

ARPEGE MEMORANDUM

From: GCO

Date: December 10, 2012

Subject: New cycle CY39

A new cycle CY39 has been created. This is a common cycle with the ECMWF. The different contributions for this cycle are described in the following pages.

ClearCase label: CY39

Contributors:

BERRE Loik & DESROZIERS Gerald

CCase branch:mrpa663_CY38T1_clinfl

BOGATCHEV Andrey

CCase branch:mrpe702_CY38T1_setup

CCase branch:mrpe702_CY38T1_trans

BROZKOVA Radmila

CCase branch:mrpe684_CY38T1_rbfir2

EL KHATB Ryad

CCase branch:mrpm602_CY38T1_opt2v7

EL KHATIB Ryad

CCase branch:mrpm602_CY38T1_fix2v6

CCase branch:mrpm602_CY38T1_fpos2

CCase branch:mrpm602_CY38T1_misc2v5

GCO

CCase branch:none

CCase branch:marp001_CY38T1_cy39

CCase branch:marp003_CY38T1_interfaces

CCase branch:marp003_CY38T1_merge_bf

CCase branch:marp003_CY38T1_r2fix*

GUIDARD Vincent	CCase branch:mrpe710_CY38T1_mergeOBS
GUILLAUME Frank	CCase branch:mrpa644_CY38T1_phasage_1
MARY Alexandre	CCase branch:mary_CY38T1_preintuv
MEUNIER Louis-Francois	CCase branch:meunierlf_CY38T1_shuffle_dim_r2
PAYAN Christophe	CCase branch:mrpa642_CY38T1_mergeOBSr2
SALMOND Deborah	CCase branch:marp001_CY38T1_cy39
	CCase branch:marp001_CY38T1_r2cep
SALMOND Deborah & YESSAD Karim & GCO	CCase branch:marp003_CY38T1_merge_cy38t1_cy38r2
SEITY Yann	CCase branch:mrpm637_CY38T1_bf_aro_pour39
SPANIEL Olda	CCase branch:mrpe693_CY38T1_38t1r2_prev06
SZUCS Mihaly	CCase branch:szucs_CY38T1_ESIGclean
YESSAD Karim	CCase branch:none
	CCase branch:mrpm603_CY38T1_merge38t1r2
	CCase branch:mrpm603_CY38T1_merge38t1r2b
	CCase branch:mrpm603_CY38T1_merge38t1r2c
	CCase branch:mrpm603_CY38T1_merge38t1r2d
	CCase branch:mrpm603_CY38T1_merge38t1r2e

BERRE Loik & DESROZIERS Gerald

Doc:

Minor cleaning of merge modifications .

Project: ifs
**ClearCase
branch:** mrpa663_CY38T1_clinfl

Modified:

arp/var fltbgerr.F90 inflation_pert.F90

BOGATCHEV Andrey

Doc:

Bugfixes.

Project: aladin,ifs
**ClearCase
branch:** mrpe702_CY38T1_setup

Modified:

ald/setup sueqlimsat.F90
arp/setup su0yomb.F90 sulap.F90
arp/utility freemem.F90

Doc:

Phasing of tal/module/suemp_trans_preleg_mod.F90 .

Project: aladin transforms
**ClearCase
branch:** mrpe702_CY38T1_trans

Modified:

tal/module suemp_trans_preleg_mod.F90

BROZKOVA Radmila

Doc:

*arp/module/yomphy0.F90
Correction of the name for entrainment tuning parameter.
Removal of useless parameters.*

*arp/namelist/namphy0.h
Correction of the name for entrainment tuning parameter.
Removal of useless parameters.*

*arp/phys_dmn/accvud.F90
Fix of mass-flux computation (change of results in all cases).
Fix of prognostic entrainment and adapting detrainment.*

*arp/phys_dmn/acmodo.F90:
Fix of mass/flux computation (mirror to updraft, change of results in all cases);*

*arp/phys_dmn/acnebcond.F90:
Fix of relative critical humidity dependency function. Attention – it must be accompanied by modifying tuning constants
SCLESPR and SCLESPS – their
new values are now set by default in SUPHY0. It is preferential to remove them from namelist file and rely on default values.
Small change of norms,*

meteorologically neutral.

arp/phys_dmn/acupd.F90:

Fix for adaptative detrainment (neutral for standard setup).

arp/phys_dmn/acupu.F90:

Correction of choice of convective cloudiness entering microphysics (change of results).

arp/phys_dmn/aplpar.F90:

Removal of initialization of YUNEBH and YUEN to zero at the beginning of integration (KSTEP=0), since the initial values of GFL should be driven

by namelist attribute NREQIN (change of results except if NREQIN=0 in case of YUNEBH).

Fix of the calling sequence of ACUPD.

arp/phys_dmn/suphy0.F90:

Correction of default values for Xu-Randall adjustment: SCLESPR and SCLESPTS.

Project: ifs
ClearCase
branch: mrpe684_CY38T1_rbfir2

Modified:

arp/module	yomphy0.F90		
arp/namelist	namphy0.h		
arp/phys_dmn	accvud.F90	acmodo.F90	acnebcond.F90
	acupd.F90	acupu.F90	aplpar.F90
	suphy0.F90		

EL KHATB Ryad

Doc:

ini3wrfp.F90, wrhfp.F90, wrsfp.F90 : optimization of physical I/Os

rdpxfa.F90 : optimization of FA gridpoint fields scattering
egath_spec.F90, egath_spec.h, egath_spec_control_mod.F90 : partial monkey business.
phrtsetup.F90 : bugfix

Project: ifs,satrad,aladin transforms
ClearCase
branch: mrpm602_CY38T1_opt2v7

Renamed:

ald/fullp suefpmapf.F90 to
os arp/fullpos/sufpmapf.F90

Modified:

arp/fullpos	ini3wrfp.F90	subfpos.F90	sufpmapf.F90
	wrhfp.F90	wrsfp.F90	
arp/parallel	rdpxfa.F90		
sat/rttov/ifs	phrtsetup.F90		
tal/external	egath_spec.F90		
tal/interface	egath_spec.h		
tal/module	egath_spec_control_mod.F90		

EL KHATIB Ryad

Doc:

cnt4.F90, rdclimo.F90, wrhfp.F90 :
Bugfix for Fullpos

fpuv2kp.F90 :
Fix a broken vectorization for Fullpos won NEC ith a compiler directive

predynfpos.F90 :

Memory savings for Fullpos

faipar_mt.F, lfiefr_mt.F :
Flush output unit number before aborting.

Project: ifs,ifsaux
ClearCase branch: mrpm602_CY38T1_fix2v6

Modified:

arp/control	cnt4.F90		
arp/fullpos	fpuv2kp.F90	predynfpos.F90	rdclimo.F90
	wrhfp.F90		
xrd/fa/mt	faipar_mt.F		
xrd/lfi/mt	lfiefr_mt.F		

Doc:

FullPos-2.

The impact on the results should be limited to the case CFPFMT='MODEL' for Arpege/Aladin only (not Ifs), where several filters have been fixed and/or disabled by default.

Regarding the user interface, the changes are the following :

- namelist keys LFIT=.TRUE./FALSE. are replaced by integers NFIT*=0/1 or 2 for advance usage (under development).*

It is recommended to just remove the occurrence of the key LFIT in namelists because the defaults of the keys NFIT* should be the best.*

- NFPOS can have the following values :

** NFPOS = 0 <=> Fullpos is disabled*

** NFPOS = 1 <=> Fullpos for gridpoint back-end post-processing*

** NFPOS = 927 <=> Fullpos for change of geometries*

** NFPOS = 928 <=> Like NFPOS = 927, but optimized (there is no spectral fit of fields - except orography) between the horizontal part and the vertical part. Compared to NFPOS = 927, the results change, of course. In the case of e928 and ee928, there are two additive modifications :*

- the biperiodicization is performed after the vertical interpolations, while it is performed before in the configuration (e)e927.

- the map factor is smoothed in the target spectral space. Because of this innovation, the possibility to run these

configurations in distributed mode is temporarily restricted to a few particular cases (A-level parallelization only, number of latitudes divisible by the number of MPI tasks).

** NFPOS = 2 <=> Fullpos-2 for change of geometries. Fullpos-2 is based on the usage of multiple spectral transforms geometries inside the same job.*

Note that the case CFPFMT='MODEL' has become a sub-case of Fullpos-2, therefore it is mandatory to set NFPOS=2 if CFPFMT should be 'MODEL'.

** Compared to NFPOS=928, NFPOS=2 gives bit-wise reproduceable results, and run approximately twice faster.*

For now, Fullpos-2 does not support MPI distribution but it works in multi-threaded mode.

The Boyd biperiodicization is not yet supported in the configurations 928/002, but it works in configuration 927.

Note that with this modset, Fullpos has completely moved away from STEPO and its subsequent subroutines. Fullpos is now driven by its own control subroutines (STEPO_FPOS being the main gear).

Project: aladin,ifs,aladin transforms,transform

ClearCase branch: mrpm602_CY38T1_fpos2

Added:

ald/fullpos	suefpmapf.F90		
ald/setup	suemapf.F90		
arp/fullpos	fpuv2kp.F90	iofpos.F90	sposgf.F90
	sufpfit.F90	sufporog.F90	
arp/utility	updtrans.F90		
tfl/external	get_current.F90		
tfl/interface	get_current.h		

