

## ARPEGE MEMORANDUM

**From:** GCO  
**To:** GMAP, COMPAS, GMGEC, GMME, DIR/RE/CRC, Mats Hamrud  
**Subject:** New cycle CY35

Date: August 28, 2008

A new cycle CY35 has been created. This is a common cycle with the ECMWF. The different contributions for this cycle are described in the following pages.

ClearCase label: CY35

Modified libraries: aladin,ifs,black\_list,mpa,mse,odb,satrad,scatt,transform,utilities,algor,ifsaux

Contributors:

GCO                      Project:ifs              CCase branch:marp001\_CY34\_cy35

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## GCO

### **Doc:**

*This cycle contains only technical modifications compared to cycle CY34: cleanings and source code modifications.*

**Project:** aladin,ifs,black\_list,mpa,mse,odb,satrad,scatt,transform,utilities,algor,ifsaux

**ClearCase branch:** marp001\_CY34\_cy35

### **Added:**

ald/control	espch.F90 espcmad.F90	espchad.F90	espcm.F90
ald/fullpos	ebipos.F90 exbip.F90 fpezzone.F90 posfpbipos.F90 suefpg3.F90 suehowism.F90 suetmetric.F90	etranscub.F90 extfpezo.F90 fpfillb.F90 prefpbipos.F90 suehow1.F90 sufpezo.F90	exarp.F90 fpezo2h.F90 incfpezo.F90 suefpbip.F90 suehow2.F90 sufpmove.F90
ald/setup	cchien.F90	eggmlt.F90	
ald/utility	gpept.F90	gpier.F90	gpnox.F90
arp/adiab	gpnoxad.F90 gppwc.F90 gptco3.F90	gpnoxtl.F90 gppwcad.F90	gpprs0d.F90 gppwctl.F90
arp/climate	updnud.F90		
arp/dia	gridpoint_norm.F90 wrradcoef.F90	wrmoderr.F90 wrsltraj2.F90	wrphtrajt.F90 wrspec.F90
arp/fullpos	cpclimi.F90 cvlaniso.F90 endvpos.F90 fpachmt.F90 fpcliphy.F90 fpfilter.F90	cpgridf.F90 dynfpos.F90 extfpi.F90 fpcica.F90 fpcordyn.F90 fpgeo.F90	cpvpospr.F90 endpos.F90 fp2sx1.F90 fpcincape.F90 fpcorphy.F90 fphor12.F90

	fpiniphy.F90	fpint12.F90	fpint4.F90
	fpintdyn.F90	fpintphy.F90	fpinvtrcuf.F90
	fplake.F90	fpmodcfu.F90	fpmodprec.F90
	fpmodxfu.F90	fpnilphy.F90	fposhor.F90
	fpps.F90	fpsampl.F90	fpscaw.F90
	fptsa_dir.F90	fptsa_inv.F90	fpview.F90
	gridfpos.F90	hpos.F90	openfpa.F90
	phymfpos.F90	pregpfpos.F90	prespfpos.F90
	rdclimo.F90	rdecclimo.F90	sc2rdgfp.F90
	sc2wrgfp.F90	spaconvert.F90	specfita.F90
	specfitg.F90	spos.F90	su4fpos.F90
	sualfpos.F90	subfpos.F90	sufpc.F90
	sufpcfu.F90	sufpcip.F90	sufpcconf.F90
	sufpcuf.F90	sufpd.F90	sufpdim.F90
	sufpdom.F90	sufpdyn.F90	sufpf.F90
	sufpg.F90	sufpg1.F90	sufpg2.F90
	sufpgrib.F90	sufpios.F90	sufpoph.F90
	sufpphq.F90	sufpphy.F90	sufprfpbuf.F90
	sufprfpds.F90	sufpsc2.F90	sufpsc2_dep.F90
	sufpsc2b.F90	sufpsuw.F90	sufptr2.F90
	sufpvset_dir.F90	sufpvset_inv.F90	sufpwfpbuf.F90
	sufpwfpds.F90	sufpwide.F90	sufpxfu.F90
	suhow1.F90	suhow2.F90	suhowlsm.F90
	sumpfpos.F90	sumpfpos_dep.F90	suprocfp.F90
	suprocfp_dep.F90	suvfpos.F90	suvfposl.F90
	suvpos.F90	updvpos.F90	vpos.F90
	wrhfp.F90	wrmlfp.F90	wrmlfpl.F90
	wrplfp.F90	wrvlfp.F90	wrsfp.F90
	wrthlfp.F90		
arp/obs_preproc	preamb.F90	statpred.F90	
arp/ocean	sipc_attach.F90	sipc_init_model.F90	sipc_read_model.F90
	sipc_write_model.F90		
arp/op_obs	aeolus_l2b_to_body.F90	aerosol_detect.F90	amv_get_preds.F90
	amv_reassign.F90	aod_ad.F90	aod_op.F90
	aod_tl.F90	bgobs.F90	biaspred.F90

cf\_digital.F90  
ch4\_tcmr\_tl.F90  
co2\_tcmr.F90  
cobs.F90  
cobslagad.F90  
cod\_opad.F90  
dopplsim.F90  
emis\_atlas.F90  
emis\_mw\_n.F90  
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gpscalc\_alpha2dad.F90  
gpscalc\_alphatl.F90  
gpscalc\_nr2dad.F90  
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hinh.F90  
hopad.F90  
hradp.F90  
hradp\_ml\_tl.F90  
hretl.F90  
incvfltl.F90  
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meanuv\_average.F90  
movinga.F90

ch4\_tcmr.F90  
ch4bcor.F90  
co2\_tcmr\_ad.F90  
cobslag.F90  
cobstl.F90  
cod\_optl.F90  
dopplsim\_ad.F90  
emis\_ir.F90  
exhco.F90  
exheiz2p.F90  
expbesutl.F90  
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gpscalc\_alpha.F90  
gpscalc\_alpha2dtl.F90  
gpscalc\_nr.F90  
gpscalc\_nr2dtl.F90  
gpscalc\_refrac.F90  
gpscalc\_refrac2dtl.F90  
gpsro\_2dad.F90  
gpsro\_ad.F90  
gpsro\_tl.F90  
gpszen\_delaytl.F90  
grg\_ak\_tl.F90  
grg\_fparamtl.F90  
grg\_jno2\_cloudad.F90  
grg\_jno2tl.F90  
hjo.F90  
hoptl.F90  
hradp\_ml.F90  
hradpad.F90  
hsatang.F90  
inv\_refl1dstat.F90  
laidliobs.F90  
meanuv\_averagead.F90  
mpobseq.F90

ch4\_tcmr\_ad.F90  
cloud\_detect.F90  
co2\_tcmr\_tl.F90  
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cod\_op.F90  
conv\_weights.F90  
dopplsim\_tl.F90  
emis\_mw.F90  
exhcoad.F90  
expbesu.F90  
fcsarf\_tl.F90  
gpscalc\_alpha2d.F90  
gpscalc\_alphaad.F90  
gpscalc\_nr2d.F90  
gpscalc\_nrad.F90  
gpscalc\_refrac2d.F90  
gpscalc\_refracad.F90  
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gpsro\_oberror.F90  
gpszen\_delay.F90  
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grg\_jno2\_cloudtl.F90  
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hqscatt.F90  
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hradptl.F90  
hvnmtlt.F90  
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meanuv\_weights.F90  
mpobseq\_pack.F90

arp/phys\_radi

mpobseqad.F90  
mwimager\_lwp.F90  
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obsvtl.F90  
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preintsad.F90  
qneg.F90  
rad1cemis.F90  
rad1cnnetl.F90  
radtr\_ml.F90  
radtrad.F90  
radtrbt1.F90  
reflsim.F90  
rousea.F90  
rtl\_hop\_1d.F90  
rtl\_hop\_2d.F90  
rtl\_oberror.F90  
slint.F90  
surboundad.F90  
writenn.F90  
lw.F90  
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lwc.F90  
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rrtm\_cmbgb4.F90

