

```
1: =====
2: READ_ASCII_FILE: unknown
3: READ_ASCII_FILE: File: input.nml
4: =====
5: READ_INPUT_NML: unknown
6: READ_INPUT_NML: input.nml
7:   &interp_nml
8:     interp_oi_sst = .true.
9:     use_ncep_sst = .true.
10:    use_ncep_ice = .false.
11:    no_anom_sst = .false.
12:    data_set = 'reynolds_oi'
13:    date_out_of_range = 'climo'
14:  /
15:
16:
17:  &atmos_model_nml
18:    blocksize = 32
19:    chksum_debug = .false.
20:    dycore_only = .false.
21:    fdiag = 1
22:    fhmax = 384
23:    fhout = 3
24:    fhmaxhf = 120
25:    fhouthf = 1
26:    ccpp_suite = 'FV3_GFS_v15p2'
27:  /
28:
29:
30:  &diag_manager_nml
31:    prepend_date = .false.
32:  /
33:
34:
35:  &fms_io_nml
36:    checksum_required = .false.
37:    max_files_r = 100
38:    max_files_w = 100
39:  /
40:
41:
42:  &fms_nml
43:    clock_grain = 'ROUTINE'
44:    domains_stack_size = 16000000
45:    print_memory_usage = .false.
46:  /
47:
48:
49:  &fv_core_nml
50:    layout = 1,1
```

```
51:   io_layout = 1,1
52:   npx = 193
53:   npy = 193
54:   ntiles = 6
55:   npz = 64
56:   grid_type = -1
57:   make_nh = .false.
58:   fv_debug = .false.
59:   range_warn = .false.
60:   reset_eta = .false.
61:   n_sponge = 10
62:   nudge_qv = .true.
63:   nudge_dz = .false.
64:   tau = 10.
65:   rf_cutoff = 7.5e2
66:   d2_bg_k1 = 0.15
67:   d2_bg_k2 = 0.02
68:   kord_tm = -9
69:   kord_mt = 9
70:   kord_wz = 9
71:   kord_tr = 9
72:   hydrostatic = .false.
73:   phys_hydrostatic = .false.
74:   use_hydro_pressure = .false.
75:   beta = 0.
76:   a_imp = 1.
77:   p_fac = 0.1
78:   k_split = 2
79:   n_split = 6
80:   nwat = 6
81:   na_init = 0
82:   d_ext = 0.
83:   dnats = 1
84:   fv_sg_adj = 450
85:   d2_bg = 0.
86:   nord = 2
87:   dddmp = 0.1
88:   d4_bg = 0.12
89:   vtdm4 = 0.02
90:   delt_max = 0.002
91:   ke_bg = 0.
92:   do_vort_damp = .true.
93:   external_ic = .true.
94:   external_eta = .true.
95:   gfs_phil = .false.
96:   nggps_ic = .true.
97:   mountain = .false.
98:   ncep_ic = .false.
99:   d_con = 1.
100:  hord_mt = 5
```

```
101:   hord_vt = 5
102:   hord_tm = 5
103:   hord_dp = -5
104:   hord_tr = 8
105:   adjust_dry_mass = .false.
106:   consv_te = 1.
107:   do_sat_adj = .true.
108:   consv_am = .false.
109:   fill = .true.
110:   dwind_2d = .false.
111:   print_freq = 6
112:   warm_start = .false.
113:   no_dycore = .false.
114:   z_tracer = .true.
115:   agrid_vel_rst = .true.
116:   read_increment = .false.
117:   res_latlon_dynamics = ""
118: /
119:
120:
121: &external_ic_nml
122:   filtered_terrain = .true.
123:   levp = 65
124:   gfs_dwinds = .true.
125:   checker_tr = .false.
126:   nt_checker = 0
127: /
128:
129:
130: &gfs_physics_nml
131:   fhzero      = 6
132:   h2o_phys    = .true.
133:   ldiag3d     = .false.
134:   fhcyc       = 24
135:   use_ufo     = .true.
136:   pre_rad     = .false.
137:   nclد        = 5
138:   imp_physics = 11
139:   pdfcld      = .false.
140:   fhswr       = 3600.
141:   fhlwr       = 3600.
142:   ialb        = 1
143:   iems        = 1
144:   iaer        = 111
145:   ico2        = 2
146:   isubc_sw    = 2
147:   isubc_lw    = 2
148:   isol        = 2
149:   lwhtr       = .true.
150:   swhtr       = .true.
```

```
151:   cnvgwd       = .true.
152:   shal_cnv     = .true.
153:   cal_pre      = .false.
154:   redrag       = .true.
155:   dspheat     = .true.
156:   hybedmf     = .true.
157:   random_clds = .false.
158:   trans_trac  = .true.
159:   cnvcld      = .true.
160:   imfshalcnv = 2
161:   imfdeepcnv = 2
162:   cdmbgwd    = 3.5,0.25
163:   prslrd0    = 0.
164:   ivegsrc    = 1
165:   isot       = 1
166:   debug      = .false.
167:   oz_phys    = .F.
168:   oz_phys_2015 = .T.
169:   nstf_name  = 2,1,0,0,0
170:   nst_anl    = .true.
171:   psautco   = 0.0008,0.0005
172:   prautco   = 0.00015,0.00015
173:   lgfdlprad = .true.
174:   effr_in   = .true.
175:   do_sppt   = .T.
176:   do_shum   = .T.
177:   do_skeb   = .T.
178:   do_sfcpts = .F.
179: /
180:
181:
182: &gfdl_cloud_microphysics_nml
183:   sedi_transport = .true.
184:   do_sedi_heat  = .false.
185:   rad_snow     = .true.
186:   rad_graupel  = .true.
187:   rad_rain     = .true.
188:   const_vi    = .F.
189:   const_vs    = .F.
190:   const_vg    = .F.
191:   const_vr    = .F.
192:   vi_max     = 1.
193:   vs_max     = 2.
194:   vg_max     = 12.
195:   vr_max     = 12.
196:   qi_lim     = 1.
197:   prog_ccn   = .false.
198:   do_qa     = .true.
199:   fast_sat_adj = .true.
200:   tau_l2v   = 225.
```

```

201: tau_v2l = 150.
202: tau_g2v = 900.
203: rthresh = 10.e-6 ! This is a key parameter for cloud water
204: dw_land = 0.16
205: dw_ocean = 0.10
206: ql_gen = 1.0e-3
207: ql_mlt = 1.0e-3
208: qi0_crt = 8.0E-5
209: qs0_crt = 1.0e-3
210: tau_i2s = 1000.
211: c_psaci = 0.05
212: c_pgacs = 0.01
213: rh_inc = 0.30
214: rh_inr = 0.30
215: rh_ins = 0.30
216: ccn_l = 300.
217: ccn_o = 100.
218: c_paut = 0.5
219: c_cracw = 0.8
220: use_ppm = .false.
221: use_ccn = .true.
222: mono_prof = .true.
223: z_slope_liq = .true.
224: z_slope_ice = .true.
225: de_ice = .false.
226: fix_negative = .true.
227: icloud_f = 1
228: mp_time = 150.
229: /
230:
231:
232: &interpolator_nml
233:   interp_method = 'conserve_great_circle'
234: /
235:
236:
237: &namsfc
238:   FNLGAC = "global_glacier.2x2.grb",
239:   FNMXIC = "global_maxice.2x2.grb",
240:   FNTSFC = "RTGSST.1982.2012.monthly.clim.grb",
241:   FNSNOG = "global_sno clim.1.875.grb",
242:   FNZORC = "igbp",
243:   FNLALBC = "global_snowfree_albedo.bosu.t382.768.384.rg.grb",
244:   FNLALBC2 = "global_albedo4.1x1.grb",
245:   FNLALISC = "CFSR.SEAICE.1982.2012.monthly.clim.grb",
246:   FNTG3C = "global_tg3clim.2.6x1.5.grb",
247:   FNVEGC = "global_vegfrac.0.144.decpercent.grb",
248:   FNVEGC = "global_vegtype.igbp.t382.768.384.rg.grb",
249:   FNSOTC = "global_soiltype.statsgo.t382.768.384.rg.grb",
250:   FNSMCC = "global_soilmgldas.t382.768.384.grb",

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```
251:      FNMSKH   = "seaice_newland.grb",
252:      FNTSFA   = "",
253:      FNACNA   = "",
254:      FNSNOA   = "",
255:      FNMVNC   = "global_shdmin.0.144x0.144.grb",
256:      FNMVXC   = "global_shdmax.0.144x0.144.grb",
257:      FNSLPC   = "global_slope.1x1.grb",
258:      FNABSC   = "global_mxsnoalb.uariz.t382.768.384.rg.grb",
259:      LDEBUG   = .false.,
260:      FSMCL(2) = 99999
261:      FSMCL(3) = 99999
262:      FSMCL(4) = 99999
263:      FTSFS    = 90
264:      FSNOL    = 99999
265:      FSICL    = 99999
266:      FTSFL    = 99999,
267:      FAISL    = 99999,
268:      FVETL    = 99999,
269:      FSOTL    = 99999,
270:      FvmnL    = 99999,
271:      FvmxL    = 99999,
272:      FSLPL    = 99999,
273:      FABSL    = 99999,
274: /
275:
276: &fv_grid_nml
277:   grid_file = 'INPUT/grid_spec.nc'
278: /
279:
280: &nam_stochy
281:   ntrunc = 766
282:   lon_s  = 1536
283:   lat_s  = 768
284:   skeb   = 0.3
285:   iseed_skeb = 2019102712451
286:   iseed_shum = 2019102712452
287:   iseed_sppt = 2019102712453
288:   skeb_tau  = 21600.
289:   skeb_lscale = 500000.
290:   skebnorm  = 0
291:   skeb_npass = 30
292:   skeb_vdof = 5
293:   shum     = 0.005
294:   shum_tau  = 21600.
295:   shum_lscale = 500000.
296:   sppt     = 0.5
297:   sppt_tau  = 21600.
298:   sppt_lscale = 500000.
299:   sppt_logit = .true.
300:   sppt_sfclimit = .true.
```

