UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

PRELIMINARY GEOMAGNETIC DATA COLLEGE OBSERVATORY FAIRBANKS, ALASKA

JANUARY 1979

OPEN FILE REPORT

79-300A

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THIS REPORT WAS PREPARED UNDER THE DIRECTION OF JOHN B. TOWNSHEND, CHIEF OF THE COLLEGE OBSERVATORY WITH THE ASSISTANCE OF OBSERVATORY STAFF MEMBERS J. E. PAPP, ASST. CHIEF, AND S. P. TILTON, AND IN COOPERATION WITH THE GEOPHYSICAL INSTITUTE OF THE UNIVERSITY OF ALASKA. THE COLLEGE OBSERVATORY IS A PART OF THE BRANCH OF ELECTROMAGNETISM AND GEOMAGNETISM OF THE U.S. GEOLOGICAL SURVEY.

COLLEGE OBSERVATORY PRELIMINARY GEOMAGNETIC DATA

INTRODUCTION

The preliminary geomagnetic data included here is made available to scientific personnel and organizations, as part of a cooperative effort and on a data exchange basis because of the early need by some users. To avoid delay, all of the data is copied from original forms processed at the observatory; therefore it should be regarded as preliminary. Inquiries about this report or about the College Observatory should be addressed to:

Chief, College Observatory
U.S. Geological Survey
Yukon Drive on West Ridge
Fairbanks, Alaska 99701

Requests for copies of the magnetograms except for the current month should be addressed to:

World Data Center A-NOAA
Environmental Data Service
Boulder, Colorado 80302

GEOMAGNETIC DATA

Normal, Storm, and Rapid Run magnetograms and appropriate calibration data are processed daily at the observatory and are available for analysis or copying. Also available are mean hourly scalings, K-indices, selected magnetic phenomena reports, and on a real-time basis are recordings from a 3-component fluxgate magnetometer and F-component proton magnetometer.

Magnetic Activity

The K-Index. The K-Index is a logarithmic measurement of the range of the most disturbed component (D or H) of the geomagnetic field for eight intervals beginning 0000-0300, 0300-0600...2100-2400 UT. It is a measure of the difference between the highest and lowest deviation from a smooth curve to be expected for a component on a magnetically quiet day, within a three hour interval.

The Equivalent Daily Amplitude, AK. The K-Index is converted into an equivalent range, ak, which is near the center of the limiting gamma ranges for a given K. The average of the eight values is called equivalent daily amplitude AK. The unit 10γ has been chosen so as not to give the illusion of an accuracy not justified.

The schedule for converting gamma range to K, and K to ak is as follows:

Gamma Range	K - Index	ak*
0 < 25	0	0
25 < 50	1	3
50 < 100	2	7
100 < 200	3	15
200 < 350	4	27
350 < 600	5	48
600 < 1000	6	80
1000 < 1650	7	140
1650 < 2500	8	240
2500+	9	400 (10γ)

The Magnetic Daily Character Figure, C. To each Universal day a character is assigned on the basis C=0, if it is quiet; C=1 if it is moderately disturbed; C=2 if it is greatly disturbed. The method used to assign characters at the College Observatory is based on AK as follows:

AK Range	C
0-25	0
25-50	1
50+	2

Routine assignment of C was discontinued at College on January 1, 1976.

OBSERVATORY LOCATION

The College Observatory, operated by the U. S. Geological Survey, is located at the University of Alaska, Fairbanks, Alaska. It is near the Auroral Zone and the northern limit of the world's greatest earthquake belt, the circum-Pacific Seismic belt. Although the observatory's basic operation is in geomagnetism and seismology, it cooperates with other scientists and organizations in areas where the facility and personnel can be of service.

The observatory is one of three operated by the USGS in Alaska. The others are located at Barrow and Sitka.