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preintrtl.F90  
preintstl.F90  
qnegad.F90  
rad1cnne.F90  
rad1cobe.F90  
radtr\_ml\_ad.F90  
radtrb.F90  
radtrk.F90  
reflsim\_2dop.F90  
rouseaad.F90  
rtl\_hop\_1d\_ad.F90  
rtl\_hop\_2d\_ad.F90  
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su\_no2clim.F90

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rrtm\_rtrn1a\_140gp\_mcica.F90  
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srtm\_cmbgb21.F90  
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srtm\_init.F90  
srtm\_kgb18.F90  
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srtm\_kgb27.F90  
srtm\_reftra.F90  
srtm\_spcvrt\_mcica.F90  
srtm\_taumol16.F90  
srtm\_taumol19.F90  
srtm\_taumol22.F90  
srtm\_taumol25.F90  
srtm\_taumol28.F90  
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su\_ccl4clim.F90  
su\_mcica.F90  
su\_ozoclim.F90

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	su_so4_A1B2060.F90	su_so4_A1B2070.F90	su_so4_A1B2080.F90
	su_so4_A1B2090.F90	su_so4_A1B2100.F90	su_so4_obs1920.F90
	su_so4_obs1930.F90	su_so4_obs1940.F90	su_so4_obs1950.F90
	su_so4_obs1960.F90	su_so4_obs1970.F90	su_so4_obs1980.F90
	su_so4_obs1990.F90	su_uvradi.F90	suaerl.F90
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	suovlp.F90	surdi.F90	surrtab.F90
	surrfttr.F90	surrtpk.F90	surrtrf.F90
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	suswn.F90	sw.F90	sw1s.F90
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	swad.F90	swclr.F90	swclrad.F90
	swclrtl.F90	swde.F90	swdead.F90
	swdetl.F90	swni.F90	swniad.F90
	swnitl.F90	swr.F90	swrad.F90
	swrtl.F90	swsurfs.F90	swsurfsad.F90
	swsurfstl.F90	swtl.F90	swtt.F90
	swtt1.F90	swtt1ad.F90	swtt1tl.F90
	swttad.F90	swtttl.F90	swu.F90
	swuad.F90	swutl.F90	swuvo3.F90
	swuvo3ad.F90	swuvo3tl.F90	uvabs.F90
	uvclr.F90	uvde.F90	uvflx.F90
	uvflxa.F90	uvo3.F90	uvr.F90
	uvradi.F90		
arp/pp_obs	apache.F90	aval.F90	bob.F90
arp/programs	master.F90		
arp/setup	suclmicst.F90		
arp/utility	scordo.F90	spreord.F90	
arp/var	jbtomodel.F90	jbtomodelad.F90	
bla/programs	bl_old2new.c		

mpa/programs	ch_make_lookup.mnh		
mse/programs	pgd.mnh	prep.mnh	sxpost.mnh
sat/programs	aer_clim_prof.F90	bufr_grid_screen.F90	bufr_screen_amsre.F90
	bufr_screen_amsre_1d.F90	bufr_screen_iasi.F90	bufr_screen_ssmi.F90
	bufr_screen_ssmi_1d.F90	bufr_screen_ssmis.F90	bufr_screen_ssmis_1d.F90
	bufr_screen_tmi.F90	bufr_screen_tmi_1d.F90	gensatim.F90
	geos_prescreen.F90	reo3_prescreen.F90	rttov_ascii2bin_coef.F90
	rttovscatt_test.F90	screen_1c.F90	test_2_coef.F90
	test_coef.F90	test_errorhandling.F90	test_q2v.F90
sct/programs	ascat_bufr_filter.F	bufr_qscat.F	dcone_qc.F
	qscat_split.F	qscat25to50km.F	qscat_filter_bufr25km.F
	timesort.F		
xla/external	fourier		
xla/external/fourier	fft992.F	set99.F	
xla/external	lanczos		
xla/external/lanczos	gcr.F	landr.F	loadev.F
	mortho.F		
xla/external	linalg		
xla/external/linalg	eigsol.F90	hltridiag.F90	intavg.F90
	minv.F	multvdv.F90	mxmaop.F90
	mxptma.F90	mxtrma.F90	mxture.F90
	mxturhd.F90	mxturs.F90	sgtsl.F
	si_mxptco.F90	simplico.F90	suher.F90
	suhert.F90	suhes.F90	tridialcz.F90
	tridiavspl.F90		
xla/external	minim		
xla/external/minim	m1qn3.F	m1qn3_1dv.F	m1qn3r.F
	n1cg1.F90		
xla/interface	dbfgsl.intfb.h	dpseuclid.intfb.h	dysave.intfb.h
	eigsol.intfb.h	hltridiag.intfb.h	intavg.intfb.h
	layeravg.intfb.h	multvdv.intfb.h	mxptma.intfb.h
	mxture.intfb.h	mxturhd.intfb.h	mxturs.intfb.h
	n1cg1.intfb.h	n1cga.intfb.h	si_mxptco.intfb.h
	simplico.intfb.h	sublayer.intfb.h	suher.intfb.h
	suhert.intfb.h	suhes.intfb.h	tridialcz.intfb.h



	tridiavspl.intfb.h		
xla/internal	fourier		
xla/internal/fourier	qpassf.F	rpassf.F	
xla/internal	lanczos		
xla/internal/lanczos	angles.F	datx.F	dsort2.F
	i2x.F	lanso.F	machar.F
	ortbnd.F	prangl.F	prrule.F
	purge.F	pythag.F	random.F
	ritvec.F	startv.F	stpone.F
	tql2.F	tqlb.F	
xla/internal	linalg		
xla/internal/linalg	balanc.F	balbak.F	cdiv.F
	elmhes.F	eltran.F	hqr.F
	hqr2.F	layeravg.F90	mxva.F
	rg.F	sgemmx.F	sublayer.F90
xla/internal	minim		
xla/internal/minim	ctcab_1dv.F	ctonb_1dv.F	dbfgsl.F90
	dd.F	dd_1dv.F	ddr.F
	dds.F	dds_1dv.F	ddsr.F
	dpseuclid.F90	dysave.F90	ecube.F
	ecube_1dv.F	ecuber.F	euclid.F
	euclid_1dv.F	m1qn3a.F	m1qn3a_1dv.F
	m1qn3ar.F	mlis0.F	mlis0_1dv.F
	mlis0r.F	mupdts_1dv.F	mupdts_orig.F
	mupdtsr.F	n1cga.F90	ystbl_1dv.F
	ystbl_orig.F	ystblr.F	
xla/module	control_vectors.F90	control_vectors_base_mix.F90	control_vectors_data_mix.F90
	control_vectors_oper_mod.F90	control_vectors_para_mod.F90	distributed_vectors_mix.F90
	random_numbers_mix.F90	spectral_fields_data.F90	spectral_fields_mod.F90
	spectral_fields_oper_mod.F90	spectral_fields_para_mod.F90	yomlcz.F90
xrd/module	stack_mix.F90		
xrd/parallel	broadcchar.F90	broadcint.F90	broadcreal.F90
	cmpl_binding.F90	coml_binding.F90	jfh_bind.F90
xrd/programs	datefa.F	ddh_ifi2lfa.F90	ddhr.F90
	ddht.F90	decret.F	gribdiff.F

