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1 netcdf B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-20-0000_0011-04-20-0000_ens_mean {
2 dimensions:
3     time = UNLIMITED ; // (745 currently)
4     lat = 96 ;
5     lon = 144 ;
6     lev = 30 ;
7     ilev = 31 ;
8     slat = 95 ;
9     slon = 144 ;
10    nbnd = 2 ;
11 variables:
12     float AEROD_v(time, lat, lon) ;
13         AEROD_v:_FillValue = 1.e+36f ;
14         AEROD_v:missing_value = 1.e+36f ;
15         AEROD_v:units = "1" ;
16         AEROD_v:long_name = "Total Aerosol Optical Depth in visible band" ;
17         AEROD_v:cell_methods = "time: mean" ;
18     float ANRAIN(time, lev, lat, lon) ;
19         ANRAIN:mdims = 1 ;
20         ANRAIN:units = "m-3" ;
21         ANRAIN:long_name = "Average rain number conc" ;
22         ANRAIN:cell_methods = "time: mean" ;
23     float ANSNOW(time, lev, lat, lon) ;
24         ANSNOW:mdims = 1 ;
25         ANSNOW:units = "m-3" ;
26         ANSNOW:long_name = "Average snow number conc" ;
27         ANSNOW:cell_methods = "time: mean" ;
28     float AODDUST1(time, lat, lon) ;
29         AODDUST1:_FillValue = 1.e+36f ;
30         AODDUST1:missing_value = 1.e+36f ;
31         AODDUST1:units = "" ;
32         AODDUST1:long_name = "Aerosol optical depth 550 nm model 1 from dust" ;
33         AODDUST1:cell_methods = "time: mean" ;
34     float AODDUST3(time, lat, lon) ;
35         AODDUST3:_FillValue = 1.e+36f ;
36         AODDUST3:missing_value = 1.e+36f ;
37         AODDUST3:units = "" ;
38         AODDUST3:long_name = "Aerosol optical depth 550 nm model 3 from dust" ;
39         AODDUST3:cell_methods = "time: mean" ;
40     float AODVIS(time, lat, lon) ;
41         AODVIS:_FillValue = 1.e+36f ;
42         AODVIS:missing_value = 1.e+36f ;
43         AODVIS:units = "" ;
44         AODVIS:long_name = "Aerosol optical depth 550 nm" ;
45         AODVIS:cell_methods = "time: mean" ;
46     float AQRAIN(time, lev, lat, lon) ;
47         AQRAIN:mdims = 1 ;
48         AQRAIN:units = "kg/kg" ;
49         AQRAIN:long_name = "Average rain mixing ratio" ;
50         AQRAIN:cell_methods = "time: mean" ;
51     float AQSNOW(time, lev, lat, lon) ;
52         AQSNOW:mdims = 1 ;
53         AQSNOW:units = "kg/kg" ;
54         AQSNOW:long_name = "Average snow mixing ratio" ;
55         AQSNOW:cell_methods = "time: mean" ;
56     float AREI(time, lev, lat, lon) ;
57         AREI:mdims = 1 ;
58         AREI:units = "Micron" ;
59         AREI:long_name = "Average ice effective radius" ;
60         AREI:cell_methods = "time: mean" ;
61     float AREL(time, lev, lat, lon) ;
62         AREL:mdims = 1 ;
63         AREL:units = "Micron" ;
64         AREL:long_name = "Average droplet effective radius" ;
65         AREL:cell_methods = "time: mean" ;
66     float AwNC(time, lev, lat, lon) ;
67         AwNC:mdims = 1 ;
68         AwNC:units = "m-3" ;
69         AwNC:long_name = "Average cloud water number conc" ;
70         AwNC:cell_methods = "time: mean" ;
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71 float AwnI(time, lev, lat, lon) ;
72     AwnI:mdims = 1 ;
73     AwnI:units = "m-3" ;
74     AwnI:long_name = "Average cloud ice number conc" ;
75     AwnI:cell_methods = "time: mean" ;
76 float BURDEN1(time, lat, lon) ;
77     BURDEN1:_FillValue = 1.e+36f ;
78     BURDEN1:missing_value = 1.e+36f ;
79     BURDEN1:units = "kg/m2" ;
80     BURDEN1:long_name = "Aerosol burden mode 1" ;
81     BURDEN1:cell_methods = "time: mean" ;
82 float BURDEN2(time, lat, lon) ;
83     BURDEN2:_FillValue = 1.e+36f ;
84     BURDEN2:missing_value = 1.e+36f ;
85     BURDEN2:units = "kg/m2" ;
86     BURDEN2:long_name = "Aerosol burden mode 2" ;
87     BURDEN2:cell_methods = "time: mean" ;
88 float BURDEN3(time, lat, lon) ;
89     BURDEN3:_FillValue = 1.e+36f ;
90     BURDEN3:missing_value = 1.e+36f ;
91     BURDEN3:units = "kg/m2" ;
92     BURDEN3:long_name = "Aerosol burden mode 3" ;
93     BURDEN3:cell_methods = "time: mean" ;
94 float BURDENBC(time, lat, lon) ;
95     BURDENBC:_FillValue = 1.e+36f ;
96     BURDENBC:missing_value = 1.e+36f ;
97     BURDENBC:units = "kg/m2" ;
98     BURDENBC:long_name = "Black carbon aerosol burden" ;
99     BURDENBC:cell_methods = "time: mean" ;
100 float BURDENDUST(time, lat, lon) ;
101     BURDENDUST:_FillValue = 1.e+36f ;
102     BURDENDUST:missing_value = 1.e+36f ;
103     BURDENDUST:units = "kg/m2" ;
104     BURDENDUST:long_name = "Dust aerosol burden" ;
105     BURDENDUST:cell_methods = "time: mean" ;
106 float BURDENPOM(time, lat, lon) ;
107     BURDENPOM:_FillValue = 1.e+36f ;
