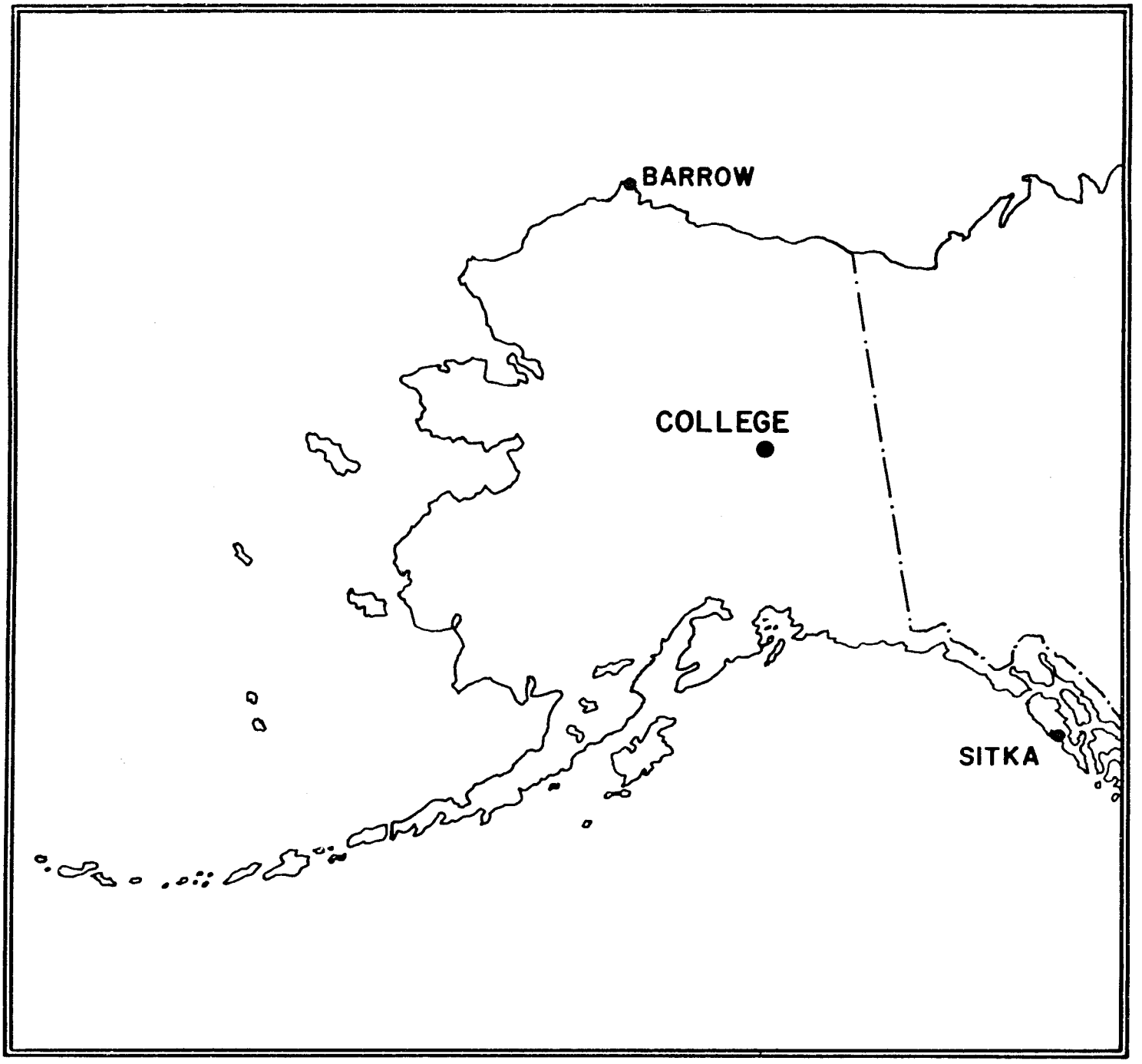
UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

PRELIMINARY GEOMAGNETIC DATA
COLLEGE OBSERVATORY
FAIRBANKS, ALASKA

AUGUST 1979 OPEN FILE REPORT 79-300H



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Normal Magnetograms

Storm Magnetograms (When Normal is too disturbed to read)

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, E.A. SAUTER, 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

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.....$64^{\circ}51.6'$N
Geographic longitude..... $147^{\circ}50.2'$W
Geomagnetic latitude.....$+64.6^{\circ}$
Geomagnetic longitude.....$+256.5^{\circ}$
Elevation.....200 meters

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 10 γ 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
$0 \approx 11$	0
$11 \approx 50$	1
50+	2

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

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 "01" 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:

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

MAGNETIC ACTIVITY

(Greenwich civil time, counted from midnight to midnight)

OBSERVATORY: COLLEGE, ALASKA

MONTH AND YEAR: AUGUST 1979

DATE	K-INDICES 00-03	03-06	06-09	09-12	12-15	15-18	18-21	21-24	SUM	AK
1	0	0	0	2	5	4	3	2	16	13
2	2	3	3	4	2	4	1	1	20	13
3	3	3	4	4	4	3	2	2	25	18
4	2	3	4	4	5	4	3	2	27	22
5	1	3	2	1	0	1	2	2	12	06
6	3	4	5	4	5	4	2	1	28	25
7	2	3	4	5	4	4	3	2	27	22
8	2	2	2	3	4	2	1	1	17	10
9	2	2	2	3	3	3	1	1	17	09
10	2	1	1	3	5	2	3	2	19	13
11	2	2	2	1	1	2	2	2	14	06
12	3	2	2	5	0	1	3	3	19	14
13	3	1	4	6	7	6	5	3	35	51
14	3	2	2	1	2	2	2	1	15	07
15	2	2	1	1	0	1	1	2	10	04
16	2	2	2	2	2	1	0	1	12	05
17	2	2	2	0	0	2	2	2	12	05
18	1	1	0	1	1	2	2	3	11	05
19	4	4	5	5	4	4	3	3	32	29
20	3	2	4	3	3	7	8	3	33	59
21	5	4	5	6	3	3	3	2	31	32
22	3	3	3	4	3	3	1	1	22	14
23	1	1	1	1	1	1	2	1	09	04
24	1	1	1	3	3	4	3	2	18	11
25	2	2	4	6	6	4	3	3	30	32
26	2	2	4	2	5	2	3	1	21	15
27	3	2	6	5	3	3	2	2	26	24
28	2	3	2	5	4	4	1	2	23	18
29	2	4	6	5	6	7	6	4	40	61
30	4	4	4	4	3	1	2	1	23	17
31	1	1	2	3	5	2	2	2	18	12

TIME SCALE ON MAGNETOGRAMS: 20 mm/hr

SUDDEN COMMENCEMENTS

d	h	m

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

BEGIN d	h	m	END d	h	m

K SCALE USED:

	D	H	Z	
LOWER LIMIT FOR K = 9.....	683.8	321.7		(mm)
CURRENT SCALE VALUE.....	3.75	7.79		(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

☆ U.S. GOVERNMENT PRINTING OFFICE: 1973-761-857

OUTSTANDING MAGNETIC EFFECTS

OBSERVATORY: COLLEGE, ALASKA

MONTH: AUGUST

YEAR: 1979

DATE	TIME U.T.	NATURE OF PHENOMENON [1]	REMARKS
18	09XX	pi2	
20	0626	si	(with pc5s present)
22	01XX	pc5	

IDENTIFIED BY: JEP

VERIFIED BY: JEP

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

WDC-A FOR SOLAR-TERRESTRIAL PHYSICS
ENVIRONMENTAL DATA SERVICE, NOAA
BOULDER, COLORADO 80302 U.S.A.

Data from Individual Observatories: COLLEGE OBSERVATORY, COLLEGE, ALASKA

AUGUST 1979

Obs. 2 letter IAGA code	Geomag. lat.	Commencement			SC - amplitudes			Max. 3 hr - index K			Ranges			UT End	
		day	hr min (UT)	type	D(')	H(γ)	Z(γ)	day	(3 hr - period)	K	D(')	H(γ)	Z(γ)	day	hr
CO	64.6 N	13	06XX	..	..	..	..	13	5	7	225	1730	710	14	01
		18	21XX	..	..	..	..	20	7	8	278	2130	690	21	13
		25	07XX	..	..	..	..	25	4, 5	6	159	1090	620	25	23
		29	03XX	..	..	..	..	29	6	7	345	1780	1160	30	13

COLLEGE OBSERVATORY, COLLEGE, ALASKA -- PRELIMINARY CALIBRATION DATA FOR: AUGUST 1979

NORMAL MAGNETOGRAPH

COMPONENT	PERIOD		CALIBRATION		
	FROM	TO	SCALE VALUE		BASELINE
D	0000 U.T., 8-1-79	2400 U.T., 8-31-79	1.0/mm	3.8γ/mm	27° 47.4 E
H	0000 U.T., 8-1-79	2400 U.T., 8-31-79	7.8γ/mm		12776γ
Z	0000 U.T., 8-1-79	2400 U.T., 8-31-79	7.3γ/mm		55163γ

STORM MAGNETOGRAPH

COMPONENT	PERIOD		CALIBRATION		
	FROM	TO	SCALE VALUE		BASELINE
D	0000 U.T., 8-1-79	2400 U.T., 8-31-79	7.8/mm	29.7γ/mm	23° 48.5 E
H	0000 U.T., 8-1-79	2400 U.T., 8-31-79	44.0γ/mm		11539γ
Z	0000 U.T., 8-1-79	2400 U.T., 8-31-79	48.6γ/mm		54021γ

RAPID RUN MAGNETOGRAPH

COMPONENT	PERIOD		CALIBRATION	
	FROM	TO	SCALE VALUE	
D				
H				
Z				

MONTHLY MEAN ABSOLUTE VALUES*

D	H	Z
28° 10.6 E	13025γ	55380γ

* COMPUTED FROM TEN QUIETEST DAYS DURING MONTH.