gribtrace.F  
tstlfi.F

splitgrib.F

testfa.F

**Renamed:**

arp/adiab cpg2lgad.F90 to arp/adiab/cpg2lagad.F90  
cpg2lgtl.F90 to arp/adiab/cpg2lagtl.F90  
gpinozstdm.F90 to arp/adiab/gpinozst.F90  
gpspv.F90 to arp/adiab/gp\_spv.F90  
gpspvad.F90 to arp/adiab/gp\_spvad.F90  
gpspvtl.F90 to arp/adiab/gp\_spvtl.F90  
laidlica.F90 to arp/adiab/laidlicad.F90  
seve.F90 to arp/adiab/siseve.F90  
sevead.F90 to arp/adiab/sisevead.F90  
spectrdm.F90 to arp/adiab/spectr.F90  
arp/ald\_inc/namelist namfpezo.h to arp/ald\_inc/namelist/nemfpezo.h  
arp/c9xx alclia.F90 to arp/c9xx/sualclia.F90  
arp/canari caeincwdm.F90 to arp/canari/caeincw.F90  
calicedm.F90 to arp/canari/calice.F90  
calincwdm.F90 to arp/canari/calincw.F90  
canifedm.F90 to arp/canari/canife.F90  
arp/climate updclidm.F90 to arp/climate/updcli.F90  
arp/control scan2mdm.F90 to arp/control/scan2m.F90  
arp/dfi ecopsp.F90 to arp/dfi/copsp.F90  
ecorsp.F90 to arp/dfi/corsp.F90  
edfi.F90 to arp/dfi/dfi.F90  
edfi1.F90 to arp/dfi/dfi1.F90  
edfi2.F90 to arp/dfi/dfi2.F90  
edfi2mod.F90 to arp/dfi/dfi2mod.F90  
edfi3.F90 to arp/dfi/dfi3.F90  
edifsp.F90 to arp/dfi/difsp.F90  
edigfil.F90 to arp/dfi/digfil.F90  
edigfilad.F90 to arp/dfi/digfilad.F90  
edigp.F90 to arp/dfi/digp.F90  
ereast.F90 to arp/dfi/reast.F90

eredate.F90 to arp/dfi/eredate.F90  
ezeroacu.F90 to arp/dfi/zeroacu.F90  
simfil.F90 to arp/dfi/smpfil.F90  
sudealldfi.F90 to arp/dfi/dealldfi.F90  
suedfi.F90 to arp/dfi/sudfi.F90  
suefw.F90 to arp/dfi/sufw.F90  
sueini.F90 to arp/dfi/suini.F90  
arp/dia allpgo.F90 to arp/dia/sualpgo.F90  
cumcpldm.F90 to arp/dia/cumcpl.F90  
echkevo.F90 to arp/dia/chkevo.F90  
wrfudm.F90 to arp/dia/wrfu.F90  
wrmlppadm.F90 to arp/dia/wrmlppa.F90  
wrxfudm.F90 to arp/dia/wrxfu.F90  
arp/module aeolus\_processing.F90 to arp/module/aeolus\_processing\_mod.F90  
control\_vectors\_comm.F90 to arp/module/control\_vectors\_comm\_mod.F90  
couplo4\_module.F90 to arp/module/couplo4\_mix.F90  
fluxes\_type.F90 to arp/module/type\_fluxes.F90  
fullpos\_types.F90 to arp/module/fullpos\_mix.F90  
gems\_profiles.F90 to arp/module/type\_gems\_profiles.F90  
gfl\_subs.F90 to arp/module/gfl\_subs\_mod.F90  
gmv\_subs.F90 to arp/module/gmv\_subs\_mod.F90  
goms.F90 to arp/module/goms\_mix.F90  
grg\_photolysis.F90 to arp/module/grg\_photolysis\_mix.F90  
grib\_header\_def.F90 to arp/module/grib\_header\_mix.F90  
gridpoint\_buffers.F90 to arp/module/gridpoint\_buffers\_mix.F90  
gridpoint\_fields.F90 to arp/module/gridpoint\_fields\_mix.F90  
indexfind.F90 to arp/module/indexfind\_mod.F90  
iostream.F90 to arp/module/iostream\_mix.F90  
model\_error.F90 to arp/module/yommodel\_error.F90  
ptrgpnh.F90 to arp/module/ptrgppc.F90  
random\_streams.F90 to arp/module/yomrandom\_streams.F90  
spectral\_columns.F90 to arp/module/spectral\_columns\_mix.F90  
surface\_fields.F90 to arp/module/surface\_fields\_mix.F90  
testvar.F90 to arp/module/testvar\_mix.F90  
traj\_data.F90 to arp/module/yomtraj.F90

	traj_main.F90 to arp/module/traj_main_mod.F90
	traj_physics.F90 to arp/module/traj_physics_mod.F90
	traj_semilag.F90 to arp/module/traj_semilag_mod.F90
	traj_surface.F90 to arp/module/traj_surface_mod.F90
	trajectory.F90 to arp/module/trajectory_mod.F90
	watch_arrays.F90 to arp/module/watch_arrays_mod.F90
	yomgnhb.F90 to arp/module/yomgppcb.F90
	yommwimager.F90 to arp/module/mwimager_mix.F90
	yomobshorcache.F90 to arp/module/obshor_cache_mix.F90
	yomstoph.F90 to arp/module/stoph_mix.F90
arp/nmi	suunltt.F90 to arp/nmi/dealltt.F90
arp/obs_error	suerrors.F90 to arp/obs_error/su_errors.F90
arp/obs_preproc	crscsbode.F90 to arp/obs_preproc/crscbode.F90
	lansyin.F90 to arp/obs_preproc/lndsyin.F90
arp/ocean	sugco0dm.F90 to arp/ocean/sugco0.F90
	wrcoedm.F90 to arp/ocean/wrcoe.F90
arp/onedvar	onedvar_obsop_grad.F90 to arp/onedvar/onedvar_obsop_gr.F90
arp/phys_ec	gpsstaqua.F90 to arp/phys_ec/gp_sstaqua.F90
arp/setup	ca.F90 to arp/setup/updcelaut.F90
	dfltvv1.F90 to arp/setup/sudefo_vv1.F90
	setinidyncore.F90 to arp/setup/sudyncore.F90
	sucacliadm.F90 to arp/setup/sucacليا.F90
	suephypo.F90 to arp/setup/suecphypo.F90
	suevents.F90 to arp/setup/su_events.F90
	sugpqlimdm.F90 to arp/setup/sugpqlim.F90
	sugridadm.F90 to arp/setup/sugrida.F90
	sugridvadm.F90 to arp/setup/sugridva.F90
	suptrgpnh.F90 to arp/setup/suptrgppc.F90
	surfric.F90 to arp/setup/surayfric.F90
	suspqlimdm.F90 to arp/setup/suspqlim.F90
arp/transform	sprotl.F90 to arp/transform/sprotlon.F90
arp/utility	allocuf.F90 to arp/utility/suallocuf.F90
	sub5to3.F90 to arp/utility/sbs5to3.F90
	sub_spint.F90 to arp/utility/spint.F90
	subbgs.F90 to arp/utility/sbsbgs.F90

