

World Data Center C2 for Geomagnetism

Prompt Report

Provisional

AURORAL ELECTROJET INDICES (AE11)

for January - December 1993

February 1996

Data Analysis Center for
Geomagnetism and Space Magnetism
FACULTY OF SCIENCE
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SPECIAL NOTICE

Plans are being made to publish Prompt Reports for Provisional AE indices on a monthly basis as the required data become available for each month. Taking into consideration of the anticipated schedule for the data collection and digitization where needed, the following order of publication of Provisional AE indices is tentatively contemplated: January to December 1991, January to December 1992, January to December 1994 and January to December 1995.

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Provisional Auroral Electrojet Indices (AE11)
for January - December 1993

1. Introduction

This report, prepared as part of the contribution of the WDC-C2 for Geomagnetism, Kyoto to the STEP program, gives provisional Auroral Electrojet Indices for the year 1993. For the details on the AE indices, reference is made to Data Books Nos. 3-23 published from the WDC-C2 for Geomagnetism, UAG reports published from WDC-A for Solar-Terrestrial Physics, and the paper by T. Davis and M. Sugiura (1966). The production of the AE indices is an activity of the WDC-C2 for Geomagnetism, Kyoto as a contributing member of the International Service of Geomagnetic Indices.

To facilitate a rapid publication of provisional AE indices, less rigorous screening was applied to the data used than is normally done for the derivation of the AE indices. Final AE indices will be calculated and published in the Data Book series at a later date. The version of provisional AE indices reported here, which we call the provisional AE(11), does not include the data from Tixie for all the period as we did not receive data from this station. Data from Cape Chelyuskin for July-October were not received, so we put title AE(10) instead of AE(11) on the plots for these months (July-October), however, we call AE(11) as a whole of this book.

2. Data Used

The data from the eleven observatories listed in Table 1 are used. Digital values recorded by digital magnetometers were supplied directly to us by LRV and NAQ and via INTERMAGNET to us by CMO, BRW, YKC, FCC and PBQ. ABK data were digitized by SGU and supplied to us. CCS, CWE and DIK data were digitized by AARI and supplied to us as a cooperative project among WDC-C2 Kyoto, WDC-A for STP, WDC panel and AARI.

3. Results

The monthly quiet-time H reference values are listed in Table 2. Table 3 gives the hourly average values of the provisional AE(11) indices (AU, AL, AE and AO).

Daily graphs of 1.0-min AE indices (AU, AL, AE and AO) are shown in Fig. 2, and corresponding plots of the contributing stations are given in Fig. 3. Supplemental plots for disturbed days are given at the end of Fig. 2. Figure 4 shows the H-traces of magnetograms from AE(11) stations from January to December 1993. A summary plot of hourly values of AU and AL indices is given in Fig. 5.

5. Acknowledgements

Table 1. List of AE(12) Stations.

Observatory	Code	Geographic Coord.		Geomagnetic Coord.	
		Lat. (°N)	Long. (°E)	Lat. (°N)	Long. (°E)
Abisko	ABK	68.36	18.82	66.04	115.08
Dixon Island	DIK	73.55	80.57	63.02	161.57
Cape Chelyuskin	CCS	77.72	104.28	66.26	176.46
(Tixie Bay --not used--)	TIK	71.58	129.00	60.44	191.41)
Cape Wellen	CWE	66.17	190.17	61.79	237.10
Barrow	BRW	71.30	203.25	68.54	241.15
College	CMO	64.87	212.17	64.63	256.52
Yellowknife	YKC	62.40	245.60	69.00	292.80
Fort Churchill	FCC	58.80	265.90	68.70	322.77
Poste-de-la-Baleine	PBQ	55.27	282.22	66.58	347.36
Narsarsuaq	NAQ	61.20	314.16	71.21	36.79
Leirvogur	LRV	64.18	338.30	70.22	71.04

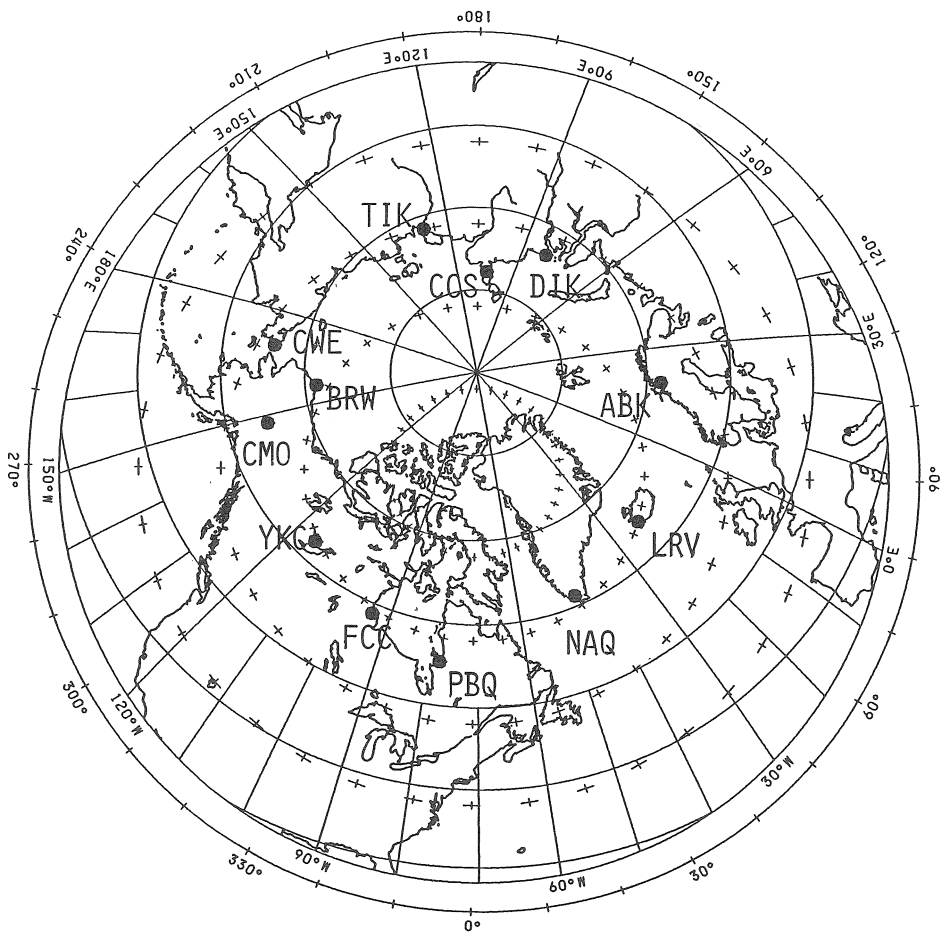


Figure 1. Distribution of AE(12) stations.

This figure is drawn by Lambert projection with the geomagnetic north pole at its center. Geographic coordinates are indicated by solid lines. Geomagnetic coordinates are shown by thin plus signs. Latitude circles are drawn at 10° intervals. Geomagnetic longitude is shown by the numbers along the outer circle and geographic longitude is given by the numbers along the inner circle with suffix E or W.

The calculation of the provisional AE indices in this volume was made possible with the data provided directly to us by the AE stations or through the World Data Centers and the INTERMAGET GINs.

As we do not know the details of the operation of each observatory, it is not possible for us to acknowledge all the persons who have contributed to the preparation of data. Here we mention only those persons with whom we have directly corresponded.

We thank Dr. T. Saemundsson of Leirvogur Observatory for very quick transmission of data, Ms. B. Olafsdottir of Geological Survey of Sweden for digitization and quality control of Abisko data, Dr. E. Friis-Christensen and Mr. B. Pederson of Danish Meteorological Institute, Mr. G. Jansen van Beek and Dr. R. Coles of Geological Survey of Canada, Mr. D. Herzog of United States Geological Survey for their cooperations, and Dr. O. Troshichev of Arctic and Antarctic Research Institute for digitization of Russian data. We also thank Dr. W. Green of USGS for the support of Russian AE stations and coordination of data supply through INTERMAGNET, Dr. M. Teague of NASA for the coordination of support of Russian stations, Dr. H. Kroehl and Mr. L. Morris of WDC-A for STP, Mr. J. Allen of SCOSTEP office, and Dr. V. Papitashvili for cooperations in digitization project of Russian Data, and Dr. Z. Kharin of WDC-B for STP for preparation of microfilm copies of magnetograms from the Russian stations.

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Table 2. Monthly quiet-time H reference values (unit in nT)
 (Provisional)
 (Year 1993)

STATION	Jan.	Feb.	Mar.	Apr.	May	June
Abisko	11524	11533	11514	11528	11532	11537
Dixon Island	5996	6012	5982	6008	6005	6007
Cape Chelyuskin	3090	3101	3088	3106	3111	3103
Tixie Bay	* not available *					
Cape Wellen	13850	13848	13834	13848	13849	13851
Barrow	9448	9443	9420	9445	9445	9441
College	12711	12710	12704	12724	12740	12742
Yellowknife	8771	8769	8767	8783	8792	8794
Fort Churchill	7980	7981	7993	7995	8012	8013
Poste-de-la-Baleine	11074	11077	11080	11089	11103	11109
Narssarssuaq	12316	12322	12330	12327	12338	12345
Leirvogur	12420	12427	12425	12427	12436	12441

STATION	July	Aug.	Sep.	Oct.	Nov.	Dec.
Abisko	11532	11526	11521	11516	11523	11519
Dixon Island	6000	5993	5987	5978	5984	5976
Cape Chelyuskin	* not available *				3075	3081
Tixie Bay	* not available *					
Cape Wellen	13845	13842	13832	13841	13842	13838
Barrow	9436	9434	9418	9415	9419	9412
College	12735	12729	12714	12712	12713	12713
Yellowknife	8793	8794	8778	8788	8797	8793
Fort Churchill	8017	8022	8005	8021	8032	8033
Poste-de-la-Baleine	11109	11112	11097	11112	11117	11119
Narssarssuaq	12341	12342	12329	12341	12345	12344
Leirvogur	12437	12434	12425	12427	12432	12431

TABLE 3

Monthly tables of
provisional hourly average AE indices
(AU, AL, AE and AO)
for January-December 1993.

AU Index (Provisional, hourly mean values, unit nT)

January 1993

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	Mean
1	36	44	52	90	41	42	53	116	75	67	77	74	51	66	48	38	30	32	54	51	36	62	107	122	61
D	181	246	175	118	103	117	116	83	124	173	84	236	182	76	143	116	188	221	305	196	255	151	149	147	162
D	157	142	203	87	221	270	266	139	103	110	127	133	94	103	82	90	66	93	79	131	117	152	123	154	135
D	265	174	145	118	103	145	144	95	131	90	91	84	233	148	87	66	164	124	64	134	148	143	141	278	138
5	163	78	111	186	168	119	148	53	85	120	130	122	112	134	60	55	52	67	121	82	131	163	124	127	112
6	87	98	111	118	121	157	112	139	104	113	73	92	70	90	121	128	55	61	74	73	50	66	69	90	95
7	73	72	101	158	199	203	132	64	87	161	179	101	62	57	60	88	91	92	142	118	166	162	119	84	115
8	75	97	106	110	88	82	69	71	60	79	82	46	38	87	24	108	91	83	131	174	139	81	92	171	91
9	160	131	155	169	125	106	81	96	118	168	110	105	98	136	96	81	69	47	39	62	86	42	71	78	101
D	119	128	127	103	131	148	299	306	303	244	175	192	115	104	72	73	29	30	34	37	28	35	33	39	121
11	32	36	34	73	40	36	37	28	42	117	81	168	119	256	209	206	165	236	214	172	97	121	211	152	120
12	101	80	75	68	70	141	96	99	52	50	68	61	49	38	47	42	51	32	30	30	23	32	37	35	59
13	42	57	55	44	48	57	49	70	88	46	63	57	53	58	49	59	119	57	48	48	69	56	159	279	72
14	156	255	238	158	143	236	240	143	103	111	104	158	113	84	88	96	80	109	113	94	93	187	140	115	140
15	165	148	62	65	115	101	75	78	59	56	76	60	44	38	47	60	105	89	64	67	62	72	62	39	75
16	40	40	82	107	129	83	83	54	43	38	39	38	33	50	27	26	49	46	35	57	43	41	89	71	56
17	53	69	60	46	66	92	94	140	157	127	125	226	142	125	85	51	35	53	60	66	88	95	65	44	90
18	54	55	89	84	62	31	24	38	55	71	68	92	49	31	67	88	123	103	66	64	109	111	158	213	79
19	177	84	177	122	95	70	46	97	172	120	100	84	46	84	39	24	51	89	92	160	190	130	91	45	99
20	65	52	58	35	30	23	25	34	67	38	42	156	87	54	210	162	39	36	25	34	27	23	28	29	57
Q	27	26	36	39	67	73	40	33	25	28	29	62	39	48	22	23	17	18	24	22	19	23	21	20	33
Q	22	31	45	44	45	71	78	73	88	42	48	49	53	43	52	61	45	32	24	36	65	87	82	81	54
Q	90	135	85	51	39	25	16	18	21	18	18	19	17	20	37	28	21	16	18	19	34	58	24	46	36
24	36	38	53	80	112	146	177	152	168	139	111	168	91	81	31	76	94	79	163	109	44	35	34	28	93
25	27	29	29	27	28	26	27	35	48	45	57	71	65	148	209	189	231	153	98	155	167	86	46	125	88
26	22	109	151	108	116	130	122	53	49	55	51	58	53	43	19	43	38	49	72	84	60	80	54	41	69
27	45	37	43	62	71	54	59	68	74	55	67	72	117	133	63	39	41	51	57	44	47	82	49	37	61
Q	36	39	45	73	91	77	85	33	52	78	87	62	73	58	37	59	44	35	31	22	26	27	28	30	51
Q	32	38	31	34	37	37	46	23	35	30	25	22	13	20	22	24	19	20	27	24	28	24	48	70	30
30	42	139	101	94	146	175	116	66	68	56	90	75	102	142	91	63	54	67	81	69	87	79	90	154	94
D	291	304	207	147	249	188	392	440	331	162	173	158	197	86	170	197	176	161	172	153	235	14	20	113	197
Mean	92	97	98	90	99	105	107	94	96	90	85	100	84	85	77	78	78	76	82	83	89	81	82	98	89
5Q Mean	41	53	48	48	55	56	53	36	44	39	41	42	39	37	34	39	29	24	24	24	34	43	40	49	40
5D Mean	202	198	171	114	161	173	243	212	198	155	130	160	164	103	110	108	124	125	130	130	156	99	93	146	150

AE Index (Provisional, hourly mean values, unit nT) 1993

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	Mean
D 1	54	47	52	91	44	60	104	304	209	105	98	73	54	89	75	50	45	52	111	60	43	95	167	259	98
D 2	388	401	324	182	105	127	107	136	275	533	364	445	474	456	587	354	420	390	512	449	450	187	379	200	344
D 3	375	597	284	166	187	221	255	153	341	180	194	523	816	303	236	263	346	205	234	335	709	382	351	627	380
D 4	748	397	284	166	187	221	255	153	341	180	194	523	816	303	236	263	346	205	234	335	709	382	351	627	352
D 5	232	124	193	468	452	235	288	127	243	406	438	400	387	311	80	137	274	163	363	221	233	222	183	145	264
D 6	160	258	325	162	167	280	156	208	217	241	227	357	360	354	398	275	176	161	480	161	83	102	210	120	235
D 7	87	106	189	361	276	254	150	63	133	648	563	146	96	89	208	664	669	350	318	186	580	547	258	182	297
D 8	156	225	192	183	102	80	115	142	106	203	134	75	56	209	297	431	341	249	432	463	393	207	293	477	232
D 9	361	230	390	284	233	235	99	176	271	295	213	215	603	382	137	305	320	75	73	190	174	80	143	319	242
D 10	325	200	174	239	271	239	799	727	587	457	460	489	244	171	87	94	58	52	42	39	28	35	44	59	247
D 11	43	49	41	89	38	38	35	52	325	407	258	589	813	1126	653	488	212	464	588	395	321	284	335	337	333
D 12	203	230	312	140	218	277	259	146	68	96	254	157	103	97	117	334	133	145	194	160	229	122	59	43	171
D 13	47	90	81	64	61	71	107	107	100	36	69	203	232	73	57	137	580	218	89	145	133	124	513	622	165
D 14	294	521	310	168	267	507	358	215	183	326	427	344	245	169	215	118	123	572	488	232	334	355	411	293	311
D 15	337	227	61	98	170	229	183	136	86	90	429	281	119	57	151	249	648	397	137	136	114	127	328	85	203
D 16	70	89	295	357	196	137	86	57	46	36	42	70	58	133	243	368	300	151	143	81	93	157	184	205	150
D 17	206	124	106	64	95	251	463	251	238	221	392	441	218	237	167	119	75	156	198	207	192	158	81	52	196
D 18	85	69	107	117	53	27	24	48	152	235	202	223	158	210	167	219	364	365	154	125	236	476	431	388	193
D 19	384	320	300	353	164	87	58	170	405	331	185	156	76	242	207	233	108	156	267	435	474	479	167	76	243
D 20	121	90	76	49	48	37	57	68	125	141	88	411	167	342	649	356	71	139	80	38	32	26	41	65	138
Q 21	167	60	130	281	280	132	53	59	37	79	125	347	142	138	141	184	101	94	28	56	71	54	77	48	120
Q 22	39	52	76	85	139	199	152	175	255	102	106	90	158	115	90	102	74	101	96	39	175	336	231	235	134
Q 23	186	208	90	46	34	24	16	17	22	18	16	21	23	35	99	64	44	45	56	41	61	78	51	76	57
Q 24	54	38	54	99	154	215	256	260	278	347	447	563	199	195	171	304	249	253	403	426	86	56	47	30	216
Q 25	25	26	22	22	20	18	15	22	33	33	59	109	259	917	619	484	644	395	323	722	417	147	204	538	253
Q 26	622	565	358	124	189	323	423	139	95	91	206	473	468	259	195	285	414	218	314	334	163	277	173	142	285
Q 27	89	44	48	184	317	200	142	285	236	119	274	452	403	324	154	263	216	158	254	135	155	262	82	39	203
Q 28	38	57	92	281	259	110	187	77	97	243	259	238	227	126	96	108	77	67	54	106	128	43	37	43	125
Q 29	56	65	31	38	44	65	181	145	94	73	90	65	48	40	35	55	65	84	57	44	122	127	148	247	84
Q 30	89	229	203	165	417	407	177	119	156	189	290	311	335	423	254	204	147	137	120	105	77	107	140	554	223
D 31	717	444	399	459	594	615	688	660	752	905	529	740	689	364	532	571	507	247	601	944	733	780	707	457	610
Mean	218	199	196	193	197	197	205	173	203	242	259	301	271	266	235	265	270	206	238	244	241	214	218	236	229
5Q Mean	97	88	83	146	151	106	108	94	101	103	119	152	119	90	92	102	72	78	58	57	111	127	108	129	104
5D Mean	510	406	389	326	337	327	445	363	419	484	433	509	482	316	322	340	380	209	311	466	475	322	353	343	386

AO Index (Provisional, hourly mean values, unit nT) January 1993

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	Mean
D	9	20	26	44	19	12	1	-35	-28	14	28	37	24	21	10	13	7	6	-1	20	14	14	23	-7	12
D	-11	44	13	27	50	52	62	15	-13	-92	-97	13	-54	-152	-149	-60	-21	26	49	-27	29	57	-39	46	-9
D	-29	-152	-178	-205	-42	52	76	69	32	-62	-182	-42	0	-41	-2	-119	-218	17	-4	-151	-109	39	-19	-31	-54
D	-108	-24	3	35	9	34	16	19	-39	0	-5	-176	-174	-2	-30	-64	-9	21	51	-32	-205	-46	-33	-35	-37
D	46	16	14	-47	-56	2	4	-10	-35	-82	-88	-77	-81	-20	20	-33	-83	-14	-59	-28	15	52	32	53	-19
D	7	-30	-51	37	37	17	34	35	-4	-6	-39	-85	-109	-86	-77	-8	-32	-19	-164	-6	8	14	-35	30	-22
D	29	18	7	-22	60	76	56	31	20	-161	-101	27	14	12	-43	-243	-242	-82	-16	24	-122	-110	-9	-6	-32
D	-2	-14	10	18	36	42	11	0	7	-21	15	8	10	-16	-123	-106	-78	-41	-83	-56	-57	-53	-66	-24	-19
D	-19	15	-38	27	8	-10	31	7	-16	20	3	-1	-202	-54	26	-70	-89	9	2	-31	0	2	0	-80	-19
D	-42	28	40	-16	-3	28	-100	-56	10	14	-55	-51	-6	19	28	25	0	4	12	17	14	17	10	9	-2
D	10	12	13	28	20	17	19	2	-119	-86	-47	-126	-286	-306	-116	-38	59	4	-79	-25	-62	-19	43	-16	-45
D	0	-33	-80	-1	-38	2	-33	26	18	1	-57	-16	-2	-9	-10	-124	-14	-38	-66	-49	-90	-27	7	13	-26
D	17	11	15	12	18	22	-4	16	37	27	29	-43	-62	21	20	-9	-169	-51	3	-23	2	-5	-96	-31	-9
D	9	-4	82	74	9	-17	60	34	12	-50	-108	-13	-8	0	-19	37	18	-175	-130	-20	-72	9	-64	-30	-15
D	-2	35	31	15	30	-12	-15	10	16	11	-138	-79	-14	9	-27	-64	-218	-108	-3	0	5	8	-101	-2	-25
D	5	-3	-64	-70	31	14	39	25	20	20	17	2	4	-16	-93	-157	-100	-28	-36	16	-3	-36	-2	-30	-18
D	-48	7	14	18	-33	-136	14	38	16	-69	5	33	7	2	-7	-2	-24	-38	-36	-6	16	24	18	7	-7
D	11	20	35	25	36	17	12	13	-19	-45	-32	-18	-29	-72	-16	-21	-58	-78	-10	1	-8	-126	-56	18	-16
D	-14	-75	27	-53	13	27	17	11	-28	-43	7	6	8	-36	-63	-91	-3	10	-41	-56	-46	-108	7	7	-21
D	4	7	20	10	5	4	-3	0	5	-31	-1	-48	3	-115	-114	-15	3	-32	-14	14	10	10	7	-3	-11
Q	-55	-3	-28	-100	-71	7	13	3	6	-11	-32	-110	-30	-19	-47	-67	-32	-28	9	-6	-16	-3	-16	-3	-26
Q	2	5	7	2	-24	-27	1	-13	-38	-8	-4	5	-25	-13	7	9	8	-18	-22	16	-22	-80	-32	-35	-12
Q	-2	30	40	28	21	13	8	9	9	9	9	9	6	3	-11	-3	0	-5	-9	-1	3	19	-1	7	8
Q	8	18	25	30	34	37	48	21	28	-34	-111	-112	-7	-16	-52	-75	-30	-46	-37	-103	0	6	10	13	-14
Q	14	15	17	16	17	16	19	24	31	28	27	16	-64	-309	-100	-52	-90	-44	-62	-205	-40	12	-54	-143	-37
Q	-288	-172	-27	45	21	-31	-88	-15	2	10	-50	-177	-180	-85	-78	-99	-168	-59	-84	-82	-20	-57	-31	-28	-72
Q	1	14	18	-29	-86	-45	-34	-72	-42	-3	-68	-153	-83	-28	-13	-92	-65	-27	-69	-22	-20	-47	8	16	-39
Q	17	10	0	-66	-38	21	13	-5	4	-42	-41	-56	-39	-4	-10	5	1	3	-30	3	-37	5	9	8	-11
Q	3	5	16	15	15	4	-43	-49	-12	-6	-19	-9	-10	0	4	-2	-12	-20	-2	2	-32	-39	-25	-52	-11
Q	-1	24	0	11	-62	-27	27	7	-8	-37	-53	-79	-64	-67	-35	-38	-18	-1	20	16	47	25	20	-121	-17
D	-66	81	7	-82	-47	-118	48	109	-44	-289	-91	-211	-146	-95	-95	-87	-77	36	-127	-318	-130	-376	-332	-114	-106
Mean	-15	-2	0	-5	1	6	5	7	-4	-30	-43	-50	-50	-47	-38	-53	-55	-25	-35	-38	-30	-25	-25	-19	-24
5Q Mean	-7	9	7	-24	-19	3	-1	-11	-6	-11	-17	-32	-19	-6	-11	-11	-6	-14	-4	-3	-20	-19	-13	-15	-10
5D Mean	-51	-4	-23	-48	-6	9	20	31	-10	-85	-86	-93	-76	-54	-49	-61	-65	20	-24	-102	-80	-61	-82	-25	-42

AU Index (Provisional, hourly mean values, unit nT) February 1993

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	Mean
D 1	98	154	150	131	180	118	182	244	220	222	208	145	81	77	37	124	133	177	157	140	144	130	117	98	144
D 2	98	134	109	148	155	151	86	82	57	34	48	58	34	48	35	60	41	54	50	94	66	62	43	39	74
D 3	60	37	54	56	81	106	69	76	69	61	54	34	21	28	28	24	19	19	62	113	92	183	156	171	70
D 4	142	87	83	87	133	167	150	88	43	51	48	64	35	27	25	23	27	59	66	53	93	58	75	74	74
D 5	90	65	36	56	80	98	162	175	86	72	29	25	27	27	21	18	17	34	20	27	44	87	62	41	61
Q 6	24	28	39	72	79	93	90	69	54	31	29	18	33	36	28	20	19	16	18	41	69	48	32	33	42
Q 7	54	66	86	110	160	180	129	97	120	124	130	81	42	67	44	38	74	166	146	262	231	260	225	154	127
D 8	120	102	136	355	216	234	172	127	117	110	106	80	78	97	103	71	159	136	117	143	171	164	194	243	148
D 9	171	158	118	179	115	119	138	97	66	80	121	108	101	79	112	85	142	122	162	121	114	129	184	130	123
D 10	70	52	81	124	97	88	98	134	71	69	82	72	102	79	106	90	92	56	134	175	86	63	50	46	88
Q 11	68	78	121	143	134	138	149	178	185	147	61	36	51	36	45	51	55	81	105	115	85	78	85	129	98
Q 12	111	51	40	71	95	103	99	124	97	97	64	95	88	131	105	39	34	35	23	26	34	35	41	63	71
Q 13	118	107	100	80	61	73	58	78	88	111	76	81	114	129	86	58	43	46	24	30	48	78	83	73	77
Q 14	101	80	99	79	83	68	71	105	97	99	64	31	35	33	31	22	11	30	70	57	32	29	26	26	57
Q 15	24	36	54	50	64	62	50	44	49	66	91	52	50	62	42	37	49	34	32	34	21	21	16	15	44
Q 16	17	24	35	35	31	42	76	63	48	40	81	197	174	114	57	29	33	32	40	31	28	21	21	18	54
D 17	20	22	25	73	44	46	44	48	84	121	171	84	132	234	173	180	92	121	51	52	19	10	8	13	78
D 18	18	21	25	22	31	26	19	16	23	15	33	42	76	50	27	32	51	78	114	132	127	157	146	99	57
D 19	141	89	40	34	28	28	38	65	33	33	14	11	15	21	33	17	14	23	21	23	29	20	19	22	34
D 20	32	56	60	158	177	207	299	250	233	216	176	100	136	60	75	58	72	107	114	148	105	85	135	94	131
D 21	56	47	45	43	36	54	66	86	84	98	108	108	83	92	76	64	147	282	117	151	145	80	79	78	93
D 22	101	97	116	135	103	106	100	119	200	227	141	77	88	74	69	100	97	113	87	116	109	157	147	90	115
D 23	76	60	63	72	76	67	32	37	40	86	34	38	43	23	23	39	39	53	36	30	32	25	19	21	44
D 24	26	33	47	37	33	34	34	27	21	25	32	21	59	55	50	59	39	24	20	14	17	25	30	21	33
D 25	24	33	37	44	53	74	55	61	49	42	33	34	27	27	19	62	62	33	22	21	18	15	18	24	37
Q 26	36	41	37	32	30	29	41	52	31	33	27	21	20	39	22	29	17	22	26	18	20	28	22	24	29
Q 27	33	34	31	23	36	36	25	31	26	26	17	14	11	10	20	17	14	14	13	10	14	19	48	71	25
Q 28	189	100	104	165	150	186	94	78	114	53	17	68	190	154	141	102	50	39	16	22	26	26	24	24	89
Mean	75	67	70	93	91	97	91	94	89	85	76	64	69	68	58	55	58	71	66	78	72	76	74	69	75
5Q Mean	26	32	39	42	48	52	56	51	41	39	49	60	57	52	33	26	26	23	25	26	30	27	27	32	38
5D Mean	102	106	109	174	131	124	127	127	137	152	149	98	96	112	98	112	124	133	114	114	111	118	130	114	121

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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	Mean
D 1	-182	-167	-255	-68	-131	-124	-125	-509	-358	-280	-356	-327	-162	-308	-229	-515	-585	-243	-269	-273	-76	-232	-395	-268	-268
D 2	-329	-336	-237	-357	-240	-250	-194	-99	-64	-24	-116	-319	-72	-68	-66	-208	-317	-211	-136	-386	-348	-28	-69	-37	-188
D 3	-45	-29	-47	-107	-137	-83	-12	-55	-75	-72	-27	-14	-27	-13	-20	-44	-37	-38	-305	-447	-210	-94	-207	-268	-101
D 4	-141	-21	-36	-59	-95	-41	-15	-5	-25	-36	-54	-158	-87	-8	-16	-19	-169	-287	-219	-112	-179	-60	-68	-88	-83
D 5	-65	-34	-5	-10	-24	-61	-44	-50	-110	-122	-24	-6	-10	-13	-12	-21	-159	-134	-50	-39	-24	-75	-173	-21	-54
Q 6	-7	-5	-1	-17	-101	-48	-5	-4	-7	-6	-11	-47	-90	-71	-50	-15	-13	-16	-8	-30	-123	-98	-33	-48	-36
Q 7	-31	-19	-29	-93	-238	-78	8	-13	-160	-413	-96	-40	-19	-10	-18	-42	-45	-134	-186	-295	-383	-490	-276	-181	-137
D 8	-397	-290	-282	-566	-413	-80	-179	-197	-274	-363	-263	-135	-170	-345	-83	-65	-756	-476	-307	-337	-322	-151	-238	-437	-297
D 9	-265	-307	-202	-267	-381	-183	-61	-17	-18	-205	-596	-430	-227	-279	-460	-367	-302	-292	-239	-264	-361	-154	-161	-164	-258
D 10	-112	-48	-31	-85	-70	-35	-31	-74	-43	-54	-80	-340	-407	-342	-447	-234	-8	-97	-310	-507	-90	-57	-20	-54	-149
Q 11	-98	-246	-426	-196	-143	-131	-146	-130	-150	-89	-18	-42	-138	-363	-254	-131	-324	-262	-232	-284	-169	-21	-138	-580	-196
Q 12	-165	-20	-12	-13	-36	-160	-55	-43	-33	-87	-80	-274	-220	-173	-58	-21	-15	-36	-17	-53	-50	-27	-30	-178	-77
Q 13	-317	-123	-32	-68	-43	-50	-43	-144	-223	-103	-88	-54	-115	-274	-46	-58	-82	-67	-15	-19	-48	-229	-190	-85	-105
Q 14	-109	-61	-31	-65	-100	-28	-10	-31	-58	-68	-10	-21	-13	-20	-19	-36	-82	-92	-52	-71	-41	-30	-22	-21	-45
Q 15	-18	-33	-81	-103	-30	-2	-5	-5	-4	-21	-152	-133	-204	-61	-17	-6	-6	-84	-43	-15	-40	-10	-6	-11	-45
Q 16	-13	-11	-5	-8	-13	-92	-174	-46	-23	-129	-245	-283	-261	-171	-117	-52	-33	-37	-39	-46	-19	-16	-6	-9	-77
D 17	-10	-8	-4	-20	-24	-23	-25	-24	-45	-330	-237	-69	-460	-975	-853	-623	-211	-191	-31	-55	-37	-39	-39	-55	-183
D 18	-92	-89	-78	-38	-35	-26	-16	-25	-28	-233	-130	-166	-493	-143	-27	-82	-333	-478	-363	-257	-312	-326	-245	-332	-181
D 19	-212	-78	-24	-12	-10	-13	-15	-53	-250	-112	-16	-12	-16	-18	-16	-18	-29	-103	-62	-9	-35	-23	-27	-20	-49
D 20	-23	-20	-146	-371	-289	-181	-371	-295	-175	-186	-206	-111	-200	-265	-211	-102	-50	-63	-270	-242	-72	-57	-416	-314	-193
D 21	-52	-39	-36	-33	-21	-41	-102	-167	-147	-332	-407	-154	-239	-304	-135	-155	-283	-632	-174	-146	-430	-281	-135	-38	-187
D 22	-287	-311	-392	-213	-185	-142	-159	-320	-678	-330	-226	-243	-482	-518	-279	-244	-254	-501	-319	-278	-147	-367	-269	-207	-306
D 23	-121	-58	-119	-293	-262	-33	-18	-58	-97	-160	-176	-100	-156	-101	-233	-175	-233	-163	-29	-67	-36	-29	-4	-10	-114
D 24	-12	-23	-77	-59	-53	-25	-33	-27	-40	-63	-126	-81	-122	-143	-52	-14	-15	-24	-35	-76	-22	-11	-25	-16	-49
D 25	-14	-20	-30	-51	-228	-174	-120	-18	-43	-21	-54	-131	-35	-18	-107	-303	-53	-15	-12	-9	-25	-7	-10	-11	-63
Q 26	-9	-15	-12	-37	-24	-34	-97	-88	-11	-15	-17	-11	-61	-133	-94	-64	-123	-138	-11	-16	-5	-22	-33	-16	-45
Q 27	-7	-10	-9	-10	-8	-16	-24	-49	-17	-13	-22	-48	-58	-94	-40	-26	-30	-18	-11	-16	-30	-14	-91	-167	-35
Q 28	-341	-306	-344	-245	-315	-307	-54	-35	-174	-627	-600	-497	-492	-464	-344	-173	-38	-31	-38	-39	-19	-34	-33	-13	-232
Mean	-124	-97	-106	-123	-130	-87	-75	-92	-118	-160	-158	-151	-179	-203	-153	-136	-163	-173	-135	-156	-130	-106	-119	-130	-134
5Q Mean	-10	-14	-21	-35	-35	-38	-61	-38	-12	-36	-89	-104	-134	-106	-63	-32	-41	-58	-22	-24	-43	-32	-33	-50	-47
5D Mean	-228	-216	-227	-226	-226	-110	-109	-213	-274	-301	-335	-240	-300	-485	-380	-362	-421	-340	-233	-241	-188	-188	-220	-226	-262

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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	Mean
D 1	281	323	406	200	312	242	307	755	579	503	565	472	244	386	267	640	719	420	427	414	222	364	513	367	414
2	428	471	348	507	396	401	281	182	122	60	165	378	107	118	102	269	358	265	187	481	415	90	113	77	263
3	106	67	102	164	220	189	82	133	146	134	83	49	49	41	49	69	57	58	368	561	303	278	364	440	171
4	284	109	120	146	228	209	166	95	69	88	104	223	123	36	42	42	197	347	285	166	274	159	126	164	158
5	156	100	42	66	105	159	143	212	286	209	98	36	36	30	33	40	177	169	71	66	68	163	236	63	116
Q 6	32	33	41	89	181	141	96	74	62	39	42	66	123	108	79	36	33	33	27	71	193	147	66	82	79
7	86	85	116	204	399	259	121	111	280	538	226	123	63	78	62	81	120	301	334	557	615	752	501	336	265
8	518	392	419	922	629	315	352	325	392	473	370	216	249	442	187	137	916	612	425	481	495	317	434	680	446
D 9	436	467	321	447	497	303	200	114	86	286	717	539	329	359	572	453	445	415	402	386	477	284	347	295	382
D 10	183	101	113	210	167	125	130	208	115	125	163	413	509	422	554	324	101	154	445	684	177	121	71	101	238
11	168	326	548	340	277	270	296	308	336	237	80	79	189	399	299	183	380	343	337	400	256	100	225	710	295
12	277	72	52	85	132	264	155	168	131	186	145	369	310	306	163	61	50	71	41	80	84	63	72	243	149
13	436	231	133	148	104	125	102	224	313	215	165	136	230	404	132	116	125	113	39	50	97	309	274	160	183
14	211	141	131	144	183	97	81	137	156	168	76	53	49	53	51	58	94	123	122	130	74	60	49	48	104
Q 15	43	71	136	153	94	64	56	51	55	89	244	186	255	125	60	44	56	120	77	50	62	32	23	27	90
16	32	37	41	44	44	136	251	111	73	171	327	481	435	286	176	82	68	70	81	79	49	38	28	28	132
17	31	32	30	94	68	69	70	73	130	452	409	153	592	1210	1027	805	304	313	83	107	56	50	48	69	261
18	111	110	104	61	66	53	36	42	52	250	164	208	569	195	55	114	385	556	478	390	440	484	392	431	239
19	354	168	65	47	38	42	54	120	285	146	31	24	32	41	49	35	44	127	84	33	65	44	47	43	84
20	56	77	207	531	468	389	671	546	409	402	383	211	337	326	287	161	124	170	386	391	179	143	552	409	326
21	109	87	82	77	57	96	169	253	232	431	516	262	322	397	212	220	432	915	292	298	576	362	215	117	280
22	389	409	509	349	289	248	260	439	879	557	368	320	570	592	349	346	352	615	408	396	257	526	418	299	423
23	197	119	182	366	338	101	51	97	138	248	211	139	199	125	256	215	274	216	66	98	70	55	24	32	159
24	40	57	125	96	87	59	67	55	62	90	160	103	182	199	102	74	54	48	56	90	40	37	56	38	82
25	40	54	67	95	281	248	175	81	94	65	88	166	63	46	127	366	116	49	36	32	45	24	29	36	101
Q 26	47	58	50	69	54	64	140	141	42	50	46	33	81	173	117	93	140	161	38	35	26	50	56	41	75
Q 27	40	45	42	35	45	52	50	81	44	40	40	63	71	105	61	43	44	32	25	27	45	33	140	239	60
Q 28	532	407	449	411	466	493	148	114	288	681	618	566	682	620	487	276	89	71	55	62	46	61	59	38	322
Mean	200	166	177	217	222	186	168	187	209	247	235	216	250	272	212	192	223	245	202	236	203	183	195	200	210
5Q Mean	38	48	62	78	83	91	118	91	55	77	139	165	193	159	98	59	68	83	49	52	75	60	62	83	87
5D Mean	331	324	337	402	359	235	237	341	413	454	485	340	395	597	480	476	547	475	349	356	301	308	352	342	385

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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	Mean
D	-41	-6	-52	31	24	-2	28	-131	-68	-28	-73	-90	-40	-115	-96	-194	-225	-33	-55	-66	33	-50	-138	-84	-61
	-114	-100	-63	-103	-41	-48	-53	-7	-3	4	-33	-129	-19	-9	-15	-74	-137	-78	-42	-145	-140	16	-12	0	-56
	7	4	3	-24	-27	11	27	10	-3	-5	13	9	-2	7	4	-9	-8	-9	-121	-165	-58	44	-25	-48	-15
	0	32	23	13	18	62	67	41	8	7	-2	-46	-25	8	4	1	-70	-113	-76	-29	-42	19	-4	-6	-4
	12	15	15	22	27	18	26	55	32	-18	23	10	6	6	4	-1	-70	-49	-14	-5	9	5	-55	9	3
Q	8	11	18	26	-10	22	41	32	23	12	9	-13	-27	-17	-10	2	2	0	4	5	-26	-24	0	-7	3
	11	23	28	8	-38	50	69	41	-19	-144	16	20	11	28	12	-1	13	15	-19	-16	-75	-114	-24	-13	-4
D	-138	-93	-72	-105	-97	76	-3	-34	-77	-125	-78	-27	-45	-123	9	2	-297	-169	-94	-96	-74	6	-21	-96	-74
D	-46	-74	-41	-43	-132	-31	38	39	23	-62	-236	-160	-62	-99	-173	-140	-79	-84	-37	-71	-122	-12	11	-16	-67
	10	-20	1	24	19	12	26	33	29	13	7	-133	-152	-131	-170	-71	41	-20	-87	-165	-1	2	14	-3	-30
	-14	-83	-152	-26	-3	3	1	23	17	28	20	-3	-43	-163	-103	-39	-134	-89	-63	-84	-41	27	-26	-225	-48
	-27	15	13	28	29	-28	21	40	32	4	-7	-88	-65	-21	23	9	8	0	2	-13	-7	4	5	-56	-3
	-99	-7	33	6	8	11	7	-33	-66	3	-5	13	0	-72	19	0	-18	-10	4	5	0	-74	-52	-5	-13
	-3	9	33	7	-7	19	30	36	18	15	26	4	10	6	5	-6	-35	-30	8	-6	-4	0	1	2	5
Q	15	2	1	-13	-25	17	29	22	19	22	-29	-39	-76	0	12	15	21	-24	-5	9	-9	4	5	1	0
Q	1	6	14	12	8	-24	-48	8	12	-44	-81	-42	-43	-28	-29	-10	0	-2	0	-7	4	2	7	4	-11
D	17	4	6	10	26	10	11	9	11	-103	-31	7	-163	-370	-339	-221	-59	-34	9	-1	-8	-13	-15	-20	-52
	-36	-33	-26	-6	-1	0	0	-4	-2	-108	-48	-61	-207	-45	0	-24	-140	-199	-123	-61	-92	-84	-49	-116	-61
	-35	5	7	10	8	6	11	6	-108	-39	0	0	0	1	8	0	-7	-39	-20	6	-2	-1	-3	0	-7
	4	17	-43	-105	-55	13	-36	-22	29	15	-14	-5	-32	-102	-67	-22	10	21	-77	-46	16	13	-139	-109	-30
	1	3	4	5	7	6	-17	-39	-30	-116	-149	-23	-78	-105	-29	-45	-67	-174	-27	2	-142	-99	-27	19	-46
D	22	-92	-106	-137	-38	-40	-17	-29	-99	-238	-50	-41	-82	-196	-221	-104	-71	-78	-193	-115	-80	-18	-104	-60	-58
	-22	1	-27	-109	-92	16	6	-10	-27	-36	-70	-30	-56	-38	-104	-67	-96	-54	3	-18	-1	-2	6	4	-34
	5	5	-14	-10	-9	4	0	0	-9	-18	-46	-29	-30	-43	0	21	11	0	-7	-30	-2	6	2	2	-8
	4	6	3	-3	-86	-49	-31	21	2	10	-10	-47	-3	4	-43	-119	4	9	4	5	-3	4	3	6	-12
Q	26	13	12	12	-1	2	-2	-27	-17	9	8	4	4	-20	-46	-35	-17	-52	-57	7	1	7	2	-5	3
Q	27	12	10	6	13	9	0	-8	4	5	-2	-16	-22	-41	-9	-4	-7	-1	0	-2	-7	2	-21	-47	-4
	-75	-102	-119	-39	-81	-59	19	21	-29	-286	-291	-213	-150	-154	-101	-35	5	4	-10	-8	3	-4	-4	5	-71
Mean	-24	-15	-18	-14	-19	4	7	1	-14	-37	-40	-43	-54	-67	-47	-40	-52	-50	-33	-38	-28	-15	-22	-30	-28
5Q Mean	7	8	8	3	6	6	-2	6	14	0	-19	-21	-37	-26	-14	-2	-7	-16	1	1	-6	-2	-2	-9	-4
5D Mean	-62	-54	-58	-25	-47	7	8	-42	-68	-73	-91	-70	-101	-185	-140	-124	-147	-102	-58	-62	-37	-34	-44	-54	-69

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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	Mean
1	42	35	35	29	29	36	78	71	98	90	48	70	65	116	142	159	200	232	139	138	177	187	155	80	102
2	70	57	67	77	122	118	104	148	248	117	48	89	55	83	70	94	176	200	214	187	192	177	183	130	126
3	191	208	156	116	303	222	168	138	205	298	193	172	185	231	158	114	105	276	198	196	257	187	187	259	197
4	182	134	291	219	197	162	92	137	109	123	78	42	49	55	43	51	78	127	52	50	50	38	29	37	101
Q	63	81	114	116	119	76	140	97	53	68	86	39	28	34	29	42	43	44	62	58	33	37	59	55	66
Q	50	36	42	56	58	63	105	112	165	177	126	117	56	98	74	71	52	95	193	335	234	188	141	79	113
7	62	66	114	182	220	294	246	293	224	55	39	30	30	43	35	33	109	99	102	158	283	164	214	310	142
8	204	165	163	146	144	140	184	207	151	135	98	93	140	151	201	312	288	285	239	153	89	142	188	126	173
D	171	182	330	196	270	360	203	197	195	177	222	73	114	79	148	128	138	123	102	81	109	213	204	144	173
10	84	180	167	112	123	177	151	99	77	83	64	62	45	81	108	81	34	25	27	37	28	36	73	109	86
D	171	123	71	45	40	64	149	221	114	194	205	69	183	134	228	248	81	28	78	159	167	230	230	102	139
12	104	126	146	150	91	85	114	120	145	124	126	131	183	115	83	154	166	208	248	205	181	124	123	126	141
13	196	157	210	197	181	216	180	121	99	149	128	127	99	108	72	116	259	171	138	213	162	155	129	86	153
14	79	69	63	87	86	86	79	99	131	107	178	142	110	204	172	85	194	146	268	229	107	113	113	150	129
D	107	91	84	71	145	187	209	250	238	68	156	166	257	290	333	325	235	243	244	202	109	197	178	97	187
D	257	147	252	170	80	151	366	146	163	181	99	230	102	77	71	52	154	213	160	135	77	55	61	107	146
17	115	85	146	106	94	100	81	167	162	121	227	139	151	165	79	63	51	92	108	150	173	213	165	116	128
18	204	189	133	103	128	119	134	188	109	109	157	70	131	93	66	25	41	30	32	40	32	39	30	32	93
Q	35	37	46	39	40	42	79	68	74	93	166	122	76	40	71	157	100	72	105	73	85	93	60	46	76
20	54	68	135	144	131	245	207	126	127	100	172	143	139	119	76	109	134	157	112	62	63	53	49	58	116
21	50	96	82	106	176	198	121	66	78	76	192	81	28	92	188	214	114	103	122	127	120	68	124	123	114
22	99	77	102	130	97	137	87	111	207	226	198	286	104	57	50	48	101	177	173	120	147	136	111	94	128
23	61	63	62	53	40	32	54	53	63	32	59	63	71	79	45	42	47	51	52	39	53	43	122	164	60
D	147	168	238	301	264	277	230	329	226	201	86	88	71	128	111	88	161	274	278	244	239	236	281	269	206
25	216	86	56	40	84	170	68	74	111	94	138	168	216	182	148	147	172	98	78	76	91	70	67	50	112
Q	42	44	39	38	73	48	50	50	73	54	68	46	37	53	47	46	39	42	29	50	93	104	101	58	55
27	61	72	80	94	77	101	101	145	80	74	40	38	32	41	57	65	138	250	216	213	149	163	202	270	115
28	213	141	119	129	205	214	117	208	127	121	121	144	238	206	126	151	247	340	349	320	266	237	162	147	194
29	182	124	153	200	286	297	140	179	138	66	27	23	34	42	39	41	39	40	39	41	39	41	93	81	99
30	101	97	76	84	160	232	317	307	248	194	144	87	133	229	163	310	301	278	165	142	100	107	94	142	175
Q	122	76	152	118	147	130	80	76	58	54	42	51	118	129	85	98	95	46	74	116	154	159	190	140	105
Mean	120	105	126	117	135	154	143	148	138	121	120	103	105	114	107	118	132	147	141	140	130	129	132	122	127
5Q Mean	62	54	78	73	87	71	90	80	84	89	97	75	63	70	61	82	65	59	92	126	119	116	110	75	82
5D Mean	170	142	195	156	159	207	231	228	187	164	153	125	145	141	178	168	153	176	172	164	140	186	190	143	170

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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	Mean
1	-17	-28	-35	-22	-15	-30	-57	-49	-72	-177	-119	-49	-73	-652	-502	-302	-162	-278	-152	-182	-181	-191	-32	-37	-142
2	-90	-121	-145	-188	-232	-199	-255	-355	-439	-69	-24	-82	-50	-93	-86	-127	-594	-673	-307	-382	-209	-206	-170	-233	-222
3	-200	-200	-317	-242	-280	-206	-298	-364	-318	-255	-143	-197	-483	-403	-257	-100	-20	-542	-469	-380	-368	-378	-274	-269	-290
4	-188	-413	-610	-354	-162	-55	-19	-110	-108	-171	-81	-18	-17	-16	-18	-27	-164	-201	-179	-41	-9	-7	-32	-32	-126
Q	-121	-284	-232	-77	-74	0	-34	-94	-137	-66	-77	-18	-17	-19	-25	-28	-53	-172	-207	-106	-36	-17	-24	-124	-85
Q	-97	-34	-28	-33	-18	-6	-29	-57	-150	-94	-124	-29	-14	-29	-83	-159	-108	-145	-183	-306	-116	-53	-62	-20	-82
7	-13	-17	-210	-589	-510	-327	-305	-352	-145	-68	-42	-16	-18	-20	-21	-28	-112	-115	-234	-276	-294	-235	-417	-197	-190
8	-246	-342	-280	-58	-67	-191	-195	-194	-118	-63	-122	-147	-198	-220	-360	-409	-507	-379	-283	-74	0	-95	-138	-172	-202
D	-553	-303	-162	-206	-46	-258	-434	-272	-554	-752	-297	-70	-167	-219	-595	-501	-399	-209	-35	-116	-109	-498	-316	-355	-309
10	-239	-429	-171	-132	-206	-57	-31	-41	-21	-51	-36	-44	-24	-91	-170	-98	-40	-24	-23	-45	-19	-25	-76	-116	-92
D	-97	-16	-16	-10	-14	-20	-208	-116	-18	-154	-455	-288	-431	-452	-580	-934	-1164	-923	-575	-328	-81	-436	-507	-433	-344
12	-200	-688	-561	-121	-65	-77	-67	-206	-257	-188	-299	-281	-263	-360	-336	-267	-419	-557	-596	-442	-404	-224	-175	-241	-304
13	-432	-513	-265	-419	-163	-165	-183	-78	-58	-243	-244	-331	-200	-213	-20	-157	-631	-1014	-825	-473	-111	-123	-74	-103	-293
14	-179	-76	-13	-39	-90	-83	-184	-232	-140	-61	-228	-267	-249	-474	-376	-115	-450	-447	-439	-413	-92	-93	-204	-604	-231
D	-239	-41	-42	-44	-95	-403	-586	-753	-480	-740	-973	-776	-579	-678	-365	-288	-450	-472	-265	-191	-11	-36	-645	-654	-409
D	-353	-307	-250	-56	-32	-238	-466	-165	-195	-251	-153	-136	-46	-30	-66	-70	-235	-765	-639	-163	-18	-8	-39	-131	-200
17	-412	-149	-115	-208	-126	-66	-40	-139	-203	-252	-472	-225	-423	-173	-21	-47	-61	-182	-303	-191	-342	-370	-301	-543	-223
18	-399	-278	-120	-122	-248	-232	-191	-374	-164	-165	-244	-108	-174	-73	-29	-54	-19	-34	-27	-115	-19	-18	-56	-48	-138
19	-35	-8	-5	-17	-38	-29	-110	-200	-188	-130	-264	-173	-61	-26	-77	-415	-270	-135	-94	-196	-77	-57	-23	-12	-110
20	-18	-63	-242	-322	-246	-104	-159	-24	-9	-12	-101	-381	-243	-279	-145	-200	-163	-418	-232	-41	-3	-35	-30	-171	-152
21	-169	-136	-45	-117	-300	-217	-191	-24	-41	-29	-154	-559	-458	-179	-256	-353	-198	-108	-126	-129	-157	-51	-169	-309	-186
22	-186	-189	-404	-156	-124	-292	-228	-269	-362	-324	-273	-480	-276	-41	-20	-48	-300	-444	-296	-96	-342	-368	-189	-340	-252
23	-83	-12	-39	-96	-45	-7	-26	-38	-20	-11	-17	-95	-157	-186	-35	-54	-56	-30	-133	-51	-23	-40	-286	-378	-80
D	-144	-209	-489	-351	-320	-846	-984	-763	-770	-350	-87	-101	-127	-401	-438	-237	-285	-330	-464	-353	-223	-306	-428	-320	-389
25	-20	-20	-20	-26	-50	-253	-298	-42	-78	-42	-121	-391	-472	-314	-226	-273	-386	-183	-172	-46	-53	-50	-80	-25	-152
Q	-14	-10	-14	-36	-180	-68	-58	-13	-49	-66	-187	-167	-66	-22	-47	-30	-43	-19	-20	-168	-199	-335	-118	-63	-83
27	-121	-280	-90	-106	-119	-147	-306	-184	-62	-12	-7	-14	-20	-32	-26	-57	-261	-370	-421	-261	-121	-83	-167	-349	-151
28	-180	-133	-219	-398	-251	-122	-180	-181	-123	-230	-137	-138	-195	-175	-188	-227	-553	-384	-588	-433	-198	-290	-487	-460	-270
29	-89	-58	-264	-626	-660	-570	-188	-442	-216	-18	-9	-18	-17	-21	-17	-19	-19	-9	0	7	5	1	-36	-138	
30	-94	-38	-20	-38	-90	-203	-309	-331	-156	-57	-31	-25	-152	-336	-155	-408	-596	-354	-125	-72	-30	-75	-103	-112	
Q	-147	-345	-97	-42	-73	-82	-23	-49	-55	-25	-14	-25	-66	-188	-182	-286	-150	-11	-85	-221	-146	-354	-236	-131	-126
Mean	-173	-185	-178	-169	-159	-179	-214	-210	-184	-165	-178	-182	-185	-206	-184	-203	-286	-320	-274	-202	-128	-163	-190	-226	-197
5Q Mean	-82	-136	-75	-41	-76	-37	-50	-82	-115	-76	-133	-82	-44	-56	-82	-183	-124	-96	-117	-199	-114	-163	-92	-70	-97
5D Mean	-277	-175	-191	-133	-101	-353	-535	-413	-403	-449	-393	-274	-270	-356	-408	-406	-506	-539	-395	-230	-88	-256	-387	-378	-330

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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	Mean
1	61	65	71	52	45	68	136	122	172	268	168	120	140	769	645	462	362	511	292	320	359	379	188	118	246
2	161	179	214	266	355	317	360	504	689	188	73	173	106	178	157	221	771	874	522	570	402	384	353	364	349
3	391	408	474	360	585	429	468	504	524	554	337	370	668	634	415	215	126	818	668	578	625	566	461	529	488
4	371	548	902	574	360	218	112	249	219	296	161	61	68	73	62	79	243	329	232	91	59	46	62	71	229
5	185	366	348	194	193	75	174	192	191	136	165	59	47	55	55	71	98	218	270	165	69	54	84	180	152
Q	148	71	90	76	69	135	170	316	316	272	252	148	72	129	158	231	161	242	376	642	351	241	205	100	197
7	76	83	325	772	731	623	552	646	369	124	82	47	49	64	57	63	222	215	337	435	577	400	632	508	333
8	451	508	444	205	212	333	380	403	270	200	221	240	338	371	561	721	795	664	523	229	88	238	327	299	376
9	725	486	493	403	317	620	638	470	750	930	520	144	283	298	744	630	538	334	138	198	220	712	520	499	484
D	323	611	338	245	330	235	184	141	99	136	101	108	70	172	278	181	76	51	51	83	48	62	149	226	179
11	269	140	89	56	55	84	358	338	133	349	662	359	615	588	808	1183	1246	952	654	487	249	667	738	535	484
12	305	816	707	272	157	163	182	328	404	314	426	414	448	476	419	421	586	766	845	648	586	348	299	368	446
13	629	672	476	617	345	382	364	201	158	393	373	459	300	322	92	274	890	1185	963	686	274	280	204	190	447
14	259	146	78	127	177	170	265	332	273	169	408	410	361	679	549	200	645	593	708	643	199	206	318	755	361
D	347	133	128	116	241	592	795	1004	719	810	1130	943	837	968	698	614	686	715	510	394	121	233	824	752	596
16	611	455	503	228	113	391	833	312	359	434	254	367	149	107	138	123	389	978	799	298	96	64	101	238	347
17	528	235	262	316	221	167	123	307	367	375	700	365	575	339	101	112	113	275	412	343	515	584	467	660	352
18	604	468	254	226	377	353	326	563	274	275	402	179	306	167	96	79	61	65	61	155	51	57	87	81	232
19	71	47	52	57	79	72	190	269	264	224	432	297	138	67	149	573	372	208	200	270	162	150	84	59	187
Q	73	132	379	468	379	350	368	151	138	114	274	526	382	399	221	309	298	576	345	104	66	89	80	230	269
21	220	233	129	224	476	416	313	92	120	106	346	641	488	272	445	567	313	212	248	256	278	120	294	433	302
22	286	267	507	287	221	430	316	381	569	551	472	767	381	100	72	97	402	621	470	216	491	504	302	434	381
23	146	76	102	149	85	40	81	91	84	45	78	159	229	267	81	97	104	82	186	90	77	84	408	543	141
D	292	378	728	653	585	1125	1215	1093	997	553	174	191	199	530	550	326	446	605	744	597	463	543	710	590	595
25	236	107	77	67	135	425	367	117	190	137	261	559	689	497	376	421	559	282	251	123	144	121	148	76	265
Q	58	55	54	75	254	116	109	64	123	122	256	214	105	76	95	77	83	61	51	218	293	439	220	121	139
27	184	353	171	200	197	249	408	330	143	88	49	54	54	75	84	123	399	621	639	476	271	247	370	620	267
28	394	275	339	528	457	337	299	391	251	353	259	283	434	382	315	379	801	724	938	755	464	528	650	608	464
29	271	183	418	827	948	868	330	622	355	85	37	42	51	64	57	61	59	50	39	33	34	40	129	118	238
30	196	135	98	123	252	435	628	639	405	253	176	114	286	566	319	718	897	633	292	215	131	183	197	254	339
Q	271	422	250	161	220	212	103	126	114	81	58	77	185	318	268	385	246	58	160	338	301	513	427	271	232
Mean	294	292	305	288	296	334	358	359	323	288	300	286	292	322	292	323	418	468	416	343	260	292	323	349	326
5Q Mean	146	192	155	115	164	108	142	164	201	167	232	159	109	129	145	267	192	157	211	326	235	279	204	146	181
5D Mean	448	318	388	291	262	562	767	643	591	615	548	400	416	498	587	575	661	716	569	394	229	443	578	522	501

Date	AO Index (Provisional, hourly mean values, unit nT)																								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean
1	11	3	0	3	6	2	9	10	12	-42	-35	10	-4	-266	-178	-70	19	-22	-6	-21	-1	-1	61	20	-19
2	-10	-31	-38	-55	-54	-40	-74	-102	-94	23	11	3	2	-4	-7	-16	-208	-236	-46	-96	-8	-14	6	-50	-47
3	-4	3	-79	-62	11	8	-64	-112	-55	21	24	-12	-148	-85	-48	7	42	-132	-134	-91	-55	-95	-43	-5	-46
4	-2	-138	-158	-66	17	52	36	13	0	-23	-1	11	15	19	12	11	-42	-36	-63	-4	20	14	-1	2	-12
5	-29	-100	-58	19	22	37	52	1	-41	1	4	10	5	7	2	6	-4	-63	-71	-23	-1	9	17	-33	-9
Q	-23	0	6	10	19	28	37	27	7	41	0	43	20	33	-4	-43	-27	-24	4	14	59	67	39	29	15
7	24	24	-47	-203	-144	-15	-28	-29	39	-6	-1	6	5	11	6	1	-1	-7	-65	-57	-5	-35	-100	55	-23
8	-20	-88	-58	43	37	-25	-4	6	16	35	-11	-26	-27	-33	-78	-48	-109	-47	-22	38	44	23	25	-22	-14
9	-190	-59	84	-4	111	51	-115	-37	-179	-286	-37	1	-26	-69	-222	-185	-130	-42	32	-17	0	-142	-55	-105	-67
10	-77	-123	-1	-9	-41	59	59	28	27	15	13	8	9	-4	-30	-8	-2	0	1	-4	4	5	-1	-3	-3
Q	36	52	27	17	13	21	-28	52	48	19	-124	-108	-123	-158	-175	-342	-541	-447	-247	-84	42	-102	-138	-164	-102
12	-47	-280	-207	14	12	3	23	-42	-55	-30	-85	-74	-40	-122	-125	-56	-126	-173	-173	-118	-111	-49	-25	-57	-81
13	-116	-177	-27	-110	9	25	-1	21	20	-46	-56	-101	-49	-51	25	-20	-189	-421	-342	-129	24	15	26	-7	-69
14	-49	-3	24	23	-2	1	-52	-66	-4	22	-24	-61	-68	-133	-101	-14	-127	-150	-85	-91	7	10	-45	-226	-50
15	-66	24	20	13	24	-107	-187	-251	-120	-335	-407	-304	-160	-193	-15	18	-107	-114	-10	5	48	79	-232	-278	-110
D	-47	-79	1	56	23	-43	-49	-8	-15	-34	-26	46	27	23	2	-8	-40	-275	-239	-14	29	22	10	-11	-27
17	-147	-32	15	-50	-15	16	20	14	-20	-65	-121	-42	-135	-4	29	7	-5	-45	-96	-20	-83	-78	-67	-213	-47
18	-97	-44	6	-9	-59	-56	-27	-92	-26	-27	-42	-18	-21	10	18	-13	10	-2	2	-36	6	10	-12	-7	-22
19	0	13	19	10	20	6	-15	-65	-56	-18	-48	-25	7	6	-2	-128	-84	-30	5	-60	4	17	18	16	-16
20	17	2	-53	-88	-56	70	24	51	58	43	35	-118	-51	-79	-33	-45	-14	-129	-59	10	29	8	9	-56	-17
21	-59	-19	17	-5	-61	-9	-34	20	17	22	19	-238	-214	-42	-33	-68	-41	-2	-1	0	-18	8	-22	-92	-35
22	-42	-55	-150	-12	-12	-77	-69	-78	-76	-48	-37	-96	-85	8	14	0	-99	-133	-61	11	-97	-115	-38	-122	-61
23	-11	24	10	-20	-2	12	13	7	21	10	20	-15	-42	-52	4	-5	-4	10	-39	-5	15	1	-81	-106	-9
24	1	-20	-125	-24	-27	-283	-376	-215	-271	-74	0	-6	-27	-135	-162	-73	-61	-27	-92	-54	7	-34	-73	-25	-91
25	97	32	17	6	16	-41	-114	15	16	25	8	-110	-127	-65	-38	-62	-106	-41	-46	15	18	9	-6	11	-19
Q	13	16	12	1	-52	-9	-3	18	11	-6	-58	-59	-14	15	0	7	-1	11	3	-58	-52	-114	-8	-2	-13
27	-29	-103	-4	-5	-20	-22	-101	-18	8	30	16	11	5	4	15	3	-61	-59	-101	-23	14	39	17	-38	-17
28	15	3	-49	-134	-22	46	-31	13	2	-54	-7	3	21	15	-30	-36	-153	-22	-119	-55	33	-26	-162	-156	-37
29	46	32	-55	-212	-186	-135	-23	-130	-38	23	8	2	8	10	10	9	15	19	24	22	21	28	21	-19	-19
30	3	29	27	22	34	14	4	-11	45	68	56	30	-9	-52	3	-48	-147	-37	19	34	34	15	-4	14	6
31	-12	-133	27	37	36	23	28	13	1	14	13	12	25	-29	-48	-93	-27	16	-5	-52	4	-97	-23	4	-10
Mean	-26	-39	-25	-25	-11	-12	-35	-30	-22	-22	-28	-39	-39	-45	-38	-42	-76	-85	-65	-30	1	-17	-28	-51	-35
5Q Mean	-10	-40	1	15	5	17	19	-1	-15	6	-17	-3	8	6	-10	-50	-28	-18	-12	-35	2	-23	8	2	-7
5D Mean	-53	-16	1	11	28	-72	-151	-91	-107	-142	-118	-74	-61	-106	-114	-118	-175	-181	-111	-32	25	-35	-97	-116	-79

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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	Mean
1	67	48	57	95	151	168	202	103	92	132	75	22	25	64	29	28	68	60	87	72	100	174	131	65	88
Q	50	33	23	30	46	83	52	39	50	108	122	74	25	12	19	7	5	13	20	16	26	22	27	32	39
Q	3	24	20	35	42	38	29	9	13	18	15	9	10	12	9	11	22	26	14	15	26	34	29	35	23
D	4	30	24	52	53	53	52	58	52	51	35	63	45	37	105	249	156	99	217	201	194	213	98	141	98
D	5	183	177	219	190	142	180	59	190	240	130	186	243	326	327	331	456	317	269	122	57	45	47	20	199
6	5	9	11	15	10	6	13	3	4	13	31	43	52	23	62	31	52	35	26	75	129	128	188	241	50
7	104	76	86	59	141	58	33	36	55	74	104	48	118	143	94	64	99	173	242	211	188	239	246	200	120
8	96	42	27	68	78	143	123	74	178	237	133	149	130	119	71	227	272	271	245	231	157	98	145	235	148
9	235	127	83	72	48	55	61	47	50	33	18	14	19	38	85	107	186	362	306	307	173	153	327	313	134
10	105	177	119	103	140	140	179	140	169	96	76	30	60	90	138	133	120	74	143	106	110	142	70	55	113
11	71	75	55	98	124	65	74	65	40	25	35	53	122	64	33	36	14	19	19	42	58	97	107	148	64
12	177	192	140	206	205	119	67	79	92	42	44	30	23	22	34	28	19	23	33	34	59	45	30	33	74
13	30	31	46	37	116	222	188	181	231	97	160	242	141	124	269	339	217	231	217	145	121	108	112	54	152
D	14	105	183	149	249	200	329	228	164	135	159	75	37	41	29	10	68	88	186	97	47	86	123	159	130
D	15	116	157	97	152	206	169	219	231	176	146	61	49	26	25	48	38	31	30	137	258	205	112	63	121
16	100	77	88	113	274	209	168	85	149	98	69	69	57	53	68	36	99	123	104	85	87	96	80	73	102
17	82	60	54	44	42	88	86	92	97	97	141	63	38	75	70	61	105	237	154	78	39	35	47	33	80
18	45	85	126	118	150	198	85	82	150	114	88	207	80	34	63	131	173	114	89	83	39	36	22	33	93
19	68	98	98	48	38	24	32	34	48	99	93	90	47	78	103	139	171	146	37	22	40	93	113	45	75
20	68	101	196	238	283	254	71	145	190	138	113	165	143	160	238	156	168	107	170	110	51	100	77	142	149
D	21	164	229	187	231	106	136	181	208	175	115	196	89	99	118	336	242	226	236	243	197	184	140	172	184
22	185	165	130	115	91	47	61	98	66	75	64	87	81	58	58	43	85	194	235	161	188	134	80	52	106
23	46	37	54	42	55	35	30	27	35	46	51	33	23	17	23	36	56	148	184	149	65	49	52	182	62
24	86	69	41	41	25	23	56	54	38	40	73	52	68	56	69	61	55	83	80	63	40	38	53	52	55
25	104	104	133	98	77	114	122	103	116	199	172	114	61	40	28	21	25	29	43	52	105	120	84	74	89
Q	26	56	32	23	29	24	47	72	52	45	52	48	55	38	28	26	26	42	48	31	25	22	27	33	39
Q	27	39	36	45	56	52	43	83	102	61	39	47	76	52	67	30	41	65	73	54	38	33	61	66	75
Q	28	38	35	53	45	25	31	23	23	25	46	52	63	49	45	39	36	51	49	43	31	25	24	28	38
29	33	36	31	32	33	35	38	35	33	34	40	48	33	37	75	81	97	84	177	164	248	334	266	249	95
30	237	230	96	121	113	179	89	85	67	83	96	84	164	119	73	64	117	130	97	71	94	73	82	115	112
Mean	93	90	86	93	107	108	91	87	96	88	85	83	74	70	79	99	107	123	124	105	100	107	101	104	96
5Q Mean	41	31	35	40	37	47	53	46	38	48	55	51	41	35	26	24	30	41	37	28	28	32	34	40	38
5D Mean	114	110	128	123	149	145	132	167	181	116	139	161	130	122	168	260	221	180	193	169	165	151	101	90	151

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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	Mean
Q	-59	-33	-36	-144	-243	-275	-235	-97	-161	-169	-69	-29	-23	-100	-80	-30	-99	-235	-128	-149	-115	-352	-198	-35	-129
Q	-30	-22	-21	-39	-76	-154	-85	-65	-93	-97	-134	-124	-39	-26	-25	-33	-34	-29	-22	-19	-50	-39	-24	-34	-55
Q	-62	-57	-76	-88	-32	-26	-23	-24	-27	-34	-37	-33	-32	-34	-35	-41	-47	-83	-54	-34	-19	-100	-31	-27	-44
D	-15	-31	-52	-42	-24	-27	-43	-66	-29	-29	-70	-145	-69	-35	-279	-1373	-1060	-732	-553	-493	-394	-131	-414	-889	-291
D	-322	-327	-743	-612	-505	-654	-691	-452	-572	-620	-741	-422	-498	-792	-854	-951	-661	-413	-552	-117	-28	-57	-96	-141	-476
6	-72	-71	-92	-41	-29	-30	-39	-43	-41	-84	-45	-38	-50	-47	-137	-140	-134	-144	-61	-39	-232	-209	-322	-278	-101
7	-71	-62	-46	-100	-238	-130	-154	-27	-94	-191	-133	-55	-168	-210	-190	-92	-167	-330	-427	-254	-123	-188	-210	-222	-162
8	-68	-30	-27	-45	-42	-114	-210	-123	-242	-537	-288	-159	-149	-174	-129	-433	-472	-544	-383	-262	-59	-159	-259	-401	-221
9	-487	-218	-132	-189	-186	-76	-68	-122	-297	-38	-44	-27	-30	-37	-128	-240	-407	-680	-434	-535	-117	-91	-433	-490	-229
10	-88	-218	-404	-214	-203	-413	-286	-242	-407	-199	-122	-128	-195	-378	-396	-392	-257	-130	-308	-356	-75	-206	-137	-35	-241
11	-47	-45	-42	-132	-194	-134	-40	-28	-38	-38	-43	-50	-129	-126	-21	-36	-36	-33	-31	-28	-28	-78	-158	-254	-74
12	-592	-320	-442	-681	-418	-78	-37	-53	-134	-77	-18	-14	-15	-23	-21	-26	-29	-23	-25	-35	-24	-27	-24	-25	-132
13	-20	-17	-5	-51	-46	-591	-496	-214	-325	-536	-807	-382	-191	-202	-343	-479	-237	-357	-243	-72	-251	-150	-64	-63	-256
14	-97	-377	-517	-273	-251	-330	-277	-401	-200	-303	-139	-16	-24	-20	-34	-77	-155	-510	-193	-70	-107	-342	-414	-235	-282
15	-425	-441	-147	-229	-540	-381	-512	-468	-430	-332	-307	-209	-29	-35	-70	-44	-67	-60	-26	-242	-726	-803	-173	-81	-282
16	-96	-266	-231	-220	-365	-313	-256	-102	-118	-123	-37	-31	-115	-131	-64	-32	-224	-347	-266	-175	-118	-184	-103	-184	-171
17	-150	-113	-111	-83	-45	-194	-284	-183	-134	-349	-262	-61	-51	-109	-186	-128	-108	-318	-180	-23	-1	-7	-36	-24	-131
18	-11	-67	-480	-479	-272	-252	-193	-69	-105	-303	-113	-448	-195	-37	-53	-153	-207	-229	-46	-54	-16	-18	-7	-21	-160
19	-34	-201	-249	-88	-26	-43	-32	-34	-32	-44	-228	-149	-79	-115	-505	-470	-317	-395	-109	-12	-11	-52	-98	-103	-143
20	-68	-83	-390	-537	-464	-432	-72	-86	-214	-236	-183	-555	-282	-259	-526	-278	-237	-88	-105	-51	-36	-86	-141	-181	-233
21	-353	-601	-558	-283	-124	-47	-177	-293	-562	-470	-211	-496	-160	-125	-166	-720	-563	-387	-271	-532	-300	-201	-306	-492	-350
22	-530	-266	-260	-198	-248	-47	-248	-193	-41	-59	-88	-63	-55	-52	-44	-41	-54	-326	-500	-173	-109	-265	-123	-24	-167
23	-24	-11	-24	-124	-93	-30	-35	-42	-26	-85	-102	-125	-23	-18	-27	-29	-112	-356	-346	-210	-144	-31	-27	-302	-98
24	-243	-161	-103	-53	-36	-36	-19	-38	-113	-53	-31	-49	-52	-24	-146	-101	-40	-75	-18	-13	-12	-18	-21	-34	-62
25	-108	-114	-92	-64	-114	-176	-326	-142	-100	-456	-355	-226	-35	-24	-20	-12	-4	-4	-34	-21	-66	-123	-153	-65	-118
26	-21	-19	-17	-27	-30	-19	-74	-157	-96	-34	-26	-41	-64	-21	-17	-17	-12	-4	-13	-22	-22	-28	-34	-34	-35
Q	-29	-28	-22	-50	-48	-28	-88	-109	-35	-29	-36	-62	-62	-65	-79	-81	-149	-104	-36	-23	-29	-112	-76	-70	-60
Q	-35	-29	-23	-42	-27	-33	-21	-32	-23	-25	-23	-32	-106	-116	-34	-20	-34	-49	-17	-17	-18	-13	-19	-20	-34
29	-21	-11	-8	-26	-31	-23	-24	-26	-25	-25	-27	-23	-26	-20	-42	-91	-146	-263	-273	-89	-111	-296	-319	-279	-93
30	-300	-203	-57	-51	-24	-171	-69	-55	-46	-73	-79	-24	-129	-125	-36	-43	-199	-134	-63	-23	-86	-116	-158	-103	-99
Mean	-149	-148	-180	-173	-165	-175	-170	-132	-158	-188	-159	-140	-102	-116	-156	-206	-208	-246	-190	-138	-114	-149	-152	-171	-162
5Q Mean	-35	-31	-31	-49	-42	-52	-58	-77	-54	-43	-51	-58	-60	-52	-38	-38	-55	-53	-28	-23	-27	-58	-36	-37	-45
5D Mean	-227	-283	-301	-243	-247	-340	-383	-298	-383	-397	-427	-330	-189	-237	-342	-633	-517	-389	-329	-291	-339	-268	-210	-333	-331

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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	Mean
1	128	82	94	239	395	443	438	201	253	303	145	52	49	166	109	58	168	295	217	223	217	527	331	101	218
Q	81	56	45	69	122	238	138	104	144	206	257	200	65	38	45	42	40	44	43	36	77	62	51	66	95
Q	87	78	112	131	71	66	54	43	41	52	52	43	44	47	46	53	70	110	70	50	47	134	61	62	68
D	46	55	105	96	77	80	103	120	81	64	147	209	115	73	385	1623	1216	833	772	695	589	345	513	1031	391
D	505	505	964	803	648	835	751	643	813	751	928	666	826	1118	1183	883	1118	730	822	239	85	103	143	162	676
6	78	81	104	57	41	38	53	47	46	98	77	82	103	71	200	173	187	179	88	115	362	338	510	520	152
7	176	138	134	161	379	188	188	64	151	266	239	104	288	354	284	157	267	504	670	466	312	428	457	423	283
8	165	73	55	114	121	258	334	198	421	775	423	310	280	294	202	661	745	816	629	494	217	259	405	636	370
9	723	347	216	263	235	132	130	170	347	72	62	41	50	75	213	348	594	1043	741	843	291	245	760	804	364
10	193	395	524	319	344	554	466	383	577	297	198	160	257	470	535	526	378	205	452	463	186	348	208	92	355
11	118	120	98	231	319	200	116	94	79	64	78	104	252	192	55	74	52	53	52	71	86	177	266	403	140
12	770	513	583	888	624	198	104	132	227	120	62	45	39	47	57	56	49	48	59	70	84	73	56	59	207
13	50	48	51	89	163	815	684	395	557	635	969	625	333	327	614	820	455	589	461	219	373	259	177	118	409
14	203	561	667	523	453	661	506	565	336	463	216	54	65	51	45	146	244	698	290	118	194	466	574	365	353
D	541	599	245	382	746	550	731	700	607	480	470	271	80	63	96	93	106	92	57	380	985	1008	286	145	405
16	197	345	320	334	640	522	424	187	267	222	108	101	173	185	133	68	324	471	371	262	207	280	184	258	274
17	233	173	166	128	88	283	372	276	231	446	404	126	89	185	257	190	215	556	336	103	41	43	84	57	212
18	56	153	607	597	423	451	278	151	256	417	203	657	276	72	117	286	281	344	136	138	56	55	30	55	254
19	103	299	348	137	64	68	64	70	80	143	322	240	126	193	609	611	490	542	147	35	52	146	211	149	219
20	136	186	587	776	749	688	144	232	405	375	298	722	426	421	765	436	407	196	275	163	88	186	219	324	383
D	565	766	788	471	356	154	313	475	771	646	328	693	250	224	286	1056	806	615	508	776	498	385	447	665	535
22	716	432	391	314	341	96	311	292	108	134	152	150	137	110	103	85	140	522	736	335	298	400	204	78	274
23	71	49	79	167	149	67	67	70	62	131	154	158	47	36	51	67	169	504	531	361	210	80	80	485	160
24	330	230	145	95	62	60	77	93	152	94	105	102	122	81	216	164	97	159	99	77	53	58	76	88	118
25	212	219	226	163	192	291	449	246	216	656	528	340	97	65	49	34	30	35	78	74	173	244	238	140	208
Q	78	52	40	57	55	68	148	210	142	88	74	88	121	60	46	44	39	47	62	55	49	52	62	67	75
Q	69	65	68	107	100	73	172	213	97	68	83	139	114	132	109	122	215	178	91	63	64	174	143	145	117
Q	75	65	76	88	52	58	53	56	47	51	70	85	170	165	80	60	71	101	61	50	40	40	45	49	172
29	54	47	39	59	64	58	63	61	59	59	67	72	59	58	118	173	245	348	450	254	360	631	586	529	188
30	537	434	154	173	138	351	159	140	114	157	177	109	295	246	110	108	318	265	161	95	182	190	241	220	211
Mean	243	238	267	267	273	284	263	221	256	277	246	224	178	187	237	307	317	370	315	244	216	257	254	276	259
5Q Mean	78	63	68	90	80	100	113	125	94	93	107	111	102	88	65	64	87	96	66	53	57	92	72	77	85
5D Mean	341	394	430	368	398	486	516	466	565	515	568	492	320	361	512	895	740	571	524	461	506	420	313	424	483

AO Index (Provisional, hourly mean values, unit nr)		1993																							
		April																							
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	Mean
Q	3	6	10	-23	-44	-52	-15	2	-34	-18	2	-3	0	-18	-25	0	-15	-86	-20	-37	-7	-88	-33	14	-20
Q	10	4	1	-4	-14	-35	-15	-12	-20	5	-6	-24	-6	-6	-3	-12	-13	-7	0	-1	-11	-8	1	-1	-7
Q	-18	-17	-19	-22	3	6	2	-2	-6	-7	-10	-12	-10	-10	-12	-14	-12	-28	-19	-8	3	-32	-1	3	-10
D	6	-3	0	5	13	11	6	-6	10	2	3	-40	-11	0	-86	-561	-451	-316	-167	-145	-99	40	-157	-373	-96
D	-69	-75	-261	-210	-181	-236	-315	-130	-165	-244	-276	-88	-84	-233	-263	-109	-101	-47	-140	2	14	-5	-23	-60	-137
6	-33	-30	-39	-12	-9	-11	-13	-19	-18	-35	-6	2	0	-11	-37	-53	-40	-54	-17	18	-51	-40	-66	-18	-25
7	16	6	19	-20	-47	-35	-60	4	-19	-58	-14	-3	-24	-33	-47	-13	-34	-78	-91	-20	32	25	17	-11	-20
8	13	5	0	11	17	14	-43	-24	-31	-149	-77	-5	-9	-27	-28	-102	-99	-136	-68	-15	48	-30	-56	-82	-36
9	-125	-45	-24	-58	-69	-10	-3	-37	-123	-2	-12	-5	-5	0	-21	-65	-109	-158	-64	-113	27	30	-52	-88	-47
10	8	-20	-142	-55	-31	-135	-53	-50	-118	-51	-23	-48	-67	-143	-128	-129	-68	-27	-82	-124	17	-31	-32	9	-63
11	11	14	6	-16	-34	-34	16	17	1	-6	-4	1	-3	-31	5	0	-10	-6	-5	6	14	9	-24	-52	-5
12	-207	-63	-150	-237	-106	20	14	12	-21	-17	12	7	3	0	5	0	-5	0	4	0	17	8	3	3	-29
13	4	6	19	-7	34	-184	-153	-16	-46	-218	-323	-69	-25	-38	-36	-69	-10	-63	-13	36	-64	-20	23	-4	-51
D	3	-96	-183	-11	-25	0	-24	-118	-32	-71	-31	9	7	3	-11	-4	-33	-161	-47	-10	-10	-109	-127	-51	-47
D	-153	-141	-24	-38	-166	-105	-146	-118	-126	-92	-72	-73	10	-4	-21	1	-13	-13	1	-51	-233	-298	-30	-8	-80
16	2	-94	-71	-53	-45	-51	-43	-8	15	-12	15	18	-29	-38	1	1	-62	-111	-80	-44	-14	-43	-11	-55	-34
17	-33	-25	-27	-18	-1	-52	-98	-45	-18	-125	-60	0	-6	-17	-57	-32	0	-40	-13	27	18	13	4	5	4
18	16	8	-176	-180	-60	-26	-53	6	21	-94	-12	-120	-57	-1	4	-10	-66	-56	21	14	10	8	6	5	-33
19	16	-51	-75	-19	5	-9	0	0	7	26	-67	-29	-15	-18	-200	-164	-72	-124	-35	4	14	20	7	-28	-33
20	0	8	-96	-148	-90	-88	0	29	-12	-48	-34	-194	-69	-48	-143	-60	-33	9	31	28	7	6	-31	-19	-41
D	-69	-218	-163	-48	52	28	-20	-55	-176	-146	-47	-149	-34	-13	-23	-191	-160	-79	-17	-144	-50	-8	-82	-159	-82
22	-172	-50	-64	-41	-78	0	-93	-47	11	7	-11	11	12	2	7	1	15	-65	-132	-5	39	-64	-21	13	-30
23	10	12	14	-40	-18	2	-2	-7	4	-19	-25	-45	0	0	-1	3	-27	-103	-80	-29	-38	8	11	-59	-18
24	-78	-45	-30	-5	-5	-6	17	7	-37	-6	20	0	7	15	-38	-19	7	3	30	24	13	9	15	8	-3
25	-2	-4	19	16	-17	-30	-102	-19	7	-128	-90	-55	12	7	3	4	9	12	4	15	19	0	-33	4	-14
Q	17	6	2	0	-3	12	-1	-52	-25	8	10	2	-4	7	4	4	5	18	17	4	1	-2	-2	0	1
Q	27	4	3	11	2	1	6	-2	-3	12	4	6	-4	0	-24	-19	-41	-15	8	7	1	-24	-5	2	-2
Q	28	1	3	14	1	-1	-3	4	-4	0	10	9	-20	-33	4	9	0	0	15	13	6	5	1	3	1
29	5	11	10	2	0	5	6	4	3	4	6	11	3	7	15	-4	-23	-88	-47	37	68	18	-26	-14	0
30	-31	13	19	34	43	3	9	14	10	4	8	29	16	-3	18	10	-40	-2	16	23	3	-21	-37	5	6
Mean	-28	-29	-46	-39	-29	-33	-39	-22	-30	-49	-37	-28	-13	-22	-37	-53	-50	-60	-33	-16	-6	-20	-25	-33	-32
5Q Mean	2	0	1	-4	-2	-2	-2	-14	-7	2	1	-3	-8	-8	-6	-6	-12	-6	4	3	0	-12	-1	1	-3
5D Mean	-56	-86	-85	-59	-49	-97	-125	-65	-100	-139	-143	-83	-28	-57	-85	-185	-147	-103	-67	-60	-86	-58	-53	-120	-89

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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	Mean
1	145	139	126	256	264	241	198	102	159	147	195	175	80	29	15	11	10	11	16	14	18	14	10	12	99
2	12	6	6	29	62	100	133	78	45	39	58	93	91	43	35	16	27	26	73	105	152	85	78	54	60
3	61	67	36	15	25	58	106	135	100	140	224	201	153	149	132	45	54	37	45	64	45	42	56	41	85
4	50	39	21	12	18	20	38	75	49	35	23	22	18	53	54	54	20	33	30	21	16	34	16	27	32
5	24	50	69	62	47	53	86	120	132	111	116	129	171	61	12	15	15	23	24	21	19	27	25	34	60
6	49	94	133	95	138	57	39	72	71	111	82	72	84	96	110	188	189	183	226	237	157	171	177	141	124
7	119	63	75	74	97	90	58	26	90	116	98	110	53	117	154	142	216	220	235	386	261	271	277	230	149
D 8	269	301	218	129	83	136	189	235	132	330	215	189	237	155	89	133	134	184	129	161	260	228	219	145	188
D 9	212	248	219	395	150	167	140	267	219	94	114	165	81	140	168	182	175	167	158	278	292	270	314	180	200
D 10	180	233	341	289	272	371	307	241	210	114	154	188	225	186	93	58	47	111	149	183	216	218	183	78	194
11	51	42	37	22	16	21	21	20	34	51	68	52	41	15	22	30	37	38	38	36	30	49	41	34	35
12	46	39	83	185	200	179	96	75	140	133	90	194	165	286	297	220	181	113	174	297	319	280	242	226	177
13	225	175	207	125	133	52	22	8	7	12	34	49	54	49	83	44	35	45	84	164	232	156	132	138	94
14	107	68	74	109	137	84	82	40	127	165	87	214	223	156	47	38	32	40	30	34	39	74	93	54	90
15	37	26	38	39	42	33	39	92	139	77	48	57	93	85	71	71	54	95	226	184	84	70	110	98	80
16	117	45	119	226	132	93	52	36	23	22	84	86	77	119	82	64	44	40	33	56	83	97	140	150	84
D 17	110	76	181	203	214	220	80	35	43	105	105	94	100	90	88	131	76	68	60	120	223	186	54	58	113
18	35	23	15	14	12	43	20	20	35	53	78	41	35	37	93	60	61	58	45	64	78	167	173	88	56
19	47	31	70	113	106	112	148	143	97	99	70	67	46	94	84	82	33	63	184	220	119	82	75	50	93
20	47	40	40	106	68	131	186	234	94	223	146	76	103	65	55	25	26	30	38	35	28	28	23	25	78
Q 21	18	22	41	35	17	20	15	20	36	40	32	38	25	20	18	12	21	26	43	37	27	35	25	35	27
Q 22	32	25	35	62	31	30	35	19	30	37	134	100	55	39	45	32	39	47	42	48	41	30	25	23	43
Q 23	26	23	16	12	8	6	13	28	61	37	52	62	48	81	74	27	11	29	49	56	53	34	29	22	36
Q 24	24	24	47	50	47	45	92	85	87	53	47	62	60	68	41	16	10	27	37	34	26	26	22	20	44
Q 25	15	15	23	22	24	26	22	15	20	21	26	42	30	24	24	21	16	23	32	38	33	34	28	30	25
26	27	27	28	45	34	24	44	60	75	78	94	118	88	67	54	39	39	52	61	53	52	44	38	52	54
27	57	55	58	121	256	353	390	296	99	59	117	204	215	201	97	74	69	86	93	129	113	145	169	118	149
28	138	199	185	305	127	119	91	90	113	197	145	99	116	89	44	101	315	325	289	174	98	58	134	226	157
29	183	225	183	76	55	32	60	67	93	122	158	45	12	22	43	43	43	35	31	53	35	54	64	51	74
30	37	26	33	45	85	66	68	54	47	33	44	51	104	82	46	22	17	61	41	31	29	23	34	23	46
31	20	45	27	23	15	8	7	14	28	23	37	79	77	118	55	17	21	31	24	51	41	33	27	25	35
Mean	81	80	89	106	94	96	92	90	85	92	95	102	95	91	75	64	66	75	88	109	103	98	97	80	89
50 Mean	23	21	32	36	25	25	35	33	46	37	58	60	43	46	40	21	19	30	40	42	36	31	25	26	35
5D Mean	181	211	228	264	169	202	161	173	143	168	146	147	151	132	96	121	149	171	157	183	217	192	180	137	170

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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	Mean
	-208	-244	-366	-294	-264	-181	-128	-68	-60	-181	-160	-69	-111	-99	-37	-18	-18	-23	-20	-20	-19	-16	-14	-17	-110
1	-21	-29	-24	-51	-60	-117	-63	-52	-24	-26	-26	-135	-125	-56	-23	-32	-24	-19	-49	-67	-224	-105	-43	-25	-59
2	-29	-149	-117	-27	-20	-22	-89	-206	-93	-38	-201	-374	417	-323	-266	-95	-23	-14	-19	-9	-15	-30	-34	-21	-110
3	-26	-20	-20	-38	-31	-28	-26	-87	-40	-25	-20	-21	-19	-40	-78	-85	-65	-88	-19	-24	-27	-56	-41	-30	-68
4	-23	-30	-74	-74	-61	-36	-150	-130	-165	-59	-41	-70	-233	-190	-52	-26	-30	-17	-15	-15	-22	-34	-36	-36	-68
5	-36	-96	-200	-118	-95	-97	-22	-22	-36	-60	-252	-75	-87	-92	-216	-401	-286	-311	-296	-270	-104	-70	-128	-126	-146
6	-60	-31	-63	-201	-219	-216	-52	-33	-48	-141	-107	-178	-55	-130	-281	-280	-256	-78	-53	-264	-196	-108	-114	-423	-149
7	-873	-790	-477	-58	-23	-78	-162	-519	-573	-426	-221	-449	-646	-362	-223	-190	-161	-200	-143	-167	-331	-382	-382	-185	-334
D	-360	-551	-586	-812	-463	-204	-168	-483	-673	-93	-124	-392	-258	-409	-486	-283	-395	-442	-281	-426	-465	-236	-559	-710	-411
D	-527	-582	-665	-830	-634	-650	-638	-578	-629	-698	-683	-571	-609	-323	-100	-48	-34	-76	-193	-294	-137	-244	-238	-94	-420
D	-33	-57	-86	-46	-47	-41	-44	-41	-29	-29	-59	-51	-32	-31	-44	-42	-80	-29	-25	-7	-38	-57	-61	-37	-44
11	-29	-43	-92	-198	-196	-162	-211	-85	-118	-123	-94	-215	-498	-502	-571	-512	-494	-346	-343	-370	-493	-278	-225	-453	-277
12	-394	-333	-422	-237	-143	-54	-32	-27	-37	-34	-25	-25	-25	-25	-42	-96	-45	-20	-47	-73	-302	-194	-126	-129	-121
13	-93	-82	-97	-236	-259	-126	-166	-68	-94	-306	-148	-279	-631	-282	-59	-75	-40	-50	-33	-9	-24	-46	-72	-36	-138
14	-30	-30	-25	-43	-41	-39	-41	-38	-111	-236	-50	-29	-79	-88	-175	-116	-100	-71	-316	-282	-21	-33	-126	-174	-95
15	-221	-137	-127	-442	-291	-134	-30	-22	-24	-31	-46	-71	-92	-216	-202	-103	-45	-54	-14	-14	-23	-60	-145	-141	-345
16	-212	-85	-211	-437	-329	-248	-109	-34	-28	-83	-114	-56	-54	-119	-109	-195	-63	-53	-33	-65	-447	-368	-15	-21	-145
17	-31	-27	-17	-26	-31	-32	-39	-32	-22	-36	-46	-100	-37	-81	-32	-38	-25	-116	-70	-36	-50	-82	-386	-111	-63
18	-40	-35	-74	-185	-144	-122	-113	-305	-325	-214	-122	-36	-31	-164	-224	-210	-65	-78	-198	-367	-110	-93	-71	-101	-143
19	-71	-81	-63	-116	-157	-239	-480	-370	-152	-330	-124	-101	-160	-161	-167	-98	-83	-27	-20	-37	-22	-20	-24	-24	-130
20	-19	-23	-44	-41	-34	-31	-35	-33	-35	-45	-42	-40	-35	-27	-45	-26	-24	-21	-34	-22	-54	-68	-45	-25	-35
Q	-23	-27	-25	-116	-45	-27	-25	-27	-26	-35	-65	-62	-54	-37	-27	-32	-27	-16	-11	-10	-52	-33	-23	-20	-35
Q	-22	-22	-18	-24	-29	-35	-37	-27	-59	-40	-40	-36	-39	-94	-107	-92	-76	-39	-33	-56	-73	-54	-39	-32	-47
Q	-27	-19	-39	-31	-38	-27	-37	-92	-168	-40	-25	-30	-60	-127	-85	-43	-29	-25	-25	-33	-29	-31	-34	-31	-47
Q	-27	-23	-20	-29	-31	-31	-39	-38	-30	-27	-25	-25	-23	-21	-9	-21	-15	-15	-15	-13	-19	-28	-27	-19	-24
Q	-22	-21	-19	-29	-41	-37	-30	-32	-49	-39	-38	-84	-94	-62	-48	-59	-81	-73	-20	-20	-21	-26	-24	-22	-41
26	-19	-16	-5	-34	-186	-379	-468	-274	-52	-14	-28	-91	-374	-210	-77	-28	-50	-10	-39	-26	-33	-65	-99	-117	-112
27	-100	-104	-284	-383	-121	-108	-48	-42	-63	-76	-232	-207	-134	-130	-144	-81	-252	-215	-206	-168	-51	-49	-121	-334	-152
D	-289	-409	-465	-161	-130	-67	-47	-136	-124	-155	-442	-184	-53	-26	-31	-33	-61	-80	-53	-73	-35	-42	-72	-61	-135
29	-23	-17	-19	-47	-99	-93	-61	-39	-48	-49	-30	-37	-131	-113	-54	-53	-51	-75	-80	-37	-21	-19	-36	-31	-53
30	-27	-36	-16	-37	-45	-49	-60	-52	-45	-40	-59	-58	-150	-170	-176	-95	-85	-35	-39	-53	-49	-48	-25	-20	-61
31	-126	-133	-153	-174	-138	-119	-117	-128	-128	-120	-119	-133	-172	-151	-135	-113	-99	-87	-88	-107	-114	-98	-109	-122	-124
Mean	-23	-22	-29	-48	-35	-30	-34	-43	-63	-37	-39	-38	-42	-61	-54	-42	-34	-23	-23	-26	-45	-42	-33	-25	-37
5Q	-414	-422	-444	-504	-314	-257	-225	-331	-393	-275	-274	-335	-340	-268	-212	-159	-181	-197	-171	-224	-286	-255	-263	-268	-292

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Date	1993																								
	May												1993												
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean
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2	34	35	31	80	123	218	198	130	69	66	85	229	218	101	59	48	51	45	122	173	376	190	122	80	120
3	90	217	155	43	46	81	196	342	194	180	426	577	571	473	399	142	78	51	65	74	62	73	91	63	195
4	77	60	42	50	50	48	65	163	90	62	44	44	37	95	133	141	86	122	50	45	44	91	58	73	129
5	47	81	143	136	108	90	236	251	298	172	157	200	405	252	64	42	45	41	40	44	50	61	61	70	129
6	86	191	333	214	234	155	61	96	108	172	335	148	172	188	327	590	477	496	522	508	262	241	306	269	270
7	180	95	138	275	317	308	111	60	139	258	206	288	110	249	436	423	473	299	289	651	457	380	393	654	299
8	1143	1093	696	188	107	215	352	756	707	757	436	638	884	518	313	323	296	385	273	328	592	611	601	331	523
D	572	800	806	1209	614	372	309	752	894	188	240	558	340	549	655	466	571	610	440	706	758	507	874	891	612
D	709	817	1008	1120	907	1022	947	820	840	812	838	759	835	509	194	107	82	188	343	477	354	464	422	174	615
11	85	101	124	70	63	62	65	62	64	81	128	104	74	47	67	72	119	68	63	44	68	107	102	72	80
12	76	84	175	384	398	342	309	161	259	258	186	410	665	789	869	733	676	460	517	668	814	559	467	680	456
13	619	509	630	362	278	107	55	37	45	51	69	75	81	76	125	141	80	65	131	238	534	351	258	268	216
14	201	152	171	347	398	211	248	109	222	471	237	495	854	440	107	114	73	91	64	43	64	121	166	90	229
15	68	57	64	83	84	72	66	131	251	315	100	87	173	173	248	189	154	168	543	466	106	103	237	273	175
16	339	182	246	669	423	228	83	59	48	54	132	158	170	335	285	167	90	95	48	79	144	243	282	497	211
17	323	161	393	641	544	469	189	69	72	189	220	151	156	210	198	326	141	122	94	186	672	554	70	80	260
18	67	51	33	40	43	76	60	52	58	90	126	143	74	119	126	99	86	175	116	100	129	251	560	200	120
19	88	67	144	299	252	235	263	450	423	314	193	104	78	258	310	294	99	142	382	588	230	176	147	152	237
20	119	122	104	223	226	371	667	606	248	554	272	177	264	227	224	123	110	58	58	73	50	49	48	49	209
Q	38	46	86	77	52	52	51	53	72	86	76	80	61	49	64	39	46	48	78	60	82	104	71	62	64
Q	55	52	60	178	77	57	61	48	58	73	201	163	110	78	73	65	67	64	54	60	94	64	48	44	79
Q	49	46	35	36	37	42	50	56	120	78	93	100	88	176	183	120	88	70	83	113	126	89	68	55	83
Q	52	44	87	81	85	73	129	178	257	94	74	93	122	196	128	60	40	52	62	67	55	58	57	51	91
Q	43	39	44	52	55	58	61	54	51	48	52	68	54	45	34	43	31	39	48	52	53	62	56	51	50
26	51	49	48	74	75	61	74	92	124	117	133	203	183	130	103	100	121	126	82	74	74	71	62	75	96
27	77	72	64	155	442	734	860	572	153	74	146	296	590	411	175	103	119	96	133	156	146	211	269	236	262
28	240	303	470	688	248	229	140	133	176	274	378	306	251	220	189	183	567	540	495	343	150	108	256	562	310
29	473	635	648	238	186	99	108	204	218	277	602	231	66	49	74	77	104	116	84	127	71	97	136	112	210
30	61	43	52	93	186	160	130	93	97	84	75	90	237	197	102	76	69	138	122	68	50	43	71	54	100
31	48	81	44	60	61	57	68	66	73	63	97	138	229	289	232	113	107	67	64	105	90	81	52	46	97
Mean	208	215	244	281	233	217	210	220	214	214	216	237	269	244	211	178	166	163	177	217	219	198	207	204	215
5Q Mean	47	45	62	84	61	56	70	77	111	75	99	100	87	108	96	65	54	54	65	70	82	75	60	52	73
5D Mean	597	634	674	769	484	461	387	506	537	444	422	482	493	401	309	281	331	369	329	408	505	448	444	407	463

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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	Mean	
1	-31	-52	-119	-18	0	29	34	16	49	-16	17	52	-14	-34	-10	-3	-3	-5	-1	-2	0	0	-1	-1	-4	
2	-3	-10	-8	-10	1	-8	34	12	10	6	16	-20	-16	-5	5	-7	1	3	11	18	-35	-9	17	13	0	
3	15	-41	-40	-5	2	17	8	-34	3	50	11	-85	-131	-86	-66	-24	15	11	13	26	14	5	10	9	-12	
4	11	9	0	-12	-6	3	5	-6	4	4	1	0	0	6	-11	-14	-21	-27	4	-1	-5	-10	-11	-1	-3	
5	0	9	-2	-5	-6	8	-31	-5	-15	25	37	29	-30	-63	-19	-4	-7	2	4	0	-5	-3	-4	0	-3	
6	6	-1	-33	-11	21	-19	7	24	17	25	-84	-1	-1	2	-52	-106	-47	-63	-34	-16	26	50	23	7	-10	
7	29	15	5	-62	-60	-62	2	-3	20	-12	-4	-33	0	-6	-62	-68	-19	70	90	60	32	80	81	-96	0	
8	-301	-243	-129	34	29	28	13	-141	-219	-47	-3	-129	-203	-103	-66	-28	-13	-7	-6	-2	-34	-75	-80	-19	-72	
D	-73	-150	-183	-207	-155	-18	-13	-107	-226	0	-4	-113	-88	-134	-158	-49	-109	-137	-60	-73	-85	17	-122	-264	-105	
D	-172	-173	-161	-269	-180	-139	-164	-167	-208	-291	-263	-190	-191	-68	-3	5	6	17	-21	-55	39	-12	-27	-8	-112	
11	8	-6	-23	-11	-14	-9	-10	-9	2	10	5	0	4	-7	-10	-5	-20	4	6	14	-3	-3	-9	-1	-3	
12	8	-1	-4	-6	2	8	-56	-4	10	5	-1	-10	-165	-107	-136	-145	-156	-116	-84	-35	-86	1	8	-112	-49	
13	-84	-78	-106	-55	-5	-1	-4	-8	-14	-12	0	11	14	11	20	-25	-5	12	17	44	-34	-18	2	4	-13	
14	6	-6	-11	-63	-60	-20	-41	-14	16	-69	-29	-32	-202	-62	-5	-17	-3	-4	-1	12	7	13	10	8	-23	
15	3	-2	6	-1	0	-3	6	26	13	-78	0	14	7	-1	-51	-21	-22	11	-44	-48	31	18	-7	-37	-7	
16	-51	-45	-3	-107	-79	-20	10	6	0	-3	18	7	-6	-48	-59	-19	0	-6	9	15	11	-24	0	-97	-20	
17	-50	-4	-15	-116	-57	-13	-14	0	7	10	-4	18	22	-13	-9	-31	6	7	13	26	-111	-90	19	17	-15	
18	2	-1	0	-5	-8	5	-8	-5	6	8	16	-28	0	-21	30	11	17	-28	-12	13	14	41	-106	-11	-3	
19	3	-1	-2	-35	-19	-5	17	-80	-113	-56	-25	15	7	-34	-69	-63	-15	-7	-7	-72	4	-5	1	-25	-24	
20	-11	-19	-11	-5	-44	-53	-146	-67	-28	-52	10	-11	-27	-47	-55	-36	-27	1	9	0	2	3	0	0	-25	
Q	0	0	-1	-2	-7	-5	-9	-5	0	-2	-4	0	-4	-2	-12	-5	0	2	4	7	-13	-15	-9	5	-3	
Q	4	-1	4	-26	-6	1	5	-3	1	0	34	18	0	1	8	0	5	15	15	18	-5	0	0	1	3	
Q	1	0	0	-5	-9	-13	-11	0	1	-1	5	13	4	-6	-15	-31	-31	-4	7	0	-9	-9	-4	-4	-5	
Q	0	2	3	8	4	8	27	-3	-39	6	10	15	0	-28	-21	-12	-8	1	5	0	-1	-2	-4	-4	-1	
Q	-5	-3	0	-3	-2	-2	-7	-10	-4	-3	0	7	3	1	7	0	0	3	7	11	7	2	0	5	0	
26	2	2	4	7	-3	-6	7	13	12	19	27	16	-2	2	3	-9	-19	-10	20	15	15	8	6	15	6	
27	18	19	26	43	35	-12	-38	11	23	21	44	56	-78	-3	9	22	9	37	27	50	39	39	34	0	18	
28	19	47	-48	-38	3	5	21	23	24	59	-43	-53	-8	-20	-49	9	31	54	41	2	23	4	6	-53	2	
29	-52	-91	-140	-42	-36	-17	6	-34	-15	-16	-141	-68	-19	-2	5	4	-8	-22	-10	-9	0	5	-3	-4	-29	
30	6	3	6	0	-7	-13	3	7	0	-7	6	6	-12	-14	-3	-14	-16	-6	-19	-2	4	2	0	-3	-3	
31	-3	4	5	-6	-14	-20	-25	-18	-7	-8	-10	10	-35	-25	-60	-38	-31	-1	-7	0	-4	-7	1	2	-12	
Mean	-22	-26	-31	-33	-21	-11	-12	-18	-21	-13	-11	-15	-37	-29	-29	-23	-15	-6	0	0	-5	0	-5	-5	-21	-17
5Q Mean	0	0	1	-5	-4	-2	1	-4	-8	0	9	10	0	-6	-6	-9	-6	3	7	7	-4	-4	-3	0	-1	
5D Mean	-115	-104	-107	-119	-72	-27	-31	-78	-124	-53	-63	-93	-93	-67	-57	-18	-15	-13	-6	-20	-33	-31	-40	-65	-60	

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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	Mean
Q 1	20	23	73	30	24	21	22	50	58	45	34	44	57	99	134	58	45	59	51	52	48	38	25	27	47
2	45	72	104	102	106	80	70	80	87	118	184	161	128	146	94	62	53	54	76	92	66	58	37	33	88
3	39	86	136	127	108	169	164	219	210	209	302	319	151	112	89	70	146	143	153	94	114	125	143	191	151
D 4	270	155	197	337	266	257	288	451	264	106	295	165	215	241	172	168	224	161	202	413	337	178	239	288	245
D 5	209	252	397	307	296	282	177	149	178	195	186	230	187	102	79	125	168	201	187	118	81	92	174	169	189
6	202	169	248	175	92	62	198	183	140	104	68	90	53	49	100	97	55	76	68	167	290	121	195	120	130
D 7	184	143	76	39	114	87	67	161	188	168	112	101	190	138	101	63	103	170	125	60	111	208	235	131	128
8	182	175	142	140	179	87	41	66	171	163	73	51	43	115	94	42	48	103	139	218	141	66	44	24	106
9	57	118	142	108	125	86	56	22	64	99	110	78	77	57	39	22	35	43	29	30	46	60	74	44	68
D 10	24	16	13	6	5	33	97	98	105	140	103	80	35	48	24	24	24	62	88	80	179	263	104	295	82
11	157	148	99	52	43	39	71	56	43	51	98	83	74	59	49	55	61	106	107	71	73	67	53	54	74
12	53	47	63	28	80	163	146	203	135	140	294	169	62	57	47	52	61	102	83	70	73	183	270	245	118
13	170	82	134	95	108	176	132	175	172	90	103	173	123	111	61	36	43	67	87	89	116	157	80	48	109
14	34	24	34	34	69	189	129	143	109	136	170	151	99	83	51	33	14	36	59	38	38	68	66	124	131
15	127	105	149	136	66	162	168	112	74	30	31	41	43	83	42	29	29	24	30	33	26	17	24	26	67
Q 16	24	22	23	26	21	25	62	84	71	66	66	107	77	54	27	23	23	35	34	31	28	27	34	27	42
17	29	40	31	28	27	71	91	101	101	47	49	20	23	21	25	36	51	51	90	91	109	113	70	41	56
18	35	20	19	17	17	17	13	15	14	25	37	20	30	41	36	55	55	32	26	24	23	21	21	21	26
Q 19	24	29	24	55	78	100	143	202	151	82	108	104	124	127	96	89	71	61	109	111	141	127	98	110	99
20	50	25	18	23	63	109	127	127	131	90	118	128	97	80	57	50	47	44	60	58	44	35	35	35	69
Q 21	19	27	19	10	10	11	10	10	12	17	30	24	25	22	30	26	20	24	36	40	47	43	46	52	25
22	84	90	87	63	48	58	46	43	56	42	32	18	18	20	47	60	53	69	64	52	82	112	132	163	64
23	167	182	209	198	149	61	24	55	48	51	68	62	79	103	79	82	82	74	127	368	232	153	106	112	120
D 24	146	146	216	233	218	86	265	246	179	140	227	168	112	154	251	209	95	88	95	98	112	112	184	217	167
25	138	114	145	101	137	191	129	94	306	274	221	126	124	170	138	85	85	91	108	91	54	120	124	118	137
26	189	136	115	108	103	57	51	54	42	39	45	62	43	30	39	44	39	50	32	34	42	95	97	100	69
27	113	56	87	51	32	38	33	99	173	96	101	156	52	59	61	70	69	53	42	43	40	51	61	40	70
Q 28	29	32	49	43	33	47	32	53	63	60	50	52	59	71	36	27	25	21	25	26	27	30	29	20	39
29	24	31	33	35	62	48	81	105	39	35	139	224	207	142	48	48	48	36	42	57	77	92	94	99	77
30	175	280	227	198	221	224	165	155	81	26	22	17	33	61	64	78	78	50	48	92	57	60	107	111	110
Mean	100	94	110	98	100	99	103	119	116	97	115	105	87	87	73	63	65	73	80	94	96	96	101	103	95
5Q Mean	25	24	36	25	21	24	27	42	43	42	43	49	49	57	52	37	33	34	34	34	34	34	31	29	36
5D Mean	166	142	179	184	179	149	178	221	182	149	184	148	147	136	128	117	122	136	139	153	164	170	187	220	162

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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	Mean
Q 1	-16	-13	-59	-54	-33	-34	-26	-50	-38	-34	-32	-28	-40	-49	-192	-131	-127	-92	-69	-85	-78	-61	-23	-17	-57
2	-12	-41	-81	-56	-56	-34	-22	-28	-131	-72	-90	-124	-109	-146	-184	-99	-69	-102	-162	-104	-12	-23	-3	-7	-74
3	-16	-39	-198	-142	-129	-115	-99	-256	-262	-396	-459	-381	-130	-165	-144	-168	-244	-275	-164	-30	-42	-67	-140	-144	-175
D 4	-195	-303	-304	-382	-516	-489	-527	-422	-276	-620	-621	-273	-282	-355	-385	-407	-305	-108	-189	-511	-512	-264	-250	-434	-372
D 5	-448	-336	-456	-434	-454	-457	-189	-161	-369	-368	-311	-640	-245	-74	-76	-247	-342	-469	-254	-83	-14	-86	-349	-339	-300
6	-292	-323	-291	-288	-161	-98	-317	-485	-408	-168	-104	-204	-101	-99	-160	-146	-75	-119	-100	-211	-558	-179	-228	-237	-223
D 7	-410	-218	-66	-39	-79	-129	-71	-272	-452	-345	-102	-115	-544	-463	-154	-57	-227	-389	-155	-22	-77	-301	-333	-153	-215
8	-219	-333	-162	-214	-377	-148	-48	-67	-241	-212	-90	-42	-61	-151	-213	-53	-61	-176	-175	-385	-211	-90	-49	-41	-159
9	-65	-262	-284	-232	-204	-71	-40	-32	-27	-136	-266	-260	-209	-128	-111	-109	-141	-56	-70	-68	-68	-74	-68	-42	-126
D 10	-36	-28	-18	-28	-33	-42	-56	-187	-198	-104	-99	-128	-54	-19	-16	-37	-36	-34	-38	-61	-125	-164	-525	-686	-115
11	-139	-109	-71	-81	-60	-72	-75	-57	-22	-32	-35	-76	-122	-27	-42	-13	-49	-135	-144	-27	-29	-31	-53	-76	-66
12	-26	-20	-20	-34	-38	-68	-264	-202	-137	-58	-256	-332	-75	-68	-33	-44	-36	-177	-181	-77	-55	-100	-362	-314	-124
13	-174	-84	-96	-202	-227	-221	-139	-201	-431	-111	-72	-166	-298	-254	-58	-52	-39	-65	-115	-87	-74	-214	-147	-62	-150
14	-34	-22	-28	-63	-271	-266	-113	-75	-92	-404	-340	-153	-73	-73	-64	-80	-95	-80	-37	-33	-55	-45	-136	-220	-119
15	-143	-94	-199	-204	-120	-222	-337	-161	-72	-40	-28	-21	-21	-102	-75	-28	-22	-22	-17	-19	-29	-14	-18	-23	-85
16	-23	-19	-14	-21	-33	-34	-31	-91	-94	-28	-15	-121	-101	-66	-32	-19	-13	-20	-14	-13	-14	-12	-16	-12	-36
17	-14	-13	-17	-29	-27	-51	-102	-28	-16	-77	-32	-33	-28	-22	-20	-26	-55	-129	-142	-102	-146	-186	-105	-45	-60
Q 18	-21	-25	-22	-24	-26	-33	-41	-37	-32	-30	-32	-30	-31	-24	-38	-108	-182	-66	-21	-9	-18	-29	-34	-29	-39
19	-19	-11	-10	-40	-47	-69	-80	-157	-112	-33	-50	-44	-186	-234	-250	-177	-129	-105	-81	-35	-62	-163	-138	-98	-97
20	-22	-18	-21	-30	-29	-44	-193	-159	-156	-49	-23	-81	-99	-102	-38	-13	-31	-41	-104	-84	-31	-22	-28	-30	-60
21	-23	-20	-10	-13	-22	-29	-33	-34	-38	-45	-35	-26	-24	-20	-14	-13	-16	-21	-28	-25	-67	-57	-46	-33	-29
22	-28	-35	-63	-42	-27	-31	-37	-39	-24	-41	-55	-35	-31	-30	-43	-75	-101	-174	-145	-42	-87	-106	-73	-94	-61
23	-126	-116	-129	-170	-64	-19	-23	-18	-33	-39	-29	-33	-36	-22	-6	-16	1	-5	-23	-143	-131	-64	-20	-53	-55
D 24	-41	-185	-220	-288	-225	-91	-236	-556	-314	-156	-235	-219	-92	-209	-600	-296	-129	-53	-71	-122	-62	-191	-208	-290	-212
25	-196	-40	-140	-134	-209	-309	-106	-57	-298	-493	-202	-232	-147	-375	-328	-141	-181	-142	-110	-68	-64	-137	-159	-92	-182
26	-190	-264	-186	-85	-207	-41	-38	-31	-39	-37	-39	-45	-45	-22	-21	-50	-76	-148	-100	-41	-18	-69	-136	-103	-85
27	-80	-89	-135	-123	-37	-34	-33	-53	-160	-183	-75	-138	-55	-63	-22	-34	-105	-106	-32	-44	-72	-74	-31	-33	-75
Q 28	-23	-17	-21	-34	-43	-50	-46	-37	-29	-68	-124	-47	-70	-37	-27	-30	-22	-25	-30	-26	-30	-47	-39	-37	-40
29	-37	-23	-19	-27	-55	-74	-78	-93	-74	-60	-69	-328	-289	-222	-84	-64	-58	-74	-30	-33	-32	-44	-43	-87	-83
30	-151	-252	-273	-210	-242	-219	-278	-259	-80	-39	-30	-44	-32	-76	-112	-234	-216	-53	-28	-49	-24	-57	-60	-140	-131
Mean	-107	-111	-120	-124	-135	-119	-122	-143	-155	-149	-131	-146	-121	-123	-118	-98	-106	-115	-94	-87	-93	-98	-127	-132	-120
5Q Mean	-21	-18	-25	-29	-31	-36	-35	-49	-46	-41	-47	-50	-53	-39	-60	-60	-72	-44	-32	-31	-41	-39	-31	-25	-40
5D Mean	-226	-214	-212	-234	-261	-241	-215	-319	-321	-318	-273	-275	-243	-224	-246	-208	-207	-210	-141	-159	-158	-201	-333	-380	-242

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Date	June																				Mean				
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		20	21	22	23
Q 1	38	37	134	86	59	57	49	101	97	81	67	73	98	149	326	190	173	152	120	137	126	99	48	45	106
2	59	115	187	159	164	115	93	110	219	191	274	286	238	293	279	162	122	156	239	196	78	82	41	42	163
3	56	127	335	271	238	286	265	476	474	606	762	702	281	277	233	238	391	418	317	125	157	193	284	336	327
D 4	467	460	503	721	783	747	816	874	542	727	918	439	498	596	557	576	531	270	392	924	849	443	491	724	619
D 5	658	590	854	743	751	740	367	312	548	564	498	870	432	177	156	373	511	670	442	203	96	179	524	510	490
6	495	493	541	465	254	162	516	669	549	273	173	294	154	149	261	244	131	195	169	378	848	301	425	359	354
D 7	595	363	143	80	194	217	139	433	640	514	215	217	734	602	255	120	331	560	280	83	189	510	569	285	345
8	403	509	305	356	558	237	91	135	414	376	164	94	105	266	307	96	110	279	315	603	353	157	95	66	266
9	124	382	427	342	331	158	98	55	93	235	376	338	286	185	151	132	177	100	100	98	114	134	142	87	194
D 10	62	46	32	35	40	76	155	286	304	245	202	209	89	69	58	62	61	96	127	141	305	427	630	982	197
11	297	258	172	135	105	113	147	114	66	84	133	160	196	87	92	70	111	241	252	98	103	99	108	131	140
12	81	68	85	63	119	233	412	406	273	199	551	502	138	125	81	97	97	280	265	147	128	285	634	561	243
13	346	167	232	298	336	398	273	378	605	202	176	339	421	365	120	88	83	132	202	177	191	373	228	111	260
14	69	48	63	133	461	397	257	186	229	575	491	253	157	125	99	94	132	139	75	71	123	111	262	352	204
15	271	200	350	341	188	386	507	274	147	71	60	64	65	185	118	58	53	47	49	53	57	32	44	50	153
16	48	43	38	49	56	61	95	176	166	96	83	228	179	120	60	42	37	56	49	45	43	40	51	41	79
17	44	54	49	59	56	124	194	130	119	125	82	55	52	44	46	63	106	180	233	193	255	300	176	86	118
18	57	46	42	42	44	51	56	53	47	56	71	51	62	66	76	163	237	99	48	34	41	50	55	51	67
19	45	41	35	97	126	170	224	361	264	116	159	148	311	361	346	267	201	167	191	147	204	291	237	209	197
20	74	45	41	55	93	155	321	287	288	140	141	210	196	182	95	64	79	86	165	143	76	58	64	66	130
21	44	48	30	25	33	40	44	46	52	63	66	51	51	43	45	40	37	45	65	66	114	100	93	85	55
22	114	126	152	106	76	90	85	84	82	85	89	54	51	51	91	135	154	245	209	95	169	219	205	258	126
23	294	299	339	370	214	81	48	74	82	91	98	96	116	127	87	99	82	80	151	512	364	218	128	166	176
D 24	188	332	438	522	445	179	502	803	494	298	464	388	205	364	851	506	225	142	166	221	175	303	394	509	380
25	335	156	286	236	347	501	237	153	605	768	424	359	272	545	467	226	266	234	219	160	119	258	284	211	320
26	380	401	303	195	311	100	91	86	82	77	85	108	89	53	61	95	116	198	133	77	61	165	233	205	154
27	195	146	224	176	70	73	67	153	334	279	176	295	108	122	84	106	175	159	74	88	112	126	93	74	146
28	54	51	71	78	77	99	79	91	94	129	175	100	129	109	65	58	48	46	55	52	58	68	69	58	80
29	63	56	53	63	118	124	160	199	115	96	210	553	497	364	133	113	107	111	72	90	109	136	138	188	161
30	328	533	501	409	464	445	444	415	162	66	52	61	66	137	176	312	294	104	77	142	81	117	168	252	242
Mean	209	208	232	223	237	220	227	264	272	247	247	253	209	211	192	162	172	189	175	183	189	195	230	236	216
5Q Mean	48	45	63	56	53	61	64	93	91	85	92	100	103	97	114	98	106	79	67	66	76	71	63	56	77
5D Mean	394	358	394	420	442	391	395	541	505	469	459	424	391	361	375	327	331	347	281	314	322	372	521	602	406

Date		AO Index (Provisional, hourly mean values, unit nT)																				1993				
		June																		1993						
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean
Q	1	4	6	-11	-4	-5	-1	0	9	5	1	7	24	-29	-35	-39	-15	-8	-16	-15	-11	0	4	-5		
	2	15	14	10	22	23	22	23	25	-21	22	46	17	9	0	-44	-18	-7	-23	-42	-5	26	16	12	6	
	3	10	22	-30	-7	-10	26	31	-18	-26	-93	-78	-30	9	-26	-27	-48	-48	-65	-5	31	34	28	1	22	
D	4	37	-73	-52	-21	-124	-115	-119	14	-6	-256	-162	-53	-33	-56	-106	-118	-40	26	6	-48	-87	-42	-5	-72	
D	5	-119	-41	-29	-62	-78	-87	-6	-6	-95	-86	-62	-204	-28	13	1	-60	-86	-133	-33	2	16	33	-87	-84	
	6	-44	-76	-20	-56	-34	-18	-59	-150	-133	-31	-17	-56	-23	-24	-29	-23	-9	-21	-16	-22	-133	-28	-16	-58	
D	7	-112	-37	4	0	16	-20	-2	-55	-131	-88	4	-6	-176	-161	-26	3	-61	-109	-15	18	16	-46	-48	-10	
	8	-18	-78	-9	-36	-98	-30	-3	0	-34	-24	-8	4	-8	-17	-58	-5	-6	-36	-18	-82	-34	-11	-2	-8	
	9	-4	-71	-70	-62	-39	6	7	-4	17	-18	-77	-90	-66	-35	-35	-42	-52	-6	-20	-18	-10	-7	2	0	
D	10	-5	-5	-2	-10	-13	-4	20	-43	-46	17	2	-23	-9	13	11	-5	-5	13	24	9	26	48	-210	-195	
	11	8	18	13	-14	-8	-15	-2	0	10	8	31	3	-23	15	3	20	5	-14	-18	21	21	17	0	-11	
	12	13	12	20	-2	20	46	-58	0	-1	40	18	-80	-6	-5	6	3	12	-37	-48	-3	8	40	-45	-34	
	13	-2	-1	18	-53	-59	-22	-3	-12	-129	-10	15	3	-86	-71	1	-8	1	1	-13	0	19	-28	-33	-6	
	14	0	0	2	2	-40	-67	14	16	21	-116	-94	-27	4	-10	-15	-32	-29	-9	0	2	5	9	-5	-44	
	15	-8	5	-24	-33	-26	-30	-83	-23	1	-4	0	9	9	-9	-16	0	3	1	5	6	0	0	2	0	
Q	16	0	0	4	1	-5	-4	15	-3	-10	18	24	-7	-12	-5	-2	1	4	7	9	8	6	7	8	6	
	17	6	12	5	0	0	10	-5	36	42	-15	8	-5	-2	0	1	4	-1	-38	-25	-5	-18	-36	-17	-2	
Q	18	6	-2	-1	-3	-4	-8	-13	-10	-8	-1	2	-4	0	7	0	-26	-62	-16	2	6	1	-3	-6	-4	
	19	2	8	6	6	14	15	30	22	18	24	28	29	-30	-53	-76	-43	-28	-21	13	37	39	-18	-19	5	
	20	13	3	-1	-3	17	31	-33	-15	-12	19	46	22	-1	-10	9	18	7	1	-21	-13	5	5	3	1	
Q	21	-1	2	3	-1	-5	-8	-11	-11	-12	-13	-2	-1	0	0	7	5	1	1	3	6	-10	-6	0	8	
	22	27	26	11	9	9	13	4	2	15	0	-10	-8	-6	-4	1	-7	-23	-51	-40	4	-2	3	28	33	
	23	19	32	39	13	41	20	0	18	7	6	19	14	20	40	36	31	41	34	51	111	49	44	42	28	
D	24	51	-19	-1	-27	-3	-2	14	-154	-67	-8	-4	-25	9	-27	-173	-43	-16	16	11	-11	24	-39	-11	-36	
	25	-28	36	1	-16	-35	-58	11	17	3	-108	8	-52	-11	-101	-94	-27	-47	-24	-1	11	-5	-8	-17	12	
	26	0	-63	-34	11	-51	7	5	11	1	1	2	7	-1	3	7	-2	-18	-48	-33	-3	11	12	-19	-1	
	27	15	-16	-23	-35	-2	1	0	22	5	-43	12	8	-1	-2	19	17	-18	-25	4	0	-15	-11	14	3	
Q	28	2	6	13	4	-4	-1	-6	7	16	-4	-36	2	-5	16	4	-1	1	-2	-2	0	-1	-3	-4	-8	
	29	-6	3	6	3	3	-12	1	5	-16	-11	34	-52	-40	-39	-17	-7	-4	-18	5	11	22	23	24	5	
	30	11	13	-22	-5	-10	2	-56	-51	0	-5	-3	-13	0	-7	-23	-77	-68	-1	9	21	16	1	23	-14	
Mean		-3	-8	-5	-12	-16	-10	-9	-12	-19	-25	-8	-20	-16	-17	-22	-17	-19	-20	-7	3	1	-1	-12	-14	
5Q Mean		1	2	5	-2	-4	-5	-3	-3	-1	1	-2	0	-2	8	-4	-11	-19	-5	0	0	-3	-3	0	1	
5D Mean		-29	-35	-16	-24	-40	-45	-18	-48	-69	-84	-44	-62	-47	-43	-58	-44	-41	-37	-1	-3	2	-15	-72	-40	

AU Index (Provisional, hourly mean values, unit nr) July 1993

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	Mean
D 1	130	215	241	252	222	169	168	213	217	130	51	255	88	171	171	81	28	58	125	167	182	324	310	292	178
D 2	276	166	230	159	187	81	56	86	114	121	186	188	151	280	337	396	429	454	400	338	312	305	297	301	244
D 3	223	231	411	403	367	272	153	141	69	62	74	58	31	61	61	43	45	31	46	38	44	36	66	94	128
D 4	142	156	75	55	38	51	126	112	104	156	192	90	66	31	38	21	26	67	34	20	18	32	24	44	72
D 5	82	46	83	137	82	114	35	13	17	9	5	11	17	20	19	33	37	48	54	36	32	37	21	22	42
D 6	14	13	9	9	9	18	42	77	67	69	75	23	31	51	17	8	19	25	38	47	45	44	48	61	36
D 7	96	99	165	138	110	67	45	23	36	28	33	20	28	24	18	36	34	25	29	39	28	26	41	28	51
D 8	27	27	113	167	186	115	93	112	108	108	103	135	188	186	152	217	197	130	75	62	71	47	56	42	113
D 9	45	60	130	209	238	161	131	98	61	35	59	70	58	154	206	251	259	326	181	95	58	64	77	76	129
D 10	66	157	146	93	84	69	95	118	106	103	183	129	167	121	64	59	51	42	83	170	210	160	89	106	111
D 11	89	107	145	213	112	203	249	188	314	104	210	179	113	38	66	88	99	95	124	87	60	46	35	40	125
D 12	59	60	64	48	30	29	56	80	86	53	40	65	23	31	43	78	39	44	31	21	49	58	88	105	53
D 13	92	86	148	186	131	74	98	93	124	154	70	38	59	123	67	58	71	61	96	100	44	33	55	43	88
D 14	23	17	8	10	22	33	25	34	23	33	39	23	25	28	21	23	24	17	38	52	36	23	30	27	26
D 15	45	65	58	49	86	93	117	141	93	70	18	30	50	97	71	35	48	77	80	66	71	82	44	84	70
D 16	43	33	48	42	32	23	6	5	15	24	26	15	21	23	28	32	39	32	28	32	28	44	51	64	31
D 17	35	36	19	15	15	14	27	25	44	46	25	25	32	33	42	52	38	17	19	15	17	21	46	69	30
D 18	53	32	23	27	28	36	45	100	84	98	56	44	38	34	35	51	43	33	36	38	40	37	38	47	46
D 19	52	77	107	116	131	125	86	36	36	36	40	63	71	47	39	32	25	24	27	30	37	66	87	65	61
D 20	79	67	86	99	170	227	285	177	161	177	206	190	121	74	61	51	75	175	275	358	189	175	269	179	164
D 21	199	94	54	134	179	145	145	120	134	211	238	154	145	127	108	103	137	162	125	170	109	113	59	107	136
D 22	145	160	142	128	117	70	112	125	103	135	137	151	166	63	40	35	35	38	37	82	101	129	67	56	99
D 23	62	81	102	83	61	57	97	114	67	86	44	56	86	66	61	52	40	24	23	28	29	27	29	44	59
D 24	45	45	21	23	17	19	46	93	76	58	51	66	59	65	37	52	68	72	62	62	40	35	34	30	49
D 25	50	84	61	93	112	77	41	75	68	93	71	55	41	16	22	21	19	23	36	42	46	30	38	54	53
D 26	71	66	66	74	91	70	52	34	16	20	41	36	59	72	60	40	32	41	34	38	39	33	27	32	48
D 27	56	98	80	60	34	21	22	47	50	44	31	29	35	39	56	54	51	68	79	112	154	97	65	46	59
D 28	48	63	91	70	42	122	140	133	92	23	24	21	18	30	22	35	45	57	83	122	149	132	106	144	76
D 29	218	174	162	126	84	38	50	103	86	83	80	185	209	136	106	200	125	117	215	187	153	189	207	202	143
D 30	138	123	195	179	118	130	41	35	19	24	24	36	28	71	90	57	30	45	48	28	23	19	14	35	65
D 31	75	105	110	89	106	94	54	31	31	19	14	26	35	62	46	41	29	48	38	23	51	31	43	50	52
Mean	89	91	109	112	104	90	88	89	84	77	78	79	73	76	71	75	72	79	83	87	79	80	79	83	84
5Q Mean	43	39	32	32	35	31	31	38	34	36	36	33	39	44	37	39	40	35	36	39	32	31	37	44	36
5D Mean	187	178	237	230	194	152	135	146	160	100	120	173	119	139	148	161	145	151	182	163	150	180	183	185	163

