

ARPEGE MEMORANDUM

From: GCO **Date:** October 08, 2007
To: GMAP, COMPAS, GMGEC, GMME,
DIR/RE/CRC, Mats Hamrud
Subject: New cycle CY32T3

A new cycle CY32T3 has been created. This is a common cycle with the ECMWF. The different contributions for this cycle are described in the following pages.

ClearCase label: CY32T3

Modified libraries: ifs, ifsaux, aladin, odb, utilities, black_list, satrad, mpa, mse

Contributors:

ALIAS Antoinette	Project:ifs	CCase branch:mrpa589_CY32T2_gco
	Project:ifs	CCase branch:mrpa589_CY32T2_gco2
AUDOIN Jean-Marcc	Project:ifs	CCase branch:mrpe602_CY32T2_dust
AUGER Ludovic	Project:ifs	CCase branch:mrpa645_CY32T2_buggo
	Project:ifs	CCase branch:mrpa645_CY32T2_gomt
BROUSSEAU Pierre	Project:ifs	CCase branch:mrpm613_CY32T2_aromeassim
	Project:ifs	CCase branch:mrpm613_CY32T2_aromebf
BROZKOVA Radmila	Project:ifs	CCase branch:mrpe684_CY32T2_moist
CHAPNIK Bernard	Project:ifs	CCase branch:mrpa658_CY32T1_narbebf
	Project:ifs	CCase branch:mrpa658_CY32T2_narbe
Dominique Puech	Project:ifs	CCase branch:marp001_CY32T0_op1v02
Dominique Puech & Fatima Karbou	Project:ifs	CCase branch:marp001_CY32T2_emiss
EL-KHATIB Ryad	Project:ifs	CCase branch:mrpm602_CY32T2_t3fix1
	Project:ifs	CCase branch:mrpm602_CY32T2_t3fix2
	Project:ifs	CCase branch:mrpm602_CY32T2_tot3
GCO	Project:ifs	CCase branch:marp001_CY32T1_bator
	Project:ifs	CCase branch:marp001_CY32T2_none
	Project:ifs	CCase branch:marp003_CY32T2_yomoml
GRIL Jean-Daniel	Project:ifs	CCase branch:marp003_CY32T2_20070924-mrpe604
GUILLAUME Frank	Project:ifs	CCase branch:mrpa644_CY32T1_fg07005
	Project:ifs	CCase branch:mrpa644_CY32T2_fg
	Project:ifs	CCase branch:mrpa644_CY32T2_fg07007
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PIRIOU Jean-Marcel	Project:ifs	CCase branch:mrpm606_CY32T2_ddhalaro
POLI Paul	Project:ifs	CCase branch:marp001_CY32T0_op1v02
	Project:ifs	CCase branch:mrpa679_CY32T0_bfgpsro6km

	Project:ifs	CCase branch:mrpa679_CY32T2_fix_newthinn
SEITY Yann	Project:ifs	CCase branch:marp004_CY32T2_coryann
	Project:ifs	CCase branch:mrpm637_CY32T1_aromeBF
	Project:ifs	CCase branch:mrpm637_CY32T2_aromefor32t3
	Project:ifs	CCase branch:mrpm637_CY32T2_bfprepsurfex
	Project:ifs	CCase branch:mrpm637_CY32T2_surfex2.bf5
TAILLEFER Francoise	Project:ifs	CCase branch:mrpa647_CY32T1_ft923
	Project:ifs	CCase branch:mrpa647_CY32T2_dbcan
TROJAKOVA Alena	Project:ifs	CCase branch:mrpe694_CY32T1_bf701
VANA Filip	Project:ifs	CCase branch:mrpe706_CY32T2_cleaning
WATTRELOT Eric	Project:ifs	CCase branch:mrpa652_CY32T2_radar
YESSAD Karim	Project:ifs	CCase branch:mrpm603_CY32T2_dev32t2pour32t3
	Project:ifs	CCase branch:mrpm603_CY32T2_fix32t2t3

ALIAS Antoinette

Doc:

Modifications for a run ARPEGE + SURFEX .

Project: ifs,mse
ClearCase branch: mrga589_CY32T2_gco

Added:

mse/internals get_grid_dim_gauss.mnh write_in_lfi_x1_aro.mnh

Modified:

arp/phys_dmn	aplp2.F90	suphmse.F90	
arp/pp_obs	fp2sx1.F90		
mse/externals	aro_surf_diag.mnh	aroini_surf.mnh	atm2sx_env.mnh
	ini_prep_surfex_aro.mnh		
mse/interface	aroini_surf.h	atm2sx_env.h	
mse/internals	average_diag.mnh	get_grid_dim.mnh	get_grid_dim_gauss.mnh
	get_mesh_dim_gauss.mnh	latlon_gridtype_gauss.mnh	read_in_lfi_x2_aro.mnh
	read_surfn0_aro.mnh	read_surfx1_aro.mnh	read_surfx2_aro.mnh
	write_in_lfi_x1_aro.mnh	write_surfx1_aro.mnh	write_surfx2_aro.mnh
mse/module	modd_io_surf_aro.mnh		

Doc:

Fix a forbidden use of ARPEGE routines in project "mse".