Modified:

ald/c9xx	ebicli.F90		
ald/fullpos	esfpf.F90	exbip.F90	extfpezo.F90
	fpezo2h.F90	fpezzone.F90	fpfillb.F90
	incfpezo.F90	posfpbipos.F90	prefpbipos.F90
	suefpbip.F90	suefpmapf.F90	sufpezo.F90
ald/parallel	ircvezon.F90	isndezon.F90	

ald/setup	suegem2.F90	suemapf.F90	
ald/transform	etransdir_fp.F90	etransdirh.F90	etransinv_fp.F90
arp/ald_inc/namelist	nemfpezo.h		
arp/control	cnt4.F90	csekf2.F90	
arp/dia	fpsnorm.F90	pregrbenc.F90	preset_grib_template.F90
	wroutspgb.F90		
arp/fullpos	cpvpospr.F90	dynfpos.F90	endpos.F90
	endvpos.F90	fpcordyn.F90	fpfilter.F90
	fptsa_dir.F90	fptsa_inv.F90	fpuv2kp.F90
	gridfpos.F90	hpos.F90	ini1wrfp.F90
	ini3wrfp.F90	iofpos.F90	openfpfa.F90
	phymfpos.F90	rdclimo.F90	scan2m_hpos.F90
	scan2m_vpos.F90	spos.F90	sposgf.F90
	stepo_fpos.F90	sualfpos.F90	subfpos.F90
	sufpc.F90	sufpconf.F90	sufpd.F90
	sufpdistrib.F90	sufpf.F90	sufpfit.F90
	sufpg.F90	sufpg2.F90	sufpgaw.F90
	sufpgrib.F90	sufpoph.F90	sufporog.F90
	sufprfpbuf.F90	sufpsc2.F90	sufptr2.F90
	sufptrans.F90	sufpvset_dir.F90	sufpvset_inv.F90
	sumpfpos.F90	suvfpos.F90	suvfposl.F90
	suvpos.F90	updvpos.F90	vpos.F90
	wrhfp.F90	wrmlfp.F90	wrplfp.F90
	wrpvlfp.F90	wrsfp.F90	wrthlfp.F90
arp/io_serv	io_serv_suiosctmpl.F90		
arp/module	yomauxb.F90	yomdfpb.F90	yomfpc.F90
	yomfpc.F90	yomfpezo.F90	yomfpg.F90
	yomfptrans.F90	yompfpb.F90	yomrfpb.F90
arp/namelist	namfpc.h	namfpc.h	
arp/parallel	trwvtof.F90		
arp/pp_obs	pos.F90	ppreset.F90	
arp/setup	suafn1.F90	suafn2.F90	susc2b.F90
arp/transform	transdir_fp.F90	transdirh.F90	transinv_fp.F90
arp/utility	dealfpos.F90	dealmod.F90	dealsc2.F90
	freemem.F90	prepacka.F90	updtrans.F90

tal/external	esetup_trans.F90	etrans_inq.F90	
tal/interface	etrans_inq.h		
tfl/external	get_current.F90	setup_trans.F90	trans_inq.F90
tfl/interface	get_current.h	trans_inq.h	
tfl/module	tpm_geometry.F90		

Doc:

mf_phys.F90, sugfl1.F90 :
Bugfixes

mod_obstat_plot.F90, string_utility.F90 :
Split file in order to have one module per file

- sumpfpos.F90, sufpg.F90, yomfpgind.F90, fptrdtoa.F90, dealfpos.F90 :
MPI support for Fullpos-2

- fposhor.F90 :
Optimizations

Project: ifs,obstat
ClearCase branch: mrpm602_CY38T1_misc2v5

Added:

obt/module string_utility.F90

Modified:

arp/fullpos	fposhor.F90	sufpg.F90	sumpfpos.F90
arp/module	yomfpgind.F90		
arp/parallel	fptrdtoa.F90		
arp/phys_dmn	mf_phys.F90		
arp/setup	sugfl1.F90		
arp/utility	dealfpos.F90		

obt/module mod_obstat_plot.F90

GCO

Doc:

Protect content of ODB_API related sources under new CPP macro "ODB_API_SUPPORT" .

Project: obstat,odb
ClearCase branch: none

Modified:

obt/src	iniitemloc.F90	obstat_hist_plot.F90	obstat_hov_plot.F90
	obstat_overview_hist_plot.F90	outcoverage.F90	writegribs.F90
odb/cma2odb	create_averaged_values.F90		
odb/lib	mpi_wrapper.F90	odb_wrapper.F90	
odb/module	odb2.F90	odb1.F90	varindex_module.F90
odb/tools	Bufr2odb.F90	Odb2_to_Odb1_ralt.F90	Odb2_to_odb1_era.F90

Doc:

- 1) Remove "arp/dia/aro_surf_diagh.F90", already moved to project "mse".
- 2) Remove obsolete routines.
- 3) Bugfix: declare argument PDL as REAL(KIND=JPRH) instead of REAL(KIND=JPRB) (sugaw36.*) .
- 4) Restore NECSX/gfortran portability fixes, and good version of "aeo/Scripts/arpifs_excluded_files" .
- 5) Remove useless interface blocks.

Project: aladin,ifs,utilities
ClearCase branch: marp001_CY38T1_cy39

Deleted:

ald/fullpos exbip.F90 extfpezo.F90 incfpezo.F90

ald/parallel	ircvezon.F90	isndezon.F90
ald/transform	etransinv_fp.F90	
arp/dia	aro_surf_diagh.F90	
arp/module	yomauxb.F90	yompinb.F90

Modified:

arp/op_obs	hretr.F90	
arp/phys_ec	ec_phys.F90	
arp/phys_radi	rrtm_init_140gp.F90	srtm_init.F90
uti/rdc/include	sugaw36.h	
uti/rdc/src	sugaw36.F90	

Doc:

- 1) Move some IFS routine to "mse/externals", because those routines are using (implicitly or not) some modules of project "mse".
- 2) Create interfaces to those moved routines in "mse/interface", and fix callers in order to replace "foo.intfb.h" by "foo.h" .
- 3) Remove useless USE statements from some interfaces (in projects "tal" & "mse").

Project: ifs,mse,aladin transforms
ClearCase branch: marp003_CY38T1_interfaces

Added:

mse/externals	aro_surf_diagh.F90	canari_sx_ics.F90	fp2sx1.F90
	sugridsfx.F90	suphmse_surface.F90	wrsfx.F90
mse/interface	aro_surf_diagh.h	canari_sx_ics.h	fp2sx1.h
	sugridsfx.h	suphmse_surface.h	wrsfx.h

Deleted:

arp/canari	canari_sx_ics.F90
arp/dia	wrsfx.F90
arp/fullpos	fp2sx1.F90

arp/phys_dmn suphmse_surface.F90
arp/setup sugridsfx.F90

Modified:

arp/canari	canari.F90		
arp/dia	wrmlppa.F90		
arp/fullpos	gridfpos.F90		
arp/phys_dmn	suphmse.F90		
arp/utility	iopack.F90		
mse/externals	aro_surf_diagh.F90 fp2sx1.F90 wrsfx.F90	aroini_surfb.F90 sugridsfx.F90	canari_sx_ics.F90 suphmse_surface.F90
mse/interface	aro_ground_diag.h aro_put_zs.h aroini_surfa.h atm2sx_env.h deallmse.h sugridsfx.h	aro_ground_diag_z0.h aro_surf_diagh.h aroini_surfb.h atm2sx_field.h fp2sx1.h suphmse_surface.h	aro_ground_param.h aro_surf_diagh.h aroini_surfc.h canari_sx_ics.h ini_prep_surfex_aro.h wrsfx.h
tal/interface	etrans_end.h		

Doc:

Bugfix n°01 of cycle CY38T1 :

1. Remove obsolete routines (GCO).

- (-) arp/module/yomvarbc.F90*
- (-) arp/var/gtvarbc_groupid.F90*
- (-) arp/var/rdvarbc.F90*
- (-) arp/var/wrvarbc.F90*

2. In the current version of CY38T1, the retrieved surface temperature is only stored in ODB over sea-ice. This bugfix activate the retrieval over

land and open-sea (Louis-François Meunier).

arp/op_obs/hretr.F90

3. Fixes bad indices used in the ROBHDR array (Louis-François Meunier).

odb/cma2odb/shuffle_odb.F90

4. Fixes from Christophe Payan & Frank Guillaume:

- * Correct consideration of ASCAT data from MetOP-B (back-phasing of 38r2)
- * ASCAT_RESOL variable renamed as ASCAT_XYGRID
- * SATRAD block added in ctxinitdb, lost between 37t1 and 38t1 (useful for radar reflectivity data assimilation)
- * Initialization to 'xxxxxTBD' the array CLSID(:) in Bator.F90
- * Fix for timeslot management of GPSSOL datas .
- * Fix in the calculation of observations distribution in pools.

(+) odb/ddl.CCMA/obsort_hdr2scatt_body.sql

(+) odb/ddl.CCMA/suobarea_scatt.sql

(+) odb/ddl.ECMA/obsort_hdr2scatt_body.sql

(+) odb/ddl.ECMA/suobarea_scatt.sql

(+) odb/ddl/obsort_hdr2scatt_body.sql

(+) odb/ddl/suobarea_scatt.sql

arp/module/parersca.F90

arp/module/yomersca.F90

arp/module/yommkodb.F90

arp/namelist/nammkodb.h

arp/obs_preproc/ascatif.F90

arp/obs_preproc/suobarea.F90

arp/obs_preproc/suobs.F90

arp/op_obs/hjo.F90

arp/var/ecset.F90

arp/var/ecset_thsafe.F90

arp/var/sualcos.F90

arp/var/suscat.F90

odb/cma2odb/ctxinitdb.F90

odb/ddl/obsort_hdr2scatt_body.sql

odb/ddl/suobarea.sql
odb/ddl/suobarea_scatt.sql
odb/pandor/module/bator_decodbufr_mod.F90
odb/pandor/module/bator_ecritures_mod.F90
odb/pandor/module/bator_init_mod.F90
odb/pandor/module/bator_saisies_mod.F90
odb/pandor/module/bator_util_mod.F90
odb/pandor/namelist/bator_namelist.h
odb/tools/Bator.F90

5. The names of the fields written in a FA file have to be 12 characters length maximum. This was not the case in the last version of surfex we use (V7.2) for the variables linked to the ground depth; they have been shortened from X_GROUND_DEPTH to X_GROUND_DPT (Françoise Taillefer).

surfex/SURFEX/mode_read_extern.F90
surfex/SURFEX/read_pgd_isba_parn.F90
surfex/SURFEX/writesurf_pgd_isba_parn.F90

6. Fixes from Eric Wattrelot:

- * Fix AROME's screening reproducibility issue (radar datas).
- * Bugfix (hretr.F90).

arp/obs_preproc/pre_thinn_rad_reflec.F90
arp/obs_preproc/pre_thinn_radar.F90
arp/op_obs/hretr.F90
odb/ddl/pre_thinn_roboddy_10.sql
odb/ddl/pre_thinn_roboddy_11.sql

7. Bugfixes when considering variable sigma_o for T2m (Cornel Soci).

arp/canari/cacova.F90
arp/canari/catrma.F90

8. Replace azimuth calculation by the direct reading of the value stored in ODB bases, in the radial speed observation operator (Thibaut Montmerle).

arp/op_obs/dopplsim.F90
arp/op_obs/dopplsim_ad.F90
arp/op_obs/dopplsim_tl.F90
odb/ddl/satbody_radar.sql

9. Fixes from Vincent Guidard:

* Bugfixes in ODB.

odb/cma2odb/ctxinitdb.F90
odb/cma2odb/getdb.F90
odb/cma2odb/shuffle_odb.F90
odb/ddl/obsort_gnssro_body.sql
odb/ddl/obsort_hdr2gnssro_body.sql
odb/ddl/obsort_hdr2scatt_body.sql

* After Ryad's "cleaning of allocation" in varbc_setup.F90, there was a failure when dealing with two VarBC files at the same time (which is the case in program MRGVARBC): this branch is a bugfix for this problem. This was an great opportunity to clean any usage of obsolete module yomvarbc. Thus the following pieces of code can be deleted: YOMVARBC, RDVARBC, WRVARBC, GTVARBC_GROUPID .

