

PROVISIONAL GEOMAGNETIC  
DATA PLOTS  
NO.26

(July - December, 2002)

February 2003

DATA ANALYSIS CENTER FOR GEOMAGNETISM  
AND SPACE MAGNETISM  
GRADUATE SCHOOL OF SCIENCE,  
KYOTO UNIVERSITY



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## PREFACE

This booklet contains provisional plots of the geomagnetic data for July - December, 2002 with the Kp index and the international sunspot number. One minute values of the horizontal (or the northward) component are plotted after subtracting the monthly mean of the five-quiet days. The purpose of this booklet is to give the information of world-wide geomagnetic disturbances with high-time resolution as early as possible. Hence the provisional data without base-line adjustment or noise reduction (marked with \* in Table 1) are included. There still remain artificial noises on the plots though we tried to eliminate them. Users should be careful on these points, and the plots in this booklet should not be used in other publications.

These data were kindly provided through the following organizations.

- (1) World Data Center-A for STP and The U.S. Geological Survey.
- (2) Leirvogur Magnetic Observatory, University of Iceland.
- (3) Valentia Observatory of Meteorological Service.
- (4) Kakioka Magnetic Observatory.
- (5) Telecommunication Training Institute.
- (6) Hermanus Magnetic Observatory.
- (7) Swedish Institute of Space Physics in Kiruna.
- (8) Chambon-la-Forêt Magnetic Observatory.
- (9) Danish Meteorological Institute.
- (10) Institut de Physique du Globe de Strasbourg.
- (11) Indian Institute of Geomagnetism.
- (12) Instituto Geofísico del Perú.
- (13) Institute of Geophysics, China Seismological Bureau and Xinjiang Province Seismological Bureau

The distribution and the information of the stations are shown in Figure 1 and Table 1, respectively. The Kp index was provided by GeoForschungsZentrum Potsdam. The international sunspot number is provided by the Sunspot Index Data Center, Brussels.

The Post-Script files of these plots for the latest issue are available from WWW home page

<http://swdcwww.kugi.kyoto-u.ac.jp/wdc/Sec3.html#ARCH>

or from anonymous FTP directory at our data center. The IP address and the directory are as follows:

IP address: 130.54.59.253 (swdcdb)

Directory: anonymous (Change directory to './data/pplot' after logging in.)

Each file is compressed and has a name YYMMD1-D2.ps.gz (for example, 021001-02.ps.gz for October 1-2, 2002). Each file contains the plot of the each page of this booklet. Files should be transferred in binary mode and uncompressed.

The users who need further information or the digital data should consult to:

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

Telephone: 81-75-753-3929  
 Facsimile: 81-75-722-7884  
 E-mail: iyemori@kugi.kyoto-u.ac.jp  
 WWW: <http://swdcwww.kugi.kyoto-u.ac.jp/>

Table 1. List of stations used in this booklet. The 17 stations among them are used in the plots.

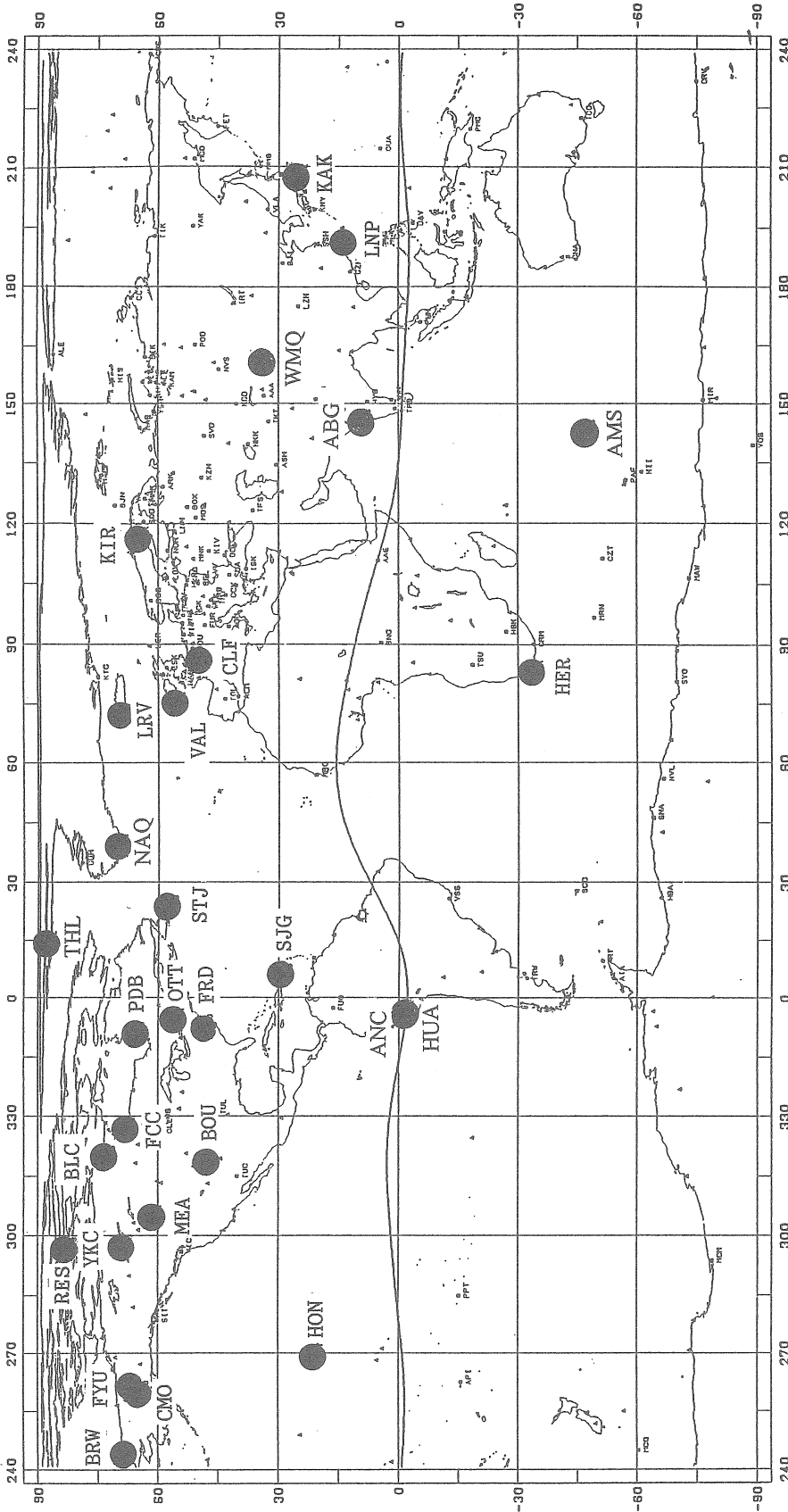
STATION NAME	ABB CODE	ORG No.	GEOGRAPHIC		GEOMAGNETIC		INVARIANT PLOT	
			LAT.	LONG.	LAT.	LONG.	LAT.	SCALE
*Tule	THL	9	76.6	291.2	87.2	12.4	85.9	500nT/div
*Resolute Bay	RES	1	74.7	265.1	83.1	296.0	83.9	"
*Baker Lake	BLC	1	64.3	264.0	73.7	319.2	74.6	"
*Narssarsuaq	NAQ	9	61.2	314.6	70.6	38.7	67.5	"
Leirvogur	LRV	2	64.2	338.3	69.7	72.0	65.7	"
*Yellowknife	YKC	1	62.5	245.5	69.1	296.6	69.8	"
*Barrow	BRW	1	71.3	203.3	69.1	243.7	69.6	"
*Fort Churchill	FCC	1	58.8	265.9	68.5	326.1	69.6	"
*Pos. de la Baleine	PDB	1	55.3	282.3	66.2	350.3	66.8	"
Kiruna	KIR	7	67.8	20.4	65.1	116.2	64.5	"
*College	CMO	1	64.9	212.2	65.1	259.2	64.8	"
*St. Johns	STJ	1	47.6	307.3	57.9	23.4	55.6	100nT/div
Valentia	VAL	3	51.9	349.8	56.2	74.8	51.0	"
*San Juan	SJG	1	18.4	293.9	29.1	5.2	32.5	"
*Fredericksburg	FRD	1	38.2	282.6	49.1	352.2	50.7	"
*Boulder	BOU	1	40.1	254.8	48.7	319.0	49.1	"
*Honolulu	HON	1	21.3	202.0	21.5	268.6	20.2	"
Kakioka	KAK	4	36.2	140.2	26.6	207.8	25.9	"
Lunping	LNP	5	25.0	121.2	14.2	191.3	7.6	"
Martin de Vivies	AMS	10	-37.8	77.6	-46.9	142.8	48.6	"
Chambon-la-Foret	CLF	8	48.0	2.3	50.1	85.7	45.7	"
*Hermanus	HER	6	-34.4	19.2	-33.9	83.4	43.6	"
*Urumqi	WMQ	13	43.8	87.7	33.7	162.0	36.5	"
*Alibag	ABG	11	18.6	72.9	9.9	145.8	----	"
*Ancon	ANC	12	-11.8	282.9	-1.1	354.4	Near Mag. Eq.	"
*Huancayo	HUA	12	-12.1	284.7	-1.4	356.2	Mag. Equator	"

\*: Provisional data

#### Acknowledgments:

The compilation of the geomagnetic data and publication of this booklet have been supported in part by grant 13640451 and 127008 under the Japan Society for Promotion of science (JSPS).

# DISTRIBUTION OF GEOMAGNETIC OBSERVATORIES



GEOMAGNETIC COORDINATE (1985.0)

——— DIP EQUATOR AT 100 KM ALTITUDE

Fig. 1 Data are obtained at the observatories shown by the solid circles.  
15 stations among those shown in this figure are used for the plots.



**July - December, 2002**

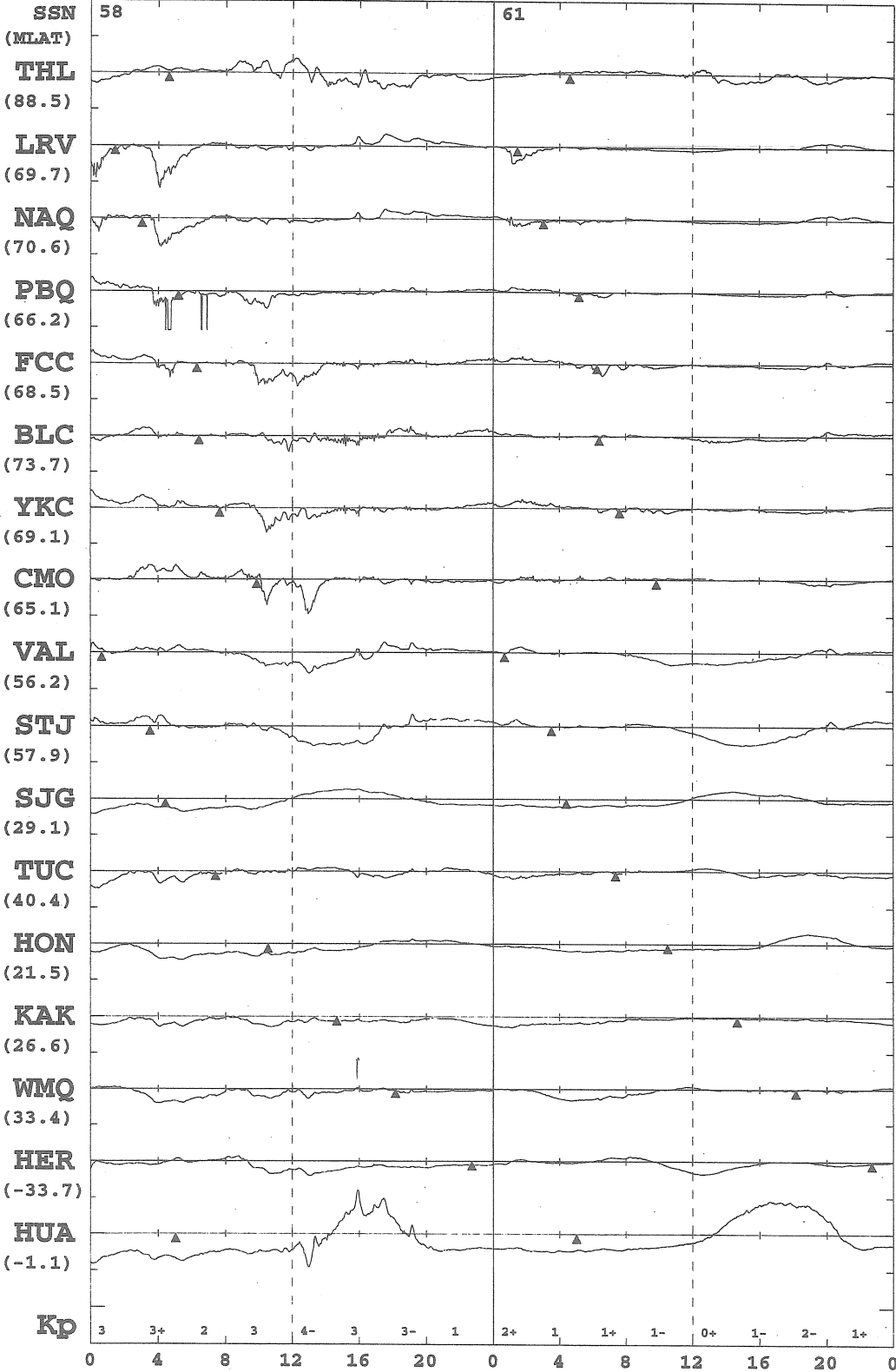




2002

H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



JUL 1 (DAY 182)

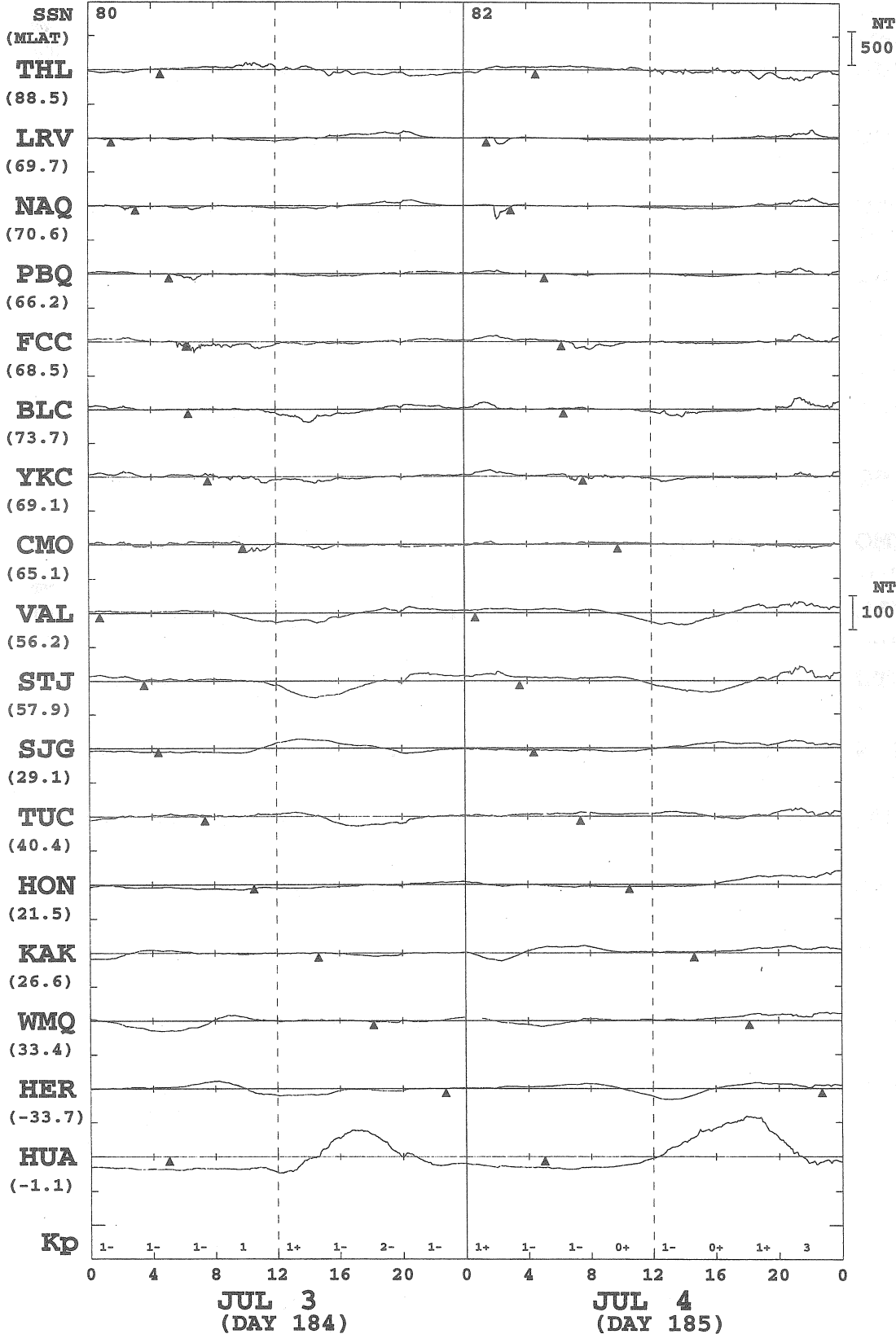
JUL 2 (DAY 183)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

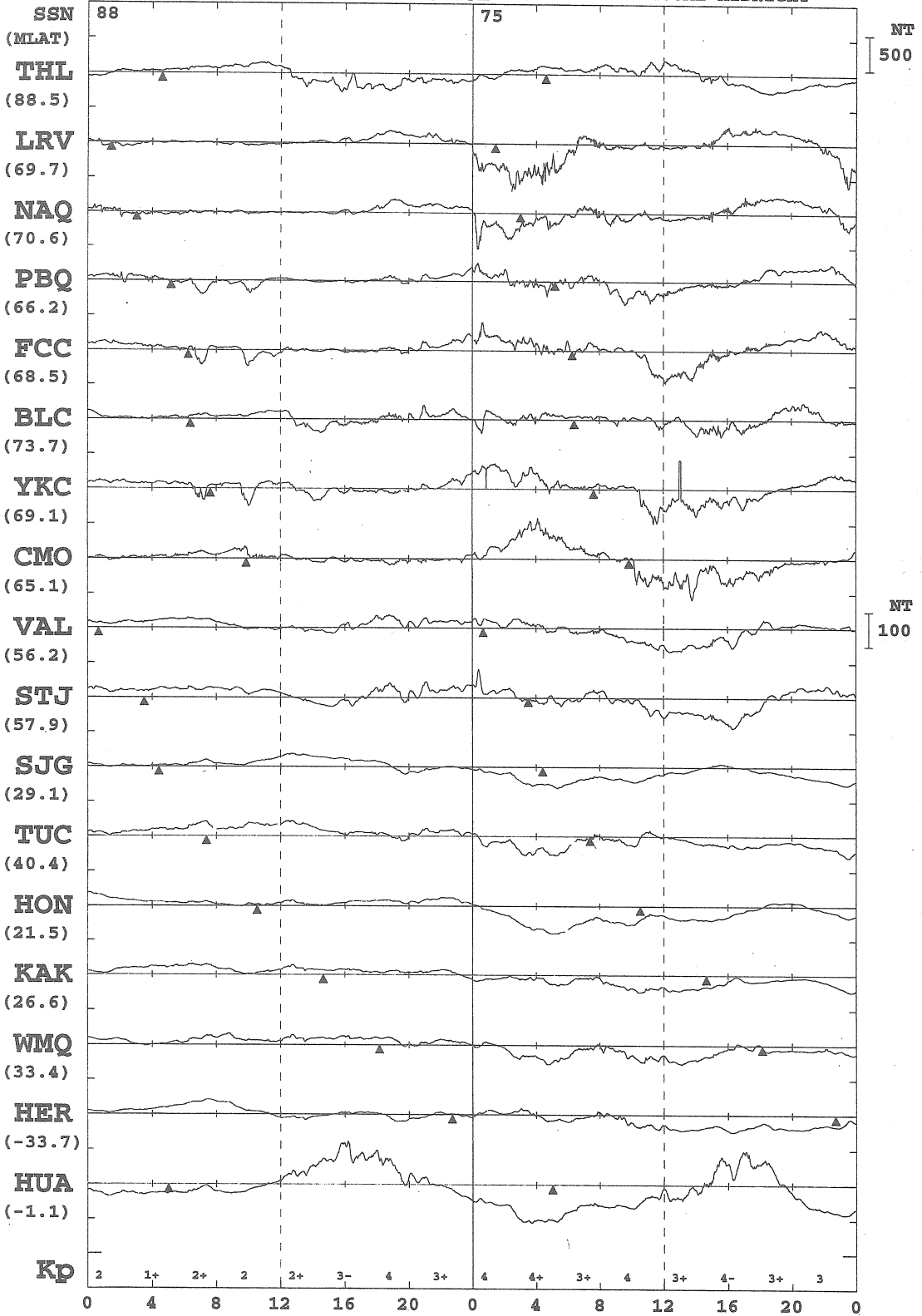


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
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KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



JUL 5  
(DAY 186)

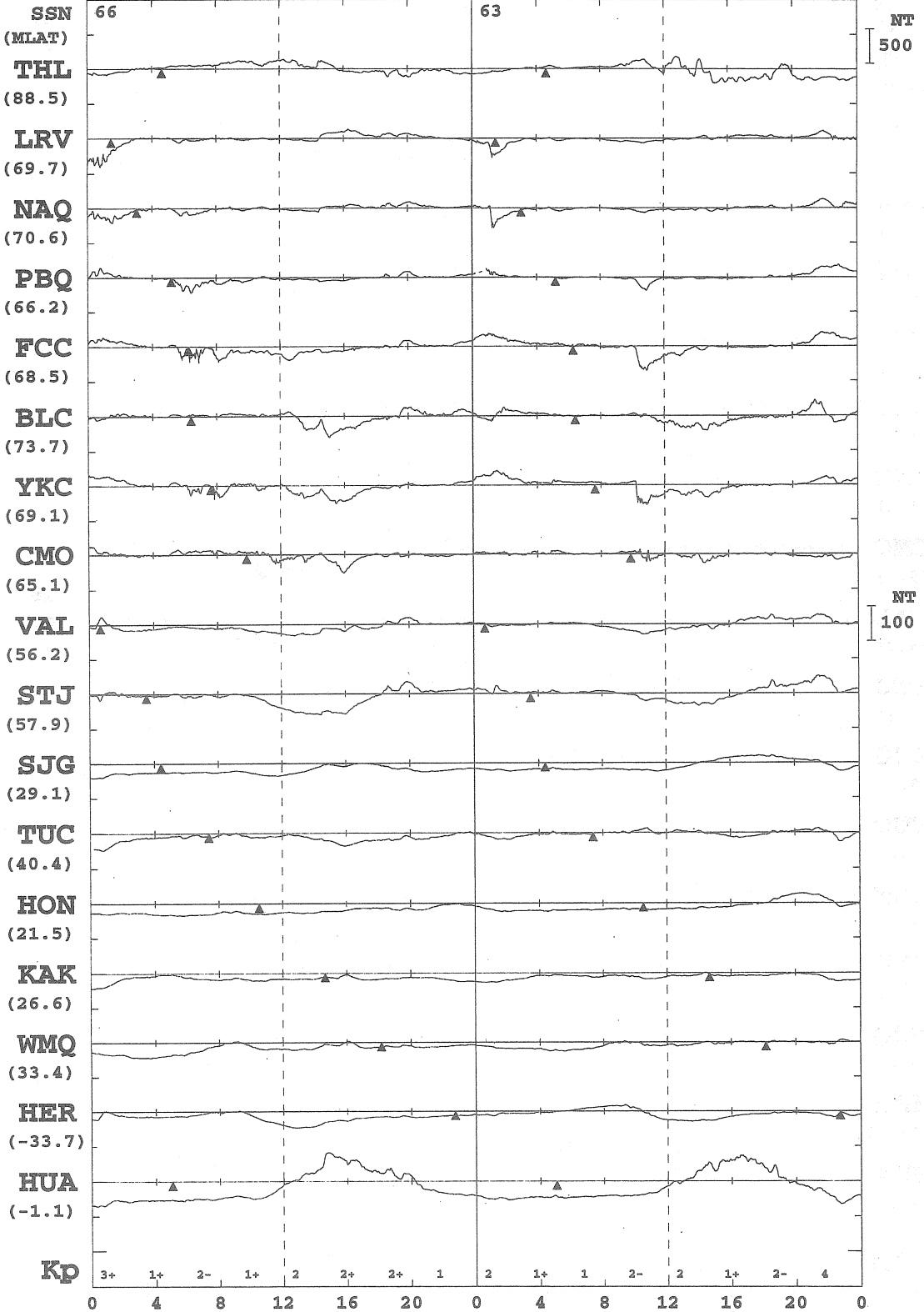
JUL 6  
(DAY 187)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

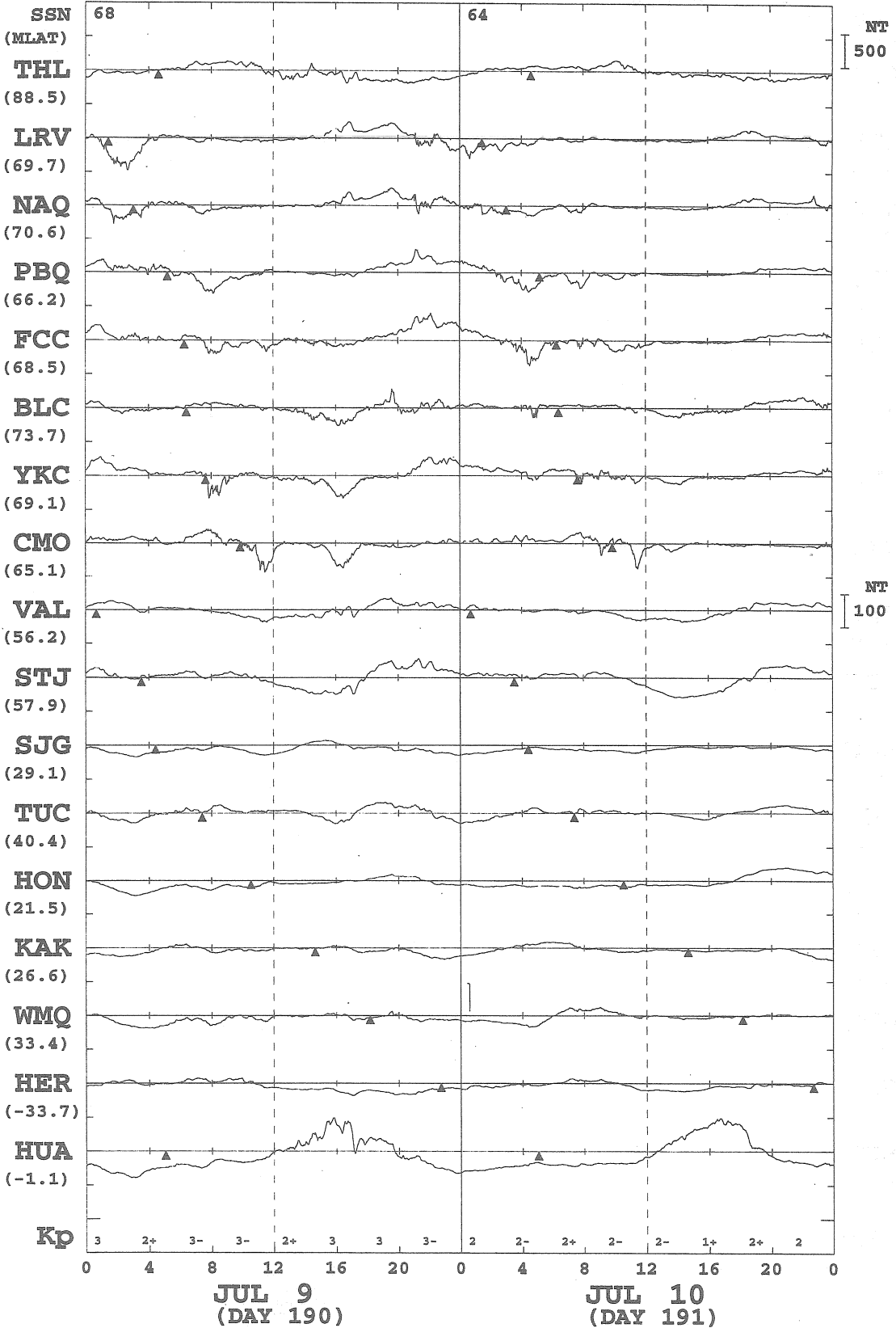
▲ : LOCAL MIDNIGHT



\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

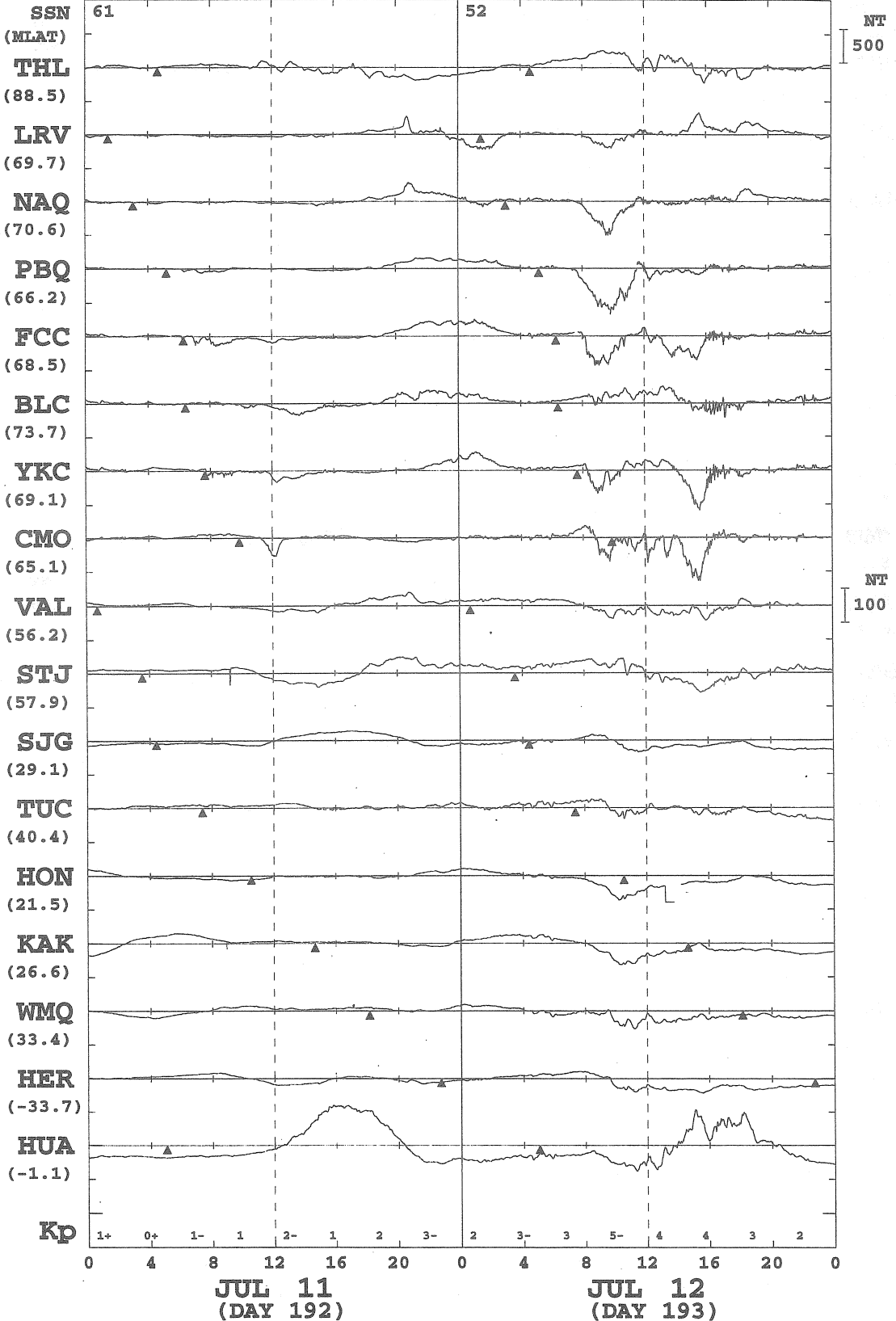


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
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KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



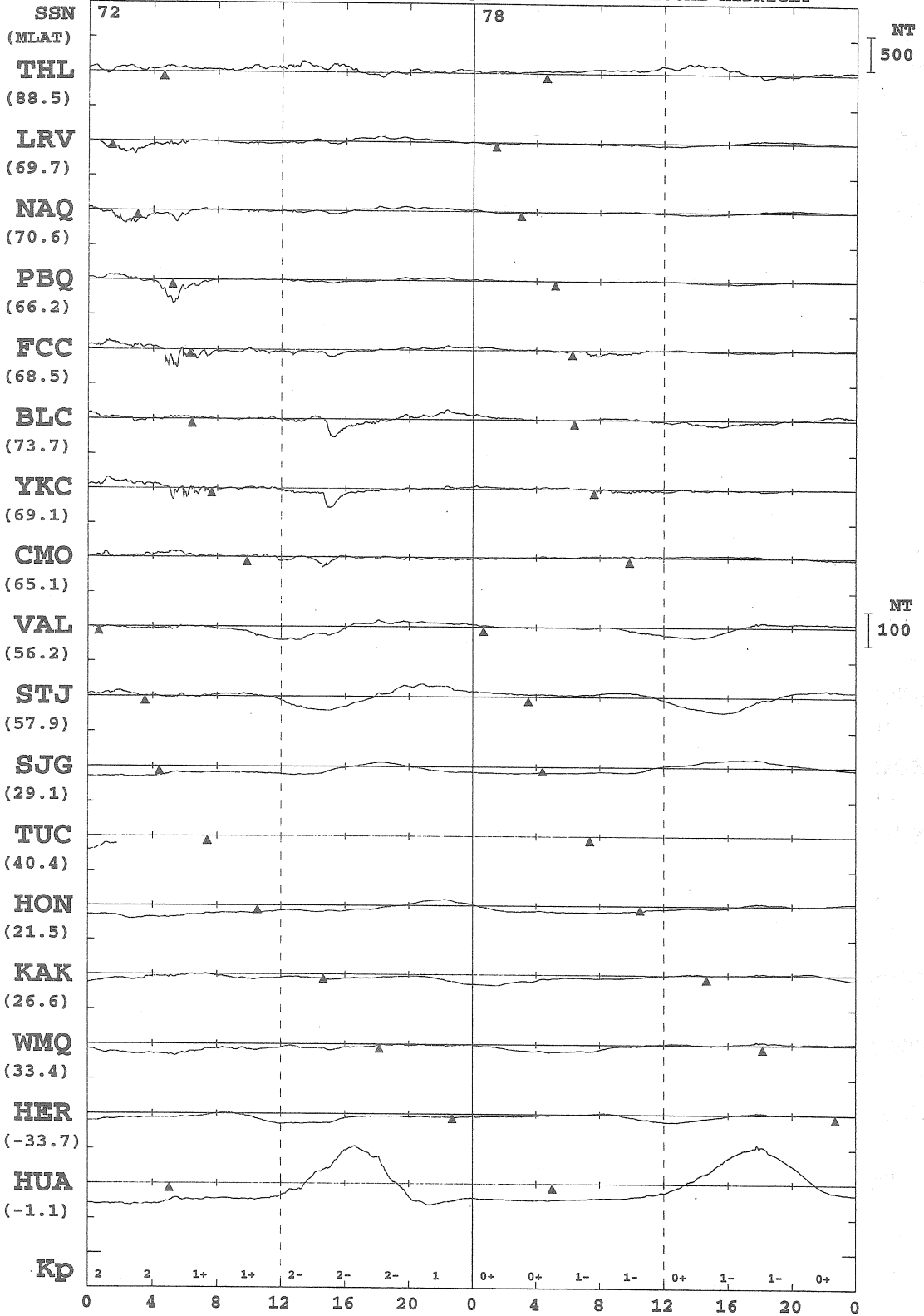
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.



# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

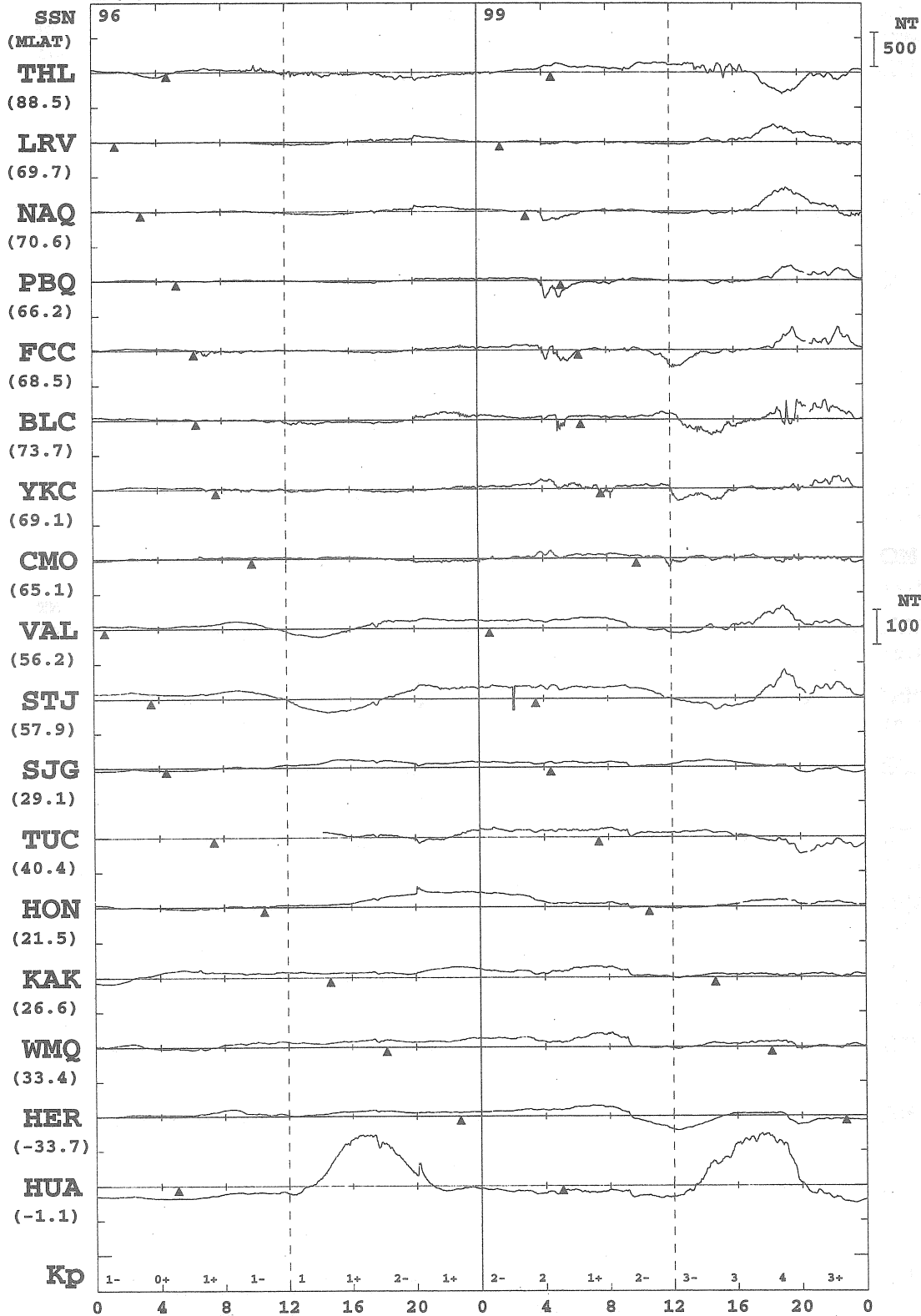


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



JUL 15  
(DAY 196)

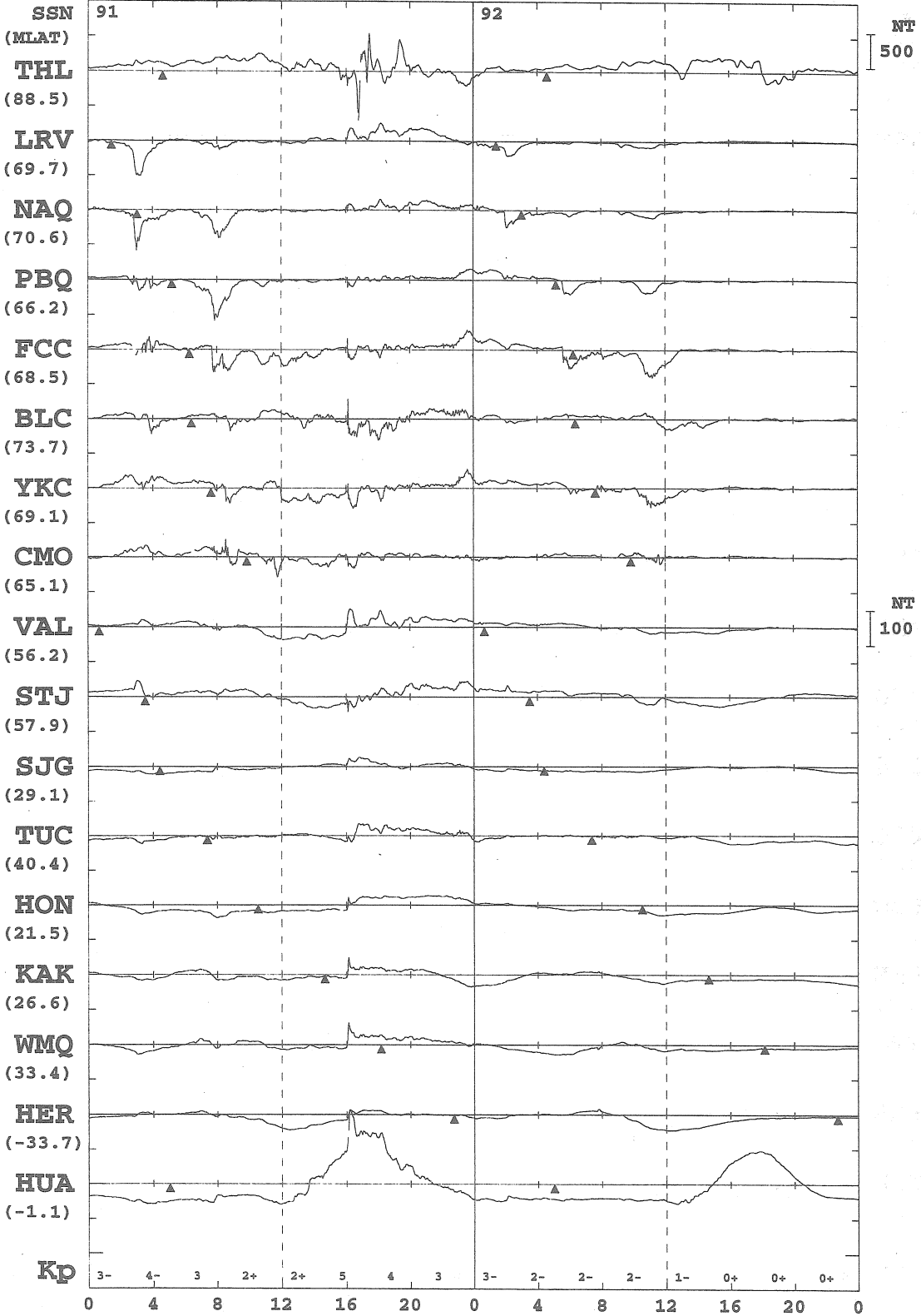
JUL 16  
(DAY 197)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

