ARPEGE MEMORANDUM

From: GCO   <u>Date:</u> November 24, 2010

To: GMAP, COMPAS, GMGEC, GMME, DIR/RE/CRC, Deborah Salmond

Subject: New cycle CY37

A new cycle CY37 has been created. This is a common cycle with the ECMWF. The different contributions for this cycle are described in the following pages.

<u>ClearCase label:</u>   CY37

<u>Contributors:</u>

BOGATCHEV Andrey	Project:ifs	CCase branch:mrpe702_CY36T2_phas1
	Project:ifs	CCase branch:mrpe702_CY36T2_phas2
GCO	Project:ifs	CCase branch:marp001_CY36T1_op1restart
	Project:ifs	CCase branch:marp001_CY36T2_dble
	Project:ifs	CCase branch:marp003_CY36T2_cleaning
	Project:ifs	CCase branch:marp003_CY36T2_defrun
	Project:ifs	CCase branch:marp003_CY36T2_fix_merge
	Project:ifs	CCase branch:marp003_CY36T2_fix_merge2
	Project:ifs	CCase branch:marp003_CY36T2_fix_merge3
	Project:ifs	CCase branch:marp003_CY36T2_interface
	Project:ifs	CCase branch:marp003_CY36T2_jplay_to_nflevg
	Project:ifs	CCase branch:marp003_CY36T2_mrpa644_sql_bator
	Project:ifs	CCase branch:marp003_CY36T2_obsolete_variables
	Project:ifs	CCase branch:marp003_CY36T2_r4fix
	Project:ifs	CCase branch:marp003_CY36T2_subscale_z0eff
GUIDARD Vincent	Project:ifs	CCase branch:mrpe710_CY36T2_mergeOBS

JIDANE Mohamed	Project:ifs	CCase branch:mrpe731_CY36T2_cy37
RIVIERE Olivier	Project:ifs	CCase branch:mrpe601_CY36T2_bug501
SPANIEL Olda	Project:ifs	CCase branch:mrpe693_CY36T2_ollace
YESSAD Karim	Project:ifs	CCase branch:marp003_CY36T2_mrpm603_dev36t2pour37
	Project:ifs	CCase branch:mrpm603_CY36T2_phasr4

BOGATCHEV Andrey

Doc:

Phasing.

Project: aladin,ifs,aladin transforms
ClearCase branch: mrpe702_CY36T2_phas1

Modified:
ald/parallel   ecommjbbal.F90
ald/setup   suemp.F90   suetrans.F90
ald/var   suejbbal.F90
arp/setup   su0yomb.F90
tal/module   suemp_trans_mod.F90

Doc:

Fix for the routine sueqlimsat.F90 which was causing stupid results in tests with GP Q. The reason was memory overwriting in the routine. It is important to outline that this happens only in case of GP Q, in spectral space there is no problem. After the fix, the mono and multi task tests belonging to the same cycle give identical results as for spectral norms, as for the GP norms of specific humidity.

The tests were re-ran for pre-cycle and the reference, and the validation results are very similar to tests with the physics.

Single processor tests at the end of the integration give the following results: 3, 3, 6, 5 equal digits for SP norms of vorticity, divergence, temperature and kinetic energy.

At the beginning of the integration, without digital filtering, spectral norms are identical, and the values of the specific humidity GP norms are also identical. For the tests with DF norms differ at time step 0 due to number of diabatic forward time steps in the filter, which number is compatible with the number of time steps during the integration. But the end result is very similar to the one mentioned above: 3, 3, 5, 5.

The multiproc tests repeat the results of monoproc tests.

Project: aladin
ClearCase branch: mrpe702_CY36T2_phas2

Modified:
ald/setup   sueqlimsat.F90

GCO

Doc:

  Reintroduction of an important modification of Patrick Saez, removed by mistake.

Project: ifs
ClearCase branch: marp001_CY36T1_op1restart

Modified:
arp/control   cprep1.F90

Doc:

  Catch-up from parallel suite CY36T1_op1 .