arp/module/varbc_setup.F90
arp/programs/merge_varbc.F90

* Handle 2D-GOM in preintuv* .

arp/op_obs/hop.F90
arp/op_obs/preintuv.F90
arp/op_obs/preintuvtl.F90
arp/op_obs/hoptl.F90
arp/op_obs/preintuvad.F90

arp/op_obs/hopad.F90

** Modify type of dummy arguments: INTENT --> POINTER .*

arp/var/cvargptl.F90

arp/var/cvargpad.F90

** Bugfix (array dimension).*

arp/op_obs/hradpad.F90

** Catch-up (Compiler option).*

arp/obs_preproc/gefger.F90

** Prune obsolete satellite in diag_siglab.*

arp/var/surad.F90

arp/var/vec2gp.F90

10. arp/fullpos/wrhfp.F90 :

Bugfix to enable communications per chunk of fields in Fullpos (Ryad El Khatib).

xrd/fa/mt/faipar_mt.F, xrd/lfi/mt/lfiifr_mt.F

Flushout output unit number before aborting (Ryad El Khatib).

arp/fullpos/wrhfp.F90

xrd/fa/mt/faipar_mt.F

xrd/lfi/mt/lfiifr_mt.F

11. Miscellaneous bugfixes (Karim Yessad):

** NH with LGWADV=.TRUE. ,*

** configurations 401, 501 (and potentially any configuration using TL/AD) in eulerian ,*

** dirty square elevation in elarchetl+ad to be replaced by a multiplication, in order to avoid many wrong error diagnoses in debug mode (NB: it's better to write z*z than z**2.0_JPRB, especially if z<0).*

ald/adiab/elarchead.F90

ald/adiab/elarchetl.F90

ald/adiab/elascaw.F90

arp/adiab/cpg5.F90
arp/adiab/cpg_dyn.F90
arp/adiab/cpg_dyn_tl.F90
arp/adiab/cpglag.F90
arp/adiab/lascaw.F90
arp/dia/iospeca_mod.F90
arp/dia/wrmlppa.F90
arp/setup/suvert.F90

12. Qv tendency active only with nudging (Eric Bazile).

arp/adiab/cp_forcing.F90

13. Fixes from Yann Seity:

arp/fullpos/sufptr2.F90 : bugfix for couplingsurf (the one provided by Ghislain for op branch, but modified to be ok also for Hirlam partners)

arp/phys_dmn/apl_arome.F90: bugfix for Hirlam EDMF scheme (array out of bound correction)

arp/fullpos/sufptr2.F90
arp/phys_dmn/apl_arome.F90

14. HIRLAM contribution for the CY38T1 bugfixes.

arp/canari/caidgu.F90
arp/fullpos/openfpfa.F90
arp/op_obs/preints.F90
arp/phys_dmn/mf_phys.F90
arp/setup/supp.F90
surfex/offlin/io/open_aux_io_surf_lfi.F90
surfex/OFFLIN/oi_hor_extrapol_surf.F90
surfex/SURFEX/assim_isban.F90
surfex/SURFEX/assim_isba_update_snow.F90
surfex/SURFEX/assim_nature_isba_oi.F90
surfex/SURFEX/interpol_npts.F90

surfex/SURFEX/prep_hor_snow_fields.F90
surfex/SURFEX/prep_inland_water.F90
xrd/grib_mf/codega.F
xrd/module/ifcore.F90
xrd/module/ifport.F90

Project: ifs,odb,surfex,ifsaux
ClearCase branch: marp003_CY38T1_merge_bf

Added:

odb/ddl.CCMA obsort_gnssro_body.sql obsort_hdr2gnssro_body.sql

Deleted:

arp/module yomvarbc.F90
arp/var gtvarbc_groupid.F90 rdvarbc.F90 wrvarbc.F90

Modified:

arp/adiab	cp_forcing.F90		
arp/canari	cacova.F90	caidgu.F90	catrma.F90
arp/fullpos	openpfa.F90		
arp/module	parersca.F90	varbc_setup.F90	yomersca.F90
arp/obs_preproc	ascatif.F90	gefger.F90	pre_thinn_rad_reflec.F90
	pre_thinn_radar.F90	suobarea.F90	
arp/op_obs	dopplsim.F90	dopplsim_ad.F90	dopplsim_tl.F90
	hradpad.F90	hretr.F90	preints.F90
arp/phys_dmn	mf_phys.F90		
arp/programs	merge_varbc.F90		
arp/setup	supp.F90		
arp/var	cvargpad.F90	cvargptl.F90	surad.F90
	vec2gp.F90		
odb/cma2odb	ctxinitdb.F90	getdb.F90	shuffle_odb.F90

odb/ddl.CCMA	CCMA.dep		
odb/ddl.ECMA	ECMA.dep		
odb/ddl	obsort_gnssro_body.sql	obsort_hdr2gnssro_body.sql	pre_thinn_robody_10.sql
	pre_thinn_robody_11.sql	satbody_radar.sql	
surfex/OFFLIN	oi_hor_extrapol_surf.F90	open_aux_io_surf_lfi.F90	
surfex/SURFEX	assim_isba_update_snow.F90	assim_isban.F90	assim_nature_isba_oi.F90
	interpol_npts.F90	mode_read_extern.F90	prep_hor_snow_fields.F90
	prep_inland_water.F90	read_pgd_isba_parn.F90	writesurf_pgd_isba_parn.F90
xrd/grib_mf	codega.F		
xrd/module	ifcore.F90	ifport.F90	

Doc:

- Remove routine arp/chem/tm5_budg.F90 (duplicated subroutines).
- Portability fixes for NEC SX .
- Fix miscellaneous phasing bugs.
- Remove obsolete routines.
- Update list of aeolus files to exclude from compilation.

aeolus/Scripts/arpifs_excluded_files

- Portability fixes for gfortran/SX9 :

obt/src/obstat_hist_plot.F90
 obt/src/obstat_hov_plot.F90
 obt/src/obstat_overview_hist_plot.F90
 obt/src/outcoverage.F90
 obt/src/writegribs.F90
 odb/cma2odb/create_averaged_values.F90
 odb/module/varindex_module.F90

- Move odb/interface/getpoolsdb.F90 to odb/cma2odb/getpoolsdb.F90 (NB: introduced in "odb/interface" by mistake in cycle CY38R1).

- Protect inclusion of "dlfcn.h" under new CPP macro "RS6K" .

ifsaux/support/jio_time.c

- Protect calls to NEMO coupling under new CPP macro "WITH_NEMO" .

arp/nemo/couplnemo.F90

arp/nemo/getnemo.F90

arp/nemo/ininemo.F90

- Rename internal subroutine INI_BUDGET to IFS_INI_BUDGET (NB: subroutine INI_BUDGET already exists in project "mpa").

Arp/chem/tm5_chem_ini.F90

- version.c: set VERSION_MAJOR to 39 .

- Re-introduce some use of variables/functions, cleaned by mistake because of a bad behaviour of norm checker.
(NB: the norm checker does not take into account variables or functions that may appear in OpenMP directives...)

- yomsmos.F90: reintroduce variable NSMOS_MAX in the USE of module PARSMOS (NB: this variable is not used in the module YOMSMOS, but is used in some other routines by the way of a USE of YOMSMOS).

- yomclddet.F90: reintroduce variable MSENSOR_IASI in the USE of module YOMSATS (NB: this variable is not used in the module YOMCLDDET, but is used in some other routines by the way of a USE of YOMCLDDET).

- Uncomment USE of module MODI_PREP_WATFLUX in prep_inland_water.F90 .

Project: aladin,ifs,obstat,surfex,ifsaux
ClearCase branch: marp003_CY38T1_r2fix*

Renamed:

odb/interface getpoolsdb.F90 to odb/cma2odb/getpoolsdb.F90

Deleted:

arp/chem	tm5_budg.F90		
arp/dfi	pc_ini.F90		
arp/fullpos	fpuv2kp.F90	iofpos.F90	sposgf.F90
	sufpfit.F90	sufpg1.F90	sufpgaw.F90
	sufporog.F90		
arp/module	parrint.F90	yomgpsro.F90	yomlascaw.F90
	yomscen.F90		
arp/obs_preproc	tosabe.F90		
arp/op_obs	co2cldairs_ml.F90	co2cldiasi_ml.F90	radtrk.F90
arp/phys_dmn	cphflux.F90	cphflux2.F90	
arp/phys_ec	idisgpf.F90		
arp/pp_obs	heapsort.F90		

Modified:

ald/fullpos	exbip.F90	extfpezo.F90	incfpezo.F90
ald/parallel	ircvezon.F90	isndezon.F90	
ald/transform	etransinv_fp.F90		
arp/chem	tm5_chem_ini.F90		
arp/control	cnt4ad.F90		
arp/module	eint_mod.F90	gom_mod.F90	yomauxb.F90
	yomclddet.F90	yomgc.F90	yomgem.F90
	yomsmos.F90		
arp/nemo	couplnemo.F90	getnemo.F90	ininemo.F90
arp/obs_preproc	biascor.F90	biascor_era40.F90	redun.F90
	screen.F90	suobs.F90	
arp/oops	fields_mod.F90		
arp/op_obs	hretr.F90	obshor.F90	

arp/phys_ec	aero_init.F90		
arp/setup	su0yomb.F90		
arp/utility	wrgp2fa.F90		
arp/var	congrad.F90	precond.F90	
ifsaux/support	jio_time.c		
obt/src	obstat_hist_plot.F90	obstat_hov_plot.F90	obstat_overview_hist_plot.F90
	outcoverage.F90	writegribs.F90	
odb/cma2odb	create_averaged_values.F90		
odb/lib	version.c		
odb/module	varindex_module.F90		
sat/rttov/main	rttov_check_traj.F90		
surfex/SURFEX	prep_inland_water.F90		
xrd/module	deallocate_if_associated_mod.F90		

GUIDARD Vincent

Doc:

Phasing + adaptation to new GOM .

Project: ifs
ClearCase branch: mrpe710_CY38T1_mergeOBS

Modified:

arp/obs_preproc	sugoms.F90		
arp/op_obs	co2slicing.F90	cobsall.F90	cobsalltl.F90
	hop.F90	hopad.F90	hoptl.F90
	jhretr.F90	obshor.F90	preintuv.F90
	preintuvad.F90	preintuvtl.F90	sumts.F90

GUILLAUME Frank

Doc:

- 1) Add new module BATOR_DATETIME_MOD, for date management (NB: used for GPSSOL datas).
- 2) Decoding of radar datas (in polar coordinates), PILOT datas, Tempdrop (WMO template), Cris, Atms.
- 3) Prepare METAR decoding.
- 4) Activate Fov/Scanline interlacing of SSMIS.
- 5) Real date of GPSSOL observation is now kepted for CENT method.
- 6) ODB: values in update_*.len and update_*.offset are null after execution of BATOR.

