ARPEGE MEMORANDUM

From: GCO Date: March 27, 2013

Subject: New cycle CY39T1

A new cycle CY39T1 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: CY39T1

Contributors:

ARBOGAST Etienne	CCase branch:arbogaste_CY39_cleaning
ASPELIEN TRYGVE	CCase branch:aspelien_CY39_CY39_hirlam_contrib_t1
	CCase branch:aspelien_CY39_hirlam_contrib
	CCase branch:aspelien_CY39_hirlam_contrib_t1
	CCase branch:aspelien_CY39_t1_04_hirlam_contrib
BERRE Loik	CCase branch:mrpa663_CY39_wlt_raw
BOUTELOUP Yves	CCase branch:mrpa648_CY39_b394
BOUTTIER Francois	CCase branch:mrpa651_CY39_fbmod
BOUYSSEL Francois	CCase branch:mrpa649_CY39_phasdbl
BROZKOVA Radmila	CCase branch:mrpe684_CY39_dev1
EL KHATIB Ryad	CCase branch:mrpm602_CY39_cleanfix
	CCase branch:mrpm602_CY39_cuf
	CCase branch:mrpm602_CY39_fposfix
	CCase branch:mrpm602_CY39_rttov

GCO	CCase branch:marp001_CY39_remove
	CCase branch:marp003_CY39_fix_t1_v00
	CCase branch:marp003_CY39_fix_t1_v01
	CCase branch:none
MARGUINAUD Philippe	CCase branch:mrpm609_CY39_4dvar
	CCase branch:mrpm609_CY39_arp_mrpm609_CY39_philourek3
	CCase branch:mrpm609_CY39_bind
	CCase branch:mrpm609_CY39_fafix
	CCase branch:mrpm609_CY39_fafix2
	CCase branch:mrpm609_CY39_falfi
	CCase branch:mrpm609_CY39_fp2sx1
	CCase branch:mrpm609_CY39_philourek2
MARY Alexandre	CCase branch:mary_CY39_bf39ald
PAYAN Christophe	CCase branch:mrpa642_CY39_38t1op1v03_to_39t1
	CCase branch:mrpa642_CY39_38t1op_to_39t1-updt
	CCase branch:mrpa642_CY39_batorscatplus-base02
SAINT-RAMOND Nathalie	CCase branch:mrpa641_CY39_gpsrothin
SASSI Zied	CCase branch:sassi_CY39_alaro-fx
	CCase branch:sassi_CY39_norms_vio
SEITY Yann	CCase branch:mrpm637_CY39_BFs_arome
	CCase branch:mrpm637_CY39_aro_for39t1
	CCase branch:mrpm637_CY39_bfsurfex
SPANIEL Olda	CCase branch:mrpe693_CY39_t1_03_omp
TAILLEFER Francoise	CCase branch:mrpa647_CY39_db_oim

	CCase branch:mrpa647_CY39_ub_923
YESSAD Karim	CCase branch:mrpm603_CY39_dev39pour39t1
	CCase branch:mrpm603_CY39_pre39t1bf2
	CCase branch:mrpm603_CY39_pre39t1bf3
	CCase branch:mrpm603_CY39_pre39t1bf4

ARBOGAST Etienne

Doc:

Pruning LAVARC=true, LMINI=true and L801TL=true .

Project: aladin,arpege
ClearCase branch: arbogaste_CY39_cleaning

Deleted:

arp/module	diwrspec_mod.F90	extfpselect_mod.F90	fpgpnorm_mod.F90
	iofldesc_mod.F90	iofu_mod.F90	iogrclia_mod.F90
	iogrida_mod.F90	iogridua_mod.F90	iogridva_mod.F90
	iomultibuf_mod.F90	ioxfu_mod.F90	mfioopts_mod.F90
	wrfldcw_mod.F90	yomhcp.F90	yomio_serv_map_plan.F90
	yomio_serv_req.F90	yomjr.F90	
arp/namelist	namhcp.h	namphmse.h	
arp/setup	sugrida_fix_toz.F90	suhcp.F90	suspeca_gp.F90
arp/sinvect	lcnoravar.F90		
arp/var	avarc.F90	avarcad.F90	avarct.F90
	deallav.F90	suallav.F90	suallavt.F90
	supavarc.F90	suspqlim_part1.F90	suspqlim_part2.F90

Modified:

ald/var	ecosjr.F90	suejk.F90	
arp/control	cdsta.F90	cgr1.F90	cnt4.F90
	cnt4ad.F90	cnt4tl.F90	monvar.F90
	scan2mad.F90	scan2mtl.F90	sim4d.F90
arp/module	yomsens.F90	yomvar.F90	yomvrtl.F90

arp/namelist	namsens.h	namvar.h	namvrtl.h
arp/setup	su1yom.F90	susc2a.F90	
arp/var	cosjr.F90	evcost.F90	grtest.F90
	rd801.F90	sualcos.F90	sucos.F90
	suscal.F90	suvar.F90	

ASPELIEN TRYGVE

Doc:

1) Use snow density in CANARI snow analysis (SQL).
2) Removing trailing blanks and insert "use only" in tfl/tal (transforms).

Project: odb,transformées aladin,transformées arpege
ClearCase branch: aspelien_CY39_CY39_hirlam_contrib_t1

Modified:

odb/ddl	camelo_robhdr.sql	camelo_robody.sql
tal/programs	aatestprog.F90	test_adjoint.F90
tfl/programs	aatestprog.F90	test_adjoint.F90

Doc:
This set constitutes the HIRLAM contributions for CY39. Included in the set are also HIRLAM contributions sent to 38t1_bf02 which never entered CY39.
All changes are validated for mitraillette on c2a for the following configurations:
ah1e, ah1s, ah1t, ah5e, ah5t, ah4e, ah4t, ah6e, ah6t, ah8e, ah8t, an1e, an1s, an1t, ahut, arut, ah2s, ah2t, an2s, an2t, ah9e, ahfe, agit, aa1t

The description of the changes are grouped in categories with the responsible authors mentioned. More information available on:
https://hirlam.org/trac/wiki/Phasing/cy39t1

Projects modified: arp, mpa, mse, surfex, mpa, odb, tfl, uti, xrd

Details about the provided files:

ClearCase branch: arp_aspelien_CY39_hirlam_contrib

Date and name of contributor:

29/01/2013
Trygve Aspelien (met.no)

Model or configuration affected by the modset:

LAM: aladin, arome, alaro, harmonie

Context and cycle

dev
CY39

Type of file/resource to be modified

New CPP macro LOG_ENGLISH introduced

Descriptions of the set of modifications

Portability
Jacob Weissman Poulsen:
Portability and syntax fixes

- Fixing the order of type specifications
./arp/adiab/lapinebad.F90
./arp/adiab/lapinebad.F90
./arp/adiab/larcinbad.F90
./arp/c9xx/grtestr.F90

./arp/module/aeolus_getamd_mod.F90
./arp/obs_preproc/thin_red_presort.F90
./arp/phys_radi/mcica_cld_generator.F90
./arp/phys_ec/cloudsc.F90
./arp/phys_radi/mcica_cld_gen.F90
./arp/setup/gawla.F90
./arp/var/gp_ssmi_gp2obs.F90
./arp/var/gp_ssmi_obs2gp.F90
./mse/externals/get_bufc0.F90
./mse/externals/put_bufc0.F90
./tfl/module/gawl_mod.F90
./xrd/fa/compact.F90
./xrd/fa/uncompact.F90
./xrd/module/order_independent_summation_mod.F90

- Adding missing field width for L edit descriptor
./arp/setup/sucst.F90

- Ensure constants types are consistent with variable types in MIN and MAX calls
./mpa/turb/internals/bl89.f90
./surfex/isba/phys/mode_dstmblutl.F90

- Ensure argument is consistent with intrinsic (and avoid using the obsolete dabs intrinsic)
./surfex/pgd/mode_gridtype_gauss.F90

- Pass consistent types to MIN and MAX
./xrd/fa/mt/fapula_mt.F, line 303

- Problematic space AFTER write statement causes problem to some compilers
./arp/nmi/sunmi.F90, line 473
./xrd/utilities/eggx_n.F90, line 282
./xrd/utilities/echien.F90, line 222

- Proper intent for PFCMPCQ, PFCMPSN, PFCMPSL
./arp/dia/cpphddh.F90

Niko Sokka
On IBM 64 bit real corresponds to double precision (in f77 terms), hence the D-form of SSYEV is to be used.

Files modified:
uti/bcov_lam/programs/diacov.F

Trygve Aspelien
Using Karim Yessads suggestion: Putting LOPT_RS6K=T in namelists if computer requires that, requires also to add the proper version of N_VMASS in
NAMJFH, but currently this value can be different from 0 in spherical geometry, not in LAM models (more exactly in plane geometry) because there is
some missing code in ELARCHE.

File modified:
arp/setup/sujfh.F90

Ulf Andrae:
Impose less strict fortran open status requirements.

File modified:
arp/utility/newfa.F90

Ulf Andrae:
Make sure variable is always initialized to avoid false reproducibility alarms

File modified:
arp/phys_dmn/mf_phys.F90

Ulf Andrae:
Correct output format to avoid truncated names

File modified:
arp/fullpos/sufpc.F90 arp/fullpos/sufpd.F90

Ulf Andrae:
Remove warning of unsused variables

File modified:
arp/programs/master.F90

CA (Cellular Automata) changes

Lisa Bengtsson:
Updates to CA coupling to 3MT convection
1.Initialization of CA specific variables
2.Updated computations of where the CA should be active as a function of CAPE
3.Tuning
Tests on ECMWF platform with no data assimilation, 12 hour forecast, ifs boundaries, surfex, no dfi, alaro-physics, domain = sweden_5.5.
LCUCONV_CA = FALSE to compare with reference (i.e none of the new code is activated and this experiment should not influence any meteorological
fields). No impact on norms.
LCUCONV_CA = TRUE (activate CA-scheme). Results looks reasonable.

File modified:
arp/phys_dmn/accvud.F90

SODA (Also sent to SURFEX team)
Trygve Aspelien:
Bug-fix in horizontal extrapolation routine and correct treatment of snow. Snow albedo and density is now updated in SODA.

Mariken Homleid:
Set max snow density extrapolation of deep soil temperature

Files modified:
surfex/OFFLIN/oi_hor_extrapol_surf.F90
surfex/SURFEX/assim_isban.F90
surfex/SURFEX/assim_isba_update_snow.F90
surfex/SURFEX/assim_read_sst_from_file.F90
surfex/SURFEX/assim_tebn.F90
surfex/SURFEX/modn_prep_isba_snow.F90
surfex/SURFEX/prep_isba.F90
surfex/SURFEX/read_prep_garden_snow.F90
surfex/SURFEX/read_prep_isba_snow.F90

Snow analysis (de-activate QC in Canari)

Mariken Homleid:
No abort because of no snow QC
In the snow analysis are all points updated in CANARI in case of SURFEX (which always has LAEICS=FALSE)

File modified:
arp/canari/canali.F90

Climate simulation

David Lindstedt & Ulf Andrae:
Merge climate simulation capabilities from branch climate/harmonie-36h1.3 This changeset allows to use HARMONIE for a climate simulation in terms of
monthly piecewice integrations. A part from the script infrastructure an update of SST from the boundary data in surfex is added. In detail the
changes consists of:
Controlling the climate simulation by setting SIMULATION_TYPE=climate in config_exp.h. Using climate implies a special suite definition file
climate.tdf.
Update of SST via the boundaries through the namelist switch LMCC01_MSE.
A new boundary strategy era for retrieving ERA-interim data from MARS.
Optional substream output during the integration controlled by INLINE_FULLPOS=yes and
scr/Setup_inline_postp. This is also available in NWP mode.
Control of the number of parallel mSMS boundary interpolation tasks by NBDMAX. The boundary interpolation tasks are now included in msms/bdgen.inc.
This is also available in NWP mode.
A new testbed configuration AROME_CLIMSIM.
And several smaller changes

Niko Sokka:
Formally replace routine DISGRID, not anymore supported, with DISGRID_SEND and DISGRID_RECV. Correctness not tested, should be checked by climate
experts.

Files modified:
arp/climate/updcli_mse.F90
arp/module/yommcc.F90 (2 diffs)

arp/namelist/nammcc.h (1 diff)
arp/setup/sudim1.F90 (1 diff)
arp/setup/sumcc.F90 (3 diffs)
arp/utility/updtim.F90 (6 diffs)
mse/externals/aro_put_SST.F90
mse/interface/aro_put_sst.h
arp/climate/updcli_mse.F90

WMO definition for low clouds
Karl-Ivar Ivarsson:
Exclude lowest model level from low cloud diagnostics in case of LWMOCLOUD=T

Files modified:
arp/phys_dmn/acnpart.F90
arp/phys_dmn/apl_arome.F90

Language
Sami Saarinen:
Language option for LFI files is controlled by the CPP macro LOG_ENGLISH

File modified:
xrd/lfi/mt/lfiini_mt.F

ODB (mandalay and bator)
Ulf Andrae:
Change of erroneous index in declaration (out of bound fix)
Language and log print format fix.

Files modified:
odb/pandor/mandalay/manda_util.F90
odb/tools/Bator.F90

IO
Ulf Andrae:
Change from status NEW to UNKNOWN to fit the way HIRLAM symlink output files

File modified:
arp/dia/inifaout.F90

Project:	arpege,Meso-NH physique altitude,Meso-NH surface,odb,,transformées arpege,utilitaires,auxiliaire
ClearCase branch:	aspelien_CY39_hirlam_contrib

Added:

arp/climate	updcli_mse.F90
mse/externals	aro_put_SST.F90
mse/interface	aro_put_sst.h

Modified:

arp/canari	canali.F90	casnas.F90	
arp/climate	updcli_mse.F90		
arp/control	cnt0.F90		
arp/dia	cpphddh.F90	inifaout.F90	
arp/fullpos	fpcorphy.F90	sufpc.F90	sufpd.F90
arp/module	aeolus_getamd_mod.F90	yommcc.F90	
arp/namelist	nammcc.h		
arp/obs_preproc	thin_red_presort.F90		
arp/phys_dmn	acnpart.F90	apl_arome.F90	
arp/phys_radi	mcica_cld_generator.F90		
arp/programs	master.F90		
arp/setup	gawla.F90	sucst.F90	sudim1.F90
	sujfh.F90	sumcc.F90	
arp/utility	newfa.F90	updtim.F90	
arp/var	gp_ssmi_gp2obs.F90	gp_ssmi_obs2gp.F90	
mpa/turb/internals	bl89.F90		
mse/externals	aro_put_SST.F90	get_bufc0.F90	put_bufc0.F90

mse/interface	aro_put_sst.h		
odb/pandor/mandalay	manda_util.F90		
odb/tools	Bator.F90		
surfex/OFFLIN	oi_hor_extrapol_surf.F90		
surfex/SURFEX	assim_isba_update_snow.F90	assim_isban.F90	assim_read_sst_from_file.F90
	assim_tebn.F90	modn_prep_isba_snow.F90	prep_isba.F90
	read_prep_garden_snow.F90	read_prep_isba_snow.F90	
tfl/module	gawl_mod.F90		
uti/bcov_lam/programs	diacov.F		
xrd/ddh	lfa_R8I4.F90		
xrd/fa/mt	fapula_mt.F		
xrd/lfi/mt	lfiini_mt.F		
xrd/module	order_independent_summation_mod.F90		
xrd/utilities	compact.F90	echien.F90	eggx_n.F90
	uncompact.F90		

Doc:

This set constitutes the HIRLAM contributions for CY39t1.03. All changes are validated for mitraillette on c2a for the following configurations:
ah1e, ah1s, ah1t, ah5e, ah5t, ah4e, ah4t, ah6e, ah6t, ah8e, ah8t, an1e, an1s, an1t, ahut, arut, ah2s, ah2t, an2s, an2t, ah9e, ahfe, agit, aa1t

The following configurations fail both with and without our contribution:
aa1t, ah8t, ah9e, ahfe, an1e, an1s, an1t, ar1t

The rest of the configurations are identical in terms of norms with and without our changes.