Project: ifs,mpa,odb,satrad,utilities,surfex
ClearCase branch: marp001_CY36T2_dble

Added:

arp/namelist	namfpdyi.h		
arp/op_obs	co2cldiasi.F90		
mpa/turb/internals	shuman_mf.f90		
surfex/offlin/assim	oi_hor_extrapol_surf.f90		
surfex/surf_atm/phys	default_sso.f90	modi_subscale_z0eff.f90	modi_subscale_z0eff_1d.f90
	modn_sso.f90	sso_z0_friction_n.f90	subscale_z0eff_1d.f90
	subscale_z0eff_1d_nveg.f90	subscale_z0eff_1d_patch.f90	
uti/sst_netcdf	caldat.F90	ncend.F90	ncop.F90
	ncread3.F90	ncreadtime.F90	sst_netcdf.F90

Deleted:
mpa/turb/internals   updraft_sope.f90

Modified:

ald/fullpos	exarp.F90		
arp/adiab	cpg.F90	cpg_dia.F90	
arp/c9xx	csstbld.F90		
arp/canari	cacsts.F90	casmswi.F90	
arp/control	cnt4.F90	ini1scan2m.F90	stepo.F90
arp/dia	cpxfu.F90		
arp/fullpos	cpvpospr.F90	dynfpos.F90	endpos.F90
	fp2sx1.F90	ini2wrfp.F90	su4fpos.F90
	sualfpos.F90	sufpc.F90	sufpconf.F90
	sufpdom.F90	sufpdyn.F90	sufptr2.F90
	suvfpos.F90	suvpos.F90	updvpos.F90
	wrhfp.F90	wrsfp.F90	
arp/module	parfpos.F90	sats_mix.F90	varbc_eval.F90
	varbc_rad.F90	yom4fpos.F90	yomafn.F90
	yomfpc.F90	yomphy.F90	yomphy0.F90
	yomxfu.F90		
arp/namelist	namafn.h	namfpc.h	namfpdyi.h
	namphy.h	namphy0.h	namsats.h
	namxfu.h		
arp/obs_preproc	tempinmf.F90		
arp/op_obs	co2cldiasi.F90	hop.F90	hopad.F90
	hoptl.F90	hretr.F90	inv_refl1dstat.F90
	rad1cobe.F90	radtr.F90	radtrad.F90
	radtrtl.F90		
arp/phys_dmn	accvimp.F90	achmt.F90	acntcls.F90
	acpluiz.F90	actke.F90	acturb.F90
	acvppkf.F90	advprcs.F90	apl_arome.F90
	aplpar.F90	mts_phys.F90	suphy0.F90
arp/pp_obs	pos.F90		
arp/setup	su0phy.F90	su_events.F90	suafn1.F90
	suafn2.F90	suafn3.F90	sufa.F90
	sugrida.F90	suxfu.F90	
arp/utility	dealfpos.F90	iopack.F90	wrgp2fa.F90

arp/var	rdfpinc.F90	writestd.F90	
bla	mf_blacklist.b		
mpa/turb/externals	aro_shallow_mf.f90	aro_turb_mnh.f90	
mpa/turb/interface	aro_shallow_mf.h	aro_turb_mnh.h	
mpa/turb/internals	compute_bl89_ml.f90	compute_entr_detr.f90	compute_function_thermo_mf.f90
	compute_mf_cloud.f90	compute_updraft.f90	ini_cmfshall.f90
	mf_turb.f90	shallow_mf.f90	shuman_mf.f90
	th_r_from_thl_rt_1d.f90	thl_rt_from_th_r_mf.f90	tridiag_massflux.f90
	turb.f90		
mpa/turb/module	modd_cmfshall.f90	modi_compute_bl89_ml.f90	modi_compute_entr_detr.f90
	modi_compute_function_thermo_mf.f90	modi_compute_mf_cloud.f90	modi_compute_updraft.f90
	modi_ini_cmfshall.f90	modi_mf_turb.f90	modi_shallow_mf.f90
	modi_th_r_from_thl_rt_1d.f90	modi_thl_rt_from_th_r_mf.f90	modi_tridiag_massflux.f90
	modi_turb.f90		
mse/programs	oi_main.f90		
odb/pandor/fcq	fcqodb_temp.F90		
odb/pandor/module	bator_decodbufr_mod.F90	bator_ecritures_mod.F90	bator_init_mod.F90
sat/module	rttov_const.F90		
sat/rttov	rttov_profaux.F90		
surfex/aux	read_surf_atm_confn.f90		
surfex/isba/module	modd_assim.f90		
surfex/isba/phys	subscale_z0eff.f90		
surfex/offlin/assim	ini_assim.f90	oi_acsolw.f90	oi_cacsts.f90
	oi_hor_extrapol_surf.f90	oi_tsl.f90	trans_chaine.f90
surfex/surf_atm/init	init_surf_atmn.f90		
surfex/surf_atm/module	modd_diag_surf_atmn.f90	modd_surf_atm_sson.f90	
surfex/surf_atm/phys	alloc_diag_surf_atmn.f90	coupling_surf_atmn.f90	default_sso.f90
	diag_inline_surf_atmn.f90	modi_subscale_z0eff.f90	modi_subscale_z0eff_1d.f90
	modn_sso.f90	read_default_surf_atmn.f90	sso_z0_friction_n.f90
	subscale_z0eff_1d.f90	subscale_z0eff_1d_nveg.f90	subscale_z0eff_1d_patch.f90
	write_diag_seb_surf_atmn.f90		
uti/add_cloud_fields	add_cloud_fields.F90		
uti/addozoaer	addozoaer.F90		
uti/ctpini/module	fonctions_inversion.F90		