arp/var subfgs.F90 to arp/utility/sbsfgs.F90  
 sudeallav.F90 to arp/var/deallav.F90  
 suunlt.F90 to arp/var/deallt.F90  
 xrd/ddh conv\_intcar.F90 to xrd/ddh/intcar.F90  
 liste\_art\_lfi.F90 to xrd/ddh/etalae.F90  
 xrd/module compensated\_summation.F90 to xrd/module/compensated\_summation\_mod.F90  
 distio.F90 to xrd/module/distio\_mix.F90  
 ecsort.F90 to xrd/module/ecsort\_mix.F90  
 fdbsubs.F90 to xrd/module/fdbsubs\_mod.F90  
 order\_independent\_summation.F90 to xrd/module/order\_independent\_summation\_mod.F90  
 prism\_constants\_mod.F90 to xrd/module/yomprism.F90  
 quad\_emu.F90 to xrd/module/quad\_emu\_mod.F90  
 sdl\_module.F90 to xrd/module/sdl\_mod.F90  
 strhandler.F90 to xrd/module/strhandler\_mod.F90  
 yomfitspec.F90 to xrd/module/fitspectrum\_mod.F90  
 yomoml.F90 to xrd/module/oml\_mod.F90  
 yomwatch.F90 to xrd/module/dr\_hook\_watch\_mod.F90

**Deleted:**

ald/adiab	espch.F90	espchad.F90	espcm.F90
	espcmad.F90		
ald/c9xx	cchien.F90		
ald/dia	suemetric.F90		
ald/pp_obs	ebipos.F90	endepos.F90	epos.F90
	etranscub.F90	exarp.F90	exbip.F90
	extfpezo.F90	fpezo2h.F90	fpezone.F90
	fpfillb.F90	incfpezo.F90	sufpmove.F90
ald/setup	suefpbip.F90	suefpg3.F90	suehow1.F90
	suehow2.F90	suehowlsm.F90	sufpezo.F90
arp/adiab	si_mxptco.F90		
arp/c9xx	apache.F90	aval.F90	bob.F90
	rdclimo.F90	rdecclimo.F90	
arp/climate	updnuddm.F90		
arp/control	master.F90		

arp/dia	sipc_attach.F90 sipc_write_model.F90 wrmlfpl.F90 wrsfp.F90	sipc_init_model.F90 wrhfp.F90 wrplfp.F90 wrthlfp.F90 yomstack.F90	sipc_read_model.F90 wrmlfp.F90 wrpvfpl.F90
arp/module	yommvo.F90		
arp/nmi	scordo.F90		
arp/parallel	gridpoint_norm.F90		
arp/phys_dmn	hltridiag.F90		
arp/phys_ec	lw.F90 lwaitl.F90 lwc.F90 lwpad.F90 lwptl.F90 lwu.F90 lwvd.F90 mcica_cld_generator.F90 rrtm_cmbgb10.F90 rrtm_cmbgb13.F90 rrtm_cmbgb16.F90 rrtm_cmbgb4.F90 rrtm_cmbgb7.F90 rrtm_ecrt_140gp.F90 rrtm_init_140gp.F90 rrtm_kgb11.F90 rrtm_kgb14.F90 rrtm_kgb2.F90 rrtm_kgb5.F90 rrtm_kgb8.F90 rrtm_rrtm_140gp_mcica.F90 rrtm_setcoef_140gp.F90 rrtm_taumol11.F90 rrtm_taumol14.F90 rrtm_taumol2.F90 rrtm_taumol5.F90 rrtm_taumol8.F90	lwai.F90 lwb.F90 lwinterf.F90 lwprclair.F90 lwt.F90 lww.F90 lwwn.F90 radghg.F90 rrtm_cmbgb11.F90 rrtm_cmbgb14.F90 rrtm_cmbgb2.F90 rrtm_cmbgb5.F90 rrtm_cmbgb8.F90 rrtm_ecrt_140gp_mcica.F90 rrtm_kgb1.F90 rrtm_kgb12.F90 rrtm_kgb15.F90 rrtm_kgb3.F90 rrtm_kgb6.F90 rrtm_kgb9.F90 rrtm_rtrn1a_140gp.F90 rrtm_taumol1.F90 rrtm_taumol12.F90 rrtm_taumol15.F90 rrtm_taumol3.F90 rrtm_taumol6.F90 rrtm_taumol9.F90	lwaiad.F90 lwbv.F90 lwneur.F90 lwprnuage.F90 lwttm.F90 lwvb.F90 mcica_cld_gen.F90 rrtm_cmbgb1.F90 rrtm_cmbgb12.F90 rrtm_cmbgb15.F90 rrtm_cmbgb3.F90 rrtm_cmbgb6.F90 rrtm_cmbgb9.F90 rrtm_gasabs1a_140gp.F90 rrtm_kgb10.F90 rrtm_kgb13.F90 rrtm_kgb16.F90 rrtm_kgb4.F90 rrtm_kgb7.F90 rrtm_rrtm_140gp.F90 rrtm_rtrn1a_140gp_mcica.F90 rrtm_taumol10.F90 rrtm_taumol13.F90 rrtm_taumol16.F90 rrtm_taumol4.F90 rrtm_taumol7.F90 srtm_cldprop.F90

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srtm_cmbgb25.F90	srtm_cmbgb26.F90	srtm_cmbgb27.F90
srtm_cmbgb28.F90	srtm_cmbgb29.F90	srtm_init.F90
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srtm_kgb28.F90	srtm_kgb29.F90	srtm_reftra.F90
srtm_setcoef.F90	srtm_spcvrt.F90	srtm_spcvrt_mcica.F90
srtm_srtm_224gp.F90	srtm_srtm_224gp_mcica.F90	srtm_taumol16.F90
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srtm_taumol29.F90	srtm_vrtqdr.F90	su_c11clim.F90
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su_n2oclim.F90	su_no2clim.F90	su_ozoclim.F90
su_so4_A1B2000.F90	su_so4_A1B2010.F90	su_so4_A1B2020.F90
su_so4_A1B2030.F90	su_so4_A1B2040.F90	su_so4_A1B2050.F90
su_so4_A1B2060.F90	su_so4_A1B2070.F90	su_so4_A1B2080.F90
su_so4_A1B2090.F90	su_so4_A1B2100.F90	su_so4_obs1920.F90
su_so4_obs1930.F90	su_so4_obs1940.F90	su_so4_obs1950.F90
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su_so4_obs1990.F90	su_uvrad.F90	suaerl.F90
suaersn.F90	suecrad.F90	suecradi.F90
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sulw.F90	sulwn.F90	sulwneur.F90
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surrftfr.F90	surrtpk.F90	surrtrf.F90
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suswn.F90	sw.F90	sw1s.F90