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301:   use_zmtnbldk = .true.
302: /
303:
304: &nam_sfcprt
305: /
306:
307: &cires_ugwp_nml
308: /
309:
310:
311:
312: MPP module unknown
313: MPP started with NPES=      6
314: Using MPI library for message passing...
315: Realtime clock resolution= 1.0000E-06 sec ( 1000000 ticks/sec)
316: Clock rolls over after 9.2234E+12 sec ( 9223372036854775806 ticks)
317:
318: MPP Parameter module unknown
319:
320: MPP Data module unknown
321:
322: MPP_DOMAINS module unknown
323: &MPP_IO_NML
324: HEADER_BUFFER_VAL      =      16384,
325: GLOBAL_FIELD_ON_ROOT_PE = T,
326: IO_CLOCKS_ON           = F,
327: SHUFFLE =              0,
328: DEFLATE_LEVEL          =              -1,
329: CF_COMPLIANCE          = F
330: /
331:
332: MPP_IO module unknown
333:
334: Using netCDF library version 4.7.3 of Aug 7 2020 10:59:28 $
335:
336: =====
    ====
337: FMS_IO_MOD
338: unknown
339:
340: =====
    ====
341: FMS_MOD
342: unknown
343: &FMS_NML
344: READ_ALL_PE           = T,
345: CLOCK_GRAIN           = ROUTINE      ,
346: CLOCK_FLAGS           = NONE        ,
347: WARNING_LEVEL         = warning    ,
348: IOSPEC_IEEE32         = -N ieee_32
    ,

```

```
349: STACK_SIZE      =          0,
350: DOMAINS_STACK_SIZE      =    16000000,
351: PRINT_MEMORY_USAGE      = F
352: /
353: nml_error_codes=
354:
355: =====
=====
356: CONSTANTS_MOD
357: unknown
358:
359: =====
=====
360: SAT_VAPOR_PRES_MOD
361: unknown
362: &SAT_VAPOR_PRES_NML
363: SHOW_BAD_VALUE_COUNT_BY_SLICE = T,
364: SHOW_ALL_BAD_VALUES      = F,
365: USE_EXACT_QS      = F,
366: DO_SIMPLE      = F,
367: CONSTRUCT_TABLE_WRT_LIQ = F,
368: CONSTRUCT_TABLE_WRT_LIQ_AND_ICE = F
369: /
370:
371: =====
=====
372: TIME_MANAGER_MOD
373: unknown
374:
375: =====
=====
376: DIAG_UTIL_MOD
377: unknown
378:
379: =====
=====
380: DIAG_DATA_MOD
381: unknown
382:
383: =====
=====
384: DIAG_MANAGER_MOD
385: unknown
386: &DIAG_MANAGER_NML
387: APPEND_PELIST_NAME      = F,
388: MIX_SNAPSHOT_AVERAGE_FIELDS      = F,
389: MAX_OUTPUT_FIELDS      =          300,
390: MAX_INPUT_FIELDS      =          600,
391: MAX_AXES      =          60,
392: DO_DIAG_FIELD_LOG      = F,
```



