ARPEGE MEMORANDUM

From: GCO Date: April 03, 2007

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

Subject: New cycle CY32T0

A new cycle CY32T0 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: CY32T0

Modified libraries: arpege, aladin, odb, utilities, bl, satrad, mpa, mse, trans, surf

Contributors:

ALIAS Antoinette	Project:arpege	CCase branch:mrga589_CY32_gco
AUGER Ludovic	Project:arpege	CCase branch:mrpa645_CY32_bf
	Project:arpege	CCase branch:mrpa645_CY32_bugseviri
	Project:arpege	CCase branch:mrpa645_CY32_none
BERRE Loik	Project:arpege	CCase branch:mrpa663_CY32_cosuvcor
Francoise TAILLEFER	Project:arpege	CCase branch:mrpa647_CY32_db923
GCO	Project:arpege	CCase branch:marp001_CY32_bator
	Project:arpege	CCase branch:marp001_CY32_dble
	Project:arpege	CCase branch:marp001_CY32_none
Jean-Daniel GRIL	Project:arpege	CCase branch:mrpe604_CY32_geomerc
LABADIE Carole	Project:arpege	CCase branch:mrmn269_CY32_combi
PUECH Dominique	Project:arpege	CCase branch:mrpa660_CY32_dev
Patrick MOLL	Project:arpege	CCase branch:mrpa646_CY32_debug
Ryad El KHATIB	Project:arpege	CCase branch:mrpm602_CY31T1_necplus
	Project:arpege	CCase branch:mrpm602_CY32_odbnec
	Project:arpege	CCase branch:mrpm602_CY32_sur
SEITY Yann	Project:arpege	CCase branch:mrpm637_CY32_leq_regions

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ALIAS Antoinette

Doc:

Addition of LTPROF key to have several vertical layers deep SOIL .

Project: arpege
ClearCase branch: mrga589_CY32_gco

Modified:

arp/module yomdphy.F90
arp/namelist namdphy.h
arp/setup su_surf_flds.F90 sudim1.F90

AUGER Ludovic

Doc:

Fix for ALADIN 3D-VAR .

Project: arpege, aladin
ClearCase branch: mrpa645_CY32_bf

Modified:

ald/var ebalvert.F90
arp/utility spec_imzero.F90

Doc:

Fix bias correction of seviri datas .

Project: arpege
ClearCase branch: mrpa645_CY32_bugseviri

Modified:

arp/module yomtvrad.F90

Doc:

Fix a bug in ALADIN minimization.

Project: aladin
ClearCase branch: mrpa645_CY32_none

Modified:

ald/parallel egathereigmd.F90

BERRE Loik

Doc:

Introduction of a new switch (LCORCOSU_VCOR), which is initialised to FALSE in SUJB by default. When switching LCORCOSU_VCOR to TRUE, the compact support (in sujbcosu) is applied to vertical correlations (instead of vertical covariances).This option has been necessary to avoid the occurrence of negative eigen values in a specific case, namely when using covariances calculated from forecast differences which were vertically extrapolated from L46 to L60.

Project: arpege
ClearCase branch: mrpa663_CY32_cosuvcor

Modified:

arp/module yomjg.F90
arp/namelist namjg.h
arp/var sujb.F90 sujbcosu.F90

Francoise TAILLEFER

Doc:

Fix for configuration 923 .

Project: arpege
ClearCase branch: mrpa647_CY32_db923

Modified:

arp/setup su_surf_flds.F90

GCO

Doc:

Lost modifications from "neccbf" modest of Ryad El-Khatib are restored.

Project: utilities
ClearCase branch: marp001_CY32_bator

Modified:

uti/bator bator.F90 bator_ecritures.F90 bator_lectures.F90
uti/module bator_module.F90

Doc:

Miscellaneous stuff from current parallel suite on NEC .

Project: arpege,bl,satrad,utilities,odb
ClearCase branch: marp001_CY32_dble

Added:

uti/add_cloud_fields add_cloud_fields.F90
uti/oulan oulan_boite.F
uti/pregpssol get_model_gpssol.F90

Modified:

arp/adiab	cputqy.F90		
arp/canari	cacsts.F90	canali.F90	
arp/control	cva1.F90		
arp/module	qactex.F90	yomphy.F90	yomphy0.F90
arp/namelist	nactex.h	namphy.h	namphy0.h
arp/obs_preproc	blacksat.F90	fgchk.F90	gefger.F90
arp/phys_dmn	acnebn.F90	acnebsm.F90	acpluiz.F90
	actsecad.F90	actsectl.F90	advprc.F90
	advprcs.F90	aplpar.F90	hl_aplpar.F90
	suphy0.F90		
arp/pp_obs	gpscalc_alpha.F90	gpscalc_nr.F90	gpsro_oberror.F90
	gpsro_op.F90		
arp/setup	su0phy.F90	sudyn.F90	

bla	mf_blacklist.b		
odb/ddl	sufger_robody_1.sql		
sat/rttov	rttov_ec.F90	rttov_integrate.F90	rttov_parm_ec.F90
	rttov_setupchan_ec.F90	rttov_setupindex_ec.F90	rttovad.F90
	rttovtl.F90		
uti/add_cloud_fields	add_cloud_fields.F90		
uti/bator	bator.F90	bator_decodbufr.F90	
uti/fcq	fcqodb_SYNOP.F90	fcqodb_TEMP.F90	
uti/oulan	ext_gpssol.F	ext_ssmi.F	ext_tovshirs.F
	ext_tovshirs_ech.F	oulan_boite.F	oulan_extract.F
	oulan_namelist.F		
uti/pregpssol	filter_gpssol.F90	get_model_gpssol.F90	get_tslot_gpssol.F90
	pregpssol.F90	read_list_gpssol.F90	
uti/progrid	procor2.F	profac.F	

Jean-Daniel GRIL

Doc:

1/ Run systematically old EGGX if old frame format.

