

ARPEGE MEMORANDUM

From: GCO
Date: Sep 03, 2019
Subject: New cycle CY47T0

A new cycle CY47T0 has been created. This is not a common cycle with ECMWF. The different contributions for this cycle are described in the following pages.

Contributors:

ARBOGAST Etienne	arbogaste_CY47_oops4davai
EL KHATIB Ryad	khatib_CY47_bc khatib_CY47_t0.01%fixad
GUILLAUME Frank	guillaum_CY47_47_phasing_46t1bf02_withadds
PAYAN Christophe	payan_CY47_main01_cfoscat-bf

ARBOGAST Etienne

Doc:

Import CY46T1 oopsifs for DAVAI.

NO NUMERICAL IMPACT IS EXPECTED.

Projects: arpifs, oops_src, oopsifs

Git branch: arbogaste_CY47_oops4davai

Deleted:

oopsifs	CMakeLists.txt, FindIFS.cmake, CMakeLists.txt, TestErrorCovariance.cc, TestGeometry.cc, TestIncrement.cc, TestLinearModel.cc, TestLocalization.cc, TestLocations.cc, TestModel.cc, TestModelAuxControl.cc, TestModelAuxCovariance.cc, TestModelAuxIncrement.cc, TestModelIncrement.cc, TestObsAuxControl.cc, TestObsAuxCovariance.cc, TestObsAuxIncrement.cc, TestObsErrorCovariance.cc, TestObsVector.cc, TestObservationSpace.cc, TestState.cc, TestSuiteOpObs.cc, TestVariables.cc, ifsHofX.cc, ifsMakeObs.cc, CMakeLists.txt, AllObsBiasCovariance.cc, AllObsBiasCovariance.h, AllObsBiasCovariance.interface.F90, CMakeLists.txt, Logbook.interface.F90, LogbookIFS.h, ModelBiasCtlVec.h, ObsBiasCovarianceTOVSCV.cc, ObsBiasCovarianceTOVSCV.h, ObsBiasCovarianceVARBC.cc, ObsBiasCovarianceVARBC.h, ObsBiasCtlVecTOVSCV.cc, ObsBiasCtlVecTOVSCV.h, ObsBiasCtlVecVARBC.cc, ObsBiasCtlVecVARBC.h, ObsBiasIncrementTOVSCV.cc, ObsBiasIncrementTOVSCV.h, ObsBiasIncrementVARBC.cc, ObsBiasIncrementVARBC.h, ObsBiasTOVSCV.cc, ObsBiasTOVSCV.h, ObsBiasVARBC.cc, ObsBiasVARBC.h, PostProcessorIFS.h, instantiateObsAuxFactories.h, instantiateObsOpFactories.h, linkedList.F90, linkedList.intf.F90, CMakeLists.txt, interfaces.json
oopsifs/cmake	FindIFS.cmake
oopsifs/mains	CMakeLists.txt, TestErrorCovariance.cc, TestGeometry.cc, TestIncrement.cc, TestLinearModel.cc, TestLocalization.cc, TestLocations.cc, TestModel.cc, TestModelAuxControl.cc, TestModelAuxCovariance.cc, TestModelAuxIncrement.cc, TestModelIncrement.cc, TestObsAuxControl.cc, TestObsAuxCovariance.cc, TestObsAuxIncrement.cc, TestObsErrorCovariance.cc, TestObsVector.cc, TestObservationSpace.cc, TestState.cc, TestSuiteOpObs.cc, TestVariables.cc, ifsHofX.cc, ifsMakeObs.cc
oopsifs/src	CMakeLists.txt, AllObsBiasCovariance.cc, AllObsBiasCovariance.h, AllObsBiasCovariance.interface.F90, CMakeLists.txt, Logbook.interface.F90, LogbookIFS.h, ModelBiasCtlVec.h, ObsBiasCovarianceTOVSCV.cc, ObsBiasCovarianceTOVSCV.h, ObsBiasCovarianceVARBC.cc, ObsBiasCovarianceVARBC.h, ObsBiasCtlVecTOVSCV.cc, ObsBiasCtlVecTOVSCV.h, ObsBiasCtlVecVARBC.cc, ObsBiasCtlVecVARBC.h, ObsBiasIncrementTOVSCV.cc, ObsBiasIncrementTOVSCV.h, ObsBiasIncrementVARBC.cc, ObsBiasIncrementVARBC.h, ObsBiasTOVSCV.cc, ObsBiasTOVSCV.h, ObsBiasVARBC.cc, ObsBiasVARBC.h, PostProcessorIFS.h, instantiateObsAuxFactories.h, instantiateObsOpFactories.h, linkedList.F90, linkedList.intf.F90
oopsifs/src/ifs	AllObsBiasCovariance.cc, AllObsBiasCovariance.h, AllObsBiasCovariance.interface.F90, CMakeLists.txt, Logbook.interface.F90, LogbookIFS.h, ModelBiasCtlVec.h, ObsBiasCovarianceTOVSCV.cc, ObsBiasCovarianceTOVSCV.h, ObsBiasCovarianceVARBC.cc,