uti/gobptout	prochien.F	procor1.F	progeom.F
uti/pinuts/module	const_standart_mod.F90	editfield_prg_mod.F90	fa_cadre_mod.F90
	newtype_mod.F90		
uti/progrid	procor2.F		
uti/sst_netcdf	caldat.F90	ncend.F90	ncop.F90
	ncread3.F90	ncreadtime.F90	sst_netcdf.F90
xrd/fa	facomp.h	farine.F	

Doc:

Remove obsolete files/directories.

Project: aladin,ifs,odb
ClearCase branch: marp003_CY36T2_cleaning

Deleted:
ald/adiab	espawr.F90	espay.F90	
arp/adiab	estrcpl.F90	gnhsim.F90	gnhy.F90
	laidditlad.F90	laidlitlad.F90	laitlitlad.F90
	laitritlad.F90	lattey.F90	spawr.F90
	spay.F90		
arp/climate	cormass.F90		
arp/control	cprep5.F90		
arp/module	parcli.F90	parclimf.F90	parptrs.F90
	parrtm1d.F90	yomchcod.F90	yomfoutc.F90
	yomsppco.F90		
arp/setup	suclmicst.F90		
odb	ddl.ECMASCR		

Doc:

Fix phasing bugs.

Project: ifs
ClearCase branch: marp003_CY36T2_defrun

Modified:

arp/obs_preproc   defrun.F90

Doc:

    * Remove obsolete routines.
    * Fix phasing bugs.
    * Add new SQL request "bator_hdr.sql" . This request will be splitted later in 6 .
    * Update headers list in directories "odb/ddl.*RST*BIAS*" .

Project: aeolus,ifs,odb,satrad,algor,ifsaux
ClearCase branch: marp003_CY36T2_fix_merge

Added:

Directory			
arp/setup	sulega.F90		
odb/ddl.COUNTRYRSTRHBIAS	aeolus.h	allsky.h	auxiliary.h
	body.h	cloud_sink.h	co2_sink.h
	enkf.h	gnssro.h	hdr.h
	iasi.h	modsurf.h	radar.h
	radiance.h	resat.h	sat.h
	satob.h	scatt.h	smos.h
	ssmi1d.h	surfemiss.h	type_definitions.h
odb/ddl.ECMA	bator_hdr.sql		
odb/ddl.ECMASCR	hdr.h		
odb/ddl.RSTBIAS	aeolus.h	allsky.h	auxiliary.h
	body.h	cloud_sink.h	co2_sink.h
	enkf.h	gnssro.h	hdr.h
	iasi.h	modsurf.h	radar.h
	radiance.h	resat.h	sat.h
	satob.h	scatt.h	smos.h
	ssmi1d.h	surfemiss.h	type_definitions.h
odb/ddl.SONDETYPERSTRHBIAS	aeolus.h	allsky.h	auxiliary.h
	body.h	cloud_sink.h	co2_sink.h
	enkf.h	gnssro.h	hdr.h
	iasi.h	modsurf.h	radar.h
	radiance.h	resat.h	sat.h

		satob.h	scatt.h	smos.h
		ssmi1d.h	surfemiss.h	type_definitions.h
odb/ddl		bator_hdr.sql		
odb/include		fortint.h		

Deleted:

arp/setup	suleg.F90		
odb/aux	disk2mrfs.c	filesize.c	kmg.c
	mrfs2disk.c	mrfsio.c	prealloc.c
	pseudo_main.c		
odb/ddl.ECMASCR	hdr.h		
odb/include	hdr.h	srcs.h	
odb/interface	src_init.h		
odb/tools	Excludebufr.F90	Fetchdupl.F90	Sourcelist.F90

