ARPEGE MEMORANDUM

From: GCO
Date: Jun 17, 2015
Subject: New cycle CY42

A new cycle CY42 has been created. This is a common cycle with ECMWF. The different contributions for this cycle are described in the following pages.

Contributors:

BOCHENEK Bogdan	bochenek_CY41T1_phasing_v1
BOUTELOUP Yves	boutelou_CY41T1_bf_LW_for42 boutelou_CY41T1_bf_rrtm boutelou_CY41T1_radheat
DESROZIERS Gerald	desroz_CY41T1_wlt_cutoffs_41t1r2
EL KHATIB Ryad	khatib_CY41T1_r2.01%fix khatib_CY41T1_r2.01%port khatib_CY41T1_r2.02%tov03 khatib_CY41T1_r2.03%tov04 khatib_CY41T1_r2.04%tov05 khatib_CY41T1_r2.04%with_fftw
GCO	gco_CY41T1_r2 gco_CY41T1_r2.01%bf gco_CY41T1_r2.02%bf gco_CY41_pre-r2-bf
MARGUINAUD Philippe	marguina_CY41T1_fixios marguina_CY41T1_rdfa2sp42
MARY Alexandre	mary_CY41T1_spam mary_CY41T1_ultimate_bfs
MEUNIER Louis-Francois	meunierlf_CY41T1_bfvarbc_rad meunierlf_CY41T1_newodbio_bf_r2
SAEZ Patrick	saez_CY41T1_C901
SALMOND Deborah & al	gco_CY41T1_r2.02%NVECOUT gco_CY41T1_r2.04%update_ecmwf gco_CY41_r2bf
SASSY Zied	sassi_CY41T1_norm_fix2
SASSY Zied & BOCHENEK Bogdan	bochenek_CY41T1_nv
SEITY Yann	seity_CY41T1_bf_arome_for42

BOCHENEK Bogdan

Doc:
1) Phasing changes:

Variable reorganisations
New encapsulations
Changes in etrans call
Changes in elascaw routines*

2) First bugfixes:

su0yomb - remove call abort if nconf=901 or nconf=923
cnt0 - add call to geometry_unset
cnt4 - remove one call for gridfpos
larcina- remove temporary 'hacks' for LAM models*
suemp - add missing NGLOBALPROC initialization
suphec, sugrib - changes in call for surf_inq

3) Fix GFL setup (from Karim):
sudyn.F90
suctrl_gflattr.F90
sudefo_gflattr.F90
Projects: aladin, arpifs, etrans
Git branch: bochenek_CY41T1_phasing_v1
Modified:

aladin/adiab	elarche.F90, elarchead.F90, elarchetl.F90, elarmes.F90, elarmes5.F90, elarmesad.F90, elarmestl.F90, espchor.F90, espchorad.F90, espcsi.F90, espcsiad.F90, especrt.F90, espnhsi.F90, espnhsi_geogw.F90, gpspng.F90
aladin/c9xx	ecoptra.F90, eincli1.F90, eincli10.F90
aladin/control	espcm.F90
aladin/coupling	ecoupl1.F90, ecoupl1ad.F90, elsin0ta.F90, elsrw.F90, elswa3.F90, erlbc.F90, eseimpls.F90, eseimplsad.F90, etenc.F90
aladin/dia	ewmovph.F90
aladin/interpol	elascaw.F90, elascawad.F90, elascawtl.F90
aladin/programs	blendsur.F90, check_limits.F90, holo.F90, unholo.F90
aladin/setup	elsac.F90, erlbc_post_req.F90, esp2lnsp.F90, suegem1a.F90, suegem1b.F90, suegem_naml.F90, sueheg.F90, sueinif.F90, suelap.F90, suemp.F90, suempvar.F90, suenhheg.F90, sueorog.F90, suetrans0.F90
aladin/transform	ereespe.F90, esperad.F90, esperee.F90, espeuv.F90, etransdir_jb.F90, etransdir_jbad.F90, etransdir_mdl.F90, etransdir_mdlad.F90, etransinv_jb.F90, etransinv_jbad.F90, etransinv_jbtomodel.F90, etransinv_jbtomodelad.F90, etransinv_mdl.F90, etransinv_mdlad.F90, etransinvh.F90, etransinvh_oops.F90, euvgeovd.F90, evduvgeo.F90
aladin/utility	cchien.F90
aladin/var	ebalnonlin.F90, ebalnonlinad.F90, ebalnonlintl.F90, ebalomega.F90, ebalomegaad.F90, ebalomegatl.F90, ewrlsgrad.F90, suejbcosu.F90
arpifs/adiab	larcina.F90, larcinaad.F90, larcinatl.F90, larcinha.F90

arpifs/control	cnt0.F90, cnt3.F90, cnt4.F90
arpifs/op_obs	slint.F90, slintad.F90
arpifs/phys_ec	suphec.F90
arpifs/setup	su0yomb.F90, suctrl_gflattr.F90, sudefo_gflattr.F90, sudyn.F90, sugrib.F90
etrans/module	edealloc_resol_mod.F90

BOUTELOUP Yves

Doc:
Bugfix to allow the use of the old long wave scheme (LW) in ARPEGE and AROME

NO NUMERICAL IMPACT IS EXPECTED.
Projects: arpifs
Git branch: boutelou_CY41T1_bf_LW_for42
Modified:

arpifs/phys_ec	suphli.F90

Doc:
Fix a bug in new version of RRTM

EXPECTED IMPACT:
It's a bug correction. Large impact in LW heating rate, arround 1K/day at 250hpa. No impact if McIca is used (IFS case).
Projects: arpifs
Git branch: boutelou_CY41T1_bf_rrtm
Modified:

arpifs/phys_radi	rrtm_ecrt_140gp.F90

Doc:
Re-activation of LMSE protection in radheat.F90

NO NUMERICAL IMPACT IS EXPECTED.
Projects: arpifs
Git branch: boutelou_CY41T1_radheat
Modified:

arpifs/phys_radi	radheat.F90

DESROZIERS Gerald

Doc:
Phasing of wavelet cutoff list.

NO NUMERICAL IMPACT IS EXPECTED.
Projects: arpifs
Git branch: desroz_CY41T1_wlt_cutoffs_41t1r2
Modified:
arpifs/var sujbwavelet0.F90

EL KHATIB Ryad

Doc:
Bugfix.

NO NUMERICAL IMPACT IS EXPECTED.
Projects: arpifs
Git branch: khatib_CY41T1_r2.01%fix
Modified:

arpifs/setup	surip.F90

Doc:
arpifs/phys_radi/suecrad.F90 :
add missing dr_hook call at start

arpifs/dia/inifaoutinfo.F90 :
fix a portability issue because of associate statements + add missing dr_hook call at start

arpifs/namelist/namoph.nam.h :
CFNHWF was removed by mistake

ifsaux/fi_libc/fi_gettimeofday.F90
emptied subroutine left there by mistake, causing conflict in ifsaux libraries (2 symbols with the same name). The inside is renamed for now,
but the file should be eradicated from the source code.

odb/tools/FcSensObs.cc
odb/tools/FcSensObsMain.cc :
protect the compilation if ODB_API_SUPPORT is not defined

trans/module/ftinvad_mod.F90
trans/module/ftinv_mod.F90
trans/module/tpm_fftw.F90
trans/module/ftdirad_mod.F90
trans/module/ftdir_mod.F90 :
Use a new cpp macro WITH_FFTW to avoid the need to link with fftw (may cause licences problems).

NO NUMERICAL IMPACT IS EXPECTED.
Projects: arpifs, ifsaux, odb, trans
Git branch: khatib_CY41T1_r2.01%port
Modified:

arpifs/dia	cumcpl.F90, inifaoutinfo.F90
arpifs/namelist	namoph.nam.h
arpifs/phys_radi	suecrad.F90
ifsaux/fi_libc	fi_gettimeofday.F90
odb/tools	FcSensObs.cc, FcSensObsMain.cc
trans/module	ftdir_mod.F90, ftdirad_mod.F90, ftinv_mod.F90, ftinvad_mod.F90, tpm_fftw.F90

Doc:

Bugfixes.

NO NUMERICAL IMPACT IS EXPECTED.
Projects: arpifs, surf, trans
Git branch: khatib_CY41T1_r2.02%tov03
Modified:

arpifs/control	cnt4.F90
arpifs/phys_ec	suphec.F90
arpifs/phys_radi	suecrad.F90, suswn.F90
arpifs/setup	su0phy.F90, sugrib.F90
surf/module	surwn_mod.F90
trans/module	dealloc_resol_mod.F90

Doc:
Bugfixes for fullpos

NO NUMERICAL IMPACT IS EXPECTED.
Projects: arpifs
Git branch: khatib_CY41T1_r2.03%tov04
Modified:

arpifs/fullpos	suvfpos.F90
arpifs/setup	sufa.F90

Doc:
Bugfix for GRIB1 encoding.

NO NUMERICAL IMPACT IS EXPECTED.
Projects: arpifs, ifsaux
Git branch: khatib_CY41T1_r2.04%tov05
Modified:

arpifs/dia	wrspeca_compress_mt.F90
arpifs/utility	pksurfa.F90
ifsaux/fa	facodx.F90

Doc:
Protect use of fftw with the cpp macro WITH_FFTW

1) Protect use of FFTW with the cpp macro WITH_FFTW.
2) Move module tpm_fftw.F90 to another project "ecfftw".

NO NUMERICAL IMPACT IS EXPECTED.
Projects: trans
Git branch: khatib_CY41T1_r2.04%with_fftw
Renamed:

trans/module	tpm_fftw.F90 ecfftw/module/tpm_fftw.F90

Modified:

trans/external	setup_trans.F90, trans_end.F90
trans/module	dealloc_resol_mod.F90, ftdir_mod.F90, ftdirad_mod.F90, ftinv_mod.F90, ftinvad_mod.F90, set_resol_mod.F90, sufft_mod.F90

GCO

Doc:
1) Move some routines to directory "phys_radi".
2) Fix phasing bugs.
3) Add new module variables encapsulations.
4) Fixes in "mitraille" namelists.
5) Add missing statement IMPLICIT NONE .

Projects: aladin, arpifs, ifsaux, mitraille, mse, utilities

Git branch: gco_CY41T1_r2

Renamed:

aladin/coupling	erlbc_mod.F90 arpifs/module/erlbc_mod.F90
arpifs/phys_dmn	acradcoef.F90 arpifs/phys_radi/acradcoef.F90, acradin.F90 arpifs/phys_radi/acradin.F90, acrads.F90 arpifs/phys_radi/acrads.F90, acradsad.F90 arpifs/phys_radi/acradsad.F90, acradstl.F90 arpifs/phys_radi/acradstl.F90, acralu.F90 arpifs/phys_radi/acralu.F90, acraneb.F90 arpifs/phys_radi/acraneb.F90, acraneb2.F90 arpifs/phys_radi/acraneb2.F90, acraneb_coefs.F90 arpifs/phys_radi/acraneb_coefs.F90, acraneb_coeft.F90 arpifs/phys_radi/acraneb_coeft.F90, acraneb_solvs.F90 arpifs/phys_radi/acraneb_solvs.F90, acraneb_solvt.F90 arpifs/phys_radi/acraneb_solvt.F90, acraneb_solvt3.F90 arpifs/phys_radi/acraneb_solvt3.F90, acraneb_trans.F90 arpifs/phys_radi/acraneb_trans.F90, acraneb_transs.F90 arpifs/phys_radi/acraneb_transs.F90, acraneb_transt.F90 arpifs/phys_radi/acraneb_transt.F90, acrso.F90 arpifs/phys_radi/acrso.F90, ecradfr15.F90 arpifs/phys_radi/ecradfr15.F90, hlrad.F90 arpifs/phys_radi/hlrad.F90, hlradia.F90 arpifs/phys_radi/hlradia.F90, lw15.F90 arpifs/phys_radi/lw15.F90, lwb15.F90 arpifs/phys_radi/lwb15.F90, lwbv15.F90 arpifs/phys_radi/lwbv15.F90, lwc15.F90 arpifs/phys_radi/lwc15.F90, lwtt15.F90 arpifs/phys_radi/lwtt15.F90, lwttm15.F90 arpifs/phys_radi/lwttm15.F90, lwu15.F90 arpifs/phys_radi/lwu15.F90, lwv15.F90 arpifs/phys_radi/lwv15.F90, lwvb15.F90 arpifs/phys_radi/lwvb15.F90, lwvd15.F90 arpifs/phys_radi/lwvd15.F90, lwvn15.F90 arpifs/phys_radi/lwvn15.F90, radaer.F90 arpifs/phys_radi/radaer.F90, radaer15.F90 arpifs/phys_radi/radaer15.F90, radheat15.F90 arpifs/phys_radi/radheat15.F90, radlsw15.F90 arpifs/phys_radi/radlsw15.F90, recmwf.F90 arpifs/phys_radi/recmwf.F90, rfmr.F90 arpifs/phys_radi/rfmr.F90, suaer15.F90 arpifs/phys_radi/suaer15.F90, suaerv15.F90 arpifs/phys_radi/suaerv15.F90, suclop15.F90 arpifs/phys_radi/suclop15.F90, suecrad15.F90 arpifs/phys_radi/suecrad15.F90, sulw15.F90 arpifs/phys_radi/sulw15.F90, surdi15.F90 arpifs/phys_radi/surdi15.F90, susw15.F90 arpifs/phys_radi/susw15.F90, sw15.F90 arpifs/phys_radi/sw15.F90, sw1s15.F90 arpifs/phys_radi/sw1s15.F90, sw2s15.F90 arpifs/phys_radi/sw2s15.F90, swclr15.F90 arpifs/phys_radi/swclr15.F90, swde15.F90 arpifs/phys_radi/swde15.F90, swr15.F90 arpifs/phys_radi/swr15.F90,