The description of the changes are grouped in categories with the responsible authors mentioned. More information available on:
https://trac.hirlam.org/wiki/Phasing/Phasing/cy39t1.03

Projects modified: ald arp mpa odb surfex tal tfl xla

The subversion branch with sent HIRLAM changes on top of CY39t1.02 is found here:
https://trac.hirlam.org/browser/branches/phasing/cy39_send2

Details about the provided files:

ClearCase branch: arp_aspelien_CY39t1_hirlam_contrib_t1.02

Date and name of contributor:

18/02/2013
Trygve Aspelien (met.no)

Model or configuration affected by the modset:

LAM: aladin, arome, alaro, harmonie

Context and cycle

dev
CY39

Type of file/resource to be modified

None

Descriptions of the set of modifications

Climate file change

Mariano Hortal (AEMET):
Don't do raw spectral fit when using a diffusion operator for spectral smoothing of orography

File modified:
ald/c9xx/eincli1.F90
Reduce output

Ole Vignes (met.no)
Reduce output from multiple processors

Files modified:
ald/var/suejbbal.F90
arp/dia/wrmlppa.F90
xla/module/control_vectors_data_mix.F90
arp/canari/canari.F90

CANARI snow changes

Mariken Homleid (met.no)
Use snow density in CANARI snow analysis

Files modified:
arp/canari/cacsts.F90
arp/canari/calico.F90
odb/ddl/camelo_robhdr.sql
odb/ddl/camelo_robody.sql

Climate runs

David Lindsted (SMHI) :
Update on climate downscaling mode

Files modified:
arp/climate/updcli_mse.F90
arp/setup/sumcclag.F90

Sensor ID

Magnus Lindskog (SMHI):
Correct ID for satelite senor

File modified:
arp/var/surad.F90

MUSC (From Eric Bazile for cy38)

Ulf Andrae (SMHI)/Eric Bazile:
MUSC fixes obtained from Eric Bazile. Probably also sent from MF.

Files modified:
arp/phys_dmn/mf_phys.F90
arp/phys_dmn/writemusc.F90

Radiation levels

Martynas Kauzlankas
IABS is Fortran intrins. So we don't want to use it as an integer. IABS is now IABSL where appropriate

Files modified:
arp/phys_dmn/sw2s15.F90
arp/phys_radi/swni.F90
arp/phys_radi/swniad.F90
arp/phys_radi/swnitl.F90

Config info and format corrections

Ole Vignes & Sami Saarinen:
Format corrections and more information

File modified:
arp/setup/sump0.F90

Comment in EMFM

Wim De Roy (KNMI):
Add missing comment

File modified:
mpa/micro/internals/condensation.F90

Snow fix in surfex

Trygve Aspelien/ Mariken Homleid (met.no), also sent to surfex team:
Maximum value of snow density and update for SODA.

File modified:
surfex/SURFEX/assim_isba_update_snow.F90

Use only in tfl/tal + partly in ald

Rimvydas Jasinskas (LHMS):
Removing trailing blanks and insert "use only" in tfl/tal + partly in ald

Files modified:
arp/setup/sugridspa.F90
ald/parallel/ecommjbbalbeta.F90
ald/parallel/ecommspnorm.F90
ald/parallel/egathereigmd.F90
ald/setup/suemp.F90
ald/setup/suetrans.F90
ald/sinvect/echnorm.F90
ald/sinvect/erdtllcz.F90
ald/sinvect/esptrlcz.F90
ald/sinvect/ewrtllcz.F90
ald/sinvect/ewrtsv.F90
ald/sinvect/suelcz.F90
ald/utility/deello.F90
ald/var/ebalvert.F90
ald/var/ebalvertad.F90
ald/var/ebalverti.F90
ald/var/ebalvertiad.F90
ald/var/ecosjr.F90
ald/var/ewreini.F90
ald/var/ewrlsgrad.F90
ald/var/suejbcosu.F90

ald/var/suejbstd.F90
ald/var/suejbtest.F90
ald/var/suelljk.F90
ald/var/suescal.F90
arp/c9xx/incli0.F90
arp/fullpos/sufpwide.F90
arp/op_obs/preints.F90
bip/module/extper_mod.F90
tal/external/edir_trans.F90
tal/external/edir_transad.F90
tal/external/edist_grid.F90
tal/external/edist_spec.F90
tal/external/egath_grid.F90
tal/external/egath_spec.F90
tal/external/egpnorm_trans.F90
tal/external/einv_trans.F90
tal/external/einv_transad.F90
tal/external/esetup_trans.F90
tal/external/especnorm.F90
tal/external/etrans_end.F90
tal/external/etrans_inq.F90
tal/module/cpl_int_mod.F90
tal/module/easre1_mod.F90
tal/module/easre1ad_mod.F90
tal/module/easre1b_mod.F90
tal/module/easre1bad_mod.F90
tal/module/edir_trans_ctl_mod.F90
tal/module/edir_trans_ctlad_mod.F90
tal/module/edist_spec_control_mod.F90
tal/module/efsc_mod.F90
tal/module/efscad_mod.F90
tal/module/eftdir_ctl_mod.F90
tal/module/eftdir_ctlad_mod.F90
tal/module/eftdirad_mod.F90
tal/module/eftinv_ctl_mod.F90
tal/module/eftinv_ctlad_mod.F90

tal/module/eftinvad_mod.F90
tal/module/egath_spec_control_mod.F90
tal/module/einv_trans_ctl_mod.F90
tal/module/einv_trans_ctlad_mod.F90
tal/module/eledir_mod.F90
tal/module/eledirad_mod.F90
tal/module/eleinv_mod.F90
tal/module/eleinvad_mod.F90
tal/module/eltdir_ctl_mod.F90
tal/module/eltdir_ctlad_mod.F90
tal/module/eltdir_mod.F90
tal/module/eltdirad_mod.F90
tal/module/eltinv_ctl_mod.F90
tal/module/eltinv_ctlad_mod.F90
tal/module/eltinv_mod.F90
tal/module/eltinvad_mod.F90
tal/module/eprfi1_mod.F90
tal/module/eprfi1ad_mod.F90
tal/module/eprfi1b_mod.F90
tal/module/eprfi1bad_mod.F90
tal/module/eprfi2_mod.F90
tal/module/eprfi2ad_mod.F90
tal/module/eprfi2b_mod.F90
tal/module/eprfi2bad_mod.F90
tal/module/eset_resol_mod.F90
tal/module/esetup_dims_mod.F90
tal/module/esetup_geom_mod.F90
tal/module/espnorm_ctl_mod.F90
tal/module/espnormc_mod.F90
tal/module/espnormd_mod.F90
tal/module/espnsde_mod.F90
tal/module/espnsdead_mod.F90
tal/module/eupdsp_mod.F90
tal/module/eupdspad_mod.F90
tal/module/eupdspb_mod.F90
tal/module/eupdspbad_mod.F90

tal/module/euvtvd_mod.F90
tal/module/euvtvdad_mod.F90
tal/module/evdtuv_mod.F90
tal/module/evdtuvad_mod.F90
tal/module/suefft_mod.F90
tal/module/suemp_trans_mod.F90
tal/module/suemp_trans_preleg_mod.F90
tal/module/suemplat_mod.F90
tal/module/suemplatb_mod.F90
tal/module/suestaonl_mod.F90
tal/programs/aatestprog.F90
tal/programs/test_adjoint.F90
tfl/external/dir_trans.F90
tfl/external/dir_transad.F90
tfl/external/dist_grid.F90
tfl/external/dist_spec.F90
tfl/external/gath_grid.F90
tfl/external/gath_spec.F90
tfl/external/gpnorm_trans.F90
tfl/external/ini_spec_dist.F90
tfl/external/inv_trans.F90
tfl/external/inv_transad.F90
tfl/external/setup_trans.F90
tfl/external/setup_trans0.F90
tfl/external/specnorm.F90
tfl/external/trans_end.F90
tfl/external/trans_inq.F90
tfl/module/asre1_mod.F90
tfl/module/asre1ad_mod.F90
tfl/module/asre1b_mod.F90
tfl/module/asre1bad_mod.F90
tfl/module/dir_trans_ctl_mod.F90
tfl/module/dir_trans_ctlad_mod.F90
tfl/module/dist_grid_ctl_mod.F90
tfl/module/dist_spec_control_mod.F90
tfl/module/eq_regions_mod.F90

tfl/module/field_split_mod.F90
tfl/module/fourier_in_mod.F90
tfl/module/fourier_inad_mod.F90
tfl/module/fourier_out_mod.F90
tfl/module/fourier_outad_mod.F90
tfl/module/fsc_mod.F90
tfl/module/fscad_mod.F90
tfl/module/fspgl_int_mod.F90
tfl/module/ftdir_ctl_mod.F90
tfl/module/ftdir_ctlad_mod.F90
tfl/module/ftdir_mod.F90
tfl/module/ftdirad_mod.F90
tfl/module/ftinv_ctl_mod.F90
tfl/module/ftinv_ctlad_mod.F90
tfl/module/ftinv_mod.F90
tfl/module/ftinvad_mod.F90
tfl/module/gath_grid_ctl_mod.F90
tfl/module/gath_spec_control_mod.F90
tfl/module/gawl_mod.F90
tfl/module/inigptr_mod.F90
tfl/module/inv_trans_ctl_mod.F90
tfl/module/inv_trans_ctlad_mod.F90
tfl/module/ldfou2_mod.F90
tfl/module/ldfou2ad_mod.F90
tfl/module/ledir_mod.F90
tfl/module/ledirad_mod.F90
tfl/module/leinv_mod.F90
tfl/module/leinvad_mod.F90
tfl/module/ltdir_ctl_mod.F90
tfl/module/ltdir_ctlad_mod.F90
tfl/module/ltdir_mod.F90
tfl/module/ltdirad_mod.F90
tfl/module/ltinv_ctl_mod.F90
tfl/module/ltinv_ctlad_mod.F90
tfl/module/ltinv_mod.F90
tfl/module/ltinvad_mod.F90

tfl/module/myrecvset_mod.F90
tfl/module/mysendset_mod.F90
tfl/module/pe2set_mod.F90
tfl/module/prepsnm_mod.F90
tfl/module/prfi1_mod.F90
tfl/module/prfi1ad_mod.F90
tfl/module/prfi1b_mod.F90
tfl/module/prfi1bad_mod.F90
tfl/module/prfi2_mod.F90
tfl/module/prfi2ad_mod.F90
tfl/module/prfi2b_mod.F90
tfl/module/prfi2bad_mod.F90
tfl/module/prle1_mod.F90
tfl/module/prle1ad_mod.F90
tfl/module/set2pe_mod.F90
tfl/module/set_resol_mod.F90
tfl/module/setup_dims_mod.F90
tfl/module/setup_geom_mod.F90
tfl/module/shuffle_mod.F90
tfl/module/spnorm_ctl_mod.F90
tfl/module/spnormc_mod.F90
tfl/module/spnormd_mod.F90
tfl/module/spnsde_mod.F90
tfl/module/spnsdead_mod.F90
tfl/module/sufft_mod.F90
tfl/module/sugaw_mod.F90
tfl/module/suleg_mod.F90
tfl/module/sump_trans0_mod.F90
tfl/module/sump_trans_mod.F90
tfl/module/sump_trans_preleg_mod.F90
tfl/module/sumplat_mod.F90
tfl/module/sumplatb_mod.F90
tfl/module/sumplatbeq_mod.F90
tfl/module/sumplatf_mod.F90
tfl/module/supol_mod.F90
tfl/module/sustaonl_mod.F90

tfl/module/sutrle_mod.F90
tfl/module/suwavedi_mod.F90
tfl/module/tpm_distr.F90
tfl/module/tpm_geometry.F90
tfl/module/tpm_trans.F90
tfl/module/trgtol_mod.F90
tfl/module/trltog_mod.F90
tfl/module/trltom_mod.F90
tfl/module/trmtol_mod.F90
tfl/module/updsp_mod.F90
tfl/module/updspad_mod.F90
tfl/module/updspb_mod.F90
tfl/module/updspbad_mod.F90
tfl/module/uvtvd_mod.F90
tfl/module/uvtvdad_mod.F90
tfl/module/vdtuv_mod.F90
tfl/module/vdtuvad_mod.F90
tfl/programs/aatestprog.F90
tfl/programs/rgrid.F90
tfl/programs/test_adjoint.F90
uti/combi/combi.F90

Cloud sedimentation changes in AROME : add LOLSMC and LOTOWNC options to compute (or not) cloud sedimentation using different cloud droplet number
conc. depending on land/sea/town. Default values are false for reproducibility.

