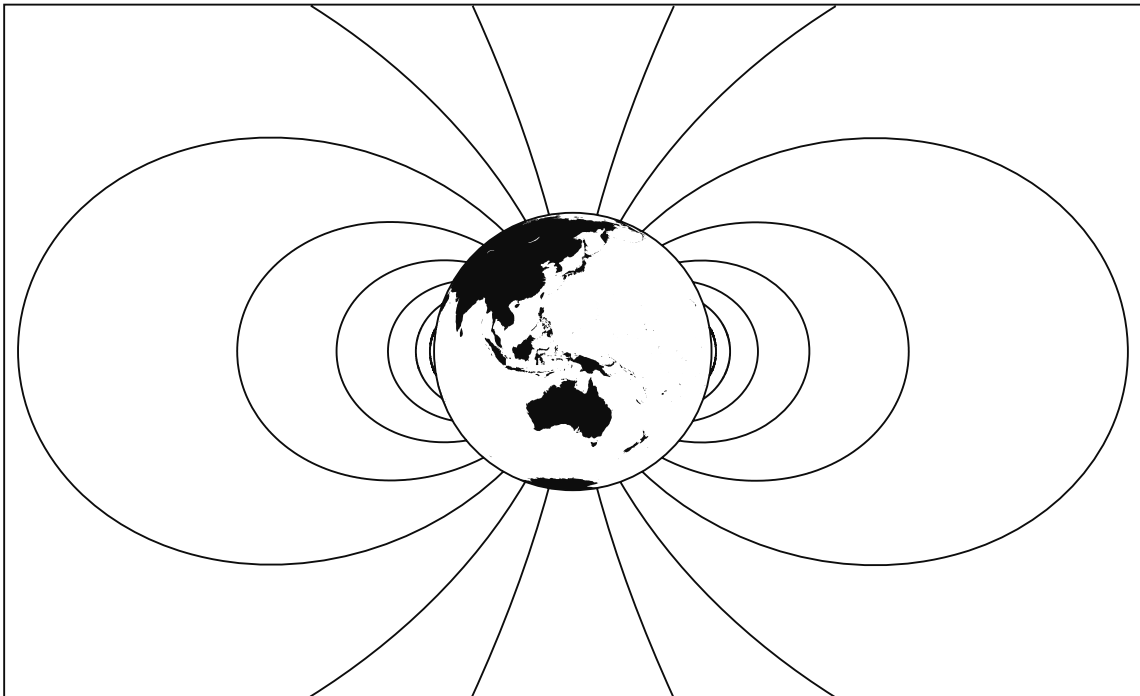


World Data Center for Geomagnetism, Kyoto

DATA CATALOGUE

NO. 32 FEBRUARY 2020



Data Analysis Center for
Geomagnetism and Space Magnetism
GRADUATE SCHOOL OF SCIENCE
KYOTO UNIVERSITY

World Data Center for Geomagnetism, Kyoto

DATA CATALOGUE

NO. 32

Compiled by

Y. Odagi, H. Toh,

and

S. Taguchi

February 2020

Data Analysis Center for
Geomagnetism and Space Magnetism
GRADUATE SCHOOL OF SCIENCE
KYOTO UNIVERSITY

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PREFACE

World Data Center (WDC) for Geomagnetism, Kyoto is operated by the Data Analysis Center for Geomagnetism and Space Magnetism, the Graduate School of Science, Kyoto University. It provides data services and conducts analysis and research. The WDC publishes a latest data catalogue every a few years. Reports on the data analysis results are published as Data Books at irregular intervals.

This catalogue gives information on the geomagnetic data collected at the WDC. The same information is stored as a database which is accessible through WWW home page (<http://wdc.kugi.kyoto-u.ac.jp/>), in which PDF version of this catalogue is also available from (<http://wdc.kugi.kyoto-u.ac.jp/wdc/pdf/Catalogue/Catalogue.pdf>). Digital data and various data services are available from the on-line database as well. The information on the databases is documented on our WWW home page.

Inquiries on ordering and charges should be made to:

World Data Center for Geomagnetism, Kyoto
Graduate School of Science, Kyoto University
Kyoto 606-8502, Japan

Tel: 81-75-753-3929
Fax: 81-75-722-7884
E-mail: taguchi@kugi.kyoto-u.ac.jp
toh@kugi.kyoto-u.ac.jp

URL: <http://wdc.kugi.kyoto-u.ac.jp/>

Copies of the data can be provided with nominal charges. Orders of data should include the following information:

- (1) User's names, affiliation and address,
- (2) Data type: e.g., hourly values (geomagnetic or earth telluric current), normal-run magnetograms, rapid-run magnetograms, normal-run tellurigrams, rapid-run tellurigrams, or digital data,
- (3) Media: hard copy, microfilm, microfiche, CD/DVD, or on-line,
- (4) Data period: year, month, day,
- (5) Station name(s).

Microfilm copies may be ordered in the minimum unit of a calendar year, because the original film is kept in units of a calendar year.

Address:

Data Analysis Center for
Geomagnetism and Space Magnetism
Graduate School of Science
Kyoto University
Kyoto 606-8502
Japan

Staff:

Satoshi Taguchi (Director)
Hiroaki Toh
Tatsuko Tsutsui
Yoko Odagi

Online data catalogue for archived data is available from

<http://wdc.kugi.kyoto-u.ac.jp/catmap/index.html>



Geomagnetic Data Service

Indices

Dst index (DOI: 10.17593/14515-74000)

AE index

Plot and download of Dst and AE (Hourly Values) indices [Since 1957]

Plot and download of ASY/SYM [since 1981] and AE [since 1975] indices

Kp index [Since 1932] (with ap and Ap)

The quietest and most disturbed days [Since 1932]

Substorm Swift Search (Stack plots and digital data of AE/ASY/Wp indices and others) [since 2005]

Archive

Digital Data

Geomagnetic hourly values [Since 1844]

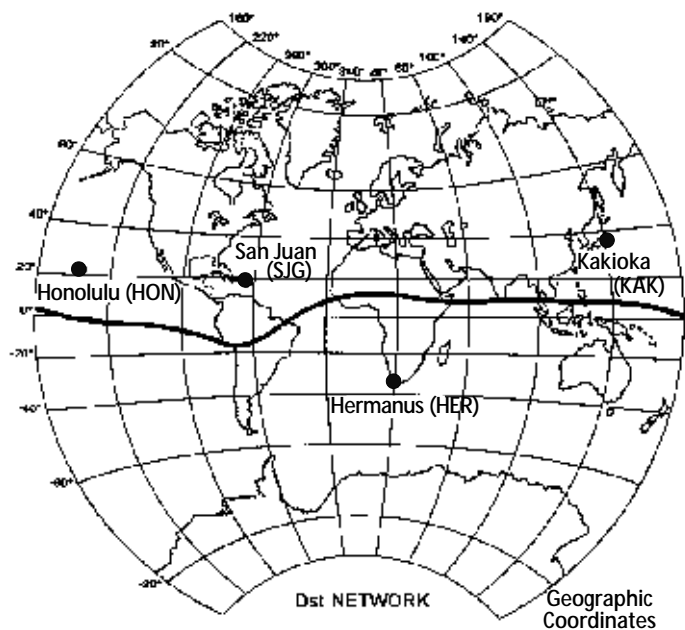
1 minute values [Since 1970]

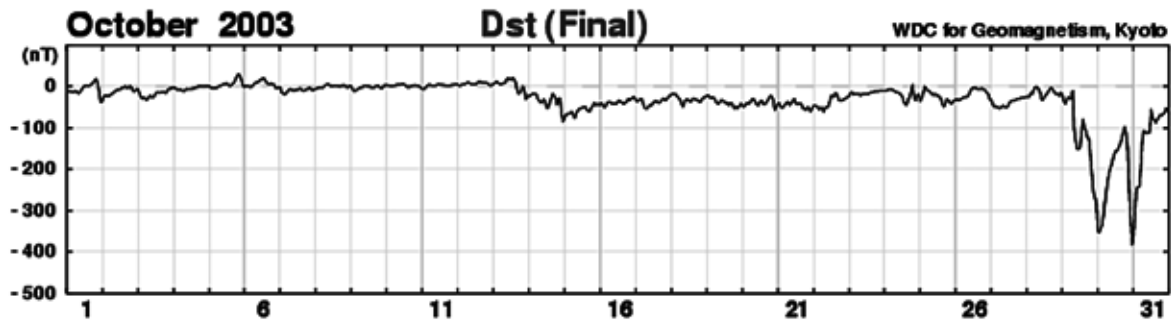
1 second values [Since 1978]

Analogue record image [Since 1924]

Location of 4 Dst observatories

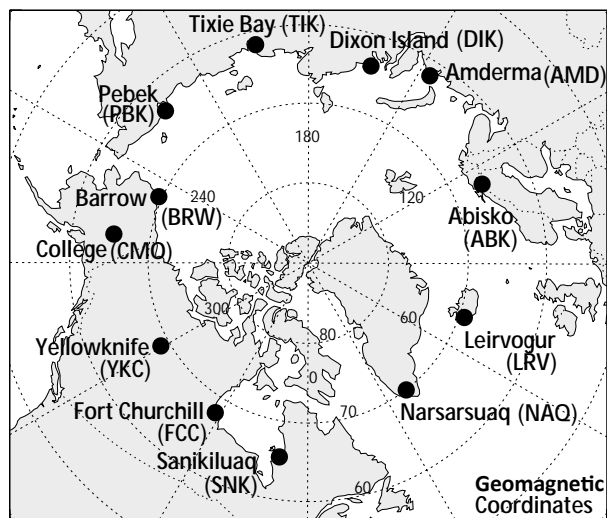
Observatory	ABB	Geographic	
		Lat.	Long.
Kakioka	KAK	36.232	140.186
Honolulu	HON	21.320	202.000
San Juan	SJG	18.110	293.850
Hermanus	HER	-34.425	19.225



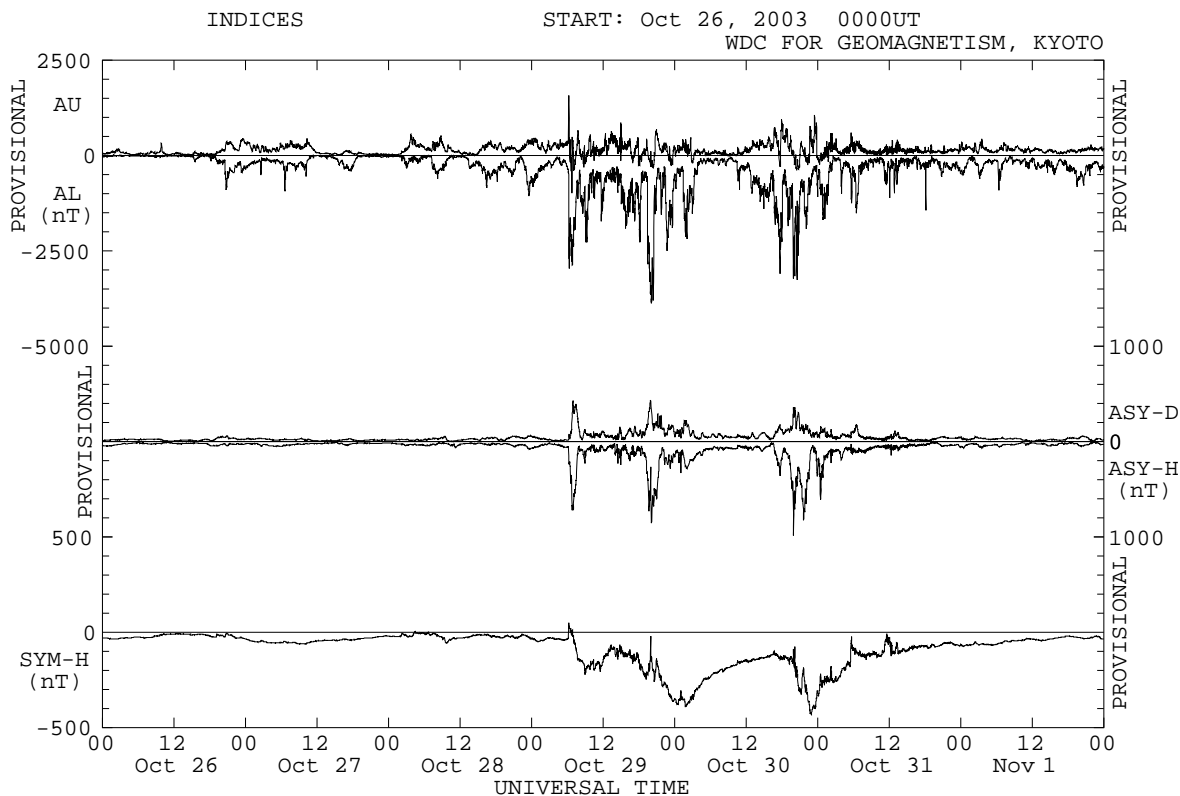


Location of 12 AE observatories

Observatory	ABB	Geographic	
		Lat.	Long.
Abisko	ABK	68.358	18.823
Amderma	AMD	69.470	61.420
Dixon Island	DIK	73.543	80.562
Tixie Bay	TIK	71.580	129.000
Pebek	PBK	70.833	170.900
Barrow	BRW	71.320	203.380
College	CMO	64.870	212.140
Yellowknife	YKC	62.480	245.518
Fort Churchill	FCC	58.759	265.912
Sanikiluaq	SNK	56.500	280.800
Narsarsuaq	NAQ	61.200	314.600
Leirvogur	LRV	64.183	338.301



AE and ASY/SYM indices



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STATION LIST IN ALPHABETICAL ORDER

This list gives the station name, ABB (abbreviation) code, sponsoring country, CSAGI code, GG (geographic) code, geographic coordinates, geomagnetic coordinates, dipole parameters, geomagnetic elements, elevation above sea level, and opening and closing years.

- 1) Station names are those usually used. Alternative names are shown on page 25.
- 2) ABB code and CSAGI code are, respectively, taken from IAGA Bulletin No.32v Geomagnetic Data 1991 (1998) and Annales of the IGY, Vol.36 (1964). Temporary ABB codes are given to some stations which are not listed in the IAGA Bulletin.
- 3) The GG code is derived from the geographic coordinates of each station, where the first three digits show the colatitude in degrees, and the last three the east longitude in degrees.
- 4) Geomagnetic coordinates and dipole parameters are calculated from the dipole terms in the International Geomagnetic Reference Field Model 'IGRF 13th' (see <https://www.ngdc.noaa.gov/IAGA/vmod/igrf.html>), where DECLI is the angle between the geographic and geomagnetic meridians through the station (measured positively eastward from the geographic north). DIP is the angle that the magnetic field vector makes with the horizontal plane (measured positively downward). DL is the geocentric equatorial distance in earth radii of the dipole field line passing through the station.
- 5) The geomagnetic elements are the latest observed values collected at the WDC for Geomagnetism; positive eastward for D (declination), and positive downward for I (inclination or dip).

Note : Values of the geomagnetic elements and opening-closing dates are revised, when the WDC obtains new information from the observatories.

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Station Name	ABB. CODE	Sponsoring Country	CSAGI CODE	GG CODE	Geographic		Geomagnetic	
					Lat.	Long.	Lat.	Long.
Aberystwyth	AWY	U. K.		038356	52.430	355.930	54.74	80.93
Abinger	ABN	U. K.		039000	51.185	359.613	52.94	84.12
Abisko	ABK	Sweden	A054	022019	68.358	18.823	66.14	113.53
Accra	ACR	Ghana		084000	5.630	359.830	8.34	73.61
Adak	ADA	U. S. A.	B100	038183	51.870	183.350	48.55	245.36
Addis Ababa	AAE	Ethiopia	E568	081039	9.035	38.770	5.44	112.56
Aedey	AED	Japan		024337	66.090	337.350	70.68	70.77
Agincourt	AGN	Canada	B249	046281	43.783	280.733	52.93	352.08
Ahmedabad	AHM	India		067073	23.020	72.600	15.06	147.08
Alert	ALE	Canada	A005	008298	82.497	297.647	87.60	145.69
Alibag	ABG	India	E538	071073	18.638	72.872	10.69	146.92
Alice Springs	ASP	Australia		114134	-23.761	133.883	-31.96	208.87
Allahabad	ALH	India		065082	25.050	82.000	16.34	156.16
Alma Ata	AAA	Kazakhstan	C050	047077	43.250	76.920	34.79	153.24
Almeria	ALM	Spain	C137	053358	36.853	357.540	39.31	77.30
Aloushta	ALU	Ukraine	C360	045034	44.680	34.420	41.07	115.25
Amatsia	AMT	Israel		058035	31.550	34.917	28.13	112.66
Amarnaya	AMN	Russia		024034	65.800	33.800	61.61	123.77
Amberley	AML	New Zealand	B979	133173	-43.152	172.722	-46.23	254.14
Amderma	AMD	Russia		021061	69.470	61.420	62.00	147.34
Anchorage	AMU	U. S. A.	A130	029210	61.235	210.130	61.76	265.48
Ancon	ANC	Peru		102283	-11.770	282.850	-2.31	355.62
Andrews AFB	AWS	U. S. A.		052283	38.200	282.630	47.39	354.54
Ankara	ANK	Turkey		050033	39.890	32.760	36.63	112.46
Annamalainagar	ANN	India	E562	079080	11.367	79.683	2.93	152.90
Antipolo	ANO	Philippines		075121	14.600	121.170	5.36	193.46
Apatity	APA	Russia		022033	67.550	33.330	63.32	124.68
Apia	API	New Zealand	E653	104188	-13.807	188.225	-15.02	263.30
Arctic Ice Flo	AIF	U. S. A.	A019	006193	83.520	193.050	78.17	213.56
Arctic Village	AVI	U. S. A.		022214	68.130	214.430	68.86	263.17
Arctowski	ARC	Poland		152302	-62.160	301.522	-52.81	10.98
Arequipa	ARE	Peru		106289	-16.470	288.520	-6.96	1.16
Argentine Island	AIA	U. K.	A973	155296	-65.250	295.730	-55.77	6.28
Arkhangelsk	ARK	Russia		025041	64.583	40.500	59.56	128.46
Arti	ARS	Russia		034059	56.433	58.567	49.51	139.97
Ascension Island	ASC	U. K.		098346	-7.952	345.623	-2.89	57.55
Ashkhabad	ASH	Turkmenistan	C126	052058	37.950	58.100	31.32	135.52
Aso	ASO	Japan	C223	057131	32.882	131.009	24.02	201.72
Asuka Station	ASK	Japan		162024	-71.530	24.140	-70.27	69.61
Averroes	AVE	Morocco		057353	33.300	352.590	36.61	71.38
Back	BKC	Canada		032266	57.690	265.770	66.05	330.93
Baguio	BAG	Philippines	E547	074121	16.400	120.633	7.13	192.87
Baker Lake	BLC	Canada	A099	026264	64.318	263.988	72.44	325.12
Baldwin	BAL	U. S. A.		051265	38.780	264.830	47.18	333.91
Bangkok	BKK	Thailand		076101	13.720	100.570	4.28	173.42
Bangui	BNG	France	E583	086019	4.333	18.566	4.04	91.93
Bar Gyora	BGY	Israel		058035	31.723	35.088	28.28	112.86
Baranov	BRN	Russia		011101	79.170	101.370	69.72	176.76
Barentsburg	BBG	Russia	A018	011016	78.630	16.380	75.34	128.37
Barrow	BRW	U. S. A.	A039	019203	71.320	203.380	69.97	249.27
Barter Island	BTI	U. S. A.	A045	020216	70.130	216.330	70.96	262.29
Batavia	BTV	Indonesia		096107	-6.180	106.830	-15.55	179.49
Beijing	BJI	China		050116	40.000	116.200	30.50	187.91
Beijing Ming Tombs	BMT	China		050116	40.300	116.200	30.80	187.90
Beliy Island	BEY	Russia		017070	73.300	70.000	65.07	155.43

Dipole parameters			Geomagnetic elements				Elev. (m)	Open-Closed	Station Name
Decli.	Dip.	DL	YEAR	H	D	I			
-15.29	70.53	3.00					-	Aberystwyth	
-14.98	69.31	2.75	1957	18755	-8.55	66.63	244	1924-1957	Abinger
-23.84	77.53	6.11	2018	11423	8.97	77.62	380	1921-	Abisko
-9.07	16.34	1.02						1963-1965	Accra
13.87	66.18	2.28	1966	21506	8.99	63.47		1964-1965	Adak
-8.79	10.79	1.01	2013	36277	1.88	2.95	2441	1958-	Addis Ababa
-22.26	80.06	9.14						-	Aedey
1.78	69.31	2.75	1969	16336	-7.67	73.73	175	1898-1969	Agincourt
-5.53	28.28	1.07						1973-1973	Ahmedabad
-135.47	88.80	572.46	2003	3463	-64.43	86.44	60	1961-2004	Alert
-5.40	20.69	1.04	2017	38166	0.34	27.75	7	1904-	Alibag
4.94	-51.29	1.39	2017	30190	4.63	-55.39	557	1992-	Alice Springs
-4.18	30.39	1.09	2014	36168	-0.09	39.22	100	-	Allahabad
-5.78	54.26	1.48	2015	24751	5.07	63.26	1300	1957-	Alma Ata
-11.47	58.59	1.67	1991	26926	-3.51	51.06	65	1955-1991	Almeria
-11.96	60.16	1.76						1957-1961	Aloushta
-10.18	46.92	1.29	2000	30207	3.35	46.97	350	1975-2000	Amatsia
-19.25	74.88	4.42						-	Ambarnaya
12.41	-64.41	2.09	1977	21661	21.87	-68.33		1902-1978	Amberley
-14.49	75.11	4.54						1973-1979	Amderma
19.69	74.97	4.47	1958	15241	26.08	74.27		1957-1959	Anchorage
0.73	-4.62	1.00	1995	26736	1.68	1.19	49	1990-2010	Ancon
1.13	65.30	2.18						1972-1972	Andrews AFB
-11.33	56.08	1.55	1993	25410	5.10	57.08	905	1986-1993	Ankara
-4.36	5.85	1.00	1993	40224	-2.26	7.19	0	1957-1993	Annamalainagar
2.25	10.63	1.01	1938	38356	0.60	15.79		1910-1940	Antipolo
-20.49	75.90	4.96						1973-1973	Apatity
9.62	-28.21	1.07	2017	33289	12.01	-31.05	2	1905-	Apia
52.71	84.02	23.81						1957-1958	Arctic Ice Flo
25.68	79.06	7.69						-	Arctic Village
-3.81	-69.23	2.74	1995	20988	12.39	-54.71	16	1978-1995	Arctowski
-0.20	-13.72	1.01						1958-	Arequipa
-2.44	-71.21	3.16	2015	20711	15.90	-57.18	10	1957-	Argentine Island
-17.26	73.63	3.90	1994	12778		76.14		1958-1989	Arkhangelsk
-10.91	66.88	2.37	2015	16069	13.39	73.40	290	1973-	Arti
-8.01	-5.77	1.00	2018	20532	-14.76	-44.30	177	1992-	Ascension Island
-8.33	50.59	1.37	2006	27344	4.28	56.61	300	1957-2006	Ashkhabad
4.12	41.71	1.20	1958	31760	-5.52	47.28	561	1932-1968	Aso
-28.74	-79.83	8.77					930	1987-1991	Asuka Station
-10.66	56.06	1.55	2003	28827	-3.67	45.63	230	1970-1994	Averroes
8.51	77.48	6.07						1978-	Back
2.17	14.05	1.02	1983	40325				1961-1989	Baguio
12.39	81.01	10.98	2016	6781	-3.05	83.37	30	1951-	Baker Lake
5.28	65.14	2.16	1909	21666	8.57	68.84		1901-1909	Baldwin
-1.10	8.52	1.01						-	Bangkok
-9.43	8.05	1.00	2010	32034	0.17	-16.31	395	1952-2011	Bangui
-10.18	47.09	1.29	2018	30071	4.41	47.95	750	1989-	Bar Gyora
-2.80	79.53	8.32						-	Baranov
-40.25	82.55	15.62						1957-1959	Barentsburg
28.33	79.67	8.52	2017	9038	14.27	80.94	12	1949-	Barrow
28.29	80.21	9.40	1958	8825	35.53	81.22		1957-1959	Barter Island
-0.08	-29.10	1.08	1944	37145	1.52	-32.53		1880-1933	Batavia
1.68	49.68	1.35	1999	29190	-6.13	58.09	69	1957-1999	Beijing
1.68	50.01	1.36	2017	28215	-8.10	59.25	183	1990-	Beijing Ming Tombs
-13.60	76.92	5.63						1973-1984	Beliy Island

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Station Name	ABB. CODE	Sponsoring Country	CSAGI CODE	GG CODE	Geographic		Geomagnetic	
					Lat.	Long.	Lat.	Long.
Beloit	BLT	U. S. A.	B012	051262	39.480	261.870	47.65	330.42
Belsk	BEL	Poland	B101	038021	51.837	20.792	50.13	104.94
Big Delta	BDE	U. S. A.	A102	026214	64.000	214.270	65.03	267.28
Binza	BIN	Zaire	E631	094015	-4.380	15.260	-3.96	87.26
Bjornoya	BJN	Norway	A031	015019	74.504	19.001	71.61	121.59
Black Forest	BFO	Germany		042008	48.333	8.317	48.75	91.63
Bochum	BOC	Germany		039007	51.490	7.230	51.99	91.82
Bodo	BOD	Norway		021014	69.300	14.420	67.67	110.83
Borga	BGA	South Africa		163356	-72.970	356.200	-67.73	46.48
Borok	BOX	Russia	B014	032038	58.070	38.230	53.58	123.26
Bossekop	BOP	Norway		020023	69.970	23.250	66.97	118.83
Boulder	BOU	U. S. A.	B295	050255	40.130	254.760	47.65	322.23
Brandon	BRD	Canada		040280	49.870	280.025	59.00	350.82
Brisbane	BRS	Australia	C918	118153	-27.530	152.920	-33.72	229.71
Brorfelde	BFE	Denmark		034012	55.625	11.672	55.25	98.03
Budakeszi	BUZ	Hungary		042019	47.520	18.900	46.25	101.57
Budkov	BDV	Czecho	B328	041014	49.080	14.015	48.55	97.45
Bunia	BNA	Zaire	E611	088030	1.530	30.180	-0.59	102.93
Burlington	BRT	U. S. A.	C401	051258	39.280	257.730	47.09	325.74
Byrd Station	BYR	U. S. A.	A997	170241	-80.000	240.500	-72.14	335.45
Cambridge Bay	CBB	Canada		021255	69.123	254.969	76.05	307.29
Camp Douglas	CDS	U. S. A.		046270	43.980	269.730	52.67	338.91
Campbell Island	CAI	New Zealand		143169	-52.500	169.200	-55.88	253.98
Canberra	CNB	Australia		125149	-35.315	149.363	-41.84	227.32
Cape Chelyuskin	CCS	Russia	A020	012104	77.717	104.283	68.23	178.25
Cape Dennison	CDN	Australia		157143	-67.000	142.670	-73.66	233.89
Cape Evans	CEV	New Zealand		168205	-77.630	205.420	-73.41	311.62
Cape Kamenny	CKA	Russia		022074	68.500	73.600	60.10	155.76
Cape Parry	CPY	U. S. A.		020235	70.200	235.300	74.11	281.19
Cape Schmidt	CPS	Russia		021181	68.920	180.520	64.51	233.57
Cape Town	CTO	South Africa		124018	-33.950	18.470	-33.45	84.88
Cape Wellen	CWE	Russia	A077	024190	66.170	190.170	63.28	243.69
Cape Zhelania	CZA	Russia		013069	77.000	68.600	68.76	156.99
Capri	CPI	Italy	C078	049014	40.550	14.217	40.21	94.90
Carrollton	CAX	U. S. A.	B269	051267	39.370	266.530	47.88	335.78
Casey	CSY	Australia		156111	-66.283	110.533	-75.53	185.20
Casper	CSR	U. S. A.	B261	047254	42.850	253.700	50.23	320.47
Castellaccio	CAO	Italy	B239	046009	44.430	8.933	44.86	90.89
Castello Tesino	CTS	Italy		044012	46.050	11.650	45.99	94.08
Castle Rock	CRC	U. S. A.		053238	37.230	237.870	42.78	304.28
Cebu	CCP	Philippines		080124	10.300	123.900	1.21	196.31
Cha-Pa	CPA	Vietnam	E528	068104	22.336	103.835	12.81	176.69
Chambon-La-Forêt	CLF	France	B168	042002	48.020	2.270	49.44	85.52
Changchun	CNH	China		046125	43.827	125.299	34.63	195.75
Charcot	CTX	France	A985	159139	-69.367	139.033	-76.36	232.19
Charters Towers	CTA	Australia		110146	-20.090	146.264	-27.16	221.60
Cheltenham	CLH	U. S. A.		051283	38.700	283.200	47.90	355.19
Chengdu	CDP	China		059104	31.000	103.700	21.44	176.66
Cheongyang	CYG	Rep. of Korea		054129	36.367	128.850	27.37	199.48
Chesterfield Inlet	CFI	Canada		027269	63.340	269.290	71.92	333.27
Chichijima	CBI	Japan		063142	27.096	142.185	19.11	212.64
Chiclayo	CCL	Peru	E595	097280	-6.800	280.200	2.58	352.92
Chilbolton	CLB	U. K.		039358	51.140	358.170	53.13	82.64
Chimbote	CMB	Peru	E596	099281	-9.100	281.400	0.32	354.15
Chiripa	CRP	Costa Rica		080275	10.440	275.089	19.56	347.22

Dipole parameters			Geomagnetic elements				Elev. (m)	Open-Closed	Station Name
Decli.	Dip.	DL	YEAR	H	D	I			
5.99	65.50	2.20	1958	20822	10.19	68.79		1957-1959	Beloit
-14.75	67.34	2.43	2018	19032	6.26	67.81	180	1960-	Belsk
21.75	76.90	5.61	1958	12998	29.85	76.79	380	1957-1959	Big Delta
-9.43	-7.87	1.00	1973	26730	-7.92	-35.63		1951-1973	Binza
-31.20	80.56	10.05	2017	8754	10.77	80.73	20	1951-	Bjornoya
-14.18	66.32	2.30	2016	20977	2.07	64.18	641	2004-	Black Forest
-15.15	68.65	2.64	1934		-7.87			1932-1934	Bochum
-25.46	78.40	6.93	1934	12233	-5.70	76.13		1932-1934	Bodo
-23.73	-78.43	6.96						1975-1975	Borga
-14.91	69.75	2.84	2016	15579	12.19	72.81	115	1957-	Borok
-24.57	78.00	6.54	1933	11390	1.58	77.30		1839-1933	Bossekop
7.51	65.50	2.20	2017	20757	8.58	66.51	1682	1961-	Boulder
2.31	73.28	3.77	2017	15172	5.22	74.53	380	2007-	Brandon
8.07	-53.17	1.45						-	Brisbane
-16.59	70.87	3.08	2008	17192	1.62	69.83	80	1980-	Brorfelde
-13.67	64.42	2.09	1955	20840	0.06	63.60		1949-1955	Budakeszi
-14.28	66.17	2.28	2017	20438	3.74	65.21	496	1958-	Budkov
-9.17	-1.17	1.00						1959-1960	Bunia
6.81	65.07	2.16	1959	21062	12.41	67.97		1957-1959	Burlington
22.88	-80.85	10.63	1968	16339	70.53	-74.12		1957-1968	Byrd Station
21.28	82.92	17.20	2016	4802	5.80	85.30	20	1972-	Cambridge Bay
4.67	69.13	2.72						-	Camp Douglas
14.90	-71.28	3.18						-	Campbell Island
8.45	-60.82	1.80	2017	23720	12.57	-65.87	859	1979-	Canberra
-1.34	78.71	7.27	2007	2814	12.73	87.26	10	1935-2007	Cape Chelyuskin
19.64	-81.66	12.63						1912-1913	Cape Dennison
34.54	-81.53	12.27	1965	7910	145.21	-83.03		1912-	Cape Evans
-10.49	73.96	4.03						1973-1976	Cape Kamenniy
28.08	81.90	13.34						-	Cape Parry
21.33	76.59	5.40						-	Cape Schmidt
-11.30	-52.88	1.44	1940	14433	-24.27	-63.67		1932-1940	Cape Town
21.15	75.87	4.94	1996	13800	13.17	75.56	10	1933-1996	Cape Wellen
-16.40	79.00	7.62						-	Cape Zhelania
-12.35	59.40	1.71					225	1957-1995	Capri
4.96	65.67	2.22	1958	19980	6.93	69.62		1957-1959	Carrollton
2.10	-82.65	16.01	2017	9070	-96.59	-81.86	41	1978-	Casey
8.14	67.41	2.44	1958	19620	14.83	70.18		1957-1959	Casper
-13.19	63.32	1.99	1962	22455	-3.58		350	1933-1995	Castellaccio
-13.54	64.22	2.07	2018	22150	3.21	62.33	1175	1964-	Castello Tesino
9.75	61.62	1.86	1974	24298	16.48	61.49		1970-1974	Castle Rock
2.67	2.41	1.00						1961-1963	Cebu
-0.58	24.45	1.05	1991	38532	-1.13	31.29	1550	1955-1991	Cha-Pa
-14.05	66.83	2.36	2016	21209	0.39	63.69	145	1936-	Chambon-La-Foret
3.52	54.09	1.48	2017	25741	-10.08	62.08	234	1979-	Changchun
21.37	-83.08	17.98						1957-1958	Charcot
6.63	-45.73	1.26	2017	31709	7.36	-49.76	370	1983-	Charters Towers
1.00	65.68	2.22	1956	18550	-7.24	70.95	72	1901-1956	Cheltenham
-0.64	38.14	1.15	2017	33829	-1.89	48.38	653	1988-	Chengdu
3.87	45.99	1.27	2016	30339	-7.89	52.95	165	-	Cheongyang
9.38	80.73	10.38	1933	3834	-12.60	86.39		1932-1933	Chesterfield Inlet
5.68	34.72	1.12	2016	32710	-4.18	37.55	155	1970-	Chichijima
1.16	5.16	1.00	1958	30300	6.60	9.70		1957-1960	Chiclayo
-14.92	69.44	2.78						-	Chilbolton
0.97	0.64	1.00	1958	29700	6.50	6.30		1957-1960	Chimbote
2.11	35.40	1.13	2013	27617	-0.38	38.03	1030	1984-	Chiripa

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Station Name	ABB. CODE	Sponsoring Country	CSAGI CODE	GG CODE	Geographic		Geomagnetic	
					Lat.	Long.	Lat.	Long.
Chittagong	CHT	Nigeria	E525	068092	22.350	91.830	13.13	165.29
Christchurch	CHR	New Zealand		134173	-43.530	172.620	-46.62	254.15
Climax	CLI	U. S. A.	B305	051254	39.370	253.820	46.80	321.32
Cocos Keeling Island	CKI	Australia		102097	-12.190	96.830	-21.36	168.98
Coimbra	COI	Portugal	C093	050352	40.220	351.580	43.55	72.09
Colaba	CLA	India		071073	18.900	72.820	10.96	146.89
College	CMO	U. S. A.	A092	025212	64.870	212.140	65.50	264.45
Collmberg	CLL	Germany	B325	039013	51.320	13.000	50.88	97.35
Colorado Springs	CSS	U. S. A.		052256	38.500	255.510	46.11	323.38
Conrad Observatory	WIC	Austria		042016	47.930	15.862	47.13	98.80
Copenhagen	COP	Denmark		034013	55.690	12.580	55.17	98.92
Costa Rica San Jose	CSJ	Costa Rica		080276	9.913	276.044	19.07	348.24
Crozet	CZT	France		136052	-46.430	51.870	-50.95	115.27
Cuzco	CUS	Peru		104288	-13.530	288.030	-4.03	0.69
Dalat	DLT	Vietnam		078108	11.946	108.481	2.46	181.14
Dalian	DLN	China		051122	39.100	121.500	29.76	192.68
Dallas	DAL	U. S. A.	C405	057263	32.980	263.250	41.30	332.85
Dar Es Salaam	DRS	Tanzania		097039	-6.510	39.180	-9.88	110.60
Darwin	DAR	Australia	C897	102131	-12.430	130.830	-20.94	204.66
Davao	DAV	Philippines		083126	7.080	125.580	-1.91	198.13
Davis	DVS	Australia		159078	-68.580	77.970	-75.91	132.29
De Bilt	DBN	Netherland		038005	52.100	5.180	52.91	90.07
Deadhorse	DED	U. S. A.		019211	70.600	210.683	70.47	256.52
Del Rio	DLR	U. S. A.		061259	29.490	259.080	37.50	328.67
Dixon	DIK	Russia	A033	016081	73.543	80.562	64.69	162.53
Dombas	DOB	Norway	A123	028009	62.070	9.120	61.80	99.50
Dome Concordia	DMC	France		165124	-75.250	124.167	-83.57	221.52
Dourbes	DOU	Belgium	B136	040005	50.100	4.600	51.07	88.65
Dumont d'Urville	DRV	France	A979	157140	-66.670	140.010	-73.69	229.97
Durham	DUR	U. S. A.		047289	43.100	289.170	52.31	2.22
East Anglia	EAA	U. K.		037001	52.630	1.300	54.06	86.45
Easter Island	EIC	Chile	E712	117251	-27.170	250.580	-19.35	325.61
Ebro	EBR	Spain	C086	049000	40.957	0.333	42.87	81.25
Eielson AFB	ENB	U. S. A.		025213	64.670	212.920	65.44	265.38
Eights	EGS	U. S. A.		165283	-75.230	282.830	-65.74	357.20
Eilat	ELT	Israel		060035	29.670	34.950	26.28	112.32
Ekaterinburg	SVD	Russia	B019	033061	56.730	61.070	49.54	142.15
Elizabethville	ELI	Zaire	E644	102027	-11.630	27.420	-13.04	98.07
Enkoping	ENK	Sweden		030017	59.600	17.000	58.20	105.18
Esashi	ESA	Japan		051141	39.237	141.355	31.08	210.50
Eskdalemuir	ESK	U. K.	B038	035357	55.317	356.800	57.38	83.23
Eskimo Point	EKP	Canada		029266	61.100	265.930	69.44	329.71
Espanola	EPN	U. S. A.	C406	054254	35.820	253.930	43.30	322.08
Ettaiyapuram	ETT	India		081078	9.167	78.017	0.88	151.10
Eureka	EUA	Canada		010274	80.000	274.100	87.68	279.74
Eusebio	EUS	U. S. A.		094322	-3.870	321.580	3.94	34.26
Eyrewell	EYR	New Zealand		133172	-43.483	172.400	-46.61	253.91
Fanning	FAN	U. K.	E585	086201	3.900	200.620	4.36	272.62
Fort Chipewyan	FCP	Canada		031248	58.800	248.000	65.26	308.00
Fort Churchill	FCC	Canada	A145	031266	58.759	265.912	67.12	330.71
Fort McMurray	FMM	Canada		033249	56.700	248.600	63.29	309.87
Fort Rae	FRA	Canada		027244	62.800	243.900	68.56	300.23
Fort Reliance	FRL	Canada		023251	67.420	251.000	73.92	304.32
Fort Severn	FSV	Canada		034272	55.980	272.350	64.79	340.07
Fort Simpson	FSP	U. S. A.		028239	61.750	238.770	66.81	295.08

Dipole parameters			Geomagnetic elements				Elev.	Open-Closed	Station
Decli.	Dip.	DL	YEAR	H	D	I	(m)	Name	
-2.57	25.01	1.05					-	Chittagong	
12.49	-64.71	2.12	1930	22108	17.81	-68.31	1902-1945	Christchurch	
7.58	64.85	2.13	1958	21820	13.88	66.85	1957-1959	Climax	
-1.83	-38.03	1.15	2017	34738	-2.17	-43.14	-	Cocos Keeling Island	
-11.72	62.25	1.90	2017	25710	-2.35	54.66	140 1866-	Coimbra	
-5.41	21.17	1.04	1906	37393	0.22	22.06	10 1846-1906	Colaba	
22.40	77.16	5.81	2017	12547	17.74	77.21	197 1941-	College	
-14.98	67.87	2.51	1935	18826	-4.73	66.25	1932-1935	Collmberg	
7.14	64.31	2.08					1973-1973	Colorado Springs	
-13.90	65.10	2.16	2017	21052	4.10	64.31	1088 2014-	Conrad Observatory	
-16.57	70.81	3.06	1908	17403	-9.72	68.72	1892-1908	Copenhagen	
1.94	34.66	1.12					1575 -	Costa Rica San Jose	
-12.34	-67.93	2.52	2015	16199	-49.91	-64.84	160 1974-	Crozet	
-0.12	-8.03	1.00					1965-1966	Cuzco	
0.19	4.91	1.00	2015	40781	-0.66	11.40	1583 1978-	Dalat	
2.64	48.83	1.33	2001	29209	-7.03	56.50	131 1981-2001	Dalian	
5.09	60.35	1.77	1974	24386	7.84	62.55	1964-1975	Dallas	
-8.86	-19.21	1.03					1896-1974	Dar Es Salaam	
4.00	-37.43	1.15					1957-1959	Darwin	
2.94	-3.81	1.00	1984	39059			1965-1989	Davao	
-19.22	-82.85	16.88	2000	16758	-78.79	-72.03	29 1973-2000	Davis	
-15.37	69.29	2.75	1938	18219	-8.04	67.16	1891-1938	De Bilt	
28.42	79.94	8.95	2016	8928	18.34	81.07	10 2010-	Deadhorse	
5.60	56.91	1.59	2007	25259	6.85	58.06	355 1982-2008	Del Rio	
-9.92	76.70	5.47	2016	5406	30.35	84.72	15 1933-	Dixon	
-20.03	74.99	4.48	2017	14098	2.28	74.05	660 1916-	Dombas	
25.03	-86.77	79.72	2009	10143	-140.27	-80.69	3250 2004-	Dome Concordia	
-14.70	68.01	2.53	2017	20137	1.15	65.54	225 1828-	Dourbes	
18.32	-81.67	12.67	2013	1823	169.38	-88.49	30 1957-	Dumont d'Urville	
-0.49	68.88	2.68	2016	24659	3.40	58.02	-	Durham	
-15.53	70.07	2.90					1973-	East Anglia	
5.95	-35.09	1.12	1968	27956			1958-1968	Easter Island	
-12.32	61.70	1.86	2018	25281	0.54	56.07	532 1905-	Ebro	
22.26	77.13	5.79					1966-1972	Eielson AFB	
1.79	-77.30	5.92	1965	21040	32.71	-66.44	1963-1965	Eights	
-10.01	44.64	1.24	2015	31165	4.08	44.39	250 1998-	Eilat	
-10.49	66.91	2.37	1989	16480	11.83	72.67	290 1924-1997	Ekaterinburg	
-9.51	-24.86	1.05	1957	22875	-8.55	-47.48	1932-1958	Elizabethville	
-18.08	72.78	3.60					-	Enkoping	
6.13	50.33	1.36	2016	29052	-7.18	53.02	396 1993-	Esashi	
-16.50	72.25	3.44	2018	17579	-2.04	69.31	245 1908-	Eskdalemuir	
9.78	79.38	8.11					1973-1976	Eskimo Point	
7.10	62.05	1.89	1958	23700	13.17	63.98	1957-1959	Espanola	
-4.59	1.76	1.00	2002	40123	-2.61	2.97	1980-2002	Ettaiyapuram	
67.23	88.84	608.00					10 2007-	Eureka	
-5.29	7.84	1.00					1975-1977	Eusebio	
12.46	-64.70	2.12	2017	20999	23.75	-68.56	120 1978-	Eyrewell	
9.42	8.67	1.01	1958	32924	9.48	10.58	1957-1958	Fanning	
14.33	77.02	5.71					-	Fort Chipewyan	
8.83	78.08	6.61	2017	9544	-1.58	80.59	15 1957-	Fort Churchill	
13.15	75.88	4.95					1973-1973	Fort McMurray	
17.91	78.89	7.48	1933	7734	37.52	82.65	1932-1964	Fort Rae	
20.47	81.80	13.04					-	Fort Reliance	
5.69	76.75	5.51					1977-1977	Fort Severn	
18.14	77.91	6.45					1990-1994	Fort Simpson	