	swtt115.F90 arpifs/phys_radi/swtt115.F90, swtt15.F90 arpifs/phys_radi/swtt15.F90, swu15.F90 arpifs/phys_radi/swu15.F90, updtier15.F90 arpifs/phys_radi/updtier15.F90
arpifs/phys_ec	ecradfr.F90 arpifs/phys_radi/ecradfr.F90, noradiation.F90 arpifs/phys_radi/noradiation.F90, radaca.F90 arpifs/phys_radi/radaca.F90, radact.F90 arpifs/phys_radi/radact.F90, radcfg.F90 arpifs/phys_radi/radcfg.F90, raddiag.F90 arpifs/phys_radi/raddiag.F90, raddrv.F90 arpifs/phys_radi/raddrv.F90, radflux_layer.F90 arpifs/phys_radi/radflux_layer.F90, radheat.F90 arpifs/phys_radi/radheat.F90, radheatad.F90 arpifs/phys_radi/radheatad.F90, radheatn.F90 arpifs/phys_radi/radheatn.F90, radheattl.F90 arpifs/phys_radi/radheattl.F90, radiation_layer.F90 arpifs/phys_radi/radiation_layer.F90, radina.F90 arpifs/phys_radi/radina.F90, radinaad.F90 arpifs/phys_radi/radinaad.F90, radinatl.F90 arpifs/phys_radi/radinatl.F90, radintg.F90 arpifs/phys_radi/radintg.F90, radlsw.F90 arpifs/phys_radi/radlsw.F90, radlswad.F90 arpifs/phys_radi/radlswad.F90, radlswr.F90 arpifs/phys_radi/radlswr.F90, radlswtl.F90 arpifs/phys_radi/radlswtl.F90, radozc.F90 arpifs/phys_radi/radozc.F90, radozcmf.F90 arpifs/phys_radi/radozcmf.F90, radozv.F90 arpifs/phys_radi/radozv.F90, radpar.F90 arpifs/phys_radi/radpar.F90, radvis.F90 arpifs/phys_radi/radvis.F90, radvis_layer.F90 arpifs/phys_radi/radvis_layer.F90, sualb2si.F90 arpifs/phys_radi/sualb2si.F90, uvradi_layer.F90 arpifs/phys_radi/uvradi_layer.F90
Added:	
ifsaux/misc	crm.F90
Modified:	
aladin/adiab	elarmes.F90, elarmes5.F90, elarmesad.F90, elarmestl.F90
aladin/var	moevar.F90
arpifs/adiab	call_sl_heap.F90, call_sl_stack.F90, cpeuldyntl.F90, cpg.F90, cpg5_gp.F90, cpg_dia.F90, cpg_gp.F90
arpifs/c9xx	incli6.F90
arpifs/canari	caclsi.F90
arpifs/chem	tm5_chem_ini.F90
arpifs/control	cgr1.F90, cnt3.F90, cnt4.F90, cva1.F90, get_clinc.F90, gp_model.F90, gp_model_heap.F90, gp_model_stack.F90, stepoad.F90
arpifs/dfi	dfi2.F90
arpifs/dia	cpdyddh.F90, dealdyn_ddh.F90, sunddh.F90, suppdate.F90, wrmlppa.F90, wrspeca_compress_mt.F90
arpifs/fullpos	endpos.F90, gridfpos_savefu.F90, hpos.F90, predynfpos.F90, pregpfpos.F90, prespfpos.F90, vpos.F90, vpos_prep.F90, wrgp2fafp.F90, wrmlfp.F90, wrmlfp_io_serv.F90, wrplfp_io_serv.F90
arpifs/interpol	laitri.F90
arpifs/io_serv	io_serv_map_send_part1.F90, io_serv_suiosctmpl.F90, io_serv_writefld_ec.F90
arpifs/module	elbc0b_mod.F90, gfl_subs_mod.F90, gmv_subs_mod.F90, iogride_mod.F90, iogridue_mod.F90, iospece_mod.F90, traj_physics_mod.F90, varbc_rad.F90, yoe_cuconvca.F90
arpifs/obs_preproc	sugoms.F90

arpifs/oops	ifs_init.F90
arpifs/op_obs	cobs.F90, hopad.F90, hoptl.F90, hradp_ml_tl.F90
arpifs/phys_dmn	acdayd.F90, acmtud.F90, aplpar.F90, mf_phys.F90, suphmpa.F90, suphy1.F90
arpifs/phys_ec	callpar.F90, callparad.F90, callpartl.F90, chem_initflux.F90, crm_layer.F90, ec_phys_ad.F90, ec_phys_tl.F90, fireinj.F90, gems_init.F90, gems_init_tl.F90, gems_tend_ad.F90, sltend.F90, state_increment.F90, state_update.F90, surftstp_s_layer.F90
arpifs/phys_radi	acraneb2.F90, recmwf.F90, suecrad.F90, surdi15.F90
arpifs/pp_obs	pos.F90
arpifs/setup	rdfa2sp.F90, su0yoma.F90, su0yomb.F90, su_surf_flds.F90, suafn1.F90, suct0.F90, suctrl_gflattr.F90, sudefo_gflattr.F90, sudyn.F90, sugfl2.F90, sugfl3.F90, sugridua.F90, susc2b.F90, suslb.F90, suspeca.F90, suspecb.F90
arpifs/utility	dealddh.F90, dealsc2.F90, ectrbk.F90, openfainfo.F90, pkgrida.F90, pkspeca.F90, updtim.F90
arpifs/var	bgevecs.F90, bgvecs.F90, suallt.F90, suecges.F90, suvar.F90, writelct.F90
ifsaux/lfi_alt	lfi_alts.c, lfi_grok.c
mitraille/namelist	namg_c901, namg_c923_lin, namg_c923_quad
mse/externals	aro_surf_diagh.F90, sugridsfx.F90, suphmse_surface.F90
utilities/combi	combi_opti.F90

Doc:
1) odb/lib/version.c: set VERSION_MAJOR to 42 .
2) Update mitraillette script (version: v032015).
Projects: mitraille, odb
Git branch: gco_CY41T1_r2.01%bf
Deleted:

mitraille/doc	aainfo_mitraille_v122014.pdf
mitraille/namelist	namg_fpla_avec_meteosat, namg_fpla_nstop0, naml_ahfe_e001_fp_ope2_avecmeteosat, naml_as1t_e001_oper_sl2_hyd, naml_as1t_e001_oper_sl3, sel_0_avec_meteosat, sel_3_avec_meteosat, sel_6_avec_meteosat
mitraille/protojobs	jobl_as1t_e001_oper

Renamed:

mitraille/namelist	naml_ar1t_e001_ios mitraille/namelist/naml_ar1t_e001_pcf, naml_ar1t_e001_oper mitraille/namelist/naml_ar1t_e001_hydmad, naml_ar1t_e001_oper_avecmeteosat mitraille/namelist/naml_ar1t_e001_pccmad, naml_as1t_e001_oper_sl2 mitraille/namelist/naml_ar1t_e001_pcc, naml_as1t_e001_oper_sl2_adiab mitraille/namelist/naml_ar1t_e001_pccmad_adiab
mitraille/procedure	mitraillette_v122014.x mitraille/procedure/mitraillette_v032015.x

Added:

mitraille/doc	aainfo_mitraille_v032015.pdf
mitraille/namelist	naml_ar1t_e001_pccmadios

Modified:

mitraille/namelist	aainfo, namg_4hex, namg_4hey, namg_4hlx, namg_4hly, namg_4hlz, namg_5hex, namg_5hey, namg_5hlx, namg_5hly, namg_5hlz, namg_6hex, namg_6hex_adiab, namg_6hlx, namg_6hlx_adiab,

	namg_ahea, namg_aheh, namg_ahla, namg_ahlh, namg_ahsa, namg_ahsh, namg_aney, namg_anly, namg_ansy, namg_c901, namg_c923_lin, namg_c923_quad, namg_fila, namg_filb, namg_fpfa, namg_fpfb, namg_fpga, namg_fpla, namg_fplb, namg_fpmb, namg_fpmc, namg_fpsa, namg_fpsu_fc, namg_fpsu_fp, namg_fpsu_fp_l03, namg_fpsu_fp_l15, namg_fpsv_addnhvar, namg_fpsv_addnhvar_l15, namg_fpsv_gpq, namg_fpsv_gpq_l15, namg_mheh, namg_mhlh, namg_mhli, namg_mhlj, namg_mhlk, namg_mhsh, namg_mney, namg_mnly, namg_mnsy, naml_aa1t_e001_lacealaro, naml_aa1t_e001_lacealaro_mix, naml_aa1t_e001_lacealaro_old, naml_ac1t_e001_sl2, naml_ac1u_e001_nh_sl2, naml_ag1t_e001_fr_oper, naml_agit_e001_idfi, naml_ah1e_e001_eul, naml_ah1s_e001_sl3, naml_ah1s_e001_sl3_slhd, naml_ah1t_e001_sl2, naml_ah1t_e001_sl2_slhd, naml_ah2s_e001_2dm_sl3, naml_ah2t_e001_2dm_sl2, naml_ah4e_e401_eul, naml_ah4t_e401_sl2, naml_ah5e_e501_eul, naml_ah5t_e501_sl2, naml_ah6e_e601_eul_physb, naml_ah6t_e601_sl2_physb, naml_ah9e_e927_fp_aru, naml_ah9e_e927_fp_cou, naml_ah9e_ee927_fp_arunes, naml_ahfe_e001_fp_gri1, naml_ahfe_e001_fp_gri2, naml_ahfe_e001_fp_lal, naml_ahfe_e001_fp_lam1, naml_ahfe_e001_fp_lam2, naml_ahfe_e001_fp_mod, naml_ahfe_e001_fp_ope2, naml_ahfe_e001_fp_opex, naml_ahfe_e001_inl_fp, naml_ahme_e001_fp_lamars, naml_ahut_e001_sl2, naml_ai1t_e001_hl, naml_an1e_e001_nhsad_d4_eul, naml_an1s_e001_nhsad_d4_sl3, naml_an1t_e001_nhsad_d4_sl2, naml_an2s_e001_nh2dm_d4_sl3, naml_an2t_e001_nh2dm_d4_sl2, naml_ar1t_e001_hyd, naml_arut_e001_sl2, naml_axcx_e923_lalon_franx01, naml_axcx_e923_lelam_france_lin, naml_axcx_e923_lelam_france_quad, naml_axcx_e923_lelam_lace_quad, naml_axcx_e923_lelam_reunion_lin, naml_axcx_e923_lelam_reunion_quad, vide, vv_complete_physics, vv_complete_physics_arome, zfutur_naml_ahfe_e001_inl_fp
mitraille/protojobs	aainfo, config, jobl_ar1t_e001_oper
mitraille/protojobs/beaufix	config
odb/lib	version.c

Doc:
1) Moves of routines without renaming, according to appendix C1a of Karim Yessad's proposal of cleanings in ARPEGE.

