List of Variables in NARR Files

rec #	wgrib abbrev.		Name and unit	level/layer type	time
			MERGED A (merged_AWIP32.YYYYMMDDHH)		
1	MSLET		Mean sea level pressure (ETA model) [Pa]	MSL	anl
2	PRMSL		Pressure reduced to MSL [Pa]	MSL	anl
3	PRES	*	Pressure [Pa]	hybrid lev 1	anl
4	HGT	*	Geopotential height [gpm]	hybrid lev 1	anl
5	TMP	*	Temp. [K]	hybrid lev 1	anl
6	POT	*	Potential temp. [K]	hybrid lev 1	anl
7	RH	*	Relative humidity [%]	hybrid lev 1	anl
8	SPFH	*	Specific humidity [kg/kg]	hybrid lev 1	anl
9	MCONV	*	Horizontal moisture divergence [kg/kg/s]	hybrid lev 1	anl
10	UGRD	*	u wind [m/s]	hybrid lev 1	anl
11	VGRD	*	v wind [m/s]	hybrid lev 1	anl
12	VVEL	*	Pressure vertical velocity [Pa/s]	hybrid lev 1	anl
13	TKE	*	Turbulent Kinetic Energy [J/kg]	hybrid lev 1	anl
14	VIS		Visibility [m]	sfc	anl
15	HPBL		Planetary boundary layer height [m]	sfc	anl
16	BMIXL		Blackadars mixing length scale [m]	hybrid lev 1	anl
17	HGT		Geopotential height [gpm]	100 mb	anl
18	TMP		Temp. [K]	100 mb	anl
19	SPFH		Specific humidity [kg/kg]	100 mb	anl
20	VVEL		Pressure vertical velocity [Pa/s]	100 mb	anl
21	UGRD		u wind [m/s]	100 mb	anl
22	VGRD		v wind [m/s]	100 mb	anl
23	CLWMR		Cloud water [kg/kg]	100 mb	anl
24	ICMR		Ice mixing ratio [kg/kg]	100 mb	anl
25	HGT		Geopotential height [gpm]	125 mb	anl
26	TMP		Temp. [K]	125 mb	anl
27	SPFH		Specific humidity [kg/kg]	125 mb	anl
28	VVEL		Pressure vertical velocity [Pa/s]	125 mb	anl
29	UGRD		u wind [m/s]	125 mb	anl
30	VGRD		v wind [m/s]	125 mb	anl
31	CLWMR		Cloud water [kg/kg]	125 mb	anl
32	ICMR		Ice mixing ratio [kg/kg]	125 mb	anl
33	HGT		Geopotential height [gpm]	150 mb	anl
34	TMP		Temp. [K]	150 mb	anl
35	SPFH		Specific humidity [kg/kg]	150 mb	anl
36	VVEL		Pressure vertical velocity [Pa/s]	150 mb	anl
37	UGRD		u wind [m/s]	150 mb	anl
38	VGRD		v wind [m/s]	150 mb	anl
39	CLWMR		Cloud water [kg/kg]	150 mb	anl
40	ICMR		Ice mixing ratio [kg/kg]	150 mb	anl
41	HGT		Geopotential height [gpm]	175 mb	anl
42	TMP		Temp. [K]	175 mb	anl
43	SPFH		Specific humidity [kg/kg]	175 mb	anl
44	VVEL		Pressure vertical velocity [Pa/s]	175 mb	anl
45	UGRD		u wind [m/s]	175 mb	anl
46	VGRD		v wind [m/s]	175 mb	anl
47	CLWMR		Cloud water [kg/kg]	175 mb	anl
48	ICMR		Ice mixing ratio [kg/kg]	175 mb	anl
49	HGT		Geopotential height [gpm]	200 mb	anl
50	TMP		Temp. [K]	200 mb	anl
51	SPFH		Specific humidity [kg/kg]	200 mb	anl