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	swdetl.F90	swni.F90	swniad.F90
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	swrtl.F90	swsurfs.F90	swsurfsad.F90
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	swttad.F90	swtttl.F90	swu.F90
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	swuvo3ad.F90	swuvo3tl.F90	uvabs.F90
	uvclr.F90	uvde.F90	uvflx.F90
	uvflxa.F90	uvo3.F90	uvr.F90
	uvrad.F90		
arp/pp_obs	aeolus_l2b_to_body.F90	aerosol_detect.F90	amv_get_preds.F90
	amv_reassign.F90	aod_ad.F90	aod_op.F90
	aod_tl.F90	bgobs.F90	biaspred.F90
	cf_digital.F90	ch4_tcmr.F90	ch4_tcmr_ad.F90
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	co2_tcmr.F90	co2_tcmr_ad.F90	co2_tcmr_tl.F90
	cod_op.F90	cod_opad.F90	cod_optl.F90
	conv_weights.F90	cpclimi.F90	cpvpospr.F90
	cvlaniso.F90	dopplsim.F90	dopplsim_ad.F90
	dopplsim_tl.F90	dynfpos.F90	emis_atlas.F90
	emis_ir.F90	emis_mw.F90	emis_mw_n.F90
	endpos.F90	endvpos.F90	exchco.F90
	exchcoad.F90	exchcotl.F90	exheiz2p.F90
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	fp2sx1.F90	fpachmt.F90	fpcaica.F90
	fpcincap.F90	fpcliphy.F90	fpcordyn.F90
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	fphor12.F90	fpiniphy.F90	fpint12.F90
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	fpinvtrcuf.F90	fpflake.F90	fpmodcfu.F90
	fpmodprec.F90	fpmodxfu.F90	fpnilphy.F90



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gpscalc\_alphatl.F90  
gpscalc\_nr2dad.F90  
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gpscalc\_refractl.F90  
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grg\_jno2ad.F90  
hdepart.F90  
hop.F90  
hpos.F90  
hradp\_ml.F90  
hradpad.F90  
hsatang.F90  
inv\_refl1dstat.F90  
laidliobs.F90  
meanuv\_average.F90  
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mpobseqad.F90  
mwimager\_lwp.F90  
nox2no2tl.F90  
obshorad.F90

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gpscalc\_alpha.F90  
gpscalc\_alpha2dtl.F90  
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grg\_fparamtl.F90  
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grg\_jno2tl.F90  
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nox2no2.F90  
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obsv.F90

fpsampl.F90  
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gpscalc\_alphaad.F90  
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gpscalc\_nrad.F90  
gpscalc\_refrac2d.F90  
gpscalc\_refracad.F90  
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gpsro\_op.F90  
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grg\_fparam.F90  
grg\_jno2.F90  
grg\_jno2\_cloudtl.F90  
gridfpos.F90  
hjo.F90  
hopltl.F90  
hradp.F90  
hradp\_ml\_tl.F90  
hretr.F90  
intavg.F90  
laiddiobsad.F90  
layeravg.F90  
meanuv\_weights.F90  
mpobseq\_pack.F90  
mwimager\_cloud.F90  
nox2no2ad.F90  
obshor.F90  
obsvad.F90

arp/setup

obsvtl.F90  
post\_obshor.F90  
pregpfpos.F90  
preint2dad.F90  
preintr.F90  
preints.F90  
preinttl.F90  
qnegad.F90  
rad1cnne.F90  
rad1cobe.F90  
radtr\_ml\_ad.F90  
radtrb.F90  
radtrk.F90  
reflsim\_2dop.F90  
rouseaad.F90  
rtl\_hop\_1d\_ad.F90  
rtl\_hop\_2d\_ad.F90  
rtl\_screen.F90  
spaconvert.F90  
spos.F90  
sucmicst.F90  
surbound.F90  
tropopause.F90  
eigsol.F90  
subfpos.F90  
sufpcip.F90  
sufpd.F90  
sufpdyn.F90  
sufpg1.F90  
sufpios.F90  
sufpsc2.F90  
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suher.F90  
suhow1.F90  
sumpfpos.F90

openfpfa.F90  
pre\_obshorad.F90  
preint.F90  
preint2dtl.F90  
preintrad.F90  
preintsad.F90  
prespfpos.F90  
qnegtl.F90  
rad1cnnead.F90  
radtr.F90  
radtr\_ml\_tl.F90  
radtrbad.F90  
radtrtl.F90  
reo3bcor.F90  
rouseatl.F90  
rtl\_hop\_1d\_tl.F90  
rtl\_hop\_2d\_tl.F90  
slint.F90  
specfitadm.F90  
statpred.F90  
sufpvset\_dir.F90  
surboundad.F90  
vpos.F90  
su4fpos.F90  
sucfufp.F90  
sufpconf.F90  
sufpdim.F90  
sufpf.F90  
sufpg2.F90  
sufpoph.F90  
sufpsc2\_dep.F90  
sufptr2.F90  
suhert.F90  
suhow2.F90  
sumpfpos\_dep.F90

phymfpos.F90  
preamb.F90  
preint2d.F90  
preintad.F90  
preintrtl.F90  
preintstl.F90  
qneg.F90  
rad1cemis.F90  
rad1cnetl.F90  
radtr\_ml.F90  
radtrad.F90  
radtrbt1.F90  
reflsim.F90  
rousea.F90  
rtl\_hop\_1d.F90  
rtl\_hop\_2d.F90  
rtl\_oberror.F90  
slintad.F90  
specfitg.F90  
sublayer.F90  
sufpvset\_inv.F90  
surboundtl.F90  
writenn.F90  
sualfpos.F90  
sufpc.F90  
sufpcuf.F90  
sufpdom.F90  
sufpg.F90  
sufpgrib.F90  
sufpphy.F90  
sufpsc2b.F90  
sufpwide.F90  
suhes.F90  
suhowlsm.F90  
suphyfp.F90

	suprocfp.F90	suprocfp_dep.F90	surfpbuf.F90
	surfpds.F90	suvfpos.F90	suvfposl.F90
	suvpos.F90	suwfpbuf.F90	suwfpds.F90
	suxfufp.F90		
arp/sinvect	tridialcz.F90		
arp/transform	spreord.F90	updvpos.F90	
arp/utility	cpgridf.F90	eggmlt.F90	extfpf.F90
	jbtomodel.F90	jbtomodelad.F90	multvdv.F90
	mxptma.F90	mxtarma.F90	mxture.F90
	mxturhd.F90	mxturs.F90	sc2rdgfp.F90
	sc2wrgfp.F90	simplico.F90	tridiavspl.F90
	wrmoderr.F90	wrphtrajt.F90	wrradcoef.F90
	wrsltraj2.F90	wrspec.F90	
arp/var	cobs.F90	cobsad.F90	cobslag.F90
	cobslagad.F90	cobstl.F90	dbfgsl.F90
	dpseuclid.F90	dysave.F90	incvfilt.F90
	n1cg1.F90	n1cga.F90	rtl_setup.F90
bla/old2new	bl_old2new.c		
mpa/chem/internals	ch_make_lookup.mnh		
mse/internals	pgd.mnh	prep.mnh	sxpost.mnh
sat/pre_screen	bufr_grid_screen.F90	bufr_screen_amsre.F90	bufr_screen_amsre_1d.F90
	bufr_screen_iasi.F90	bufr_screen_ssmi.F90	bufr_screen_ssmi_1d.F90
	bufr_screen_ssmis.F90	bufr_screen_ssmis_1d.F90	bufr_screen_tmi.F90
	bufr_screen_tmi_1d.F90	geos_prescreen.F90	reo3_prescreen.F90
	screen_1c.F90		
sat/rttov	aer_clim_prof.F90	rttov_ascii2bin_coef.F90	rttovscatt_test.F90
	test_2_coef.F90	test_coef.F90	test_errorhandling.F90
	test_q2v.F90		
sat/satim	gensatim.F90		
sct/afilter	ascat_bufr_filter.F		
sct/dcone_qc	dcone_qc.F		
sct/etimesort	timesort.F		
sct/qbukey	bufr_qscat.F		
sct/qfilter	qscat_filter_bufr25km.F		
sct/qretrieve	qscat25to50km.F		

