MOM-SIS / ACCESS-OM2 MOM5 namelist comparisons

typeset 2017-10-24 15:54:50 +11:00

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.

Contents

1	Differences between new ACCESS-OM2 configs	3
2	Old and new ACCESS-OM2 configs (differences highlighted)	5
	2.1 accessom2_1deg_jra55_ryf	5
	2.2 accessom2_025deg_jra55_ryf	11
	2.3 accessom2.01deg ira55 rvf	17

3	Old and new ACCESS-OM2 configs (differences highlighted)	23
4	All variables in all 9 configs (differences highlighted)	31
5	All variables in GFDL & ACCESS configs (differences highlighted)	41
6	All variables in new configs (differences highlighted)	64

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
	redsea_gulfbay_sfix	True	1 1.9	
&fms_io_nml	fileset_write threading_write	'single' 'single'	'multi' 'multi'	'multi' 'multi'
&ocean_adv_vel_diag_nml	diaq_step	4320	4320	576
&ocean_barotropic_nml	diag_step	4320	4320	576
&ocean_lapgen_friction_nml	bottom_5point	True		
	k_smag_aniso	0.0		
	k_smag_iso	0.0		
	ncar_only_equatorial restrict_polar_visc	True True		
	restrict_polar_visc_lat	60.0		
	restrict_polar_visc_ratio	0.35		
	use_this_module	True	False	False
	vconst_1	0.000 000 8		
	vconst_2	0.0		
	vconst_3	0.8		
	vconst_4 vconst_5	5×10^{-9}		
	vconst_6	300 000 000.0		
	vconst_7	100.0		
	vel_micom_iso	0.1		
	viscosity_ncar	True		
	viscosity_ncar_2000	False		
	viscosity_ncar_2007 viscosity_scale_by_rossby	True True		
	viscosity_scale_by_rossby_power	4.0		
&ocean_mixdownslope_nml	debug_this_module	False		
x occurs mix do misto ped mit	mixdownslope_mask_gfdl	False		
	mixdownslope_npts	4		
	read_mixdownslope_mask	False		
	use_this_module	True	False	False
&ocean_model_nml	dt_ocean	3600	1200	150
	io_layout layout	4, 3 16, 15	6, 5 48, 40	10, 15 80, 75
&ocean_nphysics_nml	use_nphysicsc	True	False	False
4000an_1.pn/j0.00_1	use_this_module	True	False	False
&ocean_nphysics_util_nml	agm	600.0	100.0	100.0
	agm_closure_eady_ave_mixed	True		
	agm_closure_eady_cap	True		
	agm_closure_eady_smooth_horz agm_closure_eady_smooth_vert	True True		
	agm_closure_eden_gamma	0.0		
	agm_closure_eden_greatbatch	False		
	agm_closure_grid_scaling	True		
	agm_closure_min	50.0	100.0	100.0
	agm_damping_time	45.0		
	agm_smooth_space agm_smooth_time	False False		
	drhodz_mom4p1	True	False	False
	nphysics_util_zero_init	True	ruisc	raise
&ocean_nphysicsc_nml	bv_freq_smooth_vert	True		
	bvp_bc_mode	2		
	bvp_min_speed	0.1		
	bvp_speed	0.0		
	debug_this_module do_gm_skewsion	False True		
	do_neutral_diffusion	True		
	epsln_bv_freq	1×10^{-12}		
	gm_skewsion_bvproblem	True		
	gm_skewsion_modes	False		
	neutral_eddy_depth	True		
	neutral_physics_limit	True		
	number_bc_modes regularize_psi	2 False		
	regularize_psi smax_psi	0.01		
	smooth_psi	True		
	tmask_neutral_on	True		
		50.0		

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
	use_this_module	True	False	False
&ocean_solo_nml	days	1460	31	30
	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
CAUSEONI_CC_MINC	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 kmxice	1.0 5	1.0 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	$1 imes 10^{-6}$	
	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' 'single'
&fms_nml	threading_write	'single' 'LOOP'	'single' 'LOOP'
&IIIIS_IIIIIL	clock_grain domains, stack_size	LUUP	115200
&mom_oasis3_interface_nml	fields_in	'u_flux',	'u_flux',
WHOMEOUSIS SERVICE TRACE SIMILE	ileta5_iii	'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', 'rupof' 'p'	'lw_flux', 'rupof' 'p'
		'runof', 'p', 'aice',	'runof', 'p', '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',
	muss Enlar in	'frazil' 15	'frazil'
	num_fields_in num_fields_out	7	15 7
	send_after_ocean_update	True	True
	send_before_ocean_update	False	False
&monin_obukhov_nml	neutral		True
&mpp_io_nml	deflate_level		5
	shuffle		1
&ocean_adv_vel_diag_nml	diag_step	4320	4320
	large_cfl_value	10.0	10.0
	max_cfl_value	100.0	100.0
Roccan advection velocity nml	verbose_cfl	True 0.5	True 0.5
&ocean_advection_velocity_nml &ocean_albedo_nml	max_advection_velocity ocean_albedo_option	U.5	0.5
&ocean_barotropic_nml	barotropic_halo	10	10
COCCUIT-DUI OLI OPIC-IIIII	barotropic_time_stepping_a	True	True
	barotropic_time_stepping_a 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

Second bit Columns Second part 1 shimman Second	Group (continued) Variable	hogg_acces- som2 1deg jra55_ryf input.nml	new_acces- som2 1deg jra55_ryf input.nml
Second State of Sta			True
Pate			True
Note			False
Second Defect of the control of th	use_legacy_barotropic_halo:		False
Page			0.01
Scena hibe nith website strategies Time st			0.05 0.2
Scena Ibl. Amil Similarity of Carbot (access to Manager (access) (a			True
Content			False
Base	&ocean_bbc_nml bmf_implici	t	True
Control Cont			0.001
Second			0.007
Ministration			False
Second December (Control of the Control of			True
Scoral Justin Lordin mml Fisher diseased and substitution scheme (speem) Fisher diseased and substitution scheme (speem) Fisher diseased and substitution scheme (speem) Figure (speem) Fisher diseased and substitution scheme (speem) Fisher diseased (speem) Fisher diseased (speem) Fisher diseased (speem) Fisher			0.05
Scorean Infriction mmil Minimitation scheme 10 scorean Scorean Secreman Infriction mil Use this module False False </td <td></td> <td></td> <td>False</td>			False
Scoran shi bridfon, mil bin firction scheme general in general i			
Scorean Juhraner mml use shis module False False become shigher, findion, mul False become shigher, findion, mul False become shigher, findion, mul Scorean Juhrent, module Time False become shigher, findion, mul False become shigher, finding, mul False become shight finding, mul False become shight finding, mul <t< td=""><td></td><td></td><td>'annoral'</td></t<>			'annoral'
Scorean_bilities fiction.nml see this module (a.g. th. module (a.g.			general False
Scorean biligen friction mmil Boots 1.5 point (in eq. stat.incimo of eq. vellinticima is eq. vell			False
Registration			False
Page	eq_lat_micon	n 0.0	0.0
Regulatorial			0.0
			0.0 Falso
Ratio Rati			0.0
Near Doundary, Scaling True Tru			2.0
			True
			True
Name		r 2	2 40-8
			2×10^{-6}
			True
wellmon, iso 0.04 0.00 & corean, convect, mil convect full, seata 7.63 & convect, mil convect, mill, seata 7.63 & convect, mill, seata 7.63 7.63 & convect, mill, seata 7.63 7.63 & convect, convect, mill seath, seat			0.0
Scocan.convect.ml visc cit scale frage 0.55 moves full scale frage 1 Scocan.convect.ml convect.full scale frage False frage Scocan.coriolis.nml acor of 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			0.0
Coccan.convect.mml Convect.full.scalar convect.full.scalar convect.mil. vector in frue statis.module page to use.this.module page to use.this.module page to use.this.module page to meet a false page t			0.0
convent_full_vector True Fall & cocean.coriolis.nml acor 0.5 0 & cocean.density.nml use.this.module True Tru & cocean.density.nml eos.inicer Falls Falls Falls Falls True			1.0
Scorean_coriolis.nml Use_this.module False False & ocean_coriolis.nml acor 0.5 1.0 1.0 0.5 1.0			
cocean.coriolis.nml acor 0.5 0.0 cocean.density.nml eos.linear False False cocean.density.nml eos.preteos10 True True leos.preteos10 True False			False
kocean_density.ml eos_preteos10 ces_preteos10			0.5
Bota			True
Rayer			False
			True 80
Neutralno min 10200 1028 1038			1038.0
Dottho max 10380 1038			1028.0
&ocean_domains_nml max_tracers 10 &ocean_form_drag_nml cprime_aiki 0.6 &ocean_frazil_nml debug_this_module False &ocean_frazil_nml ffeazil_only_in_surface False freezing_temp_preteos10 Tru False freezing_temp_simple True False &ocean_grids_nml debug_this_module True False &ocean_increment_eta_nml debug_this_module True False &ocean_increment_eta_nml days_to_increment 10 False &ocean_increment_tracer_nml days_to_increment 1 False &ocean_increment_tracer_nml days_to_increment 0 False &ocean_increment_tracer_nml days_to_increment 1 False &ocean_increment_tracer_nml days_to_increment 1 False &ocean_increment_tracer_nml days_to_increment 1 False False &ocean_increment_velocity_nml false False False False		x 1038.0	1038.0
& ocean_form_drag_nml cprime_alki 0.6 & ocean_frazil_nml gebug_this_module False Fals			1028.0
Kocean_frazil_nml Idebug_this_module frazil_nmlum_nurface False flazil_nml_nurface True False flazil_nml_nurface True False flazil_nurface False flazil_nurface True False flazil_nurface True False flazil_nurface False flazil_nurface True False flazil_nurface Fal			5
&ocean_frazil_nml debug_this_module frazil_only_in_surface freezing_temp_preteos10 False freezing_temp_preteos10 True False false freezing_temp_preteos10 True False false freezing_temp_preteos10 True False false false freezing_temp_preteos10 True False fals			False
False Fals			False
True False Secaral			False
kocean_grids_nml debug_this_module True False kocean_increment_eta_nml days_to_increment To False kocean_increment_eta_nml days_to_increment 1,0 False kocean_increment_eta_nml gecs_to_increment 1,0 False kocean_increment_tracer_nml days_to_increment 0 False kocean_increment_tracer_nml days_to_increment 1,0 False kocean_increment_velocity_nml gecs_to_increment 1,0 False kocean_increment_velocity_nml days_to_increment 0 False			True
&ocean_grids_nml debug_this_module read_rho0_profile True False &ocean_increment_eta_nml days_to_increment 0			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 1.800 1.0 use_this_module False False & ocean_increment_velocity_nml days_to_increment 0			True
& ocean_increment_eta_nml days_to_increment 0 fraction_increment 1.0 1800 secs_to_increment 1800 1800 use_this_module False False & ocean_increment_tracer_nml days_to_increment 0 fraction_increment 1.0 1800 secs_to_increment 1800 1800 use_this_module False False & ocean_increment_velocity_nml days_to_increment 0			raise
Fraction_increment			
& ocean_increment_tracer_nml days_to_increment fraction_increment 0 fraction_increment 1,0 secs_to_increment 1800 use_this_module False False & ocean_increment_velocity_nml days_to_increment 0		t 1.0	
&ocean_increment_tracer_nml days_to_increment 0 fraction_increment 1.0 1.0 secs_to_increment 1800 1800 use_this_module False False &ocean_increment_velocity_nml days_to_increment 0		t 1800	
fraction_increment 1.0 secs_to_increment 1800 use_this_module False False &ocean_increment_velocity_nml days_to_increment 0			False
secs_to_increment1800use_this_moduleFalseFalse& ocean_increment_velocity_nmldays_to_increment0			
wse_this_module False False &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	t 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	lap_friction_scheme	'general'	'general'
&ocean_lap_tracer_nml &ocean_lapcst_friction_nml	use_this_module use_this_module	False False	False False
&ocean_lapgen_friction_nml	bottom_5point	True	True
	k_smag_aniso	0.0	0.0
	k_smag_iso	0.0	0.0
	ncar_only_equatorial	True	True
	restrict_polar_visc restrict_polar_visc_lat	True 60.0	True 60.0
	restrict_potar_visc_ratio	0.35	0.35
	use_this_module	True	True
	vconst_1	0.000 000 8	8 000 000.0
	vconst_2	0.0	0.0
	vconst_3	0.8	$0.8 \\ 5 \times 10^{-9}$
	vconst_4 vconst_5	5×10^{-9}	5×10^{-3}
	vconst_6	300 000 000.0	300 000 000.0
	vconst_7	100.0	100.0
	vel_micom_iso	0.1	0.1
	viscosity_ncar	True	True
	viscosity_ncar_2000	False True	False True
	viscosity_ncar_2007 viscosity_scale_by_rossby	True	True
	viscosity_scale_by_rossby_power	4.0	4.0
&ocean_mixdownslope_nml	debug_this_module	False	False
	mixdownslope_mask_gfdl	False	False
	mixdownslope_npts	4	. 4
	read_mixdownslope_mask use_this_module	False	False
&ocean_model_nml	baroclinic_split	True 1	True 1
a decard model and the second	barotropic_split	80	80
	cmip_units	True	True
	debug	False	False
	dt_ocean	3600	3600
	io_layout layout	4, 3 16, 15	4, 3 16, 15
	surface_height_split	10, 13	10, 13
	time_tendency	'twolevel'	'twolevel'
	vertical_coordinate	'zstar'	'zstar'
&ocean_momentum_source_nml	rayleigh_damp_exp_from_bottom	_	False
	use_rayleigh_damp_table use_this_module	True	True
&ocean_nphysics_nml	debug_this_module	True False	True False
&occan_npnysics_nmc	use_nphysicsa	False	False
	use_nphysicsb	False	False
	use_nphysicsc	True	True
O company and a contract of the contract of th	use_this_module	True	True
&ocean_nphysics_util_nml	agm agm_closure	600.0 True	600.0 True
	agm_closure_baroclinic	True	True
	agm_closure_buoy_freq	0.004	0.004
	agm_closure_eady_ave_mixed	True	True
	agm_closure_eady_cap	True	True
	agm_closure_eady_smooth_horz	True	True
	agm_closure_eady_smooth_vert agm_closure_eden_gamma	True 0.0	True 0.0
	agm_closure_eden_greatbatch	False	False
	agm_closure_grid_scaling	True	True
	agm_closure_length	50 000.0	50 000.0
			False
	agm_closure_length_bczone	False	
	agm_closure_length_fixed	False	False
	agm_closure_length_fixed agm_closure_length_rossby	False False	False False
	agm_closure_length_fixed agm_closure_length_rossby agm_closure_lower_depth	False False 2000.0	False False 2000.0
	agm_closure_length_fixed agm_closure_length_rossby agm_closure_lower_depth agm_closure_max agm_closure_min	False False	False False
	agm_closure_length_fixed agm_closure_length_rossby agm_closure_lower_depth agm_closure_max agm_closure_min agm_closure_scaling	False False 2000.0 600.0 50.0 0.07	False 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 False 2000.0 600.0 50.0 0.07 100.0	False 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 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
	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 False 2000.0 600.0 50.0 0.07 100.0 45.0 False	False False 2000.0 600.0 50.0 0.07 100.0 45.0 False
	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 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

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	False	False
	drhodz_smooth_vert	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
	vel_micom	0.0	0.0
&ocean_nphysicsa_nml	use_this_module	False	False
&ocean_nphysicsb_nml	use_this_module	False	False
&ocean_nphysicsc_nml	bv_freq_smooth_vert	True	True
	bvp_bc_mode	2	2
	bvp_min_speed	0.1	0.1
	bvp_speed	0.0	0.0
	debug_this_module	False	False
	do_gm_skewsion	True	True
	do_neutral_diffusion	True	True
	epsln_bv_freq	1×10^{-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
&ocean_operators_nml	use_legacy_div_ud	nuc .	False
&ocean_overexchange_nml	debug_this_module	False	False
woccursover exertaining earthing	overexch_check_extrema	False	1 0150
	overexch_npts	4	4
	overexch_weight_far	False	False
	overflow_umax	5.0	5.0
	use_this_module	False	False
&ocean_overflow_nml	debug_this_module	False	
	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	False	False
	river_diffuse_salt	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
	use_this_module	True	True
&ocean_riverspread_nml	use_this_module	True	False
&ocean_rough_nml	rough_scheme		'beljaars'
&ocean_sbc_nml	avg_sfc_temp_salt_eta	True	True
	avg_sfc_velocity	True	True
	calvingspread		False
			False
	do_bitwise_exact_sum		
	do_bitwise_exact_sum do_flux_correction		False
	do_bitwise_exact.sum do_flux_correction land_model_heat_fluxes		False False
	do_bitwise_exact.sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore	0.5	False False 0.5
	do_bitwise_exact.sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore max_ice_thickness	8.0	False False 0.5 0.0
	do_bitwise_exact.sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore max_ice_thickness read_restore_mask	8.0 False	False False 0.5 0.0 False
	do_bitwise_exact.sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore max_ice_thickness read_restore_mask restore_mask_gfdl	8.0 False False	False False 0.5 0.0 False False
	do_bitwise_exact.sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore max_ice_thickness read_restore_mask restore_mask_gfdl runoff_salinity	8.0 False	False False 0.5 0.0 False False 0.0
	do_bitwise_exact.sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore max_ice_thickness read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale	8.0 False False 0.0	False False 0.5 0.0 False False 0.0
	do_bitwise_exact.sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore max_ice_thickness read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux	8.0 False False 0.0 True	False False 0.5 0.0 False False 0.0 0.0 True
	do_bitwise_exact_sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore max_ice_thickness read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux salt_restore_tscale	8.0 False False 0.0 True 15.0	False False 0.5 0.0 False False 0.0 0.0 True 60.0
	do_bitwise_exact_sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore max_ice_thickness read_restore_mask restore_mask_gfdl runoff_salinity salt_correction_scale salt_restore_as_salt_flux salt_restore_tscale salt_restore_under_ice	8.0 False False 0.0 True 15.0 True	False False 0.5 0.0 False False 0.0 0.0 True 60.0 True
	do_bitwise_exact_sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore max_ice_thickness 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	8.0 False False 0.0 True 15.0	False False 0.5 0.0 False False 0.0 0.0 True 60.0 True — 10.0
	do_bitwise_exact_sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore max_ice_thickness 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	8.0 False False 0.0 True 15.0 True —1.0	False False 0.5 0.0 False False 0.0 0.0 True 60.0 True —10.0 False
	do_bitwise_exact_sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore max_ice_thickness 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	8.0 False False 0.0 True 15.0 True -1.0	False False 0.5 0.0 False False 0.0 0.0 True 60.0 True — 10.0
	do_bitwise_exact_sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore max_ice_thickness 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_tavg	8.0 False False 0.0 True 15.0 True —1.0 True False	False False 0.5 0.0 False False 0.0 0.0 True 60.0 True —10.0 False True
	do_bitwise_exact_sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore max_ice_thickness 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 waterflux_tavg zero_heat_fluxes	8.0 False False 0.0 True 15.0 True -1.0	False False 0.5 0.0 False False 0.0 True 60.0 True —10.0 False True
	do_bitwise_exact_sum do_flux_correction land_model_heat_fluxes max_delta_salinity_restore max_ice_thickness 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_tavg	8.0 False False 0.0 True 15.0 True —1.0 True False	False False 0.5 0.0 False False 0.0 0.0 True 60.0 True —10.0 False True