108     BURDENPOM:missing_value = 1.e+36f ;
109     BURDENPOM:units = "kg/m2" ;
110     BURDENPOM:long_name = "POM aerosol burden" ;
111     BURDENPOM:cell_methods = "time: mean" ;
112 float BURDENSEASALT(time, lat, lon) ;
113     BURDENSEASALT:_FillValue = 1.e+36f ;
114     BURDENSEASALT:missing_value = 1.e+36f ;
115     BURDENSEASALT:units = "kg/m2" ;
116     BURDENSEASALT:long_name = "Seasalt aerosol burden" ;
117     BURDENSEASALT:cell_methods = "time: mean" ;
118 float BURDENS04(time, lat, lon) ;
119     BURDENS04:_FillValue = 1.e+36f ;
120     BURDENS04:missing_value = 1.e+36f ;
121     BURDENS04:units = "kg/m2" ;
122     BURDENS04:long_name = "Sulfate aerosol burden" ;
123     BURDENS04:cell_methods = "time: mean" ;
124 float BURDENS0A(time, lat, lon) ;
125     BURDENS0A:_FillValue = 1.e+36f ;
126     BURDENS0A:missing_value = 1.e+36f ;
127     BURDENS0A:units = "kg/m2" ;
128     BURDENS0A:long_name = "SOA aerosol burden" ;
129     BURDENS0A:cell_methods = "time: mean" ;
130 float CCN3(time, lev, lat, lon) ;
131     CCN3:mdims = 1 ;
132     CCN3:units = "#/cm3" ;
133     CCN3:long_name = "CCN concentration at S=0.1%" ;
134     CCN3:cell_methods = "time: mean" ;
135 float CDNUMC(time, lat, lon) ;
136     CDNUMC:units = "1/m2" ;
137     CDNUMC:long_name = "Vertically-integrated droplet concentration" ;
138     CDNUMC:cell_methods = "time: mean" ;
139 float CLDHGH(time, lat, lon) ;
140     CLDHGH:units = "fraction" ;
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141     CLDHGH:long_name = "Vertically-integrated high cloud" ;
142     CLDHGH:cell_methods = "time: mean" ;
143 float CLDICE(time, lev, lat, lon) ;
144     CLDICE:mdims = 1 ;
145     CLDICE:units = "kg/kg" ;
146     CLDICE:long_name = "Grid box averaged cloud ice amount" ;
147     CLDICE:cell_methods = "time: mean" ;
148 float CLDLIQ(time, lev, lat, lon) ;
149     CLDLIQ:mdims = 1 ;
150     CLDLIQ:units = "kg/kg" ;
151     CLDLIQ:long_name = "Grid box averaged cloud liquid amount" ;
152     CLDLIQ:cell_methods = "time: mean" ;
153 float CLDLLOW(time, lat, lon) ;
154     CLDLLOW:units = "fraction" ;
155     CLDLLOW:long_name = "Vertically-integrated low cloud" ;
156     CLDLLOW:cell_methods = "time: mean" ;
157 float CLDMED(time, lat, lon) ;
158     CLDMED:units = "fraction" ;
159     CLDMED:long_name = "Vertically-integrated mid-level cloud" ;
160     CLDMED:cell_methods = "time: mean" ;
161 float CLDTOT(time, lat, lon) ;
162     CLDTOT:units = "fraction" ;
163     CLDTOT:long_name = "Vertically-integrated total cloud" ;
164     CLDTOT:cell_methods = "time: mean" ;
165 float CLOUD(time, lev, lat, lon) ;
166     CLOUD:mdims = 1 ;
167     CLOUD:units = "fraction" ;
168     CLOUD:long_name = "Cloud fraction" ;
169     CLOUD:cell_methods = "time: mean" ;
170 float DCQ(time, lev, lat, lon) ;
171     DCQ:mdims = 1 ;
172     DCQ:units = "kg/kg/s" ;
173     DCQ:long_name = "Q tendency due to moist processes" ;
174     DCQ:cell_methods = "time: mean" ;
175 float DMS_SRF(time, lat, lon) ;
176     DMS_SRF:units = "kg/kg" ;
177     DMS_SRF:long_name = "DMS in bottom layer" ;
178     DMS_SRF:cell_methods = "time: mean" ;
179 float DTCOND(time, lev, lat, lon) ;
180     DTCOND:mdims = 1 ;
181     DTCOND:units = "K/s" ;
182     DTCOND:long_name = "T tendency - moist processes" ;
183     DTCOND:cell_methods = "time: mean" ;
184 float DTV(time, lev, lat, lon) ;
185     DTV:mdims = 1 ;
186     DTV:units = "K/s" ;
187     DTV:long_name = "T vertical diffusion" ;
188     DTV:cell_methods = "time: mean" ;
189 float EMISCLD(time, lev, lat, lon) ;
190     EMISCLD:mdims = 1 ;
191     EMISCLD:units = "1" ;
192     EMISCLD:long_name = "cloud emissivity" ;
193     EMISCLD:cell_methods = "time: mean" ;
194 float FICE(time, lev, lat, lon) ;
195     FICE:mdims = 1 ;
196     FICE:units = "fraction" ;
197     FICE:long_name = "Fractional ice content within cloud" ;
198     FICE:cell_methods = "time: mean" ;
199 float FLDS(time, lat, lon) ;
200     FLDS:Sampling_Sequence = "rad_lsw" ;
201     FLDS:units = "W/m2" ;
202     FLDS:long_name = "Downwelling longwave flux at surface" ;
203     FLDS:cell_methods = "time: mean" ;
204 float FLNS(time, lat, lon) ;
205     FLNS:Sampling_Sequence = "rad_lsw" ;
206     FLNS:units = "W/m2" ;
207     FLNS:long_name = "Net longwave flux at surface" ;
208     FLNS:cell_methods = "time: mean" ;
209 float FLNSC(time, lat, lon) ;
210     FLNSC:Sampling_Sequence = "rad_lsw" ;
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211     FLNSC:units = "W/m2" ;
212     FLNSC:long_name = "Clearsky net longwave flux at surface" ;