DAYS USED: AUG 5, 8, 9, 11, 14, 15, 16, 17, 18, 23

NOAA FORM 76-106 (3-72)

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

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 (150W M.T.) is hour 11 of the same universal day. Shrinkage corrections have been applied. Negative values are in red, with minus signs shown.

OBSY.	YEAR	MONTH	ELEMENT
CO	79	AUG	D

C	Q or S	Ten Q	Mr Da	01	02	03	04	05	06	07	08	09	10	11	12	Mr Da	13	14	15	16	17	18	19	20	21	22	23	24	SUM
			01	181	189	209	221	224	237	247	249	248	229	231	203	01	217	236*	220*	300	352	406	407	405	303	165	234	216	6129
			02	187	180	193	208	203	230	280	197	278	232	164	168	02	178	201	258	295	340	334	340*	270*	262*	237*	198*	190*	5623
			03	175*	167*	134*	151*	198*	183*	190*	159*	245*	167*	198*	183*	03	245*	245*	262*	254*	348*	357*	345	291	277	268	235	201	5478
			04	204	206	205	211	257	208	174	182	234	167	184	174	04	228	320	310	301	345	384	372	287	187	167	150	153	5610
			05	167	188	213	202	253	214	230	196	173	203	204	218	05	227	238	262	263	328	328	332	306	229	142	124	150	5390
			06	180	199	204	176	227	241	197	85	198*	179	161	173	06	273	225	320	310	388	413	369	333	258	201	141	148	5619
			07	160	177	185	186	177	162	194	293	247	206	192	355	07	196	260	356	429	439	417	424	338	279	198	147	127	6144
			08	134	160	171	179	198	237	228	287	222	195	214	235	08	280	268	300	326	327	346	343	298	255	243	183	134	5763
			09	118	155	155	166	204	244	271	239	208	190	216	210	09	194	232	272	279	301	345	361	322	259	227	190	172	5530
			10	160	157	178	195	208	241	258	240	228	198	220	233	10	247	199	255	277	327	367	342	297	285	272	194	152	5730
			11	138	148	147	168	198	191	187	201	201	200	196	205	11	212	227	262	247	302	321	356	407	360	248	118	81	5321
			12	68	95	126	161	162	231	230	199	211	171	192	228	12	246	262	290	322	370	402	408	407	312	219	244	62	5618
			13	81	139	156	160	168	178	199	156	121	163	137	272*	13	833*	105*	409	600	660*	359*	616	561	340	164	251	158	6986
			14	161	130	163	186	202	206	221	226	223	218	224	228	14	227	228	248	273	288	324	332	320	295	242	188	158	5511
			15	157	168	172	182	182	207	227	213	219	212	217	220	15	223	248	268	272	295	353	350	328	284	238	207	199	5641
			16	170	177	171	163	187	182	191	231	199	202	190	230	16	233	249	266	317	316	309	339	301	289	263	199	183	5557
			17	163	180	189	200	176	221	219	203	281	219	209	219	17	233	254	278	319	332	379	356	361	197	216	198	177	5779
			18	168	181	191	203	203	238	219	217	213	210	221	216	18	221	241	287	326	346	377	338	284	223	142	254	181	5700
			19	132	149	103	66	99	136	173	208	51	26*	41*	169	19	246	201	313	428	532	421	407	313	321	271	173	114	5093
			20	113	131	109	190	198	191	139	171	162	156	147	193	20	248	282	342	418	428	715*	961*	375*	216*	236	130	156	6407
			21	162	194	157	93	102	113	142	101	49*	185*	176	188	21	190	241	300	321	359	389	317	288	219	167	143	132	4728
			22	126	142	150	143	177	226	288	322	271	151	62	139	22	203	249	278	342	370	404	368	292	227	132	129	138	5329
			23	158	182	198	218	223	237	235	214	218	213	218	238	23	233	248	286	333	371	382	363	342	235	208	164	168	5885
			24	162	150	155	172	180	201	216	222	237	264	236	245	24	228	227	311	303	430	427	409	398	331	232	163	137	6036
			25	138	145	148	148	162	149	157	118	118	185	181	247*	25	596*	334	355	417	410	417	371	320	249	112	168	133	5178
			26	112	153	153	173	178	182	173	225	169	200	212	222	26	202	174	180	308	326	362	316	303	278	220	198	187	5206
			27	176	173	148	192	213	218	217	105*	209	268	238	333	27	241	222	249	293	342	374	378	319	291	258	239	228	5924
			28	180	180	176	162	203	281	258	208	227	249	261	242	28	282	261	240	281	339	381	371	358	326	285	253	181	6185
			29	178	159	131	152	197	172	118	97	58*	153*	19	122	29	272*	437*	810*	422*	334*	833*	581*	525*	234	253	126	146	6529
			30	132	174	56	88	91	110	135	239	231	286	177	151	30	201	241	250	303	341	342	331	309	277	234	202	195	5096
			31	180	178	181	192	194	200	188	221	207	218	228	221	31	197	406*	271	352	389	398	348	331	322	191	179	181	5973

SCALED BY	PEF, SPT
CHECKED BY	SPT, JEP
SIGNS REVIEWED BY	JEP
PUNCHED BY	

Preliminary base-line and scale values:

Interval Beginning	Base-line Value	Scale Value

( ) Interpolated

[ ] Significant portion of hour interpolated.

[ ] No record; or no values available because of faulty record.

[ ] Scaling uncertain because of magnetic storm.

< > Record off sheet for part or all of hour; if value is given, curve was estimated for missing part.

* Derived from Storm Mgph., converted to Normal Mgph.

MONTHLY SUM	177298
MONTHLY MEAN	238
DATES WITH GAPS:	

NOAA FORM 76-106
(5-72)

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

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 (1500 M.T.) is hour 11 of the same universal day.
Shrinkage corrections have been applied. Negative values are in red, with minus signs shown.

OBSY.	YEAR	MONTH	ELEMENT
CO	79	AUG	H

C	Q or S	Ten Q	Hr / Day	01	02	03	04	05	06	07	08	09	10	11	12	Hr / Day	13	14	15	16	17	18	19	20	21	22	23	24	SUM
			01	310	315	320	320	328	334	335	338	350	348	356	370	01	249	17	70	344	398	309	339	287	277	277	296	282	7169
			02	324	351	328	333	379	425	355	360	378	155	372	365	02	318	297	330	252	148	327	335*	329*	324*	313*	318*	329*	7745
			03	329*	329*	386*	431*	398*	386*	386*	409*	335*	329*	126*	176*	03	115*	171*	199*	273*	278*	335*	357	327	299	310	311	338	7333
			04	268	403	392	416	459	480	438	410	280	272	277	282	04	-107*	-135*	-45	232	327	308	239	279	248	311	302	323	6659
			05	323	324	333	378	435	466	347	330	329	332	346	342	05	343	347	347	329	319	300	366	259	262	304	316	319	8096
			06	361	315	308	415	461	404	367	453	272	387	215	260	06	-25	273	180	239	217	255	300	297	310	292	308	318	7182
			07	321	346	369	372	382	427	499	478	354	337	318	63	07	82	4	28	123	262	317	283	235	255	287	280	311	6733
			08	347	332	352	339	365	389	386	357	351	371	264	297	08	218	302	274	319	347	307	272	275	290	294	302	317	7667
			09	324	313	355	369	375	369	362	355	360	334	329	306	09	251	310	329	341	358	240	314	317	308	281	267	278	7745
			10	306	332	338	349	360	357	359	350	357	364	314	284	10	48	214	352	366	367	348	353	343	326	310	301	305	7703
			11	350	313	333	352	339	358	364	342	340	342	360	350	11	323	309	318	294	343	348	321	288	258	219	248	276	7688
			12	336	343	297	320	378	328	331	349	354	278	207	379	12	328	323	331	336	315	304	284	252	256	280	281	254	7444
			13	290	294	311	318	327	334	332	398	567	489	406	-133*	13	-897*	185*	164	-27	-268*	89*	53	179	185	288	318	352	4554
			14	353	294	335	330	320	313	327	320	319	311	308	308	14	313	311	297	318	285	289	287	288	287	293	294	298	7398
			15	311	310	311	328	341	339	339	330	326	321	319	332	15	317	314	320	330	323	307	293	281	280	280	276	302	7530
			16	286	299	339	358	333	370	411	370	357	403	366	349	16	333	331	300	309	339	333	312	301	290	276	266	276	7907
			17	329	313	300	321	376	322	330	349	351	331	320	321	17	326	328	334	331	339	270	294	269	271	269	272	297	7563
			18	298	300	320	325	351	341	341	331	339	341	340	350	18	344	349	353	361	339	303	283	259	231	221	269	287	7576
			19	408	526	616	549	651	674	533	319	391	287	347	274	19	303	317	252	157	139	267	241	253	251	239	212	296	8502
			20	366	373	393	313	330	341	359	389	391	401	379	329	20	273	239	261	246	283	354*	-852*	229*	314*	251	244	304	5802
			21	439	640	561	701	639	569	532	469	413	-64*	301	311	21	333	300	243	289	294	284	322	295	265	270	281	308	8995
			22	312	374	372	382	394	382	378	362	373	247	168	197	22	267	255	208	257	291	305	308	283	277	280	273	293	7238
			23	317	337	336	328	342	342	326	332	337	333	332	342	23	340	332	332	341	338	322	298	261	267	275	293	308	7711
			24	313	308	323	321	332	340	333	348	362	390	357	332	24	318	262	230	271	229	194	318	312	278	258	253	262	7244
			25	297	313	322	338	339	356	367	470	429	218	223*	-514*	25	-270*	188	255	310	358	328	260	250	264	263	272	323	5959
			26	352	381	366	408	378	382	472	505	431	387	340	321	26	288	-13	154	307	340	301	231	309	319	289	289	281	7818
			27	297	309	379	366	369	381	446	211*	365	169	-48	75	27	238	333	340	289	291	306	348	342	340	327	293	310	7076
			28	311	319	330	360	333	366	350	351	399	196*	211	241	28	181	206	319	179	254	348	343	323	301	302	279	276	7078
			29	331	343	384	469	521	647	438	539	337*	9*	139	269	29	26*	223*	-541*	-127*	-602*	-592*	-184*	-206*	139	266	354	394	3576
			30	492	374	413	443	509	518	486	454	391	234	189	192	30	184	252	301	310	317	315	297	283	293	274	289	276	8086
			31	286	286	290	296	302	311	323	326	351	350	346	349	31	319	31*	273	316	311	266	295	281	269	239	259	289	6964

