

Explanation of FIN2005N00.gri geoid file

The FIN2005N00 geoid height model covers the whole of Finland. Although the model goes over the borders, users are advised not to use the model outside the Finnish borders, because the model was fitted only to the Finnish height system.

The model contains of geoid heights that can be used to transform ellipsoidal heights in the ETRF89 system to normal heights in the Finnish N2000 height system.

The model is given as a grid-file in ASCII format (FIN2005N00.gri).

The file starts with a header giving the grid borders and grid spacing:

```
59.000000    70.700000    17.480000    33.000000    0.020000    0.040000
```

Explanation:

Minimum latitude: 59.00

Maximum latitude: 70.70

Minimum longitude: 17.48

Maximum longitude: 33.00

Latitude spacing: 0.02

Longitude spacing: 0.04

All the above numbers are in degrees.

After the header follow the geoid heights for each grid point. The values are given row-wise from north to south, starting in the northwest corner and ending in the southeast corner.

Number of rows: $(70.70 - 59.00) / 0.02 + 1 = 586$

Number of columns: $(33.00 - 17.48) / 0.04 + 1 = 389$

Total number of points: $586 \times 389 = 227\,954$

The first 389 values are the values for the most northern row of the grid (latitude 70.70°). The second 389 values are for the second most northern row of the grid (latitude 70.68°).

Geoid heights are given in metres with millimetre accuracy.

Examples

Lat. 70.70°, Lon. 17.48°, N = 34.415 m (first value after the header)

Lat. 70.70°, Lon. 17.52°, N = 34.318 m (second value)

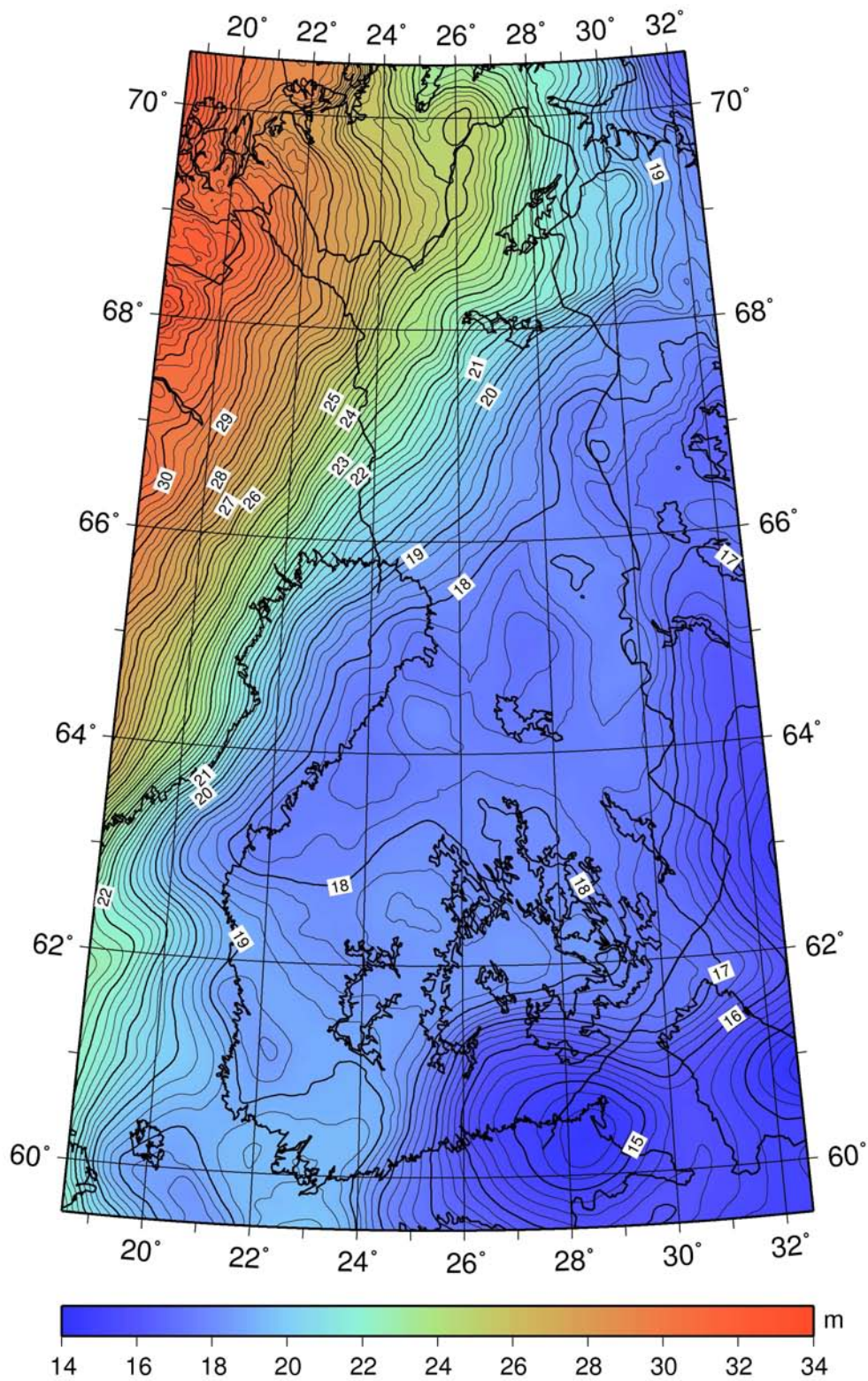
Lat. 59.00°, Lon. 33.00°, N = 15.788 m (last value in file)

A picture of the FIN2005N00 model is shown on the next page.

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Masala, 1.10.2007

FIN2005N00



FIN2005N00 geoid heights
Distance between contour lines 0.25 m
(FGI/MBK 1.10.2007)