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Station Name	ABB. CODE	Sponsoring Country	CSAGI CODE	GG CODE	Geographic		Geomagnetic	
					Lat.	Long.	Lat.	Long.
Fort Smith	FSM	Canada		032246	58.000	246.000	64.22	306.07
Fort Yukon	FYU	U. S. A.	A073	023215	66.570	214.700	67.48	265.20
Fredericksburg	FRD	U. S. A.	B318	052283	38.200	282.630	47.39	354.54
Freetown	FTN	U. S. A.		082347	8.460	346.790	13.08	61.02
Fresno	FRN	U. S. A.		053240	37.090	240.280	42.96	306.90
Fuquene	FUQ	Colombia	E578	085286	5.470	286.270	14.84	358.92
Furstenfeldbruck	FUR	Germany	B163	042011	48.165	11.277	48.11	94.46
Gan Int. Airport	GAN	Maldives		091073	-0.695	73.154	-8.46	145.41
Gelania	GEL	Russia		013069	76.950	68.580	68.71	156.94
Genova	GEN	Italy	B236	045009	44.550	8.950	44.97	90.94
Gibilmanna	GIB	Italy	C124	052014	37.980	14.020	37.74	94.01
Gilgit	GIT	Pakistan		054074	35.927	74.297	27.71	150.02
Gillam	GIM	Canada		034265	56.400	265.300	64.73	330.77
Gingin	GNG	Australia		121116	-31.356	115.715	-40.48	189.45
Girardville	GIR	Canada		041287	49.000	287.400	58.22	0.10
Gjoahavn	GJO	Canada		021264	68.630	264.090	76.65	321.25
Glenlea	GLN	Canada		040263	49.645	262.880	57.83	329.66
Gnangara	GNA	Australia	C933	122116	-31.780	115.947	-40.90	189.73
Godhavn	GDH	Denmark	A049	021306	69.252	306.467	77.64	33.10
Golmud	GLM	China		054095	36.400	94.900	27.01	168.77
Gonzales Videla	GVD	Chile		155297	-64.820	297.150	-55.37	7.38
Gottingen	GTT	Germany	B106	038010	51.530	9.970	51.58	94.51
Grahamstown	GRM	South Africa		123026	-33.280	26.480	-34.10	92.92
Great Whale River	GWC	Canada	A148	035282	55.300	282.250	64.48	353.26
Greenwich	GRW	U. K.		039000	51.480	0.000	53.16	84.63
Grocka	GCK	Serbia	C028	045021	44.633	20.767	43.14	102.41
Guam	GUA	U. S. A.	E556	076145	13.590	144.870	5.99	216.57
Guangzhou	GZH	China		067113	23.093	113.343	13.59	185.70
Guimar	GUI	Spain		062344	28.321	343.559	33.07	61.01
Gulmar	GUL	India		056074	34.080	74.400	25.87	149.91
Hallett	HLL	New Zealand	A988	162170	-72.320	170.220	-74.18	273.86
Halley Bay	HBA	U. K.	A989	166333	-75.500	333.400	-67.84	28.76
Hankasalmi	HAN	Finland		028027	62.300	26.630	59.30	115.42
Hartebeesthoek	HBK	South Africa		116028	-25.883	27.707	-27.06	95.75
Hartland	HAD	U. K.	B119	039356	51.000	355.517	53.42	79.87
Hatizyo	HTY	Japan		057140	33.073	139.825	24.84	209.81
Havana	HVN	Cuba	C425	067278	22.970	277.850	32.10	349.69
Hayriver	HRI	Canada		029244	60.800	244.200	66.68	302.14
Healy	HEA	U. S. A.	A107	026211	63.850	211.030	64.37	264.30
Heard Island	HII	Australia		143073	-53.030	73.370	-60.25	137.18
Heiss Island	HIS	Russia	A009	009058	80.620	58.050	72.88	155.02
Hel	HLP	Poland	B044	035019	54.608	18.817	53.13	104.28
Helsinki	HKI	Finland		030025	60.170	24.980	57.51	112.71
Helwan	HLW	Egypt	C256	060031	29.870	31.330	27.03	108.90
Herchmer	HCR	Canada		033266	57.400	265.900	65.77	331.20
Hermanus	HER	South Africa	C957	124019	-34.425	19.225	-34.03	85.51
Hobart	HBT	Australia		133148	-42.900	147.500	-49.55	226.94
Hollandia	HNA	Netherland	E625	093141	-2.570	140.520	-10.41	213.79
Hong Kong	HKC	U. K.		068114	22.200	114.200	12.72	186.53
Hongshan	LYH	China		052115	37.667	115.183	28.15	187.07
Honolulu	HON	U. S. A.	C277	069202	21.320	202.000	21.66	270.98
Hornsund	HRN	Poland		013016	77.000	15.550	74.17	123.95
Huancayo	HUA	Peru	E646	102285	-12.038	284.682	-2.56	357.42
Hurbanovo	HRB	Slovakia	B172	042018	47.873	18.190	46.70	101.01
Husafell	HUS	Iceland		025339	64.670	338.970	69.11	71.07

Dipole parameters			Geomagnetic elements				Elev. (m)	Open-Closed	Station Name
Decli.	Dip.	DL	YEAR	H	D	I			
14.37	76.42	5.29					1973-1973	Fort Smith	
24.05	78.29	6.82	1958	11250	31.77	78.67	1957-1958	Fort Yukon	
1.13	65.30	2.18	2017	21458	-10.57	65.16	69 1956-	Fredericksburg	
-8.31	24.93	1.05					1961-1967	Freetown	
9.41	61.77	1.87	2017	23280	12.94	61.09	331 1982-	Fresno	
0.18	27.92	1.07	2014	27340	-7.30	29.63	2543 1954-	Fuquene	
-14.09	65.84	2.24	2017	21000	3.04	64.26	572 1841-	Furstenfeldbruck	
-5.33	-16.57	1.02	2016	37852	-4.24	-19.02	2 2011-	Gan Int. Airport	
-16.37	78.97	7.59					-	Gelania	
-13.22	63.41	2.00	1962	22320	-3.26	60.33	-1962	Genova	
-11.91	57.13	1.60	1957		-2.14		1954-1957	Gibilmanna	
-5.78	46.41	1.28					1494 1967-1967	Gilgit	
8.26	76.72	5.49					1974-1976	Gillam	
1.80	-59.64	1.73	2017	24054	-1.66	-65.45	50 2012-	Gingin	
-0.02	72.79	3.61					1973-1973	Girardville	
16.21	83.23	18.75	1905	750	-6.10	89.29	1903-1905	Gjoahavn	
7.30	72.54	3.53	1997	14287	6.05	76.08	40 1980-2006	Glenlea	
1.86	-60.01	1.75	2012	23529	-1.85	-66.14	60 1957-2013	Gnangara	
-14.51	83.75	21.83	2015	8936	-33.76	80.89	8 1926-	Godhavn	
-2.26	45.55	1.26	2017	30086	-0.20	56.11	2802 1976-	Golmud	
-2.82	-70.95	3.10	1961	22914	14.95	-58.03	1961-1961	Gonzales Videla	
-15.13	68.37	2.59	1958	1868	-3.23	66.80	1957-1958	Gottingen	
-11.24	-53.55	1.46	1980	11748	-23.37	-65.75	650 1974-1980	Grahamstown	
1.92	76.58	5.39	1984	10857	-19.43	79.56	25 1965-1984	Great Whale River	
-15.09	69.46	2.78	1925	18410	-13.17	66.86	50 1836-1926	Greenwich	
-12.92	61.91	1.88	2017	22762	4.64	61.64	231 1958-	Grocka	
5.75	11.85	1.01	2017	35831	0.91	12.47	140 1957-	Guam	
1.01	25.81	1.06	2017	37663	-2.57	34.62	11 1958-	Guangzhou	
-9.34	52.48	1.42	2015	27811	-7.60	39.24	868 1993-	Guimar	
-5.67	44.13	1.24	2014	31036	2.42	52.34	2700 1977-	Gulmar	
32.27	-81.94	13.46	1962	6282	104.11	-84.63	1957-1963	Hallett	
-18.20	-78.49	7.03	1980	20200	-1.50	-64.05	30 1957-1980	Halley Bay	
-18.42	73.47	3.84					-	Hankasalmi	
-10.40	-45.61	1.26	2016	13019	-18.03	-62.60	1555 1972-	Hartebeesthoek	
-14.76	69.64	2.82	2018	19792	-1.73	65.98	95 1957-	Hartland	
5.56	42.79	1.21	2008	31330	-7.55	46.18	220 1969-2009	Hatizyo	
1.82	51.45	1.39	1999	26424	-2.47	53.67	1964-1999	Havana	
16.40	77.84	6.38					-	Hayriver	
21.54	76.51	5.34	1958	13518	27.90	76.16	1957-1958	Healy	
-10.60	-74.05	4.06	1962	6282	104.11	-84.63	1952-1983	Heard Island	
-24.89	81.24	11.54	1997	4870	25.50	85.13	20 1957-1994	Heiss Island	
-15.81	69.44	2.78	2018	17570	5.26	69.62	1 1934-	Hel	
-17.56	72.34	3.47	1909		-1.81	0.00	1844-1909	Helsinki	
-10.26	45.58	1.26	1959	30905	1.33	42.88	1903-1995	Helwan	
8.37	77.32	5.94					1973-1973	Herchmer	
-11.37	-53.49	1.46	2016	10613	-25.72	-65.45	26 1941-	Hermanus	
9.36	-66.91	2.38					1840-1854	Hobart	
5.22	-20.17	1.03	1962	37289	4.01	-21.24	1957-1962	Hollandia	
1.15	24.30	1.05	1978	38078	-1.40	30.46	555 1971-	Hong Kong	
1.45	46.94	1.29	2017	29674	-7.95	56.25	-	Hongshan	
10.10	38.46	1.16	2017	27326	9.75	37.80	4 1902-	Honolulu	
-36.81	81.93	13.44	2018	7830	8.68	81.77	15 1978-	Hornsund	
0.43	-5.11	1.00	2016	24906	-2.90	-0.48	3313 1922-	Huancayo	
-13.79	64.77	2.13	2017	21057	4.57	64.38	120 1890-	Hurbanovo	
-21.07	79.19	7.86					-	Husafell	

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Station Name	ABB. CODE	Sponsoring Country	CSAGI CODE	GG CODE	Geographic		Geomagnetic	
					Lat.	Long.	Lat.	Long.
Hyderabad	HYB	India	E542	073079	17.417	78.550	9.01	152.27
Ibadan	IBD	Nigeria	E571	083004	7.430	3.900	9.46	77.94
Inuvik	INK	U. S. A.		022227	68.250	226.700	70.97	275.04
Iqaluit	IQA	Canada		026291	63.753	291.482	72.97	6.33
Irkutsk	IRT	Russia	C362	038104	52.167	104.450	42.58	177.60
Isachsen	ISC	U. S. A.		011256	78.800	256.000	84.16	272.48
Isla da Pascua	IPM	Chile		117251	-27.200	250.580	-19.38	325.61
Island Lake	ISL	Canada		036265	53.900	265.300	62.25	331.55
Istanbul-Kandilli	ISK	Turkey		049029	41.063	29.062	38.35	109.27
Ivalo	IVA	Finland	A180	021027	68.600	27.480	65.11	120.87
Ivigtut	IVI	Denmark		029312	61.200	311.850	69.26	34.59
Iznik	IZN	Turkey		050030	40.500	29.730	37.69	109.75
Jaipur	JAI	India		063076	26.917	75.800	18.65	150.48
Jarvis Island	JRV	U. S. A.	E618	090200	-0.383	199.967	0.06	272.67
Jim Carrigan Obs.	JCO	U. K.		020211	70.356	211.201	70.34	257.32
Johnson Point	JOP	U. S. A.		018242	72.460	241.700	77.10	283.84
Julianehaab	JUL	Denmark	A132	029314	60.720	313.970	68.58	37.15
Kakadu	KDU	Australia		103132	-12.686	132.472	-21.08	206.39
Kakioka	KAK	Japan	C147	054140	36.232	140.186	28.00	209.80
Kaliningrad	KNG	Russia		035020	54.600	20.200	52.90	105.56
Kamennyj Mys	KAM	Russia		022073	68.080	73.100	59.72	155.24
Kandalakcha	KND	Russia		023036	67.130	36.430	62.52	126.85
Kanoya	KNY	Japan	C245	059131	31.424	130.880	22.56	201.72
Kanozan	KNZ	Japan		055140	35.256	139.956	27.02	209.70
Kap Tobin	KTG	Denmark	A044	020338	70.320	338.030	74.43	77.57
Karachi	KRC	Pakistan		065067	24.950	67.140	17.49	142.12
Karaganda	KGD	Kazakhstan		040073	49.820	73.080	41.61	150.83
Karmakuly	KAR	Russia		018053	72.380	52.730	65.62	143.04
Kashi	KSH	China		051076	39.500	76.000	31.13	151.98
Kazan	KZN	Russia	B028	034049	55.830	48.850	50.02	131.54
Keetmanshop	KMH	Namibia		117018	-26.541	18.110	-26.14	86.14
Kem	KEM	Russia		025034	65.000	34.400	60.77	123.72
Khabarovsk	KHB	Russia		042135	47.615	134.695	38.92	203.57
Kharasavey	KHS	Russia		019067	71.130	66.830	63.18	152.08
Kiev	KIV	Ukraine	B125	039030	50.720	30.300	47.58	113.32
King Edward Point	KEP	U. K.		144324	-54.282	323.507	-46.20	30.01
Kiruna	KIR	Sweden	A060	022020	67.843	20.420	65.43	114.36
Kodaikanal	KOD	India	E566	080077	10.233	77.467	1.98	150.64
Kontagora	KNT	Nigeria	E597	080005	10.400	5.450	12.12	79.97
Korets	KTS	Ukraine		039061	50.600	61.070	43.49	140.62
Koror	KOR	U. S. A.	E606	083135	7.330	134.500	-1.10	206.95
Kotzebue	KOT	U. S. A.	A070	023197	66.880	197.400	65.02	249.24
Kourou	KOU	France		085307	5.210	307.270	14.01	20.50
Ksara	KSA	Lebanon	C416	056036	33.820	35.880	30.21	114.04
Kumasi	KUM	Ghana		083358	6.700	358.430	9.61	72.39
Kupang	KPG	Indonesia		100124	-10.200	123.670	-19.15	197.06
Kuyper	KUY	Indonesia	E634	096107	-6.030	106.730	-15.40	179.39
Kwajalein	KWJ	U. S. A.		081167	9.050	167.200	4.19	238.94
Kzil-Agach	KZA	Kazakhstan		046079	43.850	78.730	35.25	154.91
L' Aquila	AQU	Italy	C063	048013	42.383	13.317	42.15	94.55
La Maddalena	LMD	Italy		049009	41.230	9.400	41.66	90.37
La Paz	LPB	Bolivia		107292	-16.540	291.900	-7.05	4.43
La Quiaca	LQA	Argentina	E702	112294	-22.100	294.400	-12.62	6.73
Lanzhou	LZH	China		054104	36.100	103.840	26.52	176.85
Las Acacias	LAS	Argentina	C976	125302	-35.000	302.320	-25.70	13.64

Dipole parameters			Geomagnetic elements				Elev.	Open-Closed	Station
Decli.	Dip.	DL	YEAR	H	D	I	(m)	Name	
-4.57	17.60	1.03	2017	39484	-0.64	24.41	500	1965-	Hyderabad
-9.28	18.43	1.03	1975	32138	-7.66	-7.68	300	1956-1975	Ibadan
25.91	80.22	9.41						-	Inuvik
-2.32	81.29	11.66	2017	9365	-26.16	80.54	67	1995-	Iqaluit
-0.64	61.45	1.84	2018	18431	-3.88	72.24	465	1887-	Irkutsk
56.68	87.07	96.66					500	-	Isachsen
5.95	-35.13	1.12	2015	25995	15.74	-36.78	83	2009-	Isla da Pascua
7.56	75.26	4.61						1976-1976	Island Lake
-11.78	57.71	1.63	1997	24852	3.94	58.02	130	1947-1997	Istanbul-Kandilli
-22.48	76.94	5.65	1958	1500	7.83	77.33		1957-1959	Ivalo
-11.05	79.28	7.97	1960	11607		77.84		1863-1960	Iviglut
-11.64	57.09	1.60	2017	25168	5.35	58.05	256	2007-	Iznik
-5.18	34.02	1.11	2016	35233	0.13	41.66		1976-	Jaipur
9.40	0.11	1.00	1958	34462	9.27	2.24	4	1957-1959	Jarvis Island
28.15	79.87	8.83	2017	8972	17.86	81.02	20	2003-	Jim Carrigan Obs.
31.57	83.47	20.08						-	Johnson Point
-11.59	78.90	7.50	1965	12225	-37.33	77.09		1957-1965	Julianehaab
4.27	-37.63	1.15	2017	35475	3.03	-39.82	15	1995-	Kakadu
5.77	46.77	1.28	2017	29988	-7.56	50.06	36	1913-	Kakioka
-15.71	69.29	2.75	1992	17331				1964-	Kaliningrad
-10.51	73.73	3.93						1976-1980	Kamennyj Mys
-19.56	75.42	4.70	1933	12318	6.73	76.19		1933-1933	Kandalakcha
4.06	39.73	1.17	2017	32694	-6.68	45.50	107	1957-	Kanoya
5.68	45.56	1.26	2017	30354	-7.24	48.94	342	1956-	Kanozan
-28.12	82.07	13.87	1967	10381	-30.23			1957-1959	Kap Tobin
-6.35	32.21	1.10	2006	35330	0.37	37.79	35	1988-2008	Karachi
-7.07	60.62	1.79	1988	20037	7.55	69.04		1965-1989	Karaganda
-18.83	77.23	5.87						1977-1980	Karmakuly
-5.70	50.38	1.36	2017	27023	4.13	59.75	1321	1988-	Kashi
-12.53	67.25	2.42	2016	41	10.03	75.00	80	1909-1992	Kazan
-10.49	-44.46	1.24	2017	11089	-17.12	-65.67	1065	2009-	Keetmanshop
-18.66	74.37	4.19						1973-1973	Kem
5.55	58.23	1.65	2017	23895	-12.87	64.13		1972-	Khabarovsk
-13.61	75.81	4.91						1974-1980	Kharasavey
-13.66	65.45	2.20	2015	19336	7.62	67.51	100	1958-	Kiev
-8.02	-64.38	2.09	2018	15535	-7.14	-55.94	7	2011-	King Edward Point
-23.12	77.12	5.78	2018	10593	0.13	78.47	395	1950-	Kiruna
-4.67	3.96	1.00	2004	39515	-2.01	0.73	2323	1902-2006	Kodaikanal
-9.42	23.25	1.05						1964-1965	Kontagora
-9.37	62.21	1.90						1968-1968	Korets
4.28	-2.20	1.00	1966	37959	1.99	-0.61		1957-1966	Koror
22.78	76.89	5.61	1958	13000	19.92	76.57		1957-1959	Kotzebue
-3.30	26.52	1.06	2016	27927	-17.95	14.68	10	1995-	Kourou
-10.33	49.35	1.34	1970	29022	2.65	49.24		1930-1970	Ksara
-9.03	18.71	1.03						1972-1972	Kumasi
2.79	-34.78	1.12	2017	36708	1.52	-36.05	240	2008-	Kupang
-0.10	-28.85	1.08	1969	37093	1.02	-32.74	1	1929-1962	Kuyper
8.15	8.34	1.01						1973-1973	Kwajalein
-5.50	54.73	1.50						1974-1975	Kzil-Agach
-12.71	61.08	1.82	2009	24140	2.37	58.66	682	1958-2009	L'Aquila
-12.52	60.67	1.79						-	La Maddalena
-0.75	-13.90	1.02	1976	25479	-0.52	-4.53		1964-1976	La Paz
-1.18	-24.13	1.05	1992	22846	-3.91		3450	1920-1992	La Quiaca
-0.64	44.95	1.25	2016	30514	-2.36	55.32	1560	1959-	Lanzhou
-2.69	-43.91	1.23	2018				20	1964-	Las Acacias

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Station Name	ABB. CODE	Sponsoring Country	CSAGI CODE	GG CODE	Geographic		Geomagnetic	
					Lat.	Long.	Lat.	Long.
Las Mesas	SZT	Spain	C264	062344	28.480	343.740	33.20	61.22
Lauder	LAU	New Zealand		135169	-45.030	169.410	-48.58	251.29
Lazarev	LZV	Russia		160167	-69.970	167.100	-72.65	266.62
Leadville	LDV	U. S. A.		051254	39.280	253.720	46.70	321.22
Learmonth	LRM	Australia		112114	-22.222	114.101	-31.43	187.37
Leduc	LED	Canada		037247	53.300	246.500	59.70	308.96
Leirvogur	LRV	Iceland	A101	026338	64.183	338.301	68.75	69.83
Leningrad	LNN	Russia	B259	030031	59.950	30.700	56.46	117.62
Lerwick	LER	U. K.	A140	030359	60.133	358.817	61.65	88.17
Lhasa	LSA	China		060091	29.633	91.033	20.41	164.90
Little America	LAA	U. S. A.	A995	168198	-78.180	197.800	-74.81	308.11
Livingston Island	LIV	Spain		153300	-62.662	299.605	-53.26	9.45
Logrono	LGR	Spain	B267	048358	42.450	357.500	44.79	78.82
Lompoc	LOC	U. S. A.		055239	34.720	239.450	40.52	306.52
Lonjsko Polje	LON	Croatia		045017	45.418	16.659	44.56	98.72
Loparskaya	MMK	Russia	A050	022033	68.250	33.080	64.02	125.05
Loring AFB	LOB	U. S. A.		043292	46.950	292.120	56.13	5.90
Lovo	LOV	Sweden	B009	031018	59.344	17.824	57.83	105.79
Lovozero	LOZ	Russia	A057	022035	67.970	35.020	63.50	126.36
Lu-Kia-Pang	LUK	China		059121	31.320	121.030	21.99	192.63
Luanda	LUA	Angola	E640	099013	-8.920	13.170	-8.06	84.45
Lucky Lake	LUC	Canada		039253	51.150	252.740	58.33	317.09
Lunping	LNP	China		065121	25.000	121.167	15.70	193.04
Lvov	LVV	Ukraine	B145	040024	49.900	23.750	47.79	106.98
Lwiro	LWI	Zaire	E624	092029	-2.250	28.800	-4.07	100.97
Lycksele	LYC	Sweden		025019	64.612	18.748	62.67	110.15
Lynn Lake	LYN	Canada		033259	56.850	258.940	64.60	322.49
M' Bour	MBO	Senegal	C311	076343	14.380	343.030	19.44	58.10
Macquarie Island	MCQ	Australia	A961	145159	-54.500	158.950	-59.38	243.86
Madras	MDS	India		077080	13.070	80.250	4.58	153.59
Magadan	MGD	Russia		030151	60.120	151.020	52.64	214.75
Magallanes	MGS	Chile		143289	-53.150	289.100	-43.56	1.48
Majuro	MJR	U. S. A.	E561	083171	7.080	171.380	2.86	243.33
Maliya Karmakul	MKL	Russia		018053	72.300	52.500	65.57	142.81
Manhay	MAB	Belgium	B132	040006	50.300	5.680	51.09	89.80
Manila	MAN	Philippines		075121	14.580	120.980	5.33	193.28
Manzhouli	MZL	China		040117	49.600	117.400	40.12	188.56
Maputo	LMM	Mozambique	C914	116033	-25.919	32.583	-27.88	100.61
Marion Island	MRN	South Africa		137038	-46.850	37.870	-49.19	100.47
Martin De Vivies	AMS	France		128078	-37.800	77.570	-45.61	145.81
Mauritius	MRI	U. K.		110058	-20.090	57.550	-25.86	127.12
Mawson	MAW	Australia	A980	158063	-67.604	62.879	-72.94	113.90
Mcmath-Hulbert	MMH	U. S. A.		047277	42.670	276.700	51.70	347.33
Mcmurdo	MCM	U. S. A.		168167	-77.850	166.700	-79.05	286.32
Meanook	MEA	Canada	A154	035247	54.616	246.653	61.00	308.57
Melbourne	MEL	Australia		128145	-37.830	144.980	-44.83	223.01
Melville AFB	MEV	U. S. A.		037299	53.280	299.470	62.24	15.74
Memambetsu	MMB	Japan	C034	046144	43.910	144.189	35.96	212.40
Midway	MID	U. S. A.	E743	062183	28.210	182.620	25.30	250.77
Minneapolis	MNN	U. S. A.		045266	44.930	266.400	53.41	334.82
Minsk	MNK	Belarus		036027	54.100	26.520	51.44	111.16
Mirny	MIR	Russia	A978	157093	-66.550	93.020	-75.35	156.99
Misallat	MLT	Egypt	C239	060031	29.515	30.892	26.75	108.40
Mizusawa	MIZ	Japan		051141	39.112	141.204	30.95	210.38
Moca	MFP	Spain	E586	087009	3.350	8.670	4.69	82.00

Dipole parameters			Geomagnetic elements				Elev. (m)	Open-Closed	Station Name
Decli.	Dip.	DL	YEAR	H	D	I			
-9.37	52.62	1.43	1992	29587	-8.31	38.25	310	1959-	Las Mesas
12.62	-66.20	2.28	1979	20213	22.72	-70.33	370	1977-1979	Lauder
28.28	-81.12	11.24	1960	19202	-27.33	-64.14		1960-1961	Lazarev
7.58	64.77	2.13	1959	21850	13.90	66.77		1957-1959	Leadville
1.30	-50.71	1.37	2017	30241	0.27	-55.09	4	1987-	Learmonth
12.23	73.71	3.93						-	Leduc
-20.52	79.00	7.61	2017	12704	-11.41	75.81	5	1957-	Leirvogur
-16.73	71.66	3.28	2016	14932	11.21	73.41	70	1869-	Leningrad
-19.06	74.90	4.43	2018	15058	-1.15	72.82	85	1922-	Lerwick
-2.80	36.65	1.14	1999	35008	0.19	44.66	3658	1957-1999	Lhasa
38.61	-82.27	14.57	1958	11250	102.70	-80.01		1957-1958	Little America
-3.33	-69.53	2.79	2018	19448	14.10	-55.90	19	1995-	Livingston Island
-12.52	63.26	1.99	1976	23702	-6.01	58.17		1957-1976	Logrono
9.18	59.67	1.73						-	Lompoc
-13.27	63.08	1.97	2017	22417	4.07	62.09	95	2012-	Lonjsko Polje
-21.05	76.30	5.21	1988	11623	13.26	77.30	210	1957-2013	Loparskaya
-1.41	71.45	3.22						1966-1972	Loring AFB
-17.88	72.54	3.53	2004	15335	3.94	72.51	25	1928-2004	Lovo
-20.43	76.00	5.02						1957-	Lovozero
2.40	38.92	1.16	1933	33329	-3.59	45.40		-	Lu-Kia-Pang
-9.48	-15.82	1.02	1993	22540	-7.52	-45.87	53	1956-1993	Luanda
10.18	72.86	3.63						-	Lucky Lake
2.33	29.34	1.08	2000	36454	-3.33	36.18	100	1965-2000	Lunping
-14.00	65.60	2.22	2015	20015	6.13	66.33	400	1929-	Lvov
-9.24	-8.10	1.01	1970	29632	-3.35	-30.13	1680	1958-1970	Lwiro
-20.86	75.51	4.75	2017	13089	7.28	75.52	270	2006-	Lycksele
10.44	76.65	5.44						1986-1986	Lynn Lake
-8.24	35.21	1.12	2015	32492	-7.40	7.07	7	1952-	M' Bour
14.58	-73.51	3.85	2017	12686	32.22	-78.58	8	1952-	Macquarie Island
-4.28	9.10	1.01	1855		1.00	7.65		1851-1855	Madras
10.73	69.10	2.72	2017	17239	-13.56	72.17		1966-	Magadan
-0.40	-62.26	1.90						-	Magallanes
8.47	5.70	1.00	1966	33404	9.43	5.64		1964-1966	Majuro
-18.85	77.20	5.84	1883	10744	14.98	78.75		1882-1883	Maliya Karmakul
-14.77	68.02	2.53	2017	20005	1.48	65.81	440	1932-	Manhay
2.22	10.58	1.01	1904	38215	0.86	16.00		1889-1904	Manila
2.14	59.32	1.71	2017	21171	-9.58	68.69	682	1983-	Manzhouli
-10.28	-46.62	1.28	2018	14484	-19.66	-60.65	10	1957-	Maputo
-13.55	-66.65	2.34	1980	14504	-36.57	-64.28	45	1972-1980	Marion Island
-6.66	-63.92	2.04	2013	18119	-40.51	-69.84	50	1981-	Martin De Vivies
-7.97	-44.11	1.23	1965	22220	-17.05	-53.92	55	1892-1965	Mauritius
-22.96	-81.27	11.61	2017	18534	-68.57	-67.88	12	1955-	Mawson
2.79	68.45	2.60						-	Mcmath-Hulbert
47.80	-84.48	27.72						-	Mcmurdo
12.70	74.51	4.26	2017	14035	14.63	75.79	700	1916-	Meanook
8.10	-63.30	1.99	1921	22848	8.00	-67.94		1858-1921	Melbourne
-4.24	75.25	4.61						1966-1972	Melville AFB
6.96	55.43	1.53	2017	26138	-9.01	58.42	42	1950-	Memambetsu
10.07	43.39	1.22	2002	27867	8.51	42.44	3	1964-2002	Midway
5.62	69.63	2.81						-	Minneapolis
-15.01	68.27	2.57	2018	17784	8.63	69.68	196	1958-	Minsk
-9.19	-82.56	15.64	2016	13594	-88.73	-76.75	20	1956-	Mirny
-10.25	45.23	1.25	2003	31316	5.39	42.97	120	1960-2003	Misallat
6.10	50.18	1.36	2017	28611	-8.27	53.27	125	1972-	Mizusawa
-9.33	9.32	1.01	1971	30698	-6.76	-17.29		1958-1971	Moca

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Station Name	ABB. CODE	Sponsoring Country	CSAGI CODE	GG CODE	Geographic		Geomagnetic	
					Lat.	Long.	Lat.	Long.
Mogadiscio	MOG	Somalia		088045	2.030	45.360	-2.41	118.01
Molodezhnaya	MOL	Russia		158046	-67.670	45.850	-70.31	94.93
Monte Capellino	MCP	Italy		045009	44.550	8.960	44.97	90.95
Moscow	MOS	Russia	B035	035037	55.467	37.312	51.18	121.39
Mould Bay	MBC	Canada	A028	014241	76.315	240.638	80.02	270.77
Mt Wilson	MWC	U. S. A.		056242	34.140	241.970	40.27	309.34
Mt. Clemens	MCL	U. S. A.		047277	42.600	277.150	51.64	347.87
Munchen	MNH	Germany		042012	48.150	11.610	48.04	94.78
Muntinlupa	MUT	Philippines	E553	076121	14.370	121.020	5.13	193.32
Murchison Bay	MUB	Sweden	A010	010018	80.050	18.250	76.18	133.29
Nagpur	NGP	India		069079	21.150	79.083	12.68	153.09
Nagycenk	NCK	Hungary	B191	042017	47.633	16.717	46.71	99.52
Nairobi	NAI	Kenya	E621	091037	-1.327	36.815	-4.43	109.05
Nampula	NMP	Mozambique		105039	-15.089	39.254	-18.31	109.29
Nantes	NTS	France	B184	043358	47.250	358.450	49.31	81.38
Narsarsuaq	NAQ	Denmark		029315	61.200	314.600	68.99	38.25
Neumayer Station	VNA	Germany		161352	-70.693	351.728	-65.08	45.39
New Alesund	NAL	Norway		011012	78.920	11.930	76.14	126.50
New Year Island	NYI	Argentina		145296	-54.650	295.850	-45.14	7.02
Newport	NEW	U. S. A.		042243	48.270	242.880	54.30	306.72
Nida	NDA	Russia		023073	66.600	73.000	58.27	154.65
Niemegk	NGK	Germany	B095	038013	52.072	12.675	51.66	97.35
Nitsanim	NSM	Israel	C339	058035	31.730	34.600	28.36	112.39
Nord	NRD	Denmark		008343	81.600	343.240	81.61	123.45
Norilsk	NOK	Russia		021088	69.200	88.000	60.04	166.31
Norman Wells	NOW	U. S. A.		025235	64.900	234.500	69.14	287.38
North Pole 6	NPF	Russia	A001	006010	83.600	9.500	79.36	142.98
North Pole 7	NPG	Russia	A003	004268	85.820	268.130	84.39	194.29
North Pole 8	NPH	Russia		013188	77.320	188.300	73.04	228.41
North Pole 10	NPJ	Russia		013166	76.620	166.380	70.03	215.78
North Pole 12	NPL	Russia		011187	79.080	187.220	74.36	224.13
North Pole 13	NPM	Russia		009165	81.000	165.000	73.84	208.55
North West Pacific	NWP	Japan		049160	41.102	159.963	34.83	227.04
Northway	NRW	U. S. A.	A118	027218	62.970	218.050	64.69	271.89
Norway House	NHO	Canada		036262	53.980	262.170	62.07	327.60
Norway Station	NWS	South Africa	A987	161357	-70.500	357.470	-65.59	49.84
Novokazalinsk	NKK	Kazakhstan		044062	45.770	62.120	38.61	140.54
Novolazarevskaya	NVL	Russia	A951	161012	-70.770	11.820	-67.76	60.63
Novosibirsk	NVS	Russia		035083	55.030	82.900	46.13	159.91
Numto	NMT	Russia		027071	63.500	71.400	55.32	152.45
Nurmijarvi	NUR	Finland	A134	029025	60.508	24.655	57.89	112.61
Oasis	OAS	Russia	A976	156101	-66.300	100.720	-75.47	169.33
Odessa	ODE	Ukraine	C018	043031	46.780	30.880	43.66	112.57
Okinawa	OKN	Japan		065125	24.750	125.330	15.63	196.97
Onagawa	ONW	Japan	C117	052141	38.430	141.470	30.29	210.70
Orcades del Sur	ORC	Argentina	A962	151315	-61.000	315.220	-52.29	21.88
Ottawa	OTT	Canada	B222	045284	45.403	284.448	54.61	356.51
Oulujarvi	OUJ	Finland		025027	64.520	27.230	61.32	117.40
Palmyra Island	PAI	U. S. A.	E574	084198	5.880	197.820	5.84	269.53
Panagyurishte	PAG	Bulgaria	C059	047024	42.520	24.180	40.53	105.04
Papeete	PPT	France	E672	108210	-17.567	210.426	-15.11	285.77
Paramaribo	PAB	Netherlands	E575	084305	5.810	304.778	14.74	17.98
Patacamaya	PTY	Bolivia		073292	17.266	292.048	26.53	5.05
Pebek	PBK	Russia		019171	70.833	170.900	65.11	224.66
Pelabuhan Ratu	PLR	Indonesia		097107	-6.980	106.550	-16.34	179.20

Dipole parameters			Geomagnetic elements				Elev. (m)	Open-Closed	Station Name
Decli.	Dip.	DL	YEAR	H	D	I			
-8.31	-4.82	1.00	1933	33142	0.93	-16.64		1933-1933	Mogadiscio
-25.23	-79.85	8.81	1998	19244	-52.27	-64.46	0	1965-1998	Molodezhnaya
-13.22	63.41	2.00	1962	22320	-3.26	60.33		1958-1962	Monte Capellino
-14.19	68.09	2.54	2016	17071	10.62	71.06	200	1919-	Moscow
43.37	84.97	33.32	1997	2434	49.00	87.59	40	1962-1997	Mould Bay
8.77	59.45	1.72						1926-1958	Mt Wilson
2.67	68.41	2.60						-	Mt. Clemens
-14.08	65.79	2.24	1913	20623	-9.10	63.08	530	1842-1926	Munchen
2.23	10.17	1.01	2002	39239	-1.12	15.29	62	1888-	Muntinlupa
-43.19	82.99	17.52	1958	7135	0.38	82.42		1957-1959	Murchison Bay
-4.55	24.22	1.05	2014	37982	-0.06	30.74		1991-	Nagpur
-13.79	64.78	2.13	2017	21191	4.28	64.10	160	1961-	Nagycenk
-8.89	-8.81	1.01	1980	30435	-0.96	-26.81	1670	1964-1980	Nairobi
-9.19	-33.50	1.11	2018	21201	-8.26	-48.68	374	1982-	Nampula
-13.73	66.74	2.35	1958	20678	-8.04	63.55	35	1922-1959	Nantes
-12.07	79.13	7.78	2015	12888	-23.10	76.30	4	1968-	Narsarsuaq
-20.48	-76.92	5.63	2016	18637	-13.80	-60.90	45	1993-	Neumayer Station
-42.81	82.97	17.43	2002	7240	0.87	82.35	12	1966-2002	New Alesund
-1.97	-63.55	2.01	1916	26771	15.04	-49.66		1902-1917	New Year Island
11.31	70.24	2.94	2017	18095	15.06	70.62	770	1966-	Newport
-10.09	72.82	3.61						-	Nida
-15.23	68.43	2.60	2017	18898	3.59	67.52	78	1890-	Niemegk
-10.22	47.19	1.29	1983	21088	1.04	63.65	150	1963-1967	Nitsanim
-68.10	85.78	46.94						1966-1972	Nord
-6.22	73.92	4.01						1969-1975	Norilsk
21.46	79.21	7.89						-	Norman Wells
-61.33	84.63	29.34	1958	4460	0.05	85.58		1957-1959	North Pole 6
146.63	87.19	104.71	1958	1010	70.02	89.00		1957-1959	North Pole 7
33.61	81.33	11.75						1959-1962	North Pole 8
24.24	79.70	8.57						1961-1962	North Pole 10
36.66	82.03	13.76						1963-1964	North Pole 12
29.76	81.75	12.90						-	North Pole 13
9.11	54.30	1.48	2002	26804	-1.28	53.41	-5580	2001-2003	North West Pacific
20.96	76.70	5.47	1958	12900	31.08	77.00		1957-1958	Northway
8.53	75.15	4.56						1972-1976	Norway House
-21.85	-77.22	5.86	1961	19524	-18.38	-63.21	44	1960-1962	Norway Station
-8.54	57.95	1.64	1993	22570	6.48	64.63		1965-1993	Novokazalinsk
-25.47	-78.45	6.98	2016	18558	-28.28	-61.61	460	1960-	Novolazarevskaya
-5.60	64.33	2.08	2017	16251	8.25	74.24	130	1967-	Novosibirsk
-9.70	70.91	3.09						1974-1978	Numto
-17.76	72.58	3.54	2016	14949	8.15	73.39	105	1953-	Nurmijarvi
-4.30	-82.62	15.89	1958	12003	-84.99	-79.16		1957-1958	Oasis
-12.69	62.34	1.91	2007	21324	3.78	64.29	140	1896-	Odessa
3.01	29.22	1.08						1977-1977	Okinawa
6.10	49.44	1.34						-	Onagawa
-7.18	-68.86	2.67	2001	18908	-2.05	-55.60		1905-	Orcades del Sur
0.81	70.44	2.98	2017	18351	-13.63	70.24	75	1968-	Ottawa
-19.61	74.70	4.34	2014	13009	11.54	75.79	130	1992-	Oulujarvi
9.46	11.57	1.01						1957-1958	Palmyra Island
-12.33	59.68	1.73	2015	23764	4.42	59.79	556	1948-	Panagyurishte
9.49	-28.36	1.07	2015	29794	11.30	-32.64	357	1958-	Papeete
-2.91	27.75	1.07	1974	28612	-13.61	29.32	2	1957-1981	Paramaribo
-0.86	44.96	1.25	1994	24396	3.28	7.21	3789	1983-	Patacamaya
20.36	76.94	5.65					2	-	Pebek
-0.13	-30.39	1.09	2017	38752	0.73	-31.08	54	2008-	Pelabuhan Ratu

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					Lat.	Long.	Lat.	Long.
Pelly Bay	PEB	Canada		022270	68.500	270.200	77.08	330.97
Penang	PNN	Malaysia		085100	5.360	100.300	-4.02	172.99
Penteli	PEG	Greece		052024	38.083	23.933	36.24	103.63
Petropavlovsk	PET	Russia	C001	037158	52.971	158.248	46.33	222.84
Petsamo	PTS	Russia		020031	69.540	31.250	65.47	124.73
Phu Thuy	PHU	Vietnam		069106	21.030	105.950	11.49	178.69
Pilar	PII	Argentina	C932	122296	-31.670	296.120	-22.19	8.10
Pionerskaya	PIO	Russia	A959	160096	-69.730	95.500	-78.66	158.72
Piura	PIU	Peru		095279	-5.010	278.930	4.33	351.62
Plaisance	PLS	Mauritius		110058	-20.430	57.670	-26.21	127.19
Plateau	PTU	U. S. A.		169041	-79.250	40.500	-78.84	63.06
Podkammenaya Tung.	POD	Russia		029090	61.400	90.000	52.16	166.50
Poker Flat	POK	U. S. A.		025213	65.130	212.520	65.80	264.57
Pondicherry	PND	India		078080	11.917	79.917	3.46	153.17
Port Aux Francais	PAF	France	B998	139070	-49.350	70.260	-56.27	134.78
Port Moresby	PMG	Papua New Guinea	E642	099147	-9.408	147.152	-16.51	221.24
Port Stanley	PST	U. K.		142302	-51.703	302.110	-42.37	12.42
Poste-De-La-Baleine	PBQ	Canada		035282	55.277	282.255	64.46	353.27
Potsdam	POT	Germany		038013	52.380	13.060	51.90	97.85
Price	PCU	U. S. A.	B440	050249	39.620	249.220	46.55	316.13
Pruhonice	PRU	Czecho	B143	040015	49.980	14.550	49.33	98.30
Pula	POL	Croatia		045014	44.860	13.850	44.47	95.83
Qianling	QIX	China		055108	34.600	108.200	25.01	180.80
Qiongzhang	QGZ	China		071110	19.000	109.800	9.48	182.38
Qsaybeh	QSB	Lebanon		056036	33.871	35.644	30.30	113.82
Quanzhou	QZH	China		065119	24.900	118.600	15.51	190.62
Quetta	QUE	Pakistan	C251	060067	30.187	66.950	22.69	142.56
Raciborz	RAC	Poland		040018	50.000	18.200	48.77	101.79
Rankin Inlet	RIT	Canada		027268	62.800	267.900	71.28	331.58
Rapid City	RPC	U. S. A.		046257	44.150	256.900	51.84	323.85
Resolute Bay	RES	Canada	A030	015265	74.690	265.105	82.44	310.24
Rio De Janeiro	RDJ	Brazil		112316	-22.400	316.350	-13.97	27.57
Roburent	ROB	Italy		046008	44.300	7.880	44.90	89.81
Roi Baudouin	RBD	Belgium	A986	160024	-70.430	24.300	-69.32	71.25
Rostov On Don	ROD	Russia		043040	47.220	39.680	42.80	120.78
Rude Skov	RSV	Denmark	B114	035012	55.483	12.457	54.99	98.70
Rybachy	RYB	Russia		020032	69.900	31.900	65.71	125.57
Sabel Island	SBL	U. K.		046300	43.932	299.990	52.88	15.22
Sabhawala	SAB	India	C250	060078	30.367	77.800	21.92	152.68
Sachs Harbor	SAH	U. S. A.		018235	72.000	235.000	75.63	277.43
Saint Maur	PSM	France		041002	48.809	2.494	50.17	86.04
San Fernando	SFS	Spain	C143	054354	36.462	353.795	39.52	73.38
San Juan	SJG	U. S. A.	C300	072294	18.110	293.850	27.34	6.99
San Pablo-Toledo	SPT	Spain		050356	39.547	355.651	42.25	76.09
Sanae	SNA	South Africa	A987	160358	-70.300	357.650	-65.43	50.16
Sanikiluaq	SNK	Canada		034281	56.500	280.800	65.65	351.21
Sao Miguel	SMG	Portugal	B321	052334	37.770	334.350	43.63	53.24
Saskatoon	SAS	Canada		038253	52.100	253.400	59.34	317.55
Scoresbysund	SCO	Denmark		020338	70.480	338.040	74.57	77.86
Scott Base	SBA	New Zealand	A991	168167	-77.850	166.783	-79.04	286.38
Sdr Stromfjord	STF	Denmark		023309	67.020	309.280	75.21	35.11
Seddin	SED	Germany		038013	52.280	13.010	51.81	97.76
Seoul	SEO	Korea	C069	052127	37.580	127.050	28.48	197.77
Seykha	SEY	Russia		020073	70.100	72.500	61.76	155.60
Shatsk	SHT	Russia	B054	036042	53.980	41.850	49.11	124.83