SCALED BY	PEF, SPT
CHECKED BY	SPT, JEP
SIGNS REVIEWED BY	JEP
PUNCHED BY	

Preliminary base-line and scale values:

Interval Beginning	Base-line Value	Scale Value

( ) Interpolated
[ ] Significant portion of hour interpolated.
[ ] No record; or no values available because of faulty record.
[ ] Scaling uncertain because of magnetic storm.
< > Record off sheet for part or all of hour; if value is given, curve was estimated for missing part.
* Derived from Storm Mgph., converted to Normal Mgph.

MONTHLY SUM	223741
MONTHLY MEAN	301
DATES WITH GAPS:	

NOAA FORM 76-106 (3-72)

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

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 (150W M.T.) is hour 11 of the same universal day.
Shrinkage corrections have been applied. Negative values are in red, with minus signs shown.

OBSY.	YEAR	MONTH	ELEMENT
CO	79	AUG	Z

(	Q or S	Ten Q	Hr Day	01	02	03	04	05	06	07	08	09	10	11	12	Hr Day	13	14	15	16	17	18	19	20	21	22	23	24	SUM
			01	298	299	299	297	292	297	296	292	290	289	290	279	01	249	384	511	360	318	288	278	274	260	211	248	287	7186
			02	308	311	297	288	306	354	333	298	283	46	199	300	02	278	288	295	260	190	227	255*	267*	274*	267*	267*	281*	6472
			03	281*	295*	302*	348*	388*	355*	361*	295*	261*	274*	241*	267*	03	274*	228*	235*	241*	235*	248*	300	300	299	300	311	304	6943
			04	328	348	381	400	396	363	384	388	209	207	276	302	04	365	299	414	261	273	298	250	245	269	280	283	298	7517
			05	300	299	317	317	367	388	360	313	311	313	303	309	05	302	302	306	302	302	299	288	272	245	234	264	300	7313
			06	295	313	320	319	430	402	319	250	241	330	366	311	06	513	293	275	217	250	219	248	266	279	293	298	308	7355
			07	315	322	340	338	343	352	356	281	299	313	262	122	07	143	331	384	172	158	223	254	206	233	255	273	298	6573
			08	335	331	328	333	364	354	334	312	308	306	280	288	08	243	246	268	267	292	308	288	272	263	283	290	297	7190
			09	309	317	309	329	355	366	334	304	299	285	262	227	09	178	213	262	267	240	192	221	248	265	279	287	297	6645
			10	307	312	319	326	321	351	342	324	315	315	294	273	10	245	171	240	275	282	297	282	279	283	291	287	271	7002
			11	286	302	301	328	319	308	308	305	297	289	296	292	11	277	271	269	252	278	299	296	299	277	258	252	288	6947
			12	318	362	345	312	317	321	297	284	305	274	161	283	12	300	292	292	291	289	276	255	243	218	233	268	271	6807
			13	287	272	266	278	283	287	292	282	228	294	309	461*	13	381*	402	616	557	302*	115	51	132	208	198	315	359	7175
			14	365	360	315	322	320	315	321	318	317	312	308	307	14	308	312	308	307	311	293	288	295	299	299	299	300	7499
			15	303	306	309	318	318	324	317	307	306	300	300	298	15	298	298	290	280	292	288	281	261	251	260	279	293	7077
			16	308	311	311	320	326	318	361	349	331	334	319	321	16	311	313	301	287	287	300	309	293	287	284	281	296	7458
			17	300	328	327	310	307	320	302	297	321	299	298	297	17	298	303	304	303	304	297	234	244	204	234	256	275	6962
			18	292	292	290	299	306	329	308	299	294	290	272	260	18	291	301	307	310	305	300	278	270	274	266	307	283	7023
			19	351	349	262	297	223	83	241	333	280	237	201	341	19	416	327	332	339	296	277	281	261	281	283	271	290	6852
			20	307	340	330	339	323	306	297	327	299	284	284	297	20	361	349	361	271	304	295*	181*	29*	126	239	270	297	6836
			21	319	281	328	276	328	337	281	310	272	364	280	277	21	298	309	331	302	299	290	268	309	293	301	315	318	7286
			22	328	334	335	343	369	371	376	315	208	35	23	95	22	232	237	216	222	273	274	272	283	277	278	308	321	6325
			23	319	308	308	307	308	319	316	301	307	298	293	288	23	296	298	307	308	300	295	293	288	270	280	280	288	7175
			24	289	288	293	298	291	297	298	301	317	308	224	232	24	242	277	273	302	249	197	179	260	247	248	268	278	6456
			25	293	302	303	301	307	299	312	252	174	189	267	564*	25	198*	437	360	308	287	297	245	255	236	242	280	342	7050
			26	367	378	368	381	377	377	292	222	288	338	346	313	26	327	294	152	220	267	299	264	267	298	307	318	313	7373
			27	311	310	310	355	359	331	307	180	303	276	229	259	27	227	241	282	286	293	276	286	297	308	309	310	317	6982
			28	323	339	336	347	351	359	317	319	334	314	203	216	28	179	212	242	280	249	273	299	303	299	301	316	309	7020
			29	326	338	347	389	397	256	7	102	244	451*	430*	471	29	745*	638*	824*	764*	844*	864*	757*	391*	240	317	307	332	10781
			30	314	354	338	378	329	214	289	377	338	306	171	249	30	318	327	331	349	348	339	320	317	307	300	300	310	7523
			31	311	319	320	320	316	317	313	322	328	278	280	322	31	321	431	230	311	329	309	293	306	317	311	311	331	7546

SCALED BY	PEF, SPT
CHECKED BY	SPT, JEP
SIGNS REVIEWED BY	JEP
PUNCHED BY	

Preliminary base-line and scale values:

Interval Beginning	Base-line Value	Scale Value

( ) Interpolated

[ ] Significant portion of hour interpolated.

[ ] No record; or no values available because of faulty record.

[ ] Scaling uncertain because of magnetic storm.