The position of the observatory site is:

Geographic latitude.....64°51.6'N
Geographic longitude.....147°50.2'W
Geomagnetic latitude.....64.6°
Geomagnetic longitude.....-256.5°
Elevation.....200 meters

Selected Phenomena & Outstanding Magnetic Effects

Prior to January 1, 1976, the Normal & Rapid Run records were reviewed at the observatory for selected magnetic phenomena and the events identified were forwarded to the IUGG Commission on Magnetic Variations and Disturbances. This was discontinued on January 1, 1976, but a report on Outstanding Magnetic Effects is prepared monthly for this report.

Principal Magnetic Storms

Gradual and sudden commencement magnetic disturbances with at least one K-index of 5 or greater, which are believed to be part of a world-wide disturbance, are classified as principal magnetic storms. The time of the storm beginning and ending; direction and amplitude of sudden commencements; period of maximum activity; and storm range are reported. Monthly reports of these data are forwarded to the World Data Center A in Boulder, Colorado.

Magnetogram Hourly Scalings

Magnetogram hourly scalings are averages for successive periods of one hour for the D, H, and Z elements. The value in the column headed "Q1" is the average for the hour beginning 0000 and ending 0100. Note that the values on the scaling sheets are in tenths of mm with the decimal point omitted. The user of these scalings should keep in mind that the tabular values are hourly means and if he is interested in the detailed morphology of the magnetic field, he should refer directly to the magnetograms.

Magnetograms

The normal magnetograms in this report are reproduced at about one-third the size of the originals. Preliminary base-line values and scale values adopted for use with the original magnetograms are included. For days when the magnetic field is too disturbed for the Normal magnetogram to be readable, Storm magnetograms are reproduced.

Absolutes, Base-lines, and Scale Values

To determine the absolute value of the magnetic field from the hourly means or from point scalings the following equations should be used:

$$D = B_D \cdot d \cdot S_D; H = B_H \cdot h \cdot S_H; Z = B_Z \cdot z \cdot S_Z$$

where D, H, and Z are absolute values;

B_D , B_H and B_Z are base-line values;

S_D , S_H and S_Z are scale values;

and d, h, and z are scalings in millimeters.

NOAA FORM 76-133 (9-72) U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION										OBSERVATORY COLLEGE, ALASKA	
MAGNETIC ACTIVITY (Greenwich civil time, counted from midnight to midnight)										MONTH AND YEAR JANUARY 1979	
DATE	K-INDICES								SUM	AK	TIME SCALE ON MAGNETOGRAMS 20 mm/hr
	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08			
1	2	3	1	2	3	1	1	3	16	09	SUDDEN COMMENCEMENTS d h m
2	2	1	1	4	5	4	4	3	24	20	
3	4	3	3	6	4	4	4	2	30	28	
4	4	4	4	6	5	7	6	4	40	57	
5	4	4	4	4	2	5	2	2	27	22	
6	3	1	2	6	6	6	4	2	30	37	
7	2	1	2	5	6	6	7	3	32	48	
8	3	2	2	1	1	2	2	2	15	07	
9	2	4	3	3	4	2	2	1	21	14	
10	0	0	0	0	1	0	1	1	03	01	
11	0	1	0	2	1	0	0	0	04	02	
12	0	1	2	2	4	2	1	1	13	07	
13	1	0	0	2	2	0	0	0	05	02	
14	0	1	3	4	4	3	1	0	16	11	
15	1	1	3	6	5	4	4	3	27	27	
16	3	2	3	3	4	2	0	1	18	11	
17	0	0	0	2	4	4	2	1	13	09	
18	2	1	1	4	4	5	1	1	19	15	
19	3	5	2	4	3	4	2	1	24	19	
20	2	1	3	4	4	4	3	2	23	16	
21	1	1	1	6	4	3	2	1	19	18	
22	0	0	0	3	5	1	4	5	18	18	
23	2	2	2	6	6	6	6	4	34	46	
24	4	3	2	5	4	3	2	1	24	19	
25	4	5	3	4	6	5	4	3	34	36	
26	3	4	4	5	5	5	5	4	35	36	
27	3	5	4	3	3	5	3	3	29	25	
28	2	2	2	5	3	3	4	1	22	16	
29	2	3	2	1	5	3	2	2	20	14	
30	3	2	2	3	5	3	2	2	22	15	
31	2	2	2	4	3	2	1	2	18	10	