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Decli.	Dip.	DL	YEAR	H	D	I			
12.43	83.46	19.99						1977-1977	Pelly Bay
-1.15	-7.99	1.00						1976-1980	Penang
-11.62	55.70	1.54	2016	26513	4.46	54.79	380	1958-	Penteli
10.59	64.49	2.10	2017	21627	-6.27	65.43	50	1957-	Petropavlovsk
-22.47	77.14	5.80	1933	11341	5.77	77.43		1933-1933	Petsamo
-0.23	22.13	1.04	2015	38830	-1.41	30.77	5	1957-	Phu Thuy
-1.55	-39.21	1.17	2014	19060	-5.02	-33.72	336	1905-	Pilar
-9.81	-84.27	25.86	1958	13162	-86.24	-77.68		1957-1972	Pionerskaya
1.37	8.62	1.01						2000-	Piura
-7.98	-44.55	1.24	1976	21723	-16.92	-53.20	123	1896-1976	Plaisance
-50.94	-84.37	26.69	1968	18246	-53.44	-69.79		1966-1968	Plateau
-4.55	68.77	2.66	2016	5591	-50.63	64.95		1968-1993	Podkammenaya Tung.
22.64	77.34	5.95						-	Poker Flat
-4.32	6.89	1.00	2014	40450	-1.93	11.20	6	1993-	Pondicherry
-10.22	-71.54	3.24	2013	17862	-55.45	-68.66	35	1956-	Port Aux Francais
6.27	-30.65	1.09	1993	35918	6.59	-33.38	80	1958-1993	Port Moresby
-3.24	-61.27	1.83	2017	18184	2.81	-49.97	130	1994-	Port Stanley
1.92	76.56	5.38	2007	11995	-16.14	78.11	40	1984-2007	Poste-De-La-Baleine
-15.32	68.59	2.63	1928	18467	-5.97	66.76		1890-1931	Potsdam
8.44	64.66	2.11	1959	22316	15.99	66.12		1957-1959	Price
-14.51	66.75	2.35	1972	19749	-0.52	65.54	329	1946-1972	Pruhonic
-13.22	63.01	1.96	1922	22049	-6.42	60.32		1881-1922	Pula
0.16	43.02	1.22	2017	31505	-4.52	53.22	893	1982-	Qianling
0.41	18.47	1.03	2017	39290	-1.75	26.92	227	1981-	Qiongzong
-10.36	49.45	1.34	2007	28890	3.78	50.31	525	2000-2007	Qsaybeh
1.90	29.04	1.08	2017	36359	-4.01	37.61	10	1981-	Quanzhou
-6.59	39.90	1.17	2004	32313	1.54	46.55	1737	1953-2004	Quetta
-14.36	66.34	2.30						-	Raciborz
9.75	80.38	9.70						1974-1976	Rankin Inlet
7.70	68.55	2.62						-	Rapid City
28.02	86.20	57.74	2017	2811	-21.52	87.20	30	1952-	Resolute Bay
-4.69	-26.46	1.06	1906	24772	-8.92	-13.95		1837-1925	Rio De Janeiro
-13.16	63.36	1.99	1973	22828	-2.50	60.15	815	1964-1993	Roburent
-27.35	-79.31	8.02	1966	18930	-35.48	-65.02		1957-1966	Roi Baudouin
-11.89	61.63	1.86						-	Rostov On Don
-16.50	70.70	3.04	1984	17045	-0.41	69.82	48	1907-1981	Rude Skov
-22.63	77.29	5.91						-	Rybachy
-3.41	69.27	2.75	2018	20922	-17.30	65.54	5	1999-	Sabel Island
-4.98	38.83	1.16	2014	33158	1.23	47.37	498	1964-	Sabhawala
31.43	82.70	16.24						-	Sachs Harbor
-14.29	67.36	2.44	1900	19558	-14.76	64.89	49	1883-1901	Saint Maur
-11.21	58.78	1.68	2017	27604	-1.32	50.11	28	1891-	San Fernando
-1.20	45.96	1.27	2016	27002	-12.88	43.24	424	1903-	San Juan
-11.85	61.17	1.82	2017	26072	-0.88	54.03	922	1982-	San Pablo-Toledo
-21.73	-77.12	5.78	1989	18823	-17.52	-61.90	52	1961-1990	Sanae
2.58	77.25	5.88					20	2007-	Sanikiluaq
-9.51	62.33	1.91	1977	25590	-13.04	56.03	175	1911-1978	Sao Miguel
10.31	73.49	3.85						-	Saskatoon
-28.40	82.14	14.12	1933	10576	-34.56	78.30		1892-1933	Scoresbysund
47.78	-84.47	27.66	2017	11634	152.34	-79.89	16	1957-	Scott Base
-13.86	82.48	15.34						1972-1972	Sdr Stromfjord
-15.29	68.53	2.62	1931	18450	-5.48	66.83		1907-1931	Seddin
3.60	47.34	1.29						-	Seoul
-11.38	74.97	4.47						1973-1980	Seykha
-13.13	66.59	2.33						1957-1960	Shatsk

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Station Name	ABB. CODE	Sponsoring Country	CSAGI CODE	GG CODE	Geographic		Geomagnetic	
					Lat.	Long.	Lat.	Long.
She-Shan	SSH	China		059121	31.097	121.187	21.77	192.79
Shepherd Bay	SHB	Canada		021266	68.750	266.250	76.98	324.44
Shillong	SHL	India		064092	25.550	91.880	16.31	165.49
Shumagin	SHU	U. S. A.		035200	55.350	199.540	54.43	258.86
Sidmouth	SDH	U. K.		039357	50.670	356.750	52.90	80.99
Silchar	SIL	India		065093	24.933	92.817	15.66	166.34
Simferopol	SIM	Ukraine	C026	045034	44.830	34.070	41.27	114.96
Simosato	SSO	Japan	C214	056136	33.575	135.940	25.04	206.19
Siple	SPL	U. S. A.		166276	-76.000	276.000	-66.61	353.09
Sitka	SIT	U. S. A.	A149	033225	57.060	224.670	60.15	282.85
Sloutzk	SLU	Russia		030030	59.680	30.480	56.23	117.29
Sodankyla	SOD	Finland	A065	023027	67.369	26.630	64.08	119.10
Sogra	SOG	Russia		027046	62.800	46.250	57.13	132.19
Sonmiani	SON	Pakistan		065067	25.200	66.750	17.77	141.78
Soroa	SOR	Cuba		067277	22.780	277.000	31.89	348.77
South Georgia	SGE	U. K.		144324	-54.283	323.507	-46.20	30.01
South Pole	SPA	U. S. A.	A999	180000	-90.000	0.000	-80.59	0.00
South Uist	SOU	U. K.		033353	57.200	352.860	59.82	80.25
Spitsbergen	SPB	Norway		012015	78.500	15.100	75.41	127.26
Srednikan	SRE	Russia	A121	028152	62.430	152.320	55.03	215.03
Srobarova	SRO	Slovakia		042018	47.800	18.300	46.61	101.09
St. Johns	STJ	Canada		042307	47.595	307.323	56.12	24.54
Stennis	BSL	U. S. A.		060270	30.350	270.370	39.14	341.04
Stonyhurst	STO	U. K.	B349	036358	53.850	357.530	55.85	83.23
Sudbury	SUB	U. S. A.		048289	42.200	288.720	51.42	1.67
Sukkertoppen	SKT	Denmark		025307	65.420	307.100	73.83	30.55
Surlari	SUA	Rumania	C215	045026	44.680	26.253	42.32	107.62
Swider	SWI	Poland	B089	038021	52.120	21.250	50.34	105.49
Syowa Station	SYO	Japan	A984	159040	-69.006	39.590	-70.49	86.95
Talara	TAL	Peru	E593	095279	-4.630	278.700	4.71	351.38
Talkeetna	TLK	U. S. A.		027210	63.300	209.900	63.67	263.68
Tamanrasset	TAM	Algeria	C273	067006	22.793	5.532	24.26	82.25
Tambey	TMB	Russia		019072	71.500	71.800	63.18	155.73
Tampa	TPA	U. S. A.		062278	27.820	277.500	36.92	349.11
Tananarive	TAN	Malagascar	C901	109048	-18.917	47.552	-23.32	117.04
Tangerang	TNG	Indonesia		096107	-6.170	106.630	-15.54	179.29
Tashkent	TKT	Uzbekistan	C076	049070	41.333	69.617	33.48	146.48
Tatuoca	TTB	Brazil	E590	091311	-1.205	311.487	7.38	24.38
Tbilisi	TFS	Georgia	C364	048045	42.080	44.700	37.07	124.06
Tehran	TEH	Iran	C163	054051	35.730	51.380	29.94	128.94
Teoloyucan	TEO	Mexico	C287	070261	19.746	260.807	27.98	331.57
Terra Nova Bay	TNB	Italy		165164	-74.694	164.098	-77.14	273.62
Tevriz	TEV	Russia		033072	57.500	72.400	49.29	151.72
Thompson	TMP	Canada		034262	55.720	262.120	63.79	326.95
Thule AFB	THU	Denmark		013291	76.550	291.170	85.81	12.41
Thule/Qanaq	THL	Denmark	A021	013291	77.483	290.833	86.74	13.61
Tihany	THY	Hungary	B191	043018	46.900	17.893	45.80	100.39
Tikhaya Bay	TKH	Russia		010053	80.300	52.800	72.97	151.86
Tiruchirapalli	TIP	India		079079	10.800	78.700	2.44	151.90
Tirunelveli	TIR	India		081078	8.700	77.800	0.43	150.85
Tixie Bay	TIK	Russia	A037	018129	71.580	129.000	62.51	194.74
Tjornes	TJO	Iceland		024343	66.200	342.880	69.92	77.05
Tokyo	TOK	Japan		054140	35.683	139.750	27.42	209.46
Toledo	TOL	Spain	C098	050356	39.880	355.950	42.53	76.49
Tomsk	TMK	Russia	B022	034085	56.470	84.930	47.46	161.78

Dipole parameters			Geomagnetic elements				Elev. (m)	Open-Closed	Station Name
Decli.	Dip.	DL	YEAR	H	D	I			
2.42	38.61	1.16	2006	33350	-5.08	46.52	100	1932-2006	She-Shan
15.12	83.40	19.69						1966-1966	Shepherd Bay
-2.60	30.34	1.09	2014	36723	-0.39	38.93		1976-	Shillong
16.31	70.33	2.96	2016	19801	11.10	67.74	80	2004-	Shumagin
-14.70	69.29	2.75						-	Sidmouth
-2.44	29.27	1.08	2014	37318	-0.31	37.66		1998-	Silchar
-12.02	60.33	1.77	1959	22498	4.37	61.73		1957-1959	Simferopol
4.96	43.05	1.22	1977	31546	-6.01	46.35	59	1954-1978	Simosato
4.64	-77.80	6.35						-	Siple
16.97	73.99	4.04	2017	15793	18.96	73.48	24	1902-	Sitka
-16.64	71.51	3.24	1944	15150	5.65	72.42		1878-1944	Sloutzk
-21.67	76.34	5.24	2016	11501	11.62	77.44	178	1914-	Sodankyla
-15.29	72.09	3.39						-	Sogra
-6.41	32.66	1.10	2010				5	-	Sonmiani
1.98	51.21	1.39						1964-1967	Soroa
-8.02	-64.38	2.09	1982	18065	-8.70	-53.27	7	1975-1982	South Georgia
-72.68	-85.26	37.40	1971	16006	-27.66	-73.99	2820	1957-1971	South Pole
-17.22	73.79	3.96						-	South Uist
-40.43	82.58	15.76						1978-1979	Spitsbergen
11.64	70.73	3.04	1966	16763	-10.32	72.77		1936-1966	Srednikan
-13.77	64.70	2.12						-	Srobarova
-5.76	71.44	3.22	2017	19936	-18.00	66.99	100	1968-	St. Johns
3.52	58.43	1.66	2017	23906	-1.02	59.74	8	1986-	Stennis
-15.91	71.26	3.17	1967	17646	-8.95	68.50		1865-1973	Stonyhurst
-0.37	68.25	2.57						-	Sudbury
-11.46	81.75	12.90	1965	9255	-46.05	80.61		1964-1966	Sukkertoppen
-12.62	61.23	1.83	2016	22695	5.45	62.03	84	1943-	Surlari
-14.81	67.48	2.45	1968	18348	1.55	67.90		1921-1976	Swider
-26.94	-79.95	8.97	2019	19279	-51.35	-63.31	29	1958-	Syowa Station
1.41	9.35	1.01	1958	30700	6.90	12.50		1957-1960	Talara
21.09	76.10	5.08						-	Talkeetna
-10.11	42.03	1.20	2017	33768	0.27	26.85	1373	1932-	Tamanrasset
-12.16	75.82	4.91						-	Tambey
2.00	56.36	1.56						-	Tampa
-8.85	-40.77	1.19	2007	20947	-15.09	-52.36	1375	1902-2007	Tananarive
-0.12	-29.08	1.08	2017	38619	0.64	-30.28	14	1957-2003	Tangerang
-6.89	52.91	1.44	2006	25536	4.99	60.92	810	1900-2006	Tashkent
-3.87	14.53	1.02	2017	26446	-20.20	-1.84	10	1933-	Tatuoca
-10.48	56.50	1.57	2003	23929	5.75	60.73	982	1844-2010	Tbilisi
-8.99	49.04	1.33	1973	28329	3.47	53.01	1367	1957-1973	Tehran
4.74	46.74	1.28	2008	27877	5.84	47.58	2280	1914-	Teoloyucan
37.90	-83.49	20.17	2016	8432	134.00	82.39	28	1986-	Terra Nova Bay
-8.25	66.72	2.35						1974-1979	Tevriz
9.07	76.17	5.13						1969-1976	Thompson
-8.63	87.90	186.93						1932-1973	Thule AFB
-10.16	88.37	310.01	2015	4129	-47.84	85.80	57	1947-	Thule/Qanaq
-13.56	64.07	2.06	2017	21567	4.42	63.54	187	1949-	Tihany
-27.04	81.29	11.66	1957	6130	26.24	83.65		1933-1958	Tikhaya Bay
-4.50	4.88	1.00						1975-2004	Tiruchirapalli
-4.62	0.87	1.00	2014	40496	-2.31	2.49		1996-	Tirunelveli
7.52	75.42	4.69	2016	7234	-17.91	83.06	40	1944-	Tixie Bay
-23.12	79.64	8.48						-	Tjornes
5.67	46.06	1.27	1912	29996	-5.06	48.90	21	1883-1912	Tokyo
-11.92	61.40	1.84	1981	25135	-5.61	55.11	501	1947-2009	Toledo
-5.29	65.35	2.19	1969	15945	9.22	74.43	200	1958-1969	Tomsk

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					Lat.	Long.	Lat.	Long.
Tondano	TND	Indonesia		089125	1.290	124.950	-7.68	197.79
Tonghai	THJ	China		066103	24.000	102.700	14.48	175.64
Toolangi	TOO	Australia	B966	128145	-37.530	145.470	-44.48	223.50
Trelew	TRW	Argentina	C988	133295	-43.267	294.617	-33.73	6.40
Tristan da Cunha	TDC	Denmark		127348	-37.067	347.685	-31.83	54.92
Trivandrum	TRD	India	E603	082077	8.480	76.950	0.29	149.99
Tromso	TRO	Norway	A047	020019	69.670	18.950	67.33	115.01
Tsumeb	TSU	South Africa		109018	-19.202	17.584	-18.86	87.02
Tucson	TUC	U. S. A.	C236	058249	32.170	249.270	39.19	317.59
Tulsa	TUL	U. S. A.		054264	35.920	264.220	44.29	333.58
Tumanny	TUM	Russia		021036	69.140	35.820	64.49	127.94
Tungsten	TST	U. S. A.		028232	62.000	231.850	66.00	287.12
Tuntungan	TUN	Indonesia		087099	3.500	98.560	-5.82	171.21
Ugut	UGT	Russia		029074	61.000	74.000	52.65	153.82
Ujjain	UJJ	India		067076	23.183	75.783	14.95	150.12
Ukhta	UKH	Russia		030074	60.500	74.000	52.15	153.70
Ulan Bator	UBA	Mongolia		042107	47.850	106.750	38.25	179.51
Umba	UMA	Russia		023035	66.700	34.500	62.37	124.98
Uppsala	UPS	Sweden		030017	59.903	17.353	58.44	105.68
Uranium City	URC	Canada		030282	59.600	281.500	68.78	351.81
Urumqi	WMQ	China		046088	43.800	87.700	34.68	162.80
Val Joyeux	VLJ	France		041002	48.821	2.014	50.26	85.57
Valentia	VAL	Ireland	B098	038350	51.930	349.750	55.24	74.30
Vassouras	VSS	Brazil	E629	112316	-22.400	316.350	-13.97	27.57
Victoria	VIC	Canada	B159	041237	48.520	236.580	53.68	299.64
Vieques	VQS	U. S. A.		072295	18.150	294.550	27.37	7.74
Visakhapatnam	VSK	India		072083	17.683	83.317	8.94	156.88
Vladivostok	VLA	Russia	C051	046132	43.683	132.167	34.84	201.80
Vostok	VOS	Russia	A996	168107	-78.450	106.867	-87.78	177.64
Wake Island	WKE	U. S. A.		071168	19.200	167.600	14.24	237.86
Warnkenhagen	WRH	Germany	B326	036011	54.000	11.070	53.78	96.66
Watheroo	WAT	Australia	C925	120116	-30.318	115.877	-39.45	189.59
West PHL Basin	WPB	Japan		071135	19.324	135.110	10.83	206.63
Weston	WES	U. S. A.		048289	42.380	288.680	51.60	1.62
White Shell	WHS	Canada		040265	49.800	264.800	58.13	331.96
Wien-Auhof	WIA	Austria		042016	48.200	16.230	47.34	99.25
Wien-Kobenzl	WIK	Austria	B162	042016	48.265	16.318	47.38	99.36
Wilhelmshaven	WLH	Germany		036008	53.520	8.150	53.80	93.62
Wilkes	WIL	Australia	A977	156111	-66.250	110.580	-75.49	185.28
Wingst	WNG	Germany	B058	036009	53.743	9.073	53.86	94.62
Winnipeg	WNP	Canada		040263	49.630	262.870	57.81	329.65
Witteveen	WIT	Netherland	B071	037007	52.813	6.668	53.36	91.85
Wuhan	WHN	China		059115	30.528	114.559	21.02	186.69
Yakutsk	YAK	Russia	A124	028130	62.020	129.720	53.00	197.38
Yauca	YAU	Peru	E740	106285	-15.530	285.330	-6.03	358.07
Yellowknife	YKC	Canada	A122	028246	62.480	245.518	68.48	302.44
Yinchuan	YCB	China		052106	38.500	106.300	28.90	179.09
Yuzhno Sakhalinsk	YSS	Russia	C016	043143	47.083	142.650	38.98	210.56
Yuzhny Shar	YSH	Russia		020062	69.770	61.680	62.27	147.69
Zaria	ZAR	Nigeria	E485	079008	11.150	7.650	12.50	82.28
Zi-Ka-Wei	ZKW	China		059121	31.210	121.440	21.89	193.02
Zouy	ZUY	Russia		038104	52.460	104.040	42.88	177.26

Dipole parameters			Geomagnetic elements				Elev. (m)	Open-Closed	Station Name
Decli.	Dip.	DL	YEAR	H	D	I			
2.86	-15.10	1.02	2017	39323	0.17	-13.03	704	2001-	Tondano
-0.78	27.31	1.07	2017	37597	-1.38	36.94	1820	1981-	Tonghai
8.14	-63.02	1.96	1979	22069	11.04	-68.60	457	1922-1986	Toolangi
-1.43	-53.17	1.45	2018	18361	2.77	-43.68	15	1957-	Trelew
-9.63	-51.15	1.39	2016	10079	-21.70	-65.77	42	2009-	Tristan da Cunha
-4.74	0.57	1.00	1999	39997	-2.38	1.14	300	1957-1999	Trivandrum
-25.09	78.20	6.73	2017	10851	6.67	78.31	105	1930-	Tromso
-9.95	-34.34	1.12	2016	14212	-9.01	-61.11	1273	1964-	Tsumeb
7.47	58.48	1.66	2017	24268	9.21	59.10	946	1909-	Tucson
5.14	62.86	1.95	1989	22399	5.55	65.34	257	1961-1989	Tulsa
-21.10	76.58	5.39						-	Tumanny
19.34	77.45	6.04						-	Tungsten
-1.43	-11.53	1.01	2017	41372	-0.89	-9.42	86	1982-2003	Tuntungan
-8.51	69.11	2.72						1975-1979	Ugut
-5.08	28.10	1.07	2003	36629	-0.06	34.55		1975-2003	Ujjain
-8.42	68.77	2.66						1974-1974	Ukhta
-0.12	57.61	1.62	1977	23088	-3.65	66.82	1615	1966-1977	Ulan Bator
-19.68	75.33	4.65						-	Umba
-18.20	72.92	3.65	2018	15193	6.06	72.84	50	2000-	Uppsala
2.63	79.01	7.63						-	Uranium City
-3.83	54.14	1.48	2000	25021	3.07	63.62	970	1970-	Urumqi
-14.28	67.42	2.45	1936	19647	-9.95	64.76	114	1901-1936	Val Joyeux
-14.73	70.86	3.08	2016	19483	-4.63	66.47	14	1888-	Valentia
-4.69	-26.46	1.06	2011	18617	-22.14	-37.09	457	1915-	Vassouras
12.34	69.82	2.85	2017	18833	16.27	69.43	197	1956-	Victoria
-1.33	45.99	1.27	1924	27566	-4.25	51.70	20	1903-1965	Vieques
-3.86	17.47	1.02	2014	38676	-0.77	24.33	3	1902-	Visakhapatnam
4.80	54.31	1.48	1997	26620	-10.14	59.72	300	1932-1997	Vladivostok
-1.92	-88.89	668.74	2017	13629	-126.03	-76.72	3500	1958-	Vostok
8.42	26.90	1.06						-	Wake Island
-15.97	69.89	2.86	1935	17554	-2.97			1935-1935	Warnkenhagen
1.81	-58.71	1.68	1958	24858	-2.68	-64.54	240	1919-1958	Watheroo
4.45	20.94	1.04					-5700	2006-	West PHL Basin
-0.36	68.38	2.59						1960-1968	Weston
6.81	72.73	3.59	1980	14089	4.83	76.48		1972-1980	White Shell
-13.96	65.26	2.18	1950	20455	-1.39	64.10	235	1928-1950	Wien-Auhof
-13.97	65.30	2.18	2015	20869	3.93	64.60	400	1929-2015	Wien-Kobenzl
-15.86	69.90	2.87	1932	17815	-7.72	67.92		1882-1932	Wilhelmshaven
2.13	-82.63	15.94	1966	9238	-86.55	-81.87		1957-1967	Wilkes
-15.93	69.94	2.88	2017	18192	2.67	68.52	50	1939-	Wingst
7.30	72.53	3.52						1969-1975	Winnipeg
-15.62	69.60	2.81	1987	18517	-2.19	67.54	20	1938-1987	Witteveen
1.26	37.54	1.15	2017	33946	-4.35	46.88	42	1959-	Wuhan
5.94	69.36	2.76	2017	14289	-20.32	76.20	100	1931-	Yakutsk
0.33	-11.92	1.01	1958	27900	5.90	-4.40		1957-1960	Yauca
17.28	78.85	7.43	2015	9217	17.07	80.93	198	1916-	Yellowknife
-0.19	47.84	1.30					1100	1985-	Yinchuan
6.99	58.29	1.65	1990	25059	-10.25	60.86		1932-1990	Yuzhno Sakhalinsk
-14.55	75.28	4.62						1980-1980	Yuzhny Shar
-9.50	23.92	1.05						1964-1965	Zaria
2.46	38.79	1.16	1908	33078	-2.59	45.59		1875-1908	Zi-Ka-Wei
-0.73	61.70	1.86	1958	19091	-1.62	71.69		1915-1958	Zouy

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2. List of Alternative Station Name

<< LIST OF ALTERNATIVE STATION NAME >>

ALTERNATIVE NAMES WHICH ARE USED AT SOME STATIONS ARE LISTED HERE

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ALTERNATIVE NAMES	NAMES IN THIS CATALOGUE	ALTERNATIVE NAMES	NAMES IN THIS CATALOGUE
Amsterdam Island	Martin De Vivies	Monte Capellino	Genova
Antarctica	South Pole	Narsarsuaq	Narsarsuaq
Arctica I (NP-6)	North Pole 6	Nyda	Nida
Arctica II (NP-7)	North Pole 7	O' Gyalla	Hurbanovo
Arctica III (NP-8)	North Pole 8	Pamatai	Papeete
Arctica (NP-10)	North Pole 10	Paratunka	Petropavlovsk
Arctica (NP-12)	North Pole 12	Patrony-Irkutsk	Irkutsk
Arctica (NP-13)	North Pole 13	Peking	Bei-Jing
Baudouin	Roi Baudouin	Pleshentzi-Minsk	Minsk
Bear Is.	Bjornoya	Point Barrow	Barrow
Bereznayka-Karaganda	Karaganda	Port Alfred	Crozet
Cape Hallett	Hallett	Puerto Rico	San Juan
Centro Geofisico	Havana	Quiaca	La Quiaca
Churchill	Fort Churchill	Reykjavik	Leirvogur
Cuba	Havana	Sakhalinsk	Yuzhno Sakhalinsk
Dikson	Dixon	Santa Cruz	Las Mesas
Druzhnaya	Heiss Island	Stepanovka	Odessa
Dusheti	Tbilisi	Sverdlovsk	Ekaterinburg
Dymer	Kiev	Tahiti	Papeete
Faraday Islands	Argentine Island	Tenerife	Las Mesas
Geermud	Golmud	Terre Adelie	Dumont Durville
Goose Bay	Melville AFB	Tiksy	Tixie Bay
Gornotayazhnaya	Vladivostok	Tortosa	Ebro
Hawaii	Honolulu	Tunguska	Podkammenaya Tung.
Isla De Pascua	Easter Island	Uelen	Cape Wellen
Johns St.	St. Johns	Ussurinsk	Vladivostok
Kandilli	Istanbul-Kandilli	Vannovskaya	Ashkhabad
Kerguelen	Port Aux Francais	Vienna Kobenzl	Wien-Kobenzl
King Edward Point	South Georgia	Voyeykovo	Leningrad
Kinshasa-Binza	Binza	Vysokaya-Dubrovo	Sverdlovsk
Krasnaya-Pakhra	Moscow	Wellen	Cape Wellen
Leopoldville	Binza	Yanguhi-Bazar	Tashkent
Murmansk	Loparskaya	Zaymishe-Kazan	Kazan
Maputo	Lourenco-Marques		

3. Station List by Abbreviation (ABB) Code

<< STATION LIST BY ABBREVIATION (ABB) CODE >>

	ABB. CODE	Station Name	GG CODE	Geomagnetic Lat.	Geomagnetic Long.	ABB. CODE	Station Name	GG CODE	Geomagnetic Lat.	Geomagnetic Long.
1 Station List	AAA	Alma Ata	047077	34.79	153.24	BJN	Bjornoya	015019	71.61	121.59
	AAE	Addis Ababa	081039	5.44	112.56	BKC	Back	032266	66.05	330.93
	ABG	Alibag	071073	10.69	146.92	BKK	Bangkok	076101	4.28	173.42
2 Alternative	ABK	Abisko	022019	66.14	113.53	BLC	Baker Lake	026264	72.44	325.12
	ABN	Abinger	039000	52.94	84.12	BLT	Beloit	051262	47.65	330.42
3 ABB Code	ACR	Accra	084000	8.34	73.61	BMT	Beijing Ming Tombs	050116	30.80	187.90
	ADA	Adak	038183	48.55	245.36	BNA	Bunia	088030	-0.59	102.93
	AED	Aedey	024337	70.68	70.77	BNG	Bangui	086019	4.04	91.93
	AGN	Agincourt	046281	52.93	352.08	BOC	Bochum	039007	51.99	91.82
	AHM	Ahmedabad	067073	15.06	147.08	BOD	Bodo	021014	67.67	110.83
4 Status of Data	AIA	Argentine Island	155296	-55.77	6.28	BOP	Bossekop	020023	66.97	118.83
	AIF	Arctic Ice Flo	006193	78.17	213.56	BOU	Boulder	050255	47.65	322.23
	ALE	Alert	008298	87.60	145.69	BOX	Borok	032038	53.58	123.26
	ALH	Allahabad	065082	16.34	156.16	BRD	Brandon	040280	59.00	350.82
	ALM	Almeria	053358	39.31	77.30	BRN	Baranov	011101	69.72	176.76
6 Publication	ALU	Aloushta	045034	41.07	115.25	BRS	Brisbane	118153	-33.72	229.71
	AMD	Amderma	021061	62.00	147.34	BRT	Burlington	051258	47.09	325.74
	AML	Amberley	133173	-46.23	254.14	BRW	Barrow	019203	69.97	249.27
	AMN	Ambarneya	024034	61.61	123.77	BSL	Stennis	060270	39.14	341.04
	AMS	Martin De Vivies	128078	-45.61	145.81	BTI	Barter Island	020216	70.96	262.29
7 Observatory	AMT	Amatsia	058035	28.13	112.66	BTV	Batavia	096107	-15.55	179.49
	AMU	Anchorage	029210	61.76	265.48	BUZ	Budakeszi	042019	46.25	101.57
	ANC	Ancon	102283	-2.31	355.62	BYR	Byrd Station	170241	-72.14	335.45
	ANK	Ankara	050033	36.63	112.46	CAI	Campbell Island	143169	-55.88	253.98
	ANN	Annamalainagar	079080	2.93	152.90	CAO	Castellaccio	046009	44.86	90.89
9 Format	ANO	Antipolo	075121	5.36	193.46	CAX	Carrollton	051267	47.88	335.78
	APA	Apatity	022033	63.32	124.68	CBB	Cambridge Bay	021255	76.05	307.29
	API	Apia	104188	-15.02	263.30	CBI	Chichijima	063142	19.11	212.64
	AQU	L' Aquila	048013	42.15	94.55	CCL	Chiclayo	097280	2.58	352.92
	ARC	Arctowski	152302	-52.81	10.98	CCP	Cebu	080124	1.21	196.31
	ARE	Arequipa	106289	-6.96	1.16	CCS	Cape Chelyuskin	012104	68.23	178.25
	ARK	Arkhangelsk	025041	59.56	128.46	CDN	Cape Dennison	157143	-73.66	233.89
	ARS	Arti	034059	49.51	139.97	CDP	Chengdu	059104	21.44	176.66
	ASC	Ascension Island	098346	-2.89	57.55	CDS	Camp Douglas	046270	52.67	338.91
	ASH	Ashkhabad	052058	31.32	135.52	CEV	Cape Evans	168205	-73.41	311.62
	ASK	Asuka Station	162024	-70.27	69.61	CFI	Chesterfield Inlet	027269	71.92	333.27
	ASO	Aso	057131	24.02	201.72	CHR	Christchurch	134173	-46.62	254.15
	ASP	Alice Springs	114134	-31.96	208.87	CHT	Chittagong	068092	13.13	165.29
	AVE	Averroes	057353	36.61	71.38	CKA	Cape Kamenny	022074	60.10	155.76
	AVI	Arctic Village	022214	68.86	263.17	CKI	Cocos Keeling Island	102097	-21.36	168.98
	AWS	Andrews AFB	052283	47.39	354.54	CLA	Colaba	071073	10.96	146.89
	AWY	Aberystwyth	038356	54.74	80.93	CLB	Chilbolton	039358	53.13	82.64
	BAG	Baguio	074121	7.13	192.87	CLF	Chambon-La-Foret	042002	49.44	85.52
	BAL	Baldwin	051265	47.18	333.91	CLH	Cheltenham	051283	47.90	355.19
	BBG	Barentsburg	011016	75.34	128.37	CLI	Climax	051254	46.80	321.32
	BDE	Big Delta	026214	65.03	267.28	CLL	Collmberg	039013	50.88	97.35
	BDV	Budkov	041014	48.55	97.45	CMB	Chimbote	099281	0.32	354.15
	BEL	Belsk	038021	50.13	104.94	CMO	College	025212	65.50	264.45
	BEY	Beliy Island	017070	65.07	155.43	CNB	Canberra	125149	-41.84	227.32
	BFE	Brorfelde	034012	55.25	98.03	CNH	Changchun	046125	34.63	195.75
	BFO	Black Forest	042008	48.75	91.63	COI	Coimbra	050352	43.55	72.09
	BGA	Borga	163356	-67.73	46.48	COP	Copenhagen	034013	55.17	98.92
	BGY	Bar Gyora	058035	28.28	112.86	CPA	Cha-Pa	068104	12.81	176.69
	BIN	Binza	094015	-3.96	87.26	CPI	Capri	049014	40.21	94.90
	BJI	Beijing	050116	30.50	187.91	CPS	Cape Schmidt	021181	64.51	233.57

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ABB. CODE	Station Name	GG CODE	Geomagnetic Lat.	Geomagnetic Long.	ABB. CODE	Station Name	GG CODE	Geomagnetic Lat.	Geomagnetic Long.
CPY	Cape Parry	020235	74.11	281.19	FRN	Fresno	053240	42.96	306.90
CRC	Castle Rock	053238	42.78	304.28	FSM	Fort Smith	032246	64.22	306.07
CRP	Chiripa	080275	19.56	347.22	FSP	Fort Simpson	028239	66.81	295.08
CSJ	Costa Rica San Jose	080276	19.07	348.24	FSV	Fort Severn	034272	64.79	340.07
CSR	Casper	047254	50.23	320.47	FTN	Freetown	082347	13.08	61.02
CSS	Colorado Springs	052256	46.11	323.38	FUQ	Fuquene	085286	14.84	358.92
CSY	Casey	156111	-75.53	185.20	FUR	Furstenfeldbruck	042011	48.11	94.46
CTA	Charters Towers	110146	-27.16	221.60	FYU	Fort Yukon	023215	67.48	265.20
CTO	Cape Town	124018	-33.45	84.88	GAN	Gan Int. Airport	091073	-8.46	145.41
CTS	Castello Tesino	044012	45.99	94.08	GCK	Grocka	045021	43.14	102.41
CTX	Charcot	159139	-76.36	232.19	GDH	Godhavn	021306	77.64	33.10
CUS	Cuzco	104288	-4.03	0.69	GEL	Gelania	013069	68.71	156.94
CWE	Cape Wellen	024190	63.28	243.69	GEN	Genova	045009	44.97	90.94
CYG	Cheongyang	054129	27.37	199.48	GIB	Gibilmanna	052014	37.74	94.01
CZA	Cape Zhelania	013069	68.76	156.99	GIM	Gillam	034265	64.73	330.77
CZT	Crozet	136052	-50.95	115.27	GIR	Girardville	041287	58.22	0.10
DAL	Dallas	057263	41.30	332.85	GIT	Gilgit	054074	27.71	150.02
DAR	Darwin	102131	-20.94	204.66	GJO	Gjoahavn	021264	76.65	321.25
DAV	Davao	083126	-1.91	198.13	GLM	Golmud	054095	27.01	168.77
DBN	De Bilt	038005	52.91	90.07	GLN	Glenlea	040263	57.83	329.66
DED	Deadhorse	019211	70.47	256.52	GNA	Gnangara	122116	-40.90	189.73
DIK	Dixon	016081	64.69	162.53	GNG	Gingin	121116	-40.48	189.45
DLN	Dalian	051122	29.76	192.68	GRM	Grahamstown	123026	-34.10	92.92
DLR	Del Rio	061259	37.50	328.67	GRW	Greenwich	039000	53.16	84.63
DLT	Dalat	078108	2.46	181.14	GTT	Gottingen	038010	51.58	94.51
DMC	Dome Concordia	165124	-83.57	221.52	GUA	Guam	076145	5.99	216.57
DOB	Dombas	028009	61.80	99.50	GUI	Guimar	062344	33.07	61.01
DOU	Dourbes	040005	51.07	88.65	GUL	Gulmar	056074	25.87	149.91
DRS	Dar Es Salaam	097039	-9.88	110.60	GVD	Gonzales Videla	155297	-55.37	7.38
DRV	Dumont d'Urville	157140	-73.69	229.97	GWC	Great Whale River	035282	64.48	353.26
DUR	Durham	047289	52.31	2.22	GZH	Guangzhou	067113	13.59	185.70
DVS	Davis	159078	-75.91	132.29	HAD	Hartland	039356	53.42	79.87
EAA	East Anglia	037001	54.06	86.45	HAN	Hankasalmi	028027	59.30	115.42
EBR	Ebro	049000	42.87	81.25	HBA	Halley Bay	166333	-67.84	28.76
EGS	Eights	165283	-65.74	357.20	HBK	Hartebeesthoek	116028	-27.06	95.75
EIC	Easter Island	117251	-19.35	325.61	HBT	Hobart	133148	-49.55	226.94
EKP	Eskimo Point	029266	69.44	329.71	HCR	Herchmer	033266	65.77	331.20
ELI	Elizabethville	102027	-13.04	98.07	HEA	Healy	026211	64.37	264.30
ELT	Eilat	060035	26.28	112.32	HER	Hermanus	124019	-34.03	85.51
ENB	Eielson AFB	025213	65.44	265.38	HII	Heard Island	143073	-60.25	137.18
ENK	Enkoping	030017	58.20	105.18	HIS	Heiss Island	009058	72.88	155.02
EPN	Espanola	054254	43.30	322.08	HKC	Hong Kong	068114	12.72	186.53
ESA	Esashi	051141	31.08	210.50	HKI	Helsinki	030025	57.51	112.71
ESK	Eskdalemuir	035357	57.38	83.23	HLL	Hallett	162170	-74.18	273.86
ETT	Ettaiyapuram	081078	0.88	151.10	HLP	Hel	035019	53.13	104.28
EUA	Eureka	010274	87.68	279.74	HLW	Helwan	060031	27.03	108.90
EUS	Eusebio	094322	3.94	34.26	HNA	Hollandia	093141	-10.41	213.79
EYR	Eyrewell	133172	-46.61	253.91	HON	Honolulu	069202	21.66	270.98
FAN	Fanning	086201	4.36	272.62	HRB	Hurbanovo	042018	46.70	101.01
FCC	Fort Churchill	031266	67.12	330.71	HRI	Hayriver	029244	66.68	302.14
FCP	Fort Chipewyan	031248	65.26	308.00	HRN	Hornsund	013016	74.17	123.95
FMM	Fort McMurray	033249	63.29	309.87	HTY	Hatizyo	057140	24.84	209.81
FRA	Fort Rae	027244	68.56	300.23	HUA	Huancayo	102285	-2.56	357.42
FRD	Fredericksburg	052283	47.39	354.54	HUS	Husafell	025339	69.11	71.07
FRL	Fort Reliance	023251	73.92	304.32	HVN	Havana	067278	32.10	349.69

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	ABB. CODE	Station Name	GG CODE	Geomagnetic Lat.	Geomagnetic Long.	ABB. CODE	Station Name	GG CODE	Geomagnetic Lat.	Geomagnetic Long.
1 Station List	HYB	Hyderabad	073079	9.01	152.27	LGR	Logrono	048358	44.79	78.82
	IBD	Ibadan	083004	9.46	77.94	LIV	Livingston Island	153300	-53.26	9.45
	INK	Inuvik	022227	70.97	275.04	LMD	La Maddalena	049009	41.66	90.37
2 Alternative	IPM	Isla da Pascua	117251	-19.38	325.61	LMM	Maputo	116033	-27.88	100.61
	IQA	Iqaluit	026291	72.97	6.33	LNN	Leningrad	030031	56.46	117.62
3 ABB Code	IRT	Irkutsk	038104	42.58	177.60	LNP	Lunping	065121	15.70	193.04
	ISC	Isachsen	011256	84.16	272.48	LOB	Loring AFB	043292	56.13	5.90
	ISK	Istanbul-Kandilli	049029	38.35	109.27	LOC	Lompoc	055239	40.52	306.52
	ISL	Island Lake	036265	62.25	331.55	LON	Lonjsko Polje	045017	44.56	98.72
	IVA	Ivalo	021027	65.11	120.87	LOV	Lovo	031018	57.83	105.79
4 Status of Data	IVI	Ivigtut	029312	69.26	34.59	LOZ	Lovozero	022035	63.50	126.36
	IZN	Iznik	050030	37.69	109.75	LPB	La Paz	107292	-7.05	4.43
	JAI	Jaipur	063076	18.65	150.48	LQA	La Quiaca	112294	-12.62	6.73
	JCO	Jim Carrigan Obs.	020211	70.34	257.32	LRM	Learmonth	112114	-31.43	187.37
	JOP	Johnson Point	018242	77.10	283.84	LRV	Leirvogur	026338	68.75	69.83
6 Publication	JRV	Jarvis Island	090200	0.06	272.67	LSA	Lhasa	060091	20.41	164.90
	JUL	Julianehaab	029314	68.58	37.15	LUA	Luanda	099013	-8.06	84.45
	KAK	Kakioka	054140	28.00	209.80	LUC	Lucky Lake	039253	58.33	317.09
	KAM	Kamennyj Mys	022073	59.72	155.24	LUK	Lu-Kia-Pang	059121	21.99	192.63
7 Observatory	KAR	Karmakuly	018053	65.62	143.04	LVV	Lvov	040024	47.79	106.98
	KDU	Kakadu	103132	-21.08	206.39	LWI	Lwiro	092029	-4.07	100.97
8 Contour Map	KEM	Kem	025034	60.77	123.72	LYC	Lycksele	025019	62.67	110.15
	KEP	King Edward Point	144324	-46.20	30.01	LYH	Hongshan	052115	28.15	187.07
	KGD	Karaganda	040073	41.61	150.83	LYN	Lynn Lake	033259	64.60	322.49
	KHB	Khabarovsk	042135	38.92	203.57	LZH	Lanzhou	054104	26.52	176.85
	KHS	Kharasavey	019067	63.18	152.08	LZV	Lazarev	160167	-72.65	266.62
9 Format	KIR	Kiruna	022020	65.43	114.36	MAB	Manhay	040006	51.09	89.80
	KIV	Kiev	039030	47.58	113.32	MAN	Manila	075121	5.33	193.28
	KMH	Keetmanshop	117018	-26.14	86.14	MAW	Mawson	158063	-72.94	113.90
	KND	Kandalakcha	023036	62.52	126.85	MBC	Mould Bay	014241	80.02	270.77
	KNG	Kaliningrad	035020	52.90	105.56	MBO	M' Bour	076343	19.44	58.10
	KNT	Kontagora	080005	12.12	79.97	MCL	Mt. Clemens	047277	51.64	347.87
	KNY	Kanoya	059131	22.56	201.72	MCM	McMurdo	168167	-79.05	286.32
	KNZ	Kanozan	055140	27.02	209.70	MCP	Monte Capellino	045009	44.97	90.95
	KOD	Kodaikanal	080077	1.98	150.64	MCQ	Macquarie Island	145159	-59.38	243.86
KOR	Koror	083135	-1.10	206.95	MDS	Madras	077080	4.58	153.59	
KOT	Kotzebue	023197	65.02	249.24	MEA	Meanook	035247	61.00	308.57	
KOU	Kourou	085307	14.01	20.50	MEL	Melbourne	128145	-44.83	223.01	
KPG	Kupang	100124	-19.15	197.06	MEV	Melville AFB	037299	62.24	15.74	
KRC	Karachi	065067	17.49	142.12	MFP	Moca	087009	4.69	82.00	
KSA	Ksara	056036	30.21	114.04	MGD	Magadan	030151	52.64	214.75	
KSH	Kashi	051076	31.13	151.98	MGS	Magallanes	143289	-43.56	1.48	
KTG	Kap Tobin	020338	74.43	77.57	MID	Midway	062183	25.30	250.77	
KTS	Korets	039061	43.49	140.62	MIR	Mirny	157093	-75.35	156.99	
KUM	Kumasi	083358	9.61	72.39	MIZ	Mizusawa	051141	30.95	210.38	
KUY	Kuyper	096107	-15.40	179.39	MJR	Majuro	083171	2.86	243.33	
KWJ	Kwajalein	081167	4.19	238.94	MKL	Maliya Karmakul	018053	65.57	142.81	
KZA	Kzil-Agach	046079	35.25	154.91	MLT	Misallat	060031	26.75	108.40	
KZN	Kazan	034049	50.02	131.54	MMB	Memambetsu	046144	35.96	212.40	
LAA	Little America	168198	-74.81	308.11	MMH	Mcmath-Hulbert	047277	51.70	347.33	
LAS	Las Acacias	125302	-25.70	13.64	MMK	Loparskaya	022033	64.02	125.05	
LAU	Lauder	135169	-48.58	251.29	MNH	Munchen	042012	48.04	94.78	
LDV	Leadville	051254	46.70	321.22	MNK	Minsk	036027	51.44	111.16	
LED	Leduc	037247	59.70	308.96	MNN	Minneapolis	045266	53.41	334.82	
LER	Lerwick	030359	61.65	88.17	MOG	Mogadiscio	088045	-2.41	118.01	