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_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	
	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_skew_flux		True
	use_hblt_equal_mld	True	True
	use_psi_legacy	Т	False
&ocean_tempsalt_nml	use_this_module debug_this_module	True False	True False
wotean_tempsatt_mit	pottemp_2nd_iteration	True	True
	pottemp_equal_contemp		True
	s_max	55.0	70.0
	s_max_limit	42.0	42.0
	s_min s_min_limit	-1.0 0.0	0.0 2.0
	t_max	55.0	55.0
	t_max_limit	32.0	32.0
	t_min	-5.0	-20.0
	t_min_limit	-2.0	-5.0
	temperature_variable	'conservative	'potential
&ocean_thickness_nml	debug_this_module	temp' False	temp' False
COCCUIT THE CHICAGO THE CONTRACT OF THE CONTRA	debug_this_module_detail	False	False
	initialize_zero_eta	False	ruisc
	read_rescale_rho0_mask	False	
	rescale_mass_to_get_ht_mod		False
	rescale_rho0_basin_label	7.0 Falso	
	rescale_rho0_mask_gfdl rescale_rho0_value	False 0.75	
	thickness_dzt_min	1.0	
	thickness_dzt_min_init	2.0	
	thickness_method	'energetic'	'energetic'
&ocean_topog_nml	min_thickness	25.0	
&ocean_tracer_advect_nml	advect_sweby_all async_domain_update	True True	
	debug_this_module	False	False
	read_basin_mask		False
&ocean_tracer_diag_nml	diag_step	4320	4320
	do_bitwise_exact_sum	False	False
0 4	tracer_conserve_days	1.0	30.0
&ocean_tracer_nml	age_tracer_max_init debug_this_module	0.0 False	0.0 False
	frazil_heating_after_vphysics	True	True
	frazil_heating_before_vphysics	False	False
	limit_age_tracer	True	True
	remap_depth_to_s_init	False	False
	use_tempsalt_check_range zero_tendency	True False	True False
	zero_tracer_source	False	False
&ocean_velocity_diag_nml	debug_this_module	False	False
	diag_step	4320	4320
	energy_diag_step	4320	4320
	large_cfl_value max_cfl_value	10.0 100.0	10.0 100.0
&ocean_velocity_nml	adams_bashforth_third	True	True
	max_cgint	1.0	1.0
	truncate_velocity	True	False
	truncate_velocity_value	2.0	2.0
	truncate_verbose zero_tendency	True False	True False
	zero_tendency zero_tendency_explicit_a	raise	False
	zero_tendency_explicit_b		False
	zero_tendency_implicit		False
&ocean_vert_kpp_iow_nml	use_this_module	False	False
&ocean_vert_kpp_mom4p0_nml	use_this_module	False	0.0
&ocean_vert_kpp_mom4p1_nml	diff_cbt_iw diff_con_limit	0.0 0.1	0.0
	double_diffusion	True	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 visc_cbu_iw	True 0.0	True 0.0
	visc_cou_liw visc_con_limit	0.0	0.0
&ocean_vert_mix_nml	afkph_00	0.65	

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

	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
wuldy_manager_mm	issue_oor_warnings	True	True
&fms_io_nml	fileset_write	'single'	'multi'
	threading_read	'multi'	'multi'
	threading_write_	'single'	'multi'
&fms_nml	clock_grain <mark>domains_stack_size</mark>	'LOOP'	'LOOP' 115200
&mom_oasis3_interface_nml	fields_in	'u_flux',	'u_flux',
William Coasis Sanctification in the Coasis S	ileta3_iii	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', 'wfimelt',	'aice', 'wfimelt',
		wnmett, 'wfiform'	wilmett, 'wfiform'
	fields_out	't_surf',	't_surf',
		's_surf',	's_surf',
		'u_surf',	'u_surf',
		'v_surf', 'dssldx',	'v_surf', 'dssldx',
		'dssldy',	'dssldy',
		'frazil'	'frazil'
	num_fields_in	15	15
	num_fields_out	_ 7	_ 7
	send_after_ocean_update	True False	True False
&monin_obukhov_nml	send_before_ocean_update neutral	True	True
&mpp_io_nml	deflate_level		5
	shuffle		4
			1
&ocean_adv_vel_diag_nml	diag_step	4320	4320
&ocean_adv_vel_diag_nml	diag_step large_cfl_value	10.0	4320 10.0
&ocean_adv_vel_diag_nml	diag_step large_cfl_value max_cfl_value	10.0 100.0	4320 10.0 100.0
	diag_step large_cfl_value	10.0	4320 10.0
&ocean_advection_velocity_nml &ocean_albedo_nml	diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option	10.0 100.0 True 0.5	4320 10.0 100.0 True 0.5
&ocean_advection_velocity_nml	diag_step large_cfl_value max_cfl_value verbose_cfl max_advection_velocity ocean_albedo_option barotropic_halo	10.0 100.0 True 0.5 2 10	4320 10.0 100.0 True 0.5 2
&ocean_advection_velocity_nml &ocean_albedo_nml	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	4320 10.0 100.0 True 0.5 2 10 True
&ocean_advection_velocity_nml &ocean_albedo_nml	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	10.0 100.0 True 0.5 2 10 True False	4320 10.0 100.0 True 0.5 2 10 True False
&ocean_advection_velocity_nml &ocean_albedo_nml	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	4320 10.0 100.0 True 0.5 2 10 True
&ocean_advection_velocity_nml &ocean_albedo_nml	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	10.0 100.0 True 0.5 2 10 True False False 4320 8.0	4320 10.0 100.0 True 0.5 2 10 True False False 4320 8.0
&ocean_advection_velocity_nml &ocean_albedo_nml	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	10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2	4320 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2
&ocean_advection_velocity_nml &ocean_albedo_nml	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	10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2	4320 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2
&ocean_advection_velocity_nml &ocean_albedo_nml	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	10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True	4320 10.0 100.0 True 0.5 2 10 True False 4320 8.0 0.2 0.2 True
&ocean_advection_velocity_nml &ocean_albedo_nml	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	10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2	4320 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2
&ocean_advection_velocity_nml &ocean_albedo_nml	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_biharmonic	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	4320 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False
&ocean_advection_velocity_nml &ocean_albedo_nml	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	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	4320 10.0 100.0 True 0.5 2 10 True False 4320 8.0 0.2 0.2 True False True False
&ocean_advection_velocity_nml &ocean_albedo_nml	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_eta_t_laplacian smooth_pbot_t_laplacian truncate_eta	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 False True False	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
&ocean_advection_velocity_nml &ocean_albedo_nml	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 use_legacy_barotropic_halos	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 False False False False False False False False False	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 False True False False
&ocean_advection_velocity_nml &ocean_albedo_nml	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_eta_t_laplacian smooth_pbot_t_laplacian truncate_eta	10.0 100.0 17rue 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False True False False Toue False False Found False Toue False False Toue False False Toue False False Toue False False False Toue False False	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
&ocean_advection_velocity_nml &ocean_albedo_nml	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_biharmonic smooth_eta_t_biharmonic smooth_pbot_t_laplacian smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos vel_micom_lap vel_micom_lap_diag	10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 True False True False True False True False False O.01 0.05 0.2	4320 10.0 100.0 True 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False True False False O.01 0.05
&ocean_advection_velocity_nml &ocean_albedo_nml	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_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	10.0 100.0 17rue 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False True False	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 False 0.01 0.05 0.2 True
&ocean_advection_velocity_nml &ocean_barotropic_nml	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_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	10.0 100.0 17rue 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	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 False 0.01 0.05 0.2 True False
&ocean_advection_velocity_nml &ocean_albedo_nml	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_eta_t_laplacian smooth_pbot_t_laplacian smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos vel_micom_lap_diag verbose_truncate zero_tendency bmf_implicit	10.0 100.0 17rue 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False False 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 False 0.01 0.05 0.2 True False False False True
&ocean_advection_velocity_nml &ocean_barotropic_nml	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_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	10.0 100.0 17rue 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	4320 10.0 100.0 17rue 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True False False True False O.01
&ocean_advection_velocity_nml &ocean_barotropic_nml	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_biharmonic 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_roughness_length	10.0 100.0 170.0 1	4320 10.0 100.0 17rue 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False O.01 0.05 0.2 True False True False True False
&ocean_advection_velocity_nml &ocean_barotropic_nml &ocean_barotropic_nml	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_eta_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_roughness_length cdbot_roughness_length	10.0 100.0 170.0 1	4320 10.0 100.0 17rue 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True O.001
&ocean_advection_velocity_nml &ocean_barotropic_nml &ocean_barotropic_nml	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_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 cdbot_ cdbot_hi cdbot_roughness_length cdbot_roughness_uamp uresidual	10.0 100.0 170.0 1	4320 10.0 100.0 17rue 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True O.05 0.2 True False True O.05 0.2 True False True O.001
&ocean_albedo_nml &ocean_barotropic_nml &ocean_barotropic_nml &ocean_bbc_nml	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_diag_laplacian smooth_eta_t_biharmonic smooth_eta_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_ cdbot_hi cdbot_roughness_length cdbot_roughness_length cdbot_roughness_uamp uresidual use_geothermal_heating	10.0 100.0 170.0 1	4320 10.0 100.0 17rue 0.5 2 10 True False False 4320 8.0 0.2 0.2 True False True
&ocean_advection_velocity_nml &ocean_barotropic_nml	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_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 cdbot_ cdbot_hi cdbot_roughness_length cdbot_roughness_uamp uresidual	10.0 100.0 170.0 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 0.05 0.2 True False True O.001 0.007 False True
&ocean_albedo_nml &ocean_barotropic_nml &ocean_barotropic_nml &ocean_bbc_nml	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_diag_laplacian smooth_eta_t_biharmonic smooth_pbot_t_laplacian smooth_pbot_t_laplacian truncate_eta use_legacy_barotropic_halos vel_micom_bih vel_micom_lap vel_micom_lap vel_micom_lap velose_truncate zero_tendency bmf_implicit cdbot cdbot_hi cdbot_roughness_length cdbot_roughness_uamp uresidual use_geothermal_heating bih_friction_scheme	10.0 100.0 170.0 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 U.01 0.05 0.2 True False True False False True False True False True False False True False True False False O.01 0.05 0.2 True False True False True False 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 40-8	2 40-8
	ncar_vconst_4	2×10^{-8}	2×10^{-8}
	ncar_vconst_5	5	5
	use_this_module	True	True
	vel_micom_aniso vel_micom_bottom	0.0 0.0	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
COCCUIT-CONTECCE-IIIIIC	convect_full_vector	False	
	use_this_module	False	False
&ocean_coriolis_nml	acor	0.5	0.5
Good Levi Out Junit	use_this_module	True	True
&ocean_density_nml	eos_linear	False	False
avecur_ucrisicy_mit	eos_preteos10	True	True
	layer_nk	80	80
	neutralrho_max	1038.0	1038.0
	neutralrho_min	1028.0	1028.0
	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 'twolevel'	1 'twolevel'
	time_tendency vertical_coordinate	'zstar'	'zstar'
&ocean_momentum_source_nml	rayleigh_damp_exp_from_bottom	False	False
GOCCUT_THORICITUM_30GCC_THIR	use_rayleigh_damp_table	True	True
	use_this_module	True	True
&ocean_nphysics_nml	debug_this_module	False	False
or occurrant project and the contract of the c	use_nphysicsa	False	False
	use_nphysicsb	False	False
	use_nphysicsc	False	False
	use_this_module	False	False
&ocean_nphysics_util_nml	use_this_module	False 100.0	100.0
&ocean_nphysics_util_nml	use_this_module agm		
&ocean_nphysics_util_nml	use_this_module agm agm_closure	100.0	100.0
&ocean_nphysics_util_nml	use_this_module agm agm_closure agm_closure_baroclinic	100.0 True	100.0 True
&ocean_nphysics_util_nml	use_this_module agm agm_closure	100.0 True True	100.0 True True
&ocean_nphysics_util_nml	use_this_module agm agm_closure agm_closure_baroclinic agm_closure_buoy_freq	100.0 True True 0.004	100.0 True True 0.004

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 True10.0 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 use_this_module	True False	False
	use_triis_modute zmax_pen	7000	raise
&ocean_shortwave_gfdl_nml	debug_this_module	False	False
,	enforce_sw_frac	True	True
	optics_manizza	True	True
	optics_morel_antoine	False	False
	read_chl use_this_module	True True	True True
	zmax_pen	300.0	300.0
&ocean_shortwave_jerlov_nml	use_this_module	False	False
&ocean_shortwave_nml	use_shortwave_csiro	False	False
	use_shortwave_gfdl	True	True
	use_shortwave_jerlov	False	False
&ocean_sigma_transport_nml	use_this_module sigma_advection_on	True False	True
Coccur-signia_transport_mint	sigma_advection_on sigma_advection_sgs_only	False	
	sigma_diffusion_on	True	
	sigma_diffusivity_ratio	1×10^{-6}	
	sigma_just_in_bottom_cell	True	
	sigma_umax	0.01	
	smooth_sigma_thickness smooth_sigma_velocity	True True	
	smooth_velmicom	0.2	
	thickness_sigma_layer	100.0	
	thickness_sigma_max	100.0	
	thickness_sigma_min	100.0	
	tmask_sigma_on tracer_mix_micom	False True	
	use_this_module	False	False
	vel_micom	0.05	rusc
&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	0	1200
	minutes	0	0
	months	0	0
	seconds	0	0
Recease spanned eta per	years use_this_module	0 False	0 False
&ocean_sponges_eta_nml &ocean_sponges_tracer_nml	damp_coeff_3d	False	raise
woccur_sponges_tracer_nine	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 front_length_deform_radius	5000.0 True	5000.0 True
	nonc_tengtn_aeronn_radius limit_psi	True	True
	limit_psi_velocity_scale	0.5	0.5
	min_kblt	4	4
	smooth_advect_transport	True	True
	smooth_advect_transport_num smooth_hblt	4 False	4 False
	smooth_nsi	True	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	False	False
&ocean_tempsalt_nml	use_this_module debug_this_module	True False	True False
жоссан_сетрэац_ппц	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			
Scoran. rateor, diag, amil dis. bitivities parta, amil False Fa	Woccan_tracer_advect_nint	read hasin mask		
Both brive seart sum False False False Externorme-day 500	&ocean_tracer_diag_nml			
Social Interconserve digits SOU SOU<	•			
		tracer_conserve_days		
	&ocean_tracer_nml			
pate lamp of the pate of the pa				
Time				
seat of the control of the c				
Pate				
& cean, velocity, diag, nml debug, his, module False False & cean, velocity, diag, nml debug, his, module 4570 4570 & cean, velocity, alleg, step 4570 4570 4570 & cean, velocity, and adams, absorbert, hild 100 100 & cean, velocity, nml adams, absorbert, hild 15 10 & cean, velocity, nml adams, absorbert, hild 15 10 & cean, velocity, nml tumcate, velocity 20 20 & cean, velocity, squit, class 20 20 20 & cean, velocity, squit, class 22 10 10 & cean, velocity, squit, class 16 False				
Beat		•		
Renergy ding step 1430 1570 1010 1	&ocean_velocity_diag_nml	debug_this_module	False	False
Part				
&ccean.velocity.nml dams.th.shiforth.third True True kocean.velocity.nml adams.bashforth.third True True merce sign 1.5 1.0 truncate velocity.value 2.0 2.0 truncate velocity.value 2.0 2.0 truncate verbose True True zero.tendency.explicit.a False False zero.tendency.explicit.a False False false False False docean.vert.kpp.low.nml use.f.his.module False False &cecan.vert.kpp.mom4p1.mml didff.cht.iw 0.0 0.0 docean.vert.lipp.mom4p1.mml didff.cht.iw 0.0 0.0 docean.vert.mix.mml false False False docean.vert.mix.mml false False False docean.vert.mix.nml false False False docean.vert.mix.nml false False False docean.vert.mix.nml false False False False				
&cean.velocity.mil adams.bashforth.third Tive Tive Recent to the control of		-		
1.0 1.0				
Pase	&ocean_velocity_nml			
Truncate velocity value 2.0 7.0 Truncate velocity value 7.0				
Tuncate vertoss Tuncate vertoss Talss				
gene findency explicit. Is a part tendency explicit. It a part tendency explicit		,		
sero_tendency_seplicit_b False pare tendency_implicit_b False pare t		zero_tendency	False	False
Scocan.vert.kpp.iow.mml zero.tendenoy.implicit False False & ocean.vert.kpp.iow.mml use.this.module 710 0		zero_tendency_explicit_a	False	False
&ocean.vert.kpp.iow.mnl use.this.module diff.cbt.iw Color of the				
& ccean.vert.kpp.mom4p1.mml diff.cbt.ivs 0.0 0.0 double_diffusion True True True False				
Manual M				
kbl_standard_method False False c 0.3 0.3 smooth_fix_kmax_eq_kmu False False smooth_fix_kmax_eq_kmu True True visc_bu_iw 0.0 0.0 & coean_vert_mix_nml aidiff 1.0 1.0 & coean_vert_mix_nml bysn_lewis_latt_depend False False <td>&ocean_vert_kpp_mom4p1_nml</td> <td></td> <td></td> <td></td>	&ocean_vert_kpp_mom4p1_nml			
Image:				
Smooth_ri_kmax_eq_kmu True Use_this_module Use_this_module Use_this_module Use_this_module Use_this_module Use_this_module Use_this_module Use_this_this_module Use_this_this_module Use_this_this_module Use_this_this_module Use_this_this_module Use_this_this_module Use_this_this_module Use_this_this_this_module Use_this_this_module Use_this_this_this_module Use_this_this_this_module Use_this_this_this_module Use_this_this_this_module Use_this_this_this_module Use_this_this_this_module Use_this_this_this_module Use_this_this_this_this_module Use_this_this_this_this_this_this_this_this				
&ocean_vert_mix_nml aidif bryan_lewis_diffusivity False False False False bryan_lewis_lat_depend False bryan_lewis_lat_depend False False hwf_diffusivity False False False False hwf_diffusivity False False False False False hwf_diffusivity False False False False False False hwf_nol_comega 200 200 200 use_diff_cbt_table False vert_diff_back_via_max True vert_diff_back_via_max True vert_diff_back_via_max True Vert_mix_scheme kyp_mom4p1' False False False False Vert_diff_back_via_max True vert_mix_scheme kyp_mom4p1' %pp_mom4p1' mom4p1' %pp_mom4p1' %pp_mom4p1' mom4p1' %pp_mom4p1' %pp_mom4p1' <t< td=""><td></td><td></td><td></td><td></td></t<>				
Bryan_Lewis_diffusivity				0.0
Bryan_Lewis_lat_depend False False hwf_diffusivity False False hwf_min_diffusivity False False hwf_min_diffusivity 2 × 10^-6 2 × 10^-6 hwf_mn0_20mega 20.0	&ocean_vert_mix_nml			
Nwf_diffusivity False False Nwf_min_diffusivity 2 × 10^-6 2 × 10^-6 Nwf_mon_diffusivity 2 × 10^-6 2 × 10^-6 Nwf_mon_diffusivity 2 × 10^-6 Nwf_mon_diffusivity 2 × 10^-6 Nwf_mon_diffusivity Ruse Ruse Ruse diff_cbt_table False False False Vert_diff_back_via_max True True Vert_mix_scheme Npp mom4p1 Npp mom4p1 Nmp4p1				
hwf_min_diffusivity 2 × 10^-6 2 × 10^-6 hwf_n0_20mega 20.0 20.0 use_diff_cbt_table False False vert_diff_back_via_max True True vert_mix_scheme 'kpp mom4p1' 'kpp mom4p1' &ocean_vert_tidal_nml background_diffusivity 0.0 0.00 background_viscosity 0.0001 0.0001 decay_scale 500.0 500.0 drag_dissipation_use_cdbot True True fixed_wave_difsipation False False max_wave_diffsipivity 0.01 0.01 mixing_efficiency_n2depend True True read_roughness True True <td></td> <td></td> <td></td> <td></td>				
Nwf_n0_20mega 200 200 use_diff_cbt_table False False vert_diff_back_via_max True vert_mix_scheme 'kpp- 'kpp- mom4p1' mom4p1' mom4p1' mom4p1' Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2 Mom2				
Label Use_diff_cbt_table False False Vert_diff_back_via_max True True Vert_mix_scheme 'kpp kpp mom4p1' 'kpp 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 fixed_wave_dissipation False False fixed_wave_dissipation False False max_wave_diffusivity 0.01 0.01 max_wave_diffusivity 0.01 0.001 max_wave_diffusivity 0.01 0.01 max_wav				
vert_diff_back_via_max True True vert_mix_scheme 'kpp mom4p1' 'kpp 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 × 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 True read_wave_dissipation False False				
vert_mix_scheme 'kpp- 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 × 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 True read_wave_dissipation False False				
kocean_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 × 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 True read_wave_dissipation False False				
&ocean_vert_tidal_nml background_diffusivity 0.0 0.0 background_viscosity 0.0001 0.0001 decay_scale 500.0 500.0 drhodz_min 1 × 10 ⁻¹⁰ 1 × 10 ⁻¹⁰ drhodz_min 1 × 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 True read_wave_dissipation False False			mom4p1'	mom4p1'
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	&ocean_vert_tidal_nml			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$				
$\frac{\text{drhodz_min}}{\text{fixed_wave_dissipation}} \begin{array}{ccccccccccccccccccccccccccccccccccc$				
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 True read_wave_dissipation False False				1 40-10
max_wave_diffusivity 0.01 0.01 mixing_efficiency_n2depend True True read_roughness True True read_tide_speed True True read_wave_dissipation False False				
mixing_efficiency_n2depend True True read_roughness True True read_tide_speed True True read_wave_dissipation False False				
read_roughness True True read_tide_speed True True read_wave_dissipation False False				
read_tide_speed True True read_wave_dissipation False False				
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 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'	'LOOP'
	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',
		aice,	aicc,
		wfimelt',	'wfimelt',

