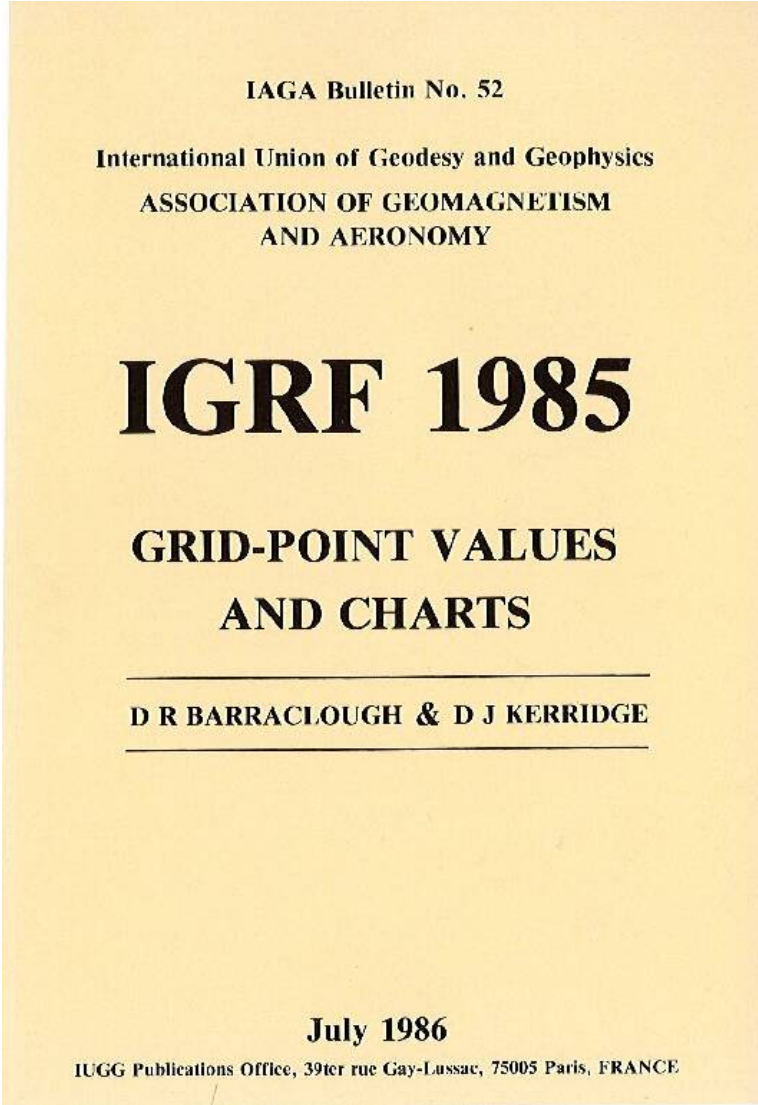

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IGRF 1985

GRID-POINT VALUES AND CHARTS

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International Geomagnetic Reference Field 1985:

Grid-point Values and Charts

D R Barraclough

D J Kerridge

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INTERNATIONAL GEOMAGNETIC REFERENCE FIELD 1985

GRID-POINT VALUES AND CHARTS

Explanation

At the Fifth General Assembly of IAGA, held in Prague in August 1985, Working Group 1 (Analysis of the main field and secular variations) of Division I undertook the revision of the International Geomagnetic Reference Field (IGRF). In order to maintain the accuracy of the IGRF, it recommended (IAGA Division I Working Group 1, 1985) the use of a fourth generation IGRF to supersede the third generation IGRF produced in 1981 (IAGA Division I Working Group 1, 1981).

The new IGRF has the following form.

1. An International Geomagnetic Reference Field for the interval 1945.0 to 1965.0 consisting of models of the main field at 1945.0, 1950.0, 1955.0 and 1960.0 (IGRF 1945, IGRF 1950, IGRF 1955 and IGRF 1960), with linear interpolation of the model coefficients for intervening dates and linear interpolation between IGRF 1960 and DGRF 1965 for the interval 1960.0 to 1965.0.
2. An International Geomagnetic Reference Field for the interval 1985.0 to 1990.0 (IGRF 1985) consisting of a model of the main

field at 1985.0 and a model of the secular variation for the interval 1985.0 to 1990.0 for use in extending the main-field model up to 1990.0.

3. A definitive International Geomagnetic Reference Field (DRGF) for the interval 1965.0 to 1980.0 consisting of models of the main field at 1965.0, 1970.0, 1975.0 and 1980.0 (DGRF 1965, DGRF 1970, DGRF 1975 and DGRF 1980), with linear interpolation of the model coefficients for intervening dates. (It should be noted that DGRF 1965, DGRF 1970 and DGRF 1975 are exactly the same as in the third generation IGRF).

4. A provisional International Geomagnetic Reference Field for the interval 1980.0 to 1985.0 (PGRF 1980) defined to be the linear interpolation of DGRF 1980 and IGRF 1985 (main field).

The DGRF models result from retrospective analysis and are definitive in the sense that further revision is not anticipated. The pre-1965 models (IGRF 1945, IGRF 1950, IGRF 1955 and IGRF 1960) will probably be replaced by definitive models in 1987. The newly adopted DGRF 1980 model replaces the former PGRF 1975 and IGRF 1980. The present PGRF 1980 will be superseded when a definitive model of the main field at 1985.0, different from IGRF 1985, is adopted.

The constituent models of the IGRF (including the forecast secular variation model) are series of spherical harmonics that describe the geomagnetic scalar potential (V) and the field components according to the expressions

$$V = a \sum_{n=1}^{10} \sum_{m=1}^{n} (a/r)^{n+1} (g_n^m \cos m\lambda + h_n^m \sin m\lambda) P_n^m (\cos \theta);$$

$$X' = (1/r)(\partial V/\partial \theta);$$

$$Y' = (-1/r \sin \theta)(\partial V/\partial \lambda);$$

$$Z' = \partial V/\partial r;$$

where X', Y' and Z' denote the northward, eastward and radially inward components, respectively, of the geomagnetic field; a denotes the mean radius (6371.2 km) of the Earth; r the distance from the Earth's centre, in km; θ the geocentric colatitude; λ the east longitude; P_n^m the associated Legendre polynomial of degree n and order m and g_n^m and h_n^m denote spherical harmonic coefficients. The units used for the field components and the spherical harmonic coefficients are nT (1nT = 1 nanotesla = 1 gamma). (In the case of the secular variation V, X', Y', Z' and the coefficients g_n^m and h_n^m are to be regarded as representing the time rates of change of the quantities referred to above). The associated Legendre polynomials are in the Schmidt quasi-normalized form (Chapman & Bartels, 1940). For the main field at 1960.0, 1965.0, 1970.0, 1975.0, 1980.0 and 1985.0 there are 120 spherical harmonic coefficients, up to and including $m = n = 10$; for the main field at 1945.0, 1950.0 and 1955.0 and for the secular variation for the interval 1985 to 1990 there are 80, up to and including $m = n = 8$. For computational purposes, it is convenient to regard these latter models as having 120 coefficients, the final 40 being zero.

It is often necessary to work in geodetic rather than geocentric coordinates and to use field components (X, Y, Z) referred to this

coordinate system. These, and the other commonly used geomagnetic elements, declination (D), inclination (I), horizontal intensity (H) and total intensity (F), can be computed from the geocentric components (X', Y', Z'). For details, see Malin & Barraclough (1981).

The coefficients of the revised IGRF are listed in the Appendix.

The main body of this Bulletin contains the following.

1. Tables containing grid-point values of D, I, H, X, Y, Z and F at 1985.0 at five-degree intervals of geographic latitude (geodetic) and longitude. The annual rate of change for the interval 1985 to 1990 is given as the second entry for each grid point. The D and I values are given to the nearest tenth of a degree and their annual rates of change to the nearest tenth of an arcminute per year. The values of the other elements are given to the nearest nT and their annual rates of change to the nearest tenth of a nT per year. For a date t between 1985 and 1990, the value of a particular element, $E(t)$, is

$$E(t) = E(1985) + \dot{E}(t - 1985),$$

where $E(1985)$ is the tabulated value of the element at 1985 and $\dot{E}$ is the tabulated value of the annual rate of change.

2. Contour charts of D, I, H, X, Y, Z and F and of the annual rates of change $\dot{D}$, $\dot{I}$, $\dot{H}$, $\dot{X}$, $\dot{Y}$, $\dot{Z}$ and $\dot{F}$. The charts cover the latitude range 80° N to 80° S, on Mercator's projection. The zero and positive contours are shown as solid lines, negative contours as dashed lines.

The tables and charts give values at the Earth's surface, using the International Ellipsoid of equatorial radius 6378.160 km and flattening 1/298.25 (International Astronomical Union, 1966). The sign convention used is that east declination and downward inclination are positive; west declination and upward inclination are negative.

To derive values for positions between grid points it is recommended that, in general, second-difference interpolation be used. It is suggested that the Gauss forward formula be used for this purpose.

Let f_{-1} , f_0 , f_1 be successive grid-point values. Then f_p , the value at a point intermediate between f_0 and f_1 and a fraction p of the distance between f_0 and f_1 from f_0 , is given by

$$f_p = f_0 + p(f_1 - f_0) + Gd,$$

where $G = 0.5p(p - 1)$,

and $d = f_1 - 2f_0 + f_{-1}$.

Interpolation should first be performed in latitude at the three appropriate grid longitudes. From these three values, interpolation should then be performed in longitude.

For some requirements linear interpolation may be satisfactory. As a guide to where the second difference, d, is unimportant, note that the maximum numerical value of G is 0.125, corresponding to $p = 0.5$.

For information about the availablility of the IGRF coefficients in computer-readable form and of computer programs for synthesizing field-component values from the models, contact one or other of the following Data Centres.

World Data Center A for Rockets and Satellites
Code 601
NASA/Goddard Space Flight Center
Greenbelt, Maryland 20771, U.S.A

World Data Center A
National Oceanic and Atmospheric Administration
NESDIS/NGDC (E/GC11)
325 Broadway
Boulder, Colorado 80303, U.S.A.

World Digital Data Centre C1
British Geological Survey
Murchison House
West Mains Road
Edinburgh EH9 3LA, U.K.

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IGRF 1985 Declination (D)

Latitude \ Longitude:	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
90	-33.6	-28.6	-23.6	-18.6	-13.6	-8.6	-3.6	1.4	6.4	11.4	16.4	21.4	26.4	31.4	36.4	41.4	46.4	51.4	56.4
	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
85	-17.1	-12.5	-8.0	-3.6	0.7	5.0	9.2	13.3	17.4	21.3	25.0	28.7	32.1	35.4	38.4	41.2	43.7	45.8	47.5
	13.1	13.2	13.3	13.4	13.5	13.7	14.0	14.2	14.5	14.9	15.3	15.7	16.2	16.7	17.3	17.9	18.6	19.2	19.7
80	-13.1	-8.8	-4.6	-0.4	3.7	7.6	11.5	15.2	18.8	22.2	25.5	28.5	31.2	33.6	35.5	36.9	37.6	37.4	36.1
	10.4	10.4	10.4	10.4	10.5	10.5	10.6	10.8	10.9	11.1	11.3	11.6	11.9	12.2	12.6	12.9	13.1	13.1	12.6
75	-11.2	-7.3	-3.4	0.4	4.1	7.7	11.2	14.5	17.6	20.6	23.3	25.7	27.8	29.4	30.4	30.8	30.2	28.6	25.6
	9.5	9.3	9.1	8.9	8.8	8.6	8.5	8.4	8.3	8.2	8.2	8.2	8.2	8.2	8.2	8.1	7.8	7.2	6.0
70	-9.8	-6.3	-2.8	0.6	3.8	7.0	10.0	12.8	15.5	18.0	20.2	22.0	23.5	24.5	24.9	24.6	23.4	21.1	17.7
	9.2	8.8	8.4	8.0	7.6	7.2	6.8	6.5	6.1	5.8	5.6	5.4	5.2	5.0	4.8	4.5	4.1	3.5	2.5
65	-8.5	-5.4	-2.4	0.6	3.4	6.0	8.6	10.9	13.1	15.1	16.8	18.2	19.2	19.8	19.8	19.2	17.8	15.5	12.3
	9.1	8.5	7.9	7.3	6.7	6.1	5.5	5.0	4.5	4.0	3.6	3.3	3.1	2.8	2.7	2.4	2.2	1.8	1.3
60	-7.1	-4.4	-1.9	0.6	2.9	5.1	7.1	9.0	10.7	12.2	13.5	14.6	15.3	15.6	15.4	14.7	13.3	11.3	8.6
	9.1	8.4	7.6	6.8	6.0	5.2	4.5	3.8	3.2	2.7	2.3	2.0	1.8	1.7	1.6	1.5	1.4	1.3	1.0
55	-5.9	-3.6	-1.4	0.7	2.6	4.3	5.9	7.3	8.6	9.7	10.6	11.3	11.8	11.9	11.7	11.0	9.8	8.1	5.9
	9.0	8.2	7.4	6.5	5.5	4.7	3.8	3.1	2.5	2.0	1.6	1.4	1.2	1.2	1.2	1.2	1.2	1.2	1.0
50	-4.9	-2.8	-0.9	0.8	2.3	3.7	4.8	5.9	6.8	7.5	8.2	8.6	8.8	8.8	8.6	8.0	7.0	5.7	3.9
	9.0	8.2	7.2	6.2	5.3	4.3	3.4	2.7	2.0	1.5	1.2	1.1	1.0	1.1	1.2	1.2	1.2	1.1	1.0
45	-4.1	-2.3	-0.7	0.8	2.0	3.1	4.0	4.7	5.3	5.8	6.2	6.4	6.4	6.3	6.0	5.5	4.7	3.7	2.5
	9.0	8.1	7.1	6.1	5.1	4.2	3.3	2.5	1.8	1.4	1.1	1.0	1.0	1.1	1.2	1.3	1.2	1.1	0.9
40	-3.7	-2.0	-0.6	0.7	1.7	2.6	3.3	3.8	4.2	4.5	4.6	4.6	4.5	4.3	3.9	3.5	2.9	2.2	1.3
	8.9	8.0	7.1	6.1	5.2	4.3	3.4	2.6	1.9	1.4	1.1	1.0	1.1	1.2	1.4	1.4	1.2	0.9	0.6
35	-3.4	-1.9	-0.7	0.4	1.3	2.1	2.7	3.1	3.4	3.5	3.4	3.2	3.0	2.6	2.3	1.9	1.5	1.0	0.5
	8.8	8.0	7.1	6.2	5.4	4.5	3.6	2.8	2.0	1.5	1.2	1.1	1.2	1.4	1.5	1.4	1.2	0.7	0.2
30	-3.5	-2.0	-0.9	0.1	1.0	1.6	2.2	2.5	2.7	2.7	2.5	2.2	1.8	1.4	1.0	0.6	0.3	0.1	-0.2
	8.6	7.8	7.1	6.3	5.6	4.8	4.0	3.1	2.3	1.7	1.3	1.2	1.4	1.5	1.6	1.5	1.1	0.5	-0.2
25	-3.7	-2.3	-1.2	-0.3	0.5	1.2	1.7	2.1	2.2	2.1	1.8	1.4	0.8	0.3	-0.1	-0.4	-0.6	-0.6	-0.7
	8.4	7.7	7.1	6.5	5.9	5.3	4.5	3.6	2.7	2.0	1.5	1.4	1.5	1.7	1.7	1.5	0.9	0.2	-0.7
20	-4.1	-2.8	-1.7	-0.7	0.0	0.7	1.3	1.7	1.8	1.6	1.2	0.7	0.0	-0.6	-1.0	-1.3	-1.3	-1.2	-1.0
	8.2	7.6	7.1	6.8	6.4	5.8	5.0	4.1	3.1	2.3	1.7	1.6	1.7	1.9	1.8	1.5	0.8	-0.2	-1.2
15	-4.8	-3.4	-2.3	-1.4	-0.5	0.2	0.9	1.3	1.4	1.2	0.7	0.0	-0.8	-1.4	-1.8	-2.0	-2.0	-1.7	-1.3
	8.1	7.6	7.3	7.1	6.9	6.4	5.7	4.6	3.5	2.6	2.0	1.8	1.8	2.0	1.9	1.4	0.6	-0.5	-1.7
10	-5.8	-4.4	-3.2	-2.2	-1.2	-0.3	0.4	0.9	1.0	0.7	0.0	-0.8	-1.6	-2.3	-2.7	-2.9	-2.7	-2.3	-1.7
	8.0	7.7	7.6	7.6	7.5	7.1	6.3	5.2	4.0	2.9	2.2	1.9	1.9	2.0	1.9	1.3	0.3	-1.0	-2.3
5	-7.2	-5.7	-4.4	-3.2	-2.0	-1.0	-0.1	0.4	0.4	0.0	-0.8	-1.7	-2.6	-3.3	-3.8	-3.8	-3.5	-3.0	-2.2
	8.1	7.9	8.0	8.2	8.3	7.9	7.1	5.8	4.4	3.1	2.3	1.9	1.9	2.0	1.7	1.0	-0.1	-1.5	-3.0
0	-9.2	-7.5	-6.0	-4.5	-3.1	-1.9	-0.9	-0.4	-0.4	-1.0	-1.9	-3.0	-4.0	-4.8	-5.1	-5.1	-4.7	-3.9	-2.9
	8.3	8.3	8.5	8.9	9.1	8.8	7.9	6.4	4.8	3.3	2.3	1.9	1.9	1.8	1.5	0.7	-0.6	-2.2	-3.6

IGRF 1985 Declination (D)

Latitude \ Longitude:	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
90	56.4	61.4	66.4	71.4	76.4	81.4	86.4	91.4	96.4	101.4	106.4	111.4	116.4	121.4	126.4	131.4	136.4	141.4	146.4
	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
85	47.5	48.7	49.3	49.3	48.6	47.2	45.1	42.6	40.0	37.5	35.4	34.0	33.3	33.5	34.5	36.3	38.8	41.9	45.6
	19.7	20.2	20.4	20.2	19.4	17.9	15.5	12.4	8.6	4.7	1.1	-1.9	-4.3	-5.9	-7.0	-7.6	-7.9	-8.0	-7.8
80	36.1	33.5	29.4	23.9	17.3	10.5	4.4	-0.4	-3.6	-5.3	-5.7	-5.1	-3.7	-1.6	1.1	4.1	7.5	11.2	15.1
	12.6	11.4	9.1	5.4	0.7	-4.0	-7.7	-10.0	-10.9	-10.9	-10.5	-9.8	-9.0	-8.3	-7.6	-7.0	-6.4	-6.0	-5.7
75	25.6	21.1	15.3	8.6	1.8	-4.2	-8.9	-12.1	-13.8	-14.3	-13.8	-12.4	-10.4	-7.9	-5.0	-1.7	1.8	5.6	9.4
	6.0	4.1	1.4	-1.7	-4.7	-6.9	-8.1	-8.4	-8.2	-7.6	-7.0	-6.3	-5.6	-5.0	-4.5	-4.0	-3.6	-3.3	-3.2
70	17.7	13.1	7.7	1.8	-3.8	-8.7	-12.3	-14.7	-16.0	-16.1	-15.4	-14.0	-12.0	-9.5	-6.6	-3.3	0.1	3.8	7.5
	2.5	1.2	-0.5	-2.3	-3.8	-4.9	-5.5	-5.7	-5.6	-5.2	-4.8	-4.4	-3.9	-3.5	-3.1	-2.8	-2.5	-2.4	-2.3
65	12.3	8.3	3.7	-1.1	-5.7	-9.6	-12.6	-14.7	-15.7	-15.8	-15.2	-13.8	-11.9	-9.5	-6.7	-3.6	-0.3	3.2	6.8
	1.3	0.5	-0.4	-1.3	-2.3	-3.0	-3.5	-3.8	-3.9	-3.8	-3.6	-3.3	-3.0	-2.7	-2.5	-2.2	-2.1	-2.1	-2.2
60	8.6	5.3	1.5	-2.3	-6.0	-9.3	-11.9	-13.7	-14.6	-14.8	-14.2	-13.0	-11.2	-9.0	-6.3	-3.4	-0.2	3.1	6.5
	1.0	0.6	0.1	-0.5	-1.1	-1.7	-2.2	-2.5	-2.7	-2.8	-2.8	-2.7	-2.6	-2.4	-2.2	-2.1	-2.1	-2.1	-2.3
55	5.9	3.3	0.3	-2.8	-5.8	-8.5	-10.7	-12.3	-13.2	-13.4	-12.9	-11.8	-10.1	-8.0	-5.5	-2.7	0.2	3.3	6.5
	1.0	0.8	0.5	0.0	-0.4	-0.9	-1.3	-1.7	-2.0	-2.3	-2.4	-2.4	-2.4	-2.3	-2.2	-2.2	-2.2	-2.3	-2.5
50	3.9	1.9	-0.4	-2.8	-5.3	-7.5	-9.4	-10.8	-11.7	-11.8	-11.4	-10.4	-8.8	-6.8	-4.5	-1.9	0.9	3.8	6.7
	1.0	0.8	0.5	0.2	-0.2	-0.5	-0.9	-1.3	-1.6	-1.9	-2.1	-2.2	-2.3	-2.3	-2.3	-2.3	-2.3	-2.5	-2.8
45	2.5	0.9	-0.8	-2.7	-4.6	-6.5	-8.1	-9.3	-10.0	-10.2	-9.8	-8.8	-7.4	-5.5	-3.2	-0.8	1.9	4.5	7.1
	0.9	0.6	0.3	0.0	-0.3	-0.5	-0.9	-1.2	-1.5	-1.7	-2.0	-2.1	-2.2	-2.3	-2.3	-2.4	-2.5	-2.7	-3.0
40	1.3	0.2	-1.0	-2.4	-3.9	-5.4	-6.7	-7.8	-8.4	-8.5	-8.1	-7.2	-5.7	-3.9	-1.8	0.6	3.0	5.4	7.6
	0.6	0.2	-0.1	-0.4	-0.6	-0.8	-1.0	-1.2	-1.5	-1.7	-1.9	-2.0	-2.1	-2.2	-2.2	-2.4	-2.5	-2.8	-3.1
35	0.5	-0.2	-1.1	-2.1	-3.2	-4.4	-5.4	-6.2	-6.7	-6.8	-6.3	-5.4	-4.0	-2.2	-0.2	2.0	4.2	6.4	8.3
	0.2	-0.3	-0.7	-1.0	-1.2	-1.3	-1.4	-1.5	-1.6	-1.7	-1.8	-1.9	-1.9	-1.9	-2.0	-2.2	-2.5	-2.8	-3.2
30	-0.2	-0.5	-1.0	-1.7	-2.5	-3.3	-4.2	-4.8	-5.1	-5.1	-4.6	-3.6	-2.2	-0.5	1.5	3.5	5.5	7.4	9.0
	-0.2	-0.8	-1.3	-1.6	-1.8	-1.8	-1.8	-1.7	-1.7	-1.7	-1.7	-1.6	-1.6	-1.6	-1.7	-1.9	-2.2	-2.7	-3.1
25	-0.7	-0.7	-0.9	-1.3	-1.8	-2.4	-3.0	-3.4	-3.6	-3.4	-2.8	-1.8	-0.4	1.2	3.1	5.0	6.8	8.3	9.6
	-0.7	-1.4	-2.0	-2.3	-2.4	-2.3	-2.2	-2.0	-1.9	-1.7	-1.5	-1.4	-1.2	-1.1	-1.2	-1.4	-1.9	-2.5	-3.0
20	-1.0	-0.9	-0.8	-0.9	-1.1	-1.5	-1.9	-2.1	-2.2	-1.8	-1.2	-0.1	1.2	2.8	4.5	6.3	7.8	9.1	10.0
	-1.2	-2.1	-2.7	-3.0	-3.0	-2.8	-2.5	-2.2	-1.9	-1.6	-1.3	-1.0	-0.7	-0.6	-0.6	-0.9	-1.5	-2.2	-2.9
15	-1.3	-0.9	-0.6	-0.5	-0.5	-0.7	-0.9	-1.0	-0.9	-0.4	0.3	1.4	2.7	4.2	5.8	7.3	8.7	9.7	10.3
	-1.7	-2.7	-3.4	-3.6	-3.5	-3.2	-2.7	-2.3	-1.9	-1.5	-1.1	-0.6	-0.3	-0.1	-0.1	-0.5	-1.2	-2.0	-2.8
10	-1.7	-1.1	-0.5	-0.2	0.0	0.0	0.0	0.1	0.3	0.8	1.6	2.7	4.0	5.4	6.8	8.2	9.3	10.1	10.5
	-2.3	-3.4	-4.0	-4.2	-3.9	-3.4	-2.7	-2.2	-1.6	-1.2	-0.7	-0.2	0.2	0.4	0.3	-0.2	-1.0	-1.8	-2.6
5	-2.2	-1.3	-0.6	0.0	0.4	0.6	0.7	0.9	1.3	1.9	2.7	3.8	5.0	6.3	7.6	8.8	9.7	10.4	10.7
	-3.0	-4.0	-4.6	-4.6	-4.1	-3.4	-2.5	-1.8	-1.2	-0.8	-0.3	0.1	0.5	0.7	0.5	0.0	-0.8	-1.7	-2.5
0	-2.9	-1.8	-0.8	0.0	0.6	1.0	1.3	1.6	2.1	2.7	3.6	4.7	5.9	7.1	8.2	9.3	10.1	10.7	10.8
	-3.6	-4.7	-5.1	-4.9	-4.1	-3.1	-2.2	-1.3	-0.7	-0.3	0.1	0.5	0.7	0.8	0.6	0.1	-0.7	-1.6	-2.2

IGRF 1985 Declination (D)

Latitude \ Longitude:	180	-175	-170	-165	-160	-155	-150	-145	-140	-135	-130	-125	-120	-115	-110	-105	-100	-95	-90
90	146.4	151.4	156.4	161.4	166.4	171.4	176.4	-178.6	-173.6	-168.6	-163.6	-158.6	-153.6	-148.6	-143.6	-138.6	-133.6	-128.6	-123.6
	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
85	45.6	50.0	55.0	60.6	67.1	74.4	82.9	92.9	104.8	118.8	135.2	153.2	171.4	-171.9	-157.3	-144.8	-134.1	-124.7	-116.4
	-7.8	-7.5	-7.0	-6.3	-5.2	-3.6	-1.1	2.7	8.5	16.7	26.9	36.3	41.7	42.1	39.2	35.2	31.2	27.7	24.8
80	15.1	19.2	23.5	27.9	32.4	37.1	42.0	47.0	52.3	57.9	64.0	71.0	79.8	93.3	122.8	-169.7	-129.7	-113.5	-103.8
	-5.7	-5.5	-5.3	-5.3	-5.4	-5.7	-6.1	-6.7	-7.6	-8.7	-10.3	-12.6	-15.3	-16.4	11.9	113.9	67.9	41.6	29.9
75	9.4	13.5	17.5	21.7	25.8	29.9	34.0	38.0	41.8	45.5	49.0	52.1	54.6	55.8	54.3	43.1	-12.9	-63.8	-73.6
	-3.2	-3.1	-3.1	-3.3	-3.6	-4.0	-4.5	-5.3	-6.3	-7.7	-9.5	-12.2	-16.4	-23.7	-38.3	-76.8	-81.8	30.1	28.8
70	7.5	11.4	15.2	19.1	22.8	26.5	29.9	33.2	36.2	38.8	40.9	42.4	42.9	41.7	37.7	28.5	10.5	-15.0	-36.4
	-2.3	-2.4	-2.6	-2.9	-3.4	-4.0	-4.7	-5.5	-6.6	-7.9	-9.6	-11.8	-14.9	-19.2	-25.4	-33.1	-35.2	-17.3	4.6
65	6.8	10.4	14.0	17.5	20.9	24.0	26.9	29.6	31.8	33.6	34.8	35.3	34.8	32.9	28.9	22.1	11.5	-2.2	-16.7
	-2.2	-2.4	-2.7	-3.2	-3.7	-4.4	-5.2	-6.0	-7.0	-8.1	-9.3	-10.9	-12.8	-15.2	-17.9	-20.3	-20.4	-15.5	-6.1
60	6.5	9.9	13.2	16.3	19.3	22.0	24.4	26.5	28.1	29.3	29.9	29.8	28.9	26.8	23.4	18.2	11.0	2.0	-7.9
	-2.3	-2.6	-3.0	-3.6	-4.2	-4.8	-5.5	-6.2	-7.0	-7.7	-8.5	-9.4	-10.4	-11.6	-12.9	-13.9	-14.0	-12.3	-8.2
55	6.5	9.6	12.6	15.4	17.9	20.2	22.2	23.8	25.0	25.7	25.9	25.5	24.5	22.6	19.7	15.6	10.3	3.8	-3.5
	-2.5	-2.9	-3.3	-3.9	-4.5	-5.1	-5.6	-6.1	-6.5	-6.9	-7.2	-7.6	-8.0	-8.6	-9.4	-10.2	-10.6	-10.2	-8.5
50	6.7	9.5	12.1	14.6	16.7	18.6	20.2	21.4	22.3	22.7	22.7	22.2	21.2	19.5	17.1	13.9	9.7	4.7	-1.0
	-2.8	-3.2	-3.6	-4.1	-4.6	-5.1	-5.5	-5.7	-5.8	-5.8	-5.7	-5.7	-5.9	-6.2	-6.8	-7.7	-8.5	-9.0	-8.5
45	7.1	9.6	11.8	13.9	15.7	17.2	18.4	19.3	19.9	20.2	20.0	19.5	18.6	17.2	15.2	12.6	9.2	5.2	0.5
	-3.0	-3.4	-3.8	-4.2	-4.6	-4.9	-5.1	-5.1	-4.9	-4.6	-4.3	-4.1	-4.0	-4.3	-4.9	-6.0	-7.1	-8.1	-8.4
40	7.6	9.7	11.6	13.3	14.7	15.9	16.8	17.5	17.9	18.0	17.8	17.3	16.5	15.3	13.7	11.5	8.8	5.4	1.5
	-3.1	-3.5	-3.9	-4.2	-4.5	-4.6	-4.6	-4.4	-4.0	-3.5	-3.0	-2.6	-2.5	-2.7	-3.5	-4.6	-6.1	-7.4	-8.3
35	8.3	10.0	11.5	12.7	13.7	14.6	15.2	15.7	16.0	16.0	15.8	15.4	14.7	13.7	12.4	10.6	8.4	5.6	2.3
	-3.2	-3.6	-3.9	-4.1	-4.3	-4.2	-4.0	-3.7	-3.2	-2.5	-1.9	-1.4	-1.2	-1.5	-2.3	-3.6	-5.2	-6.8	-8.1
30	9.0	10.3	11.3	12.1	12.7	13.3	13.7	14.0	14.2	14.2	14.0	13.7	13.1	12.3	11.3	9.9	8.0	5.7	2.8
	-3.1	-3.6	-3.9	-4.0	-4.0	-3.8	-3.5	-3.0	-2.4	-1.7	-1.0	-0.4	-0.2	-0.4	-1.3	-2.6	-4.4	-6.2	-7.7
25	9.6	10.5	11.1	11.5	11.8	12.0	12.3	12.5	12.6	12.6	12.4	12.1	11.7	11.1	10.3	9.3	7.8	5.8	3.4
	-3.0	-3.5	-3.8	-3.8	-3.6	-3.4	-2.9	-2.4	-1.8	-1.1	-0.3	0.3	0.6	0.4	-0.4	-1.8	-3.6	-5.6	-7.3
20	10.0	10.6	10.8	10.8	10.9	10.9	11.0	11.1	11.2	11.1	11.0	10.8	10.5	10.1	9.6	8.8	7.6	6.0	3.9
	-2.9	-3.4	-3.6	-3.6	-3.3	-2.9	-2.4	-1.9	-1.3	-0.6	0.2	0.8	1.2	1.1	0.4	-1.0	-2.9	-4.9	-6.7
15	10.3	10.6	10.5	10.3	10.1	10.0	10.0	10.0	10.1	10.0	9.9	9.7	9.6	9.4	9.0	8.5	7.6	6.3	4.5
	-2.8	-3.3	-3.4	-3.3	-2.9	-2.4	-1.9	-1.4	-0.8	-0.2	0.6	1.3	1.7	1.7	1.0	-0.3	-2.2	-4.3	-6.2
10	10.5	10.5	10.3	9.9	9.6	9.4	9.3	9.3	9.3	9.2	9.1	9.0	8.9	8.9	8.7	8.4	7.8	6.7	5.1
	-2.6	-3.1	-3.2	-2.9	-2.4	-1.9	-1.4	-0.9	-0.4	0.2	0.9	1.6	2.1	2.2	1.6	0.3	-1.6	-3.7	-5.8
5	10.7	10.6	10.2	9.8	9.4	9.2	9.0	9.0	8.9	8.9	8.8	8.7	8.7	8.7	8.7	8.5	8.1	7.2	5.8
	-2.5	-2.9	-2.9	-2.5	-2.0	-1.4	-0.8	-0.4	0.0	0.6	1.2	1.9	2.5	2.6	2.0	0.7	-1.1	-3.3	-5.5
0	10.8	10.7	10.4	9.9	9.5	9.3	9.1	9.1	9.0	8.9	8.8	8.7	8.7	8.8	8.9	8.9	8.6	7.8	6.6
	-2.2	-2.6	-2.5	-2.1	-1.5	-0.9	-0.3	0.1	0.5	0.9	1.5	2.2	2.8	2.9	2.3	1.1	-0.8	-3.1	-5.4

IGRF 1985 Declination (D)

Latitude \ Longitude:	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
90	-123.6	-118.6	-113.6	-108.6	-103.6	-98.6	-93.6	-88.6	-83.6	-78.6	-73.6	-68.6	-63.6	-58.6	-53.6	-48.6	-43.6	-38.6	-33.6
	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0	23.0
85	-116.4	-108.9	-101.9	-95.3	-89.1	-83.2	-77.4	-71.9	-66.4	-61.2	-56.0	-50.9	-45.8	-40.9	-36.0	-31.2	-26.4	-21.7	-17.1
	24.8	22.5	20.6	19.1	17.8	16.8	16.0	15.4	14.8	14.4	14.0	13.7	13.5	13.3	13.2	13.1	13.1	13.1	13.1
80	-103.8	-96.3	-90.0	-84.2	-78.8	-73.6	-68.6	-63.6	-58.8	-54.0	-49.3	-44.6	-39.9	-35.3	-30.8	-26.3	-21.8	-17.4	-13.1
	29.9	23.7	20.0	17.5	15.8	14.5	13.6	12.9	12.3	11.9	11.5	11.2	11.0	10.8	10.7	10.6	10.5	10.4	10.4
75	-73.6	-74.8	-73.3	-70.8	-67.6	-64.1	-60.3	-56.4	-52.4	-48.3	-44.2	-40.0	-35.9	-31.7	-27.5	-23.4	-19.3	-15.2	-11.2
	28.8	23.7	20.1	17.7	15.9	14.7	13.7	13.0	12.4	11.9	11.4	11.1	10.8	10.5	10.3	10.1	9.9	9.7	9.5
70	-36.4	-48.1	-53.5	-55.3	-55.1	-53.7	-51.6	-48.9	-45.9	-42.6	-39.2	-35.6	-32.0	-28.3	-24.5	-20.8	-17.1	-13.5	-9.8
	4.6	13.7	16.0	16.0	15.4	14.8	14.1	13.5	13.0	12.5	12.1	11.7	11.3	10.9	10.6	10.3	9.9	9.5	9.2
65	-16.7	-28.5	-36.5	-41.1	-43.3	-43.8	-43.1	-41.6	-39.5	-37.0	-34.2	-31.2	-28.1	-24.8	-21.5	-18.2	-14.9	-11.7	-8.5
	-6.1	2.8	8.5	11.5	12.8	13.3	13.4	13.2	13.0	12.7	12.4	12.1	11.7	11.4	11.0	10.6	10.1	9.6	9.1
60	-7.9	-17.3	-24.9	-30.4	-33.7	-35.4	-35.8	-35.2	-33.8	-32.0	-29.7	-27.1	-24.4	-21.5	-18.6	-15.7	-12.8	-9.9	-7.1
	-8.2	-2.8	2.4	6.3	8.9	10.6	11.5	12.0	12.2	12.2	12.2	12.0	11.8	11.5	11.2	10.8	10.3	9.7	9.1
55	-3.5	-10.9	-17.5	-22.9	-26.7	-29.0	-30.0	-30.0	-29.2	-27.8	-25.9	-23.7	-21.2	-18.7	-16.1	-13.5	-10.9	-8.3	-5.9
	-8.5	-5.4	-1.6	2.0	5.1	7.4	9.0	10.1	10.7	11.1	11.4	11.5	11.5	11.4	11.2	10.8	10.4	9.8	9.0
50	-1.0	-7.0	-12.8	-17.7	-21.6	-24.2	-25.6	-26.0	-25.6	-24.5	-22.9	-20.9	-18.7	-16.4	-14.0	-11.7	-9.3	-7.0	-4.9
	-8.5	-6.9	-4.3	-1.2	1.9	4.4	6.4	7.9	8.9	9.7	10.3	10.7	11.0	11.1	11.0	10.8	10.4	9.8	9.0
45	0.5	-4.5	-9.5	-14.1	-17.9	-20.6	-22.3	-23.0	-22.9	-22.0	-20.6	-18.9	-16.8	-14.7	-12.5	-10.3	-8.1	-6.1	-4.1
	-8.4	-7.8	-6.0	-3.5	-0.8	1.8	4.0	5.7	7.0	8.1	9.0	9.7	10.2	10.6	10.8	10.7	10.4	9.8	9.0
40	1.5	-2.8	-7.2	-11.5	-15.1	-18.0	-19.9	-20.8	-20.9	-20.3	-19.1	-17.5	-15.6	-13.6	-11.5	-9.4	-7.4	-5.4	-3.7
	-8.3	-8.3	-7.2	-5.3	-2.9	-0.5	1.7	3.6	5.1	6.4	7.6	8.6	9.5	10.1	10.5	10.5	10.3	9.7	8.9
35	2.3	-1.5	-5.5	-9.4	-13.0	-15.9	-18.0	-19.2	-19.5	-19.1	-18.1	-16.6	-14.9	-13.0	-10.9	-8.9	-7.0	-5.1	-3.4
	-8.1	-8.5	-8.0	-6.6	-4.6	-2.5	-0.4	1.5	3.2	4.7	6.1	7.4	8.6	9.5	10.1	10.3	10.1	9.6	8.8
30	2.8	-0.5	-4.1	-7.8	-11.2	-14.2	-16.5	-18.0	-18.6	-18.5	-17.7	-16.4	-14.7	-12.8	-10.8	-8.8	-6.9	-5.1	-3.5
	-7.7	-8.5	-8.5	-7.5	-6.0	-4.1	-2.2	-0.4	1.3	3.0	4.6	6.3	7.7	8.9	9.7	10.0	9.9	9.4	8.6
25	3.4	0.4	-2.9	-6.3	-9.8	-12.8	-15.3	-17.1	-18.0	-18.2	-17.6	-16.5	-15.0	-13.2	-11.1	-9.1	-7.1	-5.3	-3.7
	-7.3	-8.4	-8.7	-8.2	-7.1	-5.6	-3.9	-2.2	-0.5	1.3	3.2	5.1	6.9	8.3	9.3	9.7	9.6	9.1	8.4
20	3.9	1.3	-1.8	-5.1	-8.5	-11.7	-14.4	-16.4	-17.7	-18.2	-17.9	-17.0	-15.6	-13.8	-11.8	-9.7	-7.6	-5.7	-4.1
	-6.7	-8.1	-8.7	-8.6	-7.9	-6.8	-5.4	-3.9	-2.2	-0.3	1.8	4.0	6.0	7.8	8.9	9.4	9.3	8.9	8.2
15	4.5	2.1	-0.7	-3.9	-7.3	-10.6	-13.6	-16.0	-17.6	-18.4	-18.5	-17.8	-16.6	-14.9	-12.8	-10.6	-8.4	-6.5	-4.8
	-6.2	-7.8	-8.7	-8.9	-8.6	-7.8	-6.7	-5.4	-3.7	-1.7	0.5	2.9	5.3	7.2	8.5	9.2	9.1	8.7	8.1
10	5.1	3.0	0.3	-2.9	-6.3	-9.7	-12.9	-15.6	-17.6	-18.8	-19.2	-18.8	-17.8	-16.1	-14.1	-11.9	-9.6	-7.6	-5.8
	-5.8	-7.6	-8.7	-9.2	-9.2	-8.7	-7.8	-6.6	-5.0	-3.0	-0.6	2.0	4.5	6.7	8.2	9.0	9.0	8.6	8.0
5	5.8	3.8	1.2	-1.9	-5.3	-8.9	-12.3	-15.2	-17.6	-19.2	-19.9	-19.9	-19.1	-17.7	-15.7	-13.5	-11.2	-9.1	-7.2
	-5.5	-7.4	-8.8	-9.6	-9.8	-9.5	-8.8	-7.7	-6.2	-4.2	-1.7	1.0	3.8	6.2	7.9	8.8	8.9	8.6	8.1
0	6.6	4.7	2.2	-0.9	-4.4	-8.1	-11.7	-14.9	-17.6	-19.5	-20.6	-21.0	-20.5	-19.3	-17.6	-15.5	-13.2	-11.1	-9.2
	-5.4	-7.4	-9.0	-9.9	-10.3	-10.2	-9.6	-8.7	-7.2	-5.2	-2.7	0.1	3.0	5.5	7.5	8.5	8.8	8.6	8.3

IGRF 1985 Declination (D)

Latitude \ Longitude:	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	-9.2	-7.5	-6.0	-4.5	-3.1	-1.9	-0.9	-0.4	-0.4	-1.0	-1.9	-3.0	-4.0	-4.8	-5.1	-5.1	-4.7	-3.9	-2.9
	8.3	8.3	8.5	8.9	9.1	8.8	7.9	6.4	4.8	3.3	2.3	1.9	1.9	1.8	1.5	0.7	-0.6	-2.2	-3.6
-5	-11.6	-9.8	-8.0	-6.3	-4.6	-3.1	-2.0	-1.5	-1.6	-2.4	-3.6	-4.9	-6.0	-6.8	-7.1	-6.9	-6.2	-5.2	-4.0
	8.6	8.7	9.2	9.8	10.1	9.8	8.7	6.9	5.0	3.3	2.2	1.7	1.7	1.6	1.2	0.3	-1.1	-2.7	-4.2
-10	-14.5	-12.6	-10.5	-8.5	-6.5	-4.7	-3.6	-3.2	-3.6	-4.7	-6.2	-7.7	-8.8	-9.5	-9.7	-9.3	-8.5	-7.2	-5.6
	8.8	9.2	9.9	10.7	11.1	10.6	9.2	7.1	4.9	3.0	1.9	1.4	1.4	1.3	0.9	-0.1	-1.6	-3.2	-4.7
-15	-17.8	-15.8	-13.6	-11.3	-9.0	-7.2	-6.1	-6.0	-6.8	-8.3	-10.0	-11.6	-12.8	-13.4	-13.3	-12.7	-11.5	-9.8	-7.9
	8.8	9.5	10.5	11.4	11.7	11.0	9.2	6.7	4.2	2.3	1.2	1.0	1.1	1.1	0.7	-0.3	-1.8	-3.5	-4.9
-20	-21.0	-19.1	-16.9	-14.5	-12.3	-10.6	-9.8	-10.2	-11.4	-13.3	-15.2	-16.8	-17.9	-18.3	-18.0	-17.0	-15.5	-13.4	-11.0
	8.7	9.6	10.6	11.4	11.5	10.4	8.2	5.3	2.8	1.1	0.4	0.4	0.8	1.0	0.7	-0.3	-1.8	-3.4	-4.8
-25	-23.7	-22.1	-20.2	-18.1	-16.2	-14.9	-14.8	-15.7	-17.5	-19.6	-21.6	-23.1	-24.0	-24.2	-23.7	-22.4	-20.5	-18.1	-15.2
	8.6	9.5	10.3	10.6	10.1	8.3	5.7	2.8	0.6	-0.6	-0.7	-0.3	0.4	0.8	0.7	-0.1	-1.5	-3.1	-4.5
-30	-25.3	-24.2	-22.8	-21.3	-20.1	-19.7	-20.4	-21.9	-24.0	-26.2	-28.2	-29.7	-30.5	-30.6	-30.0	-28.6	-26.5	-23.8	-20.4
	8.8	9.4	9.6	9.0	7.5	5.0	2.1	-0.4	-2.0	-2.5	-2.2	-1.3	-0.4	0.3	0.4	-0.2	-1.3	-2.8	-4.1
-35	-25.7	-25.1	-24.3	-23.7	-23.5	-24.1	-25.4	-27.5	-29.8	-32.2	-34.2	-35.8	-36.7	-36.9	-36.4	-35.2	-33.2	-30.4	-26.9
	9.2	9.4	8.7	7.1	4.6	1.6	-1.3	-3.5	-4.6	-4.7	-4.0	-3.0	-1.9	-1.1	-0.7	-1.0	-1.8	-2.9	-4.0
-40	-25.0	-24.9	-24.9	-25.2	-25.9	-27.3	-29.3	-31.7	-34.3	-36.8	-39.1	-40.8	-42.1	-42.7	-42.6	-41.8	-40.2	-37.8	-34.4
	9.6	9.2	7.8	5.3	2.2	-1.0	-3.8	-5.7	-6.6	-6.7	-6.1	-5.2	-4.2	-3.3	-2.8	-2.7	-3.1	-3.9	-4.7
-45	-23.6	-24.1	-24.9	-25.9	-27.5	-29.5	-32.0	-34.7	-37.5	-40.3	-42.8	-44.9	-46.6	-47.7	-48.3	-48.2	-47.3	-45.6	-42.9
	9.5	8.6	6.7	4.0	0.8	-2.4	-5.1	-6.9	-8.0	-8.2	-8.0	-7.4	-6.6	-5.9	-5.4	-5.2	-5.3	-5.7	-6.3
-50	-22.0	-23.2	-24.6	-26.4	-28.5	-31.0	-33.8	-36.8	-39.9	-42.9	-45.7	-48.2	-50.4	-52.1	-53.4	-54.2	-54.3	-53.7	-52.2
	8.7	7.6	5.6	3.0	0.1	-2.8	-5.3	-7.1	-8.3	-9.0	-9.1	-8.9	-8.5	-8.1	-7.8	-7.6	-7.6	-7.8	-8.3
-55	-20.7	-22.4	-24.5	-26.8	-29.4	-32.2	-35.3	-38.5	-41.8	-45.0	-48.1	-51.0	-53.7	-56.1	-58.2	-59.8	-61.0	-61.7	-61.7
	7.5	6.4	4.7	2.4	0.0	-2.4	-4.6	-6.4	-7.8	-8.6	-9.1	-9.3	-9.3	-9.2	-9.1	-9.0	-9.1	-9.3	-9.7
-60	-19.6	-22.0	-24.5	-27.2	-30.1	-33.3	-36.6	-40.0	-43.5	-46.9	-50.3	-53.7	-56.8	-59.8	-62.6	-65.1	-67.4	-69.4	-70.9
	6.1	5.3	3.9	2.2	0.3	-1.6	-3.4	-5.0	-6.3	-7.3	-8.0	-8.5	-8.8	-8.9	-9.0	-9.1	-9.2	-9.4	-9.7
-65	-19.1	-21.8	-24.7	-27.8	-31.1	-34.4	-37.9	-41.5	-45.2	-48.9	-52.6	-56.3	-59.9	-63.4	-66.8	-70.2	-73.4	-76.6	-79.6
	4.9	4.3	3.3	2.2	0.8	-0.6	-2.0	-3.2	-4.3	-5.3	-6.0	-6.6	-7.0	-7.3	-7.5	-7.7	-7.8	-7.9	-8.2
-70	-19.0	-22.1	-25.4	-28.8	-32.3	-35.9	-39.6	-43.4	-47.3	-51.2	-55.1	-59.1	-63.1	-67.1	-71.1	-75.2	-79.2	-83.3	-87.5
	3.9	3.5	2.9	2.1	1.3	0.4	-0.5	-1.4	-2.3	-3.0	-3.6	-4.2	-4.6	-4.9	-5.1	-5.3	-5.5	-5.6	-5.6
-75	-19.5	-23.0	-26.6	-30.3	-34.1	-38.0	-41.9	-45.9	-50.0	-54.2	-58.4	-62.7	-67.0	-71.4	-75.9	-80.5	-85.1	-89.9	-94.8
	3.0	2.8	2.4	2.1	1.6	1.1	0.5	0.0	-0.5	-1.0	-1.4	-1.8	-2.1	-2.4	-2.6	-2.8	-2.9	-3.0	-3.0
-80	-20.8	-24.7	-28.7	-32.8	-36.9	-41.0	-45.3	-49.5	-53.9	-58.3	-62.8	-67.4	-72.1	-76.8	-81.6	-86.5	-91.6	-96.7	-102.0
	2.2	2.1	2.0	1.8	1.6	1.4	1.1	0.9	0.6	0.4	0.2	-0.1	-0.3	-0.4	-0.6	-0.7	-0.8	-0.8	-0.9
-85	-23.3	-27.7	-32.1	-36.6	-41.1	-45.6	-50.2	-54.8	-59.5	-64.2	-69.0	-73.9	-78.8	-83.7	-88.7	-93.8	-99.0	-104.2	-109.5
	1.5	1.4	1.4	1.4	1.3	1.2	1.2	1.1	1.0	0.9	0.9	0.8	0.7	0.6	0.6	0.5	0.5	0.4	0.4
-90	-27.4	-32.4	-37.4	-42.4	-47.4	-52.4	-57.4	-62.4	-67.4	-72.4	-77.4	-82.4	-87.4	-92.4	-97.4	-102.4	-107.4	-112.4	-117.4
	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

IGRF 1985 Declination (D)

Latitude \ Longitude:	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
0	-2.9	-1.8	-0.8	0.0	0.6	1.0	1.3	1.6	2.1	2.7	3.6	4.7	5.9	7.1	8.2	9.3	10.1	10.7	10.8
	-3.6	-4.7	-5.1	-4.9	-4.1	-3.1	-2.2	-1.3	-0.7	-0.3	0.1	0.5	0.7	0.8	0.6	0.1	-0.7	-1.6	-2.2
-5	-4.0	-2.6	-1.3	-0.2	0.6	1.3	1.7	2.2	2.7	3.4	4.4	5.4	6.6	7.7	8.8	9.8	10.5	11.0	11.2
	-4.2	-5.2	-5.4	-5.0	-4.0	-2.7	-1.6	-0.7	-0.1	0.3	0.5	0.7	0.9	0.9	0.6	0.1	-0.6	-1.4	-1.9
-10	-5.6	-3.9	-2.2	-0.8	0.4	1.2	1.9	2.5	3.2	4.0	5.0	6.1	7.2	8.3	9.4	10.3	11.0	11.5	11.7
	-4.7	-5.5	-5.6	-4.9	-3.6	-2.2	-0.9	0.0	0.5	0.8	0.9	0.9	0.9	0.8	0.6	0.1	-0.5	-1.1	-1.5
-15	-7.9	-5.7	-3.7	-1.8	-0.3	0.9	1.8	2.7	3.5	4.5	5.5	6.7	7.9	9.0	10.1	11.0	11.8	12.2	12.5
	-4.9	-5.7	-5.5	-4.6	-3.1	-1.6	-0.2	0.7	1.1	1.2	1.1	1.0	0.9	0.8	0.6	0.2	-0.2	-0.7	-1.0
-20	-11.0	-8.4	-5.8	-3.4	-1.4	0.2	1.5	2.7	3.8	4.9	6.1	7.4	8.7	9.9	11.0	12.0	12.7	13.3	13.6
	-4.8	-5.5	-5.2	-4.2	-2.6	-1.0	0.3	1.2	1.5	1.5	1.3	1.1	0.9	0.8	0.6	0.4	0.2	-0.1	-0.4
-25	-15.2	-12.0	-8.8	-5.8	-3.2	-1.0	0.9	2.4	3.9	5.3	6.7	8.2	9.6	10.9	12.2	13.2	14.0	14.6	15.0
	-4.5	-5.1	-4.8	-3.7	-2.2	-0.5	0.7	1.5	1.7	1.6	1.3	1.0	0.9	0.8	0.8	0.8	0.7	0.6	0.5
-30	-20.4	-16.7	-12.8	-9.1	-5.7	-2.8	-0.2	1.9	3.9	5.7	7.5	9.2	10.8	12.3	13.6	14.8	15.7	16.3	16.7
	-4.1	-4.7	-4.5	-3.5	-2.0	-0.4	0.7	1.4	1.6	1.4	1.1	0.9	0.9	1.0	1.2	1.4	1.6	1.5	1.4
-35	-26.9	-22.7	-18.3	-13.7	-9.4	-5.4	-2.0	1.0	3.7	6.1	8.3	10.4	12.3	14.0	15.5	16.7	17.7	18.4	18.8
	-4.0	-4.7	-4.6	-3.7	-2.3	-0.9	0.2	0.9	1.0	0.9	0.8	0.8	1.0	1.4	1.8	2.3	2.6	2.7	2.6
-40	-34.4	-30.2	-25.3	-20.0	-14.6	-9.5	-4.8	-0.6	3.1	6.4	9.3	11.9	14.1	16.1	17.8	19.2	20.2	20.9	21.4
	-4.7	-5.3	-5.3	-4.7	-3.5	-2.1	-1.0	-0.3	0.0	0.1	0.3	0.7	1.2	2.0	2.8	3.4	3.9	4.0	3.8
-45	-42.9	-39.2	-34.4	-28.6	-22.3	-15.7	-9.3	-3.4	1.8	6.4	10.3	13.7	16.5	18.9	20.8	22.2	23.3	24.1	24.5
	-6.3	-6.9	-7.1	-6.7	-5.9	-4.6	-3.4	-2.4	-1.7	-1.0	-0.3	0.7	1.8	2.9	4.0	4.9	5.4	5.5	5.2
-50	-52.2	-49.5	-45.7	-40.3	-33.6	-25.7	-17.2	-8.7	-0.9	5.9	11.5	16.1	19.7	22.6	24.8	26.4	27.5	28.2	28.5
	-8.3	-8.9	-9.5	-9.8	-9.7	-9.0	-7.8	-6.2	-4.5	-2.7	-0.9	1.0	2.9	4.5	5.9	6.8	7.3	7.2	6.8
-55	-61.7	-60.8	-58.8	-55.3	-50.0	-42.3	-32.2	-20.1	-7.5	3.7	12.9	19.7	24.7	28.3	30.8	32.4	33.5	34.1	34.3
	-9.7	-10.4	-11.4	-12.6	-14.0	-15.3	-15.7	-14.2	-10.7	-6.0	-1.4	2.4	5.4	7.5	8.9	9.6	9.7	9.4	8.6
-60	-70.9	-72.0	-72.5	-72.2	-70.6	-67.1	-60.4	-48.4	-29.0	-5.0	14.9	27.6	34.9	39.2	41.6	42.9	43.5	43.6	43.4
	-9.7	-10.4	-11.3	-12.8	-15.1	-18.7	-24.0	-30.4	-31.7	-18.7	-1.6	8.2	12.5	14.0	14.4	14.0	13.2	12.1	10.8
-65	-79.6	-82.5	-85.4	-88.1	-90.7	-93.1	-95.4	-97.5	-99.1	-98.9	53.6	69.0	68.4	67.0	65.3	63.6	61.9	60.3	58.7
	-8.2	-8.5	-9.1	-9.9	-11.3	-13.5	-17.2	-24.0	-39.3	-94.5	306.6	70.9	41.9	30.7	24.6	20.5	17.5	15.0	12.8
-70	-87.5	-91.8	-96.3	-101.0	-106.1	-111.8	-118.4	-126.4	-136.6	-150.2	-168.8	168.1	144.6	125.6	111.8	101.7	94.1	88.2	83.3
	-5.6	-5.7	-5.9	-6.1	-6.3	-6.6	-7.0	-7.1	-6.7	-4.3	2.3	13.0	21.5	23.3	21.4	18.6	15.9	13.5	11.5
-75	-94.8	-100.0	-105.3	-111.0	-117.0	-123.5	-130.6	-138.4	-147.6	-156.5	-167.0	-178.2	170.1	158.4	147.2	136.9	127.6	119.3	112.0
	-3.0	-3.0	-3.0	-2.9	-2.8	-2.7	-2.5	-2.2	-1.6	-0.9	0.2	1.5	2.9	4.2	5.2	5.7	5.9	5.8	5.5
-80	-102.0	-107.5	-113.1	-119.0	-125.0	-131.3	-137.8	-144.6	-151.7	-159.0	-166.5	-174.2	178.0	170.1	162.3	154.6	147.2	140.0	133.1
	-0.9	-0.9	-0.9	-0.9	-0.8	-0.7	-0.6	-0.5	-0.3	-0.2	0.1	0.3	0.5	0.7	1.0	1.1	1.3	1.4	1.5
-85	-109.5	-114.9	-120.4	-125.9	-131.5	-137.2	-143.0	-148.8	-154.7	-160.7	-166.7	-172.7	-178.7	175.2	169.2	163.2	157.2	151.3	145.4
	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.6
-90	-117.4	-122.4	-127.4	-132.4	-137.4	-142.4	-147.4	-152.4	-157.4	-162.4	-167.4	-172.4	-177.4	177.6	172.6	167.6	162.6	157.6	152.6
	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

IGRF 1985 Declination (D)