<< STATION LIST BY ABBREVIATION (ABB) CODE >>

ABB. CODE	Station Name	GG CODE	Geomagnetic Lat.	Geomagnetic Long.	ABB. CODE	Station Name	GG CODE	Geomagnetic Lat.	Geomagnetic Long.
MOL	Molodezhnaya	158046	-70.31	94.93	PHU	Phu Thuy	069106	11.49	178.69
MOS	Moscow	035037	51.18	121.39	PIL	Pilar	122296	-22.19	8.10
MRI	Mauritius	110058	-25.86	127.12	PIO	Pionerskaya	160096	-78.66	158.72
MRN	Marion Island	137038	-49.19	100.47	PIU	Piura	095279	4.33	351.62
MUB	Murchison Bay	010018	76.18	133.29	PLR	Pelabuhan Ratu	097107	-16.34	179.20
MUT	Muntinlupa	076121	5.13	193.32	PLS	Plaisance	110058	-26.21	127.19
MWC	Mt Wilson	056242	40.27	309.34	PMG	Port Moresby	099147	-16.51	221.24
MZL	Manzhouli	040117	40.12	188.56	PND	Pondicherry	078080	3.46	153.17
NAI	Nairobi	091037	-4.43	109.05	PNN	Penang	085100	-4.02	172.99
NAL	New Alesund	011012	76.14	126.50	POD	Podkammenaya Tung.	029090	52.16	166.50
NAQ	Narsarsuaq	029315	68.99	38.25	POK	Poker Flat	025213	65.80	264.57
NCK	Nagycenk	042017	46.71	99.52	POL	Pula	045014	44.47	95.83
NDA	Nida	023073	58.27	154.65	POT	Potsdam	038013	51.90	97.85
NEW	Newport	042243	54.30	306.72	PPT	Papeete	108210	-15.11	285.77
NGK	Niemegk	038013	51.66	97.35	PRU	Pruhonic	040015	49.33	98.30
NGP	Nagpur	069079	12.68	153.09	PSM	Saint Maur	041002	50.17	86.04
NHO	Norway House	036262	62.07	327.60	PST	Port Stanley	142302	-42.37	12.42
NKK	Novokazalinsk	044062	38.61	140.54	PTS	Petsamo	020031	65.47	124.73
NMP	Nampula	105039	-18.31	109.29	PTU	Plateau	169041	-78.84	63.06
NMT	Numto	027071	55.32	152.45	PTY	Patacamaya	073292	26.53	5.05
NOK	Norilsk	021088	60.04	166.31	QGZ	Qiongzong	071110	9.48	182.38
NOW	Norman Wells	025235	69.14	287.38	QIX	Qianling	055108	25.01	180.80
NPF	North Pole 6	006010	79.36	142.98	QSB	Qsaybeh	056036	30.30	113.82
NPG	North Pole 7	004268	84.39	194.29	QUE	Quetta	060067	22.69	142.56
NPH	North Pole 8	013188	73.04	228.41	QZH	Quanzhou	065119	15.51	190.62
NPJ	North Pole 10	013166	70.03	215.78	RAC	Raciborz	040018	48.77	101.79
NPL	North Pole 12	011187	74.36	224.13	RBD	Roi Baudouin	160024	-69.32	71.25
NPM	North Pole 13	009165	73.84	208.55	RDJ	Rio De Janeiro	112316	-13.97	27.57
NRD	Nord	008343	81.61	123.45	RES	Resolute Bay	015265	82.44	310.24
NRW	Northway	027218	64.69	271.89	RIT	Rankin Inlet	027268	71.28	331.58
NSM	Nitsanim	058035	28.36	112.39	ROB	Roburent	046008	44.90	89.81
NTS	Nantes	043358	49.31	81.38	ROD	Rostov On Don	043040	42.80	120.78
NUR	Nurmijarvi	029025	57.89	112.61	RPC	Rapid City	046257	51.84	323.85
NVL	Novolazarevskaya	161012	-67.76	60.63	RSV	Rude Skov	035012	54.99	98.70
NVS	Novosibirsk	035083	46.13	159.91	RYB	Rybachy	020032	65.71	125.57
NWP	North West Pacific	049160	34.83	227.04	SAB	Sabhawala	060078	21.92	152.68
NWS	Norway Station	161357	-65.59	49.84	SAH	Sachs Harbor	018235	75.63	277.43
NYI	New Year Island	145296	-45.14	7.02	SAS	Saskatoon	038253	59.34	317.55
OAS	Oasis	156101	-75.47	169.33	SBA	Scott Base	168167	-79.04	286.38
ODE	Odessa	043031	43.66	112.57	SBL	Sabel Island	046300	52.88	15.22
OKN	Okinawa	065125	15.63	196.97	SCO	Scoresbysund	020338	74.57	77.86
ONW	Onagawa	052141	30.29	210.70	SDH	Sidmouth	039357	52.90	80.99
ORC	Orcades del Sur	151315	-52.29	21.88	SED	Seddin	038013	51.81	97.76
OTT	Ottawa	045284	54.61	356.51	SEO	Seoul	052127	28.48	197.77
OUJ	Oulujarvi	025027	61.32	117.40	SEY	Seykha	020073	61.76	155.60
PAB	Paramaribo	084305	14.74	17.98	SFS	San Fernando	054354	39.52	73.38
PAF	Port Aux Francais	139070	-56.27	134.78	SGE	South Georgia	144324	-46.20	30.01
PAG	Panagyurishte	047024	40.53	105.04	SHB	Shepherd Bay	021266	76.98	324.44
PAI	Palmyra Island	084198	5.84	269.53	SHL	Shillong	064092	16.31	165.49
PBK	Pebek	019171	65.11	224.66	SHT	Shatsk	036042	49.11	124.83
PBQ	Poste-De-La-Baleine	035282	64.46	353.27	SHU	Shumagin	035200	54.43	258.86
PCU	Price	050249	46.55	316.13	SIL	Silchar	065093	15.66	166.34
PEB	Pelly Bay	022270	77.08	330.97	SIM	Simferopol	045034	41.27	114.96
PEG	Penteli	052024	36.24	103.63	SIT	Sitka	033225	60.15	282.85
PET	Petropavlovsk	037158	46.33	222.84	SJG	San Juan	072294	27.34	6.99

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<< STATION LIST BY ABBREVIATION (ABB) CODE >>

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ABB. CODE	Station Name	GG CODE	Geomagnetic Lat.	Geomagnetic Long.	ABB. CODE	Station Name	GG CODE	Geomagnetic Lat.	Geomagnetic Long.
SKT	Sukkertoppen	025307	73.83	30.55	TPA	Tampa	062278	36.92	349.11
SLU	Sloutzk	030030	56.23	117.29	TRD	Trivandrum	082077	0.29	149.99
SMG	Sao Miguel	052334	43.63	53.24	TRO	Tromso	020019	67.33	115.01
SNA	Sanae	160358	-65.43	50.16	TRW	Trelew	133295	-33.73	6.40
SNK	Sanikiluaq	034281	65.65	351.21	TST	Tungsten	028232	66.00	287.12
SOD	Sodankyla	023027	64.08	119.10	TSU	Tsumeb	109018	-18.86	87.02
SOG	Sogra	027046	57.13	132.19	TTB	Tatuoca	091311	7.38	24.38
SON	Sonmiani	065067	17.77	141.78	TUC	Tucson	058249	39.19	317.59
SOR	Soroa	067277	31.89	348.77	TUL	Tulsa	054264	44.29	333.58
SOU	South Uist	033353	59.82	80.25	TUM	Tumanny	021036	64.49	127.94
SPA	South Pole	180000	-80.59	0.00	TUN	Tuntungan	087099	-5.82	171.21
SPB	Spitsbergen	012015	75.41	127.26	UBA	Ulan Bator	042107	38.25	179.51
SPL	Siple	166276	-66.61	353.09	UGT	Ugut	029074	52.65	153.82
SPT	San Pablo-Toledo	050356	42.25	76.09	UJJ	Ujjain	067076	14.95	150.12
SRE	Srednikan	028152	55.03	215.03	UKH	Ukhta	030074	52.15	153.70
SRO	Srobarova	042018	46.61	101.09	UMA	Umba	023035	62.37	124.98
SSH	She-Shan	059121	21.77	192.79	UPS	Uppsala	030017	58.44	105.68
SSO	Simosato	056136	25.04	206.19	URC	Uranium City	030282	68.78	351.81
STF	Sdr Stromfjord	023309	75.21	35.11	VAL	Valentia	038350	55.24	74.30
STJ	St. Johns	042307	56.12	24.54	VIC	Victoria	041237	53.68	299.64
STO	Stonyhurst	036358	55.85	83.23	VLA	Vladivostok	046132	34.84	201.80
SUA	Surlari	045026	42.32	107.62	VLJ	Val Joyeux	041002	50.26	85.57
SUB	Sudbury	048289	51.42	1.67	VNA	Neumayer Station	161352	-65.08	45.39
SVD	Ekaterinburg	033061	49.54	142.15	VOS	Vostok	168107	-87.78	177.64
SWI	Swider	038021	50.34	105.49	VQS	Vieques	072295	27.37	7.74
SYO	Syowa Station	159040	-70.49	86.95	VSK	Visakhapatnam	072083	8.94	156.88
SZT	Las Mesas	062344	33.20	61.22	VSS	Vassouras	112316	-13.97	27.57
TAL	Talara	095279	4.71	351.38	WAT	Watheroo	120116	-39.45	189.59
TAM	Tamanrasset	067006	24.26	82.25	WES	Weston	048289	51.60	1.62
TAN	Tananarive	109048	-23.32	117.04	WHN	Wuhan	059115	21.02	186.69
TDC	Tristan da Cunha	127348	-31.83	54.92	WHS	White Shell	040265	58.13	331.96
TEH	Tehran	054051	29.94	128.94	WIA	Wien-Auhof	042016	47.34	99.25
TEO	Teoloyucan	070261	27.98	331.57	WIC	Conrad Observatory	042016	47.13	98.80
TEV	Tevriz	033072	49.29	151.72	WIK	Wien-Kobenzl	042016	47.38	99.36
TFS	Tbilisi	048045	37.07	124.06	WIL	Wilkes	156111	-75.49	185.28
THJ	Tonghai	066103	14.48	175.64	WIT	Witteveen	037007	53.36	91.85
THL	Thule/Qanaq	013291	86.74	13.61	WKE	Wake Island	071168	14.24	237.86
THU	Thule AFB	013291	85.81	12.41	WLH	Wilhelmshaven	036008	53.80	93.62
THY	Tihany	043018	45.80	100.39	WMQ	Urumqi	046088	34.68	162.80
TIK	Tixie Bay	018129	62.51	194.74	WNG	Wingst	036009	53.86	94.62
TIP	Tiruchirapalli	079079	2.44	151.90	WNP	Winnipeg	040263	57.81	329.65
TIR	Tirunelveli	081078	0.43	150.85	WPB	West PHL Basin	071135	10.83	206.63
TJO	Tjornes	024343	69.92	77.05	WRH	Warnkenhagen	036011	53.78	96.66
TKH	Tikhaya Bay	010053	72.97	151.86	YAK	Yakutsk	028130	53.00	197.38
TKT	Tashkent	049070	33.48	146.48	YAU	Yauca	106285	-6.03	358.07
TLK	Talkeetna	027210	63.67	263.68	YCB	Yinchuan	052106	28.90	179.09
TMB	Tambey	019072	63.18	155.73	YKC	Yellowknife	028246	68.48	302.44
TMK	Tomsk	034085	47.46	161.78	YSH	Yuzhny Shar	020062	62.27	147.69
TMP	Thompson	034262	63.79	326.95	YSS	Yuzhno Sakhalinsk	043143	38.98	210.56
TNB	Terra Nova Bay	165164	-77.14	273.62	ZAR	Zaria	079008	12.50	82.28
TND	Tondano	089125	-7.68	197.79	ZKW	Zi-Ka-Wei	059121	21.89	193.02
TNG	Tangerang	096107	-15.54	179.29	ZUY	Zouy	038104	42.88	177.26
TOK	Tokyo	054140	27.42	209.46					
TOL	Toledo	050356	42.53	76.49					
TOO	Toolangi	128145	-44.48	223.50					

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4. Status of Data Collection

Hourly Values (Geomagnetism)

One-minute Digital Values (Geomagnetism)

One-second Digital Values (Geomagnetism)

Normal-run Magnetograms

Rapid-run Magnetograms

Hourly Values (Earth Current)

Normal-run Tellurigrams

Rapid-run Tellurigrams

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Alibag (ABB CODE=ABG, GG CODE=071073, GM LAT= 10.69, GM LONG=146.92)

Geomagnetic Hourly Values ---- Digital

Table with 12 columns representing years from 1981 to 2010. Rows show data availability (1 or 0) for each year. Includes a vertical label '1 Station List' on the left.

Geomagnetic Hourly Values ---- Book

Table with 12 columns representing years from 1932 to 2009. Rows show data availability (1 or 0) for each year. Includes a vertical label '2 Alternative' on the left.

Geomagnetic Hourly Values ---- Film

Table with 12 columns representing years from 1957 to 1959. Rows show data availability (1 or 0) for each year. Includes a vertical label '3 ABB Code' on the left.

Normal-run Magnetograms ----- Digital

Table with 12 columns representing years from 1906 to 2009. Rows show data availability (1 or 0) for each year. Includes a vertical label '4 Status of Data' on the left.

Normal-run Magnetograms ----- Film

Table with 12 columns representing years from 1957 to 1999. Rows show data availability (1 or 0) for each year. Includes a vertical label '5 Sample' on the left.

** Alice Springs (ABB CODE=ASP, GG CODE=114134, GM LAT=-31.96, GM LONG=208.87)

Geomagnetic 1.0-min. Values -- Digital

Table with 12 columns representing years from 1995 to 2010. Rows show data availability (1 or 0) for each year. Includes a vertical label '6 Publication' on the left.

Geomagnetic Hourly Values ---- Digital

Table with 12 columns representing years from 1992 to 2010. Rows show data availability (1 or 0) for each year. Includes a vertical label '7 Observatory' on the left.

** Alma Ata (ABB CODE=AAA, GG CODE=047077, GM LAT= 34.79, GM LONG=153.24)

Geomagnetic 1.0-min. Values -- Digital

Table with 12 columns representing years from 2005 to 2011. Rows show data availability (1 or 0) for each year. Includes a vertical label '8 Contour Map' on the left.

Geomagnetic Hourly Values ---- Digital

Table with 12 columns representing years from 1963 to 2012. Rows show data availability (1 or 0) for each year. Includes a vertical label '9 Format' on the left.

Geomagnetic Hourly Values ---- Book

Table with 12 columns representing years from 1982 to 1983. Rows show data availability (1 or 0) for each year.

Geomagnetic Hourly Values ---- Film

Table with 12 columns representing years from 1963 to 1981. Rows show data availability (1 or 0) for each year.

Geomagnetic Hourly Values ---- Fiche

Table with 12 columns representing years from 1983 to 1989. Rows show data availability (1 or 0) for each year.

Normal-run Magnetograms ----- Film

Table with 12 columns representing years from 1963 to 1981. Rows show data availability (1 or 0) for each year.

Normal-run Magnetograms ----- Fiche

Table with 12 columns representing years from 1983 to 1989. Rows show data availability (1 or 0) for each year.

(Continued on next page.)

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Alma Ata (ABB CODE=AAA, GG CODE=047077, GM LAT= 34.79, GM LONG=153.24)
Hourly Values (Earth Current) Film
1957 000 000 011 000
Normal-run Tellurigrams ----- Film
1957 000 000 011 000 1958 111 111 111 111 1959 111 111 111 111
Rapid-run Tellurigrams ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 000 011

** Almeria (ABB CODE=ALM, GG CODE=053358, GM LAT= 39.31, GM LONG= 77.30)
Geomagnetic Hourly Values ---- Digital
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 001 000 000 000
Geomagnetic Hourly Values ---- Book
1955 111 111 111 111 1956 111 111 111 111 1957 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111
1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111
1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111
1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111
1980 111 111 111 111 1981 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111
1988 111 111 111 111 1989 111 111 111 111
Geomagnetic Hourly Values ---- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111
1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111
1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111
1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111
1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111
1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 110 001 111 1984 111 111 111 111
1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 000 000 110 000 1990 111 111 111 111 1991 111 111 111 111

** Aloushta (ABB CODE=ALU, GG CODE=045034, GM LAT= 41.07, GM LONG=115.25)
Rapid-run Tellurigrams ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 101 011

** Amatsia (ABB CODE=AMT, GG CODE=058035, GM LAT= 28.13, GM LONG=112.66)
Geomagnetic Hourly Values ---- Digital
1979 000 000 000 011 1980 111 111 000 000 1987 111 111 111 111 1988 111 111 111 111 1996 000 011 111 111 1997 000 011 111 111
1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111

** Amberley (ABB CODE=AML, GG CODE=133173, GM LAT=-46.23, GM LONG=254.14)
Geomagnetic Hourly Values ---- Digital
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 000
Geomagnetic Hourly Values ---- Book
1949 111 111 111 111 1950 111 111 111 111 1951 111 111 111 111 1952 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111
1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111
Geomagnetic Hourly Values ---- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111
Geomagnetic Hourly Values ---- Fiche
1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111
1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111
1977 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1968 111 111 111 111 1970 111 111 111 111
1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111

** Amderma (ABB CODE=AMD, GG CODE=021061, GM LAT= 62.00, GM LONG=147.34)
Normal-run Magnetograms ----- Film
1973 000 000 000 011 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111
1979 111 111 111 111

** Anchorage (ABB CODE=AMU, GG CODE=029210, GM LAT= 61.76, GM LONG=265.48)
Geomagnetic Hourly Values ---- Digital
1957 000 000 111 111 1958 111 111 111 111
Geomagnetic Hourly Values ---- Book
1957 000 000 111 111 1958 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 111 111 111 1958 111 111 111 111 1959 100 000 000 000

** Ancon (ABB CODE=ANC, GG CODE=102283, GM LAT= -2.31, GM LONG=355.62)
Geomagnetic 1.0-min. Values -- Digital
1999 001 111 111 111 2000 111 110 110 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 110 011 111 2004 111 111 111 111
2005 111 110 000 000 2006 000 000 000 111 2007 111 111 111 111 2008 111 111 111 011 2009 111 111 111 111 2010 111 111 111 000
Geomagnetic Hourly Values ---- Book
1990 000 000 111 111

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Each month from January to December is shown by 1 (data available) or 0 (unavailable).

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** Arctowski      (ABB CODE=ARC,  GG CODE=152302,  GM LAT=-52.81,  GM LONG= 10.98)
Geomagnetic 1.0-min. Values -- Digital
1992 111 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1978 000 001 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111
1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111
1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111
Geomagnetic Hourly Values ---- Book
1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111

** Arequipa      (ABB CODE=ARE,  GG CODE=106289,  GM LAT=-6.96,  GM LONG= 1.16)
Geomagnetic Hourly Values ---- Digital
1964 111 111 111 111
Geomagnetic Hourly Values ---- Film
1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111
Normal-run Magnetograms ----- Film
1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1968 111 111 111 111 1969 111 111 111 000 1970 111 100 111 111

** Argentine Island (ABB CODE=AIA,  GG CODE=155296,  GM LAT=-55.77,  GM LONG= 6.28)
Geomagnetic 1.0-min. Values -- Digital
1996 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111
2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111
2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1957 001 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1986 000 010 111 111 1987 111 100 001 111
1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111
1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111
2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111
2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
Geomagnetic Hourly Values ---- Book
1957 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
1981 111 111 111 111 1982 111 111 111 111
Geomagnetic Hourly Values ---- Film
1957 000 001 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
Normal-run Magnetograms ----- Digital
1957 000 001 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111
1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111
1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 001 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111
1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1986 111 111 111 111
1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111

** Arkhangelsk  (ABB CODE=ARK,  GG CODE=025041,  GM LAT= 59.56,  GM LONG=128.46)
Geomagnetic Hourly Values ---- Digital
1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
Geomagnetic Hourly Values ---- Film
1976 111 100 000 000 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 110 1980 101 001 111 111 1981 111 111 100 111
1982 111 111 111 111 1983 111 111 100 000
Geomagnetic Hourly Values ---- Fiche
1983 000 000 011 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
1989 000 000 000 111
Normal-run Magnetograms ----- Film
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1976 111 100 000 000 1977 111 111 111 111
1978 111 111 111 111 1979 111 111 111 110 1980 101 001 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 100 000
Normal-run Magnetograms ----- Fiche
1983 000 000 011 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 000
1989 000 000 000 111

** Arti          (ABB CODE=ARS,  GG CODE=034059,  GM LAT= 49.51,  GM LONG=139.97)
Geomagnetic 1.0-min. Values -- Digital
1990 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111
1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111
1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 001 111 111 1989 111 111 111 111 1990 111 111 111 111
2000 111 111 111 111 2001 111 111 000 000 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111
2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111
    
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<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

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** Arti          (ABB CODE=ARS,  GG CODE=034059,  GM LAT= 49.51,  GM LONG=139.97)
Geomagnetic Hourly Values ---- Fiche
1993 010 100 011 111
Normal-run Magnetograms ----- Fiche
1993 010 100 011 111

** Ascension Island (ABB CODE=ASC,  GG CODE=098346,  GM LAT= -2.89,  GM LONG= 57.55)
Geomagnetic 1.0-min. Values -- Digital
1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111
2000 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111
2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111
2000 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111
2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111

** Ashkhabad     (ABB CODE=ASH,  GG CODE=052058,  GM LAT= 31.32,  GM LONG=135.52)
Geomagnetic 1.0-min. Values -- Digital
1990 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111
1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 000 000
1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111
1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111
1984 111 111 111 111 1985 111 111 111 111 1990 111 111 111 111
Geomagnetic Hourly Values ---- Film
1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111
1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 000 000
1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111
1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 000 000
Geomagnetic Hourly Values ---- Fiche
1983 000 000 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
1989 111 111 000 000
Normal-run Magnetograms ----- Digital
1958 000 000 011 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111
1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111
1970 111 111 000 000 1971 000 000 000 001 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111
1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111
1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111
1988 111 111 111 111 1989 111 111 000 111
Normal-run Magnetograms ----- Film
1958 000 000 011 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111
1964 111 111 111 111 1965 111 111 111 111 1966 101 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111
1970 111 111 000 000 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1978 111 100 000 000
1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 000 000
Normal-run Magnetograms ----- Fiche
1983 000 000 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
1989 111 111 000 111
Rapid-run Magnetograms ----- Film
1958 000 001 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111
1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111
1970 111 111 000 000
Hourly Values (Earth Current) Film
1957 000 000 111 111 1958 111 111 111 111 1959 000 111 111 111 1964 000 000 000 111 1965 111 111 111 111 1966 000 100 000 111
Normal-run Tellurigrams ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 000 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 100 111 111
Rapid-run Tellurigrams ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 000 111 111 111 1964 111 111 000 111 1965 111 111 111 111 1966 111 111 111 111

** Aso          (ABB CODE=ASO,  GG CODE=057131,  GM LAT= 24.02,  GM LONG=201.72)
Geomagnetic Hourly Values ---- Digital
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111
Geomagnetic Hourly Values ---- Book
1932 000 000 011 111 1933 111 111 110 000
Geomagnetic Hourly Values ---- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 000 111 111 111 1959 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111
Rapid-run Magnetograms ----- Digital
1953 000 000 010 000 1954 001 000 111 111 1955 001 100 110 000 1957 000 001 111 111 1958 111 111 111 111 1959 111 110 010 000
1960 000 011 111 111 1961 111 110 000 000 1962 000 111 111 111 1963 011 111 111 110 1964 011 111 111 111 1965 111 111 111 111
1966 111 111 111 011 1967 111 111 111 111 1968 111 111 111 111

** Asuka Station (ABB CODE=ASK,  GG CODE=162024,  GM LAT=-70.27,  GM LONG= 69.61)
Normal-run Magnetograms ----- Book
1987 011 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111
    
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<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

** Beijing (ABB CODE=BJI, GG CODE=050116, GM LAT= 30.50, GM LONG=187.91)

Table with columns for year and month (1-12) for Beijing. Includes sections for 'Geomagnetic Hourly Values - Digital' and 'Geomagnetic Hourly Values - Book'.

** Beijing Ming Tombs (ABB CODE=BMT, GG CODE=050116, GM LAT= 30.80, GM LONG=187.90)

Table with columns for year and month (1-12) for Beijing Ming Tombs. Includes sections for 'Geomagnetic 1.0-min. Values - Digital' and 'Geomagnetic Hourly Values - Book'.

** Beliy Island (ABB CODE=BEY, GG CODE=017070, GM LAT= 65.07, GM LONG=155.43)

Table with columns for year and month (1-12) for Beliy Island. Includes 'Normal-run Magnetograms - Film'.

** Beloit (ABB CODE=BLT, GG CODE=051262, GM LAT= 47.65, GM LONG=330.42)

Table with columns for year and month (1-12) for Beloit. Includes sections for 'Geomagnetic Hourly Values - Digital', 'Geomagnetic Hourly Values - Book', and 'Normal-run Magnetograms - Film'.

** Belsk (ABB CODE=BEL, GG CODE=038021, GM LAT= 50.13, GM LONG=104.94)

Large table with columns for year and month (1-12) for Belsk. Includes sections for 'Geomagnetic 1.0-min. Values - Digital', 'Geomagnetic Hourly Values - Digital', 'Geomagnetic Hourly Values - Book', and 'Normal-run Magnetograms - Film'.

** Big Delta (ABB CODE=BDE, GG CODE=026214, GM LAT= 65.03, GM LONG=267.28)

Table with columns for year and month (1-12) for Big Delta. Includes 'Geomagnetic Hourly Values - Digital'.

Vertical sidebar with numbered items 1-9 and their corresponding labels: Station List, Alternative, ABB Code, Status of Data, Sample, Publication, Observatory, Contour Map, Format.

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<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

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```

** Big Delta      (ABB CODE=BDE,  GG CODE=026214,  GM LAT= 65.03,  GM LONG=267.28)
Geomagnetic Hourly Values ---- Book
1957 000 000 111 111 1958 111 111 111 111
Geomagnetic Hourly Values ---- Film
1957 000 000 111 111 1958 111 111 111 111 1959 100 000 000 000
Normal-run Magnetograms ----- Book
1957 000 000 111 111 1958 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 100 000 000 000
Rapid-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 100 000 000 000

** Binza         (ABB CODE=BIN,  GG CODE=094015,  GM LAT= -3.96,  GM LONG= 87.26)
Geomagnetic Hourly Values ---- Film
1958 111 111 111 111
Normal-run Magnetograms ----- Film
1968 111 111 111 111

** Bjornoya     (ABB CODE=BJN,  GG CODE=015019,  GM LAT= 71.61,  GM LONG=121.59)
Geomagnetic 1.0-min. Values -- Digital
1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 101 1990 100 001 111 111 1991 111 111 111 111 1992 111 111 111 111
1993 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111
2004 110 001 111 100 2005 111 111 111 111 2006 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 101 1990 100 001 111 111 1991 111 111 111 111 1992 111 111 111 111
1993 111 111 111 111 1994 111 111 111 000 1995 111 111 111 111 1996 111 111 111 100 1997 111 111 111 111 1998 111 111 111 111
1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111 2004 110 001 111 100
2005 111 111 111 111 2006 111 111 111 111
Geomagnetic Hourly Values ---- Book
1956 111 111 111 111
Normal-run Magnetograms ----- Film
1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111
1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 000 001 111 1985 111 111 111 111
1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 101 1990 111 000 000 000

** Black Forest (ABB CODE=BFO,  GG CODE=042008,  GM LAT= 48.75,  GM LONG= 91.63)
Geomagnetic 1.0-min. Values -- Digital
2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111
Geomagnetic Hourly Values ---- Digital
2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111

** Bodo         (ABB CODE=BOD,  GG CODE=021014,  GM LAT= 67.67,  GM LONG=110.83)
Geomagnetic Hourly Values ---- Book
1932 000 000 001 111 1933 111 111 110 000

** Borok       (ABB CODE=BOX,  GG CODE=032038,  GM LAT= 53.58,  GM LONG=123.26)
Geomagnetic 1.0-min. Values -- Digital
2004 000 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111
2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1980 111 111 011 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111
1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111
1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 101 111 111
1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2004 000 111 111 111 2005 111 111 111 111 2006 111 111 111 111
2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
Geomagnetic Hourly Values ---- Film
1976 000 000 000 001 1977 111 100 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111
1982 111 111 111 111 1983 110 111 100 000
Geomagnetic Hourly Values ---- Fiche
1983 000 000 011 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
1989 111 111 111 111 1990 111 111 111 111 1992 111 111 111 111
Normal-run Magnetograms ----- Film
1976 000 000 000 001 1977 111 100 111 111 1978 000 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111
1982 111 110 111 111 1983 111 111 100 000
Normal-run Magnetograms ----- Fiche
1983 000 000 011 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111
Rapid-run Magnetograms ----- Film
1957 111 100 011 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 000 000
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111
Normal-run Tellurigrams ----- Digital
1958 011 111 111 111 1959 111 111 111 111 1960 111 100 000 000
Rapid-run Tellurigrams ----- Digital
1958 011 111 111 111 1959 111 111 111 111 1960 111 100 000 000
Rapid-run Tellurigrams ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 011 1962 111 111 111 001
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 110 011 111 111 1970 111 111 111 111 1971 111 111 111 111
    
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<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

1
Station List
** Cape Zhelania (ABB CODE=CZA, GG CODE=013069, GM LAT= 68.76, GM LONG=156.99)
Normal-run Magnetograms ----- Film
1973 000 000 000 011 1974 110 000 000 000

2
Alternative
** Capri (ABB CODE=CPI, GG CODE=049014, GM LAT= 40.21, GM LONG= 94.90)
Geomagnetic Hourly Values ---- Book
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 110 000 1961 011 111 111 111 1962 111 111 111 111 1963 111 111 111 111
1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111
1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111
1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 101 1980 111 111 111 111 1981 111 111 111 111
1982 111 111 111 111 1990 111 111 111 111 1995 111 111 111 111
Normal-run Magnetograms ----- Book
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 110 000 1961 011 111 111 111 1962 111 111 111 111 1963 111 111 111 111
1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111
Normal-run Magnetograms ----- Film
1964 111 111 111 111 1965 111 111 111 111

3
ABB Code
** Carrollton (ABB CODE=CAX, GG CODE=051267, GM LAT= 47.88, GM LONG=335.78)
Geomagnetic Hourly Values ---- Digital
1958 111 111 111 111 1959 100 000 000 000
Geomagnetic Hourly Values ---- Film
1958 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 100 000 000 000

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** Casey (ABB CODE=CSY, GG CODE=156111, GM LAT=-75.53, GM LONG=185.20)
Geomagnetic 1.0-min. Values -- Digital
1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111
1995 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111
2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2011 111 111 111 111 2012 111 111 111 101
Geomagnetic Hourly Values ---- Digital
1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111
1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111
2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2011 111 111 111 111
2012 111 111 111 111

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Observatory
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Contour Map
9
Format
** Casper (ABB CODE=CSR, GG CODE=047254, GM LAT= 50.23, GM LONG=320.47)
Geomagnetic Hourly Values ---- Film
1957 000 000 011 111 1958 110 011 110 000
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111

** Castellaccio (ABB CODE=CAO, GG CODE=046009, GM LAT= 44.86, GM LONG= 90.89)
Geomagnetic Hourly Values ---- Digital
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111
Geomagnetic Hourly Values ---- Book
1957 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1994 111 111 111 111 1995 111 111 111 111
Geomagnetic Hourly Values ---- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111

** Castello Tesino (ABB CODE=CTS, GG CODE=044012, GM LAT= 45.99, GM LONG= 94.08)
Geomagnetic Hourly Values ---- Book
1981 111 111 111 111 1985 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111
1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 2008 111 111 111 111
2009 111 111 111 111

** Cebu (ABB CODE=CCP, GG CODE=080124, GM LAT= 1.21, GM LONG=196.31)
Normal-run Magnetograms ----- Film
1961 000 000 111 111

** Cha-Pa (ABB CODE=CPA, GG CODE=068104, GM LAT= 12.81, GM LONG=176.69)
Geomagnetic Hourly Values ---- Digital
1957 000 000 001 111 1958 111 111 111 111 1959 111 111 111 111 1965 111 111 111 111
Geomagnetic Hourly Values ---- Book
1957 000 000 001 111 1958 111 111 111 111 1959 111 111 111 111
Geomagnetic Hourly Values ---- Film
1957 000 000 001 111 1958 111 111 111 111 1959 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 000 001 111 1958 111 111 111 111 1959 111 111 111 111

** Chambon-La-Forêt (ABB CODE=CLF, GG CODE=042002, GM LAT= 49.44, GM LONG= 85.52)
Geomagnetic 1.0-min. Values -- Digital
1980 110 011 111 111 1981 111 111 111 011 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111
1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111
1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111
1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111
2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111
2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111

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<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Chambon-La-Foret (ABB CODE=CLF, GG CODE=042002, GM LAT= 49.44, GM LONG= 85.52)

Geomagnetic Hourly Values --- Digital

Table with columns for years (1936-2012) and rows for digital geomagnetic hourly values for Chambon-La-Foret. Values are mostly 1, indicating data availability.

Geomagnetic Hourly Values --- Book

Table with columns for years (1936-1988) and rows for book geomagnetic hourly values for Chambon-La-Foret. Values are mostly 1.

Normal-run Magnetograms ----- Film

Table with columns for years (1957-1974) and rows for normal-run magnetogram film data for Chambon-La-Foret.

Rapid-run Magnetograms ----- Film

Table with columns for years (1957-1959) and rows for rapid-run magnetogram film data for Chambon-La-Foret.

** Changchun (ABB CODE=CNH, GG CODE=046125, GM LAT= 34.63, GM LONG=195.75)

Geomagnetic Hourly Values --- Digital

Table with columns for years (1979-2007) and rows for digital geomagnetic hourly values for Changchun.

** Charcot (ABB CODE=CTX, GG CODE=159139, GM LAT=-76.36, GM LONG=232.19)

Geomagnetic Hourly Values --- Digital

Table with columns for years (1957-1958) and rows for digital geomagnetic hourly values for Charcot.

** Charters Towers (ABB CODE=CTA, GG CODE=110146, GM LAT=-27.16, GM LONG=221.60)

Geomagnetic 1.0-min. Values -- Digital

Table with columns for years (1994-2008) and rows for 1.0-minute geomagnetic values for Charters Towers.

Geomagnetic Hourly Values --- Digital

Table with columns for years (1990-2012) and rows for digital geomagnetic hourly values for Charters Towers.

** Cheltenham (ABB CODE=CLH, GG CODE=051283, GM LAT= 47.90, GM LONG=355.19)

Geomagnetic Hourly Values --- Digital

Table with columns for years (1901-1956) and rows for digital geomagnetic hourly values for Cheltenham.

Geomagnetic Hourly Values --- Book

Table with columns for years (1913-1955) and rows for book geomagnetic hourly values for Cheltenham.

** Chengdu (ABB CODE=CDP, GG CODE=059104, GM LAT= 21.44, GM LONG=176.66)

Geomagnetic Hourly Values --- Digital

Table with columns for years (1995-2009) and rows for digital geomagnetic hourly values for Chengdu.

** Chichijima (ABB CODE=CBI, GG CODE=063142, GM LAT= 19.11, GM LONG=212.64)

Geomagnetic 1.0-sec. Values -- Digital

Table with columns for years (2013-2019) and rows for 1.0-second geomagnetic values for Chichijima.

Geomagnetic 1.0-min. Values -- Digital

Table with columns for years (1991-2002) and rows for 1.0-minute geomagnetic values for Chichijima.

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Vertical sidebar with numbered items 1-9 and their corresponding labels: Station List, Alternative, ABB Code, Status of Data, Sample, Publication, Observatory, Contour Map, Format.

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Dalat (ABB CODE=DLT, GG CODE=078108, GM LAT= 2.46, GM LONG=181.14)
Geomagnetic Hourly Values ---- Book
1991 000 000 000 111

** Dalian (ABB CODE=DLN, GG CODE=051122, GM LAT= 29.76, GM LONG=192.68)
Geomagnetic Hourly Values ---- Book
1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111

** Dallas (ABB CODE=DAL, GG CODE=057263, GM LAT= 41.30, GM LONG=332.85)
Geomagnetic Hourly Values ---- Digital
1964 111 111 111 111 1965 111 111 111 111 1966 111 000 000 000 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111
1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111

Geomagnetic Hourly Values ---- Film
1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111
1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111

Normal-run Magnetograms ----- Film
1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111
1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 100 000 000

** Dar Es Salaam (ABB CODE=DRS, GG CODE=097039, GM LAT= -9.88, GM LONG=110.60)
Normal-run Magnetograms ----- Film
1969 000 000 001 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 110 000 000

** Davao (ABB CODE=DAV, GG CODE=083126, GM LAT= -1.91, GM LONG=198.13)
Geomagnetic Hourly Values ---- Digital
1980 000 000 001 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 101
Geomagnetic Hourly Values ---- Film
1971 111 100 000 000 1972 000 110 111 111 1973 111 111 111 111 1974 111 111 111 000 1975 111 111 111 111 1976 111 111 111 111
1977 111 111 111 111 1985 111 111 111 111

Normal-run Magnetograms ----- Digital
1965 000 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111
1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111
1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111
1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111

Normal-run Magnetograms ----- Film
1965 000 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111
1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111
1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111
1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111

** Davis (ABB CODE=DVS, GG CODE=159078, GM LAT=-75.91, GM LONG=132.29)
Geomagnetic 1.0-min. Values -- Digital
1988 011 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111
1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1988 011 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111
1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111
2000 111 111 111 111

** De Bilt (ABB CODE=DBN, GG CODE=038005, GM LAT= 52.91, GM LONG= 90.07)
Geomagnetic Hourly Values ---- Digital
1903 111 111 111 111 1904 111 111 111 111 1905 111 111 111 111 1906 111 111 111 111 1907 111 111 111 111 1908 111 111 111 111
1909 111 111 111 111 1910 111 111 111 111 1911 111 111 111 111 1912 111 111 111 111 1913 111 111 111 111 1914 111 111 111 111
1915 111 111 111 111 1916 111 111 111 111 1917 111 111 111 111 1918 111 111 111 111 1919 111 111 111 111 1920 111 111 111 111
1921 111 111 111 111 1922 111 111 111 111 1923 111 111 111 111 1924 111 111 111 111 1925 111 111 111 111 1926 111 111 111 111
1927 111 111 111 111 1928 111 111 111 111 1929 111 111 111 111 1930 111 111 111 111 1931 111 111 111 111 1932 111 111 111 111
1933 111 111 111 111 1934 111 111 111 111 1935 111 111 111 111 1936 111 111 111 111 1937 111 111 111 111 1938 111 111 000 000
Geomagnetic Hourly Values ---- Book
1932 111 111 111 111 1933 111 111 111 111 1934 111 111 111 111 1935 111 111 111 111 1936 111 111 111 111 1937 111 111 111 111

** Deadhorse (ABB CODE=DED, GG CODE=019211, GM LAT= 70.47, GM LONG=256.52)
Geomagnetic 1.0-min. Values -- Digital
2011 111 111 111 111 2012 111 111 111 111
Geomagnetic Hourly Values ---- Digital
2011 111 111 111 111 2012 111 111 111 111

** Del Rio (ABB CODE=DLR, GG CODE=061259, GM LAT= 37.50, GM LONG=328.67)
Geomagnetic 1.0-min. Values -- Digital
1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111
1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111
1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111
2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 110 111
2008 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1982 000 000 001 111 1983 111 111 000 000 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111
1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111
1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111
2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111
2006 111 111 111 111 2007 111 111 110 111 2008 111 111 111 111

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Dourbes (ABB CODE=DOU, GG CODE=040005, GM LAT= 51.07, GM LONG= 88.65)

Geomagnetic Hourly Values --- Digital

Table with 12 columns representing years from 1981 to 2012, showing data availability (1 or 0) for Dourbes station.

1 Station List

Geomagnetic Hourly Values --- Book

Table with 12 columns representing years from 1957 to 1999, showing data availability (1 or 0) for Dourbes station.

2 Alternative

Geomagnetic Hourly Values --- Film

Table with 12 columns representing years from 1964 to 1993, showing data availability (1 or 0) for Dourbes station.

3 ABB Code

Normal-run Magnetograms ----- Film

Table with 12 columns representing years from 1957 to 1984, showing data availability (1 or 0) for Dourbes station.

5 Sample

Rapid-run Magnetograms ----- Film

Table with 12 columns representing years from 1957 to 1965, showing data availability (1 or 0) for Dourbes station.

6 Publication

** Dumont d'Urville (ABB CODE=DRV, GG CODE=157140, GM LAT=-73.69, GM LONG=229.97)

Geomagnetic 1.0-min. Values -- Digital

Table with 12 columns representing years from 1969 to 2011, showing data availability (1 or 0) for Dumont d'Urville station.

7 Observatory

Geomagnetic Hourly Values --- Digital

Table with 12 columns representing years from 1957 to 2006, showing data availability (1 or 0) for Dumont d'Urville station.

8 Contour Map

Geomagnetic Hourly Values --- Book

Table with 12 columns representing years from 1957 to 1983, showing data availability (1 or 0) for Dumont d'Urville station.

9 Format

Geomagnetic Hourly Values --- Film

Table with 12 columns representing years from 1957 to 1992, showing data availability (1 or 0) for Dumont d'Urville station.

** Easter Island (ABB CODE=EIC, GG CODE=117251, GM LAT=-19.35, GM LONG=325.61)

Geomagnetic Hourly Values --- Digital

Table with 12 columns representing years from 1964 to 2000, showing data availability (1 or 0) for Easter Island station.

Geomagnetic Hourly Values --- Book

Table with 12 columns representing years from 1963 to 2000, showing data availability (1 or 0) for Easter Island station.

Normal-run Magnetograms ----- Digital

Table with 12 columns representing years from 1958 to 1964, showing data availability (1 or 0) for Easter Island station.

Normal-run Magnetograms ----- Film

Table with 12 columns representing years from 1958 to 1963, showing data availability (1 or 0) for Easter Island station.

** Ebro (ABB CODE=EBR, GG CODE=049000, GM LAT= 42.87, GM LONG= 81.25)

Geomagnetic 1.0-min. Values -- Digital

Table with 12 columns representing years from 2000 to 2012, showing data availability (1 or 0) for Ebro station.

(Continued on next page.)

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

** Eskimo Point (ABB CODE=EKP, GG CODE=029266, GM LAT= 69.44, GM LONG=329.71)
Normal-run Magnetograms ----- Film
1974 000 000 011 111 1975 111 111 111 011 1976 111 111 111 111

** Espanola (ABB CODE=EPN, GG CODE=054254, GM LAT= 43.30, GM LONG=322.08)
Geomagnetic Hourly Values ---- Film
1957 000 001 111 111 1958 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 001 111 111 1958 111 111 111 111 1959 100 000 000 000

** Ettaiyapuram (ABB CODE=ETT, GG CODE=081078, GM LAT= 0.88, GM LONG=151.10)
Geomagnetic Hourly Values ---- Digital
1996 111 111 111 110 1997 000 000 011 111 1998 111 100 000 000
Geomagnetic Hourly Values ---- Book
1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111
1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111
1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 2000 111 111 111 111
2001 111 111 111 111
Normal-run Magnetograms ----- Digital
1980 111 111 111 111

** Eyrewell (ABB CODE=EYR, GG CODE=133172, GM LAT=-46.61, GM LONG=253.91)
Geomagnetic 1.0-min. Values -- Digital
1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111
2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111
2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1978 000 000 011 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111
1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111
1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111
1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111
2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111
2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
Geomagnetic Hourly Values ---- Fiche
1985 111 111 111 111 1986 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111
1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111
1998 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111

** Fanning (ABB CODE=FAN, GG CODE=086201, GM LAT= 4.36, GM LONG=272.62)
Geomagnetic Hourly Values ---- Digital
1957 000 000 011 111 1958 111 111 111 111
Geomagnetic Hourly Values ---- Film
1957 000 000 011 111 1958 111 111 111 111
Normal-run Magnetograms ----- Digital
1958 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 000 011 111 1958 111 111 111 111

** Fort Churchill (ABB CODE=FCC, GG CODE=031266, GM LAT= 67.12, GM LONG=330.71)
Geomagnetic 1.0-min. Values -- Digital
1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111
1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111
2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111
2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 110 111 2013 111 111 111 111
2014 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1957 000 000 111 111 1958 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111
1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111
1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111
1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111
1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111
1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111
1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111
2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111
2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111 2013 111 111 111 111 2014 111 111 111 111
Geomagnetic Hourly Values ---- Book
1957 111 111 111 111 1958 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111
1968 111 111 111 111 1969 111 111 111 111
Geomagnetic Hourly Values ---- Film
1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111
1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111
1982 111 111 111 111 1983 111 111 111 111
Geomagnetic Hourly Values ---- Fiche
1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 001 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111

(Continued on next page.)