Project: ifs,odb
ClearCase branch: mrpa644_CY38T1_phasage_1

Added:

odb/pandor/module bator_datetime_mod.F90

Modified:

arp/module	yomersca.F90		
odb/cma2odb	putatdb.F90		
odb/ddl	obsort_hdr2gnssro_body.sql	obsort_hdr2scatt_body.sql	
odb/pandor/module	bator_datetime_mod.F90	bator_decodbufr_mod.F90	bator_ecritures_mod.F90
	bator_init_mod.F90	bator_lectures_mod.F90	bator_module.F90
	bator_saisies_mod.F90	bator_util_mod.F90	
odb/pandor/namelist	bator_namelist.h		
odb/tools	Bator.F90		

MARY Alexandre

Doc:

Phasing PREINTUV (wind rotation w/r to grids compas) with new GOM handling.

Project: ifs
ClearCase branch: mary_CY38T1_preintuv

Modified:

arp/module	gom_mod.F90		
arp/obs_preproc	sugoms.F90		
arp/op_obs	hop.F90	hopad.F90	hoptl.F90
	preintuv.F90	preintuvad.F90	preintuvtl.F90

MEUNIER Louis-Francois

Doc:

Fixes bad indices used in the ROBHDR array.

Project: odb
ClearCase branch: meunierlf_CY38T1_shuffle_dim_r2

Modified:

odb/cma2odb shuffle_odb.F90

PAYAN Christophe

Doc:

Phasing of arp/op_obs/hjo.F90 .

Project: ifs
ClearCase branch: mrpa642_CY38T1_mergeOBSr2

Modified:

arp/op_obs hjo.F90

SALMOND Deborah**Doc:**

1. Fix format statement at line 715 in odb/pandor/bator_init_mod.F90 .
2. Revert V07 versions of ifs/var/surad.F90 and ifs/var/vec2gp.F90 back to the V06 versions.
3. su0yomb.F90: put in extra 501 check for call to subj .
4. Fix indenting in ifs/op_obs/hretr.F90 .
5. Put in some GPHPRE calls:

ifs/var/bgobs.F90
ifs/phys_ec/ec_phys.F90
ifs/phys_ec/ec_phys_ad.F90
ifs/phys_ec/ec_phys_tl.F90
ifs/op_obs/hop.F90
ifs/op_obs/hopad.F90
ifs/op_obs/hoptl.F90
ifs/op_obs/hretr.F90
ifs/op_obs/hretr_aeolus.F90
ifs/op_obs/preint.F90
ifs/op_obs/preintad.F90
ifs/op_obs/preinttl.F90

6. Revert RRTM back to Cycle 38 for NEC vectorisation .

ifs/module/yoerrtm.F90
ifs/module/yoesrtm.F90
ifs/phys_radi/surrtmcf.F90
ifs/phys_radi/susrtmcf.F90
ifs/phys_radi/srtm_init.F90
ifs/phys_radi/rrtm_init_140gp.F90

7. Fix new GOM for NEC by A.Geer - as discussed with A.Mary to remove Fortran2003 and replace with F95.

ifs/control/scan2mad.F90
ifs/control/scan2mtl.F90
ifs/module/gom_mod.F90
ifs/module/yomglobs.F90
ifs/obs_preproc/mkglobstab.F90
ifs/obs_preproc/sugoms.F90
ifs/obs_preproc/suobs.F90
ifs/oops/fields_interp_mod.F90
ifs/oops/gom_setup.F90
ifs/op_obs/cobs.F90
ifs/op_obs/cobsad.F90
ifs/op_obs/cobsall.F90
ifs/op_obs/cobsallad.F90
ifs/op_obs/cobsalltl.F90
ifs/op_obs/hop.F90
ifs/op_obs/hopad.F90
ifs/op_obs/hoptl.F90
ifs/op_obs/hradp.F90
ifs/op_obs/hradp_ml.F90
ifs/op_obs/hradp_ml_ad.F90
ifs/op_obs/hradp_ml_tl.F90
ifs/op_obs/hradpad.F90
ifs/op_obs/hradptl.F90
ifs/op_obs/obshor.F90
ifs/op_obs/obshorad.F90
ifs/op_obs/slnt.F90

ifs/op_obs/slntad.F90
ifs/pp_obs/ppobsaad.F90
ifs/pp_obs/ppobsatl.F90
ifs/utility/deallo.F90

add ifs/obs_preproc/rmglobstab.F90

8. Fix small Fortran problem in EC physics .

Insert missing deallocate and remove passing in same array twice in argument list from callparad to cond:

ifs/phys_ec/callpartl.F90
ifs/phys_ec/callparad.F90

Project: ifs,odb,satrad,ifsaux
ClearCase branch: marp001_CY38T1_cy39

Added:

arp/obs_preproc rmglobstab.F90
xrd/support opfla_perfmon.c wrap_ftn.c

Deleted:

arp/op_obs hop_rad.F90 hop_rad_ml.F90

Modified:

arp/control	scan2mad.F90	scan2mtl.F90	
arp/fullpos	predynfpos.F90		
arp/module	gom_mod.F90	yoerrtm.F90	yoesrtm.F90
	yomglobs.F90		
arp/obs_preproc	mkglobstab.F90	rmglobstab.F90	sugoms.F90
	suobs.F90		
arp/oops	fields_interp_mod.F90	gom_setup.F90	
arp/op_obs	bgobs.F90	cobs.F90	cobsad.F90

	cobsall.F90	cobsallad.F90	cobsalltl.F90
	hop.F90	hopad.F90	hoptl.F90
	hradp.F90	hradp_ml.F90	hradp_ml_ad.F90
	hradp_ml_tl.F90	hradpad.F90	hradptl.F90
	hretr.F90	hretr_aeolus.F90	obshor.F90
	obshorad.F90	preint.F90	preintad.F90
	preinttl.F90	slint.F90	slintad.F90
arp/phys_ec	callparad.F90	callpartl.F90	ec_phys.F90
	ec_phys_ad.F90	ec_phys_tl.F90	
arp/phys_radi	rrtm_init_140gp.F90	srtm_init.F90	surrtmcf.F90
	susrtmcf.F90		
arp/pp_obs	ppobsaad.F90	ppobsatl.F90	
arp/setup	su0yomb.F90		
arp/utility	deallo.F90		
arp/var	surad.F90	vec2gp.F90	
odb/cma2odb	ctxinitdb.F90	getdb.F90	putatdb.F90
	shuffle_odb.F90		
odb/pandor/module	bator_init_mod.F90		
sat/programs	bufr_screen_cris.F90		

Doc:

1. OpenMP bug:

ifs/adiab/cpglag.F90

2. Remove '??':

ifs/fullpos/spos.F90

3. Fix for LLSURF for ECMWF only:

ifs/fullpos/updvpos.F90

4. Fix for varbec_airep ODB problem (bug from ECMWF):

ifs/module/varbc_airep.F90

odb/cma2odb/ctxinitdb.F90

odb/ddl/varbc_airep_robhdr.sql

5. Remerge of HRETR to fix bugs

```
< IXVARBC(JOBS,JBODY) = ROBODY(IBODY,MDB_VARBC_IX_AT_BODY)
---
> IXVARBC(JOBS,ICOUNT(JOBS)) = ROBODY(IBODY,MDB_VARBC_IX_AT_BODY)

< ROBODY(IBODY,MDBTORB) = ZVARBC(JOBS,JBODY)
---
> ROBODY(IBODY,MDBTORB) = ZVARBC(JOBS,ICOUNT(JOBS))
```

The following line was erroneously deleted (and at CY38 too)

```
> & .AND. ICHAN/=IEMIS_CHAN) THEN
```

Reinstate second call to Jacobian peak:

The reason for this is that the Jacobian calculation is only cost free if it recycles calculations from a previous call to RTTOV (via RADTR). There is a call to RADTR in the emiss loop for microwave sounders (so I tagged on a Jacobian peak calculation there), but the IR sounders don't go through that section of code. They have a call to RADTR related to cloud detection and estimation later on (so that is where I tagged on a Jacobian peak calculation).

ifs/op_obs/hretr.F90

6. Comment out calls to SURFEX_FIELD_BUF_GET2DF:

ifs/dia/wrsfx.F90

ifs/setup/sugridsfx.F90

7. Fix for JB struct being used before allocated (bug from ECMWF):

ifs/setup/su0yomb.F90

8. Fix for SV calc and Sensitivity (601 and 801) (bug from ECMWF):

ifs/setup/su_surf_flds.F90

9. Fix for #ifdef ODB_API_SUPPORT
obstat/src/iniitemloc.F90

10. Late fixes from ECMWF for 38r2
- only affects ECMWF physics + OBSTAT and MACC

ifs/climate/updclie.F90
ifs/climate/updrgas.F90
ifs/fullpos/wrmlfp.F90
ifs/phys_ec/callpar.F90
ifs/phys_ec/callparad.F90
ifs/phys_ec/cubasen.F90
ifs/phys_ec/cuflxn.F90
ifs/phys_ec/cumastrn.F90
ifs/phys_ec/gwsetup.F90
ifs/phys_ec/gwsetupad.F90
ifs/phys_ec/gwsetuptl.F90
ifs/phys_ec/phys_ad.F90
ifs/phys_ec/phys_nl.F90
ifs/phys_ec/radlsw.F90
ifs/phys_ec/radlswad.F90
ifs/phys_ec/radlswtl.F90
ifs/phys_ec/su_ghgclim.F90
ifs/phys_ec/sucumf.F90
ifs/phys_ec/sugwd.F90
ifs/phys_ec/vdfexcu.F90
ifs/phys_radi/lw.F90
ifs/phys_radi/lwc.F90
ifs/phys_radi/lwv.F90
ifs/phys_radi/lwvad.F90
ifs/phys_radi/lwvtl.F90
ifs/var/sujbwavelet.F90
odb/tools/Simulobs2odb.F90
obstat/src/inisoftdef.F90
obstat/src/outcoverage.F90

obstat/src/plotsoft.F90
obstat/src/updsoft.F90
obstat/src/writealarm.F90
obstat/src/writegribs.F90

Project: ifs,obstat,odb
ClearCase branch: marp001_CY38T1_r2cep

Added:

odb/ddl.CCMA canaco_robhdr.sql

Modified:

arp/adiab	cpglag.F90		
arp/climate	updclie.F90	updrgas.F90	
arp/control	scan2mtl.F90		
arp/fullpos	spos.F90	updvpos.F90	wrmlfp.F90
arp/module	varbc_airep.F90		
arp/op_obs	hretl.F90		
arp/phys_ec	callpar.F90	callparad.F90	cubasen.F90
	cuflexn.F90	cumastrn.F90	gwsetup.F90
	gwsetupad.F90	gwsetuptl.F90	phys_ad.F90
	phys_nl.F90	radlsw.F90	radlswad.F90
	radlswtl.F90	su_ghgclim.F90	sucumf.F90
	sugwd.F90	vdfevcu.F90	
arp/phys_radi	lw.F90	lwc.F90	lwv.F90
	lwvad.F90	lwvtl.F90	
arp/setup	su0yomb.F90	su_surf_flds.F90	
arp/var	sujbwavelet.F90		
obt/src	iniitemloc.F90	inisoftdef.F90	outcoverage.F90
	plotsoft.F90	updsoft.F90	writealarm.F90
	writegribs.F90		
odb/cma2odb	ctxinitdb.F90		
odb/ddl	varbc_airep_robhdr.sql		