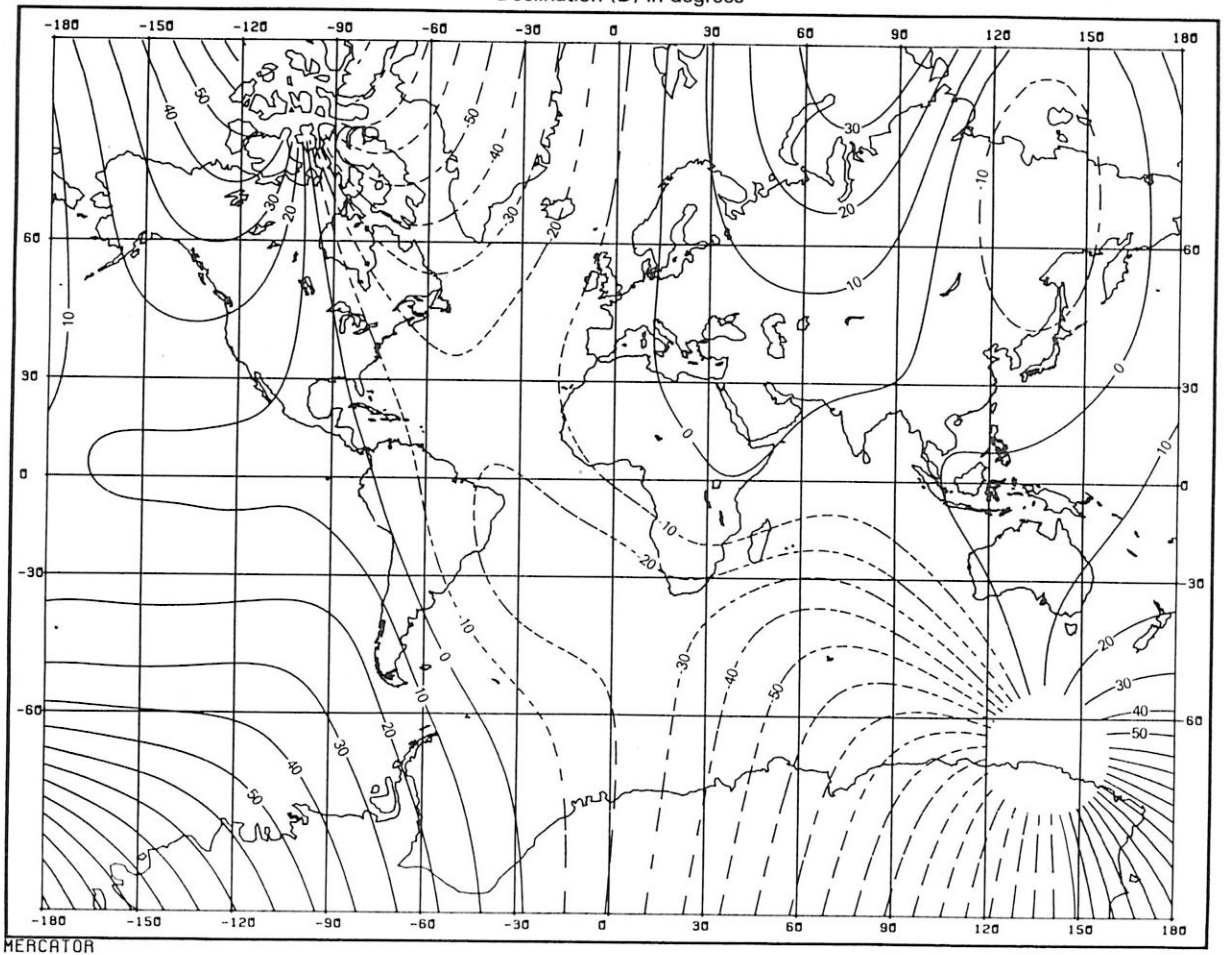
Latitude \ Longitude:	180	-175	-170	-165	-160	-155	-150	-145	-140	-135	-130	-125	-120	-115	-110	-105	-100	-95	-90
0	10.8	10.7	10.4	9.9	9.5	9.3	9.1	9.1	9.0	8.9	8.8	8.7	8.7	8.8	8.9	8.9	8.6	7.8	6.6
	-2.2	-2.6	-2.5	-2.1	-1.5	-0.9	-0.3	0.1	0.5	0.9	1.5	2.2	2.8	2.9	2.3	1.1	-0.8	-3.1	-5.4
-5	11.2	11.0	10.7	10.3	10.0	9.8	9.6	9.6	9.5	9.4	9.2	9.1	9.1	9.2	9.4	9.4	9.2	8.6	7.4
	-1.9	-2.2	-2.1	-1.6	-1.0	-0.4	0.1	0.5	0.8	1.3	1.9	2.5	3.0	3.1	2.5	1.2	-0.7	-3.0	-5.4
-10	11.7	11.6	11.4	11.0	10.8	10.6	10.5	10.4	10.3	10.2	10.0	9.9	9.9	10.0	10.1	10.2	10.0	9.4	8.4
	-1.5	-1.7	-1.6	-1.2	-0.6	0.0	0.4	0.8	1.1	1.5	2.1	2.7	3.1	3.2	2.6	1.2	-0.7	-3.1	-5.5
-15	12.5	12.5	12.3	12.1	11.8	11.7	11.6	11.5	11.5	11.3	11.2	11.0	11.0	11.0	11.1	11.2	11.1	10.5	9.5
	-1.0	-1.1	-1.0	-0.7	-0.2	0.2	0.6	0.9	1.2	1.6	2.2	2.7	3.2	3.1	2.5	1.2	-0.8	-3.1	-5.5
-20	13.6	13.6	13.5	13.4	13.2	13.1	13.0	12.9	12.9	12.7	12.6	12.4	12.4	12.4	12.5	12.6	12.4	12.0	11.0
	-0.4	-0.5	-0.4	-0.2	0.1	0.3	0.6	0.8	1.1	1.6	2.1	2.6	3.0	3.0	2.3	1.0	-0.9	-3.1	-5.4
-25	15.0	15.1	15.1	15.0	14.8	14.7	14.6	14.5	14.5	14.4	14.2	14.2	14.1	14.2	14.3	14.3	14.2	13.8	12.8
	0.5	0.3	0.3	0.3	0.3	0.4	0.5	0.6	0.9	1.3	1.9	2.4	2.8	2.7	2.2	0.9	-0.8	-2.8	-4.9
-30	16.7	16.9	16.9	16.8	16.7	16.6	16.5	16.4	16.3	16.2	16.2	16.2	16.2	16.3	16.5	16.6	16.4	16.0	15.0
	1.4	1.2	1.0	0.8	0.6	0.4	0.3	0.4	0.6	1.0	1.6	2.1	2.5	2.5	2.0	1.0	-0.5	-2.2	-4.1
-35	18.8	19.0	19.1	19.0	18.8	18.7	18.5	18.5	18.4	18.4	18.5	18.6	18.7	18.9	19.1	19.2	19.0	18.5	17.5
	2.6	2.3	1.8	1.4	0.9	0.5	0.2	0.2	0.4	0.8	1.4	2.0	2.4	2.5	2.1	1.3	0.1	-1.4	-2.9
-40	21.4	21.6	21.6	21.5	21.3	21.1	21.0	21.0	21.0	21.0	21.2	21.4	21.7	21.9	22.1	22.1	21.9	21.3	20.1
	3.8	3.4	2.8	2.1	1.4	0.8	0.4	0.3	0.5	0.9	1.5	2.1	2.5	2.7	2.5	1.9	0.9	-0.2	-1.5
-45	24.5	24.7	24.6	24.5	24.3	24.2	24.1	24.0	24.1	24.3	24.5	24.8	25.1	25.3	25.4	25.3	24.9	24.0	22.6
	5.2	4.6	3.8	2.9	2.1	1.4	0.9	0.8	0.9	1.3	1.9	2.5	2.9	3.1	3.0	2.5	1.8	0.9	-0.2
-50	28.5	28.6	28.6	28.4	28.3	28.1	28.0	28.0	28.1	28.3	28.6	28.8	29.0	29.1	28.9	28.5	27.8	26.6	24.9
	6.8	6.0	5.1	4.1	3.1	2.3	1.8	1.7	1.8	2.1	2.6	3.1	3.4	3.6	3.5	3.1	2.5	1.7	0.9
-55	34.3	34.3	34.2	33.9	33.7	33.5	33.4	33.3	33.3	33.4	33.5	33.5	33.4	33.1	32.6	31.8	30.7	29.1	27.2
	8.6	7.7	6.5	5.4	4.4	3.6	3.1	2.8	2.8	3.1	3.4	3.7	3.9	3.9	3.8	3.4	2.8	2.2	1.4
-60	43.4	43.0	42.6	42.1	41.6	41.2	40.8	40.5	40.2	39.9	39.5	39.1	38.5	37.7	36.7	35.3	33.7	31.8	29.6
	10.8	9.5	8.1	6.9	5.8	4.9	4.3	4.0	3.8	3.9	3.9	4.0	4.0	3.9	3.6	3.2	2.7	2.1	1.4
-65	58.7	57.2	55.8	54.5	53.3	52.2	51.1	50.1	49.1	48.1	47.0	45.8	44.5	43.0	41.3	39.4	37.3	35.0	32.4
	12.8	10.9	9.3	7.9	6.7	5.8	5.1	4.6	4.3	4.1	3.9	3.8	3.6	3.3	3.0	2.6	2.1	1.7	1.2
-70	83.3	79.2	75.7	72.6	69.8	67.3	64.9	62.7	60.5	58.4	56.2	54.1	51.8	49.5	47.1	44.5	41.8	39.1	36.2
	11.5	9.8	8.4	7.2	6.2	5.4	4.7	4.2	3.8	3.5	3.2	2.9	2.7	2.4	2.1	1.8	1.4	1.1	0.8
-75	112.0	105.5	99.7	94.5	89.8	85.5	81.5	77.7	74.1	70.6	67.3	64.0	60.7	57.5	54.2	51.0	47.7	44.4	41.0
	5.5	5.1	4.6	4.2	3.7	3.3	3.0	2.7	2.4	2.2	2.0	1.8	1.6	1.4	1.2	1.0	0.8	0.7	0.6
-80	133.1	126.5	120.2	114.3	108.7	103.3	98.2	93.3	88.6	84.0	79.6	75.3	71.1	67.0	63.0	59.0	55.0	51.1	47.2
	1.5	1.5	1.5	1.4	1.4	1.3	1.2	1.2	1.1	1.0	0.9	0.9	0.8	0.7	0.7	0.6	0.6	0.6	0.6
-85	145.4	139.7	134.0	128.4	122.9	117.5	112.2	107.0	101.8	96.8	91.8	87.0	82.2	77.4	72.8	68.2	63.6	59.1	54.6
	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7
-90	152.6	147.6	142.6	137.6	132.6	127.6	122.6	117.6	112.6	107.6	102.6	97.6	92.6	87.6	82.6	77.6	72.6	67.6	62.6
	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

IGRF 1985 Declination (D)

Latitude \ Longitude:	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
0	6.6	4.7	2.2	-0.9	-4.4	-8.1	-11.7	-14.9	-17.6	-19.5	-20.6	-21.0	-20.5	-19.3	-17.6	-15.5	-13.2	-11.1	-9.2
	-5.4	-7.4	-9.0	-9.9	-10.3	-10.2	-9.6	-8.7	-7.2	-5.2	-2.7	0.1	3.0	5.5	7.5	8.5	8.8	8.6	8.3
-5	7.4	5.6	3.2	0.1	-3.4	-7.2	-11.0	-14.5	-17.5	-19.7	-21.2	-21.9	-21.9	-21.1	-19.6	-17.8	-15.7	-13.6	-11.6
	-5.4	-7.5	-9.2	-10.3	-10.8	-10.8	-10.4	-9.5	-8.1	-6.1	-3.7	-0.9	2.1	4.8	6.9	8.2	8.7	8.7	8.6
-10	8.4	6.6	4.2	1.2	-2.4	-6.3	-10.3	-14.0	-17.2	-19.8	-21.7	-22.7	-23.1	-22.7	-21.7	-20.2	-18.4	-16.5	-14.5
	-5.5	-7.7	-9.4	-10.6	-11.2	-11.3	-11.0	-10.2	-8.8	-7.0	-4.6	-1.9	1.1	3.9	6.1	7.6	8.3	8.6	8.8
-15	9.5	7.9	5.5	2.5	-1.2	-5.2	-9.3	-13.3	-16.8	-19.7	-21.8	-23.3	-24.0	-24.1	-23.6	-22.6	-21.2	-19.6	-17.8
	-5.5	-7.7	-9.5	-10.7	-11.4	-11.6	-11.4	-10.7	-9.5	-7.8	-5.5	-2.9	0.0	2.8	5.1	6.8	7.8	8.4	8.8
-20	11.0	9.4	7.1	4.0	0.3	-3.8	-8.1	-12.3	-16.1	-19.3	-21.7	-23.5	-24.6	-25.1	-25.0	-24.6	-23.7	-22.5	-21.0
	-5.4	-7.5	-9.2	-10.5	-11.3	-11.6	-11.5	-11.0	-10.0	-8.4	-6.3	-3.8	-1.0	1.7	4.1	6.0	7.2	8.0	8.7
-25	12.8	11.3	9.0	5.9	2.1	-2.1	-6.6	-11.0	-15.1	-18.5	-21.2	-23.3	-24.7	-25.5	-25.9	-25.9	-25.5	-24.8	-23.7
	-4.9	-6.9	-8.5	-9.8	-10.7	-11.2	-11.3	-10.9	-10.1	-8.8	-6.9	-4.5	-1.9	0.8	3.3	5.3	6.7	7.8	8.6
-30	15.0	13.4	11.1	8.0	4.2	-0.1	-4.8	-9.3	-13.5	-17.2	-20.2	-22.5	-24.2	-25.3	-26.0	-26.4	-26.4	-26.1	-25.3
	-4.1	-5.8	-7.3	-8.6	-9.5	-10.2	-10.5	-10.4	-9.8	-8.7	-7.0	-4.9	-2.4	0.3	2.8	4.9	6.6	7.9	8.8
-35	17.5	15.9	13.5	10.3	6.5	2.1	-2.5	-7.1	-11.4	-15.3	-18.5	-21.0	-22.9	-24.3	-25.3	-25.8	-26.1	-26.1	-25.7
	-2.9	-4.4	-5.7	-6.9	-7.9	-8.6	-9.1	-9.3	-8.9	-8.1	-6.7	-4.7	-2.4	0.2	2.8	5.1	7.0	8.4	9.2
-40	20.1	18.3	15.8	12.7	8.9	4.6	0.1	-4.5	-8.8	-12.6	-15.9	-18.6	-20.7	-22.3	-23.5	-24.3	-24.8	-25.0	-25.0
	-1.5	-2.7	-3.9	-5.0	-6.0	-6.8	-7.4	-7.7	-7.5	-6.9	-5.7	-3.9	-1.7	0.8	3.3	5.7	7.7	9.0	9.6
-45	22.6	20.6	18.1	14.9	11.2	7.1	2.8	-1.5	-5.6	-9.4	-12.7	-15.4	-17.7	-19.4	-20.8	-21.8	-22.5	-23.1	-23.6
	-0.2	-1.2	-2.3	-3.3	-4.2	-5.0	-5.6	-5.9	-5.8	-5.3	-4.2	-2.6	-0.6	1.7	4.1	6.3	8.2	9.3	9.5
-50	24.9	22.8	20.1	17.0	13.4	9.6	5.6	1.6	-2.2	-5.8	-8.9	-11.7	-14.0	-16.0	-17.5	-18.8	-20.0	-21.0	-22.0
	0.9	-0.1	-1.0	-1.9	-2.7	-3.4	-3.9	-4.2	-4.0	-3.5	-2.5	-1.1	0.6	2.7	4.7	6.6	8.1	8.8	8.7
-55	27.2	24.8	22.1	19.0	15.6	12.1	8.4	4.8	1.2	-2.1	-5.1	-7.9	-10.3	-12.4	-14.2	-15.9	-17.5	-19.0	-20.7
	1.4	0.6	-0.2	-1.0	-1.7	-2.2	-2.6	-2.7	-2.5	-1.9	-1.0	0.2	1.7	3.3	4.9	6.4	7.4	7.8	7.5
-60	29.6	27.0	24.2	21.2	18.0	14.6	11.2	7.8	4.6	1.4	-1.5	-4.2	-6.8	-9.1	-11.3	-13.3	-15.4	-17.5	-19.6
	1.4	0.8	0.1	-0.5	-1.0	-1.3	-1.5	-1.5	-1.2	-0.7	0.1	1.1	2.3	3.5	4.7	5.7	6.3	6.5	6.1
-65	32.4	29.7	26.8	23.7	20.6	17.4	14.1	10.9	7.8	4.7	1.8	-1.0	-3.7	-6.3	-8.9	-11.4	-13.9	-16.4	-19.1
	1.2	0.7	0.2	-0.2	-0.4	-0.6	-0.6	-0.5	-0.2	0.3	0.9	1.7	2.6	3.4	4.2	4.8	5.2	5.2	4.9
-70	36.2	33.2	30.1	26.9	23.7	20.5	17.3	14.0	10.9	7.8	4.7	1.7	-1.3	-4.2	-7.1	-10.0	-12.9	-15.9	-19.0
	0.8	0.5	0.3	0.1	0.0	0.0	0.0	0.2	0.5	0.9	1.4	2.0	2.5	3.1	3.5	3.9	4.1	4.1	3.9
-75	41.0	37.7	34.3	30.9	27.5	24.1	20.7	17.3	13.9	10.6	7.3	4.0	0.7	-2.6	-5.9	-9.3	-12.6	-16.0	-19.5
	0.6	0.5	0.4	0.4	0.4	0.5	0.6	0.8	1.0	1.3	1.6	2.0	2.3	2.6	2.8	3.0	3.1	3.1	3.0
-80	47.2	43.4	39.6	35.7	32.0	28.2	24.4	20.7	16.9	13.2	9.5	5.7	2.0	-1.7	-5.5	-9.3	-13.1	-16.9	-20.8
	0.6	0.6	0.6	0.6	0.7	0.8	0.9	1.1	1.2	1.4	1.6	1.7	1.9	2.0	2.1	2.2	2.2	2.2	2.2
-85	54.6	50.2	45.8	41.4	37.0	32.7	28.4	24.1	19.8	15.5	11.3	7.0	2.7	-1.6	-5.9	-10.2	-14.5	-18.9	-23.3
	0.7	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.5	1.5	1.5	1.5
-90	62.6	57.6	52.6	47.6	42.6	37.6	32.6	27.6	22.6	17.6	12.6	7.6	2.6	-2.4	-7.4	-12.4	-17.4	-22.4	-27.4
	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

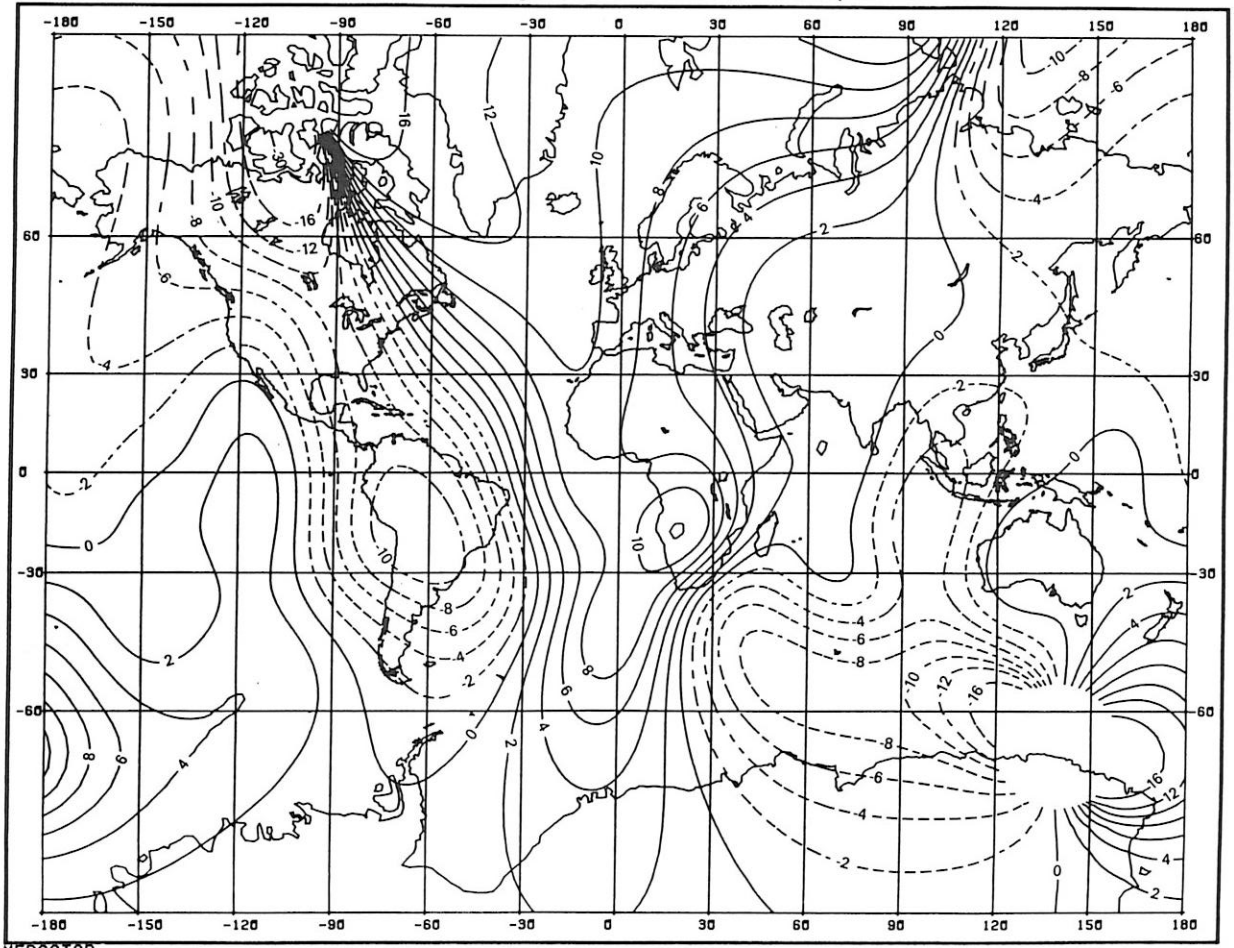
IGRF 1985

Declination (D) in degrees



IGRF 1985

Annual change of Declination ($\dot{D}$) in minutes/yr



IGRF 1985 Inclination (I)

Latitude \ Longitude:	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
90	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7
	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
85	85.1	85.1	85.1	85.1	85.2	85.2	85.3	85.4	85.5	85.6	85.8	85.9	86.1	86.3	86.5	86.7	86.9	87.1	87.3
	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1
80	82.6	82.6	82.6	82.6	82.7	82.8	82.9	83.1	83.3	83.5	83.7	84.0	84.3	84.7	85.0	85.4	85.8	86.1	86.5
	1.2	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
75	80.2	80.2	80.2	80.2	80.3	80.4	80.6	80.8	81.0	81.3	81.6	82.0	82.4	82.8	83.3	83.7	84.2	84.7	85.1
	1.3	1.4	1.5	1.6	1.6	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.7	1.8	1.8	1.8	1.8
70	77.9	77.8	77.8	77.8	77.9	78.0	78.2	78.4	78.7	79.0	79.3	79.7	80.1	80.6	81.1	81.7	82.2	82.7	83.1
	1.3	1.4	1.5	1.6	1.7	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.8	1.8
65	75.3	75.2	75.3	75.3	75.4	75.5	75.7	75.9	76.2	76.5	76.8	77.2	77.6	78.1	78.6	79.1	79.6	80.1	80.5
	1.1	1.3	1.4	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.8
60	72.4	72.4	72.4	72.5	72.7	72.8	73.0	73.2	73.5	73.8	74.1	74.4	74.8	75.2	75.7	76.1	76.6	77.0	77.3
	0.8	1.0	1.2	1.4	1.6	1.7	1.7	1.7	1.7	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.7
55	69.1	69.1	69.2	69.4	69.5	69.7	70.0	70.2	70.5	70.7	71.0	71.3	71.6	71.9	72.3	72.7	73.0	73.3	73.6
	0.4	0.8	1.1	1.3	1.5	1.6	1.7	1.7	1.7	1.6	1.6	1.5	1.5	1.4	1.4	1.5	1.5	1.6	1.7
50	65.2	65.3	65.4	65.6	65.9	66.1	66.4	66.6	66.9	67.2	67.4	67.7	67.9	68.2	68.4	68.7	68.9	69.2	69.3
	0.0	0.5	0.9	1.2	1.5	1.7	1.8	1.8	1.8	1.7	1.6	1.5	1.5	1.5	1.5	1.6	1.6	1.7	1.8
45	60.6	60.7	60.9	61.2	61.5	61.8	62.1	62.4	62.7	63.0	63.2	63.4	63.6	63.8	64.0	64.1	64.3	64.4	64.5
	-0.4	0.2	0.8	1.2	1.6	1.8	2.0	2.0	2.0	2.0	1.9	1.8	1.7	1.7	1.8	1.9	2.0	2.1	2.2
40	55.2	55.3	55.5	55.8	56.2	56.5	56.9	57.3	57.7	58.0	58.3	58.5	58.6	58.7	58.8	58.8	58.8	58.8	58.8
	-1.0	-0.1	0.6	1.1	1.6	2.0	2.3	2.4	2.4	2.4	2.3	2.2	2.1	2.2	2.3	2.5	2.7	2.8	2.8
35	48.7	48.8	49.1	49.4	49.8	50.2	50.7	51.2	51.6	52.0	52.4	52.6	52.7	52.8	52.7	52.6	52.5	52.4	52.3
	-1.6	-0.6	0.2	1.0	1.6	2.2	2.6	2.8	3.0	2.9	2.8	2.8	2.7	2.9	3.1	3.3	3.6	3.7	3.8
30	40.9	41.1	41.4	41.8	42.2	42.7	43.2	43.8	44.4	44.9	45.3	45.6	45.8	45.7	45.6	45.3	45.1	44.8	44.7
	-2.4	-1.3	-0.3	0.7	1.5	2.3	2.9	3.3	3.6	3.6	3.5	3.4	3.5	3.7	4.0	4.4	4.8	4.9	4.9
25	31.8	32.0	32.3	32.7	33.2	33.8	34.4	35.1	35.8	36.5	37.1	37.4	37.5	37.5	37.2	36.8	36.4	36.1	35.9
	-3.5	-2.2	-1.0	0.1	1.2	2.2	3.1	3.8	4.2	4.3	4.2	4.2	4.3	4.6	5.1	5.6	6.1	6.3	6.2
20	21.3	21.5	21.8	22.2	22.7	23.3	24.1	25.0	25.9	26.7	27.4	27.9	28.0	27.9	27.5	27.0	26.5	26.0	25.7
	-4.7	-3.3	-2.0	-0.7	0.6	2.0	3.3	4.2	4.8	5.0	5.0	4.9	5.1	5.5	6.2	6.9	7.5	7.8	7.6
15	9.6	9.7	10.0	10.4	10.9	11.5	12.4	13.5	14.6	15.7	16.5	17.1	17.2	17.0	16.5	15.9	15.3	14.8	14.5
	-6.1	-4.6	-3.3	-1.8	-0.1	1.6	3.3	4.5	5.3	5.7	5.7	5.6	5.8	6.4	7.2	8.1	8.8	9.0	8.6
10	-2.7	-2.8	-2.6	-2.3	-1.9	-1.2	-0.2	1.0	2.3	3.6	4.6	5.2	5.4	5.2	4.6	3.9	3.3	2.7	2.4
	-7.5	-6.0	-4.5	-2.9	-1.0	1.0	3.0	4.6	5.6	6.1	6.2	6.2	6.4	7.1	8.0	9.0	9.7	9.8	9.2
5	-15.1	-15.3	-15.3	-15.2	-14.8	-14.1	-13.1	-11.8	-10.3	-8.9	-7.7	-7.0	-6.9	-7.1	-7.6	-8.3	-9.0	-9.5	-9.8
	-8.7	-7.2	-5.7	-4.0	-2.0	0.3	2.5	4.4	5.7	6.3	6.4	6.5	6.8	7.4	8.4	9.3	9.9	9.9	9.1
0	-26.6	-27.1	-27.4	-27.4	-27.1	-26.5	-25.5	-24.1	-22.5	-21.0	-19.8	-19.1	-18.8	-19.0	-19.5	-20.2	-20.8	-21.2	-21.4
	-9.6	-8.2	-6.7	-5.0	-2.8	-0.5	1.9	3.9	5.4	6.1	6.4	6.5	6.8	7.4	8.3	9.1	9.5	9.3	8.4

IGRF 1985 Inclination (I)

Latitude \ Longitude:	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
90	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7
	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
85	87.3	87.5	87.7	87.9	88.0	88.1	88.3	88.3	88.4	88.4	88.4	88.4	88.4	88.4	88.3	88.3	88.3	88.3	88.3
	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1
80	86.5	86.8	87.1	87.3	87.4	87.4	87.3	87.1	86.9	86.6	86.4	86.1	85.9	85.7	85.5	85.4	85.3	85.3	85.3
	1.5	1.5	1.6	1.6	1.6	1.5	1.5	1.4	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.3	1.3	1.3
75	85.1	85.5	85.7	85.8	85.7	85.5	85.2	84.8	84.4	83.9	83.5	83.0	82.6	82.3	82.0	81.8	81.7	81.6	81.7
	1.8	1.8	1.8	1.8	1.7	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6
70	83.1	83.4	83.6	83.6	83.4	83.1	82.6	82.0	81.4	80.8	80.1	79.6	79.0	78.6	78.2	78.0	77.8	77.7	77.8
	1.8	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9
65	80.5	80.7	80.8	80.8	80.5	80.1	79.5	78.8	78.0	77.3	76.5	75.8	75.2	74.6	74.2	73.9	73.7	73.7	73.7
	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.0	2.0
60	77.3	77.5	77.6	77.4	77.1	76.6	75.9	75.2	74.3	73.5	72.6	71.8	71.1	70.5	70.0	69.7	69.5	69.5	69.6
	1.7	1.7	1.8	1.9	1.9	2.0	2.0	2.1	2.1	2.1	2.1	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.8
55	73.6	73.7	73.7	73.6	73.2	72.7	72.0	71.2	70.3	69.3	68.4	67.5	66.8	66.1	65.7	65.3	65.2	65.2	65.4
	1.7	1.7	1.8	1.9	2.0	2.1	2.1	2.2	2.2	2.2	2.1	2.1	2.0	2.0	1.9	1.8	1.7	1.7	1.6
50	69.3	69.4	69.4	69.2	68.9	68.3	67.6	66.8	65.9	64.9	63.9	63.0	62.2	61.6	61.1	60.9	60.8	60.9	61.2
	1.8	1.9	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.2	2.2	2.1	1.9	1.8	1.7	1.6	1.5	1.3	1.2
45	64.5	64.5	64.4	64.2	63.9	63.4	62.8	61.9	61.0	60.0	59.1	58.1	57.4	56.8	56.4	56.2	56.3	56.6	57.0
	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.1	1.9	1.8	1.6	1.5	1.3	1.2	1.0	0.8
40	58.8	58.8	58.7	58.6	58.3	57.8	57.2	56.5	55.6	54.6	53.6	52.8	52.1	51.6	51.3	51.3	51.6	52.1	52.8
	2.8	2.8	2.8	2.7	2.6	2.4	2.4	2.3	2.1	2.0	1.9	1.7	1.5	1.4	1.2	1.1	0.9	0.7	0.5
35	52.3	52.2	52.2	52.0	51.8	51.4	50.9	50.2	49.4	48.5	47.6	46.8	46.2	45.8	45.8	46.0	46.6	47.4	48.3
	3.8	3.7	3.4	3.2	2.9	2.6	2.4	2.1	1.9	1.8	1.6	1.4	1.2	1.1	1.0	0.9	0.8	0.6	0.3
30	44.7	44.6	44.5	44.5	44.3	44.1	43.6	43.0	42.3	41.4	40.6	40.0	39.5	39.4	39.6	40.2	41.1	42.2	43.4
	4.9	4.7	4.2	3.7	3.2	2.7	2.3	2.0	1.6	1.4	1.1	1.0	0.9	0.9	0.9	0.9	0.9	0.7	0.4
25	35.9	35.7	35.7	35.8	35.7	35.6	35.3	34.8	34.1	33.4	32.8	32.3	32.0	32.2	32.7	33.6	34.8	36.3	37.9
	6.2	5.8	5.1	4.3	3.5	2.8	2.2	1.7	1.2	0.9	0.6	0.5	0.5	0.6	0.8	1.0	1.1	0.9	0.5
20	25.7	25.7	25.7	25.9	26.0	26.0	25.8	25.4	24.9	24.3	23.9	23.6	23.6	24.0	24.8	26.1	27.7	29.6	31.5
	7.6	6.9	5.9	4.8	3.7	2.7	1.9	1.2	0.7	0.3	0.0	0.0	0.1	0.4	0.8	1.2	1.4	1.2	0.8
15	14.5	14.4	14.6	14.8	15.1	15.3	15.3	15.1	14.7	14.3	14.1	14.0	14.3	15.0	16.1	17.7	19.6	21.8	23.9
	8.6	7.7	6.4	5.0	3.6	2.3	1.4	0.7	0.1	-0.3	-0.5	-0.5	-0.3	0.2	0.8	1.4	1.7	1.5	1.0
10	2.4	2.4	2.7	3.1	3.5	3.9	4.1	4.0	3.9	3.7	3.7	3.9	4.4	5.3	6.7	8.5	10.6	12.9	15.3
	9.2	8.1	6.5	4.7	3.1	1.8	0.7	0.0	-0.5	-0.8	-1.0	-0.9	-0.5	0.1	0.9	1.5	1.8	1.6	1.0
5	-9.8	-9.7	-9.3	-8.8	-8.2	-7.7	-7.3	-7.2	-7.1	-7.1	-6.9	-6.5	-5.8	-4.7	-3.2	-1.3	0.9	3.2	5.6
	9.1	7.7	5.9	4.0	2.3	0.9	0.0	-0.6	-1.0	-1.2	-1.3	-1.1	-0.6	0.1	0.8	1.5	1.8	1.6	0.8
0	-21.4	-21.3	-20.9	-20.2	-19.5	-18.9	-18.4	-18.0	-17.8	-17.6	-17.3	-16.7	-15.8	-14.7	-13.2	-11.3	-9.2	-6.9	-4.6
	8.4	6.8	4.9	3.0	1.3	0.0	-0.8	-1.2	-1.4	-1.4	-1.3	-1.1	-0.6	0.0	0.7	1.3	1.5	1.2	0.5

IGRF 1985 Inclination (I)

Latitude \ Longitude:	180	-175	-170	-165	-160	-155	-150	-145	-140	-135	-130	-125	-120	-115	-110	-105	-100	-95	-90
90	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7
	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
85	88.3	88.4	88.4	88.5	88.6	88.6	88.7	88.8	88.9	89.0	89.1	89.1	89.0	88.9	88.8	88.6	88.4	88.2	88.0
	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.8	0.7	0.6	0.5	0.3	0.3	0.2	0.2	0.2
80	85.3	85.3	85.4	85.6	85.8	86.0	86.3	86.6	87.0	87.4	87.8	88.2	88.6	89.1	89.5	89.6	89.2	88.7	88.2
	1.3	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.0	1.0	0.4	-0.1	-0.2	-0.2
75	81.7	81.7	81.9	82.2	82.5	82.9	83.3	83.8	84.3	84.9	85.6	86.3	87.0	87.7	88.4	89.1	89.5	89.1	88.4
	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.4	1.4	1.3	1.2	1.1	1.0	0.9	0.7	0.2	-1.0	-1.1	-0.8
70	77.8	77.9	78.2	78.5	78.9	79.5	80.1	80.7	81.5	82.3	83.1	84.0	84.9	85.8	86.6	87.4	87.9	88.0	87.6
	1.9	1.9	1.9	1.8	1.8	1.7	1.6	1.6	1.4	1.3	1.2	1.0	0.9	0.6	0.3	-0.2	-0.8	-1.4	-1.5
65	73.7	73.9	74.2	74.7	75.2	75.9	76.6	77.4	78.3	79.3	80.3	81.3	82.3	83.3	84.3	85.1	85.7	86.0	85.9
	2.0	1.9	1.9	1.8	1.8	1.7	1.6	1.4	1.3	1.1	1.0	0.8	0.5	0.3	-0.1	-0.5	-1.0	-1.5	-1.9
60	69.6	69.9	70.3	70.8	71.4	72.2	73.0	73.9	74.9	76.0	77.1	78.2	79.3	80.4	81.4	82.3	82.9	83.3	83.4
	1.8	1.8	1.7	1.6	1.5	1.4	1.3	1.1	0.9	0.8	0.6	0.4	0.2	-0.1	-0.4	-0.7	-1.2	-1.7	-2.1
55	65.4	65.8	66.2	66.8	67.6	68.4	69.3	70.3	71.4	72.5	73.6	74.8	75.9	77.0	78.0	79.0	79.7	80.2	80.4
	1.6	1.5	1.4	1.3	1.1	1.0	0.8	0.6	0.4	0.3	0.1	0.0	-0.2	-0.3	-0.6	-0.8	-1.2	-1.7	-2.2
50	61.2	61.7	62.2	62.9	63.7	64.6	65.6	66.6	67.7	68.8	69.9	71.1	72.2	73.3	74.4	75.3	76.1	76.7	77.1
	1.2	1.1	0.9	0.8	0.6	0.4	0.2	0.0	-0.2	-0.3	-0.4	-0.4	-0.4	-0.5	-0.6	-0.8	-1.1	-1.6	-2.2
45	57.0	57.6	58.3	59.1	59.9	60.8	61.8	62.8	63.8	64.9	66.0	67.2	68.3	69.4	70.5	71.4	72.3	73.0	73.4
	0.8	0.6	0.4	0.2	0.0	-0.2	-0.4	-0.6	-0.7	-0.8	-0.8	-0.7	-0.6	-0.5	-0.4	-0.5	-0.8	-1.3	-2.0
40	52.8	53.5	54.3	55.2	56.1	57.0	57.9	58.9	59.9	60.9	62.0	63.1	64.1	65.2	66.3	67.3	68.2	68.9	69.4
	0.5	0.3	0.0	-0.3	-0.6	-0.8	-1.0	-1.2	-1.3	-1.3	-1.2	-1.0	-0.7	-0.4	-0.2	-0.2	-0.4	-0.9	-1.7
35	48.3	49.3	50.3	51.2	52.1	53.0	53.9	54.8	55.7	56.7	57.7	58.7	59.7	60.8	61.8	62.8	63.8	64.6	65.2
	0.3	0.0	-0.4	-0.7	-1.1	-1.4	-1.6	-1.8	-1.9	-1.8	-1.6	-1.3	-0.8	-0.4	0.0	0.2	0.1	-0.4	-1.2
30	43.4	44.7	45.8	46.9	47.8	48.7	49.5	50.3	51.2	52.1	53.0	53.9	54.9	55.9	56.9	57.9	58.9	59.8	60.6
	0.4	-0.1	-0.6	-1.0	-1.5	-1.8	-2.1	-2.3	-2.3	-2.2	-2.0	-1.5	-1.0	-0.3	0.3	0.6	0.6	0.2	-0.6
25	37.9	39.4	40.8	41.9	42.9	43.7	44.5	45.2	46.0	46.8	47.7	48.5	49.4	50.4	51.4	52.5	53.6	54.6	55.5
	0.5	0.0	-0.7	-1.3	-1.8	-2.2	-2.5	-2.7	-2.7	-2.7	-2.4	-1.9	-1.1	-0.3	0.5	1.0	1.1	0.8	0.0
20	31.5	33.2	34.8	36.0	37.0	37.8	38.6	39.3	40.0	40.8	41.5	42.3	43.2	44.1	45.2	46.3	47.5	48.7	49.8
	0.8	0.1	-0.7	-1.5	-2.1	-2.6	-2.8	-3.0	-3.1	-3.0	-2.7	-2.2	-1.3	-0.3	0.7	1.4	1.7	1.5	0.7
15	23.9	25.9	27.6	29.0	30.0	30.8	31.5	32.2	32.9	33.7	34.4	35.2	36.0	36.9	38.0	39.3	40.7	42.1	43.4
	1.0	0.1	-0.9	-1.8	-2.4	-2.9	-3.1	-3.3	-3.3	-3.3	-3.0	-2.4	-1.5	-0.3	0.9	1.9	2.4	2.3	1.5
10	15.3	17.4	19.3	20.7	21.7	22.6	23.3	24.0	24.8	25.5	26.2	27.0	27.8	28.8	30.0	31.4	33.0	34.7	36.3
	1.0	0.0	-1.1	-2.1	-2.8	-3.2	-3.3	-3.4	-3.4	-3.4	-3.1	-2.5	-1.4	-0.1	1.3	2.5	3.2	3.2	2.4
5	5.6	7.8	9.7	11.2	12.3	13.2	14.0	14.8	15.6	16.4	17.2	17.9	18.7	19.8	21.0	22.6	24.4	26.3	28.3
	0.8	-0.3	-1.4	-2.4	-3.1	-3.4	-3.5	-3.4	-3.4	-3.3	-2.9	-2.3	-1.2	0.3	2.0	3.4	4.2	4.2	3.4
0	-4.6	-2.4	-0.6	0.9	2.1	3.0	3.9	4.8	5.7	6.5	7.4	8.2	9.0	10.1	11.4	13.1	15.1	17.2	19.4
	0.5	-0.6	-1.7	-2.7	-3.3	-3.5	-3.4	-3.3	-3.1	-2.9	-2.6	-1.8	-0.6	1.0	2.7	4.3	5.2	5.3	4.4

IGRF 1985 Inclination (I)

Longitude: Latitude	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
90	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7
	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
85	88.0	87.7	87.5	87.3	87.1	86.8	86.6	86.4	86.2	86.0	85.9	85.7	85.6	85.5	85.4	85.3	85.2	85.1	85.1
	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.9
80	88.2	87.8	87.3	86.8	86.3	85.9	85.5	85.1	84.7	84.4	84.1	83.8	83.5	83.3	83.1	82.9	82.8	82.7	82.6
	-0.2	-0.1	-0.1	0.0	0.1	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.8	0.9	1.0	1.1	1.1	1.2
75	88.4	87.6	86.9	86.2	85.5	84.9	84.3	83.7	83.2	82.7	82.2	81.8	81.5	81.2	80.9	80.7	80.5	80.3	80.2
	-0.8	-0.7	-0.5	-0.4	-0.3	-0.1	0.0	0.1	0.2	0.3	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3
70	87.6	87.0	86.1	85.3	84.5	83.6	82.9	82.1	81.4	80.8	80.2	79.7	79.3	78.9	78.6	78.3	78.1	78.0	77.9
	-1.5	-1.4	-1.2	-1.0	-0.8	-0.7	-0.5	-0.4	-0.2	-0.1	0.1	0.2	0.4	0.6	0.7	0.9	1.0	1.2	1.3
65	85.9	85.4	84.7	83.8	82.9	82.0	81.1	80.2	79.4	78.6	77.9	77.4	76.8	76.4	76.0	75.8	75.5	75.4	75.3
	-1.9	-2.0	-2.0	-1.8	-1.7	-1.5	-1.3	-1.1	-0.9	-0.8	-0.6	-0.4	-0.2	0.0	0.3	0.5	0.7	0.9	1.1
60	83.4	83.1	82.6	81.8	80.8	79.8	78.8	77.8	76.9	76.0	75.2	74.6	74.0	73.5	73.1	72.8	72.6	72.5	72.4
	-2.1	-2.5	-2.6	-2.6	-2.6	-2.4	-2.3	-2.1	-1.9	-1.7	-1.5	-1.3	-1.0	-0.7	-0.4	-0.1	0.2	0.5	0.8
55	80.4	80.3	79.9	79.1	78.2	77.2	76.1	75.0	73.9	73.0	72.1	71.3	70.7	70.2	69.7	69.4	69.2	69.1	69.1
	-2.2	-2.7	-3.1	-3.3	-3.4	-3.4	-3.3	-3.2	-3.1	-2.9	-2.6	-2.4	-2.1	-1.7	-1.3	-0.9	-0.4	0.0	0.4
50	77.1	77.1	76.7	76.1	75.2	74.1	73.0	71.8	70.6	69.5	68.5	67.6	66.9	66.3	65.8	65.5	65.3	65.2	65.2
	-2.2	-2.8	-3.4	-3.9	-4.2	-4.3	-4.4	-4.4	-4.3	-4.2	-4.0	-3.7	-3.3	-2.9	-2.3	-1.7	-1.1	-0.5	0.0
45	73.4	73.5	73.3	72.7	71.9	70.8	69.5	68.2	66.9	65.6	64.5	63.5	62.6	61.9	61.4	61.0	60.7	60.6	60.6
	-2.0	-2.8	-3.6	-4.3	-4.8	-5.2	-5.4	-5.5	-5.6	-5.5	-5.4	-5.2	-4.8	-4.2	-3.5	-2.8	-2.0	-1.2	-0.4
40	69.4	69.7	69.6	69.1	68.3	67.1	65.8	64.4	62.9	61.4	60.0	58.8	57.7	56.8	56.1	55.6	55.3	55.1	55.2
	-1.7	-2.6	-3.6	-4.5	-5.2	-5.8	-6.3	-6.6	-6.9	-7.0	-7.0	-6.8	-6.4	-5.8	-4.9	-3.9	-2.9	-1.9	-1.0
35	65.2	65.5	65.5	65.1	64.4	63.3	61.8	60.2	58.5	56.8	55.1	53.5	52.2	51.0	50.1	49.4	48.9	48.7	48.7
	-1.2	-2.2	-3.4	-4.5	-5.5	-6.3	-7.0	-7.6	-8.1	-8.5	-8.7	-8.7	-8.3	-7.6	-6.5	-5.3	-4.0	-2.7	-1.6
30	60.6	61.0	61.2	60.9	60.2	59.1	57.6	55.8	53.8	51.7	49.6	47.6	45.8	44.2	42.9	41.9	41.3	41.0	40.9
	-0.6	-1.8	-3.0	-4.3	-5.6	-6.6	-7.6	-8.6	-9.4	-10.2	-10.7	-10.8	-10.5	-9.6	-8.4	-6.9	-5.3	-3.8	-2.4
25	55.5	56.1	56.4	56.3	55.7	54.6	53.0	51.0	48.6	46.1	43.4	40.8	38.4	36.3	34.5	33.2	32.4	31.9	31.8
	0.0	-1.2	-2.6	-4.1	-5.5	-6.9	-8.2	-9.5	-10.8	-12.0	-12.8	-13.2	-12.9	-12.0	-10.5	-8.7	-6.8	-5.0	-3.5
20	49.8	50.7	51.2	51.2	50.7	49.6	47.9	45.6	42.9	39.8	36.5	33.2	30.1	27.3	25.0	23.2	22.1	21.5	21.3
	0.7	-0.5	-2.1	-3.7	-5.4	-7.0	-8.7	-10.5	-12.3	-13.9	-15.2	-15.9	-15.7	-14.6	-12.9	-10.7	-8.5	-6.4	-4.7
15	43.4	44.6	45.3	45.5	45.2	44.1	42.2	39.7	36.5	32.9	28.9	24.8	20.9	17.3	14.4	12.2	10.7	9.9	9.6
	1.5	0.2	-1.4	-3.3	-5.2	-7.2	-9.3	-11.6	-13.9	-16.0	-17.7	-18.7	-18.5	-17.3	-15.2	-12.7	-10.2	-7.9	-6.1
10	36.3	37.7	38.7	39.2	38.9	37.9	35.9	33.1	29.5	25.2	20.5	15.7	11.0	6.7	3.2	0.5	-1.3	-2.3	-2.7
	2.4	1.0	-0.8	-2.9	-5.2	-7.5	-10.1	-12.8	-15.6	-18.2	-20.3	-21.4	-21.2	-19.7	-17.3	-14.5	-11.7	-9.4	-7.5
5	28.3	30.0	31.3	32.0	31.9	30.9	28.8	25.7	21.7	17.0	11.7	6.2	0.9	-3.9	-7.9	-11.0	-13.1	-14.4	-15.1
	3.4	1.9	-0.2	-2.6	-5.2	-8.0	-11.0	-14.1	-17.4	-20.3	-22.6	-23.6	-23.3	-21.6	-18.9	-15.8	-12.9	-10.5	-8.7
0	19.4	21.4	23.0	24.0	24.0	23.1	20.9	17.7	13.4	8.3	2.6	-3.2	-8.9	-14.0	-18.4	-21.7	-24.1	-25.7	-26.6
	4.4	2.7	0.3	-2.4	-5.5	-8.7	-12.0	-15.5	-19.0	-22.1	-24.3	-25.2	-24.6	-22.7	-19.8	-16.6	-13.7	-11.4	-9.6

IGRF 1985 Inclination (I)

Latitude \ Longitude:	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	-26.6	-27.1	-27.4	-27.4	-27.1	-26.5	-25.5	-24.1	-22.5	-21.0	-19.8	-19.1	-18.8	-19.0	-19.5	-20.2	-20.8	-21.2	-21.4
	-9.6	-8.2	-6.7	-5.0	-2.8	-0.5	1.9	3.9	5.4	6.1	6.4	6.5	6.8	7.4	8.3	9.1	9.5	9.3	8.4
-5	-36.8	-37.6	-38.1	-38.4	-38.2	-37.7	-36.6	-35.2	-33.6	-32.1	-30.9	-30.1	-29.9	-30.0	-30.4	-31.0	-31.5	-31.9	-32.0
	-10.3	-8.9	-7.4	-5.7	-3.6	-1.1	1.3	3.4	4.9	5.8	6.1	6.3	6.6	7.1	7.8	8.4	8.6	8.2	7.2
-10	-45.3	-46.4	-47.2	-47.7	-47.7	-47.2	-46.2	-44.8	-43.3	-41.7	-40.5	-39.7	-39.4	-39.5	-39.9	-40.4	-40.8	-41.2	-41.3
	-10.7	-9.4	-7.9	-6.2	-4.1	-1.7	0.7	2.8	4.4	5.3	5.8	6.0	6.2	6.6	7.1	7.5	7.5	6.9	5.8
-15	-52.1	-53.5	-54.5	-55.2	-55.3	-54.9	-53.9	-52.6	-51.0	-49.5	-48.4	-47.6	-47.3	-47.4	-47.7	-48.2	-48.6	-49.0	-49.1
	-11.0	-9.6	-8.2	-6.5	-4.4	-2.0	0.3	2.4	3.9	4.9	5.4	5.5	5.7	5.9	6.2	6.3	6.2	5.5	4.4
-20	-57.2	-58.8	-60.0	-60.8	-61.0	-60.6	-59.6	-58.3	-56.8	-55.3	-54.2	-53.5	-53.3	-53.5	-53.9	-54.4	-55.0	-55.4	-55.7
	-11.0	-9.6	-8.2	-6.4	-4.4	-2.1	0.2	2.2	3.7	4.6	5.0	5.0	5.0	5.0	5.1	5.1	4.8	4.1	3.0
-25	-60.8	-62.5	-63.7	-64.5	-64.6	-64.2	-63.2	-61.9	-60.4	-59.1	-58.1	-57.6	-57.6	-57.9	-58.5	-59.3	-60.0	-60.6	-61.0
	-10.6	-9.2	-7.7	-6.0	-3.9	-1.7	0.4	2.3	3.6	4.3	4.4	4.3	4.0	3.9	3.8	3.7	3.4	2.7	1.8
-30	-63.0	-64.6	-65.7	-66.3	-66.3	-65.8	-64.7	-63.4	-62.1	-61.0	-60.3	-60.1	-60.4	-61.0	-61.8	-62.8	-63.8	-64.6	-65.3
	-9.8	-8.3	-6.7	-4.9	-2.9	-0.8	1.1	2.7	3.6	3.9	3.8	3.3	2.9	2.5	2.3	2.2	1.9	1.4	0.6
-35	-64.0	-65.3	-66.1	-66.5	-66.3	-65.6	-64.6	-63.4	-62.3	-61.6	-61.3	-61.4	-62.0	-63.0	-64.1	-65.3	-66.6	-67.7	-68.7
	-8.4	-6.8	-5.1	-3.2	-1.3	0.5	2.1	3.2	3.6	3.5	2.9	2.2	1.6	1.1	0.9	0.7	0.5	0.1	-0.4
-40	-63.9	-64.8	-65.3	-65.4	-65.0	-64.3	-63.4	-62.5	-61.8	-61.5	-61.6	-62.1	-63.1	-64.2	-65.6	-67.1	-68.5	-69.9	-71.2
	-6.5	-4.9	-3.1	-1.3	0.4	1.9	3.0	3.5	3.4	2.9	2.1	1.3	0.5	0.0	-0.3	-0.5	-0.6	-0.8	-1.1
-45	-63.0	-63.6	-63.8	-63.7	-63.3	-62.7	-62.1	-61.6	-61.3	-61.4	-61.8	-62.7	-63.8	-65.1	-66.7	-68.3	-69.9	-71.5	-73.1
	-4.4	-2.7	-1.0	0.6	1.9	3.0	3.5	3.6	3.2	2.5	1.6	0.7	0.0	-0.6	-0.9	-1.1	-1.2	-1.2	-1.3
-50	-61.7	-62.1	-62.2	-62.1	-61.8	-61.5	-61.2	-61.0	-61.1	-61.5	-62.2	-63.2	-64.5	-65.9	-67.5	-69.2	-70.9	-72.6	-74.3
	-2.3	-0.8	0.7	1.9	2.9	3.6	3.8	3.6	3.1	2.3	1.5	0.7	0.0	-0.5	-0.8	-1.0	-1.1	-1.1	-1.1
-55	-60.6	-60.9	-61.0	-61.0	-60.9	-60.9	-60.9	-61.1	-61.4	-62.1	-62.9	-64.0	-65.2	-66.7	-68.2	-69.9	-71.6	-73.3	-75.1
	-0.5	0.7	1.8	2.8	3.4	3.8	3.8	3.6	3.1	2.5	1.8	1.1	0.6	0.1	-0.2	-0.3	-0.4	-0.4	-0.3
-60	-60.2	-60.4	-60.6	-60.7	-60.9	-61.1	-61.3	-61.7	-62.2	-63.0	-63.8	-64.9	-66.1	-67.5	-68.9	-70.5	-72.1	-73.7	-75.4
	0.7	1.6	2.4	3.1	3.5	3.8	3.8	3.6	3.2	2.8	2.3	1.8	1.4	1.1	0.8	0.7	0.6	0.6	0.6
-65	-60.7	-61.0	-61.2	-61.4	-61.7	-62.0	-62.4	-62.9	-63.5	-64.2	-65.1	-66.1	-67.2	-68.4	-69.6	-71.0	-72.5	-73.9	-75.5
	1.4	2.0	2.6	3.0	3.4	3.6	3.6	3.5	3.4	3.1	2.8	2.5	2.2	2.0	1.8	1.7	1.6	1.6	1.6
-70	-62.1	-62.4	-62.6	-62.9	-63.2	-63.6	-64.0	-64.5	-65.1	-65.8	-66.6	-67.4	-68.4	-69.4	-70.5	-71.6	-72.8	-74.1	-75.3
	1.8	2.2	2.5	2.9	3.1	3.3	3.4	3.4	3.3	3.2	3.1	2.9	2.8	2.7	2.6	2.5	2.4	2.3	2.3
-75	-64.3	-64.5	-64.7	-65.0	-65.3	-65.7	-66.1	-66.5	-67.1	-67.6	-68.3	-69.0	-69.7	-70.5	-71.4	-72.2	-73.2	-74.1	-75.1
	1.9	2.2	2.4	2.6	2.8	2.9	3.0	3.1	3.1	3.1	3.1	3.0	3.0	2.9	2.9	2.8	2.8	2.7	2.7
-80	-67.1	-67.2	-67.4	-67.6	-67.8	-68.1	-68.5	-68.8	-69.2	-69.6	-70.1	-70.6	-71.1	-71.7	-72.3	-72.9	-73.5	-74.1	-74.8
	2.0	2.1	2.3	2.4	2.5	2.6	2.6	2.7	2.7	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.7	2.7	2.7
-85	-70.2	-70.2	-70.4	-70.5	-70.6	-70.8	-71.0	-71.2	-71.4	-71.7	-71.9	-72.2	-72.5	-72.7	-73.0	-73.3	-73.7	-74.0	-74.3
	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
-90	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1

IGRF 1985 Inclination (I)