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

Group (continued)	Variable	original/ hogg_acces- som2 01deg jra55_ryf input.nml	new_acces- som2 01deg jra55_ryf input.nml
	use_this_module	True	True
&ocean_density_nml	eos_linear	False	False
	eos_preteos10	True	True
	layer_nk neutralrho_max	80 1038.0	80 1038.0
	neutralrho_min	1038.0	1038.0
	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
0	use_this_module	True	True
&ocean_grids_nml	debug_this_module use_this_module	False False	False
Rocean_increment_eta_nml			False
&ocean_increment_tracer_nml &ocean_increment_velocity_nml	use_this_module use_this_module	False False	False False
&ocean_increment_velocity_nml &ocean_lap_friction_nml	use_tnis_module lap_friction_scheme	'general'	'general'
&ocean_lap_tracer_nml	use_this_module	False	False
&ocean_tap_tracer_mmt &ocean_tapcst_friction_nml	use_this_module use_this_module	False	False
&ocean_lapgen_friction_nml	k_smag_iso	2.0	raisc
xoccuri-tupgeri-metion-mite	use_this_module	False	False
&ocean_mixdownslope_nml	debug_this_module	False	
account in the country of the countr	use_this_module	False	False
&ocean_model_nml	baroclinic_split	1	1
	barotropic_split	80	80
	cmip_units		True
	debug	False	False
	dt_ocean	150	150
	io_layout	10, 15	10, 15
	layout	80,75	80,75
	surface_height_split time_tendency	1 'twolevel'	1 'twolevel'
	•		
Gocean momentum source nml	vertical_coordinate	'zstar'	'zstar'
&ocean_momentum_source_nml	vertical_coordinate rayleigh_damp_exp_from_bottom		'zstar' False
&ocean_momentum_source_nml	vertical_coordinate	'zstar' False	'zstar' False True
	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module	'zstar' False True	'zstar False True True
	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table	'zstar' False True True	'zstar' False True True False
	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb	'zstar' False True True False False False	'zstar' False True True False False False
	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc	'zstar' False True True False False False False False	'zstar' False True True False False False False
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc use_this_module	'zstar' False True True False False False False False False False	'zstar' False True True False False False False False False False
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc use_this_module agm	'zstar' False True True False False False False False False False 100.0	'zstar' False True True False False False False False False False
kocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc use_this_module agm agm_closure	'zstar' False True True False False False False False Talse True True	'zstar False True True False False False False False True False False False True
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc use_this_module agm agm_closure agm_closure_baroclinic	'zstar' False True True False False False False False True True True	'zstar' False True True False False False False False True True True
kocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc use_this_module agm agm_closure agm_closure_baroclinic agm_closure_buoy_freq	'zstar' False True True False False False False False True True 100.0 True True 0.004	'zstar False True False False False False False False False False 100.0 True True
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicss use_nphysicsc use_this_module agm agm_closure agm_closure_baroclinic agm_closure_length	'zstar' False True True False False False False False True True 0.004 50 000.0	'zstar False True False False False False False False False False 500.00
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc use_this_module agm agm_closure agm_closure_baroclinic agm_closure_length_bczone	'zstar' False True True False False False False False True 100.0 True True 0.004 50 000.0 False	'zstar False True False False False False False False Folse False Folse False False False False False False False False
kocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc use_this_module agm agm_closure_baroclinic agm_closure_length_bczone agm_closure_length_fixed	'zstar' False True True False False False False False True True 0.004 50 000.0	'zstar False True False False False False False 100.0 True True 0.004 50 000.0 False False
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc use_this_module agm agm_closure agm_closure_baroclinic agm_closure_length_bczone	'zstar' False True True False False False False True True O0004 True True False False True False False	'zstar' False True False False False False False 50.00 True 7rue 0.004 50.000, False False False
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc use_this_module agm agm_closure agm_closure_baroclinic agm_closure_length_bczone agm_closure_length_fixed agm_closure_length_fixed agm_closure_length_fixed	'zstar' False True True False False False False False False O000 True True 0.004 50 000.0 False False False False False False	'zstar False True False False False False False 0.004 50 000.0 False False False
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc use_this_module agm_closure agm_closure_baroclinic agm_closure_buoy_freq agm_closure_length agm_closure_length_fixed agm_closure_length_rossby agm_closure_lever_depth agm_closure_lever_depth agm_closure_lever_depth agm_closure_lever_depth agm_closure_max agm_closure_min	'zstar' False True True False False False False False False 100.0 True 0.004 50 000.0 False False False False False False False False False 100.00 False False False False False 100.00 100.0	'zstar False True False False False False False 100.0 True 0.004 50 000.0 False False False 100.0 False False 100.0 False False 100.0
kocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc use_this_module agm agm_closure_baroclinic agm_closure_buoy_freq agm_closure_length agm_closure_length_fixed agm_closure_length_fixed agm_closure_length	'zstar' False True True False False False False False 100.0 True True 0.004 50 000.0 False False False False False 100.0 False False False 100.0 False False False 100.0 600.0 100.0 0.07	'zstar False True False False False False False False 100.0 True 0.004 50 000.0 False False 2000.0 600.0 100.0
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc use_this_module agm agm_closure agm_closure_baroclinic agm_closure_buoy_freq agm_closure_length agm_closure_length_fixed agm_closure_length_fixed agm_closure_length agm_closure_length agm_closure_length agm_closure_length agm_closure_length agm_closure_length agm_closure_length agm_closure_length agm_closure_length	'zstar' False True True False False False False False 100.0 True True 0.004 50 000.0 False False False False 100.0 True True 0.004 100.0 0.07	'zstar False True False False False False False 100.0 True 0.004 50 000.0 False False 2000.0 600.0 100.0 0.07
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicso use_nphysicso use_this_module agm_agm_closure_baroclinic agm_closure_baroclinic agm_closure_baroclinic agm_closure_length agm_closure_length agm_closure_length_fixed agm_closure_length_fixed agm_closure_length agm_closure_lower_depth agm_closure_lower_depth agm_closure_max agm_closure_min agm_closure_scaling agm_closure_upper_depth aredi	'zstar' False True True False False False False False False 100.0 True True 0.004 50 000.0 False False False 2000.0 600.0 100.0 0.07	'zstar False True False False False False False 100.0 True 0.004 50 000.0 False False 2000.0 600.0 0.07
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc use_this_module agm_closure agm_closure_baroclinic agm_closure_baroclinic agm_closure_buoy_freq agm_closure_length agm_closure_length 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 aredi aredi_equal_agm	'zstar' False True True False False False False False 100.0 True True 0.004 50 000.0 False False False 2000.0 600.0 100.0 0.07 100.0 600.0 False	'zstar False True False False False False False 100,0 True 0,004 50 000,0 False False 2000,0 600,0 100,0 600,0 False
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicss use_nphysicsc use_this_module agm_closure_losure_baroclinic agm_closure_baroclinic agm_closure_length agm_closure_length agm_closure_length_fixed agm_closure_length_fixed agm_closure_length agm_closure_depth agm_closure_scaling agm_closure_uppr_depth aredi aredi_equal_agm drhodz_mom4p1	'zstar' False True True False False False False False False 100.0 True True 0.004 50 000.0 False False 2000.0 600.0 100.0 0.07 100.0 600.0 False False False	'zstar False True False False False False False 100.0 True True 0.004 50 000.0 False False 2000.0 600.0 100.0 0.07 100.0 600.0 False
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicso use_this_module agm_closure agm_closure_baroclinic agm_closure_baroclinic agm_closure_length agm_closure_length agm_closure_length_fixed agm_closure_length_fixed agm_closure_lower_depth agm_closure_lower_depth agm_closure_scaling agm_closure_unin	'zstar' False True True False False False False False 100.0 True True 0.004 50 000.0 False False False 2000.0 600.0 100.0 0.07 100.0 600.0 False False False	'zstar False True False False False False False False 100.0 True True 0.004 50 000.0 False False 2000.0 600.0 100.0 0.07 100.0 600.0 False
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsb use_nphysicsc use_this_module agm_closure agm_closure_baroclinic agm_closure_baroclinic agm_closure_length agm_closure_length agm_closure_length_fixed agm_closure_length_fixed agm_closure_length_fixed agm_closure_length agm_closure_length agm_closure_length agm_closure_length agm_closure_length agm_closure_depth agm_closure_scaling agm_closure_uper_depth aredi aredi_equal_agm drhodz_mom4p1 drhodz_smooth_horz drhodz_smooth_vert	'zstar' False True True False False False False False 100.0 True True 0.004 50 000.0 False False 2000.0 600.0 100.0 0.07 100.0 600.0 False	'zstar' False True False False False False False 100.0 True True 0.004 50 000.0 False False 2000.0 600.0 100.0 0.07 100.0 600.0 False
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsb use_nphysicsc use_this_module agm_closure agm_closure_baroclinic agm_closure_baroclinic agm_closure_length agm_closure_length_bczone agm_closure_length_fixed agm_closure_length_fixed agm_closure_length_fixed agm_closure_length_rossby agm_closure_lower_depth agm_closure_scaling agm_closure_scaling agm_closure_uper_depth aredi aredi_equal_agm drhodz_mom4p1 drhodz_smooth_horz drhodz_smooth_vert rossby_radius_max	'zstar' False True True False False False False False 100.0 True True 0.004 50 000.0 False False False 2000.0 600.0 100.0 0.07 100.0 600.0 False False False	'zstar' False True False False False False False 100.0 True True 0.004 50 000.0 False False 2000.0 600.0 100.0 0.07 100.0 600.0 False
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsb use_nphysicsc use_this_module agm_closure agm_closure_baroclinic agm_closure_baroclinic agm_closure_length agm_closure_length agm_closure_length_fixed agm_closure_length_fixed agm_closure_length_fixed agm_closure_length agm_closure_length agm_closure_length agm_closure_length agm_closure_length agm_closure_depth agm_closure_scaling agm_closure_uper_depth aredi aredi_equal_agm drhodz_mom4p1 drhodz_smooth_horz drhodz_smooth_vert	'zstar' False True True False False False False False False 100.0 True True 0.004 50 000.0 False False False 2000.0 600.0 100.0 0.07 100.0 600.0 False False False 100.00	'zstar False True False False False False False False 100.0 True True 0.004 50 000.0 False False 2000.0 600.0 100.0 0.07 100.0 False False False False False False False 100 000.0
&ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsb use_nphysicsc use_this_module agm_closure agm_closure_baroclinic agm_closure_baroclinic agm_closure_length agm_closure_length_bczone agm_closure_length_fixed agm_closure_length_fixed agm_closure_length_rixed agm_closure_length_rossby agm_closure_lower_depth agm_closure_scaling agm_closure_scaling agm_closure_uper_depth aredi aredi_equal_agm drhodz_mom4p1 drhodz_smooth_horz drhodz_smooth_vert rossby_radius_max rossby_radius_min	'zstar' False True True False False False False False False False 100.0 True True 0.004 50 000.0 False False False False False False False False 2000.0 600.0 100.0 0.07 100.0 600.0 False	'zstar False True False False False False False 100.0 True True 0.004 50 000.0 False False 2000.0 600.0 100.0 50.00 False False False 100.00 False False
&ocean_momentum_source_nml &ocean_nphysics_nml &ocean_nphysics_util_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsb use_nphysicsc use_this_module agm_closure_baroclinic agm_closure_baroclinic agm_closure_length_bczone agm_closure_length_bczone agm_closure_length_fixed agm_closure_length_fixed agm_closure_length_fixed agm_closure_length_fixed agm_closure_length agm_closure_length agm_closure_depth agm_closure_depth agm_closure_depth agm_closure_upper_depth aredi aredi_equal_agm drhodz_mom4p1 drhodz_smooth_horz drhodz_smooth_vert rossby_radius_max rossby_radius_min	'zstar' False True True False False False False False False False 100.0 True True 0.004 50 000.0 False False 2000.0 600.0 100.0 0.07 100.0 600.0 False	'zstar' False True False False False False False False 100.0 True True 0.004 50 000.0 False False 2000.0 600.0 100.0 0.07 100.0 600.0 False
&ocean_nphysics_nml &ocean_nphysics_util_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsc use_this_module agm_closure agm_closure_baroclinic agm_closure_length_bczone agm_closure_length_fixed agm_clos	'zstar' False True True False False False False False False False 100.0 True True 0.004 50 000.0 False False False False 100.0 0.07 100.0 600.0 False 100 000.0	'zstar' False True False False False False False False 100.0 True True 0.004 50 000.0 False False 2000.0 600.0 100.0 600.0 False O.0
&ocean_nphysics_nml &ocean_nphysics_util_nml &ocean_nphysics_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsc use_this_module agm_closure agm_closure_baroclinic agm_closure_length_bczone agm_closure_length_fixed agm_clos	'zstar' False True True False False False False False False False 100.0 True True 0.004 50 000.0 False False 2000.0 600.0 100.0 0.07 100.0 600.0 False	'zstar' False True False False False False False False False 100.0 True True 0.004 50 000.0 False False False False 100.0 100.0 100.0 100.0 500.0 False
Rocean_nphysics_nml Rocean_nphysics_util_nml Rocean_nphysicsa_nml Rocean_nphysicsb_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsc use_this_module agm_closure agm_closure_baroclinic agm_closure_length_bczone agm_closure_length_fixed agm_clos	'zstar' False True True False False False False False False False 100.0 True True 0.004 50 000.0 False False False 2000.0 600.0 100.0 0.07 100.0 600.0 False	'zstar' False True False False False False False False 100.0 True True 0.004 50 000.0 False False 2000.0 600.0 100.0 600.0 False
kocean_nphysics_util_nml kocean_nphysics_util_nml kocean_nphysicsa_nml	vertical_coordinate rayleigh_damp_exp_from_bottom use_rayleigh_damp_table use_this_module debug_this_module use_nphysicsa use_nphysicsc use_this_module agm_closure agm_closure_baroclinic agm_closure_length_bczone agm_closure_length_fixed agm_clos	'zstar' False True True False False False False False False False 100.0 True True 0.004 50 000.0 False False 2000.0 600.0 100.0 0.07 100.0 600.0 False	'zstar' False True False False False False False False 100.0 True 0.004 50 000.0 False False 2000.0 600.0 100.0 600.0 False O.0