2) Update mitraillette:
- add empty block NAMGWDIAG in namelists;
- mitraille/protojobs/beaufix/config: change value of FILE_PATH_RRTMCST.
Projects: aladin, arpifs, mitraille
Git branch: gco_CY41T1_r2.02%bf
Renamed:

aladin/c9xx	ecoptra.F90 aladin/var/ecoptra.F90
arpifs/c9xx	coptra.F90 arpifs/var/coptra.F90
arpifs/dia	cpnudg.F90 arpifs/climate/cpnudg.F90
arpifs/phys_ec	gp_sstaqua.F90 arpifs/setup/gp_sstaqua.F90

arpifs/utility	iopack.F90 arpifs/control/iopack.F90
arpifs/var	eigenmd.F90 arpifs/utility/eigenmd.F90, troplev.F90 arpifs/pp_obs/troplev.F90

Modified:

mitraille/namelist	namg_4hex, namg_4hey, namg_4hlx, namg_4hly, namg_4hlz, namg_5hex, namg_5hey, namg_5hlx, namg_5hly, namg_5hlz, namg_6hex, namg_6hex_adiab, namg_6hlx, namg_6hlx_adiab, namg_ahea, namg_aheh, namg_ahla, namg_ahlh, namg_ahsa, namg_ahsh, namg_aney, namg_anly, namg_ansy, namg_c901, namg_c923_lin, namg_c923_quad, namg_fila, namg_filb, namg_fpfa, namg_fpfb, namg_fpga, namg_fpla, namg_fplb, namg_fpmb, namg_fpmc, namg_fpsa, namg_fpsu_fc, namg_fpsu_fp, namg_fpsu_fp_l03, namg_fpsu_fp_l15, namg_fpsv_addnhvar, namg_fpsv_addnhvar_l15, namg_fpsv_gpq, namg_fpsv_gpq_l15, namg_mheh, namg_mhlh, namg_mhli, namg_mhlj, namg_mhlk, namg_mhsh, namg_mney, namg_mnly, namg_mnsy, naml_aa1t_e001_lacealaro, naml_aa1t_e001_lacealaro_mix, naml_aa1t_e001_lacealaro_old, naml_ac1t_e001_sl2, naml_ac1u_e001_nh_sl2, naml_ag1t_e001_fr_oper, naml_agit_e001_idfi, naml_ah1e_e001_eul, naml_ah1s_e001_sl3, naml_ah1s_e001_sl3_slhd, naml_ah1t_e001_sl2, naml_ah1t_e001_sl2_slhd, naml_ah2s_e001_2dm_sl3, naml_ah2t_e001_2dm_sl2, naml_ah4e_e401_eul, naml_ah4t_e401_sl2, naml_ah5e_e501_eul, naml_ah5t_e501_sl2, naml_ah6e_e601_eul_physb, naml_ah6t_e601_sl2_physb, naml_ah9e_e927_fp_aru, naml_ah9e_e927_fp_cou, naml_ah9e_ee927_fp_arunes, naml_ahfe_e001_fp_gri1, naml_ahfe_e001_fp_gri2, naml_ahfe_e001_fp_lal, naml_ahfe_e001_fp_lam1, naml_ahfe_e001_fp_lam2, naml_ahfe_e001_fp_mod, naml_ahfe_e001_fp_ope2, naml_ahfe_e001_fp_opex, naml_ahfe_e001_inl_fp, naml_ahme_e001_fp_lamars, naml_ahut_e001_sl2, naml_ai1t_e001_hl, naml_an1e_e001_nhsad_d4_eul, naml_an1s_e001_nhsad_d4_sl3, naml_an1t_e001_nhsad_d4_sl2, naml_an2s_e001_nh2dm_d4_sl3, naml_an2t_e001_nh2dm_d4_sl2, naml_ar1t_e001_hyd, naml_ar1t_e001_hydmad, naml_ar1t_e001_pcc, naml_ar1t_e001_pccmad, naml_ar1t_e001_pccmad_adiab, naml_ar1t_e001_pccmadios, naml_ar1t_e001_pcf, naml_arut_e001_sl2, naml_axcx_e923_lalon_franx01, naml_axcx_e923_lelam_france_lin, naml_axcx_e923_lelam_france_quad, naml_axcx_e923_lelam_lace_quad, naml_axcx_e923_lelam_reunion_lin, naml_axcx_e923_lelam_reunion_quad, vide, zfutur_naml_ahfe_e001_inl_fp
mitraille/protojobs/beaufix	config

Doc:

Portability fixes for INTEL compiler.

** dfi2.F90:*

Replace YQ by YGFL%YQ in calls to COPGFL & CORGFL.

** io_serv_suiosctmpl.F90:*

Remove USE statement at line 56:
USE GRIB_API_INTERFACE, ONLY : IGRIB_GET_VALUE

(NB: GRIB_API_INTERFACE already used at line 50)

** gridpoint_buffers_mix.F90*
sutrans.F90
rdnhtrajm.F90
wrnhtrajm.F90:

Remove useless interface block:
abor1.intfb.h

** model_mod.F90:*

Remove useless interface blocks:
sualmdh.intfb.h
sualtdh.intfb.h

** fields_io_mod.F90:*

Remove useless interface block:
spnorm.intfb.h

** radtr_ml.F90:*

Declare intrinsic integer COUNT function as EXTERNAL.

** apl_arome2intflex.F90*
aplpar2intflex.F90
sugfl2.F90:

Replace YCOMP by YGFL%YCOMP in pointer assignments and in ASSOCIATED statements.

** ec_phys_drv.F90:*

Replace associated variables by their real names in pointer assignments and in ALLOCATED statements.

** suecrad.F90:*

1) Remove useless interface block:
su_aerop.intfb.h

2) Lines 1951 to 1953: WRITE(UNIT=KULOUT,FMT=) instead of WRITE(UNIT=KULOUT,*) .*

** surand1.F90:*

Line 541: fix output format (remove last comma).

** transdir_wavelet.F90*
transdir_waveletad.F90
transinv_wavelet.F90

transinv_waveletad.F90

Replace MYMS/NASM0 by YRLAP%MYMS/YRLAP%NASM0 in pointer assignements.

** sualcos.F90:*

Remove useless interface block:
cmoctmap_inv.intfb.h

** grib_api_interface.F90:*

Replace line 620:
CALL GRIB_GET_MESSAGE_SIZE(KHANDLE,KBYTES,STATUS=IRET)

by the lines:
INTEGER(KIND=kindofsize_t) :: IBYTES
[...]
CALL GRIB_GET_MESSAGE_SIZE(KHANDLE,IBYTES,STATUS=IRET)
KBYTES = IBYTES

** msgpass_storeobs.F90:*

Fix double declaration of CLbasename.

** odbio_msgpass.F90:*

Fix double declaration of io_trace & datavolume .

** Merge_gmi_swaths.F90:*

1) Fix double declaration of ipool .
2) Line 54: "dbname" instead of "trim(dbname)" as argument for intrinsic GETARG.

** kpp_bldepth_mod.F90*
kpp_blmix_mod.F90
kpp_kppmix_mod.F90
kpp_wscale_mod.F90
ocean_ml_driver_mod.F90
surftstp_ctl_mod.F90:

Set attribute INTENT to INOUT for argument YDOCEAN_ML .
Portability fixes for gfortran (4.8.3).

** inifaoutinfo.F90*
openfainfo.F90
posddh.F90
reresf.F90
specfitg.F90
suarg.F90
suecozv.F90
sugridg.F90
sugrido.F90
sugridug.F90
sugridug2.F90
suofname.F90

suspecb.F90
suwcou.F90
tlprop.F90
wroutgpgb.F90
wroutspgb.F90:

Fix compilation issue: Associate-name 'cxxx' at (1) is used as array
=> Replace associated variable CXXX (character) by full variable name YFOO%CXXX in statements such as: YFOO%CXXX(m:n) .

** inicou.F90:*

Declare integer function GETPID as external.

** writemusc.F90:*

Declare functions as external: THETA, THETAL_KE, THETAV, THETAVL, HCLA, THETAE_BOLTON, THETAES_BOLTON .

** aer_src.F90*
suswn.F90:

Fix compilation issue: Host associated variable 'xxxxx' may not be in the DATA statement at (1)
=> Move DATA statements before ASSOCIATE statements.

aer_src.F90 (only): declare function ERF as external.

** sualspajb.F90*
sujb.F90:

Fix compilation issue: 'mask' argument of 'any' intrinsic at (1) must be a logical array
=> Replace associated variable XXXX by full variable name YFOO%XXXX in concerned ANY statements.

** surad.F90:*

Declare integer function ISRCHEQ as external.
Portability fixes.

** cnt4.F90:*

Protect calls to UPDNEMOFIELDS/UPDNEMOSTRESS under cpp key WITH_NEMO .

** radtr_ml.F90:*

Declare COUNT function as INTRINSIC instead of EXTERNAL.

** aer_src.F90:*

Declare ERF function as INTRINSIC instead of EXTERNAL.
Replace cpp macro NO_ATLAS (#ifndef NO_ATLAS etc...) by macro WITH_ATLAS (#ifdef WITH_ATLAS etc...).
Projects: aeolus, arpifs, ifsaux, odb, surf
Git branch: gco_CY41_pre-r2-bf

Deleted:

ifsaux/support	fi_libc.c, fi_libc.h, groksize.c, paddrs.c

Modified:

aeolus/Scripts	arpifs_excluded_files
arpifs/control	cnt4.F90, reresf.F90
arpifs/dfi	dfi2.F90
arpifs/dia	inifaoutinfo.F90, posddh.F90, suofname.F90, wroutgpgb.F90, wroutspgb.F90
arpifs/fullpos	specfitg.F90
arpifs/io_serv	io_serv_suiosctmpl.F90
arpifs/module	gridpoint_buffers_mix.F90, model_mod.F90
arpifs/ocean	inicou.F90
arpifs/oops	fields_io_mod.F90
arpifs/op_obs	radtr_ml.F90
arpifs/phys_dmn	apl_arome2intflex.F90, aplpar2intflex.F90, writemusc.F90
arpifs/phys_ec	aer_src.F90, ec_phys_drv.F90, suecozv.F90, suwcou.F90
arpifs/phys_radi	suecrad.F90, suswn.F90
arpifs/setup	su0yoma.F90, suarg.F90, sugfl2.F90, sugridg.F90, sugrido.F90, sugridug.F90, sugridug2.F90, surand1.F90, suspecb.F90, sutrans.F90
arpifs/transform	transdir_wavelet.F90, transdir_waveletad.F90, transinv_wavelet.F90, transinv_waveletad.F90
arpifs/utility	openfainfo.F90, sualspajb.F90
arpifs/var	rdnhtrajm.F90, sualcos.F90, sujb.F90, surad.F90, tlprop.F90, wrnhtrajm.F90
ifsaux/module	grib_api_interface.F90
odb/lib	msgpass_storeobs.F90
odb/module	odbio_msgpass.F90
odb/tools	Merge_gmi_swaths.F90
surf/module	kpp_bldepth_mod.F90, kpp_blmix_mod.F90, kpp_kppmix_mod.F90, kpp_wscale_mod.F90, ocean_ml_driver_mod.F90, surftstp_ctl_mod.F90

MARGUINAUD Philippe

Doc:
Fix bugs in IO server initialization.

NO NUMERICAL IMPACT IS EXPECTED.
Projects: arpifs
Git branch: marguina_CY41T1_fixios
Modified:

arpifs/dia	wrspeca_compress_mt.F90
arpifs/io_serv	io_serv_map_send_part1.F90, io_serv_suiosctmpl.F90

Doc:
Fix bug in rdfa2sp.F90 .

NO NUMERICAL IMPACT IS EXPECTED.
Projects: arpifs
Git branch: marguina_CY41T1_rdfa2sp42
Modified:

arpifs/setup	rdfa2sp.F90

MARY Alexandre

Doc:
Arguments passing of FIELDS and TRAJ + capitalisation.

Automatic passing by arguments of FIELDS(= GMV, GFL, SURF) and TRAJ (= GMV5, GFL5), from CNT0 downwards (574 routines + 6 modules).
Automatic re-capitalisation, except full lowercase routines (1667 routines).

With the use of the so-called "SPAM" script by Olivier Marsden (ECMWF).

NO NUMERICAL IMPACT IS EXPECTED.
Projects: aladin, algor, arpifs, etrans, ifsaux, mse, oops, trans
Git branch: mary_CY41T1_spam
Renamed:

ifsaux/py_interface	comppar.F90 ifsaux/py_interface/modd_comppar.F90

Modified:

aladin/adiab	especrt.F90
aladin/c9xx	eincli3.F90, eincli6.F90
aladin/control	espcm.F90, espcmad.F90
aladin/coupling	ecoupl1.F90, ecoupl1ad.F90, elsrw.F90, elswa3.F90, erlbc.F90
aladin/fullpos	sufpmove.F90
aladin/programs	blendsur.F90, check_limits.F90, holo.F90, unholo.F90
aladin/setup	elsac.F90, erlbc_post_req.F90, sueinif.F90, suemapf.F90, sueqlimsat.F90
aladin/sinvect	echnorm.F90, esptrlcz.F90, ewrtsv.F90
aladin/transform	etransdir_mdl.F90, etransdir_mdlad.F90, etransdirh.F90, etransdirhad.F90, etransinv_mdl.F90, etransinv_mdlad.F90, etransinvh.F90, etransinvh_oops.F90, etransinvhad.F90
aladin/utility	deello.F90
aladin/var	ebalbeta.F90, ebalbetaad.F90, ebalomega.F90, ebalomegaad.F90, ebalomegatl.F90, ecoptra.F90, ecosjr.F90, erdlsgrad.F90, evarjkini.F90, ewreini.F90, suejbcov.F90, suejbstd.F90, suejbtest.F90, suemodjk.F90, suescal.F90
aladin/wavelet	suejbwav_read_sigmab.F90
algor/external/fourier	fft992.F
algor/external/lanczos	gcr.F, landr.F, loadev.F, mortho.F90
algor/external/linalg	intavg.F90, minv.F90, multvdv.F90, sgtsl.F
algor/external/minim	m1qn3.F, m1qn3_1dv.F, m1qn3r.F, n1cg1.F90
algor/interface	mortho.h
algor/internal/lanczos	allgather_ctlvec_lanczos.F90, lanso.F, prrule.F, purge.F, ritvec.F, startv.F90, stpone.F
algor/internal/linalg	layeravg.F90, mxva.F, sgemmx.F, sublayer.F90
algor/internal/minim	ctcab_1dv.F, ctonb_1dv.F, dbfgsl.F90, dd.F, dd_1dv.F, ddr.F, dds.F, dds_1dv.F, ddsr.F, dpseuclid.F90, dysave.F90, ecube.F, ecube_1dv.F, ecuber.F, euclid.F, euclid_1dv.F, m1qn3a.F, m1qn3a_1dv.F, m1qn3ar.F, mlis0.F, mlis0_1dv.F, mlis0r.F, mupdts_1dv.F, mupdts_orig.F, mupdtsr.F, n1cga.F90, ystbl_1dv.F, ystbl_orig.F, ystblr.F