Latitude \ Longitude:	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
0	-21.4	-21.3	-20.9	-20.2	-19.5	-18.9	-18.4	-18.0	-17.8	-17.6	-17.3	-16.7	-15.8	-14.7	-13.2	-11.3	-9.2	-6.9	-4.6
	8.4	6.8	4.9	3.0	1.3	0.0	-0.8	-1.2	-1.4	-1.4	-1.3	-1.1	-0.6	0.0	0.7	1.3	1.5	1.2	0.5
-5	-32.0	-31.8	-31.4	-30.7	-29.9	-29.2	-28.6	-28.1	-27.7	-27.4	-26.9	-26.3	-25.4	-24.2	-22.8	-21.1	-19.1	-17.0	-14.9
	7.2	5.6	3.7	1.8	0.3	-0.8	-1.4	-1.6	-1.6	-1.5	-1.3	-1.0	-0.6	0.0	0.5	1.0	1.1	0.8	0.0
-10	-41.3	-41.1	-40.6	-40.0	-39.2	-38.4	-37.7	-37.2	-36.7	-36.3	-35.8	-35.1	-34.2	-33.1	-31.8	-30.3	-28.5	-26.6	-24.7
	5.8	4.2	2.4	0.7	-0.7	-1.5	-1.9	-1.9	-1.7	-1.5	-1.2	-0.9	-0.5	-0.1	0.3	0.6	0.6	0.3	-0.4
-15	-49.1	-49.0	-48.6	-48.0	-47.3	-46.5	-45.8	-45.3	-44.7	-44.3	-43.7	-43.0	-42.2	-41.2	-40.0	-38.6	-37.1	-35.4	-33.8
	4.4	2.8	1.2	-0.3	-1.4	-2.1	-2.2	-2.1	-1.7	-1.4	-1.1	-0.8	-0.5	-0.2	0.1	0.2	0.1	-0.2	-0.7
-20	-55.7	-55.7	-55.4	-54.9	-54.3	-53.6	-52.9	-52.3	-51.8	-51.3	-50.7	-50.1	-49.3	-48.4	-47.3	-46.1	-44.7	-43.3	-41.8
	3.0	1.6	0.2	-1.1	-2.0	-2.4	-2.4	-2.1	-1.7	-1.3	-1.0	-0.7	-0.5	-0.3	-0.2	-0.1	-0.2	-0.5	-0.9
-25	-61.0	-61.2	-61.1	-60.8	-60.3	-59.7	-59.1	-58.6	-58.0	-57.5	-56.9	-56.3	-55.6	-54.7	-53.7	-52.6	-51.4	-50.1	-48.8
	1.8	0.6	-0.7	-1.7	-2.4	-2.6	-2.5	-2.2	-1.7	-1.3	-1.0	-0.7	-0.6	-0.5	-0.4	-0.4	-0.5	-0.6	-0.9
-30	-65.3	-65.7	-65.9	-65.8	-65.5	-65.1	-64.5	-64.0	-63.5	-63.0	-62.4	-61.8	-61.1	-60.3	-59.3	-58.3	-57.2	-56.0	-54.8
	0.6	-0.3	-1.3	-2.1	-2.5	-2.7	-2.5	-2.1	-1.7	-1.3	-1.0	-0.8	-0.7	-0.6	-0.6	-0.6	-0.6	-0.7	-0.8
-35	-68.7	-69.4	-69.9	-70.0	-69.9	-69.7	-69.3	-68.8	-68.3	-67.8	-67.2	-66.6	-65.9	-65.1	-64.2	-63.2	-62.2	-61.1	-60.0
	-0.4	-1.0	-1.7	-2.2	-2.5	-2.6	-2.4	-2.0	-1.6	-1.3	-1.1	-0.9	-0.8	-0.8	-0.7	-0.7	-0.6	-0.6	-0.6
-40	-71.2	-72.3	-73.0	-73.5	-73.8	-73.7	-73.5	-73.1	-72.7	-72.1	-71.5	-70.9	-70.1	-69.3	-68.5	-67.5	-66.5	-65.4	-64.4
	-1.1	-1.4	-1.8	-2.2	-2.3	-2.3	-2.2	-1.9	-1.6	-1.4	-1.2	-1.1	-1.0	-0.9	-0.8	-0.7	-0.6	-0.5	-0.4
-45	-73.1	-74.4	-75.5	-76.4	-77.0	-77.2	-77.2	-77.0	-76.6	-76.1	-75.5	-74.8	-74.0	-73.2	-72.3	-71.3	-70.3	-69.3	-68.3
	-1.3	-1.5	-1.7	-1.8	-1.9	-2.0	-1.9	-1.7	-1.6	-1.5	-1.4	-1.3	-1.2	-1.1	-0.9	-0.7	-0.5	-0.3	-0.1
-50	-74.3	-75.9	-77.4	-78.6	-79.6	-80.2	-80.5	-80.5	-80.3	-79.8	-79.2	-78.5	-77.6	-76.7	-75.8	-74.8	-73.8	-72.8	-71.8
	-1.1	-1.1	-1.1	-1.2	-1.3	-1.4	-1.5	-1.6	-1.6	-1.6	-1.6	-1.5	-1.4	-1.2	-1.0	-0.7	-0.4	-0.1	0.1
-55	-75.1	-76.8	-78.4	-80.0	-81.3	-82.5	-83.3	-83.7	-83.7	-83.4	-82.8	-82.0	-81.1	-80.1	-79.1	-78.1	-77.1	-76.1	-75.1
	-0.3	-0.3	-0.3	-0.3	-0.4	-0.6	-0.9	-1.2	-1.5	-1.7	-1.8	-1.7	-1.5	-1.3	-0.9	-0.6	-0.2	0.1	0.3
-60	-75.4	-77.1	-78.8	-80.5	-82.1	-83.6	-84.9	-86.0	-86.7	-86.8	-86.3	-85.5	-84.5	-83.4	-82.3	-81.3	-80.2	-79.2	-78.2
	0.6	0.7	0.8	0.8	0.7	0.6	0.3	-0.2	-1.0	-1.7	-2.0	-1.8	-1.5	-1.1	-0.7	-0.3	0.1	0.4	0.6
-65	-75.5	-77.0	-78.6	-80.1	-81.7	-83.2	-84.7	-86.1	-87.5	-88.9	-89.8	-88.5	-87.3	-86.1	-85.0	-83.9	-82.8	-81.8	-80.8
	1.6	1.6	1.7	1.7	1.7	1.7	1.7	1.6	1.4	1.2	-1.7	-1.0	-0.6	-0.3	0.0	0.3	0.6	0.9	1.1
-70	-75.3	-76.6	-77.9	-79.2	-80.5	-81.8	-83.0	-84.1	-85.2	-86.1	-86.7	-87.0	-86.9	-86.4	-85.7	-84.9	-84.0	-83.1	-82.3
	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.1	1.9	1.7	1.5	1.5	1.6	1.6	1.7
-75	-75.1	-76.1	-77.0	-78.0	-78.9	-79.9	-80.7	-81.5	-82.2	-82.8	-83.3	-83.6	-83.8	-83.8	-83.6	-83.3	-82.9	-82.4	-81.8
	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.1	2.1	2.1
-80	-74.8	-75.4	-76.0	-76.7	-77.2	-77.8	-78.4	-78.8	-79.3	-79.7	-80.0	-80.2	-80.4	-80.4	-80.4	-80.4	-80.2	-80.0	-79.7
	2.7	2.6	2.6	2.6	2.5	2.5	2.5	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2
-85	-74.3	-74.6	-74.9	-75.2	-75.4	-75.7	-75.9	-76.2	-76.4	-76.5	-76.7	-76.8	-76.9	-76.9	-77.0	-77.0	-76.9	-76.8	-76.7
	2.4	2.4	2.4	2.4	2.4	2.4	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2	2.2	2.2	2.2	2.1	2.1
-90	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1

IGRF 1985 Inclination (I)

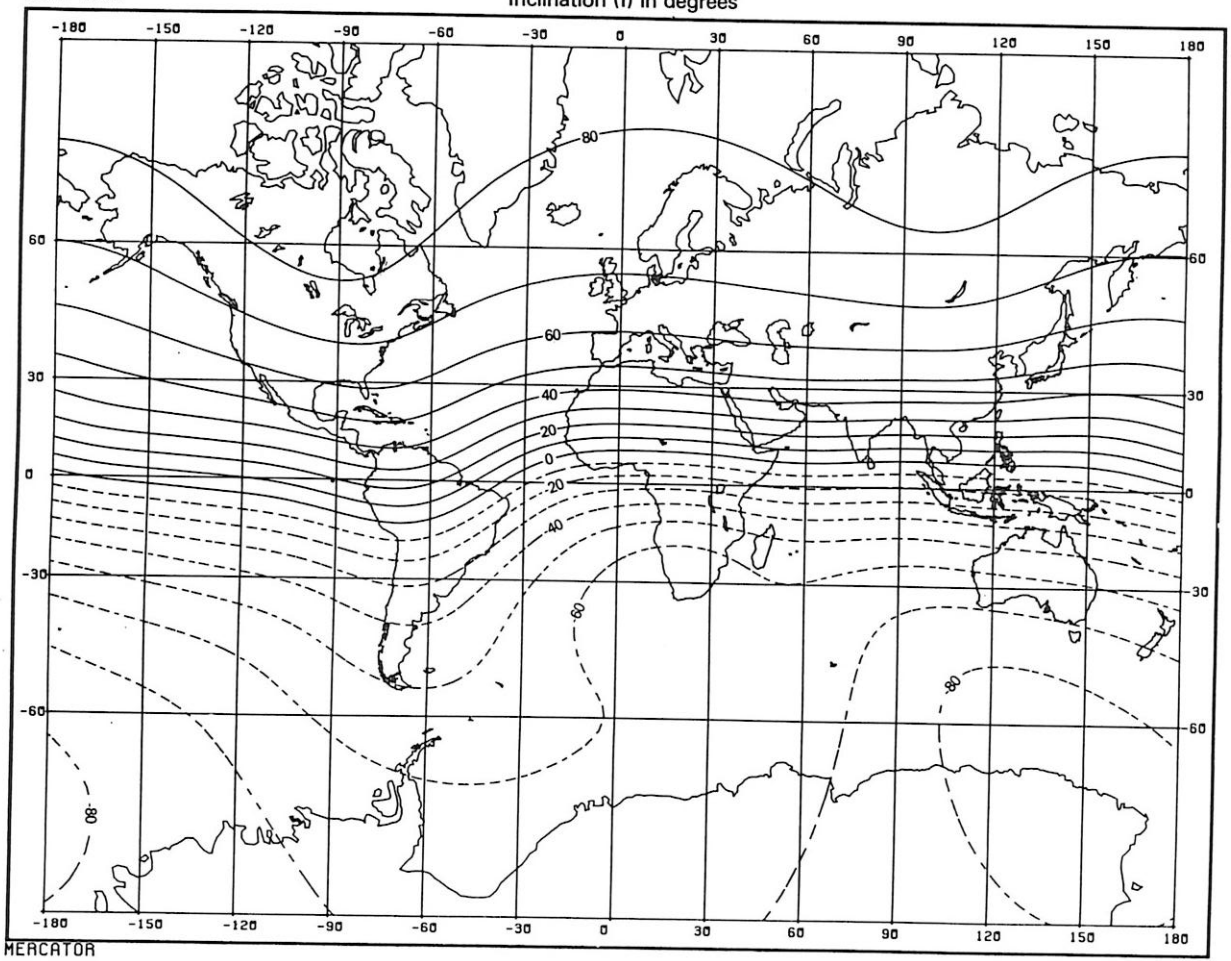
Latitude \ Longitude:	180	-175	-170	-165	-160	-155	-150	-145	-140	-135	-130	-125	-120	-115	-110	-105	-100	-95	-90
0	-4.6	-2.4	-0.6	0.9	2.1	3.0	3.9	4.8	5.7	6.5	7.4	8.2	9.0	10.1	11.4	13.1	15.1	17.2	19.4
	0.5	-0.6	-1.7	-2.7	-3.3	-3.5	-3.4	-3.3	-3.1	-2.9	-2.6	-1.8	-0.6	1.0	2.7	4.3	5.2	5.3	4.4
-5	-14.9	-12.9	-11.1	-9.6	-8.5	-7.4	-6.5	-5.5	-4.5	-3.6	-2.7	-1.8	-0.9	0.2	1.5	3.2	5.3	7.6	10.0
	0.0	-1.0	-2.0	-2.8	-3.3	-3.4	-3.2	-3.0	-2.7	-2.5	-2.0	-1.2	0.1	1.7	3.6	5.2	6.2	6.2	5.3
-10	-24.7	-22.9	-21.3	-19.9	-18.7	-17.6	-16.6	-15.6	-14.5	-13.5	-12.5	-11.6	-10.7	-9.6	-8.3	-6.6	-4.6	-2.3	0.2
	-0.4	-1.2	-2.1	-2.8	-3.1	-3.2	-3.0	-2.6	-2.3	-1.9	-1.4	-0.5	0.8	2.4	4.3	5.8	6.8	6.8	5.7
-15	-33.8	-32.2	-30.7	-29.4	-28.2	-27.1	-26.0	-25.0	-23.9	-22.8	-21.7	-20.8	-19.8	-18.8	-17.5	-15.9	-14.0	-11.8	-9.5
	-0.7	-1.4	-2.1	-2.6	-2.8	-2.8	-2.6	-2.3	-2.0	-1.5	-0.9	0.0	1.3	2.8	4.5	6.0	6.8	6.7	5.7
-20	-41.8	-40.4	-39.0	-37.8	-36.7	-35.6	-34.5	-33.4	-32.3	-31.2	-30.1	-29.2	-28.2	-27.2	-26.0	-24.5	-22.8	-20.8	-18.5
	-0.9	-1.4	-1.9	-2.3	-2.5	-2.5	-2.3	-2.1	-1.8	-1.3	-0.7	0.1	1.3	2.8	4.3	5.6	6.2	6.1	5.1
-25	-48.8	-47.5	-46.3	-45.1	-44.0	-42.9	-41.9	-40.8	-39.7	-38.6	-37.6	-36.6	-35.7	-34.6	-33.5	-32.2	-30.5	-28.7	-26.7
	-0.9	-1.3	-1.6	-1.9	-2.1	-2.2	-2.1	-2.0	-1.7	-1.4	-0.9	-0.1	1.0	2.3	3.6	4.6	5.2	5.0	4.1
-30	-54.8	-53.6	-52.5	-51.4	-50.3	-49.3	-48.2	-47.2	-46.2	-45.1	-44.1	-43.2	-42.2	-41.2	-40.1	-38.7	-37.2	-35.5	-33.6
	-0.8	-1.1	-1.3	-1.5	-1.7	-1.9	-2.0	-2.0	-1.9	-1.7	-1.2	-0.6	0.3	1.4	2.4	3.3	3.8	3.7	2.9
-35	-60.0	-58.8	-57.7	-56.7	-55.7	-54.7	-53.7	-52.8	-51.8	-50.8	-49.9	-48.9	-47.9	-46.8	-45.7	-44.3	-42.8	-41.1	-39.3
	-0.6	-0.8	-0.9	-1.1	-1.4	-1.6	-1.8	-2.0	-2.1	-2.0	-1.7	-1.2	-0.5	0.4	1.2	1.9	2.3	2.3	1.7
-40	-64.4	-63.3	-62.3	-61.3	-60.3	-59.4	-58.5	-57.6	-56.7	-55.8	-54.8	-53.8	-52.8	-51.7	-50.4	-49.0	-47.5	-45.8	-44.0
	-0.4	-0.4	-0.6	-0.8	-1.0	-1.3	-1.7	-2.0	-2.1	-2.2	-2.1	-1.7	-1.2	-0.5	0.1	0.7	1.1	1.1	0.8
-45	-68.3	-67.3	-66.3	-65.4	-64.4	-63.6	-62.7	-61.8	-60.9	-60.0	-59.1	-58.1	-57.0	-55.8	-54.4	-53.0	-51.4	-49.7	-47.9
	-0.1	-0.1	-0.2	-0.4	-0.6	-1.0	-1.4	-1.7	-2.0	-2.2	-2.2	-2.0	-1.6	-1.1	-0.6	-0.1	0.3	0.4	0.3
-50	-71.8	-70.9	-69.9	-69.0	-68.1	-67.3	-66.4	-65.6	-64.7	-63.8	-62.8	-61.7	-60.5	-59.3	-57.9	-56.3	-54.7	-53.1	-51.4
	0.1	0.2	0.2	0.0	-0.2	-0.6	-1.0	-1.3	-1.6	-1.8	-1.9	-1.8	-1.5	-1.2	-0.8	-0.4	-0.1	0.1	0.1
-55	-75.1	-74.2	-73.3	-72.4	-71.5	-70.7	-69.8	-68.9	-68.0	-67.0	-66.0	-64.9	-63.6	-62.3	-60.9	-59.4	-57.8	-56.3	-54.8
	0.3	0.5	0.5	0.4	0.2	-0.1	-0.4	-0.7	-1.0	-1.2	-1.2	-1.2	-1.1	-0.8	-0.5	-0.3	0.0	0.2	0.2
-60	-78.2	-77.3	-76.3	-75.4	-74.5	-73.7	-72.8	-71.8	-70.9	-69.8	-68.8	-67.6	-66.4	-65.1	-63.7	-62.3	-60.9	-59.4	-58.1
	0.6	0.8	0.9	0.8	0.7	0.5	0.3	0.0	-0.2	-0.3	-0.4	-0.4	-0.3	-0.2	0.0	0.2	0.3	0.4	0.5
-65	-80.8	-79.8	-78.9	-78.0	-77.1	-76.1	-75.2	-74.2	-73.2	-72.2	-71.1	-70.0	-68.8	-67.6	-66.3	-65.1	-63.8	-62.6	-61.4
	1.1	1.2	1.3	1.3	1.2	1.1	0.9	0.8	0.7	0.6	0.5	0.5	0.5	0.5	0.6	0.7	0.7	0.7	0.7
-70	-82.3	-81.4	-80.5	-79.6	-78.7	-77.8	-76.9	-76.0	-75.0	-74.0	-73.0	-71.9	-70.9	-69.8	-68.7	-67.7	-66.6	-65.6	-64.7
	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.4	1.4	1.3	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.0	1.0
-75	-81.8	-81.2	-80.6	-79.8	-79.1	-78.4	-77.6	-76.8	-76.0	-75.1	-74.3	-73.4	-72.5	-71.7	-70.8	-70.0	-69.2	-68.4	-67.7
	2.1	2.1	2.1	2.0	2.0	1.9	1.9	1.8	1.8	1.7	1.6	1.6	1.5	1.5	1.4	1.4	1.3	1.3	1.2
-80	-79.7	-79.4	-79.0	-78.6	-78.1	-77.6	-77.1	-76.5	-76.0	-75.4	-74.8	-74.2	-73.6	-73.0	-72.4	-71.8	-71.2	-70.7	-70.2
	2.2	2.1	2.1	2.1	2.0	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.6	1.6	1.5	1.5	1.4
-85	-76.7	-76.6	-76.5	-76.3	-76.1	-75.8	-75.6	-75.3	-75.1	-74.8	-74.5	-74.2	-73.9	-73.6	-73.3	-73.0	-72.7	-72.4	-72.1
	2.1	2.1	2.1	2.0	2.0	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.8	1.8	1.8	1.8	1.8	1.7	1.7
-90	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1

IGRF 1985 Inclination (I)

Latitude \ Longitude:	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
0	19.4	21.4	23.0	24.0	24.0	23.1	20.9	17.7	13.4	8.3	2.6	-3.2	-8.9	-14.0	-18.4	-21.7	-24.1	-25.7	-26.6
	4.4	2.7	0.3	-2.4	-5.5	-8.7	-12.0	-15.5	-19.0	-22.1	-24.3	-25.2	-24.6	-22.7	-19.8	-16.6	-13.7	-11.4	-9.6
-5	10.0	12.2	14.0	15.2	15.4	14.5	12.4	9.1	4.6	-0.6	-6.4	-12.3	-18.0	-23.2	-27.6	-31.1	-33.7	-35.5	-36.8
	5.3	3.4	0.7	-2.4	-5.8	-9.3	-13.0	-16.7	-20.3	-23.2	-25.2	-25.9	-25.0	-23.0	-20.1	-17.0	-14.2	-12.0	-10.3
-10	0.2	2.5	4.5	5.8	6.2	5.5	3.4	0.2	-4.2	-9.3	-14.9	-20.6	-26.1	-31.1	-35.4	-38.9	-41.7	-43.7	-45.3
	5.7	3.7	0.9	-2.5	-6.1	-9.9	-13.8	-17.5	-20.9	-23.6	-25.2	-25.6	-24.7	-22.6	-19.9	-17.1	-14.5	-12.4	-10.7
-15	-9.5	-7.2	-5.1	-3.7	-3.1	-3.7	-5.6	-8.6	-12.7	-17.6	-22.8	-28.0	-33.1	-37.7	-41.8	-45.2	-48.0	-50.2	-52.1
	5.7	3.6	0.8	-2.6	-6.4	-10.2	-14.0	-17.6	-20.7	-23.1	-24.4	-24.6	-23.6	-21.7	-19.3	-16.8	-14.5	-12.6	-11.0
-20	-18.5	-16.3	-14.3	-12.8	-12.2	-12.6	-14.2	-16.9	-20.6	-25.0	-29.7	-34.4	-38.9	-43.1	-46.8	-50.1	-52.8	-55.2	-57.2
	5.1	3.1	0.4	-2.8	-6.4	-10.1	-13.7	-17.0	-19.8	-21.7	-22.8	-22.9	-22.0	-20.5	-18.4	-16.3	-14.2	-12.5	-11.0
-25	-26.7	-24.6	-22.7	-21.2	-20.4	-20.7	-22.0	-24.3	-27.6	-31.4	-35.6	-39.7	-43.7	-47.4	-50.8	-53.8	-56.5	-58.8	-60.8
	4.1	2.3	-0.1	-3.0	-6.2	-9.6	-12.8	-15.7	-18.1	-19.8	-20.7	-20.7	-20.1	-18.8	-17.2	-15.4	-13.6	-12.0	-10.6
-30	-33.6	-31.6	-29.8	-28.4	-27.6	-27.7	-28.7	-30.7	-33.5	-36.8	-40.4	-44.0	-47.5	-50.8	-53.8	-56.5	-59.0	-61.2	-63.0
	2.9	1.5	-0.5	-3.0	-5.7	-8.6	-11.4	-13.8	-15.9	-17.4	-18.2	-18.3	-17.9	-16.9	-15.7	-14.2	-12.7	-11.2	-9.8
-35	-39.3	-37.5	-35.8	-34.4	-33.6	-33.5	-34.3	-35.9	-38.2	-41.1	-44.2	-47.3	-50.4	-53.3	-55.9	-58.4	-60.5	-62.4	-64.0
	1.7	0.7	-0.9	-2.8	-4.9	-7.2	-9.5	-11.6	-13.3	-14.6	-15.4	-15.7	-15.5	-14.8	-13.9	-12.7	-11.3	-9.9	-8.4
-40	-44.0	-42.2	-40.6	-39.3	-38.5	-38.3	-38.9	-40.2	-42.1	-44.4	-47.0	-49.7	-52.4	-54.9	-57.2	-59.3	-61.1	-62.7	-63.9
	0.8	0.1	-0.9	-2.3	-3.9	-5.7	-7.4	-9.1	-10.6	-11.8	-12.6	-13.0	-13.0	-12.6	-11.8	-10.8	-9.5	-8.1	-6.5
-45	-47.9	-46.2	-44.7	-43.5	-42.7	-42.4	-42.8	-43.7	-45.2	-47.1	-49.2	-51.4	-53.7	-55.8	-57.7	-59.4	-60.9	-62.1	-63.0
	0.3	-0.1	-0.8	-1.7	-2.8	-4.1	-5.4	-6.8	-8.0	-9.0	-9.8	-10.2	-10.3	-10.1	-9.5	-8.5	-7.4	-6.0	-4.4
-50	-51.4	-49.9	-48.4	-47.3	-46.5	-46.2	-46.4	-47.0	-48.0	-49.4	-51.1	-52.8	-54.5	-56.2	-57.7	-59.1	-60.2	-61.1	-61.7
	0.1	-0.1	-0.4	-1.0	-1.8	-2.6	-3.6	-4.7	-5.6	-6.5	-7.2	-7.6	-7.7	-7.5	-7.0	-6.1	-5.0	-3.7	-2.3
-55	-54.8	-53.3	-52.1	-51.0	-50.3	-49.9	-49.9	-50.2	-50.9	-51.8	-52.9	-54.2	-55.4	-56.6	-57.8	-58.7	-59.6	-60.2	-60.6
	0.2	0.1	-0.1	-0.4	-0.9	-1.5	-2.2	-3.0	-3.7	-4.3	-4.8	-5.2	-5.2	-5.0	-4.6	-3.8	-2.9	-1.7	-0.5
-60	-58.1	-56.8	-55.7	-54.8	-54.1	-53.7	-53.5	-53.6	-53.9	-54.4	-55.1	-55.9	-56.7	-57.5	-58.2	-58.9	-59.4	-59.9	-60.2
	0.5	0.4	0.3	0.0	-0.3	-0.7	-1.2	-1.7	-2.2	-2.6	-2.9	-3.1	-3.1	-2.9	-2.5	-1.9	-1.1	-0.2	0.7
-65	-61.4	-60.4	-59.4	-58.6	-58.0	-57.5	-57.2	-57.1	-57.2	-57.4	-57.7	-58.1	-58.5	-58.9	-59.4	-59.8	-60.1	-60.4	-60.7
	0.7	0.7	0.5	0.4	0.1	-0.1	-0.5	-0.8	-1.0	-1.3	-1.4	-1.5	-1.4	-1.2	-0.9	-0.4	0.1	0.8	1.4
-70	-64.7	-63.8	-63.0	-62.3	-61.8	-61.3	-60.9	-60.7	-60.6	-60.6	-60.6	-60.7	-60.9	-61.1	-61.3	-61.5	-61.7	-61.9	-62.1
	1.0	0.9	0.8	0.7	0.5	0.3	0.2	0.0	-0.2	-0.3	-0.3	-0.3	-0.2	0.0	0.2	0.6	0.9	1.4	1.8
-75	-67.7	-67.0	-66.3	-65.8	-65.3	-64.9	-64.5	-64.2	-64.0	-63.8	-63.7	-63.7	-63.7	-63.7	-63.8	-63.9	-64.0	-64.1	-64.3
	1.2	1.1	1.0	1.0	0.9	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.9	1.0	1.2	1.5	1.7	1.9
-80	-70.2	-69.7	-69.2	-68.8	-68.4	-68.1	-67.8	-67.5	-67.3	-67.1	-67.0	-66.9	-66.8	-66.8	-66.8	-66.8	-66.8	-66.9	-67.1
	1.4	1.4	1.3	1.3	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.3	1.4	1.4	1.5	1.6	1.8	1.9	2.0
-85	-72.1	-71.9	-71.6	-71.4	-71.2	-71.0	-70.8	-70.6	-70.5	-70.3	-70.2	-70.1	-70.1	-70.0	-70.0	-70.0	-70.0	-70.1	-70.2
	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.0
-90	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5	-73.5
	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1

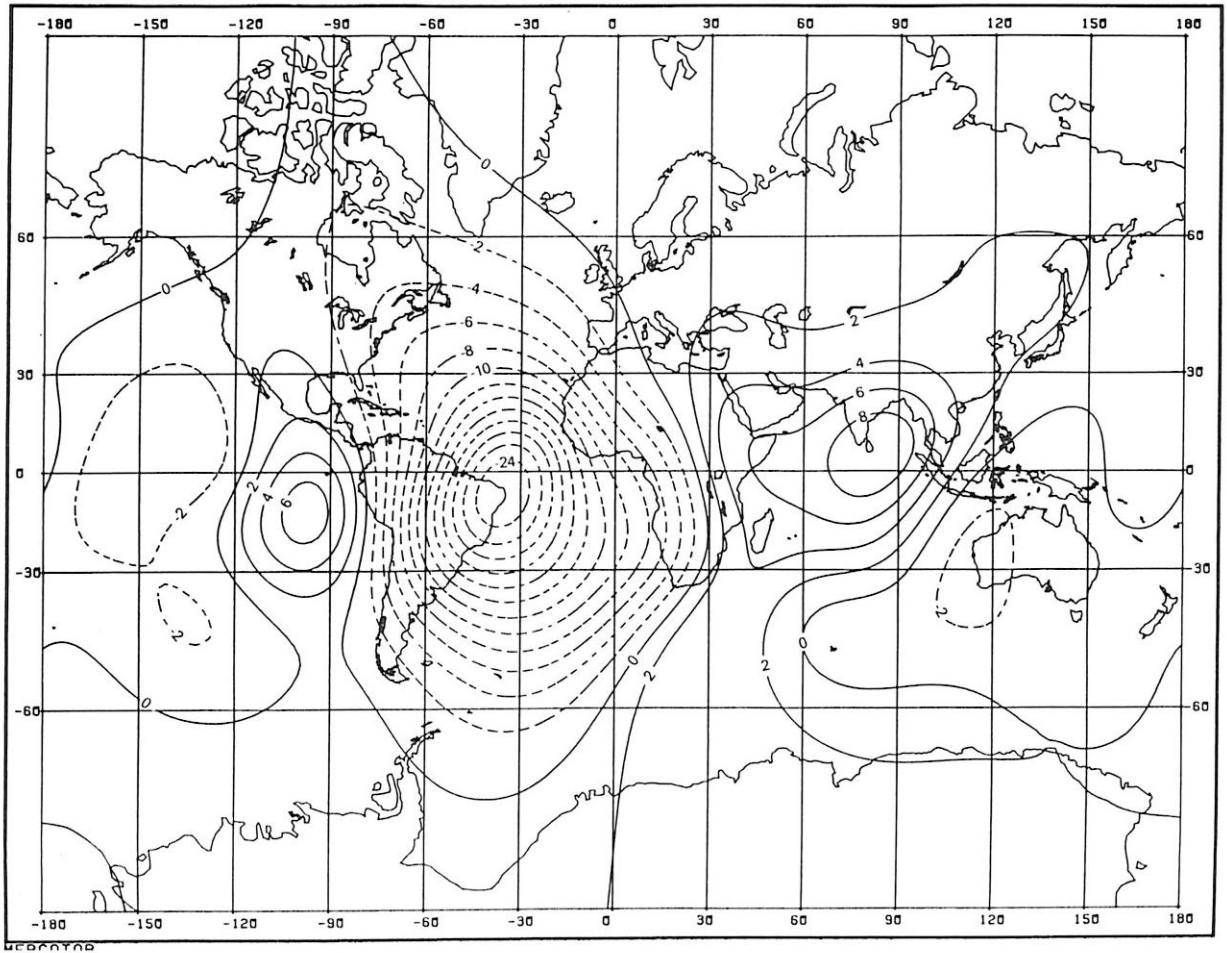
IGRF 1985

Inclination (I) in degrees



IGRF 1985

Annual change of Inclination (i̇) in minutes/yr



IGRF 1985 Horizontal Intensity (H)

Latitude \ Longitude:	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
90	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264
	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9
85	4739	4756	4756	4738	4704	4652	4584	4499	4397	4279	4147	4000	3840	3669	3487	3298	3103	2905	2707
	-17.7	-18.2	-18.7	-19.0	-19.4	-19.6	-19.9	-20.0	-20.2	-20.2	-20.3	-20.3	-20.3	-20.2	-20.2	-20.1	-20.1	-20.1	-20.1
80	6995	7033	7044	7028	6985	6914	6814	6685	6526	6337	6118	5869	5592	5288	4961	4617	4263	3908	3565
	-23.1	-24.0	-24.8	-25.5	-26.1	-26.6	-27.0	-27.4	-27.6	-27.8	-28.0	-28.0	-28.0	-28.0	-28.0	-28.0	-28.1	-28.2	-28.5
75	9040	9093	9118	9113	9080	9015	8919	8788	8621	8415	8168	7879	7548	7177	6771	6339	5894	5457	5054
	-24.5	-25.8	-26.9	-27.9	-28.9	-29.7	-30.4	-31.0	-31.5	-31.9	-32.2	-32.5	-32.7	-32.9	-33.1	-33.2	-33.5	-33.8	-34.1
70	11006	11059	11086	11088	11065	11017	10941	10836	10696	10519	10299	10033	9717	9355	8949	8511	8061	7624	7239
	-22.0	-23.7	-25.2	-26.6	-27.8	-28.9	-29.9	-30.7	-31.4	-32.0	-32.5	-32.9	-33.3	-33.7	-34.0	-34.4	-34.9	-35.3	-35.8
65	13022	13057	13070	13064	13042	13006	12953	12882	12789	12669	12515	12321	12081	11794	11463	11099	10721	10358	10049
	-16.6	-18.8	-20.9	-22.7	-24.3	-25.6	-26.8	-27.7	-28.5	-29.1	-29.7	-30.1	-30.6	-31.1	-31.6	-32.3	-33.0	-33.9	-34.8
60	15172	15179	15168	15145	15115	15080	15044	15005	14961	14907	14836	14741	14614	14450	14248	14016	13768	13531	13338
	-9.7	-12.7	-15.5	-17.9	-20.0	-21.7	-23.0	-24.1	-24.9	-25.5	-25.9	-26.4	-26.8	-27.4	-28.2	-29.1	-30.3	-31.6	-33.0
55	17490	17474	17443	17404	17364	17328	17301	17285	17281	17287	17297	17305	17301	17279	17234	17166	17083	17001	16943
	-2.5	-6.5	-10.1	-13.4	-16.1	-18.4	-20.2	-21.5	-22.4	-23.0	-23.5	-23.9	-24.5	-25.2	-26.2	-27.5	-29.0	-30.7	-32.4
50	19967	19947	19914	19873	19833	19801	19783	19784	19809	19859	19933	20027	20136	20251	20364	20467	20557	20637	20717
	4.3	-0.7	-5.3	-9.4	-13.1	-16.2	-18.8	-20.7	-22.1	-23.0	-23.6	-24.2	-25.0	-26.0	-27.5	-29.2	-31.0	-32.8	-34.4
45	22563	22566	22554	22534	22514	22499	22496	22512	22555	22632	22749	22907	23105	23337	23589	23849	24099	24328	24530
	10.6	4.9	-0.5	-5.6	-10.3	-14.6	-18.3	-21.3	-23.5	-25.1	-26.3	-27.3	-28.5	-30.1	-32.0	-34.2	-36.4	-38.0	-39.0
40	25212	25261	25293	25317	25337	25356	25379	25413	25470	25561	25702	25901	26164	26485	26850	27237	27618	27967	28262
	16.3	10.5	4.6	-1.2	-7.0	-12.6	-17.8	-22.2	-25.6	-28.2	-30.2	-31.9	-33.7	-36.0	-38.7	-41.4	-43.7	-45.1	-45.1
35	27803	27914	28009	28094	28171	28239	28300	28359	28429	28530	28685	28911	29219	29605	30052	30530	31002	31430	31780
	21.4	16.0	10.3	4.1	-2.5	-9.4	-16.1	-22.1	-27.0	-30.8	-33.7	-36.2	-38.8	-41.8	-45.2	-48.4	-50.8	-51.6	-50.4
30	30162	30347	30517	30677	30824	30953	31061	31151	31240	31355	31524	31773	32116	32548	33049	33583	34105	34569	34936
	25.1	21.0	16.0	10.0	2.8	-5.0	-13.0	-20.5	-26.8	-31.7	-35.5	-38.7	-41.9	-45.6	-49.5	-53.0	-55.1	-55.2	-52.7
25	32055	32323	32579	32824	33051	33248	33409	33538	33656	33793	33986	34264	34641	35110	35645	36206	36745	37212	37566
	26.5	24.1	20.3	14.9	7.9	-0.4	-9.2	-17.6	-24.8	-30.5	-34.9	-38.6	-42.3	-46.2	-50.1	-53.3	-54.8	-53.8	-49.8
20	33217	33575	33926	34264	34575	34843	35062	35238	35396	35572	35806	36127	36547	37053	37615	38190	38727	39182	39514
	24.2	23.7	21.4	17.1	10.7	2.7	-6.1	-14.6	-22.0	-28.0	-32.5	-36.2	-39.7	-43.3	-46.6	-48.8	-49.0	-46.5	-41.1
15	33420	33866	34312	34741	35133	35469	35746	35977	36190	36426	36725	37112	37593	38149	38746	39337	39878	40327	40650
	17.3	18.4	17.6	14.5	9.3	2.5	-5.1	-12.8	-19.5	-24.9	-28.9	-32.0	-34.7	-37.3	-39.3	-39.8	-38.1	-33.8	-27.1
10	32545	33058	33580	34080	34533	34924	35255	35548	35835	36157	36548	37031	37600	38230	38882	39512	40079	40550	40899
	5.3	7.6	8.0	6.3	2.8	-2.0	-7.5	-13.1	-18.2	-22.1	-24.9	-26.7	-28.1	-29.0	-29.0	-27.2	-23.2	-17.1	-9.4
5	30639	31169	31717	32243	32719	33140	33517	33878	34257	34692	35209	35818	36506	37240	37976	38675	39303	39835	40252
	-11.3	-8.4	-7.2	-7.4	-8.7	-10.7	-13.2	-15.8	-18.1	-19.8	-20.6	-20.7	-20.3	-19.1	-16.6	-12.4	-6.2	1.4	9.4
0	27921	28390	28888	29371	29817	30234	30643	31075	31563	32135	32805	33571	34406	35268	36114	36908	37626	38251	38772
	-30.9	-27.9	-26.1	-24.9	-23.7	-22.3	-20.9	-19.7	-18.7	-17.4	-15.7	-13.7	-11.2	-7.8	-3.1	3.3	11.1	19.3	26.5

IGRF 1985 Horizontal Intensity (H)

Latitude \ Longitude:	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
90	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264
	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9
85	2707	2513	2327	2154	1997	1862	1752	1670	1617	1590	1585	1596	1618	1644	1667	1685	1693	1688	1669
	-20.1	-20.3	-20.4	-20.7	-21.0	-21.3	-21.7	-21.9	-21.9	-21.9	-21.6	-21.3	-21.0	-20.6	-20.3	-19.9	-19.7	-19.4	-19.1
80	3565	3252	2989	2798	2699	2701	2797	2969	3191	3440	3696	3942	4168	4365	4526	4646	4724	4757	4744
	-28.5	-28.8	-29.1	-29.3	-29.1	-28.4	-27.4	-26.4	-25.5	-24.9	-24.6	-24.5	-24.5	-24.7	-24.9	-25.1	-25.2	-25.3	-25.3
75	5054	4718	4488	4397	4458	4665	4988	5390	5834	6288	6727	7133	7492	7795	8036	8210	8316	8353	8321
	-34.1	-34.3	-34.3	-33.9	-33.1	-32.1	-31.1	-30.4	-30.1	-30.0	-30.2	-30.6	-31.1	-31.5	-32.0	-32.4	-32.6	-32.7	-32.7
70	7239	6949	6797	6813	7007	7362	7840	8397	8990	9579	10137	10639	11072	11427	11698	11884	11986	12004	11942
	-35.8	-36.2	-36.4	-36.4	-36.1	-35.6	-35.2	-35.0	-35.0	-35.1	-35.4	-35.7	-36.0	-36.3	-36.4	-36.5	-36.5	-36.3	-36.0
65	10049	9840	9773	9875	10155	10594	11154	11790	12453	13100	13699	14225	14663	15006	15253	15407	15471	15451	15352
	-34.8	-35.8	-36.6	-37.3	-37.9	-38.2	-38.3	-38.4	-38.4	-38.3	-38.2	-37.9	-37.6	-37.2	-36.7	-36.2	-35.5	-34.9	-34.2
60	13338	13229	13242	13404	13722	14183	14753	15387	16037	16659	17217	17689	18061	18329	18497	18573	18568	18492	18352
	-33.0	-34.5	-36.0	-37.3	-38.4	-39.2	-39.6	-39.6	-39.3	-38.7	-37.8	-36.8	-35.6	-34.3	-33.0	-31.6	-30.3	-29.1	-27.9
55	16943	16940	17023	17215	17527	17951	18461	19018	19576	20093	20536	20883	21123	21258	21299	21260	21157	21005	20816
	-32.4	-34.1	-35.6	-37.0	-38.0	-38.6	-38.7	-38.3	-37.3	-36.0	-34.3	-32.3	-30.3	-28.3	-26.3	-24.3	-22.5	-20.8	-19.4
50	20717	20813	20948	21141	21406	21742	22133	22547	22947	23294	23559	23723	23781	23740	23617	23432	23207	22962	22713
	-34.4	-35.6	-36.4	-36.9	-36.9	-36.6	-35.7	-34.4	-32.5	-30.3	-27.9	-25.4	-22.9	-20.6	-18.4	-16.3	-14.4	-12.6	-11.0
45	24530	24707	24871	25037	25221	25430	25657	25883	26077	26208	26252	26196	26039	25796	25488	25139	24779	24429	24108
	-39.0	-39.1	-38.5	-37.1	-35.4	-33.3	-30.9	-28.2	-25.3	-22.4	-19.5	-16.9	-14.6	-12.7	-10.9	-9.4	-7.9	-6.4	-5.0
40	28262	28492	28658	28773	28854	28912	28953	28966	28929	28821	28624	28331	27950	27499	27004	26494	25997	25539	25142
	-45.1	-43.6	-40.9	-37.2	-33.1	-28.7	-24.4	-20.3	-16.5	-13.1	-10.3	-8.2	-6.7	-5.8	-5.3	-4.8	-4.2	-3.4	-2.3
35	31780	32031	32175	32222	32188	32093	31946	31745	31480	31135	30702	30182	29590	28950	28289	27638	27023	26470	26000
	-50.4	-47.2	-42.2	-36.0	-29.4	-22.9	-16.8	-11.5	-7.1	-3.7	-1.4	-0.2	-0.2	-0.9	-2.0	-3.0	-3.6	-3.6	-3.0
30	34936	35177	35280	35252	35109	34872	34557	34167	33699	33146	32509	31797	31034	30246	29463	28712	28016	27396	26871
	-52.7	-47.6	-40.6	-32.3	-23.7	-15.5	-8.4	-2.6	1.9	4.8	6.1	5.9	4.4	2.0	-0.8	-3.4	-5.2	-6.1	-5.9
25	37566	37778	37833	37736	37502	37153	36707	36172	35550	34841	34056	33212	32338	31465	30620	29826	29099	28451	27900
	-49.8	-43.2	-34.6	-25.0	-15.4	-6.7	0.4	5.8	9.4	11.2	11.2	9.6	6.7	2.9	-1.1	-4.8	-7.7	-9.3	-9.5
20	39514	39695	39713	39569	39277	38858	38331	37709	36997	36203	35343	34442	33533	32646	31807	31032	30328	29698	29153
	-41.1	-33.3	-23.9	-14.0	-4.7	3.2	9.1	12.9	14.8	14.9	13.5	10.7	6.9	2.5	-2.1	-6.4	-9.7	-11.8	-12.5
15	40650	40823	40833	40681	40377	39942	39393	38748	38017	37215	36360	35482	34613	33784	33015	32314	31681	31110	30602
	-27.1	-18.6	-9.3	-0.3	7.5	13.3	16.8	18.2	17.7	15.9	13.1	9.5	5.4	1.1	-3.2	-7.3	-10.7	-13.0	-14.1
10	40899	41104	41154	41046	40787	40393	39886	39283	38603	37862	37086	36301	35539	34824	34172	33586	33059	32575	32128
	-9.4	-1.0	7.2	14.3	19.4	22.3	22.7	21.1	18.1	14.3	10.3	6.4	2.7	-0.8	-4.1	-7.4	-10.4	-12.9	-14.4
5	40252	40539	40682	40675	40519	40227	39819	39317	38745	38125	37481	36841	36228	35663	35157	34707	34301	33919	33545
	9.4	16.9	23.0	27.2	29.1	28.5	25.7	21.2	16.0	10.7	6.0	2.2	-0.6	-2.9	-4.9	-7.1	-9.6	-12.1	-14.2
0	38772	39180	39462	39606	39605	39465	39205	38850	38426	37962	37483	37013	36570	36168	35814	35503	35219	34938	34638
	26.5	32.0	35.2	35.9	34.3	30.5	25.0	18.5	11.8	5.7	0.9	-2.3	-4.1	-5.0	-5.7	-6.9	-8.9	-11.6	-14.5

IGRF 1985 Horizontal Intensity (H)

Latitude \ Longitude:	180	-175	-170	-165	-160	-155	-150	-145	-140	-135	-130	-125	-120	-115	-110	-105	-100	-95	-90
90	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264
	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9
85	1669	1635	1585	1520	1441	1350	1251	1150	1052	971	919	911	956	1054	1195	1368	1565	1775	1995
	-19.1	-18.9	-18.7	-18.5	-18.2	-18.0	-17.7	-17.3	-16.8	-15.9	-14.6	-12.7	-10.5	-8.5	-6.9	-5.8	-5.3	-5.1	-5.2
80	4744	4684	4578	4427	4232	3993	3714	3397	3045	2660	2248	1813	1363	913	516	441	798	1262	1745
	-25.3	-25.2	-25.0	-24.7	-24.3	-23.7	-23.0	-22.3	-21.4	-20.5	-19.5	-18.6	-17.8	-17.3	-16.9	-7.3	0.7	2.1	1.5
75	8321	8221	8053	7819	7520	7157	6733	6250	5710	5119	4482	3804	3092	2358	1615	904	498	952	1659
	-32.7	-32.6	-32.3	-31.8	-31.2	-30.4	-29.4	-28.2	-26.8	-25.3	-23.5	-21.4	-19.1	-16.2	-12.2	-4.7	16.0	17.4	12.9
70	11942	11800	11580	11282	10906	10452	9921	9314	8634	7885	7075	6214	5316	4404	3513	2714	2151	2044	2444
	-36.0	-35.6	-35.1	-34.5	-33.7	-32.7	-31.6	-30.2	-28.5	-26.5	-24.2	-21.3	-17.8	-13.4	-7.5	1.0	12.7	22.8	24.7
65	15352	15177	14925	14597	14190	13699	13124	12463	11715	10887	9986	9026	8026	7019	6050	5189	4541	4230	4332
	-34.2	-33.4	-32.7	-31.9	-31.1	-30.1	-28.9	-27.5	-25.7	-23.5	-20.9	-17.7	-13.8	-8.9	-2.6	5.4	15.0	24.3	30.2
60	18352	18152	17892	17571	17181	16715	16167	15531	14805	13991	13097	12136	11130	10112	9127	8239	7532	7095	6998
	-27.9	-26.9	-26.0	-25.1	-24.3	-23.4	-22.4	-21.1	-19.5	-17.6	-15.3	-12.5	-9.1	-4.9	0.5	7.4	15.6	24.4	32.2
55	20816	20595	20343	20055	19722	19332	18873	18335	17711	17000	16204	15334	14409	13456	12515	11642	10904	10381	10139
	-19.4	-18.1	-17.1	-16.3	-15.6	-14.9	-14.1	-13.2	-12.1	-10.9	-9.5	-7.9	-5.9	-3.3	0.3	5.5	12.5	21.1	30.1
50	22713	22467	22227	21985	21730	21446	21116	20725	20259	19712	19082	18373	17597	16772	15930	15116	14389	13820	13476
	-11.0	-9.7	-8.6	-7.8	-7.2	-6.8	-6.3	-5.9	-5.4	-5.1	-5.0	-5.1	-5.2	-4.8	-3.4	-0.2	5.4	13.6	23.4
45	24108	23828	23591	23392	23217	23047	22860	22635	22353	22001	21573	21064	20478	19825	19126	18415	17741	17169	16765
	-5.0	-3.7	-2.6	-1.7	-1.2	-0.8	-0.7	-0.6	-0.8	-1.4	-2.6	-4.3	-6.5	-8.5	-9.5	-8.5	-4.6	2.7	12.8
40	25142	24817	24573	24404	24297	24230	24176	24110	24008	23851	23628	23328	22949	22489	21959	21381	20794	20254	19824
	-2.3	-1.1	0.1	1.1	1.7	2.0	2.1	1.8	1.2	0.0	-2.0	-5.0	-8.8	-12.8	-16.1	-17.4	-15.5	-9.7	-0.2
35	26000	25629	25366	25212	25152	25165	25219	25285	25335	25348	25309	25204	25020	24750	24392	23956	23471	22981	22545
	-3.0	-1.9	-0.5	0.7	1.5	1.9	1.9	1.5	0.7	-0.7	-3.0	-6.5	-11.2	-16.6	-21.8	-25.2	-25.6	-21.9	-14.1
30	26871	26459	26174	26018	25983	26044	26170	26327	26488	26630	26734	26787	26768	26662	26456	26149	25757	25316	24878
	-5.9	-4.9	-3.4	-1.9	-0.9	-0.5	-0.5	-1.0	-1.8	-3.0	-5.1	-8.5	-13.3	-19.4	-25.8	-31.1	-33.8	-32.6	-27.1
25	27900	27461	27154	26985	26948	27022	27176	27377	27596	27812	28008	28167	28266	28281	28190	27980	27659	27252	26805
	-9.5	-8.6	-7.1	-5.5	-4.5	-4.2	-4.6	-5.2	-6.0	-7.0	-8.6	-11.4	-15.8	-21.7	-28.6	-35.3	-39.9	-41.2	-38.3
20	29153	28708	28382	28188	28125	28174	28307	28496	28715	28946	29173	29379	29539	29622	29599	29450	29171	28780	28318
	-12.5	-11.8	-10.5	-9.1	-8.4	-8.6	-9.4	-10.6	-11.6	-12.6	-13.7	-15.8	-19.4	-24.7	-31.4	-38.6	-44.6	-48.0	-47.4
15	30602	30170	29831	29602	29486	29472	29538	29661	29822	30005	30200	30390	30550	30648	30649	30527	30269	29885	29409
	-14.1	-13.9	-13.1	-12.3	-12.2	-13.1	-14.7	-16.5	-18.1	-19.3	-20.4	-21.9	-24.6	-29.0	-35.0	-42.0	-48.6	-53.1	-54.3
10	32128	31723	31376	31103	30915	30806	30766	30777	30829	30911	31016	31131	31237	31302	31291	31172	30925	30551	30074
	-14.4	-15.0	-14.9	-15.0	-15.8	-17.5	-19.9	-22.5	-24.8	-26.6	-27.8	-29.1	-31.2	-34.5	-39.5	-45.6	-51.8	-56.7	-58.8
5	33545	33176	32824	32506	32235	32016	31847	31720	31631	31574	31548	31547	31557	31553	31503	31372	31135	30781	30321
	-14.2	-15.7	-16.8	-17.9	-19.5	-21.8	-24.8	-27.9	-30.8	-33.0	-34.6	-35.9	-37.5	-39.9	-43.6	-48.5	-53.9	-58.5	-60.8
0	34638	34311	33961	33604	33258	32934	32639	32375	32140	31936	31764	31626	31518	31423	31317	31166	30937	30608	30178
	-14.5	-17.1	-19.3	-21.3	-23.5	-26.1	-29.0	-32.0	-34.9	-37.4	-39.1	-40.4	-41.6	-43.2	-45.7	-49.4	-53.7	-57.8	-60.2

IGRF 1985 Horizontal Intensity (H)

Latitude \ Longitude:	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
90	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264	2264
	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9	-11.9
85	1995	2220	2445	2669	2888	3100	3305	3500	3683	3855	4014	4159	4289	4404	4504	4587	4654	4705	4739
	-5.2	-5.6	-6.1	-6.7	-7.4	-8.2	-9.0	-9.8	-10.6	-11.5	-12.3	-13.1	-13.9	-14.6	-15.3	-16.0	-16.6	-17.2	-17.7
80	1745	2227	2700	3158	3598	4016	4410	4779	5120	5434	5719	5976	6205	6405	6577	6722	6839	6930	6995
	1.5	0.4	-1.0	-2.5	-4.1	-5.7	-7.4	-9.0	-10.5	-12.1	-13.5	-15.0	-16.3	-17.6	-18.9	-20.0	-21.1	-22.2	-23.1
75	1659	2386	3099	3785	4435	5046	5613	6135	6609	7037	7419	7756	8050	8304	8519	8698	8844	8957	9040
	12.9	9.5	6.5	3.8	1.2	-1.2	-3.5	-5.7	-7.8	-9.8	-11.7	-13.6	-15.4	-17.1	-18.8	-20.3	-21.8	-23.2	-24.5
70	2444	3138	3944	4773	5582	6348	7059	7706	8288	8803	9253	9641	9972	10249	10479	10665	10812	10925	11006
	24.7	21.7	17.8	14.1	10.6	7.4	4.4	1.6	-1.0	-3.4	-5.8	-8.0	-10.2	-12.3	-14.4	-16.4	-18.4	-20.2	-22.0
65	4332	4801	5514	6349	7220	8075	8879	9613	10268	10839	11328	11739	12079	12354	12573	12743	12870	12962	13022
	30.2	31.7	29.9	26.8	23.2	19.6	16.1	12.9	9.8	7.0	4.2	1.6	-1.1	-3.7	-6.4	-9.0	-11.6	-14.2	-16.6
60	6998	7252	7799	8544	9390	10261	11102	11878	12568	13163	13662	14071	14398	14653	14846	14987	15083	15142	15172
	32.2	37.2	39.1	38.3	36.0	33.0	29.6	26.2	23.0	19.9	16.9	13.8	10.7	7.4	4.0	0.5	-3.0	-6.4	-9.7
55	10139	10215	10590	11204	11970	12803	13633	14409	15100	15690	16178	16568	16872	17101	17267	17381	17450	17484	17490
	30.1	37.9	43.4	45.9	46.0	44.4	41.9	39.0	36.0	33.1	30.0	26.8	23.2	19.3	15.2	10.7	6.2	1.8	-2.5
50	13476	13409	13627	14099	14755	15513	16294	17037	17703	18271	18737	19107	19394	19609	19765	19871	19935	19965	19967
	23.4	33.5	42.1	47.9	50.8	51.3	50.3	48.5	46.3	44.0	41.4	38.4	34.7	30.5	25.7	20.4	15.0	9.5	4.3
45	16765	16588	16670	16999	17527	18183	18888	19576	20203	20744	21195	21562	21855	22086	22263	22394	22484	22538	22563
	12.8	24.4	35.3	43.9	49.4	52.3	53.1	52.9	52.1	51.0	49.4	47.0	43.6	39.4	34.2	28.5	22.5	16.5	10.6
40	19824	19568	19529	19718	20108	20643	21254	21875	22461	22986	23443	23836	24173	24458	24695	24886	25033	25139	25212
	-0.2	11.6	23.7	34.3	42.0	47.1	50.0	51.7	52.8	53.3	52.9	51.6	48.9	44.9	40.0	34.3	28.3	22.3	16.3
35	22545	22227	22080	22132	22379	22784	23292	23844	24397	24924	25414	25866	26280	26655	26984	27262	27487	27664	27803
	-14.1	-3.1	9.1	20.5	29.8	36.7	41.8	45.6	48.7	50.9	52.1	51.8	49.9	46.6	42.1	37.1	31.9	26.6	21.4
30	24878	24505	24257	24177	24282	24557	24963	25453	25984	26527	27068	27596	28105	28581	29010	29383	29694	29949	30162
	-27.1	-17.9	-6.7	4.7	14.8	23.2	30.2	36.1	41.1	45.0	47.3	47.8	46.5	43.8	40.3	36.4	32.6	28.9	25.1
25	26805	26379	26037	25835	25808	25962	26275	26709	27222	27783	28368	28960	29542	30096	30602	31049	31434	31764	32055
	-38.3	-31.5	-21.9	-11.2	-0.7	8.9	17.5	25.1	31.7	36.6	39.5	40.2	39.1	36.8	34.1	31.7	29.8	28.3	26.5
20	28318	27842	27418	27112	26972	27021	27250	27628	28114	28669	29262	29867	30464	31032	31556	32030	32458	32849	33217
	-47.4	-42.9	-35.0	-25.1	-14.6	-4.2	5.6	14.5	21.9	27.1	29.6	29.6	27.9	25.6	23.7	22.9	23.1	23.8	24.2
15	29409	28895	28410	28023	27792	27751	27900	28212	28643	29147	29684	30224	30746	31238	31698	32133	32558	32984	33420
	-54.3	-51.4	-45.0	-35.9	-25.5	-14.7	-4.2	5.1	12.4	16.9	18.1	16.5	13.5	10.7	9.4	10.0	12.1	14.9	17.3
10	30074	29543	29020	28577	28276	28155	28220	28445	28780	29173	29580	29967	30321	30644	30954	31280	31646	32069	32545
	-58.8	-57.0	-51.6	-43.2	-33.0	-22.2	-11.8	-2.9	3.4	6.2	5.2	1.5	-3.2	-6.9	-8.1	-6.5	-2.8	1.5	5.3
5	30321	29794	29257	28778	28418	28219	28189	28298	28496	28725	28936	29101	29216	29301	29397	29552	29806	30173	30639
	-60.8	-59.7	-55.0	-47.3	-37.7	-27.4	-17.8	-10.2	-5.8	-5.3	-8.8	-15.0	-21.5	-26.2	-27.5	-25.3	-20.8	-15.7	-11.3
0	30178	29670	29132	28626	28210	27928	27787	27758	27788	27818	27801	27713	27561	27383	27237	27188	27283	27535	27921
	-60.2	-59.7	-55.8	-49.1	-40.6	-31.6	-23.6	-18.0	-15.9	-18.1	-24.0	-32.3	-40.4	-45.9	-47.5	-45.2	-40.5	-35.3	-30.9

IGRF 1985 Horizontal Intensity (H)

Latitude \ Longitude:	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	27921	28390	28888	29371	29817	30234	30643	31075	31563	32135	32805	33571	34406	35268	36114	36908	37626	38251	38772
	-30.9	-27.9	-26.1	-24.9	-23.7	-22.3	-20.9	-19.7	-18.7	-17.4	-15.7	-13.7	-11.2	-7.8	-3.1	3.3	11.1	19.3	26.5
-5	24731	25052	25412	25775	26135	26513	26940	27444	28051	28775	29617	30554	31548	32548	33512	34409	35223	35949	36587
	-51.4	-48.6	-46.4	-43.6	-39.6	-34.5	-28.9	-23.6	-18.7	-14.2	-9.8	-5.4	-0.9	4.3	10.7	18.4	26.8	34.3	39.6
-10	21450	21552	21703	21888	22122	22438	22872	23447	24175	25053	26064	27166	28306	29427	30487	31461	32346	33148	33876
	-70.5	-67.9	-64.9	-60.4	-53.6	-44.9	-35.3	-26.0	-17.4	-9.5	-2.4	4.0	10.0	16.3	23.5	31.4	39.0	44.6	46.9
-15	18414	18267	18184	18174	18275	18530	18973	19616	20456	21475	22632	23866	25107	26297	27396	28389	29283	30097	30855
	-85.9	-83.1	-79.2	-72.8	-63.3	-51.5	-38.6	-26.0	-14.1	-3.5	5.7	13.5	20.2	26.7	33.6	40.5	46.2	48.9	47.5
-20	15850	15487	15204	15038	15041	15263	15728	16440	17381	18511	19768	21072	22343	23522	24576	25500	26314	27050	27746
	-96.1	-92.6	-87.3	-79.1	-67.6	-53.5	-38.4	-23.4	-9.4	3.1	13.4	21.4	27.7	33.3	38.7	43.6	46.7	46.4	41.4
-25	13878	13381	12986	12748	12726	12963	13478	14263	15283	16481	17773	19066	20279	21355	22271	23034	23671	24230	24761
	-100.7	-95.9	-89.0	-79.1	-66.1	-50.9	-34.8	-18.7	-3.8	8.9	18.7	25.6	30.2	33.8	37.0	39.4	39.9	36.9	29.4
-30	12542	12016	11620	11412	11443	11750	12340	13193	14261	15468	16720	17922	18994	19889	20593	21117	21500	21795	22067
	-99.8	-93.5	-84.9	-73.6	-59.9	-44.6	-28.6	-12.9	1.2	12.5	20.3	24.8	26.8	27.6	28.0	27.9	26.2	21.6	13.1
-35	11849	11390	11086	10986	11129	11537	12204	13099	14164	15316	16460	17506	18385	19056	19509	19760	19848	19828	19774
	-94.6	-86.8	-76.8	-64.8	-51.2	-36.6	-21.8	-7.8	4.0	12.7	17.6	19.0	18.1	16.1	13.9	11.5	8.3	3.3	-4.4
-40	11793	11460	11296	11335	11600	12096	12809	13698	14700	15736	16721	17576	18242	18683	18891	18876	18673	18334	17930
	-86.3	-77.4	-66.9	-55.1	-42.3	-29.2	-16.5	-5.2	3.7	9.3	11.2	10.1	6.7	2.5	-1.8	-5.6	-9.4	-13.8	-19.6
-45	12339	12144	12115	12273	12624	13162	13863	14685	15568	16443	17239	17891	18348	18580	18573	18333	17884	17265	16538
	-76.4	-67.3	-57.1	-46.1	-34.9	-24.0	-13.9	-5.5	0.5	3.4	3.2	0.4	-4.2	-9.5	-14.5	-18.8	-22.3	-25.4	-28.7
-50	13397	13311	13376	13598	13974	14489	15117	15816	16537	17224	17819	18270	18537	18589	18412	18004	17374	16550	15572
	-66.2	-57.6	-48.4	-39.0	-29.7	-21.1	-13.6	-7.8	-4.1	-2.9	-4.2	-7.4	-11.9	-16.8	-21.2	-24.7	-27.1	-28.5	-29.2
-55	14805	14781	14882	15106	15444	15877	16380	16919	17454	17941	18337	18602	18700	18607	18305	17786	17050	16111	14993
	-56.6	-49.0	-41.2	-33.5	-26.2	-19.6	-14.2	-10.3	-8.0	-7.6	-8.8	-11.3	-14.6	-17.9	-20.8	-22.6	-23.3	-22.8	-21.4
-60	16345	16336	16423	16599	16851	17163	17514	17876	18219	18511	18721	18817	18773	18566	18180	17605	16835	15876	14737
	-47.9	-41.5	-35.1	-29.0	-23.3	-18.4	-14.4	-11.4	-9.7	-9.1	-9.5	-10.6	-12.0	-13.4	-14.2	-14.3	-13.3	-11.3	-8.4
-65	17763	17741	17784	17883	18028	18206	18399	18588	18752	18868	18913	18866	18707	18419	17988	17404	16664	15766	14716
	-39.7	-34.5	-29.5	-24.6	-20.2	-16.3	-13.0	-10.5	-8.6	-7.4	-6.7	-6.3	-5.9	-5.5	-4.6	-3.1	-1.0	1.8	5.2
-70	18814	18770	18760	18780	18821	18873	18926	18965	18977	18948	18862	18705	18466	18131	17694	17146	16485	15712	14830
	-31.5	-27.6	-23.6	-19.8	-16.3	-13.0	-10.1	-7.6	-5.4	-3.5	-1.9	-0.3	1.2	2.9	4.8	7.0	9.5	12.3	15.5
-75	19291	19227	19176	19132	19091	19047	18993	18922	18825	18695	18524	18305	18029	17693	17291	16820	16281	15675	15005
	-23.0	-20.1	-17.2	-14.3	-11.5	-8.8	-6.2	-3.8	-1.5	0.7	2.8	4.8	6.9	8.9	11.1	13.3	15.6	17.9	20.3
-80	19044	18977	18905	18827	18741	18644	18535	18408	18262	18094	17899	17676	17423	17138	16820	16469	16086	15674	15236
	-13.9	-12.0	-10.1	-8.1	-6.1	-4.1	-2.1	-0.1	1.8	3.7	5.6	7.5	9.3	11.1	12.8	14.6	16.3	17.9	19.5
-85	18006	17955	17895	17826	17747	17659	17561	17453	17334	17204	17063	16911	16749	16577	16395	16204	16006	15802	15593
	-4.3	-3.4	-2.4	-1.4	-0.4	0.7	1.8	2.9	4.0	5.1	6.2	7.3	8.4	9.4	10.4	11.4	12.3	13.2	14.0
-90	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201
	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6