Modified:

aeo/Scripts	arpifs_excluded_files		
arp/adiab	cpg_end_ad.F90	cpg_end_tl.F90	laitri.F90
	spcsi.F90		
arp/control	forecast_error.F90		
arp/dfi	reast.F90		
arp/dia	sunddh.F90		
arp/module	iostream_mix.F90	varbc_setup.F90	
arp/namelist	naerad.h		
arp/obs_preproc	defrun.F90	new_thinner.F90	new_thinner_no_sq.F90
	post_thinner.F90	pre_thinner.F90	scaqc.F90
arp/op_obs	amv_reassign.F90	cobslag.F90	cobslagad.F90
	gpscalc_alpharkm2tl.F90	hopad.F90	hoptl.F90
	hretr.F90		
arp/phys_dmn	aplpar.F90	surdi15.F90	
arp/setup	su0yoma.F90	su0yomb.F90	su_surf_flds.F90
	sulega.F90	supp.F90	
arp/utility	deallo.F90	updtim.F90	
arp/var	rtsetup.F90	sujbvarens.F90	
odb/cma2odb	ctxinitdb.F90		

odb/ddl.ECMA	ECMA.dep		
odb/ddl	bator_hdr.sql	caredo_robody.sql	new_thinn_robhdr_11.sql
	new_thinn_robody_11.sql	obstat_radhure.sql	obstat_radrefl.sql
	pre_thinn_robhdr_11.sql	pre_thinn_robody_11.sql	
odb/include	fortint.h		
odb/pandor/module	bator_decodbufr_mod.F90	bator_ecritures_mod.F90	
sat/rttov	phrtsetup.F90	rttov_setpredictors_7_ad.F90	
xla/module	control_vectors_para_mod.F90		
xrd/module	mpl_recv_mod.F90		

Doc:

   * *Remove header "svipc.h" from ODB . The IFSAUX version of this header is replaced by the removed ODB version.*
   * *Phasing of ALADIN transforms project (Andrey Bogatchev - mrpe702_CY36T2_talplus).*
   * *ALADIN phasing (Mohamed Jidane - mrpe731_CY36T2_cy37).*
   * *Fix phasing bugs.*

Project: aladin,ifs,odb,aladin transforms,transform,ifsaux
ClearCase branch: marp003_CY36T2_fix_merge2

Deleted:
odb/include   svipc.h   svipc.h.obsolete

Modified:

ald/adiab	elascawad.F90	espchor.F90	espcsi.F90
	espcsiad.F90	especrt.F90	espnhsi.F90
	espnhsi_geogw.F90		
ald/fullpos	sufpmove.F90		
ald/programs	blend.F90		
ald/setup	suetrans.F90		
ald/var	ejghcori.F90	suescal.F90	
arp/adiab	cputqy_arome.F90		
arp/phys_dmn	mf_phys.F90		
arp/setup	suspqlim.F90		
tal/external	egpnorm_trans.F90	esetup_trans.F90	etrans_end.F90
	etrans_inq.F90		

tal/interface	esetup_trans.h	etrans_end.h	etrans_inq.h
tal/module	eset_resol_mod.F90	suemp_trans_mod.F90	suemp_trans_preleg_mod.F90
	suemplat_mod.F90	suemplatb_mod.F90	suestaonl_mod.F90
tal/programs	aatestprog.F90	test_adjoint.F90	
tfl/module	set_resol_mod.F90		
xrd/svipc/include	svipc.h		

Doc:

Fix phasing bugs.

Project: ifs
ClearCase branch: marp003_CY36T2_fix_merge3

Modified:

arp/obs_preproc	defrun.F90
arp/setup	su0yomb.F90

Doc:

Remove useless "use" module instructions in some interfaces.

Project: mpa,aladin transforms
ClearCase branch: marp003_CY36T2_interface

Modified:

mpa/turb/interface	aro_shallow_mf.h	aro_turb_mnh.h
tal/interface	esetup_trans.h	etrans_inq.h

Doc:

Replace use of parameter JPLAY by use of NFLEVG .