1	Station List
2	Alternative
3	ABB Code
4	Status of Data
5	Sample
6	Publication
7	Observatory
8	Contour Map
9	Format

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

- 1**
Station List

- 2**
Alternative

- 3**
ABB Code

- 4**
Status of Data

- 5**
Sample

- 6**
Publication

- 7**
Observatory

- 8**
Contour Map

- 9**
Format

```

** Fort Churchill (ABB CODE=FCC, GG CODE=031266, GM LAT= 67.12, GM LONG=330.71)
Normal-run Magnetograms ----- Film
1987 111 111 111 111
Normal-run Magnetograms ----- Fiche
1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111

** Fort Rae (ABB CODE=FRA, GG CODE=027244, GM LAT= 68.56, GM LONG=300.23)
Geomagnetic Hourly Values ---- Digital
1964 111 111 111 111

** Fort Simpson (ABB CODE=FSP, GG CODE=028239, GM LAT= 66.81, GM LONG=295.08)
Geomagnetic 1.0-min. Values -- Digital
1990 111 111 111 111 1992 111 111 011 111
Geomagnetic Hourly Values ---- Digital
1990 111 111 111 111 1992 111 111 011 111 1994 111 111 111 111

** Fort Yukon (ABB CODE=FYU, GG CODE=023215, GM LAT= 67.48, GM LONG=265.20)
Geomagnetic Hourly Values ---- Film
1957 000 001 000 111 1958 111 011 111 111
Normal-run Magnetograms ----- Film
1957 000 001 110 111 1958 111 111 111 111

** Fredericksburg (ABB CODE=FRD, GG CODE=052283, GM LAT= 47.39, GM LONG=354.54)
Geomagnetic 1.0-min. Values -- Digital
1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111
1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111
1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111
2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111
2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1956 111 111 111 111 1957 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111
1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111
1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111
1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111
1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111
1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111
1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111
1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111
2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111
2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
Geomagnetic Hourly Values ---- Book
1957 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1989 001 111 111 111 1996 000 100 111 111 1997 111 111 111 111
Geomagnetic Hourly Values ---- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
1987 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 110 000 000 000
Normal-run Magnetograms ----- Book
1956 111 111 111 111 1957 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111
1962 111 111 111 111 1963 111 111 111 111 1996 000 100 111 111 1997 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111
1993 110 000 000 000
Rapid-run Magnetograms ----- Digital
1957 000 001 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 110 1979 111 100 000 000
Rapid-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 110 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 100 1979 111 100 000 000

** Freetown (ABB CODE=FTN, GG CODE=082347, GM LAT= 13.08, GM LONG= 61.02)
Geomagnetic Hourly Values ---- Digital
1964 111 111 111 111
Geomagnetic Hourly Values ---- Film
1961 000 000 111 111 1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 000 000
Normal-run Magnetograms ----- Digital
1961 000 001 111 111 1962 111 111 110 000 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111
1967 110 001 000 000

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(Continued on next page.)

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

1
Station List

2
Alternative

3
ABB Code

4
Status of Data

** Furstenfeldbruck (ABB CODE=FUR, GG CODE=042011, GM LAT= 48.11, GM LONG= 94.46)
Normal-run Magnetograms ----- Film
1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111
1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111
1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111
1982 111 111 111 111 1983 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
1989 111 111 111 111 1990 111 111 111 111 1992 111 111 111 111

Rapid-run Magnetograms ----- Digital
1959 000 000 000 001 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111
1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111
1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111
1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111
1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 000

** Gan Int. Airport (ABB CODE=GAN, GG CODE=091073, GM LAT=-8.46, GM LONG=145.41)
Geomagnetic 1.0-min. Values -- Digital
2012 111 111 111 011
Geomagnetic Hourly Values ---- Digital
2012 111 111 111 111

** Genova (ABB CODE=GEN, GG CODE=045009, GM LAT= 44.97, GM LONG= 90.94)
Geomagnetic Hourly Values ---- Book
1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111

** Gillam (ABB CODE=GIM, GG CODE=034265, GM LAT= 64.73, GM LONG=330.77)
Normal-run Magnetograms ----- Film
1974 111 100 000 000 1975 000 000 001 111 1976 111 110 000 000

** Gingin (ABB CODE=GNG, GG CODE=121116, GM LAT=-40.48, GM LONG=189.45)
Geomagnetic 1.0-min. Values -- Digital
2012 111 111 111 111
Geomagnetic Hourly Values ---- Digital
2012 111 111 111 111

** Glenlea (ABB CODE=GLN, GG CODE=040263, GM LAT= 57.83, GM LONG=329.66)
Geomagnetic 1.0-min. Values -- Digital
1983 111 111 111 111 1984 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111
1992 111 111 111 111 1993 111 111 111 111 1994 111 110 000 001 1995 111 111 111 111 1996 111 100 111 111 1997 111 000 000 000
Geomagnetic Hourly Values ---- Digital
1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 110 000 001
1995 111 111 111 111 1996 111 100 111 111 1997 111 000 000 000
Geomagnetic Hourly Values ---- Film
1980 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111
Geomagnetic Hourly Values ---- Fiche
1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
Normal-run Magnetograms ----- Film
1980 000 000 000 001 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111
1986 111 111 111 111 1987 111 111 111 111
Normal-run Magnetograms ----- Fiche
1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111

** Gngara (ABB CODE=GNA, GG CODE=122116, GM LAT=-40.90, GM LONG=189.73)
Geomagnetic 1.0-min. Values -- Digital
1995 111 111 111 111 1996 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111
2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111
2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1992 111 111 111 111 1993 111 110 111 111
1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111
2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111
2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111
2012 111 111 111 111
Geomagnetic Hourly Values ---- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 100 000 000
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1975 111 111 111 111
1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111
1983 111 111 111 111 1984 111 111 111 111 1986 000 111 000 000

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Kakioka (ABB CODE=KAK, GG CODE=054140, GM LAT= 28.00, GM LONG=209.80)

Geomagnetic Hourly Values ---- Book

Table with 12 columns representing years from 1913 to 2019. Rows are categorized by Station List (1), Alternative (2), ABB Code (3), and Status of Data (4). All cells contain '1'.

Geomagnetic Hourly Values ---- Film

Table with 12 columns representing years from 1957 to 1995. Rows are categorized by Sample (5). All cells contain '1'.

Normal-run Magnetograms ----- Digital

Table with 12 columns representing years from 1924 to 1972. Rows are categorized by Publication (6) and Observatory (7). All cells contain '1'.

Normal-run Magnetograms ----- Book

Table with 12 columns representing years from 1957 to 1996. Rows are categorized by Contour Map (8) and Format (9). All cells contain '1'.

Normal-run Magnetograms ----- Film

Table with 12 columns representing years from 1924 to 1994. Rows are categorized by Contour Map (8) and Format (9). All cells contain '1'.

Rapid-run Magnetograms ----- Digital

1957 000 000 001 111

Rapid-run Magnetograms ----- Film

1957 000 000 111 111 1958 111 111 111 111

Hourly Values (Earth Current) Book

Table with 12 columns representing years from 1957 to 1999. Rows are categorized by Contour Map (8) and Format (9). All cells contain '1'.

Normal-run Tellurigrams ----- Book

1998 111 111 111 111 1999 111 111 111 111

Normal-run Tellurigrams ----- Film

Table with 12 columns representing years from 1957 to 1993. Rows are categorized by Contour Map (8) and Format (9). All cells contain '1'.

(Continued on next page.)

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Kanoya (ABB CODE=KNY, GG CODE=059131, GM LAT= 22.56, GM LONG=201.72)

Table with columns for Station List (1-6), Alternative (7-9), and data rows for Rapid-run Magnetograms, Hourly Values (Earth Current), and Normal-run Tellurigrams for Kanoya.

** Kanozan (ABB CODE=KNZ, GG CODE=055140, GM LAT= 27.02, GM LONG=209.70)

Table with columns for Publication (6-9) and data rows for Geomagnetic 1.0-sec. Values, Geomagnetic 1.0-min. Values, and Geomagnetic Hourly Values for Kanozan.

** Kap Tobin (ABB CODE=KTG, GG CODE=020338, GM LAT= 74.43, GM LONG= 77.57)

Table with columns for Normal-run Magnetograms and data row for Kap Tobin.

** Karachi (ABB CODE=KRC, GG CODE=065067, GM LAT= 17.49, GM LONG=142.12)

Table with columns for Geomagnetic Hourly Values and data row for Karachi.

** Karaganda (ABB CODE=KGD, GG CODE=040073, GM LAT= 41.61, GM LONG=150.83)

Table with columns for Geomagnetic Hourly Values and data rows for Karaganda.

(Continued on next page.)

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Kiev (ABB CODE=KIV, GG CODE=039030, GM LAT= 47.58, GM LONG=113.32)

Geomagnetic Hourly Values --- Digital

Table with 12 columns representing years from 1982 to 2011. Rows show data availability for 1982-1984, 1988-1991, 2009-2010, and 2011.

Geomagnetic Hourly Values --- Book

Table with 12 columns representing years from 1968 to 1980. Row shows data availability for 1968-1979 and 1980.

Geomagnetic Hourly Values --- Film

Table with 12 columns representing years from 1958 to 1982. Rows show data availability for 1958-1960, 1961-1963, 1964-1967, 1970-1973, 1974-1975, 1976-1977, and 1982.

Geomagnetic Hourly Values --- Fiche

Table with 12 columns representing years from 1983 to 1989. Rows show data availability for 1983-1984, 1985-1986, 1987-1988, and 1989.

Normal-run Magnetograms --- Film

Table with 12 columns representing years from 1958 to 1982. Rows show data availability for 1958-1960, 1961-1963, 1964-1967, 1970-1973, 1974-1975, 1976-1977, and 1982.

Normal-run Magnetograms --- Fiche

Table with 12 columns representing years from 1983 to 1989. Rows show data availability for 1983-1984, 1985-1986, 1987-1988, and 1989.

Rapid-run Magnetograms --- Film

Table with 12 columns representing years from 1959 to 1966. Rows show data availability for 1959-1960, 1961-1962, 1963-1964, and 1965-1966.

** Kiruna (ABB CODE=KIR, GG CODE=022020, GM LAT= 65.43, GM LONG=114.36)

Geomagnetic 1.0-min. Values -- Digital

Table with 12 columns representing years from 1991 to 2008. Rows show data availability for 1991-1993, 2002-2005, 2006-2007, and 2008.

Geomagnetic Hourly Values --- Digital

Table with 12 columns representing years from 1962 to 2004. Rows show data availability for 1962-1963, 1964-1966, 1967-1968, 1969-1970, 1971-1973, 1974-1975, 1976-1977, 1978-1979, 1980-1981, 1982-1983, 1984-1985, 1986-1987, 1988-1989, 1990-1991, 1992-1993, 1994-1995, 1996-1997, 1998-1999, 2000-2001, 2002-2003, 2004-2005, and 2008.

Geomagnetic Hourly Values --- Book

Table with 12 columns representing years from 1987 to 1987. Row shows data availability for 1987.

Geomagnetic Hourly Values --- Film

Table with 12 columns representing years from 1992 to 1992. Row shows data availability for 1992.

Normal-run Magnetograms --- Book

Table with 12 columns representing years from 1967 to 2015. Rows show data availability for 1967-1970, 1971-1973, 1974-1975, 1976-1977, 1978-1979, 1980-1981, 1982-1983, 1984-1985, 1986-1987, 1988-1989, 1990-1991, 1992-1993, 1994-1995, 1996-1997, 1998-1999, 2000-2001, 2002-2003, 2004-2005, 2006-2007, 2008-2009, 2010-2011, 2012-2013, 2014-2015, and 2015.

Normal-run Magnetograms --- Film

Table with 12 columns representing years from 1957 to 2001. Rows show data availability for 1957-1958, 1959-1961, 1962-1963, 1964-1966, 1967-1968, 1969-1970, 1971-1973, 1974-1975, 1976-1977, 1978-1979, 1980-1981, 1982-1983, 1984-1985, 1986-1987, 1988-1989, 1990-1991, 1992-1993, 1994-1995, 1996-1997, 1998-1999, 2000-2001, and 2002.

Rapid-run Magnetograms --- Film

Table with 12 columns representing years from 1963 to 1975. Rows show data availability for 1963-1964, 1965-1966, 1967-1968, 1969-1970, 1971-1972, 1973-1974, 1975-1976, 1977-1978, and 1979.

Hourly Values (Earth Current) Book

Table with 12 columns representing years from 1963 to 1964. Row shows data availability for 1963-1964.

** Kodaikanal (ABB CODE=KOD, GG CODE=080077, GM LAT= 1.98, GM LONG=150.64)

Geomagnetic Hourly Values --- Digital

Table with 12 columns representing years from 1957 to 1980. Row shows data availability for 1957-1958, 1959-1980.

Geomagnetic Hourly Values --- Book

Table with 12 columns representing years from 1953 to 2000. Rows show data availability for 1953-1955, 1956-1957, 1958-1959, 1960-1961, 1962-1963, 1964-1965, 1966-1967, 1968-1969, 1970-1971, 1972-1973, 1974-1975, 1976-1977, 1978-1979, 1980-1981, 1982-1983, 1984-1985, 1986-1987, 1988-1989, 1990-1991, 1992-1993, 1994-1995, 1996-1997, 1998-1999, 2000-2001, and 2003.

(Continued on next page.)

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Kodaikanal (ABB CODE=KOD, GG CODE=080077, GM LAT= 1.98, GM LONG=150.64)
 Geomagnetic Hourly Values ---- Film
 1957 111 111 111 111
 Normal-run Magnetograms ----- Film
 1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111
 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111
 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111
 1978 111 111 111 111 1979 111 111 111 111

** Kontagora (ABB CODE=KNT, GG CODE=080005, GM LAT= 12.12, GM LONG= 79.97)
 Normal-run Magnetograms ----- Digital
 1964 000 000 000 001 1965 111 111 111 111
 Normal-run Magnetograms ----- Film
 1964 000 000 000 001 1965 111 111 111 111

** Koror (ABB CODE=KOR, GG CODE=083135, GM LAT= -1.10, GM LONG=206.95)
 Geomagnetic Hourly Values ---- Digital
 1957 000 000 111 111 1958 111 111 111 111 1964 000 011 111 111 1965 111 111 111 111 1966 111 000 000 000
 Geomagnetic Hourly Values ---- Book
 1957 000 000 111 111 1958 111 111 111 111
 Geomagnetic Hourly Values ---- Film
 1957 000 000 111 111 1958 111 111 111 111
 Normal-run Magnetograms ----- Digital
 1957 000 000 111 111 1958 111 111 111 111 1964 000 011 111 111 1965 111 111 111 111 1966 111 000 000 000
 Normal-run Magnetograms ----- Book
 1957 000 000 111 111 1958 111 111 111 111
 Normal-run Magnetograms ----- Film
 1957 000 000 111 111 1958 111 111 111 111 1964 000 011 111 111 1965 111 111 111 111 1966 111 000 000 000
 Rapid-run Magnetograms ----- Film
 1957 000 000 111 111 1958 111 111 111 111

** Kotzebue (ABB CODE=KOT, GG CODE=023197, GM LAT= 65.02, GM LONG=249.24)
 Geomagnetic Hourly Values ---- Film
 1957 000 010 000 111 1958 111 111 111 111 1959 100 000 000 000
 Normal-run Magnetograms ----- Film
 1957 000 011 011 111 1958 111 111 111 111

** Kourou (ABB CODE=KOU, GG CODE=085307, GM LAT= 14.01, GM LONG= 20.50)
 Geomagnetic 1.0-min. Values -- Digital
 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 110 011 2000 111 111 111 111 2001 111 111 111 111
 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111
 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
 Geomagnetic Hourly Values ---- Digital
 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 110 011 2000 111 111 111 111 2001 111 111 111 111
 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111
 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111

** Ksara (ABB CODE=KSA, GG CODE=056036, GM LAT= 30.21, GM LONG=114.04)
 Geomagnetic Hourly Values ---- Book
 1931 111 111 111 111 1932 111 111 111 111 1933 111 111 111 111
 Normal-run Magnetograms ----- Film
 1964 111 111 111 111 1965 111 111 111 111

** Kumasi (ABB CODE=KUM, GG CODE=083358, GM LAT= 9.61, GM LONG= 72.39)
 Geomagnetic Hourly Values ---- Film
 1972 111 111 111 111

** Kuyper (ABB CODE=KUY, GG CODE=096107, GM LAT=-15.40, GM LONG=179.39)
 Geomagnetic Hourly Values ---- Book
 1957 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111
 Geomagnetic Hourly Values ---- Film
 1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 100 000 000 000
 Normal-run Magnetograms ----- Film
 1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 110 000

** Kzil-Agach (ABB CODE=KZA, GG CODE=046079, GM LAT= 35.25, GM LONG=154.91)
 Normal-run Magnetograms ----- Film
 1974 001 000 111 111 1975 111 111 111 111

** L' Aquila (ABB CODE=AQU, GG CODE=048013, GM LAT= 42.15, GM LONG= 94.55)
 Geomagnetic 1.0-min. Values -- Digital
 2000 000 001 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111
 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111
 Geomagnetic Hourly Values ---- Digital
 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111
 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111
 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111
 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111
 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111
 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111

(Continued on next page.)

1	Station List
2	Alternative
3	ABB Code
4	Status of Data
5	Sample
6	Publication
7	Observatory
8	Contour Map
9	Format

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

** Leningrad (ABB CODE=LNN, GG CODE=030031, GM LAT= 56.46, GM LONG=117.62)

Geomagnetic Hourly Values ---- Digital

Table with 12 columns of years (1948-1984) and 12 columns of monthly data (1-12) for Station List (1).

Geomagnetic Hourly Values ---- Book

Table with 12 columns of years (1948-1984) and 12 columns of monthly data (1-12) for Alternative (2).

Geomagnetic Hourly Values ---- Film

Table with 12 columns of years (1957-1981) and 12 columns of monthly data (1-12) for Status of Data (4).

Geomagnetic Hourly Values ---- Fiche

Table with 12 columns of years (1983-1989) and 12 columns of monthly data (1-12) for Sample (5).

Normal-run Magnetograms ----- Film

Table with 12 columns of years (1957-1981) and 12 columns of monthly data (1-12) for Publication (6).

Normal-run Magnetograms ----- Fiche

Table with 12 columns of years (1983-1989) and 12 columns of monthly data (1-12) for Observatory (7).

** Lerwick (ABB CODE=LER, GG CODE=030359, GM LAT= 61.65, GM LONG= 88.17)

Geomagnetic 1.0-min. Values -- Digital

Table with 12 columns of years (1983-2008) and 12 columns of monthly data (1-12) for Contour Map (8).

Geomagnetic Hourly Values ---- Digital

Table with 12 columns of years (1926-2010) and 12 columns of monthly data (1-12) for Format (9).

Geomagnetic Hourly Values ---- Book

Table with 12 columns of years (1932-1985) and 12 columns of monthly data (1-12) for Format (9).

Geomagnetic Hourly Values ---- Film

Table with 12 columns of years (1957-1981) and 12 columns of monthly data (1-12) for Format (9).

Normal-run Magnetograms ----- Book

Table with 12 columns of years (1987-1992) and 12 columns of monthly data (1-12) for Format (9).

Normal-run Magnetograms ----- Film

Table with 12 columns of years (1957-1981) and 12 columns of monthly data (1-12) for Format (9).

(Continued on next page.)

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

** Magadan (ABB CODE=MGD, GG CODE=030151, GM LAT= 52.64, GM LONG=214.75)
 Geomagnetic 1.0-min. Values -- Digital
 2012 111 111 111 111
 Geomagnetic Hourly Values ---- Digital
 1966 000 000 000 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111
 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111
 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111
 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111
 1990 111 111 111 111 2012 111 111 111 111
 Geomagnetic Hourly Values ---- Film
 1975 000 000 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
 1981 111 111 111 111 1982 111 111 111 111
 Geomagnetic Hourly Values ---- Fiche
 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111
 1995 111 111 111 111 1996 111 111 111 111
 Normal-run Magnetograms ----- Film
 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111
 1982 111 111 111 111
 Normal-run Magnetograms ----- Fiche
 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111
 1995 111 111 111 111 1996 111 111 111 111

** Majuro (ABB CODE=MJR, GG CODE=083171, GM LAT= 2.86, GM LONG=243.33)
 Normal-run Magnetograms ----- Digital
 1964 000 000 011 111 1965 111 111 111 111 1966 111 000 000 000
 Normal-run Magnetograms ----- Film
 1964 000 000 001 111 1965 111 111 111 111 1966 110 000 000 000

** Maliya Karmakul (ABB CODE=MKL, GG CODE=018053, GM LAT= 65.57, GM LONG=142.81)
 Geomagnetic Hourly Values ---- Book
 1882 000 000 000 111 1883 111 111 110 000

** Manhay (ABB CODE=MAB, GG CODE=040006, GM LAT= 51.09, GM LONG= 89.80)
 Geomagnetic 1.0-min. Values -- Digital
 1995 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111
 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111
 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
 Geomagnetic Hourly Values ---- Digital
 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111
 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111
 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
 Geomagnetic Hourly Values ---- Book
 1985 111 111 111 111
 Normal-run Magnetograms ----- Film
 1957 000 000 111 111 1958 111 111 111 111

** Manzhouli (ABB CODE=MZL, GG CODE=040117, GM LAT= 40.12, GM LONG=188.56)
 Geomagnetic Hourly Values ---- Digital
 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111
 2001 111 111 111 111 2002 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2009 111 111 111 111
 2010 111 111 111 111 2011 111 111 111 111
 Geomagnetic Hourly Values ---- Book
 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111
 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111

** Maputo (ABB CODE=LMM, GG CODE=116033, GM LAT=-27.88, GM LONG=100.61)
 Geomagnetic 1.0-min. Values -- Digital
 2000 000 000 011 111 2001 111 111 111 111 2002 111 110 000 000 2003 001 110 111 110
 Geomagnetic Hourly Values ---- Digital
 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 2000 000 000 011 111
 2001 111 111 111 111 2002 111 110 000 000 2003 001 110 111 110
 Geomagnetic Hourly Values ---- Book
 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1987 111 111 111 111
 1991 111 111 111 111 1992 111 111 111 111

** Marion Island (ABB CODE=MRN, GG CODE=137038, GM LAT=-49.19, GM LONG=100.47)
 Geomagnetic Hourly Values ---- Digital
 1973 000 001 111 111 1974 111 111 111 111 1975 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111
 1980 111 111 111 111
 Geomagnetic Hourly Values ---- Book
 1973 000 001 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111
 1979 111 111 111 111 1980 111 111 111 111

** Martin De Vivies (ABB CODE=AMS, GG CODE=128078, GM LAT=-45.61, GM LONG=145.81)
 Geomagnetic 1.0-min. Values -- Digital
 1981 000 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111
 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111

(Continued on next page.)

1	Station List
2	Alternative
3	ABB Code
4	Status of Data
5	Sample
6	Publication
7	Observatory
8	Contour Map
9	Format

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

1	<p>** Mizusawa (ABB CODE=MIZ, GG CODE=051141, GM LAT= 30.95, GM LONG=210.38)</p> <p>Normal-run Magnetograms ----- Book</p> <p>1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111</p> <p>Normal-run Magnetograms ----- Film</p> <p>1993 111 111 111 111</p>
2	<p>** Moca (ABB CODE=MFP, GG CODE=087009, GM LAT= 4.69, GM LONG= 82.00)</p> <p>Geomagnetic Hourly Values ---- Digital</p> <p>1958 000 000 000 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111</p> <p>1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 000 1967 000 000 001 101 1968 110 111 000 000 1969 000 000 111 100</p> <p>1970 111 111 111 111 1971 111 111 111 111</p> <p>Geomagnetic Hourly Values ---- Book</p> <p>1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111</p> <p>1964 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111</p> <p>1971 111 111 111 111</p> <p>Geomagnetic Hourly Values ---- Film</p> <p>1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111</p> <p>1970 111 111 111 111 1971 111 111 111 111</p> <p>Normal-run Magnetograms ----- Film</p> <p>1958 000 000 000 111 1959 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111</p> <p>1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 110</p> <p>Rapid-run Magnetograms ----- Film</p> <p>1964 111 111 111 111 1965 111 111 111 111</p>
3	<p>** Molodezhnaya (ABB CODE=MOL, GG CODE=158046, GM LAT=-70.31, GM LONG= 94.93)</p> <p>Geomagnetic Hourly Values ---- Digital</p> <p>1965 110 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111</p> <p>1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111</p> <p>1977 111 111 111 111</p> <p>Geomagnetic Hourly Values ---- Film</p> <p>1972 111 111 111 111 1973 111 111 111 111</p> <p>Geomagnetic Hourly Values ---- Fiche</p> <p>1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1972 111 111 111 111</p> <p>1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111</p> <p>Normal-run Magnetograms ----- Film</p> <p>1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111</p> <p>1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111</p> <p>1986 111 111 111 111</p>
4	<p>** Monte Capellino (ABB CODE=MCP, GG CODE=045009, GM LAT= 44.97, GM LONG= 90.95)</p> <p>Geomagnetic Hourly Values ---- Digital</p> <p>1958 000 000 111 111 1959 111 111 111 111</p>
5	<p>** Moscow (ABB CODE=MOS, GG CODE=035037, GM LAT= 51.18, GM LONG=121.39)</p> <p>Geomagnetic Hourly Values ---- Digital</p> <p>1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111</p> <p>1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111</p> <p>1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111</p> <p>1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111</p> <p>1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111</p> <p>1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1998 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111</p> <p>2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111</p> <p>Geomagnetic Hourly Values ---- Book</p> <p>1974 000 001 100 000 1975 100 100 000 001 1976 100 000 000 001 1977 111 100 000 000 1978 111 000 000 000 1979 000 000 000 011</p> <p>1980 111 100 000 000 1981 100 000 000 000 1982 000 000 000 001</p> <p>Geomagnetic Hourly Values ---- Film</p> <p>1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111</p> <p>1963 111 111 111 000 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111</p> <p>1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111</p> <p>1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111</p> <p>1981 111 111 111 111 1982 111 111 111 111 1983 111 111 110 000</p> <p>Geomagnetic Hourly Values ---- Fiche</p> <p>1983 000 000 001 111 1984 111 111 111 111 1985 111 111 111 100 1986 111 111 111 111 1987 111 111 111 111 1988 111 110 000 000</p> <p>1989 111 000 111 111 1990 111 111 111 111 1991 111 111 111 111</p> <p>Normal-run Magnetograms ----- Digital</p> <p>1944 000 000 000 001 1945 111 111 111 111 1946 111 111 111 111 1947 111 111 110 000 1948 000 011 111 111 1949 111 111 111 111</p> <p>1950 111 111 111 111 1951 111 111 111 111 1952 111 111 111 111 1953 111 111 111 111 1954 111 111 111 111 1955 111 101 111 111</p> <p>1956 111 111 111 111 1957 101 111 111 111</p> <p>Normal-run Magnetograms ----- Film</p> <p>1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111</p> <p>1963 111 111 111 000 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111</p> <p>1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111</p> <p>1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111</p> <p>1981 111 111 111 111 1982 111 111 111 111 1983 111 111 110 000</p> <p>Normal-run Magnetograms ----- Fiche</p> <p>1983 000 000 001 111 1984 111 111 111 111 1985 111 111 111 100 1986 111 111 111 111 1987 111 111 111 111 1988 111 110 000 000</p> <p>1989 111 000 111 111 1990 111 111 111 111 1991 111 111 111 111</p>
6	
7	
8	
9	

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

- 1**
Station List

- 2**
Alternative

- 3**
ABB Code

- 4**
Status of Data

- 5**
Sample

- 6**
Publication

- 7**
Observatory

- 8**
Contour Map

- 9**
Format

** Nagycenk (ABB CODE=NCK, GG CODE=042017, GM LAT= 46.71, GM LONG= 99.52)	
Geomagnetic Hourly Values ---- Digital	
1993 111 111 111 111	1995 111 111 111 111
1996 111 111 111 111	1997 111 111 111 111
1998 111 111 111 111	1999 111 111 111 111
2000 111 111 111 111	2001 111 111 111 111
2002 111 111 111 111	2003 111 111 111 111
2004 111 111 111 111	2005 111 111 111 111
2006 111 111 111 111	2007 111 111 111 111
2008 111 111 111 111	2009 111 111 111 111
2010 111 111 111 111	2011 111 111 111 111
2012 111 111 111 111	
Geomagnetic Hourly Values ---- Book	
2006 111 111 111 111	2007 111 111 111 111
Normal-run Magnetograms ----- Film	
1964 111 111 111 111	1965 111 111 111 111
** Nairobi (ABB CODE=NAI, GG CODE=091037, GM LAT= -4.43, GM LONG=109.05)	
Geomagnetic Hourly Values ---- Digital	
1964 000 000 001 111	1965 111 111 111 111
1966 111 000 000 000	1967 000 110 000 000
1968 111 111 111 111	1969 111 111 111 111
1970 111 111 111 111	1971 000 000 111 111
1972 111 111 111 111	1973 111 111 111 111
1974 111 111 111 111	1975 111 111 111 111
Geomagnetic Hourly Values ---- Book	
1967 111 111 111 111	1968 111 111 111 111
1969 111 111 111 111	1970 111 111 111 111
1971 111 111 111 111	1972 111 111 111 111
1973 111 111 111 111	1974 111 111 111 111
1975 111 111 111 111	1976 111 111 111 111
1977 111 111 111 111	1978 111 111 111 111
1979 111 111 111 111	
Geomagnetic Hourly Values ---- Film	
1964 011 111 111 111	1965 111 111 111 111
1966 111 000 000 000	
Normal-run Magnetograms ----- Film	
1964 011 111 111 111	1965 111 111 111 111
1966 111 000 000 000	1967 111 111 111 111
** Nampula (ABB CODE=NMP, GG CODE=105039, GM LAT=-18.31, GM LONG=109.29)	
Geomagnetic Hourly Values ---- Digital	
1982 000 000 111 111	1983 111 111 111 111
1984 111 111 111 111	2010 111 111 111 011
Geomagnetic Hourly Values ---- Book	
1982 000 000 111 111	1983 111 111 111 111
1984 111 111 111 111	
** Nantes (ABB CODE=NTS, GG CODE=043358, GM LAT= 49.31, GM LONG= 81.38)	
Geomagnetic Hourly Values ---- Book	
1932 111 111 111 111	1933 111 111 111 111
** Narsarsuaq (ABB CODE=NAQ, GG CODE=029315, GM LAT= 68.99, GM LONG= 38.25)	
Geomagnetic 1.0-min. Values -- Digital	
1982 000 001 111 111	1983 111 111 111 111
1984 111 111 111 111	1985 111 111 111 111
1986 111 111 111 111	1987 111 111 111 111
1988 111 111 111 111	1989 111 111 111 111
1990 111 111 111 111	1991 111 111 111 111
1992 111 111 111 111	1993 111 111 111 111
1994 111 111 111 111	1995 111 111 111 111
1996 111 111 111 111	1997 111 111 111 111
1998 111 111 111 111	1999 111 111 111 111
2000 111 111 111 111	2001 111 111 111 111
2002 111 111 111 111	2003 111 111 111 111
2004 111 111 111 111	2005 111 111 111 111
2006 111 111 111 111	2007 111 111 111 111
2008 111 111 111 111	2009 111 111 111 111
2010 111 111 111 111	2011 111 111 111 111
2012 111 111 111 111	2013 111 111 111 111
2014 111 111 111 111	
Geomagnetic Hourly Values ---- Digital	
1968 111 111 110 111	1969 111 111 111 111
1970 111 111 111 111	1971 111 111 111 111
1972 111 111 111 111	1973 111 111 111 111
1974 111 111 111 111	1975 111 111 111 111
1976 111 111 111 111	1977 111 111 111 111
1978 111 111 111 111	1979 111 111 111 111
1980 111 111 111 111	1981 111 111 111 111
1982 111 111 111 111	1983 111 111 111 111
1984 111 111 111 111	1985 111 111 111 111
1986 111 111 111 111	1987 111 111 111 111
1988 111 111 111 111	1989 111 111 111 111
1990 111 111 111 111	1991 111 111 111 111
1992 111 111 111 111	1993 111 111 111 111
1994 111 111 111 111	1995 111 111 111 111
Normal-run Magnetograms ----- Film	
1968 111 111 110 111	1969 111 111 111 111
1970 111 111 111 111	1971 111 111 111 111
1972 111 111 111 111	1973 111 111 111 111
1974 111 111 111 111	1975 111 111 111 111
1976 111 111 111 111	1977 111 111 111 111
1978 111 111 111 111	1979 111 111 111 111
1980 111 111 111 111	1981 111 111 111 111
1982 111 111 111 111	1983 111 111 111 111
1984 111 111 111 111	1985 111 111 111 111
1986 111 111 111 111	1987 111 111 111 111
1988 111 111 111 111	1989 111 111 111 111
1990 111 100 001 111	1991 111 111 111 111
1992 111 111 111 111	1993 111 111 111 111
1994 111 111 111 111	1995 111 111 111 111
** Neumayer Station (ABB CODE=VNA, GG CODE=161352, GM LAT=-65.08, GM LONG= 45.39)	
Geomagnetic Hourly Values ---- Digital	
1999 111 111 111 111	2000 111 111 111 111
2001 111 111 111 111	2002 111 111 111 111
2003 111 111 111 111	2004 111 111 111 111
2005 111 111 111 111	2006 000 000 111 111
2007 111 111 111 111	2008 111 111 111 110
Geomagnetic Hourly Values ---- Book	
1993 001 111 111 111	1994 111 111 111 111
** New Alesund (ABB CODE=NAL, GG CODE=011012, GM LAT= 76.14, GM LONG=126.50)	
Normal-run Magnetograms ----- Film	
1974 111 111 111 111	1975 111 111 111 111
1976 111 111 111 111	1977 111 111 111 111
1978 111 111 111 111	1979 111 111 111 111
1980 111 111 111 111	1981 111 111 111 111
1982 111 111 000 000	1983 111 111 111 111
1984 111 111 111 111	1985 111 111 111 111
1986 111 111 111 111	1987 111 111 111 111
1988 111 111 111 111	1989 000 000 001 111
1990 111 111 000 000	

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

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** Niemegek      (ABB CODE=NGK,  GG CODE=038013,  GM LAT= 51.66,  GM LONG= 97.35)
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111
1967 111 111 000 000 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111
1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111
1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 000 111 1984 111 111 111 111
1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 000 1990 111 111 111 111
1991 111 111 111 111 1992 111 111 111 111 1993 111 111 000 000
Normal-run Tellurigrams ----- Film
1959 000 000 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 000 000 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 000 111 111 1979 111 111 111 111 1980 111 111 111 111
1981 111 111 000 111 1982 111 111 111 111 1983 111 111 000 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 000 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111
1993 111 111 000 000

** Nitsanim      (ABB CODE=NSM,  GG CODE=058035,  GM LAT= 28.36,  GM LONG=112.39)
Geomagnetic Hourly Values ---- Book
1967 111 111 111 111
Geomagnetic Hourly Values ---- Film
1963 111 111 111 111

** Nord          (ABB CODE=NRD,  GG CODE=008343,  GM LAT= 81.61,  GM LONG=123.45)
Geomagnetic Hourly Values ---- Digital
1969 000 000 011 111 1970 111 111 111 111
Geomagnetic Hourly Values ---- Book
1969 000 000 011 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 000 000 000

** Norilsk      (ABB CODE=NOK,  GG CODE=021088,  GM LAT= 60.04,  GM LONG=166.31)
Normal-run Magnetograms ----- Film
1974 011 111 111 111 1975 111 111 100 000

** North Pole 6  (ABB CODE=NPF,  GG CODE=006010,  GM LAT= 79.36,  GM LONG=142.98)
Geomagnetic Hourly Values ---- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 000
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 000

** North Pole 7  (ABB CODE=NPG,  GG CODE=004268,  GM LAT= 84.39,  GM LONG=194.29)
Geomagnetic Hourly Values ---- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 000 000 000
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 000 000 000

** North Pole 8  (ABB CODE=NPH,  GG CODE=013188,  GM LAT= 73.04,  GM LONG=228.41)
Geomagnetic Hourly Values ---- Film
1959 000 011 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 110 000 000 000
Normal-run Magnetograms ----- Film
1959 000 011 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 110 000 000 000

** North Pole 10 (ABB CODE=NPJ,  GG CODE=013166,  GM LAT= 70.03,  GM LONG=215.78)
Geomagnetic Hourly Values ---- Film
1961 000 000 000 011 1962 111 110 000 000
Normal-run Magnetograms ----- Film
1961 000 000 000 011 1962 111 110 000 000

** North Pole 12 (ABB CODE=NPL,  GG CODE=011187,  GM LAT= 74.36,  GM LONG=224.13)
Geomagnetic Hourly Values ---- Film
1963 000 001 111 111 1964 111 000 000 000
Normal-run Magnetograms ----- Film
1963 000 000 011 111 1964 111 000 000 000

** North Pole 13 (ABB CODE=NPM,  GG CODE=009165,  GM LAT= 73.84,  GM LONG=208.55)
Geomagnetic Hourly Values ---- Film
1964 000 011 111 111 1965 111 111 111 111
Normal-run Magnetograms ----- Film
1964 000 011 111 111 1965 111 111 111 111

** North West Pacific (ABB CODE=NWP,  GG CODE=049160,  GM LAT= 34.83,  GM LONG=227.04)
Geomagnetic 1.0-min. Values -- Digital
2001 000 000 011 111 2002 111 111 111 111 2003 111 111 100 000

** Northway      (ABB CODE=NRW,  GG CODE=027218,  GM LAT= 64.69,  GM LONG=271.89)
Geomagnetic Hourly Values ---- Film
1957 000 111 111 111 1958 111 101 111 111
Normal-run Magnetograms ----- Film
1957 000 111 111 111 1958 111 111 111 111
    
```

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Each month from January to December is shown by 1 (data available) or 0 (unavailable).

** Norway House (ABB CODE=NHO, GG CODE=036262, GM LAT= 62.07, GM LONG=327.60)
 Normal-run Magnetograms ----- Film
 1974 111 111 111 111 1976 010 000 000 000

** Norway Station (ABB CODE=NWS, GG CODE=161357, GM LAT=-65.59, GM LONG= 49.84)
 Geomagnetic Hourly Values ---- Digital
 1960 111 111 111 111 1961 111 111 111 111 1962 110 000 000 000
 Geomagnetic Hourly Values ---- Book
 1960 111 111 111 111 1961 111 111 111 111

** Novokazalinsk (ABB CODE=NKK, GG CODE=044062, GM LAT= 38.61, GM LONG=140.54)
 Geomagnetic Hourly Values ---- Digital
 1980 111 111 000 000
 Geomagnetic Hourly Values ---- Film
 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 000 000 011 111 1974 111 111 111 111
 1975 111 111 111 111 1976 111 111 011 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 000
 Geomagnetic Hourly Values ---- Fiche
 1983 000 000 001 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
 1989 111 000 000 000
 Normal-run Magnetograms ----- Film
 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 000 000 011 111 1974 111 111 111 111
 1975 111 111 111 111 1976 111 111 011 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
 1981 111 111 111 111 1982 101 111 111 111 1983 111 111 111 000
 Normal-run Magnetograms ----- Fiche
 1983 000 000 000 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
 1989 110 000 000 000

** Novolazarevskaya (ABB CODE=NVL, GG CODE=161012, GM LAT=-67.76, GM LONG= 60.63)
 Geomagnetic Hourly Values ---- Digital
 1961 011 111 111 111 1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111
 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111
 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111
 Geomagnetic Hourly Values ---- Film
 1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111
 1969 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111
 Geomagnetic Hourly Values ---- Fiche
 1978 111 111 111 111 1986 111 000 000 000 1988 111 111 111 111 1989 111 100 000 000
 Normal-run Magnetograms ----- Film
 1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111
 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111
 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111
 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
 Normal-run Magnetograms ----- Fiche
 1982 111 111 111 111

** Novosibirsk (ABB CODE=NVS, GG CODE=035083, GM LAT= 46.13, GM LONG=159.91)
 Geomagnetic 1.0-min. Values -- Digital
 2003 000 000 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111
 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
 Geomagnetic Hourly Values ---- Digital
 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111
 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111
 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111
 1985 111 111 111 111 1986 111 000 011 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111
 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111
 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111
 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111
 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
 Geomagnetic Hourly Values ---- Book
 1976 000 000 111 111 1977 111 111 111 110 1978 001 110 110 000 1979 000 100 111 011 1980 111 111 111 111 1981 111 111 100 111
 1982 111 111 111 111 1983 111 011 111 001 1984 111 111 111 111
 Geomagnetic Hourly Values ---- Film
 1967 111 111 111 000 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111
 1973 111 111 111 111 1974 111 111 111 111 1975 001 000 111 111 1976 111 111 000 110 1977 000 001 111 111 1978 111 111 111 111
 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 000 011 111 111 1983 111 111 100 000
 Geomagnetic Hourly Values ---- Fiche
 1983 000 000 011 111 1984 111 111 111 111 1985 111 111 111 111 1986 000 000 011 111 1987 111 111 111 111 1988 111 111 111 111
 1989 111 100 000 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 110 000
 Normal-run Magnetograms ----- Film
 1967 111 111 111 000 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111
 1973 111 111 111 111 1974 111 111 111 111 1975 001 000 111 110 1976 111 111 111 111 1977 110 111 111 111 1978 111 111 111 111
 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 000 011 111 111 1983 111 111 100 000
 Normal-run Magnetograms ----- Fiche
 1983 000 000 011 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 000 111 111 1987 111 111 111 111 1988 111 111 111 111
 1989 111 100 000 111 1990 101 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111
 1995 111 111 000 000

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Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Paramaribo (ABB CODE=PAB, GG CODE=084305, GM LAT= 14.74, GM LONG= 17.98)

Normal-run Magnetograms ----- Digital
 1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
 1975 111 111 000 000

Normal-run Magnetograms ----- Film
 1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1974 111 111 111 111 1975 111 111 000 000

Normal-run Magnetograms ----- Fiche
 1975 000 000 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
 1981 111 111 111 100

Rapid-run Magnetograms ----- Film
 1957 000 000 111 111 1958 111 111 111 111 1964 000 000 111 111

Rapid-run Tellurigrams ----- Film
 1957 000 000 111 111 1958 111 111 111 111

** Patacamaya (ABB CODE=PTY, GG CODE=073292, GM LAT= 26.53, GM LONG= 5.05)

Geomagnetic Hourly Values ---- Book
 1983 111 111 111 111 1984 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111
 1994 111 111 111 111 1995 111 111 111 111

** Penang (ABB CODE=PNN, GG CODE=085100, GM LAT= -4.02, GM LONG=172.99)

Geomagnetic Hourly Values ---- Book
 1976 000 011 111 111 1977 111 111 111 111 1979 000 000 001 111 1980 110 000 000 000

Geomagnetic Hourly Values ---- Film
 1976 000 011 111 111

** Penteli (ABB CODE=PEG, GG CODE=052024, GM LAT= 36.24, GM LONG=103.63)

Geomagnetic 1.0-min. Values -- Digital
 2012 111 111 111 111

Geomagnetic Hourly Values ---- Digital
 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111 2012 111 111 111 111

Normal-run Magnetograms ----- Film
 1971 111 111 111 111 1972 100 000 000 000

** Petropavlovsk (ABB CODE=PET, GG CODE=037158, GM LAT= 46.33, GM LONG=222.84)

Geomagnetic 1.0-min. Values -- Digital
 2011 111 111 111 111 2012 111 111 111 111

Geomagnetic Hourly Values ---- Digital
 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 110 000 1980 111 111 111 111
 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111
 1994 111 111 111 111 1995 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111

Geomagnetic Hourly Values ---- Film
 1968 000 000 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111
 1974 111 111 111 111 1975 000 000 111 111 1976 111 111 111 111 1977 111 111 110 000 1978 111 111 111 111 1980 111 111 111 111
 1981 111 111 111 111 1982 111 100 000 000

Geomagnetic Hourly Values ---- Fiche
 1982 000 110 110 111 1983 111 111 111 111 1984 111 111 000 000 1985 000 000 111 111 1986 111 111 111 111 1987 111 111 111 111
 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111

Normal-run Magnetograms ----- Digital
 1967 000 000 011 111 1968 111 111 000 000

Normal-run Magnetograms ----- Film
 1968 000 000 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111
 1974 111 111 111 111 1975 000 000 001 111 1976 111 101 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 101 000
 1980 111 111 111 111 1981 111 111 111 111 1982 111 100 000 000

Normal-run Magnetograms ----- Fiche
 1982 000 110 110 111 1983 111 111 111 111 1984 111 111 000 000 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111
 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111

Rapid-run Magnetograms ----- Film
 1957 000 000 011 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
 1963 111 111 111 111 1964 111 100 011 111 1965 111 100 000 000

Rapid-run Tellurigrams ----- Film
 1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 011 1962 111 111 111 001
 1963 111 111 111 111 1964 111 111 111 111 1965 111 110 000 000 1969 111 111 100 000

** Phu Thuy (ABB CODE=PHU, GG CODE=069106, GM LAT= 11.49, GM LONG=178.69)

Geomagnetic 1.0-min. Values -- Digital
 1996 111 111 111 111 1998 111 000 000 000 1999 011 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111
 2003 111 110 011 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111
 2009 111 111 111 111 2010 111 111 111 100 2011 000 111 111 111 2012 111 111 110 001

Geomagnetic Hourly Values ---- Digital
 1996 111 111 111 111 1997 111 111 111 111 1998 111 000 000 000 1999 011 111 111 111 2000 111 111 111 111 2001 111 111 111 111
 2002 111 111 111 111 2003 111 110 011 111 2004 111 111 111 111 2005 111 111 011 111 2006 111 111 111 111 2007 111 111 111 111
 2008 111 111 111 111 2009 111 111 111 111 2010 011 111 111 100 2011 000 111 111 111 2012 111 111 110 011

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Each month from January to December is shown by 1 (data available) or 0 (unavailable).

** Port Aux Francais (ABB CODE=PAF, GG CODE=139070, GM LAT=-56.27, GM LONG=134.78)

Geomagnetic 1.0-sec. Values -- Digital

Table with 12 columns representing years from 1978 to 1990. Each cell contains a 12-digit binary string representing monthly data availability.

