ARPEGE MEMORANDUM

From: GCO

Date: July 27, 2006

To: GMAP, COMPAS, GMGEC, GMME, DIR/RE/CRC, Mats Hamrud

Subject: New cycle CY31T1

A new cycle CY31T1 has been created. This is not a common cycle with the ECMWF. The different contributions for this cycle are described in the following pages.

ClearCase label: CY31T1

Modified libraries: arpege, aladin, odb, utilites,ifsaux, trans_ald

Contributors:

ALIAS Antoinette	Project:arpege CCase branch:mrga589_CY31T0_aa
	Project:arpege CCase branch:mrga589_CY31_eac
ANDERSEN Bjarne Stig	Project:arpege CCase branch:mrpe697_CY31T0_hirphys
AUGER Ludovic	Project:arpege CCase branch:mrpa645_CY31_varp
DESROZIERS Gerald	Project:arpege CCase branch:mrpm611_CY31T0_bgobs31t1
	Project:arpege CCase branch:mrpm611_CY31_mrpm611
Eric BAZILE	Project:arpege CCase branch:mrpm604_CY31T0_gmgec
FAURE Ghislain	Project:arpege CCase branch:mcrc001_CY31_BalNLO
Francoise TAILLEFER	Project:arpege CCase branch:mrpa647_CY31T0_ftmod
GCO	Project:arpege CCase branch:marp001_CY30T1_none
	Project:arpege CCase branch:marp001_CY30T1_op1
	Project:arpege CCase branch:marp001_CY30T1_op2
	Project:arpege CCase branch:marp001_CY31T0_NEC
	Project:arpege CCase branch:marp001_CY31T0_dble
	Project:arpege CCase branch:marp001_CY31T0_eggx
	Project:arpege CCase branch:marp001_CY31T0_none
	Project:arpege CCase branch:marp001_CY31_bla
IVATEK-SAHDAN Stjepan	Project:arpege CCase branch:mrpm620_CY31T0_501
	Project:arpege CCase branch:mrpm620_CY31T0_e923-elislap
Jean-Marcel PIRIOU	Project:arpege CCase branch:mrpm606_CY31T0_ddhk
Karim YESSAD	Project:arpege CCase branch:mrpm603_CY31T0_bugfixpour31t1
	Project:arpege CCase branch:mrpm603_CY31_dev31pour31t1
	Project:arpege CCase branch:mrpm603_CY31_none
POLI Paul	Project:arpege CCase branch:mrpa679_CY31T0_dble31poli
PUECH Dominique	Project:arpege CCase branch:mrpa660_CY31T0_dev
	Project:arpege CCase branch:mrpa660_CY31_dev
Patrick MOLL	Project:arpege CCase branch:mrpa646_CY31T0_none
	Project:arpege CCase branch:mrpa646_CY31T0_vents
Ryad El KHATIB	Project:arpege CCase branch:mrpm602_CY31T0_fix
	Project:arpege CCase branch:mrpm602_CY31T0_g95
	Project:arpege CCase branch:mrpm602_CY31T0_gcc
SEITY Yann	Project:arpege CCase branch:mrpm637_CY31T0_bfchimie
	Project:arpege CCase branch:mrpm637_CY31T0_bfcompilg95
	Project:arpege CCase branch:mrpm637_CY31T0_bfprepsurfex
	Project:arpege CCase branch:mrpm637_CY31T0_compil
	Project:arpege CCase branch:mrpm637_CY31T0_none
	Project:arpege CCase branch:mrpm637_CY31_arome
	Project:arpege CCase branch:mrpm637_CY31_bfSyl
	Project:arpege CCase branch:mrpm637_CY31_none
TROJAKOVA Alena	Project:arpege CCase branch:mrpe694_CY31T0_phasing
	Project:arpege CCase branch:mrpe694_CY31_bfSWI
VANA Filip	Project:arpege CCase branch:mrpe706_CY31T0_slhdstr

ALIAS Antoinette

Doc:

1/ Allow to modify the value of RI0 in namelist.

2/ The processing of gust max will not be introduced in ARPEGE code.

3/ Correction to test that SDSAT and CVV are not coded in spectral.

Project: arpege
ClearCase branch: mrga589_CY31T0_aa

Modified:

arp/adiab	cpg_dia.F90	
arp/dia	cpxfu.F90	
arp/module	ptrxfu.F90	
arp/namelist	namscen.h	
arp/phys_dmn		surdi15.F90
arp/setup	sugfl.F90	suxfu.F90

Doc:

1/ Cleaning the source code.

Modified: arp/adiab gpmpfc.F90
arp/module/yomaerd15.F90
arp/namelist/namtoph.h
arp/transform/speuv.F90
arp/utility/updtim.F90

2/ Relaxation of deep reservoir.

Modified: arp/adiab/cpwts.F90

3/ - Nudging with time variable coefficients
- Nudging with vertical variable coefficients

Modified: arp/adiab/spchor.F90

4/ Min and Max output added.

Modified: arp/dia/grnorma.F90

5/ Introduce heterogeneous chemical (P.Simon) and bugfix on zenital angle (M.Déqué)

Modified: arp/phys_dmn/acozone.F90

6/ Version 3 of the Deep Convection.

Modified: arp/phys_dmn/accvimp_v3.F90
arp/phys_dmn/aplpar.F90

7/ Cloud forcing diagnostics.

Modified: arp/setup/sugem2.F90

8/ - Add VCLIS for ozone forcing files
- Allows NVCLIS=1 with LOZONE=.F.

Modified: arp/setup/sugridadm.F90

9/ MXGUST added.

Modified: arp/dia/cpxfu.F90
arp/adiab/cpg_dia.F90
arp/module/ptrxfu.F90
arp/setup/suxfu.F90

10/ - Introduction of the routines calculating the deep convection through the logical key LCVPGY.
- Addition of 2 GFLs fields to be used by the convection scheme ACCVIMPGY/ACCVIMPDGY:
YSDSAT : standard Deviation of the SATuration depression (Sigma_s)
YCVV : Convective Vertical Velocity

Added : arp/phys_dmn/accvimpdgy.F90
arp/phys_dmn/accvimpgy.F90
arp/phys_dmn/actcpnf.F90

Modified: arp/adiab cpg.F90
arp/module/yomfa.F90
arp/module/yom_gfl.F90
arp/module/yomphy0.F90
arp/phys_dmn aplpar.F90
arp/phys_dmn/mf_phys.F90
arp/phys_dmn/suphy0.F90
arp/namelist/namfa.h
arp/namelist/namgfl.h
arp/namelist/namphy0.h
arp/setup sudim1.F90
arp/setup/sudyn.F90
arp/setup/sufa.F90
arp/setup/sugfl.F90

11/ - Introduction of keys : LAJUCV,LNEBGR,LNEBGY,LCVKF,LCVRAV3,LBCCOND,LPBLE to activate the use of different convection or turbulence schemes.
- Introduction of key LZ0HSREL to activate the use of thermical Z0 without relief.