IGRF 1985 Horizontal Intensity (H)

Latitude \ Longitude:	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
0	38772	39180	39462	39606	39605	39465	39205	38850	38426	37962	37483	37013	36570	36168	35814	35503	35219	34938	34638
	26.5	32.0	35.2	35.9	34.3	30.5	25.0	18.5	11.8	5.7	0.9	-2.3	-4.1	-5.0	-5.7	-6.9	-8.9	-11.6	-14.5
-5	36587	37132	37573	37894	38079	38126	38047	37864	37611	37317	37010	36712	36438	36195	35985	35803	35630	35443	35216
	39.6	42.0	41.5	38.5	33.6	27.4	20.2	12.8	5.8	-0.1	-4.2	-6.6	-7.3	-7.1	-6.8	-7.3	-9.1	-12.2	-16.0
-10	33876	34538	35125	35617	35991	36231	36341	36340	36258	36130	35986	35846	35724	35623	35543	35475	35402	35300	35144
	46.9	45.5	40.8	34.2	26.7	19.0	11.5	4.6	-1.4	-6.0	-8.9	-10.1	-9.9	-8.9	-8.1	-8.5	-10.5	-14.2	-18.9
-15	30855	31574	32254	32875	33406	33820	34104	34272	34348	34370	34367	34364	34372	34394	34427	34462	34481	34462	34381
	47.5	42.0	33.4	23.7	14.3	6.3	-0.2	-5.4	-9.1	-11.6	-12.8	-12.8	-11.9	-10.6	-9.9	-10.5	-13.0	-17.4	-22.9
-20	27746	28434	29124	29800	30426	30963	31386	31694	31906	32055	32172	32283	32401	32530	32666	32797	32907	32975	32980
	41.4	32.2	20.5	8.7	-1.4	-8.7	-13.4	-15.9	-16.8	-16.7	-16.0	-14.8	-13.4	-12.2	-11.8	-13.0	-16.1	-20.9	-26.9
-25	24761	25313	25909	26543	27179	27770	28279	28689	29009	29263	29483	29693	29910	30136	30369	30597	30803	30969	31074
	29.4	17.9	4.6	-8.0	-17.8	-23.7	-26.0	-25.6	-23.7	-21.2	-18.7	-16.5	-14.8	-13.8	-13.8	-15.4	-18.8	-23.9	-30.0
-30	22067	22379	22773	23258	23806	24370	24901	25369	25768	26113	26426	26732	27044	27368	27700	28030	28342	28616	28836
	13.1	1.4	-11.8	-23.7	-32.1	-36.2	-36.2	-33.4	-29.3	-25.0	-21.3	-18.4	-16.5	-15.6	-15.8	-17.5	-20.7	-25.4	-31.2
-35	19774	19762	19854	20083	20441	20886	21369	21846	22298	22721	23128	23533	23949	24380	24820	25261	25687	26079	26423
	-4.4	-14.6	-25.7	-35.6	-42.0	-44.3	-42.7	-38.5	-33.3	-28.2	-24.0	-20.9	-18.9	-17.9	-17.8	-18.8	-21.3	-25.1	-30.1
-40	17930	17545	17260	17136	17196	17424	17778	18208	18679	19168	19671	20188	20723	21275	21838	22400	22947	23463	23933
	-19.6	-26.9	-34.8	-41.7	-46.0	-47.0	-44.8	-40.6	-35.6	-30.9	-27.1	-24.2	-22.1	-20.6	-19.7	-19.6	-20.6	-23.1	-26.9
-45	16538	15780	15082	14530	14189	14086	14207	14512	14951	15483	16078	16718	17388	18079	18779	19474	20150	20790	21382
	-28.7	-32.5	-36.8	-40.7	-43.4	-44.0	-42.6	-39.9	-36.6	-33.4	-30.7	-28.3	-26.0	-23.7	-21.5	-19.8	-19.0	-19.8	-22.1
-50	15572	14504	13422	12420	11595	11029	10771	10821	11138	11662	12330	13093	13910	14755	15605	16442	17250	18015	18726
	-29.2	-29.9	-30.8	-32.0	-33.6	-35.0	-36.0	-36.4	-36.3	-35.7	-34.5	-32.6	-29.9	-26.5	-22.8	-19.3	-16.7	-15.6	-16.4
-55	14993	13733	12383	11014	9713	8586	7750	7312	7316	7716	8408	9282	10253	11262	12271	13256	14199	15089	15918
	-21.4	-19.5	-17.6	-16.5	-16.7	-18.8	-23.0	-28.6	-33.9	-37.3	-38.1	-36.5	-32.9	-28.0	-22.6	-17.4	-13.1	-10.5	-9.8
-60	14737	13439	12010	10485	8911	7346	5872	4626	3833	3745	4340	5331	6483	7676	8854	9987	11063	12074	13016
	-8.4	-4.9	-1.3	2.0	4.1	4.2	0.9	-7.8	-22.3	-36.2	-40.8	-38.1	-32.4	-25.5	-18.5	-12.2	-7.0	-3.4	-1.7
-65	14716	13525	12208	10784	9275	7705	6099	4480	2869	1285	283	1760	3192	4559	5857	7085	8242	9331	10354
	5.2	9.1	13.2	17.2	20.8	23.7	25.6	26.3	25.5	22.3	-33.2	-20.2	-14.5	-9.0	-3.7	1.2	5.1	7.8	9.0
-70	14830	13846	12772	11623	10418	9177	7928	6704	5554	4550	3808	3479	3644	4207	5003	5908	6854	7806	8746
	15.5	18.8	22.2	25.5	28.6	31.5	34.0	36.1	38.1	39.6	40.2	38.1	33.3	28.4	25.4	23.9	23.2	22.6	21.6
-75	15005	14279	13504	12692	11859	11019	10195	9409	8688	8061	7560	7212	7038	7043	7219	7543	7986	8519	9118
	20.3	22.7	25.0	27.3	29.3	31.1	32.7	34.0	34.9	35.6	36.0	35.9	35.5	34.7	33.7	32.4	31.0	29.4	27.7
-80	15236	14776	14300	13815	13328	12849	12387	11953	11556	11208	10918	10693	10541	10465	10465	10541	10689	10902	11173
	19.5	21.0	22.4	23.7	24.9	25.9	26.8	27.5	28.0	28.4	28.6	28.6	28.4	28.1	27.5	26.8	26.0	24.9	23.6
-85	15593	15383	15172	14964	14762	14567	14383	14212	14058	13922	13807	13716	13649	13607	13592	13604	13642	13706	13794
	14.0	14.8	15.5	16.1	16.7	17.2	17.6	17.9	18.1	18.2	18.3	18.2	18.1	17.8	17.5	17.1	16.6	15.9	15.3
-90	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201
	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6

IGRF 1985 Horizontal Intensity (H)

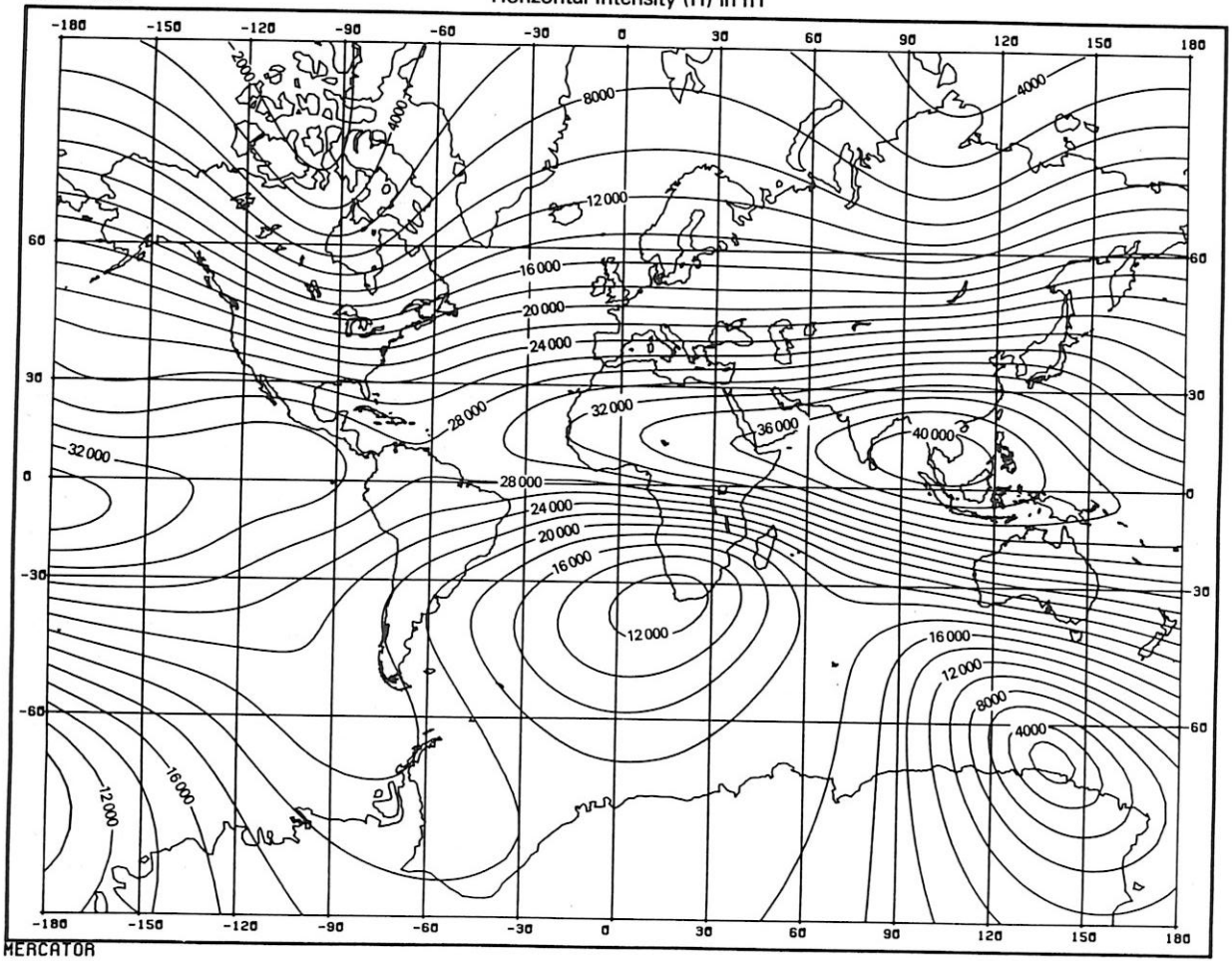
Latitude \ Longitude: 180	-175	-170	-165	-160	-155	-150	-145	-140	-135	-130	-125	-120	-115	-110	-105	-100	-95	-90
0	34638	34311	33961	33604	33258	32934	32639	32375	32140	31936	31764	31626	31518	31423	31317	31166	30937	30608	30178
	-14.5	-17.1	-19.3	-21.3	-23.5	-26.1	-29.0	-32.0	-34.9	-37.4	-39.1	-40.4	-41.6	-43.2	-45.7	-49.4	-53.7	-57.8	-60.2
-5	35216	34934	34598	34222	33824	33424	33035	32663	32310	31980	31677	31410	31183	30993	30821	30637	30407	30097	29694
	-16.0	-19.7	-23.0	-25.7	-28.0	-30.1	-32.2	-34.5	-36.6	-38.6	-40.0	-41.0	-41.7	-42.5	-44.1	-46.7	-50.3	-54.1	-56.9
-10	35144	34916	34613	34247	33839	33411	32980	32554	32136	31727	31334	30970	30645	30365	30122	29893	29641	29331	28935
	-18.9	-23.7	-27.8	-30.8	-32.8	-33.9	-34.7	-35.3	-36.0	-36.7	-37.1	-37.2	-37.1	-37.2	-38.0	-40.1	-43.5	-47.6	-51.4
-15	34381	34219	33974	33656	33286	32887	32476	32061	31641	31216	30789	30374	29984	29633	29321	29033	28737	28398	27984
	-22.9	-28.4	-33.1	-36.2	-37.6	-37.6	-36.7	-35.4	-34.1	-32.9	-31.7	-30.4	-29.2	-28.4	-28.6	-30.5	-34.2	-39.3	-44.7
-20	32980	32904	32746	32513	32227	31909	31574	31227	30865	30482	30078	29661	29247	28851	28481	28130	27775	27386	26931
	-26.9	-33.0	-37.9	-41.1	-42.1	-41.2	-38.9	-35.9	-32.7	-29.4	-26.3	-23.3	-20.7	-18.9	-18.6	-20.4	-24.7	-31.1	-38.5
-25	31074	31105	31058	30942	30775	30574	30353	30114	29850	29551	29213	28839	28441	28034	27631	27231	26823	26383	25884
	-30.0	-36.2	-41.4	-44.7	-45.8	-44.7	-41.9	-37.9	-33.4	-28.5	-23.7	-19.0	-14.9	-12.1	-11.2	-12.9	-17.7	-25.1	-34.2
-30	28836	28989	29071	29090	29058	28992	28901	28785	28636	28444	28199	27900	27556	27179	26783	26372	25942	25477	24956
	-31.2	-37.3	-42.6	-46.4	-48.2	-47.9	-45.6	-41.9	-37.1	-31.6	-25.8	-19.9	-14.7	-10.8	-9.2	-10.5	-15.3	-23.1	-33.0
-35	26423	26705	26923	27080	27186	27253	27288	27292	27259	27177	27040	26842	26589	26289	25953	25588	25190	24748	24247
	-30.1	-35.7	-41.2	-45.8	-48.8	-50.1	-49.6	-47.3	-43.5	-38.5	-32.7	-26.4	-20.6	-15.9	-13.5	-14.2	-18.2	-25.4	-35.0
-40	23933	24344	24692	24980	25213	25402	25552	25667	25743	25775	25756	25683	25557	25383	25165	24907	24603	24242	23812
	-26.9	-31.8	-37.3	-42.6	-47.2	-50.6	-52.3	-52.4	-50.6	-47.2	-42.4	-36.7	-30.9	-26.0	-22.9	-22.6	-25.4	-31.1	-39.2
-45	21382	21916	22386	22793	23142	23442	23701	23922	24109	24262	24377	24452	24487	24480	24430	24330	24172	23942	23627
	-22.1	-26.1	-31.3	-37.1	-42.9	-48.2	-52.3	-54.9	-55.5	-54.3	-51.2	-46.9	-41.9	-37.3	-34.0	-32.8	-34.2	-38.2	-44.2
-50	18726	19375	19959	20479	20940	21351	21721	22059	22371	22661	22930	23176	23394	23579	23720	23806	23821	23750	23581
	-16.4	-19.1	-23.6	-29.3	-35.8	-42.3	-48.1	-52.6	-55.5	-56.4	-55.4	-52.8	-49.3	-45.7	-42.8	-41.4	-41.8	-44.1	-48.2
-55	15918	16681	17377	18012	18591	19124	19622	20095	20552	20998	21435	21860	22264	22638	22966	23231	23417	23509	23492
	-9.8	-11.2	-14.6	-19.7	-25.9	-32.5	-39.0	-44.6	-48.8	-51.4	-52.3	-51.7	-50.1	-48.1	-46.3	-45.3	-45.4	-46.9	-49.6
-60	13016	13892	14704	15459	16166	16834	17475	18098	18710	19315	19913	20499	21063	21592	22071	22483	22811	23042	23166
	-1.7	-2.1	-4.5	-8.5	-13.7	-19.6	-25.7	-31.3	-36.1	-39.7	-42.0	-43.3	-43.6	-43.5	-43.2	-43.4	-44.1	-45.5	-47.6
-65	10354	11317	12226	13087	13910	14702	15471	16225	16966	17696	18412	19107	19774	20399	20970	21473	21895	22226	22458
	9.0	8.7	6.9	3.8	-0.4	-5.2	-10.4	-15.4	-20.1	-24.1	-27.4	-30.0	-32.0	-33.6	-35.0	-36.4	-38.0	-39.9	-42.1
-70	8746	9665	10562	11435	12287	13121	13938	14740	15527	16296	17044	17764	18450	19091	19680	20207	20664	21044	21343
	21.6	20.1	17.9	15.0	11.5	7.5	3.3	-1.0	-5.1	-9.1	-12.7	-16.0	-19.0	-21.8	-24.3	-26.7	-29.1	-31.5	-34.0
-75	9118	9763	10438	11132	11837	12547	13256	13961	14656	15336	15998	16635	17241	17811	18339	18820	19248	19620	19934
	27.7	25.6	23.3	20.7	17.8	14.7	11.4	8.0	4.6	1.2	-2.1	-5.3	-8.4	-11.3	-14.2	-16.9	-19.5	-22.0	-24.4
-80	11173	11495	11860	12260	12687	13135	13598	14069	14544	15015	15480	15933	16370	16787	17180	17546	17882	18186	18457
	23.6	22.2	20.6	18.8	16.9	14.8	12.6	10.3	7.9	5.5	3.1	0.7	-1.6	-3.9	-6.2	-8.4	-10.4	-12.4	-14.3
-85	13794	13905	14037	14189	14358	14541	14736	14940	15151	15367	15585	15803	16018	16229	16434	16631	16818	16995	17160
	15.3	14.5	13.6	12.7	11.7	10.7	9.6	8.4	7.2	6.0	4.8	3.6	2.4	1.2	0.0	-1.1	-2.2	-3.2	-4.2
-90	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201
	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6

IGRF 1985 Horizontal Intensity (H)

Latitude \ Longitude:	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
0	30178	29670	29132	28626	28210	27928	27787	27758	27788	27818	27801	27713	27561	27383	27237	27188	27283	27535	27921
	-60.2	-59.7	-55.8	-49.1	-40.6	-31.6	-23.6	-18.0	-15.9	-18.1	-24.0	-32.3	-40.4	-45.9	-47.5	-45.2	-40.5	-35.3	-30.9
-5	29694	29205	28667	28131	27656	27283	27021	26843	26698	26527	26286	25959	25562	25143	24769	24512	24419	24502	24731
	-56.9	-57.3	-54.9	-49.9	-43.2	-36.2	-30.4	-27.2	-27.6	-32.1	-39.9	-49.6	-58.5	-64.6	-66.4	-64.4	-60.1	-55.3	-51.4
-10	28935	28451	27901	27329	26788	26320	25938	25618	25313	24968	24543	24027	23443	22840	22286	21845	21560	21438	21450
	-51.4	-53.5	-53.3	-50.7	-46.6	-42.2	-39.0	-38.2	-40.8	-46.9	-55.8	-65.8	-74.9	-80.9	-82.9	-81.3	-77.7	-73.7	-70.5
-15	27984	27482	26904	26287	25678	25121	24631	24192	23761	23287	22736	22099	21399	20683	20008	19426	18968	18638	18414
	-44.7	-49.2	-51.9	-52.4	-51.4	-49.8	-49.2	-50.5	-54.6	-61.5	-70.4	-80.0	-88.3	-93.8	-95.8	-94.7	-91.9	-88.7	-85.9
-20	26931	26394	25779	25115	24446	23813	23238	22708	22189	21634	21012	20316	19565	18796	18055	17379	16787	16281	15850
	-38.5	-45.6	-51.4	-55.2	-57.3	-58.6	-60.2	-63.0	-67.8	-74.6	-82.7	-91.1	-98.2	-102.8	-104.6	-103.9	-101.7	-99.0	-96.1
-25	25884	25311	24662	23960	23245	22557	21919	21325	20747	20147	19493	18779	18019	17239	16472	15744	15067	14445	13878
	-34.2	-43.7	-52.1	-58.8	-63.7	-67.3	-70.5	-74.2	-79.0	-85.0	-91.8	-98.6	-104.2	-107.9	-109.4	-108.8	-106.9	-104.1	-100.7
-30	24956	24365	23700	22982	22243	21520	20838	20198	19578	18946	18277	17562	16809	16038	15272	14528	13819	13152	12542
	-33.0	-43.7	-53.9	-62.6	-69.4	-74.6	-78.8	-82.7	-87.0	-91.9	-97.2	-102.3	-106.6	-109.4	-110.4	-109.7	-107.6	-104.4	-99.8
-35	24247	23674	23026	22318	21580	20843	20132	19454	18795	18132	17445	16727	15983	15227	14477	13750	13057	12416	11849
	-35.0	-45.7	-56.2	-65.6	-73.3	-79.3	-83.9	-87.7	-91.3	-95.1	-99.0	-102.7	-105.8	-107.8	-108.3	-107.2	-104.6	-100.4	-94.6
-40	23812	23300	22707	22043	21332	20603	19880	19171	18472	17773	17061	16333	15594	14857	14137	13453	12819	12257	11793
	-39.2	-48.7	-58.3	-67.2	-74.7	-80.7	-85.3	-88.9	-92.0	-94.9	-97.7	-100.4	-102.5	-103.6	-103.5	-101.8	-98.4	-93.3	-86.3
-45	23627	23219	22716	22128	21475	20781	20065	19342	18617	17887	17152	16415	15685	14975	14301	13680	13132	12677	12339
	-44.2	-51.6	-59.5	-67.1	-73.7	-79.2	-83.4	-86.8	-89.5	-91.8	-94.0	-95.8	-97.1	-97.5	-96.6	-94.1	-89.9	-84.0	-76.4
-50	23581	23305	22922	22441	21876	21246	20572	19867	19144	18412	17678	16952	16248	15581	14967	14425	13970	13622	13397
	-48.2	-53.5	-59.4	-65.2	-70.6	-75.2	-79.0	-82.1	-84.5	-86.6	-88.3	-89.5	-90.1	-89.6	-88.0	-84.8	-80.0	-73.8	-66.2
-55	23492	23362	23117	22764	22315	21785	21191	20551	19879	19192	18502	17826	17179	16579	16041	15582	15214	14952	14805
	-49.6	-53.2	-57.4	-61.8	-65.9	-69.7	-72.9	-75.6	-77.9	-79.7	-81.0	-81.7	-81.6	-80.5	-78.2	-74.6	-69.7	-63.6	-56.6
-60	23166	23176	23072	22859	22547	22148	21677	21150	20584	19996	19404	18823	18272	17765	17318	16943	16651	16450	16345
	-47.6	-50.3	-53.4	-56.6	-59.9	-62.9	-65.7	-68.0	-69.9	-71.4	-72.3	-72.5	-71.9	-70.3	-67.7	-64.0	-59.4	-53.9	-47.9
-65	22458	22587	22613	22540	22375	22126	21808	21434	21019	20578	20128	19684	19260	18870	18526	18238	18011	17853	17763
	-42.1	-44.5	-47.1	-49.8	-52.4	-54.9	-57.2	-59.1	-60.7	-61.7	-62.2	-62.0	-61.0	-59.3	-56.7	-53.3	-49.2	-44.6	-39.7
-70	21343	21557	21687	21736	21709	21613	21457	21252	21008	20737	20453	20165	19886	19625	19390	19187	19023	18898	18814
	-34.0	-36.4	-38.8	-41.2	-43.4	-45.5	-47.3	-48.7	-49.8	-50.4	-50.5	-50.1	-49.0	-47.4	-45.1	-42.3	-39.0	-35.4	-31.5
-75	19934	20188	20382	20518	20600	20630	20616	20563	20478	20368	20240	20103	19961	19822	19689	19568	19460	19368	19291
	-24.4	-26.7	-28.8	-30.8	-32.6	-34.2	-35.5	-36.5	-37.2	-37.5	-37.4	-36.9	-36.0	-34.7	-32.9	-30.8	-28.5	-25.8	-23.0
-80	18457	18694	18896	19064	19199	19303	19378	19427	19453	19458	19446	19420	19383	19338	19287	19230	19171	19109	19044
	-14.3	-16.0	-17.6	-19.0	-20.3	-21.3	-22.2	-22.8	-23.2	-23.3	-23.2	-22.8	-22.2	-21.3	-20.2	-18.9	-17.4	-15.7	-13.9
-85	17160	17312	17452	17578	17690	17789	17874	17946	18006	18053	18088	18112	18125	18129	18122	18106	18082	18048	18006
	-4.2	-5.0	-5.8	-6.5	-7.2	-7.7	-8.1	-8.4	-8.5	-8.6	-8.5	-8.4	-8.1	-7.7	-7.2	-6.6	-5.9	-5.1	-4.3
-90	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201	16201
	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6

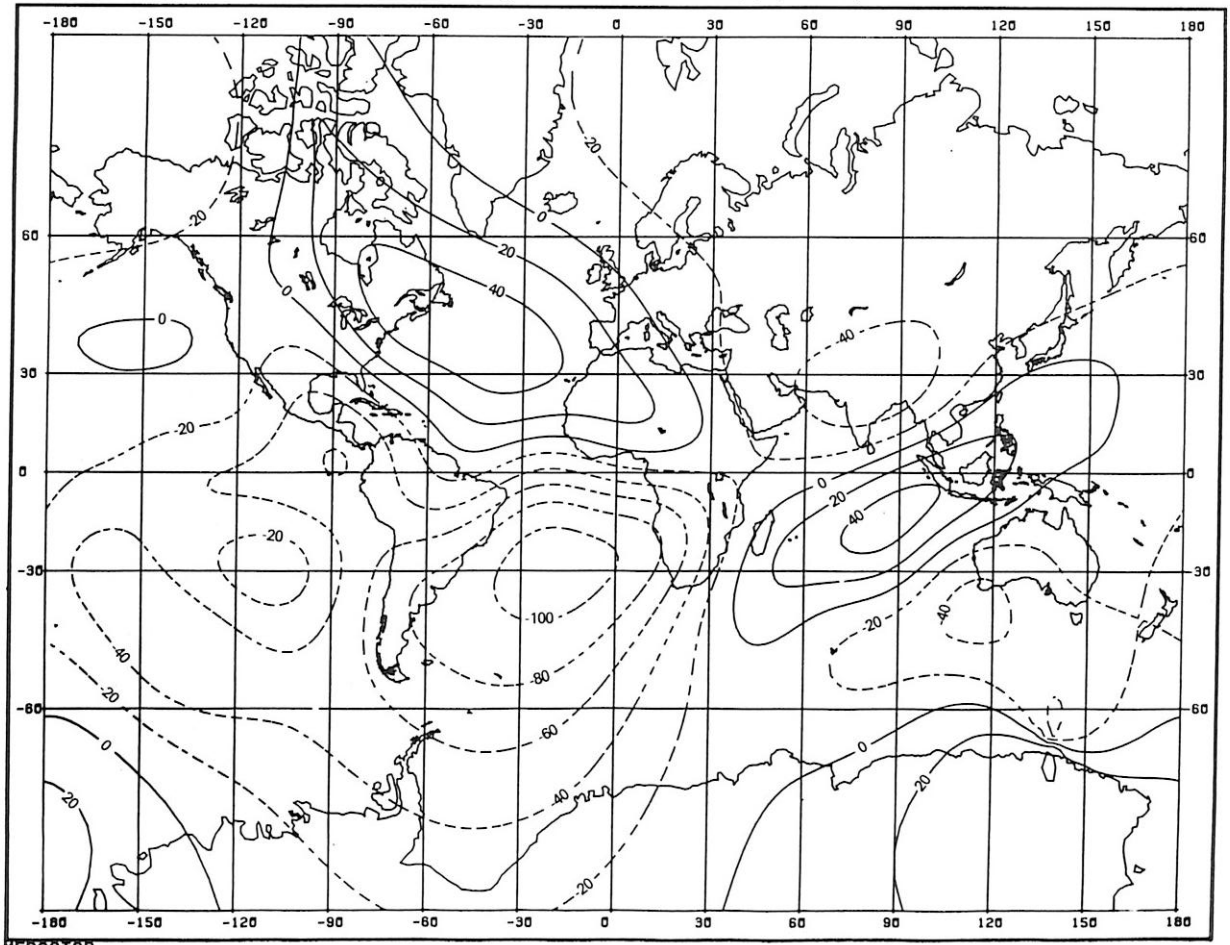
IGRF 1985

Horizontal Intensity (H) in nT



IGRF 1985

Annual change of Horizontal Intensity ($\dot{H}$) in nT/yr



MERCATOR

IGRF 1985 North Component (X)

Latitude \ Longitude:	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
90	1886	1988	2075	2146	2201	2239	2260	2264	2250	2219	2172	2108	2028	1932	1822	1698	1561	1412	1253
	-1.6	-3.2	-4.9	-6.5	-8.0	-9.5	-11.0	-12.3	-13.6	-14.7	-15.7	-16.6	-17.4	-18.1	-18.6	-19.0	-19.2	-19.3	-19.2
85	4529	4642	4709	4729	4704	4634	4524	4377	4197	3988	3757	3510	3252	2991	2731	2480	2243	2024	1828
	-11.6	-13.8	-15.9	-17.8	-19.6	-21.2	-22.6	-23.8	-24.8	-25.6	-26.2	-26.6	-26.8	-26.8	-26.7	-26.5	-26.1	-25.6	-25.1
80	6814	6950	7021	7028	6971	6853	6678	6451	6178	5866	5523	5159	4783	4406	4039	3693	3378	3104	2879
	-17.7	-20.5	-23.0	-25.3	-27.4	-29.2	-30.7	-31.9	-32.9	-33.5	-33.9	-34.1	-34.0	-33.8	-33.4	-32.8	-32.2	-31.5	-30.7
75	8867	9020	9102	9113	9056	8934	8750	8508	8215	7877	7502	7099	6679	6254	5839	5447	5094	4793	4559
	-19.2	-22.5	-25.4	-28.1	-30.4	-32.4	-34.1	-35.4	-36.3	-36.9	-37.3	-37.4	-37.3	-37.0	-36.6	-36.2	-35.6	-35.1	-34.5
70	10844	10993	11073	11087	11040	10935	10775	10564	10306	10006	9668	9299	8910	8510	8115	7738	7398	7112	6897
	-16.7	-20.4	-23.8	-26.8	-29.4	-31.5	-33.2	-34.4	-35.3	-35.9	-36.2	-36.4	-36.3	-36.2	-36.1	-35.9	-35.8	-35.7	-35.7
65	12879	12999	13058	13063	13020	12934	12809	12649	12457	12234	11982	11704	11406	11096	10783	10482	10209	9982	9819
	-11.3	-15.7	-19.6	-22.9	-25.7	-27.9	-29.6	-30.7	-31.5	-32.0	-32.2	-32.3	-32.4	-32.6	-32.8	-33.1	-33.5	-34.1	-34.8
60	15054	15133	15160	15144	15095	15020	14927	14819	14699	14568	14424	14267	14098	13919	13736	13558	13398	13269	13189
	-4.6	-9.8	-14.4	-18.2	-21.3	-23.6	-25.3	-26.4	-27.1	-27.4	-27.6	-27.7	-27.9	-28.3	-28.9	-29.7	-30.8	-31.9	-33.2
55	17398	17440	17438	17403	17346	17278	17209	17144	17088	17040	17001	16967	16936	16907	16878	16852	16834	16831	16853
	2.2	-3.9	-9.3	-13.8	-17.4	-20.1	-22.0	-23.3	-24.0	-24.4	-24.6	-24.8	-25.2	-25.9	-26.9	-28.2	-29.7	-31.2	-32.8
50	19895	19923	19911	19871	19817	19761	19712	19680	19670	19687	19731	19802	19897	20011	20137	20270	20404	20537	20668
	8.7	1.7	-4.6	-9.9	-14.3	-17.8	-20.4	-22.1	-23.3	-23.9	-24.4	-24.9	-25.6	-26.7	-28.2	-29.9	-31.7	-33.3	-34.7
45	22505	22548	22552	22532	22500	22466	22442	22436	22458	22516	22618	22766	22960	23195	23460	23739	24017	24277	24508
	14.8	7.0	0.1	-6.1	-11.5	-16.1	-19.8	-22.6	-24.5	-25.9	-26.9	-27.8	-29.1	-30.7	-32.8	-34.9	-36.9	-38.4	-39.2
40	25161	25245	25292	25316	25326	25330	25338	25357	25401	25484	25619	25818	26084	26412	26787	27186	27582	27946	28254
	20.5	12.5	5.2	-1.7	-8.1	-14.0	-19.2	-23.4	-26.6	-28.9	-30.7	-32.4	-34.3	-36.6	-39.3	-42.0	-44.2	-45.3	-45.2
35	27752	27898	28007	28093	28163	28221	28269	28317	28380	28478	28634	28865	29180	29574	30028	30513	30992	31425	31779
	25.6	18.2	11.0	3.8	-3.6	-10.8	-17.5	-23.3	-28.0	-31.5	-34.2	-36.6	-39.3	-42.3	-45.7	-48.8	-51.0	-51.7	-50.5
30	30107	30328	30513	30676	30820	30941	31039	31121	31205	31320	31493	31750	32100	32539	33044	33581	34104	34569	34936
	29.7	23.5	17.0	9.8	2.0	-6.3	-14.4	-21.7	-27.7	-32.4	-36.0	-39.1	-42.3	-45.9	-49.7	-53.1	-55.2	-55.2	-52.7
25	31990	32297	32572	32823	33049	33241	33394	33516	33631	33770	33969	34254	34637	35109	35645	36205	36743	37210	37564
	31.5	27.0	21.7	15.2	7.3	-1.5	-10.5	-18.8	-25.8	-31.2	-35.4	-38.9	-42.5	-46.3	-50.1	-53.2	-54.7	-53.7	-49.9
20	33132	33536	33912	34261	34575	34840	35053	35223	35379	35558	35798	36125	36547	37051	37609	38180	38717	39173	39507
	29.9	27.2	23.4	17.9	10.6	1.9	-7.2	-15.8	-23.0	-28.6	-32.9	-36.4	-39.7	-43.1	-46.2	-48.4	-48.8	-46.5	-41.4
15	33303	33805	34284	34732	35131	35468	35742	35968	36179	36419	36722	37112	37589	38138	38726	39312	39854	40308	40638
	23.8	22.8	20.5	16.2	10.0	2.2	-6.0	-13.9	-20.4	-25.4	-29.1	-32.0	-34.5	-36.8	-38.6	-39.2	-37.8	-34.0	-27.5
10	32377	32961	33527	34056	34525	34923	35255	35544	35830	36154	36548	37027	37585	38200	38838	39463	40035	40518	40881
	13.0	13.2	12.1	9.1	4.4	-1.6	-8.0	-14.0	-18.9	-22.5	-24.9	-26.5	-27.5	-28.1	-27.9	-26.4	-23.0	-17.5	-10.2
5	30394	31014	31624	32193	32699	33135	33517	33878	34257	34692	35206	35802	36468	37176	37894	38589	39228	39782	40223
	-2.1	-1.2	-1.5	-3.1	-5.9	-9.4	-13.0	-16.1	-18.4	-19.8	-20.3	-20.1	-19.3	-17.8	-15.3	-11.5	-6.3	0.5	8.1
0	27564	28149	28732	29279	29773	30218	30639	31075	31563	32130	32787	33525	34321	35146	35969	36762	37501	38162	38723
	-19.7	-18.8	-18.5	-18.8	-19.3	-19.8	-19.8	-19.4	-18.4	-16.9	-15.0	-12.7	-9.8	-6.2	-1.7	4.0	10.5	17.6	24.5

IGRF 1985 North Component (X)

Latitude \ Longitude:	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
90	1253	1083	906	722	532	338	142	-56	-253	-448	-640	-827	-1007	-1180	-1344	-1498	-1640	-1770	-1886
	-19.2	-19.0	-18.7	-18.2	-17.5	-16.8	-15.9	-14.9	-13.7	-12.5	-11.2	-9.8	-8.3	-6.7	-5.1	-3.5	-1.8	-0.1	1.6
85	1828	1659	1517	1405	1321	1266	1236	1229	1239	1262	1292	1324	1352	1370	1373	1358	1320	1256	1167
	-25.1	-24.4	-23.8	-23.1	-22.4	-21.6	-20.9	-20.2	-19.4	-18.7	-17.9	-17.2	-16.4	-15.6	-14.8	-13.9	-12.9	-11.8	-10.7
80	2879	2711	2603	2559	2577	2656	2789	2969	3185	3426	3677	3927	4160	4363	4525	4635	4684	4667	4581
	-30.7	-30.0	-29.3	-28.6	-27.9	-27.4	-26.9	-26.4	-26.1	-25.8	-25.6	-25.4	-25.2	-24.9	-24.7	-24.3	-23.9	-23.2	-22.4
75	4559	4401	4329	4347	4456	4652	4928	5271	5665	6093	6534	6966	7369	7721	8005	8206	8312	8314	8208
	-34.5	-34.0	-33.6	-33.2	-32.9	-32.7	-32.6	-32.5	-32.5	-32.5	-32.6	-32.7	-32.8	-32.8	-32.8	-32.6	-32.3	-31.8	-31.0
70	6897	6767	6736	6810	6991	7278	7659	8121	8643	9202	9771	10323	10831	11271	11621	11864	11986	11978	11839
	-35.7	-35.8	-36.0	-36.2	-36.5	-36.8	-37.1	-37.4	-37.6	-37.8	-37.9	-37.9	-37.8	-37.7	-37.4	-37.0	-36.5	-35.7	-34.7
65	9819	9737	9752	9873	10105	10445	10884	11406	11987	12602	13220	13811	14346	14799	15148	15375	15471	15428	15245
	-34.8	-35.6	-36.5	-37.4	-38.3	-39.2	-39.9	-40.4	-40.7	-40.8	-40.6	-40.1	-39.5	-38.7	-37.8	-36.7	-35.6	-34.3	-32.8
60	13189	13173	13237	13393	13646	13997	14437	14952	15518	16107	16691	17237	17716	18106	18385	18541	18568	18465	18234
	-33.2	-34.6	-36.0	-37.4	-38.7	-39.8	-40.6	-41.2	-41.3	-40.9	-40.1	-39.0	-37.5	-35.9	-34.1	-32.2	-30.4	-28.4	-26.4
55	16853	16912	17022	17195	17438	17754	18139	18580	19058	19547	20018	20442	20793	21050	21200	21235	21156	20969	20683
	-32.8	-34.2	-35.6	-36.9	-38.0	-38.8	-39.4	-39.4	-39.0	-38.1	-36.6	-34.7	-32.4	-30.0	-27.5	-24.9	-22.5	-20.0	-17.5
50	20668	20802	20947	21115	21315	21554	21834	22145	22474	22799	23094	23334	23498	23571	23544	23419	23204	22911	22558
	-34.7	-35.7	-36.4	-36.8	-36.9	-36.7	-36.2	-35.4	-34.1	-32.4	-30.2	-27.8	-25.1	-22.3	-19.5	-16.8	-14.1	-11.4	-8.8
45	24508	24704	24869	25009	25139	25267	25402	25542	25678	25794	25869	25885	25824	25679	25447	25137	24766	24353	23923
	-39.2	-39.2	-38.4	-37.1	-35.4	-33.5	-31.4	-29.2	-26.9	-24.4	-21.8	-19.2	-16.7	-14.2	-11.9	-9.6	-7.3	-4.9	-2.3
40	28254	28492	28654	28748	28786	28784	28753	28700	28620	28504	28339	28110	27810	27435	26991	26493	25962	25427	24918
	-45.2	-43.6	-40.9	-37.3	-33.3	-29.2	-25.3	-21.6	-18.1	-15.1	-12.4	-10.2	-8.4	-7.0	-5.8	-4.7	-3.2	-1.4	0.8
35	31779	32030	32170	32201	32138	32000	31803	31557	31263	30917	30514	30048	29518	28928	28289	27621	26950	26307	25727
	-50.5	-47.2	-42.3	-36.3	-29.9	-23.7	-17.9	-12.9	-8.7	-5.5	-3.1	-1.8	-1.3	-1.5	-2.0	-2.4	-2.2	-1.2	0.5
30	34936	35175	35274	35236	35076	34813	34466	34048	33564	33017	32406	31735	31011	30245	29453	28658	27885	27169	26542
	-52.7	-47.7	-40.8	-32.7	-24.4	-16.6	-9.7	-4.0	0.3	3.3	4.8	4.9	3.8	1.8	-0.4	-2.4	-3.4	-3.3	-2.0
25	37564	37775	37828	37727	37484	37121	36658	36108	35480	34780	34015	33195	32337	31457	30576	29713	28895	28151	27511
	-49.9	-43.4	-35.0	-25.5	-16.2	-7.8	-0.8	4.5	8.2	10.1	10.4	9.2	6.6	3.1	-0.6	-3.7	-5.7	-6.2	-5.3
20	39507	39691	39709	39564	39269	38845	38311	37683	36971	36184	35335	34442	33525	32607	31707	30846	30044	29323	28708
	-41.4	-33.7	-24.3	-14.5	-5.4	2.3	8.1	12.0	14.0	14.4	13.2	10.7	7.1	2.7	-1.7	-5.4	-7.8	-8.6	-8.0
15	40638	40817	40831	40679	40376	39939	39389	38743	38013	37213	36359	35472	34575	33693	32846	32050	31318	30665	30107
	-27.5	-19.1	-9.8	-0.7	7.1	12.8	16.3	17.7	17.4	15.8	13.2	9.7	5.6	1.1	-3.1	-6.6	-8.9	-9.8	-9.4
10	40881	41097	41153	41046	40787	40393	39886	39283	38602	37859	37071	36261	35453	34670	33931	33246	32625	32070	31589
	-10.2	-1.7	6.8	14.1	19.5	22.3	22.7	21.1	18.2	14.5	10.6	6.5	2.6	-1.1	-4.4	-7.1	-8.8	-9.6	-9.7
5	40223	40528	40680	40675	40518	40225	39816	39312	38736	38105	37439	36760	36090	35447	34848	34300	33806	33363	32966
	8.1	15.8	22.5	27.2	29.4	28.9	26.1	21.6	16.3	11.0	6.2	2.1	-1.1	-3.6	-5.6	-7.0	-8.1	-8.9	-9.6
0	38723	39161	39459	39606	39602	39459	39195	38834	38401	37919	37408	36889	36379	35894	35445	35038	34670	34335	34020
	24.5	30.3	34.3	35.9	34.8	31.2	25.6	18.9	12.0	5.8	0.8	-2.7	-4.9	-6.0	-6.6	-6.9	-7.5	-8.5	-10.0

IGRF 1985 North Component (X)

Latitude \ Longitude:	180	-175	-170	-165	-160	-155	-150	-145	-140	-135	-130	-125	-120	-115	-110	-105	-100	-95	-90
90	-1886	-1988	-2075	-2146	-2201	-2239	-2260	-2264	-2250	-2219	-2172	-2108	-2028	-1932	-1822	-1698	-1561	-1412	-1253
	1.6	3.2	4.9	6.5	8.0	9.5	11.0	12.3	13.6	14.7	15.7	16.6	17.4	18.1	18.6	19.0	19.2	19.3	19.2
85	1167	1051	910	745	561	363	154	-58	-268	-468	-652	-813	-945	-1043	-1102	-1118	-1088	-1012	-888
	-10.7	-9.4	-8.1	-6.6	-5.1	-3.5	-1.8	0.0	1.8	3.5	5.3	7.0	8.7	10.2	11.6	12.8	13.8	14.6	15.2
80	4581	4424	4200	3913	3571	3183	2760	2315	1862	1415	987	591	241	-52	-280	-434	-510	-503	-415
	-22.4	-21.4	-20.1	-18.6	-16.9	-14.9	-12.7	-10.3	-7.8	-5.2	-2.5	0.2	2.8	5.3	7.7	9.8	11.6	13.2	14.4
75	8208	7995	7679	7267	6771	6204	5584	4928	4256	3587	2941	2338	1793	1324	943	661	485	420	468
	-31.0	-30.0	-28.6	-26.8	-24.7	-22.2	-19.4	-16.3	-13.0	-9.6	-6.0	-2.5	1.0	4.3	7.5	10.4	12.9	15.2	17.0
70	11839	11568	11173	10663	10052	9357	8598	7794	6969	6145	5344	4588	3896	3289	2781	2386	2115	1975	1968
	-34.7	-33.3	-31.6	-29.4	-26.9	-24.0	-20.6	-17.1	-13.2	-9.3	-5.3	-1.3	2.6	6.4	10.0	13.4	16.5	19.3	21.8
65	15245	14928	14483	13923	13260	12513	11699	10840	9955	9066	8195	7363	6590	5895	5296	4809	4449	4227	4149
	-32.8	-31.0	-28.9	-26.4	-23.5	-20.3	-16.8	-13.1	-9.3	-5.5	-1.7	2.1	5.7	9.4	12.9	16.5	20.0	23.5	26.8
60	18234	17884	17423	16863	16217	15498	14722	13902	13057	12201	11352	10528	9745	9022	8377	7828	7394	7090	6931
	-26.4	-24.1	-21.7	-19.0	-16.1	-13.0	-9.7	-6.4	-3.1	0.0	2.9	5.6	8.3	11.1	14.1	17.4	21.2	25.3	29.6
55	20683	20308	19857	19339	18764	18141	17476	16779	16056	15318	14574	13835	13113	12423	11783	11210	10728	10358	10120
	-17.5	-15.0	-12.4	-9.7	-6.9	-4.1	-1.4	1.0	3.2	5.0	6.3	7.4	8.5	9.9	11.8	14.6	18.4	23.1	28.5
50	22558	22160	21731	21279	20808	20321	19817	19293	18749	18186	17605	17011	16409	15809	15224	14674	14182	13773	13474
	-8.8	-6.2	-3.5	-1.0	1.5	3.7	5.6	7.1	7.9	8.1	7.7	6.9	6.0	5.6	6.1	7.9	11.4	16.5	22.8
45	23923	23497	23090	22709	22353	22016	21688	21357	21015	20653	20266	19852	19409	18941	18457	17973	17511	17098	16764
	-2.3	0.3	2.8	5.2	7.3	9.0	10.1	10.5	10.1	8.9	6.9	4.2	1.5	-0.8	-2.0	-1.4	1.4	6.4	13.2
40	24918	24459	24069	23753	23504	23308	23147	23000	22851	22688	22498	22272	22004	21691	21336	20949	20550	20162	19817
	0.8	3.2	5.7	7.9	9.7	10.9	11.3	11.0	9.7	7.5	4.4	0.5	-3.8	-7.7	-10.5	-11.3	-9.7	-5.5	1.0
35	25727	25239	24861	24597	24436	24357	24335	24342	24358	24367	24352	24301	24202	24044	23823	23544	23220	22871	22528
	0.5	2.8	5.2	7.3	8.9	9.7	9.6	8.8	7.1	4.6	1.0	-3.5	-8.6	-13.6	-17.8	-20.2	-20.2	-17.4	-12.0
30	26542	26035	25668	25442	25344	25348	25424	25542	25679	25816	25939	26030	26071	26046	25944	25761	25504	25191	24848
	-2.0	0.1	2.4	4.4	5.7	6.2	5.8	4.7	2.9	0.4	-3.1	-7.4	-12.6	-18.2	-23.4	-27.2	-28.9	-27.9	-24.3
25	27511	27005	26649	26447	26382	26428	26554	26729	26933	27147	27356	27540	27679	27750	27732	27616	27405	27112	26759
	-5.3	-3.4	-1.2	0.5	1.4	1.4	0.5	-0.9	-2.7	-4.9	-7.8	-11.6	-16.4	-22.0	-27.6	-32.4	-35.6	-36.6	-35.0
20	28708	28222	27880	27684	27620	27663	27785	27961	28171	28401	28638	28860	29044	29161	29186	29105	28914	28622	28252
	-8.0	-6.4	-4.7	-3.5	-3.2	-3.9	-5.4	-7.3	-9.3	-11.4	-13.8	-16.9	-20.9	-26.0	-31.5	-36.8	-41.0	-43.4	-43.6
15	30107	29658	29330	29123	29027	29022	29088	29207	29364	29550	29752	29952	30125	30240	30269	30192	30002	29705	29320
	-9.4	-8.4	-7.4	-7.0	-7.6	-9.3	-11.6	-14.2	-16.6	-18.8	-20.9	-23.5	-26.8	-31.1	-36.0	-41.1	-45.6	-48.7	-49.9
10	31589	31187	30870	30636	30480	30391	30358	30371	30424	30511	30623	30747	30858	30927	30927	30836	30640	30342	29955
	-9.7	-9.5	-9.5	-10.2	-11.9	-14.5	-17.7	-20.9	-23.9	-26.5	-28.7	-31.0	-33.8	-37.2	-41.2	-45.5	-49.4	-52.5	-54.0
5	32966	32613	32302	32032	31801	31608	31451	31330	31246	31197	31181	31187	31198	31191	31141	31024	30825	30537	30166
	-9.6	-10.4	-11.6	-13.5	-16.2	-19.5	-23.3	-27.0	-30.5	-33.4	-35.9	-38.2	-40.5	-43.0	-45.9	-49.0	-52.0	-54.3	-55.5
0	34020	33713	33408	33102	32798	32503	32224	31969	31743	31550	31391	31262	31154	31053	30940	30793	30592	30323	29981
	-10.0	-12.0	-14.5	-17.5	-20.8	-24.4	-28.1	-31.7	-35.2	-38.2	-40.9	-43.1	-45.0	-46.7	-48.5	-50.3	-52.0	-53.5	-54.3

IGRF 1985 North Component (X)

Latitude \ Longitude:	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
90	-1253	-1083	-906	-722	-532	-338	-142	56	253	448	640	827	1007	1180	1344	1498	1640	1770	1886
	19.2	19.0	18.7	18.2	17.5	16.8	15.9	14.9	13.7	12.5	11.2	9.8	8.3	6.7	5.1	3.5	1.8	0.1	-1.6
85	-888	-718	-504	-248	44	369	719	1089	1472	1860	2247	2625	2988	3330	3643	3924	4168	4370	4529
	15.2	15.5	15.6	15.4	14.9	14.1	13.1	11.8	10.3	8.6	6.7	4.6	2.4	0.1	-2.2	-4.6	-7.0	-9.3	-11.6
80	-415	-245	1	318	699	1134	1612	2123	2655	3195	3733	4258	4758	5225	5651	6027	6350	6613	6814
	14.4	15.2	15.7	15.7	15.4	14.7	13.5	12.0	10.2	8.1	5.7	3.0	0.2	-2.7	-5.8	-8.8	-11.9	-14.9	-17.7
75	468	626	889	1247	1691	2207	2780	3393	4032	4678	5318	5937	6523	7065	7554	7983	8347	8643	8867
	17.0	18.3	19.2	19.6	19.5	18.9	17.7	16.1	14.1	11.6	8.8	5.7	2.3	-1.2	-4.8	-8.5	-12.2	-15.8	-19.2
70	1968	2094	2347	2718	3193	3755	4386	5063	5766	6475	7171	7837	8459	9027	9532	9968	10333	10625	10844
	21.8	23.8	25.3	26.3	26.6	26.3	25.4	23.9	21.8	19.1	16.0	12.5	8.7	4.6	0.3	-4.0	-8.4	-12.6	-16.7
65	4149	4219	4433	4783	5255	5828	6481	7186	7919	8653	9367	10041	10660	11214	11697	12104	12435	12693	12879
	26.8	29.7	32.2	34.1	35.3	35.7	35.4	34.2	32.3	29.7	26.5	22.7	18.4	13.7	8.8	3.7	-1.5	-6.5	-11.3
60	6931	6925	7074	7373	7809	8361	9004	9707	10438	11168	11870	12523	13113	13630	14068	14427	14708	14915	15054
	29.6	33.8	37.7	41.0	43.5	45.1	45.7	45.3	43.9	41.7	38.6	34.7	30.1	24.9	19.2	13.2	7.1	1.1	-4.6
55	10120	10030	10098	10324	10698	11202	11806	12478	13183	13886	14557	15176	15726	16198	16590	16902	17136	17299	17398
	28.5	34.2	39.8	44.9	49.1	52.2	54.1	54.9	54.4	52.9	50.4	46.7	42.1	36.5	30.1	23.2	16.1	9.0	2.2
50	13474	13308	13291	13430	13723	14153	14693	15311	15969	16631	17266	17850	18368	18810	19174	19460	19672	19814	19895
	22.8	30.0	37.3	44.2	50.2	55.0	58.5	60.7	61.7	61.4	59.9	57.0	52.7	47.1	40.3	32.6	24.5	16.4	8.7
45	16764	16537	16439	16486	16682	17017	17472	18016	18615	19233	19838	20405	20917	21363	21735	22033	22257	22411	22505
	13.2	21.3	29.9	38.3	45.8	52.2	57.4	61.4	64.1	65.6	65.7	64.1	60.6	55.4	48.6	40.5	31.9	23.2	14.8
40	19817	19545	19373	19325	19413	19638	19990	20447	20983	21563	22158	22739	23284	23776	24201	24552	24825	25025	25161
	1.0	9.3	18.4	27.5	36.1	43.8	50.6	56.4	61.2	64.8	66.9	67.1	64.9	60.5	54.1	46.3	37.7	28.9	20.5
35	22528	22220	21979	21834	21808	21914	22154	22521	22995	23549	24155	24782	25398	25976	26493	26931	27284	27553	27752
	-12.0	-4.5	4.2	13.3	22.3	30.9	38.9	46.5	53.4	59.3	63.6	65.6	65.1	61.9	56.4	49.3	41.4	33.4	25.6
30	24848	24505	24196	23956	23817	23804	23934	24211	24627	25163	25792	26479	27183	27866	28492	29033	29479	29832	30107
	-24.3	-18.4	-10.9	-2.5	6.3	15.3	24.3	33.3	42.1	49.9	56.2	60.1	61.1	59.2	55.0	49.1	42.6	36.0	29.7
25	26759	26378	26004	25677	25435	25313	25339	25529	25886	26396	27035	27764	28538	29306	30024	30658	31192	31629	31990
	-35.0	-31.0	-25.2	-17.9	-9.7	-0.7	8.9	18.9	28.9	38.1	45.7	50.8	53.0	52.4	49.5	45.2	40.5	35.9	31.5
20	28252	27835	27405	27006	26678	26464	26396	26498	26779	27234	27838	28555	29337	30131	30888	31574	32171	32685	33132
	-43.6	-41.4	-37.1	-31.0	-23.6	-14.9	-5.2	5.0	15.4	24.9	32.9	38.5	41.3	41.6	39.9	37.3	34.6	32.1	29.9
15	29320	28875	28407	27957	27566	27275	27120	27125	27303	27651	28151	28770	29467	30194	30910	31585	32205	32774	33303
	-49.9	-49.0	-45.9	-40.9	-34.1	-26.0	-16.9	-7.2	2.5	11.3	18.6	23.7	26.4	27.2	26.6	25.5	24.7	24.2	23.8
10	29955	29503	29020	28541	28106	27751	27508	27400	27438	27621	27938	28365	28875	29435	30020	30611	31201	31789	32377
	-54.0	-53.6	-51.3	-47.0	-41.1	-33.9	-25.8	-17.5	-9.5	-2.4	3.1	6.9	9.1	10.0	10.2	10.4	11.0	12.0	13.0
5	30166	29729	29251	28762	28295	27881	27544	27302	27165	27135	27205	27366	27607	27920	28297	28737	29238	29795	30394
	-55.5	-55.3	-53.4	-49.9	-45.0	-39.1	-32.7	-26.5	-21.0	-16.5	-13.2	-11.1	-9.9	-9.1	-8.2	-7.1	-5.5	-3.6	-2.1
0	29981	29572	29112	28622	28127	27651	27212	26824	26493	26224	26019	25880	25816	25839	25964	26203	26559	27022	27564
	-54.3	-54.2	-52.9	-50.4	-46.9	-42.9	-38.9	-35.4	-32.7	-31.1	-30.2	-29.9	-29.5	-28.7	-27.4	-25.6	-23.4	-21.4	-19.7

IGRF 1985 North Component (X)