SALMOND Deborah & YESSAD Karim & GCO**Doc:***Merge of cycles CY8T1/CY38R2 .***Project:** aladin,ifs,black_list,,obstat,odb,satrad,scatt,surf,aladin
transforms,transform,algor,ifsaux**ClearCase branch:** marp003_CY38T1_merge_cy38t1_cy38r2**Added:**

ald/interpol	elascaw.F90 eslextpol.F90 suehowlsm.F90	elascawad.F90 suehow1.F90	elascawtl.F90 suehow2.F90
ald/setup arp/adiab	suegem_naml.F90 cpg_drv.F90 gppwcvfe.F90 laqmlimiter.F90	cpg_drv_ad.F90 gpstress.F90 spfilt.F90	cpg_drv_tl.F90 laminmaxint.F90
arp/chem	chem_decay.F90 chem_inext.F90 chem_massdia.F90 chem_negat.F90 chem_tm5.F90 tm5_budg.F90 tm5_cloud_info.F90 tm5_fparam.F90 tm5_noy.F90 tm5_sundis.F90	chem_drydep.F90 chem_init.F90 chem_mocage.F90 chem_noxadv.F90 tm5_boundary_ch4.F90 tm5_calrates.F90 tm5_do_ebi.F90 tm5_getextra.F90 tm5_photolysis_rates.F90	chem_emi3d.F90 chem_main.F90 chem_mozart.F90 chem_scav.F90 tm5_boundary_hno3.F90 tm5_chem_ini.F90 tm5_eqsam.F90 tm5_incbud.F90 tm5_reacbud.F90
arp/control arp/dfi arp/fullpos	qmfixer.F90 pc_ini.F90 predynfpos.F90	tracmf.F90 scan2m_hpos.F90	 scan2m_vpos.F90

arp/interpol	stepo_fpos.F90 sufptrans.F90 check_sl_struct.F90 fpscaw.F90 laiddiad.F90 laidditl.F90 laidliad.F90 laidliobs.F90 laihvt.F90 laitli.F90 laitlitl.F90 laitriad.F90 laminmaxint.F90 lascaw_cla.F90 lascaw_clo.F90 lascaw_vintw.F90 lascawad.F90 slcomm.F90 slcset.F90 slrset.F90 suhowlsm.F90 suvsplip.F90 chem_mix.F90 tm5_chem_module.F90 yoeaervol.F90 yomclddet.F90 yomfptrans.F90 yomgrib.F90 yomnemo.F90 yomsurf.F90 mwave_wrapper.F90 naephli.h namcosjo.h couplnemo.F90 read_crischans.F90	sufpdistrib.F90 fpint12.F90 laiddi.F90 laiddiobs.F90 laidli.F90 laidlic.F90 laidliobsad.F90 laismoa.F90 laitli_init.F90 laitri.F90 laitritl.F90 laqmlimiter.F90 lascaw_cla_ad.F90 lascaw_clo_ad.F90 lascaw_vintw_ad.F90 lascawtl.F90 slcomm2.F90 slextpol.F90 suhow1.F90 suhslmer.F90 gom_mod.F90 tm5_photolysis_mix.F90 yoerrtm.F90 yomdiagvar.F90 yomgfl5.F90 yomgwdiag.F90 yomsats.F90 yomvertfe.F90 naevol.h getnemo.F90 sekf_prep_smos.F90	sufpgaw.F90 fpint4.F90 laiddi_init.F90 laiddiobsad.F90 laidli_init.F90 laidlicad.F90 laidlitl.F90 laismoo.F90 laitliad.F90 laitri_init.F90 laitvspcqm.F90 lascaw.F90 lascaw_cla_tl.F90 lascaw_clo_tl.F90 lascaw_vintw_tl.F90 rdscaw.F90 slcomm2a.F90 slextpolad.F90 suhow2.F90 suvslleta.F90 iospeca_mod.F90 yoe_aervole.F90 yoesrtm.F90 yomdyndiff.F90 yomgm5.F90 yomjbsibi_mod.F90 yomsp5.F90 yomvwrk.F90 namchem.h ininemo.F90 smostb_cdfpar.F90
arp/module			
arp/mwave			
arp/namelist			
arp/nemo			
arp/obs_preproc			

arp/oops	allobs_mod.F90 fields_io_mod.F90 gom_setup.F90 locations_mod.F90 obsvec_mod.F90	error_covariance_3d_mod.F90 fields_mod.F90 ifs_constants.F90 model_mod.F90 ostats_mod.F90	fields_interp_mod.F90 geometry_mod.F90 ifs_init.F90 obstraj_mod.F90 variables_mod.F90
arp/op_obs	aer_lidsimad.F90 aod_dualcv_ad.F90 exheiz2p_lidar.F90 isac_grgtl.F90	aer_lidsimop.F90 aod_dualcv_op.F90 isac_grg.F90 jacobian_peak.F90 rao_op.F90	aer_lidsimtl.F90 aod_dualcv_tl.F90 isac_grgad.F90 mw_screen_cloud_and_rain.F90 rao_tl.F90
arp/parallel arp/phys_ec	rao_ad.F90 check_sl_struct.F90 aer_volce.F90 ec_phys_drv_ad.F90 su_aervole.F90	aero_init.F90 ec_phys_drv_tl.F90 update_fields.F90 susrtmcf.F90	culight.F90 radvis.F90
arp/phys_radi arp/setup	surrtmcf.F90 sucpicgfl.F90 susc2c.F90	sugem_naml.F90 suvert2.F90 dotprod3.F90	suhdf_ec.F90 suvv1.F90 forecast_days_calc.F90 suanebuf.F90
arp/utility arp/var	dotprod2.F90 aerlid_setup.F90 surad_jot.F90	monitoring_summary.F90 suscat.F90 esc2r.F90 esrlxt1ad.F90	
coupling/external/gpcou	epak3w.F90 esrlxt1.F90	esc2r.F90 esrlxt1ad.F90	esc2rad.F90
coupling/external/spnud coupling/interface	epak3wsp.F90 epak3w.h esc2rad.h esrlxt1.h	espcpl.F90 epak3wsp.h espcpl.h esrlxt1ad.h	espsc2r.F90 esc2r.h espsc2r.h
obt/src odb/bufr2odb odb/cma2odb odb/ddl.CCMA	obstat_create_dumgrib.F90 bufr2odb_asr.F90 create_averaged_values.F90 ensemble.h global_enkf_115.sql set_active.sql update_hprior_101.sql update_hprior_104.sql	obstat_grib_dump.F90 bufr2odb_cris.F90 store_enda.F90 global_enkf_105.sql global_enkf_120.sql sugoms.sql update_hprior_102.sql update_hprior_105.sql	obstat_warn_plot.F90 geosangl.F90 global_enkf_110.sql obsort_hdr2scatt_body.sql suobarea_scatt.sql update_hprior_103.sql update_hprior_106.sql

	update_hprior_107.sql	update_hprior_108.sql	update_hprior_109.sql
	update_hprior_110.sql	update_hprior_111.sql	update_hprior_112.sql
	update_hprior_113.sql	update_hprior_114.sql	update_hprior_115.sql
	update_hprior_116.sql	update_hprior_117.sql	update_hprior_118.sql
	update_hprior_119.sql	update_hprior_120.sql	
odb/ddl.COUNTRYRSTRHBIAS	ensemble.h		
odb/ddl.ECMA	allsky_update_links.sql	conv_update_links.sql	count_orbit.sql
	count_scanpos.sql	ensemble.h	gbrad_update_links.sql
	gnssro_update_links.sql	hdr_update_links.sql	init_update_1.sql
	init_update_2.sql	init_update_3.sql	links_aeolus_hdr.sql
	links_ensemble.sql	max_values.sql	obsort_hdr2scatt_body.sql
	obstat_radar.sql	radiance_averaging.sql	radiance_update_links.sql
	ralt.sql	ralt_wam.sql	resat_update_links.sql
	robody_smos_sekf.sql	sat_update_links.sql	satellite_identifier_list.sql
	scatt_update_links.sql	set_active.sql	stat_obs_3.sql
	store_enda.sql	sugoms.sql	suobarea_scatt.sql
	update_modstep.sql		
odb/ddl.RSTBIAS	ensemble.h		
odb/ddl.SONDETYPERSTRHBIAS	ensemble.h		
odb/ddl	allsky_update_links.sql	conv_update_links.sql	count_orbit.sql
	count_scanpos.sql	gbrad_update_links.sql	global_enkf_105.sql
	global_enkf_110.sql	global_enkf_115.sql	global_enkf_120.sql
	gnssro_update_links.sql	hdr_update_links.sql	init_update_1.sql
	init_update_2.sql	init_update_3.sql	links_aeolus_hdr.sql
	links_ensemble.sql	max_values.sql	obsort_hdr2scatt_body.sql
	obstat_radar.sql	radiance_averaging.sql	radiance_update_links.sql
	ralt.sql	ralt_wam.sql	resat_update_links.sql
	robody_smos_sekf.sql	sat_update_links.sql	satellite_identifier_list.sql
	scatt_update_links.sql	set_active.sql	stat_obs_3.sql
	store_enda.sql	sugoms.sql	suobarea_scatt.sql
	update_hprior_101.sql	update_hprior_102.sql	update_hprior_103.sql
	update_hprior_104.sql	update_hprior_105.sql	update_hprior_106.sql
	update_hprior_107.sql	update_hprior_108.sql	update_hprior_109.sql
	update_hprior_110.sql	update_hprior_111.sql	update_hprior_112.sql
	update_hprior_113.sql	update_hprior_114.sql	update_hprior_115.sql

odb/include	update_hprior_116.sql	update_hprior_117.sql	update_hprior_118.sql
odb/interface	update_hprior_119.sql	update_hprior_120.sql	update_modstep.sql
	Odb2Odb1.h	bufr2odb.h	netcdf.h
	create_averaged_values.h	getpoolsdb.F90	getpoolsdb.h
odb/lib	store_enda.h		
	Odb2Odb1.cc	mpi_wrapper.F90	odb_wrapper.F90
	set_err_trap.F90		
odb/module	aligned.F90	odb1.F90	odb2.F90
	odbi.F90		
odb/tools	Odb2Odb1Main.cc	Odb2_to_Odb1_ralt.F90	Odb2_to_odb1_era.F90
sat/interface	rttov_ec_alloc_ad.h	rttov_ec_alloc_tl.h	rttvi.h
sat/module	mod_rttov_fastem5_coef.F90		
sat/programs	bufr_screen_cris.F90	calc_radiance_fields.F90	
sat/rttov/main	rttov_fastem5.F90	rttov_fastem5_ad.F90	rttov_fastem5_k.F90
	rttov_fastem5_tl.F90		
sct/oretrieve	read_speed_bias.F		
sur/module	oc_mlm_mod.F90	ocean_ml_driver_v2_mod.F90	source_e_mod.F90
	sugridmlm_mod.F90	tridag_mod.F90	yos_mlm.F90
tal/module	euvtvd_comm_mod.F90	evdtuvad_comm_mod.F90	
tfl/external	dist_grid_32.F90	gath_grid_32.F90	sugawc.F90
tfl/interface	dist_grid_32.h	gath_grid_32.h	sugawc.h
tfl/module	dist_grid_32_ctl_mod.F90	gath_grid_32_ctl_mod.F90	supolf_mod.F90
	tpmflt.F90	tpm_pol.F90	
xla/module	butterfly_alg_mod.F90	interpol_decomp_mod.F90	
xrd/module	deallocate_if_associated_mod.F90		
xrd/support	jio_time.c	ra_check.c	ra_det.c
	stack_overwrite.F90		