Project: arpege,Meso-NH physique altitude,Meso-NH surface
ClearCase branch: aspelien_CY39_hirlam_contrib_t1

Modified:

ald/c9xx	eincli1.F90		
ald/sinvect	suelcz.F90		
ald/var	suejbbal.F90		
arp/canari	cacsts.F90	calico.F90	canari.F90

arp/climate	updcli_mse.F90		
arp/dia	wrmlppa.F90		
arp/module	yomparar.F90		
arp/namelist	namparar.h		
arp/obs_preproc	mkglobstab.F90		
arp/op_obs	preints.F90		
arp/phys_dmn	apl_arome.F90	aplpar.F90	mf_phys.F90
	suparar.F90	sw2s15.F90	writemusc.F90
arp/phys_radi	swni.F90	swniad.F90	swnitl.F90
arp/setup	sugridspa.F90	sump0.F90	
arp/var	surad.F90		
mpa/micro/externals	aro_rain_ice.F90		
mpa/micro/interface	aro_rain_ice.h		
mpa/micro/internals	condensation.F90	rain_ice.F90	
mpa/micro/module	modi_rain_ice.F90		
mse/externals	aro_ground_diag.F90		
mse/interface	aro_ground_diag.h		
mse/programs	driver_off_omp.F90		
surfex/SURFEX	assim_isba_update_snow.F90		
tal/external	edir_trans.F90	edir_transad.F90	edist_grid.F90
	edist_spec.F90	egath_grid.F90	egath_spec.F90
	egpnorm_trans.F90	einv_trans.F90	einv_transad.F90
	esetup_trans.F90	especnorm.F90	etrans_end.F90
	etrans_inq.F90		
tal/module	easre1_mod.F90	easre1ad_mod.F90	easre1b_mod.F90
	easre1bad_mod.F90	edir_trans_ctl_mod.F90	edir_trans_ctlad_mod.F90
	edist_spec_control_mod.F90	efsc_mod.F90	efscad_mod.F90
	eftdir_ctl_mod.F90	eftdir_ctlad_mod.F90	eftdirad_mod.F90
	eftinv_ctl_mod.F90	eftinv_ctlad_mod.F90	eftinvad_mod.F90
	egath_spec_control_mod.F90	einv_trans_ctl_mod.F90	einv_trans_ctlad_mod.F90
	eledir_mod.F90	eledirad_mod.F90	eleinv_mod.F90
	eleinvad_mod.F90	eltdir_ctl_mod.F90	eltdir_ctlad_mod.F90

	eltdir_mod.F90	eltdirad_mod.F90	eltinv_ctl_mod.F90
	eltinv_ctlad_mod.F90	eltinv_mod.F90	eltinvad_mod.F90
	eprfi1_mod.F90	eprfi1ad_mod.F90	eprfi1b_mod.F90
	eprfi1bad_mod.F90	eprfi2_mod.F90	eprfi2ad_mod.F90
	eprfi2b_mod.F90	eprfi2bad_mod.F90	eset_resol_mod.F90
	esetup_dims_mod.F90	esetup_geom_mod.F90	espnorm_ctl_mod.F90
	espnormc_mod.F90	espnormd_mod.F90	espnsde_mod.F90
	espnsdead_mod.F90	eupdsp_mod.F90	eupdspad_mod.F90
	eupdspb_mod.F90	eupdspbad_mod.F90	euvtvd_mod.F90
	euvtvdad_mod.F90	evdtuv_mod.F90	evdtuvad_mod.F90
	suefft_mod.F90	suemp_trans_mod.F90	suemp_trans_preleg_mod.F90
	suemplat_mod.F90	suemplatb_mod.F90	suestaonl_mod.F90
tfl/external	dir_trans.F90	dir_transad.F90	dist_grid.F90
	dist_spec.F90	gath_grid.F90	gath_spec.F90
	gpnorm_trans.F90	ini_spec_dist.F90	inv_trans.F90
	inv_transad.F90	setup_trans.F90	setup_trans0.F90
	specnorm.F90	trans_end.F90	trans_inq.F90
tfl/module	asre1_mod.F90	asre1ad_mod.F90	asre1b_mod.F90
	asre1bad_mod.F90	dir_trans_ctl_mod.F90	dir_trans_ctlad_mod.F90
	dist_grid_ctl_mod.F90	dist_spec_control_mod.F90	eq_regions_mod.F90
	field_split_mod.F90	fourier_in_mod.F90	fourier_inad_mod.F90
	fourier_out_mod.F90	fourier_outad_mod.F90	fsc_mod.F90
	fscad_mod.F90	fspgl_int_mod.F90	ftdir_ctl_mod.F90
	ftdir_ctlad_mod.F90	ftdir_mod.F90	ftdirad_mod.F90
	ftinv_ctl_mod.F90	ftinv_ctlad_mod.F90	ftinv_mod.F90
	ftinvad_mod.F90	gath_grid_ctl_mod.F90	gath_spec_control_mod.F90
	gawl_mod.F90	inigptr_mod.F90	inv_trans_ctl_mod.F90
	inv_trans_ctlad_mod.F90	ldfou2_mod.F90	ldfou2ad_mod.F90
	ledir_mod.F90	ledirad_mod.F90	leinv_mod.F90
	leinvad_mod.F90	ltdir_ctl_mod.F90	ltdir_ctlad_mod.F90
	ltdir_mod.F90	ltdirad_mod.F90	ltinv_ctl_mod.F90
	ltinv_ctlad_mod.F90	ltinv_mod.F90	ltinvad_mod.F90

	myrecvset_mod.F90	mysendset_mod.F90	pe2set_mod.F90
	prepsnm_mod.F90	prfi1_mod.F90	prfi1ad_mod.F90
	prfi1b_mod.F90	prfi1bad_mod.F90	prfi2_mod.F90
	prfi2ad_mod.F90	prfi2b_mod.F90	prfi2bad_mod.F90
	prle1_mod.F90	prle1ad_mod.F90	set2pe_mod.F90
	set_resol_mod.F90	setup_dims_mod.F90	setup_geom_mod.F90
	shuffle_mod.F90	spnorm_ctl_mod.F90	spnormc_mod.F90
	spnormd_mod.F90	spnsde_mod.F90	spnsdead_mod.F90
	sufft_mod.F90	sugaw_mod.F90	suleg_mod.F90
	sump_trans0_mod.F90	sump_trans_mod.F90	sump_trans_preleg_mod.F90
	sumplat_mod.F90	sumplatb_mod.F90	sumplatbeq_mod.F90
	sumplatf_mod.F90	sustaonl_mod.F90	sutrle_mod.F90
	tpm_trans.F90	trgtol_mod.F90	trltog_mod.F90
	trltom_mod.F90	trmtol_mod.F90	updsp_mod.F90
	updspad_mod.F90	updspb_mod.F90	updspbad_mod.F90
	uvtvd_mod.F90	uvtvdad_mod.F90	vdtuv_mod.F90
	vdtuvad_mod.F90		
tfl/programs	rgrid.F90		
xla/module	control_vectors_data_mix.F90		

Doc:

Deallocation of never-deallocated array in SURFEX .

Project: surfex
ClearCase branch: aspelien_CY39_t1_04_hirlam_contrib

Modified:

surfex/SURFEX interpol_npts.F90 prep_hor_snow_fields.F90 prep_snow_unif.F90

BERRE Loik

Doc:

This branch contains wavelet code modifications which are part of the current double suite in preparation. The code modifications
allow to write and read files of perturbed forecasts in RAW format (optionally), instead of GRIB format, in order to speed up the
calculation of the wavelet B matrix.

In previous code versions, the FEMARS task wrote ensemble forecast files in GRIB format, and the calculation task of the wavelet B
(sujbwavgen.F90) read these forecast files in GRIB format. The use of such GRIB files implies the use of the GRIB_API module, which
increases the computational cost of wavelet B in our case (by a factor 5(!)).

The possibility to use RAW files, instead of GRIB files, has therefore been extended (in sujbwavgen.F90, FEMARS/cnt3.F90 and bgvecs.F90),
in order to avoid the use of the GRIB_API module. This can be done by activating the option LFEMARSF_RAW, which allows for a strong decrease
of the computational cost for writing and reading forecast files.

As a consequence, the calculation of the wavelet B is faster (by a factor 5).

Project: arpege
ClearCase branch: mrpa663_CY39_wlt_raw

Added:

arp/var readtmp.F90 writetmp.F90

Modified:

arp/control cnt3.F90
arp/dia suofname.F90 wrmlpp.F90

arp/module	yomvar.F90		
arp/namelist	namvar.h		
arp/var	bgvecs.F90	readtmp.F90	sujbwavgen.F90
	suvar.F90	writetmp.F90	

BOUTELOUP Yves

Doc:

1. New updraft for shallow convection scheme PCMM09 (old name is EDKF !), following Rio et al (2010).
2. Parameters of the parameterization can now be tune by NAMELIST (NAMPARAR).
NB: Bit reproductability of operationnal configuration is ensured.

Project: arpege,Meso-NH physique altitude
ClearCase branch: mrpa648_CY39_b394

Added:

mpa/turb/internals	compute_updraft_rhcj10.f90
mpa/turb/module	modi_compute_updraft_rhcj10.f90

Modified:

arp/module	yomparar.F90		
arp/namelist	namparar.h		
arp/phys_dmn	suparar.F90	suphmpa.F90	
mpa/turb/externals	aroini_mfshal.F90		
mpa/turb/interface	aroini_mfshal.h		
mpa/turb/internals	compute_updraft_rhcj10.F90	ini_cmfshall.F90	shallow_mf.F90
mpa/turb/module	modd_cmfshall.F90	modi_compute_updraft_rhcj10.F90	modi_ini_cmfshall.F90

BOUTTIER Francois

Doc:

Random perturbation of physiographic surface fields for AROME ensemble prediction.

Perturbed fields are read from initial LFI file. The multiplicative perturbations of VEG, LAI, CV, roughness length, albedo are stored and
reapplied if those fields are reset to time-varying climatologies during the model integration.

These modfications are activated by switch LPERTSURF in namelist NAM_ISBAn. By default, it is off, and bit-reproducibility is ensured.

Project: surfex
ClearCase branch: mrpa651_CY39_fbmod

Modified:

surfex/SURFEX compute_isba_parameters.F90 coupling_isban.F90 init_surf_atmn.F90
modd_isban.F90 modn_isban.F90 vegetation_update.F90

BOUYSSEL Francois

Doc:

1. Modification de l'inertie thermique, de l'albédo et de la rugosité de surface des glaciers.
2. Modifications dans le schéma de convection peu profonde KFB : dépendance à la TKE des perturbations en T et w pour le calcul de l'ascendance,
eau condensée diagnostiquée proportionnelle au flux de masse, réglage de l'entrainement.
3. Interpolation spatiale de la température de surface et non plus de l'incrément par rapport à la climatologie dans le post-traitement.

Project: arpege,Meso-NH physique altitude
ClearCase branch: mrpa649_CY39_phasdbl

Added:

arp/phys_dmn accvimpgps.F90

Modified:

arp/fullpos	fpcorphy.F90		
arp/module	yomphy.F90	yomphy0.F90	
arp/namelist	namphy.h	namphy0.h	
arp/phys_dmn	accvimp.F90	accvimpgps.F90	acnebsm.F90
	acsol.F90	acvppkf.F90	suphy0.F90
arp/setup	su0phy.F90		
mpa/conv/internals	convect_trigger_shal.f90		

BROZKOVA Radmila

Doc:

1. Catch-up of contributions from CY38T1_op1 and CY38T1_bf.02 (or later) .

2. Observations:

- Possible re-phasing of code changes related to the monitoring of NPP/ATMS (filtering of noise on Tb and use of wind product) & CrIS
(note: for CrIS, the code by ECMWF will be in CY39) ;

- Mostly blacklist changes (for Arpège: mf_blacklist.b) to assimilate radiances from GOES and MTSAT, SSMI/S channels as well as SEVIRI over land,
MHS channels 4-5 of NOAA-19, monitoring of AMSU-A channel 14, raise top level for assimilating GPS-RO from 36 to 46 km. In Arome: more AMSU-A
channels for Arome ;

- Pre-processing of GPS ZTD in Arpège and LAMs ;

- Changes for the vertical thinning of GPS-RO: pre_thinner.F90, YOMOBS, SUOBS, namobs.h, YOMSCC, namscc.h, defrun.F90 ;

- Scatterometer code: cleaning of code related to OSCAT, adapt a more general code for band-Ku scatterometer data (OSI-SAF); more refined definition
of sigmao's depending on observed value and position of satellite print ;

- Code land surface emissivity maps as binary files (coordinated with F. Karbou/CEN-Grenoble) ;

- Bator adaptations for HYMEX configuration (polar-coordinate radar data) .

3. Dynamics (common code to all models):

- Various cleanings by K. Yessad including simplification of coupling code, of tests on LPC_FULL, of use of CDCONF(7:7) and (8:8) that become
equivalent in the direct transforms, aborts in I/O routines .

4. Full-POS:

- Fullpos buffers re-shaping (REK): since the very beginning, Fullpos buffers have been shaped like 1-D arrays in order to enable the use of the
asynchronous I/O workfiles on the former Cray vector machine. The buffers are now reshaped like 3-D arrays (NFPROMA, number of fields, number of
NFPROMA slices) in order to :

=> allow higher resolutions (the total buffer size is not any more limited to 2.E9) ;
=> reduce the number of arrays copies (no more sc2rdg/sc2wrg mechanism) ;
=> save memory (each NFPROMA slice is accessed directly and working arrays can be released rapidly) .

5. System:

- Possibility to read/write surface FA files split into sub-files with the same frame; basic parallel version of "e927/PREP" (aka as "PREP in

Full-POS") which is the configuration used when coupling an Aladin/Arome+Surfex with and Arpège or Aladin with the old ISBA (P. Marguinaud).

- FA/LFI files: compatibility with 64 bit format for all data types ; optimization of memory usage; move to F90 free source file format ;

- I/O server: facility to send fields piecewise and aggregate them into full horizontal fields inside the I/O server (instead of before sending them to the server) ;

- Cleaning and rewrite of the model I/O routines (wrml, wrpl*) ;*

- Bug-fixes from CY38T1 about I/O stuff reported to CY39 ;

- Parallelization of "fp2sx1" (ISBA -> SURFEX) .

6. SURFEX code:

- version V7.2.1 including the processing of only the current decadal datasets (instead of all yearly decades; this is an optimization feature in Surfex & PREP); surface EKF scheme SODA with a few code updates for snow and albedo analysis (Hirlam) .

7. ALARO:

- Corrections to 3MT, which have entered CY38T1bf, but not CY39 (R. Brozkova) ;

- Latest development in TOUCANS (R. Brozkova, I. Bastak-Duran) ;

- Small modification to BATOR, enabling to read wind profiler data from BUFR (A. Trojakova) ;

- Possibly first version of the incremental updraft and unsaturated downdraft (R. Brozkova, L. Gérard, D. Banciu) ;

- Possibly diagnostic fields for describing convection like helicity, speed of thunderstorm etc. (in Full-POS) ;

8. Hirlam for atmospheric NWP libraries:

- Various small fixes for porting to other platforms ;

- Update of the coupling of Cellular Automata with 3MT ;

- WMO cloud definitions: update ;

- Option to switch language of printouts to English in LFI ;

- Note: Bator and blacklist changes: will be handled as separate codes and files in the Harmonie trunk (specific versions for Harmonie w/r to Aladin/Arome)

Code cleaning and refactoring will also enter this cycle (with other refactoring entering directly CY40).

Project: arpege
ClearCase branch: mrpe684_CY39_dev1

Added:

arp/phys_dmn	acpscc.F90	acptkes.F90	actkezot.F90	
	actkezotls.F90			

Modified:

arp/fullpos	vpos_prep.F90		
arp/module	type_gflflds.F90	yom_ygfl.F90	yomafn.F90
	yomfa.F90	yomphy.F90	yomphy0.F90
arp/namelist	namafn.h	namgfl.h	namphy.h
	namphy0.h		
arp/phys_dmn	accvud.F90	acdifv3.F90	acmixelen.F90
	acmrip.F90	acmris.F90	acmriss.F90

	acnebcond.F90	acnebnsc.F90	acpscc.F90
	acptke.F90	acptkes.F90	actkecoefk.F90
	actkecoefkh.F90	actkehmt.F90	actkehmtls.F90
	actkezot.F90	actkezotls.F90	acupu.F90
	aplpar.F90	arp_ground_param.F90	mf_phys.F90
	suphy0.F90		
arp/setup	su0phy.F90	su_surf_flds.F90	suafn1.F90
	suafn2.F90	suafn3.F90	suctrl_gflattr.F90
	sudefo_gflattr.F90	sufa.F90	sugfl1.F90
	sugfl2.F90	sugfl3.F90	

EL KHATIB Ryad

Doc:

```
1) Bugfix on the "use only" cleaning in tfl.
2) Bugfix for holo/unholo programs.
```

Project: odb,transformées arpege,auxiliaire
ClearCase branch: mrpm602_CY39_cleanfix

Added:

xrd/lfi lfiarticles.F90

Deleted:

odb/tools	Add_bias_1c.F90	Add_scan_1c.F90	Biasconv_1c.F90
	Calc_bias_1c.F90	Calc_scan_1c.F90	Cycle_bias_1c.F90
	Cycle_biasprep_1c.F90	Cycle_biassele_1c.F90	Cycle_scan_1c.F90

Modified:

tfl/module suleg_mod.F90
xrd/lfi lfiarticles.F90

Doc:

1) Bugfix : enable the post-processing of Coupling Update Frequency fields in Fullpos in-line and off-line with NFPOS=2 .
2) Miscellaneous bugfixes for the post-processing of satellite radiances.
3) Protection of a test on non-associated pointers.