POSSIBLE SOLAR-FLARE EFFECTS BASED ON INSPECTION OF GRAMS ALONE (WITHOUT REFERENCE TO DATA FROM OTHER SOURCES)

BEGIN			END		
d	h	m	d	h	m

K SCALE USED:	D	H	Z	
LOWER LIMIT FOR K = 9.....	683.8	321.7		(mm)
CURRENT SCALE VALUE.....	3.75	7.80		(γ/mm)
LOWER LIMIT FOR K = 9.....	2560	2510		(to nearest 10γ)

SCALINGS AND COMPUTATIONS HAVE BEEN CHECKED.

APPROVED JOHN B. TOWNSHEND, CHIEF, COLLEGE OBSERVATORY
 OBSERVER IN CHARGE

OUTSTANDING MAGNETIC EFFECTS			OBSERVATORY COLLEGE, ALASKA	
			MONTH JANUARY	YEAR 1979
DATE	TIME U.T.	NATURE OF PHENOMENON ¹	REMARKS	
06	0126	si		
09	0340	ssc* or si		
25	0139	ssc* or si		
IDENTIFIED BY: JEP			VERIFIED BY: JBT	

1. NATURE OF PHENOMENON: ssc, ssc*, si, si*, b, bp, bs, bps, pc1, pc2 - - - pc5, pg, pi 1, pi 2, sfe.

NOAA FORM 86-500
(11/73)

PRINCIPAL MAGNETIC STORMS

Data from Individual Observatories:

COLLEGE OBSERVATORY, COLLEGE, ALASKA
JANUARY 1979

WDC-A FOR SOLAR-TERRRESTRIAL PHYSICS
ENVIRONMENTAL DATA SERVICE, NOAA
BOULDER, COLORADO 80505 U.S.A.

Obs. 2 letter XABA code	Geomag. lat.	Commencement			SC - amplitudes			Max. 3 hr - index K			Ranges			UT End day hr
		day	hr min (UT)	type	D(°)	H(°)	Z(°)	day	(3 hr - period)	K	D(°)	H(°)	Z(°)	
00	64.6 N	02	11XX	..	..	..	..	04	6	7	236	1660	870	05 20
		07	09XX	..	..	..	..	07	7	7	216	1270	710	08 07
		23 25	09XX 0139	.. s.c.*	.. -20	.. +138	.. -32	23 25	4,5,6,7 5	6 6	243	1420	780	27 24

JANUARY

1979

NORMAL MAGNETOGRAPH					
COMPONENT	PERIOD		CALIBRATION		
	FROM	TO	SCALE VALUE		BASELINE
D	0000 U.T. 1-1-79	2400 U.T. 1-31-79	1.0/mm	388/mm	27° 47.1 E
H	0000 U.T. 1-1-79	2400 U.T. 1-31-79	7.88/mm		127518
Z	0000 U.T. 1-1-79	2400 U.T. 1-31-79	7.78/mm		551318

STORM MAGNETOGRAPH					
COMPONENT	PERIOD		CALIBRATION		
	FROM	TO	SCALE VALUE		BASELINE
D	0000 U.T. 1-1-79	2400 U.T. 1-31-79	7.8/mm	29.78/mm	24° 22.1 E
H	0000 U.T. 1-1-79	2400 U.T. 1-31-79	44.08/mm		114978
Z	0000 U.T. 1-1-79	2400 U.T. 1-14-79	48.68/mm		540138
	0000 U.T. 1-15-79	2400 U.T. 1-31-79	"		540248