rec #	wgrib abbrev.	Name and unit	level/layer type	time
52	VVEL	Pressure vertical velocity [Pa/s]	200 mb	anl
53	UGRD	u wind [m/s]	200 mb	anl
54	VGRD	v wind [m/s]	200 mb	anl
55	CLWMR	Cloud water [kg/kg]	200 mb	anl
56	ICMR	Ice mixing ratio [kg/kg]	200 mb	anl
57	HGT	Geopotential height [gpm]	225 mb	anl
58	TMP	Temp. [K]	225 mb	anl
59	SPFH	Specific humidity [kg/kg]	225 mb	anl
60	VVEL	Pressure vertical velocity [Pa/s]	225 mb	anl
61	UGRD	u wind [m/s]	225 mb	anl
62	VGRD	v wind [m/s]	225 mb	anl
63	CLWMR	Cloud water [kg/kg]	225 mb	anl
64	ICMR	Ice mixing ratio [kg/kg]	225 mb	anl
65	HGT	Geopotential height [gpm]	250 mb	anl
66	TMP	Temp. [K]	250 mb	anl
67	SPFH	Specific humidity [kg/kg]	250 mb	anl
68	VVEL	Pressure vertical velocity [Pa/s]	250 mb	anl
69	UGRD	u wind [m/s]	250 mb	anl
70	VGRD	v wind [m/s]	250 mb	anl
71	CLWMR	Cloud water [kg/kg]	250 mb	anl
72	ICMR	Ice mixing ratio [kg/kg]	250 mb	anl
73	HGT	Geopotential height [gpm]	275 mb	anl
74	TMP	Temp. [K]	275 mb	anl
75	SPFH	Specific humidity [kg/kg]	275 mb	anl
76	VVEL	Pressure vertical velocity [Pa/s]	275 mb	anl
77	UGRD	u wind [m/s]	275 mb	anl
78	VGRD	v wind [m/s]	275 mb	anl
79	CLWMR	Cloud water [kg/kg]	275 mb	anl
80	ICMR	Ice mixing ratio [kg/kg]	275 mb	anl
81	HGT	Geopotential height [gpm]	300 mb	anl
82	TMP	Temp. [K]	300 mb	anl
83	SPFH	Specific humidity [kg/kg]	300 mb	anl
84	VVEL	Pressure vertical velocity [Pa/s]	300 mb	anl
85	UGRD	u wind [m/s]	300 mb	anl
86	VGRD	v wind [m/s]	300 mb	anl
87	CLWMR	Cloud water [kg/kg]	300 mb	anl
88	ICMR	Ice mixing ratio [kg/kg]	300 mb	anl
89	HGT	Geopotential height [gpm]	350 mb	anl
90	TMP	Temp. [K]	350 mb	anl
91	SPFH	Specific humidity [kg/kg]	350 mb	anl
92	VVEL	Pressure vertical velocity [Pa/s]	350 mb	anl
93	UGRD	u wind [m/s]	350 mb	anl
94	VGRD	v wind [m/s]	350 mb	anl
95	CLWMR	Cloud water [kg/kg]	350 mb	anl
96	ICMR	Ice mixing ratio [kg/kg]	350 mb	anl
97	HGT	Geopotential height [gpm]	400 mb	anl
98	TMP	Temp. [K]	400 mb	anl
99	SPFH	Specific humidity [kg/kg]	400 mb	anl
100	VVEL	Pressure vertical velocity [Pa/s]	400 mb	anl
101	UGRD	u wind [m/s]	400 mb	anl
102	VGRD	v wind [m/s]	400 mb	anl
103	CLWMR	Cloud water [kg/kg]	400 mb	anl
104	ICMR	Ice mixing ratio [kg/kg]	400 mb	anl
105	HGT	Geopotential height [gpm]	450 mb	anl
106	TMP	Temp. [K]	450 mb	anl
107	SPFH	Specific humidity [kg/kg]	450 mb	anl
108	VVEL	Pressure vertical velocity [Pa/s]	450 mb	anl

rec #	abbrev.	Name and unit	level/layer type	time
109	UGRD	u wind [m/s]	450 mb	anl
110	VGRD	v wind [m/s]	450 mb	anl
111	CLWMR	Cloud water [kg/kg]	450 mb	anl
112	ICMR	Ice mixing ratio [kg/kg]	450 mb	anl
113	HGT	Geopotential height [gpm]	500 mb	anl
114	TMP	Temp. [K]	500 mb	anl
115	SPFH	Specific humidity [kg/kg]	500 mb	anl
116	VVEL	Pressure vertical velocity [Pa/s]	500 mb	anl
117	UGRD	u wind [m/s]	500 mb	anl
118	VGRD	v wind [m/s]	500 mb	anl
119	CLWMR	Cloud water [kg/kg]	500 mb	anl
120	ICMR	Ice mixing ratio [kg/kg]	500 mb	anl
121	HGT	Geopotential height [gpm]	550 mb	anl
122	TMP	Temp. [K]	550 mb	anl
123	SPFH	Specific humidity [kg/kg]	550 mb	anl
124	VVEL	Pressure vertical velocity [Pa/s]	550 mb	anl
125	UGRD	u wind [m/s]	550 mb	anl
126	VGRD	v wind [m/s]	550 mb	anl
127	CLWMR	Cloud water [kg/kg]	550 mb	anl
128	ICMR	Ice mixing ratio [kg/kg]	550 mb	anl
129	HGT	Geopotential height [gpm]	600 mb	anl
130	TMP	Temp. [K]	600 mb	anl
131	SPFH	Specific humidity [kg/kg]	600 mb	anl
132	VVEL	Pressure vertical velocity [Pa/s]	600 mb	anl
133	UGRD	u wind [m/s]	600 mb	anl
134	VGRD	v wind [m/s]	600 mb	anl
135	TKE	Turbulent Kinetic Energy [J/kg]	600 mb	anl
136	CLWMR	Cloud water [kg/kg]	600 mb	anl
137	ICMR	Ice mixing ratio [kg/kg]	600 mb	anl
138	HGT	Geopotential height [gpm]	650 mb	anl
139	TMP	Temp. [K]	650 mb	anl
140	SPFH	Specific humidity [kg/kg]	650 mb	anl
141	VVEL	Pressure vertical velocity [Pa/s]	650 mb	anl
142	UGRD	u wind [m/s]	650 mb	anl
143	VGRD	v wind [m/s]	650 mb	anl
144	TKE	Turbulent Kinetic Energy [J/kg]	650 mb	anl
145	CLWMR	Cloud water [kg/kg]	650 mb	anl
146	ICMR	Ice mixing ratio [kg/kg]	650 mb	anl
147	HGT	Geopotential height [gpm]	700 mb	anl
148	TMP	Temp. [K]	700 mb	anl
149	SPFH	Specific humidity [kg/kg]	700 mb	anl
150	VVEL	Pressure vertical velocity [Pa/s]	700 mb	anl
151	UGRD	u wind [m/s]	700 mb	anl
152	VGRD	v wind [m/s]	700 mb	anl
153	TKE	Turbulent Kinetic Energy [J/kg]	700 mb	anl
154	CLWMR	Cloud water [kg/kg]	700 mb	anl
155	ICMR	Ice mixing ratio [kg/kg]	700 mb	anl
156	HGT	Geopotential height [gpm]	725 mb	anl
157	TMP	Temp. [K]	725 mb	anl
158	SPFH	Specific humidity [kg/kg]	725 mb	anl
159	VVEL	Pressure vertical velocity [Pa/s]	725 mb	anl
160	UGRD	u wind [m/s]	725 mb	anl
161	VGRD	v wind [m/s]	725 mb	anl
162	TKE	Turbulent Kinetic Energy [J/kg]	725 mb	anl
163	CLWMR	Cloud water [kg/kg]	725 mb	anl
164	ICMR	Ice mixing ratio [kg/kg]	725 mb	anl
165	HGT	Geopotential height [gpm]	750 mb	anl