Project: arpege,satrad
ClearCase branch: mrpm602_CY39_cuf

Modified:

arp/fullpos endpos.F90 endvpos.F90 phymfpos.F90
sufpcuf.F90 sufpxfu.F90
arp/phys_dmn mts_phys.F90
arp/setup suafn2.F90
arp/utility deallo.F90
sat/rttov/ifs rttov_ec.F90

Doc:

Bugfixes concerning Fullpos.

Project: aladin,arpege,transformées aladin
ClearCase branch: mrpm602_CY39_fposfix

Modified:

ald/setup suemp.F90 suetrans.F90

arp/fullpos	wrhfp.F90	wrsfp.F90
arp/parallel	fptrdtoa.F90	
arp/utility	prepacka.F90	
tal/external	esetup_trans.F90	etrans_end.F90

Doc:

Bugfix: LCLOUD=.TRUE. .

Project: satrad
ClearCase branch: mrpm602_CY39_rttov

Modified:

sat/rttov/ifs	phrtsetup.F90

GCO

Doc:

Remove obsolete routines.

Project: aladin,arpege,auxiliaire
ClearCase branch: marp001_CY39_remove

Deleted:

ald/setup	elsirf.F90		
arp/fullpos	sc2rdgfp.F90	sc2wrgfp.F90	sufpsc2b.F90
arp/module	yomafpb.F90		
xrd/fa	decf10.F	ellips.F	fa_limits.F
	facade.F	facadi.F	facage.F

	facdec.F	facies.F	facile.F
	facine.F	facoch.F	facodx.F
	facom0.h	facom2.h	facomp.h
	facond.F	facsim.F	factec.F
	factui.F	factum.F	fadeci.F
	fadeco.F	fadecx.F	fadies.F
	fagiot.F	fagote.F	faicor.F
	faienc.F	faifla.F	fainig.F
	fainoc.F	faiopt.F	faipag.F
	faipar.F	fairme.F	fairno.F
	fais2f.F	faisan.F	faisc1.F
	faisc2.F	faitou.F	faixla.F
	falais.F	falimu.F	falsif.F
	famiso.F	fandai.F	fandar.F
	fandat.F	fanerg.F	fanfan.F
	fanfar.F	fanime.F	fanion.F
	fanmsg.F	fanouv.F	fanuca.F
	fanumu.F	fapula.F	farcis.F
	faregi.F	faregu.F	farflu.F
	farine.F	farpar.F	fatale.F
	fatran.F	fautif.F	faveur.F
	favori.F	faxion.F	
xrd/fa/mt	fa_limits_mt.F	facade_mt.F	facadi_mt.F
	facage_mt.F	facdec_mt.F	facies_mt.F
	facile_mt.F	facine_mt.F	facoch_mt.F
	facodx_mt.F	facond_mt.F	facsim_mt.F
	factec_mt.F	factui_mt.F	factum_mt.F
	fadeci_mt.F	fadeco_mt.F	fadecx_mt.F
	fadies_mt.F	fagiot_mt.F	fagote_mt.F
	faicor_mt.F	faienc_mt.F	faifla_mt.F
	fainig_mt.F	fainoc_mt.F	faiopt_mt.F
	faipag_mt.F	faipar_mt.F	fairme_mt.F

	fairno_mt.F	fais2f_mt.F	faisan_mt.F
	faisc1_mt.F	faisc2_mt.F	faitou_mt.F
	faixla_mt.F	falais_mt.F	falimu_mt.F
	falsif_mt.F	famiso_mt.F	fandai_mt.F
	fandar_mt.F	fandat_mt.F	fanerg_mt.F
	fanfan_mt.F	fanfar_mt.F	fanime_mt.F
	fanion_mt.F	fanmsg_mt.F	fanouv_mt.F
	fanuca_mt.F	fanumu_mt.F	fapula_mt.F
	farcis_mt.F	faregi_mt.F	faregu_mt.F
	farflu_mt.F	farine_mt.F	farpar_mt.F
	fatale_mt.F	fatran_mt.F	fautif_mt.F
	faveur_mt.F	favori_mt.F	faxion_mt.F
xrd/lfi	lfiafm.F	lfiarticles.F	lficap.F
	lficaq.F	lficas.F	lficax.F
	lficfg.F	lfichi.F	lficom0.h
	lficom1.h	lficom2.h	lficomt.h
	lfidah.F	lfideb.F	lfidst.F
	lfiecc.F	lfiecd.F	lfiecr.F
	lfiecx.F	lfiedo.F	lfiefr.F
	lfiems.F	lfieng.F	lfierf.F
	lfifer.F	lfifmd.F	lfifmp.F
	lfifra.F	lfiini.F	lfiintecr.F
	lfiintlec.F	lfiist.F	lfilaf.F
	lfilap.F	lfilas.F	lfilcc.F
	lfildo.F	lfilec.F	lfiled.F
	lfimoe.F	lfimst.F	lfinaf.F
	lfineg.F	lfinfo.F	lfinim.F
	lfinmg.F	lfinsg.F	lfinum.F
	lfioef.F	lfioeg.F	lfiofd.F
	lfiofm.F	lfiomf.F	lfiomg.F
	lfiopt.F	lfiosf.F	lfiosg.F
	lfiouv.F	lfipha.F	lfipim.F

	lfipos.F	lfipxa.F	lfipxf.F
	lfirac.F	lfiran.F	lfirec.F
	lfiree.F	lfiren.F	lfisfm.F
	lfista.F	lfisup.F	lfitam.F
	lfiver.F	lfivid.F	
xrd/lfi/mt	lfiafm_mt.F	lficap_mt.F	lficaq_mt.F
	lficas_mt.F	lficax_mt.F	lficfg_mt.F
	lfichi_mt.F	lfidah_mt.F	lfideb_mt.F
	lfidst_mt.F	lfiecc_mt.F	lfiecd_mt.F
	lfiecr_mt.F	lfiecx_mt.F	lfiedo_mt.F
	lfiefr_mt.F	lfiems_mt.F	lfieng_mt.F
	lfierf_mt.F	lfifer_mt.F	lfifmd_mt.F
	lfifmp_mt.F	lfifra_mt.F	lfiini_mt.F
	lfiintecr_mt.F	lfiintlec_mt.F	lfiist_mt.F
	lfilaf_mt.F	lfilap_mt.F	lfilas_mt.F
	lfilcc_mt.F	lfildo_mt.F	lfilec_mt.F
	lfiled_mt.F	lfimoe_mt.F	lfimst_mt.F
	lfinaf_mt.F	lfineg_mt.F	lfinfo_mt.F
	lfinim_mt.F	lfinmg_mt.F	lfinsg_mt.F
	lfinum_mt.F	lfioef_mt.F	lfioeg_mt.F
	lfiofd_mt.F	lfiofm_mt.F	lfiomf_mt.F
	lfiomg_mt.F	lfiopt_mt.F	lfiosf_mt.F
	lfiosg_mt.F	lfiouv_mt.F	lfipha_mt.F
	lfipim_mt.F	lfipos_mt.F	lfipxa_mt.F
	lfipxf_mt.F	lfirac_mt.F	lfiran_mt.F
	lfirec_mt.F	lfiree_mt.F	lfiren_mt.F
	lfisfm_mt.F	lfista_mt.F	lfisup_mt.F
	lfitam_mt.F	lfiver_mt.F	lfivid_mt.F
xrd/lfi	precision.h		
xrd/module	fa_mod.F	lfimod.F	
xrd/programs	testfa.F	tstlfi.F	
xrd/utilities	ismax_1.F	ismin_1.F	

Doc:

Fix phasing bugs.

Project: arpege,surfex
ClearCase branch: marp003_CY39_fix_t1_v00

Modified:

arp/namelist namparar.h
arp/phys_dmn suparar.F90
surfex/SURFEX allocate_teb_garden.F90 compute_isba_parameters.F90 garden.F90
modn_isban.F90

Doc:

Fix phasing bugs:
1) aro_ground_diag.F90: add dummy (intent out) argument ZLEI(KLON) to call of GET_FLUX_n ;
2) fp2sx1fa.F90: remove useless mandatory interface "sc2rdgfp.intfb.h" ;
3) oi_control.F90: add missing declaration of variables ILUNAM (INTEGER) & GFOUND (LOGICAL) ;
4) compute_isba_parameters.F90: add use of module MODI_READ_SURF, mandatory for call to READ_SURF .

Project: Meso-NH surface,surfex
ClearCase branch: marp003_CY39_fix_t1_v01

Modified:

mse/externals aro_ground_diag.F90 fp2sx1fa.F90
surfex/OFFLIN oi_control.F90
surfex/SURFEX compute_isba_parameters.F90

Doc:

Remove obsolete routines.

Project: transformées aladin,transformées arpege
ClearCase branch: none

Deleted:

tal/module eldspc2_mod.F90 eldspc2ad_mod.F90
tfl/module ldspc2_mod.F90 ldspc2ad_mod.F90 prle2_mod.F90
prle2ad_mod.F90

MARGUINAUD Philippe

Doc:

1) Changes in Linux_bind interface.
2) Re-activate OpenMP in screen.F90 .
3) Cleaning in sujbwavallo.F90 (OpenMP control).
4) Big/little endian conversion in iostream_mix.F90 .
5) Move MPI code part in bufr_screen_smos.F90 .

Project: arpege,satrad,auxiliaire
ClearCase branch: mrpm609_CY39_4dvar

Modified:

arp/module iostream_mix.F90
arp/obs_preproc screen.F90
arp/var sujbwavallo.F90
sat/programs bufr_screen_smos.F90
xrd/linux linux_bind.c
xrd/module mpl_init_mod.F90

Doc:

Phasing: interfacing with module "FA_MOD" .

Project: Meso-NH surface
ClearCase branch: mrpm609_CY39_arp_mrpm609_CY39_philourek3

Modified:

mse/module modd_io_surf_aro.F90

Doc:

1) Fix OpenMP bugs (move pieces of code outside OpenMP loops).
2) Use CPP macro "_OPENMP" in linux_bind.c .

Project: arpege,auxiliaire
ClearCase branch: mrpm609_CY39_bind

Added:

arp/adiab	lapineb_setup.F90		
arp/module	yomfgchk.F90		
arp/obs_preproc	fgchk_setup.F90		

Modified:

arp/adiab	call_sl.F90	lapineb.F90	lapineb_setup.F90	
arp/fullpos	openfpfa.F90			
arp/module	yomfgchk.F90			
arp/obs_preproc	fgchk.F90	fgchk_setup.F90	screen.F90	
xrd/linux	linux_bind.c			

Doc:

1) Miscellaneous bugfixes and cleanings.
2) Binding on Intel machine.

Project: auxiliaire
ClearCase branch: mrpm609_CY39_fafix

Added:

xrd/linux linux_bind.c

Modified:

xrd/fa	facadi.F90	facies.F90	facoch.F90
	facsim.F90	faifla.F90	faitou.F90
	fanouv.F90		
xrd/module	fa_mod.F90	mpl_init_mod.F90	
xrd/programs	lfidiff.F90	testfa.F90	

Doc:

Bugfixes in FA routines, about GRIB1 encoding (GRIBEX).

Project: auxiliaire
ClearCase branch: mrpm609_CY39_fafix2

Modified:

xrd/fa	facodx.F90	fadecx.F90	faitou.F90
	fanouv.F90		
xrd/module	fa_mod.F90		

Doc:

64 bits FA/LFI (write files larger than 16Gb), memory savings, convert code to F90.

Project: auxiliaire
ClearCase branch: mrpm609_CY39_falfi

Added:

xrd/fa	decf10.F90	ellips.F90	ellips.h
	fa_limits.F90	facade.F90	facadi.F90
	facage.F90	facdec.F90	facies.F90
	facile.F90	facine.F90	facoch.F90
	facodega.F90	facodx.F90	facom2.ixnvms.h
	facom2.llmoer.h	facond.F90	facsim.F90
	factec.F90	factui.F90	factum.F90
	fadeci.F90	fadeco.F90	fadecoga.F90
	fadecx.F90	fadies.F90	fagiot.F90
	fagote.F90	fagribex.F90	fagribexi.h
	fagribexr.h	faicor.F90	faienc.F90
	faifla.F90	fainig.F90	fainoc.F90
	faiopt.F90	faipag.F90	faipar.F90
	fairme.F90	fairno.F90	fais2f.F90
	faisan.F90	faisc1.F90	faisc2.F90
	faitou.F90	faixla.F90	falais.F90
	falimu.F90	falsif.F90	famiso.F90
	fandai.F90	fandar.F90	fandat.F90
	fanerg.F90	fanfan.F90	fanfar.F90
	fanime.F90	fanion.F90	fanmsg.F90
	fanouv.F90	fanuca.F90	fanumu.F90
	fapula.F90	farcis.F90	faregi.F90

	faregu.F90	farflu.F90	farine.F90
	farpar.F90	fatale.F90	fatran.F90
	fautif.F90	faveur.F90	favori.F90
	faxion.F90		
xrd/lfi	lfiafm.F90	lficap.F90	lficaq.F90
	lficas.F90	lficax.F90	lficfg.F90
	lfichi.F90	lficom2.ixc.h	lficom2.ixm.h
	lficom2.ixnims.h	lficom2.ixt.h	lficom2.llmoer.h
	lfidah.F90	lfideb.F90	lfidst.F90
	lfiecc.F90	lfiecd.F90	lfiecr.F90
	lfiecx.F90	lfiedo.F90	lfiefr.F90
	lfiems.F90	lfieng.F90	lfierf.F90
	lfifer.F90	lfifmd.F90	lfifmp.F90
	lfifra.F90	lfiini.F90	lfiintecr.F90
	lfiintlec.F90	lfiist.F90	lfilaf.F90
	lfilap.F90	lfilas.F90	lfilcc.F90
	lfildo.F90	lfilec.F90	lfiled.F90
	lfimoe.F90	lfimst.F90	lfinaf.F90
	lfineg.F90	lfinfo.F90	lfinim.F90
	lfinmg.F90	lfinsg.F90	lfinum.F90
	lfioef.F90	lfioeg.F90	lfiofd.F90
	lfiofm.F90	lfiomf.F90	lfiomg.F90
	lfiopt.F90	lfiosf.F90	lfiosg.F90
	lfiouv.F90	lfipha.F90	lfipim.F90
	lfipos.F90	lfipxa.F90	lfipxf.F90
	lfiran.F90	lfirec.F90	lfiree.F90
	lfiren.F90	lfisfm.F90	lfista.F90
	lfisuffix.h	lfisuffix.pl	lfisup.F90
	lfitam.F90	lfiver.F90	lfivid.F90
xrd/module	fa_mod.F90	lfi_precision.F90	lfimod.F90
xrd/programs	lfixxx.F90	testfa.F90	tstlfi.F90
xrd/utilities	ismax_1.F90	ismin_1.F90	