Project: ifs
ClearCase branch: marp003_CY36T2_jplay_to_nflevg

Modified:

arp/module	parrrtm.F90	parsrtm.F90	
arp/phys_radi	rrtm_ecrt_140gp.F90	rrtm_ecrt_140gp_mcica.F90	rrtm_gasabs1a_140gp.F90
	rrtm_rrtm_140gp.F90	rrtm_rrtm_140gp_mcica.F90	rrtm_rtrn1a_140gp.F90
	rrtm_rtrn1a_140gp_mcica.F90	rrtm_setcoef_140gp.F90	rrtm_taumol1.F90
	rrtm_taumol10.F90	rrtm_taumol11.F90	rrtm_taumol12.F90
	rrtm_taumol13.F90	rrtm_taumol14.F90	rrtm_taumol15.F90
	rrtm_taumol16.F90	rrtm_taumol2.F90	rrtm_taumol3.F90
	rrtm_taumol4.F90	rrtm_taumol5.F90	rrtm_taumol6.F90
	rrtm_taumol7.F90	rrtm_taumol8.F90	rrtm_taumol9.F90
	srtm_cldprop.F90	srtm_reftra.F90	srtm_setcoef.F90
	srtm_spcvrt.F90	srtm_spcvrt_mcica.F90	srtm_srtm_224gp.F90
	srtm_srtm_224gp_mcica.F90	srtm_taumol16.F90	srtm_taumol17.F90
	srtm_taumol18.F90	srtm_taumol19.F90	srtm_taumol20.F90
	srtm_taumol21.F90	srtm_taumol22.F90	srtm_taumol23.F90
	srtm_taumol24.F90	srtm_taumol25.F90	srtm_taumol26.F90
	srtm_taumol27.F90	srtm_taumol28.F90	srtm_taumol29.F90
	srtm_vrtqdr.F90	suecrad.F90	

Doc:

Split of SQL request bator_hdr.sql in 6 .

Project: odb

ClearCase branch: marp003_CY36T2_mrpa644_sql_bator

Added:

odb/ddl.ECMA	bator_hdr_1.sql	bator_hdr_2.sql	bator_hdr_3.sql
	bator_hdr_4.sql	bator_hdr_5.sql	bator_hdr_6.sql
odb/ddl	bator_hdr_1.sql	bator_hdr_2.sql	bator_hdr_3.sql
	bator_hdr_4.sql	bator_hdr_5.sql	bator_hdr_6.sql

Deleted:

odb/ddl.ECMA	bator_hdr.sql
odb/ddl	bator_hdr.sql

Modified:

odb/cma2odb	ctxinitdb.F90		
odb/ddl.ECMA	ECMA.dep		
odb/ddl	bator_hdr_1.sql	bator_hdr_2.sql	bator_hdr_3.sql
	bator_hdr_4.sql	bator_hdr_5.sql	bator_hdr_6.sql
odb/pandor/module	bator_ecritures_mod.F90		

Doc:

   Cleaning of two obsolete variables: LASQ, NFPLNPR .

Project: ifs
ClearCase branch: marp003_CY36T2_obsolete_variables

Modified:

arp/fullpos	sufpc.F90
arp/module	yomfpc.F90
arp/namelist	namfpc.h

Doc:

   Fix phasing bugs.

Project: ifs,mpa,,odb,satrad
ClearCase branch: marp003_CY36T2_r4fix

Modified:

arp/adiab	call_sl_ad.F90		
arp/module	yoecldp.F90		
arp/namelist	namca.h		
arp/obs_preproc	obscor_lanczos.F90	suobarea.F90	suobscor.F90
arp/op_obs	emis_ir.F90	hop.F90	hretr.F90
arp/phys_ec	ludcmp.F90	vdffblend.F90	
arp/prism	couplo4_exchange.F90		
arp/smos	smos_gp2obs.F90	smos_igp2obs.F90	smos_iobs2gp.F90
	smos_obs2gp.F90		
arp/utility	sbsfgs.F90		

arp/var	sureo3.F90		
mpa/turb/internals	compute_updraft.f90		
obt/module	obsdata.F90		
obt/satmon	get_dmsprainy_odb.F90	get_gpsro_odb.F90	get_mwimg_odb.F90
	get_slmoist_odb.F90	get_tcwv_odb.F90	
obt/src	iniitemloc.F90	mpsoft.F90	obstat_add_grib.F90
	obstat_hist_plot.F90	obstat_hov_plot.F90	obstat_overview_hist_plot.F90
	updsoft.F90	writegribs.F90	writesoft.F90
odb/bufr2odb	bufr2odb_satob.F90		
odb/cma2odb	grid_nearest.F90	initmdb.F90	subuoctp.F90
odb/module	yomboctp.F90		
odb/tools	Load_balancing.F90		
sat/cmem	cmem_setup.F90		
sat/rtlimb	rtlimb_distribcoeffs.F90		
sat/rttov	rttov_distribcoef_scatt_ir.F90	rttov_distribcoeffs.F90	rttov_iniedd.F90
	rttov_iniedd_ad.F90	rttov_mieproc.F90	rttov_mieproc_ad.F90
	rttov_mieproc_tl.F90		