rec #	wgrib abbrev.	Name and unit	level/layer type	time
166	TMP	Temp. [K]	750 mb	anl
167	SPFH	Specific humidity [kg/kg]	750 mb	anl
168	VVEL	Pressure vertical velocity [Pa/s]	750 mb	anl
169	UGRD	u wind [m/s]	750 mb	anl
170	VGRD	v wind [m/s]	750 mb	anl
171	TKE	Turbulent Kinetic Energy [J/kg]	750 mb	anl
172	CLWMR	Cloud water [kg/kg]	750 mb	anl
173	ICMR	Ice mixing ratio [kg/kg]	750 mb	anl
174	HGT	Geopotential height [gpm]	775 mb	anl
175	TMP	Temp. [K]	775 mb	anl
176	SPFH	Specific humidity [kg/kg]	775 mb	anl
177	VVEL	Pressure vertical velocity [Pa/s]	775 mb	anl
178	UGRD	u wind [m/s]	775 mb	anl
179	VGRD	v wind [m/s]	775 mb	anl
180	TKE	Turbulent Kinetic Energy [J/kg]	775 mb	anl
181	CLWMR	Cloud water [kg/kg]	775 mb	anl
182	ICMR	Ice mixing ratio [kg/kg]	775 mb	anl
183	HGT	Geopotential height [gpm]	800 mb	anl
184	TMP	Temp. [K]	800 mb	anl
185	SPFH	Specific humidity [kg/kg]	800 mb	anl
186	VVEL	Pressure vertical velocity [Pa/s]	800 mb	anl
187	UGRD	u wind [m/s]	800 mb	anl
188	VGRD	v wind [m/s]	800 mb	anl
189	TKE	Turbulent Kinetic Energy [J/kg]	800 mb	anl
190	CLWMR	Cloud water [kg/kg]	800 mb	anl
191	ICMR	Ice mixing ratio [kg/kg]	800 mb	anl
192	HGT	Geopotential height [gpm]	825 mb	anl
193	TMP	Temp. [K]	825 mb	anl
194	SPFH	Specific humidity [kg/kg]	825 mb	anl
195	VVEL	Pressure vertical velocity [Pa/s]	825 mb	anl
196	UGRD	u wind [m/s]	825 mb	anl
197	VGRD	v wind [m/s]	825 mb	anl
198	TKE	Turbulent Kinetic Energy [J/kg]	825 mb	anl
199	CLWMR	Cloud water [kg/kg]	825 mb	anl
200	ICMR	Ice mixing ratio [kg/kg]	825 mb	anl
201	HGT	Geopotential height [gpm]	850 mb	anl
202	TMP	Temp. [K]	850 mb	anl
203	SPFH	Specific humidity [kg/kg]	850 mb	anl
204	VVEL	Pressure vertical velocity [Pa/s]	850 mb	anl
205	MCONV	Horizontal moisture divergence [kg/kg/s]	850 mb	anl
206	UGRD	u wind [m/s]	850 mb	anl
207	VGRD	v wind [m/s]	850 mb	anl
208	TKE	Turbulent Kinetic Energy [J/kg]	850 mb	anl
209	CLWMR	Cloud water [kg/kg]	850 mb	anl
210	ICMR	Ice mixing ratio [kg/kg]	850 mb	anl
211	HGT	Geopotential height [gpm]	875 mb	anl
212	TMP	Temp. [K]	875 mb	anl
213	SPFH	Specific humidity [kg/kg]	875 mb	anl
214	VVEL	Pressure vertical velocity [Pa/s]	875 mb	anl
215	UGRD	u wind [m/s]	875 mb	anl
216	VGRD	v wind [m/s]	875 mb	anl
217	TKE	Turbulent Kinetic Energy [J/kg]	875 mb	anl
218	CLWMR	Cloud water [kg/kg]	875 mb	anl
219	ICMR	Ice mixing ratio [kg/kg]	875 mb	anl
220	HGT	Geopotential height [gpm]	900 mb	anl
221	TMP	Temp. [K]	900 mb	anl
222	SPFH	Specific humidity [kg/kg]	900 mb	anl