Latitude \ Longitude:	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	27564	28149	28732	29279	29773	30218	30639	31075	31563	32130	32787	33525	34321	35146	35969	36762	37501	38162	38723
	-19.7	-18.8	-18.5	-18.8	-19.3	-19.8	-19.8	-19.4	-18.4	-16.9	-15.0	-12.7	-9.8	-6.2	-1.7	4.0	10.5	17.6	24.5
-5	24225	24689	25165	25622	26053	26476	26924	27436	28040	28750	29558	30443	31375	32323	33259	34162	35014	35799	36499
	-38.0	-37.1	-36.4	-35.3	-33.3	-30.4	-26.6	-22.2	-17.6	-13.0	-8.6	-4.1	0.7	6.0	12.1	18.7	25.4	31.5	36.4
-10	20763	21036	21336	21649	21981	22361	22827	23411	24126	24967	25911	26924	27971	29020	30050	31045	31994	32889	33716
	-54.5	-53.7	-52.3	-49.7	-45.2	-39.0	-31.4	-23.2	-15.1	-7.7	-0.9	5.4	11.6	18.0	24.5	30.9	36.4	40.4	42.2
-15	17533	17579	17675	17825	18050	18385	18865	19509	20312	21251	22288	23379	24487	25586	26659	27696	28696	29654	30564
	-67.3	-66.2	-64.0	-59.6	-52.8	-43.7	-33.0	-21.8	-11.1	-1.4	7.1	14.5	21.4	28.0	34.0	38.9	42.2	43.0	41.1
-20	14797	14632	14545	14556	14697	15004	15498	16183	17035	18016	19075	20169	21262	22333	23373	24380	25358	26310	27236
	-75.4	-73.4	-69.9	-64.0	-55.3	-44.2	-31.5	-18.5	-6.4	4.3	13.5	21.2	27.9	33.7	38.3	41.1	41.4	38.8	33.2
-25	12710	12396	12190	12121	12223	12525	13032	13730	14579	15529	16529	17536	18523	19478	20399	21292	22168	23035	23900
	-78.2	-75.0	-70.2	-62.9	-53.1	-41.1	-28.0	-14.9	-2.9	7.5	16.0	23.0	28.6	32.9	35.6	36.1	33.7	28.2	19.9
-30	11335	10959	10714	10633	10744	11060	11570	12242	13028	13874	14731	15566	16362	17117	17839	18542	19240	19949	20680
	-76.5	-71.9	-65.8	-57.7	-47.7	-36.2	-24.2	-12.6	-2.4	6.1	12.9	18.1	22.1	24.6	25.4	24.0	19.8	12.7	3.2
-35	10672	10313	10100	10060	10206	10535	11022	11623	12286	12961	13607	14203	14743	15236	15698	16150	16612	17104	17640
	-71.4	-65.4	-58.4	-50.2	-41.0	-31.2	-21.7	-13.1	-5.9	-0.3	3.7	6.6	8.4	9.2	8.6	6.2	1.4	-5.6	-14.3
-40	10686	10392	10245	10260	10435	10751	11172	11652	12140	12593	12983	13298	13544	13739	13906	14071	14259	14493	14790
	-64.2	-57.3	-49.9	-42.3	-34.7	-27.5	-21.3	-16.4	-13.0	-10.9	-10.0	-9.7	-9.8	-10.4	-11.8	-14.3	-18.2	-23.6	-30.1
-45	11306	11081	10992	11037	11202	11457	11763	12073	12345	12545	12655	12674	12615	12501	12362	12225	12121	12074	12105
	-56.4	-49.0	-41.9	-35.3	-29.7	-25.4	-22.6	-21.3	-21.6	-22.9	-24.8	-26.8	-28.6	-30.1	-31.5	-33.2	-35.4	-38.3	-41.7
-50	12418	12233	12158	12181	12278	12416	12556	12658	12688	12621	12449	12177	11821	11408	10969	10534	10136	9801	9553
	-48.7	-41.4	-34.9	-29.7	-26.0	-24.1	-24.1	-25.9	-28.9	-32.7	-36.7	-40.3	-43.1	-45.0	-46.1	-46.6	-46.9	-47.3	-47.7
-55	13853	13661	13546	13488	13461	13433	13369	13239	13016	12684	12242	11695	11064	10374	9655	8939	8259	7643	7119
	-41.7	-34.8	-29.2	-25.1	-22.8	-22.6	-24.3	-27.7	-32.2	-37.3	-42.2	-46.4	-49.6	-51.4	-52.1	-51.7	-50.7	-49.2	-47.6
-60	15394	15151	14948	14763	14572	14347	14062	13692	13221	12639	11946	11153	10276	9339	8372	7405	6469	5596	4812
	-35.3	-29.2	-24.2	-20.9	-19.4	-19.8	-21.9	-25.5	-30.1	-35.0	-39.7	-43.8	-46.7	-48.4	-48.8	-48.1	-46.5	-44.5	-42.2
-65	16790	16470	16152	15817	15445	15015	14510	13911	13210	12402	11489	10481	9395	8252	7078	5902	4753	3662	2654
	-29.2	-23.8	-19.5	-16.5	-15.1	-15.2	-16.7	-19.4	-22.9	-26.7	-30.4	-33.6	-36.0	-37.5	-37.9	-37.5	-36.5	-35.0	-33.5
-70	17792	17387	16946	16459	15911	15288	14580	13778	12876	11875	10779	9598	8348	7047	5718	4388	3081	1824	644
	-22.9	-18.4	-14.6	-11.7	-10.0	-9.3	-9.7	-10.9	-12.8	-15.1	-17.4	-19.6	-21.4	-22.7	-23.5	-23.9	-23.9	-23.8	-23.6
-75	18185	17695	17140	16513	15807	15016	14135	13162	12097	10943	9708	8402	7039	5635	4210	2785	1383	25	-1266
	-16.1	-12.5	-9.3	-6.6	-4.6	-3.2	-2.6	-2.6	-3.1	-3.9	-5.1	-6.3	-7.6	-8.9	-10.0	-11.2	-12.3	-13.5	-14.7
-80	17802	17235	16578	15831	14993	14065	13047	11944	10759	9499	8173	6792	5368	3917	2453	994	-442	-1838	-3177
	-8.7	-6.1	-3.7	-1.5	0.3	1.8	2.9	3.5	3.8	3.7	3.3	2.6	1.6	0.5	-0.9	-2.4	-4.1	-5.9	-7.9
-85	16543	15903	15160	14318	13381	12354	11242	10054	8796	7478	6109	4701	3266	1814	361	-1082	-2501	-3882	-5213
	-0.9	0.5	1.8	3.0	4.1	5.0	5.7	6.2	6.5	6.5	6.2	5.7	5.0	4.1	3.0	1.7	0.2	-1.4	-3.0
-90	14378	13673	12863	11956	10957	9876	8719	7496	6215	4888	3523	2131	723	-690	-2098	-3490	-4856	-6184	-7466
	6.8	6.8	6.8	6.8	6.7	6.5	6.3	6.1	5.8	5.4	5.1	4.6	4.2	3.7	3.2	2.6	2.1	1.5	0.9

IGRF 1985 North Component (X)

Latitude \ Longitude:	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
0	38723	39161	39459	39606	39602	39459	39195	38834	38401	37919	37408	36889	36379	35894	35445	35038	34670	34335	34020
	24.5	30.3	34.3	35.9	34.8	31.2	25.6	18.9	12.0	5.8	0.8	-2.7	-4.9	-6.0	-6.6	-6.9	-7.5	-8.5	-10.0
-5	36499	37094	37564	37894	38077	38117	38030	37838	37569	37250	36904	36548	36199	35867	35561	35284	35031	34791	34549
	36.4	39.4	40.1	38.3	34.1	28.0	20.8	13.1	5.8	-0.2	-4.7	-7.3	-8.3	-8.2	-7.7	-7.3	-7.8	-9.3	-11.8
-10	33716	34459	35098	35613	35990	36223	36321	36305	36202	36042	35850	35646	35442	35247	35066	34901	34747	34591	34415
	42.2	41.6	38.6	33.5	26.9	19.5	11.8	4.6	-1.7	-6.5	-9.7	-11.1	-11.1	-10.1	-9.0	-8.6	-9.4	-11.7	-15.3
-15	30564	31415	32188	32859	33406	33815	34087	34234	34283	34265	34207	34130	34047	33967	33893	33825	33757	33678	33569
	41.1	36.6	30.0	22.3	14.2	6.5	-0.2	-5.7	-9.8	-12.5	-13.9	-13.9	-13.0	-11.7	-10.7	-10.7	-12.3	-15.5	-20.1
-20	27236	28130	28975	29746	30417	30963	31375	31660	31837	31937	31989	32015	32032	32048	32065	32083	32097	32095	32061
	33.2	25.3	16.0	6.5	-2.0	-8.7	-13.5	-16.3	-17.7	-17.9	-17.2	-16.0	-14.5	-13.3	-12.8	-13.6	-16.0	-20.1	-25.4
-25	23900	24761	25605	26407	27137	27766	28276	28663	28942	29137	29279	29391	29490	29588	29688	29788	29884	29966	30020
	19.9	9.7	-1.1	-10.9	-18.7	-23.8	-26.1	-26.1	-24.6	-22.3	-19.9	-17.6	-15.9	-14.9	-15.1	-16.7	-19.9	-24.5	-30.1
-30	20680	21434	22203	22964	23688	24341	24900	25354	25709	25983	26202	26389	26565	26740	26919	27103	27287	27462	27616
	3.2	-7.5	-18.1	-27.1	-33.3	-36.3	-36.2	-33.8	-30.0	-25.9	-22.2	-19.3	-17.5	-17.0	-17.7	-19.9	-23.4	-28.0	-33.4
-35	17640	18225	18855	19512	20168	20792	21356	21843	22252	22593	22884	23148	23401	23655	23918	24191	24469	24744	25006
	-14.3	-23.8	-32.7	-39.6	-43.7	-44.6	-42.6	-38.6	-33.6	-28.7	-24.5	-21.5	-19.9	-19.7	-20.7	-22.9	-26.1	-30.2	-34.9
-40	14790	15159	15601	16102	16641	17188	17717	18208	18651	19049	19413	19757	20095	20437	20791	21158	21534	21914	22286
	-30.1	-36.9	-42.9	-47.1	-48.9	-48.1	-45.1	-40.6	-35.6	-30.8	-27.1	-24.5	-23.3	-23.2	-24.1	-25.8	-28.3	-31.3	-34.8
-45	12105	12227	12445	12752	13132	13564	14022	14486	14943	15386	15817	16243	16671	17108	17559	18025	18502	18984	19460
	-41.7	-45.1	-47.9	-49.4	-49.3	-47.5	-44.4	-40.4	-36.3	-32.7	-30.0	-28.3	-27.5	-27.4	-27.9	-28.7	-30.0	-31.6	-33.6
-50	9553	9410	9381	9466	9657	9939	10292	10697	11137	11601	12083	12580	13093	13623	14170	14733	15306	15883	16452
	-47.7	-48.0	-48.0	-47.4	-46.1	-44.1	-41.6	-39.0	-36.5	-34.6	-33.2	-32.5	-32.1	-32.0	-31.9	-31.7	-31.6	-31.6	-32.0
-55	7119	6706	6420	6267	6246	6348	6561	6868	7252	7700	8198	8737	9311	9914	10541	11186	11842	12499	13149
	-47.6	-45.9	-44.2	-42.6	-41.0	-39.5	-38.2	-37.2	-36.6	-36.3	-36.4	-36.5	-36.6	-36.3	-35.6	-34.5	-33.1	-31.7	-30.6
-60	4812	4142	3604	3209	2963	2863	2903	3071	3352	3731	4194	4726	5315	5951	6622	7318	8030	8747	9459
	-42.2	-40.0	-38.1	-36.6	-35.6	-35.1	-35.2	-35.8	-36.7	-37.8	-38.9	-39.7	-40.0	-39.6	-38.4	-36.6	-34.3	-31.7	-29.4
-65	2654	1756	987	363	-107	-419	-576	-584	-454	-198	168	630	1173	1782	2445	3147	3877	4624	5377
	-33.5	-32.1	-31.1	-30.6	-30.7	-31.4	-32.7	-34.5	-36.4	-38.4	-40.0	-41.1	-41.5	-41.0	-39.6	-37.4	-34.5	-31.4	-28.3
-70	644	-436	-1396	-2219	-2894	-3413	-3774	-3979	-4035	-3949	-3735	-3404	-2971	-2451	-1856	-1200	-496	246	1015
	-23.6	-23.7	-24.2	-25.0	-26.4	-28.2	-30.3	-32.7	-35.0	-37.2	-38.9	-40.0	-40.3	-39.7	-38.3	-36.1	-33.2	-30.0	-26.6
-75	-1266	-2469	-3567	-4543	-5385	-6084	-6634	-7035	-7287	-7395	-7366	-7208	-6933	-6550	-6071	-5508	-4871	-4170	-3414
	-14.7	-16.2	-17.9	-19.9	-22.0	-24.4	-26.9	-29.3	-31.6	-33.5	-34.9	-35.8	-36.0	-35.4	-34.2	-32.3	-29.8	-26.9	-23.9
-80	-3177	-4441	-5615	-6687	-7644	-8476	-9178	-9744	-10172	-10462	-10617	-10639	-10534	-10309	-9970	-9526	-8982	-8348	-7631
	-7.9	-10.0	-12.2	-14.5	-16.9	-19.2	-21.4	-23.4	-25.2	-26.7	-27.7	-28.3	-28.4	-28.0	-27.1	-25.8	-24.0	-21.9	-19.6
-85	-5213	-6480	-7672	-8778	-9788	-10694	-11487	-12161	-12713	-13139	-13436	-13605	-13645	-13560	-13350	-13021	-12576	-12021	-11360
	-3.0	-4.8	-6.6	-8.3	-10.1	-11.7	-13.2	-14.6	-15.8	-16.7	-17.4	-17.9	-18.0	-17.9	-17.5	-16.9	-16.1	-15.0	-13.8
-90	-7466	-8691	-9849	-10933	-11933	-12843	-13655	-14363	-14961	-15446	-15813	-16060	-16185	-16186	-16064	-15820	-15456	-14974	-14378
	0.9	0.3	-0.3	-0.9	-1.5	-2.1	-2.6	-3.2	-3.7	-4.2	-4.6	-5.1	-5.4	-5.8	-6.1	-6.3	-6.5	-6.7	-6.8

IGRF 1985 North Component (X)

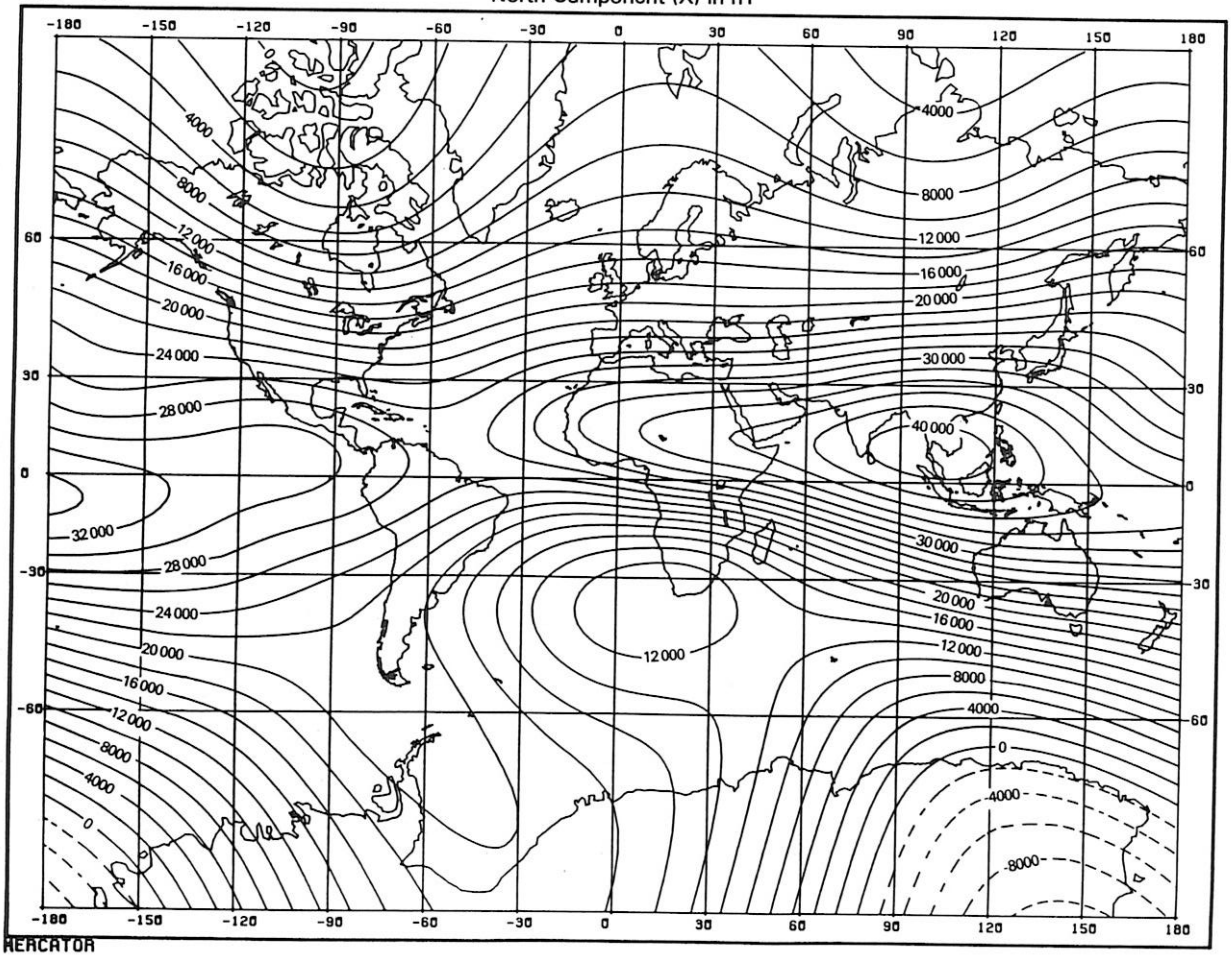
Latitude \ Longitude:	180	-175	-170	-165	-160	-155	-150	-145	-140	-135	-130	-125	-120	-115	-110	-105	-100	-95	-90
0	34020	33713	33408	33102	32798	32503	32224	31969	31743	31550	31391	31262	31154	31053	30940	30793	30592	30323	29981
	-10.0	-12.0	-14.5	-17.5	-20.8	-24.4	-28.1	-31.7	-35.2	-38.2	-40.9	-43.1	-45.0	-46.7	-48.5	-50.3	-52.0	-53.5	-54.3
-5	34549	34287	33994	33667	33312	32941	32569	32209	31868	31553	31267	31012	30788	30591	30410	30226	30017	29762	29447
	-11.8	-15.1	-18.7	-22.4	-25.8	-29.0	-31.9	-34.7	-37.4	-40.0	-42.3	-44.1	-45.5	-46.4	-47.2	-47.9	-48.7	-49.6	-50.4
-10	34415	34201	33934	33613	33244	32844	32431	32018	31615	31226	30855	30507	30189	29906	29655	29424	29192	28934	28628
	-15.3	-19.7	-24.1	-28.1	-31.1	-33.3	-34.8	-36.1	-37.3	-38.6	-39.9	-40.9	-41.4	-41.5	-41.4	-41.3	-41.7	-42.6	-44.1
-15	33569	33413	33195	32915	32579	32206	31812	31412	31009	30607	30206	29812	29435	29086	28769	28480	28204	27918	27597
	-20.1	-25.3	-30.2	-34.0	-36.4	-37.3	-37.1	-36.4	-35.7	-35.2	-34.9	-34.5	-33.9	-33.1	-32.2	-31.8	-32.3	-33.9	-36.7
-20	32061	31979	31837	31633	31377	31082	30765	30434	30091	29733	29356	28964	28566	28176	27805	27456	27123	26790	26436
	-25.4	-31.0	-36.0	-39.5	-41.1	-40.8	-39.2	-36.7	-34.1	-31.7	-29.6	-27.7	-25.7	-23.8	-22.3	-21.8	-22.7	-25.3	-29.7
-25	30020	30031	29990	29894	29752	29574	29371	29149	28904	28629	28316	27964	27581	27180	26777	26383	26000	25623	25237
	-30.1	-35.7	-40.6	-43.8	-45.0	-44.1	-41.6	-38.1	-34.2	-30.4	-26.8	-23.3	-20.1	-17.2	-15.1	-14.4	-15.7	-19.3	-25.1
-30	27616	27736	27813	27845	27835	27790	27718	27618	27486	27311	27082	26796	26458	26081	25683	25279	24881	24491	24101
	-33.4	-38.7	-43.2	-46.3	-47.5	-46.8	-44.5	-41.1	-37.0	-32.7	-28.3	-23.9	-19.7	-16.0	-13.3	-12.3	-13.6	-17.6	-24.2
-35	25006	25243	25445	25608	25732	25818	25870	25887	25862	25785	25647	25445	25181	24868	24523	24166	23811	23464	23123
	-34.9	-39.5	-43.7	-46.7	-48.4	-48.7	-47.6	-45.4	-42.3	-38.7	-34.5	-30.0	-25.4	-21.2	-18.1	-16.6	-17.4	-21.0	-27.2
-40	22286	22638	22960	23245	23490	23692	23853	23970	24039	24055	24012	23909	23750	23546	23313	23069	22826	22592	22362
	-34.8	-38.4	-42.0	-45.1	-47.6	-49.2	-49.9	-49.7	-48.6	-46.5	-43.5	-39.8	-35.6	-31.5	-28.0	-26.0	-26.0	-28.4	-33.3
-45	19460	19918	20347	20739	21086	21387	21641	21847	22005	22116	22179	22197	22177	22128	22065	21997	21933	21875	21813
	-33.6	-36.0	-38.8	-41.8	-44.9	-47.8	-50.4	-52.3	-53.3	-53.3	-52.2	-49.9	-46.7	-43.2	-39.8	-37.3	-36.4	-37.4	-40.4
-50	16452	17003	17525	18007	18445	18834	19176	19472	19729	19950	20141	20310	20465	20613	20762	20917	21079	21239	21383
	-32.0	-33.1	-34.8	-37.3	-40.5	-44.1	-47.9	-51.4	-54.3	-56.2	-56.9	-56.3	-54.5	-52.0	-49.2	-46.7	-45.1	-44.8	-46.2
-55	13149	13779	14380	14945	15468	15948	16388	16793	17170	17529	17879	18229	18587	18958	19343	19741	20144	20536	20898
	-30.6	-30.2	-30.6	-32.2	-34.8	-38.2	-42.2	-46.3	-50.1	-53.2	-55.2	-56.1	-55.7	-54.4	-52.5	-50.5	-48.9	-48.1	-48.4
-60	9459	10156	10831	11477	12091	12675	13232	13770	14297	14824	15360	15913	16488	17087	17707	18339	18970	19581	20147
	-29.4	-27.7	-26.8	-27.0	-28.3	-30.7	-33.9	-37.5	-41.1	-44.3	-46.9	-48.6	-49.3	-49.2	-48.5	-47.5	-46.5	-46.0	-46.1
-65	5377	6129	6871	7601	8317	9020	9715	10409	11108	11822	12556	13316	14104	14916	15747	16584	17411	18208	18951
	-28.3	-25.5	-23.5	-22.3	-22.1	-22.9	-24.5	-26.7	-29.2	-31.7	-34.0	-35.8	-37.2	-37.9	-38.3	-38.4	-38.5	-38.9	-39.6
-70	1015	1803	2606	3418	4239	5070	5912	6770	7647	8548	9474	10428	11405	12401	13407	14409	15393	16340	17230
	-26.6	-23.4	-20.5	-18.3	-16.7	-16.0	-15.9	-16.4	-17.4	-18.7	-20.2	-21.6	-23.0	-24.2	-25.3	-26.4	-27.5	-28.8	-30.4
-75	-3414	-2610	-1764	-881	36	985	1965	2975	4015	5083	6178	7295	8430	9574	10717	11849	12955	14022	15033
	-23.9	-20.7	-17.8	-15.1	-12.8	-11.0	-9.7	-8.9	-8.7	-8.8	-9.2	-10.0	-11.0	-12.1	-13.5	-15.0	-16.6	-18.5	-20.5
-80	-7631	-6837	-5973	-5045	-4059	-3020	-1933	-802	366	1567	2793	4039	5296	6555	7807	9042	10247	11414	12529
	-19.6	-17.2	-14.7	-12.4	-10.2	-8.3	-6.6	-5.3	-4.3	-3.8	-3.5	-3.6	-4.1	-4.8	-5.8	-7.0	-8.5	-10.1	-11.9
-85	-11360	-10601	-9749	-8813	-7797	-6711	-5563	-4359	-3108	-1820	-503	834	2181	3529	4868	6189	7481	8734	9941
	-13.8	-12.5	-11.2	-9.8	-8.4	-7.2	-6.0	-5.0	-4.1	-3.4	-2.9	-2.7	-2.6	-2.7	-3.0	-3.4	-4.0	-4.7	-5.5
-90	-14378	-13673	-12863	-11956	-10958	-9876	-8719	-7496	-6215	-4888	-3523	-2131	-723	690	2098	3490	4856	6184	7466
	-6.8	-6.8	-6.8	-6.8	-6.7	-6.5	-6.3	-6.1	-5.8	-5.4	-5.1	-4.6	-4.2	-3.7	-3.2	-2.6	-2.1	-1.5	-0.9

IGRF 1985 North Component (X)

Latitude \ Longitude:	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
0	29981	29572	29112	28622	28127	27651	27212	26824	26493	26224	26019	25880	25816	25839	25964	26203	26559	27022	27564
	-54.3	-54.2	-52.9	-50.4	-46.9	-42.9	-38.9	-35.4	-32.7	-31.1	-30.2	-29.9	-29.5	-28.7	-27.4	-25.6	-23.4	-21.4	-19.7
-5	29447	29066	28623	28131	27606	27065	26522	25988	25468	24970	24502	24079	23723	23464	23330	23344	23511	23817	24225
	-50.4	-50.8	-50.6	-49.7	-48.3	-46.7	-45.4	-44.9	-45.2	-46.2	-47.4	-48.4	-48.6	-47.7	-45.9	-43.6	-41.2	-39.3	-38.0
-10	28628	28260	27824	27323	26765	26161	25522	24859	24178	23491	22810	22159	21568	21072	20709	20501	20456	20555	20763
	-44.1	-45.8	-47.5	-48.9	-50.2	-51.5	-53.1	-55.4	-58.2	-61.3	-64.0	-65.7	-66.0	-64.7	-62.4	-59.6	-57.2	-55.5	-54.5
-15	27597	27222	26778	26262	25673	25018	24305	23545	22748	21927	21103	20299	19547	18883	18339	17938	17683	17557	17533
	-36.7	-40.3	-44.5	-48.8	-53.1	-57.3	-61.8	-66.4	-71.2	-75.6	-79.0	-80.7	-80.6	-78.8	-75.8	-72.7	-70.1	-68.4	-67.3
-20	26436	26039	25582	25053	24446	23760	23003	22184	21318	20422	19518	18631	17791	17025	16358	15806	15370	15039	14797
	-29.7	-35.6	-42.5	-49.7	-56.9	-63.9	-70.6	-77.1	-82.9	-87.8	-91.1	-92.5	-91.7	-89.2	-85.6	-82.0	-79.0	-76.9	-75.4
-25	25237	24823	24361	23834	23229	22541	21771	20931	20035	19107	18171	17251	16372	15555	14815	14162	13595	13112	12710
	-25.1	-32.9	-42.0	-51.5	-61.0	-70.0	-78.4	-85.8	-92.1	-96.8	-99.7	-100.3	-98.8	-95.6	-91.5	-87.3	-83.7	-80.9	-78.2
-30	24101	23696	23256	22758	22183	21520	20766	19931	19034	18099	17154	16225	15334	14496	13721	13014	12377	11814	11335
	-24.2	-32.9	-43.1	-54.0	-64.7	-74.8	-83.8	-91.5	-97.6	-101.9	-104.1	-104.1	-102.0	-98.4	-93.8	-89.0	-84.6	-80.5	-76.5
-35	23123	22773	22393	21957	21441	20828	20113	19304	18421	17492	16548	15617	14722	13878	13094	12374	11723	11150	10672
	-27.2	-35.7	-45.7	-56.5	-67.2	-77.3	-86.1	-93.5	-99.2	-102.9	-104.6	-104.1	-101.7	-97.8	-92.9	-87.5	-82.2	-76.8	-71.4
-40	22362	22121	21845	21506	21077	20537	19880	19112	18257	17343	16406	15478	14584	13744	12968	12265	11641	11110	10686
	-33.3	-40.4	-49.0	-58.5	-68.1	-77.2	-85.3	-92.0	-97.1	-100.3	-101.7	-101.1	-98.6	-94.6	-89.5	-83.6	-77.4	-70.9	-64.2
-45	21813	21729	21597	21385	21066	20620	20041	19336	18527	17648	16735	15824	14945	14122	13371	12703	12129	11659	11306
	-40.4	-45.4	-51.9	-59.4	-67.2	-74.8	-81.7	-87.6	-92.1	-95.0	-96.3	-95.7	-93.4	-89.5	-84.2	-78.0	-71.1	-63.8	-56.4
-50	21383	21488	21524	21463	21276	20948	20472	19859	19130	18319	17463	16600	15764	14981	14272	13652	13131	12718	12418
	-46.2	-49.1	-53.4	-58.7	-64.6	-70.6	-76.3	-81.3	-85.3	-88.0	-89.2	-88.8	-86.6	-82.9	-77.7	-71.3	-64.1	-56.4	-48.7
-55	20898	21201	21419	21522	21488	21303	20963	20480	19875	19179	18428	17659	16905	16194	15549	14985	14513	14135	13853
	-48.4	-49.9	-52.6	-56.2	-60.5	-65.2	-69.8	-74.1	-77.6	-80.0	-81.2	-80.8	-78.8	-75.2	-70.1	-63.8	-56.7	-49.1	-41.7
-60	20147	20642	21039	21314	21449	21432	21263	20952	20519	19990	19397	18772	18145	17542	16985	16486	16054	15692	15394
	-46.1	-47.1	-49.0	-51.7	-55.0	-58.7	-62.6	-66.1	-69.2	-71.3	-72.2	-71.8	-69.9	-66.5	-61.7	-55.8	-49.1	-42.1	-35.3
-65	18951	19618	20185	20632	20946	21118	21148	21046	20826	20508	20118	19680	19219	18755	18305	17880	17487	17125	16790
	-39.6	-40.9	-42.7	-45.2	-48.1	-51.3	-54.5	-57.5	-60.0	-61.6	-62.3	-61.8	-59.9	-56.8	-52.5	-47.2	-41.3	-35.1	-29.2
-70	17230	18045	18767	19381	19876	20246	20491	20616	20630	20548	20384	20157	19881	19572	19242	18897	18541	18175	17792
	-30.4	-32.2	-34.4	-37.0	-39.7	-42.5	-45.2	-47.6	-49.5	-50.7	-51.1	-50.4	-48.7	-46.0	-42.3	-37.9	-33.0	-27.9	-22.9
-75	15033	15977	16838	17606	18274	18835	19288	19633	19876	20021	20078	20055	19960	19800	19583	19313	18990	18615	18185
	-20.5	-22.7	-25.1	-27.5	-30.0	-32.3	-34.5	-36.3	-37.6	-38.3	-38.3	-37.6	-36.2	-33.9	-31.1	-27.7	-23.9	-20.0	-16.1
-80	12529	13584	14567	15472	16290	17016	17646	18178	18611	18945	19182	19323	19372	19329	19198	18979	18674	18281	17802
	-11.9	-13.8	-15.7	-17.6	-19.4	-21.0	-22.4	-23.5	-24.2	-24.5	-24.3	-23.7	-22.5	-21.0	-19.0	-16.7	-14.1	-11.4	-8.7
-85	9941	11091	12176	13189	14122	14969	15724	16383	16940	17394	17740	17978	18105	18122	18026	17820	17503	17077	16543
	-5.5	-6.3	-7.1	-7.9	-8.6	-9.2	-9.7	-10.0	-10.1	-10.0	-9.7	-9.1	-8.4	-7.5	-6.4	-5.1	-3.8	-2.4	-0.9
-90	7466	8691	9849	10933	11933	12843	13655	14363	14961	15446	15813	16060	16185	16186	16064	15820	15456	14974	14378
	-0.9	-0.3	0.3	0.9	1.5	2.1	2.6	3.2	3.7	4.2	4.6	5.1	5.4	5.8	6.1	6.3	6.5	6.7	6.8

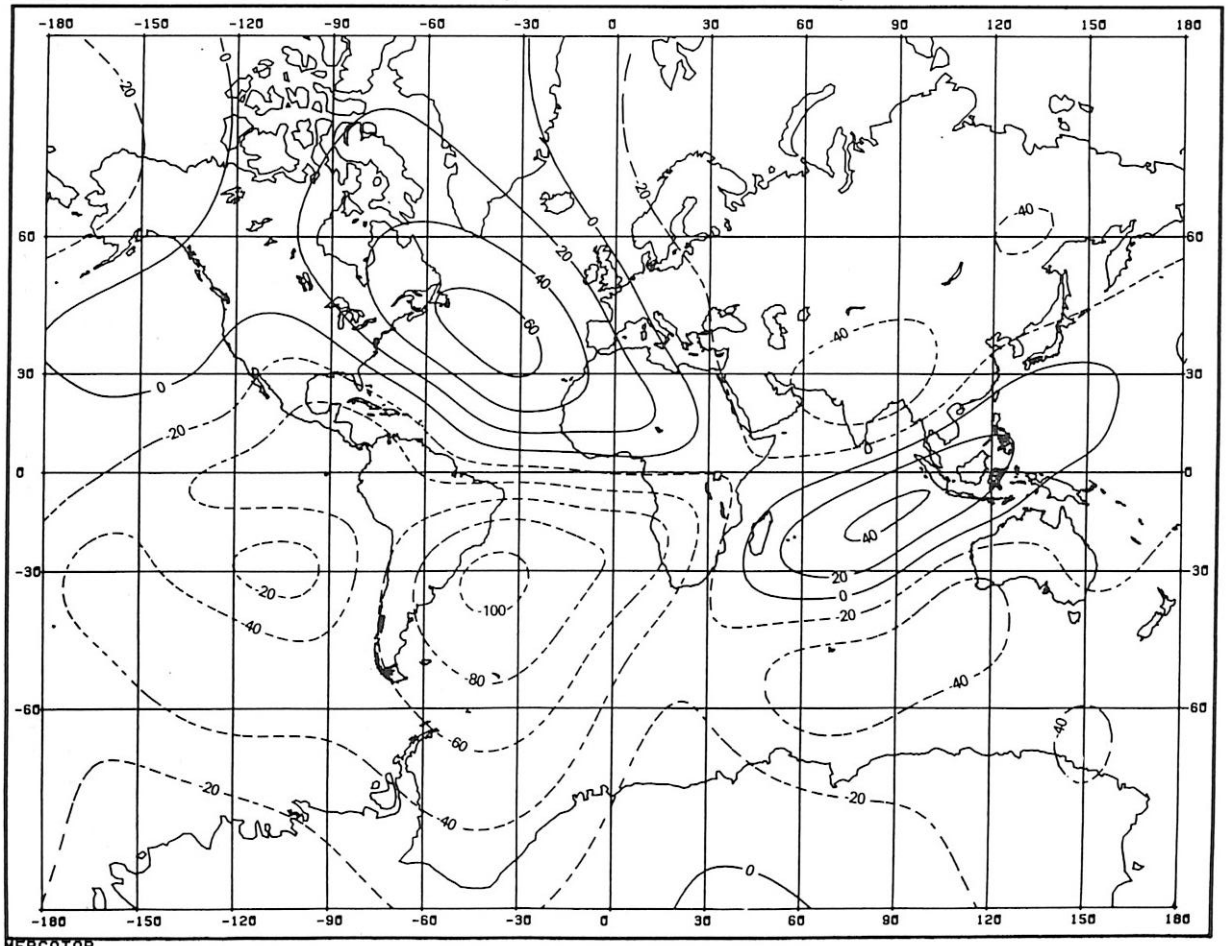
IGRF 1985

North Component (X) in nT



IGRF 1985

Annual change of North Component ($\dot{X}$) in nT/yr



IGRF 1985 East Component (Y)

Latitude \ Longitude:	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
90	-1253	-1083	-906	-722	-532	-338	-142	56	253	448	640	827	1007	1180	1344	1498	1640	1770	1886
	19.2	19.0	18.7	18.2	17.5	16.8	15.9	14.9	13.7	12.5	11.2	9.8	8.3	6.7	5.1	3.5	1.8	0.1	-1.6
85	-1395	-1033	-666	-299	61	408	736	1039	1312	1552	1755	1918	2042	2125	2168	2173	2144	2083	1996
	22.5	21.7	20.8	19.6	18.3	16.8	15.2	13.5	11.7	9.9	8.1	6.3	4.6	2.9	1.2	-0.3	-1.8	-3.1	-4.4
80	-1580	-1072	-559	-50	445	917	1356	1754	2104	2398	2631	2798	2896	2923	2881	2771	2600	2374	2103
	25.9	24.7	23.2	21.5	19.6	17.5	15.3	13.0	10.7	8.4	6.2	4.1	2.1	0.2	-1.5	-3.0	-4.2	-5.3	-6.2
75	-1758	-1150	-538	66	652	1209	1729	2200	2614	2960	3231	3419	3517	3521	3429	3243	2966	2608	2181
	29.2	27.7	25.7	23.5	21.1	18.5	15.7	13.0	10.3	7.6	5.1	2.8	0.6	-1.2	-2.9	-4.2	-5.3	-6.2	-6.7
70	-1882	-1213	-547	107	738	1338	1899	2410	2862	3246	3551	3765	3879	3883	3773	3544	3200	2748	2201
	32.7	30.7	28.3	25.5	22.5	19.4	16.2	13.1	10.0	7.1	4.5	2.1	0.1	-1.7	-3.1	-4.2	-5.0	-5.6	-5.9
65	-1924	-1225	-538	128	764	1366	1926	2440	2899	3294	3615	3848	3980	3998	3890	3649	3273	2766	2141
	36.5	34.0	31.0	27.6	23.9	20.2	16.5	13.0	9.7	6.7	4.1	1.9	0.1	-1.4	-2.4	-3.2	-3.6	-3.8	-3.8
60	-1887	-1176	-491	161	774	1344	1871	2352	2784	3161	3473	3708	3849	3881	3786	3553	3173	2648	1989
	40.9	37.7	34.0	29.8	25.4	21.0	16.7	12.8	9.2	6.2	3.8	1.8	0.5	-0.5	-1.1	-1.4	-1.4	-1.3	-1.1
55	-1797	-1084	-412	213	786	1306	1777	2201	2580	2911	3189	3402	3535	3569	3486	3270	2909	2399	1746
	46.0	42.2	37.6	32.5	27.2	22.0	17.1	12.7	8.9	5.8	3.5	2.0	1.1	0.7	0.7	0.8	1.1	1.3	1.6
50	-1695	-984	-327	268	797	1263	1671	2027	2338	2605	2826	2993	3094	3113	3031	2832	2502	2033	1426
	51.9	47.3	41.8	35.9	29.8	23.8	18.1	13.1	8.9	5.7	3.6	2.5	2.1	2.3	2.7	3.2	3.5	3.6	3.6
45	-1621	-911	-267	301	792	1209	1560	1853	2094	2289	2438	2538	2584	2564	2468	2280	1988	1581	1052
	58.2	52.9	46.8	40.1	33.3	26.6	20.2	14.5	9.8	6.3	4.2	3.4	3.6	4.3	5.1	5.7	5.7	5.2	4.5
40	-1607	-894	-260	288	752	1135	1445	1687	1868	1991	2060	2078	2048	1970	1842	1657	1406	1075	651
	64.4	58.7	52.2	45.2	38.0	30.8	23.8	17.3	11.8	7.8	5.5	4.9	5.6	6.9	7.9	8.3	7.6	6.0	3.8
35	-1670	-949	-320	215	662	1028	1317	1529	1664	1722	1709	1635	1515	1364	1192	1005	797	553	253
	69.9	64.1	57.6	50.8	43.8	36.5	29.0	21.7	15.2	10.4	7.7	7.1	8.2	10.0	11.2	11.0	9.1	5.8	1.7
30	-1816	-1083	-456	72	515	881	1169	1371	1476	1478	1385	1216	1000	768	549	358	197	49	-115
	74.1	68.5	62.5	56.6	50.3	43.4	35.6	27.4	19.8	13.9	10.6	10.0	11.4	13.5	14.6	13.7	10.2	4.6	-1.9
25	-2050	-1302	-674	-146	304	688	996	1206	1294	1248	1077	813	501	192	-72	-261	-370	-415	-437
	76.7	71.5	66.7	62.2	57.3	51.1	43.2	34.2	25.3	18.1	14.0	13.2	14.8	17.1	18.1	16.1	10.6	2.5	-6.8
20	-2375	-1613	-981	-444	29	446	790	1021	1101	1011	766	411	10	-369	-666	-844	-893	-833	-711
	77.5	73.2	69.9	67.3	64.1	58.9	51.2	41.4	31.1	22.6	17.5	16.3	18.1	20.4	20.9	17.6	10.0	-0.8	-12.8
15	-2794	-2023	-1381	-824	-313	155	546	804	877	744	426	-15	-495	-930	-1247	-1403	-1387	-1220	-957
	76.8	73.5	72.0	71.5	70.3	66.3	58.8	48.2	36.6	26.7	20.7	19.0	20.6	22.8	22.6	17.8	8.0	-5.4	-19.7
10	-3299	-2526	-1870	-1279	-715	-185	258	541	602	419	27	-495	-1043	-1519	-1842	-1967	-1881	-1610	-1213
	75.2	73.0	73.3	74.8	75.3	72.5	65.1	53.8	41.1	30.0	22.9	20.7	21.9	23.6	22.5	16.2	4.4	-11.2	-27.3
5	-3865	-3100	-2425	-1788	-1161	-567	-79	215	248	4	-466	-1063	-1669	-2173	-2492	-2578	-2422	-2051	-1529
	73.3	72.2	73.9	77.0	78.9	76.7	69.3	57.4	43.7	31.6	23.7	20.9	21.5	22.5	20.3	12.5	-1.0	-18.0	-35.0
0	-4446	-3696	-3001	-2313	-1625	-981	-469	-191	-212	-533	-1087	-1756	-2410	-2932	-3238	-3283	-3059	-2595	-1956
	71.7	71.4	74.1	78.1	80.5	78.4	70.7	58.2	43.9	31.1	22.7	19.3	19.3	19.4	16.1	7.1	-7.5	-25.2	-42.0

IGRF 1985 East Component (Y)

Latitude \ Longitude:	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
90	1886	1988	2075	2146	2201	2239	2260	2264	2250	2219	2172	2108	2028	1932	1822	1698	1561	1412	1253
	-1.6	-3.2	-4.9	-6.5	-8.0	-9.5	-11.0	-12.3	-13.6	-14.7	-15.7	-16.6	-17.4	-18.1	-18.6	-19.0	-19.2	-19.3	-19.2
85	1996	1888	1765	1633	1497	1365	1241	1131	1039	967	917	892	889	908	945	998	1060	1127	1193
	-4.4	-5.5	-6.5	-7.4	-8.3	-9.1	-9.7	-10.4	-11.0	-11.6	-12.1	-12.7	-13.2	-13.7	-14.3	-14.8	-15.4	-15.9	-16.4
80	2103	1797	1470	1133	803	492	214	-20	-199	-317	-368	-351	-267	-119	83	332	616	921	1234
	-6.2	-6.9	-7.5	-7.8	-8.1	-8.3	-8.4	-8.4	-8.5	-8.6	-8.8	-9.0	-9.4	-9.8	-10.4	-11.2	-12.1	-13.1	-14.2
75	2181	1701	1186	659	141	-344	-774	-1129	-1393	-1553	-1601	-1534	-1356	-1072	-697	-245	264	809	1366
	-6.7	-7.1	-7.3	-7.3	-7.2	-7.0	-6.7	-6.5	-6.3	-6.1	-6.1	-6.1	-6.4	-6.9	-7.6	-8.6	-9.8	-11.3	-12.9
70	2201	1580	908	215	-468	-1108	-1673	-2136	-2472	-2663	-2698	-2575	-2298	-1880	-1336	-692	26	789	1567
	-5.9	-6.0	-5.9	-5.7	-5.4	-5.1	-4.8	-4.6	-4.4	-4.3	-4.3	-4.5	-4.8	-5.4	-6.2	-7.4	-8.9	-10.7	-12.8
65	2141	1420	632	-189	-1002	-1766	-2440	-2985	-3372	-3578	-3589	-3404	-3030	-2485	-1791	-980	-86	856	1809
	-3.8	-3.7	-3.4	-3.2	-2.9	-2.8	-2.7	-2.8	-3.0	-3.4	-3.8	-4.2	-4.8	-5.6	-6.5	-7.7	-9.3	-11.3	-13.7
60	1989	1215	358	-543	-1443	-2290	-3036	-3634	-4048	-4250	-4226	-3975	-3510	-2852	-2034	-1092	-66	1002	2072
	-1.1	-0.8	-0.5	-0.3	-0.3	-0.5	-0.9	-1.6	-2.5	-3.5	-4.5	-5.4	-6.4	-7.3	-8.3	-9.5	-11.0	-12.9	-15.3
55	1746	969	95	-835	-1771	-2657	-3436	-4056	-4472	-4653	-4584	-4267	-3718	-2967	-2052	-1019	88	1225	2349
	1.6	1.9	2.0	2.0	1.8	1.2	0.2	-1.2	-2.8	-4.6	-6.2	-7.7	-9.0	-10.1	-11.1	-12.1	-13.5	-15.2	-17.4
50	1426	692	-146	-1051	-1972	-2852	-3627	-4238	-4634	-4780	-4660	-4279	-3656	-2831	-1849	-762	379	1529	2647
	3.6	3.5	3.4	3.0	2.4	1.4	-0.1	-2.0	-4.2	-6.5	-8.7	-10.6	-12.1	-13.2	-14.1	-15.0	-16.1	-17.6	-19.5
45	1052	403	-351	-1181	-2041	-2872	-3609	-4184	-4542	-4642	-4467	-4025	-3341	-2460	-1437	-331	804	1918	2977
	4.5	3.6	2.7	1.9	1.0	-0.3	-2.0	-4.1	-6.6	-9.1	-11.5	-13.4	-14.7	-15.7	-16.4	-17.2	-18.2	-19.6	-21.5
40	651	123	-506	-1219	-1979	-2727	-3396	-3913	-4216	-4261	-4031	-3532	-2799	-1881	-840	257	1350	2391	3346
	3.8	1.7	-0.2	-1.7	-2.9	-4.2	-5.7	-7.6	-9.8	-12.0	-13.9	-15.4	-16.3	-16.9	-17.5	-18.3	-19.4	-21.1	-23.0
35	253	-128	-603	-1169	-1797	-2437	-3015	-3455	-3691	-3674	-3386	-2839	-2069	-1131	-95	969	1995	2933	3755
	1.7	-2.3	-5.5	-7.8	-9.1	-10.1	-11.0	-12.1	-13.5	-14.8	-15.7	-16.2	-16.3	-16.4	-16.8	-17.8	-19.5	-21.8	-24.2
30	-115	-333	-636	-1036	-1516	-2029	-2501	-2851	-3009	-2924	-2581	-1993	-1200	-262	751	1763	2704	3522	4192
	-1.9	-8.1	-12.8	-15.8	-17.1	-17.3	-17.2	-17.1	-17.1	-16.9	-16.4	-15.5	-14.5	-13.9	-14.3	-15.8	-18.5	-21.8	-25.2
25	-437	-485	-609	-836	-1161	-1539	-1896	-2149	-2223	-2069	-1673	-1053	-252	671	1642	2587	3433	4125	4640
	-6.8	-15.3	-21.5	-25.0	-25.9	-25.0	-23.4	-21.6	-19.9	-18.1	-15.9	-13.4	-11.2	-10.0	-10.4	-12.8	-16.7	-21.4	-25.8
20	-711	-591	-537	-593	-762	-1005	-1247	-1400	-1389	-1167	-724	-83	713	1604	2521	3390	4138	4708	5077
	-12.8	-23.4	-30.9	-34.4	-34.4	-32.0	-28.5	-24.9	-21.4	-17.8	-14.1	-10.2	-7.0	-5.3	-5.9	-9.2	-14.5	-20.8	-26.4
15	-957	-674	-449	-339	-358	-470	-599	-656	-564	-280	202	855	1634	2482	3337	4127	4781	5243	5486
	-19.7	-32.0	-40.0	-42.9	-41.4	-37.0	-31.5	-26.0	-20.9	-16.0	-11.1	-6.3	-2.4	-0.5	-1.5	-5.7	-12.5	-20.1	-26.7
10	-1213	-775	-388	-118	9	24	2	35	199	538	1050	1707	2461	3262	4053	4768	5340	5713	5861
	-27.3	-40.4	-48.2	-49.8	-46.2	-39.5	-31.8	-24.6	-18.3	-12.7	-7.3	-2.2	1.8	3.6	2.1	-3.0	-10.8	-19.4	-26.7
5	-1529	-946	-402	21	291	431	514	631	860	1244	1779	2434	3163	3919	4650	5300	5807	6116	6202
	-35.0	-48.1	-54.7	-54.3	-48.2	-38.9	-29.2	-20.6	-13.6	-8.0	-2.9	1.7	5.2	6.5	4.5	-1.2	-9.6	-18.7	-26.2
0	-1956	-1237	-545	31	445	713	901	1100	1390	1813	2367	3020	3728	4446	5130	5730	6190	6461	6517
	-42.0	-54.1	-58.9	-56.0	-47.2	-35.5	-24.0	-14.4	-7.5	-2.5	1.4	4.9	7.4	7.9	5.5	-0.4	-8.7	-17.7	-24.9

IGRF 1985 East Component (Y)

Latitude \ Longitude:	180	-175	-170	-165	-160	-155	-150	-145	-140	-135	-130	-125	-120	-115	-110	-105	-100	-95	-90
90	1253	1083	906	722	532	338	142	-56	-253	-448	-640	-827	-1007	-1180	-1344	-1498	-1640	-1770	-1886
	-19.2	-19.0	-18.7	-18.2	-17.5	-16.8	-15.9	-14.9	-13.7	-12.5	-11.2	-9.8	-8.3	-6.7	-5.1	-3.5	-1.8	-0.1	1.6
85	1193	1252	1298	1325	1327	1301	1242	1148	1018	850	647	411	144	-149	-462	-789	-1124	-1459	-1787
	-16.4	-16.8	-17.2	-17.5	-17.6	-17.7	-17.6	-17.3	-16.9	-16.2	-15.4	-14.3	-13.1	-11.6	-9.9	-8.1	-6.1	-4.0	-1.7
80	1234	1539	1822	2070	2270	2412	2486	2486	2409	2253	2020	1714	1341	911	434	-79	-614	-1157	-1695
	-14.2	-15.3	-16.5	-17.6	-18.7	-19.6	-20.3	-20.8	-21.0	-20.9	-20.5	-19.7	-18.5	-17.0	-15.2	-13.1	-10.6	-8.0	-5.1
75	1366	1913	2427	2886	3272	3568	3762	3843	3807	3652	3381	3000	2519	1951	1311	617	-111	-854	-1591
	-12.9	-14.8	-16.7	-18.7	-20.6	-22.3	-23.8	-24.9	-25.7	-26.0	-25.9	-25.2	-24.1	-22.5	-20.4	-18.0	-15.1	-11.9	-8.5
70	1567	2328	3043	3685	4230	4657	4951	5099	5097	4941	4637	4191	3617	2929	2148	1294	393	-530	-1449
	-12.8	-15.2	-17.7	-20.4	-23.0	-25.4	-27.4	-29.1	-30.2	-30.8	-30.8	-30.2	-29.0	-27.3	-25.1	-22.5	-19.4	-15.9	-12.0
65	1809	2736	3606	4386	5051	5577	5948	6150	6177	6028	5706	5220	4583	3811	2925	1949	909	-165	-1243
	-13.7	-16.4	-19.4	-22.4	-25.5	-28.3	-30.6	-32.5	-33.7	-34.3	-34.2	-33.6	-32.5	-30.8	-28.8	-26.3	-23.4	-20.0	-16.0
60	2072	3106	4071	4936	5673	6261	6682	6924	6979	6847	6531	6037	5377	4566	3624	2571	1434	244	-965
	-15.3	-18.1	-21.2	-24.5	-27.7	-30.5	-32.9	-34.6	-35.6	-35.9	-35.6	-34.9	-33.9	-32.6	-31.2	-29.4	-27.2	-24.4	-20.9
55	2349	3426	4423	5313	6072	6682	7126	7393	7476	7372	7082	6613	5972	5170	4220	3139	1951	685	-623
	-17.4	-20.1	-23.1	-26.2	-29.2	-31.9	-33.9	-35.1	-35.6	-35.3	-34.6	-33.8	-33.0	-32.4	-32.0	-31.6	-30.9	-29.4	-26.9
50	2647	3702	4669	5527	6260	6854	7294	7570	7675	7606	7361	6943	6355	5601	4689	3627	2433	1131	-242
	-19.5	-22.0	-24.7	-27.5	-30.1	-32.2	-33.6	-34.1	-33.7	-32.7	-31.4	-30.3	-29.8	-30.1	-31.3	-32.9	-34.3	-34.8	-33.7
45	2977	3954	4835	5611	6273	6815	7226	7497	7618	7584	7392	7041	6529	5854	5014	4010	2849	1552	150
	-21.5	-23.7	-26.0	-28.4	-30.4	-31.8	-32.3	-31.8	-30.4	-28.4	-26.3	-24.9	-24.7	-26.1	-29.0	-33.0	-37.0	-40.0	-41.0
40	3346	4200	4950	5601	6157	6620	6981	7232	7361	7358	7219	6940	6515	5936	5192	4273	3180	1923	530
	-23.0	-25.2	-27.2	-29.0	-30.2	-30.8	-30.3	-28.9	-26.4	-23.3	-20.4	-18.4	-18.3	-20.6	-25.3	-31.8	-38.7	-44.5	-47.8
35	3755	4453	5039	5536	5961	6324	6621	6840	6966	6987	6895	6684	6347	5871	5236	4424	3424	2238	888
	-24.2	-26.5	-28.3	-29.5	-29.9	-29.5	-28.2	-25.7	-22.3	-18.3	-14.3	-11.6	-11.3	-14.2	-20.4	-29.1	-38.8	-47.5	-53.3
30	4192	4716	5121	5447	5727	5979	6204	6383	6497	6530	6474	6322	6069	5696	5178	4487	3600	2510	1231
	-25.2	-27.8	-29.4	-30.0	-29.5	-28.1	-25.9	-22.8	-18.6	-13.8	-8.9	-5.4	-4.5	-7.5	-14.6	-25.2	-37.3	-48.7	-57.0
25	4640	4987	5209	5362	5495	5636	5784	5918	6012	6046	6012	5909	5731	5459	5061	4498	3737	2760	1572
	-25.8	-29.0	-30.5	-30.3	-28.9	-26.6	-23.7	-20.1	-15.6	-10.2	-4.6	-0.1	1.6	-0.9	-8.4	-20.2	-34.3	-48.0	-58.7
20	5077	5260	5313	5306	5303	5338	5412	5498	5564	5589	5565	5498	5384	5207	4927	4496	3868	3013	1925
	-26.4	-30.1	-31.4	-30.4	-28.0	-24.8	-21.4	-17.5	-12.9	-7.3	-1.2	4.1	6.8	5.0	-2.3	-14.6	-30.1	-45.8	-58.7
15	5486	5533	5444	5303	5183	5127	5134	5173	5206	5210	5185	5139	5078	4985	4816	4512	4015	3281	2296
	-26.7	-30.8	-31.8	-30.0	-26.5	-22.5	-18.6	-14.8	-10.4	-5.0	1.3	7.3	10.9	10.1	3.4	-9.1	-25.4	-42.7	-57.5
10	5861	5806	5613	5373	5167	5039	4990	4983	4980	4956	4917	4879	4855	4829	4755	4565	4188	3569	2680
	-26.7	-31.0	-31.4	-28.8	-24.3	-19.5	-15.3	-11.6	-7.7	-2.6	3.5	9.8	14.2	14.1	8.1	-4.2	-21.1	-39.5	-55.9
5	6202	6085	5831	5533	5273	5098	5005	4959	4919	4863	4800	4755	4747	4765	4761	4662	4386	3867	3065
	-26.2	-30.2	-30.2	-26.7	-21.4	-16.0	-11.6	-8.1	-4.6	-0.1	5.8	12.0	16.7	17.2	11.6	-0.5	-17.7	-36.9	-54.7
0	6517	6378	6106	5789	5509	5310	5190	5113	5038	4948	4854	4788	4775	4809	4845	4807	4607	4169	3444
	-24.9	-28.5	-27.9	-23.9	-18.0	-12.3	-7.7	-4.4	-1.3	2.7	8.1	14.1	18.7	19.3	13.9	1.9	-15.4	-35.2	-54.0

IGRF 1985 East Component (Y)