213     FLNSC:cell_methods = "time: mean" ;
214 float FLNT(time, lat, lon) ;
215     FLNT:Sampling_Sequence = "rad_lsw" ;
216     FLNT:units = "W/m2" ;
217     FLNT:long_name = "Net longwave flux at top of model" ;
218     FLNT:cell_methods = "time: mean" ;
219 float FLNTC(time, lat, lon) ;
220     FLNTC:Sampling_Sequence = "rad_lsw" ;
221     FLNTC:units = "W/m2" ;
222     FLNTC:long_name = "Clearsky net longwave flux at top of model" ;
223     FLNTC:cell_methods = "time: mean" ;
224 float FLUT(time, lat, lon) ;
225     FLUT:Sampling_Sequence = "rad_lsw" ;
226     FLUT:units = "W/m2" ;
227     FLUT:long_name = "Upwelling longwave flux at top of model" ;
228     FLUT:cell_methods = "time: mean" ;
229 float FLUTC(time, lat, lon) ;
230     FLUTC:Sampling_Sequence = "rad_lsw" ;
231     FLUTC:units = "W/m2" ;
232     FLUTC:long_name = "Clearsky upwelling longwave flux at top of model" ;
233     FLUTC:cell_methods = "time: mean" ;
234 float FREQI(time, lev, lat, lon) ;
235     FREQI:mdims = 1 ;
236     FREQI:units = "fraction" ;
237     FREQI:long_name = "Fractional occurrence of ice" ;
238     FREQI:cell_methods = "time: mean" ;
239 float FREQL(time, lev, lat, lon) ;
240     FREQL:mdims = 1 ;
241     FREQL:units = "fraction" ;
242     FREQL:long_name = "Fractional occurrence of liquid" ;
243     FREQL:cell_methods = "time: mean" ;
244 float FREQR(time, lev, lat, lon) ;
245     FREQR:mdims = 1 ;
246     FREQR:units = "fraction" ;
247     FREQR:long_name = "Fractional occurrence of rain" ;
248     FREQR:cell_methods = "time: mean" ;
249 float FREQS(time, lev, lat, lon) ;
250     FREQS:mdims = 1 ;
251     FREQS:units = "fraction" ;
252     FREQS:long_name = "Fractional occurrence of snow" ;
253     FREQS:cell_methods = "time: mean" ;
254 float FSDS(time, lat, lon) ;
255     FSDS:Sampling_Sequence = "rad_lsw" ;
256     FSDS:units = "W/m2" ;
257     FSDS:long_name = "Downwelling solar flux at surface" ;
258     FSDS:cell_methods = "time: mean" ;
259 float FSDSC(time, lat, lon) ;
260     FSDSC:Sampling_Sequence = "rad_lsw" ;
261     FSDSC:units = "W/m2" ;
262     FSDSC:long_name = "Clearsky downwelling solar flux at surface" ;
263     FSDSC:cell_methods = "time: mean" ;
264 float FSNS(time, lat, lon) ;
265     FSNS:Sampling_Sequence = "rad_lsw" ;
266     FSNS:units = "W/m2" ;
267     FSNS:long_name = "Net solar flux at surface" ;
268     FSNS:cell_methods = "time: mean" ;
269 float FSNSC(time, lat, lon) ;
270     FSNSC:Sampling_Sequence = "rad_lsw" ;
271     FSNSC:units = "W/m2" ;
272     FSNSC:long_name = "Clearsky net solar flux at surface" ;
273     FSNSC:cell_methods = "time: mean" ;
274 float FSNT(time, lat, lon) ;
275     FSNT:Sampling_Sequence = "rad_lsw" ;
276     FSNT:units = "W/m2" ;
277     FSNT:long_name = "Net solar flux at top of model" ;
278     FSNT:cell_methods = "time: mean" ;
279 float FSNTC(time, lat, lon) ;
280     FSNTC:Sampling_Sequence = "rad_lsw" ;
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281     FSNTC:units = "W/m2" ;
282     FSNTC:long_name = "Clearsky net solar flux at top of model" ;
283     FSNTC:cell_methods = "time: mean" ;
284 float FSNTOA(time, lat, lon) ;
285     FSNTOA:Sampling_Sequence = "rad_lsw" ;
286     FSNTOA:units = "W/m2" ;
287     FSNTOA:long_name = "Net solar flux at top of atmosphere" ;
288     FSNTOA:cell_methods = "time: mean" ;
289 float FSNTOAC(time, lat, lon) ;
290     FSNTOAC:Sampling_Sequence = "rad_lsw" ;
291     FSNTOAC:units = "W/m2" ;
292     FSNTOAC:long_name = "Clearsky net solar flux at top of atmosphere" ;
293     FSNTOAC:cell_methods = "time: mean" ;
294 float FSUTOA(time, lat, lon) ;
295     FSUTOA:Sampling_Sequence = "rad_lsw" ;
296     FSUTOA:units = "W/m2" ;
297     FSUTOA:long_name = "Upwelling solar flux at top of atmosphere" ;
298     FSUTOA:cell_methods = "time: mean" ;
299 float H202_SRF(time, lat, lon) ;
300     H202_SRF:units = "kg/kg" ;
301     H202_SRF:long_name = "H202 in bottom layer" ;
302     H202_SRF:cell_methods = "time: mean" ;
303 float H2S04_SRF(time, lat, lon) ;
304     H2S04_SRF:units = "kg/kg" ;
305     H2S04_SRF:long_name = "H2S04 in bottom layer" ;
306     H2S04_SRF:cell_methods = "time: mean" ;
307 float ICEFRAC(time, lat, lon) ;
308     ICEFRAC:units = "fraction" ;
309     ICEFRAC:long_name = "Fraction of sfc area covered by sea-ice" ;
310     ICEFRAC:cell_methods = "time: mean" ;
311 float ICIMR(time, lev, lat, lon) ;
312     ICIMR:mdims = 1 ;
313     ICIMR:units = "kg/kg" ;
314     ICIMR:long_name = "Prognostic in-cloud ice mixing ratio" ;
315     ICIMR:cell_methods = "time: mean" ;
316 float ICWMR(time, lev, lat, lon) ;