RAPID RUN MAGNETOGRAPH					
COMPONENT	PERIOD		CALIBRATION		
	FROM	TO	SCALE VALUE		
D					
H					
Z					

MONTHLY MEAN ABSOLUTE VALUES*		
D	H	Z
28° 13.7 E	130288	553838
* COMPUTED FROM THE QUIETEST DAYS DURING MONTH.		
DAYS USED: JAN 1, 8, 10, 11, 12, 13, 14, 16, 17, 31		

MACROTEGROM HOURLY SCALINGS
(UNIVERSAL TIME)

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Values are in tenths of mm. and are averages for successive periods of one hour beginning at midnight. Hour 01 of local day is hour 11 of the GMT universal day.

TEAM
WORK
SHEET
D

Q ₀₁ For 5 0 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	500
01	249	232	239	233	258	262	262	265	262	262	251	270	279	300	240	267	289	290	296	297	297	304	284	157	6365
02	190	227	250	243	245	250	278	253	260	264	265	241	449	404	503	320	449	465	421	347	269	221	254	191	7259
03	119	159	209	242	214	229	229	253	261	96	99	376	302	321	348	298	301	362	369	340	199	197	172	256	5951
04	268	252	115	162	189	228	94	298	347	224	204	563	384	654	946	629	748	171	289	321	200	250	269	227	7972
05	222	239	221	166	229	168	297	262	249	260	172	261	259	277	272	300	402	421	347	343	319	277	279	281	6523
06	240	222	229	242	252	221	242	262	263	262	259	363	413	368	316	619	372	327	349	288	299	292	271	262	6753
07	252	259	254	251	249	251	253	259	246	366	231	209	121	377	527	971	709	400	439	392	182	272	178	142	7790
08	182	232	231	238	247	241	257	255	258	261	265	265	267	270	268	269	269	262	299	279	261	249	268	256	6169
09	268	239	245	241	258	252	203	251	262	262	261	280	359	308	272	275	269	262	281	298	277	259	275	261	6458
10	261	251	242	244	242	250	257	257	260	267	262	261	269	271	270	270	271	280	281	292	288	276	280	268	6370
11	241	241	231	242	231	260	269	270	275	260	262	261	299	367	288	278	267	264	290	294	299	298	282	261	6573
12	251	231	231	237	249	249	227	229	247	240	250	271	283	361	337	310	301	326	301	307	291	291	289	271	6580
13	231	250	257	259	258	263	262	262	262	262	277	287	416	439	405	378	283	268	271	267	273	278	279	271	6430
14	248	242	239	248	241	219	193	189	287	199	271	304	375	381	301	307	302	272	281	268	99	147	230	241	6425
15	261	256	259	252	251	260	259	250	299	271	238	365	278	299	279	267	290	287	298	297	291	287	256	252	6643
16	222	227	212	222	222	243	253	253	271	389	407	331	269	319	277	290	321	322	308	271	247	248	251	241	6483
17	249	249	249	247	249	253	253	261	261	260	262	292	301	319	277	290	321	322	308	271	247	248	251	241	6528
18	232	209	200	182	226	251	260	258	259	262	344	403	376	389	287	381	331	319	321	286	291	287	263	241	6528
19	222	204	198	132	129	263	272	288	278	280	367	269	302	282	300	299	281	262	281	270	249	238	239	241	6146
20	231	239	238	232	247	249	248	248	248	238	241	282	319	318	341	311	314	281	269	277	271	269	257	239	6505
21	242	247	234	242	241	258	252	249	288	261	211	408	349	461	441	261	356	287	287	272	270	276	258	196	6905
22	247	251	256	258	257	261	261	258	258	278	298	278	395	478	266	278	282	294	299	279	190	82	258	196	6453
23	201	248	254	262	257	261	292	282	251	369	328	906	591	607	473	789	623	314	440	143	226	241	164	152	8658
24	197	213	241	158	218	248	251	250	308	259	240	106	230	247	261	276	302	281	313	328	286	289	269	273	5652
25	258	200	209	191	178	218	273	278	242	247	142	239	292	576	781	532	379	535	355	322	281	167	231	181	7327
26	199	221	207	239	199	207	201	197	227	211	36	187	282	319	429	396	399	346	242	322	164	199	262	222	5913
27	211	222	221	232	228	217	171	272	259	288	231	250	269	267	275	306	352	271	443	339	209	218	226	257	6096
28	247	231	243	204	213	219	204	250	244	256	359	116	236	272	300	290	280	310	368	285	249	271	258	258	6163
29	240	225	209	201	214	229	243	218	250	242	238	246	294	300	270	308	300	303	368	290	251	259	249	256	6125
30	192	181	225	240	237	247	236	270	202	162	263	253	249	330	301	339	277	316	317	291	276	287	160	119	5990
31	178	229	215	220	238	230	267	267	267	267	267	267	294	289	349	370	277	305	301	318	298	258	257	209	6227