Latitude \ Longitude:	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
90	-1886	-1988	-2075	-2146	-2201	-2239	-2260	-2264	-2250	-2219	-2172	-2108	-2028	-1932	-1822	-1698	-1561	-1412	-1253
	1.6	3.2	4.9	6.5	8.0	9.5	11.0	12.3	13.6	14.7	15.7	16.6	17.4	18.1	18.6	19.0	19.2	19.3	19.2
85	-1787	-2101	-2393	-2657	-2887	-3078	-3226	-3326	-3377	-3377	-3326	-3225	-3076	-2882	-2647	-2375	-2072	-1743	-1395
	-1.7	0.6	2.9	5.3	7.6	9.9	12.1	14.2	16.1	17.8	19.3	20.6	21.7	22.5	23.0	23.3	23.3	23.0	22.5
80	-1695	-2214	-2700	-3142	-3529	-3853	-4105	-4281	-4378	-4395	-4333	-4194	-3982	-3704	-3365	-2975	-2541	-2073	-1580
	-5.1	-2.1	1.0	4.1	7.2	10.3	13.2	16.0	18.5	20.8	22.7	24.4	25.7	26.6	27.2	27.4	27.2	26.7	25.9
75	-1591	-2303	-2969	-3573	-4100	-4538	-4877	-5111	-5237	-5257	-5173	-4990	-4718	-4364	-3939	-3455	-2922	-2353	-1758
	-8.5	-4.8	-1.0	2.8	6.7	10.5	14.1	17.5	20.7	23.5	25.9	27.9	29.5	30.6	31.3	31.5	31.2	30.4	29.2
70	-1449	-2337	-3170	-3924	-4579	-5118	-5531	-5810	-5953	-5963	-5847	-5615	-5279	-4854	-4353	-3791	-3183	-2543	-1882
	-12.0	-7.8	-3.4	1.1	5.7	10.2	14.6	18.7	22.5	25.9	28.8	31.3	33.2	34.6	35.4	35.6	35.2	34.2	32.7
65	-1243	-2292	-3279	-4175	-4952	-5588	-6069	-6385	-6536	-6527	-6371	-6082	-5680	-5184	-4613	-3985	-3318	-2626	-1924
	-16.0	-11.6	-6.8	-1.6	3.7	9.0	14.2	19.1	23.7	27.8	31.4	34.5	36.9	38.7	39.7	40.0	39.6	38.4	36.5
60	-965	-2155	-3285	-4317	-5214	-5948	-6495	-6846	-7001	-6968	-6765	-6417	-5947	-5381	-4744	-4058	-3342	-2614	-1887
	-20.9	-16.6	-11.5	-5.8	0.3	6.6	12.8	18.7	24.2	29.2	33.6	37.5	40.6	43.0	44.5	45.1	44.6	43.2	40.9
55	-623	-1931	-3191	-4353	-5369	-6201	-6818	-7206	-7364	-7306	-7057	-6648	-6113	-5483	-4788	-4052	-3296	-2539	-1797
	-26.9	-23.0	-17.9	-11.7	-4.7	2.6	10.0	17.0	23.6	29.6	35.1	40.0	44.2	47.5	49.8	50.8	50.5	48.9	46.0
50	-242	-1641	-3011	-4291	-5422	-6352	-7043	-7473	-7641	-7565	-7277	-6816	-6224	-5539	-4794	-4016	-3228	-2448	-1695
	-33.7	-30.8	-25.8	-19.1	-11.3	-2.8	5.7	13.9	21.6	28.8	35.5	41.8	47.4	52.0	55.3	57.0	57.0	55.2	51.9
45	150	-1308	-2761	-4142	-5378	-6406	-7175	-7658	-7851	-7773	-7463	-6967	-6333	-5605	-4820	-4006	-3187	-2386	-1621
	-41.0	-39.2	-34.7	-27.7	-19.0	-9.6	0.0	9.1	17.9	26.3	34.4	42.3	49.7	56.0	60.8	63.5	63.8	62.0	58.2
40	530	-952	-2459	-3916	-5243	-6365	-7221	-7773	-8014	-7962	-7656	-7150	-6494	-5736	-4917	-4067	-3215	-2387	-1607
	-47.8	-47.6	-43.7	-36.7	-27.5	-17.4	-7.1	2.8	12.4	21.9	31.6	41.4	50.9	59.3	65.8	69.6	70.4	68.5	64.4
35	888	-582	-2111	-3621	-5024	-6237	-7189	-7834	-8153	-8162	-7897	-7410	-6754	-5977	-5124	-4232	-3337	-2473	-1670
	-53.3	-54.9	-52.1	-45.4	-36.1	-25.7	-15.3	-5.1	5.0	15.5	26.8	38.8	50.8	61.5	69.9	74.9	76.2	74.3	69.9
30	1231	-200	-1723	-3263	-4729	-6033	-7094	-7855	-8288	-8397	-8210	-7774	-7138	-6351	-5461	-4515	-3563	-2651	-1816
	-57.0	-60.6	-59.1	-53.2	-44.4	-34.4	-24.2	-14.2	-3.8	7.6	20.5	34.8	49.4	62.6	72.8	78.9	80.6	78.6	74.1
25	1572	202	-1297	-2851	-4372	-5768	-6950	-7850	-8426	-8669	-8594	-8236	-7638	-6847	-5918	-4910	-3890	-2921	-2050
	-58.7	-64.4	-64.6	-59.9	-52.1	-43.0	-33.6	-24.0	-13.7	-1.5	13.1	29.8	47.0	62.6	74.6	81.5	83.3	81.1	76.7
20	1925	626	-838	-2398	-3970	-5458	-6768	-7820	-8558	-8957	-9016	-8755	-8209	-7423	-6458	-5389	-4303	-3279	-2375
	-58.7	-66.5	-68.5	-65.5	-59.2	-51.3	-42.9	-34.1	-23.8	-10.8	5.5	24.5	44.1	61.8	75.1	82.5	84.3	81.8	77.5
15	2296	1070	-357	-1921	-3540	-5117	-6553	-7756	-8658	-9216	-9415	-9260	-8776	-8008	-7024	-5913	-4780	-3719	-2794
	-57.5	-67.4	-71.5	-70.3	-65.6	-59.1	-51.9	-43.7	-33.3	-19.4	-1.4	19.6	41.3	60.6	74.7	82.3	83.7	81.0	76.8
10	2680	1524	133	-1433	-3094	-4752	-6300	-7639	-8687	-9390	-9718	-9666	-9252	-8521	-7547	-6431	-5289	-4223	-3299
	-55.9	-67.8	-73.8	-74.5	-71.5	-66.3	-60.0	-52.0	-41.3	-26.4	-7.0	15.7	38.9	59.2	73.7	81.0	82.0	79.0	75.2
5	3065	1975	620	-944	-2637	-4358	-5995	-7441	-8605	-9424	-9858	-9899	-9560	-8890	-7965	-6893	-5792	-4763	-3865
	-54.7	-68.2	-76.0	-78.4	-76.8	-72.6	-66.7	-58.6	-47.2	-31.2	-10.6	13.2	37.3	57.9	72.3	79.2	79.7	76.6	73.3
0	3444	2415	1099	-454	-2163	-3924	-5622	-7140	-8383	-9281	-9794	-9912	-9652	-9065	-8230	-7252	-6243	-5292	-4446
	-54.0	-68.8	-78.1	-81.8	-81.1	-77.5	-71.5	-62.9	-50.6	-33.7	-12.2	12.2	36.4	56.8	70.7	77.1	77.4	74.5	71.7

IGRF 1985 East Component (Y)

Latitude \ Longitude:	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	-4446	-3696	-3001	-2313	-1625	-981	-469	-191	-212	-533	-1087	-1756	-2410	-2932	-3238	-3283	-3059	-2595	-1956
	71.7	71.4	74.1	78.1	80.5	78.4	70.7	58.2	43.9	31.1	22.7	19.3	19.3	19.4	16.1	7.1	-7.5	-25.2	-42.0
-5	-4976	-4249	-3536	-2808	-2078	-1413	-918	-696	-802	-1220	-1865	-2604	-3297	-3828	-4115	-4118	-3831	-3283	-2538
	70.8	71.1	74.0	77.9	79.8	77.1	68.8	55.8	41.1	28.1	19.5	15.8	15.2	14.6	10.4	0.6	-14.3	-31.7	-47.6
-10	-5386	-4690	-3972	-3227	-2493	-1857	-1431	-1311	-1537	-2073	-2815	-3620	-4345	-4878	-5143	-5104	-4758	-4135	-3295
	70.7	71.1	73.5	76.3	76.8	72.7	63.4	49.9	35.3	22.6	14.2	10.5	9.7	8.5	3.9	-5.9	-20.3	-36.6	-50.5
-15	-5627	-4969	-4270	-3547	-2862	-2314	-2015	-2045	-2423	-3091	-3932	-4797	-5546	-6074	-6313	-6233	-5835	-5145	-4224
	71.2	71.2	72.4	73.1	71.3	65.3	54.7	40.9	26.6	14.6	7.0	3.8	3.1	2.0	-2.4	-11.4	-24.4	-38.6	-50.2
-20	-5681	-5074	-4426	-3774	-3199	-2801	-2681	-2898	-3448	-4253	-5187	-6102	-6867	-7384	-7595	-7476	-7031	-6286	-5297
	71.9	71.1	70.3	68.3	63.7	55.3	43.3	29.3	15.7	4.9	-1.5	-3.8	-3.7	-4.1	-7.5	-14.9	-25.6	-37.2	-46.1
-25	-5573	-5038	-4479	-3952	-3541	-3343	-3438	-3862	-4585	-5519	-6533	-7485	-8255	-8755	-8938	-8786	-8302	-7514	-6472
	72.2	70.2	67.0	62.0	54.3	43.6	30.3	16.3	3.6	-5.6	-10.5	-11.4	-10.1	-9.2	-10.7	-15.8	-23.7	-32.3	-38.7
-30	-5368	-4929	-4500	-4143	-3939	-3970	-4293	-4918	-5799	-6839	-7910	-8882	-9647	-10129	-10287	-10107	-9595	-8778	-7701
	71.6	68.2	62.6	54.7	44.1	31.3	17.1	3.3	-8.2	-15.8	-18.9	-18.2	-15.3	-12.7	-12.0	-14.4	-19.2	-24.8	-29.0
-35	-5147	-4835	-4570	-4415	-4438	-4702	-5240	-6042	-7048	-8160	-9261	-10235	-10985	-11446	-11584	-11387	-10861	-10030	-8936
	69.7	64.9	57.3	46.9	34.1	19.7	5.1	-8.2	-18.4	-24.3	-25.7	-23.4	-19.0	-14.5	-11.6	-11.2	-13.1	-16.0	-18.5
-40	-4988	-4832	-4757	-4817	-5066	-5545	-6265	-7201	-8288	-9436	-10538	-11493	-12220	-12662	-12786	-12583	-12057	-11229	-10137
	66.4	60.5	51.4	39.4	25.3	10.3	-4.2	-16.6	-25.5	-30.0	-30.1	-26.6	-21.0	-15.0	-10.2	-7.5	-6.9	-7.9	-9.2
-45	-4943	-4968	-5095	-5367	-5821	-6480	-7337	-8359	-9485	-10631	-11707	-12628	-13324	-13745	-13861	-13662	-13150	-12341	-11268
	61.8	55.3	45.5	32.9	18.6	3.8	-9.9	-21.2	-28.9	-32.3	-31.5	-27.4	-21.2	-14.5	-8.6	-4.5	-2.3	-1.9	-2.7
-50	-5027	-5248	-5576	-6044	-6673	-7469	-8418	-9482	-10607	-11720	-12748	-13621	-14278	-14677	-14789	-14600	-14111	-13335	-12298
	56.2	49.7	40.0	27.9	14.4	0.8	-11.6	-21.6	-28.2	-30.9	-30.0	-26.1	-20.2	-13.7	-7.7	-3.1	-0.4	0.6	0.0
-55	-5223	-5644	-6164	-6803	-7571	-8465	-9465	-10536	-11630	-12689	-13653	-14465	-15076	-15447	-15552	-15376	-14917	-14183	-13195
	50.0	44.1	35.4	24.6	12.8	0.9	-9.8	-18.3	-24.0	-26.6	-26.0	-23.0	-18.3	-13.0	-7.9	-3.9	-1.4	-0.6	-1.3
-60	-5493	-6109	-6803	-7587	-8462	-9420	-10440	-11492	-12535	-13525	-14413	-15155	-15711	-16046	-16138	-15972	-15543	-14857	-13929
	43.6	38.7	31.5	22.7	13.0	3.3	-5.4	-12.6	-17.6	-20.3	-20.6	-19.0	-16.2	-12.7	-9.3	-6.6	-5.0	-4.7	-5.7
-65	-5799	-6595	-7443	-8345	-9300	-10295	-11314	-12328	-13309	-14219	-15024	-15687	-16177	-16467	-16536	-16373	-15971	-15335	-14475
	37.0	33.4	28.0	21.4	14.1	6.7	-0.2	-6.1	-10.6	-13.5	-14.9	-14.9	-14.0	-12.7	-11.2	-10.2	-9.8	-10.2	-11.5
-70	-6117	-7071	-8047	-9043	-10053	-11066	-12066	-13032	-13940	-14765	-15478	-16055	-16471	-16706	-16744	-16575	-16195	-15606	-14816
	30.3	28.0	24.4	19.8	14.7	9.3	4.2	-0.5	-4.5	-7.6	-9.9	-11.4	-12.2	-12.7	-13.1	-13.5	-14.2	-15.2	-16.5
-75	-6437	-7521	-8598	-9661	-10705	-11718	-12686	-13594	-14424	-15158	-15777	-16262	-16599	-16771	-16770	-16588	-16223	-15675	-14952
	23.4	22.1	19.9	17.1	13.7	10.1	6.4	2.8	-0.6	-3.7	-6.4	-8.7	-10.7	-12.4	-13.9	-15.3	-16.7	-17.9	-19.1
-80	-6766	-7942	-9086	-10190	-11244	-12239	-13164	-14007	-14757	-15400	-15924	-16319	-16575	-16684	-16640	-16439	-16080	-15566	-14901
	16.2	15.5	14.3	12.6	10.6	8.3	5.7	3.1	0.5	-2.1	-4.6	-7.0	-9.2	-11.3	-13.1	-14.7	-16.2	-17.3	-18.3
-85	-7109	-8334	-9507	-10618	-11658	-12619	-13491	-14266	-14936	-15494	-15932	-16245	-16428	-16477	-16391	-16168	-15809	-15317	-14696
	8.7	8.2	7.4	6.5	5.3	3.9	2.4	0.8	-0.9	-2.6	-4.3	-6.0	-7.6	-9.0	-10.4	-11.6	-12.5	-13.3	-13.8
-90	-7466	-8691	-9849	-10933	-11933	-12843	-13655	-14363	-14961	-15446	-15813	-16060	-16185	-16186	-16064	-15820	-15456	-14974	-14378
	0.9	0.3	-0.3	-0.9	-1.5	-2.1	-2.6	-3.2	-3.7	-4.2	-4.6	-5.1	-5.4	-5.8	-6.1	-6.3	-6.5	-6.7	-6.8

IGRF 1985 East Component (Y)

Latitude \ Longitude:	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
0	-1956	-1237	-545	31	445	713	901	1100	1390	1813	2367	3020	3728	4446	5130	5730	6190	6461	6517
	-42.0	-54.1	-58.9	-56.0	-47.2	-35.5	-24.0	-14.4	-7.5	-2.5	1.4	4.9	7.4	7.9	5.5	-0.4	-8.7	-17.7	-24.9
-5	-2538	-1693	-857	-131	432	834	1135	1422	1775	2236	2810	3465	4161	4855	5507	6075	6508	6764	6820
	-47.6	-57.9	-60.3	-54.7	-43.5	-29.8	-17.0	-7.1	-0.7	3.0	5.4	7.2	8.4	8.1	5.3	-0.2	-7.9	-16.1	-22.6
-10	-3295	-2334	-1364	-489	227	775	1202	1589	2013	2521	3120	3786	4481	5166	5803	6356	6782	7043	7121
	-50.5	-58.6	-58.6	-50.8	-37.7	-22.7	-9.4	0.2	5.6	7.9	8.4	8.5	8.3	7.3	4.6	-0.2	-6.8	-13.8	-19.3
-15	-4224	-3161	-2066	-1047	-175	529	1099	1604	2115	2682	3318	4005	4712	5401	6040	6594	7028	7310	7426
	-50.2	-55.8	-53.8	-44.5	-30.5	-15.4	-2.5	6.2	10.4	11.2	10.1	8.7	7.5	6.2	3.9	0.2	-4.9	-10.4	-15.0
-20	-5297	-4148	-2943	-1788	-761	107	835	1477	2096	2739	3426	4147	4876	5582	6235	6803	7256	7570	7731
	-46.1	-49.6	-46.2	-36.6	-23.0	-8.9	2.7	10.1	12.9	12.4	10.2	7.9	6.3	5.1	3.7	1.4	-2.0	-6.0	-9.7
-25	-6472	-5255	-3958	-2681	-1505	-471	426	1223	1970	2709	3463	4230	4991	5723	6398	6988	7468	7818	8027
	-38.7	-40.6	-36.8	-27.9	-16.0	-4.0	5.5	11.1	12.7	11.3	8.7	6.3	4.9	4.5	4.4	3.7	1.9	-0.7	-3.8
-30	-7701	-6434	-5065	-3685	-2372	-1175	-106	857	1747	2600	3437	4263	5066	5830	6531	7148	7658	8045	8300
	-29.0	-29.8	-26.5	-19.5	-10.3	-1.3	5.5	9.2	9.7	8.0	5.7	4.0	3.7	4.5	5.9	6.9	6.7	5.2	2.5
-35	-8936	-7641	-6220	-4757	-3326	-1980	-743	387	1431	2411	3346	4242	5097	5898	6630	7275	7816	8238	8536
	-18.5	-19.0	-16.9	-12.4	-6.6	-1.0	3.0	4.8	4.5	3.1	1.7	1.4	2.6	5.1	8.1	10.7	11.9	11.4	8.9
-40	-10137	-8833	-7383	-5861	-4336	-2862	-1474	-183	1013	2127	3170	4150	5066	5913	6680	7356	7928	8385	8725
	-9.2	-9.9	-9.3	-7.6	-5.1	-2.9	-1.5	-1.3	-1.9	-2.6	-2.6	-1.2	1.8	6.0	10.6	14.6	17.0	17.2	15.0
-45	-11268	-9976	-8520	-6965	-5374	-3802	-2288	-857	482	1728	2884	3956	4944	5847	6659	7372	7980	8476	8861
	-2.7	-3.8	-4.8	-5.5	-6.0	-6.4	-7.1	-7.9	-8.4	-8.2	-6.7	-3.5	1.2	7.0	13.0	18.1	21.4	22.3	20.4
-50	-12298	-11037	-9599	-8041	-6418	-4782	-3177	-1635	-175	1191	2459	3628	4697	5667	6535	7299	7954	8502	8944
	0.0	-1.7	-3.9	-6.3	-8.7	-10.9	-12.8	-13.9	-14.1	-12.9	-9.9	-5.3	0.9	7.8	14.7	20.6	24.6	26.0	24.7
-55	-13195	-11984	-10589	-9058	-7439	-5780	-4125	-2510	-961	503	1871	3135	4292	5341	6282	7113	7835	8453	8972
	-1.3	-3.3	-6.2	-9.4	-12.7	-15.6	-17.7	-18.6	-18.1	-15.9	-11.9	-6.2	0.7	8.2	15.6	21.8	26.2	28.2	27.5
-60	-13929	-12785	-11456	-9982	-8404	-6765	-5105	-3460	-1860	-328	1118	2467	3712	4850	5877	6796	7610	8322	8942
	-5.7	-7.8	-10.7	-13.8	-16.9	-19.5	-21.1	-21.4	-20.1	-17.1	-12.4	-6.3	0.7	8.2	15.4	21.5	26.0	28.5	28.6
-65	-14475	-13411	-12168	-10777	-9274	-7694	-6072	-4442	-2833	-1270	227	1644	2969	4197	5323	6348	7273	8105	8849
	-11.5	-13.4	-15.7	-18.2	-20.4	-22.0	-22.6	-22.0	-20.0	-16.6	-11.8	-5.9	0.8	7.6	14.1	19.8	24.2	26.9	27.8
-70	-14816	-13839	-12696	-11410	-10008	-8519	-6972	-5396	-3817	-2259	-741	719	2109	3420	4646	5785	6836	7802	8687
	-16.5	-18.1	-19.7	-21.1	-22.2	-22.6	-22.2	-20.8	-18.3	-14.8	-10.3	-5.0	0.7	6.5	12.0	16.9	20.8	23.5	24.9
-75	-14952	-14064	-13024	-11852	-10565	-9188	-7741	-6248	-4730	-3208	-1701	-223	1211	2590	3906	5153	6328	7429	8455
	-19.1	-20.2	-21.1	-21.6	-21.7	-21.2	-20.0	-18.2	-15.6	-12.3	-8.5	-4.2	0.3	4.8	9.1	13.0	16.2	18.6	20.2
-80	-14901	-14093	-13151	-12088	-10918	-9656	-8319	-6923	-5485	-4021	-2547	-1078	374	1797	3180	4515	5794	7011	8162
	-18.3	-18.9	-19.2	-19.1	-18.6	-17.7	-16.3	-14.5	-12.3	-9.7	-6.8	-3.8	-0.6	2.6	5.6	8.3	10.7	12.6	14.0
-85	-14696	-13951	-13089	-12119	-11049	-9891	-8655	-7354	-6000	-4604	-3181	-1741	-298	1137	2553	3940	5286	6584	7824
	-13.8	-14.1	-14.1	-13.9	-13.4	-12.6	-11.6	-10.4	-9.0	-7.4	-5.7	-3.9	-2.1	-0.3	1.5	3.1	4.5	5.8	6.8
-90	-14378	-13673	-12863	-11956	-10957	-9876	-8719	-7496	-6215	-4888	-3523	-2131	-723	690	2098	3490	4856	6184	7466
	-6.8	-6.8	-6.8	-6.8	-6.7	-6.5	-6.3	-6.1	-5.8	-5.4	-5.1	-4.6	-4.2	-3.7	-3.2	-2.6	-2.1	-1.5	-0.9

IGRF 1985 East Component (Y)

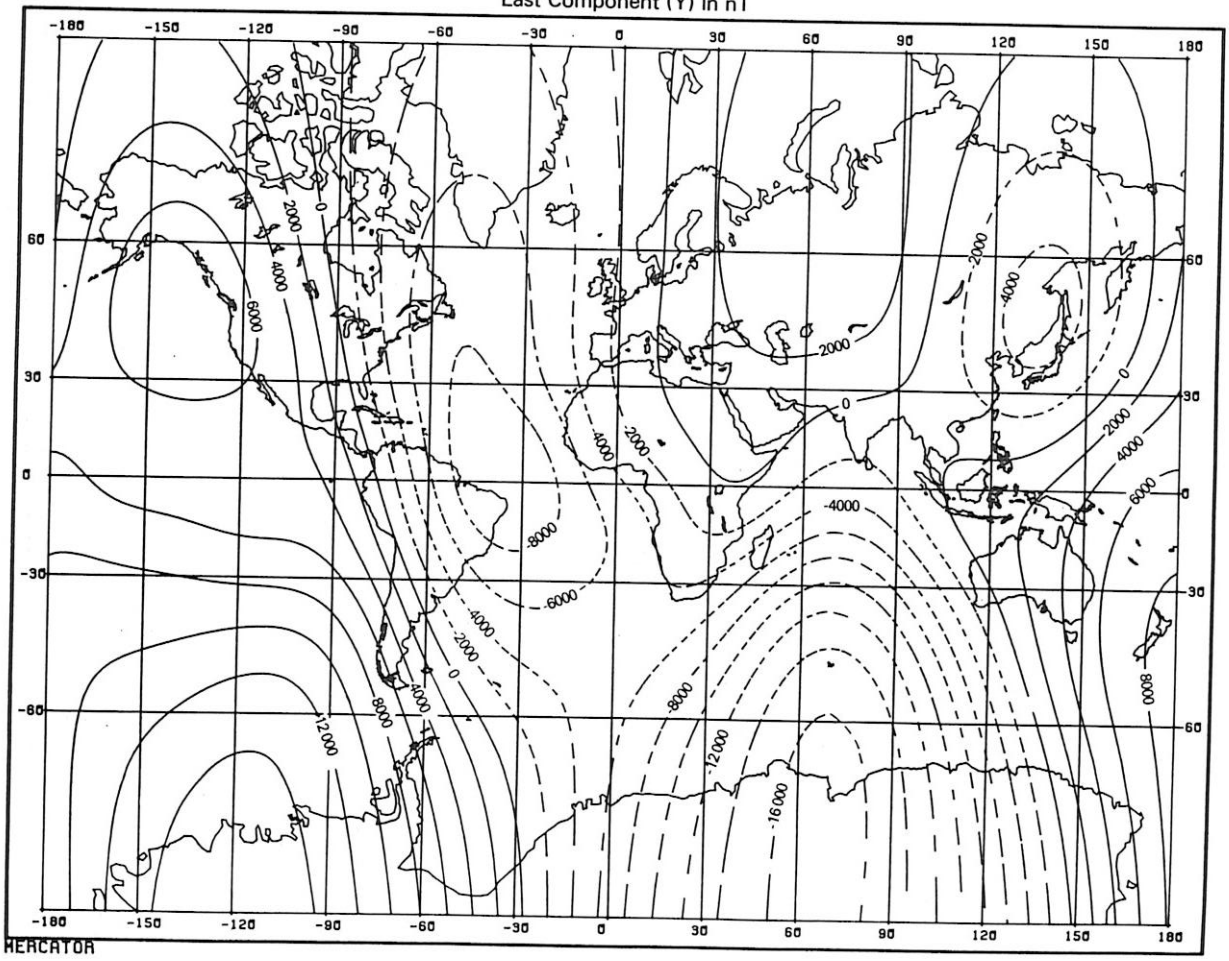
Latitude \ Longitude:	180	-175	-170	-165	-160	-155	-150	-145	-140	-135	-130	-125	-120	-115	-110	-105	-100	-95	-90
0	6517	6378	6106	5789	5509	5310	5190	5113	5038	4948	4854	4788	4775	4809	4845	4807	4607	4169	3444
	-24.9	-28.5	-27.9	-23.9	-18.0	-12.3	-7.7	-4.4	-1.3	2.7	8.1	14.1	18.7	19.3	13.9	1.9	-15.4	-35.2	-54.0
-5	6820	6692	6437	6136	5865	5663	5530	5431	5329	5207	5081	4985	4949	4972	5016	5006	4854	4478	3818
	-22.6	-25.7	-24.8	-20.6	-14.7	-9.0	-4.4	-1.2	1.7	5.4	10.4	16.0	20.3	20.7	15.2	3.2	-14.2	-34.3	-53.7
-10	7121	7030	6818	6558	6316	6128	5993	5882	5761	5616	5462	5335	5265	5258	5283	5274	5144	4810	4205
	-19.3	-21.9	-21.0	-17.2	-11.8	-6.6	-2.3	0.9	3.8	7.4	12.2	17.4	21.2	21.3	15.6	3.6	-13.7	-33.7	-53.2
-15	7426	7386	7233	7028	6826	6661	6534	6419	6289	6133	5964	5813	5711	5670	5663	5636	5509	5199	4634
	-15.0	-17.3	-16.9	-14.0	-9.9	-5.6	-2.0	1.1	4.2	8.1	13.0	18.0	21.5	21.2	15.5	3.7	-13.2	-32.7	-51.8
-20	7731	7750	7660	7513	7356	7217	7102	6992	6866	6715	6548	6393	6275	6207	6171	6119	5982	5680	5141
	-9.7	-12.1	-12.6	-11.4	-9.0	-6.3	-3.5	-0.7	2.7	6.9	12.1	17.2	20.6	20.4	14.9	3.8	-12.1	-30.5	-48.7
-25	8027	8104	8076	7984	7869	7758	7659	7562	7453	7325	7185	7050	6942	6869	6816	6744	6591	6284	5753
	-3.8	-6.6	-8.4	-9.2	-9.0	-8.1	-6.6	-4.3	-0.8	3.9	9.5	14.9	18.6	18.8	14.0	4.1	-10.2	-27.0	-43.8
-30	8300	8430	8459	8419	8344	8262	8185	8111	8034	7949	7858	7771	7700	7647	7597	7514	7343	7019	6477
	2.5	-0.8	-4.2	-7.1	-9.3	-10.5	-10.5	-8.9	-5.6	-0.7	5.3	11.1	15.3	16.2	12.7	4.5	-7.8	-22.4	-37.3
-35	8536	8716	8796	8805	8772	8725	8680	8643	8613	8588	8565	8549	8538	8526	8495	8410	8220	7869	7299
	8.9	5.0	0.2	-4.8	-9.2	-12.4	-14.0	-13.5	-10.7	-5.9	0.1	6.2	10.9	12.8	10.8	4.6	-5.2	-17.4	-30.0
-40	8725	8953	9085	9146	9163	9162	9164	9179	9210	9258	9316	9380	9440	9480	9476	9390	9179	8792	8182
	15.0	10.6	4.8	-1.7	-7.9	-12.9	-16.0	-16.6	-14.8	-10.6	-5.0	1.0	6.0	8.6	8.0	3.9	-3.4	-12.9	-23.2
-45	8861	9142	9333	9456	9536	9598	9664	9746	9850	9976	10116	10258	10383	10470	10486	10396	10158	9731	9077
	20.4	16.0	9.7	2.4	-4.9	-11.1	-15.5	-17.4	-16.7	-13.7	-9.0	-3.8	1.0	4.0	4.5	2.2	-2.9	-9.9	-18.0
-50	8944	9289	9553	9753	9914	10057	10203	10364	10547	10748	10959	11163	11335	11449	11471	11366	11096	10629	9941
	24.7	20.7	14.6	7.3	-0.3	-7.1	-12.3	-15.3	-16.0	-14.5	-11.3	-7.3	-3.4	-0.6	0.4	-0.7	-4.0	-9.0	-15.0
-55	8972	9401	9756	10053	10312	10553	10791	11037	11295	11561	11823	12063	12256	12372	12380	12246	11941	11442	10732
	27.5	24.4	19.1	12.6	5.5	-1.2	-6.8	-10.7	-12.6	-12.7	-11.3	-9.0	-6.5	-4.6	-3.8	-4.4	-6.5	-10.0	-14.3
-60	8942	9478	9945	10358	10731	11079	11414	11744	12068	12382	12673	12922	13107	13201	13176	13006	12668	12147	11435
	28.6	26.6	22.6	17.3	11.3	5.3	-0.1	-4.3	-7.3	-8.8	-9.2	-8.8	-8.0	-7.4	-7.3	-8.0	-9.6	-12.1	-15.1
-65	8849	9514	10112	10654	11150	11610	12040	12446	12823	13167	13466	13703	13860	13915	13848	13640	13276	12746	12050
	27.8	26.8	24.3	20.5	16.0	11.1	6.4	2.2	-1.3	-3.9	-5.7	-7.0	-7.8	-8.6	-9.4	-10.6	-12.2	-14.1	-16.2
-70	8687	9496	10235	10912	11533	12102	12622	13094	13513	13874	14168	14382	14502	14515	14408	14167	13787	13262	12595
	24.9	24.9	23.7	21.5	18.4	14.9	11.1	7.4	4.0	0.9	-1.8	-4.1	-6.2	-8.0	-9.7	-11.3	-13.0	-14.6	-16.0
-75	8455	9407	10287	11097	11837	12508	13110	13640	14095	14470	14757	14950	15040	15020	14882	14622	14236	13724	13090
	20.2	20.9	20.6	19.6	17.9	15.6	13.0	10.2	7.3	4.4	1.6	-1.0	-3.5	-5.7	-7.8	-9.6	-11.2	-12.6	-13.6
-80	8162	9241	10246	11173	12020	12784	13460	14046	14539	14934	15226	15413	15490	15454	15304	15037	14655	14159	13553
	14.0	14.9	15.2	15.0	14.3	13.2	11.7	10.0	8.0	6.0	3.8	1.7	-0.3	-2.2	-4.0	-5.5	-6.8	-7.8	-8.5
-85	7824	8998	10099	11121	12056	12899	13645	14290	14829	15259	15577	15781	15869	15841	15696	15436	15063	14578	13987
	6.8	7.6	8.2	8.5	8.5	8.3	7.9	7.3	6.5	5.7	4.7	3.7	2.8	1.8	1.0	0.2	-0.4	-0.9	-1.2
-90	7466	8691	9849	10933	11933	12843	13655	14363	14961	15446	15813	16060	16185	16186	16064	15820	15456	14974	14378
	-0.9	-0.3	0.3	0.9	1.5	2.1	2.6	3.2	3.7	4.2	4.6	5.1	5.4	5.8	6.1	6.3	6.5	6.7	6.8

IGRF 1985 East Component (Y)

Latitude \ Longitude:	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
0	3444	2415	1099	-454	-2163	-3924	-5622	-7140	-8383	-9281	-9794	-9912	-9652	-9065	-8230	-7252	-6243	-5292	-4446
	-54.0	-68.8	-78.1	-81.8	-81.1	-77.5	-71.5	-62.9	-50.6	-33.7	-12.2	12.2	36.4	56.8	70.7	77.1	77.4	74.5	71.7
-5	3818	2848	1576	46	-1661	-3439	-5166	-6723	-8009	-8953	-9518	-9698	-9519	-9033	-8320	-7476	-6597	-5753	-4976
	-53.7	-69.4	-79.7	-84.3	-84.2	-80.6	-74.2	-64.8	-51.5	-33.7	-11.8	12.5	36.1	55.9	69.1	75.2	75.5	73.0	70.8
-10	4205	3291	2067	573	-1115	-2889	-4622	-6192	-7494	-8460	-9057	-9289	-9188	-8811	-8236	-7544	-6812	-6088	-5386
	-53.2	-69.3	-80.1	-85.3	-85.4	-81.6	-74.6	-64.2	-50.1	-31.9	-10.1	13.5	36.2	54.9	67.5	73.5	74.2	72.3	70.7
-15	4634	3770	2595	1142	-516	-2270	-3994	-5560	-6865	-7841	-8461	-8737	-8710	-8440	-7999	-7456	-6864	-6254	-5627
	-51.8	-67.7	-78.7	-84.0	-84.3	-80.3	-72.6	-61.6	-47.1	-28.9	-7.7	14.8	36.1	53.7	65.8	72.0	73.5	72.4	71.2
-20	5141	4314	3181	1768	143	-1586	-3293	-4851	-6155	-7139	-7782	-8100	-8141	-7967	-7643	-7225	-6751	-6237	-5681
	-48.7	-64.1	-74.8	-80.2	-80.6	-76.5	-68.7	-57.5	-42.9	-25.3	-5.2	15.8	35.6	52.1	63.9	70.6	73.1	72.9	71.9
-25	5753	4945	3839	2455	860	-845	-2535	-4084	-5390	-6388	-7058	-7421	-7525	-7432	-7201	-6880	-6496	-6061	-5573
	-43.8	-58.2	-68.4	-73.9	-74.4	-70.7	-63.2	-52.3	-38.4	-21.7	-3.1	16.2	34.6	50.2	61.9	69.2	72.6	73.3	72.2
-30	6477	5667	4569	3202	1628	-55	-1728	-3271	-4583	-5602	-6308	-6720	-6885	-6861	-6704	-6457	-6144	-5779	-5368
	-37.3	-50.3	-60.0	-65.4	-66.4	-63.3	-56.6	-46.7	-33.9	-18.6	-1.6	16.1	33.0	47.9	59.5	67.4	71.7	72.9	71.6
-35	7299	6468	5361	3999	2440	778	-876	-2410	-3730	-4775	-5523	-5992	-6221	-6265	-6176	-5995	-5750	-5461	-5147
	-30.0	-41.5	-50.4	-55.8	-57.4	-55.3	-49.7	-41.1	-29.7	-16.1	-0.7	15.4	31.1	45.3	56.8	65.2	70.0	71.4	69.7
-40	8182	7319	6194	4832	3290	1654	26	-1492	-2815	-3886	-4682	-5215	-5519	-5641	-5629	-5527	-5368	-5178	-4988
	-23.2	-33.0	-40.9	-46.2	-48.3	-47.2	-43.0	-35.8	-26.0	-13.9	-0.2	14.4	29.0	42.4	53.7	62.2	67.2	68.6	66.4
-45	9079	8183	7043	5688	4174	2577	989	-502	-1820	-2914	-3761	-4368	-4761	-4981	-5072	-5077	-5034	-4978	-4943
	-18.0	-25.9	-32.8	-37.7	-40.1	-39.8	-36.7	-30.9	-22.6	-12.0	0.2	13.5	26.9	39.4	50.2	58.3	63.2	64.4	61.8
-50	9941	9023	7883	6553	5085	3547	2016	567	-736	-1848	-2748	-3439	-3939	-4282	-4508	-4657	-4768	-4880	-5027
	-15.0	-21.2	-26.8	-31.0	-33.4	-33.5	-31.2	-26.4	-19.3	-10.0	0.8	12.7	24.8	36.2	46.1	53.7	58.1	59.0	56.2
-55	10732	9812	8696	7416	6017	4557	3100	1707	428	-698	-1653	-2436	-3060	-3551	-3942	-4268	-4568	-4875	-5223
	-14.3	-18.9	-23.1	-26.4	-28.3	-28.4	-26.4	-22.2	-16.0	-7.9	1.6	12.1	22.8	32.9	41.6	48.2	52.1	52.7	50.0
-60	11435	10537	9469	8261	6952	5587	4217	2888	1639	501	-510	-1391	-2150	-2806	-3383	-3911	-4420	-4938	-5493
	-15.1	-18.3	-21.2	-23.4	-24.5	-24.1	-22.0	-18.2	-12.7	-5.6	2.6	11.6	20.6	29.2	36.6	42.1	45.3	45.8	43.6
-65	12050	11194	10195	9076	7867	6605	5324	4060	2842	1692	624	-357	-1256	-2083	-2855	-3592	-4314	-5044	-5799
	-16.2	-18.2	-19.9	-21.0	-21.1	-20.2	-17.9	-14.3	-9.4	-3.3	3.6	10.9	18.3	25.2	31.1	35.5	38.1	38.6	37.0
-70	12595	11793	10869	9841	8731	7565	6366	5159	3964	2799	1673	594	-440	-1432	-2391	-3327	-4253	-5180	-6117
	-16.0	-17.2	-18.0	-18.1	-17.6	-16.1	-13.7	-10.4	-6.2	-1.2	4.3	10.0	15.7	20.9	25.3	28.7	30.7	31.3	30.3
-75	13090	12341	11485	10536	9508	8418	7281	6113	4929	3740	2557	1385	228	-912	-2038	-3150	-4253	-5348	-6437
	-13.6	-14.2	-14.4	-14.0	-13.1	-11.5	-9.3	-6.4	-3.1	0.7	4.7	8.8	12.8	16.4	19.5	21.8	23.3	23.9	23.4
-80	13553	12843	12035	11138	10161	9114	8008	6854	5661	4439	3196	1940	678	-586	-1846	-3098	-4339	-5563	-6766
	-8.5	-8.8	-8.7	-8.2	-7.3	-6.0	-4.4	-2.4	-0.1	2.3	4.9	7.4	9.8	11.9	13.7	15.1	16.0	16.4	16.2
-85	13987	13293	12502	11620	10654	9611	8499	7326	6101	4833	3529	2200	853	-503	-1859	-3206	-4536	-5840	-7109
	-1.2	-1.3	-1.2	-1.0	-0.5	0.1	0.9	1.8	2.8	3.8	4.9	5.9	6.8	7.6	8.3	8.7	8.9	8.9	8.7
-90	14378	13673	12863	11956	10957	9876	8719	7496	6215	4888	3523	2131	723	-690	-2098	-3490	-4856	-6184	-7466
	6.8	6.8	6.8	6.8	6.7	6.5	6.3	6.1	5.8	5.4	5.1	4.6	4.2	3.7	3.2	2.6	2.1	1.5	0.9

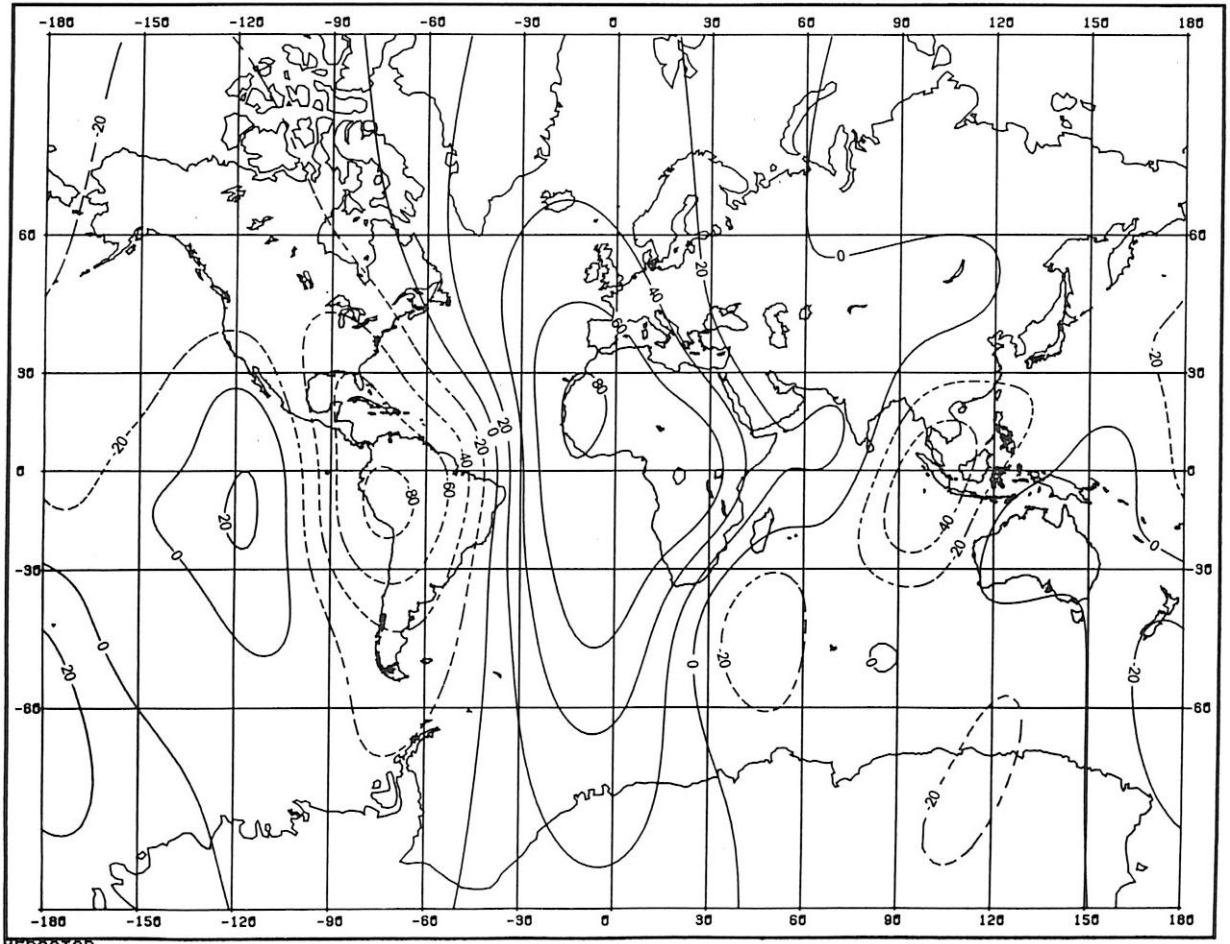
IGRF 1985

East Component (Y) in nT



IGRF 1985

Annual change of East Component ($\dot{Y}$) in nT/yr



MERCATOR

IGRF 1985 Vertical Component (Z)

Latitude \ Longitude:	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
90	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557
	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4
85	55395	55422	55463	55517	55584	55663	55753	55853	55962	56077	56198	56323	56449	56575	56699	56819	56934	57041	57140
	-45.0	-45.0	-45.0	-45.0	-45.1	-45.3	-45.5	-45.8	-46.1	-46.5	-46.9	-47.3	-47.8	-48.3	-48.8	-49.4	-49.9	-50.4	-50.9
80	54034	54069	54140	54246	54386	54559	54763	54995	55252	55529	55823	56127	56436	56746	57048	57338	57610	57857	58076
	-33.5	-33.2	-33.0	-32.9	-33.0	-33.2	-33.5	-34.0	-34.6	-35.3	-36.2	-37.2	-38.2	-39.4	-40.6	-41.8	-43.0	-44.3	-45.4
75	52607	52629	52711	52851	53050	53304	53613	53972	54376	54820	55297	55798	56313	56833	57343	57833	58290	58701	59056
	-20.4	-19.7	-19.2	-18.8	-18.7	-18.8	-19.2	-19.8	-20.6	-21.7	-22.9	-24.3	-25.9	-27.7	-29.5	-31.4	-33.2	-35.1	-36.9
70	51146	51148	51228	51387	51623	51935	52321	52778	53300	53883	54518	55195	55901	56621	57336	58027	58673	59252	59744
	-8.4	-7.1	-6.2	-5.5	-5.2	-5.3	-5.6	-6.3	-7.3	-8.6	-10.2	-12.0	-14.0	-16.2	-18.5	-20.7	-23.0	-25.2	-27.3
65	49594	49585	49669	49844	50108	50459	50894	51412	52010	52683	53426	54229	55078	55955	56838	57698	58508	59234	59846
	1.0	2.8	4.2	5.2	5.7	5.6	5.1	4.2	2.9	1.2	-0.7	-2.9	-5.2	-7.6	-10.0	-12.4	-14.7	-16.8	-18.7
60	47834	47840	47948	48154	48451	48835	49302	49853	50485	51198	51990	52854	53779	54748	55734	56706	57627	58455	59149
	6.9	9.6	11.6	12.8	13.4	13.2	12.4	11.1	9.2	7.0	4.6	2.0	-0.6	-3.1	-5.5	-7.6	-9.5	-11.0	-12.2
55	45733	45785	45944	46201	46545	46968	47464	48031	48670	49383	50172	51036	51968	52954	53967	54975	55937	56804	57530
	9.5	13.4	16.2	18.0	18.6	18.3	17.0	15.0	12.5	9.5	6.5	3.4	0.5	-2.0	-4.1	-5.7	-6.9	-7.5	-7.6
50	43169	43286	43515	43840	44245	44716	45244	45824	46457	47148	47902	48721	49603	50538	51503	52468	53393	54230	54927
	9.4	14.9	18.9	21.4	22.4	22.0	20.5	17.9	14.6	10.8	7.0	3.4	0.2	-2.2	-3.8	-4.7	-4.9	-4.4	-3.3
45	40029	40217	40520	40916	41384	41907	42471	43068	43698	44363	45070	45821	46617	47450	48305	49156	49971	50708	51320
	6.9	14.5	20.2	23.8	25.6	25.6	24.1	21.3	17.4	13.0	8.5	4.3	1.1	-1.1	-2.0	-1.9	-0.8	0.8	2.9
40	36208	36456	36821	37277	37799	38367	38966	39586	40223	40874	41541	42222	42916	43616	44315	44997	45643	46225	46706
	2.1	12.1	19.7	25.0	28.1	29.3	28.6	26.1	22.3	17.5	12.6	8.2	5.0	3.5	3.6	5.1	7.4	10.2	12.9
35	31609	31897	32303	32797	33353	33951	34579	35226	35883	36538	37182	37803	38394	38949	39466	39946	40385	40777	41101
	-5.3	7.0	16.6	23.9	29.1	32.2	33.3	32.2	29.2	24.7	19.7	15.4	12.7	12.1	13.8	17.1	21.0	24.8	27.8
30	26169	26473	26895	27400	27963	28570	29216	29892	30580	31258	31898	32474	32970	33379	33708	33973	34193	34385	34551
	-15.5	-1.4	10.1	19.5	27.2	33.2	37.1	38.4	37.1	33.6	29.1	25.3	23.4	24.4	28.1	33.6	39.4	44.1	46.7
25	19908	20197	20605	21089	21629	22224	22876	23578	24307	25020	25671	26214	26624	26895	27042	27101	27115	27122	27150
	-28.5	-13.3	-0.6	10.9	21.5	31.0	38.6	43.3	44.6	42.7	39.3	36.4	35.8	38.7	44.8	52.7	60.4	65.8	67.5
20	12977	13211	13563	13987	14472	15029	15674	16400	17172	17928	18595	19112	19442	19584	19567	19443	19278	19134	19058
	-43.4	-28.1	-14.7	-1.5	12.1	25.6	37.5	46.2	50.6	50.9	48.9	47.2	48.1	53.1	61.7	72.0	81.3	86.9	87.1
15	5680	5803	6045	6361	6752	7248	7872	8616	9429	10223	10901	11386	11637	11659	11493	11212	10901	10642	10499
	-58.4	-43.9	-30.4	-15.8	0.6	18.0	34.4	47.2	54.9	57.6	57.2	56.8	59.2	66.1	76.8	89.0	99.2	104.2	102.1
10	-1555	-1608	-1540	-1385	-1124	-713	-123	630	1470	2285	2956	3390	3549	3447	3141	2719	2284	1933	1742
	-71.4	-58.1	-44.9	-29.3	-10.5	10.5	30.9	47.5	58.2	63.0	64.1	64.9	68.5	76.7	88.7	101.7	111.6	114.9	109.7
5	-8251	-8542	-8704	-8752	-8649	-8338	-7793	-7049	-6205	-5402	-4777	-4429	-4392	-4640	-5098	-5664	-6226	-6673	-6921
	-79.9	-67.8	-55.0	-38.6	-17.9	5.8	29.1	48.5	61.4	67.8	69.9	71.4	75.6	84.2	96.4	108.7	117.0	117.4	108.4
0	-13986	-14547	-14966	-15232	-15290	-15081	-14590	-13876	-13068	-12329	-11810	-11605	-11741	-12175	-12820	-13562	-14281	-14860	-15205
	-82.0	-70.7	-58.0	-41.0	-19.0	6.2	31.0	51.6	65.4	72.3	74.6	76.0	80.0	88.1	99.0	109.3	114.7	111.5	98.4

IGRF 1985 Vertical Component (Z)

Latitude \ Longitude:	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
90	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557
	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4
85	57140	57228	57306	57373	57428	57471	57503	57524	57534	57535	57527	57512	57492	57467	57438	57408	57376	57344	57312
	-50.9	-51.4	-51.9	-52.3	-52.7	-53.1	-53.4	-53.7	-53.9	-54.0	-54.1	-54.1	-54.1	-54.1	-54.0	-53.9	-53.8	-53.6	-53.4
80	58076	58261	58411	58522	58594	58628	58626	58589	58523	58432	58322	58198	58067	57936	57808	57690	57586	57499	57431
	-45.4	-46.6	-47.6	-48.6	-49.4	-50.1	-50.7	-51.0	-51.3	-51.4	-51.3	-51.1	-50.8	-50.4	-49.9	-49.3	-48.7	-48.2	-47.6
75	59056	59344	59558	59694	59749	59725	59626	59459	59234	58964	58662	58342	58020	57710	57425	57176	56973	56823	56730
	-36.9	-38.6	-40.1	-41.5	-42.6	-43.5	-44.2	-44.6	-44.7	-44.5	-44.1	-43.5	-42.6	-41.6	-40.5	-39.3	-38.1	-36.9	-35.9
70	59744	60131	60400	60540	60548	60424	60178	59822	59375	58858	58298	57719	57150	56614	56135	55732	55420	55212	55112
	-27.3	-29.2	-30.9	-32.3	-33.4	-34.2	-34.7	-34.8	-34.6	-34.0	-33.2	-32.1	-30.7	-29.1	-27.4	-25.6	-23.9	-22.3	-20.8
65	59846	60316	60621	60745	60681	60431	60005	59425	58718	57919	57067	56202	55363	54587	53907	53351	52940	52687	52600
	-18.7	-20.3	-21.6	-22.5	-23.0	-23.2	-23.1	-22.6	-21.9	-21.0	-19.8	-18.4	-16.8	-15.0	-13.0	-11.0	-9.1	-7.3	-5.8
60	59149	59672	59990	60079	59929	59539	58924	58112	57142	56061	54922	53779	52685	51689	50832	50147	49659	49382	49324
	-12.2	-12.9	-13.2	-13.1	-12.5	-11.7	-10.6	-9.4	-8.1	-6.8	-5.5	-4.2	-2.8	-1.3	0.2	1.9	3.5	5.0	6.1
55	57530	58065	58368	58409	58168	57645	56857	55835	54630	53300	51913	50536	49235	48067	47080	46311	45783	45511	45496
	-7.6	-7.1	-6.1	-4.6	-2.7	-0.5	1.7	3.8	5.6	7.0	8.1	8.8	9.4	9.9	10.5	11.2	12.0	12.7	13.0
50	54927	55431	55696	55680	55361	54732	53808	52625	51240	49724	48154	46614	45176	43907	42859	42066	41550	41317	41364
	-3.3	-1.6	0.7	3.4	6.5	9.8	12.9	15.6	17.7	18.9	19.3	19.0	18.3	17.5	16.7	16.1	15.6	15.2	14.6
45	51320	51754	51961	51894	51521	50828	49826	48550	47063	45442	43777	42161	40675	39392	38362	37619	37175	37028	37163
	2.9	5.4	8.4	11.7	15.3	19.0	22.4	25.2	26.9	27.5	26.9	25.4	23.4	21.1	18.9	16.9	15.2	13.6	11.8
40	46706	47043	47184	47079	46688	45985	44974	43686	42185	40555	38894	37301	35866	34662	33740	33126	32822	32813	33069
	12.9	15.6	18.3	21.1	24.0	27.0	29.7	31.6	32.4	32.0	30.2	27.6	24.4	21.1	18.0	15.1	12.5	9.9	7.1
35	41101	41327	41408	41291	40923	40269	39320	38104	36682	35142	33587	32120	30835	29805	29077	28668	28570	28750	29164
	27.8	29.8	31.0	31.9	32.7	33.6	34.4	34.6	33.8	31.9	29.0	25.5	21.8	18.4	15.2	12.4	9.5	6.3	2.5
30	34551	34674	34714	34616	34316	33767	32948	31880	30623	29265	27912	26668	25625	24852	24390	24249	24409	24820	25420
	46.7	47.1	45.7	43.3	40.8	38.4	36.2	33.9	31.1	27.7	23.9	20.1	16.8	14.2	12.1	10.2	7.8	4.4	-0.2
25	27150	27196	27228	27185	26997	26601	25968	25111	24087	22988	21915	20971	20239	19782	19635	19800	20246	20909	21709
	67.5	65.5	60.5	53.8	46.9	40.5	34.8	29.8	24.9	20.2	15.9	12.5	10.4	9.6	9.6	9.5	8.2	4.9	-0.4
20	19058	19063	19122	19172	19131	18927	18518	17914	17172	16379	15637	15037	14655	14542	14726	15201	15930	16840	17834
	87.1	81.9	72.6	61.1	49.4	38.9	30.0	22.6	16.2	10.8	6.6	4.2	3.9	5.6	8.2	10.3	10.4	7.4	1.3
15	10499	10496	10611	10780	10911	10919	10755	10424	9980	9512	9113	8866	8834	9057	9551	10310	11291	12416	13580
	102.1	93.1	79.1	62.7	46.8	32.9	21.8	13.0	6.1	0.9	-2.5	-3.4	-1.5	2.7	7.9	12.1	13.4	10.7	3.9
10	1742	1746	1929	2222	2528	2750	2830	2766	2611	2450	2373	2451	2734	3250	4008	4998	6179	7472	8769
	109.7	96.5	77.9	57.3	38.1	22.2	10.3	1.8	-4.1	-8.0	-9.8	-9.0	-5.1	1.1	8.2	14.0	16.2	13.4	5.9
5	-6921	-6923	-6692	-6296	-5839	-5427	-5128	-4953	-4854	-4750	-4557	-4211	-3674	-2927	-1968	-810	511	1918	3310
	108.4	91.0	68.3	44.5	23.5	7.4	-3.4	-9.9	-13.4	-14.9	-14.6	-11.9	-6.7	0.8	8.8	15.2	17.6	14.7	6.6
0	-15205	-15262	-15035	-14589	-14033	-13480	-13011	-12645	-12346	-12037	-11640	-11097	-10377	-9469	-8376	-7109	-5705	-4229	-2777
	98.4	77.1	51.3	25.9	4.7	-9.8	-17.9	-20.8	-20.7	-19.1	-16.4	-12.2	-6.2	1.4	9.3	15.4	17.4	14.1	5.9

IGRF 1985 Vertical Component (Z)