317     ICWMR:mdims = 1 ;
318     ICWMR:units = "kg/kg" ;
319     ICWMR:long_name = "Prognostic in-cloud water mixing ratio" ;
320     ICWMR:cell_methods = "time: mean" ;
321 float IWC(time, lev, lat, lon) ;
322     IWC:mdims = 1 ;
323     IWC:units = "kg/m3" ;
324     IWC:long_name = "Grid box average ice water content" ;
325     IWC:cell_methods = "time: mean" ;
326 float LANDFRAC(time, lat, lon) ;
327     LANDFRAC:units = "fraction" ;
328     LANDFRAC:long_name = "Fraction of sfc area covered by land" ;
329     LANDFRAC:cell_methods = "time: mean" ;
330 float LHFLX(time, lat, lon) ;
331     LHFLX:units = "W/m2" ;
332     LHFLX:long_name = "Surface latent heat flux" ;
333     LHFLX:cell_methods = "time: mean" ;
334 float LWCF(time, lat, lon) ;
335     LWCF:Sampling_Sequence = "rad_lsw" ;
336     LWCF:units = "W/m2" ;
337     LWCF:long_name = "Longwave cloud forcing" ;
338     LWCF:cell_methods = "time: mean" ;
339 float NUMICE(time, lev, lat, lon) ;
340     NUMICE:mdims = 1 ;
341     NUMICE:units = "1/kg" ;
342     NUMICE:long_name = "Grid box averaged cloud ice number" ;
343     NUMICE:cell_methods = "time: mean" ;
344 float NUMLIQ(time, lev, lat, lon) ;
345     NUMLIQ:mdims = 1 ;
346     NUMLIQ:units = "1/kg" ;
347     NUMLIQ:long_name = "Grid box averaged cloud liquid number" ;
348     NUMLIQ:cell_methods = "time: mean" ;
349 float OCNFRAC(time, lat, lon) ;
350     OCNFRAC:units = "fraction" ;
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351     OCNFRAC:long_name = "Fraction of sfc area covered by ocean" ;
352     OCNFRAC:cell_methods = "time: mean" ;
353 float OMEGA(time, lev, lat, lon) ;
354     OMEGA:mdims = 1 ;
355     OMEGA:units = "Pa/s" ;
356     OMEGA:long_name = "Vertical velocity (pressure)" ;
357     OMEGA:cell_methods = "time: mean" ;
358 float OMEGAT(time, lev, lat, lon) ;
359     OMEGAT:mdims = 1 ;
360     OMEGAT:units = "K Pa/s" ;
361     OMEGAT:long_name = "Vertical heat flux" ;
362     OMEGAT:cell_methods = "time: mean" ;
363 float ORO(time, lat, lon) ;
364     ORO:units = "frac" ;
365     ORO:long_name = "ORO" ;
366     ORO:cell_methods = "time: mean" ;
367 double P0 ;
368     P0:long_name = "reference pressure" ;
369     P0:units = "Pa" ;
370 float PBLH(time, lat, lon) ;
371     PBLH:units = "m" ;
372     PBLH:long_name = "PBL height" ;
373     PBLH:cell_methods = "time: mean" ;
374 float PHIS(time, lat, lon) ;
375     PHIS:units = "m2/s2" ;
376     PHIS:long_name = "Surface geopotential" ;
377 float PRECC(time, lat, lon) ;
378     PRECC:units = "m/s" ;
379     PRECC:long_name = "Convective precipitation rate (liq + ice)" ;
380     PRECC:cell_methods = "time: mean" ;
381 float PRECL(time, lat, lon) ;
382     PRECL:units = "m/s" ;
383     PRECL:long_name = "Large-scale (stable) precipitation rate (liq + ice)" ;
384     PRECL:cell_methods = "time: mean" ;
385 float PRECSC(time, lat, lon) ;
386     PRECSC:units = "m/s" ;
387     PRECSC:long_name = "Convective snow rate (water equivalent)" ;
388     PRECSC:cell_methods = "time: mean" ;
389 float PRECSL(time, lat, lon) ;
390     PRECSL:units = "m/s" ;
391     PRECSL:long_name = "Large-scale (stable) snow rate (water equivalent)" ;
392     PRECSL:cell_methods = "time: mean" ;
393 float PS(time, lat, lon) ;
394     PS:units = "Pa" ;
395     PS:long_name = "Surface pressure" ;
396     PS:cell_methods = "time: mean" ;
397 float PSL(time, lat, lon) ;
398     PSL:units = "Pa" ;
399     PSL:long_name = "Sea level pressure" ;
400     PSL:cell_methods = "time: mean" ;
401 float Q(time, lev, lat, lon) ;
402     Q:mdims = 1 ;
403     Q:units = "kg/kg" ;
404     Q:long_name = "Specific humidity" ;
405     Q:cell_methods = "time: mean" ;
406 float QFLX(time, lat, lon) ;
407     QFLX:units = "kg/m2/s" ;
408     QFLX:long_name = "Surface water flux" ;
409     QFLX:cell_methods = "time: mean" ;
410 float QREFHT(time, lat, lon) ;
411     QREFHT:units = "kg/kg" ;
412     QREFHT:long_name = "Reference height humidity" ;
413     QREFHT:cell_methods = "time: mean" ;
414 float QRL(time, lev, lat, lon) ;
415     QRL:mdims = 1 ;
416     QRL:Sampling_Sequence = "rad_lwsw" ;
417     QRL:units = "K/s" ;
418     QRL:long_name = "Longwave heating rate" ;
419     QRL:cell_methods = "time: mean" ;
420 float QRS(time, lev, lat, lon) ;
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421     QRS:mdims = 1 ;
422     QRS:Sampling_Sequence = "rad_lsw" ;
423     QRS:units = "K/s" ;
424     QRS:long_name = "Solar heating rate" ;
425     QRS:cell_methods = "time: mean" ;
426 float RELHUM(time, lev, lat, lon) ;
427     RELHUM:mdims = 1 ;
428     RELHUM:units = "percent" ;