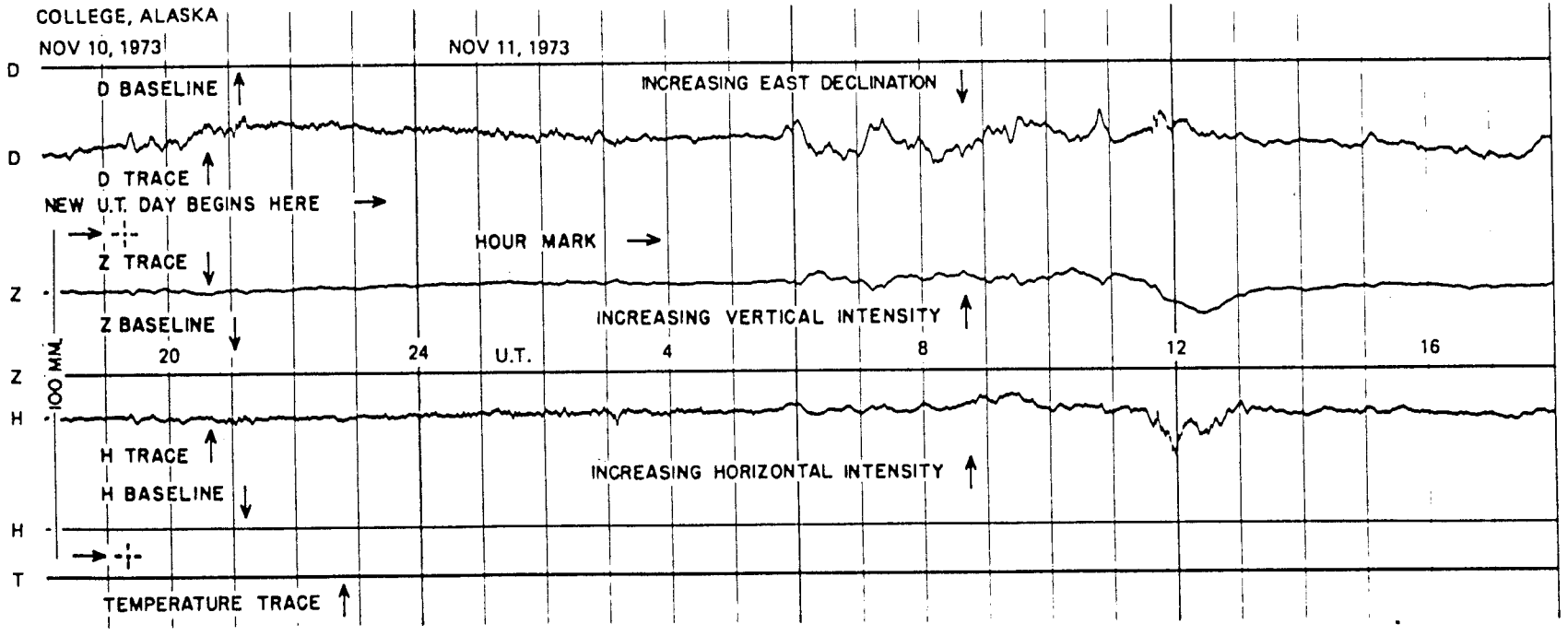
<> Record off sheet for part or all of hour; if value is given, curve was estimated for missing part.

* Derived from GLOBE Mgph., converted to Normal Mgph.

MONTHLY SUM	222349
MONTHLY MEAN	299
DATES WITH GAPS:	

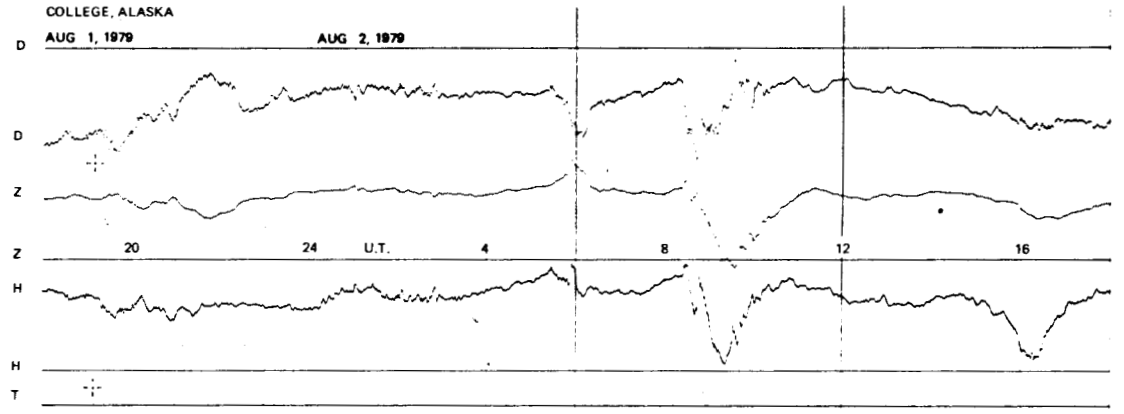
FORMAT FOR NORMAL & STORM MAGNETOGRAMS

(SAMPLE ONLY)