Doc:

  * Rename modules "MODI_SUBSCALE_Z0EFF*" to "MODI_ISBA_SUBSCALE_Z0EFF*" in surfex/isba/phys routines.
  * Introduce new interfaces modules (NB: catch-up from parallel suite CY36T1_op1).

Project:
ClearCase branch: marp003_CY36T2_subscale_z0eff

Modified:

surfex/isba/phys	coupling_isban.f90	subscale_z0eff.f90	vegetation_evol.f90
	vegetation_update.f90	z0eff.f90	
surfex/surf_atm/phys	modi_subscale_z0eff.f90	modi_subscale_z0eff_1d.f90	

GUIDARD Vincent

Doc:

   Phasing.

Project: ifs
ClearCase branch: mrpe710_CY36T2_mergeOBS

Modified:
arp/obs_preproc   cloud_detect_setup.F90

JIDANE Mohamed

Doc:

arp/setup/su0yomb.F90:
Call to SULEGA under .not.LELAM .

arp/utility/freemem.F90:
To solve a strange behaviour: call to ETRANS_END with no argument and yet PRESENT(CDMODE)=.true. .

tal/external/etrans_end.F90:
To solve a problem with DEALLOCATE(N_REGIONS) when it is not allocated.

xla/module/control_vectors_para_mod.F90:
Solve some problems with conf 401 .

Project: ifs,aladin transforms,algor
ClearCase branch: mrpe731_CY36T2_cy37

Modified:
arp/setup   su0yomb.F90
arp/utility   freemem.F90
tal/external   etrans_end.F90
xla/module   control_vectors_para_mod.F90

RIVIERE Olivier

Doc:

Call to reset_spert.F90 in scan2mtl/ad is put under LEPHYS key (in agreement with Deborah). This solves crash in conf 501 (aplpassh.F90).

Project: ifs
ClearCase branch: mrpe601_CY36T2_bug501

Modified:
arp/control   scan2mad.F90   scan2mtl.F90

SPANIEL Olda

Doc:

arp/phys_dmn/acvppkf.F90:
  Bug correction in expression SQRT(MIN)

ald/var/ejghcori.F90:
  Phasing.

arp/setup/suafn1.F90
  Reordering of the fields based on suafn2.F90 .

arp/setup/suafn3.F90
  Phasing.

odb/cma2odb/grid_nearest.F90:
  #include "fcobs.h" moved to the right line.

arp/phys_dmn/swclr15.F90:
  Fix uninitialization of ZFF .

arp/setup/sumcuf.F90:
  Bugfix: size for the declaration of some arrays (ZPOLER, ZPOLEI, ZPOLEN).

arp/setup/susc2b.F90:
  Bugfix: fix the array allocation size for NSLCORE.

arp/control/gp_model.F90:
  Fix of the allocation of ZPB[X]P9 arrays, too restrictive condition for some arrays allocations: some tests on LSLAG and LSLPHY are replaced by tests only on LSLAG.
  Those arrays are used only if LSLAG.AND.LSLPHY, but they are passed to LAPINEB with index (1,1,IBL). So with bound checking option, that can generate a false alarm.
  Treatment of this issue must be similar to the one done in CPG for local arrays. See in CPG for example what is done for array ZPRE9.

xrd/fa/fa_limits.F
  New routine - contribution from J.Masek (LACE) .