429     RELHUM:long_name = "Relative humidity" ;
430     RELHUM:cell_methods = "time: mean" ;
431 float SHFLX(time, lat, lon) ;
432     SHFLX:units = "W/m2" ;
433     SHFLX:long_name = "Surface sensible heat flux" ;
434     SHFLX:cell_methods = "time: mean" ;
435 float SNOWHICE(time, lat, lon) ;
436     SNOWHICE:units = "m" ;
437     SNOWHICE:long_name = "Snow depth over ice" ;
438     SNOWHICE:cell_methods = "time: mean" ;
439 float SNOWHLND(time, lat, lon) ;
440     SNOWHLND:units = "m" ;
441     SNOWHLND:long_name = "Water equivalent snow depth" ;
442     SNOWHLND:cell_methods = "time: mean" ;
443 float SO2_SRF(time, lat, lon) ;
444     SO2_SRF:units = "kg/kg" ;
445     SO2_SRF:long_name = "SO2 in bottom layer" ;
446     SO2_SRF:cell_methods = "time: mean" ;
447 float SOAG_SRF(time, lat, lon) ;
448     SOAG_SRF:units = "kg/kg" ;
449     SOAG_SRF:long_name = "SOAG in bottom layer" ;
450     SOAG_SRF:cell_methods = "time: mean" ;
451 float SOLIN(time, lat, lon) ;
452     SOLIN:Sampling_Sequence = "rad_lsw" ;
453     SOLIN:units = "W/m2" ;
454     SOLIN:long_name = "Solar insolation" ;
455     SOLIN:cell_methods = "time: mean" ;
456 float SWCF(time, lat, lon) ;
457     SWCF:Sampling_Sequence = "rad_lsw" ;
458     SWCF:units = "W/m2" ;
459     SWCF:long_name = "Shortwave cloud forcing" ;
460     SWCF:cell_methods = "time: mean" ;
461 float T(time, lev, lat, lon) ;
462     T:mdims = 1 ;
463     T:units = "K" ;
464     T:long_name = "Temperature" ;
465     T:cell_methods = "time: mean" ;
466 float TAUX(time, lat, lon) ;
467     TAUX:units = "N/m2" ;
468     TAUX:long_name = "Zonal surface stress" ;
469     TAUX:cell_methods = "time: mean" ;
470 float TAUY(time, lat, lon) ;
471     TAUY:units = "N/m2" ;
472     TAUY:long_name = "Meridional surface stress" ;
473     TAUY:cell_methods = "time: mean" ;
474 float TGCLDCWP(time, lat, lon) ;
475     TGCLDCWP:units = "kg/m2" ;
476     TGCLDCWP:long_name = "Total grid-box cloud water path (liquid and ice)" ;
477     TGCLDCWP:cell_methods = "time: mean" ;
478 float TGCLDIWP(time, lat, lon) ;
479     TGCLDIWP:units = "kg/m2" ;
480     TGCLDIWP:long_name = "Total grid-box cloud ice water path" ;
481     TGCLDIWP:cell_methods = "time: mean" ;
482 float TGCLDLWP(time, lat, lon) ;
483     TGCLDLWP:units = "kg/m2" ;
484     TGCLDLWP:long_name = "Total grid-box cloud liquid water path" ;
485     TGCLDLWP:cell_methods = "time: mean" ;
486 float TMQ(time, lat, lon) ;
487     TMQ:units = "kg/m2" ;
488     TMQ:long_name = "Total (vertically integrated) precipitable water" ;
489     TMQ:cell_methods = "time: mean" ;
490 float TREFHT(time, lat, lon) ;
```

```
491   TREFHT:units = "K" ;
492   TREFHT:long_name = "Reference height temperature" ;
493   TREFHT:cell_methods = "time: mean" ;
494   float TS(time, lat, lon) ;
495   TS:units = "K" ;
496   TS:long_name = "Surface temperature (radiative)" ;
497   TS:cell_methods = "time: mean" ;
498   float TSMN(time, lat, lon) ;
499   TSMN:units = "K" ;
500   TSMN:long_name = "Minimum surface temperature over output period" ;
501   TSMN:cell_methods = "time: minimum" ;
502   float TSMX(time, lat, lon) ;
503   TSMX:units = "K" ;
504   TSMX:long_name = "Maximum surface temperature over output period" ;
505   TSMX:cell_methods = "time: maximum" ;
506   float U(time, lev, lat, lon) ;
507   U:mdims = 1 ;
508   U:units = "m/s" ;
509   U:long_name = "Zonal wind" ;
510   U:cell_methods = "time: mean" ;
511   float U10(time, lat, lon) ;
512   U10:units = "m/s" ;
513   U10:long_name = "10m wind speed" ;
514   U10:cell_methods = "time: mean" ;
515   float UU(time, lev, lat, lon) ;
516   UU:mdims = 1 ;
517   UU:units = "m2/s2" ;
518   UU:long_name = "Zonal velocity squared" ;
519   UU:cell_methods = "time: mean" ;
520   float V(time, lev, lat, lon) ;
521   V:mdims = 1 ;
522   V:units = "m/s" ;
523   V:long_name = "Meridional wind" ;
524   V:cell_methods = "time: mean" ;
525   float VD01(time, lev, lat, lon) ;
526   VD01:mdims = 1 ;
527   VD01:units = "kg/kg/s" ;
528   VD01:long_name = "Vertical diffusion of Q" ;
529   VD01:cell_methods = "time: mean" ;
530   float VQ(time, lev, lat, lon) ;
531   VQ:mdims = 1 ;
532   VQ:units = "m/skg/kg" ;
533   VQ:long_name = "Meridional water transport" ;
534   VQ:cell_methods = "time: mean" ;
535   float VT(time, lev, lat, lon) ;
536   VT:mdims = 1 ;
537   VT:units = "K m/s" ;
538   VT:long_name = "Meridional heat transport" ;
539   VT:cell_methods = "time: mean" ;
540   float VU(time, lev, lat, lon) ;
541   VU:mdims = 1 ;
542   VU:units = "m2/s2" ;
543   VU:long_name = "Meridional flux of zonal momentum" ;