SEE PRELIMINARY CALIBRATION DATA FOR SCALE VALUES & BASELINE VALUES

NORMAL MAGNETOGRAMS



COLLEGE, ALASKA

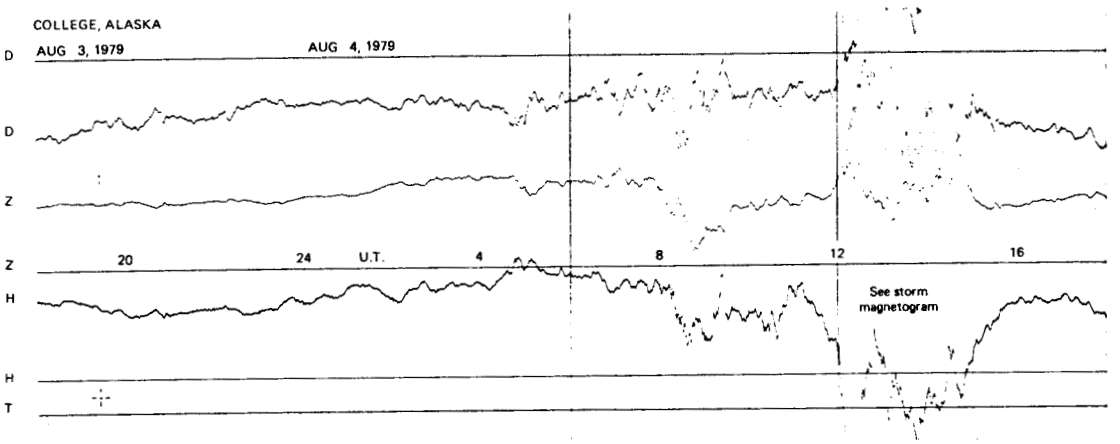
AUG 2, 1979 AUG 3, 1979

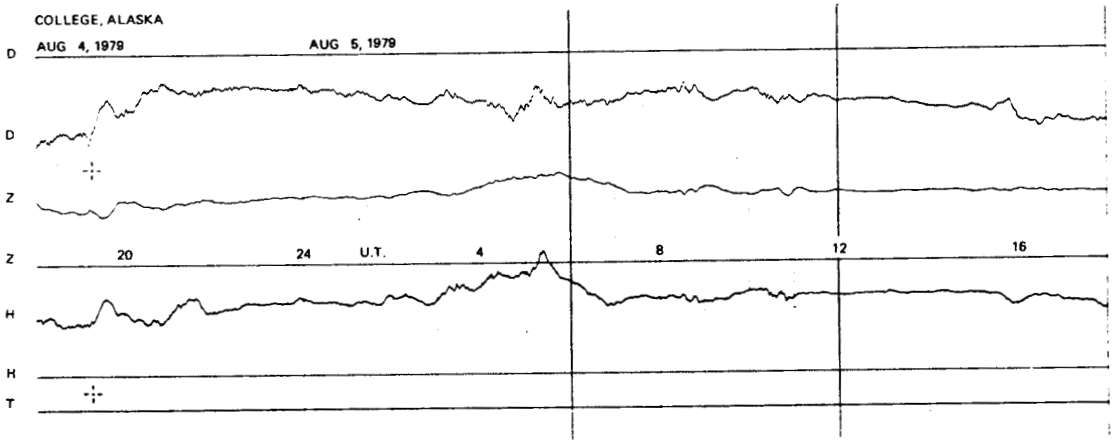
200 mm

100 mm