rec #	wgrib abbrev.		Name and unit	level/layer type	time
223	VVEL		Pressure vertical velocity [Pa/s]	900 mb	anl
224	UGRD		u wind [m/s]	900 mb	anl
225	VGRD		v wind [m/s]	900 mb	anl
226	TKE		Turbulent Kinetic Energy [J/kg]	900 mb	anl
227	CLWMR		Cloud water [kg/kg]	900 mb	anl
228	ICMR		Ice mixing ratio [kg/kg]	900 mb	anl
229	HGT		Geopotential height [gpm]	925 mb	anl
230	TMP		Temp. [K]	925 mb	anl
231	SPFH		Specific humidity [kg/kg]	925 mb	anl
232	VVEL		Pressure vertical velocity [Pa/s]	925 mb	anl
233	UGRD		u wind [m/s]	925 mb	anl
234	VGRD		v wind [m/s]	925 mb	anl
235	TKE		Turbulent Kinetic Energy [J/kg]	925 mb	anl
236	CLWMR		Cloud water [kg/kg]	925 mb	anl
237	ICMR		Ice mixing ratio [kg/kg]	925 mb	anl
238	HGT		Geopotential height [gpm]	950 mb	anl
239	TMP		Temp. [K]	950 mb	anl
240	SPFH		Specific humidity [kg/kg]	950 mb	anl
241	VVEL		Pressure vertical velocity [Pa/s]	950 mb	anl
242	UGRD		u wind [m/s]	950 mb	anl
243	VGRD		v wind [m/s]	950 mb	anl
244	TKE		Turbulent Kinetic Energy [J/kg]	950 mb	anl
245	CLWMR		Cloud water [kg/kg]	950 mb	anl
246	ICMR		Ice mixing ratio [kg/kg]	950 mb	anl
247	HGT		Geopotential height [gpm]	975 mb	anl
248	TMP		Temp. [K]	975 mb	anl
249	SPFH		Specific humidity [kg/kg]	975 mb	anl
250	VVEL		Pressure vertical velocity [Pa/s]	975 mb	anl
251	UGRD		u wind [m/s]	975 mb	anl
252	VGRD		v wind [m/s]	975 mb	anl
253	TKE		Turbulent Kinetic Energy [J/kg]	975 mb	anl
254	CLWMR		Cloud water [kg/kg]	975 mb	anl
255	ICMR		Ice mixing ratio [kg/kg]	975 mb	anl
256	HGT		Geopotential height [gpm]	1000 mb	anl
257	TMP		Temp. [K]	1000 mb	anl
258	SPFH		Specific humidity [kg/kg]	1000 mb	anl
259	VVEL		Pressure vertical velocity [Pa/s]	1000 mb	anl
260	UGRD		u wind [m/s]	1000 mb	anl
261	VGRD		v wind [m/s]	1000 mb	anl
262	TKE		Turbulent Kinetic Energy [J/kg]	1000 mb	anl
263	CLWMR		Cloud water [kg/kg]	1000 mb	anl
264	ICMR		Ice mixing ratio [kg/kg]	1000 mb	anl
265	PRES		Pressure [Pa]	sfc	anl
266	PRESN	*	Pressure (nearest grid point) [Pa]	sfc	anl
267	TMP	*	Temp. [K]	sfc	anl
268	POT	*	Potential temp. [K]	sfc	anl
269	TSOIL	*	Soil temp. [K]	0-10 cm down	anl
270	SOILW	*	Volumetric soil moisture (frozen + liquid) [fraction]	0-10 cm down	anl
271	SOILL	*	Liquid volumetric soil moisture (non-frozen) [fraction]	0-10 cm down	anl
272	TSOIL	*	Soil temp. [K]	10-40 cm down	anl
273	SOILW	*	Volumetric soil moisture (frozen + liquid) [fraction]	10-40 cm down	anl
274	SOILL	*	Liquid volumetric soil moisture (non-frozen) [fraction]	10-40 cm down	anl
275	TSOIL	*	Soil temp. [K]	40-100 cm down	anl
276	SOILW	*	Volumetric soil moisture (frozen + liquid) [fraction]	40-100 cm down	anl
277	SOILL	*	Liquid volumetric soil moisture (non-frozen) [fraction]	40-100 cm down	anl
278	TSOIL	*	Soil temp. [K]	100-200 cm down	anl
279	SOILW	*	Volumetric soil moisture (frozen + liquid) [fraction]	100-200 cm down	anl