544   VU:cell_methods = "time: mean" ;
545   float VV(time, lev, lat, lon) ;
546   VV:mdims = 1 ;
547   VV:units = "m2/s2" ;
548   VV:long_name = "Meridional velocity squared" ;
549   VV:cell_methods = "time: mean" ;
550   float WGUSTD(time, lat, lon) ;
551   WGUSTD:units = "m/s" ;
552   WGUSTD:long_name = "wind gusts from turbulence" ;
553   WGUSTD:cell_methods = "time: mean" ;
554   float WSUB(time, lev, lat, lon) ;
555   WSUB:mdims = 1 ;
556   WSUB:units = "m/s" ;
557   WSUB:long_name = "Diagnostic sub-grid vertical velocity" ;
558   WSUB:cell_methods = "time: mean" ;
559   float Z3(time, lev, lat, lon) ;
560   Z3:mdims = 1 ;
```



```
561     Z3:units = "m" ;
562     Z3:long_name = "Geopotential Height (above sea level)" ;
563     Z3:cell_methods = "time: mean" ;
564     float bc_a1_SRF(time, lat, lon) ;
565     bc_a1_SRF:units = "kg/kg" ;
566     bc_a1_SRF:long_name = "bc_a1 in bottom layer" ;
567     bc_a1_SRF:cell_methods = "time: mean" ;
568     double ch4vmr(time) ;
569     ch4vmr:long_name = "ch4 volume mixing ratio" ;
570     double co2vmr(time) ;
571     co2vmr:long_name = "co2 volume mixing ratio" ;
572     int date(time) ;
573     date:long_name = "current date (YYYYMMDD)" ;
574     int datesec(time) ;
575     datesec:long_name = "current seconds of current date" ;
576     float dst_a1SF(time, lat, lon) ;
577     dst_a1SF:units = "kg/m2/s" ;
578     dst_a1SF:long_name = "dst_a1 dust surface emission" ;
579     dst_a1SF:cell_methods = "time: mean" ;
580     float dst_a1_SRF(time, lat, lon) ;
581     dst_a1_SRF:units = "kg/kg" ;
582     dst_a1_SRF:long_name = "dst_a1 in bottom layer" ;
583     dst_a1_SRF:cell_methods = "time: mean" ;
584     float dst_a3SF(time, lat, lon) ;
585     dst_a3SF:units = "kg/m2/s" ;
586     dst_a3SF:long_name = "dst_a3 dust surface emission" ;
587     dst_a3SF:cell_methods = "time: mean" ;
588     float dst_a3_SRF(time, lat, lon) ;
589     dst_a3_SRF:units = "kg/kg" ;
590     dst_a3_SRF:long_name = "dst_a3 in bottom layer" ;
591     dst_a3_SRF:cell_methods = "time: mean" ;
592     double f11vmr(time) ;
593     f11vmr:long_name = "f11 volume mixing ratio" ;
594     double f12vmr(time) ;
595     f12vmr:long_name = "f12 volume mixing ratio" ;
596     double gw(lat) ;
597     gw:long_name = "gauss weights" ;
598     double hyai(ilev) ;
599     hyai:long_name = "hybrid A coefficient at layer interfaces" ;
600     double hyam(lev) ;
601     hyam:long_name = "hybrid A coefficient at layer midpoints" ;
602     double hybi(ilev) ;
603     hybi:long_name = "hybrid B coefficient at layer interfaces" ;
604     double hybm(lev) ;
605     hybm:long_name = "hybrid B coefficient at layer midpoints" ;
606     double ilev(ilev) ;
607     ilev:long_name = "hybrid level at interfaces (1000*(A+B))" ;
608     ilev:units = "level" ;
609     ilev:positive = "down" ;
610     ilev:standard_name = "atmosphere_hybrid_sigma_pressure_coordinate" ;
611     ilev:formula_terms = "a: hyai b: hybi p0: P0 ps: PS" ;
612     double lat(lat) ;
613     lat:long_name = "latitude" ;
614     lat:units = "degrees_north" ;
615     double lev(lev) ;
616     lev:long_name = "hybrid level at midpoints (1000*(A+B))" ;
617     lev:units = "level" ;
618     lev:positive = "down" ;
619     lev:standard_name = "atmosphere_hybrid_sigma_pressure_coordinate" ;
620     lev:formula_terms = "a: hyam b: hybm p0: P0 ps: PS" ;
621     double lon(lon) ;
622     lon:long_name = "longitude" ;
623     lon:units = "degrees_east" ;
624     int mdt ;
625     mdt:long_name = "timestep" ;
626     mdt:units = "s" ;
627     double n2ovmr(time) ;
628     n2ovmr:long_name = "n2o volume mixing ratio" ;
629     int nbdate ;
630     nbdate:long_name = "base date (YYYYMMDD)" ;
```

```
631     int nbsec ;
632         nbsec:long_name = "seconds of base date" ;
633     float ncl_a1_SRF(time, lat, lon) ;
634         ncl_a1_SRF:units = "kg/kg" ;
635         ncl_a1_SRF:long_name = "ncl_a1 in bottom layer" ;
636         ncl_a1_SRF:cell_methods = "time: mean" ;
637     float ncl_a2_SRF(time, lat, lon) ;
638         ncl_a2_SRF:units = "kg/kg" ;
639         ncl_a2_SRF:long_name = "ncl_a2 in bottom layer" ;
640         ncl_a2_SRF:cell_methods = "time: mean" ;
641     float ncl_a3_SRF(time, lat, lon) ;
642         ncl_a3_SRF:units = "kg/kg" ;
643         ncl_a3_SRF:long_name = "ncl_a3 in bottom layer" ;
644         ncl_a3_SRF:cell_methods = "time: mean" ;
645     int ndbase ;
646         ndbase:long_name = "base day" ;
647     int ndcur(time) ;
648         ndcur:long_name = "current day (from base day)" ;
649     int nlon(lat) ;