algor/module	butterfly_alg_mod.F90, control_vectors.F90, control_vectors_base_mix.F90, control_vectors_data_mix.F90, control_vectors_oper_mod.F90, control_vectors_para_mod.F90, dilatation_mod.F90, distributed_vectors_mix.F90, jb_control_vectors_base_mod.F90, jb_control_vectors_oper_mod.F90, jb_control_vectors_para_mod.F90, random_numbers_mix.F90, spectral_arp_mod.F90, spectral_fields_mod.F90, spectral_fields_oper_mod.F90, spectral_fields_para_mod.F90
arpifs/adiab	call_sl.F90, call_sl_ad.F90, call_sl_heap.F90, call_sl_stack.F90, call_sl_tl.F90, cpeuldyn.F90, cpeuldynad.F90, cpeuldyntl.F90, cpg.F90, cpg2.F90, cpg2ad.F90, cpg2lag.F90, cpg2lagad.F90, cpg2lagtl.F90, cpg2tl.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_end_ad.F90, cpg_end_tl.F90, cpg_gp.F90, cpg_gp_ad.F90, cpg_gp_tl.F90, cpg_gpb_nhgeogw.F90, cpg_pt.F90, cpg_pt_ulp.F90, cpgad.F90, cpglag.F90, cpglagad.F90, cpglagtl.F90, cpgtl.F90, cputqy.F90, cputqy_arome.F90, cputqys.F90, cputqysad.F90, cputqystl.F90, cpwts.F90, gp_tndlagadiab_uv.F90, gp_tndlagadiab_uv_ad.F90, gp_tndlagadiab_uv_geogw.F90, gp_tndlagadiab_uv_tl.F90, gpino3ch.F90, gpmasscor.F90, gpmpfc.F90, gpmpfc5.F90, gpnox.F90, gpnoxad.F90, gpnoxtl.F90, gpstress.F90, gptf1.F90, gptf1ad.F90, gptf2.F90, gptf2ad.F90, lacdyn.F90, lacdynad.F90, lacdyntl.F90, ladad.F90, lanhsi.F90, lanhsi_geogw.F90, lanhsib.F90, lapineb.F90, lapinebad.F90, lapinebtl.F90, larche_hlp.F90, larcinb.F90, larcinbad.F90, larcinbtl.F90, lassie.F90, lassiead.F90, lassietl.F90, latte_bbc.F90, latte_kappa.F90, latte_kappaad.F90, latte_kappatl.F90, latte_stddis.F90, lattes.F90, lattesad.F90, lattestl.F90, lattex.F90, lattexad.F90, lattextl.F90, lavent.F90, laventad.F90, laventtl.F90, postphy.F90, pre_sladrep.F90, spchor.F90, specrt.F90, specrtges.F90
arpifs/c9xx	add_pert_sst.F90, eadd_pert_sst.F90, incli0.F90, incli3.F90, incli6.F90
arpifs/canari	caclsi.F90, caclsst.F90, cacova.F90, cacsts.F90, cadavr.F90, caeincw.F90, cah2as.F90, cahuax.F90, calincw.F90, can1.F90, canali.F90, canari.F90, capotx.F90, caprsurf.F90, capsax.F90, carcli.F90, caredo.F90, carnak.F90, casgra.F90, casmswi.F90, casnas.F90, castas.F90, cat2as.F90, catrma.F90, cav1as.F90, cavtax.F90
arpifs/chem	chem_drydep.F90, chem_main.F90, chem_massdia.F90, chem_scav.F90, chem_tm5.F90, cod_op_tm5.F90, tm5_aerosol_info.F90, tm5_boundary_ch4.F90, tm5_boundary_hno3.F90, tm5_calrates.F90, tm5_chem_ini.F90, tm5_directflux.F90, tm5_do_ebi.F90, tm5_eqsam.F90, tm5_ibud.F90, tm5_noy.F90, tm5_photo_flux.F90, tm5_photorates_tropo.F90, tm5_pifm_ran.F90, tm5_slingo.F90, tm5_stratbc_ch4.F90, tm5_wetchem.F90
arpifs/climate	icestatenemo.F90, updcalsec.F90, updcli.F90, updclie.F90, updclie_co2.F90, updclie_compo.F90, updcpl.F90, updicetemp.F90, updnemoocean.F90
arpifs/control	adjotest.F90, cad1.F90, cdsta.F90, cfcsens2obs.F90, cgr1.F90, cnt0.F90, cnt1.F90, cnt2.F90, cnt3.F90, cnt3ad.F90, cnt3tl.F90, cnt4.F90, cnt4ad.F90, cnt4tl.F90, cprep1.F90, csekf1.F90, csekf2.F90, csta.F90, ctl1.F90, cuconvca.F90, cva1.F90, cva2.F90, forecast_error.F90, gmassdiag.F90, gp_model.F90, gp_model_ad.F90, gp_model_heap.F90, gp_model_stack.F90, gp_model_tl.F90,

	iopack.F90, jmgfixer.F90, negfixer.F90, pfixer.F90, qmfixer.F90, qmfixer2.F90, reresf.F90, reset_spert.F90, restart_cnt3.F90, scan2m.F90, scan2mad.F90, scan2mtl.F90, sim4d.F90, spcm.F90, stepo.F90, stepo_oops.F90, stepoad.F90, stepotl.F90, tesadj.F90, testli.F90, testlievol.F90, tracmf.F90, trmfixers.F90
arpifs/dfi	copgfl.F90, corgfl.F90, dfi.F90, dfi2.F90, dfi2mod.F90, dfi3.F90, digfil.F90, digp.F90
arpifs/dia	chkevo.F90, cpdyddh.F90, cpphddhe.F90, ddhoff.F90, gridpoint_norm.F90, inifaoutinfo.F90, posddh.F90, ppeddhec.F90, ppfidh.F90, preset_grib_template.F90, spnorm.F90, sucddh.F90, sumddh.F90, sunddh.F90, wrfu.F90, wrgathflnm.F90, wrgrida.F90, wrgridall.F90, wrgridall_map.F90, wrgridua.F90, wrmlpp.F90, wrmlppa.F90, wrmlppa_io_serv.F90, wrmlppg.F90, wrmlpplg.F90, wrmoderr.F90, wrspeca.F90, wrspeca_gp.F90, wrspeca_map.F90, wrtcfou.F90, wrxfu.F90
arpifs/fullpos	cpclimi.F90, cpgridf.F90, dynfpos.F90, endpos.F90, endvpos.F90, fpachmt.F90, fpmodprec.F90, gridfpos.F90, hpos.F90, iofpos.F90, phymfpos.F90, predynfpos.F90, pregpfpos.F90, prespfpos.F90, scan2m_hpos.F90, scan2m_mpos.F90, scan2m_vpos.F90, spaconvert.F90, stepo_fpos.F90, sufpc.F90, sufpsuw.F90, vpos.F90, vpos_prep.F90, wrgp2fafp.F90, wrhfp.F90, wrmlfp.F90, wrmlfp_io_serv.F90, wrsfp.F90
arpifs/gbrad	gbrad_obsop.F90, gbrad_obsop_ad.F90, gbrad_obsop_tl.F90, gbrad_refrac.F90, gbrad_screen.F90, gbrad_setup.F90
arpifs/interpol	laiddiad.F90
arpifs/io_serv	io_serv_close.F90
arpifs/module	aeolus_getamd_mod.F90, control_vectors_comm_mod.F90, crm_inout.F90, crmdims.F90, elbc0b_mod.F90, elbc0c_mod.F90, erlbc_mod.F90, factx_mod.F90, fields_mod.F90, geometry_mod.F90, get_lwpcoeff_mix.F90, get_scattidxcoeff_mix.F90, gmv_subs_mod.F90, gridpoint_buffers_mix.F90, gridpoint_fields_mix.F90, indexfind_mod.F90, iogrclia_mod.F90, iogrida_mod.F90, iogridoe_mod.F90, iogridua_mod.F90, iogridva_mod.F90, iospeca_mod.F90, iostream_mix.F90, model_mod.F90, mtraj_mod.F90, mw_clearsky_oberror_mod.F90, par_cou.F90, par_sipc.F90, parmwave.F90, paronedvar.F90, rrtmg_sw_reftra.F90, rrtmg_sw_spcvrt.F90, rrtmg_sw_vrtqdr.F90, rt6svalues.F90, spectral_columns_mix.F90, stoph_mix.F90, surface_fields_mix.F90, testvar_mix.F90, tm5_chem_module.F90, tm5_photolysis_new.F90, traj_main_mod.F90, traj_physics_mod.F90, traj_surface_mod.F90, trajectory_mod.F90, varbc_airep.F90, varbc_allsky.F90, varbc_eval.F90, varbc_gbrad.F90, varbc_pred.F90, varbc_rad.F90, varbc_setup.F90, varbc_sfcobs.F90, varbc_table.F90, varbc_tcwv.F90, varbc_to3.F90, variables_mod.F90, watch_arrays_mod.F90, wav_lifting_mod.F90, yhlconst.F90, yhlrad.F90, yo_aero_m7.F90, yo_aero_trac.F90, yoe_cuconvca.F90, yoe_mcica.F90, yoeadbuffer.F90, yoecldp.F90, yoerad.F90, yom_amv_oberror.F90, yom_amv_reassign.F90, yom_cpl.F90, yom_inpc.F90, yom_oas.F90, yom_reo3_bcor.F90, yom_reo3_thin.F90, yomancs.F90, yomaneb.F90, yomascatsm.F90, yomcfu.F90, yomchem.F90, yomclddet.F90, yomcmempar.F90, yomcmemtypes.F90, yomcosjo.F90, yomdb.F90, yomdimo.F90, yomdyncore.F90, yomemis.F90, yomgbrad.F90, yomgfl.F90, yomgfl5.F90, yomgfub.F90, yomglobs.F90, yomgmv.F90,

	yomgmv5.F90, yomgppb.F90, yomgppcb.F90, yomgpsk.F90, yomlcz.F90, yomlimb.F90, yommkodb.F90, yommwave.F90, yomobs.F90, yomobset_thsafe.F90, yomonedvar.F90, yomphyder.F90, yomradf.F90, yomraingg.F90, yomrandom_streams.F90, yomrstrhbias.F90, yomsats.F90, yomsmos.F90, yomsphyhist.F90, yomtraj.F90, yomvar.F90, yomvcgl.F90, yomxfu.F90, yomxfub.F90
arpifs/mwave	mwave_assign_emis_atms.F90, mwave_assign_emis_mhs.F90, mwave_assign_emis_mwhs2.F90, mwave_assign_emis_ssmis.F90, mwave_cpfrac.F90, mwave_diags.F90, mwave_emis.F90, mwave_flux_to_mmr.F90, mwave_obsop.F90, mwave_obsop_ad.F90, mwave_obsop_test.F90, mwave_obsop_tl.F90, mwave_obsop_traj.F90, mwave_read_sat_error.F90, mwave_screen.F90, mwave_setup.F90, mwave_wrapper.F90
arpifs/nemo	ininemo.F90
arpifs/obs_preproc	airep_flight_phase.F90, ascatin.F90, ascatsm_cdfpar.F90, biascor.F90, biascor_era40.F90, black.F90, blackhat.F90, cloud_detect_setup.F90, comtc.F90, defrun.F90, dribuin.F90, dupli.F90, dupli_no_sq.F90, dwlin.F90, ersin.F90, fgchk.F90, fgwnd.F90, gefger.F90, gen_corr_pert.F90, hatbiasc.F90, ifsodbddr1f.F90, iniersca.F90, inifger.F90, interp_obs.F90, interp_obsad.F90, kscatin.F90, limb_plane.F90, lndsyin.F90, metarin.F90, mkcmarpl.F90, movpl_no_sq.F90, new_rs_trh_bias.F90, new_thinn.F90, new_thinn_rad_reflec.F90, new_thinn_radar.F90, new_thinner.F90, new_thinner_no_sq.F90, ngenada.F90, obatabs.F90, obscor_lanczos.F90, opk_obscor.F90, oscatin.F90, paobin.F90, pertobs.F90, pertobs_interchan_corr.F90, pertobs_uncorr.F90, pgpsin.F90, pilotin.F90, pre_prsta.F90, pre_thinn_rad_reflec.F90, pre_thinn_radar.F90, pre_thinner.F90, qscatin.F90, radar_profs.F90, rd_obs_boxes.F90, read_crischans.F90, read_iasichans.F90, readoba.F90, redgl.F90, redgl_no_sq.F90, redgps.F90, redml.F90, redml_no_sq.F90, redor.F90, redprof.F90, redrp.F90, redrp1.F90, redrp1_no_sq.F90, redrp_no_sq.F90, redsm.F90, redsm_no_sq.F90, redtp.F90, reini.F90, reo3sin.F90, s0towind.F90, scaqc.F90, screen.F90, sekf_prep_ascat.F90, sekf_prep_smos.F90, settc.F90, setup_tovscv.F90, shipin.F90, smostb_cdfpar.F90, sonde_country_db_match.F90, sortscatidx.F90, sudimo.F90, sugoms.F90, suobarea.F90, suobs.F90, suobsaddr.F90, suobsb.F90, suobscor.F90, suobsort.F90, tempin.F90, tempinmf.F90, thin_red_presort.F90, upecma.F90
arpifs/ocean	inicou.F90, sipc_attach.F90, sipc_init_model.F90, sipc_read_model.F90, sipc_write_model.F90, wrcom.F90
arpifs/onedvar	onedvar_adjoint_test.F90, onedvar_diagnostics.F90, onedvar_find_satsens.F90, onedvar_fstscrn.F90, onedvar_get_bgcor.F90, onedvar_get_bias.F90, onedvar_lintest.F90, onedvar_obsop.F90, onedvar_obsop_gr.F90, onedvar_obsop_tl.F90, onedvar_passive_ok.F90, onedvar_raintb.F90, onedvar_raintb_rcv.F90, onedvar_raintb_snd.F90, onedvar_read_sat_bias.F90, onedvar_read_sat_error.F90, onedvar_screen.F90, onedvar_setup.F90, onedvar_simul.F90
arpifs/oops	allobs_error_mod.F90, allobs_mod.F90, error_covariance_3d_mod.F90, fields_interp_mod.F90, fields_io_mod.F90, ifs_init.F90, localization_mod.F90, locations_mod.F90, obstraj_mod.F90, obsvec_mod.F90, ostats_mod.F90