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 280   SOILL  *  Liquid volumetric soil moisture (non-frozen) [fraction]   100-200 cm down       anl
 281   TSOIL  *  Soil temp. [K]                                            800 cm down           anl
 282   MSTAV  *  Moisture availability [%]                                 0-100 cm down         anl
 283   SOILM  *  Soil moisture content [kg/m^2]                            0-200 cm down         anl
 284   CNWAT  *  Plant canopy surface water [kg/m^2]                       sfc                   anl
 285   WEASD  *  Accum. snow [kg/m^2]                                      sfc                   anl
 286   SNOWC  *  Snow cover [%]                                            sfc                   anl
 287   SNOD   *  Snow depth [m]                                            sfc                   anl
 288   TMP    *  Temp. [K]                                                 2 m above gnd         anl
 289   SPFH   *  Specific humidity [kg/kg]                                 2 m above gnd         anl
 290   DPT    *  Dew point temp. [K]                                       2 m above gnd         anl
 291   RH     *  Relative humidity [%]                                     2 m above gnd         anl
 292   PRES   *  Pressure [Pa]                                             2 m above gnd         anl
 293   UGRD   *  u wind [m/s]                                              10 m above gnd        anl
 294   VGRD   *  v wind [m/s]                                              10 m above gnd        anl
 295   POT    *  Potential temp. [K]                                       10 m above gnd        anl
 296   TMP    *  Temp. [K]                                                 10 m above gnd        anl
 297   PRES   *  Pressure [Pa]                                             10 m above gnd        anl
 298   SPFH   *  Specific humidity [kg/kg]                                 10 m above gnd        anl
 299   UGRD   *  u wind [m/s]                                              30 m above gnd        anl
 300   VGRD   *  v wind [m/s]                                              30 m above gnd        anl
 301   POT    *  Potential temp. [K]                                       30 m above gnd        anl
 302   TMP    *  Temp. [K]                                                 30 m above gnd        anl
 303   PRES   *  Pressure [Pa]                                             30 m above gnd        anl
 304   SPFH   *  Specific humidity [kg/kg]                                 30 m above gnd        anl
 305   FRICV  *  Surface friction velocity [m/s]                           sfc                   anl
 306   CD     *  Surface drag coefficient [non-dim]                        sfc                   anl
 307   UFLX   *  Zonal momentum flux [N/m^2]                               sfc                   anl
 308   VFLX   *  Meridional momentum flux [N/m^2]                          sfc                   anl
 309   SFEXC  *  Exchange coefficient [(kg/m^3)(m/s)]                      sfc                   anl
 310   VEG    *  Vegetation [%]                                            sfc                   anl
 311   CCOND  *  Canopy conductance [m/s]                                  sfc                   anl
 312   RCS    *  Solar parameter in canopy conductance [fraction]          sfc                   anl
 313   RCT    *  Temperature parameter in canopy conductance [fraction]    sfc                   anl
 314   RCQ    *  Humidity parameter in canopy conductance [fraction]       sfc                   anl
 315   RCSOL  *  Soil moisture parameter in canopy conductance [fraction]  sfc                   anl
 316   LFTX      Surface lifted index [K]                                  500-1000 mb           anl
 317   CAPE      Convective available potential energy [J/kg]              sfc                   anl
 318   CIN       Convective inhibition [J/kg]                              sfc                   anl
 319   PWAT      Precipitable water [kg/m^2]                               atmos col             anl
 320   PRES   *  Pressure [Pa]                                             cld base              anl
 321   HGT    *  Geopotential height [gpm]                                 cld base              anl
 322   PRES   *  Pressure [Pa]                                             cld top               anl
 323   HGT    *  Geopotential height [gpm]                                 cld top               anl
 324   TMP    *  Temp. [K]                                                 cld top               anl
 325   HLCY      Storm relative helicity [m^2/s^2]                         3000-0 m above gnd    anl
 326   USTM      u-component of storm motion [m/s]                         6000-0 m above gnd    anl
 327   VSTM      v-component of storm motion [m/s]                         6000-0 m above gnd    anl
 328   PRES      Pressure [Pa]                                             tropopause            anl
 329   HGT       Geopotential height [gpm]                                 tropopause            anl
 330   TMP       Temp. [K]                                                 tropopause            anl
 331   UGRD      u wind [m/s]                                              tropopause            anl
 332   VGRD      v wind [m/s]                                              tropopause            anl
 333   VWSH      Vertical speed shear [1/s]                                tropopause            anl
 334   PRES      Pressure [Pa]                                             max wind lev          anl
 335   HGT       Geopotential height [gpm]                                 max wind lev          anl
 336   UGRD      u wind [m/s]                                              max wind lev          anl
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 337   VGRD        v wind [m/s]                                         max wind lev          anl
 338   HGT         Geopotential height [gpm]                            0C isotherm           anl
 339   RH          Relative humidity [%]                                0C isotherm           anl
 340   TMP    *    Temp. [K]                                            30-0 mb above gnd     anl
 341   SPFH   *    Specific humidity [kg/kg]                            30-0 mb above gnd     anl
 342   MCONV  *    Horizontal moisture divergence [kg/kg/s]             30-0 mb above gnd     anl
 343   UGRD   *    u wind [m/s]                                         30-0 mb above gnd     anl
 344   VGRD   *    v wind [m/s]                                         30-0 mb above gnd     anl
 345   VVEL   *    Pressure vertical velocity [Pa/s]                    30-0 mb above gnd     anl
 346   TMP    *    Temp. [K]                                            60-30 mb above gnd    anl
 347   SPFH   *    Specific humidity [kg/kg]                            60-30 mb above gnd    anl