Project: ifs,mse
ClearCase branch: mrga589_CY32T2_gco2

Modified:

arp/phys_dmn suphmse.F90

mse/externals aroini_surf.mnh
mse/interface aroini_surf.h

AUDOIN Jean-Marcc

Doc:

1/ New domain for Morage: GLOB22 .
2/ Introduce new fields for MOCAGE (dust) .
3/ Fix an overflow in case of no compacted field in a BDAP clim file.

Project: utilities
ClearCase branch: mrpe602_CY32T2_dust

Modified:

uti/progrid procor2.F prodom.F prolec.F

AUGER Ludovic

Doc:

Bugfixes ("CLS" problems).

Project: ifs
ClearCase branch: mrpa645_CY32T2_buggo

Modified:

arp/var cobs.F90 cobslag.F90

Doc:

1/ Modifications allowing to use directly temperature and relative humidity fields at 2 meters. This modification is under key LDIRCLSMOD (NAMOBS).
If activated in appropriate configurations (screening, minim, fullpos), this keyallows to read fields CLSTEMPERATURE and CLSHUMI.RELATIVE of initial file, and to fill the appropriate surface goms arrays with read values, instead of use the vertical interpolations operators, which re-compute those same values from surface fields and model last level fields.

2/ Bugfixes .

Project: ifs
ClearCase branch: mrpa645_CY32T2_gomt

Modified:

arp/module	goms.F90	surface_fields.F90	yomdphy.F90
	yomobs.F90		
arp/namelist	namdphy.h		
arp/obs_preproc	defrun.F90		
arp/pp_obs	hop.F90	mpobseq.F90	obshor.F90
	ppobsac.F90	preints.F90	slint.F90
arp/setup	su_surf_fds.F90	sudim1.F90	sugridadm.F90
	susc2b.F90		
arp/var	cobs.F90	cobslag.F90	

BROUSSEAU Pierre

Doc:

Fix a non-allowed call to TAL projects routines in ARPEGE/IFS.

Project: aladin,ifs

ClearCase branch: mrpm613_CY32T2_aromeassim

Added:

ald/transform etransinv_jbtomodel.F90 etransinv_jbtomodelad.F90

arp/transform transinv_jbtomodel.F90 transinv_jbtomodelad.F90

Modified:

ald/transform etransinv_jbtomodel.F90 etransinv_jbtomodelad.F90

arp/transform transinv_jbtomodel.F90 transinv_jbtomodelad.F90

arp/utility jbtomodel.F90 jbtomodelad.F90

Doc:

Fix some arrays dimensions.

Project: aladin,mse

ClearCase branch: mrpm613_CY32T2_aromebf

Modified:

ald/programs blend.F90

mse/externals ini_prep_surfex_aro.mnh

BROZKOVA Radmila

Doc:

These modifications are bugfixes and/or small corrections of ALARO-0.

arp/namelist/namphy0.h:

Add tuning constants FSPRAIN, EFFCOLL, SCLESPR and SCLESPS. These constants were already defined in cy32t1 but were forgotten in the namphy0.h file within the last phasing.

arp/phys_dmn/aplpar.F90:

Modified calls to parameterizations (ALARO-0). Corrections in 3MT cascade.

arp/phys_dmn/acnebcond.F90

arp/phys_dmn/accdev.F90:

Fix of the resolved cloudiness computation when 3MT.

arp/phys_dmn/aplmpphys.F90

arp/phys_dmn/acevmel.F90:

Fix of the evaporation/melting of precipitations.

arp/phys_dmn/acacon.F90

arp/phys_dmn/accoll.F90

arp/phys_dmn/acupu.F90

arp/phys_dmn/acupm.F90

arp/phys_dmn/acupd.F90:

Cleaning.

arp/phys_dmn/accvud.F90:
Correction of mass flux and condensation flux computation.

arp/phys_dmn/acmodo.F90:
Correction of the transport computation and evaporation flux.

arp/phys_dmn/acraneb.F90:
Fix in the net exchange rate computation.

Project: ifs
ClearCase branch: mrpe684_CY32T2_moist

Added:

arp/phys_dmn actqsats.F90

Modified:

arp/namelist	namphy0.h		
arp/phys_dmn	acacon.F90	accdev.F90	accoll.F90
	accvud.F90	acevmel.F90	acmodo.F90
	acnebcond.F90	acraneb.F90	actqsats.F90
	acupd.F90	acupm.F90	acupu.F90
	aplmpphys.F90	aplpar.F90	

CHAPNIK Bernard

Doc:

Fix for B-Level parallelization .

Project: aladin
ClearCase branch: mrpa658_CY32T1_narbebf

Modified:

ald/setup sueqlimsat.F90

Doc:

xrd/module/spectral_fields.F90:
Remove an already done array allocation.

arp/utility/spec_imzero.F90:
Remove a test which could try to evaluate a nullified pointer.