Geomagnetic 1.0-min. Values -- Digital

Table with 12 columns representing years from 1969 to 2011. Each cell contains a 12-digit binary string representing monthly data availability.

Geomagnetic Hourly Values ---- Digital

Table with 12 columns representing years from 1957 to 2011. Each cell contains a 12-digit binary string representing monthly data availability.

Geomagnetic Hourly Values ---- Book

Table with 12 columns representing years from 1956 to 1988. Each cell contains a 12-digit binary string representing monthly data availability.

Geomagnetic Hourly Values ---- Film

Table with 12 columns representing years from 1957 to 1963. Each cell contains a 12-digit binary string representing monthly data availability.

Normal-run Magnetograms ----- Film

Table with 12 columns representing years from 1957 to 1991. Each cell contains a 12-digit binary string representing monthly data availability.

** Port Moresby (ABB CODE=PMG, GG CODE=099147, GM LAT=-16.51, GM LONG=221.24)

Geomagnetic Hourly Values ---- Digital

Table with 12 columns representing years from 1958 to 1990. Each cell contains a 12-digit binary string representing monthly data availability.

Geomagnetic Hourly Values ---- Film

Table with 12 columns representing years from 1958 to 1967. Each cell contains a 12-digit binary string representing monthly data availability.

Normal-run Magnetograms ----- Film

Table with 12 columns representing years from 1958 to 1989. Each cell contains a 12-digit binary string representing monthly data availability.

Rapid-run Magnetograms ----- Film

Table with 12 columns representing years from 1959 to 1970. Each cell contains a 12-digit binary string representing monthly data availability.

** Port Stanley (ABB CODE=PST, GG CODE=142302, GM LAT=-42.37, GM LONG= 12.42)

Geomagnetic 1.0-min. Values -- Digital

Table with 12 columns representing years from 1994 to 2012. Each cell contains a 12-digit binary string representing monthly data availability.

Geomagnetic Hourly Values ---- Digital

Table with 12 columns representing years from 1994 to 2012. Each cell contains a 12-digit binary string representing monthly data availability.

** Poste-De-La-Baleine(ABB CODE=PBQ, GG CODE=035282, GM LAT= 64.46, GM LONG=353.27)

Geomagnetic 1.0-min. Values -- Digital

Table with 12 columns representing years from 1990 to 2007. Each cell contains a 12-digit binary string representing monthly data availability.

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Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Srednikan (ABB CODE=SRE, GG CODE=028152, GM LAT= 55.03, GM LONG=215.03)

Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 100

1
Station List

** St. Johns (ABB CODE=STJ, GG CODE=042307, GM LAT= 56.12, GM LONG= 24.54)

Geomagnetic 1.0-min. Values -- Digital
1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1996 111 111 111 111
1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111
2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111
2009 110 000 111 111 2010 111 111 111 110 2011 000 000 111 111 2012 111 111 111 111

2
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Geomagnetic Hourly Values ---- Digital
1968 000 000 011 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111
1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111
1980 111 111 111 111 1981 111 111 111 111 1982 110 000 000 000 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111
1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111
1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111
1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111
2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 110 000 011 111
2010 111 111 111 110 2011 000 000 111 111 2012 111 111 111 111

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Geomagnetic Hourly Values ---- Book
1968 000 000 011 111 1969 111 111 111 111 1970 111 111 111 111
Geomagnetic Hourly Values ---- Film
1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111
1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111

5
Sample

Geomagnetic Hourly Values ---- Fiche
1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111

6
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Normal-run Magnetograms ----- Film
1968 000 000 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111
1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111
1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111
1986 111 111 111 111 1987 111 111 111 111

7
Observatory

Normal-run Magnetograms ----- Fiche
1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111

8
Contour Map

** Stennis (ABB CODE=BSL, GG CODE=060270, GM LAT= 39.14, GM LONG=341.04)

Geomagnetic 1.0-min. Values -- Digital
1986 000 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111
1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111
1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111
2004 111 111 111 111 2005 111 111 111 000 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111
2011 111 111 111 111 2012 111 111 111 111

9
Format

Geomagnetic Hourly Values ---- Digital
1986 000 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111
1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111
1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111
2004 111 111 111 111 2005 111 111 111 000 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111
2011 111 111 111 111 2012 111 111 111 111

** Stonyhurst (ABB CODE=STO, GG CODE=036358, GM LAT= 55.85, GM LONG= 83.23)

Geomagnetic Hourly Values ---- Digital
1964 111 111 111 111 1965 111 111 111 111
Geomagnetic Hourly Values ---- Book
1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111
Geomagnetic Hourly Values ---- Film
1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111
Normal-run Magnetograms ----- Film
1958 001 111 111 111 1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111
1966 111 111 111 111

** Sukkertoppen (ABB CODE=SKT, GG CODE=025307, GM LAT= 73.83, GM LONG= 30.55)

Geomagnetic Hourly Values ---- Digital
1965 000 000 000 110 1966 001 000 000 000
Normal-run Magnetograms ----- Film
1964 111 111 111 111 1965 111 111 111 111
Rapid-run Magnetograms ----- Film
1964 111 111 111 111 1965 111 111 111 111

** Surlari (ABB CODE=SUA, GG CODE=045026, GM LAT= 42.32, GM LONG=107.62)

Geomagnetic 1.0-min. Values -- Digital
2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 000 000
2006 000 000 111 111 2007 111 110 001 111 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111
2012 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1961 000 000 011 111 1964 111 111 111 111 1965 111 111 111 111
1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111
1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111
2003 111 111 111 111 2004 111 111 111 111 2005 111 111 000 000 2006 000 000 111 111 2007 111 110 001 111 2008 111 111 111 111
2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111

(Continued on next page.)

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Tananarive (ABB CODE=TAN, GG CODE=109048, GM LAT=-23.32, GM LONG=117.04)

Table for Tananarive station. Includes headers: Station List (1), Alternative (2), ABB Code (3), Status of Data (4). Content: Geomagnetic Hourly Values --- Digital (1971-2007), Geomagnetic Hourly Values --- Book (1953-1971), Geomagnetic Hourly Values --- Film (1965-1971), Normal-run Magnetograms ----- Film (1957-1970).

** Tangerang (ABB CODE=TNG, GG CODE=096107, GM LAT=-15.54, GM LONG=179.29)

Table for Tangerang station. Includes headers: Sample (5), Publication (6), Observatory (7). Content: Geomagnetic Hourly Values --- Digital (1957-1967), Geomagnetic Hourly Values --- Book (1991-1994), Normal-run Magnetograms ----- Film (1964-1979).

** Tashkent (ABB CODE=TKT, GG CODE=049070, GM LAT= 33.48, GM LONG=146.48)

Table for Tashkent station. Includes headers: Contour Map (8), Format (9). Content: Geomagnetic Hourly Values --- Digital (1957-1991), Geomagnetic Hourly Values --- Film (1957-1981), Geomagnetic Hourly Values --- Fiche (1983-1989), Normal-run Magnetograms ----- Digital (1943-1985), Normal-run Magnetograms ----- Film (1957-1989), Normal-run Magnetograms ----- Fiche (1983-1989).

** Tatuoca (ABB CODE=TTB, GG CODE=091311, GM LAT= 7.38, GM LONG= 24.38)

Table for Tatuoca station. Content: Geomagnetic Hourly Values --- Digital (1957-1999), Geomagnetic Hourly Values --- Book (1933-1995), Geomagnetic Hourly Values --- Film (1957-1958).

(Continued on next page.)

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

** Tihany (ABB CODE=THY, GG CODE=043018, GM LAT= 45.80, GM LONG=100.39)

Geomagnetic 1.0-min. Values --- Digital
1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111
2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111
2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111

Geomagnetic Hourly Values ---- Digital
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1991 111 111 111 111
1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111
1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111
2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111
2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111

Geomagnetic Hourly Values ---- Book
1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111 1964 111 111 111 111
1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111
1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111
1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111
1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111

Geomagnetic Hourly Values ---- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111

Normal-run Magnetograms ---- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111
1976 111 111 111 111 1977 111 010 111 110 1978 001 111 111 110 1979 000 000 000 111 1980 111 111 111 111 1981 111 111 111 111
1982 111 111 111 100

Normal-run Tellurigrams ---- Film
1958 000 000 111 111 1959 111 111 111 111

** Tikhaya Bay (ABB CODE=TKH, GG CODE=010053, GM LAT= 72.97, GM LONG=151.86)

Geomagnetic Hourly Values ---- Digital
1957 111 111 111 111 1958 111 111 110 000

Geomagnetic Hourly Values ---- Film
1957 111 111 111 111 1958 111 111 110 000

Normal-run Magnetograms ---- Digital
1957 111 111 111 111 1958 111 111 110 000

Normal-run Magnetograms ---- Film
1957 111 111 111 111 1958 111 111 110 000

** Tiruchirapalli (ABB CODE=TIP, GG CODE=079079, GM LAT= 2.44, GM LONG=151.90)

Geomagnetic Hourly Values ---- Book
2000 111 111 111 111 2001 111 111 111 111 2004 111 111 111 111

** Tirunelveli (ABB CODE=TIR, GG CODE=081078, GM LAT= 0.43, GM LONG=150.85)

Geomagnetic Hourly Values ---- Digital
1999 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111
2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111

Geomagnetic Hourly Values ---- Book
2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111

Normal-run Magnetograms ---- Digital
2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111
2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111

Normal-run Magnetograms ---- Film
1999 111 111 111 111

** Tixie Bay (ABB CODE=TIK, GG CODE=018129, GM LAT= 62.51, GM LONG=194.74)

Geomagnetic Hourly Values ---- Digital
1957 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 100 1968 001 010 111 111
1969 111 111 110 001 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
1990 111 111 111 111 1991 111 111 111 111

Geomagnetic Hourly Values ---- Film
1957 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 100 1970 111 111 111 111
1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111
1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1982 111 111 111 111

Geomagnetic Hourly Values ---- Fiche
1981 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111

Normal-run Magnetograms ---- Digital
1957 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 110 1968 011 011 111 111 1969 111 111 110 001
1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
1981 111 111 111 111 1982 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111
1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1992 111 111 110 100

Normal-run Magnetograms ---- Film
1957 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 110 1968 011 011 111 111
1969 111 111 110 001 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
1981 111 111 111 111 1982 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111

(Continued on next page.)

- **1**
Station List
- **2**
Alternative
- **3**
ABB Code
- **4**
Status of Data
- **5**
Sample
- **6**
Publication
- **7**
Observatory
- **8**
Contour Map
- **9**
Format

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

1
Station List

2
Alternative

3
ABB Code

4
Status of Data

5
Sample

6
Publication

7
Observatory

8
Contour Map

9
Format

** Tixie Bay (ABB CODE=TIK, GG CODE=018129, GM LAT= 62.51, GM LONG=194.74)

Normal-run Magnetograms ----- Film
1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1992 111 111 100 100
Normal-run Magnetograms ----- Fiche
1983 111 111 111 111
Hourly Values (Earth Current) Film
1958 000 000 000 111 1959 111 111 111 111

** Tokyo (ABB CODE=TOK, GG CODE=054140, GM LAT= 27.42, GM LONG=209.46)

Geomagnetic Hourly Values ---- Digital
1896 000 000 000 001 1897 111 111 111 111 1898 111 111 111 111 1899 111 111 111 101 1900 111 111 111 111 1901 111 111 111 111
1902 111 111 111 111 1903 111 111 111 111 1904 111 111 111 111 1905 111 111 111 111 1906 111 111 111 111 1907 111 111 111 111
1908 111 111 111 111 1909 111 111 111 111 1910 111 111 111 111 1911 111 111 111 111 1912 111 111 111 111

** Toledo (ABB CODE=TOL, GG CODE=050356, GM LAT= 42.53, GM LONG= 76.49)

Geomagnetic Hourly Values ---- Digital
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1963 000 000 000 001 1964 111 111 111 111 1965 111 111 111 111
1966 000 000 000 011 1967 000 110 001 101 1968 110 111 000 000 1969 000 000 111 100 1972 111 111 111 111 1973 111 111 111 111
1979 000 000 001 111 1980 111 100 000 000
Geomagnetic Hourly Values ---- Book
1957 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111
1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111
1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111
2009 111 111 111 111

Geomagnetic Hourly Values ---- Film

1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111
1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111
Normal-run Magnetograms ----- Digital
1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 110 1982 011 111 111 111 1983 111 111 111 111 1984 111 111 111 111
1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111
1991 111 000 000 000

Normal-run Magnetograms ----- Film

1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111
1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111
1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111
1979 111 111 111 111 1980 111 111 111 111 1981 101 111 111 110
Rapid-run Magnetograms ----- Film
1964 111 111 111 111 1965 111 111 111 111
Normal-run Tellurigrams ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111

** Tomsk (ABB CODE=TMK, GG CODE=034085, GM LAT= 47.46, GM LONG=161.78)

Geomagnetic Hourly Values ---- Digital
1965 111 111 111 111
Geomagnetic Hourly Values ---- Film
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 000 111 111
Normal-run Magnetograms ----- Film
1958 000 000 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 110 111 111 1962 111 111 111 111 1963 111 111 111 111
1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 000 111 111

** Tondano (ABB CODE=TND, GG CODE=089125, GM LAT= -7.68, GM LONG=197.79)

Geomagnetic 1.0-min. Values -- Digital
2001 000 011 111 111 2002 111 111 111 111 2003 111 111 111 111
Geomagnetic Hourly Values ---- Digital
2001 000 011 111 111 2002 111 111 111 111 2003 111 111 111 111 2005 111 111 100 011 2006 111 111 111 111

** Tonghai (ABB CODE=THJ, GG CODE=066103, GM LAT= 14.48, GM LONG=175.64)

Geomagnetic Hourly Values ---- Digital
1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111
2001 111 111 111 111 2002 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2009 111 111 111 111
2010 111 111 111 111 2011 111 111 111 111
Geomagnetic Hourly Values ---- Book
1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111
1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111

** Toolangi (ABB CODE=TOO, GG CODE=128145, GM LAT=-44.48, GM LONG=223.50)

Geomagnetic Hourly Values ---- Digital
1924 111 111 111 111 1925 111 111 111 111 1926 111 111 111 111 1927 111 111 111 111 1928 111 111 111 111 1929 111 111 111 111
1930 111 111 111 111 1931 111 111 111 111 1932 111 111 111 111 1933 111 111 111 111 1949 111 111 111 111 1950 111 111 111 111
1951 111 111 111 111 1952 111 111 111 111 1953 111 111 111 111 1954 111 111 111 111 1955 111 111 111 111 1956 111 111 111 111
1957 111 111 111 111 1958 111 111 111 111 1961 000 000 011 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111
1967 111 110 011 101 1968 111 111 000 000 1969 000 000 111 100 1970 111 000 000 000 1976 111 111 111 111 1977 111 111 111 111
1978 111 111 111 111 1979 111 111 000 000

(Continued on next page.)

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Tromso (ABB CODE=TRO, GG CODE=020019, GM LAT= 67.33, GM LONG=115.01)

Geomagnetic Hourly Values ---- Book

Table with 12 columns representing years from 1956 to 1998. Rows show data availability for Tromso from 1956 to 1998.

Normal-run Magnetograms ----- Book

Table with 12 columns representing years from 1974 to 1986. Rows show data availability for Tromso normal-run magnetograms.

Normal-run Magnetograms ----- Film

Table with 12 columns representing years from 1964 to 1988. Rows show data availability for Tromso normal-run magnetograms on film.

** Tsumeb (ABB CODE=TSU, GG CODE=109018, GM LAT=-18.86, GM LONG= 87.02)

Geomagnetic 1.0-min. Values -- Digital

Table with 12 columns representing years from 1992 to 2008. Rows show data availability for Tsumeb 1.0-min. values.

Geomagnetic Hourly Values ---- Digital

Table with 12 columns representing years from 1964 to 2008. Rows show data availability for Tsumeb hourly values.

Geomagnetic Hourly Values ---- Book

Table with 12 columns representing years from 1964 to 1999. Rows show data availability for Tsumeb hourly values on book.

Normal-run Magnetograms ----- Film

Table with 12 columns representing years from 1964 to 1975. Rows show data availability for Tsumeb normal-run magnetograms on film.

** Tucson (ABB CODE=TUC, GG CODE=058249, GM LAT= 39.19, GM LONG=317.59)

Geomagnetic 1.0-min. Values -- Digital

Table with 12 columns representing years from 1982 to 2012. Rows show data availability for Tucson 1.0-min. values.

Geomagnetic Hourly Values ---- Digital

Table with 12 columns representing years from 1909 to 2011. Rows show data availability for Tucson hourly values.

Geomagnetic Hourly Values ---- Book

Table with 12 columns representing years from 1913 to 1961. Rows show data availability for Tucson hourly values on book.

(Continued on next page.)

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

- 1 Station List
- 2 Alternative
- 3 ABB Code
- 4 Status of Data
- 5 Sample
- 6 Publication
- 7 Observatory
- 8 Contour Map
- 9 Format

**** Ulan Bator** (ABB CODE=UBA, GG CODE=042107, GM LAT= 38.25, GM LONG=179.51)
 Geomagnetic Hourly Values --- Digital
 1966 111 111 111 111 1967 111 111 111 111
 Geomagnetic Hourly Values --- Film
 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1976 111 111 111 111
 1977 111 111 111 111
 Normal-run Magnetograms ----- Film
 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 011

**** Uppsala** (ABB CODE=UPS, GG CODE=030017, GM LAT= 58.44, GM LONG=105.68)
 Geomagnetic 1.0-min. Values -- Digital
 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111
 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
 Geomagnetic Hourly Values --- Digital
 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111
 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
 Geomagnetic Hourly Values --- Book
 2003 111 111 111 111 2004 111 111 111 111

**** Urumqi** (ABB CODE=WMQ, GG CODE=046088, GM LAT= 34.68, GM LONG=162.80)
 Geomagnetic 1.0-sec. Values -- Digital
 2000 000 000 000 011 2001 100 000 000 111 2002 111 111 111 111 2003 111 111 101 111 2004 111 111 101 100 2005 111 111 111 111
 2006 111 111 111 111 2007 111 111 100 111 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 000 2012 100 000 000 000
 Geomagnetic 1.0-min. Values -- Digital
 2000 000 000 000 001 2001 110 111 101 111 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 110 2005 111 111 111 111
 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111 2011 111 110 000 000
 2012 111 110 000 000
 Geomagnetic Hourly Values --- Book
 1980 111 111 111 111 1981 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1989 111 111 111 111
 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111
 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111

**** Val Joyeux** (ABB CODE=VLJ, GG CODE=041002, GM LAT= 50.26, GM LONG= 85.57)
 Geomagnetic Hourly Values --- Digital
 1901 111 111 111 111 1902 111 111 111 111 1903 111 111 111 111 1904 111 111 111 111 1905 111 111 111 111 1906 111 111 111 111
 1907 111 111 111 111 1908 111 111 111 111 1909 111 111 111 111 1910 111 111 111 111 1911 111 111 111 111 1912 111 111 111 111
 1913 111 111 111 111 1914 111 111 111 111 1915 111 111 111 111 1916 111 111 111 111 1917 111 111 111 111 1918 111 111 111 111
 1919 111 111 111 111 1920 111 111 111 111 1921 111 111 111 111 1922 111 111 111 111 1923 111 111 111 111 1924 111 111 111 111
 1925 111 111 111 111 1926 111 111 111 111 1927 111 111 111 111 1928 111 111 111 111 1929 111 111 111 111 1930 111 111 111 111
 1931 111 111 111 111 1932 111 111 111 111 1933 111 111 111 111 1934 111 111 111 111 1935 111 111 111 111 1936 111 111 111 111
 Geomagnetic Hourly Values --- Book
 1923 111 111 111 111 1924 111 111 111 111 1925 111 111 111 111 1926 111 111 111 111 1927 111 111 111 111 1928 111 111 111 111
 1929 111 111 111 111 1930 111 111 111 111 1931 111 111 111 111 1932 111 111 111 111 1933 111 111 111 111 1934 111 111 111 111
 1935 111 111 111 111 1936 111 111 111 111

**** Valentia** (ABB CODE=VAL, GG CODE=038350, GM LAT= 55.24, GM LONG= 74.30)
 Geomagnetic 1.0-min. Values -- Digital
 1991 111 111 111 111 1992 111 111 111 100 1993 011 111 000 110 1994 111 111 111 100 1995 111 111 111 111 1996 111 111 111 111
 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111
 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111
 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111 2013 111 111 111 111 2014 111 101 111 111
 2015 111 111 111 111 2016 111 111 111 111 2017 111 111 111 111 2018 111 111 111 111 2019 111 100 111 111 2020 110 000 000 000
 Geomagnetic Hourly Values --- Digital
 1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111 1963 111 111 111 111
 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111
 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111
 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111
 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111
 1988 111 111 111 111 1989 111 111 111 111 1991 111 111 111 111 1993 011 111 000 110 1994 111 111 111 100 1995 111 111 111 111
 1996 111 111 000 000 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2003 111 111 111 111
 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111
 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
 Geomagnetic Hourly Values --- Book
 1957 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
 1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111
 Normal-run Magnetograms ----- Film
 1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
 1975 111 111 111 111 1976 111 111 000 000 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 000 000 1984 111 111 111 111 1985 111 111 000 000 1986 111 111 111 111
 1988 111 111 111 111

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

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** Watheroo      (ABB CODE=WAT,  GG CODE=120116,  GM LAT=-39.45,  GM LONG=189.59)
Geomagnetic Hourly Values ---- Digital
1949 111 111 111 111 1950 111 111 111 111 1951 111 111 111 111 1952 111 111 111 111 1953 111 111 111 111 1954 111 111 111 111
1955 111 111 111 111 1956 111 111 111 111 1957 111 111 111 111 1958 111 111 111 111
Geomagnetic Hourly Values ---- Film
1957 000 000 111 111 1958 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111
Rapid-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111

** West PHL Basin (ABB CODE=WPB,  GG CODE=071135,  GM LAT= 10.83,  GM LONG=206.63)
Geomagnetic 1.0-min. Values -- Digital
2009 000 001 111 111 2010 111 111 111 111 2011 110 000 000 000

** Weston        (ABB CODE=WES,  GG CODE=048289,  GM LAT= 51.60,  GM LONG= 1.62)
Normal-run Magnetograms ----- Film
1965 001 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111

** White Shell   (ABB CODE=WHS,  GG CODE=040265,  GM LAT= 58.13,  GM LONG=331.96)
Geomagnetic Hourly Values ---- Digital
1979 011 000 000 000 1980 111 111 111 000
Geomagnetic Hourly Values ---- Film
1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111
1979 111 111 111 111
Normal-run Magnetograms ----- Film
1976 111 110 001 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111

** Wien-Auhof    (ABB CODE=WIA,  GG CODE=042016,  GM LAT= 47.34,  GM LONG= 99.25)
Geomagnetic Hourly Values ---- Book
1933 111 111 111 111 1934 111 111 111 111 1935 111 111 111 111 1936 111 111 111 111 1937 111 111 111 111 1938 111 111 111 111
1939 111 111 111 111 1940 111 111 111 111 1941 111 111 111 111 1942 111 111 111 111 1943 111 111 111 111 1944 111 111 111 111

** Wien-Kobenzl  (ABB CODE=WIK,  GG CODE=042016,  GM LAT= 47.38,  GM LONG= 99.36)
Geomagnetic Hourly Values ---- Digital
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1994 111 111 111 111
1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111
2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111
2007 111 111 111 111
Geomagnetic Hourly Values ---- Book
1957 111 111 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111
1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111
1999 111 111 111 111 2000 111 111 111 111
Normal-run Magnetograms ----- Film
1964 111 111 111 111 1965 111 111 111 111

** Wilhelmshaven (ABB CODE=WLH,  GG CODE=036008,  GM LAT= 53.80,  GM LONG= 93.62)
Geomagnetic Hourly Values ---- Book
1882 000 000 000 001 1883 111 111 111 111

** Wilkes        (ABB CODE=WIL,  GG CODE=156111,  GM LAT=-75.49,  GM LONG=185.28)
Geomagnetic Hourly Values ---- Digital
1957 000 000 111 111 1958 111 111 111 111 1961 000 000 111 111 1964 000 000 001 111 1965 111 111 111 111 1966 100 000 000 000
Geomagnetic Hourly Values ---- Book
1957 000 000 111 111 1958 111 111 111 111
Geomagnetic Hourly Values ---- Film
1957 000 000 111 111 1958 111 111 111 111
Normal-run Magnetograms ----- Book
1957 000 000 111 111 1958 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 100 000 000 000
Rapid-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111

** Wingst        (ABB CODE=WNG,  GG CODE=036009,  GM LAT= 53.86,  GM LONG= 94.62)
Geomagnetic 1.0-min. Values -- Digital
1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111
1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111
1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111
2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111 2009 111 111 111 111 2010 111 111 111 111
2011 111 111 111 111 2012 111 111 111 111
    
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(Continued on next page.)

1	Station List
2	Alternative
3	ABB Code
4	Status of Data
5	Sample
6	Publication
7	Observatory
8	Contour Map
9	Format

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Wingst (ABB CODE=WNG, GG CODE=036009, GM LAT= 53.86, GM LONG= 94.62)

Geomagnetic Hourly Values ---- Digital

Table with columns for Station List (1-3), Alternative (4), ABB Code (5), and data for years 1943-2009. Rows include Station List, Alternative, and ABB Code categories.

Geomagnetic Hourly Values ---- Book

Table with columns for Status of Data (4), Sample (5), and data for years 1943-1992. Rows include Status of Data and Sample categories.

Geomagnetic Hourly Values ---- Film

Table with columns for Publication (6), Observatory (7), and data for years 1965-1992. Rows include Publication and Observatory categories.

Normal-run Magnetograms ---- Film

Table with columns for Contour Map (8), Format (9), and data for years 1964-1999. Rows include Contour Map and Format categories.

Rapid-run Magnetograms ---- Digital

Table with columns for Contour Map (8), Format (9), and data for years 1964-1995. Rows include Contour Map and Format categories.

Rapid-run Magnetograms ---- Film

Table with columns for Contour Map (8), Format (9), and data for years 1964-1999. Rows include Contour Map and Format categories.

** Winnipeg (ABB CODE=WNP, GG CODE=040263, GM LAT= 57.81, GM LONG=329.65)

Normal-run Magnetograms ---- Film

Table with columns for Contour Map (8), Format (9), and data for years 1974-1975.

** Witteveen (ABB CODE=WIT, GG CODE=037007, GM LAT= 53.36, GM LONG= 91.85)

Geomagnetic Hourly Values ---- Digital

Table with columns for Contour Map (8), Format (9), and data for years 1938-1980. Rows include Contour Map and Format categories.

Geomagnetic Hourly Values ---- Book

Table with columns for Contour Map (8), Format (9), and data for years 1949-1966. Rows include Contour Map and Format categories.

Geomagnetic Hourly Values ---- Film

Table with columns for Contour Map (8), Format (9), and data for years 1964-1981. Rows include Contour Map and Format categories.

Geomagnetic Hourly Values ---- Fiche

Table with columns for Contour Map (8), Format (9), and data for years 1970-1976. Rows include Contour Map and Format categories.

(Continued on next page.)

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

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** Witteveen      (ABB CODE=WIT,  GG CODE=037007,  GM LAT= 53.36,  GM LONG= 91.85)
Geomagnetic Hourly Values ---- Fiche
1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111
Normal-run Magnetograms ----- Digital
1972 000 001 000 000
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1980 111 111 111 111
Normal-run Magnetograms ----- Fiche
1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1985 111 111 111 111
Rapid-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111
1967 111 111 111 111 1968 111 111 111 111 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111
1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1978 111 111 111 111
Rapid-run Tellurigrams ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1964 111 111 000 000

** Wuhan          (ABB CODE=WHN,  GG CODE=059115,  GM LAT= 21.02,  GM LONG=186.69)
Geomagnetic Hourly Values ---- Digital
1980 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111
2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111
2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111
Geomagnetic Hourly Values ---- Book
1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1988 111 111 111 111
1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111
1995 111 111 111 111 1996 111 111 111 111

** Yakutsk       (ABB CODE=YAK,  GG CODE=028130,  GM LAT= 53.00,  GM LONG=197.38)
Geomagnetic 1.0-min. Values -- Digital
2009 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111
1993 111 111 111 111 1994 111 111 111 111 1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 2009 111 111 111 111
2011 111 111 111 111 2012 111 111 111 111
Geomagnetic Hourly Values ---- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 110 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111
Geomagnetic Hourly Values ---- Fiche
1980 111 111 111 111 1981 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111
1993 111 111 111 111 1994 111 111 111 111
Normal-run Magnetograms ----- Digital
1961 111 111 111 111 1962 111 111 111 111
Normal-run Magnetograms ----- Film
1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 110 1966 111 111 111 111 1967 111 111 111 111 1968 111 111 111 111
1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111
Normal-run Magnetograms ----- Fiche
1980 111 111 111 111 1981 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
1987 111 111 111 111 1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111
1993 111 111 111 111 1994 111 111 111 111
Rapid-run Magnetograms ----- Film
1958 000 000 001 111 1959 111 111 000 000

** Yauca         (ABB CODE=YAU,  GG CODE=106285,  GM LAT= -6.03,  GM LONG=358.07)
Geomagnetic Hourly Values ---- Film
1957 000 000 001 111 1958 111 111 111 111 1959 111 111 111 111 1960 100 000 000 000
Normal-run Magnetograms ----- Film
1957 000 000 001 111 1958 111 111 111 111 1959 111 111 111 111 1960 100 000 000 000

** Yellowknife   (ABB CODE=YKC,  GG CODE=028246,  GM LAT= 68.48,  GM LONG=302.44)
Geomagnetic 1.0-min. Values -- Digital
1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111 1996 111 111 111 111
1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111 2001 111 111 111 111 2002 111 111 111 111
2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111 2007 111 111 111 111 2008 111 111 111 111
2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111 2013 111 111 111 111 2014 111 111 111 111
Geomagnetic Hourly Values ---- Digital
1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111
1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111
1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111 1992 111 111 111 111 1993 111 111 111 111 1994 111 111 111 111
    
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(Continued on next page.)

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- 5**
Sample

- 6**
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Format

<< STATUS OF DATA COLLECTION BY MONTH >>

Each month from January to December is shown by 1 (data available) or 0 (unavailable).

(CONTINUED)

** Yellowknife (ABB CODE=YKC, GG CODE=028246, GM LAT= 68.48, GM LONG=302.44)

Geomagnetic Hourly Values ---- Digital

1995 111 111 111 111 1996 111 111 111 111 1997 111 111 111 111 1998 111 111 111 111 1999 111 111 111 111 2000 111 111 111 111
 2001 111 111 111 111 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 111 111 111 111 2006 111 111 111 111
 2007 111 111 111 111 2008 111 111 110 001 2009 111 111 111 111 2010 111 111 111 111 2011 111 111 111 111 2012 111 111 111 111
 2013 111 111 111 111 2014 111 111 111 011

Geomagnetic Hourly Values ---- Book

1957 000 000 111 111 1958 111 111 100 000

Geomagnetic Hourly Values ---- Film

1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111
 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111

Geomagnetic Hourly Values ---- Fiche

1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111 1988 111 111 111 111

Normal-run Magnetograms ----- Digital

1957 000 000 111 111 1958 111 111 100 000 1974 000 000 000 111 1975 111 111 111 111

Normal-run Magnetograms ----- Film

1957 000 000 111 111 1958 111 111 100 000 1974 000 000 000 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111
 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111
 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111

Normal-run Magnetograms ----- Fiche

1988 111 111 111 111 1989 111 111 111 111 1990 111 111 111 111 1991 111 111 111 111

** Yinchuan (ABB CODE=YCB, GG CODE=052106, GM LAT= 28.90, GM LONG=179.09)

Geomagnetic 1.0-sec. Values -- Digital

2001 000 000 001 111 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111

Geomagnetic 1.0-min. Values -- Digital

2001 000 000 001 111 2002 111 111 111 111 2003 111 111 111 111 2004 111 111 111 111 2005 011 111 111 111 2006 111 111 111 000

** Yuzhno Sakhalinsk (ABB CODE=YSS, GG CODE=043143, GM LAT= 38.98, GM LONG=210.56)

Geomagnetic Hourly Values ---- Digital

1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 000 1967 111 111 111 111 1968 111 111 111 111
 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 111 111 111 111 1979 111 111 111 111 1980 111 111 111 111
 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111
 1987 111 111 111 111 1988 111 111 111 111

Geomagnetic Hourly Values ---- Book

1974 000 111 111 111 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 000 000 1978 111 111 000 000 1979 111 111 111 111
 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 111 111 1983 111 111 111 111 1984 111 111 000 000 1986 111 111 111 111

Geomagnetic Hourly Values ---- Film

1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 000 1967 111 111 111 111 1968 111 111 111 111
 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 000 111 111 111
 1980 111 111 111 111 1981 111 111 111 111 1982 111 111 000 000

Geomagnetic Hourly Values ---- Fiche

1982 000 000 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1987 111 111 111 111
 1988 111 111 111 111

Normal-run Magnetograms ----- Digital

1932 000 000 011 111 1933 111 111 111 111 1934 111 111 111 111 1935 111 111 111 111 1936 111 111 111 111 1937 111 111 111 111
 1938 111 111 111 111 1939 111 111 111 111 1940 111 111 111 000 1941 111 111 111 111 1942 111 111 111 111 1943 111 111 111 111
 1944 111 111 111 111 1945 111 111 111 111 1946 111 111 111 111 1953 111 111 111 111

Normal-run Magnetograms ----- Film

1957 000 000 111 111 1958 111 111 111 111 1959 111 111 111 111 1960 111 111 111 111 1961 111 111 111 111 1962 111 111 111 111
 1963 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111 1966 111 111 111 000 1967 111 111 111 111 1968 111 111 111 111
 1969 111 111 111 111 1970 111 111 111 111 1971 111 111 111 111 1972 111 111 111 111 1973 111 111 111 111 1974 111 111 111 111
 1975 111 111 111 111 1976 111 111 111 111 1977 111 111 111 111 1978 000 000 111 111 1979 111 111 111 111 1980 111 111 111 111
 1981 111 111 111 111

Normal-run Magnetograms ----- Fiche

1982 111 111 111 111 1983 111 111 111 111 1984 111 111 111 111 1985 111 111 111 111 1986 111 111 111 111 1988 111 111 111 111
 1989 111 111 111 111 1990 111 111 111 111

Normal-run Tellurigrams ----- Film

1958 000 000 000 111 1959 111 111 111 111

Rapid-run Tellurigrams ----- Film

1958 011 111 111 111 1959 111 111 111 111 1964 111 111 111 111 1965 111 111 111 111

** Yuzhny Shar (ABB CODE=YSH, GG CODE=020062, GM LAT= 62.27, GM LONG=147.69)

Normal-run Magnetograms ----- Film

1980 111 111 111 111

** Zaria (ABB CODE=ZAR, GG CODE=079008, GM LAT= 12.50, GM LONG= 82.28)

Normal-run Magnetograms ----- Digital

1964 111 111 111 111 1965 111 111 111 111

Normal-run Magnetograms ----- Film

1964 111 111 111 111 1965 111 111 111 111

** Zouy (ABB CODE=ZUY, GG CODE=038104, GM LAT= 42.88, GM LONG=177.26)

Geomagnetic Hourly Values ---- Book

1932 111 111 111 111 1933 111 111 111 111

1	Station List
2	Alternative
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9	Format

5. Samples of Analogue Data

Hourly Values (Geomagnetism)

Normal-run Magnetograms

Rapid-run Magnetograms

Normal-run Tellurigrams

Rapid-run Tellurigrams

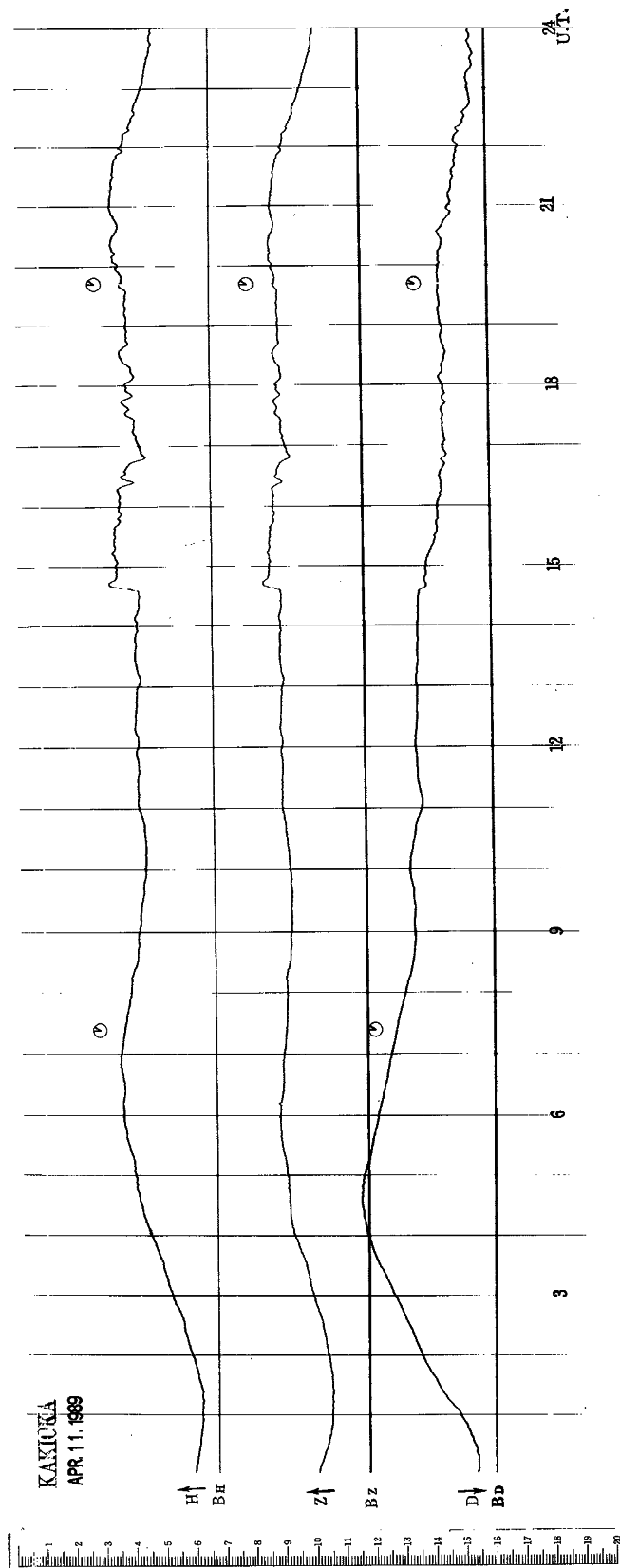
**Online Magnetogram Image
(Scanned from Microfilm)**

- 1
Station List
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Hourly Values (Geomagnetism)

GEOMAGNETIC DATA		TOTAL FORCE																									
KAKIOKA		IS 45500 PLUS TABULAR VALUES IN NANOTESLAS.																									
		APRIL 1989																									
		UT 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 MEAN																									
DATE		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
1	597 584 583 602 614 615	592 591 586 596 603 599	608 616 614 608 617 618	614 616 616 616 616 609 606	605																						
2	593 586 590 593 605 622	623 617 614 610 607 612	623 608 622 622 614 617	622 614 614 616 608 596	610																						
3	588 579 589 607 622 627	622 616 617 621 621 622	625 626 631 612 614 621	625 637 631 633 615 589	616																						
4	568 564 570 581 601 628	627 605 583 603 601 583	595 604 614 628 626 621	625 620 605 598 574 562	599																						
5	553 565 578 609 626 620	613 586 568 585 602 595	599 611 619 613 613 616	617 622 620 619 606 576	601																						
6	566 558 556 587 613 624	626 624 623 623 622 623	623 625 627 628 623 621	624 624 632 625 612 587	612																						
7	569 566 577 599 615 631	620 608 601 598 604 603	596 606 604 606 599 609	611 604 608 607 597 575	601																						
8	571 577 591 613 626 624	625 612 605 617 623 613	626 627 625 628 631 631	622 622 627 626 613 594	615																						
9	570 541 571 597 613 628	627 620 619 620 622 623	624 624 628 630 635 639	632 622 628 630 617 599	615																						
10	574 576 591 607 625 635	632 626 619 622 627 625	623 626 630 635 628 631	630 627 633 630 616 596	620																						
11	580 576 591 613 633 644	648 643 635 629 630 636	637 637 644 653 641 638	642 644 652 650 629 608	631																						
12	598 601 609 627 646 654	650 637 631 630 635 638	638 637 638 640 640 642	644 647 649 641 622 606	633																						
13	600 600 609 626 639 641	617 600 597 599 600 603	605 610 606 610 618 622	633 636 637 635 631 621	616																						
14	600 595 614 634 648 652	650 649 638 640 641 647	646 641 639 648 635 623	618 628 619 622 603 591	630																						
15	580 559 547 568 579 576	580 590 596 587 601 593	604 606 610 621 615 618	621 626 629 630 617 604	598																						
16	594 593 603 614 627 630	625 624 617 620 623 624	625 628 627 620 617 630	630 627 621 612 606 579	617																						
17	579 590 600 611 619 622	619 614 608 608 606 605	608 611 618 629 627 626	629 633 633 628 620 605	615																						
18	594 590 596 613 627 627	630 623 616 617 624 625	630 630 634 635 634 634	636 637 640 639 633 623	624																						
19	610 611 624 642 651 654	644 638 633 627 629 634	631 633 637 637 639 636	643 642 647 644 634 621	635																						
20	606 610 621 635 637 634	631 621 623 624 629 633	632 632 633 631 633 635	635 635 634 637 628 611	628																						
21	596 593 606 628 648 652	650 657 647 642 643 642	643 644 643 645 647 646	638 642 645 644 637 624	638																						
22	612 602 616 636 651 653	650 642 637 635 638 637	638 643 639 635 638 636	638 639 637 634 624 611	634																						
23	606 605 613 625 634 640	644 635 636 640 634 635	636 620 605 604 599 605	614 623 640 632 617 603	623																						
24	588 587 601 623 635 641	641 634 626 624 632 636	634 636 639 638 639 635	638 643 646 643 631 621	630																						
25	621 619 625 634 644 645	645 644 637 630 645 655	652 648 648 656 658 643	643 638 620 598 589 563	633																						
26	535 560 600 576 565 553	575 584 568 555 570 600	595 601 597 609 623 610	605 610 611 621 598 572	587																						
27	562 569 570 570 596 609	584 577 593 594 602 608	610 629 623 618 615 624	619 632 634 621 606 567	601																						
28	560 567 595 600 607 618	614 607 608 595 595 601	609 610 619 618 627 614	619 618 620 614 597 593	605																						
29	586 591 605 619 622 628	629 613 613 611 609 615	623 628 623 622 628 631	626 622 619 609 592 578	614																						
30	580 590 610 620 621 625	626 618 608 622 624 625	627 628 626 628 629 626	630 629 631 627 614 600	619																						
MEAN	585 583 595 610 623 628	625 619 613 614 618 620	622 624 625 627 627 627	627 629 629 626 613 596	617																						

Normal-run Magnetograms

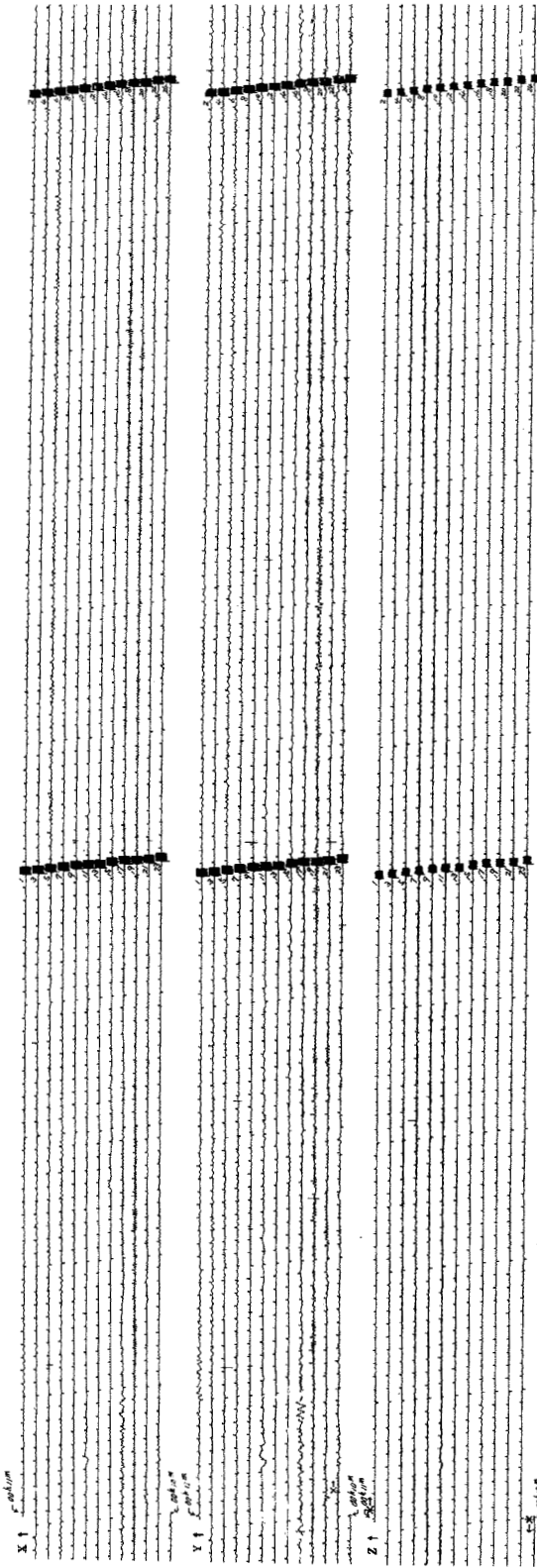


- 1 Station List
- 2 Alternative
- 3 ABB Code
- 4 Status of Data
- 5 Sample**
- 6 Publication
- 7 Observatory
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- 9 Format