 348   MCONV  *    Horizontal moisture divergence [kg/kg/s]             60-30 mb above gnd    anl
 349   UGRD   *    u wind [m/s]                                         60-30 mb above gnd    anl
 350   VGRD   *    v wind [m/s]                                         60-30 mb above gnd    anl
 351   VVEL   *    Pressure vertical velocity [Pa/s]                    60-30 mb above gnd    anl
 352   TMP    *    Temp. [K]                                            90-60 mb above gnd    anl
 353   SPFH   *    Specific humidity [kg/kg]                            90-60 mb above gnd    anl
 354   MCONV  *    Horizontal moisture divergence [kg/kg/s]             90-60 mb above gnd    anl
 355   UGRD   *    u wind [m/s]                                         90-60 mb above gnd    anl
 356   VGRD   *    v wind [m/s]                                         90-60 mb above gnd    anl
 357   VVEL   *    Pressure vertical velocity [Pa/s]                    90-60 mb above gnd    anl
 358   TMP    *    Temp. [K]                                            120-90 mb above gnd   anl
 359   SPFH   *    Specific humidity [kg/kg]                            120-90 mb above gnd   anl
 360   MCONV  *    Horizontal moisture divergence [kg/kg/s]             120-90 mb above gnd   anl
 361   UGRD   *    u wind [m/s]                                         120-90 mb above gnd   anl
 362   VGRD   *    v wind [m/s]                                         120-90 mb above gnd   anl
 363   VVEL   *    Pressure vertical velocity [Pa/s]                    120-90 mb above gnd   anl
 364   TMP    *    Temp. [K]                                            150-120 mb above gnd  anl
 365   SPFH   *    Specific humidity [kg/kg]                            150-120 mb above gnd  anl
 366   MCONV  *    Horizontal moisture divergence [kg/kg/s]             150-120 mb above gnd  anl
 367   UGRD   *    u wind [m/s]                                         150-120 mb above gnd  anl
 368   VGRD   *    v wind [m/s]                                         150-120 mb above gnd  anl
 369   VVEL   *    Pressure vertical velocity [Pa/s]                    150-120 mb above gnd  anl
 370   TMP    *    Temp. [K]                                            180-150 mb above gnd  anl
 371   SPFH   *    Specific humidity [kg/kg]                            180-150 mb above gnd  anl
 372   MCONV  *    Horizontal moisture divergence [kg/kg/s]             180-150 mb above gnd  anl
 373   UGRD   *    u wind [m/s]                                         180-150 mb above gnd  anl
 374   VGRD   *    v wind [m/s]                                         180-150 mb above gnd  anl
 375   VVEL   *    Pressure vertical velocity [Pa/s]                    180-150 mb above gnd  anl
 376   4LFTX       Best (4-layer) lifted index [K]                      180-0 mb above gnd    anl
 377   CAPE        Convective available potential energy [J/kg]         180-0 mb above gnd    anl
 378   CIN         Convective inhibition [J/kg]                         180-0 mb above gnd    anl
 379   PRES        Pressure [Pa]                                        cond lev              anl
 380   ALBDO  *    Albedo [%]                                           sfc                   anl
 381   PRATE       Precipitation rate [kg/m^2/s]                        sfc                   3hr fcst
 382   APCP        Total precipitation [kg/m^2]                         sfc                   0-3hr acc
 383   APCPN  *    Total precipitation (nearest grid point) [kg/m^2]    sfc                   0-3hr acc
 384   ACPCP       Convective precipitation [kg/m^2]                    sfc                   0-3hr acc
 385   SNOM   *    Snow melt [kg/m^2]                                   sfc                   0-3hr acc
 386   SSRUN  *    Surface runoff (non-infiltrating) [kg/m^2]           sfc                   0-3hr acc
 387   BGRUN  *    Subsurface runoff (baseflow) [kg/m^2]                sfc                   0-3hr acc
 388   CSNOW  *    Categorical snow [yes=1 no=0]                        sfc                   3hr fcst
 389   CICEP  *    Categorical ice pellets [yes=1 no=0]                 sfc                   3hr fcst
 390   CFRZR  *    Categorical freezing rain [yes=1 no=0]               sfc                   3hr fcst
 391   CRAIN  *    Categorical rain [yes=1 no=0]                        sfc                   3hr fcst
 392   LHTFL  *    Latent heat flux [W/m^2]                             sfc                   0-3hr ave
 393   SHTFL  *    Sensible heat flux [W/m^2]                           sfc                   0-3hr ave
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rec #	wgrib abbrev.		Name and unit	level/layer type	time
394	GFLUX	*	Ground Heat Flux [W/m^2]	sfc	0-3hr ave
395	SNOHF	*	Snow phase-change heat flux [W/m^2]	sfc	0-3hr ave
396	EVP	*	Evaporation [kg/m^2]	sfc	0-3hr acc
397	PEVAP	*	Potential evaporation [kg/m^2]	sfc	0-3hr acc
398	WVCONV		Water vapor flux convergence (vertical int) [kg/m^2/s]	atmos col	0-3hr acc
399	WVCONV		Water vapor flux convergence (vertical int) [kg/m^2/s]	0-700 mb	0-3hr acc
400	WCCONV		Water condensate flux convergence (vertical int) [kg/m^2/s]	atmos col	0-3hr acc
401	WCCONV		Water condensate flux convergence (vertical int) [kg/m^2/s]	0-700 mb	0-3hr acc
402	WVUFLX		Water vapor zonal flux (vertical int)[kg/m]	atmos col	0-3hr acc
403	WVUFLX		Water vapor zonal flux (vertical int)[kg/m]	0-700 mb	0-3hr acc
404	WVVFLX		Water vapor meridional flux (vertical int) [kg/m]	atmos col	0-3hr acc
405	WVVFLX		Water vapor meridional flux (vertical int) [kg/m]	0-700 mb	0-3hr acc
406	WCUFLX		Water condensate zonal flux (vertical int) [kg/m]	atmos col	0-3hr acc
407	WCUFLX		Water condensate zonal flux (vertical int) [kg/m]	0-700 mb	0-3hr acc
408	WCVFLX		Water condensate meridional flux (vertical int) [kg/m]	atmos col	0-3hr acc
409	WCVFLX		Water condensate meridional flux (vertical int) [kg/m]	0-700 mb	0-3hr acc
410	WVINC		water vapor added by precip assimilation [kg/m^2/s]	atmos col	0-3hr acc
411	WVINC		water vapor added by precip assimilation [kg/m^2/s]	0-700 mb	0-3hr acc
412	WCINC		water condensate added by precip assimilaition [kg/m^2/s]	atmos col	0-3hr acc
413	WCINC		water condensate added by precip assimilaition [kg/m^2/s]	0-700 mb	0-3hr acc
414	LCDC		Low level cloud cover [%]	low cld lay	3hr fcst
415	MCDC		Mid level cloud cover [%]	mid cld lay	3hr fcst
416	HCDC		High level cloud cover [%]	high cld lay	3hr fcst
417	TCDC		Total cloud cover [%]	atmos col	3hr fcst
418	CDLYR		Non-convective cloud [%]	atmos col	0-3hr ave
419	CDCON		Convective cloud cover [%]	atmos col	0-3hr ave
420	DSWRF	*	Downward shortwave radiation flux [W/m^2]	sfc	0-3hr ave
421	DLWRF	*	Downward longwave radiation flux [W/m^2]	sfc	0-3hr ave
422	USWRF	*	Upward short wave radiation flux [W/m^2]	sfc	0-3hr ave
423	ULWRF	*	Upward long wave radiation flux [W/m^2]	sfc	0-3hr ave
424	USWRF		Upward short wave radiation flux [W/m^2]	nom. top	0-3hr ave
425	ULWRF		Upward long wave radiation flux [W/m^2]	nom. top	0-3hr ave