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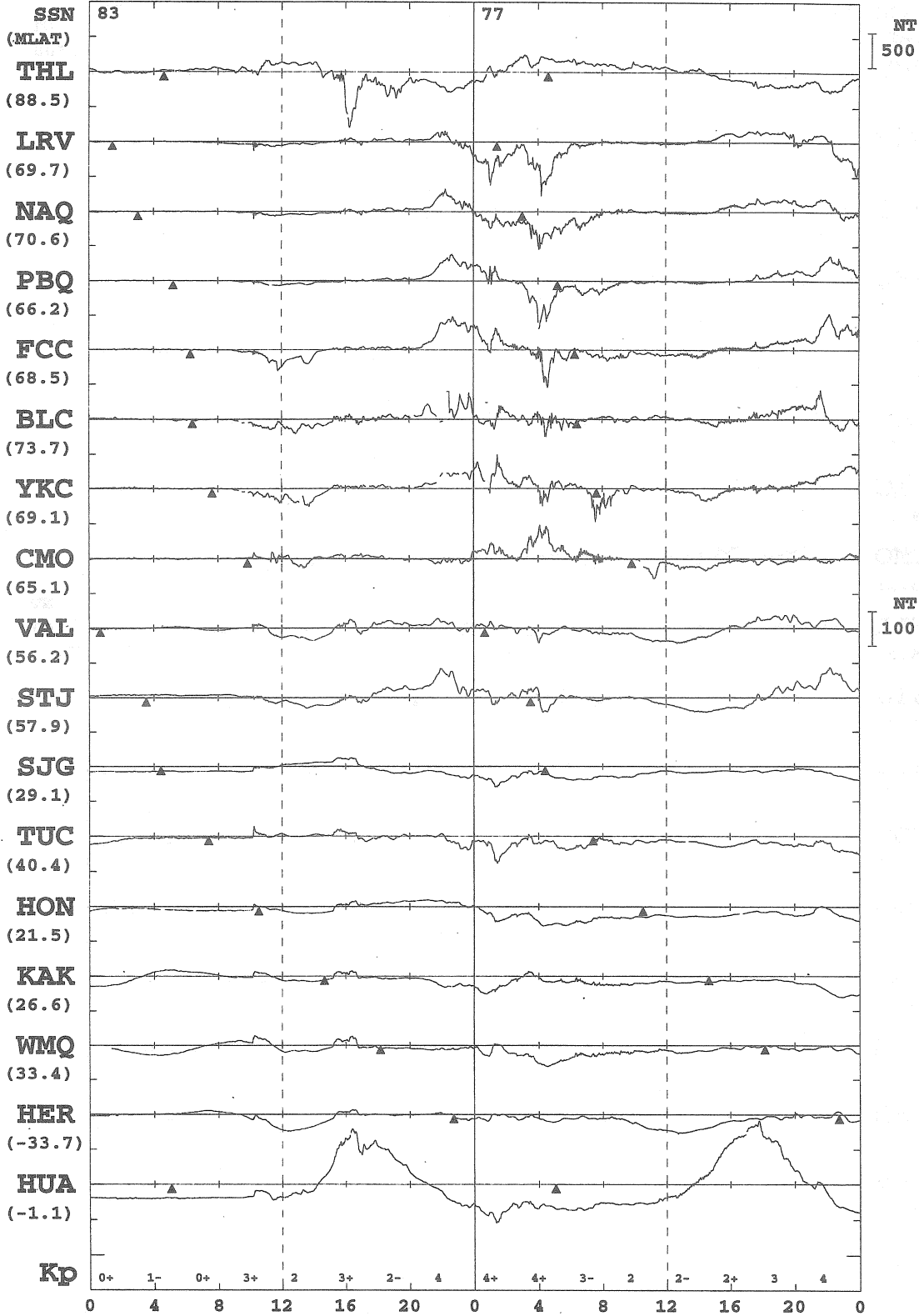


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

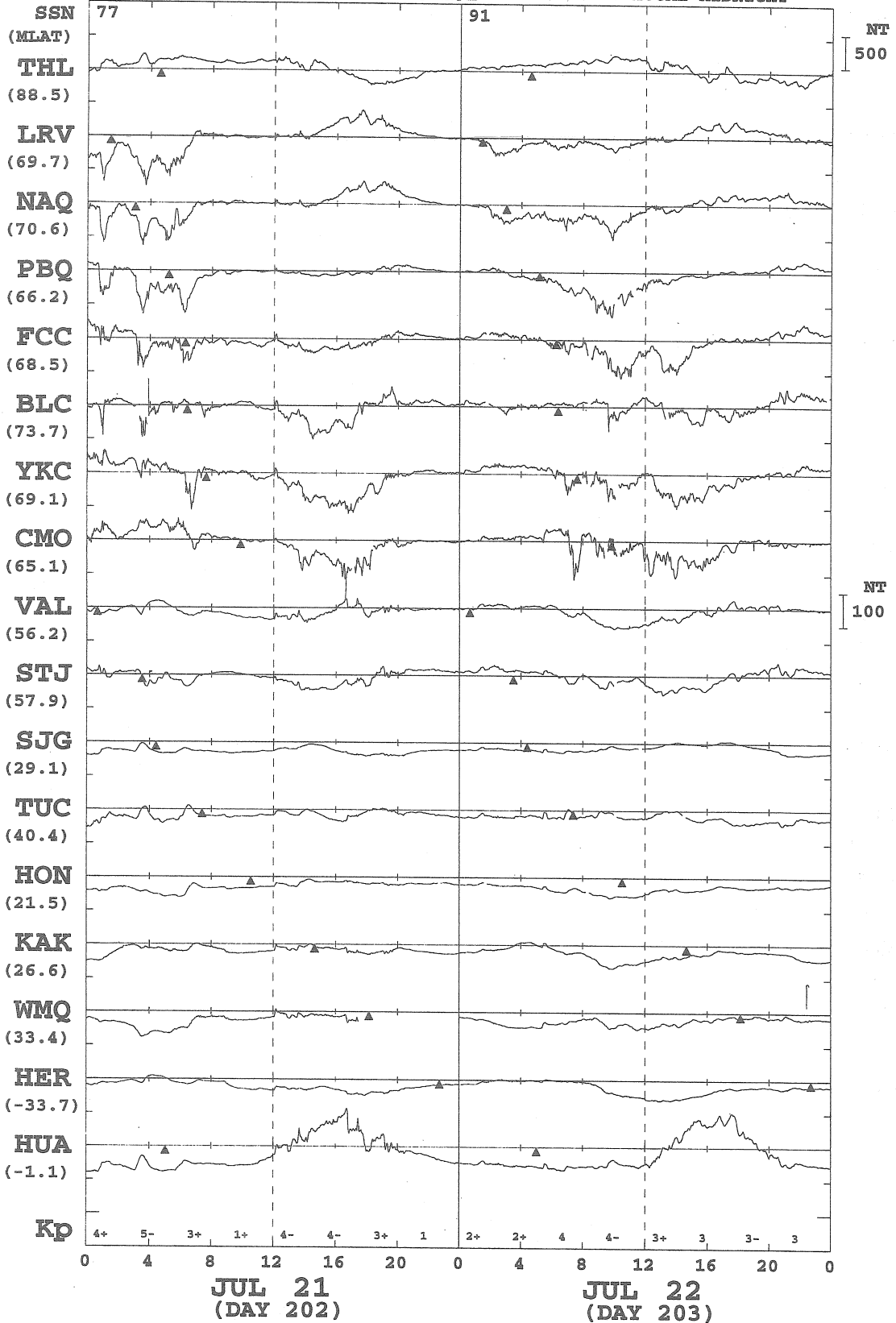


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

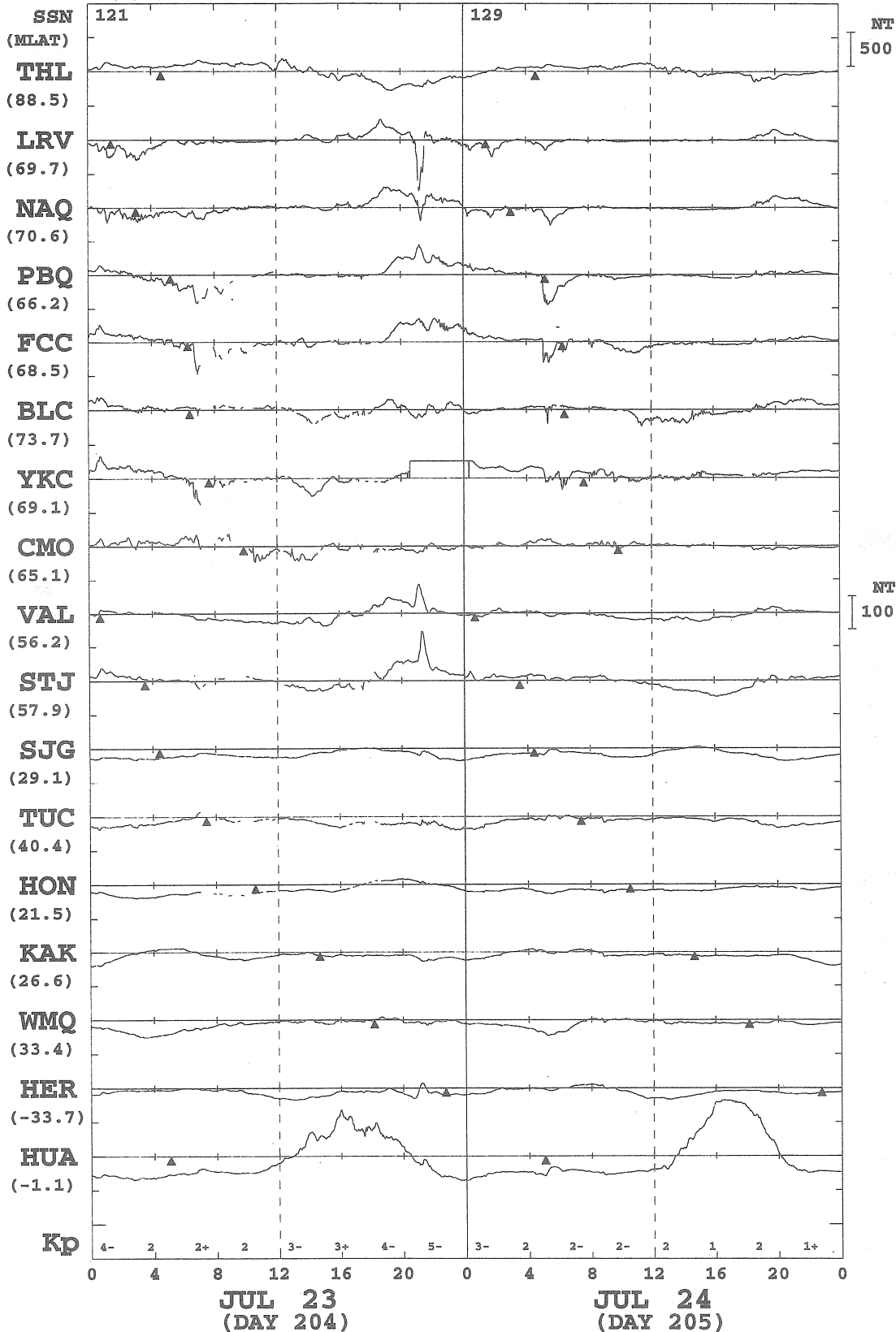


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



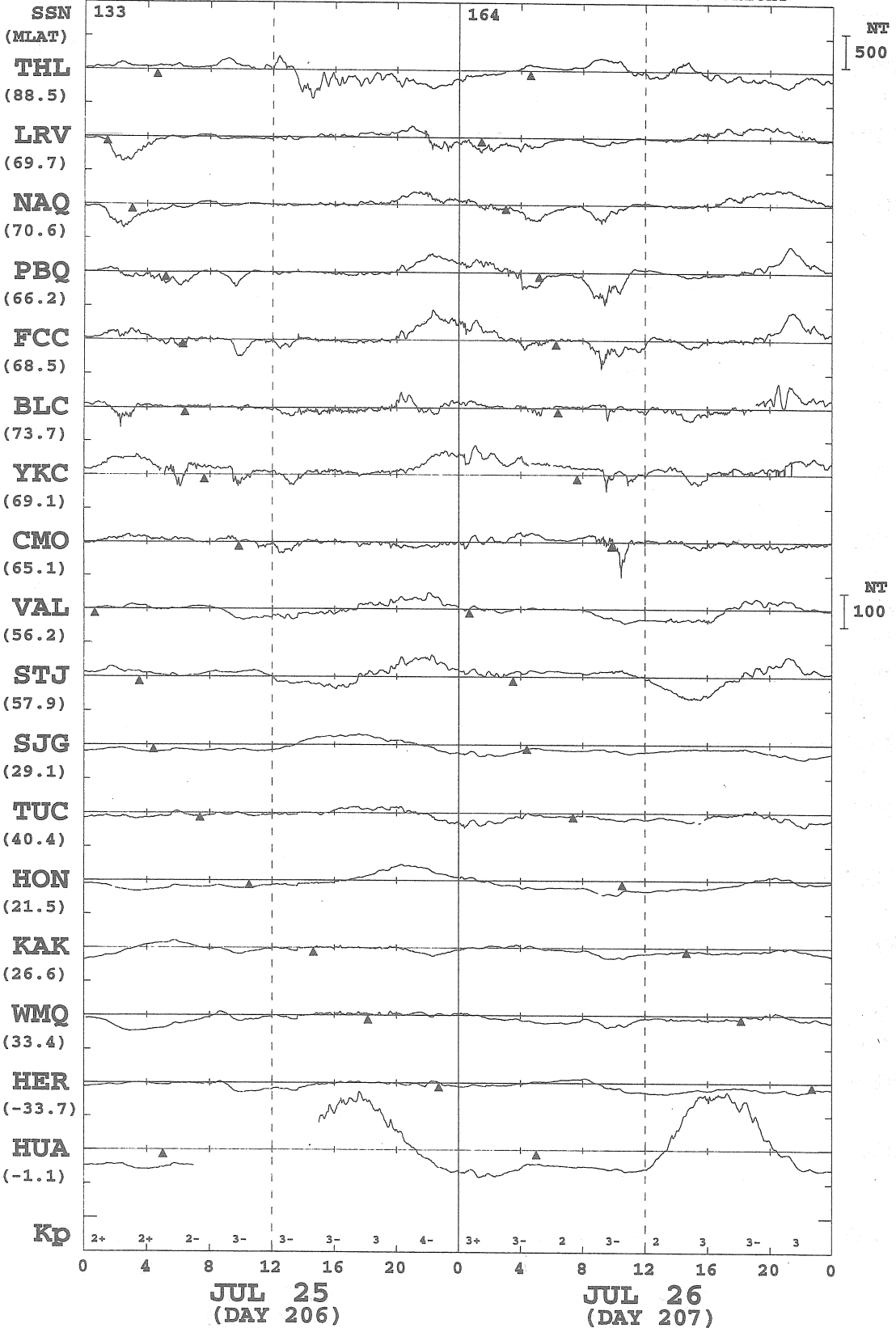
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KYOTO UNIV.



2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

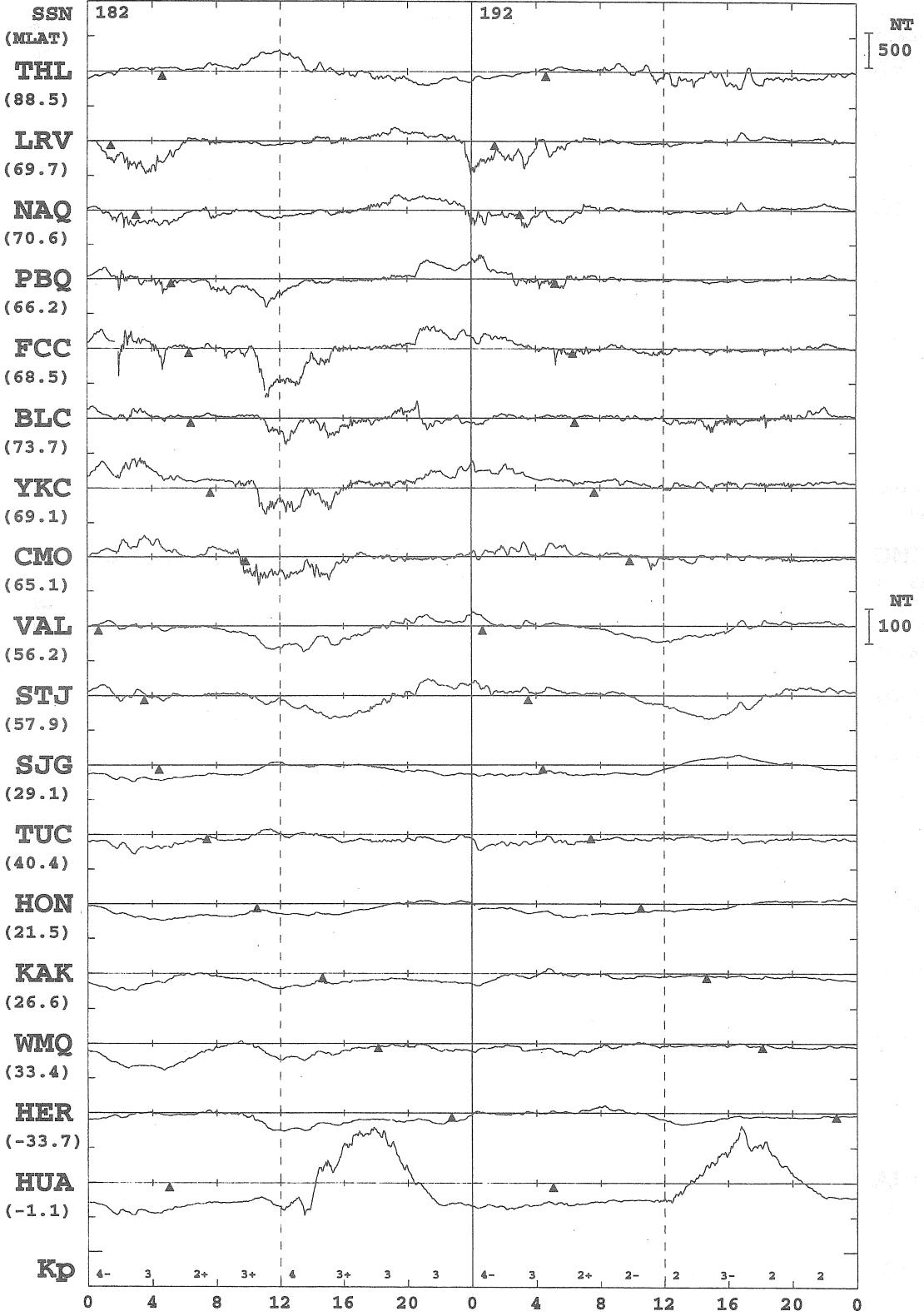


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



Kp

0 4 8 12 16 20 0 4 8 12 16 20 0

JUL 27  
(DAY 208)

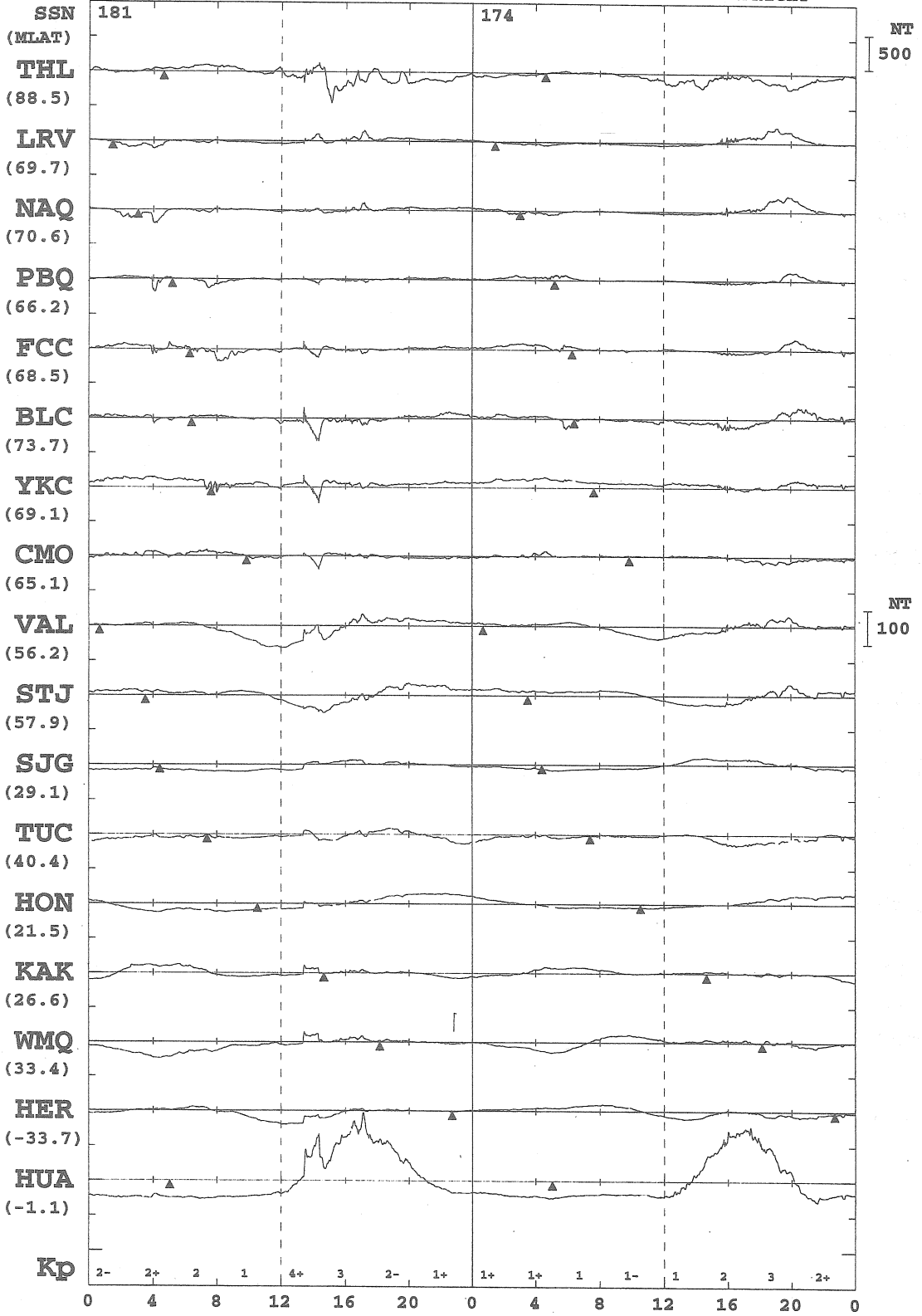
JUL 28  
(DAY 209)

- \* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
- \* PROMPT DATA ARE INCLUDED
- \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



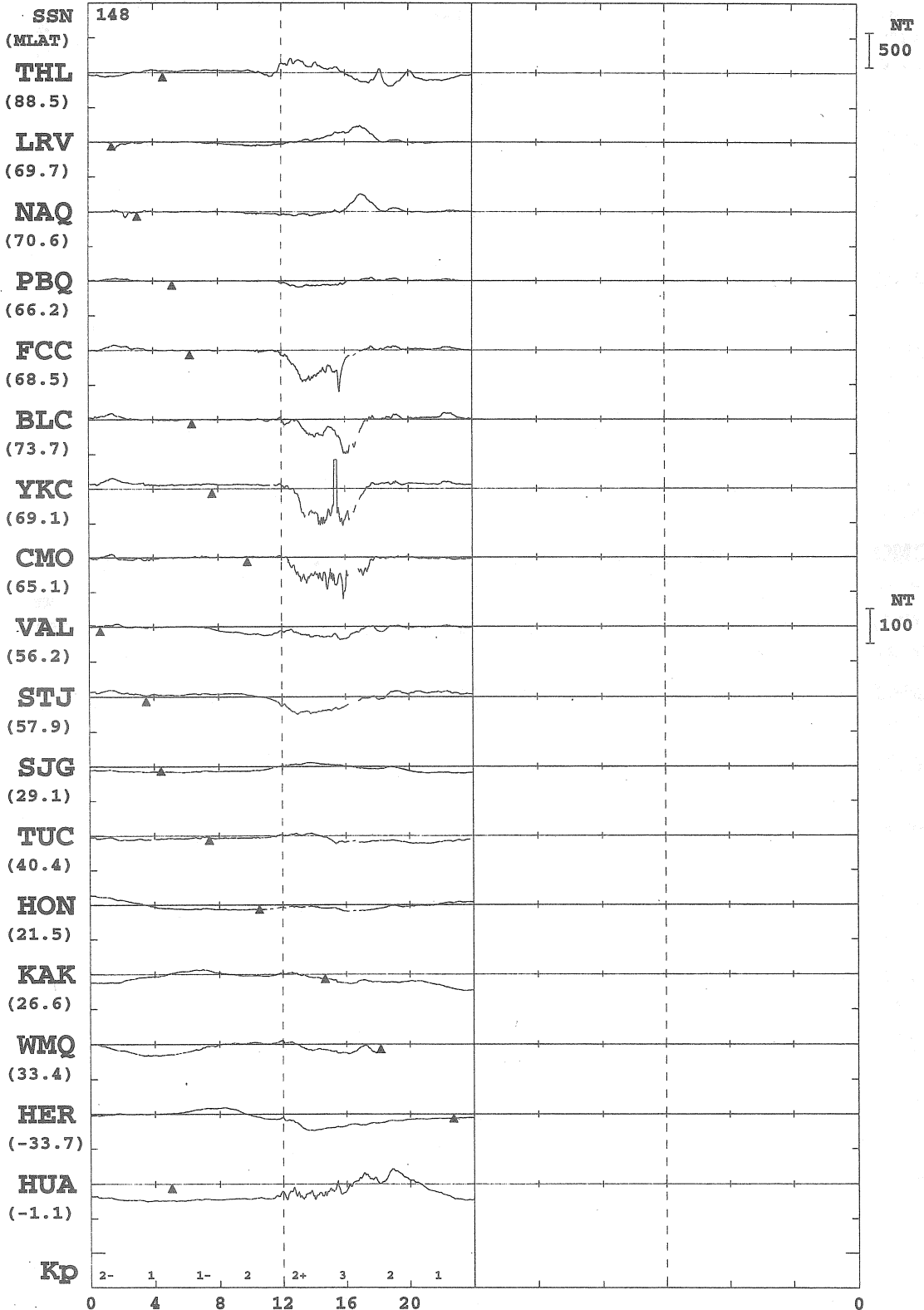
JUL 29  
(DAY 210)

JUL 30  
(DAY 211)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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2002 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT



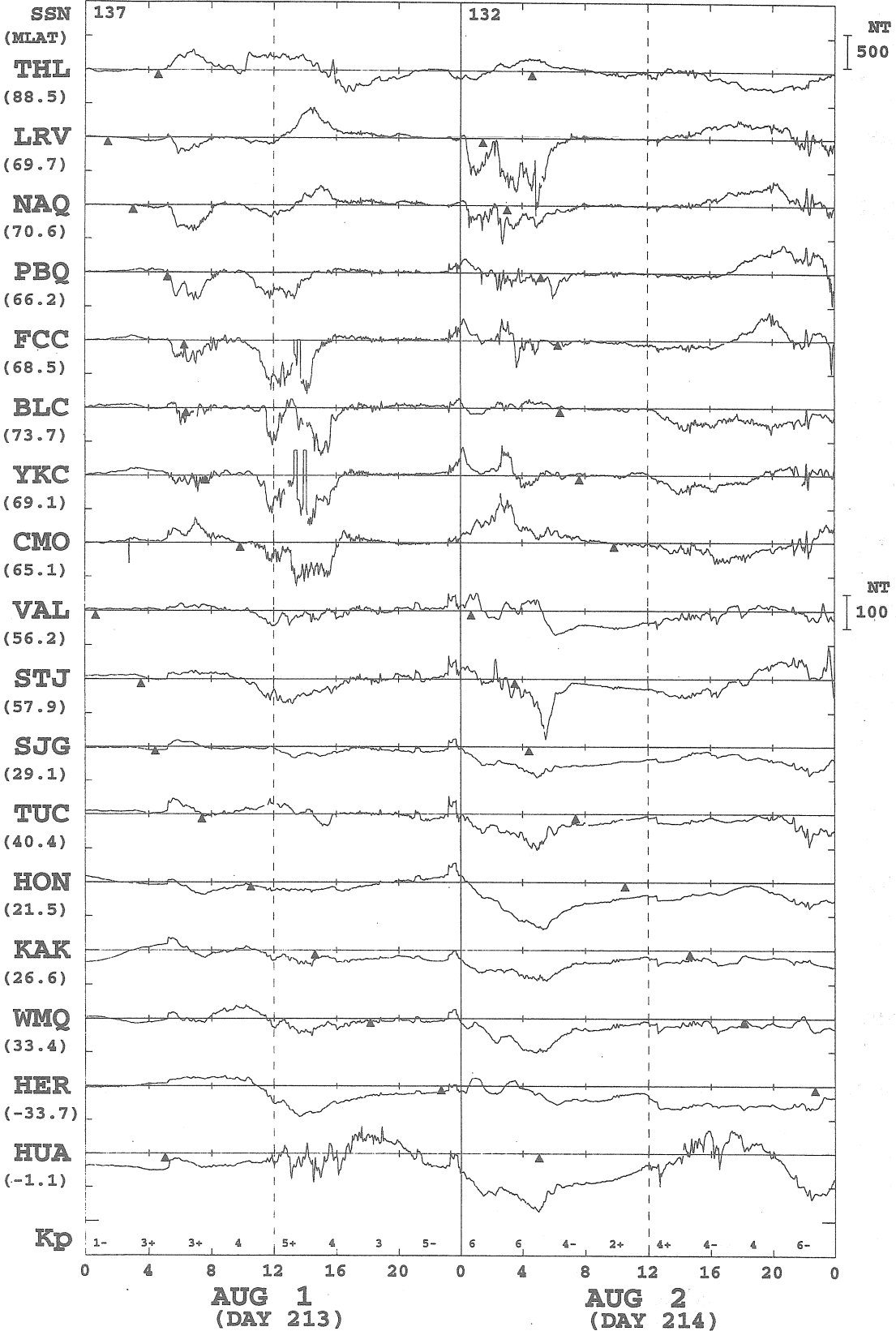
**JUL 31**  
**(DAY 212)**

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
\* PROMPT DATA ARE INCLUDED  
\* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

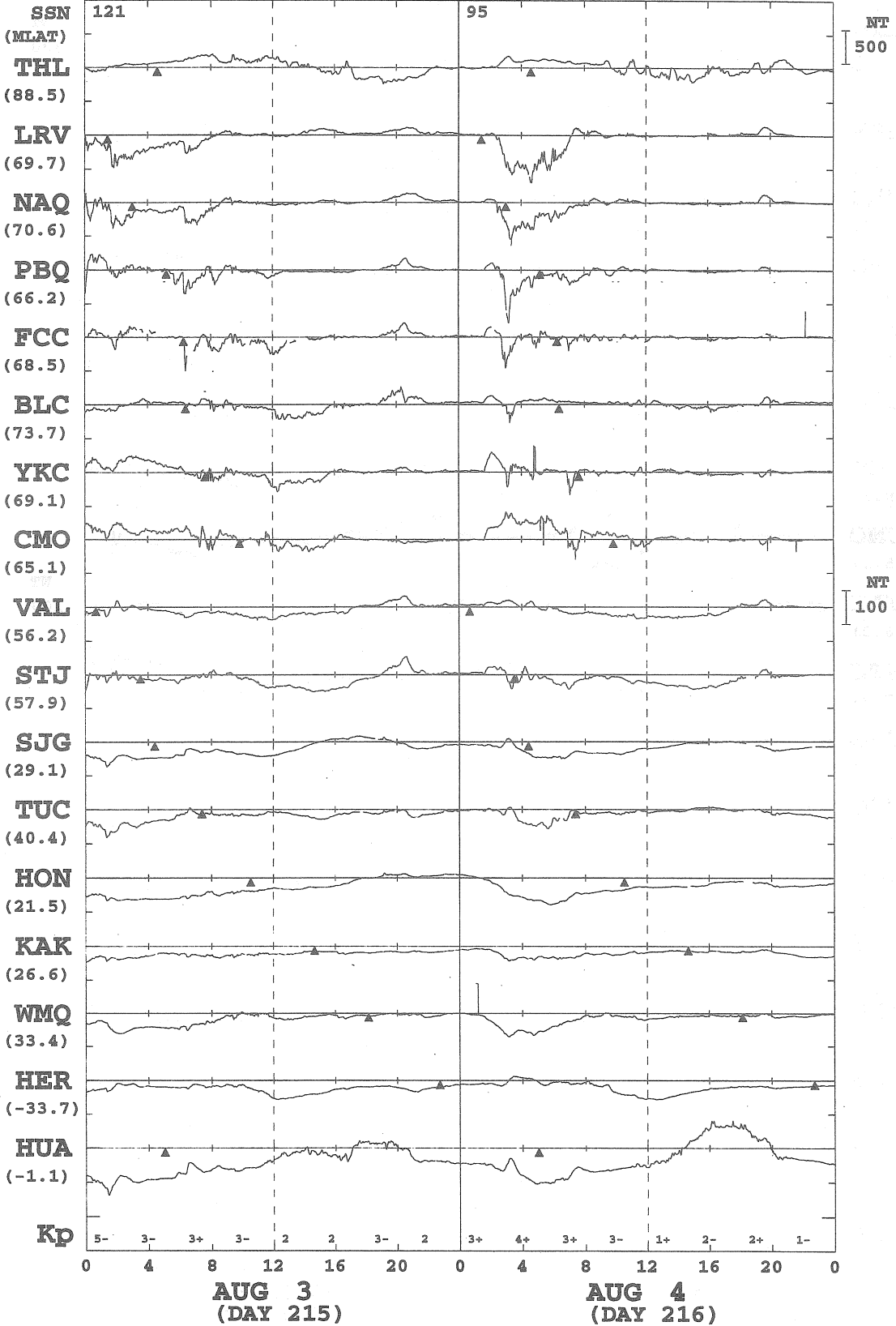


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



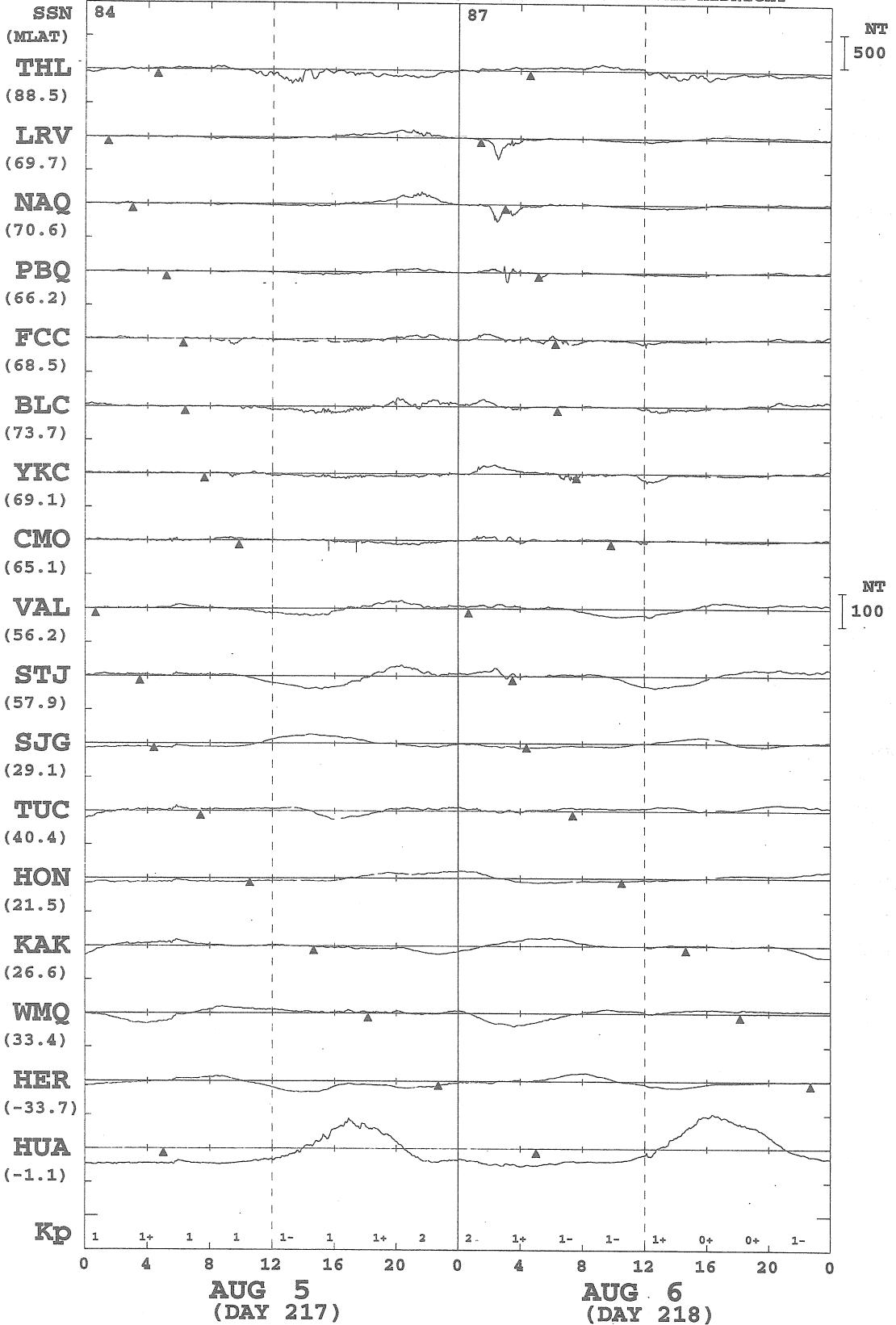
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

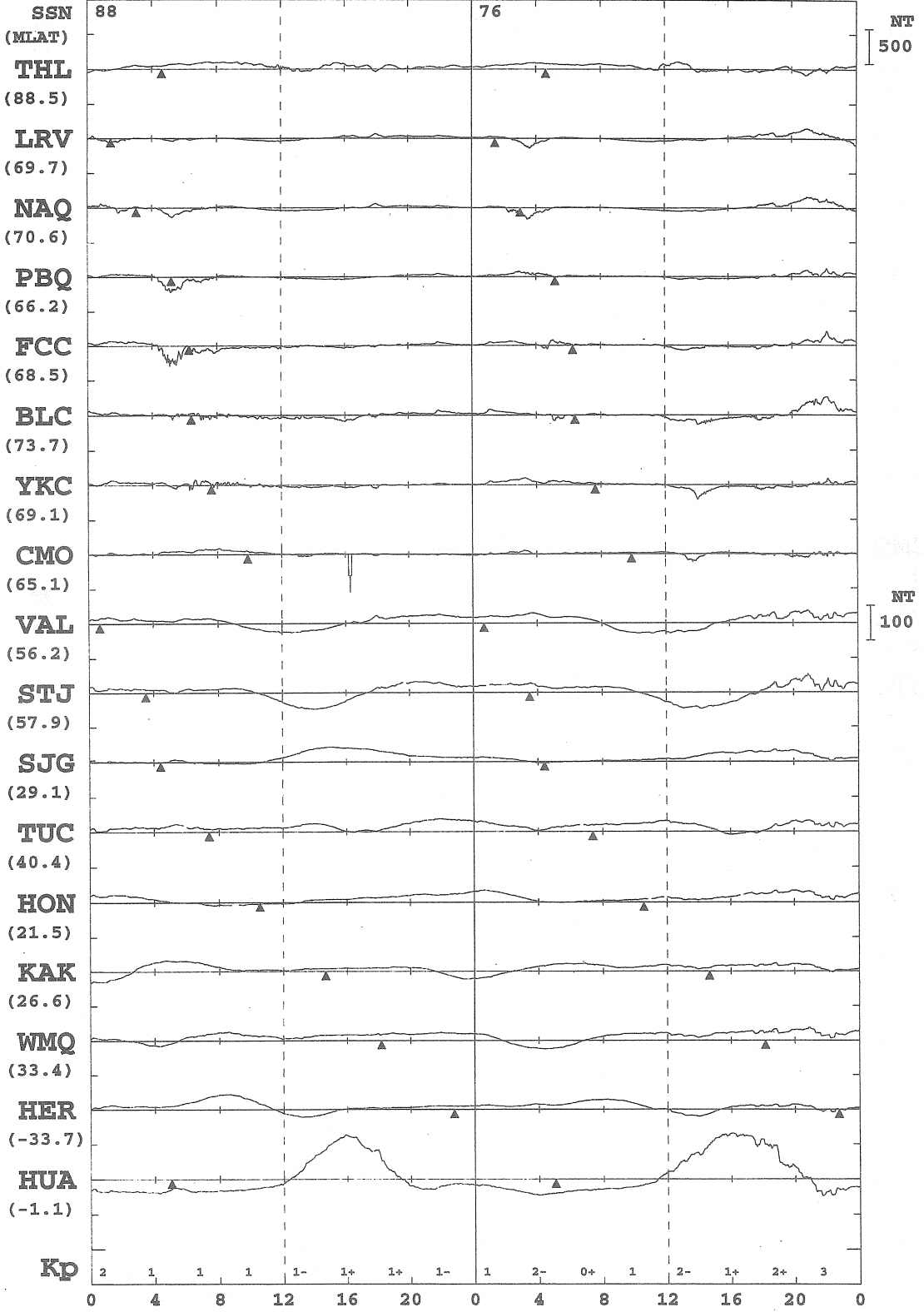


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



AUG 7 (DAY 219)

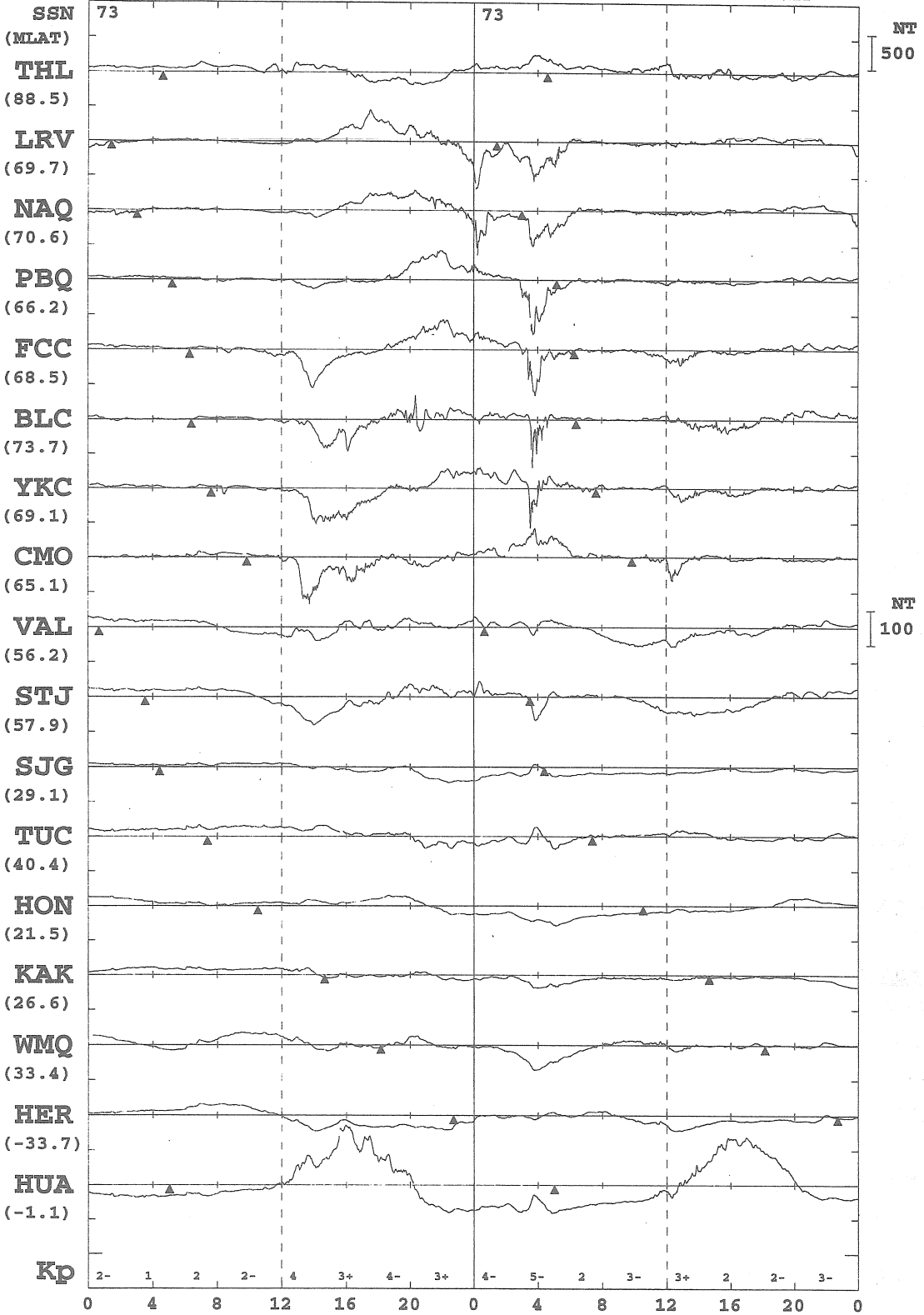
AUG 8 (DAY 220)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



AUG 9  
(DAY 221)