sct/qsca_split	qsca_split.F		
xrd/ddh	ddh-lfi2lfa.F90	ddhr.F90	ddht.F90
xrd/fa	datefa.F	testfa.F	
xrd/grib_io	gribdiff.F	gribtrace.F	splitgrib.F
xrd/grib_mf	decret.F		
xrd/lanczos	angles.F	datx.F	dsort2.F
	gcr.F	i2x.F	landr.F
	lanso.F	loadev.F	machar.F
	mortho.F	ortbnd.F	prangl.F
	prrule.F	purge.F	pythag.F
	random.F	ritvec.F	startv.F
	stpone.F	tql2.F	tqlb.F
	tstlfi.F		
xrd/lfi	ctcab_1dv.F	ctonb_1dv.F	dd.F
xrd/minim	dd_1dv.F	ddr.F	dds.F
	dds_1dv.F	ddsr.F	ecube.F
	ecube_1dv.F	ecuber.F	euclide.F
	euclide_1dv.F	m1qn3.F	m1qn3_1dv.F
	m1qn3a.F	m1qn3a_1dv.F	m1qn3ar.F
	m1qn3r.F	mlis0.F	mlis0_1dv.F
	mlis0r.F	mupdts_1dv.F	mupdts_orig.F
	mupdtsr.F	ystbl_1dv.F	ystbl_orig.F
	ystblr.F		
xrd/module	control_vectors.F90	control_vectors_base.F90	control_vectors_data.F90
	control_vectors_oper.F90	control_vectors_para.F90	random_numbers.F90
	spectral_fields.F90	spectral_fields_data.F90	spectral_fields_oper.F90
	spectral_fields_para.F90	yom_distributed_vectors.F90	yomlcz.F90
xrd/support	balanc.F	balbak.F	broadcchar.F90
	broadcint.F90	broadcreal.F90	cdiv.F
	cmpl_binding.F90	coml_binding.F90	elmhes.F
	eltran.F	fft992.F	hqr.F
	hqr2.F	jfh_bind.F90	minv.F
	mxmaop.F90	mxva.F	qpassf.F
	rg.F	rpassf.F	set99.F
	sgemmx.F	sgtsl.F	

**Modified:**

ald/adiab	espectr.F90	espnhsi.F90	espnhsiad.F90
ald/c9xx	eincli3.F90	eincli6.F90	
ald/coupling	eseimpls.F90	eseimplsad.F90	
ald/fullpos	fpezo2h.F90	posfpbipos.F90	prefpbipos.F90
	suehow2.F90	suehowism.F90	sufpezo.F90
ald/inidata	elsin.F90	elsirf.F90	
ald/parallel	eslxtpol.F90	eslxtpol1.F90	eslxtpol1a.F90
	eslxtpol2.F90		
ald/programs	blend.F90		
ald/setup	suemp.F90	sueoph.F90	sueqlimsat.F90
ald/sinvect	erdtlcz.F90	esptrlcz.F90	ewrtlcz.F90
ald/transform	espuv.F90		
ald/utility	eggmlt.F90		
ald/var	ebalvert.F90	ebalvertad.F90	ebalverti.F90
	ebalvertiad.F90	suejbtst.F90	suescal.F90
arp/adiab	call_sl.F90	call_sl_ad.F90	cpeuldyn.F90
	cpg.F90	cpg2.F90	cpg25.F90
	cpg2lag.F90	cpg2lagad.F90	cpg2lagtl.F90
	cpg5.F90	cpg5_gp.F90	cpg_dia.F90
	cpg_dyn.F90	cpg_dyn_ad.F90	cpg_dyn_tl.F90
	cpg_end.F90	cpg_end_ad.F90	cpg_end_tl.F90
	cpg_gp.F90	cpg_gp_ad.F90	cpg_gp_tl.F90
	cpgad.F90	cpgtl.F90	cpwts.F90
	estrcpl.F90	gp_spv.F90	gp_spvad.F90
	gp_spvtl.F90	gpinozst.F90	gmpfc_gmvs.F90
	lacdyn.F90	ladinead.F90	laidlicad.F90
	lanhsi.F90	lapineb.F90	larcinaad.F90
	larcinbad.F90	postphy.F90	sidd.F90
	siddad.F90	siseve.F90	sisevead.F90
	spchor.F90	specrt.F90	spnhsi.F90
arp/ald_inc/namelist	nemfpezo.h		
arp/c9xx	dealclia.F90	inclio.F90	inclio.F90

arp/canari	incli6.F90 caclsi.F90 caeincw.F90 calife.F90 canali.F90 canife.F90 capsax.F90 casnas.F90 cav1as.F90	sualcia.F90 caclsst.F90 cah2as.F90 calincw.F90 canari.F90 capotx.F90 carcli.F90 castas.F90	cacsts.F90 calice.F90 calver.F90 cancer.F90 caprsurf.F90 casmswi.F90 cat2as.F90
arp/climate	updcli.F90 updclie_co2.F90	updclie.F90 updcpl.F90	updclie_aer.F90 updnud.F90
arp/control	cdsta.F90 cnt3.F90 cnt4.F90 cprep1.F90 cva1.F90 gp_model.F90 reresf.F90 scan2m.F90 sim4d.F90 testli.F90	cgr1.F90 cnt3ad.F90 cnt4ad.F90 cprep4.F90 cva2.F90 gp_model_ad.F90 restart_cnt3.F90 scan2mad.F90 stepo.F90 testlievol.F90	cnt0.F90 cnt3tl.F90 cnt4tl.F90 csekf2.F90 forecast_error.F90 gp_model_tl.F90 scan2h.F90 scan2mtl.F90 tesadj.F90
arp/dfi	copsp.F90 dfi.F90 dfi2mod.F90 digfil.F90 reast.F90 smpfil.F90 sufw.F90	corsp.F90 dfi1.F90 dfi3.F90 digfilad.F90 recfil.F90 sualldfi.F90 suini.F90	dealldfi.F90 dfi2.F90 difsp.F90 digp.F90 redate.F90 sudfi.F90 zeroacu.F90
arp/dia	aro_cpphddh.F90 cpphddhe.F90 inifaout.F90 ppfidh.F90 prepfdb.F90 suechk.F90 wrcfupp.F90	chkevo.F90 cumcpl.F90 inipgo.F90 ppsydh.F90 sualpgo.F90 sunddh.F90 wrfu.F90	cpcuddh.F90 gridpoint_norm.F90 ppeddhec.F90 pregrbenc.F90 sualthd.F90 wrbudg.F90 wrmlpp.F90