650         nlon:long_name = "number of longitudes" ;
651     int nsbase ;
652         nsbase:long_name = "seconds of base day" ;
653     int nscur(time) ;
654         nscur:long_name = "current seconds of current day" ;
655     int nsteph(time) ;
656         nsteph:long_name = "current timestep" ;
657     int ntrk ;
658         ntrk:long_name = "spectral truncation parameter K" ;
659     int ntrm ;
660         ntrm:long_name = "spectral truncation parameter M" ;
661     int ntrn ;
662         ntrn:long_name = "spectral truncation parameter N" ;
663     float num_a1_SRF(time, lat, lon) ;
664         num_a1_SRF:units = " 1/kg" ;
665         num_a1_SRF:long_name = "num_a1 in bottom layer" ;
666         num_a1_SRF:cell_methods = "time: mean" ;
667     float num_a2_SRF(time, lat, lon) ;
668         num_a2_SRF:units = " 1/kg" ;
669         num_a2_SRF:long_name = "num_a2 in bottom layer" ;
670         num_a2_SRF:cell_methods = "time: mean" ;
671     float num_a3_SRF(time, lat, lon) ;
672         num_a3_SRF:units = " 1/kg" ;
673         num_a3_SRF:long_name = "num_a3 in bottom layer" ;
674         num_a3_SRF:cell_methods = "time: mean" ;
675     float pom_a1_SRF(time, lat, lon) ;
676         pom_a1_SRF:units = "kg/kg" ;
677         pom_a1_SRF:long_name = "pom_a1 in bottom layer" ;
678         pom_a1_SRF:cell_methods = "time: mean" ;
679     double slat(slat) ;
680         slat:long_name = "staggered latitude" ;
681         slat:units = "degrees_north" ;
682     double slon(slon) ;
683         slon:long_name = "staggered longitude" ;
684         slon:units = "degrees_east" ;
685     float so4_a1_SRF(time, lat, lon) ;
686         so4_a1_SRF:units = "kg/kg" ;
687         so4_a1_SRF:long_name = "so4_a1 in bottom layer" ;
688         so4_a1_SRF:cell_methods = "time: mean" ;
689     float so4_a2_SRF(time, lat, lon) ;
690         so4_a2_SRF:units = "kg/kg" ;
691         so4_a2_SRF:long_name = "so4_a2 in bottom layer" ;
692         so4_a2_SRF:cell_methods = "time: mean" ;
693     float so4_a3_SRF(time, lat, lon) ;
694         so4_a3_SRF:units = "kg/kg" ;
695         so4_a3_SRF:long_name = "so4_a3 in bottom layer" ;
696         so4_a3_SRF:cell_methods = "time: mean" ;
697     float soa_a1_SRF(time, lat, lon) ;
698         soa_a1_SRF:units = "kg/kg" ;
699         soa_a1_SRF:long_name = "soa_a1 in bottom layer" ;
700         soa_a1_SRF:cell_methods = "time: mean" ;
```

```
701 float soa_a2_SRF(time, lat, lon) ;
702     soa_a2_SRF:units = "kg/kg" ;
703     soa_a2_SRF:long_name = "soa_a2 in bottom layer" ;
704     soa_a2_SRF:cell_methods = "time: mean" ;
705 double sol_tsi(time) ;
706     sol_tsi:long_name = "total solar irradiance" ;
707     sol_tsi:units = "W/m2" ;
708 double time(time) ;
709     time:long_name = "time" ;
710     time:units = "days since 0011-03-20 00:00:00" ;
711     time:calendar = "noleap" ;
712     time:bounds = "time_bnds" ;
713 double time_bnds(time, nbnd) ;
714     time_bnds:long_name = "time interval endpoints" ;
715 double w_stag(slat) ;
716     w_stag:long_name = "staggered latitude weights" ;
717 int wnummax(lat) ;
718     wnummax:long_name = "cutoff Fourier wavenumber" ;
719
720 // global attributes:
721     :Conventions = "CF-1.0" ;
722     :source = "CAM" ;
723     :case = "B_1850_CAM5.30days.cam0400.clm0400.ens" ;
724     :title = "UNSET" ;
725     :logname = "baird" ;
726     :host = "r6i1n6" ;
727     :Version = "$Name$" ;
728     :revision_Id = "$Id$" ;
729     :initial_file = "B_1850_CAM5.10years.cam0400.clm0400.cam.i.0011-03-20-00000.nc" ;
730     :topography_file = "/glade/p/cesmdata/cseg/inputdata/atm/cam/topo/USGS-gtopo30_1.9x2.5_remap_c050602.nc"
731 ;
732     :history = "Thu May 31 19:24:24 2018: ncrncat
733 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-20-00000_ens_mean.nc
734 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-21-00000_ens_mean.nc
735 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-22-00000_ens_mean.nc
736 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-23-00000_ens_mean.nc
737 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-24-00000_ens_mean.nc
738 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-25-00000_ens_mean.nc
739 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-26-00000_ens_mean.nc
740 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-27-00000_ens_mean.nc
741 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-28-00000_ens_mean.nc
742 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-29-00000_ens_mean.nc
743 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-30-00000_ens_mean.nc