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				
See False See False See				
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 optics_morel_antoine enforce_sw_frac True True True optics_morel_antoine enead_cht use_this_module True true use_this_module Ealse False true use_shortwave_group and true use_shortwave_csiro true use_shortwave_group true use_shortwave_group true use_shortwave_group true use_shortwave_group true true true use_shortwave_group true true true true use_shortwave_group true true true true true true true true		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 &ocean_shortwave_jerlov_nml use_this_module False False &ocean_shortwave_nml use_shortwave_cirro False False use_shortwave_jerlov False False use_shortwave_jerlov False False use_shortwave_jerlov False False use_shortwave_jerlov False False use_this_module True True true true True	&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_on true False sigma_diffusion_on sigma_diffusivity_ratio True sigma_just_in_bottom_cell sigma_umax smooth_sigma_thickness True smooth_sigma_thickness True	&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	0.2	
	thickness_sigma_layer	100.0	
	thickness_sigma_max thickness_sigma_min	100.0 100.0	
	tmask_sigma_inin	False	
	tracer_mix_micom	True	
	use_this_module	False	False
	vel_micom	0.05	
&ocean_solo_nml	calendar	'NOLEAP'	'NOLEAP'
	date_init days	1, 1, 1, 0, 0, 0 30	1, 1, 1, 0, 0, 0 30
	dt_cpld	150	600
	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	F 1
Passan spansos valositu pml	use_this_module	False	False
&ocean_sponges_velocity_nml &ocean_submesoscale_nml	use_this_module coefficient_ce	False 0.05	False 0.05
xucean_submesustate_mill	coemcient_ce 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
	smooth_advect_transport	True	True
	smooth_advect_transport_num	4	_ 4
	smooth_hblt	False	False
	smooth_psi smooth_psi_num	True 3	True 3
	submeso_advect_flux	False	False
	submeso_advect_limit	True	True
	submeso_advect_upwind	True	True
	submeso_advect_zero_bdy	True	True
	submeso_diffusion	False	False
	submeso_diffusion_biharmonic	True	True
	submeso_diffusion_scale	10.0	10.0
	submeso_skew_flux	True	True
	use_hblt_equal_mld use_psi_leqacy	True False	True 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	70.0	70.0
	s_max_limit	42.0	42.0
	s_min	0.0	0.0
	s_min_limit	2.0	2.0
	t_max t_max_limit	55.0 32.0	55.0 32.0
	t_max_umit t_min	-20.0	- 20.0
	t_min_limit	-20.0 -5.0	20.0 5.0
	temperature_variable	'potential	'potential
		temp'	temp'
cocean_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	
	thickness_dzt_min_init thickness_method	10.0 'energetic'	'energetic'
&ocean_tracer_advect_nml	tnickness_method debug_this_module	False	False
xoccan_cracci_auvect_nint	read_basin_mask	False	False
&ocean_tracer_diag_nml	diag_step	576	576
A Court Land Col Landy Linite	do_bitwise_exact_sum	False	False
	tracer_conserve_days	30.0	30.0
&ocean_tracer_nml	age_tracer_max_init	0.0	0.0
	debug_this_module	False	False
	frazil_heating_after_vphysics	True	True
	frazil_heating_before_vphysics	False	False
	limit_age_tracer	True	True

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
Roccom wort kan 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
	do_ice_once 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 11 11	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	
	fileset_write	'single'	'single'	'single'	'multi'	'multi'	'multi'
	max_files_r	J	J	J		700	
	max_files_w					700	
	threading_read	'multi'	'multi'	'multi'	'multi'	'multi'	'multi'
0.5	threading_write	'single'	'single'	'single'	'multi'	'multi'	'multi'
&fms_nml	clock_grain domains_stack_size	'LOOP'	'LOOP' 115200	'LOOP'	'LOOP' 115200	'LOOP' 115200	'LOOP' 115200
	print_memory_usage		113200		113200	False	113200
&generic_tracer_nml	do_qeneric_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'	wnmett, 'wfiform'	'wfimelt', 'wfiform'	'wfimelt', 'wfiform'	wnmett, 'wfiform'	'wfimelt', 'wfiform'
			WILLOUILL		't_surf',	't_surf',	't_surf',
	fields out			L_SUIT.	L_Suit.		
	fields_out	't_surf', 's_surf',	't_surf',	't_surf', 's_surf',	's_surf',	's_surf',	
	fields_out	't_surf', 's_surf', 'u_surf',		's_surf', 'u_surf',	's_surf', 'u_surf',	's_surf', 'u_surf',	's_surf', 'u_surf',
	fields_out	't_surf', 's_surf', 'u_surf', 'v_surf',	't_surf', 's_surf', 'u_surf', 'v_surf',	's_surf', 'u_surf', 'v_surf',	's_surf', 'u_surf', 'v_surf',	's_surf', 'u_surf', 'v_surf',	's_surf', 'u_surf', 'v_surf',
	fields_out	't_surf', 's_surf', 'u_surf', 'v_surf', 'dssldx',	't_surf', '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',	's_surf', 'u_surf', 'v_surf', 'dssldx',
	fields_out	't_surf', 's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy',	't_surf', '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',	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy',
		't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil'	't_surf, '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'	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil'
	num_fields_in	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil'	't_surf, '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, 'vssldx', 'dssldy', 'frazil'	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil'
		't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil'	't_surf, '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'	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil'
	num_fields_in num_fields_out	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15	'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
&monin_obukhov_nml	num_fields_in num_fields_out send_after_ocean_update	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7	't_surf, '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	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7	's_surf', '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	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7	't_surf, '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	'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
&mpp_io_nml	num_fields_in num_fields_out send_after_ocean_update send_before_ocean_update neutral deflate_level shuffle	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False	't_surf, '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 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 True 5	's_surf', '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	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 4320	'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	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1	's_surf', '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	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False 4320 10.0	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 4320 100	'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 10.0	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 576 100	's_surf', '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	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False 4320 10.0 100.0	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 4320 1000	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True 4320 1000 1000	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 4320 1000	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 576 100 1000	's_surf', '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	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False 4320 10.0	't_surf, 's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 4320 100	'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 10.0	's_surf', 'u_surf', 'v_surf', 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 576 100	's_surf, 'u_surf, 'v_surf, 'dssldx', 'dssldy', 'frazil' 15 7 True False True 5 1 576 100

Group (continued)	Variable	original/ hogg_acces- som2 1deg jra55_ryf input pml	new_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf	new_acces- som2 025deg jra55_ryf input.nml	original/ hogg_acces- som2 01deg jra55_ryf input pml	new_acces- som2 01deg jra55_ryf input.nml
&ocean_barotropic_nml	barotropic_halo	•	10		10	•	10
40004	barotropic_time_stepping_a	True	True	True	True	True	True
		False					
							False
							576 8.0
							0.2
							0.2
							True
							False
							True
							False True
							False
							False
							0.01
	vel_micom_lap						0.05
							0.2
		True					True
8 ocean libra nml							False
&ocean_bbc_nml		0.001					True 0.001
		0.001					0.001
		False					
	cdbot_roughness_length		False	False	False	False	False
							True
							0.05
&ocean_bbc_ofam_nml			False	False	False	False	False
&OCEAN_DDC_OIAIN_HINL							
&ocean_bih_friction_nml			'oeneral'	'neneral'	'neneral'	'neneral'	'general'
&ocean_bih_tracer_nml		generat	generat		generat		generat
		False	False		False		False
	vel_micom			0.001		0.001	
&ocean_bihcst_friction_nml							False
&ocean_bihgen_friction_nml							False
	•						0.0
							0.0 0.0
							False
							0.0
							2.0
		True					True
		-					True
							2 10-8
							2×10^{-8} 5
							True
							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	Falso	False	Falso	False	Ealco
&ocean_coriolis_nml	use_this_module acor	False 0.5	False 0.5	False 0.5	False 0.5	False 0.5	False 0.5
COCCUIT-COTTOUS-LITTLE	use_this_module	True	True	True	True	True	True
&ocean_density_nml	eos_linear	False	False	False	False	False	False
•	eos_preteos10	True	True	True	True	True	True
	layer_nk	80	80	80	80	80	80
	neutralrho_max	1030.0	1038.0	1038.0	1038.0	1038.0	1038.0
	neutralrho_min	1020.0	1028.0	1028.0	1028.0	1028.0	1028.0
	potrho_max	1038.0 1028.0	1038.0 1028.0	1038.0 1028.0	1038.0 1028.0	1038.0 1028.0	1038.0 1028.0
&ocean_domains_nml	potrho_min max_tracers	1028.0	1028.0	1028.0	1028.0	1028.0	1028.0
&ocean_form_drag_nml	cprime_aiki	0.6	J	J	J	,	J
	use_this_module	False	False	False	False	False	False
&ocean_frazil_nml	debug_this_module		False	False	False	False	False
	frazil_only_in_surface		False	False	False	False	False
	freezing_temp_preteos10		True	True	True	True	True
	freezing_temp_simple	True	False	False	False	False	False
2 accord gride and	use_this_module	True	True	True	True	True	True
&ocean_grids_nml	debug_this_module	True	False	False	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 fraction_increment	0 1.0					
	secs_to_increment	1800					
	use_this_module	False	False	False	False	False	False
&ocean_increment_tracer_nml	days_to_increment	0					
	fraction_increment	1.0					
	secs_to_increment	1800	Falsa	False	Falsa	False	Falsa
&ocean_increment_velocity_nml	use_this_module days_to_increment	False 0	False	False	False	False	False
woccan_merement_vetocity_mint	fraction_increment	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 use_this_module	False False	False False	False False	False False	False False	False False
&ocean_lapcst_friction_nml &ocean_lapgen_friction_nml	bottom_5point	True	True	raise	raise	raise	raise
Coccan_tapgen_metion_mit	k_smag_aniso	0.0	0.0				
	k_smag_iso	0.0	0.0	2.0		2.0	
	ncar_only_equatorial	True	True				
	restrict_polar_visc	True	True				
	restrict_polar_visc_lat	60.0	60.0				
	restrict_polar_visc_ratio use_this_module	0.35 True	0.35 True	False	False	False	False
	vconst_1	8 000 000.0	8 000 000.0	i atse	i atse	raise	1 0130
	vconst_2	0.0	0.0				
	vconst_3	0.8	0.8				
	vconst_4	5×10^{-9}	5×10^{-9}				
	vconst_5	3	3				
	vconst_6	300 000 000.0	300 000 000.0				
	vconst_7 vel_micom_iso	100.0 0.1	100.0 0.1				
	viscosity_ncar	True	True				
	viscosity_ncar_2000	False	False				
	viscosity_ncar_2007	True	True				
	viscosity_scale_by_rossby	True	True				
	viscosity_scale_by_rossby_power	4.0	4.0				
&ocean_mixdownslope_nml	debug_this_module mixdownslope_mask_qfdl	False False	False False	False		False	
	mixdownslope_npts	4	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 <mark>dt_ocean</mark>	False 3600	False 3600	False 1200	False 1200	False 150	False 150
	io_layout	4, 3	4, 3	6, 5	6,5	10, 15	10, 15
	layout	16,15	16, 15	48, 40	48, 40	80,75	80, 75
	surface_height_split	1	1	1	1	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	Tuus	False	False	False	False	False
	use_rayleigh_damp_table use_this_module	True True	True True	True True	True True	True True	True True
&ocean_nphysics_nml	debug_this_module	False	False	False	False	False	False
	use_nphysicsa	False	False	False	False	False	False
	use_nphysicsb	False	False	False	False	False	False
	use_nphysicsc	True	True	False	False	False	False
O a series and the series are the series and the series and the series are the se	use_this_module	True	True	False	False	False	False
&ocean_nphysics_util_nml	agm closure	600.0	600.0 True	100.0	100.0 True	100.0 True	100.0 True
	agm_closure agm_closure_baroclinic	True True	True	True True	True	True	True
	agm_closure_baloctific	0.004	0.004	0.004	0.004	0.004	0.004
	agm_closure_eady_ave_mixed	True	True				,,,,,
	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 Falso	0.0 Falso				
	agm_closure_eden_greatbatch agm_closure_grid_scaling	False True	False True				
	agm_closure_length	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
	agctosa.c_terigui_bt2011c	. 4.50	. 4150	. 4150	· uisc	. 4130	raise

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 PROCEEDING	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		False	False	False	False	False
	do_bitwise_exact_sum		False	False	False	False False	False
	do_flux_correction land_model_heat_fluxes		False False	False False	False False	False	False False
	max_delta_salinity_restore	0.5	0.5	0.5	0.5	0.5	0.5
	max_ice_thickness	8.0	0.0	0.0	0.0	0.0	0.0
	read_restore_mask	False	False	False	False	False	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
	salt_restore_as_salt_flux salt_restore_tscale	True 15.0	True 60.0	True 60.0	True 60.0	True 60.0	True 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	2.0	False	False	False	False	False
	use_waterflux	True	True	True	True	True	True
	waterflux_tavg	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
	<pre>zero_net_water_correction zero_net_water_couple_restore</pre>	True	False True	False True	False True	False True	False 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
Paccan chartways aful am	zmax_pen debuq_this_module	7000 False	False	7000 False	False	False	False
&ocean_shortwave_gfdl_nml	enforce_sw_frac	True	True	True	True	True	True
	optics_manizza	True	True	True	True	True	True
	optics_morel_antoine	IIde	False	False	False	False	False
	read_chl	False	True	True	True	True	True
	sw_pen_fixed_depths	False					
	use_this_module	False	True	True	True	True	True
	zmax_pen	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
&ocean_shortwave_nml	use_shortwave_csiro use_shortwave_qfdl	True	False	False	False	False	False
	use_shortwave_jerlov	False False	True False	True False	True False	True False	True False
	use_this_module	True	True	True	True	True	True
&ocean_sigma_transport_nml	sigma_advection_on	False	iruc	False	iiuc	False	nuc
a see an as grown and see a	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_umax	0.01		0.01		0.01	
	smooth_sigma_thickness	True		True		True	
	smooth_sigma_velocity	True		True		True	
	smooth_velmicom thickness_sigma_layer	0.2 100.0		0.2 100.0		0.2 100.0	
	thickness_sigma_tayer	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 False	1460	31	31	30	30
	debug_this_module dt_cpld	3600	3600	1200	1200	150	600
	hours	0 0	0000	1200	1200	150	000
	minutes	0	0	0	0	0	0
	months	0	0	0	0	0	0
		-	-		-		
	seconds	0	0	0	0	0	0
		0 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 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 True	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 FOR CAMPACITIES	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	ruse		
&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
<u>re</u>	edsea_gulfbay_sfix sign_stflx						1.0	True 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	lat_low_bgdiff	^	^		^		20.0			
&coupler_nml	atmos_npes atmos_nthreads	0 4	0	0	0	0				
	calendar	'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 do_ice	True True	True	True	True	True				
	do_lte	True	False	False	False	False				
	do_ocean	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 True	0 True	0 True	0 True	0 True				
&diag_integral_nml	use_lag_fluxes file_name	True 'diag	True 'diag	True 'diag	True 'diag	True 'diag				
&ulay_IIILegrat_IIIIL	iile_iiaiile	integral.out'	integral.out'	integral.out'	integral.out'	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
is	sue_oor_warnings	False	False	False	False	False	False	True	True	True
	max_axes	200	100	300	300	300				
	max_files max_input_fields	50 800	699	1000 700	1000 700	1000 700				
m	nax_num_axis_sets	200	100	40	40	40				
	max_output_fields	1300	699	700	700	700				
mix_snapsh	not_average_fields	False	False							
&flux_exchange_nml	debug_stocks	False	False							
	vert_stocks_report	True	True		_	True				
			F 1	-						
	rea_weighted_flux	False	False	True	True	irue				
do_a	rea_weighted_flux nblocks		False	True	Irue					
do_a	rea_weighted_flux nblocks hecksum_required	False				False	'sinale'	'sinale'	'multi'	'multi'
do_a	rea_weighted_flux nblocks	False	False 'single' 200	True 'multi' 700	'multi'		'single'	'single'	'multi'	'multi'
do_a	rea_weighted_flux nblocks hecksum_required fileset_write max_files_r max_files_w	False 4 300 300	'single' 200 200	'multi' 700 700	'multi' 700 700	False 'multi' 700 700		-		
do_a	rea_weighted_flux nblocks hecksum_required fileset_write max_files_r max_files_w threading_read	False 4 300	'single' 200 200 'multi'	'multi' 700 700 'multi'	'multi' 700 700 'multi'	False 'multi' 700 700 'multi'	'multi'	'multi'	'multi'	'multi'
do_a &fms_io_nml <u>c</u>	rea_weighted_flux nblocks hecksum_required fileset_write max_files_r max_files_w threading_read threading_write	False 4 300 300 'multi'	'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'
do_a &fms_io_nml ©	rea_weighted_flux nblocks hecksum_required fileset_write max_files_r max_files_w threading_read threading_write clock_grain	False 4 300 300 'multi' 'COMPONENT'	'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' 'LOOP'	'multi' 'multi' 'LOOP'	'multi' 'multi' 'LOOP'
do_a &fms_io_nml	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 4 300 300 'multi' 'COMPONENT' 5000000	'single' 200 200 'multi' 'single' 'LOOP' 8000000	'multi' 700 700 'multi' 'multi'	'multi' 700 700 'multi' 'multi'	False 'multi' 700 700 'multi' 'multi'	'multi' 'single'	'multi' 'single'	'multi' 'multi'	'multi' 'multi'
&fms_io_nml &	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 4 300 300 'multi' 'COMPONENT' 5000000	'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' 'LOOP'	'multi' 'multi' 'LOOP'	'multi' 'multi' 'LOOP'
&fms_io_nml & &fms_nml & & & & & & & & & & & & & & & & & & &	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 4 300 300 'multi' 'COMPONENT' 5000000	'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	'multi' 'single'	'multi' 'single' 'LOOP'	'multi' 'multi' 'LOOP'	'multi' 'multi' 'LOOP'
&fms_io_nml & &fms_nml & & & & & & & & & & & & & & & & & & &	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 4 300 300 300 'multi' 'COMPONENT' 5000000 0 False True True	'single' 200 200 'multi' 'single' 'LOOP' 8000000 0 False True True	'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' 'LOOP'	'multi' 'multi' 'LOOP'	'multi' 'multi' 'LOOP'
&fms_io_nml & &fms_nml d pri &generic_tracer_nml &ice_albedo_nml	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 do_generic_topaz do_generic_tracer	False 4 300 300 300 'multi' 'COMPONENT' 5000000 0 False True True 10.0	'single' 200 200 'multi' 'single' 'LOOP' 8000000 0 False True True	'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False False False	'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False False False	False 'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False False False	'multi' 'single'	'multi' 'single' 'LOOP'	'multi' 'multi' 'LOOP'	'multi' 'multi' 'LOOP'
&fms_io_nml & &fms_nml & & & & & & & & & & & & & & & & & & &	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 do_generic_topaz do_generic_tracer t_range add_diurnal_sw	False 4 300 300 300 'multi' 'COMPONENT' 5000000 0 False True True 10.0 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' 'LOOP'	'multi' 'multi' 'LOOP'	'multi' 'multi' 'LOOP'
&fms_io_nml & &fms_nml d pri &generic_tracer_nml &ice_albedo_nml	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 do_generic_topaz do_generic_tracer	False 4 300 300 300 'multi' 'COMPONENT' 5000000 0 False True True 10.0	'single' 200 200 'multi' 'single' 'LOOP' 8000000 0 False True True	'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False False False	'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False False False	False 'multi' 700 700 'multi' 'multi' 'LOOP' 115200 False False False	'multi' 'single'	'multi' 'single' 'LOOP'	'multi' 'multi' 'LOOP'	'multi' 'multi' 'LOOP'

