

## Explanation of FIN2005N00.asc 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.asc).

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 as a table:

- The values are given row-wise from north to south, starting in the northwest corner and ending in the southeast corner
- The first row corresponds to latitude 70.70° and the last row corresponds to latitude 59.00°
- The first height in a row has longitude 17.48° and the last height has longitude 33.00°
- 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 geoid heights are separated by one space character

Geoid heights are given in metres with millimetre accuracy.

As an example the left upper corner:

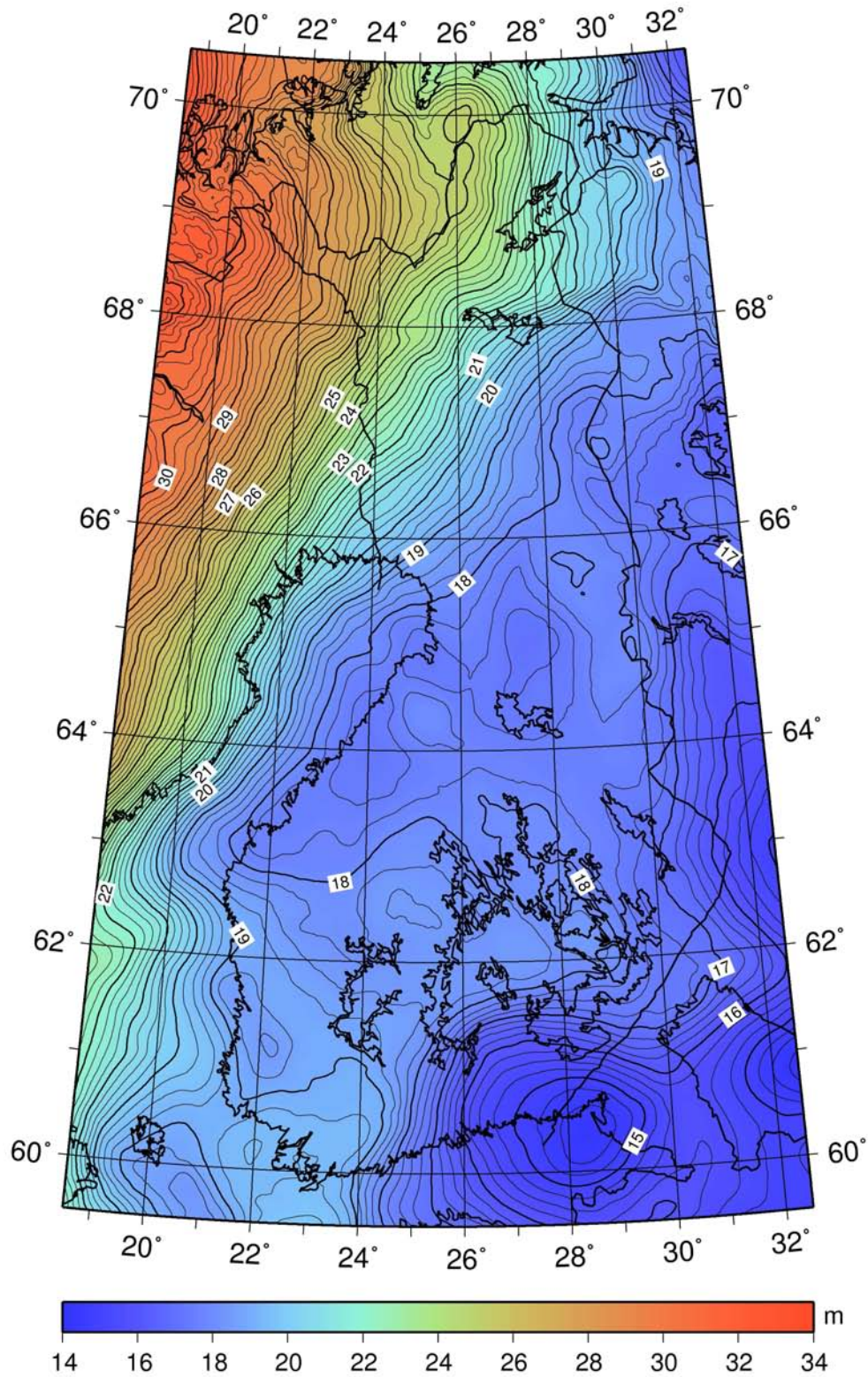
		17.48°	17.52°	17.56°	...
		↓	↓	↓	
70.70°	→	34.415	34.318	34.219	...
70.68°	→	34.433	34.336	34.235	...
70.66°	→	34.450	34.350	34.250	...
⋮		⋮	⋮	⋮	⋮

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

Mirjam Bilker-Koivula  
Finnish Geodetic Institute

Masala, 2.10.2007

# FIN2005N00



FIN2005N00 geoid heights  
 Distance between contour lines 0.25 m  
 (FGI/MBK 2.10.2007)