		AL Index (Provisional, hourly mean values, unit nT)																								
		July												1993												
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	Mean
D	1	-176	-267	-338	-585	-271	-76	-107	-277	-342	-65	-22	-154	-300	-503	-327	-104	-47	-40	-66	-104	-295	-342	-361	-347	-230
D	2	-238	-172	-465	-223	-243	-102	-28	-43	-59	-154	-284	-268	-183	-457	-531	-621	-739	-674	-536	-533	-311	-269	-245	-617	-333
D	3	-542	-910	-649	-578	-477	-334	-233	-22	-12	-23	-146	-35	-20	-38	-55	-56	-24	-16	-11	-23	-34	-41	-48	-56	-183
	4	-160	-186	-196	-33	-45	-17	-58	-144	-127	-181	-190	-82	-79	-47	-33	-33	-33	-59	-73	-32	-35	-48	-35	-36	-82
	5	-66	-25	-29	-243	-146	-111	-74	-35	-29	-35	-38	-32	-24	-26	-26	-42	-151	-116	-75	-37	-65	-35	-24	-26	-63
	6	-26	-22	-15	-8	-13	-19	-22	-60	-29	-88	-174	-151	-79	-126	-103	-59	-34	-27	-43	-34	-20	-11	-25	-26	-51
	7	-164	-187	-151	-203	-88	-70	-27	-23	-29	-35	-37	-30	-21	-13	-15	-11	-12	-26	-26	-38	-38	-19	-17	-18	-54
	8	-20	-13	-53	-228	-199	-23	-24	-47	-60	-319	-280	-219	-206	-226	-312	-272	-252	-121	-36	-5	-10	0	-10	-21	-123
	9	-60	-22	-73	-380	-333	-200	-118	-33	-46	-79	-56	-199	-81	-132	-209	-183	-243	-209	-173	-61	-12	-31	-170	-81	-133
	10	-67	-182	-295	-129	-93	-71	-122	-240	-214	-213	-440	-239	-248	-100	-21	-16	0	-22	-16	-67	-244	-95	-119	-94	-139
D	11	-114	-199	-335	-587	-423	-320	-498	-377	-528	-215	-296	-293	-249	-52	-96	-167	-256	-39	-105	-35	-200	-20	-13	-22	-227
	12	-97	-56	-49	-63	-31	-55	-86	-210	-302	-167	-125	-106	-56	-10	-23	-94	-43	-32	-26	-15	-30	-116	-116	-103	-84
	13	-139	-181	-220	-371	-256	-92	-153	-163	-393	-380	-134	-99	-80	-347	-192	-47	-179	-168	-95	-34	-24	-56	-87	-164	-164
Q	14	-16	-12	-16	-13	-24	-37	-37	-48	-29	-30	-31	-33	-71	-44	-42	-56	-48	-11	-9	-58	-47	-18	-30	-35	-33
	15	-31	-23	-21	-10	-9	-139	-65	-62	-61	-56	-20	-22	-26	-37	-106	-34	-16	-87	-42	-34	-57	-51	-14	-29	-44
Q	16	-28	-30	-19	-19	-16	-11	-23	-23	-30	-40	-38	-24	-21	-21	-23	-24	-58	-65	-55	-28	-22	-39	-38	-66	-32
Q	17	-17	-8	-3	-5	-8	-18	-27	-28	-24	-37	-31	-26	-27	-20	-22	-36	-25	-35	-25	-47	-35	-32	-32	-29	-25
Q	18	-32	-20	-4	-2	-5	-15	-19	-89	-155	-247	-96	-32	-42	-15	-27	-29	-23	-18	-87	-76	-21	-24	-28	-28	-47
	19	-32	-38	-50	-179	-157	-90	-43	-41	-33	-49	-46	-87	-52	-21	-33	-30	-20	-14	-14	-16	-26	-41	-55	-43	-50
	20	-37	-46	-11	-16	-108	-151	-275	-103	-44	-61	-326	-172	-23	-11	-3	-10	-45	-133	-287	-180	-63	-160	-376	-235	-120
	21	-308	-153	-50	-91	-287	-457	-280	-176	-205	-329	-251	-192	-204	-346	-259	-194	-115	-255	-147	-151	-88	-115	-99	-125	-203
	22	-305	-315	-218	-193	-154	-85	-205	-153	-174	-299	-312	-243	-275	-125	-16	-43	-49	-58	-51	-70	-51	-282	-105	-20	-158
	23	-26	-79	-244	-223	-68	-21	-70	-233	-247	-122	-69	-68	-151	-127	-60	-100	-34	-6	-6	-11	-9	-15	-20	-25	-85
Q	24	-29	-28	-26	-19	-22	-34	-38	-73	-139	-175	-99	-93	-88	-68	-20	-29	-82	-296	-205	-44	-8	-9	-13	-17	-69
	25	-25	-96	-51	-135	-192	-35	-35	-24	-134	-144	-101	-148	-102	-34	-34	-87	-36	-8	-77	-104	-26	-22	-31	-23	-71
Q	26	-44	-55	-73	-65	-175	-58	-30	-29	-37	-39	-40	-63	-43	-90	-101	-46	-67	-7	-6	-7	-14	-35	-20	-15	-48
	27	-11	-78	-66	-31	-14	-16	-26	-28	-36	-60	-81	-35	-19	-25	-25	-76	-211	-233	-112	-72	-39	-65	-61	-18	-60
	28	-31	-103	-127	-49	-15	-35	-89	-173	-64	-30	-27	-30	-21	-10	-6	-15	-36	-104	-165	-76	-92	-98	-70	-95	-65
D	29	-252	-208	-138	-112	-57	-21	-18	-33	-173	-90	-61	-121	-309	-153	-140	-371	-169	-23	-300	-316	-229	-174	-134	-45	-152
	30	-37	-111	-294	-126	-25	-36	-29	-18	-21	-30	-32	-32	-28	-50	-106	-65	-104	-133	-74	-42	-46	-49	-48	-36	-66
	31	-85	-186	-160	-60	-157	-97	-21	-19	-23	-22	-30	-41	-49	-115	-73	-37	-33	-67	-50	-48	-122	-102	-40	-31	-70
Mean		-103	-129	-143	-160	-132	-91	-92	-97	-122	-123	-126	-108	-102	-109	-98	-96	-98	-100	-97	-79	-74	-76	-79	-79	-105
5Q Mean		-26	-26	-27	-24	-49	-31	-31	-40	-51	-64	-47	-47	-50	-48	-41	-38	-56	-82	-60	-36	-25	-26	-26	-32	-41
5D Mean		-264	-351	-385	-417	-294	-170	-176	-150	-222	-109	-161	-174	-212	-240	-229	-263	-247	-158	-203	-202	-213	-169	-160	-217	-224

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July

AE Index (Provisional, hourly mean values, unit nT)

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	Mean
D 1	306	482	580	838	495	247	276	491	559	196	74	411	389	675	499	186	75	99	192	272	478	667	672	640	408
D 2	514	339	696	383	431	185	85	131	174	276	472	458	335	738	869	1019	1169	1129	937	871	624	575	543	919	578
D 3	765	1141	1061	981	846	607	386	164	82	86	221	94	59	111	117	100	70	48	58	62	80	78	115	151	312
4	303	343	272	89	84	69	186	258	232	339	383	172	146	80	71	54	86	140	68	54	54	81	61	81	154
5	148	72	114	381	228	226	110	49	47	45	44	44	41	46	45	77	190	165	130	73	97	73	46	50	106
6	42	37	26	18	23	38	65	138	97	158	249	175	111	179	121	68	53	52	81	82	66	57	75	88	87
7	260	287	318	342	200	138	74	46	65	63	70	51	49	38	34	47	47	52	55	77	66	46	59	48	105
8	48	41	167	396	386	138	118	161	170	428	385	355	394	412	465	491	450	251	112	68	82	47	67	64	237
9	107	83	204	591	572	362	251	132	108	115	116	271	140	287	416	436	535	535	354	157	70	95	247	157	263
10	134	341	442	223	179	142	218	359	322	318	624	369	416	222	86	77	51	64	100	237	455	256	209	200	252
D 11	204	307	480	801	535	523	748	566	844	321	508	473	363	92	164	256	356	135	229	122	261	67	49	63	353
12	157	116	114	111	61	85	143	292	389	221	165	173	80	42	66	173	84	77	57	37	80	174	204	208	138
13	232	268	370	558	388	167	253	256	518	535	204	138	140	472	260	105	108	241	265	196	79	58	112	131	252
14	39	31	25	24	47	70	62	83	53	63	70	56	97	73	64	80	74	29	47	111	84	42	61	63	60
15	76	89	81	59	96	234	183	204	155	128	39	53	76	134	179	80	65	164	123	100	129	134	59	113	114
16	72	64	68	61	49	34	30	28	45	65	64	40	43	46	53	58	98	98	83	60	51	84	90	131	63
17	53	45	23	21	24	32	55	53	68	84	56	52	60	54	65	89	64	53	45	63	53	54	78	99	56
18	85	52	29	29	33	52	65	189	239	346	154	77	81	50	63	81	67	51	124	115	62	62	67	77	94
19	85	116	159	296	290	217	130	78	69	85	87	151	124	69	73	62	46	38	41	47	64	107	143	108	112
20	116	113	98	116	279	379	561	281	205	239	534	363	145	86	64	61	121	309	562	539	253	336	646	414	284
21	508	248	106	227	467	602	426	298	340	542	491	347	350	474	368	298	254	419	273	321	197	229	158	233	341
22	451	477	361	322	272	156	319	280	279	435	450	394	442	189	57	79	86	96	89	153	152	412	172	77	258
23	89	161	346	306	130	79	169	348	315	209	113	124	238	194	122	154	75	31	30	40	39	43	50	69	145
24	75	74	48	42	39	54	85	166	216	234	151	159	148	134	58	82	151	368	268	106	48	46	48	48	119
25	75	181	114	229	306	112	77	100	203	237	173	203	144	52	57	109	56	32	114	146	73	53	69	78	125
Q 26	116	121	140	139	267	129	82	64	54	60	81	100	103	163	162	88	100	48	41	46	54	68	49	48	97
27	67	176	147	92	50	37	48	75	86	105	114	65	54	65	83	131	263	302	192	185	193	162	127	65	120
28	79	166	219	120	58	158	231	308	157	54	52	40	40	40	29	51	81	162	249	199	242	231	177	240	141
D 29	471	383	301	239	141	59	70	138	260	173	141	307	519	290	247	572	296	141	515	503	383	364	342	247	296
30	176	235	491	306	144	168	70	53	41	54	57	69	56	123	198	123	136	179	123	70	69	68	63	72	131
31	161	292	272	150	265	192	76	50	55	42	45	67	85	178	121	79	62	116	89	72	174	133	83	82	122
Mean	194	221	253	273	238	183	182	188	207	201	206	189	176	187	170	172	172	181	182	167	155	158	159	163	191
5Q Mean	71	67	60	57	85	63	62	78	87	101	84	81	90	94	80	79	97	119	96	77	58	58	65	77	78
5D Mean	452	530	623	648	489	324	313	298	383	210	283	348	333	381	379	426	393	310	386	366	365	350	344	404	389

		1993																																
		July																																
AO Index (Provisional, hourly mean values, unit nT)		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	25	26	27	28	29	30	31	Mean
D	1	-23	-25	-48	-165	-24	45	30	-31	-62	31	14	50	-104	-165	-77	-10	-8	8	29	31	-56	-8	-24	10	16	-7							
D	2	18	-3	-116	-31	-27	-10	13	21	26	-15	-48	-39	-15	-88	-96	-111	-154	-109	-67	-96	0	17	26	-157	-25								
D	3	-158	-338	-118	-87	-54	-30	-39	59	28	19	-35	11	8	15	3	-6	10	7	16	7	4	-2	8	18	-44								
	4	-8	-14	-60	10	-3	16	33	-15	-11	-12	1	4	-5	-7	2	-5	-16	-3	0	-5	-7	-7	-4	4	-27								
	5	7	10	26	-52	-31	1	-18	-9	-5	-12	-15	-9	-3	-2	-2	-4	-56	-33	-10	0	-16	1	0	-1	-10								
	6	-5	-4	-2	0	-1	0	9	8	18	-9	-48	-63	-23	-36	-41	-24	-6	0	-2	6	12	15	10	16	-7								
	7	-34	-43	6	-32	10	-1	8	0	3	-3	-1	-4	3	5	1	11	10	0	1	0	-4	2	11	4	-1								
	8	3	6	29	-30	-6	45	34	32	23	-105	-87	-40	-8	-19	-79	-26	-26	4	18	28	30	23	23	10	-4								
	9	-7	18	28	-84	-47	-19	6	32	7	-21	1	-63	-10	10	-1	33	8	57	3	16	22	16	-45	-1	-1								
	10	0	-12	-73	-17	-4	0	-12	-60	-53	-54	-128	-53	-39	10	21	21	25	9	32	50	-16	32	-14	5	-13								
D	11	-12	-45	-94	-186	-155	-57	-123	-94	-106	-54	-42	-56	-67	-6	-14	-38	-77	27	9	25	-69	12	10	8	-50								
	12	-18	1	6	-7	0	-12	-14	-64	-107	-56	-41	-19	-16	9	-9	-7	-1	5	2	3	9	-28	-13	0	-15								
	13	-23	-46	-35	-91	-62	-8	-26	-34	-134	-112	-31	-29	-9	-111	-61	5	17	-58	-35	2	5	4	0	-21	-37								
Q	14	3	2	-3	-1	0	-1	-5	-6	-2	1	3	-4	-22	-7	-9	-15	-11	2	14	-2	-5	2	0	-3	-2								
	15	6	20	17	18	37	-22	25	39	15	6	-1	3	11	29	-16	1	15	-5	18	15	6	15	14	26	12								
Q	16	7	1	13	11	8	5	-7	-8	-6	-7	-5	-4	0	0	2	3	-9	-15	-12	1	2	2	6	0	0								
Q	17	8	13	7	4	2	-1	0	0	9	4	-2	0	2	5	9	8	6	-8	-2	-15	-7	-5	6	19	2								
	18	9	5	8	12	10	10	13	5	-34	-73	-19	5	-1	8	3	11	9	7	-24	-18	9	5	4	8	0								
	19	9	19	28	-30	-12	17	21	-2	1	-5	-2	-11	9	12	2	1	2	4	6	-6	5	12	15	10	5								
	20	20	9	36	41	31	38	5	36	58	57	-59	9	48	31	28	19	14	20	-5	89	62	7	-52	-27	21								
	21	-54	-29	2	21	-53	-155	-67	-27	-34	-58	-6	-18	-29	-109	-74	-44	10	-46	-11	9	10	-1	-19	-8	-33								
	22	-79	-77	-37	-32	-17	-7	-45	-13	-34	-81	-86	-45	-53	-30	11	-4	-6	-9	-6	5	25	-75	-19	17	-29								
	23	17	0	-70	-69	-3	17	13	-58	-89	-17	-11	-5	-31	-29	0	-23	3	8	7	8	9	5	4	8	-12								
Q	24	7	7	-2	1	-2	-6	3	9	-30	-57	-23	-13	-13	-1	7	11	-7	-111	-71	8	15	12	9	5	-10								
	25	12	-6	4	-20	-39	20	2	25	-32	-24	-14	-45	-29	-8	-5	-32	-7	6	-20	-30	9	3	2	14	-8								
Q	26	12	4	-2	4	-41	5	10	2	-10	-8	0	-12	8	-8	-19	-2	-17	16	14	14	12	-1	3	8	0								
	27	22	9	6	13	9	2	-1	8	6	-7	-24	-2	7	6	15	-10	-79	-82	-16	19	57	16	2	13	0								
	28	8	-20	-17	9	13	43	25	-19	13	-2	-1	-4	-1	4	7	10	4	-23	-40	22	28	16	17	23	5								
D	29	-16	-16	11	6	12	7	15	34	-42	-3	9	31	-49	-7	-16	-84	-21	46	-41	-64	-37	7	36	78	-4								
	30	49	5	-48	25	45	46	6	8	-1	-2	-3	2	0	10	-8	-3	-36	-43	-12	-6	-11	-14	-16	0	0								
	31	-5	-39	-24	14	-25	-1	16	3	-1	-7	-6	-6	-6	-26	-13	2	-2	-9	-5	-11	-35	-34	0	8	-8								
Mean		-7	-18	-16	-24	-13	0	-2	-3	-18	-21	-22	-13	-14	-16	-13	-10	-13	-10	-6	3	2	1	0	1	-9								
5Q Mean		7	5	2	3	-6	0	0	0	-7	-13	-5	-6	-5	-2	-2	1	-7	-23	-11	1	3	2	4	5	-2								
5D Mean		-38	-85	-73	-92	-49	-9	-20	-2	-31	-4	-20	0	-45	-50	-40	-49	-50	-4	-10	-19	-31	5	11	-15	-30								

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AU Index (Provisional, hourly mean values, unit nT)

August

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	Mean
Q 1	53	27	19	12	7	6	12	19	17	16	17	19	18	24	26	24	33	45	57	50	42	30	27	28	26
Q 2	28	27	23	31	39	48	52	49	43	38	32	26	39	39	28	21	20	31	37	42	53	54	51	45	37
Q 3	61	82	60	63	68	54	66	71	50	47	23	24	43	33	73	60	51	42	95	95	56	71	62	46	58
D 4	47	38	33	28	76	125	141	82	99	109	254	379	196	284	441	513	415	488	413	220	144	150	235	113	209
Q 5	210	269	216	231	252	67	109	88	136	95	35	47	106	104	90	83	54	100	121	63	43	47	58	41	111
Q 6	31	37	27	59	74	173	182	75	201	89	21	36	115	143	121	155	181	256	129	112	73	45	31	39	100
Q 7	51	102	169	169	178	178	105	92	174	228	352	295	57	58	111	111	145	152	138	173	168	243	109	152	152
Q 8	88	47	53	46	117	177	141	97	57	66	111	49	41	44	54	37	62	48	34	29	21	24	30	31	63
Q 9	90	151	204	136	101	83	115	64	84	96	147	78	59	127	91	63	36	85	131	158	66	40	39	25	95
Q 10	23	43	39	27	31	21	26	52	38	62	133	108	65	42	45	30	36	45	96	123	151	130	121	74	65
Q 11	106	45	24	57	30	24	71	80	44	28	24	40	28	28	17	18	12	15	16	20	20	14	22	43	34
Q 12	30	23	20	13	102	155	118	85	71	32	87	97	80	61	86	80	52	45	42	27	24	26	52	111	63
Q 13	116	99	78	110	142	135	89	51	28	16	32	24	32	45	46	26	41	34	30	32	22	24	38	32	55
Q 14	17	13	7	6	6	12	13	9	12	12	7	9	8	10	12	17	19	20	13	18	18	21	22	27	14
Q 15	25	24	19	15	15	16	16	16	25	30	29	47	88	76	70	106	135	140	190	183	242	334	283	204	97
Q 16	212	311	165	109	222	355	238	233	206	186	150	185	184	153	412	252	169	292	373	250	254	284	241	210	235
D 17	281	281	364	204	216	261	174	79	39	24	23	27	36	46	24	26	29	23	17	22	41	36	45	37	98
D 18	75	56	82	101	170	161	193	150	101	127	91	153	171	156	208	116	177	214	151	123	100	83	81	64	129
D 19	50	64	105	96	139	108	108	45	61	25	122	102	85	81	36	41	32	32	68	126	159	97	86	49	80
Q 20	40	76	83	83	55	65	90	72	41	41	41	93	140	81	38	32	34	24	41	43	28	27	18	23	54
Q 21	35	20	13	9	49	70	82	57	17	41	15	49	68	94	85	46	20	20	26	45	37	39	30	49	42
Q 22	53	39	44	58	68	97	106	118	55	46	77	51	25	20	18	20	19	19	29	19	24	57	73	69	50
Q 23	48	35	37	31	26	15	25	22	21	30	13	5	6	5	7	9	9	10	21	19	16	14	19	19	19
Q 24	16	13	14	18	29	45	43	42	55	71	83	48	25	33	20	5	5	9	15	18	31	40	53	69	33
Q 25	70	53	40	21	13	12	14	12	19	27	18	20	10	15	23	18	9	25	11	9	10	27	62	66	25
Q 26	59	36	35	31	24	12	24	38	30	25	15	55	73	99	33	79	33	22	25	33	45	48	49	58	41
D 27	72	41	15	12	17	42	43	67	79	94	161	178	111	319	216	462	358	351	325	343	306	216	151	63	168
D 28	41	37	38	8	8	14	22	40	16	29	72	55	127	79	107	24	47	112	110	77	67	101	133	161	64
Q 29	217	146	181	128	159	84	98	53	63	55	60	114	120	75	31	11	12	28	21	16	8	46	125	70	80
Q 30	39	47	32	58	60	61	85	21	22	15	12	2	5	0	0	0	8	7	5	13	27	16	24	58	26
Q 31	57	32	25	32	43	33	22	20	15	9	16	8	19	43	58	12	21	21	28	35	62	56	66	33	32
Mean	75	74	73	64	81	87	84	64	59	56	69	80	78	77	83	80	72	88	91	80	76	76	82	66	76
5Q Mean	43	31	25	20	18	18	23	22	22	24	17	15	16	18	19	17	18	26	27	27	27	29	36	37	24
5D Mean	137	145	131	90	140	188	157	122	104	108	135	184	139	191	260	273	239	273	255	191	169	153	150	97	168

Date	AL Index (Provisional, hourly mean values, unit nT)																	August 1993											
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean				
Q 1	-64	-26	-11	-6	-12	-16	-22	-18	-21	-20	-20	-19	-24	-23	-29	-33	-33	-25	-36	-61	-53	-29	-30	-26	-27				
Q 2	-17	-19	-13	-10	-17	-23	-62	-77	-56	-16	-23	-66	-43	-69	-37	-8	-13	-18	-20	-15	-19	-64	-68	-21	-33				
Q 3	-17	-105	-61	-43	-32	-18	-29	-47	-77	-36	-24	-28	-37	-38	-88	-158	-163	-118	-204	-87	-31	-40	-38	-20	-64				
D 4	-3	-6	-1	-14	-12	-122	-152	-38	-99	-195	-199	-314	-522	-449	-428	-598	-494	-381	-231	-114	-180	-65	-216	-511	-223				
5	-647	-326	-352	-300	-332	-47	-46	-77	-215	-202	-82	-92	-288	-167	-53	-58	-47	-80	-248	-51	-18	-34	-39	-26	-160				
6	-28	-25	-19	-29	-52	-160	-384	-275	-334	-391	-80	-21	-126	-355	-175	-262	-233	-186	-187	-173	-11	-14	-16	-49	-149				
7	-56	-179	-382	-515	-264	-156	-397	-224	-208	-474	-385	-485	-416	-145	-38	-95	-137	-161	-143	-122	-271	-171	-340	-161	-247				
8	-43	-16	-22	-95	-176	-414	-417	-235	-156	-53	-291	-124	-62	-16	-36	-33	-82	-89	-39	-17	-28	-32	-29	-27	-105				
9	-135	-351	-453	-327	-95	-132	-124	-193	-210	-123	-380	-155	-12	-117	-129	-104	-63	-81	-160	-334	-72	-22	-24	-23	-159				
10	-20	-58	-59	-70	-35	-14	-13	-80	-44	-69	-372	-331	-178	-62	-43	-30	-76	-125	-111	-70	-108	-148	-176	-128	-101				
11	-198	-17	-17	-24	-29	-45	-58	-104	-167	-165	-58	-110	-47	-60	-60	-35	-23	-23	-28	-29	-33	-26	-35	-35	-59				
12	-36	-15	-14	0	-33	-340	-369	-133	-61	-84	-111	-132	-127	-43	-135	-210	-108	-7	-6	-10	-11	-13	-45	-123	-90				
13	-128	-71	-39	-105	-197	-229	-93	-20	-21	-26	-29	-25	-24	-49	-77	-65	-33	-69	-77	-34	-34	-31	-35	-36	-64				
Q 14	-14	-8	-4	-4	-5	-8	-16	-19	-15	-17	-27	-34	-30	-27	-19	-15	-15	-17	-32	-35	-41	-35	-29	-21	-20				
15	-7	-1	3	-3	-3	-4	-9	-9	-9	-7	-10	-21	-110	-142	-83	-123	-196	-130	-211	-430	-306	-236	-288	-285	-109				
16	-106	-320	-201	-61	-174	-587	-489	-454	-500	-519	-167	-213	-698	-491	-619	-361	-279	-359	-659	-619	-427	-471	-602	-573	-415				
D 17	-683	-806	-629	-342	-378	-364	-207	-199	-75	-22	-21	-24	-26	-40	-27	-28	-40	-58	-35	-36	-44	-33	-55	-77	-177				
D 18	-113	-203	-113	-101	-326	-414	-300	-192	-300	-413	-338	-413	-488	-432	-529	-243	-210	-178	-180	-96	-146	-182	-216	-253	-266				
19	-114	-112	-327	-201	-289	-191	-134	-219	-73	-61	-351	-232	-158	-85	-24	-41	-51	-100	-197	-137	-319	-132	-116	-74	-156				
20	-37	-164	-235	-151	-89	-133	-196	-195	-82	-237	-191	-156	-231	-152	-57	-49	-83	-55	-60	-90	-90	-22	-18	-16	-113				
21	-86	-46	-20	-11	-72	-117	-284	-122	-222	-143	-59	-63	-62	-63	-155	-82	-59	-44	-160	-101	-13	-11	-11	-24	-85				
22	-81	-122	-131	-144	-125	-86	-23	-22	-103	-57	-278	-149	-23	-20	-20	-24	-48	-72	-41	-27	-24	-108	-192	-152	-86				
Q 23	-62	-19	-69	-35	-67	-34	-21	-64	-34	-31	-91	-70	-47	-38	-29	-30	-32	-23	-28	-34	-45	-26	-30	-28	-41				
24	-20	-13	-6	-8	-13	-22	-30	-35	-21	-36	-186	-104	-24	-43	-71	-38	-19	-15	-13	-15	-22	-35	-32	-56	-37				
Q 25	-29	-35	-48	-10	-5	-16	-19	-20	-26	-36	-54	-39	-37	-36	-20	-29	-18	-39	-15	-21	-25	-29	-63	-46	-30				
26	-58	-34	-125	-30	-4	-7	-7	-21	-22	-54	-37	-63	-117	-161	-216	-117	-63	-18	-11	-27	-27	-68	-41	-39	-57				
27	-101	-117	-16	-5	-8	-21	-25	-151	-235	-224	-251	-187	-292	-572	-405	-677	-1108	-874	-834	-484	-76	-251	-80	-16	-292				
28	-21	-22	-22	-27	-21	-22	-28	-38	-38	-32	-67	-32	-180	-115	-106	-48	-78	-172	-205	-80	-29	-83	-226	-172	-77				
29	-161	-155	-248	-104	-151	-101	-99	-123	-229	-55	-48	-48	-97	-65	-12	-19	-25	-46	-52	-28	-23	-42	-268	-132	-97				
30	-28	-39	-41	-68	-65	-43	-51	-177	-41	-24	-28	-48	-36	-26	-32	-32	-27	-21	-29	-39	-45	-44	-24	-23	-43				
31	-76	-20	-55	-92	-15	-18	-23	-22	-22	-23	-29	-32	-56	-54	-108	-79	-18	-17	-23	-60	-206	-91	-47	-15	-50				
Mean	-102	-111	-120	-94	-99	-125	-132	-115	-119	-124	-138	-123	-148	-134	-124	-120	-124	-116	-137	-112	-87	-83	-110	-102	-117				
5Q Mean	-37	-21	-29	-13	-21	-19	-28	-39	-30	-24	-43	-45	-36	-38	-26	-23	-22	-24	-26	-33	-36	-36	-44	-28	-30				
5D Mean	-201	-290	-192	-104	-179	-301	-234	-206	-241	-274	-195	-230	-405	-396	-401	-381	-426	-370	-387	-269	-174	-200	-233	-286	-274				

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AE Index (Provisional, hourly mean values, unit nT)

August

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	Mean
Q 1	119	55	32	19	20	24	34	38	39	38	37	38	43	48	57	59	67	72	93	112	96	59	58	55	55
Q 2	48	47	37	42	57	71	115	127	100	55	57	94	83	109	66	30	34	50	59	59	73	119	119	66	72
Q 3	78	188	122	108	101	73	95	119	127	84	48	54	81	72	162	219	214	160	300	183	87	111	101	67	123
D 4	51	44	35	43	89	249	294	121	200	306	454	695	720	734	869	1112	910	869	644	335	324	216	451	625	433
5	858	596	569	533	585	115	156	167	353	299	119	140	394	272	144	142	102	181	369	114	62	82	98	68	272
6	59	63	48	89	128	335	567	351	536	481	102	59	241	499	297	418	415	443	317	285	84	60	48	88	251
7	107	281	552	685	444	335	504	317	301	649	614	838	713	204	97	208	249	307	296	260	445	340	584	270	400
8	131	64	76	141	294	592	559	333	215	120	403	174	104	62	92	71	145	138	73	47	50	57	59	58	169
9	226	502	658	465	197	217	240	258	296	220	528	235	72	246	221	169	100	166	291	492	138	62	63	49	255
10	44	103	99	98	66	35	40	133	83	132	507	440	244	106	89	62	113	171	208	194	259	279	298	203	167
11	304	62	42	81	59	70	130	186	212	194	82	151	77	90	78	53	36	39	45	49	54	40	58	79	95
12	66	38	35	14	136	496	487	219	133	117	199	230	209	106	222	291	161	52	48	37	36	40	98	235	154
13	245	172	118	216	341	366	184	72	51	44	63	50	57	95	125	91	74	104	107	67	56	55	74	70	121
Q 14	32	21	12	11	13	21	29	28	28	30	35	45	40	38	32	34	35	39	47	54	59	57	51	48	35
15	32	25	16	18	19	21	25	26	35	39	41	69	199	219	154	230	332	271	402	613	548	570	571	489	207
16	320	632	368	171	397	943	729	688	707	706	319	400	882	646	1032	613	449	651	1033	870	681	755	844	784	651
D 17	966	1088	994	547	596	626	382	279	114	47	44	51	63	87	53	55	69	82	53	60	86	70	100	115	276
D 18	190	259	196	203	497	576	495	344	402	541	429	567	660	589	737	361	387	392	331	219	247	265	299	318	396
19	164	177	432	298	430	301	243	265	135	87	474	336	244	167	61	83	83	132	266	264	479	230	203	123	237
20	78	240	320	235	144	200	287	269	124	279	233	251	372	234	96	82	117	80	101	133	51	47	36	39	169
21	122	67	34	20	122	187	367	180	241	185	75	113	132	158	242	129	80	65	187	146	51	51	42	75	128
22	135	162	176	202	195	184	129	141	160	104	356	201	49	41	38	44	67	91	71	47	49	165	265	222	137
Q 23	112	55	107	66	94	50	46	87	56	63	105	77	54	44	36	40	42	33	50	54	62	40	49	48	61
24	37	27	21	27	42	67	73	78	78	108	270	153	50	77	92	44	25	25	29	33	54	76	86	126	71
Q 25	101	89	89	32	18	28	33	32	45	65	73	61	48	53	45	49	27	65	28	30	36	56	126	112	56
26	118	71	162	63	30	20	32	60	53	80	53	119	191	262	251	197	97	41	37	61	72	117	90	98	99
D 27	174	159	32	18	26	64	69	220	316	320	413	365	404	892	621	1140	1467	1225	1159	827	382	468	232	80	461
28	62	61	61	36	30	35	45	69	55	63	141	89	308	195	214	73	125	284	316	158	97	184	359	334	141
29	378	302	430	232	311	186	198	178	293	112	110	164	218	141	45	31	37	74	74	45	32	89	393	202	178
30	69	88	74	128	126	105	137	199	64	40	40	51	43	27	31	31	35	28	34	53	73	61	48	82	70
31	134	53	80	126	59	51	46	43	38	34	46	41	77	98	168	92	40	39	52	96	268	147	113	49	83
Mean	179	186	194	160	182	214	218	181	180	182	208	204	228	213	208	201	197	205	229	193	164	160	194	170	194
5Q Mean	82	53	55	34	40	38	51	62	53	50	61	63	53	58	47	42	41	51	55	61	65	66	80	65	55
5D Mean	340	436	325	196	321	491	393	330	347	384	331	415	545	589	662	656	656	643	644	462	344	354	385	384	443

AO Index (Provisional, hourly mean values, unit nT)		1993														Mean										
		August																								
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	Mean	
Q 1	-5	0	3	2	-2	-4	-4	0	-1	-1	-1	0	-2	0	-1	-4	0	9	9	-5	-5	0	0	0	1	0
Q 2	3	3	4	9	10	12	-5	-13	-6	10	4	-20	-2	-14	-4	5	2	5	7	12	16	-4	-8	11	1	1
Q 3	21	-11	0	9	16	17	18	11	-13	5	0	-1	2	-2	-7	-48	-55	-37	-54	3	12	15	11	13	-3	-3
D 4	21	15	15	6	31	1	-5	21	0	-42	27	32	-162	-82	6	-42	-39	53	90	52	-18	42	9	-198	-6	
5	-217	-28	-67	-33	-40	9	30	5	-39	-53	-23	-22	-89	-30	17	11	2	9	-63	5	12	6	9	7	-24	
6	1	5	3	14	10	6	-100	-99	-66	-150	-29	6	-4	-105	-26	-53	-25	34	-28	-30	30	15	6	-5	-24	
7	-2	-38	-105	-172	-43	11	-145	-65	-57	-149	-77	-66	-59	-43	9	8	-13	-8	3	7	-49	-1	-48	-26	-47	
8	21	15	14	-24	-29	-117	-137	-68	-48	6	-89	-36	-10	13	8	1	-10	-20	-2	5	-3	4	0	1	-21	
9	-22	-100	-124	-95	2	-23	-4	-64	-62	-13	-115	-38	22	5	-18	-20	-12	1	-14	-87	-2	8	6	1	-32	
10	1	-7	-9	-21	-2	3	6	-13	-3	-3	-118	-111	-56	9	0	0	-19	-39	-7	25	21	-8	-27	-27	-17	
11	-46	13	2	16	0	-9	5	-12	-61	-67	-16	-33	-9	-15	-21	-8	-5	-3	-5	-3	-5	-5	-5	3	-12	
12	-2	3	2	6	34	-92	-124	-23	4	-25	-11	-16	-23	8	-24	-64	-27	18	18	8	6	6	3	-5	-13	
13	-6	13	18	2	-27	-46	-2	14	3	-4	1	0	3	-1	-15	-18	4	-17	-23	-1	-5	-2	1	-1	-4	
Q 14	1	1	1	0	0	1	-1	-4	-1	-2	-9	-11	-10	-7	-3	0	1	1	-8	-8	-10	-6	-3	3	-3	
15	8	11	11	5	5	5	3	2	6	10	9	12	-10	-32	-6	-8	-29	4	-11	-123	-31	48	-2	-40	-6	
16	52	-4	-18	23	23	-115	-124	-110	-146	-165	-8	-13	-256	-168	-103	-54	-55	-33	-142	-184	-86	-93	-180	-181	-89	
D 17	-200	-262	-131	-68	-80	-51	-16	-59	-18	0	1	1	4	3	-1	0	-5	-16	-8	-6	-1	1	-4	-19	-39	
D 18	-18	-73	-15	0	-77	-125	-53	-20	-99	-142	-122	-129	-157	-137	-159	-63	-16	17	-14	12	-22	-49	-67	-94	-67	
19	-31	-23	-110	-52	-74	-41	-13	-86	-5	-17	-113	-64	-35	-2	5	0	-9	-33	-64	-5	-79	-17	-14	-12	-37	
20	1	-44	-75	-34	-16	-34	-52	-61	-19	-97	-74	-31	-44	-34	-9	-7	-24	-14	-9	-23	2	3	0	3	-29	
21	-25	-12	-3	0	-11	-23	-100	-32	-102	-50	-21	-6	3	15	-34	-17	-18	-11	-66	-27	11	13	9	11	-20	
22	-13	-41	-43	-43	-28	4	40	47	-24	-5	-99	-48	0	0	-1	-1	-14	-26	-5	-4	0	-25	-59	-41	-18	
Q 23	-7	7	-15	-2	-20	-9	1	-20	-5	0	-38	-32	-20	-15	-10	-10	-10	-6	-3	-7	-13	-5	-4	-3	-10	
24	-1	0	3	4	7	10	6	3	15	16	-51	-27	0	-4	-24	-16	-6	-2	1	1	3	2	9	6	-1	
Q 25	20	8	-3	5	3	-1	-1	-3	-3	-4	-17	-9	-12	-10	1	-5	-3	-7	-1	-5	-6	0	0	0	9	-2
26	0	0	-44	0	9	2	7	8	3	-14	-10	-3	-21	-30	-91	-19	-14	1	6	2	8	-9	3	9	-8	
D 27	-14	-37	0	3	4	9	8	-42	-77	-64	-44	-4	-89	-125	-94	-106	-374	-260	-253	-70	114	-17	35	23	-61	
28	9	6	7	-9	-6	-2	0	5	-10	-1	2	10	-25	-17	0	-11	-15	-30	-46	-1	18	8	-46	-5	-6	
29	26	-4	-33	11	3	-8	0	-35	-82	0	6	32	11	5	8	-3	-5	-8	-15	-4	-6	2	-71	-30	-8	
30	5	3	-4	-5	-2	8	16	-77	-9	-4	-7	-22	-15	-12	-16	-16	-9	-6	-10	-12	-8	-12	0	16	-8	
31	-9	5	-14	-29	13	7	0	0	-3	-7	-6	-11	-17	-5	-24	-32	0	1	2	-12	-71	-17	9	8	-9	
Mean	-13	-18	-23	-15	-9	-19	-24	-25	-29	-33	-33	-21	-34	-27	-20	-19	-25	-13	-23	-15	-5	-3	-13	-18	-20	
5Q Mean	2	3	-2	2	-1	0	-2	-8	-3	0	-12	-14	-9	-9	-3	-2	-2	0	0	-2	-3	-3	-3	4	-2	
5D Mean	-31	-72	-29	-7	-19	-56	-38	-42	-68	-82	-29	-22	-132	-101	-70	-53	-97	-47	-65	-39	-2	-23	-41	-93	-52	

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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	Mean
Q 1	28	26	49	40	37	23	27	32	30	27	28	25	24	23	22	19	16	33	26	31	33	32	31	28	29
2	27	30	36	58	55	47	41	45	42	65	81	119	87	50	27	25	26	47	112	146	83	82	105	93	64
D 3	112	137	120	97	109	80	89	142	176	235	186	108	172	158	107	81	131	299	317	375	159	122	191	177	162
D 4	113	109	166	133	107	228	195	132	148	101	83	111	122	112	78	153	128	96	86	69	63	89	143	180	123
5	123	93	59	58	28	33	25	35	65	65	44	79	82	84	81	83	37	44	48	48	57	118	115	78	66
6	88	69	67	68	17	39	39	36	36	27	65	123	125	98	71	61	84	85	97	122	132	99	92	116	77
7	136	72	99	61	25	77	57	49	46	30	16	14	20	52	66	75	36	27	18	17	49	91	66	64	53
8	125	138	77	88	70	99	48	97	65	47	33	36	26	21	21	20	24	32	30	30	60	52	70	86	58
9	69	23	26	16	23	29	48	53	43	40	25	34	100	108	41	36	26	28	25	51	55	42	27	27	41
Q 10	27	44	59	52	45	43	62	49	40	52	46	36	109	115	70	41	20	29	30	29	31	40	57	38	48
11	60	92	99	108	90	68	45	53	46	52	49	33	40	25	16	22	25	35	56	54	58	106	68	43	56
12	69	92	48	24	22	24	62	61	56	40	37	50	106	142	90	105	110	239	344	360	315	296	240	238	132
D 13	203	158	189	299	122	133	279	185	35	95	138	125	58	388	308	319	286	242	247	303	256	141	123	151	199
D 14	109	135	55	71	75	80	70	181	167	199	220	150	123	141	92	146	121	76	131	113	110	135	148	100	123
15	140	149	152	84	125	106	60	73	114	56	109	103	72	44	103	59	52	88	113	140	160	109	76	47	97
16	47	29	44	41	41	35	23	23	19	29	37	92	90	33	46	60	29	56	71	46	47	27	33	19	42
17	22	21	28	26	33	14	14	30	39	18	10	19	29	35	53	27	11	14	25	20	31	36	50	27	27
Q 18	36	30	42	43	46	39	47	66	45	40	47	28	33	36	35	15	13	18	28	27	30	23	28	22	34
19	34	50	53	61	57	53	82	66	52	7	17	21	20	34	47	19	19	28	27	24	30	30	28	18	37
Q 20	20	25	32	43	51	60	63	54	73	84	143	91	204	148	213	331	387	364	346	383	302	230	167	180	166
21	153	157	124	54	27	16	18	16	29	22	22	22	12	13	29	29	79	124	134	224	194	86	61	42	70
22	46	53	80	69	62	60	48	40	53	61	45	36	21	20	17	13	13	25	21	23	24	42	38	35	39
23	35	32	39	40	42	45	43	30	26	22	27	25	27	60	103	69	50	47	60	81	107	132	84	114	56
24	215	126	49	34	34	24	19	25	33	29	18	42	48	45	26	74	79	141	174	179	91	92	100	116	75
25	62	40	33	20	23	41	31	26	28	39	62	46	74	51	69	30	43	38	55	75	48	101	98	88	51
26	52	92	87	73	108	148	121	67	59	35	62	48	87	34	27	23	40	32	39	35	32	39	68	83	62
27	117	49	71	97	62	66	41	57	71	55	68	28	26	52	30	66	54	57	110	38	34	39	68	38	58
28	28	22	20	20	26	33	31	28	30	30	34	54	141	186	50	38	94	90	185	232	200	123	64	64	76
D 29	53	38	48	26	38	38	69	69	153	125	124	151	152	119	228	173	298	253	233	214	199	189	162	90	135
30	185	69	84	119	154	169	173	91	42	38	30	29	14	19	47	11	21	29	28	50	42	153	249	215	86
Mean	84	73	71	67	58	65	65	63	62	58	63	62	74	81	73	74	78	90	107	117	101	96	95	88	78
5Q Mean	29	34	46	44	43	34	46	48	41	28	29	25	43	48	45	24	15	24	27	26	31	32	38	31	35
5D Mean	118	115	115	125	90	111	140	141	135	151	150	129	125	183	162	174	192	193	202	214	157	135	153	139	148

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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	Mean
Q 1	-6	-9	-30	-9	-9	-13	-16	-16	-22	-24	-25	-26	-22	-20	-24	-22	-16	-24	-24	-23	-80	-35	-17	-5	-21
2	0	1	-4	-55	-25	3	-1	-8	-15	-23	-135	-204	147	-21	-13	-23	-14	-125	-249	-283	-123	-58	-89	-134	-73
D 3	-112	-103	-194	-376	-214	-48	-163	-218	-209	-418	-235	-69	-285	-490	-171	-133	-151	-394	-219	-405	-99	-57	-167	-789	-238
D 4	-567	-421	-266	-177	-227	-385	-277	-416	-288	-293	-110	-338	-439	-218	-92	-496	-244	-110	-81	-66	-64	-212	-465	-548	-283
5	-603	-134	-13	-126	-159	-110	-112	-183	-212	-276	-118	-143	-115	-43	-170	-51	-24	-78	-107	-36	-82	-178	-234	-110	-142
6	-257	-151	-70	-129	-241	-90	-14	-39	-297	-218	-139	-241	-313	-142	-81	-116	-80	-73	-137	-116	-259	-208	-163	-86	-152
7	-137	-47	-81	-133	-347	-364	-144	-127	-173	-10	-32	-22	-23	-28	-100	-125	-10	-14	-22	-24	-35	-140	-127	-10	-95
8	-130	-313	-146	-82	-105	-201	-205	-130	-100	-67	-24	-18	-13	-16	-10	-38	-48	-66	-81	-16	-62	-84	-60	-277	-96
9	-80	-9	-3	-3	-6	-7	-19	-70	-25	-148	-75	-36	-126	-182	-83	-55	-42	-16	-14	-27	-126	-69	-8	-12	-52
Q 10	-10	-9	-40	-95	-99	-43	-30	-20	-147	-90	-35	-52	-122	-151	-129	-109	-48	-3	-13	-44	-29	-3	-12	-24	-57
11	-66	-242	-141	-118	-41	-15	-14	-16	-15	-51	-141	-48	-88	-37	-19	-11	-5	-27	-170	-112	-29	-138	-64	2	-67
12	-20	-91	-30	-1	-4	-9	-39	-163	-90	-25	-12	-73	-144	-156	-274	-206	-150	-301	-626	-375	-355	-327	-468	-410	-181
13	-248	-96	-240	-905	-945	-650	-305	-681	-930	-506	-631	-196	-96	-471	-749	-811	-603	-384	-408	-473	-251	-151	-348	-240	-472
D 14	-752	-312	-190	-125	-208	-42	-249	-632	-411	-594	-391	-400	-479	-533	-356	-443	-311	-97	-268	-407	-248	-209	-301	-296	-344
15	-171	-425	-406	-230	-185	-417	-192	-336	-430	-226	-229	-189	-90	-42	-174	-76	-64	-242	-345	-161	-156	-133	-26	-15	-207
16	-17	-19	-15	-15	-30	-14	-18	-15	-18	-21	-28	-130	-212	-177	-105	-93	-101	-99	-328	-111	-17	-11	-12	-10	-67
Q 17	-8	-9	-10	-5	-16	-55	-101	-91	-29	-49	-56	-27	-33	-44	-58	-120	-40	-14	-16	-8	-12	-59	-52	-48	-40
Q 18	-39	-25	-22	-65	-38	-91	-44	-32	-31	-157	-203	-82	-71	-73	-75	-39	-39	-82	-43	-27	-9	-16	-13	-10	-55
Q 19	-10	-36	-107	-49	-27	-67	-93	-95	-123	-126	-39	-19	-17	-25	-43	-73	-11	-29	-27	-42	-20	-30	-30	-22	-48
20	-13	-10	-4	-8	-7	-4	-23	-64	-36	-231	-410	-309	-414	-292	-335	-439	-648	-574	-577	-358	-220	-331	-598	-408	-263
21	-376	-460	-109	-20	-12	-13	-9	-15	-10	-5	0	-2	-5	-5	-14	-34	-142	-321	-305	-336	-136	-76	-21	-12	-102
22	-16	-44	-105	-247	-124	-124	-131	-322	-205	-124	-65	-17	-25	-22	-16	-14	-7	-2	0	-3	-3	-9	-7	-8	-68
23	-5	-4	-4	-4	-6	-12	-13	-13	-15	-19	-20	-16	-9	-18	-86	6	0	-23	-8	-12	-49	-108	-128	-59	-26
24	-152	-46	-8	-5	-15	-16	-20	-15	-47	-50	-28	-199	-171	-224	-180	-200	-181	-227	-258	-110	-4	-112	-61	-110	-102
25	-53	-3	0	-1	-11	-10	-16	-34	-9	-12	-90	-47	-56	-43	-203	-43	-60	-62	-69	-80	-30	-95	-197	-39	-53
26	-8	-23	-11	0	-83	-251	-141	-3	-14	-120	-273	-183	-128	-31	-11	-30	-35	-37	-35	-19	-14	-14	-53	-108	-68
27	-292	-80	-7	-142	-132	-28	-4	-32	-105	-179	-43	-46	-48	-34	-42	-196	-82	-160	-271	-17	-16	-14	-9	-64	-83
28	-3	0	-2	-1	-5	-10	-13	-17	-15	-17	-45	-150	-188	-137	-129	-146	-348	-454	-273	-225	-162	-79	-52	-51	-105
D 29	-23	-15	-41	-14	-13	-30	-83	-116	-245	-217	-146	-477	-264	-321	-423	-433	-743	-420	-246	-418	-456	-237	-250	-84	-238
30	-215	-309	-238	-241	-537	-341	-181	-50	-24	-51	-28	-17	-12	-14	-81	-39	-61	-51	-19	-111	-64	-196	-613	-541	-168
Mean	-146	-114	-84	-112	-129	-115	-89	-132	-143	-144	-126	-125	-138	-133	-141	-153	-143	-150	-172	-148	-107	-112	-154	-150	-132
5Q Mean	-14	-17	-41	-44	-37	-53	-56	-50	-70	-89	-71	-41	-53	-62	-65	-72	-30	-30	-24	-28	-30	-28	-24	-21	-44
5D Mean	-340	-189	-186	-319	-321	-231	-215	-412	-416	-405	-302	-296	-312	-406	-358	-463	-410	-281	-244	-353	-223	-173	-306	-391	-315

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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	Mean
Q 1	35	36	80	50	47	36	44	48	53	51	53	52	46	44	48	42	34	59	52	55	114	68	49	35	51
2	28	29	41	113	80	43	43	53	58	89	218	325	236	72	41	49	42	173	362	431	207	141	195	229	137
D 3	225	240	315	474	323	128	253	361	386	654	422	179	459	649	279	215	282	694	538	781	260	181	359	966	401
D 4	681	531	433	312	336	613	472	549	437	395	194	451	563	332	172	649	372	207	168	136	128	302	610	729	407
5	727	228	184	189	144	139	220	278	343	164	224	199	122	156	63	122	156	85	140	297	350	189	207	210	
6	346	222	137	197	259	130	53	76	334	246	205	366	439	241	154	179	165	159	235	239	392	307	256	203	231
7	275	121	180	195	373	442	202	178	221	41	48	37	45	80	167	202	47	43	41	42	85	232	194	74	149
8	257	452	224	171	176	301	255	228	166	115	59	56	41	39	32	59	73	99	112	47	123	137	132	364	155
9	149	34	30	21	30	37	68	124	69	189	101	71	227	291	126	93	69	46	39	80	182	112	37	40	94
Q 10	38	54	99	148	145	87	92	69	188	143	82	89	233	267	200	151	69	32	45	73	61	44	70	64	106
11	127	335	240	227	132	84	60	70	62	104	192	82	129	64	36	34	31	63	226	168	88	246	133	41	124
12	89	185	78	26	34	102	225	147	67	50	124	252	299	299	366	311	261	541	972	737	670	624	709	649	314
D 13	451	255	430	1204	1067	784	585	867	966	602	770	322	155	860	1058	1131	890	628	656	777	509	293	471	392	672
D 14	862	448	246	197	284	122	319	814	579	795	612	552	603	675	449	590	433	174	400	522	360	346	450	397	468
15	311	575	560	315	311	525	254	410	546	283	340	293	163	86	277	136	118	331	459	302	318	243	103	64	305
16	66	50	60	57	72	50	41	38	38	51	66	223	303	211	152	154	131	156	400	158	65	39	46	30	111
17	31	31	38	32	50	70	115	121	69	69	68	47	63	81	112	148	53	29	42	30	45	96	104	100	69
Q 18	76	56	65	108	84	131	92	99	77	199	252	111	105	111	111	56	53	101	73	55	40	41	42	34	90
Q 19	45	87	161	111	85	122	176	163	177	134	58	42	38	60	91	93	32	59	56	67	50	61	60	42	86
20	34	36	37	52	58	65	87	120	110	317	555	401	619	441	550	771	1036	939	924	742	522	562	766	588	430
21	530	618	233	75	40	30	28	31	40	27	21	25	18	19	44	64	222	445	440	561	332	164	83	55	173
22	63	99	186	316	187	184	180	363	259	187	112	54	47	43	33	28	21	28	22	27	28	52	45	44	109
23	42	36	43	45	49	57	57	44	41	42	48	42	37	79	190	62	50	70	68	93	157	240	213	174	82
24	367	172	59	40	49	40	39	40	81	80	47	242	220	270	208	275	261	369	432	291	97	205	162	227	178
25	116	44	32	21	34	52	49	61	37	52	153	94	131	95	274	74	103	102	126	156	79	197	297	128	105
26	61	116	99	74	191	400	262	71	74	156	336	232	216	67	40	54	77	70	75	55	47	55	123	192	131
27	410	130	79	239	195	94	45	90	177	236	111	75	76	87	74	262	136	218	332	57	50	54	78	103	142
28	33	23	23	22	32	43	44	46	46	49	80	206	331	325	181	185	442	546	458	459	363	203	117	117	182
D 29	77	54	90	41	51	68	153	186	400	342	271	629	417	441	652	606	1041	673	481	633	656	427	413	175	374
30	400	380	322	362	692	510	354	143	67	91	59	47	27	34	129	51	83	81	48	163	108	349	863	756	255
Mean	231	189	156	180	188	180	155	196	206	204	191	189	214	216	216	228	223	241	281	267	209	210	251	240	211
5Q Mean	45	52	88	89	82	89	103	100	112	119	102	68	97	112	112	98	48	56	53	56	62	62	65	55	80
5D Mean	459	305	302	445	412	343	356	555	553	557	453	426	439	591	522	638	603	475	448	569	382	309	460	531	464

AO Index (Provisional, hourly mean values, unit nT)		September 1993																									
		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	Mean
Q	1	10	8	15	13	4	7	2	0	1	0	0	1	0	1	0	0	-1	0	4	1	3	-22	-1	6	10	3
D	2	13	15	14	25	19	17	12	20	-26	-41	-29	14	6	0	5	-38	-68	-67	-68	-67	-18	11	7	-20	-4	
D	3	0	16	-37	-139	-52	15	-36	-90	-23	18	-56	-165	-31	-25	-9	-46	48	-15	30	32	12	-305	-38	-38	-80	
D	4	-226	-155	-49	-21	-59	-78	-40	-141	-69	-95	-13	-112	-157	-52	-7	-171	-57	-6	2	1	0	-61	-160	-183	-80	
D	5	-239	-20	22	-33	-65	-38	-43	-73	-73	-104	-36	-31	-15	19	-44	15	6	-16	-28	5	-12	-28	-58	-185	-38	
D	6	-84	-41	-1	-30	-111	-25	12	-2	-130	-95	-36	-58	-93	-21	-4	-27	1	5	-20	3	-62	-53	-34	14	-37	
D	7	0	11	8	-35	-160	-143	-43	-38	-63	9	-7	-3	-1	11	-17	-24	12	6	-1	-3	6	-23	-30	26	-21	
D	8	-2	-87	-34	2	-17	-50	-78	-16	-16	-10	3	8	6	2	4	-8	-11	-16	-25	6	-1	-15	4	-18	-18	
D	9	-5	5	10	5	8	10	14	-8	8	-53	-24	-1	-12	-36	-20	-9	-7	6	5	12	-35	-12	8	6	-5	
Q	10	7	16	9	-21	-26	0	15	14	-53	-18	5	-8	-6	-17	-29	-34	12	12	8	-7	0	17	22	6	-4	
D	11	-3	-74	-20	-4	23	25	15	17	14	0	-45	-7	-23	-5	-1	4	9	3	-56	-28	14	-15	1	22	-5	
D	12	23	0	8	10	8	7	11	-50	-16	7	12	-11	-18	-6	-92	-50	-19	-31	-140	-7	-20	-15	-113	-85	-24	
D	13	-22	30	-25	-302	-411	-257	-12	-247	-446	-205	-246	-35	-19	-41	-220	-245	-158	-70	-79	-84	3	-4	-112	-44	-135	
D	14	-321	-87	-67	-26	-66	18	-89	-225	-121	-196	-84	-124	-177	-195	-132	-148	-95	-10	-67	-146	-68	-36	-76	-97	-110	
D	15	-15	-137	-126	-72	-29	-154	-65	-131	-157	-84	-59	-42	-8	0	-34	-8	-5	-76	-115	-9	2	-11	24	14	-54	
Q	16	14	4	13	12	5	10	2	3	0	3	3	-18	-60	-71	-29	-16	-35	-20	-127	-32	14	7	9	3	-12	
Q	17	6	5	8	10	7	-20	-43	-30	4	-15	-22	-4	-1	-4	-2	-45	-13	0	4	5	9	-11	-1	1	-6	
Q	18	-1	2	9	-11	3	-26	1	16	6	-58	-77	-26	-18	-18	-19	-11	-12	-31	-6	0	10	3	6	5	-10	
Q	19	10	6	-26	5	14	-7	-5	-14	-35	-59	-10	0	0	4	1	-26	3	0	0	-8	4	0	0	-1	-6	
Q	20	2	6	13	17	20	27	19	-4	18	-73	-133	-108	-104	-71	-60	-53	-130	-104	-115	12	40	-50	-215	-113	-48	
D	21	-111	-151	7	16	6	0	4	0	8	7	10	9	2	3	6	-2	-31	-98	-84	-55	28	5	19	14	-15	
D	22	14	4	-12	-88	-30	-31	-40	-140	-75	-30	-9	9	-2	-1	0	0	2	10	10	10	10	16	15	13	-14	
D	23	14	13	17	17	17	15	14	7	4	0	2	3	8	20	8	37	25	11	25	33	28	11	-21	27	14	
D	24	30	39	20	13	9	3	0	5	-7	-10	-5	-77	-61	-89	-76	-63	-50	-42	-41	33	43	-9	18	2	-13	
D	25	4	17	16	9	5	15	7	-4	8	12	-14	0	8	4	-66	-6	-8	-11	-6	-2	8	3	-48	24	-1	
D	26	21	34	37	35	12	-50	-9	31	21	-42	-105	-66	-20	1	7	-3	2	-2	2	7	8	11	7	-12	-2	
D	27	-86	-15	31	-22	-34	18	17	12	-16	-61	11	-8	-10	8	-6	-64	-13	-50	-54	10	8	12	29	-13	-12	
D	28	11	10	8	9	10	11	8	5	6	5	-6	-47	-23	23	-39	-54	-126	-181	-43	3	19	21	5	6	-14	
D	29	14	11	3	5	11	4	-7	-23	-46	-45	-10	-162	-55	-100	-97	-129	-221	-83	-6	-101	-128	-23	-43	2	-51	
D	30	-15	-119	-76	-61	-191	-85	-4	19	8	-6	0	5	0	2	-16	-14	-19	-10	3	-30	-10	-21	-181	-162	-41	
Mean		-31	-21	-7	-22	-35	-25	-11	-34	-40	-42	-31	-31	-31	-26	-33	-39	-32	-29	-32	-15	-3	-7	-30	-31	-26	
5Q Mean		6	7	1	0	2	-9	-5	-1	-15	-30	-20	-7	-5	-6	-9	-23	-7	-3	1	-1	0	1	6	4	-4	
5D Mean		-111	-37	-35	-96	-115	-59	-36	-134	-139	-126	-75	-83	-92	-110	-97	-143	-108	-43	-20	-69	-32	-18	-75	-125	-82	

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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	Mean
1	169	188	231	127	168	112	74	99	72	100	134	213	166	65	77	70	91	85	129	89	78	57	47	36	112
2	31	31	25	26	28	35	56	23	27	65	42	41	60	64	86	55	30	36	57	46	39	59	51	43	44
3	25	19	15	21	35	41	73	42	48	13	25	15	45	86	84	64	27	24	51	77	68	44	36	43	43
4	35	26	24	18	28	29	27	50	42	29	33	54	56	37	57	40	42	43	65	134	30	34	29	34	41
5	33	37	50	37	34	31	37	29	31	29	25	22	23	20	18	20	36	71	121	118	95	104	71	46	47
6	42	74	115	94	121	120	195	270	137	42	26	28	20	20	17	18	17	19	21	42	74	117	186	106	80
7	58	39	43	41	37	27	27	24	20	16	14	15	21	11	13	11	14	21	20	24	23	24	20	22	24
8	16	40	80	61	33	26	51	153	255	197	177	77	156	71	59	32	27	25	47	31	63	54	47	47	76
9	56	84	72	64	180	381	309	331	251	105	164	154	108	102	66	53	49	82	94	43	62	108	61	94	128
10	90	109	94	71	139	127	132	74	65	166	70	42	62	127	111	49	50	73	143	132	124	184	78	45	98
11	54	60	75	40	64	60	81	75	71	102	58	132	158	90	101	155	120	111	49	43	50	47	72	169	85
12	95	86	33	38	48	71	47	57	76	43	38	30	105	80	85	69	64	43	38	34	35	27	32	47	55
13	60	56	60	56	47	37	86	110	81	116	76	42	40	53	71	88	50	30	39	31	37	40	32	48	57
14	61	60	100	78	76	82	59	58	57	21	32	38	73	86	87	75	26	23	14	12	11	13	24	35	50
15	32	35	38	50	40	50	43	33	30	22	22	39	33	25	26	22	28	19	23	22	22	20	20	16	30
16	24	29	26	34	35	44	56	44	50	44	54	87	104	59	30	34	55	20	15	20	32	49	58	55	44
17	51	54	53	125	169	91	44	27	26	26	23	26	43	44	37	27	23	27	31	24	32	70	74	67	51
18	80	106	64	48	73	84	97	111	67	62	102	150	105	100	115	146	145	128	87	64	51	37	37	42	88
19	56	70	68	75	81	151	141	119	82	111	97	144	138	90	27	15	45	25	29	43	81	70	56	38	77
20	36	28	35	31	34	26	37	32	22	64	29	20	12	12	28	22	28	53	107	87	53	37	46	40	38
21	41	39	42	42	52	77	58	54	93	46	64	128	204	128	76	34	34	21	23	18	22	32	37	27	58
22	36	49	54	104	81	61	80	101	98	56	35	41	45	65	38	41	32	41	123	60	65	70	114	121	67
23	71	61	24	48	83	118	98	116	75	75	33	29	61	68	44	25	31	30	42	72	117	56	43	69	62
24	71	83	153	75	26	26	27	36	19	28	15	19	21	17	27	19	34	36	33	27	34	24	29	26	38
25	26	36	47	62	39	46	94	178	139	108	107	71	146	103	193	299	194	229	150	68	29	54	35	48	104
26	29	24	27	16	13	21	32	46	45	30	26	24	29	39	34	64	223	308	148	132	54	79	125	100	69
27	124	121	116	160	152	171	203	332	253	272	215	96	102	94	168	231	248	226	116	99	116	177	180	122	171
28	111	124	96	81	102	93	70	93	74	83	84	105	140	73	58	34	29	52	64	80	44	79	142	157	86
29	118	88	125	101	84	106	50	39	37	31	21	29	56	84	127	176	137	87	52	40	26	65	99	104	78
30	114	62	43	31	30	36	22	30	23	21	15	13	14	13	19	13	9	7	6	6	8	10	14	18	24
31	15	19	14	15	15	17	27	30	36	38	72	115	124	40	34	64	63	130	152	172	251	183	52	35	71
Mean	60	62	65	60	68	78	79	89	78	68	61	65	80	64	65	65	63	68	67	61	59	65	62	61	67
5Q Mean	52	38	37	37	35	36	37	32	29	33	26	34	36	24	23	20	26	24	34	31	27	28	31	30	32
5D Mean	70	82	80	79	114	157	163	198	155	150	122	99	115	103	127	157	132	144	110	77	76	114	85	95	117

Date	AL Index (Provisional, hourly mean values, unit nr)																								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Mean
1	-253	-512	-565	-532	-212	-118	-97	-300	-408	-304	-657	-485	-284	-139	-46	-144	-260	-163	-220	-48	-181	-103	-6	-1	-252
2	-6	-32	-24	-37	-20	-64	-174	-109	-41	-315	-124	-110	-94	-125	-115	-231	-134	-33	-201	-335	-118	-103	-68	-9	-109
3	-5	-4	-2	-3	-14	-60	-122	-153	-83	-40	-15	-16	-6	-56	-122	-91	-110	-138	-138	-265	-343	-52	-9	-6	-79
4	0	0	0	1	0	0	-1	-46	-62	-47	-85	-191	-213	-63	-45	-50	-78	-62	-40	-249	-106	-6	-10	-46	-58
5	-104	-28	-36	-43	-42	1	1	4	1	0	-8	-14	-20	-21	-23	-25	-45	-182	-421	-257	-30	-150	-29	-4	-61
6	-7	-32	-291	-465	-264	-142	-169	-139	-32	-9	-14	-50	-12	-13	-16	-16	-12	-21	-22	-86	-80	-84	-121	-25	-88
7	-14	-3	-2	-1	2	-1	-2	-4	-5	-8	-11	-15	-21	-22	-21	-19	-18	-12	-10	-5	-3	-2	-3	-5	-8
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9	-239	-317	-216	-210	-234	-297	-802	-595	-349	-375	-1044	-613	-316	-361	-121	-172	-70	-77	-310	-21	-81	-582	-845	-376	-359
10	-286	-457	-177	-301	-438	-528	-273	-90	-79	-444	-182	-46	-152	-650	-436	-103	-60	-168	-341	-443	-434	-649	-127	-9	-286
11	-57	-338	-341	-325	-298	-306	-280	-192	-251	-327	-140	-765	-361	-159	-252	-586	-243	-137	-41	-68	-91	-134	-197	-608	-271
12	-524	-339	-172	-232	-296	-200	-96	-92	-256	-91	-24	-51	-331	-305	-392	-127	-34	-186	-213	-113	-155	-95	-38	-105	-186
13	-328	-264	-140	-259	-375	-372	-356	-237	-231	-146	-81	-63	-56	-41	-77	-5	-11	-48	-66	-55	-221	-146	-22	-22	-151
14	-158	-340	-219	-76	-94	-61	-20	-22	-24	-56	-25	-31	-82	-108	-155	-74	-81	-137	-96	-82	-107	-57	-69	-51	-93
15	-24	-38	-77	-24	-13	-54	-33	-7	-5	-16	-24	-83	-117	-66	-27	-55	-72	-88	-87	-37	-22	-5	-3	-2	-41
16	-4	-28	-13	-20	-6	-12	-53	-38	-97	-163	-108	-100	-69	-48	-30	-76	-191	-63	-27	-12	-43	-180	-81	-77	-64
17	-68	-119	-261	-213	-107	-46	-46	-25	-6	-4	-11	-26	-70	-23	-28	-26	-26	-75	-187	-67	-88	-269	-182	-108	-87
18	-59	-99	-147	-116	-212	-102	-82	-92	-113	-153	-204	-236	-263	-257	-250	-251	-179	-228	-159	-80	-16	-76	-56	-45	-145
19	-90	-201	-193	-100	-174	-148	-119	-145	-126	-126	-204	-234	-175	-114	-37	-46	-91	-84	-26	-15	-288	-126	-70	-108	-127
20	-96	-12	-9	-14	-40	-11	-29	-29	-152	-74	-9	-7	-12	-16	-27	-84	-177	-264	-213	-103	-28	-50	-133	-115	-71
21	-72	-46	-83	-145	-154	-125	-114	-126	-146	-104	-143	-300	-279	-157	-80	-37	-12	-5	-12	-14	-9	-4	-30	0	-91
22	3	-40	-232	-241	-31	-14	-159	-364	-127	-13	-9	-67	-60	-39	-12	-35	-11	-24	-238	-80	-25	-29	-196	-115	-91
23	-10	-7	-2	-8	-84	-322	-283	-221	-270	-41	-15	-6	-21	-36	-112	-49	-34	-34	-64	-68	-161	-16	-24	-43	-81
24	-61	-291	-183	-20	-10	-7	-15	-16	-13	-27	-27	-84	-22	-37	-51	-45	-158	-205	-14	-19	-109	-74	0	6	-62
25	0	-8	-15	-33	0	-10	-47	-158	-205	-49	-406	-1017	-325	-244	-970	-994	-605	-309	-116	-87	-147	-163	-204	-148	-261
26	-40	-25	-32	-13	-15	-26	-56	-127	-24	-46	-90	-81	-26	-10	-51	-205	-590	-703	-310	-151	-55	-67	-226	-326	-137
27	-88	-123	-380	-462	-274	-524	-576	-569	-749	-576	-293	-314	-894	-490	-389	-734	-668	-416	-451	-140	-222	-374	-392	-380	-437
28	-305	-156	-106	-136	-136	-232	-98	-221	-102	-99	-58	-562	-246	-139	-285	-196	-223	-237	-203	-208	-63	-172	-638	-460	-220
29	-203	-221	-309	-120	-125	-67	-45	-44	-58	-38	-25	-87	-179	-356	-351	-331	-155	-122	-79	-21	-7	-74	-255	-53	-139
30	-120	-91	-16	2	-3	-10	-6	-7	-4	-3	-6	-11	-16	-16	-19	-18	-18	-12	-10	-11	-9	-5	-4	-1	-17
31	0	0	-3	0	1	1	-3	-146	-195	-226	-208	-205	-156	-175	-159	-130	-198	-304	-249	-277	-223	-103	-27	-1	-124
Mean	-103	-134	-137	-133	-118	-125	-139	-151	-154	-139	-143	-200	-177	-150	-158	-160	-147	-146	-150	-114	-113	-133	-133	-106	-140
5Q Mean	-51	-34	-23	-11	-12	-17	-24	-17	-52	-52	-31	-43	-47	-33	-24	-50	-95	-87	-69	-33	-21	-48	-44	-40	-40
5D Mean	-134	-248	-225	-266	-248	-333	-395	-320	-326	-354	-413	-551	-409	-380	-433	-517	-329	-221	-251	-151	-195	-380	-353	-304	-322

AE Index (Provisional, hourly mean values, unit nr) 1993

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	Mean
1	424	701	797	660	381	230	172	399	481	405	793	699	451	205	124	215	352	250	350	139	260	162	54	38	364
2	38	63	50	63	48	99	230	132	69	382	168	153	155	190	202	286	165	69	259	382	157	163	121	53	154
3	32	24	19	25	50	102	196	196	131	54	41	32	87	144	208	157	137	162	189	342	411	97	46	50	122
4	35	26	23	16	28	30	28	97	105	77	119	246	270	102	103	91	121	106	106	383	137	41	41	81	100
5	138	66	86	81	76	29	36	24	28	29	33	37	44	42	42	47	82	254	543	377	127	256	101	50	110
6	50	107	407	559	386	263	366	409	169	52	41	79	33	34	34	35	30	41	45	128	155	201	308	133	169
7	74	43	45	42	34	28	29	28	26	24	26	30	43	34	34	32	34	34	32	30	27	27	24	28	34
8	16	47	100	54	34	63	202	537	832	588	362	411	732	439	284	66	40	30	156	164	115	231	126	107	239
9	296	402	288	275	415	678	1112	927	601	481	1208	767	425	464	188	226	120	161	404	64	144	691	906	472	488
10	377	567	272	372	578	656	405	165	144	612	253	90	215	778	549	153	112	241	485	577	560	834	207	55	386
11	112	399	416	365	363	367	362	268	323	431	200	898	521	250	354	742	364	249	90	113	143	182	271	777	357
12	620	426	205	271	344	272	144	150	333	135	63	83	437	385	477	197	100	230	251	148	190	123	72	153	242
13	388	321	197	307	412	459	467	319	347	224	124	105	111	113	167	57	42	87	98	93	263	195	55	71	209
14	220	400	320	155	170	143	80	80	82	77	59	70	157	195	243	151	108	160	111	94	119	71	94	88	144
15	57	74	115	75	54	104	76	41	36	38	47	124	151	93	54	77	101	108	111	59	45	26	24	19	71
16	29	58	39	54	42	57	109	83	147	208	164	189	174	109	61	110	246	84	43	32	76	229	140	134	109
17	120	173	315	338	276	137	90	53	33	32	35	53	115	69	66	54	49	103	218	91	121	339	257	177	138
18	140	206	211	165	285	186	180	203	181	217	307	387	369	358	366	398	324	357	247	144	68	115	94	88	233
19	146	272	262	176	256	300	260	265	208	238	303	380	314	206	65	61	136	110	56	59	369	196	128	147	205
20	133	42	44	45	75	37	67	62	174	138	39	28	25	30	56	107	206	317	321	191	82	88	179	157	110
21	113	86	126	188	207	202	173	181	240	151	208	429	484	287	158	73	47	27	35	32	31	37	68	26	150
22	33	90	286	345	113	75	270	465	226	70	46	110	107	106	52	76	44	66	362	141	91	101	310	237	159
23	82	69	27	57	167	441	381	338	346	116	50	36	84	106	158	76	66	65	107	141	279	73	68	114	144
24	134	375	336	96	37	34	43	53	33	56	43	104	44	56	79	65	193	242	49	48	144	99	29	19	100
25	25	44	63	94	39	56	142	336	344	158	514	1089	473	348	1164	1294	800	540	267	156	178	218	240	198	366
26	70	50	60	30	29	48	89	173	69	77	117	106	55	50	87	270	815	1013	460	284	110	147	352	427	208
27	213	246	496	622	426	695	779	901	1004	850	509	411	997	585	558	966	918	643	567	240	339	553	573	504	608
28	417	281	202	218	239	325	168	315	178	184	143	669	387	214	344	231	252	290	269	289	109	253	781	618	307
29	322	311	434	221	209	173	96	84	96	70	48	117	236	441	479	507	293	209	132	61	33	139	355	158	218
30	235	154	60	28	34	47	29	37	28	25	22	25	31	31	40	32	28	19	17	18	16	19	20	42	100
31	14	20	17	15	13	15	30	176	232	265	281	321	282	217	194	195	262	434	401	451	475	286	80	36	196
Mean	164	198	203	193	187	204	219	241	233	208	205	267	258	215	225	227	212	216	218	176	173	199	197	168	209
5Q Mean	105	74	60	48	47	54	62	50	82	86	59	79	84	59	49	71	123	112	104	66	49	77	77	71	73
5D Mean	204	331	307	345	364	490	560	519	483	506	536	651	526	485	562	676	462	366	362	230	272	495	439	401	440

Date	AO Index (Provisional, hourly mean values, unit nT)																				1993											
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2	12	0	6	-4	3	-14	-58	-42	-6	-124	-40	-33	-16	-29	-14	-87	-51	1	-71	-143	-39	-21	-8	17	-32							
3	9	7	6	8	9	-9	-23	-55	-17	-13	4	0	2	14	-18	-12	-40	-56	-42	-93	-136	-4	12	17	-17							
4	17	13	12	9	13	13	1	-9	-9	-9	-25	-68	-77	-12	6	-5	-17	-10	12	-57	-37	13	8	-5	-8							
5	-34	4	6	-2	-4	16	19	17	16	13	7	3	1	0	-2	-2	-4	-55	-149	-69	31	-22	20	20	-6							
6	17	20	-88	-185	-71	-11	12	64	52	16	5	-10	3	3	0	0	2	-1	-1	-21	-2	16	32	40	-4							
7	21	17	20	19	13	12	9	6	3	0	0	0	-5	-3	-3	-1	4	4	4	9	9	10	8	7	7							
8	7	16	29	33	15	-5	-49	-114	-160	-95	-2	-127	-209	-147	-81	0	7	9	-29	-50	6	-60	-15	-5	-42							
9	-90	-115	-71	-72	-26	41	-245	-131	-48	-134	-439	-228	-102	-129	-26	-59	-10	2	-107	10	-9	-236	-391	-140	-115							
D 10	-97	-173	-40	-114	-149	-200	-70	-7	-7	-138	-55	-2	-44	-261	-161	-26	-4	-46	-98	-155	-154	-232	-24	18	-93							
D 11	0	-138	-132	-142	-116	-122	-99	-57	-89	-111	-40	-315	-100	-34	-75	-214	-60	-12	4	-12	-20	-43	-62	-219	-92							
12	-213	-126	-69	-96	-123	-63	-23	-17	-89	-23	6	-9	-112	-112	-153	-28	15	-70	-87	-38	-59	-33	-2	-28	-65							
13	-132	-103	-41	-105	-168	-142	-122	-77	-56	-34	-19	-10	0	14	5	22	9	-4	-16	-9	-90	-48	4	12	-46							
14	-47	-139	-59	1	-8	10	19	17	16	-17	3	3	-4	-10	-33	0	-26	-56	-40	-34	-47	-21	-21	-7	-21							
Q 15	3	-1	-19	12	12	-2	4	12	11	2	0	-21	-40	-19	0	-15	-21	-34	-31	-6	0	7	7	6	-5							
Q 16	9	0	6	7	14	15	1	2	-23	-59	-26	-6	17	5	0	-20	-67	-21	-5	4	-5	-64	-11	-10	-9							
17	-8	-31	-103	-43	30	22	-1	0	9	10	5	0	-12	10	4	0	-1	-23	-77	-21	-27	-98	-53	-19	-17							
18	10	3	-40	-33	-69	-9	6	9	-23	-45	-50	-42	-78	-77	-66	-52	-17	-49	-35	-7	16	-19	-9	-1	-28							
19	-16	-64	-61	-12	-46	1	10	-13	-21	-7	-52	-44	-17	-11	-4	-14	-22	-28	1	13	-102	-27	-7	-34	-24							
Q 20	-29	7	12	8	-2	6	3	0	-64	-5	9	5	0	-1	0	-30	-73	-105	-52	-7	12	-6	-42	-37	-16							
21	-15	-3	-20	-50	-50	-23	-27	-35	-26	-28	-38	-85	-36	-14	-1	-1	10	7	5	2	6	13	3	14	-16							
22	19	4	-89	-67	24	23	-54	-131	-14	20	12	-12	-7	12	12	2	9	7	-57	-9	19	20	-40	2	-12							
23	29	26	11	19	0	-101	-92	-51	-97	16	8	11	19	15	-33	-12	-1	-2	-10	2	-21	19	9	12	-9							
24	4	-103	-14	26	7	9	5	9	2	0	-5	-31	0	-9	-11	-12	-61	-83	9	3	-37	-24	15	16	-11							
D 25	13	13	15	14	19	17	22	9	-32	29	-149	-472	-88	-70	-388	-346	-205	-39	16	-9	-58	-53	-84	-49	-78							
26	-5	0	-2	1	0	-2	-11	-40	10	-8	-31	-27	1	13	-8	-70	-183	-197	-80	-9	0	5	-50	-113	-33							
D 27	17	-1	-131	-150	-61	-175	-185	-117	-246	-151	-38	-108	-395	-197	-110	-250	-209	-94	-167	-20	-52	-98	-105	-128	-132							
28	-96	-15	-4	-27	-16	-69	-14	-63	-14	-7	13	-227	-52	-32	-113	-80	-96	-92	-69	-63	-9	-46	-247	-151	-66							
29	-42	-66	-91	-8	-20	18	2	-1	-10	-3	-1	-28	-60	-135	-111	-76	-9	-17	-13	8	9	-3	-77	25	-29							
Q 30	-2	-14	13	16	12	12	7	11	9	7	3	0	0	-1	0	-1	-4	-2	-1	-2	0	1	4	7	3							
31	7	8	5	7	8	8	11	-57	-79	-93	-66	-44	-15	-66	-62	-33	-66	-86	-86	-48	-52	13	39	12	17	-26						
Mean	-21	-35	-35	-36	-24	-23	-30	-30	-37	-35	-40	-66	-47	-42	-46	-47	-41	-38	-41	-26	-26	-33	-35	-22	-36							
5Q Mean	0	1	6	12	11	8	5	6	-12	-10	-2	-4	-4	-4	0	-13	-33	-31	-17	0	3	-10	-6	-5	-4							
5D Mean	-31	-82	-71	-92	-66	-87	-115	-60	-84	-101	-144	-225	-145	-138	-152	-179	-97	-37	-70	-37	-58	-132	-133	-103	-102							

1993

December

AU Index (Provisional, hourly mean values, unit nT)

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	Mean
D 1	45	82	51	60	76	65	63	51	40	48	89	105	77	265	252	183	310	219	66	82	85	168	108	145	114
D 2	97	174	217	247	250	221	137	151	101	110	205	86	146	255	128	195	85	154	256	209	-53	-2	71	78	147
D 3	117	186	160	237	119	192	149	146	187	129	110	95	90	63	21	28	37	27	14	69	69	61	11	37	98
D 4	22	24	28	25	16	10	7	11	14	18	18	30	39	18	17	14	11	14	12	20	97	32	28	20	23
D 5	21	20	22	19	18	16	33	40	86	36	48	44	27	44	89	119	53	35	37	53	44	38	42	52	43
D 6	62	32	33	27	32	41	45	37	44	22	26	21	49	25	51	11	19	13	20	22	37	26	33	39	32
D 7	54	67	41	35	37	34	36	38	50	44	50	38	43	131	312	325	271	82	66	121	108	127	157	126	100
D 8	119	89	184	111	231	298	225	285	178	97	96	195	89	140	150	228	198	205	242	146	46	58	50	38	154
Q 9	25	20	8	11	11	7	7	9	7	8	4	10	8	11	12	16	17	32	35	40	36	22	24	20	17
Q 10	34	40	27	28	25	45	72	72	27	48	35	58	31	30	32	37	25	10	68	93	49	43	33	39	42
D 11	58	58	79	50	26	52	34	49	73	75	37	32	21	24	53	28	24	24	51	24	23	36	23	25	41
D 12	26	32	32	32	26	28	39	32	59	70	63	41	17	33	13	39	22	30	13	11	17	15	19	25	31
Q 13	22	19	18	34	34	39	52	46	40	54	68	79	68	42	30	34	23	24	14	9	11	15	22	19	34
Q 14	23	29	31	34	29	44	33	17	22	16	12	48	57	39	26	6	8	10	13	21	18	17	15	22	25
Q 15	23	23	45	68	119	164	117	101	159	86	42	25	49	24	113	64	41	25	23	20	26	20	20	27	59
D 16	37	37	21	49	57	97	208	104	46	80	156	113	72	64	206	124	62	54	40	144	95	151	151	179	97
D 17	157	104	92	91	135	82	84	51	74	65	71	132	112	73	53	50	68	77	45	66	195	140	88	75	91
D 18	72	86	77	80	73	70	110	137	89	108	68	69	39	41	68	63	48	75	109	99	47	42	87	107	78
D 19	121	115	176	120	61	64	83	54	74	80	40	59	60	54	44	25	41	55	58	53	47	29	47	75	68
D 20	111	157	165	133	143	99	69	36	59	47	54	63	71	63	134	95	35	62	50	81	101	110	67	89	87
D 21	146	110	101	60	89	57	86	80	97	88	82	117	101	64	56	44	87	97	167	115	134	168	189	79	101
D 22	94	71	54	72	54	49	87	70	70	69	87	133	147	107	48	48	44	32	29	33	34	62	43	61	67
D 23	64	64	69	101	107	154	121	83	75	67	86	80	62	50	51	43	73	85	86	98	85	107	142	131	87
D 24	122	69	85	61	57	64	47	73	67	81	140	104	55	49	34	73	62	58	119	108	108	127	98	69	80
D 25	63	61	61	69	58	87	84	62	75	77	90	90	54	56	51	63	37	18	19	50	82	43	45	44	60
D 26	43	50	92	58	35	23	25	43	46	39	73	46	45	37	54	59	60	31	23	22	80	135	130	50	54
D 27	43	45	46	77	77	66	63	79	66	49	37	38	95	105	51	68	60	88	47	34	30	26	21	21	56
Q 28	25	25	27	41	57	47	47	48	34	39	53	18	7	9	27	16	15	14	20	16	28	31	33	39	30
Q 29	32	26	24	32	35	71	56	50	42	26	23	19	22	17	15	14	14	14	14	12	15	14	16	16	26
Q 30	29	38	52	80	85	87	66	49	70	34	27	21	34	32	56	30	27	23	18	13	14	14	12	16	39
Q 31	14	27	50	30	55	103	158	237	295	133	84	42	28	16	13	18	59	91	91	45	57	62	91	80	78
Mean	61	63	69	70	71	79	78	75	76	62	66	66	58	63	72	69	62	57	60	62	56	62	61	59	66
5Q Mean	25	23	21	30	33	41	39	34	29	28	32	34	32	23	22	17	15	18	19	19	21	19	22	23	26
5D Mean	81	113	126	140	146	174	156	147	110	92	131	118	94	157	151	151	138	131	123	130	48	87	78	95	122

AL Index (Provisional, hourly mean values, unit nT)		December												1993												
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D	2	-208	-204	-284	-406	-319	-239	-299	-310	-138	-259	-603	-631	-596	-682	-370	-593	-330	-372	-734	-499	-543	-533	-632	-664	-435
D	3	-574	-500	-396	-246	-180	-343	-283	-595	-533	-731	-829	-860	-606	-295	-217	-114	-108	-137	-96	-310	-538	-234	-137	-105	-374
4	-71	-50	-31	-22	-20	-18	-26	-35	-48	-35	-48	-86	-159	-46	-23	-19	-28	-92	-50	-60	-262	-104	-18	-17	-57	
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6	-13	-9	-18	-25	-24	-28	-27	-43	-47	-58	-141	-183	-223	-129	-100	-30	-45	-185	-173	-142	-168	-158	-100	-122	-91	
7	-187	-111	-57	-30	-46	-29	-15	-46	-85	-157	-161	-496	-824	-983	-656	-327	-98	-150	-239	-487	-429	-211	-309	-256		
8	-977	-735	-368	-440	-611	-461	-308	-493	-422	-369	-632	-669	-244	-556	-973	-879	-455	-511	-399	-103	-18	-24	-44	-41	-447	
D	9	-30	-30	-42	-23	-18	-14	-18	-20	-17	-17	-14	-16	-20	-23	-16	-15	-11	-20	-14	-16	-11	-19	-44	-20	
Q	10	-125	-50	-33	-33	-15	-109	-147	-74	-32	-47	-201	-285	-107	-138	-185	-105	-135	-105	-231	-246	-122	-97	-29	-75	-114
11	-213	-193	-119	-74	-11	-17	-58	-162	-279	-84	-87	-199	-145	-93	-152	-127	-155	-209	-124	-201	-80	-39	-23	-28	-120	
12	-60	-93	-81	-56	-12	-13	-41	-107	-109	-299	-121	-39	-57	-142	-245	-257	-99	-82	-41	-71	-28	-87	-20	-31	-91	
13	-68	-18	-11	-43	-28	-3	-20	-70	-84	-157	-132	-114	-109	-72	-57	-58	-60	-27	-68	-81	-41	-14	-23	-36	-58	
Q	14	-29	-8	-8	-15	-48	-29	-16	-20	-13	-60	-82	-153	-122	-103	-83	-95	-98	-41	-24	-32	-55	-73	-68	-43	-55
15	-25	-39	-154	-94	-180	-141	-125	-253	-212	-37	-27	-57	-79	-392	-164	-9	-11	-13	-21	-18	-35	-38	-22	-15	-90	
16	-12	-22	-19	-18	-26	-198	-102	-6	-4	-63	-299	-280	-48	-214	-543	-385	-62	-32	-71	-250	-421	-304	-44	-256	-153	
17	-250	-50	-90	-189	-215	-73	-55	-110	-108	-169	-172	-398	-630	-437	-231	-239	-421	-353	-159	-232	-427	-269	-62	-125	-228	
18	-122	-79	-30	-49	-31	-139	-198	-204	-79	-231	-210	-92	-43	-88	-236	-32	-174	-476	-535	-24	-15	-37	-219	-256	-150	
19	-255	-113	-158	-28	-5	-12	-55	-172	-144	-49	-34	-142	-90	-56	-49	-162	-234	-197	-109	-112	-79	-31	-30	-149	-103	
20	-198	-185	-194	-66	-46	-36	0	0	-25	-42	-170	-240	-128	-80	-199	-138	-90	-281	-152	-90	-59	-141	-152	-148	-119	
21	-115	-107	-56	-34	-37	-45	-61	-227	-103	-112	-187	-344	-211	-113	-343	-227	-379	-392	-58	-54	-264	-328	-88	-20	-163	
22	-99	-33	-30	-12	0	-8	-60	-84	-61	-24	-95	-522	-170	-31	-21	-32	-40	-11	-20	-28	-45	-134	-100	-101	-73	
23	-57	-66	-17	-30	-78	-2	2	-1	-8	-139	-302	-162	-53	-18	-10	-77	-52	-259	-271	-43	-92	-130	-438	-87	-100	
24	-39	-33	-3	3	0	-26	-31	-78	-69	-87	-131	-126	-73	-34	-130	-287	-120	-228	-236	-116	-59	-186	-163	-32	-95	
25	-33	-30	-17	-105	-121	-8	-15	-1	-12	-100	-181	-61	-38	-65	-142	-41	-14	-30	-71	-79	-81	-138	-66	-34	-62	
26	-78	-45	-6	2	1	-8	-25	-8	-23	-72	-66	-41	-60	-160	-226	-179	-35	-14	-10	-14	-133	-383	-135	-50	-74	
27	-24	-17	-9	-12	-32	-94	-25	-2	-51	-2	-23	-79	-135	-191	-173	-138	-96	-284	-64	-15	-5	-13	-11	-11	-63	
Q	28	-7	-8	-7	-6	-1	0	-4	-5	-12	-28	-2	-8	-8	-47	-98	-47	-87	-99	-120	-58	-18	-4	3	-28	
Q	29	2	1	0	-2	-1	-27	-19	0	-3	3	0	0	-1	-5	-9	-6	-8	-6	-1	-20	3	0	-2	-4	
30	-12	-8	-18	-7	3	0	-9	-19	-206	-51	0	-6	-97	-108	-129	-29	-10	-10	-7	0	0	0	0	-2	-30	
31	-5	-72	-52	7	-50	-166	-470	-536	-391	-231	-185	-134	-123	-290	-97	-88	-275	-301	-177	-64	-112	-314	-305	-154	-191	
Mean	-127	-95	-73	-67	-69	-74	-82	-120	-107	-118	-176	-220	-196	-207	-219	-193	-143	-165	-147	-123	-147	-164	-108	-108	-135	
5Q Mean	-26	-12	-13	-17	-19	-14	-15	-23	-25	-51	-46	-56	-51	-41	-43	-54	-45	-34	-42	-53	-33	-22	-22	-24	-33	
5D Mean	-362	-299	-213	-222	-227	-247	-196	-279	-218	-288	-529	-605	-458	-470	-503	-479	-272	-252	-272	-248	-342	-367	-200	-270	-326	

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AE Index (Provisional, hourly mean values, unit nT)

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	Mean
D 1	86	117	52	65	74	58	55	43	37	68	373	695	874	874	666	610	720	431	129	163	277	914	253	432	336
D 2	306	378	502	654	571	462	434	463	241	371	810	719	743	938	500	789	417	527	991	709	490	530	704	743	583
D 3	692	687	557	483	301	536	433	433	742	861	940	957	697	359	240	143	145	165	111	379	608	297	149	143	473
D 4	94	75	59	48	37	29	34	47	57	54	68	117	200	65	41	33	40	107	63	81	360	137	47	38	80
D 5	39	35	42	32	33	35	75	129	151	67	110	203	485	473	315	562	155	104	386	531	183	144	104	188	190
D 6	76	41	52	53	56	70	72	81	91	81	168	206	273	155	152	43	64	198	194	165	206	185	133	162	124
D 7	241	180	63	93	68	81	67	54	98	131	208	201	540	956	1297	983	599	181	217	361	596	558	369	436	357
D 8	1096	824	552	552	843	760	534	779	601	467	729	866	333	697	1125	1109	655	718	642	250	64	83	94	79	602
Q 9	56	51	51	35	29	22	25	29	26	25	18	25	24	32	36	32	32	44	56	55	53	35	44	65	38
Q 10	160	91	61	62	40	155	220	146	60	96	237	344	139	169	219	143	161	115	300	340	171	141	62	115	156
11	272	252	198	125	38	70	92	212	354	160	126	232	168	118	207	156	192	235	177	226	103	76	46	54	162
12	87	126	113	89	39	41	80	140	170	370	185	80	76	176	260	297	122	112	55	82	46	103	40	57	123
13	91	38	31	78	63	43	73	117	126	213	202	194	178	116	88	94	85	52	83	91	52	30	45	56	93
Q 14	52	38	40	50	78	73	49	38	36	77	95	202	180	144	111	103	108	51	37	53	74	91	84	66	80
Q 15	49	63	199	163	300	306	244	355	371	123	70	84	129	417	279	73	53	38	44	39	62	58	42	42	150
D 16	40	60	41	67	83	297	312	111	50	144	456	394	122	279	750	511	125	87	112	395	518	456	195	437	252
17	407	154	183	281	351	156	139	161	182	236	244	531	744	511	285	290	489	431	205	299	622	410	151	201	319
18	195	166	108	131	105	210	309	342	169	340	280	162	84	130	305	96	223	552	645	124	62	79	307	364	229
19	377	229	335	148	65	77	139	227	220	130	75	203	152	111	93	187	275	253	168	165	127	61	77	224	172
20	311	343	360	200	190	135	69	36	85	90	226	304	201	144	335	234	127	343	203	172	161	252	219	237	207
21	262	218	157	95	127	103	148	309	201	202	271	462	313	178	400	273	467	490	225	170	399	497	278	99	264
22	193	106	84	84	54	57	147	155	131	94	183	656	318	139	70	81	85	43	50	62	80	197	144	163	141
23	122	130	88	132	186	156	118	85	83	207	390	244	115	69	61	121	126	345	359	142	178	238	581	219	187
24	161	102	88	57	57	91	79	152	137	169	272	232	129	84	166	361	184	287	355	225	169	314	262	102	176
25	96	91	79	175	180	96	100	64	88	178	273	152	93	123	195	104	51	49	90	130	164	181	112	79	123
26	122	96	99	55	33	32	51	52	69	112	140	87	106	198	281	239	96	45	34	36	214	519	266	101	128
27	67	63	56	90	111	161	90	82	118	51	62	119	231	298	226	207	157	372	113	50	36	39	33	32	119
28	32	34	35	47	58	45	51	54	46	68	55	21	16	19	76	115	63	102	120	137	87	49	37	35	58
Q 29	29	24	25	34	36	98	76	49	46	23	22	19	24	23	25	20	22	21	16	32	11	10	15	19	30
Q 30	42	47	72	88	81	87	76	69	277	86	28	28	132	141	187	59	37	33	26	13	13	12	11	19	69
31	20	100	102	22	106	270	629	775	687	365	270	177	153	307	112	107	334	394	269	110	170	377	397	234	270
Mean	189	159	144	138	141	155	161	196	184	182	244	287	256	272	293	263	206	223	208	186	205	228	171	169	203
5Q Mean	52	37	36	48	52	56	54	57	56	81	78	92	84	66	67	72	62	62	54	62	73	55	43	45	48
5D Mean	444	413	340	364	374	422	353	427	330	382	661	726	553	629	656	632	412	385	397	379	391	456	279	366	449

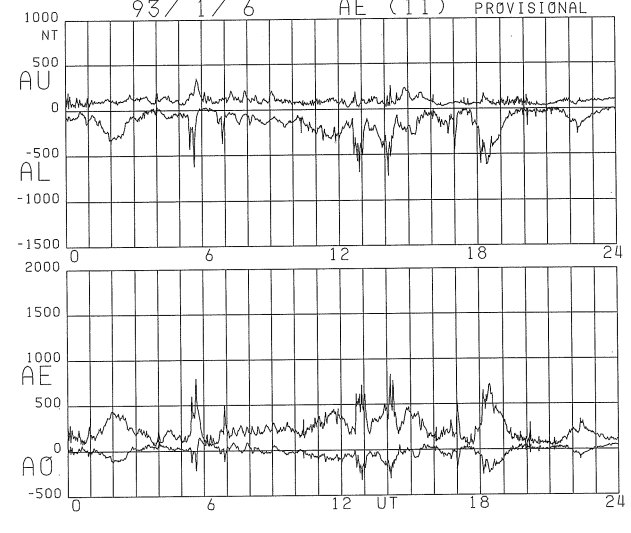
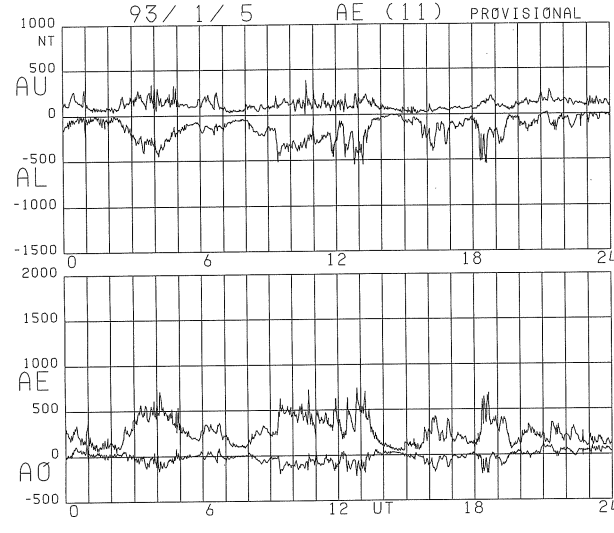
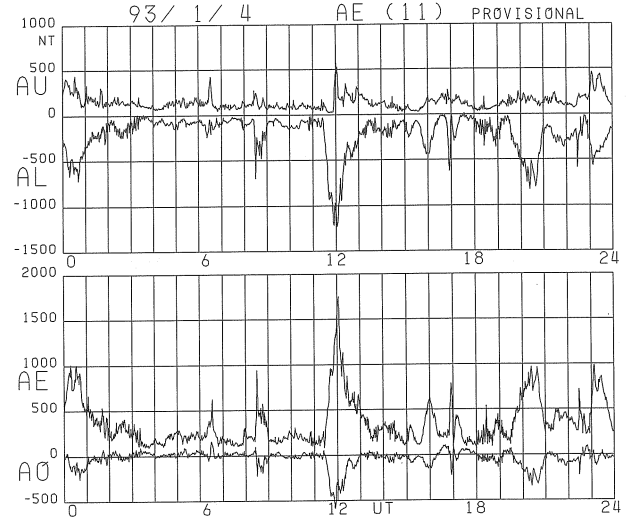
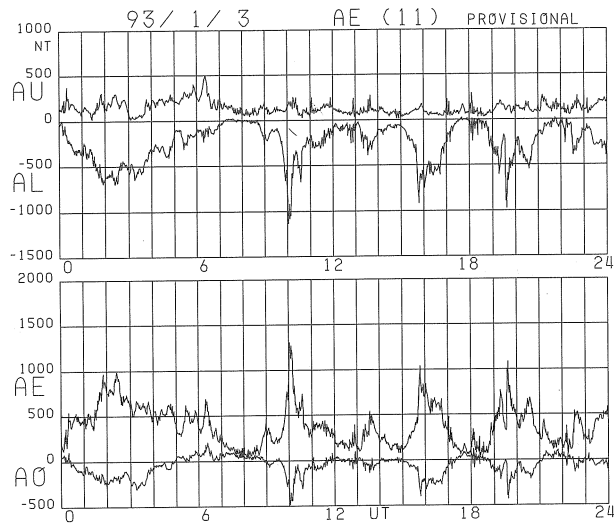
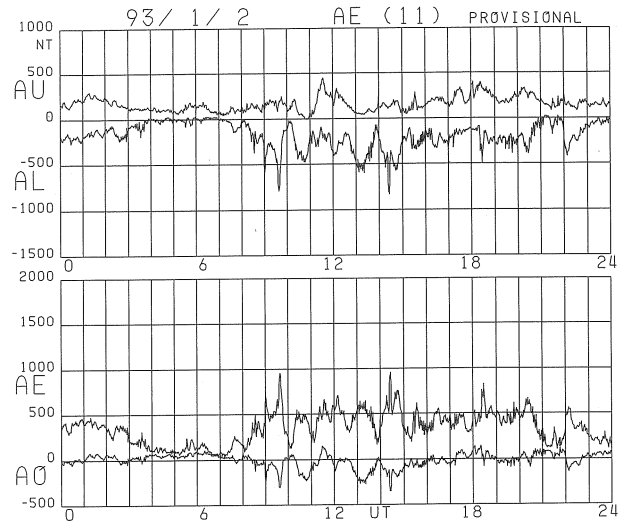
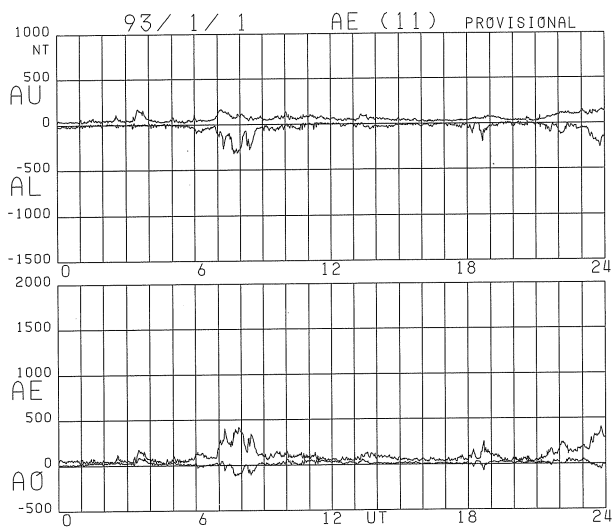
AO Index (Provisional, hourly mean values, unit nT)		December 1993																								
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D	2	-55	-14	-33	-79	-34	-9	-78	-18	-74	-198	-272	-224	-212	-121	-198	-121	-108	-238	-144	-298	-267	-280	-292	-144	
D	3	-227	-156	-118	-4	-30	-75	-67	-224	-172	-300	-359	-382	-257	-115	-97	-42	-34	-54	-40	-120	-234	-86	-62	-137	
	4	-24	-12	-1	1	-1	-3	-8	-11	-13	-8	-14	-27	-59	-13	-2	-8	-38	-18	-19	-82	-35	4	1	-16	
	5	1	2	1	3	1	-1	-4	-23	9	2	-6	-56	-205	-191	-67	-161	-23	-16	-155	-211	-47	-33	-9	-51	
	6	24	11	7	0	3	5	8	-3	-2	-17	-57	-80	-86	-51	-24	-9	-12	-85	-75	-59	-64	-65	-32	-40	
	7	-66	-21	9	-10	2	-5	3	11	2	-20	-53	-60	-225	-346	-335	-165	-27	-7	-41	-58	-188	-150	-26	-78	
D	8	-428	-323	-91	-163	-189	-81	-41	-104	-121	-135	-267	-236	-76	-207	-411	-324	-127	-152	-78	21	13	16	2	-1	
Q	9	-2	-4	-16	-5	-3	-2	-4	-5	-4	-3	-4	-1	-3	-4	-4	0	1	10	7	12	9	5	2	-1	
Q	10	-44	-5	-3	-2	4	-32	-37	0	-2	0	-82	-113	-37	-53	-76	-33	-54	-46	-80	-76	-36	-25	2	-11	
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	15	0	-7	-54	-12	-30	10	-4	-75	-26	24	7	-15	-15	-183	-25	27	15	6	0	0	-3	-8	0	5	
D	16	6	6	0	14	15	-50	52	48	20	8	-71	-82	11	-74	-168	-130	0	10	-15	-52	-162	-75	53	-37	
	17	-45	26	0	-48	-39	4	14	-28	-16	-51	-49	-132	-258	-181	-88	-94	-175	-137	-56	-82	-115	-64	12	-25	
18		-24	3	22	15	20	-34	-43	-32	4	-61	-70	-11	-1	-23	-83	14	-62	-200	-212	37	16	2	-66	-73	
19		-66	0	9	45	27	25	13	-58	-34	14	3	-40	-15	0	-2	-67	-95	-70	-25	-29	-16	-1	8	-36	
20		-43	-13	-14	32	48	30	34	18	16	2	-57	-88	-28	-8	-31	-21	-26	-108	-50	-4	20	-15	-42	-29	
	21	15	1	21	12	25	5	12	-73	-3	-11	-51	-112	-54	-24	-143	-91	-145	-146	54	30	-64	-79	50	28	
	22	-2	18	11	29	27	20	13	-7	4	21	-3	-193	-11	37	13	7	1	9	4	2	-5	-35	-28	-19	
	23	2	-1	25	34	13	75	61	40	33	-36	-107	-40	4	15	19	-16	10	-86	-92	27	-3	-11	-147	21	
	24	40	17	40	32	28	18	7	-2	-1	-2	4	-10	-9	7	-47	-106	-28	-84	-58	-4	23	-29	-32	17	
	25	14	15	21	-18	-31	39	33	30	30	-11	-44	14	7	-4	-45	10	10	-5	-25	-14	0	-46	-10	4	
	26	-16	2	42	30	18	7	0	16	11	-16	3	2	-7	-61	-85	-59	11	8	5	3	-25	-123	-2	0	
	27	9	13	18	31	21	18	37	6	22	6	-20	-19	-42	-61	-34	-17	-97	-7	9	12	6	4	4	-3	
Q	28	8	7	9	17	27	23	21	10	5	24	7	0	0	-10	-40	-15	-35	-38	-51	-14	6	14	21	0	
Q	29	17	13	11	14	16	21	17	24	18	14	11	9	10	5	2	3	3	6	-4	9	9	7	6	10	
	30	8	14	16	36	44	43	28	14	-68	-9	13	6	-31	-37	-35	0	8	6	4	6	7	7	6	4	
	31	4	-22	-1	18	2	-31	-155	-149	-48	-48	-50	-45	-47	-136	-41	-34	-107	-104	-42	-8	-27	-125	-106	-36	
Mean		-32	-15	-2	0	0	2	-1	-22	-15	-27	-54	-76	-68	-71	-72	-61	-39	-53	-43	-30	-44	-50	-23	-24	-34
5Q Mean		0	5	3	6	6	13	11	5	1	-11	-7	-10	-8	-8	-10	-18	-14	-7	-11	-16	-5	-1	0	-3	
5D Mean		-140	-92	-43	-41	-40	-36	-19	-66	-54	-97	-198	-242	-161	-155	-175	-162	-66	-60	-74	-59	-146	-139	-60	-86	-101

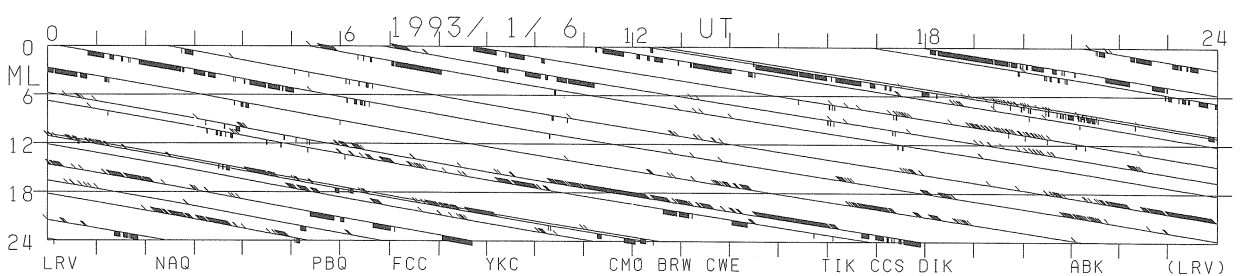
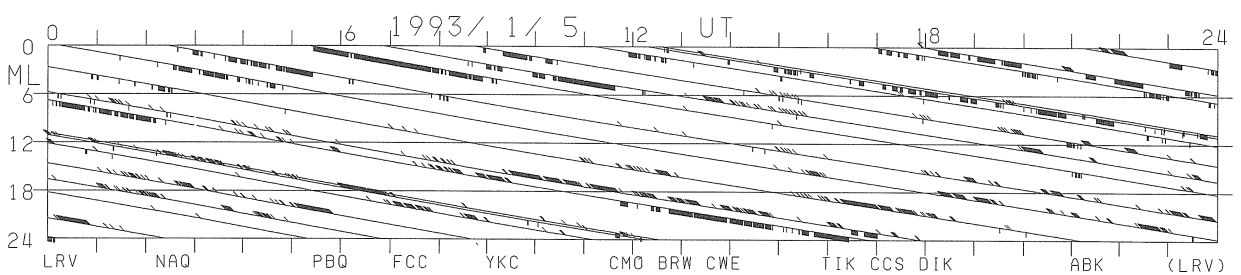
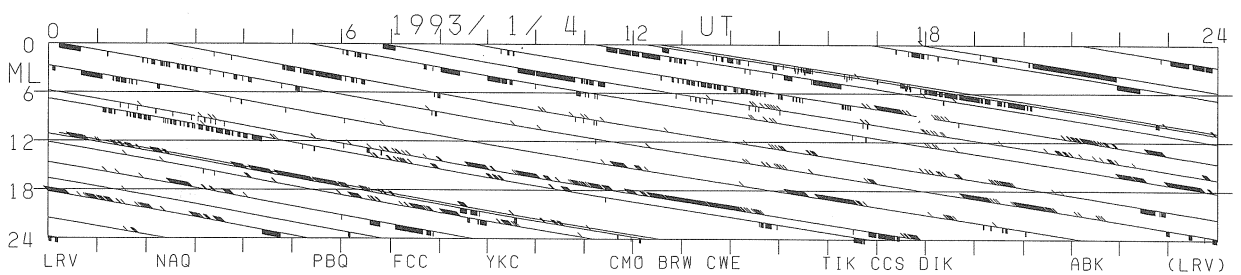
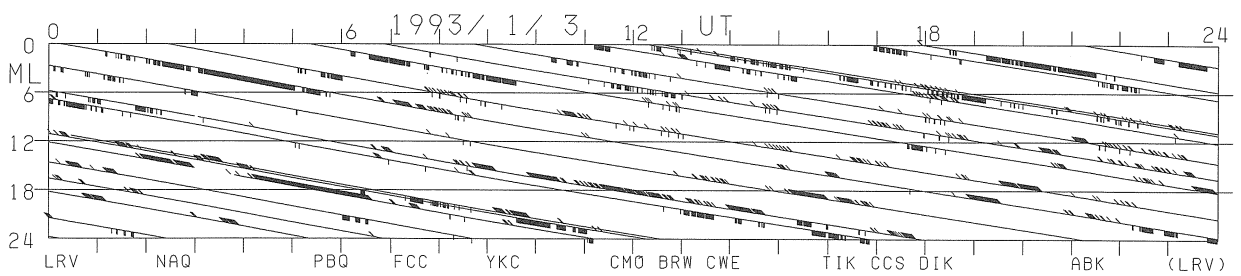
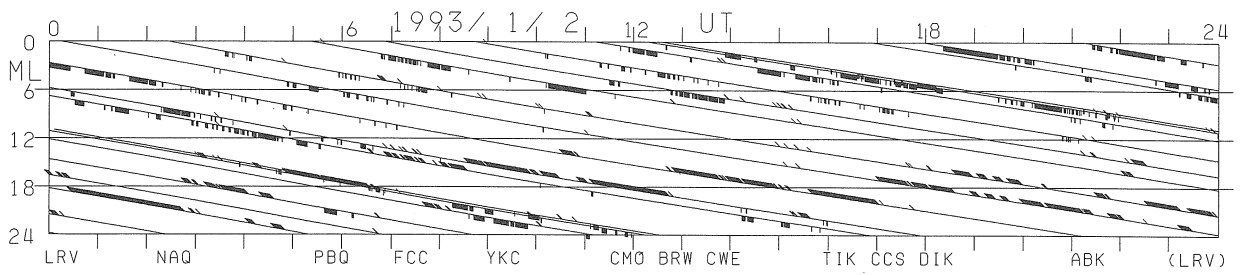
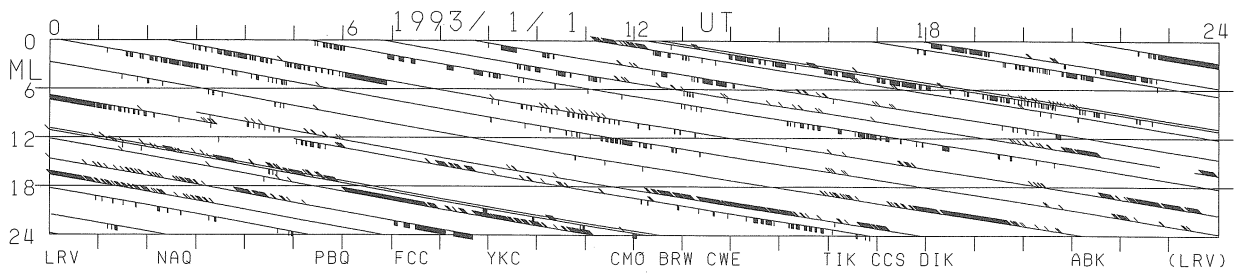
FIGURE 2 (on even pages)

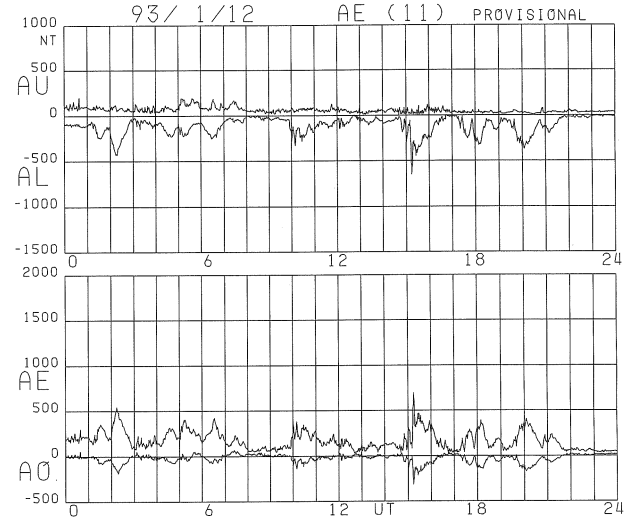
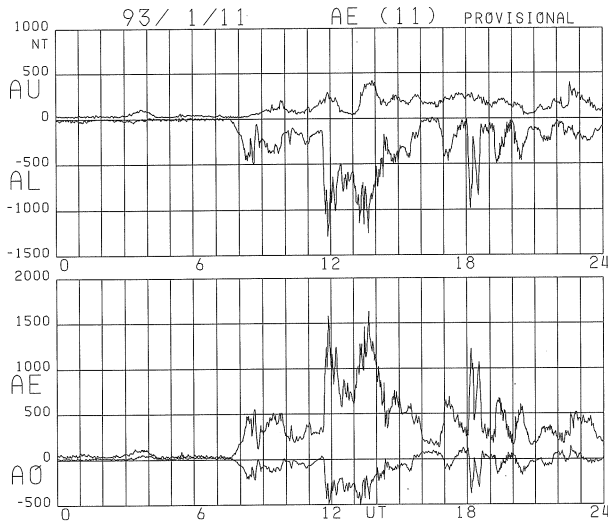
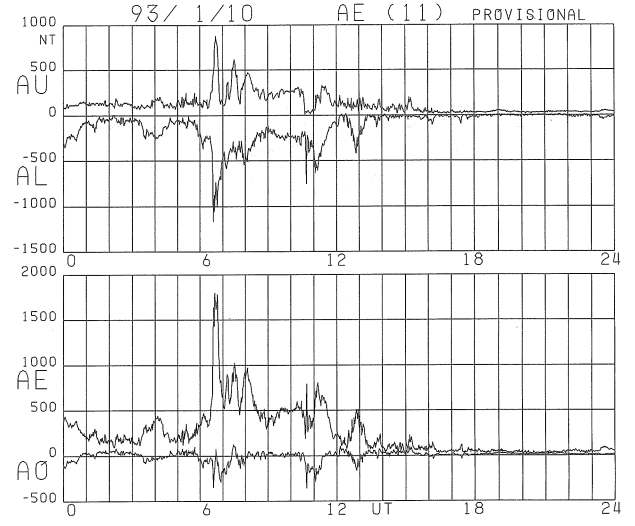
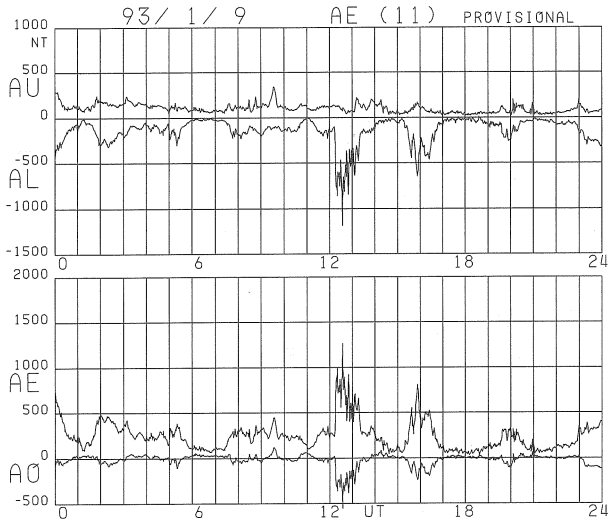
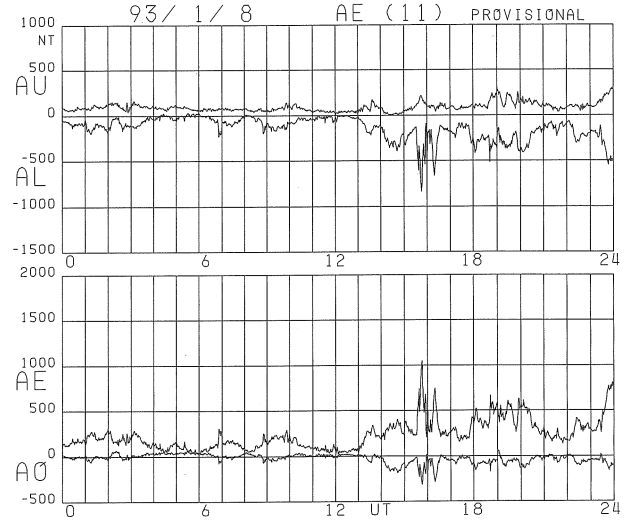
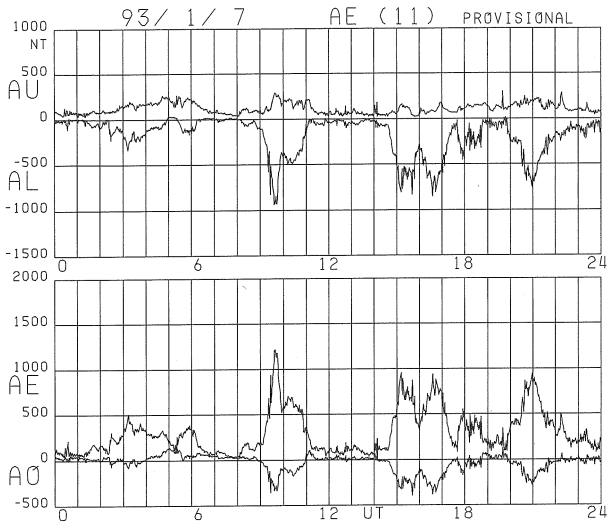
Daily graphs of provisional 1.0 min AE indices (AU, AL, AE and AO) for January-December 1993. Graphs on disturbed days (Mar. 13, Apr. 4, Aug. 27, Oct. 25, Nov. 4, Dec 3, and Dec 8) are reproduced on page 190.

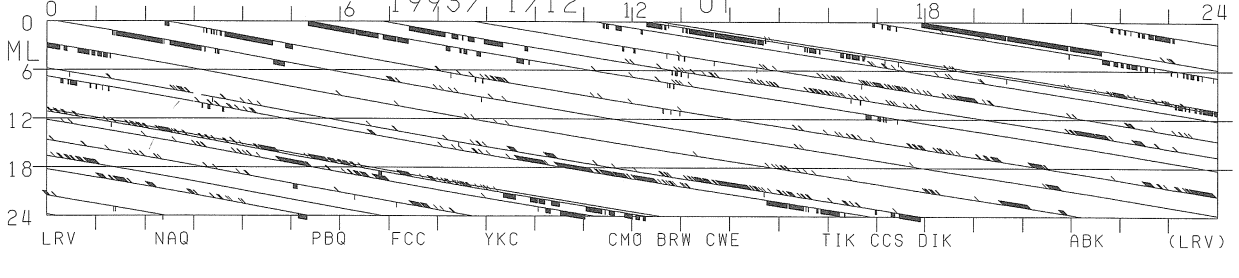
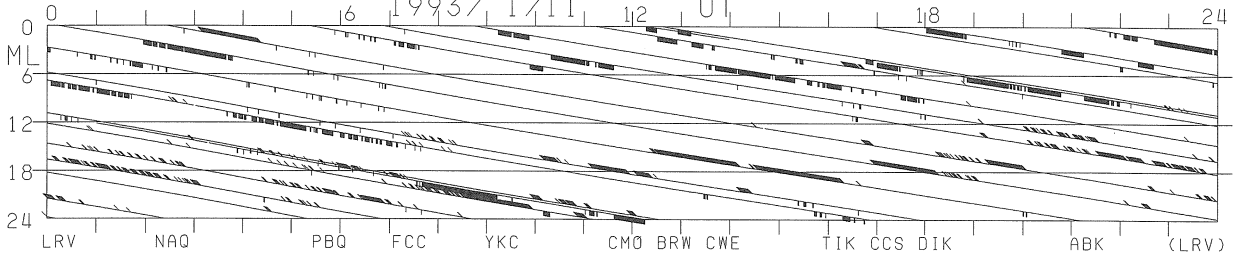
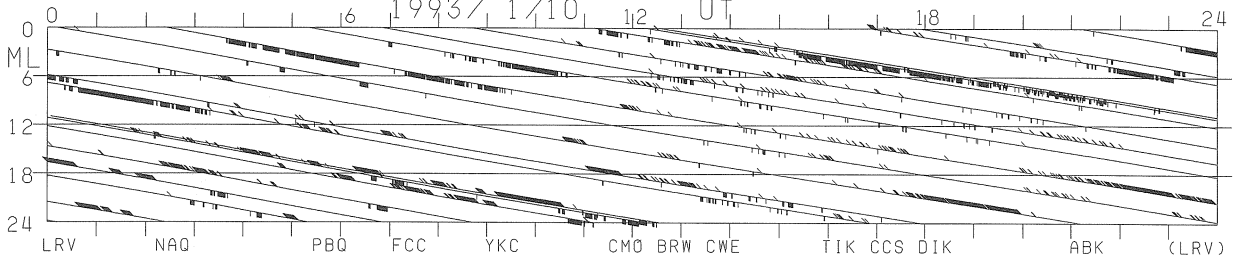
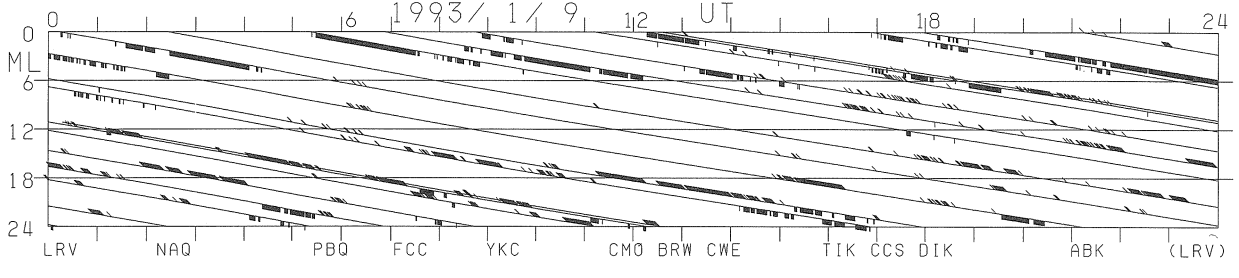
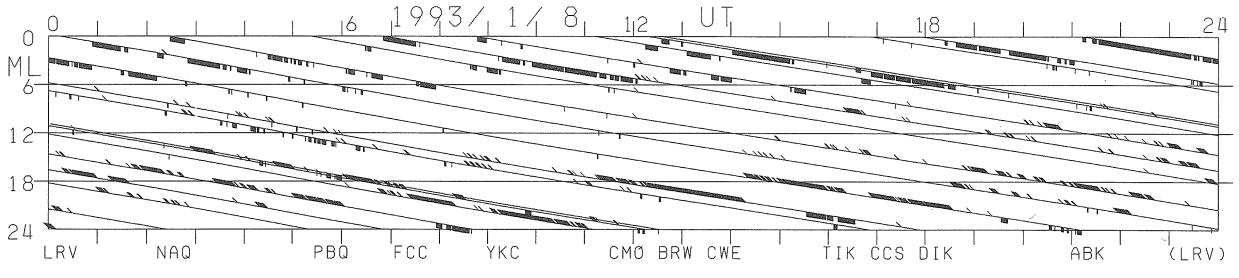
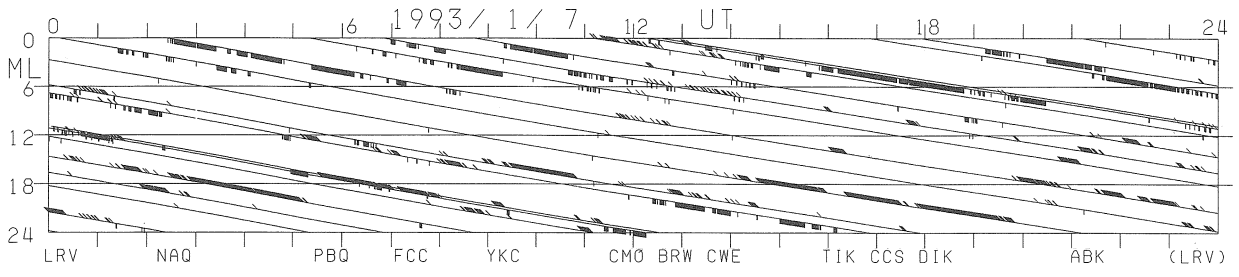
FIGURE 3 (on odd pages)

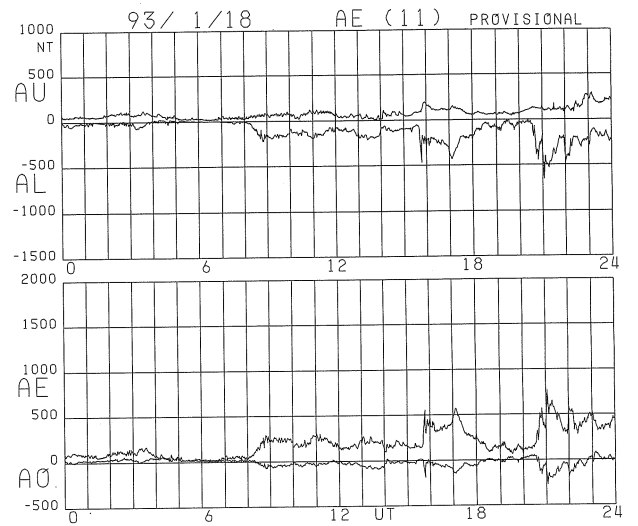
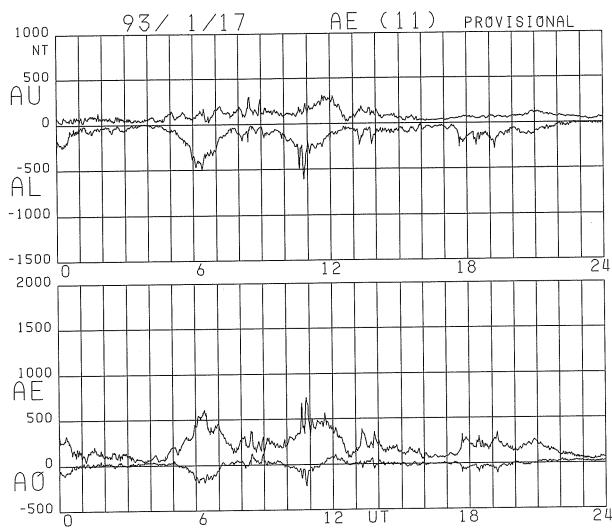
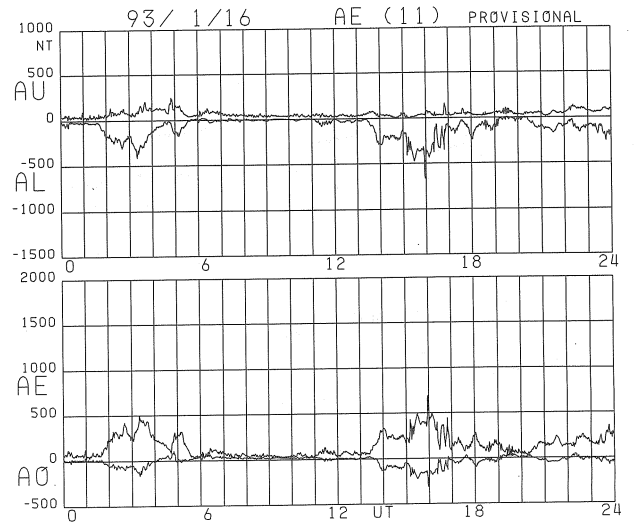
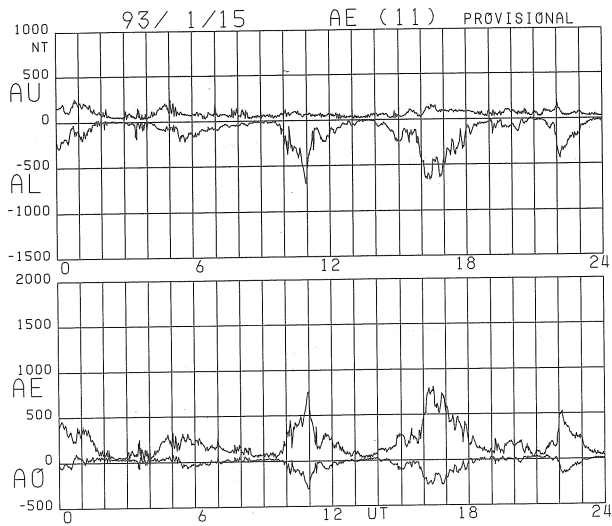
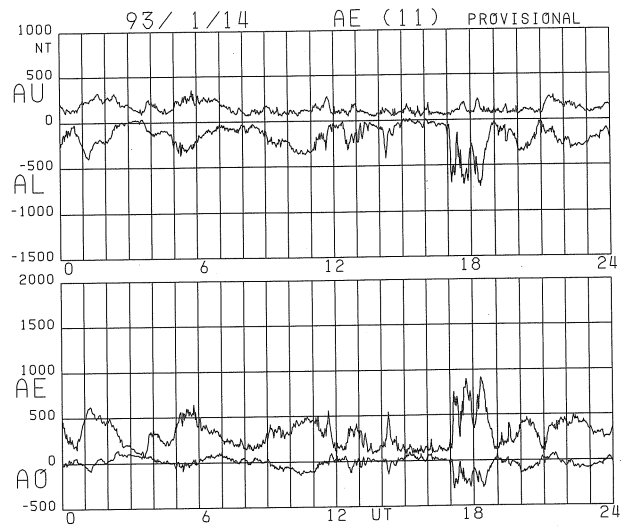
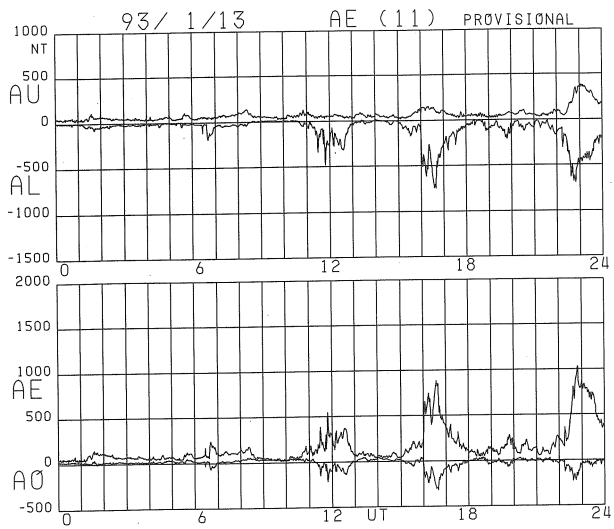
Plots of the contributing station to the AU (upper plumes) and AL (lower plumes) indices, showing which station contributes to these indices at each UT minute.

