The Carlson Geoid separation file (*.g99, *.egm, and soon to be *.gsf) is an ascii file containing a single entity per line.

The first line of the file is the minimum latitude value that defines the area covered by this file. This value is in decimal degrees. A negative value represents the southern hemisphere. A positive value represents the northern hemisphere.
Values range from –90.0 to 90.0.

The second line of the file is the minimum longitude value that defines the area covered by this file. This value is in decimal degrees of a 360° circle. To represent values in the western hemisphere, subtract the absolute longitude value from 360. Longitude values in the eastern hemisphere do not need to be modified.
Values range from 0.0 to 360.0.

The third line of the file is the maximum latitude value that defines the area covered by this file. This value is in decimal degrees. A negative value represents the southern hemisphere. A positive value represents the northern hemisphere.
Values range from –90.0 to 90.0.

The fourth line of the file is the maximum longitude value that defines the area covered by this file. This value is in decimal degrees of a 360° circle. To represent values in the western hemisphere, subtract the absolute longitude value from 360. Longitude values in the eastern hemisphere do not need to be modified.
Values range from 0.0 to 360.0.

The fifth line is the number of columns contained in the grid defined by this file. (xres)

The fourth line is the number of rows contained in the grid defined by this file. (yres)

Each following line contains a geoid separation value (undulation) in meters corresponding to a specific node in the grid. The order of the nodes starts at the bottom left corner of the grid, move to the right, then continue from left to right up the grid. The number of nodes will be (xres + 1) * (yres + 1).

The following is a small example:

41.7500
288.2500
43.2500
289.7500
6.0
6.0
-30.6840
-30.5320
-30.2570
-29.9000

-29.5180
-29.1890
-28.9780
-29.9890
-29.8700
-29.6330
-29.3210
-28.9890
-28.7020
-28.5190
-29.2790
-29.1880
-28.9870
-28.7210
-28.4400
-28.1970
-28.0390
-28.7650
-28.6550
-28.4320
-28.1650
-27.9090
-27.7020
-27.5700
-28.4510
-28.2820
-27.9920
-27.6900
-27.4430
-27.2630
-27.1460
-28.2290
-28.0150
-27.6870
-27.3800
-27.1520
-26.9810
-26.8350
-28.0740
-27.8760
-27.5830
-27.3250
-27.1290
-26.9330
-26.6960