  New subroutine FA_LIMITS returning xrd dimensions JPXPAH, JPXIND, JPXGEO and JPXNIV is proposed to be included in xrd/fa.
  Subroutine FALIMU with similar purpose already exists, but it does not return all parameters needed for correct allocation
  of arrays entering FACIES. These are:

  KNLOPA(JPXPAH)
  KNOZPA(JPXIND)
  PSINLA(JPXGEO)
  PAHYBR(0:JPXNIV)
  PBHYBR(0:JPXNIV)

  Common practice in external utilities using xrd library is to overdimension these arrays. It is rather frequent source of
  errors (memory overwriting) when dimensions in calling program are not sufficient. Using include "xrd/fa/facomp.h" to get
  JPX* values in external utilities is not without risk, since it contains cpp directives. If preprocessing options are not
  compatible with xrd library, include "facomp.h" gives wrong values.

  Moreover, include is written in fixed form and cannot be used by free form programs. It is therefore preferable to extract
  JPX* values from include "facomp.h" via wrapper subroutine which would be part of xrd and thus automatically compiled with
  proper options.

Project: aladin,ifs,odb,ifsaux
ClearCase branch: mrpe693_CY36T2_ollace

Added:
xrd/fa   fa_limits.F

Modified:

ald/var	ejghcori.F90		
arp/control	gp_model.F90		
arp/phys_dmn	acvppkf.F90	swclr15.F90	
arp/setup	suafn1.F90	suafn3.F90	sumcuf.F90
	susc2b.F90		
odb/cma2odb	grid_nearest.F90		
xrd/fa	fa_limits.F		

YESSAD Karim

Doc:

 COUPL   : rewrite coupling in order to make easier its future externalisation.
 NETS   : cosmetic cleanings.
 OBSOLETE   : remove obsolete (unused) decks.

Project: aladin,ifs
ClearCase branch: marp003_CY36T2_mrpm603_dev36t2pour37

Deleted:

ald/coupling	elscot1.F90	elscot1ad.F90	
arp/obs_error	pwcoerr.F90	pwcperr.F90	thioerr.F90
	thiperr.F90		
arp/obs_preproc	chdeve.F90	chdeve2.F90	chdsta.F90
	chreve.F90	chrsta.F90	craibode.F90
	crdrbode.F90	crpabode.F90	crpibode.F90
	crsbbode.F90	crscbode.F90	crssbode.F90
	crsybode.F90	crtebode.F90	crtsbode.F90
	flago2n.F90	obschar.F90	rdbfld.F90
	scatsin.F90	ssmis_flagging.F90	
arp/phys_dmn	apl2phy.F90		
arp/setup	suadbuffer.F90		
arp/var	cuancape.F90	mupdts.F90	

Modified:

ald/adiab	elarche.F90		
ald/c9xx	ebicli.F90	echk923.F90	ecoptra.F90
	eganiso.F90	egeo923.F90	eincli1.F90
	eincli10.F90	eincli2.F90	eincli3.F90
	eincli4.F90	eincli5.F90	eincli6.F90

	eincli7.F90	eincli8.F90	eincli9.F90
	einclib.F90	einclir.F90	einter0.F90
	einter1.F90	einter10.F90	einter2.F90
	einter6.F90	einter8.F90	eintfac.F90
	eleci.F90	elislap.F90	
ald/control	espch.F90	espchad.F90	espcm.F90
	espcmad.F90		
ald/coupling	ecoupl1.F90	ecoupl1ad.F90	elsin0ta.F90
	eseimpls.F90	eseimplsad.F90	esrlxt1.F90
	esrlxt1ad.F90		
ald/dia	espfp.F90	espnormave.F90	espnormb.F90
	ewmovph.F90	ewrimova.F90	
ald/fullpos	etranscub.F90	exarp.F90	exbip.F90
	fpezo2h.F90	fpezone.F90	prefpbipos.F90
	suefpg3.F90	suehow1.F90	suehow2.F90
	suehowlsm.F90	sufpezo.F90	sufpmove.F90
ald/inidata	elsac.F90	elsin.F90	elsrw.F90
	elswa3.F90	epak3w.F90	epak3wsp.F90
	esc2r.F90		
ald/obs_preproc	lamflag_odb_select.F90		
ald/parallel	ecommjbbal.F90	ecommjbbalbeta.F90	ecommspnorm.F90
	egathereigmd.F90		
ald/programs	lamflag_odb.F90		
ald/setup	esp2lnsp.F90	suebicu.F90	suebig.F90
	suecuv.F90	sueheg.F90	suelap.F90
	suemetric.F90	suempvar.F90	suenhheg.F90
	sueorog.F90	sueqlimsat.F90	suesmap.F90
	suetrans.F90	suezone.F90	
ald/sinvect	echnorm.F90	erdtllcz.F90	esptrlcz.F90
	ewrtllcz.F90	ewrtsv.F90	suelcz.F90
ald/transform	etransdir_jb.F90	etransdir_jbad.F90	etransinv_jb.F90
	etransinv_jbad.F90	etransinv_jbtomodel.F90	etransinv_jbtomodelad.F90
	etransinvh.F90	etransinvhad.F90	euvgeovd.F90
	evduvgeo.F90		