Modified:

xrd/fa	decf10.F90	ellips.F90	ellips.h
	fa_limits.F90	facade.F90	facadi.F90
	facage.F90	facdec.F90	facies.F90
	facile.F90	facine.F90	facoch.F90
	facodega.F90	facodx.F90	facom2.ixnvms.h
	facom2.llmoer.h	facond.F90	facsim.F90
	factec.F90	factui.F90	factum.F90
	fadeci.F90	fadeco.F90	fadecoga.F90
	fadecx.F90	fadies.F90	fagiot.F90
	fagote.F90	fagribex.F90	fagribexi.h
	fagribexr.h	faicor.F90	faienc.F90
	faifla.F90	fainig.F90	fainoc.F90
	faiopt.F90	faipag.F90	faipar.F90
	fairme.F90	fairno.F90	fais2f.F90
	faisan.F90	faisc1.F90	faisc2.F90
	faitou.F90	faixla.F90	falais.F90
	falimu.F90	falsif.F90	famiso.F90
	fandai.F90	fandar.F90	fandat.F90
	fanerg.F90	fanfan.F90	fanfar.F90
	fanime.F90	fanion.F90	fanmsg.F90
	fanouv.F90	fanuca.F90	fanumu.F90
	fapula.F90	farcis.F90	faregi.F90
	faregu.F90	farflu.F90	farine.F90
	farpar.F90	fatale.F90	fatran.F90
	fautif.F90	faveur.F90	favori.F90
	faxion.F90		
xrd/lfi	lfiafm.F90	lficap.F90	lficaq.F90
	lficas.F90	lficax.F90	lficfg.F90
	lfichi.F90	lficom2.ixc.h	lficom2.ixm.h

	lficom2.ixnims.h	lficom2.ixt.h	lficom2.llmoer.h
	lfidah.F90	lfideb.F90	lfidst.F90
	lfiecc.F90	lfiecd.F90	lfiecr.F90
	lfiecx.F90	lfiedo.F90	lfiefr.F90
	lfiems.F90	lfieng.F90	lfierf.F90
	lfifer.F90	lfifmd.F90	lfifmp.F90
	lfifra.F90	lfiini.F90	lfiintecr.F90
	lfiintlec.F90	lfiist.F90	lfilaf.F90
	lfilap.F90	lfilas.F90	lfilcc.F90
	lfildo.F90	lfilec.F90	lfiled.F90
	lfimoe.F90	lfimst.F90	lfinaf.F90
	lfineg.F90	lfinfo.F90	lfinim.F90
	lfinmg.F90	lfinsg.F90	lfinum.F90
	lfioef.F90	lfioeg.F90	lfiofd.F90
	lfiofm.F90	lfiomf.F90	lfiomg.F90
	lfiopt.F90	lfiosf.F90	lfiosg.F90
	lfiouv.F90	lfipha.F90	lfipim.F90
	lfipos.F90	lfipxa.F90	lfipxf.F90
	lfiran.F90	lfirec.F90	lfiree.F90
	lfiren.F90	lfisfm.F90	lfista.F90
	lfisuffix.h	lfisuffix.pl	lfisup.F90
	lfitam.F90	lfiver.F90	lfivid.F90
xrd/module	fa_mod.F90	lfi_precision.F90	lfimod.F90
xrd/programs	lfidiff.F90	lfilist.F90	lfitools.F90
	lfixxx.F90	testfa.F90	tstlfi.F90
xrd/utilities	ismax_1.F90	ismin_1.F90	

Doc:

1) Bugfix in FP2SX1 (prep isba->surfex).
2) Change name from L_GROUND_DEPTH to L_GROUND_DPT in SURFEX .
3) Changes in conversion tools (sfxlfi2fa).

Project: Meso-NH surface,surfex
ClearCase branch: mrpm609_CY39_fp2sx1

Modified:

mse/externals	fp2sx1.F90	fp2sx1fa.F90
mse/module	sfxflddesc_mod.F90	
mse/programs	sfxlfi2fa.F90	
surfex/SURFEX	read_pgd_isba_parn.F90	writesurf_pgd_isba_parn.F90

Doc:

- Fullpos buffers re-shaping :
Since the very beginning, Fullpos buffers have been shaped like 1-D arrays in order to enable the use of the asynchronous queued workfiles on the former Cray vector machine.
The buffers are here reshaped like 3-D arrays (NFPROMA, number of fields, number of NFPROMA slices) in order to :
- allow higher resolutions (the total buffer size is not any more limited to 2.E9)
- reduce the number of arrays copies (no more sc2rdg/sc2wrg mechanism)
- save memory (each NFPROMA slice is accessed directly and working arrays can be released rapidly).
- prepare for incoming optimizations of the communications in Fullpos
- prepare for multi-spectral transforms in Fullpos

- Overall memory saving in Fullpos :
The data flux has been re-organised in order to minimize the allocation of large arrays.

- Possibility to read/write surface FA files split into sub-files with the same frame; basic parallel version of "e927/PREP" (aka as "PREP in Full-POS") which is the configuration used when coupling an Aladin/Arome+Surfex with and Arpège or Aladin with the old ISBA .

- I/O server: facility to send fields piecewise and aggregate them into full horizontal fields inside the I/O server (instead of before sending them to the server).

- Cleaning and rewrite of the model I/O routines.

Project:	aladin,arpege,Meso-NH physique altitude,Meso-NH surface,odb,satrad,scattt,surfex,transformées arpege,auxiliaire
ClearCase branch:	mrpm609_CY39_philourek2

Added:

ald/transform	edir_trans_px.F90	einv_trans_px.F90	
arp/dia	ini1wrfp.F90	ini3wrfp.F90	inifaoutinfo.F90
	wrgathflnm.F90	wrspeca_compress1_mt.F90	wrspeca_gp.F90
	wrspeca_map.F90		
arp/fullpos	extfpfboyd.F90	fposhorlag.F90	fpselezo.F90
	rdclimosfx.F90	scan2m_mpos.F90	wrgp2fafp.F90
arp/io_serv	io_serv_del_req.F90	io_serv_get_req.F90	io_serv_hdr1_init.F90
	io_serv_hdr2_init.F90	io_serv_make_chunks.F90	io_serv_map_send_part1.F90
	io_serv_map_send_part2.F90	io_serv_read_idx.F90	io_serv_recv_decode_fullpos.F90
	io_serv_recv_fullpos.F90	io_serv_recv_map.F90	
arp/module	diwrspec_mod.F90	extfpselect_mod.F90	fpgpnorm_mod.F90
	iofldesc_mod.F90	iofu_mod.F90	iogrclia_mod.F90
	iogrida_mod.F90	iogridua_mod.F90	iogridva_mod.F90
	iomultibuf_mod.F90	ioxfu_mod.F90	mfioopts_mod.F90
	wrfldcw_mod.F90	yomio_serv_map_plan.F90	yomio_serv_req.F90
arp/namelist	namphmse.h		
arp/setup	sugrida_fix_toz.F90	suspeca_gp.F90	
arp/utility	facile_compact.F90	facond_compact.F90	faget_compact.F90
	faset_compact.F90	openfainfo.F90	rdfa2gp.F90

	wrgp2fa_remove_undef.F90		
arp/var	suspqlim_part1.F90	suspqlim_part2.F90	
mse/externals	fp2sx1fa.F90	ini_prep_surfex_aroa.F90	ini_prep_surfex_arob.F90
	ini_prep_surfex_aroc.F90		
mse/interface	fp2sx1fa.h	ini_prep_surfex_aroa.h	ini_prep_surfex_arob.h
	ini_prep_surfex_aroc.h	lfi2xxyy.h	sfxfagrok.h
mse/internals	lfi2xxyy.F90	sfxfagrok.F90	
mse/module	sfxflddesc_mod.F90		
mse/programs	sfxconv.F90	sfxfa2lfi.F90	sfxlfi2fa.F90
	sfxtools.F90		
sat/rttov/main	rttov_nullify_prof.F90		
xrd/fa	faiopt.F	fanfan.F	
xrd/fa/mt	faiopt_mt.F	fanfan_mt.F	
xrd/hack	bbt.h		
xrd/lfi	lfiopt.F		
xrd/lfi/mt	lfiopt_mt.F		
xrd/module	fadup_mod.F	mpl_comm_free_mod.F90	mpl_comm_split_mod.F90
	xrd_getoptions.F90	xrd_unix_env.F90	
xrd/programs	faempty.F90		
xrd/support	iswap8.c		

Modified:

ald/c9xx	ebicli.F90		
ald/fullpos	ebipos.F90	espfp.F90	exarp.F90
	fpezo2h.F90	fpezone.F90	fpfillb.F90
	posfpbipos.F90	prefpbipos.F90	sufpmove.F90
ald/module	eshrinkstretch_mod.F90		
ald/transform	edir_trans_px.F90	einv_trans_px.F90	
arp/adiab	spcsi.F90		
arp/canari	caisse.F90	calice.F90	can1.F90
	canife.F90	cavegi.F90	

arp/control	spcm.F90		
arp/dia	ini1wrfp.F90	ini3wrfp.F90	inifaout.F90
	inifaoutinfo.F90	wrfu.F90	wrgathflnm.F90
	wrgpa.F90	wrgrida.F90	wrgridall.F90
	wrgridua.F90	wrmlppa.F90	wrspeca.F90
	wrspeca_compress.F90	wrspeca_compress1_mt.F90	wrspeca_compress_mt.F90
	wrspeca_gp.F90	wrspeca_map.F90	wrxfu.F90
arp/fullpos	cpclimi.F90	dynfpos.F90	endpos.F90
	endvpos.F90	extfpf.F90	extfpfboyd.F90
	fpachmt.F90	fpcliphy.F90	fpcorphy.F90
	fpnilphy.F90	fposhor.F90	fposhorlag.F90
	fpselezo.F90	gridfpos.F90	hpos.F90
	openfpfa.F90	rdclimo.F90	rdclimosfx.F90
	sc2rdgfp.F90	sc2wrgfp.F90	scan2m_hpos.F90
	scan2m_mpos.F90	scan2m_vpos.F90	stepo_fpos.F90
	sufpcip.F90	sufporog.F90	sufprfpbuf.F90
	sufpsc2b.F90	sufpsuw.F90	vpos.F90
	wrgp2fafp.F90	wrhfp.F90	wrmlfp.F90
	wrmlfpl.F90	wrplfp.F90	wrpvlfp.F90
	wrsfp.F90	wrthlfp.F90	
arp/io_serv	io_serv_close.F90	io_serv_compress.F90	io_serv_del_req.F90
	io_serv_get_req.F90	io_serv_hdr1_init.F90	io_serv_hdr2_init.F90
	io_serv_hdr_grok_size.F90	io_serv_hdr_init.F90	io_serv_make_chunks.F90
	io_serv_map_send_part1.F90	io_serv_map_send_part2.F90	io_serv_open.F90
	io_serv_prepacka1_compress.F90	io_serv_read_idx.F90	io_serv_reclaim_buf_space.F90
	io_serv_recv.F90	io_serv_recv_cleanup.F90	io_serv_recv_decode_fullpos.F90
	io_serv_recv_fullpos.F90	io_serv_recv_map.F90	io_serv_send.F90
	io_serv_suiosctmpl.F90	io_serv_sumpioh.F90	io_serv_terminate.F90
	io_serv_wrgp2fa_compress.F90	io_serv_write.F90	io_serv_wrspeca_compress.F90
arp/module	disgrid_mod.F90	diwrgrid_mod.F90	diwrspec_mod.F90
	extfpselect_mod.F90	fpgpnorm_mod.F90	iofldesc_mod.F90
	iofu_mod.F90	iogrclia_mod.F90	iogrida_mod.F90

	iogridua_mod.F90	iogridva_mod.F90	iomultibuf_mod.F90
	iospeca_mod.F90	ioxfu_mod.F90	mfioopts_mod.F90
	surface_fields_mix.F90	wrfldcw_mod.F90	wrfu_mod.F90
	wrgrida_mod.F90	wrgridua_mod.F90	wrxfu_mod.F90
	yomafpb.F90	yomcst.F90	yomct0.F90
	yomdfpb.F90	yomio_serv.F90	yomio_serv_cfield.F90
	yomio_serv_compress.F90	yomio_serv_hdr.F90	yomio_serv_map_plan.F90
	yomio_serv_recv.F90	yomio_serv_req.F90	yomio_serv_write.F90
	yommse.F90	yompfpb.F90	yomrfpb.F90
	yomtag.F90		
arp/namelist	namct0.h	namphmse.h	
arp/obs_preproc	black.F90	readoba.F90	
arp/op_obs	hop.F90	hretr.F90	radtr.F90
arp/parallel	diwrgridalltoall.F90	diwrgridunscramble.F90	fptrdtoa.F90
	gathereigmd.F90	gathflnm.F90	pe2set.F90
	rdpxfa.F90		
arp/phys_dmn	apl_arome.F90	aplpar.F90	
arp/setup	sucst.F90	suct0.F90	sugrclia.F90
	sugrida.F90	sugrida_fix_toz.F90	sugridua.F90
	sugridva.F90	sump0.F90	sumpini.F90
	sumpioh.F90	suspeca.F90	suspeca_gp.F90
	suspqlim.F90		
arp/utility	dealfpos.F90	dealsekf.F90	extgpf.F90
	facile_compact.F90	facond_compact.F90	faget_compact.F90
	faset_compact.F90	openfa.F90	openfainfo.F90
	pkgrida.F90	pkspeca.F90	pksurfa.F90
	prepacka.F90	rdfa2gp.F90	rdgpfa.F90
	wrgp2fa.F90	wrgp2fa_compress.F90	wrgp2fa_compress_mt.F90
	wrgp2fa_remove_undef.F90		
arp/var	getmini2.F90	inflation_pert.F90	rdfpinc.F90
	rtsetup.F90	suinfce.F90	sujbcor.F90
	suspqlim_part1.F90	suspqlim_part2.F90	suvar.F90

mpa/turb/internals	compute_entr_detr.f90		
mse/externals	aro_ground_param.F90	aro_surf_diag.F90	aro_surf_diagh.F90
	aroini_surfa.F90	aroini_surfb.F90	aroini_surfc.F90
	close_prep_surfex_aro.F90	fp2sx1.F90	fp2sx1fa.F90
	ini_prep_surfex_aro.F90	ini_prep_surfex_aroa.F90	ini_prep_surfex_arob.F90
	ini_prep_surfex_aroc.F90	prep_surf_aro.F90	put_bufx1.F90
	sugridsfx.F90	suphmse_surface.F90	wrsfx.F90
mse/interface	aro_ground_param.h	aro_surf_diag.h	aroini_surfa.h
	aroini_surfb.h	aroini_surfc.h	fp2sx1fa.h
	ini_prep_surfex_aroa.h	ini_prep_surfex_arob.h	ini_prep_surfex_aroc.h
	lfi2xxyy.h	prep_surf_aro.h	sfxfagrok.h
	sugridsfx.h	xxyy2lfi.h	
mse/internals	aroclose_aux_io_surf.F90	aroinit_io_surf_n.F90	aroopen_aux_io_surf.F90
	fmlook.F90	lfi2xxyy.F90	read_in_lfi_x2.F90
	read_surfc0_aro.F90	read_surfl0_aro.F90	read_surfl1_aro.F90
	read_surfn0_aro.F90	read_surfn1_aro.F90	read_surft0_aro.F90
	read_surft1_aro.F90	read_surfx0_aro.F90	read_surfx1_aro.F90
	read_surfx2_aro.F90	sfxfagrok.F90	write_surfc0_aro.F90
	write_surfl0_aro.F90	write_surfl1_aro.F90	write_surfn0_aro.F90
	write_surfn1_aro.F90	write_surft0_aro.F90	write_surft1_aro.F90
	write_surfx0_aro.F90	write_surfx1_aro.F90	write_surfx2_aro.F90
	xxyy2lfi.F90		
mse/module	modd_io_surf_aro.F90	sfxflddesc_mod.F90	
mse/new	disgrid_surf_ext2.F90	diwrgrid_surf_ext2.F90	
mse/programs	driver_off_omp.F90	sfxconv.F90	sfxfa2lfi.F90
	sfxfilter.F90	sfxlfi2fa.F90	sfxtools.F90
	sfxutil.F90		
odb/cma2odb	update_ddr_odb.F90		
sat/rttov/ifs	rttov_ec.F90	rttov_ec_ad.F90	rttov_ec_tl.F90
sat/rttov/main	rttov_nullify_prof.F90		
sct/oretrieve	oscat_read_bufr.F		
surfex/SURFEX	av_pgd.F90	compute_isba_parameters.F90	init_isba_mixpar.F90

tfl/module	sump_trans_mod.F90		
xrd/fa	facade.F	faiopt.F	fanfan.F
xrd/fa/mt	facine_mt.F	fadeci_mt.F	faiopt_mt.F
	faipar_mt.F	fanfan_mt.F	fanouv_mt.F
xrd/fi_libc	fi_libc.c	fi_libc.h	
xrd/hack	bbt.h		
xrd/lfi	lfiopt.F		
xrd/lfi/mt	lfiefr_mt.F	lfifer_mt.F	lfiled_mt.F
	lfiopt_mt.F	lfiouv_mt.F	lfiver_mt.F
xrd/module	fa_mod.F	fadup_mod.F	lfimod.F
	mpl_allreduce_mod.F90	mpl_alltoallv_mod.F90	mpl_broadcast_mod.F90
	mpl_comm_free_mod.F90	mpl_comm_split_mod.F90	mpl_recv_mod.F90
	mpl_send_mod.F90	xrd_getoptions.F90	xrd_unix_env.F90
xrd/programs	facat.F90	faempty.F90	faidx.F90
	lfidiff.F90	lfilist.F90	lfitools.F90
	lfixxxx.F90		
xrd/support	iswap8.c		