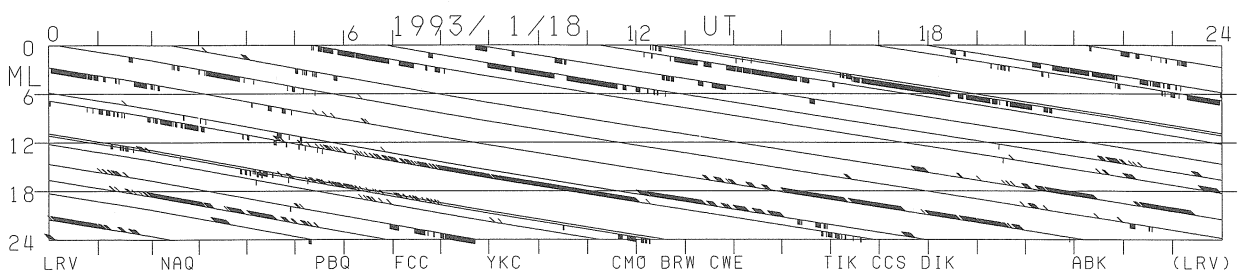
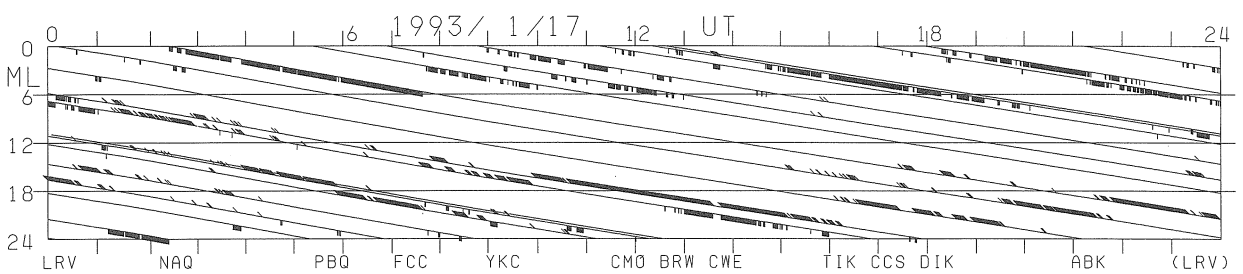
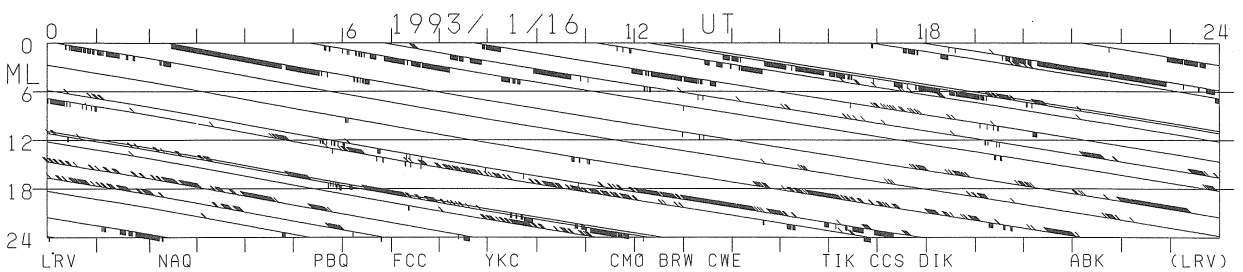
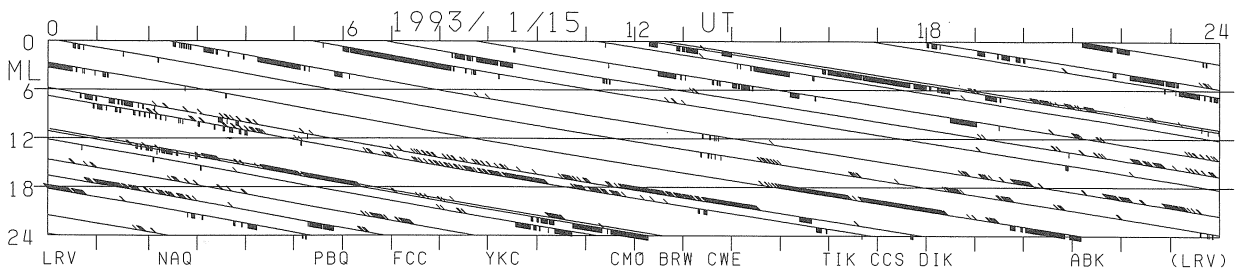
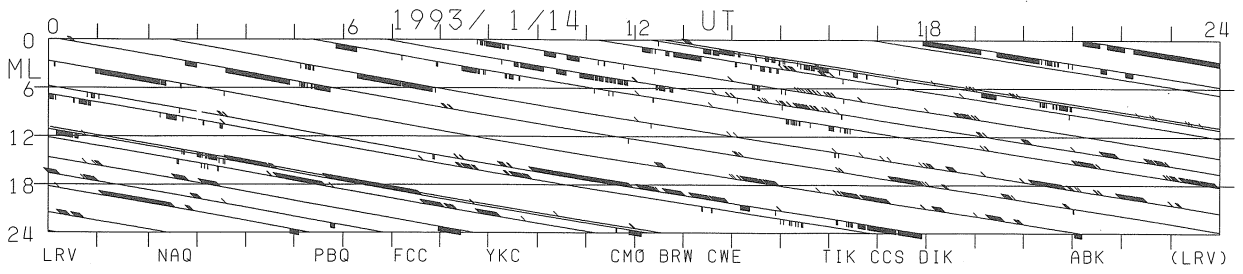
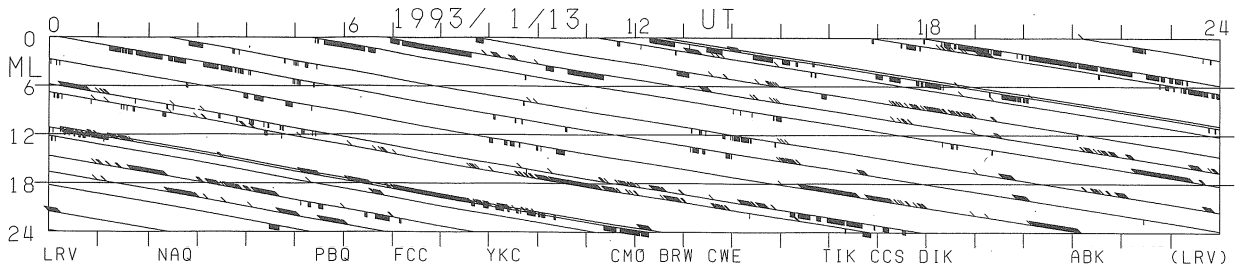


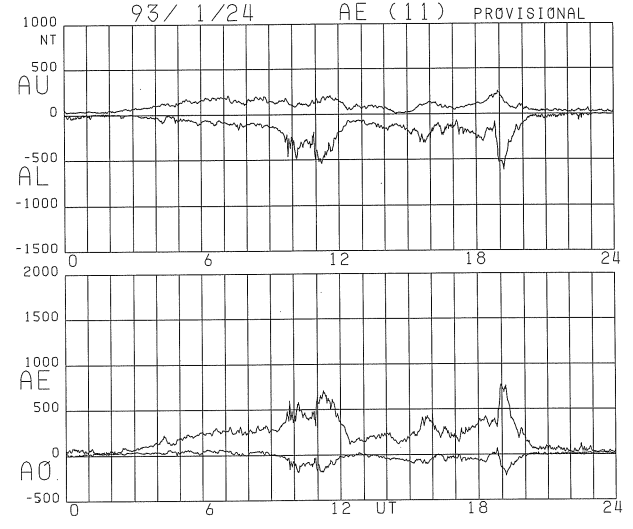
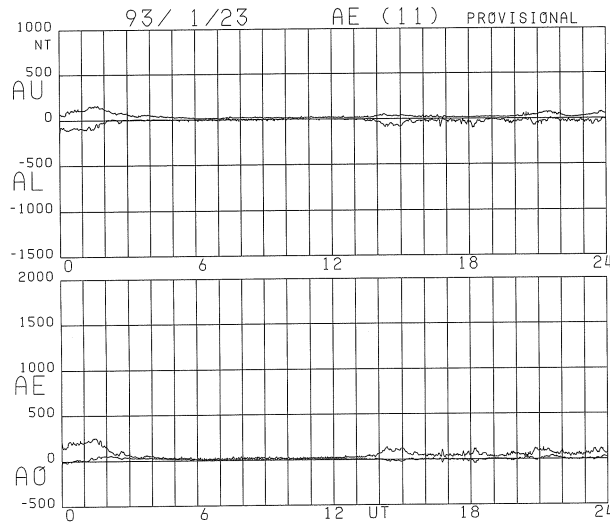
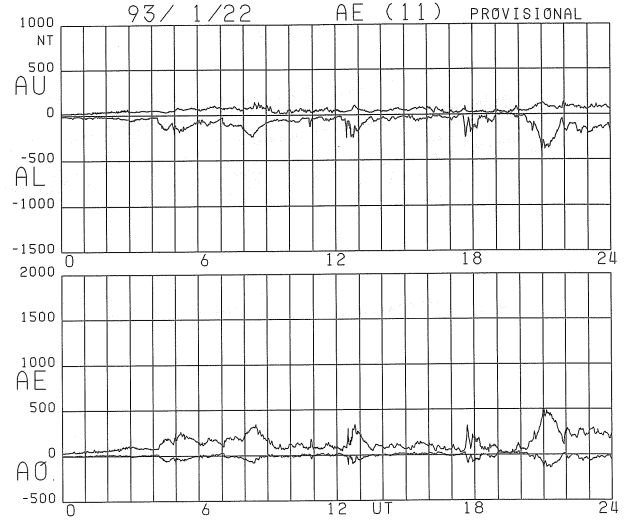
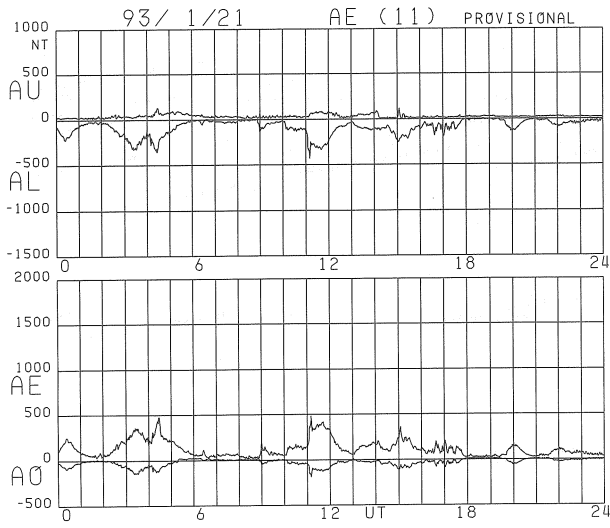
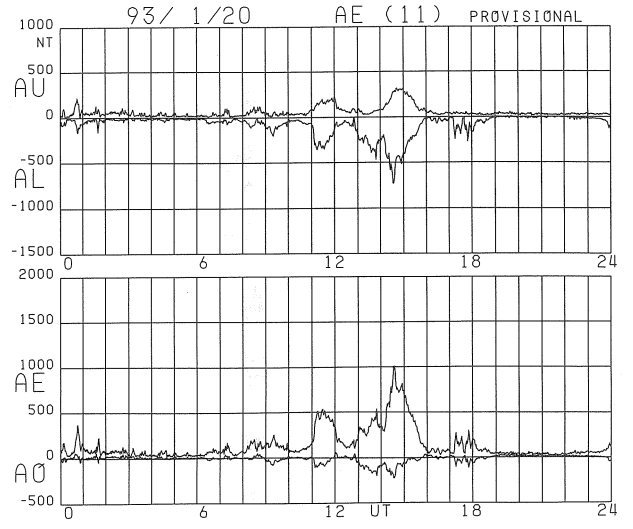
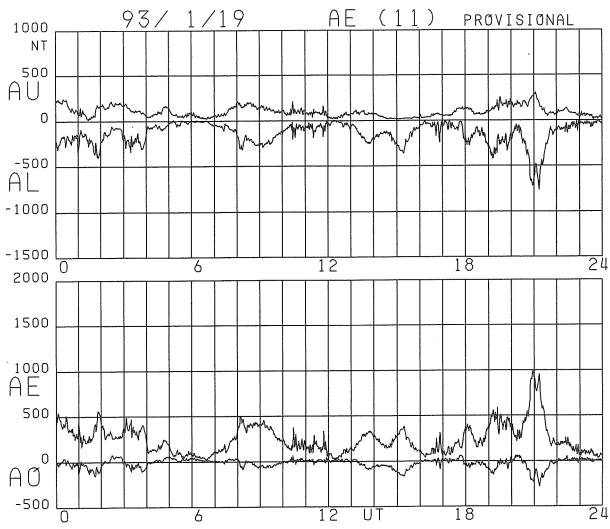


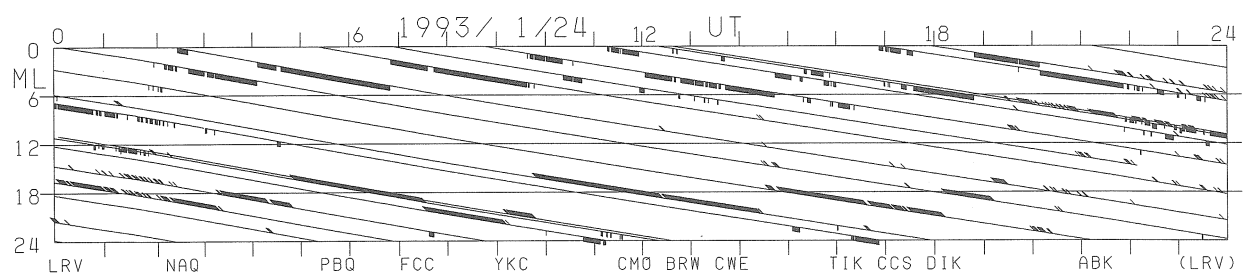
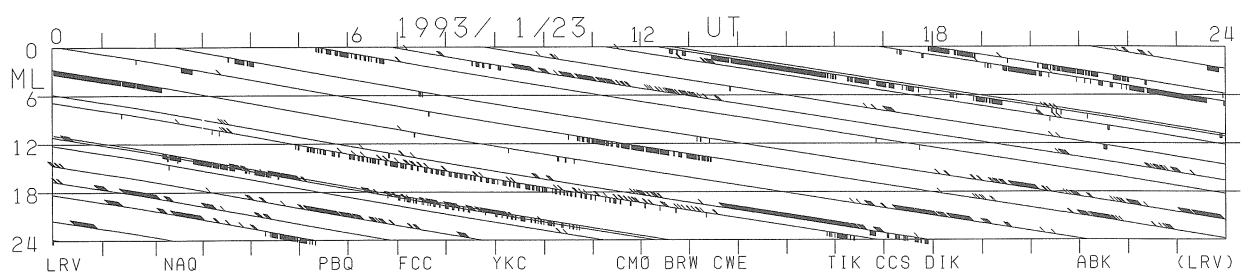
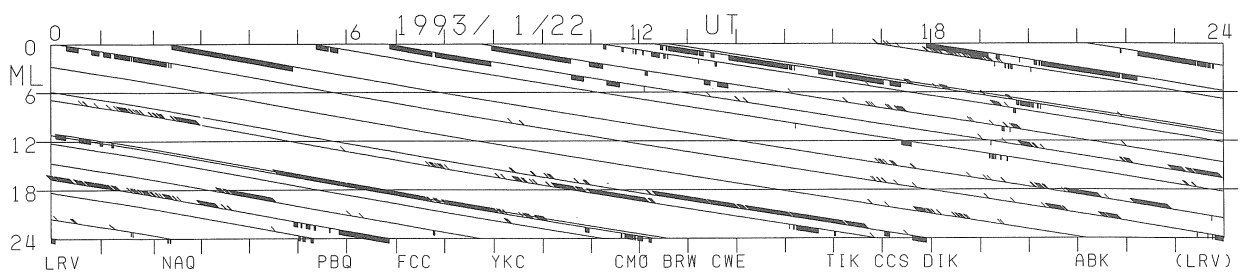
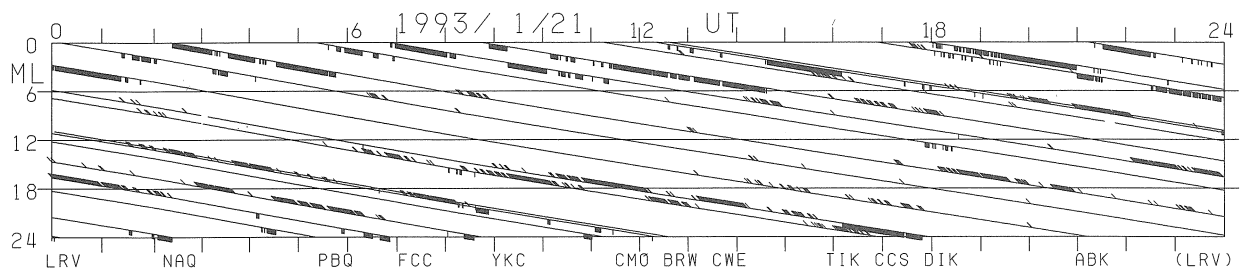
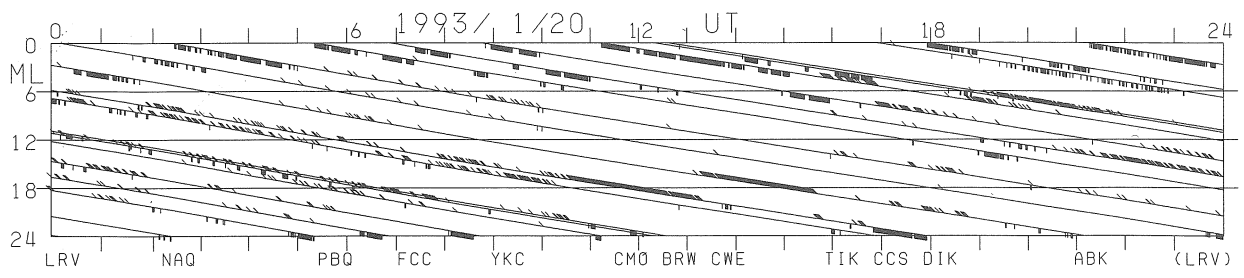
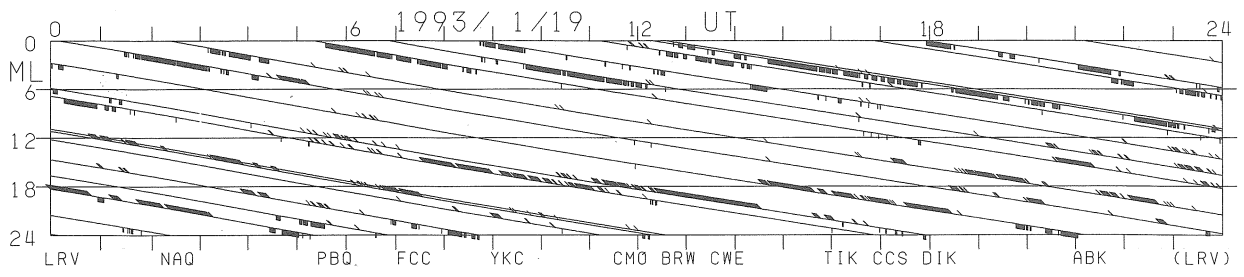


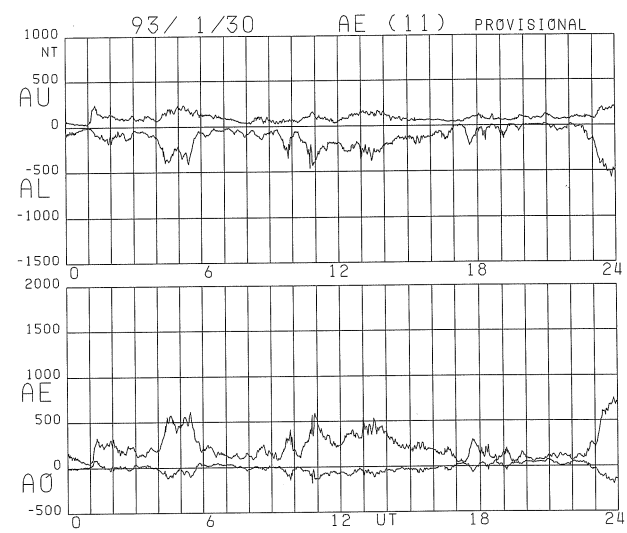
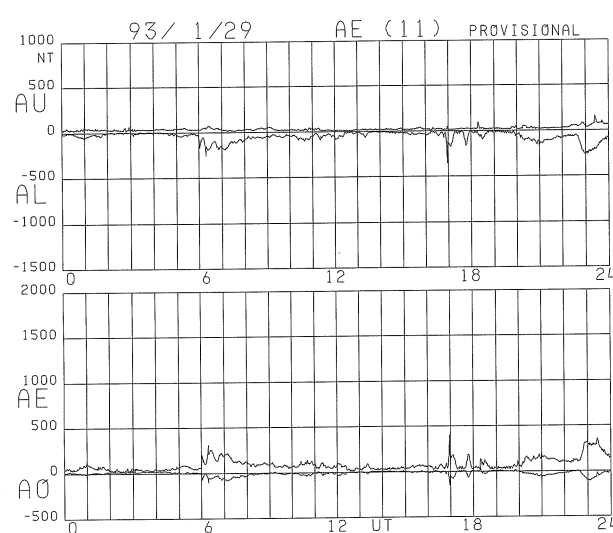
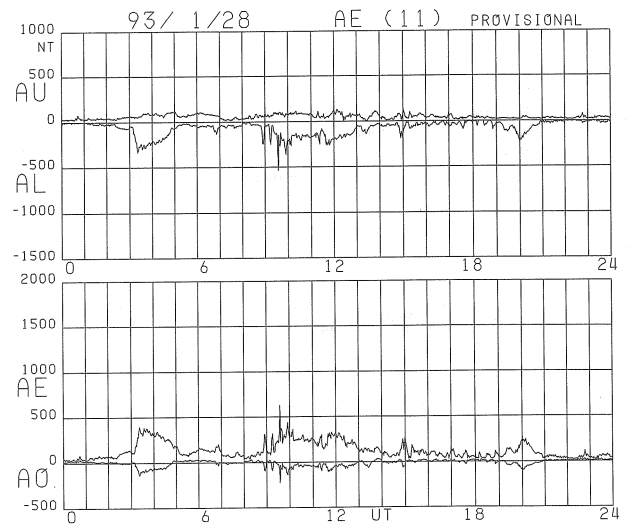
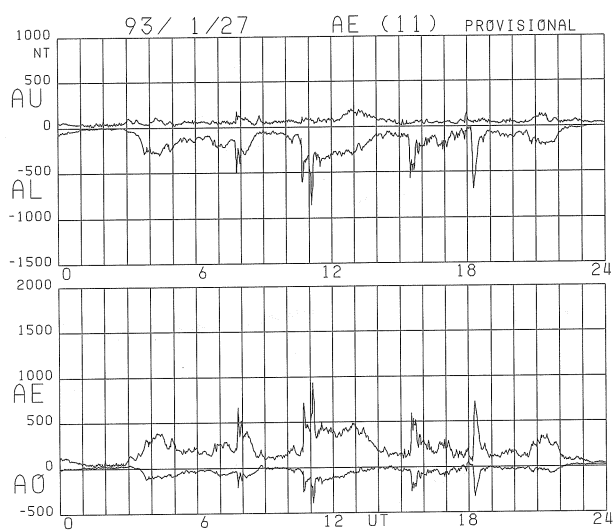
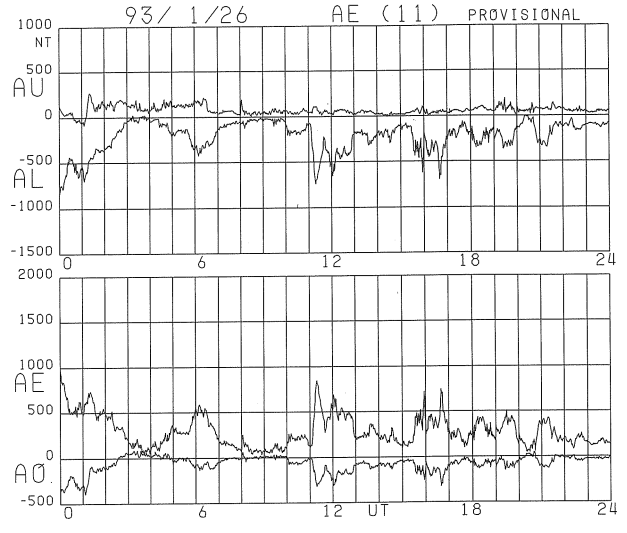
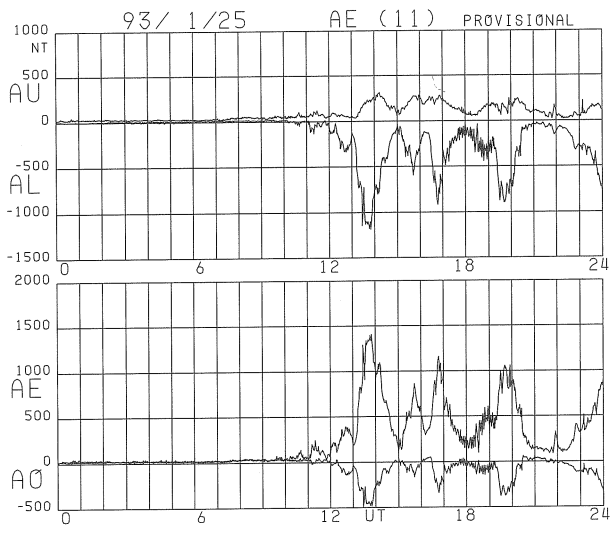


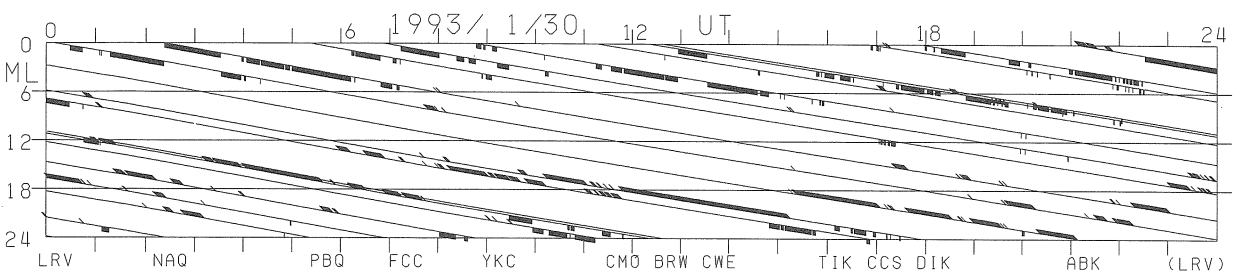
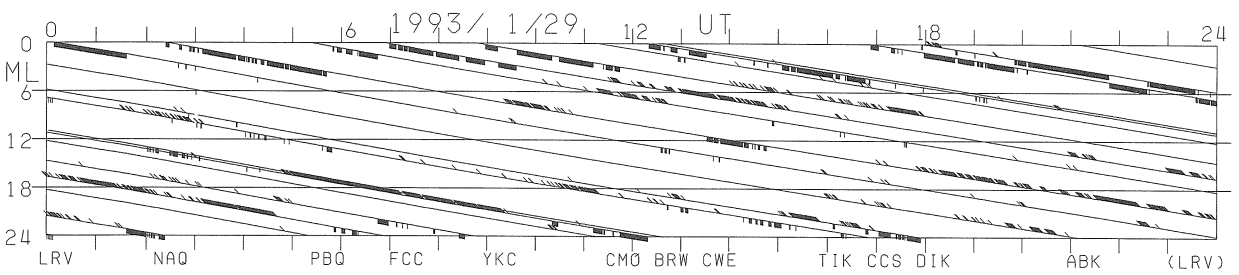
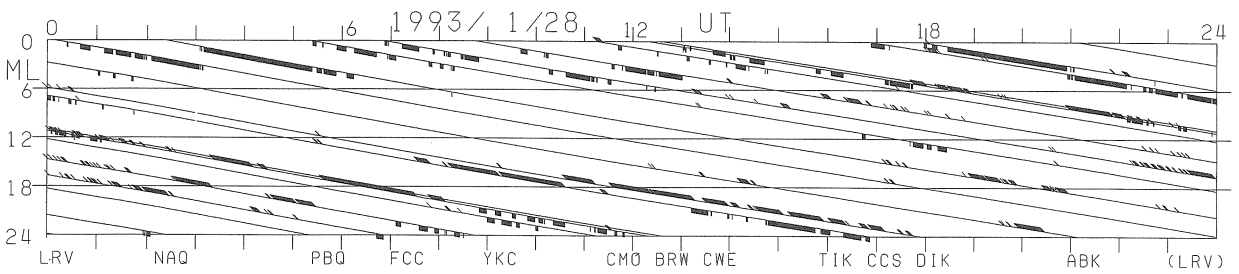
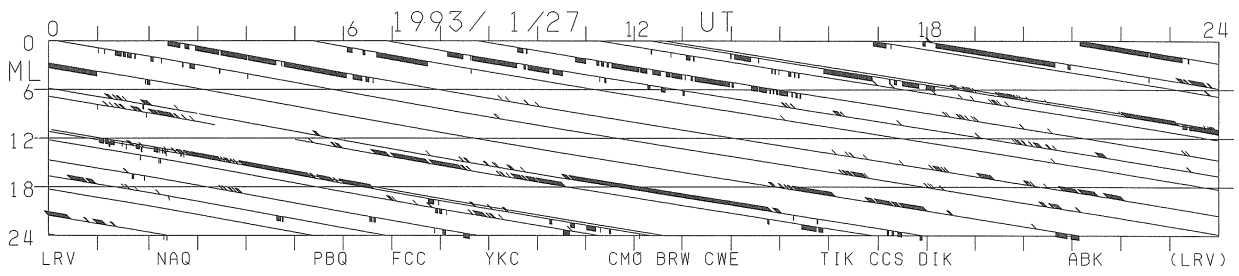
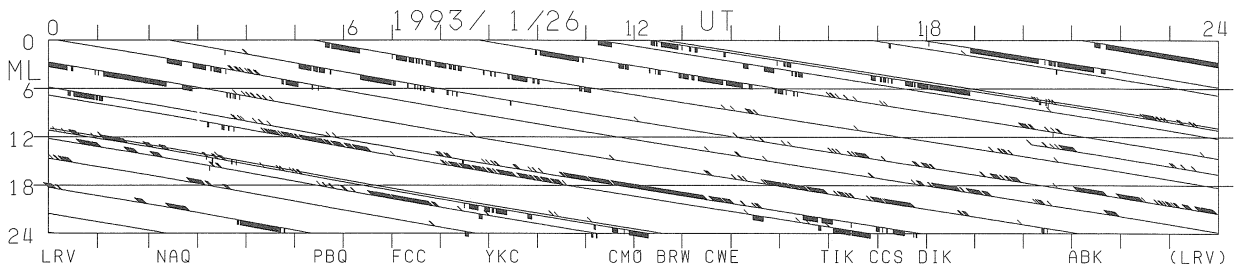
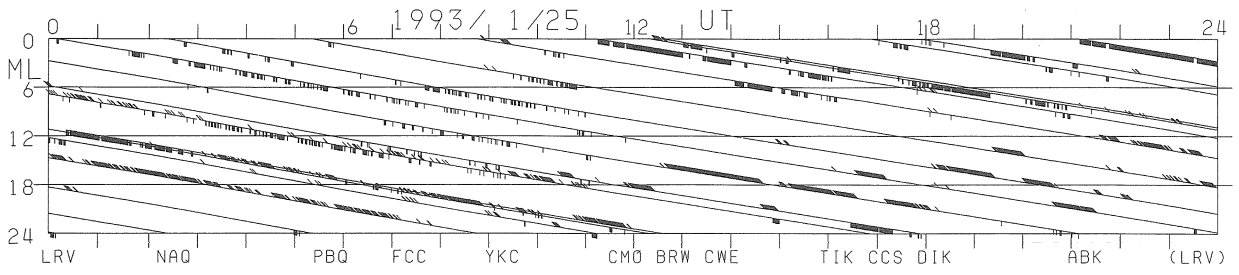


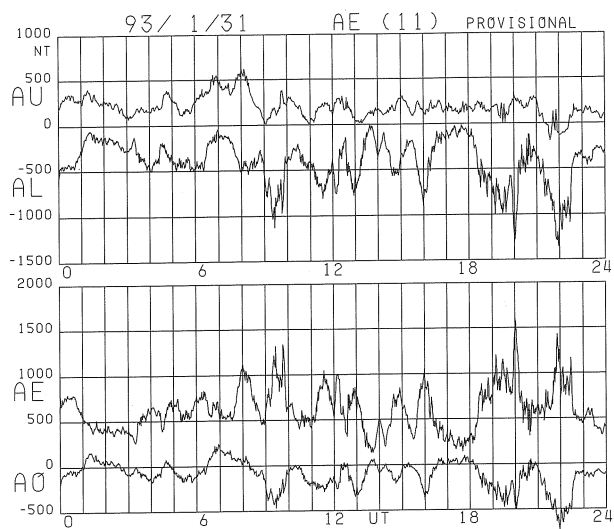


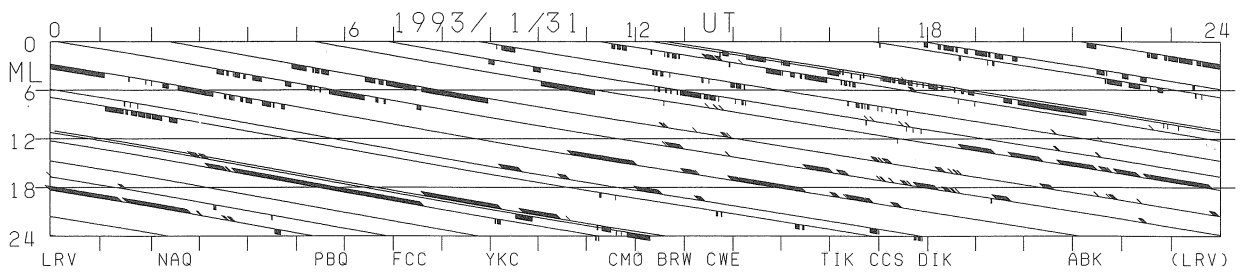


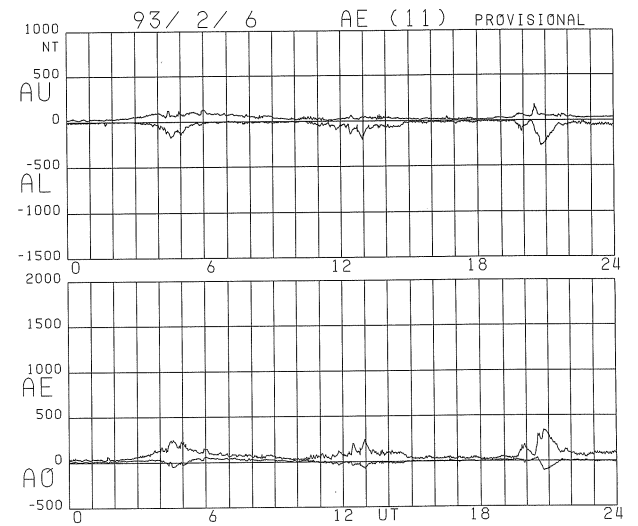
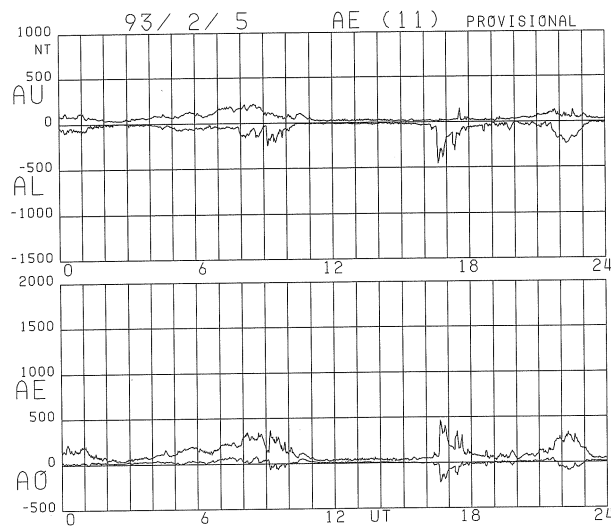
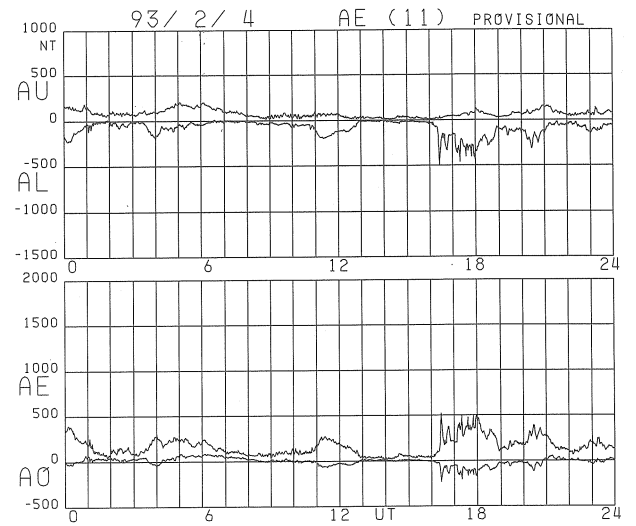
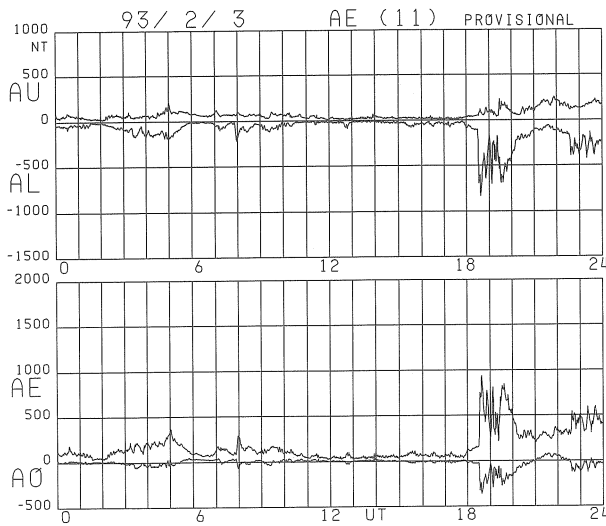
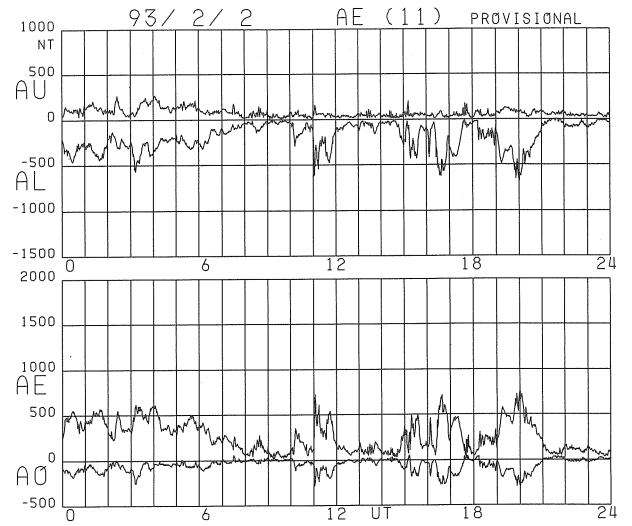
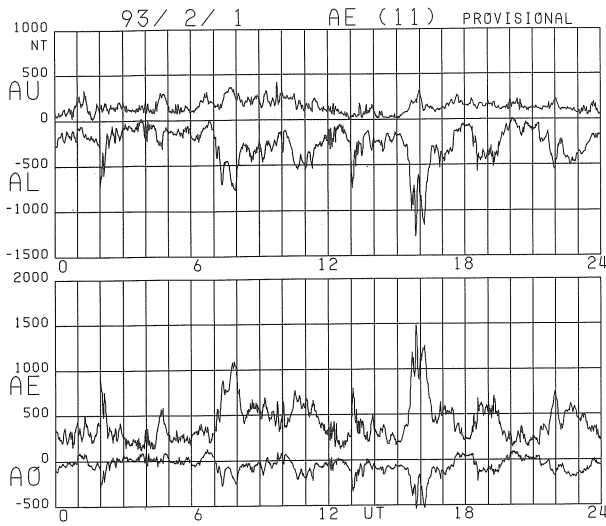


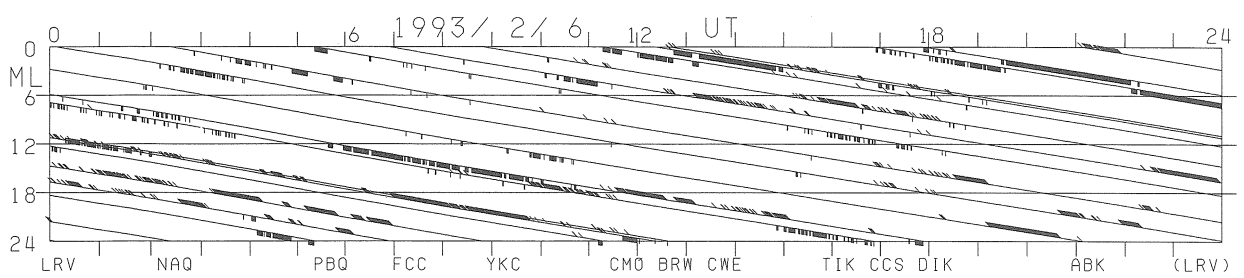
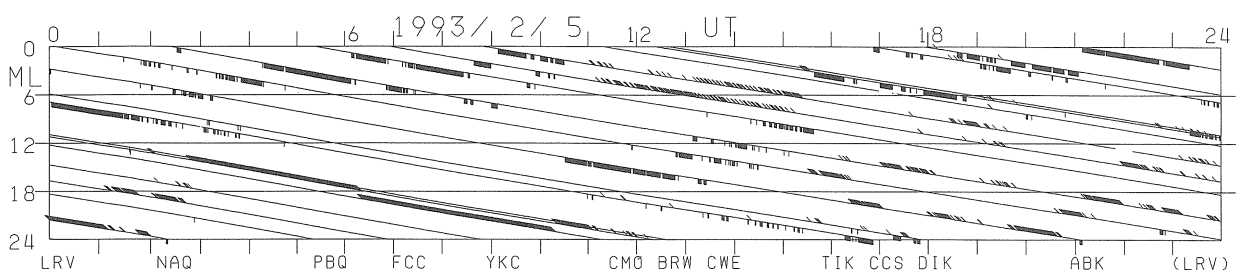
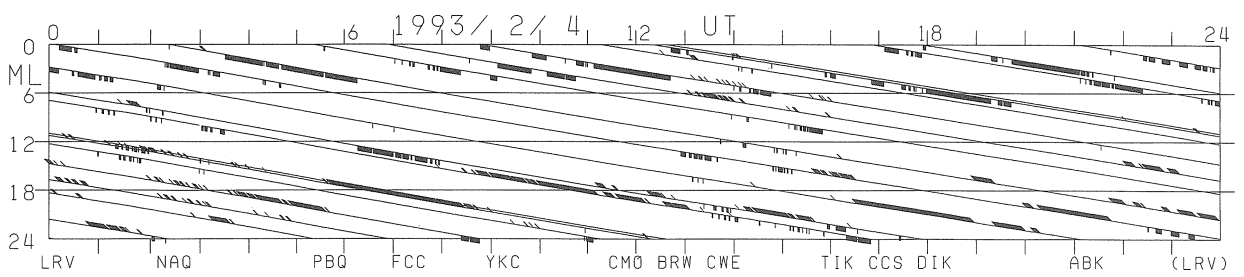
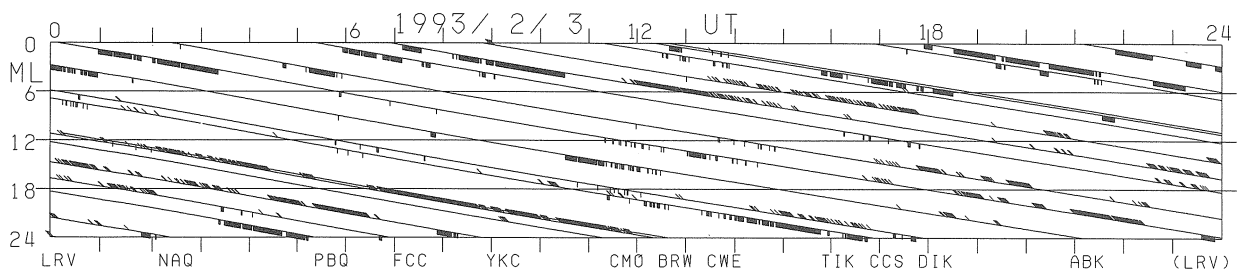
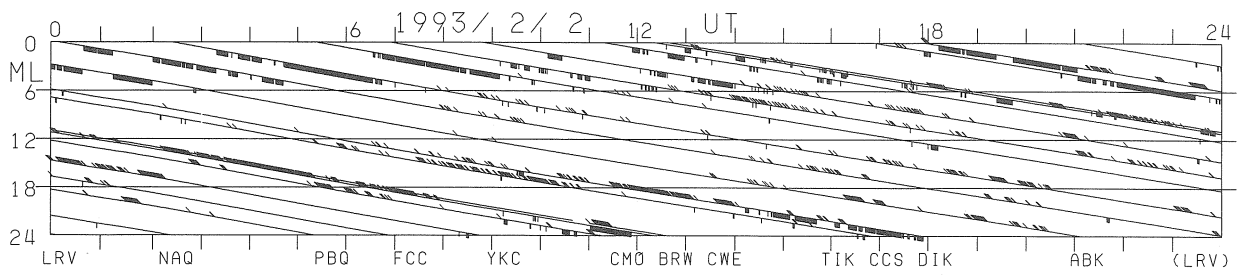
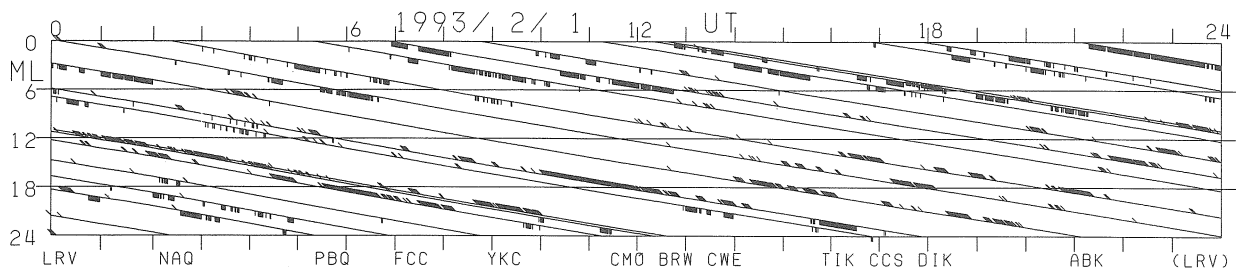


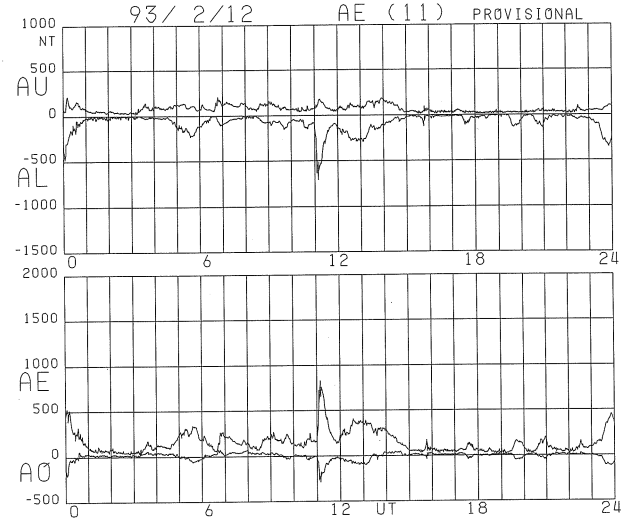
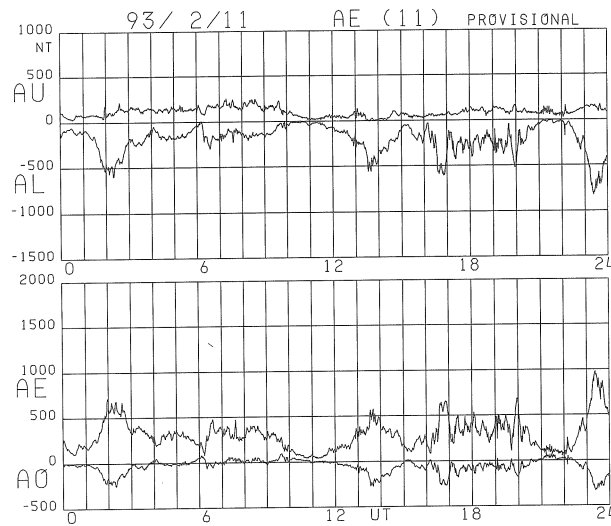
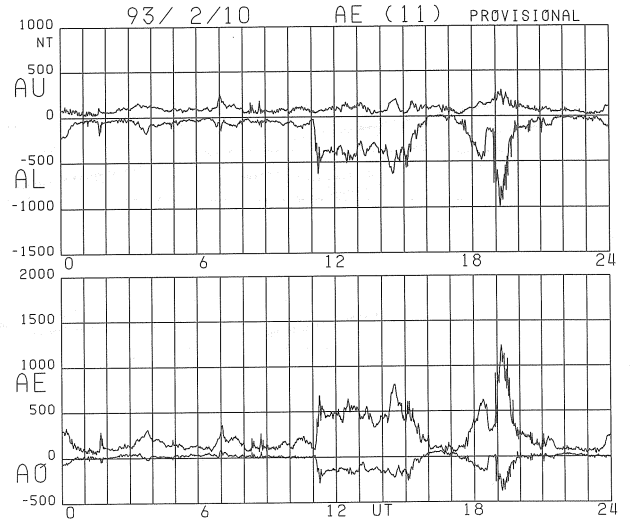
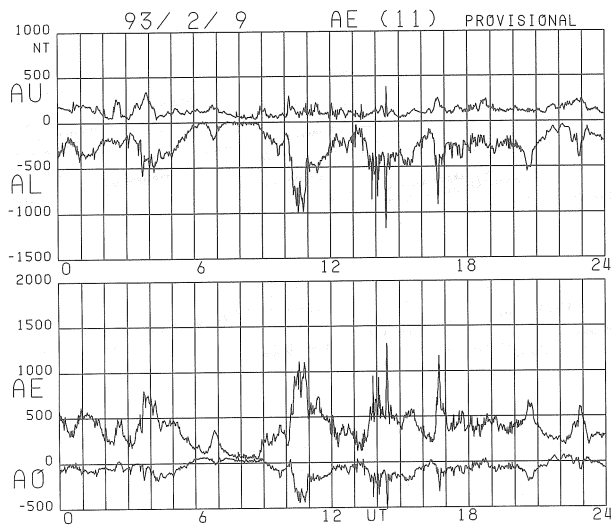
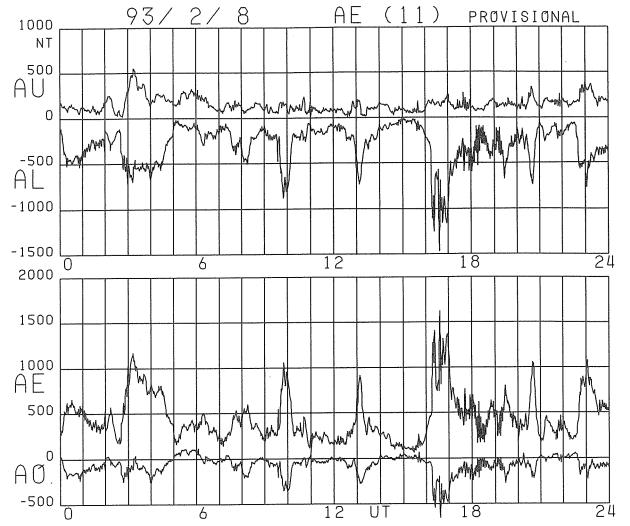
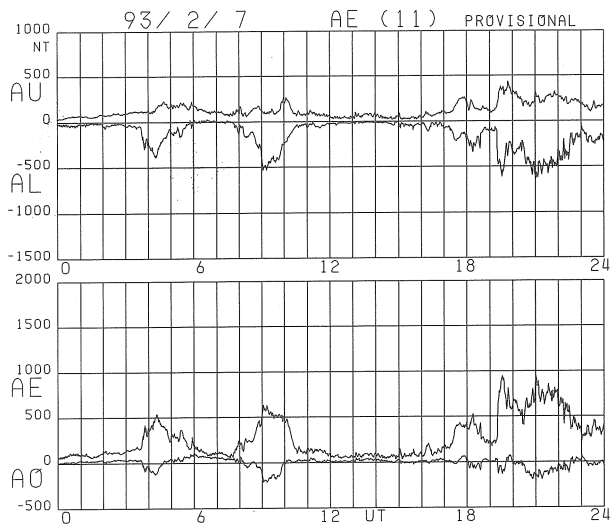


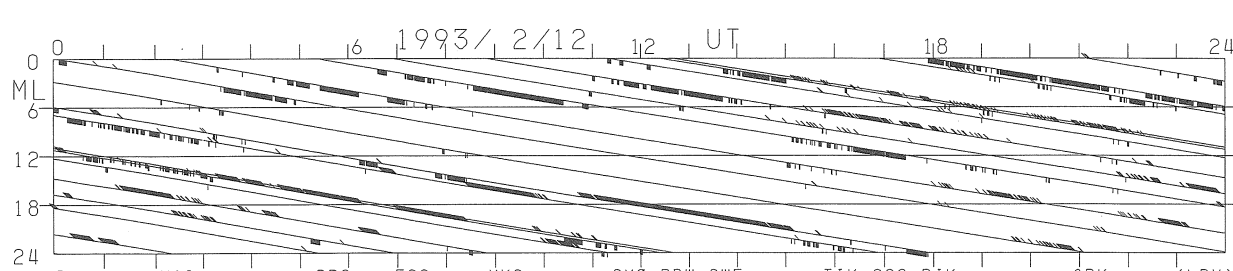
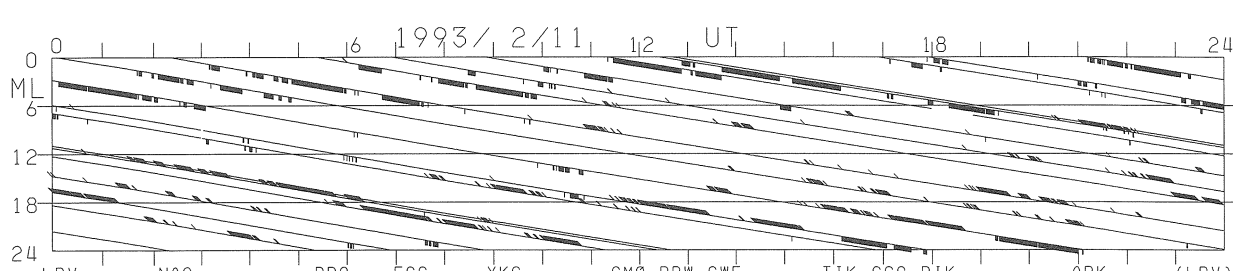
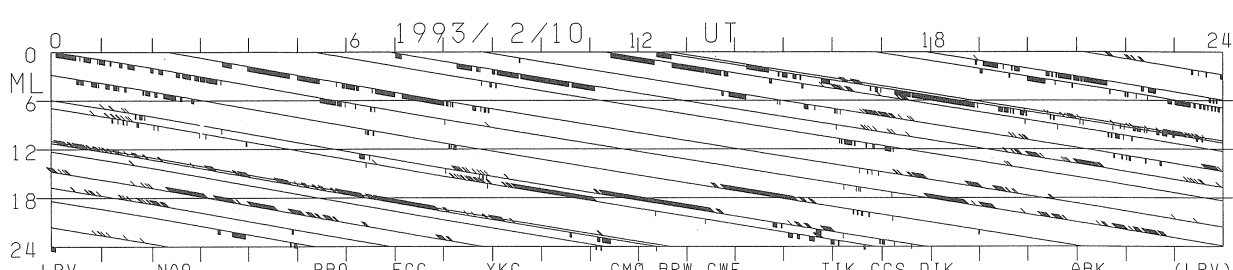
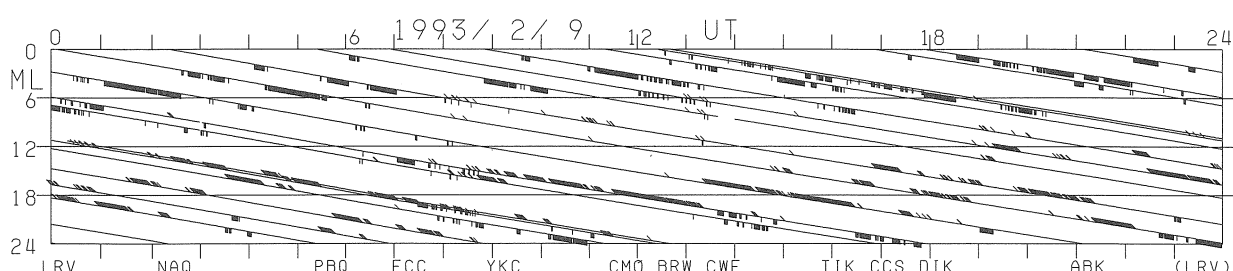
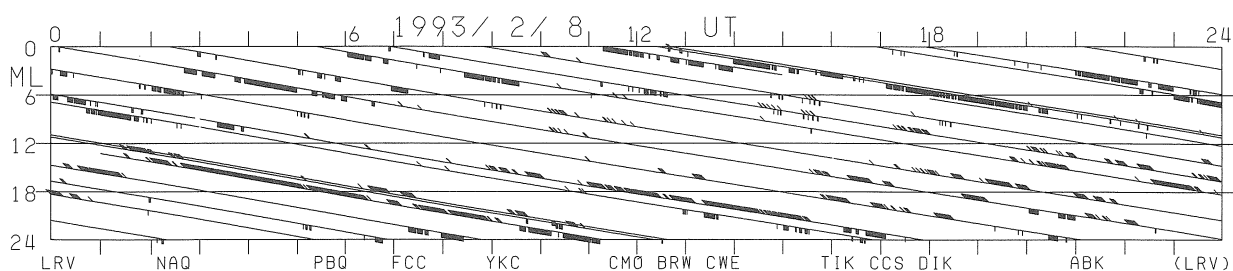
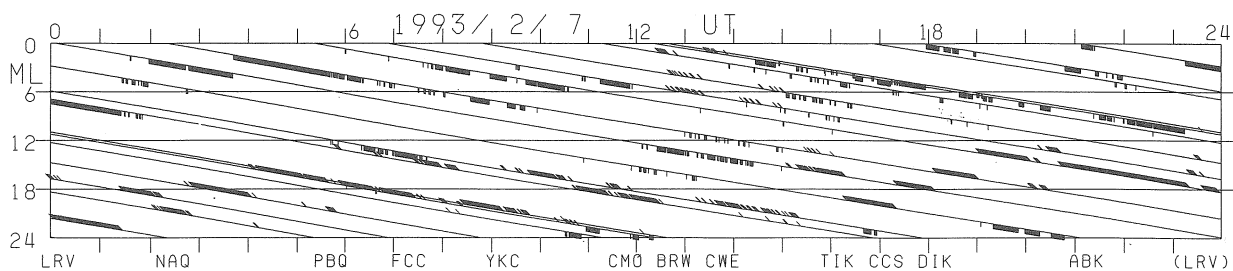


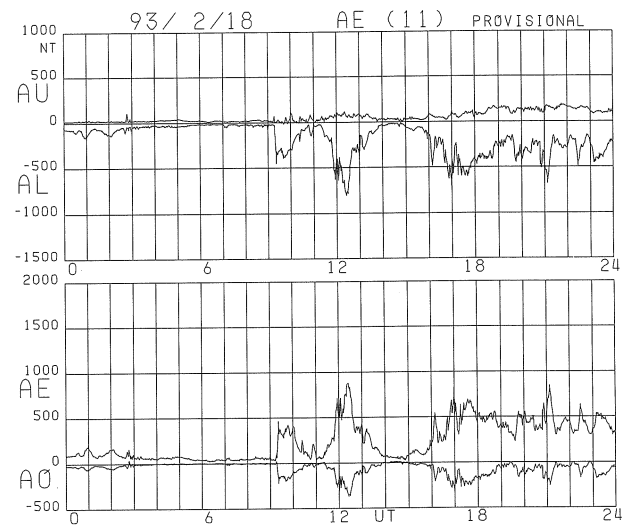
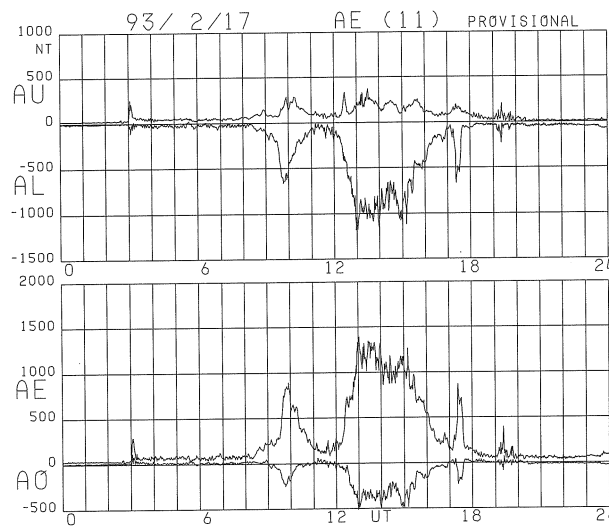
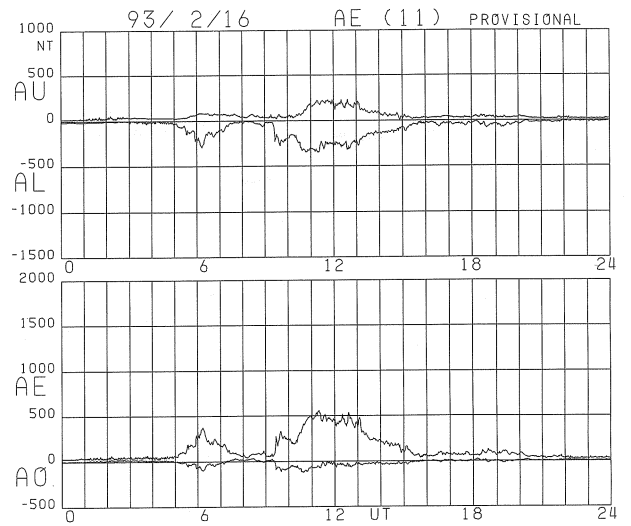
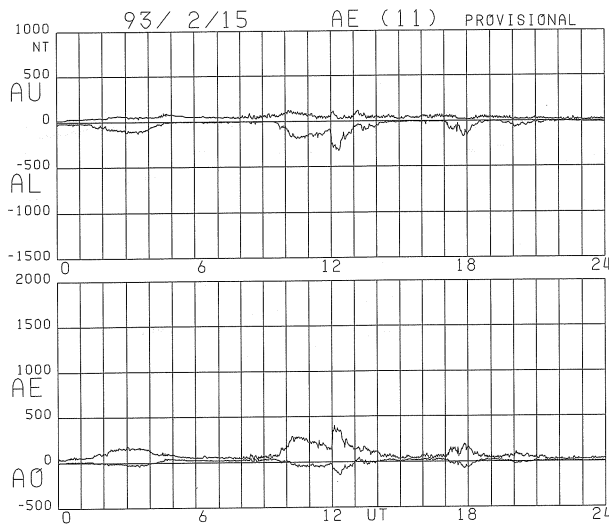
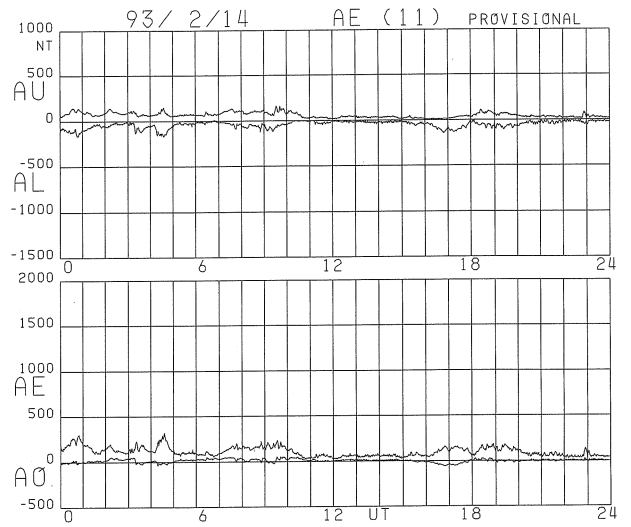
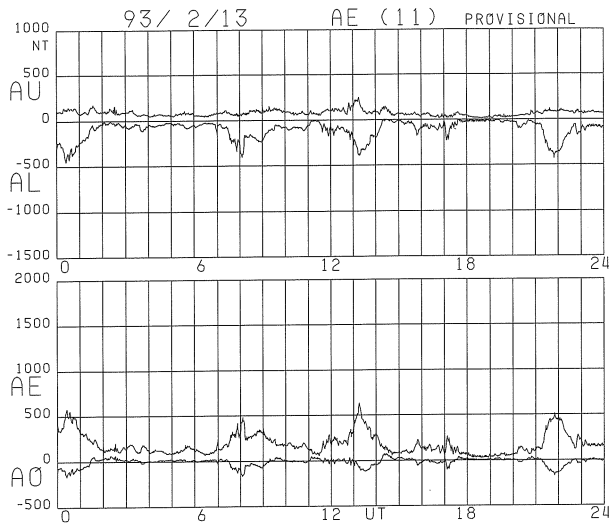


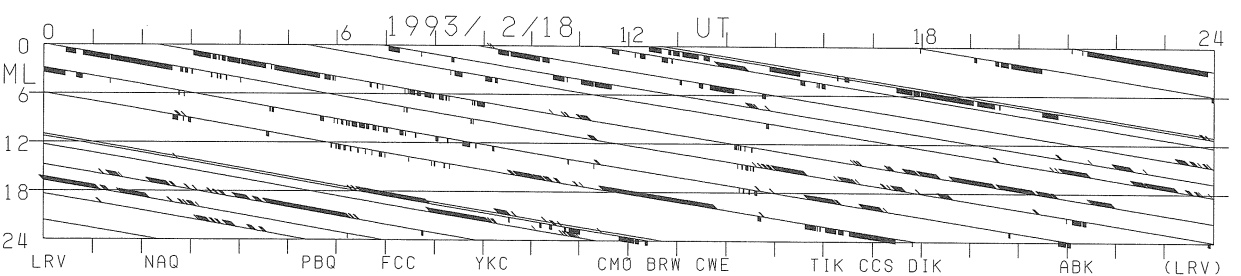
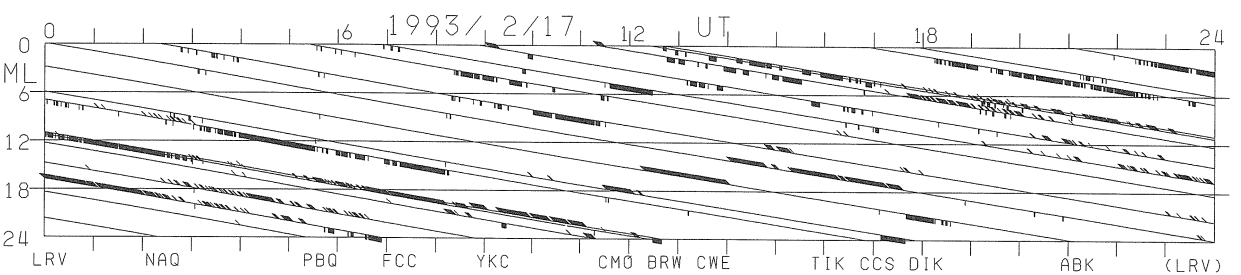
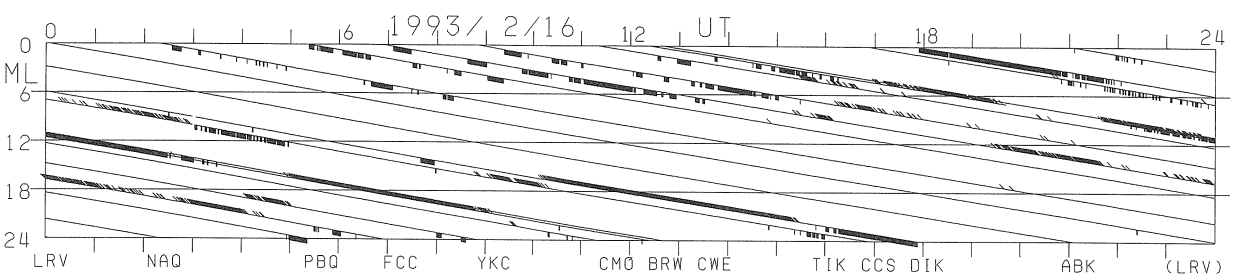
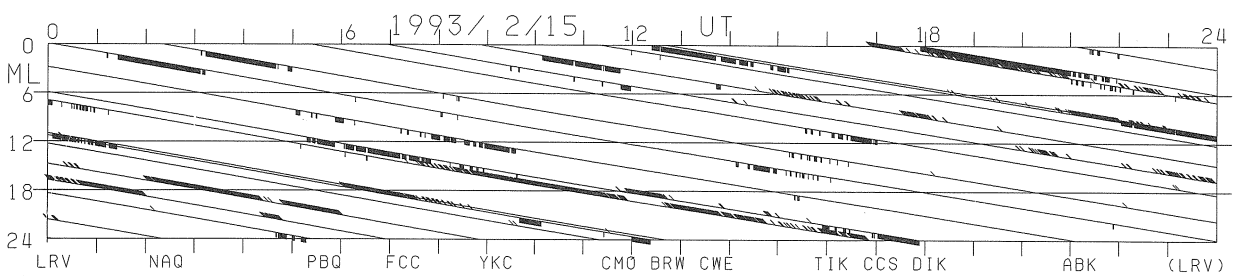
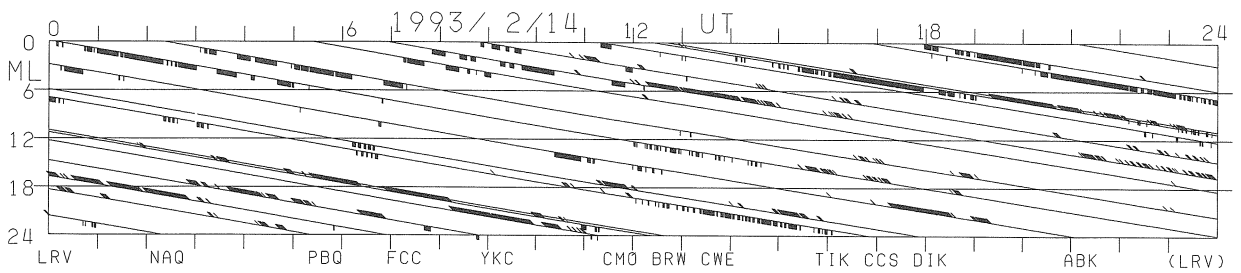
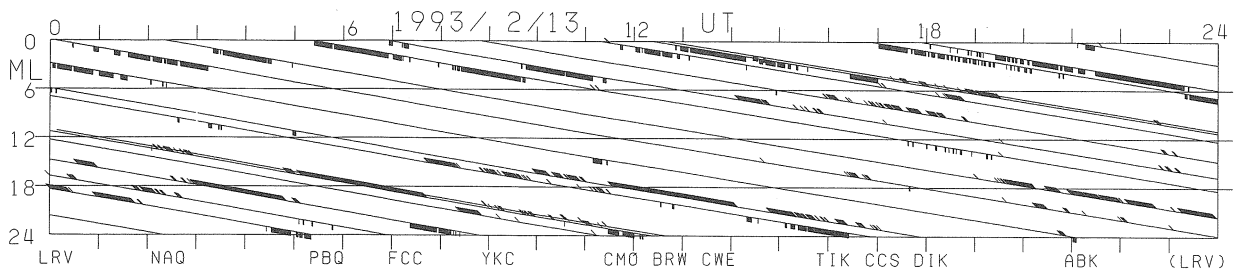


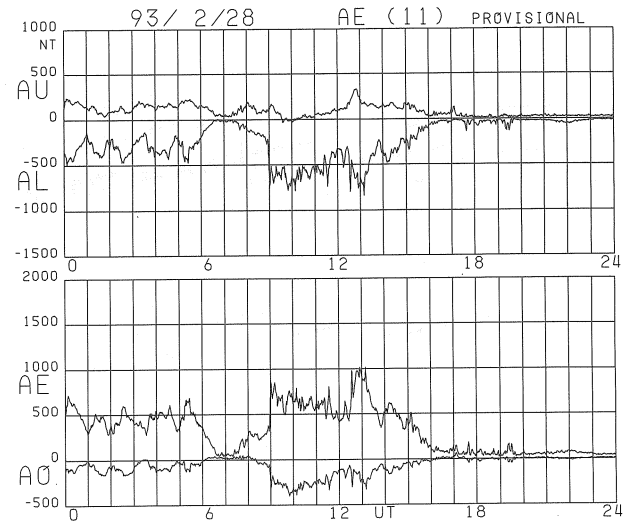
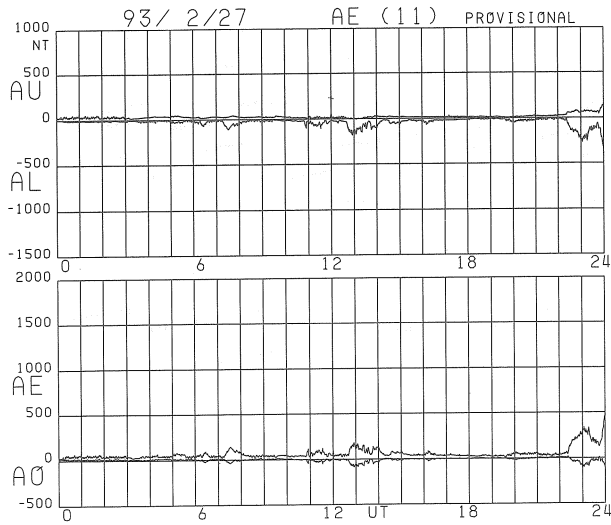
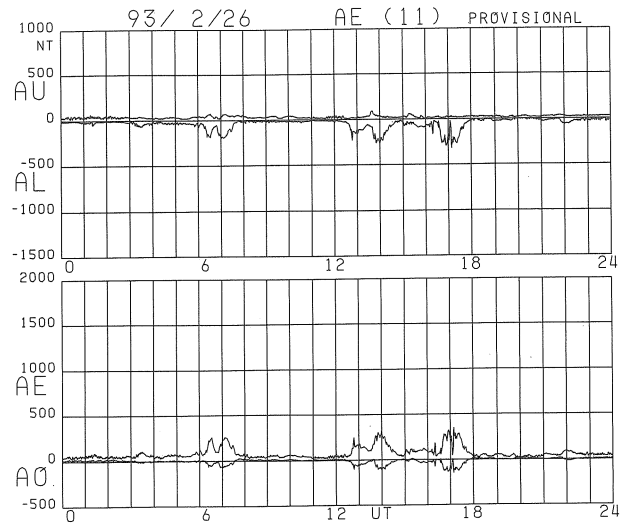
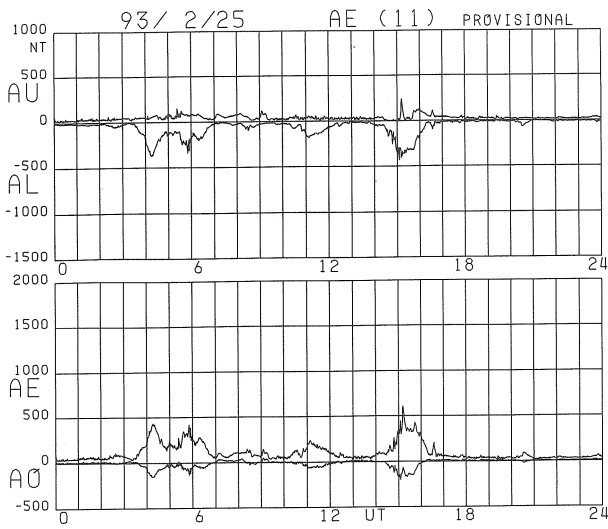


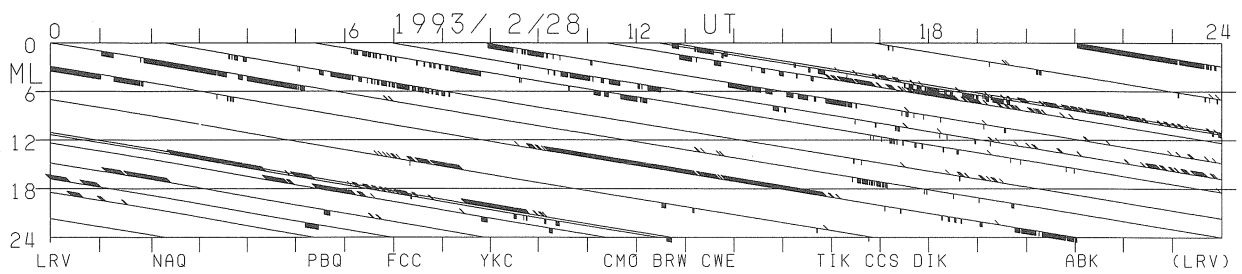
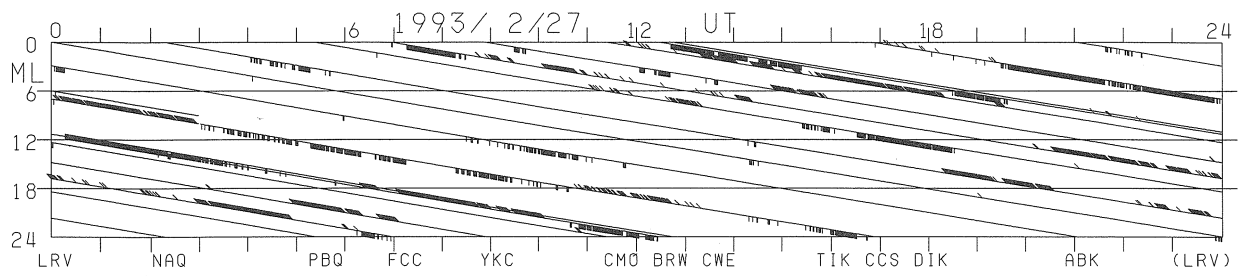
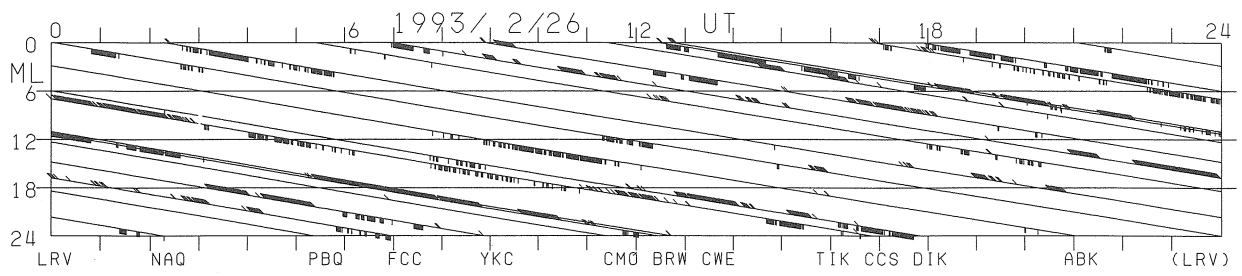
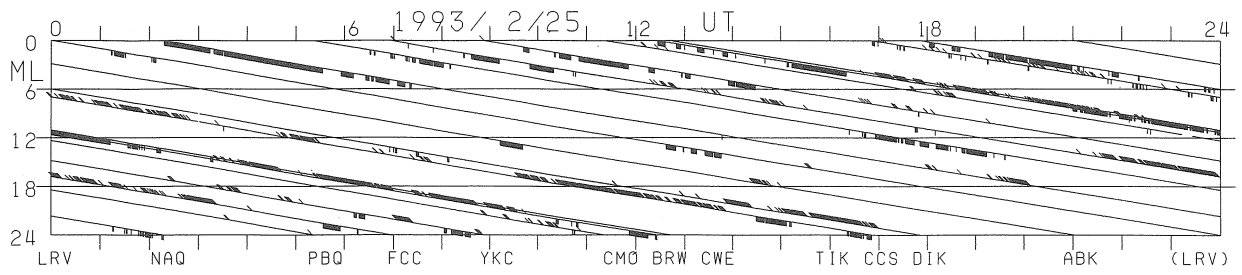


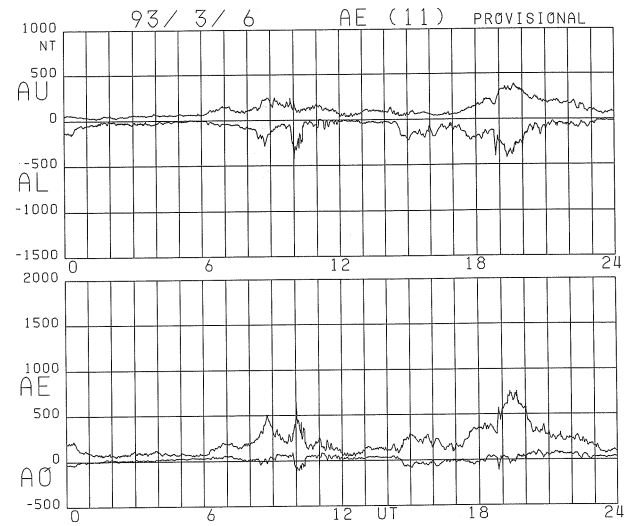
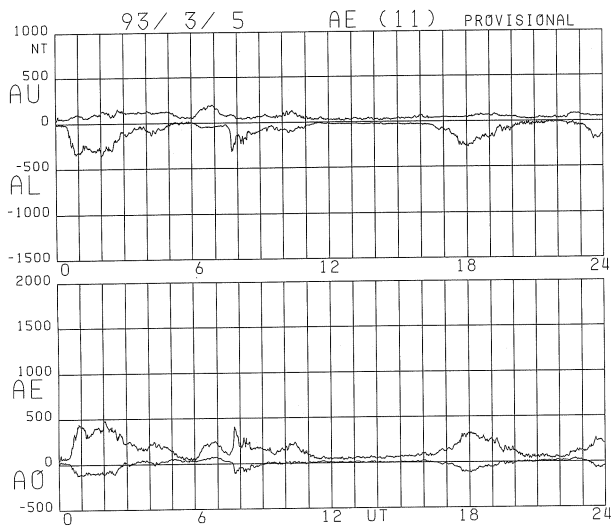
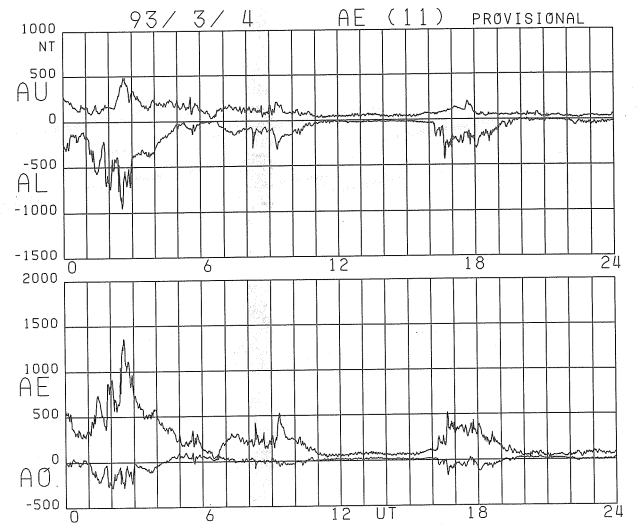
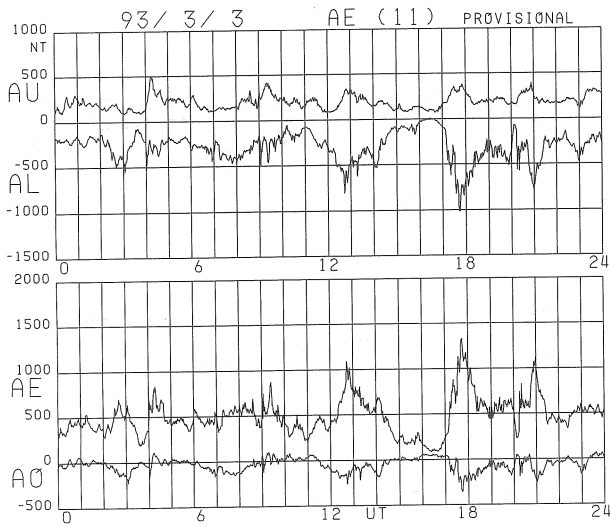
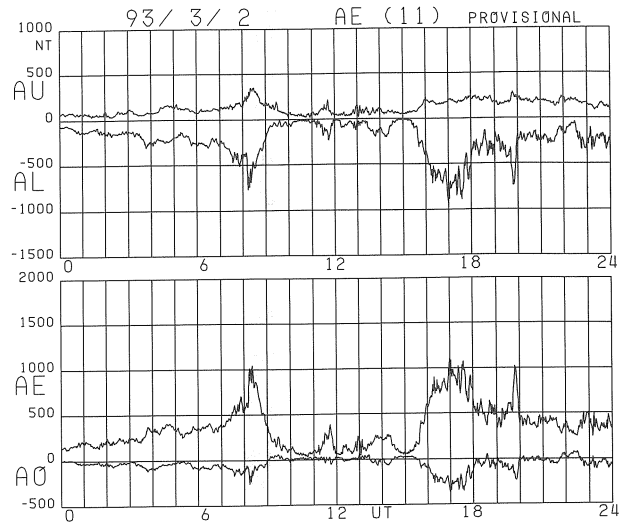
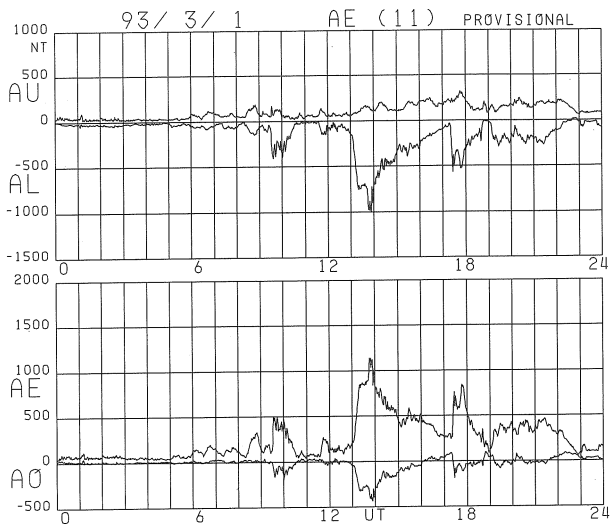


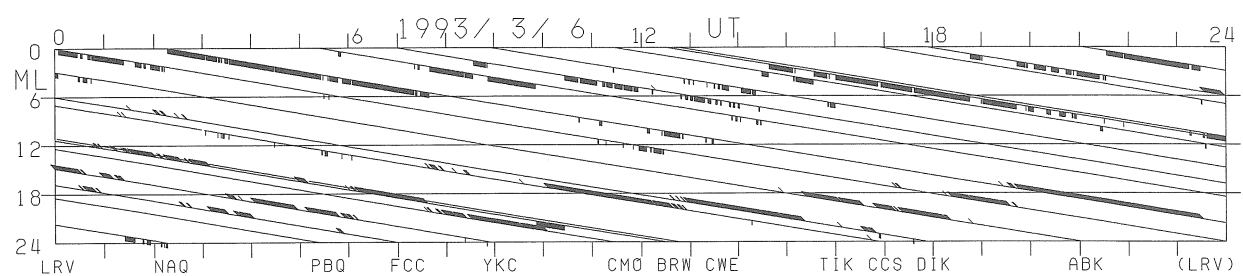
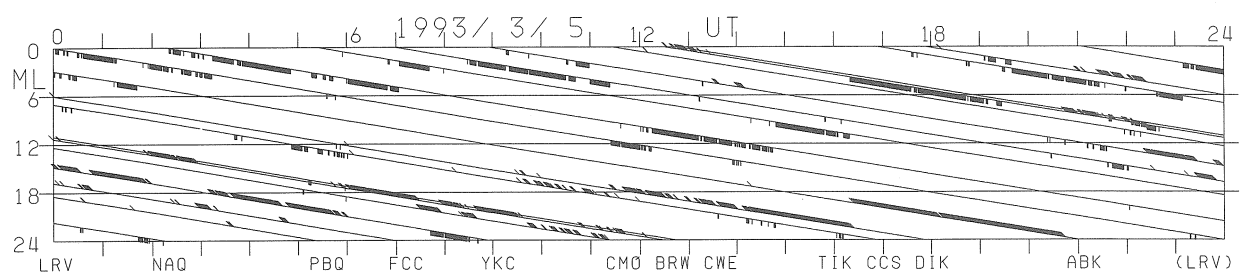
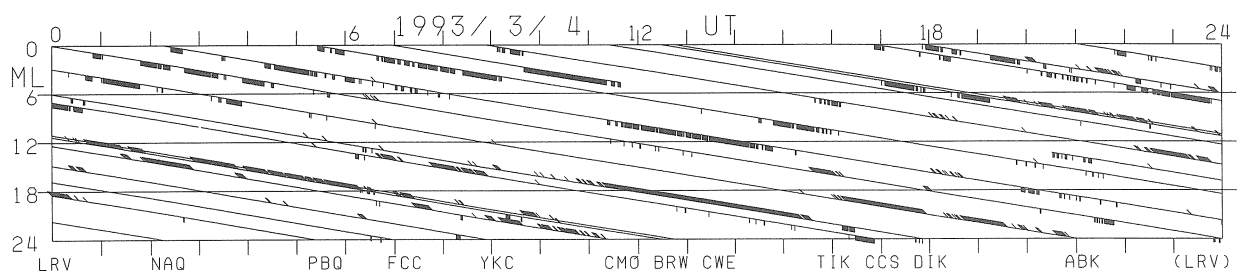
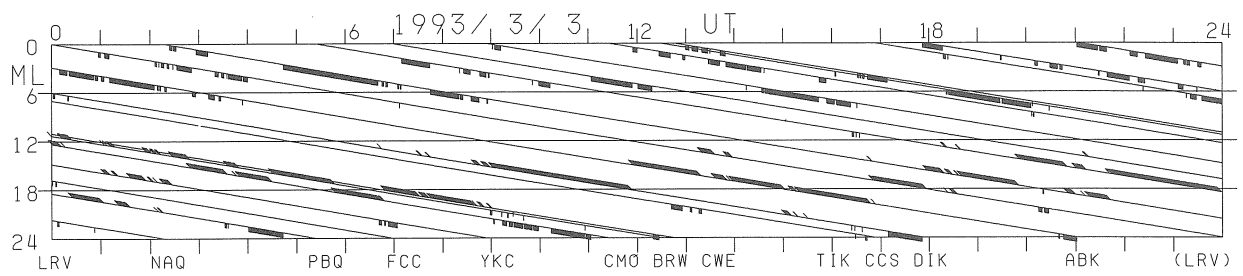
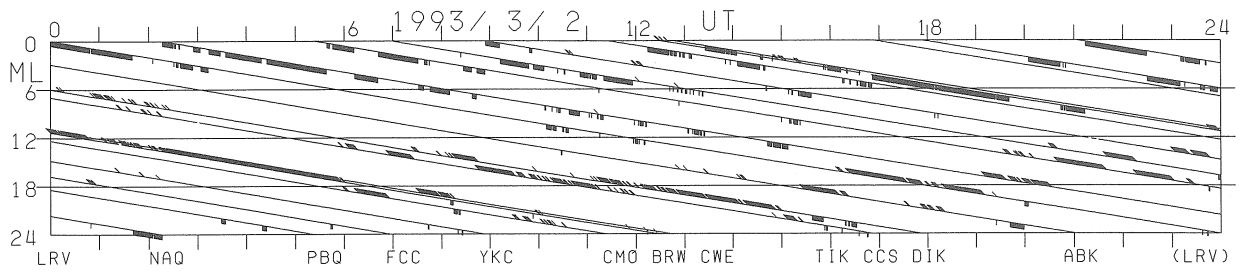
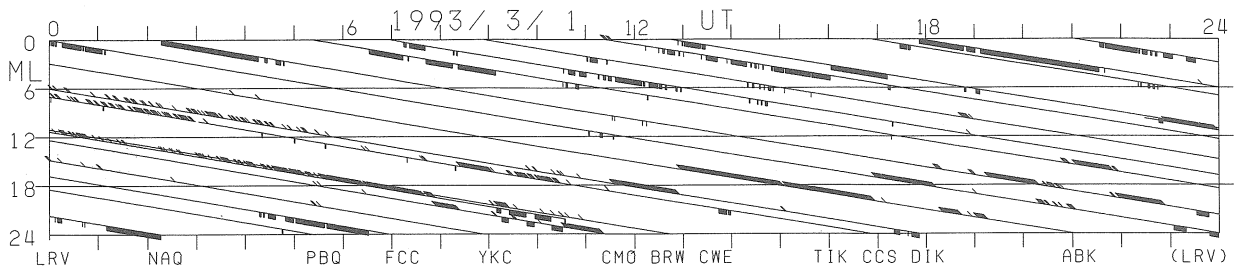


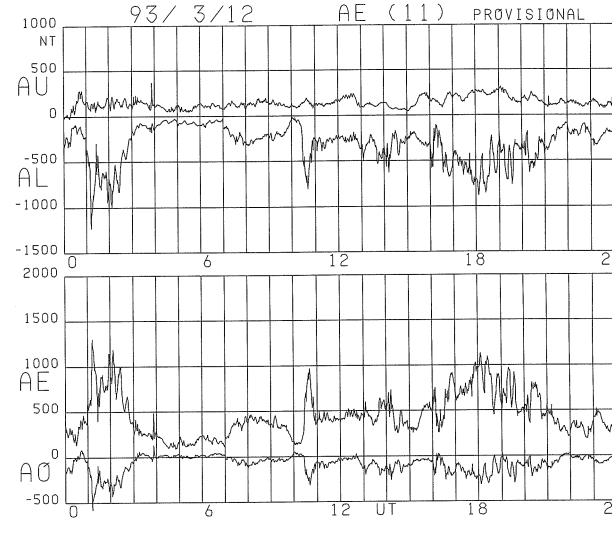
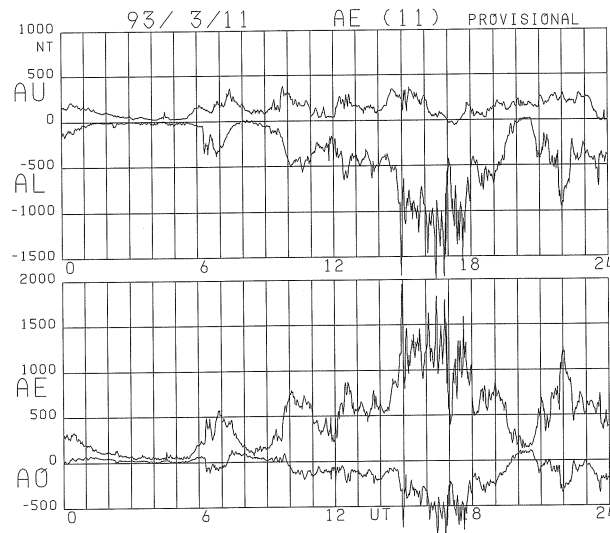
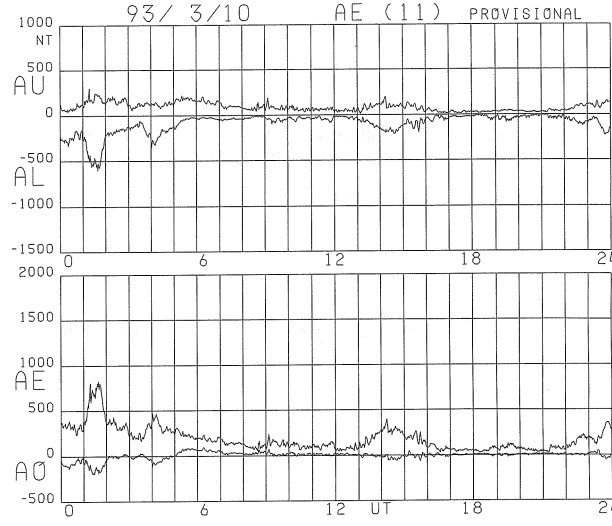
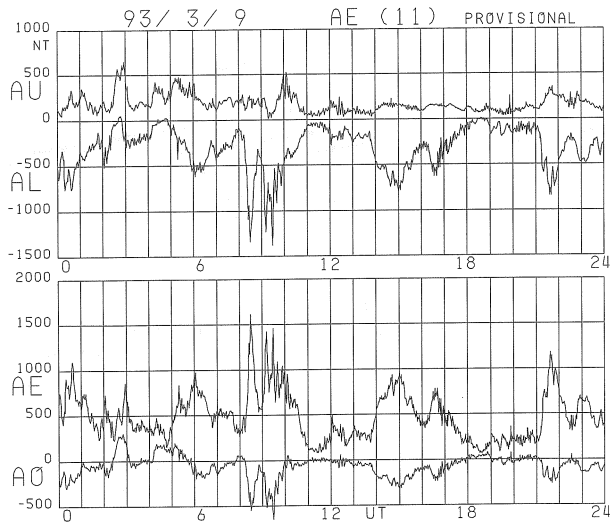
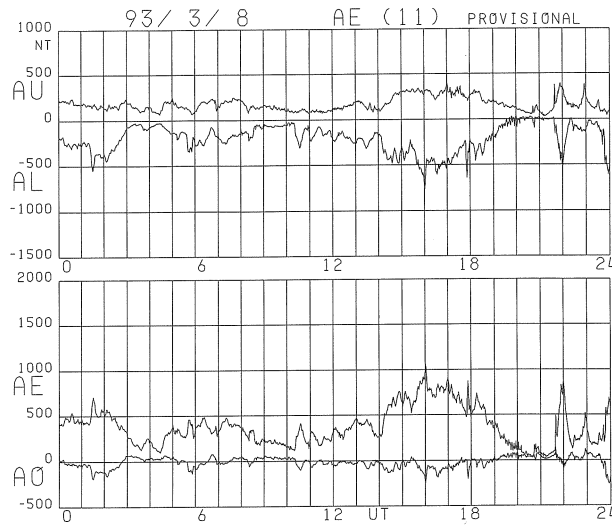
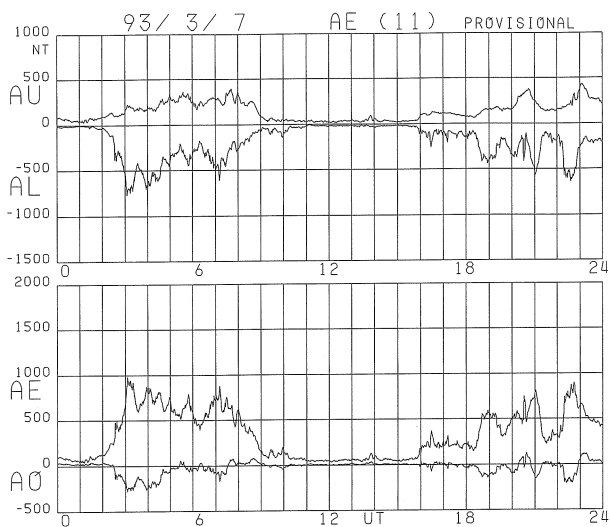


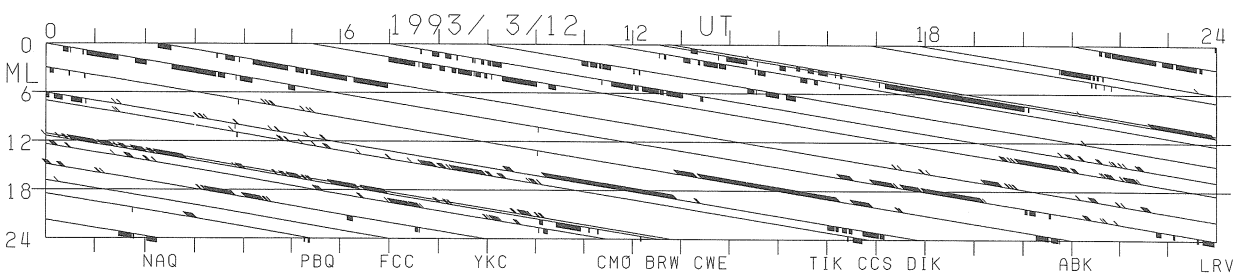
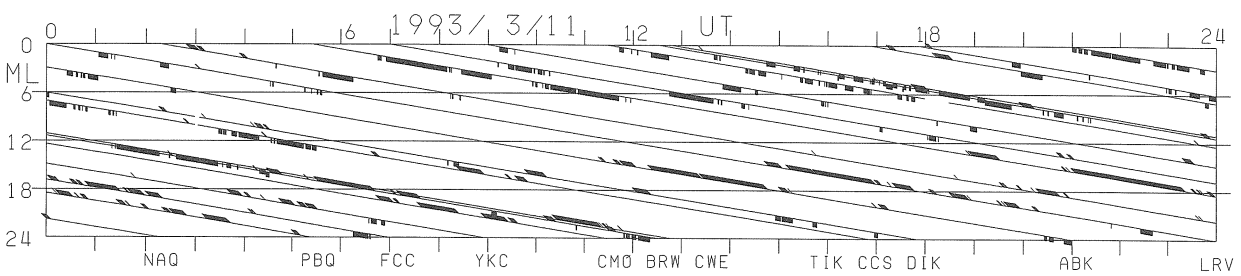
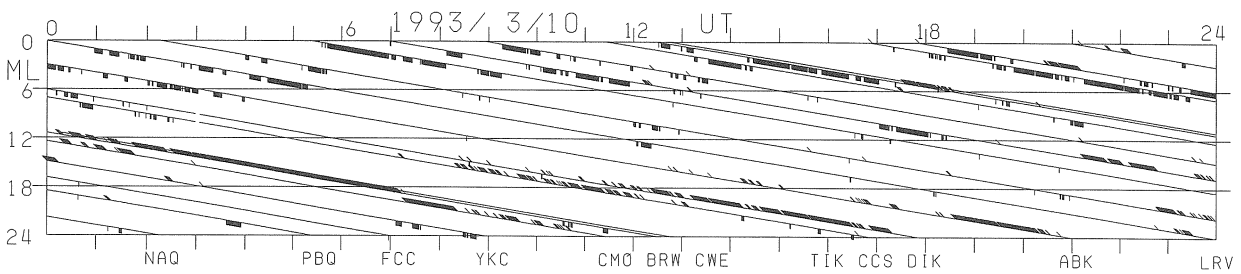
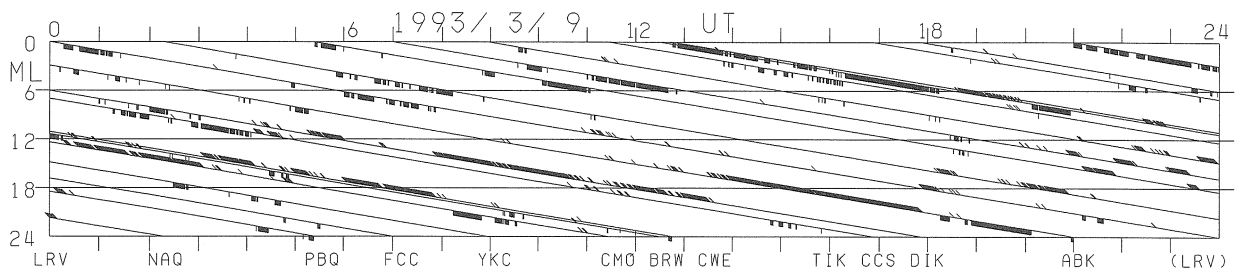
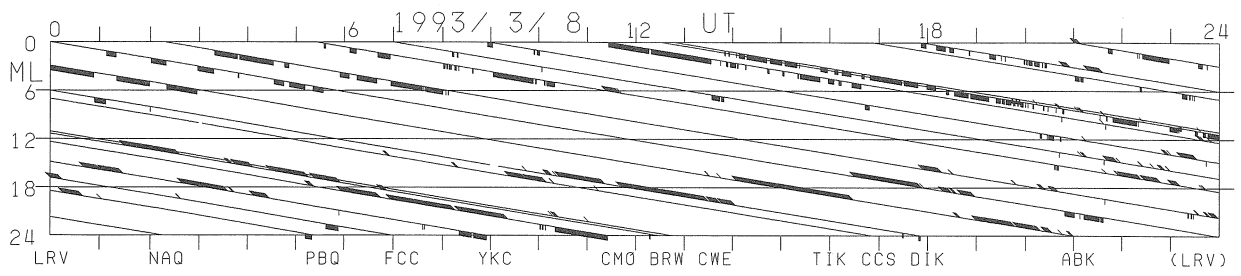


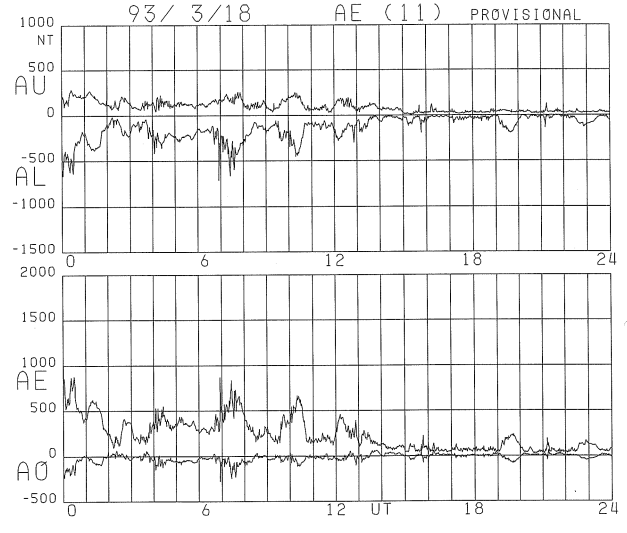
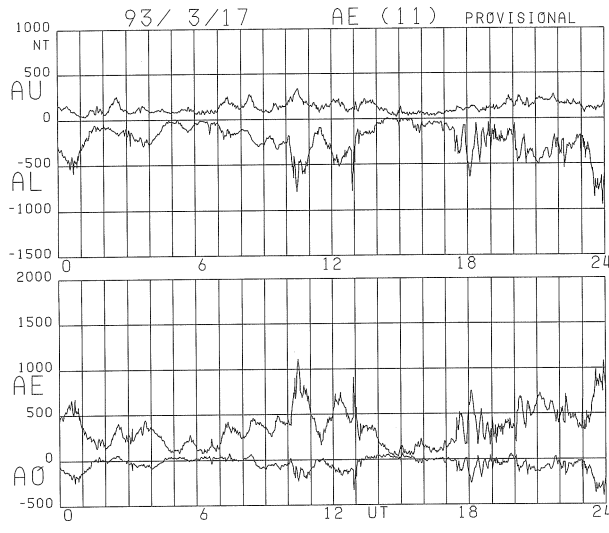
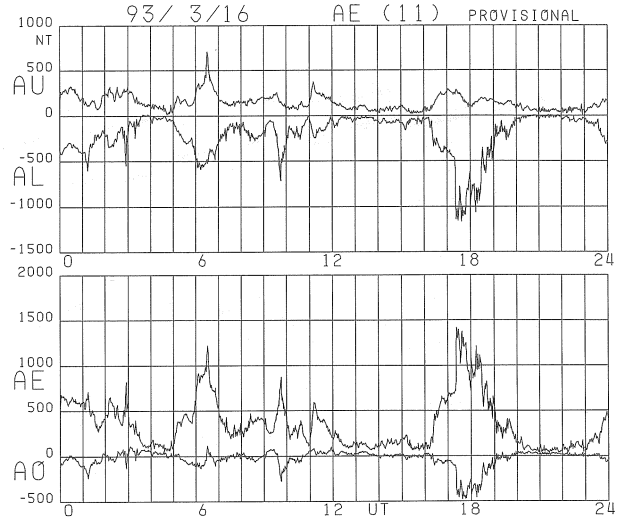
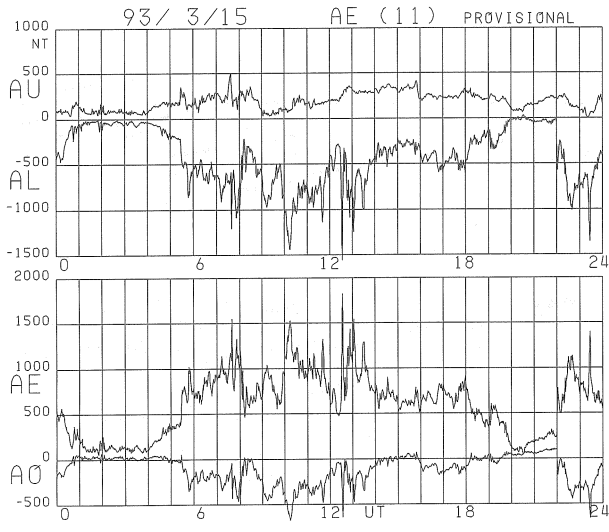
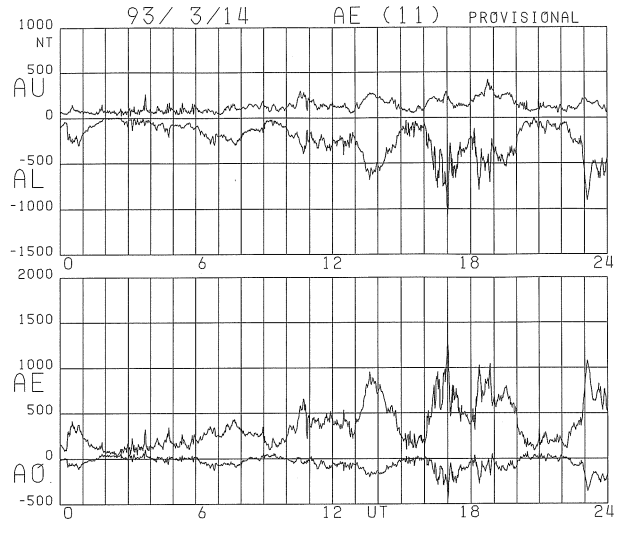
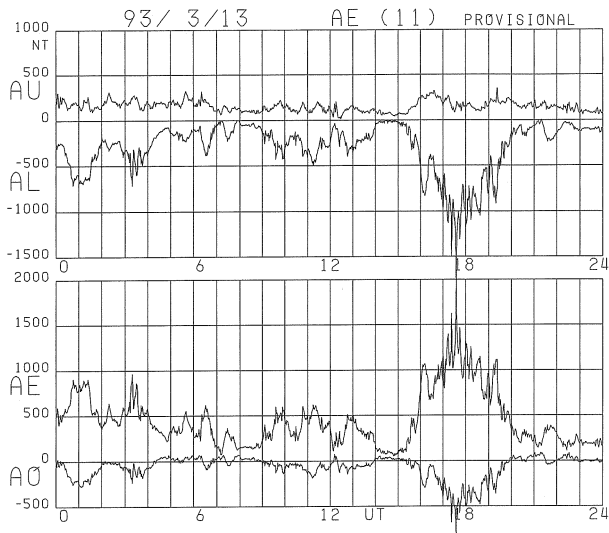


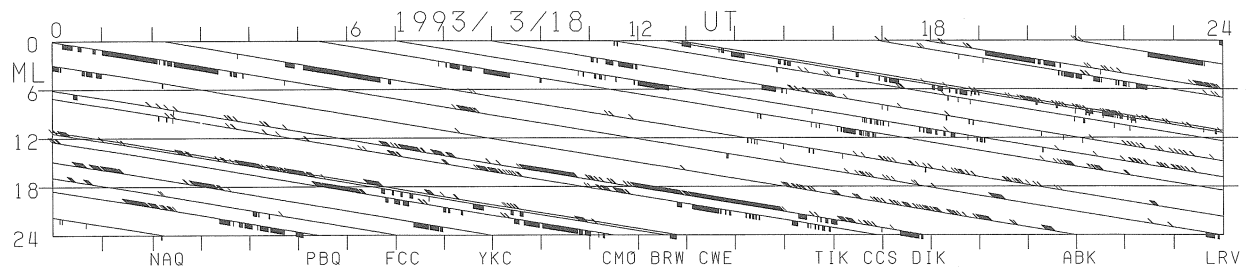
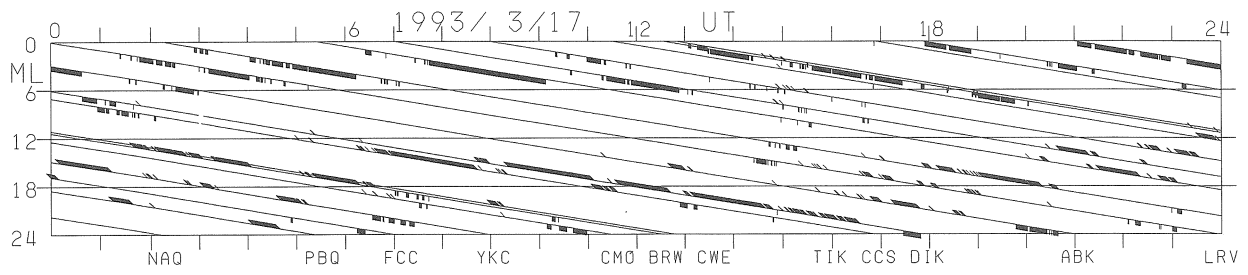
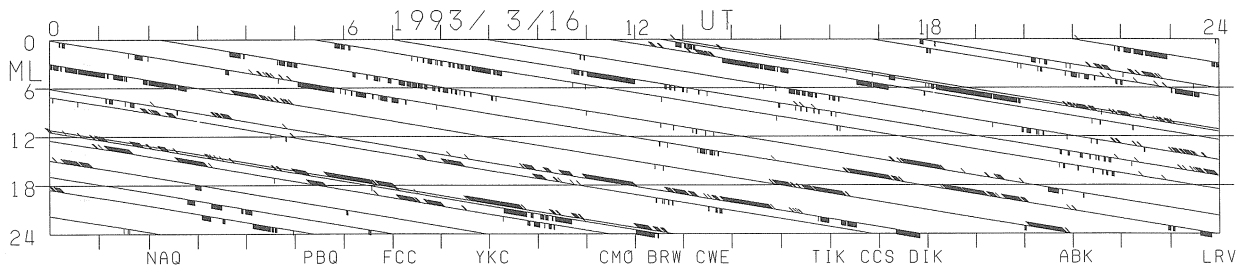
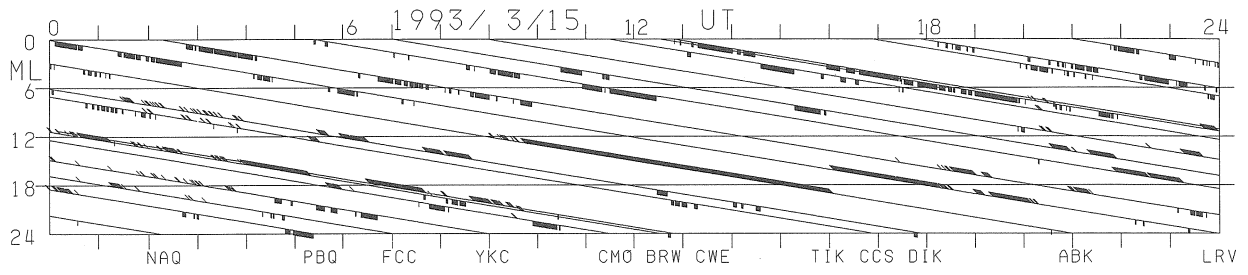
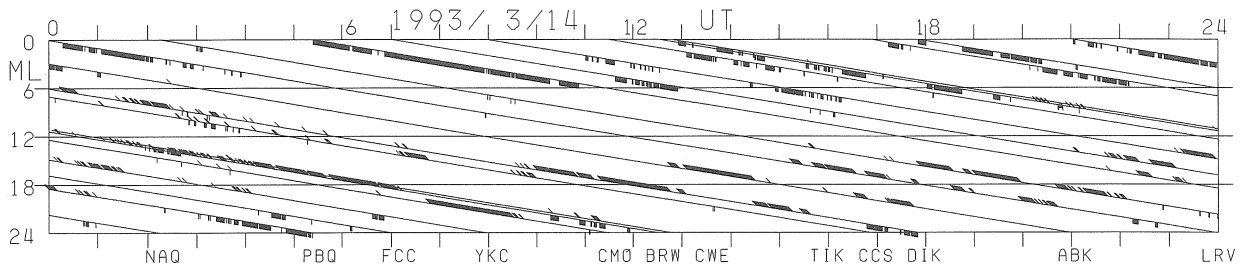
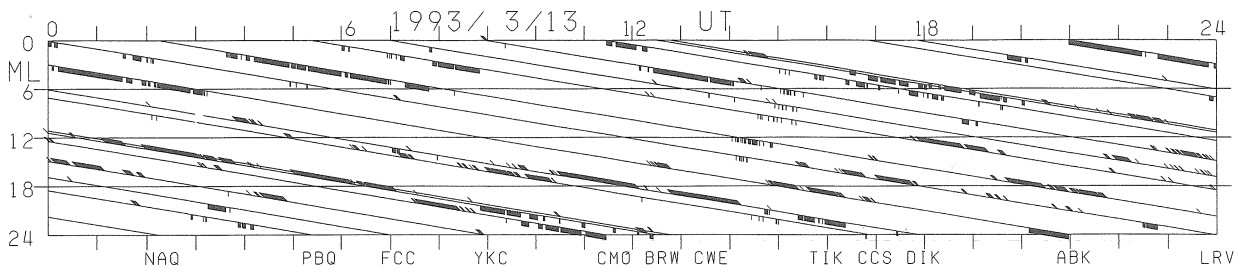


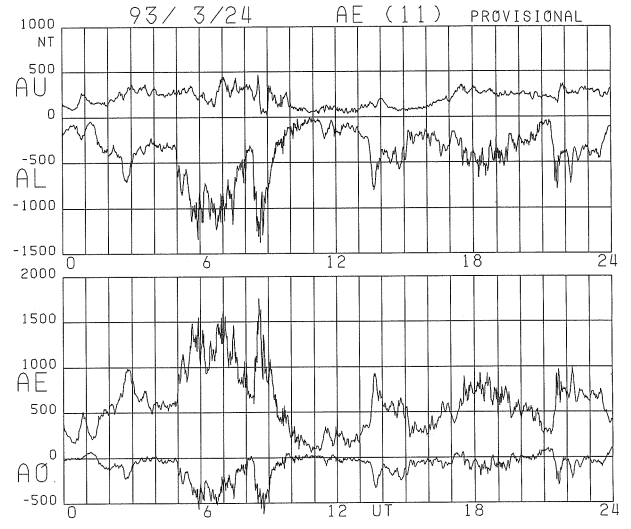
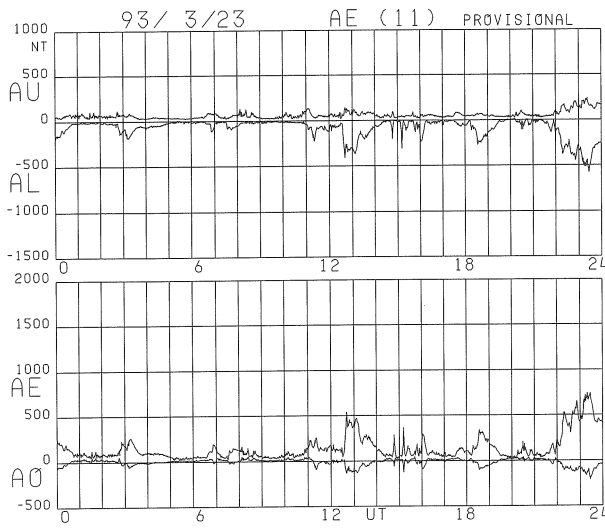
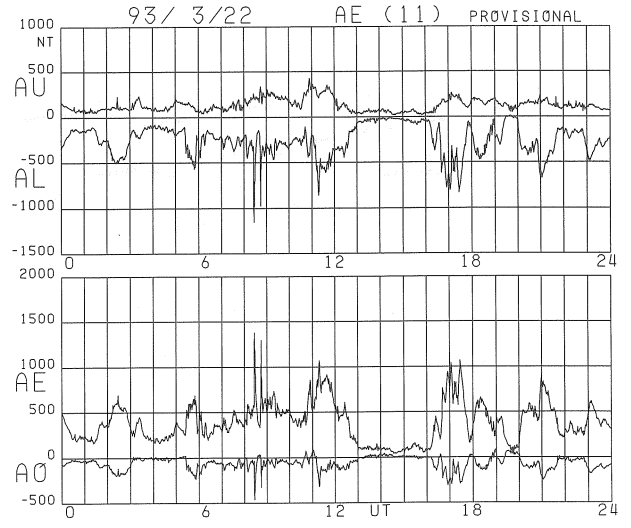
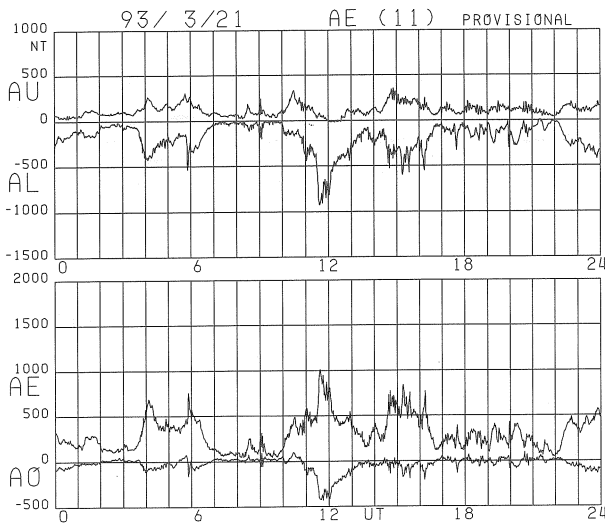
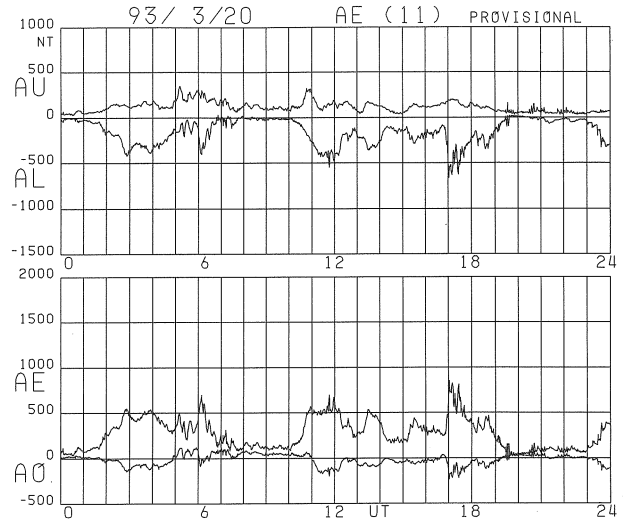
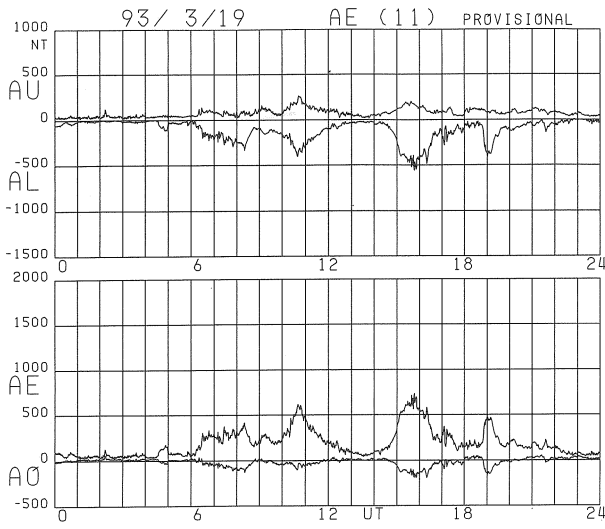


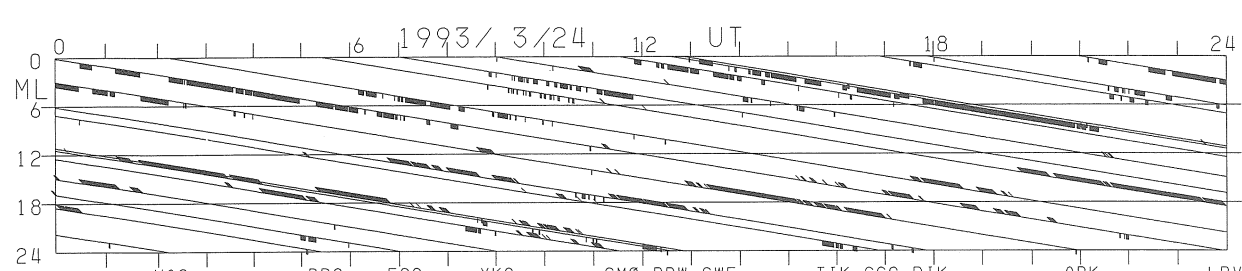
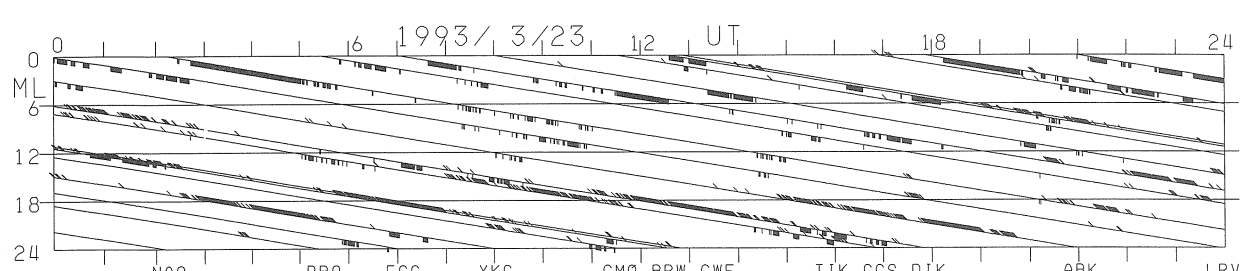
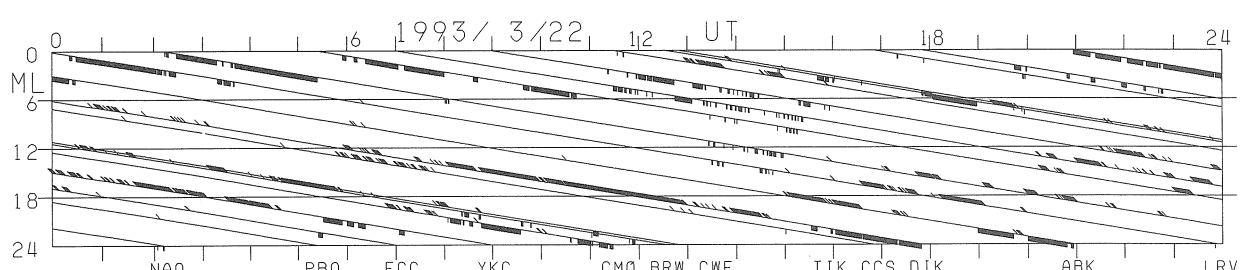
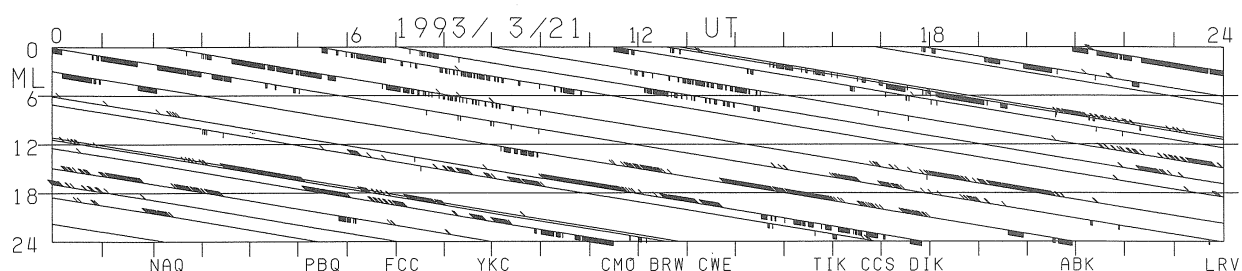
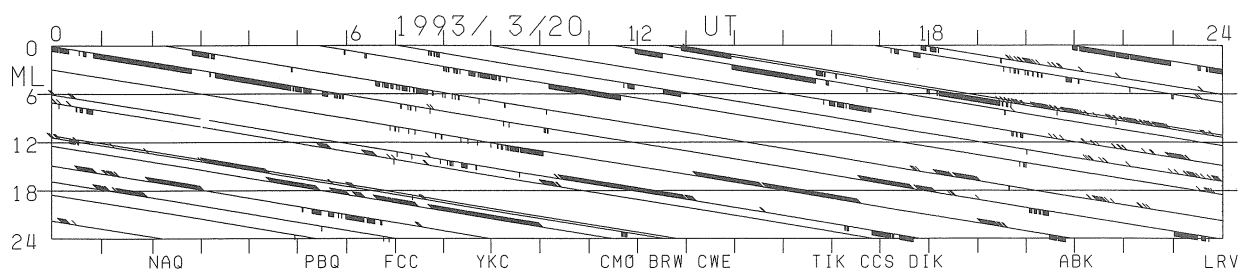
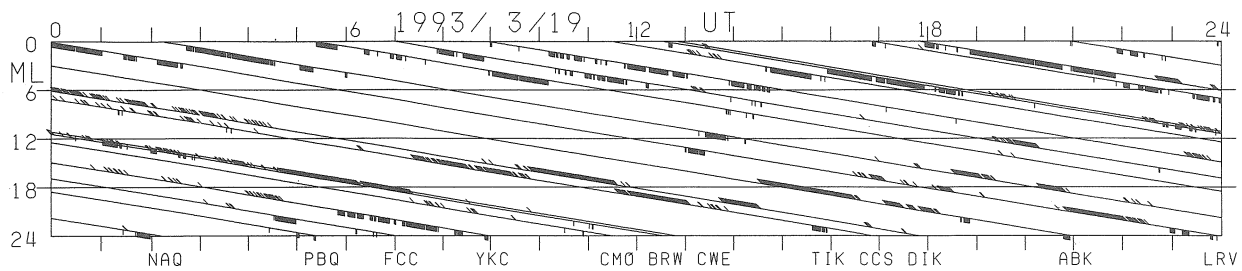