arpifs/op_obs	acos_ak_ad.F90, acos_ak_op.F90, acos_ak_tl.F90, aer_lidsimad.F90, aerosol_detect.F90, amv_get_preds.F90, amv_oberr.F90, amv_reassign.F90, bgobs.F90, cf_digital.F90, ch4_tcmr.F90, ch4_tcmr_ad.F90, ch4_tcmr_tl.F90, ch4bcor.F90, cholesky.F90, cloud_detect.F90, cloud_estimate.F90, co2_tcmr.F90, co2_tcmr_ad.F90, co2_tcmr_tl.F90, co2slicing.F90, cobs.F90, cobsad.F90, cobsall.F90, cobsallad.F90, cobsalltl.F90, cod_op.F90, cod_opad.F90, cod_optl.F90, dopplsim.F90, dopplsim_ad.F90, dopplsim_tl.F90, emis_mw.F90, fcintgt.F90, fcseradi.F90, fcserf.F90, fcserf_ad.F90, fcserf_tl.F90, fcsglat.F90, ghg_ak_ad.F90, ghg_ak_op.F90, ghg_ak_tl.F90, gpscalc_alpha.F90, gpscalc_alpha2d.F90, gpscalc_alpha2dad.F90, gpscalc_alpha2dtl.F90, gpscalc_alphaad.F90, gpscalc_alpharkm2.F90, gpscalc_alpharkm2ad.F90, gpscalc_alpharkm2tl.F90, gpscalc_alphatl.F90, gpscalc_compress.F90, gpscalc_compress2d.F90, gpscalc_compress2dad.F90, gpscalc_compress2dtl.F90, gpscalc_compressad.F90, gpscalc_compresstl.F90, gpscalc_nr.F90, gpscalc_nr2d.F90, gpscalc_nr2dad.F90, gpscalc_nr2dtl.F90, gpscalc_nrad.F90, gpscalc_nrtl.F90, gpscalc_refrac.F90, gpscalc_refrac2d.F90, gpscalc_refrac2dad.F90, gpscalc_refrac2dtl.F90, gpscalc_refracad.F90, gpscalc_refractl.F90, gpspderivs.F90, gpspderivsad.F90, gpspderivstl.F90, gpsro_2dad.F90, gpsro_2dop.F90, gpsro_2dtl.F90, gpsro_ad.F90, gpsro_oberror.F90, gpsro_op.F90, gpsro_tl.F90, grg_ak_ad.F90, grg_ak_op.F90, grg_ak_tl.F90, hdepart.F90, hjo.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, hsatang.F90, imager_cloud_detect.F90, isac_grg.F90, isac_grgad.F90, isac_grgtl.F90, kernel_pbp.F90, kernel_pbp_ad.F90, kernel_pbp_tl.F90, kernel_ppsl.F90, meanuv_averagetl.F90, meanuv_weights.F90, meanuv_weightsad.F90, meanuv_weightstl.F90, mopitt_ak_ad.F90, mopitt_ak_op.F90, mopitt_ak_tl.F90, movinga.F90, mw_clearsky_screen_mfdecis.F90, obsv.F90, obsvad.F90, obsvtl.F90, popboolean.F90, popinteger4.F90, popreal8.F90, preint.F90, pushinteger4.F90, pushreal8.F90, rad1cemis.F90, radtr_ml.F90, radtr_ml_ad.F90, radtr_ml_tl.F90, reflsim.F90, reflsim_2dop.F90, reo3bcor.F90, rtl_hop_1d.F90, rtl_hop_1d_ad.F90, rtl_hop_1d_tl.F90, rtl_hop_2d.F90, rtl_hop_2d_ad.F90, rtl_hop_2d_tl.F90, rtl_oberror.F90, rtl_screen.F90, vertdisc_ad.F90, vertdisc_tl.F90
arpifs/parallel	bcastcov.F90, distddh.F90, diwrgrid_surf_ext.F90, dot_product_ctlvec.F90, gathercosto.F90, gathereigmd.F90, gl2ll.F90, pe2set.F90, read_spec.F90, read_spec_fromfa.F90, read_spec_grib.F90, set2pe.F90, trmtos.F90, trmtos_spec.F90, trstom.F90, trstom_spec.F90, write_spec.F90, write_spec_traj.F90
arpifs/phys_dmn	acconvsad.F90, acconvstl.F90, acdifv3.F90, acdragltl.F90, aclspstl.F90, acmicroad.F90, acmixelen.F90, acmrip.F90, acmris.F90, acmriss.F90, acmtud.F90, acmtudeul.F90, acnebr.F90, acnuagesad.F90, acnuagestl.F90, acptke.F90, actkehmt.F90, acturb.F90, advprc.F90, advprcs.F90, advprcsad.F90, advprcstl.F90, apl_arome.F90, aplpar.F90, frasolu.F90, hlcldiag.F90, mf_phys.F90, mf_phys_prep.F90, mf_physad.F90, mf_phystl.F90, mts_phys.F90, posct.F90, profilechet.F90, suphy3.F90, vdfhghthl.F90, vdfhghtnhl.F90, vdfparcelhl.F90, vdfstcucrithl.F90, wrarom.F90, writemusc.F90, writephysio.F90, writeprofile.F90, wrscmr.F90

arpifs/phys_ec	accnemoflux_layer.F90, aer_clcld.F90, aer_cld.F90, aer_climg.F90, aer_cloud_layer.F90, aer_diag1.F90, aer_lidsim.F90, aer_phy3_layer.F90, aer_rad.F90, aer_src.F90, aer_ssalt_ms.F90, aer_tau.F90, aerc_scav.F90, aerdiag_layer.F90, aerini_layer.F90, backscatter_layer.F90, callpar.F90, callparad.F90, callpartl.F90, chem_initflux.F90, chem_main_layer.F90, chemini_layer.F90, clddia_layer.F90, cldpp.F90, cldpp_simplified.F90, cldprg_layer.F90, climaer_layer.F90, cloud_layer.F90, cloud_s_layer.F90, cloudsc.F90, cloudst.F90, cloudstad.F90, cloudsttl.F90, cond_layer.F90, convection_ca_layer.F90, convection_layer.F90, convection_s_layer.F90, cover.F90, crm_layer.F90, cuadjtqsad.F90, cuascn.F90, cubasen.F90, cucalln.F90, cucalln2.F90, cucalln2tl.F90, cudtdqn.F90, cudtdqn2.F90, cudtdqn2ad.F90, cudtdqnad.F90, cudtdqntl.F90, cududvtl.F90, cuflxn.F90, cuinin.F90, cuinin2.F90, culight.F90, cumastrn.F90, cumastrn2.F90, cumastrn2ad.F90, cumastrn2tl.F90, ductdia_layer.F90, ec_phys.F90, ec_phys_ad.F90, ec_phys_drv.F90, ec_phys_drv_ad.F90, ec_phys_drv_tl.F90, ec_phys_tl.F90, fireinj.F90, gems_init.F90, gwdrag_layer.F90, gwdrag_wms.F90, gwdrag_wmss.F90, gwdrag_wmssad.F90, gwdrag_wmsstl.F90, gwdragwms_layer.F90, gwdragwms_s_layer.F90, heldsuarez.F90, legtriv.F90, lightning_layer.F90, local_arrays_ini.F90, local_state_ini.F90, m7.F90, m7_aero_prop.F90, m7_averageproperties.F90, m7_coaset.F90, m7_coat.F90, m7_concoag.F90, m7_cumnor.F90, m7_dconc.F90, m7_delcoa.F90, m7_dgas.F90, m7_dnum.F90, m7_drydep.F90, m7_emi.F90, m7_emi_car.F90, m7_emi_dms.F90, m7_emi_du.F90, m7_emi_so2.F90, m7_emi_ss_lsce.F90, m7_emi_ss_mon.F90, m7_equil.F90, m7_equimix.F90, m7_equiz.F90, m7_interface.F90, m7_logtail.F90, m7_nuck.F90, m7_nucl_ku.F90, m7_nucl_ve.F90, m7_sedimentation.F90, m7_wetdep.F90, nocloud.F90, noturbulence.F90, phys_arrays_ini.F90, postphy_layer.F90, restore_vdfout.F90, sltend_layer.F90, spbsgpupd.F90, sppten.F90, state_copy.F90, state_increment.F90, state_update.F90, stochpert_layer.F90, store_traj_phys_layer.F90, store_vdfout.F90, su_aerm7.F90, su_aerw.F90, su_ghgclim.F90, sucldp.F90, suecaebc.F90, suecaeor.F90, suecaesd.F90, suecaess.F90, suecaesu.F90, suecozv.F90, sugwwms.F90, sumaccbc1.F90, sumaccbc2.F90, sumaccor1.F90, sumaccor2.F90, sumaccsd1.F90, sumaccsd2.F90, sumaccsd3.F90, sumaccss1.F90, sumaccss2.F90, sumaccss3.F90, sumaccsu1.F90, suphec.F90, surfbc_layer.F90, surfrad_layer.F90, surftstp_layer.F90, surftstp_s_layer.F90, turbulence_layer.F90, turbulence_s_layer.F90, updtier.F90, vdfeis.F90, vdfexcusad.F90, vdfhghtn.F90, vdfmain.F90, vdftofdc.F90, wvcouple.F90, wvrg2xf.F90, wvwg2rg.F90, wvxf2gb.F90
arpifs/phys_radi	hlrad.F90, hlradia.F90, lwinterf.F90, lwvdr.F90, lwvdrad.F90, lwvdrtl.F90, mcica_cld_generator.F90, noradiation.F90, radact.F90, radaer15.F90, radcfg.F90, raddiag.F90, raddrv.F90, radflux_layer.F90, radheatn.F90, radiation_layer.F90, radintg.F90, radlsw.F90, radlswad.F90, radlswr.F90, radlswtl.F90, radvis_layer.F90, rrtm_cmbgb9.F90, rrtm_ecrt_140gp.F90, rrtm_ecrt_140gp_mcica.F90, rrtm_init_140gp.F90, rrtm_kgb1.F90, rrtm_kgb2.F90, rrtm_kgb3.F90, rrtm_rrtm_140gp_mcica.F90, rrtm_rtrn1a_140gp.F90, rrtm_rtrn1a_140gp_mcica.F90, rrtm_setcoef_140gp.F90, rrtm_taumol12.F90, rrtm_taumol15.F90, rrtm_taumol16.F90,

