

N80

	original reduced grid (N80)	octahedral reduced grid (O80)	regular grid (F80)
Total number of grid points	35718	28480	51200
Resolution at equator (lat-lon)	1.125°	1.125°	1.125°
Resolution at equator (km)	125	125	125
Average resolution (km)	120	134	100

- The lat-lon resolution at the equator is given by $90^\circ/N$ where N is the number of Gaussian latitudes between the pole and equator.
- The resolution in kilometres at the equator is given by $\sim 10000/N$ km (assuming a circumference of the earth of ~ 40000 km).
- The average resolution is given by $\sqrt[4]{4\pi R^2_{\text{earth}}/N_p}$ km, where N_p is the total number of grid points.

km, where N_p is the total number of grid points.

latitude number	reduced points (original - N80)	reduced points (octahedral - O80)	regular points (full - F80)	latitude
1	18	20	320	89.141519
2	25	24	320	88.029429
3	36	28	320	86.910771
4	40	32	320	85.790629
5	45	36	320	84.669924
6	54	40	320	83.548947
7	60	44	320	82.427818
8	64	48	320	81.306595
9	72	52	320	80.185310
10	72	56	320	79.063982
11	80	60	320	77.942624
12	90	64	320	76.821243
13	96	68	320	75.699844
14	100	72	320	74.578432
15	108	76	320	73.457008
16	120	80	320	72.335576
17	120	84	320	71.214136
18	128	88	320	70.092690
19	135	92	320	68.971240
20	144	96	320	67.849784
21	144	100	320	66.728326
22	150	104	320	65.606864
23	160	108	320	64.485399
24	160	112	320	63.363932
25	180	116	320	62.242462
26	180	120	320	61.120991
27	180	124	320	59.999518
28	192	128	320	58.878044
29	192	132	320	57.756569
30	200	136	320	56.635092
31	200	140	320	55.513614

32	216	144	320	54.392135
33	216	148	320	53.270655
34	216	152	320	52.149175
35	225	156	320	51.027694
36	225	160	320	49.906212
37	240	164	320	48.784729
38	240	168	320	47.663246
39	240	172	320	46.541763
40	256	176	320	45.420279
41	256	180	320	44.298794
42	256	184	320	43.177309
43	256	188	320	42.055824
44	288	192	320	40.934338
45	288	196	320	39.812852
46	288	200	320	38.691366
47	288	204	320	37.569880
48	288	208	320	36.448393
49	288	212	320	35.326906
50	288	216	320	34.205418
51	288	220	320	33.083931
52	288	224	320	31.962443
53	300	228	320	30.840955
54	300	232	320	29.719467
55	300	236	320	28.597979
56	300	240	320	27.476491
57	320	244	320	26.355002
58	320	248	320	25.233514
59	320	252	320	24.112025
60	320	256	320	22.990536
61	320	260	320	21.869047
62	320	264	320	20.747558
63	320	268	320	19.626069
64	320	272	320	18.504580
65	320	276	320	17.383091
66	320	280	320	16.261601
67	320	284	320	15.140112
68	320	288	320	14.018622
69	320	292	320	12.897133
70	320	296	320	11.775643
71	320	300	320	10.654153
72	320	304	320	9.532664
73	320	308	320	8.411174
74	320	312	320	7.289684
75	320	316	320	6.168194
76	320	320	320	5.046704
77	320	324	320	3.925215
78	320	328	320	2.803725

79	320	332	320	1.682235
80	320	336	320	0.560745
81	320	336	320	-0.560745
82	320	332	320	-1.682235
83	320	328	320	-2.803725
84	320	324	320	-3.925215
85	320	320	320	-5.046704
86	320	316	320	-6.168194
87	320	312	320	-7.289684
88	320	308	320	-8.411174
89	320	304	320	-9.532664
90	320	300	320	-10.654153
91	320	296	320	-11.775643
92	320	292	320	-12.897133
93	320	288	320	-14.018622
94	320	284	320	-15.140112
95	320	280	320	-16.261601
96	320	276	320	-17.383091
97	320	272	320	-18.504580
98	320	268	320	-19.626069
99	320	264	320	-20.747558
100	320	260	320	-21.869047
101	320	256	320	-22.990536
102	320	252	320	-24.112025
103	320	248	320	-25.233514
104	320	244	320	-26.355002
105	300	240	320	-27.476491
106	300	236	320	-28.597979
107	300	232	320	-29.719467
108	300	228	320	-30.840955
109	288	224	320	-31.962443
110	288	220	320	-33.083931
111	288	216	320	-34.205418
112	288	212	320	-35.326906
113	288	208	320	-36.448393
114	288	204	320	-37.569880
115	288	200	320	-38.691366
116	288	196	320	-39.812852
117	288	192	320	-40.934338
118	256	188	320	-42.055824
119	256	184	320	-43.177309
120	256	180	320	-44.298794
121	256	176	320	-45.420279
122	240	172	320	-46.541763
123	240	168	320	-47.663246
124	240	164	320	-48.784729
125	225	160	320	-49.906212

126	225	156	320	-51.027694
127	216	152	320	-52.149175
128	216	148	320	-53.270655
129	216	144	320	-54.392135
130	200	140	320	-55.513614
131	200	136	320	-56.635092
132	192	132	320	-57.756569
133	192	128	320	-58.878044
134	180	124	320	-59.999518
135	180	120	320	-61.120991
136	180	116	320	-62.242462
137	160	112	320	-63.363932
138	160	108	320	-64.485399
139	150	104	320	-65.606864
140	144	100	320	-66.728326
141	144	96	320	-67.849784
142	135	92	320	-68.971240
143	128	88	320	-70.092690
144	120	84	320	-71.214136
145	120	80	320	-72.335576
146	108	76	320	-73.457008
147	100	72	320	-74.578432
148	96	68	320	-75.699844
149	90	64	320	-76.821243
150	80	60	320	-77.942624
151	72	56	320	-79.063982
152	72	52	320	-80.185310
153	64	48	320	-81.306595
154	60	44	320	-82.427818
155	54	40	320	-83.548947
156	45	36	320	-84.669924
157	40	32	320	-85.790629
158	36	28	320	-86.910771
159	25	24	320	-88.029429
160	18	20	320	-89.141519

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