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 False	True False	True	True False	False True	True False	False True	False True	False True
smooth_pbot_t_laplacian truncate_eta	False	False	False False	False	False	False	False	False	False
use_legacy_barotropic_halos	rube	raise	False	False	False	ruise	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 1.0	0.05 1.0	0.05 0.5	0.05 0.5	0.05 0.5	0.05 0.2	0.05 0.2	0.05 0.2	0.05 0.2
<pre>vel_micom_lap_diag verbose_truncate</pre>	True	True	U.5 True	0.5 True	0.5 True	True	True	True	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	1 0130	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	False
&ocean_bbc_ofam_nml read_tide_speed uresidual2_max						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
&ocean_bihcst_friction_nml use_this_module	False	False	0.001 False	0.001 False	0.001 False	False	False	False	False
&ocean_bihgen_friction_nml	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
eq_vel_micom_iso	0.0	0.0 False	0.0	0.0	0.0	0.0 False	0.0 False	0.0	0.0 False
equatorial_zonal k_smag_aniso	False 0.0	False 0.0	False 0.0	False 0.0	False 0.0	False 0.0	False 0.0	False 0.0	False 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	2	2	False	True	True	2	True	True	True
ncar_rescale_power ncar_vconst_4	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}	2×10^{-8}
ncar_vconst_5	5	2 \(\) 10	5	5	5	5	5	5	5
use_this_module	True	True	True	True	True	True	True	True	True
vel_micom_aniso	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
vel_micom_bottom vel_micom_iso	0.01 0.04	0.01 0.04	0.0 0.0	0.0 0.0	0.0 0.0	0.01 0.04	0.0 0.0	0.0 0.0	0.0 0.0
visc_crit_scale	0.04	0.04	1.0	1.0	1.0	0.04	1.0	1.0	1.0
&ocean_convect_nml convect_full_scalar	0,23	ULS.	True	True	True	False			1.0
convect_full_vector	_	_	False	False	False	True	_	_	
use_this_module	False	False	False	False	False	False	False	False	False
&ocean_coriolis_nml acor use_this_module	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 True
&ocean_density_nml eos_linear	False	nuc	False	False	False	iluc	False	False	False
eos_preteos10	True		True	True	True		True	True	True
layer_nk	80	80	80	80	80	80	80	80	80
linear_eos neutralrho_max	1030.0	False 1030.0	1038.0	1038.0	1038.0	False 1030.0	1038.0	1038.0	1038.0
neutrairno_max neutralrho_min	1030.0	1030.0	1038.0	1038.0	1038.0	1030.0	1038.0	1038.0	1038.0
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	Ealea	Ealco	Ealea	0.6 False	Ealea	Ealea	Eales
use_this_module	False	False	False	False	False	False	False	False	False

Group (continued) Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ 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_frazil_nml debug_this_module	False	False	False	False	False		False	False	False
frazil_only_in_surface	True	True	True	True	True	False	False	False	False
freezing_temp_accurate freezing_temp_preteos10		False				True	True	True	True
freezing_temp_simple	True	True	True	True	True	False	False	False	False
use_this_module	True	True	True	True	True	True	True	True	True
&ocean_grids_nml debug_this_module	True	True	False	False	False	True	False	False	False
do_bitwise_exact_sum	True	False				False			
read_rho0_profile &ocean_increment_eta_nml	False	raise				raise			
days_to_increment						· ·			
fraction_increment						1.0			
secs_to_increment	F 1	F 1	F 1	F 1		3600	F.1		
use_this_module &ocean_increment_tracer_nml	False	False	False	False	False	False	False	False	False
days_to_increment						U			
fraction_increment						1.0			
secs_to_increment						3600			
use_this_module	False	False	False	False	False	False	False	False	False
&ocean_increment_velocity_nml days_to_increment fraction_increment						1.0			
fraction_increment 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'	'general'	'general'
scheme &ocean_lap_tracer_nml use_this	False	False	False	False	False	False	False	False	False
module &ocean_lapcst_friction_nml use_this	False	False	False	False	False	False	False	False	False
module &ocean_lapgen_friction_nml	True	True				True	True		
bottom_5point k_smag_aniso	0.0	0.0				0.0	0.0		
k_smaq_iso	0.0	0.0	2.0	2.0	2.0	0.0	0.0		
ncar_only_equatorial						True	True		
restrict_polar_visc	True	True				True	True		
restrict_polar_visc_lat	60.0 0.35	60.0 0.35				60.0 0.35	60.0 0.35		
restrict_polar_visc_ratio use_this_module	True	True	False	False	False	True	True	False	False
vconst_1	nuc	iiuc	raise	1 4 13 6	ruse	8 000 000.0	8 000 000.0	raise	rusc
vconst_2						0.0	0.0		
vconst_3						0.8	0.8		
vconst_4						5×10^{-9}	5×10^{-9}		
vconst_5 vconst_6						3 300 000 000.0	3 300 000 000.0		
vconst_7						100.0	100.0		
vel_micom_iso	0.1	0.1				0.1	0.1		
viscosity_ncar	False	False				False	True		
viscosity_ncar_2000 viscosity_ncar_2007						False True	False True		
viscosity_rical_zoo7 viscosity_scale_by_rossby	True	True				True	True		
viscosity_scale_by_rossby_power	4.0	4.0				4.0	4.0		
&ocean_mixdownslope_nml debug_this_module	False	False	False	False	False	False	False		
mixdownslope_mask_gfdl	True	True				False	False		
mixdownslope_npts	4 True	4 True				4 False	4 Falso		
read_mixdownslope_mask use_this_module	True True	True True	False	False	False	False True	False True	False	False
&ocean_model_nml baroclinic_split	1	1	1	1	1	1	1	1	1
barotropic_split	80	80	80	80	60	80	80	80	80
cmip_units	False		_	_		True	True	True	True
debug	False 7200	False 7200	False	False	False	False	False	False	False
dt_ocean impose_init_from_restart	True	False	3600	1800	150	3600	3600	1200	150
io_layout	1,4	i disc		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
time_tendency	'twolevel'	'twolevel'	'twolevel'	'twolevel'	'twolevel'	'twolevel'	'twolevel'	'twolevel'	'twolevel'
vertical_coordinate &ocean_momentum_source_nml rayleigh_damp_exp_from_bottom	'zstar'	'zstar'	'zstar' False	'zstar' False	'zstar' False	'zstar'	'zstar' False	'zstar' False	'zstar' False
use_rayleigh_damp_table			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	False	False	False	False	False	False	False	False	False
agm_closure_lower_depth agm_closure_max	2000.0 800.0	2000.0 800.0	2000.0 600.0	2000.0 600.0	2000.0 600.0	2000.0 600.0	2000.0 600.0	2000.0 600.0	2000.0 600.0
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	Tuise	raise	i disc	1 4 5 5	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	Falsa	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		
<mark>smooth_psi</mark>	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		
	turb_blayer_min ise_this_module	50.0 True	False	False	False	False	50.0 True	50.0 True	False	False
&ocean_operators_nml	isc_tins_module	True	ratse	False	False	False	Huc	False	False	False
use_legacy_div_ud										
&ocean_overexchange_r this_module	_	False	False	False	False	False	False	False	False	False
overexch	_check_extrema overexch_npts	False 4	False 4	4	4	4	False 4	4	4	4
overe	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
	ise_this_module	False	False	False	False	False	False	False	False	False
&ocean_overflow_nml debug_this_module		False	False	False	False	False	False			
	ise_this_module	False	False	False	False	False	False	False	False	False
&ocean_overflow_ofp_nidebug_this_module	ml			False	False	False				
	diag_step			4320	4320	43200				
do_entraii	nment_para_ofp do_mass_ofp			False True	False True	False True				
fra	ac_exchange_src			1.0	1.0	1.0				
	x_vol_trans_ofp			10 000 000.0	10 000 000.0	10 000 000.0				
	ise_this_module			False	False	False		False	False	False
&ocean_polar_filter_nml module	l 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_thickn		Falsa	F-I	Falsa	Falsa	Falsa	F-1	F-I	Falsa	Falsa
deo discharge_combi	ug_this_module	False False	False True	False	False	False	False	False	False	False
	wise_exact_sum	True	iiuc							
	ver_diffuse_salt	False	False	False	False	False	False	True	True	True
	er_diffuse_temp rusion_thickness	False 0.0	False 0.0	False 0.0	False 0.0	False 0.0	False 0.0	True 0.0	True 0.0	True 0.0
	river_diffusivity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	ertion_thickness	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
	ertion_thickness	40.0	40.0	_	_	_	_	_	_	_
&ocean_riverspread_nm	ıse_this_module	True	True	True 'false'	True 'false'	True 'false'	True	True	True	True
debug_this_module	·			.idi3C	.iaisc	.iauc				
	ise_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_sf	c_temp_salt_eta avg_sfc_velocity	True True	True True	True True	True True	True True	True True	True True	True True	True True
	calvingspread	False	False	False	False	False	Huc	False	False	False
	wise_exact_sum			False	False	False		False	False	False
	_flux_correction	True — 10.0		False	False	False		False	False	False
	a_restore_tscale lt_concentration	-10.0					0.005			
	del_heat_fluxes	True	False	False	False	False	0.003	False	False	False
	_salinity_restore			0.5	0.5	0.5	0.5	0.5	0.5	0.5
	ax_ice_thickness ad_restore_mask	8.0	8.0	1.0 False	1.0 False	1.0 False	8.0 False	0.0 False	0.0 False	0.0 False
	store_mask_gfdl			False	False	False	False	False	False	False
	runoff_salinity			0.0	0.0	0.0	0.0	0.0	0.0	0.0
	runoffspread	False	False			2.2			2.2	2.2
	correction_scale ore_as_salt_flux	0.0		0.0 True	0.0 True	0.0 True	True	0.0 True	0.0 True	0.0 True
	t_restore_tscale	-10.0	-10.0	60.0	60.0	60.0	15.0	60.0	60.0	60.0
salt_re	store_under_ice			True	True	True	True	True	True	True
	correction_scale	0.0								
	correction_scale correction_scale	0.0 1.0								
	p_restore_tscale	-10.0	-10.0	-10.0	-10.0	-10.0	-1.0	-10.0	-10.0	-10.0
	m_for_sea_level	True	True	False	False	False		False	False	False
usa watarila	use_waterflux	True	True	True	True	True	True	True	True	True
use_waterflux_c	x_override_evap	False False								
	c_override_evap	False								
	waterflux_tavg	False	False				False			
	ero_heat_fluxes ome_eta_restore	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
zero_net_salt_co	orrection			False	False	False		False	False	False
zero_net_salt	t_restore			True	True	True	True	True	True	True
zero_net_water_co				False	False	False	_	False	False	False
zero_net_water_couple				True True	True True	True True	True True	True True	True True	True
zero_net_water zero_net_water				True	True	True	True	True	True	True True
	ie_fluxes			nuc	iiuc	False	iiuc	iiuc	nuc	iiuc
zero_rive						False				
zero_runo						True				
zero_surfac				False	False	False	False	False	False	False
&ocean_sbc_ofam_nml	er_tluxes			False	False	False	False False	False	False	False
restore_mask_ofam							raisc			
river_ter	np_ofam						False			
&ocean_shortwave_csiro_nml				True			True			
read_depth	_module	False	False	True	False	False	True	False	False	False
	max_pen	raise	raise	7000	raise	raise	7000	raise	raise	raise
&ocean_shortwave_gfdl_nml		False	False	False	False	False	False	False	False	False
this_module										
	_sw_frac	True	True	True	True	True	True	True	True	True
•	manizza	True	True	True	True	True	True	True	True	True
optics_morel	ide_f_vis	False False	False False	False	False	False		False	False	False
	read_chl	False	False	False	True	True	False	True	True	True
sw_pen_fixed	d_depths						False			
use_this	_module	True	True	False	True	True	False	True	True	True
	max_pen	200.0	200.0	300.0	300.0	300.0	200.0	300.0	300.0	300.0
&ocean_shortwave_jerlov_nml this_module	use	False	False	False	False	False	False	False	False	False
&ocean_shortwave_nml use_shortwave_csiro	6.11	False	False	True	False	False	True	False	False	False
use_shortw		True False	True False	False False	True False	True False	False False	True False	True False	True False
use_shortwa use_this	•	True	True	True	True	True	True	True	True	True
&ocean_sigma_transport_nml sigma_advection_on	inodute	False	False	False	False	False	False	nuc	nuc	nuc
sigma_advection_	sqs_only	False	False	False	False	False	False			
sigma_diffu	usion_on	True	True	True	True	True	True			
sigma_diffusiv	•	$1 imes 10^{-6}$	$1 imes 10^{-6}$	1×10^{-6}	1×10^{-6}	$1 imes 10^{-6}$	$1 imes 10^{-6}$			
sigma_just_in_bot		True	True	True	True	True	True			
sign smooth_sigma_t	na_umax	0.01 True	0.01 True	0.01 True	0.01 True	0.01 True	0.01 True			
smooth_sigma_c		True	True	True	True	True	True			
smooth_v		0.2	0.2	0.2	0.2	0.2	0.2			
thickness_sign		100.0	100.0	100.0	100.0	100.0	100.0			
thickness_sig	ma_max	100.0	100.0	100.0	100.0	100.0	100.0			
thickness_sig		100.0	100.0	100.0	100.0	100.0	100.0			
	igma_on ·	False	False	False	False	False	False			
tracer_mix	_module	True True	True True	True False	True False	True False	True True	False	False	False
	L_micom	0.05	0.05	0.05	0.05	0.05	0.05	False	False	raise
	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						3600	3600	1200	600
	hours minutes						0	0	0	0
	months						12	0	0	0
	seconds						0	0	0	0
_	years							0	0	0
module	se_this	False	False	False	False	False	False	False	False	False
&ocean_sponges_tracer_nml damp_coeff_3d		False	False	False	False	False	False			
use_this		False	False	False	False	False	False	False	False	False
&ocean_sponges_velocity_nml	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 debug_this	module	False	False	False	False	False	False	False	False	False
front_leng		5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0	5000.0
front_length_deform		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
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	raise	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	ing_roughness_amp	True	True	True	True	True	True	True	True	True
reading	g_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>u</u>	ise_legacy_methods	True		False	False	False		False	False	False
	use_this_module	True	True	True	True	True	True	True	True	True
	se_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_ni	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							
si	how_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'
make_e	exchange_reproduce	True	True	False	False	False		False	False	False
	nsubset			16	16	16		16	16	16
	xgrid_log			False	False	False				