	wrmlppa.F90	wrmlppg.F90	wrmlpplg.F90
	wrmoderr.F90	wroutgpgb.F90	wroutspgb.F90
arp/fullpos	wrxfu.F90	wrxfupp.F90	
	cpclimi.F90	cpgridf.F90	fpachmt.F90
	fpmmodprec.F90	gridfpos.F90	hpos.F90
	pregpfpos.F90	prespfpos.F90	sc2rdgfp.F90
	sc2wrgfp.F90	specfita.F90	specfitg.F90
	subfpos.F90	sufpcfu.F90	sufpg1.F90
	sufpphq.F90	sufprfpbuf.F90	sufprfpds.F90
	sufpwfpbuf.F90	sufpwfpds.F90	sufpxfu.F90
	suhow1.F90	suhow2.F90	suhowlsm.F90
	vpos.F90	wrmlfp.F90	
arp/module	aeolus_processing_mod.F90	control_vectors_comm_mod.F90	couplo4_mix.F90
	fullpos_mix.F90	gfl_subs_mod.F90	gmv_subs_mod.F90
	goms_mix.F90	grg_photolysis_mix.F90	grib_header_mix.F90
	gridpoint_buffers_mix.F90	gridpoint_fields_mix.F90	indexfind_mod.F90
	iostream_mix.F90	mwimager_mix.F90	obshor_cache_mix.F90
	ptrgppc.F90	spectral_columns_mix.F90	stoph_mix.F90
	surface_fields_mix.F90	testvar_mix.F90	traj_main_mod.F90
	traj_physics_mod.F90	traj_semilag_mod.F90	traj_surface_mod.F90
	trajectory_mod.F90	type_fluxes.F90	type_fprqdyns.F90
	type_gems_profiles.F90	watch_arrays_mod.F90	yomafn.F90
	yomaneb.F90	yomauxb.F90	yomcfu.F90
	yomdb.F90	yomdyncore.F90	yomfceb.F90
	yomgfub.F90	yomgppb.F90	yomgppcb.F90
	yomgpsk.F90	yomjq.F90	yommodel_error.F90
	yomrandom_streams.F90	yomspjb.F90	yomtraj.F90
	yomxfu.F90	yomxfub.F90	
arp/nmi	dealltt.F90	nnmi2.F90	nnmi2ad.F90
	nnmi2tl.F90	nnmi3.F90	nnmi3ad.F90
	nnmi3tl.F90		
arp/obs_error	su_errors.F90		
arp/obs_preproc	ascatsm_cdfpar.F90	biascor.F90	biascor_era40.F90
	black.F90	blackhat.F90	decis.F90
	defrun.F90	dupli.F90	dupli_no_sq.F90

	fgwnd.F90	first.F90	flgtst.F90
	gefger.F90	gen_corr_pert.F90	inifger.F90
	lndsyin.F90	mkglobstab.F90	movpl.F90
	movpl_no_sq.F90	new_thinn_radar.F90	new_thinner.F90
	new_thinner_no_sq.F90	obscor_lanczos.F90	obsgen.F90
	pertobs.F90	pertobs_uncorr.F90	pre_prsta.F90
	prech.F90	prsta.F90	redgl.F90
	redgl_no_sq.F90	redml.F90	redml_no_sq.F90
	redprof.F90	redrp.F90	redrp1.F90
	redrp1_no_sq.F90	redrp_no_sq.F90	redsl.F90
	redsm.F90	redsm_no_sq.F90	redun.F90
	repra.F90	scaqc.F90	screen.F90
	sekf_prep_ascat.F90	settc.F90	sualobs.F90
	sudimo.F90	sugoms.F90	suobs.F90
	suobsaddr.F90	suobscor.F90	synopin.F90
	thiair.F90	thin_red_presort.F90	thinn_radar.F90
	thinner.F90	thinner_no_sq.F90	upecma.F90
	verco.F90		
	sugco0.F90	wrcoe.F90	wrcom.F90
arp/ocean	onedvar_adjoint_test.F90	onedvar_obsop_gr.F90	onedvar_raintb.F90
arp/onedvar	onedvar_raintb_hlp.F90	onedvar_simul.F90	
	aod_ad.F90	aod_op.F90	aod_tl.F90
arp/op_obs	bgobs.F90	ch4_tcmr.F90	ch4_tcmr_ad.F90
	ch4_tcmr_tl.F90	cloud_detect.F90	co2_tcmr.F90
	co2_tcmr_ad.F90	co2_tcmr_tl.F90	cobs.F90
	cobsad.F90	cobslag.F90	cobstl.F90
	expbesuad.F90	fcseradi.F90	fcserf.F90
	fcserf_ad.F90	fcserf_tl.F90	fcsglat.F90
	gpascal_alpha.F90	gpascal_alpha2d.F90	gpascal_alpha2dad.F90
	gpascal_alpha2dtl.F90	gpascal_alphaad.F90	gpascal_alphatl.F90
	gpascal_nr.F90	gpascal_nr2d.F90	gpascal_nr2dad.F90
	gpascal_nr2dtl.F90	gpascal_nrad.F90	gpascal_nrtl.F90
	grg_ak_ad.F90	grg_ak_op.F90	grg_ak_tl.F90
	grg_fparam.F90	grg_fparamad.F90	grg_fparamtl.F90
	grg_jno2.F90	grg_jno2_cloud.F90	grg_jno2_cloudad.F90



	grg_jno2_cloudtl.F90	grg_jno2ad.F90	grg_jno2tl.F90
	hdepart.F90	hjo.F90	hop.F90
	hopad.F90	hoptl.F90	hradp.F90
	hradp_ml.F90	hradp_ml_ad.F90	hradp_ml_tl.F90
	hradpad.F90	hradptl.F90	hretr.F90
	mpobseq.F90	mpobseq_pack.F90	mpobseqad.F90
	mpobseqad_unpck.F90	mwimager_cloud.F90	mwimager_lwp.F90
	nox2no2.F90	nox2no2ad.F90	nox2no2tl.F90
	obscor_sumup_scalp.F90	obshor.F90	obshorad.F90
	post_obshor.F90	pre_obshorad.F90	preint.F90
	preint2d.F90	preint2dad.F90	preint2dtl.F90
	preintad.F90	preintr.F90	preintrad.F90
	preintrtl.F90	preints.F90	preintsad.F90
	preintstl.F90	preinttl.F90	radtr.F90
	radtr_ml.F90	radtr_ml_ad.F90	radtr_ml_tl.F90
	radtrad.F90	radtrb.F90	radtrk.F90
	radtrtl.F90	slint.F90	slintad.F90
arp/parallel	dot_product_ctlvec.F90	phcset.F90	read_spec.F90
	read_spec_fromfa.F90	read_spec_grib.F90	slcomm.F90
	slcomm1.F90	slcomm2.F90	slcomm2a.F90
	slxtpol.F90	slxtpol1.F90	slxtpol1a.F90
	slxtpol2.F90	trmtos_spec.F90	trstom_spec.F90
	write_spec.F90	write_spec_grib.F90	
arp/phys_dmn	apl_arome.F90	aro_iniapft.F90	mf_phys.F90
	mf_physad.F90	mf_phystl.F90	radaer15.F90
	suparar.F90	suphy1.F90	writeprofile.F90
arp/phys_ec	callpar.F90	cldpp.F90	ec_phys.F90
	ec_phys_ad.F90	ec_phys_drv.F90	ec_phys_tl.F90
	ec_physg.F90	gp_sstaqua.F90	heldsuarez.F90
	radcfg.F90	raddrv.F90	radintg.F90
	stochadiaten.F90	suphec.F90	wvcouple.F90
	wvrg2xf.F90	wvxf2gb.F90	
arp/phys_radi	mcica_cld_generator.F90	su_uvradi.F90	suecrad.F90
	uvclr.F90	uvflx.F90	uvflxa.F90
	uvradi.F90		