```

393: WRITE_BYTES_IN_FILE      = F,
394: DEBUG_DIAG_MANAGER      = F,
395: MAX_NUM_AXIS_SETS       =          25,
396: MAX_FILES                =          31,
397: USE_CMOR                 = F,
398: ISSUE_OOR_WARNINGS       = T,
399: OOR_WARNINGS_FATAL       = F,
400: MAX_OUT_PER_IN_FIELD     =          150,
401: FLUSH_NC_FILES           = F,
402: REGION_OUT_USE_ALT_VALUE = T,
403: MAX_FIELD_ATTRIBUTES     =           4,
404: MAX_FILE_ATTRIBUTES      =           2,
405: MAX_AXIS_ATTRIBUTES      =           4,
406: PREPEND_DATE             = F,
407: WRITE_MANIFEST_FILE      = F
408: /
409: =====
410: READ_ASCII_FILE: unknown
411: READ_ASCII_FILE: File: diag_table
412: base date used = 2019 August 29  0:00:00 gmt
413:
414: =====
====
415: DIAG_AXIS_MOD
416: unknown
417:
418: =====
====
419: FV_CONTROL_MOD
420: unknown
421: &FV_GRID_NML
422: GRID_NAME                =
423: GRID_FILE                 = INPUT/grid_spec.nc
424:
425: /
426: =====
427: READ_ASCII_FILE: unknown
428: READ_ASCII_FILE: File: input.nml
429: =====
430: READ_INPUT_NML: unknown
431: READ_INPUT_NML: input.nml
432:   i»;&amip_interp_nml
433:     interp_oi_sst = .true.
434:     use_ncep_sst = .true.
435:     use_ncep_ice = .false.
436:     no_anom_sst = .false.
437:     data_set = 'reynolds_oi'
438:     date_out_of_range = 'climo'

```

```
439: /
440:
441:
442: &atmos_model_nml
443:   blocksize = 32
444:   chksum_debug = .false.
445:   dycore_only = .false.
446:   fdiaq = 1
447:   fhmax = 384
448:   fhout = 3
449:   fhmaxhf = 120
450:   fhouthf = 1
451:   ccpp_suite = 'FV3_GFS_v15p2'
452: /
453:
454:
455: &diag_manager_nml
456:   prepend_date = .false.
457: /
458:
459:
460: &fms_io_nml
461:   checksum_required = .false.
462:   max_files_r = 100
463:   max_files_w = 100
464: /
465:
466:
467: &fms_nml
468:   clock_grain = 'ROUTINE'
469:   domains_stack_size = 16000000
470:   print_memory_usage = .false.
471: /
472:
473:
474: &fv_core_nml
475:   layout = 1,1
476:   io_layout = 1,1
477:   npx = 193
478:   npy = 193
479:   ntiles = 6
480:   npz = 64
481:   grid_type = -1
482:   make_nh = .false.
483:   fv_debug = .false.
484:   range_warn = .false.
485:   reset_eta = .false.
486:   n_sponge = 10
487:   nudge_qv = .true.
488:   nudge_dz = .false.
```

```
489: tau = 10.
490: rf_cutoff = 7.5e2
491: d2_bg_k1 = 0.15
492: d2_bg_k2 = 0.02
493: kord_tm = -9
494: kord_mt = 9
495: kord_wz = 9
496: kord_tr = 9
497: hydrostatic = .false.
498: phys_hydrostatic = .false.
499: use_hydro_pressure = .false.
500: beta = 0.
501: a_imp = 1.
502: p_fac = 0.1
503: k_split = 2
504: n_split = 6
505: nwat = 6
506: na_init = 0
507: d_ext = 0.
508: dnats = 1
509: fv_sg_adj = 450
510: d2_bg = 0.
511: nord = 2
512: dddmp = 0.1
513: d4_bg = 0.12
514: vtdm4 = 0.02
515: delt_max = 0.002
516: ke_bg = 0.
517: do_vort_damp = .true.
518: external_ic = .true.
519: external_eta = .true.
520: gfs_phil = .false.
521: nggps_ic = .true.
522: mountain = .false.
523: ncep_ic = .false.
524: d_con = 1.
525: hord_mt = 5
526: hord_vt = 5
527: hord_tm = 5
528: hord_dp = -5
529: hord_tr = 8
530: adjust_dry_mass = .false.
531: consv_te = 1.
532: do_sat_adj = .true.
533: consv_am = .false.
534: fill = .true.
535: dwind_2d = .false.
536: print_freq = 6
537: warm_start = .false.
538: no_dycore = .false.
```

```
539:   z_tracer = .true.
540:   agrid_vel_rst = .true.
541:   read_increment = .false.
542:   res_latlon_dynamics = ""
543: /
544:
545:
546: &external_ic_nml
547:   filtered_terrain = .true.
548:   levp = 65
549:   gfs_dwinds = .true.
550:   checker_tr = .false.
551:   nt_checker = 0
552: /
553:
554:
555: &gfs_physics_nml
556:   fhzero      = 6
557:   h2o_phys    = .true.
558:   ldiag3d     = .false.
559:   fhcyc       = 24
560:   use_ufo     = .true.
561:   pre_rad     = .false.
562:   nclد        = 5
563:   imp_physics = 11
564:   pdfcld     = .false.
565:   fhswr      = 3600.
566:   fhlwr      = 3600.
567:   ialb       = 1
568:   iems       = 1
569:   iaer       = 111
570:   ico2       = 2
571:   isubc_sw   = 2
572:   isubc_lw   = 2
573:   isol       = 2
574:   lwhtr      = .true.
575:   shwtr      = .true.
576:   cnvgwd     = .true.
577:   shal_cnv   = .true.
578:   cal_pre    = .false.
579:   redrag     = .true.
580:   dspheat    = .true.
581:   hybedmf    = .true.
582:   random_clds = .false.
583:   trans_trac = .true.
584:   cnvcld     = .true.
585:   imfshalcnv = 2
586:   imfdeepcnv = 2
587:   cdmbgwd    = 3.5,0.25
588:   prslrd0    = 0.
```

```
589:  ivegsrc      = 1
590:  isot         = 1
591:  debug        = .false.
592:  oz_phys      = .F.
593:  oz_phys_2015 = .T.
594:  nstf_name    = 2,1,0,0,0
595:  nst_anl      = .true.
596:  psautco     = 0.0008,0.0005
597:  prautco     = 0.00015,0.00015
598:  lgfdlmprad  = .true.
599:  effr_in     = .true.
600:  do_sppt     = .T.
601:  do_shum     = .T.
602:  do_skeb     = .T.
603:  do_sfcperfs = .F.
604:  /
605:
606:
607:  &gfdl_cloud_microphysics_nml
608:    sedi_transport = .true.
609:    do_sedi_heat = .false.
610:    rad_snow = .true.
611:    rad_graupel = .true.
612:    rad_rain = .true.
613:    const_vi = .F.
614:    const_vs = .F.
615:    const_vg = .F.
616:    const_vr = .F.
617:    vi_max = 1.
618:    vs_max = 2.
619:    vg_max = 12.
620:    vr_max = 12.
621:    qi_lim = 1.
622:    prog_ccn = .false.
623:    do_qa = .true.
624:    fast_sat_adj = .true.
625:    tau_l2v = 225.
626:    tau_v2l = 150.
627:    tau_g2v = 900.
628:    rthresh = 10.e-6 ! This is a key parameter for cloud water
629:    dw_land = 0.16
630:    dw_ocean = 0.10
631:    ql_gen = 1.0e-3
632:    ql_mlt = 1.0e-3
633:    qi0_crt = 8.0E-5
634:    qs0_crt = 1.0e-3
635:    tau_i2s = 1000.
636:    c_psaci = 0.05
637:    c_pgacs = 0.01
638:    rh_inc = 0.30
```