	rrtm_taumol7.F90, srtm_cldprop.F90, srtm_init.F90, srtm_kgb16.F90, srtm_reftra.F90, srtm_setcoef.F90, srtm_spcvrt_mcica.F90, srtm_srtm_224gp.F90, srtm_srtm_224gp_mcica.F90, srtm_taumol16.F90, srtm_taumol22.F90, su_c11clim.F90, su_c12clim.F90, su_c22clim.F90, su_ccl4clim.F90, su_ch4clim.F90, su_co2clim.F90, su_gch4clim.F90, su_gco2clim.F90, su_gozoclim.F90, su_mch4clim.F90, su_mcica.F90, su_mco2clim.F90, su_mozoclim.F90, su_n2oclim.F90, su_no2clim.F90, su_ozoclim.F90, suecozc.F90, suecrad.F90, surdi15.F90, swclr.F90, uvflx.F90, uvflxa.F90, uvr.F90, uvradi.F90, uvradi_layer.F90
arpifs/pp_obs	poaero.F90, pos.F90, ppobsa.F90, ppobsaad.F90, ppobsac.F90, ppobsacad.F90, ppobsactl.F90, pptccad.F90
arpifs/programs	merge_varbc.F90
arpifs/raingg	raingg_obsop.F90, raingg_obsop_ad.F90, raingg_obsop_tl.F90, raingg_screen.F90, raingg_setup.F90
arpifs/sekf	pertsekf_v2.F90, sekf_backgerr.F90, sekf_costf.F90, sekf_gain.F90, sm_ekf_main.F90, susekf.F90
arpifs/setup	gp_sstaqua.F90, su0phy.F90, su0yoma.F90, su0yomb.F90, su1yom.F90, su_surf_flds.F90, suarg.F90, sucpicgfl.F90, sudyn.F90, sudyncore.F90, suemis_conf.F90, sugpqlim.F90, sugrclia.F90, sugrib.F90, sugrida.F90, sugrida_fix_toz.F90, sugrida_fixup.F90, sugridf.F90, sugridg.F90, sugrido.F90, sugridu.F90, sugridua.F90, sugridua_fixup.F90, sugridua_map_part1.F90, sugridua_map_part2.F90, sugridug.F90, sugridug1.F90, sugridug2.F90, sugridva.F90, suhdf.F90, suhlconst.F90, suhlrad.F90, suiauinif.F90, suinif.F90, suinimoderr.F90, sujbvolc.F90, sumcclag.F90, sump0.F90, suoph.F90, surand1.F90, surand2.F90, susc2c.F90, suspec.F90, suspeca.F90, suspeca_gp.F90, suspeca_map_part1.F90, suspecb.F90, suspecg.F90, suspecg2.F90, suspgpg.F90, suspsdt.F90, suvfe_cpsplines.F90, suvolc.F90, updcelaut.F90
arpifs/sinvect	balanced_reduction.F90, bfgs.F90, chnorm.F90, chsymeig.F90, cun1.F90, cun2.F90, cun3.F90, eof_matrix.F90, jacdav.F90, lcnorad.F90, lcnortl.F90, lcztoald.F90, lcztoifs.F90, nalan1.F90, nalan2.F90, opk.F90, opm.F90, pcgbfgs.F90, rdtllcz.F90, sptrlcz.F90, su_subspace.F90, suforce.F90, sulcz.F90, wrtllcz.F90, wrtsv.F90
arpifs/smos	smos_obsop.F90, smos_obsop_setup.F90, smos_process.F90, smos_screen.F90
arpifs/transform	grid2spec.F90, grid2specad.F90, relaxgp.F90, spec2grid.F90, spec2gridad.F90, transdir_mdl.F90, transdir_mdlad.F90, transdirh.F90, transdirhad.F90, transinv_mdl.F90, transinv_mdlad.F90, transinvh.F90, transinvhad.F90
arpifs/utility	add5to3.F90, addbgs.F90, addfgs.F90, copy_spa2spec.F90, copy_spec2spa.F90, dealctv.F90, deallo.F90, dealmod.F90, dealxmo.F90, ectrbk.F90, gpnorm_gfl.F90, gpnorm_gmv.F90, grid_bicubic.F90, grid_bilinear.F90, grid_minmaxavg.F90, incgpf.F90, model2moderr.F90, modeltojb.F90, modeltojbad.F90, pksurfa.F90, pre_grid_biconserv.F90, prt_conv_diags.F90, prt_ctlvec_max.F90, prt_ctlvec_norms.F90, prtime.F90, prtjo.F90, random_ctlvec.F90, rdmoderr.F90, rdvaparam.F90, read_surfgrid_traj_fromfa.F90, reset_accfie_vareps.F90, save_evecs.F90, save_merr_tend.F90, save_test4dinc.F90, savmoderr.F90, sbs5to3.F90, sbsfgs.F90, sc2rdg.F90, sc2wrg.F90, setimzero.F90, spec2state.F90, spec_concat.F90, spec_imzero.F90, spec_split.F90, specimzero.F90,

	state2spec.F90, state2specad.F90, sualspa1.F90, sualspajb.F90, updrlxref.F90, updtim.F90, wrgp2fa.F90, write_ctlvec_grib.F90, write_grid_grib.F90, write_grid_traj.F90, write_wavelet_initcv_grib.F90, wrresf.F90, wrvaparam.F90
arpifs/var	add_moderr_ad.F90, add_moderr_tl.F90, adtest.F90, amv_read_oberror.F90, balomega.F90, balomegaad.F90, balomegatl.F90, bgevecs.F90, bgvecs.F90, cain.F90, cainad.F90, cainin.F90, caininad.F90, chavar.F90, chavarad.F90, chavarin.F90, chavarinad.F90, congrad.F90, congrad_ad.F90, coptra.F90, cosens.F90, cosjc.F90, cosjl.F90, cosjr.F90, costra.F90, ctcab.F90, ctonb.F90, cvar2.F90, cvar2ad.F90, cvar2in.F90, cvar2inad.F90, cvar3.F90, cvar3ad.F90, cvar3in.F90, cvar3inad.F90, cvarbc.F90, cvarbcad.F90, cvarbcin.F90, cvarbcinad.F90, deallt.F90, djbdy.F90, estsig.F90, estsiga.F90, evcost.F90, evjcdfi.F90, fjvarbc.F90, fltbgcalc.F90, fltbgerr.F90, fltbgvarens.F90, fltlcterr.F90, get_traj_phys.F90, getmini.F90, getmini2.F90, getsatid.F90, gp_ssmi.F90, grbspa_mf.F90, grtest.F90, inflation_pert.F90, inflcalc.F90, jbtomodel.F90, jbtomodelad.F90, jbvcor_wavelet.F90, jbvcor_waveletad.F90, jbvcor_waveletin.F90, jbvcor_waveletinad.F90, jgcor.F90, jgcorad.F90, jgcori.F90, jgcoriad.F90, jgnriad.F90, jqhcor.F90, jqhcorin.F90, jqvcor.F90, litest.F90, orthnorm.F90, precond.F90, preppcm.F90, prosca.F90, qneglim.F90, qneglimtl.F90, rd801.F90, rdfpinc.F90, read_surfgrid_traj.F90, readtmp.F90, readvec.F90, rtsetup.F90, savhess.F90, savmini2.F90, scaleae.F90, scalederae.F90, scalefe.F90, setran.F90, sqrtfe.F90, sqrtq.F90, sqrtqad.F90, sqrtqin.F90, sqrtqinad.F90, suaeolus.F90, sualcosjo.F90, sualctv.F90, suallr.F90, suallt.F90, suamv.F90, sucos.F90, suecges.F90, suhess.F90, suhifce.F90, suhifcead.F90, suinfce.F90, sujb.F90, sujbcov.F90, sujbcovsignal.F90, sujbdat.F90, sujbstd.F90, sujbtest.F90, sujbvarens.F90, sujbvcoord.F90, sujbwavallo.F90, sujbwavelet.F90, sujbwavgen.F90, sujbwavgen_hybraw.F90, sujbwavstats.F90, sujbwavtrans.F90, sujq.F90, sujqcor.F90, sujqdata.F90, sujqstd.F90, sulimb.F90, sumdfce.F90, sumoderr.F90, supert.F90, surad.F90, surad_jot.F90, sureo3.F90, suscal.F90, suscalmerr.F90, suscat.F90, sushfce.F90, suvazx.F90, svvarbc.F90, taskob.F90, taskobad.F90, taskobtl.F90, tlprop.F90, tltest.F90, upspec.F90, vec2dergp.F90, vec2gp.F90, vec2gpfe.F90, wrevecs.F90, writelct.F90, writeoba.F90, writesd.F90, writetmp.F90, xformev.F90
etrans/external	edir_trans.F90, edir_transad.F90, einv_trans.F90, einv_transad.F90
etrans/module	edist_spec_control_mod.F90
etrans/programs	aatestprog.F90, test_adjoint.F90
ifsaux/bufr_io	oldbufr_close.F, oldbufr_open.F, oldbufr_read.F, oldbufr_rewind.F, oldbufr_write.F
ifsaux/cma	oldcma_close.F, oldcma_get_address.F, oldcma_open.F, oldcma_read.F, oldcma_rewind.F, oldcma_set_address.F, oldcma_write.F
ifsaux/ddh	casc.F90, const_ther.F90, dates.F90, etalae.F90, fillzero.F90, fonctions.F90, intcar.F90, modulo.F90, pridocf.F90
ifsaux/eclite	getopt.F, n_compat.F
ifsaux/fa	facine.F90, facodx.F90, faisan.F90
ifsaux/fi_libc	fi_gettimeofday.F90
ifsaux/misc	datefa.F, optd.F, optgee.F, optmccpa.F, optremez.F
ifsaux/module	compensated_summation_mod.F90, distio_mix.F90,

	dr_hook_watch_mod.F90, ecsort_mix.F90, eggpack.F90, fdbsubs_mod.F90, fitspectrum_mod.F90, grib_api_interface.F90, mpi4to8.F90, mpi4to8_m.F90, mpi4to8_s.F90, mpl_abort_mod.F90, mpl_allgather_mod.F90, mpl_allgatherv_mod.F90, mpl_allreduce_mod.F90, mpl_alltoallv_mod.F90, mpl_arg_mod.F90, mpl_barrier_mod.F90, mpl_broadcast_mod.F90, mpl_buffer_method_mod.F90, mpl_close_mod.F90, mpl_end_mod.F90, mpl_gatherv_mod.F90, mpl_groups.F90, mpl_init_mod.F90, mpl_ioinit_mod.F90, mpl_locomm_create_mod.F90, mpl_message_mod.F90, mpl_mygatherv_mod.F90, mpl_myrank_mod.F90, mpl_nproc_mod.F90, mpl_open_mod.F90, mpl_probe_mod.F90, mpl_read_mod.F90, mpl_recv_mod.F90, mpl_scatterv_mod.F90, mpl_send_mod.F90, mpl_setdflt_comm_mod.F90, mpl_stats_mod.F90, mpl_tour_table_mod.F90, mpl_wait_mod.F90, mpl_waitany_mod.F90, mpl_write_mod.F90, oml_mod.F90, order_independent_summation_mod.F90, prism_dummy_mod.F90, quad_emu_mod.F90, rttov_const.F90, rttov_ec_mod.F90, sdl_mod.F90, strhandler_mod.F90, yomhookstack.F90, yomprism.F90
ifsaux/parallel	cmpl_binding.F90, coml_binding.F90
ifsaux/programs	ddh_lfi2lfa.F90, ddhr.F90, ddht.F90
ifsaux/py_interface	FA4py.F90, compress.F90, searchgrp.F90, transforms4py.F90
ifsaux/support	abor1.F90, clock.F, convin.F90, convout.F90, cptime.F90, dr_hook_procinfo.F90, dr_hook_util.F90, get_opt.F, gstats.F90, gstats_print.F90, gstats_setup.F90, isrcheq.F, jfh_bind.F90, rdot.F, rsum.F, stack_overwrite.F90, sufftp.F90, timef.F
ifsaux/utilities	ctor.F, dsort.F, ec_cray_meminfo.F90, gentrbk.F90, get_max_threads.F90, get_num_threads.F90, get_proc_id.F90, get_thread_id.F90, getheapstat.F90, getmemstat.F90, getmemvals.F90, itor.F, iusrcl.F, jsort.F, rtoc.F, rtoi.F
mse/dummy	close_file_mnh.F90, detect_field_mnh.F90, fmlook_ll.F90, fmwrit.F90, les_mean_subgrid_3d.F90, les_mean_subgrid_surf.F90, mnhclose_aux_io_surf.F90, mnhclose_namelist.F90, mnhclose_write_cover_tex.F90, mnhend_io_surf_n.F90, mnhget_desfm_n.F90, mnhget_luout.F90, mnhget_size_full_n.F90, mnhinit_io_surf_n.F90, mnhopen_aux_io_surf.F90, mnhopen_namelist.F90, mnhopen_write_cover_tex.F90, open_file_mnh.F90, read_surfc0_mnh.F90, read_surfl0_mnh.F90, read_surfl1_mnh.F90, read_surfn0_mnh.F90, read_surfn1_mnh.F90, read_surft0_mnh.F90, read_surft1_mnh.F90, read_surfx0_mnh.F90, read_surfx1_mnh.F90, read_surfx2_mnh.F90, second_mnh.F90, write_surfc0_mnh.F90, write_surfc0_ol.F90, write_surfl0_mnh.F90, write_surfl0_ol.F90, write_surfl1_mnh.F90, write_surfl1_ol.F90, write_surfn0_mnh.F90, write_surfn0_ol.F90, write_surfn1_mnh.F90, write_surfn1_ol.F90, write_surft0_mnh.F90, write_surft0_ol.F90, write_surft1_mnh.F90, write_surft1_ol.F90, write_surfx0_mnh.F90, write_surfx0_ol.F90, write_surfx1_mnh.F90, write_surfx1_ol.F90, write_surfx1_time_ol.F90, write_surfx2_mnh.F90, write_surfx2_ol.F90
mse/externals	aro_ground_diag.F90, aro_ground_diag_z0.F90, aro_ground_param.F90, aro_put_SST.F90, aro_surf_diag.F90, aro_surf_diagh.F90, aroini_surfa.F90, aroini_surfa1.F90, aroini_surfb.F90, aroini_surfc.F90, canari_sx_ics.F90, fp2sx1.F90, fp2sx1fa.F90, fp2sx2.F90, prep_stepx.F90, prep_surf_aro.F90,

	wrsfx.F90
mse/interface	aro_surf_diagh.h, canari_sx_ics.h, fp2sx1.h, fp2sx1fa.h, fp2sx2.h, wrsfx.h
mse/internals	aroend_io_surf_n.F90, aroget_desfm_n.F90, aroget_size_full_n.F90, aroinit_io_surf_n.F90, aroopen_write_cover_tex.F90, correct_time_flake.F90, correct_time_isba.F90, correct_time_sea.F90, correct_time_surf.F90, correct_time_teb.F90, correct_time_wat.F90, read_surfn1_aro.F90, read_surfy1_aro.F90, write_surfl1_aro.F90, write_surfn1_aro.F90, write_surfy1_aro.F90
mse/module	modi_aroget_size_full_n.F90
mse/new	diwrgrid_surf_ext2.F90
mse/programs	driver_off_omp.F90, offline.F90, pgd.F90, prep.F90
oops/ifs/model	AllObs.interface.F90, AllObsTraj.interface.F90, ErrorCovariance3D.interface.F90, FieldsIFS.interface.F90, ModelIFS.interface.F90
trans/external	dir_trans.F90, dir_transad.F90, inv_trans.F90, inv_transad.F90
trans/module	eq_regions_mod.F90, suleg_mod.F90
trans/programs	aatestprog.F90, test_adjoint.F90

Doc:
Last bugfixes for cycle CY42.