Latitude \ Longitude:	180	-175	-170	-165	-160	-155	-150	-145	-140	-135	-130	-125	-120	-115	-110	-105	-100	-95	-90
90	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557
	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4
85	57312	57281	57251	57222	57193	57165	57137	57108	57077	57044	57008	56968	56922	56872	56816	56754	56686	56613	56533
	-53.4	-53.2	-53.1	-52.9	-52.7	-52.5	-52.3	-52.2	-52.0	-51.8	-51.7	-51.5	-51.3	-51.2	-51.0	-50.8	-50.6	-50.3	-50.1
80	57431	57384	57358	57350	57360	57384	57418	57459	57501	57540	57570	57588	57589	57571	57529	57462	57370	57251	57107
	-47.6	-47.1	-46.6	-46.2	-45.9	-45.7	-45.6	-45.5	-45.6	-45.7	-45.8	-46.0	-46.1	-46.2	-46.3	-46.3	-46.3	-46.1	-45.9
75	56730	56696	56719	56796	56922	57086	57281	57494	57714	57929	58128	58300	58435	58524	58562	58543	58465	58328	58132
	-35.9	-35.0	-34.3	-33.9	-33.7	-33.8	-34.1	-34.7	-35.5	-36.4	-37.4	-38.4	-39.4	-40.3	-41.1	-41.7	-42.1	-42.3	-42.3
70	55112	55123	55241	55458	55762	56139	56571	57037	57518	57991	58438	58839	59178	59439	59612	59689	59665	59537	59309
	-20.8	-19.8	-19.1	-18.9	-19.1	-19.9	-21.2	-22.9	-24.9	-27.1	-29.5	-31.8	-34.1	-36.1	-37.9	-39.4	-40.5	-41.3	-41.6
65	52600	52679	52918	53305	53821	54444	55149	55906	56686	57458	58195	58868	59454	59932	60286	60502	60572	60491	60262
	-5.8	-4.8	-4.4	-4.8	-5.8	-7.7	-10.2	-13.3	-16.8	-20.6	-24.5	-28.3	-31.9	-35.2	-38.1	-40.6	-42.6	-44.0	-44.9
60	49324	49482	49847	50401	51121	51980	52945	53979	55047	56110	57133	58083	58929	59646	60209	60600	60805	60816	60628
	6.1	6.7	6.5	5.4	3.3	0.3	-3.6	-8.2	-13.2	-18.4	-23.6	-28.5	-33.2	-37.4	-41.3	-44.7	-47.7	-50.2	-52.0
55	45496	45734	46209	46903	47788	48833	50002	51256	52554	53856	55123	56316	57402	58350	59132	59721	60097	60240	60140
	13.0	12.8	11.8	9.8	6.7	2.6	-2.5	-8.2	-14.3	-20.4	-26.2	-31.7	-36.6	-41.2	-45.6	-49.8	-53.8	-57.7	-61.2
50	41364	41679	42244	43035	44026	45184	46477	47866	49310	50769	52204	53578	54855	56002	56986	57775	58336	58640	58664
	14.6	13.4	11.5	8.6	4.5	-0.5	-6.5	-12.9	-19.4	-25.6	-31.2	-36.1	-40.4	-44.5	-48.7	-53.3	-58.5	-64.2	-70.1
45	37163	37560	38193	39039	40073	41269	42597	44027	45521	47045	48561	50035	51433	52723	53869	54830	55567	56037	56203
	11.8	9.7	6.7	2.9	-1.8	-7.5	-13.9	-20.5	-26.7	-32.3	-36.8	-40.2	-42.9	-45.6	-48.8	-53.4	-59.7	-67.5	-76.2
40	33069	33559	34249	35116	36139	37301	38586	39970	41427	42925	44434	45923	47363	48724	49970	51057	51936	52553	52857
	7.1	3.8	-0.2	-4.9	-10.3	-16.4	-22.8	-29.1	-34.7	-39.1	-41.9	-43.2	-43.6	-43.9	-45.5	-49.5	-56.4	-66.2	-78.1
35	29164	29763	30507	31370	32341	33416	34593	35863	37209	38607	40031	41456	42860	44216	45492	46644	47617	48347	48773
	2.5	-1.9	-7.0	-12.7	-18.7	-25.1	-31.4	-37.2	-42.0	-45.1	-46.2	-45.1	-42.7	-40.4	-39.7	-42.2	-49.1	-60.4	-75.0
30	25420	26144	26941	27786	28676	29627	30653	31761	32945	34187	35465	36761	38059	39343	40585	41744	42763	43574	44104
	-0.2	-5.9	-12.3	-19.0	-25.7	-32.2	-38.4	-43.8	-47.9	-50.0	-49.6	-46.5	-41.5	-36.2	-32.7	-33.3	-39.3	-51.0	-67.4
25	21709	22565	23415	24234	25031	25838	26691	27613	28606	29657	30749	31869	33011	34170	35330	36455	37489	38358	38985
	-0.4	-7.4	-15.3	-23.2	-30.6	-37.3	-43.2	-48.2	-51.9	-53.4	-52.1	-47.6	-40.5	-32.5	-26.1	-24.0	-28.2	-39.2	-56.1
20	17834	18817	19719	20513	21217	21883	22565	23299	24096	24947	25836	26757	27717	28723	29775	30845	31881	32806	33533
	1.3	-7.1	-16.5	-25.6	-33.6	-40.2	-45.7	-50.2	-53.6	-55.0	-53.4	-48.1	-39.6	-29.3	-20.1	-15.1	-16.7	-26.1	-42.4
15	13580	14677	15627	16404	17035	17584	18121	18695	19319	19986	20683	21410	22185	23037	23977	24993	26033	27020	27859
	3.9	-5.8	-16.6	-26.7	-34.9	-41.2	-45.9	-49.7	-52.6	-53.9	-52.4	-47.0	-37.6	-25.7	-14.1	-6.1	-5.0	-12.1	-26.9
10	8769	9959	10958	11738	12331	12810	13255	13720	14222	14750	15294	15860	16479	17195	18039	19010	20064	21121	22076
	5.9	-4.9	-16.7	-27.2	-35.2	-40.5	-44.0	-46.6	-48.7	-49.7	-48.3	-42.8	-33.0	-20.0	-6.5	3.9	7.6	2.8	-10.4
5	3310	4573	5625	6436	7040	7513	7938	8368	8819	9279	9736	10199	10711	11330	12104	13044	14115	15237	16302
	6.6	-4.8	-16.9	-27.2	-34.4	-38.3	-40.1	-41.1	-42.0	-42.2	-40.3	-34.8	-24.7	-10.9	3.8	15.8	21.4	18.3	6.3
0	-2777	-1454	-340	536	1206	1743	2225	2703	3187	3662	4111	4548	5018	5591	6324	7245	8327	9498	10649
	5.9	-5.4	-17.0	-26.5	-32.4	-34.7	-34.6	-33.8	-33.0	-31.9	-29.2	-23.1	-12.7	1.5	16.8	29.6	36.2	34.0	22.5

IGRF 1985 Vertical Component (Z)

Latitude \ Longitude:	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
90	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557	56557
	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4	-52.4
85	56533	56449	56361	56269	56176	56081	55987	55895	55807	55723	55645	55576	55515	55464	55425	55398	55383	55382	55395
	-50.1	-49.8	-49.5	-49.2	-48.9	-48.6	-48.2	-47.9	-47.5	-47.2	-46.9	-46.5	-46.2	-45.9	-45.7	-45.5	-45.3	-45.1	-45.0
80	57107	56939	56750	56542	56319	56086	55846	55604	55366	55135	54916	54713	54531	54373	54242	54140	54071	54035	54034
	-45.9	-45.6	-45.1	-44.6	-44.0	-43.3	-42.5	-41.7	-40.8	-39.9	-39.1	-38.2	-37.3	-36.5	-35.7	-35.1	-34.4	-33.9	-33.5
75	58132	57882	57581	57238	56859	56453	56030	55599	55169	54750	54351	53979	53640	53343	53090	52887	52737	52643	52607
	-42.3	-42.0	-41.5	-40.7	-39.7	-38.6	-37.2	-35.8	-34.3	-32.7	-31.1	-29.5	-27.9	-26.4	-24.9	-23.6	-22.4	-21.3	-20.4
70	59309	58986	58575	58089	57539	56942	56314	55670	55028	54401	53804	53248	52744	52299	51921	51613	51380	51224	51146
	-41.6	-41.4	-40.8	-39.8	-38.5	-36.8	-34.8	-32.6	-30.2	-27.8	-25.3	-22.8	-20.3	-17.9	-15.7	-13.6	-11.6	-9.9	-8.4
65	60262	59890	59386	58765	58047	57255	56413	55548	54684	53845	53050	52316	51655	51078	50590	50197	49899	49698	49594
	-44.9	-45.1	-44.8	-43.7	-42.1	-39.9	-37.2	-34.1	-30.8	-27.3	-23.8	-20.2	-16.7	-13.2	-9.9	-6.8	-3.9	-1.3	1.0
60	60628	60246	59680	58949	58079	57100	56050	54966	53885	52839	51859	50964	50171	49490	48925	48478	48149	47935	47834
	-52.0	-53.2	-53.5	-52.8	-51.3	-48.8	-45.6	-41.8	-37.5	-32.9	-28.2	-23.3	-18.5	-13.7	-9.0	-4.5	-0.3	3.6	6.9
55	60140	59793	59207	58401	57405	56260	55015	53724	52437	51203	50057	49029	48136	47385	46779	46316	45991	45799	45733
	-61.2	-64.0	-65.8	-66.4	-65.6	-63.4	-60.0	-55.6	-50.5	-44.9	-38.9	-32.7	-26.3	-19.8	-13.3	-6.9	-0.8	4.7	9.5
50	58664	58394	57830	56987	55900	54617	53202	51725	50254	48853	47569	46436	45473	44684	44068	43617	43323	43177	43169
	-70.1	-75.5	-79.8	-82.5	-83.2	-82.0	-78.9	-74.4	-68.8	-62.4	-55.5	-48.0	-40.0	-31.6	-22.8	-13.9	-5.4	2.5	9.4
45	56203	56037	55530	54689	53549	52165	50614	48981	47354	45810	44410	43193	42178	41366	40752	40323	40067	39974	40029
	-76.2	-85.0	-92.7	-98.4	-101.5	-101.9	-99.8	-95.8	-90.3	-83.8	-76.3	-68.0	-58.5	-48.0	-36.7	-24.9	-13.3	-2.5	6.9
40	52857	52808	52381	51577	50427	48987	47342	45591	43835	42169	40662	39361	38285	37438	36809	36386	36154	36101	36208
	-78.1	-90.6	-102.2	-111.4	-117.5	-120.1	-119.6	-116.8	-112.3	-106.6	-99.5	-90.9	-80.5	-68.1	-54.1	-39.1	-24.1	-10.1	2.1
35	48773	48841	48514	47782	46665	45219	43527	41695	39836	38052	36427	35013	33837	32906	32215	31755	31513	31471	31609
	-75.0	-91.0	-106.5	-119.3	-128.5	-133.7	-135.5	-134.8	-132.3	-128.5	-122.9	-115.0	-104.2	-90.3	-73.8	-55.7	-37.4	-20.2	-5.3
30	44104	44289	44079	43451	42414	41010	39316	37437	35487	33577	31799	30216	28869	27779	26954	26395	26093	26029	26169
	-67.4	-86.2	-104.7	-120.8	-133.0	-141.0	-145.6	-147.8	-148.4	-147.6	-144.6	-138.4	-128.0	-113.1	-94.5	-73.6	-52.3	-32.6	-15.5
25	38985	39292	39219	38728	37809	36489	34831	32928	30891	28834	26856	25038	23440	22106	21066	20340	19926	19798	19908
	-56.1	-76.5	-97.3	-115.8	-130.7	-141.6	-149.3	-155.1	-159.7	-162.9	-163.4	-159.6	-150.2	-134.9	-114.6	-91.6	-68.2	-46.8	-28.5
20	33533	33976	34060	33731	32960	31754	30155	28242	26117	23893	21679	19573	17660	16015	14698	13748	13171	12937	12977
	-42.4	-63.1	-85.0	-105.4	-122.6	-136.3	-147.5	-157.4	-166.5	-174.1	-178.6	-177.6	-169.5	-154.1	-132.8	-108.3	-83.8	-61.8	-43.4
15	27859	28451	28707	28555	27947	26868	25341	23427	21220	18830	16374	13968	11724	9746	8126	6922	6146	5760	5680
	-26.9	-47.1	-69.6	-91.3	-110.6	-127.1	-141.9	-156.0	-169.6	-181.7	-189.8	-191.4	-184.6	-169.3	-147.4	-122.3	-97.6	-76.0	-58.4
10	22076	22822	23252	23279	22834	21884	20435	18535	16268	13743	11085	8424	5894	3625	1727	275	-717	-1295	-1555
	-10.4	-30.0	-52.7	-75.6	-96.9	-116.3	-134.6	-152.6	-170.3	-186.0	-197.0	-200.5	-194.5	-179.3	-157.1	-132.0	-107.8	-87.4	-71.4
5	16302	17190	17783	17975	17684	16862	15500	13639	11357	8764	5989	3174	464	-2001	-4101	-5760	-6962	-7760	-8251
	6.3	-12.7	-35.8	-60.1	-83.6	-105.8	-127.2	-148.5	-169.0	-187.1	-199.9	-204.2	-198.5	-183.1	-161.0	-136.3	-113.2	-94.3	-79.9
0	10649	11655	12387	12727	12580	11885	10628	8844	6611	4041	1267	-1569	-4321	-6850	-9046	-10838	-12218	-13238	-13986
	22.5	3.4	-20.5	-46.2	-71.8	-96.5	-120.5	-143.8	-166.0	-185.0	-197.9	-202.0	-195.9	-180.4	-158.5	-134.5	-112.6	-95.2	-82.0

IGRF 1985 Vertical Component (Z)

Latitude \ Longitude:	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	-13986	-14547	-14966	-15232	-15290	-15081	-14590	-13876	-13068	-12329	-11810	-11605	-11741	-12175	-12820	-13562	-14281	-14860	-15205
	-82.0	-70.7	-58.0	-41.0	-19.0	6.2	31.0	51.6	65.4	72.3	74.6	76.0	80.0	88.1	99.0	109.3	114.7	111.5	98.4
-5	-18484	-19297	-19952	-20407	-20599	-20475	-20043	-19390	-18672	-18066	-17726	-17740	-18116	-18797	-19684	-20656	-21587	-22357	-22866
	-76.7	-65.5	-52.4	-34.9	-12.6	12.6	37.1	57.0	70.1	76.1	77.6	78.2	81.0	87.4	96.0	103.3	105.0	97.9	81.2
-10	-21660	-22654	-23467	-24041	-24311	-24242	-23872	-23317	-22750	-22357	-22281	-22593	-23283	-24278	-25470	-26733	-27940	-28970	-29717
	-64.2	-52.2	-38.4	-20.7	0.9	24.5	46.7	64.0	74.4	78.2	77.7	76.4	77.3	81.2	86.8	90.7	88.9	78.6	59.6
-15	-23614	-24673	-25532	-26128	-26405	-26360	-26059	-25642	-25292	-25187	-25450	-26130	-27197	-28563	-30112	-31717	-33253	-34599	-35649
	-45.7	-32.4	-17.8	-0.4	19.5	40.0	58.0	70.8	76.9	77.0	73.6	69.7	68.1	69.2	71.8	72.6	68.1	56.1	36.7
-20	-24573	-25570	-26358	-26881	-27109	-27068	-26852	-26617	-26539	-26778	-27432	-28522	-29997	-31761	-33691	-35662	-37552	-39244	-40634
	-23.5	-8.7	6.6	23.2	40.3	56.3	68.7	75.6	76.3	71.9	64.8	57.9	53.5	52.0	52.1	50.8	45.3	33.7	16.2
-25	-24823	-25657	-26289	-26681	-26834	-26803	-26702	-26686	-26917	-27527	-28583	-30082	-31958	-34104	-36400	-38722	-40955	-42987	-44718
	0.2	16.1	31.6	46.6	60.3	71.0	77.2	77.6	72.5	63.2	52.3	42.4	35.5	31.9	30.4	28.4	23.6	14.4	1.0
-30	-24655	-25279	-25723	-25979	-26076	-26088	-26138	-26370	-26921	-27892	-29321	-31184	-33406	-35878	-38483	-41105	-43633	-45964	-48003
	23.0	39.4	54.4	67.3	77.1	82.6	82.6	77.0	66.5	53.0	38.8	26.5	17.7	12.8	10.7	9.3	6.7	1.4	-6.7
-35	-24338	-24763	-25049	-25213	-25306	-25413	-25650	-26142	-26997	-28283	-30018	-32164	-34642	-37350	-40178	-43017	-45767	-48330	-50620
	43.3	59.4	73.3	83.7	89.8	90.7	85.8	75.5	61.0	44.4	28.2	14.4	4.7	-0.7	-2.6	-2.6	-2.4	-3.3	-5.8
-40	-24119	-24402	-24599	-24744	-24900	-25151	-25597	-26338	-27453	-28985	-30935	-33260	-35887	-38723	-41669	-44629	-47509	-50222	-52687
	60.2	75.2	87.4	95.5	98.7	96.2	88.1	75.1	58.8	41.0	24.2	10.3	0.5	-4.6	-5.8	-4.3	-1.5	1.3	3.4
-45	-24232	-24448	-24633	-24831	-25104	-25526	-26178	-27132	-28443	-30136	-32200	-34597	-37261	-40115	-43073	-46051	-48966	-51738	-54293
	73.5	86.9	97.2	103.4	104.6	100.5	91.3	77.9	61.9	45.0	29.3	16.4	7.5	3.0	2.5	5.1	9.4	14.4	19.1
-50	-24896	-25107	-25337	-25632	-26043	-26632	-27456	-28566	-29996	-31758	-33839	-36206	-38805	-41574	-44443	-47339	-50191	-52928	-55483
	83.5	95.0	103.6	108.5	108.9	104.8	96.4	84.6	70.8	56.4	43.2	32.4	25.0	21.3	21.1	23.7	28.2	33.5	38.6
-55	-26296	-26534	-26832	-27227	-27761	-28477	-29416	-30608	-32073	-33816	-35825	-38072	-40516	-43110	-45796	-48516	-51210	-53816	-56277
	91.1	100.5	107.6	111.7	112.3	109.3	103.0	94.2	83.8	73.0	63.1	54.9	49.1	46.2	45.8	47.6	50.9	54.9	58.7
-60	-28548	-28815	-29168	-29635	-30246	-31028	-32007	-33201	-34619	-36262	-38119	-40169	-42382	-44720	-47141	-49598	-52043	-54425	-56697
	96.7	104.2	110.0	113.6	114.8	113.5	109.8	104.4	97.8	90.8	84.1	78.5	74.4	71.9	71.1	71.6	73.0	74.7	76.1
-65	-31673	-31949	-32325	-32817	-33445	-34224	-35168	-36286	-37583	-39054	-40692	-42479	-44394	-46410	-48494	-50612	-52726	-54799	-56794
	101.0	106.6	111.2	114.5	116.2	116.3	115.0	112.4	109.1	105.2	101.4	97.9	95.1	93.0	91.6	90.8	90.3	89.8	89.0
-70	-35586	-35847	-36207	-36675	-37260	-37971	-38813	-39789	-40899	-42139	-43501	-44973	-46538	-48178	-49870	-51589	-53310	-55006	-56650
	104.1	108.0	111.3	114.0	115.8	116.8	116.9	116.2	115.0	113.3	111.4	109.5	107.5	105.7	104.0	102.3	100.6	98.7	96.6
-75	-40106	-40330	-40640	-41040	-41533	-42121	-42806	-43586	-44460	-45422	-46467	-47585	-48766	-49996	-51261	-52546	-53834	-55108	-56351
	105.9	108.2	110.3	112.1	113.6	114.6	115.1	115.3	115.0	114.4	113.6	112.5	111.2	109.7	108.0	106.2	104.3	102.1	99.7
-80	-44979	-45148	-45380	-45676	-46035	-46458	-46942	-47486	-48087	-48741	-49443	-50188	-50968	-51776	-52605	-53445	-54287	-55123	-55943
	106.2	107.2	108.2	109.0	109.8	110.3	110.6	110.8	110.7	110.5	110.0	109.3	108.5	107.5	106.3	105.0	103.5	101.9	100.2
-85	-49901	-49997	-50126	-50287	-50479	-50702	-50955	-51235	-51540	-51869	-52218	-52585	-52968	-53362	-53764	-54171	-54580	-54986	-55386
	104.7	104.9	105.1	105.2	105.3	105.4	105.4	105.3	105.2	104.9	104.7	104.3	103.9	103.4	102.9	102.3	101.7	101.0	100.3
-90	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542
	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5

IGRF 1985 Vertical Component (Z)

Latitude \ Longitude:	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
0	-15205	-15262	-15035	-14589	-14033	-13480	-13011	-12645	-12346	-12037	-11640	-11097	-10377	-9469	-8376	-7109	-5705	-4229	-2777
	98.4	77.1	51.3	25.9	4.7	-9.8	-17.9	-20.8	-20.7	-19.1	-16.4	-12.2	-6.2	1.4	9.3	15.4	17.4	14.1	5.9
-5	-22866	-23050	-22905	-22490	-21913	-21291	-20716	-20223	-19785	-19336	-18805	-18136	-17303	-16297	-15125	-13800	-12353	-10842	-9352
	81.2	57.1	29.7	4.2	-15.4	-27.0	-31.1	-29.7	-25.5	-20.4	-15.4	-10.1	-4.1	2.8	9.5	14.5	15.8	12.4	4.7
-10	-29717	-30111	-30138	-29848	-29339	-28735	-28132	-27579	-27065	-26536	-25930	-25195	-24304	-23251	-22042	-20691	-19227	-17700	-16183
	59.6	34.3	7.2	-16.6	-33.3	-41.1	-40.8	-35.2	-27.1	-19.1	-12.3	-6.6	-1.2	4.3	9.4	13.1	13.8	10.7	4.0
-15	-35649	-36327	-36608	-36530	-36181	-35679	-35125	-34577	-34042	-33483	-32846	-32085	-31174	-30107	-28887	-27531	-26064	-24531	-22992
	36.7	12.5	-12.3	-32.8	-45.5	-49.4	-45.3	-36.3	-25.5	-15.6	-8.0	-2.4	1.9	5.7	9.2	11.7	12.2	10.0	5.1
-20	-40634	-41642	-42235	-42437	-42322	-41995	-41555	-41069	-40557	-40000	-39359	-38596	-37687	-36623	-35408	-34058	-32596	-31061	-29505
	16.2	-4.7	-25.2	-41.2	-49.8	-50.1	-43.4	-32.5	-20.8	-10.6	-3.2	1.4	4.4	6.7	8.9	10.8	11.8	11.2	8.8
-25	-44718	-46068	-46998	-47517	-47683	-47582	-47305	-46921	-46463	-45930	-45299	-44544	-43643	-42591	-41390	-40054	-38604	-37076	-35513
	1.0	-14.7	-29.6	-40.4	-45.0	-42.7	-35.0	-24.3	-13.5	-4.6	1.3	4.4	6.0	7.1	8.7	10.8	13.0	14.6	15.0
-30	-48003	-49674	-50932	-51773	-52234	-52384	-52298	-52045	-51663	-51169	-50556	-49811	-48922	-47886	-46704	-45390	-43965	-42457	-40907
	-6.7	-16.2	-24.9	-30.7	-32.0	-28.5	-21.4	-12.7	-4.5	1.7	5.2	6.5	6.7	7.2	8.8	11.8	15.7	19.8	23.2
-35	-50620	-52562	-54110	-55248	-55994	-56396	-56515	-56408	-56121	-55679	-55094	-54367	-53494	-52479	-51325	-50046	-48659	-47194	-45682
	-5.8	-9.2	-12.4	-14.0	-13.1	-9.7	-4.6	0.9	5.3	8.0	8.6	7.9	7.1	7.3	9.4	13.6	19.5	26.1	32.3
-40	-52687	-54835	-56616	-58004	-59004	-59643	-59965	-60016	-59842	-59475	-58937	-58242	-57400	-56419	-55308	-54080	-52755	-51356	-49913
	3.4	4.7	5.6	6.7	8.4	10.6	12.9	14.6	15.0	14.0	11.8	9.3	7.7	7.9	10.8	16.3	23.9	32.6	41.2
-45	-54293	-56568	-58511	-60091	-61299	-62147	-62661	-62879	-62837	-62572	-62113	-61482	-60699	-59777	-58733	-57582	-56344	-55040	-53697
	19.1	23.1	26.1	28.2	29.4	29.7	29.0	27.1	23.9	19.8	15.4	11.6	9.5	10.0	13.5	19.9	28.7	38.9	49.0
-50	-55483	-57798	-59824	-61526	-62885	-63903	-64592	-64976	-65087	-64956	-64614	-64089	-63405	-62582	-61641	-60601	-59480	-58300	-57082
	38.6	43.0	46.0	47.6	47.5	45.7	42.3	37.6	31.9	25.8	20.1	15.7	13.5	14.2	18.0	24.9	34.1	44.7	55.5
-55	-56277	-58541	-60562	-62306	-63750	-64887	-65718	-66260	-66532	-66561	-66374	-65998	-65460	-64782	-63986	-63094	-62123	-61095	-60025
	58.7	61.6	63.2	63.2	61.4	57.8	52.6	46.3	39.4	32.6	26.6	22.3	20.3	21.1	24.9	31.5	40.3	50.5	61.1
-60	-56697	-58815	-60740	-62439	-63891	-65082	-66009	-66678	-67102	-67297	-67286	-67092	-66736	-66242	-65630	-64920	-64130	-63277	-62373
	76.1	76.9	76.4	74.5	71.2	66.5	60.6	53.9	47.1	40.7	35.3	31.6	30.0	30.9	34.3	40.1	47.8	56.7	66.2
-65	-56794	-58676	-60413	-61978	-63353	-64522	-65479	-66224	-66761	-67102	-67260	-67250	-67090	-66798	-66390	-65883	-65291	-64627	-63902
	89.0	87.6	85.4	82.2	78.0	73.0	67.4	61.4	55.6	50.4	46.2	43.4	42.3	43.2	46.0	50.6	56.6	63.8	71.5
-70	-56650	-58217	-59684	-61032	-62244	-63307	-64215	-64962	-65550	-65982	-66265	-66408	-66421	-66315	-66102	-65793	-65397	-64924	-64381
	96.6	94.0	90.9	87.3	83.2	78.8	74.2	69.6	65.4	61.7	58.8	57.0	56.4	57.1	59.1	62.4	66.7	71.8	77.4
-75	-56351	-57547	-58682	-59741	-60714	-61590	-62363	-63028	-63583	-64027	-64361	-64590	-64718	-64748	-64688	-64543	-64318	-64020	-63652
	99.7	97.1	94.2	91.2	88.0	84.8	81.6	78.6	76.0	73.7	72.1	71.1	70.8	71.3	72.6	74.6	77.2	80.3	83.8
-80	-55943	-56739	-57501	-58223	-58898	-59518	-60080	-60580	-61013	-61379	-61677	-61905	-62065	-62158	-62185	-62148	-62050	-61893	-61679
	100.2	98.4	96.6	94.7	92.9	91.0	89.3	87.8	86.5	85.4	84.6	84.2	84.1	84.3	85.0	85.9	87.2	88.7	90.4
-85	-55386	-55776	-56153	-56514	-56855	-57175	-57469	-57737	-57976	-58184	-58360	-58504	-58614	-58691	-58733	-58741	-58716	-58658	-58568
	100.3	99.6	98.9	98.2	97.6	96.9	96.4	95.9	95.5	95.1	94.9	94.7	94.7	94.8	94.9	95.2	95.6	96.0	96.5
-90	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542
	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5

IGRF 1985 Vertical Component (Z)

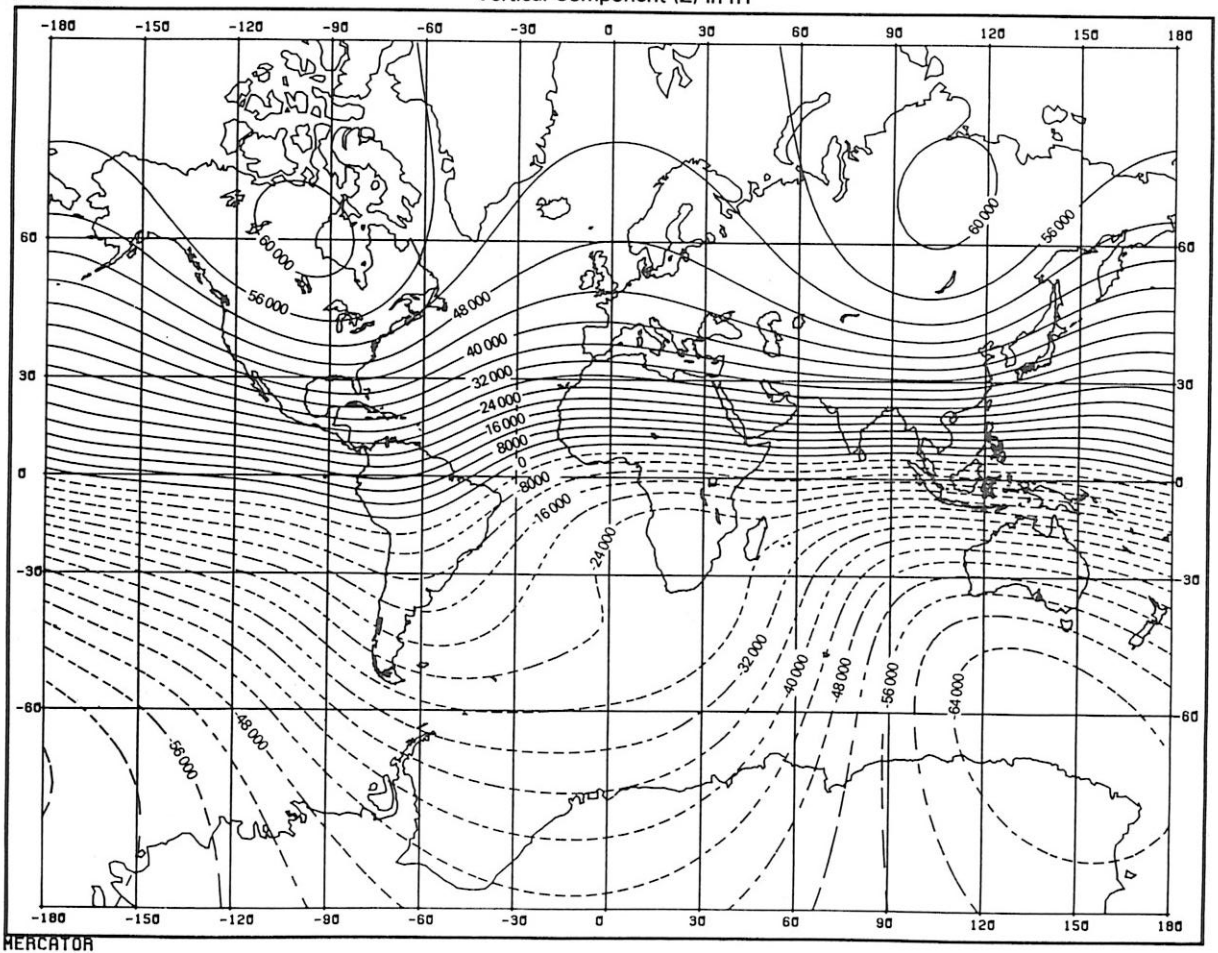
Latitude \ Longitude:	180	-175	-170	-165	-160	-155	-150	-145	-140	-135	-130	-125	-120	-115	-110	-105	-100	-95	-90
0	-2777	-1454	-340	536	1206	1743	2225	2703	3187	3662	4111	4548	5018	5591	6324	7245	8327	9498	10649
	5.9	-5.4	-17.0	-26.5	-32.4	-34.7	-34.6	-33.8	-33.0	-31.9	-29.2	-23.1	-12.7	1.5	16.8	29.6	36.2	34.0	22.5
-5	-9352	-7976	-6789	-5816	-5030	-4367	-3758	-3159	-2565	-1997	-1475	-988	-490	88	815	1727	2813	4011	5219
	4.7	-5.8	-16.3	-24.4	-28.8	-29.6	-27.9	-25.4	-23.0	-20.6	-16.7	-9.7	1.2	15.6	31.0	43.8	50.5	48.4	36.9
-10	-16183	-14757	-13485	-12393	-11458	-10629	-9846	-9078	-8323	-7606	-6950	-6349	-5764	-5128	-4373	-3452	-2364	-1153	92
	4.0	-4.8	-13.5	-20.0	-23.1	-22.9	-20.5	-17.1	-13.8	-10.2	-5.2	2.6	14.1	28.5	43.6	56.0	62.2	59.8	48.1
-15	-22992	-21516	-20156	-18938	-17845	-16838	-15871	-14921	-13989	-13101	-12281	-11528	-10812	-10076	-9254	-8295	-7186	-5954	-4672
	5.1	-1.4	-7.9	-12.8	-15.1	-14.8	-12.7	-9.7	-6.4	-2.6	3.0	11.3	22.9	37.0	51.6	63.3	69.0	66.4	54.9
-20	-29505	-27985	-26547	-25214	-23979	-22814	-21687	-20578	-19490	-18445	-17463	-16549	-15679	-14807	-13876	-12837	-11666	-10380	-9036
	8.8	5.0	0.8	-2.6	-4.7	-5.2	-4.6	-3.3	-1.4	1.5	6.6	14.6	25.8	39.3	53.1	64.2	69.7	67.6	57.2
-25	-35513	-33964	-32470	-31054	-29715	-28436	-27195	-25976	-24778	-23614	-22498	-21433	-20403	-19370	-18289	-17116	-15830	-14438	-12991
	15.0	14.2	12.4	10.1	7.8	5.8	4.0	2.6	2.0	3.0	6.5	13.2	23.3	35.7	48.5	59.0	64.8	63.8	55.6
-30	-40907	-39355	-37839	-36382	-34989	-33653	-32355	-31081	-29825	-28587	-27373	-26179	-24991	-23782	-22517	-21164	-19708	-18161	-16568
	23.2	25.3	25.8	24.6	22.0	18.3	14.0	9.5	5.9	4.1	5.2	9.9	18.0	28.7	40.2	50.2	56.5	57.3	52.1
-35	-45682	-44161	-42664	-41213	-39819	-38477	-37173	-35892	-34619	-33344	-32060	-30757	-29420	-28030	-26564	-25004	-23348	-21616	-19856
	32.3	37.1	39.7	39.7	37.1	32.3	25.9	18.9	12.6	8.1	6.5	8.6	14.3	22.8	32.7	41.9	48.5	51.2	49.1
-40	-49913	-48458	-47020	-45619	-44265	-42956	-41681	-40419	-39150	-37856	-36519	-35122	-33651	-32092	-30433	-28673	-26823	-24914	-23000
	41.2	48.2	52.7	54.1	52.2	47.3	40.1	31.8	23.8	17.3	13.5	13.1	16.3	22.4	30.2	38.1	44.7	48.6	49.0
-45	-53697	-52340	-50992	-49672	-48387	-47133	-45899	-44664	-43404	-42094	-40711	-39236	-37654	-35958	-34147	-32231	-30235	-28199	-26181
	49.0	57.7	64.0	67.0	66.4	62.5	56.1	48.1	39.8	32.6	27.6	25.5	26.4	30.0	35.6	41.8	47.6	51.7	53.5
-50	-57082	-55848	-54614	-53393	-52189	-50999	-49808	-48597	-47341	-46015	-44596	-43067	-41415	-39637	-37743	-35750	-33691	-31612	-29568
	55.5	65.2	72.8	77.4	78.8	76.9	72.4	66.2	59.3	52.9	47.8	44.8	44.2	45.8	49.0	53.2	57.4	60.7	62.5
-55	-60025	-58931	-57824	-56712	-55596	-54471	-53323	-52136	-50888	-49559	-48129	-46584	-44919	-43135	-41246	-39275	-37256	-35232	-33254
	61.1	70.9	79.2	85.1	88.4	89.0	87.2	83.7	79.2	74.6	70.6	67.7	66.4	66.5	67.8	69.8	72.0	73.8	74.7
-60	-62373	-61432	-60462	-59466	-58445	-57392	-56299	-55150	-53933	-52631	-51234	-49733	-48127	-46422	-44634	-42784	-40904	-39030	-37203
	66.2	75.3	83.5	90.1	94.8	97.5	98.4	97.6	95.9	93.6	91.2	89.3	87.9	87.2	87.2	87.5	87.9	88.0	87.5
-65	-63902	-63125	-62302	-61434	-60523	-59563	-58550	-57475	-56330	-55108	-53804	-52415	-50946	-49403	-47800	-46158	-44499	-42851	-41245
	71.5	79.2	86.5	92.9	98.2	102.1	104.7	106.1	106.6	106.4	105.7	104.9	104.0	103.2	102.5	101.8	100.9	99.8	98.3
-70	-64381	-63776	-63111	-62391	-61614	-60781	-59890	-58938	-57924	-56844	-55701	-54495	-53232	-51920	-50570	-49196	-47816	-46446	-45108
	77.4	83.2	88.9	94.3	99.0	103.0	106.3	108.8	110.5	111.6	112.1	112.3	112.0	111.5	110.8	109.8	108.5	107.0	105.1
-75	-63652	-63219	-62725	-62171	-61561	-60895	-60175	-59402	-58578	-57704	-56784	-55821	-54821	-53791	-52738	-51673	-50605	-49546	-48506
	83.8	87.6	91.4	95.1	98.6	101.8	104.6	106.9	108.9	110.3	111.4	112.0	112.3	112.2	111.9	111.2	110.2	109.0	107.6
-80	-61679	-61411	-61091	-60721	-60305	-59843	-59338	-58794	-58213	-57597	-56951	-56278	-55582	-54869	-54143	-53411	-52678	-51949	-51232
	90.4	92.3	94.3	96.2	98.2	100.0	101.8	103.3	104.7	105.8	106.7	107.4	107.9	108.1	108.2	108.0	107.7	107.2	106.6
-85	-58568	-58446	-58294	-58114	-57906	-57672	-57414	-57133	-56832	-56513	-56177	-55828	-55468	-55099	-54724	-54345	-53966	-53589	-53217
	96.5	97.1	97.7	98.3	99.0	99.6	100.3	100.9	101.4	101.9	102.4	102.8	103.1	103.4	103.6	103.7	103.8	103.9	103.9
-90	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542
	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5

IGRF 1985 Vertical Component (Z)

Latitude \ Longitude:	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
0	10649	11655	12387	12727	12580	11885	10628	8844	6611	4041	1267	-1569	-4321	-6850	-9046	-10838	-12218	-13238	-13986
	22.5	3.4	-20.5	-46.2	-71.8	-96.5	-120.5	-143.8	-166.0	-185.0	-197.9	-202.0	-195.9	-180.4	-158.5	-134.5	-112.6	-95.2	-82.0
-5	5219	6313	7159	7630	7621	7063	5939	4280	2168	-283	-2939	-5661	-8313	-10773	-12949	-14787	-16289	-17499	-18484
	36.9	17.4	-7.4	-34.6	-61.9	-88.5	-113.9	-138.3	-160.5	-178.9	-190.8	-193.8	-186.9	-171.2	-149.7	-126.7	-105.9	-89.3	-76.7
-10	92	1253	2196	2790	2923	2520	1560	75	-1852	-4104	-6547	-9051	-11493	-13777	-15833	-17631	-19177	-20507	-21660
	48.1	28.3	3.0	-25.0	-53.3	-80.7	-106.5	-130.5	-151.6	-168.2	-178.2	-179.6	-171.9	-156.2	-135.4	-113.4	-93.5	-77.2	-64.2
-15	-4672	-3447	-2408	-1688	-1402	-1629	-2397	-3671	-5368	-7370	-9547	-11773	-13946	-15989	-17858	-19541	-21048	-22402	-23614
	54.9	35.6	10.8	-16.8	-44.9	-71.8	-96.8	-119.2	-138.2	-152.4	-160.2	-160.0	-151.8	-136.5	-116.8	-95.9	-76.4	-59.8	-45.7
-20	-9036	-7729	-6581	-5723	-5271	-5309	-5864	-6906	-8353	-10089	-11985	-13923	-15813	-17597	-19246	-20759	-22148	-23421	-24573
	57.2	39.5	16.5	-9.2	-35.5	-60.6	-83.5	-103.6	-120.1	-131.8	-137.5	-136.3	-127.9	-113.6	-95.2	-75.3	-56.2	-39.0	-23.5
-25	-12991	-11571	-10295	-9287	-8662	-8503	-8841	-9648	-10846	-12320	-13948	-15617	-17244	-18778	-20201	-21514	-22724	-23833	-24823
	55.6	40.9	21.2	-1.2	-24.2	-46.3	-66.5	-83.9	-97.8	-107.3	-111.5	-109.7	-101.9	-88.9	-72.1	-53.4	-34.5	-16.6	0.2
-30	-16568	-15008	-13588	-12426	-11632	-11284	-11411	-11989	-12945	-14172	-15552	-16978	-18369	-19678	-20884	-21985	-22986	-23882	-24655
	52.1	41.2	25.9	8.0	-10.9	-29.4	-46.3	-60.9	-72.5	-80.4	-83.8	-82.1	-75.3	-63.8	-48.7	-31.3	-12.9	5.4	23.0
-35	-19856	-18145	-16583	-15278	-14329	-13805	-13734	-14093	-14815	-15802	-16945	-18143	-19317	-20417	-21418	-22314	-23102	-23781	-24338
	49.1	42.3	31.7	18.5	4.1	-10.5	-24.3	-36.4	-46.2	-53.0	-56.1	-54.9	-49.3	-39.5	-26.1	-10.0	7.6	25.7	43.3
-40	-23000	-21156	-19476	-18053	-16973	-16294	-16038	-16183	-16670	-17412	-18313	-19280	-20237	-21134	-21940	-22644	-23242	-23734	-24119
	49.0	45.8	39.4	30.4	20.0	8.8	-2.2	-12.2	-20.6	-26.7	-29.7	-29.2	-24.8	-16.6	-4.8	9.8	26.3	43.4	60.2
-45	-26181	-24254	-22499	-20997	-19817	-19005	-18576	-18509	-18754	-19239	-19881	-20599	-21327	-22015	-22632	-23162	-23603	-23956	-24232
	53.5	52.6	49.1	43.3	35.8	27.4	18.6	10.2	2.9	-2.6	-5.6	-5.6	-2.2	4.7	14.9	27.8	42.6	58.3	73.5
-50	-29568	-27627	-25857	-24324	-23080	-22159	-21570	-21296	-21295	-21512	-21880	-22334	-22819	-23290	-23721	-24095	-24409	-24672	-24896
	62.5	62.5	60.4	56.4	50.9	44.3	37.2	30.1	23.8	18.9	16.1	15.8	18.4	24.2	32.9	44.0	56.9	70.4	83.5
-55	-33254	-31378	-29658	-28145	-26877	-25877	-25152	-24686	-24451	-24405	-24500	-24689	-24928	-25185	-25435	-25669	-25884	-26087	-26296
	74.7	74.3	72.4	69.2	64.7	59.2	53.3	47.4	42.1	37.9	35.5	35.2	37.4	42.1	49.3	58.5	69.1	80.3	91.1
-60	-37203	-35467	-33861	-32421	-31174	-30136	-29311	-28690	-28255	-27979	-27830	-27777	-27792	-27852	-27941	-28051	-28183	-28344	-28548
	87.5	86.2	83.9	80.7	76.7	72.1	67.1	62.3	58.1	54.8	53.0	52.8	54.6	58.4	64.1	71.3	79.6	88.3	96.7
-65	-41245	-39709	-38272	-36956	-35781	-34758	-33890	-33175	-32602	-32157	-31823	-31583	-31420	-31323	-31281	-31292	-31356	-31480	-31673
	98.3	96.2	93.6	90.5	86.9	83.0	79.1	75.4	72.3	69.9	68.7	68.7	70.2	73.0	77.2	82.5	88.5	94.8	101.0
-70	-45108	-43819	-42596	-41455	-40409	-39464	-38626	-37896	-37269	-36742	-36308	-35959	-35689	-35492	-35366	-35310	-35324	-35414	-35586
	105.1	103.0	100.5	97.8	94.9	92.0	89.2	86.6	84.5	83.1	82.4	82.5	83.6	85.6	88.3	91.8	95.7	99.9	104.1
-75	-48506	-47497	-46529	-45611	-44751	-43955	-43228	-42572	-41988	-41478	-41040	-40673	-40378	-40152	-39997	-39912	-39901	-39964	-40106
	107.6	106.0	104.2	102.4	100.5	98.7	97.0	95.5	94.4	93.6	93.3	93.5	94.2	95.3	96.9	98.9	101.1	103.5	105.9
-80	-51232	-50531	-49853	-49203	-48586	-48006	-47466	-46971	-46522	-46122	-45774	-45477	-45234	-45047	-44916	-44842	-44827	-44873	-44979
	106.6	105.8	105.0	104.2	103.4	102.6	101.9	101.4	100.9	100.7	100.6	100.7	101.1	101.6	102.3	103.2	104.1	105.2	106.2
-85	-53217	-52852	-52498	-52157	-51831	-51522	-51234	-50967	-50724	-50507	-50316	-50155	-50023	-49921	-49852	-49814	-49810	-49839	-49901
	103.9	103.8	103.8	103.7	103.6	103.5	103.5	103.4	103.4	103.4	103.4	103.5	103.6	103.8	103.9	104.1	104.3	104.5	104.7
-90	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542	-54542
	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5	101.5

IGRF 1985

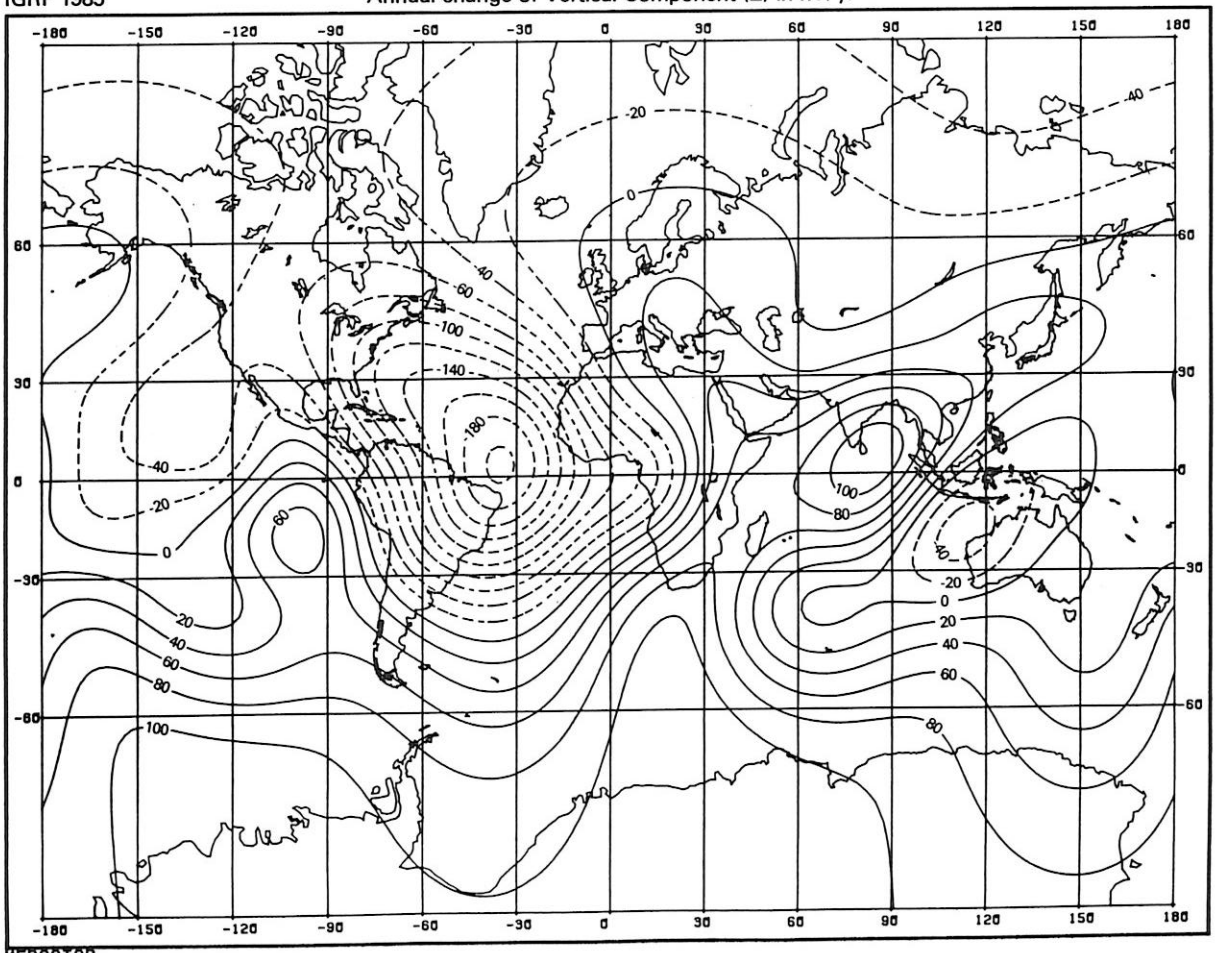
Vertical Component (Z) in nT



MERCATOR

IGRF 1985

Annual change of Vertical Component (Ż) in nT/yr



MERCATOR

IGRF 1985 Total Intensity (F)

Latitude \ Longitude:	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
90	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602
	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8
85	55598	55626	55666	55719	55782	55857	55941	56034	56134	56241	56351	56465	56580	56694	56806	56915	57018	57115	57204
	-46.4	-46.4	-46.4	-46.5	-46.6	-46.8	-47.0	-47.3	-47.6	-47.9	-48.3	-48.7	-49.1	-49.5	-50.0	-50.5	-50.9	-51.4	-51.8
80	54485	54524	54596	54699	54833	54996	55186	55400	55636	55890	56157	56433	56713	56991	57263	57524	57767	57989	58185
	-36.2	-36.0	-35.9	-35.9	-36.0	-36.3	-36.6	-37.0	-37.6	-38.3	-39.0	-39.9	-40.8	-41.8	-42.8	-43.9	-45.0	-46.1	-47.1
75	53378	53409	53493	53631	53821	54061	54350	54682	55055	55462	55897	56351	56817	57284	57742	58180	58587	58954	59272
	-24.3	-23.8	-23.5	-23.3	-23.3	-23.5	-23.9	-24.5	-25.3	-26.3	-27.4	-28.7	-30.1	-31.6	-33.2	-34.8	-36.4	-38.1	-39.7
70	52317	52330	52414	52569	52796	53091	53453	53878	54363	54900	55482	56099	56739	57388	58030	58648	59224	59740	60181
	-12.8	-12.0	-11.4	-11.0	-10.9	-11.1	-11.6	-12.4	-13.4	-14.6	-16.1	-17.7	-19.5	-21.5	-23.5	-25.5	-27.6	-29.5	-31.4
65	51275	51275	51359	51527	51778	52108	52517	53001	53559	54185	54872	55611	56387	57185	57982	58756	59482	60132	60683
	-3.3	-2.1	-1.2	-0.7	-0.6	-1.0	-1.6	-2.7	-4.0	-5.6	-7.5	-9.5	-11.6	-13.9	-16.1	-18.3	-20.4	-22.4	-24.2
60	50182	50190	50290	50479	50753	51110	51546	52062	52655	53324	54065	54871	55730	56623	57526	58413	59249	60000	60634
	3.6	5.3	6.4	6.9	6.8	6.2	5.2	3.6	1.8	-0.4	-2.7	-5.1	-7.6	-10.0	-12.3	-14.4	-16.3	-17.9	-19.2
55	48964	49006	49144	49370	49679	50063	50519	51047	51647	52321	53070	53890	54773	55701	56652	57593	58487	59294	59973
	8.0	10.2	11.6	12.1	11.8	10.8	9.1	6.9	4.3	1.4	-1.6	-4.5	-7.2	-9.7	-11.9	-13.7	-15.1	-16.0	-16.4
50	47563	47661	47855	48134	48487	48904	49380	49913	50504	51160	51883	52677	53535	54444	55383	56319	57214	58024	58704
	10.3	13.2	15.0	15.6	15.1	13.6	11.2	8.2	4.7	1.0	-2.6	-6.1	-9.2	-11.7	-13.7	-15.0	-15.7	-15.8	-15.2
45	45950	46115	46374	46711	47112	47565	48061	48597	49175	49803	50486	51228	52029	52878	53757	54636	55479	56242	56881
	11.2	15.0	17.4	18.2	17.5	15.7	12.7	9.0	4.7	0.2	-4.3	-8.3	-11.7	-14.2	-15.9	-16.6	-16.6	-15.7	-14.2
40	44121	44352	44671	45061	45505	45989	46502	47042	47609	48209	48849	49534	50262	51028	51815	52599	53349	54027	54591
	11.0	15.9	18.8	20.0	19.4	17.5	14.2	10.0	5.1	-0.1	-5.2	-9.7	-13.3	-15.7	-17.0	-17.1	-16.3	-14.6	-12.3
35	42096	42386	42755	43185	43658	44161	44683	45223	45779	46358	46961	47592	48248	48923	49606	50277	50913	51484	51955
	10.2	15.8	19.4	20.9	20.6	18.7	15.5	11.2	6.1	0.5	-5.0	-9.8	-13.4	-15.6	-16.4	-15.8	-14.2	-11.9	-8.9
30	39932	40271	40677	41131	41618	42123	42642	43173	43716	44274	44847	45432	46026	46621	47206	47769	48294	48758	49135
	8.8	14.9	18.7	20.4	20.4	18.8	15.9	11.8	6.8	1.3	-4.2	-9.0	-12.5	-14.4	-14.6	-13.4	-11.1	-8.1	-4.6
25	37734	38114	38548	39015	39499	39991	40490	40997	41515	42048	42592	43142	43690	44227	44742	45226	45666	46047	46350
	7.5	13.3	16.9	18.4	18.3	16.9	14.2	10.5	6.0	0.9	-4.2	-8.6	-11.7	-13.1	-12.9	-11.1	-8.2	-4.7	-0.8
20	35662	36081	36537	37009	37481	37946	38405	38867	39341	39834	40346	40871	41396	41910	42400	42854	43260	43604	43870
	6.8	11.7	14.4	15.2	14.5	12.6	9.8	6.3	2.3	-2.0	-6.3	-9.9	-12.4	-13.4	-12.9	-10.8	-7.6	-3.7	0.8
15	33899	34359	34841	35319	35776	36202	36602	36994	37398	37834	38308	38819	39353	39891	40414	40904	41341	41707	41984
	7.3	10.7	12.1	11.4	9.3	6.1	2.4	-1.4	-5.0	-8.4	-11.4	-13.9	-15.7	-16.4	-15.8	-13.9	-10.6	-6.1	-0.7
10	32582	33097	33615	34108	34551	34931	35256	35554	35865	36229	36668	37186	37767	38385	39009	39605	40144	40596	40936
	8.7	10.4	10.0	7.5	3.2	-2.2	-7.6	-12.3	-15.8	-18.1	-19.6	-20.7	-21.6	-22.0	-21.7	-20.1	-16.8	-11.6	-4.7
5	31731	32318	32890	33410	33843	34173	34412	34604	34815	35110	35531	36091	36770	37528	38317	39088	39793	40390	40843
	9.9	9.9	7.7	3.0	-3.9	-11.8	-19.4	-25.3	-28.8	-30.0	-29.8	-29.3	-29.1	-29.4	-29.3	-28.0	-24.4	-18.0	-9.1
0	31228	31900	32535	33086	33509	33786	33939	34033	34162	34419	34866	35520	36354	37310	38322	39321	40245	41036	41647
	9.1	7.4	3.5	-3.2	-12.4	-22.7	-32.2	-39.1	-42.3	-42.2	-40.1	-37.8	-36.4	-36.1	-36.0	-34.6	-30.3	-22.4	-11.2

IGRF 1985 Total Intensity (F)

Latitude \ Longitude:	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
90	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602
	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8
85	57204	57283	57354	57414	57463	57501	57530	57548	57557	57557	57549	57535	57515	57490	57463	57432	57401	57369	57336
	-51.8	-52.3	-52.7	-53.1	-53.4	-53.8	-54.0	-54.3	-54.4	-54.6	-54.7	-54.7	-54.7	-54.7	-54.6	-54.5	-54.3	-54.2	-54.0
80	58185	58352	58487	58589	58656	58690	58692	58664	58610	58533	58439	58332	58217	58100	57985	57877	57780	57696	57627
	-47.1	-48.1	-49.1	-49.9	-50.7	-51.4	-51.9	-52.3	-52.6	-52.8	-52.8	-52.7	-52.4	-52.1	-51.7	-51.2	-50.6	-50.1	-49.5
75	59272	59531	59727	59856	59915	59907	59834	59703	59521	59298	59046	58777	58502	58234	57984	57762	57576	57433	57337
	-39.7	-41.2	-42.6	-43.9	-45.0	-45.9	-46.6	-47.1	-47.4	-47.4	-47.3	-46.9	-46.2	-45.5	-44.5	-43.5	-42.4	-41.3	-40.2
70	60181	60531	60781	60922	60952	60871	60687	60409	60052	59633	59173	58692	58212	57756	57341	56985	56701	56502	56391
	-31.4	-33.2	-34.8	-36.2	-37.3	-38.3	-38.9	-39.3	-39.4	-39.2	-38.8	-38.0	-37.0	-35.7	-34.3	-32.7	-31.1	-29.5	-28.0
65	60683	61113	61404	61543	61525	61352	61033	60583	60024	59382	58688	57974	57272	56612	56024	55531	55154	54906	54795
	-24.2	-25.8	-27.1	-28.2	-28.9	-29.5	-29.7	-29.7	-29.4	-28.9	-28.2	-27.1	-25.8	-24.3	-22.5	-20.6	-18.7	-16.8	-15.2
60	60634	61121	61434	61556	61480	61205	60743	60114	59349	58483	57557	56613	55695	54843	54093	53476	53017	52731	52627
	-19.2	-20.1	-20.7	-20.9	-20.8	-20.5	-19.9	-19.2	-18.4	-17.5	-16.6	-15.5	-14.2	-12.7	-11.0	-9.2	-7.3	-5.5	-4.0
55	59973	60485	60800	60893	60751	60376	59779	58985	58031	56962	55827	54681	53575	52558	51674	50957	50435	50124	50032
	-16.4	-16.4	-15.8	-14.8	-13.5	-12.0	-10.3	-8.8	-7.3	-6.1	-5.1	-4.2	-3.4	-2.4	-1.3	0.0	1.4	2.8	3.8
50	58704	59210	59505	59559	59356	58892	58182	57252	56144	54910	53609	52303	51053	49915	48935	48152	47591	47269	47190
	-15.2	-14.0	-12.2	-9.9	-7.2	-4.4	-1.6	0.8	2.8	4.2	5.1	5.4	5.6	5.6	5.8	6.1	6.6	7.2	7.5
45	56881	57350	57606	57618	57363	56835	56044	55019	53804	52458	51045	49636	48296	47087	46057	45246	44676	44360	44298
	-14.2	-12.0	-9.1	-5.6	-1.8	2.1	5.8	8.9	11.3	12.6	13.1	12.7	11.8	10.7	9.7	8.9	8.3	7.8	7.2
40	54591	54998	55205	55176	54884	54319	53487	52417	51152	49753	48292	46840	45471	44246	43216	42418	41870	41581	41541
	-12.3	-9.2	-5.6	-1.4	3.1	7.6	11.7	15.1	17.4	18.4	18.2	17.0	15.1	12.9	10.7	8.8	7.2	5.7	4.2
35	51955	52287	52439	52375	52065	51493	50662	49595	48338	46950	45504	44076	42736	41550	40568	39821	39325	39080	39071
	-8.9	-5.4	-1.4	3.0	7.6	12.1	16.1	19.2	21.0	21.4	20.5	18.4	15.6	12.5	9.5	6.8	4.4	2.2	-0.1
30	49135	49393	49495	49406	49094	48541	47747	46731	45534	44217	42847	41500	40246	39146	38248	37582	37158	36967	36990
	-4.6	-0.9	3.1	7.3	11.6	15.6	18.9	21.3	22.3	21.9	20.2	17.4	14.0	10.5	7.1	4.0	1.2	-1.5	-4.4
25	46350	46549	46612	46508	46209	45694	44964	44033	42942	41742	40498	39279	38149	37167	36375	35800	35449	35308	35351
	-0.8	3.2	7.2	11.2	14.9	18.1	20.5	21.7	21.7	20.4	18.0	14.8	11.2	7.6	4.3	1.2	-1.6	-4.5	-7.7
20	43870	44035	44077	43969	43688	43222	42570	41748	40787	39736	38647	37582	36595	35739	35051	34555	34257	34140	34175
	0.8	5.4	9.9	14.0	17.4	19.9	21.2	21.4	20.2	18.1	15.0	11.5	7.9	4.5	1.5	-1.2	-3.8	-6.6	-9.9
15	41984	42151	42190	42085	41825	41407	40835	40126	39306	38411	37484	36573	35723	34977	34369	33919	33633	33496	33480
	-0.7	5.2	10.9	15.8	19.4	21.5	21.9	20.9	18.7	15.6	12.1	8.4	4.9	1.8	-0.9	-3.2	-5.5	-8.1	-11.3
10	40936	41141	41200	41106	40865	40487	39986	39380	38691	37942	37162	36384	35644	34975	34406	33956	33631	33421	33304
	-4.7	3.1	10.9	17.4	21.8	23.7	23.3	21.1	17.7	13.8	9.7	5.8	2.3	-0.7	-3.2	-5.3	-7.3	-9.6	-12.4
5	40843	41126	41229	41160	40938	40592	40148	39628	39048	38420	37757	37081	36414	35783	35212	34717	34305	33973	33707
	-9.1	1.3	11.6	20.1	25.4	27.3	25.9	22.3	17.5	12.5	7.7	3.6	0.0	-2.9	-5.4	-7.5	-9.3	-11.3	-13.5
0	41647	42048	42229	42207	42017	41704	41308	40856	40361	39825	39249	38640	38013	37387	36781	36208	35678	35193	34749
	-11.2	1.9	14.6	24.7	30.7	32.1	29.4	24.0	17.5	11.2	5.7	1.3	-2.3	-5.2	-7.7	-9.8	-11.6	-13.2	-14.9