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

	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
0				0.15	0.15	015	file.000000.ou	0.15	0.15	015
&auscom_ice_nml	aice_cutoff hk_fields_period			0.15	0.15	0.15	0.15 1	0.15	0.15	0.15
	fields_start_time						0			
CHICA	chk_i2o_fields			False	False	False	False	False	False	False
	chk_o2i_fields			False	False	False	False	False	False	False
	do_ice_once			False	False	False	False	False	False	False
	dt_cpl			3600	3600	3600	1800	1800	150	600
	fixmeltt frazil_factor			False 1.0	False 1.0	False 1.0	False 1.0	False 1.0	False 1.0	False 1.0
	iceform_adj_salt			False	False	False	False	False	False	False
	icemlt_factor			1.0	1.0	1.0	1.0	1.0	1.0	1.0
	ige						345			
	igs						328			
	ire1						324			
	ire2						331 314			
	irs1 irs2						325			
	jge						198			
	jgs						189			
	jre1						196			
	jre2						180			
	jrs1						169			
	jrs2			_	-	г	169	г		-
	kmxice ksmax			5	5	5	5 5	5	5	5
	limit_srfstress						False			
	mstress						2.0			
	pop_icediag			True	True	True	True	True	True	True
reds	sea_gulfbay_sfix				True	True	False			
	sfix_hours						12			
	sign_stflx tlthk0			1.0	1.0	1.0	1.0 10.0	1.0	1.0	1.0
	tmelt			-0.216	-0.216	-0.216	-0.216	-0.216	-0.216	-0.216
	use_ioaice			True	True	True	True	True	True	True
&bg_diff_lat_dependenc bg_diff_eq	ce_nml			1×10^{-6}	1×10^{-6}					
	lat_low_bgdiff			20.0	20.0					
&coupler_nml	atmos_npes	0	0							
	atmos_nthreads calendar	4 'NOLEAP'	'NOLEAP'							
	check_stocks	NULEAP 0	NULEAP 0							
	concurrent	True	False							
	current_date	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0							
	days	0	2							
	de execute									
	do_atmos	True	False							
	do_flux	True								
	do_flux do_ice	True True	True							
	do_flux do_ice do_land	True True True	True False							
	do_flux do_ice do_land do_ocean	True True True True	True False True							
	do_flux do_ice do_land	True True True	True False							
	do_flux do_ice do_land do_ocean dt_atmos	True True True True 1800 7200	True False True 7200							
	do_flux do_ice do_land do_ocean dt_atmos dt_cpld	True True True True 1800 7200	True False True 7200 7200							
	do_flux do_ice do_land do_ocean dt_atmos dt_cpld months	True True True True 1800 7200	True False True 7200 7200 0							
&data_override_nml debug_data_override	do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes	True True True True True 1800 7200 12 96	True False True 7200 7200 0				False			
debug_data_override &diag_integral_nml	do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes grid_center_bug file_name	True True True True 1800 7200 12 96 True	True False True 7200 7200 0 0 True				False False			
debug_data_override &diag_integral_nml	do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes grid_center_bug file_name output_interval	True True True 1800 7200 12 96 True	True False True 7200 7200 0 0 True 'diag integral.out'							
debug_data_override &diag_integral_nml	do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes grid_center_bug file_name	True True True True 1800 7200 12 96 True	True False True 7200 7200 0 0 True							
debug_data_override &diag_integral_nml &diag_manager_nml append_pelist_name	do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes grid_center_bug file_name output_interval time_units	True True True 1800 7200 12 96 True	True False True 7200 7200 0 0 True 'diag integral.out'				False False True			
debug_data_override &diag_integral_nml &diag_manager_nml append_pelist_name	do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes grid_center_bug file_name output_interval time_units conserve_water g_diag_manager	True True True 1800 7200 12 96 True	True False True 7200 7200 0 0 True 'diag integral.out'			True	False False True True	True		True
debug_data_override &diag_integral_nml &diag_manager_nml append_pelist_name debug debug_data_override	do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes grid_center_bug file_name output_interval time_units conserve_water g_diag_manager o_diag_field_log	True True True 1800 7200 12 96 True 'diag integral.out' 1.0 'days'	True False True 7200 7200 0 True 'diag integral.out' 1.0 'days'		Falsa		False False True True False		Felix	
debug_data_override &diag_integral_nml &diag_manager_nml append_pelist_name debug debug_data_override	do_flux do_ice do_land do_ocean dt_atmos dt_cpld months ocean_npes use_lag_fluxes grid_center_bug file_name output_interval time_units conserve_water g_diag_manager	True True True 1800 7200 12 96 True	True False True 7200 7200 0 0 True 'diag integral.out'	False	False	True True	False False True True	True True	False 300	True 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.oi	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		1000	
	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	oshot_average_fields	False	False				False			
	oor_warnings_fatal prepend_date						False True			
regio	n_out_use_alt_value						True			
	use_cmor						False			
	write_bytes_in_file						False			
&flux_exchange_nm	l debug_stocks divert_stocks_report	False True	False True							
	_area_weighted_flux	False	False							
40.	nblocks	4	Tuise							
&fms_io_nml	checksum_required						True		False	
	debug_mask_list						False			
	dr_set_size fileset_write		'single'	'single'	'single'	'single'	10 'single'	'multi'	'multi'	'multi'
	fms_netcdf_override		Siligle	single	Siligle	Siligle	True	mutti	mutti	IIIulli
,	fms_netcdf_restart						True			
	format						'netcdf'			
	iospec_ieee32						", 'N',			
	max_files_r	300	200				'ieee_32' 40		700	
	max_files_w	300	200				40		700	
	print_chksum	300	200				False		700	
	read_all_pe						True			
	read_data_bug						False			
show_open_na	threading_read	'multi'	'multi'	'multi'	'multi'	'multi'	False 'multi'	'multi'	'multi'	'multi'
	threading_write	mutu	'single'	'single'	'single'	'single'	'single'	'multi'	'multi'	'multi'
	time_stamp_restart			9		5	True			
&fms_nml	clock_flags						'NONE'			
	clock_grain domains_stack_size	'COMPONENT' 5000000	'LOOP' 8000000	'LOOP'	'L00P'	'LOOP' 115200	'LOOP' 0	'LOOP' 115200	'LOOP' 115200	'LOOP' 115200
	iospec_ieee32	3000000	8000000			113200	"; 'N',	113200	113200	113200
	103pec=1ece32						'ieee_32'			
ŗ	orint_memory_usage						False		False	
	read_all_pe	0	0				True			
	stack_size warning_level	0	0				0 'warning'			
&generic_tracer_nm		False	False				waitiiig		False	
	do_generic_topaz	True	True						False	
	do_generic_tracer	True	True						False	
&get_cal_time_nml							True			
allow_calendar_conv &horiz_interp_nml	reproduce_siena						False			
&ice_albedo_nml	t_range	10.0	10.0				1 0130			
&ice_model_nml	add_diurnal_sw	False	True							
	alb_ice	0.65	0.615							
	alb_sno	0.85 500 000.0	0.825							
	channel_viscosity cm2_bugs	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	6							
	spec_ice	False 1.0	False 10.0							
	t_range_melt wd_turn	1.0 0.0	0.0							
&icebergs_nml	mu_tuill	0.0	0.0							
bergy_bit_erosion_fr										
	debug	_	False							
make	e_calving_reproduce	True	True							
	parallel_reprod		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.oi	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	i	False				iile.uuuuuu.ui			
sicn_shif		0.1							
speed_limi									
time_average_weigh traj_sample_hrs		0							
use_operator_splitting		True							
use_roundoff_fix	•								
verbose		False							
verbose_hrs &mom_oasis3_interface_nml fields_ir		2400	'u_flux',	'u_flux',	'u_flux',	'u_flux',	'u_flux',	'u_flux',	'u_flux',
CHIOIL-06353_INCHOCC_IIII			'v_flux', 'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof', 'p', 'aice',	'v_flux', 'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof, 'p', 'aice',	'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof,'p', 'aice',	'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof', p', 'aice',	'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof, 'p', 'aice',	'v.flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw.flux', 'q_flux', 't_flux', 'lw_flux', 'runof,'p', 'aice',	'v_flux', 'lprec', 'fprec', 'salt_flx', 'mh_flux', 'sw_flux', 'q_flux', 't_flux', 'lw_flux', 'runof, 'p', 'aice',
			'wfimelt',	'wfimelt',	'wfimelt',	'wfimelt',	'wfimelt',	'wfimelt',	'wfimelt',
fields_ou			'wfiform' 't_surf',	'wfiform' 't_surf',	'wfiform' 't_surf',	'wfiform' 't_surf',	'wfiform' 't_surf',	'wfiform' 't_surf',	'wfiform' 't_surf',
netus_ou			's_surf',	's_surf',	's_surf',	's_surf',	's_surf',	's_surf',	's_surf',
			'u_surf',	'u_surf',	'u_surf',	'u_surf',	'u_surf',	'u_surf',	'u_surf',
			'v_surf',	'v_surf',	'v_surf',	'v_surf',	'v_surf',	'v_surf',	'v_surf',
			'dssldx',	'dssldx',	'dssldx',	'dssldx',	'dssldx',	'dssldx',	'dssldx',
			'dssldy', 'frazil'	'dssldy', 'frazil'	'dssldy', 'frazil'	'dssldy', 'frazil'	'dssldy', 'frazil'	'dssldy', 'frazil'	'dssldy', 'frazil'
num_fields_ir	i		15	15	15	15	15	15	15
num_fields_ou			7	7	7	7	7	7	7
send_after_ocean_update send_before_ocean_update			True False	True False	True False	True False	True False	True False	True False
&monin_obukhov_nml neutra		True	raise	raise	True	raise	True	True	True
rich_cri									
stable_option									
&mpp_io_nml deflate_leve					5	-1	5	5	5
global_field_on_root_pe header_buffer_va io_clocks_or	l I					True 16384 False			
shuffle &ocean_adv_vel_diag_nml diag_ster		12	120	4320	4320	4320	4320	1 576	576
&ocean_adv_vel_diag_nml diag_step large_cfl_value		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
verbose_cf	l False	False	False	True	True	True	True	True	True
&ocean_advection_velocity_nml constant_advection_velocity debug_this_module	s.					False False			
inflow_nboundary						False			
max_advection_velocity		0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5
read_advection_transpor read_advection_velocity						False False			
&ocean_albedo_nml	5	2			2	raise	2	2	2
ocean_albedo_option									
&ocean_barotropic_nml alpha						0.948			
barotropic_halo barotropic_leap_froo		False	False	10	10	10	10	10	10
barotropic_teap_frog barotropic_pred_cor	<u> </u>	True	True						
barotropic_time_stepping_a	True			True	True	True	True	True	True
barotropic_time_stepping_t		-	-	False	False	False	False	False	False
barotropic_time_stepping_mom4p0 barotropic_time_stepping_mom4p1		True False	True False						
debug_this_module		False	False	False	False	False	False	False	False
diag_ster	1200	12	120	4320	4320	4320	4320	576	576
do_bitwise_exact_sum		0.0	0.0	0.0	0.0	False	0.0	0.0	0.0
eta_max eta_offse		8.0	8.0	8.0	8.0	$8.0 \\ 1 \times 10^{-12}$	8.0	8.0	8.0
frac_crit_cell_heigh		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
geoid_forcing	i	0.2	Ü.	0.2	0.2	False	0.2	Ü.E	0.2
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-I		Falsa	False	F-I	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	Т	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
							file.000000.oı			
	eutralrho_max	1030.0 1020.0	1030.0 1020.0	1030.0 1020.0	1030.0 1020.0	1038.0 1028.0	1038.0	1038.0 1028.0	1038.0 1028.0	1038.0 1028.0
	eutralrho_min m_121_passes	1020.0	1020.0	1020.0	1020.0	1028.0	1028.0 1	1028.0	1028.0	1028.0
Hu	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			
ŀ	rhoO_density						False			
	s_test						20.0			
	smax_diag						-1.0			
	nin_in_column						False			
smootn_strati	fication_factor sn_test						False 35.0			
	t_test						20.0			
	teos10_eos			False			20.0			
	theta_max						30.0			
	theta_min						-2.0			
undato dia	tn_test nostic_factors						20.0 False			
	vrite_a_restart						True			
&ocean_domains_nml	halo						1			
	max_tracers			20	10	5	5	5	5	5
	x_cyclic_offset						0			
	y_cyclic_offset						0			
	utput_interval e_this_module	False	False				False			
&ocean_form_drag_nml a		Tabe	1 8130				600.0			
	cprime_aiki			0.6	0.6		0.3			
	g_this_module						False			
form_drag_aiki_b							3			
form_drag_aiki	_bottom_layer iki_gradh_max						False 0.05			
form_draq_aiki							1.0			
form_drag_aik							False			
form_drag_aiki_s							False			
	_gbatch_alpha						300 000 000.0			
	atch_alpha_f2						False False			
form_drag_gba	atch_f2overn2						False			
form_drag_gba							False			
form_di	rag_gbatch_no						0.005			
form_drag_gbat							False			
form_drag_gba	,						False			
	urf_blayer_min n_squared_min						1×10^{-10}			
	m_121_passes						1 × 10			
	orm_drag_aiki						False			
	n_drag_gbatch						False			
	e_this_module	False	False	False	False	False	False	False	False	False
vel_to	orm_drag_max verbose_init						1.0 True			
visc chu fe	orm_drag_max						1.0			
&ocean_frazil_nml air_sa							True			
	g_this_module	False	False			False	False	False	False	False
	frazil_factor						1.0			
	nly_in_surface	True	True	False		False	False	False	False	False
	temp_accurate mp_preteos10		False	True		True	True	True	True	True
	_temp_simple	True	True	False	True	False	False	False	False	False
	_temp_teos10	,,,,,,		. 4.50		. 4.50	False	. 4150	. 4.50	. 4.50
	e_this_module	True	True	True	True	True	True	True	True	True
kocean_grids_nml debu		True	True	True	True	False	False	False	False	False
	ise_exact_sum	True	Ealaa	Ealaa	Ealaa		False			
rea	d_rhoO_profile verbose_init	False	False	False	False		False True			
	write_grid						False			
kocean_increment_eta_ni				0	0		1			
ays_to_increment										
	ion_increment			1.0	1.0		1.0			
	_to_increment e_this_module	False	False	3600 False	1800 False	False	0 False	False	False	False
			LAICH	L4176		LAICE				

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.oi	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	False	False	False	False	False	False
days_to_increment			0	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						False			
debug_this_module lap_friction_scheme	'general'	'general'	'general'	'general'	'general'	'general'	'general'	'general'	'general'
write_a_restart	generat	generat	general	generat	generat	True	generat	generat	generat
&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						0.0			
eq_vel_micom_aniso eq_vel_micom_iso						0.0			
equatorial_no_smag						False			
equatorial_zonal						False			
equatorial_zonal_lat 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		2.0	
ncar_isotropic_at_depth						False			
ncar_isotropic_at_depth_visc ncar_isotropic_depth						10 000.0 4000.0			
ncar_isotropic_depth ncar_isotropic_off_equator						False			
ncar_only_equatorial			True	True	True	False			
neptune neptune_depth_min						False 100.0			
neptune_deptit_iiiiii neptune_length_eq						1200.0			
neptune_length_pole						3000.0			
neptune_smooth						True 1			
neptune_smooth_num restrict_polar_visc	True	True	True	True	True	False			
restrict_polar_visc_lat	60.0	60.0	60.0	60.0	60.0	60.0			
restrict_polar_visc_ratio	0.35	0.35	0.35	0.35	0.35	0.35			
side_drag_friction_max side_drag_friction_scaling						1.0 1.0			
side_drag_friction_uvmag_max						10.0			
use_side_drag_friction	_	_	_	_	_	False			
use_this_module vconst_1	True	True	True 8 000 000.0	True 8 000 000.0	True 8 000 000.0	False 10 000 000.0	False	False	False
vconst_2			0.0	0.0	0.0	0.0			
vconst_3			0.8	0.8	0.8	0.16			
vconst_4			5×10^{-9}	5×10^{-9}	5×10^{-9}	2×10^{-8} 3			
vconst_6			300 000 000.0	300 000 000.0	300 000 000.0				
vconst_7			100.0	100.0	100.0	100.0			
vconst_8						45.0			
vel_micom_aniso vel_micom_iso	0.1	0.1	0.1	0.1	0.1	0.0			
visc_vel_scale_length	0.1	0.1	0.1	0.1	0.1	150 000.0			
viscosity_ncar	False	False	False	True	True	False			

Group (continued) Varial	ole 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_20	00		False	False	False	True			
viscosity_ncar_20			True	True	True	False			
viscosity_scale_by_ross		True	True	True	True	False			
<pre>viscosity_scale_by_rossby_pov &ocean_mixdownslope_nml</pre>	ver 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		False	
do_bitwise_exact_s	ım					False			
mixdownslope_frac_cent		_				0.25			
mixdownslope_mask_g		True 4	False 4	False 4	False 4	False 1			
mixdownslope_n mixdownslope_weight_		4	7	4	7	False			
mixdownslope_wid						1			
read_mixdownslope_ma		True	False	False	False	False			
use_this_mod		True	True	True	True	False	False	False	False
&ocean_model_nml baroclinic_sp barotropic_sp		1 80	1 80	1 80	1 80	1 80	1 80	1 80	1 80
cmip_ur		00	True	True	True	True	True	80	True
deb	ug False	False	False	False	False	False	False	False	False
dt_oce		7200	3600	3600	3600	1800	1200	150	150
horizontal_g impose_init_from_rest		False				'bgrid' False			
impose_mit_from_rest io_layo		raise		4, 3	4, 3	6, 5	6, 5	10, 15	10, 15
layo		6,4	12, 10	16, 15	16, 15	48, 40	48, 40	80,75	80,75
mask_tal	ole	•	,	,	,	'INPUT'	•	ŕ	•
reinitialize_thickno				_	,	False		_	
surface_height_sp time_tender		1 'twolevel'	1 'twolevel'	1 'twolevel'	1 'twolevel'	1 'twolevel'	1 'twolevel'	1 'twolevel'	1 'twolevel'
use_blo	•	twotevet	twotevet	twotevet	twotevet	False	twotevet	twotevet	twotevet
use_velocity_overri						False			
vertical_coordina	ite 'zstar'	'zstar'	'zstar'	'zstar'	'zstar'	'zstar'	'zstar'	'zstar'	'zstar'
&ocean_momentum_source_nml						False			
debug_this_module rayleigh_damp_exp_from_botto	ım.				False	False	False	False	False
rayleigh_damp_exp_sci					raise	100.0	raise	raise	raise
rayleigh_damp_exp_ti						864 000.0			
use_rayleigh_damp_tal			True	True	True	True	True	True	True
use_this_mod verbose_i		False	True	True	True	True	True	True	True
&ocean_nphysics_new_nml	IIIL					True False			
drhodz_smooth_horz						1 4130			
drhodz_smooth_v	ert					False			
	ax					0.01			
use_this_mod vel_micom_smod						False 0.2			
&ocean_nphysics_nml debug_thi		False	False	False	False	False	False	False	False
module									
use_nphysic		False	False	False	False	False	False	False	False
use_nphysio use_nphysio		True False	False True	False True	False True	False False	False False	False False	False False
use_this_mod		True	True	True	True	False	False	False	False
write_a_rest						True		, alse	1 4150
&ocean_nphysics_util_new_nml						1			
num_121_passes	2002	0000	(000	(000	/000		4000	4000	4000
&ocean_nphysics_util_nml agm_clost	m 800.0 re True	800.0 True	600.0 True	600.0 True	600.0 True		100.0 True	100.0 True	100.0 True
agm_closure_barocli		True	True	True	True		True	True	True
agm_closure_buoy_fr		0.004	0.004	0.004	0.004		0.004	0.004	0.004
agm_closure_eady_ave_mix		True	True	True	True				
agm_closure_eady_c		True True	True	True	True True				
agm_closure_eady_smooth_h agm_closure_eady_smooth_v		True	True True	True True	True				
agm_closure_eden_gam		0.0	0.0	0.0	0.0				
agm_closure_eden_greatbat	<mark>ch</mark> False	False	False	False	False				
agm_closure_grid_scali		True	True	True	True		F0.000.0	F0 000 0	F0 000 C
agm_closure_leng agm_closure_length_bczo		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_fix		False	False	False	False		False	False	False
agm_closure_length_ross	by False	False	False	False	False		False	False	False
agm_closure_lower_dep		2000.0	2000.0	2000.0	2000.0		2000.0	2000.0	2000.0
agm_closure_m		800.0	600.0	600.0	600.0		600.0	600.0	600.0
agm_closure_n agm_closure_scali		100.0 0.07	50.0 0.07	50.0 0.07	50.0 0.07		100.0 0.07	100.0 0.07	100.0 0.07
agin_closure_Stati	U.U/	0.07	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
	filename_tracer						file.000000.ou 'INPUT'			
	filename_ud						'obc_ud', '.nc',			
	nterialite_da						'none', 'none',			
							'none'			
	ie						-999, -999,			
							-999, -999			
	iere						-999, -999, -999, -999			
	iers						-999, -999,			
							-999, -999			
	is						-999, -999,			
							-999, -999			
	itre						-999, -999,			
	itrs						-999, -999 -999, -999,			
	1013						-999, -999			
	je						-999, -999,			
							-999, -999			
	jere						-999, -999,			
	-						-999, -999			
	jers						-999, -999, -999, -999			
	js						-999, -999,			
	-						-999, -999			
	jtre						-999, -999,			
							-999, -999			
	jtrs						-999, -999,			
	name						-999, -999 'test_obc',			
	Hume						'none', 'none',			
							'none'			
	nobc						0			
obc_a	djust_forcing_bt						False, False,			
ohc	_consider_convu						False, False False, False,			
ODC.	_consider_convu						False, False			
obc_c	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,			
							False, False			
obc_en	hance_diff_back						'NONE',			
							'NONE',			
							'NONE',			
ohc ent	hance_visc_back						'NONE' 'NONE',			
ooc_em	Harree_vise_Dack						'NONE',			
							'NONE',			
							'NONE'			
	obc_eta						'NOTHIN',			
							'NOTHIN', 'NOTHIN',			
							NOTHIN, 'NOTHIN'			
							.10111111			