(1) Interpretation
of significant portion of
hour interpolated.
No record or no value
given, curve was estimated
for missing part.

(2) Significant portion of
hour interpolated.
No record or no value
given, curve was estimated
for missing part.

(3) Significant portion of
hour interpolated.
No record or no value
given, curve was estimated
for missing part.

(4) Significant portion of
hour interpolated.
No record or no value
given, curve was estimated
for missing part.

(5) Significant portion of
hour interpolated.
No record or no value
given, curve was estimated
for missing part.

(6) Significant portion of
hour interpolated.
No record or no value
given, curve was estimated
for missing part.

(7) Significant portion of
hour interpolated.
No record or no value
given, curve was estimated
for missing part.

MAGNETOGRAM HOURLY SCALINGS
(UNIVERSAL TIME)

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Values are in tenths of mm, and are averaged for successive periods of one hour beginning at midnight. Hour 01 of local day (2500L.T.) is hour 11 of the date.

of the date _____ of the _____ universal day.

CO 79 JAN 81

C	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	SUM	
01	361	368	354	371	350	369	370	369	360	365	361	353	350	300	281	361	359	360	352	348	349	325	300	8374		
02	343	362	362	372	373	368	362	362	379	374	375	312	24	164	213	287	204	202	251	335	239	284	295	270	7186	
03	321	424	430	442	391	391	409	416	509	561	385	62	216	213	247	212	406	396	309	297	281	257	297	313	8181	
04	373	391	532	517	477	571	592	496	515	419	251	71	-109	250	317	232	498	266	33	48	259	251	321	397	4782	
05	561	492	504	521	549	751	474	392	438	368	300	311	337	340	340	286	71	-16	323	351	353	359	349	324	9158	
06	329	360	370	384	398	403	413	410	397	370	351	-104	-116	123	298	-21	201	315	396	404	381	359	355	358	7134	
07	363	369	379	380	379	373	379	397	413	431	249	159	-31	167	571	432	479	326	-3	305	261	281	268	249	3042	
08	360	361	371	379	374	360	362	364	362	364	358	357	355	353	359	357	360	353	331	311	334	341	347	343	8536	
09	319	338	359	394	392	390	424	462	461	420	372	321	170	276	370	317	361	349	369	366	360	343	345	345	8707	
10	350	354	356	359	361	367	370	369	367	369	364	369	358	370	360	361	364	364	361	360	353	351	349	346	8631	
11	349	351	359	371	377	368	371	373	376	384	399	376	358	370	373	360	371	372	371	370	361	355	353	351	8841	
12	356	368	369	359	380	387	380	410	446	441	399	370	365	305	361	370	379	390	380	377	376	373	369	360	340	8791
13	360	369	371	366	369	371	374	371	376	373	354	311	301	300	361	370	379	390	380	377	360	350	349	343	8618	
14	351	361	370	374	378	391	463	497	469	422	379	318	111	101	121	319	381	406	380	377	360	349	350	350	8378	
15	350	357	370	369	368	370	369	383	411	389	307	-11	49	251	347	284	306	379	363	293	209	284	373	359	7429	
16	341	369	409	397	379	399	390	379	364	306	309	331	298	82	174	369	377	381	376	369	361	359	357	349	8225	
17	351	360	369	370	370	369	370	370	369	369	360	324	249	225	359	329	200	353	371	369	351	350	345	341	8199	
18	336	347	379	400	384	389	370	369	363	353	256	119	120	147	351	136	137	357	379	376	379	369	361	361	7538	
19	361	341	396	627	715	512	402	370	341	340	129	233	257	319	263	169	246	382	386	373	365	349	339	351	8646	
20	361	357	374	370	369	379	379	406	431	343	343	299	171	33	118	310	297	291	319	371	372	369	359	351	7706	
21	349	357	350	349	370	370	371	379	369	263	132	142	229	153	170	319	324	339	351	369	369	351	350	350	7476	
22	357	357	363	365	370	369	370	369	366	369	386	350	71	159	387	368	381	380	363	260	127	271	359	451	7982	
23	387	359	362	360	362	372	403	379	360	131	49	-194	184	264	467	417	337	201	116	144	206	187	151	257	2079	