Renamed:

arp/module	yommodel_error.F90 to arp/module/yommoderr.F90
	yomop.F90 to arp/module/yomoph.F90
obt/bias_sat	makefile.cc to obt/bias_sat/makefile_cc
odb/ddl	enkf.h to odb/ddl/ensemble.h
odb/include	nammatchup.h to odb/include/nam_matchup.h

namsort.h to odb/include/nam_sort.h
namstdin.h to odb/include/nam_stdin.h
namwt.h to odb/include/nam_wt.h

Deleted:

ald/adiab
ald/coupling

ald/fullpos
ald/parallel
arp/adiab

arp/control
arp/dia
arp/fullpos

arp/module

elasaw.F90
epak3w.F90
esc2rad.F90
esrlxt1.F90
suehow1.F90
eslextpol.F90
laidi.F90
laiditl.F90
laidliad.F90
laidlitl.F90
lasmoo.F90
laitliad.F90
laitri_init.F90
laitvspcqm.F90
lascaw.F90
lascaw_cla_tl.F90
lascaw_clo_tl.F90
lascaw_vintw_tl.F90
rdscaw.F90
cnmi.F90
iospeca_mod.F90
fpint12.F90
suhow1.F90
aeolus_l2bp_wrapper_mod.F90
obshor_cache_mix.F90
parsekf.F90
ydualm_tke.F90
yomct0b.F90
yomhoub.F90

elasawad.F90
epak3wsp.F90
espcpl.F90
esrlxt1ad.F90
suehow2.F90

laidi_init.F90
laidli.F90
laidlic.F90
laihvt.F90
laitli.F90
laitlitl.F90
laitriad.F90
laminmaxint.F90
lascaw_cla.F90
lascaw_clo.F90
lascaw_vintw.F90
lascawad.F90

cnmiad.F90

fpint4.F90
suhow2.F90
goms_mix.F90
pargen.F90
perdim.F90
yomalim.F90
yomgems.F90
yomiasi.F90

elasawtl.F90
esc2r.F90
espsc2r.F90

suehowlsm.F90

laiddiad.F90
laidli_init.F90
laidlicad.F90
laimoa.F90
laitli_init.F90
laitri.F90
laitritl.F90
laqmlimiter.F90
lascaw_cla_ad.F90
lascaw_clo_ad.F90
lascaw_vintw_ad.F90
lascawtl.F90

cnmitl.F90

fpscaw.F90
suehowlsm.F90
module_obb1_mix.F90
parlvly.F90
qasset.F90
yomcpg.F90
yomgrb.F90
yommul.F90

	yomnmia.F90	yomnmib.F90	yomskf.F90
	yomsphb.F90	yomsptt.F90	yomtlevol.F90
	yomtnewt.F90	yomtrsl.F90	yomtvrad.F90
	yomvfp.F90		
arp/namelist	namgom.h	namjo.h	namnmi.h
	namskf.h	namtlevol.h	namvfp.h
arp	nmi		
arp/op_obs	aeolus_l2b_to_body.F90	cobslag.F90	cobslagad.F90
	cobslagtl.F90	cobstl.F90	laiddiobs.F90
	laiddiobsad.F90	laidliobs.F90	laidliobsad.F90
	mpobseq.F90	mpobseq_pack.F90	mpobseqad.F90
	mpobseqad_unpck.F90	mpobseqtl.F90	mpobseqtl_pack.F90
	obshortl.F90	post_obshor.F90	post_obshortl.F90
	pre_obshorad.F90	preint2d.F90	preint2dad.F90
	preint2dtl.F90	slinttl.F90	
arp/parallel	check_sl_struct.F90	gatherfreq.F90	gathergom.F90
	gatherjcvrt.F90	slcomm.F90	slcomm2.F90
	slcomm2a.F90	slcset.F90	slextpol.F90
	slextpolad.F90	slrset.F90	trmtov.F90
	trvtoh.F90		
arp/phys_ec	aer_bdgtmss_ad.F90	aer_bdgtmss_tl.F90	aer_scavbc_ad.F90
	aer_scavbc_tl.F90	aer_scavin_ad.F90	aer_scavin_tl.F90
	aer_sdust_ad.F90	aer_sdust_tl.F90	aer_sedimnt_ad.F90
	aer_sedimnt_tl.F90	aer_ssalt_ad.F90	aer_ssalt_tl.F90
	cuascnad.F90	cuascntl.F90	cubasenad.F90
	cubasentl.F90	cubasmcnad.F90	cubasmcntl.F90
	cucallnad.F90	cucallntl.F90	cuddrafnad.F90
	cuddrafntl.F90	cudlfsnad.F90	cudlfsntl.F90
	cuentrad.F90	cuentrtl.F90	cuflixnad.F90
	cuflixntl.F90	cumastrnad.F90	cumastrntl.F90
	lubksb.F90	ludcmp.F90	
arp/setup	suhdfvareps.F90	suvsplip.F90	
arp/utility	dealges.F90	dealnmi.F90	prtgom.F90
arp/var	nmicost.F90	nmijc.F90	nmijctl.F90
	rokfcovar.F90	suskf.F90	

bla/compiler
obt/module
odb/bufr2odb

muldefs.c
odb_c_binding.F90
get_odb2bufr_varindex.F90
odb2bufr_dep_049.F90
odb2bufr_dep_059.F90
odb2bufr_dep_089.F90
odb2bufr_dep_110.F90
odb2bufr_dep_129.F90
odb2bufr_dep_139.F90
odb2bufr_dep_164.F90
odb2bufr_dep_240.F90
odb2bufr_fos_001.F90
odb2bufr_fos_054.F90
odb2bufr_fos_065.F90
odb2bufr_fos_091.F90
odb2bufr_fos_122.F90
odb2bufr_fos_135.F90
odb2bufr_fos_142.F90
odb2bufr_fos_189.F90
odb2bufr_fos_250.F90
odb2bufr_qc_021.F90
odb2bufr_qc_057.F90
odb2bufr_qc_082.F90
odb2bufr_qc_101.F90
odb2bufr_qc_127.F90
odb2bufr_qc_137.F90
odb2bufr_qc_156.F90
odb2bufr_qc_206.F90
odb2bufr_qc_250_displaced_data.F90

odb/ddl.CCMA

odb/ddl.COUNTRYRSTRHBIAS

enkf.h
prtgom.sql
robody_mwave_get_ssmi.sql
enkf.h

odb2bufr_dep_001.F90
odb2bufr_dep_054.F90
odb2bufr_dep_065.F90
odb2bufr_dep_091.F90
odb2bufr_dep_122.F90
odb2bufr_dep_135.F90
odb2bufr_dep_142.F90
odb2bufr_dep_189.F90
odb2bufr_dep_250.F90
odb2bufr_fos_021.F90
odb2bufr_fos_057.F90
odb2bufr_fos_082.F90
odb2bufr_fos_101.F90
odb2bufr_fos_127.F90
odb2bufr_fos_137.F90
odb2bufr_fos_156.F90
odb2bufr_fos_206.F90
odb2bufr_fos_250_displaced_data.F90
odb2bufr_qc_049.F90
odb2bufr_qc_059.F90
odb2bufr_qc_089.F90
odb2bufr_qc_110.F90
odb2bufr_qc_129.F90
odb2bufr_qc_139.F90
odb2bufr_qc_164.F90
odb2bufr_qc_240.F90
odb2bufr_summary.F90

obstat_radhure.sql
robhdr_mwave_get_ssmi.sql
robody_mwave_put_ssmi.sql

odb2bufr_dep_021.F90
odb2bufr_dep_057.F90
odb2bufr_dep_082.F90
odb2bufr_dep_101.F90
odb2bufr_dep_127.F90
odb2bufr_dep_137.F90
odb2bufr_dep_156.F90
odb2bufr_dep_206.F90
odb2bufr_dep_250_displaced_data.F90
odb2bufr_fos_049.F90
odb2bufr_fos_059.F90
odb2bufr_fos_089.F90
odb2bufr_fos_110.F90
odb2bufr_fos_129.F90
odb2bufr_fos_139.F90
odb2bufr_fos_164.F90
odb2bufr_fos_240.F90
odb2bufr_qc_001.F90
odb2bufr_qc_054.F90
odb2bufr_qc_065.F90
odb2bufr_qc_091.F90
odb2bufr_qc_122.F90
odb2bufr_qc_135.F90
odb2bufr_qc_142.F90
odb2bufr_qc_189.F90
odb2bufr_qc_250.F90
odb2bufr_summary_displaced_data.F90
obstat_radrefl.sql
robhdr_mwave_put_ssmi.sql