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,			
	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 Obc_vert_advel_t False, Fa											
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 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, False Obc_ud 'NOGRAD', 'NOGRAD', 'NOGRAD', 'NOGRAD' 'NOGRAD' False, False, False, False, 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) 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
use_this_module					False	inte.000000.00	False	False	False
&ocean_parameters_nml					Taisc	4218.0	1 disc	raisc	T disc
cp_liquid_runoff						.22010			
cp_ocean						3992.103 223			
cp_solid_runoff						2106.0			
grav						9.8			
omega_earth						7.2921×10^{-5}			
rho0						1035.0			
tfreeze						273.15			
&ocean_polar_filter_nml	False	False	False	False	False		False	False	False
use_this_module									
&ocean_pressure_nml						False			
debug_this_module						F.1			
zero_correction_term_grad zero_diagonal_press_grad						False False			
zero_eta_over_h_zstar_pressure						False			
zero_pressure_force					False	False	False	False	False
&ocean_rivermix_nml	40.0	40.0				0.0			
calving_insertion_thickness									
debug_all_in_top_cell						False			
debug_this_module	False	False	False	False	False	False	False	False	False
debug_this_module_heat discharge_combine_runoff_calve	False	True				False True			
do_bitwise_exact_sum	True	iiue				False			
river_diffuse_salt	False	False	False	False	True	False	True	True	True
river_diffuse_temp	False	False	False	False	True	False	True	True	True
river_diffusion_thickness	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
river_diffusivity	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
river_insertion_thickness	40.0 40.0	40.0 40.0	40.0	40.0	40.0	40.0 0.0	40.0	40.0	40.0
runoff_insertion_thickness use_this_module	True	True	True	True	True	True	True	True	True
&ocean_riverspread_nml	iiuc	nuc	iiuc	nuc	nuc	False	nuc	False	nuc_
debug_this_module									
riverspread_diffusion						False			
riverspread_diffusion_passes			-	-		0		-	
use_this_module vel_micom_smooth	False	False	True	True	False	False	False	True	False
&ocean_rough_nml rough_scheme	'beljaars'	'beljaars'			'beljaars'	0.2	'beljaars'	'beljaars'	'beljaars'
&ocean_sbc_nml avg_sfc_temp_salt_eta	True	True	True	True	True	True	True	True	True
avg_sfc_velocity	True	True	True	True	True	True	True	True	True
calvingspread	False	False			False	False	False	False	False
constant_hlf						True			
constant_hlv						True			
constant_sss_for_restore						35.0 12.0			
convert_river_to_pme						False			
debug_water_fluxes						False			
do_bitwise_exact_sum					False	False	False	False	False
do_flux_correction	True				False	False	False	False	False
do_langmuir	400					False			
eta_restore_tscale ice_salt_concentration	-10.0		0.005			-30.0 0.005			
land_model_heat_fluxes	True	False	0.005		False	False	False	False	False
max_delta_salinity_restore	iiuc	ruisc	0.5	0.5	0.5	0.5	0.5	0.5	0.5
max_ice_thickness	8.0	8.0	8.0	8.0	0.0	0.0	0.0	0.0	0.0
read_restore_mask			False	False	False	False	False	False	False
read_stokes_drift					F .	False	F .		
restore_mask_gfdl			False	False	False	False	False	False	False
rotate_winds runoff_salinity			0.0	0.0	0.0	False 0.0	0.0	0.0	0.0
runoff_temp_min			0.0	0.0	0.0	0.0	0.0	0.0	0.0
runoffspread	False	False				False			
salinity_ref						35.0			
salt_correction_scale	0.0				0.0	0.0	0.0	0.0	0.0
salt_restore_as_salt_flux	400	400	True	True	True	True	True	True	True
salt_restore_tscale salt_restore_under_ice	-10.0	-10.0	15.0 True	15.0 True	60.0 True	60.0 True	60.0 True	60.0 True	60.0 True
satt_restore_under_ice sbc_heat_fluxes_const			irue	irue	irue	False	iiue	irue	irue
sbc_heat_fluxes_const_seasonal						False			
sbc_heat_fluxes_const_value						0.0			
tau_x_correction_scale	0.0					0.0			

Group (continued) Variab	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.oi	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_sca	e 0.0					0.0			
taux_sir						False			
tauy_sii	/					False			
temp_correction_sca temp_restore_tsca		-10.0	-1.0	-1.0	-10.0	0.0 10.0	-10.0	-10.0	-10.0
use_constant_sss_for_resto		-10.0	-1.0	- 1.0	-10.0	— 10.0 False	-10.0	-10.0	-10.0
use_constant_sst_for_resto						False			
use_full_patm_for_sea_lev	el True	True			False	False	False	False	False
use_ideal_calvir						False			
use_ideal_runo		T	Т	T	Т	False	Т	Т	T
use_waterflu use_waterflux_override_calvir		True	True	True	True	True False	True	True	True
use_waterflux_override_eva	<u> </u>					False			
use_waterflux_override_fpro	<u> </u>					False			
waterflux_tav	g False	False	False	False		False			
zero_calving_flux						False			
zero_heat_flux			False	False	False	False	False	False	False
zero_net_pme_eta_resto					False	False False	False	False	False
zero_net_salt_correction zero_net_salt_resto			True	True	True	True	True	True	True
zero_net_water_correction			iiue	iiue	False	False	False	False	False
zero_net_water_couple_resto			True	True	True	True	True	True	True
zero_net_water_coupl			True	True	True	True	True	True	True
zero_net_water_resto	e		True	True	True	True	True	True	True
zero_pme_flux						False			
zero_river_flux						False			
zero_runoff_flux						False			
zero_surface_stre			False False	False False	False False	False False	False False	False False	False
<pre></pre>	:5		False	False	False	False	False	raise	False
restore_mask_ofam			i alse	raise		i alse			
river_temp_ofa	m		False	False		False			
&ocean_shortwave_csiro_nml			True	True					
read_depth use_this_modu	o Falco	Falso	Truo	Truo	False		Ealco	Falso	Ealco
use_tnis_modu zmax_pe		False	True 7000	True 7000	False		False	False	False
&ocean_shortwave_gfdl_nml	<mark>II</mark>		7000	7000		0.08			
chl_default									
debug_this_modu	e False	False	False	False	False	False	False	False	False
enforce_sw_fra		True	True	True	True	True	True	True	True
optics_for_uniform_c						False			
optics_maniz		True	True	True	True	True	True	True	True
optics_morel_antoir override_f_v		False False			False	False True	False	False	False
read_c		False	False	False	True	True	True	True	True
sw_frac_to		ruisc	Tube	raisc	iruc	0.0	iiuc	iiuc	iruc
sw_morel_fixed_depti						False			
sw_pen_fixed_deptl	IS		False	False					
use_this_modu		True	False	False	True	True	True	True	True
zmax_pe		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	False	False	True	True	False	False	False	False	False
use_shortwave_csiro						False			
use_shortwave_e use_shortwave_qf		True	False	False	True	False True	True	True	True
use_shortwave_jerlo		False	False	False	False	False	False	False	False
use_this_modu		True	True	True	True	True	True	True	True
&ocean_sigma_transport_nml						0.3333			
campingoose_delta campingoose_m	II.					0.0001			
debug_this_modu						False			
sigma_advection_che						True			
sigma_advection_c	n False	False	False	False		False		False	
sigma_advection_sgs_on		False	False	False		False		False	
sigma_diffusion_c		True	True	True		True		True	
sigma_diffusivi						1000.0			
sigma_diffusivity_rat		1×10^{-6}	1×10^{-6}	1×10^{-6}		1×10^{-6}		1×10^{-6}	
sigma_just_in_bottom_ce		True	True	True		True		True	
sigma_uma smooth_sigma_thickne		0.01 True	0.01 True	0.01 True		0.01 True		0.01 True	
smooth_sigma_veloci		True	True	True		True		True	
Sinootii_Sigina_vetoti	y nue	iiue	iiue	iiue		iluc		IIUC	

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_sigma_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_sigma_on	False	False	False	False		False		False	
tracer_mix_micom	True	True	True	True		True		True	
use_this_module	True	True	True	True	False	False	False	False	False
vel_micom	0.05	0.05	0.05	0.05		0.05		0.05	
verbose_init						True			
write_a_restart						True			
&ocean_solo_nml calendar			'NOLEAP'	'NOLEAP'	'NOLEAP'	'NOLEAP'	'NOLEAP'	'NOLEAP'	'NOLEAP'
date_init			1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0	1, 1, 1, 0, 0, 0
days			0	1460	1460	0	31	30	30
debug_this_module				False		False			
dt_cpld			3600	3600	3600	1800	1200	150	600
hours			0	0	0	0	0	0	0
layout_mask						0,0			

Group (continued)	Variable	original/ GFDL ESM2M input- cut.nml	original/ MOM_SIS TOPAZ input.nml	original/ russ- accessom- mom4p1- input.nml	original/ hogg_acces- som2 1deg jra55_ryf inout nml	new_acces- som2 1deg jra55_ryf input.nml	original/ kiss_acces- som2 025deg jra55_ryf	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
	mark 12 a				input.nml		log- file.000000.oı		iiiput.nmt	
	mask_list						0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
							0, 0, 0, 0, 0,			
					5 7		0, 0, 0, 0, 0, 0, 0, 0, 0, 0,			
					57		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	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 Falsa
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- 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
	.limit_prather			_			False			
	d_basin_mask rite_a_restart			True		False	False True	False	False	False
	_advect_horz						False			
	r_advect_vert						False			
&ocean_tracer_diag_nml t							0.0003			
	nose_mixinga						False			
	nose_mixingb nose_mixingc						False False			
	nose_mixingd						False			
	diag_step	1200	12	120	4320	4320	4320	4320	576	576
do_bitwis	se_exact_sum	False	False	False	False	False	False	False	False	False
	dtheta_crit frazil_factor						2.0 1.0			
	psu2ppt						1.004 867			
r	ho_grad_max						$1 \times 10^{+28}$			
	rho_grad_min						1×10^{-5}			
smoot	h_kappa_sort						0			
	smooth_mld	True	True				False			
smooth_mld_fo		100.0	100.0	1.0	1.0	30.0	True 30.0	30.0	30.0	30.0
tracer_co Socean_tracer_nml	onserve_days acer_max_init	100.0 $1 \times 10^{+40}$	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	nask_limit_on	1 // 10	0.0	0.0	0.0	0.0	True	0.0	0.0	0.0
	_this_module	False	False	False	False	False	False	False	False	False
frazil_heating_a		True	True	True	True	True	True	True	True	True
frazil_heating_bef		False	False	False	False	False	False	False	False	False
interpolate_to	w_nboundary	False					False False			
interpolate_tp		False					True			
	nit_age_tracer	True	True	True	True	True	True	True	True	True
ocear	n_tpm_debug						False			
•	pth_to_s_init	False	False	False	False	False	False	False	False	False
tmask_l use_tempsalt.	imit_ts_same	True	True		True	True	True True	True	True	True
	rite_a_restart				iiue	iiue	True	iiue	iiue	iiue
	ero_tendency	False	False	False	False	False	False	False	False	False
	tracer_source	False	False	False	False	False	False	False	False	False
&ocean_tracer_util_nml lebuq_diagnose_mass_of_l	avor						False			
epsln_diagnose_n							1×10^{-5}			
rebin_onto_rh							True			
&ocean_velocity_advect_nr	ml						False			
debug_this_module										
	/ect_centered						True			
velocity_ad zero_velocity	dvect_upwind						False False			
	y_advect_norz						False			
ocean_velocity_diag_nml		False	False	False	False	False	False	False	False	False
nodule										
U. Lie .	diag_step	1200	12	120	4320	4320	4320	4320	576	576
	se_exact_sum rgy_diag_step	1200	12	120	4320	4320	False 4320	4320	5760	5760
	ell_num_max	1200	14	120	1320	1320	100	1320	5700	3700
	rge_cfl_value	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
n	nax_cfl_value	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Pagan valagitu nml	verbose_cfl						False			
&ocean_velocity_nml adams_bashforth_epsilon							0.6			
	shforth_third	True	True	True	True	True	True	True	True	True
	constant_u						0.0			
	constant_v						0.0			
debug.	_this_module			1.0	1.0	1.0	False	10	1.0	10
trun	max_cgint cate_velocity	False	False	1.0 False	1.0 True	1.0 False	1.5 False	1.0 False	1.0 False	1.0 False
	e_velocity_lat	i aisc	1 0130	1 0136	iiuc	ו מנטכ	0.0	า สเรต	ו מנטכ	i alse
truncate_v	elocity_value	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	cate_verbose	True	True	True	True	True	True	True	True	True
update_velocit							True			
	stant_velocity rite_a_restart						False True			
	ero_tendency	False	False	False	False	False	False	False	False	False
	ncy_explicit_a	. 4.00	. 2.00	. 4.50	. 4.00	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.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_b					False	False	False	False	False
zero_tendency_implicit					False	False	False	False	False
&ocean_vert_kpp_iow_nml use_this_module	False	False		False	False		False	False	False
&ocean_vert_kpp_mom4p0_nml use_this_module	False	False		False					
&ocean_vert_kpp_mom4p1_nml bvf_from_below						False			
calc_visc_on_cgrid						False			
concv						1.8			
cw_0 debug_this_module						0.15 False			
debug_triss_modute diff_cbt_iw	0.0			0.0	0.0	0.0	0.0	0.0	0.0
diff_cbt_limit	0.0			0.0	0.0	0.005	0.0	0.0	0.0
diff_con_limit				0.1		0.1			
do_langmuir	_			_	_	False	_	_	_
double_diffusion	True			True	True	True	True	True	True
hbl_with_rit kbl_standard_method				False	False	False False	False	False	False
kl_min				Tube	ruse	2	ruisc	raise	ruisc
L_smyth						2.0			
lgam						1.04			
limit_ghats						False			
limit_with_hekman linear_hbl						True True			
ltmax						5.0			
non_local_kpp						True			
radiation_iow						False			
radiation_large						False			
radiation_zero	0.7			0.7	0.7	False	0.7	0.7	0.7
ricr shear_instability	0.3			0.3	0.3	0.3 True	0.3	0.3	0.3
smear_instability smooth_blmc	True			False	False	False	False	False	False
smooth_ri_kmax_eq_kmu	nuc			True	True	True	True	True	True
use_max_shear						False			
use_sbl_bottom_flux	_			_	_	False	_	_	_
use_this_module	True			True	True	True	True	True	True
variable_vtc visc_cbu_iw	0.0			0.0	0.0	False 0.0	0.0	0.0	0.0
visc_cbu_limit	0.0			0.0	0.0	0.005	0.0	0.0	0.0
visc_con_limit				0.1		0.1			
wsfc_combine_runoff_calve	False					True			
wstfac						0.6			
&ocean_vert_kpp_nml diff_cbt_iw		0.0	0.0						
diff_con_limit double_diffusion		True	0.1 True						
kbl_standard_method		iiue	True						
ricr		0.3	0.3						
smooth_blmc		True	True						
use_this_module		True	True						
visc_cbu_iw visc_con_limit		0.0	0.0 0.1						
&ocean_vert_mix_nml afkph_00	0.675	0.675	0.1	0.65		0.55			
afkph_90	0.725	0.725	0.75	0.75		0.55			
aidif	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
bryan_lewis_diffusivity	True	True	False	False	False	False	False	False	False
bryan_lewis_lat_depend	True	True	True	True	False	False	False	False	False
bryan_lewis_lat_transition debug_this_module	35.0	35.0	35.0	35.0		35.0 False			
debug_tilis_inodute dfkph_00	1.15	1.15	1.15	1.15		1.05			
dfkph_90	1.15	1.15	0.95	0.95		1.05			
diff_cbt_tanh						False			
diff_cbt_tanh_max						0.001			
diff_cbt_tanh_min						2×10^{-5}			
diff_cbt_tanh_zmid diff_cbt_tanh_zwid						150.0 30.0			
hwf_30_diffusivity						2×10^{-5}			
hwf_depth_transition						25 000 000.0			
hwf_diffusivity					False	False	False	False	False
hwf_diffusivity_3d						False			
hwf_min_diffusivity					2×10^{-6}	2×10^{-6}	2×10^{-6}	2×10^{-6}	2×10^{-6}
hwf_n0_2omega					20.0	20.0	20.0	20.0	20.0

Group (continued) 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		Tuisc	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.oi	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	ebug_this_module						False			
	filter_wave_mom						True			
	use_this_module						False			
	use_tma						True			
	wavedamp						-10.0			
&ocean xlandinsert n	write_a_restart	True	True	False	False	False	True	False	False	False
use_this_module						False		raise	raise	raise
	verbose_init	True	True	True	True					
&ocean_xlandmix_nm		True	True	False	False	False		False	False	False
	verbose_init	True	True	True	True					
0+	xlandmix_kmt	True	True	True	True					
&sat_vapor_pres_nml construct_table_wrt_lice		True	True							
	e_wrt_liq_and_ice	True	True							
	w_all_bad_values								True	
&surface_flux_nml	ncar_ocean_flux								True	
	old_dtaudv raoult_sat_vap	False							True	
&time_interp_external debug_this_module	L_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-							
O vorid mml	do allec-II	phy.data.nc'	phy.data.nc'						Tur-	Tarre
&xgrid_nml	do_alltoall do_alltoallv								True	True True
	interp_method	'second	'second		'second	'second		'second	True 'second	'second
	mterp_metriou	order	order'		order'	order'		order'	order'	order'
make exc	change_reproduce	True	True		False	False		False	False	False
manc_c/n	nsubset	nac.	1140		1 4.50	16		16	16	16
	xgrid_log					10		20	False	10