arp/pp_obs	pos.F90 ppobsac.F90 ppobsas.F90 ppobsn.F90	ppobsa.F90 ppobsacad.F90 ppobsatl.F90 pppsad.F90	ppobsaad.F90 ppobsactl.F90 ppobsaz.F90 ppreset.F90
arp/prism	couplo4_definitions.F90 couplo4_grg_stats.F90	couplo4_exchange.F90 couplo4_inimpi.F90	couplo4_grg_input.F90
arp/programs	master.F90	merge_varbc.F90	
arp/sekf	pertsekf_v2.F90	sekf_write.F90	
arp/setup	su0yoma.F90 su_surf_flds.F90 suafn3.F90 sucaclia.F90 sudefo_gflattr.F90 sudyn.F90 sudyncore.F90 sugpqlim.F90 sugridf.F90 sugridug2.F90 suhdu.F90 sump.F90 sunhbmata.F90 suphy.F90 surand2.F90 suspecg.F90 suvert.F90	su0yomb.F90 suafn1.F90 suallo.F90 sucfu.F90 sudefo_vv1.F90 sudyn_setgflattr.F90 suecphypo.F90 sugrclia.F90 sugridg.F90 sugridva.F90 suinif.F90 sumpini.F90 suoaf.F90 suptrgppc.F90 surayfric.F90 suspecg2.F90 suxfu.F90	su_events.F90 suafn2.F90 suarg.F90 sucoaphy.F90 sudim1.F90 sudyna.F90 sugfl.F90 sugrida.F90 sugridug.F90 suhdf.F90 suinimoderr.F90 sumts.F90 suoph.F90 surand1.F90 susc2b.F90 suspqlim.F90 updcelaut.F90
arp/sinvect	balanced_reduction.F90 cun2.F90 lcnorad.F90 lcztoifs.F90 pcgbfgs.F90 su_subspace.F90	bfgs.F90 cun3.F90 lcnortl.F90 nalan1.F90 rdtllcz.F90 suforce.F90	chsymeig.F90 jacdav.F90 lcztoald.F90 nalan2.F90 sptrllcz.F90 wrtllcz.F90
arp/transform	grid2spec.F90 spec2gridad.F90	grid2specad.F90 spolts.F90	spec2grid.F90 sprotlon.F90
arp/utility	add5to3.F90 allgather_ctlvec_ifsaux.F90	addbgs.F90 copy_spa2spec.F90	addfigs.F90 copy_spec2spa.F90

copygom5t0.F90  
dealmod.F90  
extgpf.F90  
incgpf.F90  
modeltojb.F90  
pkgridg.F90  
prtgom.F90  
rdgpfa.F90  
read\_grid\_traj.F90  
save4next.F90  
savmoderr.F90  
sbsfgs.F90  
setimzero.F90  
spec\_imzero.F90  
state2spec.F90  
sualspajb.F90  
write\_grid\_grib.F90  
wrresf.F90  
add\_modbias.F90  
add\_moderr.F90  
adtest.F90  
balverti.F90  
bgvecs.F90  
cainin.F90  
cosjc.F90  
cvar2in.F90  
cvar3ad.F90  
cvargpad.F90  
deallav.F90  
ecset\_thsafe.F90  
evjq.F90  
jbtomodelad.F90  
jgcori.F90  
jghcosad.F90  
jgnrs.F90

dealctv.F90  
dealsc2.F90  
grid\_from\_grib.F90  
iopack.F90  
modeltojbad.F90  
prt\_ctlvec\_max.F90  
random\_ctlvec.F90  
rdmoderr.F90  
read\_surfgrid\_traj\_fromfa.F90  
save\_merr\_tend.F90  
sbs5to3.F90  
sc2rdg.F90  
spec2state.F90  
spec\_split.F90  
state2specad.F90  
updtim.F90  
write\_grid\_traj.F90  
add\_modbias\_ad.F90  
add\_moderr\_ad.F90  
balvert.F90  
balvertiad.F90  
cain.F90  
caininad.F90  
cvar2.F90  
cvar2inad.F90  
cvar3in.F90  
cvargptl.F90  
deallt.F90  
estsig.F90  
getmini.F90  
jgcor.F90  
jgcoriad.F90  
jghcosi.F90  
jgnrsi.F90

deallo.F90  
dealspa.F90  
gstats\_label\_ifs.F90  
model2moderr.F90  
pkgrida.F90  
prt\_ctlvec\_norms.F90  
rdfufa.F90  
read\_grid\_grib.F90  
reset\_accfie\_vareps.F90  
save\_test4dinc.F90  
sbsbgs.F90  
sc2wrg.F90  
spec\_concat.F90  
spint.F90  
suallocuf.F90  
write\_ctlvec\_grib.F90  
write\_wavelet\_initcv\_grib.F90  
add\_modbias\_tl.F90  
add\_moderr\_tl.F90  
balvertad.F90  
bgevecs.F90  
cainad.F90  
congrad.F90  
cvar2ad.F90  
cvar3.F90  
cvar3inad.F90  
cvtest.F90  
ecset.F90  
evcost.F90  
jbtomodel.F90  
jgcorad.F90  
jghcos.F90  
jghcosiad.F90  
jqhcor.F90

arp/var

	jqhcorin.F90	jqvcor.F90	litest.F90
	precond.F90	preppcm.F90	rdfpinc.F90
	readvec.F90	savhess.F90	savmini.F90
	setran.F90	sqrtb.F90	sqrtbad.F90
	sqrtbin.F90	sqrtbinad.F90	sqrtq.F90
	sqrtqad.F90	sqrtqin.F90	sqrtqinad.F90
	sualctv.F90	sualges.F90	suallt.F90
	suecges.F90	suhess.F90	suinfce.F90
	sujbtest.F90	sujbwavallo.F90	sujbwavelet.F90
	sujbwavelet0.F90	sujbwavgen.F90	sujbwavwri.F90
	sujq.F90	sujqstd.F90	sumoderr.F90
	supert.F90	sureo3.F90	suscal.F90
	suscalmerr.F90	sushfce.F90	suskf.F90
	suvar.F90	suvazx.F90	taskob.F90
	taskobad.F90	taskobtl.F90	tlprop.F90
	tltest.F90	upspec.F90	vec2gp.F90
	weak_constraint.F90	weak_constraint_ad.F90	weak_constraint_tl.F90
	wrevecs.F90	writesd.F90	xformev.F90
odb/cma2odb	bool_setparam_obsort.F90	ctxgetdb.F90	ctxputdb.F90
	getatdb.F90	getdb.F90	init_common.F90
	int_setparam_obsort.F90	intarr_setparam_obsort.F90	mapdb.F90
	opendb.F90	putatdb.F90	putdb.F90
	read_namelist.F90	setpoolmaskdb.F90	setup_obsort.F90
	string_setparam_obsort.F90	unsetpoolmaskdb.F90	wtfunc_obsort.F90
	xchangedatadb.F90		
odb/include	fodbmp2.h	privpub.h	
odb/lib	ckeysort.F90	msgpass_obsdata.F90	
odb/module	iodist.F90	odb.F90	odbmp.F90
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