NO NUMERICAL IMPACT IS EXPECTED.
Projects: aladin, arpifs
Git branch: mary_CY41T1_ultimate_bfs
Modified:

aladin/interpol	elascaw.F90
aladin/setup	suemp.F90
arpifs/module	gfl_subs_mod.F90
arpifs/phys_dmn	suparar.F90
arpifs/phys_ec	suphli.F90, turbulence_layer.F90
arpifs/setup	su0yoma.F90

MEUNIER Louis-Francois

Doc:
Fixes a phasing issue in varbc_rad.F90.

NO NUMERICAL IMPACT IS EXPECTED.
Projects: arpifs
Git branch: meunierlf_CY41T1_bfvarbc_rad
Modified:

arpifs/module	varbc_rad.F90

Doc:
This branch corrects a bug when ODB_NEW_MSGPASS=1 is used (which is now the default). This bug only appears when an empty database has to be writen
(which is unlikely in a global model but happens in a limited area model).
Projects: odb
Git branch: meunierlf_CY41T1_newodbio_bf_r2
Modified:

odb/lib	msgpass_storeobs.F90
odb/module	odbio_msgpass.F90

SAEZ Patrick

Doc:
Bugfix for configuration 901

NO NUMERICAL IMPACT IS EXPECTED.
Projects: arpifs
Git branch: saez_CY41T1_C901
Modified:
arpifs/setup suarg.F90

SALMOND Deborah & al

Doc:
A few small changes to introduce a new variable "NVECOUT" for the dimension of the extra fields that are needed to archive in DDH from ECMWF, but that
METEO FRANCE doesn't need.

** arpifs/module/yomdphy.F90*
arpifs/namelist/namdphy.nam.h:

Introduce NVECOUT as a new namelist variable.

** arpifs/setup/sudimf1.F90*
arpifs/dia/sunddh.F90:

LECMWF is used as a switch to set NVECOUT=0/1 for METEO FRANCE/ECMWF, and to set LHDPAS, which switches the DDH output pathway on/off.

** arpifs/dia/cpdyddh.F90:*

A small code change to replace a hard-coded dimension 1 with NVECOUT.

** arpifs/setup/su_surf_flds.F90:*

Only allocate the precipitation fraction fields if NVECOUT>0.
Projects: arpifs
Git branch: gco_CY41T1_r2.02%NVECOUT
Modified:

arpifs/dia	cpdyddh.F90, sunddh.F90
arpifs/module	yomdphy.F90
arpifs/namelist	namdphy.nam.h
arpifs/setup	su_surf_flds.F90, sudimf1.F90

Doc:
Miscellaneous fixes from ECMWF upon CY41T1_r2.04 .

** arpifs/adiab/gprcp.F90:*

Replace "(:" by "(KSTART:KPROF" to stop floating-point error.

** arpifs/dia/wroutgpgb.F90:*

Revert lines of code for ECMWF's use of fullpos.

** arpifs/fullpos/gridfpos.F90*
arpifs/fullpos/hpos.F90
arpifs/fullpos/sufpc.F90
arpifs/setup/suafn1.F90
arpifs/setup/suafn2.F90
arpifs/setup/suafn3.F90:

Put "IF(.NOT.LECMWF" round SFX calls.

** arpifs/module/varbc_rad.F90:*

Bugfix, as agrred with Louis-FranÃ§ois Meunier.

** arpifs/op_obs/hradp_ml_tl.F90:*

Remove extra DR_HOOK call.

** arpifs/phys_dmn/suparar.F90*
arpifs/setup/su0phy.F90:

Replace CHARACTER POINTER by CHARACTER as work-around for compiler bug (as done elsewhere already).

** arpifs/phys_ec/aer_src.F90*

Add "#ifdef" for PGI bug.

** arpifs/op_obs/hop.F90*
arpifs/setup/su0yomb.F90:

Bugfixes for MACC runs (late fixes from 41r2).

** ifsaux/linux/linux_bind.c:*

Extra "#ifdef" to protect from linux_binding on Cray.

** ifsaux/module/mpl_waitany_mod.F90:*

Add "#ifndef MPI1".

** ifsaux/utilities/getstackusage.c:*

Revert to 41r2 version as otherwise gives very large overhead in 4D-Var.

** arpifs/adiab/cpg5.F90*
arpifs/adiab/cpg_dyn_tl.F90
arpifs/adiab/gp_kappatad.F90
arpifs/adiab/gp_kappattl.F90
arpifs/adiab/larcinatl.F90
arpifs/adiab/larcinb.F90
arpifs/adiab/larcinbad.F90
arpifs/adiab/larcinbtl.F90
arpifs/adiab/latte_kappa.F90
arpifs/adiab/latte_kappaad.F90
arpifs/adiab/latte_kappatl.F90
arpifs/interpol/lascaw.F90
arpifs/interpol/lascaw_cla_ad.F90
arpifs/interpol/lascaw_cla_tl.F90
arpifs/interpol/lascaw_clo_ad.F90
arpifs/interpol/lascaw_clo_tl.F90
arpifs/interpol/lascaw_vintw.F90
arpifs/interpol/lascaw_vintw_ad.F90

arpifs/interpol/lascaw_vintw_tl.F90
arpifs/module/intdynsl_mod.F90
arpifs/setup/sudyn.F90
arpifs/setup/suslb.F90:

Protection of LSLHDHEAT (memory allocation and computation) by LSLHDHEAT logical switch.

** arpifs/setup/suct0.F90:*

LOPDIS=.TRUE. in configuration 401.

** Modset from T.Wilhelmsson.*

This modset enables two forecasts of different resolution to run from the same executable.

** arpifs/phys_ec/aer_src.F90:*

Small change for PGI compiler.
Projects: arpifs, ifsaux
Git branch: gco_CY41T1_r2.04%update_ecmwf
Modified:

arpifs/adiab	cpg5.F90, cpg_dyn_tl.F90, cpphinp.F90, gp_kappatad.F90, gp_kappattl.F90, gprcp.F90, larcinatl.F90, larcinb.F90, larcinbad.F90, larcinbtl.F90, latte_kappa.F90, latte_kappaad.F90, latte_kappatl.F90
arpifs/climate	read_cmip5ghg.F90, updrgas.F90
arpifs/control	stepo_oops.F90
arpifs/dia	wroutgpgb.F90
arpifs/fullpos	gridfpos.F90, hpos.F90, sufpc.F90
arpifs/interpol	lascaw.F90, lascaw_cla_ad.F90, lascaw_cla_tl.F90, lascaw_clo_ad.F90, lascaw_clo_tl.F90, lascaw_vintw.F90, lascaw_vintw_ad.F90, lascaw_vintw_tl.F90
arpifs/module	fields_mod.F90, geometry_mod.F90, intdynsl_mod.F90, model_mod.F90, varbc_rad.F90, yoeaerc.F90, yoeaercli.F90, yoecmip5.F90, yoerip.F90
arpifs/oops	fields_io_mod.F90
arpifs/op_obs	hop.F90, hradp_ml_tl.F90
arpifs/phys_dmn	suparar.F90
arpifs/phys_ec	aer_climg.F90, aer_clist.F90, aer_src.F90, aer_stratcl.F90, ec_phys.F90, ec_phys_ad.F90, ec_phys_tl.F90, su_ghgclim.F90, suecaebc.F90, suecaec.F90, suecaeor.F90, suecaesd.F90, suecaess.F90, suecaesu.F90, suecozv.F90, sumaccbc1.F90, sumaccbc2.F90, sumaccor1.F90, sumaccor2.F90, sumaccsd1.F90, sumaccsd2.F90, sumaccsd3.F90, sumaccss1.F90, sumaccss2.F90, sumaccss3.F90, sumaccsu1.F90, updtier.F90
arpifs/phys_radi	radaca.F90, radact.F90, radcfg.F90, raddiag.F90, radintg.F90, radozv.F90, suecrad.F90, suecso4.F90, surdi15.F90
arpifs/setup	su0phy.F90, su0yomb.F90, suafn1.F90, suafn2.F90, suafn3.F90, suct0.F90, sudyn.F90, suslb.F90
arpifs/utility	updtim.F90
ifsaux/linux	linux_bind.c
ifsaux/module	mpl_waitany_mod.F90
ifsaux/utilities	getstackusage.c

Doc:
Miscellaneous fixes.

1) Remove duplicated files:

ifsaux/hack/groksize.c
ifsaux/hack/paddrs.c
ifsaux/support/fi_libc.c
ifsaux/support/fi_libc.h

2) Move ifsaux/hack/ files to ifsaux/support .*

3) aeolus/Scripts/arpifs_excluded_files: add support/compiler_features_crayftn.F90 to list.

4) odb/lib/Dummies.c: remove linux_bind .

5) others: OOPS updates from ECMWF (bit-reproducible).

6) arpifs/transform/transinv_wavelet.F90 - reverted back to your change
arpifs/transform/transinv_waveletad.F90 - reverted back to your change
arpifs/module/iostream_mix.F90 - fix
arpifs/phys_radi/srtm_reftra.F90 - fix not bit-reproducible with before
arpifs/phys_radi/srtm_spcvrt_mcica.F90 - fix not bit-reproducible with before
arpifs/phys_radi/srtm_vrtqdr.F90 - fix not bit-reproducible with before
arpifs/module/fdb_utils_mod.F90 - fix for FDB
arpifs/setup/suafn1.F90 - add new field I10FG for .NOT(LECMWF.AND..NOT.LARPEGEF) too (Karim Yessad).

7) Changes for LREPRO4DVAR=TRUE:

ifs/module/varbc_setup.F90
ifs/module/varbc_table.F90

8) Changes to grib_api call to replace GRIB_NEW_FROM_TEMPLATE calls to GRIB_NEW_FROM_SAMPLES as requested by Shahram:

ifs/dia/preset_grib_template.F90
ifsaux/module/grib_api_interface.F90

9) Cleaning in ifs/op_obs to remove obsolete code:

Delete commented out calls to aer_opt in*

ifs/op_obs/hop.F90
ifs/op_obs/hopad.F90
ifs/op_obs/hoptl.F90

10) Remove obsolete routines.

11) Miscellaneous other fixes (NB: update n°4 & 5).

** arpifs/utility/gpnorm_gfl.F90:*

Humidity off for Spectral Q.

** arpifs/obs_preproc/redrp_no_sq.F90:*

Reduce prints.

** arpifs/module/surface_fields_mix.F90:*

NULL missing for one POINTER.

** arpifs/setup/sumpini.F90:*

Add gfortran and PGI for optimsition switches.

** satrad/programs/bufr_screen_gmi_1d.F90*
odb/tools/Merge_gmi_swaths.F90:

Modifications for GMI instrument.

** arpifs/module/iostream_mix.F90:*

CRITICAL region inserted to work around intermittent 'threads safeness' issue with grib_api .

** arpifs/setup/sudyn.F90:*

NITMP default=2 for ECMWF minimisation.

** arpifs/setup/sugfl1.F90*
arpifs/phys_ec/radintg.F90:

MACC fixes.

** arpifs/phys_ec/vdfmain.F90*
arpifs/phys_ec/vdfouter.F90
arpifs/phys_ec/turbulence_layer.F90:

Fix for unset variable in ECMWF physics.

** arpifs/var/evcost.F90:*

Fix for bit-reproducibility of JO - turn off vectorisation of SUM.

** trans/module/setup_geom_mod.F90*
trans/module/sumplatb_mod.F90:

Remove annoying write statements left in by mistake.

** arpifs/control/qmfixer.F90:*

Fix for MACC.