2/ Not re-compute resolutions (to handle domains "1 point" or "linear") implicates some border effects if the computing of the domain is made with new EGGX, using an old frame format (NCADFORM=0). Actually, in some cases, "eggx_n.F90" runs old EGGX (old frame) which can be in its bug area (from which the writing of new version), and returns strange values. So that, choosen algorithm is:
- if new frame then run MAKDO (new EGGX);
- if old frame then:
* * if KGIVO<>0 or KSTROP<>0 or PRPK = 10 (1) then run old EGGX;*
* * compute the center of domain with routines of new EGGX;*
* * if KGIVO=0 or KSTROP=0 or PRPK <> 10 (2) then compute the resolutions with care about "1 point" or "linear" cases, and run MAKDO .*

(1) possible modifications of points SW/NE/REF by EGGX;
(2) old EGGX has not been run, either file was created with old EGGX and parameters SW/NE/REF are OK, or file was created with MAKDO - in both case we can re-run MAKDO with minimal risks;

3/ Modifications in "eggpack.F90":
- modifications in conversion routines RAD->DEG and vice-versa;
- remove parameter PI in call to REF_DATA .

Project: arpege,aladin,utilities
ClearCase branch: mrpe604_CY32_geomerc

Modified:

ald/c9xx	einter1.F90	einter10.F90	einter2.F90
	einter6.F90	einter8.F90	
ald/module	eggangles.F90	eggmrt.F90	eggpack.F90
ald/obs_preproc	lamflag_odb_select.F90		
ald/setup	suefpg3.F90		
ald/utility	eggx_n.F90	elalo2xy.F90	
uti/bator	bator_util.F90		

LABADIE Carole

Doc:

*Rename all routines from « *.mnh » to « *.F90 », and phasing on cycle CY32 .*

Project: utilities
ClearCase branch: mrmn269_CY32_combi

Renamed:

uti/combi	combi.mnh to uti/combi/combi.F90
	combi_opti.mnh to uti/combi/combi_opti.F90
	combi_pert.mnh to uti/combi/combi_pert.F90
	masque.mnh to uti/combi/masque.F90
	proba.mnh to uti/combi/proba.F90
	stat.mnh to uti/combi/stat.F90

Modified:

uti/combi	combi.F90	combi_opti.F90	combi_pert.F90
	masque.F90	proba.F90	stat.F90

PUECH Dominique

Doc:

Modifications to run BATOR on NEC .

Project: odb,utilities
ClearCase branch: mrpa660_CY32_dev

Modified:

odb/cma2odb	ctxinitdb.F90	getatdb.F90	getdb.F90
	putatdb.F90		
uti/bator	bator.F90	bator_ecritures.F90	bator_lectures.F90
	bator_util.F90		
uti/module	bator_module.F90		

Patrick MOLL

Doc:

Last fix for 4D-VAR .

Project: arpege
ClearCase branch: mrpa646_CY32_debug

Modified:

arp/control	cva1.F90
arp/setup	su1yom.F90
arp/var	suvazx.F90

Ryad El KHATIB

Doc:

1/ Some bugfixes (for SUGOMS, and for OpenMP directives).

2/ Some optimizations, also for AROME .

3/ Harmonisation with ECMWF (for cycle CY32).

4/ First modifications to limit some "NaN" .

Project: arpege,aladin,mpa,mse,odb,trans,utilities,ifsaux
ClearCase branch: mrpm602_CY31T1_necplus

Modified:

ald/coupling	ebipaux.F90	ecoupl1.F90	eseimpls.F90
	esrlxt1.F90		
ald/inidata	esc2r.F90		
arp/adiab	call_sl.F90	laitri.F90	sigam.F90
arp/control	gp_model.F90		
arp/obs_preproc	sugoms.F90		
arp/phys_dmn	suphy1.F90		
arp/phys_ec	rrtm_taumol2.F90		
arp/setup	su0yoma.F90	sudim1.F90	suhlph.F90
	susc2b.F90		
arp/var	suvar.F90		
mpa/micro/internals	rain_ice.mnh		
mpa/turb/internals	bl89.mnh		
mse/internals	av_patch_pgd_1d.mnh		
odb/cma2odb	gather4poolmask.F90		
tfl/module	spnsdead_mod.F90	trgtol_mod.F90	trltog_mod.F90
uti/prescat/qretrieve	regroup.F		
xrd/fa	fairno.F		

Doc:

Enable PC-made ODBs (little endians) on NEC (big endians).

Project: odb
ClearCase branch: mrpm602_CY32_odbnec

Modified:

odb/aux swapbytes.c

Doc:

1/ Restore a deleted bugfix in su_surf_flds.F90 .

2/ Fixes to work in adiabatical mode .

Project: arpege,surf
ClearCase branch: mrpm602_CY32_sur

Modified:

arp/setup su_surf_flds.F90
sur/module sussoil_mod.F90 susveg_mod.F90

SEITY Yann

Doc:

1/ Set the same name in AROME as in ALADIN the cloud fraction field.

2/ Set default of LEQ_REGIONS to .FALSE. if .NOT.LECMWF .

Project: arpege
ClearCase branch: mrpm637_CY32_leq_regions

Modified:

arp/setup sufa.F90 sump0.F90