Modified: arp/namelist/namphy.h
arp/module/yomphy.F90
arp/setup/su0phy.F90

Project: arpege
ClearCase branch: mrga589_CY31_eac

Modified:

arp/adiab	cpg.F90	cpg_dia.F90	cpg_gp.F90	
	cpwts.F90	gpmpfc.F90	spchor.F90	
arp/control	cnt4.F90			
arp/dia	cpxfu.F90	grnorma.F90		
arp/module	ptrxfu.F90	yom_ygfl.F90		yomaerd15.F90
	yomfa.F90	yomphy.F90	yomphy0.F90	
arp/namelist	namfa.h	namgfl.h	namphy.h	

	namphy0.h	namtoph.h		
arp/ocean	inicou.F90			
arp/phys_dmn		acnebr.F90	acozone.F90	aplpar.F90
	mf_phys.F90	suphy0.F90		
arp/setup	su0phy.F90	sudim1.F90	sudyn.F90	
	sufa.F90	sugem2.F90	sugfl.F90	
	sugridadm.F90		suxfu.F90	
arp/transform	speuv.F90			
arp/utility	updtim.F90			

ANDERSEN Bjarne Stig

Doc:

Introduction of the Turbulent Kinetic Energy scheme (Default LECT=F) (E.Bazile), logical for the Smith's adjustment (Default LADJCLD=T) (F. Bouyssel) and the HIRLAM physics (Default LHL=F) (B. Andersen and B. Sass) .

Project: arpege
ClearCase branch: mrpe697_CY31T0_hirphys

Added:

arp/function	hlesat.h			
arp/module	yhlcond.F90	yhlconst.F90	yhloption.F90	
	yhlrad.F90	yhlturb.F90	yommnh.F90	
arp/namelist	namhlopt.h			
arp/phys_dmn		acbl89.F90	acevolet.F90	actke.F90
	acturb.F90	hl_aplpar.F90	hlaconds.F90	
	hlavcbr.F90	hlcldia.F90	hlcldiag.F90	
	hlcloudcv.F90		hlcondcv.F90	hlcondfc.F90
	hlconds.F90	hlcondst.F90	hlnocondcv.F90	
	hlprevap.F90	hlqcampli.F90		hlrad.F90
	hlradia.F90	hltend2flx.F90		hltridiag.F90
	hlvcbr.F90	suphmnh.F90	surfext.F90	
arp/setup	suhlcond.F90	suhlconst.F90		suhloption.F90
	suhlph.F90	suhlrad.F90	suhlturb.F90	

Modified:

arp/adiab	cpg.F90	cptend.F90	cputqy.F90	
arp/function	hlesat.h			
arp/module	yhlcond.F90	yhlconst.F90	yhloption.F90	
	yhlrad.F90	yhlturb.F90	yom_ygfl.F90	
	yomfa.F90	yomphy.F90	yomphy0.F90	
arp/namelist	namfa.h	namgfl.h	namhlopt.h	
	namphy.h	namphy0.h		
arp/phys_dmn		acbl89.F90	acevolet.F90	acmicro.F90
	acpluiz.F90	actke.F90	acturb.F90	
	advprc.F90	aplpar.F90	cpchet.F90	
	hl_aplpar.F90	hlaconds.F90	hlavcbr.F90	
	hlcldia.F90	hlcldiag.F90	hlcloudcv.F90	
	hlcondcv.F90	hlcondfc.F90	hlconds.F90	
	hlcondst.F90	hlnocondcv.F90		hlprevap.F90
	hlqcampli.F90		hlrad.F90	hlradia.F90
	hltend2flx.F90		hltridiag.F90	hlvcbr.F90
	initaplpar.F90		mf_phys.F90	suphy0.F90
arp/setup	su0phy.F90	sudim1.F90	sudyn.F90	

sufa.F90 sugfl.F90 suhlcond.F90
suhlconst.F90 suhloption.F90 suhlph.F90
suhlrad.F90 suhlturb.F90 suphy.F90

AUGER Ludovic

Doc:

Modifications for VARPACK .

Project: arpege
ClearCase branch: mrpa645_CY31_varp

Modified:

arp/module yomfpc.F90 yomphy.F90
arp/namelist namfpc.h namphy.h
arp/phys_dmn acntcls.F90 acntclsad.F90 acntclstl.F90
arp/pp_obs phymfpos.F90
arp/setup su0phy.F90 sufpc.F90 suxfufp.F90

DESROZIERS Gerald

Doc:

Modifications for sigmab cycling.

Project: arpege
ClearCase branch: mrpm611_CY31T0_bgobs31t1

Modified:

arp/obs_preproc defrun.F90 fgchk.F90

Doc:

Add SSMI channels for sigmab randomization if LECMWF=FALSE .

Project: arpege
ClearCase branch: mrpm611_CY31_mrpm611

Modified:
arp/setupsusc2b.F90

Eric BAZILE

Doc:

Bugfixes.

Project: arpege
ClearCase branch: mrpm604_CY31T0_gmgec

Modified:

arp/module yomphy.F90

arp/namelist namphy.h namphy0.h
arp/phys_dmn aplpar.F90 suphy0.F90
arp/setup su0phy.F90

FAURE Ghislain

Doc:

Introduce non-linear balances and omega in ALADIN assimilation. These balances are used to make the model, which handles guess error covariances, dependent on the flux (of the guess), forcing some spatial heterogeneousness: stronger is the wind (his gradient or his curve), locally higher are the guess standard deviations. These balances allow a better jets description for temperate latitudes, even though we expect that they increase high resolution cyclones analysis in tropical areas.
Theses balances already exist in ARPEGE, and are handled in ALADIN source code since december 2005.

Project: arpege, aladin
ClearCase branch: mcrc001_CY31_BalNLO

Added:

ald/var ebalnonlin.F90 ebalnonlinad.F90 ebalnonlintl.F90
ebalomega.F90 ebalomegaad.F90 ebalomegatl.F90

Modified:

ald/var ebalnonlin.F90 ebalnonlinad.F90 ebalnonlintl.F90
ebalomega.F90 ebalomegaad.F90 ebalomegatl.F90
arp/var sqrtb.F90 sqrtbad.F90 sqrtbin.F90
sqrtbinad.F90

Francoise TAILLEFER

Doc:

1/ arp/setup/sufpsc2.F90 : bad array allocation in case of e923 (correction done by M. Jidane).

2/ arp/canari/caupflg.F90 : better setting of the tags for the MP routines.

Project: arpege
ClearCase branch: mrpa647_CY31T0_ftmod

Modified:

arp/canaricaupflg.F90
arp/setup sufpsc2.F90

GCO

Doc:

Create dummy routine mpa/dummy/mask_compress.mnh .

Project: mpa

ClearCase branch: marp001_CY30T1_none

Added:

mpa dummy
mpa/dummy mask_compress.mnh

Doc:
Miscellaneous stuff from current parallel suite, which has become operationnal at the end of June .

Project: arpege, odb, utilities
ClearCase branch: marp001_CY30T1_op1

Modified:

arp/canari canaco.F90 canali.F90 caupflg.F90
arp/module qactex.F90
arp/namelist nactex.h
odb/ddl matchup_atovs_pred.sql matchup_body.sql
matchup_hdr.sql
matchup_update_1.sql matchup_update_2.sql matchup_update_3.sql
new_thinn_robhdr_4.sql new_thinn_robhdr_5.sql
pre_thinn_robhdr_4.sql
pre_thinn_robhdr_5.sql
uti/bator bator_lectures.F90

Doc:

Miscellaneous stuff from the new parallel suite.