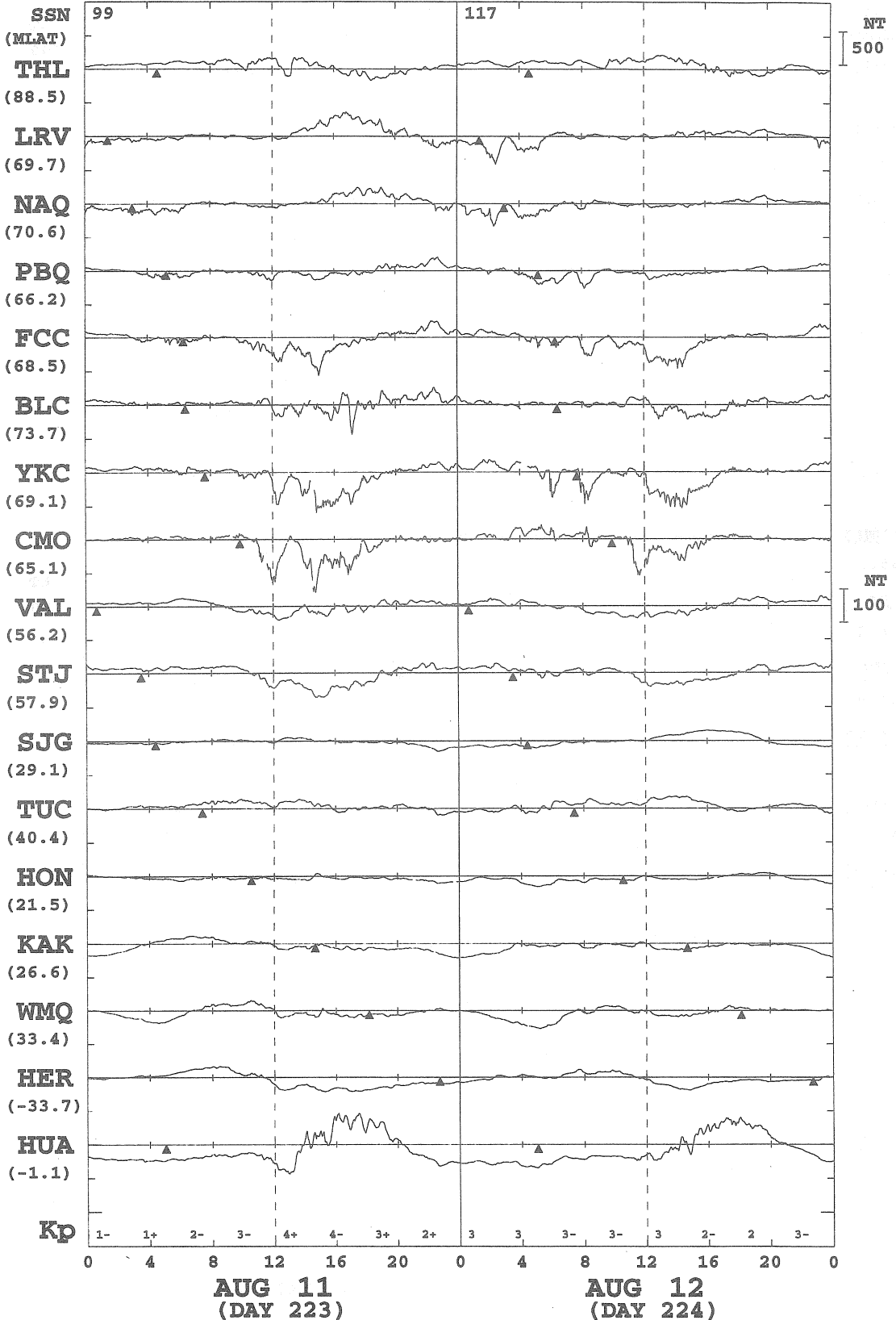
AUG 10  
(DAY 222)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

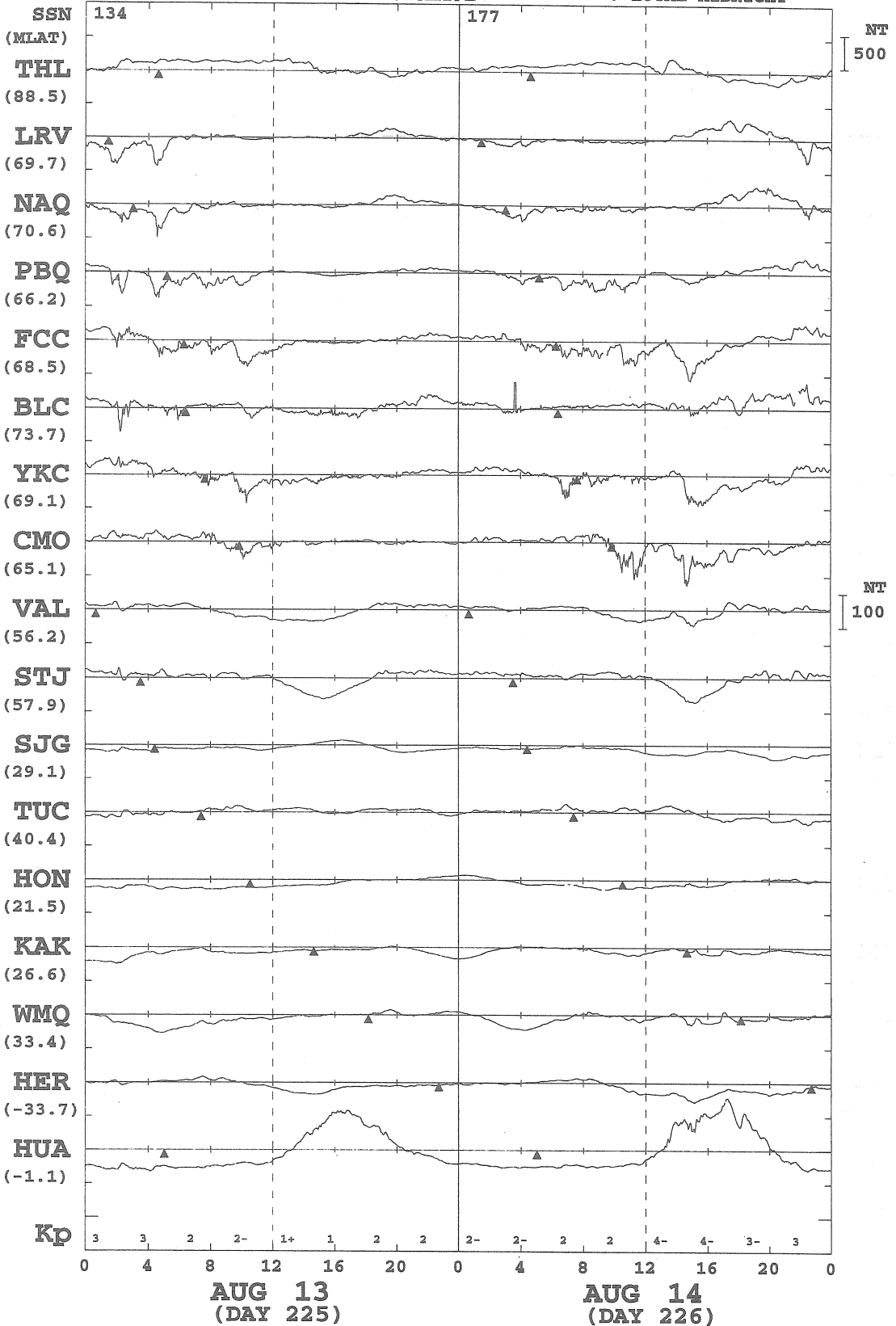


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

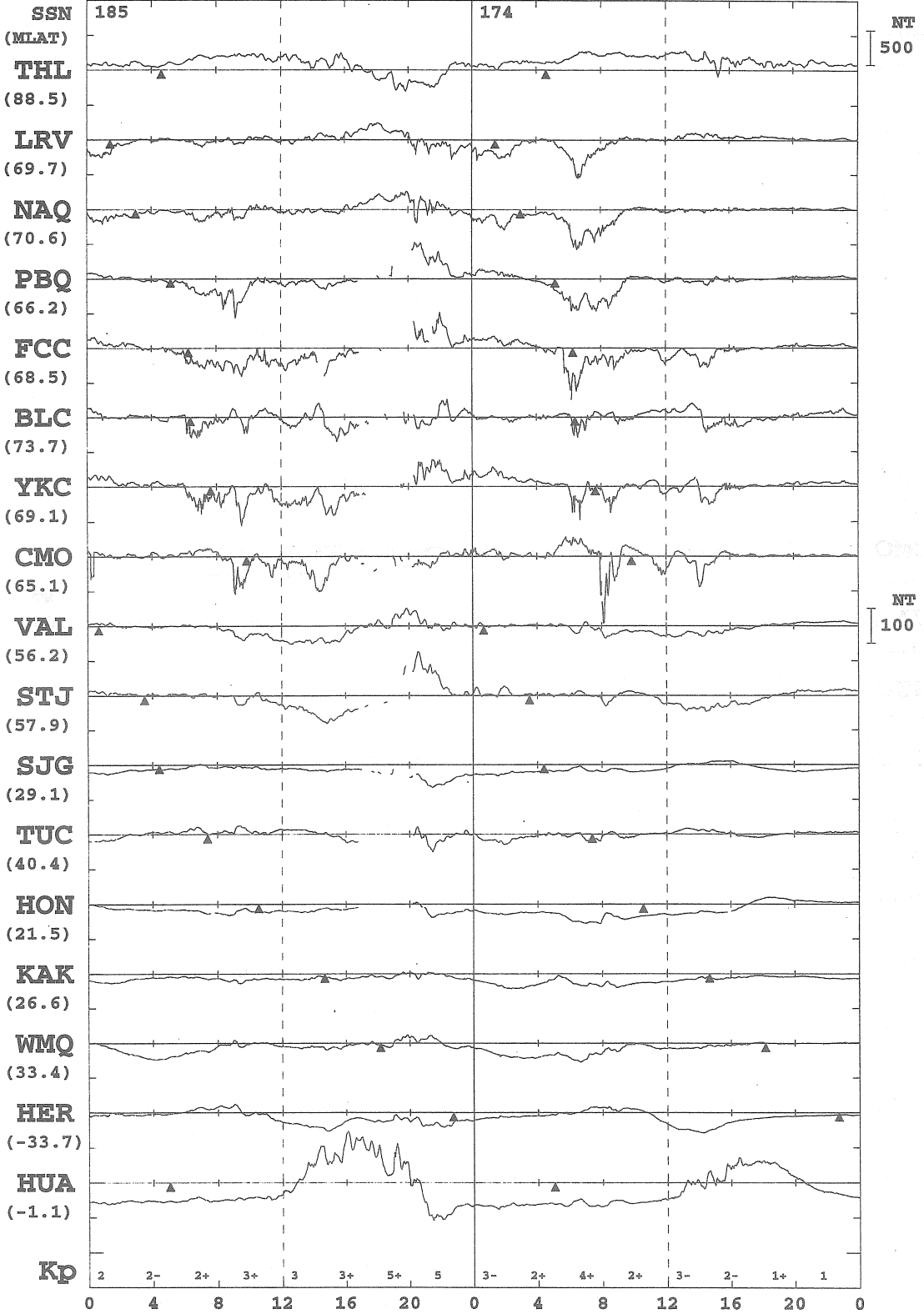


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2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



AUG 15  
(DAY 227)

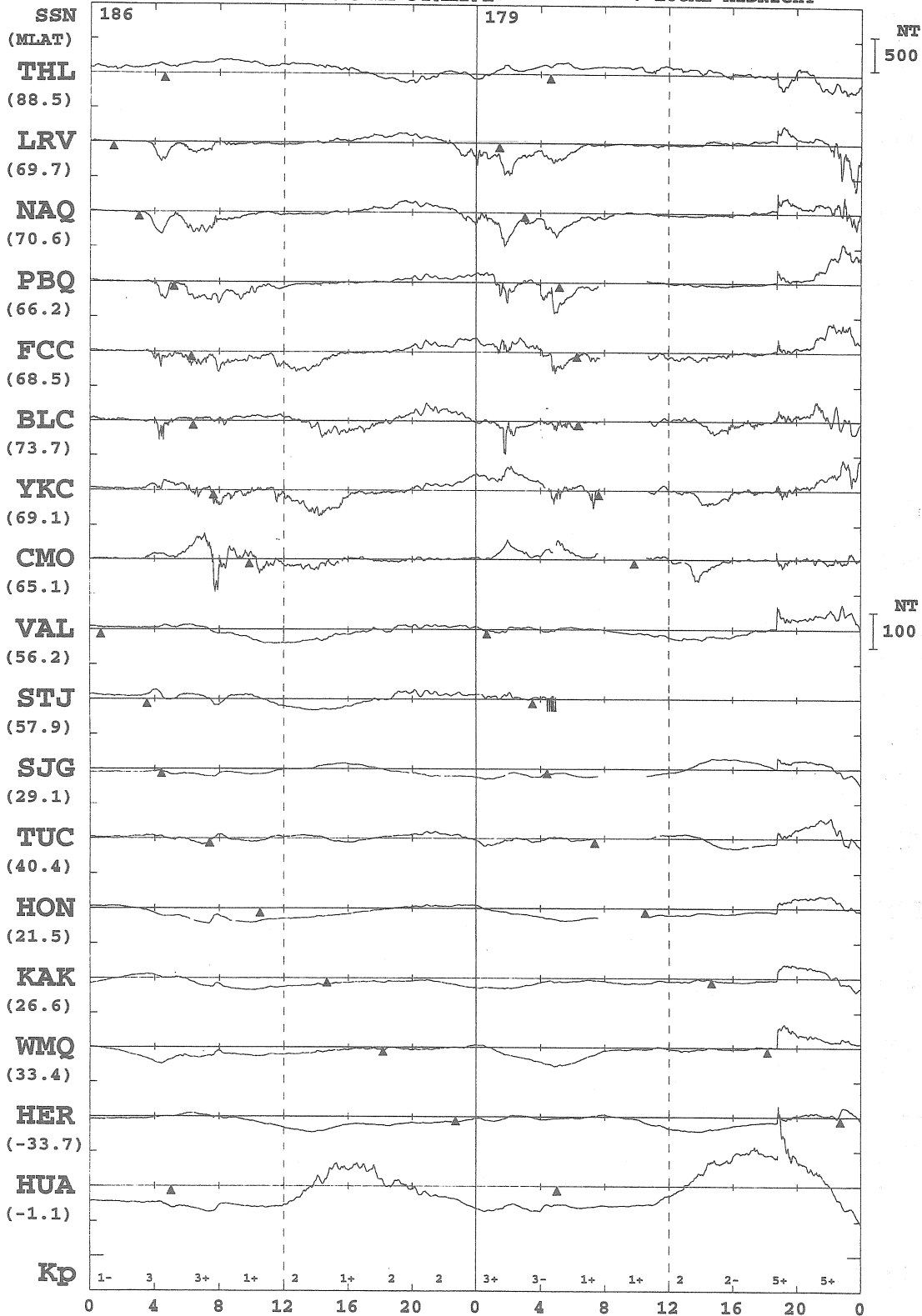
AUG 16  
(DAY 228)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



AUG 17  
(DAY 229)

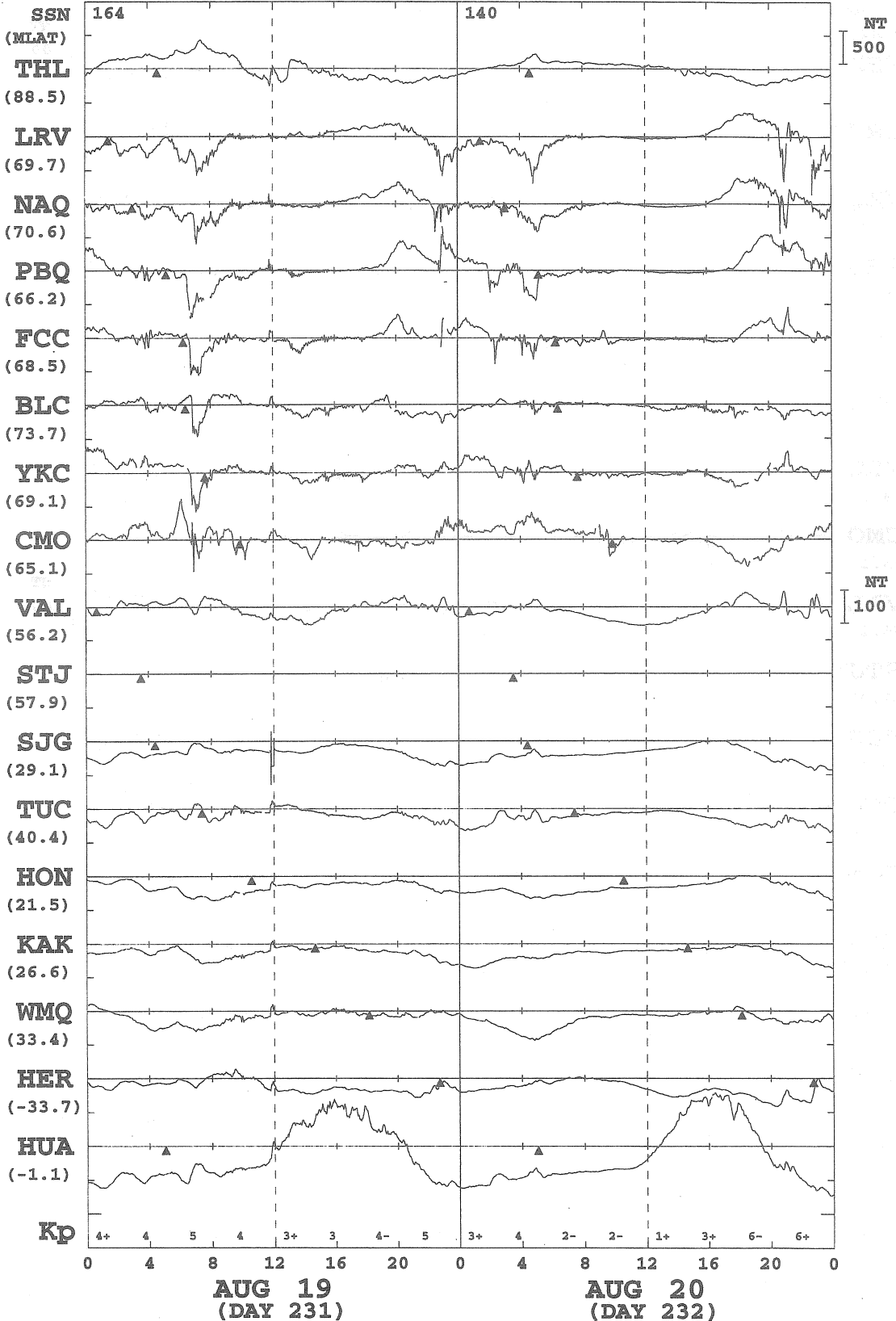
AUG 18  
(DAY 230)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



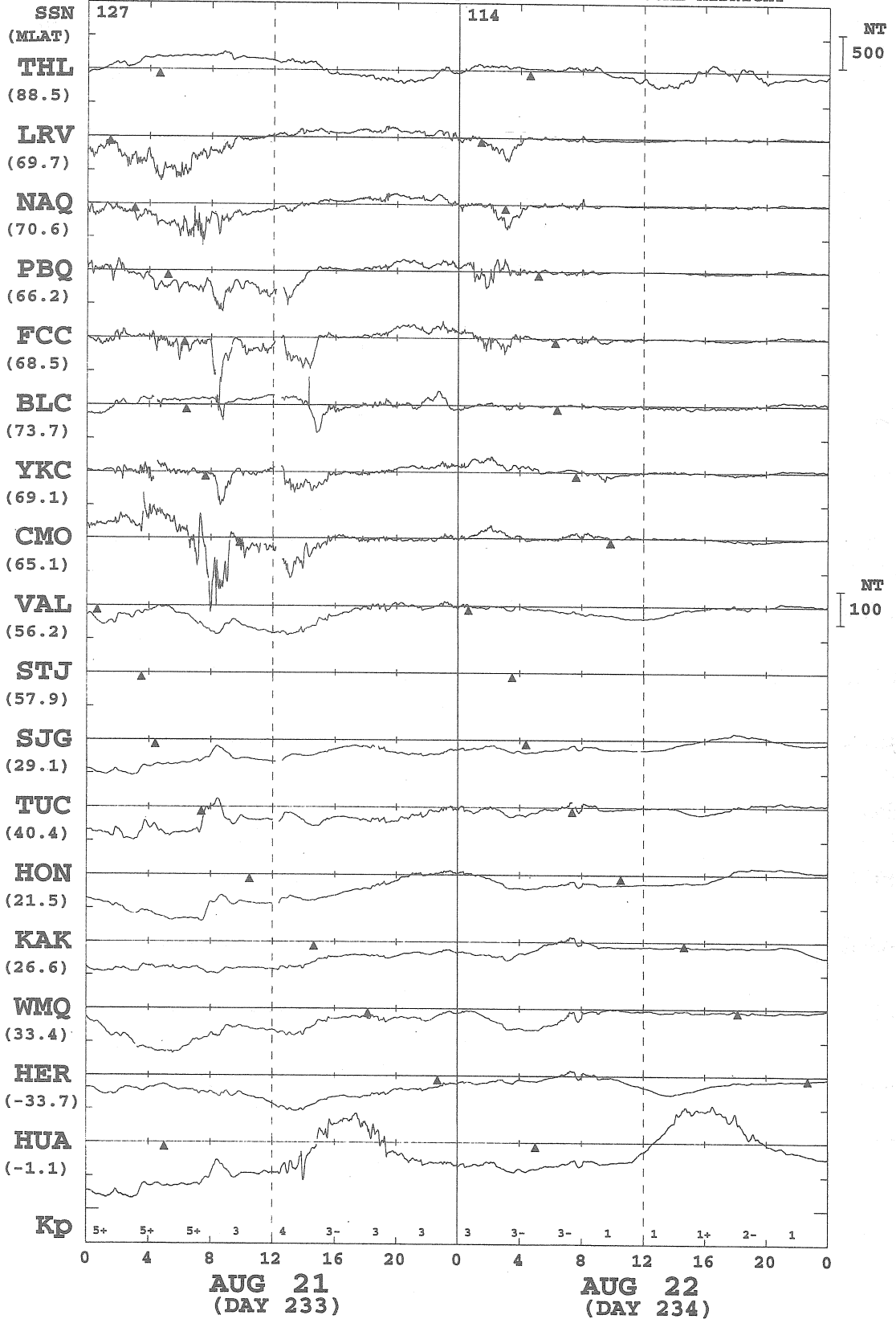
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
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KYOTO UNIV.



# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

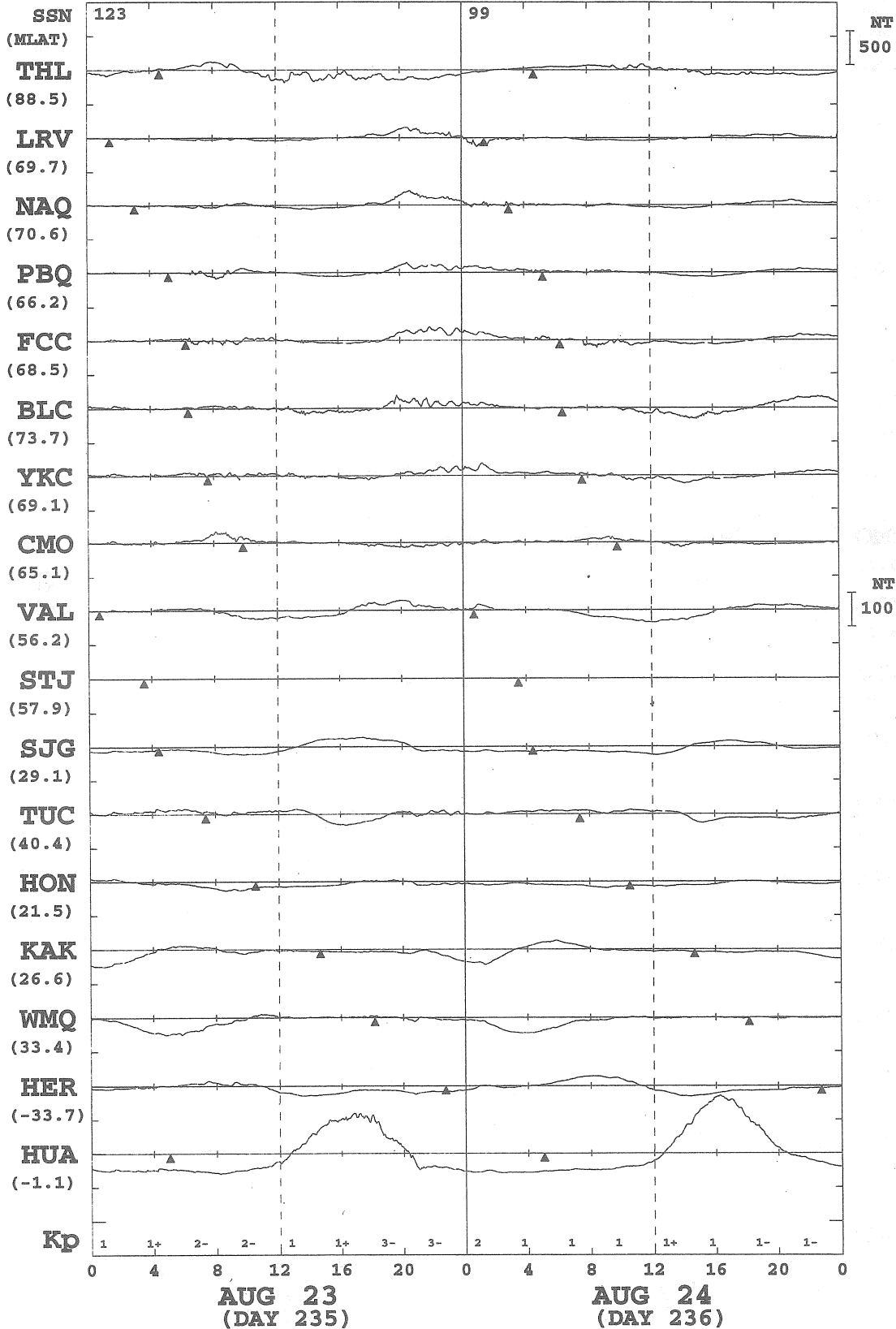


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

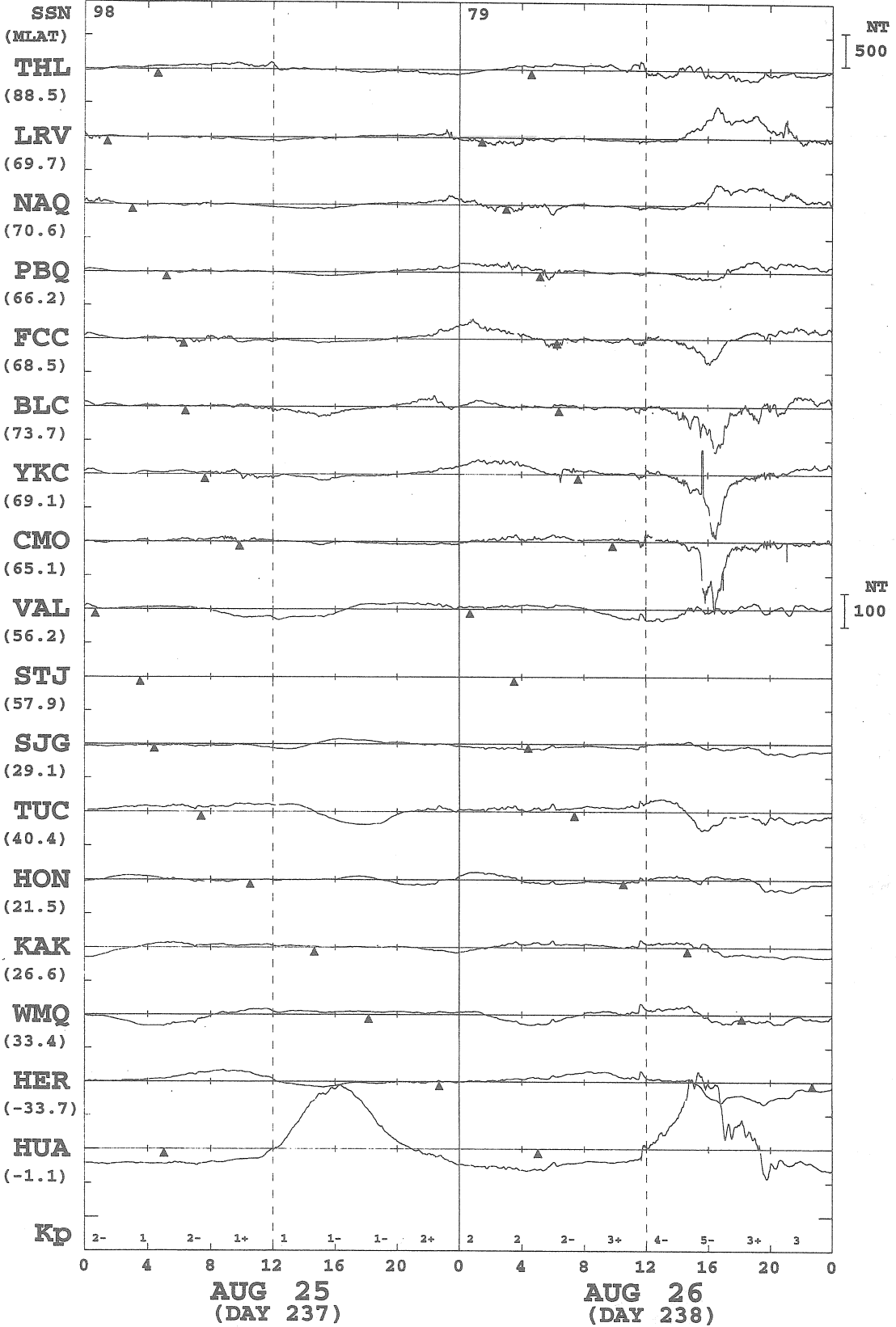


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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▲ : LOCAL MIDNIGHT

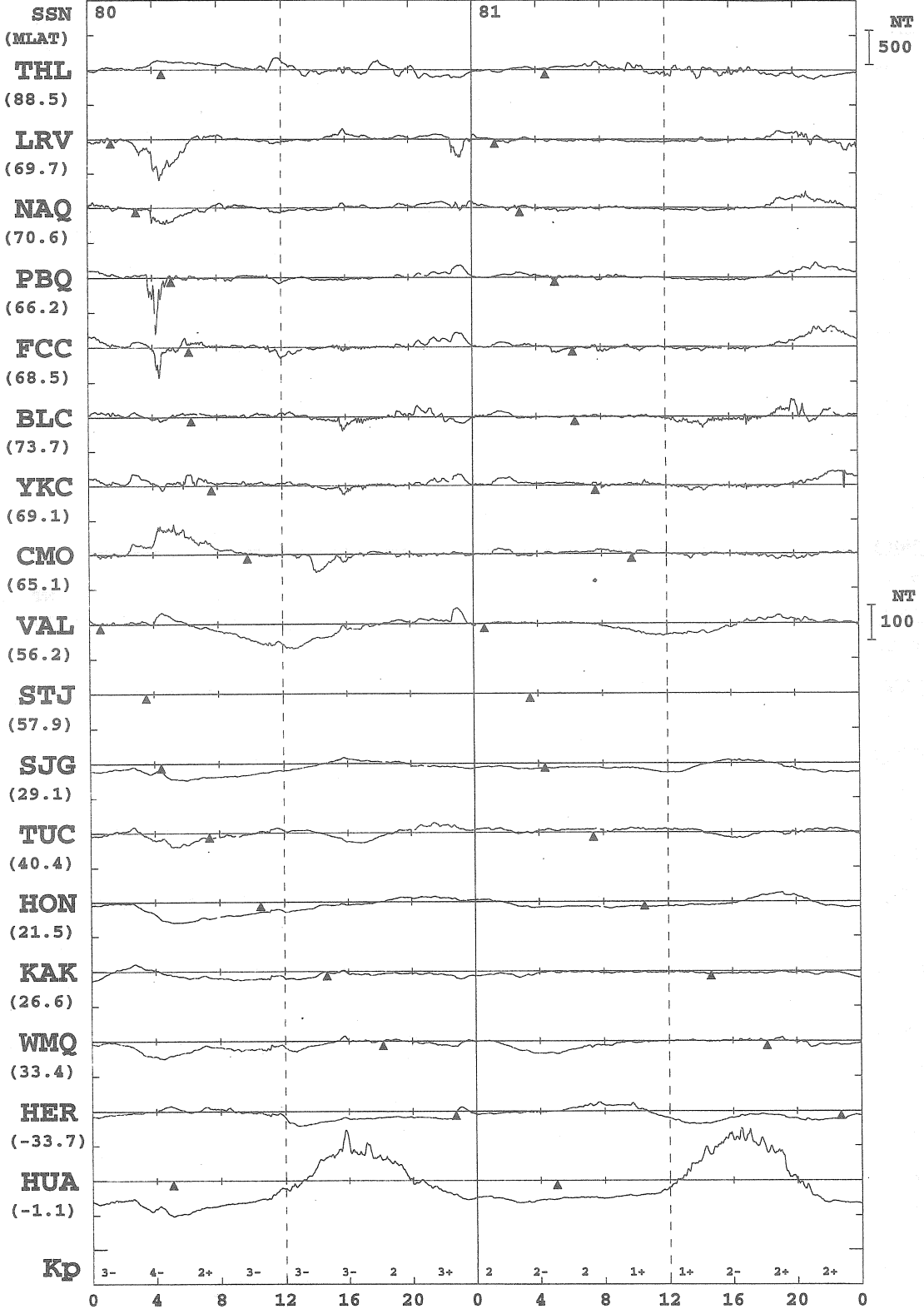


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



AUG 27  
(DAY 239)

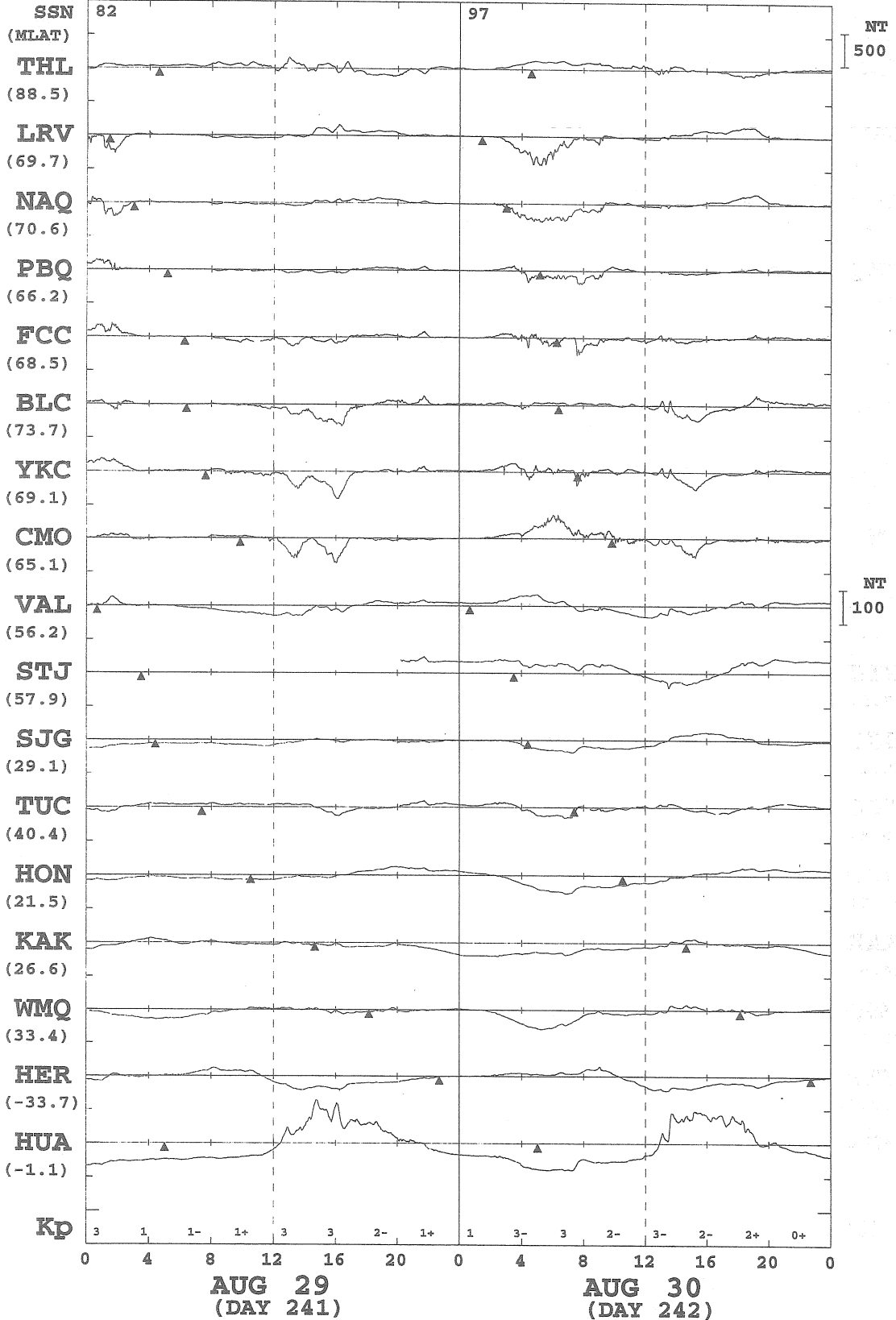
AUG 28  
(DAY 240)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
\* PROMPT DATA ARE INCLUDED  
\* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

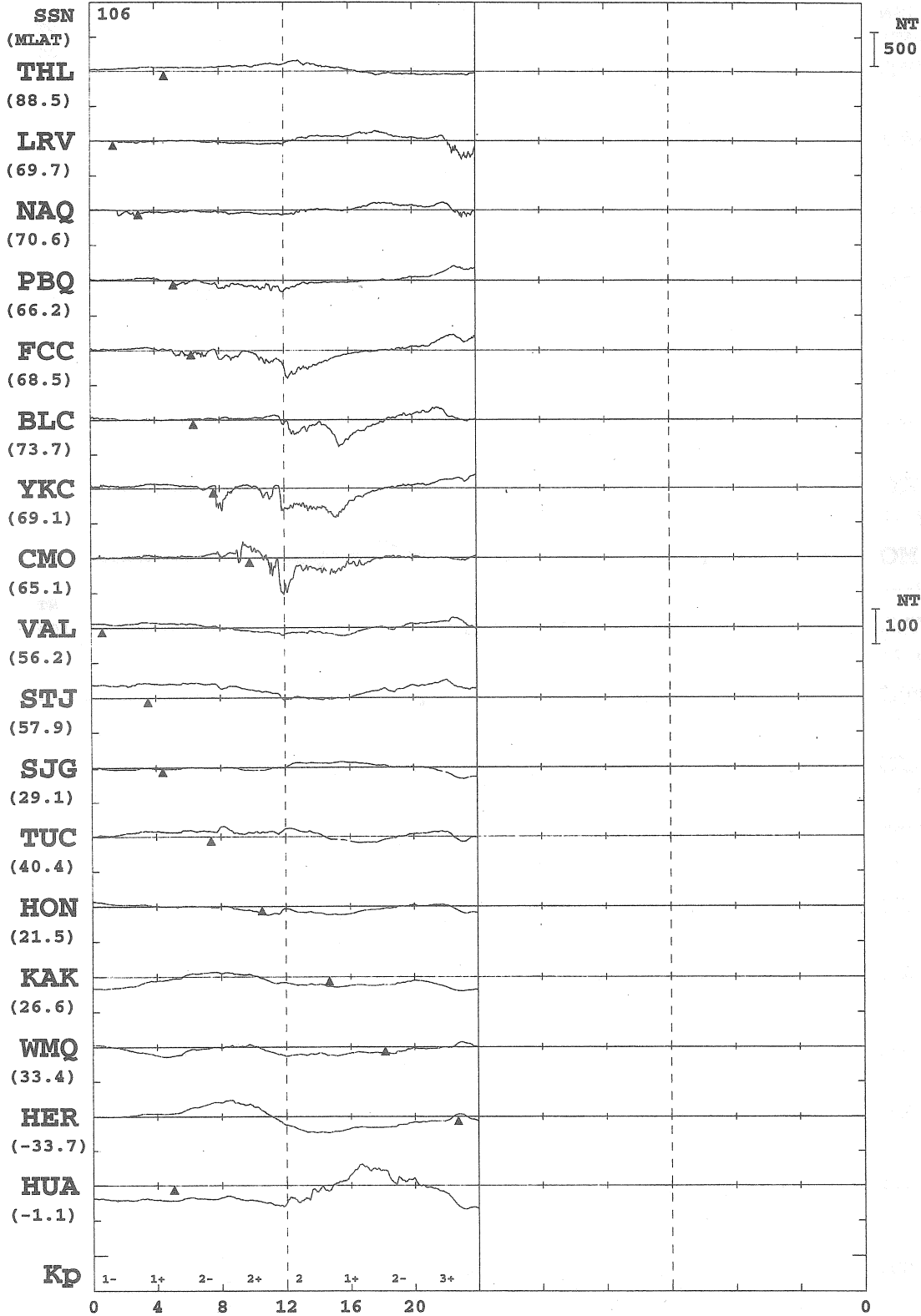


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



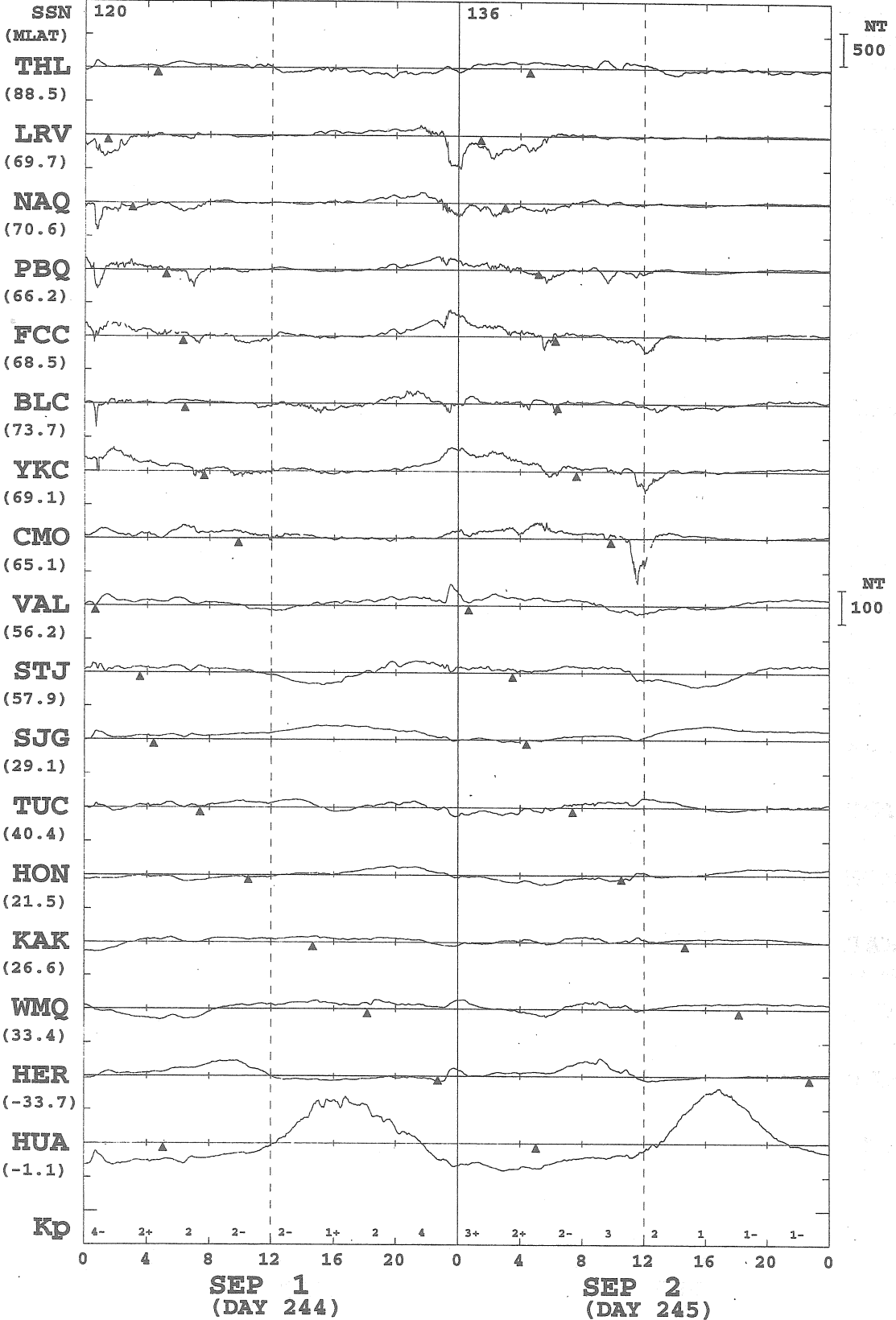
AUG 31  
(DAY 243)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
\* PROMPT DATA ARE INCLUDED  
\* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

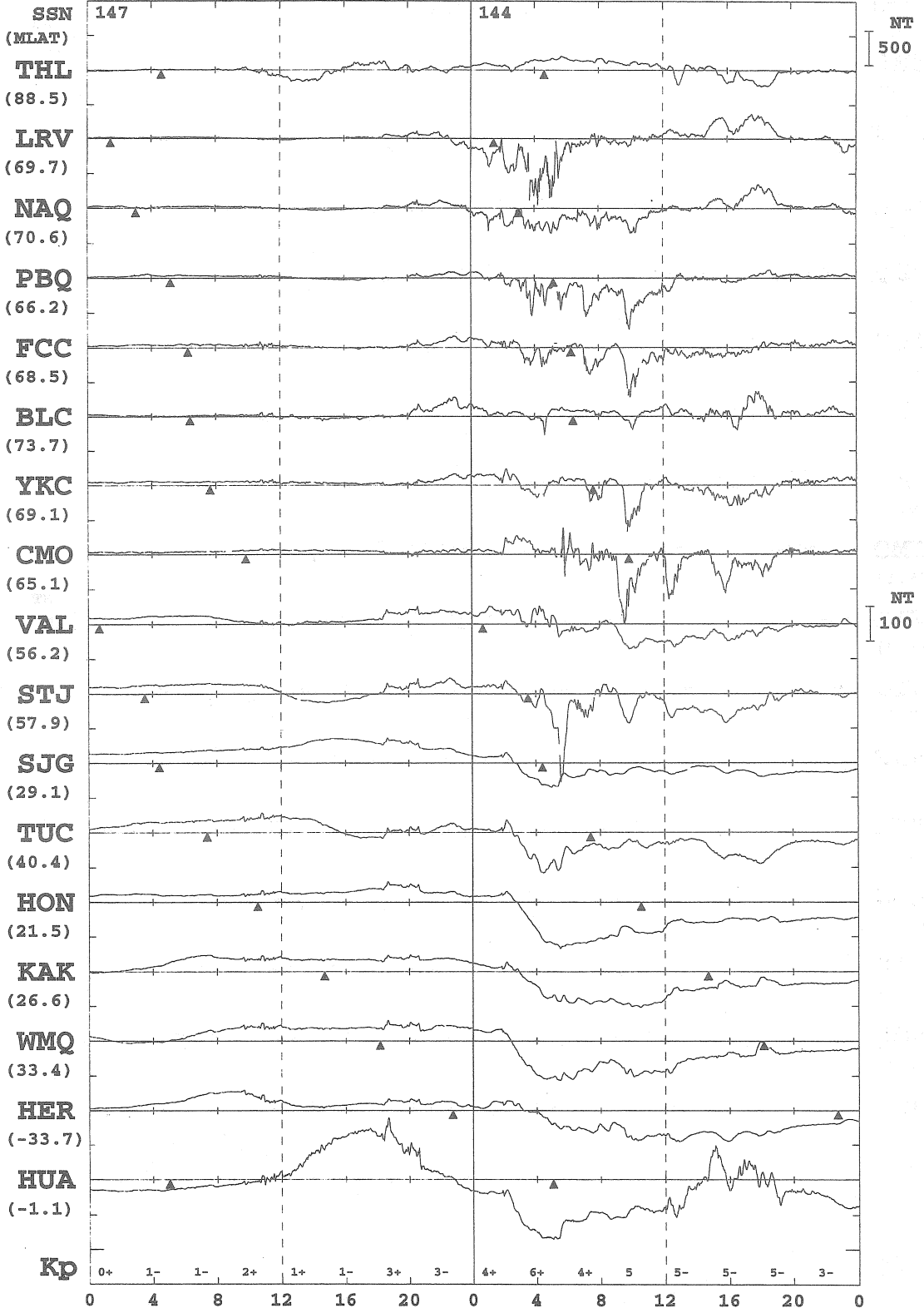


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



Kp

0+ 1- 1- 2+ 1+ 1- 3+ 3- 4+ 6+ 4+ 5 5- 5- 5- 3-

SEP 3  
(DAY 246)

SEP 4  
(DAY 247)

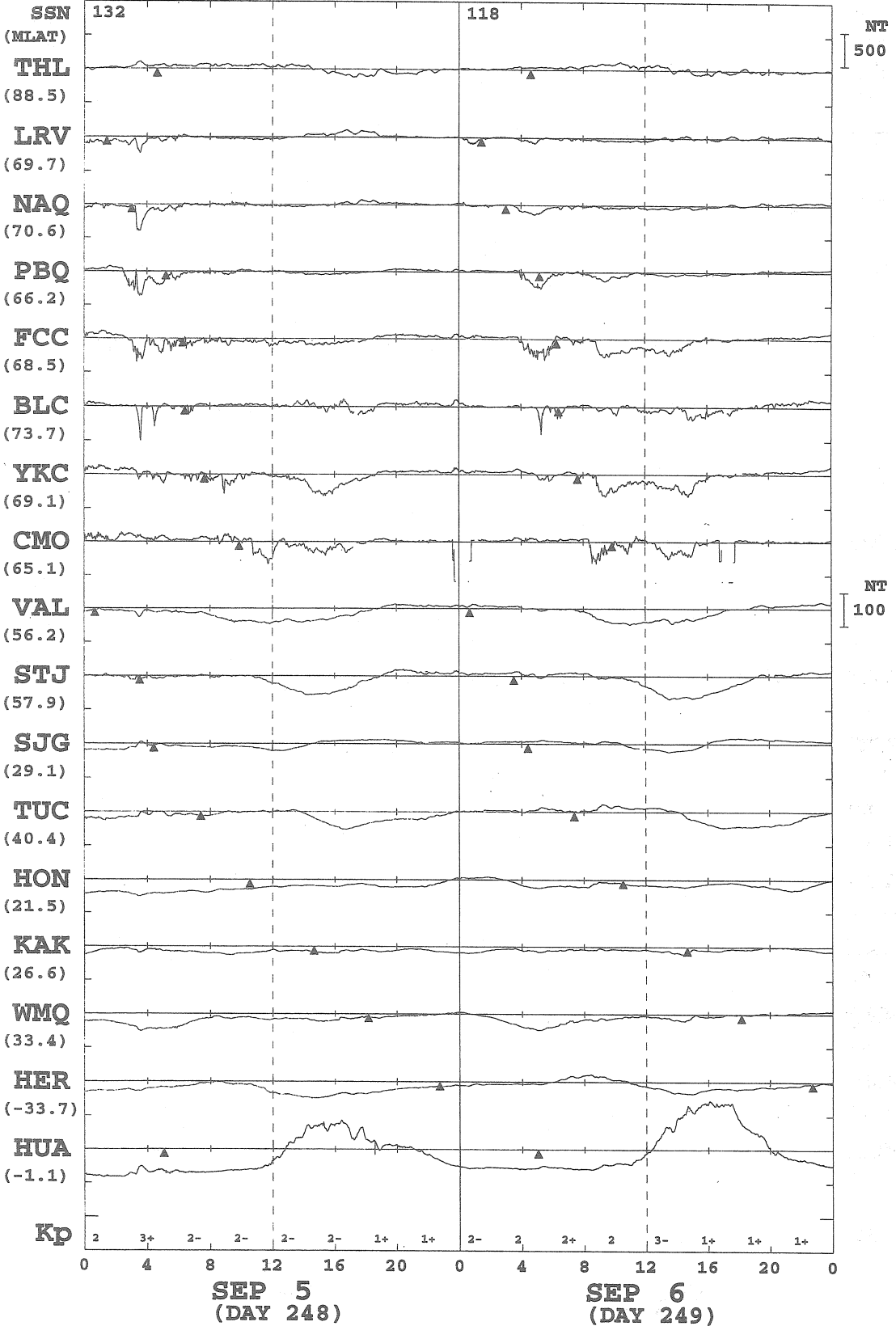
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
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KYOTO UNIV.