Project: ifs,ifsaux
ClearCase branch: mrpa658_CY32T2_narbe

Modified:

arp/utility spec_imzero.F90
xrd/module spectral_fields.F90

Dominique Puech

Doc:

Increase size of dynamic arrays, following up update of threshold file.

Project:

ClearCase branch: marp001_CY32T0_op1v02

Modified:

uti/controdb controdb.F90

Dominique Puech & Fatima Karbou

Doc:

Move EMISS datas stuff from table atovs to table atovs_body .

Project: ifs,odb

ClearCase branch: marp001_CY32T2_emiss

Added:

odb/ddl.ECMA obsort_atovs_body.sql obsort_hdr2atovs_body.sql
odb/ddl obsort_atovs_body.sql obsort_hdr2atovs_body.sql

Modified:

arp/common yomdb_defs.h yomdb_vars.h
odb/cma2odb getdb.F90 initmdb.F90 putatdb.F90
odb/ddl.ECMA ECMA.dep
odb/ddl cma.h obsort_atovs_body.sql obsort_hdr2atovs_body.sql
odb/lib version.c

EL-KHATIB Ryad

Doc:

*1/ hopad.F90 : more proper protection against aggressive optimisation by NEC compiler .
2/ yomoml.F90 : bugfix for OPEN-MP on NEC (critical for sl adjoint).*

Project: ifs,ifsaux

ClearCase branch: mrpm602_CY32T2_t3fix1

Modified:

arp/pp_obs hopad.F90
xrd/module yomoml.F90

Doc:

*1/ congrad.F90 : bugfix for use with Open-mp.
2/ sufpsc2_dep.F90 : enable NFPRONA_DEP to be negative (for optimisation).*

Project: ifs

ClearCase branch: mrpm602_CY32T2_t3fix2

Modified:

arp/setup sufpsc2_dep.F90
 arp/var congrad.F90

Doc:

1/ Bugfixes toward the use of Open-MP on NEC .
 2/ Emulate the use of MathKeisan FFTs (via the new macro MATHKEISAN).
 3/ PINUTS package from Jean-Daniel Gril .

Project: ifs,,ifsaux
ClearCase branch: mrpm602_CY32T2_tot3

Added:

uti/pinuts	include		
uti/pinuts/include	mykind.h		
uti/pinuts	module		
uti/pinuts/module	add_op_mod.F90	array_lib_mod.F90	coneo_prg_mod.F90
	const_standart_mod.F90	debugtools_mod.F90	domain_mod.F90
	domolalo_prg_mod.F90	ectoplasm_prg_mod.F90	editfield_prg_mod.F90
	egg_tools_mod.F90	fa_cadre_mod.F90	fa_datas_mod.F90
	frodo_prg_mod.F90	makdo_prg_mod.F90	namlist_mod.F90
	newtype_mod.F90	pseudo_prg_mod.F90	string_lib_mod.F90
	subdo_prg_mod.F90		
uti/pinuts	programs		
uti/pinuts/programs	alto.F90		

Modified:

arp/obs_preproc	mkglobstab.F90	suobs.F90	
arp/pp_obs	hopad.F90		
arp/setup	su0phy.F90	su0yomb.F90	suevents.F90
arp/utility	spec_imzero.F90		
arp/var	sualcos.F90	subj.F90	
uti/pinuts/include	mykind.h		
uti/pinuts/module	add_op_mod.F90	array_lib_mod.F90	coneo_prg_mod.F90
	const_standart_mod.F90	debugtools_mod.F90	domain_mod.F90
	domolalo_prg_mod.F90	ectoplasm_prg_mod.F90	editfield_prg_mod.F90
	egg_tools_mod.F90	fa_cadre_mod.F90	fa_datas_mod.F90
	frodo_prg_mod.F90	makdo_prg_mod.F90	namlist_mod.F90
	newtype_mod.F90	pseudo_prg_mod.F90	string_lib_mod.F90
	subdo_prg_mod.F90		
uti/pinuts/programs	alto.F90		
xrd/module	yomoml.F90		
xrd/support	fft992.F		

GCO**Doc:**

Reorganisation of BATOR code.

Project: utilities
ClearCase branch: marp001_CY32T1_bator

Added:

uti/module bator_decodbufr_mod.F90 bator_decodgrib_mod.F90 bator_ecriptions_mod.F90
bator_impr_mod.F90 bator_init_mod.F90 bator_lectures_mod.F90
bator_radar_mod.F90 bator_saisies_mod.F90 bator_util_mod.F90

Renamed:

uti/bator bator_decodgrib.F90 to uti/bator/bator_lgrib_sev.F90
decodegrib.F90 to uti/bator/bator_decodegrib_sev.F90

Deleted:

uti/bator bator_decodbufr.F90 bator_ecriptions.F90 bator_impr.F90
bator_init.F90 bator_lectures.F90 bator_saisies.F90
bator_util.F90 filter_radar.F90 radar_wind_cleaner.F90
reduce_radar.F90

Doc:

1/ Fix a possible attempt of allocation of already allocated arrays.

2/ Remove obsolete routines.

3/ Add link to new SQL queries in ddl.ECMA & ddl.ECMASCR directories, and update files ECMA.dep & ECMASCR.dep .