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	0.15
	chk_i2o_fields chk_o2i_fields	False False	False False	False False
	do_ice_once	False	False	False
	dt_cpl	3600	1800	600
	fixmeltt	False	False	False
	frazil_factor	1.0	1.0	1.0
	iceform_adj_salt	False	False	False
	icemlt_factor	1.0	1.0	1.0
	kmxice pop_icediag	5 True	5 True	5 True
	redsea_gulfbay_sfix	True	ilue	iiuc
	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	True
&fms_io_nml	fileset_write	'single' 'multi'	'multi' 'multi'	'multi' 'multi'
	threading_read threading_write	'multi' 'single'	'multi' 'multi'	'multi' 'multi'
&fms_nml	clock_grain	'LOOP'	'LOOP'	'LOOP'
	domains_stack_size	115200	115200	115200
&mom_oasis3_interface_nml	fields_in	'u_flux',	'u_flux',	'u_flux',
		'v_flux',	'v_flux',	'v_flux',
		'lprec', 'fprec',	'lprec', 'fprec',	'lprec', 'fprec',
		'salt_flx',	'salt_flx',	'salt_flx',
		'mh_flux', 'sw_flux',	'mh_flux', 'sw_flux',	'mh_flux', 'sw_flux',
		'q_flux',	'q_flux',	'q_flux',
		't_flux',	't_flux',	't_flux',
		'lw_flux',	'lw_flux',	'lw_flux',
		'runof', 'p',	'runof', 'p',	'runof', 'p',
		'aice',	'aice',	'aice',
		'wfimelt',	'wfimelt',	'wfimelt',
	fields_out	'wfiform' 't_surf',	'wfiform' 't_surf',	'wfiform' 't_surf',
	nctus_out	's_surf',	's_surf',	's_surf',
		'u_surf',	'u_surf',	'u_surf',
		'v_surf',	'v_surf',	'v_surf',
		'dssldx',	'dssldx',	'dssldx',
		'dssldy',	'dssldy',	'dssldy',
	num_fields_in	'frazil' 15	'frazil' 15	'frazil' 15
	num_fields_out	7	7	7
	send_after_ocean_update	True	True	True
	send_before_ocean_update	False	False	False
&monin_obukhov_nml	neutral	True	True	True
&mpp_io_nml	deflate_level	5	5	5
	shuffle	1 1 7720	1 1720	1
&ocean_adv_vel_diag_nml	diag_step	4320	4320	576
	large_cfl_value max_cfl_value	10.0 100.0	10.0 100.0	10.0 100.0
	verbose_cfl	True	True	True
&ocean_advection_velocity_nml	max_advection_velocity	0.5	0.5	0.5
&ocean_albedo_nml	ocean_albedo_option	2	2	2
&ocean_barotropic_nml	barotropic_halo	10	10	10
	barotropic_time_stepping_a	True	True	True
	barotropic_time_stepping_b	False	False	False
	debug_this_module	False	False	False
	diag_step eta_max	4320 8.0	4320 8.0	576 8.0
	frac_crit_cell_height	0.2	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	False
	smooth_eta_t_laplacian	True	True	True
	smooth_pbot_t_biharmonic	False	False	False
	smooth_pbot_t_laplacian	True	True	True
	truncate_eta use_legacy_barotropic_halos	False False	False False	False False
	vel_micom_bih	0.01	0.01	0.01
	YCCIMCOMEDIII	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 False	True False	True False
&ocean_bbc_nml	zero_tendency bmf_implicit	True	True	True
&ocean_boc_nint	cdbot	0.001	0.001	0.001
	cdbot_hi	0.007	0.007	0.007
	cdbot_roughness_length	False	False	False
	cdbot_roughness_uamp	True	True	True
	uresidual	0.05	0.05	0.05
	use_geothermal_heating	False	False	False
&ocean_bih_friction_nml	bih_friction_scheme	'general'	'general'	'general'
&ocean_bih_tracer_nml &ocean_bihcst_friction_nml	use_this_module use_this_module	False False	False False	False False
&ocean_bihgen_friction_nml	bottom_5point	False	False	False
&ocean_onigen_inction_init	eq_lat_micom	0.0	0.0	0.0
	eq_vel_micom_aniso	0.0	0.0	0.0
	eq_vel_micom_iso	0.0	0.0	0.0
	equatorial_zonal	False	False	False
	k_smag_aniso	0.0	0.0	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 ncar_vconst_4	2×10^{-8}	2×10^{-8}	2×10^{-8}
	ncar_vconst_5	5	2 × 10	5
	use_this_module	True	True	True
	vel_micom_aniso	0.0	0.0	0.0
	vel_micom_bottom	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
&ocean_density_nml	use_this_module eos_linear	True False	True False	True False
&ocean_density_nint	eos_preteos10	True	True	True
	layer_nk	80	80	80
	neutralrho_max	1038.0	1038.0	1038.0
	neutralrho_min	1028.0	1028.0	1028.0
	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 False	False False
	frazil_only_in_surface freezing_temp_preteos10	True	True	True
	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_Spoint	True		
	k_smag_aniso k_smag_iso	0.0 0.0		
	ncar_only_equatorial	True		
	restrict_polar_visc	True		
	restrict_polar_visc_lat	60.0		
	restrict_polar_visc_ratio	0.35		
	use_this_module	True	False	False
	vconst_1	8 000 000.0		
	vconst_2	0.0		
	vconst_4	$0.8 \\ 5 \times 10^{-9}$		
	vconst_4 vconst_5	5 × 10 ³		
	vconst_6	300 000 000.0		
	vconst_7	100.0		
	vel_micom_iso	0.1		
	viscosity_ncar	True		
	viscosity_ncar_2000	False		
	viscosity_ncar_2007	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
	viscosity_scale_by_rossby	True		-
O a serial de constant de cons	viscosity_scale_by_rossby_power	4.0		
&ocean_mixdownslope_nml	debug_this_module mixdownslope_mask_gfdl	False 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	_ 80	_80
	cmip_units	True False	True False	True False
	debug dt_ocean	3600	1200	150
	io_layout	4, 3	6,5	10, 15
	layout	16, 15	48, 40	80, 75
	surface_height_split	1	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
Paccan polycics and	use_this_module	True	True	True
&ocean_nphysics_nml	debug_this_module use_nphysicsa	False False	False 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	True	True	True
	agm_closure_buoy_freq	0.004	0.004	0.004
	agm_closure_eady_ave_mixed	True		
	agm_closure_eady_cap	True		
	agm_closure_eady_smooth_horz agm_closure_eady_smooth_vert	True True		
	agm_closure_eden_gamma	0.0		
	agm_closure_eden_greatbatch	False		
	agm_closure_grid_scaling	True		
	agm_closure_length	50 000.0	50 000.0	50 000.0
	agm_closure_length_bczone	False	False	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 agm_closure_min	600.0 50.0	600.0 100.0	600.0 100.0
	agm_closure_scaling	0.07	0.07	0.07
	agm_closure_upper_depth	100.0	100.0	100.0
	agm_damping_time	45.0		
	agm_smooth_space	False		
	agm_smooth_time	False		
	aredi	600.0	600.0	600.0
	aredi_equal_agm	False	False	False
	drhodz_mom4p1 drhodz_smooth_horz	True False	False False	False False
	drhodz_smooth_vert	False	False	False
	nphysics_util_zero_init	True	i atse	1 0130
	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	2		
	bvp_min_speed bvp_speed	0.1 0.0		
	debug_this_module	False		
	do_qm_skewsion	True		
	do_giii_skewsion do_neutral_diffusion	True		
	epsln_bv_freq	1×10^{-12}		
	gm_skewsion_bvproblem	True		
	gm_skewsion_modes	False		
	neutral_eddy_depth	True		
	neutral_physics_limit	True		
	number_bc_modes	2		
	regularize_psi	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
	smax_psi	0.01		
	smooth_psi	True		
	tmask_neutral_on turb_blayer_min	True 50.0		
	use_this_module	True	False	False
&ocean_operators_nml	use_legacy_div_ud	False	False	False
&ocean_overexchange_nml	debug_this_module	False		False
	overexch_npts overexch_weight_far	False		4 False
	overflow_umax	5.0	5.0	5.0
	use_this_module	False	False	False
&ocean_overflow_nml	use_this_module	False		False
&ocean_overflow_ofp_nml &ocean_polar_filter_nml	use_this_module use_this_module	False False		False False
&ocean_pressure_nml	zero_pressure_force	False		False
&ocean_rivermix_nml	debug_this_module	False	False	False
	river_diffuse_salt	True	True	True
	river_diffuse_temp	True		True
	river_diffusion_thickness river_diffusivity	0.0 0.0		0.0 0.0
	river_insertion_thickness	40.0		40.0
	use_this_module	True		True
&ocean_riverspread_nml	use_this_module	False		False
&ocean_rough_nml	rough_scheme	'beljaars'		'beljaars'
&ocean_sbc_nml	avg_sfc_temp_salt_eta	True		True
	avg_sfc_velocity 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 max_ice_thickness	0.5 0.0		0.5 0.0
	read_restore_mask	False		False
	restore_mask_gfdl	False		False
	runoff_salinity	0.0		0.0
	salt_correction_scale salt_restore_as_salt_flux	0.0		0.0
	satt_restore_tscale	True 60.0		True 60.0
	salt_restore_under_ice	True		True
	temp_restore_tscale	-10.0		-10.0
	use_full_patm_for_sea_level	False		False
	use_waterflux zero_heat_fluxes	True False		True False
	zero_net_salt_correction	False		False
	zero_net_salt_restore	True		True
	zero_net_water_correction	False		False
	zero_net_water_couple_restore zero_net_water_coupler	True True		True True
	zero_net_water_restore	True		True
	zero_surface_stress	False		False
	zero_water_fluxes	False	False	False
&ocean_shortwave_csiro_nml	use_this_module	False		False
&ocean_shortwave_gfdl_nml	debug_this_module enforce_sw_frac	False True		False True
	optics_manizza	True		True
	optics_morel_antoine	False		False
	read_chl	True		True
	use_this_module	True 300.0		True 300.0
&ocean_shortwave_jerlov_nml	zmax_pen use_this_module	False		False
&ocean_shortwave_nml	use_shortwave_csiro	False		False
	use_shortwave_gfdl	True	True	True
	use_shortwave_jerlov	False		False
&ocean_sigma_transport_nml	use_this_module use_this_module	True False		True False
&ocean_signia_transport_nimt &ocean_solo_nml	use_tnis_modute calendar	'NOLEAP'		'NOLEAP'
	date_init	1, 1, 1, 0, 0, 0		1, 1, 1, 0, 0, 0
		1460		30
	days			
	dt_cpld	3600	1200	600
	dt_cpld hours	3600 0	0	0
	dt_cpld	3600		
	<mark>dt_cpld</mark> hours minutes	3600 0 0	0 0	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
Autons spalmessociale mil					
Being the part Part					
	&ocean_submesoscale_nml				
Time					
		•			
Second		•			
Semonth pix lumn					
Summon anderect.time					
Submess advert_upprint Tue True True True Submess advert_upprint Tue True True True True True Submess adfirston in himmoria Tue True True Submess adfirston in himmoria Tue True True Submess adfirston in himmoria Tue True True Submess adfirston scale Tue True Tr					
Submess diffusion in hismanic False Fals					
Submeso, diffusion False		submeso_advect_upwind	True	True	True
Submess of Mission Inhamonic True True True Submess of Mission Inhamonic True T		submeso_advect_zero_bdy	True	True	True
Submess diffusion scale 100 10			False	False	False
Submess Subm		submeso_diffusion_biharmonic			True
			10.0	10.0	10.0
		submeso_skew_flux	True	True	True
Scean.tempsell.nml gustathis.module pritemp. Indicatation pottemp. Indicatation pottemp. Indicatation pottemp. Indicatation pottemp. Indicatation pottemp. Apal. Londram pottemp. Londram pottemp. Londram pottemp.		•			
docean_tempsalt.mml debug_nits_module False protemp_Ond_iteration False protemp_December False protemp_December <td></td> <td>use_psi_legacy</td> <td>False</td> <td>False</td> <td>False</td>		use_psi_legacy	False	False	False
					True
	&ocean_tempsalt_nml		False	False	False
S.max Limit 42.0		pottemp_equal_contemp			
L.min −200 −200 −200 L.min −200 −50 −50 −50 Lemperature variable potential					
Marie					
between thickness.nml debug.this.module debug.this.module debug.this.module debug.this.module debug.this.module.detail False Fal					
&cean.thickness.mll debug_this_module_detalt ralse False ralse ralse rescale mass, to_get.ht.mod reach assin.mass ralse read_basin.mass ralse ralse ralse read_basin.mass ralse ralse ralse read_basin.mass ralse ralse ralse ralse read_basin.mass ralse ral		temperature_variable	•	•	•
debug this module detail rescale mass to get hit mode False rescale mass debug this module rescale mass depug this mode False rescale mass depug this mode <	&orean thickness nml	dehug this module			
rescale_mass to_opet.ht_mod False between thickness.method False between thickneshold False between thickneshold False between thi	Wocedii_tiiiCkiie35_liiiit				
Kocean_tracer_advect_nml thickness_method energetic energetic energetic & Cocean_tracer_advect_nml debug_this_module False					
&ocean_tracer_advect_nml debug_this_module False					
cocean_tracer_diag.nml read_basin_mask False False &cocean_tracer_diag.nml diag. step 4320 4320 576 &cocean_tracer_moscret_days 300 300 300 &cocean_tracer_moscret_days 300 300 300 &cocean_tracer_moscret_days 300 300 300 &cocean_tracer_moscret_days 100 0 0 300 &cocean_tracer_moscret_days 100 0	&ocean tracer advect nml				
&ccean_tracer_diag_nml diag_step 4320 4320 576 dob_litwise_exact_sum False	WOOD THE COLUMN				
March Marc	&ocean tracer diag nml				
cocean.tracer.nml tracer.conserve.days 300 300 300 & ocean.tracer.nml age_tracer.max.init 00 0					
& ccean_tracer_nml age_tracer_max_init debug_this_module 0.0 0.0 0.0 debug_this_module False False <t< td=""><td></td><td></td><td></td><td></td><td></td></t<>					
Mathematical Heating Affer Applysics False Fals	&ocean_tracer_nml				
Frazil_heating_after_vphysics True True Frue Fru					
False Fals					
True				5000.0 True True 0.5 4 True 3 False True 3 False True True False True 10.0 True False True 10.0 True False True True False True True False True False True True True False True True False True False True False False False True False False False True False	
False Fals					
Use_tempsalt_check_range True True Zero_tendency False False False False Zero_tendency False False False Zero_tendency False False False False Zero_tendency_explicit_a False				False	False
Reserve to the comment of th			True	False False False 0.05 False 5000.0 True True 0.5 4 True 4 False True 3 False True True True True True True True False True True False True False False False False False False True False False True False False False True False	True
&ocean_velocity_diag_nml debug_this_module False False False diag_step 4320 4320 576 energy_diag_step 4320 4320 5760 large_cfl_value 100 100 100 tuncate_velocity_nml 100 100 100 adams_bashforth_third True True True max_cgint 10 10 10 truncate_velocity_nml 51 10 10 10 truncate_velocity_nml 51 10 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 <td></td> <td></td> <td></td> <td></td> <td></td>					
Read		zero_tracer_source	False		False
energy_diag_step 4320 4320 5760 large_cfl_value 100 100 100 &ocean_velocity_nml adams_bashforth_third True True True max_cgint 1.0 1.0 1.0 truncate_velocity_nalue 1.0 1.0 1.0 truncate_velocity_value 2.0 2.0 2.0 truncate_velocity_value 2.0 2.0 2.0 2.0 truncate_velocity_value 2.0 2.0 2.0 2.0 2.0 <th< td=""><td>&ocean_velocity_diag_nml</td><td>debug_this_module</td><td></td><td>False</td><td></td></th<>	&ocean_velocity_diag_nml	debug_this_module		False	
large_cfl_value 10.0 10.0 10.0 &ocean_velocity_nml adams_bashforth_third True True True max_cgint 1.0 1.0 1.0 1.0 truncate_velocity_nml 1.0 1.0 1.0 1.0 truncate_velocity False False False truncate_velocity_value 2.0 2.0 2.0 truncate_verbose True True True zero_tendency_erbose True True True zero_tendency_explicit_a False False False zero_tendency_explicit_a False False False zero_tendency_implicit False False False &cean_vert_kpp_iow_nml use_this_module False False False &cocan_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 0.0					
kocean_velocity_nml max_cfl_value 100.0 100.0 100.0 kocean_velocity_nml adams_bashforth_third True True True max_cgint 1.0 1.0 1.0 truncate_velocity False False False truncate_velocity_value 2.0 2.0 2.0 truncate_verbose True True True True zero_tendency_explicit_a False False False zero_tendency_explicit_a False False False zero_tendency_implicit False False False &ocean_vert_kpp_iow_nml use_this_module False False False &cocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 0.0					
&ocean_velocity_nml adams_bashforth_third True True True max_cgint 1.0 1.0 1.0 truncate_velocity False False False truncate_velocity_value 2.0 2.0 2.0 truncate_verbose True True True True zero_tendency_explicit_a False False False zero_tendency_explicit_b False False False zero_tendency_implicit False False False &ocean_vert_kpp_iow_nml use_this_module False False False &cocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 0.0					
max_cgint 1.0 1.0 1.0 truncate_velocity False False False truncate_velocity_value 2.0 2.0 2.0 truncate_verbose True True True zero_tendency_explicit_a False False False zero_tendency_explicit_a False False False False False False False &ocean_vert_kpp_iow_nml use_this_module False False False &ocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 0.0					
truncate_velocity False False False truncate_velocity_value 2.0 2.0 2.0 truncate_verbose True True True zero_tendency False False False zero_tendency_explicit_a False False False zero_tendency_explicit_b False False False zero_tendency_implicit False False False &ocean_vert_kpp_iow_nml use_this_module False False False &cocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 0.0	&ocean_velocity_nml			True	True
truncate_velocity_value 2.0 2.0 2.0 truncate_verbose True True True zero_tendency False False False zero_tendency_explicit_a False False False zero_tendency_explicit_b False False False zero_tendency_implicit False False False &ocean_vert_kpp_iow_nml use_this_module False False False &ocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 0.0					
truncate_verbose True True True zero_tendency False False False zero_tendency_explicit_a False False False zero_tendency_explicit_b False False False zero_tendency_implicit False False False &ocean_vert_kpp_iow_nml use_this_module False False False &ocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 0.0					
zero_tendencyFalseFalseFalsezero_tendency_explicit_aFalseFalseFalsezero_tendency_explicit_bFalseFalseFalsezero_tendency_implicitFalseFalseFalse&ocean_vert_kpp_iow_nmluse_this_moduleFalseFalseFalse&ocean_vert_kpp_mom4p1_nmldiff_cbt_iw0.00.00.0		•			2.0
zero_tendency_explicit_aFalseFalseFalsezero_tendency_explicit_bFalseFalseFalsezero_tendency_implicitFalseFalseFalse&ocean_vert_kpp_iow_nmluse_this_moduleFalseFalseFalse&ocean_vert_kpp_mom4p1_nmldiff_cbt_iw0.00.00.0		truncate_verbose			
zero_tendency_explicit_bFalseFalseFalsezero_tendency_implicitFalseFalseFalse&ocean_vert_kpp_iow_nmluse_this_moduleFalseFalseFalse&ocean_vert_kpp_mom4p1_nmldiff_cbt_iw0.00.00.0		•			
kocean_vert_kpp_iow_nml zero_tendency_implicit False False False &ocean_vert_kpp_iow_nml use_this_module False False False &ocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 0.0			False		False
&ocean_vert_kpp_iow_nmluse_this_moduleFalseFalseFalse&ocean_vert_kpp_mom4p1_nmldiff_cbt_iw0.00.00.0					
&ocean_vert_kpp_mom4p1_nml diff_cbt_iw 0.0 0.0 0.0					
double_diffusion True True True	&ocean_vert_kpp_mom4p1_nml				
		double_diffusion	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
	kbl_standard_method	False	False	False
	ricr	0.3	0.3	0.3
	smooth_blmc	False	False	False
	smooth_ri_kmax_eq_kmu	True	True	True
	use_this_module	True	True	True
	visc_cbu_iw	0.0	0.0	0.0
&ocean_vert_mix_nml	aidif	1.0	1.0	1.0
	bryan_lewis_diffusivity	False	False	False
	bryan_lewis_lat_depend	False	False	False
	hwf_diffusivity	False	False	False
	hwf_min_diffusivity	$2 imes 10^{-6}$	$2 imes 10^{-6}$	2×10^{-6}
	hwf_n0_2omega	20.0	20.0	20.0
	use_diff_cbt_table	False	False	False
	vert_diff_back_via_max	True	True	True
	vert_mix_scheme	'kpp mom4p1'	'kpp mom4p1'	'kpp mom4p1'
&ocean_vert_tidal_nml	background_diffusivity	0.0	0.0	0.0
	background_viscosity	0.0001	0.0001	0.0001
	decay_scale	500.0	500.0	500.0
	drag_dissipation_use_cdbot	True	True	True
	drhodz_min	$1 imes 10^{-10}$	$1 imes 10^{-10}$	$1 imes 10^{-10}$
	fixed_wave_dissipation	False	False	False
	max_wave_diffusivity	0.01	0.01	0.01
	mixing_efficiency_n2depend	True	True	True
	read_roughness	True	True	True
	read_tide_speed	True	True	True
	read_wave_dissipation	False	False	False
	reading_roughness_amp	True	True	True
	reading_roughness_length	False	False	False
	roughness_scale	12 000.0	12 000.0	12 000.0
	shelf_depth_cutoff	-1000.0	-1000.0	-1000.0
	tide_speed_data_on_t_grid	True	True	True
	use_drag_dissipation	True	True	True
	use_legacy_methods	False	False	False
	use_this_module	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			True
	do_alltoallv			True
	interp_method	'second	'second	'second
		order'	order'	order'
	make_exchange_reproduce	False	False	False
	nsubset	16	16	16