MERGED B (merged_AWIP32.YYYYMMDDHH.b)

rec #	wgrib abbrev.		Name and unit	level/layer type	time
1	WEASD	*	Accum. snow [kg/m^2]	sfc	3hr fcst
2	SHTFL	*	Sensible heat flux [W/m^2]	sfc	3hr fcst
3	LHTFL	*	Latent heat flux [W/m^2]	sfc	3hr fcst
4	GFLUX	*	Ground Heat Flux [W/m^2]	sfc	3hr fcst
5	PWAT		Precipitable water [kg/m^2]	atmos col	3hr fcst
6	DSWRF	*	Downward shortwave radiation flux [W/m^2]	sfc	3hr fcst
7	DLWRF	*	Downward longwave radiation flux [W/m^2]	sfc	3hr fcst
8	USWRF	*	Upward short wave radiation flux [W/m^2]	sfc	3hr fcst
9	ULWRF	*	Upward long wave radiation flux [W/m^2]	sfc	3hr fcst

LAND A subset (landA.YYYYMMDDHH)

rec #	wgrib abbrev.		Name and unit	level/layer type	time
1	PRES		Pressure [Pa]	sfc	anl
2	TMP	*	Temp. [K]	2 m above gnd	anl
3	SPFH	*	Specific humidity [kg/kg]	2 m above gnd	anl
4	RH	*	Relative humidity [%]	2 m above gnd	anl
5	UGRD	*	u wind [m/s]	10 m above gnd	anl
6	VGRD	*	v wind [m/s]	10 m above gnd	anl
7	POT	*	Potential temp. [K]	10 m above gnd	anl
8	TMP	*	Temp. [K]	10 m above gnd	anl

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         wgrib
rec #    abbrev.    Name and unit                                                  level/layer type          time

    9    PRES   *   Pressure [Pa]                                                  10 m above gnd            anl
   10    SPFH   *   Specific humidity [kg/kg]                                      10 m above gnd            anl
   11    APCP       Total precipitation [kg/m^2]                                   sfc                       0-3hr acc
   12    ACPCP      Convective precipitation [kg/m^2]                              sfc                       0-3hr acc
   13    DSWRF  *   Downward shortwave radiation flux [W/m^2]                      sfc                       0-3hr ave
   14    DLWRF  *   Downward longwave radiation flux [W/m^2]                       sfc                       0-3hr ave
   15    CAPE       Convective available potential energy [J/kg]                   180-0 mb above gnd        anl



         LAND B subset (landB.YYYYMMDDHH)