Project: arpege, odb, utilities
ClearCase branch: marp001_CY30T1_op2

Added:

uti/pregpssol filter_gpssol.F90 get_tslot_gpssol.F90
pregpssol.F90
read_list_gpssol.F90 read_obsoul_gpssol.F90
write_obsoul_gpssol.F90

Modified:

arp/namelist namvar.h
arp/obs_preproc blacksat.F90 defrun.F90
fgchk.F90
arp/pp_obs bgobs.F90
arp/setup susc2b.F90
arp/var fltbgerr.F90 vec2gp.F90
odb/ddl black_atovs.sql hretr_canari_robody.sql
uti/bator bator.F90 bator_decodbufr.F90 bator_decodgrib.F90
bator_ecritures.F90 bator_impr.F90 bator_init.F90
bator_lectures.F90 bator_saisies.F90 bator_util.F90
uti/controdb controdb.F90
uti/extrtovs biasconv_1c.F90 calc_bias_1c.F90 cycle_bias_1c.F90
cycle_biasprep_1c.F90
uti/include oulan_yomdirs.h
uti/namelist bator_namelist.h oulan_nadirs.h
uti/oulan ext_gpssol.F ext_synop.F oulan_carobs.F
oulan_extract.F oulan_init.F oulan_namelist.F

uti/pregpssol filter_gpssol.F90 get_tslot_gpssol.F90 pregpssol.F90
read_list_gpssol.F90 read_obsoul_gpssol.F90
write_obsoul_gpssol.F90

Doc:

Modifications for portability on NEC platform.

Project: utilities
ClearCase branch: marp001_CY31T0_NEC

Modified:

uti/extrtovs extr_lib_1c.F90
uti/gobptout proindex.F

Doc:

Miscellaneous stuff from current parallel suite, which has become operationnal at the end of June .

Project: arpege, aladin, odb, utilities
ClearCase branch: marp001_CY31T0_dble

Modified:

ald/adiab espcm.F90
ald/programs blend.F90
arp/canari caupflg.F90
arp/dfi edfi2.F90
arp/module yomfpf.F90
arp/obs_preproc blackcln.F90 defrun.F90
arp/pp_obs spos.F90
arp/setup suafn1.F90 sufpf.F90
arp/utility dealfpos.F90
odb/bufr2odb satobfreq.F90
uti/bator bator.F90 bator_decodbufr.F90
bator_decodgrib.F90
bator_ecritures.F90 bator_lectures.F90 bator_saisies.F90
bator_util.F90
uti/module bator_module.F90
uti/oulan ext_acar.F ext_airsbt.F ext_atovs.F
ext_ers1.F ext_gpssol.F ext_radomeh.F
ext_ssmi.F ext_ssmice.F ext_synop.F
ext_tovs.F ext_tovsamsua.F ext_tovsamsub.F
ext_tovshirs.F ext_tovshirs_ech.F ext_tovsmsu.F
oulan_extract.F
uti/progrid profac.F

Doc:

Little modset from Jean-Daniel Gril:
** eggx_n.F90: bugfix;*
** eggangles.F90: split a too long line.*

Project: aladin
ClearCase branch: marp001_CY31T0_eggx

Modified:

ald/module eggangles.F90
ald/utility eggx_n.F90

Doc:

1/ Add "Static_Init(MTOCOMP);" in odb/include/static.h to handle new database "MTOCOMP" .

2/ Create dummy file odb/lib/MTOCOMP_static_init.c .

3/ Remove obsolete routines.

Project: arpege, mpa, mse, odb
ClearCase branch: marp001_CY31T0_none

Added:

odb/lib MTOCOMP_static_init.c

Deleted:

arp/obs_preproc blackcln.F90
mpa/chem/internals ch_set_photo_rates_n.mnh
mpa/chem/module modi_ch_set_photo_rates_n.mnh
mse/dummy budget.mnh

Modified:

odb/include static.h

Doc:

1/ Modifications allowing to handle ECMWF blacklist .

2/ Modifications in BATOR:
- *replace YOMGLP (coh) by YOMANA (arp);*
- *check dates: possibility to create bases without tslot using ficdate;*
- *insert gpsro: use limb table;*
- *modifications for LAMFLAG;*
- *re-write GRIB program: formatting to prepare introduction of new GRIB data (insertion in general loop to be processed with other observations);*
- *modifications of prints.*

3/ Modifications in ODBTOOLS:
- *odbddr1.F90, odbddr2.F90 : portability modifications for g95 (formats);*
- *suffle.F90 : basetime initialization;*
- *swapoutdb.F90 : delete "-x" option, now useless.*

4/ Add a new database "MTOCOMP", allowing to produce compressed bases.

Project: arpege, odb, utilities
ClearCase branch: marp001_CY31_bla

Added:

odb/ddl.MTOCOMP MTOCOMP.ddl alloc.h mdi.h
obstype.h odb.h odb98.flags
privpub.h sensor.h varno.h

Modified:

arp/obs_preproc	black.F90	blackhat.F90	blinit.F90	
	decis.F90	reini.F90	screen.F90	
odb/cma2odb	odbddr1.F90	odbddr2.F90	shuffle.F90	
	swapoutdb.F90			
odb/ddl.MTOCOMP	MTOCOMP.ddl			
uti/bator	bator.F90	bator_decodbufr.F90		
bator_decodgrib.F90				
	bator_ecritures.F90		bator_impr.F90	bator_init.F90
	bator_lectures.F90		bator_saisies.F90	bator_util.F90
uti/module	bator_module.F90			
uti/namelist	bator_namelist.h			

IVATEK-SAHDAN Stjepan

Doc:

Bugfix for configuration 501.

Project: arpege
ClearCase branch: mrpm620_CY31T0_501

Modified:

arp/setupsudyn.F90

Doc:

Bugfixes for configuration 923 .

Project: aladin
ClearCase branch: mrpm620_CY31T0_e923-elislap

Modified:

ald/c9xxeincli1.F90	einclir.F90

Jean-Marcel PIRIOU

Doc:

Introduction of DDH diagnostics in AROME.

Project: arpege, mpa
ClearCase branch: mrpm606_CY31T0_ddhk

Added:

arp/dia	aro_cpphddh.F90		
arp/module	yommnh.F90	yomphft.F90	
arp/phys_dmn	addft.F90	aro_iniapft.F90	suphmnh.F90
	surfext.F90		
mpa/micro/externals		aro_buprocn.mnh	aro_convbu.mnh
aro_startbu.mnh			
	aro_subudget.mnh	aroend_budget.mnh	testapft.mnh
mpa/micro/interface		aro_buprocn.h	aro_convbu.h
aro_startbu.h			

	aro_subudget.h	aroend_budget.h	testapft.h
mpa/micro/internals		budget.mnh	ini_budget.mnh
mpa/micro/module	modd_conf1.mnh	modd_dyn.mnh	modd_param_c2r2.mnh
	moddb_budget.mnh		modi_mask_compress.mnh

Modified:

arp/adiab	cpg.F90	cpg_dia.F90	
arp/dia	aro_cpphddh.F90	cpdyddh.F90	ppfidh.F90
	sunddh.F90		
arp/module	yomarphy.F90	yomlddh.F90	yomphft.F90
	yomphy.F90		
arp/namelist	namarphy.h	namddh.h	namparar.h
	namphy.h		
arp/phys_dmn	addft.F90	apl_arome.F90	aro_iniapft.F90
	mf_phys.F90		
arp/setup	su0phy.F90		
mpa/micro/externals		aro_adjust.mnh	aro_buprocn.mnh
aro_convbu.mnh			
	aro_rain_ice.mnh	aro_startbu.mnh	aro_subudget.mnh
	aroend_budget.mnh	aroini_budget.mnh	
aroini_micro.mnh			
	testapft.mnh		
mpa/micro/interface		aro_adjust.h	aro_buprocn.h
aro_convbu.h			
	aro_rain_ice.h	aro_startbu.h	aro_subudget.h
	aroend_budget.h	aroini_budget.h	aroini_micro.h
	testapft.h		
mpa/micro/internals		budget.mnh	ice_adjust.mnh
ini_budget.mnh			
mpa/micro/module	modd_conf1.mnh	modd_dyn.mnh	modd_param_c2r2.mnh
	moddb_budget.mnh	modi_budget.mnh	
modi_ini_budget.mnh			
	modi_mask_compress.mnh		

Karim YESSAD

Doc:

1/ arp/phys_dmn/mf_phys.F90: fix the problem of PGP1 pointers which generates arrays overflows in leap-frog if LVGSN=TRUE, and fix some bad indentations.