IGRF 1985 Total Intensity (F)

Latitude \ Longitude:	180	-175	-170	-165	-160	-155	-150	-145	-140	-135	-130	-125	-120	-115	-110	-105	-100	-95	-90
90	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602
	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8
85	57336	57304	57273	57242	57211	57181	57151	57120	57087	57052	57015	56975	56931	56882	56829	56771	56708	56640	56569
	-54.0	-53.8	-53.6	-53.3	-53.1	-52.9	-52.7	-52.5	-52.3	-52.1	-51.9	-51.7	-51.5	-51.3	-51.1	-50.9	-50.7	-50.5	-50.2
80	57627	57575	57540	57521	57516	57523	57539	57559	57582	57601	57614	57617	57606	57578	57531	57464	57375	57265	57134
	-49.5	-48.9	-48.4	-48.0	-47.6	-47.2	-47.0	-46.8	-46.6	-46.6	-46.5	-46.5	-46.5	-46.5	-46.5	-46.4	-46.3	-46.1	-45.8
75	57337	57288	57288	57332	57416	57533	57675	57833	57996	58155	58301	58424	58517	58572	58584	58550	58467	58335	58156
	-40.2	-39.3	-38.5	-37.9	-37.5	-37.3	-37.3	-37.5	-37.9	-38.5	-39.1	-39.7	-40.4	-40.9	-41.4	-41.8	-42.0	-42.0	-41.9
70	56391	56372	56441	56594	56819	57104	57434	57793	58162	58525	58865	59166	59416	59602	59716	59751	59703	59572	59360
	-28.0	-26.8	-25.9	-25.4	-25.3	-25.6	-26.3	-27.4	-28.8	-30.4	-32.1	-33.9	-35.5	-37.0	-38.3	-39.3	-40.1	-40.5	-40.5
65	54795	54822	54983	55267	55660	56141	56689	57278	57884	58480	59045	59556	59993	60342	60589	60724	60742	60639	60418
	-15.2	-13.9	-13.1	-13.0	-13.6	-14.8	-16.6	-18.9	-21.7	-24.6	-27.7	-30.7	-33.5	-36.0	-38.2	-40.0	-41.4	-42.2	-42.6
60	52627	52706	52961	53376	53931	54602	55358	56169	57003	57828	58615	59337	59971	60497	60897	61158	61270	61228	61031
	-4.0	-3.0	-2.7	-3.2	-4.6	-6.9	-10.0	-13.7	-17.8	-22.1	-26.4	-30.5	-34.3	-37.7	-40.7	-43.3	-45.4	-47.0	-48.0
55	50032	50157	50489	51011	51698	52520	53445	54437	55459	56476	57455	58366	59183	59882	60442	60845	61078	61128	60988
	3.8	4.3	3.9	2.6	0.3	-3.1	-7.3	-12.2	-17.4	-22.7	-27.8	-32.6	-37.0	-40.9	-44.5	-47.8	-50.7	-53.3	-55.4
50	47190	47349	47735	48325	49096	50016	51049	52160	53309	54462	55583	56641	57609	58460	59171	59720	60084	60246	60192
	7.5	7.2	6.1	4.1	0.9	-3.4	-8.5	-14.2	-20.0	-25.7	-31.0	-35.8	-40.1	-44.0	-47.8	-51.6	-55.5	-59.4	-63.1
45	44298	44480	44892	45511	46313	47268	48344	49504	50713	51935	53137	54288	55360	56327	57163	57840	58331	58608	58650
	7.2	6.2	4.4	1.6	-2.2	-7.0	-12.5	-18.5	-24.4	-29.9	-34.7	-38.8	-42.3	-45.6	-49.2	-53.3	-58.2	-63.7	-69.4
40	41541	41738	42153	42763	43547	44480	45534	46679	47880	49106	50325	51508	52630	53664	54582	55353	55944	56321	56452
	4.2	2.4	-0.1	-3.4	-7.6	-12.6	-18.2	-24.0	-29.4	-34.2	-38.0	-40.8	-43.0	-45.3	-48.2	-52.4	-58.1	-65.2	-73.2
35	39071	39277	39675	40246	40970	41831	42810	43880	45015	46185	47360	48516	49628	50672	51619	52437	53087	53531	53732
	-0.1	-2.7	-5.7	-9.5	-13.9	-18.9	-24.2	-29.5	-34.3	-38.1	-40.6	-41.9	-42.6	-43.3	-45.2	-49.1	-55.4	-64.0	-74.0
30	36990	37197	37562	38066	38697	39447	40305	41254	42273	43335	44413	45485	46530	47526	48446	49258	49921	50394	50637
	-4.4	-7.6	-11.1	-15.2	-19.7	-24.5	-29.6	-34.4	-38.5	-41.3	-42.7	-42.6	-41.6	-40.8	-41.5	-44.7	-51.1	-60.5	-72.0
25	35351	35543	35855	36269	36780	37387	38092	38884	39747	40658	41593	42533	43460	44356	45198	45955	46588	47053	47311
	-7.7	-11.4	-15.3	-19.6	-24.2	-28.8	-33.5	-37.9	-41.5	-43.8	-44.3	-43.2	-41.0	-38.9	-38.3	-40.5	-46.4	-55.9	-68.0
20	34175	34325	34560	34862	35230	35674	36200	36809	37486	38213	38969	39738	40506	41261	41984	42647	43213	43641	43890
	-9.9	-13.8	-18.0	-22.4	-26.9	-31.4	-35.9	-40.0	-43.3	-45.4	-45.7	-44.1	-41.2	-38.1	-36.4	-37.6	-42.5	-51.3	-63.0
15	33480	33550	33676	33843	34053	34319	34654	35061	35533	36052	36604	37174	37756	38340	38914	39453	39924	40289	40510
	-11.3	-15.1	-19.3	-23.7	-28.0	-32.3	-36.5	-40.5	-43.8	-46.0	-46.4	-45.0	-42.0	-38.6	-36.3	-36.4	-40.1	-47.5	-57.9
10	33304	33250	33234	33245	33283	33364	33500	33697	33951	34250	34582	34938	35317	35714	36118	36511	36864	37141	37307
	-12.4	-15.8	-19.6	-23.6	-27.7	-31.7	-35.7	-39.6	-43.0	-45.4	-46.3	-45.4	-43.0	-39.9	-37.4	-36.9	-39.4	-45.1	-53.5
5	33707	33490	33303	33137	32995	32886	32821	32806	32837	32909	33016	33155	33325	33525	33748	33976	34185	34346	34426
	-13.5	-16.2	-19.4	-22.8	-26.4	-30.0	-33.8	-37.5	-40.9	-43.6	-45.0	-44.9	-43.5	-41.3	-39.4	-38.8	-40.3	-44.3	-50.5
0	34749	34342	33963	33609	33280	32980	32715	32488	32298	32145	32029	31951	31915	31917	31950	31997	32038	32048	32002
	-14.9	-16.9	-19.1	-21.8	-24.7	-27.9	-31.2	-34.7	-38.0	-40.8	-42.6	-43.3	-43.1	-42.3	-41.5	-41.4	-42.5	-45.1	-49.2

IGRF 1985 Total Intensity (F)

Latitude \ Longitude:	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
90	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602	56602
	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8	-52.8
85	56569	56493	56414	56333	56250	56167	56085	56005	55928	55856	55790	55731	55680	55639	55607	55587	55579	55582	55598
	-50.2	-50.0	-49.7	-49.5	-49.2	-49.0	-48.7	-48.4	-48.1	-47.9	-47.6	-47.4	-47.1	-46.9	-46.8	-46.6	-46.5	-46.4	-46.4
80	57134	56983	56814	56630	56434	56229	56020	55809	55602	55402	55213	55039	54883	54749	54639	54556	54502	54478	54485
	-45.8	-45.5	-45.1	-44.7	-44.1	-43.6	-42.9	-42.3	-41.6	-40.9	-40.2	-39.6	-38.9	-38.3	-37.8	-37.3	-36.8	-36.5	-36.2
75	58156	57931	57665	57363	57031	56678	56310	55936	55564	55201	54855	54533	54241	53985	53769	53598	53474	53400	53378
	-41.9	-41.6	-41.0	-40.4	-39.5	-38.5	-37.4	-36.2	-35.0	-33.7	-32.4	-31.1	-29.9	-28.7	-27.6	-26.6	-25.7	-24.9	-24.3
70	59360	59069	58708	58284	57810	57295	56755	56201	55648	55108	54594	54114	53678	53294	52968	52704	52506	52376	52317
	-40.5	-40.2	-39.5	-38.6	-37.3	-35.7	-34.0	-32.1	-30.0	-28.0	-25.9	-23.8	-21.9	-20.0	-18.2	-16.6	-15.1	-13.9	-12.8
65	60418	60082	59641	59107	58494	57821	57108	56374	55640	54925	54246	53617	53049	52551	52130	51789	51532	51361	51275
	-42.6	-42.5	-41.8	-40.6	-38.9	-36.7	-34.2	-31.4	-28.5	-25.4	-22.4	-19.4	-16.5	-13.7	-11.2	-8.8	-6.7	-4.8	-3.3
60	61031	60681	60188	59565	58833	58015	57139	56235	55331	54454	53628	52871	52196	51613	51128	50741	50456	50270	50182
	-48.0	-48.3	-47.9	-46.8	-44.9	-42.2	-39.0	-35.3	-31.3	-27.1	-22.9	-18.8	-14.8	-11.0	-7.4	-4.1	-1.1	1.5	3.6
55	60988	60659	60147	59466	58640	57698	56679	55623	54568	53553	52607	51753	51007	50376	49864	49470	49191	49023	48964
	-55.4	-56.7	-57.2	-56.6	-54.8	-52.0	-48.2	-43.6	-38.5	-33.2	-27.8	-22.4	-17.2	-12.1	-7.3	-2.7	1.4	5.0	8.0
50	60192	59914	59414	58706	57814	56778	55642	54459	53281	52158	51126	50213	49435	48797	48297	47930	47689	47569	47563
	-63.1	-66.1	-68.0	-68.6	-67.5	-64.8	-60.7	-55.5	-49.5	-43.0	-36.4	-29.8	-23.2	-16.6	-10.3	-4.2	1.4	6.3	10.3
45	58650	58441	57978	57270	56344	55244	54024	52748	51483	50288	49209	48276	47504	46893	46436	46124	45945	45889	45950
	-69.4	-74.6	-78.7	-81.0	-81.1	-79.0	-74.9	-69.3	-62.6	-55.3	-47.6	-39.8	-31.9	-23.8	-15.8	-7.9	-0.6	5.9	11.2
40	56452	56316	55903	55218	54288	53159	51894	50567	49255	48026	46936	46016	45278	44719	44326	44082	43975	43991	44121
	-73.2	-80.9	-87.5	-91.9	-93.5	-92.4	-88.6	-83.0	-75.9	-68.1	-59.8	-51.1	-42.0	-32.4	-22.7	-12.9	-3.7	4.4	11.0
35	53732	53661	53302	52659	51754	50635	49367	48032	46713	45488	44416	43531	42844	42347	42023	41852	41816	41902	42096
	-74.0	-84.1	-93.1	-99.6	-102.9	-102.9	-99.8	-94.4	-87.4	-79.5	-71.0	-61.7	-51.7	-40.9	-29.5	-18.1	-7.2	2.4	10.2
30	50637	50616	50313	49725	48873	47800	46572	45270	43983	42792	41759	40921	40290	39857	39600	39497	39530	39680	39932
	-72.0	-84.1	-95.0	-103.3	-108.1	-109.0	-106.7	-101.9	-95.5	-87.9	-79.4	-69.9	-59.2	-47.4	-34.8	-22.1	-10.1	0.4	8.8
25	47311	47325	47075	46554	45778	44783	43630	42398	41175	40041	39064	38283	37712	37342	37152	37118	37217	37429	37734
	-68.0	-81.1	-93.1	-102.6	-108.3	-110.2	-108.7	-104.6	-98.9	-91.9	-83.6	-74.0	-62.8	-50.2	-36.9	-23.6	-11.3	-0.8	7.5
20	43890	43926	43725	43276	42590	41694	40643	39508	38373	37320	36418	35709	35213	34921	34811	34856	35028	35304	35662
	-63.0	-75.9	-88.2	-97.9	-104.1	-106.5	-105.7	-102.4	-97.3	-90.7	-82.5	-72.6	-60.9	-48.0	-34.6	-21.7	-10.1	-0.5	6.8
15	40510	40551	40388	40008	39414	38626	37691	36671	35647	34700	33900	33295	32905	32723	32723	32870	33133	33483	33899
	-57.9	-69.7	-81.1	-90.4	-96.4	-99.0	-98.5	-95.7	-91.0	-84.4	-75.9	-65.3	-53.1	-40.2	-27.5	-16.0	-6.2	1.6	7.3
10	37307	37331	37186	36858	36344	35660	34842	33951	33059	32248	31588	31129	30888	30857	31002	31281	31655	32095	32582
	-53.5	-63.5	-73.2	-81.2	-86.6	-88.9	-88.5	-85.7	-80.8	-73.7	-64.2	-52.8	-40.3	-27.9	-16.8	-7.6	-0.4	5.0	8.7
5	34426	34398	34238	33930	33471	32873	32169	31413	30675	30032	29549	29274	29219	29369	29681	30108	30608	31155	31731
	-50.5	-58.1	-65.6	-72.0	-76.1	-77.8	-76.9	-73.6	-67.9	-59.7	-49.2	-37.0	-24.7	-13.7	-5.0	1.2	5.4	8.3	9.9
0	32002	31878	31657	31327	30888	30352	29750	29133	28564	28110	27830	27757	27898	28227	28700	29268	29894	30552	31228
	-49.2	-54.3	-59.4	-63.7	-66.3	-66.9	-65.1	-60.8	-53.9	-44.5	-33.0	-20.8	-9.5	-0.8	4.9	7.8	9.1	9.4	9.1

IGRF 1985 Total Intensity (F)

Latitude \ Longitude:	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
0	31228	31900	32535	33086	33509	33786	33939	34033	34162	34419	34866	35520	36354	37310	38322	39321	40245	41036	41647
	9.1	7.4	3.5	-3.2	-12.4	-22.7	-32.2	-39.1	-42.3	-42.2	-40.1	-37.8	-36.4	-36.1	-36.0	-34.6	-30.3	-22.4	-11.2
-5	30875	31623	32309	32876	33277	33499	33578	33603	33697	33977	34516	35331	36379	37586	38865	40133	41312	42334	43144
	4.7	1.4	-4.1	-12.5	-23.3	-35.0	-45.3	-52.2	-54.4	-52.5	-48.2	-43.9	-41.1	-40.0	-39.4	-37.3	-32.1	-22.6	-9.4
-10	30484	31268	31964	32513	32869	33032	33060	33067	33196	33578	34289	35334	36651	38150	39726	41285	42743	44023	45063
	-4.0	-9.0	-15.9	-25.3	-36.7	-48.5	-58.1	-63.5	-63.6	-59.1	-52.3	-45.8	-41.4	-39.1	-37.6	-34.8	-28.6	-18.1	-4.0
-15	29945	30699	31346	31827	32112	32221	32234	32284	32530	33099	34057	35389	37014	38825	40709	42566	44309	45858	47147
	-16.8	-23.4	-31.4	-41.2	-52.1	-62.3	-69.6	-72.0	-68.7	-60.9	-51.2	-42.4	-36.3	-32.8	-30.5	-27.1	-20.6	-10.2	3.3
-20	29241	29894	30429	30802	31003	31075	31120	31285	31724	32553	33812	35461	37404	39522	41702	43841	45854	47664	49203
	-32.4	-40.5	-49.4	-58.8	-68.1	-75.4	-78.7	-76.7	-69.0	-57.4	-44.7	-33.9	-26.4	-22.0	-19.3	-15.9	-10.2	-1.4	10.0
-25	28439	28937	29321	29570	29699	29774	29911	30258	30953	32083	33658	35616	37849	40238	42672	45055	47304	49345	51115
	-49.3	-58.6	-67.8	-76.2	-82.8	-86.1	-84.6	-77.3	-64.9	-49.6	-34.5	-22.1	-13.8	-9.1	-6.6	-4.3	-0.5	5.6	13.4
-30	27662	27989	28226	28375	28476	28612	28905	29486	30465	31894	33753	35968	38428	41022	43646	46212	48643	50870	52833
	-65.7	-75.8	-84.5	-91.2	-94.7	-93.6	-86.9	-74.7	-58.3	-40.3	-23.6	-10.6	-2.2	2.2	3.8	4.5	5.6	8.0	11.6
-35	27069	27257	27393	27503	27645	27909	28406	29240	30487	32164	34235	36620	39218	41930	44664	47339	49885	52239	54345
	-80.3	-90.3	-98.1	-102.7	-102.8	-97.7	-86.8	-71.0	-52.2	-33.1	-16.3	-3.6	4.4	8.0	8.4	7.1	5.5	4.3	3.8
-40	26848	26959	27068	27217	27469	27909	28623	29687	31141	32981	35165	37619	40257	42994	45751	48457	51047	53464	55655
	-92.0	-101.0	-107.4	-109.8	-107.3	-99.3	-86.2	-69.1	-50.1	-31.6	-15.9	-4.4	2.6	5.2	4.6	1.7	-2.1	-6.0	-9.6
-45	27193	27298	27451	27698	28099	28720	29622	30851	32425	34330	36525	38949	41534	44208	46907	49566	52129	54542	56756
	-100.1	-107.7	-112.4	-113.2	-109.2	-100.3	-87.2	-71.2	-54.1	-37.9	-24.3	-14.4	-8.6	-6.8	-8.1	-11.7	-16.5	-21.7	-26.7
-50	28272	28417	28651	29015	29555	30318	31342	32652	34253	36128	38244	40554	43005	45541	48106	50647	53113	55455	57627
	-104.9	-110.9	-114.2	-114.1	-110.0	-102.1	-91.0	-77.8	-64.0	-51.0	-40.2	-32.3	-27.7	-26.3	-27.6	-31.0	-35.5	-40.4	-45.1
-55	30178	30373	30683	31137	31768	32604	33669	34973	36515	38281	40245	42373	44624	46954	49319	51674	53974	56176	58240
	-107.1	-111.7	-114.1	-113.9	-110.8	-105.0	-96.9	-87.4	-77.5	-68.1	-60.1	-54.3	-50.7	-49.5	-50.2	-52.5	-55.7	-59.1	-62.2
-60	32896	33123	33474	33967	34623	35459	36485	37707	39120	40714	42468	44358	46354	48421	50526	52630	54698	56693	58581
	-107.7	-111.1	-113.1	-113.3	-111.6	-108.2	-103.2	-97.3	-91.0	-85.0	-79.7	-75.6	-72.9	-71.6	-71.5	-72.2	-73.5	-74.9	-75.8
-65	36314	36545	36894	37374	37995	38765	39690	40770	42001	43373	44872	46480	48175	49931	51722	53520	55296	57022	58670
	-107.5	-110.0	-111.6	-112.3	-111.8	-110.3	-107.9	-104.8	-101.4	-98.0	-94.8	-92.1	-89.9	-88.4	-87.5	-86.9	-86.4	-85.8	-84.8
-70	40253	40463	40778	41203	41744	42403	43181	44078	45087	46203	47414	48708	50068	51477	52916	54364	55801	57206	58558
	-106.8	-108.4	-109.7	-110.5	-110.7	-110.4	-109.5	-108.2	-106.6	-104.8	-103.0	-101.2	-99.5	-97.9	-96.4	-94.9	-93.3	-91.6	-89.5
-75	44504	44679	44937	45280	45710	46227	46830	47516	48281	49119	50023	50984	51992	53034	54099	55173	56242	57294	58315
	-105.4	-106.4	-107.1	-107.7	-108.0	-108.0	-107.7	-107.2	-106.5	-105.6	-104.5	-103.2	-101.9	-100.4	-98.8	-97.1	-95.3	-93.3	-91.1
-80	48845	48974	49160	49404	49704	50059	50469	50930	51438	51991	52584	53210	53864	54539	55228	55925	56621	57308	57981
	-103.2	-103.5	-103.8	-103.9	-103.9	-103.9	-103.7	-103.3	-102.9	-102.3	-101.5	-100.6	-99.7	-98.6	-97.4	-96.0	-94.6	-93.1	-91.6
-85	53050	53123	53224	53352	53508	53690	53896	54126	54377	54647	54935	55238	55553	55877	56208	56543	56878	57211	57539
	-100.0	-99.9	-99.8	-99.7	-99.5	-99.3	-99.0	-98.7	-98.4	-98.0	-97.5	-97.1	-96.5	-96.0	-95.4	-94.7	-94.1	-93.4	-92.8
-90	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897
	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7

IGRF 1985 Total Intensity (F)

Latitude \ Longitude:	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180
0	41647	42048	42229	42207	42017	41704	41308	40856	40361	39825	39249	38640	38013	37387	36781	36208	35678	35193	34749
	-11.2	1.9	14.6	24.7	30.7	32.1	29.4	24.0	17.5	11.2	5.7	1.3	-2.3	-5.2	-7.7	-9.8	-11.6	-13.2	-14.9
-5	43144	43705	44005	44066	43934	43668	43321	42927	42497	42029	41514	40948	40337	39695	39035	38370	37711	37064	36436
	-9.4	5.6	20.0	30.9	36.8	37.1	32.6	25.3	17.0	9.4	3.2	-1.4	-4.9	-7.6	-9.9	-12.0	-13.8	-15.3	-16.6
-10	45063	45821	46282	46470	46434	46243	45957	45620	45245	44828	44355	43815	43207	42540	41823	41068	40286	39489	38691
	-4.0	11.8	26.3	36.9	41.7	40.4	34.1	24.9	15.1	6.5	0.0	-4.5	-7.5	-9.8	-11.9	-13.9	-15.8	-17.5	-18.8
-15	47147	48130	48790	49145	49245	49160	48958	48684	48360	47983	47539	47014	46403	45710	44941	44109	43224	42301	41360
	3.3	18.1	31.3	40.2	43.2	40.2	32.3	22.0	11.5	2.6	-3.8	-7.7	-10.1	-11.7	-13.5	-15.5	-17.7	-19.9	-21.8
-20	49203	50424	51303	51855	52124	52176	52076	51877	51603	51259	50835	50318	49701	48984	48175	47282	46318	45301	44252
	10.0	22.1	32.4	38.7	39.6	35.1	26.6	16.1	5.9	-2.2	-7.6	-10.6	-12.1	-13.1	-14.5	-16.8	-19.7	-22.9	-25.9
-25	51115	52564	53667	54428	54885	55093	55113	54997	54775	54460	54049	53533	52909	52175	51336	50403	49388	48308	47189
	13.4	21.5	28.1	31.3	30.2	25.0	16.7	7.4	-1.1	-7.5	-11.3	-12.9	-13.3	-13.8	-15.2	-18.0	-21.9	-26.5	-31.1
-30	52833	54483	55791	56757	57403	57775	57924	57898	57733	57447	57046	56530	55899	55155	54301	53348	52308	51200	50049
	11.6	15.3	17.9	18.3	15.8	10.6	3.8	-3.2	-9.1	-12.9	-14.5	-14.4	-13.9	-14.0	-15.7	-19.2	-24.4	-30.7	-37.0
-35	54345	56155	57638	58785	59608	60139	60419	60491	60388	60137	59752	59241	58611	57865	57012	56060	55023	53920	52773
	3.8	3.5	2.8	1.0	-2.1	-6.3	-10.8	-14.7	-17.2	-18.0	-17.2	-15.6	-14.2	-14.1	-16.2	-20.6	-27.2	-35.0	-43.1
-40	55655	57574	59188	60482	61459	62136	62544	62718	62689	62487	62133	61642	61027	60297	59463	58536	57530	56462	55355
	-9.6	-12.7	-15.5	-18.3	-21.0	-23.4	-25.1	-25.7	-24.9	-22.8	-19.8	-16.7	-14.7	-14.7	-17.2	-22.5	-30.2	-39.3	-48.8
-45	56756	58728	60423	61823	62920	63723	64252	64531	64591	64459	64160	63715	63140	62451	61662	60786	59839	58836	57798
	-26.7	-31.0	-34.4	-37.0	-38.4	-38.7	-37.7	-35.3	-31.7	-27.2	-22.6	-18.7	-16.3	-16.4	-19.4	-25.2	-33.5	-43.3	-53.7
-50	57627	59590	61311	62767	63945	64848	65483	65871	66033	65995	65780	65413	64913	64298	63586	62792	61931	61020	60076
	-45.1	-49.0	-51.7	-53.0	-52.8	-51.0	-47.7	-43.1	-37.6	-31.7	-26.2	-21.9	-19.6	-19.9	-23.1	-29.0	-37.4	-47.3	-57.9
-55	58240	60130	61815	63272	64486	65452	66174	66662	66933	67007	66904	66648	66258	65753	65152	64471	63726	62931	62100
	-62.2	-64.4	-65.5	-65.1	-63.2	-59.7	-55.0	-49.2	-42.9	-36.7	-31.2	-27.1	-25.1	-25.6	-28.7	-34.4	-42.2	-51.5	-61.5
-60	58581	60331	61916	63314	64509	65495	66270	66839	67211	67401	67426	67303	67051	66686	66225	65684	65078	64418	63717
	-75.8	-76.0	-75.2	-73.2	-69.9	-65.6	-60.2	-54.3	-48.3	-42.6	-37.8	-34.5	-33.0	-33.6	-36.5	-41.5	-48.3	-56.3	-65.1
-65	58670	60214	61634	62910	64028	64980	65762	66375	66823	67114	67260	67273	67166	66953	66648	66263	65809	65297	64735
	-84.8	-83.3	-81.1	-78.0	-74.2	-69.7	-64.7	-59.5	-54.5	-50.0	-46.3	-43.9	-43.0	-43.7	-46.1	-50.1	-55.6	-62.0	-69.1
-70	58558	59841	61036	62129	63110	63969	64702	65307	65785	66138	66374	66499	66521	66449	66291	66057	65755	65391	64973
	-89.5	-87.1	-84.2	-81.0	-77.4	-73.5	-69.5	-65.6	-61.9	-58.8	-56.4	-54.9	-54.5	-55.2	-57.0	-60.0	-63.9	-68.6	-73.8
-75	58315	59292	60216	61075	61861	62568	63191	63726	64173	64532	64804	64992	65099	65130	65090	64982	64812	64584	64302
	-91.1	-88.7	-86.2	-83.5	-80.8	-78.0	-75.3	-72.8	-70.5	-68.7	-67.4	-66.6	-66.5	-67.1	-68.4	-70.3	-72.8	-75.8	-79.1
-80	57981	58631	59253	59840	60387	60889	61344	61748	62098	62394	62635	62822	62954	63032	63059	63036	62964	62846	62683
	-91.6	-90.0	-88.3	-86.7	-85.1	-83.5	-82.1	-80.8	-79.7	-78.9	-78.3	-78.1	-78.1	-78.5	-79.2	-80.2	-81.5	-83.0	-84.8
-85	57539	57858	58167	58461	58740	59001	59242	59460	59656	59826	59971	60090	60182	60247	60285	60296	60280	60238	60170
	-92.8	-92.1	-91.4	-90.8	-90.2	-89.7	-89.2	-88.8	-88.5	-88.3	-88.1	-88.1	-88.1	-88.3	-88.5	-88.9	-89.3	-89.9	-90.5
-90	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897
	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7

IGRF 1985 Total Intensity (F)

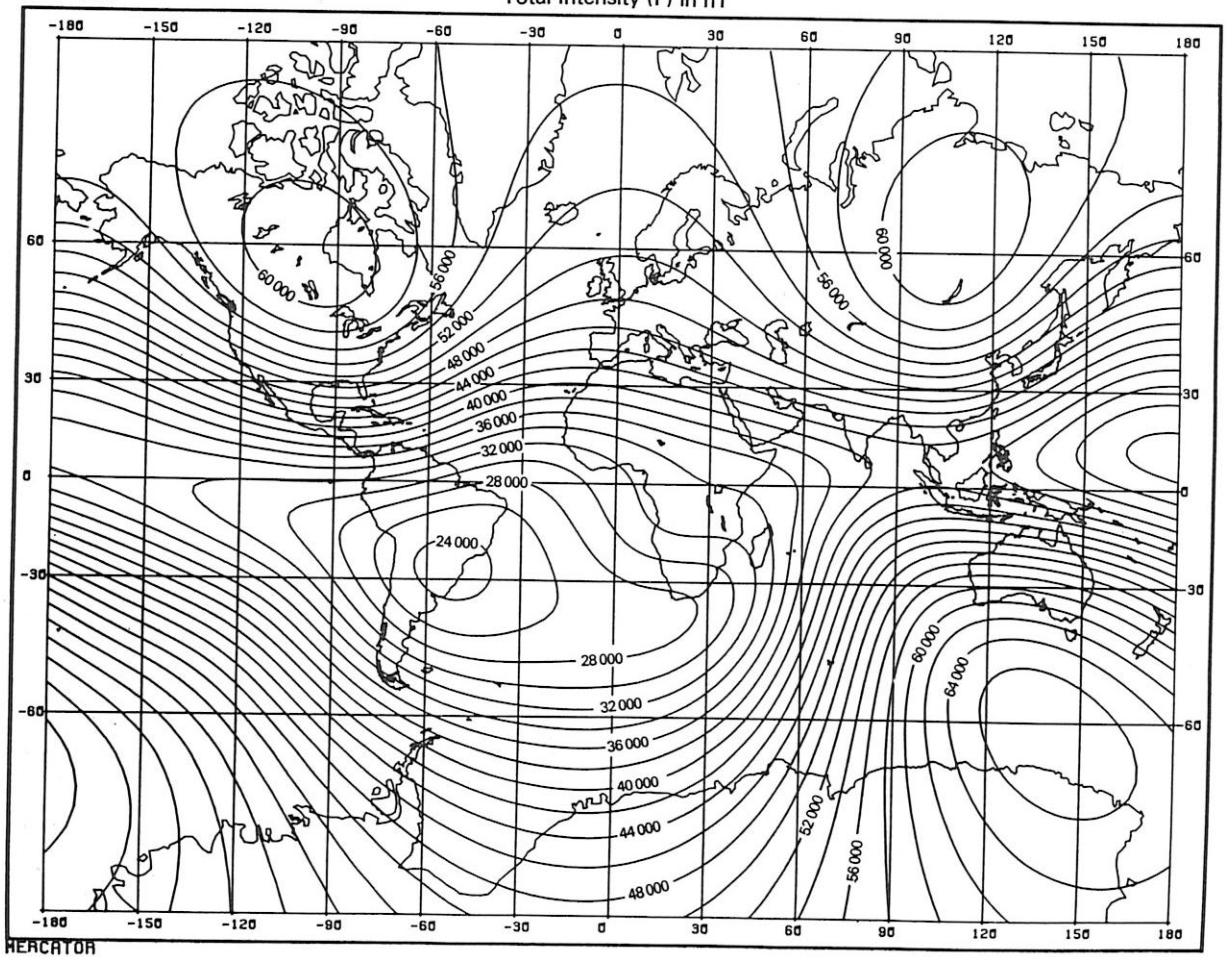
Latitude \ Longitude: 180	-175	-170	-165	-160	-155	-150	-145	-140	-135	-130	-125	-120	-115	-110	-105	-100	-95	-90
0	34749	34342	33963	33609	33280	32980	32715	32488	32298	32145	32029	31951	31915	31917	31950	31997	32038	32048	32002
	-14.9	-16.9	-19.1	-21.8	-24.7	-27.9	-31.2	-34.7	-38.0	-40.8	-42.6	-43.3	-43.1	-42.3	-41.5	-41.4	-42.5	-45.1	-49.2
-5	36436	35833	35258	34712	34196	33708	33248	32816	32412	32042	31711	31425	31187	30993	30831	30686	30536	30363	30149
	-16.6	-17.9	-19.4	-21.3	-23.5	-26.0	-28.9	-31.9	-34.7	-37.2	-39.2	-40.7	-41.7	-42.5	-43.2	-44.2	-45.5	-47.3	-49.6
-10	38691	37906	37147	36420	35726	35061	34419	33796	33196	32626	32096	31614	31182	30795	30438	30092	29735	29354	28936
	-18.8	-19.9	-21.0	-22.2	-23.6	-25.4	-27.4	-29.4	-31.4	-33.3	-35.1	-37.0	-39.1	-41.4	-43.9	-46.2	-48.3	-49.9	-51.2
-15	41360	40421	39504	38618	37768	36947	36147	35363	34595	33854	33148	32488	31874	31300	30747	30194	29622	29015	28371
	-21.8	-23.3	-24.4	-25.3	-26.0	-26.7	-27.4	-28.0	-28.6	-29.4	-30.5	-32.4	-35.2	-38.8	-42.8	-46.7	-49.9	-52.1	-53.2
-20	44252	43195	42155	41144	40170	39226	38304	37397	36503	35628	34780	33965	33185	32429	31682	30920	30125	29287	28407
	-25.9	-28.3	-30.0	-30.9	-31.0	-30.5	-29.5	-28.2	-26.9	-26.0	-26.0	-27.4	-30.4	-34.8	-40.0	-45.3	-49.8	-53.0	-54.7
-25	47189	46055	44932	43838	42779	41754	40754	39769	38794	37827	36872	35932	35002	34075	33135	32163	31145	30075	28951
	-31.1	-34.9	-37.5	-38.7	-38.4	-36.7	-33.9	-30.4	-27.0	-24.2	-22.7	-23.1	-25.7	-30.2	-36.1	-42.4	-48.2	-52.7	-55.6
-30	50049	48879	47717	46581	45482	44419	43383	42363	41347	40327	39299	38259	37201	36115	34990	33814	32579	31287	29955
	-37.0	-42.5	-46.4	-48.2	-47.7	-45.1	-40.8	-35.5	-30.0	-25.3	-22.1	-21.3	-23.0	-27.0	-32.9	-39.7	-46.3	-52.1	-56.3
-35	52773	51608	50448	49313	48214	47150	46113	45089	44062	43017	41940	40823	39655	38429	37138	35776	34346	32859	31340
	-43.1	-50.2	-55.5	-58.3	-58.1	-55.3	-50.2	-43.7	-36.8	-30.6	-26.0	-23.9	-24.4	-27.6	-32.8	-39.4	-46.3	-52.8	-58.2
-40	55355	54230	53109	52010	50942	49905	48890	47880	46856	45798	44688	43511	42256	40917	39490	37980	36397	34762	33106
	-48.8	-57.4	-64.0	-67.9	-68.7	-66.4	-61.5	-54.9	-47.7	-40.8	-35.4	-32.2	-31.7	-33.7	-37.9	-43.6	-50.1	-56.5	-62.3
-45	57798	56743	55689	54652	53636	52641	51657	50667	49650	48585	47451	46231	44916	43500	41986	40383	38709	36992	35266
	-53.7	-63.3	-71.1	-76.3	-78.4	-77.5	-73.8	-68.3	-61.8	-55.4	-50.0	-46.4	-45.0	-45.8	-48.7	-53.2	-58.5	-64.1	-69.3
-50	60076	59113	58147	57185	56234	55288	54338	53369	52361	51292	50146	48906	47565	46120	44578	42951	41262	39539	37820
	-57.9	-67.9	-76.5	-82.8	-86.4	-87.3	-85.6	-82.0	-77.3	-72.3	-67.8	-64.5	-62.7	-62.7	-64.3	-67.2	-70.9	-75.0	-78.9
-55	62100	61246	60378	59503	58622	57730	56819	55875	54882	53824	52686	51458	50134	48715	47209	45632	44004	42355	40715
	-61.5	-71.3	-80.0	-87.1	-92.0	-94.7	-95.3	-94.1	-91.7	-88.7	-85.7	-83.3	-81.7	-81.2	-81.7	-83.2	-85.2	-87.5	-89.6
-60	63717	62983	62224	61443	60640	59810	58948	58044	57086	56064	54968	53792	52534	51198	49793	48332	46835	45324	43826
	-65.1	-74.0	-82.2	-89.4	-95.1	-99.1	-101.5	-102.5	-102.4	-101.5	-100.3	-99.0	-98.0	-97.4	-97.3	-97.6	-98.2	-98.9	-99.4
-65	64735	64131	63490	62813	62100	61351	60559	59721	58830	57880	56867	55790	54649	53449	52198	50908	49594	48273	46963
	-69.1	-76.5	-83.6	-90.1	-95.7	-100.4	-103.9	-106.3	-107.9	-108.7	-108.9	-108.8	-108.6	-108.2	-107.9	-107.7	-107.4	-107.0	-106.4
-70	64973	64504	63989	63430	62827	62181	61491	60754	59969	59134	58250	57317	56338	55318	54264	53184	52090	50991	49902
	-73.8	-79.3	-84.7	-90.0	-94.8	-99.1	-102.8	-105.8	-108.1	-109.8	-111.0	-111.7	-112.1	-112.2	-112.1	-111.7	-111.2	-110.5	-109.6
-75	64302	63969	63587	63160	62689	62174	61618	61021	60384	59707	58994	58247	57468	56663	55836	54993	54142	53289	52443
	-79.1	-82.6	-86.3	-89.9	-93.4	-96.7	-99.7	-102.3	-104.5	-106.3	-107.8	-108.9	-109.7	-110.1	-110.3	-110.2	-109.9	-109.4	-108.8
-80	62683	62478	62232	61947	61625	61267	60877	60454	60002	59522	59017	58490	57943	57379	56804	56219	55630	55041	54455
	-84.8	-86.6	-88.6	-90.6	-92.6	-94.6	-96.4	-98.1	-99.6	-101.0	-102.2	-103.2	-104.0	-104.6	-105.0	-105.2	-105.3	-105.3	-105.1
-85	60170	60078	59961	59821	59659	59477	59274	59054	58817	58565	58299	58022	57734	57439	57138	56833	56526	56219	55915
	-90.5	-91.1	-91.8	-92.5	-93.3	-94.0	-94.7	-95.4	-96.1	-96.8	-97.4	-97.9	-98.4	-98.8	-99.2	-99.5	-99.8	-100.0	-100.1
-90	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897
	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7

IGRF 1985 Total Intensity (F)

Latitude \ Longitude:	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
0	32002	31878	31657	31327	30888	30352	29750	29133	28564	28110	27830	27757	27898	28227	28700	29268	29894	30552	31228
	-49.2	-54.3	-59.4	-63.7	-66.3	-66.9	-65.1	-60.8	-53.9	-44.5	-33.0	-20.8	-9.5	-0.8	4.9	7.8	9.1	9.4	9.1
-5	30149	29880	29547	29148	28687	28183	27666	27182	26786	26528	26450	26569	26880	27354	27950	28627	29353	30109	30875
	-49.6	-52.4	-55.1	-57.2	-58.1	-57.2	-54.2	-48.6	-40.5	-30.2	-18.5	-7.1	2.1	8.1	10.5	10.3	8.8	6.9	4.7
-10	28936	28479	27987	27471	26947	26440	25985	25618	25381	25303	25401	25675	26109	26674	27338	28072	28855	29667	30484
	-51.2	-52.2	-52.9	-53.0	-52.1	-49.7	-45.3	-38.6	-29.6	-19.0	-8.0	1.7	8.4	11.4	10.9	7.9	4.0	0.1	-4.0
-15	28371	27697	27011	26341	25716	25174	24748	24469	24360	24426	24659	25039	25542	26143	26819	27554	28334	29141	29945
	-53.2	-53.3	-52.6	-51.2	-48.8	-45.1	-39.6	-32.0	-22.8	-12.6	-2.9	4.7	8.9	9.3	6.3	1.2	-4.8	-10.8	-16.8
-20	28407	27503	26606	25759	25008	24398	23966	23735	23709	23871	24190	24629	25156	25748	26389	27073	27791	28524	29241
	-54.7	-54.9	-53.9	-51.8	-48.6	-44.0	-37.9	-30.1	-21.1	-11.9	-3.7	1.9	4.1	2.5	-2.2	-8.9	-16.6	-24.5	-32.4
-25	28961	27830	26724	25697	24807	24107	23635	23406	23411	23615	23969	24424	24940	25491	26066	26659	27266	27869	28439
	-55.6	-56.7	-56.3	-54.4	-51.3	-46.7	-40.5	-33.0	-24.7	-16.5	-9.8	-5.6	-4.8	-7.5	-13.3	-21.2	-30.3	-39.8	-49.3
-30	29955	28616	27319	26126	25101	24298	23757	23488	23470	23660	23998	24427	24899	25386	25872	26352	26820	27263	27662
	-56.3	-58.8	-59.7	-58.8	-56.4	-52.4	-46.9	-40.0	-32.6	-25.4	-19.7	-16.5	-16.4	-19.6	-25.9	-34.4	-44.4	-55.1	-65.7
-35	31340	29827	28376	27047	25904	25000	24371	24022	23932	24051	24320	24677	25072	25470	25852	26210	26537	26827	27069
	-58.2	-62.0	-64.2	-64.6	-63.3	-60.3	-55.6	-49.7	-43.1	-36.9	-31.9	-29.3	-29.5	-32.8	-39.0	-47.7	-58.1	-69.3	-80.3
-40	33106	31472	29915	28492	27261	26268	25542	25088	24882	24881	25029	25268	25548	25833	26101	26339	26543	26712	26848
	-62.3	-66.8	-69.9	-71.3	-70.9	-68.8	-65.0	-60.1	-54.5	-49.1	-44.9	-42.6	-42.9	-46.0	-52.0	-60.4	-70.5	-81.4	-92.0
-45	35266	33576	31972	30505	29222	28161	27344	26771	26425	26269	26257	26340	26474	26625	26771	26901	27010	27104	27193
	-69.3	-73.7	-76.8	-78.4	-78.5	-76.9	-73.9	-69.8	-65.1	-60.6	-57.1	-55.3	-55.7	-58.7	-64.2	-71.8	-81.0	-90.8	-100.1
-50	37820	36144	34555	33094	31800	30699	29807	29124	28636	28315	28129	28039	28012	28022	28048	28082	28125	28182	28272
	-78.9	-82.2	-84.6	-85.7	-85.5	-84.1	-81.4	-78.0	-74.2	-70.7	-68.0	-66.7	-67.3	-70.0	-74.7	-81.3	-89.1	-97.3	-104.9
-55	40715	39120	37603	36199	34933	33826	32889	32121	31513	31047	30701	30451	30274	30152	30071	30028	30024	30069	30178
	-89.6	-91.4	-92.4	-92.6	-91.8	-90.2	-87.7	-84.8	-81.8	-79.1	-77.1	-76.3	-77.1	-79.4	-83.4	-88.7	-94.9	-101.3	-107.1
-60	43826	42367	40974	39669	38473	37399	36456	35643	34958	34390	33926	33554	33261	33035	32873	32771	32735	32772	32896
	-99.4	-99.7	-99.4	-98.6	-97.2	-95.3	-93.0	-90.5	-88.1	-86.1	-84.8	-84.4	-85.1	-87.1	-90.1	-94.1	-98.7	-103.4	-107.7
-65	46963	45684	44453	43288	42201	41203	40301	39497	38790	38177	37654	37215	36854	36568	36356	36219	36161	36190	36314
	-106.4	-105.7	-104.6	-103.2	-101.5	-99.5	-97.5	-95.4	-93.6	-92.2	-91.3	-91.1	-91.7	-93.1	-95.3	-98.1	-101.2	-104.5	-107.5
-70	49902	48834	47799	46808	45871	44995	44186	43448	42782	42190	41672	41227	40855	40557	40333	40186	40121	40141	40253
	-109.6	-108.5	-107.2	-105.7	-104.1	-102.5	-100.9	-99.4	-98.1	-97.1	-96.6	-96.5	-96.9	-97.8	-99.1	-100.9	-102.8	-104.8	-106.8
-75	52443	51610	50798	50014	49265	48556	47892	47278	46716	46209	45760	45370	45042	44778	44580	44451	44393	44410	44504
	-108.8	-108.0	-107.0	-106.0	-104.9	-103.8	-102.8	-101.9	-101.1	-100.6	-100.2	-100.2	-100.4	-100.8	-101.5	-102.4	-103.3	-104.4	-105.4
-80	54455	53878	53314	52767	52242	51741	51270	50830	50425	50059	49733	49450	49213	49022	48881	48792	48755	48772	48845
	-105.1	-104.8	-104.5	-104.1	-103.6	-103.2	-102.8	-102.4	-102.1	-101.8	-101.7	-101.6	-101.6	-101.8	-102.0	-102.3	-102.6	-102.9	-103.2
-85	55915	55615	55323	55039	54766	54507	54262	54034	53825	53636	53469	53325	53205	53111	53043	53003	52991	53006	53050
	-100.1	-100.3	-100.3	-100.4	-100.4	-100.4	-100.4	-100.3	-100.3	-100.3	-100.2	-100.2	-100.2	-100.2	-100.1	-100.1	-100.1	-100.0	-100.0
-90	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897	56897
	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7	-95.7

IGRF 1985

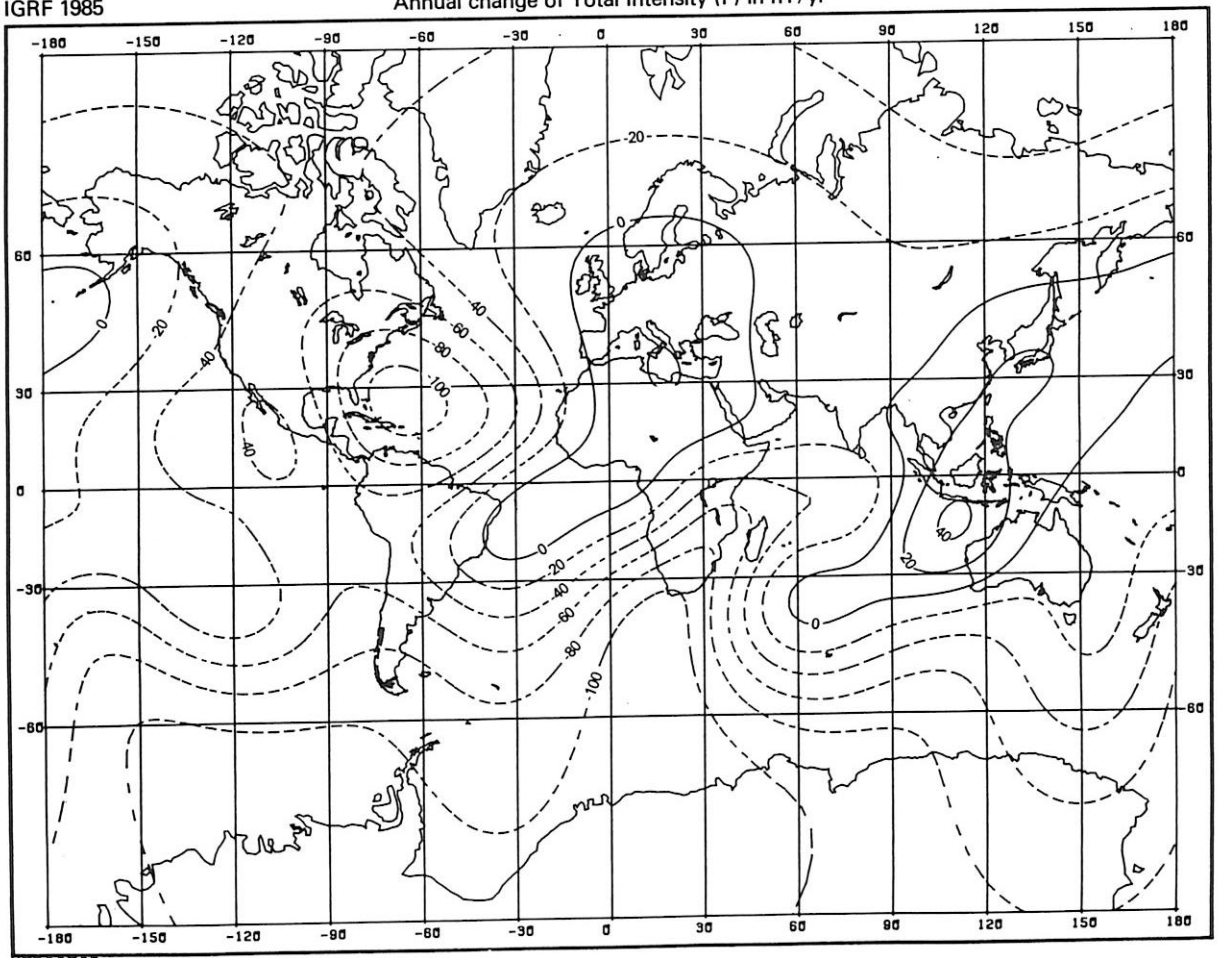
Total Intensity (F) in nT



MERCATOR

IGRF 1985

Annual change of Total Intensity ($\dot{F}$) in nT/yr



APPENDIX

The International Geomagnetic Reference Field
Fourth generation

Spherical harmonic coefficients of the 9 main-field models, in nT, and of the predictive secular-variation model (SV) for 1985-90, in nT/yr.

	m	n	1945	1950	1955	1960	1965	1970	1975	1980	1985	SV
g	0	1	-30634	-30571	-30507	-30411	-30334	-30220	-30100	-29992	-29877	23.2
g	1	1	-2240	-2241	-2134	-2162	-2119	-2068	-2013	-1956	-1903	10.0
h	1	1	5806	5807	5796	5780	5776	5737	5675	5604	5497	-24.5
g	0	2	-1215	-1330	-1432	-1546	-1662	-1781	-1902	-1997	-2073	-13.7
g	1	2	2972	2978	2995	3007	2997	3000	3010	3027	3045	3.4
h	1	2	-1700	-1813	-1896	-1948	-2016	-2047	-2067	-2129	-2191	-11.5
g	2	2	1588	1579	1567	1572	1594	1611	1632	1663	1691	7.0
h	2	2	497	388	263	209	114	25	-68	-200	-309	-20.2
g	0	3	1274	1293	1308	1307	1297	1287	1276	1281	1300	5.1
g	1	3	-1833	-1878	-1955	-1987	-2038	-2091	-2144	-2180	-2208	-4.6
h	1	3	-512	-485	-487	-421	-404	-366	-333	-336	-312	5.3
g	2	3	1225	1271	1293	1288	1292	1278	1260	1251	1244	-0.6
h	2	3	185	228	235	230	240	251	262	271	284	2.3
g	3	3	926	890	897	879	856	838	830	833	835	0.1
h	3	3	-5	-67	-73	-130	-165	-196	-223	-252	-296	-10.8
g	0	4	980	975	964	962	957	952	946	938	937	0.1
g	1	4	771	795	794	804	804	800	791	782	780	-0.6
h	1	4	155	171	167	150	148	167	191	212	233	3.8
g	2	4	544	532	510	492	479	461	438	398	363	-7.8
h	2	4	-280	-306	-275	-272	-269	-266	-265	-257	-250	2.2
g	3	4	-408	-402	-392	-392	-390	-395	-405	-419	-426	-1.4
h	3	4	-68	-51	-44	1	13	26	39	53	68	2.5
g	4	4	300	310	292	267	252	234	216	199	169	-6.8
h	4	4	-158	-184	-249	-254	-269	-279	-288	-297	-298	0.9
g	0	5	-286	-255	-232	-236	-219	-216	-218	-218	-215	1.3
g	1	5	341	355	360	358	358	359	356	357	356	0.1
h	1	5	-14	-8	14	12	19	26	31	46	47	0.1
g	2	5	207	201	237	229	254	262	264	261	253	-1.5
h	2	5	80	101	111	121	128	139	148	150	148	-0.2
g	3	5	-25	-3	-13	-34	-31	-42	-59	-74	-94	-3.2
h	3	5	-65	-95	-90	-115	-126	-139	-152	-151	-155	-0.1
g	4	5	-156	-160	-176	-153	-157	-160	-159	-162	-161	0.1
h	4	5	-114	-100	-111	-106	-97	-91	-83	-78	-75	0.6
g	5	5	-88	-76	-68	-64	-62	-56	-49	-48	-48	-0.1
h	5	5	83	73	77	83	81	83	88	92	95	0.0
g	0	6	68	57	47	47	45	43	45	48	52	1.4
g	1	6	67	50	57	56	61	64	66	66	65	-0.3
h	1	6	9	-1	-7	-13	-11	-12	-13	-15	-16	-0.4
g	2	6	6	15	4	-3	8	15	28	42	50	1.7
h	2	6	118	100	101	106	100	100	99	93	90	-1.1
g	3	6	-244	-261	-250	-241	-228	-212	-198	-192	-186	0.6
h	3	6	18	52	46	55	68	72	75	71	69	-0.8
g	4	6	-12	8	12	3	4	2	1	4	4	0.0
h	4	6	-9	-7	-16	-26	-32	-37	-41	-43	-50	-2.3
g	5	6	14	8	13	4	1	3	6	14	17	0.9
h	5	6	-12	-17	-6	-10	-8	-6	-4	-2	-4	-0.5
g	6	6	-100	-108	-105	-108	-111	-112	-111	-108	-102	1.2
h	6	6	-42	-21	-21	-16	-7	1	11	17	20	-0.1
g	0	7	72	67	80	72	75	72	71	72	75	0.2
g	1	7	-61	-48	-66	-52	-57	-57	-56	-59	-61	-0.6
h	1	7	-42	-44	-52	-53	-61	-70	-77	-82	-82	0.2
g	2	7	6	-3	2	4	4	1	1	2	2	-0.5
h	2	7	-39	-18	-37	-25	-27	-27	-26	-27	-26	1.0
g	3	7	6	16	4	11	13	14	16	21	24	0.8
h	3	7	2	-6	6	-8	-2	-4	-5	-5	-1	1.1
g	4	7	-44	-38	-46	-20	-26	-22	-14	-12	-6	1.0
h	4	7	-1	-8	-1	3	6	8	10	16	23	1.9
g	5	7	-2	1	-15	-4	-6	-2	0	1	4	0.4
h	5	7	25	32	29	28	26	23	22	18	17	0.3
g	6	7	18	9	8	15	13	13	12	11	9	-0.5
h	6	7	-19	-18	-20	-16	-23	-23	-23	-23	-21	0.2
g	7	7	27	11	14	6	1	-2	-5	-2	0	-0.1

h	7	7	-23	-22	-12	-18	-12	-11	-12	-10	-6	0.9
g	0	8	15	16	5	6	13	14	14	18	21	0.7
g	1	8	5	4	17	4	5	6	6	6	6	0.0
h	1	8	-7	2	12	7	7	7	6	7	7	0.1
g	2	8	-12	-8	-3	-3	-4	-2	-1	0	0	0.3
h	2	8	9	-2	1	-16	-12	-15	-16	-18	-21	-1.0
g	3	8	-21	-31	-30	-13	-14	-13	-12	-11	-11	0.4
h	3	8	0	-3	10	5	9	6	4	4	5	0.1
g	4	8	18	15	14	-5	0	-3	-8	-7	-9	-0.3
h	4	8	-13	-7	-20	-19	-16	-17	-19	-22	-25	-0.8
g	5	8	16	8	27	10	8	5	4	4	2	-0.3
h	5	8	5	6	5	5	4	6	6	9	11	0.2
g	6	8	-14	-17	-15	-6	-1	0	0	3	4	0.1
h	6	8	26	27	34	23	24	21	18	16	12	-0.8
g	7	8	1	7	1	15	11	11	10	6	4	-0.5
h	7	8	1	-6	4	-2	-3	-6	-10	-13	-16	-0.1
g	8	8	10	13	12	5	4	3	1	-1	-6	-0.8
h	8	8	-19	-22	-19	-18	-17	-16	-17	-15	-10	1.3
g	0	9				13	8	8	7	5	5	
g	1	9				5	10	10	10	10	10	
h	1	9				-22	-22	-21	-21	-21	-21	
g	2	9				4	2	2	2	1	1	
h	2	9				14	15	16	16	16	16	
g	3	9				-12	-13	-12	-12	-12	-12	
h	3	9				5	7	6	7	9	9	
g	4	9				14	10	10	10	9	9	
h	4	9				-5	-4	-4	-4	-5	-5	
g	5	9				5	-1	-1	-1	-3	-3	
h	5	9				0	-5	-5	-5	-6	-6	
g	6	9				-2	-1	0	-1	-1	-1	
h	6	9				11	10	10	10	9	9	
g	7	9				0	5	3	4	7	7	
h	7	9				10	10	11	11	10	10	
g	8	9				0	1	1	1	2	2	
h	8	9				2	-4	-2	-3	-6	-6	
g	9	9				-1	-2	-1	-2	-5	-5	
h	9	9				-2	1	1	1	2	2	
g	0	10				-5	-2	-3	-3	-4	-4	
g	1	10				-2	-3	-3	-3	-4	-4	
h	1	10				3	2	1	1	1	1	
g	2	10				0	2	2	2	2	2	
h	2	10				0	1	1	1	0	0	
g	3	10				-5	-5	-5	-5	-5	-5	
h	3	10				4	2	3	3	3	3	
g	4	10				-2	-2	-1	-2	-2	-2	
h	4	10				3	6	4	4	6	6	
g	5	10				8	4	6	5	5	5	
h	5	10				-4	-4	-4	-4	-4	-4	
g	6	10				3	4	4	4	3	3	
h	6	10				-2	0	0	-1	0	0	
g	7	10				0	0	1	1	1	1	
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g	8	10				1	2	0	0	2	2	
h	8	10				5	3	3	3	4	4	
g	9	10				0	2	3	3	3	3	
h	9	10				3	0	1	1	0	0	
g	10	10				-1	0	-1	-1	0	0	
h	10	10				-3	-6	-4	-5	-6	-6	

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