```

639:   rh_inr = 0.30
640:   rh_ins = 0.30
641:   ccn_l = 300.
642:   ccn_o = 100.
643:   c_paut = 0.5
644:   c_cracw = 0.8
645:   use_ppm = .false.
646:   use_ccn = .true.
647:   mono_prof = .true.
648:   z_slope_liq = .true.
649:   z_slope_ice = .true.
650:   de_ice = .false.
651:   fix_negative = .true.
652:   icloud_f = 1
653:   mp_time = 150.
654: /
655:
656:
657: &interpolator_nml
658:   interp_method = 'conserve_great_circle'
659: /
660:
661:
662: &namsfc
663:   FNLGLAC = "global_glacier.2x2.grb",
664:   FNMXIC = "global_maxice.2x2.grb",
665:   FNTSFC = "RTGSST.1982.2012.monthly.clim.grb",
666:   FNSNOC = "global_sno clim.1.875.grb",
667:   FNZORC = "igbp",
668:   FNALBC = "global_snowfree_albedo.bosu.t382.768.384.rg.grb",
669:   FNALBC2 = "global_albedo4.1x1.grb",
670:   FNAISC = "CFSR.SEAICE.1982.2012.monthly.clim.grb",
671:   FNTG3C = "global_tg3clim.2.6x1.5.grb",
672:   FNVEGC = "global_vegfrac.0.144.decpercent.grb",
673:   FNVETC = "global_vegtype.igbp.t382.768.384.rg.grb",
674:   FNSOTC = "global_soiltype.statsgo.t382.768.384.rg.grb",
675:   FNSMCC = "global_soilmgldas.t382.768.384.grb",
676:   FNMSKH = "seaice_newland.grb",
677:   FNTSFA = "",
678:   FNACNA = "",
679:   FNSNOA = "",
680:   FNVMNC = "global_shdmin.0.144x0.144.grb",
681:   FNVMXC = "global_shdmax.0.144x0.144.grb",
682:   FNSLPC = "global_slope.1x1.grb",
683:   FNABSC = "global_mxsnoalb.uariz.t382.768.384.rg.grb",
684:   LDEBUG = .false.,
685:   FSMCL(2) = 99999
686:   FSMCL(3) = 99999
687:   FSMCL(4) = 99999
688:   FTSFS = 90

```

```
689:         FSNOL      = 99999
690:         FSICL      = 99999
691:         FTSFL      = 99999,
692:         FAISL      = 99999,
693:         FVETL      = 99999,
694:         FSOTL      = 99999,
695:         FvmnL      = 99999,
696:         FvmxL      = 99999,
697:         FSLPL      = 99999,
698:         FABSL      = 99999,
699: /
700:
701: &fv_grid_nml
702:   grid_file = 'INPUT/grid_spec.nc'
703: /
704:
705: &nam_stochy
706:   ntrunc = 766
707:   lon_s = 1536
708:   lat_s = 768
709:   skeb = 0.3
710:   iseed_skeb = 2019102712451
711:   iseed_shum = 2019102712452
712:   iseed_sppt = 2019102712453
713:   skeb_tau = 21600.
714:   skeb_lscale = 500000.
715:   skebnorm = 0
716:   skeb_npass = 30
717:   skeb_vdof = 5
718:   shum = 0.005
719:   shum_tau = 21600.
720:   shum_lscale = 500000.
721:   sppt = 0.5
722:   sppt_tau = 21600.
723:   sppt_lscale = 500000.
724:   sppt_logit = .true.
725:   sppt_sfclimit = .true.
726:   use_zmtnblck = .true.
727: /
728:
729: &nam_sfcperfs
730: /
731:
732: &cires_ugwp_nml
733: /
734:
735:
736: &FV_CORE_NML
737: NPX      =      193,
738: NPY      =      193,
```

```

739: NTILES = 6,
740: NPZ = 64,
741: NPZ_RST = 0,
742: LAYOUT = 2*1,
743: IO_LAYOUT = 2*1,
744: NCNST = 0,
745: NWAT = 6,
746: USE_LOGP = F,
747: P_FAC = 0.100000000000000000 ,
748: A_IMP = 1.0000000000000000 ,
749: K_SPLIT = 2,
750: N_SPLIT = 6,
751: M_SPLIT = 0,
752: Q_SPLIT = 0,
753: PRINT_FREQ = 6,
754: WRITE_3D_DIAGS = T,
755: DO_SCHMIDT = F,
756: HORD_MT = 5,
757: HORD_VT = 5,
758: HORD_TM = 5,
759: HORD_DP = -5,
760: HORD_TR = 8,
761: SHIFT_FAC = 18.0000000000000000 ,
762: STRETCH_FAC = 1.0000000000000000 ,
763: TARGET_LAT = -90.0000000000000000 ,
764: TARGET_LON = 0.0000000000000000E+000,
765: KORD_MT = 9,
766: KORD_WZ = 9,
767: KORD_TM = -9,
768: KORD_TR = 9,
769: FV_DEBUG = F,
770: FV_LAND = F,
771: NUDGE = F,
772: DO_SAT_ADJ = T,
773: DO_F3D = F,
774: EXTERNAL_IC = T,
775: READ_INCREMENT = F,
776: NCEP_IC = F,
777: NGGPS_IC = T,
778: ECMWF_IC = F,
779: USE_NEW_NCEP = F,
780: USE_NCEP_PHY = F,
781: FV_DIAG_IC = F,
782: EXTERNAL_ETA = T,
783: RES_LATLON_DYNAMICS =