2/ ald/setup/suegeo1.F90: cleanings and replace "PRINT" by WRITE(NULOUT), and move big prints under key LOUTPUT .*

3/ arp/setup/sudyn.F90: fix a phasing bug, and replace (LEPHYS.OR.LMPHYS) by LLDIAB in the definition of LLPT .

Project: arpege,aladin
ClearCase branch: mrpm603_CY31T0_bugfixpour31t1

Modified:

ald/setup	suegeo1.F90
arp/phys_dmn	mf_phys.F90
arp/setup	sudyn.F90

Doc:

Modification code:

BUG : bug correction.

NETADTLDYN : update the TL and AD codes according to the direct code under CPGTL and CPGAD, and remove old scories of obsolete AD and TL code of (NPDVAR,NVDVAR)=(0,0) NH code.

MISC : miscellaneous.

OPTSP : optimisation of the memory used in the SI and horizontal diffusion schemes in the stretched version of ARPEGE.

Ccase branch name:
----
mrpm603_CY30T1_dev31pour31t1

Modified elements:
----

ald/coupling/eseimpls.F90 : BUG

arp/adiab/cpg5_gp.F90 : NETADTLDYN
arp/adiab/cpg_dyn_ad.F90 : NETADTLDYN
arp/adiab/cpg_dyn_tl.F90 : NETADTLDYN
arp/adiab/cpg_end_ad.F90 : NETADTLDYN
arp/adiab/cpg_end_tl.F90 : NETADTLDYN
arp/adiab/cpg_gp_ad.F90 : NETADTLDYN
arp/adiab/cpg_gp_tl.F90 : NETADTLDYN
arp/adiab/cpg_zero_ad.F90 : NETADTLDYN
arp/adiab/cpgad.F90 : NETADTLDYN
arp/adiab/cpgtl.F90 : NETADTLDYN
arp/adiab/gpgrgeo.F90 : NETADTLDYN
arp/adiab/gpgrpad.F90 : NETADTLDYN
arp/adiab/gpgrptl.F90 : NETADTLDYN
arp/adiab/gpgrxyb.F90 : NETADTLDYN
arp/adiab/gphluv.F90 : NETADTLDYN
arp/adiab/gphluvad.F90 : NETADTLDYN
arp/adiab/gphluvtl.F90 : NETADTLDYN
arp/adiab/gphlwi.F90 : NETADTLDYN
arp/adiab/gphlwiad.F90 : NETADTLDYN
arp/adiab/gphlwitl.F90 : NETADTLDYN
arp/adiab/gpxybad.F90 : NETADTLDYN
arp/adiab/gpxybtl.F90 : NETADTLDYN
arp/adiab/lattexad.F90 : NETADTLDYN
arp/adiab/lattextl.F90 : NETADTLDYN
arp/adiab/spc2.F90 : OPTSP
arp/adiab/spc2ad.F90 : OPTSP
arp/adiab/spchor.F90 : OPTSP
arp/adiab/spchorad.F90 : OPTSP
arp/adiab/spcsi.F90 : OPTSP
arp/adiab/spcsiad.F90 : OPTSP
arp/adiab/spnhsi.F90 : OPTSP
arp/control/cnt4.F90 : MISC
arp/control/spc2m.F90 : OPTSP
arp/control/spc2mad.F90 : OPTSP
arp/control/spcm.F90 : OPTSP

arp/control/spcmad.F90 : OPTSP
arp/module/yomdyn.F90 : MISC
arp/module/yomlap.F90 : OPTSP
arp/namelist/namdyn.h : MISC
arp/setup/sualdynb.F90 : OPTSP
arp/setup/suallo.F90 : OPTSP
arp/setup/suct0.F90 : MISC
arp/setup/sudim1.F90 : MISC
arp/setup/sudyn.F90 : OPTSP MISC
arp/setup/sugmre.F90 : OPTSP
arp/setup/suhdu.F90 : OPTSP
arp/setup/suheg.F90 : OPTSP
arp/setup/sulap.F90 : OPTSP
arp/setup/sunhheg.F90 : OPTSP
arp/setup/susmap.F90 : OPTSP
arp/setup/suspgm.F90 : OPTSP
arp/utility/deallo.F90 : OPTSP

Added elements:
----

arp/adiab/cpeuldynad.F90 : NETADTLDYN
arp/adiab/cpeuldyntl.F90 : NETADTLDYN
arp/adiab/gpgrgeoad.F90 : NETADTLDYN
arp/adiab/gpgrgeotl.F90 : NETADTLDYN
arp/adiab/gpgrxybad.F90 : NETADTLDYN
arp/adiab/gpgrxybtl.F90 : NETADTLDYN
arp/adiab/gpuvsad.F90 : NETADTLDYN

Removed elements:
----

arp/adiab/cpdynad.F90 : NETADTLDYN
arp/adiab/cpdyntl.F90 : NETADTLDYN
arp/adiab/gnhdynad.F90 : NETADTLDYN
arp/adiab/gnhdyntl.F90 : NETADTLDYN
arp/adiab/gnhgrpad.F90 : NETADTLDYN
arp/adiab/gnhgrptl.F90 : NETADTLDYN
arp/adiab/gnhpdvdad.F90 : NETADTLDYN
arp/adiab/gnhpdvdtl.F90 : NETADTLDYN

Modifications in namelists:

None excepted the fact that some default values have changed (for example LVERAVE_HLUV in NAMDYN, now default is .F.). default values for Y[X]_NL%LPT and Y[X]_NL%LPC have been adapted, it becomes not necessary to specify them in the namelist.

Scientific description of your modification(s):

See paragraph 'Code modif.'

Influence on the results:

- Modification NETADTLDYN can generate some numerical differences, especially in configurations using adjoint and TL code.
- Modification OPTSP does not generate any differences in the norms, and allows to save memory for multiproc ARPEGE runs with stretching. Reduction of memory consumption is 250Mb/proc for TL358L41c2.4 forecasts with 4 procs.

- Modification MISC requires to be careful with the namelist options especially for LPC_OLD=T or LPC_FULL runs, or NH runs. In case of doubt check that reference and experience NH runs use the same value of LVERAVE_HLUV (please use .F., .T. is an obsolescent option to stabilize obsolete (and often disappeared) NH options). Default value is .T. in CY31 but .F. in the current modset. For the horizontal diffusion with PC schemes, note that it is now activated for all steps of the predictor-corrector scheme (hard-coded in CY31, optional default value in the current modset, new variable LRHDI_LASTITERPC in NAMDYN): better to activate it at all steps of the predictor-corrector scheme (LRHDI_LASTITERPC=.F.).