2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

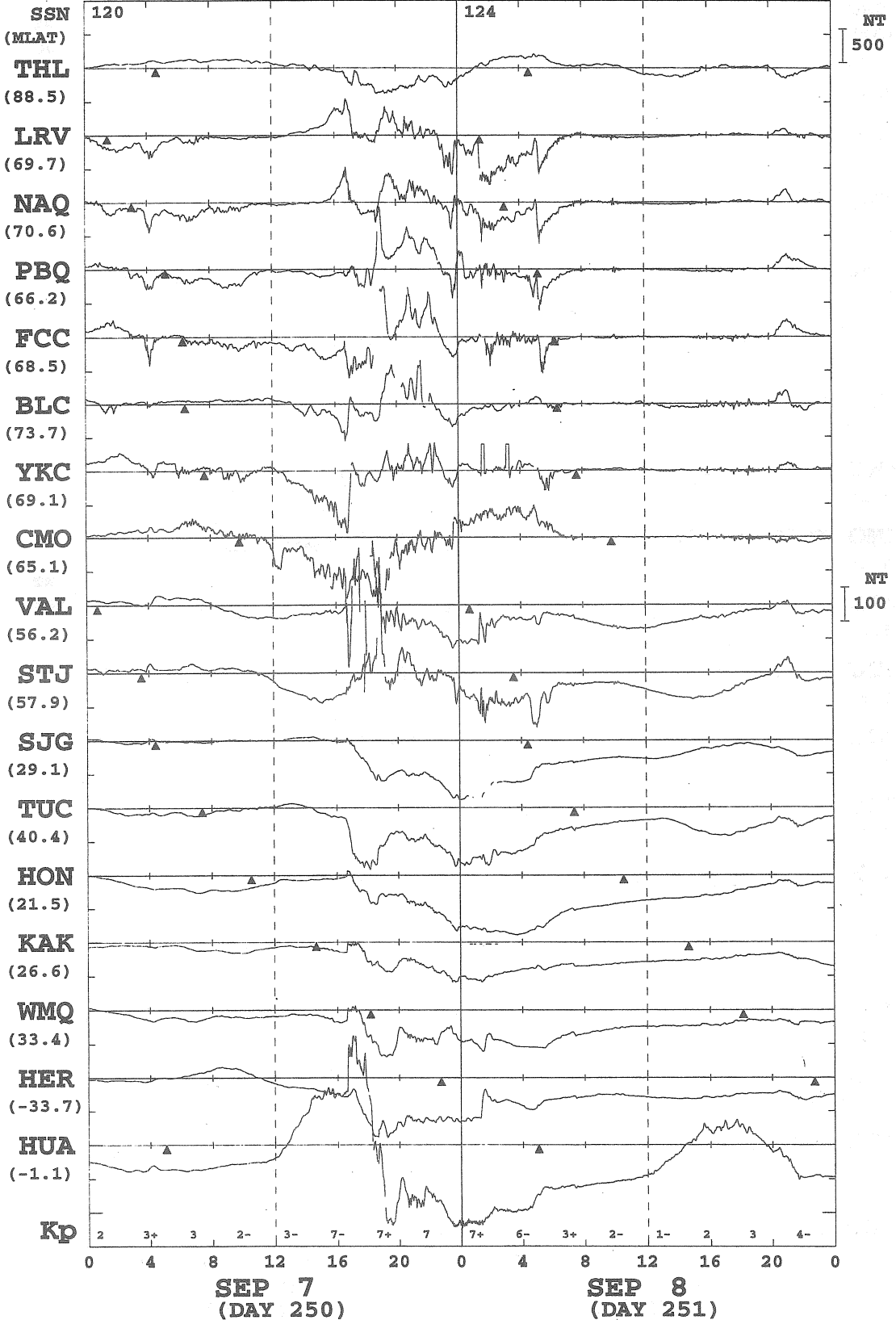


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

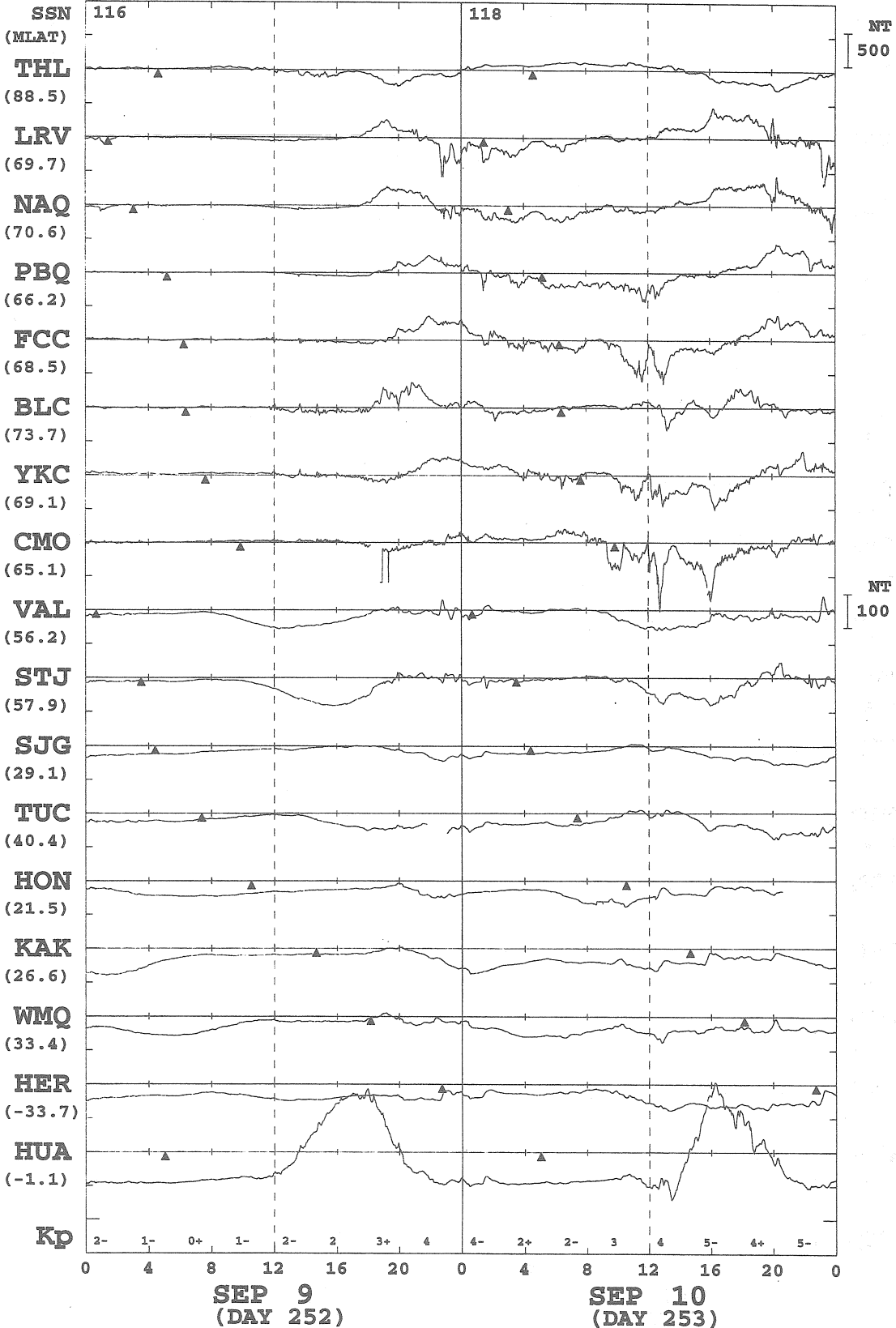


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

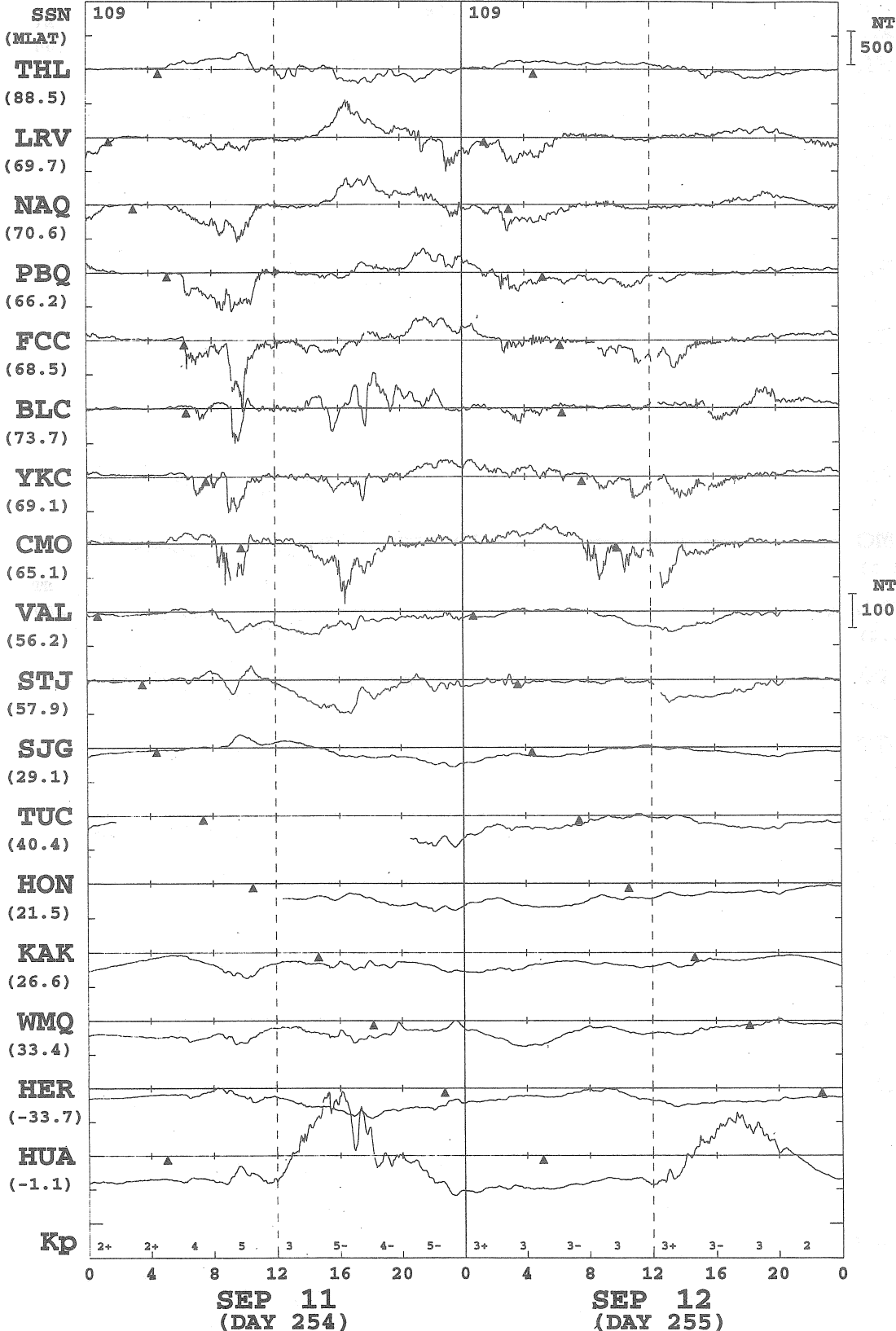


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

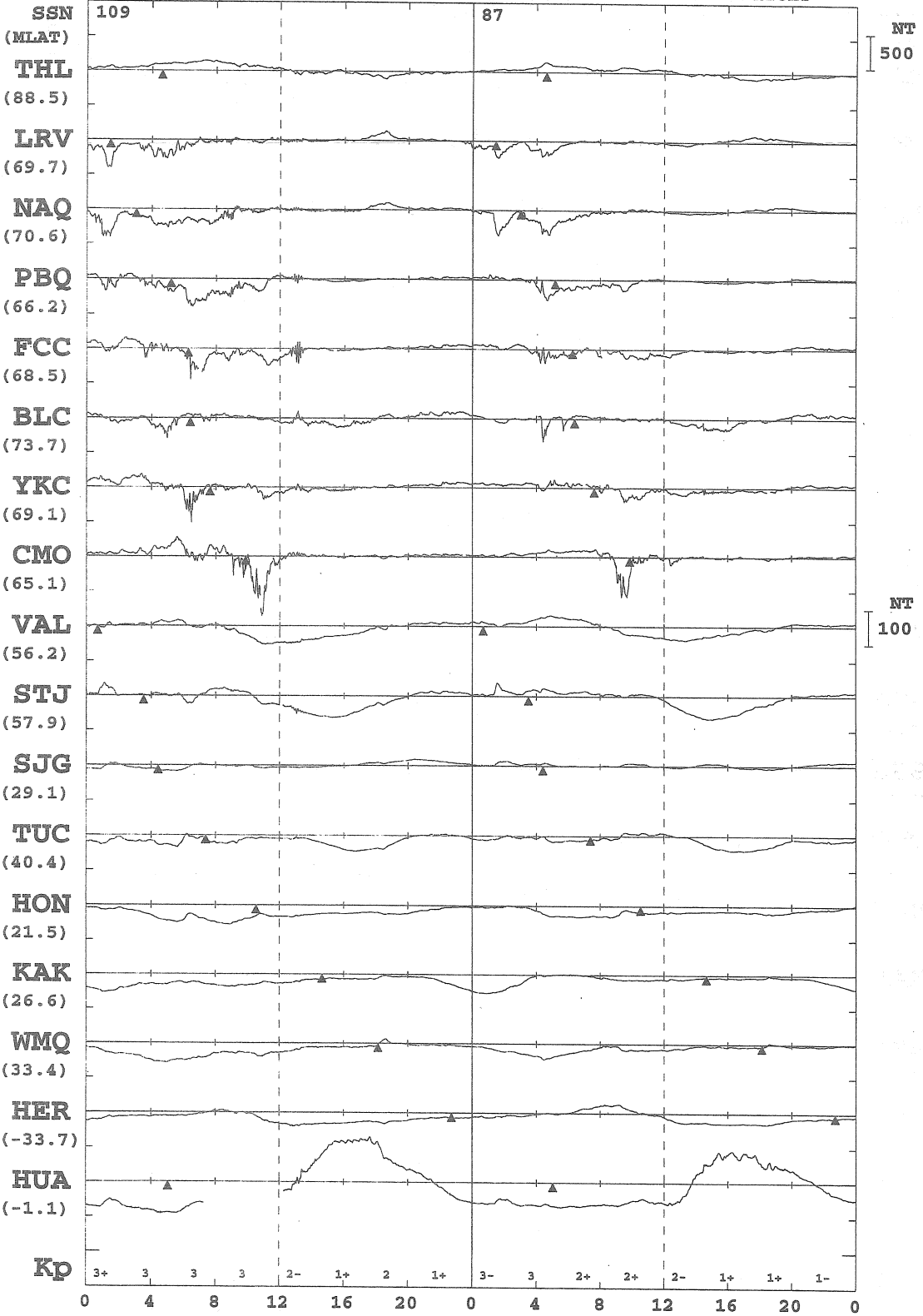


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



SEP 13  
(DAY 256)

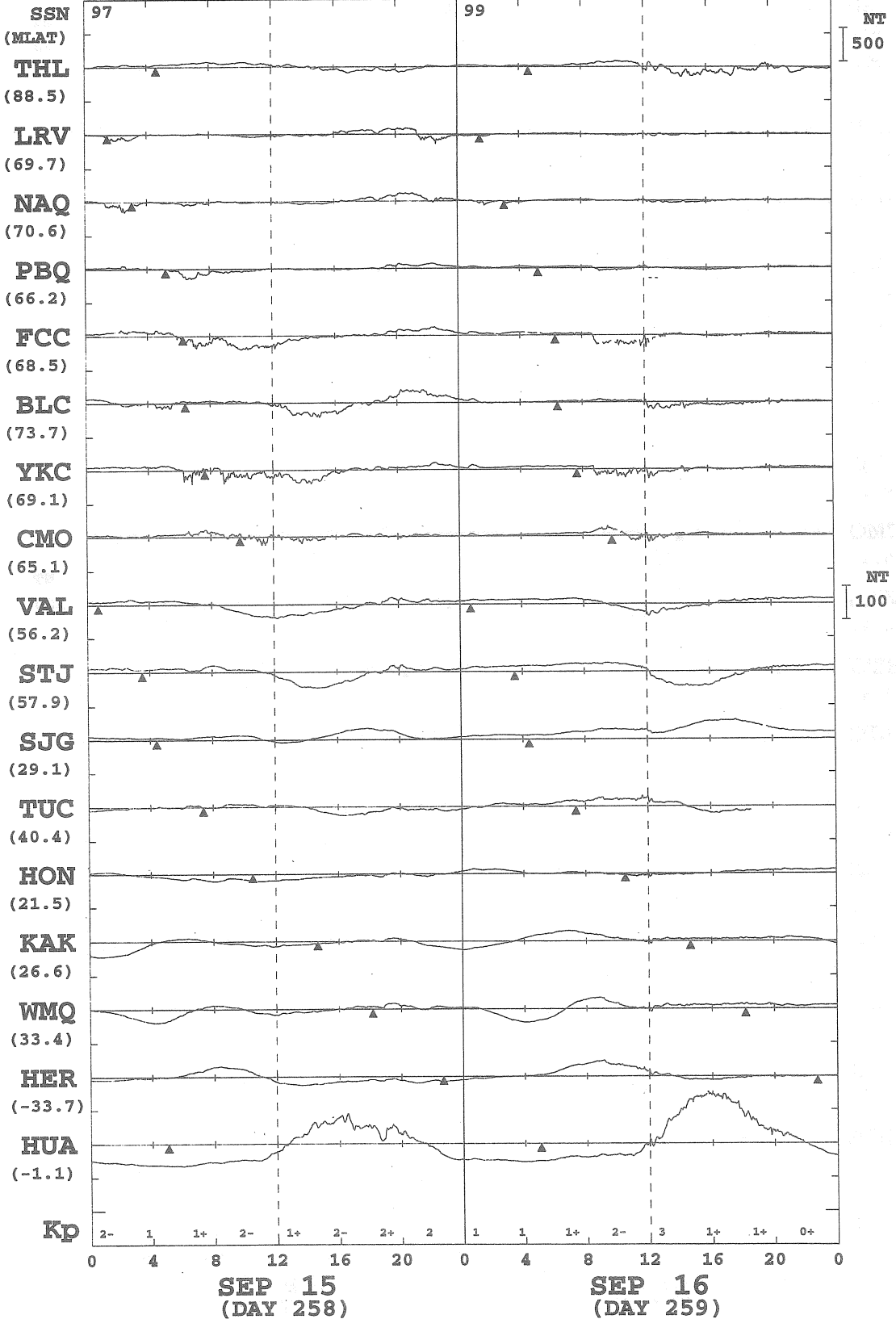
SEP 14  
(DAY 257)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

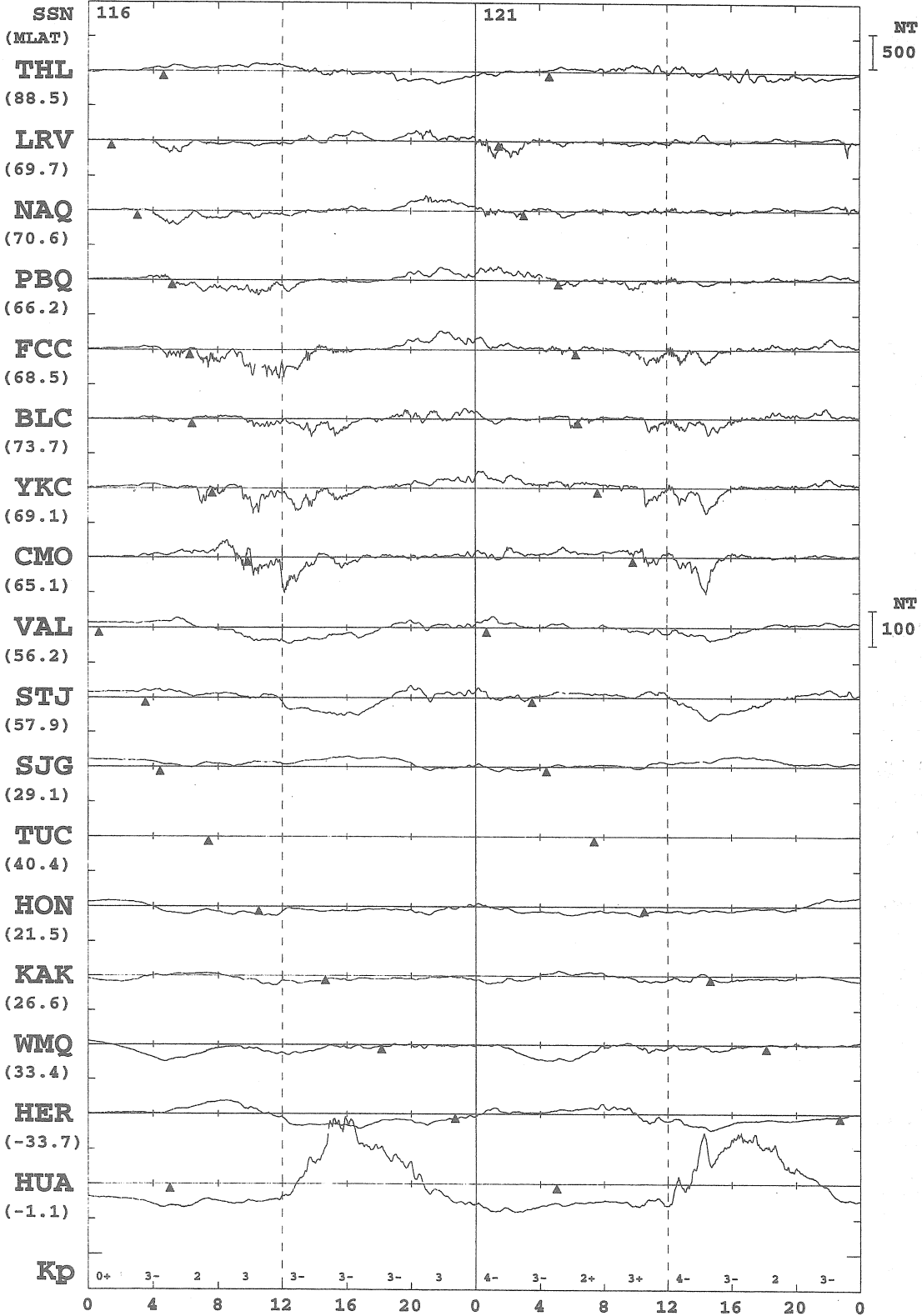


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

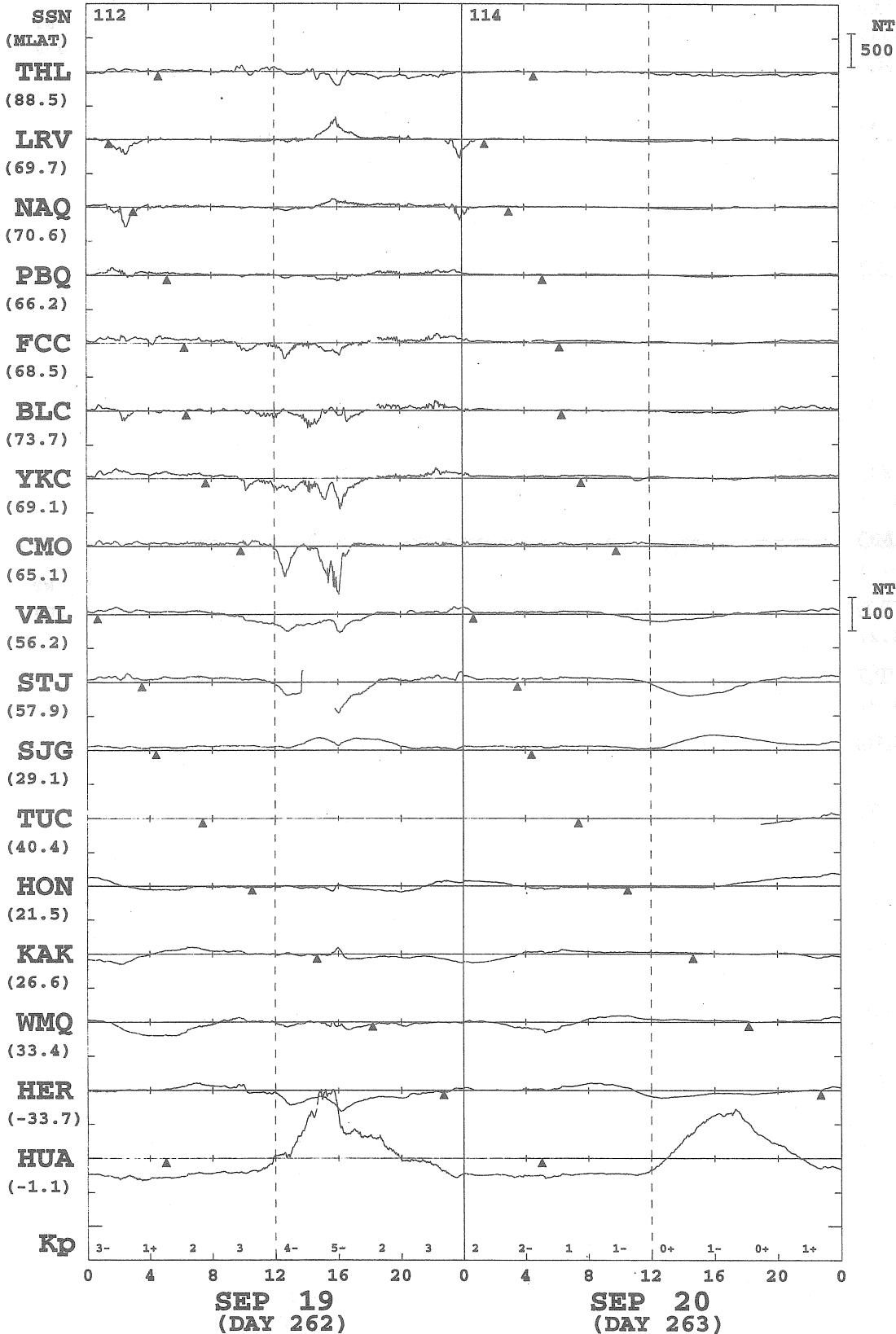


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

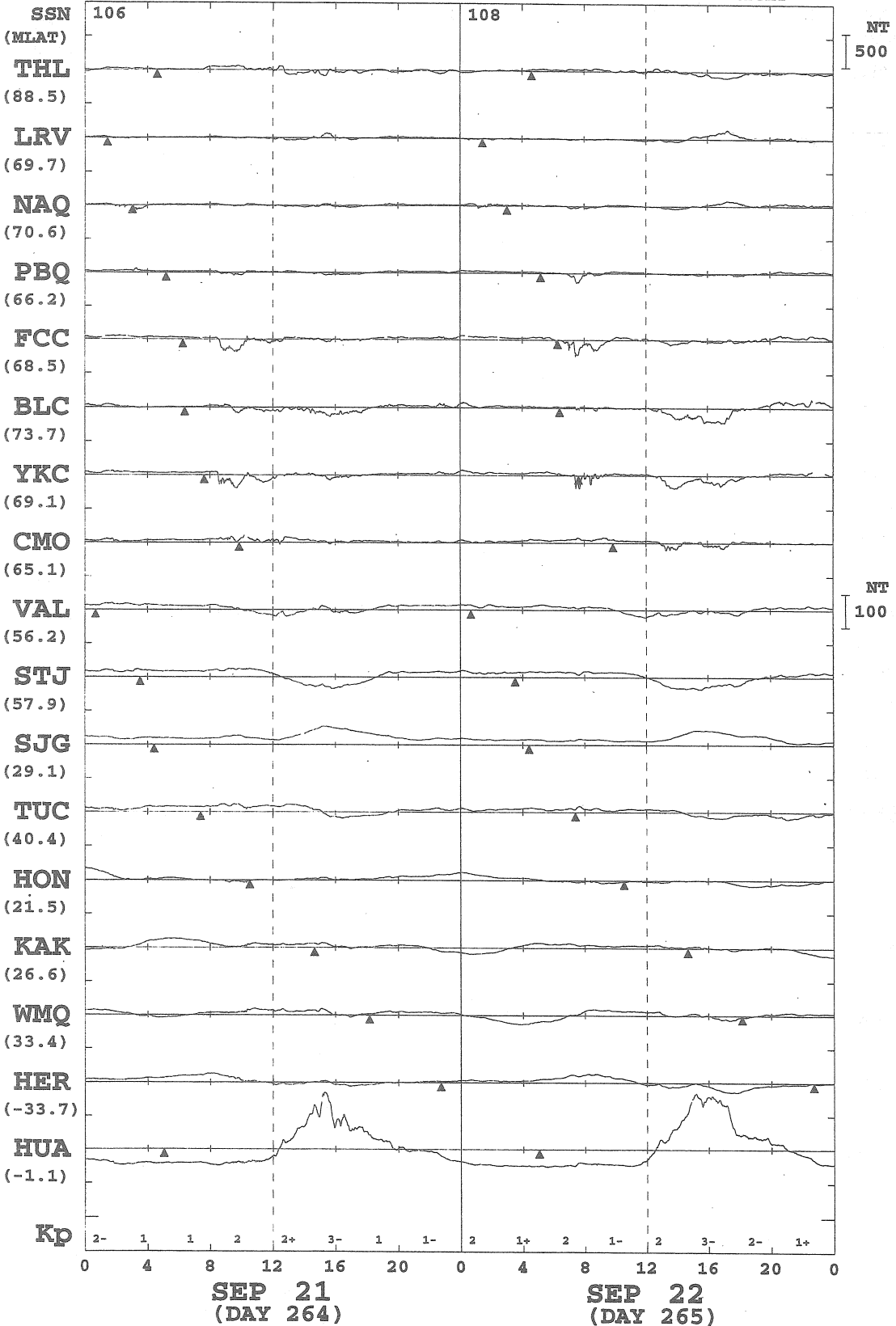


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.