odb/ddl.ECMA	bufrdata_presence.sql fb_getbody.sql fb_gethdr.sql fb_getscatt.sql fb_getupdate_1.sql fb_getupdate_3.sql fb_getupdate_6.sql fb_getupdate_9.sql obstat_radwd.sql robhdr_mwave_put_ssmi.sql sathdr_screen_aeolus_1b.sql	enkf.h fb_getbufr.sql fb_getresat.sql fb_getscatt_body.sql fb_getupdate_10.sql fb_getupdate_4.sql fb_getupdate_7.sql obstat_radhure.sql prtgom.sql robody_mwave_get_ssmi.sql sathdr_screen_aeolus_2b.sql	fb_getatovs_pred.sql fb_geterrstat.sql fb_getsatob.sql fb_gettypes.sql fb_getupdate_2.sql fb_getupdate_5.sql fb_getupdate_8.sql obstat_radrefl.sql robhdr_mwave_get_ssmi.sql robody_mwave_put_ssmi.sql sathdr_screen_aeolus_2b_pa
odb/ddl.RSTBIAS odb/ddl.SONDETYPERSTRHBIAS odb/ddl	enkf.h bufrdata_presence.sql fb_getbufr.sql fb_getresat.sql fb_getscatt_body.sql fb_getupdate_1.sql fb_getupdate_3.sql fb_getupdate_6.sql fb_getupdate_9.sql obstat_radrefl.sql robhdr_mwave_get_ssmi.sql robody_mwave_put_ssmi.sql sathdr_screen_aeolus_2b_part2.sql	fb_getatovs_pred.sql fb_geterrstat.sql fb_getsatob.sql fb_gettypes.sql fb_getupdate_10.sql fb_getupdate_4.sql fb_getupdate_7.sql fetchbufr.sql obstat_radwd.sql robhdr_mwave_put_ssmi.sql sathdr_screen_aeolus_1b.sql	fb_getbody.sql fb_gethdr.sql fb_getscatt.sql fb_gettypes_sat.sql fb_getupdate_2.sql fb_getupdate_5.sql fb_getupdate_8.sql obstat_radhure.sql prtgom.sql robody_mwave_get_ssmi.sql sathdr_screen_aeolus_2b.sql
odb/module odb/tools sat/bias sat/emiss sat/rttov/ifs	bufr_module1.F90 Fbnew2old.F90 getbias.F90 scan_bias.F90 get_extra_top_levels.F90	odb2bufr_varindex_module.F90 Odb2bufr.F90 getpred.F90	suadvar.F90

Modified:

ald/adiab	elarche.F90 elarchetl.F90	elarche5.F90 elarmes.F90	elarchead.F90 elarmes5.F90
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	elarmesad.F90	elarmestl.F90	especrt.F90
	espnhsi.F90	gpspng.F90	
ald/c9xx	ecoptra.F90	eincli1.F90	eincli10.F90
ald/control	espcm.F90		
ald/coupling	ecoupl1.F90	ecoupl1ad.F90	elsin0ta.F90
	elsrw.F90	elswa3.F90	etenc.F90
ald/dia	ewmovph.F90		
ald/fullpos	suefpg3.F90		
ald/interpol	elasaw.F90	elasawad.F90	elasawtl.F90
	eslextpol.F90		
ald/parallel	egathereigmd.F90		
ald/setup	elsac.F90	elsirf.F90	suedyn.F90
	suegem1a.F90	suegem_naml.F90	suemp.F90
	sueqlimsat.F90	suetrans.F90	
ald/sinvect	erdtllcz.F90	ewrtllcz.F90	suelcz.F90
ald/transform	etransdir_jb.F90	etransdir_jbad.F90	etransdirh.F90
	etransdirhad.F90	etransinv_jb.F90	etransinv_jbad.F90
	etransinvh.F90	etransinvhad.F90	
ald/utility	cchien.F90		
ald/var	ecosjr.F90	ejgnrgg.F90	ejgnrggad.F90
	ejgnrggi.F90	ejgnrggiad.F90	ewrlsgrad.F90
	suejbcor.F90	suejbcosu.F90	suejbstd.F90
	suescal.F90		
ald/wavelet	suejbwav_read_sigmab.F90		
arp/adiab	call_sl.F90	call_sl_ad.F90	call_sl_tl.F90
	cpedia.F90	cpeuldyn.F90	cpeuldynad.F90
	cpeuldyntl.F90	cpg.F90	cpg2.F90
	cpg25.F90	cpg2ad.F90	cpg2lag.F90
	cpg2lagtl.F90	cpg2tl.F90	cpg5.F90
	cpg5_gp.F90	cpg_dia.F90	cpg_drv.F90
	cpg_drv_ad.F90	cpg_drv_tl.F90	cpg_dyn.F90
	cpg_dyn_ad.F90	cpg_dyn_tl.F90	cpg_end.F90
	cpg_gp.F90	cpg_gp_ad.F90	cpg_gp_tl.F90
	cpg_zero_ad.F90	cpgad.F90	cpglag.F90
	cpglagad.F90	cpglagtl.F90	cpgtl.F90

arp/ald_inc/namelist
arp/c9xx
arp/canari

cppsolan.F90
gnh_tndlagadiab_spd.F90
gnhgrgw.F90
gp_spv.F90
gpgrp.F90
gpgrxybtl.F90
gphpretl.F90
gppread.F90
gppreftl.F90
gprh.F90
gprhtl.F90
gpxyb.F90
lacdynam.F90
ladine.F90
lainor2.F90
laitre_gfl.F90
lapinea.F90
lapineatl.F90
lapinebtl.F90
larcin2ad.F90
larcinaad.F90
larcinha.F90
larmes25.F90
larmes5.F90
lassiead.F90
latte_kappatl.F90
lavent.F90
spfilt.F90
nemelbc0a.h
cseai.F90
cabane.F90
caeincw.F90
calife.F90
cancer.F90
capotx.F90

gnh_conv_nhvar.F90
gnhdlra.F90
gnhpre.F90
gp_spvad.F90
gpgrxyb.F90
gphpre.F90
gpinslb.F90
gppref.F90
gppretl.F90
gprh_2d.F90
gpstress.F90
gpxybad.F90
lacdynamshwtl.F90
ladinead.F90
lainor2ad.F90
laitre_gmv.F90
lapinea5.F90
lapineb.F90
laqlimiter.F90
larcin2tl.F90
larcinatl.F90
larmes.F90
larmes2ad.F90
larmesad.F90
lassietl.F90
lattesad.F90
postphy.F90
spnhsi.F90

csstbld.F90
cabine.F90
caisse.F90
calver.F90
canife.F90
caratk.F90

gnh_conv_prhs.F90
gnhdlra_sta.F90
gnhpreh.F90
gp_spvtl.F90
gpgrxybad.F90
gphpread.F90
gpmprc5.F90
gpprefad.F90
gppwcvfe.F90
gprhad.F90
gptf1.F90
gpxybtl.F90
lacdynamtl.F90
ladinetl.F90
lainor2tl.F90
laminmaxint.F90
lapineaad.F90
lapinebad.F90
larcin2.F90
larcina.F90
larcinb.F90
larmes2.F90
larmes2tl.F90
larmestl.F90
latte_kappaad.F90
lattestl.F90
specrt.F90

caclsi.F90
calice.F90
canari.F90
caohis.F90

arp/chem	chem_decay.F90 chem_inext.F90 chem_massdia.F90 chem_negat.F90 chem_tm5.F90 tm5_budg.F90 tm5_cloud_info.F90 tm5_fparam.F90 tm5_noy.F90 tm5_sundis.F90 cormassdry.F90 updclie_aer.F90 updrgas.F90	chem_drydep.F90 chem_init.F90 chem_mocage.F90 chem_noxadv.F90 tm5_boundary_ch4.F90 tm5_calrates.F90 tm5_do_ebi.F90 tm5_getextra.F90 tm5_photolysis_rates.F90	chem_emi3d.F90 chem_main.F90 chem_mozart.F90 chem_scav.F90 tm5_boundary_hno3.F90 tm5_chem_ini.F90 tm5_eqsam.F90 tm5_incbud.F90 tm5_reacbud.F90
arp/climate	updcli.F90 updclie_co2.F90	updcli.F90 updclie_co2.F90	updclie.F90 updo3ch.F90
arp/common	yomdb_defs.h	yomdb_vars.h	
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	srtm_kgb28.F90	srtm_kgb29.F90	srtm_spcvrt.F90
	srtm_spcvrt_mcica.F90	srtm_srtm_224gp.F90	srtm_srtm_224gp_mcica.F90
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	srtm_taumol28.F90	srtm_taumol29.F90	srtm_vrtqdr.F90
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	su_ccl4clim.F90	su_ch4clim.F90	su_co2clim.F90
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	rttov_ec_tl.h	rttvi.h	

sat/module	mod_cparam.F90 rttov_types.F90	mod_emiskf.F90	mod_rttov_fastem5_coef.F90
sat/programs	bufr_screen_cris.F90 emiskf_update_amsua.F90 gensatim.F90	bufr_screen_smos.F90 emiskf_update_amsub.F90 rttov_ascii2bin_scattcoef.F90	calc_radiance_fields.F90 emiskf_update_mhs.F90
sat/rttov/coef_io sat/rttov/ifs	rttov_opencoeff.F90 getcoef_field.F90 rttov_calcbt_basic.F90 rttov_ec_tl.F90	getcparam.F90 rttov_ec.F90 rttvi.F90	phrtsetup.F90 rttov_ec_ad.F90
sat/rttov/main	rttov_calcemis_mw.F90 rttov_calcemis_mw_tl.F90 rttov_fastem5.F90 rttov_fastem5_tl.F90 rttov_profaux_ad.F90 rttov_read_scattcoeffs.F90	rttov_calcemis_mw_ad.F90 rttov_check_traj.F90 rttov_fastem5_ad.F90 rttov_opdpsscattir.F90 rttov_profaux_k.F90	rttov_calcemis_mw_k.F90 rttov_direct.F90 rttov_fastem5_k.F90 rttov_profaux.F90 rttov_profaux_tl.F90
sat/rttov/mw_scatt sct/module sct/oretrieve sct/programs sur/external sur/interface sur/module	oscat_wind.F invert_owind.F ascat_bufr_filter.F surfpp.F90 surfpp.h oc_mlm_mod.F90 srfcotwo_mod.F90 surfpp_ctl_mod.F90 susflake_mod.F90 tridag_mod.F90 vsurfsad_mod.F90	oscat_write_bufr.F oscat_filter.F surftstp.F90 surftstp.h ocean_ml_driver_v2_mod.F90 sucotwo_mod.F90 surftstp_ctl_mod.F90 susocean_ml_mod.F90 vexcssad_mod.F90 vsurfstl_mod.F90	read_speed_bias.F susurf.F90 susurf.h source_e_mod.F90 sugridmlm_mod.F90 suscst_mod.F90 susurf_ctl_mod.F90 vexcsstl_mod.F90 yos_mlm.F90
tal/module	eldspc2_mod.F90 eltdirad_mod.F90 euvtvd_comm_mod.F90 evdtuvad_mod.F90	eldspc2ad_mod.F90 eltinv_ctlad_mod.F90 euvtvd_mod.F90	eltdir_mod.F90 eltinvad_mod.F90 evdtuvad_comm_mod.F90
tal/programs tfl/external	aatestprog.F90 dist_grid_32.F90 sugawc.F90	test_adjoint.F90 gath_grid_32.F90 trans_end.F90	setup_trans.F90 trans_inq.F90
tfl/interface	dist_grid_32.h sugawc.h	gath_grid_32.h trans_inq.h	setup_trans.h

tfl/module	cpledn_mod.F90 gawl_mod.F90 ledir_mod.F90 leinvad_mod.F90 ltinv_mod.F90 sugaw_mod.F90 supol_mod.F90 tpm_distr.F90	dist_grid_32_ctl_mod.F90 ldspc2_mod.F90 ledirad_mod.F90 ltdir_mod.F90 ltinvad_mod.F90 suleg_mod.F90 supolf_mod.F90 tpmflt.F90	gath_grid_32_ctl_mod.F90 ldspc2ad_mod.F90 leinv_mod.F90 ltdirad_mod.F90 set_resol_mod.F90 sump_trans_preleg_mod.F90 sutrle_mod.F90 tpm_pol.F90
xla/external/lanczos xla/internal/lanczos	landr.F angles.F lanso.F prangl.F pythag.F startv.F tqlb.F	datx.F machar.F prrule.F random.F stpone.F	i2x.F ortbnd.F purge.F ritvec.F tql2.F
xla/module	butterfly_alg_mod.F90 spectral_arp_mod.F90	interpol_decomp_mod.F90 spectral_fields_mod.F90	random_numbers_mix.F90
xrd/include	fjfn.h		
xrd/module	deallocate_if_associated_mod.F90 mpl_rcv_mod.F90	grib_api_interface.F90 oml_mod.F90	mpl_init_mod.F90
xrd/support	drhook.c jio_time.c stack_overwrite.F90	jfh_bind.F90 ra_check.c	jfhc.c ra_det.c