- In the contribution MISC, there is a bug correction in ald/coupling/eseimpls.F90 which can change the results in SL2TL NH ALADIN runs forced by NH LBC (when SITRA is not equal to SITR).

- Remember that the default value of LREPHD is now .F. (this is already the case in CY31), this is the value in the current oper and from now on all the validations will use LREPHD=F. LREPHD=T is an obsolescent option which has not been yet removed from the code for the time being.

Project: arpege, aladin
ClearCase branch: mrpm603_CY31_dev31pour31t1

Added:

arp/adiab	cpdynad.F90	cpdyntl.F90	cpeuldynad.F90	
	cpeuldyntl.F90		gnhdynad.F90	gnhdyntl.F90
	gnhgrpad.F90	gnhgrptl.F90	gnhpdvdad.F90	
	gnhpdvdtl.F90	gpgrgeoad.F90		gpgrgeotl.F90
	gpgrxybad.F90		gpgrxybtl.F90	gpuvsad.F90

Modified:

ald/adiab	espcsi.F90	espcsiad.F90	espnhsi.F90
	espnhsiad.F90		
ald/coupling	eseimpls.F90		
ald/setup	suemp.F90		
ald/var	ebalvert.F90	ebalvertad.F90	ebalverti.F90
	ebalvertiad.F90	ecvaru2i.F90	ecvaru2iad.F90
arp/adiab	cpeuldynad.F90	cpeuldyntl.F90	cpg5_gp.F90
	cpg_dyn_ad.F90	cpg_dyn_tl.F90	cpg_end_ad.F90
	cpg_end_tl.F90	cpg_gp_ad.F90	cpg_gp_tl.F90
	cpg_zero_ad.F90	cpgad.F90	cpgtl.F90
	gpgrgeo.F90	gpgrgeoad.F90	gpgrgeotl.F90
	gpgrpad.F90	gpgrptl.F90	gpgrxyb.F90
	gpgrxybad.F90	gpgrxybtl.F90	gphluvad.F90
	gphluvtl.F90	gphlwi.F90	gphlwiad.F90
	gphlwitl.F90	gpuvsad.F90	gpxybad.F90
	gpxybtl.F90	lattexad.F90	lattextl.F90
	spc2.F90	spc2ad.F90	spchor.F90
	spchorad.F90	spcsi.F90	spcsiad.F90
	spnhsi.F90		
arp/control	cnt4.F90	spc2m.F90	spc2mad.F90
	spcm.F90	spcmad.F90	
arp/module	yomdyn.F90	yomlap.F90	
arp/namelist		namdyn.h	
arp/setup	sualdynb.F90	suallo.F90	suct0.F90
	sudim1.F90	sudyn.F90	sugmre.F90
	suhdu.F90	suheg.F90	sulap.F90
	sunhheg.F90	susmap.F90	suspgm.F90
arp/utility	deallo.F90		

Doc:

Remove obsolete routines.

Project: arpege
ClearCase branch: mrpm603_CY31_none

Deleted:

arp/adiab cpdynad.F90 cpdyntl.F90 gnhdynad.F90
gnhdyntl.F90 gnhgrpad.F90 gnhgrptl.F90
gnhpdvdad.F90 gnhpdvdtl.F90

POLI Paul

Doc:

1/ arp/obs_preproc/blacksat.F90 Retains only 20 AIRS stratospheric channels over sea and land. All other channels not active. Channels over high orography not active.

2/ arp/obs_preproc/defrun.F90 AIRS observation error standard deviations (sigma_o) for MF now read from file rmtberr_airs.dat. Added check to verify AIRS sigma_o are found between 1E-3 K and 1E+3 K ; set to 10 K otherwise.

3/ arp/pp_obs/rad1cnne.F90 AIRS observation minus first-guess biases now read from file rmtberr_airs.dat.

4/ arp/pp_obs/gpszen_delay.F90 Added optional outputs for zenith hydrostatic delay and zenith wet delay.

5/ arp/pp_obs/gpszen_delaytl.F90 Added optional outputs for zenith hydrostatic delay tangent linear and zenith wet delay tangent linear. Fixed bug in zenith total delay tangent linear.

6/ arp/pp_obs/gpszen_delayad.F90 Fixed bug in zenith total delay adjoint.

7/ uti/bator/bator_ecritures.F90 Set GPS ZTD observation error standard deviation to that found in OBSOUL file. If physically not possible (smaller than 1E-6 m or larger than 1 m), set observation error to 10 mm.

Project: arpege, utilities
ClearCase branch: mrpa679_CY31T0_dble31poli

Modified:

arp/obs_preproc blacksat.F90 defrun.F90
arp/pp_obs gpszen_delay.F90 gpszen_delayad.F90 gpszen_delaytl.F90
rad1cnne.F90
uti/bator bator_ecritures.F90

PUECH Dominique

Doc:

1/ Update modifications for gps and gpsro, according to the future parallel suite.

2/ BATOR: phasing of last modifications for AIRS, from new parallel suite.

3/ CONTRODB: add some prints.

4/ Modifications in radar table.

Project: arpege, odb, utilities
ClearCase branch: mrpa660_CY31T0_dev

Modified:

arp/common	yomdb_defs.h	yomdb_vars.h		
arp/module	parcma.F90	yomdb.F90		
odb/cma2odb		initmdb.F90		
odb/ddl	cma.h			
uti/bator	bator_decodbufr.F90		bator_ecritures.F90	bator_init.F90
	bator_lectures.F90	bator_saisies.F90	bator_util.F90	
uti/controdb	controdb.F90			

Doc:

Remove call to BLACKCLN .

Project: arpege
ClearCase branch: mrpa660_CY31_dev

Modified:

arp/pp_obs	obsv.F90

Patrick MOLL

Doc:

Bugfix.

Project: arpege
ClearCase branch: mrpa646_CY31T0_none

Modified:

arp/setupsuinif.F90

Doc:

Bugfix on processing the thinning of SATOB winds (validated on 5 days of assimilation).

Project: odb
ClearCase branch: mrpa646_CY31T0_vents

Modified:

odb/ddl	new_thinn_robhdr_4.sql	new_thinn_robhdr_5.sql
	pre_thinn_robhdr_4.sql	
	pre_thinn_robhdr_5.sql	

Ryad El KHATIB

Doc:

Correction on the dimensionning of a local array. It caused an overflow of array when NPROMA was smaller than the number of physical fields requested in the post-processing.

Project: arpege
ClearCase branch: mrpm602_CY31T0_fix

Modified:

arp/pp_obs fpintphy.F90

Doc:

Compatibility with g95 compiler.

Project: arpege, mpa, mse, sur, trans_ald, utilities, ifsaux
ClearCase branch: mrpm602_CY31T0_g95

Modified:

ald/adiab	espchor.F90	espchorad.F90	espcsi.F90
	espcsiad.F90	espnhsi.F90	espnhsiad.F90
ald/module	eggangles.F90		
ald/setup	suehdf.F90		
arp/module	yoecldp.F90		
arp/phys_ec	ec_phys_drv.F90		
mpa/chem/externals		aro_mnhc.mnh	aro_mnhdust.mnh
mpa/chem/module	modi_ch_aer_rhcalcn.mnh		
mse/externals	aro_ground_param.mnh		
mse/internals	ini_sun_aro.mnh	offline.mnh	sunpos.mnh
sur/module	susveg_mod.F90		
tal/programs	aatestprog.F90	test_adjoint.F90	
uti/fcq	fcqodb_DRIBU.F90	fcqodb_PILOT.F90	fcqodb_SYNOP.F90
	fcqodb_TEMP.F90		
uti/prescat/etimesort		timesort.F	
uti/prescat/qretrieve		var_col.F	
xrd/ddh	ddhr.F90		

Doc:

1/ modi_ch_interp_jvalues_n.mnh : fix for g95 compiler;
2/ drhook.c, svipc.c : fix for Darwin-based systems (use -DDARWIN at compilation time).