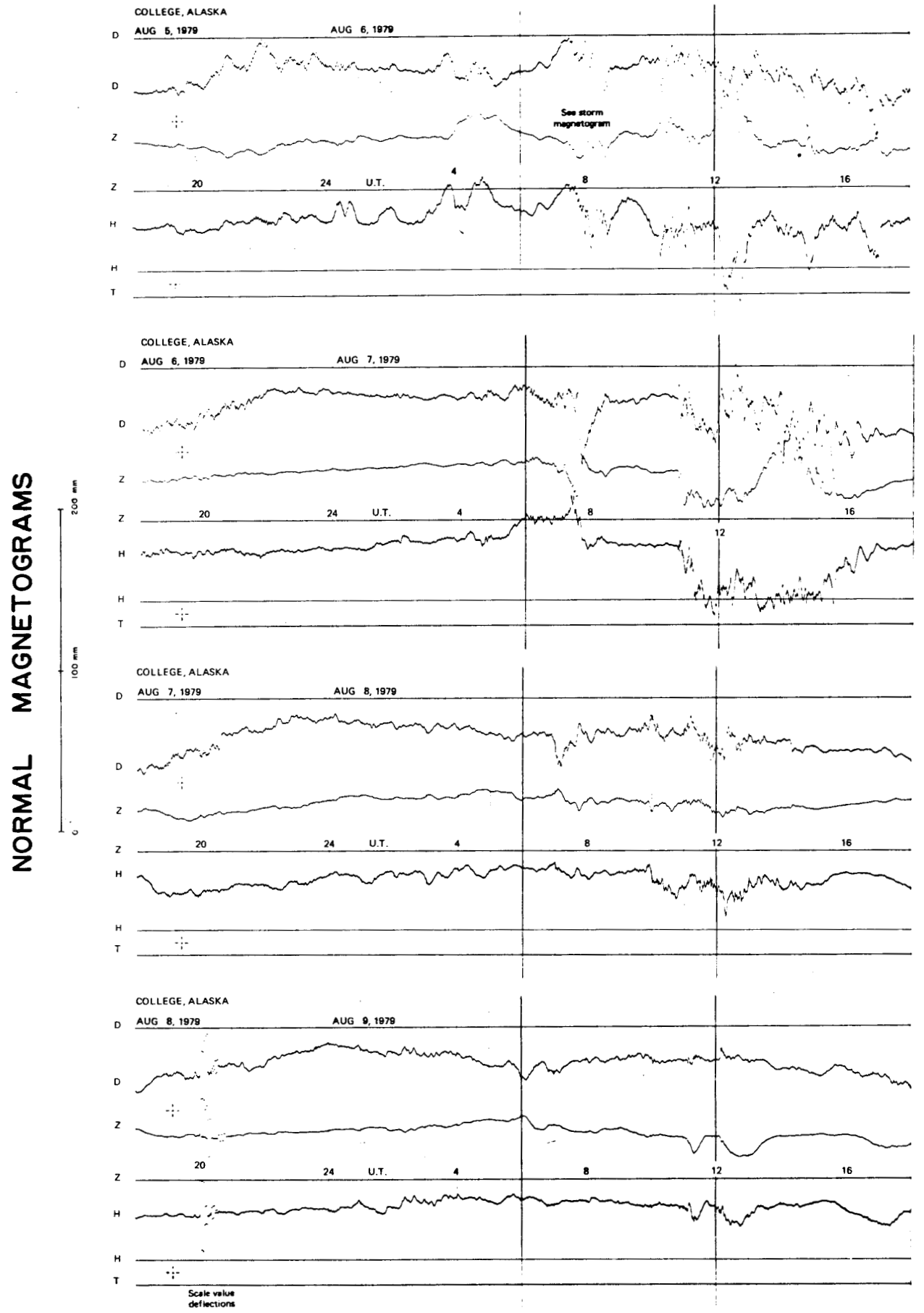
0

See storm magnetogram

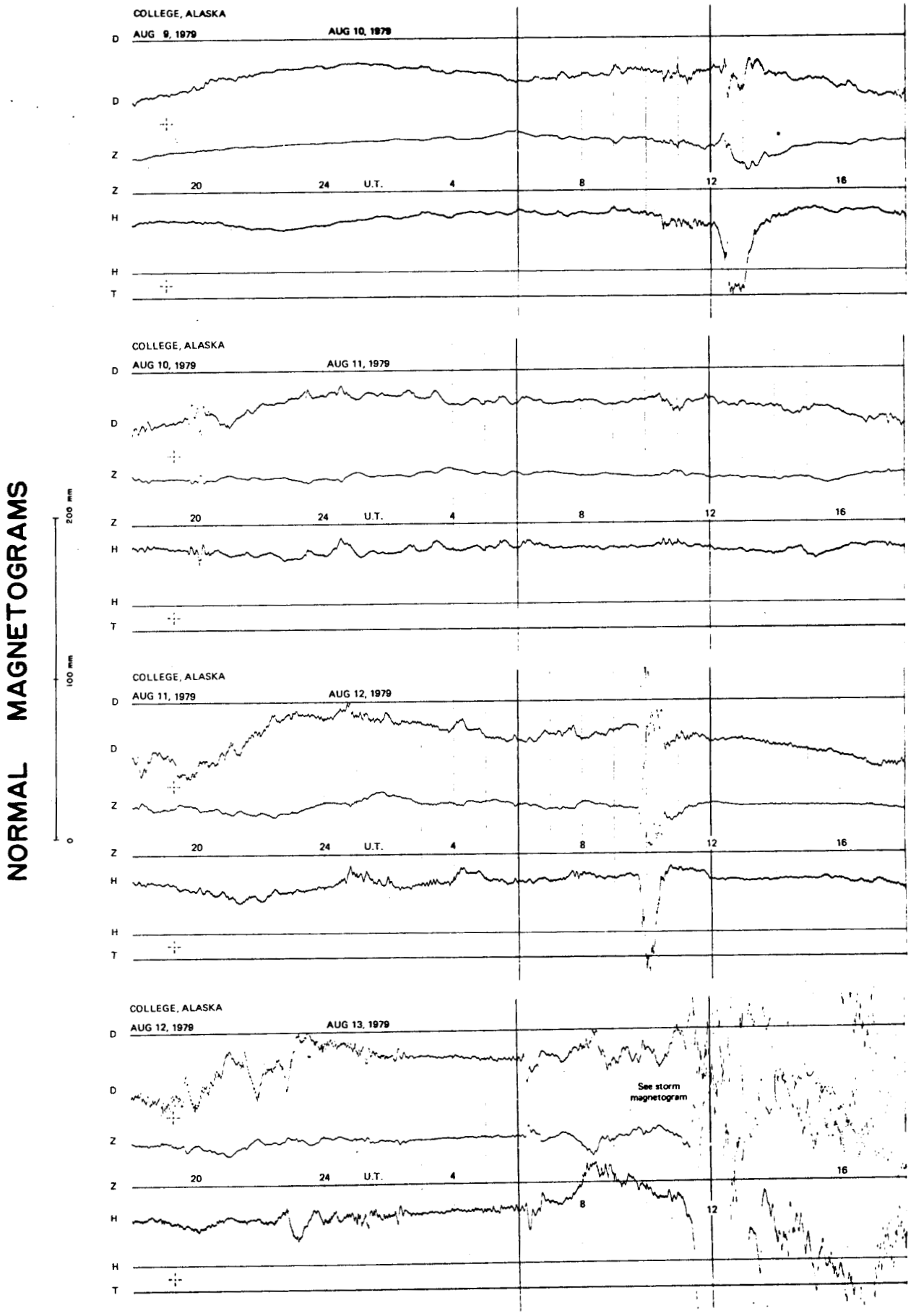




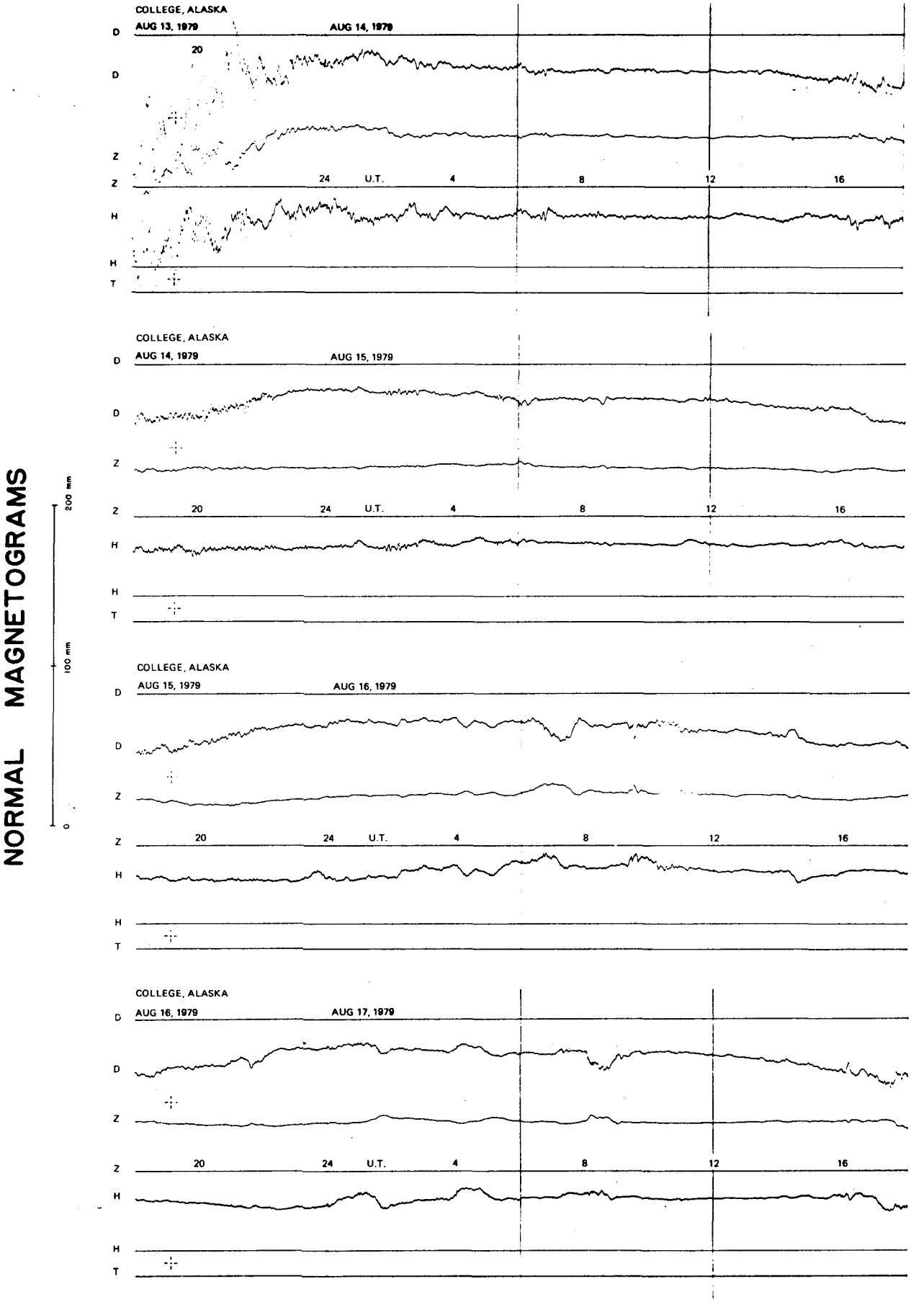
NORMAL MAGNETOGRAMS



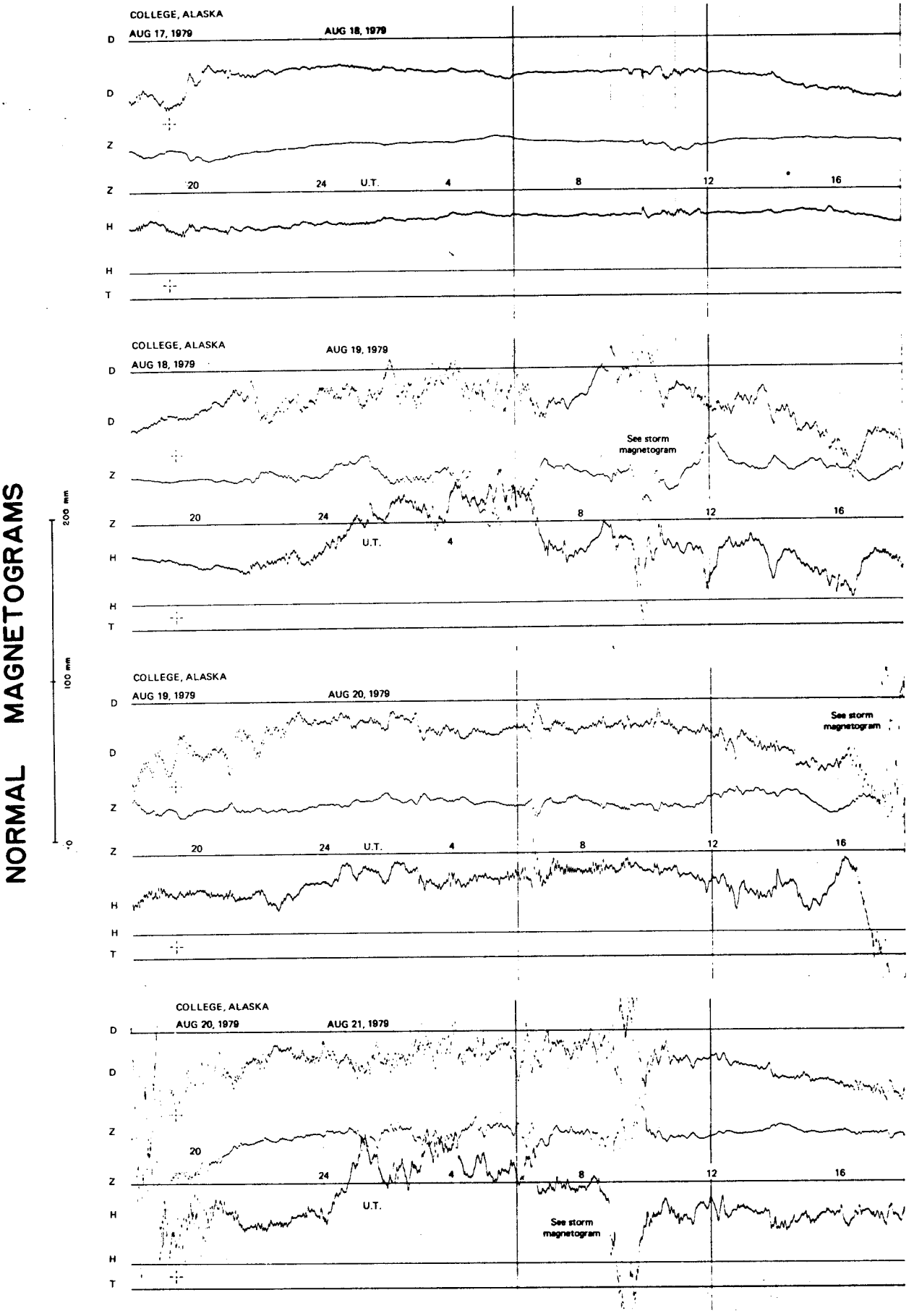