ald/utility	elalo2xy.F90	espareord.F90	espconvert.F90
	euvcopy.F90	sp3to7.F90	sp7to3.F90
ald/var	ebalbeta.F90	ebalnonlin.F90	ebalnonlinad.F90
	ebalnonlintl.F90	ebalstat.F90	ebalstatad.F90
	ebalvert.F90	ebalvertad.F90	ebalverti.F90
	ebalvertiad.F90	ecosjr.F90	ecvaru2i.F90
	ecvaru2iad.F90	edog.F90	efill_isotropic.F90
	ejghcor.F90	ejghcori.F90	ejgnrgg.F90
	ejgnrggad.F90	ejgnrggi.F90	ejgnrggiad.F90
	escaljgs.F90	evarjk.F90	evarjkad.F90
	evarjkini.F90	ewreini.F90	ewrlsgrad.F90
	moevar.F90	suejbcor.F90	suejbcosu.F90
	suejbcov.F90	suejbdat96.F90	suejbstd.F90
	suejbtest.F90	suejk.F90	suelges.F90
	suemodjk.F90	suescal.F90	suevargp.F90
ald/wavelet	ejbwav_cv2wav.F90	ejbwav_gp2wav.F90	ejbwav_h2v.F90
	ejbwav_hcori.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
	suejbwavelet.F90	suejbwavelet_bmatrix.F90	

Doc:

Manual rephasing between CY36R4 and CY36T2 .

Bugfixes.

arp/adiab/lascaw.F90   : bugfix SLHD
arp/adiab/lascaw_cla.F90   : bugfix SLHD
arp/adiab/laidlic.F90   : bugfix obs interpolator
arp/module/module_obb1_mix.F90 : bugfix obs interpolator
arp/obs_preproc/suobs.F90   : bugfix obs interpolator
arp/op_obs/obshorad.F90   : bugfix obs interpolator
arp/op_obs/obshor.F90   : bugfix obs interpolator
arp/op_obs/slintad.F90   : bugfix obs interpolator
arp/sinvect/sulcz.F90   : bugfix GRIB_API
arp/setup/susc2b.F90   : bugfix obs interpolator

ald/adiab/elascawad.F90   : bugfix conf E401
ald/sinvect/suelcz.F90   : bugfix GRIB_API
tfl/module/sump_trans_mod.F90 : bugfix setup trans

Project: aladin,ifs,transform
ClearCase branch: mrpm603_CY36T2_phasr4

Modified:

ald/adiab	elascaw.F90	elascawad.F90	elascawtl.F90
ald/dia	espfp.F90		
ald/fullpos	sufpmove.F90		
ald/inidata	elsirf.F90		
ald/sinvect	suelcz.F90		
ald/var	ejgnrgg.F90	ejgnrggad.F90	ejgnrggi.F90
	ejgnrggiad.F90	suescal.F90	
arp/adiab	laidlic.F90	lascaw.F90	lascaw_cla.F90
	spcsi.F90		
arp/control	cnt4.F90	scan2m.F90	scan2mad.F90
	scan2mtl.F90	spcm.F90	
arp/dia	cpxfu.F90		
arp/fullpos	endpos.F90	phymfpos.F90	vpos.F90
arp/module	module_obb1_mix.F90		
arp/obs_preproc	suobs.F90		
arp/op_obs	cobs.F90	cobsad.F90	cobstl.F90
	hop.F90	hopad.F90	hoptl.F90
	hretr.F90	obshor.F90	obshorad.F90
	slint.F90	slintad.F90	
arp/pp_obs	apache.F90	pos.F90	ppgeop.F90
	ppgeopad.F90	ppgeoptl.F90	ppobsap.F90
	ppobsn.F90		
arp/setup	su0yomb.F90	sudefo_gflattr.F90	sugem.F90
	susc2b.F90		
arp/sinvect	sulcz.F90		
arp/utility	iopack.F90	prtgom.F90	
arp/var	vec2gp.F90		

tfl/module   sump_trans_mod.F90