MARY Alexandre

Doc:

```
1. Fixes linked with new GOM handling :
   - bad filling of gom SD_VV // cobs
   - key for the need for cloud gfl (YA) in goms under activation of YA%LACTIVE // sugoms
   - copy of TS in SST table if SST gom not filled // preints, needed for ppobsac/achmt
2. Missing external non special variables 46-52 // mf_blacklist
3. Missing test on LECMWF on call ABOR1 for missing VF_CI in goms // black
4. Missing test on LECMWF on call JACOBIAN_PEAK // hretr
5. Correction of test for calling GET_TRAJ_GRID // scan2m
```

Project: arpege,black_list

ClearCase branch: mary_CY39_bf39ald

Modified:

arp/control	scan2m.F90		
arp/obs_preproc	black.F90	sugoms.F90	
arp/op_obs	cobs.F90	hretr.F90	preints.F90
bla	mf_blacklist.b		

PAYAN Christophe

Doc:

Catch-up from current parallel suite (version CY38T1_op1.04), except for BATOR part, sent in a different contribution.

Project: arpege,black_list,odb,satrad
ClearCase branch: mrpa642_CY39_38t1op1v03_to_39t1

Added:

arp/namelist	namfpdyf.h	namthlim.h	
arp/obs_preproc	land_seviri.F90	redgps.F90	
arp/op_obs	emis_ir_atlas.F90	sat_avg_stdev_filter.F90	
sat/emiss	atlas_bcast.F90	atlas_iniall.F90	atlas_land_amsua.F90
	atlas_land_amsub.F90	atlas_read.F90	atlas_write.F90
sat/programs	atlas_ascii2bin.F90	sat_retr_tools.F90	

Deleted:

sat/emiss land_amsua_an1.F90 land_amsua_an2.F90 land_amsub_an1.F90
land_amsub_an2.F90

Modified:

arp/adiab	spcsi.F90		
arp/canari	cacsts.F90	can1.F90	cavegi.F90
arp/dia	inifaout.F90	wrmlppa.F90	
arp/fullpos	openfpfa.F90		
arp/module	qacveg.F90	surface_fields_mix.F90	varbc_rad.F90
	varbc_setup.F90	yomemis.F90	yomppvi.F90
	yomscc.F90		
arp/namelist	nacveg.h	namemis_conf.h	namfpdyf.h
	namobs.h	namppvi.h	namscc.h
	namthlim.h		
arp/obs_preproc	black.F90	cloud_detect_setup.F90	defrun.F90
	fgwnd.F90	inifger.F90	land_seviri.F90
	new_thinn.F90	rad1cin.F90	readoba.F90
	redgps.F90	redun.F90	scaqc.F90
	sufglim.F90		
arp/op_obs	cloud_detect.F90	emis_atlas.F90	emis_ir.F90
	emis_ir_atlas.F90	hop.F90	hretr.F90
	mw_screen_cloud_and_rain.F90	preintuvad.F90	rad1cemis.F90
	radtr.F90	sat_avg_stdev_filter.F90	
arp/parallel	gathereigmd.F90		
arp/pp_obs	ppt.F90		
arp/setup	sucst.F90	suemis_conf.F90	suppvi.F90
arp/utility	add5to3.F90	deallo.F90	
arp/var	getmini2.F90	rtsetup.F90	suinfce.F90
	sujbcor.F90	sujbwavgen.F90	writeoba.F90
bla	mf_blacklist.b		
odb/cma2odb	create_averaged_values.F90	putatdb.F90	shuffle_odb.F90
	update_ddr_odb.F90		
odb/ddl	obsort_radar_body.sql	obsort_update_1.sql	obsort_update_10.sql

	obsort_update_2.sql	obsort_update_3.sql	obsort_update_4.sql
	obsort_update_5.sql	obsort_update_6.sql	obsort_update_7.sql
	obsort_update_8.sql	obsort_update_9.sql	radiance_averaging.sql
	redun_robody_1.sql	satbody_screen_atovs.sql	
odb/pandor/module	bator_decodbufr_mod.F90	bator_ecritures_mod.F90	bator_init_mod.F90
	bator_module.F90		
odb/pandor/namelist	bator_namelist.h		
odb/tools	Odbtools.F90		
sat/emiss	atlas_bcast.F90	atlas_iniall.F90	atlas_land_amsua.F90
	atlas_land_amsub.F90	atlas_read.F90	atlas_write.F90
	land_ssmi.F90	land_ssmis.F90	land_surf_type.F90
sat/programs	atlas_ascii2bin.F90	sat_retr_tools.F90	
sat/rttov/ifs	rttov_ec.F90	rttov_ec_ad.F90	rttov_ec_tl.F90

Doc:

```
* suejbstd.F90: bugfix (AM) ;
* last modified routines for next 38t1_op1.05: mf_blacklist.b, bator_init_mod.F90,
bator_decodbufr_mod.F90 (LFM) ;
* namthlim in OOPS style (inclusion in sufglim) (CP) ;
* update (mainly cleaning) of  mrpa642_CY39_38t1op1v03_to_39t1 merged in CY39_t1.03:
 - sujbwavgen.F90: duplicated line removed ;
 - hretr.F90 mw_screen_cloud_and_rain.F90: LFM cleaning ;
 - obsort_update_N.sql, N=1,10: DP +LFM merging (update_1.len block in clause WHERE kept) ;
 - obsort_conv_body.sql obsort_conv.sql and obsort_hdr2conv_body.sql (DP+CP) ;
* proposition which should satisfy ECMWF and MF (?) :
<      AND groupid = 17
---
>      AND ( groupid = 17 OR obstype IN (,,,,) ) //IFS OR AAA-H
 - other routines: merging (DP) .

(NB: AM = Alexandre MARY ; CP = Christophe PAYAN ; DP = Dominique PUECH ; LFM = Louis-François MEUNIER)
```

Project: aladin,arpege,black_list,odb

ClearCase branch: mrpa642_CY39_38t1op_to_39t1-updt

Deleted:

arp/namelist namthlim.h

Modified:

ald/var	suejbstd.F90		
arp/module	yomdb.F90		
arp/namelist	namthlim.h		
arp/obs_preproc	sufglim.F90		
arp/op_obs	hretr.F90	mw_screen_cloud_and_rain.F90	
arp/var	sujbwavgen.F90		
bla	mf_blacklist.b		
odb/cma2odb	ctxinitdb.F90	shuffle.F90	shuffle_odb.F90
odb/ddl	obsort_allsky.sql	obsort_allsky_body.sql	obsort_auxiliary.sql
	obsort_body.sql	obsort_cloud_sink.sql	obsort_collocated_imager_information.sql
	obsort_conv.sql	obsort_conv_body.sql	obsort_errstat.sql
	obsort_gbrad.sql	obsort_gbrad_body.sql	obsort_gnssro.sql
	obsort_gnssro_body.sql	obsort_hdr.sql	obsort_hdr2allsky_body.sql
	obsort_hdr2auxiliary_body.sql	obsort_hdr2body.sql	obsort_hdr2conv_body.sql
	obsort_hdr2gbrad_body.sql	obsort_hdr2gnssro_body.sql	obsort_hdr2radar_body.sql
	obsort_hdr2radiance_body.sql	obsort_hdr2resat_averaging_kernel.sql	obsort_hdr2scatt_body.sql
	obsort_index.sql	obsort_limb.sql	obsort_modsurf.sql
	obsort_radar.sql	obsort_radar_body.sql	obsort_radar_station.sql
	obsort_radiance.sql	obsort_radiance_body.sql	obsort_resat.sql
	obsort_resat_averaging_kernel.sql	obsort_sat.sql	obsort_satob.sql
	obsort_scatt.sql	obsort_scatt_body.sql	obsort_ssmi.sql
	obsort_ssmi_body.sql	obsort_update_1.sql	obsort_update_10.sql
	obsort_update_2.sql	obsort_update_3.sql	obsort_update_4.sql
	obsort_update_5.sql	obsort_update_6.sql	obsort_update_7.sql

	obsort_update_8.sql	obsort_update_9.sql	obsortca_auxiliary.sql
	obsortca_body.sql	obsortca_errstat.sql	obsortca_hdr.sql
	obsortca_hdr2auxiliary_body.sql	obsortca_hdr2body.sql	obsortca_index.sql
	obsortca_update_1.sql	obsortca_update_2.sql	obsortca_update_3.sql
odb/pandor/module	bator_decodbufr_mod.F90	bator_init_mod.F90	

Doc:

Catch-up from current parallel suite (version CY38T1_op1.04), BATOR part .

Project: odb
ClearCase branch: mrpa642_CY39_batorscatplus-base02

Modified:

odb/pandor/module bator_decodbufr_mod.F90 bator_init_mod.F90 bator_module.F90
odb/pandor/namelist bator_namelist.h

SAINT-RAMOND Nathalie

Doc:

Modify GPS RO vertical thinning and upper limit.

Project: arpege,black_list
ClearCase branch: mrpa641_CY39_gpsrothin

Modified:

arp/module	yomobs.F90	yomscc.F90
arp/namelist	namobs.h	namscc.h
arp/obs_preproc	defrun.F90	pre_thinner.F90

bla mf_blacklist.b

SASSI Zied

Doc:

1) Fix for ALARO: add initialization of 4 new local arrays in APLPAR. The correction ensures bit-reproducible results with varying NPROMA and between
mono and multi-proc jobs (as tested in mitraillette, job AA1T) in CY39_t1.03 .

2) Inline of subroutines SUFPPHQ.F90 which initializes the control of post process of physical quantities in routine SUMTS.F90 and EINTFAC.F90 which
copies the ALADIN spectral array to array from argument or the other way round in routines DFI2.F90, DFI2MOD.F90 and DIGFIL.F90 .

3) Inline of subroutine GPINITHER.F90 which initializes the weigth vectors in the routine mf_phys.F90 .

Project: arpege
ClearCase branch: sassi_CY39_alaro-fx

Modified:

arp/dfi	dfi2.F90	dfi2mod.F90	digfil.F90
arp/phys_dmn	aplpar.F90	mf_phys.F90	
arp/setup	sumts.F90		

Doc:

Fix of norm violations reported by the norm checker. The main norm violations are:
- declaration of non used variables ;
- variable names not following prefix convention as defined in the programming standard document ;
- syntax issues like use of "END IF" in order of "ENDIF" or use of ".NE." in order of "/=". etc...

Project: arpege

ClearCase branch: sassi_CY39_norms_vio

Modified:

arp/op_obs	slint_canari.F90		
arp/phys_dmn	accvud.F90	acdifv3.F90	acmixelen.F90
	acmrip.F90	acmris.F90	acmriss.F90
	acnebcond.F90	acnebnsc.F90	acpscc.F90
	acptke.F90	acptkes.F90	actkecoefkh.F90
	actkehmt.F90	actkehmtls.F90	actkezot.F90
	actkezotls.F90	arp_ground_param.F90	suphy0.F90
	vdfparcelhl.F90		
arp/phys_radi	surrtmcf.F90	susrtmcf.F90	
arp/var	readtmp.F90		

SEITY Yann

Doc:

```
arp/phys_dmn/apl_arome.F90               : cleaning ;
mpa/conv/externals/aro_conv_mnh.F90      : bugfix for vertical levels ordering ;
mpa/micro/externals/aro_suintbudget.F90 : bugfix for vertical levels ordering ;
mpa/micro/externals/invert_vlev.F90      : bugfix for vertical levels ordering ;
mpa/micro/internals/budget.F90           : bugfix for vertical levels ordering ;
mse/externals/sugridsfx.F90              : bugfix from 38t1_op [E-suite] to cycle Canopy fields when
surfex FA files are used .
```

Project: arpege,Meso-NH physique altitude,Meso-NH surface
ClearCase branch: mrpm637_CY39_BFs_arome

Added:

arp/phys_dmn compute_neb.F90

Modified:

arp	phys_dmn	
arp/phys_dmn	apl_arome.F90	compute_neb.F90
mpa/conv/externals	aro_conv_mnh.F90	
mpa/micro/externals	aro_suintbudget.F90	invert_vlev.F90
mpa/micro/internals	budget.F90	
mse/externals	sugridsfx.F90	

Doc:

1) Optimisations to be able to run MesoNH physics without JPVEXT points in the vertical dimension. Arrays are now (KLON,1,KLEV)
instead of (KLON,1,KLEV+2).
2) Rename all ".f90" files to "*.F90" .*

Project: arpege,Meso-NH physique altitude
ClearCase branch: mrpm637_CY39_aro_for39t1