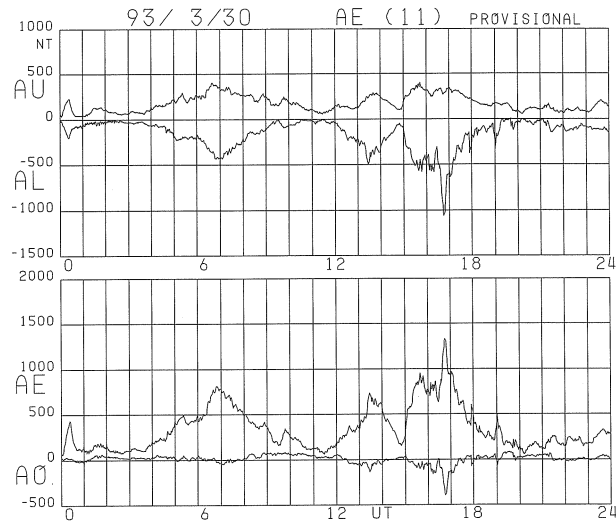
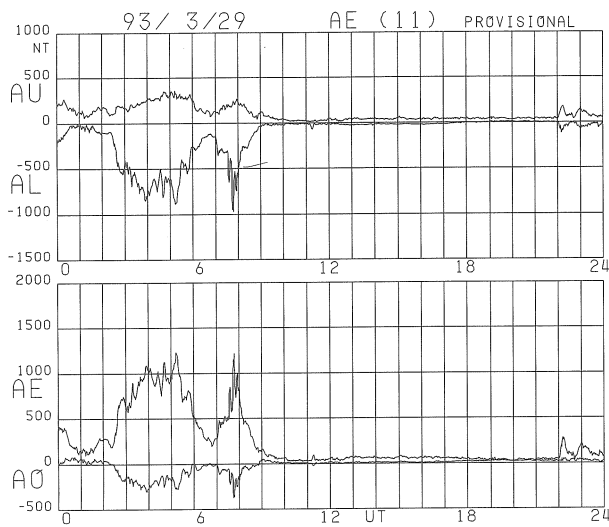
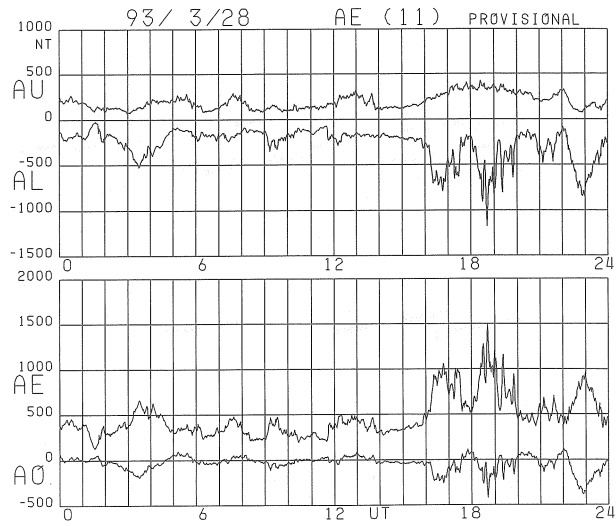
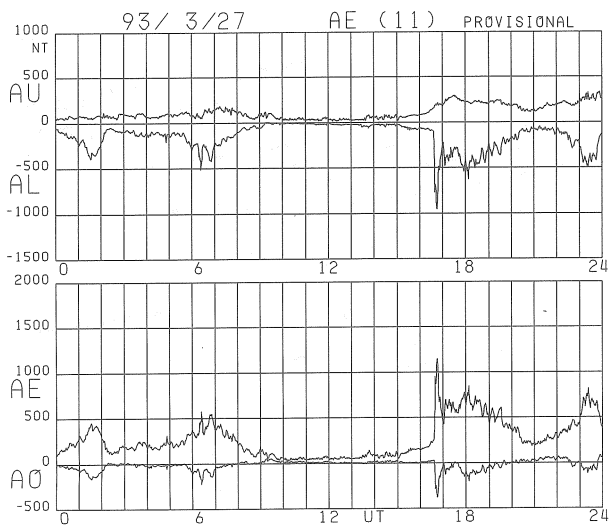
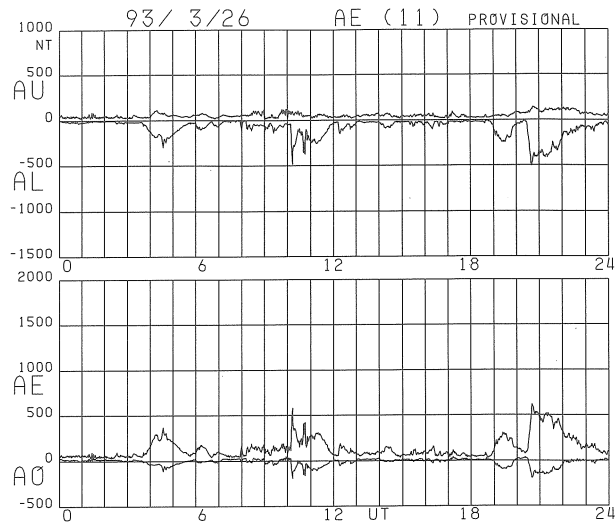
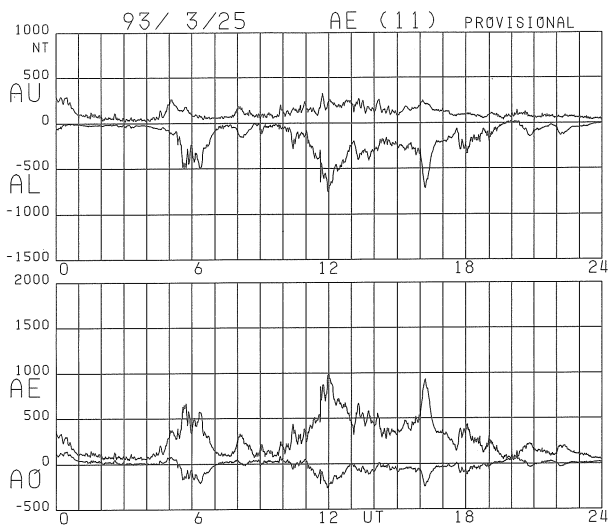


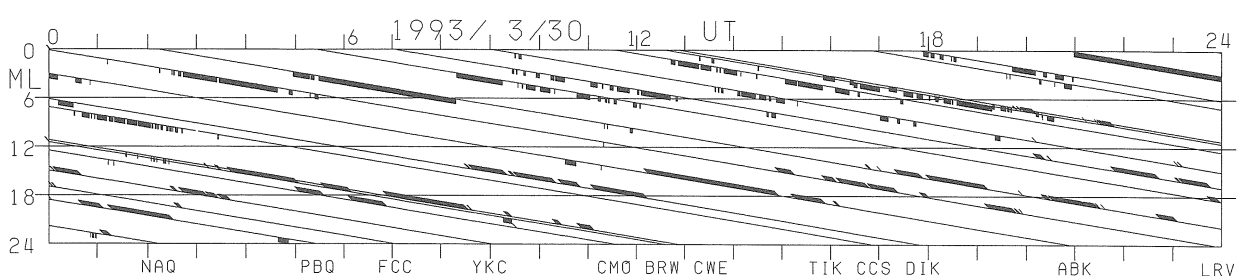
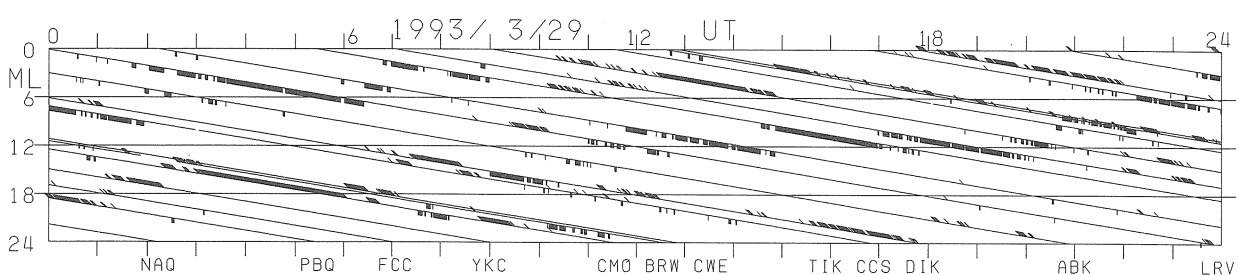
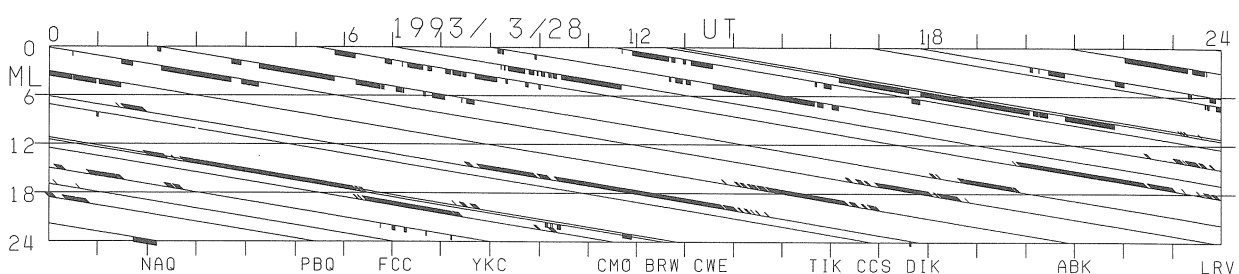
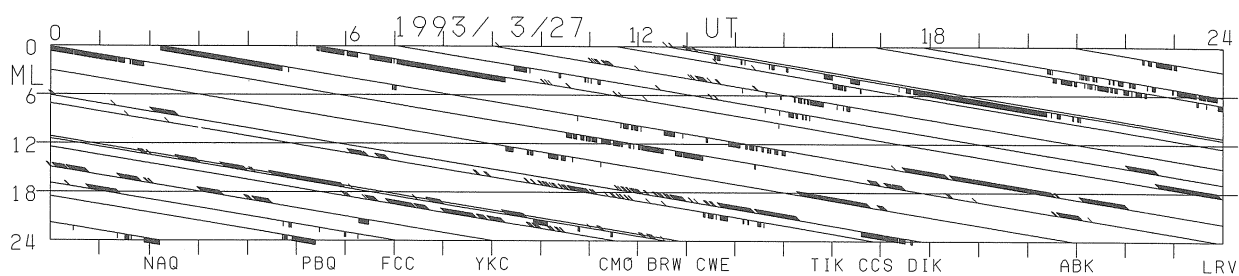
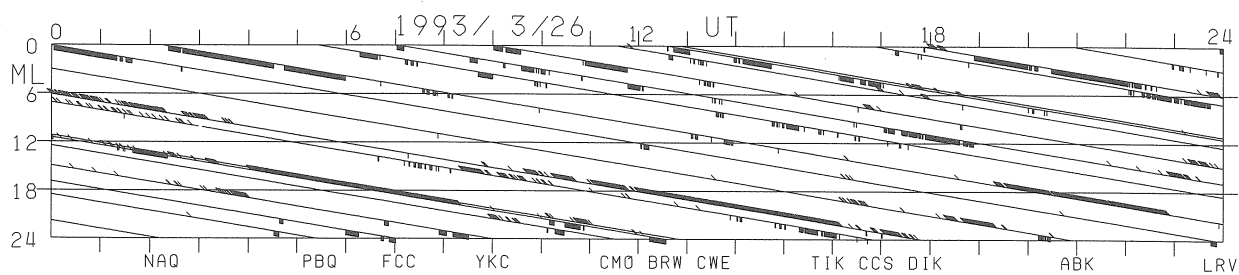
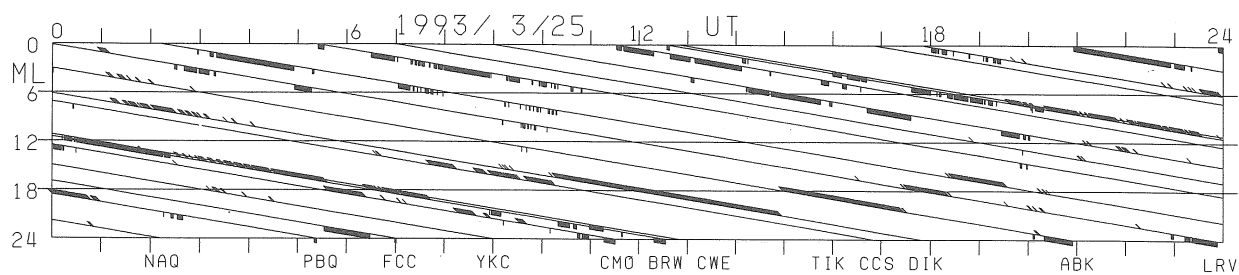


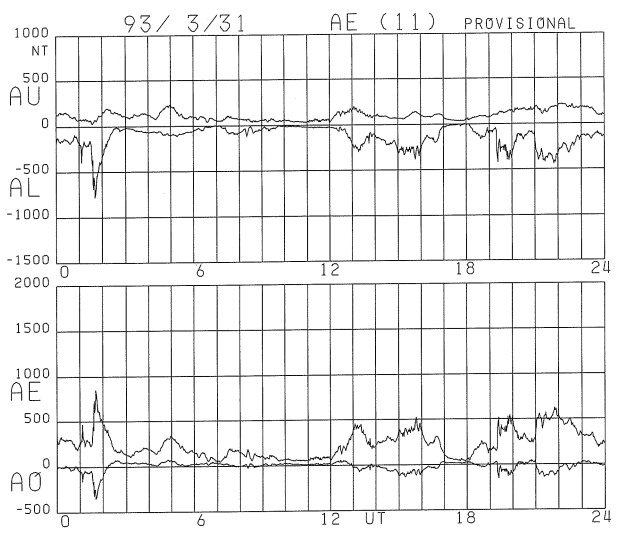


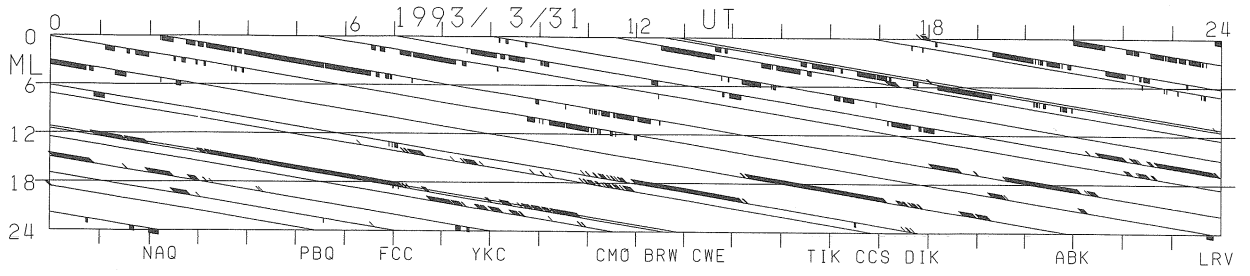


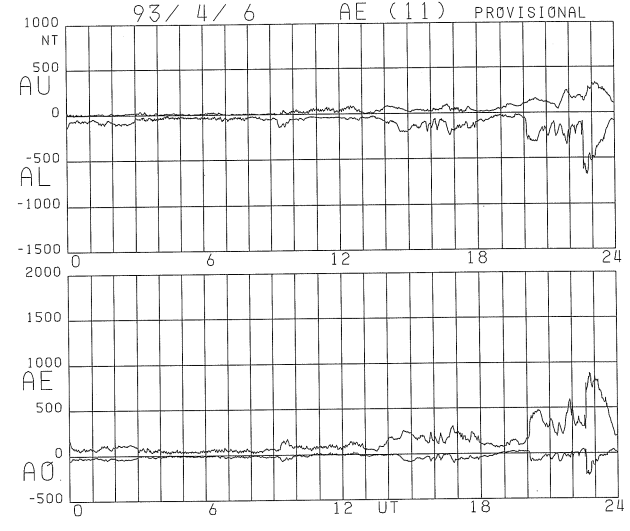
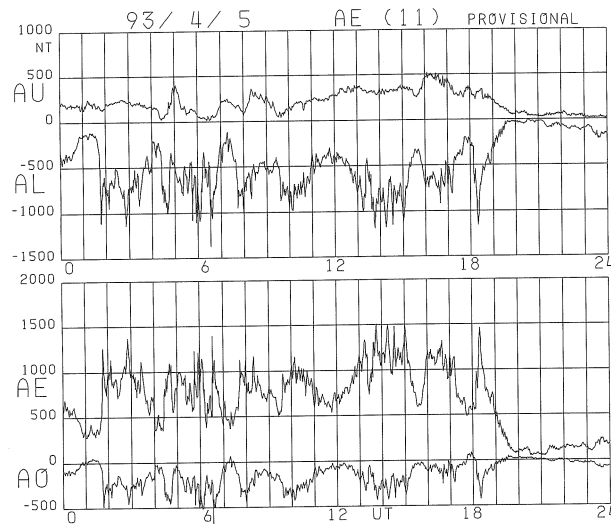
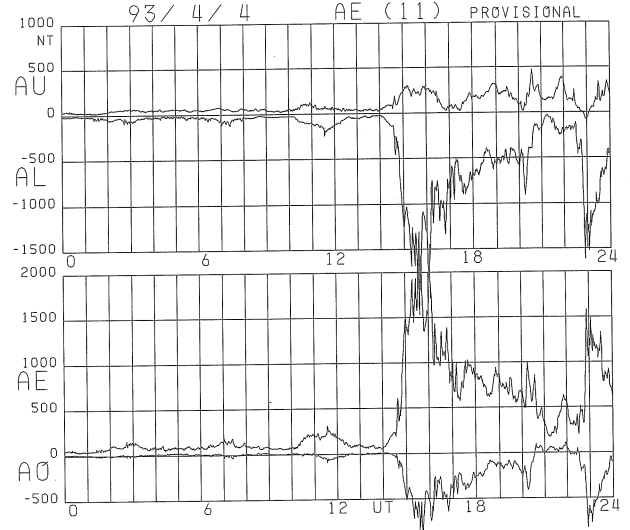
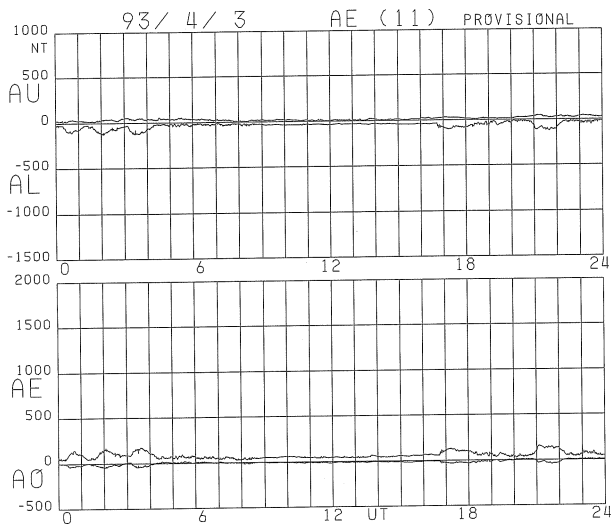
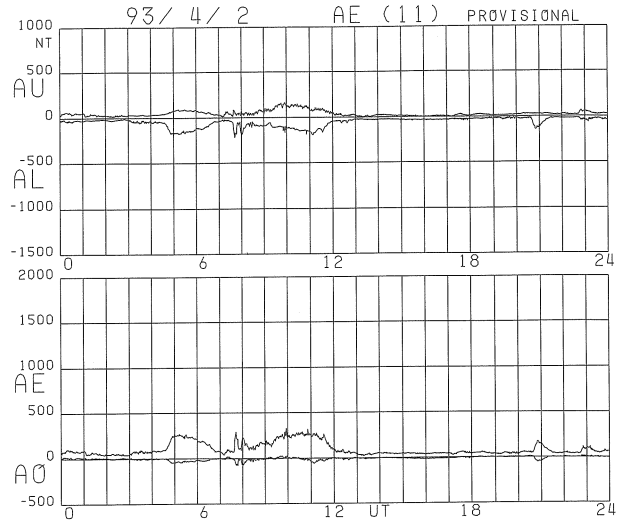
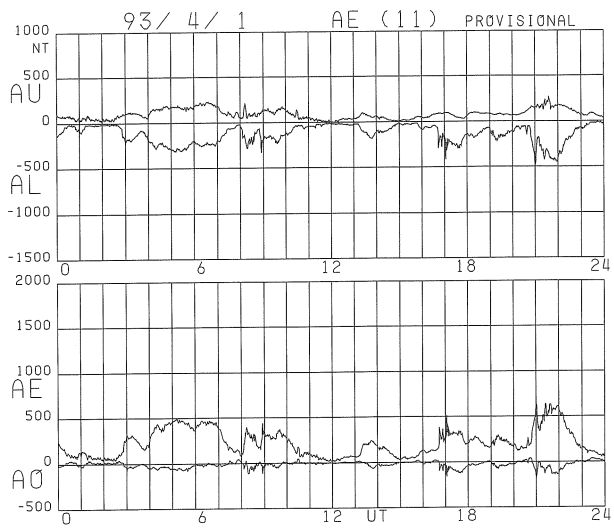


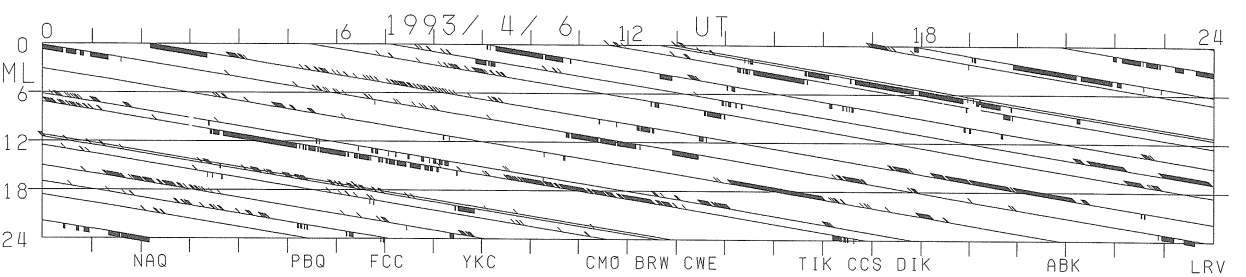
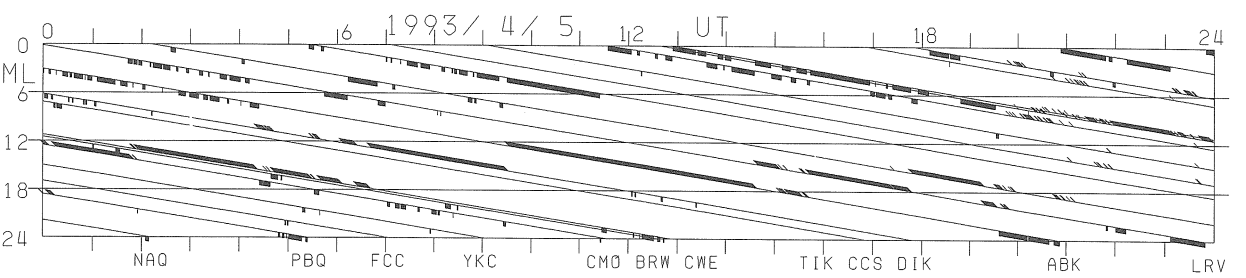
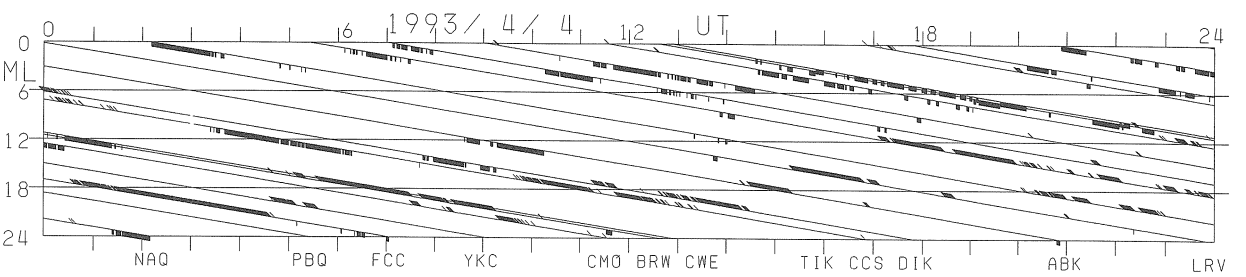
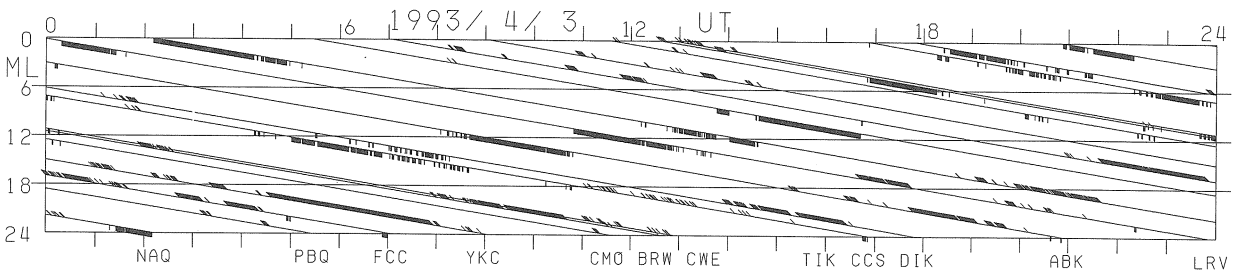
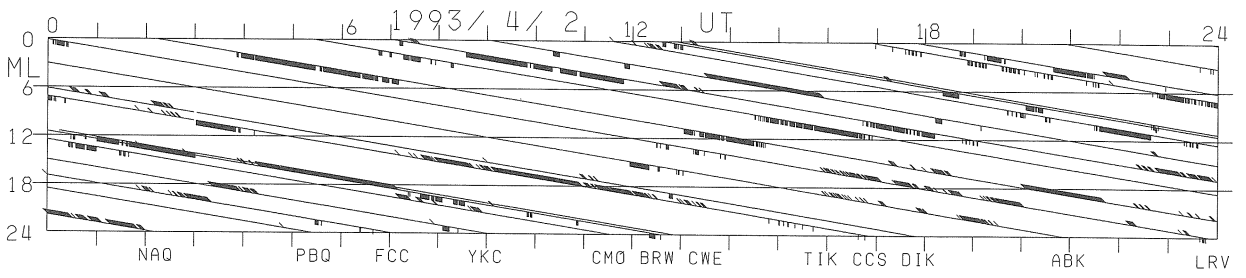
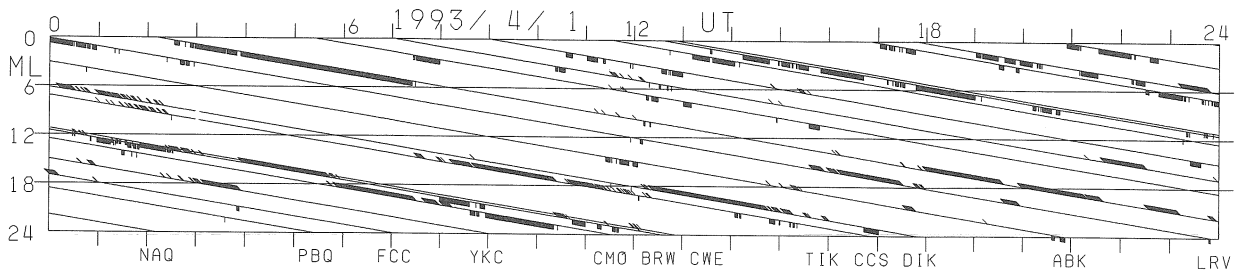


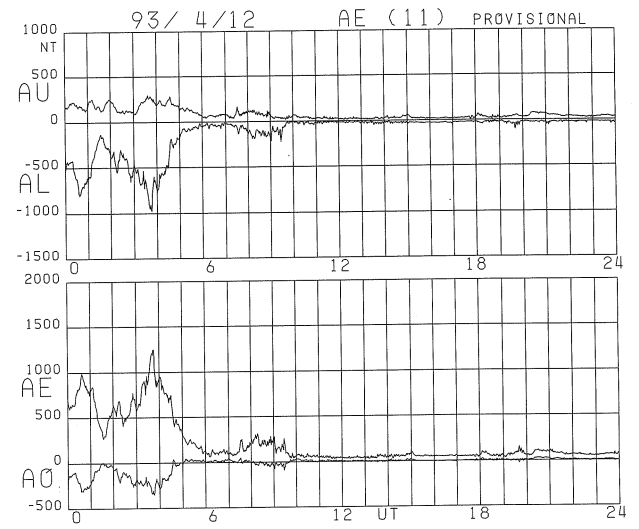
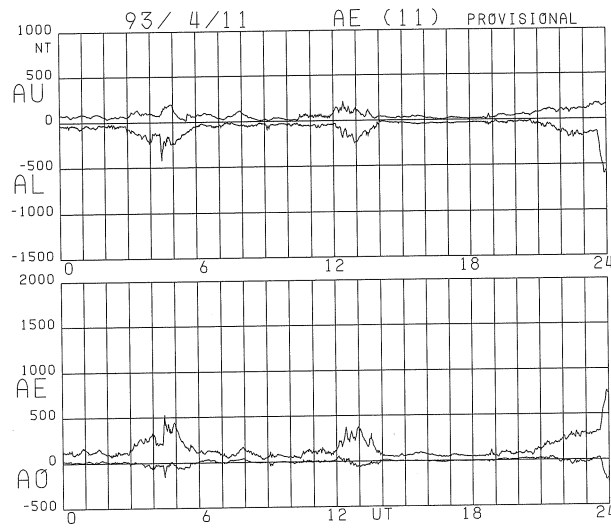
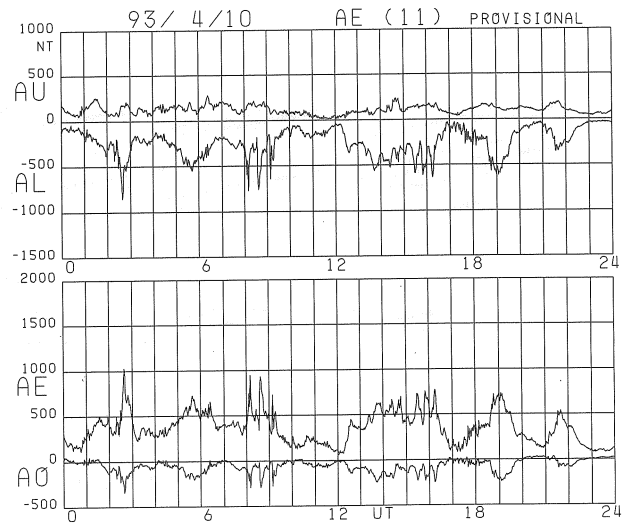
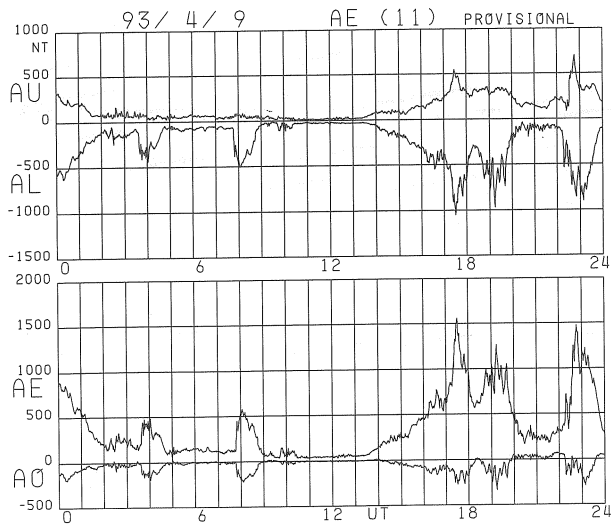
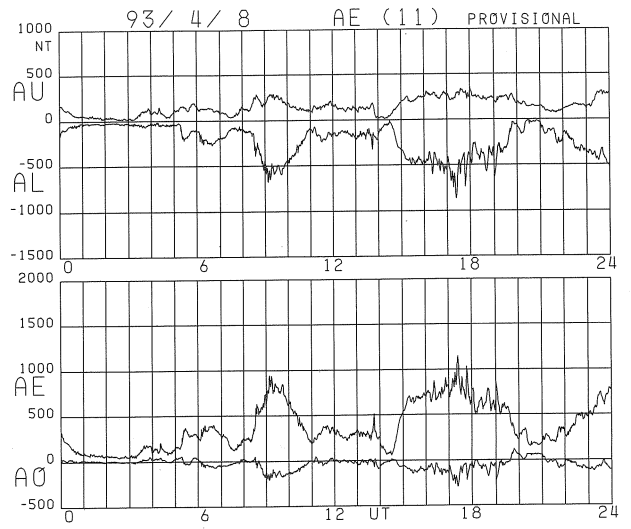
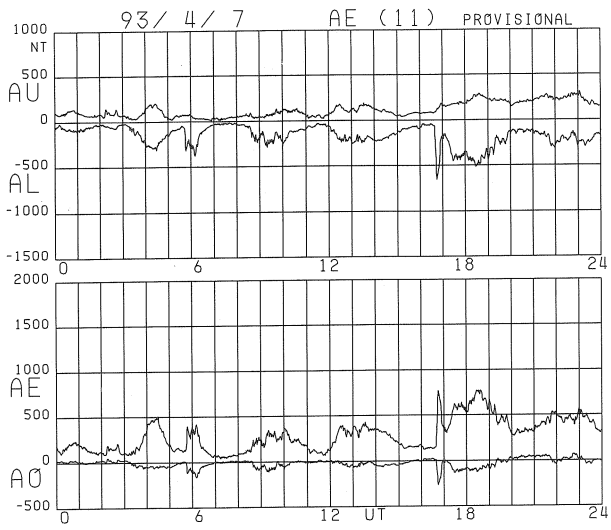


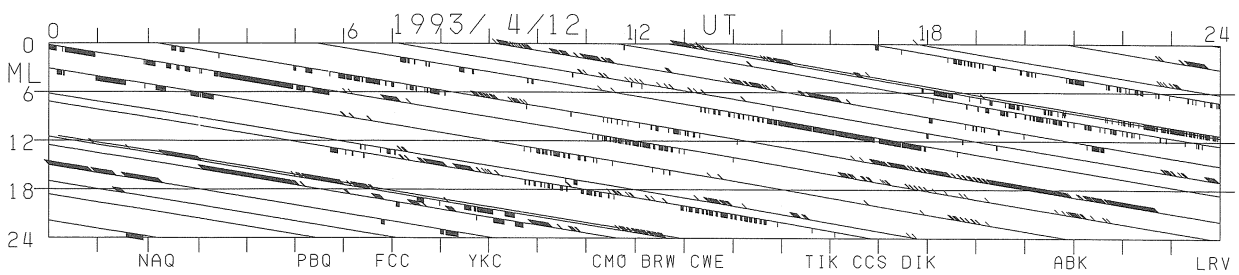
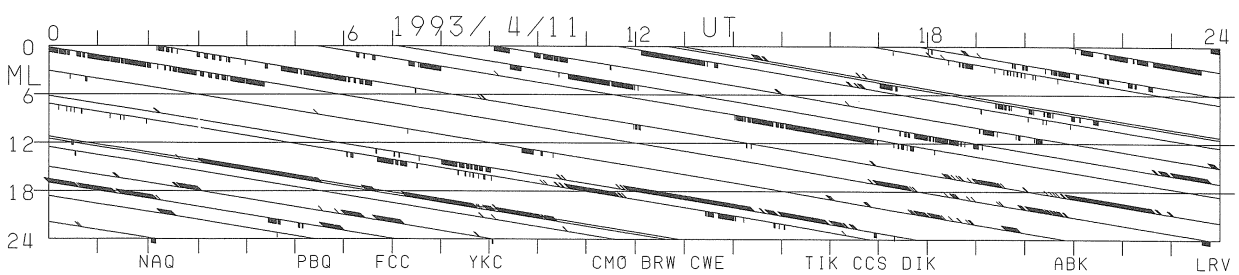
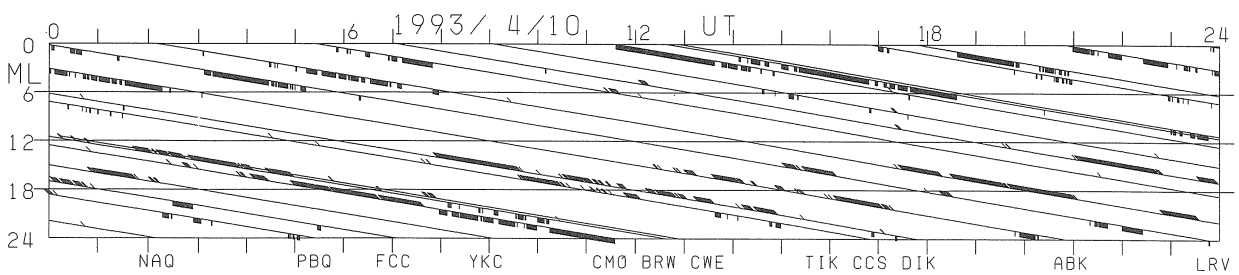
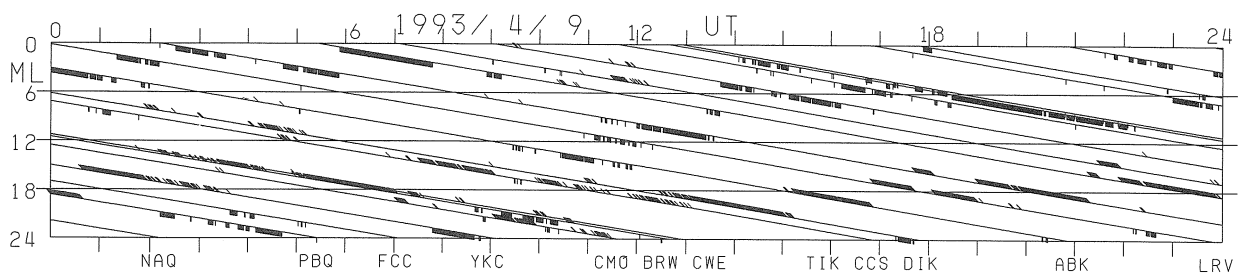
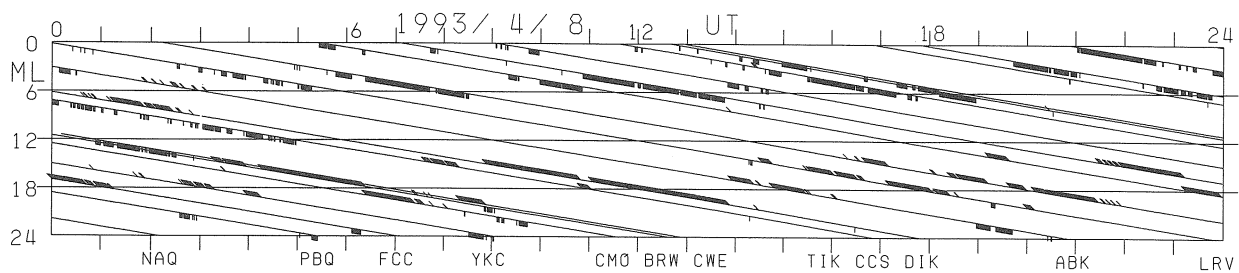
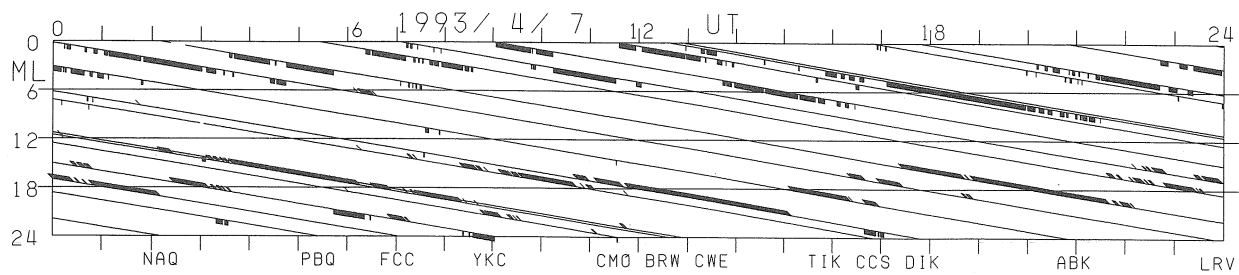


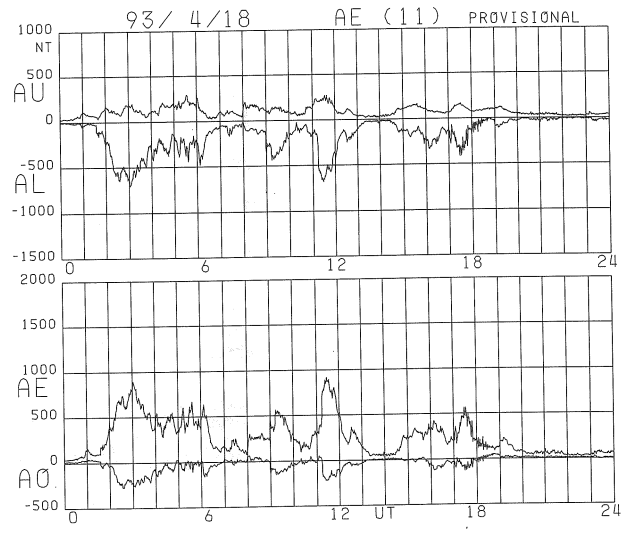
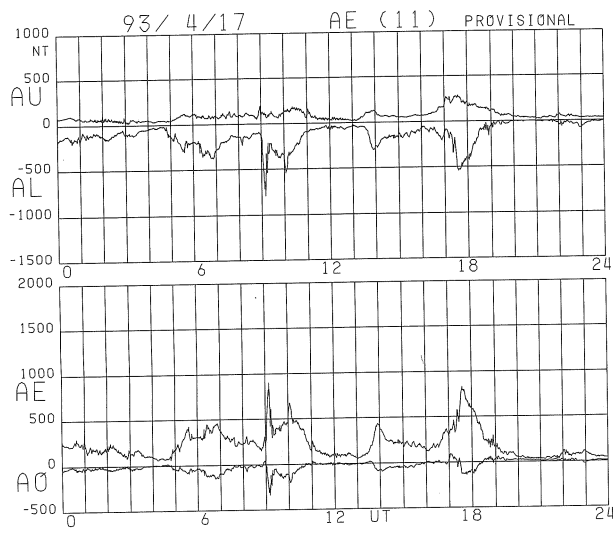
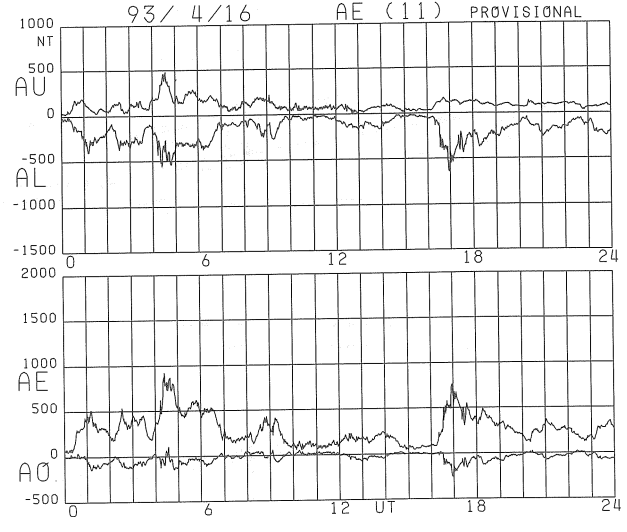
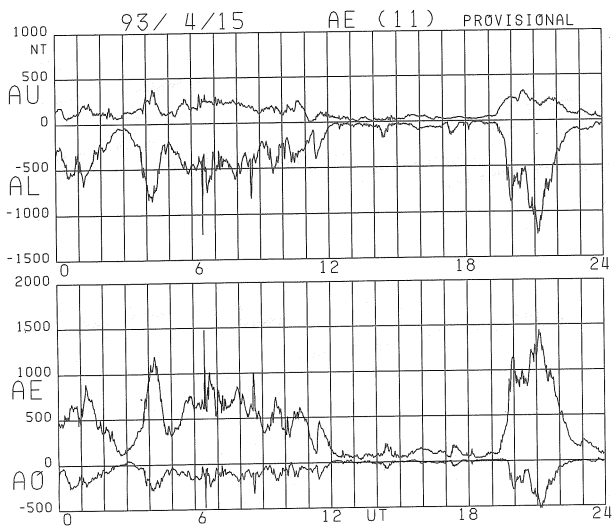
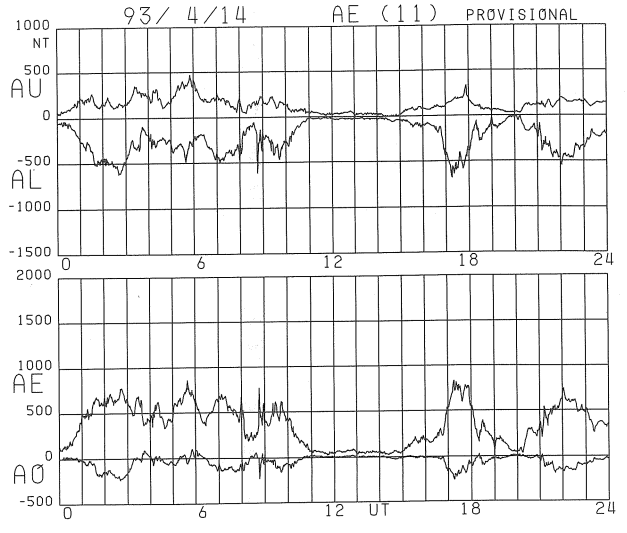
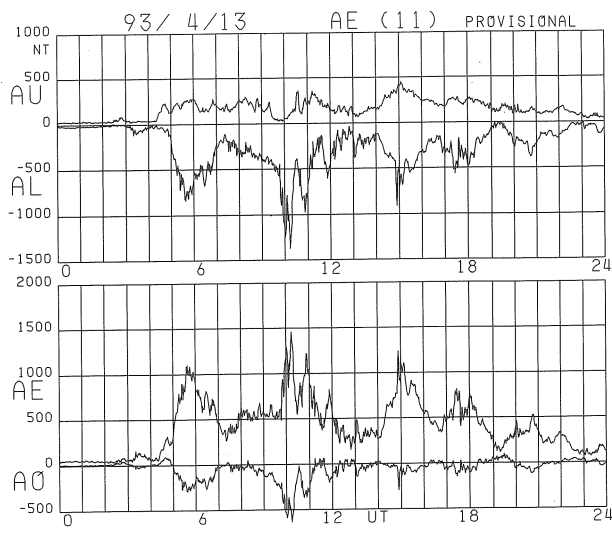


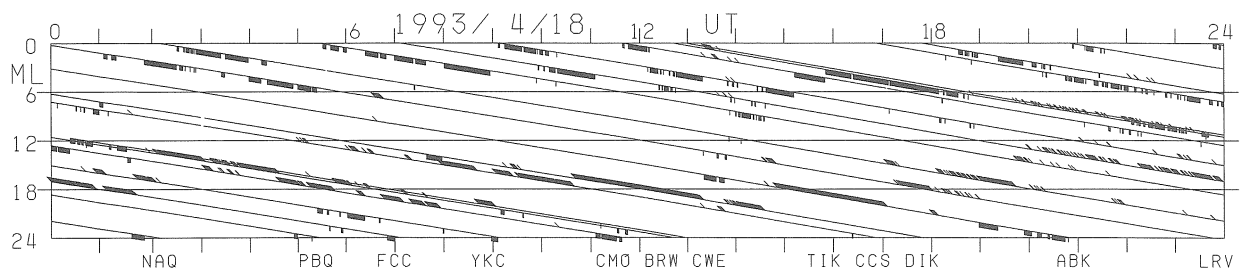
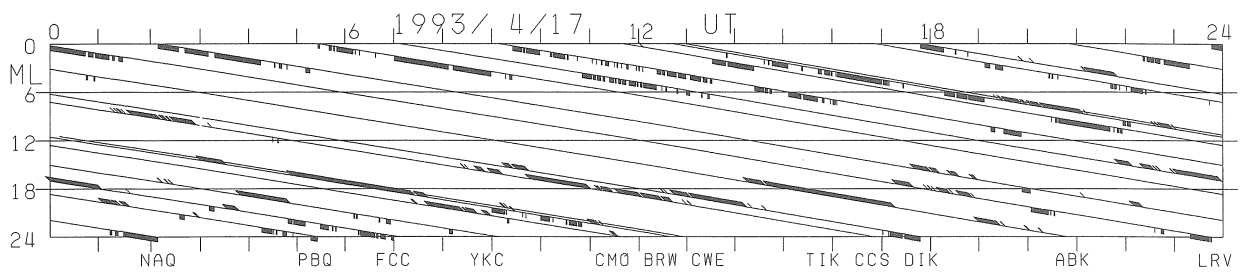
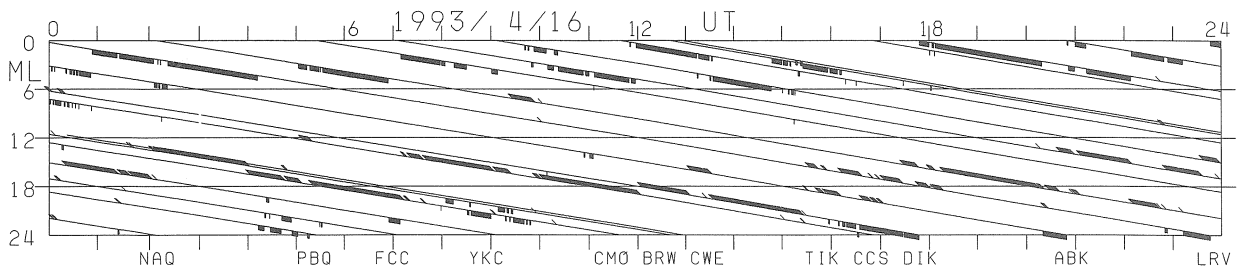
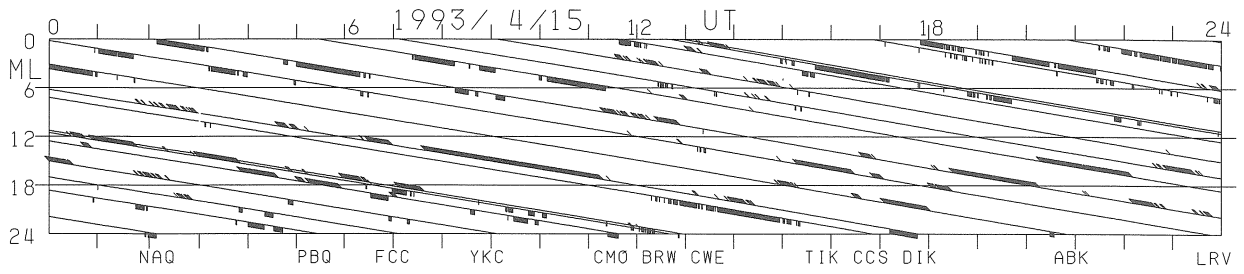
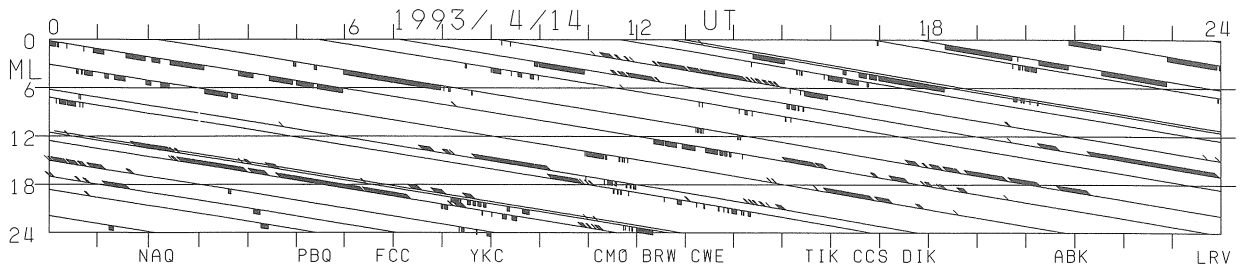
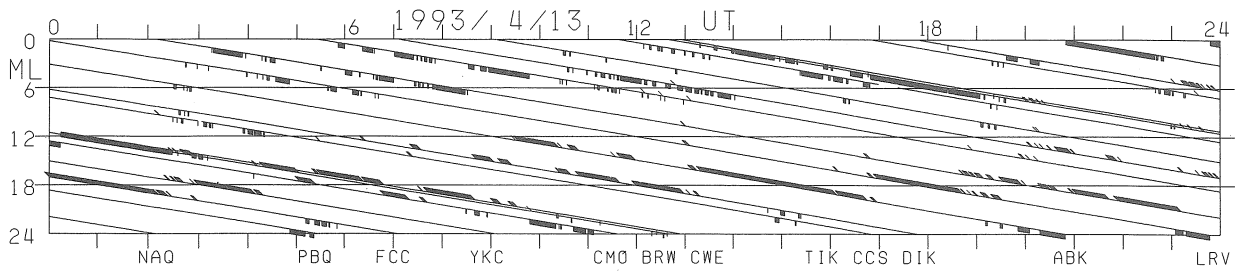


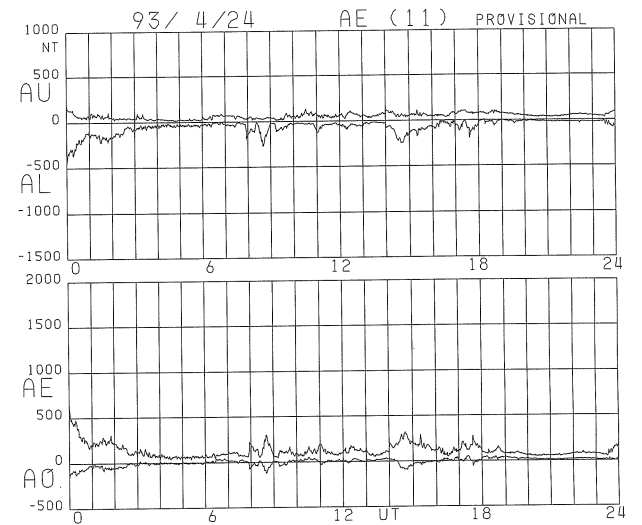
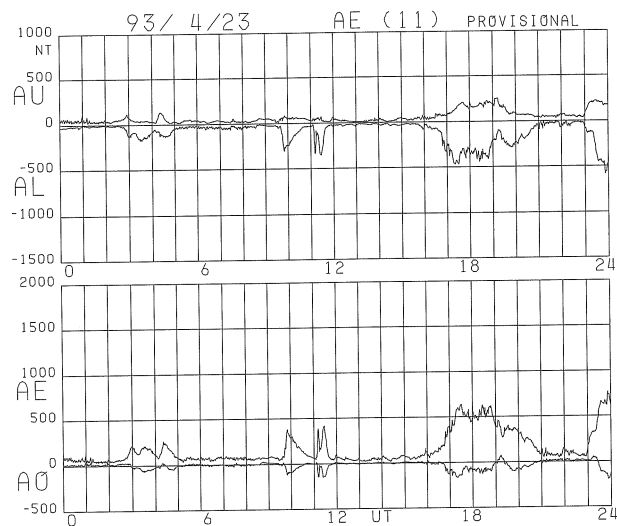
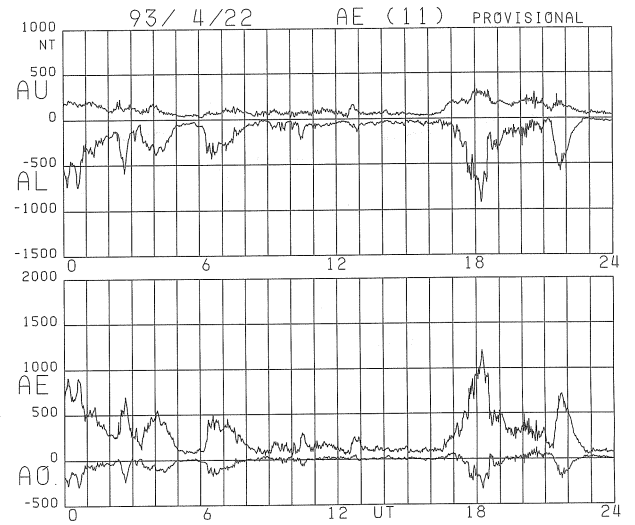
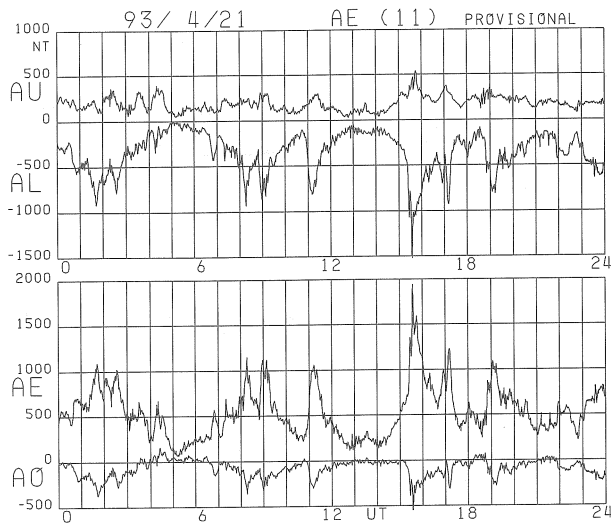
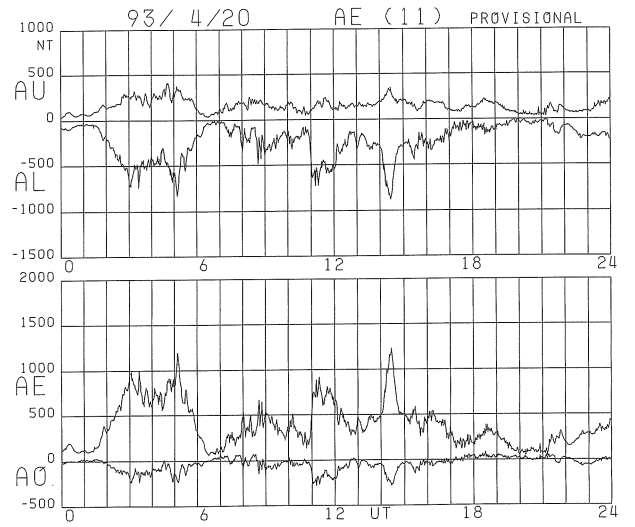
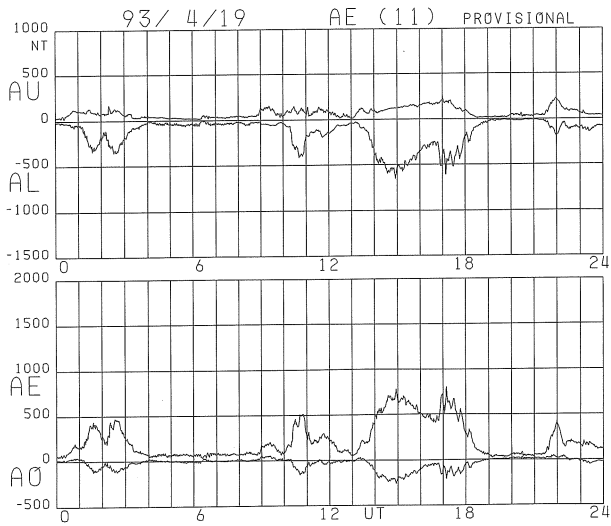


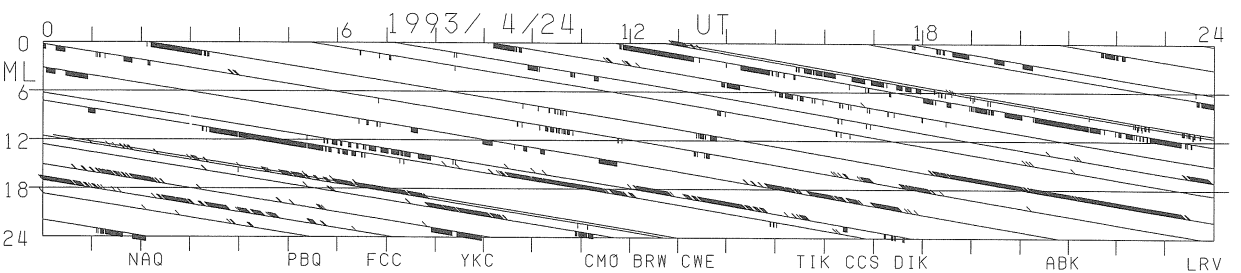
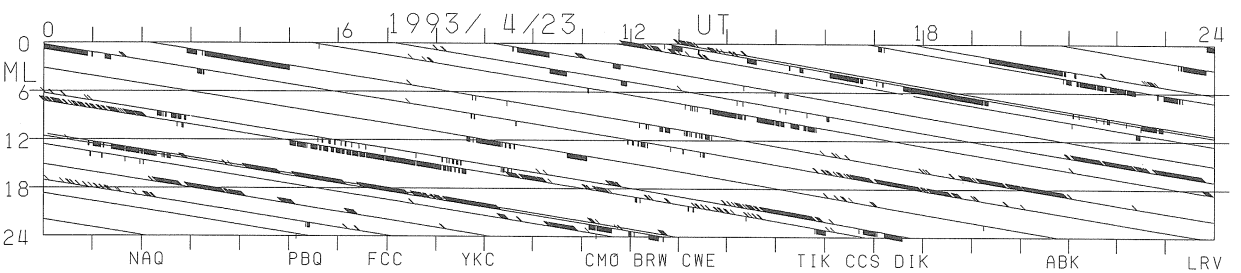
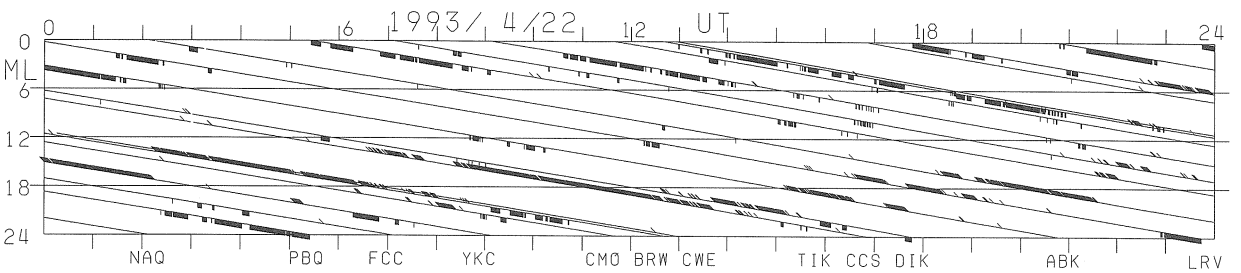
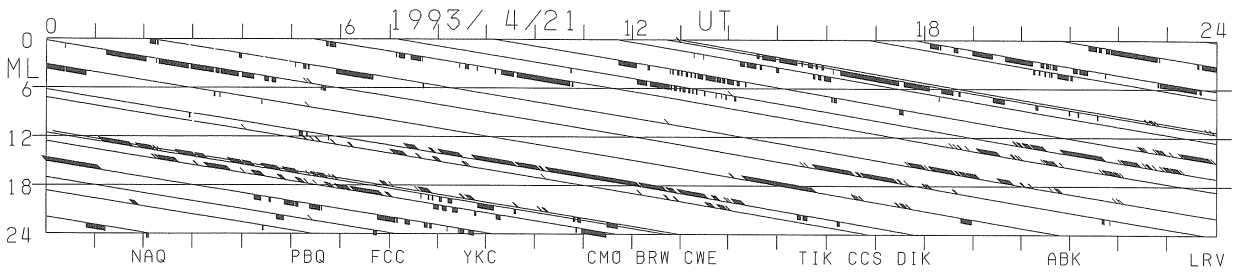
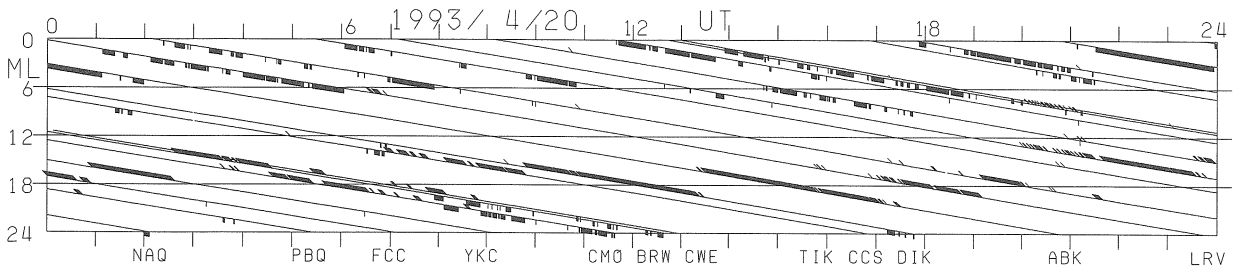
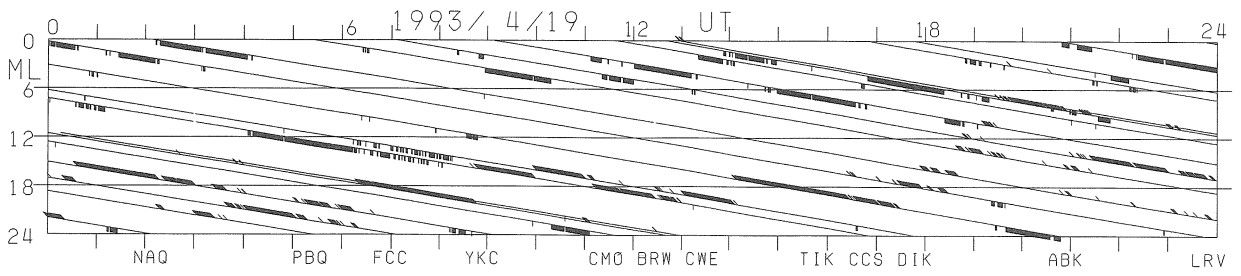


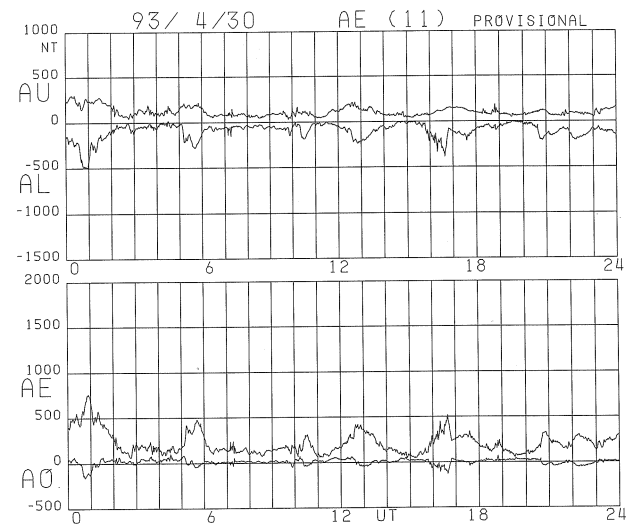
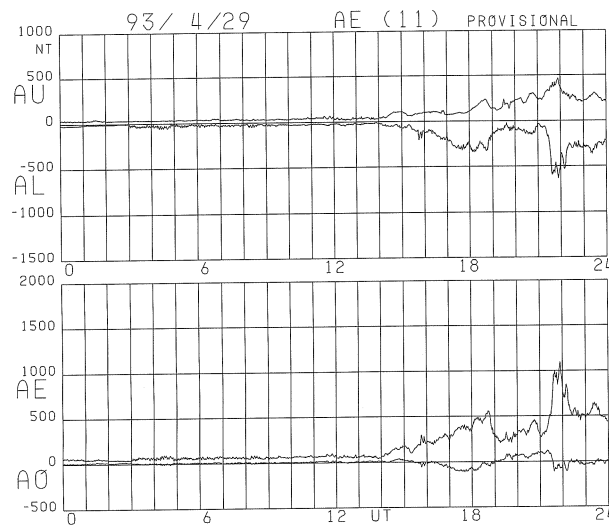
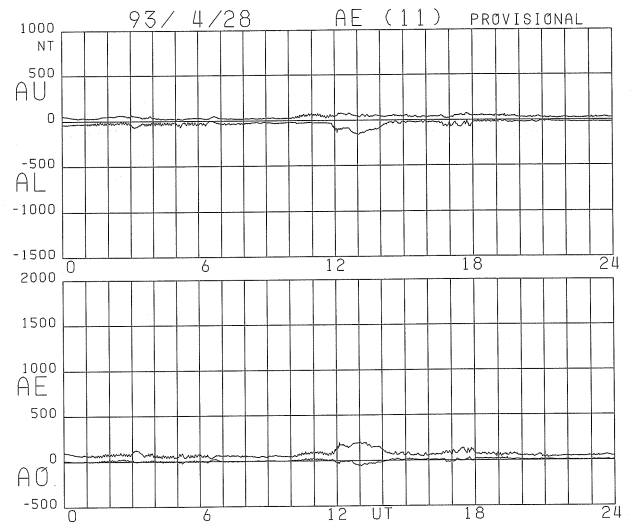
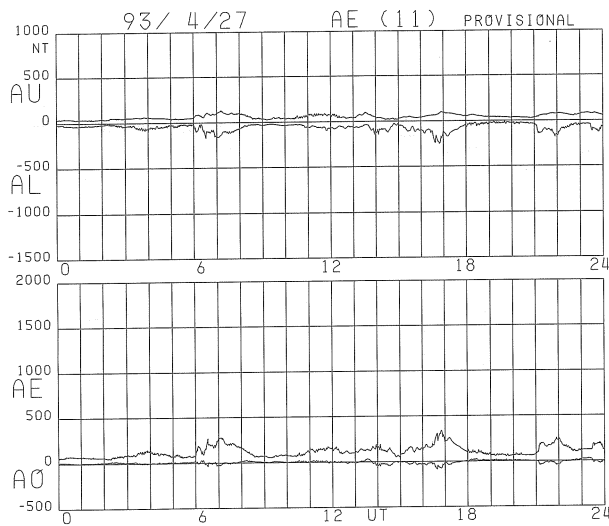
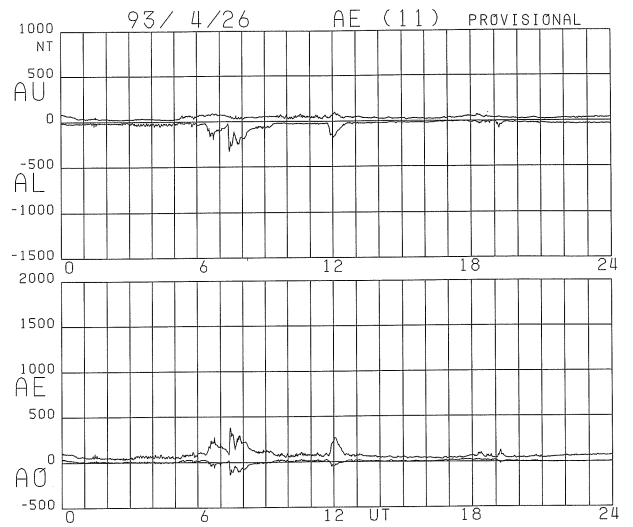
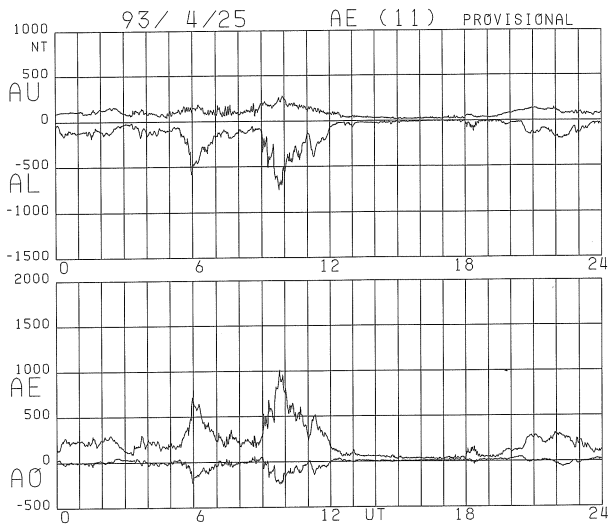


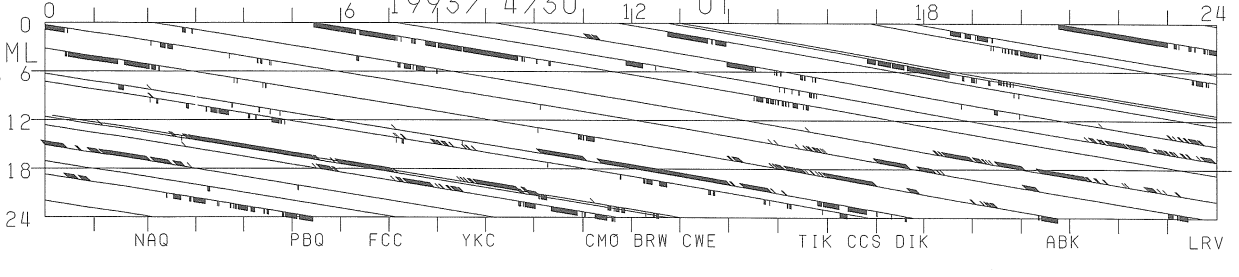
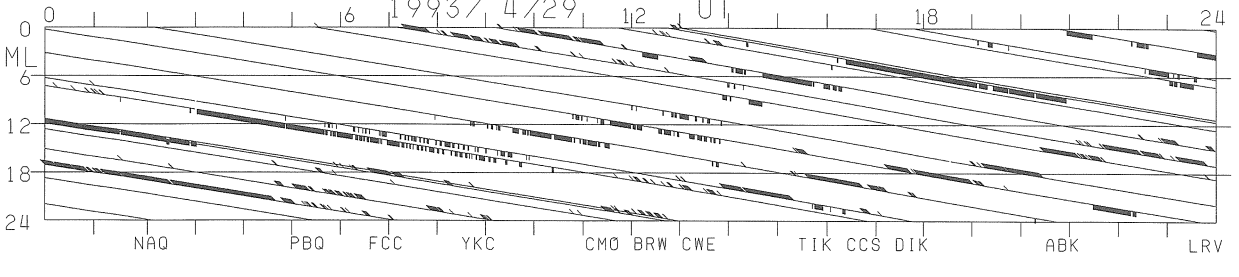
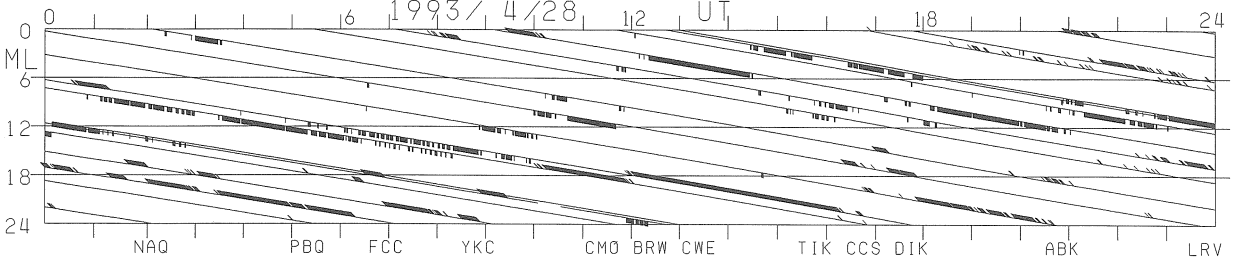
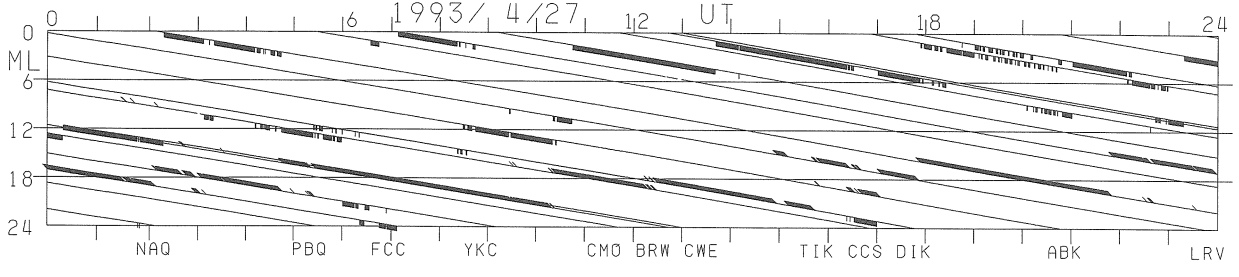
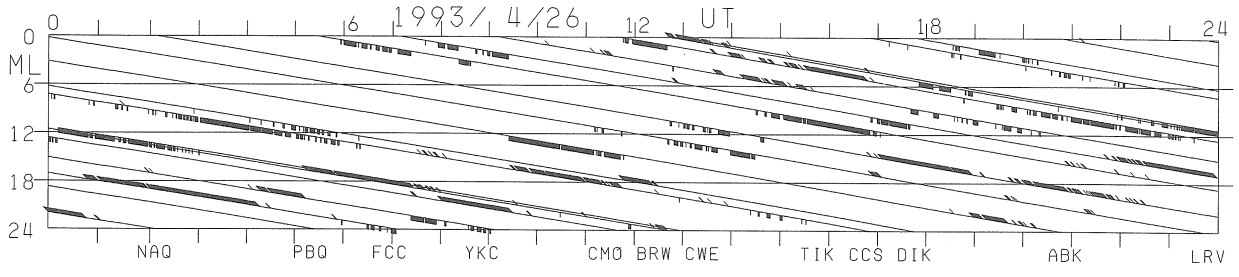
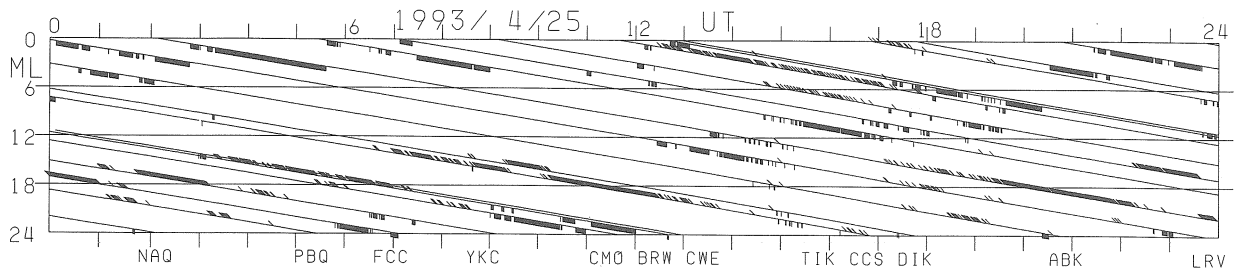


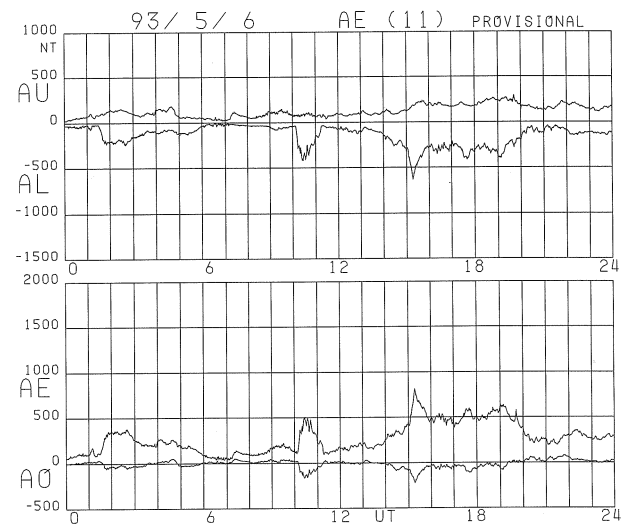
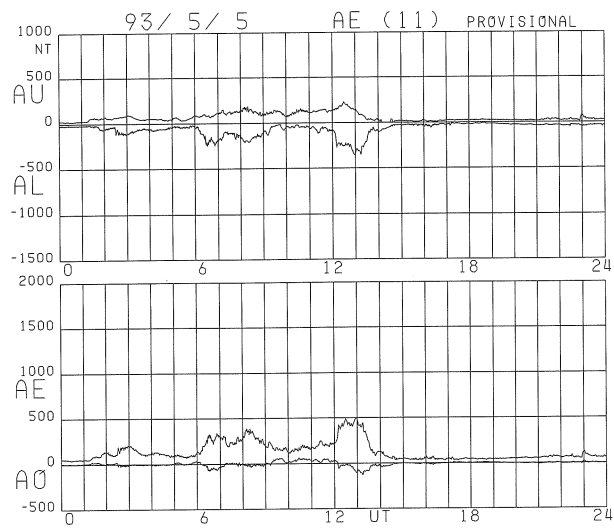
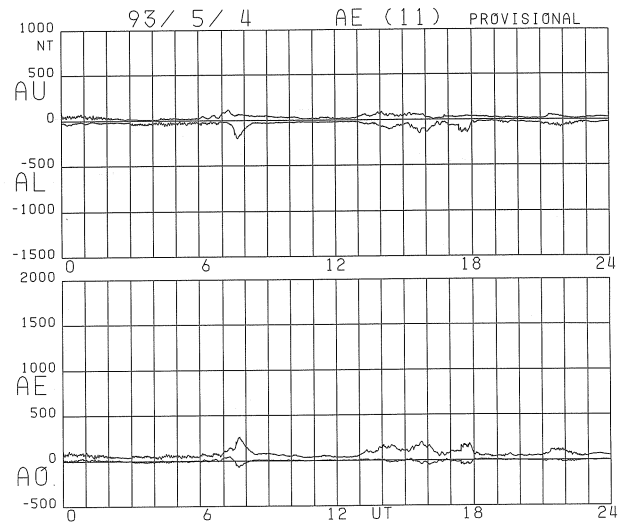
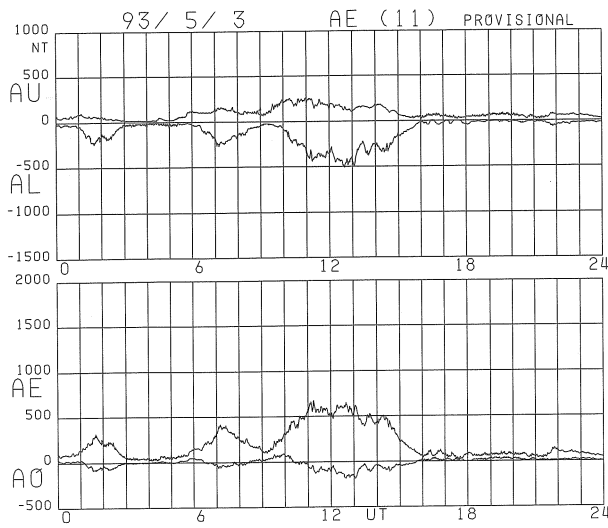
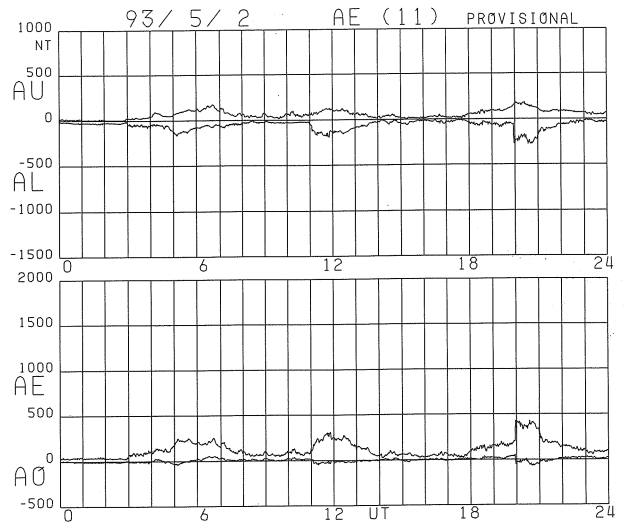
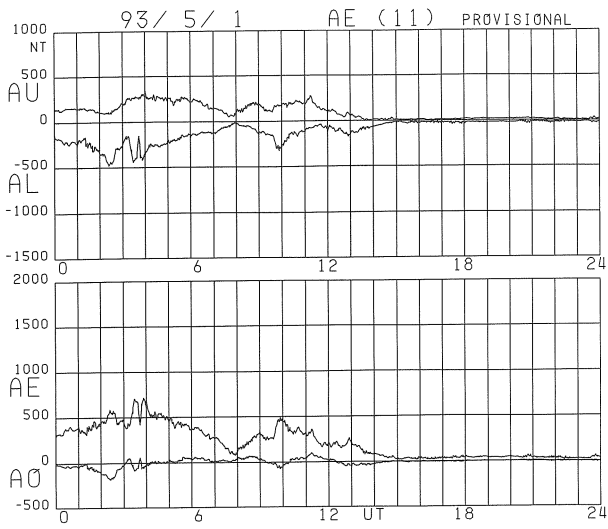


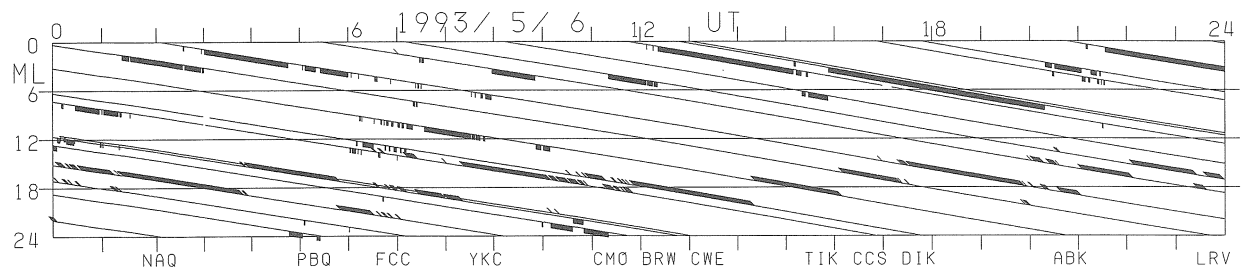
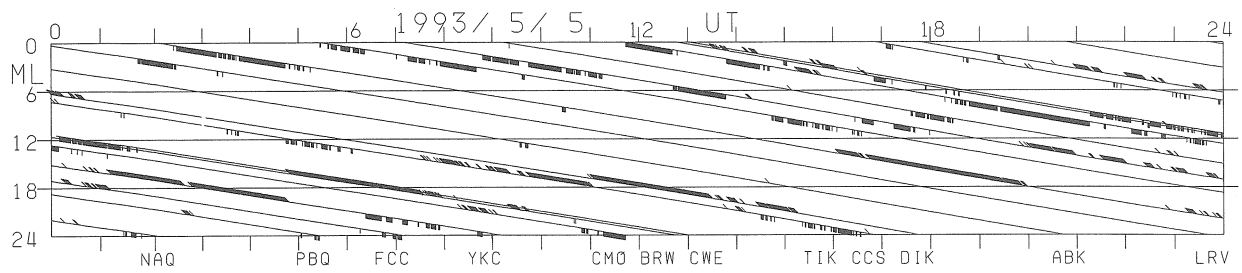
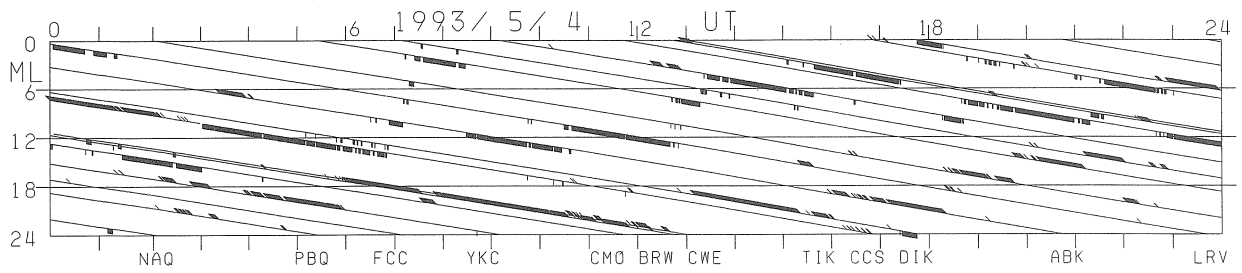
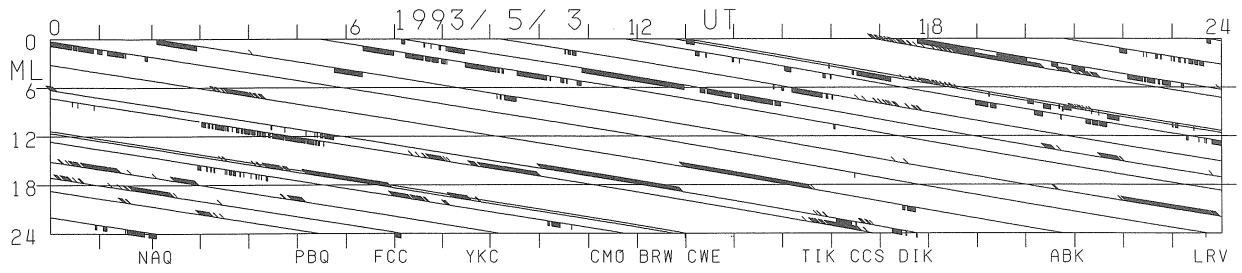
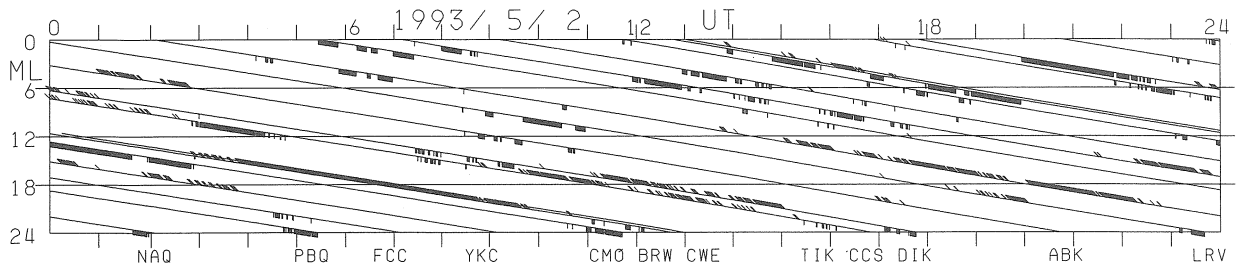
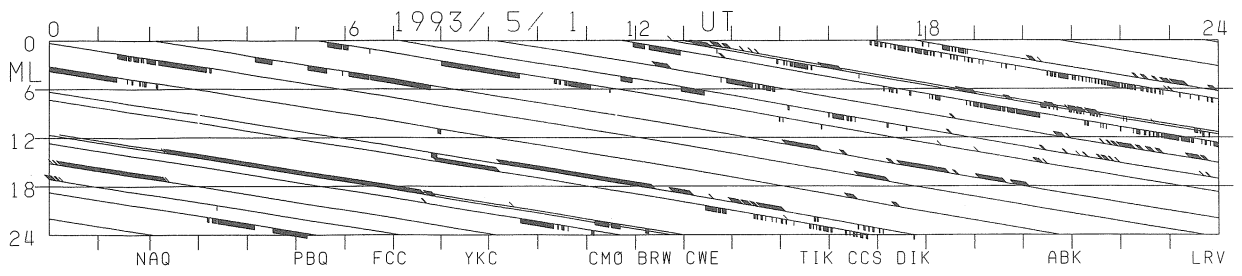


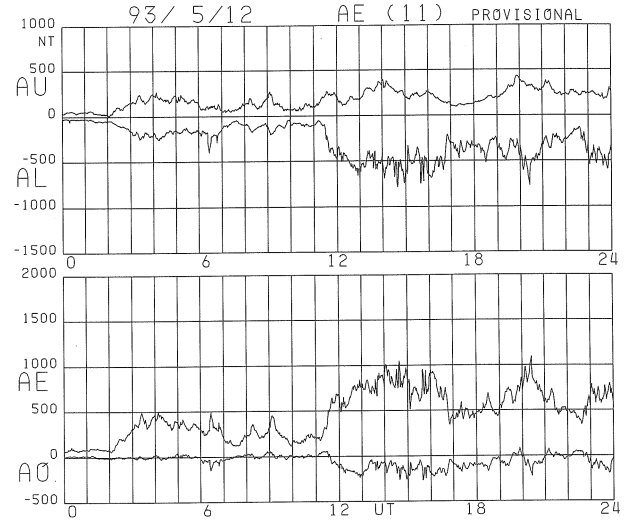
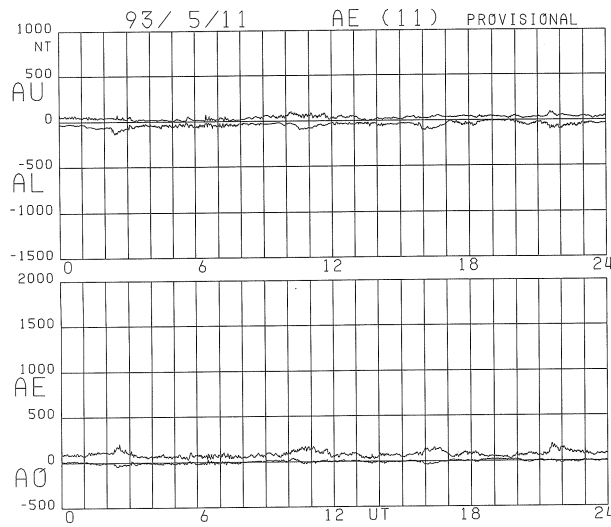
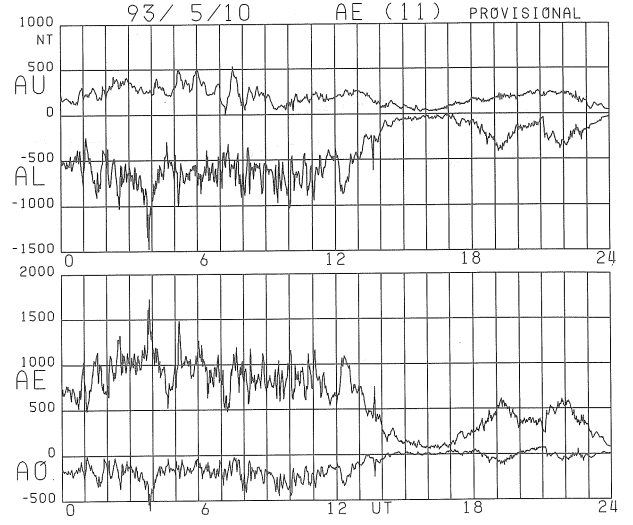
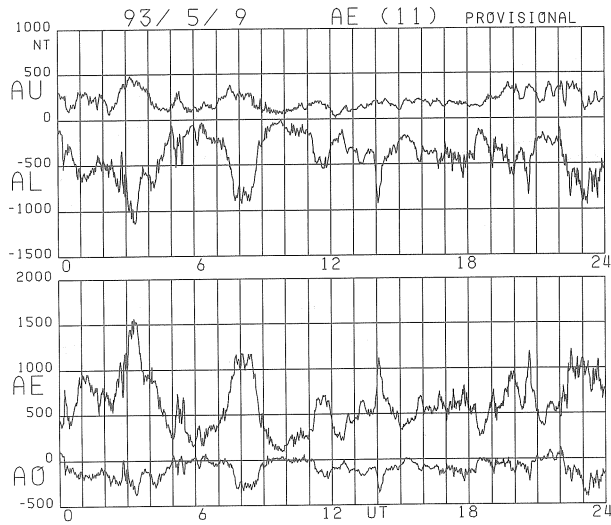
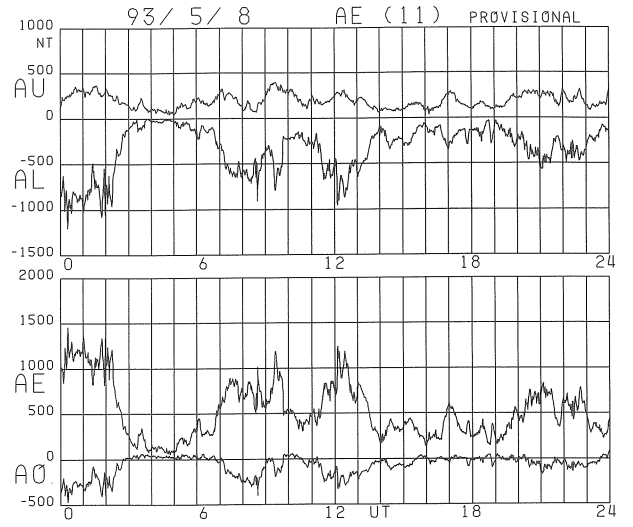
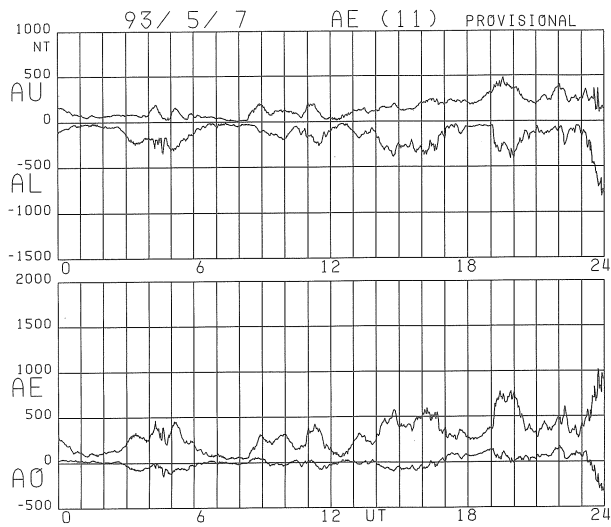


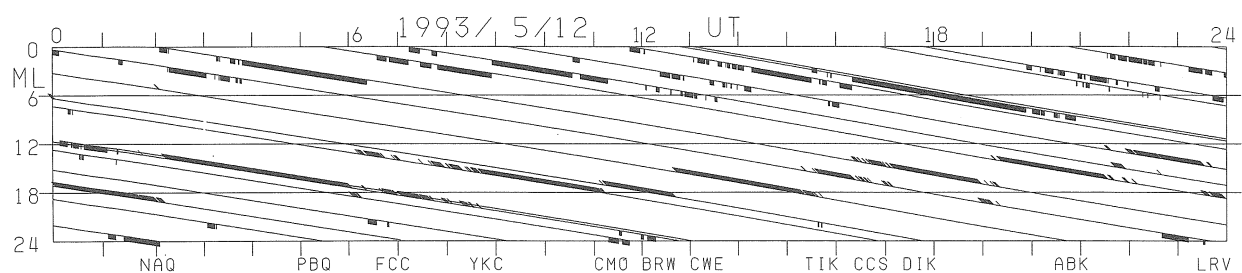
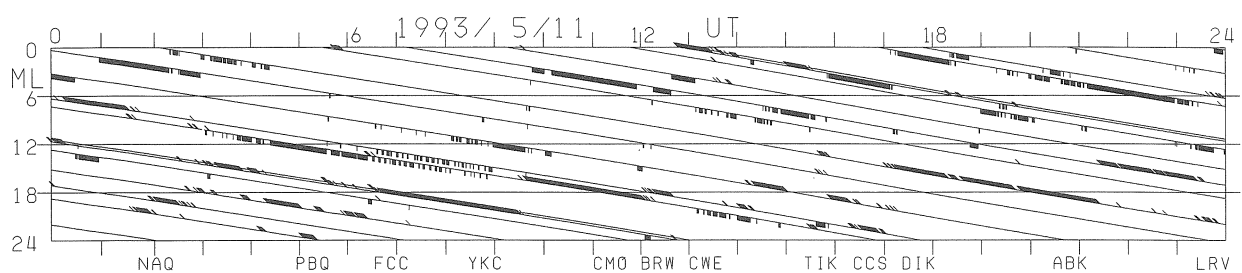
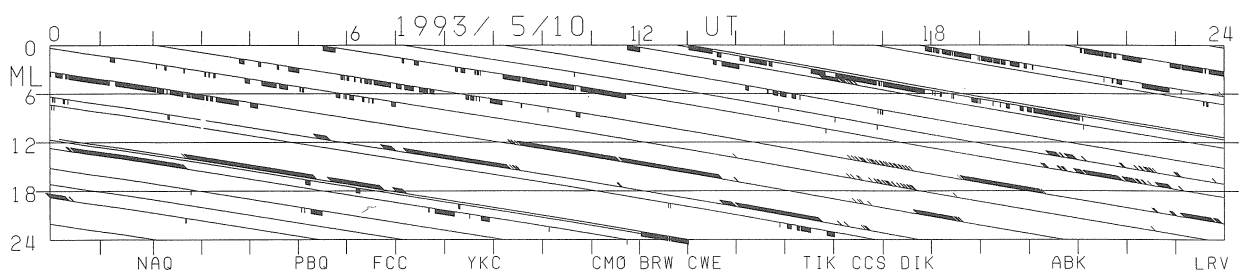
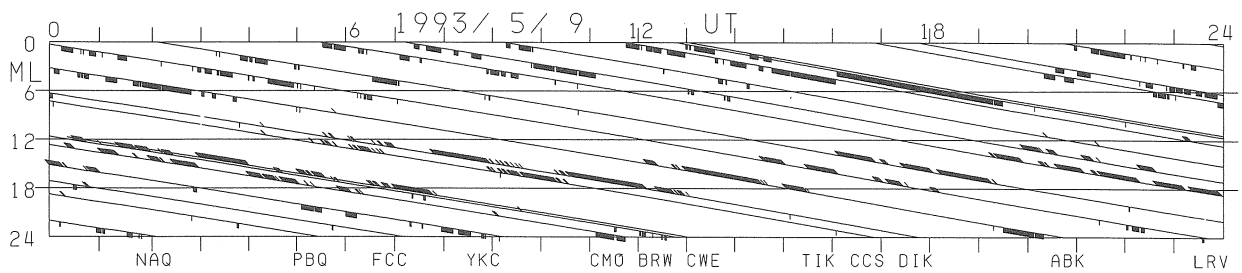
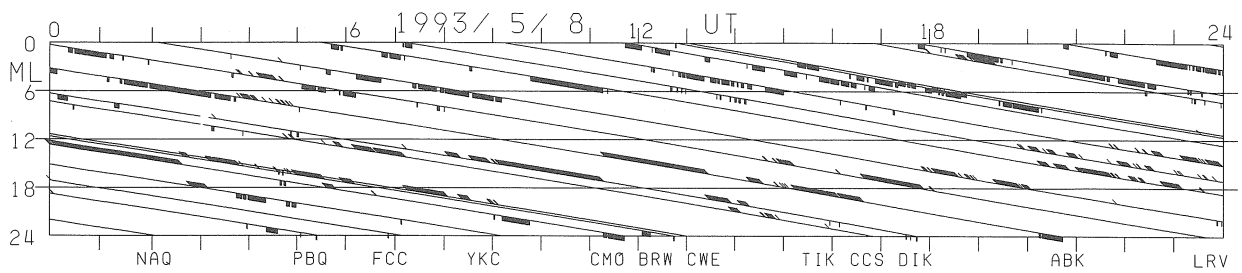
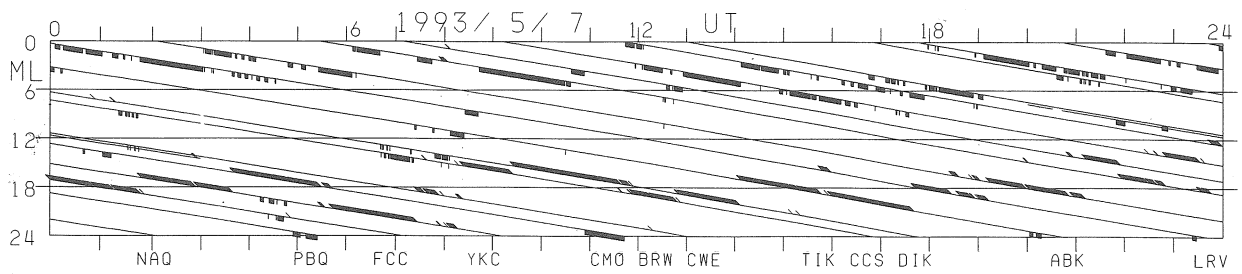


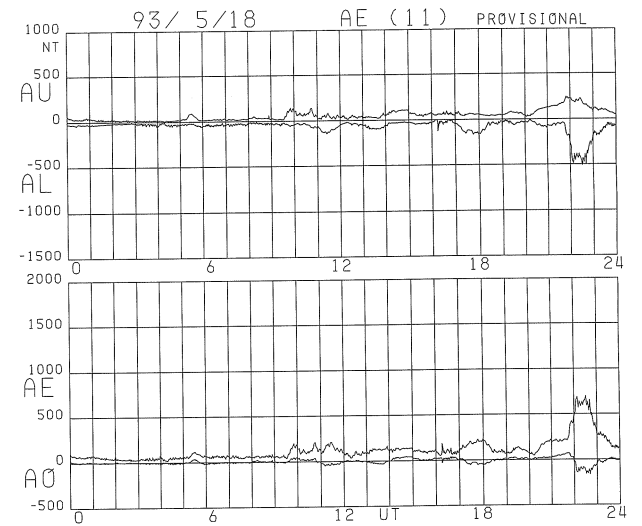
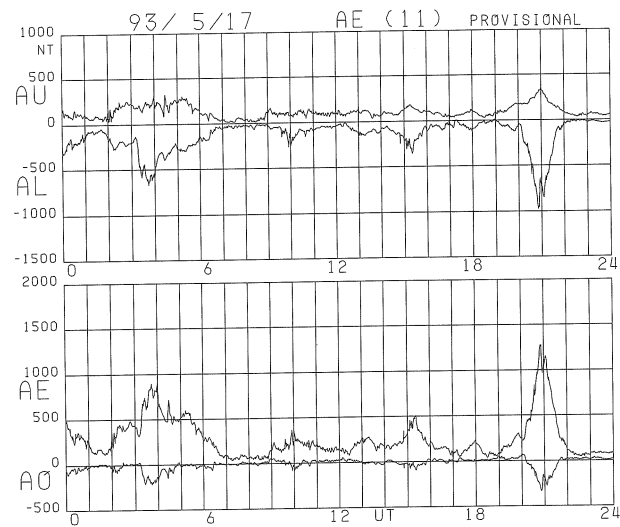
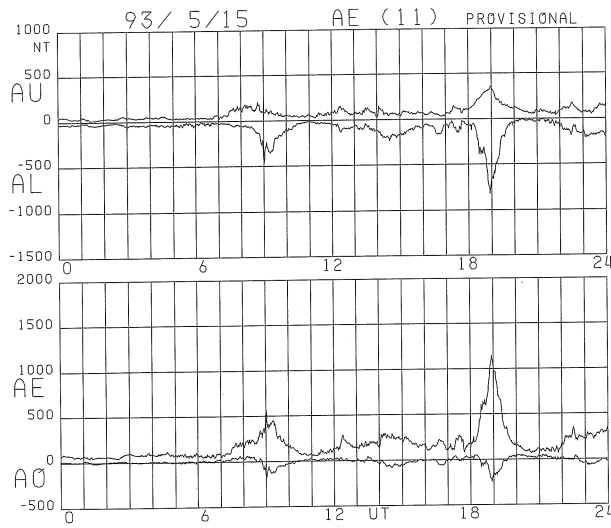
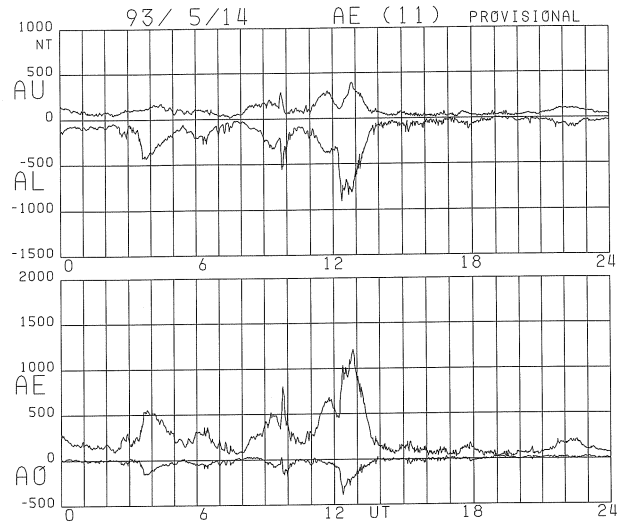
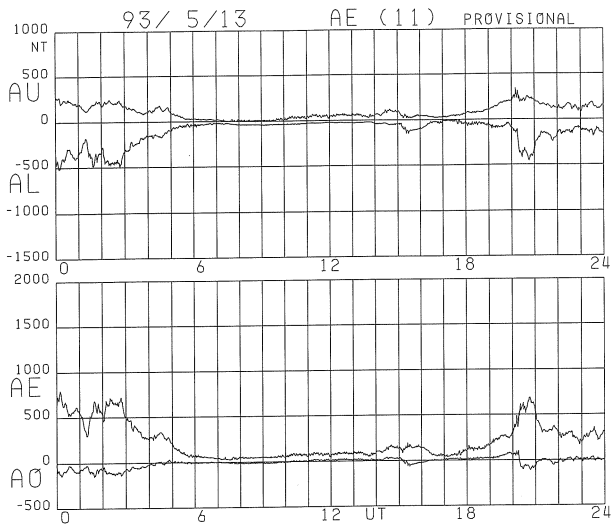


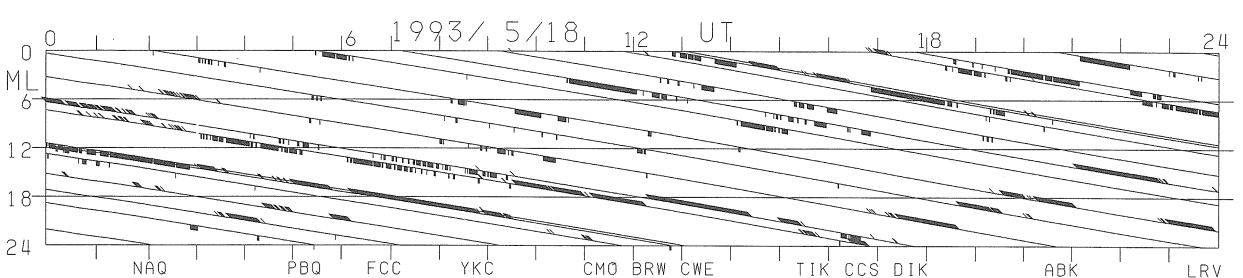
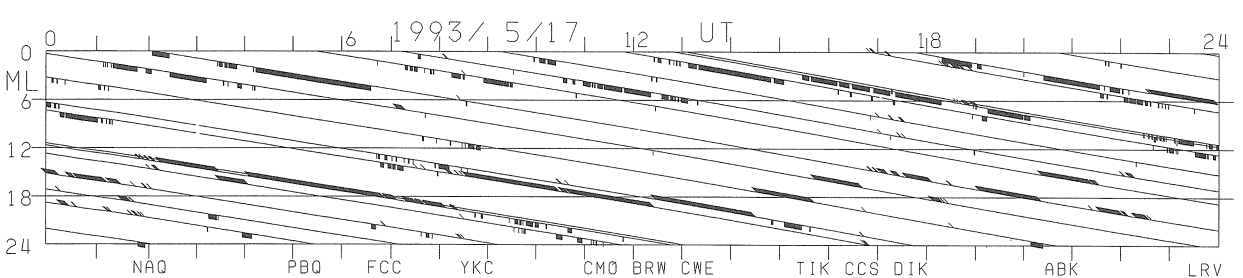
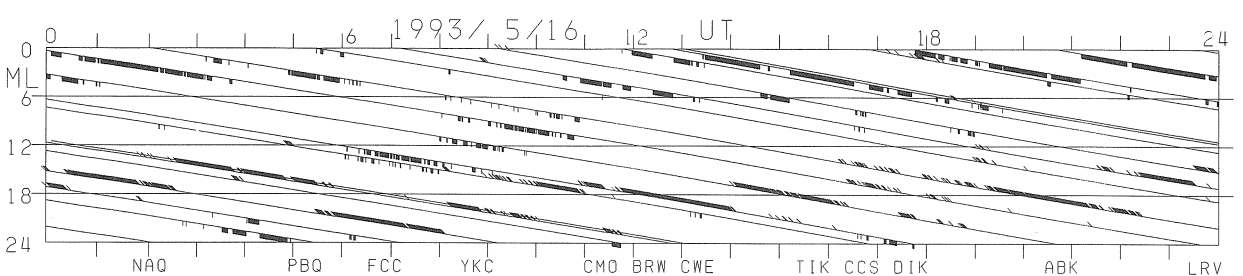
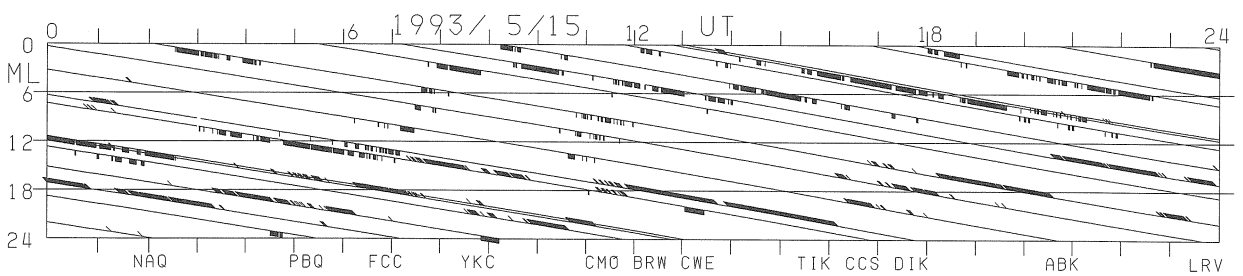
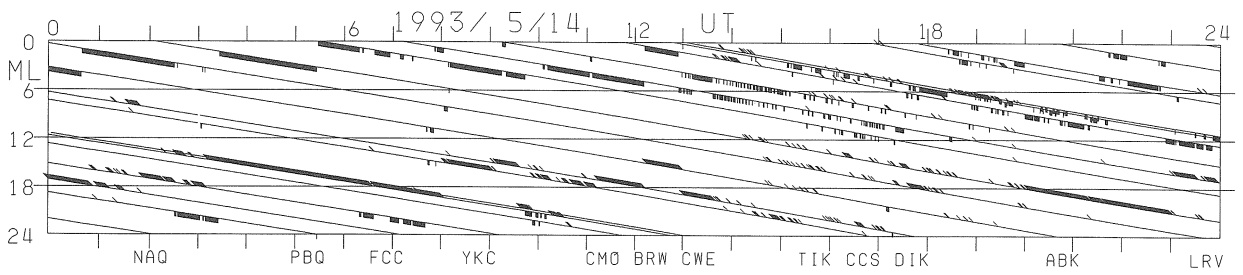
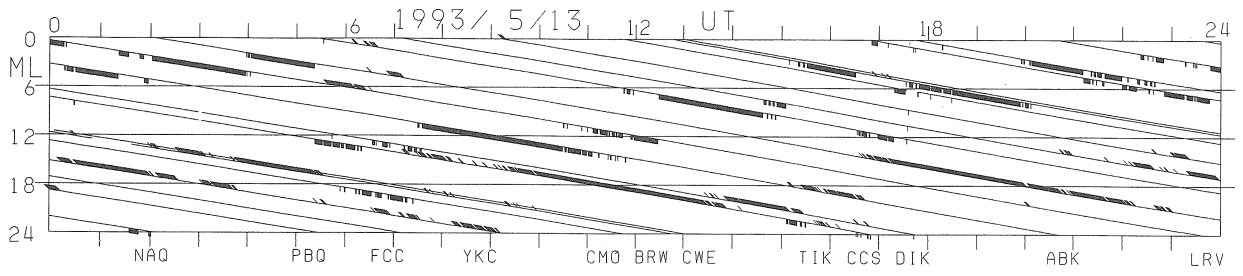


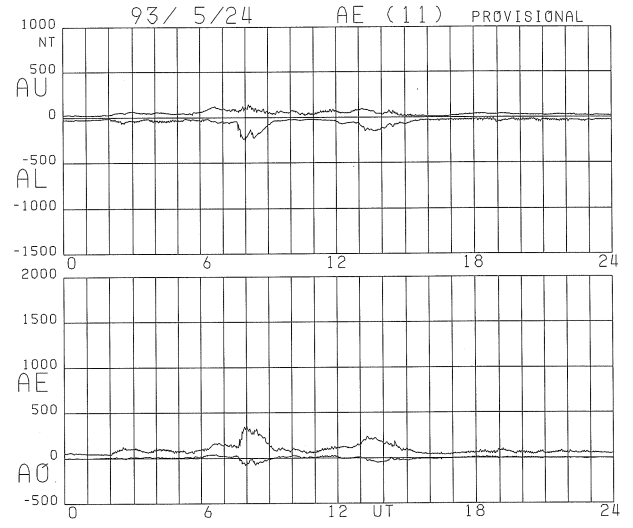
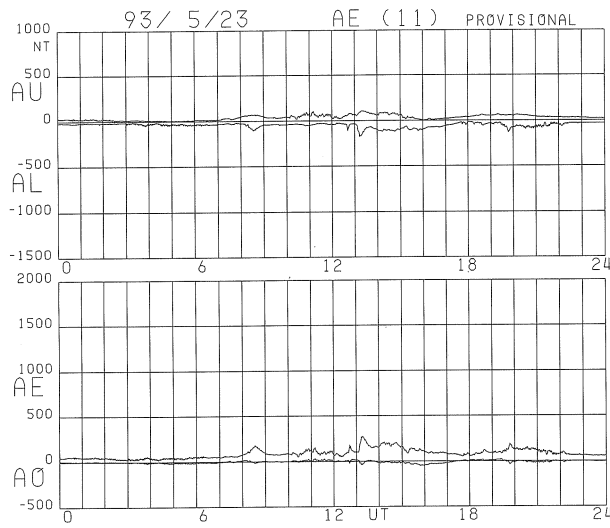
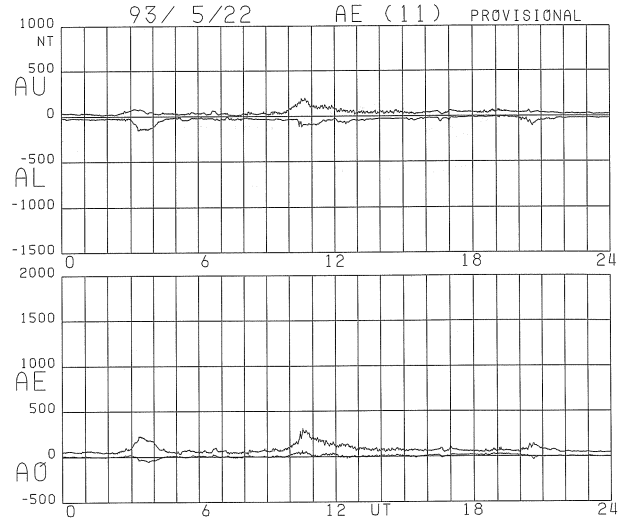
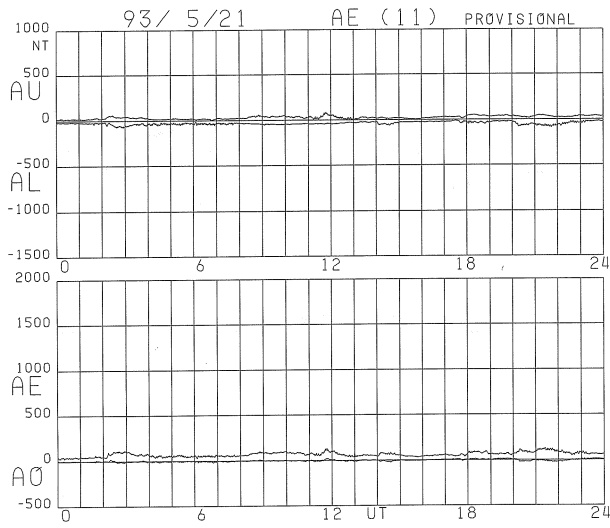
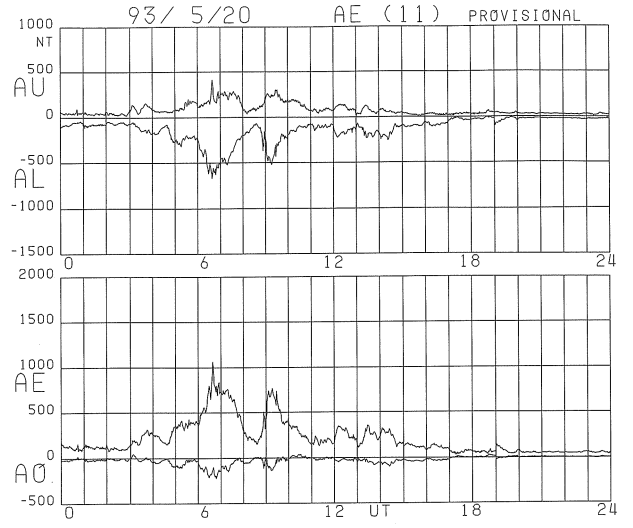
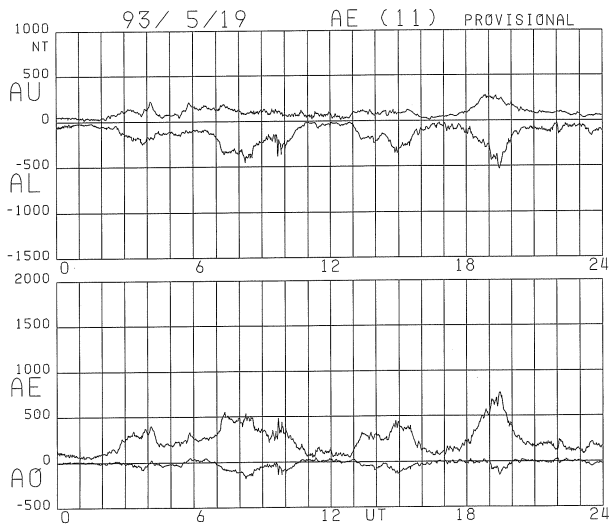


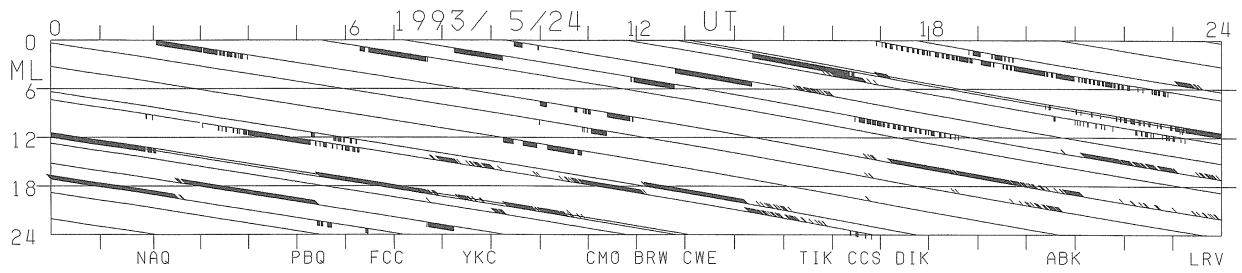
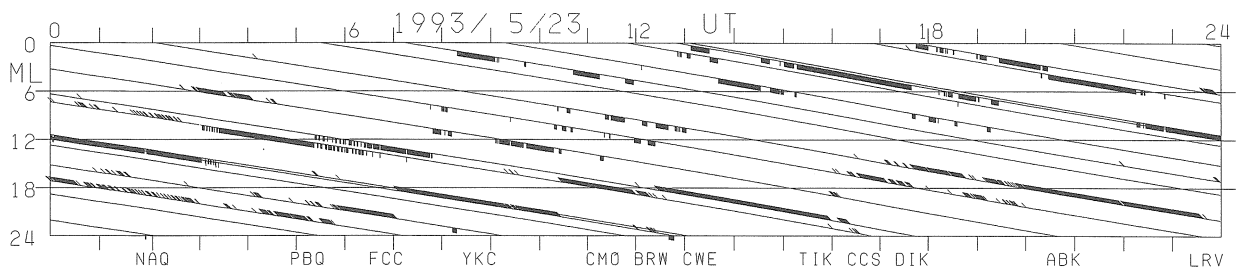
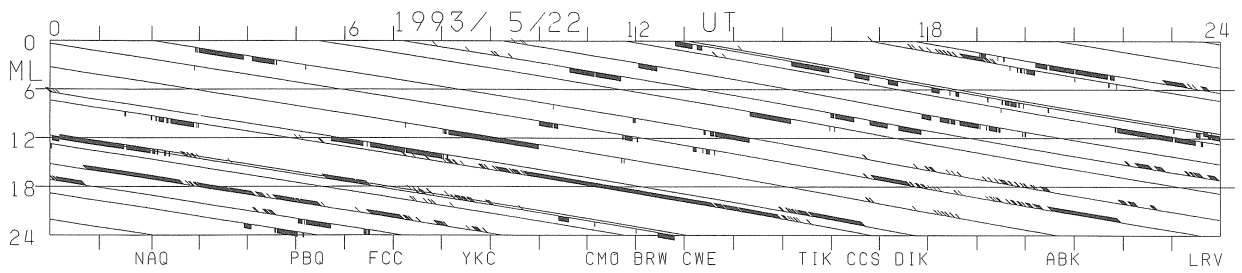
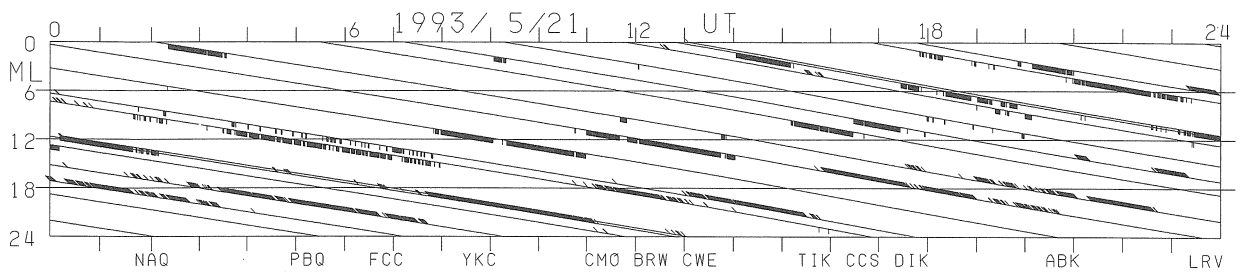
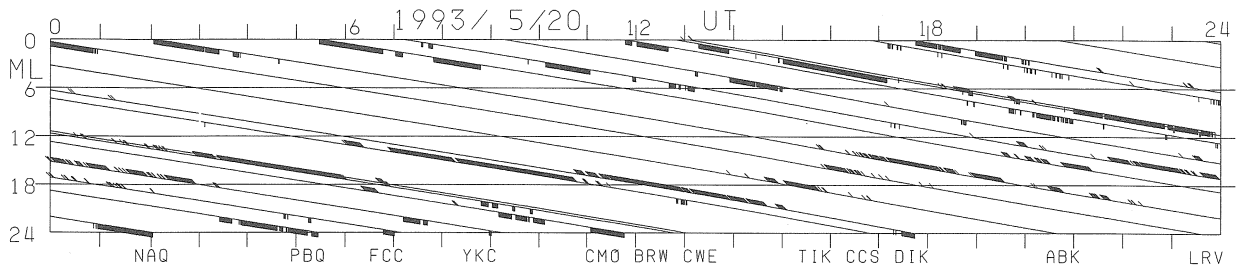
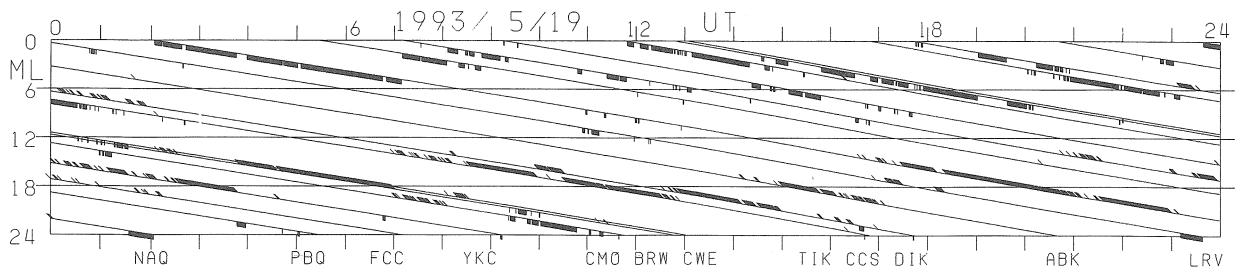