ObsBiasCovarianceVARBC.h, ObsBiasCtlVecTOVSCV.cc,
ObsBiasCtlVecTOVSCV.h, ObsBiasCtlVecVARBC.cc,
ObsBiasCtlVecVARBC.h, ObsBiasIncrementTOVSCV.cc,
ObsBiasIncrementTOVSCV.h, ObsBiasIncrementVARBC.cc,
ObsBiasIncrementVARBC.h, ObsBiasTOVSCV.cc, ObsBiasTOVSCV.h,
ObsBiasVARBC.cc, ObsBiasVARBC.h, PostProcessorIFS.h,
instantiateObsAuxFactories.h, instantiateObsOpFactories.h, linkedList.F90,
linkedList.intf.F90

oopsifs/test CMakeLists.txt, interfaces.json

oopsifs/test/testinput interfaces.json

Renamed:

oopsifs/src/ifs ObsBiasCovarianceTOVSCV.interface.F90
oopsifs/src/ifs/ObsBiasCovariance2.interface.F90,
ObsBiasCovarianceVARBC.interface.F90
oopsifs/src/ifs/ObsBiasCovariance.interface.F90,
ObsBiasCtlVecTOVSCV.interface.F90
oopsifs/src/ifs/ObsBiasCtlVec2.interface.F90,
ObsBiasCtlVecVARBC.interface.F90
oopsifs/src/ifs/ObsBiasCtlVec.interface.F90,
ObsBiasIncrementTOVSCV.interface.F90
oopsifs/src/ifs/ObsBiasIncrement2.interface.F90,
ObsBiasIncrementVARBC.interface.F90
oopsifs/src/ifs/ObsBiasIncrement.interface.F90, ObsBiasLListsTOVSCV.F90
oopsifs/src/ifs/ObsBiasLLists2.F90, ObsBiasLListsVARBC.F90
oopsifs/src/ifs/ObsBiasLLists.F90, ObsBiasTOVSCV.interface.F90
oopsifs/src/ifs/ObsBias2.interface.F90, ObsBiasVARBC.interface.F90
oopsifs/src/ifs/ObsBias.interface.F90

Added:

oopsifs/src/ifs ObsBias.cc, ObsBias.h, ObsBiasCovariance.cc, ObsBiasCovariance.h,
ObsBiasCtlVec.cc, ObsBiasCtlVec.h, ObsBiasIncrement.cc,
ObsBiasIncrement.h

Modified:

arpifs/oops allobs_bias_error_mod.F90, allobs_error_mod.F90, obsvec_mod.F90

oops_src/src/oops/assimilation SQRTPLanczosMinimizer.h

oopsifs/mains TestSuiteVariational.cc, ifs4dvar.cc

oopsifs/src/ifs AllObs.cc, AllObs.h, AllObs.interface.F90, AllObsCovariance.cc,
AllObsCovariance.h, AllObsCovariance.interface.F90, AllObsTLAD.cc,
AllObsTLAD.h, AllObsTLAD.interface.F90, FieldsIFS.cc, FieldsIFS.h,
FieldsIFS.interface.F90, GeometryIFS.interface.F90, GomData.h,
GomData.interface.F90, GomsIFS.h, IFSFortran.h, IFSTraits.h,
IncrModCtlVecIFS.cc, IncrModCtlVecIFS.h, IncrModCtlVecIFS.interface.F90,
LinearModelIFS.cc, LinearModelIFS.h, LinearModelIFS.interface.F90,
ModelBiasCovariance.h, ModelIFS.cc, ModelIFS.interface.F90,
ObsSpaceODB.cc, ObsSpaceODB.h, ObsSpaceODB.interface.F90,
ObsVector.cc, ObsVector.interface.F90, StateIFS.cc, StateIFS.h,
VariablesIFS.interface.F90, instantiateObsErrorFactory.h, pm_link_mod.F90,

pm_linked_list_mod.F90

EL KHATIB Ryad

Doc:

Eradication of bounds violations.

cf. [[url=http://gco.meteo.fr/welcome/IMG/pdf/eradication_of_bounds_violations.pdf](http://gco.meteo.fr/welcome/IMG/pdf/eradication_of_bounds_violations.pdf)]documentation[/[url](#)]

Projects: aladin, arpifs

Git branch: khatib_CY47_bc

Added:

arpifs/module sc2prg_mod.F90

Modified:

aladin/adiab elarmes.F90, elarmes5.F90, elarmesad.F90, elarmestl.F90

arpifs/adiab call_sl.F90, call_sl_ad.F90, cpg_dia.F90, cpg_drv.F90, cpg_drv_ad.F90, cpg_drv_tl.F90, cpg_gp.F90, cpg_gp_ad.F90, cpg_gp_hyd.F90, cpg_gp_nhee.F90, cpg_gp_tl.F90, cpglag.F90, cputqy_arome.F90, laitrgfl.F90, lapinea.F90, lapinea5.F90, lapineaad.F90, lapineatl.F90, larcinb.F90, larmes.F90, larmes5.F90, larmesad.F90, larmestl.F90, lattex.F90

arpifs/control gp_model.F90

arpifs/phys_dmn mf_phys.F90, mf_physad.F90, mf_phystl.F90

Doc:

Fix bounds violation modset for AD model.

NO NUMERICAL IMPACT IS EXPECTED.

Projects: arpifs

Git branch: khatib_CY47_t0.01%fixad

Modified:

arpifs/adiab cpg_drv_ad.F90

GUILLAUME Frank

Doc:

Phasing BATOR (and ODB) from cy46t1_bf.02 + GIT branch guillaum_CY46T1_fix_amdaromm_radome.

ODB :

- change version of ODB to 47 in version.c,

BATOR :

- Bugfix for ODIM-HDF5 radar treatments in BATOR (M. Martet),
- bugfix in amdaromm() subroutine,
- bugfix in synop() subroutine (only for french radome),
- bugfix in Bayrad initialization,

- Reduction of the number of observations in the output ecma databases with the use of a new namelist (see below) to help validations,
- update of aeolus decoding subroutine (V. Pourret),
- other bugfixes (P. moll).

NO NUMERICAL IMPACT IS EXPECTED.

Projects: odb

Git branch: guillaum_CY47_47_phasing_46t1bf02_withadds

Modified:

odb/lib	version.c
odb/pandor/module	bator_decodbufr_mod.F90, bator_decodhdf5_mod.F90, bator_decodnetcdf_mod.F90, bator_ecritures_mod.F90, bator_init_mod.F90, bator_lectures_mod.F90, bator_module.F90, bator_util_mod.F90
odb/pandor/namelist	bator_namelist.nam.h

PAYAN Christophe

Doc:

*This bf allows to handle correctly a new scatterometer winds dataset from CFOSAT satellite. Observation file in input in BUFR, 50 km grid product, provided by OSI-SAF.
NB: this new dataset requires an update of param_bator.cfg file and BUFR tables (new template)*

EXPECTED IMPACT:

Allows to monitor CFOSAT scatterometer winds, and possibly to assimilate them. No impact if this data is unavailable.

Projects: arpifs, odb

Git branch: payan_CY47_main01_cfoscat-bf

Modified:

arpifs/obs_preproc scaqc.F90, sufglim.F90

odb/pandor/module bator_decodbufr_mod.F90, bator_module.F90, bator_util_mod.F90