Added:

mpa/micro/externals	add_bounds.F90
mpa/micro/module	modi_add_bounds.F90

Renamed:

mpa/chem/externals	aro_mnhc.f90 to mpa/chem/externals/aro_mnhc.F90
	aro_mnhdust.f90 to mpa/chem/externals/aro_mnhdust.F90
	aro_rainaero.f90 to mpa/chem/externals/aro_rainaero.F90
	aro_wetdep.f90 to mpa/chem/externals/aro_wetdep.F90
	aroini_mnhc.f90 to mpa/chem/externals/aroini_mnhc.F90

	aroini_nsv.f90 to mpa/chem/externals/aroini_nsv.F90
	aroini_nsv0.f90 to mpa/chem/externals/aroini_nsv0.F90
	ch_aer_init.f90 to mpa/chem/externals/ch_aer_init.F90
	ch_aer_mod_init.f90 to mpa/chem/externals/ch_aer_mod_init.F90
mpa/chem/internals	aer_effic.f90 to mpa/chem/internals/aer_effic.F90
	aer_effic_dep.f90 to mpa/chem/internals/aer_effic_dep.F90
	aer_velgrav.f90 to mpa/chem/internals/aer_velgrav.F90
	aer_wet_dep.f90 to mpa/chem/internals/aer_wet_dep.F90
	aer_wet_dep_kmt_warm.f90 to mpa/chem/internals/aer_wet_dep_kmt_warm.F90
	ch_aer_coag.f90 to mpa/chem/internals/ch_aer_coag.F90
	ch_aer_driver.f90 to mpa/chem/internals/ch_aer_driver.F90
	ch_aer_eqm_cormass.f90 to mpa/chem/internals/ch_aer_eqm_cormass.F90
	ch_aer_eqm_init0d.f90 to mpa/chem/internals/ch_aer_eqm_init0d.F90
	ch_aer_eqsam.f90 to mpa/chem/internals/ch_aer_eqsam.F90
	ch_aer_growth.f90 to mpa/chem/internals/ch_aer_growth.F90
	ch_aer_init_soa.f90 to mpa/chem/internals/ch_aer_init_soa.F90
	ch_aer_intermin.f90 to mpa/chem/internals/ch_aer_intermin.F90
	ch_aer_mineral.f90 to mpa/chem/internals/ch_aer_mineral.F90
	ch_aer_mpmpo.f90 to mpa/chem/internals/ch_aer_mpmpo.F90
	ch_aer_nucl.f90 to mpa/chem/internals/ch_aer_nucl.F90
	ch_aer_organic.f90 to mpa/chem/internals/ch_aer_organic.F90
	ch_aer_pun.f90 to mpa/chem/internals/ch_aer_pun.F90
	ch_aer_reallfi_n.f90 to mpa/chem/internals/ch_aer_reallfi_n.F90
	ch_aer_sedim_n.f90 to mpa/chem/internals/ch_aer_sedim_n.F90
	ch_aer_solv.f90 to mpa/chem/internals/ch_aer_solv.F90
	ch_aer_surf.f90 to mpa/chem/internals/ch_aer_surf.F90
	ch_aer_thermo.f90 to mpa/chem/internals/ch_aer_thermo.F90
	ch_aer_trans.f90 to mpa/chem/internals/ch_aer_trans.F90
	ch_aer_velgrav_n.f90 to mpa/chem/internals/ch_aer_velgrav_n.F90
	ch_allocate_taccs.f90 to mpa/chem/internals/ch_allocate_taccs.F90
	ch_aqua.f90 to mpa/chem/internals/ch_aqua.F90
	ch_ares.f90 to mpa/chem/internals/ch_ares.F90

ch_convect_scavenging.f90 to mpa/chem/internals/ch_convect_scavenging.F90
ch_cranck.f90 to mpa/chem/internals/ch_cranck.F90
ch_deallocate_taccs.f90 to mpa/chem/internals/ch_deallocate_taccs.F90
ch_diagnostics.f90 to mpa/chem/internals/ch_diagnostics.F90
ch_exqssa.f90 to mpa/chem/internals/ch_exqssa.F90
ch_fcn.f90 to mpa/chem/internals/ch_fcn.F90
ch_gauss.f90 to mpa/chem/internals/ch_gauss.F90
ch_get_cnames.f90 to mpa/chem/internals/ch_get_cnames.F90
ch_get_rates.f90 to mpa/chem/internals/ch_get_rates.F90
ch_ini_orilam.f90 to mpa/chem/internals/ch_ini_orilam.F90
ch_init_ccs.f90 to mpa/chem/internals/ch_init_ccs.F90
ch_init_diagnostics.f90 to mpa/chem/internals/ch_init_diagnostics.F90
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	modd_neb.f90 to mpa/micro/module/modd_neb.F90
	modd_nsv.f90 to mpa/micro/module/modd_nsv.F90
	modd_param_c1r3.f90 to mpa/micro/module/modd_param_c1r3.F90
	modd_param_c2r2.f90 to mpa/micro/module/modd_param_c2r2.F90
	modd_param_ice.f90 to mpa/micro/module/modd_param_ice.F90
	modd_parameters.f90 to mpa/micro/module/modd_parameters.F90
	modd_rain_ice_descr.f90 to mpa/micro/module/modd_rain_ice_descr.F90
	modd_rain_ice_param.f90 to mpa/micro/module/modd_rain_ice_param.F90
	modd_refaro.f90 to mpa/micro/module/modd_refaro.F90
	moddb_intbudget.f90 to mpa/micro/module/moddb_intbudget.F90
	mode_fmbidon.f90 to mpa/micro/module/mode_fmbidon.F90
	mode_fmwritbidon.f90 to mpa/micro/module/mode_fmwritbidon.F90
	modi_budget.f90 to mpa/micro/module/modi_budget.F90
	modi_cart_compress.f90 to mpa/micro/module/modi_cart_compress.F90

	modi_condensation.f90 to mpa/micro/module/modi_condensation.F90
	modi_gamma.f90 to mpa/micro/module/modi_gamma.F90
	modi_gamma_inc.f90 to mpa/micro/module/modi_gamma_inc.F90
	modi_general_gamma.f90 to mpa/micro/module/modi_general_gamma.F90
	modi_ice_adjust.f90 to mpa/micro/module/modi_ice_adjust.F90
	modi_ini_budget.f90 to mpa/micro/module/modi_ini_budget.F90
	modi_ini_cst.f90 to mpa/micro/module/modi_ini_cst.F90
	modi_ini_neb.f90 to mpa/micro/module/modi_ini_neb.F90
	modi_ini_rain_ice.f90 to mpa/micro/module/modi_ini_rain_ice.F90
	modi_mask_compress.f90 to mpa/micro/module/modi_mask_compress.F90
	modi_rain_ice.f90 to mpa/micro/module/modi_rain_ice.F90
	modi_read_xker_gweth.f90 to mpa/micro/module/modi_read_xker_gweth.F90
	modi_read_xker_raccs.f90 to mpa/micro/module/modi_read_xker_raccs.F90
	modi_read_xker_rdryg.f90 to mpa/micro/module/modi_read_xker_rdryg.F90
	modi_read_xker_sdryg.f90 to mpa/micro/module/modi_read_xker_sdryg.F90
	modi_read_xker_sweth.f90 to mpa/micro/module/modi_read_xker_sweth.F90
	modi_rrcolss.f90 to mpa/micro/module/modi_rrcolss.F90
	modi_rscolrg.f90 to mpa/micro/module/modi_rscolrg.F90
	modi_rzcolx.f90 to mpa/micro/module/modi_rzcolx.F90
mpa/programs	ch_make_lookup.f90 to mpa/programs/ch_make_lookup.F90
mpa/turb/externals	aro_shallow_mf.f90 to mpa/turb/externals/aro_shallow_mf.F90
	aro_turb_mnh.f90 to mpa/turb/externals/aro_turb_mnh.F90
	aroini_mfshal.f90 to mpa/turb/externals/aroini_mfshal.F90
	aroini_turb.f90 to mpa/turb/externals/aroini_turb.F90
	arp_shallow_mf.f90 to mpa/turb/externals/arp_shallow_mf.F90
mpa/turb/internals	bl89.f90 to mpa/turb/internals/bl89.F90
	bl_depth_diag_1d.f90 to mpa/turb/internals/bl_depth_diag_1d.F90
	bl_depth_diag_3d.f90 to mpa/turb/internals/bl_depth_diag_3d.F90
	compute_bl89_ml.f90 to mpa/turb/internals/compute_bl89_ml.F90
	compute_entr_detr.f90 to mpa/turb/internals/compute_entr_detr.F90
	compute_frac_ice1d.f90 to mpa/turb/internals/compute_frac_ice1d.F90
	compute_frac_ice2d.f90 to mpa/turb/internals/compute_frac_ice2d.F90

compute_frac_ice3d.f90 to mpa/turb/internals/compute_frac_ice3d.F90
compute_function_thermo_mf.f90 to mpa/turb/internals/compute_function_thermo_mf.F90
compute_mf_cloud.f90 to mpa/turb/internals/compute_mf_cloud.F90
compute_mf_cloud_bigaus.f90 to mpa/turb/internals/compute_mf_cloud_bigaus.F90
compute_mf_cloud_direct.f90 to mpa/turb/internals/compute_mf_cloud_direct.F90
compute_mf_cloud_stat.f90 to mpa/turb/internals/compute_mf_cloud_stat.F90
compute_updraft.f90 to mpa/turb/internals/compute_updraft.F90
emoist.f90 to mpa/turb/internals/emoist.F90
etheta.f90 to mpa/turb/internals/etheta.F90
gx_m_m.f90 to mpa/turb/internals/gx_m_m.F90
gx_m_u.f90 to mpa/turb/internals/gx_m_u.F90
gx_u_m.f90 to mpa/turb/internals/gx_u_m.F90
gx_v_uv.f90 to mpa/turb/internals/gx_v_uv.F90
gx_w_uw.f90 to mpa/turb/internals/gx_w_uw.F90
gy_m_m.f90 to mpa/turb/internals/gy_m_m.F90
gy_m_v.f90 to mpa/turb/internals/gy_m_v.F90
gy_u_uv.f90 to mpa/turb/internals/gy_u_uv.F90
gy_v_m.f90 to mpa/turb/internals/gy_v_m.F90
gy_w_vw.f90 to mpa/turb/internals/gy_w_vw.F90
gz_m_m.f90 to mpa/turb/internals/gz_m_m.F90
gz_m_w.f90 to mpa/turb/internals/gz_m_w.F90
gz_u_uw.f90 to mpa/turb/internals/gz_u_uw.F90
gz_v_vw.f90 to mpa/turb/internals/gz_v_vw.F90
gz_w_m.f90 to mpa/turb/internals/gz_w_m.F90
ini_cmfshall.f90 to mpa/turb/internals/ini_cmfshall.F90
ini_cturb.f90 to mpa/turb/internals/ini_cturb.F90
mf_turb.f90 to mpa/turb/internals/mf_turb.F90
prandtl.f90 to mpa/turb/internals/prandtl.F90
rmc01.f90 to mpa/turb/internals/rmc01.F90
sbl_depth.f90 to mpa/turb/internals/sbl_depth.F90
shallow_mf.f90 to mpa/turb/internals/shallow_mf.F90
shuman_mf.f90 to mpa/turb/internals/shuman_mf.F90

	shumanaro.f90 to mpa/turb/internals/shumanaro.F90
	th_r_from_thl_rt_1d.f90 to mpa/turb/internals/th_r_from_thl_rt_1d.F90
	th_r_from_thl_rt_2d.f90 to mpa/turb/internals/th_r_from_thl_rt_2d.F90
	th_r_from_thl_rt_3d.f90 to mpa/turb/internals/th_r_from_thl_rt_3d.F90
	thl_rt_from_th_r_mf.f90 to mpa/turb/internals/thl_rt_from_th_r_mf.F90
	tke_eps_sources.f90 to mpa/turb/internals/tke_eps_sources.F90
	tm06.f90 to mpa/turb/internals/tm06.F90
	tm06_h.f90 to mpa/turb/internals/tm06_h.F90
	tridiag.f90 to mpa/turb/internals/tridiag.F90
	tridiag_massflux.f90 to mpa/turb/internals/tridiag_massflux.F90
	tridiag_thermo.f90 to mpa/turb/internals/tridiag_thermo.F90
	tridiag_tke.f90 to mpa/turb/internals/tridiag_tke.F90
	tridiag_wind.f90 to mpa/turb/internals/tridiag_wind.F90
	turb.f90 to mpa/turb/internals/turb.F90
	turb_ver.f90 to mpa/turb/internals/turb_ver.F90
	turb_ver_dyn_flux.f90 to mpa/turb/internals/turb_ver_dyn_flux.F90
	turb_ver_sv_corr.f90 to mpa/turb/internals/turb_ver_sv_corr.F90
	turb_ver_sv_flux.f90 to mpa/turb/internals/turb_ver_sv_flux.F90
	turb_ver_thermo_corr.f90 to mpa/turb/internals/turb_ver_thermo_corr.F90
	turb_ver_thermo_flux.f90 to mpa/turb/internals/turb_ver_thermo_flux.F90
mpa/turb/module	modd_cmfshall.f90 to mpa/turb/module/modd_cmfshall.F90
	modd_cturb.f90 to mpa/turb/module/modd_cturb.F90
	modd_diag_in_run.f90 to mpa/turb/module/modd_diag_in_run.F90
	mode_prandtl.f90 to mpa/turb/module/mode_prandtl.F90
	mode_sbl.f90 to mpa/turb/module/mode_sbl.F90
	mode_thermo_mono.f90 to mpa/turb/module/mode_thermo_mono.F90
	modi_bl89.f90 to mpa/turb/module/modi_bl89.F90
	modi_bl_depth_diag.f90 to mpa/turb/module/modi_bl_depth_diag.F90
	modi_bl_depth_diag_3d.f90 to mpa/turb/module/modi_bl_depth_diag_3d.F90
	modi_compute_bl89_ml.f90 to mpa/turb/module/modi_compute_bl89_ml.F90
	modi_compute_entr_detr.f90 to mpa/turb/module/modi_compute_entr_detr.F90
	modi_compute_frac_ice.f90 to mpa/turb/module/modi_compute_frac_ice.F90

modi_compute_frac_ice1d.f90 to mpa/turb/module/modi_compute_frac_ice1d.F90
modi_compute_frac_ice3d.f90 to mpa/turb/module/modi_compute_frac_ice3d.F90
modi_compute_function_thermo_mf.f90 to mpa/turb/module/modi_compute_function_thermo_mf.F90
modi_compute_mf_cloud.f90 to mpa/turb/module/modi_compute_mf_cloud.F90
modi_compute_mf_cloud_bigaus.f90 to mpa/turb/module/modi_compute_mf_cloud_bigaus.F90
modi_compute_mf_cloud_direct.f90 to mpa/turb/module/modi_compute_mf_cloud_direct.F90
modi_compute_mf_cloud_stat.f90 to mpa/turb/module/modi_compute_mf_cloud_stat.F90
modi_compute_updraft.f90 to mpa/turb/module/modi_compute_updraft.F90
modi_emoist.f90 to mpa/turb/module/modi_emoist.F90
modi_etheta.f90 to mpa/turb/module/modi_etheta.F90
modi_gradient_m.f90 to mpa/turb/module/modi_gradient_m.F90
modi_gradient_u.f90 to mpa/turb/module/modi_gradient_u.F90
modi_gradient_v.f90 to mpa/turb/module/modi_gradient_v.F90
modi_gradient_w.f90 to mpa/turb/module/modi_gradient_w.F90
modi_ini_cmfshall.f90 to mpa/turb/module/modi_ini_cmfshall.F90
modi_ini_cturb.f90 to mpa/turb/module/modi_ini_cturb.F90
modi_les_mean_subgrid.f90 to mpa/turb/module/modi_les_mean_subgrid.F90
modi_mf_turb.f90 to mpa/turb/module/modi_mf_turb.F90
modi_prandtl.f90 to mpa/turb/module/modi_prandtl.F90
modi_rmc01.f90 to mpa/turb/module/modi_rmc01.F90
modi_sbl_depth.f90 to mpa/turb/module/modi_sbl_depth.F90
modi_shallow_mf.f90 to mpa/turb/module/modi_shallow_mf.F90
modi_shumanaro.f90 to mpa/turb/module/modi_shumanaro.F90
modi_th_r_from_thl_rt_1d.f90 to mpa/turb/module/modi_th_r_from_thl_rt_1d.F90
modi_th_r_from_thl_rt_2d.f90 to mpa/turb/module/modi_th_r_from_thl_rt_2d.F90
modi_th_r_from_thl_rt_3d.f90 to mpa/turb/module/modi_th_r_from_thl_rt_3d.F90
modi_thl_rt_from_th_r_mf.f90 to mpa/turb/module/modi_thl_rt_from_th_r_mf.F90
modi_tke_eps_sources.f90 to mpa/turb/module/modi_tke_eps_sources.F90
modi_tm06.f90 to mpa/turb/module/modi_tm06.F90
modi_tm06_h.f90 to mpa/turb/module/modi_tm06_h.F90
modi_tridiag.f90 to mpa/turb/module/modi_tridiag.F90
modi_tridiag_massflux.f90 to mpa/turb/module/modi_tridiag_massflux.F90

modi_tridiag_thermo.f90 to mpa/turb/module/modi_tridiag_thermo.F90
modi_tridiag_tke.f90 to mpa/turb/module/modi_tridiag_tke.F90
modi_tridiag_wind.f90 to mpa/turb/module/modi_tridiag_wind.F90
modi_turb.f90 to mpa/turb/module/modi_turb.F90
modi_turb_ver.f90 to mpa/turb/module/modi_turb_ver.F90
modi_turb_ver_dyn_flux.f90 to mpa/turb/module/modi_turb_ver_dyn_flux.F90
modi_turb_ver_sv_corr.f90 to mpa/turb/module/modi_turb_ver_sv_corr.F90
modi_turb_ver_sv_flux.f90 to mpa/turb/module/modi_turb_ver_sv_flux.F90
modi_turb_ver_thermo_corr.f90 to mpa/turb/module/modi_turb_ver_thermo_corr.F90
modi_turb_ver_thermo_flux.f90 to mpa/turb/module/modi_turb_ver_thermo_flux.F90
modi_update_lm.f90 to mpa/turb/module/modi_update_lm.F90
modi_updraft_sope.f90 to mpa/turb/module/modi_updraft_sope.F90
modn_turb.f90 to mpa/turb/module/modn_turb.F90