784: ,
785: RES_LATLON_TRACERS =

786: ,

```



```

787: SCALE_Z = 0.0000000000000000E+000,
788: W_MAX = 75.00000000000000 ,
789: Z_MIN = 5.000000000000000E-002,
790: LIM_FAC = 1.000000000000000 ,
791: DDDMP = 0.1000000000000000 ,
792: D2_BG = 0.000000000000000E+000,
793: D4_BG = 0.1200000000000000 ,
794: VTDM4 = 2.000000000000000E-002,
795: TRDM2 = 0.000000000000000E+000,
796: D_EXT = 0.000000000000000E+000,
797: DELT_MAX = 2.000000000000000E-003,
798: BETA = 0.000000000000000E+000,
799: NON_ORTHO = T,
800: N_SPONGE = 10,
801: WARM_START = F,
802: ADJUST_DRY_MASS = F,
803: MOUNTAIN = F,
804: D_CON = 1.000000000000000 ,
805: KE_BG = 0.000000000000000E+000,
806: NORD = 2,
807: NORD_TR = 0,
808: CONVERT_KE = F,
809: USE_OLD_OMEGA = T,
810: DRY_MASS = 98290.0000000000 ,
811: GRID_TYPE = -1,
812: DO_HELD_SUAREZ = F,
813: DO_REED_PHYSICS = F,
814: REED_COND_ONLY = F,
815: CONSV_TE = 1.000000000000000 ,
816: FILL = T,
817: FILTER_PHYS = F,
818: FILL_DP = F,
819: FILL_WZ = F,
820: CONSV_AM = F,
821: RF_FAST = F,
822: RANGE_WARN = F,
823: DWIND_2D = F,
824: INLINE_Q = F,
825: Z_TRACER = T,
826: REPRODUCE_SUM = T,
827: ADIABATIC = F,
828: DO_VORT_DAMP = T,
829: NO_DYCORE = F,
830: TAU = 10.00000000000000 ,
831: TAU_H2O = 0.000000000000000E+000,
832: RF_CUTOFF = 750.000000000000 ,
833: NF_OMEGA = 1,
834: HYDROSTATIC = F,
835: FV_SG_ADJ = 450,
836: BREED_VORTEX_INLINE = F,

```

```

837: NA_INIT = 0,
838: NUDGE_DZ = F,
839: HYBRID_Z = F,
840: MAKE_NH = F,
841: N_ZS_FILTER = 0,
842: NORD_ZS_FILTER = 4,
843: FULL_ZS_FILTER = F,
844: RESET_ETA = F,
845: PNATS = 0,
846: DNATS = 1,
847: A2B_ORD = 4,
848: REMAP_T = T,
849: P_REF = 100000.000000000 ,
850: D2_BG_K1 = 0.150000000000000 ,
851: D2_BG_K2 = 2.00000000000000E-002,
852: C2L_ORD = 4,
853: DX_CONST = 1000.00000000000 ,
854: DY_CONST = 1000.00000000000 ,
855: UMAX = 350.000000000000 ,
856: DEGLAT = 15.0000000000000 ,
857: DEGLON_START = -30.0000000000000 ,
858: DEGLON_STOP = 30.0000000000000 ,
859: DEGLAT_START = -30.0000000000000 ,
860: DEGLAT_STOP = 30.0000000000000 ,
861: PHYS_HYDROSTATIC = F,
862: USE_HYDRO_PRESSURE = F,
863: MAKE_HYBRID_Z = F,
864: OLD_DIVG_DAMP = F,
865: ADD_NOISE = -1.00000000000000 ,
866: NESTED = F,
867: TWOWAYNEST = F,
868: PARENT_GRID_NUM = -1,
869: PARENT_TILE = 1,
870: NUDGE_QV = T,
871: REFINEMENT = 3,
872: NESTBCTYPE = 1,
873: NESTUPDATE = 0,
874: NSPONGE = 0,
875: S_WEIGHT = 1.00000000000000E-006,
876: IOFFSET = 0,
877: JOFFSET = 0,
878: CHECK_NEGATIVE = F,
879: NUDGE_IC = F,
880: HALO_UPDATE_TYPE = 1,
881: GFS_PHIL = F,
882: AGRID_VEL_RST = T,
883: DO_UNI_ZFULL = F,
884: ADJ_MASS_VMR = F,
885: FAC_N_SPL = 1.00000000000000 ,
886: FHOURI = 0.00000000000000E+000,

```

```
887: REGIONAL          = F,
888: BC_UPDATE_INTERVAL      =          3
889: /
890: &TEST_CASE_NML
891: TEST_CASE            =          11,
892: BUBBLE_DO           = F,
893: ALPHA = 0.0000000000000000E+000,
894: NSOLITONS           =          0,
895: SOLITON_UMAX        = 50.0000000000000000    ,
896: SOLITON_SIZE        = 750000.0000000000
897: /
898:
899: Cubic: cubed-sphere domain decomposition:    1 X    1
900:   pe,  is,  ie,  js,  je,   isd, ied, jsd, jed
901:
902: Cubic: cubed-sphere domain decomposition:    1 X    1
903:   pe,  is,  ie,  js,  je,   isd, ied, jsd, jed
904:
905: =====
906: TRACER_MANAGER_MOD
907: unknown
908:
909: =====
910: FIELD_MANAGER_MOD
911: unknown
912: # added by FRE: sphum must be present in atmos
```

```
913: # specific humidity for moist runs
```

914: "TRACER", "atmos_mod", "sphum"

915: # prognostic cloud water mixing ratio

916: "TRACER", "atmos_mod", "liq_wat"

917: "TRACER", "atmos_mod", "rainwat"

918: "TRACER", "atmos_mod", "ice_wat"

919: "TRACER", "atmos_mod", "snowwat"

920: "TRACER", "atmos_mod", "graupel"

921: # prognostic ozone mixing ratio tracer

922: "TRACER", "atmos_mod", "o3mr"

923: # prognostic subgrid scale turbulent kinetic energy

924: "TRACER", "atmos_mod", "sgs_tke"

925: # non-prognostic cloud amount

926: "TRACER", "atmos_mod", "cld_amt"

```
927: -----
928: Contents of tracer entry          1
929: Model type and field name
930: Model                :          1
931: Field name           : sphum
932: Tracer units         : kg/kg
933: Tracer longname      : specific humidity
934: Tracer is_prognostic : T
935: -----
936: -----
937: Contents of tracer entry          2
938: Model type and field name
939: Model                :          1
940: Field name           : liq_wat
941: Tracer units         : kg/kg
942: Tracer longname      : cloud water mixing ratio
943: Tracer is_prognostic : T
944: -----
945: -----
946: Contents of tracer entry          3
947: Model type and field name
948: Model                :          1
949: Field name           : rainwat
950: Tracer units         : kg/kg
951: Tracer longname      : rain mixing ratio
952: Tracer is_prognostic : T
953: -----
954: -----
955: Contents of tracer entry          4
956: Model type and field name
957: Model                :          1
958: Field name           : ice_wat
959: Tracer units         : kg/kg
960: Tracer longname      : cloud ice mixing ratio
961: Tracer is_prognostic : T
962: -----
```