NORMAL MAGNETOGRAMS



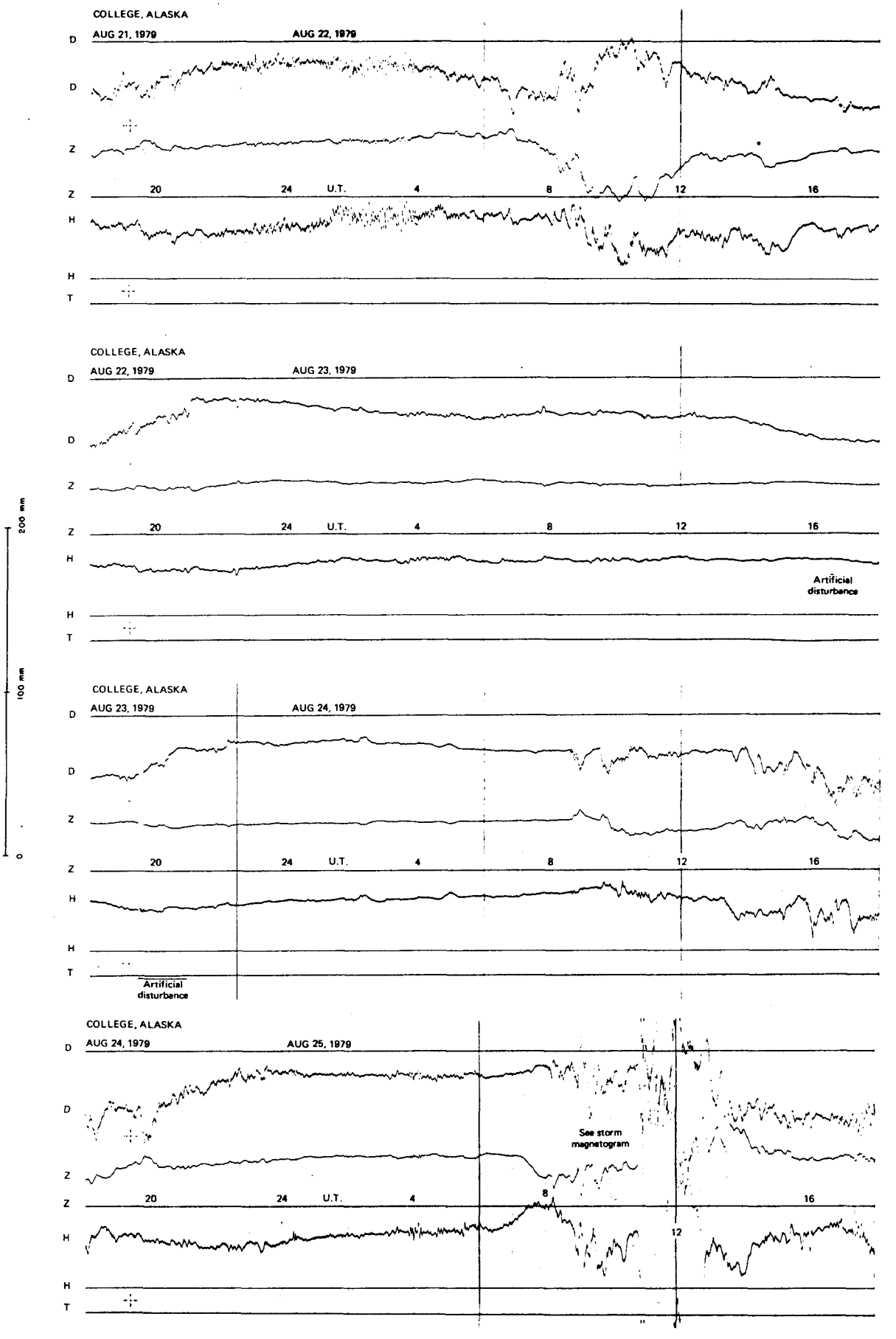
NORMAL MAGNETOGRAMS



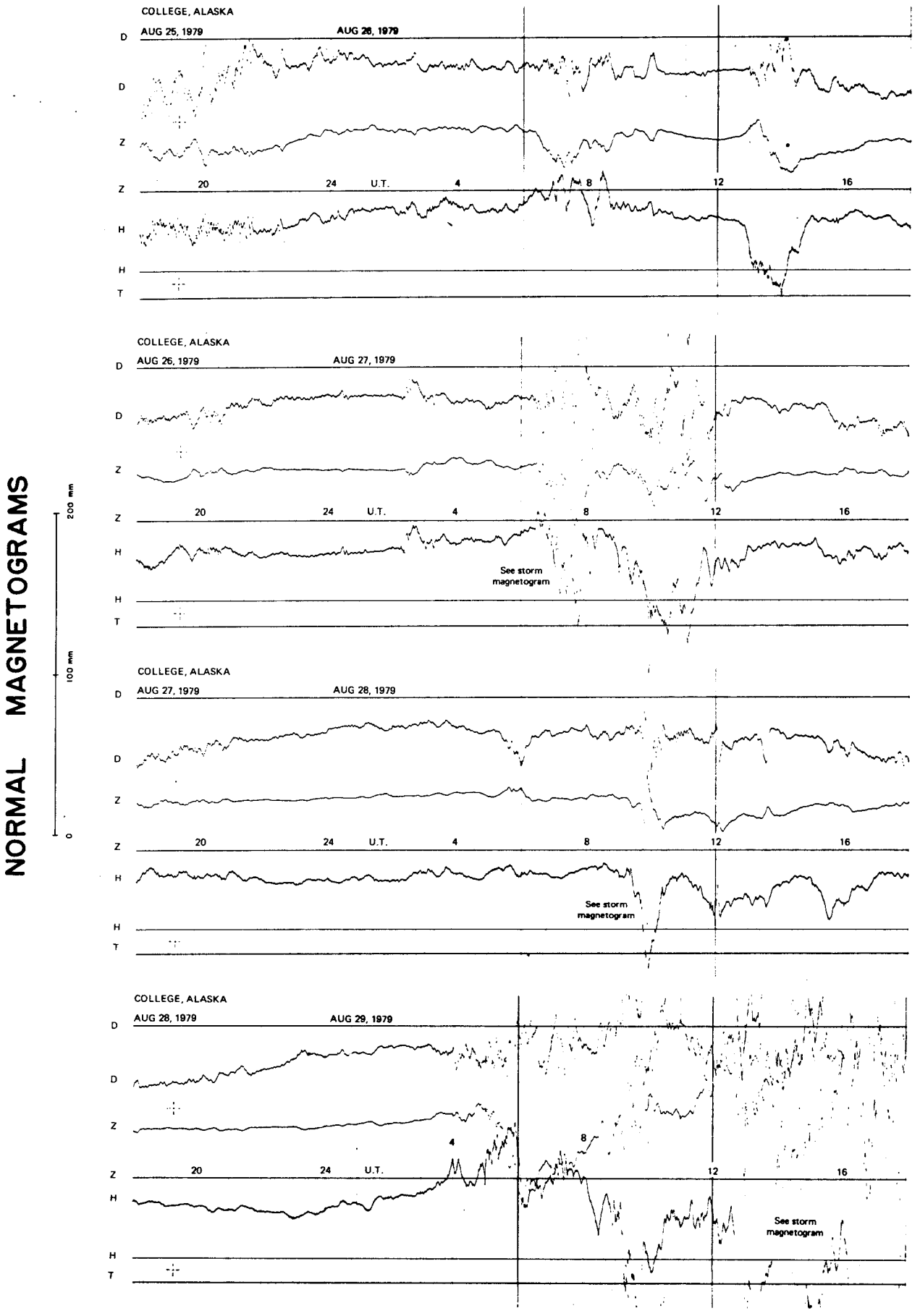
NORMAL MAGNETOGRAMS



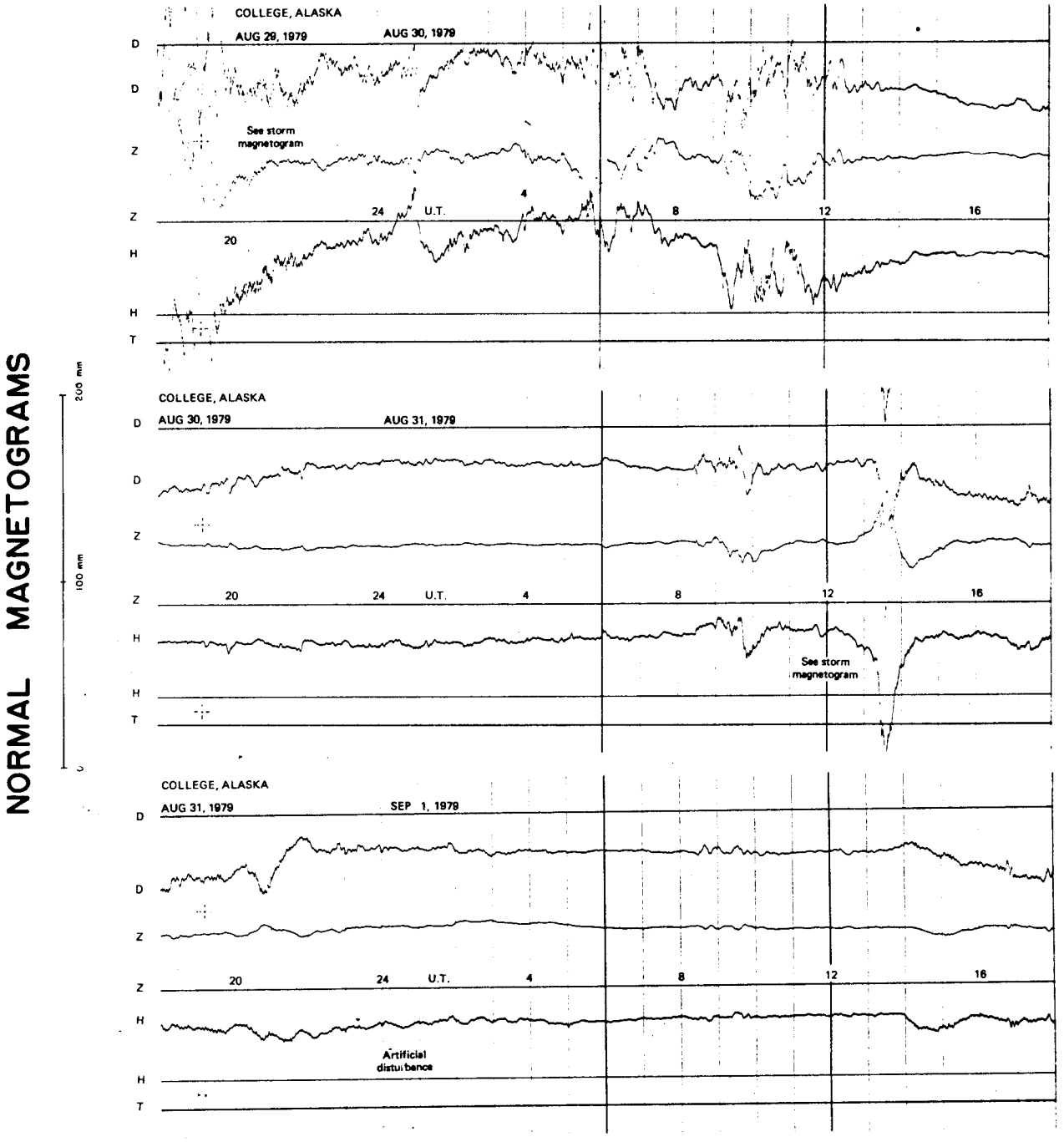
NORMAL MAGNETOGRAMS



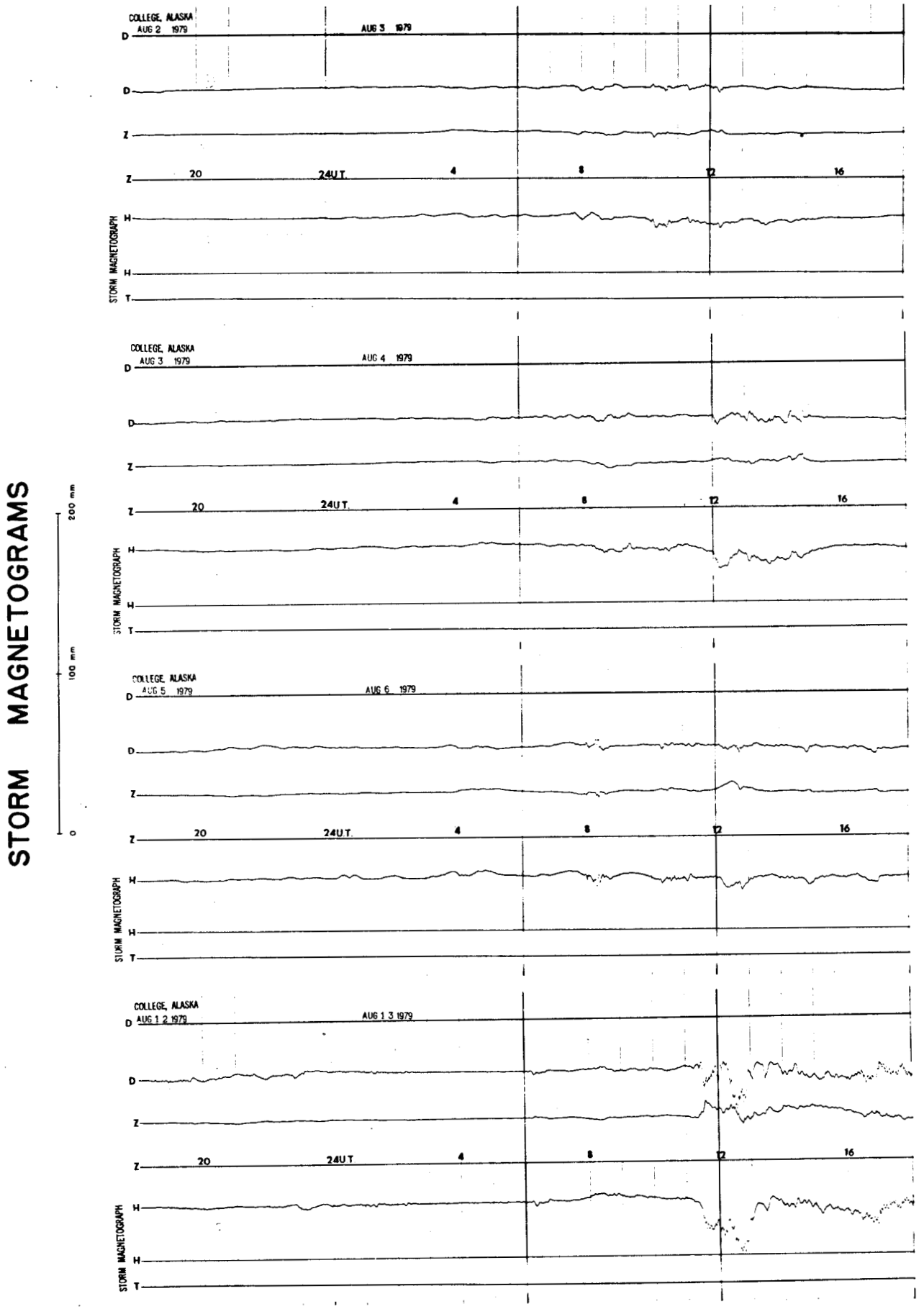