Project: mpa, ifsaux
ClearCase branch: mrpm602_CY31T0_gcc

Modified:

mpa/chem/module		modi_ch_interp_jvalues_n.mnh
xrd/support	drhook.c	
xrd/svipc	svipc.c	

SEITY Yann

Doc:

Bugfixes for chemical.

Project: mpa

ClearCase branch: mrpm637_CY31T0_bfchimie
Added:

mpa/chem/internals ch_set_photo_rates.mnh ichsamax.F
mpa/chem/module modi_ch_set_photo_rates.mnh

Modified:

mpa/chem/externals aro_mnhc.mnh aroini_mnhc.mnh
mpa/chem/internals ch_allocate_taccs.mnh
ch_deallocate_taccs.mnh ch_init_ccs.mnh
ch_interp_jvalues_n.mnh ch_jac.mnh
ch_nonzeroterms.mnh
ch_prodloss.mnh ch_set_photo_rates.mnh ch_set_rates.mnh
ch_sparse.mnh ch_terms.mnh
ch_update_jvalues_n.mnh
ichsamax.F sgbfa.F troe.mnh
troe_equil.mnh
mpa/chem/module modd_ch_m9_scheme.mnh
modi_ch_interp_jvalues_n.mnh modi_ch_set_photo_rates.mnh

Doc:

Bugfixes:
* *ald/c9xx/cchien.F90: clean some prints;*
* *ald/setup/sugeo1.F90: removing useless prints;*
* *arp/dia/wrspeca.F90: idem;*
* *arp/module/yomphy.F90: fix double declaration variables;*
* *arp/module/yomphy0.F90: idem;*
* *arp/phys_dmn/suparar.F90: removing useless prints;*
* *arp/setup/suhloption.F90: change a setup to have less prints in output.*
* *arp/setup/suhlph.F90: clean some prints;*
* *arp/setup/suphmf.F90: removing call to sulsforc which has already been displaced in su0yomb;*
* *arp/setup/suspeca.F90 bugfix for Fullpos (removing special treatment of GFL CVQQ);*
* *uti/oulan/ext_radomeh.F: fix double declaration variables.*

Project: arpege, aladin, utilities
ClearCase branch: mrpm637_CY31T0_bfcompilg95

Modified:

ald/c9xx cchien.F90
ald/setup suegeo1.F90
arp/dia wrspeca.F90
arp/module yomphy.F90 yomphy0.F90
arp/phys_dmn suparar.F90 suphmf.F90
arp/setup suhloption.F90 suhlph.F90 suspeca.F90
uti/oulan ext_radomeh.F

Doc:

1/ Bugfixes for the configuration Fullpos Prepsurfex in AROME.
2/ suinif.F90: bugfix.

Project: arpege
ClearCase branch: mrpm637_CY31T0_bfprepsurfex

Modified:

arp/phys_dmn suphmf.F90
arp/setup sufpc.F90 suinif.F90

Doc:

Portability modifications.

Project: arpege, mpa, mse
ClearCase branch: mrpm637_CY31T0_compil

Modified:

arp/adiab cpg.F90 cpg_gp.F90
arp/namelist namgfl.h
arp/obs_preproc defrun.F90
arp/phys_dmn acnebr.F90 actke.F90 apl_arome.F90
aplpar.F90 hl_aplpar.F90 suparar.F90
suphmpa.F90
arp/setup sugfl.F90
mpa/chem/interface ch_aer_init.h ch_aer_mod_init.h
mpa/micro/interface aro_adjust.h aro_buprocn.h
aro_convbu.h
aro_rain_ice.h aro_startbu.h aro_subudget.h
aroend_budget.h aroini_budget.h testapft.h
mse/internals ch_aer_dep.mnh ch_aer_emission.mnh grid_from_file.mnh
mr98.mnh pack_diag_patch_n.mnh pgd_grid.mnh
pgd_orography.mnh write_diag_seb_isba_n.mnh
zoom_pgd_cover.mnh
zoom_pgd_isba_full.mnh
zoom_pgd_orography.mnh
mse/module modi_grid_from_file.mnh

Doc:

Those routines are deleted and replaced by arp/adiab/gpcty_forc.F90 and arp/adiab/cp_forcing.F90 .

Project: arpege
ClearCase branch: mrpm637_CY31T0_none

Deleted:

arp/adiabforc_dyn.F90 forcing.F90

Doc:

This ClearCase branch contains:
- The version 1.3 of externalized surface: add some fluxes in output, modifications in T2M diagnostic, modifications in computing ice reserve, and modifications in the case of snow;
- Rachid's modifications for the surface call into the NPROMA loop in APL_AROME . Rationalization of the setup and the call to AROME physics, according to the specifications done by Karim. Total separation between surface and atmospherical parametrisations;
- Modifications for 1D model from Sylvie Malardel. Add two more GFLs and a new namelist for forcings;
- Bugfix in mpa/micro/internals/condensation.mnh .

Project: arpege, aladin, mse
ClearCase branch:mrpm637_CY31_arome

Added:

arp/adiab	cpdynad.F90	cpdyntl.F90	forc_dyn.F90
	forcing.F90	gnhdynad.F90	gnhdyntl.F90
	gnhgrpad.F90	gnhgrptl.F90	gnhpdvdad.F90
	gnhpdvdtl.F90		
arp/dia	aro_surf_diagh.F90	surf_diagh.F90	
arp/module	yomarar.F90	yomlsforc.F90	yommnh.F90
arp/namelist	namlsforc.h		
arp/phys_dmn		sulsforc.F90	suparar.F90
	suphmnh.F90		
	suphmpa.F90	suphmse.F90	surfext.F90
mse/internals	diag_inline_surf_atm_n.mnh	diag_surf_budget_isba.mnh	
diag_surf_budget_teb.mnh			
	error_read.mnh	get_surf_var_n.mnh	
get_var_nature_n.mnh			
	get_var_sea_n.mnh	get_var_town_n.mnh	
get_var_water_n.mnh			
	get_z0_n.mnh	read_lecoclimap.mnh	
mse/module	modi_average_diag_isba_n.mnh		
modi_diag_inline_surf_atm_n.mnh		modi_diag_surf_budget_isba.mnh	
	modi_diag_surf_budget_teb.mnh		
modi_get_surf_var_n.mnh		modi_get_var_nature_n.mnh	
	modi_get_var_sea_n.mnh	modi_get_var_town_n.mnh	
modi_get_var_water_n.mnh			
	modi_get_z0_n.mnh		