    1    MSLET      Mean sea level pressure (ETA model) [Pa]                       MSL                       anl
    2    TMP        Temp. [K]                                                      1000 mb                   anl
    3    PRESN  *   Pressure (nearest grid point) [Pa]                             sfc                       anl
    4    UGRD   *   u wind [m/s]                                                   30 m above gnd            anl
    5    VGRD   *   v wind [m/s]                                                   30 m above gnd            anl
    6    POT    *   Potential temp. [K]                                            30 m above gnd            anl
    7    TMP    *   Temp. [K]                                                      30 m above gnd            anl
    8    PRES   *   Pressure [Pa]                                                  30 m above gnd            anl
    9    SPFH   *   Specific humidity [kg/kg]                                      30 m above gnd            anl
   10    PRES   *   Pressure [Pa]                                                  hybrid lev 1              anl
   11    HGT    *   Geopotential height [gpm]                                      hybrid lev 1              anl
   12    TMP    *   Temp. [K]                                                      hybrid lev 1              anl
   13    POT    *   Potential temp. [K]                                            hybrid lev 1              anl
   14    SPFH   *   Specific humidity [kg/kg]                                      hybrid lev 1              anl
   15    UGRD   *   u wind [m/s]                                                   hybrid lev 1              anl
   16    VGRD   *   v wind [m/s]                                                   hybrid lev 1              anl
   17    TKE    *   Turbulent Kinetic Energy [J/kg]                                hybrid lev 1              anl
   18    BMIXL      Blackadars mixing length scale [m]                             hybrid lev 1              anl
   19    FRICV  *   Surface friction velocity [m/s]                                sfc                       anl
   20    CD     *   Surface drag coefficient [non-dim]                             sfc                       anl
   21    UFLX   *   Zonal momentum flux [N/m^2]                                    sfc                       anl
   22    VFLX   *   Meridional momentum flux [N/m^2]                               sfc                       anl
   23    SFEXC  *   Exchange coefficient [(kg/m^3)(m/s)]                           sfc                       anl
   24    HPBL       Planetary boundary layer height [m]                            sfc                       anl
   25    TMP    *   Temp. [K]                                                      sfc                       anl
   26    POT    *   Potential temp. [K]                                            sfc                       anl
   27    TSOIL  *   Soil temp. [K]                                                 0-10 cm down              anl
   28    SOILW  *   Volumetric soil moisture (frozen + liquid) [fraction]          0-10 cm down              anl
   29    SOILL  *   Liquid volumetric soil moisture (non-frozen) [fraction]        0-10 cm down              anl
   30    TSOIL  *   Soil temp. [K]                                                 10-40 cm down             anl
   31    SOILW  *   Volumetric soil moisture (frozen + liquid) [fraction]          10-40 cm down             anl
   32    SOILL  *   Liquid volumetric soil moisture (non-frozen) [fraction]        10-40 cm down             anl
   33    TSOIL  *   Soil temp. [K]                                                 40-100 cm down            anl
   34    SOILW  *   Volumetric soil moisture (frozen + liquid) [fraction]          40-100 cm down            anl
   35    SOILL  *   Liquid volumetric soil moisture (non-frozen) [fraction]        40-100 cm down            anl
   36    TSOIL  *   Soil temp. [K]                                                 100-200 cm down           anl
   37    SOILW  *   Volumetric soil moisture (frozen + liquid) [fraction]          100-200 cm down           anl
   38    SOILL  *   Liquid volumetric soil moisture (non-frozen) [fraction]        100-200 cm down           anl
   39    MSTAV  *   Moisture availability [%]                                      0-100 cm down             anl
   40    SOILM  *   Soil moisture content [kg/m^2]                                 0-200 cm down             anl
   41    CNWAT  *   Plant canopy surface water [kg/m^2]                            sfc                       anl
   42    WEASD  *   Accum. snow [kg/m^2]                                           sfc                       anl
   43    SNOD   *   Snow depth [m]                                                 sfc                       anl
   44    SNOWC  *   Snow cover [%]                                                 sfc                       anl
   45    ALBDO  *   Albedo [%]                                                     sfc                       anl
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rec #	wgrib abbrev.		Name and unit	level/layer type	time
46	VEG	*	Vegetation [%]	sfc	anl
47	CCOND	*	Canopy conductance [m/s]	sfc	anl
48	RCSOL	*	Soil moisture parameter in canopy conductance [fraction]	sfc	anl
49	VIS		Visibility [m]	sfc	anl
50	LCDC		Low level cloud cover [%]	low cld lay	3hr fcst
51	TCDC		Total cloud cover [%]	atmos col	3hr fcst

LAND C subset (landC.YYYYMMDDHH)

rec #	wgrib abbrev.		Name and unit	level/layer type	time
1	APCPN	*	Total precipitation (nearest grid point) [kg/m^2]	sfc	0-3hr acc
2	SNOM	*	Snow melt [kg/m^2]	sfc	0-3hr acc
3	SSRUN	*	Surface runoff (non-infiltrating) [kg/m^2]	sfc	0-3hr acc
4	BGRUN	*	Subsurface runoff (baseflow) [kg/m^2]	sfc	0-3hr acc
5	EVP	*	Evaporation [kg/m^2]	sfc	0-3hr acc
6	PEVAP	*	Potential evaporation [kg/m^2]	sfc	0-3hr acc
7	LHTFL	*	Latent heat flux [W/m^2]	sfc	0-3hr ave
8	SHTFL	*	Sensible heat flux [W/m^2]	sfc	0-3hr ave
9	GFLUX	*	Ground Heat Flux [W/m^2]	sfc	0-3hr ave
10	SNOHF	*	Snow phase-change heat flux [W/m^2]	sfc	0-3hr ave
11	ULWRF	*	Upward long wave radiation flux [W/m^2]	sfc	0-3hr ave
12	USWRF	*	Upward short wave radiation flux [W/m^2]	sfc	0-3hr ave

FIXED fields

rec #	wgrib abbrev.	Name and unit	level/layer type	time
1	HGT	Geopotential height [gpm]	sfc	anl
2	HGTN	Geopotential Height (nearest grid point) [gpm]	sfc	anl
3	TSOIL	Soil temp. [K]	800 cm down	anl
4	SMDRY	Direct evaporation cease (soil moisture) [fraction]	sfc	anl
5	POROS	Soil porosity [fraction]	sfc	anl
6	SFCR	Surface roughness [m]	sfc	anl
7	VGTYP	Vegetation type [Index]	sfc	anl
8	SOTYP	Soil type [Index]	sfc	anl
9	SLTYP	Surface slope type [Index]	sfc	anl
10	RSMIN	Minimal stomatal resistance [s/m]	sfc	anl
11	RLYRS	Number of soil layers in root zone [non-dim]	sfc	anl
12	WILT	Wilting point [fraction]	sfc	anl
13	SMREF	Transpiration stress-onset (soil moisture) [fraction]	sfc	anl
14	NLAT	Latitude (-90 to +90) [deg]	sfc	anl
15	ELON	East longitude (0-360) [deg]	sfc	anl
16	LAND	Land cover (land=1;sea=0) [fraction]	sfc	anl
17	SNFALB	Snow-free albedo [%]	sfc	anl
18	MXSALB	Maximum snow albedo [%]	sfc	anl

Notes:
- asterisk in third colum denotes fields interpolated using nearest-neighbor option
- 8 merged A and B files (every 3 hours) are archived in a single daily tar file (approx. 450Mb)
- 8 land A, B and C files (every 3 hours) are archived in a single daily tar file (approx. 75Mb)