4/ Remove variable LDIRCLSMOD from module YOMBOS (moved in YOMDPHY), and add a comment line for this variable in YOMDPHY .

5/ Move variable LDIRCLSMOD from "USE YOMOBS" to "USE YOMDPHY" in mpobseq.F90, ppobsac.F90, and susc2b.F90 .

Project: ifs
ClearCase branch: marp001_CY32T2_none

Added:

odb/ddl.ECMA pre_thinn_robhdr_10.sql pre_thinn_robody_10.sql
odb/ddl.ECMASCR pre_thinn_robhdr_10.sql pre_thinn_robody_10.sql

Deleted:

arp/adiab gptopb1.F90
arp/climate updsoli.F90
arp/dia gptosnorm.F90 ppbuffer.F90
arp/function fcdbl.h fsatpmad.h fsatpmtl.h
arp/obs_preproc flgdge.F90 flgoba.F90 gedeve.F90
gedeve2.F90 gereve.F90 gereve2.F90
modrl.F90 nchdeve2.F90 ssmithi.F90
thickpwc.F90 tovsrtovs_ob.F90 trmmbe.F90
trmmin.F90 trmmthi.F90
arp/ocean wrcodm.F90

arp/parallel	diwrspe.F90	sladd3p.F90	sladd3pad.F90
arp/pp_obs	aerod_ad.F90	aerod_op.F90	aerod_tl.F90
	cpgeob.F90	forward_backward_prop.F90	gradient_descent.F90
	mpobseq_pck2.F90	mpobseq_unpck2.F90	neural_simulator.F90
	pca_calc.F90	sumup.F90	tadjust.F90
	thinup.F90	z0simple.F90	
arp/setup	sudluy.F90		
arp/utility	chgridf.F90	spec_part_copy.F90	
arp/var	cosjr2.F90	covintp.F90	cv2spa.F90
	cvaru2.F90	fltfcerr.F90	fmult.F90
	fmultad.F90	simpxico.F90	siscal.F90
	sujbwavvc_sp.F90		

Modified:

arp/module	yomdphy.F90	yomobs.F90
arp/pp_obs	mpobseq.F90	ppobsac.F90
arp/setup	susc2b.F90	
odb/ddl.ECMA	ECMA.dep	
odb/ddl.ECMASCR	ECMASCR.dep	
uti/bator	bator_decodbufr.F90	

Doc:

Add a missing "ENDIF" in Open-MP directives.

Project: ifsaux
ClearCase branch: marp003_CY32T2_yomoml

Modified:

xrd/module yomoml.F90

GRIL Jean-Daniel

Doc:

Bugfix: replace function ANGLE_DOMAIN by DAOUEG_PG at lines 287/288 .

Project:
ClearCase branch: marp003_CY32T2_20070924-mrpe604

Modified:

uti/pinuts/module egg_tools_mod.F90

GUILLAUME Frank

Doc:

1/ Decode BUFR for IASI and RADAR (radial wind and reflectivity) in BATOR .

2/ Miscellaneous fixes and improvements.

3/ Improvements for LISTE_LOC use .

4/ Fixes for ASCAT .

5/ Add table ATOVS_BODY (Fatima Karbou) .

Project: ifs,black_list,odb,
ClearCase branch: mrpa644_CY32T1_fg07005

Modified:

arp/module	parersca.F90		
arp/obs_preproc	ascatin.F90	ersin.F90	scaqc.F90
	scat_ob.F90		
bla	mf_blacklist.b		
odb/ddl	decis_robhdr_4.sql		
uti/bator	bator.F90		
uti/module	bator_decodbuf_mod.F90	bator_decodgrib_mod.F90	bator_ecritures_mod.F90
	bator_impr_mod.F90	bator_init_mod.F90	bator_lectures_mod.F90
	bator_module.F90	bator_radar_mod.F90	bator_saisies_mod.F90
	bator_util_mod.F90		
uti/namelist	bator_namelist.h		

Doc:

Re-introduce a bugfix on SSMI datas .

Project:
ClearCase branch: mrpa644_CY32T2_fg

Modified:

uti/bator bator_decodbuf.F90

Doc:

*1/ Fix about use of LISTE_LOC file .
2/ Test of date: change "INT" to "NINT" for "verifdate" argument .*

Project:
ClearCase branch: mrpa644_CY32T2_fg07007

Modified:

uti/module bator_decodbuf_mod.F90 bator_lectures_mod.F90 bator_saisies_mod.F90

KARBOU Fatima

Doc:

Add new treatments for continental surfaces emissivity in micro-waves bandwidth. Those treatments are activated by keys in a new namelist, which has to be included in screening namelist. Default for all those keys is FALSE .