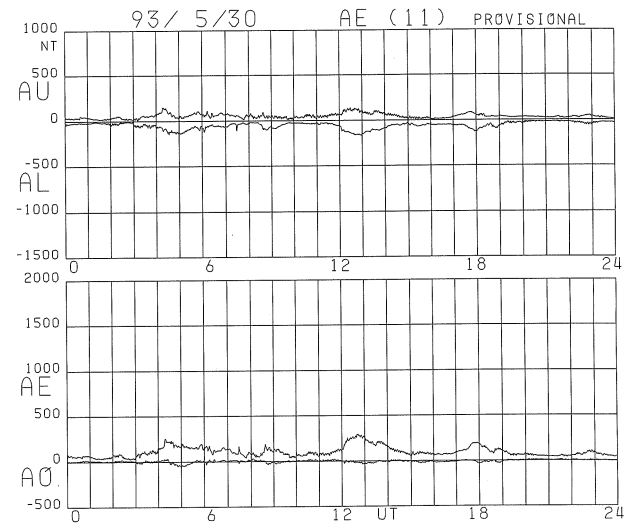
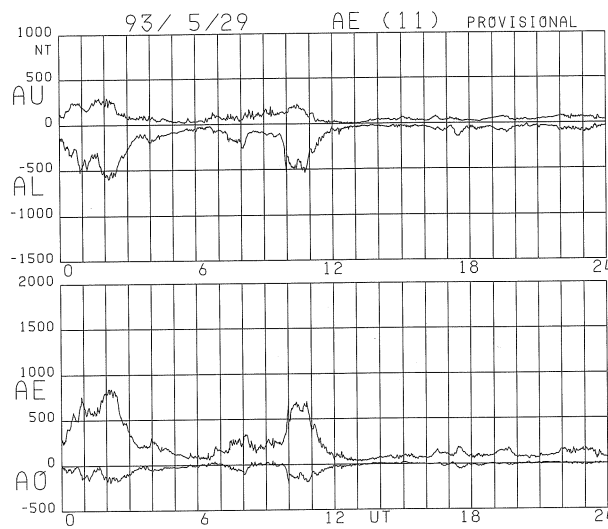
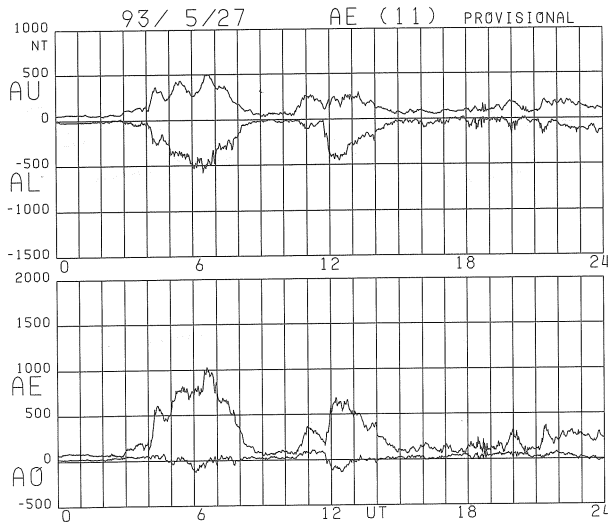
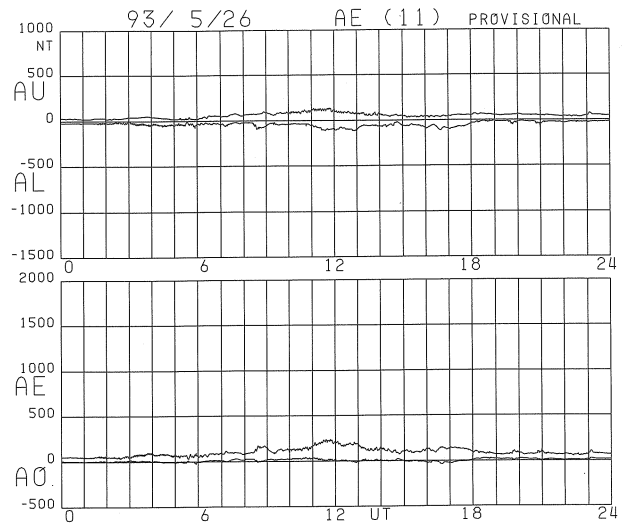
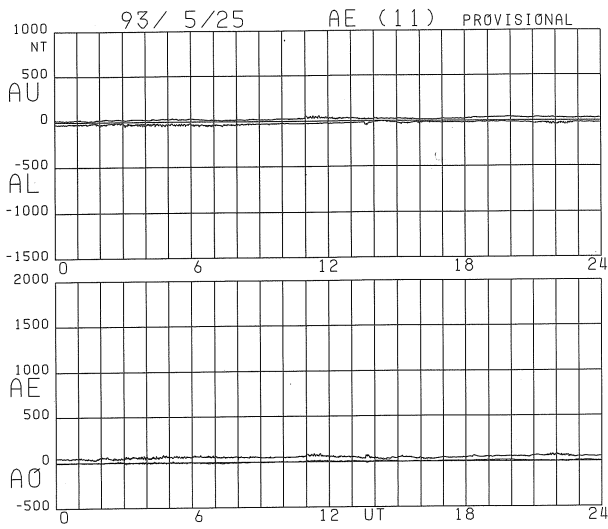


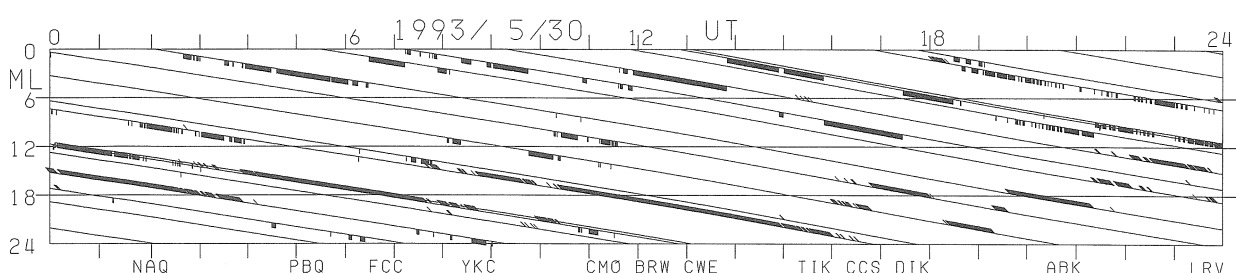
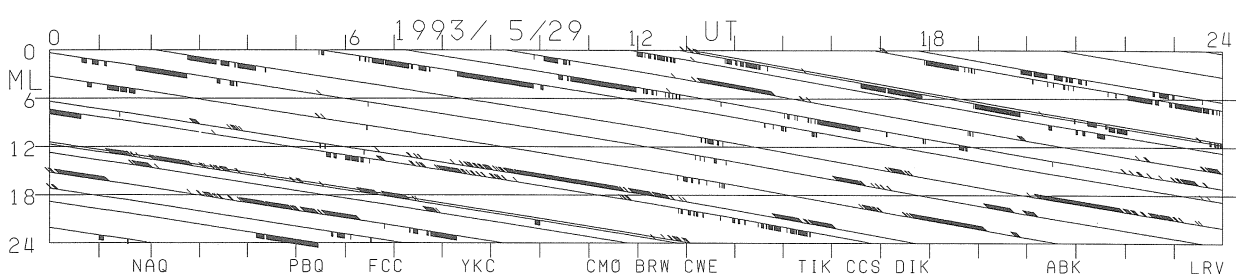
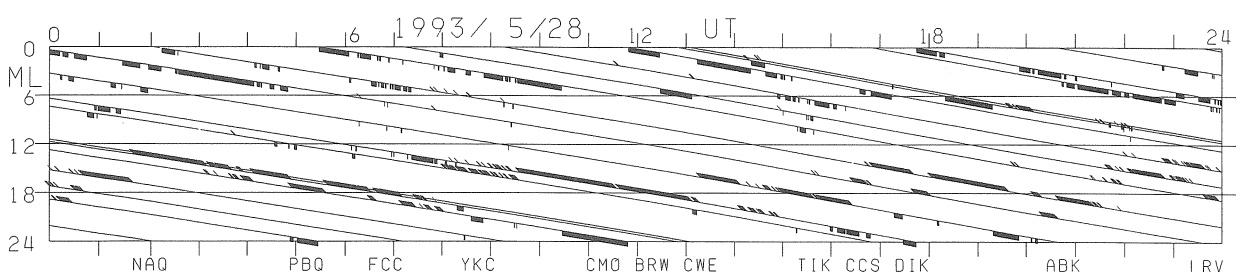
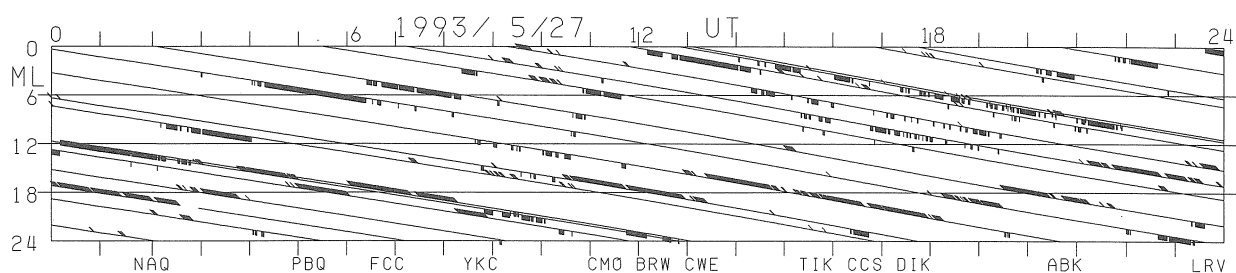
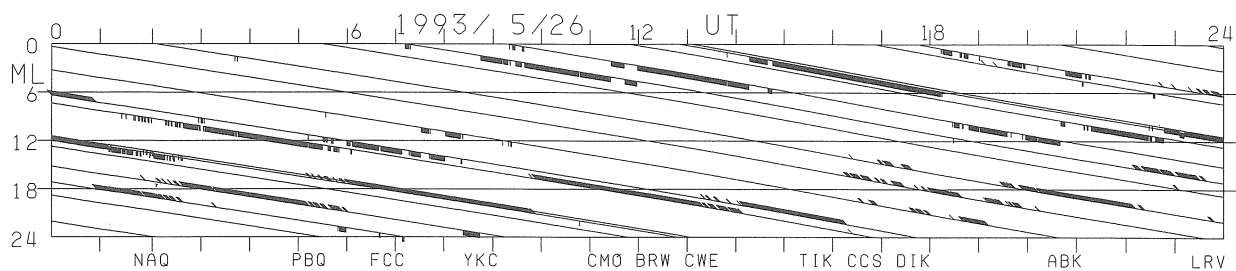
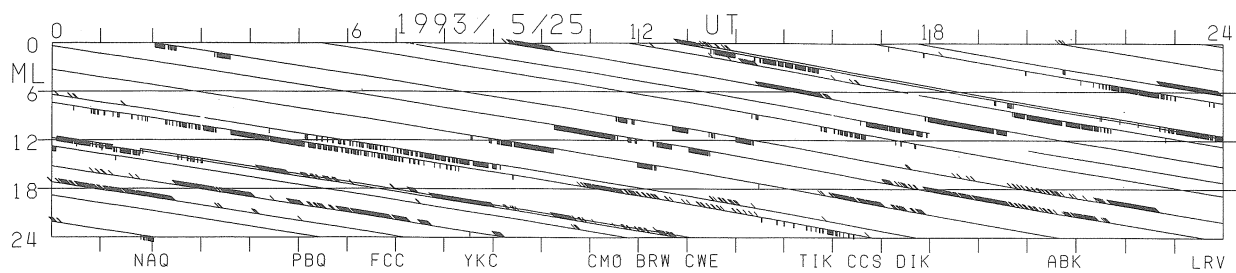


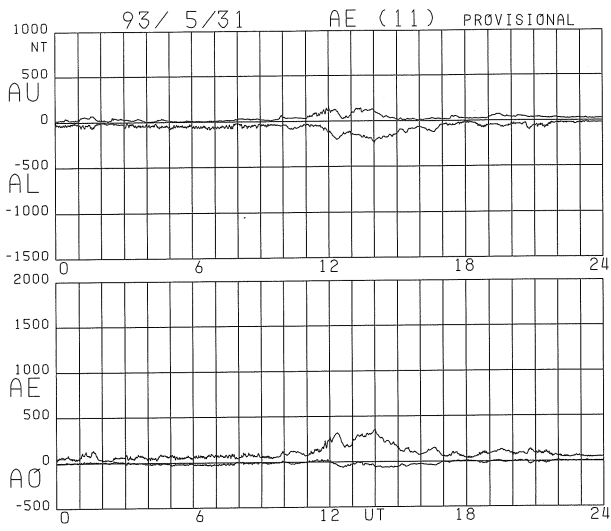


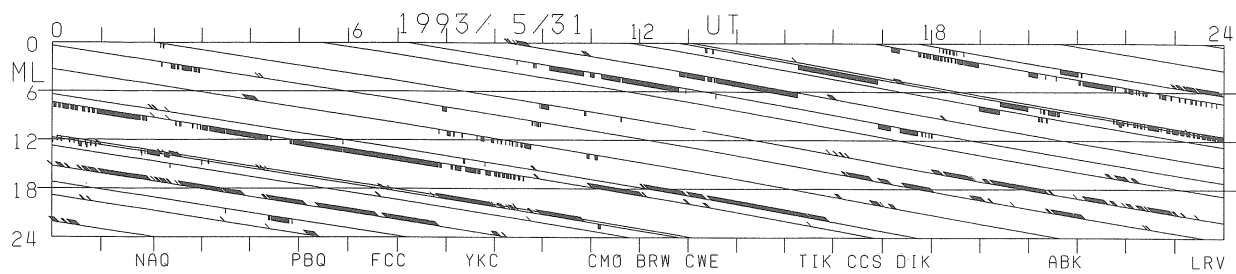


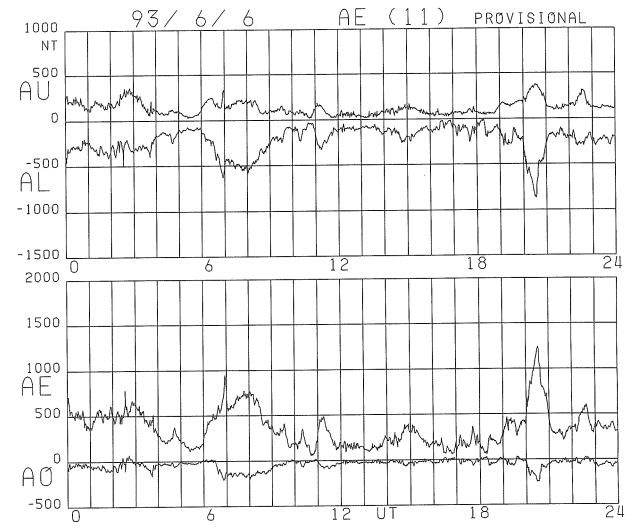
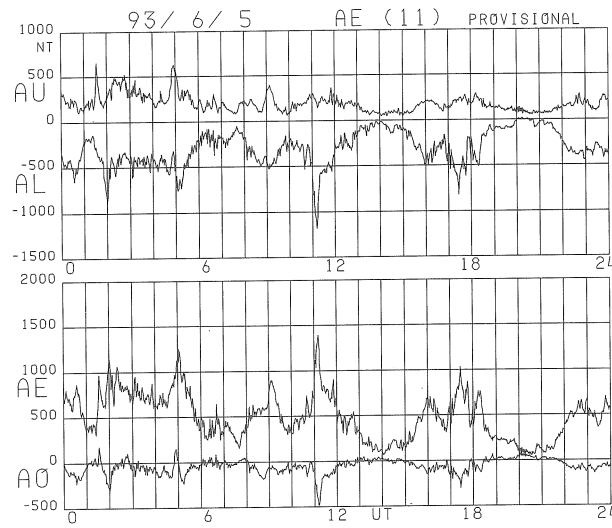
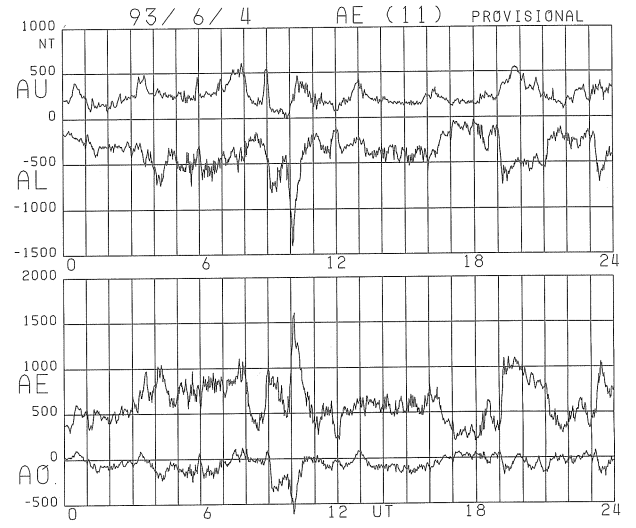
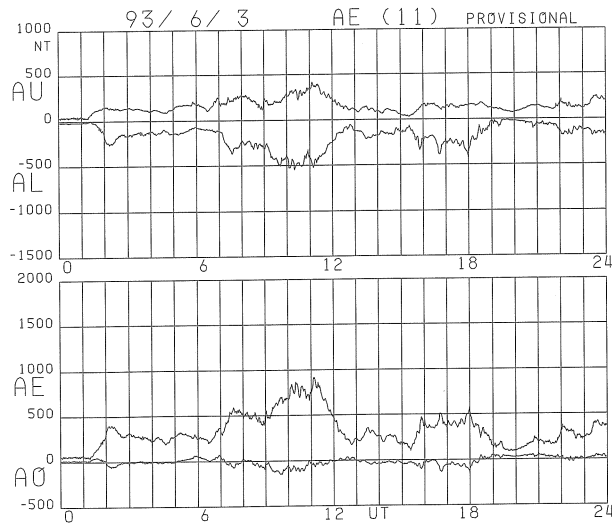
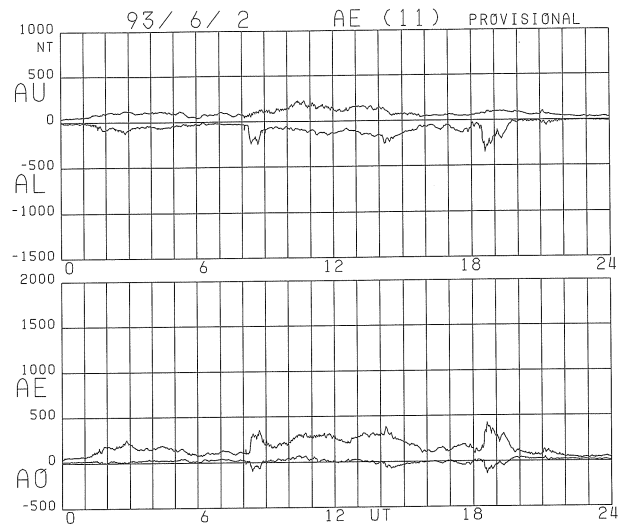


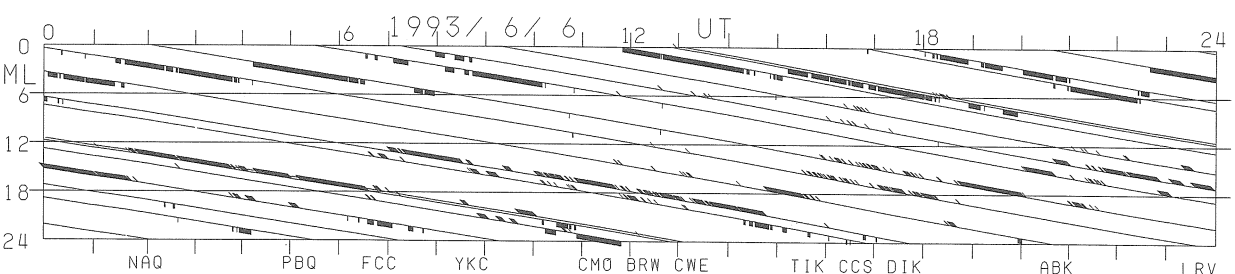
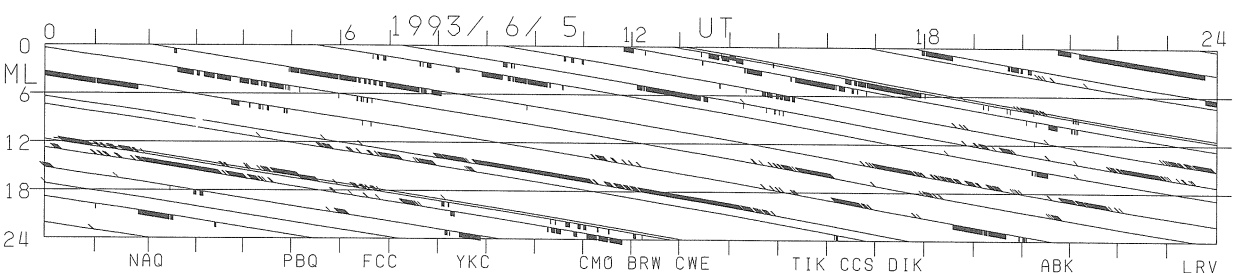
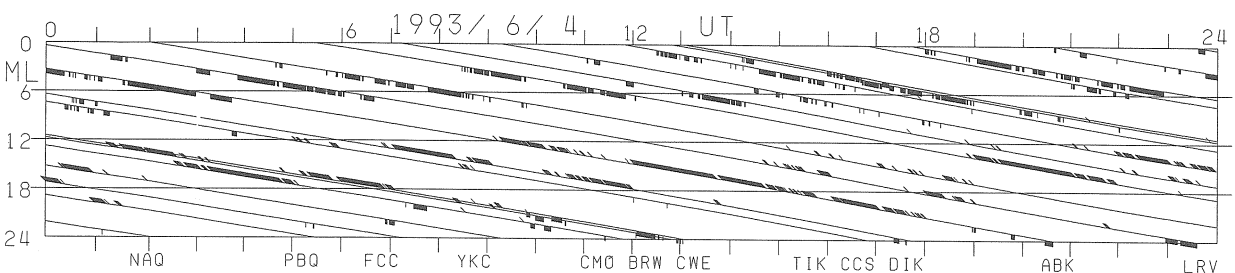
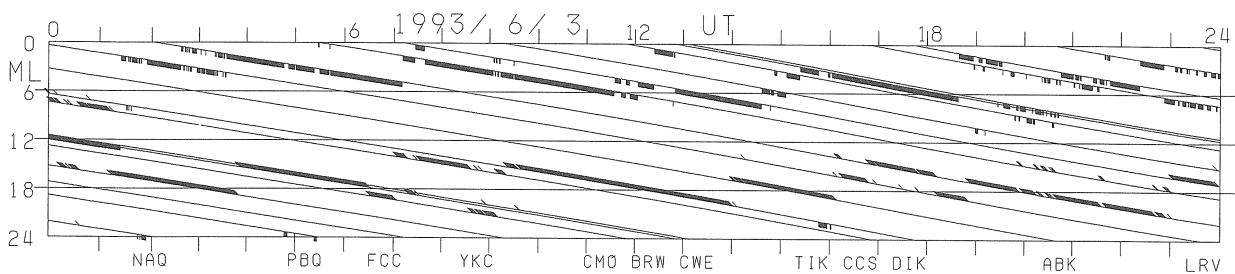
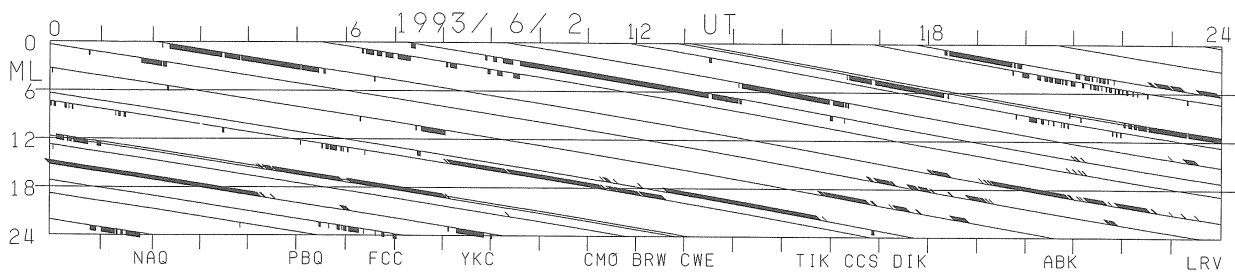
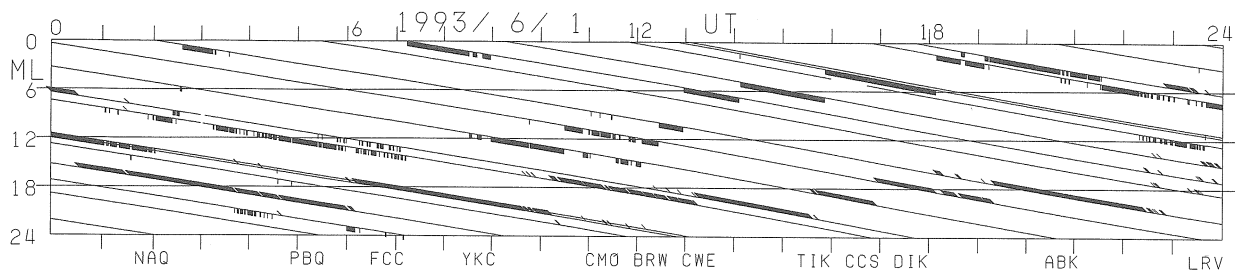


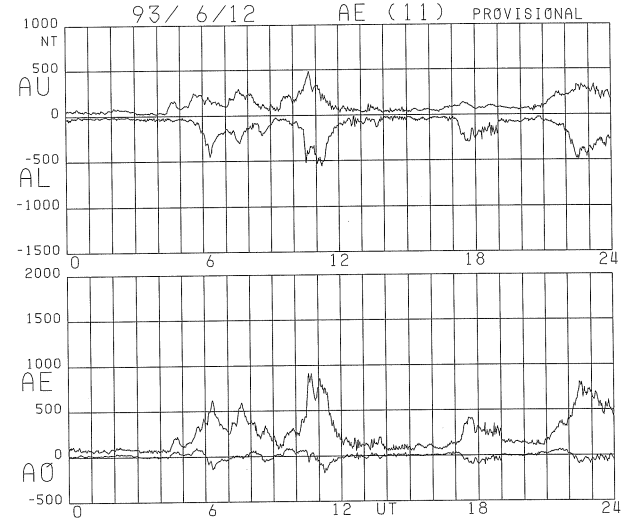
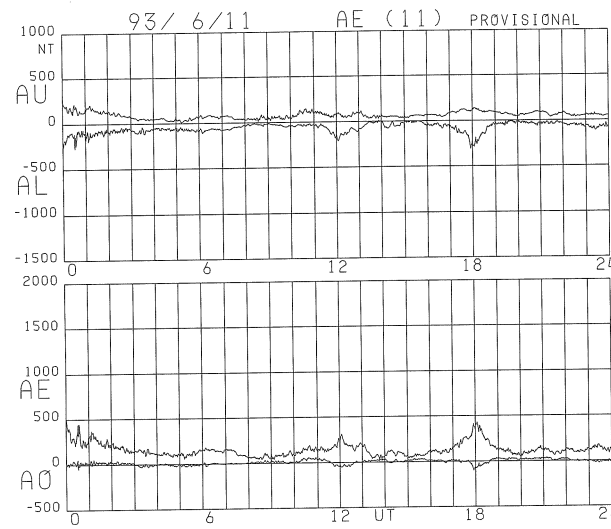
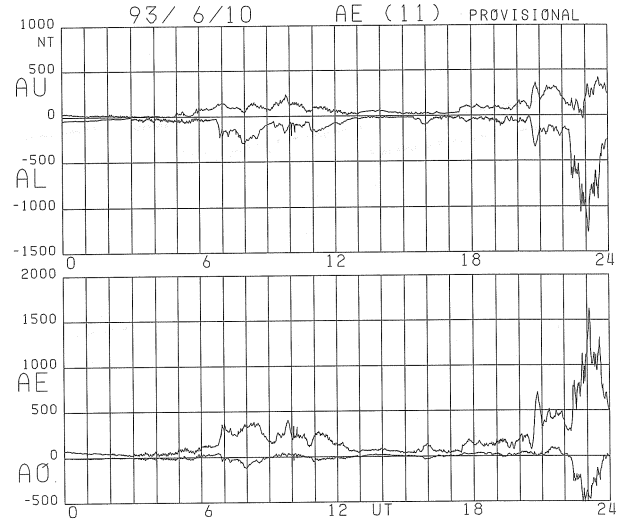
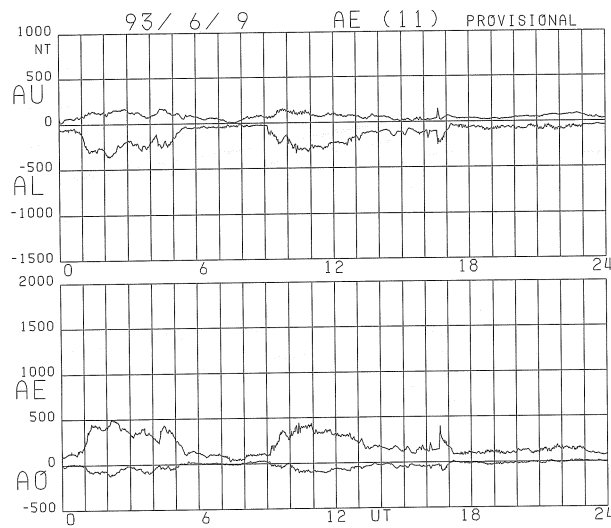
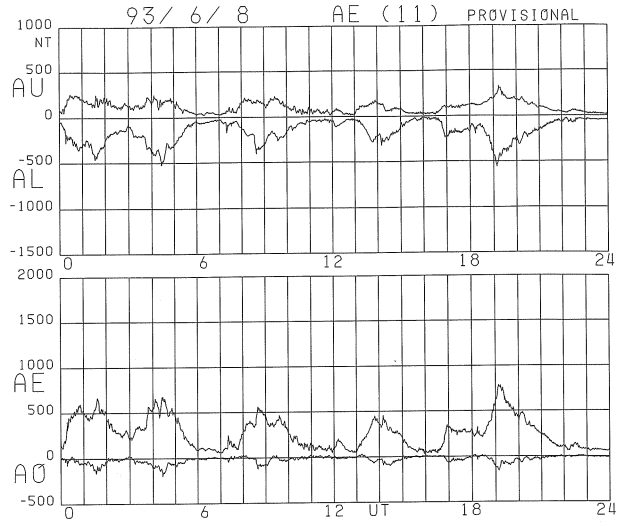
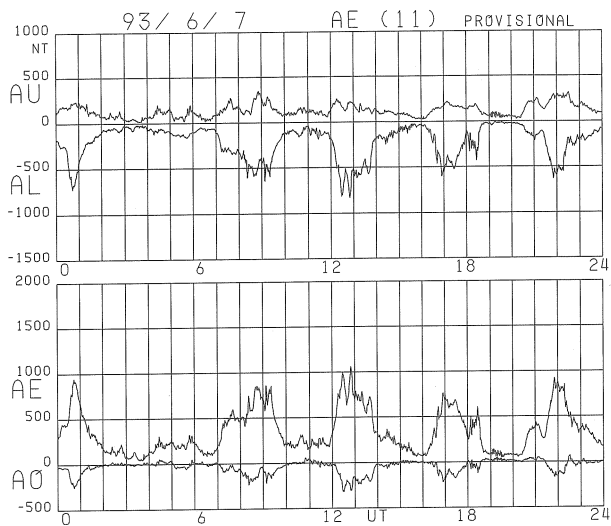


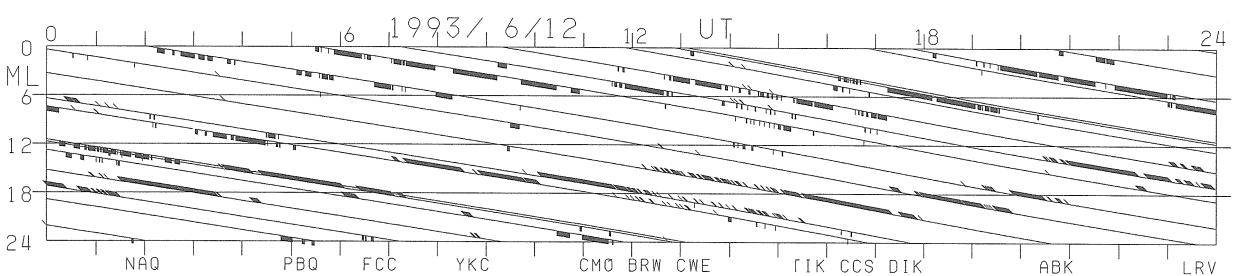
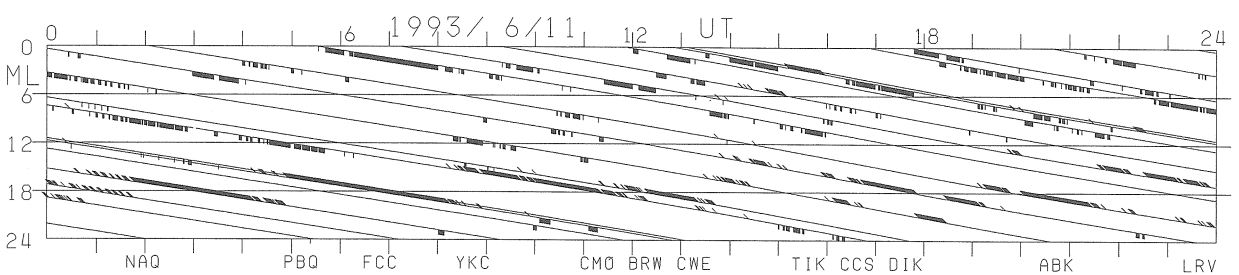
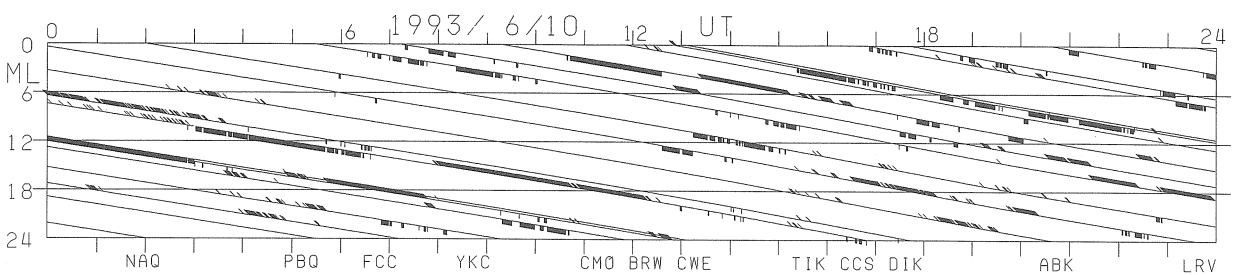
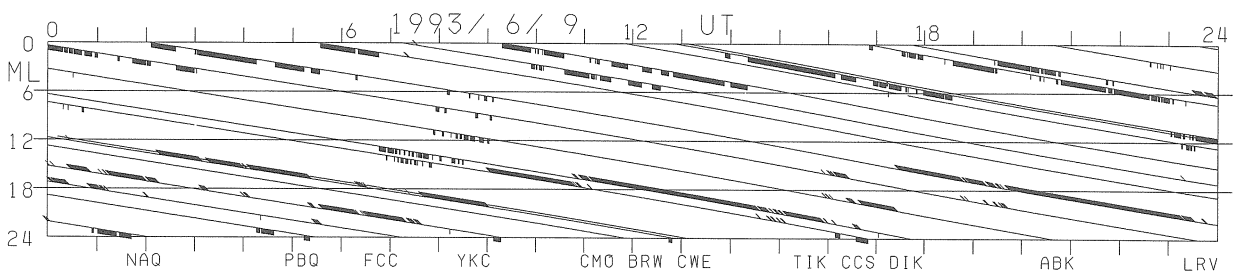
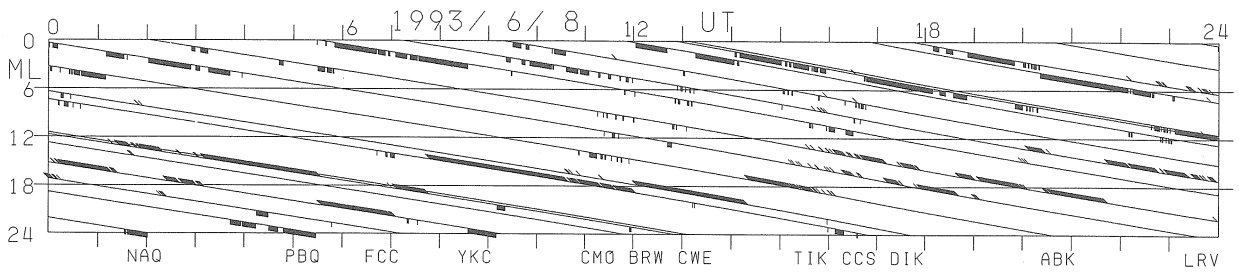
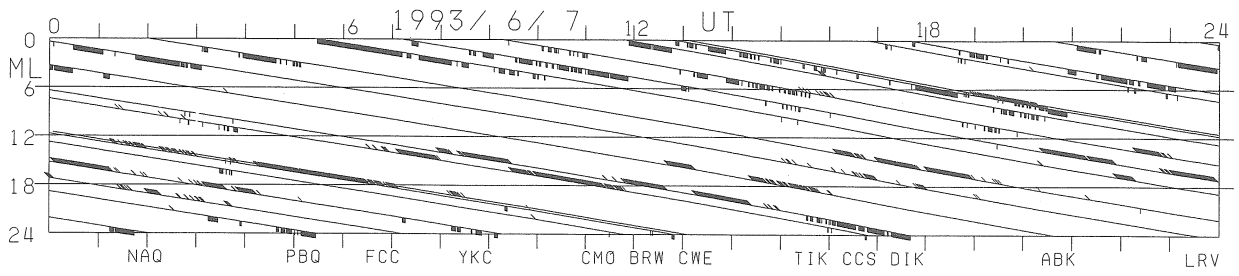


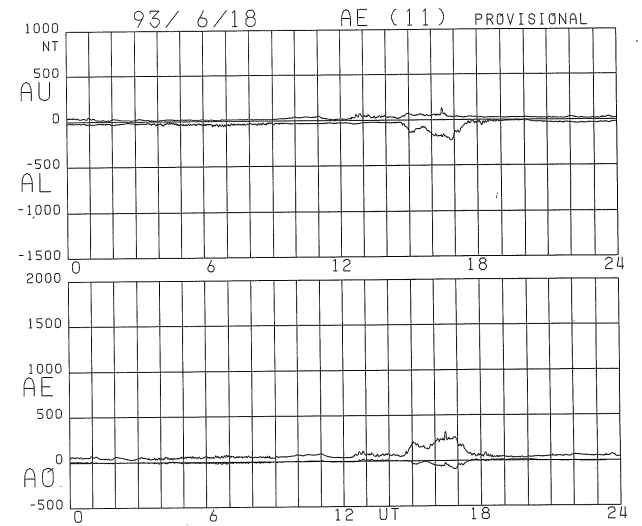
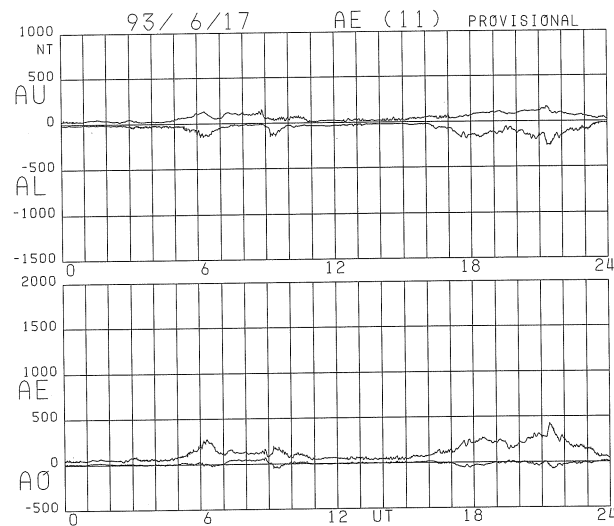
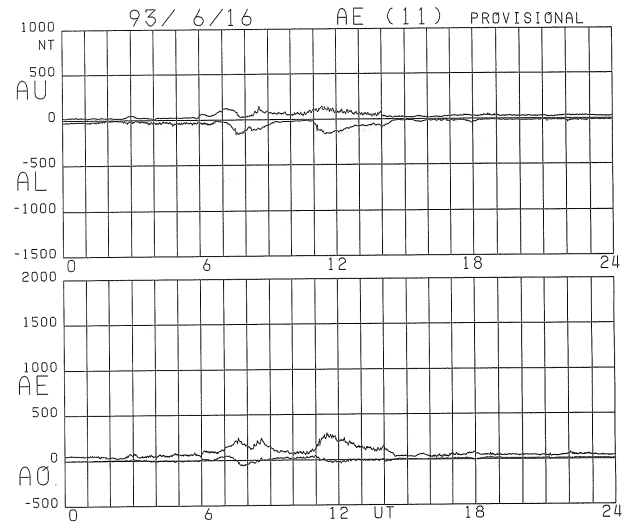
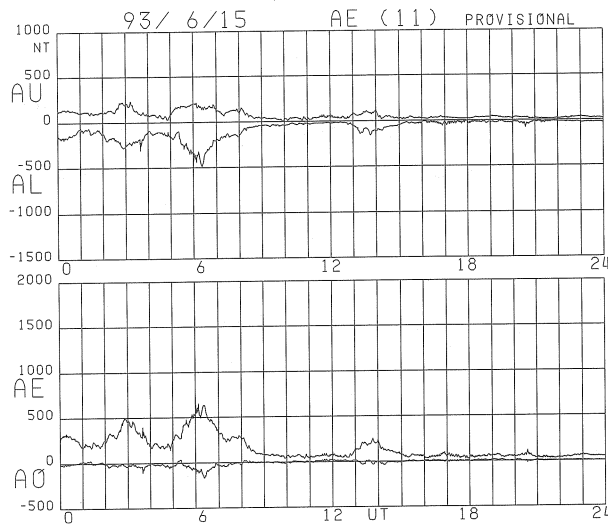
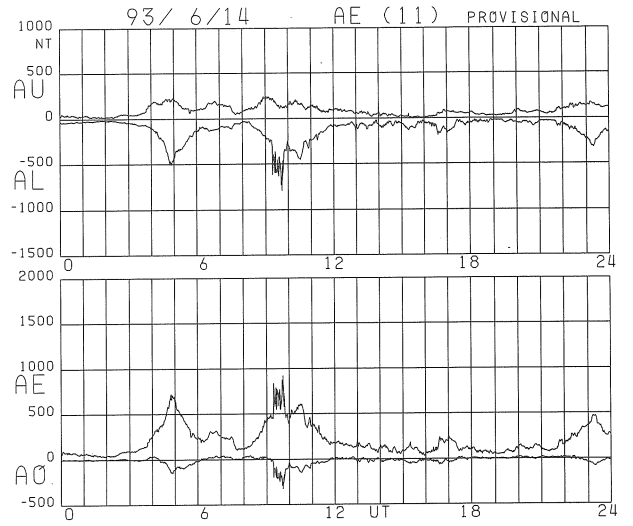
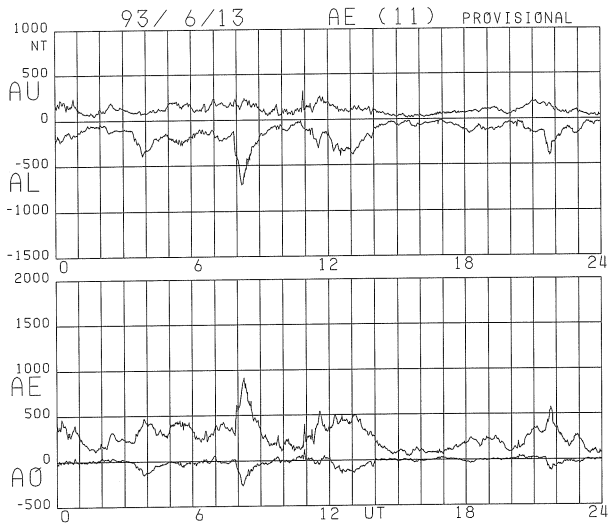


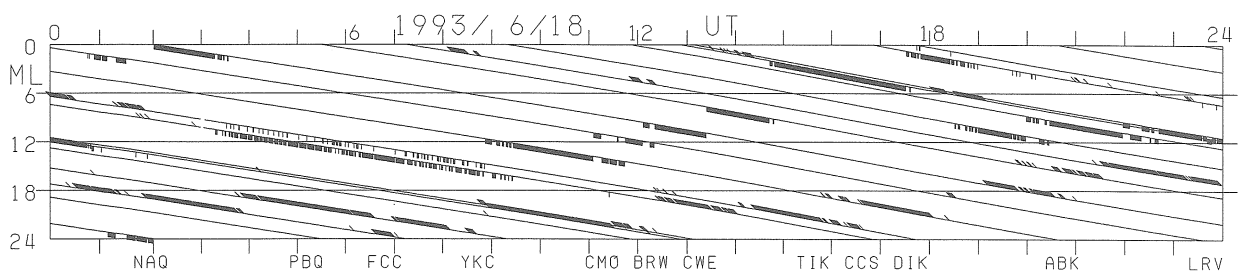
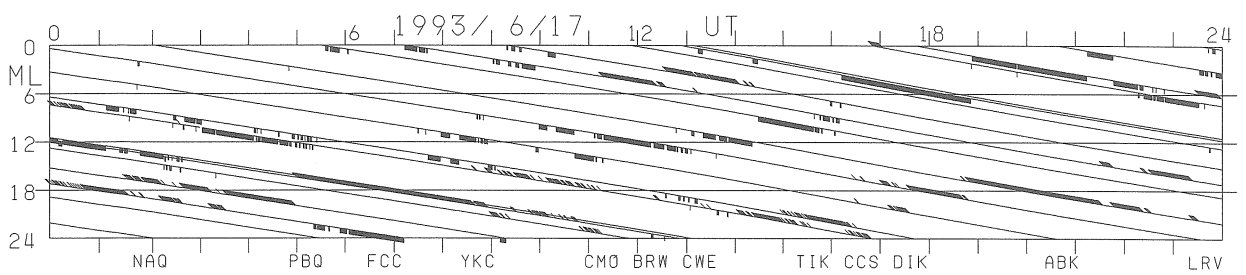
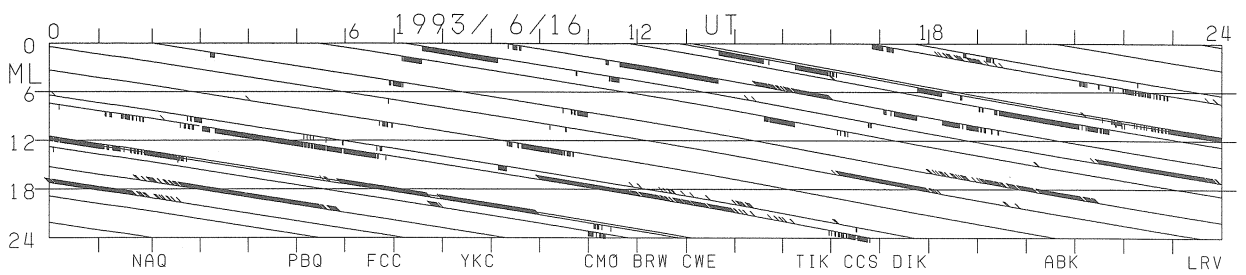
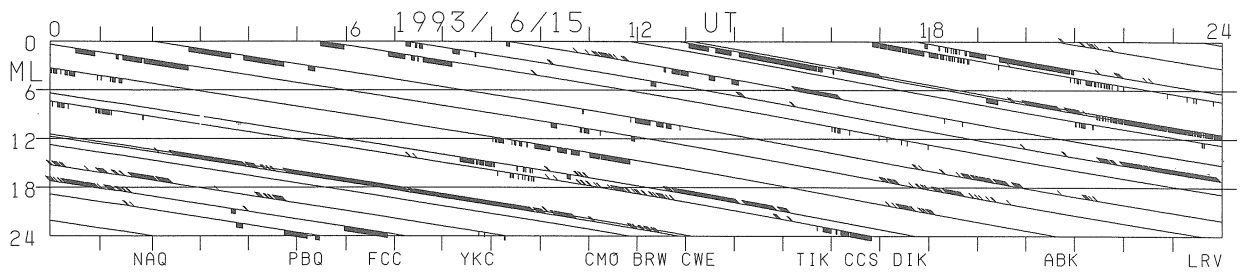
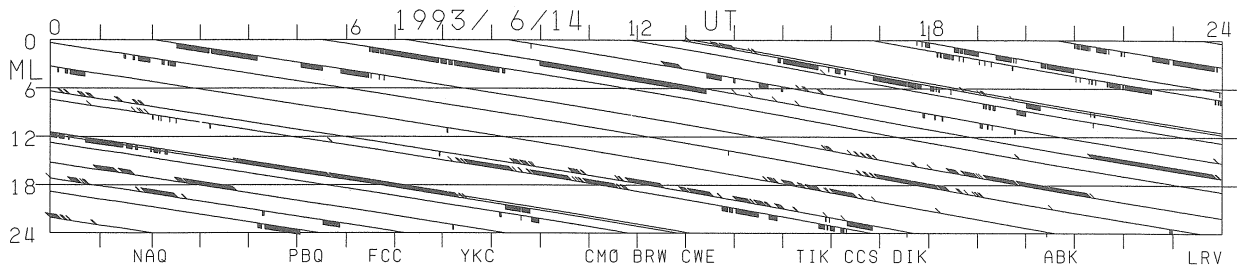
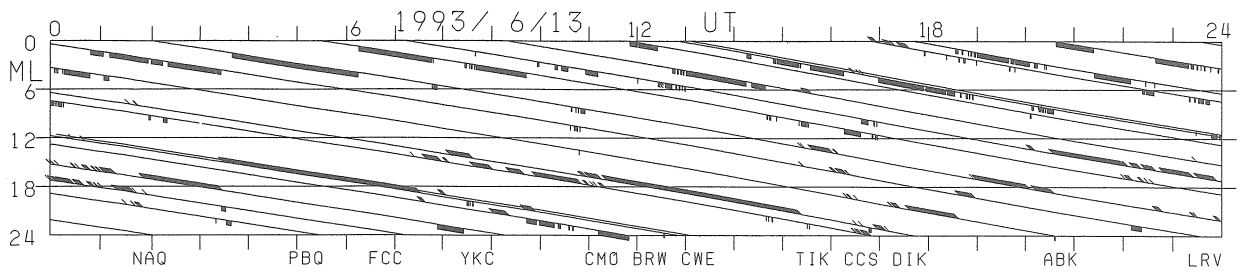


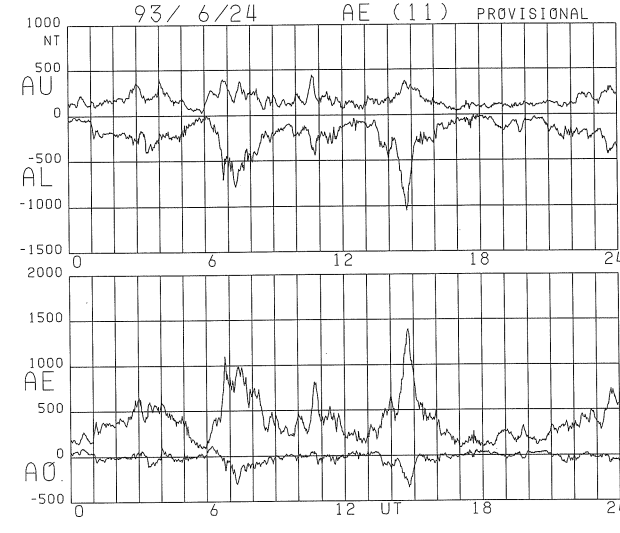
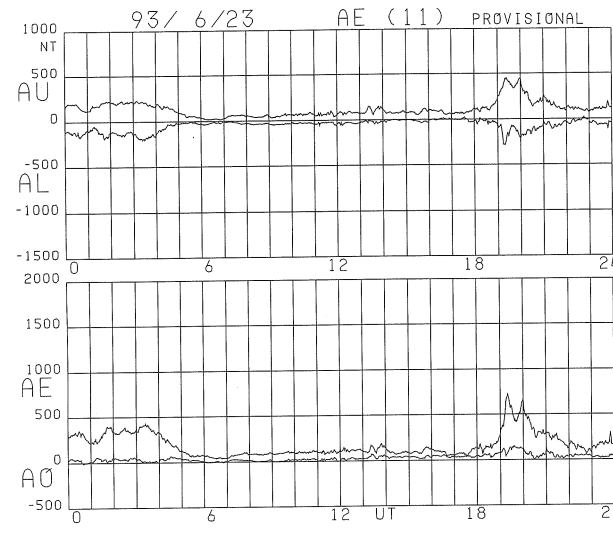
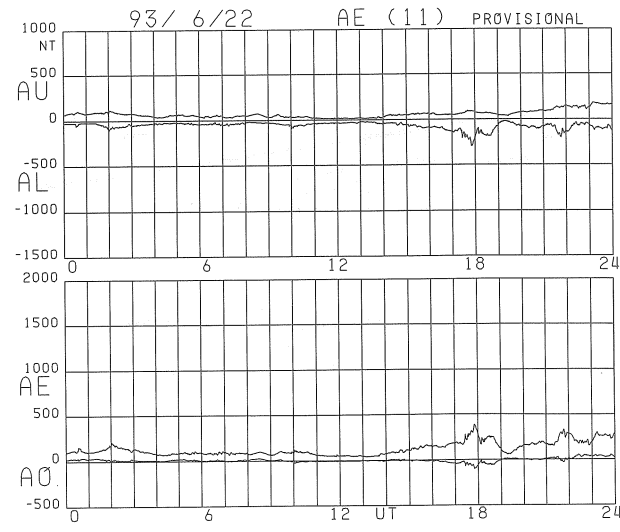
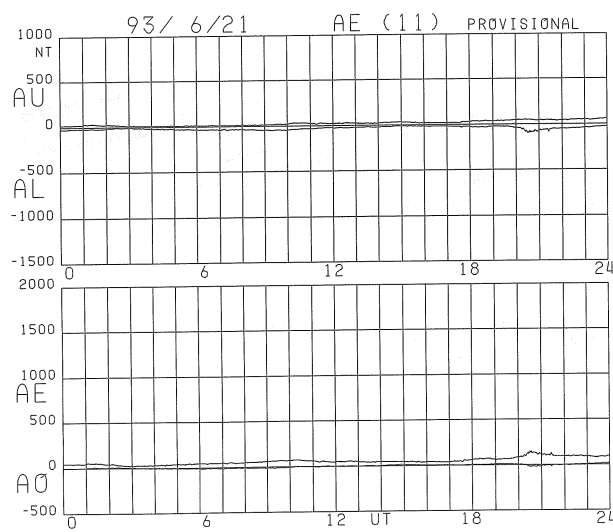
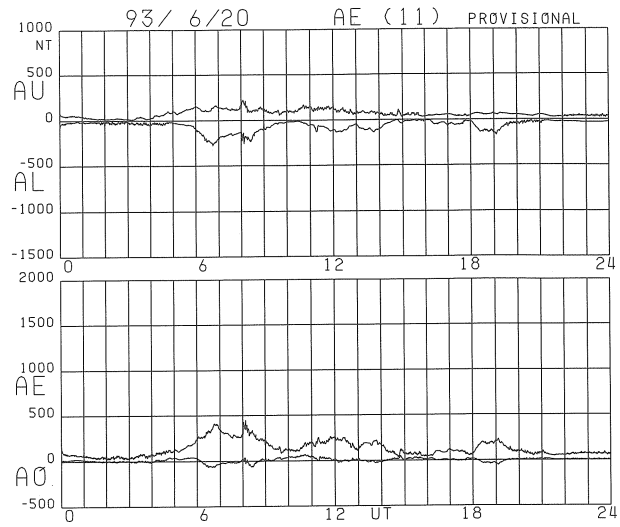
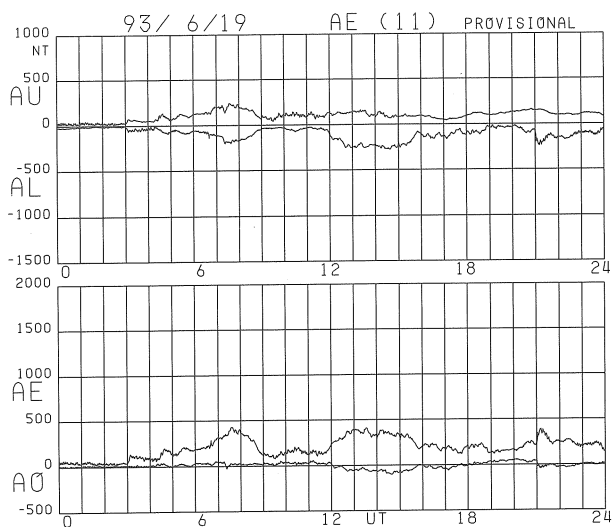


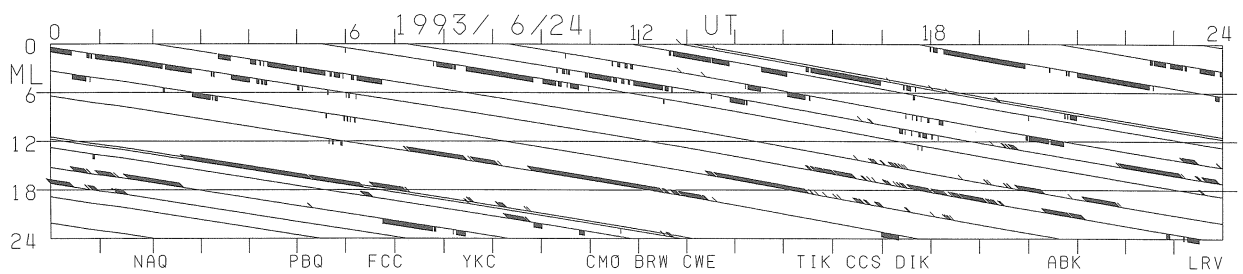
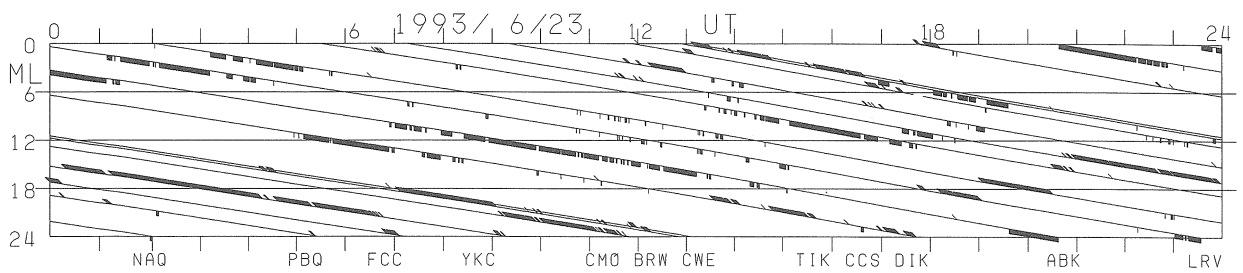
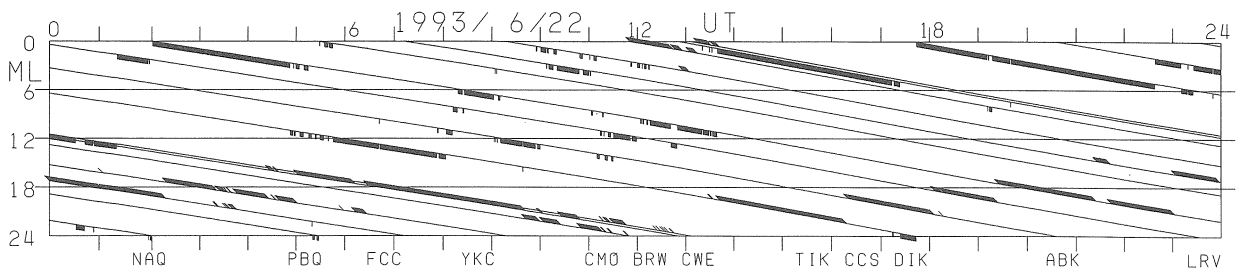
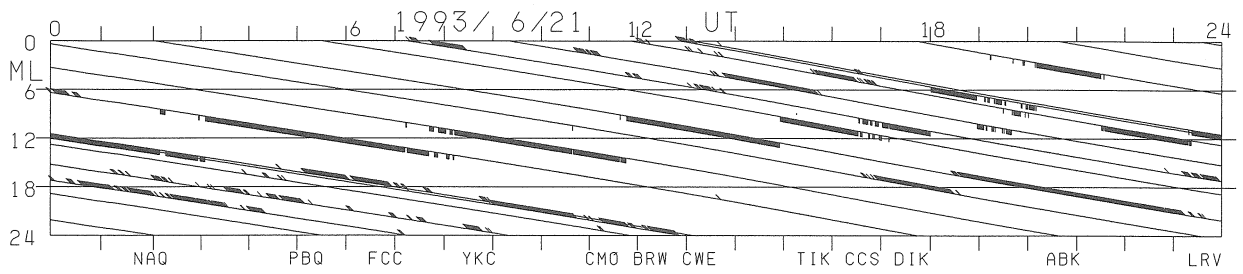
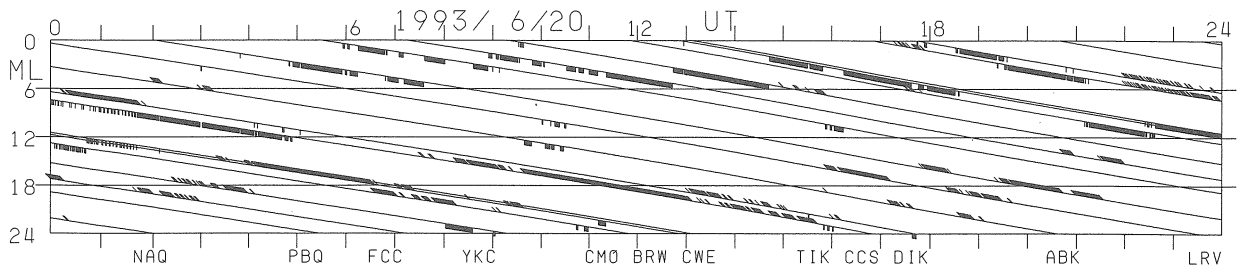
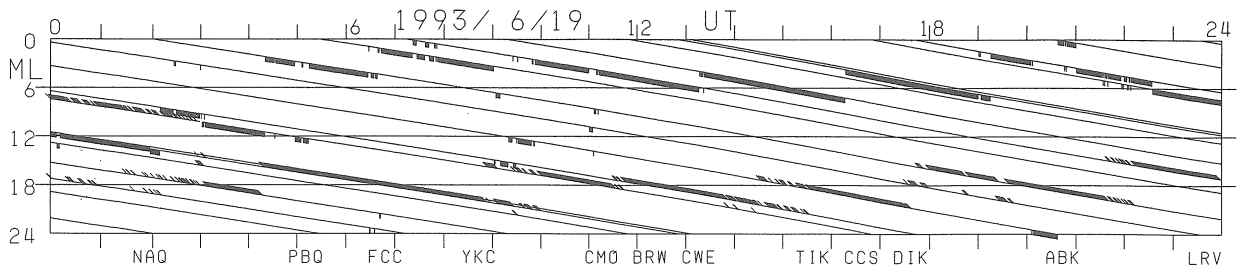


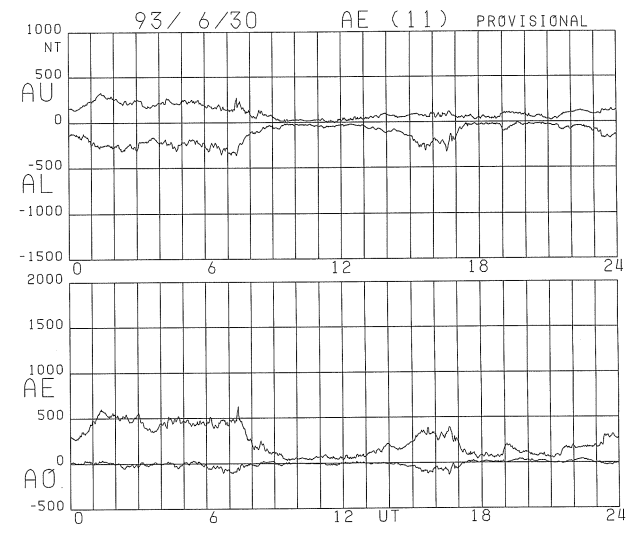
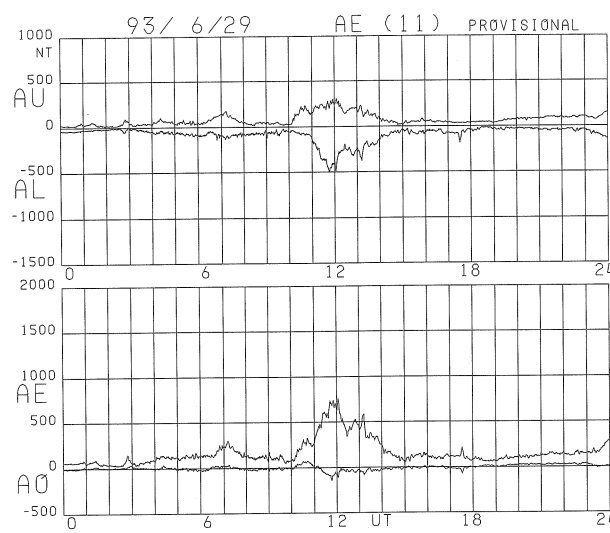
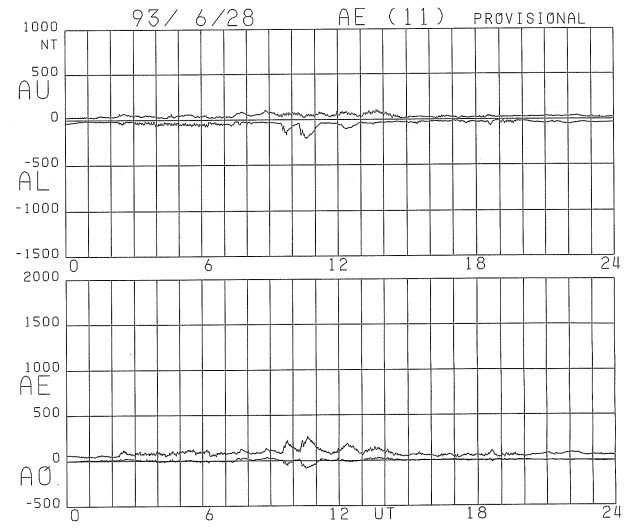
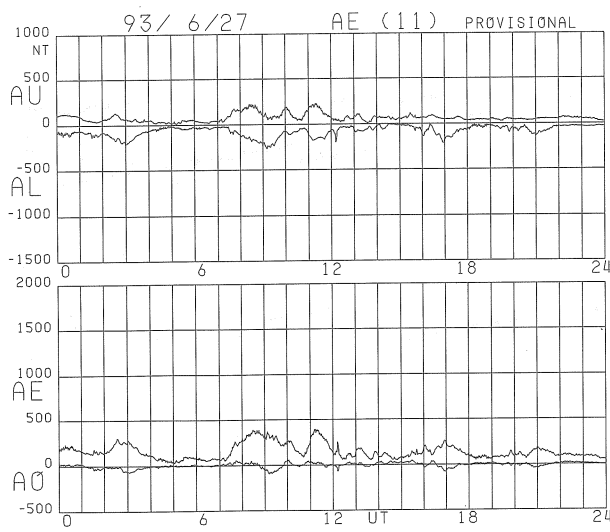
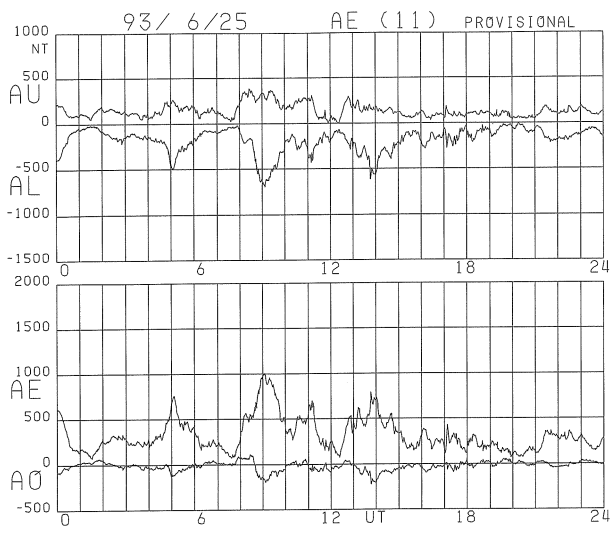


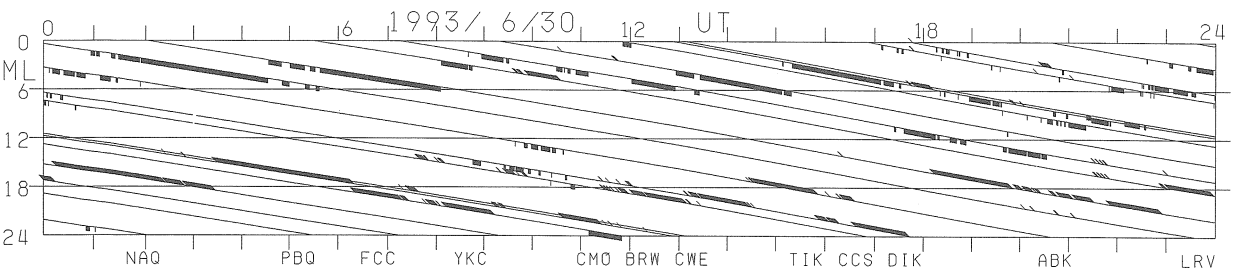
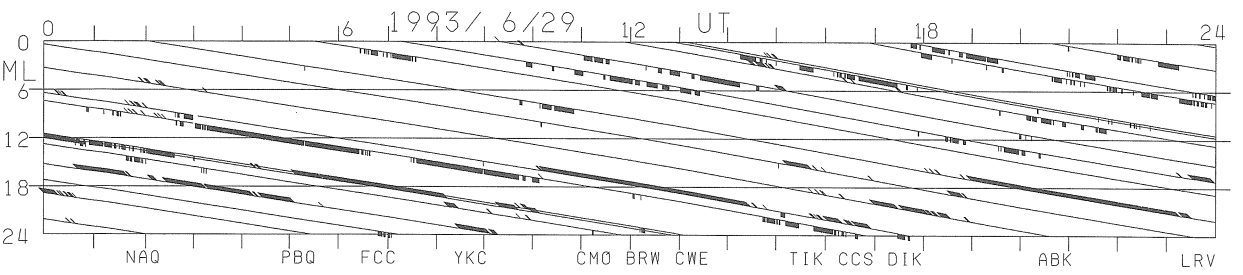
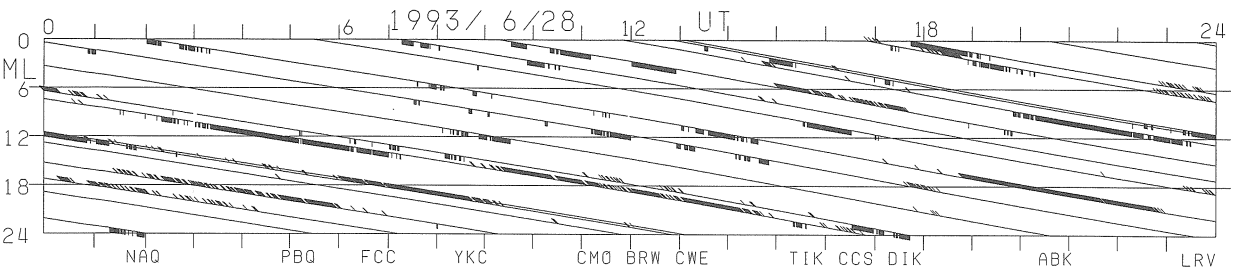
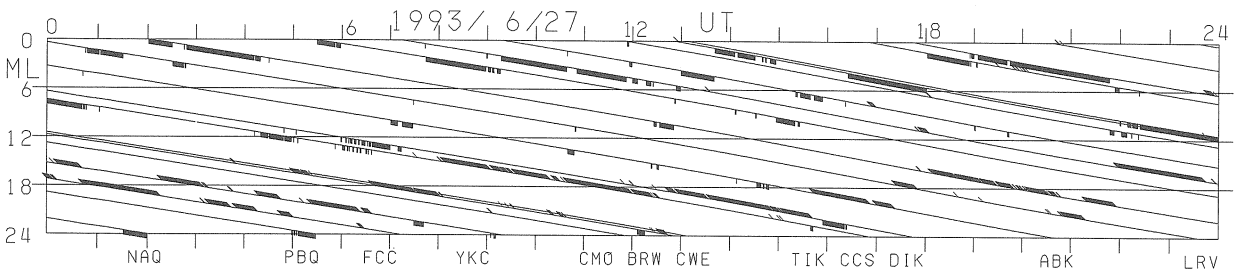
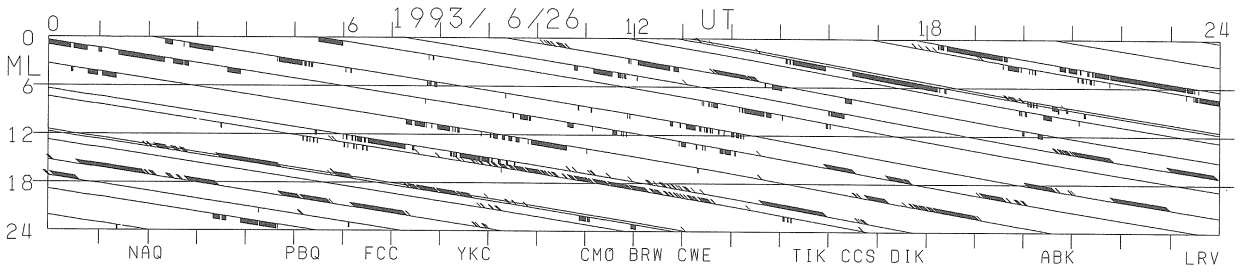
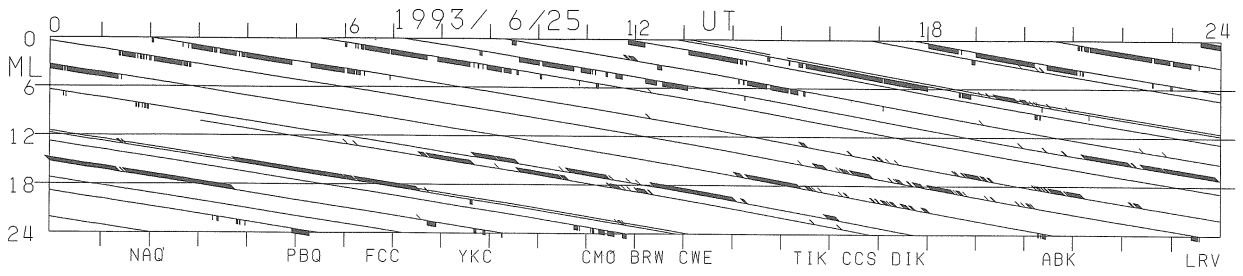


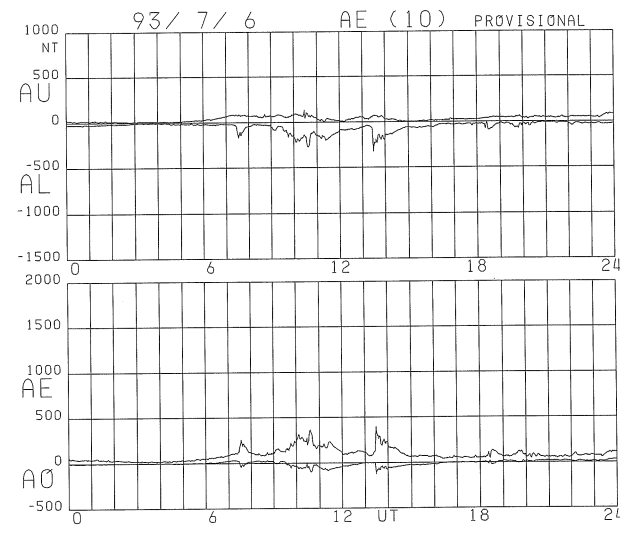
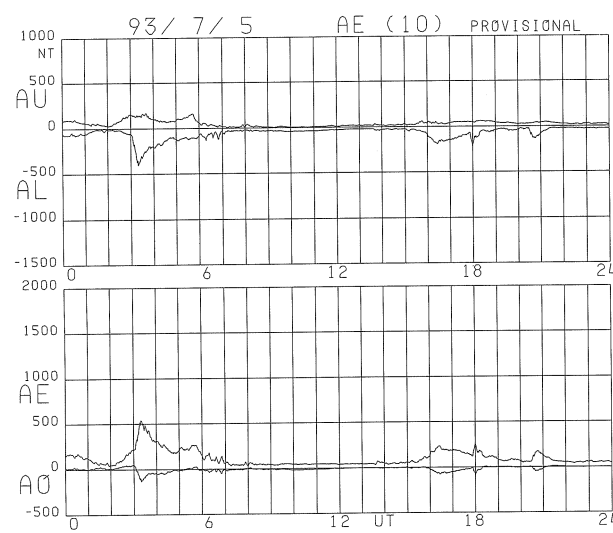
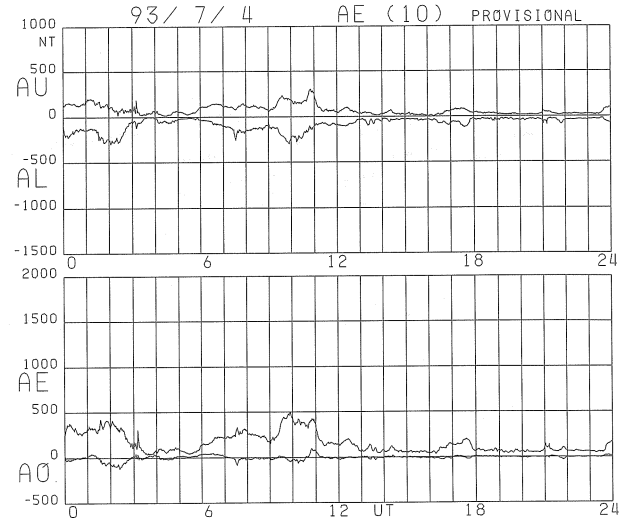
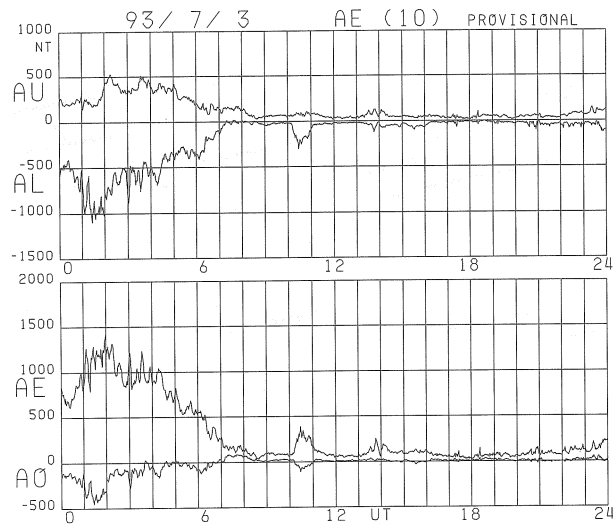
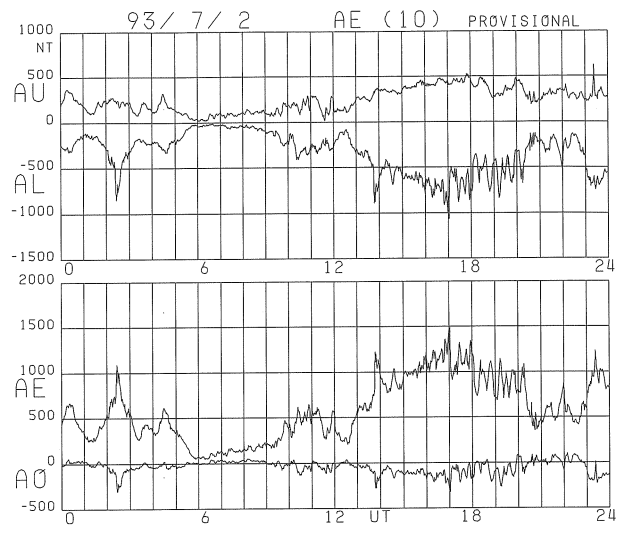
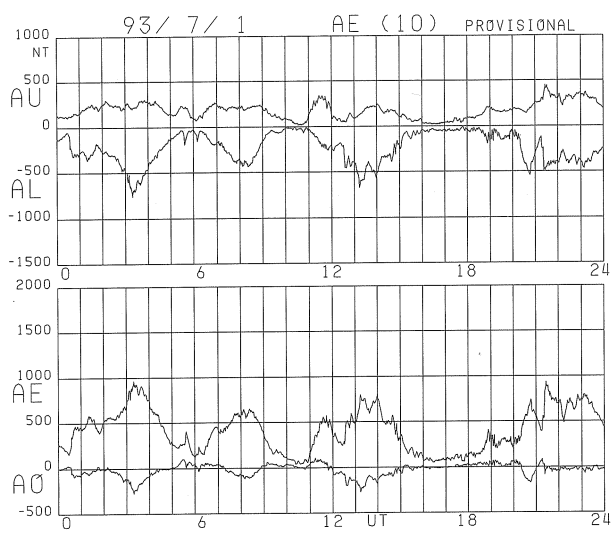


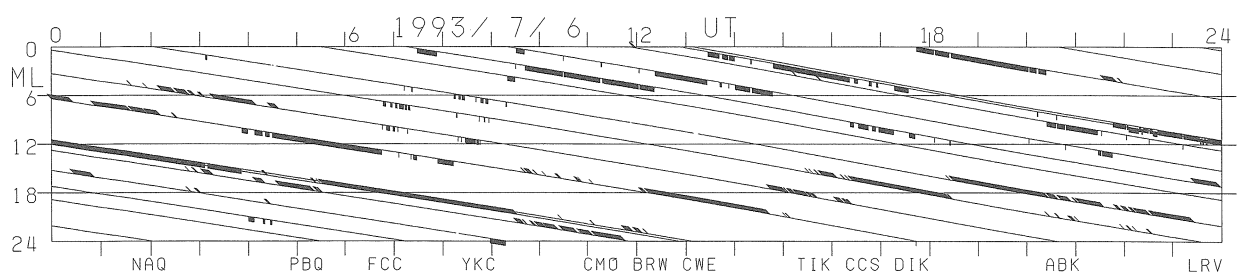
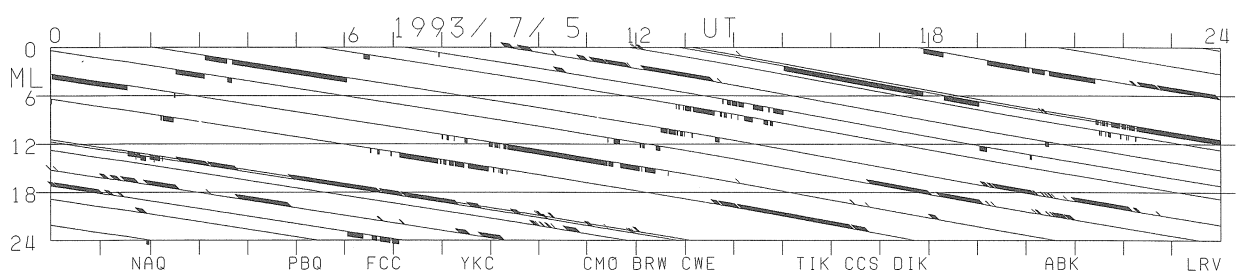
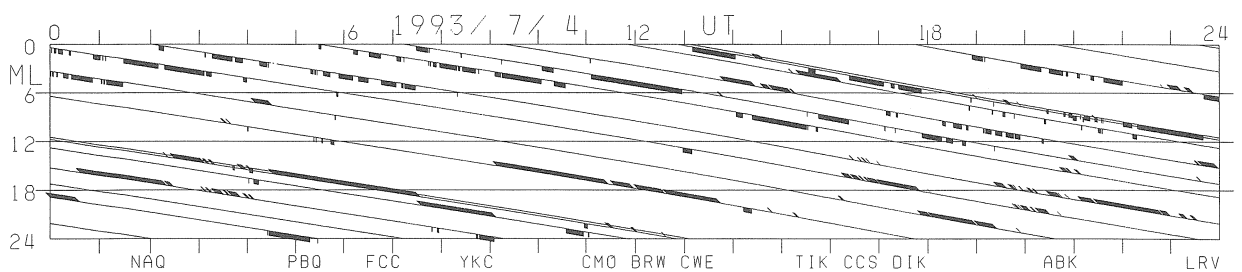
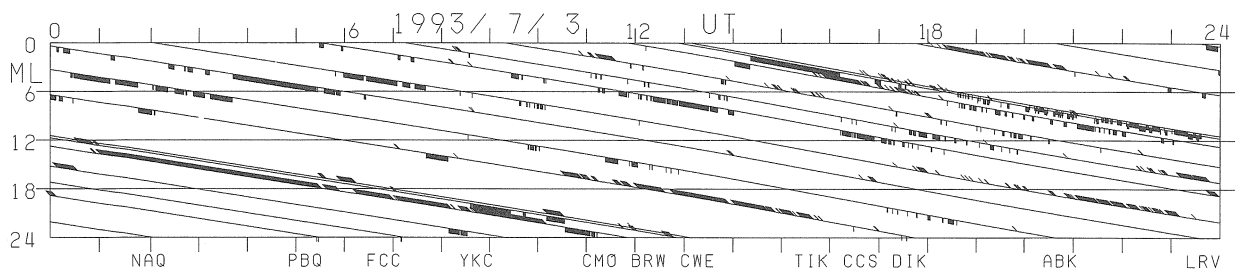
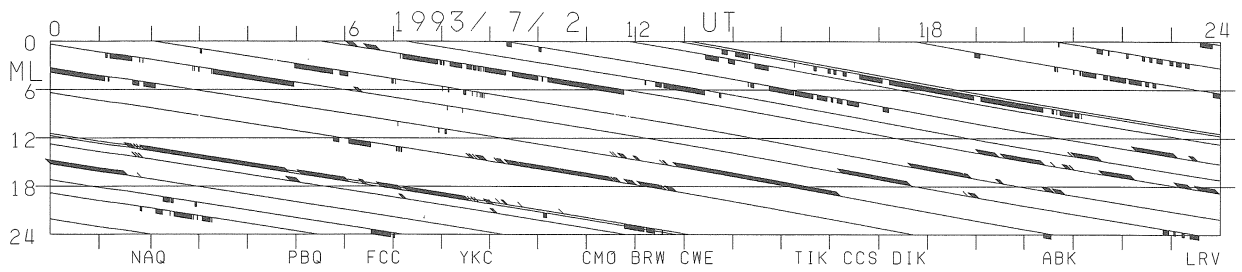
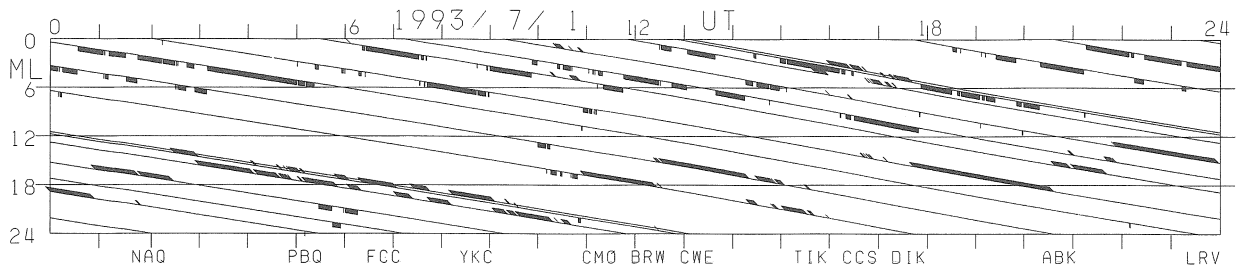


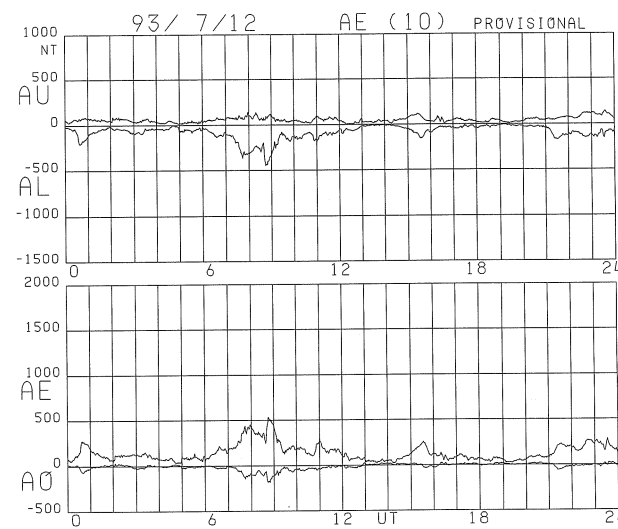
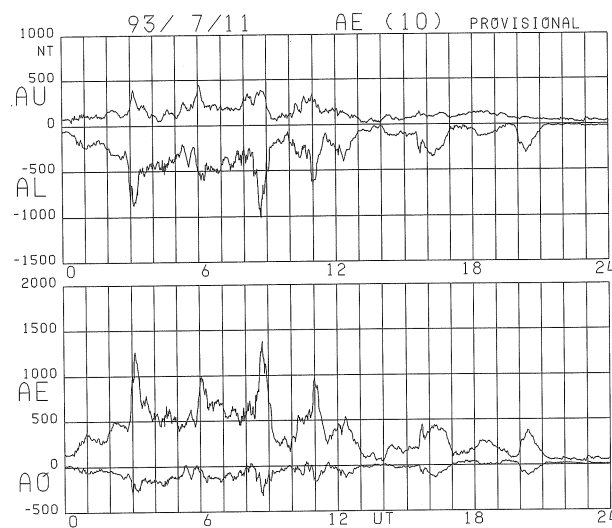
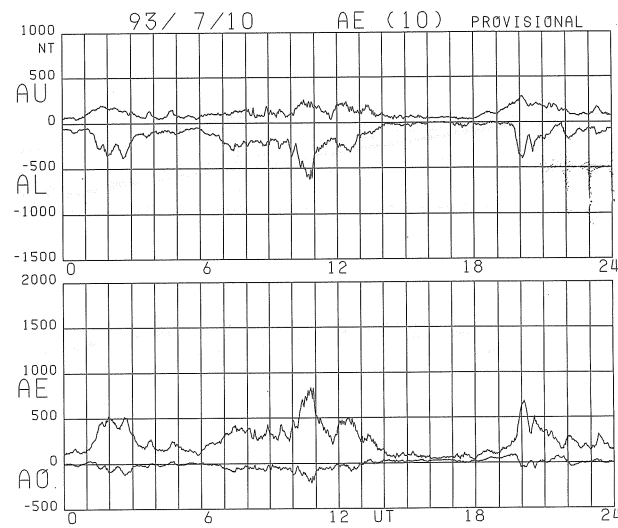
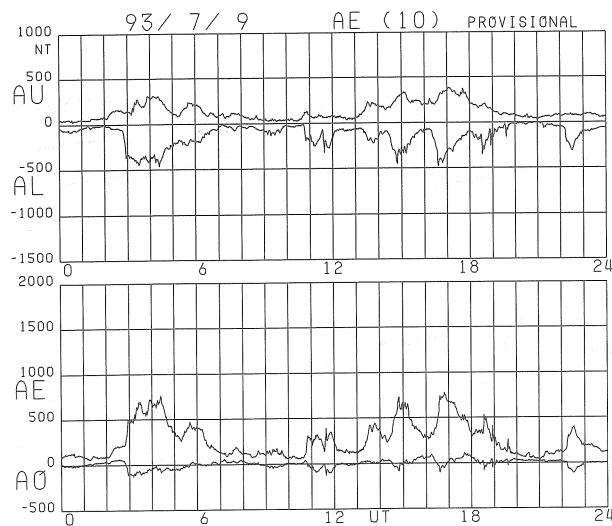
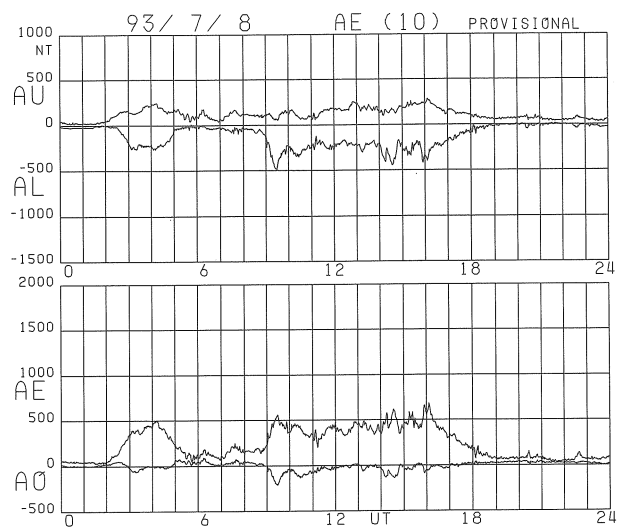
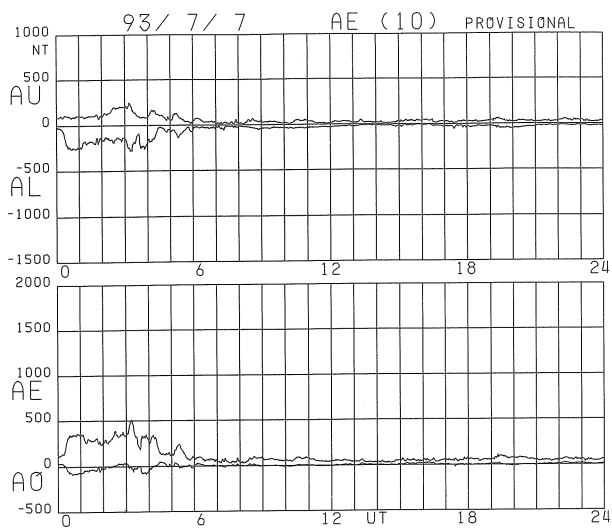


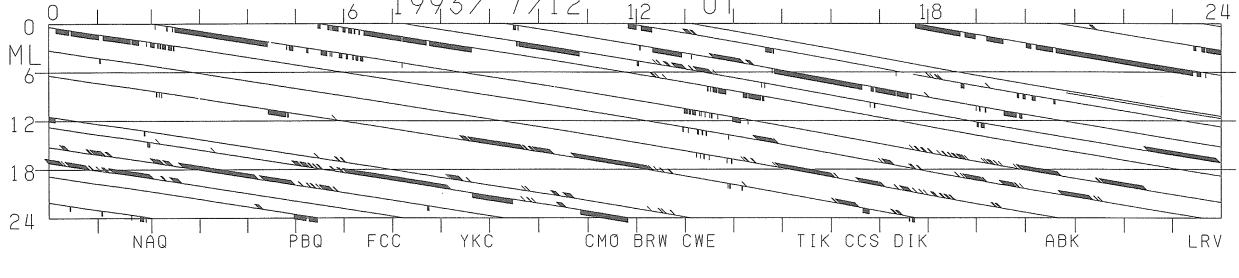
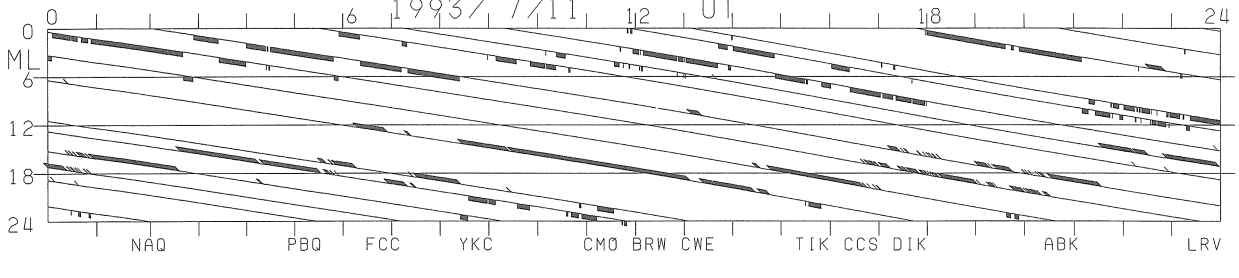
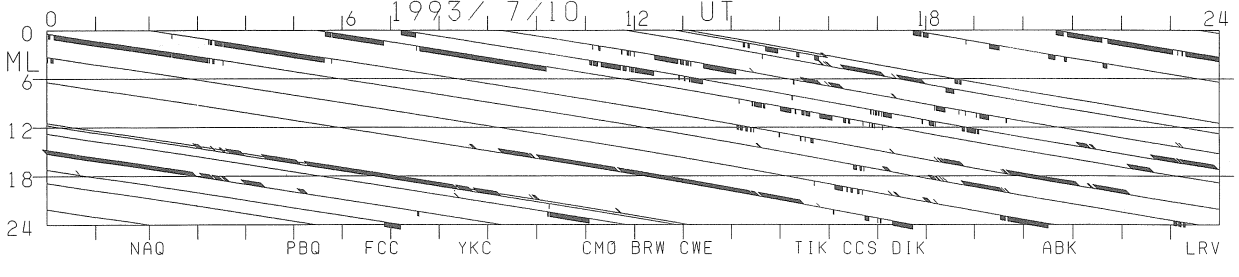
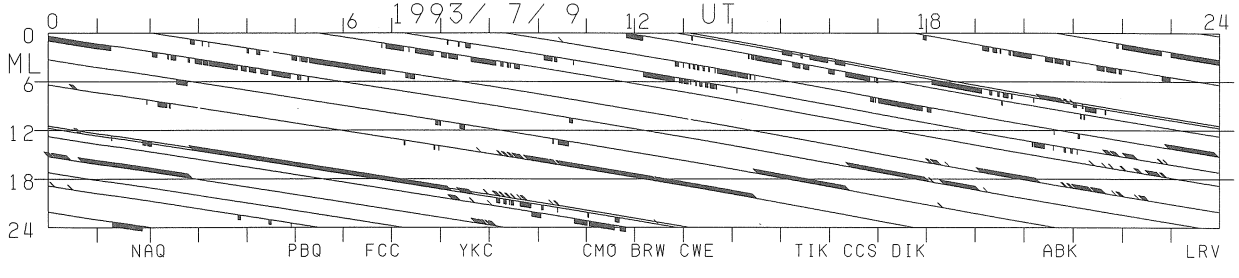
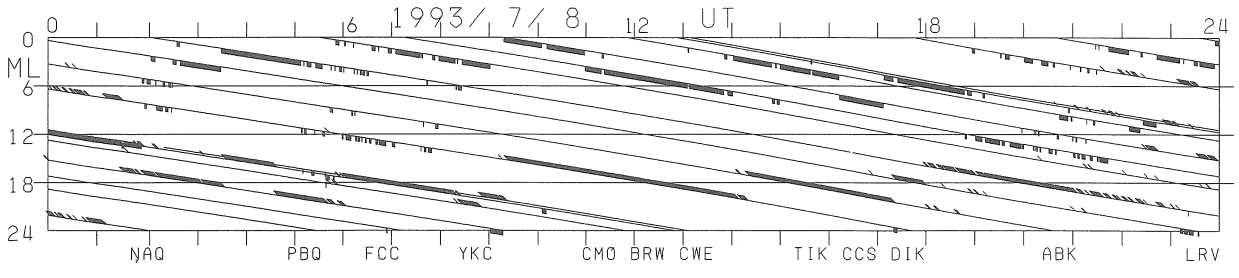
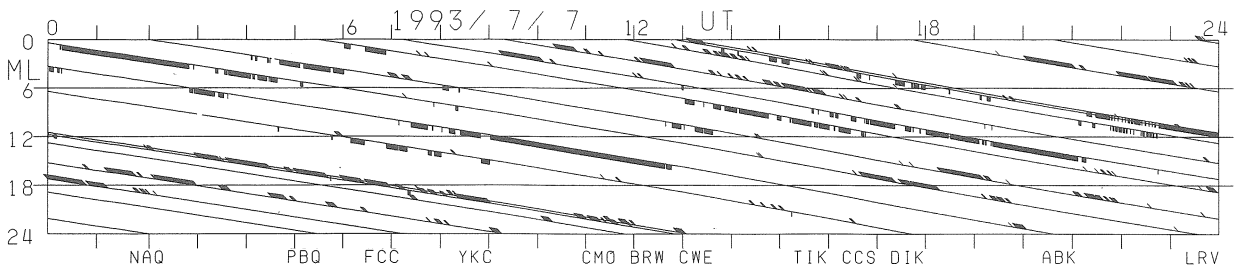


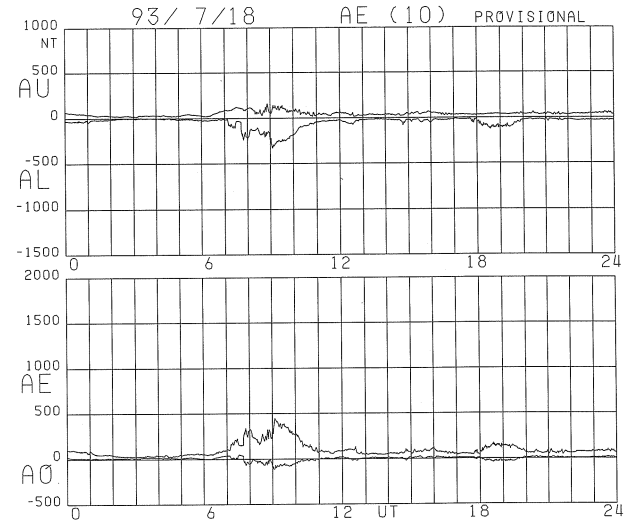
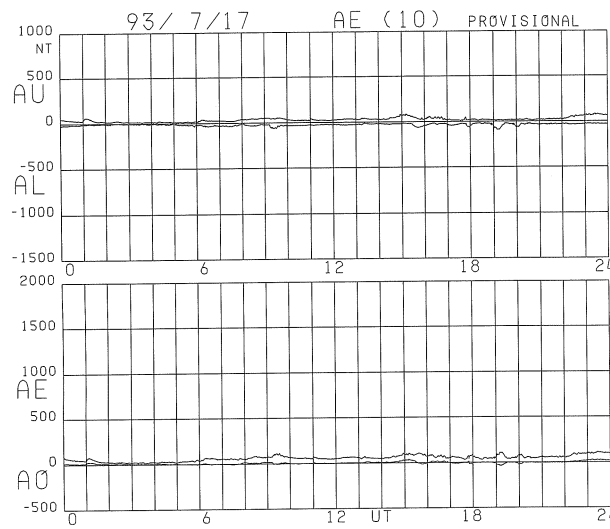
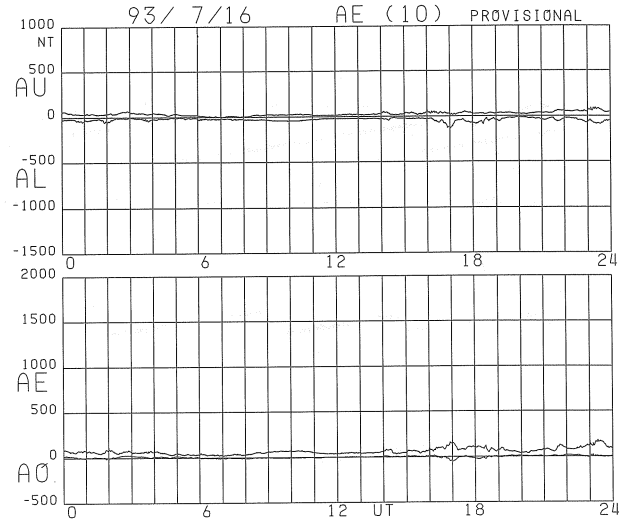
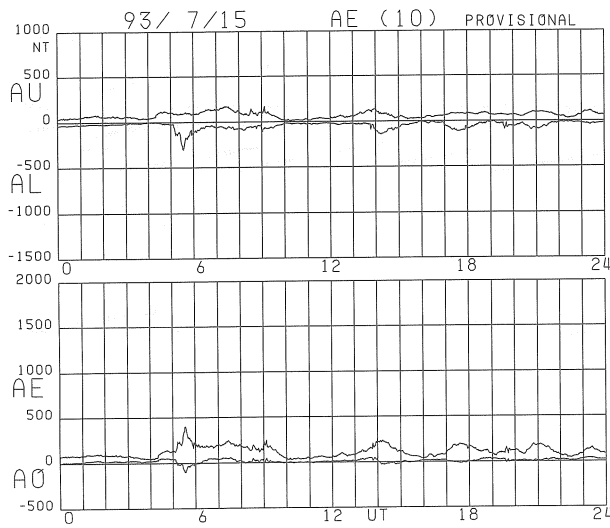
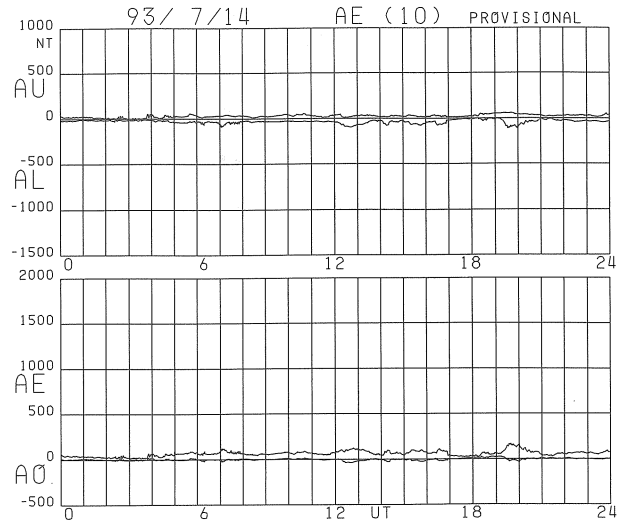
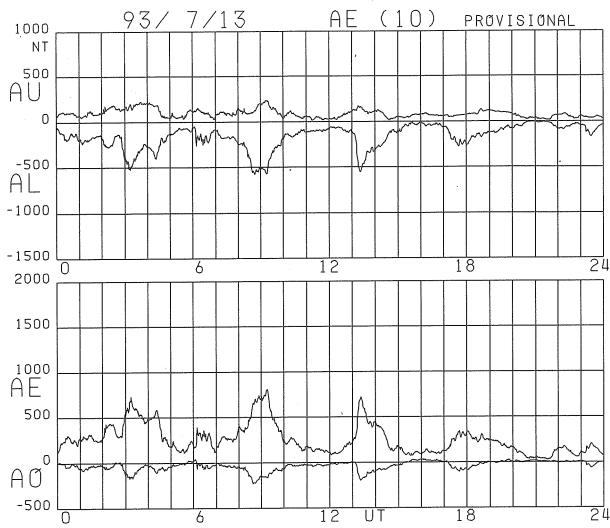


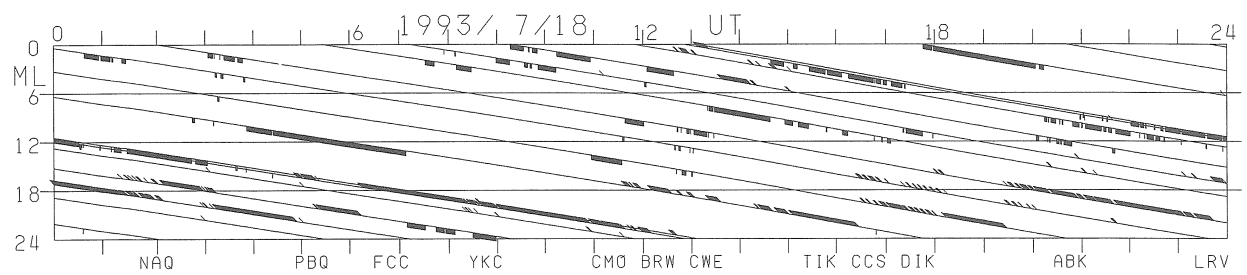
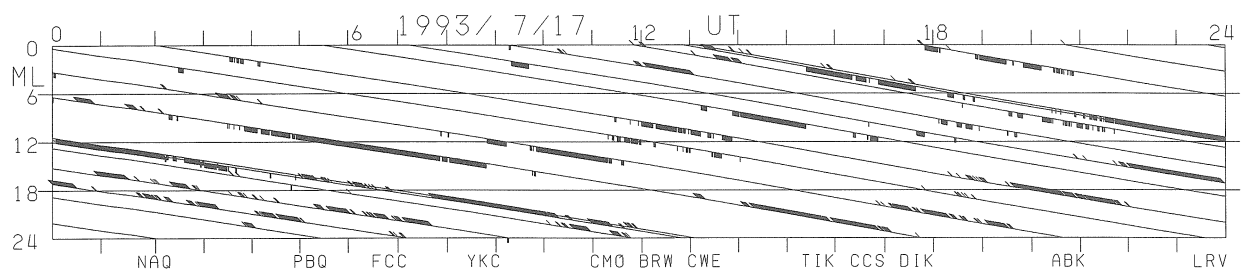
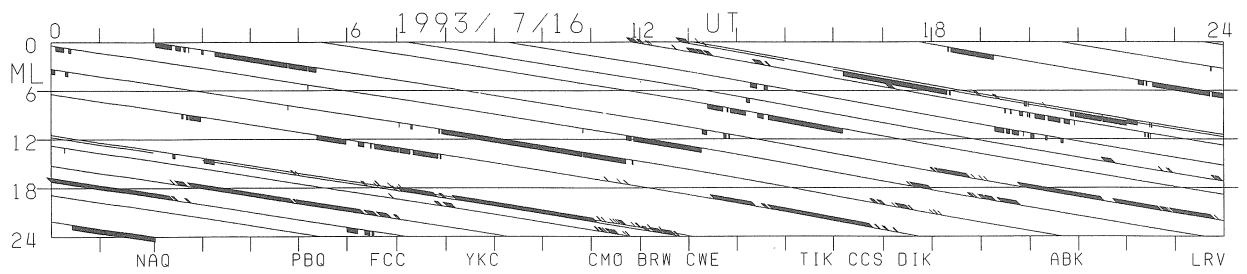
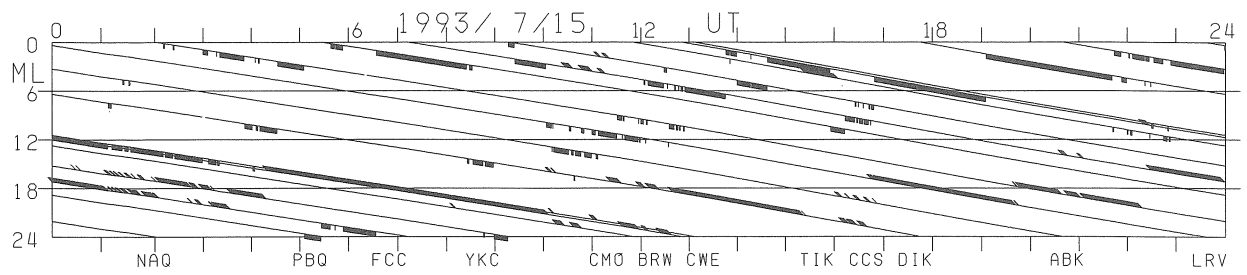
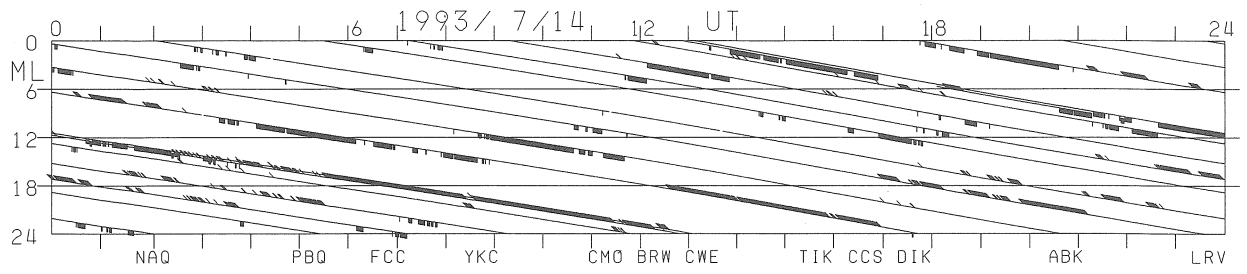
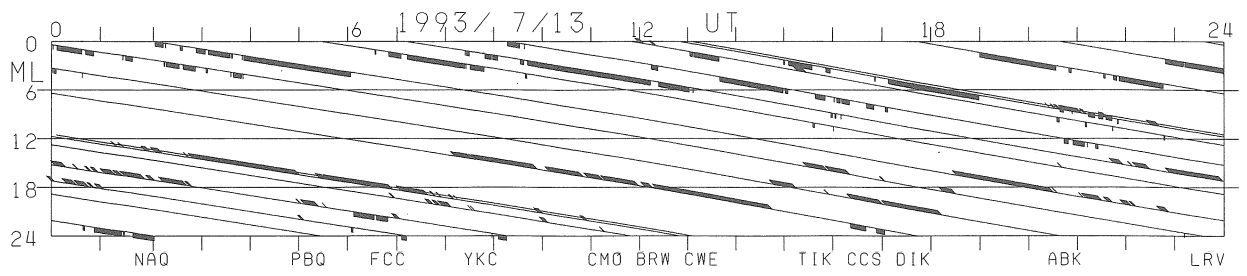


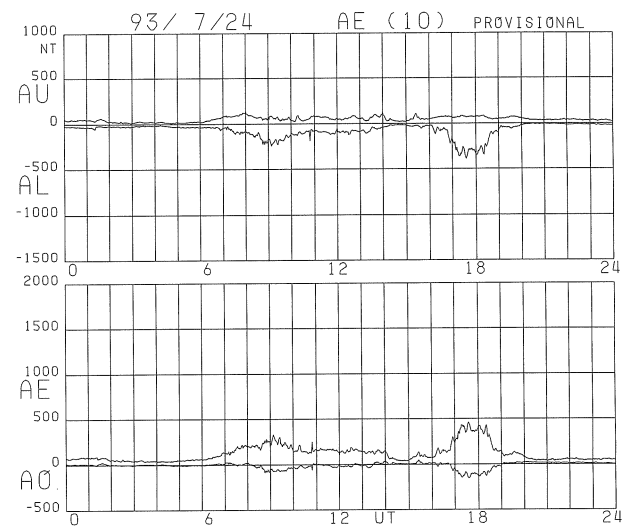
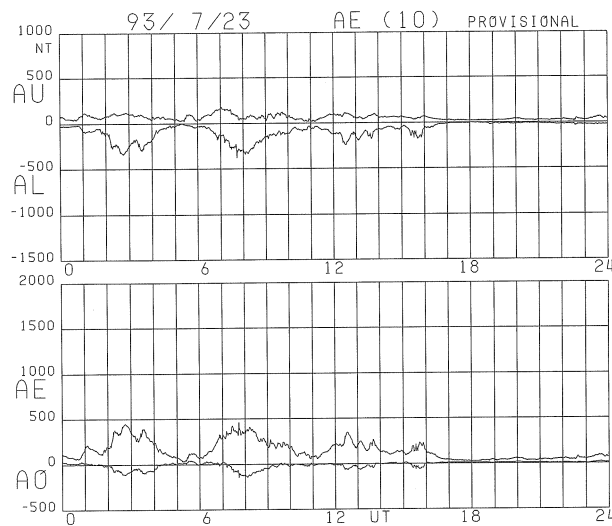
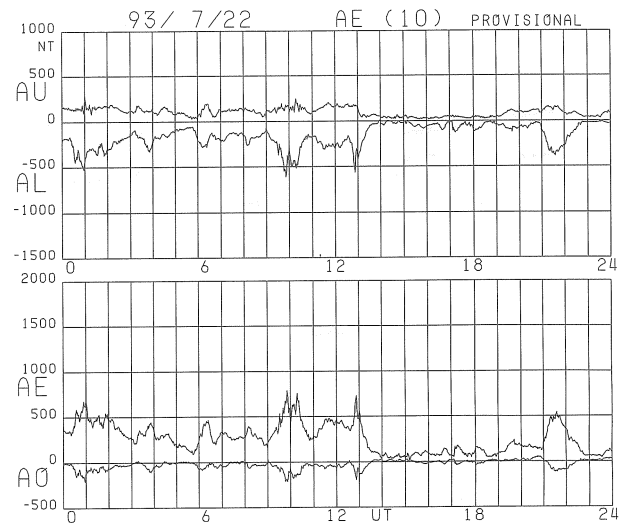
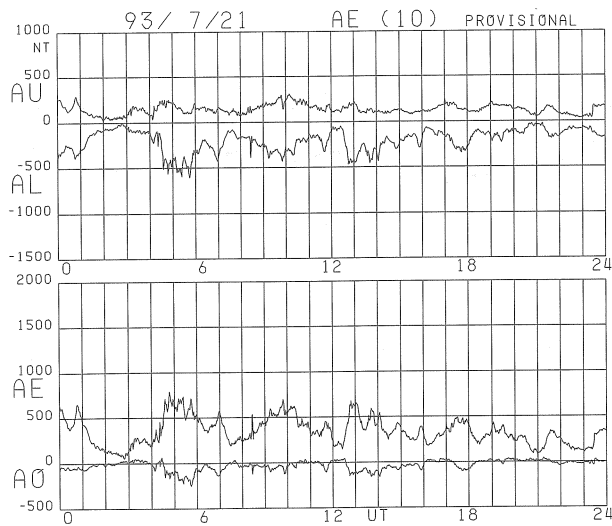
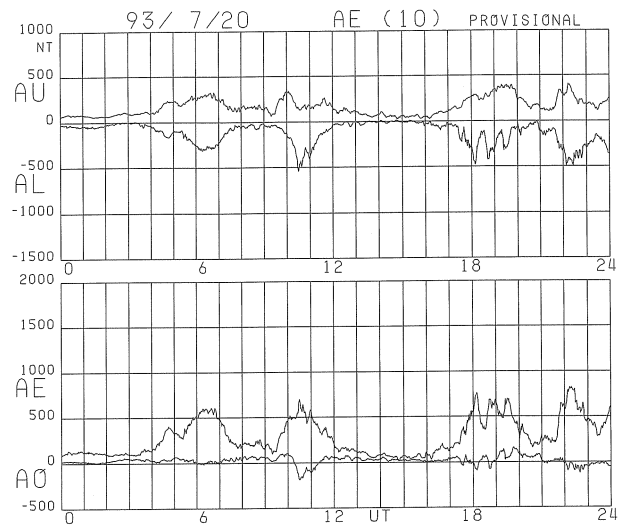
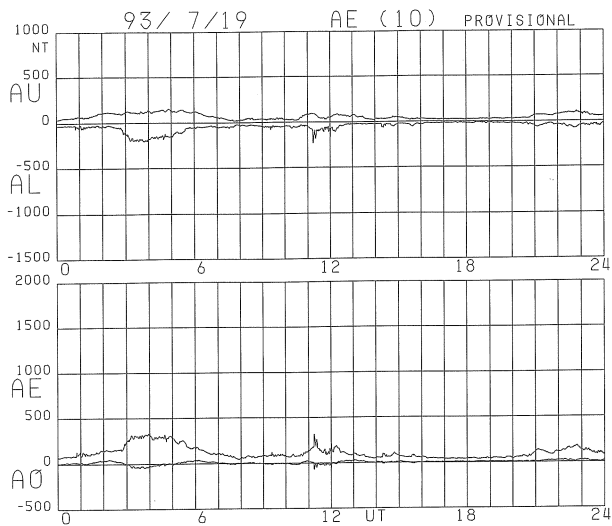


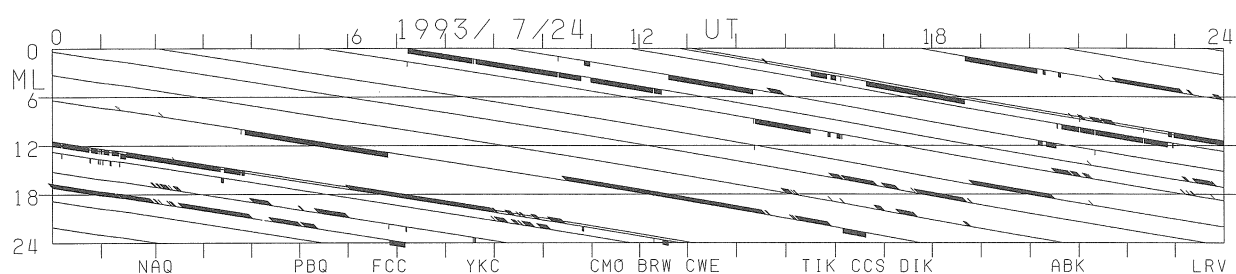
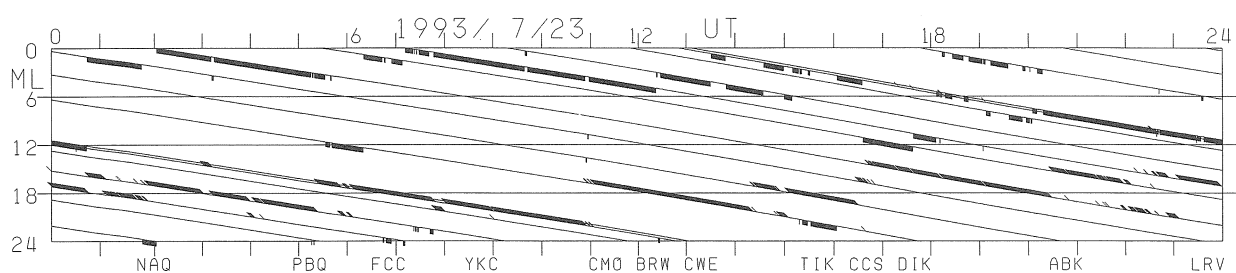
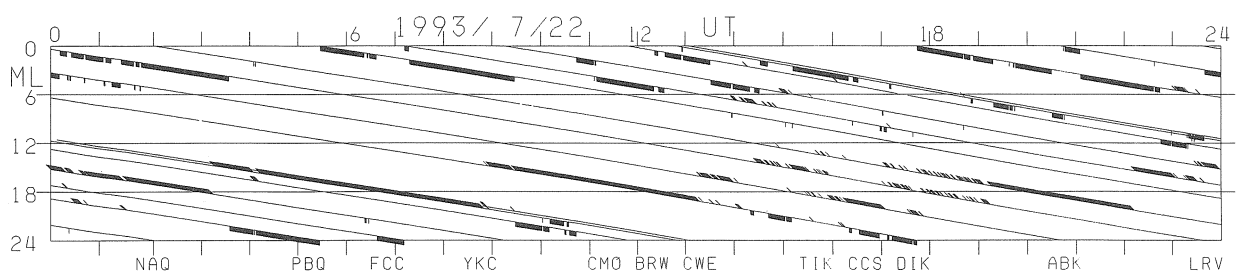
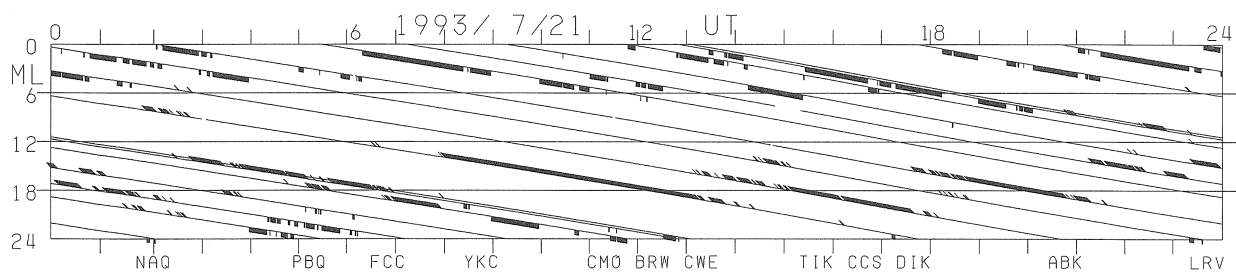
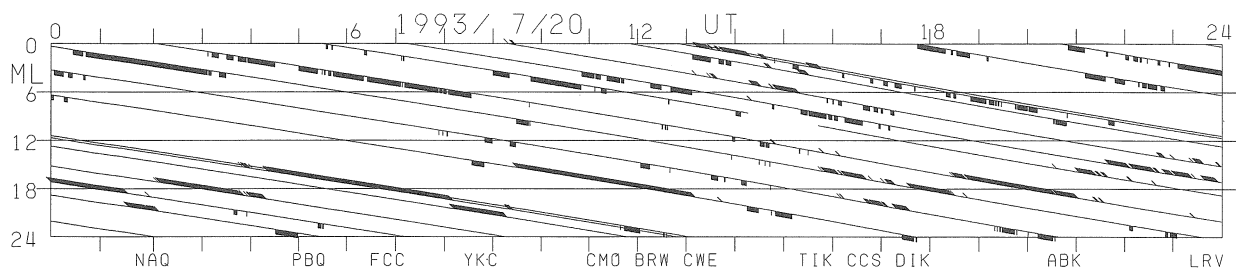
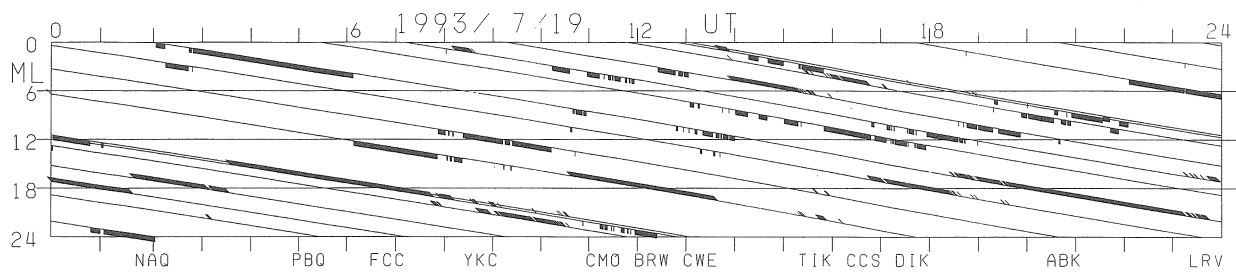


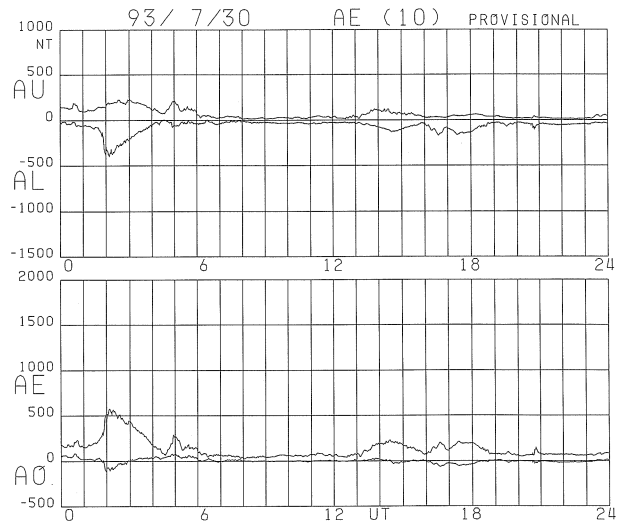
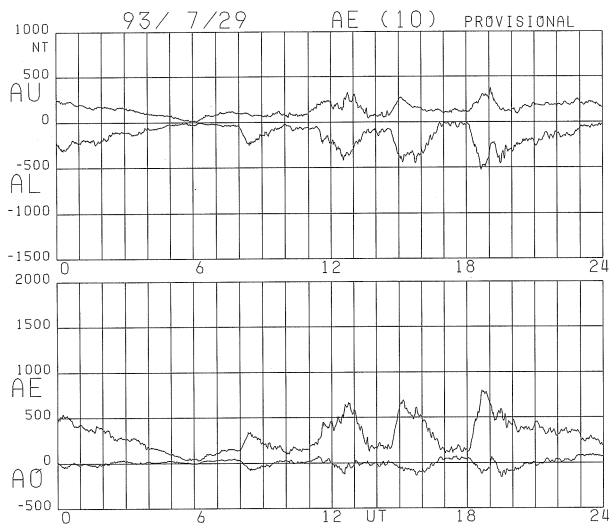
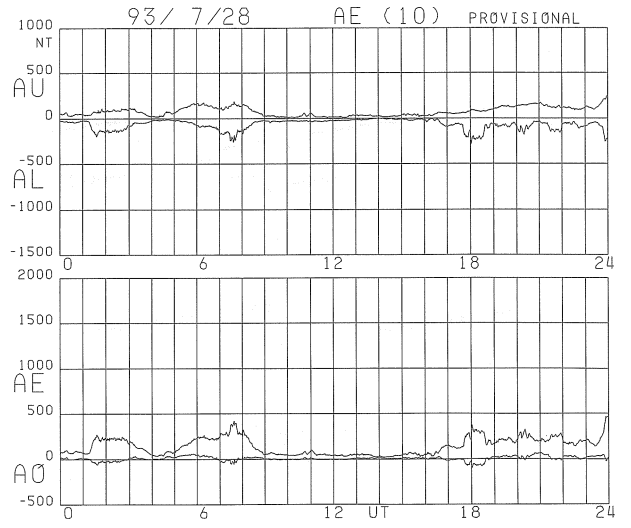
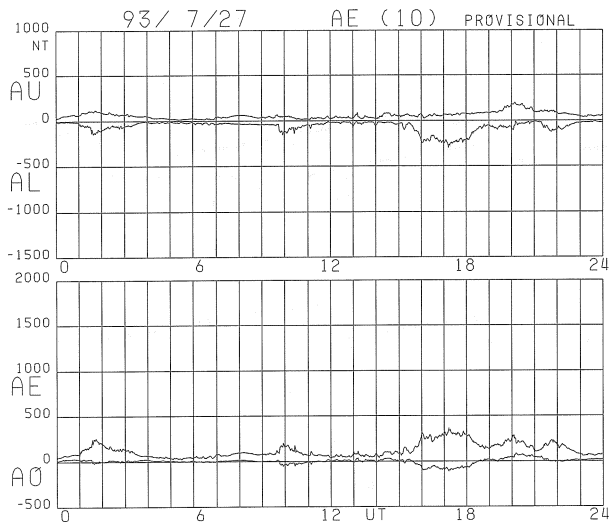
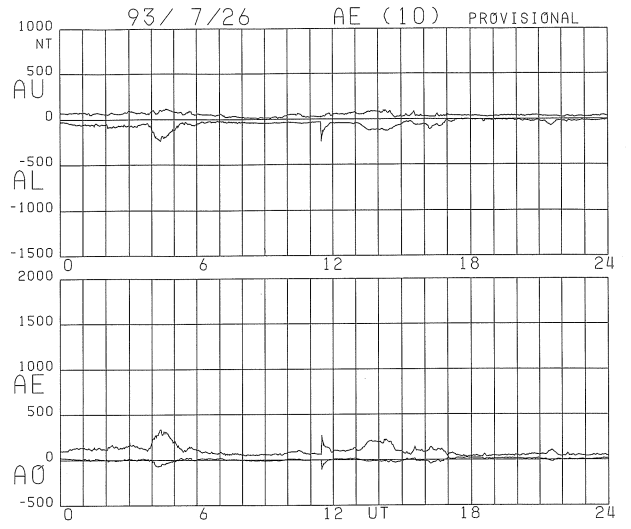
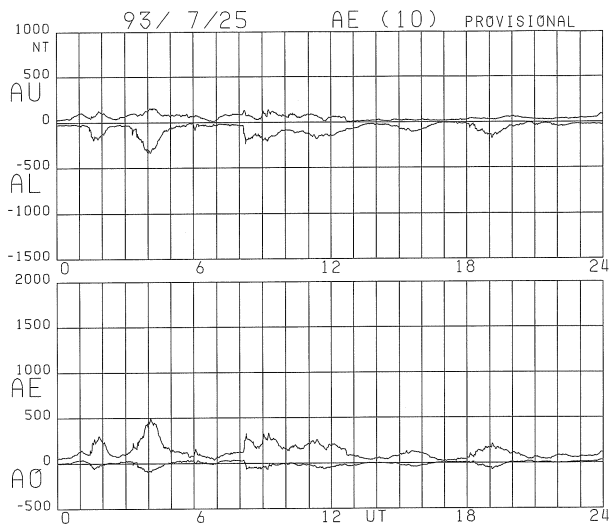