Modified:

arp/module	yomparar.F90		
arp/phys_dmn	apl_arome.F90	aplpar.F90	bri2acconv.F90
	suparar.F90		
mpa/chem/externals	aro_mnhc.F90	aro_mnhdust.F90	aro_rainaero.F90
mpa/chem/interface	aro_mnhc.h	aro_mnhdust.h	aro_rainaero.h
mpa/chem/internals	sedim_dust.F90		
mpa/chem/module	modi_sedim_dust.F90		
mpa/conv/externals	aro_conv_mnh.F90		
mpa/conv/interface	aro_conv_mnh.h		
mpa/micro/externals	add_bounds.F90	aro_adjust.F90	aro_rain_ice.F90
mpa/micro/interface	aro_adjust.h	aro_rain_ice.h	
mpa/micro/internals	rain_ice.F90		
mpa/micro/module	modd_parameters.F90	modi_add_bounds.F90	modi_rain_ice.F90
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	bl89.F90	gx_m_u.F90	gy_m_v.F90

	gz_m_w.F90	prandtl.F90	rmc01.F90
	tke_eps_sources.F90	tm06.F90	tridiag.F90
	tridiag_massflux.F90	tridiag_thermo.F90	tridiag_tke.F90
	tridiag_wind.F90	turb.F90	turb_ver.F90
	turb_ver_dyn_flux.F90	turb_ver_sv_flux.F90	turb_ver_thermo_corr.F90
	turb_ver_thermo_flux.F90		
mpa/turb/module	mode_prandtl.F90		

Doc:

Last bugfixes from SURFEX (trunk_rev772).

Project: Meso-NH surface,surfex
ClearCase branch: mrpm637_CY39_bfsurfex

Modified:

mse/programs	offline.F90		
surfex/OFFLIN	init_outfn_isban.F90	mode_read_surf_lfi.F90	mode_write_surf_lfi.F90
	oi_control.F90	oi_hor_extrapol_surf.F90	ol_find_file_read.F90
	ol_time_interp_atm.F90	open_aux_io_surf_lfi.F90	open_close_bin_asc_forc.F90
	read_surf_atm.F90	soda.F90	write_header_mnh.F90
surfex/SURFEX	alloc_diag_surf_atmn.F90	assim_isba_update_snow.F90	assim_isban.F90
	assim_read_sst_from_file.F90	assim_tebn.F90	av_pgd.F90
	av_pgd_param.F90	canopy_grid_update.F90	ccetr_pair.F90
	close_aux_io_surf.F90	close_file.F90	close_namelist.F90
	coare30_flux.F90	common_parts.F90	compute_isba_parameters.F90
	convert_patch_isba.F90	cotwores.F90	coupling_dstn.F90
	coupling_flake_orographyn.F90	coupling_flaken.F90	coupling_ideal_flux.F90
	coupling_isba_canopyn.F90	coupling_isba_orographyn.F90	coupling_isba_svatn.F90
	coupling_isban.F90	coupling_seaflux_orogn.F90	coupling_seafluxn.F90
	coupling_seawat_sbln.F90	coupling_surf_atmn.F90	coupling_teb_orographyn.F90

coupling_tebn.F90
coupling_tsz0n.F90
coupling_watflux_orogn.F90
coupling_watfluxn.F90
dealloc_isban.F90
default_data_cover.F90
default_grid.F90
default_lai_eco1.F90
default_lai_eco2.F90
default_prep_teb.F90
default_schemes.F90
default_surf_atm.F90
detect_field.F90
diag_townn.F90
drag.F90
dustflux_get.F90
e_budget.F90
ecume_flux.F90
end_io_surfn.F90
extrapol_fields.F90
fapair.F90
flake_interface.F90
garden.F90
get_default_namn.F90
get_fluxn.F90
get_interp_halo.F90
get_luout.F90
get_size_fulln.F90
get_surf_varn.F90
hydro.F90
hydro_glacier.F90
hydro_sgh.F90
hydro_soil.F90
hydro_soildif.F90
hydro_veg.F90
ice_sea_flux.F90
ice_soildif.F90
ini_data_param.F90
ini_surf_csts.F90
init_dst.F90
init_io_surfn.F90
init_isba_mixpar.F90
init_isba_sbl.F90
init_slt.F90
init_surf_atmn.F90
init_teb_gardenn.F90
init_top.F90
interpol_npts.F90
isba.F90
isba_flood_properties.F90
isba_fluxes.F90
isba_snow_agr.F90
modd_data_isban.F90
modd_data_lake.F90
modd_diag_misc_flaken.F90
modd_flaken.F90
modd_isban.F90
modd_pack_isba.F90
modd_snow_metamo.F90
modd_snow_par.F90
modd_surf_atm.F90
modd_surf_atmn.F90
modd_teb_gardenn.F90
mode_dstmblutl.F90
mode_read_extern.F90
mode_read_grib.F90
mode_snow3l.F90
mode_soil.F90
mode_split_grid_parameter.F90
modn_surf_atm.F90
open_aux_io_surf.F90
open_file.F90
open_namelist.F90
pack_isba_patch_get_sizen.F90
pack_isba_patchn.F90
pgd_cover.F90
pgd_grid_io_init.F90
pgd_isba.F90
pgd_isba_par.F90
pgd_teb_garden.F90
prep_hor_isba_field.F90
prep_hor_snow_fields.F90
prep_inland_water.F90
prep_perm_snow.F90
prep_surf_atm.F90
prep_teb_unif.F90
put_zsn.F90
read_direct.F90
read_direct_gauss.F90
read_isban.F90
read_nam_pgd_gauss_index.F90
read_nam_pgd_isba.F90
read_namelists_surf.F90
read_pgd_isba_parn.F90
read_pgd_isban.F90
read_precipn.F90

read_prep_isba_snow.F90	read_prep_teb_conf.F90	read_surf.F90
read_surf_atm_conf.F90	read_teb_gardenn.F90	rw_precipn.F90
set_surfex_filein.F90	snow3L_isba.F90	snow3l.F90
snow_cover_1layer.F90	snowcro.F90	soilgrid.F90
sso_be04_frictionn.F90	sso_z0_frictionn.F90	start_lake_of.F90
subscale_z0eff_1d.F90	sum_on_all_procs.F90	surface_ri.F90
teb.F90	teb_garden.F90	tridiag_ground.F90
unpack_diag_patchn.F90	unpack_isba_patchn.F90	urban_drag.F90
urban_exch_coef.F90	urban_fluxes.F90	vegetation_update.F90
water_flux.F90	write_cover_tex_end.F90	write_cover_tex_isba_par.F90
write_cover_tex_start.F90	write_diag_misc_isban.F90	write_diag_pgd_grdnn.F90
write_diag_pgd_isban.F90	write_diag_seb_isban.F90	write_diag_seb_watfluxn.F90
write_surf.F90	write_surf_atmn.F90	writesurf_isban.F90
writesurf_pgd_isba_parn.F90	writesurf_pgd_isban.F90	writesurf_precipn.F90
writesurf_teb_gardenn.F90		

SPANIEL Olda

Doc:

Information about NUMBER OF THREADS in case of OMP is returned back.

Project: aladin
ClearCase branch: mrpe693_CY39_t1_03_omp

Modified:

ald/setup suemp.F90

TAILLEFER Francoise

Doc:

Version of this routine is obsolete in the last version of SURFEX (implemented by Yann in his branch arp_mrpm637_CY39_bfsurfex) regarding
developments made for CY38T1_op1 for surfex assimilation . So this version of oi_control.F90 is the one we must have in CY39T1 !

Project:
ClearCase branch: mrpa647_CY39_db_oim

Modified:

surfex/OFFLIN oi_control.F90

Doc:

Avoid crash in 923 configuration for only land or only water domains climatological files building.

Project: aladin
ClearCase branch: mrpa647_CY39_ub_923

Modified:

ald/c9xx einter10.F90

YESSAD Karim

Doc:

- Minor simplifications in lateral coupling for LAM models; add a tester.
- Rename ELSIRF into SUEINIF.

- Activate some calls to GPHPRE.
- Simplify some testings using NCURRENT_ITER (some expressions are always TRUE).
- Simplify use of CDCONF for direct transforms.
- Simplify testings on CDCONF in inverse transforms (values of CDCONF(2:3) are kept unchanged).
- Calls to ABOR1 in IOPACK and WRMLPPA if improper values of CDCONF are used.

Project: aladin,arpege,coupling,utilitaires
ClearCase branch: mrpm603_CY39_dev39pour39t1

Added:

ald/setup sueinif.F90

Modified:

ald/coupling	ecoupl1.F90	ecoupl1ad.F90	erlbc.F90
	etenc.F90		
ald/setup	elsac.F90	sueinif.F90	
ald/transform	etransdirh.F90	etransdirhad.F90	etransinvh.F90
	etransinvhad.F90		
ald/var	ewrlsgrad.F90		
arp/adiab	cpg5_gp.F90	cpg_drv_ad.F90	cpg_drv_tl.F90
	cpg_dyn.F90	cpg_dyn_ad.F90	cpg_dyn_tl.F90
	cpg_end.F90	cpg_gp.F90	cpg_gp_ad.F90
	cpg_gp_tl.F90	cpg_gpb_nhgeogw.F90	cpglag.F90
	cpglagad.F90	cpglagtl.F90	gnhdlra_sta.F90
	gp_spv.F90	gp_spvad.F90	gp_spvtl.F90
	gpmpfc.F90		
arp/canari	cabane.F90	caclsi.F90	caisse.F90
	capotx.F90		
arp/control	gp_model.F90	gp_model_ad.F90	scan2m.F90
	scan2mad.F90	scan2mtl.F90	stepo.F90
	stepoad.F90	stepotl.F90	

arp/dia	wrmlppa.F90		
arp/fullpos	phymfpos.F90	specfita.F90	
arp/pp_obs	ppobsap.F90		
arp/setup	sugpqlim.F90	supong.F90	suspqlim.F90
arp/transform	transdirh.F90	transdirhad.F90	transinv_mdl.F90
	transinv_mdlad.F90	transinvh.F90	transinvhad.F90
arp/utility	iopack.F90		
arp/var	sujbstd.F90	sujbvcoord.F90	sujbwavelet.F90
	suprecov.F90	sushfce.F90	
coupling/external/gpcou	esc2r.F90	esc2rad.F90	
coupling/interface	esc2r.h	esc2rad.h	
uti/rdc/include	sugaw36.h		
uti/rdc/programs	master911.F90		
uti/rdc/src	sugaw36.F90		

Doc:

1) Fix phasing problems (change GPPRE to GPHPRE, tests on LNHX) ;
2) Fix in CHIEN in order to avoid the poles detection in files which do not have any ;
3) Miscellaneous other bugfixes.

Project: arpege,coupling,auxiliaire
ClearCase branch: mrpm603_CY39_pre39t1bf2

Added:

coupling/programs tester_gpcou.F90

Modified:

arp/adiab	spcsi.F90	
arp/c9xx	incli2.F90	
arp/control	sim4d.F90	spcm.F90

arp/dia	wrgpa.F90	
arp/fullpos	endpos.F90	
arp/parallel	diwrspe0.F90	
arp/phys_dmn	acconvstl.F90	
arp/setup	sudim2.F90	sudyn.F90 sump0.F90
arp/utility	iopack.F90	
arp/var	suspqlim_part2.F90	suvar.F90
xrd/utilities	chien.F90	

Doc:

Miscellaneous bugfixes.

Project: arpege,utilitaires
ClearCase branch: mrpm603_CY39_pre39t1bf3

Modified:

arp/fullpos	fpfilter.F90	spos.F90
arp/module	yomppvi.F90	
arp/op_obs	slint_canari.F90	
arp/setup	suarg.F90	sucst.F90
uti/rdc/programs	master911.F90	
uti/rdc/src	sump_dilb.F90	

Doc:

1) Remove obsolete routines.
2) Miscellaneous fixes and optimizations for configuration 911 ; some of those changes are necessary to be able to compute contraction/dilation
matrix in TL1278c2.4 on BULL computer.

Project: aladin,arpege,utilitaires

ClearCase branch: mrpm603_CY39_pre39t1bf4

Added:

uti/rdc/include	sudil_io.h	suplic.h
uti/rdc/src	sudil_io.F90	suplic.F90

Deleted:

ald/c9xx	eintfac.F90		
ald/fullpos	exarp.F90		
arp/dia	gpinither.F90		
arp/fullpos	sufpphq.F90		
arp/module	wrfu_mod.F90	wrgrida_mod.F90	wrgridua_mod.F90
	wrxfu_mod.F90		
arp/parallel	diwrspe0.F90		
arp/setup	suspqlim.F90		
arp/utility	extgpf.F90		

Modified:

ald/c9xx	eintfac.F90		
ald/fullpos	exarp.F90		
arp/dia	gpinither.F90		
arp/module	wrfu_mod.F90	wrgrida_mod.F90	wrgridua_mod.F90
	wrxfu_mod.F90		
arp/utility	extgpf.F90		
uti/rdc/include	dilatb.h	sudil.h	sudil_io.h
	sugaw36.h	sump_dila.h	sump_dilb.h
	suplic.h	suplis.h	trltom_dil.h
uti/rdc/programs	master911.F90		
uti/rdc/src	dilat.F90	dilatb.F90	sudil.F90

sudil_io.F90 sugaw36.F90 sump_dila.F90
sump_dilb.F90 suplic.F90 suplis.F90
trltom_dil.F90