24	329	441	521	449	379	361	391	434	423	399	335	-82	341	389	374	357	289	307	364	369	366	360	351	356	8603	
25	354	389	329	584	605	475	355	360	549	489	274	231	43	190	221	186	261	159	236	304	257	260	306	330	6742	
26	316	369	439	390	442	498	606	602	549	489	274	231	220	151	34	-59	56	201	8	217	250	239	364	365	7251	
27	412	401	419	426	497	631	611	461	449	450	439	371	344	311	287	181	-10	172	264	276	244	305	406	369	8726	
28	364	370	360	389	403	419	437	392	437	401	321	164	340	357	343	319	338	325	291	220	276	370	370	366	8462	
29	343	346	367	427	422	394	411	405	381	390	385	358	180	297	368	349	229	332	380	370	357	360	370	336	8602	
30	370	373	373	408	411	416	392	410	440	454	437	408	283	145	372	358	393	361	345	349	351	312	370	336	8669	
31	365	369	373	369	409	419	443	443	443	440	440	308	329	272	360	380	371	369	351	323	319	309	309	8027		
32	357	357	363	365	370	369	370	369	366	369	386	350	71	159	387	368	381	380	363	260	127	271	359	451	7982	
33	387	359	362	360	362	372	403	379	360	131	49	-194	184	264	467	417	337	201	116	144	206	187	151	257	2079	
34	329	441	521	449	379	361	391	434	423	399	335	-82	341	389	374	357	289	307	364	369	366	360	351	356	8603	
35	354	389	329	584	605	475	355	360	549	489	274	231	43	190	221	186	261	159	236	304	257	260	306	330	6742	
36	316	369	439	390	442	498	606	602	549	489	274	231	220	151	34	-59	56	201	8	217	250	239	364	365	7251	
37	412	401	419	426	497	631	611	461	449	450	439	371	344	311	287	181	-10	172	264	276	244	305	406	369	8726	
38	364	370	360	389	403	419	437	392	437	401	321	164	340	357	343	319	338	325	291	220	276	370	370	366	8462	
39	343	346	367	427	422	394	411	405	381	390	385	358	180	297	368	349	229	332	380	370	357	360	370	336	8602	
40	370	373	373	408	411	416	392	410	440	454	437	408	283	145	372	358	393	361	345	349	351	312	370	336	8669	
41	365	369	373	369	409	419	443	443	443	440	440	308	329	272	360	380	371	369	351	323	319	309	309	8027		
42	357	357	363	365	370	369	370	369	366	369	386	350	71	159	387	368	381	380	363	260	127	271	359	451	7982	
43	387	359	362	360	362	372	403	379	360	131	49	-194	184	264	467	417	337	201	116	144	206	187	151	257	2079	
44	329	441	521	449	379	361	391	434	423	399	335	-82	341	389	374	357	289	307	364	369	366	360	351	356	8603	
45	354	389	329	584	605	475	355	360	549	489	274	231	43	190	221	186	261	159	236	304	257	260	306	330	6742	
46	316	369	439	390	442	498	606	602	549	489	274	231	220	151	34	-59	56	201	8	217	250	239	364	365	7251	
47	412	401	419	426	497	631	611	461	449	450	439	371	344	311	287	181	-10	172	264	276	244	305	406	369	8726	
48	364	370	360	389	403	419	437	392	437	401	321	164	340	357	343	319	338	325	291	220	276	370	370	366	8462	
49	343	346	367	427	422	394	411	405	381	390	385	358	180	297	368	349	229	332	380	370	357	360	370	336	8602	
50	370	373	373	408	411	416	392	410	440	454	437	408	283	145	372	358	393	361	345	349	351	312	370	336	8669	
51	365	369	373	369	409	419	443	443	443	440	440	308	329	272	360	380	371	369	351	323	319	309	309	8027		
52	357	357	363	365	370	369	370	369	366	369	386	350	71	159	387	368	381	380	363	260	127	271	359	451	7982	
53	387	359	362	360	362	372	403	379	360	131	49	-194	184	264	467	417	337	201	116	144	206	187	151	257	2079	
54	329	441	521	449	379	361	391	434	423	399	335	-82	341	389	374	357	289	307	364	369	366	360	351	356	8603	
55	354	389	329	584	605	475	355	360	549	489	274	231	43	190	221	186	261	159	236	304	257	260	306	330	6742	
56	316	369	439	390	442	498	606	602	549	489	274	231	220	151	34	-59	56	201	8	217	250	239	364	365	7251	
57	412	401	419	426	497	631	611	461	449	450	439	371	344	311	287	181	-10	172	264	276	244	305	406	369	8726	
58	364	370	360	389	403	419	437	392	437	401	321	164	340	357	343	319	338	325	291	220	276	370	370			