Project: ifs,odb,satrad,
ClearCase branch: mrpa681_CY32T2_MWEMIS

Added:

arp/module	yomemis.F90		
arp/namelist	namemis_conf.h		
arp/pp_obs	emis_mw_atlas.F90	radtrskin.F90	
arp/setup	suemis_conf.F90		
sat/emiss	land_amsua_an1.F90	land_amsua_an2.F90	land_amsub_an1.F90
	land_amsub_an2.F90	land_ssmi.F90	land_ssmis.F90
	land_surf_type.F90		
sat/interface	rttov_calcbt_skin.h	rttov_calcrad_skin.h	rttov_direct_skin.h
	rttov_integrate_skin.h		
sat/rttov	rttov_calcbt_skin.F90	rttov_calcrad_skin.F90	rttov_direct_skin.F90
	rttov_integrate_skin.F90	rttov_skin.F90	

Modified:

arp/module	yomemis.F90		
arp/namelist	namemis_conf.h		
arp/obs_preproc	defrun.F90		
arp/pp_obs	emis_mw_atlas.F90	hretr.F90	rad1cemis.F90
	radtrskin.F90		
arp/setup	suemis_conf.F90		
odb/cma2odb	ctxinitdb.F90		
sat/emiss	land_amsua_an1.F90	land_amsua_an2.F90	land_amsub_an1.F90
	land_amsub_an2.F90	land_ssmi.F90	land_ssmis.F90
	land_surf_type.F90		
sat/interface	rttov_calcbt_skin.h	rttov_calcrad_skin.h	rttov_direct_skin.h
	rttov_integrate_skin.h		
sat/rttov	rttov_calcbt_skin.F90	rttov_calcrad_skin.F90	rttov_direct_skin.F90
	rttov_integrate_skin.F90	rttov_skin.F90	
uti/bator	bator_ecritures.F90		

PIRIOU Jean-Marcel

Doc:

DDH diagnostics from 3MT and prognostic microphysics.

Project: ifs

ClearCase branch: mrpm606_CY32T2_ddhalaro

Added:

arp/dia iniapft_bp002.F90

Modified:

arp/adiab	cpg.F90	cpg_dia.F90	cptend_new.F90
arp/dia	cpdyddh.F90	cphddh.F90	iniapft_bp002.F90
	ppfidh.F90	sualtdh.F90	sunddh.F90
arp/module	yomphy.F90		
arp/phys_dmn	mf_phys.F90		
arp/setup	su0phy.F90		

POLI Paul

Doc:

Fix an array overflowing due to an increase of SATEM subtypes number. Size of the array is now 15 (instead of 12).

Project: ifs,odb
ClearCase branch: marp001_CY32T0_op1v02

Modified:

arp/module parcma.F90
odb/cma2odb setcomcm.F90

Doc:

Blacklisting of GPSRO observations under 6km of altitude on whole North hemisphere.

Project: black_list
ClearCase branch: mrpa679_CY32T0_bfgpsro6km

Modified:

bla mf_blacklist.b

Doc:

Fix incorrect modification of GPSRO thinning settings.

Project: ifs
ClearCase branch: mrpa679_CY32T2_fix_newthinn

Modified:

arp/obs_preproc new_thinn.F90

SEITY Yann

Doc:

*1/ Fix a compilation problem on IBM: MAX function does not accept arrays as argument on IBM (apl_arome.F90).
2/ Replace argument PTSTEP by 2*PTSTEP in call to TURB routine: time step had to be divided by two in previous version of MEso-NH, now it's not the cas (aro_turb_mnh.mnh).*

Project: ifs,mpa
ClearCase branch: marp004_CY32T2_corryann

Modified:

arp/phys_dmn apl_arome.F90
mpa/turb/externals aro_turb_mnh.mnh

Doc:

Fix for prepsurfex: the test of comparison of geometry between surfex and 923 is getting now less hard, allowing a difference of $1.E-12$. This will avoid to have problems with some domains (FRAN for example) when preparing the initialization surface file.

Project: mse
ClearCase branch: mrpm637_CY32T1_aromeBF

Modified:

mse/externals ini_prep_surfex_aro.mnh

Doc:

1/ Bugfixes for chemistry .

2/ NEC optimizations (D.Lambert) .

3/ Introduce possibility to run AROME without surface .

4/ Bugfixes for HPCE (from HIRLAM), on Meso-NH turbulence (MASDEV47) .

5/ Bugfix: remove a bad initialization of NGPTOT_CAP to NGPTOT .

Project: aladin
ClearCase branch: mrpm637_CY32T2_aromefor32t3

Modified:

ald/setup	suetrans.F90	suezone.F90	
arp/adiab	cpg_end.F90	cpg_gp.F90	
arp/module	yomarphy.F90	yommp.F90	yomnsv.F90
	yomtrans.F90		
arp/namelist	namarphy.h	nampar1.h	namtrans.h
arp/parallel	slcomm.F90		
arp/phys_dmn	apl_arome.F90	suphmse.F90	
arp/setup	su0phy.F90	sudefo_gflattr.F90	sump0.F90
	sutrans.F90		
mpa/chem/externals	aro_mnhc.mnh	aro_mnhdust.mnh	aroini_mnhc.mnh
	aroini_nsv.mnh	aroini_nsv0.mnh	
mpa/chem/interface	aro_mnhdust.h	aroini_nsv.h	aroini_nsv0.h
mpa/chem/internals	ch_prodloss.mnh	ch_solver_n.mnh	init_dust.mnh
mpa/chem/module	modd_ch_solver_n.mnh	modd_csts_dust.mnh	mode_dustopt.mnh
	modi_ch_solver_n.mnh		
mpa/micro/module	modd_nsv.mnh		
mpa/turb/internals	sbl_depth.mnh	turb.mnh	turb_ver_sv_flux.mnh
mse/externals	aro_ground_param.mnh	aroini_surf.mnh	
mse/interface	aro_ground_param.h		
mse/internals	ch_buildemiss_n.mnh	cotwores.mnh	cotworestress.mnh
	coupling_dst_n.mnh		
tfl/external	setup_trans0.F90		
tfl/interface	setup_trans0.h		
tfl/module	tpm_gen.F90	trltom_mod.F90	trmtol_mod.F90