Modified:

ald/pp_obs	fpfillb.F90		
ald/setup	suebig.F90	suegeo1.F90	
arp/adiab	cpg.F90	cpg_end.F90	
cpg_gp.F90			
	cpphinp.F90	cputqy_arome.F90	
lavent.F90			
arp/ald_inc/namelist		nemgeo.h	
arp/control	gp_model.F90	stepo.F90	
arp/dia	aro_surf_diagh.F90		
arp/module	yemgeo.F90	yom_ygfl.F90	
yomarphy.F90			
	yomct0.F90	yomlsforc.F90	
arp/namelist	namarphy.h	namct0.h	
namgfl.h			
	namlsforc.h		
arp/phys_dmn	apl_arome.F90	mf_phys.F90	
sulsforc.F90			
	suparar.F90	suphmf.F90	
suphmpa.F90			
	suphmse.F90		
arp/pp_obs	fpcorphy.F90	fpiniphy.F90	
hpos.F90			
arp/setup	su0phy.F90	suct0.F90	
sudim1.F90			
	sudyn.F90	sufpc.F90	
sufpd.F90			

sugfl.F90 suhdf.F90
sumpini.F90
suphyds.F90 surfpds.F90
mpa/micro/internals condensation.mnh
mse/externals aro_ground_param.mnh aro_surf_diag.mnh
aroini_surf.mnh
ini_prep_surfex_aro.mnh prep_surf_aro.mnh
mse/interface aro_ground_param.h aro_surf_diag.h
aroini_surf.h
mse/internals alloc_diag_surf_atm_n.mnh aroinit_io_surf_n.mnh
average_diag.mnh
average_diag_isba_n.mnh average_diag_misc_isba_n.mnh
campaign_water_flux.mnh
ch_aer_dep.mnh ch_dep_isba.mnh
cls_2m.mnh
coare25_flux.mnh cotwores.mnh
cotworestress.mnh
coupling_dst_n.mnh coupling_isba_n.mnh
coupling_seaflux_n.mnh
coupling_surf_atm_n.mnh coupling_teb_n.mnh
coupling_watflux_n.mnh
dealloc_diag_surf_atm_n.mnh default_diag_surf_atm.mnh
diag_inland_water_n.mnh
diag_inline_isba_n.mnh diag_inline_seaflux_n.mnh
diag_inline_surf_atm_n.mnh
diag_inline_teb_n.mnh diag_inline_watflux_n.mnh
diag_isba_init_n.mnh
diag_isba_n.mnh diag_misc_isba_n.mnh
diag_nature_n.mnh
diag_sea_n.mnh diag_seaflux_init_n.mnh
diag_seaflux_n.mnh
diag_surf_atm_n.mnh diag_surf_budget_isba.mnh
diag_surf_budget_sea.mnh
diag_surf_budget_teb.mnh diag_surf_budget_water.mnh
diag_teb_init_n.mnh
diag_teb_n.mnh diag_town_n.mnh
diag_watflux_init_n.mnh
diag_watflux_n.mnh drag.mnh
get_flux_n.mnh
get_surf_var_n.mnh get_var_nature_n.mnh
get_var_sea_n.mnh
get_var_town_n.mnh get_var_water_n.mnh
get_z0_n.mnh
ice_sea_flux.mnh init_io_surf_asc_n.mnh
init_isba_n.mnh
init_seaflux_n.mnh init_surf_atm_n.mnh
init_teb_n.mnh
init_watflux_n.mnh isba.mnh
mr98.mnh
pack_diag_patch_n.mnh param_cls.mnh
pgd_cover.mnh
prep.mnh read_grib.mnh
read_lecoclimap.mnh
read_pgd_isba_n.mnh read_pgd_teb_n.mnh
read_surfx1_aro.mnh
read_surfx2_aro.mnh readwrite_emis_field_n.mnh
snow3l.mnh
snow3l_isba.mnh sunpos.mnh
unpack_diag_patch_n.mnh

water_flux.mnh write_diag_inland_water_n.mnh
write_diag_isba_n.mnh
write_diag_misc_isba_n.mnh write_diag_nature_n.mnh
write_diag_pgd_isba_n.mnh
write_diag_sea_n.mnh write_diag_seaflux_n.mnh
write_diag_seb_isba_n.mnh
write_diag_seb_seaflux_n.mnh write_diag_seb_surf_atm_n.mnh
write_diag_seb_teb_n.mnh
write_diag_seb_watflux_n.mnh write_diag_surf_atm_n.mnh
write_diag_teb_n.mnh
write_diag_town_n.mnh write_diag_watflux_n.mnh
write_surfn1_asc.mnh
write_surfx1_aro.mnh write_surfx1_asc.mnh
write_surfx2_aro.mnh
write_surfx2_asc.mnh z0eff.mnh
mse/module modd_diag_isba_n.mnh modd_diag_misc_isba_n.mnh
modd_diag_seaflux_n.mnh
modd_diag_surf_atm_n.mnh modd_diag_teb_n.mnh
modd_diag_watflux_n.mnh
modd_io_surf_aro.mnh modd_pack_diag_isba.mnh
mode_read_extern.mnh
modi_average_diag.mnh modi_average_diag_isba_n.mnh
modi_campaign_water_flux.mnh
modi_cls_2m.mnh modi_coare25_flux.mnh
modi_default_diag_surf_atm.mnh
modi_diag_inland_water_n.mnh modi_diag_inline_isba_n.mnh
modi_diag_inline_seaflux_n.mnh
modi_diag_inline_surf_atm_n.mnh
modi_diag_inline_teb_n.mnh modi_diag_inline_watflux_n.mnh
modi_diag_isba_init_n.mnh modi_diag_isba_n.mnh
modi_diag_misc_isba_n.mnh
modi_diag_nature_n.mnh modi_diag_sea_n.mnh
modi_diag_seaflux_init_n.mnh
modi_diag_seaflux_n.mnh modi_diag_surf_budget_isba.mnh
modi_diag_surf_budget_sea.mnh
modi_diag_surf_budget_teb.mnh
modi_diag_surf_budget_water.mnh modi_diag_teb_init_n.mnh
modi_diag_teb_n.mnh modi_diag_town_n.mnh
modi_diag_watflux_init_n.mnh
modi_diag_watflux_n.mnh modi_drag.mnh
modi_get_flux_n.mnh
modi_get_surf_var_n.mnh modi_get_var_nature_n.mnh
modi_get_var_sea_n.mnh
modi_get_var_town_n.mnh modi_get_var_water_n.mnh
modi_get_z0_n.mnh
modi_ice_sea_flux.mnh modi_isba.mnh
modi_mr98.mnh
modi_pack_diag_patch_n.mnh modi_param_cls.mnh
modi_snow3l.mnh
modi_snow3l_isba.mnh modi_water_flux.mnh
modi_write_diag_inland_water_n.mnh
modi_write_diag_isba_n.mnh modi_write_diag_nature_n.mnh
modi_write_diag_sea_n.mnh
modi_write_diag_seaflux_n.mnh modi_write_diag_teb_n.mnh
modi_write_diag_town_n.mnh
modi_write_diag_watflux_n.mnh modi_z0eff.mnh
modn_isba_n.mnh
modn_seaflux_n.mnh modn_surf_atm_n.mnh
modn_teb_n.mnh

modn_watflux_n.mnh

Doc:

1/ Bugfixes and modifications for 1D-model .

2/ Portability modifications.

Project: arpege, aladin
ClearCase branch: mrpm637_CY31_bfSyl

Added:

arp/adiab cp_forcing.F90 cpdynad.F90 cpdyntl.F90
gnhdynad.F90gnhdyntl.F90 gnhgrpad.F90
gnhgrptl.F90 gnhpdvdad.F90 gnhpdvdtl.F90
gpcty_forc.F90
arp/module yomlsforc.F90 yommnh.F90
arp/setup sulsforc.F90

Modified:

ald/c9xx cchien.F90
arp/adiab cp_forcing.F90 cpg.F90 cpg_dyn.F90
cpg_gp.F90 gpcty_forc.F90
arp/module yomlsforc.F90
arp/phys_dmn acradin.F90 suphmf.F90
arp/setup su0yomb.F90 sulsforc.F90

Doc:

Remove obsolete routines.