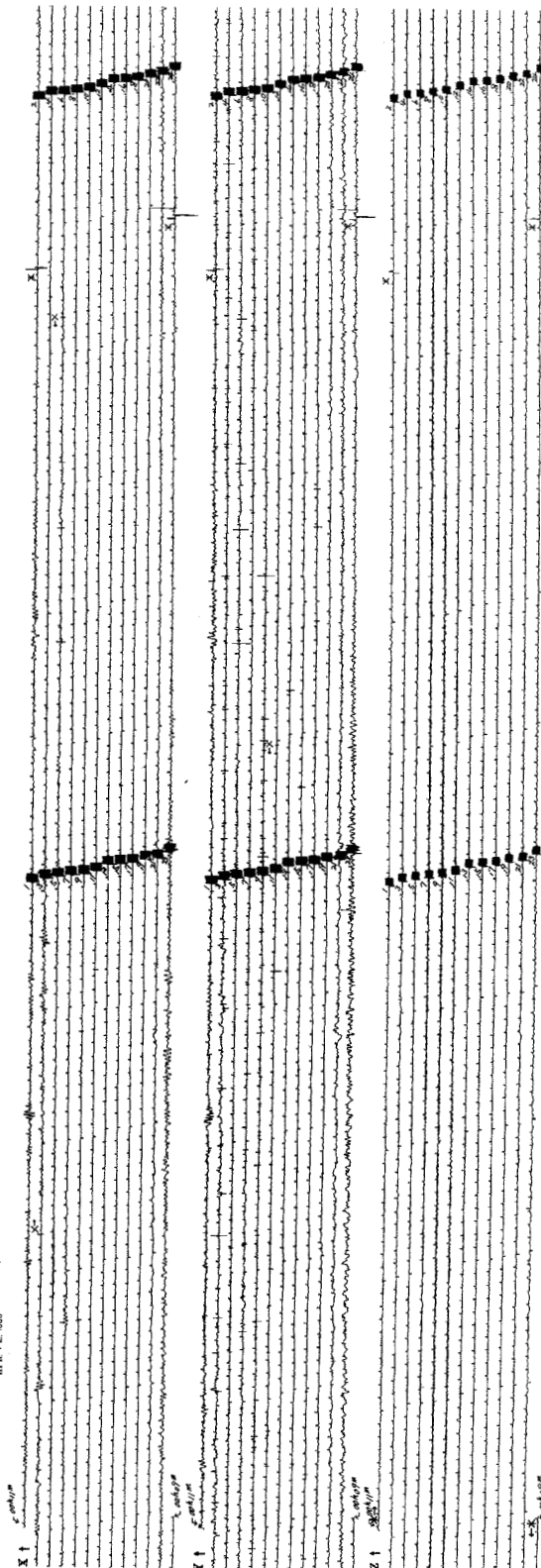
- 1 Station List
- 2 Alternative
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- 6 Publication
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Rapid-run Magnetograms

MEMAMBETSU Time corr. \uparrow \downarrow
APR 11 1988



MEMAMBETSU Time corr. \uparrow \downarrow
APR 12 1988



Normal-run Tellurigrams

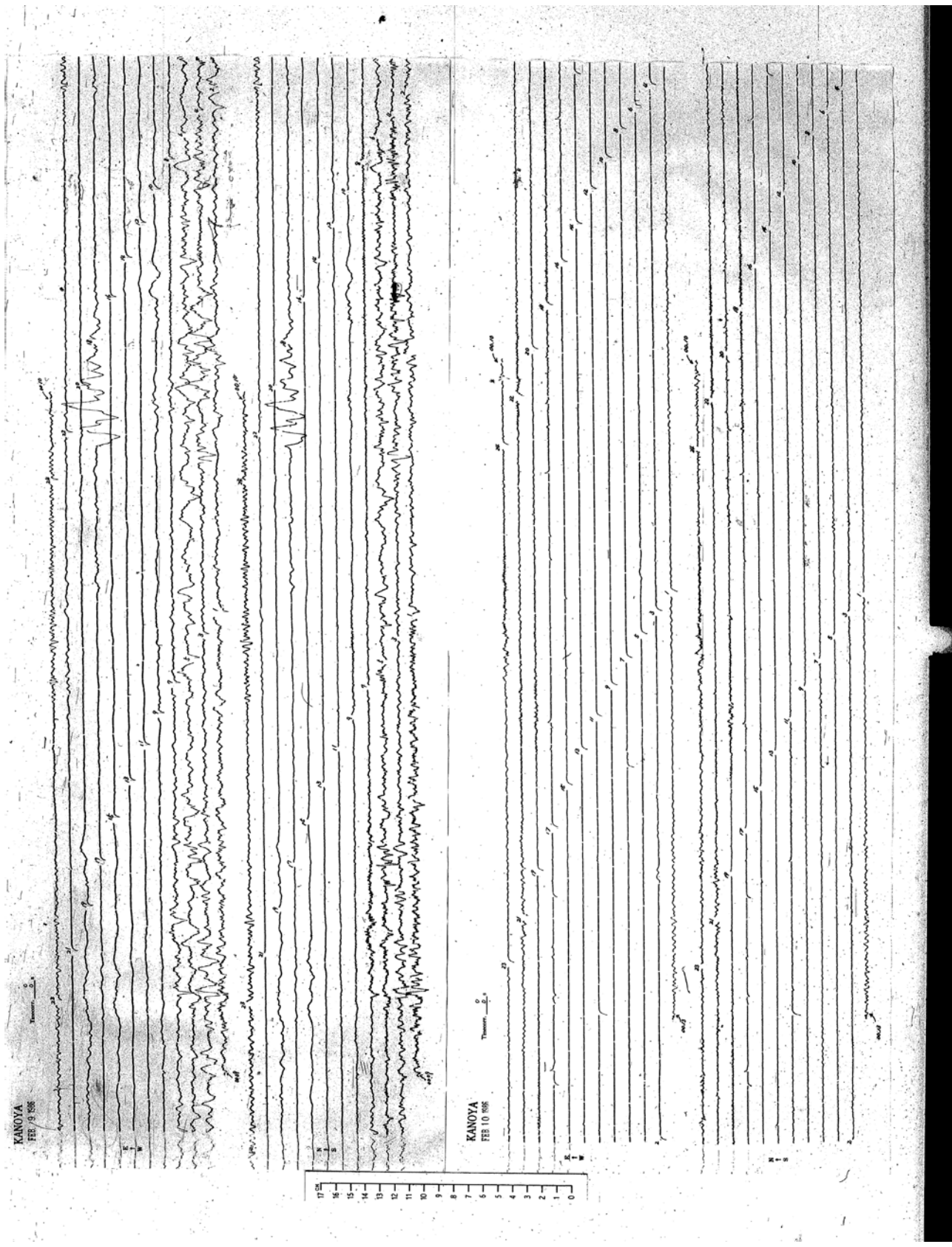


CHART No. SF-10X-B-K1 TOA Electronics Ltd.
CHART No. SF-10X-B-K1 TOA Electronics Ltd.
CHART No. SF-10X-B-K1 TOA Electronics Ltd.

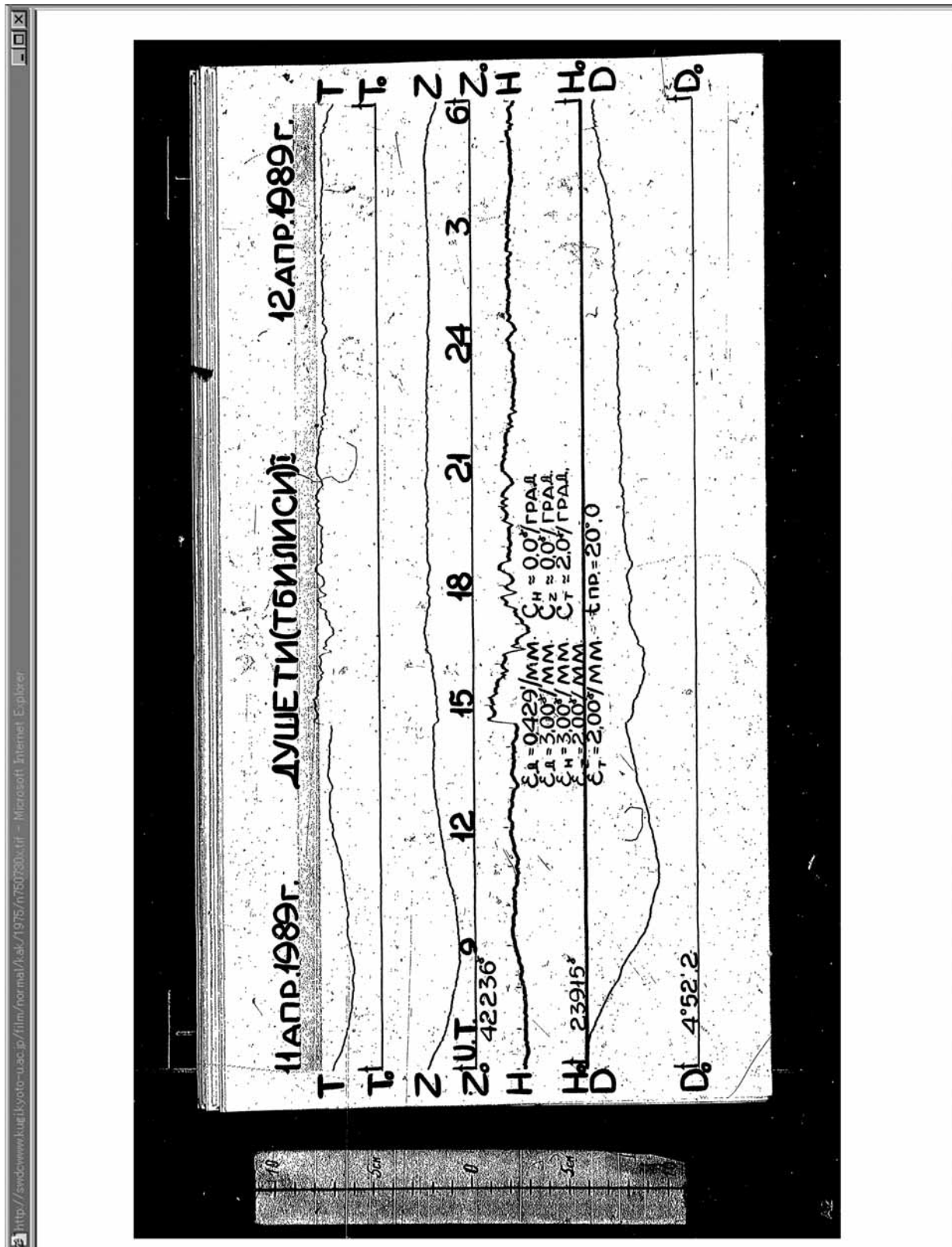
- 1 Station List
- 2 Alternative
- 3 ABB Code
- 4 Status of Data
- 5 Sample**
- 6 Publication
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- 9 Format

- 1 Station List
- 2 Alternative
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- 6 Publication
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Rapid-run Tellurigrams



Online Magnetogram Image (Scanned from Microfilm)



- 1 Station List
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6. Publications

1	Station List
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3	ABB Code
4	Status of Data
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6	Publication
7	Observatory
8	Contour Map
9	Format

<< PUBLICATIONS >>

The following publications are available on request:

1. Report of Aeromagnetic Survey in Japan (1966)
2. Japanese WMS (World Magnetic Surey) Magnetic ChartS) for 1965.0 (1966)
3. WMA (World Magnetic Archives) Inventory (1970 and 1971)
4. Data Books; (*: out of copy)

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- No.1 Equivalent current systems of the daily geomagnetic variations (1979)
- *No.2 Electric fields and neutral winds in the dynamo region (1979)
- No.3 Auroral electrojet indices (AE) for January-June 1978 (1981)
- No.4 Auroral electrojet indices (AE) for July-December 1978 (1981)
- No.5 Auroral electrojet indices (AE) for January-June 1979 (1982)
- No.6 Auroral electrojet indices (AE) for July-December 1979 (1982)
- No.7 Auroral electrojet indices (AE) for January-June 1980 (1983)
- No.8 Auroral electrojet indices (AE) for July-December 1980 (1983)
- No.9 Auroral electrojet indices (AE) for January-June 1981 (1984)
- No.10 Auroral electrojet indices (AE) for July-December 1981 (1984)
- No.11 Auroral electrojet indices (AE) for January-June 1983 (1985)
- No.12 Auroral electrojet indices (AE) for July-December 1982 (1985)
- No.13 Auroral electrojet indices (AE) for July-December 1983 (1986)
- No.14 Auroral electrojet indices (AE) for January-June 1982 (1986)
- No.15 Auroral electrojet indices (AE) for January-June 1984 (1987)
- No.16 Auroral electrojet indices (AE) for July-December 1984 (1988)
- No.17 Auroral electrojet indices (AE) for July-December 1985 (1989)
- No.18 Auroral electrojet indices (AE) for January-June 1985 (1989)
- No.19 Auroral electrojet indices (AE) for January-June 1986 (1990)
- No.20 Auroral electrojet indices (AE) for July-December 1986 (1991)
- No.21 Auroral electrojet indices (AE) for January-June 1987 (1992)
- No.22 Auroral electrojet indices (AE) for July-December 1987 (1993)
- No.23 Auroral electrojet indices (AE) for January-June 1988 (1994)
- No.24 Auroral electrojet indices (AE) for January-December 1991 (1998)
- No.25 Auroral electrojet indices (AE) for January-December 1992 (1998)
- No.26 Auroral electrojet indices (AE) for January-December 1995 (2001)

Special Issue No.1 Summary Plots of ISEE-3 Magnetic Field and Plasma Data
and AE, Dst and Kp Indices for Aug., 1978 - Jul., 1982 (1986)

Special Issue No.2 Summary Plots of IMP-8 Magnetic Field and Plasma Data
and AE, Dst and Kp Indices for Sep., 1982 - Apr., 1986 (1990)

Special Issue No.3 Field-Aligned Currents Flowing Through the Surface Surrounded by
the Magsat Satellite Orbit Calculated by Use of the Ampere's Law (2002)

- Provisional Auroral Electrojet Indices (AE11) for March 1989 (1989)
- Provisional Auroral Electrojet Indices (AE11) for Jan.-Dec. 1990 (1995)
- Provisional Auroral Electrojet Indices (AE11) for Jan.-Dec. 1993 (1996)
- Provisional Auroral Electrojet Indices (AE11) for Jan.-Dec. 1994 (1998)

- Provisional Geomagnetic Data Plots No.1 (Jan.-Dec. 1989) (1990)
- *Provisional Geomagnetic Data Plots No.2 (Jan.-Jun. 1990) (1990)
- Provisional Geomagnetic Data Plots No.3 (Jul.-Dec. 1990) (1991)
- Provisional Geomagnetic Data Plots No.4 (Jan.-Jun. 1991) (1992)
- Provisional Geomagnetic Data Plots No.5 (Jul.-Dec. 1991) (1992)
- Provisional Geomagnetic Data Plots No.6 (Jan.-Jun. 1992) (1992)
- *Provisional Geomagnetic Data Plots No.7 (Jul.-Dec. 1992) (1993)
- *Provisional Geomagnetic Data Plots No.8 (Jan.-Jun. 1993) (1993)
- *Provisional Geomagnetic Data Plots No.9 (Jul.-Dec. 1993) (1994)

Provisional Geomagnetic Data Plots No. 10 (Jan. -Jun. 1994) (1994)
 *Provisional Geomagnetic Data Plots No. 11 (Jul. -Dec. 1994) (1995)
 Provisional Geomagnetic Data Plots No. 12 (Jan. -Jun. 1995) (1995)
 Provisional Geomagnetic Data Plots No. 13 (Jul. -Dec. 1995) (1996)
 Provisional Geomagnetic Data Plots No. 14 (Jan. -Jun. 1996) (1996)
 Provisional Geomagnetic Data Plots No. 15 (Jul. -Dec. 1996) (1997)
 *Provisional Geomagnetic Data Plots No. 16 (Jan. -Dec. 1997) (1998)
 Provisional Geomagnetic Data Plots No. 17 (Jul. -Dec. 1997) (1998)
 Provisional Geomagnetic Data Plots No. 18 (Jan. -Dec. 1998) (1999)
 Provisional Geomagnetic Data Plots No. 19 (Jan. -Jun. 1999) (1999)
 Provisional Geomagnetic Data Plots No. 20 (Jul. -Dec. 1999) (2000)
 Provisional Geomagnetic Data Plots No. 21 (Jan. -Jun. 2000) (2000)
 Provisional Geomagnetic Data Plots No. 22 (Jul. -Dec. 2000) (2001)
 Provisional Geomagnetic Data Plots No. 23 (Jan. -Jun. 2001) (2001)
 Provisional Geomagnetic Data Plots No. 24 (Jul. -Dec. 2001) (2002)
 Provisional Geomagnetic Data Plots No. 25 (Jan. -Jun. 2002) (2002)
 Provisional Geomagnetic Data Plots No. 26 (Jul. -Dec. 2002) (2003)
 Provisional Geomagnetic Data Plots No. 27 (Jan. -Jun. 2003) (2003)
 Provisional Geomagnetic Data Plots No. 28 (Jul. -Dec. 2003) (2004)
 Provisional Geomagnetic Data Plots No. 29 (Jan. -Jun. 2004) (2004)
 Provisional Geomagnetic Data Plots No. 30 (Jul. -Dec. 2004) (2005)
 Provisional Geomagnetic Data Plots No. 31 (Jan. -Jun. 2005) (2005)
 Provisional Geomagnetic Data Plots No. 32 (Jul. -Dec. 2005) (2006)
 Provisional Geomagnetic Data Plots No. 33 (Jan. -Jun. 2006) (2006)
 Provisional Geomagnetic Data Plots No. 34 (Jul. -Dec. 2006) (2007)
 Provisional Geomagnetic Data Plots No. 35 (Jan. -Jun. 2007) (2007)
 Provisional Geomagnetic Data Plots No. 36 (Jul. -Dec. 2007) (2008)

Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 1 (1989-1990) (1992)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 2 (1991) (1993)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 3 (1992) (1993)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 4 (1993) (1994)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 5 (1994) (1995)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 6 (1995) (1996)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 7 (1996) (1997)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 8 (1997) (1998)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 9 (1998) (1999)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 10 (1999) (2000)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 11 (2000) (2001)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 12 (2001) (2002)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 13 (2002) (2003)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 14 (2003) (2004)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 15 (2004) (2005)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 16 (2005) (2006)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 17 (2006) (2007)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 18 (2007) (2008)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 19 (2008) (2009)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 20 (2009) (2010)
 Mid-latitude Geomagnetic Indices ASY and SYM (Provisional) No. 21 (2010) (2011)

High-Time Resolution Geomagnetic Indices AE, ASY, Wp, and SYM No. 1 (2009) (2012)
 High-Time Resolution Geomagnetic Indices AE, ASY, Wp, and SYM No. 2 (2010) (2012)
 High-Time Resolution Geomagnetic Indices AE, ASY, Wp, and SYM No. 3 (2011) (2012)

1	Station List
2	Alternative
3	ABB Code
4	Status of Data
5	Sample
6	Publication
7	Observatory
8	Contour Map
9	Format

1

Station List

2

Alternative

3

ABB Code

4

Status of Data

5

Sample

6

Publication

7

Observatory

8

Contour Map

9

Format

7. Distribution of Geomagnetic Observatories

Geographic Coordinates

Geomagnetic Stations (since 1882)

European Stations

North American Stations

Northern High Latitude Stations

Southern High Latitude Stations

Geomagnetic Coordinates

Invariant Latitude Contour

1

Station List

2

Alternative

3

ABB Code

4

Status of Data

5

Sample

6

Publication

7

Observatory

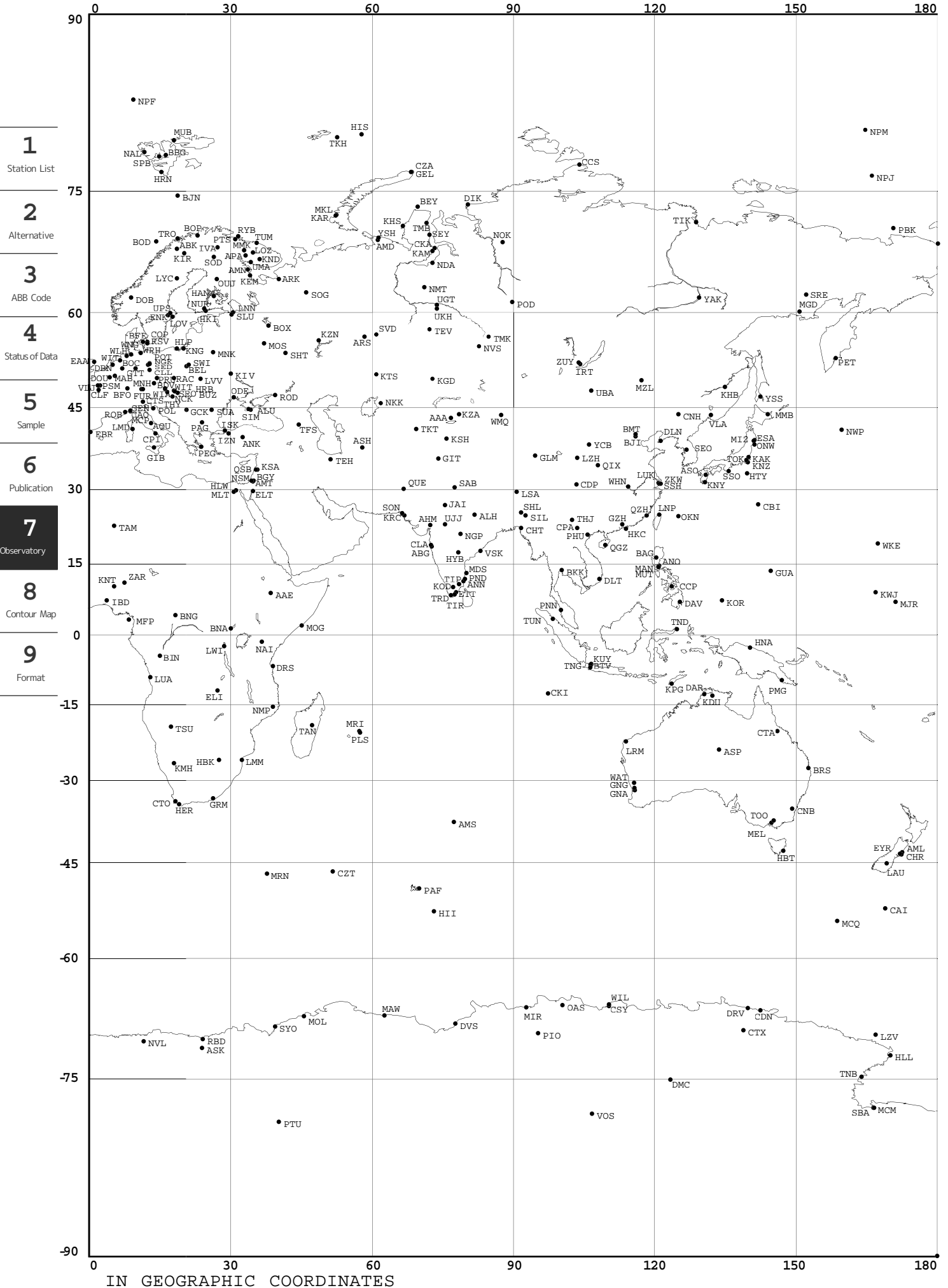
8

Contour Map

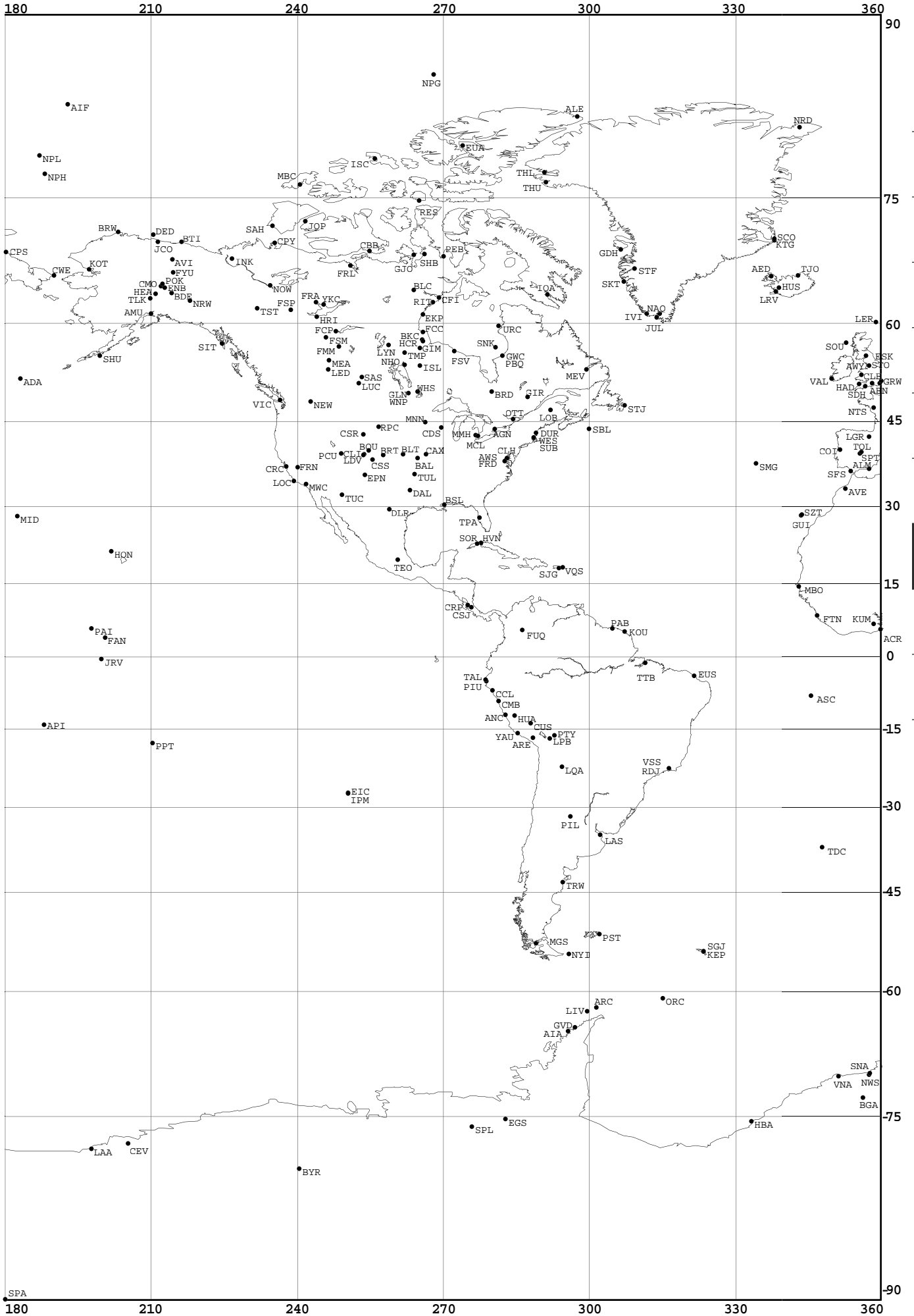
9

Format

GEOMAGNETIC STATIONS



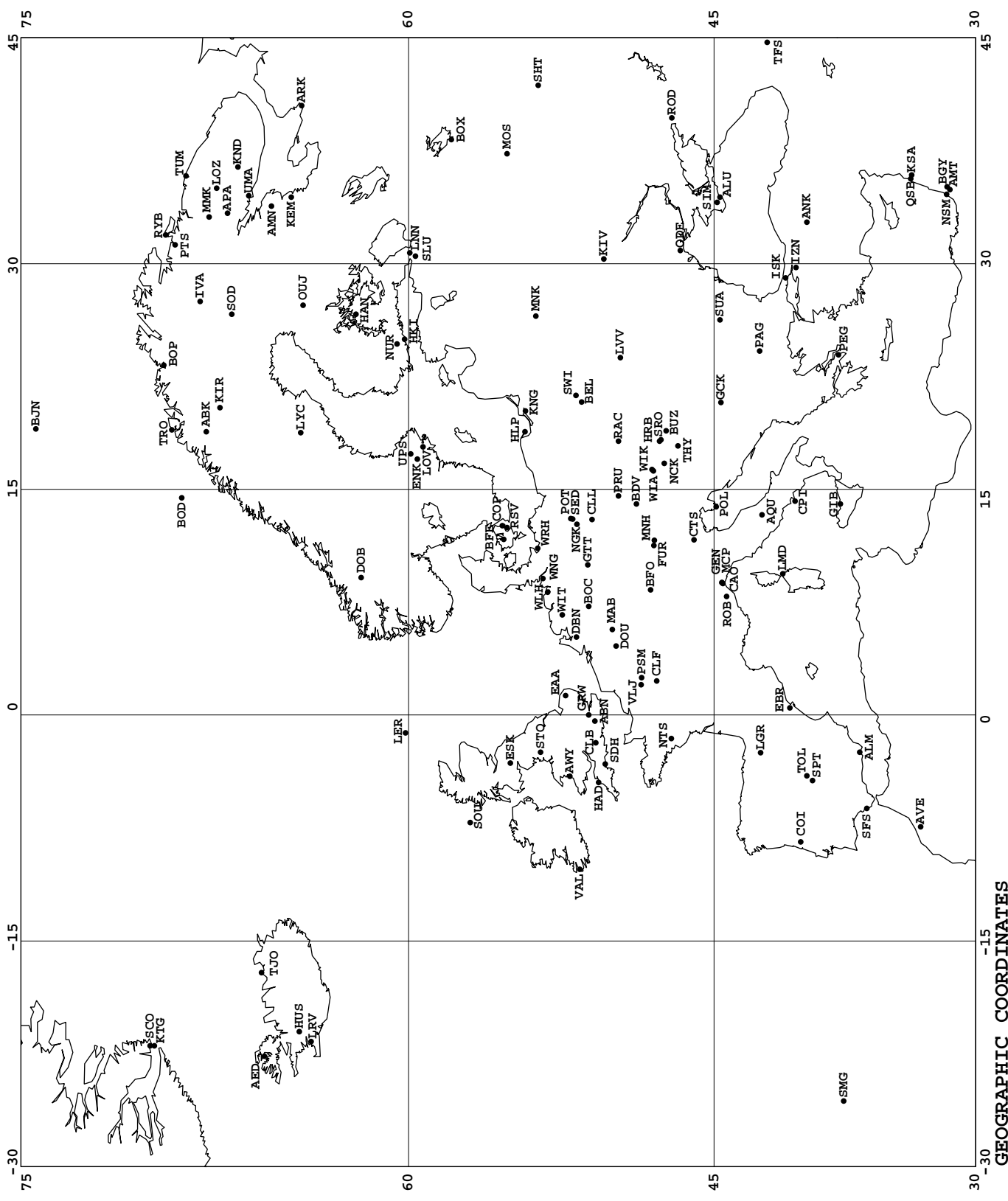
(since 1882)



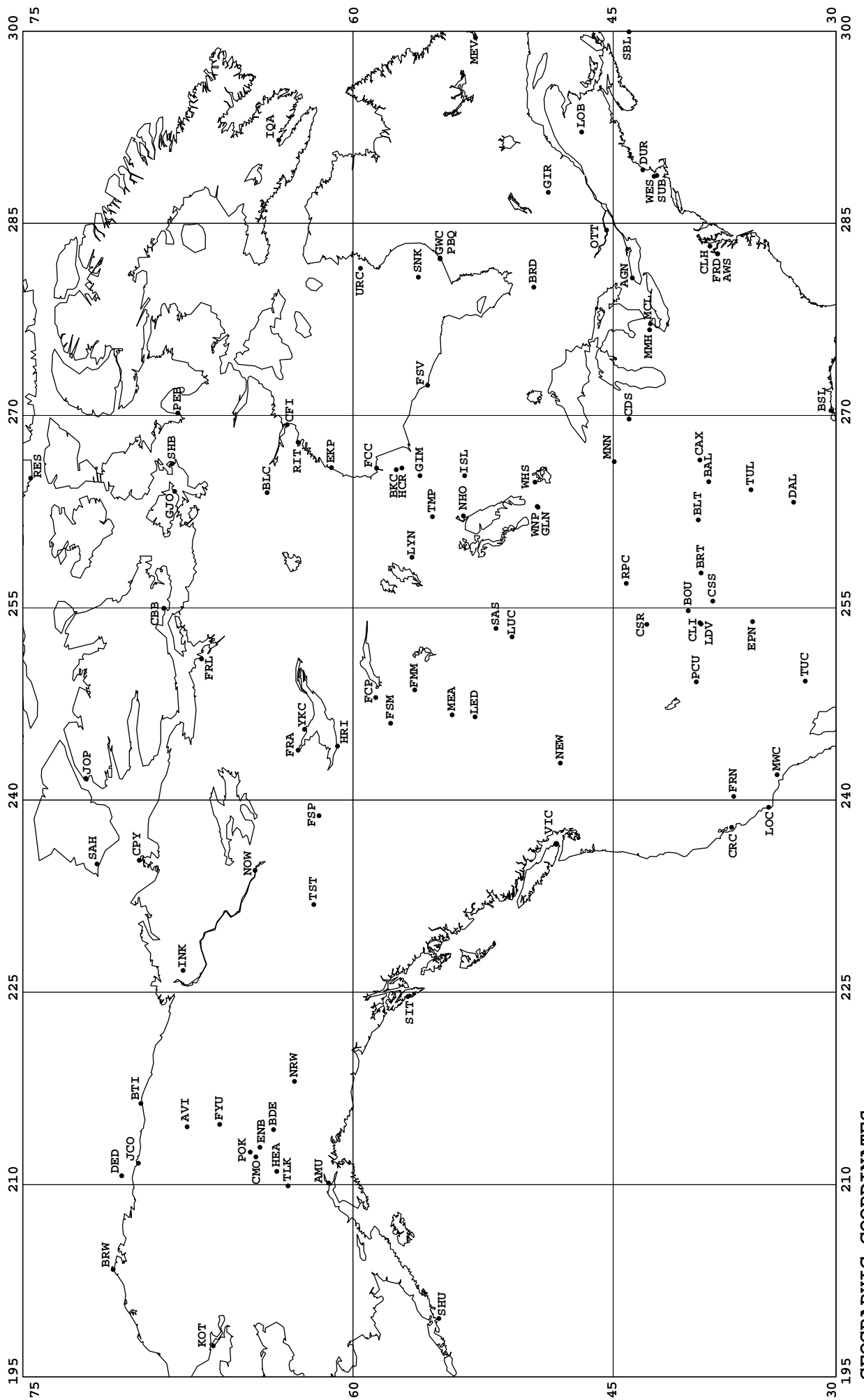
- 1**
Station List
- 2**
Alternative
- 3**
ABB Code
- 4**
Status of Data
- 5**
Sample
- 6**
Publication
- 7**
Observatory
- 8**
Contour Map
- 9**
Format

EUROPEAN STATIONS

- 1** Station List
- 2** Alternative
- 3** ABB Code
- 4** Status of Data
- 5** Sample
- 6** Publication
- 7** Observatory
- 8** Contour Map
- 9** Format



NORTH AMERICAN STATIONS



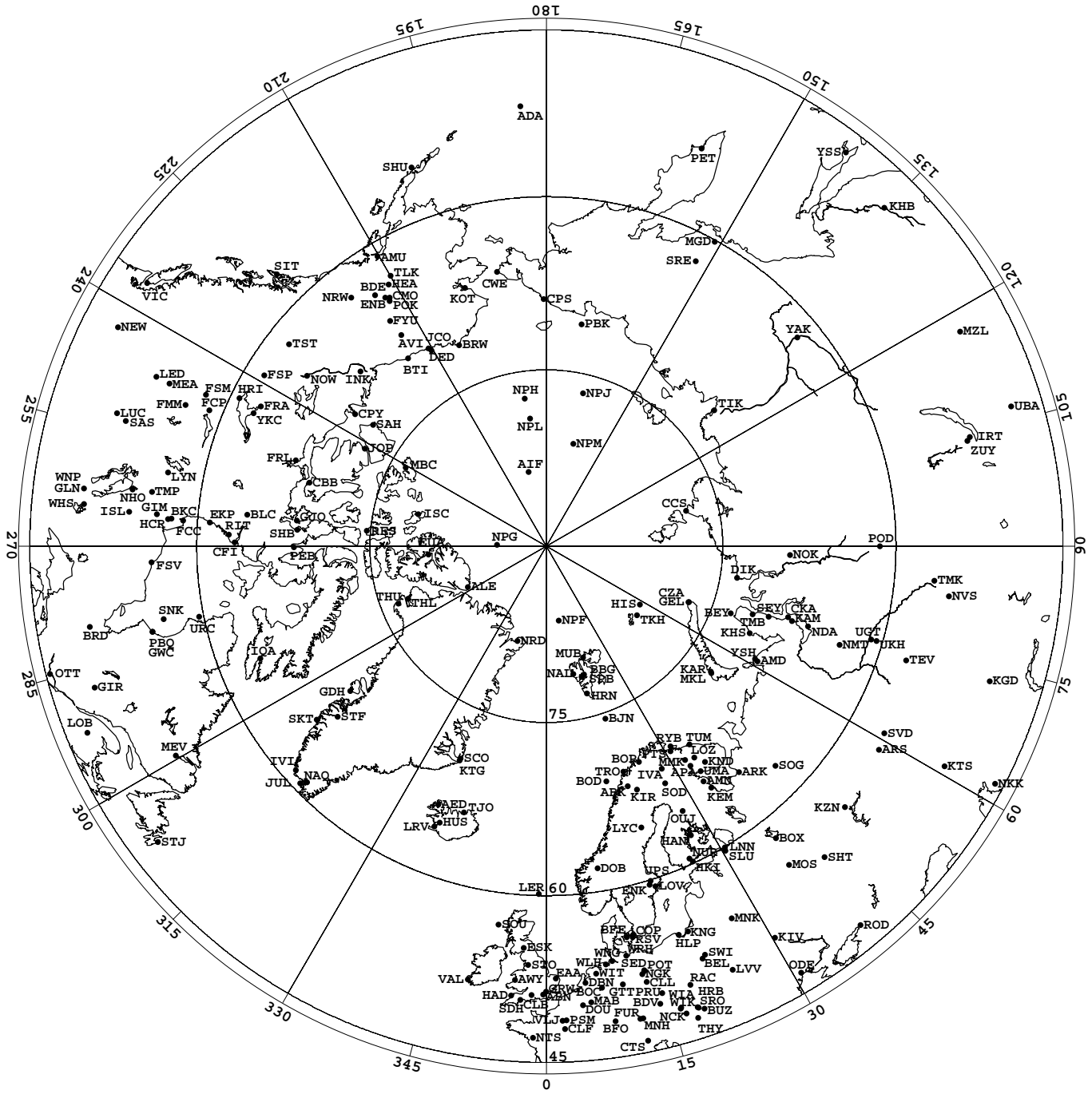
GEOGRAPHIC COORDINATES

- 1**
Station List
- 2**
Alternative
- 3**
ABB Code
- 4**
Status of Data
- 5**
Sample
- 6**
Publication
- 7**
Observatory
- 8**
Contour Map
- 9**
Format

NORTHERN HIGH LATITUDE STATIONS

(since 1882)

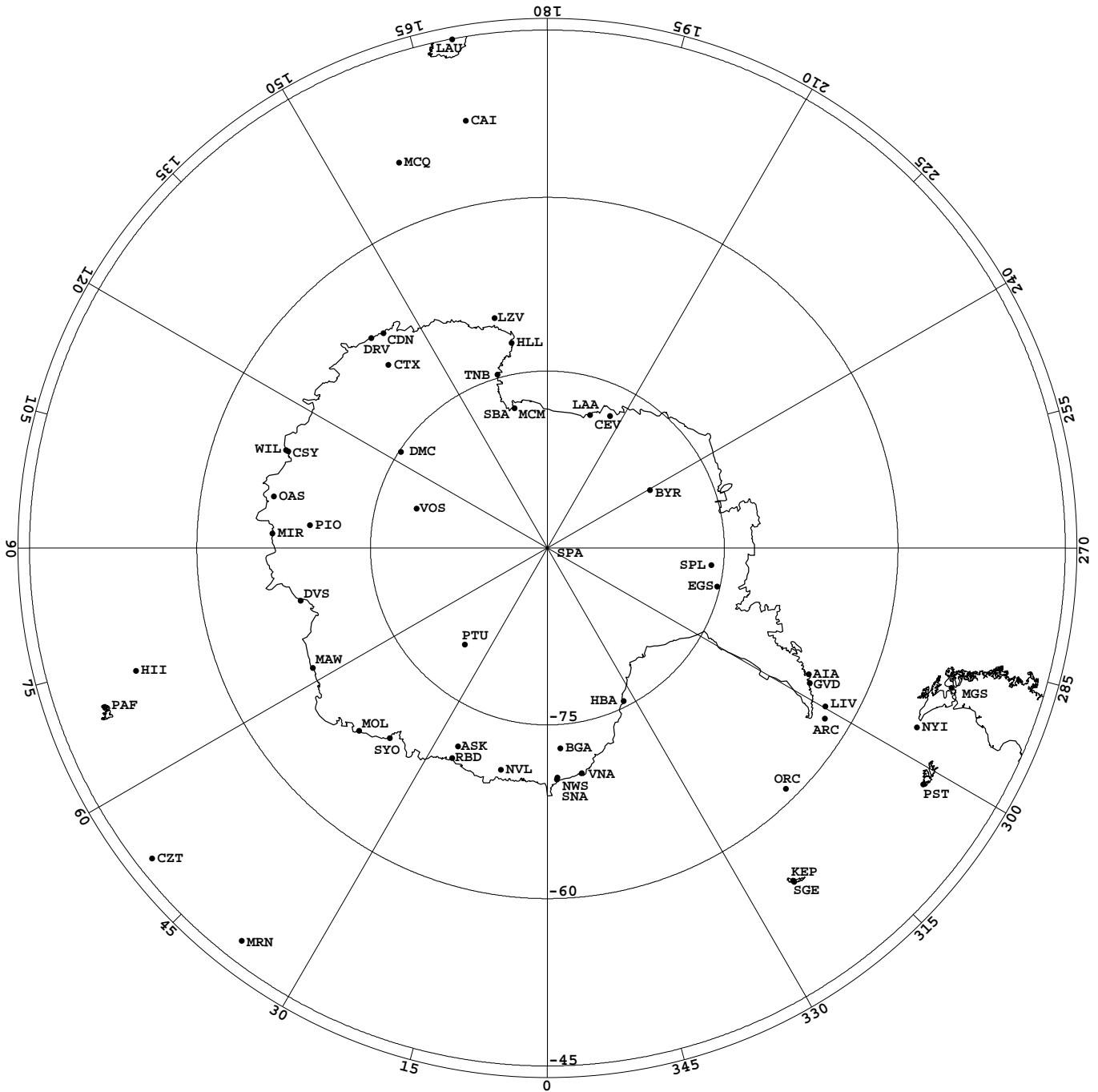
- 1**
Station List
- 2**
Alternative
- 3**
ABB Code
- 4**
Status of Data
- 5**
Sample
- 6**
Publication
- 7**
Observatory
- 8**
Contour Map
- 9**
Format



GEOGRAPHIC COORDINATES

SOUTHERN HIGH LATITUDE STATIONS

(since 1882)