2002 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

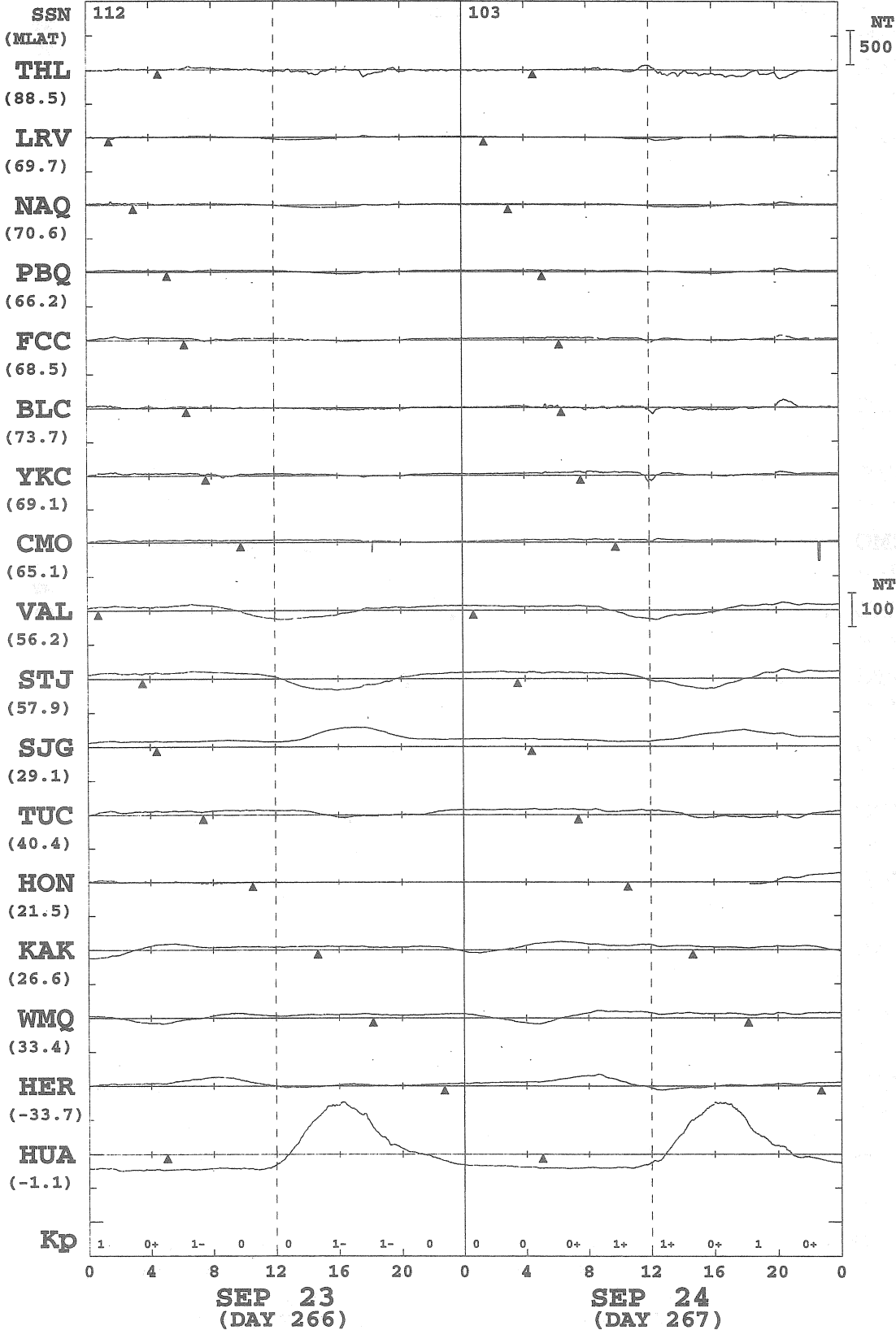


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

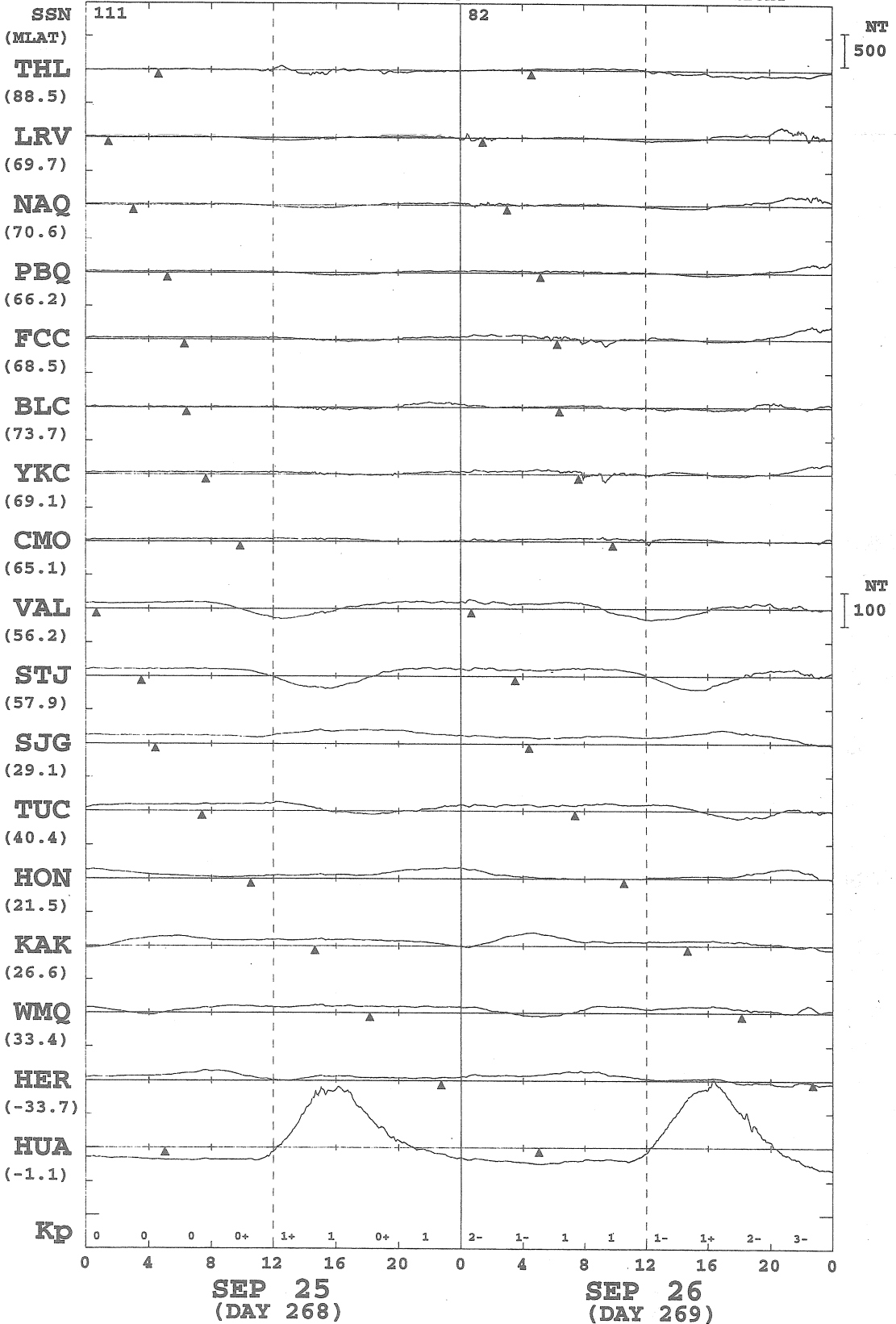


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

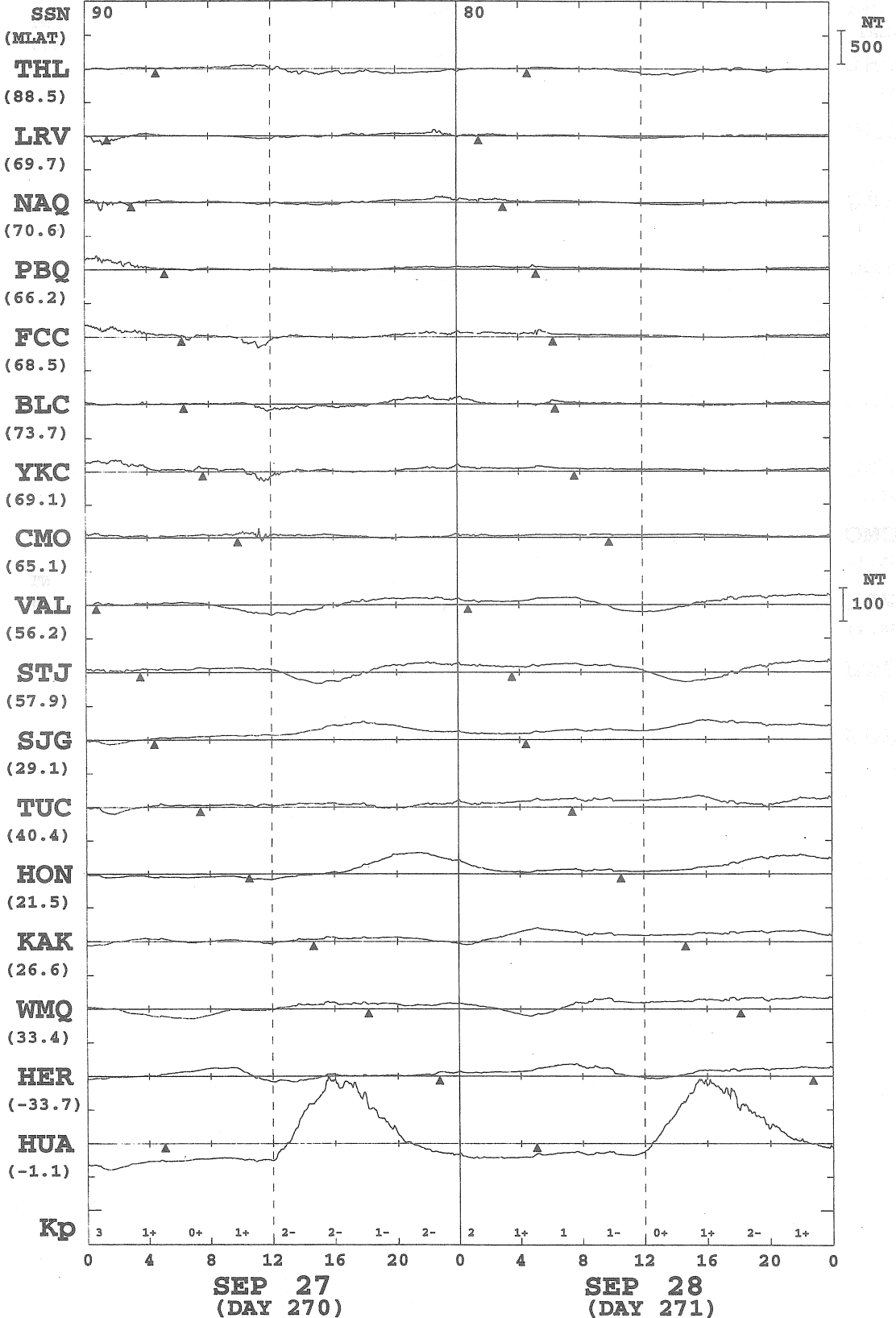


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

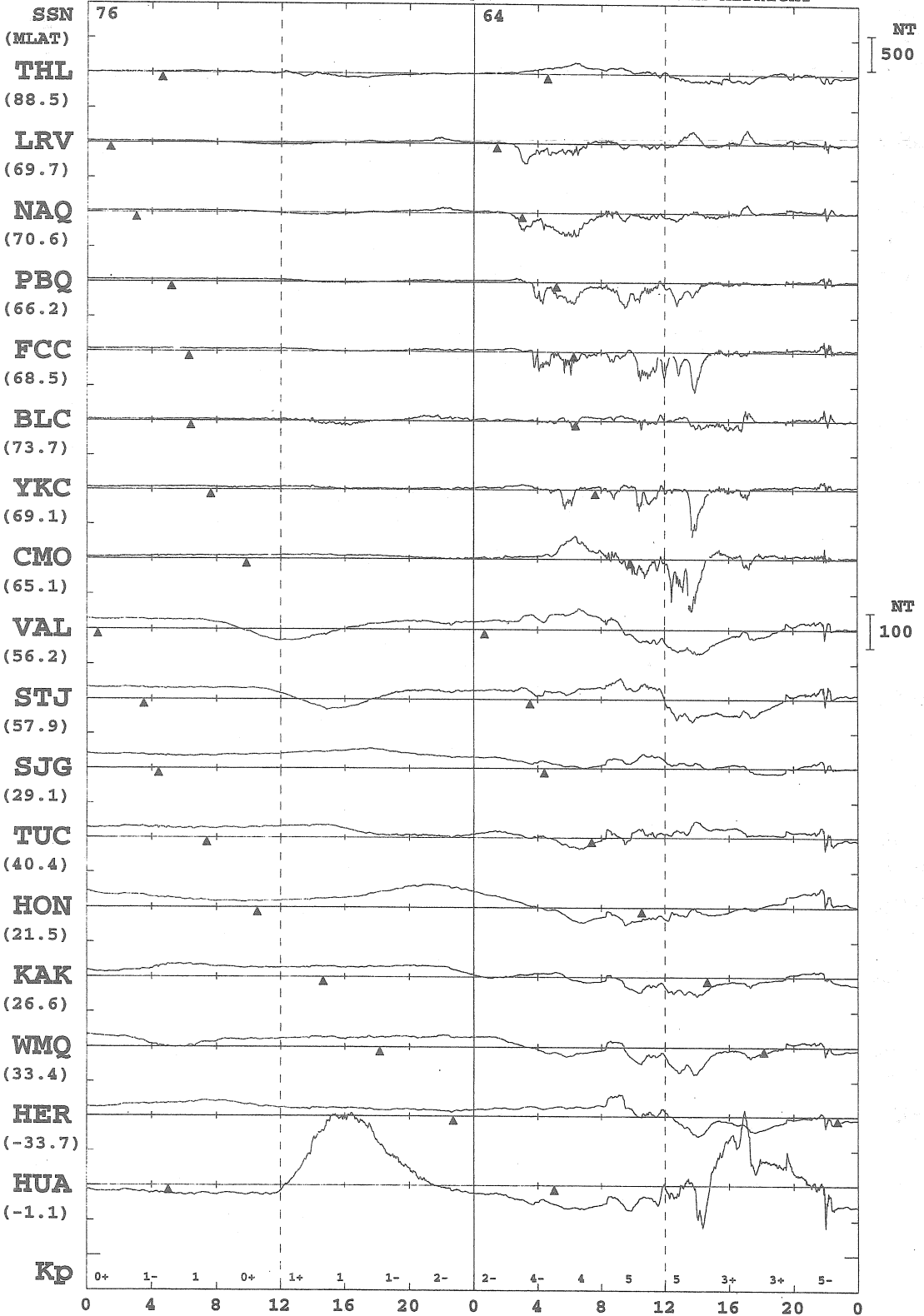


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

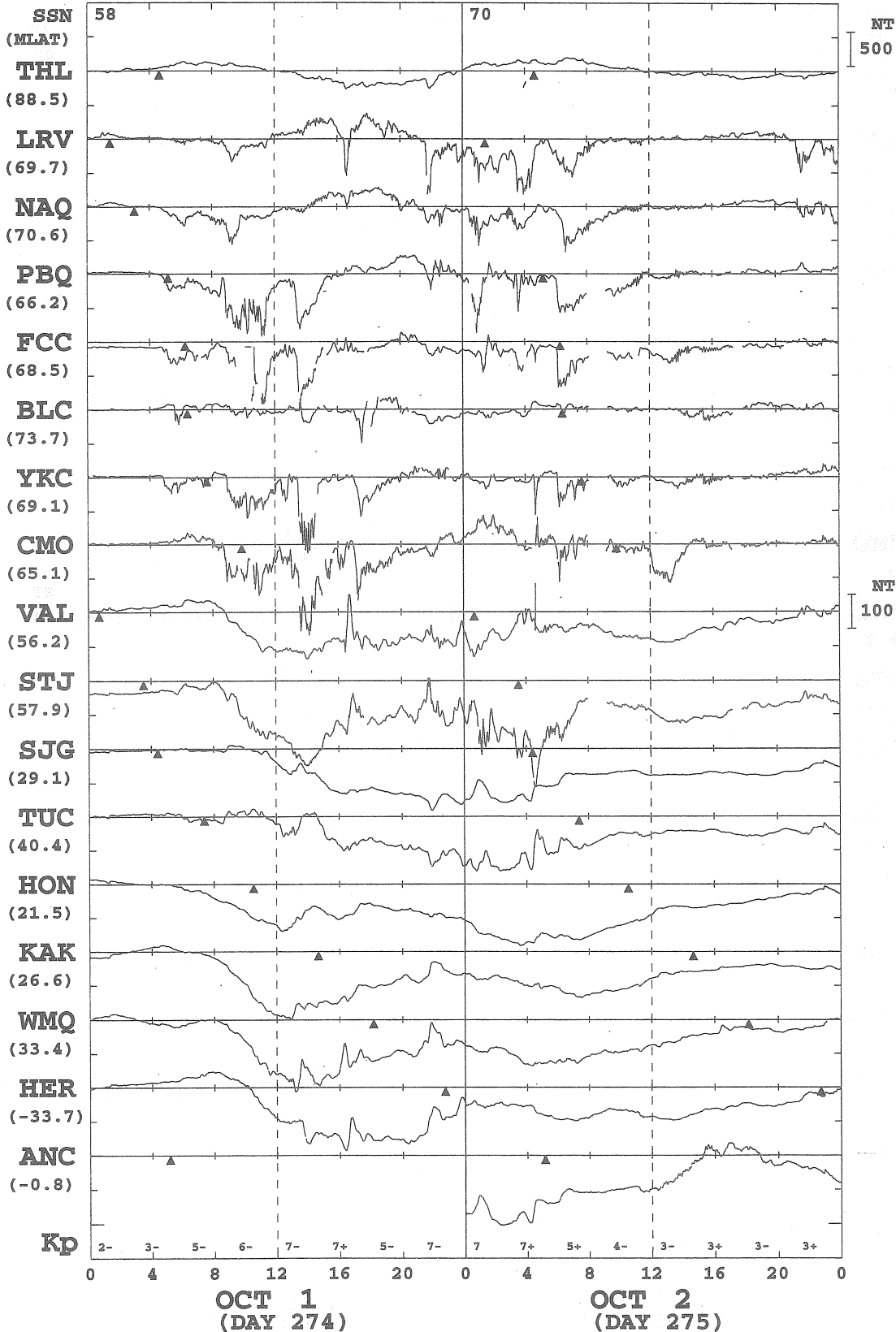


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

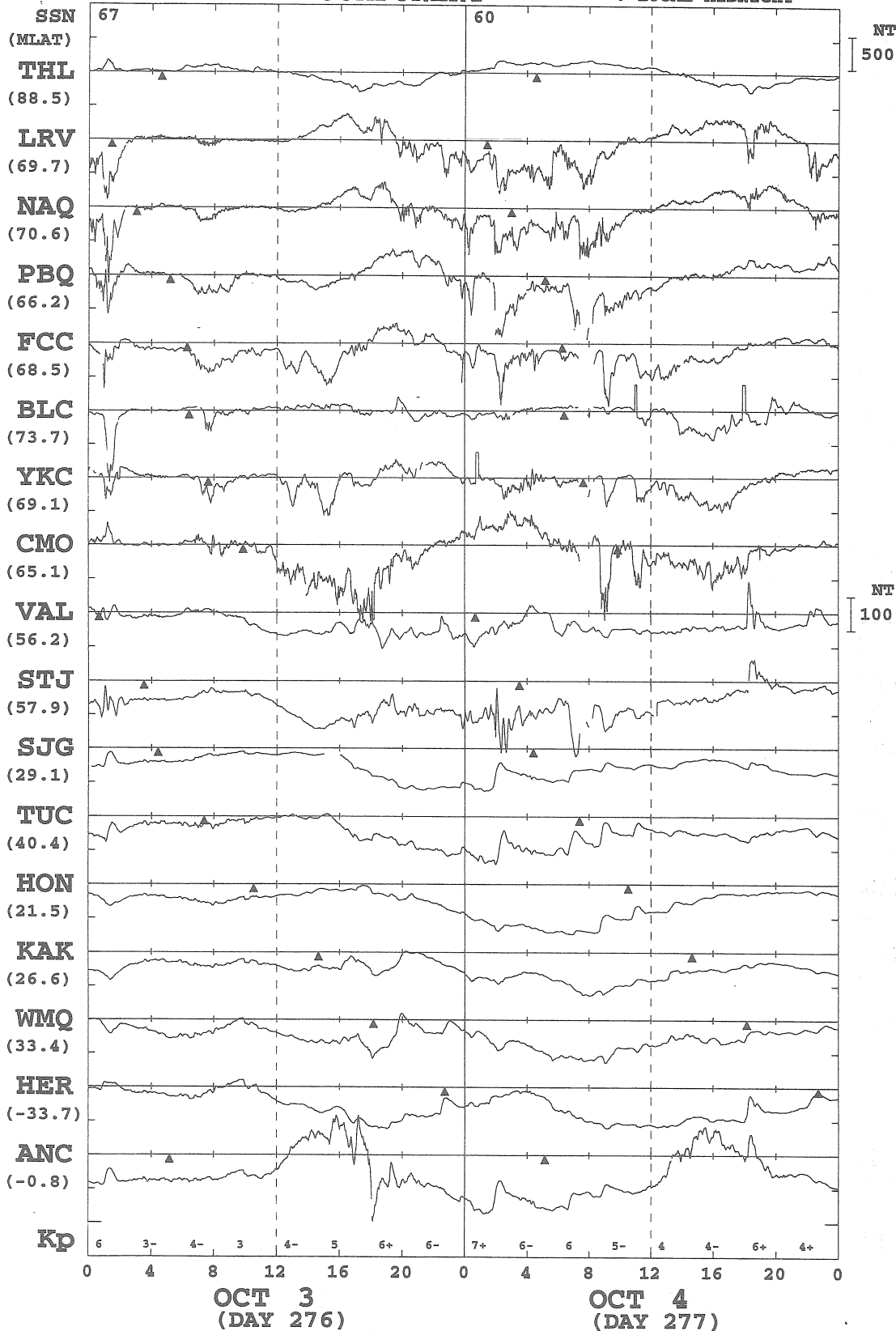


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

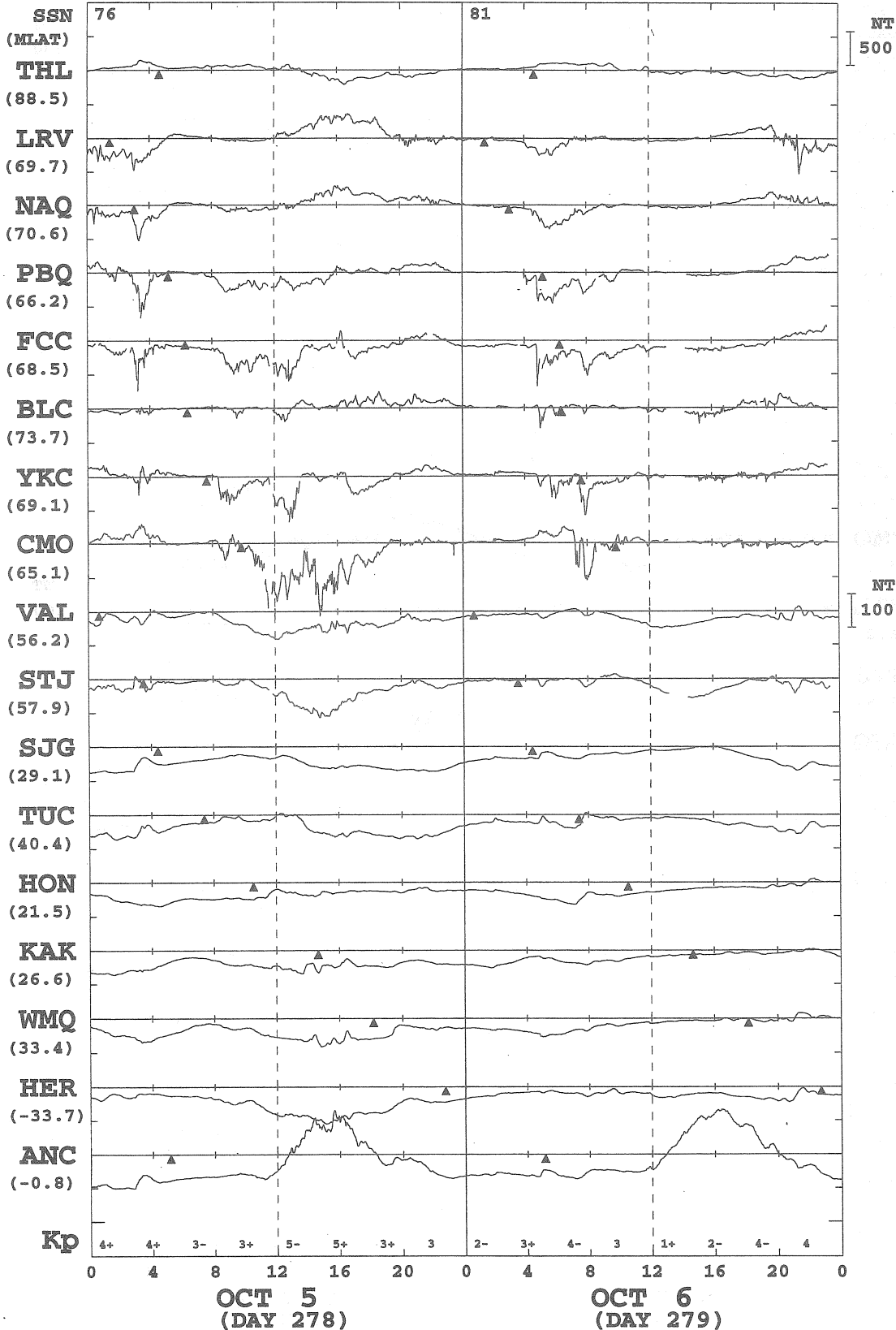


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



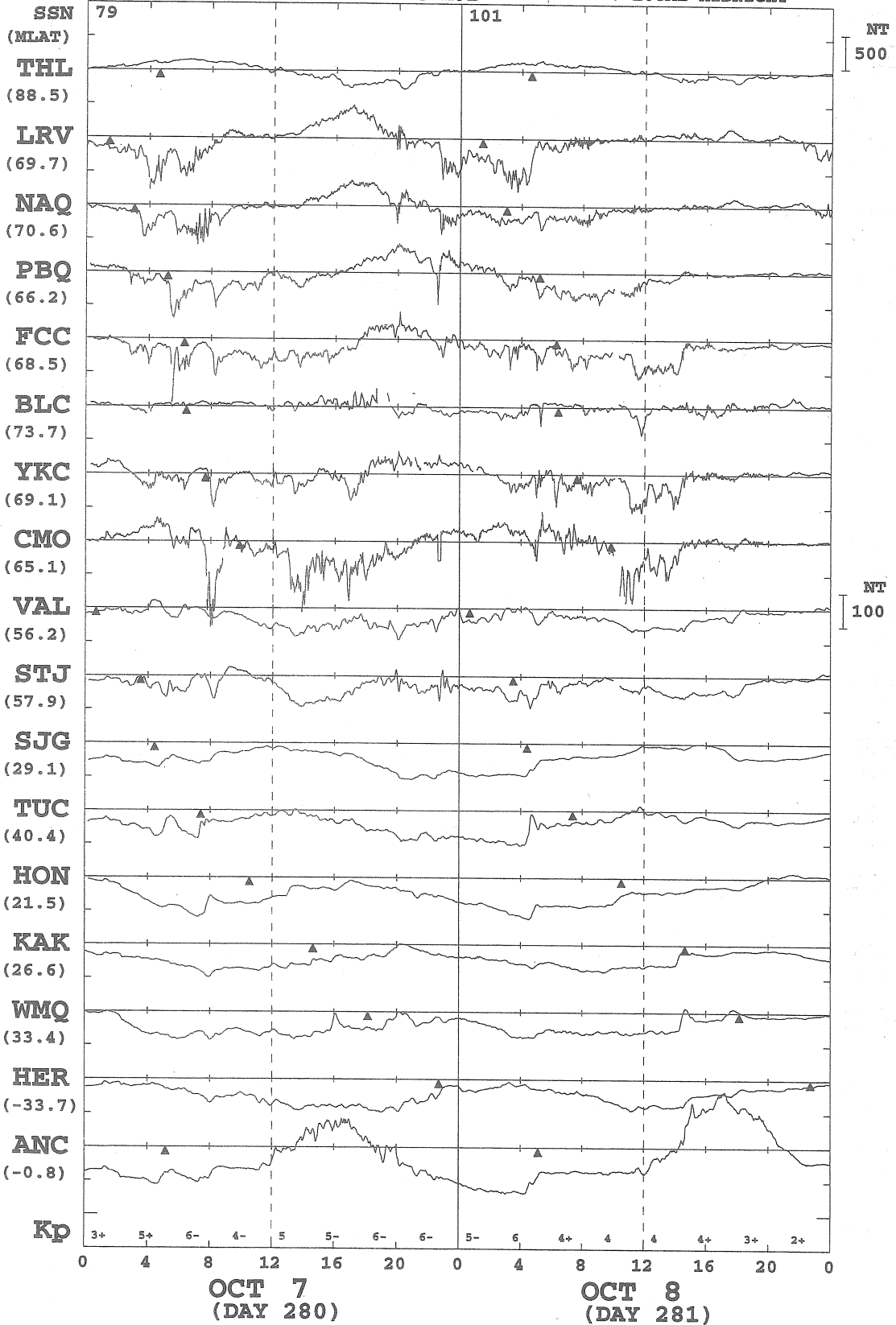
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.



# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

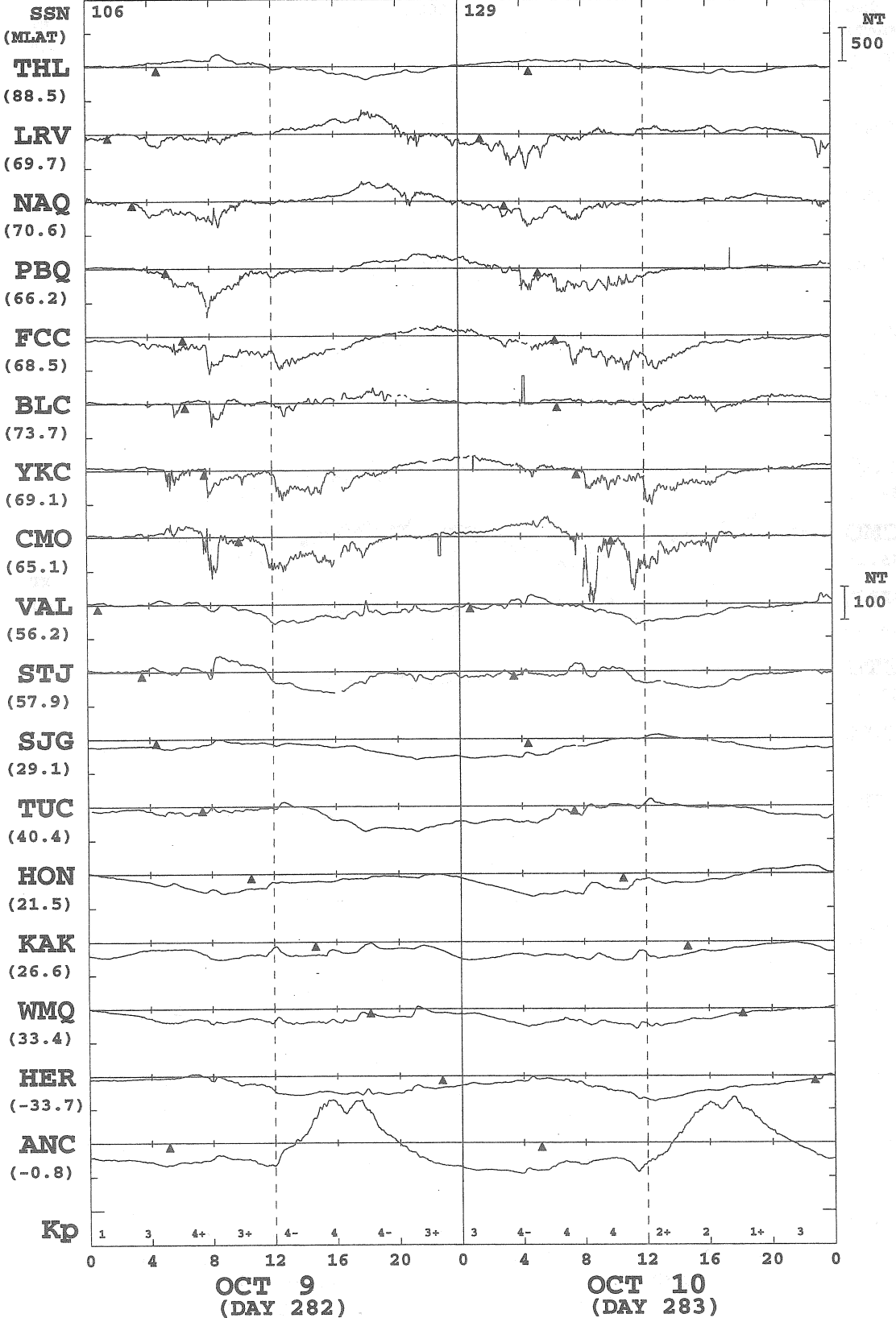


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

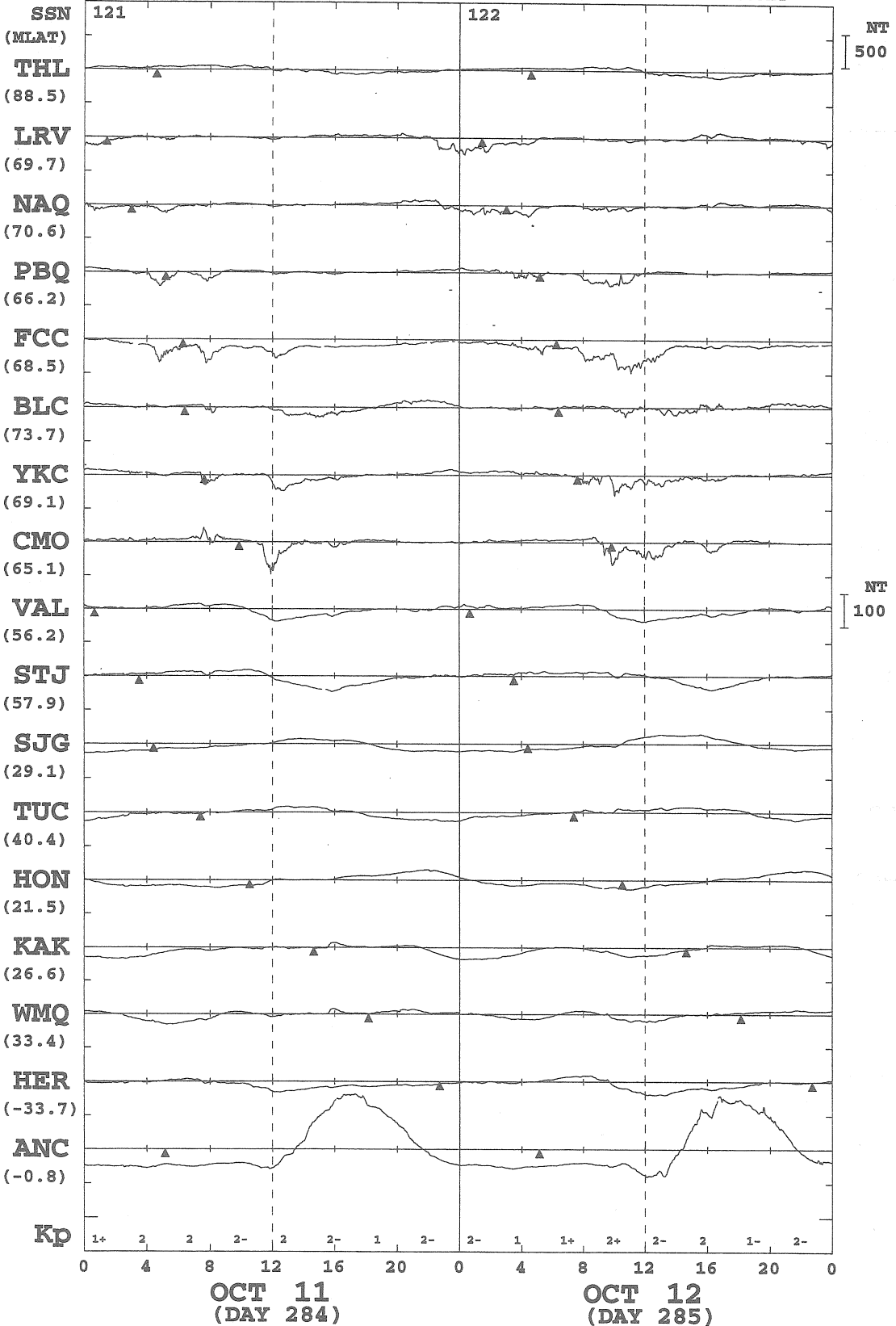


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

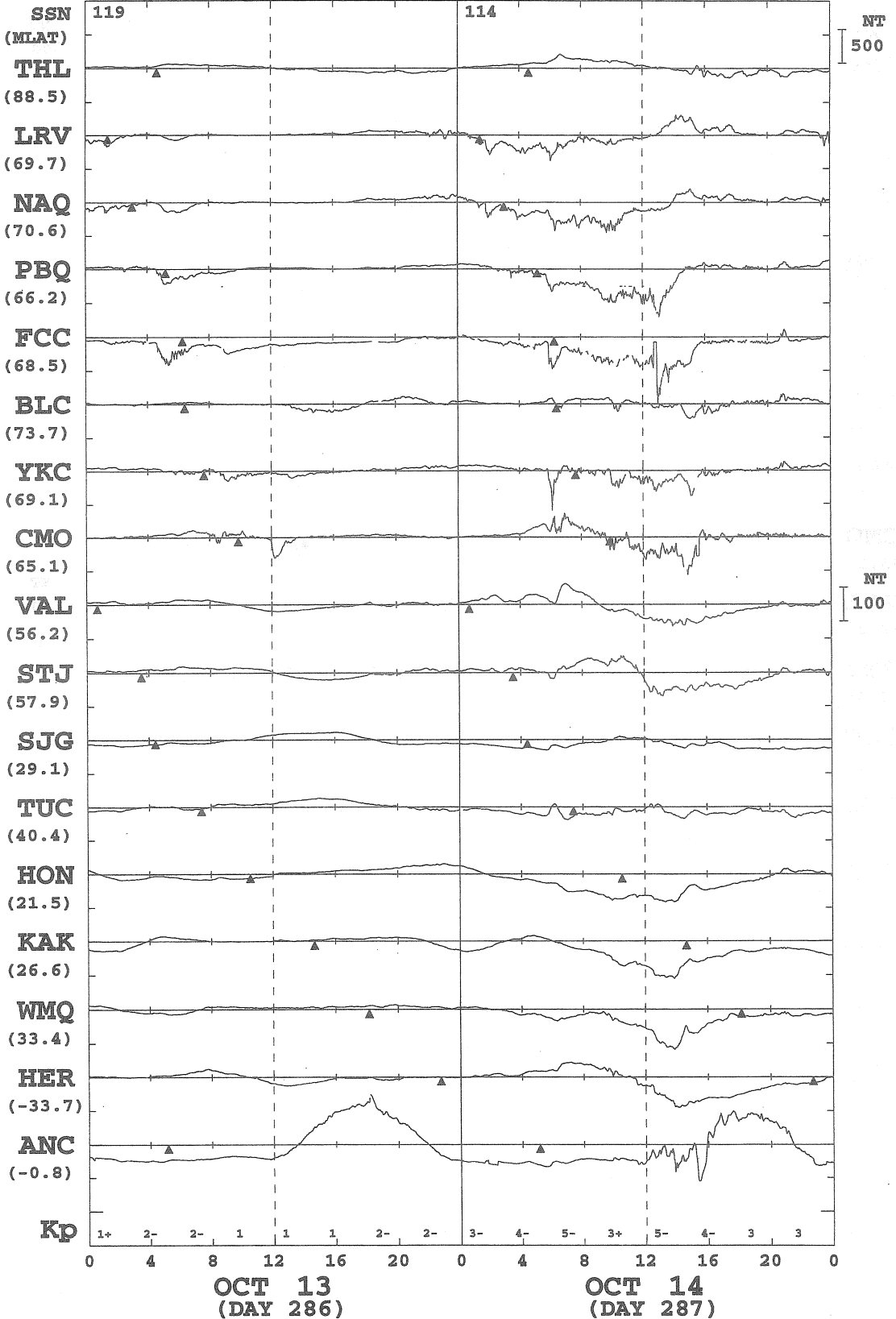


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

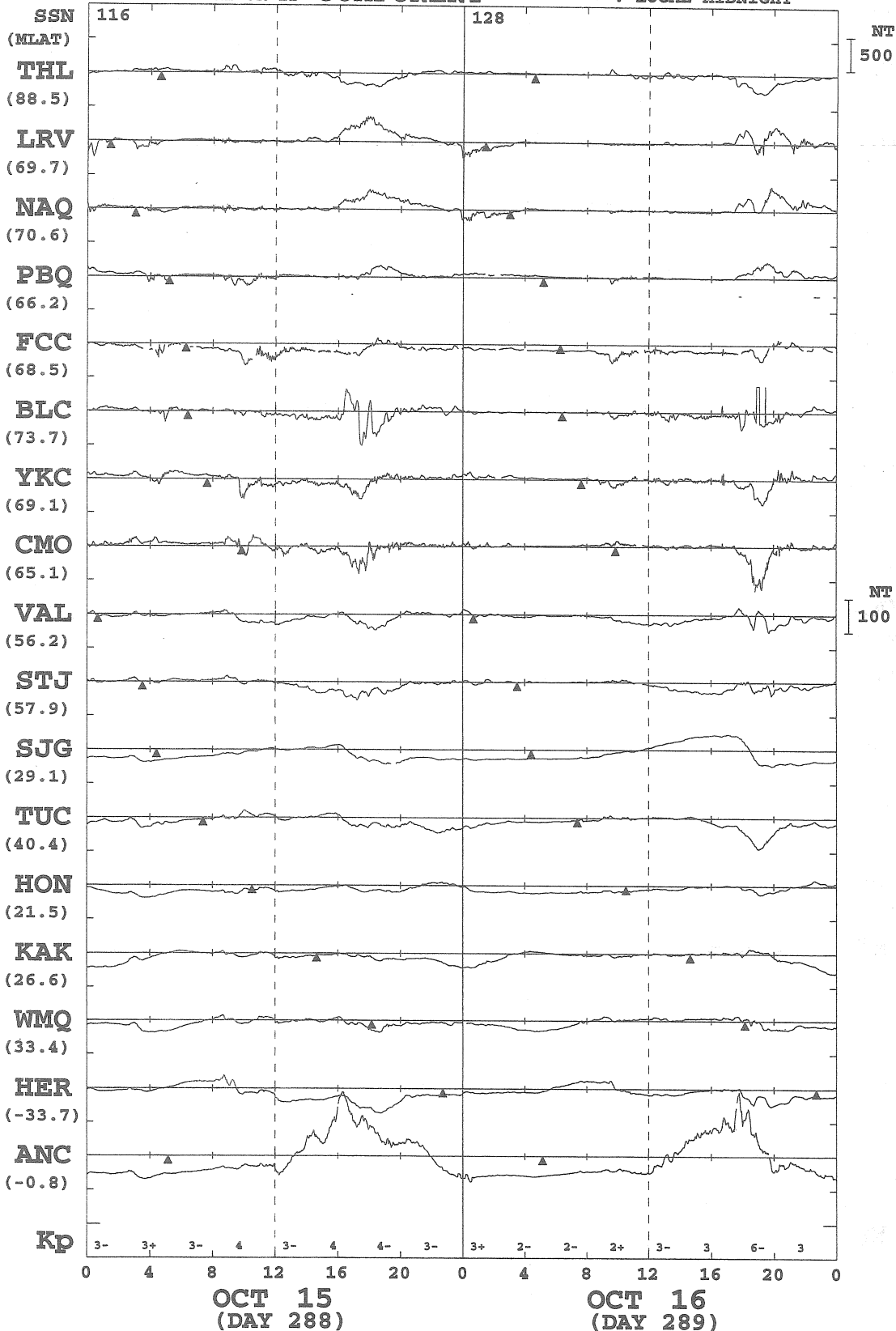


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

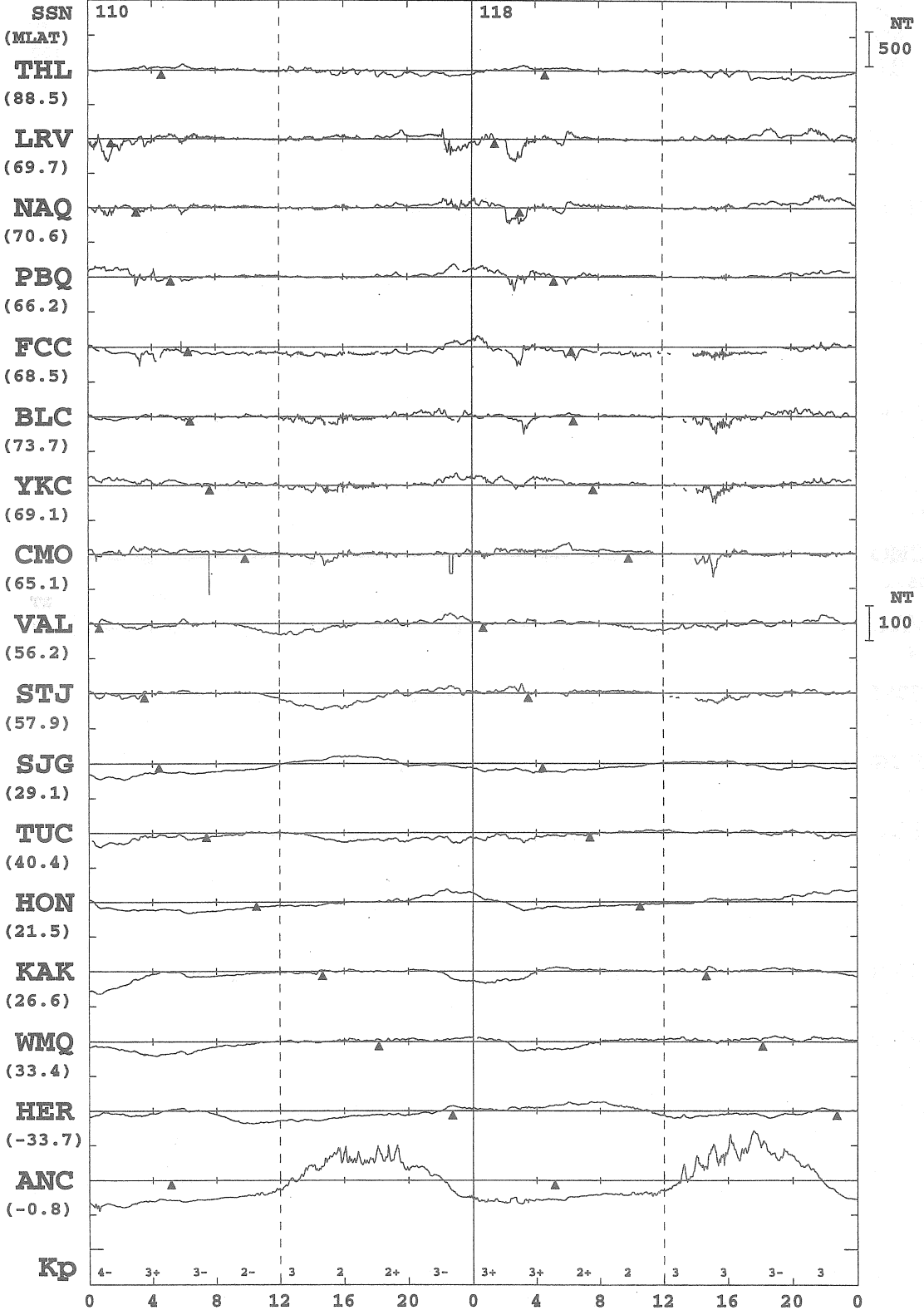


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

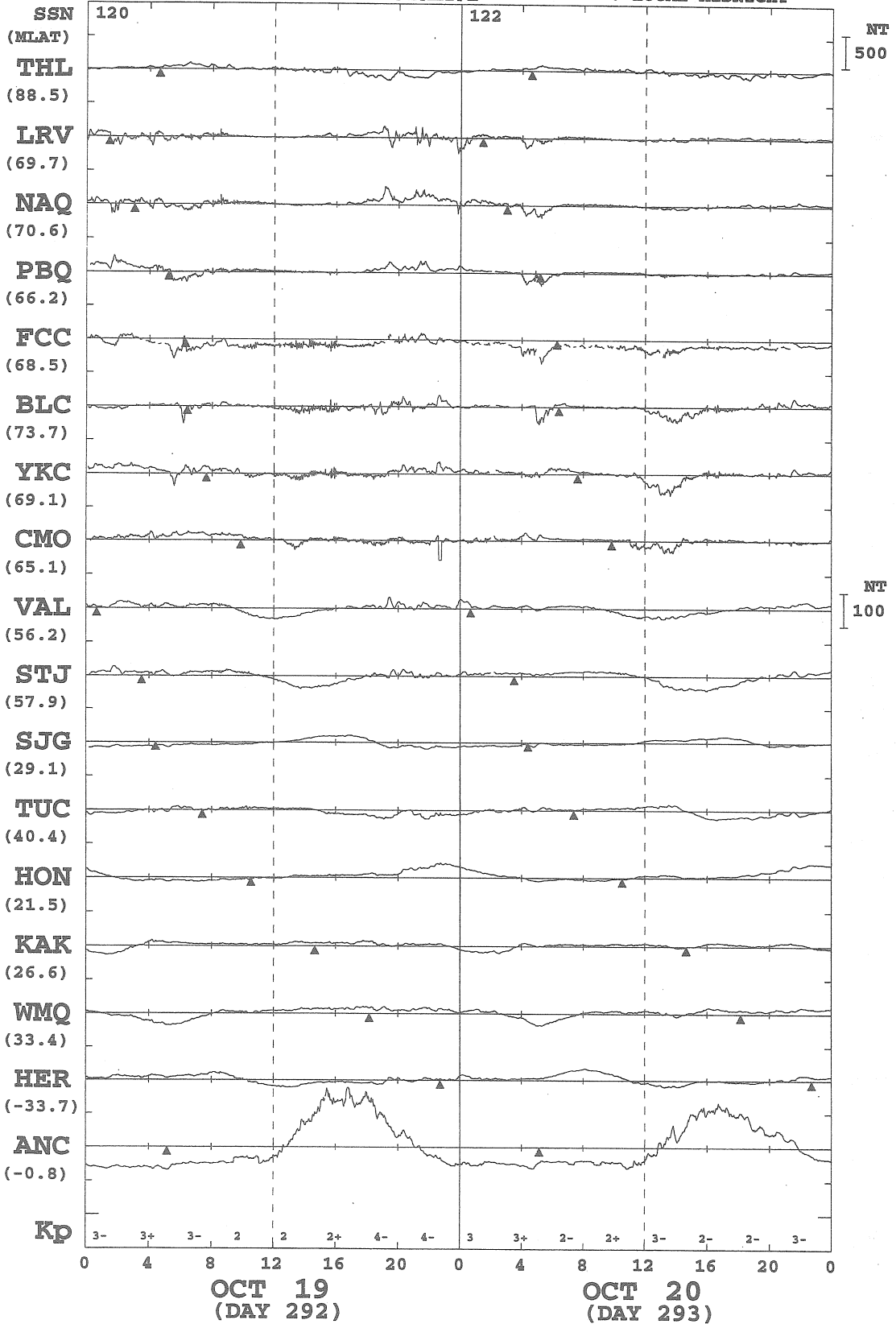


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
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KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

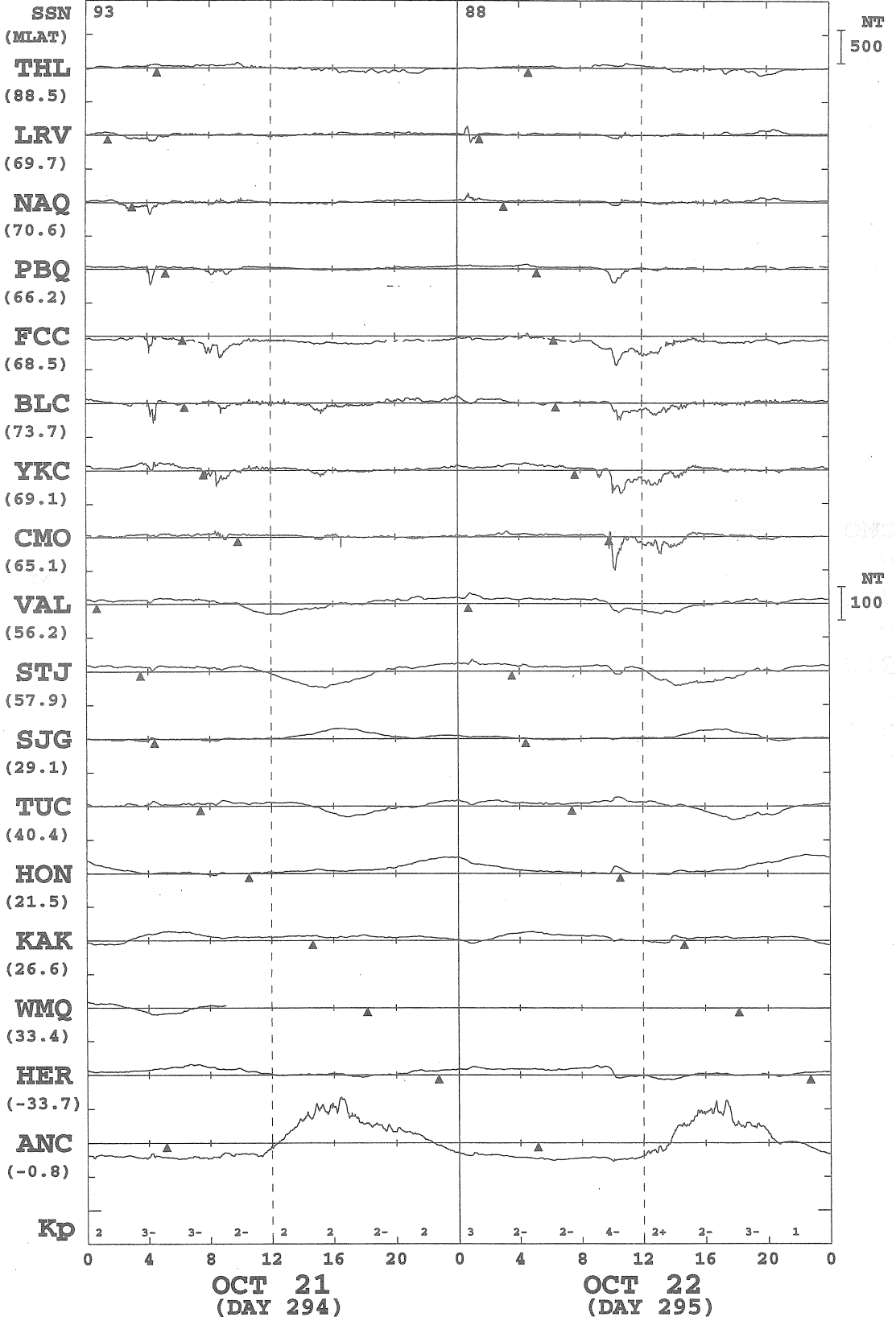


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



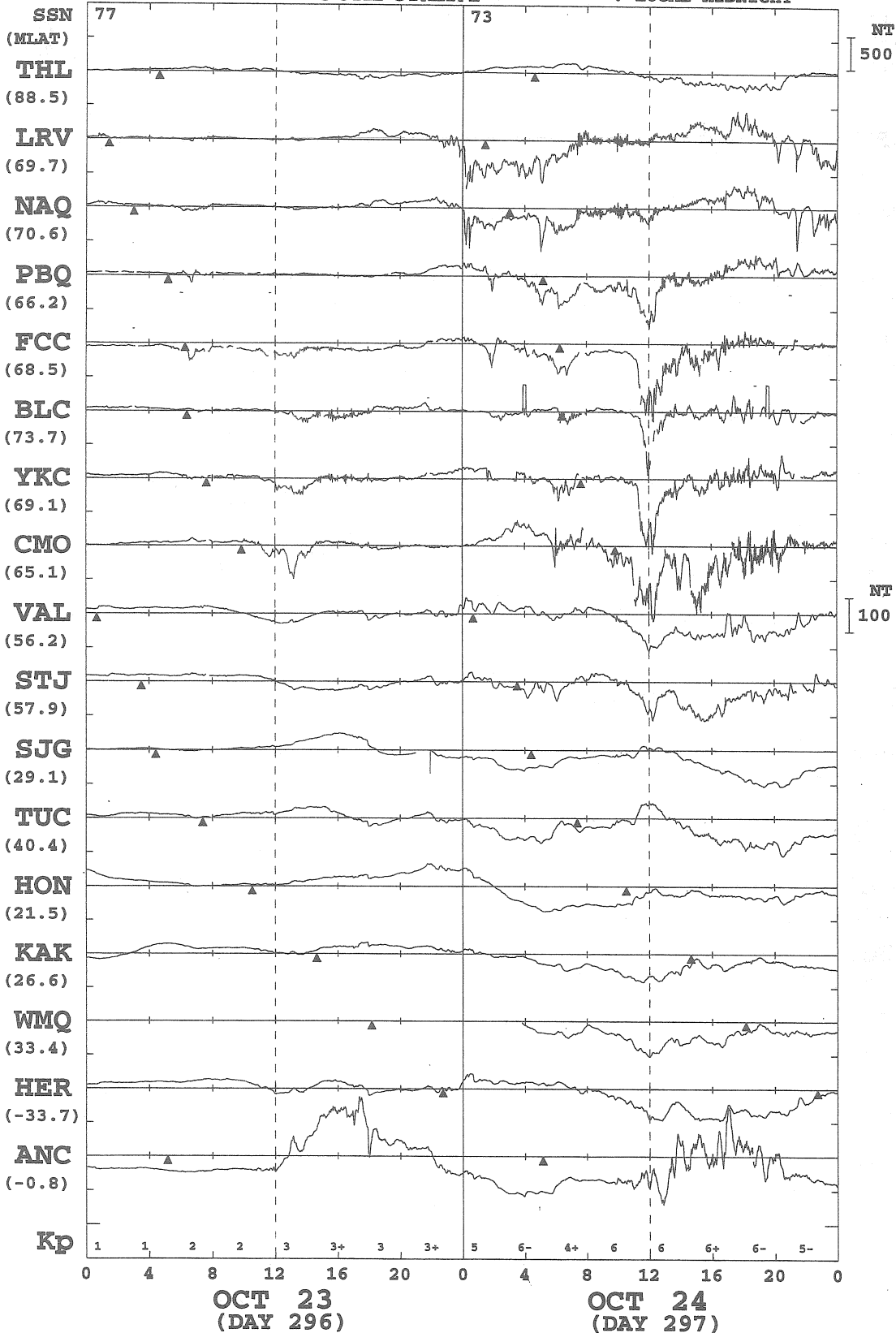
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.



# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

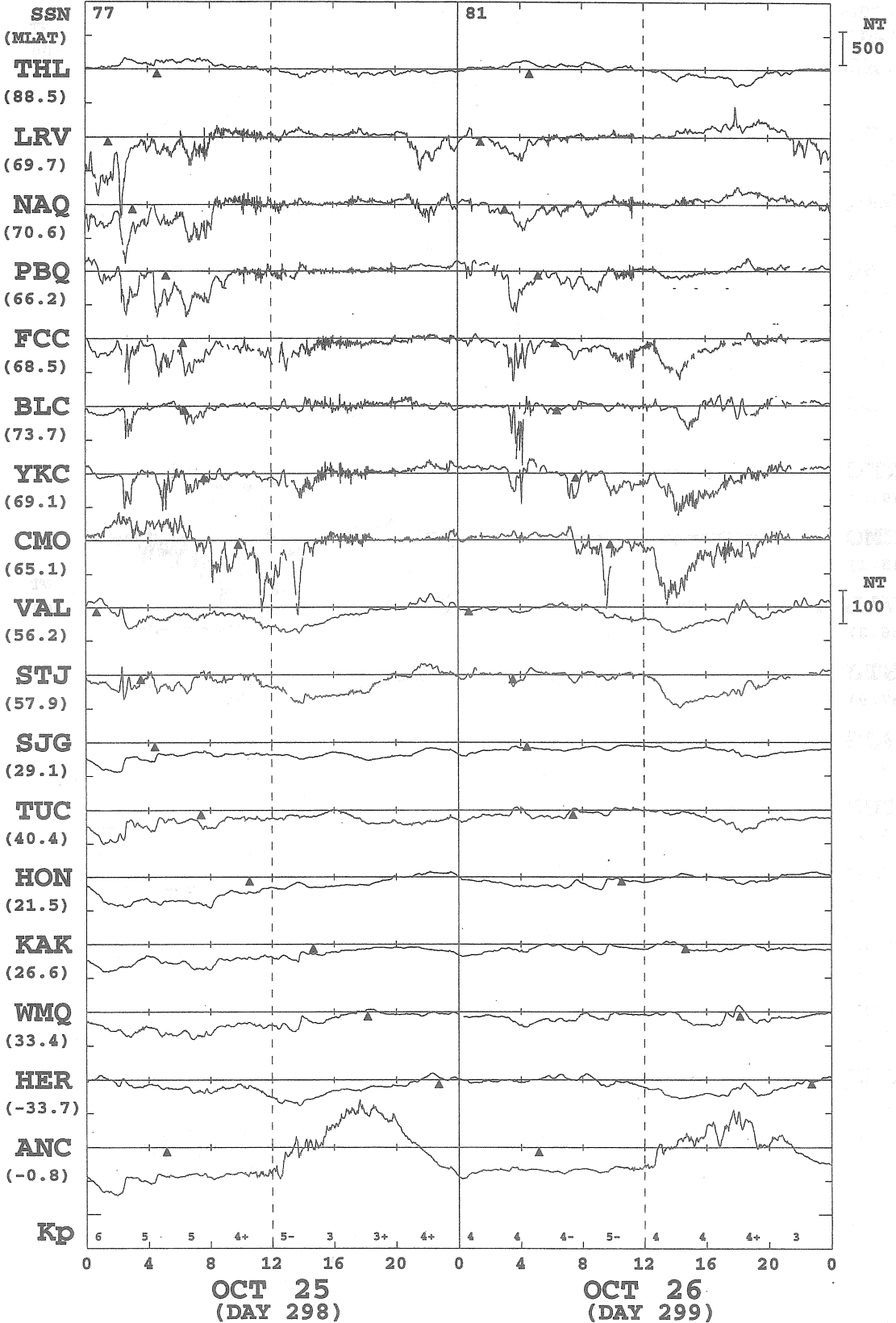


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

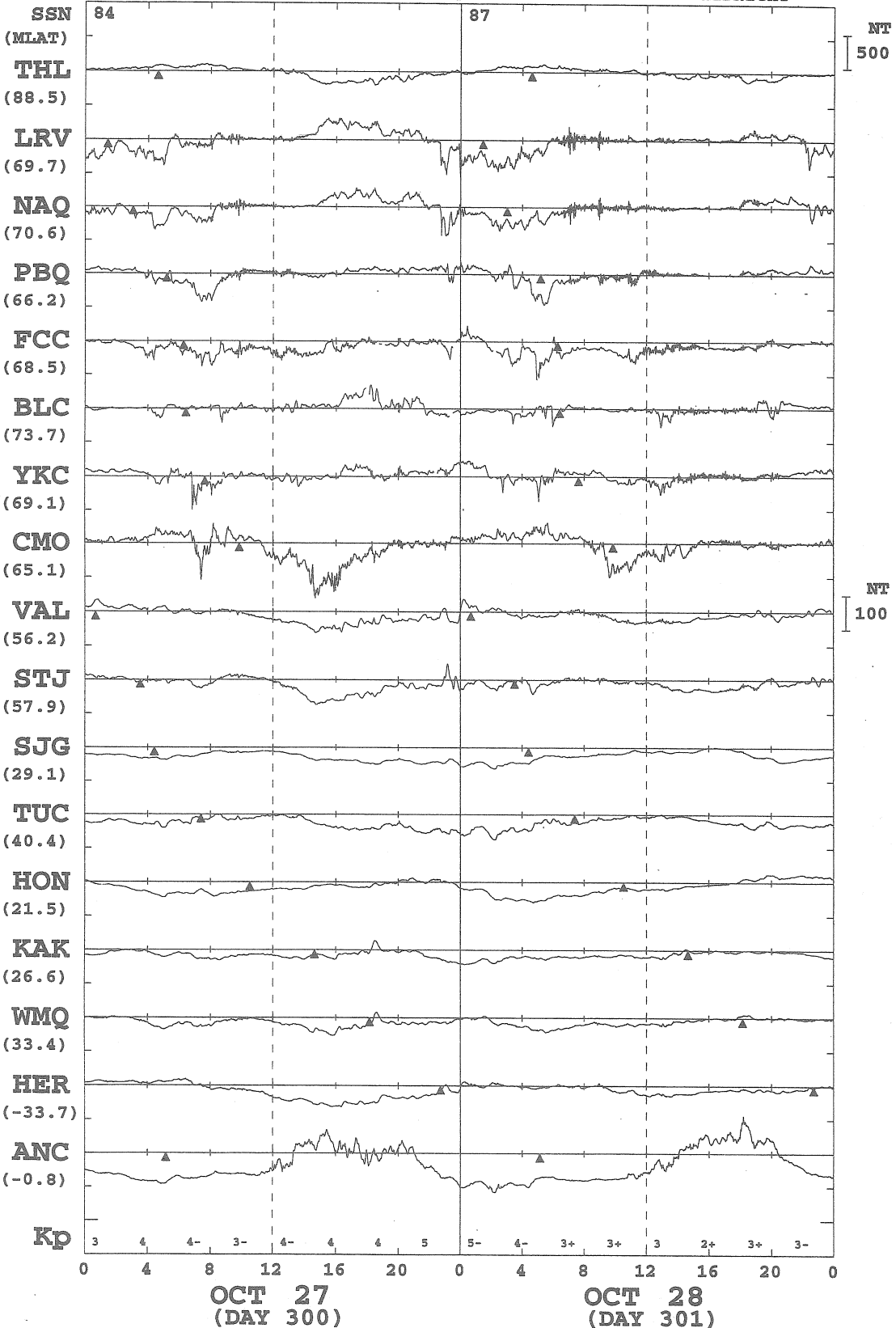


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

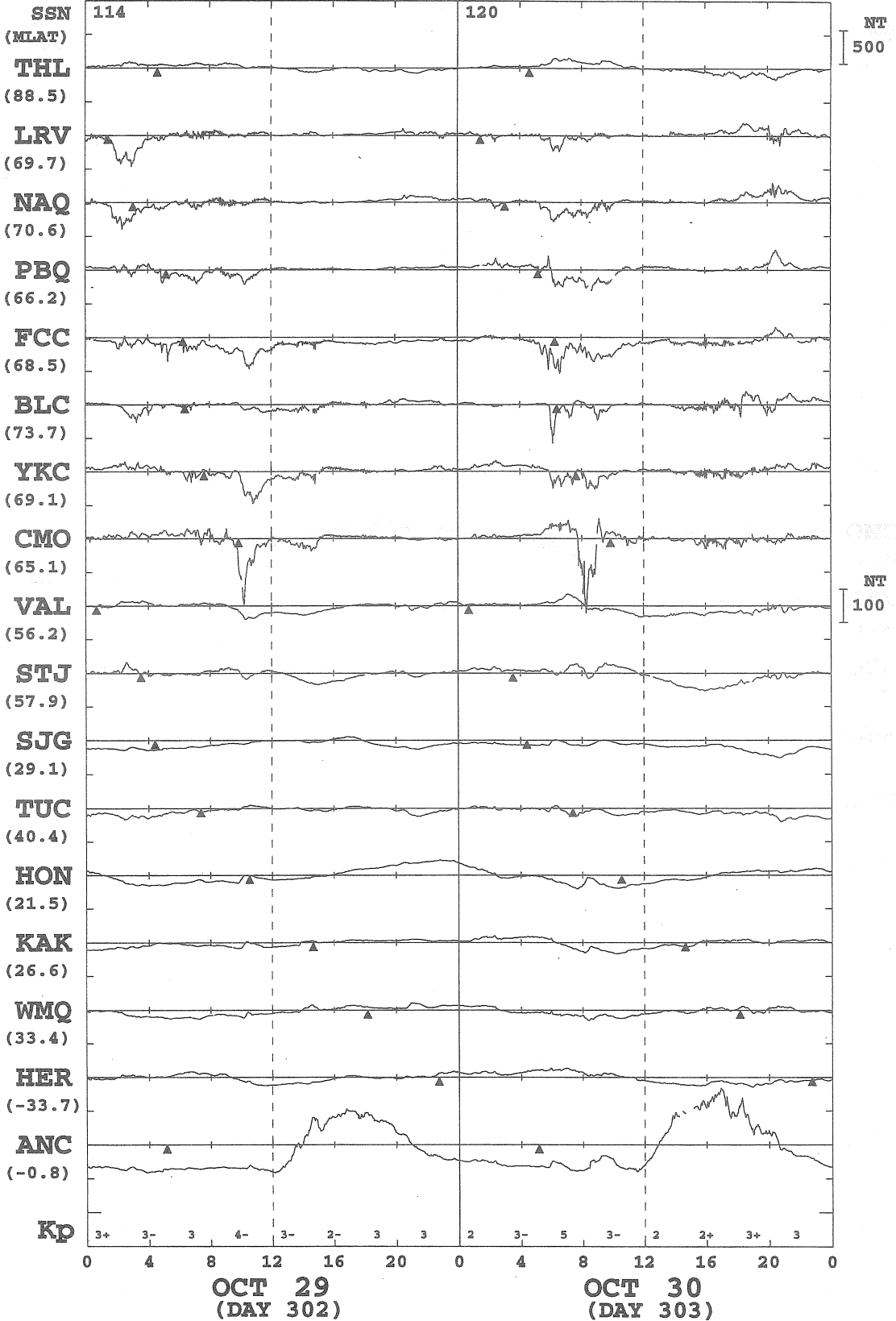


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
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KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

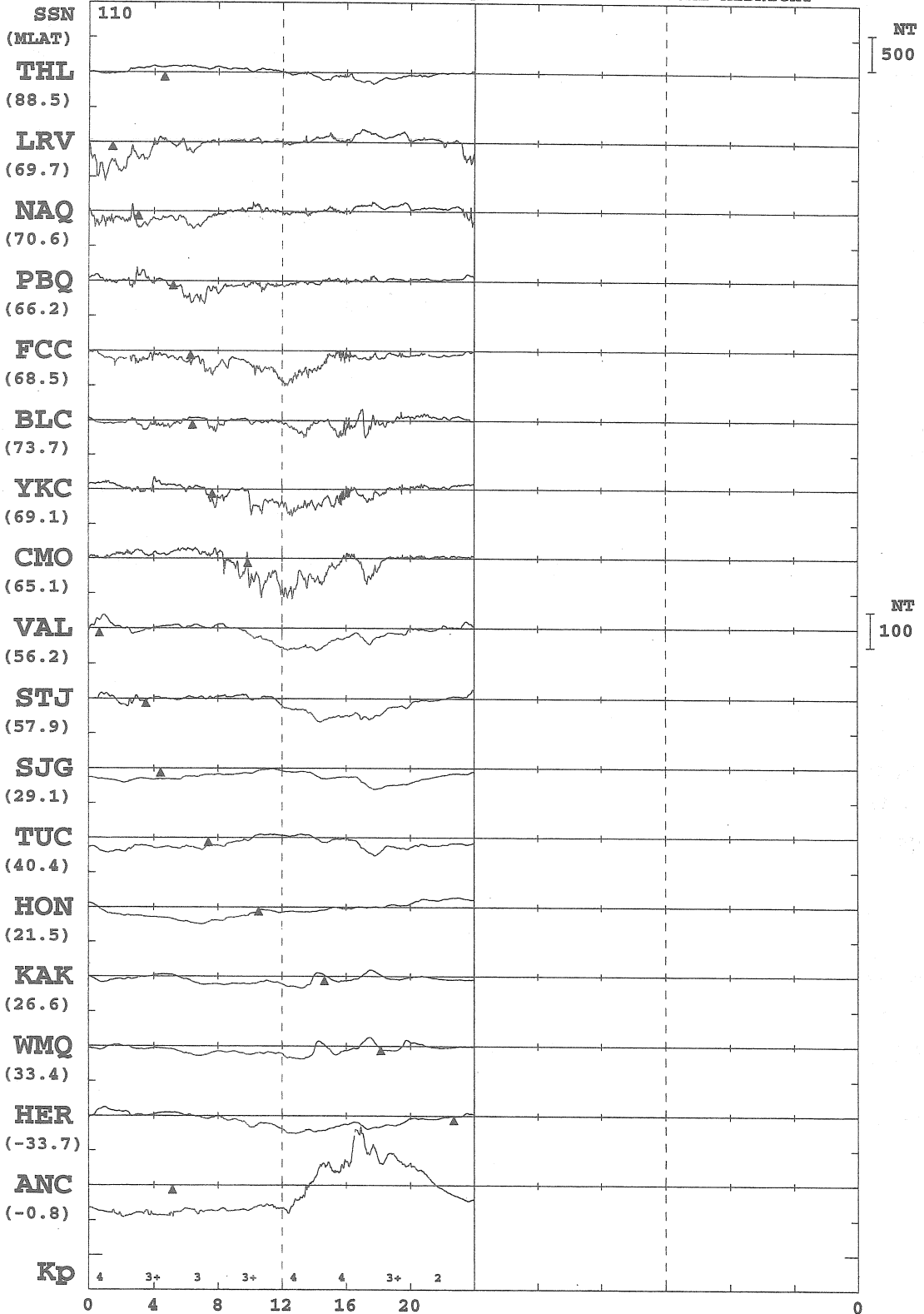


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



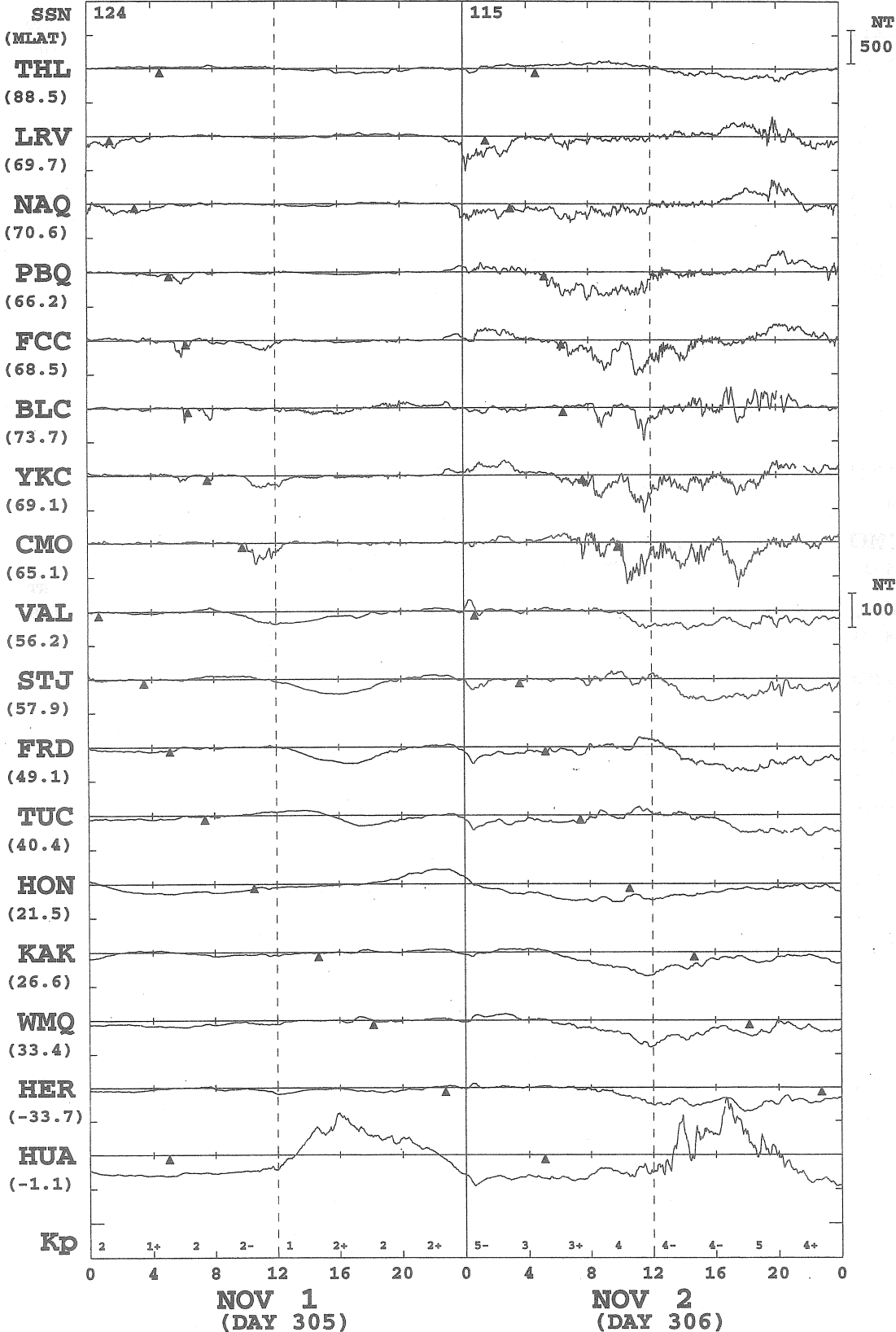
OCT 31  
(DAY 304)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

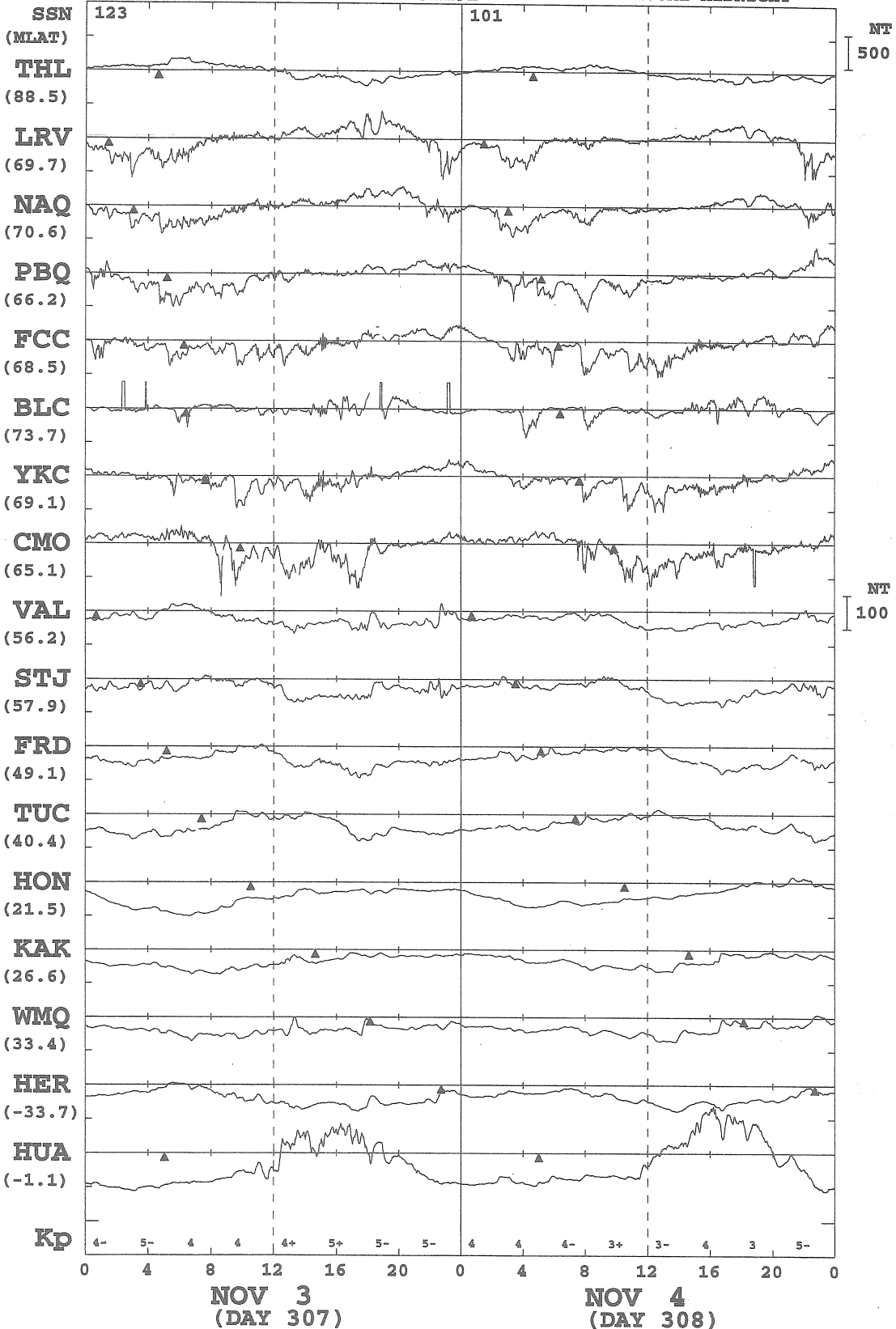


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

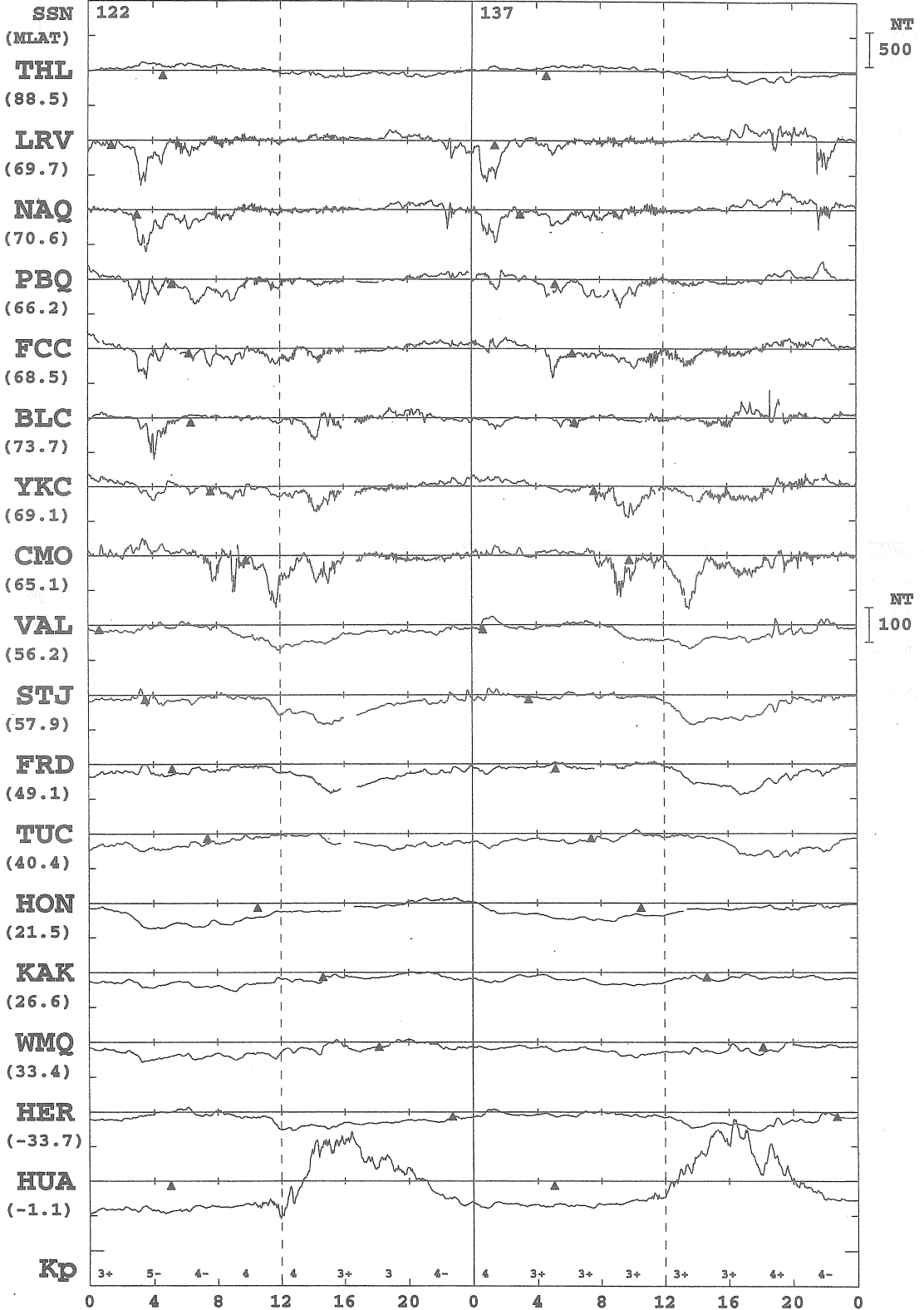


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



NOV 5  
(DAY 309)

NOV 6  
(DAY 310)

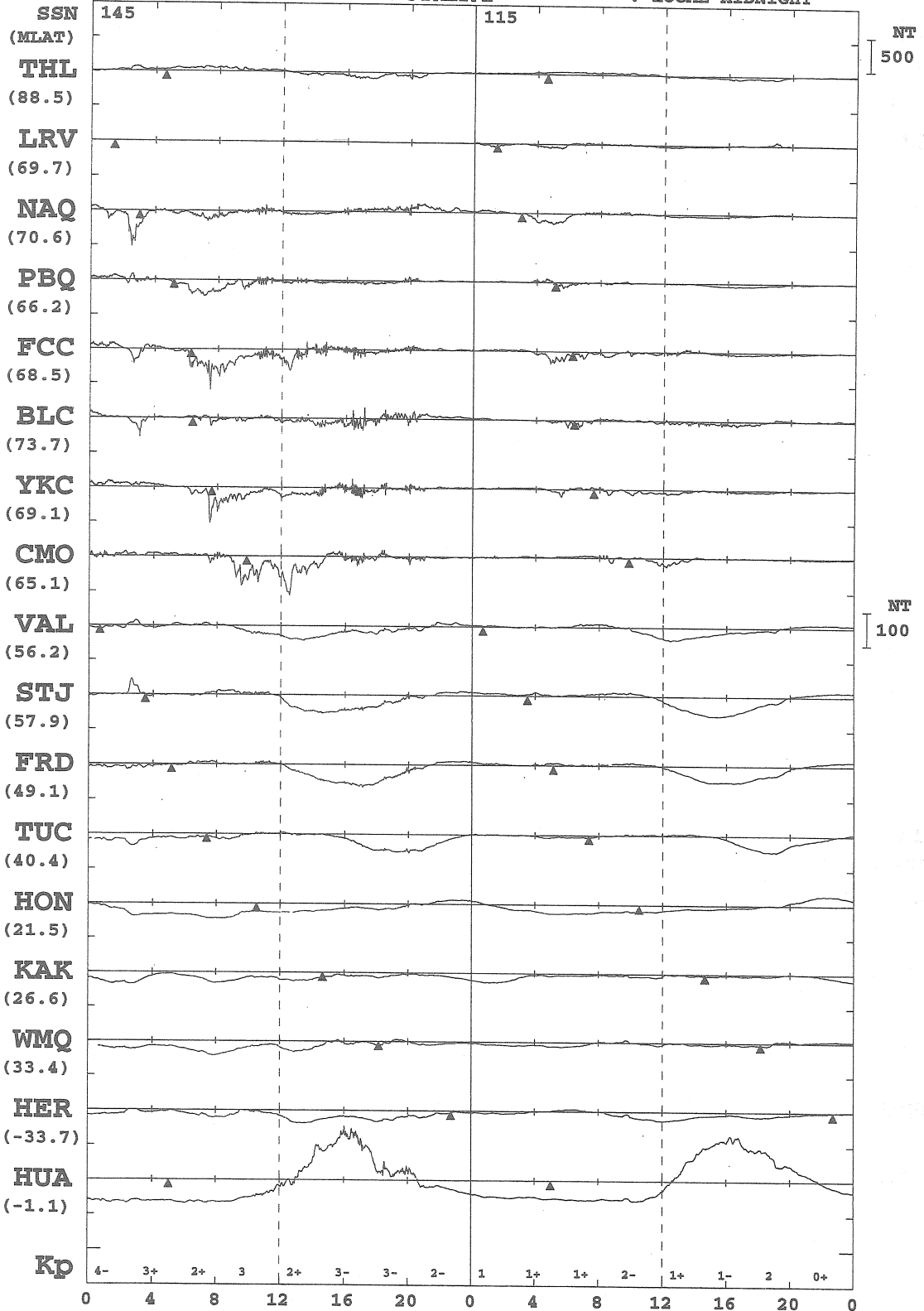
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.



# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

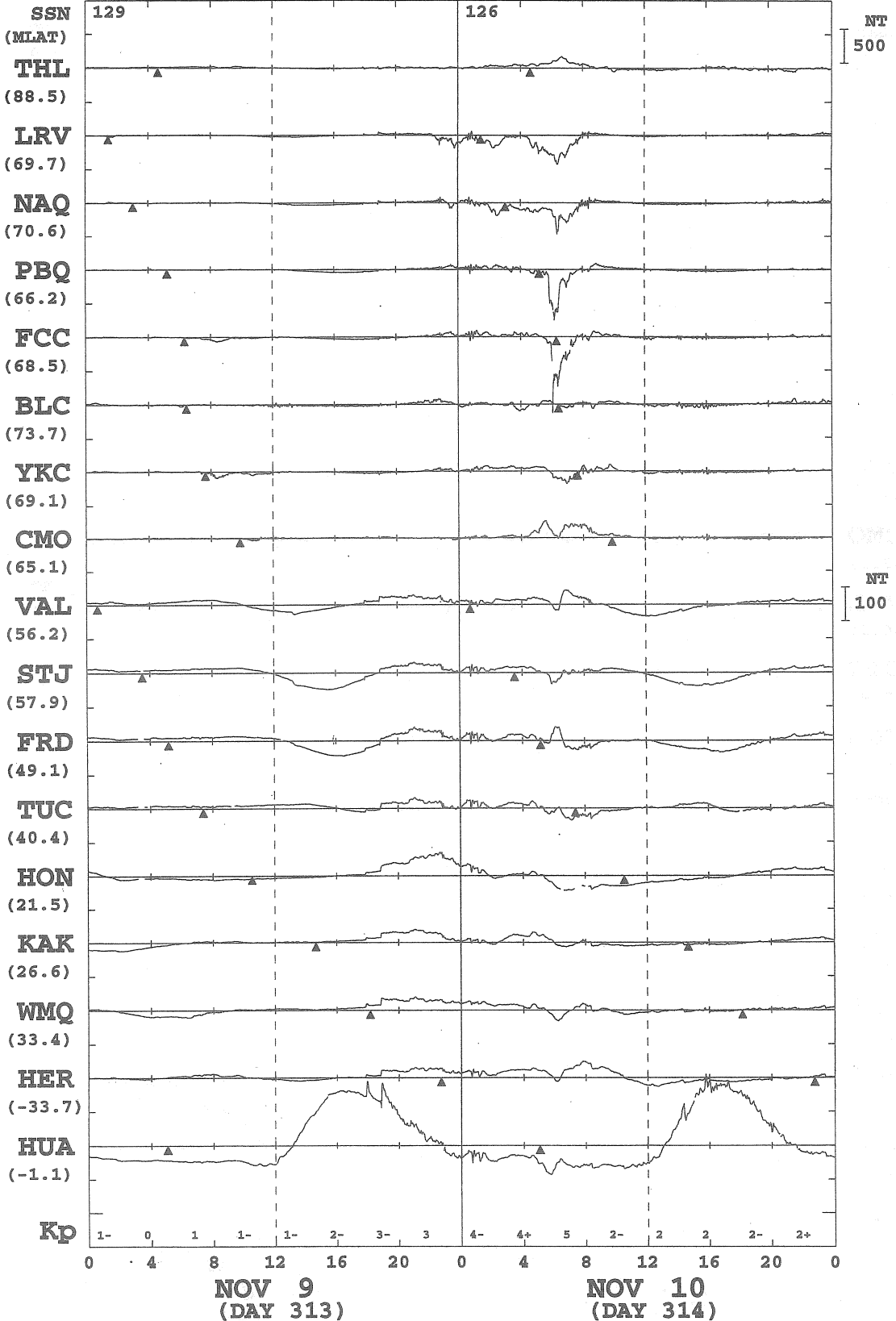


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

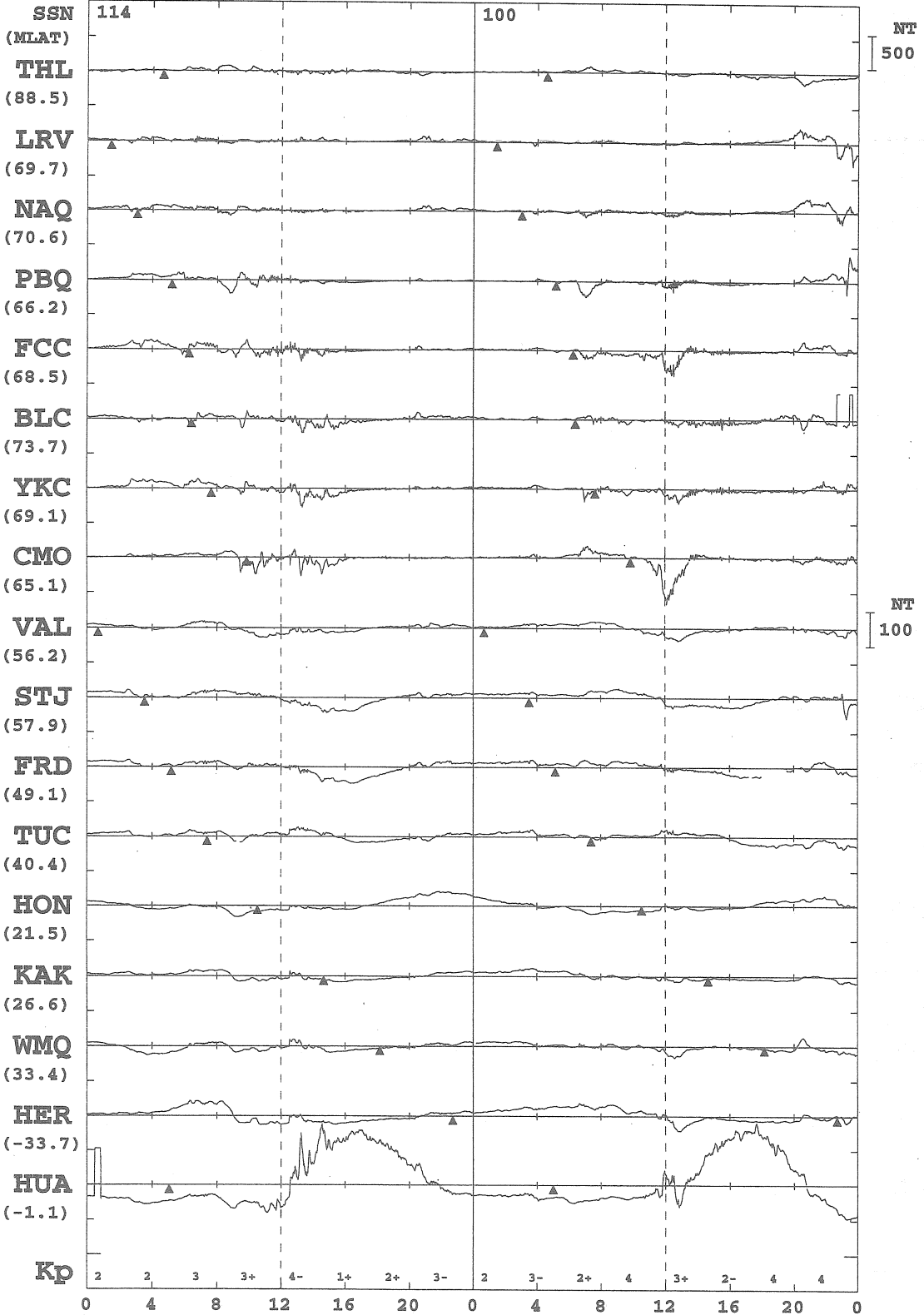


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

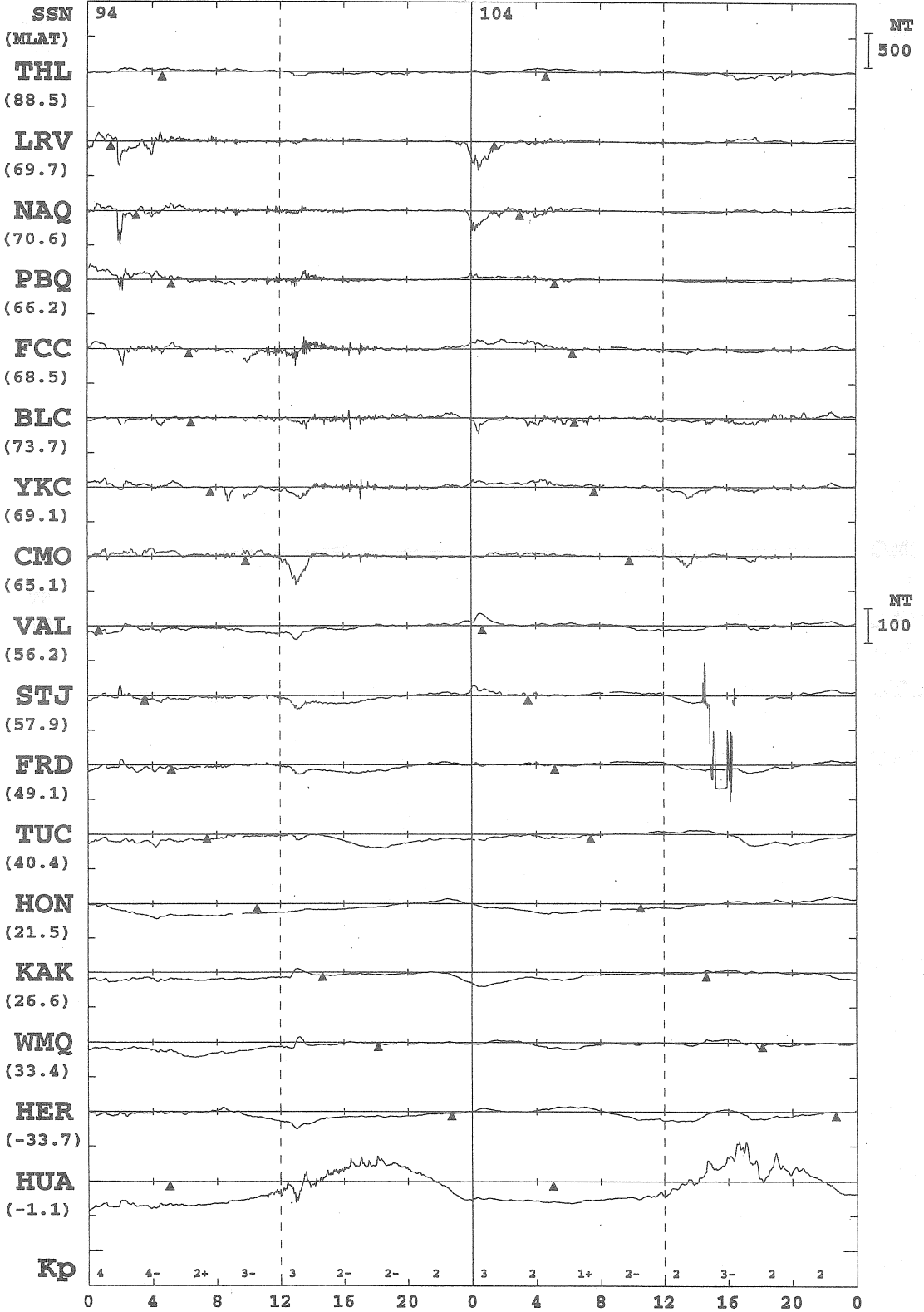


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

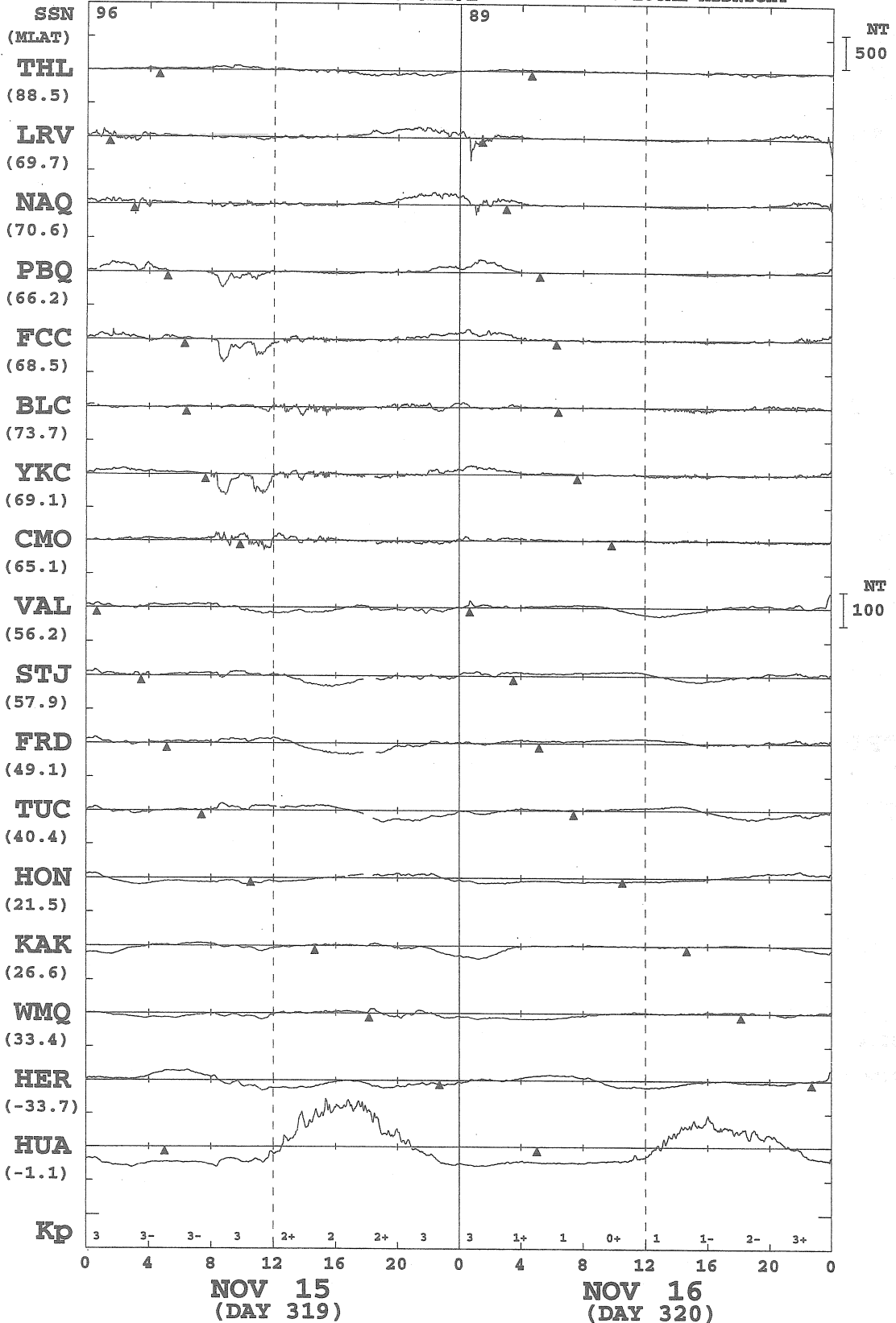


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

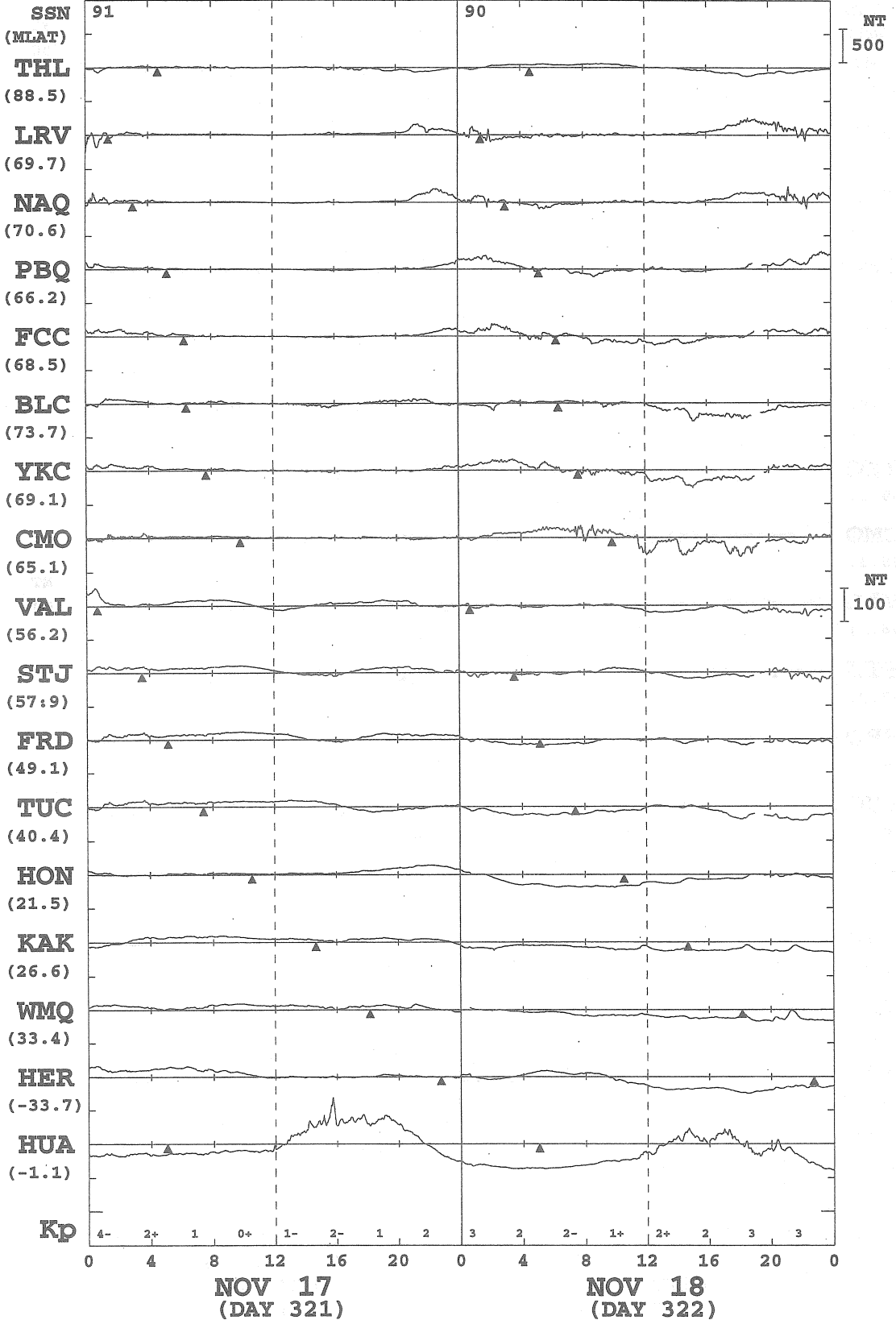


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

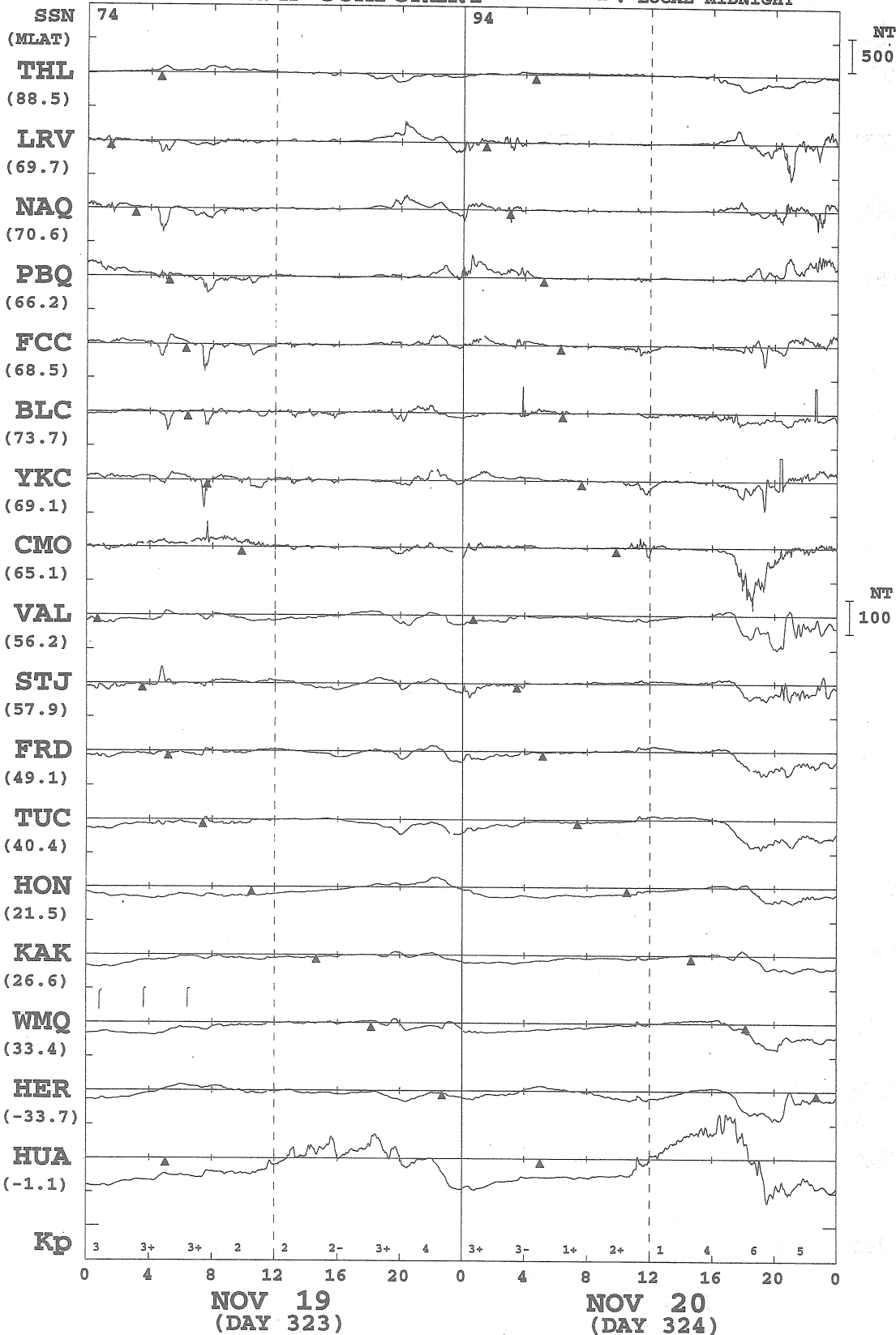


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

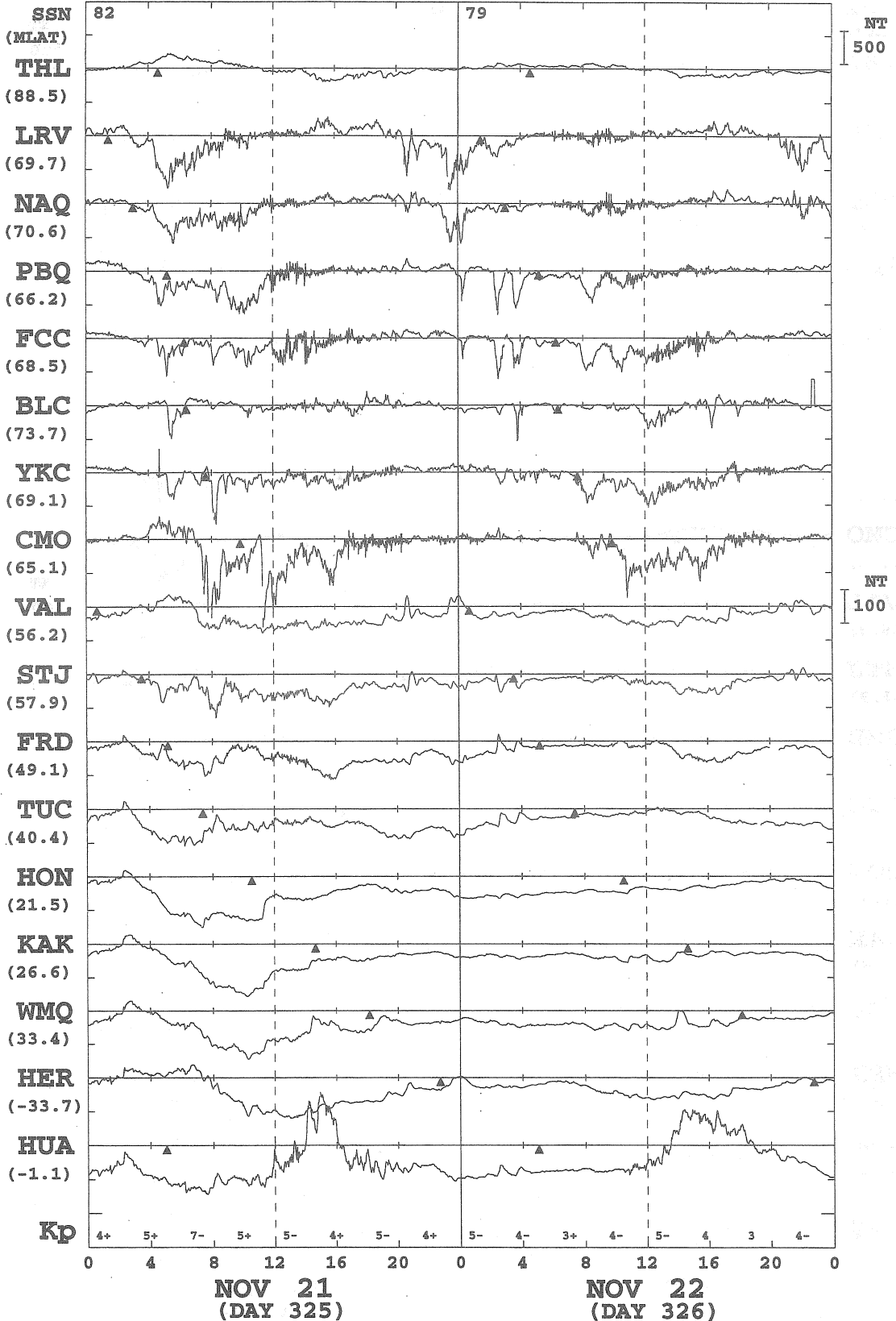


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED.  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



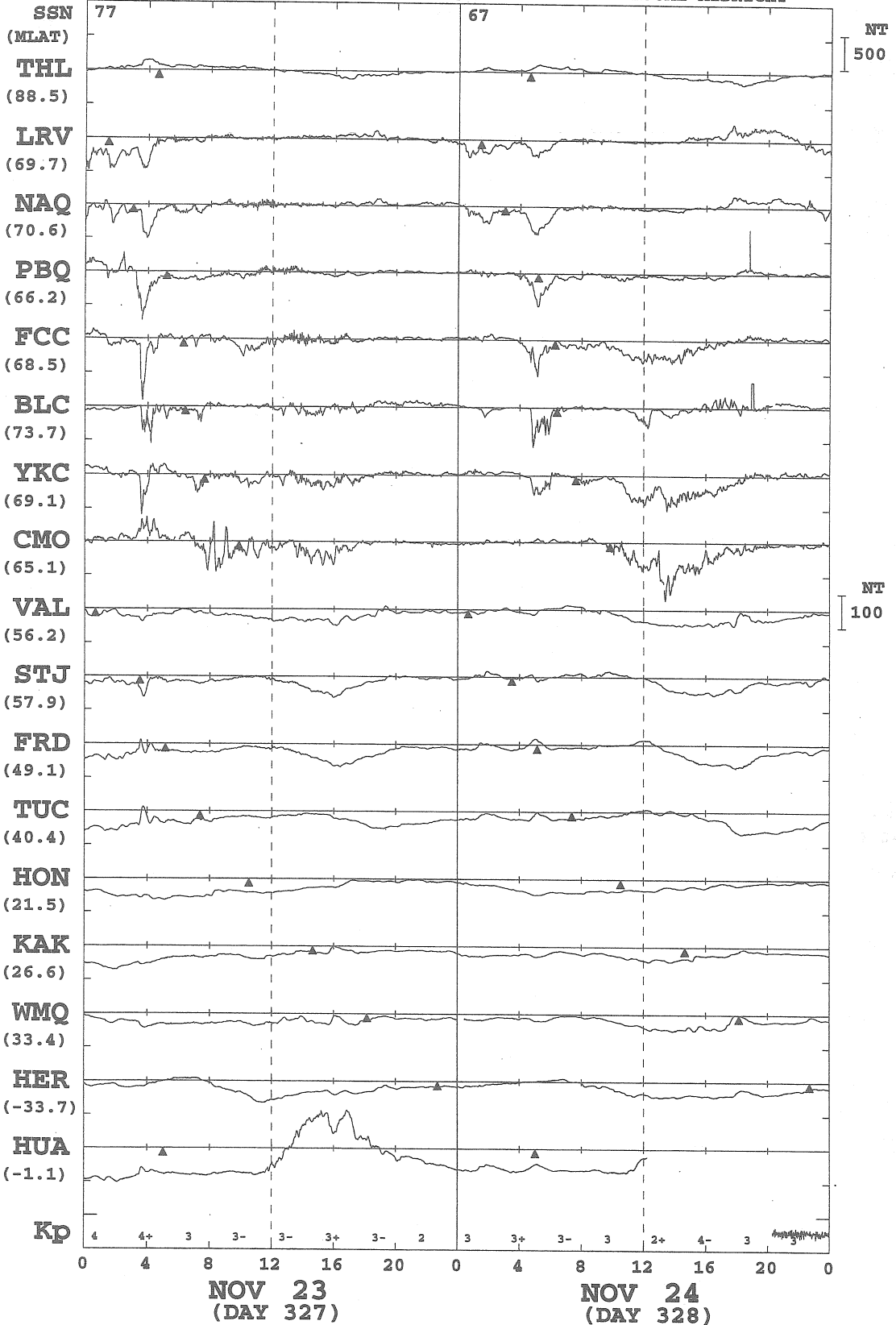
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.



2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

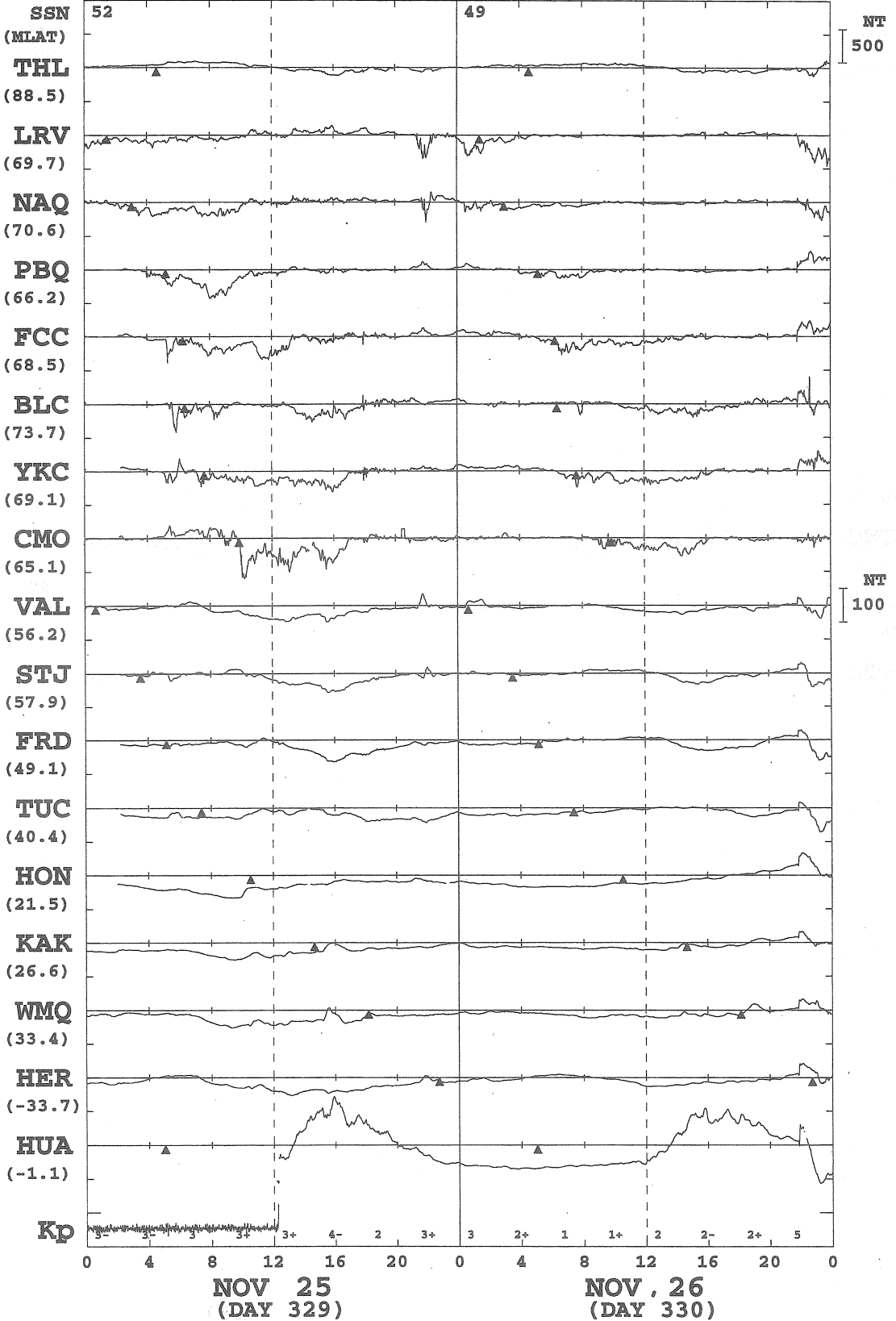


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

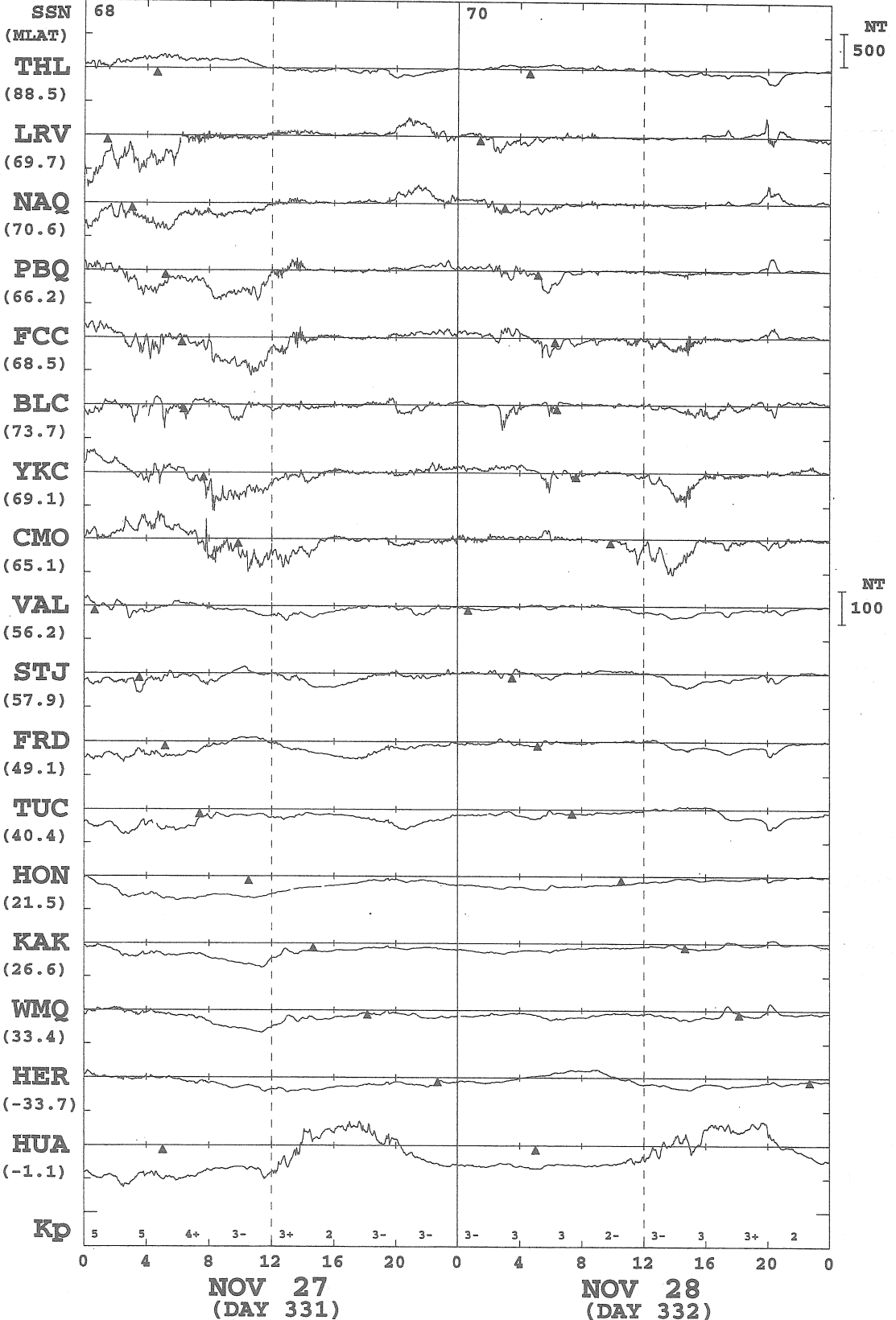


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
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KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

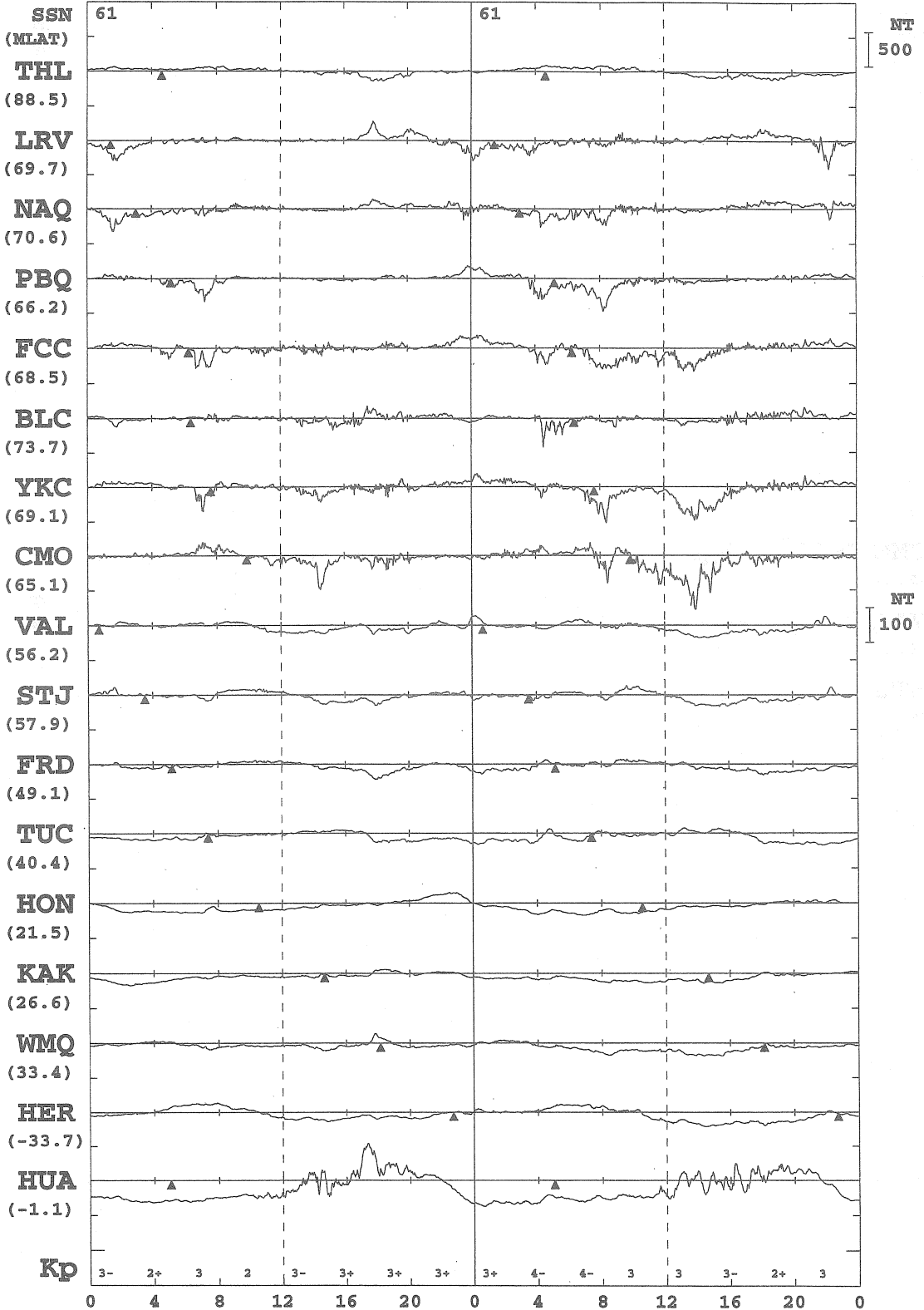


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



NOV 29  
(DAY 333)

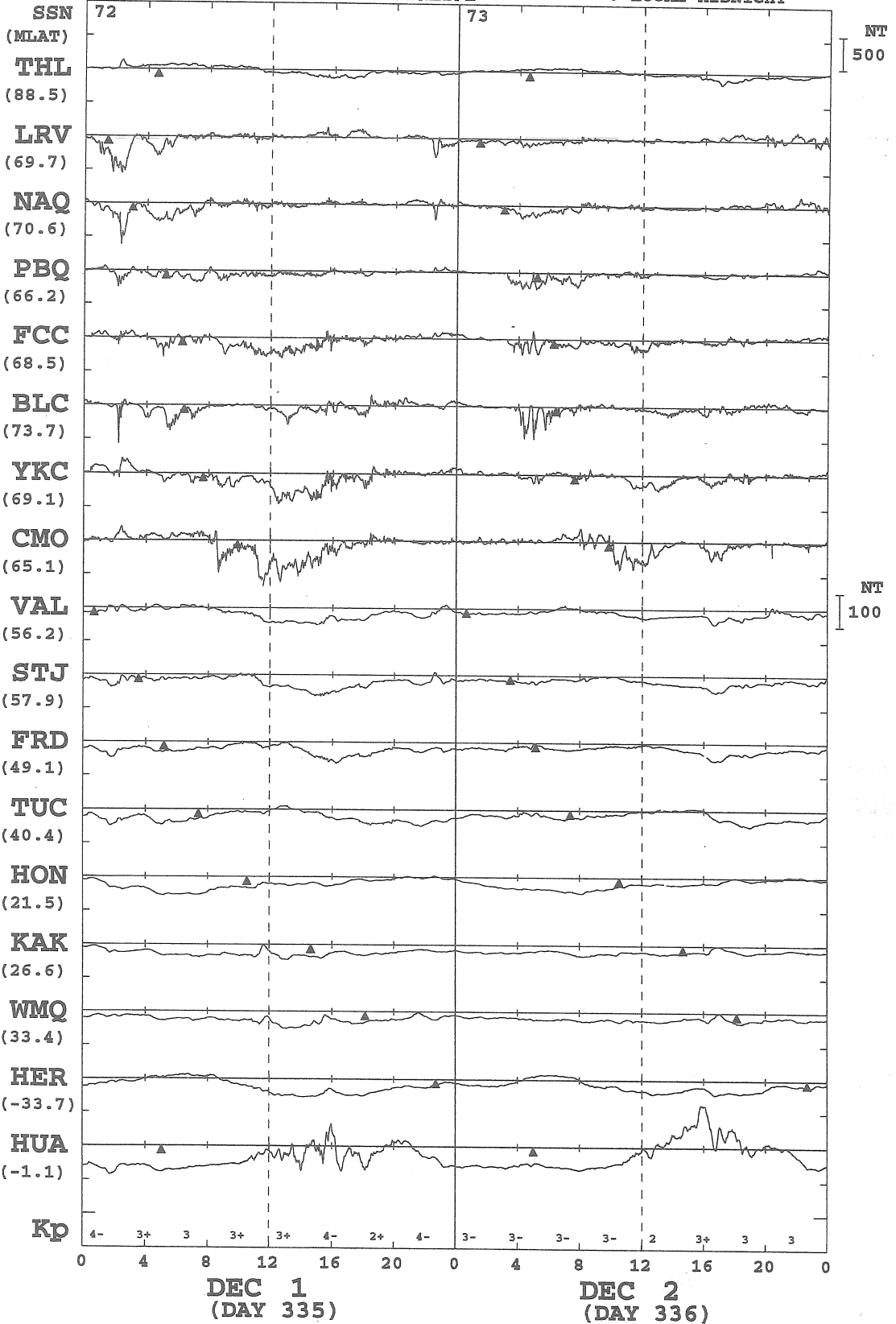
NOV 30  
(DAY 334)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

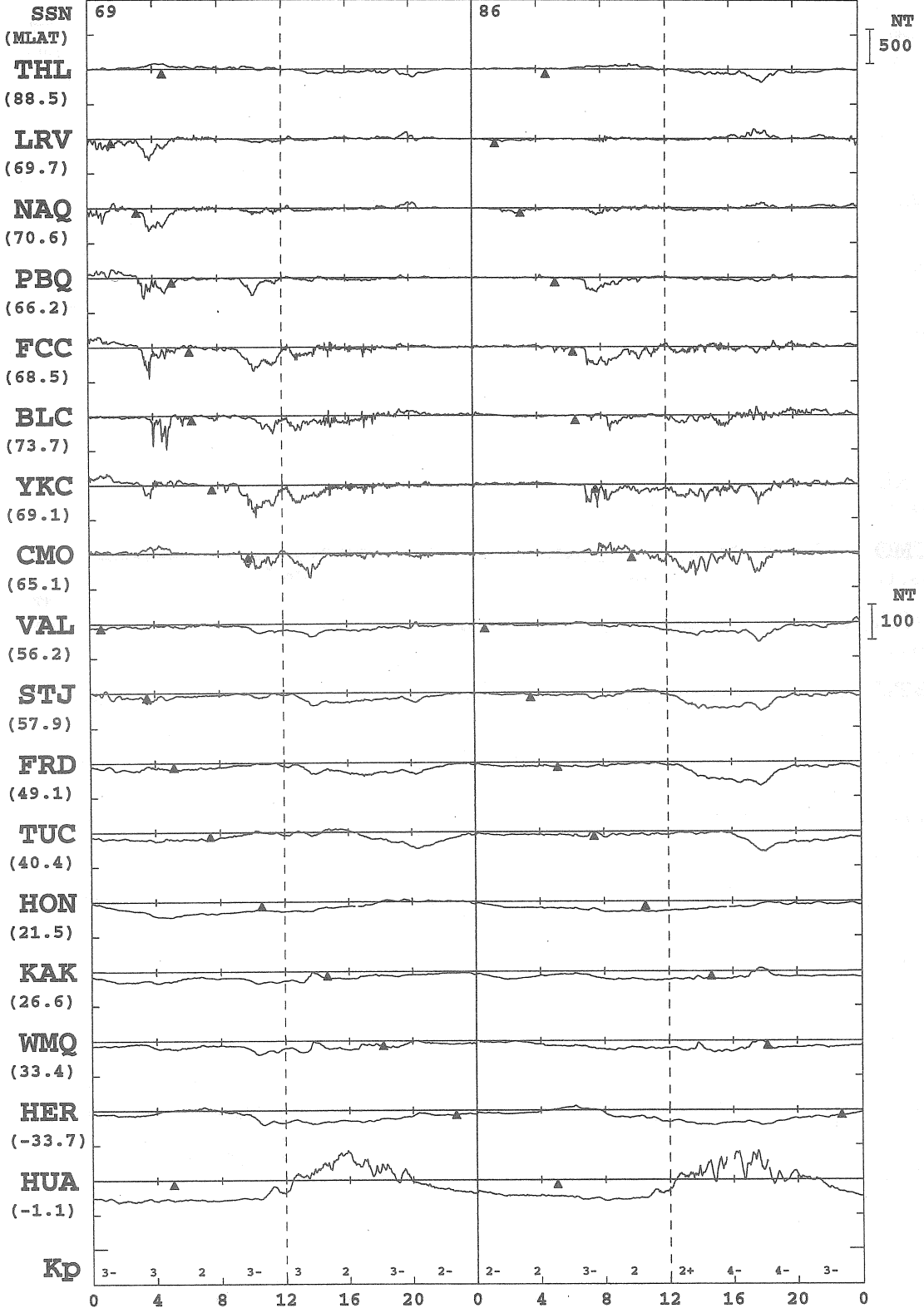


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



DEC 3  
(DAY 337)

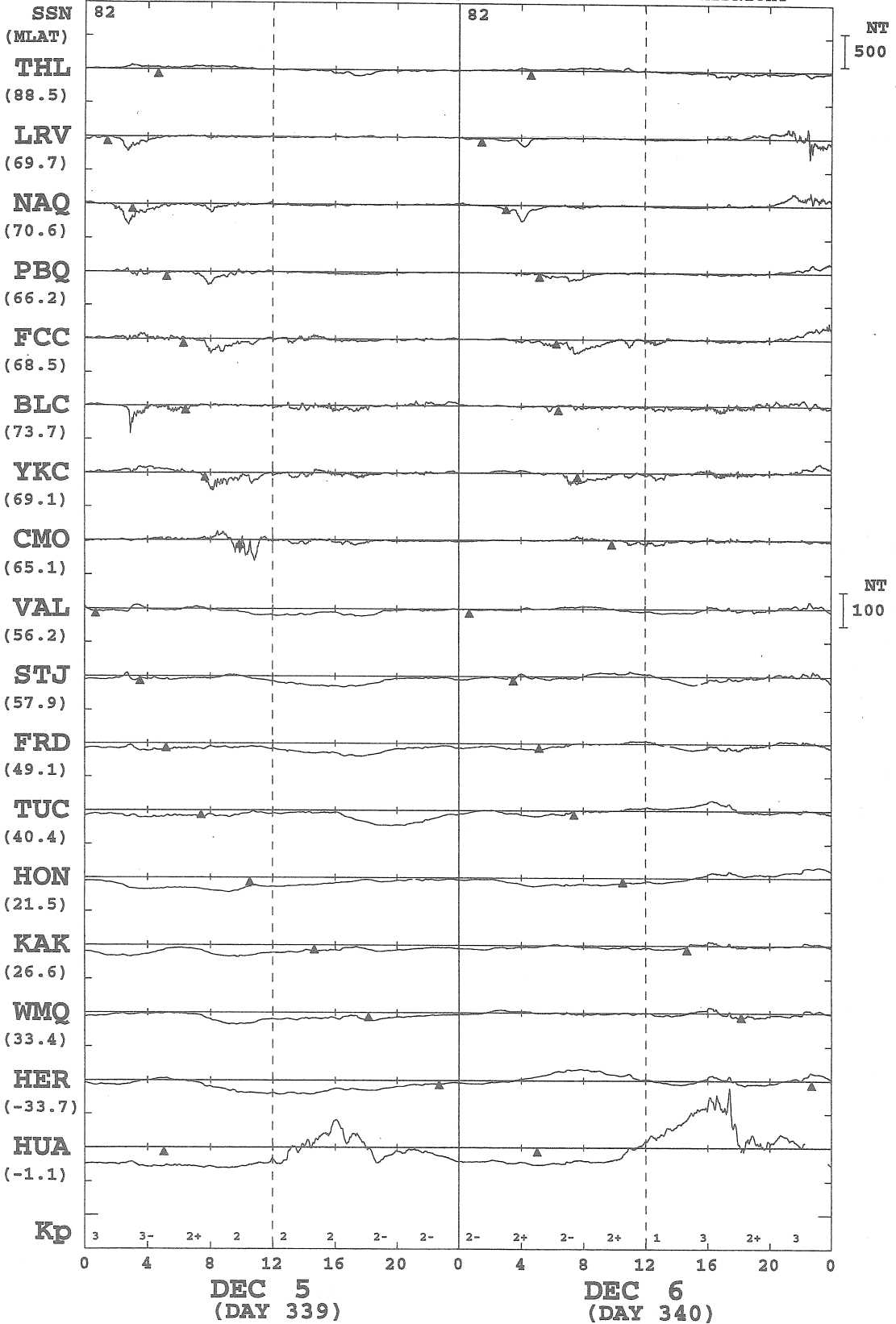
DEC 4  
(DAY 338)

\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

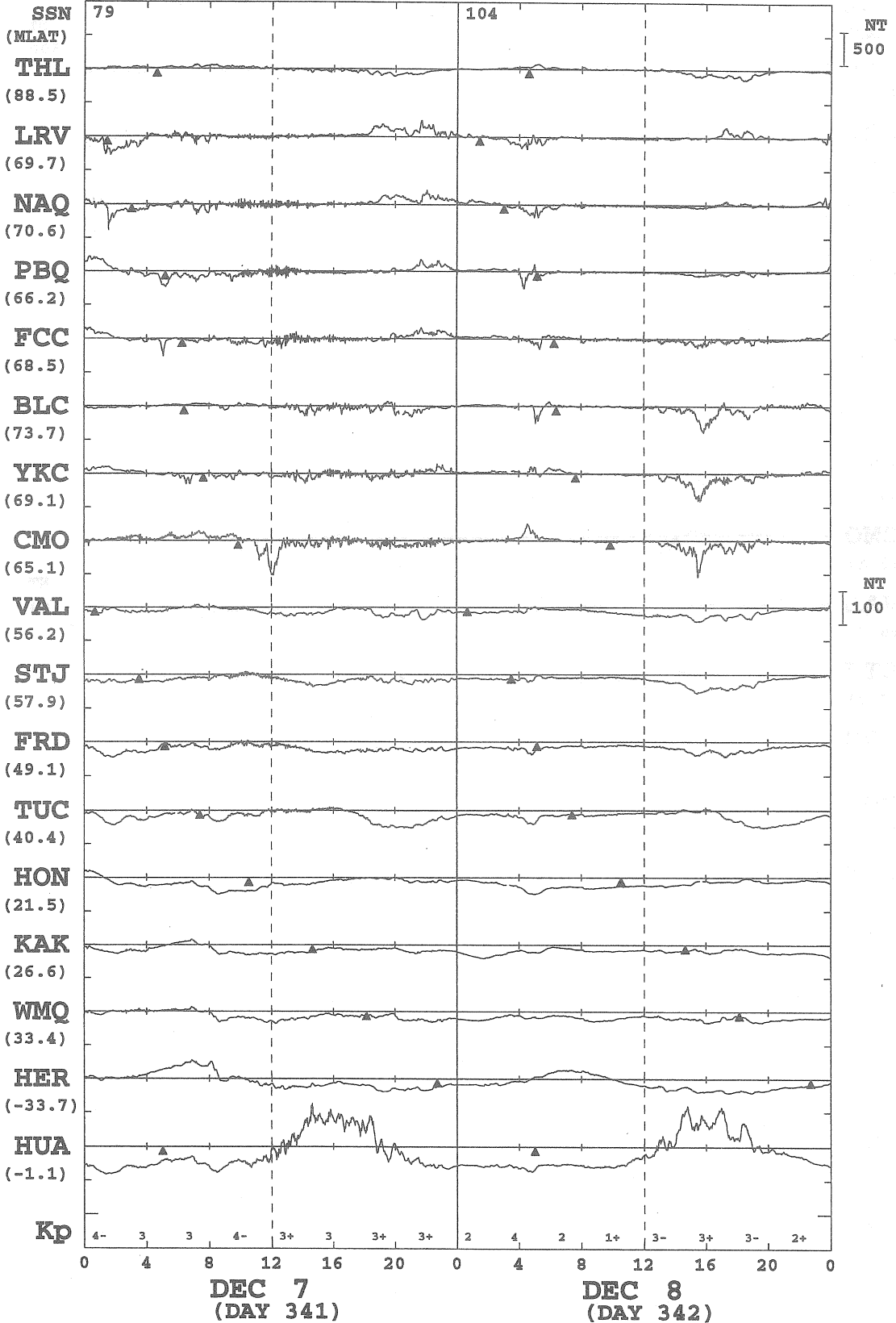


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



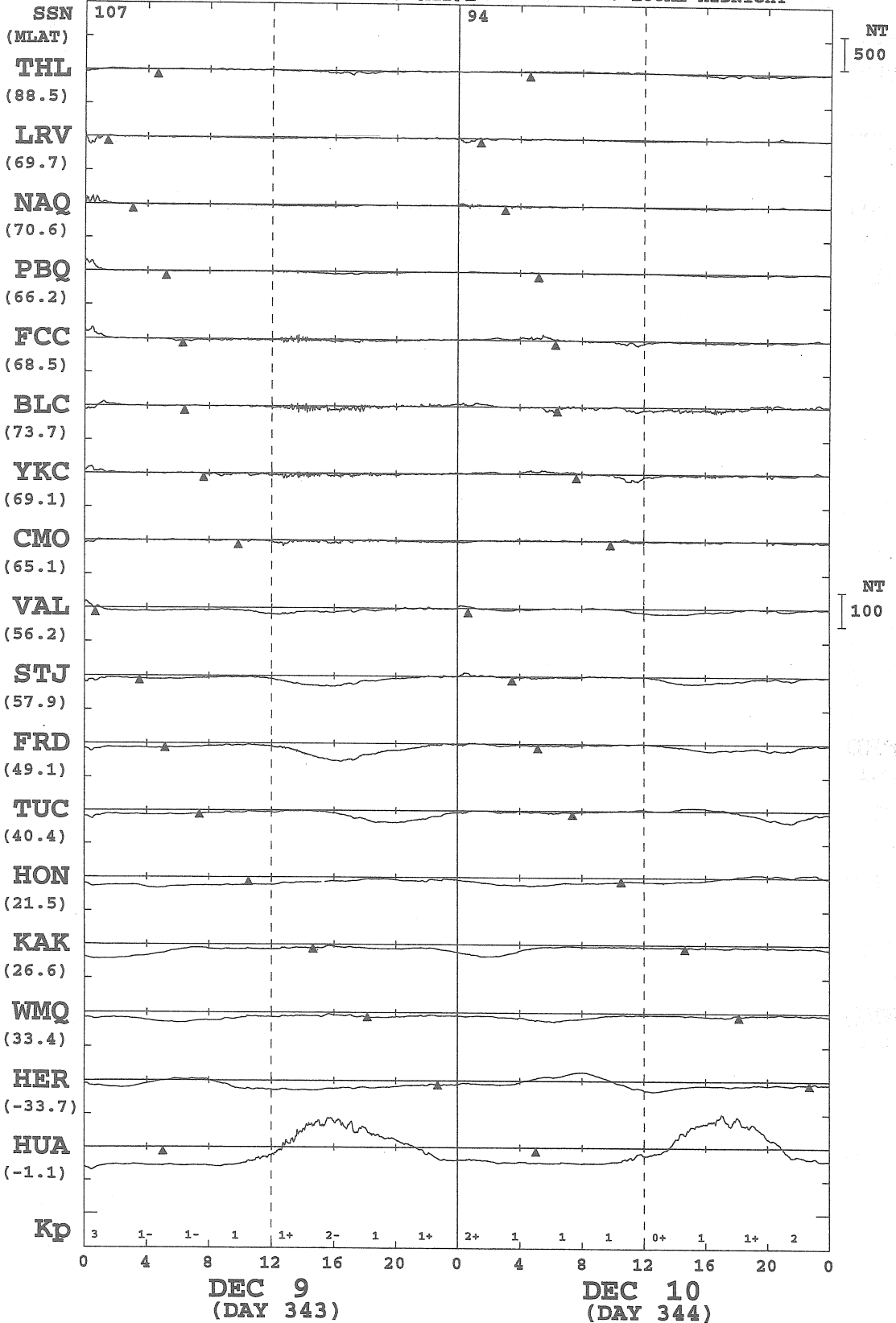
\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
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KYOTO UNIV.