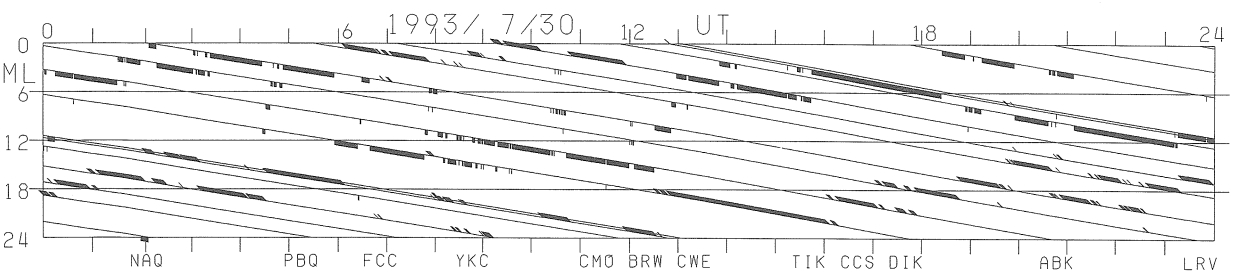
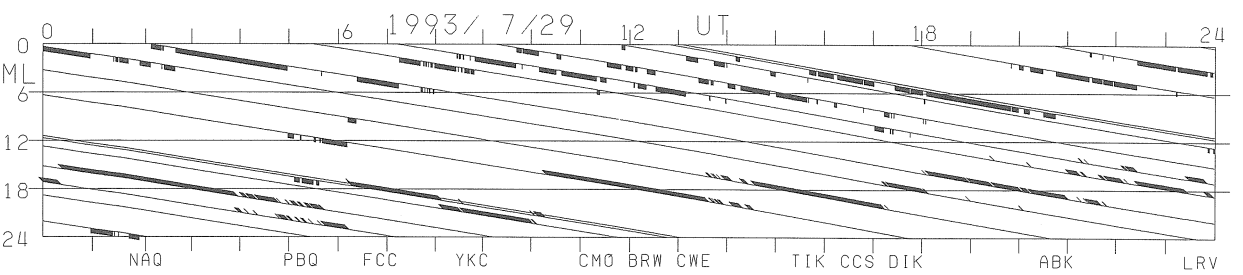
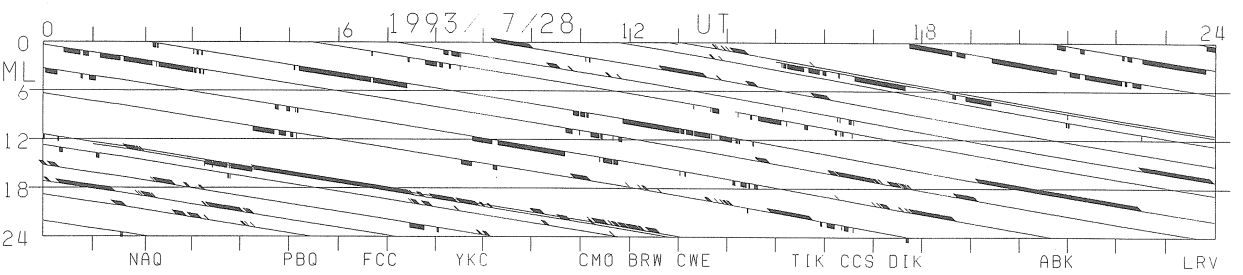
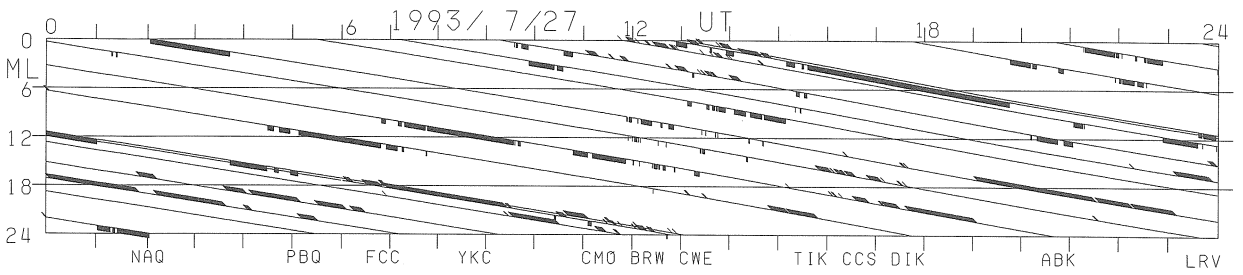
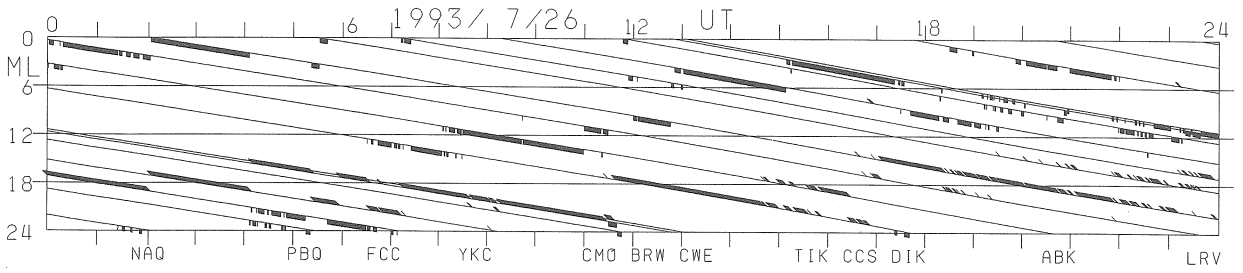
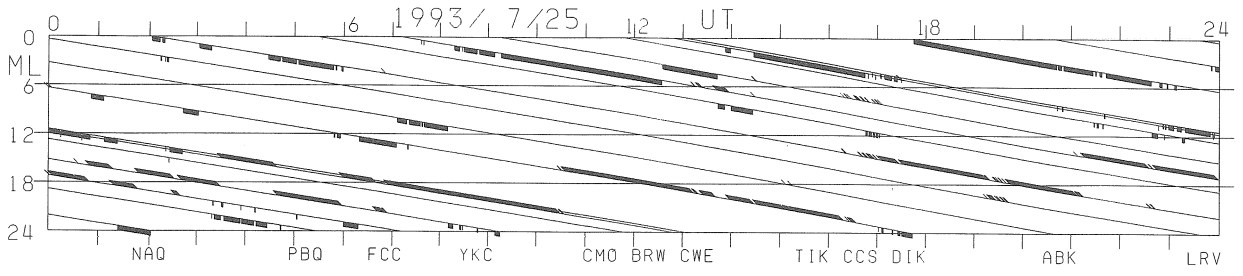


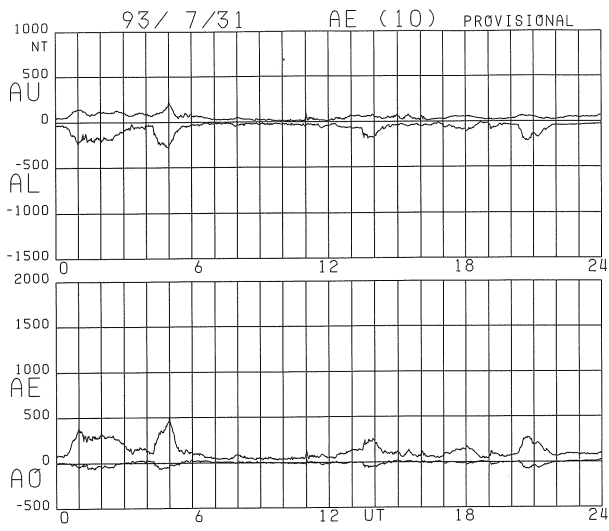


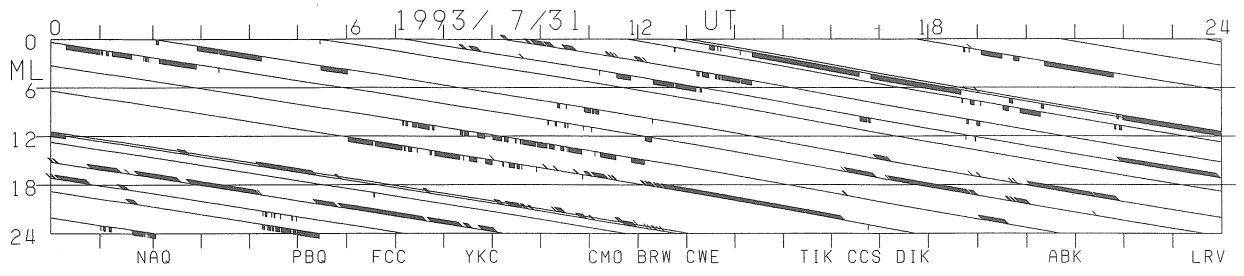


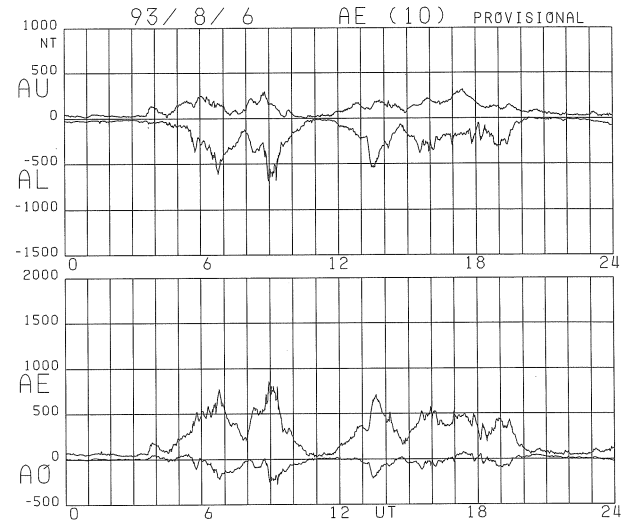
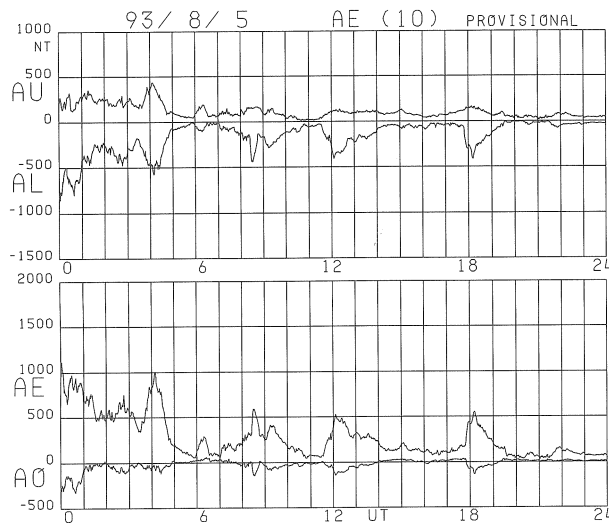
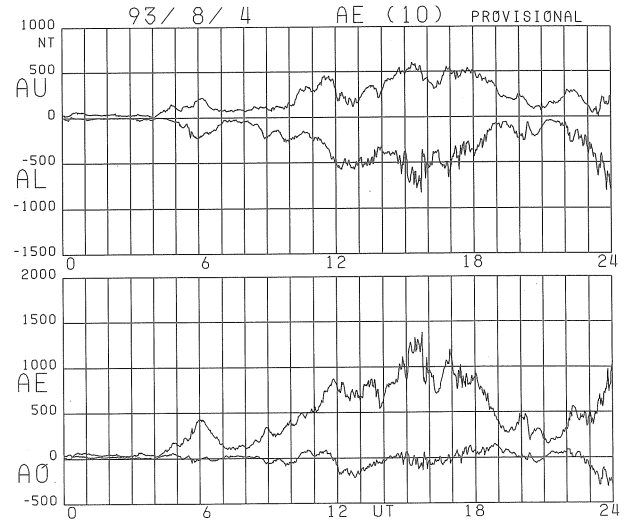
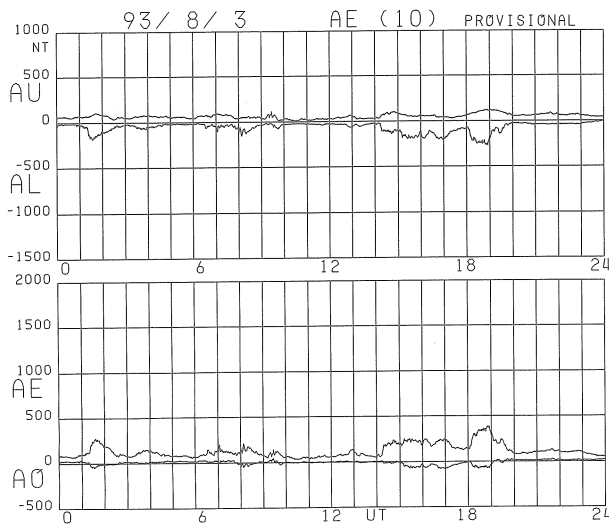
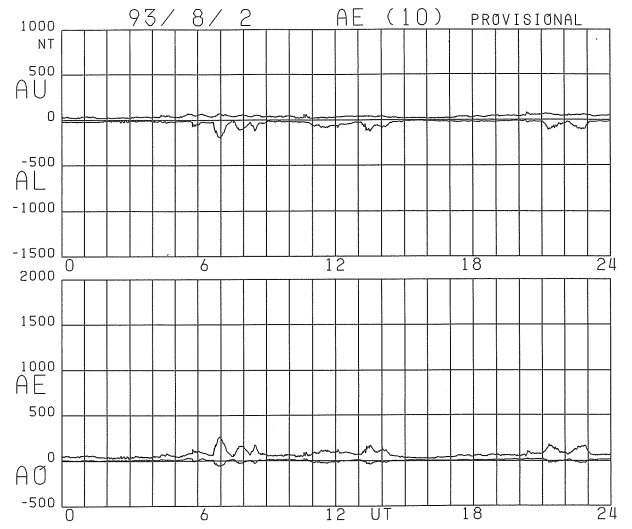
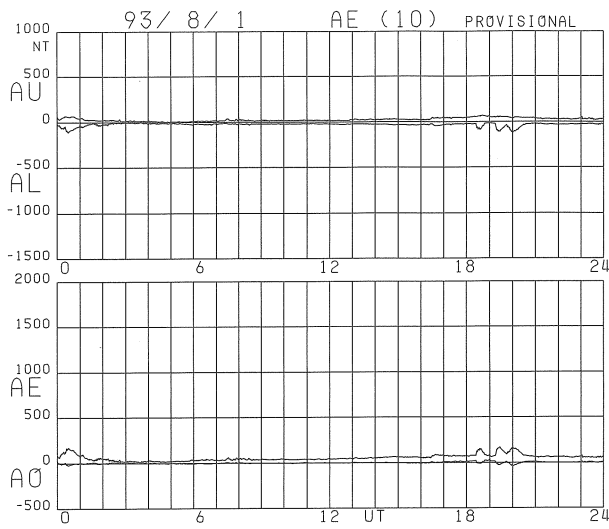


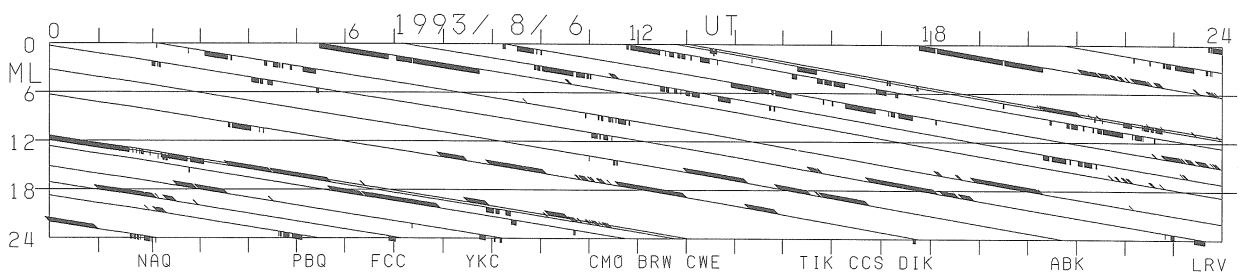
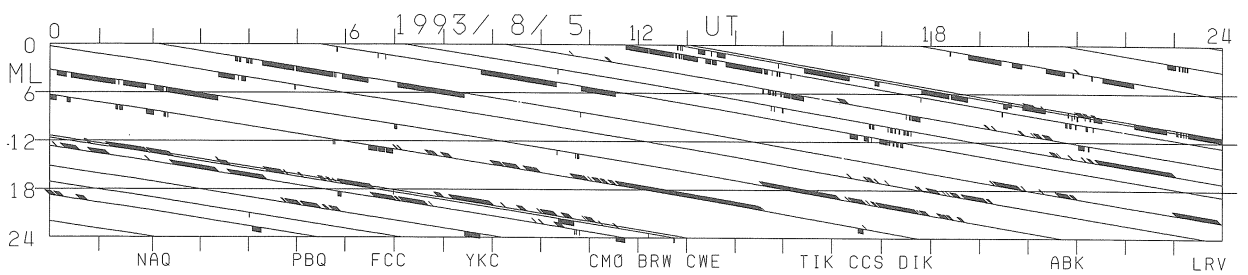
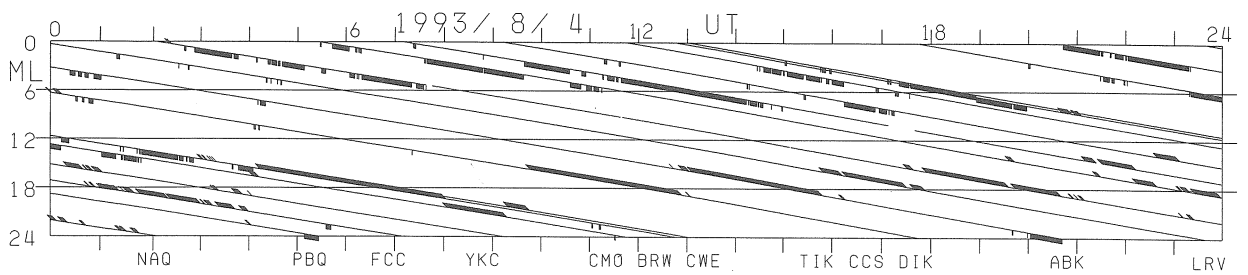
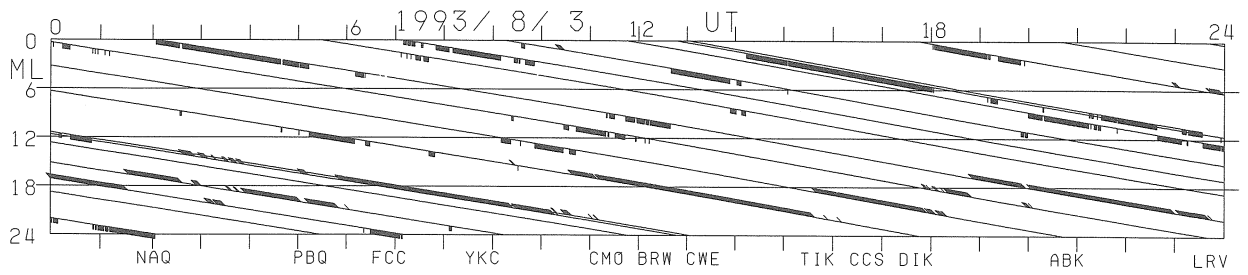
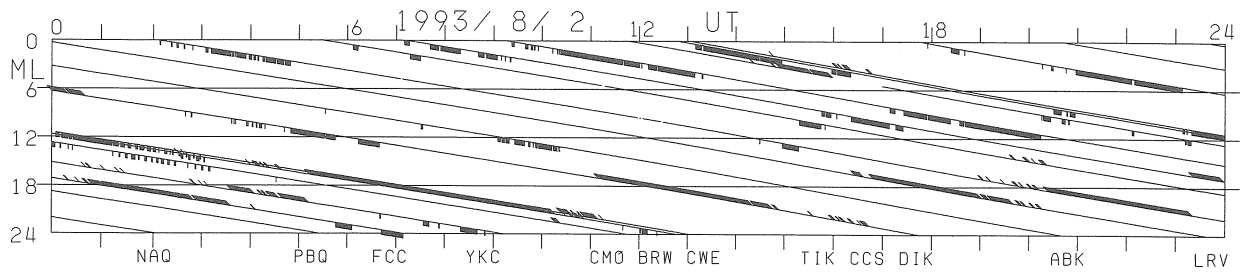
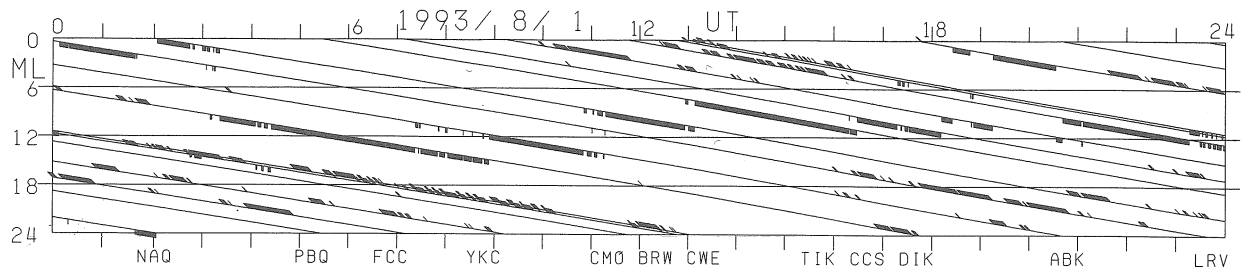


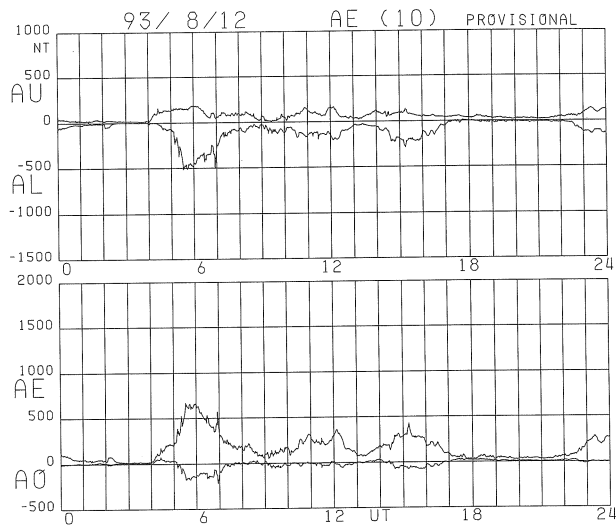
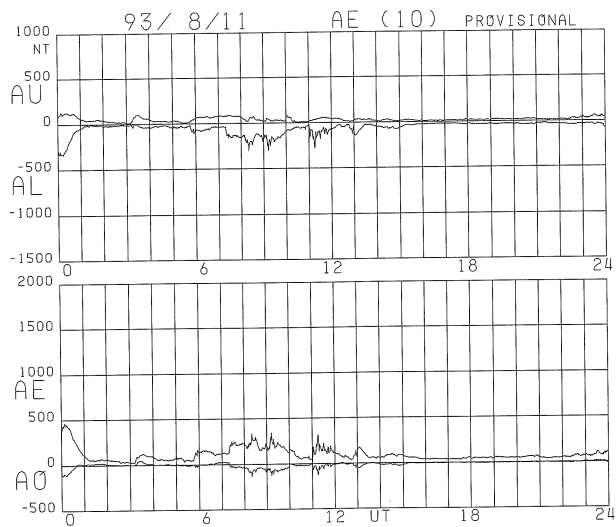
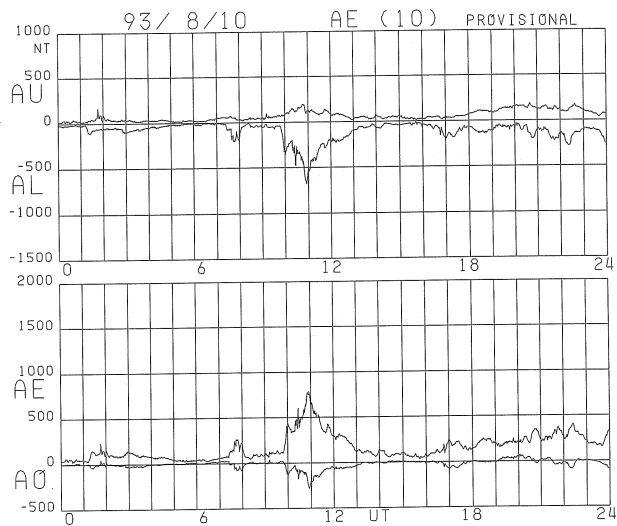
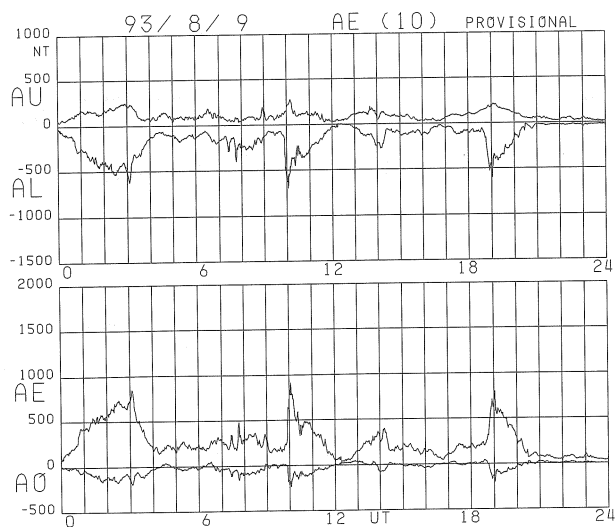
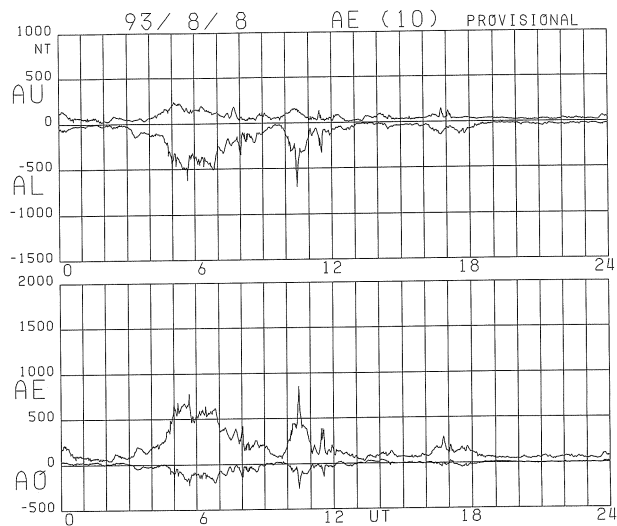
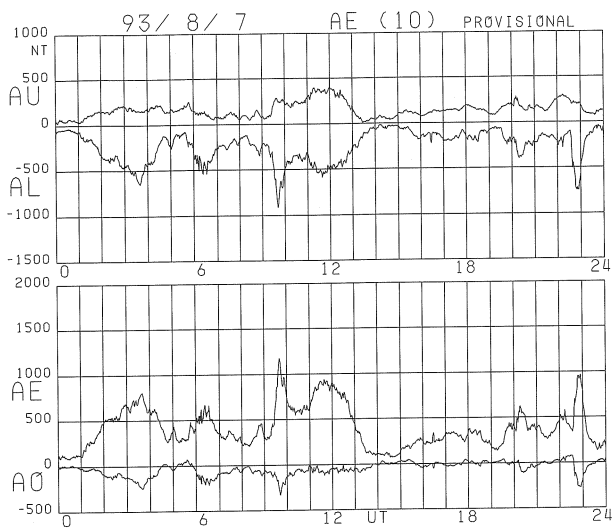


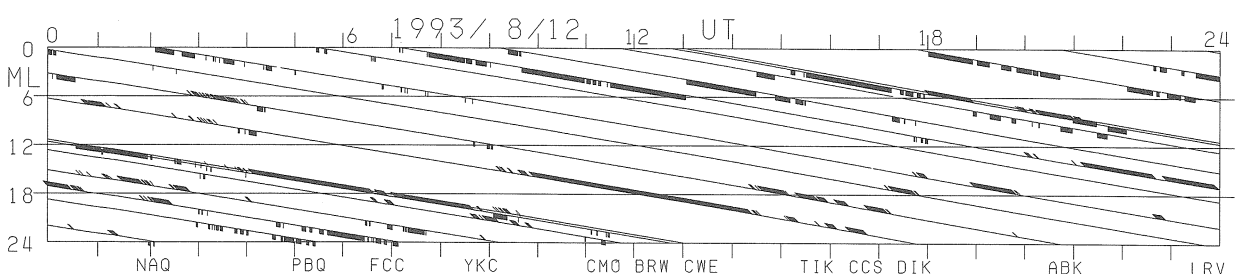
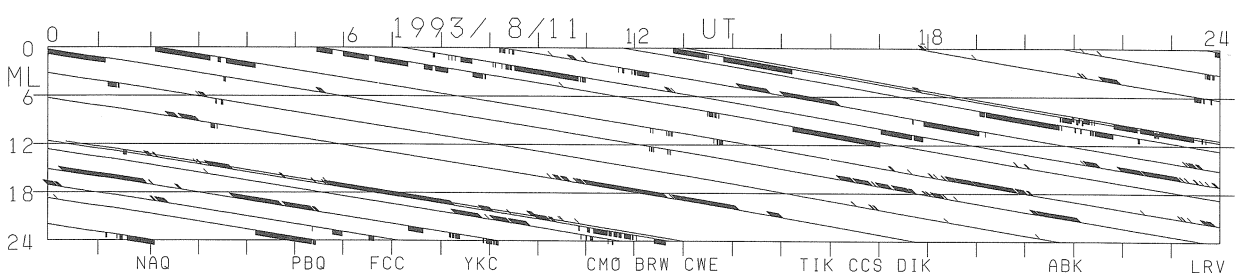
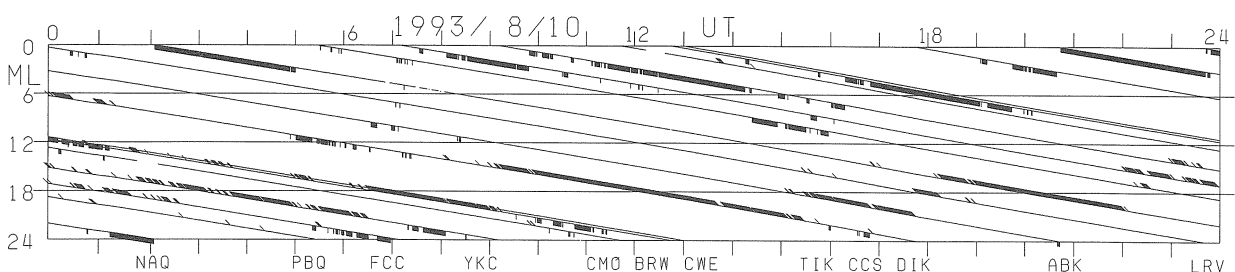
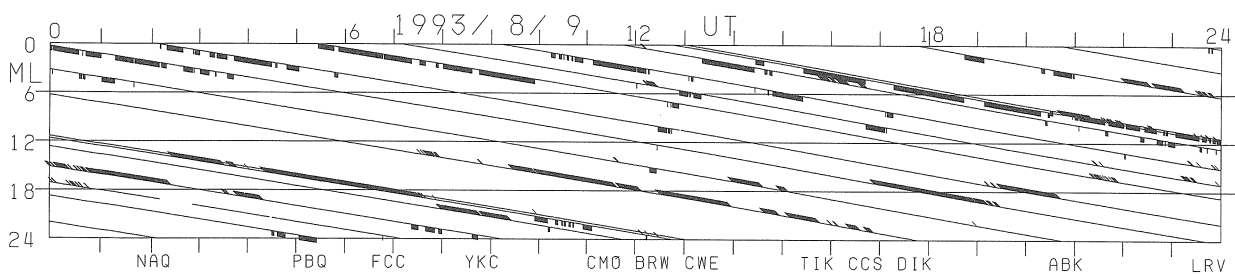
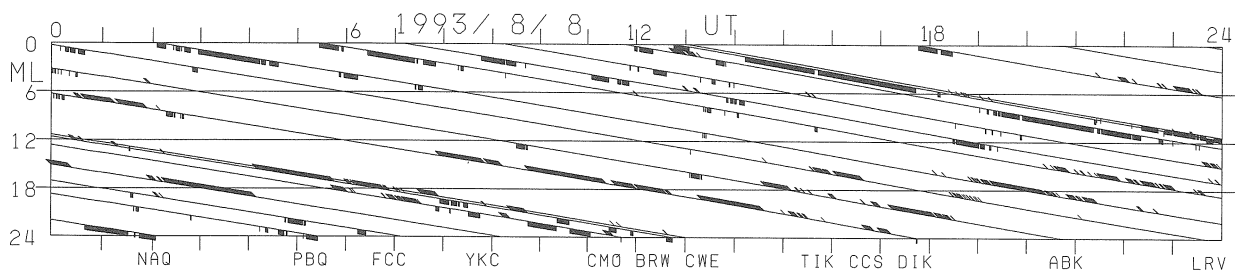
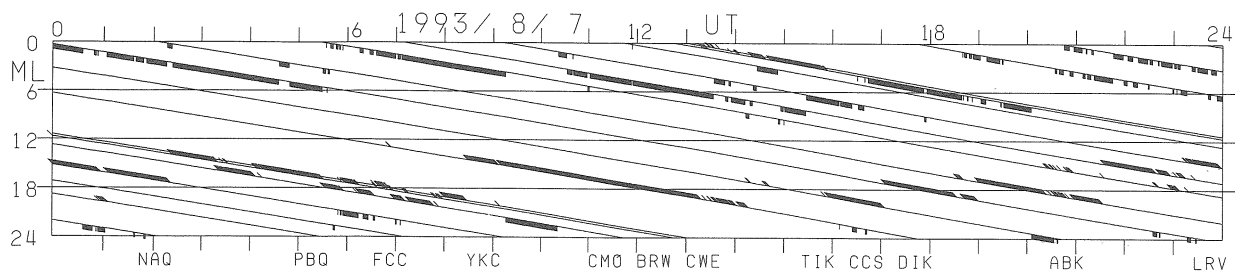


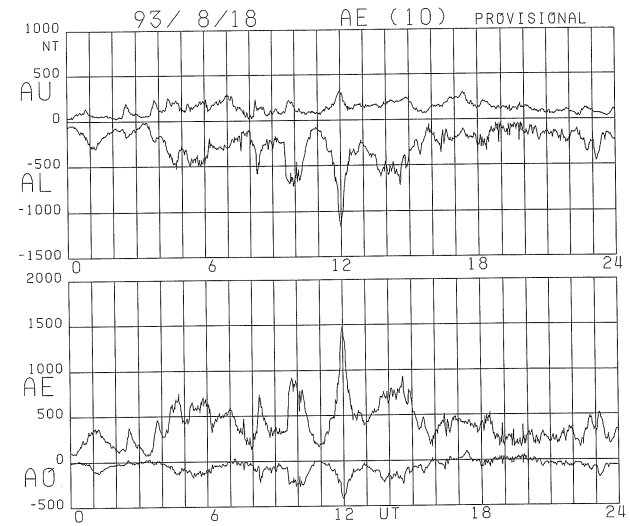
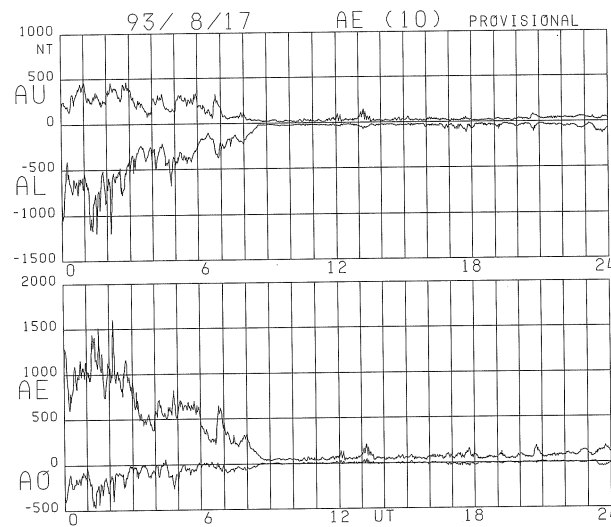
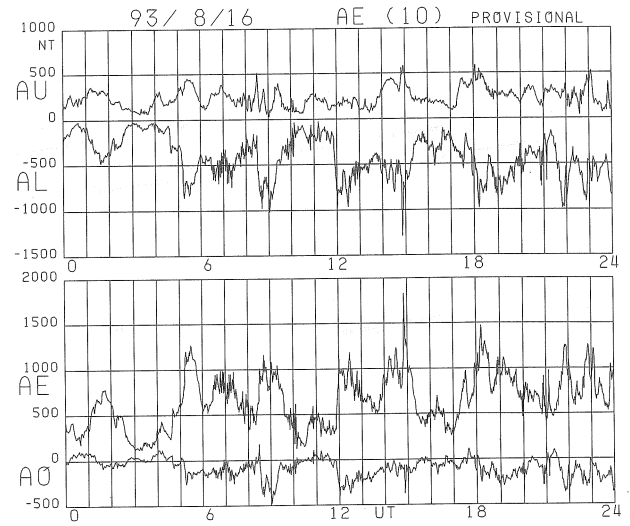
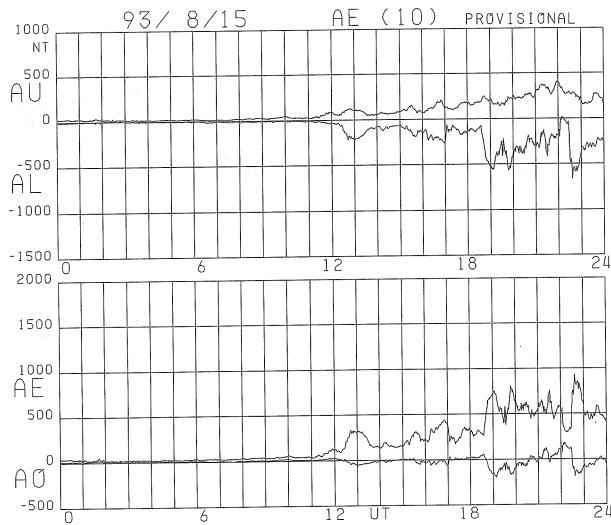
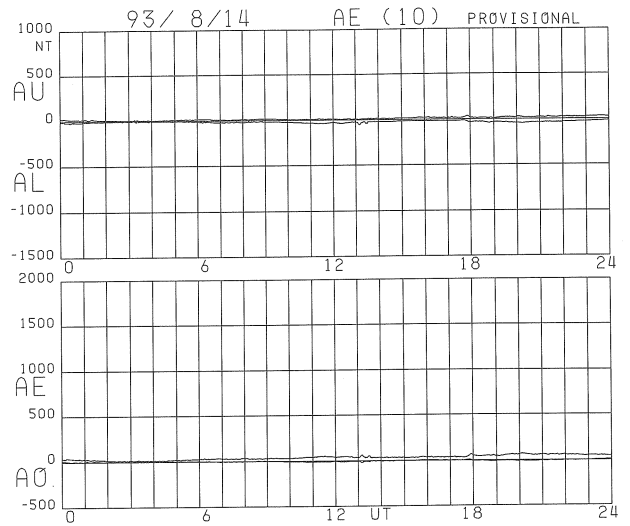
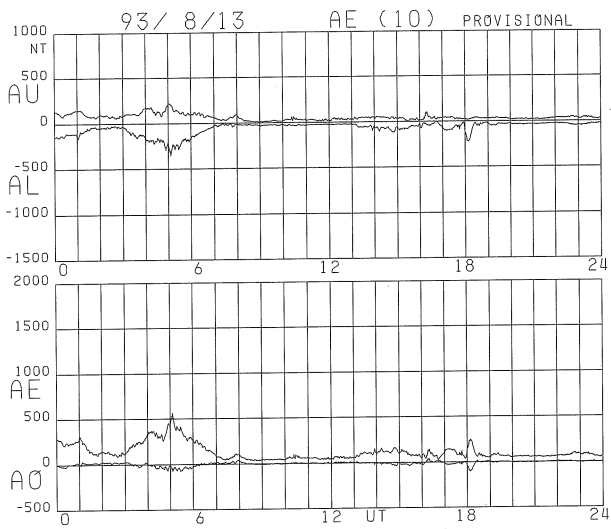


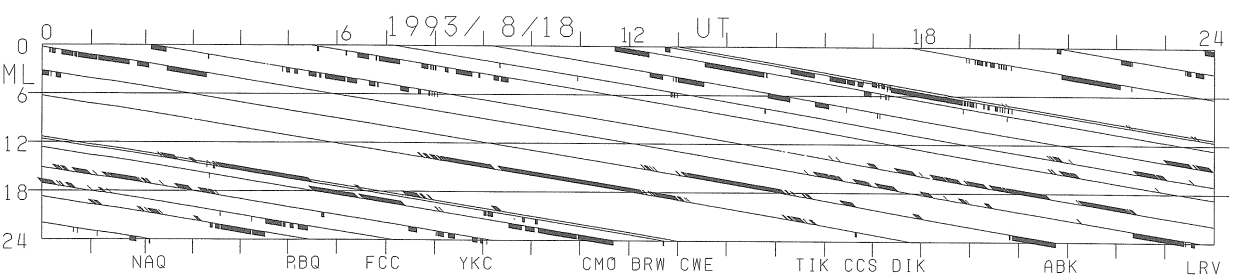
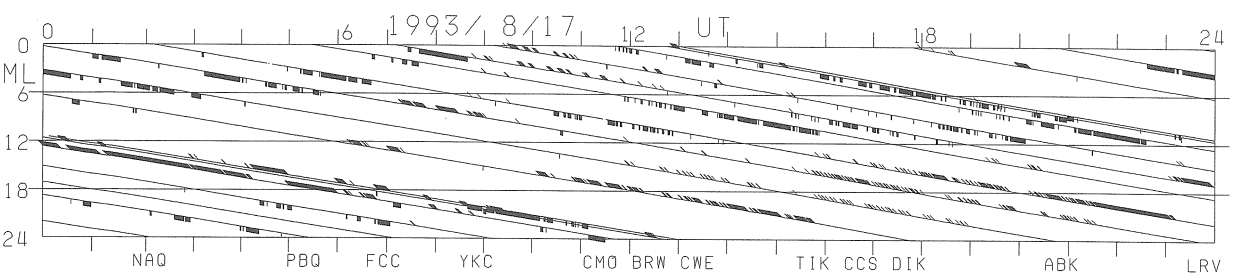
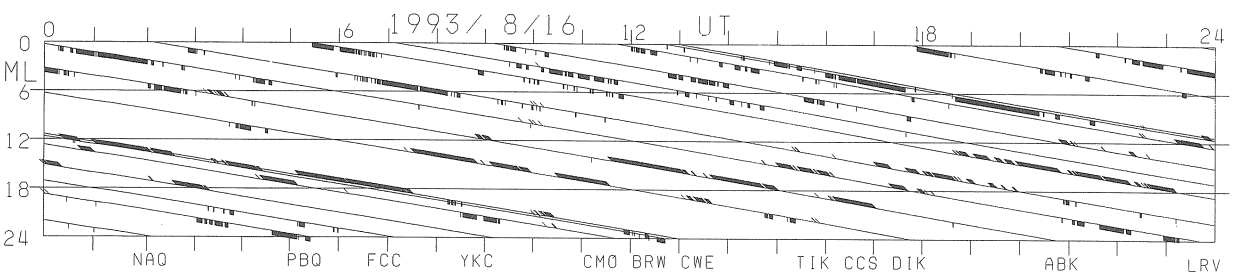
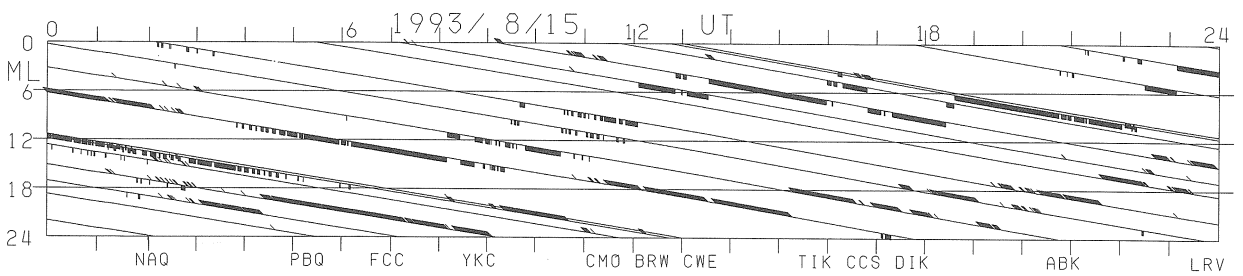
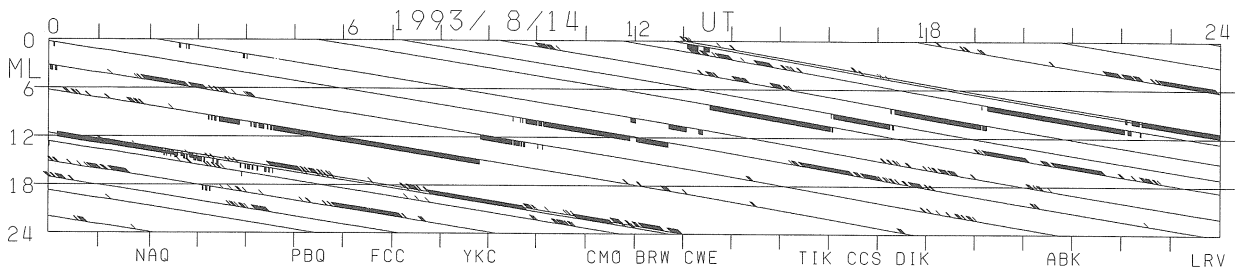
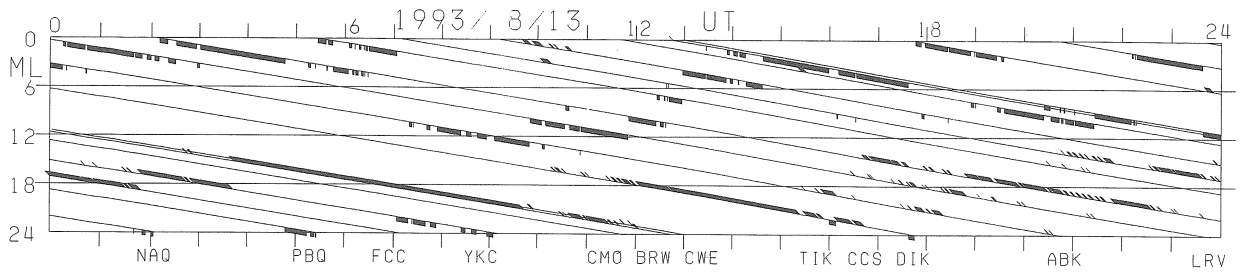


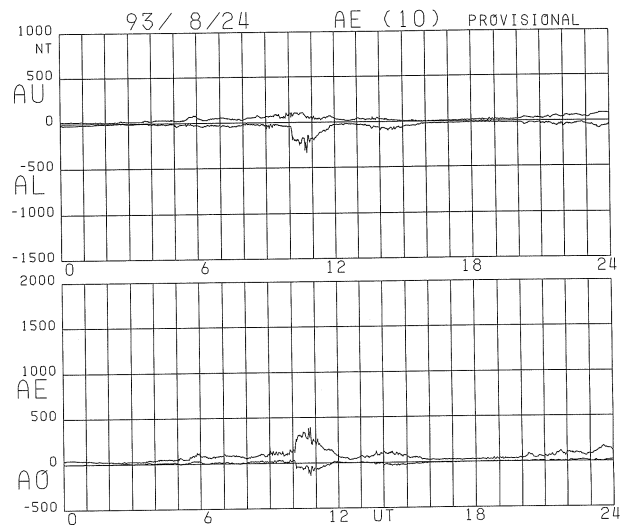
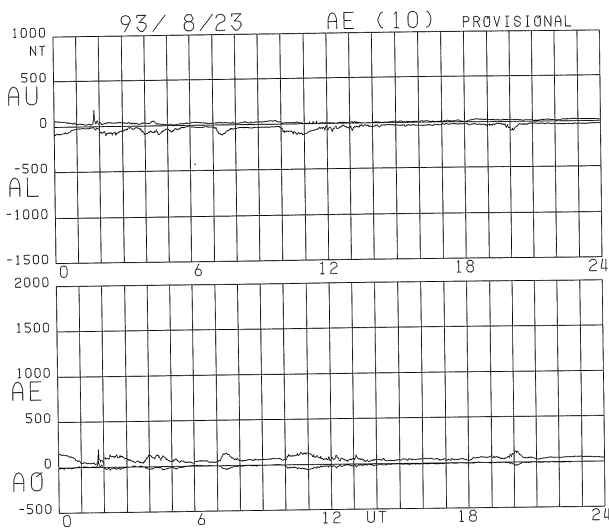
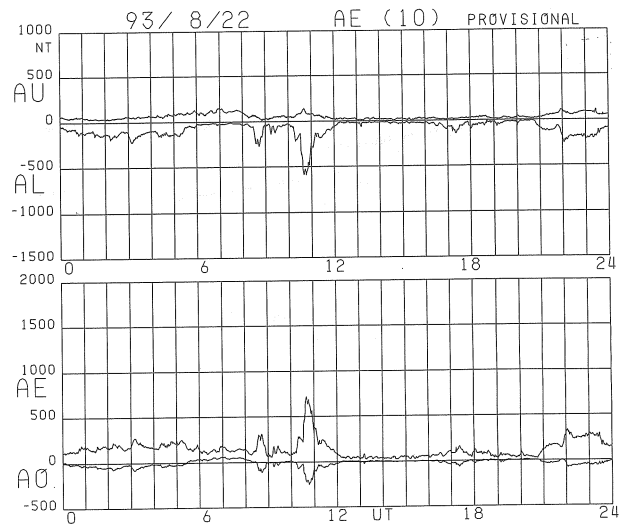
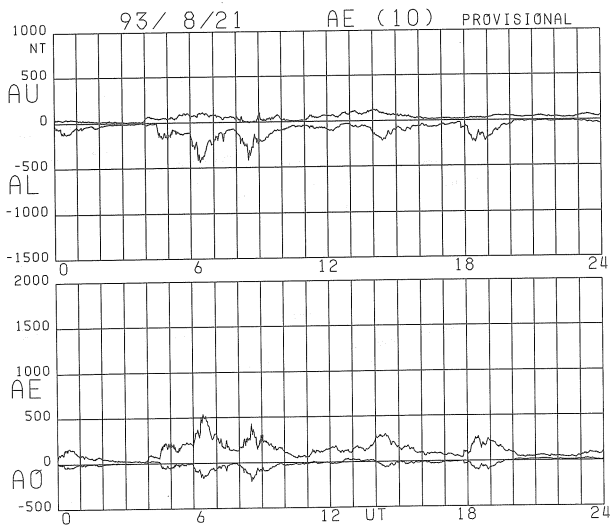
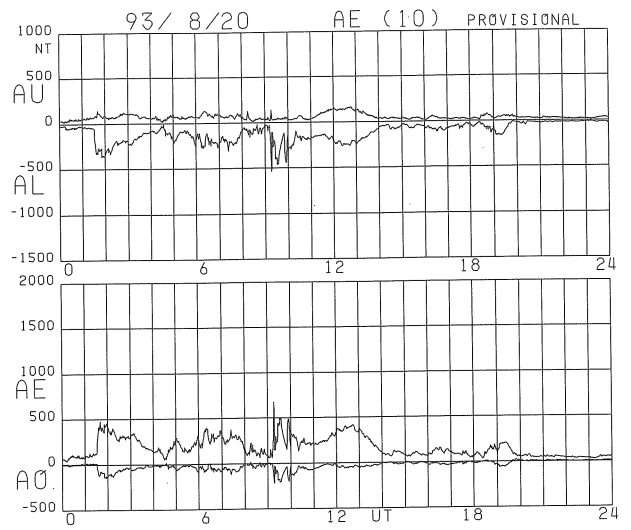
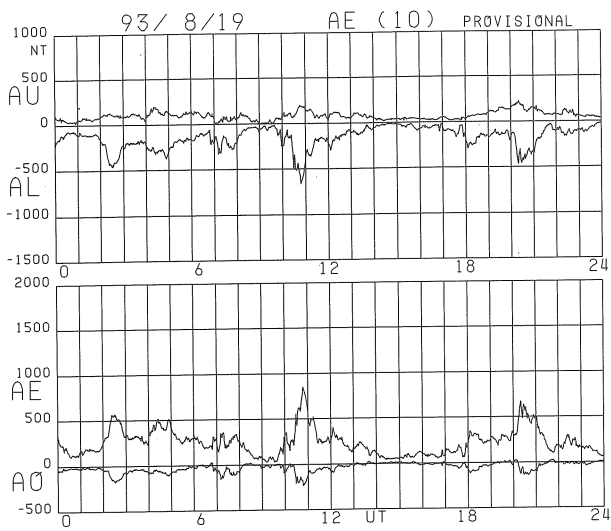


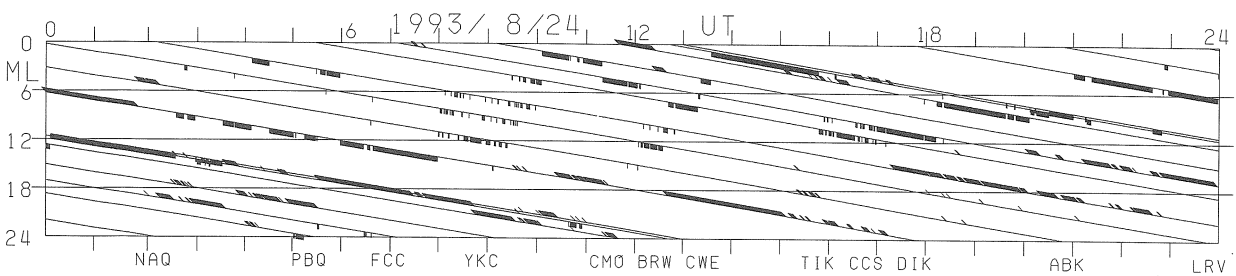
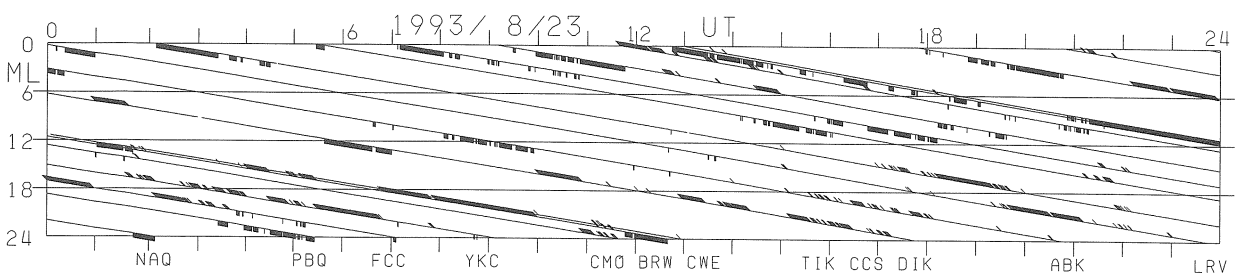
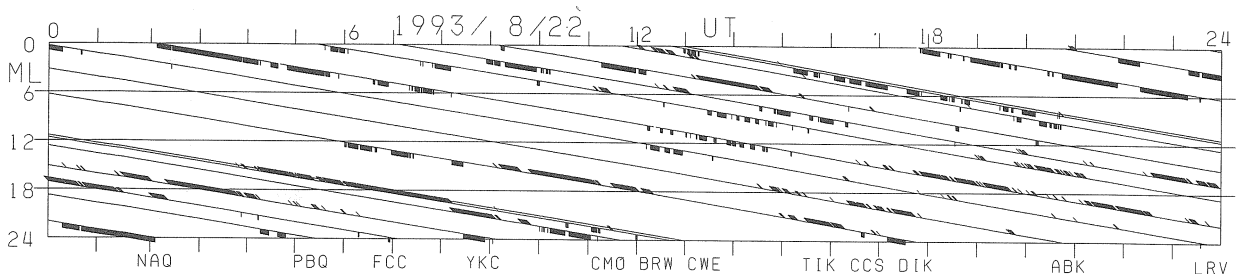
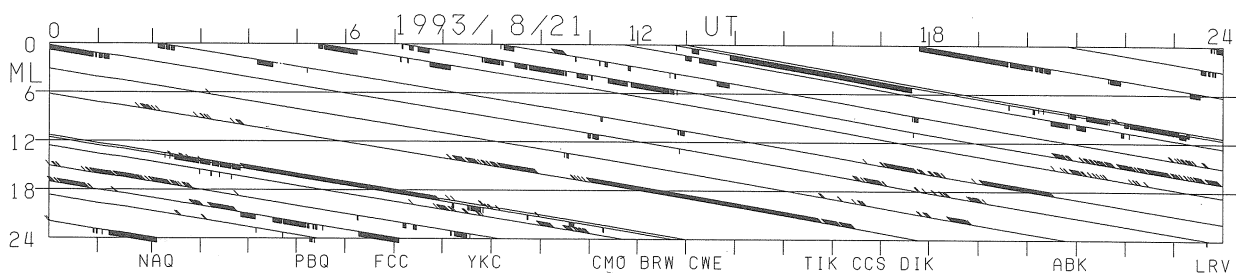
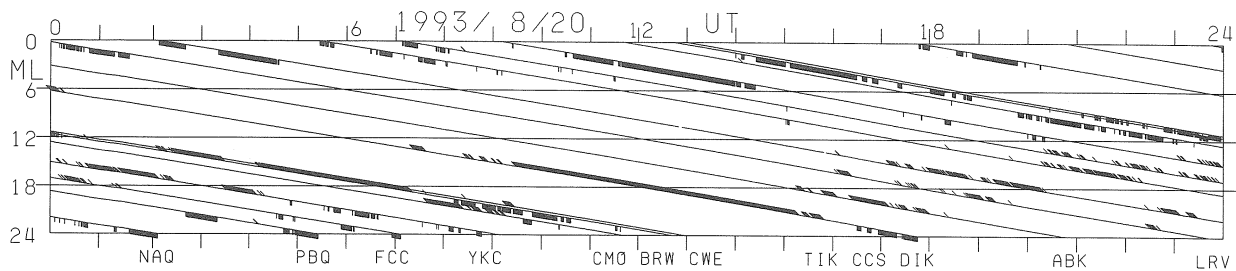
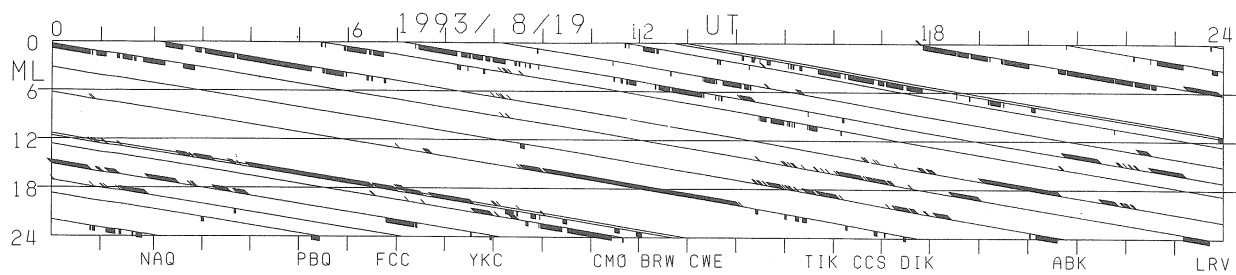


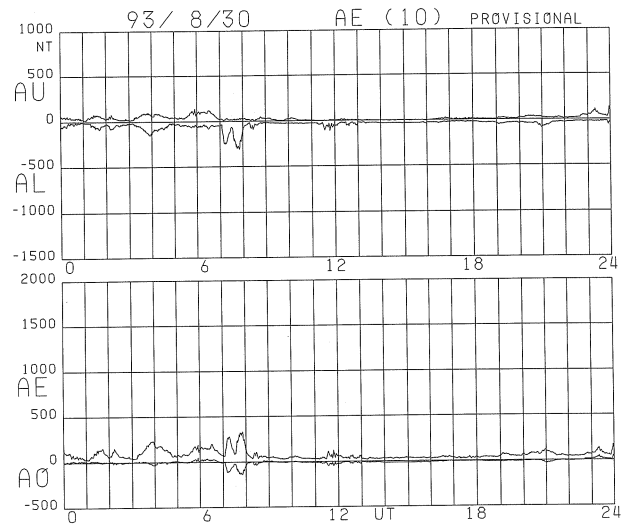
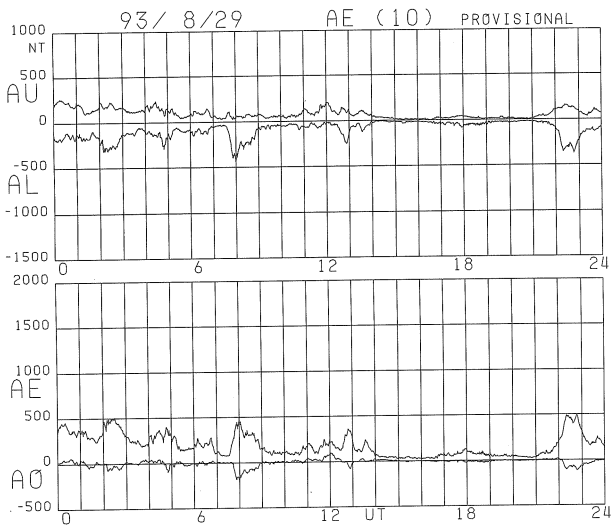
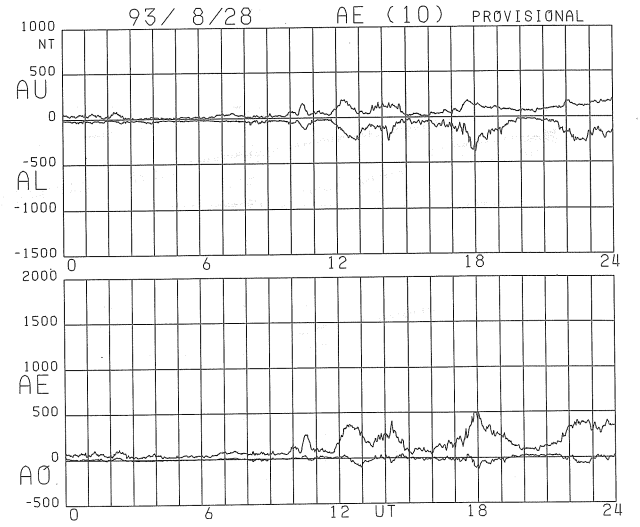
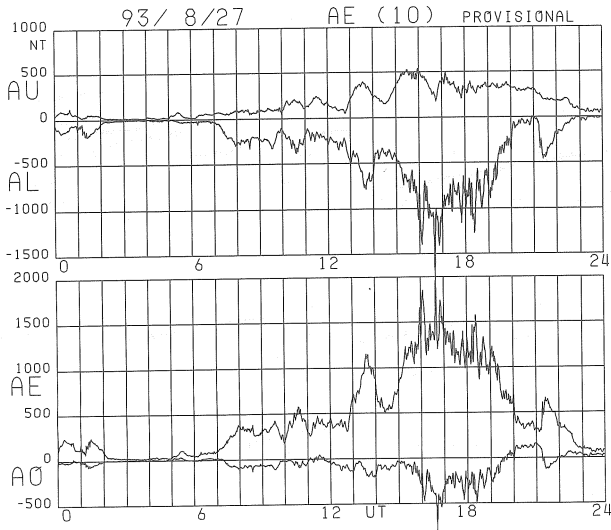
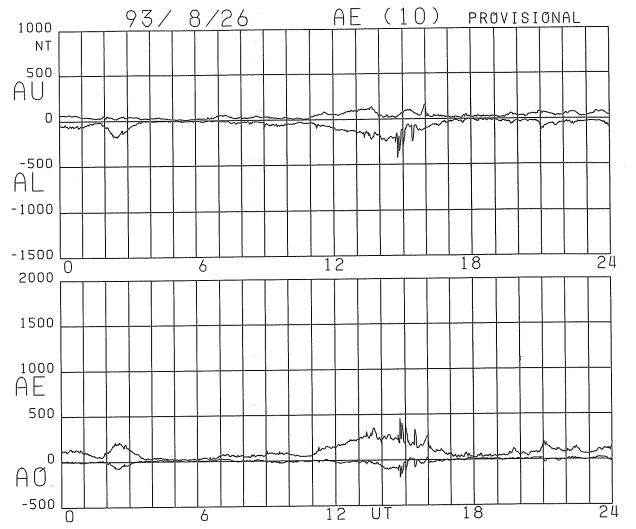
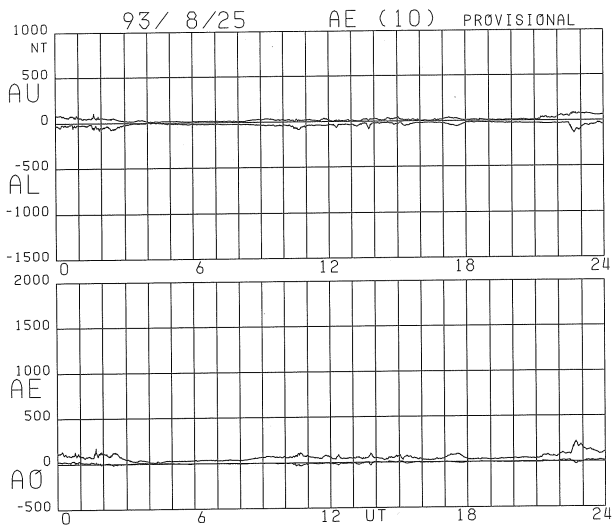


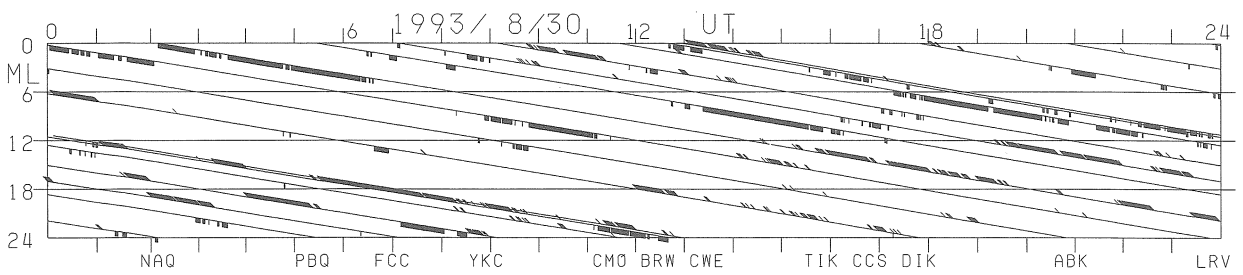
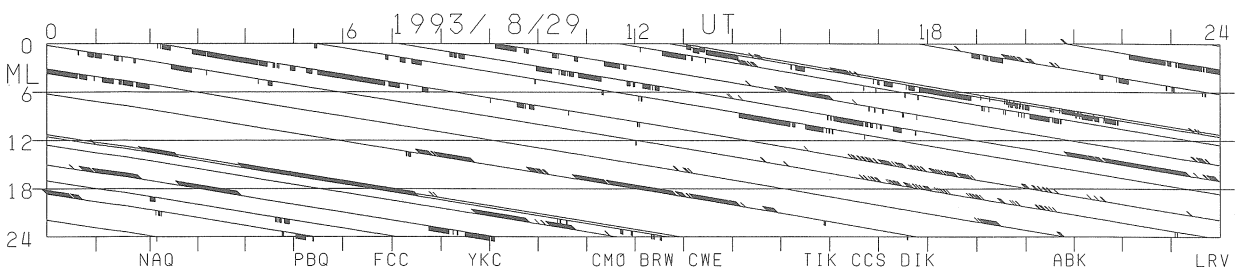
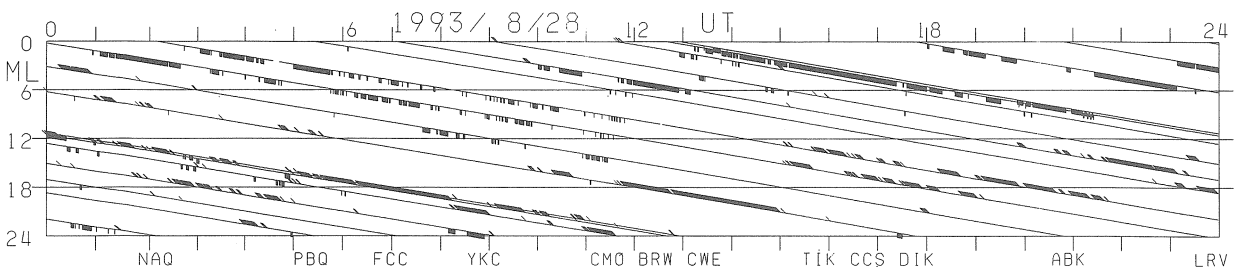
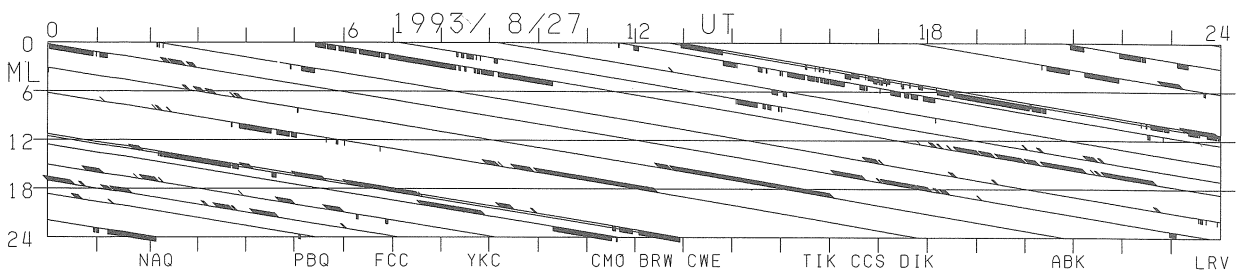
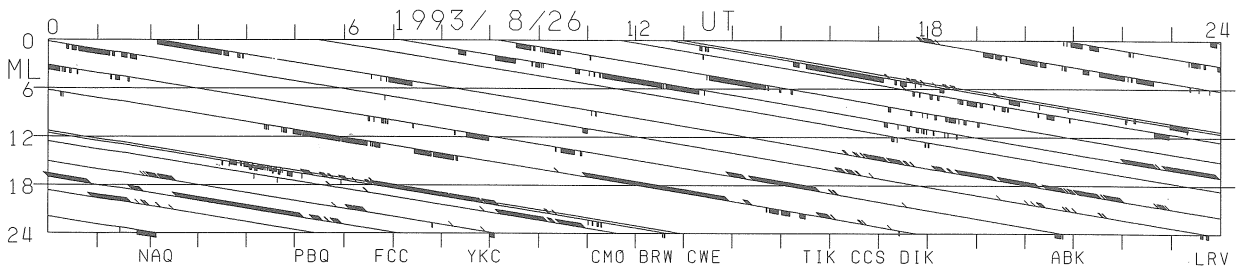
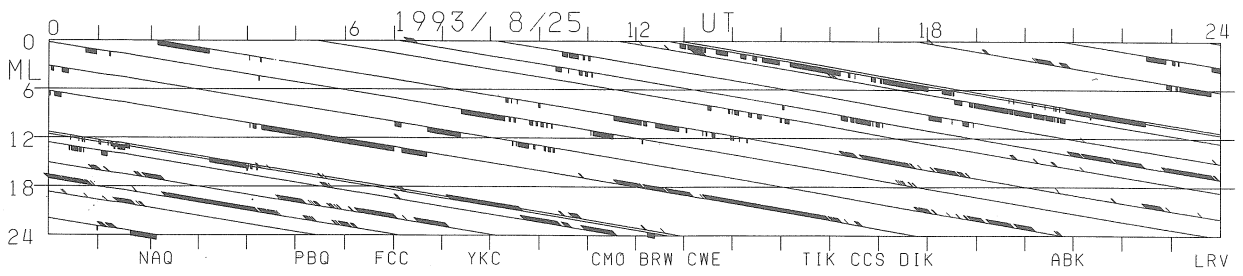


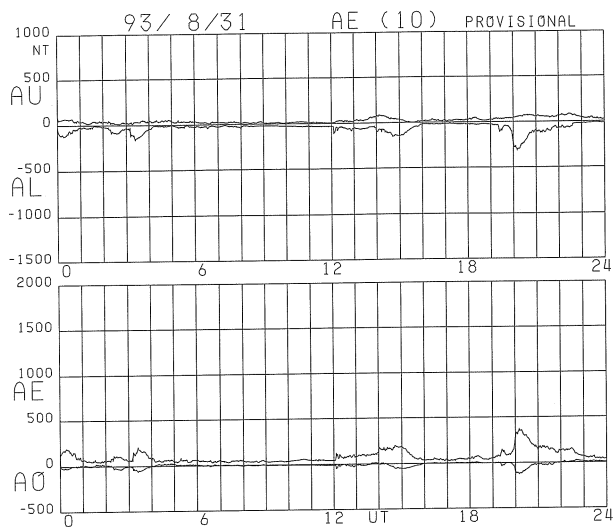


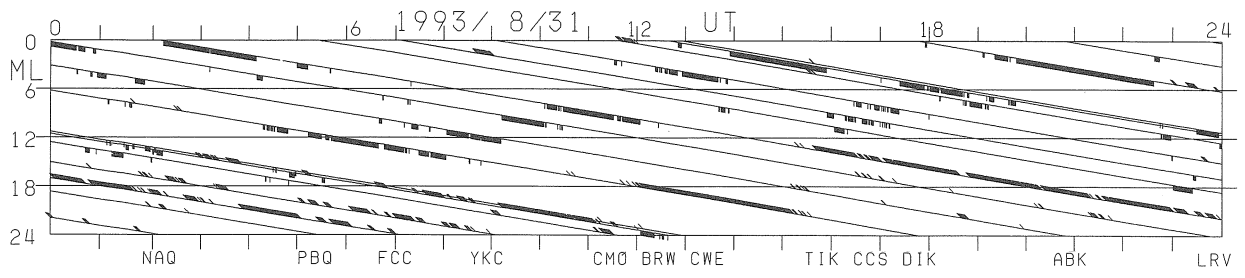


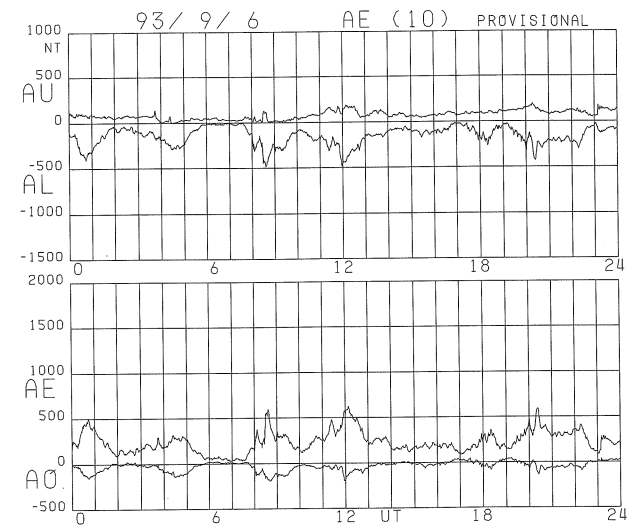
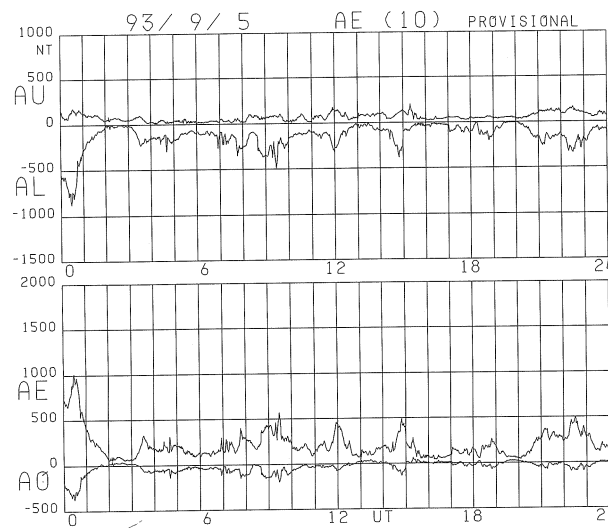
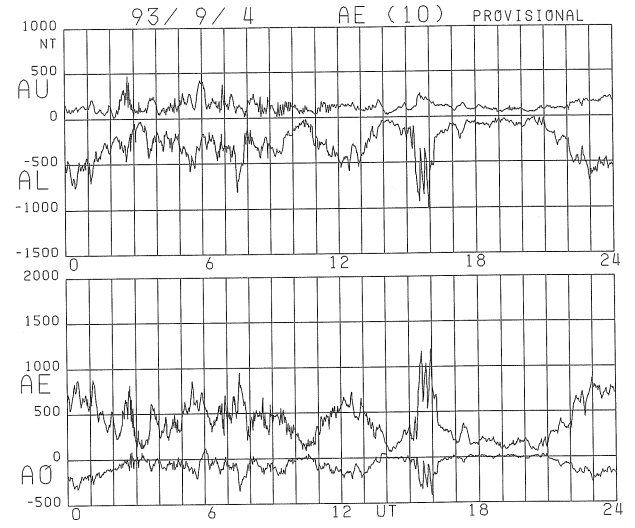
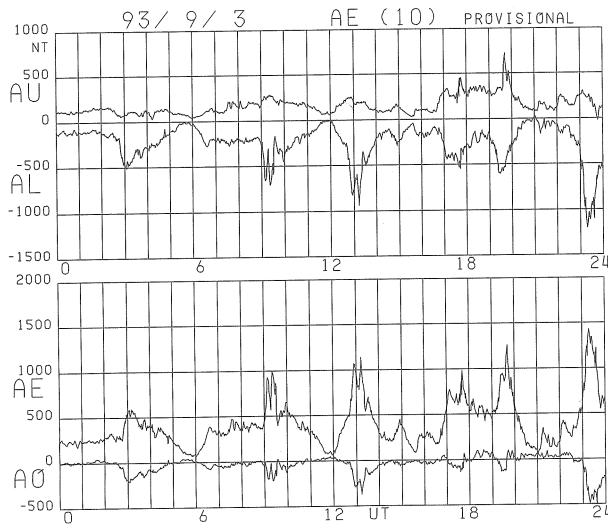
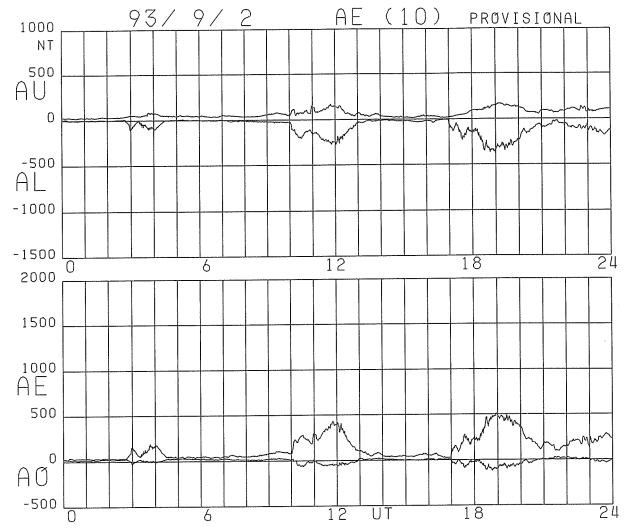
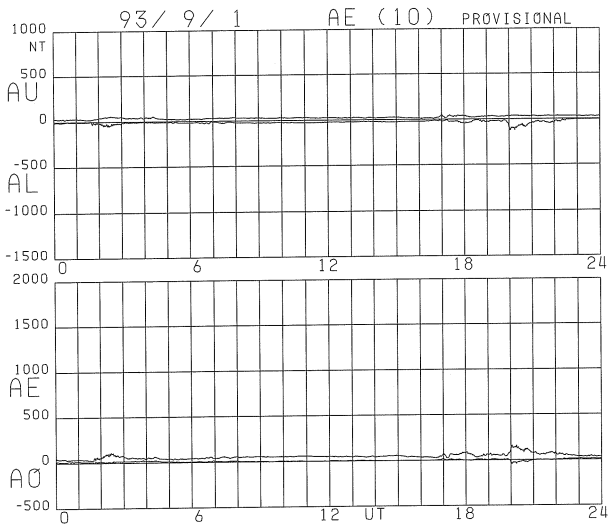


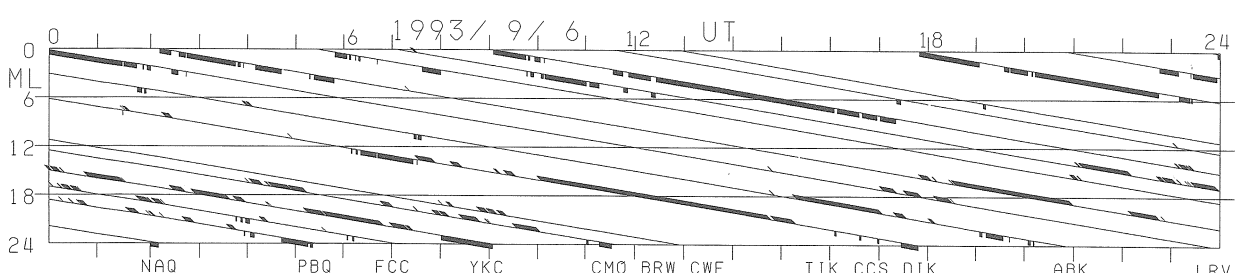
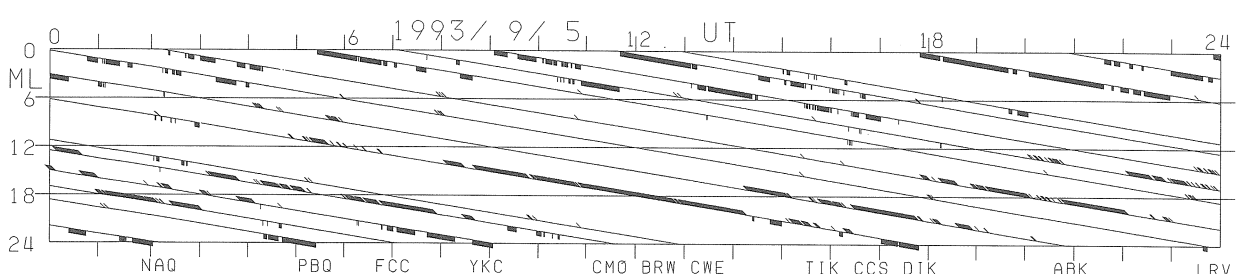
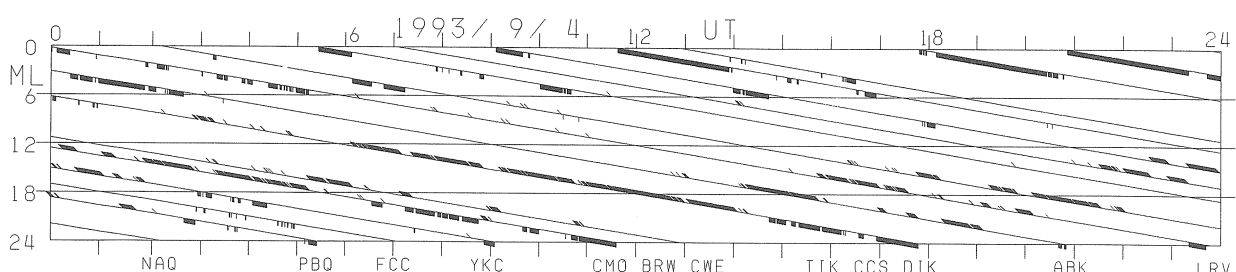
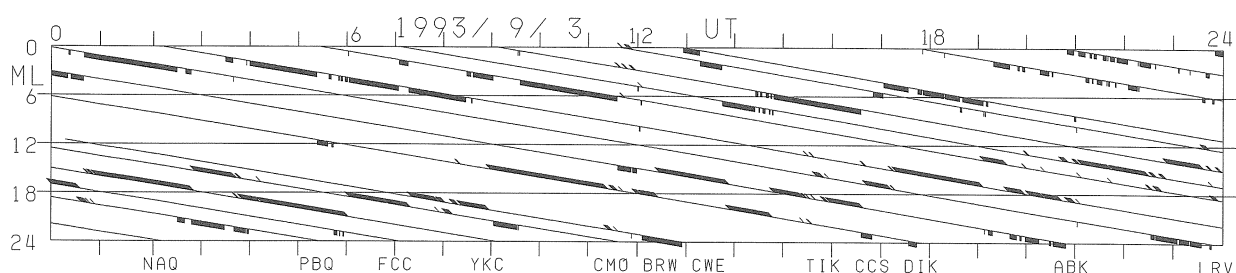
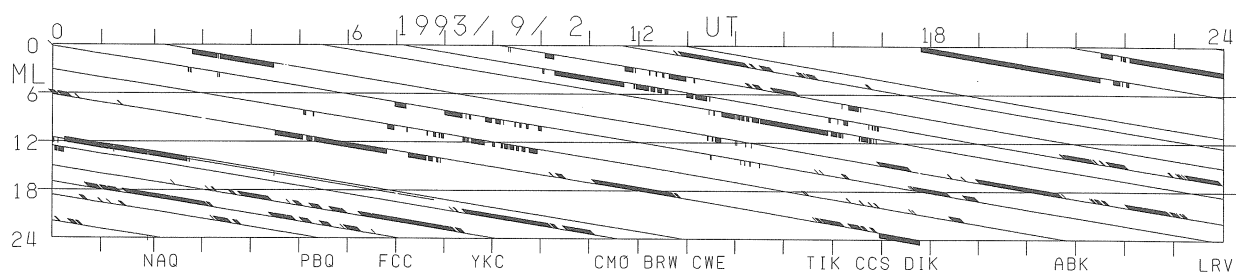
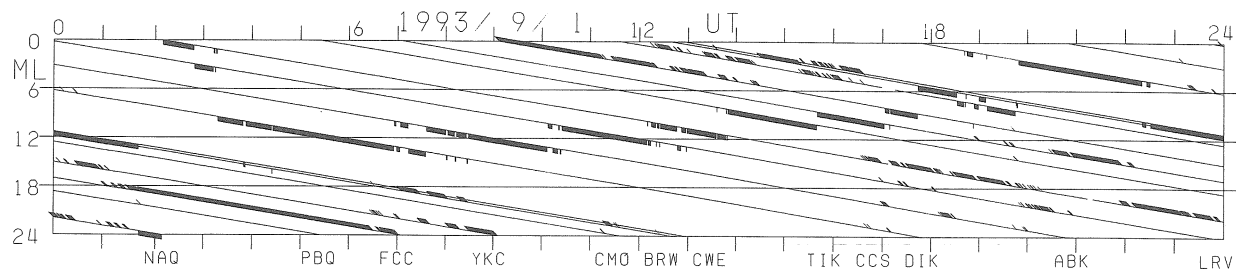


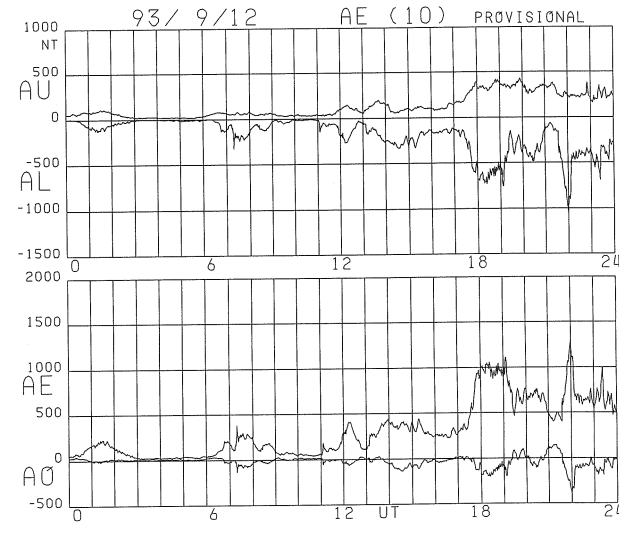
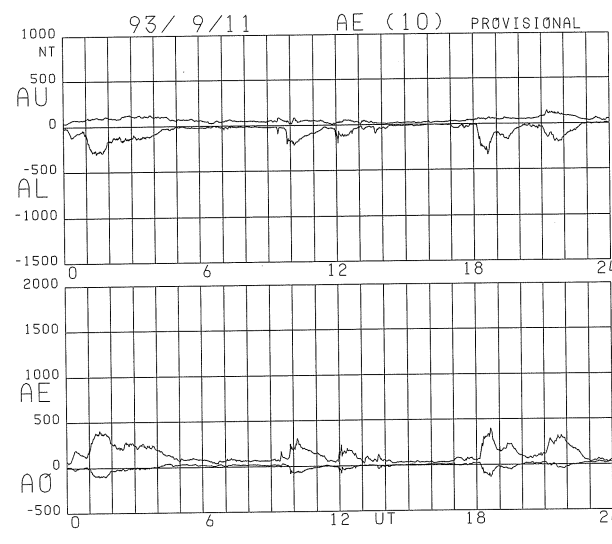
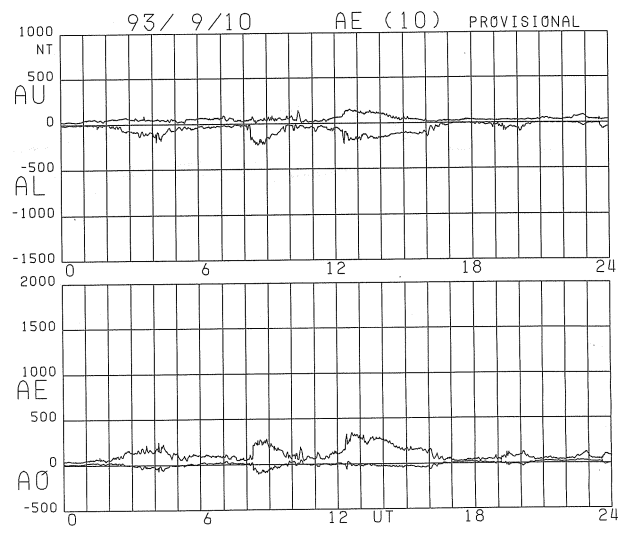
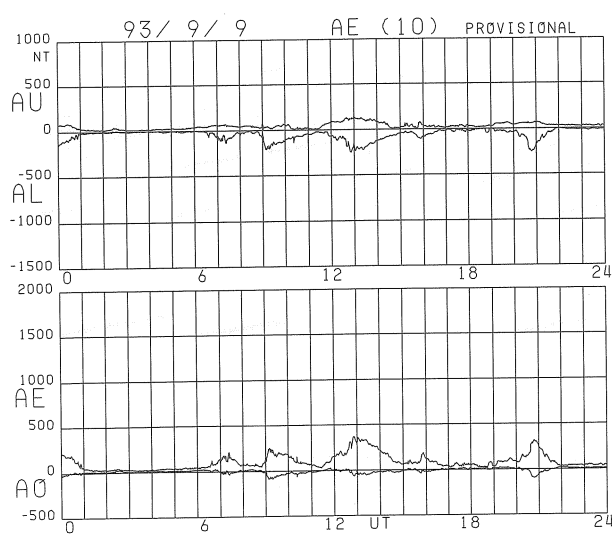
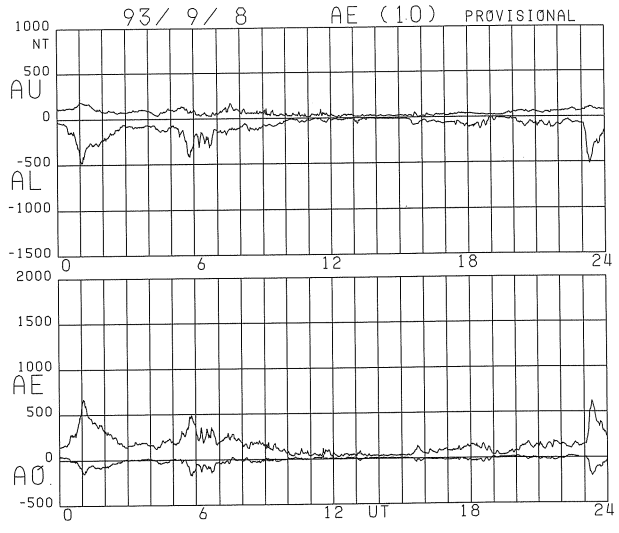
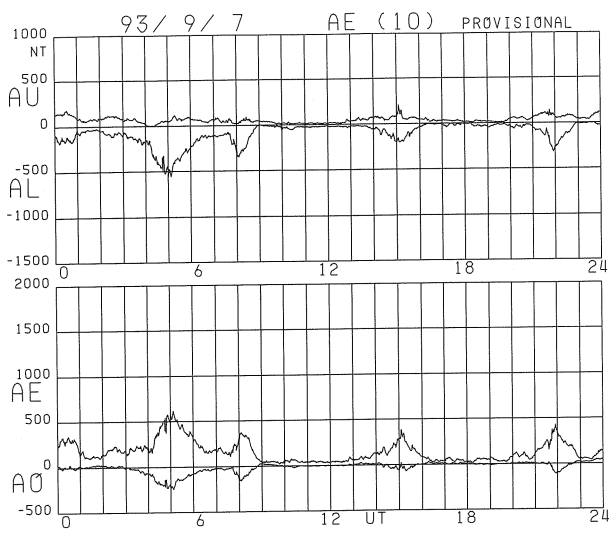


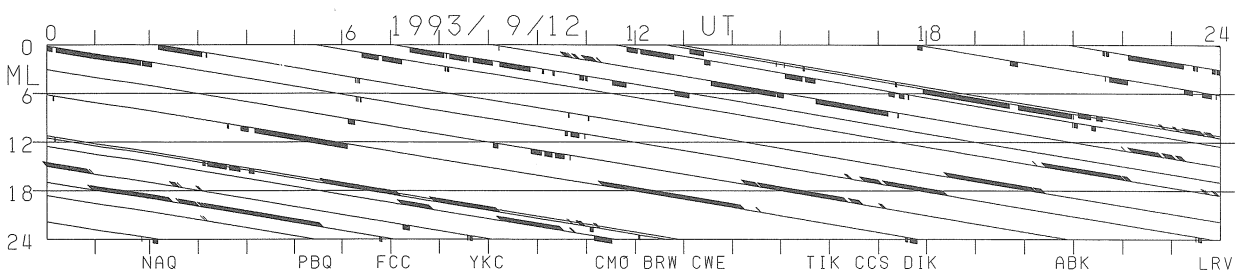
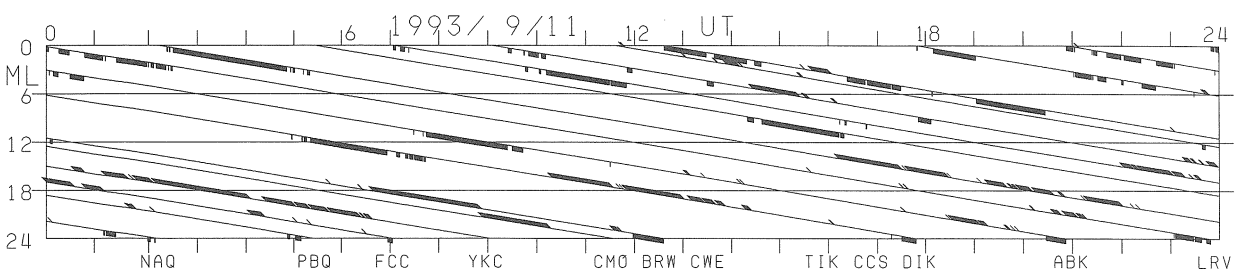
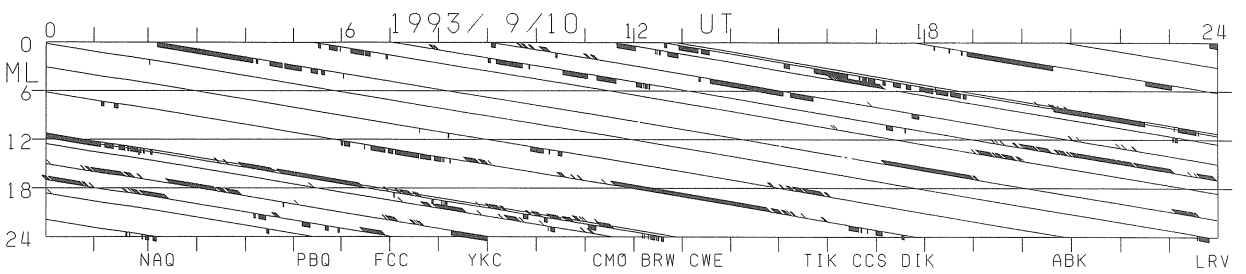
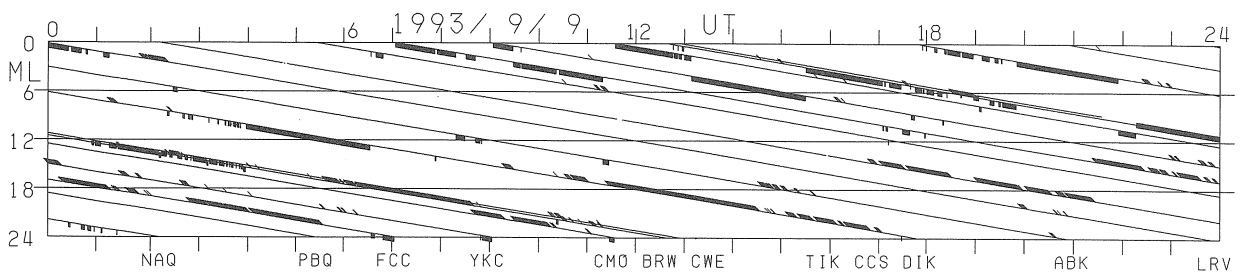
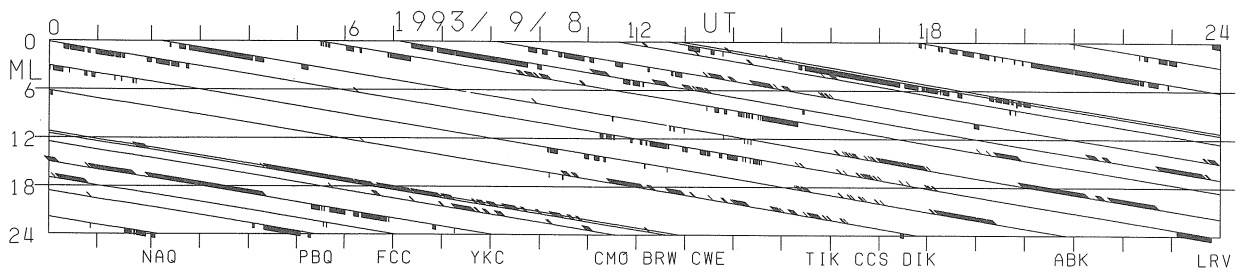
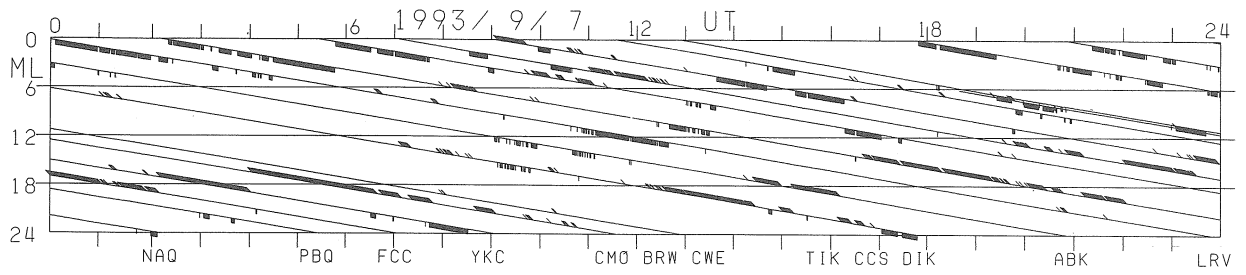


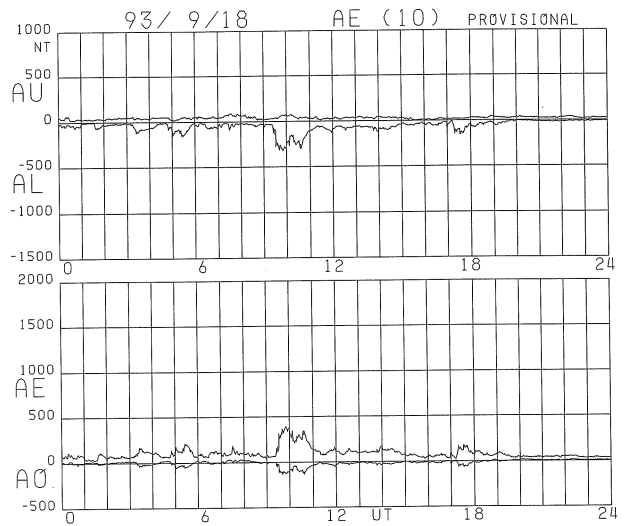
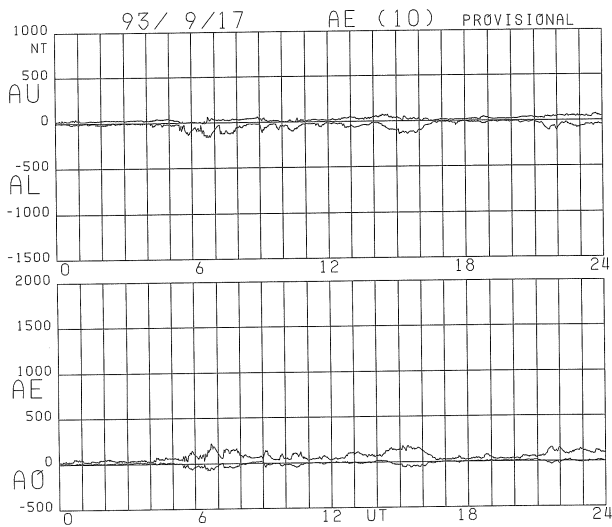
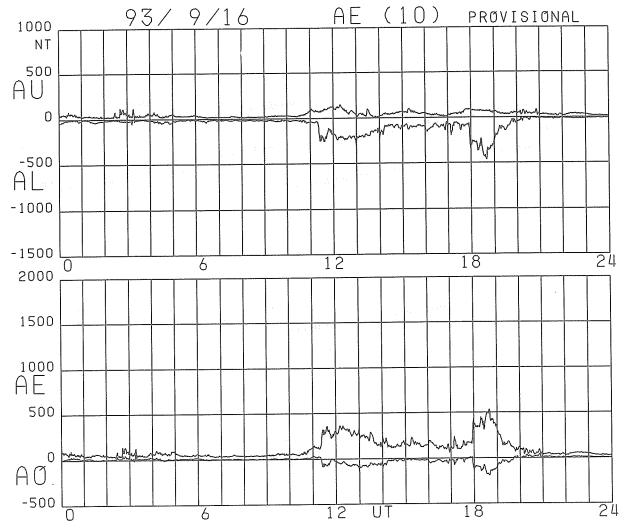
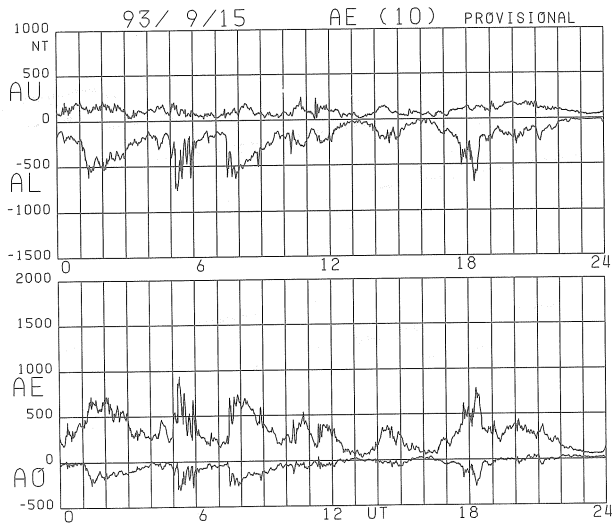
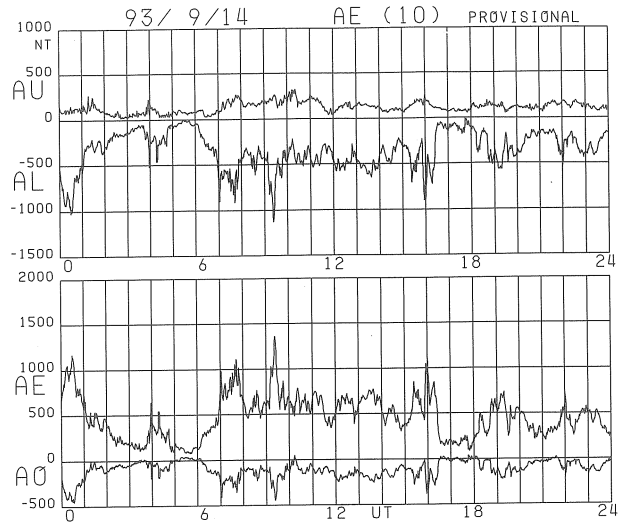
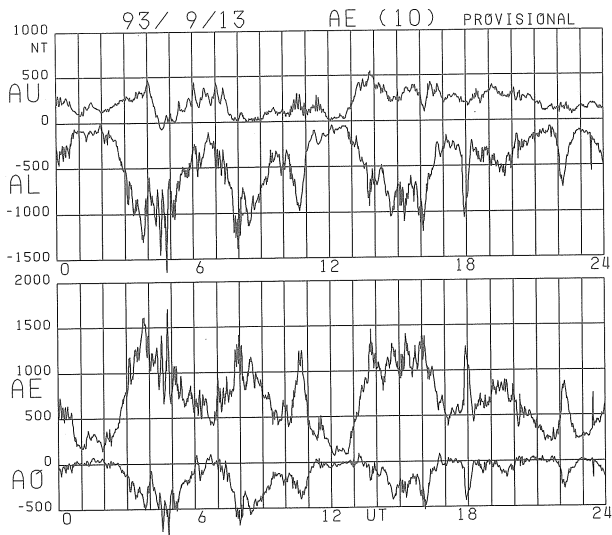


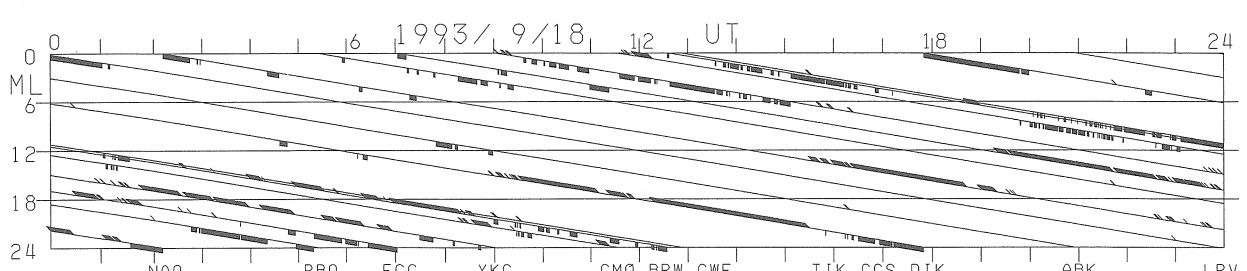
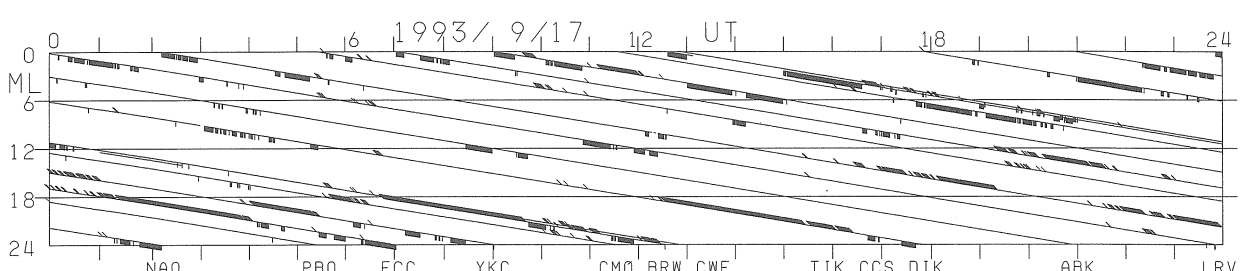
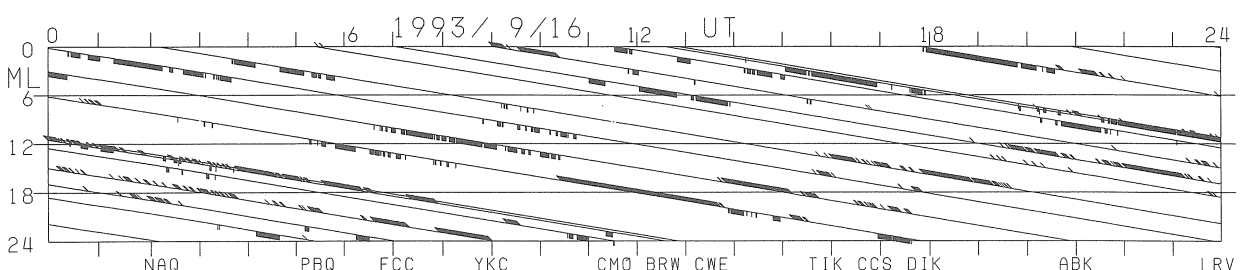
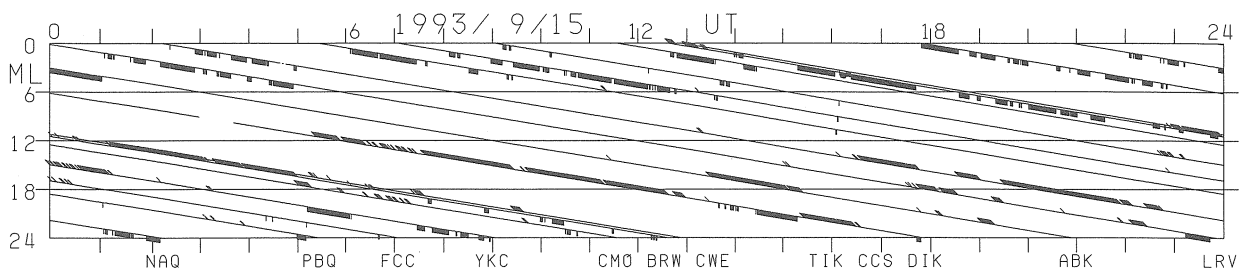
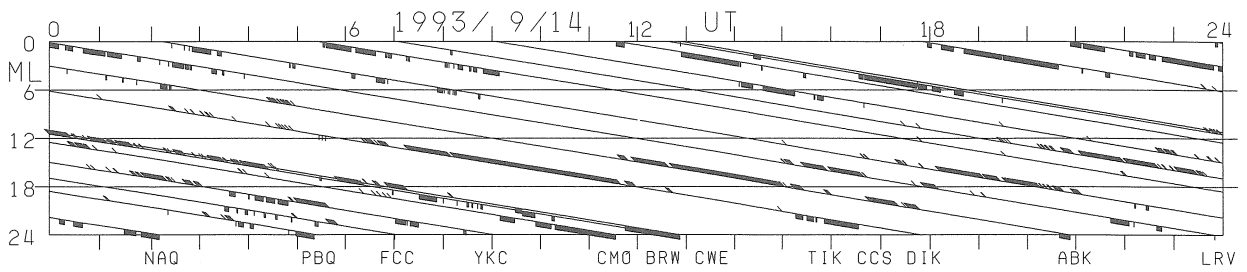
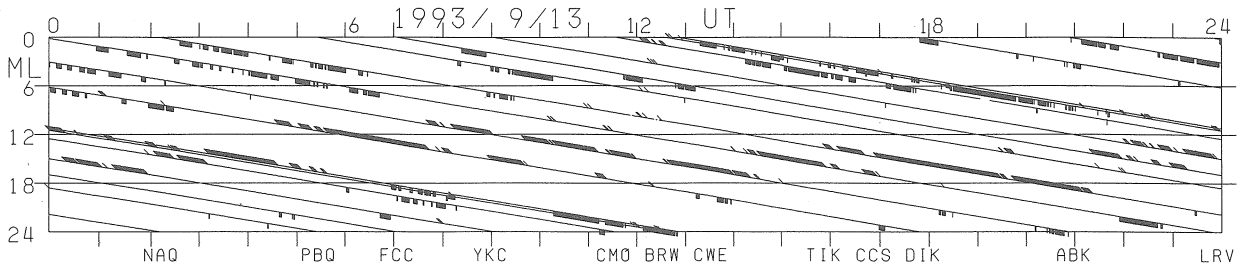


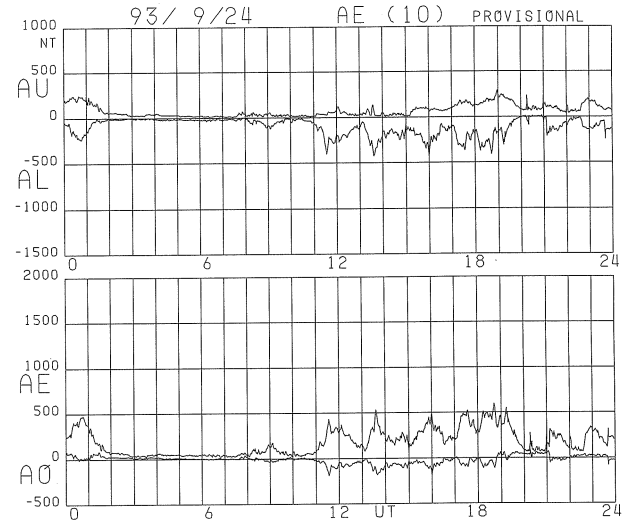
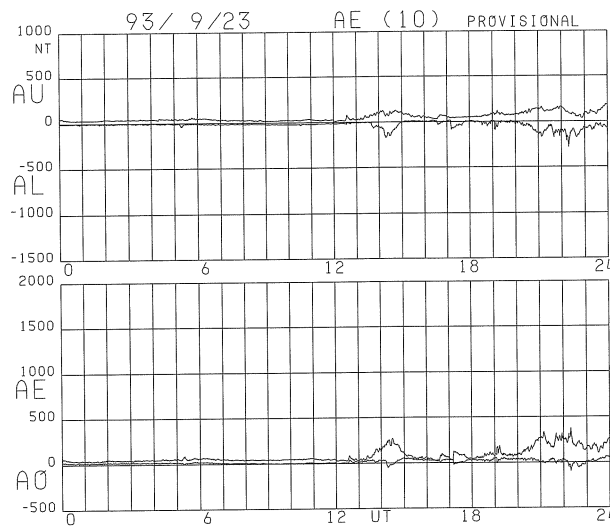
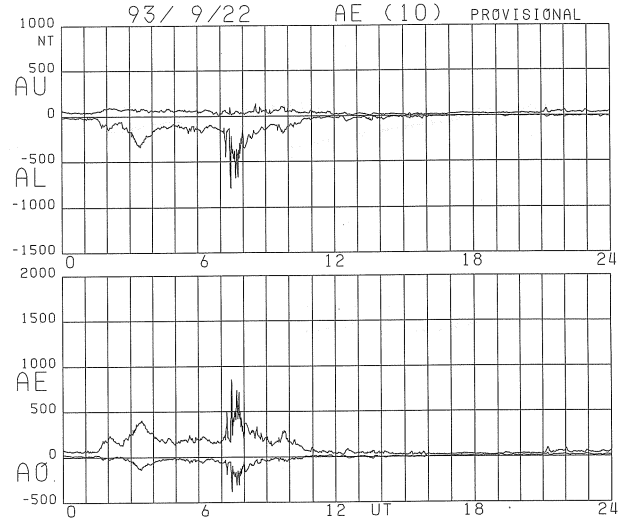
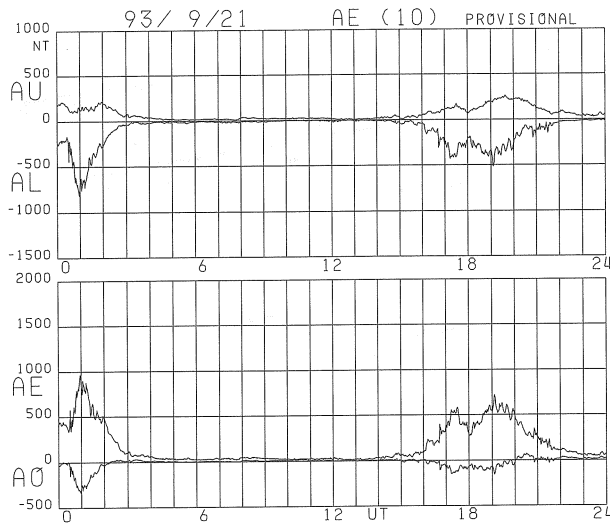
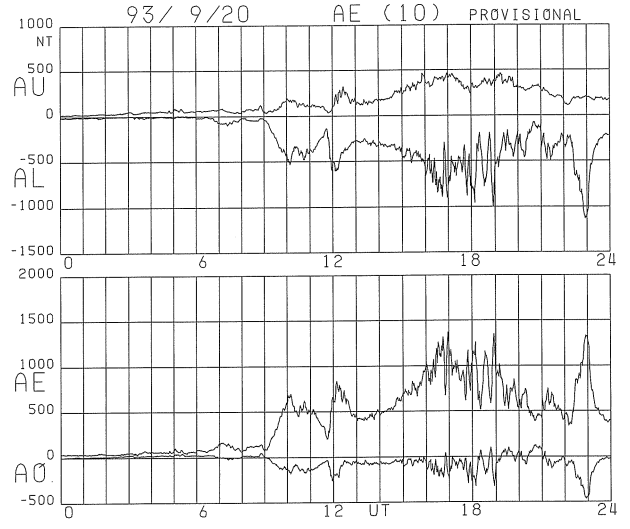
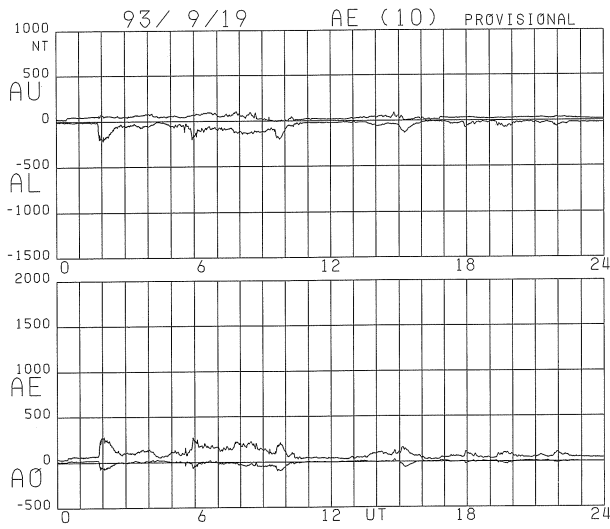


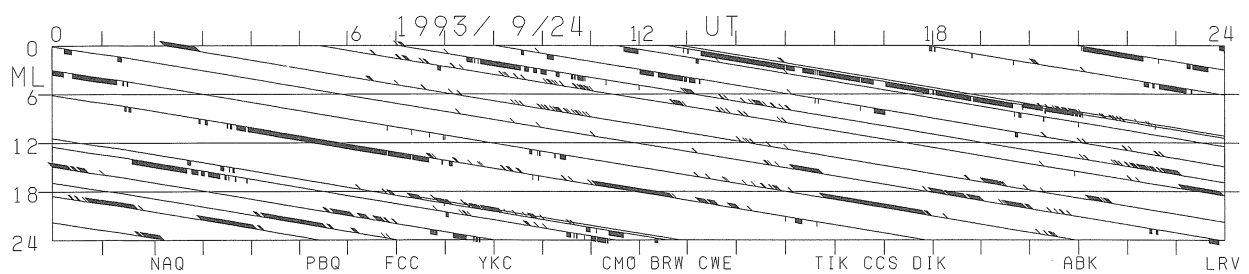
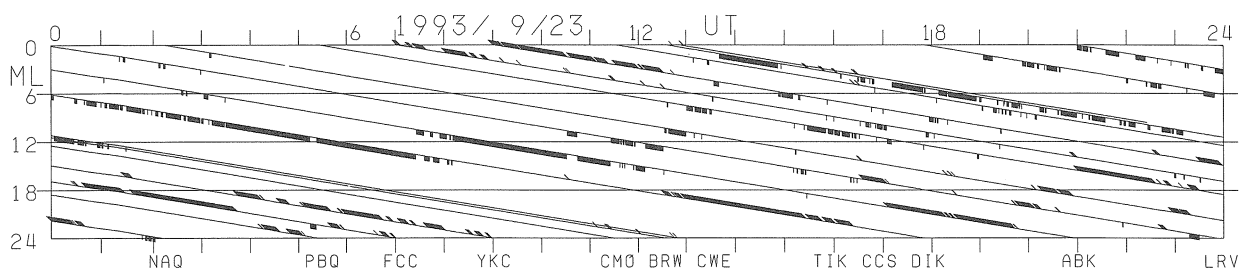
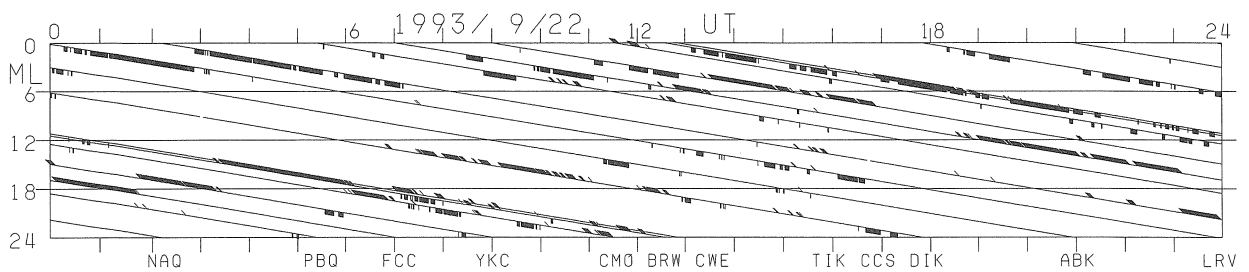
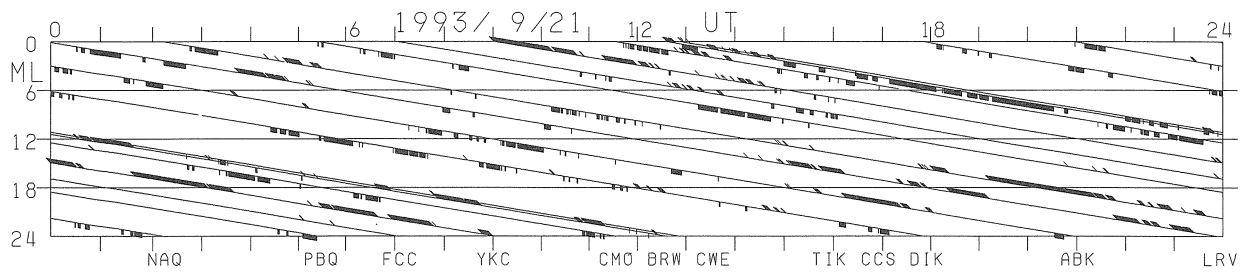
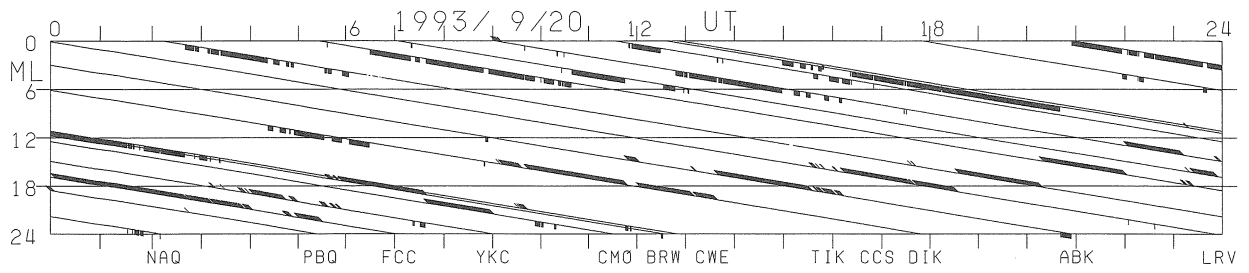
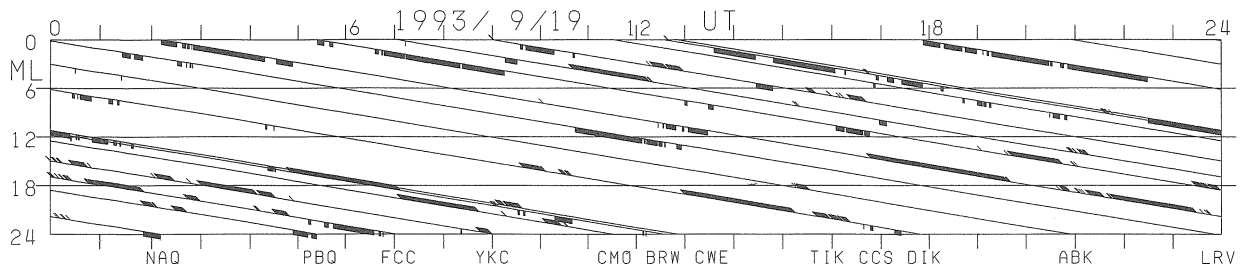