Doc:

Fix a bug in AROME prepsurfex configuration.

Project: ifs,mse
ClearCase branch: mrpm637_CY32T2_bfprepsurfex

Modified:

arp/pp_obs fp2sx1.F90
mse/externals ini_prep_surfex_aro.mnh
mse/interface ini_prep_surfex_aro.h

Doc:

Bugfix n°5 from surfex2 .

Project: mse
ClearCase branch: mrpm637_CY32T2_surfex2.bf5

Added:

mse/module modi_get_grid_dim_gauss.mnh

Modified:

mse/internals	averaged_tsrاد_teb.mnh	coupling_dst_n.mnh	coupling_seaflux_n.mnh
	coupling_teb_n.mnh	coupling_watflux_n.mnh	get_grid_dim.mnh
	hydro.mnh	interpol_splines.mnh	latlon_gridtype_gauss.mnh
	read_pgd_teb_par_n.mnh	surf_version.mnh	write_diag_seb_isba_n.mnh
	writesurf_pgd_teb_par_n.mnh		
mse/module	modd_dst_surf.mnh	modd_dummy_surf_fields_n.mnh	modd_isba_n.mnh
	modi_get_grid_dim_gauss.mnh		

TAILLEFER Francoise

Doc:

Fix allowing to get all listings prints of part 5 of th 923 configuration. This did no work correctly up to day, because of a too early close of unit 20 .

Project: aladin,ifs
ClearCase branch: mrpa647_CY32T1_ft923

Modified:

ald/c9xx eincli5.F90
arp/c9xx incli5.F90

Doc:

Correction of 2 bugs in CANARI, which appear when the distribution of observations mismatches a lot with model grid (this doesn't happen during operational execution).

Project: ifs
ClearCase branch: mrpa647_CY32T2_dbcan

Modified:

arp/canari canaco.F90

arp/pp_obs obshor.F90

TROJAKOVA Alena

Doc:

Bugfix on computation of all ground water fields, except temperature and snow .

Project: ifs

ClearCase branch: mrpe694_CY32T1_bf701

Modified:

arp/canari cacsts.F90

arp/setup su_surf_flds.F90

VANA Filip

Doc:

1/ More general cpp directive for the NEC users

Modified:

xrd/support/sgemmx.F

2/ Renaming routine updclie_CO2.F90 to follow naming convention and not cause problem to compilation software.

Removed:

arp/climate/updclie_CO2.F90

New routine:

arp/climate/updclie_co2.F90

Modified:

arp/utility/updtime.F90

3/ Fix for OpenMP allowing to use the OMP compiled code also in monothread mode.

Modified:

xrd/modules/yomoml.F90

4/ Improved and cleaned SL adjoint for LAM (this is natural extension of the bugfix reported during the CY32T2 phasing). Moreover there is special treatment of the most problematic loops in SL adjoint improving all the code performance (on vector machines) by like 10%.

Removed:

ald/adiab/elaitltd.F90

Modified:

arp/adiab/larcinaad.F90

arp/adiab/larcinbad.F90

5/ Retuned empiric numbers extending the size of SL buffer. The new set of values found for the NEC SX platform replaced the old set obtained for VPP machines.

Modified:

arp/parallel/slcset.F90

6/ Bugfix for SLHD setup allowing this scheme to be used with 2D slice models.

Modified:

ald/setup/suegeo2.F90

7/ Cleaning of the 4-points spline interpolation in the SL advection. This interpolation targeted to the fields with prevailing small scale information has been found detrimental to the model performances. It was shown this comes from this interpolation tendency to amplify long waves. It seems that any interpolator amplifying some scale can't be used for SL. Moreover the defaults for supporting spectral diffusion used with SLHD was updated to reflect all findings and conclusion from the last two years.