** arpifs/module/get_lwpcoeff_mix.F90:*

Fix for GMI (merge issue was un-noticed).
Projects: aeolus, arpifs, ifsaux, odb, satrad, trans

Git branch: gco_CY41_r2bf

Deleted:

arpifs/op_obs	aer_opt_prop.F90, aer_opt_prop_ad.F90, aer_opt_prop_tl.F90, aer_refl_ad.F90, aer_refl_op.F90, aer_refl_tl.F90, atmref_gems.F90, atmref_gems_ad.F90, atmref_gems_tl.F90, csalbr_gems.F90, discom_gems.F90, discom_gems_ad.F90, discom_gems_tl.F90, gauss_gems.F90, iso_gems.F90, iso_gems_ad.F90, iso_gems_tl.F90, os_gems.F90, os_gems_ad.F90, os_gems_tl.F90, pre_calc.F90, pushboolean.F90, rt6s_gems.F90, rt6s_gems_ad.F90, rt6s_gems_tl.F90, scatra_gems.F90, scatra_gems_ad.F90, scatra_gems_tl.F90, trunca_gems.F90, trunca_gems_ad.F90, trunca_gems_tl.F90
ifsaux/hack	groksize.c, paddrs.c
ifsaux/support	fi_libc.c, fi_libc.h

Renamed:

ifsaux/hack	bbt.c ifsaux/support/bbt.c, bbt.h ifsaux/support/bbt.h, c_mpl_barr.F90 ifsaux/support/c_mpl_barr.F90, memory_hook.c ifsaux/support/memory_hook.c, save.c ifsaux/support/save.c, spawn.c ifsaux/support/spawn.c

Modified:

aeolus/Scripts	arpifs_excluded_files
arpifs/adiab	call_sl.F90, cpg_gp.F90, gpiau.F90, gpnspng.F90, postphy.F90, spchor.F90
arpifs/control	gp_model.F90, qmfixer.F90, reresf.F90, spcm.F90, stepo.F90, stepo_oops.F90
arpifs/dia	cpcuddh.F90, ddhoff.F90, posddh.F90, ppeddhec.F90, ppfidh.F90, ppsydh.F90, preset_grib_template.F90, sualdyn_ddh.F90, sualmdh.F90, sualtdh.F90, sucddh.F90, zeroddh.F90
arpifs/module	fdb_utils_mod.F90, get_lwpcoeff_mix.F90, iostream_mix.F90, model_mod.F90, spng_mod.F90, surface_fields_mix.F90, varbc_setup.F90, varbc_table.F90, yomaerd15.F90, yomcddh.F90, yomgpddh.F90, yompaddh.F90, yomspddh.F90, yomtddh.F90
arpifs/obs_preproc	redrp_no_sq.F90
arpifs/oops	ifs_init.F90
arpifs/op_obs	hop.F90, hopad.F90, hoptl.F90, hqscatt.F90
arpifs/parallel	dladdh.F90, dmaddh.F90, dresddh.F90
arpifs/phys_dmn	radaer15.F90, rfmr.F90, suecrad15.F90
arpifs/phys_ec	local_arrays_ini.F90, radintg.F90, turbulence_layer.F90, vdfmain.F90, vdfouter.F90
arpifs/phys_radi	srtm_reftra.F90, srtm_spcvrt_mcica.F90, srtm_vrtqdr.F90
arpifs/setup	su0yoma.F90, su_surf_flds.F90, suafn1.F90, suallo.F90, sudyn.F90, sugfl1.F90, sumpini.F90
arpifs/transform	transdir_wavelet.F90, transdir_waveletad.F90, transinv_wavelet.F90, transinv_waveletad.F90, transinvh.F90
arpifs/utility	deallo.F90, freemem.F90, gpnorm_gfl.F90, wrresf.F90
arpifs/var	evcost.F90
ifsaux/module	grib_api_interface.F90
odb/lib	Dummies.c
odb/tools	Merge_gmi_swaths.F90
satrad/programs	bufr_screen_gmi_1d.F90
trans/module	setup_geom_mod.F90, sumplatb_mod.F90

SASSY Zied

Doc:
Fix bugs introduced in last norm violations contribution.
Projects: arpifs
Git branch: sassi_CY41T1_norm_fix2
Modified:

arpifs/adiab	gprcp.F90
arpifs/interpol	slcomm.F90, slcomm2.F90, slcomm2a.F90
arpifs/io_serv	io_serv_reclaim_buf_space.F90
arpifs/nemo	endnemoio.F90, ininemoio.F90
arpifs/oops	ifs_init.F90
arpifs/phys_radi	rrtm_kgb1.F90, rrtm_kgb10.F90, rrtm_kgb11.F90, rrtm_kgb12.F90, rrtm_kgb13.F90, rrtm_kgb14.F90, rrtm_kgb15.F90, rrtm_kgb16.F90, rrtm_kgb2.F90, rrtm_kgb3.F90, rrtm_kgb4.F90, rrtm_kgb5.F90, rrtm_kgb6.F90, rrtm_kgb7.F90, rrtm_kgb8.F90, rrtm_kgb9.F90, srtm_kgb16.F90, srtm_kgb17.F90, srtm_kgb18.F90, srtm_kgb19.F90, srtm_kgb20.F90, srtm_kgb21.F90, srtm_kgb22.F90, srtm_kgb23.F90, srtm_kgb24.F90, srtm_kgb25.F90, srtm_kgb27.F90, srtm_kgb28.F90, srtm_kgb29.F90, su_c11clim.F90, su_c12clim.F90, su_c22clim.F90, su_ccl4clim.F90, su_ch4clim.F90, su_co2clim.F90, su_gch4clim.F90, su_gco2clim.F90, su_gozoclim.F90, su_mch4clim.F90, su_mcica.F90, su_mco2clim.F90, su_mozoclim.F90, su_n2oclim.F90, su_no2clim.F90, su_ozoclim.F90, suecozc.F90
arpifs/utility	ectrbk.F90

SASSY Zied & BOCHENEK Bogdan

Doc:
Norm violation corrections:
1) reorder statements DRHOOK/ASSOCIATE;
2) remove unused variables;
3) replace tabulations by spaces.
Projects: aladin, arpifs
Git branch: bochenek_CY41T1_nv
Modified:

aladin/adiab	elarche.F90, elarche5.F90, elarchead.F90, elarchetl.F90, espchor.F90, espchorad.F90, espcsi.F90, espnhsi.F90, espnhsi_geogw.F90
aladin/c9xx	ebicli.F90, echk923.F90, eganiso.F90, egeo923.F90, eincli1.F90, eincli4.F90, eincli5.F90, eincli8.F90, eincli9.F90, einter0.F90, einter1.F90, einter10.F90, einter2.F90, einter6.F90, einter8.F90, eleci.F90, elislap.F90
aladin/control	espcm.F90
aladin/coupling	ecoupl1.F90, ecoupl1ad.F90, eseimpls.F90, eseimplsad.F90, etenc.F90
aladin/dia	espnormb.F90, ewmovph.F90
aladin/fullpos	ebipos.F90, fpezone.F90, sufpezo.F90, sufpmove.F90
aladin/interpol	elascaw.F90, elascawad.F90, eslextpol.F90
aladin/parallel	ecommjbbalbeta.F90, egathereigmd.F90
aladin/programs	holo.F90, unholo.F90
aladin/setup	erlbc_post_req.F90, esp2lnsp.F90, suedim.F90, suedyn.F90, suegem1a.F90, suegem1b.F90, suegem2.F90, suegem_naml.F90, suehdf.F90, sueheg.F90, suelap.F90, suelega.F90, suemetric.F90, suemp.F90, suempvar.F90, suenhheg.F90, sueorog.F90, suetrans.F90, suezone.F90
aladin/transform	ereespe.F90, esperad.F90, esperee.F90, espeuv.F90, etransinv_jbtomodel.F90, etransinv_jbtomodelad.F90, etransinvh_oops.F90, euvgeovd.F90, evduvgeo.F90
aladin/utility	cchien.F90, espareord.F90, espconvert.F90
aladin/var	ebalbeta.F90, ebalbetaad.F90, ebalnonlin.F90, ebalnonlinad.F90, ebalnonlintl.F90, ebalomega.F90, ebalomegaad.F90, ebalomegatl.F90, ebalstat.F90, ebalstatad.F90, ebalvert.F90, ebalvertad.F90, ebalverti.F90, ebalvertiad.F90, ecvaru2i.F90, ecvaru2iad.F90, edog.F90, efill_isotropic.F90, ejghcor.F90, ejghcori.F90, ejgnrgg.F90, ejgnrggad.F90, ejgnrggi.F90, ejgnrggiad.F90, escaljgs.F90, ewrlsgrad.F90, suejbbal.F90, suejbbalbeta.F90, suejbcor.F90, suejbcosu.F90, suejbcov.F90, suejbdat96.F90, suejbstd.F90, suejbtest.F90, suejknorm.F90, suelges.F90, suevargp.F90
aladin/wavelet	ejbwav_cv2wav.F90, ejbwav_gp2wav.F90, ejbwav_h2v.F90, ejbwav_v2h.F90, ejbwav_vcori.F90, ejbwav_wav2cv.F90, ejbwav_wav2gp.F90, suejbwav_read_eigval.F90, suejbwav_read_eigvec.F90, suejbwav_read_sigmab.F90, suejbwavalloc.F90
arpifs/adiab	cptend_flex.F90, cputqy.F90, gpnox.F90, gpnoxad.F90, gpnoxtl.F90, gprcp.F90, larche_hlp.F90, larcina.F90, specrtges.F90
arpifs/c9xx	coptra.F90
arpifs/chem	aer2massdia.F90, chem_scav.F90, tm5_ibud.F90, tm5_noy.F90

arpifs/control	cdsta.F90, cfcsens2obs.F90, cnt0.F90, cnt1.F90, cnt3.F90, cnt4.F90, cva2.F90, forecast_error.F90, gp_model.F90, iopack.F90, reresf.F90, restart_cnt3.F90, testli.F90
arpifs/dfi	copgfl.F90, corgfl.F90, dfi2mod.F90, digfil.F90
arpifs/dia	chkevo.F90, spmcuf.F90, wroutgpgb.F90
arpifs/fullpos	fpcorphy.F90, fpintphy.F90, ini3wrfp.F90, predynfpos.F90, sufpg2.F90, suprocfp_dep.F90, wrgp2fafp.F90, wrmlfp.F90, wrmlfp_io_serv.F90
arpifs/interpol	check_sl_struct.F90, fpavg.F90, fpint12.F90, fpint4x.F90, fpnear.F90, slcomm.F90, slcomm2.F90, slcomm2a.F90, suehox1.F90
arpifs/io_serv	io_serv_hdr_grok_size.F90, io_serv_reclaim_buf_space.F90, io_serv_suiosctmpl.F90, io_serv_write_ec.F90
arpifs/module	crm_inout.F90, elbc0b_mod.F90, fdb_utils_mod.F90, fields_mod.F90, iomultibuf_mod.F90, model_mod.F90, rrtmg_sw_reftra.F90, rrtmg_sw_vrtqdr.F90, varbc_setup.F90, yomlun.F90
arpifs/mwave	mwave_diags.F90, mwave_emis.F90, mwave_lwp.F90, mwave_screen.F90, mwave_setup.F90
arpifs/nemo	endnemoio.F90, ininemoio.F90
arpifs/oops	allobs_error_mod.F90, ifs_init.F90, localization_mod.F90, ostats_mod.F90
arpifs/parallel	diwrgrid_surf_ext.F90
arpifs/phys_dmn	accvud.F90, acmtud.F90
arpifs/phys_ec	accnemoflux_layer.F90, cldpp_simplified.F90
arpifs/phys_radi	rrtm_kgb1.F90, rrtm_kgb10.F90, rrtm_kgb11.F90, rrtm_kgb12.F90, rrtm_kgb13.F90, rrtm_kgb14.F90, rrtm_kgb15.F90, rrtm_kgb16.F90, rrtm_kgb2.F90, rrtm_kgb3.F90, rrtm_kgb4.F90, rrtm_kgb5.F90, rrtm_kgb6.F90, rrtm_kgb7.F90, rrtm_kgb8.F90, rrtm_kgb9.F90, rrtm_taumol15.F90, rrtm_taumol4.F90, rrtm_taumol5.F90, srtm_kgb16.F90, srtm_kgb17.F90, srtm_kgb18.F90, srtm_kgb19.F90, srtm_kgb20.F90, srtm_kgb21.F90, srtm_kgb22.F90, srtm_kgb23.F90, srtm_kgb24.F90, srtm_kgb25.F90, srtm_kgb27.F90, srtm_kgb28.F90, srtm_kgb29.F90, su_c11clim.F90, su_c12clim.F90, su_c22clim.F90, su_ccl4clim.F90, su_ch4clim.F90, su_co2clim.F90, su_gch4clim.F90, su_gco2clim.F90, su_gozoclim.F90, su_mch4clim.F90, su_mcica.F90, su_mco2clim.F90, su_mozoclim.F90, su_n2oclim.F90, su_no2clim.F90, su_ozoclim.F90, suecozc.F90
arpifs/utility	ectrbk.F90, ecwrite.F90, findminmaxg.F90, iopack.F90, sualspa.F90
arpifs/var	coptra.F90, fltbgcalc_crt.F90, fltlcterr.F90, scalederae.F90, sujbvarens.F90, sujbwavgen_hybraw.F90, vec2dergp.F90, writelct.F90

SEITY Yann

Doc:
Introduce recent bugfixes from CY41T1_op1 .

1) Fix wrong dimension of PEDR in aro_turb_mnh.h
2) Bugfix for LFPREC3D (to produce 3D total precipitations fluxes in ICMSHAROM for MOCAGE use).
3) Bugix linked with "oopsification" of suparar.F90 (wrong type for NRR variable).

NO NUMERICAL IMPACT IS EXPECTED.
Projects: arpifs, mpa
Git branch: seity_CY41T1_bf_arome_for42
Modified:

arpifs/namelist	namparar.nam.h
arpifs/phys_dmn	suparar.F90
mpa/turb/interface	aro_turb_mnh.h