Permitted baseline and scale values:

Integral Baseline Value

Scale Value

- () Interpolated
() Significant portion of how interpreted.
() No record or no values available because of faulty record.
() Derived from SLOTTM Magp., converted to Normal Magp.

MONTHLY SUM 233541
MONTHLY MEAN 322
DAYS WITH GAUGE

MAGNETOGRAM HOURLY SCALINGS

NO. 1 FORM 11-10

MAGNETOGRAM HOURLY SCALINGS

(UNIVERSAL TIME)

Values are in tenths of mm. and are averages for successive periods of one hour beginning at midnight, hour 01 of local day (1500M T.) to hour 11 of the same universal day. Shading corrections have been applied. Negative values are in red, with minus signs shown.

U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION		OBSY.		YEAR		MONTH		ELEVATION	
at the		CO		79		JAN		Z	
of local day (1500M T.) to hour 11 of the		DATE		11		11		11	
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FORMAT FOR NORMAL & STORM MAGNETOGRAMS (SAMPLE ONLY)

SEE PRELIMINARY CALIBRATION DATA FOR SCALE VALUES & BASELINE VALUES

NORMAL MAGNETOGRAMS

100 mm

NORMAL MAGNETOGRAMS

NORMAL MAGNETOGRAMS

NORMAL MAGNETOGRAMS

NORMAL MAGNETOGRAMS

NORMAL MAGNETOGRAMS

NORMAL MAGNETOGRAMS

NORMAL MAGNETOGRAMS

STORM MAGNETOGRAMS

STORM MAGNETOGRAMS

STORM MAGNETOGRAMS

STORM MAGNETOGRAMS