744 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-31-00000_ens_mean.nc
745 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-01-00000_ens_mean.nc
746 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-02-00000_ens_mean.nc
747 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-03-00000_ens_mean.nc
748 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-04-00000_ens_mean.nc
749 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-05-00000_ens_mean.nc
750 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-06-00000_ens_mean.nc
751 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-07-00000_ens_mean.nc
752 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-08-00000_ens_mean.nc
753 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-09-00000_ens_mean.nc
754 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-10-00000_ens_mean.nc
755 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-11-00000_ens_mean.nc
756 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-12-00000_ens_mean.nc
757 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-13-00000_ens_mean.nc
758 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-14-00000_ens_mean.nc
759 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-15-00000_ens_mean.nc
760 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-16-00000_ens_mean.nc
761 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-17-00000_ens_mean.nc
762 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-18-00000_ens_mean.nc
763 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-19-00000_ens_mean.nc
764 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-04-20-00000_ens_mean.nc
765 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-20-0000_0011-04-20-0000_ens_mean.nc\n",
766 "Wed May 30 17:18:14 2018: ncks -O -x -v time_written,date_written
767 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-20-00000_ens_mean.nc
768 B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-20-00000_ens_mean.nc\n",
769 "Thu May 24 18:59:32 2018: ncea -O
770 /beegfs/DATA/pritchard/blangenb/CESM_ARCHIVE/B_1850_CAM5.30days.cam0400.clm0400.ens_10members/
```

```
733... B_1850_CAM5.30days.cam0400.clm0400.ens01/atm/hist/B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-
... 03-20-00000.nc
... /beegfs/DATA/pritchard/blangenb/CESM_ARCHIVE/B_1850_CAM5.30days.cam0400.clm0400.ens_10members/
... B_1850_CAM5.30days.cam0400.clm0400.ens02/atm/hist/B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-
... 03-20-00000.nc
... /beegfs/DATA/pritchard/blangenb/CESM_ARCHIVE/B_1850_CAM5.30days.cam0400.clm0400.ens_10members/
... B_1850_CAM5.30days.cam0400.clm0400.ens03/atm/hist/B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-
... 03-20-00000.nc
... /beegfs/DATA/pritchard/blangenb/CESM_ARCHIVE/B_1850_CAM5.30days.cam0400.clm0400.ens_10members/
... B_1850_CAM5.30days.cam0400.clm0400.ens04/atm/hist/B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-
... 03-20-00000.nc
... /beegfs/DATA/pritchard/blangenb/CESM_ARCHIVE/B_1850_CAM5.30days.cam0400.clm0400.ens_10members/
... B_1850_CAM5.30days.cam0400.clm0400.ens05/atm/hist/B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-
... 03-20-00000.nc
... /beegfs/DATA/pritchard/blangenb/CESM_ARCHIVE/B_1850_CAM5.30days.cam0400.clm0400.ens_10members/
... B_1850_CAM5.30days.cam0400.clm0400.ens06/atm/hist/B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-
... 03-20-00000.nc
... /beegfs/DATA/pritchard/blangenb/CESM_ARCHIVE/B_1850_CAM5.30days.cam0400.clm0400.ens_10members/
... B_1850_CAM5.30days.cam0400.clm0400.ens07/atm/hist/B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-
... 03-20-00000.nc
... /beegfs/DATA/pritchard/blangenb/CESM_ARCHIVE/B_1850_CAM5.30days.cam0400.clm0400.ens_10members/
... B_1850_CAM5.30days.cam0400.clm0400.ens08/atm/hist/B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-
... 03-20-00000.nc
... /beegfs/DATA/pritchard/blangenb/CESM_ARCHIVE/B_1850_CAM5.30days.cam0400.clm0400.ens_10members/
... B_1850_CAM5.30days.cam0400.clm0400.ens09/atm/hist/B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-
... 03-20-00000.nc
... /beegfs/DATA/pritchard/blangenb/CESM_ARCHIVE/B_1850_CAM5.30days.cam0400.clm0400.ens_10members/
... B_1850_CAM5.30days.cam0400.clm0400.ens10/atm/hist/B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-
... 03-20-00000.nc
... /beegfs/DATA/pritchard/blangenb/CESM_ARCHIVE/B_1850_CAM5.30days.cam0400.clm0400.ens_10members/
... ens_mean_cesm_files/B_1850_CAM5.30days.cam0400.clm0400.ens.cam.h0.0011-03-20-00000_ens_mean.nc" ;
734 :NCO = "4.7.2" ;
735 :nco_openmp_thread_number = 1 ;
736 }
737
```