Removed:

arp/adiab/laitldsp.F90
arp/adiab/laidspqm.F90
arp/adiab/laitsp.F90
arp/adiab/laitldspqmh.F90
arp/adiab/laitspqmh.F90
arp/adiab/laitldspqm.F90
arp/adiab/laitspqm.F90
arp/adiab/laidsp.F90

Modified:

ald/adiab/elarmes.F90
ald/adiab/elarmes5.F90
ald/adiab/elascaw.F90
arp/adiab/call_sl.F90
arp/adiab/lapineb.F90
arp/adiab/larcinha.F90
arp/adiab/laitre_gfl.F90
arp/adiab/larcin2.F90
arp/adiab/larcinhb.F90
arp/adiab/laitre_gmv.F90
arp/adiab/larcin2ad.F90
arp/adiab/larmes.F90
arp/adiab/lapinea.F90
arp/adiab/larcina.F90
arp/adiab/larmes5.F90
arp/adiab/lapinea5.F90
arp/adiab/larcinb.F90
arp/adiab/lascaw.F90
arp/module/type_gfls.F90
arp/module/yomdyn.F90
arp/namelist/namdyn.h
arp/pp_obs/slinter.F90
arp/pp_obs/slinterad.F90
arp/setup/sucslinter.F90
arp/setup/sudyn.F90
arp/setup/suctrl_gflattr.F90
arp/setup/sudyn_setgflattr.F90
arp/setup/sudefo_gflattr.F90

8/ All routines to be removed were modified in the way that their body consist from:

```
SUBROUTINE XXX  
! --- obsolete routine to be deleted ---  
END SUBROUTINE XXX
```

9/ To follow the DOCTOR norms, local variable JPROF was renamed into IPROF in *arp/adiab/larcinaad.F90* and *arp/adiab/larcinbad.F90* .

10/ Finally, a more exclusive tests for NSMAX and NMSMAX was introduced to part 6 in *ald/setup/suegeo2.F90* .

arp/adiab	gprh_2d.F90		
arp/module	yomvnmb.F90		
arp/obs_preproc	defrun.F90	fgchk.F90	mkglobstab.F90
	new_thinn.F90	new_thinn_radar.F90	pre_thinn_radar.F90
	thibox.F90		
arp/pp_obs	hop.F90	hretr.F90	hvnmtlt.F90
	inv_refl1dstat.F90		
arp/setup	suvnmb.F90		
odb/cma2odb	ctxinitdb.F90	getdb.F90	
odb/ddl	pre_thinn_robhdr_10.sql	pre_thinn_roboddy_10.sql	satbody_radar.sql
	sathdr_radar.sql		

YESSAD Karim

Doc:

BUG : bug correction.

OBSOLETE : removal of obsolete routines.

ADDCOM : add missing comments, correct wrong comments.

NHSI : * LIMPf in NH.

* Iterative algorithm in the NH semi-implicit scheme allowing to relax the constraint C1 (use for example NDLNPR=0).

OPT : optimisations, improve code readability.

RMUSC : removal of useless calculations.

VFENH : set-up for VFE-NH.

Modified elements:

ald/adiab/espnhsi.F90 : NHSI

arp/adiab/gnhx.F90 : RMUSC

arp/adiab/lattex.F90 : OPT

arp/adiab/spnhsi.F90 : NHSI

arp/module/qactex.F90 : ADDCOM

arp/module/traj_data.F90 : ADDCOM

arp/module/yomafn.F90 : ADDCOM

arp/module/yomcla.F90 : ADDCOM

arp/module/yomcpg.F90 : ADDCOM

arp/module/yomcst.F90 : ADDCOM

arp/module/yomcva.F90 : ADDCOM

arp/module/yomcver.F90 : VFENH

arp/module/yomdyn.F90 : NHSI

arp/module/yom_grid_biconserv.F90 : ADDCOM

arp/module/yomjfh.F90 : ADDCOM

arp/module/yommaid.F90 : ADDCOM

arp/module/yommask.F90 : ADDCOM

arp/module/yomopf.F90 : ADDCOM

arp/module/yomspnrm.F90 : ADDCOM

arp/namelist/namdyn.h : NHSI

arp/pp_obs/endpos.F90 : ADDCOM
arp/pp_obs/gpiet.F90 : ADDCOM
arp/pp_obs/pos.F90 : ADDCOM

arp/setup/suafn3.F90 : ADDCOM
arp/setup/suallo.F90 : VFENH
arp/setup/subfpos.F90 : NHSI
arp/setup/suct0.F90 : VFENH
arp/setup/sudyn.F90 : NHSI
arp/setup/sunhsi.F90 : NHSI
arp/setup/suvertfe.F90 : VFENH

arp/utility/deallo.F90 : VFENH

Added elements:

arp/adiab/si_cccor.F90 : NHSI
arp/adiab/si_mxptco.F90 : NHSI

arp/setup/sunh_vertfe1d.F90 : VFENH
arp/setup/sunh_vertfe1dd.F90 : VFENH
arp/setup/sunh_vertfe3d.F90 : VFENH
arp/setup/sunh_vertfe3dd.F90 : VFENH

arp/utility/verdder.F90 : VFENH

Removed elements:

arp/adiab/gptopb1.F90
arp/climate/updsoli.F90
arp/dia/gptosnorm.F90
arp/dia/ppbuffer.F90
arp/function/fcdbl.h
arp/function/fsatpmad.h
arp/function/fsatpmtl.h
arp/obs_preproc/flgdge.F90
arp/obs_preproc/flgoba.F90
arp/obs_preproc/gedeve2.F90
arp/obs_preproc/gedeve.F90
arp/obs_preproc/gereve2.F90
arp/obs_preproc/gereve.F90
arp/obs_preproc/modrl.F90
arp/obs_preproc/nchdeve2.F90
arp/obs_preproc/ssmithi.F90
arp/obs_preproc/thickpwc.F90
arp/obs_preproc/tovsrtovs_ob.F90
arp/obs_preproc/trmmbe.F90
arp/obs_preproc/trmmmin.F90
arp/obs_preproc/trmmthi.F90
arp/ocean/wrcodm.F90
arp/parallel/diwrspc.F90
arp/parallel/sladd3pad.F90
arp/parallel/sladd3p.F90
arp/pp_obs/aerod_ad.F90
arp/pp_obs/aerod_op.F90
arp/pp_obs/aerod_tl.F90
arp/pp_obs/cpgeob.F90
arp/pp_obs/forward_backward_prop.F90
arp/pp_obs/gradient_descent.F90
arp/pp_obs/mpobseq_pck2.F90
arp/pp_obs/mpobseq_unpck2.F90
arp/pp_obs/neural_simulator.F90

arp/pp_obs/pca_calc.F90
 arp/pp_obs/sumup.F90
 arp/pp_obs/tadjust.F90
 arp/pp_obs/thinup.F90
 arp/pp_obs/z0simple.F90
 arp/setup/sudluy.F90
 arp/utility/chgridf.F90
 arp/utility/spec_part_copy.F90
 arp/var/cosjr2.F90
 arp/var/covintp.F90
 arp/var/cv2spa.F90
 arp/var/cvaru2.F90
 arp/var/fltfcerr.F90
 arp/var/fmultad.F90
 arp/var/fmult.F90
 arp/var/simpxico.F90
 arp/var/siscal.F90
 arp/var/sujbwavvc_sp.F90

Remark:

LIMPF=T less stable than LADVF=T for NH: at this stage this is difficult to know if there is a residual bug or if this is inherent to the NH model; it would be interesting that calculations and code be checked separately by several people.

Project: aladin,ifs
ClearCase branch: mrpm603_CY32T2_dev32t2pour32t3

Added:

arp/adiab si_cccor.F90 si_mxptco.F90
 arp/setup sunh_vertfe1d.F90 sunh_vertfe1dd.F90 sunh_vertfe3d.F90
 sunh_vertfe3dd.F90
 arp/utility verdder.F90

Modified:

ald/adiab	espnhsi.F90		
arp/adiab	gnhx.F90	gptopb1.F90	lattice.F90
	si_cccor.F90	si_mxptco.F90	spnhsi.F90
arp/climate	updsoli.F90		
arp/dia	gptosnorm.F90	ppbuffer.F90	
arp/function	fcdbld.h	fsatpmd.h	fsatpmtl.h
arp/module	qactex.F90	traj_data.F90	yom_grid_biconserv.F90
	yomafn.F90	yomcla.F90	yomcpg.F90
	yomcst.F90	yomcva.F90	yomcver.F90
	yomdyn.F90	yomjfh.F90	yommald.F90
	yommask.F90	yomopf.F90	yomspnrm.F90
arp/namelist	namdyn.h		
arp/obs_preproc	flgdge.F90	flgoba.F90	gedeve.F90
	gedeve2.F90	gereve.F90	gereve2.F90
	modrl.F90	nchdeve2.F90	ssmithi.F90
	thickpwc.F90	tovsrtovs_ob.F90	trmmbe.F90
	trmmin.F90	trmmthi.F90	
arp/ocean	wrcodm.F90		
arp/parallel	diwrspe.F90	sladd3p.F90	sladd3pad.F90
arp/pp_obs	aerod_ad.F90	aerod_op.F90	aerod_tl.F90
	cpgeob.F90	endpos.F90	forward_backward_prop.F90

	gpiet.F90	gradient_descent.F90	mpobseq_pck2.F90
	mpobseq_unpck2.F90	neural_simulator.F90	pca_calc.F90
	pos.F90	sumup.F90	tadjust.F90
	thinup.F90	z0simple.F90	
arp/setup	suafn3.F90	suallo.F90	subfpos.F90
	suct0.F90	sudluy.F90	sudyn.F90
	sunh_vertfe1d.F90	sunh_vertfe1dd.F90	sunh_vertfe3d.F90
	sunh_vertfe3dd.F90	sunhsi.F90	suvertfe.F90
arp/utility	chgridf.F90	deallo.F90	spec_part_copy.F90
	verdder.F90		
arp/var	cosjr2.F90	covintp.F90	cv2spa.F90
	cvaru2.F90	fltfcerr.F90	fmult.F90
	fmultad.F90	simpxico.F90	sisca1.F90
	sujobwavvc_sp.F90		

Doc:

- 1/ Add comments to isolate the new surface fields class (CLS).
- 2/ Fixes.

Project: ifs

ClearCase branch: mrpm603_CY32T2_fix32t2t3

Modified:

arp/module surface_fields.F90
arp/setup su_surf_flds.F90 sugridadm.F90