SEITY Yann

Doc:

- 1) *Bugfix for couplingsurf.*
- 2) *Bugfix for HIRLAM EDMF scheme (array out of bound correction).*

Project: ifs
ClearCase branch: mrpm637_CY38T1_bf_aro_pour39

Modified:

arp/fullpos sufptr2.F90
arp/phys_dmn apl_arome.F90

SPANIEL Oida

Doc:

- 1) *Bugfixes.*
- 2) *Optimization of some array dimensioning.*

Project: ifs
ClearCase
branch: mrpe693_CY38T1_38t1r2_prev06

Modified:

ald/c9xx	ebicli.F90		
ald/fullpos	fpezone.F90	posfpbipos.F90	sufpezo.F90
ald/setup	suemapf.F90		
arp/fullpos	fpcorphy.F90	rdclimo.F90	sufpg2.F90
arp/module	yomcver.F90	yomjbchvar.F90	
arp/phys_dmn	accvud.F90	acmodo.F90	aplpar.F90
arp/phys_radi	rrtm_gasabs1a_140gp.F90		
arp/setup	sudyna.F90		

SZUCS Mihaly

Doc:

1) In the pre-cycle an ECMWF modification was implemented which moved ESIG into JB_STRUCT. This contribution removed it from there.

2) In scan2m CANARI was made call subroutine cobsall.

2) Some compiler related fixes in connection with GOM modernization.

Project: ifs
ClearCase branch: szucs_CY38T1_ESIGclean

Added:

arp/module	qasset.F90	yomvarbc.F90
arp/utility	dealges.F90	

Modified:

arp/canari	cabine.F90	caisse.F90	calice.F90
arp/control	scan2m.F90		
arp/module	gom_mod.F90	yomjg.F90	
arp/op_obs	cobsall.F90		
arp/setup	su0yomb.F90		
arp/utility	dealges.F90	freemem.F90	
arp/var	sualges.F90		

YESSAD Karim

Doc:

Miscellaneous phasing & bugfixes.

Project: aladin,ifs
ClearCase branch: none

Modified:

ald/adiab	elarchead.F90	elarchetl.F90	
arp/adiab	cpg_gpb_nhgeogw.F90	cpwts.F90	gpstress.F90
	lacdynshw.F90	lacdynshwad.F90	lacdynshwtl.F90
arp/control	gp_model_ad.F90		
arp/module	ptrgfu.F90	ptrxfu.F90	yom_ygfl.F90
	yomcfu.F90	yomxfu.F90	
arp/setup	su0yomb.F90	sualmp1.F90	sudyn.F90
	sugfl2.F90	suvert2.F90	
arp/utility	deallo.F90		

Doc:

Project: aladin,ifs,transform
ClearCase branch: mrpm603_CY38T1_merge38t1r2

Modified:

ald/setup	suetrans.F90		
arp/adiab	cpglag.F90		
arp/canari	cancer.F90		
arp/control	gp_model.F90		
arp/module	yompinb.F90		
tfl/module	ltdir_mod.F90	ltdirad_mod.F90	prle2_mod.F90
	prle2ad_mod.F90		

Doc:

Miscellaneous cleanings, bugfixes, and fix norm violations.

Project: aladin,ifs
ClearCase branch: mrpm603_CY38T1_merge38t1r2b

Modified:

ald/module	eshrinkstretch_mod.F90		
ald/setup	suedyn.F90	suegem_naml.F90	suemp.F90

ald/transform	sueqlimsat.F90		
ald/utility	etransinvh.F90		
ald/var	euvcopy.F90		
arp/adiab	ebalnonlinad.F90	ebalnonlintl.F90	
	gppwcvfe.F90	gpstress.F90	lacdynshw.F90
	lacdynshwad.F90	lacdynshwtl.F90	larcinb.F90
arp/canari	cabane.F90	calver.F90	cancer.F90
	caredo.F90		
arp/chem	chem_negat.F90		
arp/climate	updcli.F90	updcpl.F90	
arp/control	cnt0.F90	cnt4ad.F90	csekf2.F90
	forecast_error.F90	qmfixer.F90	reresh.F90
	scan2m.F90	scan2mad.F90	scan2mtl.F90
arp/dfi	dfi2.F90	pc_ini.F90	
arp/dia	aro_surf_diagh.F90	suofname.F90	wrmlppa.F90
arp/fullpos	scan2m_hpos.F90	sufpgaw.F90	sumpfpos.F90
arp/gbrad	gbrad_setup.F90		
arp/interpol	laidlic.F90	suhsImer.F90	suvseta.F90
arp/io_serv	io_serv_open.F90		
arp/module	parrint.F90	yomclddet.F90	yomgpsro.F90
	yomgwdiag.F90	yomnmev.F90	yomphy.F90
	yomscen.F90	yomsmos.F90	
arp/mwave	mwave_emis.F90	mwave_obsop.F90	mwave_obsop_test.F90
arp/namelist	namphy.h		
arp/obs_preproc	biascor.F90	biascor_era40.F90	black.F90
	defrun.F90	post_thinner.F90	pre_prsta.F90
	redun.F90	screen.F90	suobs.F90
	suobscor_resol.F90	tosabe.F90	
arp/oops	fields_interp_mod.F90	co2cldairs_ml.F90	co2cldiasi_ml.F90
arp/op_obs	atmref_gems_tl.F90	cobsall.F90	cobsalltl.F90
	cobs.F90	hop.F90	hop_rad.F90
	cod_op.F90	hopad.F90	hoptl.F90
	hop_rad_ml.F90	hradp_ml.F90	hradp_ml_tl.F90
	hradp.F90	mw_screen_cloud_and_rain.F	obshor.F90
	hretr_aeolus.F90		

	obshorad.F90	90	
	preintr.F90	preint.F90	preintad.F90
	radtrk.F90	preints.F90	preinttl.F90
arp/parallel	commspnorm.F90	rao_op.F90	
arp/phys_dmn	accdev.F90	diwrgrfp.F90	
	acnebcond.F90	acmrip.F90	acmris.F90
	cphflux2.F90	acptke.F90	cphflux.F90
	mf_phys.F90	fl2hl.F90	hl2fl.F90
	vdfhghthl.F90	mts_phys.F90	suphmse_surface.F90
	writephysio.F90	vdfhghtnhi.F90	vdfparcelhl.F90
arp/phys_ec	aer_scavin.F90		
	ec_phys_drv.F90	cldpp.F90	cuentr.F90
arp/phys_radi	rrtm_rrtm_140gp.F90	idisgpf.F90	suclopn.F90
	srtm_srtm_224gp_mcica.F90	rrtm_rrtm_140gp_mcica.F90	srtm_cldprop.F90
	suswn.F90	suaersn.F90	susrtalb.F90
arp/pp_obs	heapsort.F90		
	ppclw.F90	ppak.F90	ppaktl.F90
	ppobsac.F90	ppinitz.F90	ppltp.F90
arp/programs	merge_varbc.F90	ppobsn.F90	ppt2mtl.F90
arp/sekf	sekf_write.F90		
arp/setup	su0phy.F90	sm_ekf_main.F90	
	suafn1.F90	su0yomb.F90	su_events.F90
	sudyn.F90	suctrl_gflatr.F90	sudim2.F90
	sumcclag.F90	suhdf_ec.F90	sulap.F90
	sunhsi.F90	sump.F90	sumpini.F90
	suvert.F90	surgri.F90	suspeca.F90
arp/transform	transinvh.F90	suvert2.F90	suvertdlr.F90
arp/utility	gpnorm_gmv.F90	transinvhad.F90	
	wrgp2fa.F90	prepacka.F90	state2specad.F90
arp/var	congrad.F90		
	inflcalc.F90	estsig.F90	grbspa.F90
	sujbwavallo.F90	precond.F90	suecges.F90
		suscat.F90	

Doc:

Bugfixes + fix norms violations.

Project: aladin,ifs
ClearCase branch: mrpm603_CY38T1_merge38t1r2c

Modified:

ald/setup	suemp.F90
arp/obs_preproc	sugoms.F90
arp/op_obs	slint.F90
arp/setup	su0yomb.F90

Doc:

Miscellaneous bugfixes.

Project: aladin,ifs
ClearCase branch: mrpm603_CY38T1_merge38t1r2d

Modified:

ald/fullpos	sufpezo.F90		
ald/interpol	elascaw.F90		
arp/adiab	cpg5.F90	cpg_dyn.F90	cpg_dyn_tl.F90
	cpglag.F90		
arp/interpol	lascaw.F90	suvslata.F90	
arp/module	yomcver.F90		
arp/setup	sudyna.F90		

Doc:

- 1) Fix non-initialized variables issues.
- 2) Fix local/OpenMP variables issues in CPGLAG.
- 3) Protect NHX under LNHX=.TRUE. .

4) Restore good version of SUEMAPF.

Project: aladin,ifs
ClearCase branch: mrpm603_CY38T1_merge38t1r2e

Modified:

ald/adiab	elarchead.F90	elarchetl.F90	
ald/setup	suemapf.F90		
arp/adiab	cpg_gp.F90	cpglag.F90	
arp/control	gp_model.F90		
arp/dia	wrmlppa.F90		
arp/module	iospeca_mod.F90	yompong.F90	
arp/setup	suct0.F90	sudyn.F90	sugfl1.F90