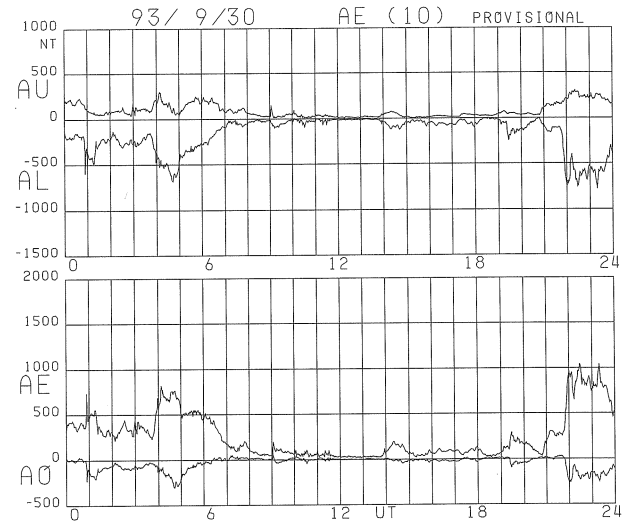
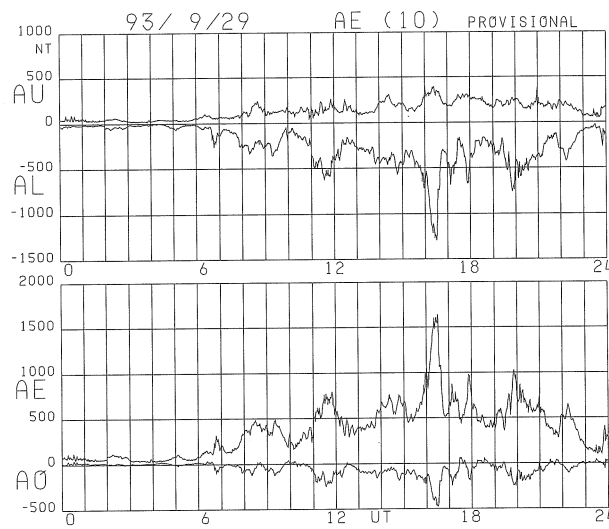
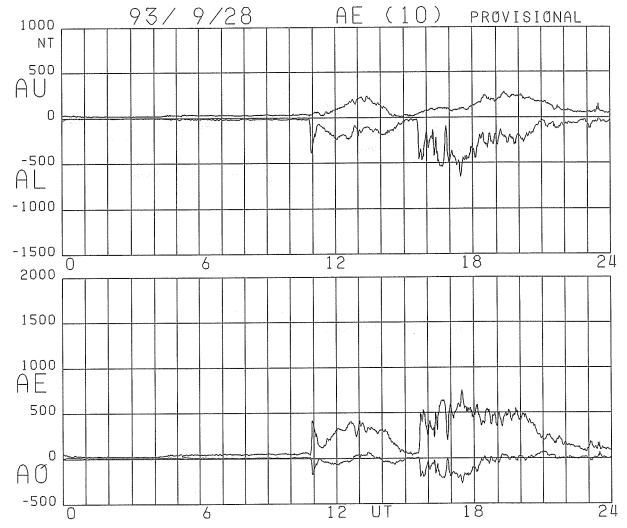
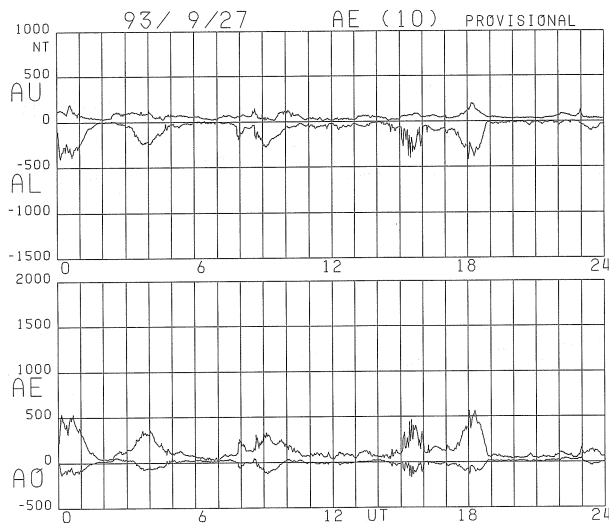
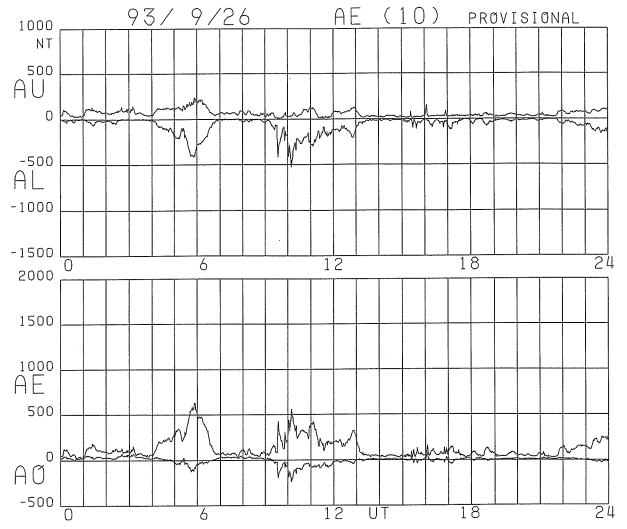
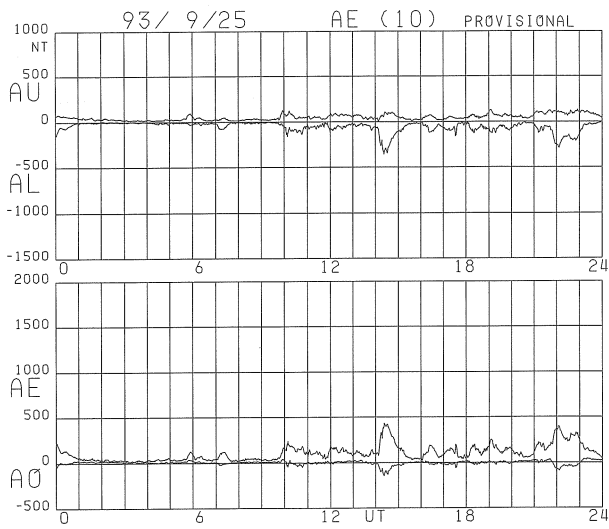


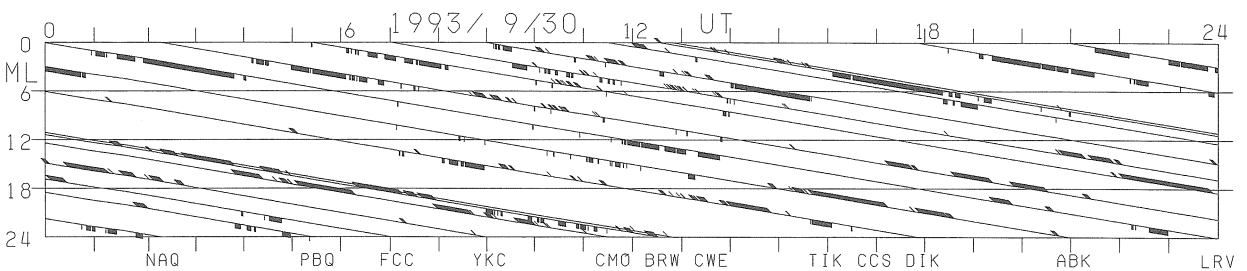
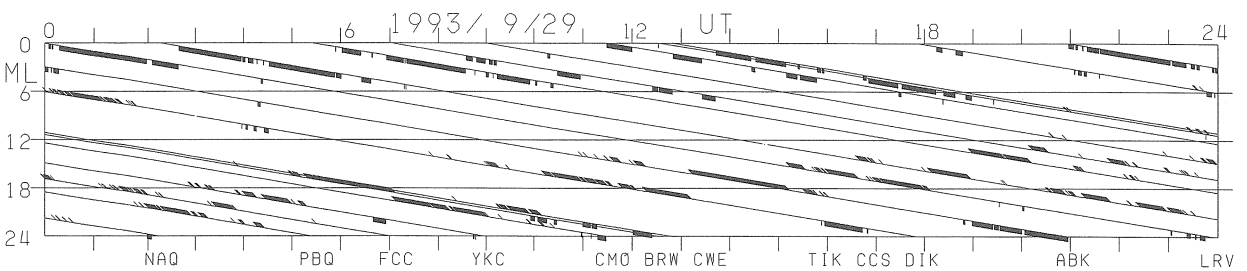
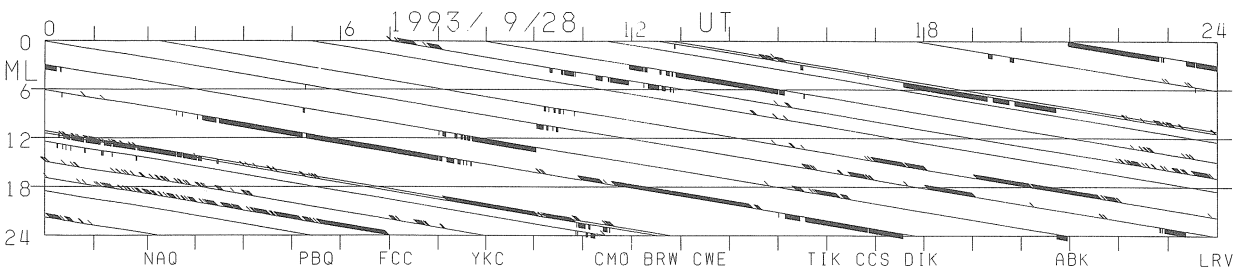
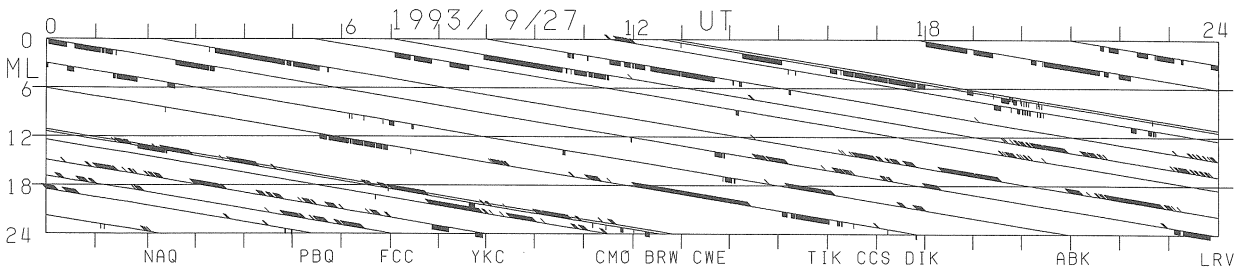
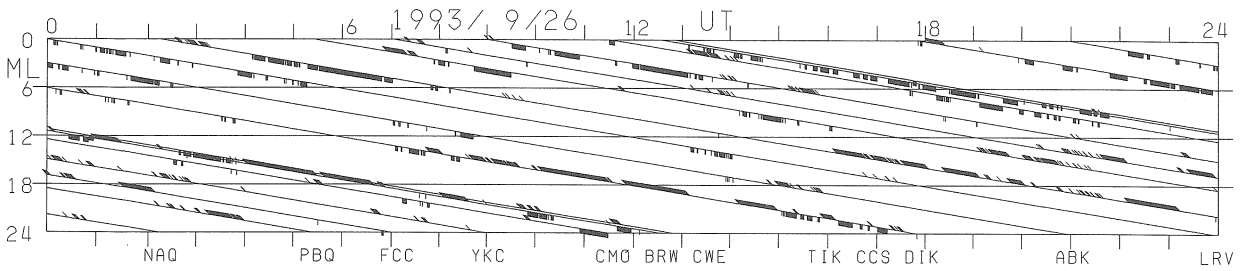
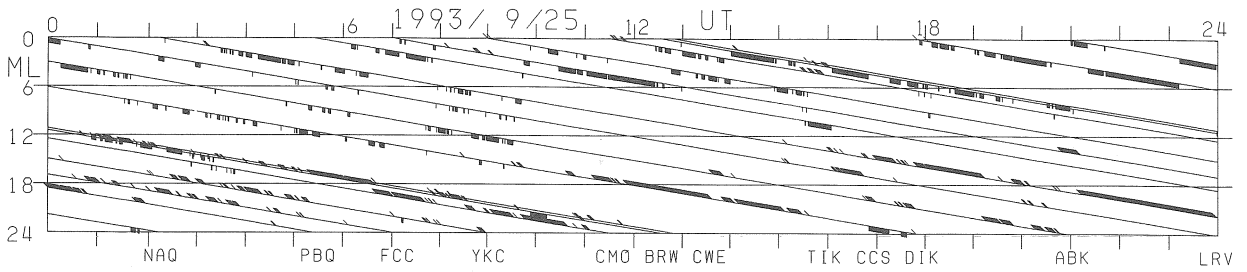


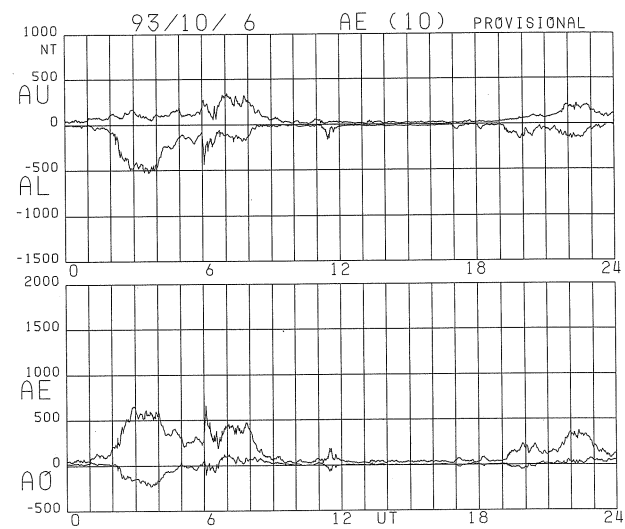
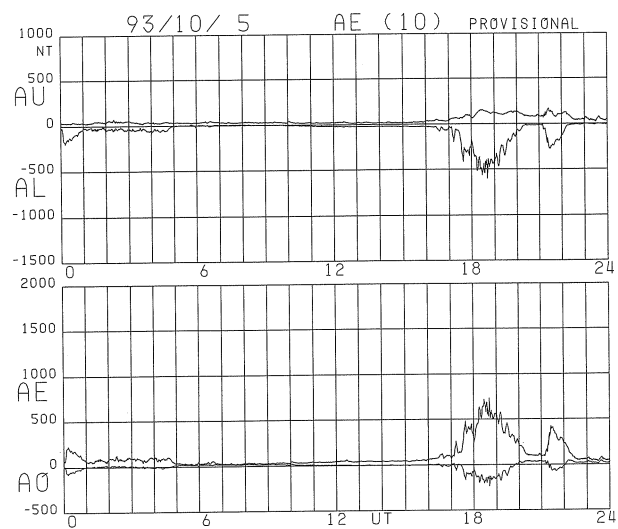
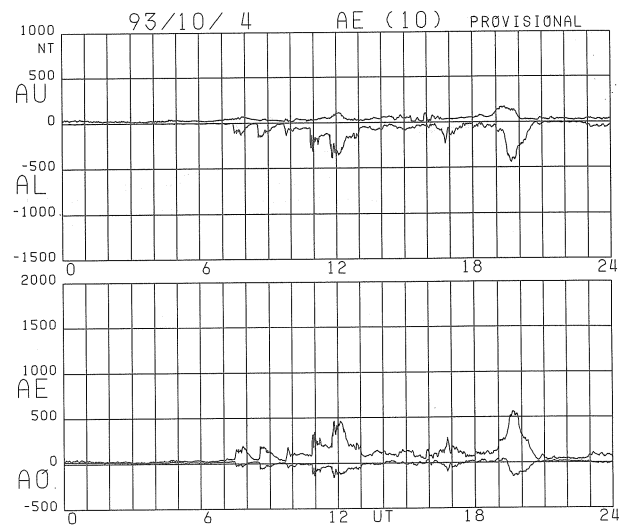
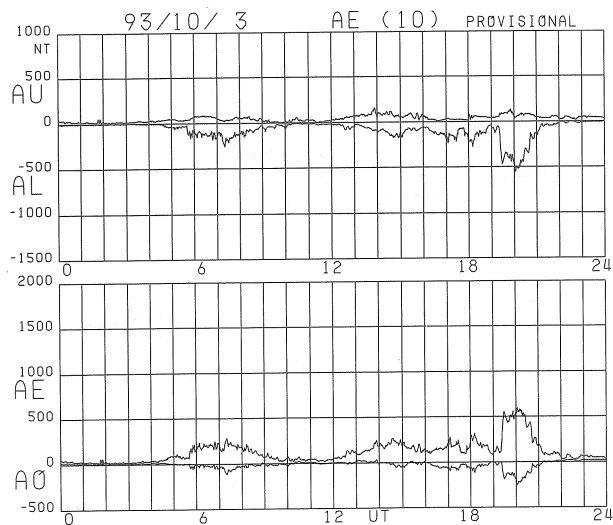
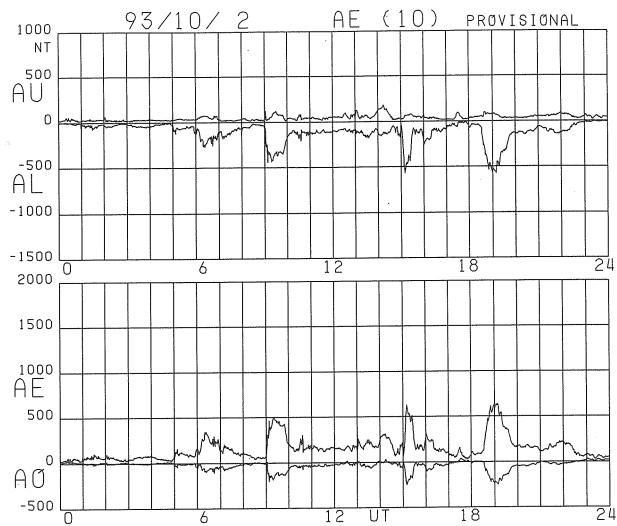
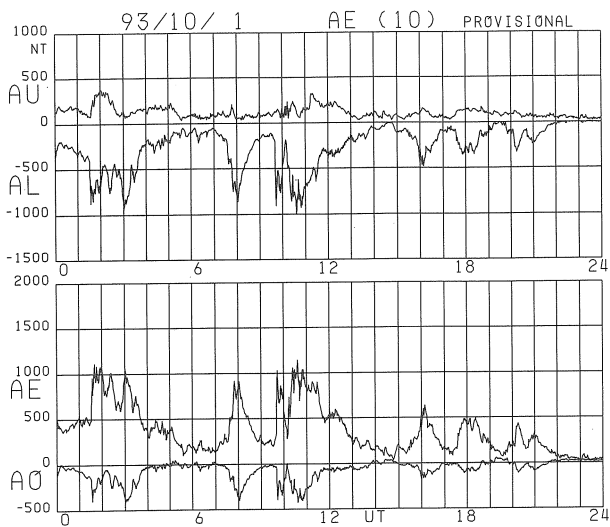


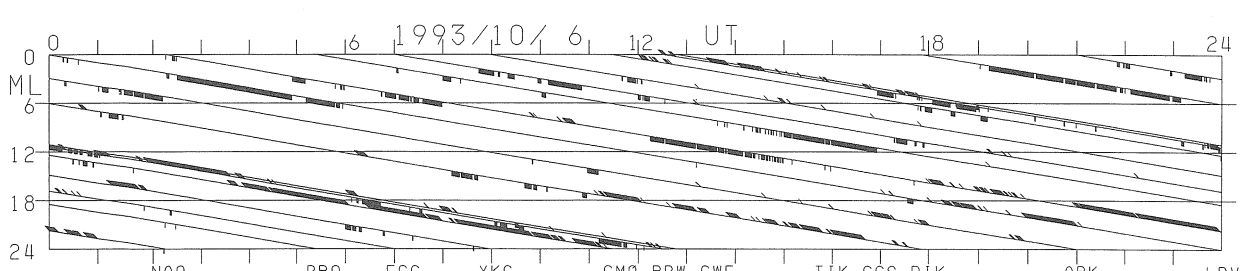
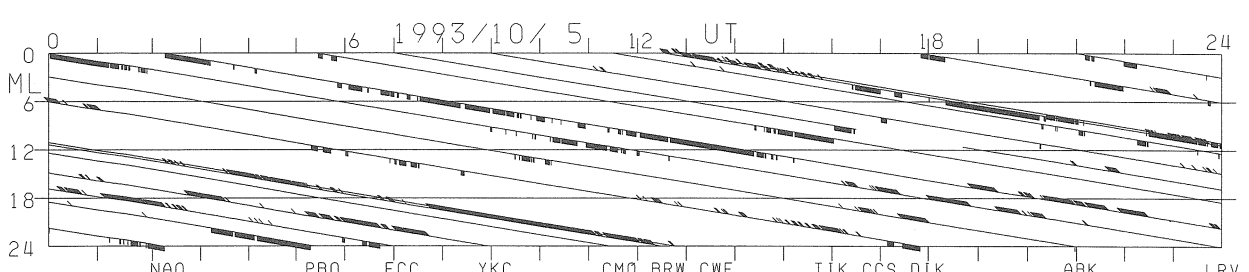
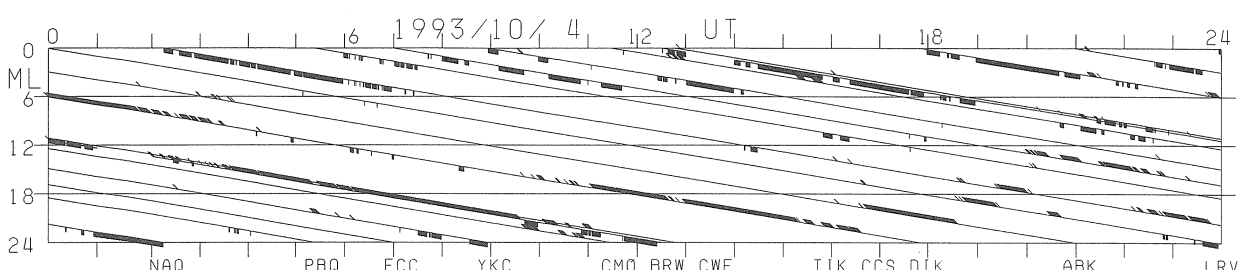
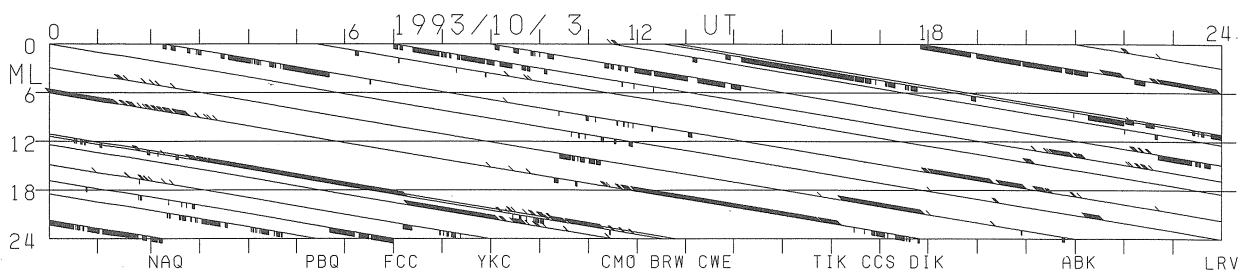
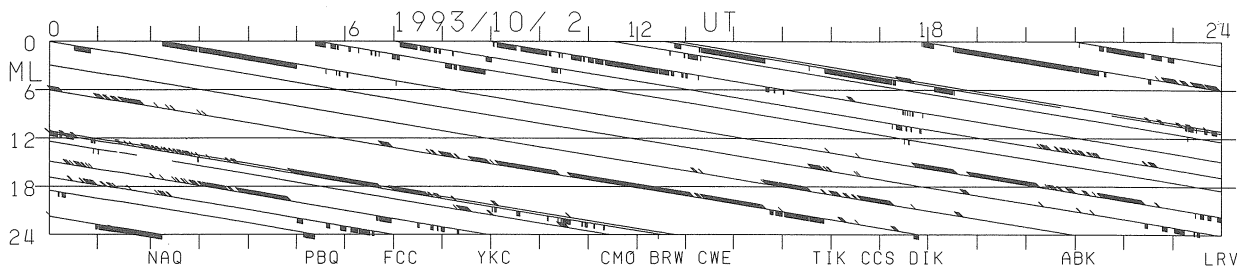
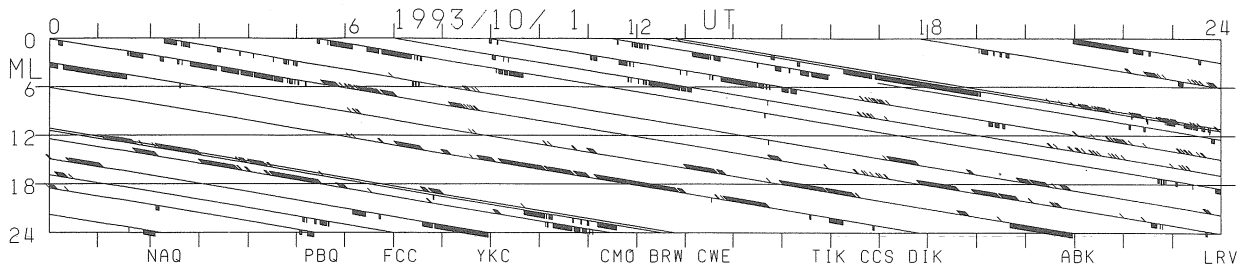


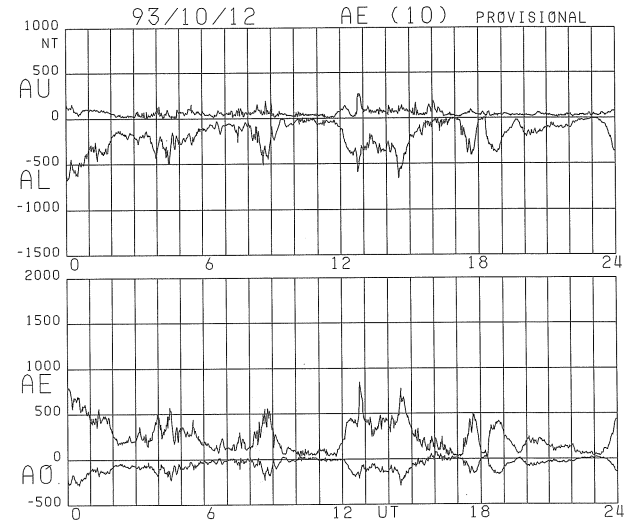
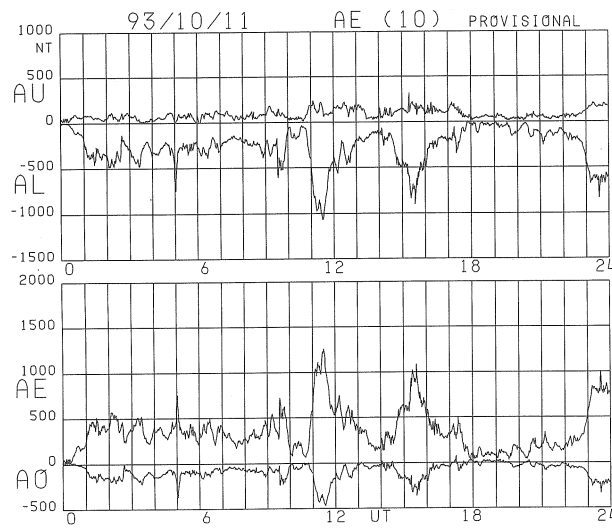
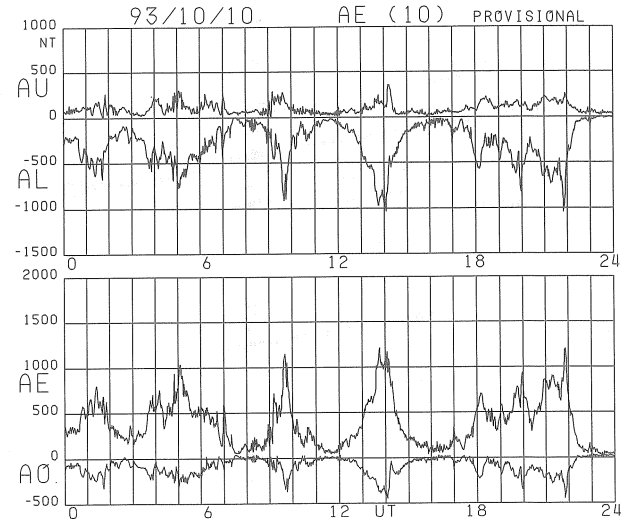
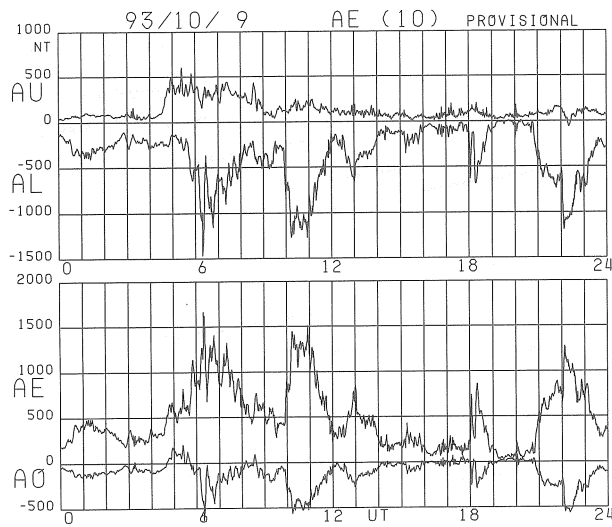
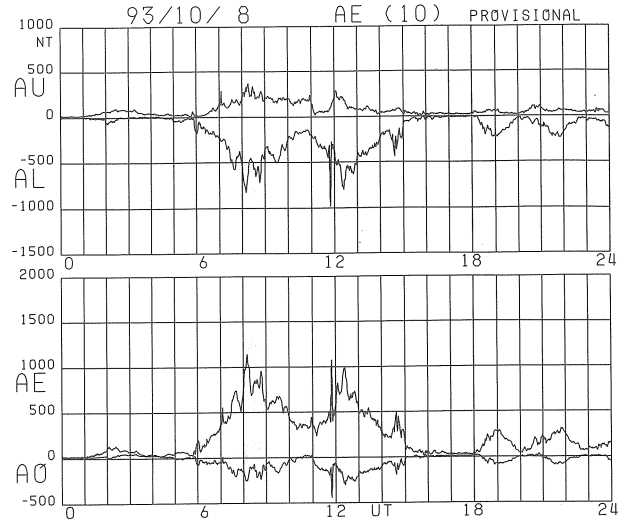
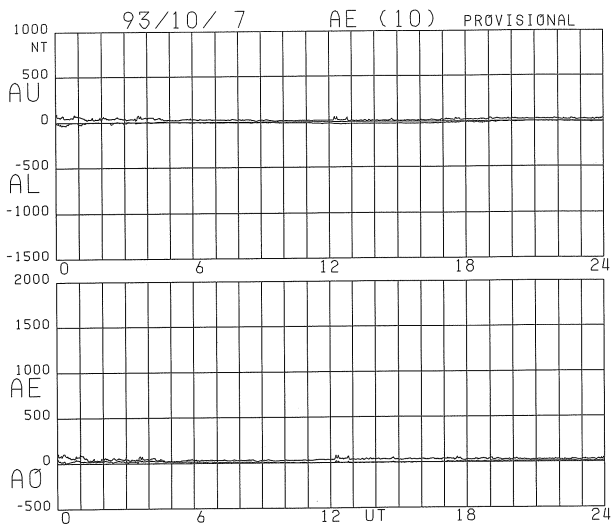


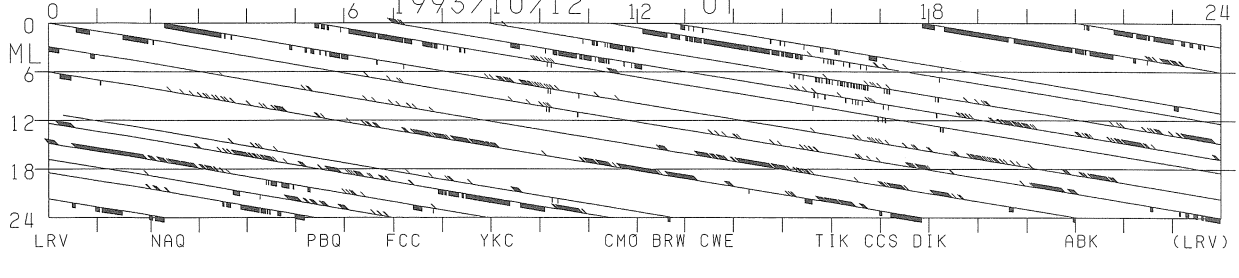
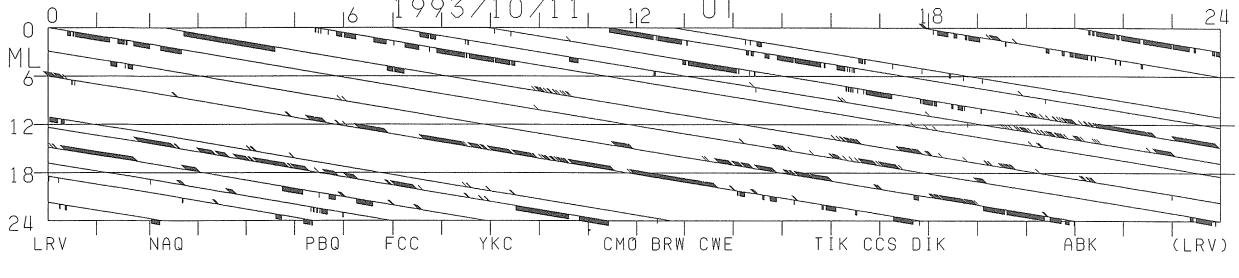
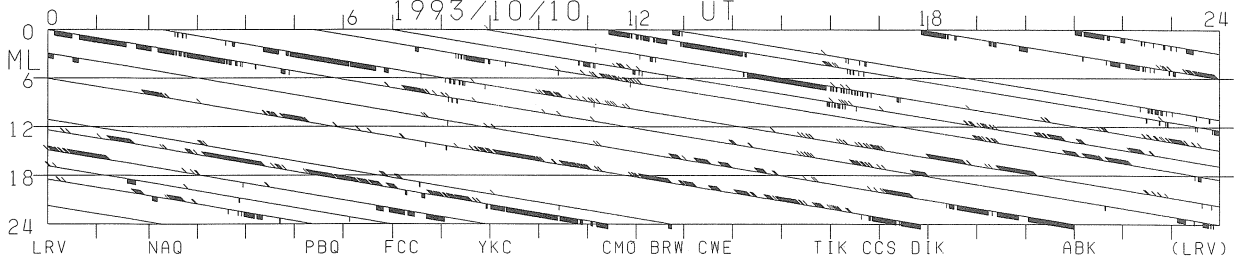
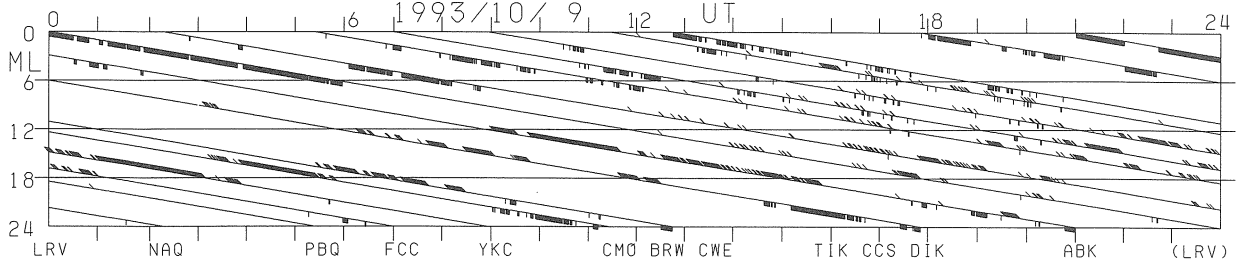
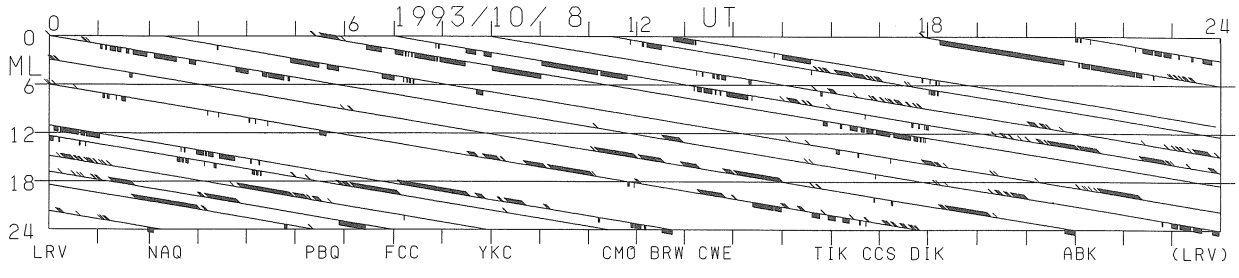
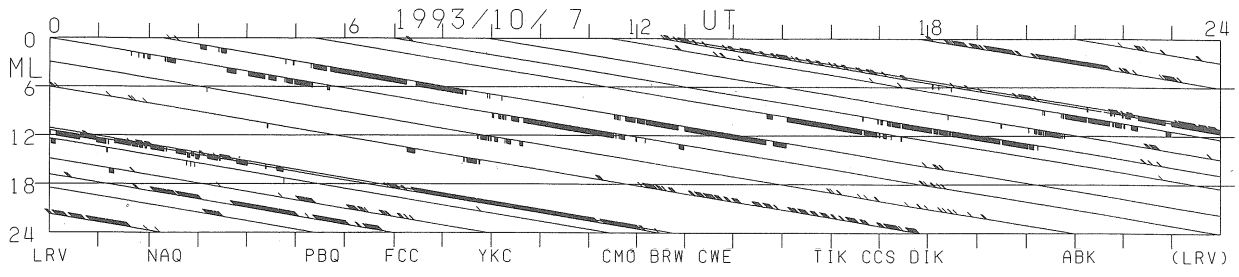


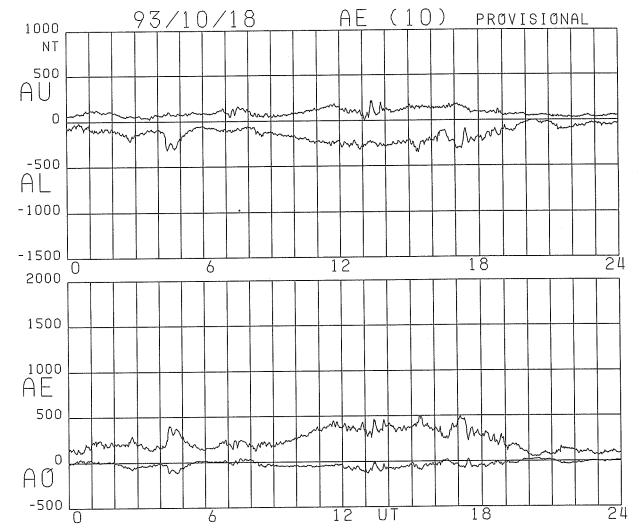
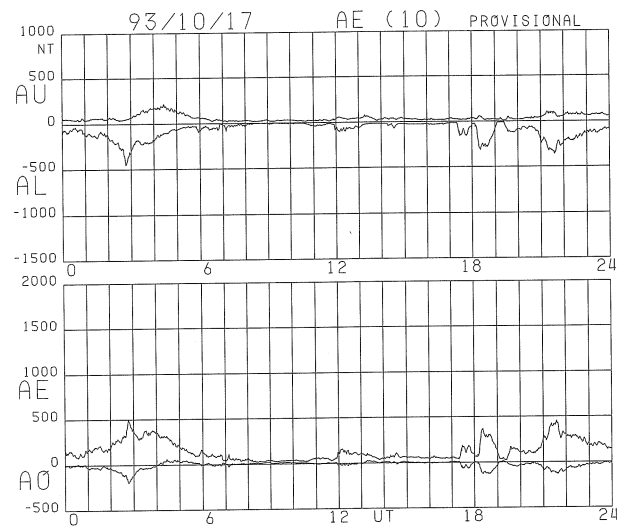
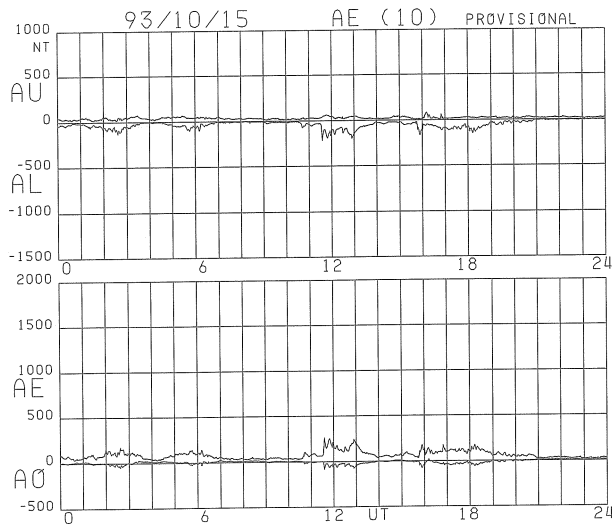
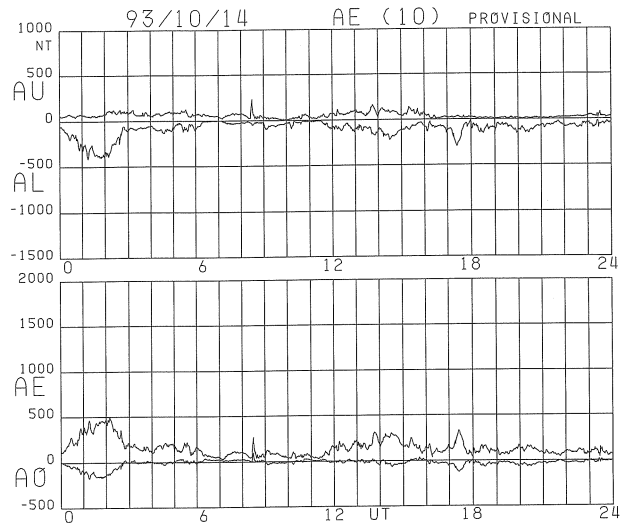
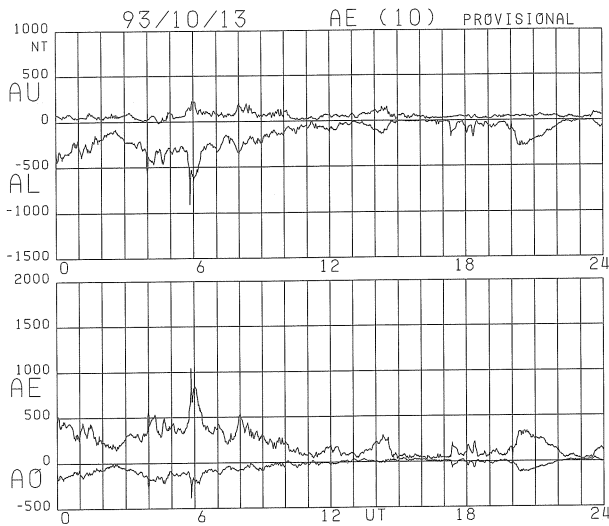


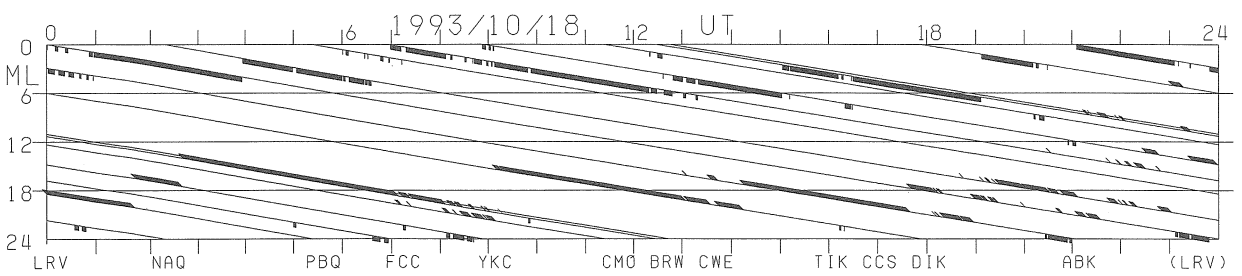
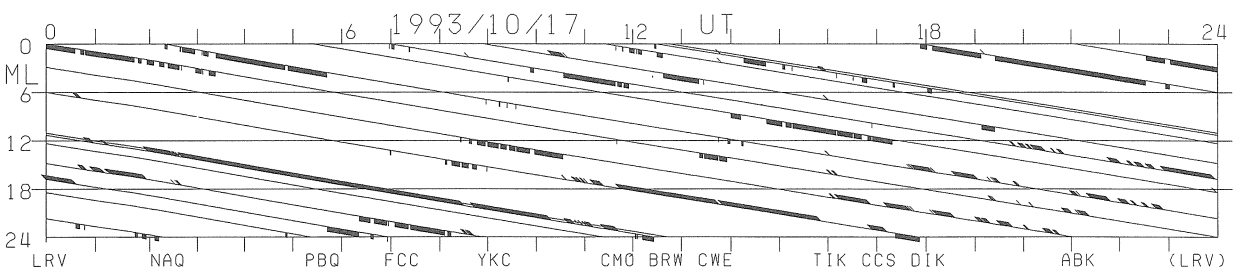
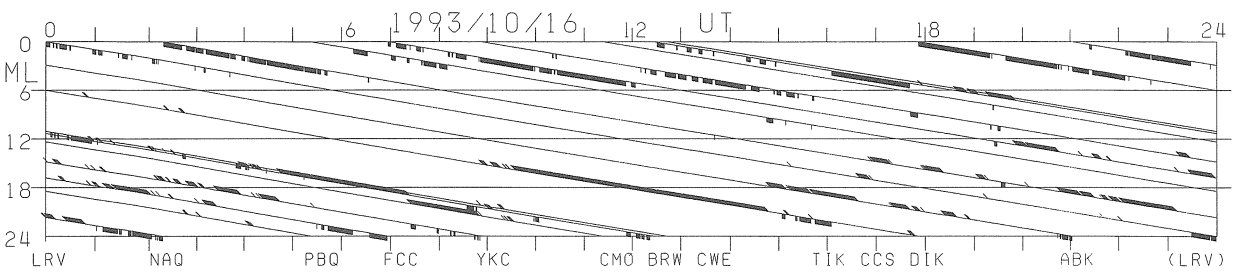
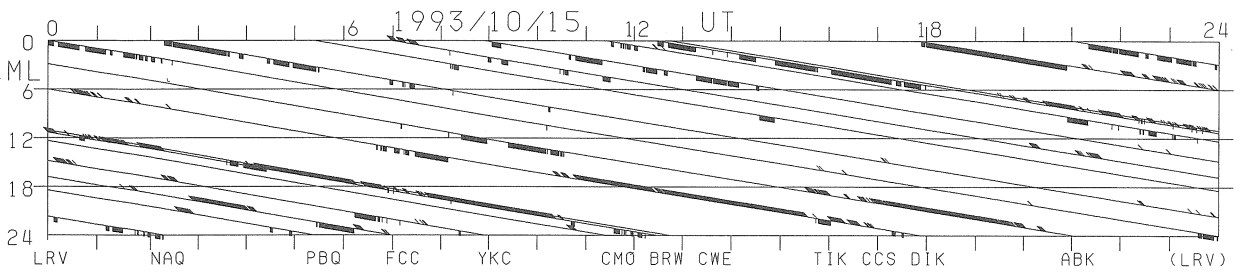
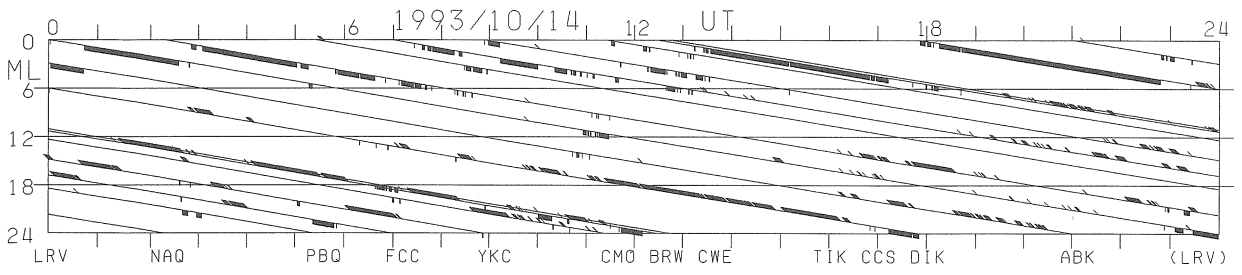
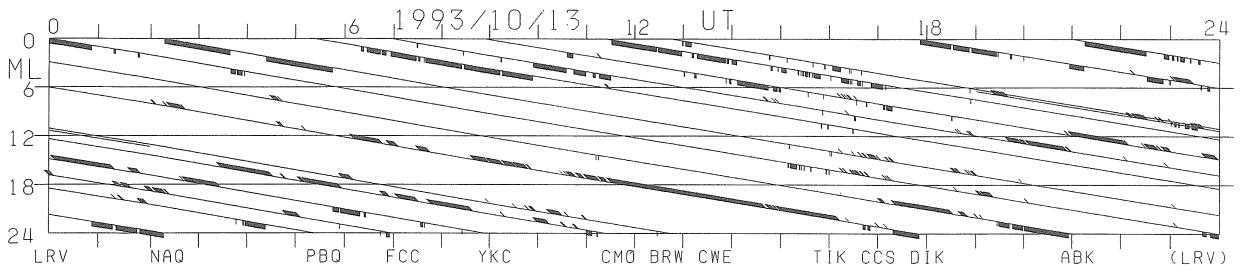


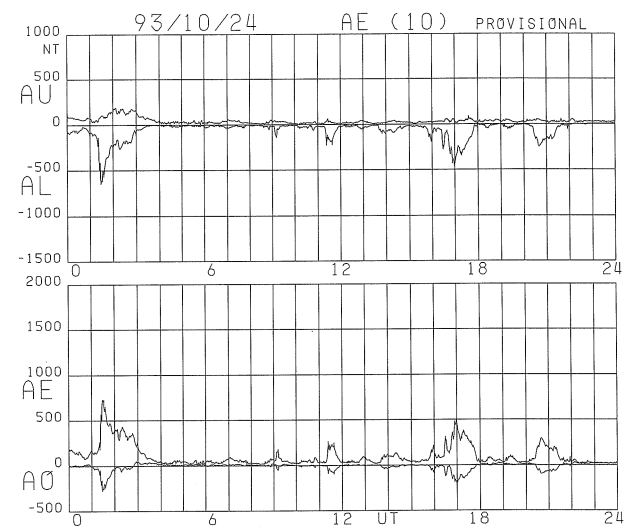
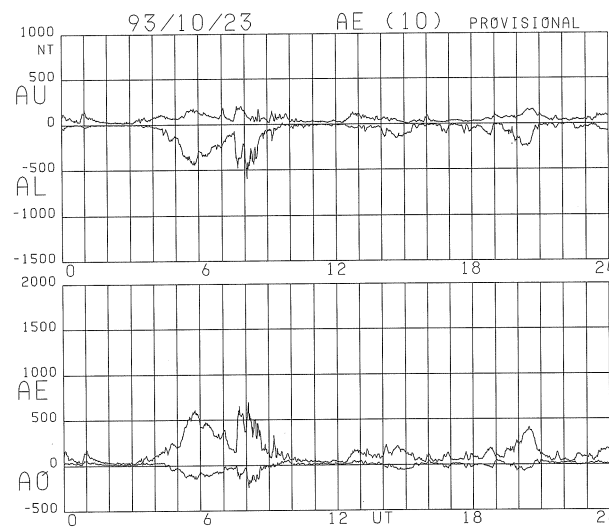
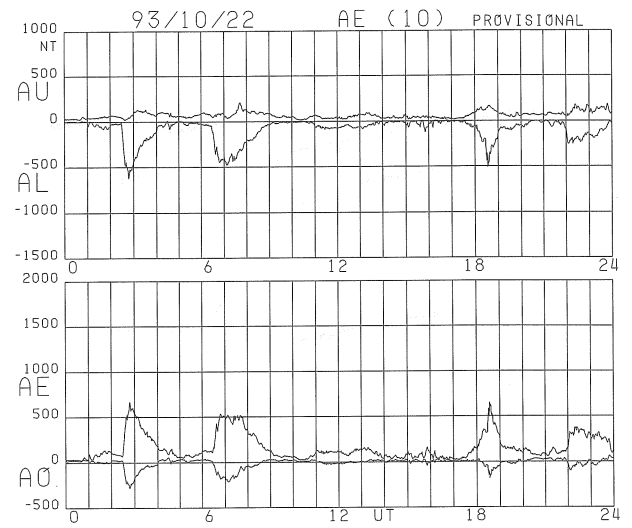
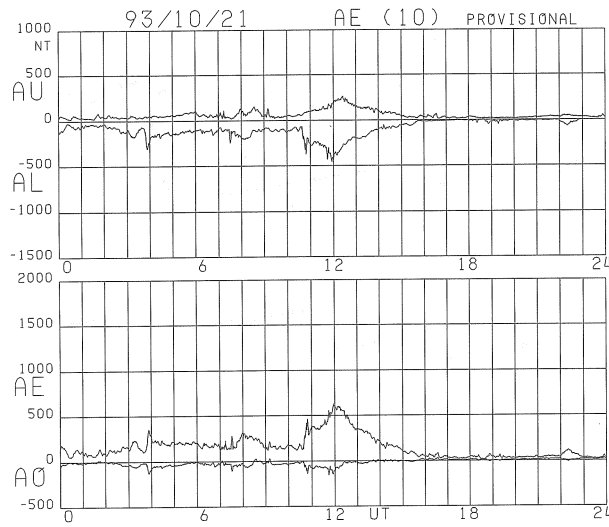
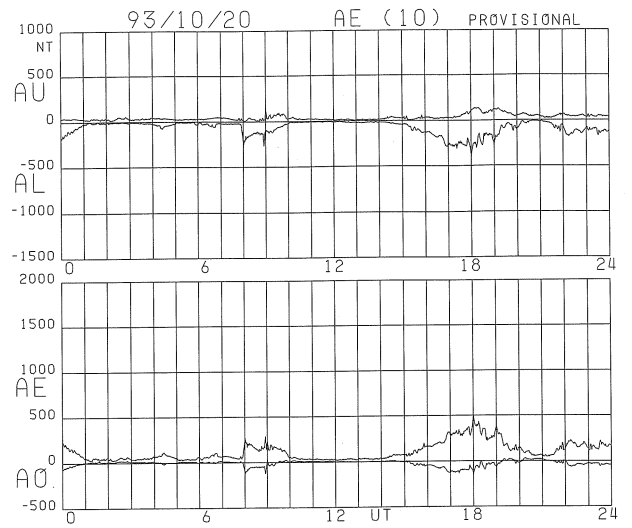
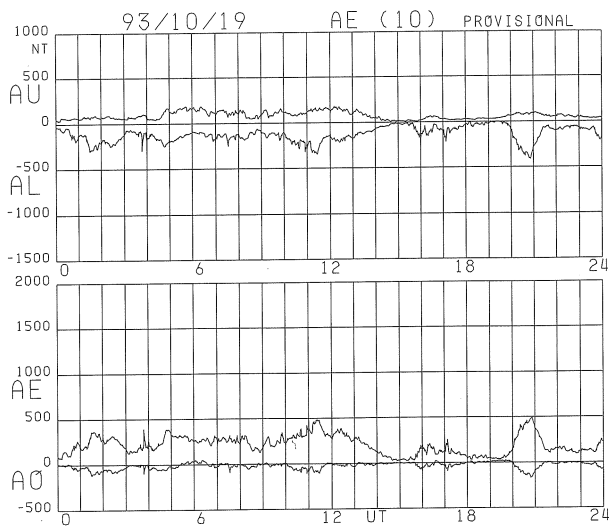


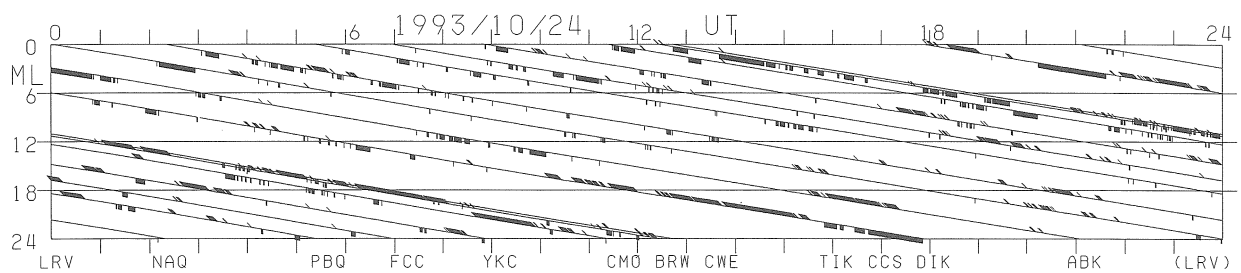
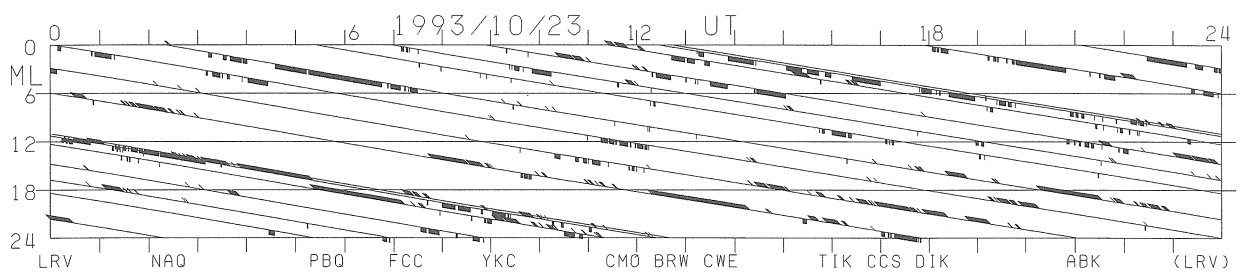
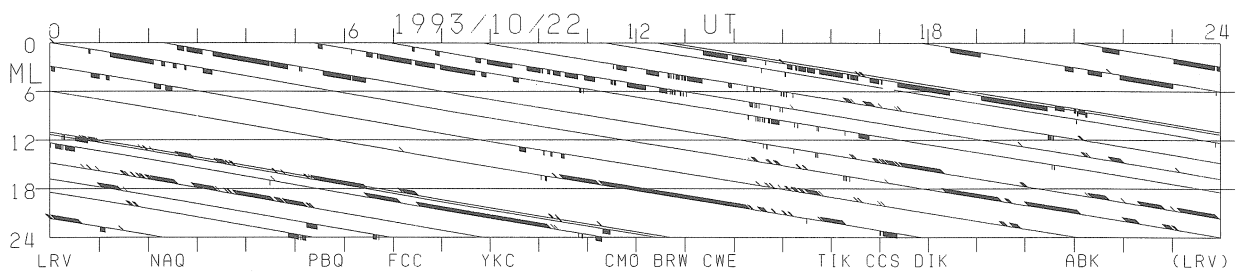
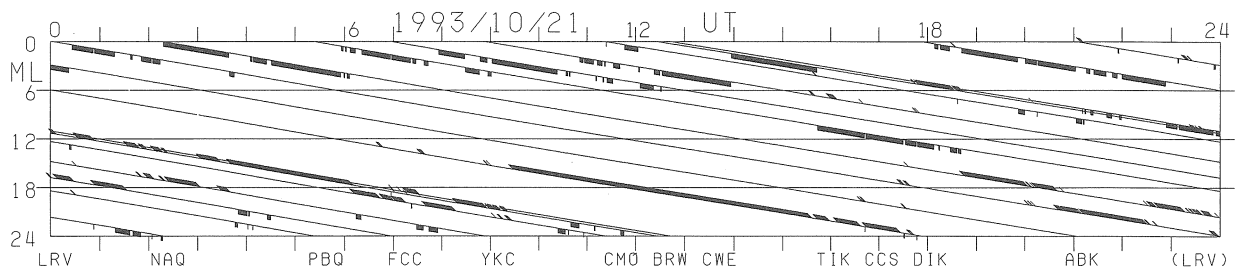
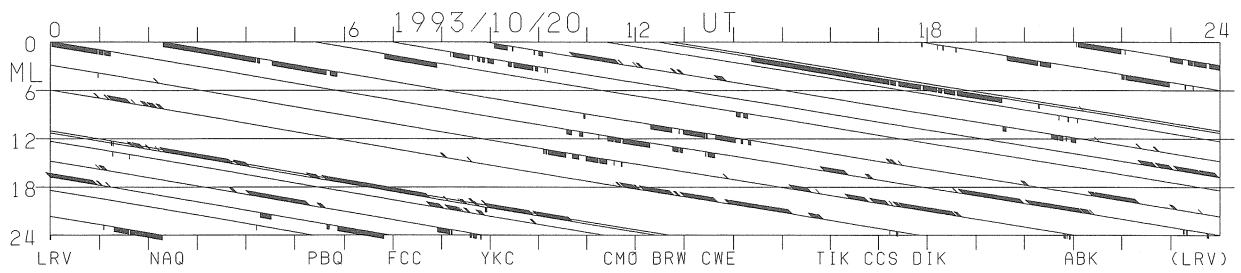
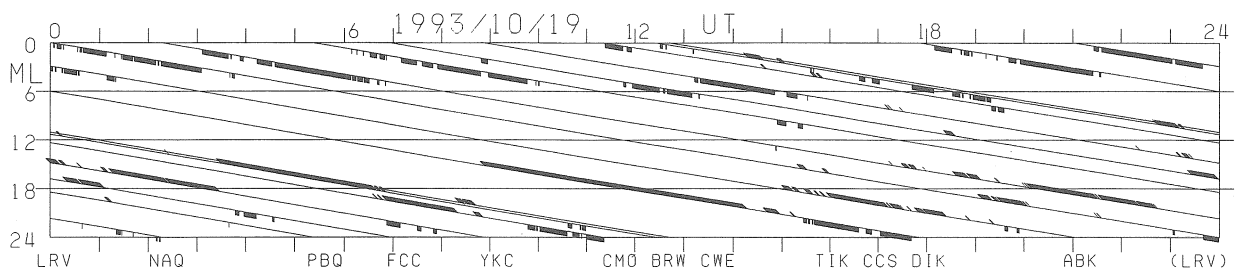


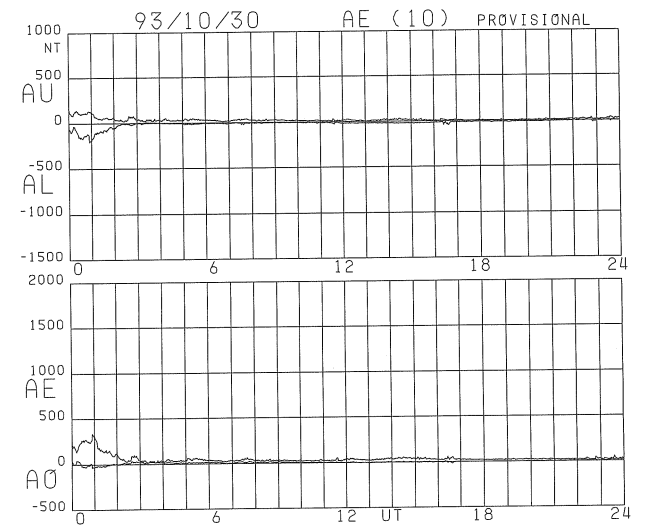
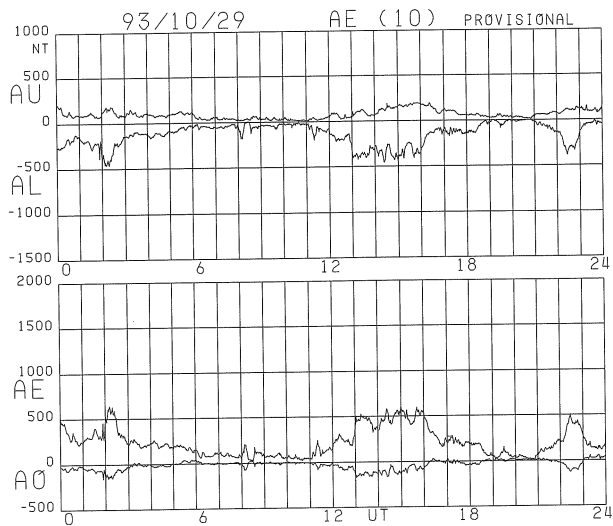
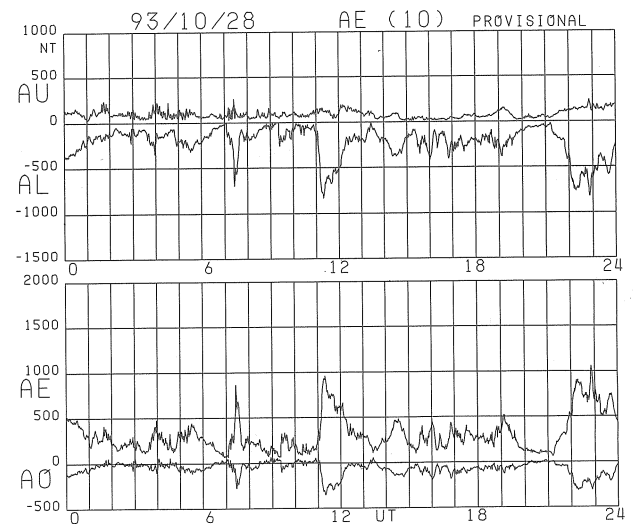
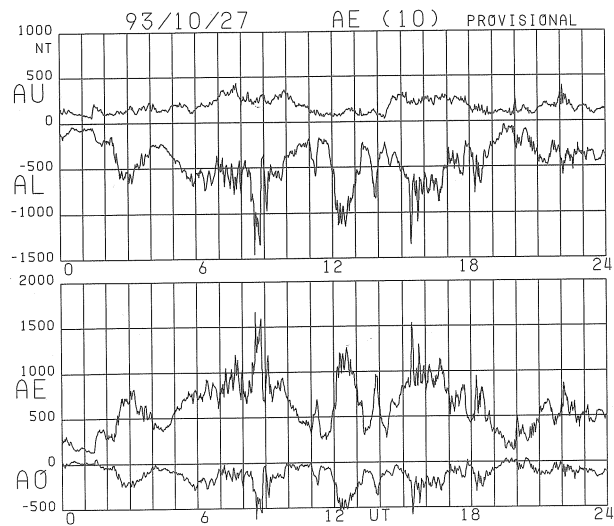
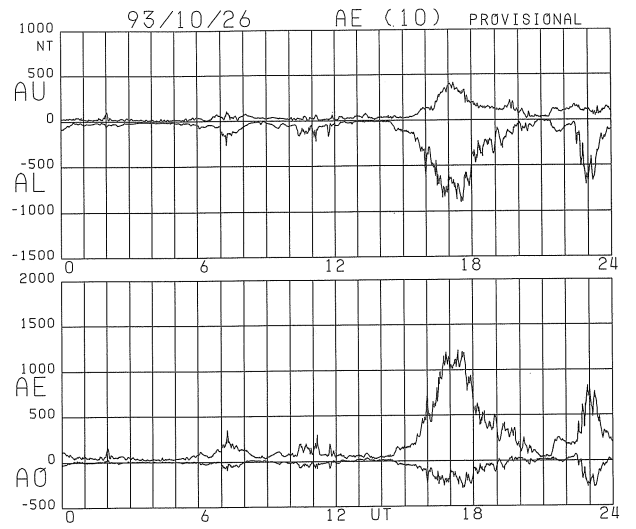
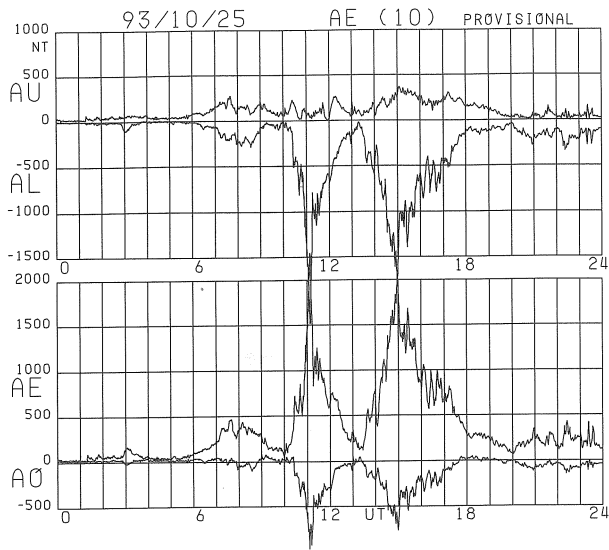


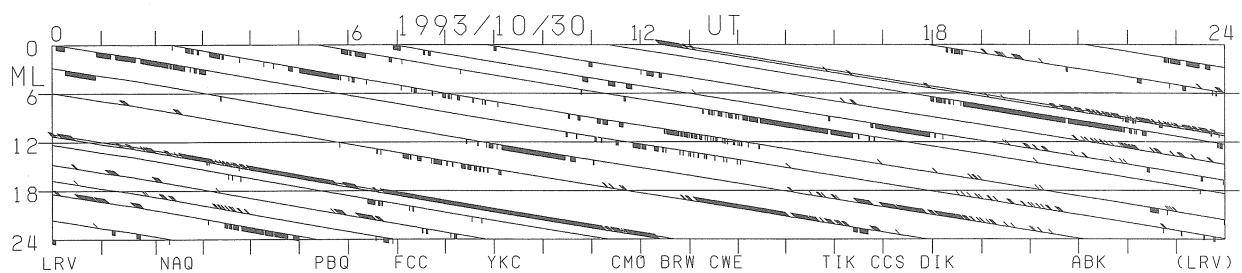
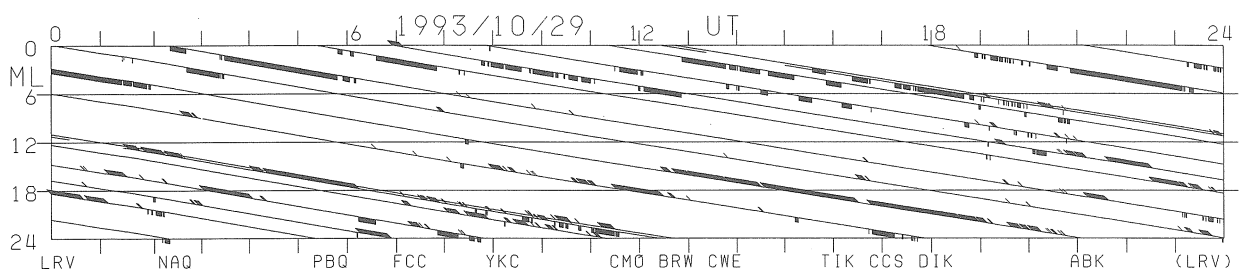
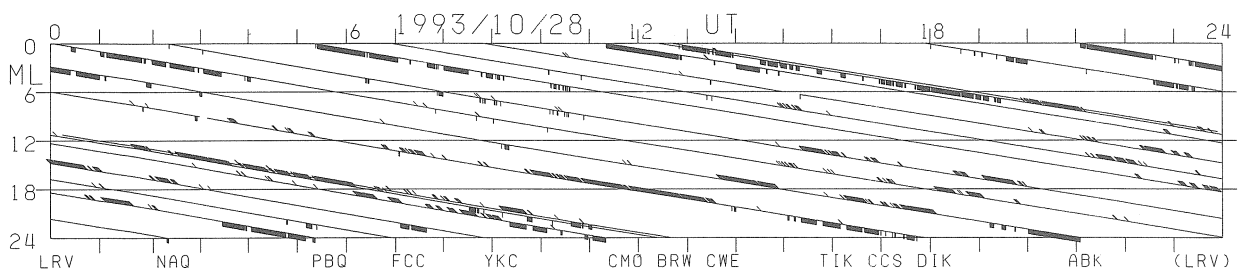
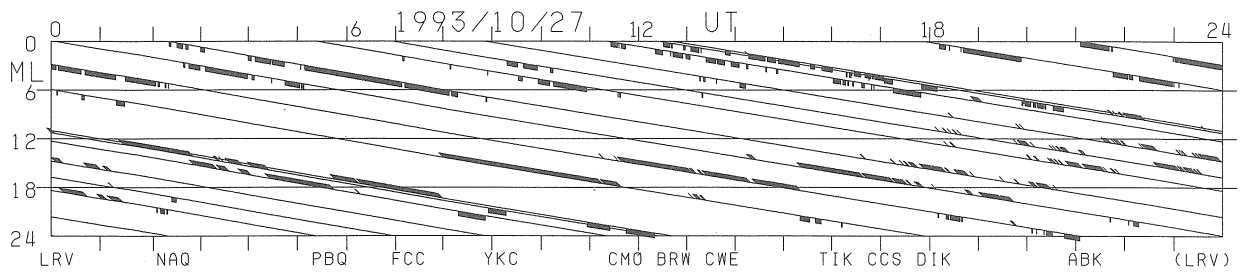
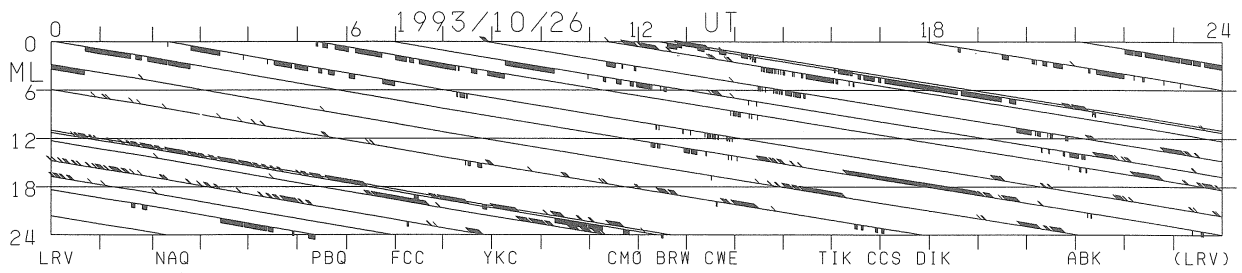
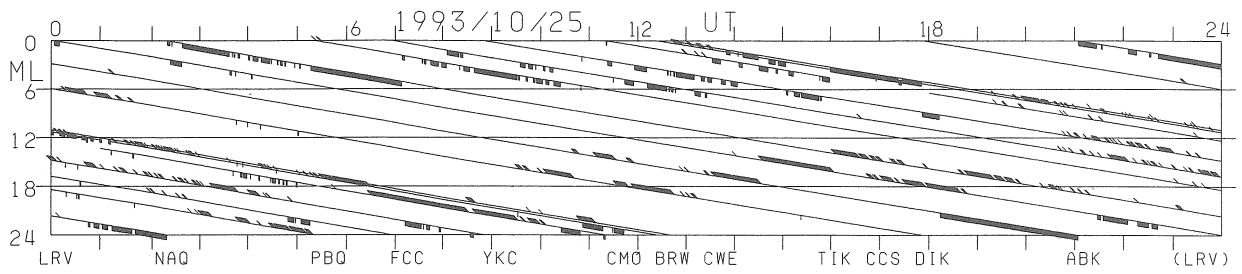


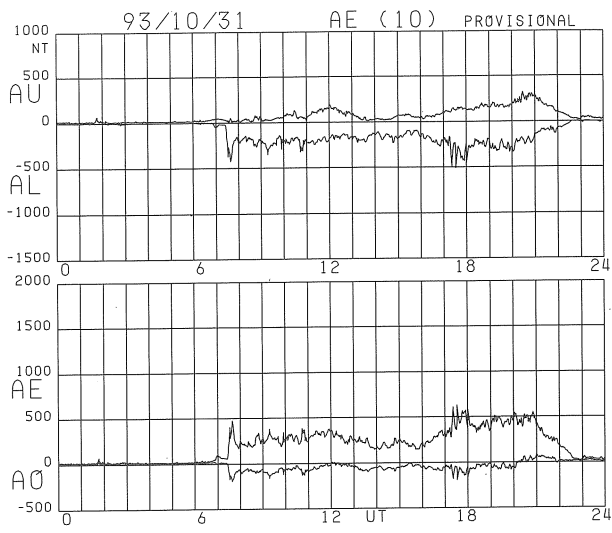


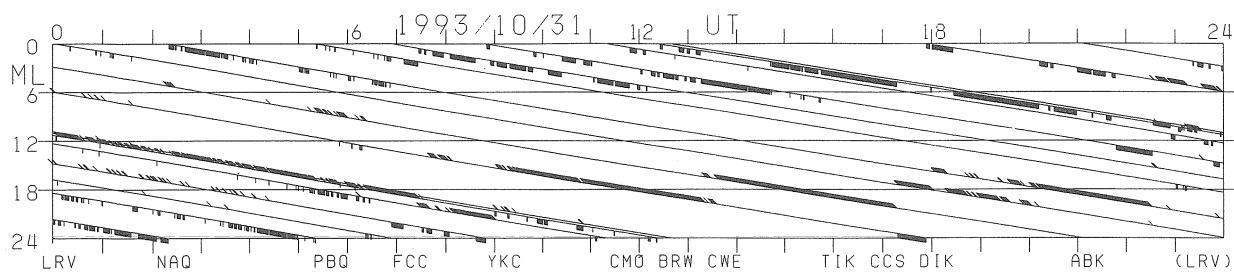


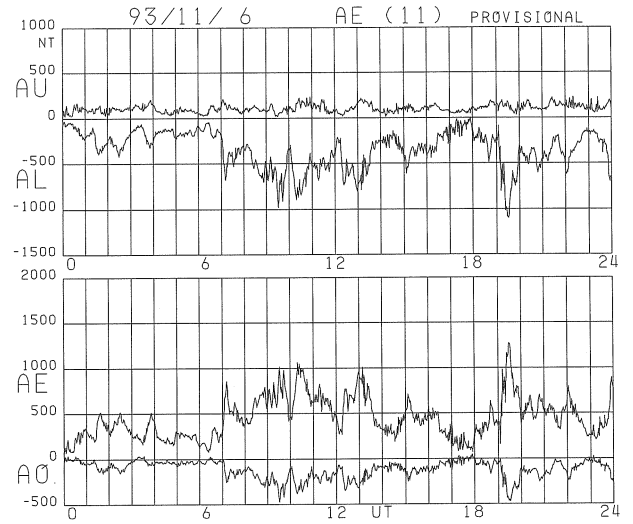
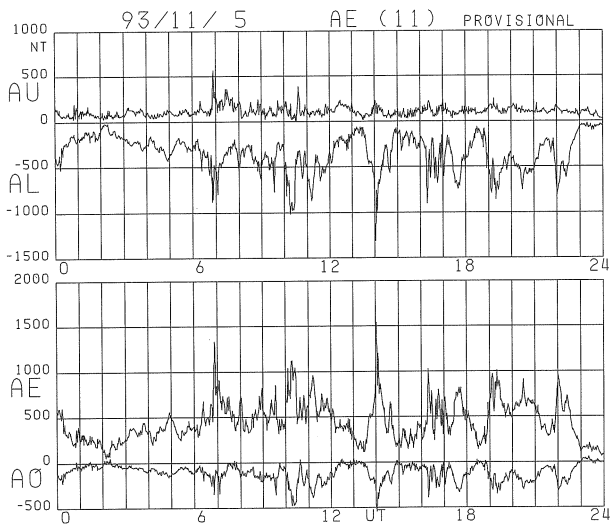
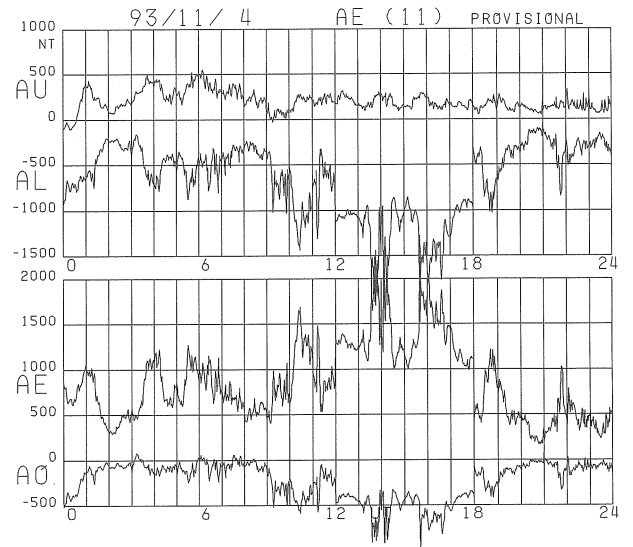
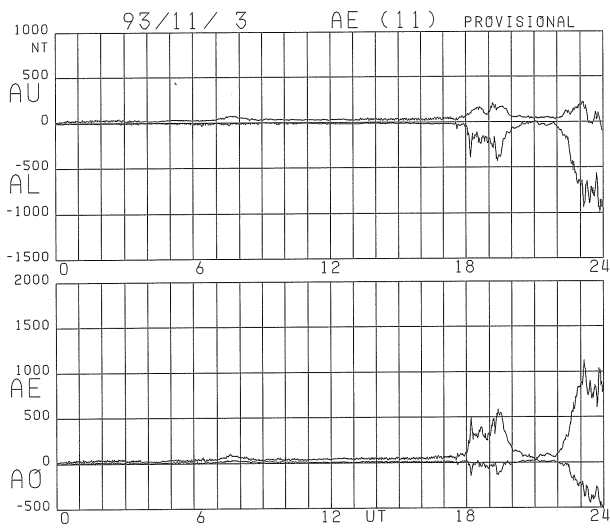
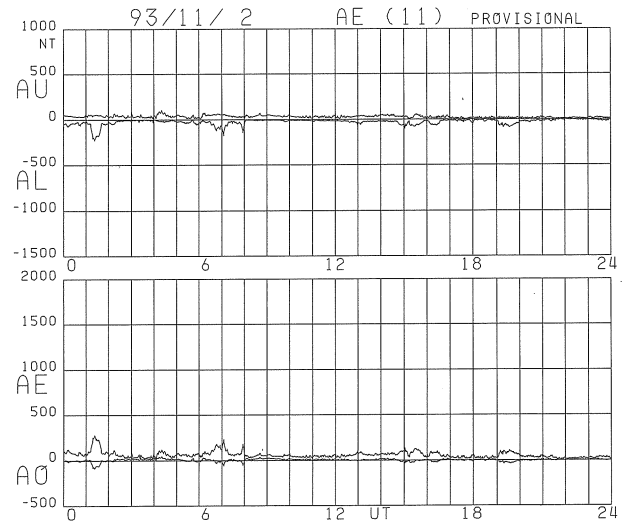
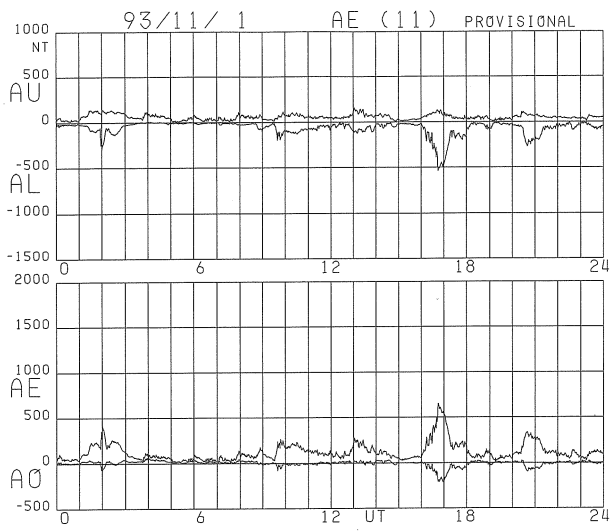


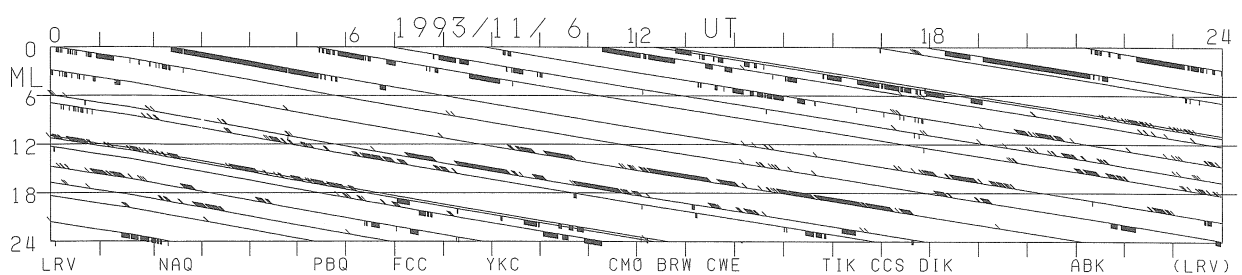
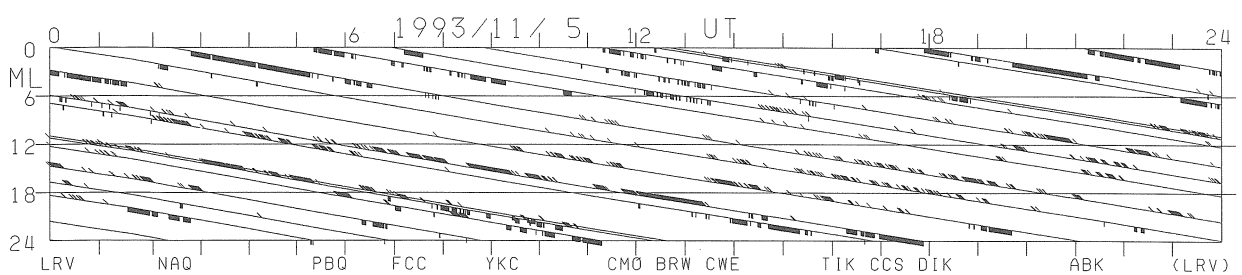
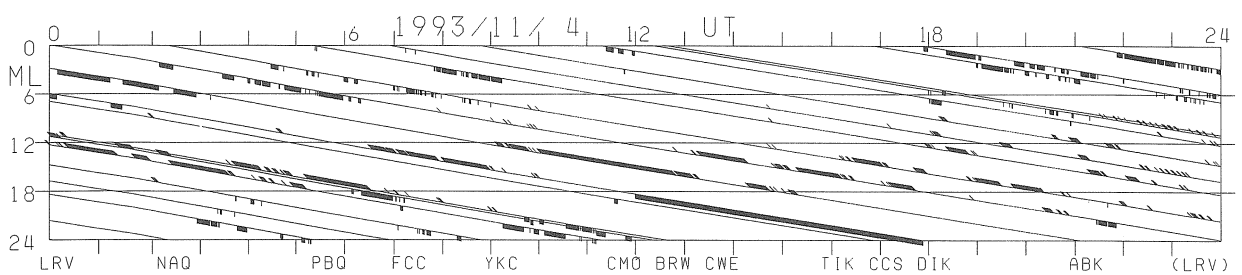
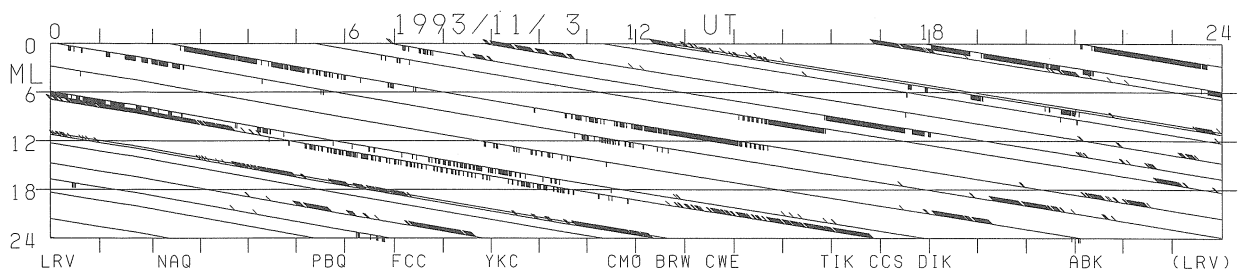
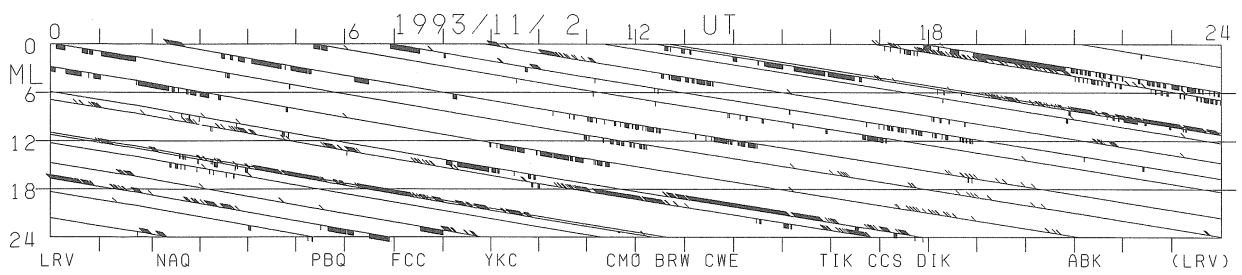
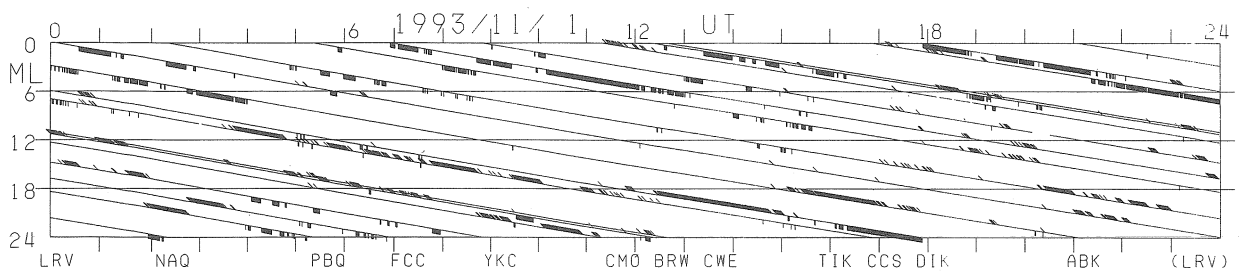


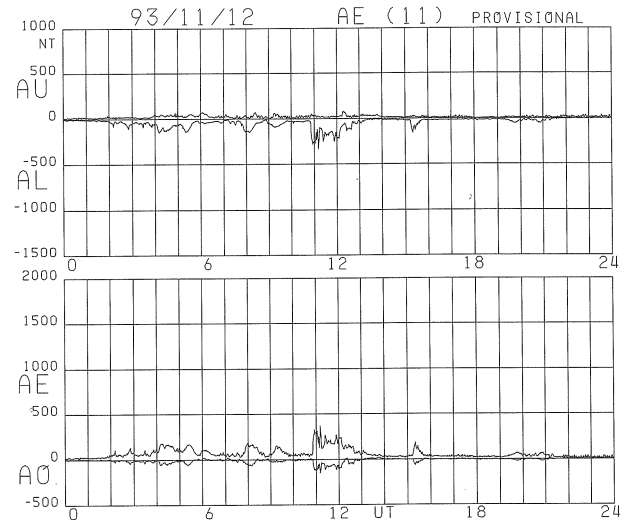
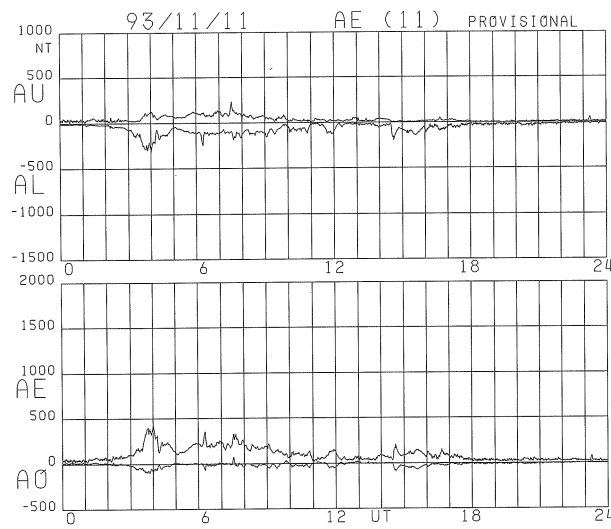
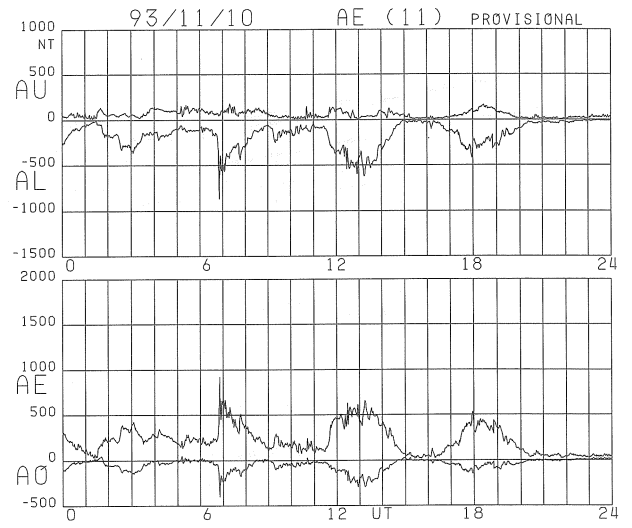
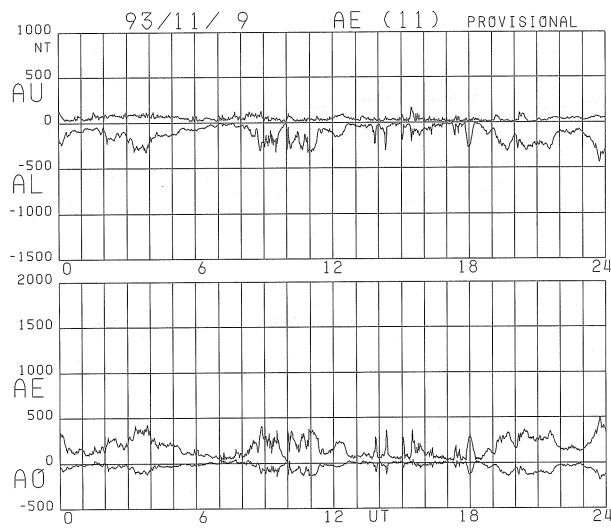
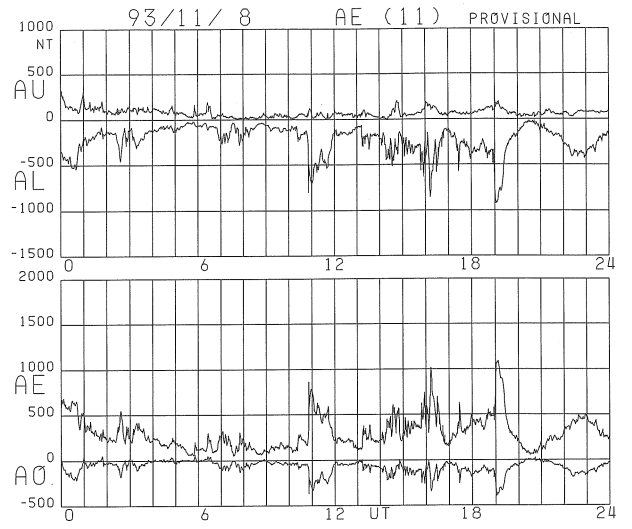
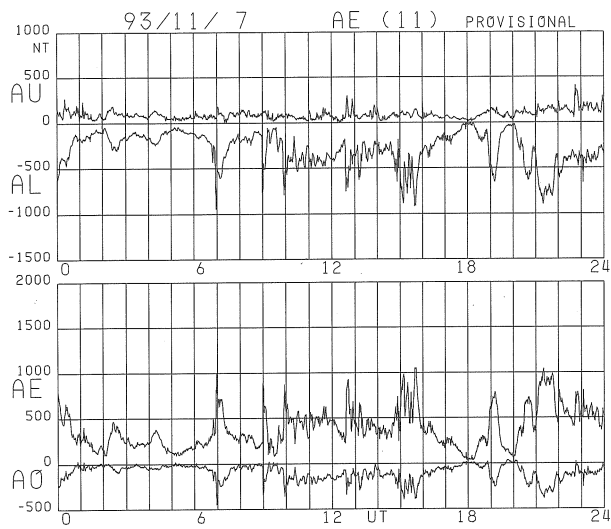


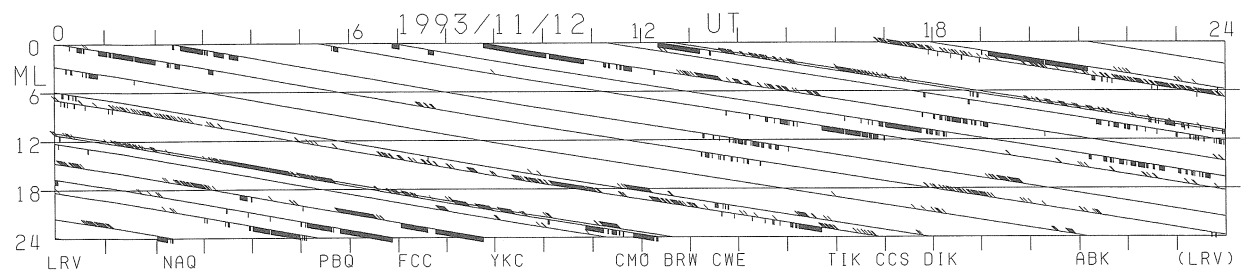
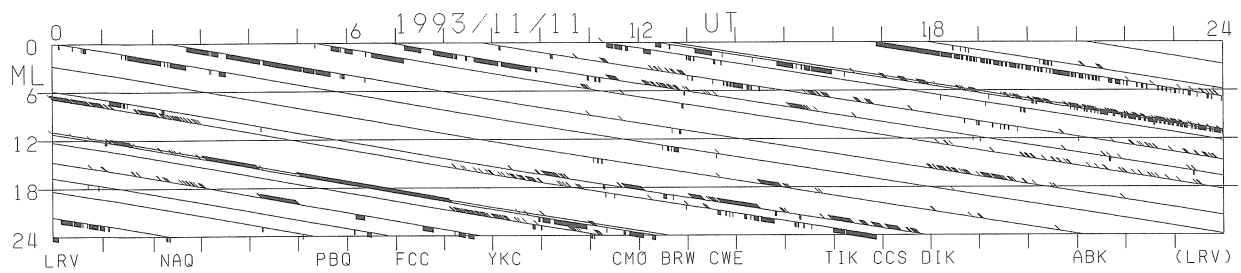
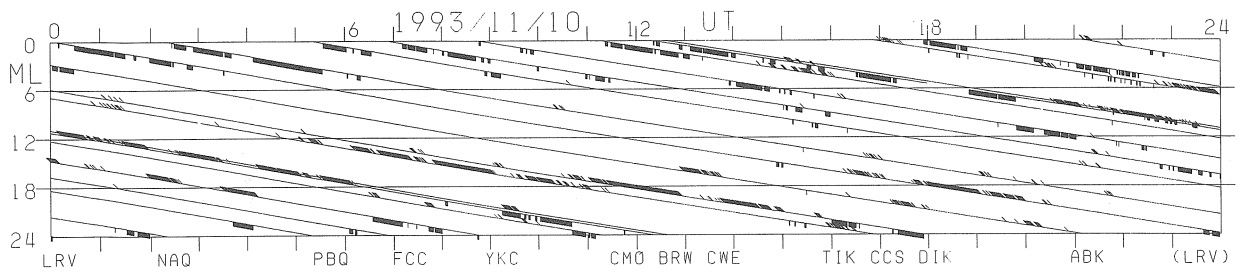
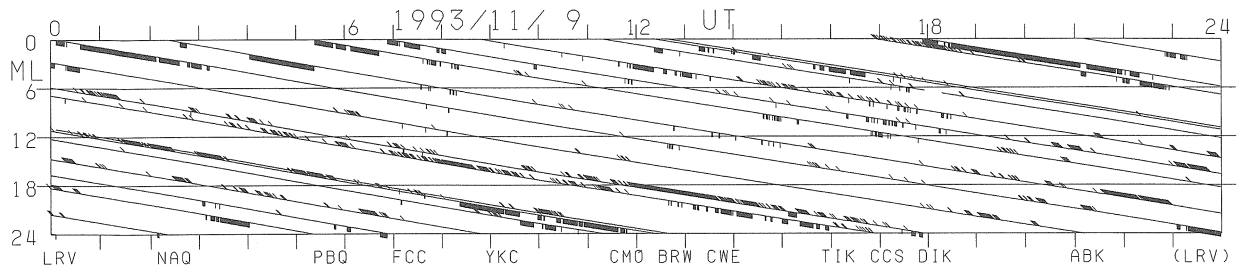
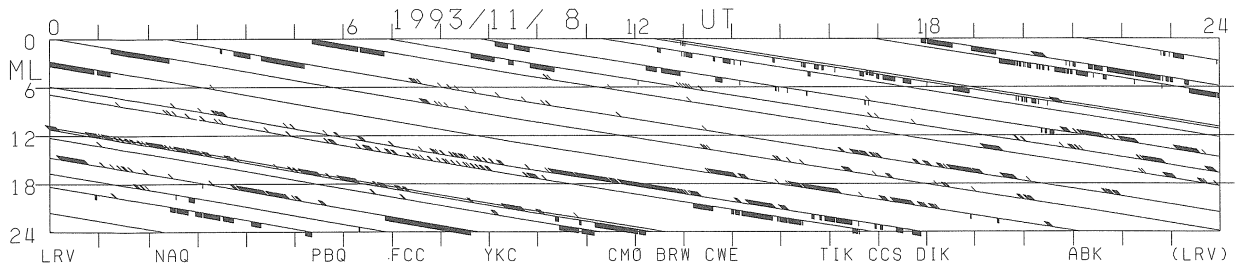
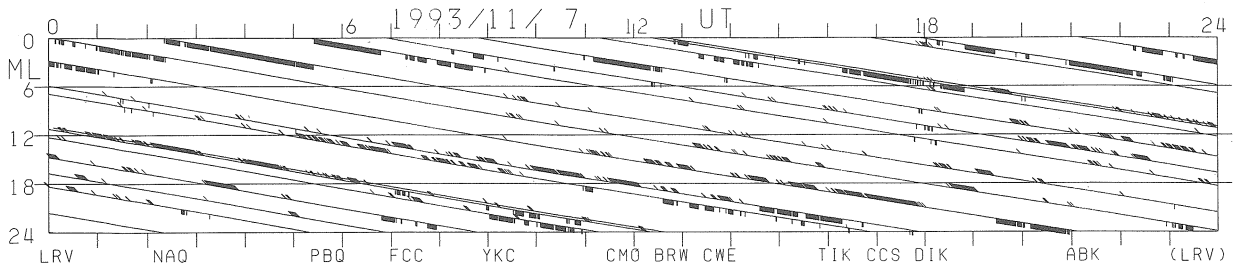


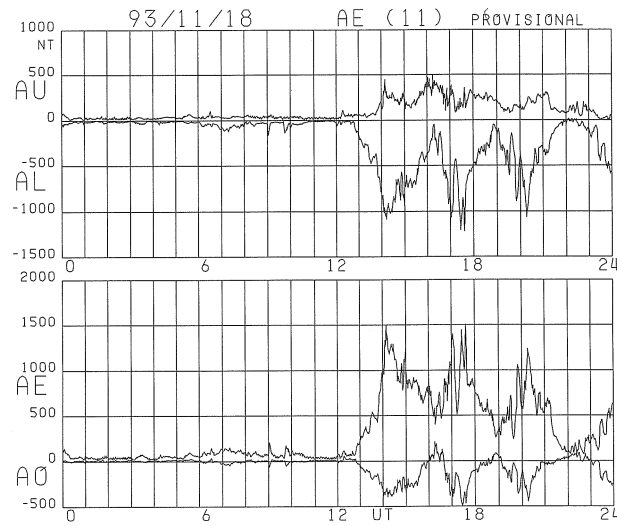
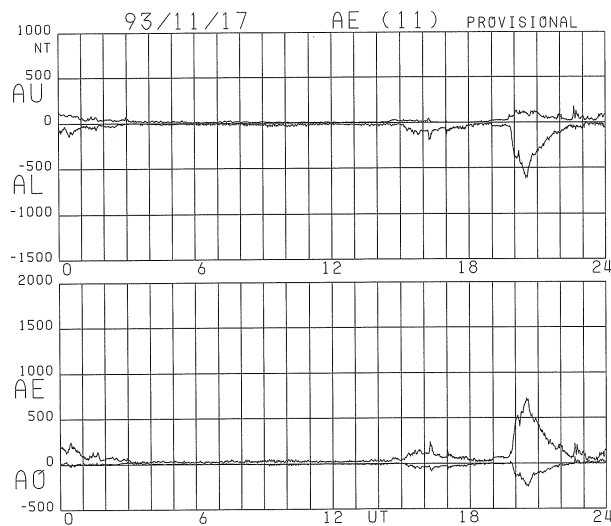
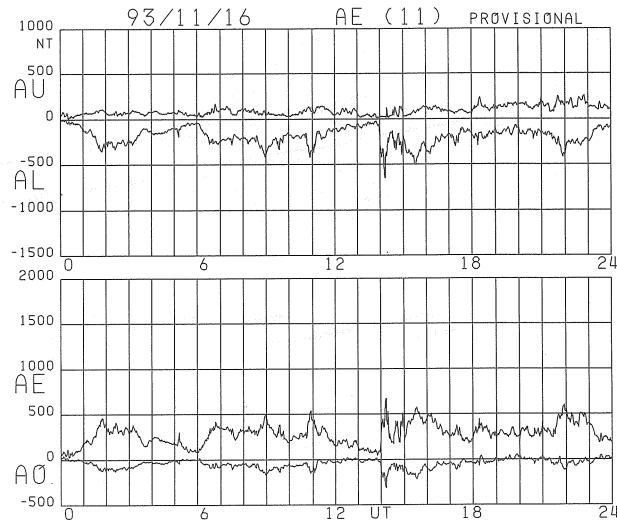
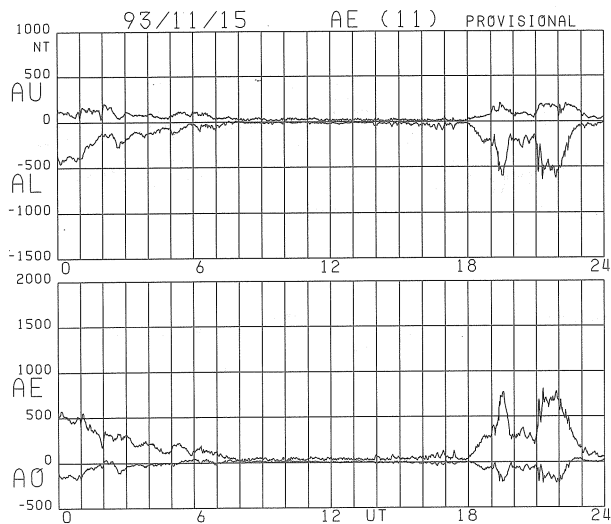
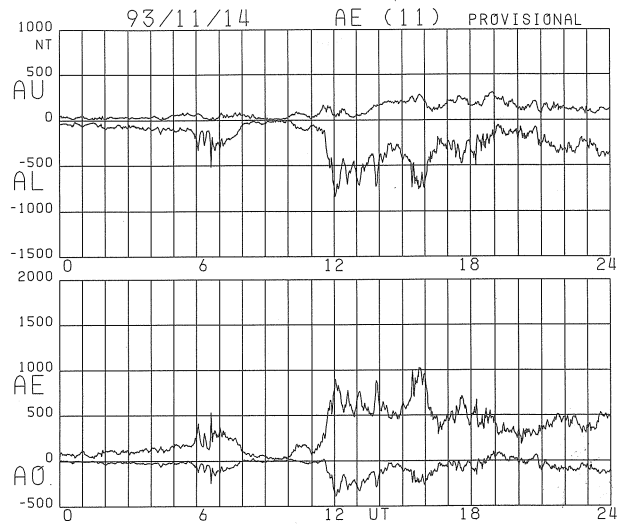
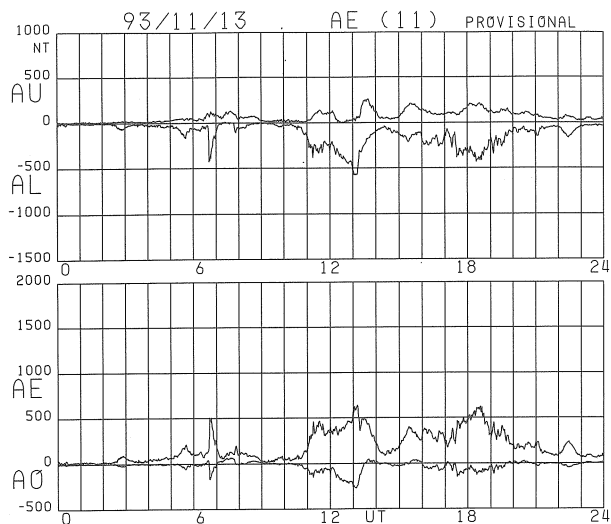


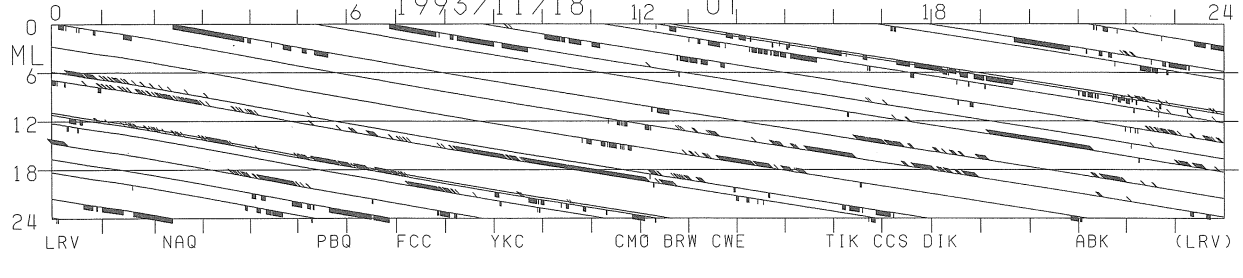
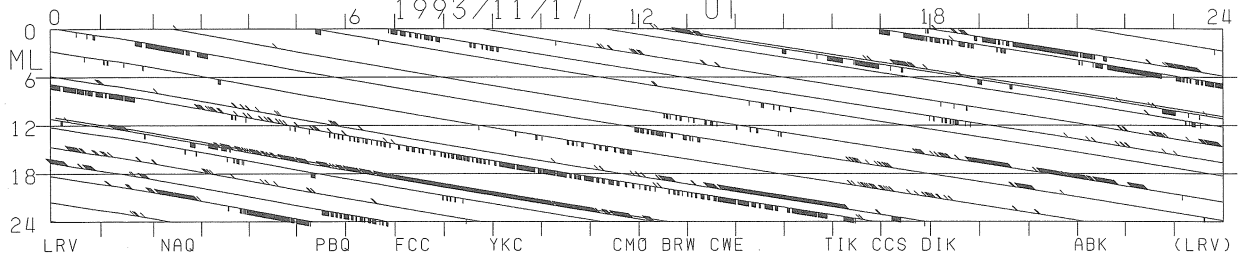
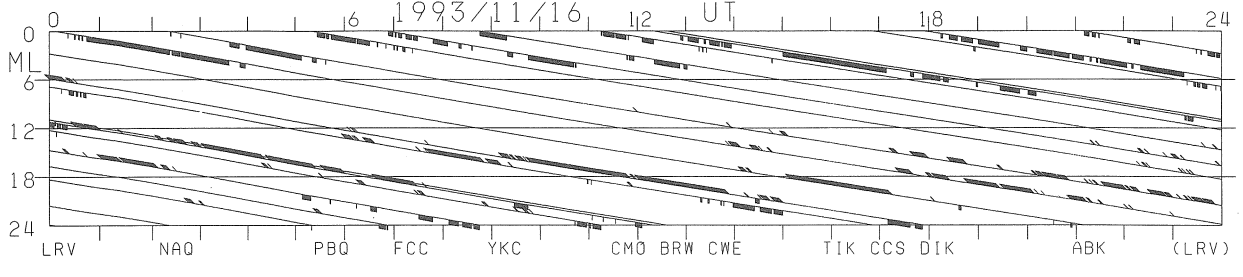
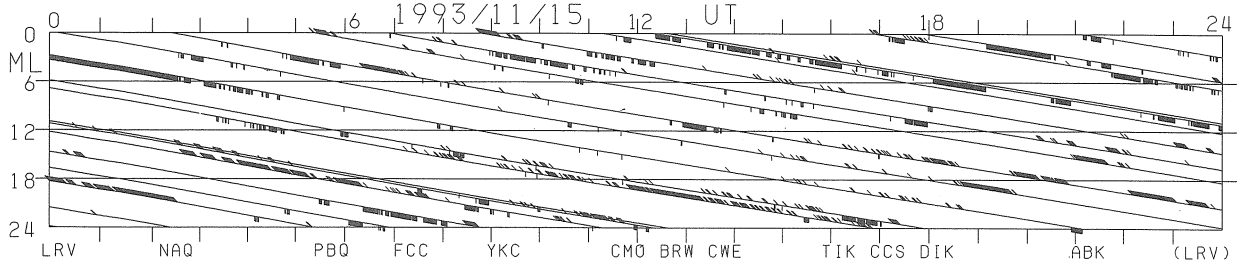
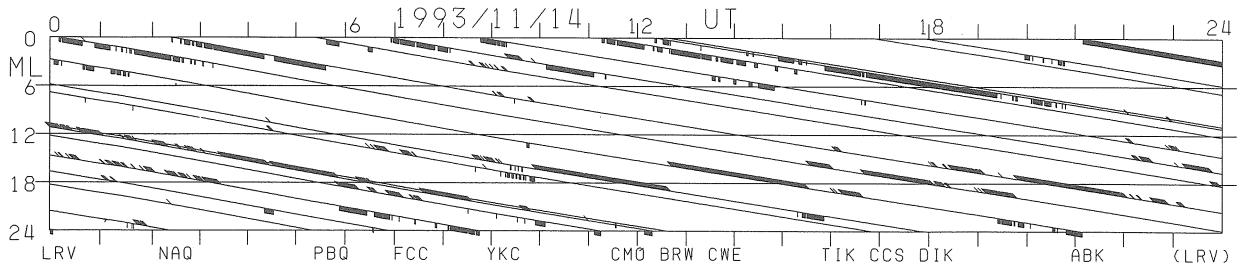
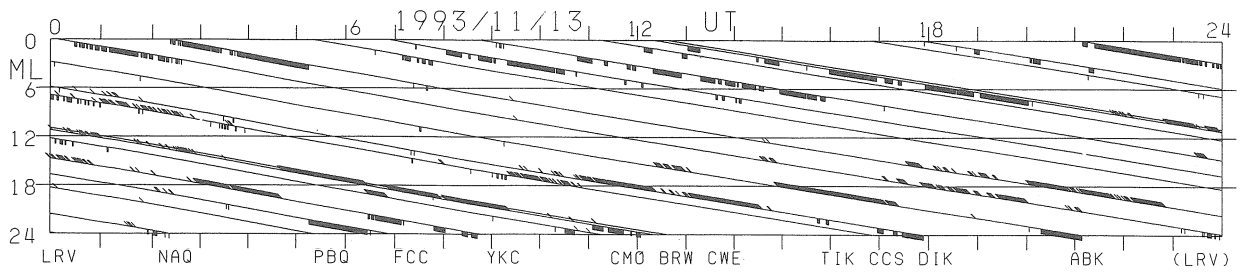


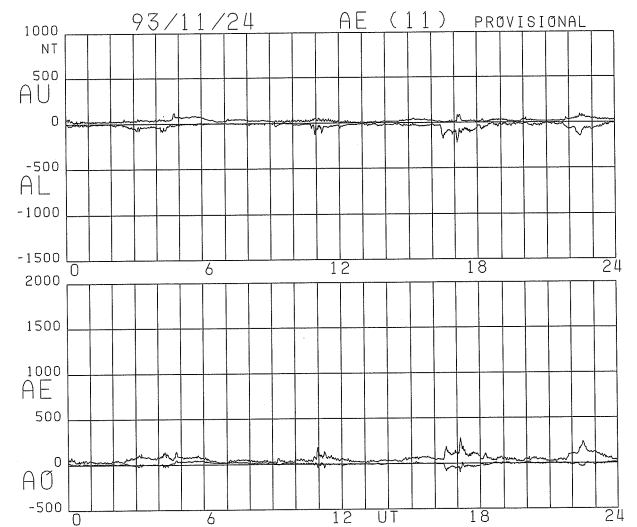
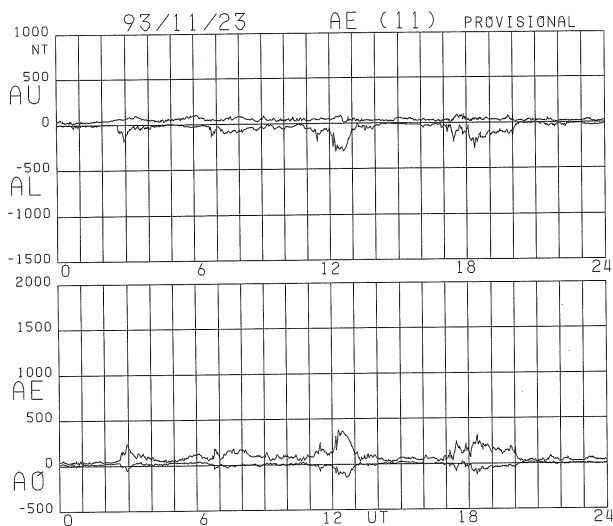
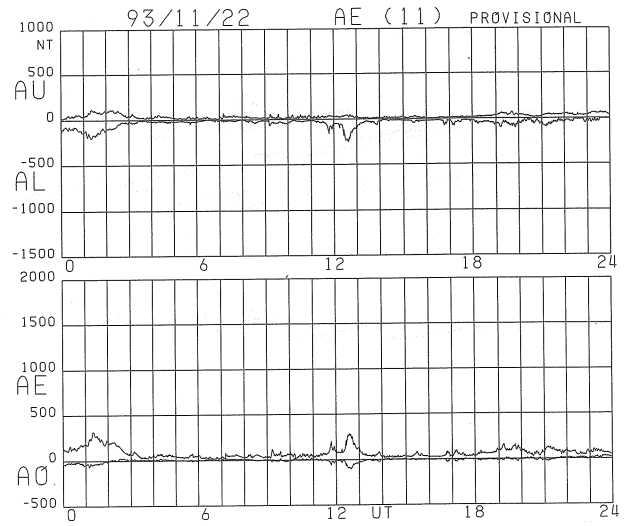
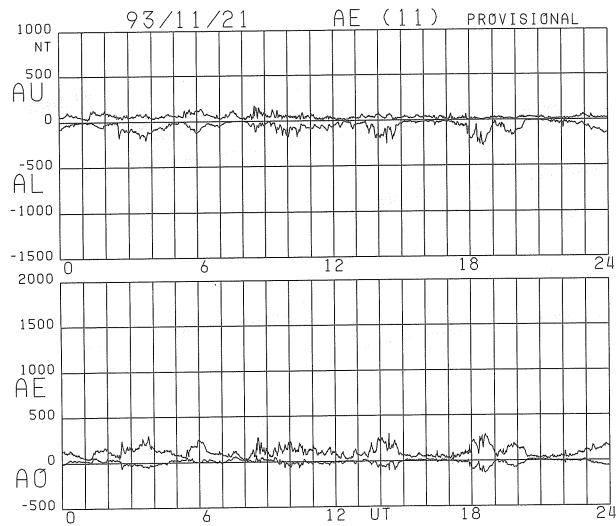
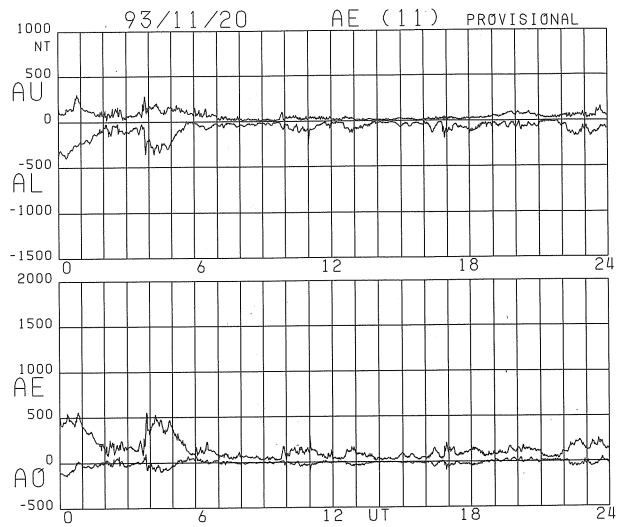
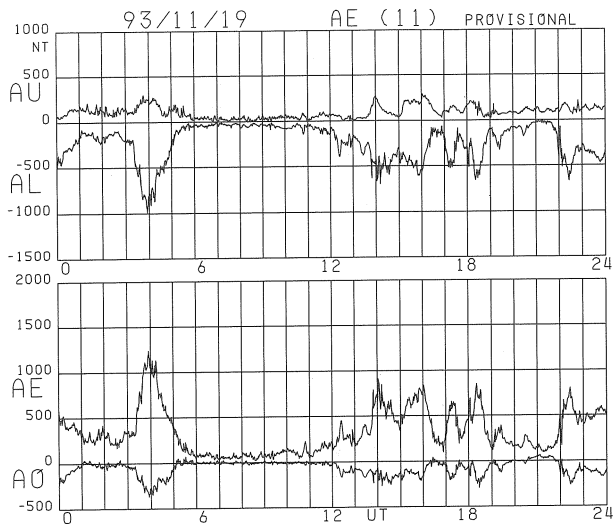


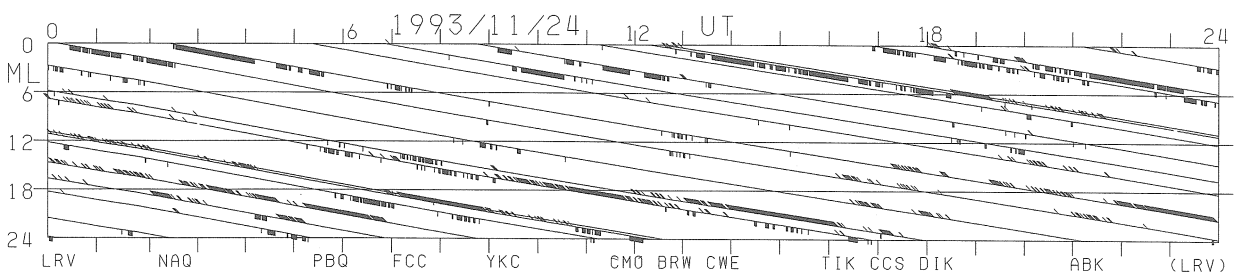
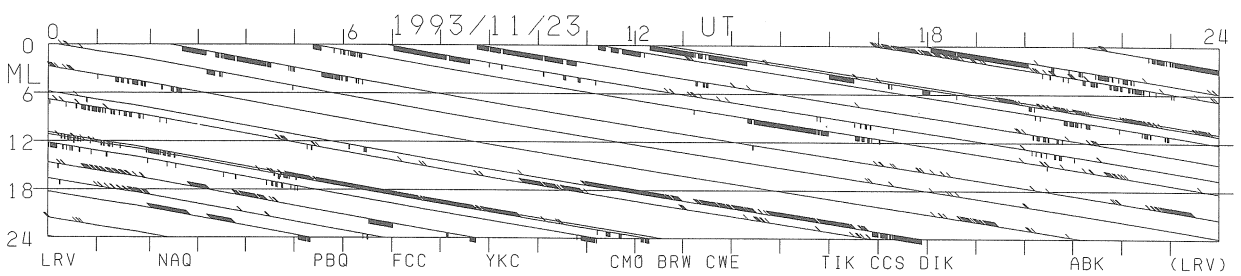
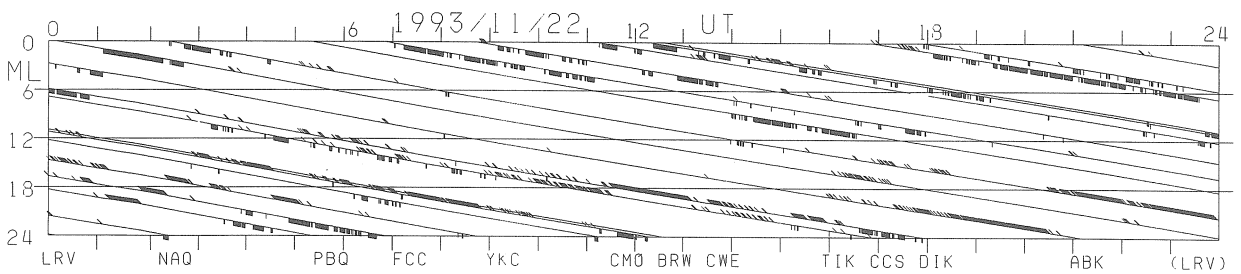
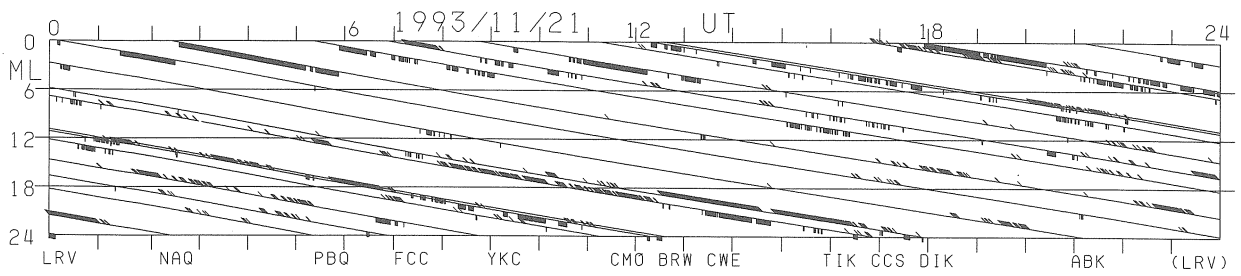
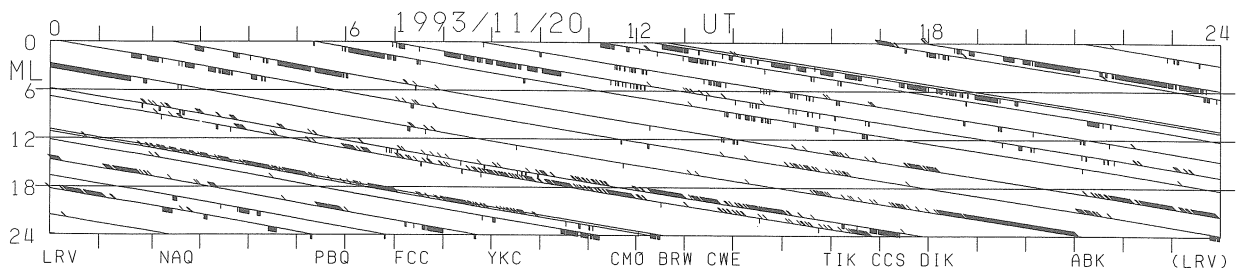
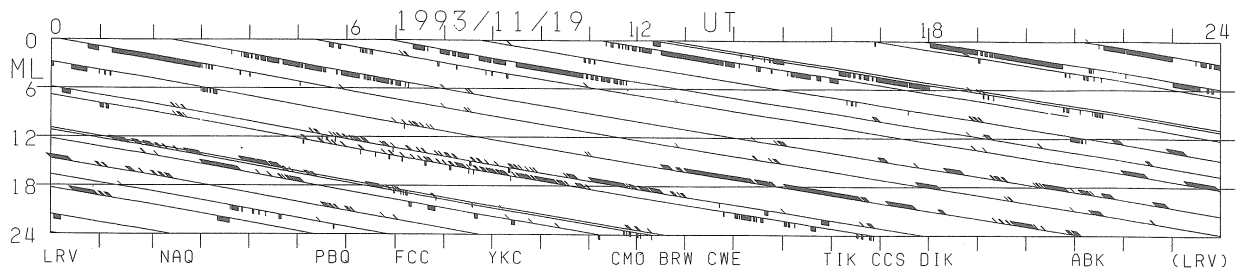


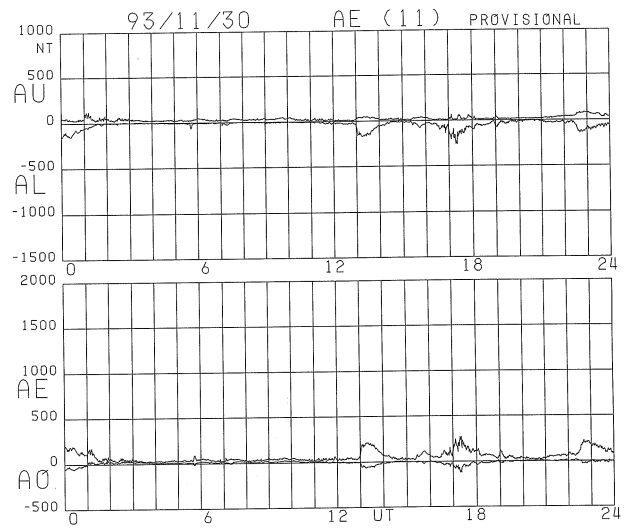
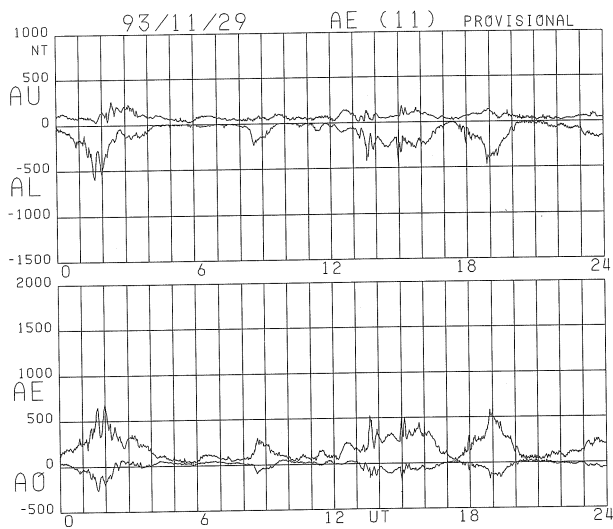
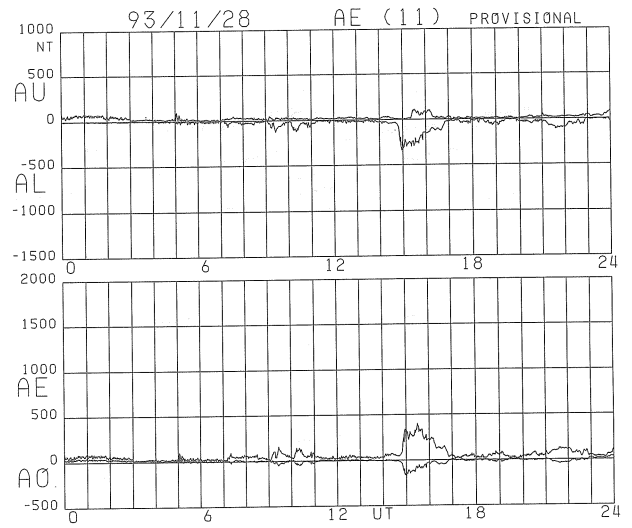
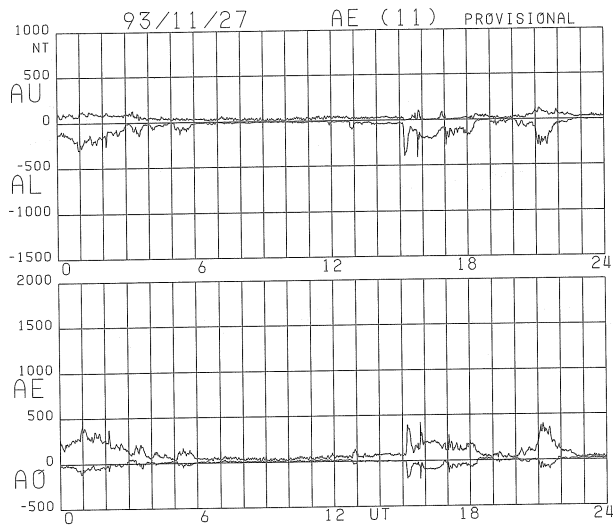
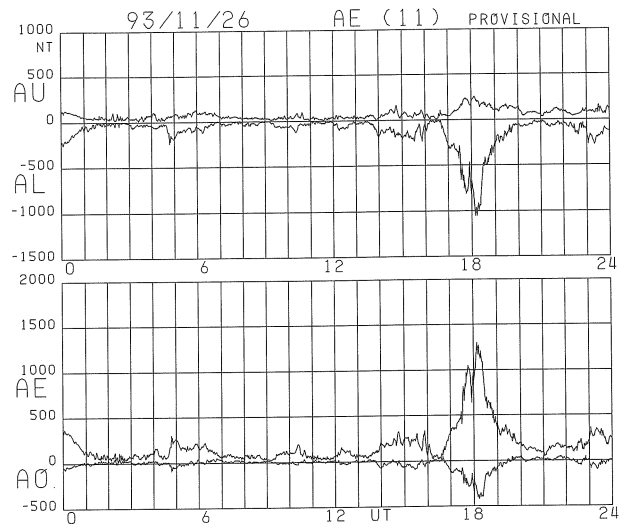
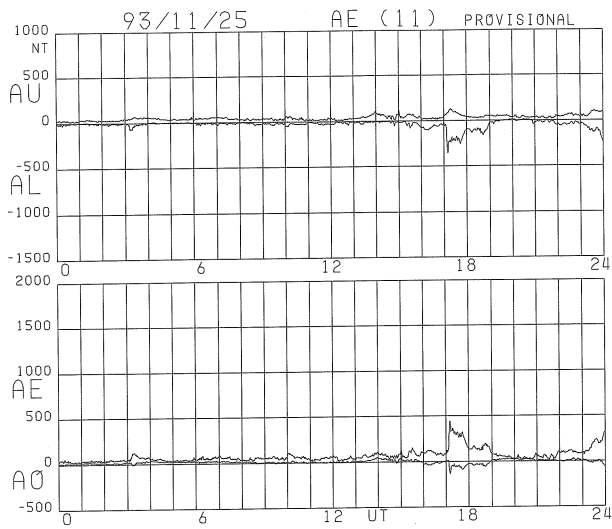