2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

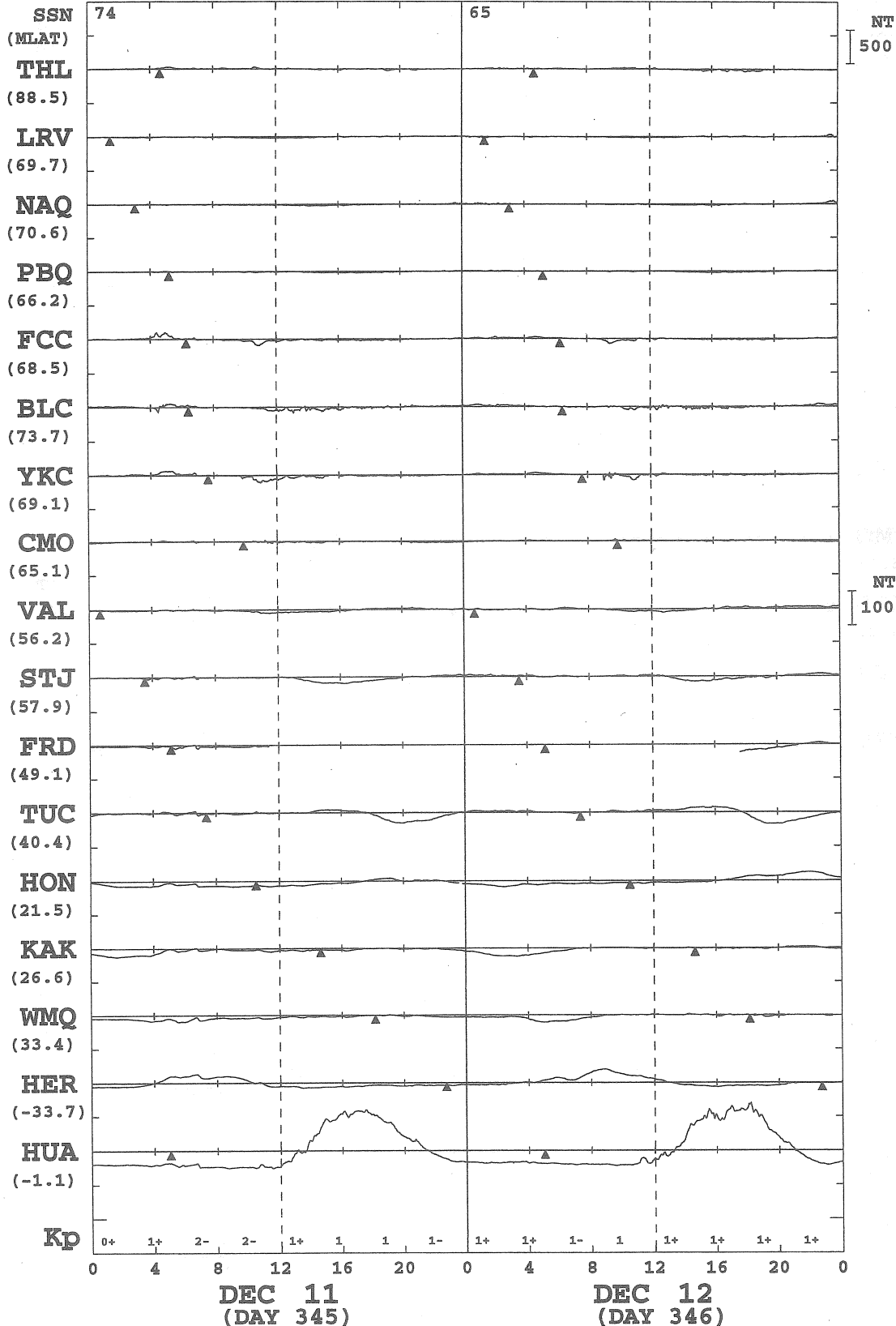


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
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KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

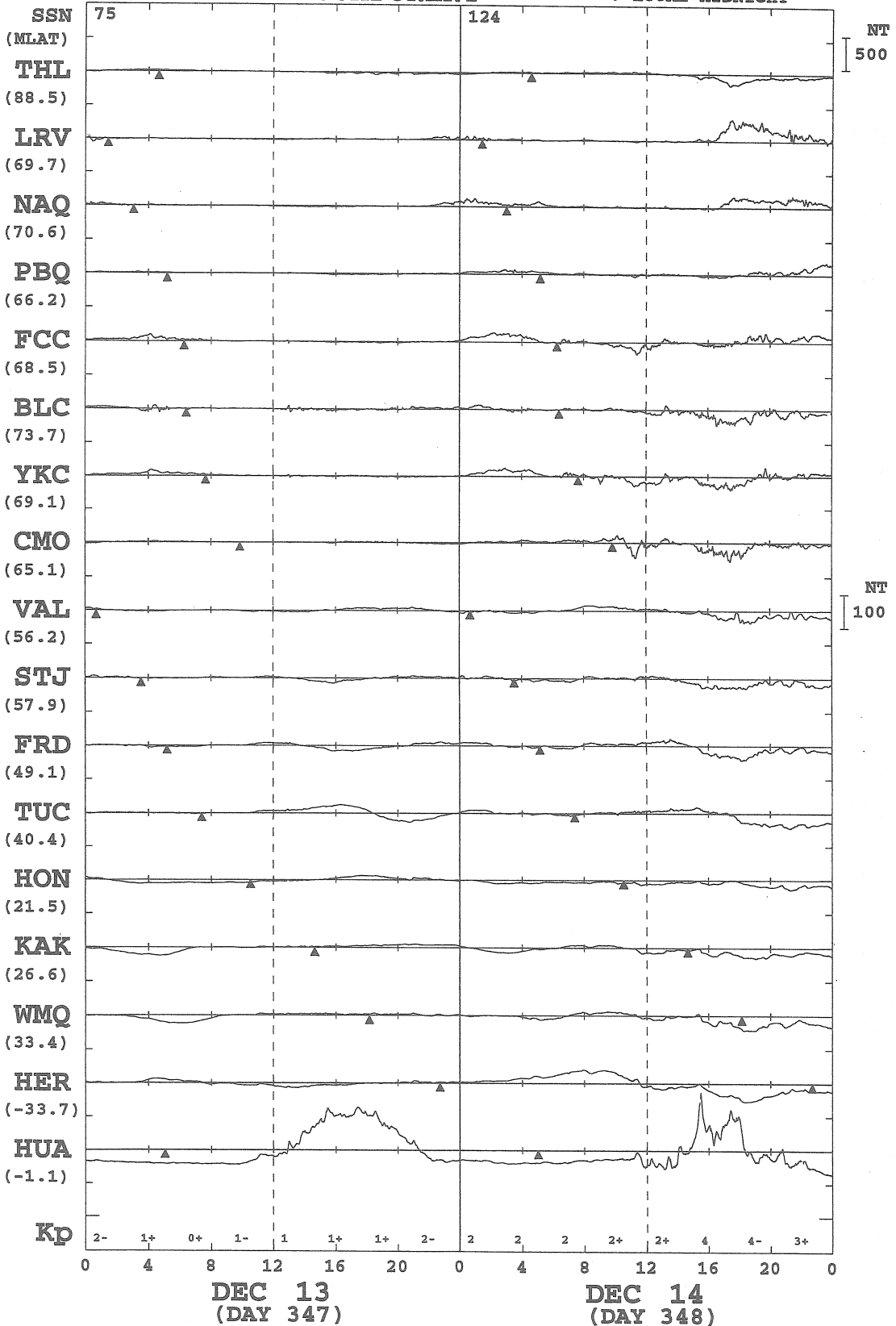


\* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED  
 \* PROMPT DATA ARE INCLUDED  
 \* ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

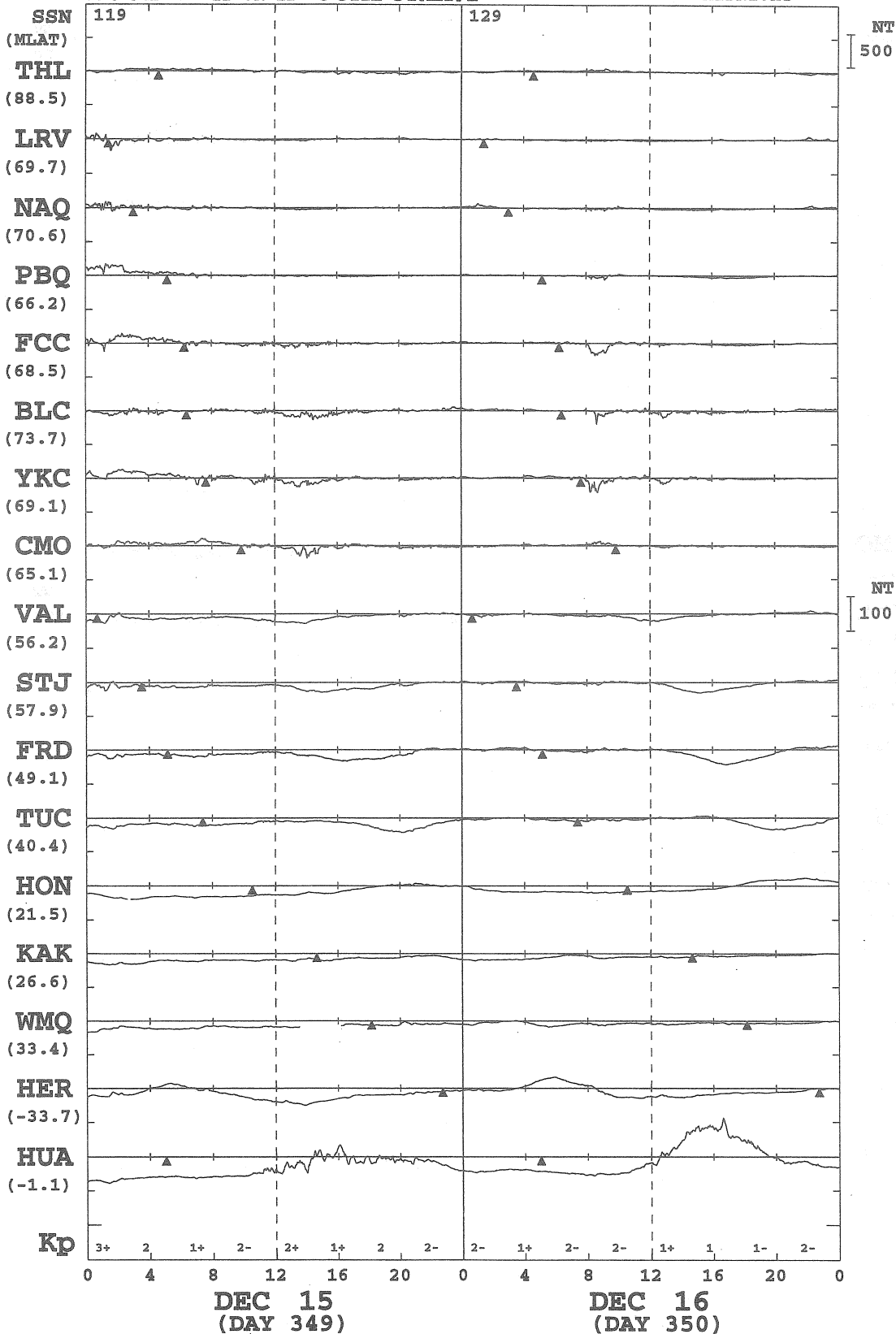


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 \* PROMPT DATA ARE INCLUDED  
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# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

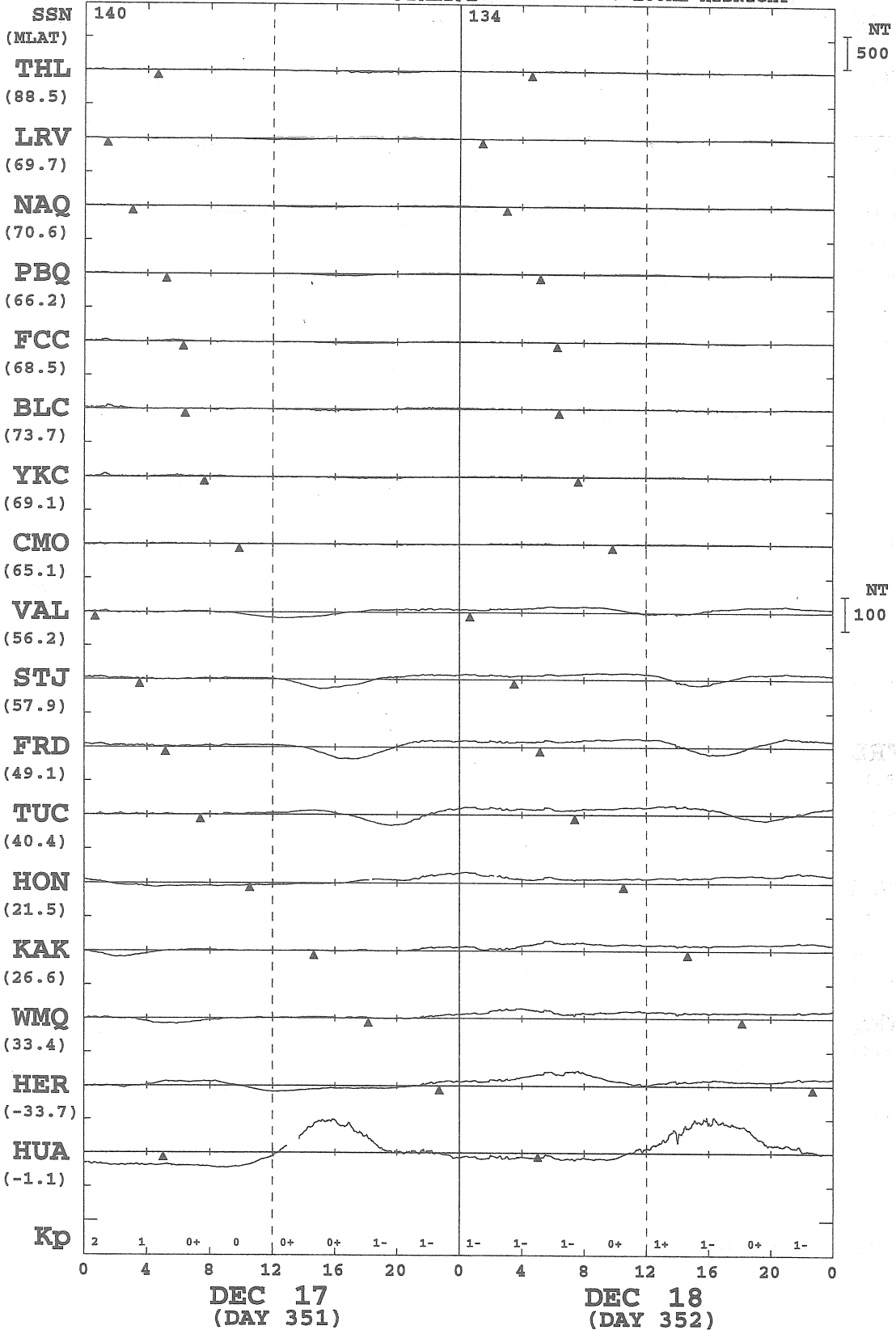


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KYOTO UNIV.

# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

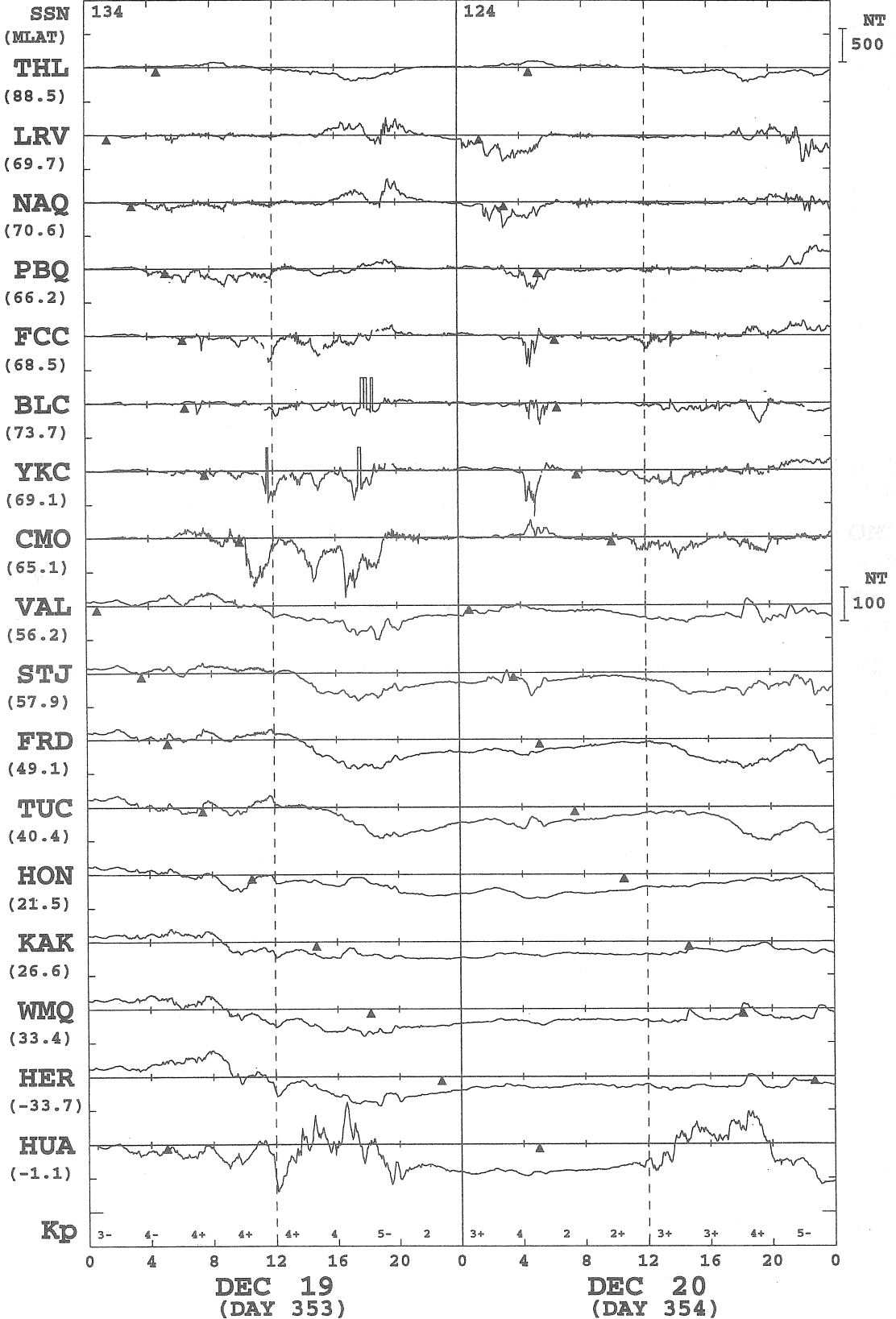


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KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

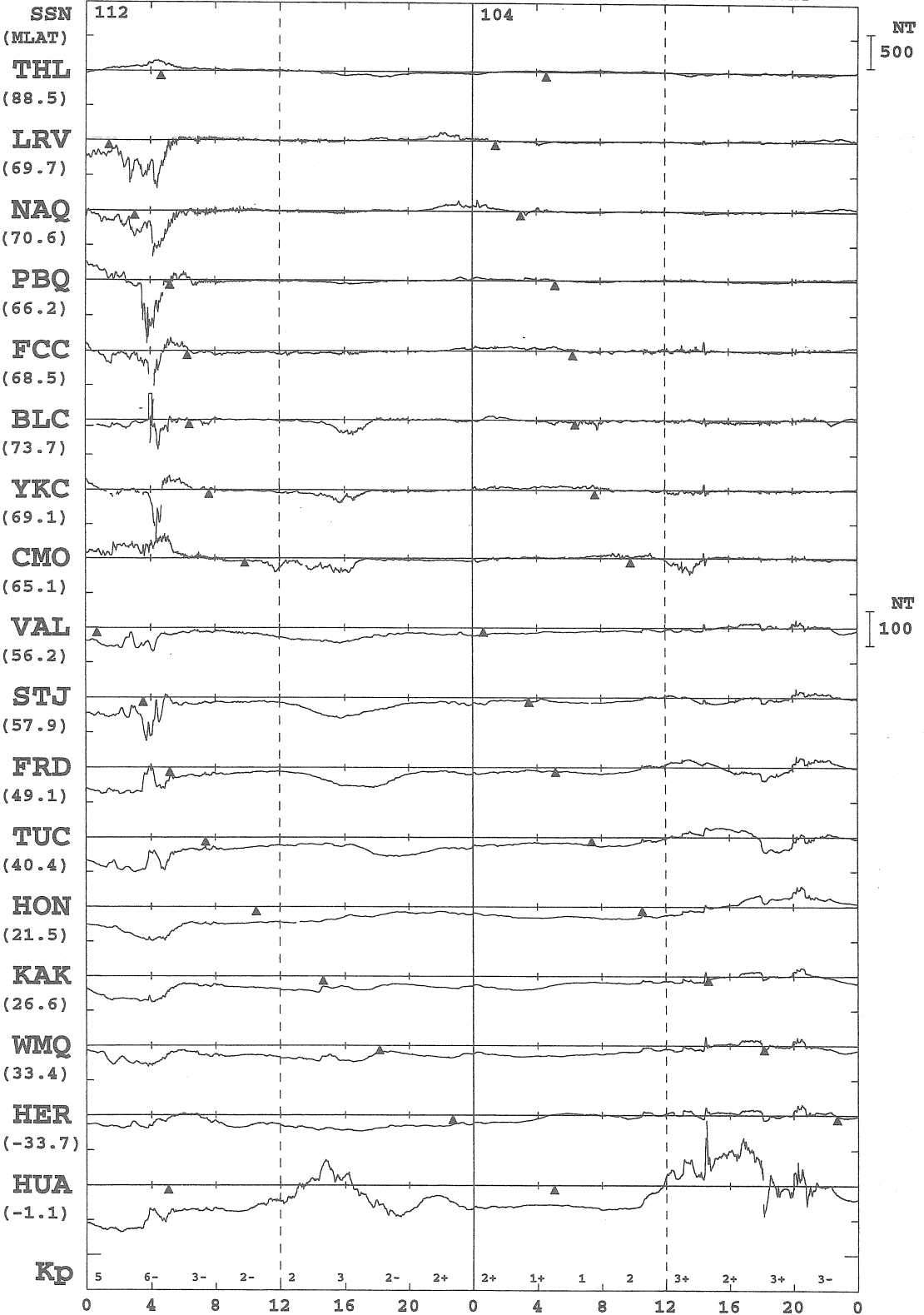


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KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

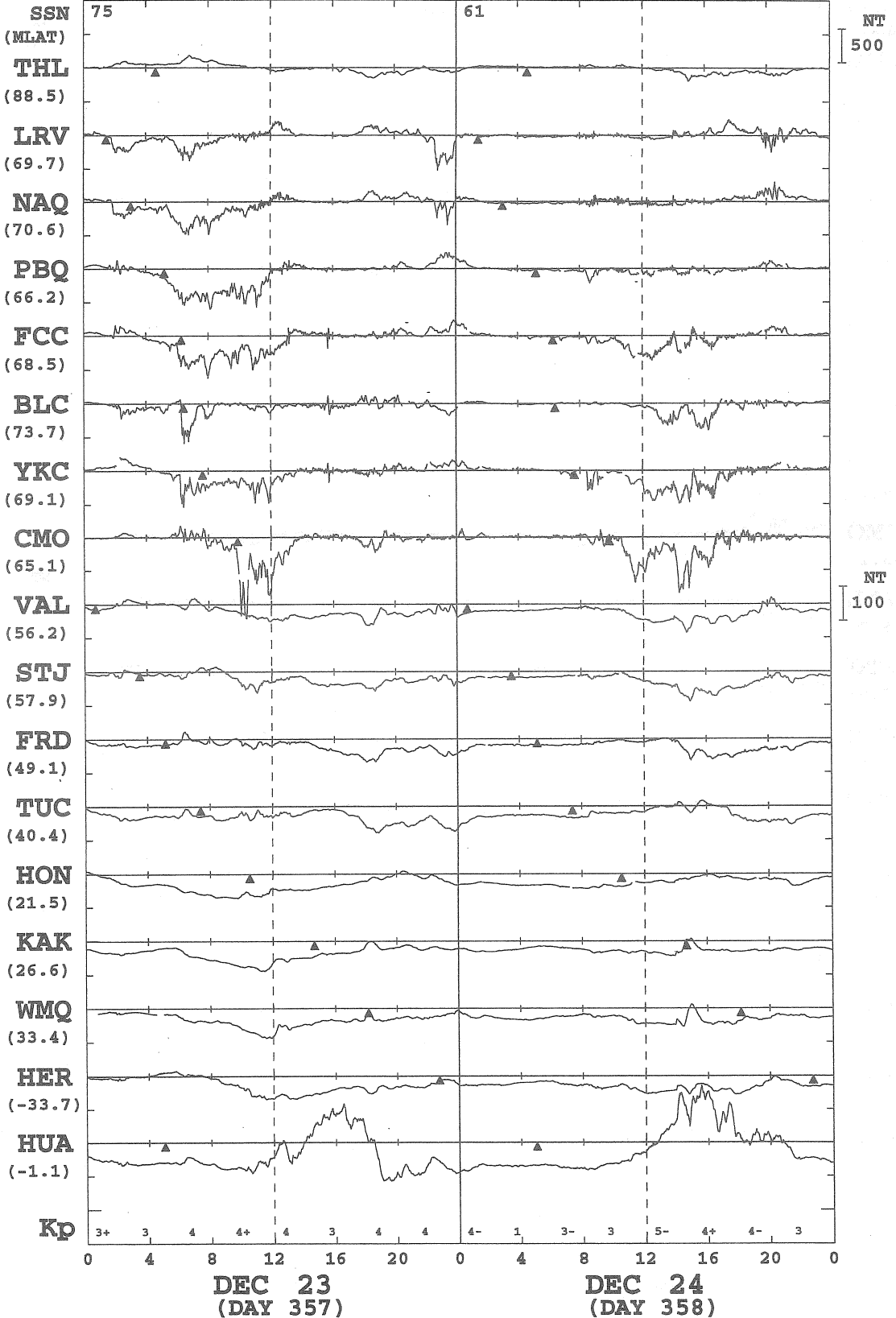


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KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



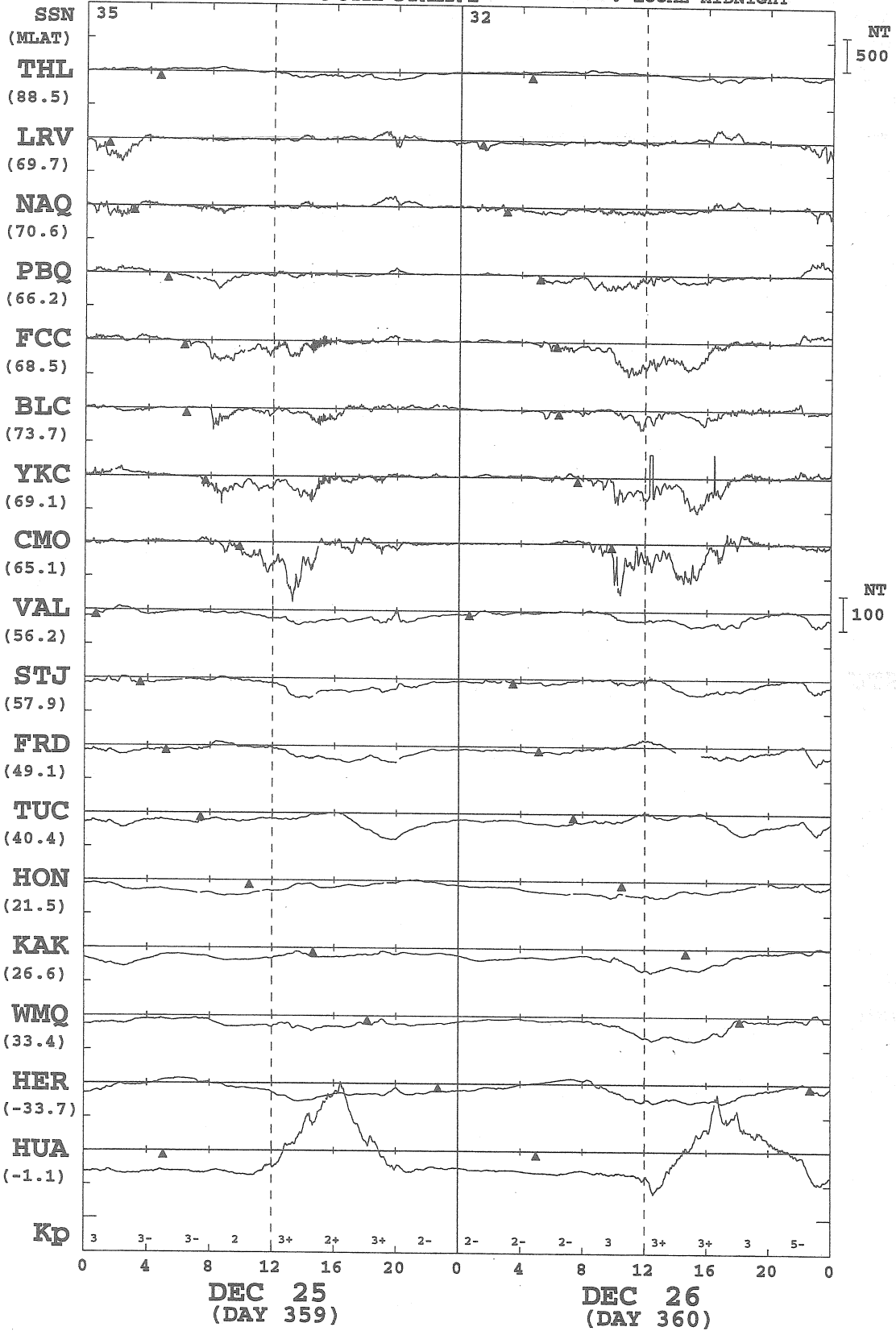
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KYOTO UNIV.



# 2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

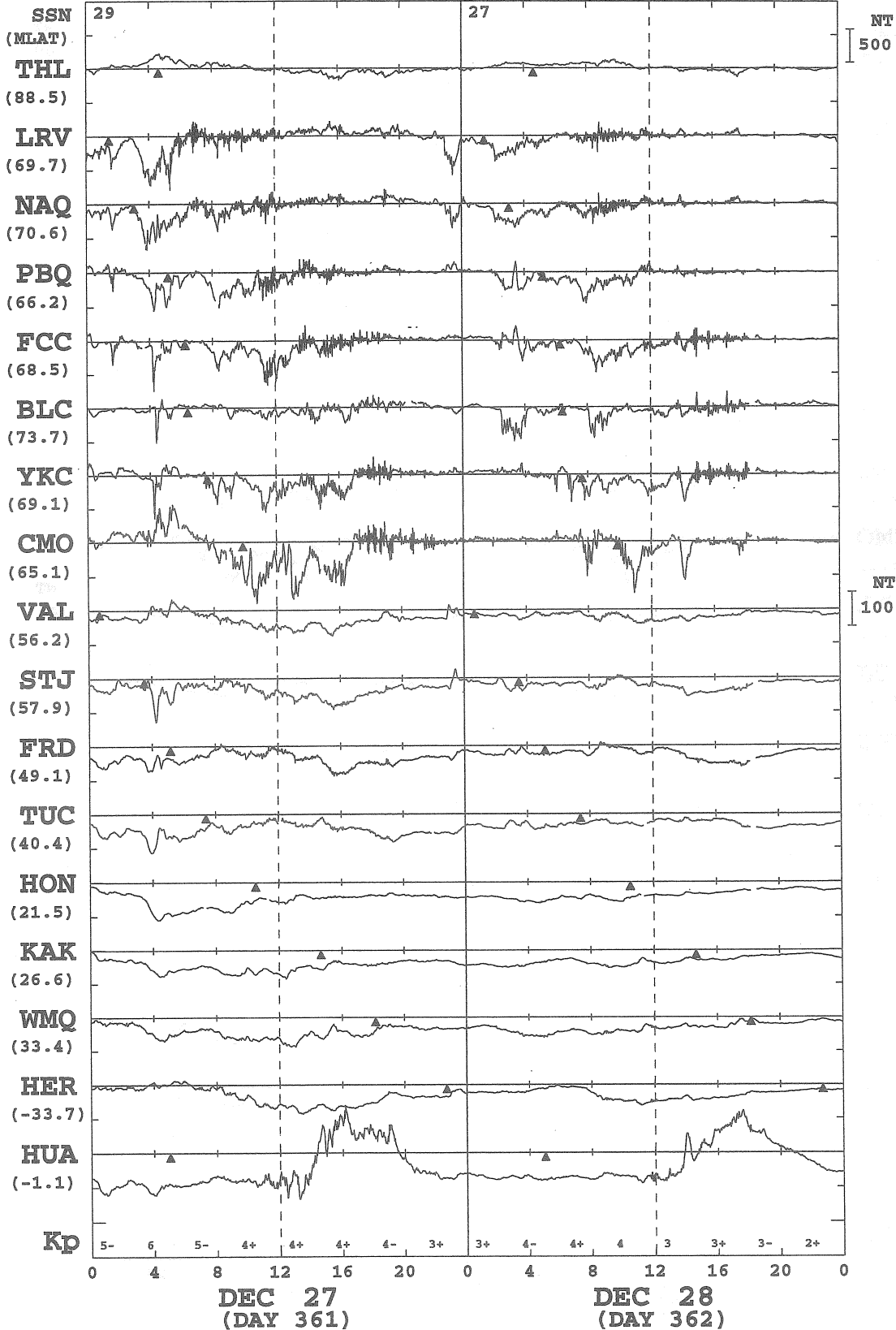


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KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

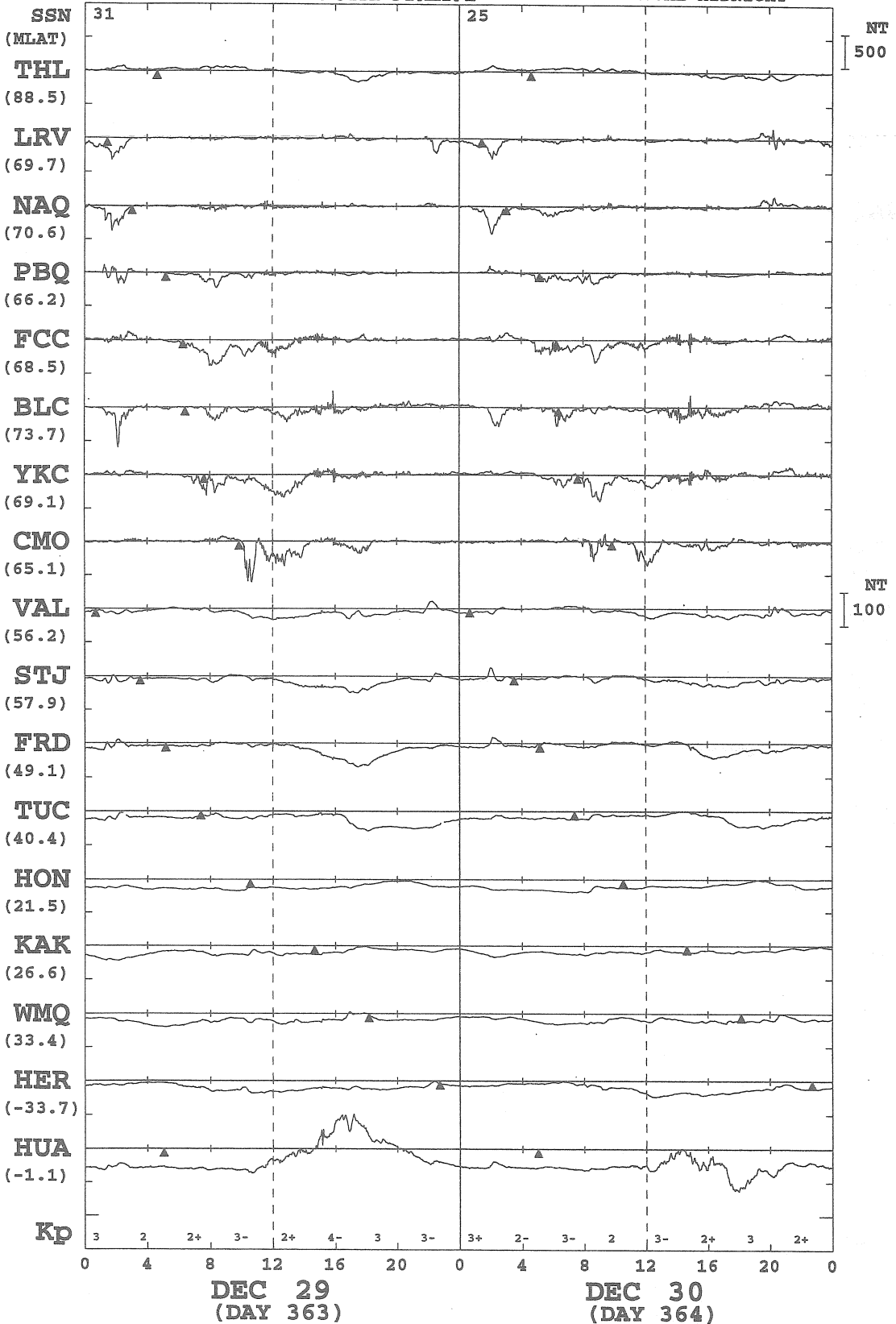


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KYOTO UNIV.

2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

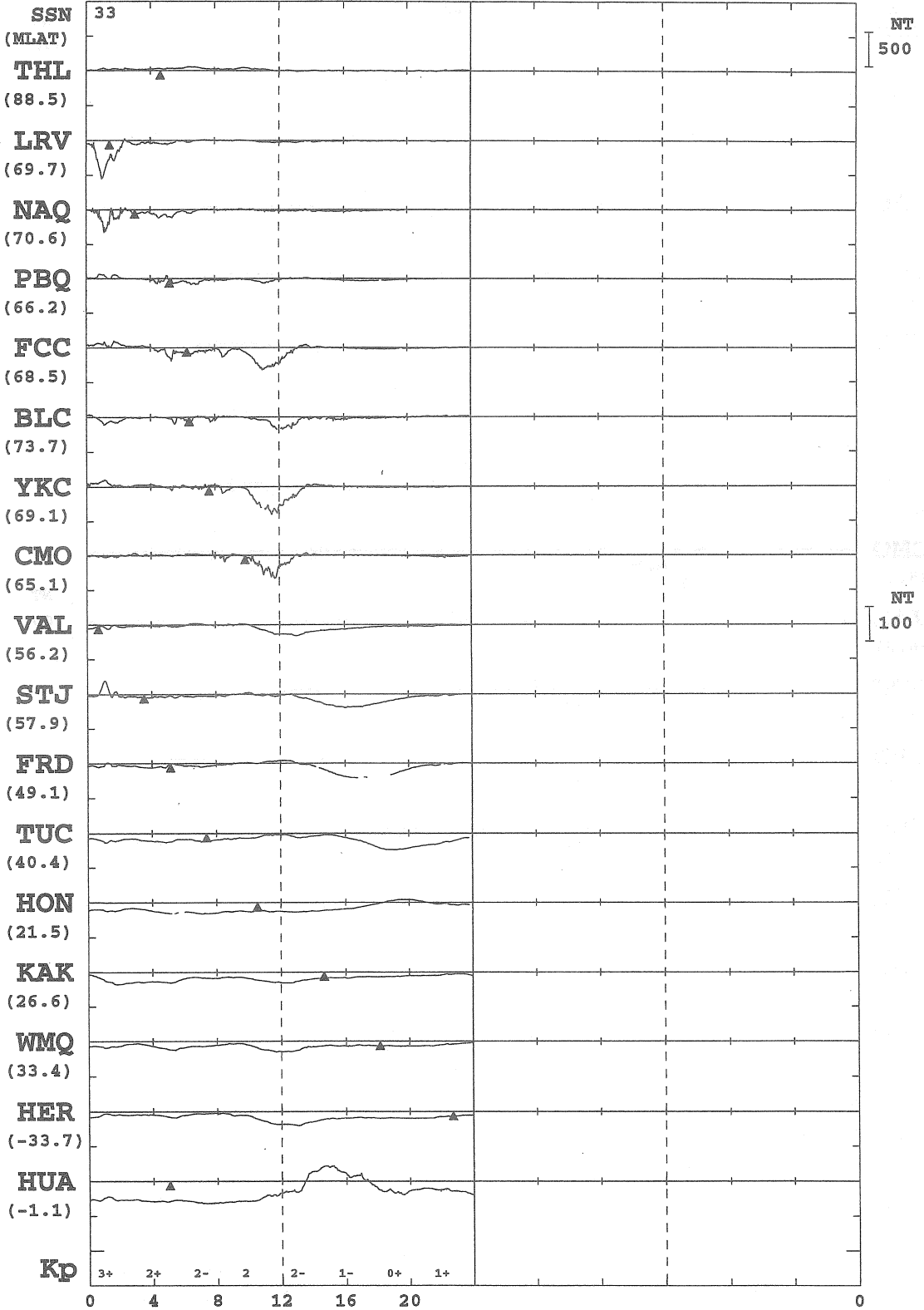


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2002 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



DEC 31  
 (DAY 365)

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