Project: arpege
ClearCase branch:mrpm637_CY31_none

Deleted:

arp/module yommnh.F90
arp/phys_dmn suphmnh.F90 surfext.F90

TROJAKOVA Alena

Doc:

All modifications concern ALADIN 3DVAR model configuration.

Blacklist file blacklist.b (currently not content of pack) was modified to obtain the same number observations (except geopotential of SYNOP observation, where is a difference less than 2% for a tested case). There was added blacklisting of 2m relative humidity of SYNOP observation in case of difference between model and real orography bigger than 200 m (previously in BLACKCLN routine, removal of channel 13 of AMSU-A from blacklisting (BLACKSAT) (This modification can have an impact also for ARPEGE 4DVAR because there in no LELAM key in blacklisting procedure). And correction of blacklisting of HR_MSG (SEVIRI) data.

Next modification (by Bernard Chapnik) fixed weights used for computation of inverse horizontal prediction error correlation matrix in SUEJBCOR.

Modifications for storing trajectory in grid-point space (LTRAJGP). In SUBFGS one crash on abort of GET_TRAJ_GRID: CALL ABOR1('TRAJ_MAIN:NOT YET DONE/GFL') in case of LTRAJGP=F (current setting for ALADIN). Assuming that it would be enough to correct number of GFL fields (trajectory) YGFL%NUMFLDS5, decrementing of YGFL%NUMFLDS5 and deactivation of convective precipitation flux (YCPF) was added in DEACT_CLOUD_GFL (module GFL_SUBS). Unfortunately it was not enough because YGFL%NUMFLDS5 counts all fields, e.g. grid-point and spectral and there remain spectral humidity as last variable to be kept. So as temporary solution the key LTRAJGP was used to avoid entering GET_TRAJ_GRID. The correction of YGFL%NUMFLDS5 was kept as it can be found useful later on.

Last correction applies a bug of for mean-wind in SUECGES where instead of initialization of SP7A1 was initializes SPA1 and which caused double Jo for wind observation of all types in ALADIN minimization.

Modified routines:

arp/obs_preproc/mkglobstab.F90
Misplaced deallocation statement corrected.

ald/var/suejbcor.F90
Bf of weights used for computation of inverse horizontal prediction error correlation matrix

arp/module/gfl_subs.F90
added deactivation of YCFP and deremented of YGFL%NUMFLDS5

arp/utility/subfgs.F90
fix for LTRAJGP=F

arp/control/cva1.F90
call DEACT_CLOUD_GFL in all cases except 3DFGAT

All modifications concern ALADIN 3DVAR model configuration.

Blacklist file blacklist.b (currently not content of pack) was modified to obtain the same number observations (except geopotential of SYNOP observation, where is a difference less than 2% for a tested case). There was added blacklisting of 2m relative humidity of SYNOP observation in case of difference between model and real orography bigger than 200 m (previously in BLACKCLN routine, removal of channel 13 of AMSU-A from blacklisting (BLACKSAT) (This modification can have an impact also for ARPEGE 4DVAR because there in no LELAM key in blacklisting procedure). And correction of blacklisting of HR_MSG (SEVIRI) data.

Next modification (by Bernard Chapnik) fixed weights used for computation of inverse horizontal prediction error correlation matrix in SUEJBCOR.

Modifications for storing trajectory in grid-point space (LTRAJGP). In SUBFGS one crash on abort of GET_TRAJ_GRID: CALL ABOR1('TRAJ_MAIN:NOT YET DONE/GFL') in case of LTRAJGP=F (current setting for ALADIN). Assuming that it would be enough to correct number of GFL fields (trajectory) YGFL%NUMFLDS5, decrementing of YGFL%NUMFLDS5 and deactivation of convective precipitation flux (YCPF) was added in DEACT_CLOUD_GFL (module GFL_SUBS). Unfortunately it was not enough because YGFL%NUMFLDS5 counts all fields, e.g. grid-point and spectral and there remain spectral humidity as last variable to be kept. So as temporary solution the key LTRAJGP was used to avoid entering GET_TRAJ_GRID. The correction of YGFL%NUMFLDS5 was kept as it can be found useful later on.

Last correction applies a bug of for mean-wind in SUECGES where instead of initialization of SP7A1 was initializes SPA1 and which caused double Jo for wind observation of all types in ALADIN minimization.

Modified routines:

arp/obs_preproc/mkglobstab.F90
Misplaced deallocation statement corrected.

ald/var/suejbcor.F90
Bf of weights used for computation of inverse horizontal prediction error correlation matrix

arp/module/gfl_subs.F90
added deactivation of YCFP and deremenTing of YGFL%NUMFLDS5

arp/utility/subfgs.F90
fix for LTRAJGP=F

arp/control/cva1.F90
call DEACT_CLOUD_GFL in all cases except 3DFGAT

Project: arpege, aladin
ClearCase branch: mrpe694_CY31T0_phasing

Modified:

ald/var	suejbcor.F90	
arp/control	cva1.F90	
arp/module	gfl_subs.F90	
arp/obs_preproc		mkglobstab.F90
arp/utility	subfgs.F90	
arp/var	suecges.F90	

Doc:

These modifications concern mainly the bug in the routine ELISLAP which is used to smooth the soil water index; this routine is an ALADIN routine and it is used also in the configuration e923 (this one is run in monotask). Although there were correctly arranged collecting the soil water index on one processor where ELISLAP is called, then inside ELISLAP the map factor array is used (the GM array from the module YOMGC). The trouble is that GM is local on the processor while the array addressing inside ELISLAP is global.

Next modification concerns adding NEC compiler directives to arp/canari/cacsts.F90

Modified routines:

ald/c9xx/elislap.F90:
Map factor added as dummy argument to ensure correct addressing inside ELISLAP. And small cleaning (NLOENG corresponds to local variable KLONG, NDGUNG=NDLUNG=1 all the time).

arp/canari/casmswi.F90:
Collecting of map factor and change of corresponding ELISLAP call (dummy argument added).

ald/c9xx/eincli1.F90:
Change of corresponding ELISLAP call (dummy argument added).

ald/c9xx/einclir.F90:
Change of corresponding ELISLAP call (dummy argument added).

arp/canari/cacsts.F90:
NEC compiler directive added. This compiler option must be placed on the line before SUBROUTINE statement (no empty lines allowed), so it cannot be implemented via #ifdef SX4 CPP macro.

Project: arpege, aladin
ClearCase branch: mrpe694_CY31_bfSWI

Modified:

ald/c9xx eincli1.F90 einclir.F90 elislap.F90
arp/canaricacsts.F90casmswi.F90

VANA Filip

Doc:

The modification introduces the proper tuning for the gridpoint part of the SLHD in case of non-uniform resolution. The existing tuning for spherical geometry has been also rescaled in order to be consistent with the one of LAM.

Project: arpege, aladin
ClearCase branch: mrpe706_CY31T0_slhdstr

Modified:

ald/setup sueldynb.F90
arp/adiab cpg.F90 cpg_dyn.F90lacdyn.F90
latte_kappa.F90
arp/module yomdyn.F90
arp/setup sualdynb.F90 sudyn.F90 sugem2.F90
arp/utility deallo.F90