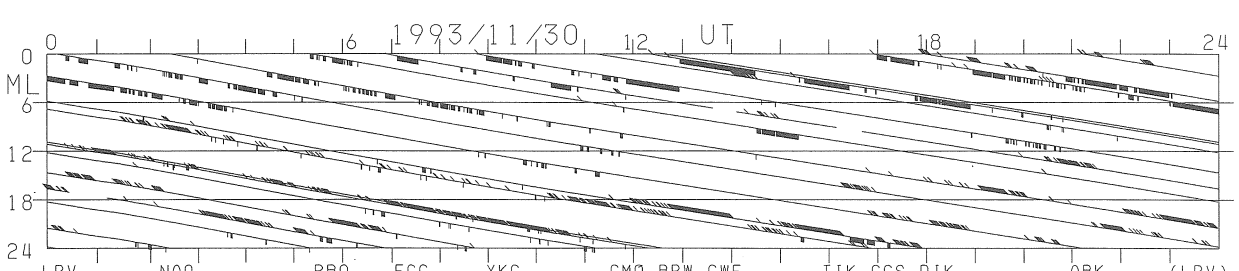
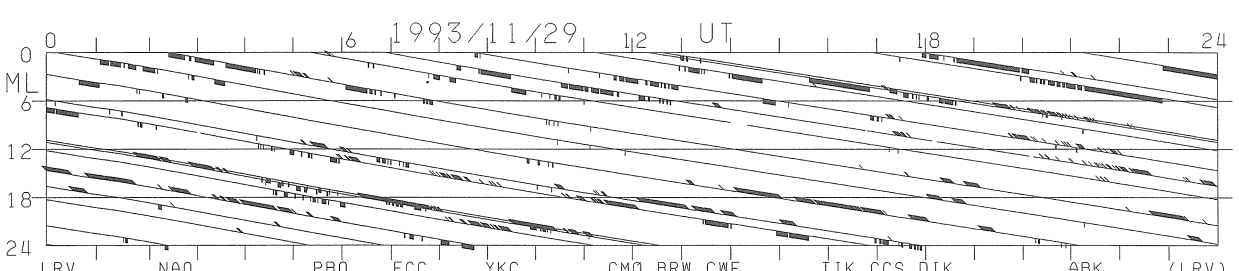
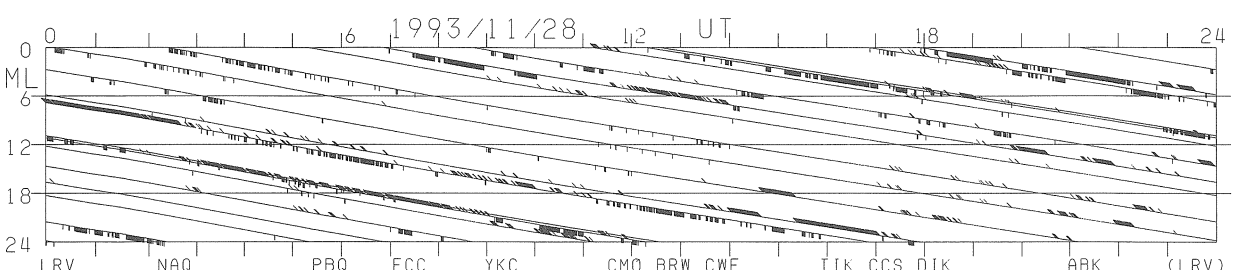
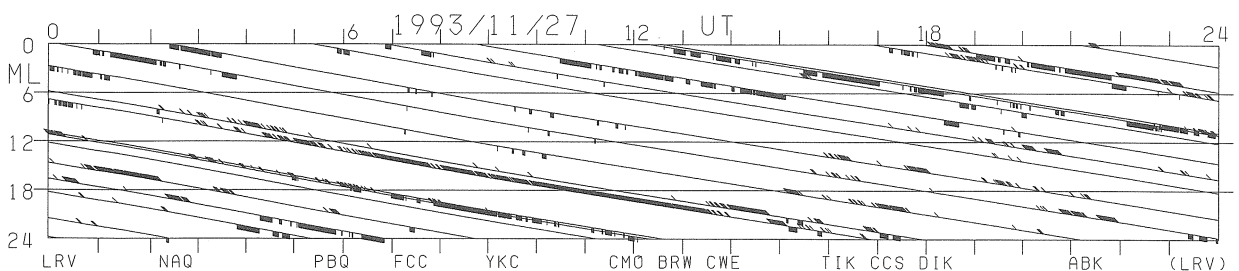
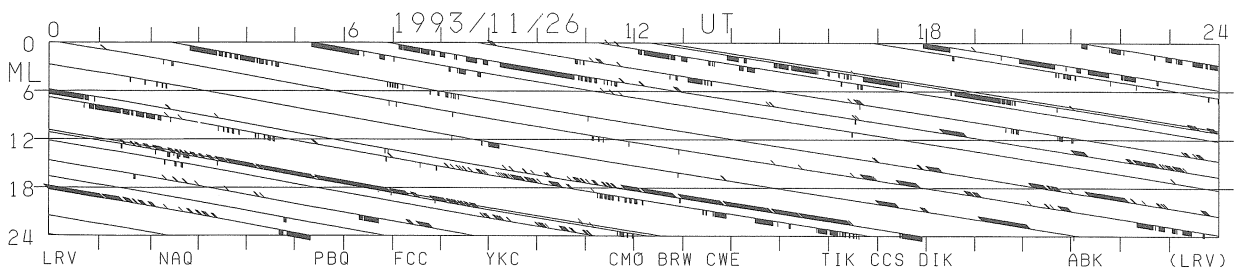
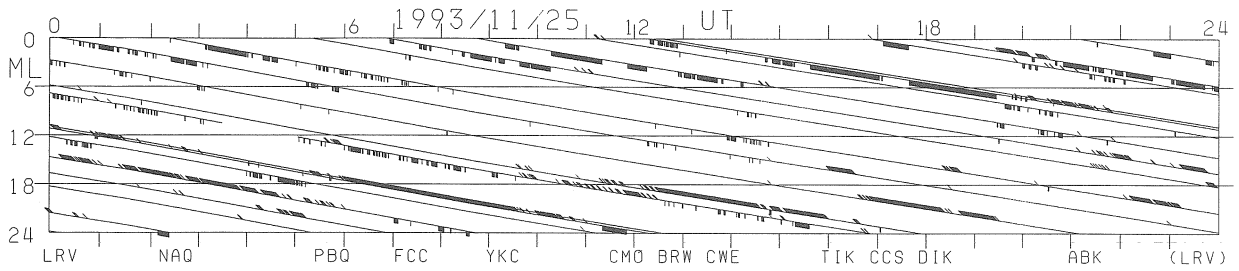


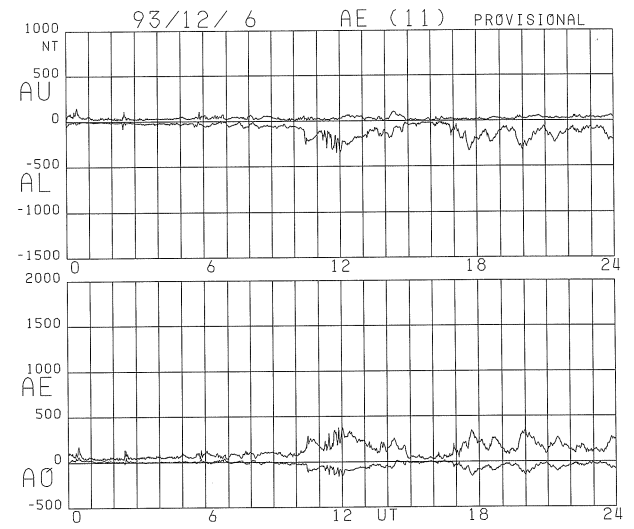
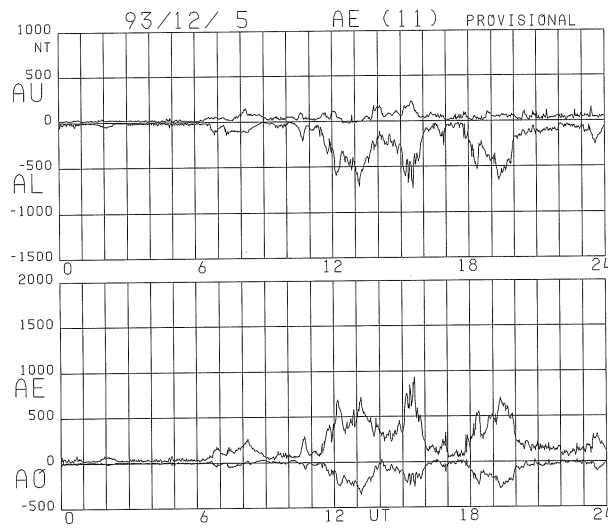
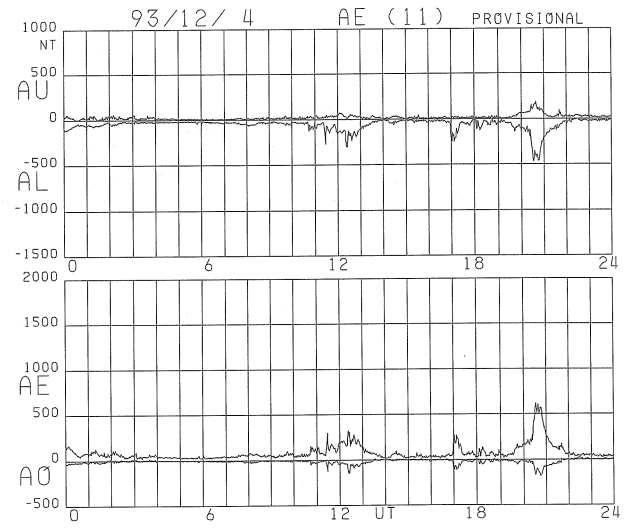
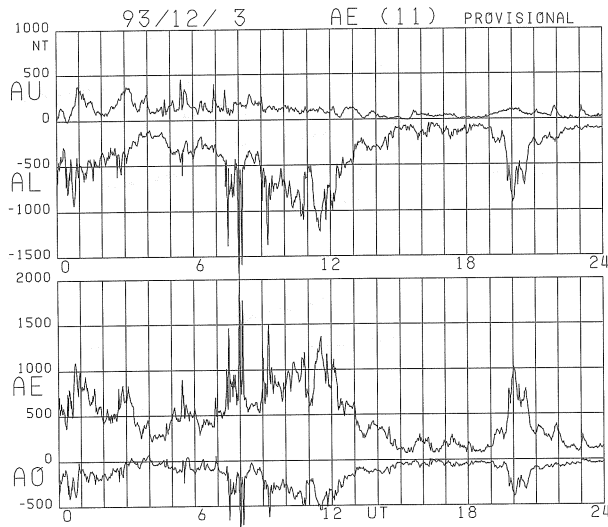
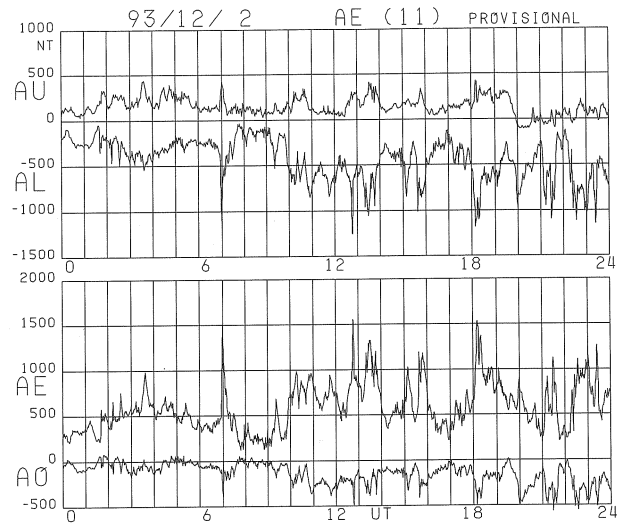
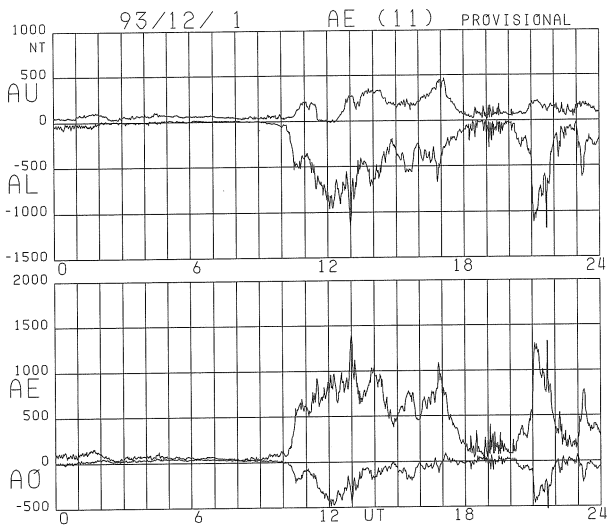


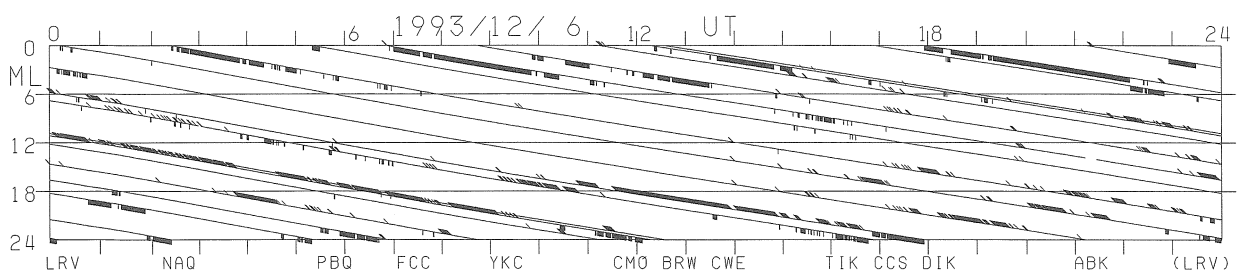
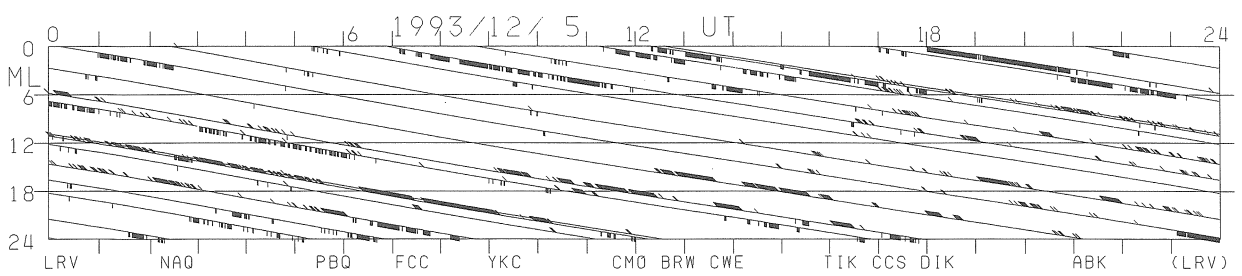
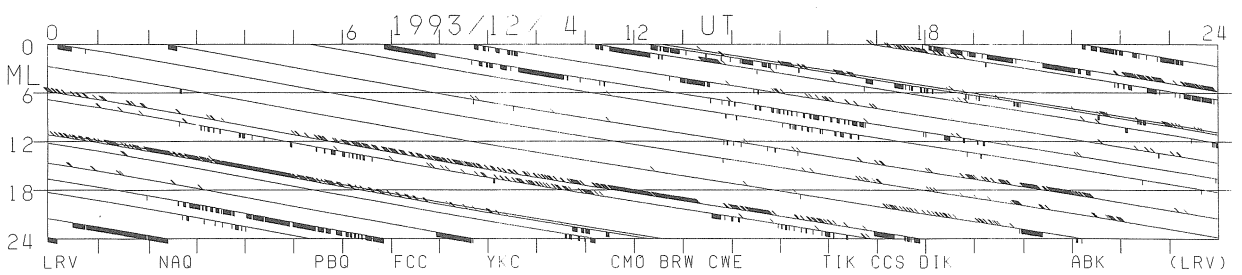
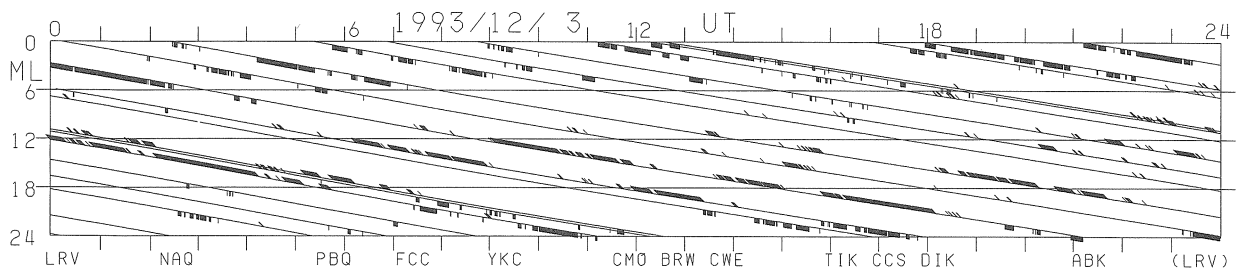
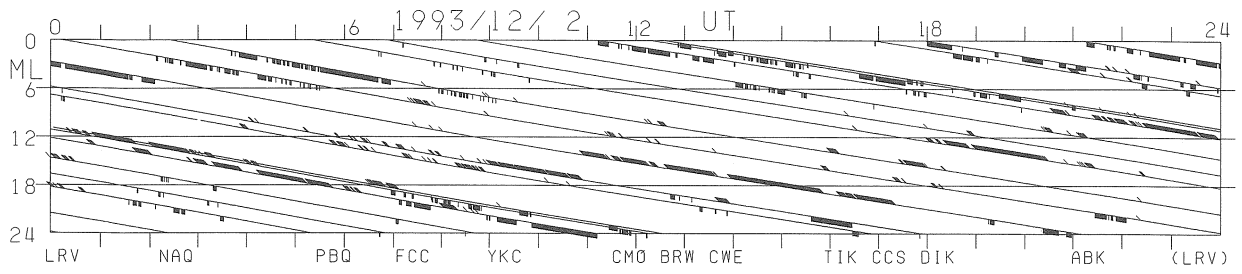
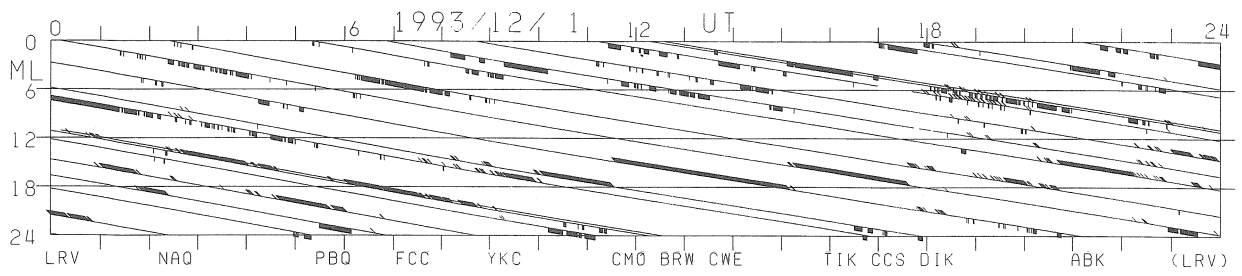


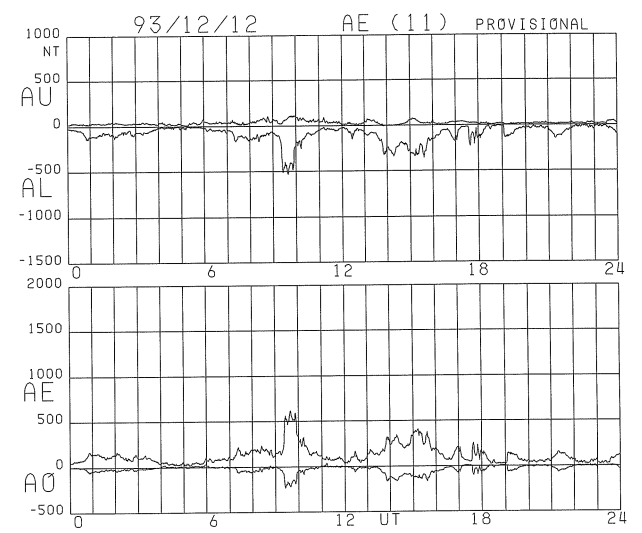
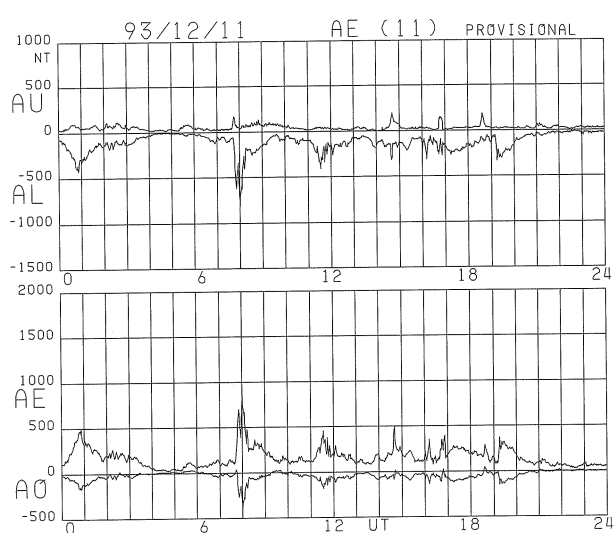
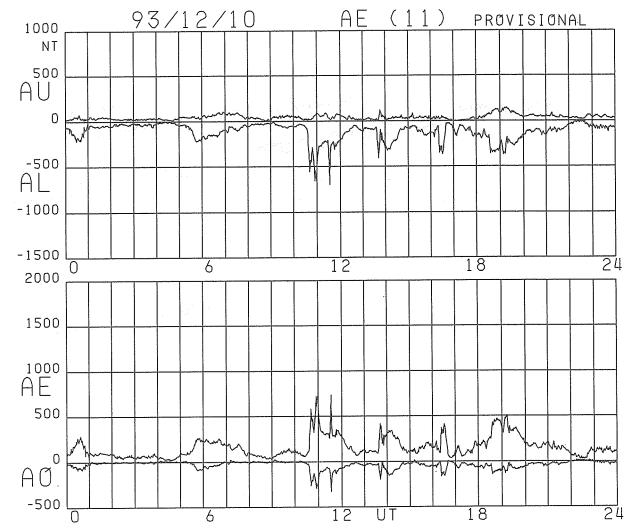
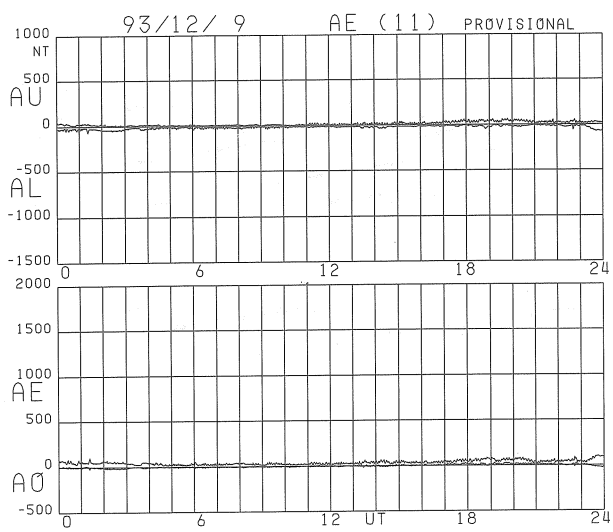
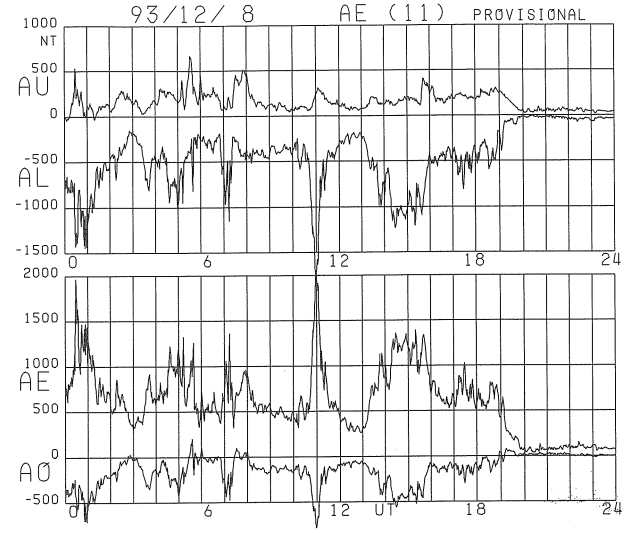
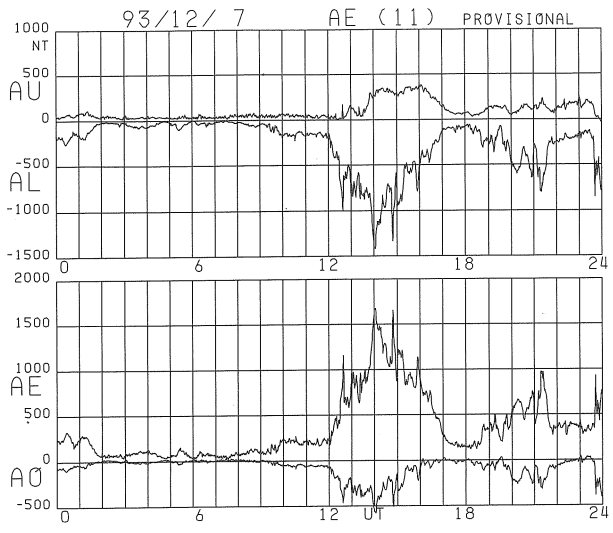


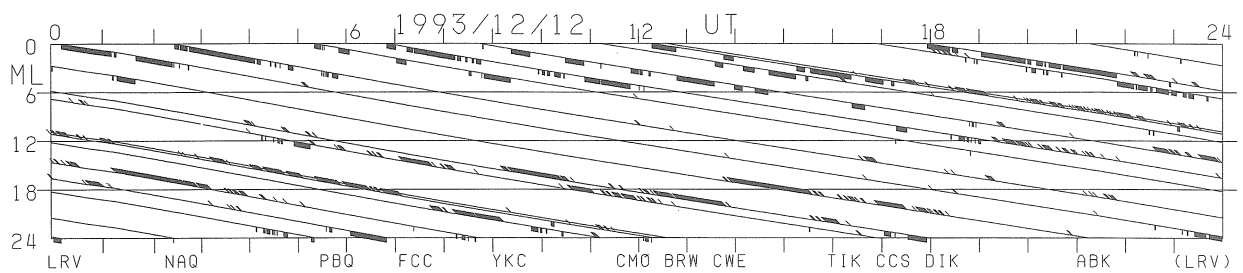
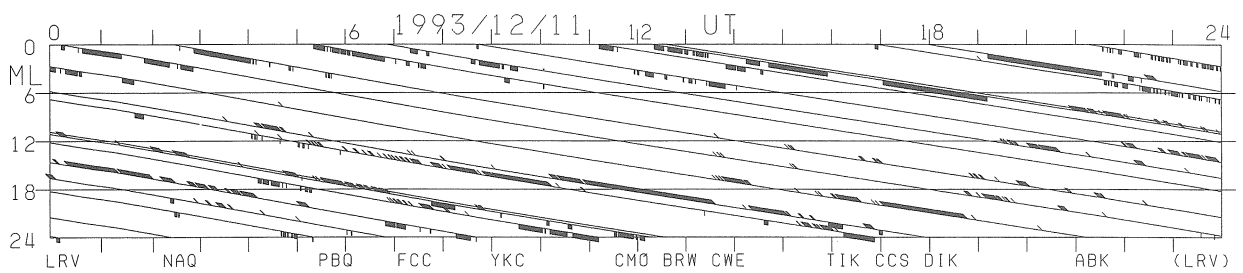
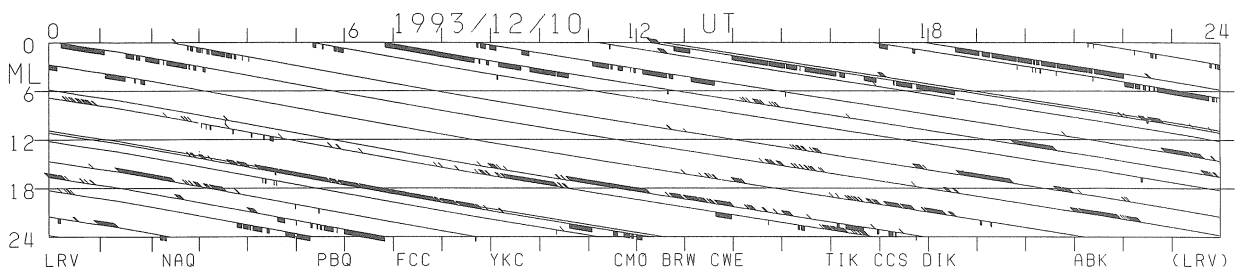
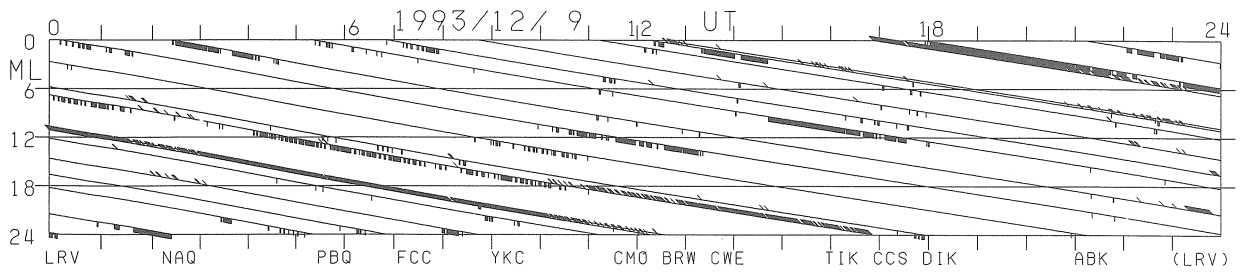
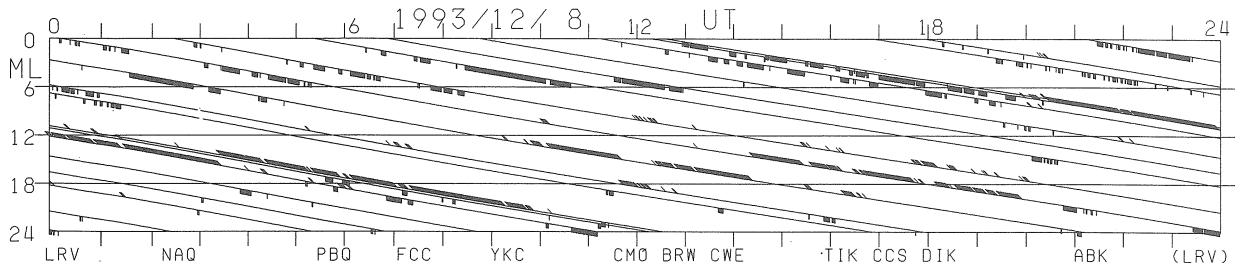
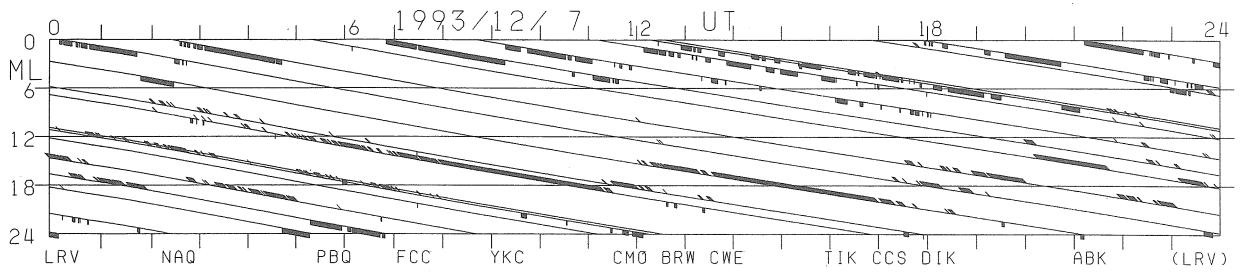


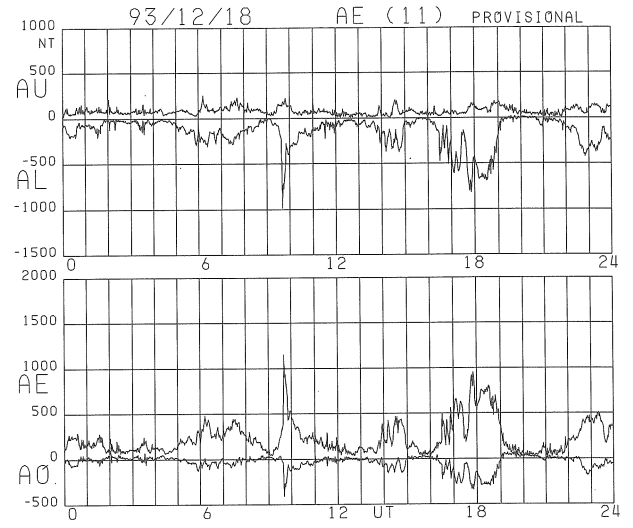
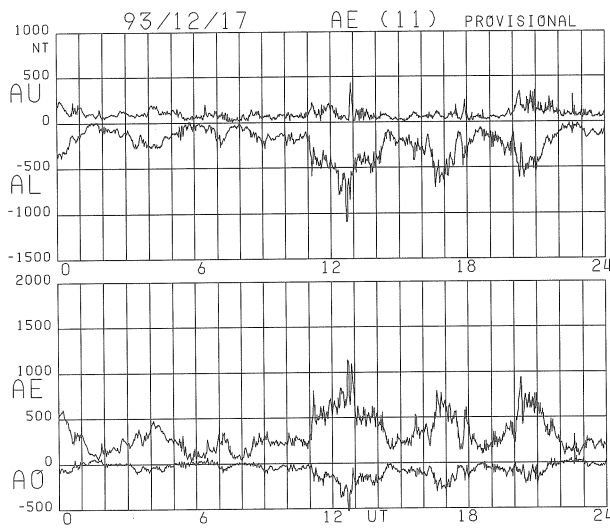
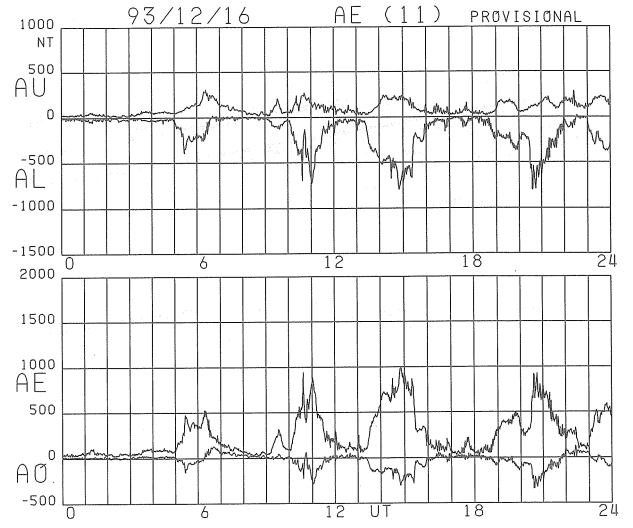
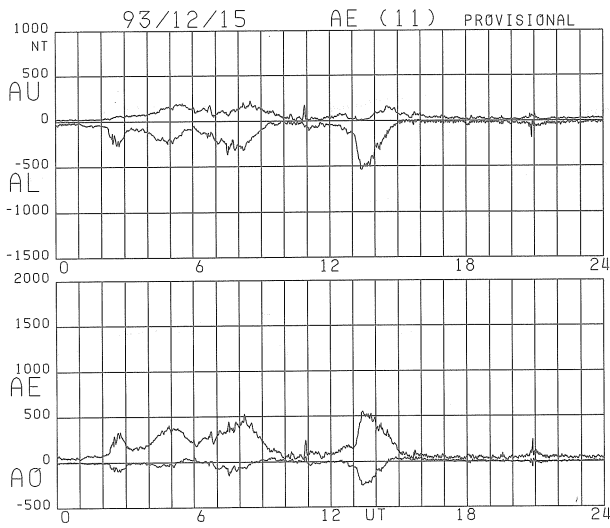
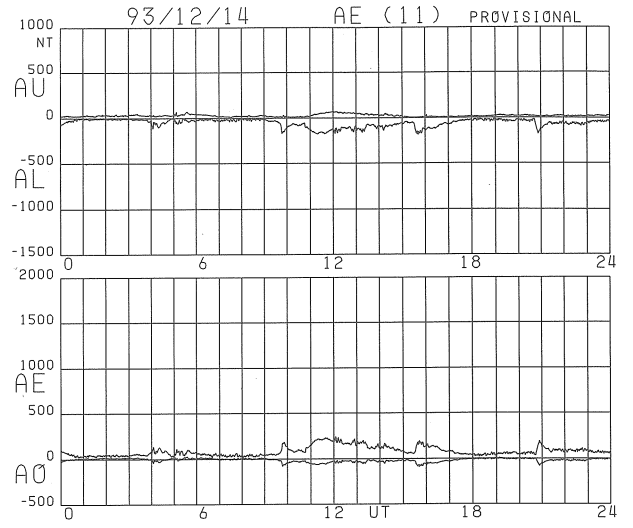
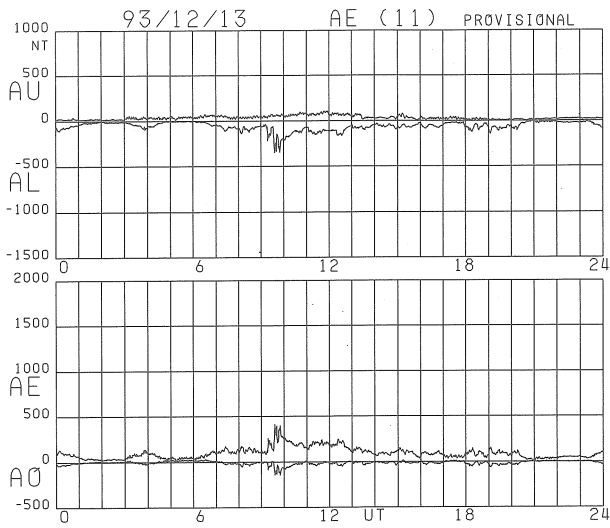


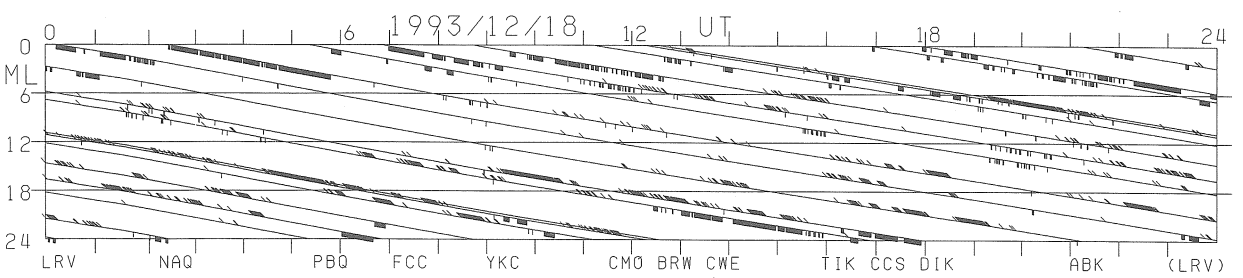
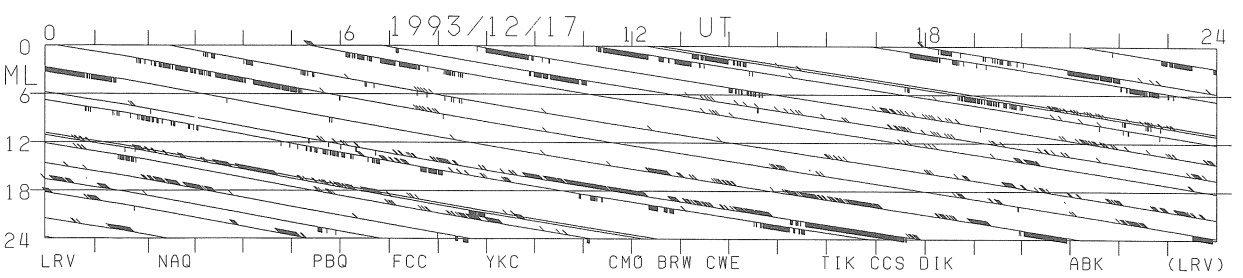
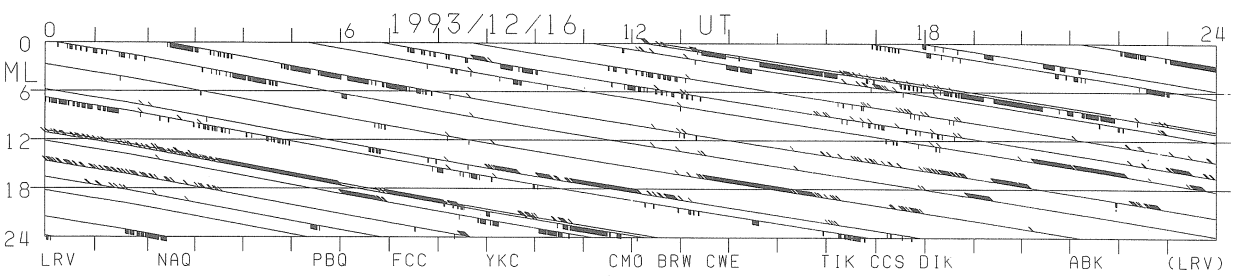
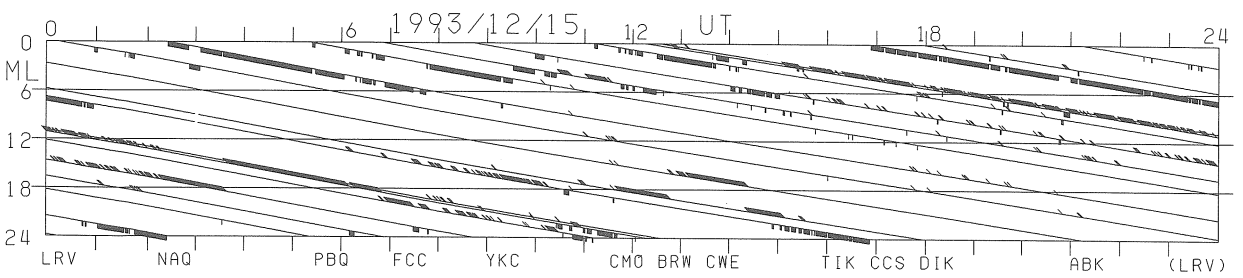
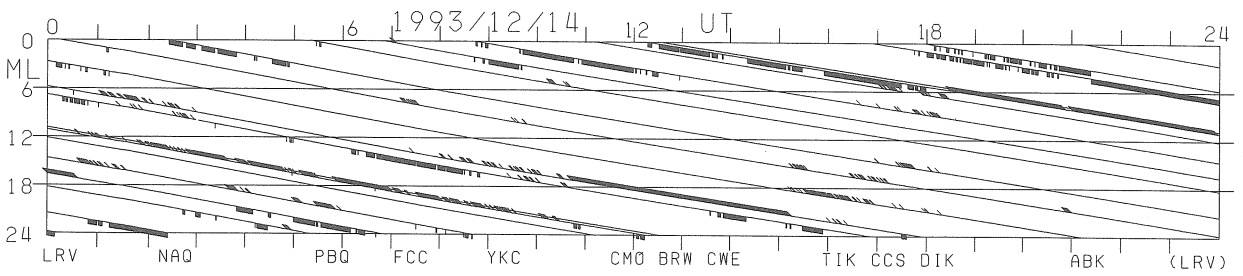
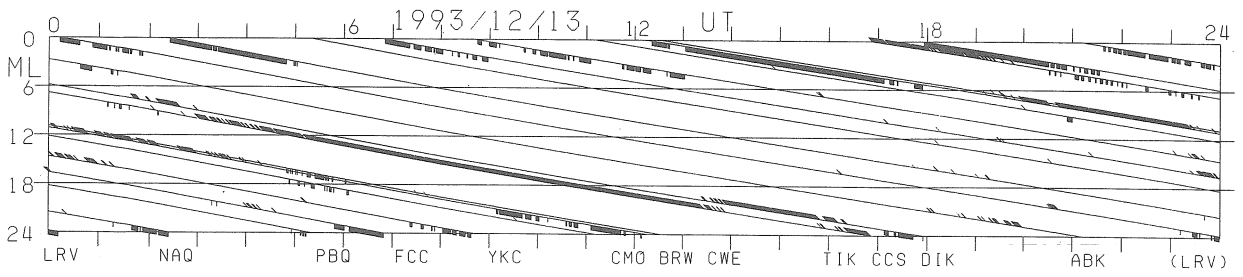


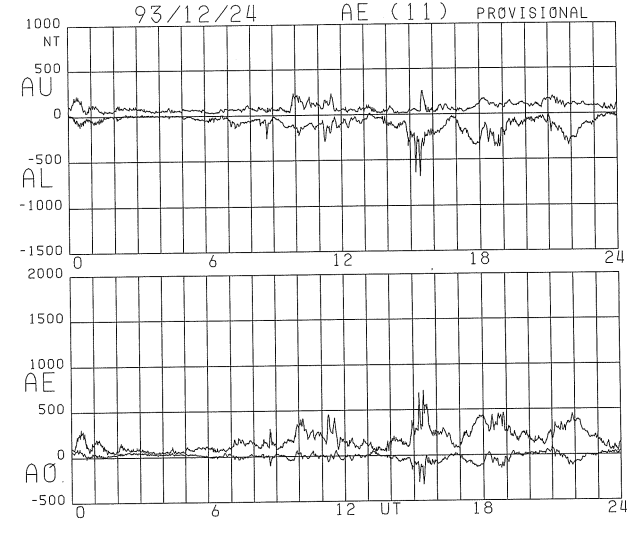
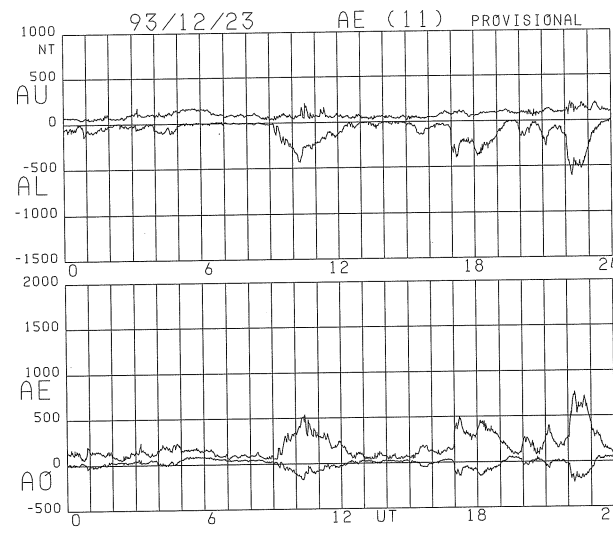
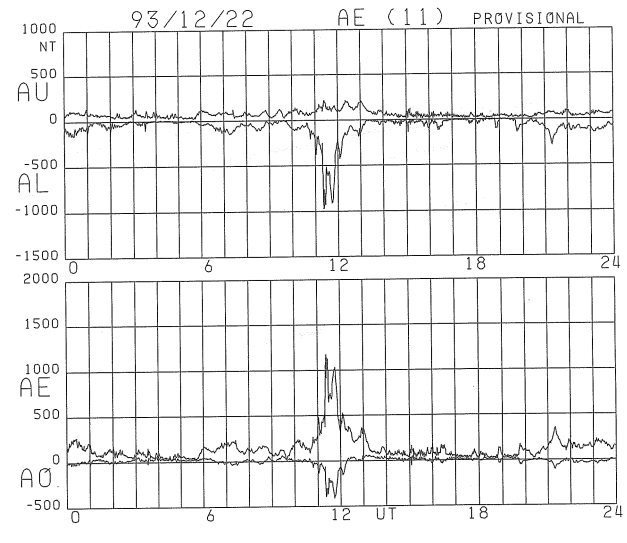
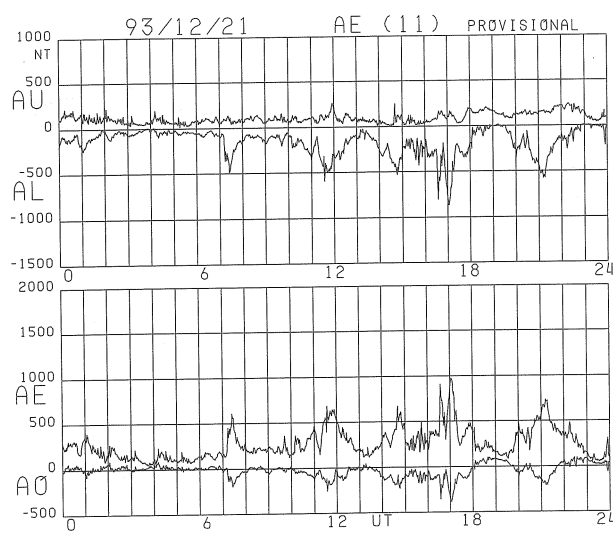
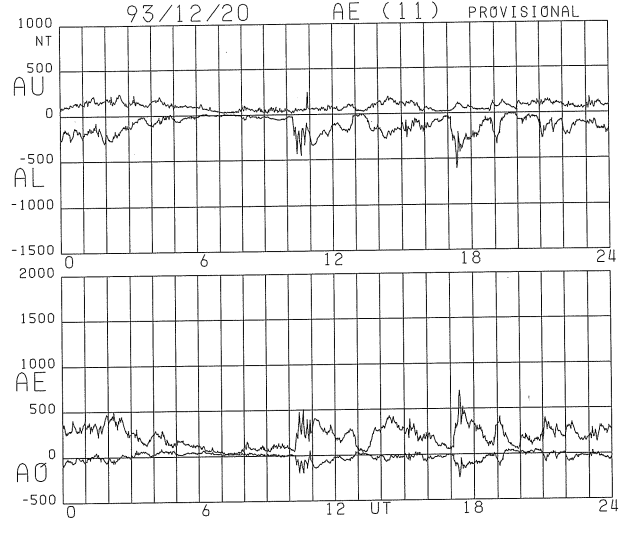
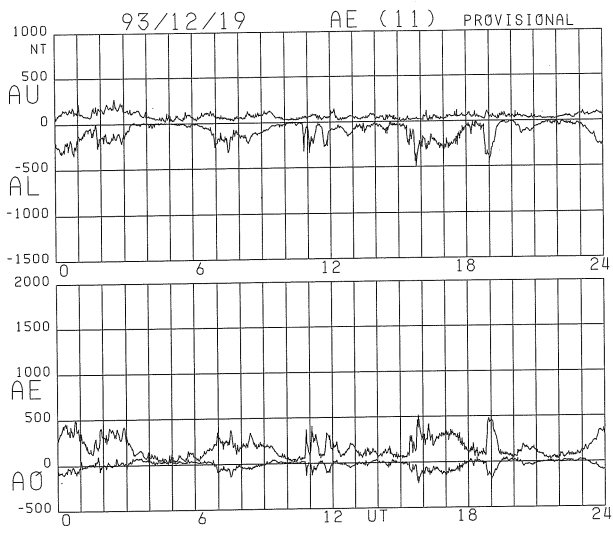


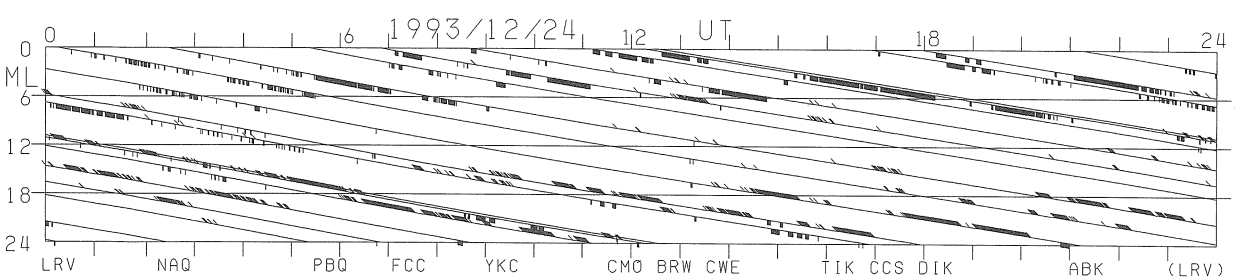
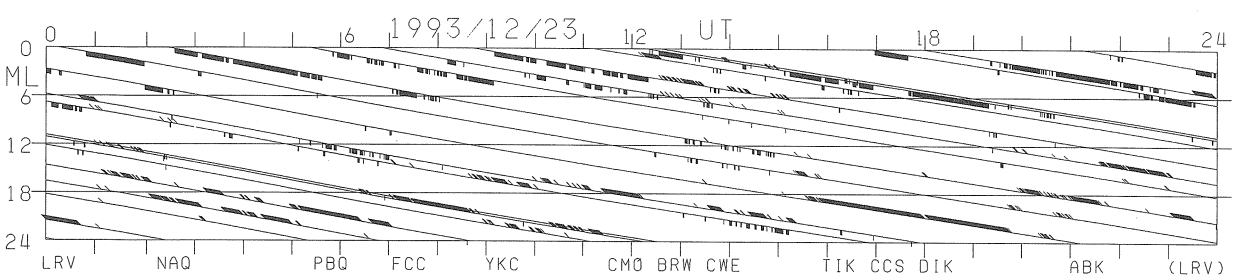
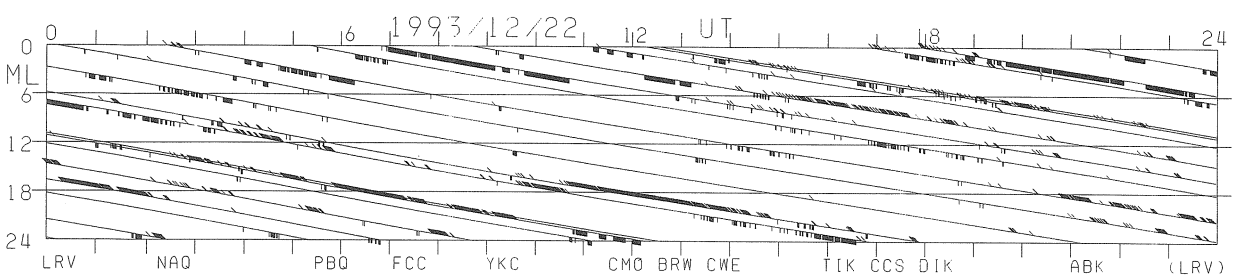
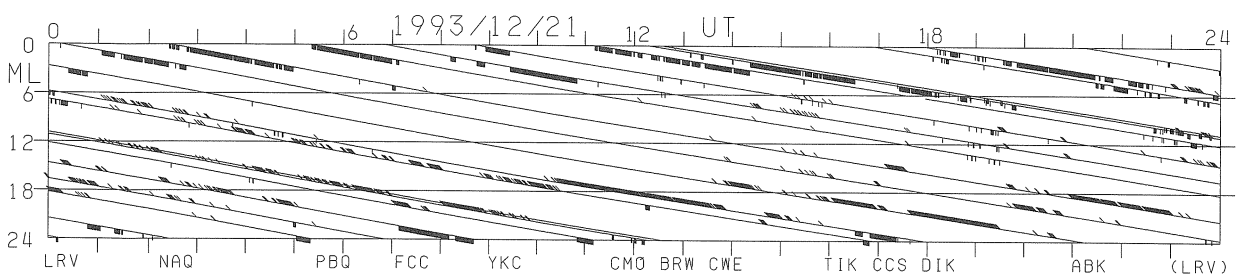
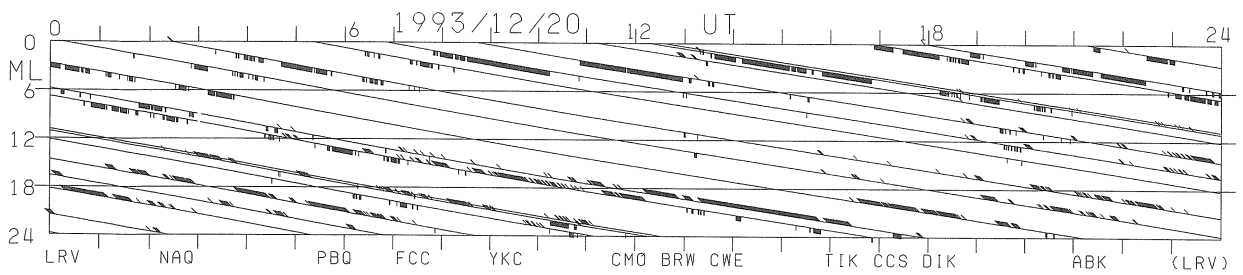
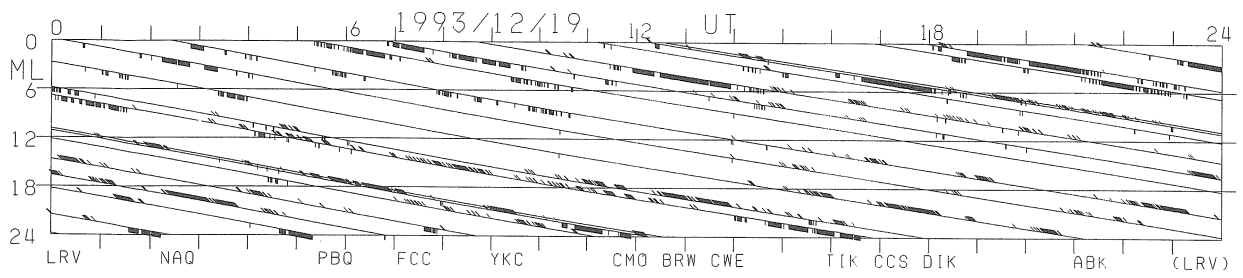


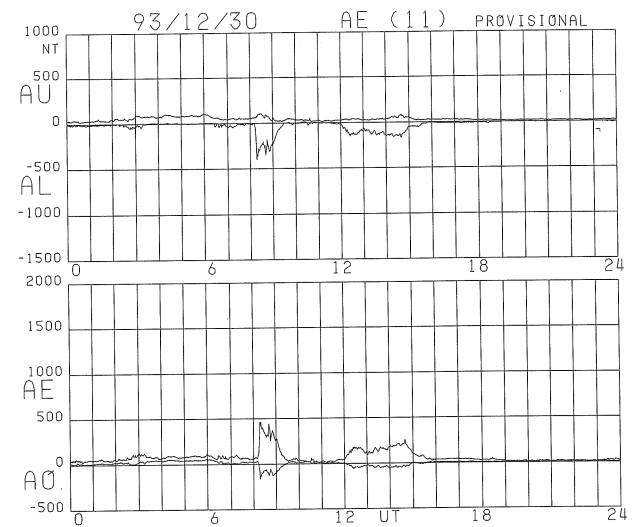
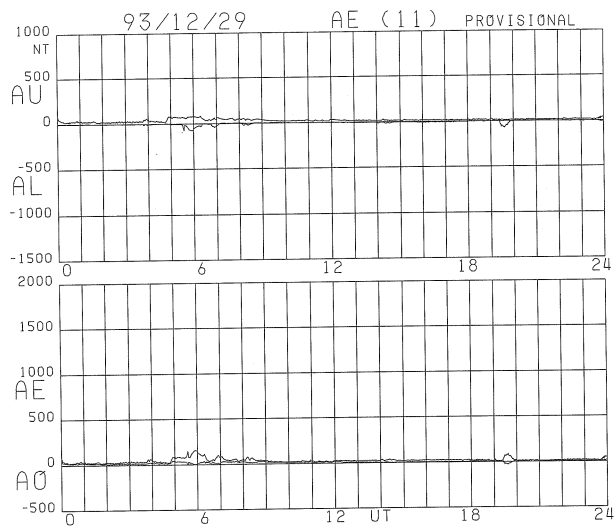
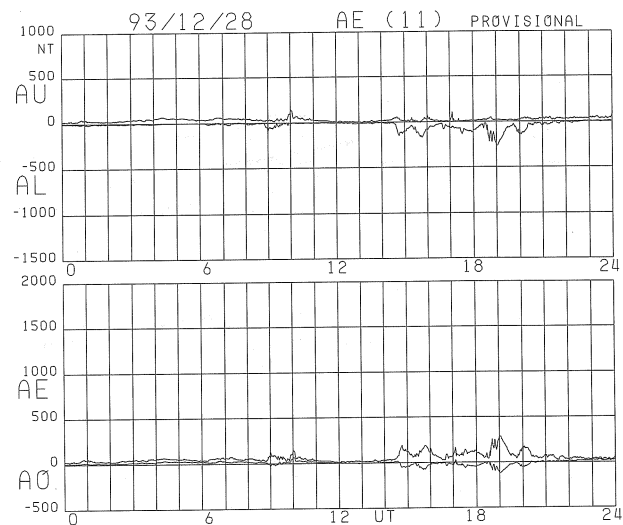
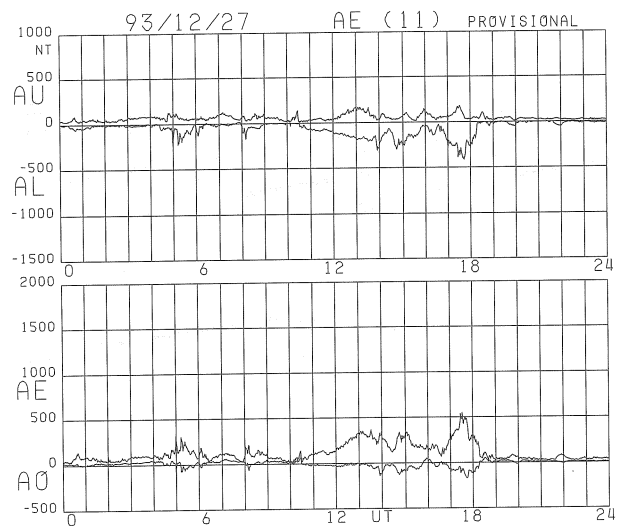
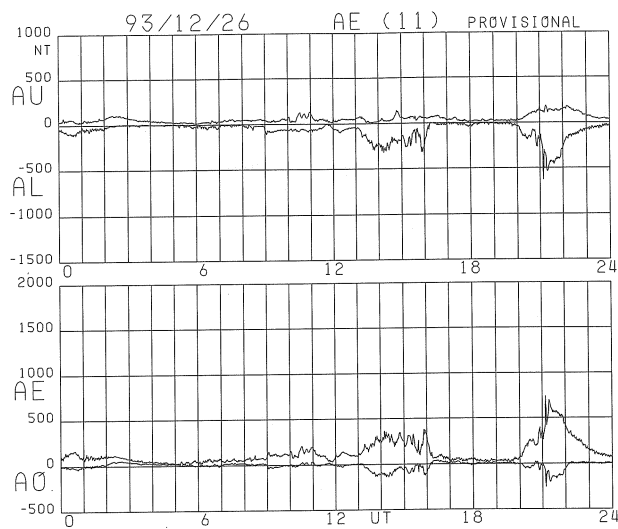
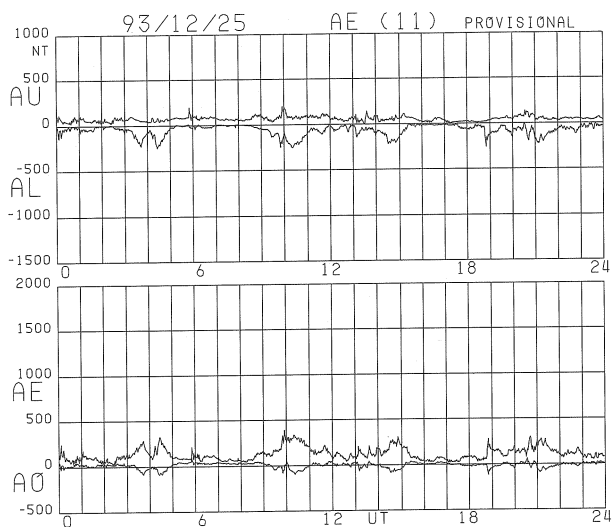


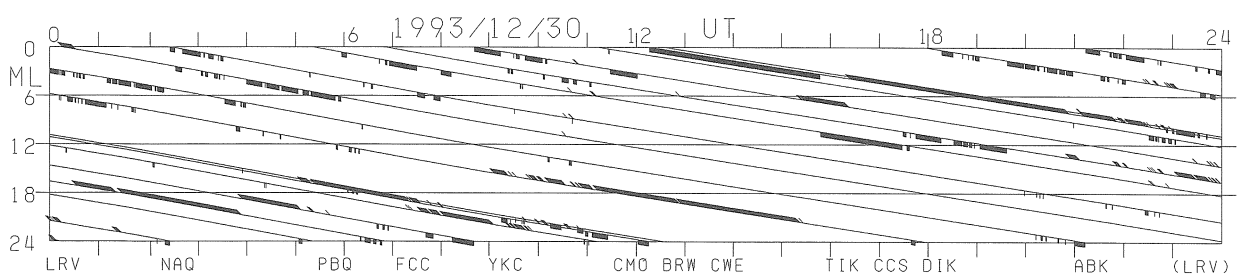
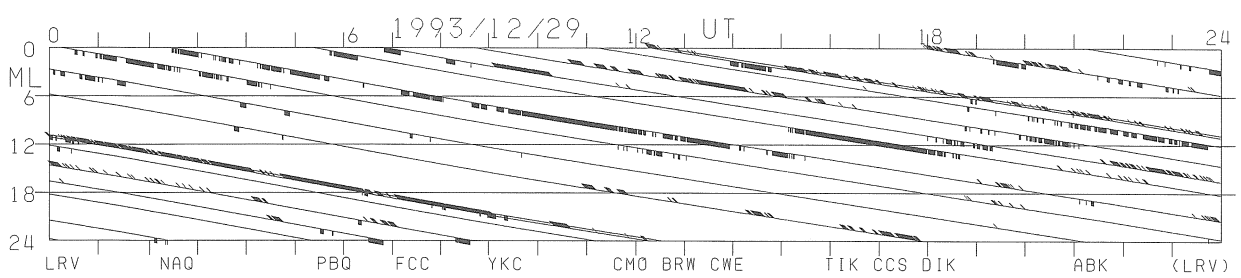
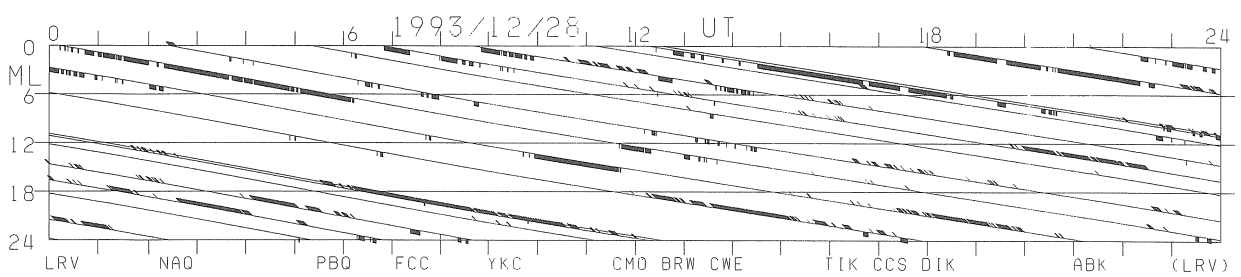
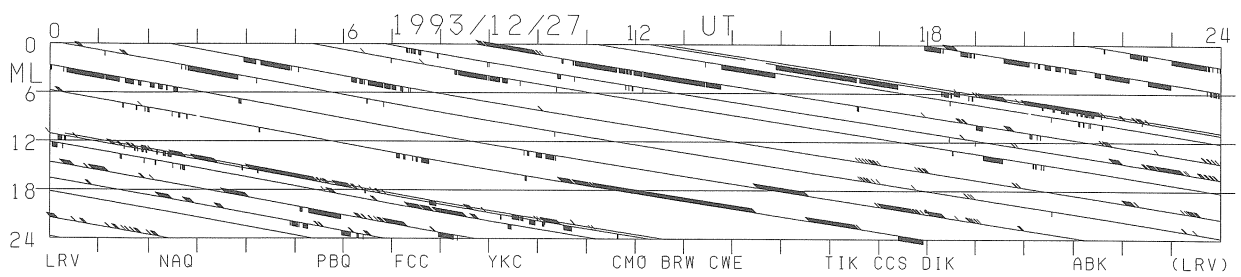
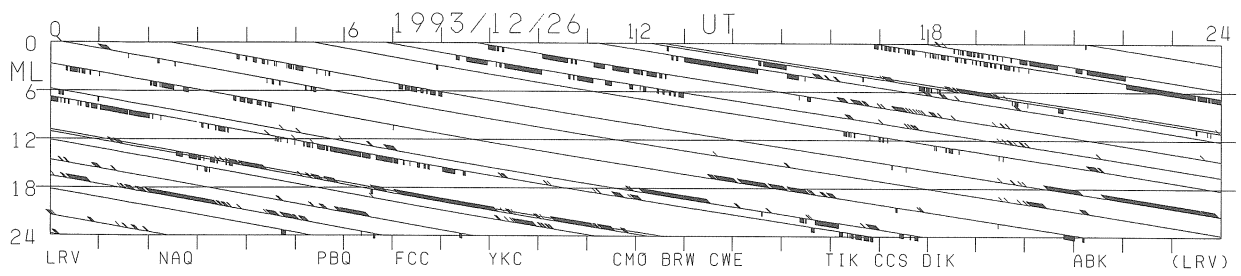
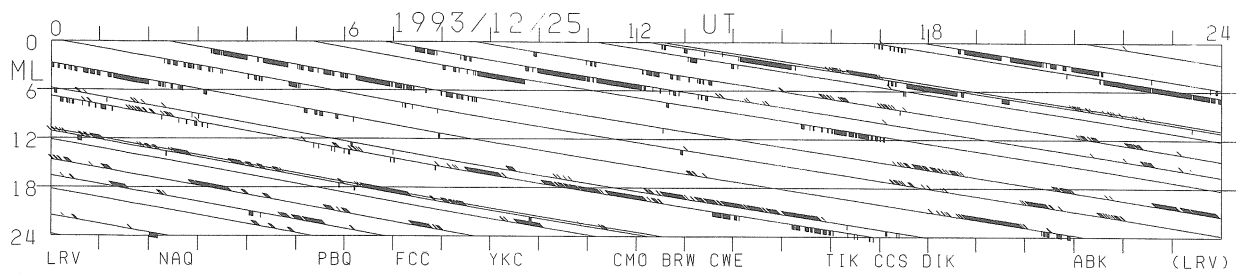


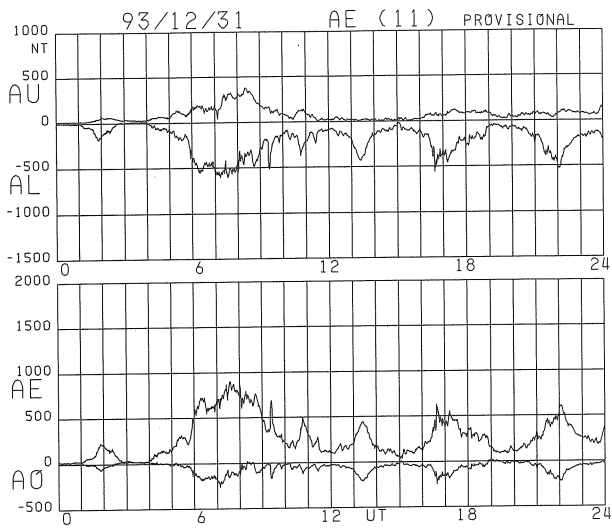


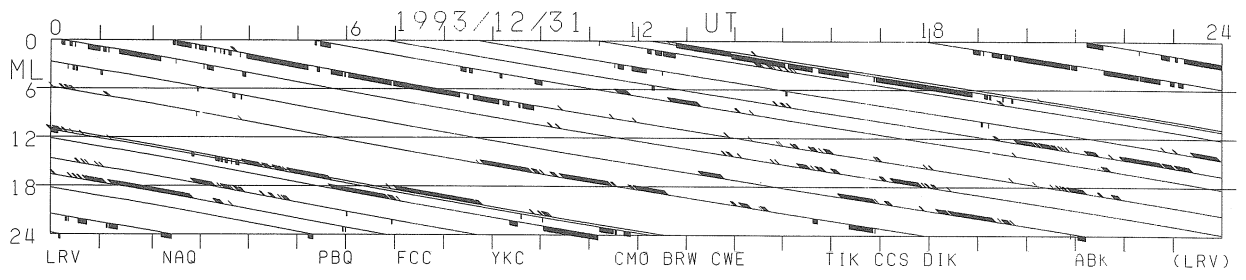


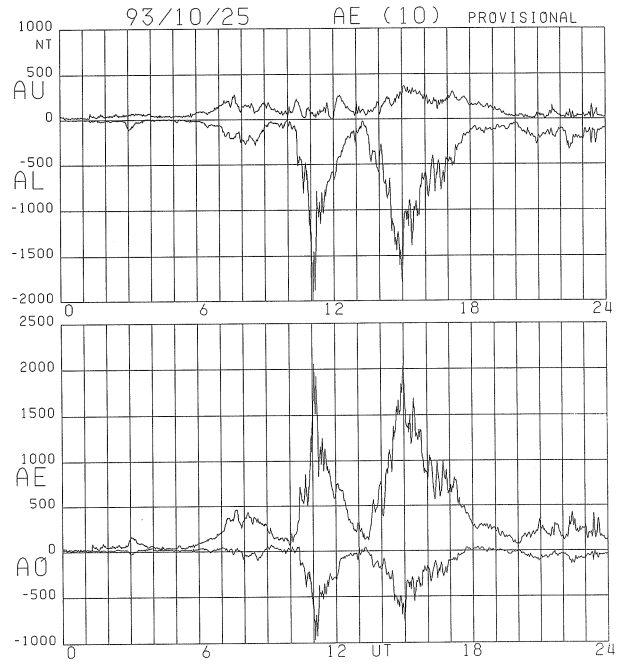
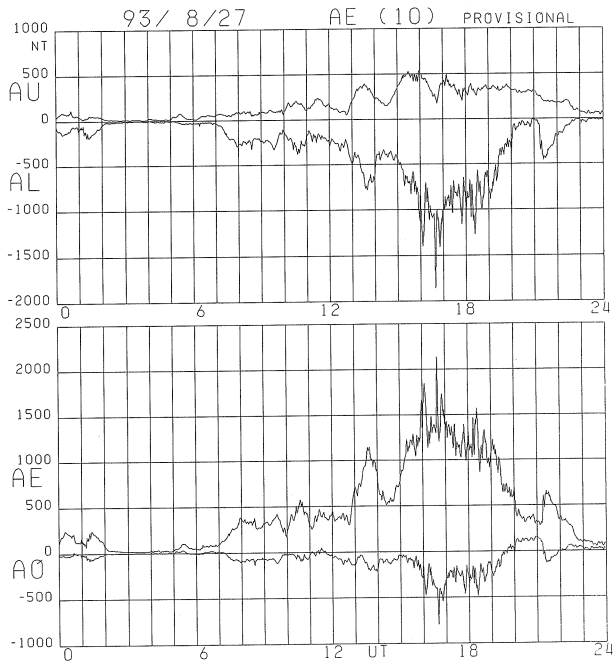
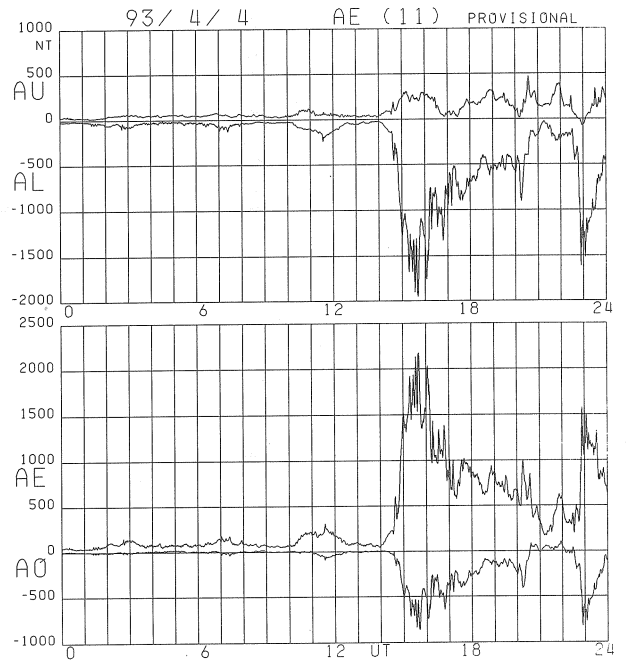
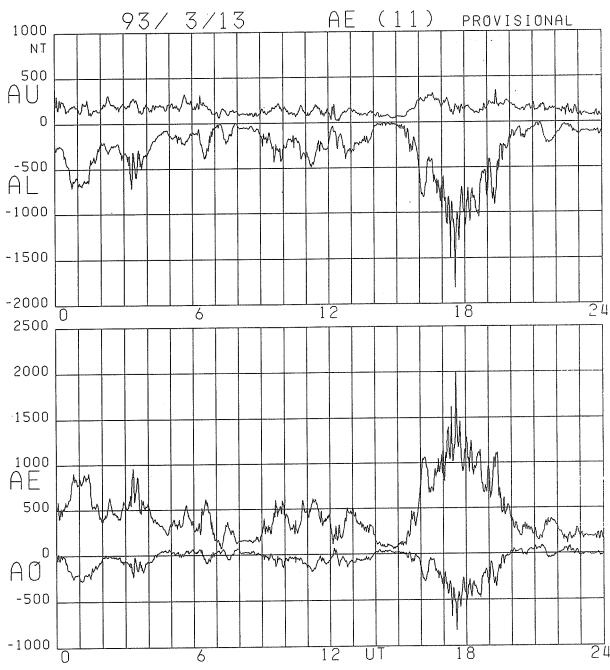












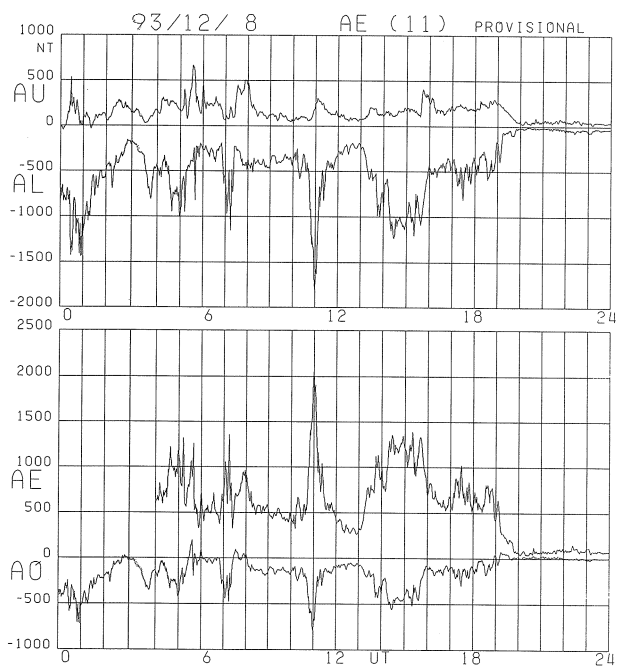
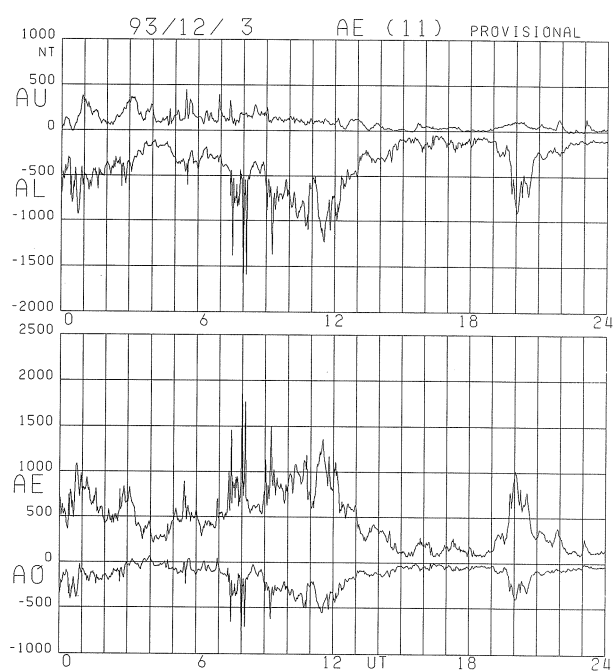
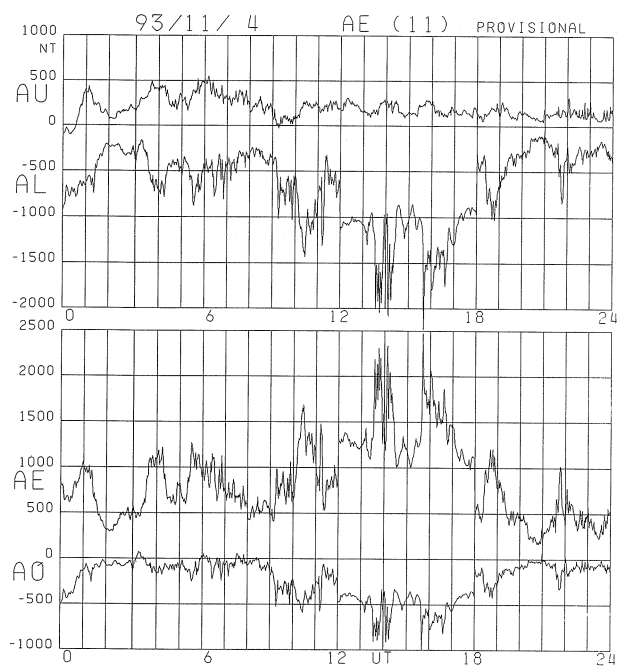
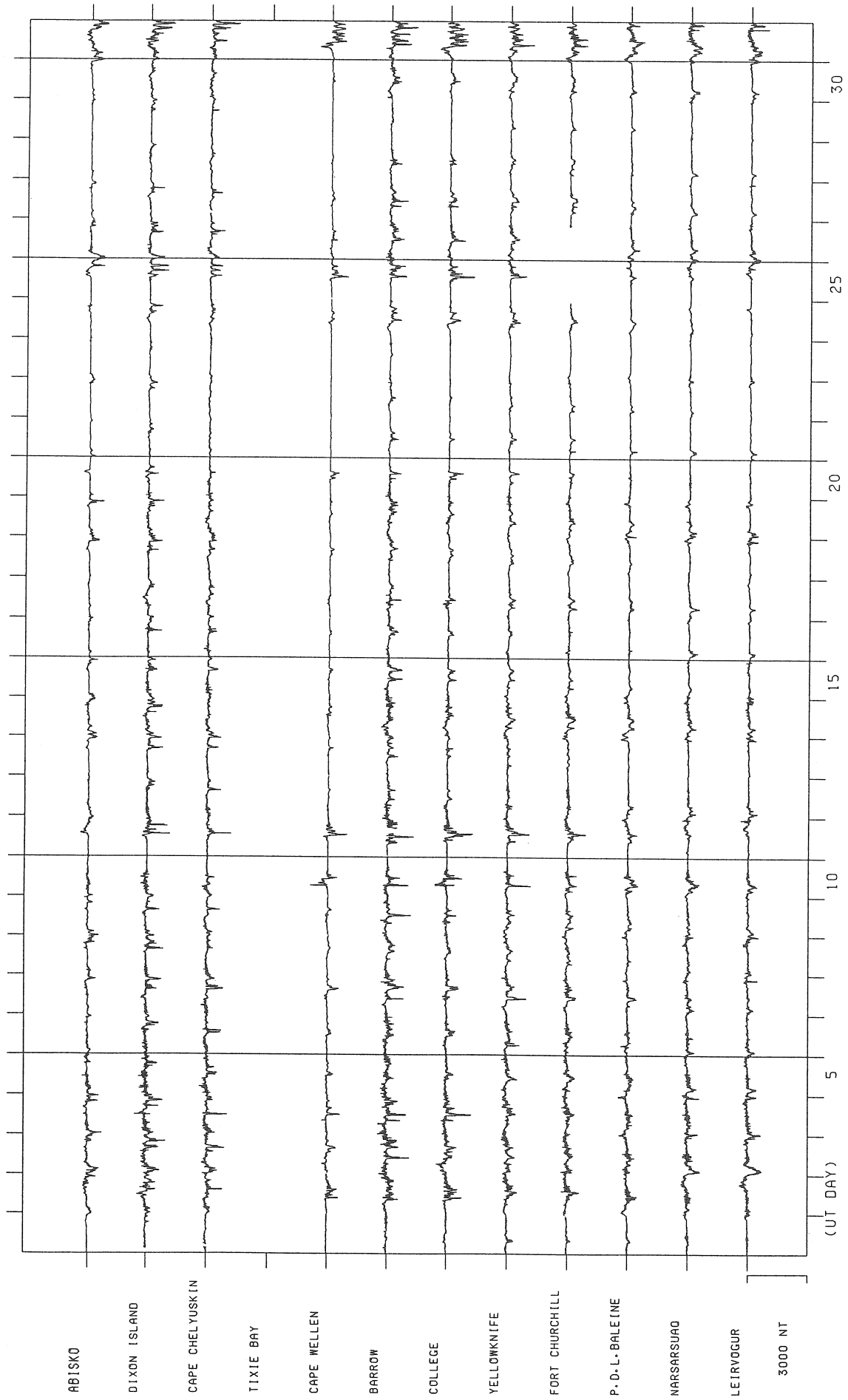
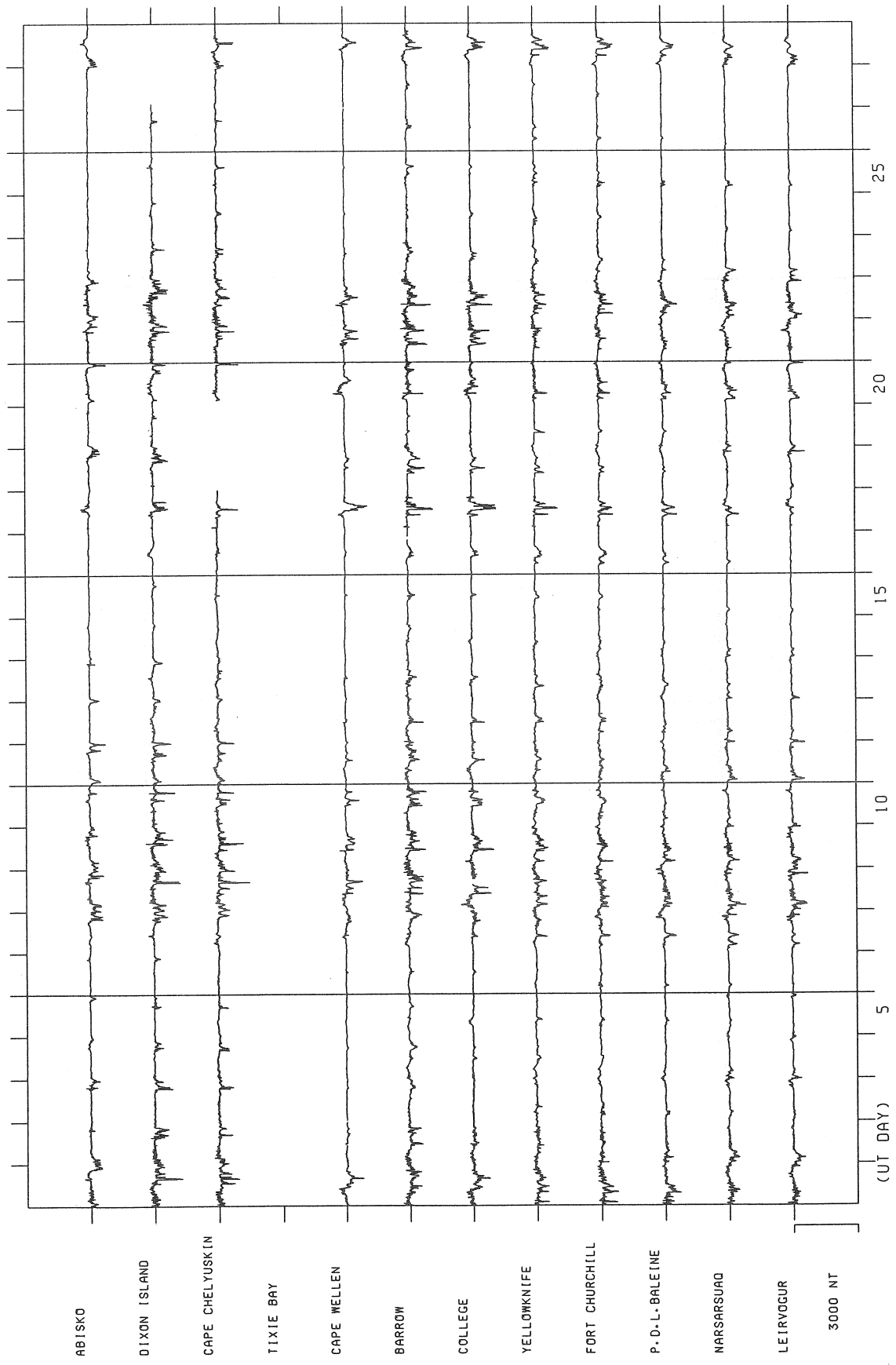


FIGURE 3

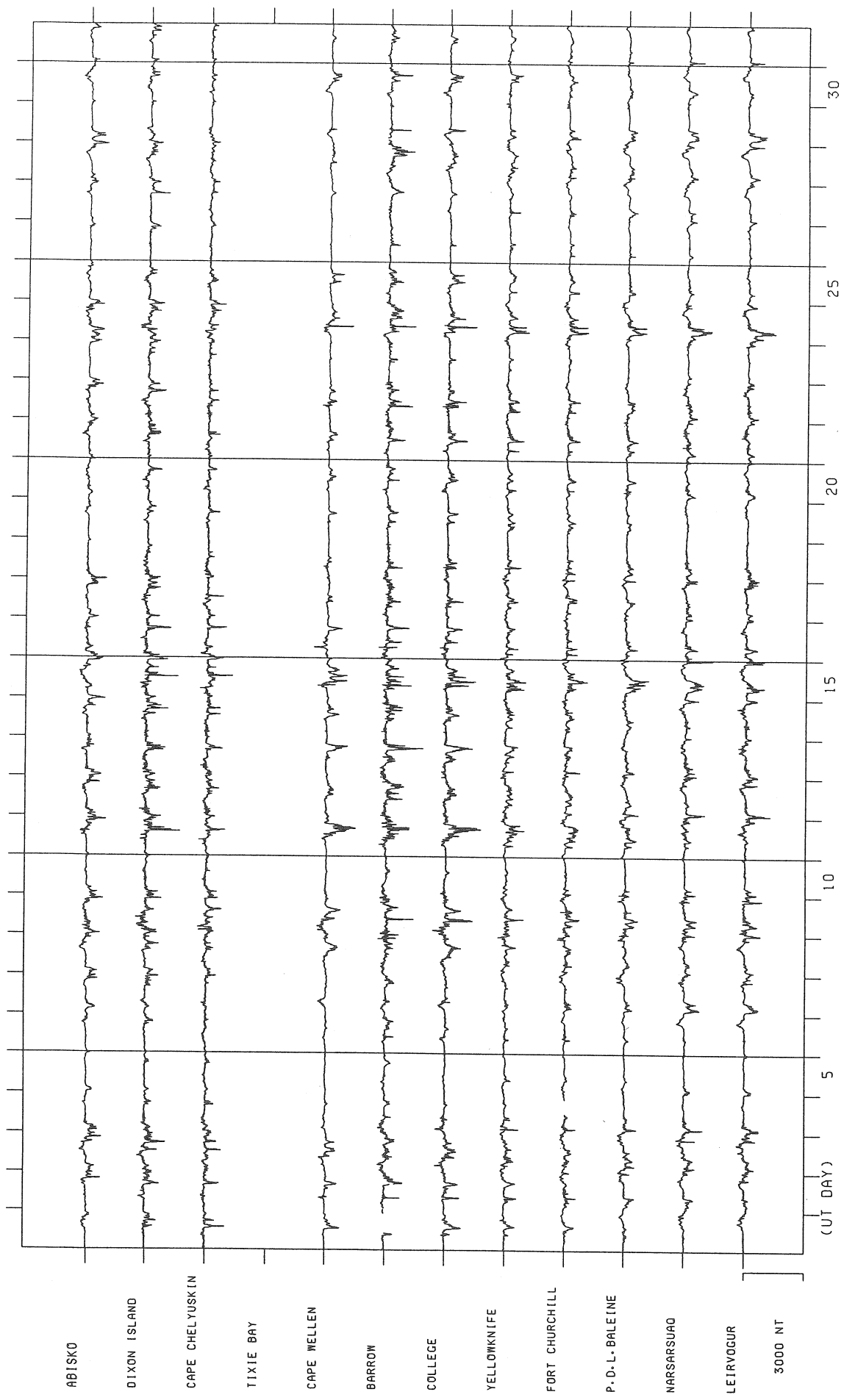
The H traces of magnetograms
from AE(11) stations
in each month
for January-December 1993.
(Provisional)



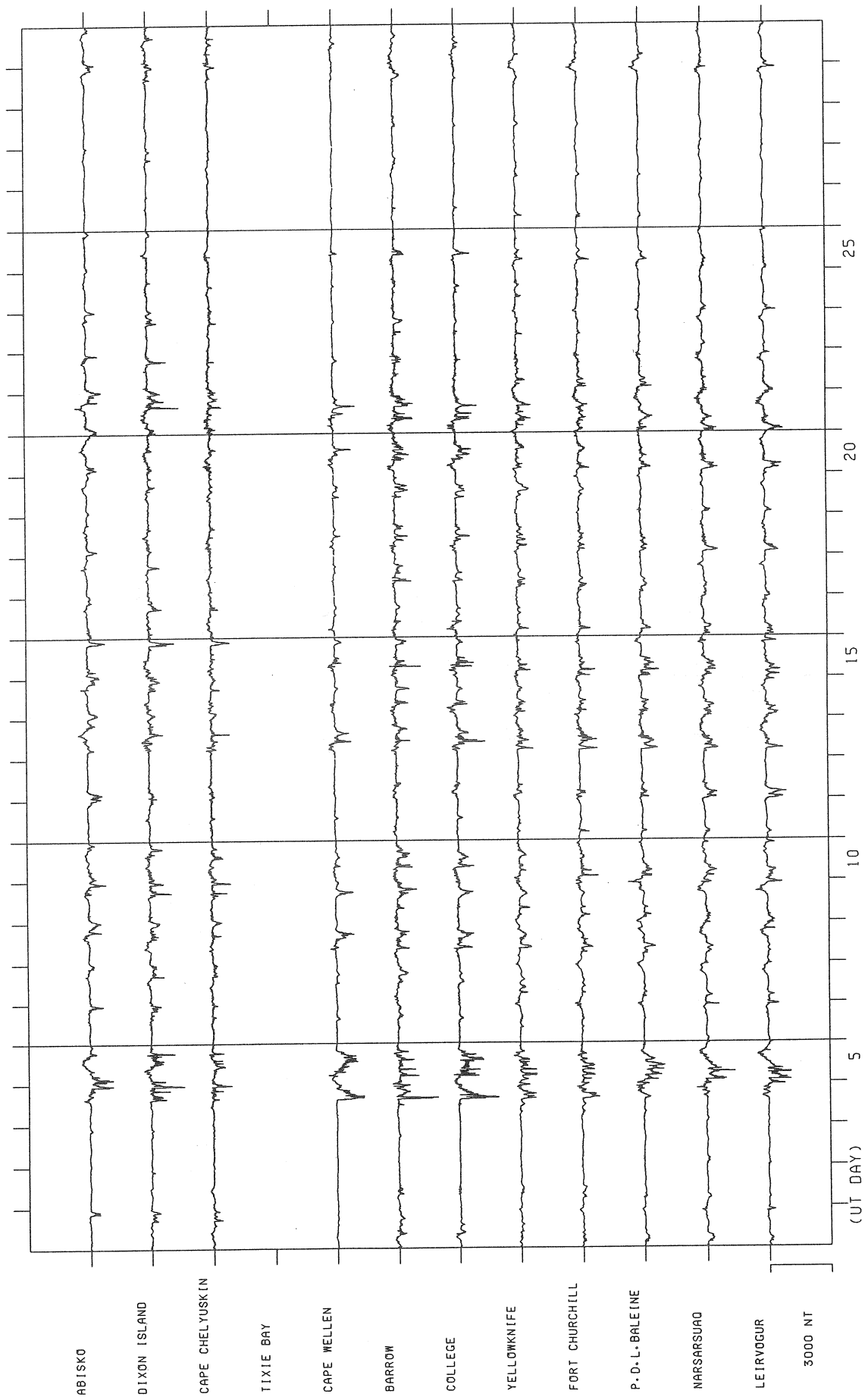
STACKED COMMON SCALE MAGNETOGRAMS FOR JANUARY 1993



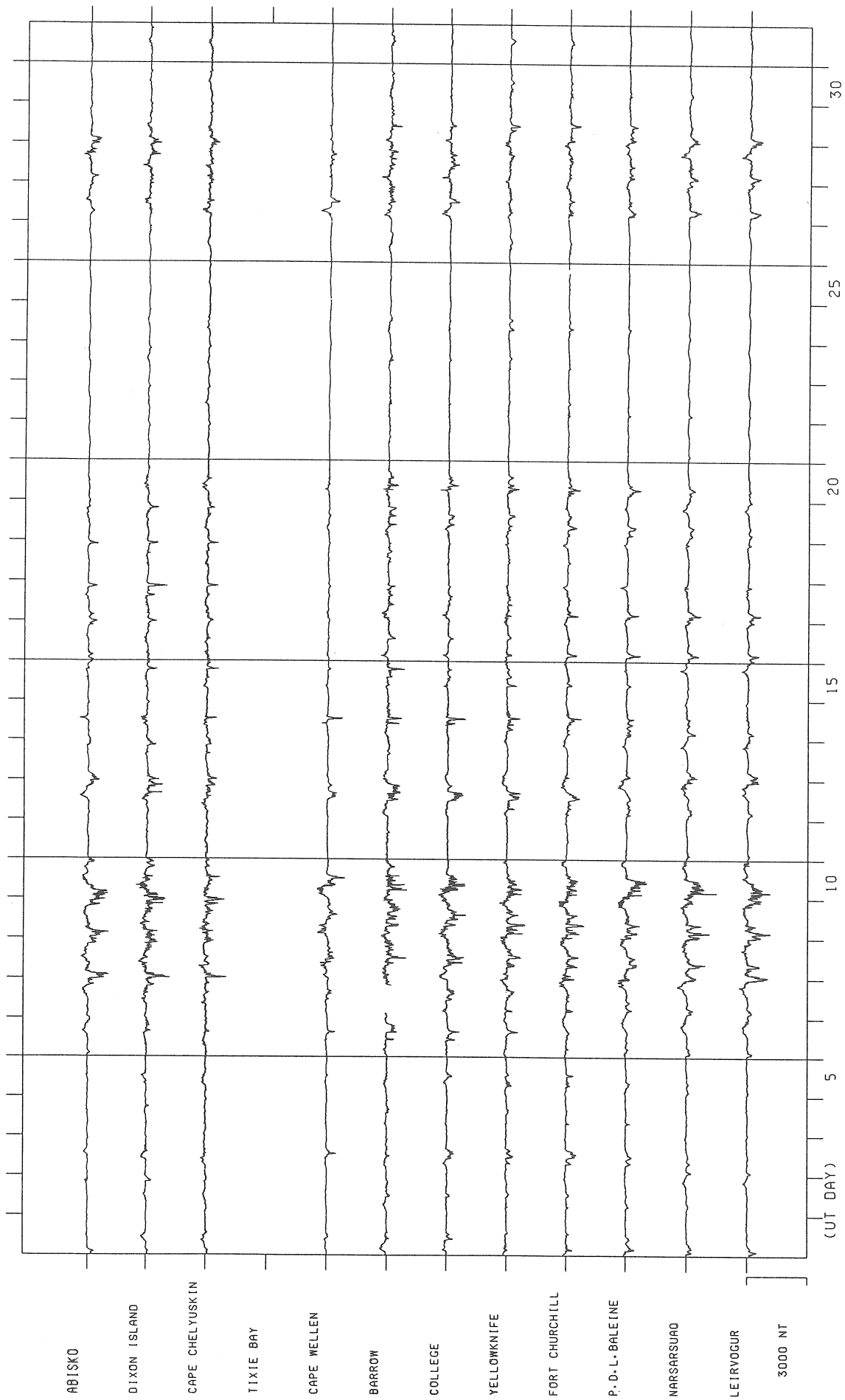
STACKED COMMON SCALE MAGNETOGRAMS FOR FEBURARY 1993



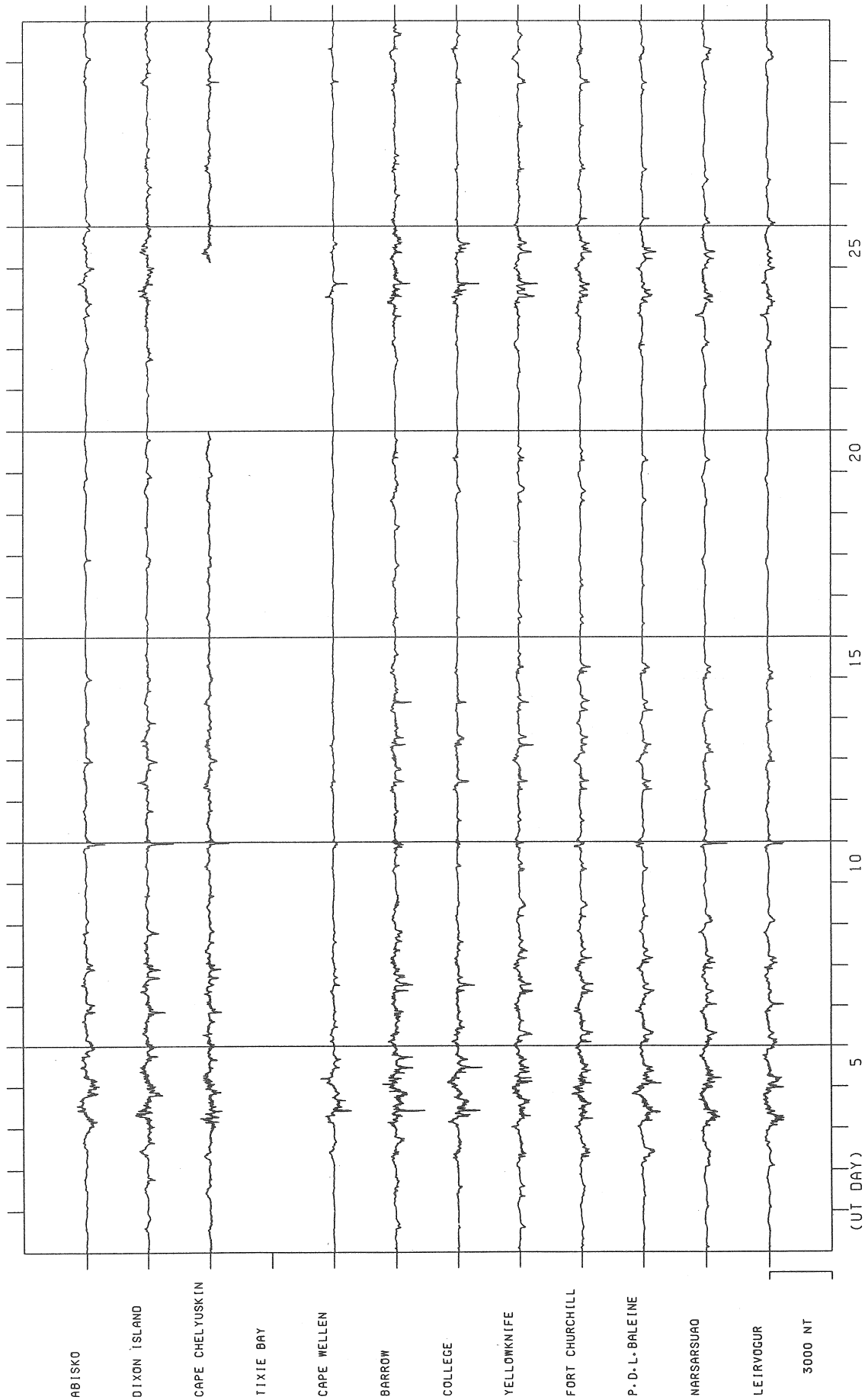
STACKED COMMON SCALE MAGNETOGRAMS FOR MARCH 1993



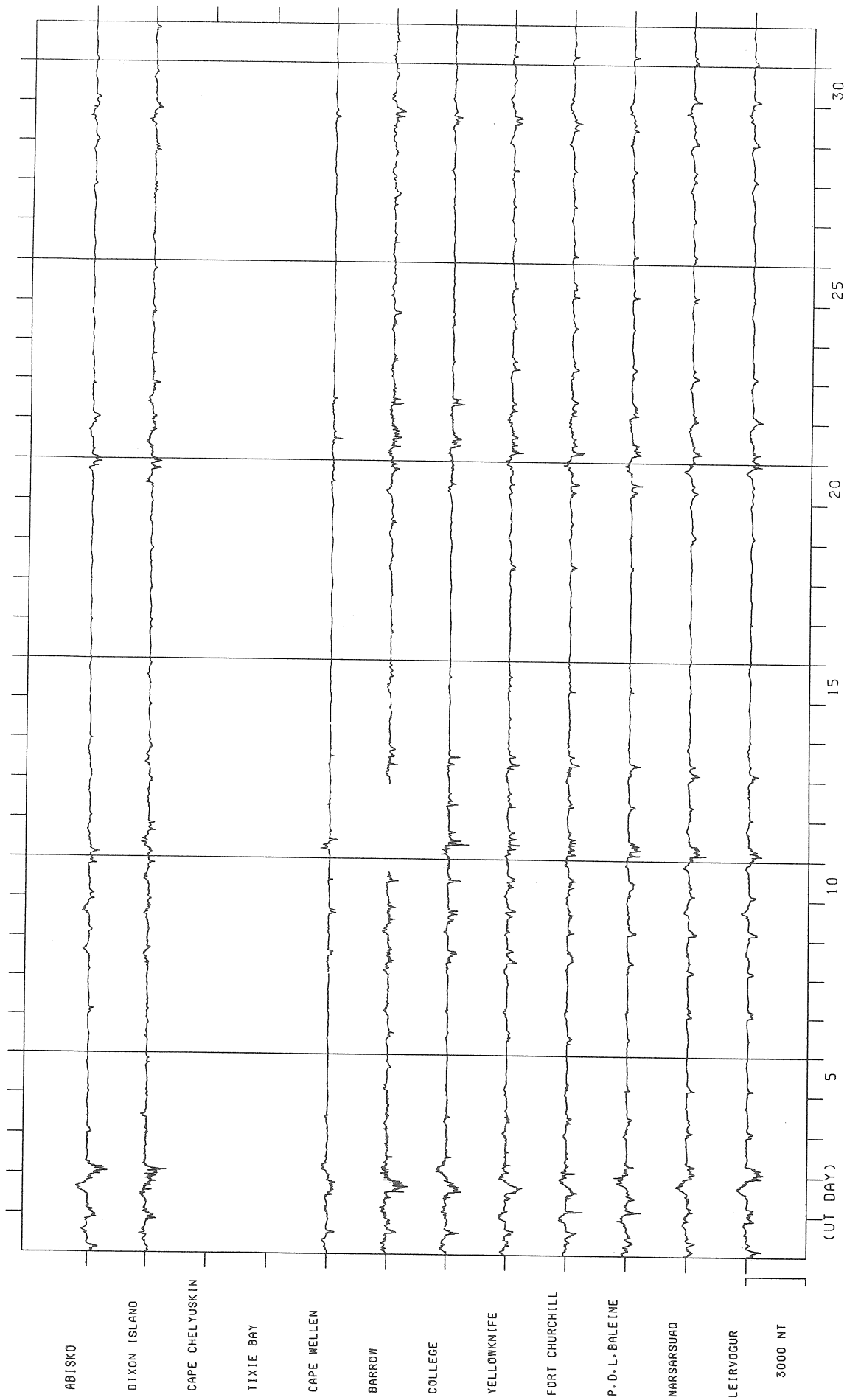
STACKED COMMON SCALE MAGNETOGRAMS FOR APRIL 1993



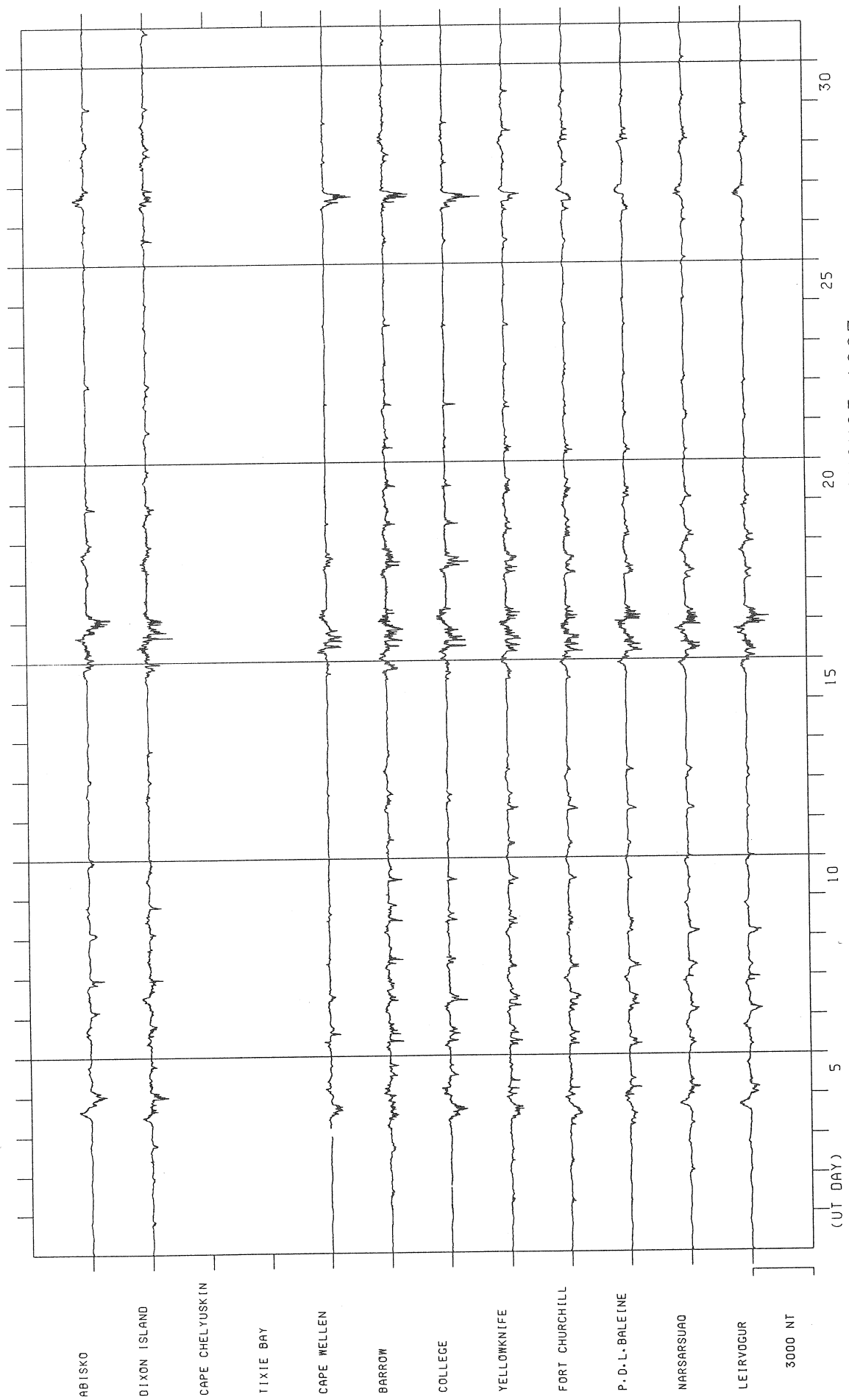
STACKED COMMON SCALE MAGNETOGRAMS FOR MAY 1993



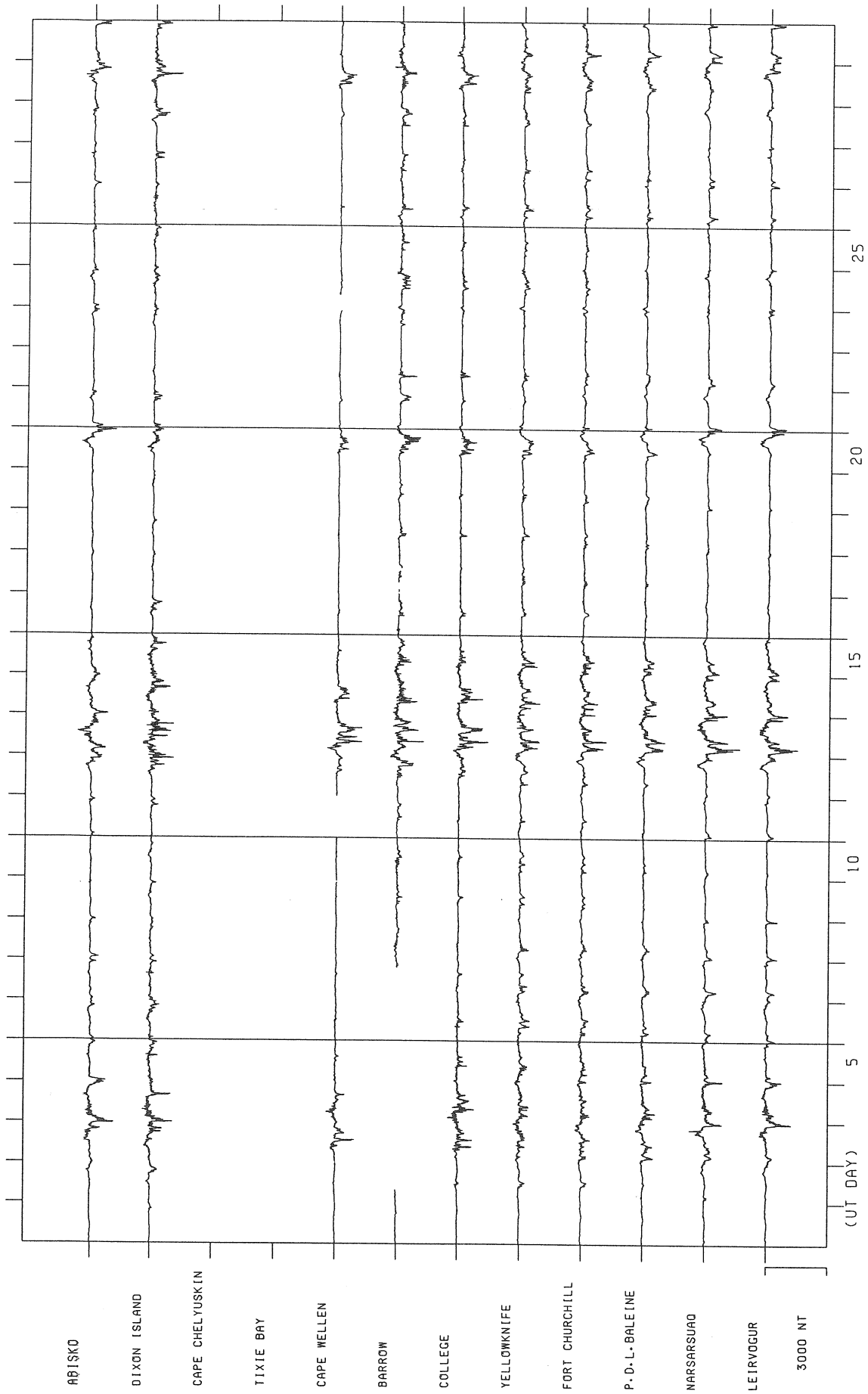
STACKED COMMON SCALE MAGNETOGRAMS FOR JUNE 1993



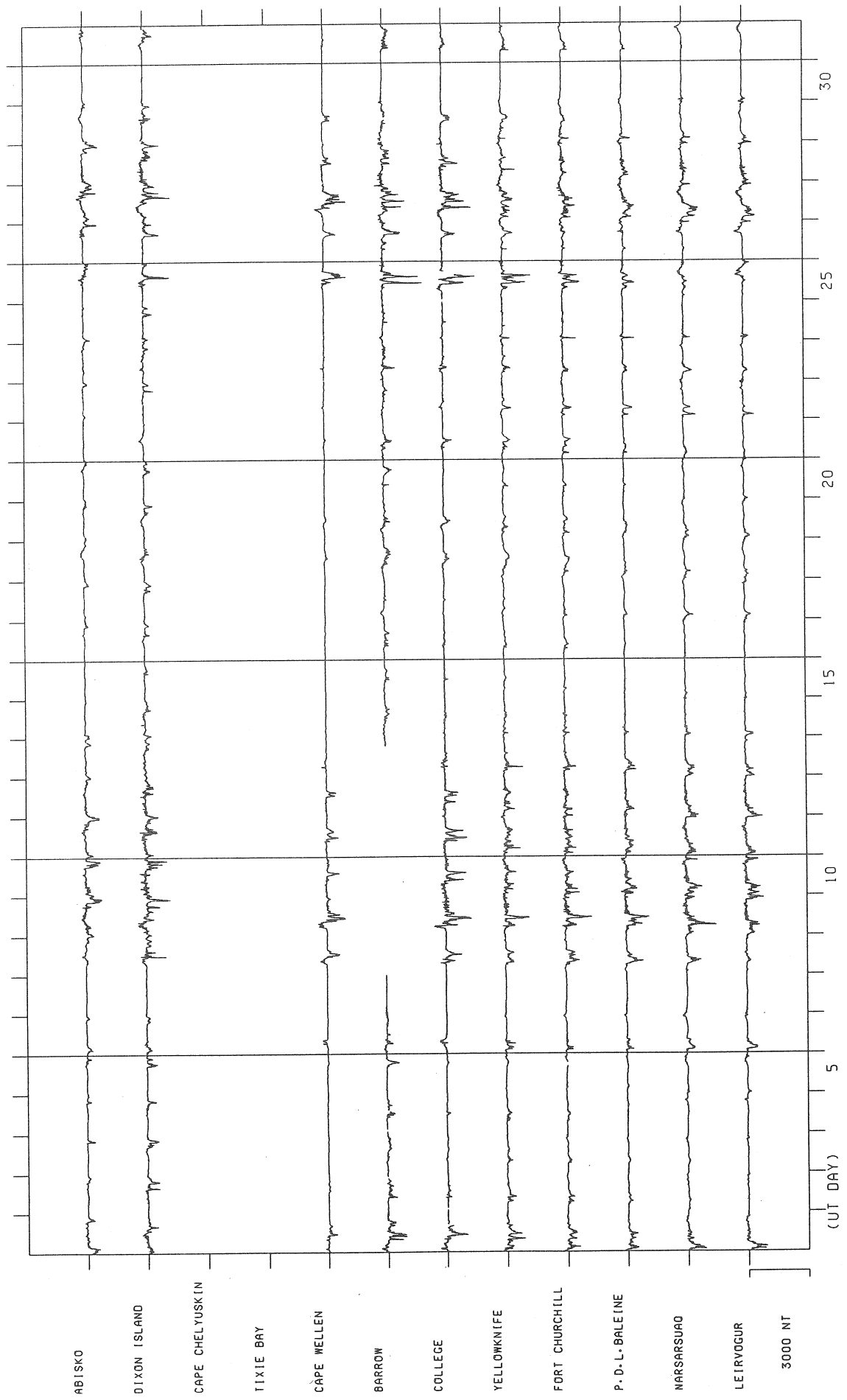
STACKED COMMON SCALE MAGNETOGRAMS FOR JULY 1993



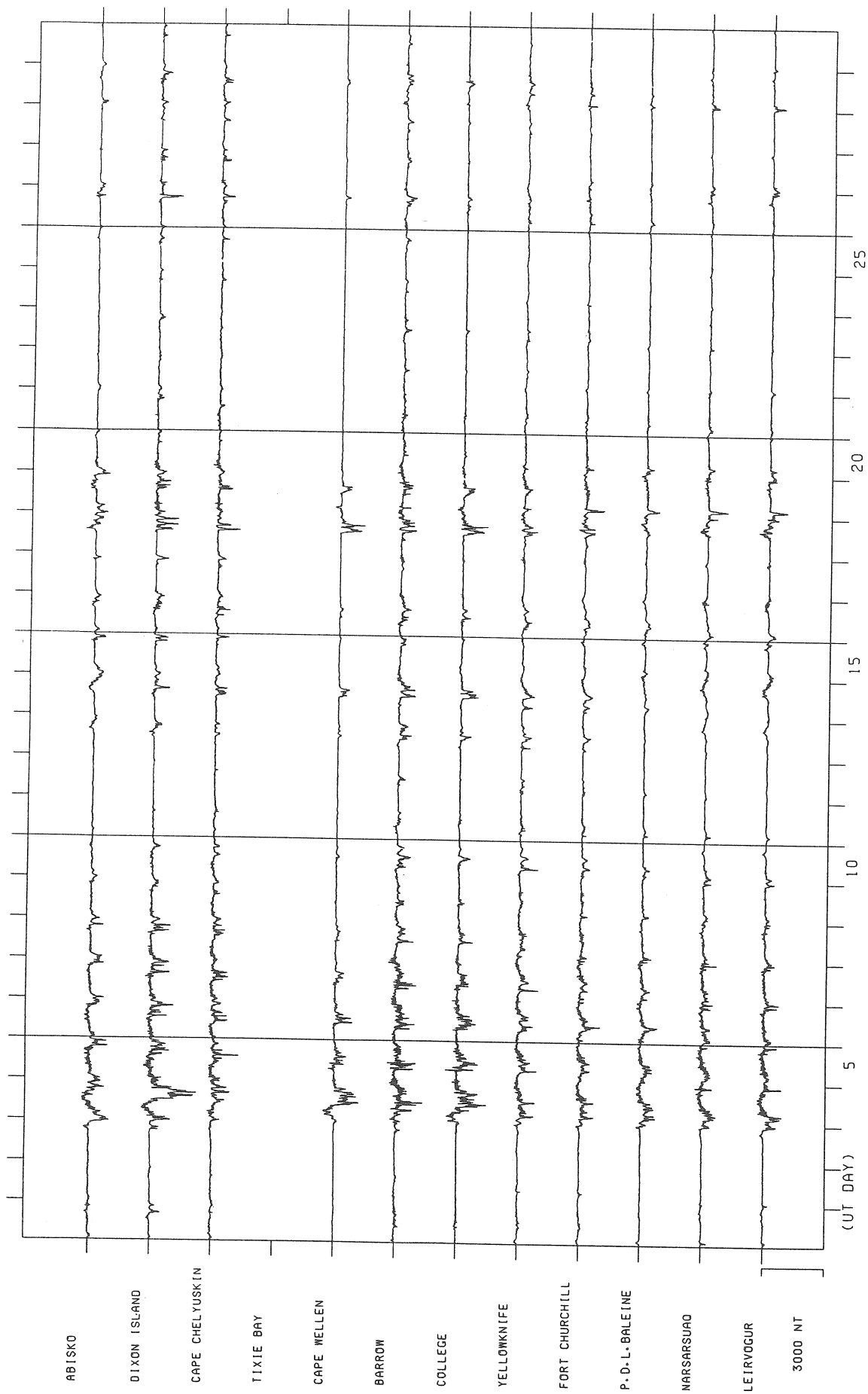
STACKED COMMON SCALE MAGNETOGRAMS FOR AUGUST 1993



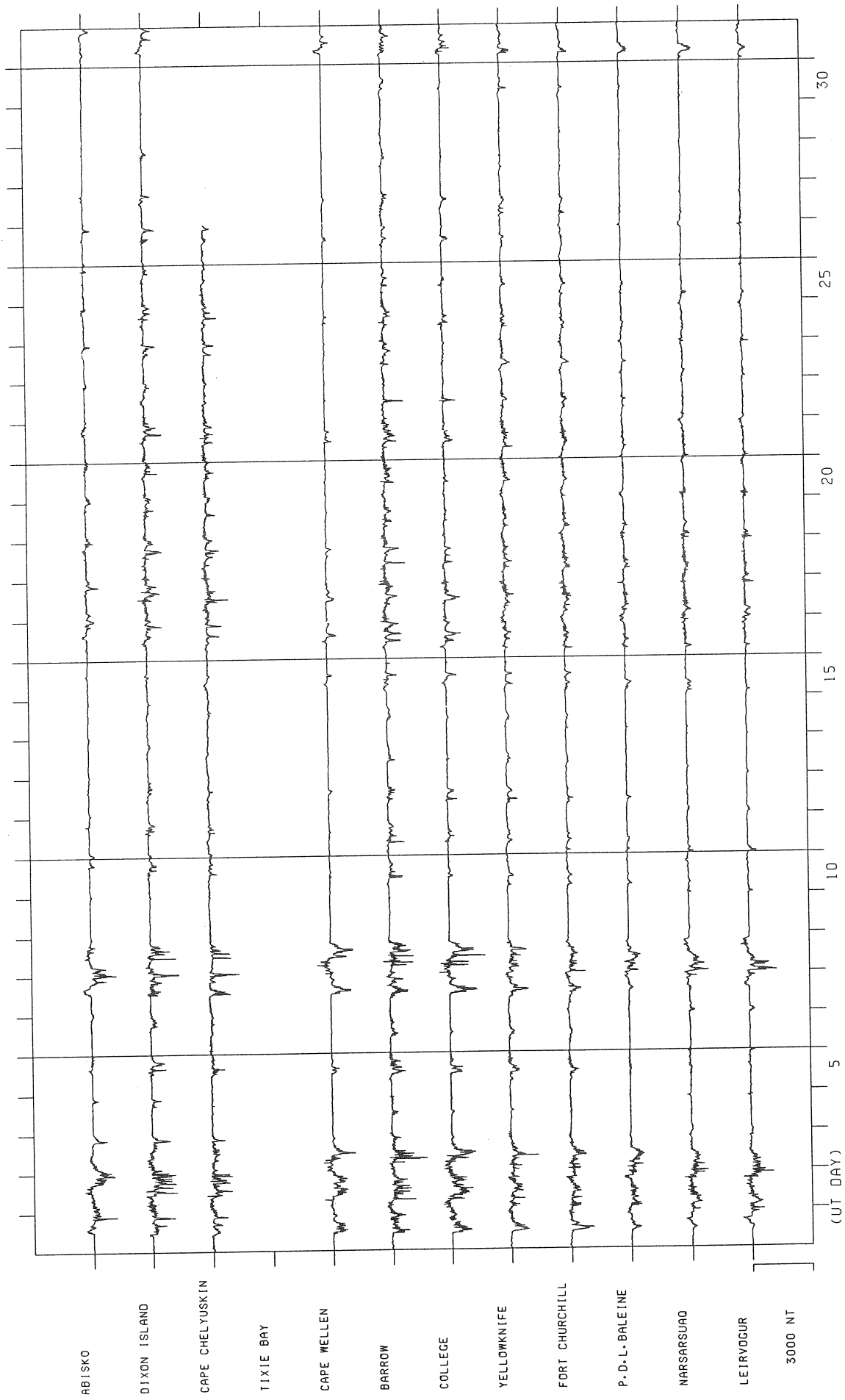
STACKED COMMON SCALE MAGNETOGRAMS FOR SEPTEMBER 1993



STACKED COMMON SCALE MAGNETOGRAMS FOR OCTOBER 1993



STACKED COMMON SCALE MAGNETOGRAMS FOR NOVEMBER 1993



STACKED COMMON SCALE MAGNETOGRAMS FOR DECEMBER 1993

FIGURE 4

A summary plot of provisional hourly values of
AU and AL indices
for January-December 1993.

Provisional Hourly Values of AU and AL for 1993