```

963: -----
964: Contents of tracer entry          5
965: Model type and field name
966: Model                :          1
967: Field name           : snowwat
968: Tracer units         : kg/kg
969: Tracer longname      : snow mixing ratio
970: Tracer is_prognostic : T
971: -----
972: -----
973: Contents of tracer entry          6
974: Model type and field name
975: Model                :          1
976: Field name           : graupel
977: Tracer units         : kg/kg
978: Tracer longname      : graupel mixing ratio
979: Tracer is_prognostic : T
980: -----
981: -----
982: Contents of tracer entry          7
983: Model type and field name
984: Model                :          1
985: Field name           : o3mr
986: Tracer units         : kg/kg
987: Tracer longname      : ozone mixing ratio
988: Tracer is_prognostic : T
989: -----
990: -----
991: Contents of tracer entry          8
992: Model type and field name
993: Model                :          1
994: Field name           : sgs_tke
995: Tracer units         : m2/s2
996: Tracer longname      : subgrid scale turbulent kinetic energy
997: Tracer is_prognostic : T
998: -----
999: -----
1000: Contents of tracer entry          9
1001: Model type and field name
1002: Model                :          1
1003: Field name           : cld_amt
1004: Tracer units         : 1
1005: Tracer longname      : cloud amount
1006: Tracer is_prognostic : T
1007: -----
1008: Number of tracers in field table for atmospheric model = 9
1009: Number of tracers in field table for oceanic model = 0
1010: Number of tracers in field table for land model = 0
1011: Number of tracers in field table for ice model = 0
1012: Number of tracers in field table for coupler model = 0

```



```

1013:
1014: =====
====
1015: fvGFS/ATMOSPHERE_MOD
1016: unknown
1017:
1018: =====
====
1019: EXTERNAL_IC_mod::get_nggps_ic
1020: unknown
1021: &EXTERNAL_IC_NML
1022: FILTERED_TERRAIN      = T,
1023: LEVP      =          65,
1024: GFS_DWINDS      = T,
1025: CHECKER_TR      = F,
1026: NT_CHECKER      =          0
1027: /
1028:
1029: =====
====
1030: FV_DIAGNOSTICS_MOD
1031: unknown
1032:
1033: =====
====
1034: DIAG_GRID_MOD
1035: unknown
1036: =====
====
1037: v2018 FV3GFS BETA VERSION PHYSICS
1038: &GFS_PHYSICS_NML
1039: FHZERO = 6.0000000000000000 ,
1040: LDIAG3D = F,
1041: LSSAV = F,
1042: FHCYC = 24.0000000000000000 ,
1043: THERMODYN_ID =          1,
1044: SFCPRESS_ID =          1,
1045: CPLFLX = F,
1046: CPLWAV = F,
1047: CPLCHM = F,
1048: LSIDEA = F,
1049: FHSWR = 3600.000000000000 ,
1050: FHLWR = 3600.000000000000 ,
1051: LEVR =          -99,
1052: NFXR =          45,
1053: AERO_IN = F,
1054: IFLIP =          1,
1055: ISOL =          2,
1056: ICO2 =          2,
1057: IALB =          1,

```

1058: ISOT = 1,
1059: IEMS = 1,
1060: IAER = 111,
1061: ICLIQ_SW = 1,
1062: IOVR_SW = 1,
1063: IOVR_LW = 1,
1064: ICTM = 1,
1065: ISUBC_SW = 2,
1066: ISUBC_LW = 2,
1067: CRICK_PROOF = F,
1068: CCNORM = F,
1069: LWHTR = T,
1070: SWHTR = T,
1071: ICCN = F,
1072: NCLD = 5,
1073: IMP_PHYSICS = 11,
1074: PSAUTCO = 8.000000000000000E-004, 5.000000000000000E-004,
1075: PRAUTCO = 2*1.500000000000000E-004 ,
1076: EVPCO = 2.000000000000000E-005,
1077: WMINCO = 2*1.000000000000000E-005 ,
1078: FPRCP = 0,
1079: PDFFLAG = 4,
1080: MG_DCS = 200.000000000000 ,
1081: MG_QCVAR = 1.000000000000000 ,
1082: MG_TS_AUTO_ICE = 2*180.000000000000 ,
1083: MG_RHMINI = 1.010000000000000 ,
1084: EFR_IN = T,
1085: TF = 258.160000000000 ,
1086: TCR = 273.160000000000 ,
1087: MICROP_UNIFORM = T,
1088: DO_CLDICE = T,
1089: HETFRZ_CLASSNUC = F,
1090: MG_DO_GRAUPEL = T,
1091: MG_DO_HAIL = F,
1092: MG_NCCONS = F,
1093: MG_NICONS = F,
1094: MG_NGCONS = F,
1095: MG_NCNST = 10000000.000000 ,
1096: MG_NINST = 15000.0000000000 ,
1097: MG_NGNST = 10000.0000000000 ,
1098: SED_SUPERSAT = T,
1099: DO_SB_PHYSICS = T,
1100: MG_ALF = 1.000000000000000 ,
1101: MG_QCMIN = 2*1.000000000000000E-009 ,
1102: MG_DO_ICE_GMAO = F,
1103: MG_DO_LIQ_LIU = T,
1104: LTAEROSOL = F,
1105: LRADAR = F,
1106: TTENDLIM = -999.000000000000 ,
1107: LGFDLMPRAD = T,

1108: AVG_MAX_LENGTH = 3600.0000000000 ,
1109: LSM = 1,
1110: LSOIL = 4,
1111: LSOIL_LSM = -1,
1112: LSNOW_LSM = 3,
1113: NMTVR = 14,
1114: IVEGSRC = 1,
1115: USE_UFO = T,
1116: IOPT_DVEG = 4,
1117: IOPT_CRS = 1,
1118: IOPT_BTR = 1,
1119: IOPT_RUN = 3,
1120: IOPT_SFC = 1,
1121: IOPT_FRZ = 1,
1122: IOPT_INF = 1,
1123: IOPT_RAD = 3,
1124: IOPT_ALB = 2,
1125: IOPT_SNF = 1,
1126: IOPT_TBOT = 2,
1127: IOPT_STC = 1,
1128: RAS = F,
1129: TRANS_TRAC = T,
1130: OLD_MONIN = F,
1131: CNVGWD = T,
1132: MSTRAT = F,
1133: MOIST_ADJ = F,
1134: CSCNV = F,
1135: CAL_PRE = F,
1136: DO_AW = F,
1137: DO_SHOC = F,
1138: SHOCAFTCNV = F,
1139: SHOC_CLD = F,
1140: OZ_PHYS = F,
1141: OZ_PHYS_2015 = T,
1142: DO_MYNNEDMF = F,
1143: DO_MYNNSFCLAY = F,
1144: BL_MYNN_CLOUDPDF = 2,
1145: BL_MYNN_EDMF = 0,
1146: BL_MYNN_EDMF_MOM = 1,
1147: BL_MYNN_EDMF_TKE = 0,
1148: BL_MYNN_EDMF_PART = 0,
1149: BL_MYNN_CLOUDMIX = 1,
1150: BL_MYNN_MIXQT = 0,
1151: ICLLOUD_BL = 1,
1152: BL_MYNN_TKEADVECT = F,
1153: GWD_OPT = 1,
1154: DO_MYJSFC = F,
1155: DO_MYJPBL = F,
1156: H2O_PHYS = T,
1157: PDFCLD = F,

1158: SHCNVCW = F,
1159: REDRAG = T,
1160: HYBEDMF = T,
1161: SATMEDMF = F,
1162: SHINHONG = F,
1163: DO_YSU = F,
1164: DSPHEAT = T,
1165: LHEATSTRG = F,
1166: CNVCLD = T,
1167: RANDOM_CLDS = F,
1168: SHAL_CNV = T,
1169: IMFSHALCNV = 2,
1170: IMFDEEPCNV = 2,
1171: ISATMEDMF = 0,
1172: DO_DEEP = T,
1173: JCAP = 1,
1174: CS_PARM = 8.0000000000000000 , 4.0000000000000000 ,
1000.0000000000000000 , 3500.0000000000000000 , 20.0000000000000000 ,
1.0000000000000000 , -999.0000000000000000 , 1.0000000000000000 ,
0.6000000000000000 , 0.0000000000000000E+000,
1175: FLGMIN = 0.1800000000000000 , 0.2200000000000000 ,
1176: CGWF = 0.5000000000000000 , 5.0000000000000000E-002,
1177: CCWF = 2*1.0000000000000000 ,
1178: CDMBGWD = 3.5000000000000000 , 0.2500000000000000 ,
2*1.0000000000000000 ,
1179: SUP = 1.0000000000000000 ,
1180: CTEI_RM = 2*10.0000000000000000 ,
1181: CRTRH = 3*0.9000000000000000 ,
1182: DLQF = 2*0.0000000000000000E+000 ,
1183: RBCR = 0.2500000000000000 ,
1184: SHOC_PARM = 7000.000000000000 , 1.0000000000000000 ,
4.2857143000000000 , 0.7000000000000000 , -999.0000000000000000 ,
1185: PSAURAS = 2*1.0000000000000000E-003 ,
1186: PRAURAS = 2*2.0000000000000000E-003 ,
1187: WMINRAS = 2*1.0000000000000000E-005 ,
1188: DO_SPPT = T,
1189: DO_SHUM = T,
1190: DO_SKEB = T,
1191: DO_SFCPERTS = F,
1192: PRSLRD0 = 0.0000000000000000E+000,
1193: RAL_TS = 0.0000000000000000E+000,
1194: LDIAG_UGWP = F,
1195: DO_UGWP = F,
1196: DO_TOFD = F,
1197: CLAM_DEEP = 0.1000000000000000 ,
1198: C0S_DEEP = 2.0000000000000000E-003,
1199: C1_DEEP = 2.0000000000000000E-003,
1200: BETAL_DEEP = 5.0000000000000000E-002,
1201: BETAS_DEEP = 5.0000000000000000E-002,
1202: EVFACT_DEEP = 0.3000000000000000 ,