NORMAL MAGNETOGRAMS



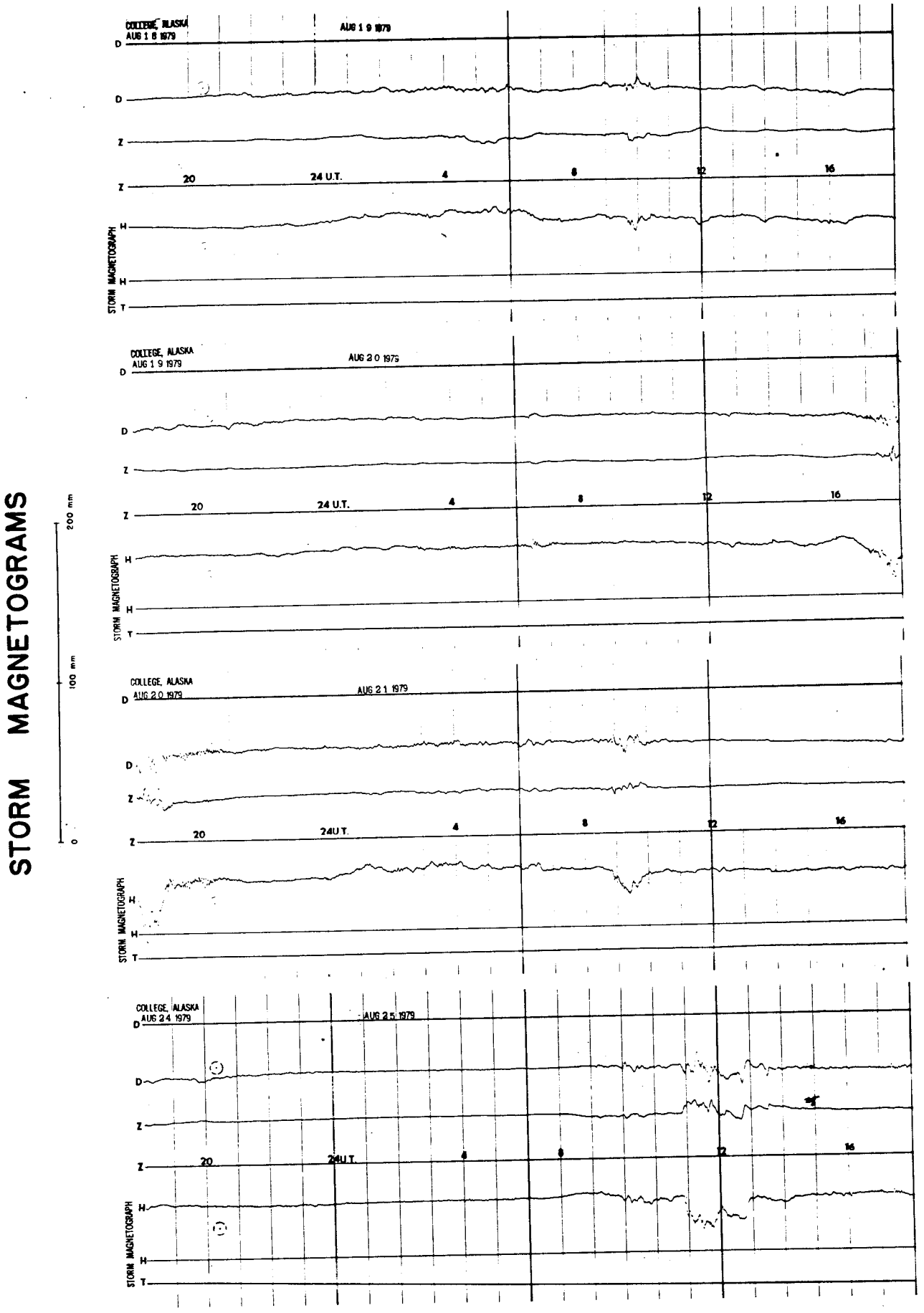
NORMAL MAGNETOGRAMS



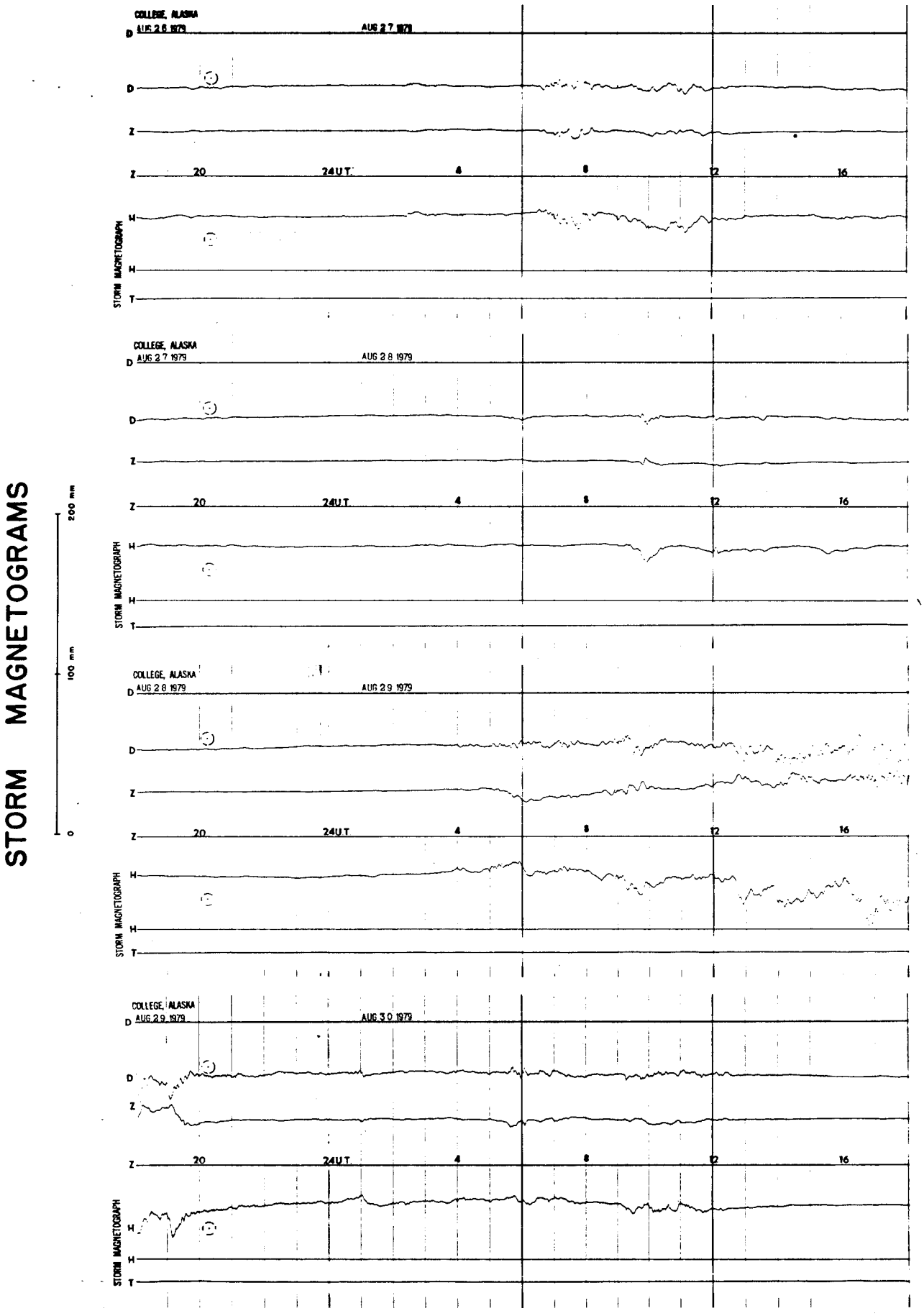
STORM MAGNETOGRAMS



STORM MAGNETOGRAMS



STORM MAGNETOGRAMS



STORM MAGNETOGRAMS