GEOGRAPHIC COORDINATES

- 1**
Station List

- 2**
Alternative

- 3**
ABB Code

- 4**
Status of Data

- 5**
Sample

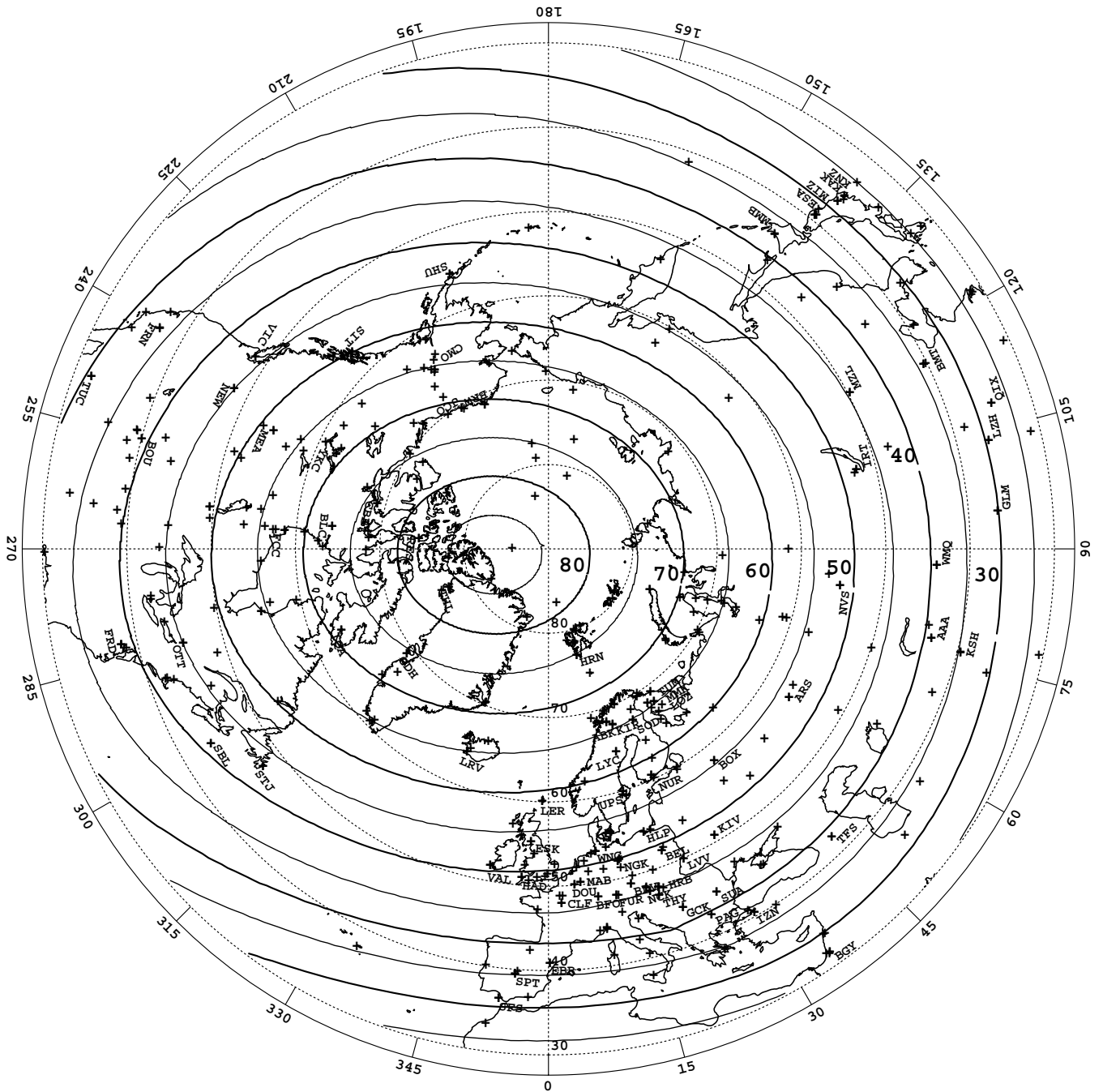
- 6**
Publication

- 7**
Observatory

- 8**
Contour Map

- 9**
Format

INVARIANT LATITUDE CONTOUR (IGRF-13 MODEL) (ALT=200KM)



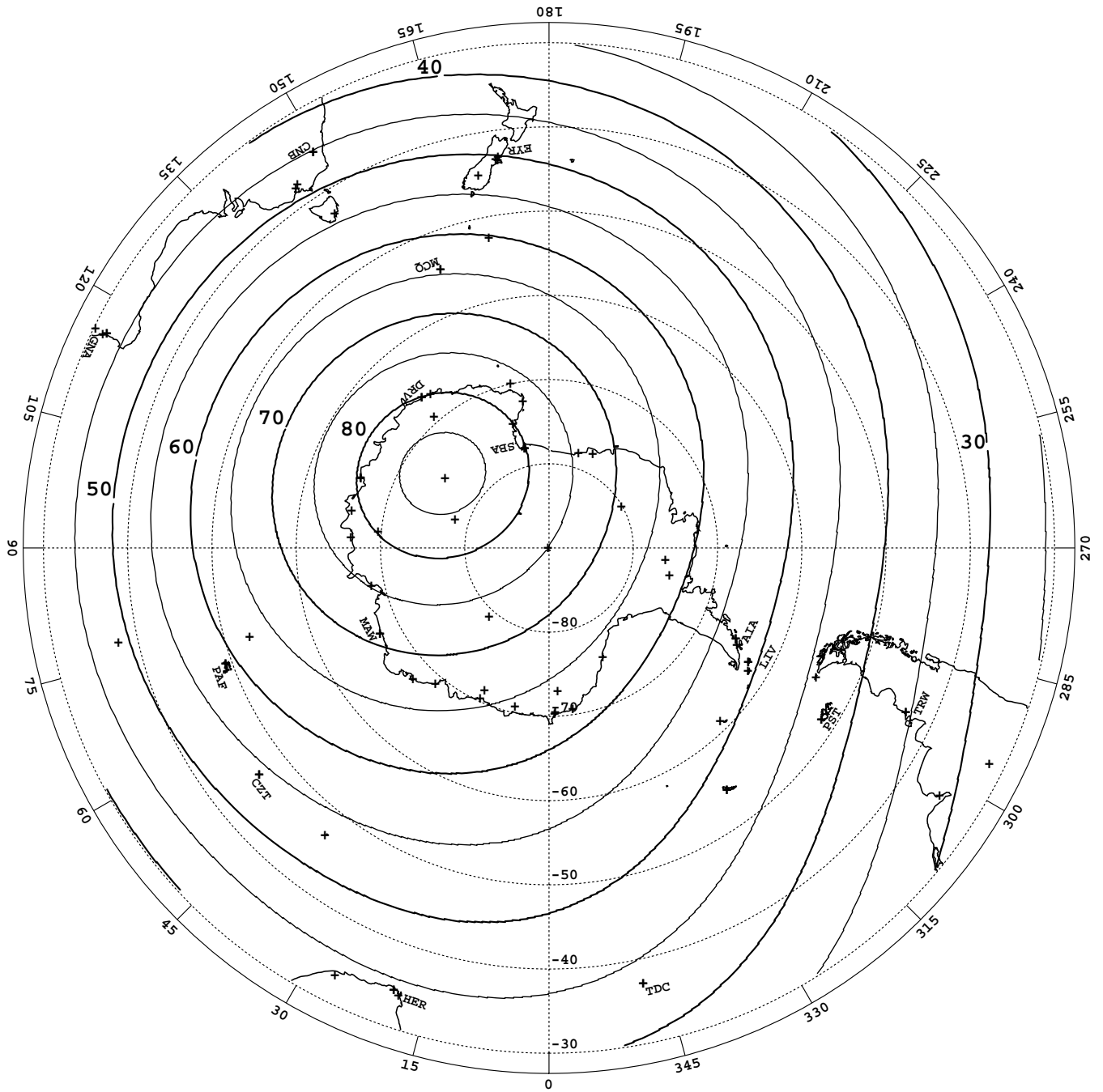
GEOGRAPHIC COORDINATES

* ABB CODE IS ATTACHED FOR THE STATION THAT AT LEAST
SOME DATA AFTER 2010 ARE AVAILABLE.

- 1**
Station List
- 2**
Alternative
- 3**
ABB Code
- 4**
Status of Data
- 5**
Sample
- 6**
Publication
- 7**
Observatory
- 8**
Contour Map
- 9**
Format

INVARIANT LATITUDE CONTOUR (IGRF-13 MODEL) (ALT=200KM)

- 1**
Station List
- 2**
Alternative
- 3**
ABB Code
- 4**
Status of Data
- 5**
Sample
- 6**
Publication
- 7**
Observatory
- 8**
Contour Map
- 9**
Format



GEOGRAPHIC COORDINATES

* ABB CODE IS ATTACHED FOR THE STATION THAT AT LEAST
SOME DATA AFTER 2010 ARE AVAILABLE.

1	Station List
2	Alternative
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8. Contour Maps of Geomagnetic Elements (2020.0)

Total Intensity (F)

Mercator Projection, Northern Hemisphere, Southern Hemisphere

Horizontal Intensity (H)

Mercator Projection, Northern Hemisphere, Southern Hemisphere

Declination (D)

Mercator Projection, Northern Hemisphere, Southern Hemisphere

Inclination (I)

Mercator Projection, Northern Hemisphere, Southern Hemisphere

North-South Component (X)

Mercator Projection, Northern Hemisphere, Southern Hemisphere

East-West Component (Y)

Mercator Projection, Northern Hemisphere, Southern Hemisphere

Vertical Component (Z)

Mercator Projection, Northern Hemisphere, Southern Hemisphere

1	Station List
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9. Digital Data Format

- (1) Digital WDC Exchange Format for Observatory Hourly Means**
- (2) Digital WDC Exchange Format for Observatory 2.5 Minute Values**
- (3) Digital WDC Exchange Format for Observatory 1.0 Minute Values**
- (4) Digital WDC Exchange Format for Resolution Data: W0, W1 and W2**
- (5) IAGA 2002 Format**

(1)-(3) from: Guide to the World Data Center System, Part 3 ICSU, 1989

(5) from: <https://www.ngdc.noaa.gov/IAGA/vdat/IAGA2002/iaga2002format.html>

(1) DIGITAL WDC EXCHANGE FORMAT FOR OBSERVATORY HOURLY MEANS

COLUMNS FORMAT DESCRIPTION

Column	Format	Description
1-3	A3	OBSERVATORY 3-LETTER CODE, left adjusted
4-5	I2	YEAR (last 2 digits, 82 = 1982)
6-7	I2	MONTH (01-12)
8	A1	ELEMENT(D, H, X, Y, Z, or F)
9-10	I2	DAY OF MONTH(01-31)
11-12	A2	Blanks
13-14	A2	Arbitrary
15	A1	INTERNATIONAL QUIET or DISTURBED DAYS, Q=1,D=2
16	I1	Blank for since 1900,8 for data before
17-20	I4	Tabular base, in degrees for D and I, hundreds of nanoTeslas (gammas) for the intensity elements. The bases are right adjusted and signed if negative. Negative values are identified with a minus sign either adjacent to the first significant digit or in the high-order position of the field (position 17). NOTE : A blank digit will not appear between a (-) sign and the first significant digit. For example, a base may appear as -050 or b-50 but not as -b50(b=blank).
21-116	24I4	Twenty-four 4-digit Hourly Values for the day. The values are in tenth-minutes for D and nanoTeslas (gammas) for the intensity elements. The first hourly value represents the mean value between 00:00 UT and 01:00 UT, ..., the 24th value represents the mean between 23:00 UT and 24:00 UT. Rules for negative values are the same as those described for tabular bases. A missing value is identified by 9999.
117-120	I4	Daily Mean. Rules for negative values are the same as those described for tabular bases. If any of the hourly mean values for the day are missing 9999 will appear as the daily mean.

The 25 values in positions 21-120 will have the range -999 to 9998, with 9999 reserved for missing values. To avoid a 4-digit negative value in positions 21-116, the tabular base will be adjusted for that day; for example for D, one degree is subtracted from the base and 600 units are added to each of the hourly values for the day - for the intensity elements, 500 nT are subtracted from the base and 500 nT are added to each of the hourly values for the day. Each tape block contains 20 records (2400 characters). A standard inter-record gap appears between tape blocks. When necessary, all nines are used as padding to complete the last block of data. Two or more tape marks follow the last block of data. The records are sorted according to observatory code, year, month, element, day (positions 1-10).

(2) DIGITAL WDC EXCHANGE FORMAT FOR OBSERVATORY 2.5 MINUTE VALUES

The same format as for hourly means is used for 2.5-minute values except that positions 11-12 contain the hour (00-23) of day and the first data value is for 2.5 minutes past the hour. For 2.5-minute values the hourly mean appears in positions 117-120. If more than 20 2.5-minute values are missing, the mean will appear as 9999.

(3) DIGITAL WDC EXCHANGE FORMAT FOR OBSERVATORY 1.0 MINUTE VALUES

- The logical record length is 400 coded characters containing header information, blank spaces, and data for one element for one hour. Twelve such logical records, containing a total of 4800 coded characters, are combined into a single data block on magnetic tape. There are 12 hours of data for one component for one station in each block. Therefore, 24 hours of D are followed by 24 hours of the next element for the same OBS, YR, MO, DA.

- A double end-of-file mark terminates each file. Blocks are padded with nines (9s) internally to fill missing data segments and to complete a data set.
- Each logical record contains header information and data in the following format: North polar distance, longitude, year, month, day, hour, element, observatory code, blank spaces, 60 data values, and an hourly mean.

NPD	LONG	YR	MO	DA	E	HR
1-6	7-12	13-14	15-16	17-18	19	20-21
OBS	ORG	(Blanks)	DATA-1	DATA-60	HRlyMEAN	
22-24	25	26-34	35-40	389-394	395-400	

- NPD is the observatory's North Polar Distance (0 to 180) degrees from the north geographic pole in thousandths of a degree and is allotted 6 characters. Decimal point is implied between positions 3 and 4.

LONG is the geographic longitude (0 to 360 degrees) measured EAST from Greenwich in thousandths of a degree and also has a 6-character field. Decimal point is implied between positions 9 and 10.

YR, MO, DA, and HR are each 2-digit numbers giving the date and time in GMT.

E is the element symbol in 1 character: it may be D, H, X, Y, Z, or F.

OBS is the 3-letter code (abbreviation) assigned by IAGA for the observatory.

ORG is the origin of the data, e.g. G = U.S. Geological Survey.

Blanks are spaces for 9 characters reserved for future additions.

DATA-1 ... DATA-60 are 1-minute values of the given element for that hour. H, X, Y, Z, or F are given to the nearest nanoTesla (gamma). D is given to the nearest tenth-minute of arc ($612 = 1 \text{ degree} + 01.2 \text{ minutes East}$). Each value is in a 6-character field.

HRly MEAN is the average of the preceding 60 1-minute values.

- Each element value and the hourly mean is given in a six-digit field including a minus sign for negative values, or a blank for positive values.
- Missing data spaces are padded with 99999. No alteration of logical record length is required for different types of computers.
- Positive values of Declination (D) indicate East Declination and negative values indicate West Declination.

Codes for sources of digital magnetometer data in the WDC system not only indicate the source organization, but also show whether the data are average values or point data. For example, 1-minute point values scaled from analog magnetograms for the production of AE indices are coded with a "D" because they are "digitized". Typically, digital 1-minute values received by WDCs from organizations operating automatic magnetic observatory instruments are averages of more frequently sampled values, e.g. 10-second point samples. Different organizations process their higher time resolution observations in different ways.

Some may filter and smooth the observations. Some follow the practice recommended by IAGA of averaging higher time resolution samples from before and after the minute to obtain a 1-minute value centered exactly on the minute. Others average values from the beginning of a given minute to the beginning of the next minute, effectively centering the mean on the half-minute, in similar fashion to the processing of 1-minute values to obtain hourly means. If the

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method used to obtain 1-minute average values is important to a user, the WDC will assist in determining the exact procedure applied.

In general, digital values from national networks are "absolute" and are tied to baselines determined by are operating institutions. Often only timely variations data are needed to support special research campaigns and digital values may be transmitted from regular observatory sites via satellite relay platforms. Such values are "flagged" with a "V" as noted below and eventually are replaced by the standard digital observatory output. Values from special networks such as the IMS chains are variations only. Attempts are made to check the absolute output of these instruments but usually no systematic absolute observations are possible or they are later replaced by adopted standard observatory digital values.

- ORG (data origin codes)
- A = Alaskan meridian magnetometer chain (includes Canadian sites) for IMS
 - C = Canadian standard observatory network
 - O = point samples digitized from analog magnetograms
 - F = France
 - G = USGS standard observatory network (one station operated by NOAA)
 - J = Japan
 - K = US AFGL E-W sub-auroral zone magnetometer chain
 - R = Western Canadian meridian magnetometer chain operated for IMS
 - T = Luning magnetic observatory, Taiwan.
 - U = E-W mid-latitude magnetometer chain operated for IMS
 - V = Variations only sent via NOAA GOES satellite relay
 - W = Eastern Canadian meridian magnetometer chain operated for IMS

(4) Proposed formats for one minute resolution data: W0, W1, W2

The following is an example of the updated formats (W0, W1, W2). W0 format is almost same as WDC-A format but colatitude and longitude are shortened, in order to have identification format, and a year field of 4 digits. The reserved 10 characters are divided into base value field, and information fields. Files containing mixed formats in W0, W1, W2 and WDC-A formats can be handled if you have program similar to the one attached to this message, but data sorting must be done without the first 12 characters and without mixing data from centuries (without first 10 characters if only W0, W1, W2 are mixed). (Recommended sorting is 3 character station code + year + month + day + component + hour + memo)

Binary format was suggested. However, the character format is useful for manual corrections. Hence a character coded format and one which is similar or compatible to the WDC-A format was chosen.

Here is the graphical explanation, and proposed description of W1 format (W0 and W2 is same except the unit).

```

Illustration of WDC A format
cccccllllllyymmddchhsssmmmmmmmmm000000111111222222333333...
colat. long.  mon comp stn memo      0min  1min  2min  3min
           year day hour
to make this into W0 format
W0 CCCLLLYYymmddchhssAAVVBBBBB000000111111222222333333...
id  ggcode year day hour add base   0min  1min  2min  3min
           month comp stn conversion
by adding base values, higher precision data can be used

```

W1 CCCLLLYYymmddchhsssAAVVBBBBBB000000111111222222333333...
W2 CCCLLLYYymmddchhsssAAVVBBBBBB000000111111222222333333...

an example of W1 data

W1 05414019920210H00KAK C2 00295 05110 05112 05112 05116 05119 05121...
W2 formcan also be used for this data

W2 05414019920210H00KAK C2 02950 51100 51120 51120 51160 51190 51210...
rounding data and changing base values give W0 and WDC-A formats

W0 05414019920210H00KAK C2 00029 01011 01011 01011 01012 01012 01012...
But W0 format does not use base value so the following is OK

W0 05414019920210H00KAK C2 00000 30011 30011 30011 30012 30012 30012...
Only changing the header part of W0 gives WDC-A format

053770140180920210H00KAKC2MEMOAREA 30011 30011 30011 30012 30012 30012...
We can convert WDC-A format to W0,W1,W2 automatically

W0 05414019920210H00KAK C2 00300 00011 00011 00011 00012 00012 00012...
If there is a missing data, an example is following

W1 05414019920210Z00KAK C2 00345 05423 05424 05422999999 05423 05423...
If one block is totally missing

W1 05414019920210D00KAKC2999...
For southern hemisphere, field is large enough to have negative values

W1 05414019920210Z00SOU C2-00345-05423-05424-05422-05423-05423-05423...
For polar area where Declination is almost 180 degrees

W1 05414019920210D00KAK C2 01080 05619 05625 05631 05634 05634 05633...

*** PROPOSAL OF THE FORMAT of GEOMAGNETIC DATA, ONE MINUTE FORMAT ***
(KYOTO/W1 FORMAT)

COMPATIBILITY IBM NON-LABEL MT, 5 1/4' Floppy, 3.5' Floppy
CHARACTER SET ISO (ASCII) coded
TAPE BLOCK FIXED LENGTH, BLOCKING FACTOR 12 RECORDS (4800 CHARACTERS)
LAST BLOCK MAY BE A SHORT BLOCK
RECORD SIZE 400 CHARACTERS, FIXED LENGTH

*** RECORD FORMAT ***

COLUMN FORMAT SHORT DESCRIPTION

FROM TO FORTRAN/COBOL

1	2	A2	X(2)	FORMAT IDENTIFIER 'W1' for W1 format 'Wn' for Wn format, others WDC-A old format
3	4	2X	X(2)	FILLER (IDENTIFIER) VALUE ' ' reserved for update
5	10	A6	X(6)	IDENTIFIER for Station usually GG code (colatitude 3 digits, longitude 3 digits)
11	14	I4	9(4)	4 digit year e.g. '1903' '2015'
15	16	I2	9(2)	MONTH '01' TO '12'
17	18	I2	9(2)	DAY OF THE MONTH '01' TO '31'
19		A1	X(1)	COMPONENT 'HDZFXIYIB1-0' and others for index
20	21	I2	9(2)	HOUR UT, '00' TO '23'
22	24	A3	X(3)	IAGA station code, or name code of index
25	26	A2	X(2)	sub code of station, observation instrument etc. value ' ' reserved for future use e.g. DG for digitized values
27	28	A2	X(2)	process code such as conversion identifier value ' ' reserved for future use e.g. C2 for WDCC2 process
29	34	I6	-99999	base value (in 1000*unit) (comment for old WDCA)

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```

35 394 60I6 -99999 TIMES 60
      60 ONE MINUTE VALUES,
      UNIT 0.1nT for W1, 0.01nT for W2, 1nT for W0 and old-WDCA
      0.01arc min for W1, 0.001arc min for W2,
      0.1 arc min for W0 and old-WDCA
      VALUE '999999' FOR THE MISSING DATA
      ' 99999' maybe used in old-WDCA
( 35 40      ONE MINUTE VALUE FOR THE FIRST MINUTE OF THE HOUR
(389 394     ONE MINUTE VALUE FOR THE LAST MINUTE OF THE HOUR
395 400 I6 -99999 HOURLY MEAN VALUE (rounded in absolute value)

```

Following is example FORTRAN code to handle a mixture of WDC-A, W0 W1 W2 data, integer values are designed to handle the finest precision W2 data, and all real variables should be double precision to handle these high precision data.

```

=====
      INTEGER IYEAR, IMON, IDAY, IHOUR, IDATA(60), IMEAN
      CHARACTER CIN*400, CSTN*3, CSTNS*2, CCOMP*1, CID*12, CCOMM*10
      REAL*8 FDATA(60), FMEAN
1  read(5, '(A)', END=9) CIN
      MODIN=-2
      IUNIT=3
      CALL      W2INPT (CIN, MODIN, IUNIT, IMOD, IERR, IYEAR, IMON,
- IDAY, IHOUR, IBASE, IDATA, IMEAN, CSTN, CSTNS, CCOMP, CID, CCOMM,
- FDATA, FMEAN)
      write(6, *) CIN, MODIN, IUNIT, IMOD, IERR, IYEAR, IMON,
- IDAY, IHOUR, IBASE, IDATA, IMEAN, CSTN, CSTNS, CCOMP, CID, CCOMM,
- FDATA, FMEAN
      GO TO 1
9  STOP
      END

      SUBROUTINE W2INPT(CIN, MODIN, IUNIT, IMOD, IERR, IYEAR, IMON,
- IDAY, IHOUR, IBASE, IDATA, IMEAN, CSTN, CSTNS, CCOMP, CID, CCOMM,
- FDATA, FMEAN)
      INTEGER IYEAR, IMON, IDAY, IHOUR, IDATA(60), IMEAN
      CHARACTER CIN*400, CSTN*3, CSTNS*2, CCOMP*1, CID*12, CCOMM*10
      REAL*8 FDATA(60), FMEAN, FMISS, FBB, FDIV
      DATA MISS/999999999/, FMISS/999999./
C MODIN -1, OLD WDCA FORMAT (SUPERSEDES INPUT DATA)
C      -2, AUTOMATICALLY DEFINED FROM INPUT DATA
C      0=W0, 1=W1, 2=W2, (SUPERSEDES INPUT DATA)
C IUNIT 0 UNIT IS NOT CHANGED, DEPENDENT ON IMOD, MISSING DATA UNCHANGED
C      NO DATA IN FDATA, FMEAN
C      1 UNIT IS NOT CHANGED, DEPENDENT ON IMOD, MISSING DATA UNCHANGED
C      FDATA WILL HAVE DATA IN NT, OR .1ARC MIN, MISSING DATA IS 999999.
C      2 UNIT IS CONVERTED FOR W2 MODE, MISSING DATA IS 999999999
C      NO DATA IN FDATA, FMEAN
C      3 UNIT IS CONVERTED FOR W2 MODE, MISSING DATA IS 999999999
C      FDATA WILL HAVE DATA IN NT, OR .1ARC MIN, MISSING DATA IS 999999.
C IMOD ACTUALLY USED MODE
C
C FORMAT      UNIT      BASE UNIT      D UNIT      BASE D UNIT
C OLD WDCA    1nT      -----    0.1 ARCMIN    -----

```

```

C W0          1NT          1000NT          0.1 ARCMIN          100 ARCMIN (6 ARC DEG)
C W1          0.1NT        100NT          0.01 ARCMIN          10 ARCMIN (1/6 ARC DEG)
C W2          0.01NT       10NT          0.001 ARCMIN          1 ARCMIN
C
C CSTN STATION CODE, CSTNS SUB STATION CODE (W1,W2..), CID FIRST 12
C CHARACTER (LAT LONG), OR GG CODE (W1,W2), CCOM RESERVED FIELD
    IERR=0
    IVF=0
    IVI=0
    IF(IUNIT.EQ.1.OR.IUNIT.EQ.3)IVF=1
    IF(IUNIT.EQ.2.OR.IUNIT.EQ.3)IVI=1
    IF(MODIN.LT.-2.OR.MODIN.GT.2)GO TO 900
    IF(MODIN.EQ.-2)GO TO 1500
    IF(MODIN.EQ.-1)GO TO 1600
    IMOD=MODIN
    GO TO 999
900 IERR=1000
C INPUT MODE IS NOT REASONABLE, CANNOT PROCEED
    RETURN
1500 IF(CIN(1:2).EQ.'W1'.OR.CIN(1:2).EQ.'w1')GO TO 1100
    IF(CIN(1:2).EQ.'W0'.OR.CIN(1:2).EQ.'w0')GO TO 1000
    IF(CIN(1:2).EQ.'W2'.OR.CIN(1:2).EQ.'w2')GO TO 1200
C INPUT IS IN OLD WDC FORMAT
1600 READ(CIN,6006)CID,IYEAR,IMON,IDAY,CCOMP,IHOUR,CSTN,CCOMM,
    - IDATA,IMEAN
6006 FORMAT(A12,3I2,A1,I2,A3,A10,60I6,I6)
    CSTNS=' '
    IYEAR=IYEAR+1900
    IBASE=0
    IMOD=-1
    GO TO 998
1000 IMOD=0
    GO TO 999
1200 IMOD=2
    GO TO 999
1100 IMOD=1
    999 READ(CIN,6000)CID,IYEAR,IMON,IDAY,CCOMP,IHOUR,CSTN,CSTNS,
    - CCOMM,IBASE,IDATA,IMEAN
6000 FORMAT(2X,A8,I4,2I2,A1,I2,A3,A2,A2,I6,60I6,I6)
    998 IF(IUNIT.EQ.0)RETURN
    IF(IMOD.EQ.-1)GO TO 1700
    IF(IBASE.EQ.999999)GO TO 1800
    IF(IVF.EQ.1)FDIV=1.D0/10**(IMOD)
    IF(IVI.EQ.1)IMUL=10**(2-IMOD)
    IF(IVF.EQ.1)FBB=IBASE*FDIV*1000
    IF(IVI.EQ.1)IBB=IBASE*IMUL*1000
    DO 1110 I=1,60
    IF(IDATA(I).EQ.999999)GO TO 1111
    IF(IVF.EQ.1)FDATA(I)=FBB+IDATA(I)*FDIV
    IF(IVI.EQ.1)IDATA(I)=IBB+IDATA(I)*IMUL
    GO TO 1110
1111 IF(IVF.EQ.1)FDATA(I)=FMISS
    IF(IVI.EQ.1)IDATA(I)=MISS
1110 CONTINUE

```

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```
IF(IMEAN.EQ.999999)GO TO 1820
IF(IVF.EQ.1)FMEAN=FBB+IMEAN*FDIV
IF(IVI.EQ.1)IMEAN=IBB+IMEAN*IMUL
RETURN
```

```
1700 IMUL=100
DO 1710 I=1,60
IF(IDATA(I).EQ.999999.OR.IDATA(I).EQ.99999)GO TO 1711
IF(IVF.EQ.1)FDATA(I)=IDATA(I)
IF(IVI.EQ.1)IDATA(I)=IDATA(I)*IMUL
GO TO 1710
```

```
1711 IF(IVF.EQ.1)FDATA(I)=FMISS
IF(IVI.EQ.1)IDATA(I)=MISS
```

```
1710 CONTINUE
IF(IMEAN.EQ.999999.OR.IMEAN.EQ.99999)GO TO 1820
IF(IVF.EQ.1)FMEAN=IMEAN
IF(IVI.EQ.1)IMEAN=IMEAN*IMUL
RETURN
```

```
1800 DO 1810 I=1,60
IF(IVF.EQ.1)FDATA(I)=FMISS
1810 IF(IVI.EQ.1)IDATA(I)=MISS
1820 IF(IVF.EQ.1)FMEAN=FMISS
IF(IVI.EQ.1)IMEAN=MISS
```

```
RETURN
END
```

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(5) IAGA 2002 format

This format is intended as a data exchange format for geomagnetic data (samples and means) from observatories and variometer stations at time intervals from millisecond up to and including monthly means. The format comprises:

- * Twelve (12) mandatory and one (1) optional file header records
- * Unlimited optional comment records
- * One (1) mandatory data header record
- * A series of data records.
- * **Every record is 70 characters long** plus the machine-dependent carriage return / line feed.

Pad records with spaces if needed. Data records report exactly 4 magnetic field elements (DHIF, DHZF, XYZF, or DHIG, DHZG, XYZG). Use missing data values (8's or 9's) if fewer than 4 elements are available.

The 12 mandatory and 1 optional file header records

Mandatory header and optional comment records begin with a space character in column 1 and end with the vertical bar | (ASCII 124) in column 70. Content labels begin in column 2 and descriptions begin in column 25.

- * This *format* is designated IAGA-2002.
- * **Source of Data** is the name of the institute responsible for collecting the data.
- * Please spell the entire **station name**; do not use abbreviations. Capitalize the first letter.
- * The **IAGA Code** is the official IAGA 3-letter station code. It should be in capital letters and correspond to the IAGA list of magnetic observatories. Variation stations must check observer suggested 3-letter codes against the IAGA list (WDC SEG, Boulder) and confirm through the IAGA Division V WG1 or leave the code blank.
- * Location of the station is reported to the one thousandth degree in **geodetic latitude** (positive north) from -90 to 90 degrees and in **geodetic longitude** (positive east) from -180 to 180 or 0 to 360 degrees.
- * Report **elevation** in meters above mean sea level.
- * **Reported** refers to the magnetic field elements contained in the data record, **in the order recorded in data record**. Valid values are DHIF, DHZF, and XYZF (or DHIG, DHZG, and XYZG). Use E/V instead of D/I for declination/inclination given in intensity units (ONLY if data type is variation).
- * **Sensor Orientation** is the physical orientation of the observing instruments, i.e. XYZF, HDZ.
- * **Digital Sampling** is the rate (in seconds) of the data sampling of the magnetic field sensor (instrument) or the digitizing interval for analogue data.
- * **Data interval** type is the mean or instantaneous time interval of the data. Common values include 1-minute (00:30-01:29), 1-minute (00:00-00:59), 1-hour (00-59), 1-day (00-23) and 1-month (01-31); the last day could also be 30, 29, or 28. There are many possible intervals, including a fraction of a second (instant value), averages by 1-second (501-1500), 1- second (0-1000), 10 second, or 2.5 minute. **Define the type of mean and how values are centered in the comment section.**
- * **Data type** is provisional (P), definitive(D), quasi-definitive (Q), or variation (V).
- * **Publication date** (optional) is date when the data is published. This is added in June 2015. The inclusion of this line (#13) is optional but desirable for the modern data. The old data files can be not modified. Example is "Publication date 2014-10-20".

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The optional comment header records

Use these records to record important information concerning the data that is not contained in the defined fields. Types of information may include the type of means and how the mean values are centered, important gaps in the data record, or explanations of missing values (9 filled element field).

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- * Every record begins with a space character in column 1 and # (hash or number sign) in column 2.
- * The end of each record is indicated with a vertical bar | (ASCII 124) in column 70.
- * Include the formula for computing the missing (non-reported) magnetic elements. For example, if an observatory reports XYZF, the comments should contain the formula for computing HDI.
- * Addition July 2003: for transmission of incomplete day files include two additional optional comment headers stating the start time and duration in seconds. These records must have the form:

```
#Start Time          hh:mm:ss
                    duration-in-seconds
```

- * Addition July 2003: for computing approximate values of D in angular units from E values in nT one additional optional comment header is required. This record should contain an approximate H value (e.g., the most recent annual mean value or a value from the IGRF) and must be of the form:

```
#Approx H           17000
```

The mandatory data header record

The mandatory data-header record contains column headers useful for multi-station analysis. Elements, both type and order, are indicated in the file-header field **Reported**.

- * The date and time headers are DATE, TIME, and DOY (day of year).
- * The magnetic element headers comprise 4 letters: 3 letters for the observatory IAGA code and 1 letter for the magnetic element reported. Valid values are H, D (or E), I (or V), X, Y, Z, F (or G). The column headers are space delimited.
- * The end of each record is indicated with a vertical bar | (ASCII 124) in column 70.

The data records

The data records contain the date, time, and magnetic field elements reported. Report data to the least significant digit. Indicate missing data with 99999 to the corresponding accuracy for a given component (e.g., 99999.0 or 99999.00). If an element is not observed, please record 88888 (to the corresponding accuracy) in that field. The format for field elements is 4(1X, F9.2). Each record is exactly 70 characters long plus the machine dependent carriage return / line feed.

- * DATE is the calendar date in ISO YYYY-MM-DD format (4-digit year, month as 01-12, day as 01-31).
- * TIME is in ISO hh:mm:ss.sss format (hour as 0-24, minute as 0-59, second as 0-59 Note: if the hour is 24, the minute and second must be 0).

Values beyond the time interval of the means being reported must be zero-filled i.e. 14:01:00.000 for 1 minute data for the 14th hour, first minute. DOY is the day of the year, from 1-365 (or 366 for leap years). Describe the method of average, i.e., centered to the hour for hourly means, in the comments area.

- * D and I are reported in angular units of minutes of arc to the precision of the instruments.
- * F, H, X, Y, Z, E, G, and V are reported in nanotesla and a fraction of nT.

Recommended File Name Procedure

To improve the ease with which data are exchanged and recognized, IAGA recommends the following guidelines and style for naming files containing magnetic observatory data. The recommendations closely follow the current International Standards Organization (ISO) Level II recommendations, and are fully compliant with both the Joliette extension to Level II and to the proposed modifications for the ISO standard. These recommendations are for data exchange and do not necessarily apply to data archive. Some changes have been made in this section in July 2003 to allow for existence of multiple fragments of data starting at different times (which is a possibility for some data transmission systems) and to ease usage with compression programs.

1. File names are composed of two parts, the base name and a three-character extension. A full stop (period) separates the base from the extension. The base name may be up to 27 characters long. The extension is exactly three characters (total file name length not to exceed 31 characters). This format is sometimes referred to as the "27.3" format.

BASENAME (1 to 27 characters) "." EXTENSION (3 characters)

Ex. my_file_name.dat

2. File names are composed of lower case a-z, 0-9, underscore "_", and dash "-" characters. No spaces, unusual characters (i.e. *, /, \, :, ;, ?) or upper case characters allowed.
3. File names must begin with the IAGA 3-Letter Code, Date, and Type of data. The Extension defines the Data Interval (monthly, daily, hourly, minute, or second data). The Extension is duplicated in the last three characters of the base name, so that if the Extension is stripped on compression the Data Interval is not lost. The file name only indicates the general data interval, specific information is contained in the file header *Data Interval* field (i.e. 2.5 and 1-minute averages are both "minute" data, 10 second averages and 1 second instantaneous are both "second" data).
4. The first several characters in the base name are strictly defined. Files may be further defined with the remaining characters by using an underscore "_" to separate the standard name. For example, naq20020101dmin.min and naq20020101d_2-5min.min are both acceptable names for 2.5 minute definitive data from Narsarsuaq.

General format: iagyyymmddtint.int

Where: iag = IAGA 3-letter observatory code

yyyy = four digit year (i.e. 2002)

mm = two digit month (i.e. 01 for January, 12 for December)

dd = two digit day of month (01-31)

t = type of data (p - provisional, d - definitive, q - quasi-definitive v - variation)

int = data interval (mon - monthly, day - daily, hor - hourly, min - minute, sec - second)

Comment	Data Interval	Files	File Name Pattern	Example Name
1	Monthly	Year	iagyyyytint.int	naq2002dmon.mon
2	Daily	Year	iagyyyytint.int	naq2002dday.day
3	Hourly	Month	iagyyymmtint.int	naq200201phor.hor
4	Minute	Day	iagyyymmddtint.int	naq20020101pmin.min
5	Second	Day	iagyyymmddtint.int	naq20020211vsec.sec

1. File contains 1 year of definitive monthly data for 2002 from Narsarsuaq.
2. File contains 1 year of definitive daily data for 2002 from Narsarsuaq.

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3. File contains 1 month of provisional hourly data for January 2002 from Narsarsuaq.
4. File contains 1 day of provisional minute data for 1 January 2002 from Narsarsuaq.
5. File contains 1 day of variation second data for 11 February 2002 from Narsarsuaq.

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**Additional format to handle multiple fragments of data starting at different times:
iagyyymmddhhMMsstint.int**

3

ABB Code

Where: iag = IAGA 3-letter observatory code

yyyy = four digit year (i.e. 2002)

mm = two digit month (i.e. 01 for January, 12 for December)

dd = two digit day of month (01-31)

hh = hour at which data starts (00-23)

MM = minute at which data starts (00-59)

ss = second at which data starts (00-59)

t = type of data (p - provisional, d - definitive, q - quasi-definitive v - variation)

int = data interval (mon - monthly, day - daily, hor - hourly, min - minute, sec - second)

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Comment	Data Interval	Files	File Name Pattern	Example Name
1	Minute	Part-day	iagyyymmddhhMMtint.int	clf200306121320vmin.min
2	Second	Part-day	iagyyymmddhhMMsstint.int	clf20030612132000vsec.sec

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1. File contains part-day of 1-minute variation data from CLF for 12 June 2003, starting at 13:20
2. File contains part-day of 1-second variation data from CLF for 12 June 2003, starting at 13:20:00

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Sample format: IAGA-2002 - July 2003 Revision

```

    <sample for 1-minute definitive data>
Format                IAGA-2002
Source of Data        Danish Meteorological Institute
Station Name          Narsarsuaq
IAGA CODE              NAQ
Geodetic Latitude     61.160
Geodetic Longitude    314.560
Elevation              4
Reported              XYZF
Sensor Orientation     DIF
Digital Sampling       0.01 seconds
Data Interval Type     Filtered 1-minute (00:30 - 01:29)
Data Type              Definitive
# This area is where the data source or distributor can include
# any additional information needed for proper use of data. For
# example, the observers name and contact, notes on a change of
# instrumentation, reasons for missing data values, definition of
# observed values, geomagnetic location of the observatory, etc.
# This area should also contain the formula for computing the non-
# reported elements and components of the INTERMAGNET binary
# format which do not fit elsewhere. These include:
# D-conversion:
# = H/3438*10000.
# which is word 8 in the INTERMAGNET binary format and is used
# to convert variations of D in minutes of arc <-> nT. Please

```

```

# note that all of the header records and comment records begin
# with a space in column 1, end with a | (ASCII 124), and are
# padded with spaces - never with tabs.
# H = squareroot(X*X + Y*Y), cos D = X/H, sin I = Z/F
DATE      TIME      DOY      NAQX      NAQY      NAQZ      NAQF
2001-03-13 00:00:00.000 072      10800.11 -6100.23  53381.51  54801.12
2001-03-13 00:01:00.000 072      10800.31 -6100.20  53381.51  54801.12
2001-03-13 00:02:00.000 072      10801.11 -6101.23  99999.00  54801.12
2001-03-13 00:03:00.000 072      10803.12 -6100.23  99999.00  54801.12

```

<Sample data header and data record for hourly values>

The header record for Data Interval Type might read:

Data Interval Type 1-hour (00 - 59)

Note filler for non-reported element.

```

DATE      TIME      DOY      NAQX      NAQY      NAQZ      NAQF
2001-03-13 00:00:00.000 072      10800.11 -6100.23  53381.51  88888.00
2001-03-13 01:00:00.000 072      10800.31 -6100.20  53381.51  88888.00
2001-03-13 02:00:00.000 072      10801.11 -6101.23  53381.50  88888.00
2001-03-13 03:00:00.000 072      10803.12 -6100.23  99999.00  88888.00

```

<Sample data header and data record for monthly values>

The header record for Data Interval Type might read:

Data Interval Type 1-month (01 - 31)

Note filler for non-reported element.

```

DATE      TIME      DOY      NAQX      NAQY      NAQZ      NAQF
2001-01-15 00:00:00.000 015      10800.11 -6100.23  53381.51  88888.00
2001-02-14 00:00:00.000 045      10800.31 -6100.20  53381.51  88888.00
2001-03-15 00:00:00.000 074      10801.11 -6101.23  53381.50  88888.00
2001-04-15 00:00:00.000 105      10803.12 -6100.23  99999.00  88888.00

```

<Sample for 1-second Variation Data>

```

Format          IAGA-2002
Source of Data  Danish Meteorological Institute
Station Name    Narsarsuaq
IAGA CODE      NAQ
Geodetic Latitude 61.160
Geodetic Longitude 314.560
Elevation       4
Reported        HEZF
Sensor Orientation HEZF
Digital Sampling 1 seconds
Data Interval Type 1-second instantaneous
Data Type       Variation
# This area should contain additional information needed
# in order to transform the reported elements. For the data in this
# sample information about the declination at the observatory is
# needed in order to transform the variation data from HEZ to the
# widely used XYZ orientation. Also information about the value of
# horizontal field H can be useful to convert E-variations in nT to
# variations in minutes of arcs.
# Approx. D 312 mins
# Approx. H 10800 nT
DATE      TIME      DOY      NAQH      NAQE      NAQZ      NAQF
2001-03-13 00:00:00.000 072      800.11    -100.23   381.51    54801.12
2001-03-13 00:00:01.000 072      800.31    -100.20   381.51    54802.32

```

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2001-03-13 00:00:02.000 072      801.11   -101.23  99999.00  54803.22
2001-03-13 00:00:03.000 072      803.12   -100.23  99999.00  54803.43

```

<Sample data header and data record for 5 millisecond values>

The header record for Data Interval Type might read:

```

Data Interval Type      5 millisecond (instantaneous values).
Note filler for missing element.

```

DATE	TIME	DOY	NAQX	NAQY	NAQZ	NAQF
2001-03-13	00:00:00.000	072	10800.11	-6100.23	53381.51	99999.00
2001-03-13	00:00:00.005	072	10800.31	-6100.20	53381.51	99999.00
2001-03-13	00:00:00.010	072	10801.11	-6101.23	53381.50	54801.10
2001-03-13	00:00:00.015	072	10803.12	-6100.23	99999.00	54801.24

Addition to IAGA2002 Data Exchange Format Quasi Definitive (q) data type and valid geomagnetic element (G)

Background. On the view of the upcoming Swarm mission the observatory data user community requests to create the new data type "Quasi Definitive". During the INTERMAGNET meeting held 18-20 October 2010 in Paris it was decided to establish this data type and to modify the IAGA2002 format accordingly. The present IAGA2002 format allows in the mandatory header the types Provisional (p), Definitive (d), or Variation (v). The new established type Quasi Definitive does not fit to any of the 3 present possible ones. It needs to be clearly distinguished from all of them.

A further decision of INTERMAGNET was to introduce the concept of ΔF (the difference between total field values derived from variometer data and measured using a scalar instrument). Current codes for geomagnetic elements do not include (as standard) a code for ΔF . INTERMAGNET proposes that the code 'G' should be used for ΔF .

INTERMAGNET suggests adopting the new data type Quasi Definitive in the IAGA2002 format by extending the present 3 data types to 4. INTERMAGNET proposes that the current 7 geomagnetic field elements (XYZHDIF) be extended with an eighth (add G) that designates ΔF .

Detailed description of the format modifications. There are 3 points to be modified in the IAGA2002 format.

1. In the data type field of the metadata, the valid values should be extended to include "Quasi Definitive".
2. In the file name convention the new data type should be considered by adopting "q" as a valid code for the data type.
3. To add G as a valid geomagnetic element for the fourth data column (currently only F is valid here) to allow orientation codes of XYZG and HDZG.

G is defined as ΔF : $\Delta F = F(v) - F(s)$

where $F(v)$ represents the total field value calculated from the main observatory instrument (vector F) and $F(s)$ represents the total field from an independent instrument (scalar F). Both $F(v)$ and $F(s)$ must be corrected to the location in the observatory where geomagnetic absolute observations are made. When $F(s)$ is missing or both $F(s)$ and $F(v)$ are missing, set ΔF to the missing value. When $F(v)$ only is missing, set ΔF to $-F(s)$.