```

1203: EVFACTL_DEEP = 0.3000000000000000 ,
1204: PGCON_DEEP = 0.5500000000000000 ,
1205: ASOLFAC_DEEP = 0.9580000000000000 ,
1206: CLAM_SHAL = 0.3000000000000000 ,
1207: C0S_SHAL = 2.000000000000000E-003,
1208: C1_SHAL = 5.000000000000000E-004,
1209: PGCON_SHAL = 0.5500000000000000 ,
1210: ASOLFAC_SHAL = 0.9580000000000000 ,
1211: NST_ANL = T,
1212: LSEA = 0,
1213: NSTF_NAME = 2, 1, 3*0,
1214: FRAC_GRID = F,
1215: MIN_LAKEICE = 0.1500000000000000 ,
1216: MIN_SEAICE = 1.000000000000000E-006,
1217: FRAC_GRID = F,
1218: SFC_Z0_TYPE = 0,
1219: XKZM_M = 1.0000000000000000 ,
1220: XKZM_H = 1.0000000000000000 ,
1221: XKZM_S = 1.0000000000000000 ,
1222: XKZMINV = 0.3000000000000000 ,
1223: MONINQ_FAC = 1.0000000000000000 ,
1224: DSPFAC = 1.0000000000000000 ,
1225: BL_UPFR = 0.1300000000000000 ,
1226: BL_DNFR = 0.1000000000000000 ,
1227: NCA = 1,
1228: NCELLS = 5,
1229: NLIVES = 10,
1230: NFRACSEED = 0.5000000000000000 ,
1231: NSEED = 100000,
1232: NTHRESH = 0.000000000000000E+000,
1233: DO_CA = F,
1234: CA_SGS = F,
1235: CA_GLOBAL = F,
1236: ISEED_CA = 0,
1237: CA_SMOOTH = F,
1238: ISPPT_DEEP = F,
1239: NSPINUP = 1,
1240: IAU_DELTHRS = 0.000000000000000E+000,
1241: IAUFHRS = 7*-1.000000000000000 ,
1242: IAU_INC_FILES =

```

1243:

```
1244: IAU_FILTER_INCREMENTS = F,
1245: DEBUG = F,
1246: PRE_RAD = F,
1247: MAX_LON = 5000,
1248: MAX_LAT = 2000,
1249: MIN_LON = 192,
1250: MIN_LAT = 94,
1251: RHCMAX = 0.9999999000000000 ,
1252: PHYS_VERSION = v2018 FV3GFS BETA VERSION PHYSICS
,
1253: FSCAV_AERO = default default default default
      default default default default default
      default default default default default
      default default default default default
      default default default default default
1254: /
1255: =====
1256: cires_ugwp_cires
1257: &CIRES_UGWP_NML
1258: KNOB_UGWP_SOLVER = 1,
1259: KNOB_UGWP_SOURCE = 1, 0, 1,
0,
1260: KNOB_UGWP_WVSPEC = 1, 3*32,
1261: KNOB_UGWP_AZDIR = 2, 3*4,
1262: KNOB_UGWP_STOCH = 4*0,
1263: KNOB_UGWP_EFFAC = 4*1.0000000000000000 ,
1264: KNOB_UGWP_DOAXYZ = 1,
1265: KNOB_UGWP_DOHEAT = 1,
1266: KNOB_UGWP_DOKDIS = 0,
1267: KNOB_UGWP_NDX4LH = 2,
1268: KNOB_UGWP_VERSION = 0,
1269: LAUNCH_LEVEL = 55
1270: /
1271: =====
1272: gfdl_cloud_microphys_mod
1273: &GFDL_CLOUD_MICROPHYSICS_NML
1274: MP_TIME = 150.00000000000000 ,
1275: T_MIN = 178.00000000000000 ,
1276: T_SUB = 184.00000000000000 ,
1277: TAU_R2G = 900.00000000000000 ,
```

1278: TAU_SMLT = 900.000000000000 ,
1279: TAU_G2R = 600.000000000000 ,
1280: DW_LAND = 0.160000000000000 ,
1281: DW_OCEAN = 0.100000000000000 ,
1282: VI_FAC = 1.00000000000000 ,
1283: VR_FAC = 1.00000000000000 ,
1284: VS_FAC = 1.00000000000000 ,
1285: VG_FAC = 1.00000000000000 ,
1286: QL_MLT = 1.00000000000000E-003,
1287: DO_QA = T,
1288: FIX_NEGATIVE = T,
1289: VI_MAX = 1.00000000000000 ,
1290: VS_MAX = 2.00000000000000 ,
1291: VG_MAX = 12.0000000000000 ,
1292: VR_MAX = 12.0000000000000 ,
1293: QS_MLT = 1.00000000000000E-006,
1294: QS0_CRT = 1.00000000000000E-003,
1295: QI_GEN = 1.82000000000000E-006,
1296: QL0_MAX = 2.00000000000000E-003,
1297: QI0_MAX = 1.00000000000000E-004,
1298: QI0_CRT = 8.00000000000000E-005,
1299: QR0_CRT = 1.00000000000000E-004,
1300: FAST_SAT_ADJ = T,
1301: RH_INC = 0.300000000000000 ,
1302: RH_INS = 0.300000000000000 ,
1303: RH_INR = 0.300000000000000 ,
1304: CONST_VI = F,
1305: CONST_VS = F,
1306: CONST_VG = F,
1307: CONST_VR = F,
1308: USE_CCN = T,
1309: RTHRESH = 1.00000000000000E-005,
1310: CCN_L = 300.000000000000 ,
1311: CCN_O = 100.000000000000 ,
1312: QC_CRT = 5.00000000000000E-008,
1313: TAU_G2V = 900.000000000000 ,
1314: TAU_V2G = 21600.0000000000 ,
1315: SAT_ADJ0 = 0.900000000000000 ,
1316: C_PIACR = 5.00000000000000 ,
1317: TAU_IMLT = 600.000000000000 ,
1318: TAU_V2L = 150.000000000000 ,
1319: TAU_L2V = 225.000000000000 ,
1320: TAU_I2S = 1000.000000000000 ,
1321: TAU_L2R = 900.000000000000 ,
1322: QI_LIM = 1.00000000000000 ,
1323: QL_GEN = 1.00000000000000E-003,
1324: C_PAUT = 0.500000000000000 ,
1325: C_PSACI = 5.00000000000000E-002,
1326: C_PGACS = 1.00000000000000E-002,
1327: Z_SLOPE_LIQ = T,

```

1328: Z_SLOPE_ICE      = T,
1329: PROG_CCN          = F,
1330: C_CRACW = 0.8000000000000000 ,
1331: ALIN      = 842.000000000000 ,
1332: CLIN      = 4.80000000000000 ,
1333: TICE      = 273.160000000000 ,
1334: RAD_SNOW   = T,
1335: RAD_GRAUPEL = T,
1336: RAD_RAIN   = T,
1337: CLD_MIN = 5.00000000000000E-002,
1338: USE_PPM = F,
1339: MONO_PROF = T,
1340: DO_SEDI_HEAT = F,
1341: SEDI_TRANSPORT = T,
1342: DO_SEDI_W = F,
1343: DE_ICE = F,
1344: ICLOUD_F = 1,
1345: IRAIN_F = 0,
1346: MP_PRINT = F,
1347: REIFLAG = 1,
1348: REWMIN = 5.00000000000000 ,
1349: REWMAX = 10.00000000000000 ,
1350: REIMIN = 10.00000000000000 ,
1351: REIMAX = 150.000000000000 ,
1352: RERMIN = 10.00000000000000 ,
1353: RERMAX = 10000.0000000000 ,
1354: RESMIN = 150.000000000000 ,
1355: RESMAX = 10000.0000000000 ,
1356: REGMIN = 300.000000000000 ,
1357: REGMAX = 10000.0000000000 ,
1358: TINTQS = F
1359: /
1360:
1361: =====
=====
1362: $Id$
1363: $Name$
1364: &ATMOS_MODEL_NML
1365: BLOCKSIZE = 32,
1366: CHKSUM_DEBUG = F,
1367: DYCORE_ONLY = F,
1368: DEBUG = F,
1369: SYNC = F,
1370: FDIAG = 1.00000000000000 , 4095*0.00000000000000E+000 ,
1371: FHMAX = 384.000000000000 ,
1372: FHMAXHF = 120.000000000000 ,
1373: FHOUT = 3.00000000000000 ,
1374: FHOUTHF = 1.00000000000000 ,
1375: CCPP_SUITE = FV3_GFS_v15p2

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```
1376:  AVG_MAX_LENGTH  =   3600.000000000000
1377:  /
1378:  &DATA_OVERRIDE_NML
1379:  DEBUG_DATA_OVERRIDE    = F,
1380:  GRID_CENTER_BUG = F
1381:  /
1382:
1383:  =====
      =====
1384:  HORIZ_INTERP_MOD
1385:  unknown
1386:  &HORIZ_INTERP_NML
1387:  REPRODUCE_SIENA = F
1388:  /
1389:
1390:  =====
      =====
1391:  HORIZ_INTERP_CONSERVE_MOD
1392:  unknown
1393:
1394:  =====
      =====
1395:  HORIZ_INTERP_BILINEAR_MOD
1396:  unknown
1397:
1398:  =====
      =====
1399:  HORIZ_INTERP_BICUBIC_MOD
1400:  unknown
1401:
1402:  =====
      =====
1403:  horiz_interp_spherical_mod
1404:  unknown
1405:
1406:  =====
      =====
1407:  DATA_OVERRIDE_MOD
1408:  unknown
1409:
1410:  =====
      =====
1411:  TIME_INTERP_EXTERNAL_MOD
1412:  unknown
1413:  &TIME_INTERP_EXTERNAL_NML
1414:  NUM_IO_BUFFERS  =           2,
1415:  DEBUG_THIS_MODULE    = F,
1416:  MAX_FIELDS      =          100,
1417:  MAX_FILES       =           40
1418:  /
```

1419:
1420: =====
=====
1421: TIME_INTERP_MOD
1422: unknown
1423: &TIME_INTERP_NML
1424: PERTHLIKE_BEHAVIOR = F
1425: /
1426: