

PROVISIONAL GEOMAGNETIC
DATA PLOTS
NO.20

(July - December, 1999)

January 2000

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, 1999 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-Foret Magnetic Observatory.
- (9) Danish Meteorological Institute.
- (10) Institute de Physique du Globe de Strasbourg.
- (11) Indian Institute of Geomagnetism.
- (12) Instituto Geofisico del Peru.

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://swdcdb.kugi.kyoto-u.ac.jp/>

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, 990111-12.ps.gz). 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://swdcdb.kugi.kyoto-u.ac.jp/>

Table 1. List of stations used in this booklet. The 15 stations among them are used in the plots.

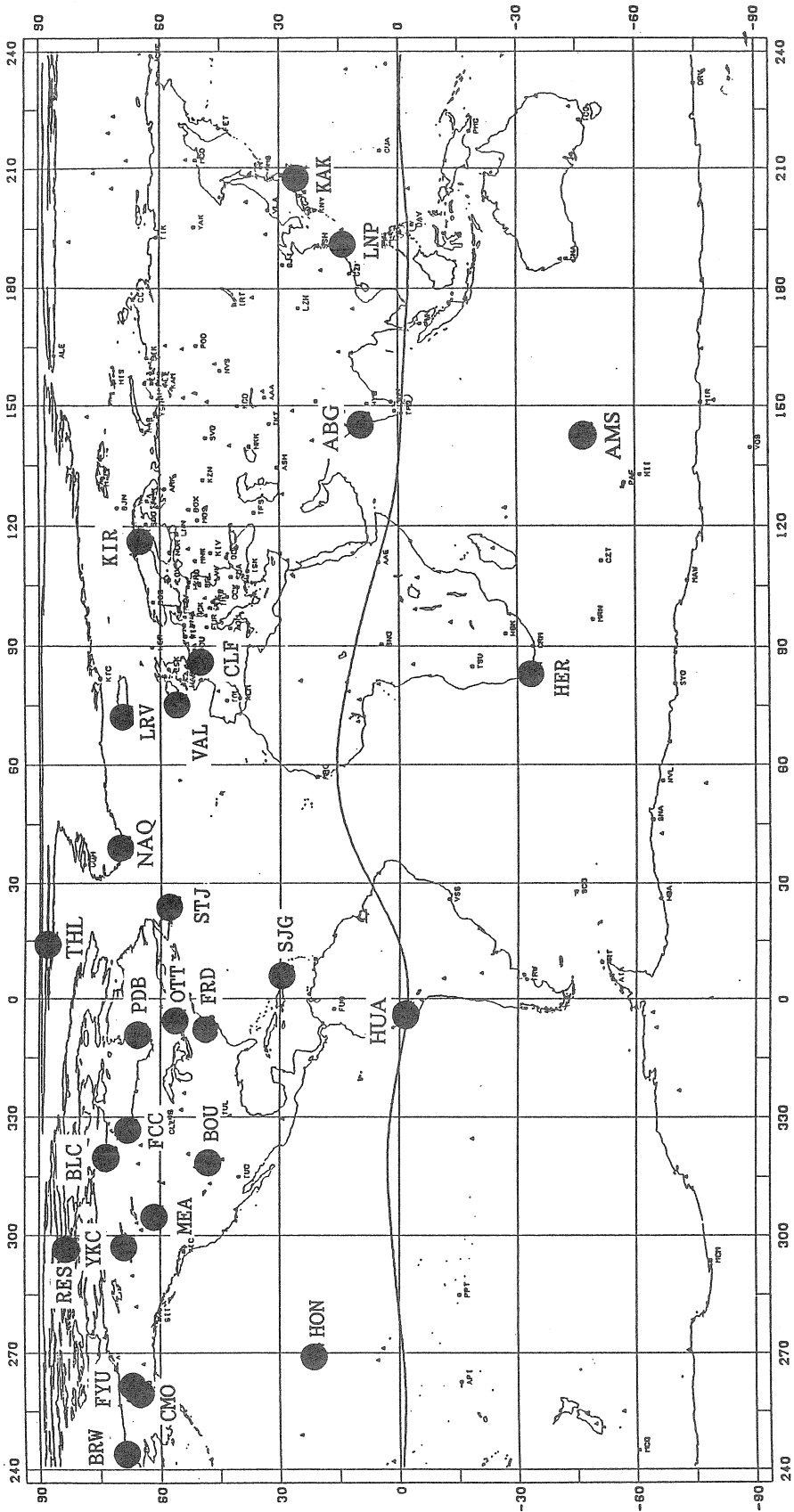
STATION NAME	ABB CODE	ORG No.	GEOGRAPHIC		GEOMAGNETIC		INVARIANT		PLOT SCALE
			LAT.	LONG.	LAT.	LONG.	LAT.		
*Tule	THL	9	76.6	291.2	87.2	12.4	85.9	500nT/div	
*Resolute Bay	RES	1	74.7	265.1	83.1	296.0	83.9	"	
*Baker Lake	BLC	1	64.3	264.0	73.7	319.2	74.6	"	
*Narssarssuaq	NAQ	9	61.2	314.6	70.6	38.7	67.5	"	
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	"	
Luning	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	-33.7	82.7	43.6	"	
*Alibag	ABG	11	18.6	72.9	9.9	145.8	---	"	
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 11694072 and 403002 under the Japan Society for Promotion of science (JSPS) and by a part of "Ground Research for Space Utilization" promoted by NASDA and Japan Space Forum.

DISTRIBUTION OF GEOMAGNETIC OBSERVATORIES



GEOMAGNETIC COORDINATE (1985.0)

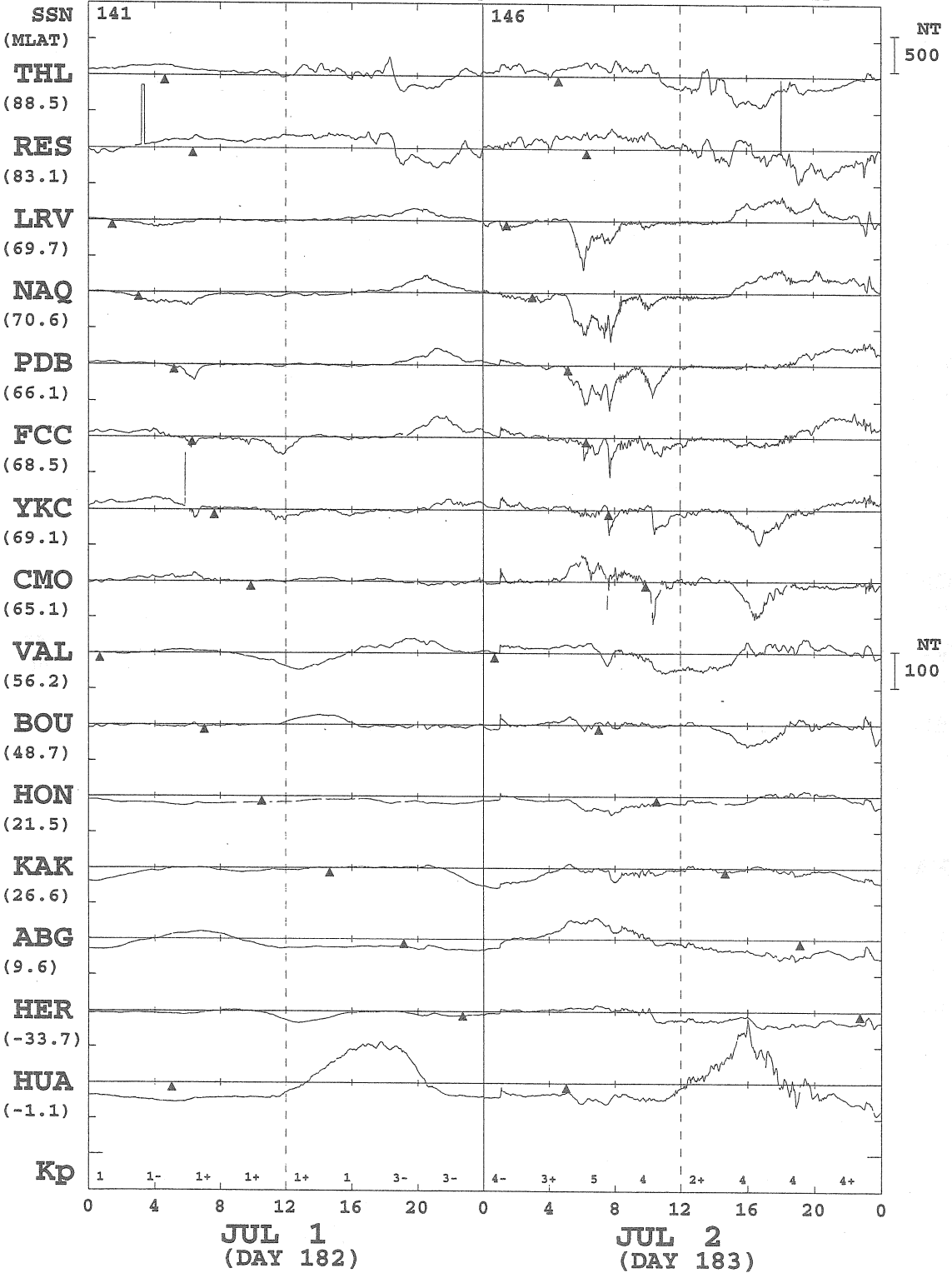
————— DIP EQUATOR AT 100 KM ALTITUDE

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, 1999

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



JUL 1
(DAY 182)

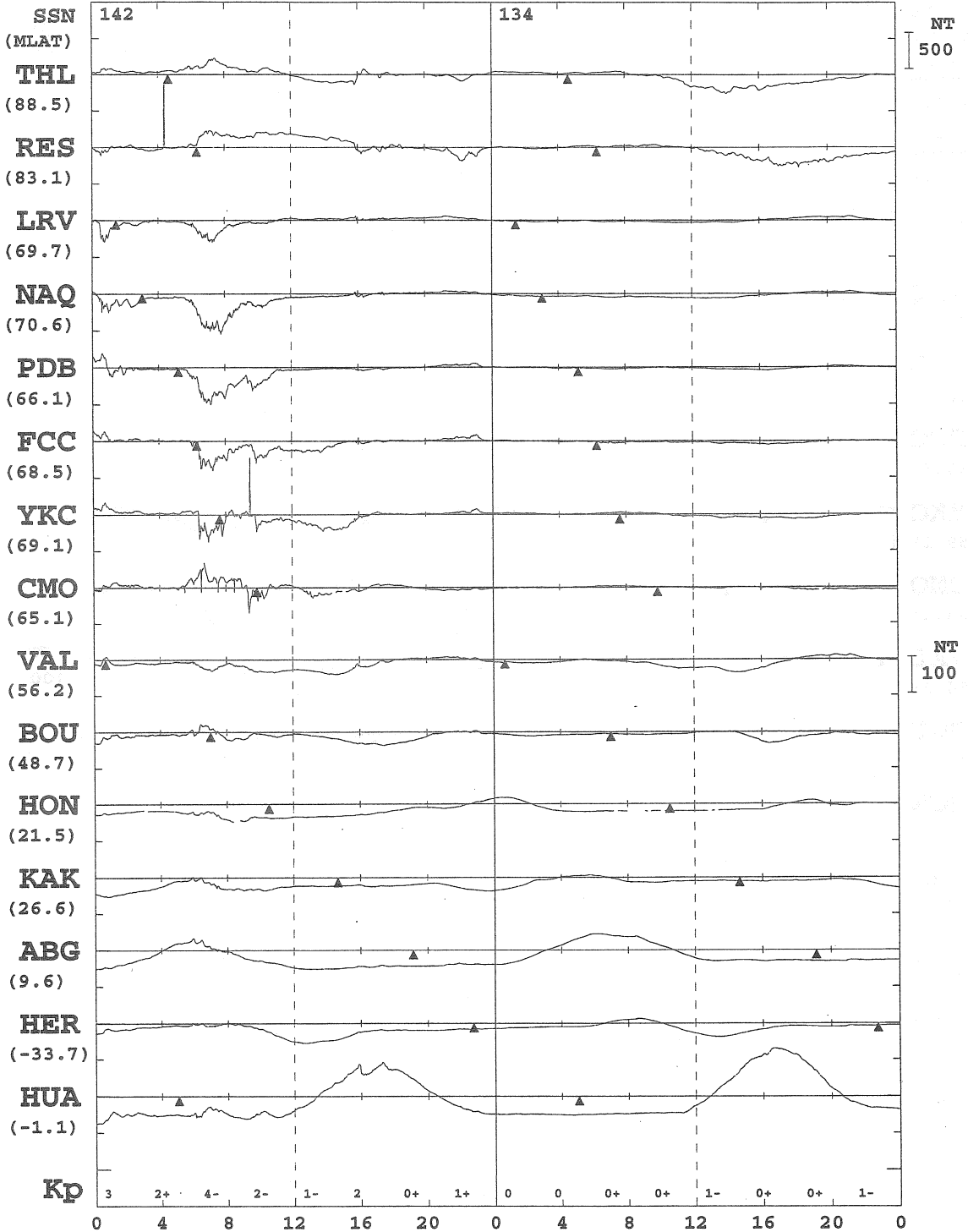
JUL 2
(DAY 183)

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

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

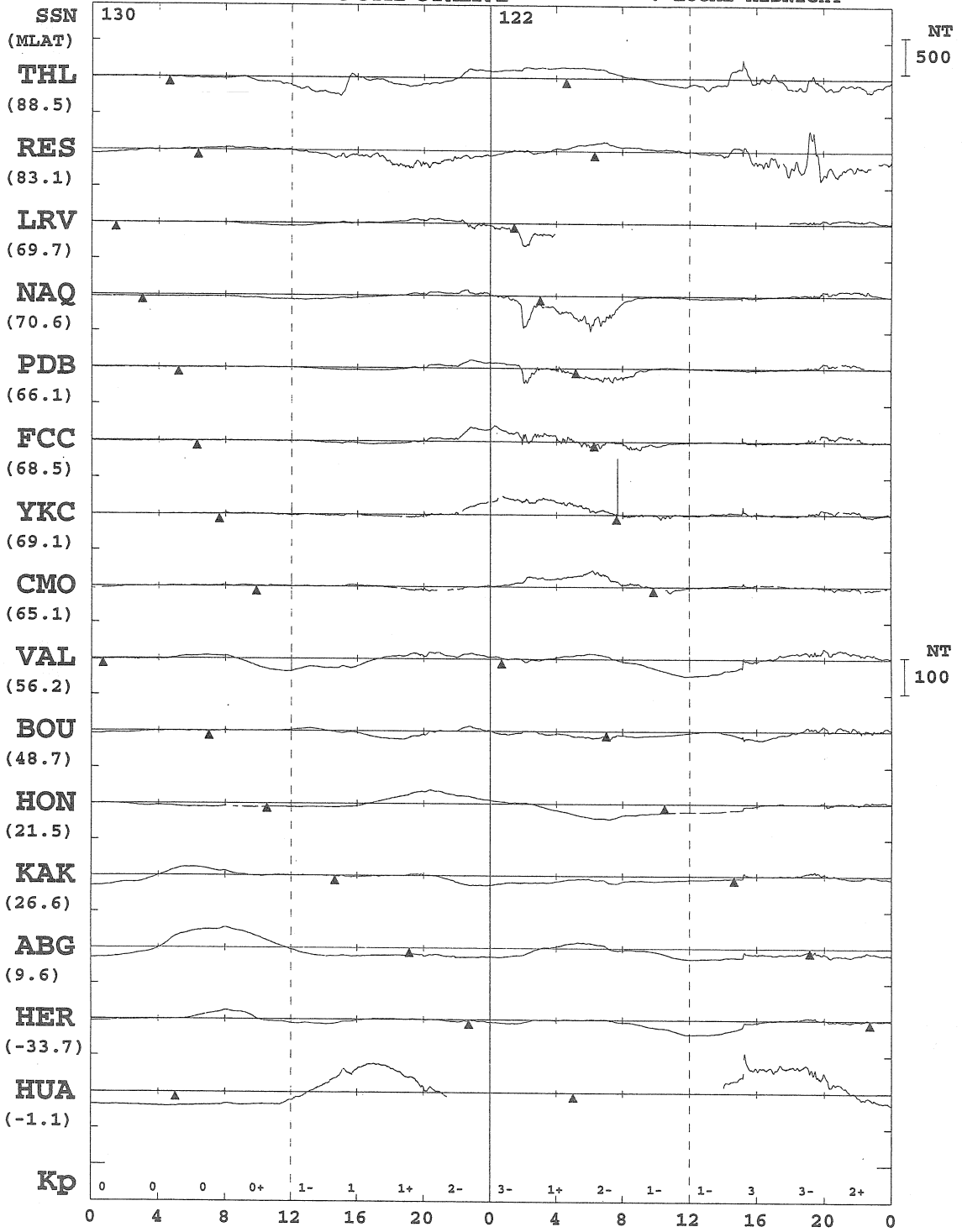


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



JUL 5
(DAY 186)

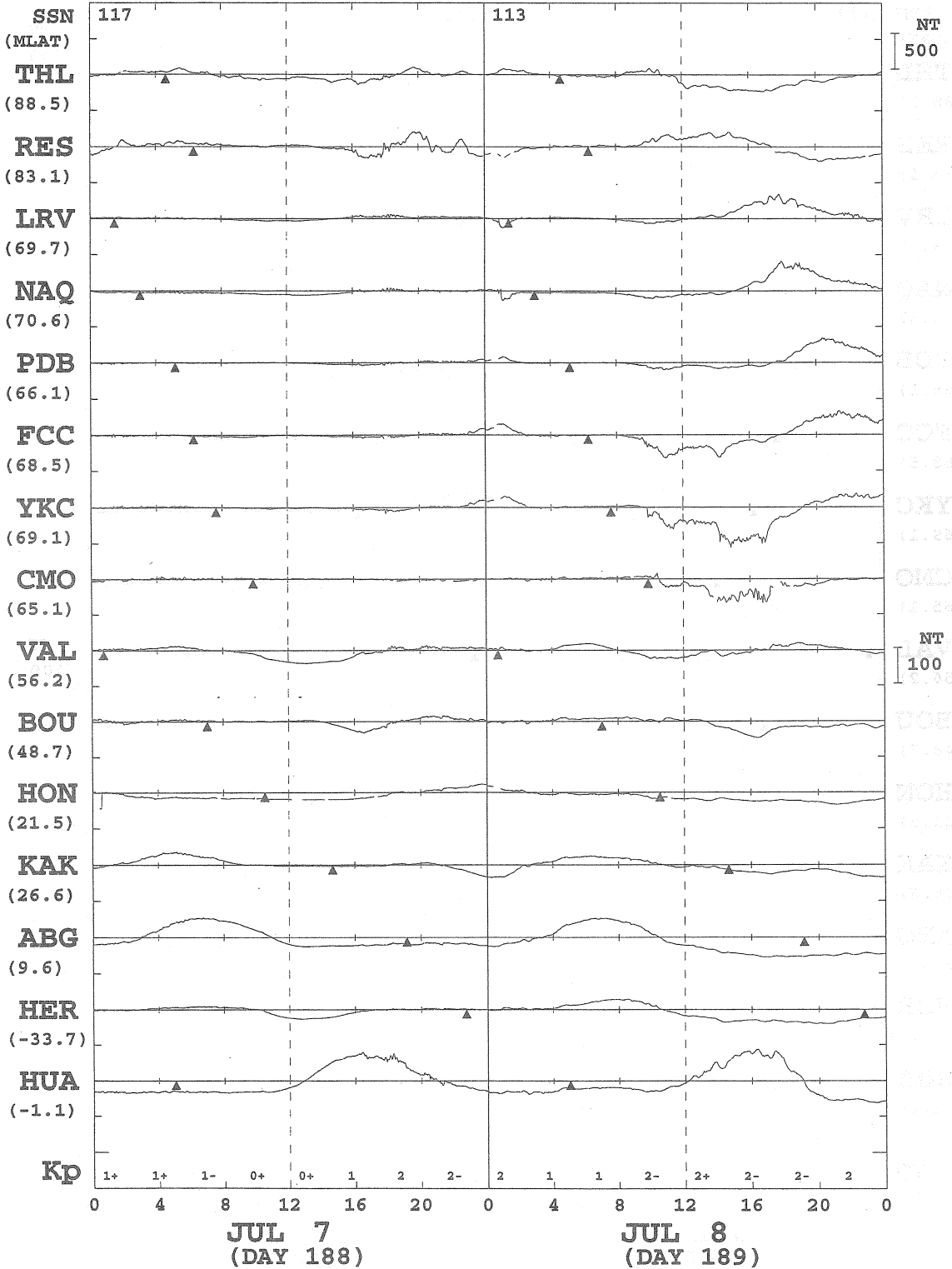
JUL 6
(DAY 187)

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

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1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

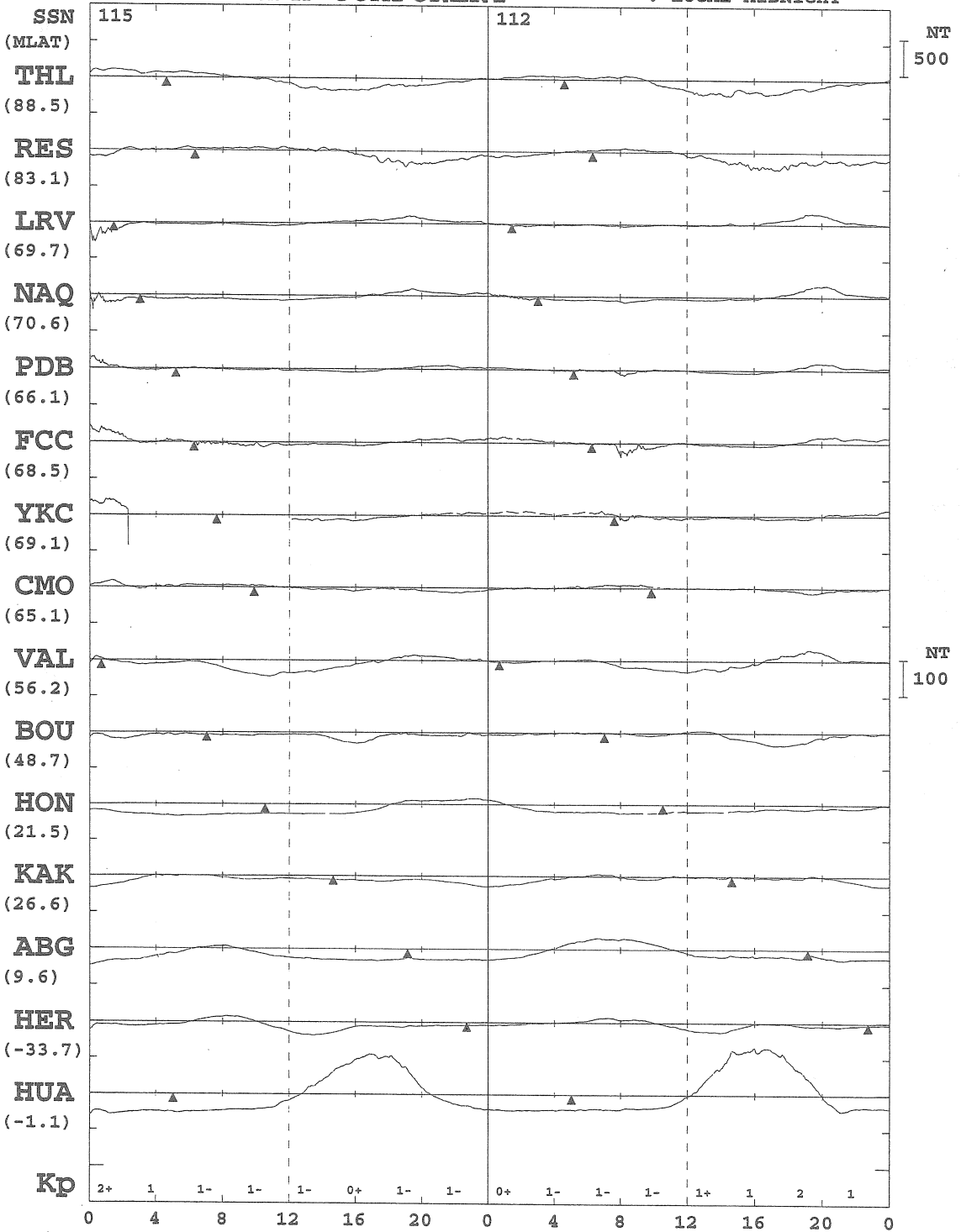


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

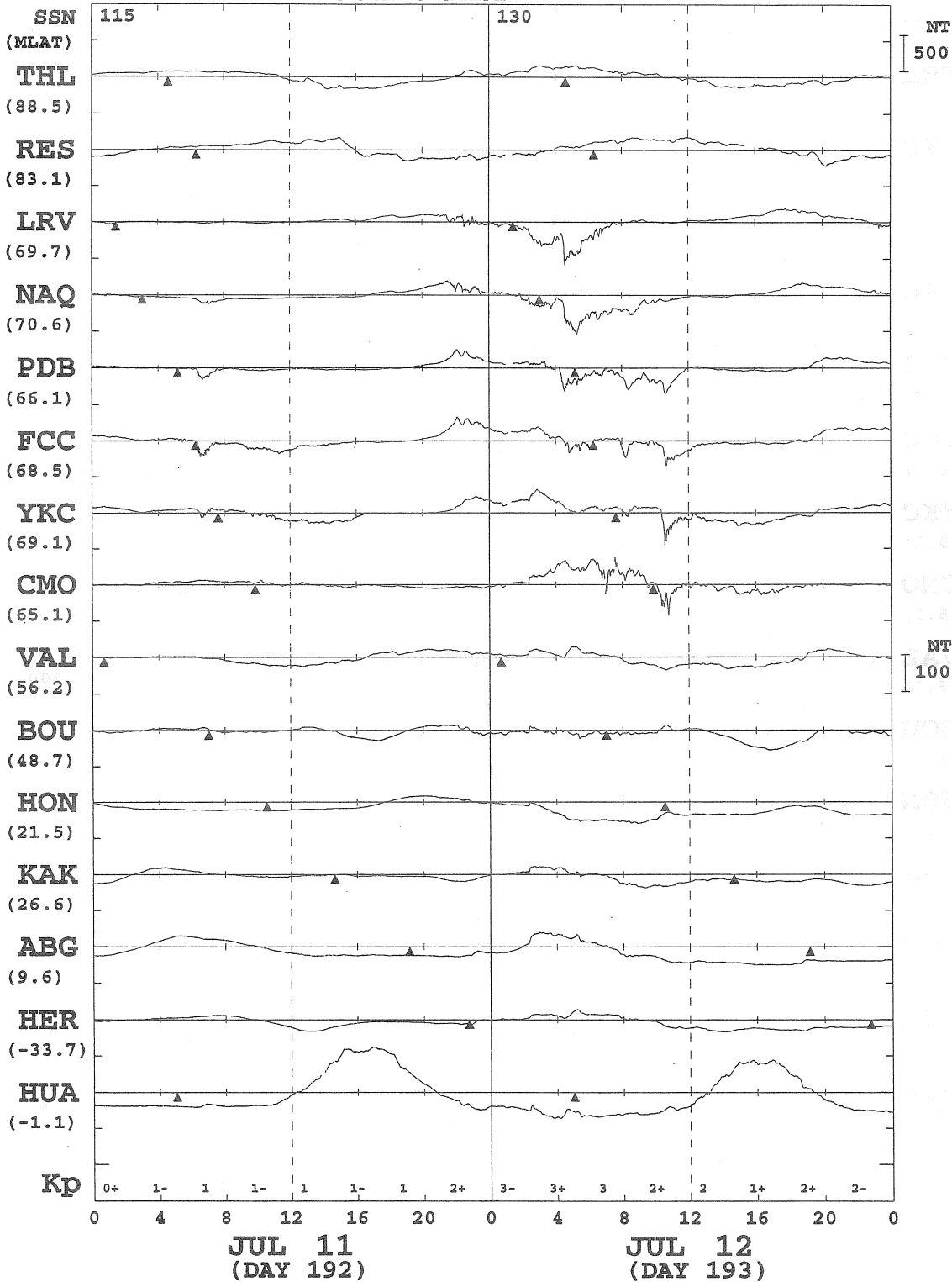


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
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1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

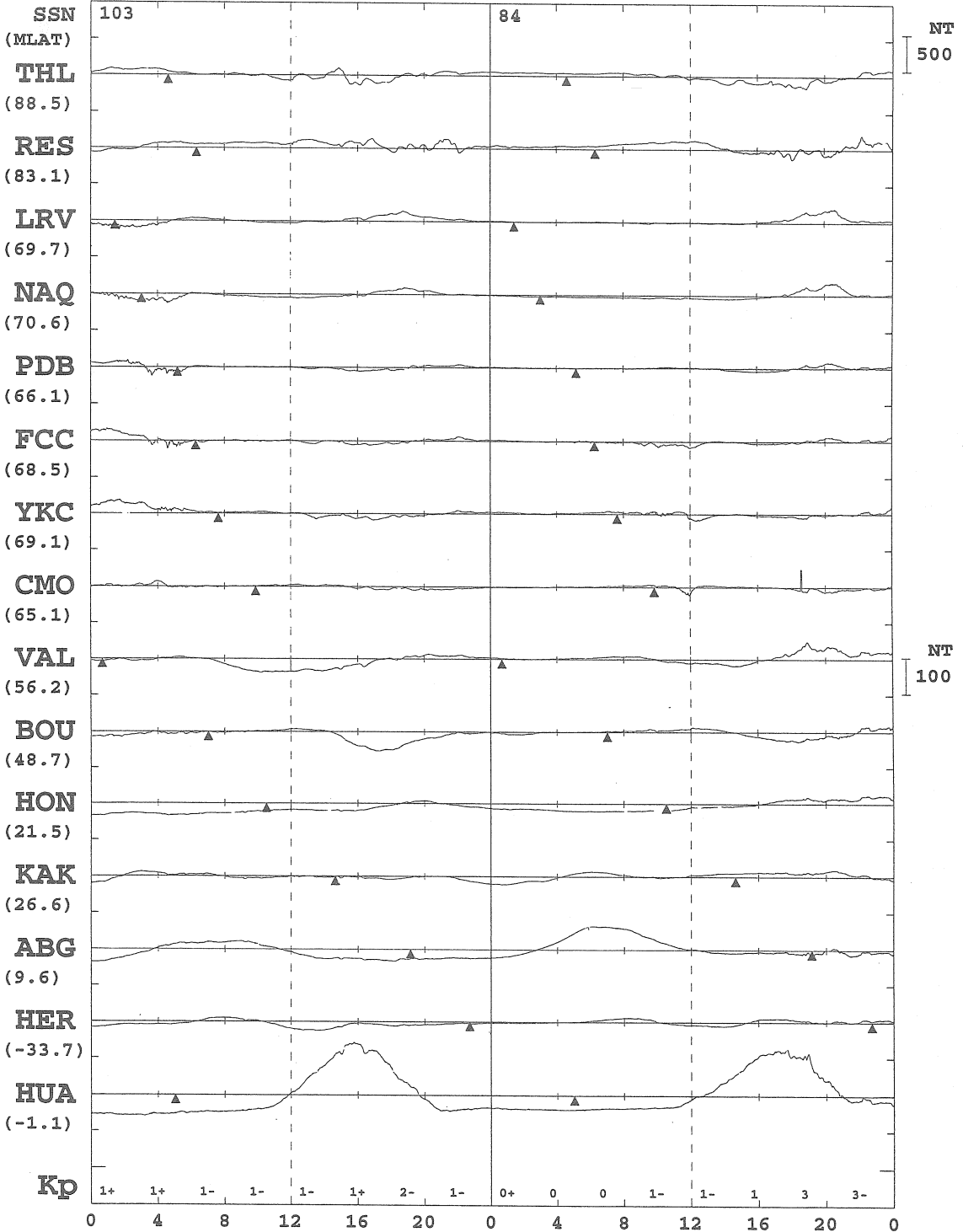


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



JUL 13
(DAY 194)

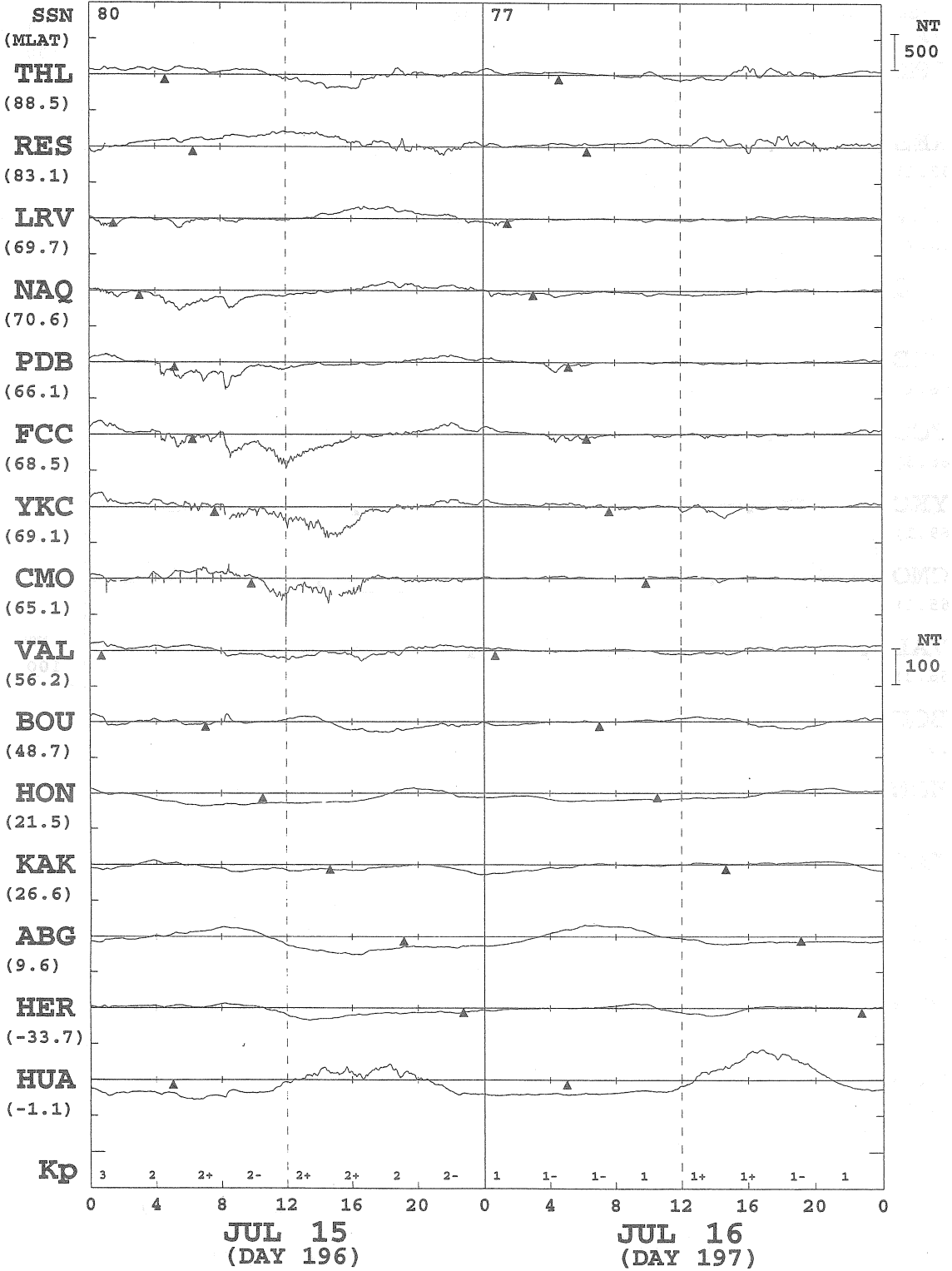
JUL 14
(DAY 195)

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

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

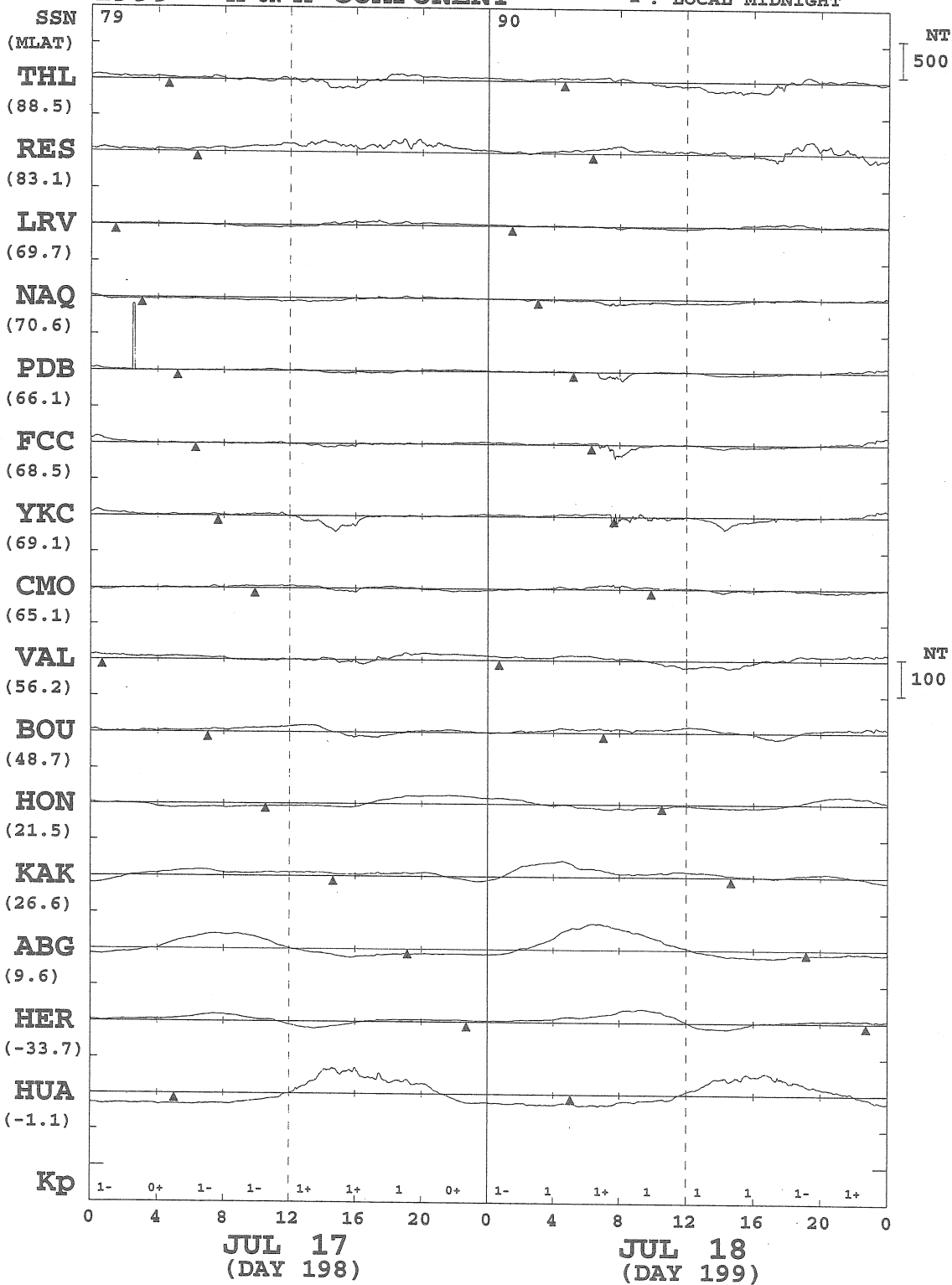


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

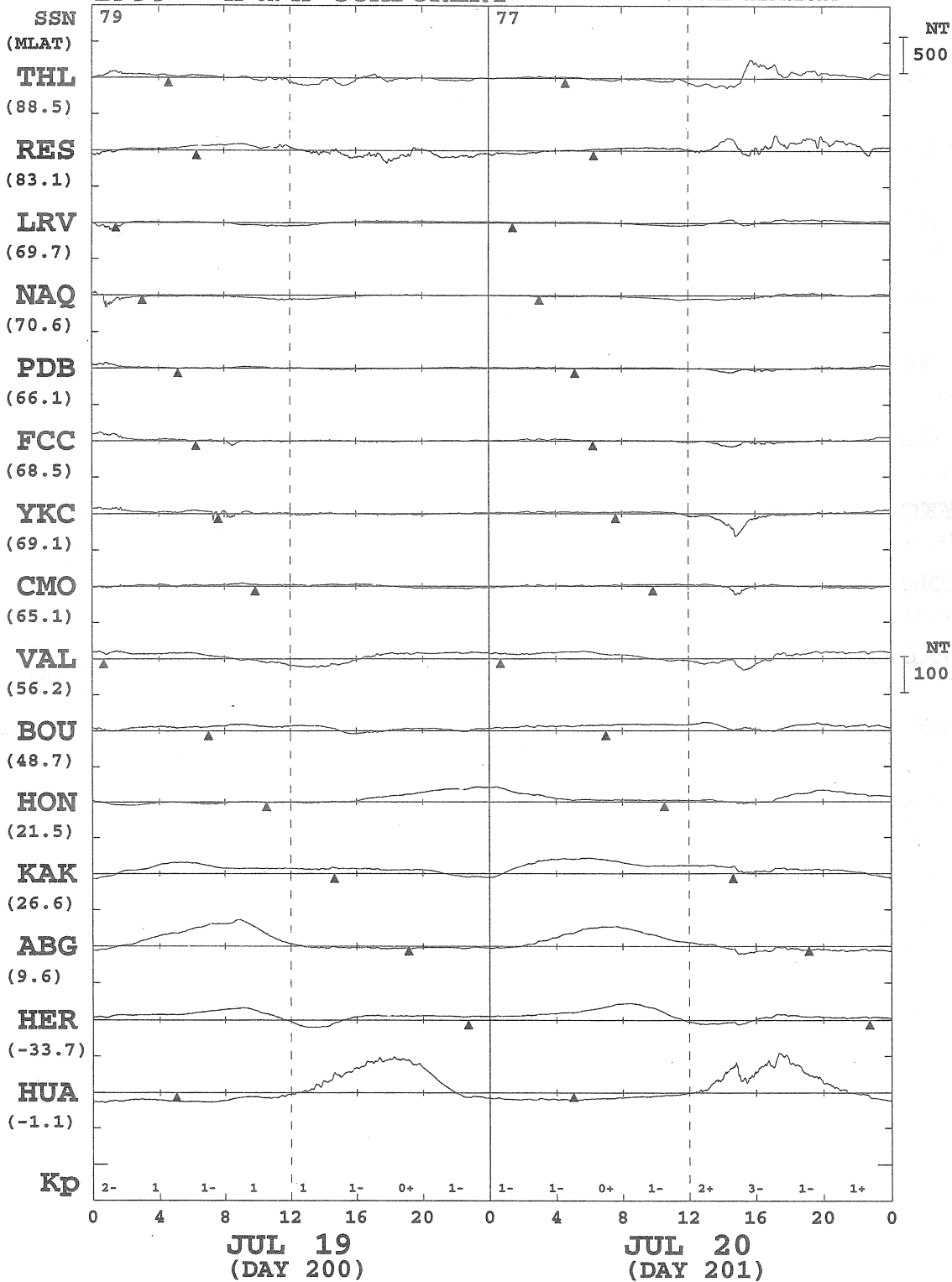


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

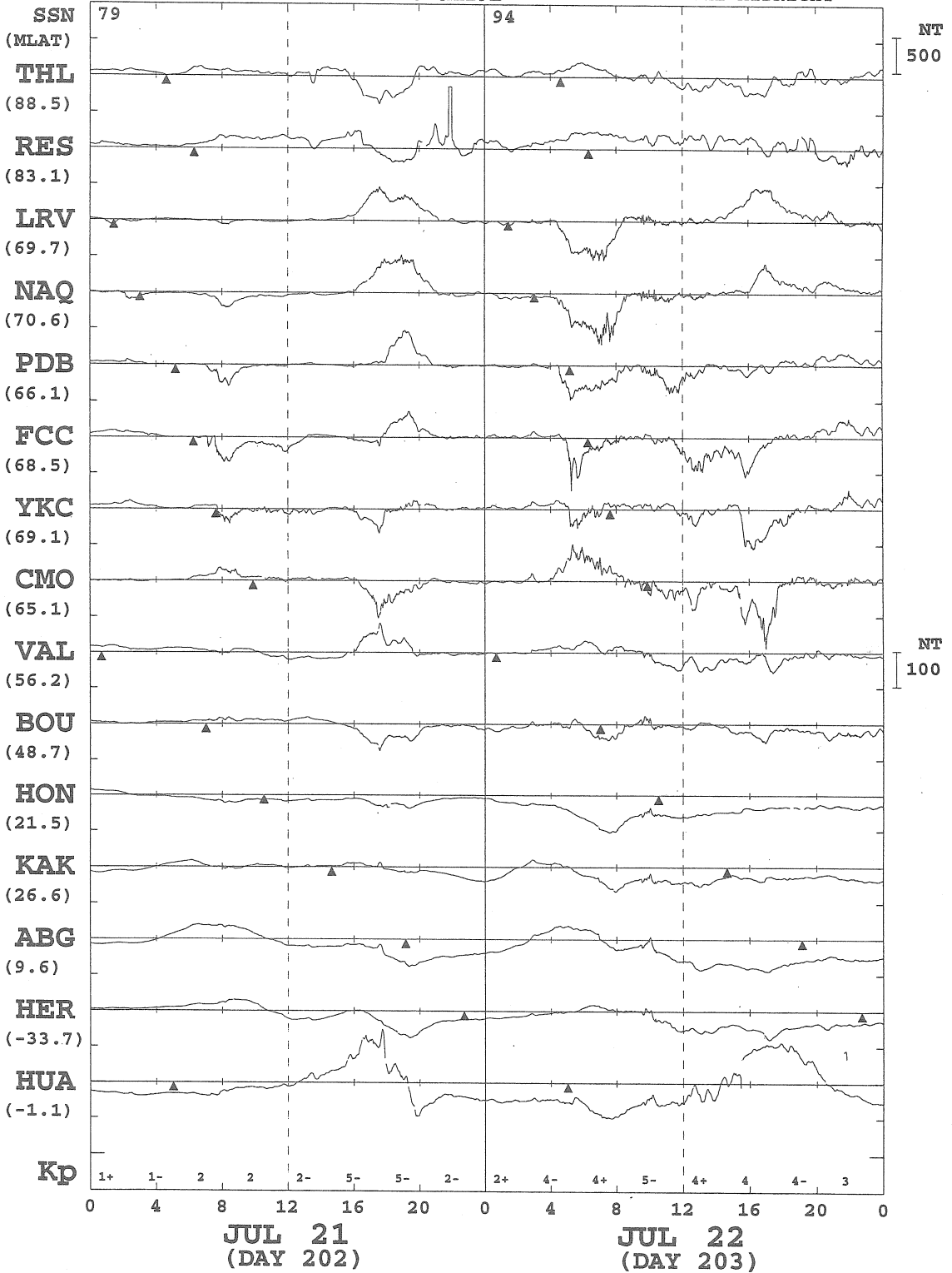


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

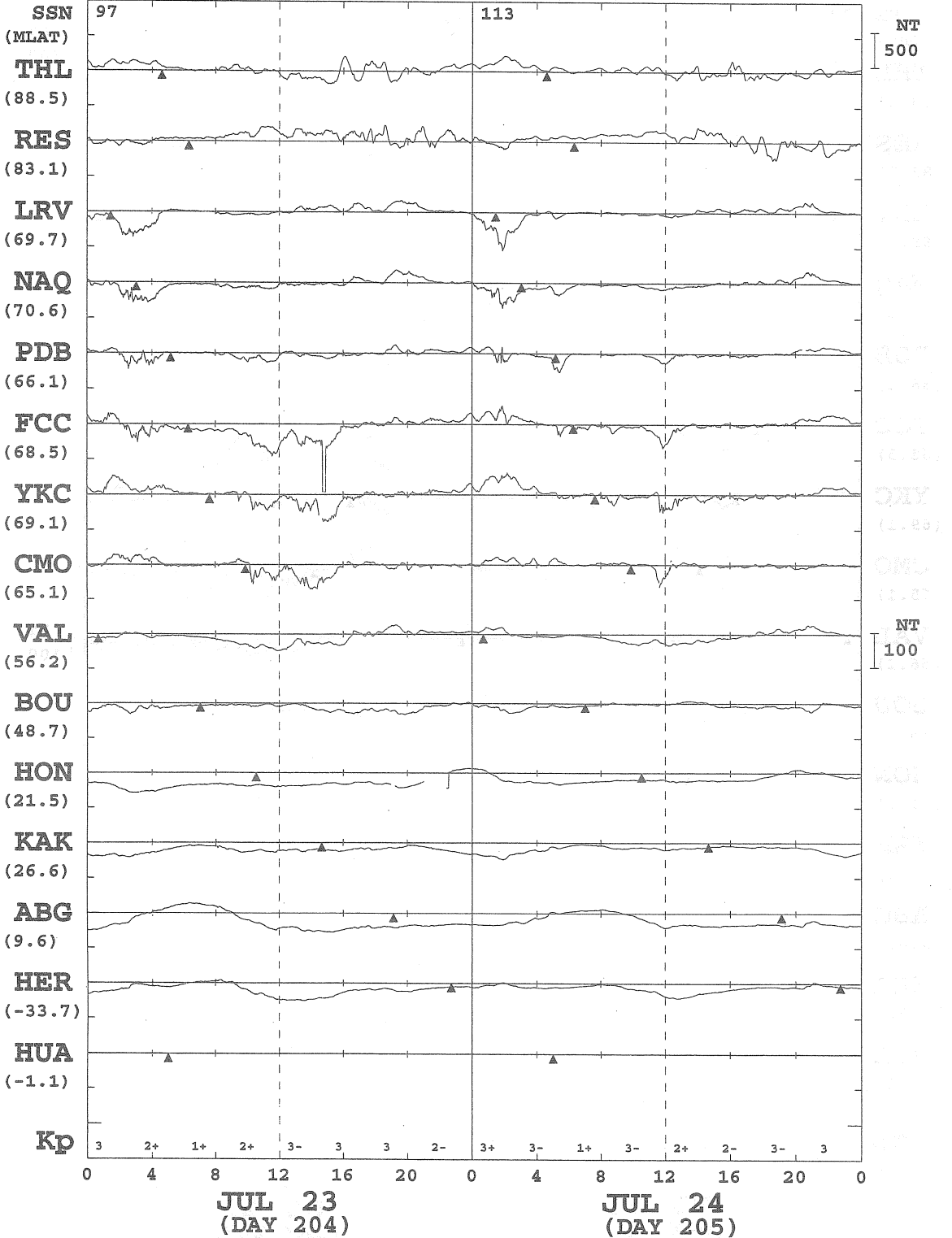


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 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

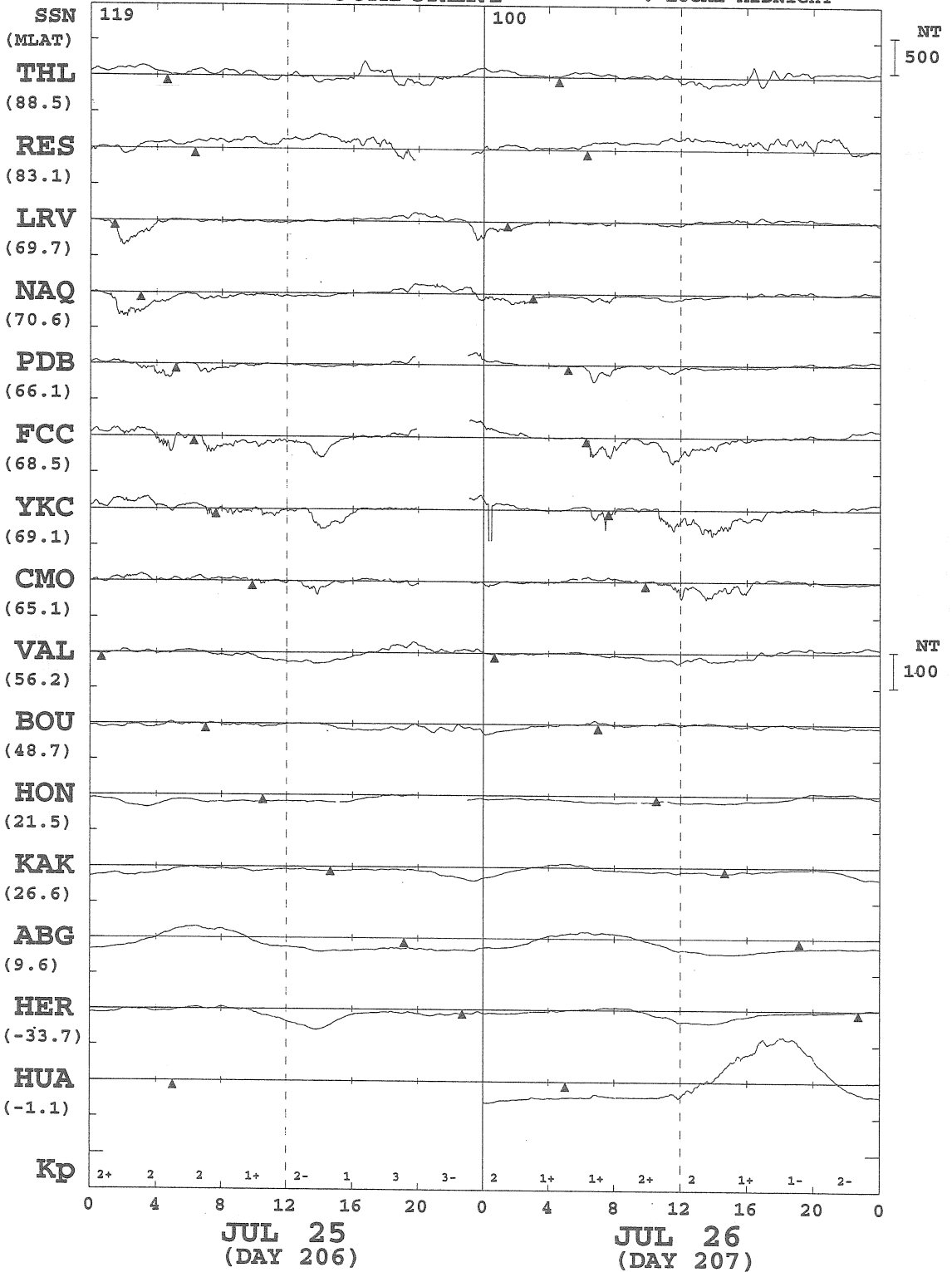


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
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KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

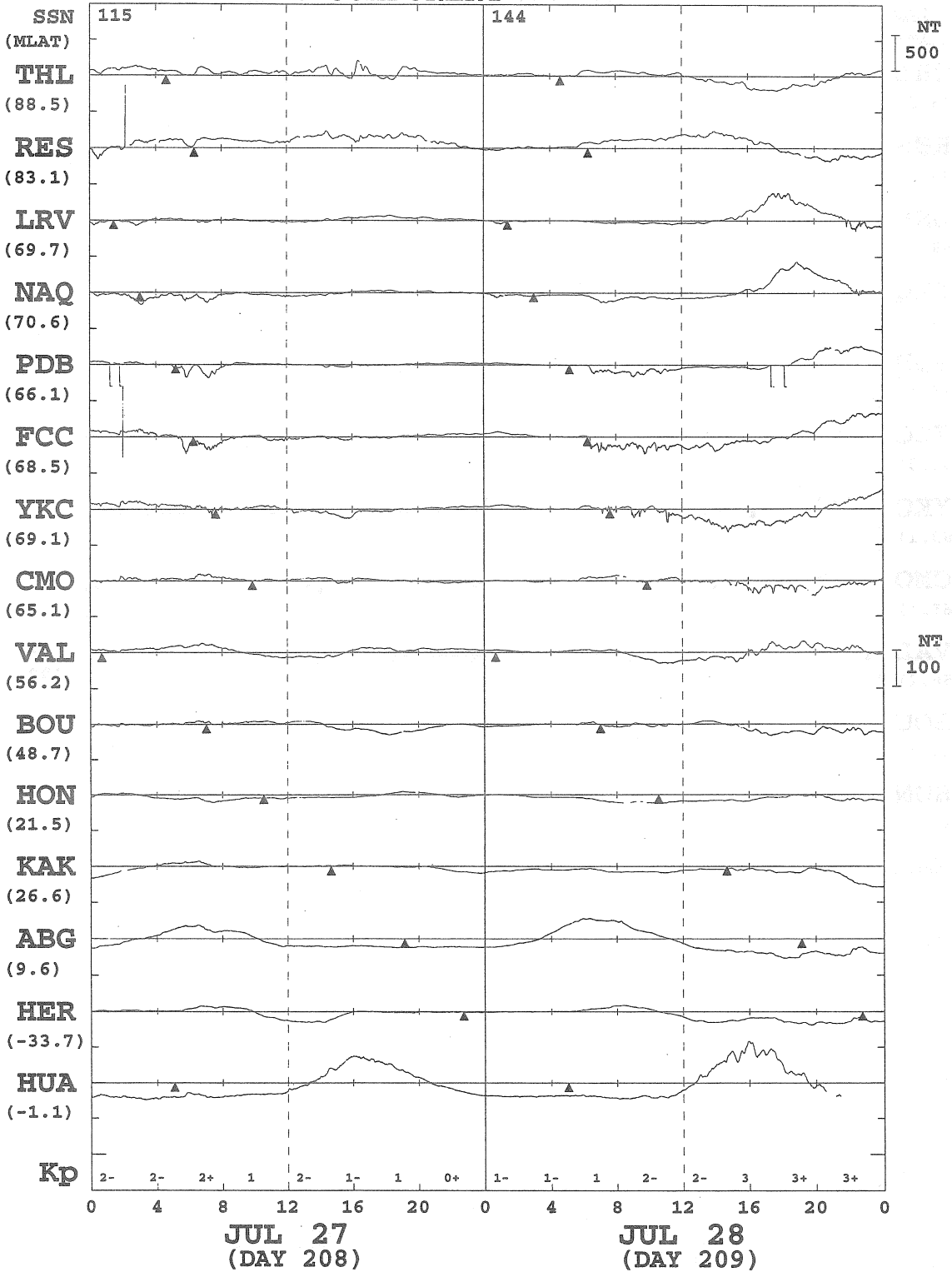


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

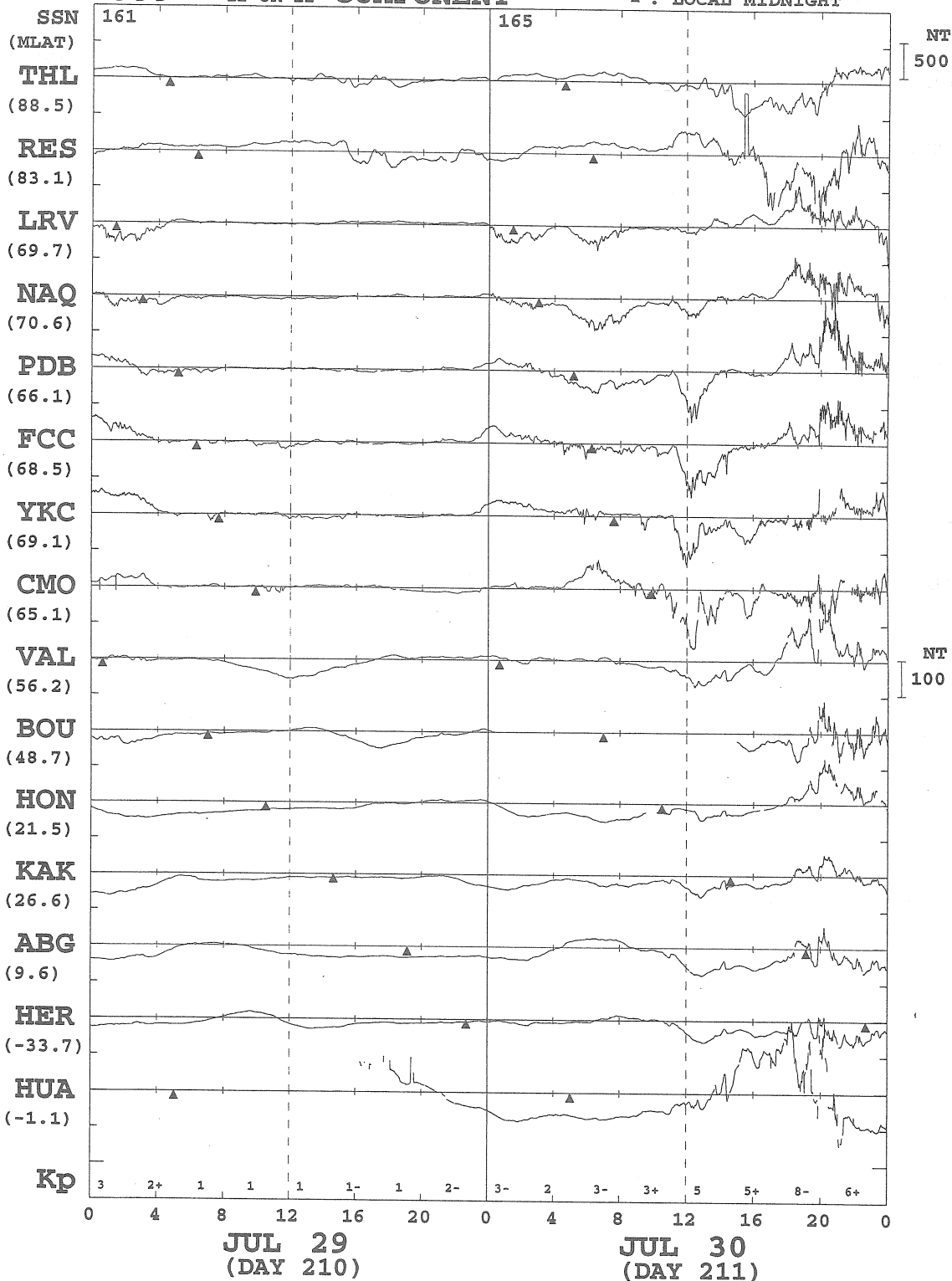


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

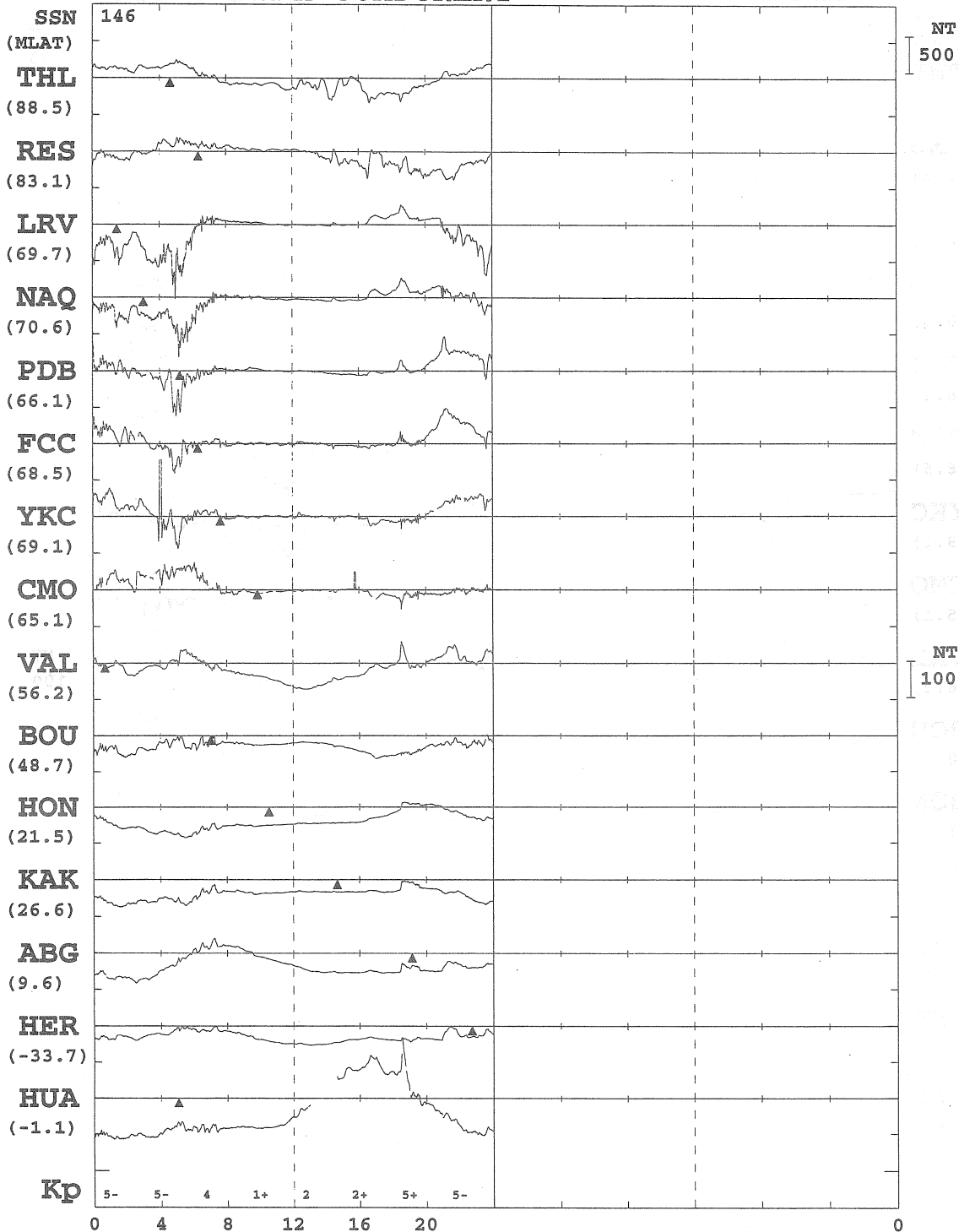


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



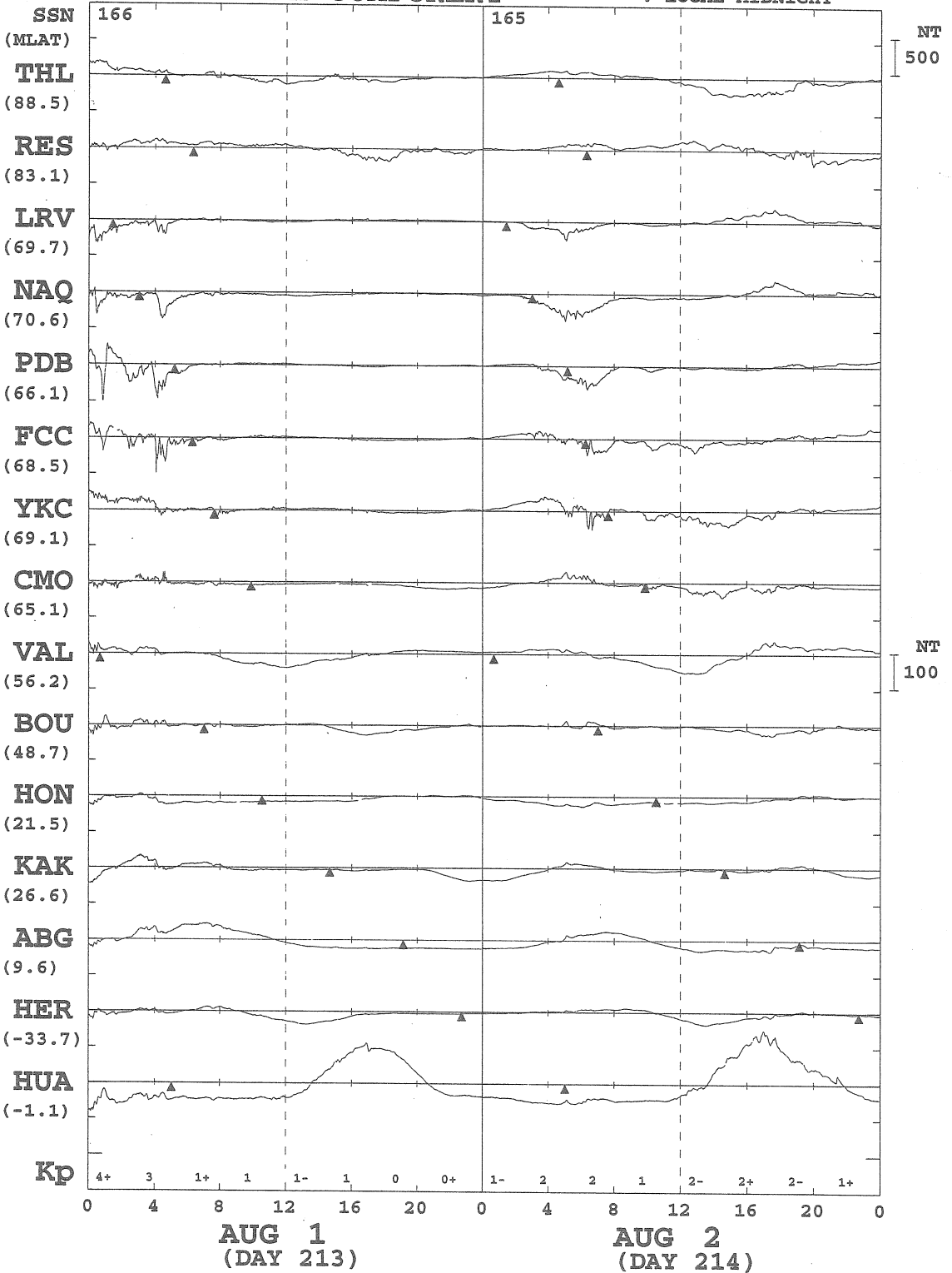
JUL 31
(DAY 212)

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

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1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

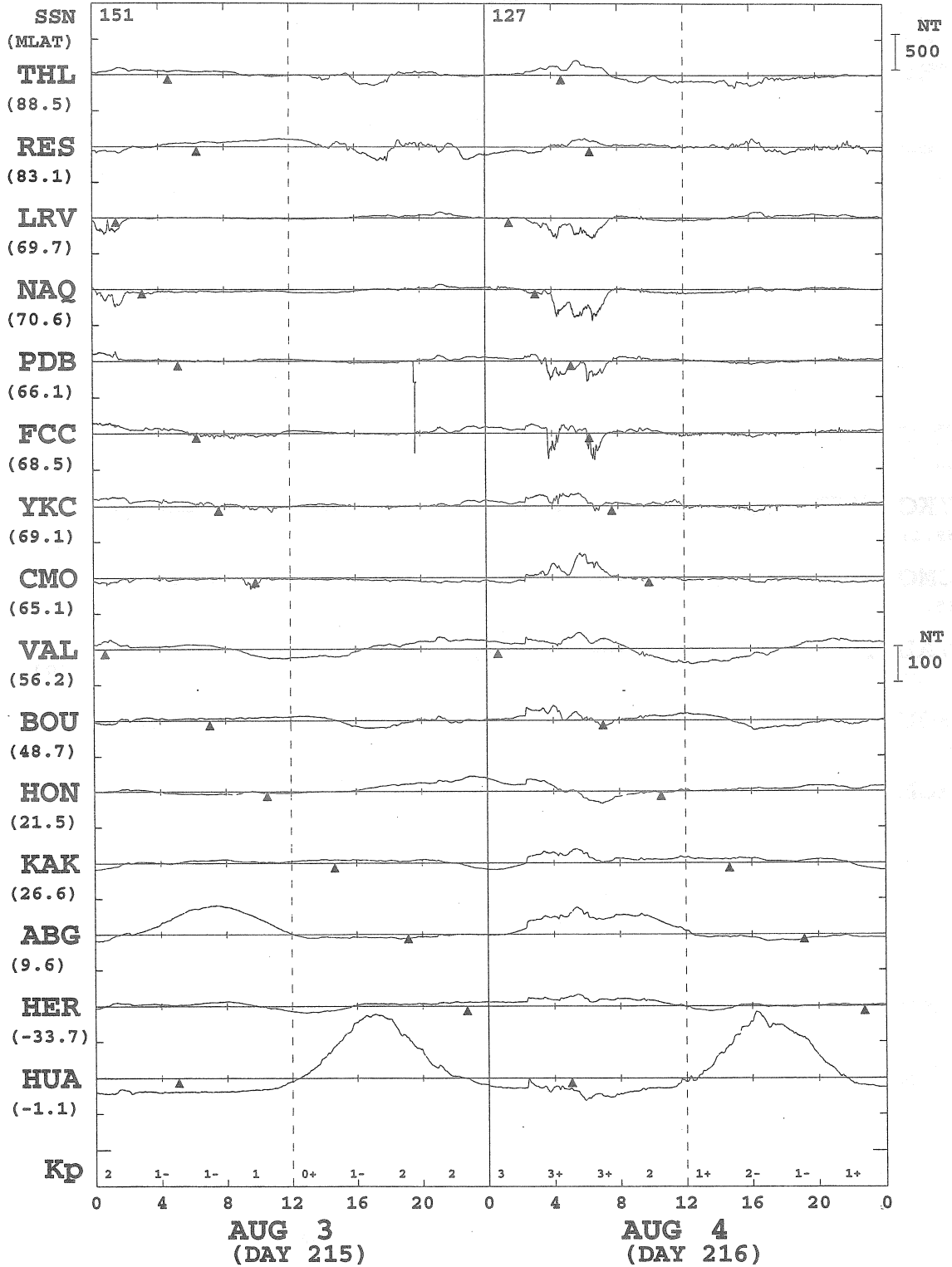


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

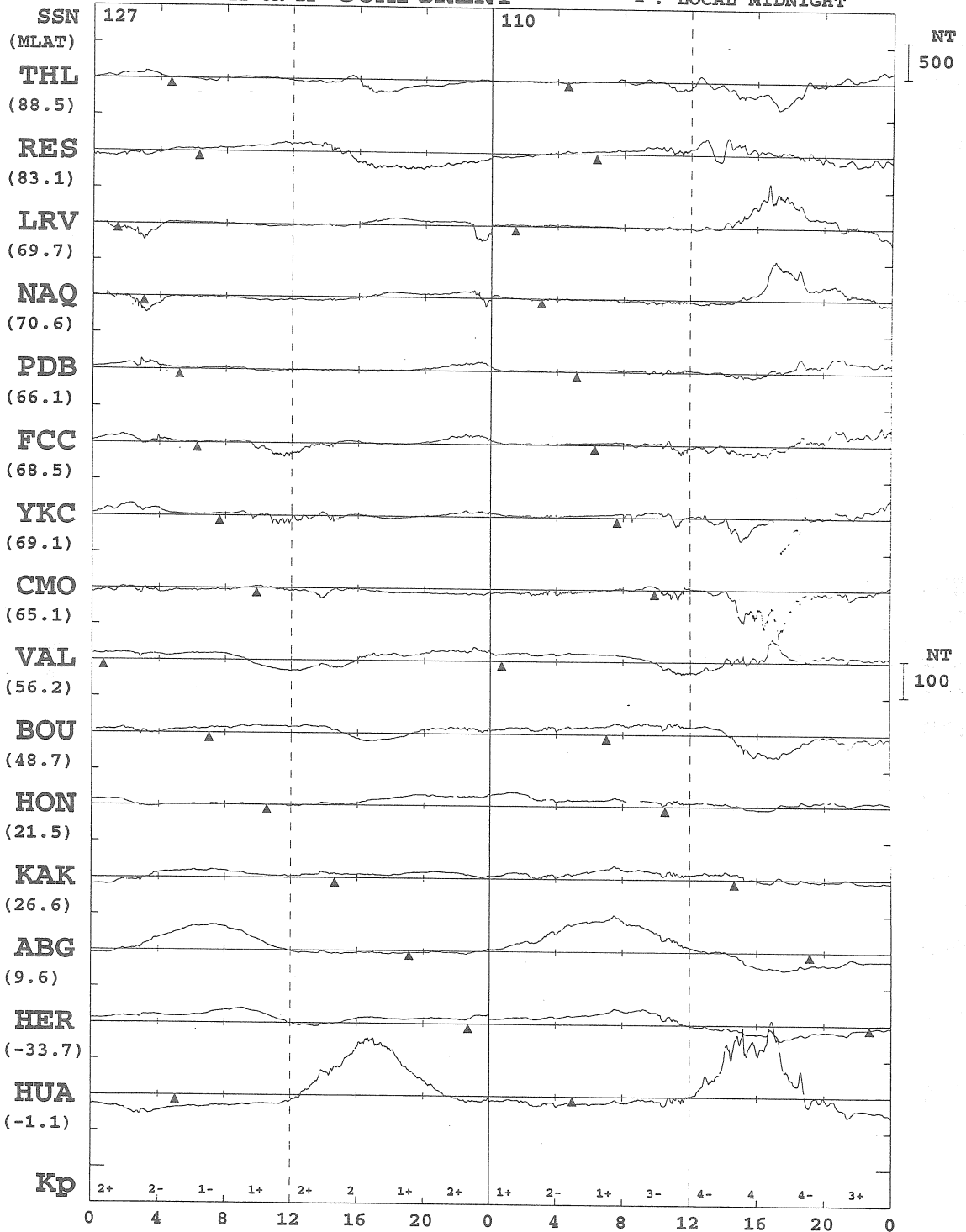


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



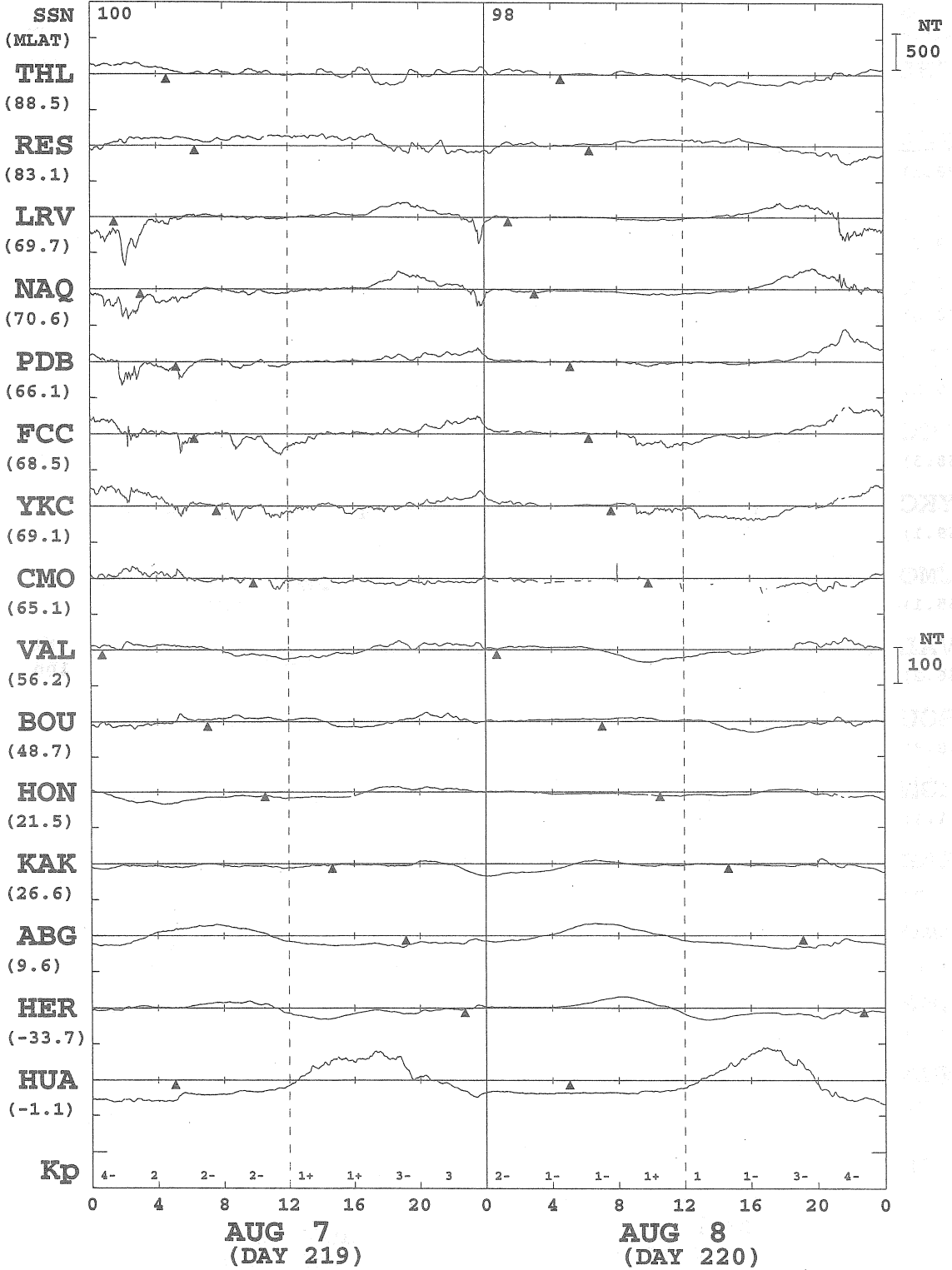
AUG 5
(DAY 217)

AUG 6
(DAY 218)

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

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1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

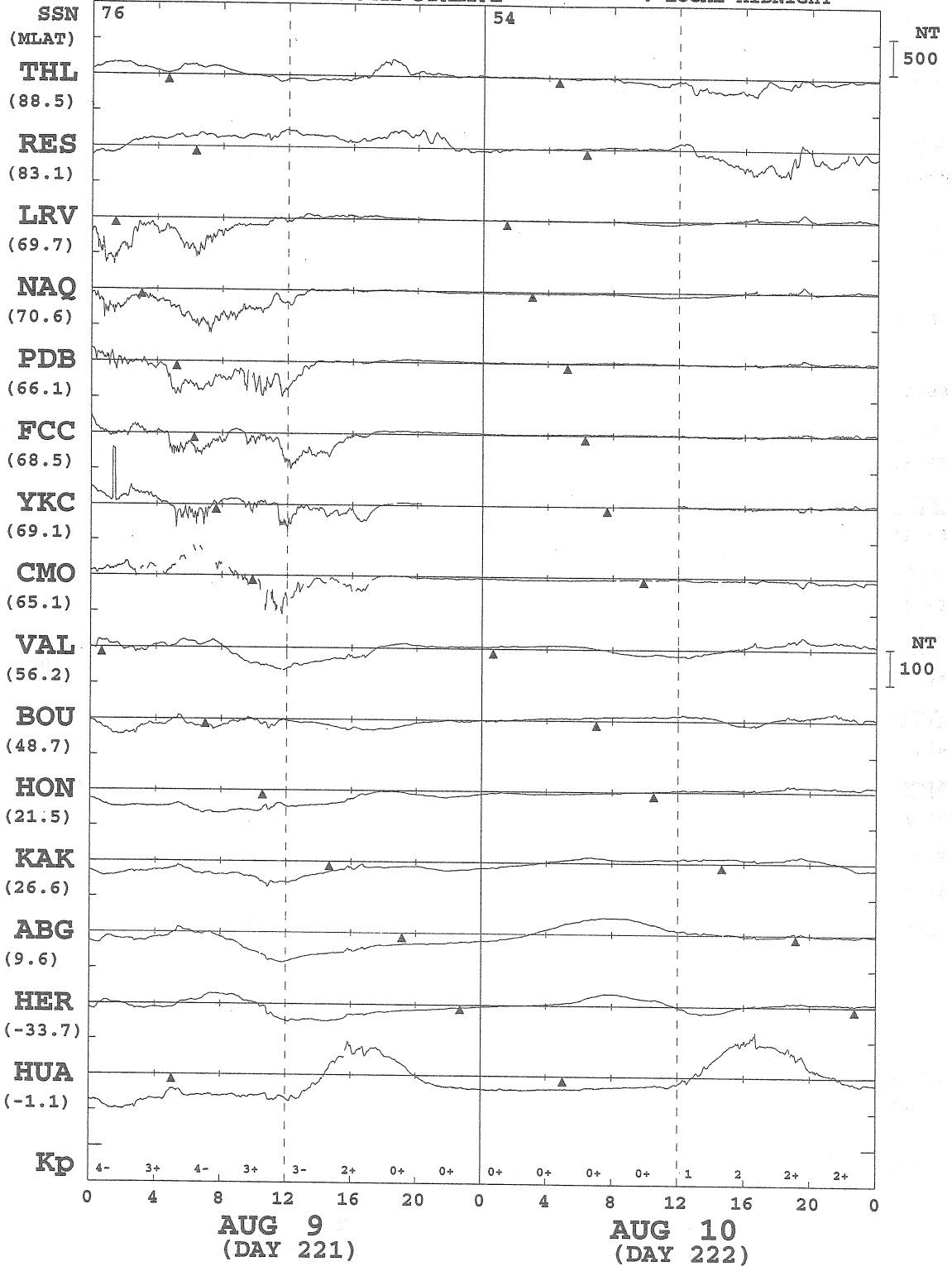


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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1999 H OR X-COMPONENT

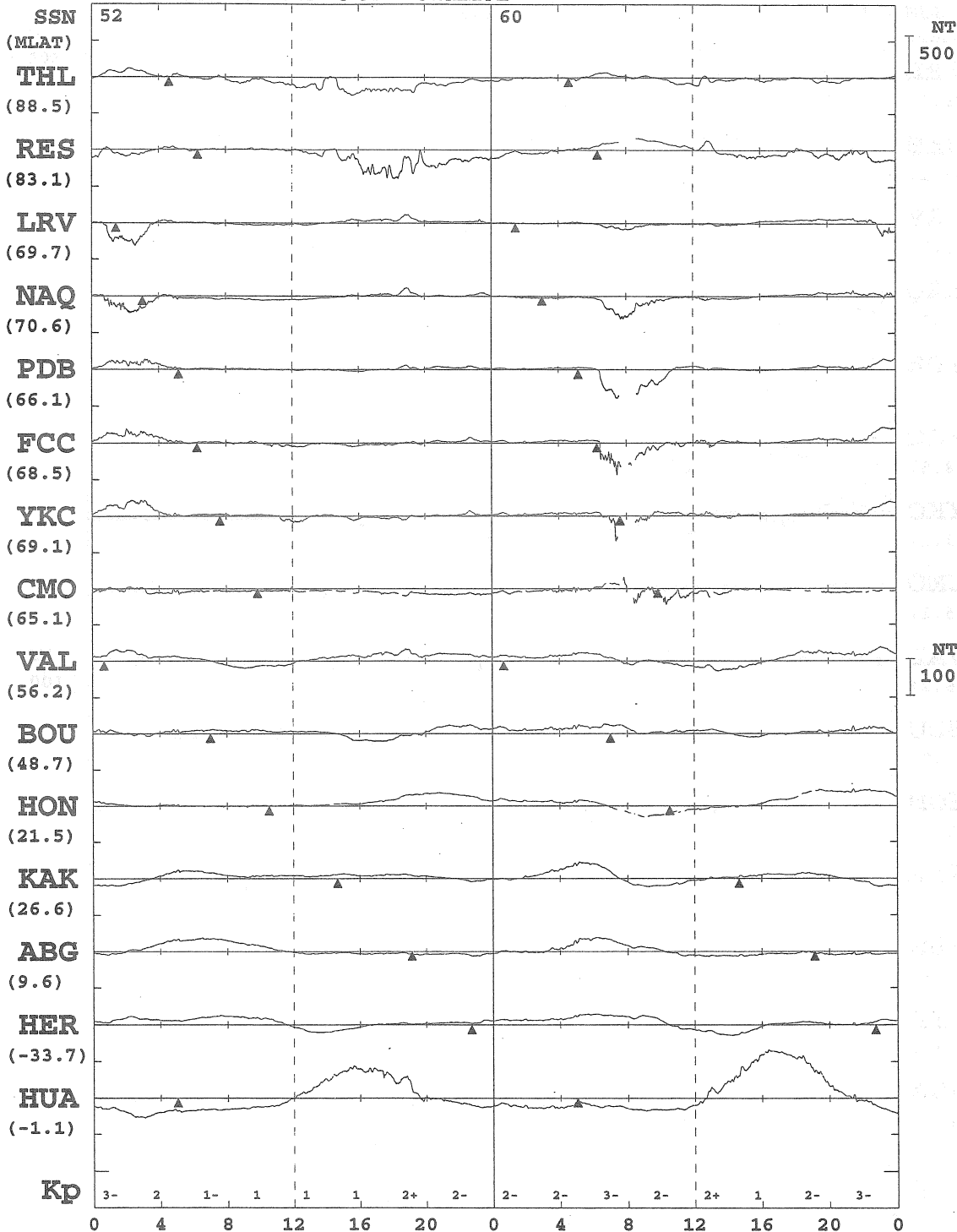
▲ : LOCAL MIDNIGHT



* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

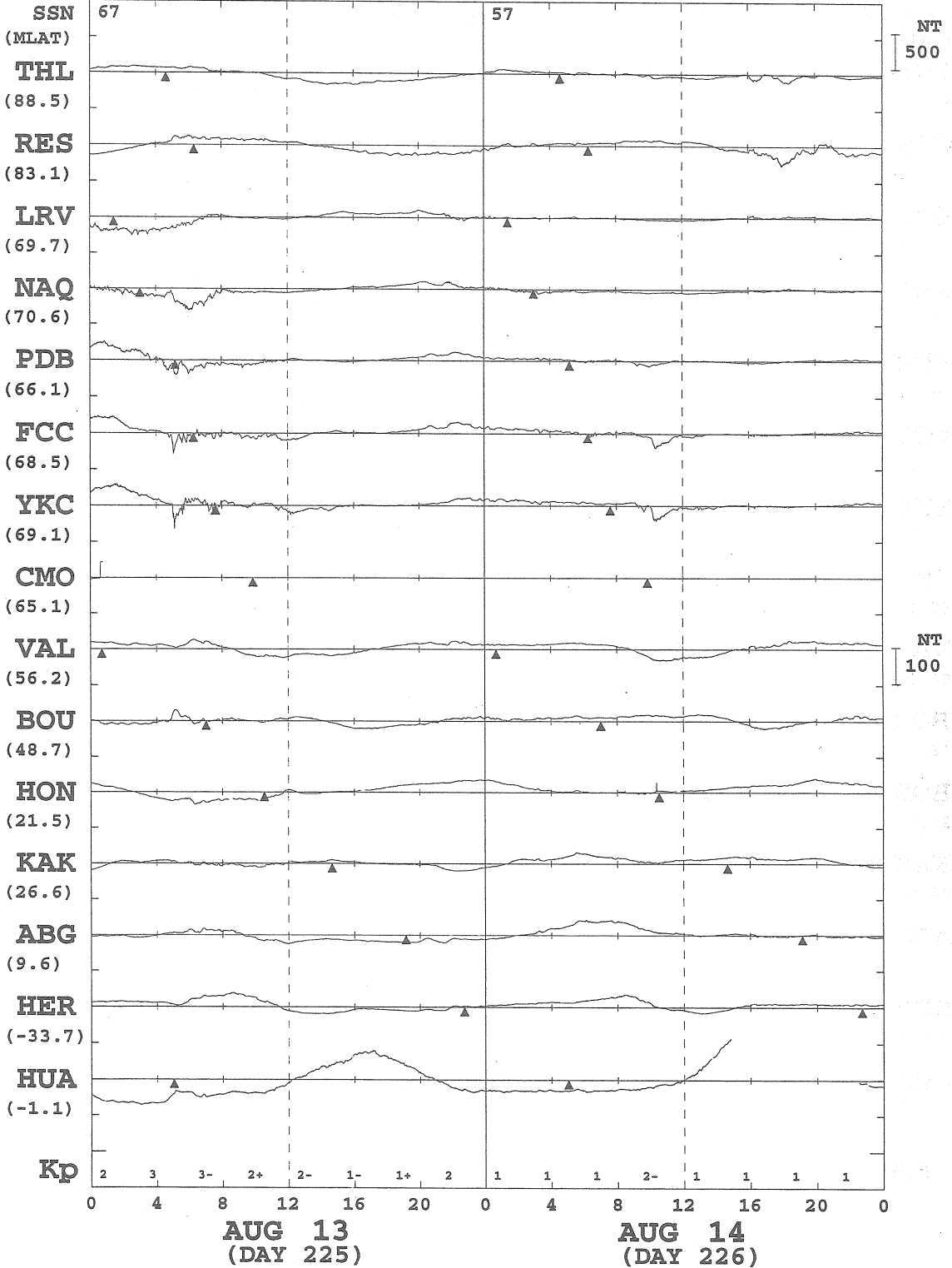


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KYOTO UNIV.

1999 H OR X-COMPONENT

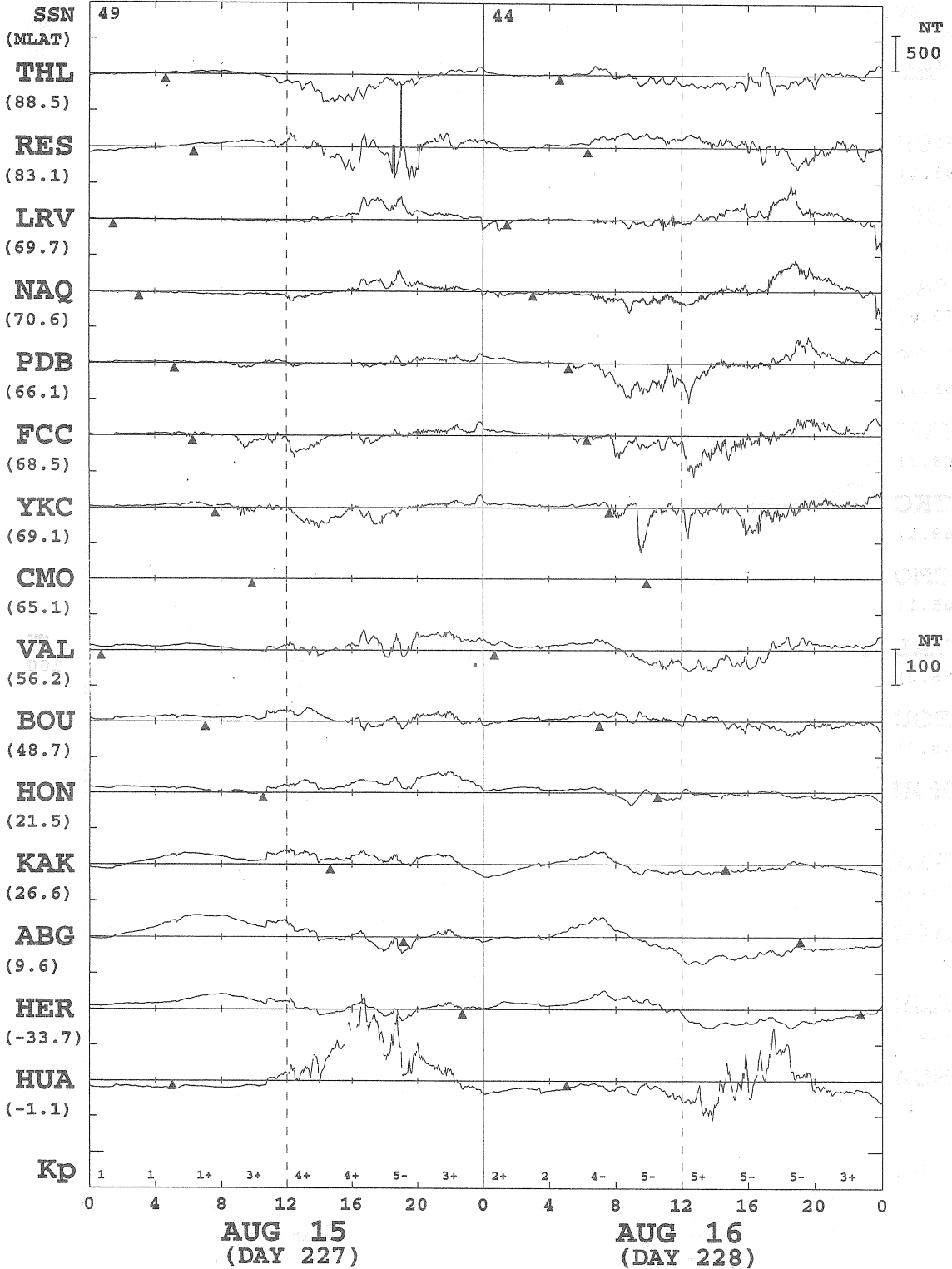
▲ : LOCAL MIDNIGHT



* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

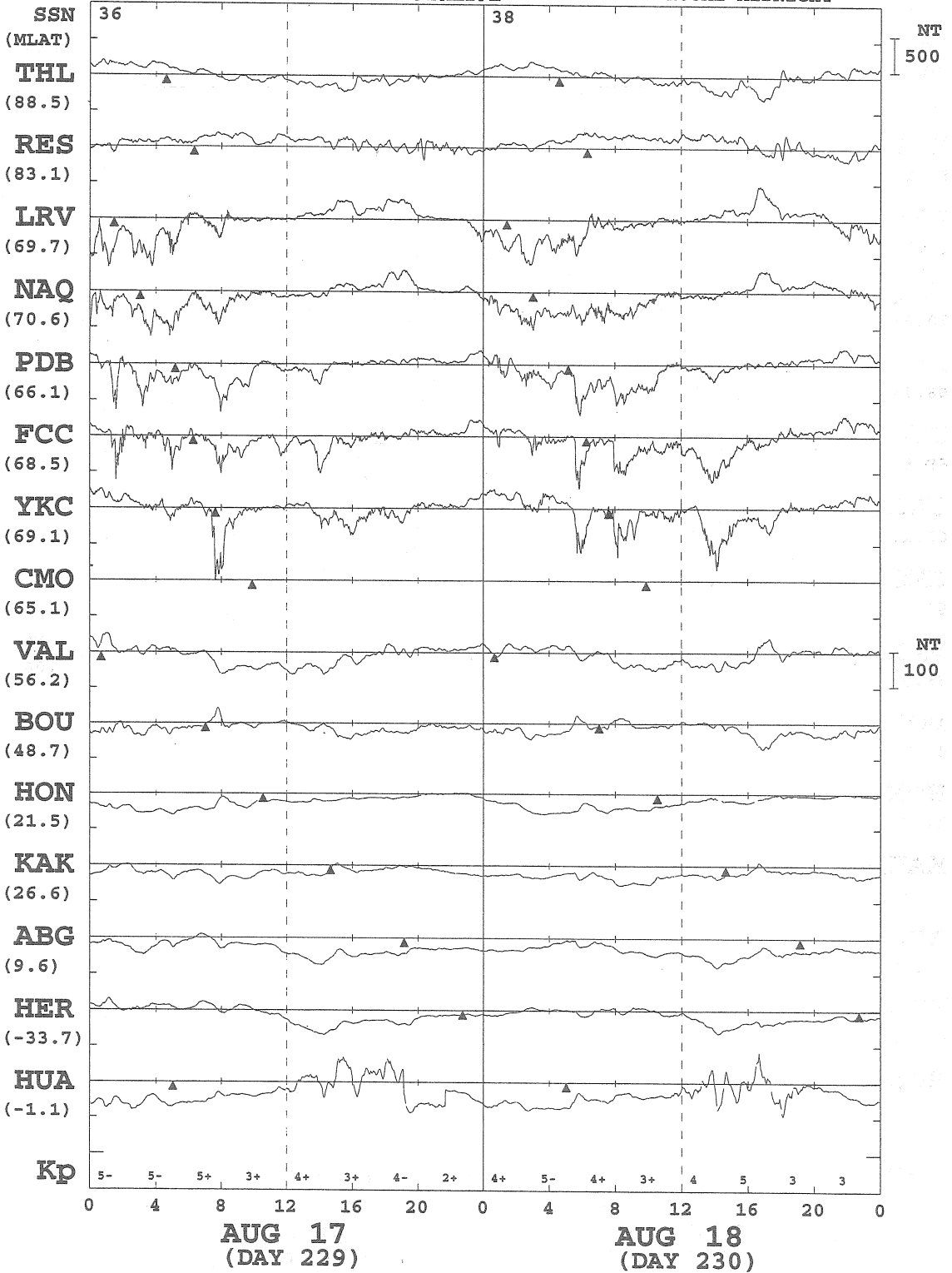


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1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

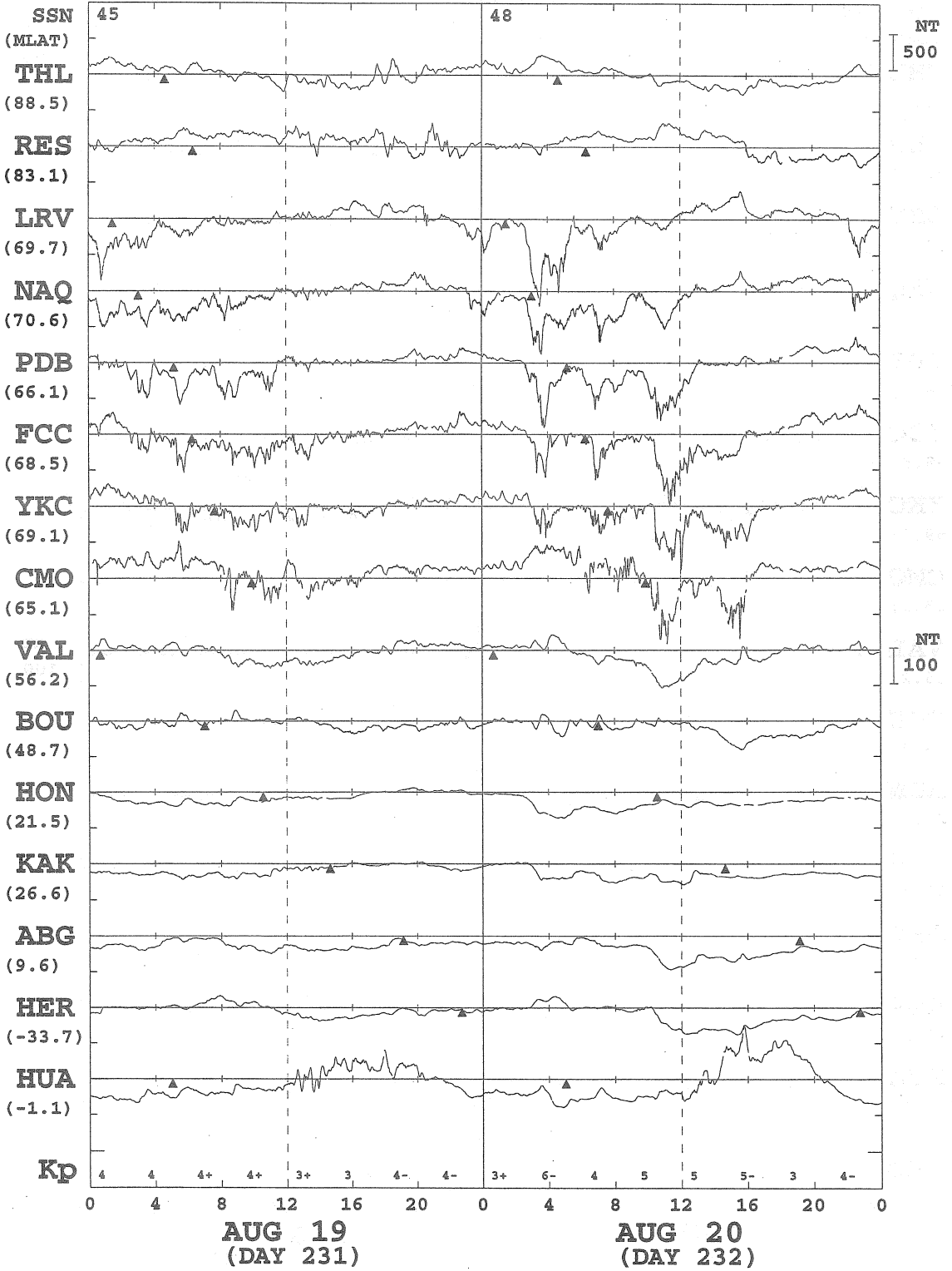


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

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1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

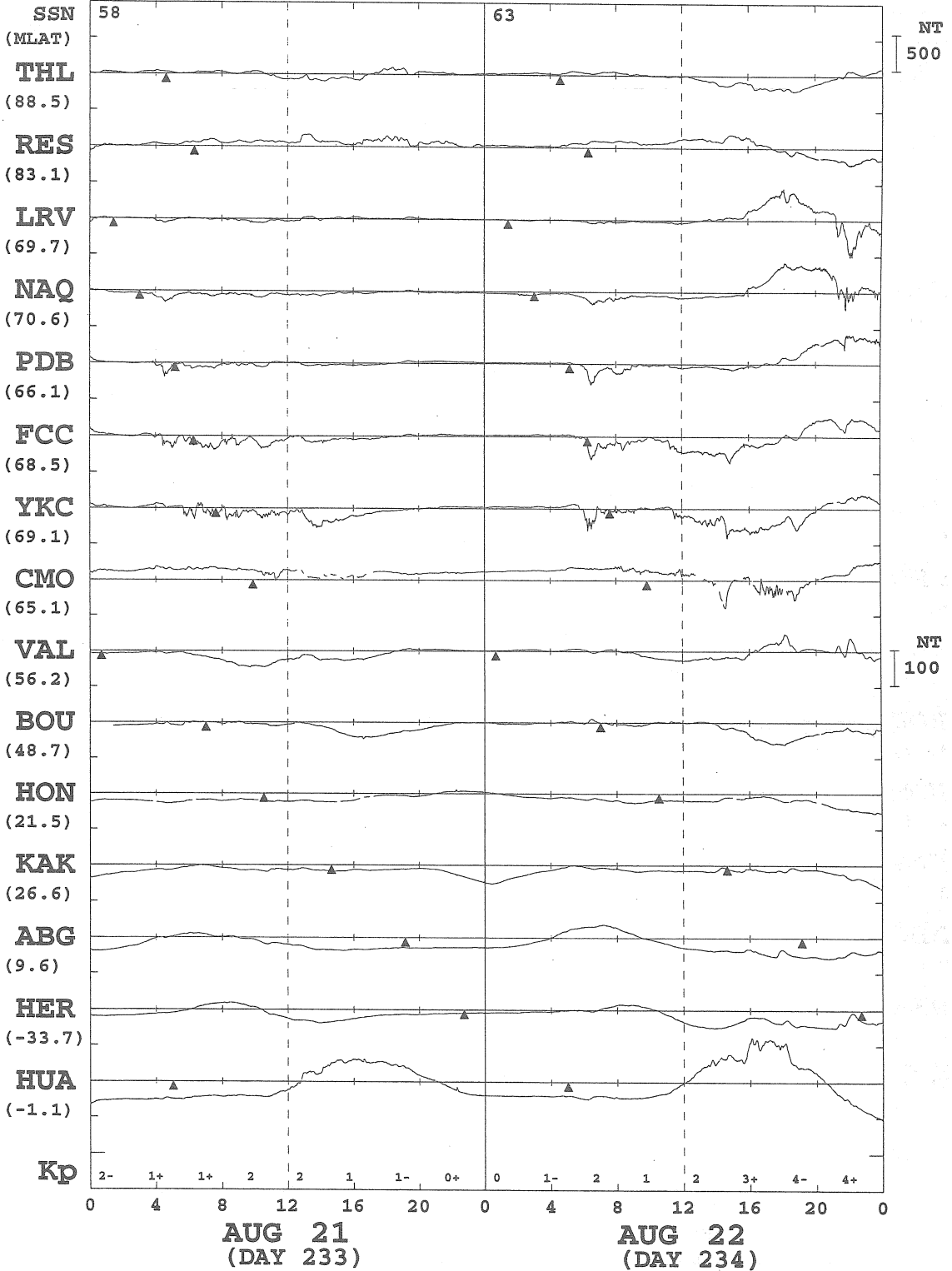


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1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

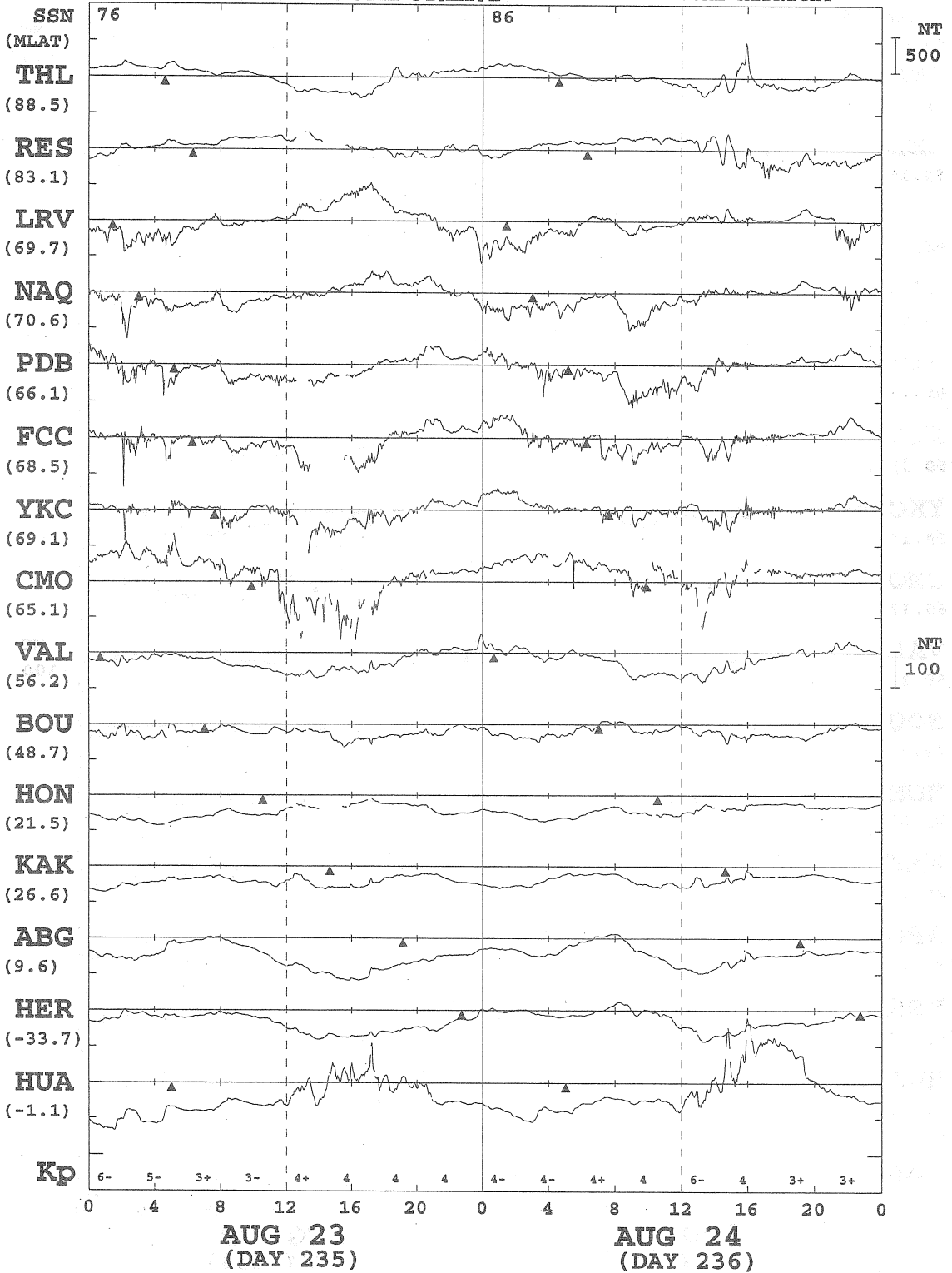


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

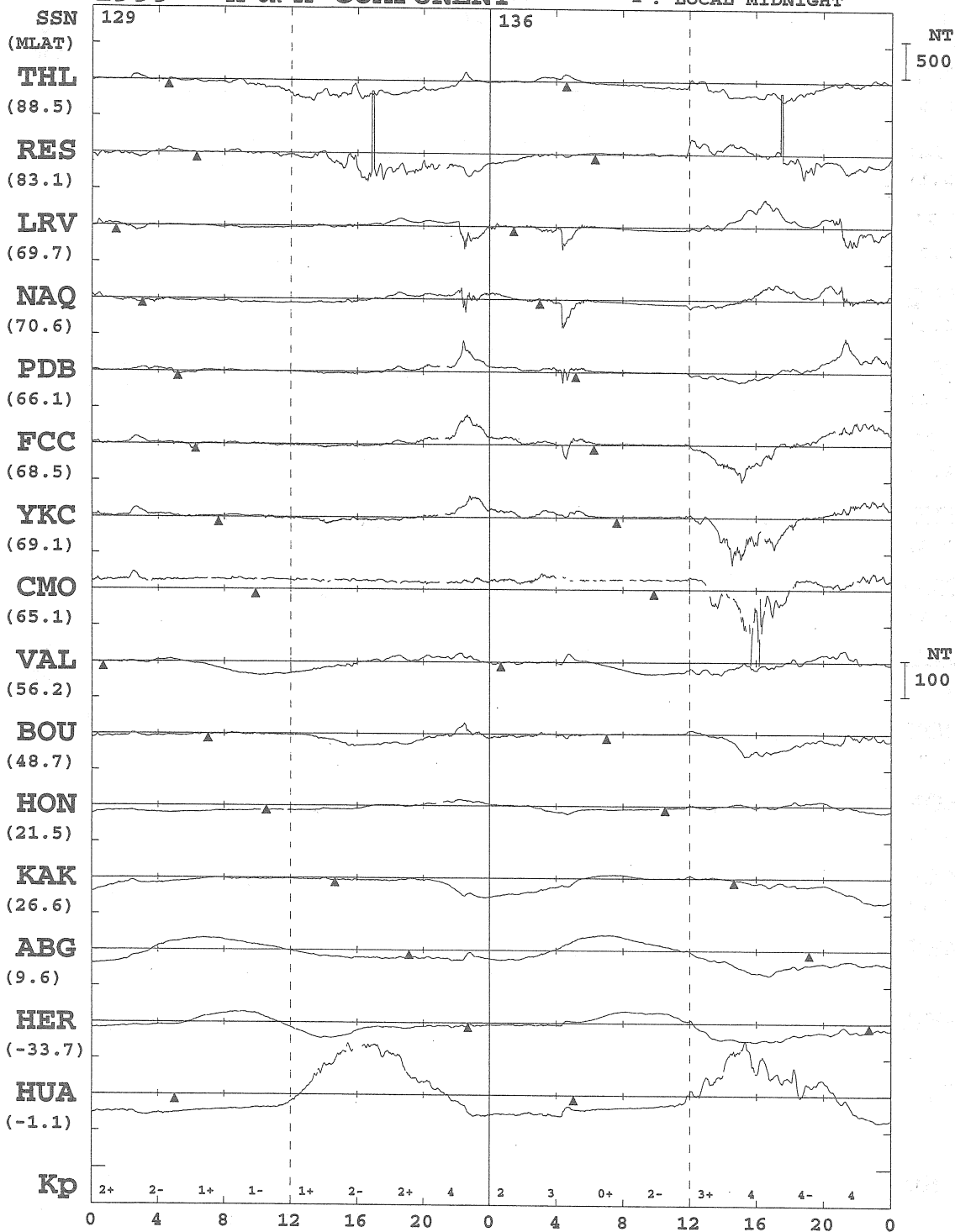


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



AUG 25
(DAY 237)

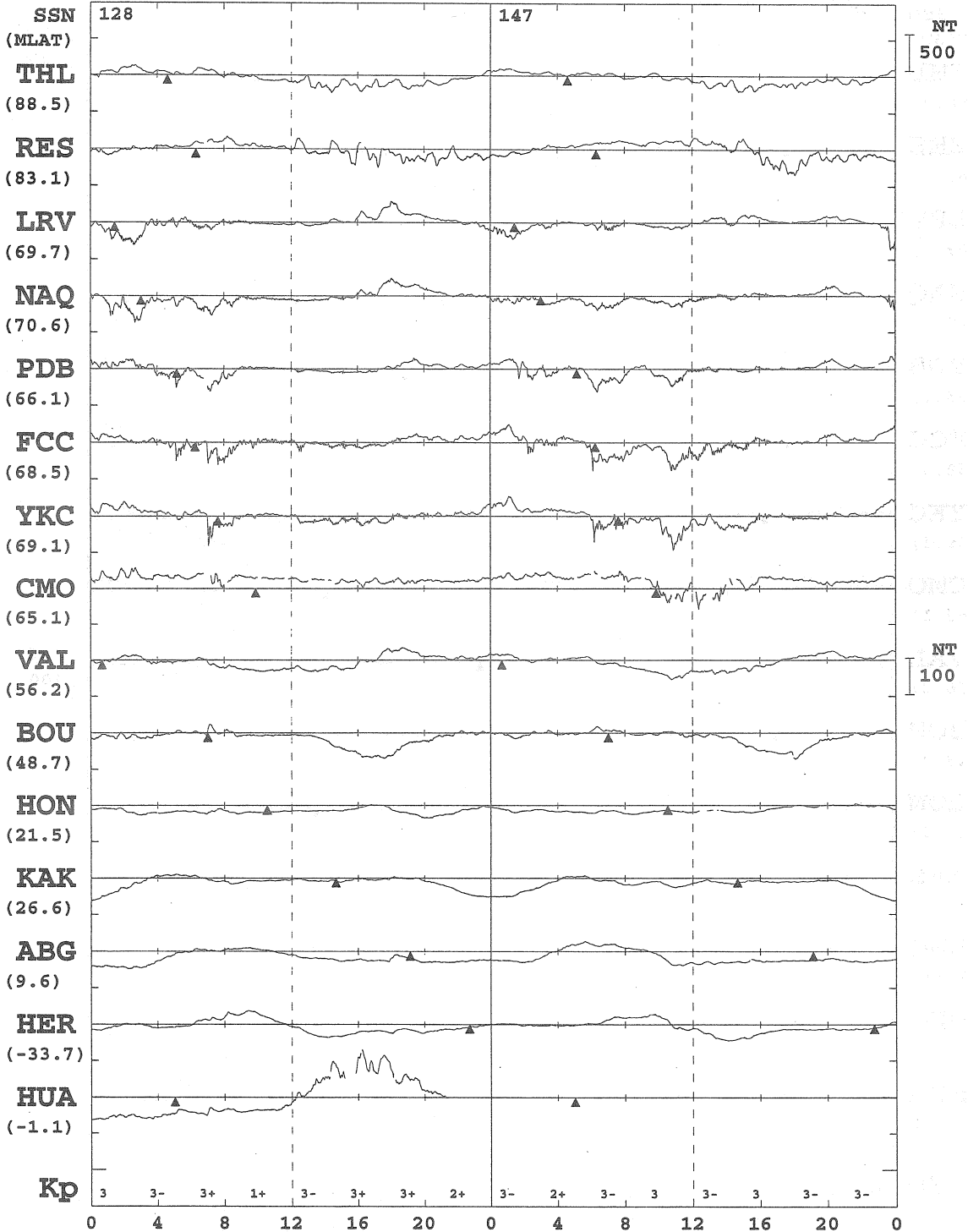
AUG 26
(DAY 238)

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

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



AUG 27
(DAY 239)

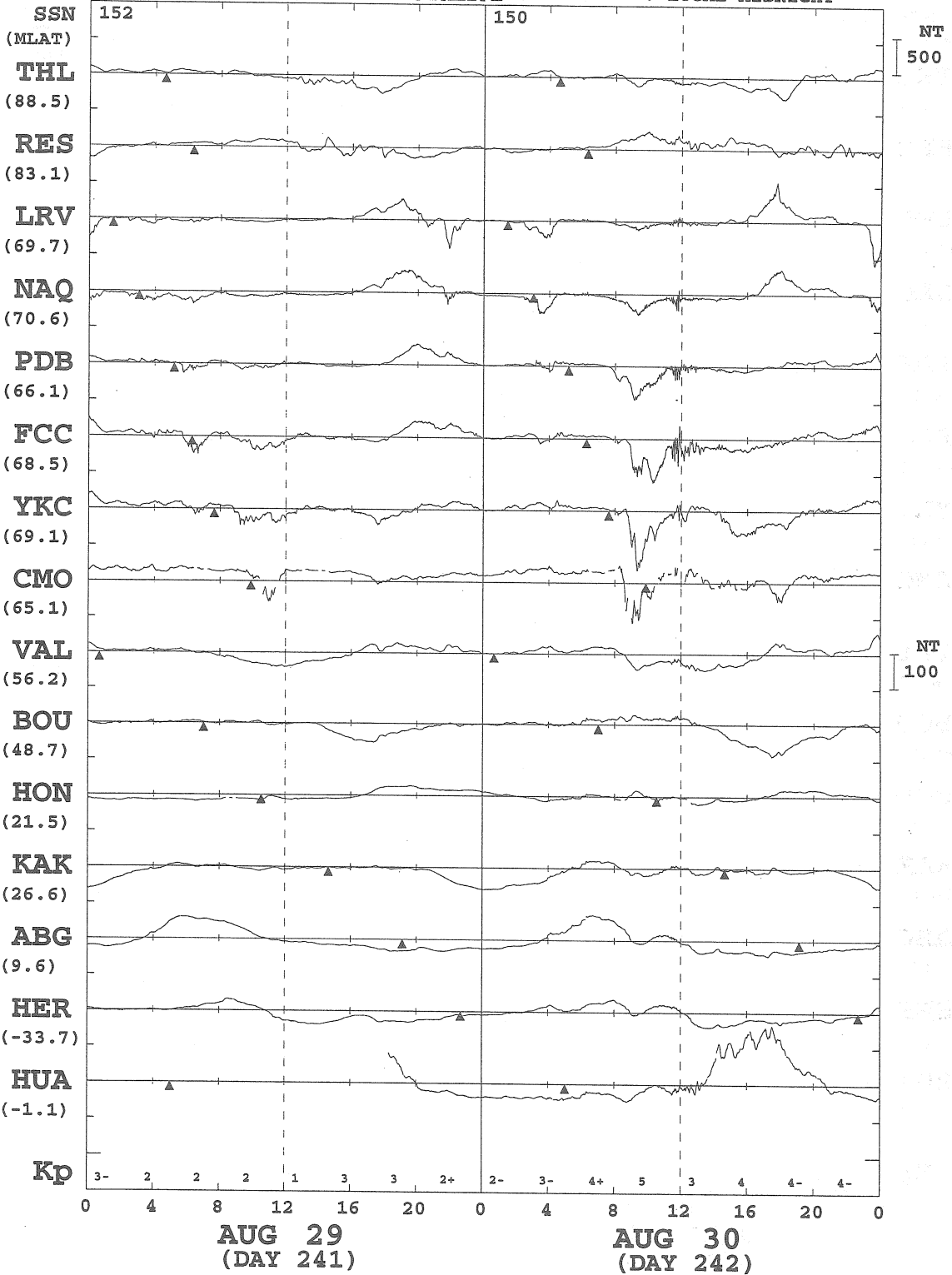
AUG 28
(DAY 240)

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

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

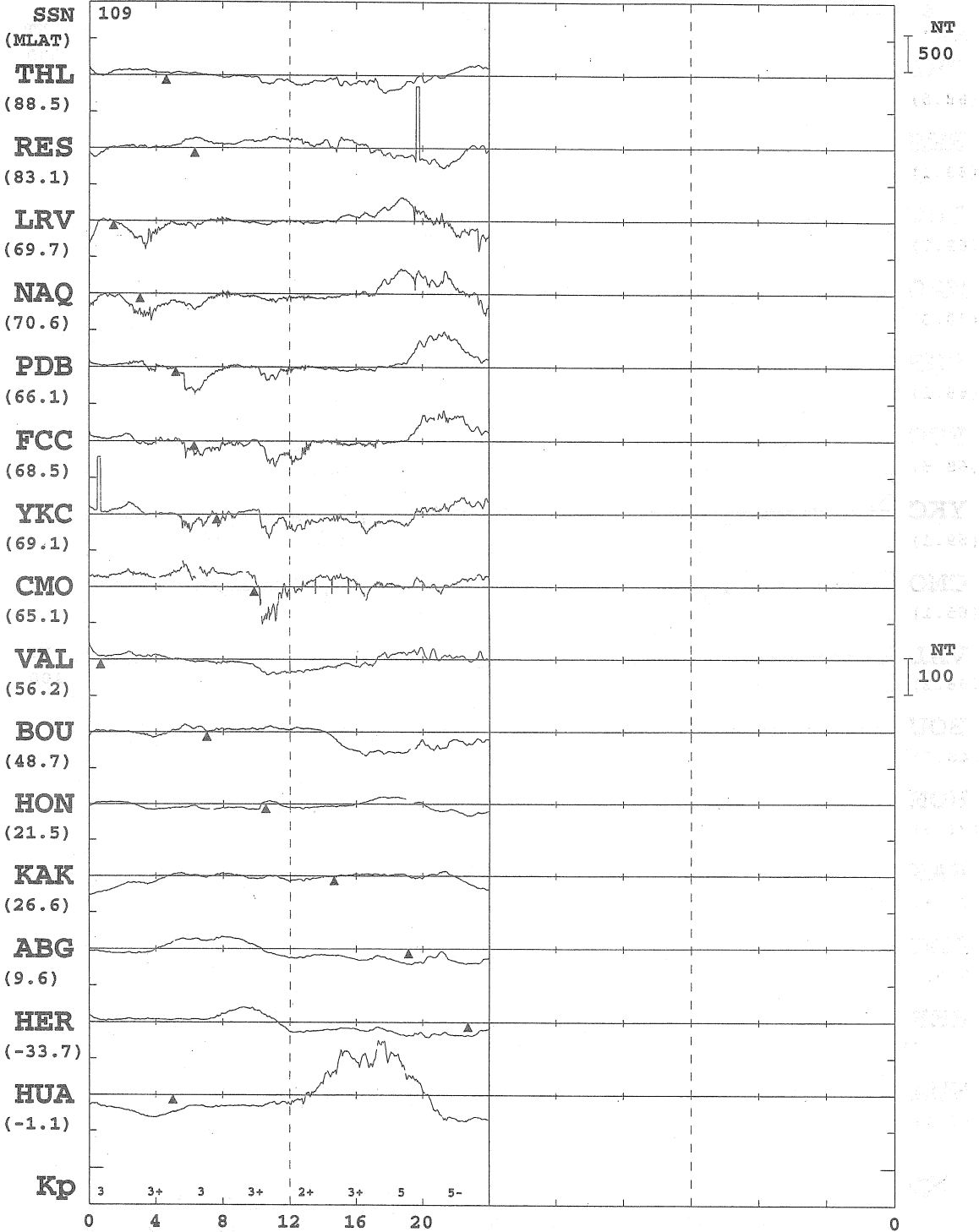


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



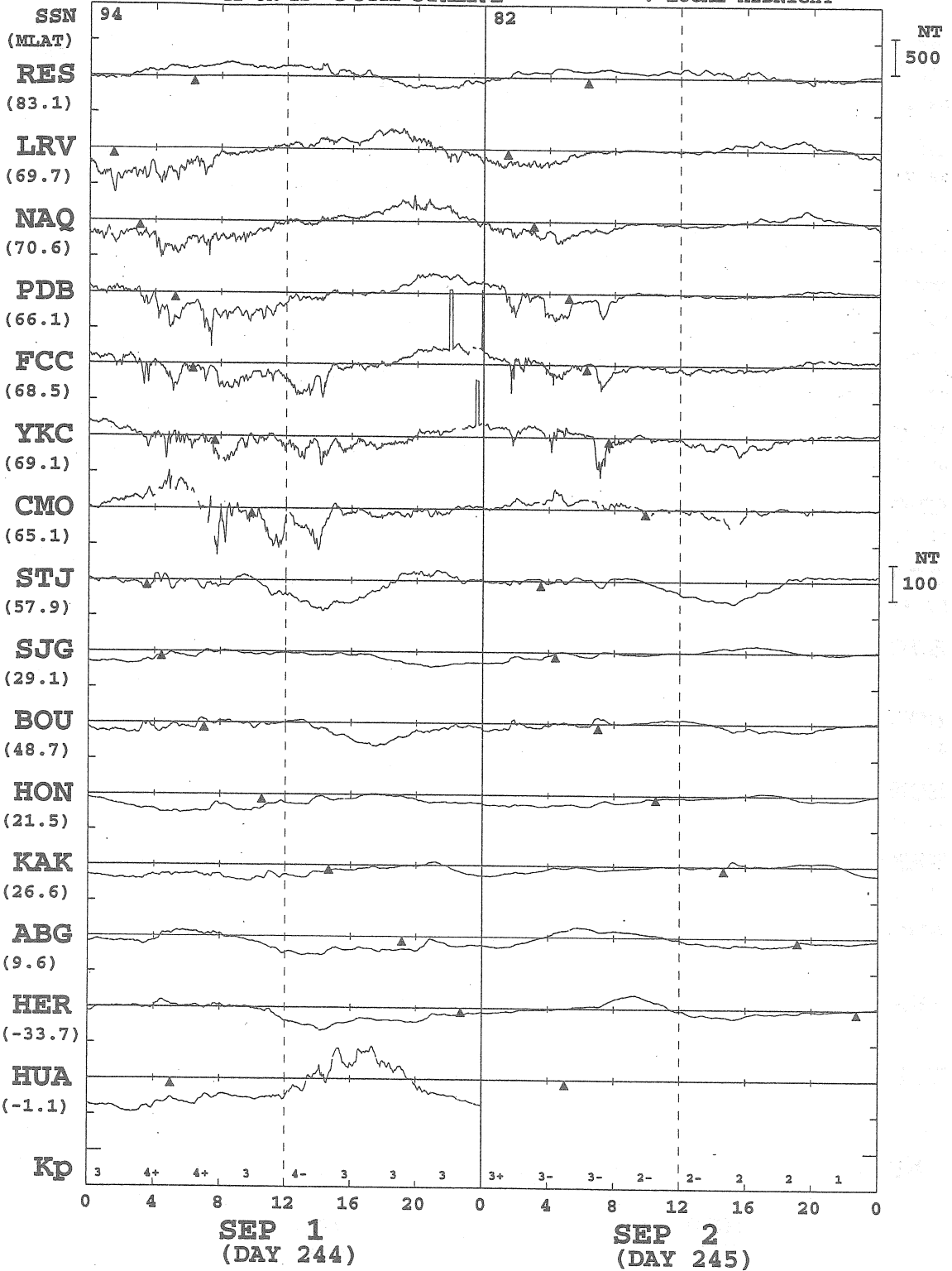
AUG 31
(DAY 243)

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

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

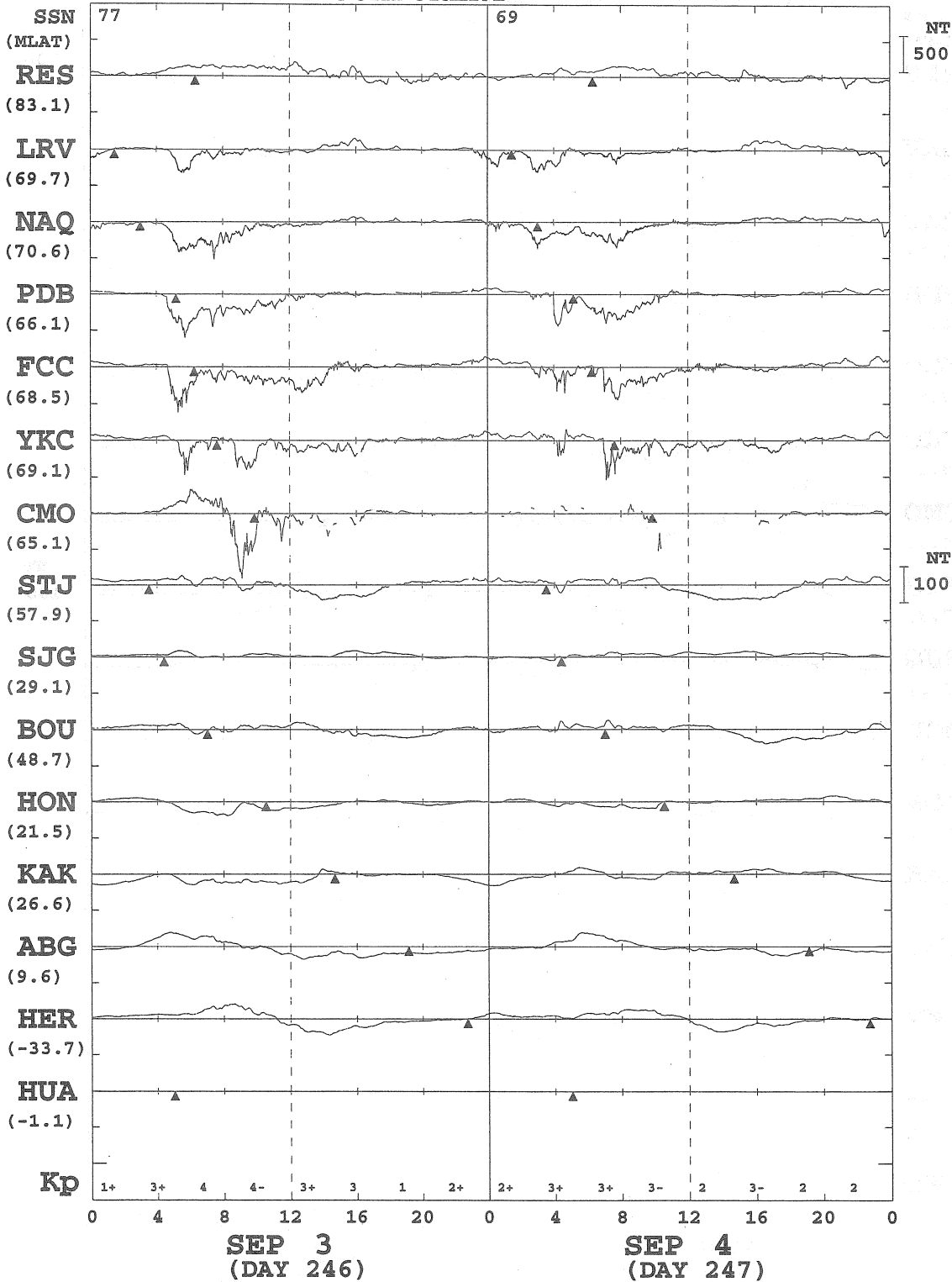


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

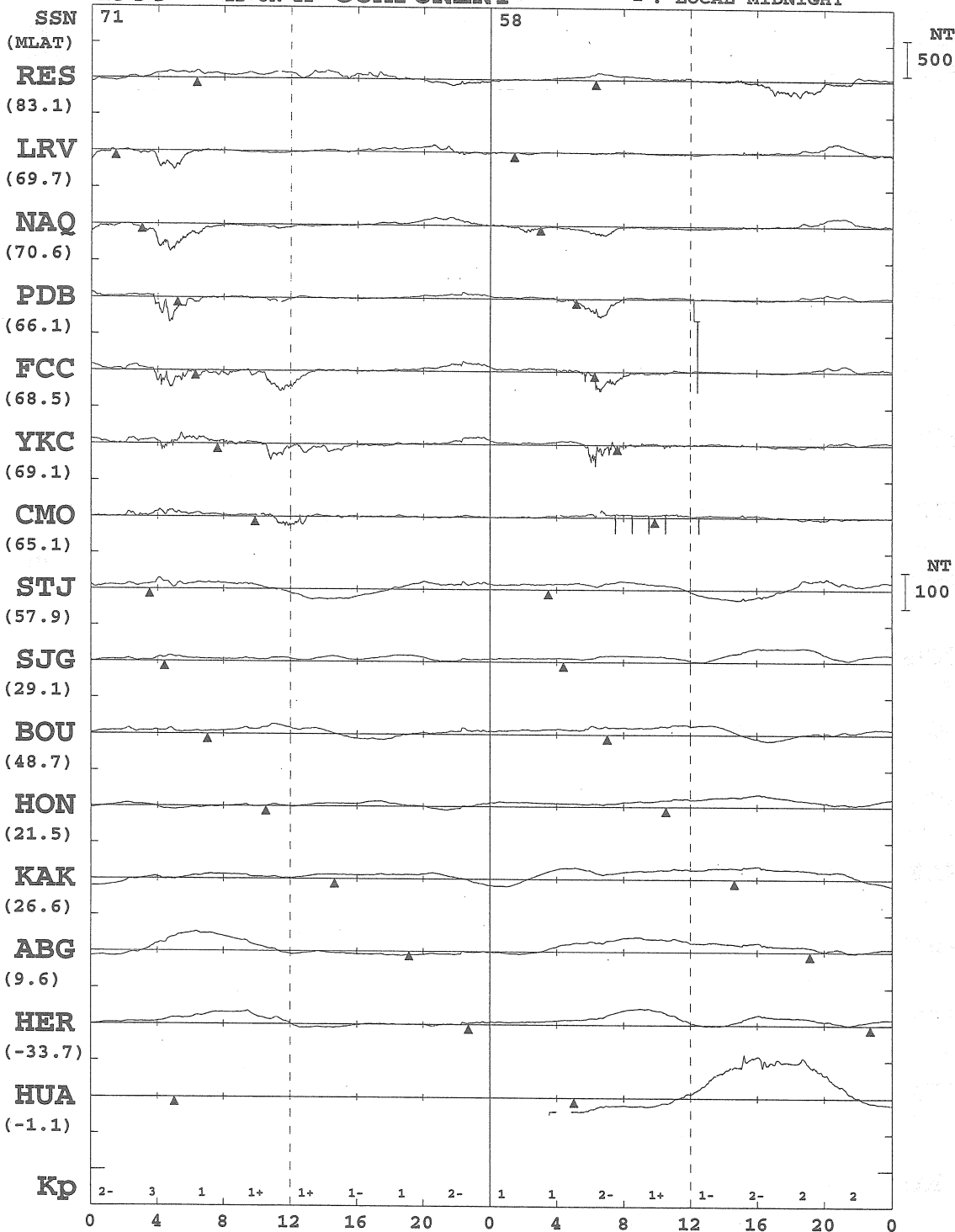


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

△ : LOCAL MIDNIGHT



SEP 5
(DAY 248)

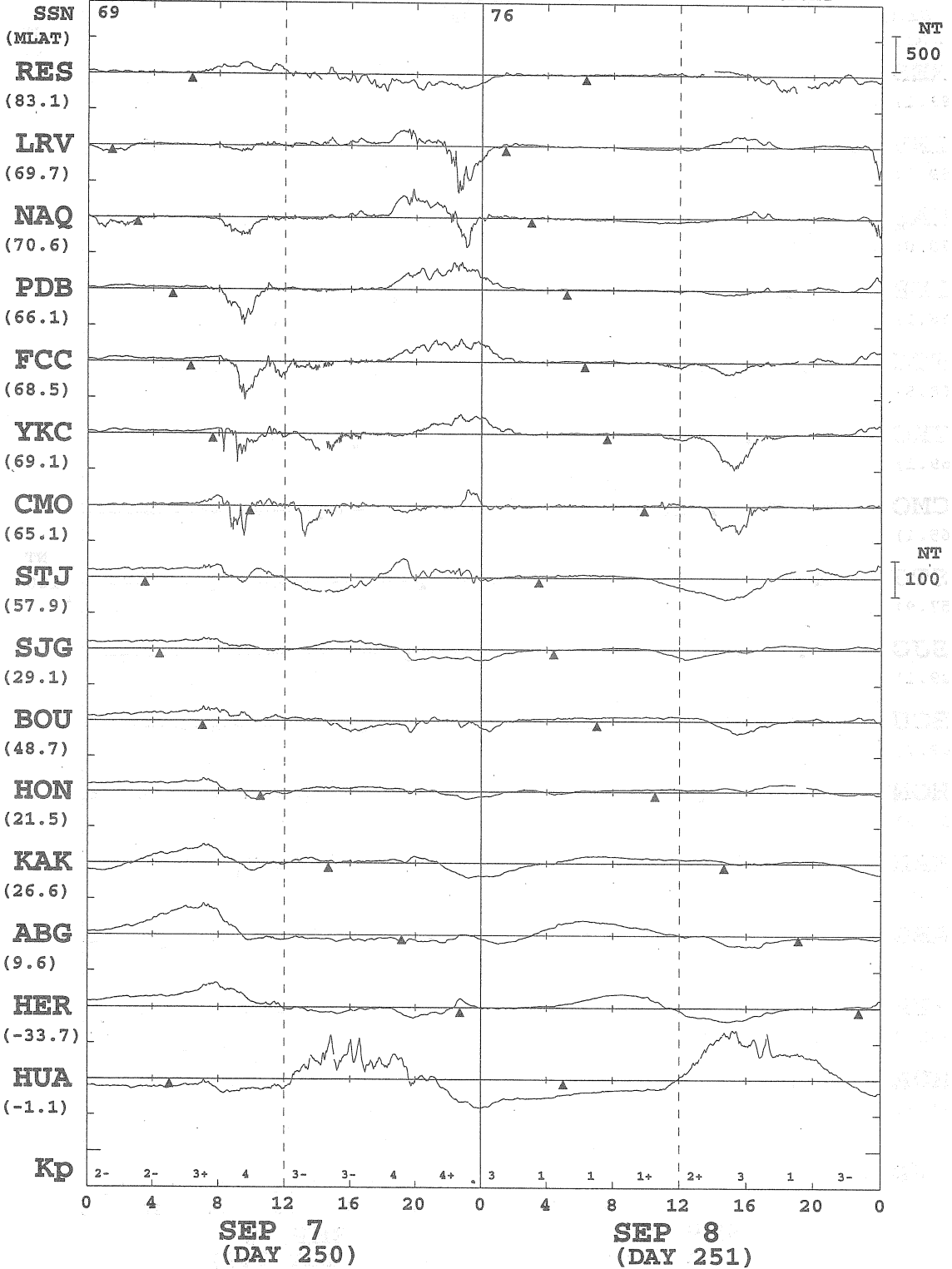
SEP 6
(DAY 249)

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

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

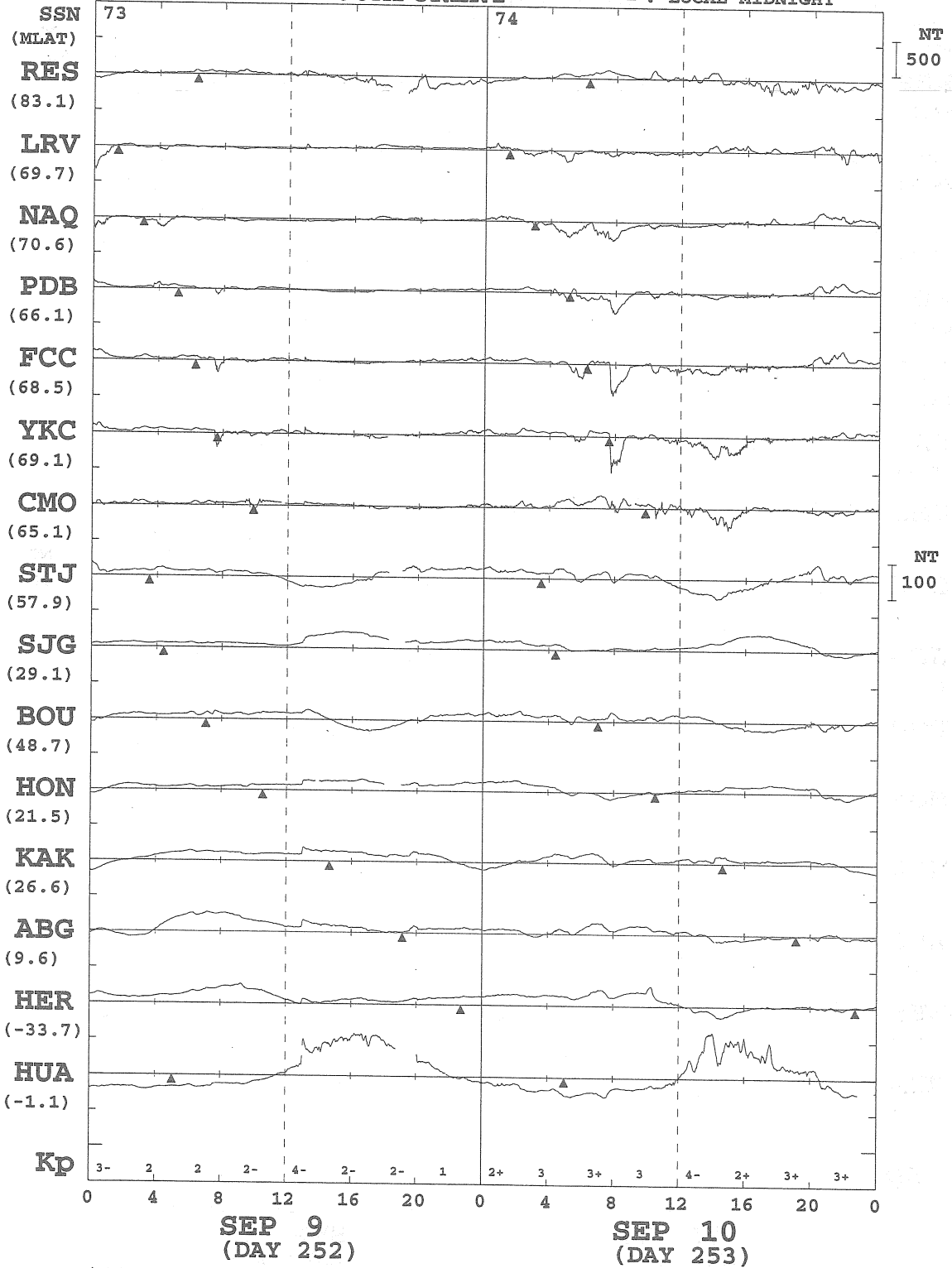


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

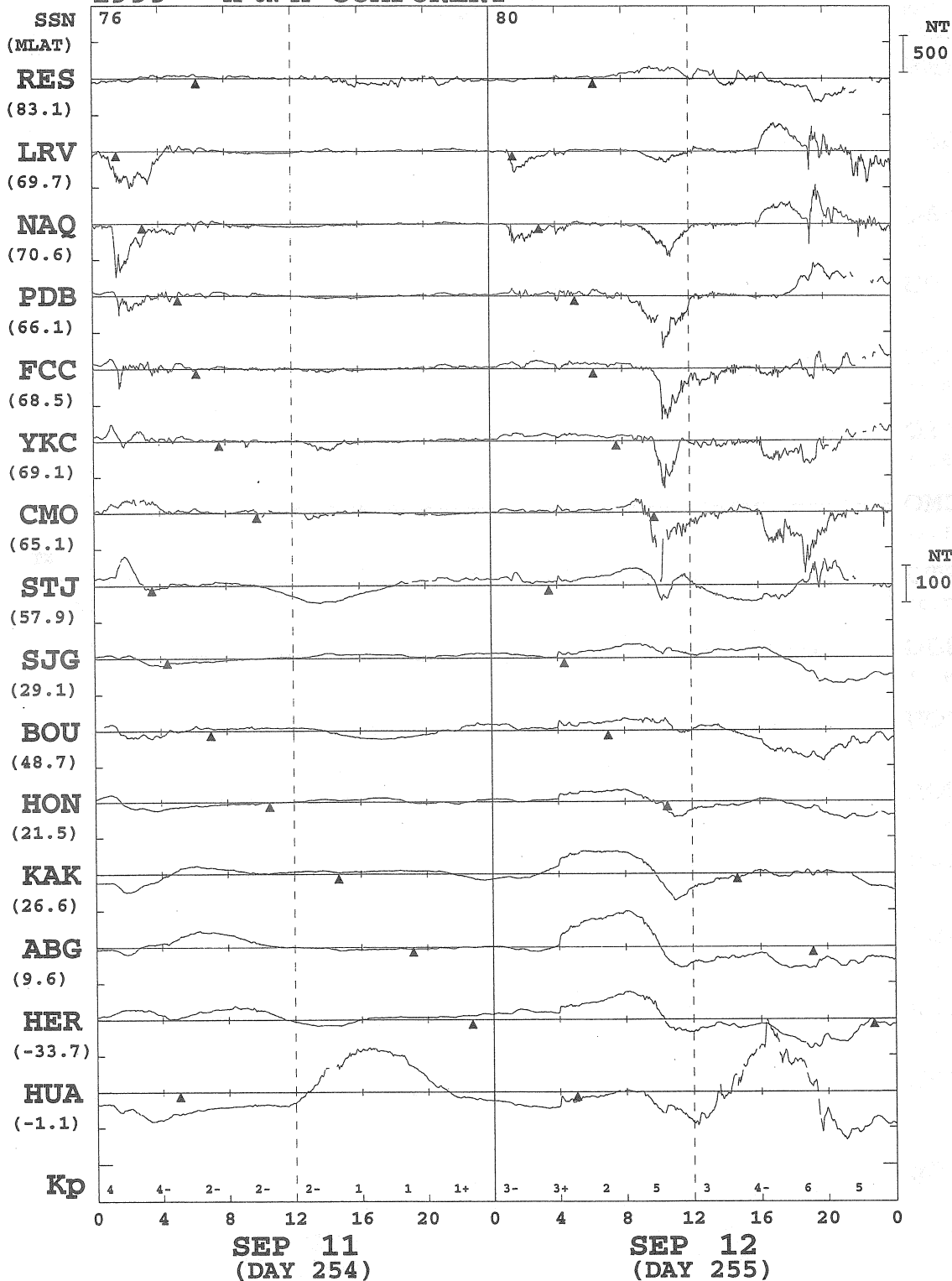


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

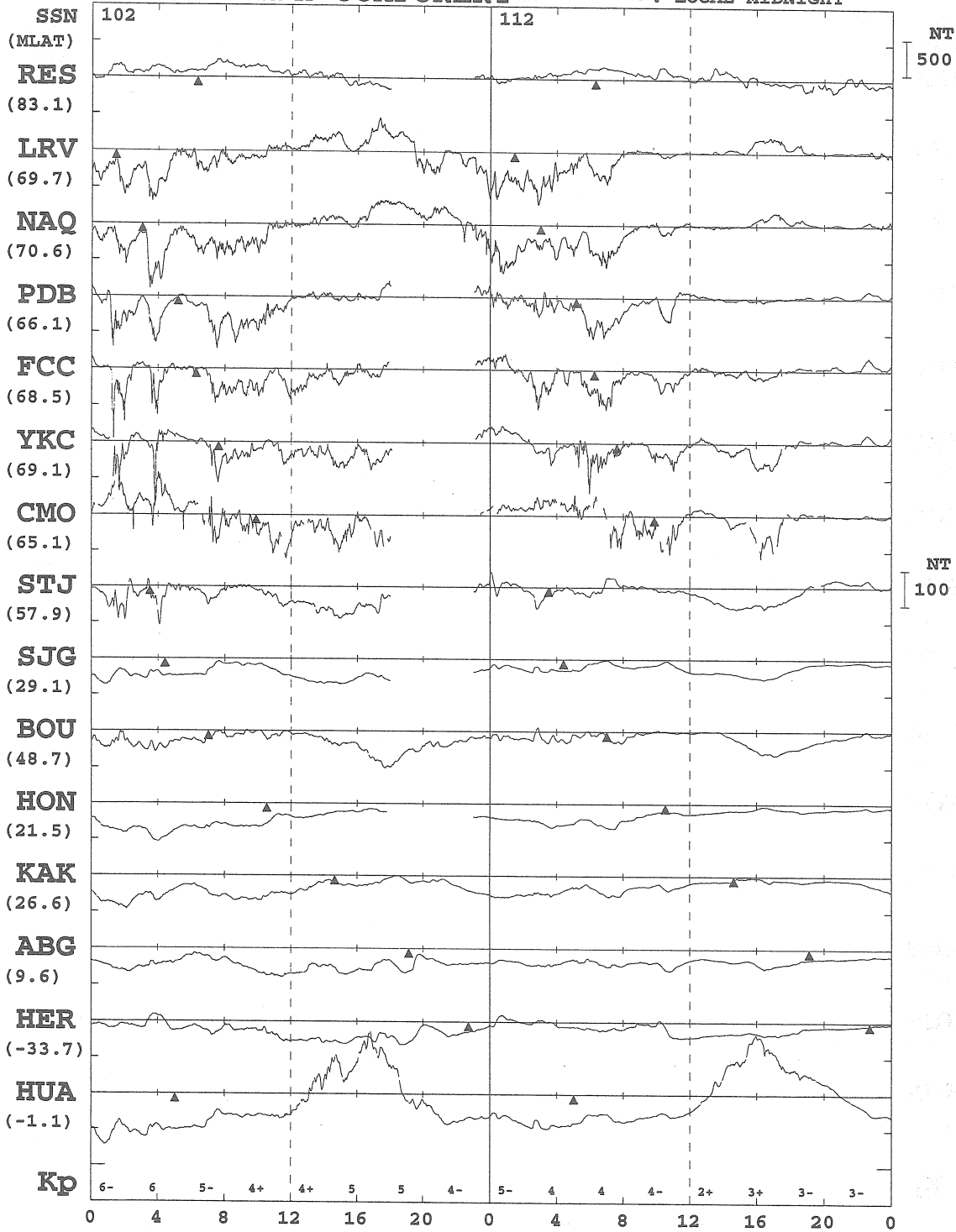


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



SEP 13
(DAY 256)

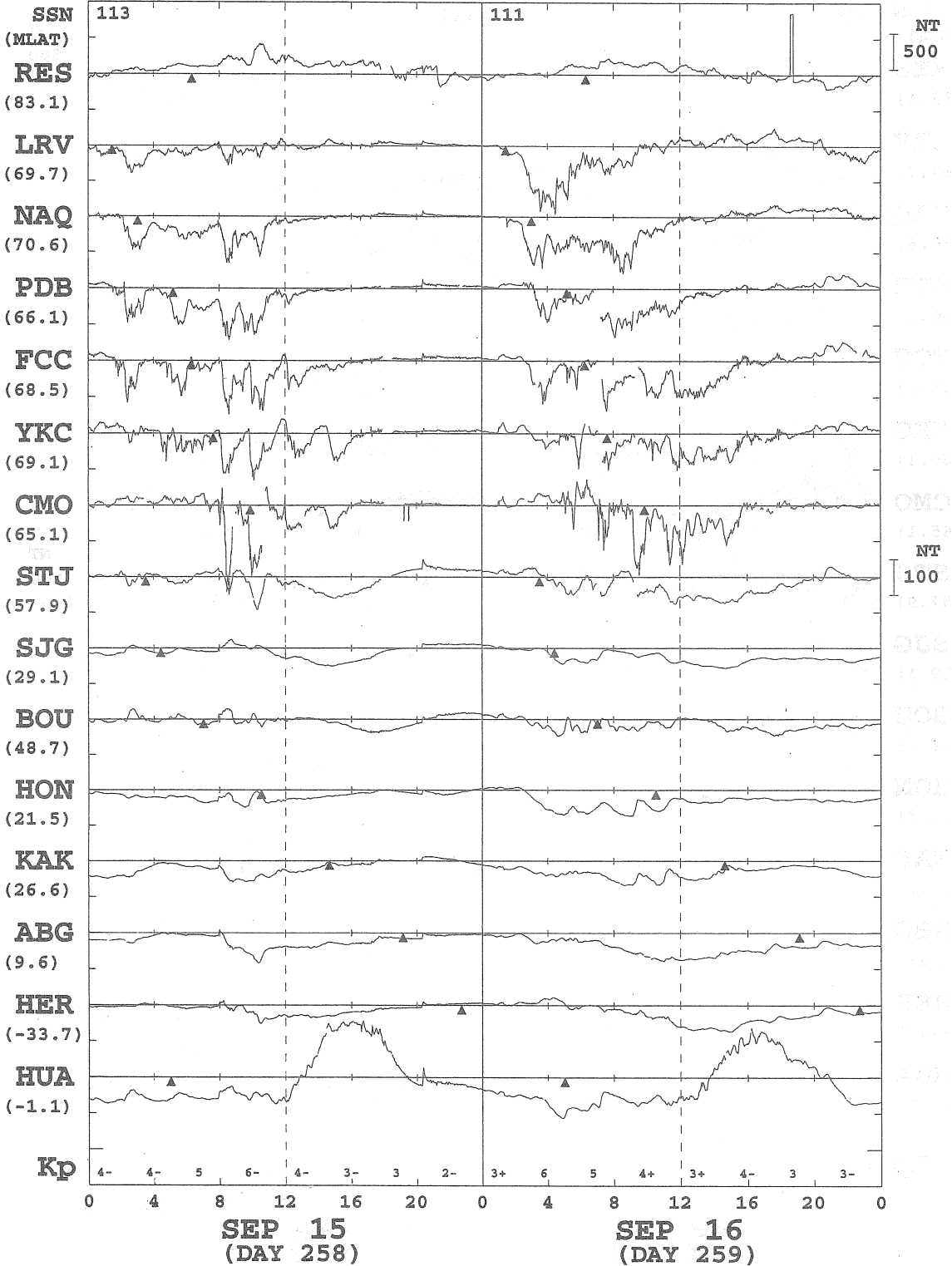
SEP 14
(DAY 257)

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

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

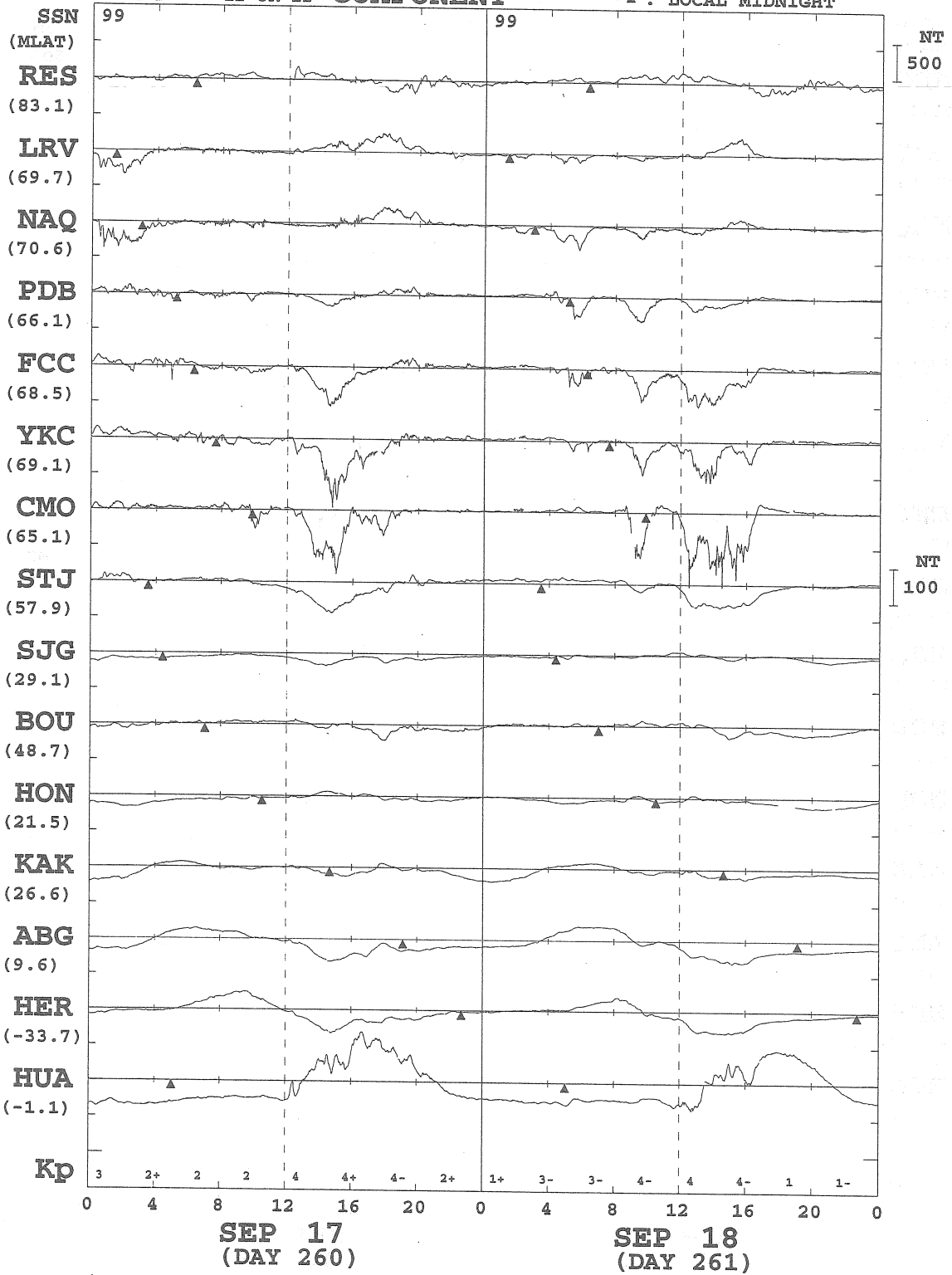


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

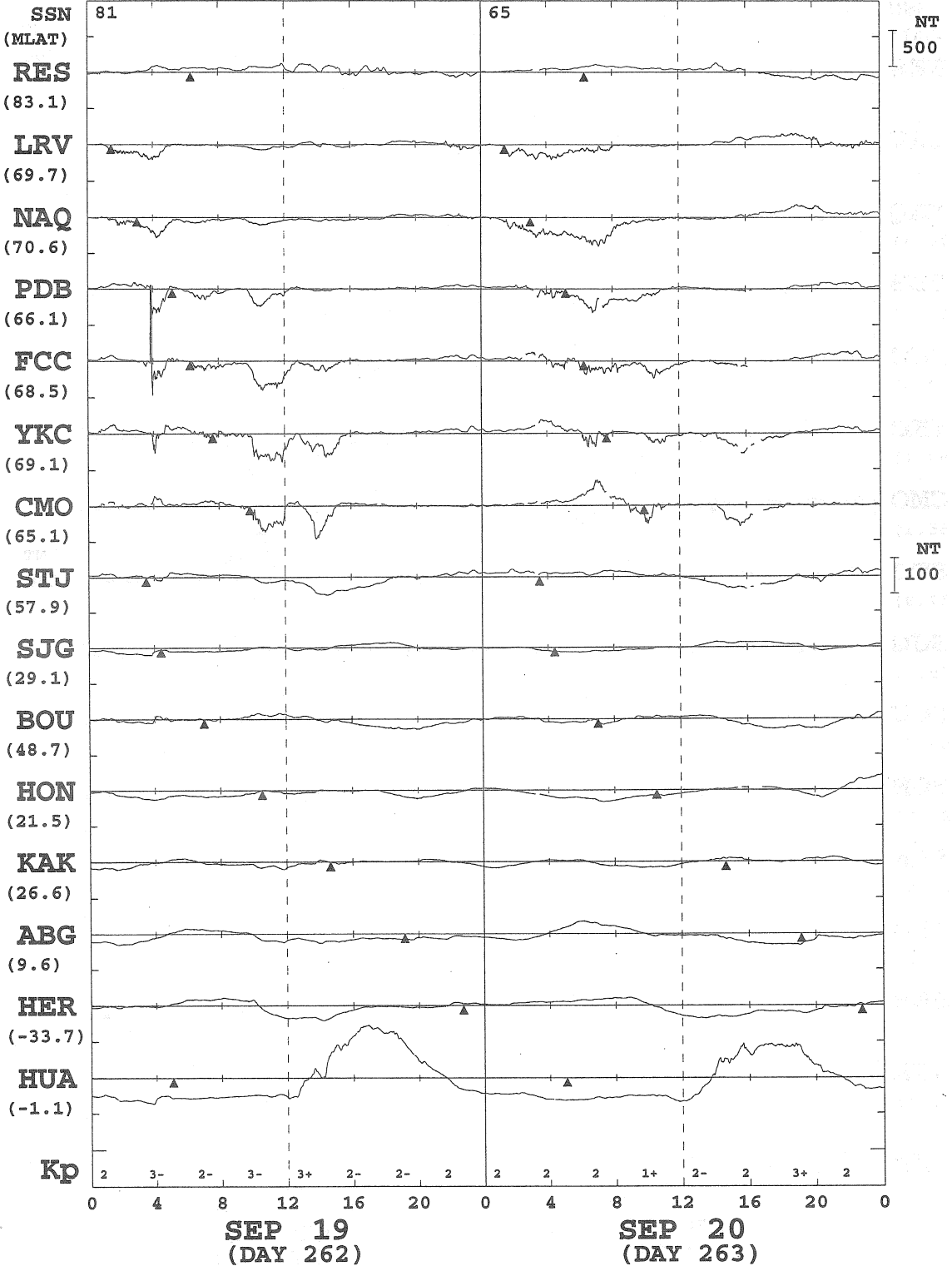


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
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KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

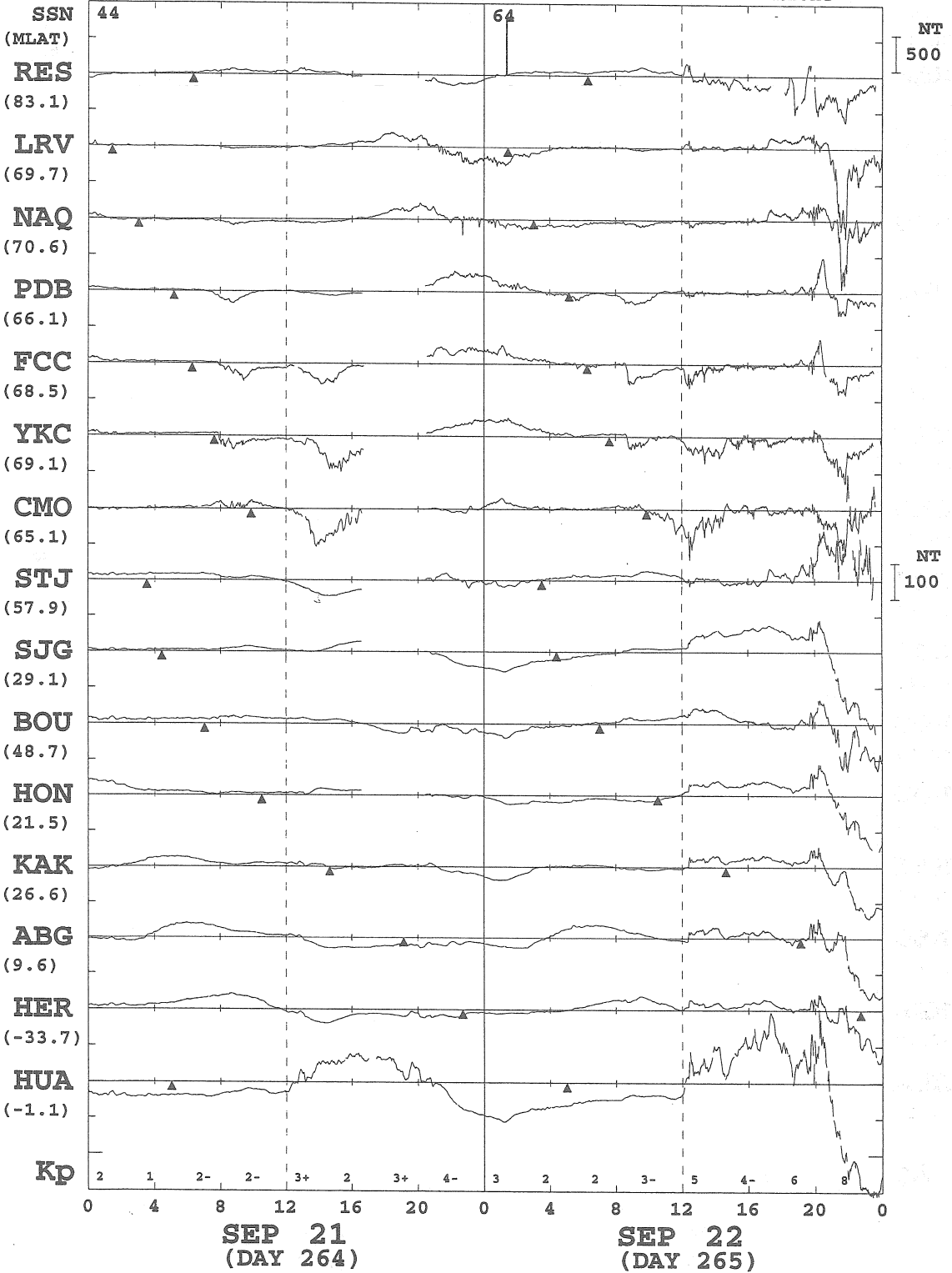


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

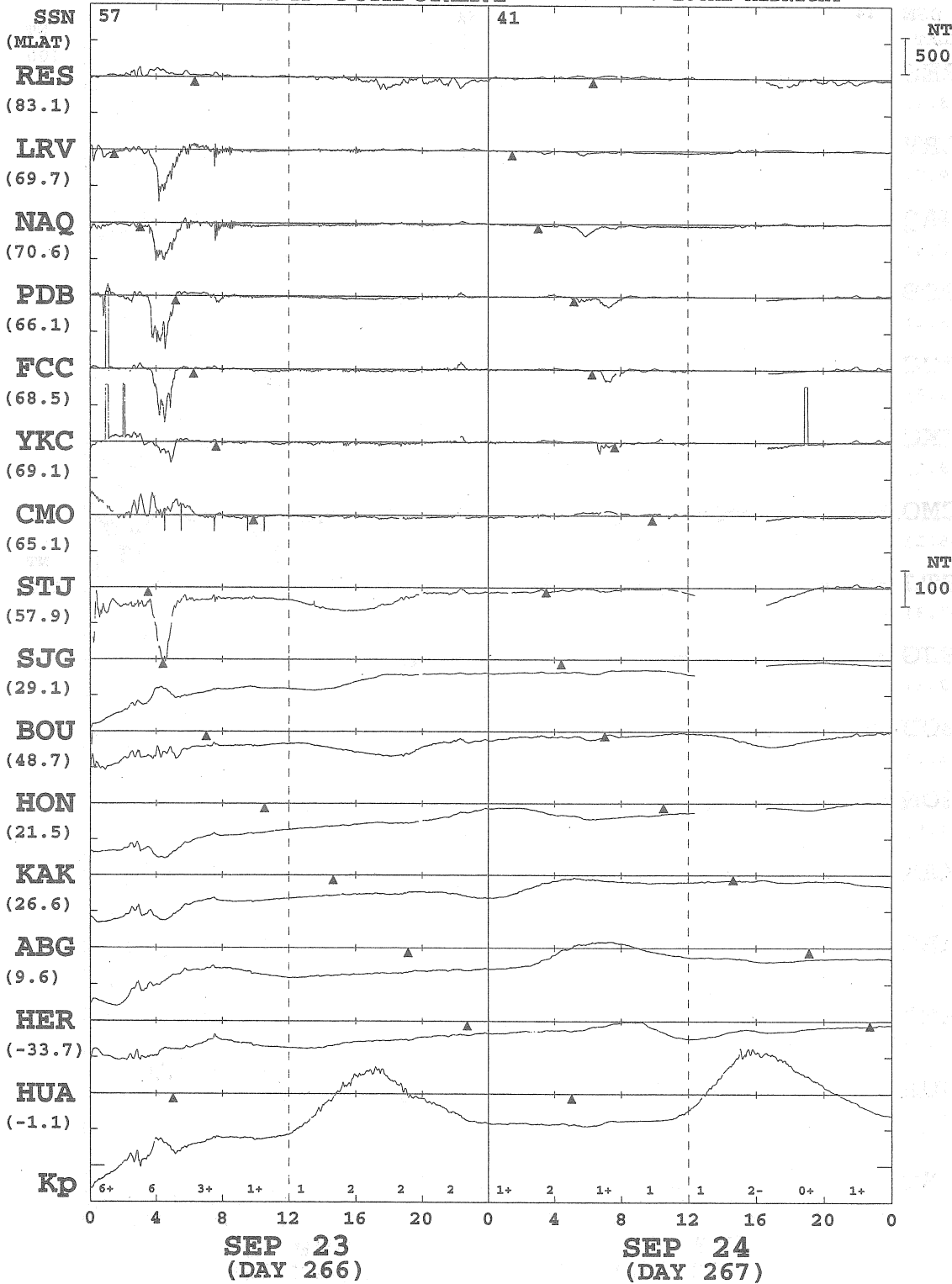


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

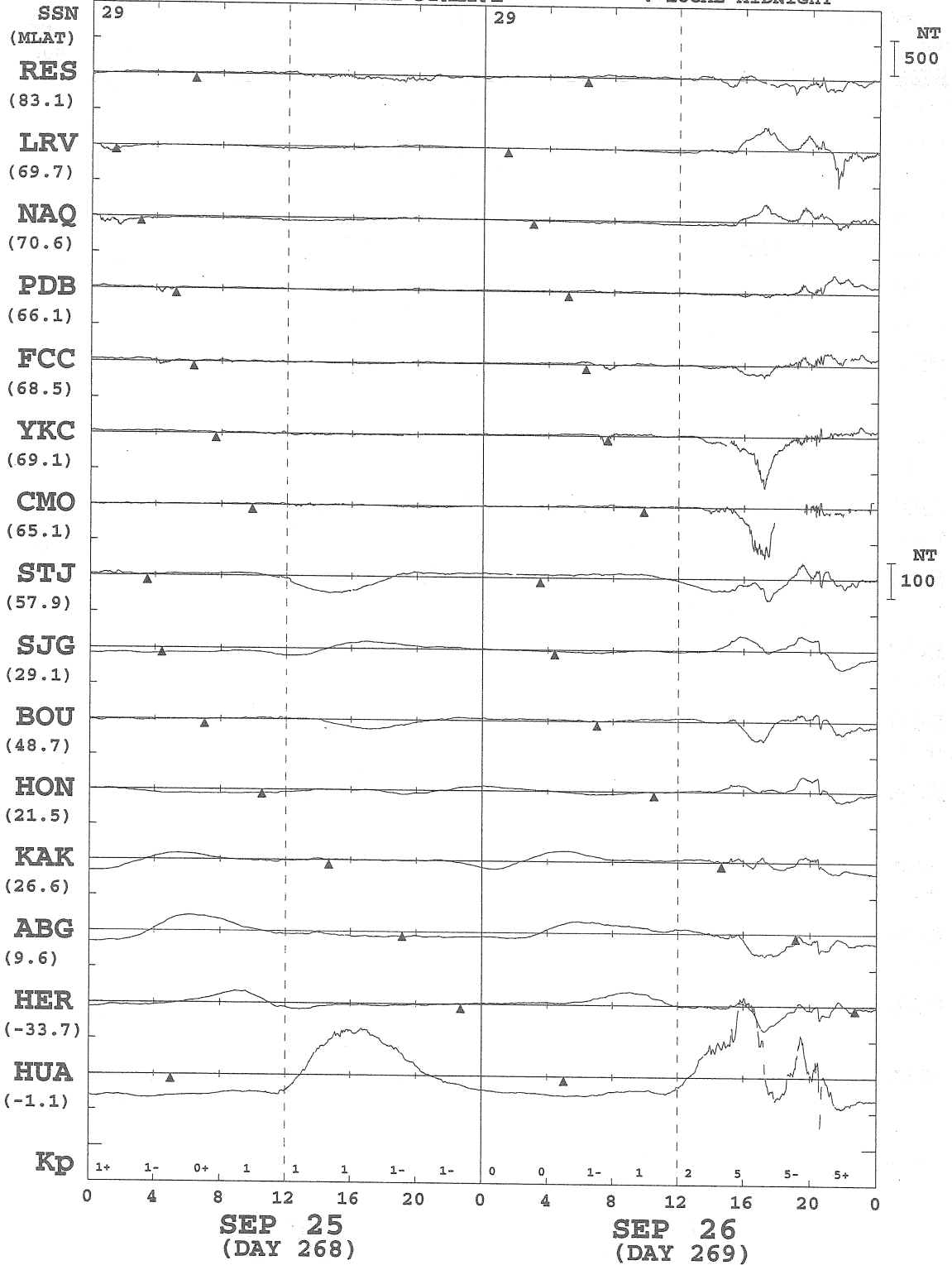


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

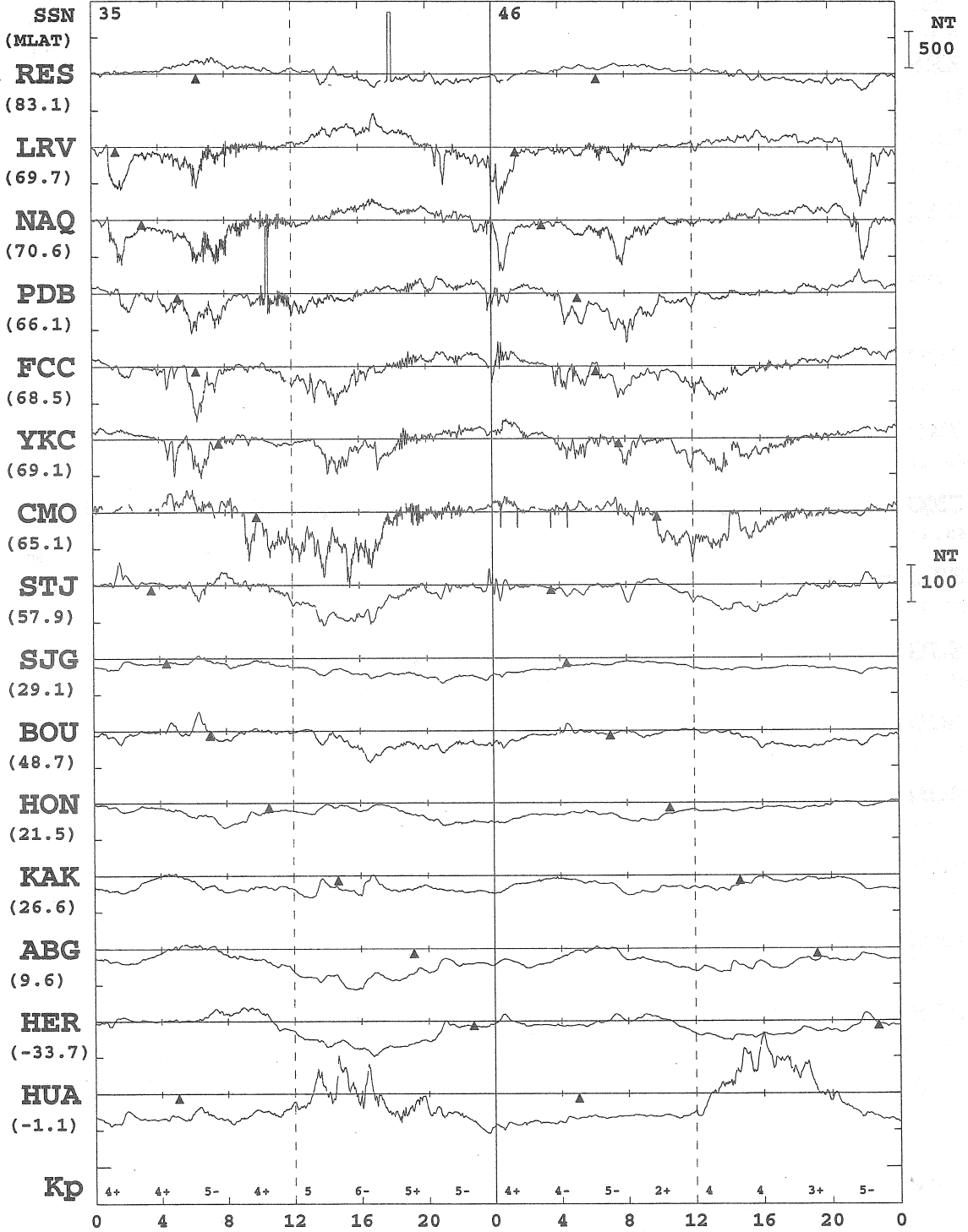


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

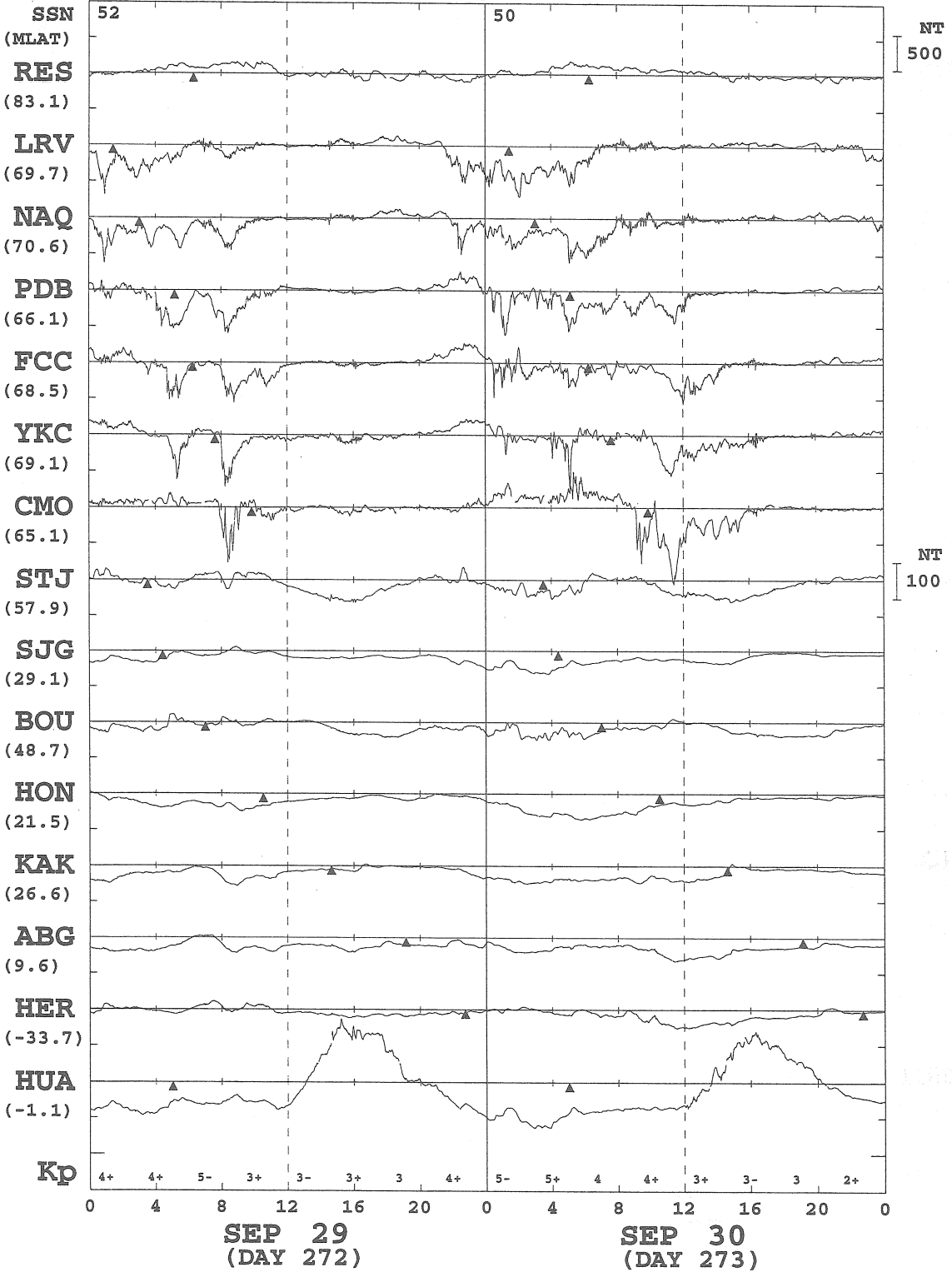


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

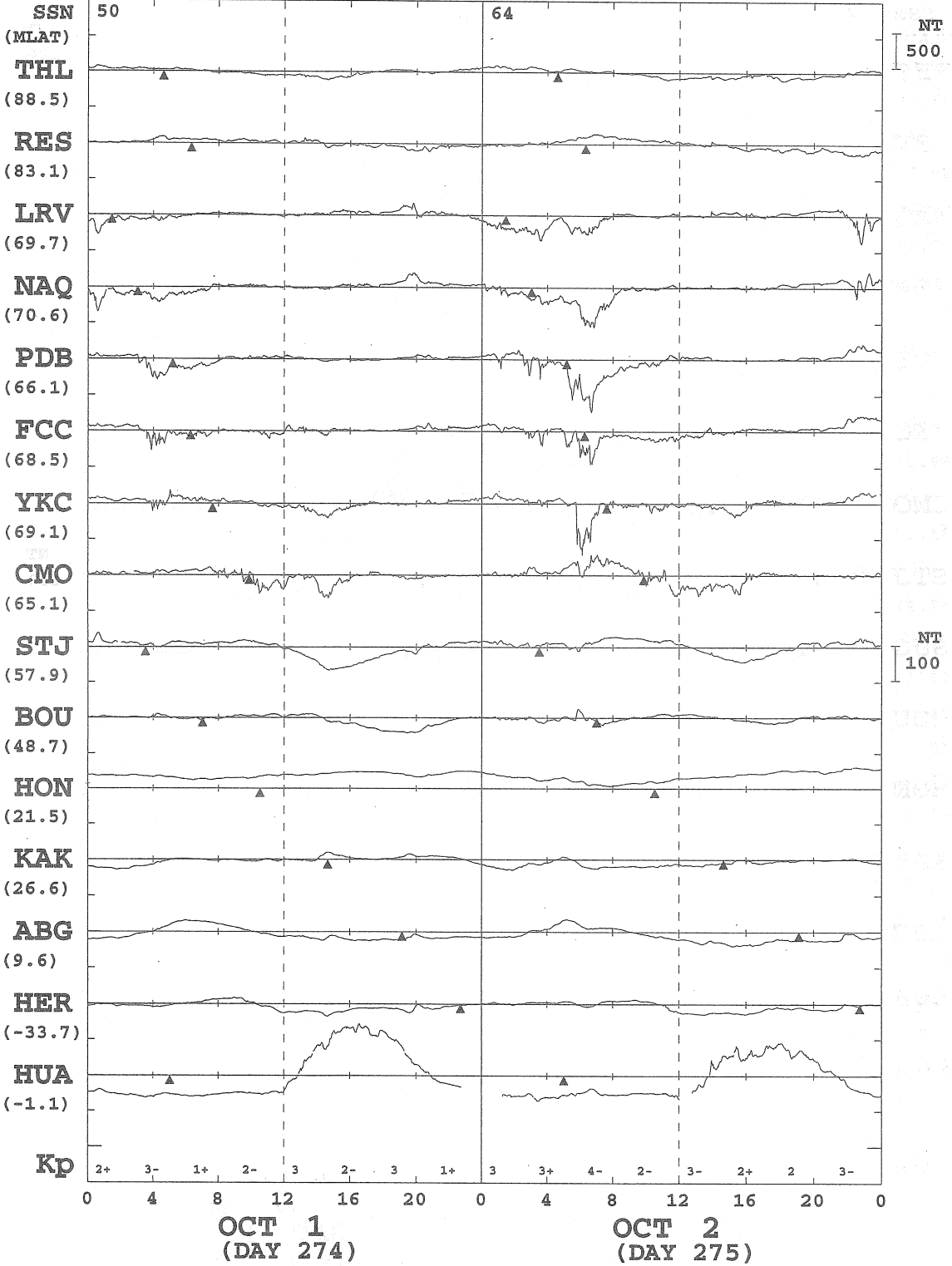
▲ : LOCAL MIDNIGHT



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

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

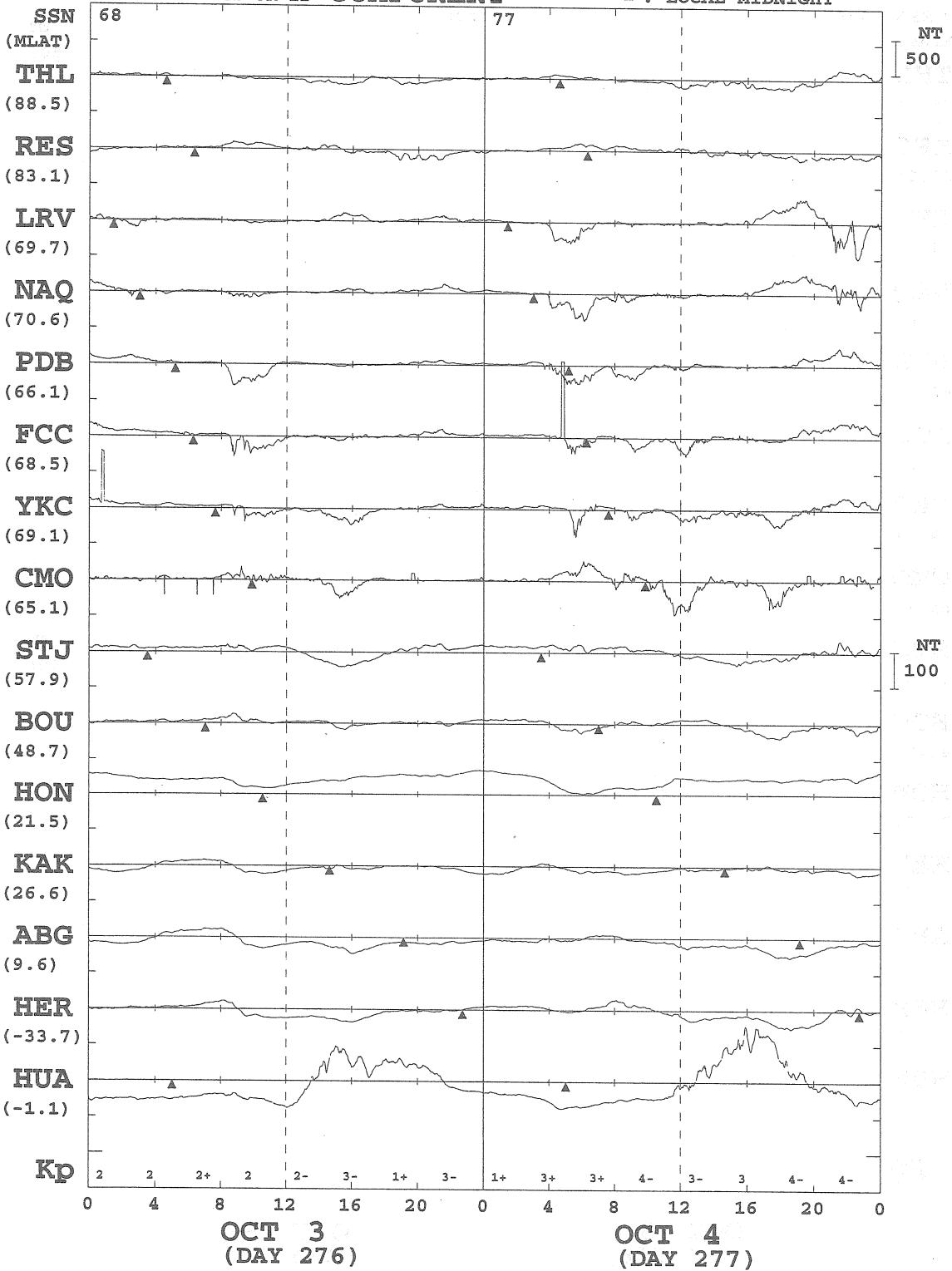


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

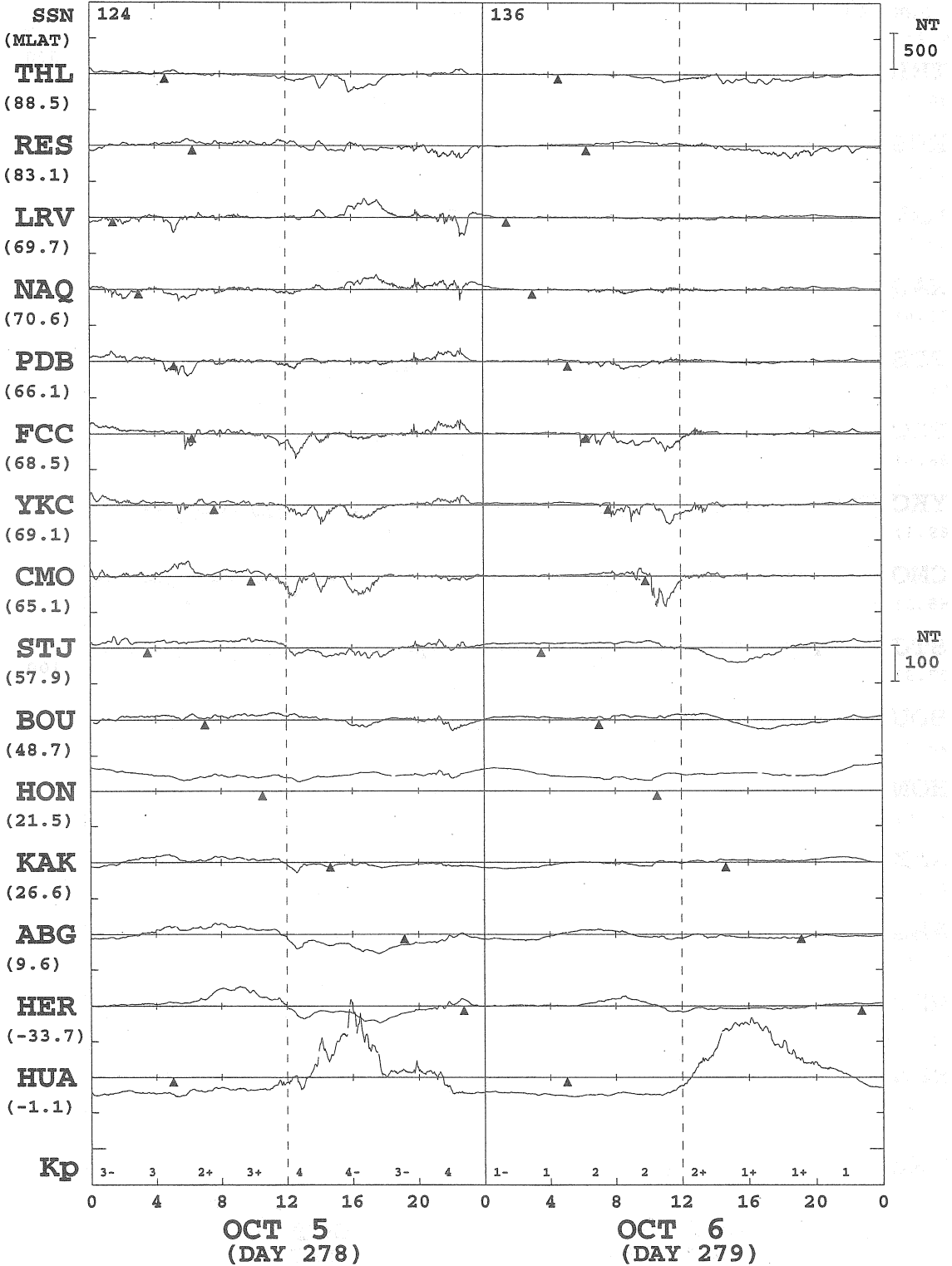


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

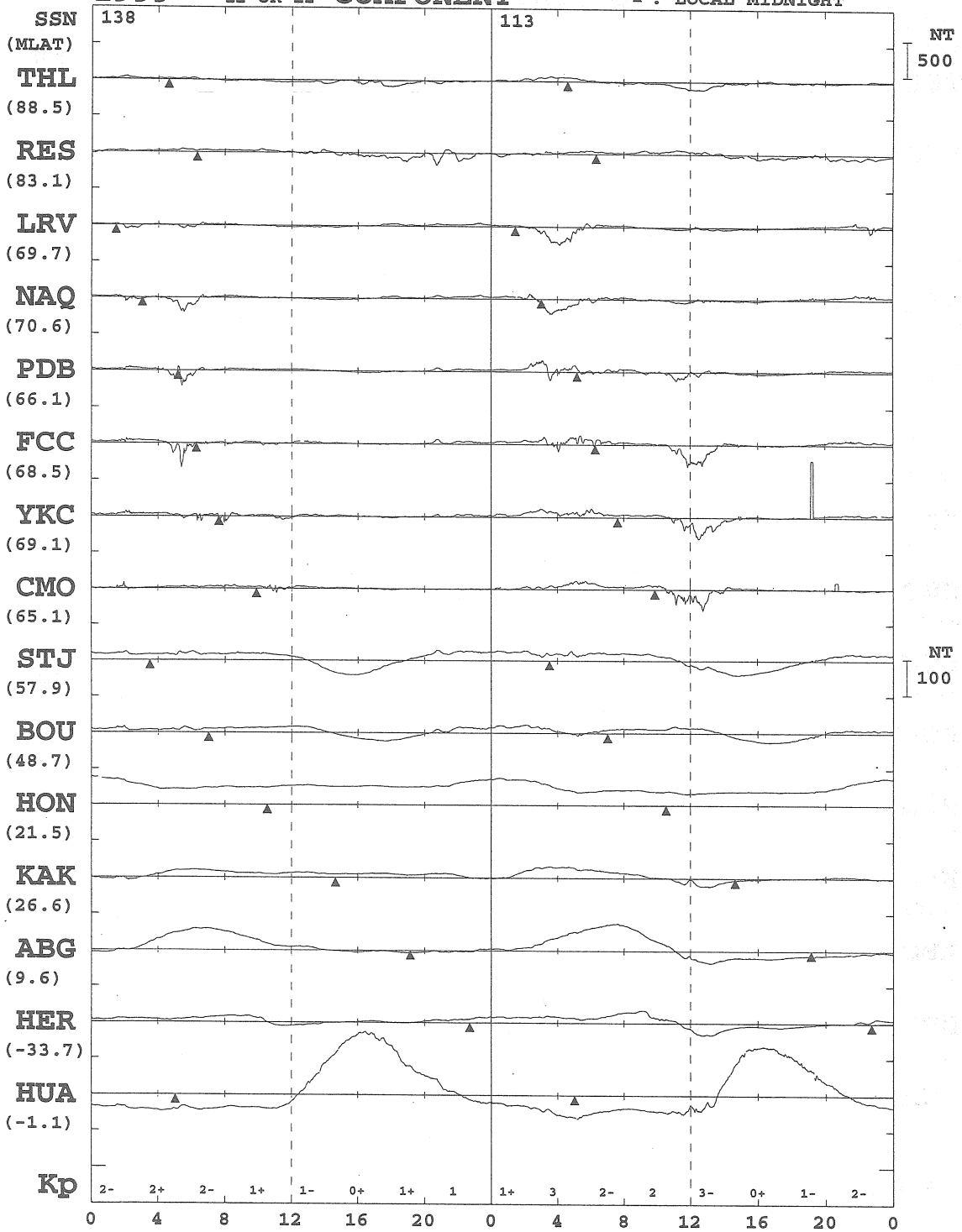


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



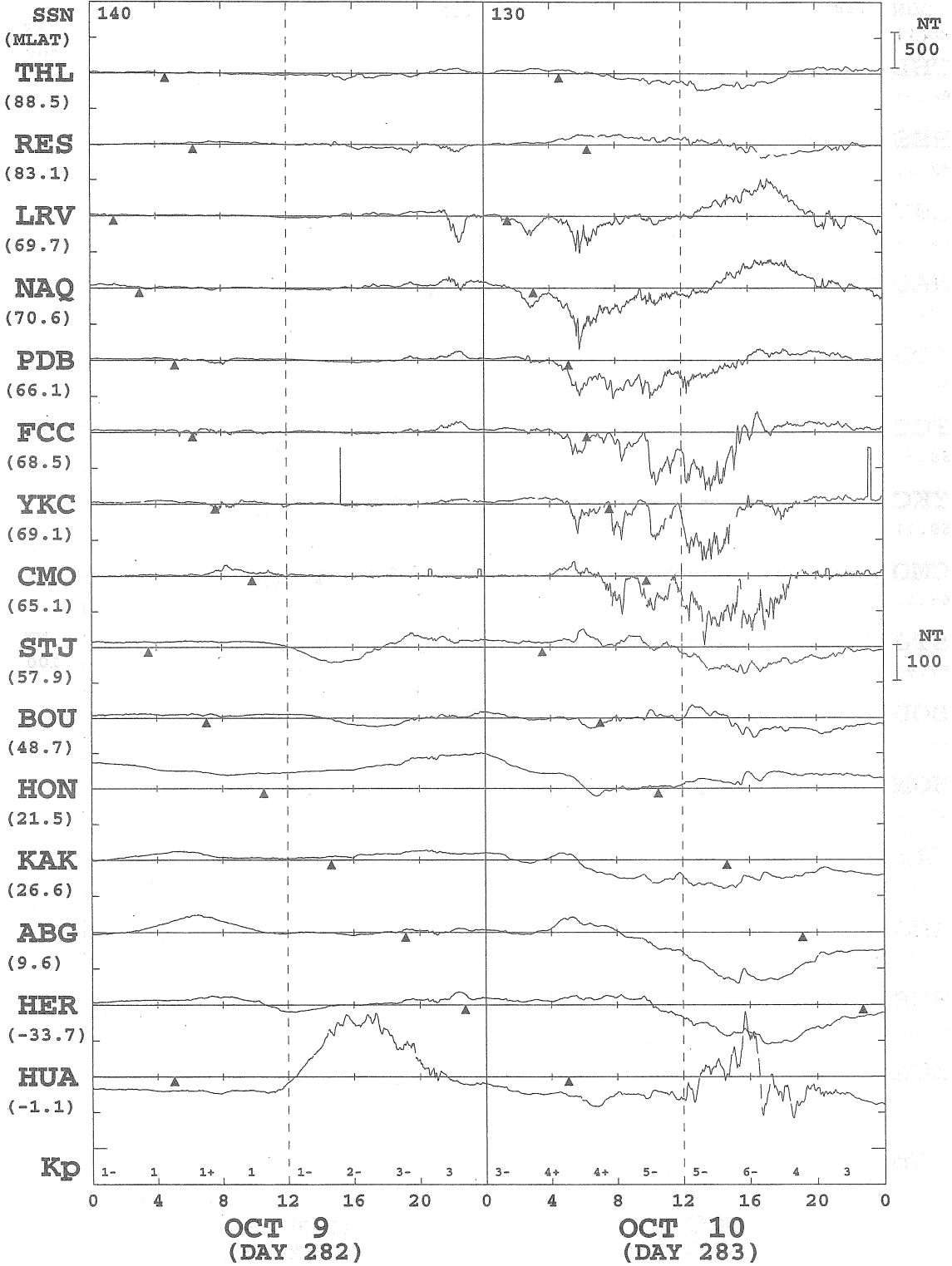
OCT 7
(DAY 280)

OCT 8
(DAY 281)

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

KYOTO UNIV.

1999 H OR X-COMPONENT Δ : LOCAL MIDNIGHT

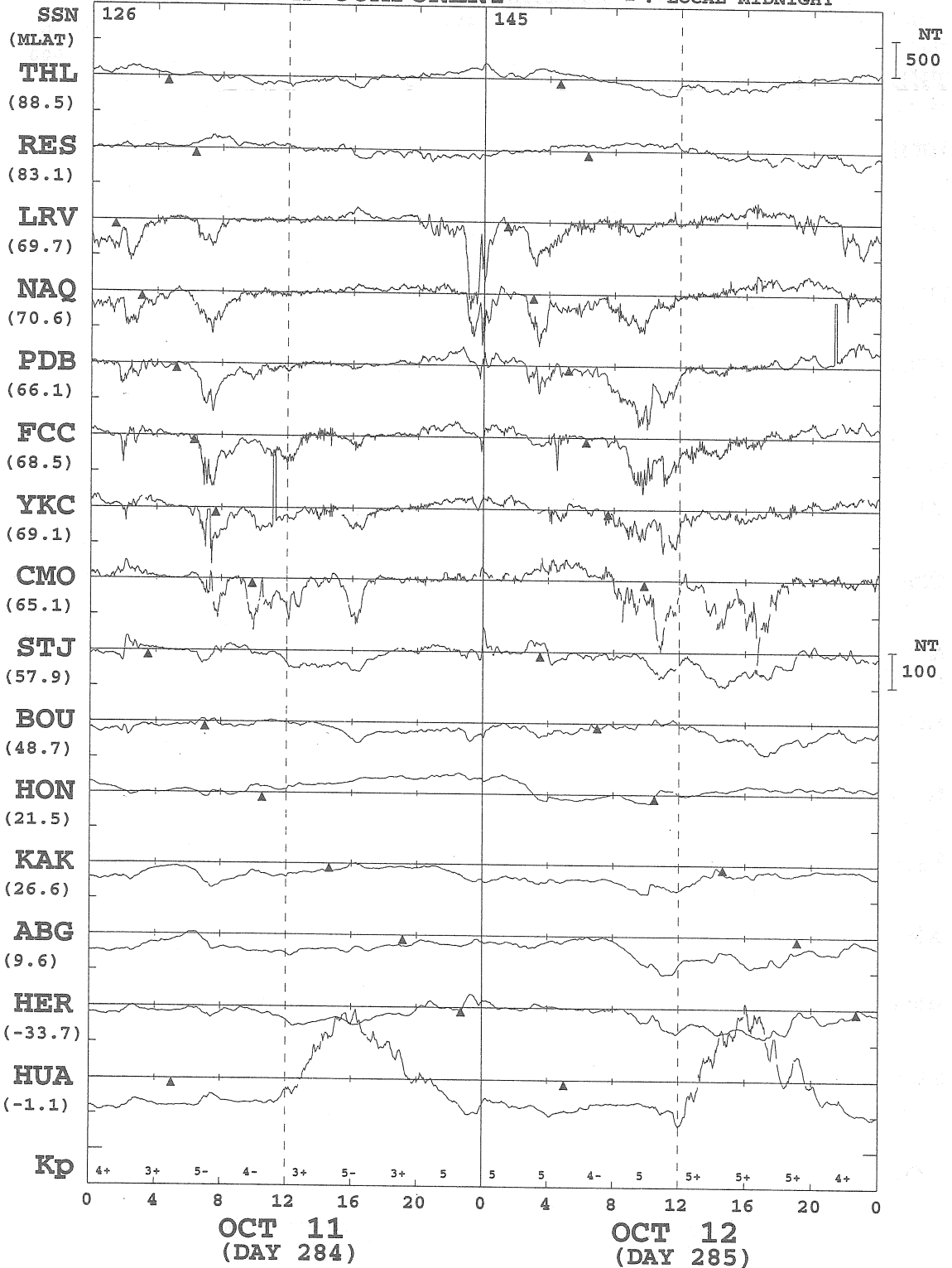


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

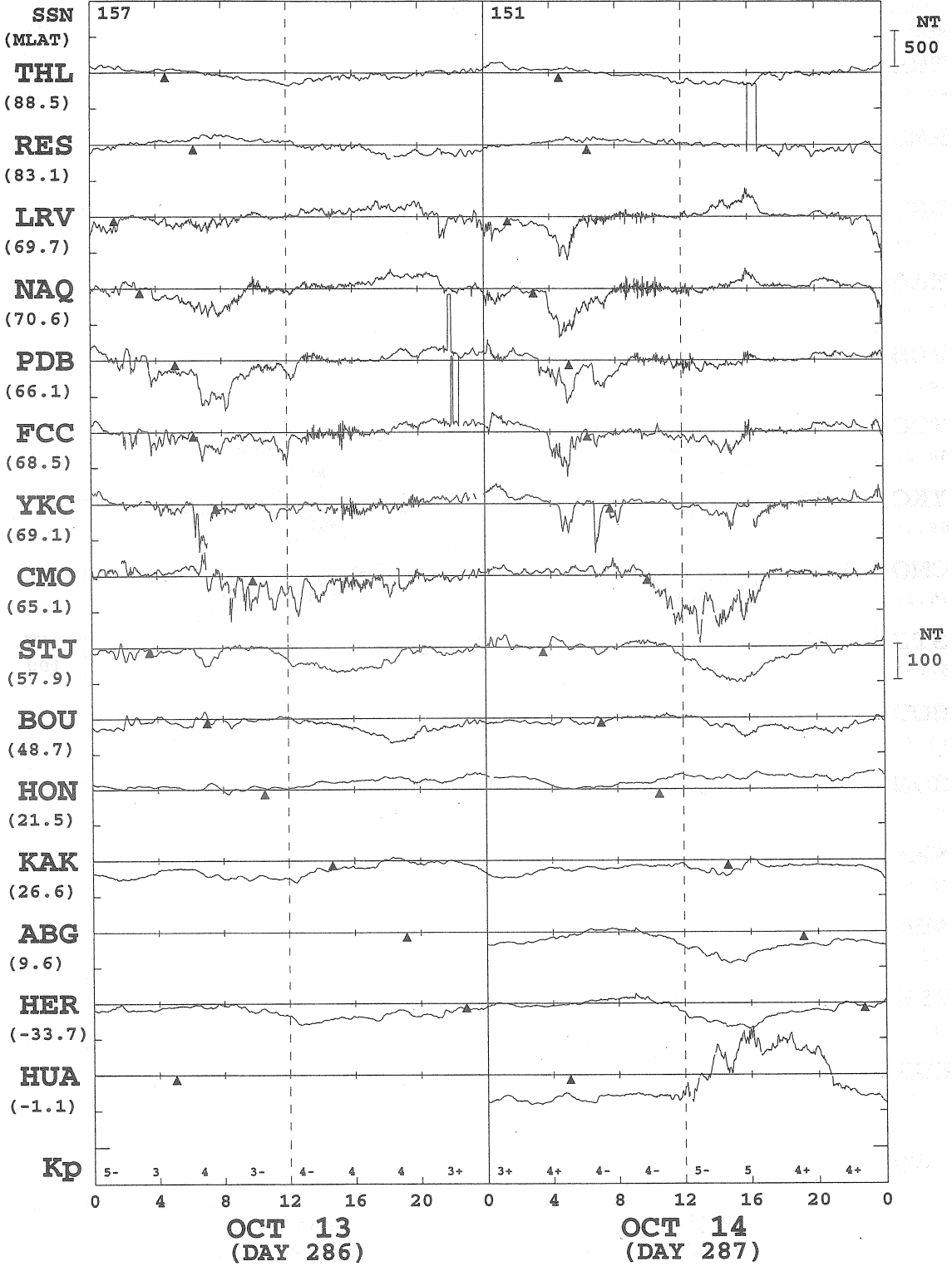


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

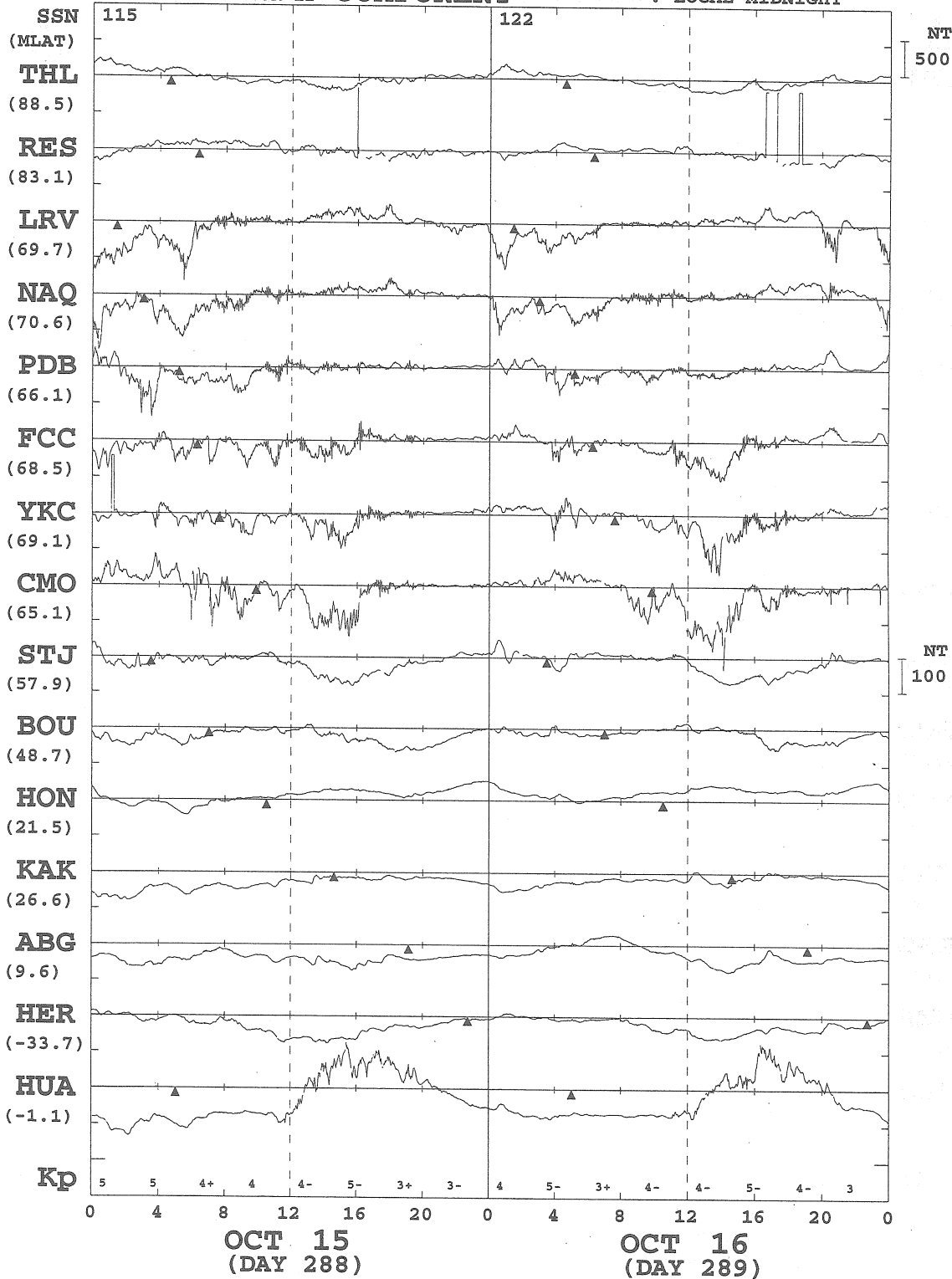


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

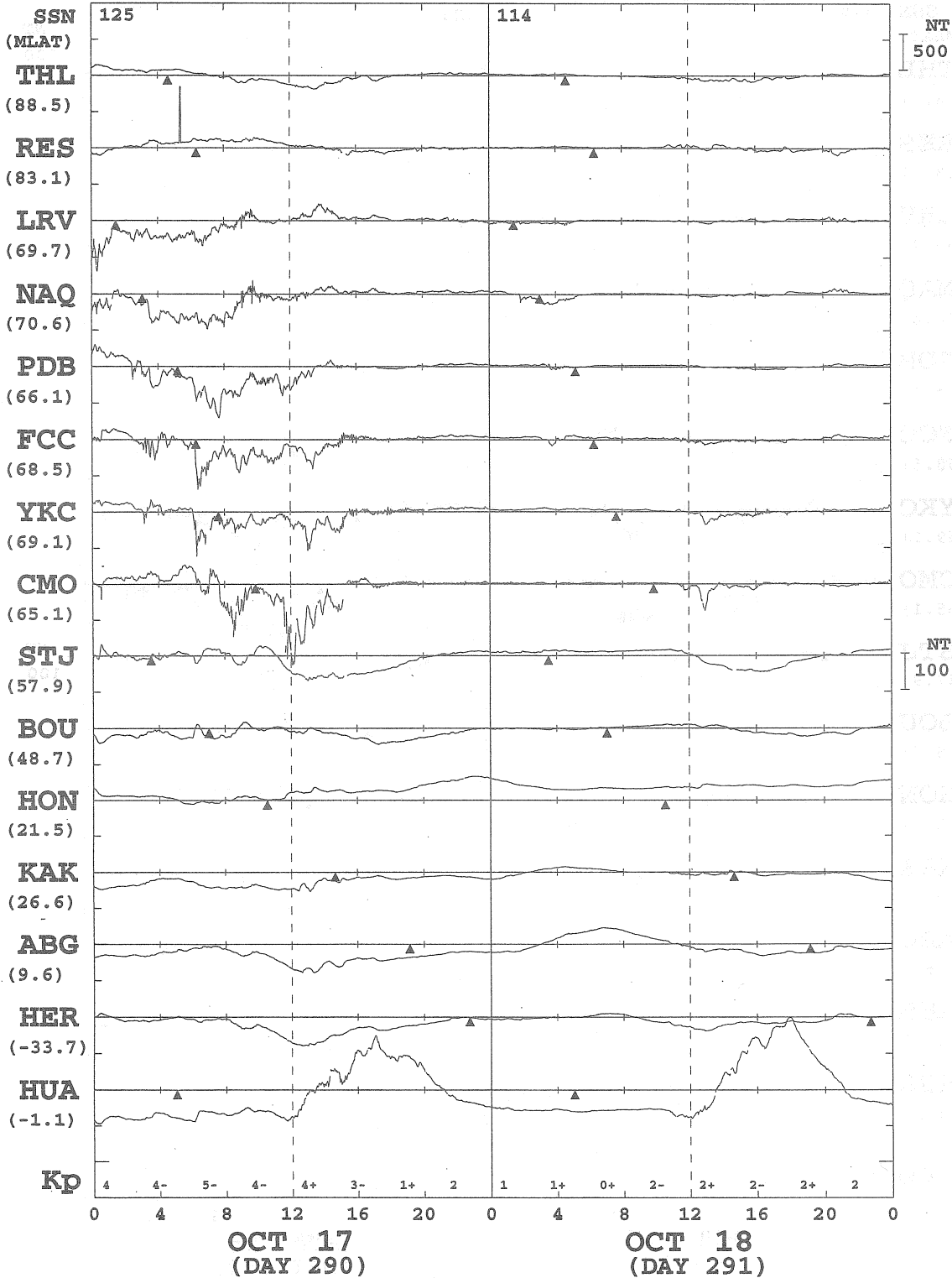
▲ : LOCAL MIDNIGHT



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

KYOTO UNIV.

1999 H OR X-COMPONENT Δ : LOCAL MIDNIGHT

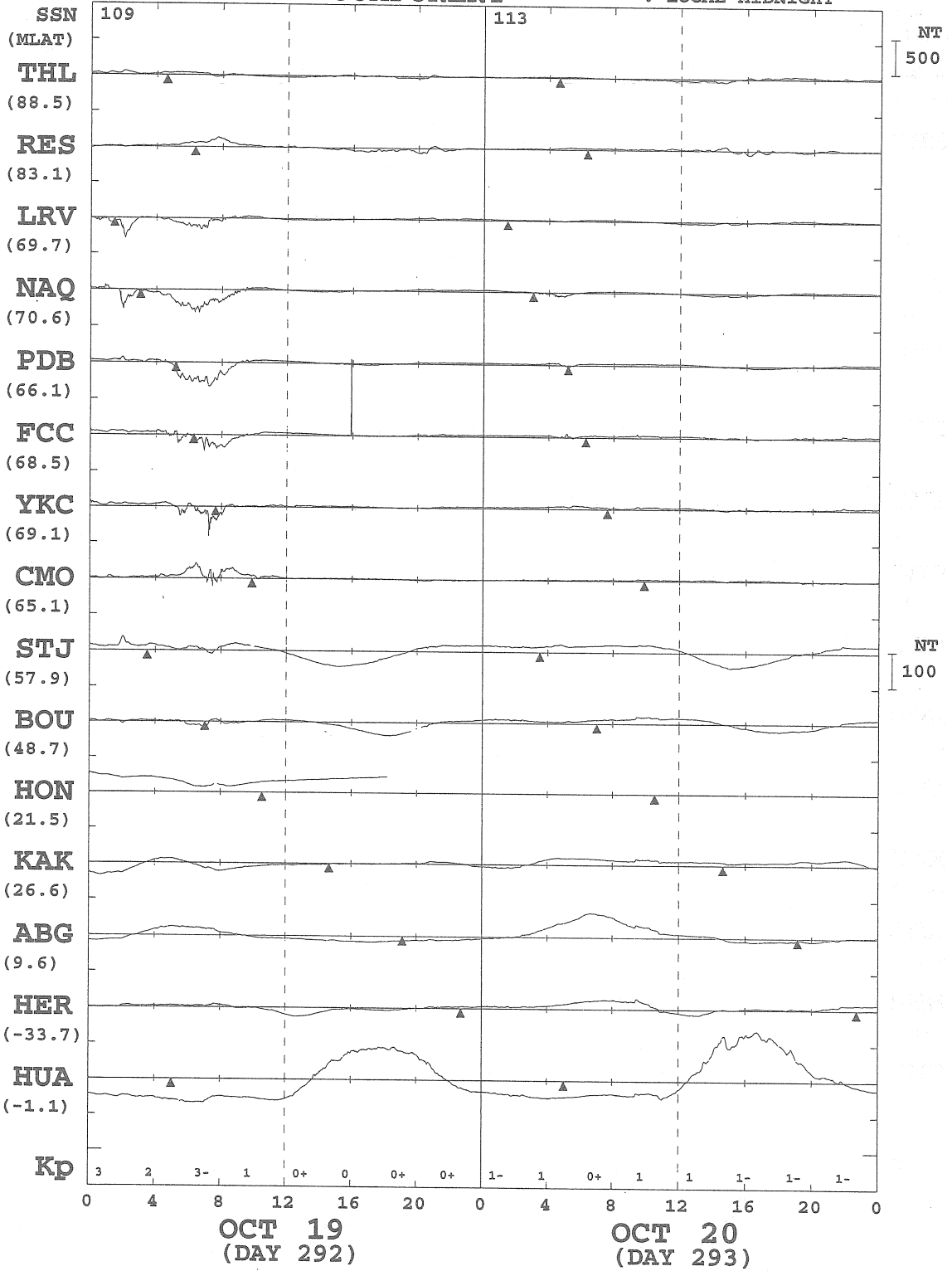


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

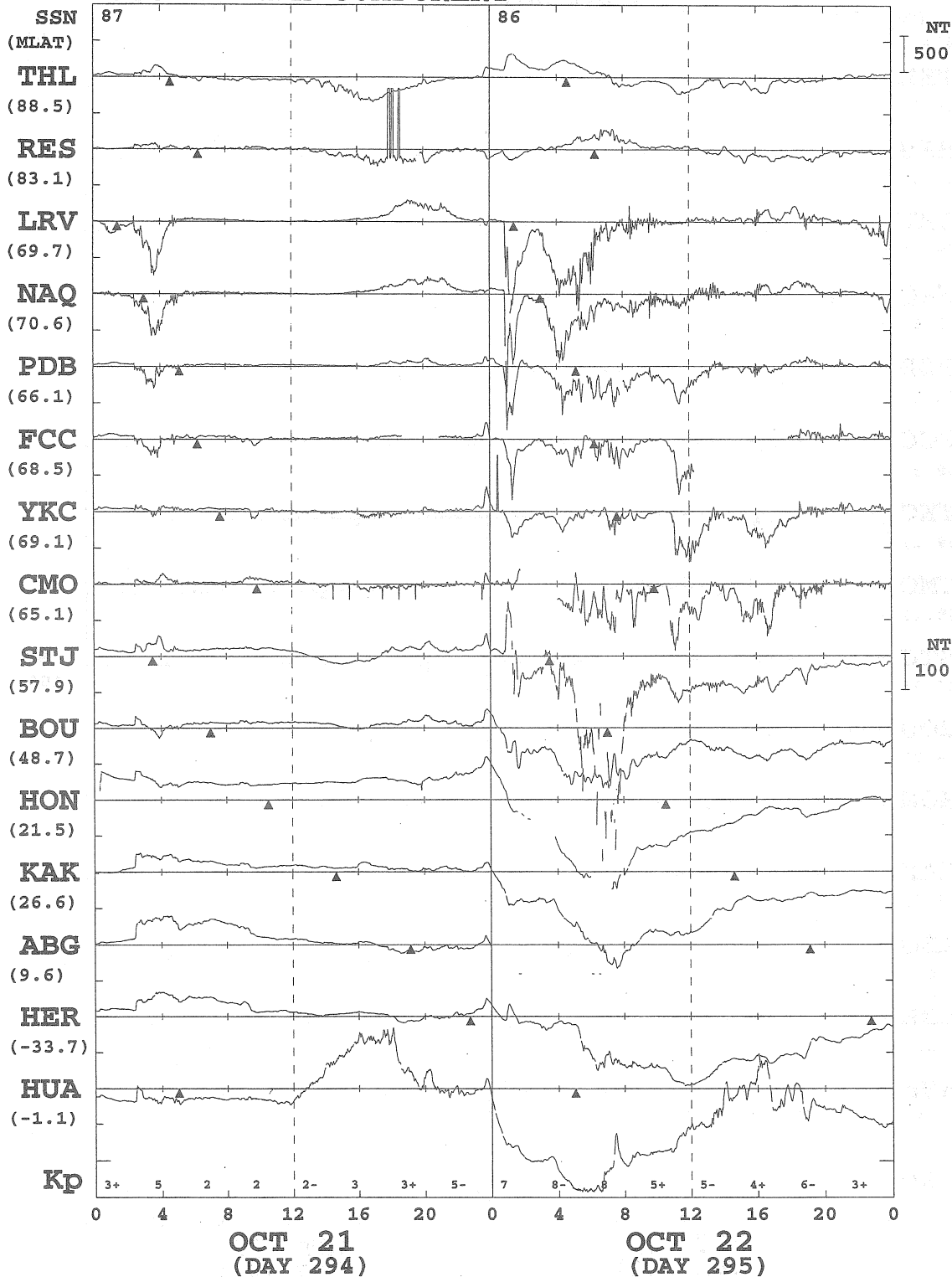


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

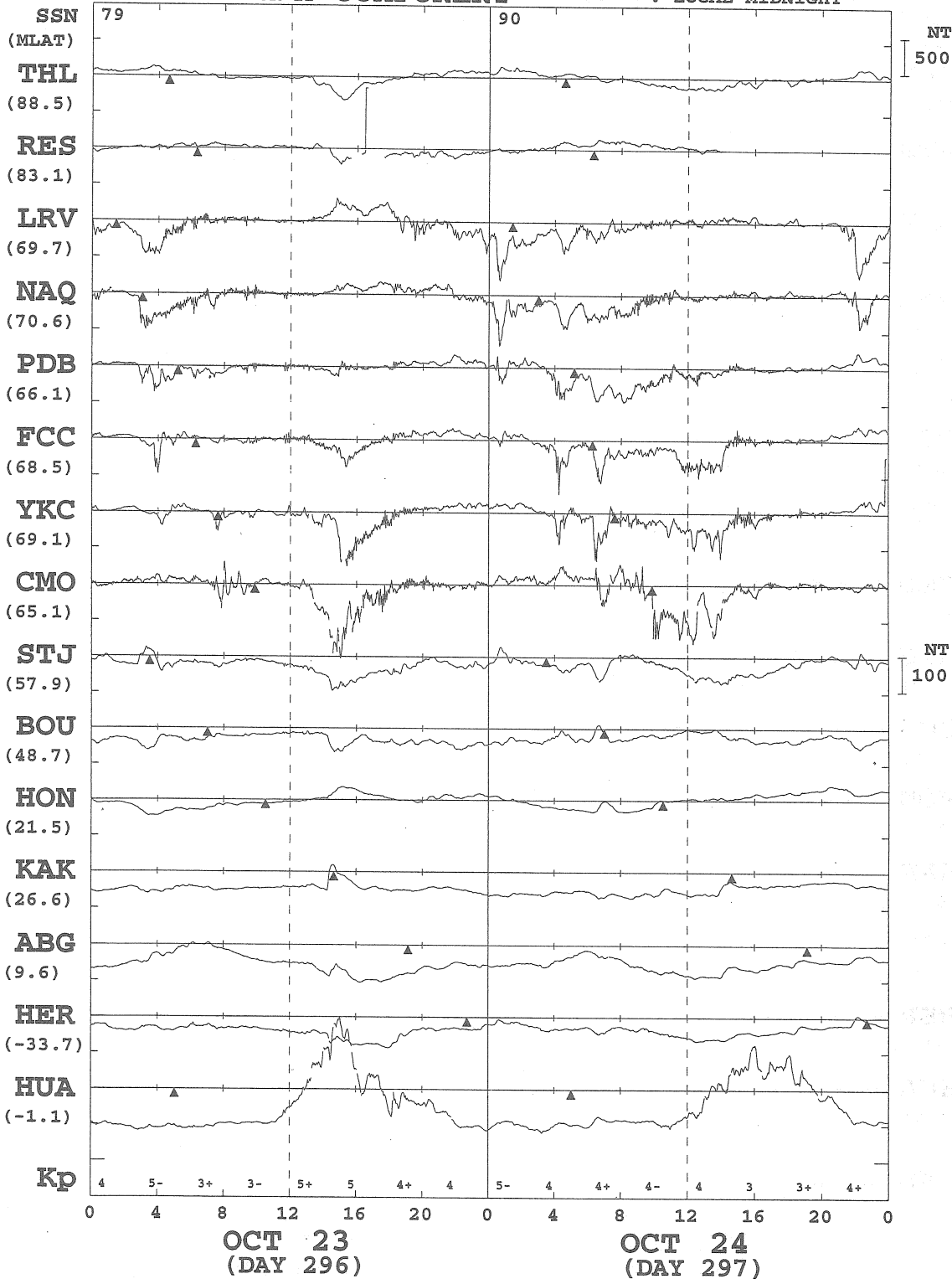


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

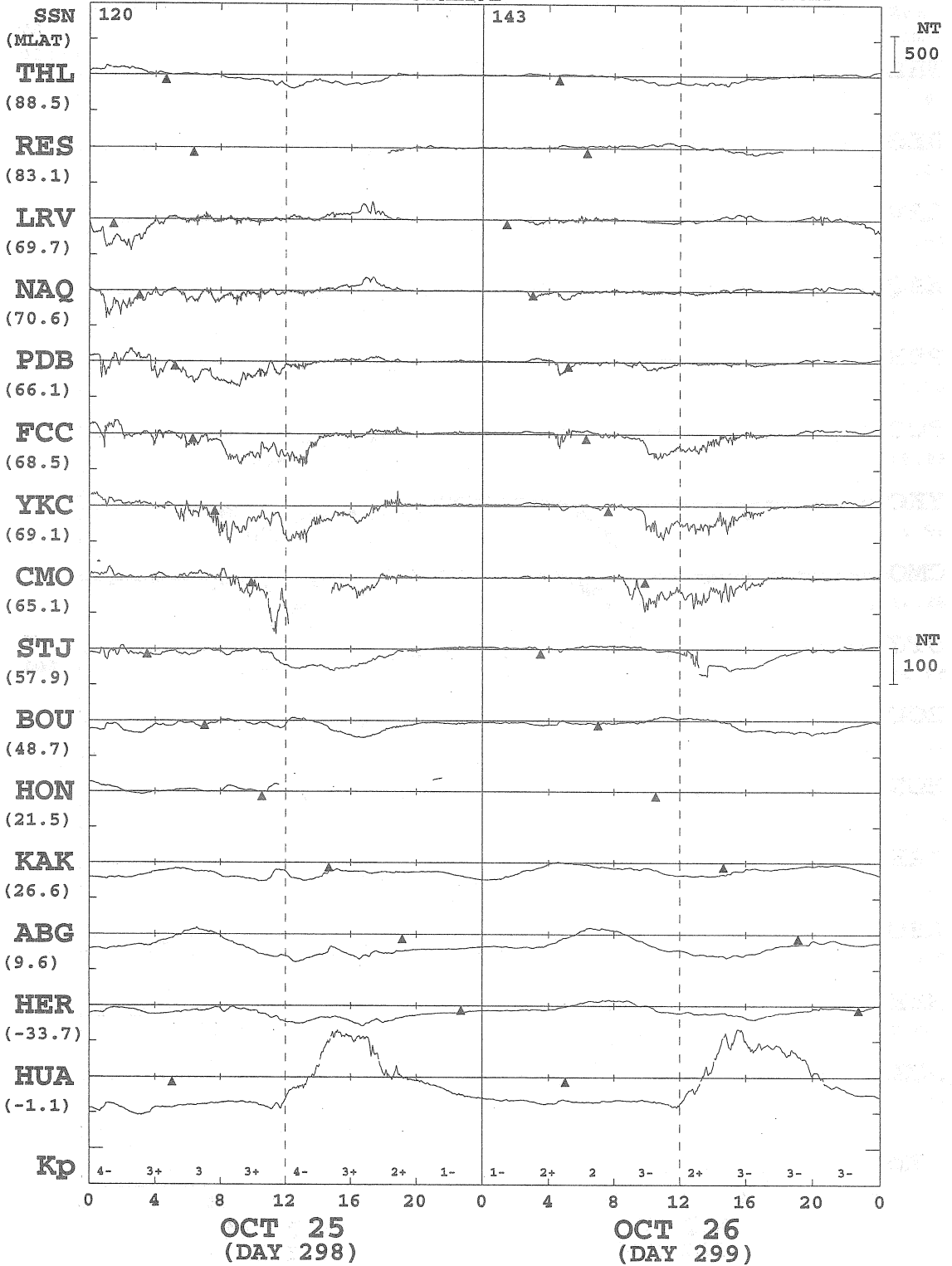


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

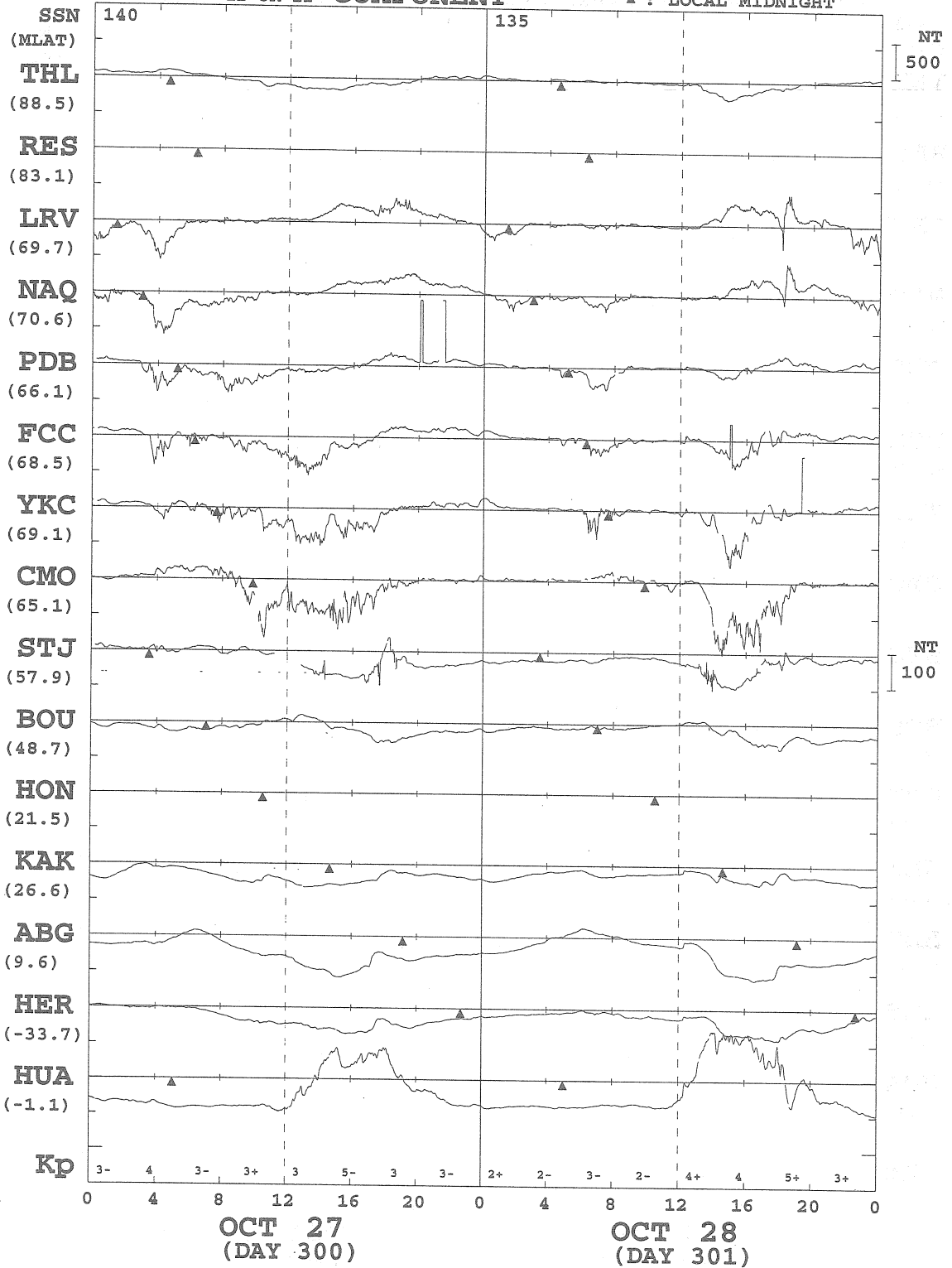


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

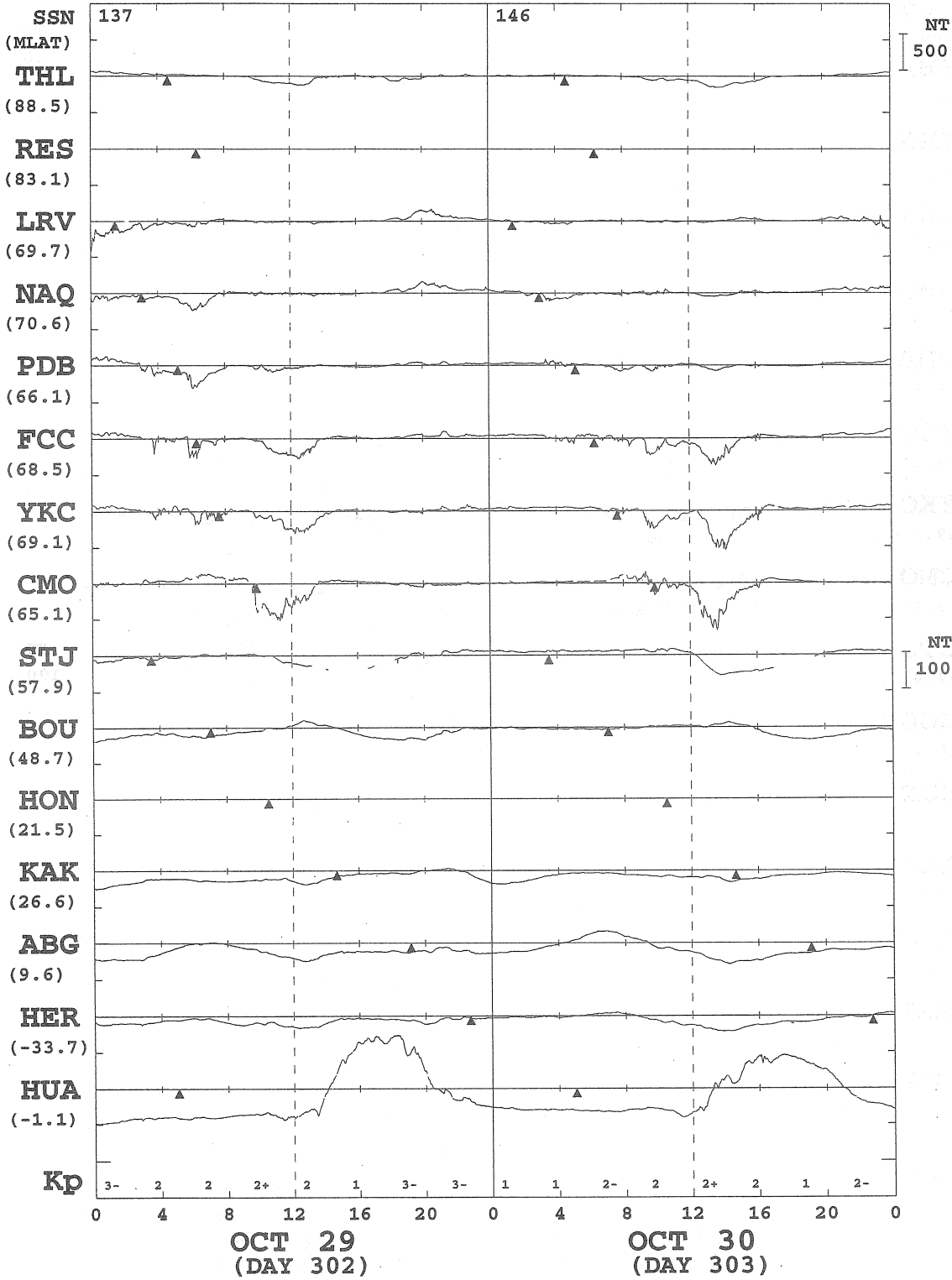
▲ : LOCAL MIDNIGHT



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

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

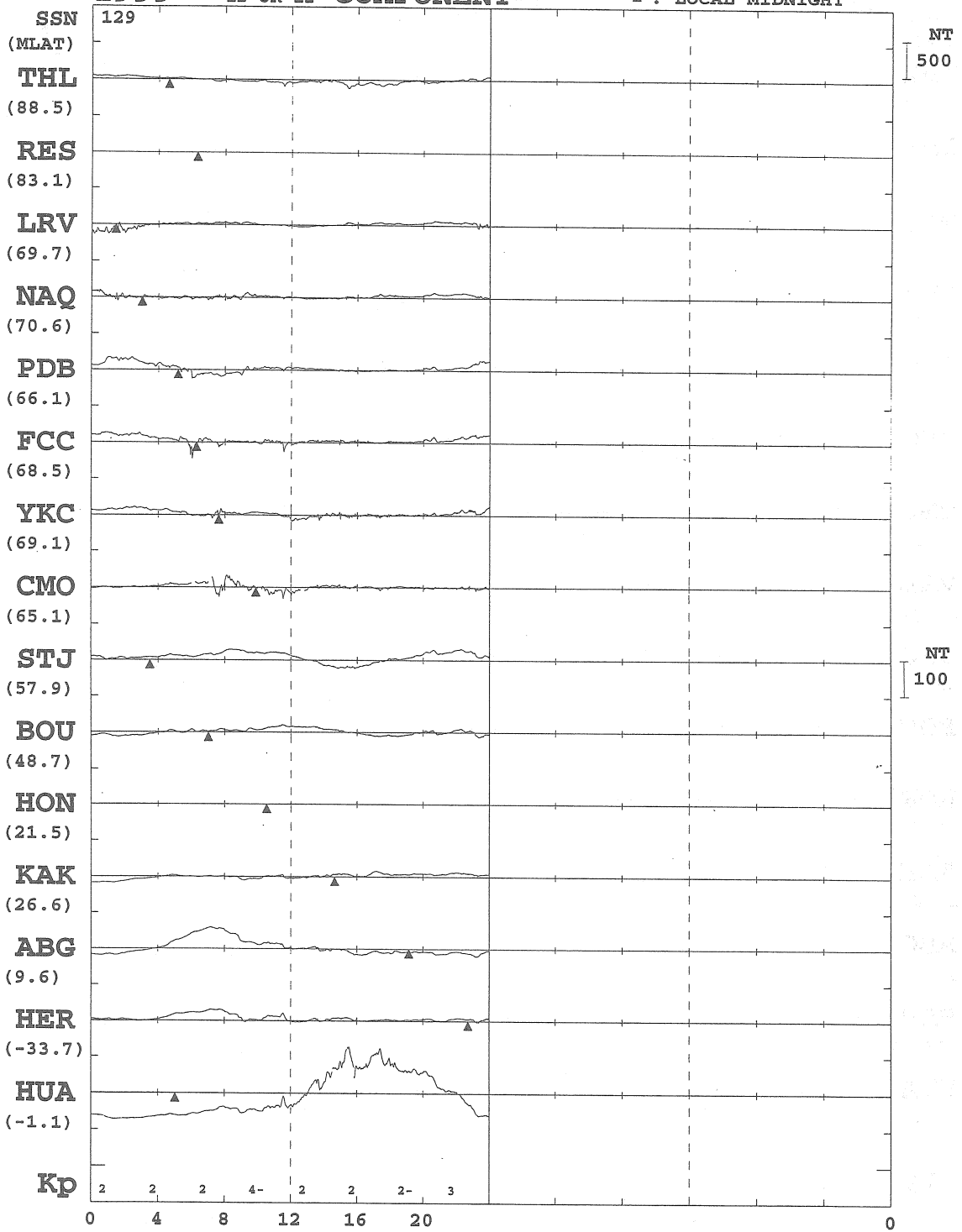


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

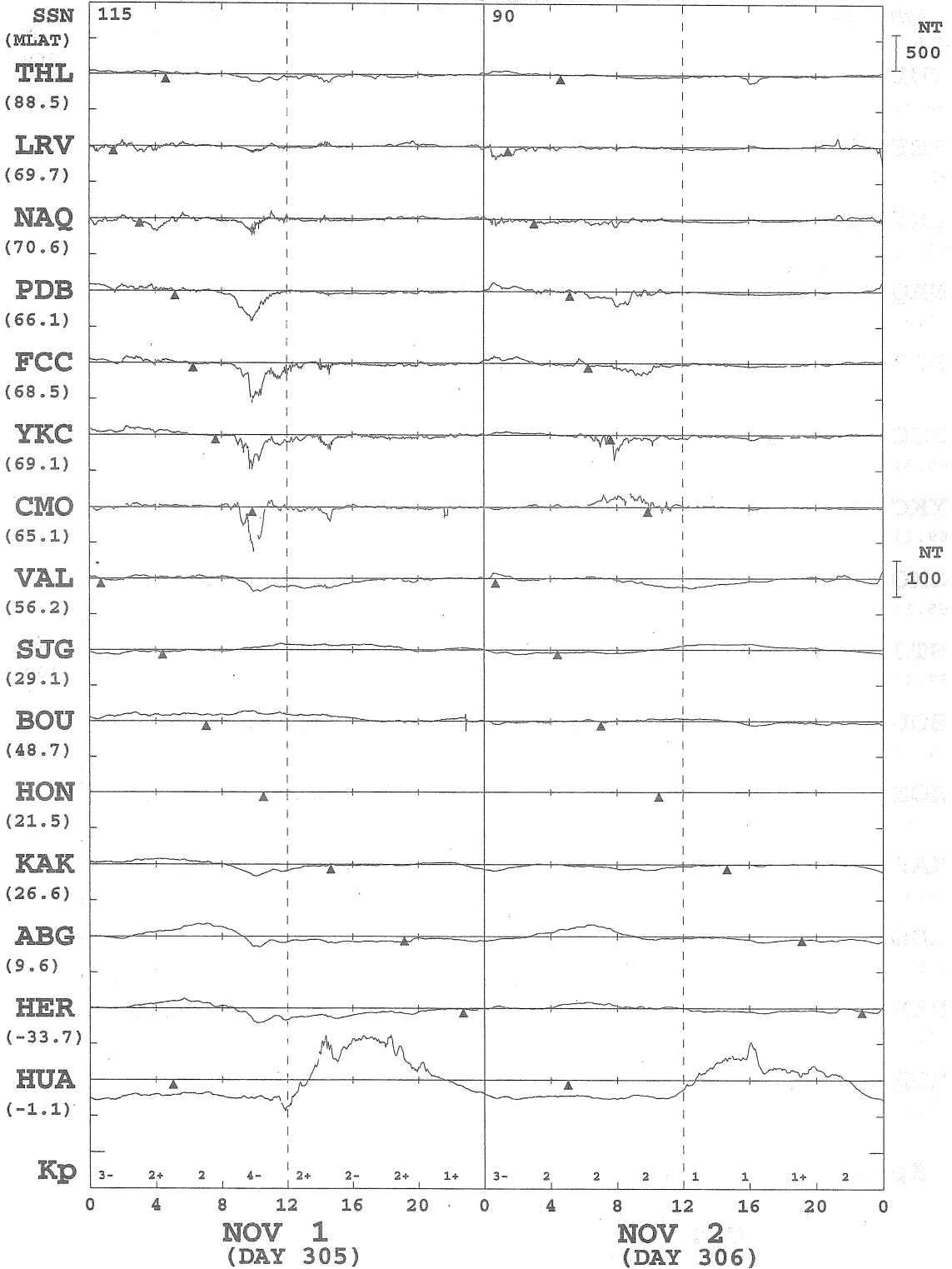


OCT 31
(DAY 304)

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

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

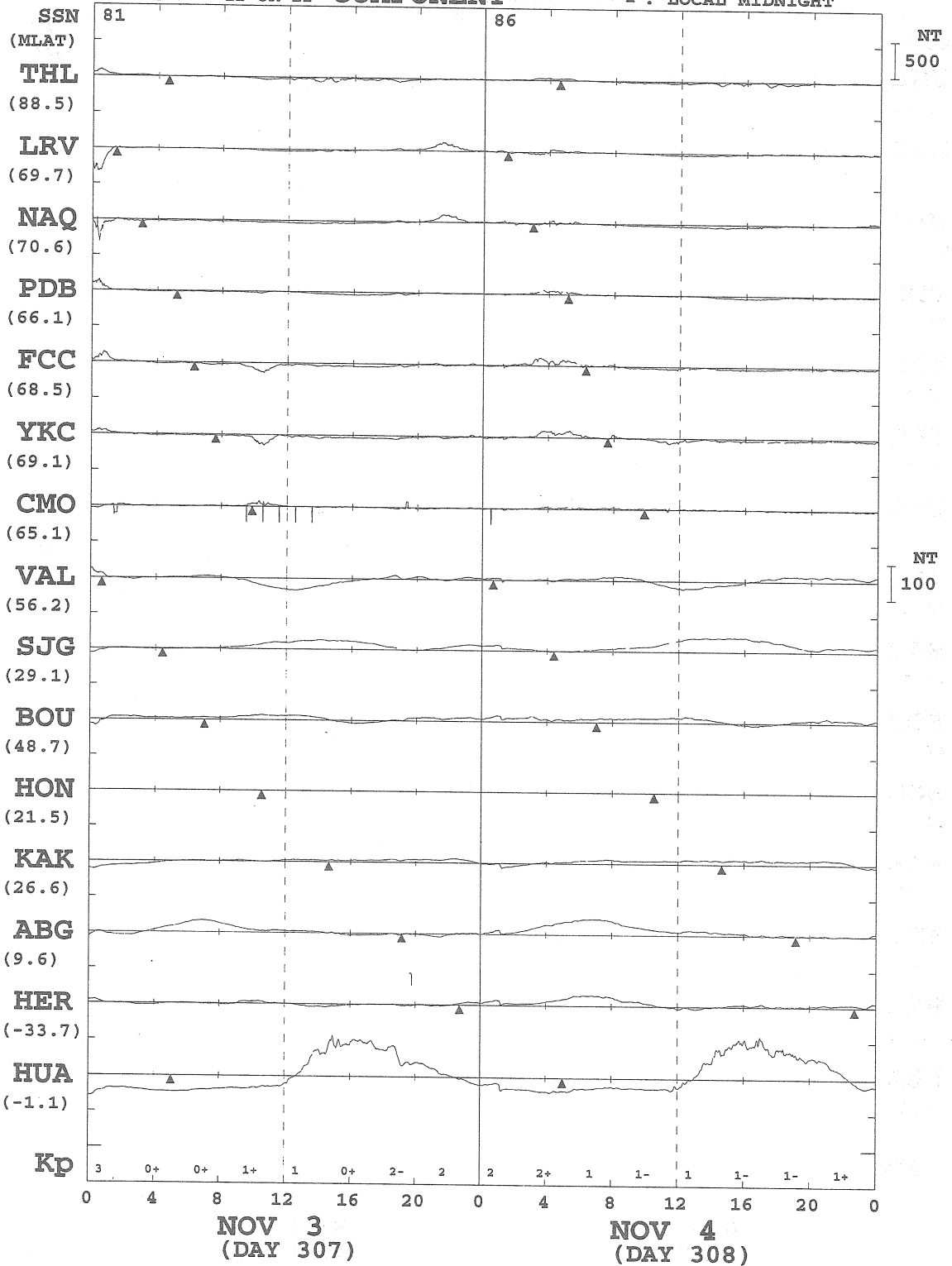


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

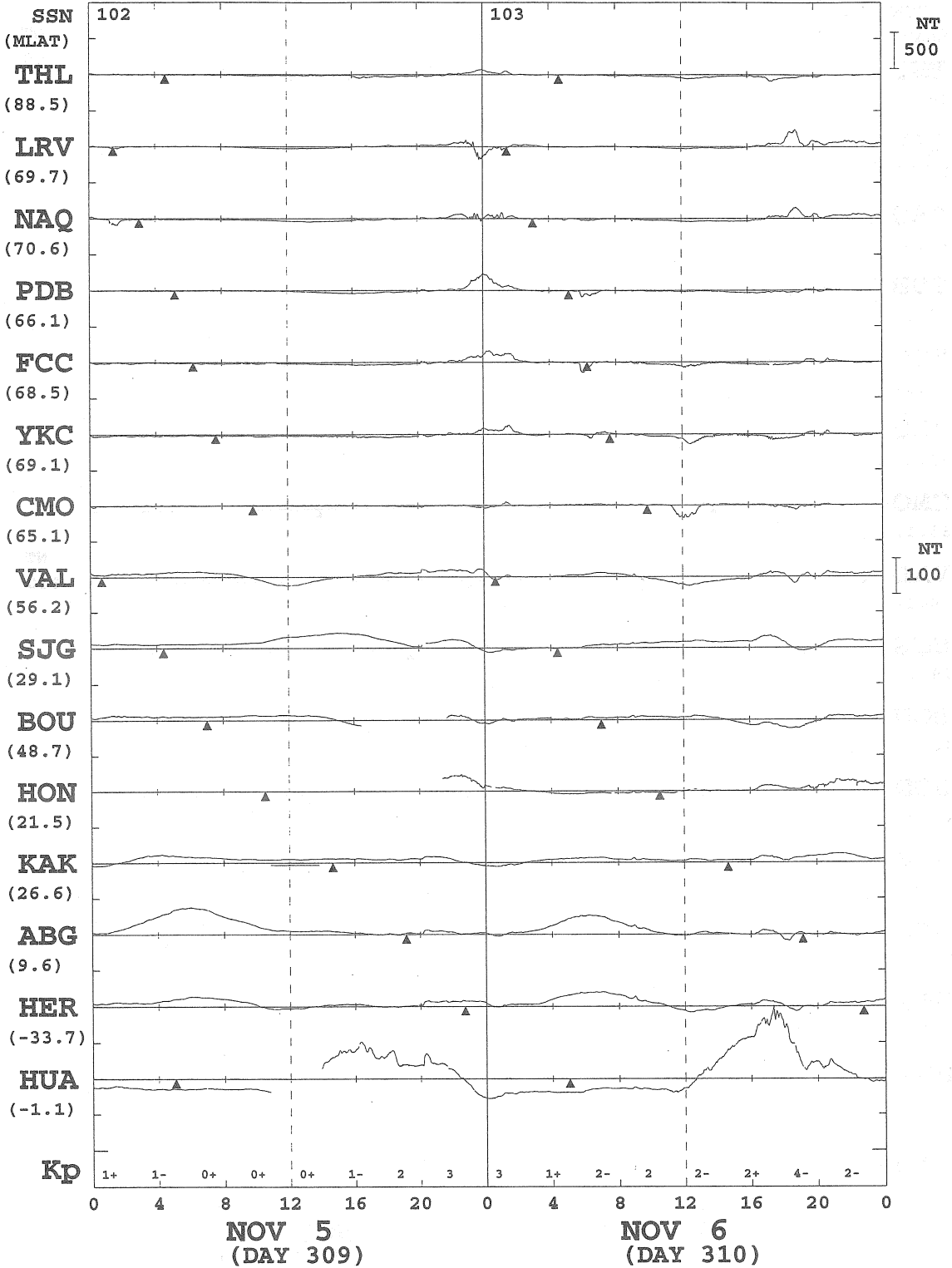


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
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KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

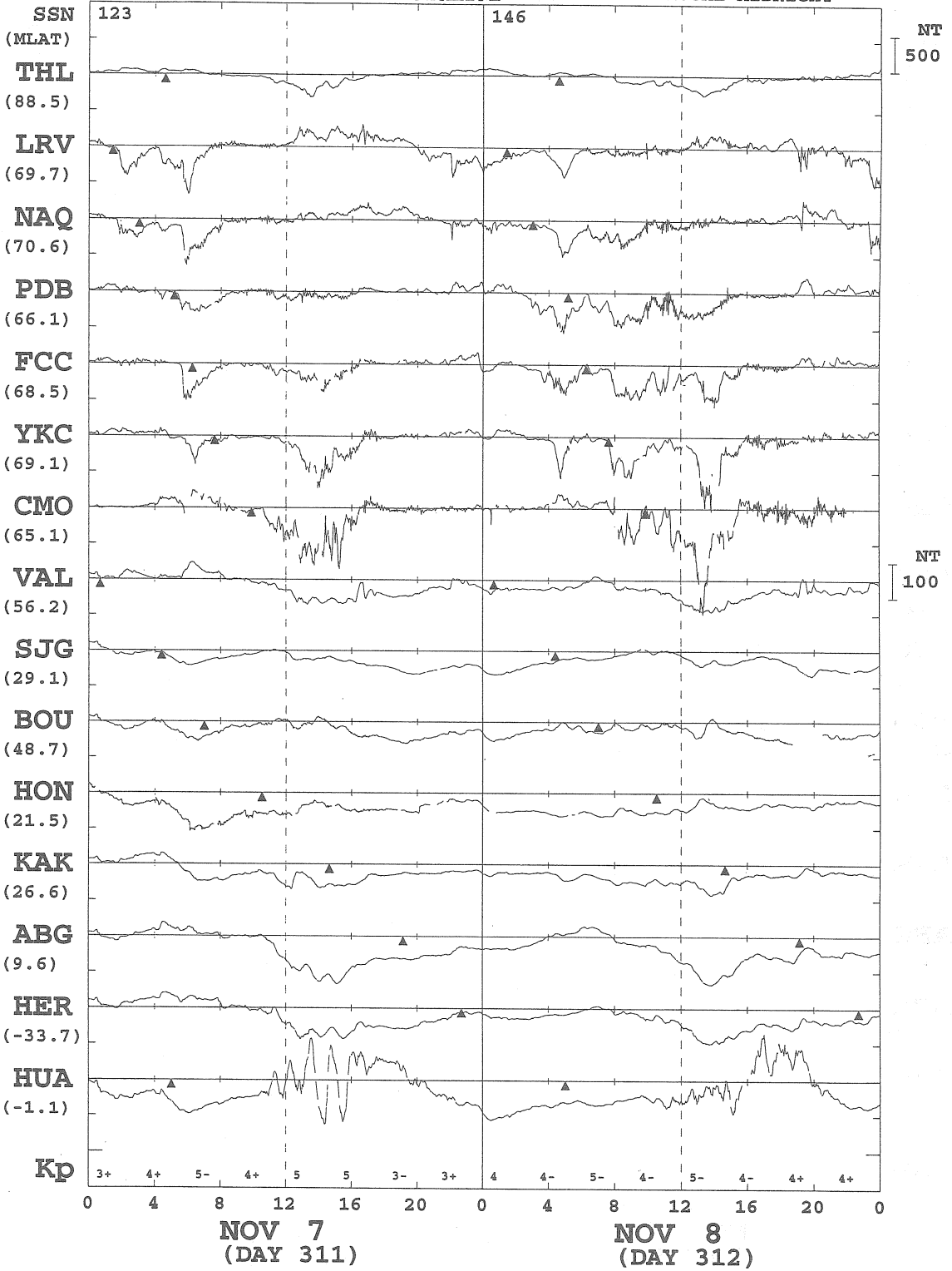


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

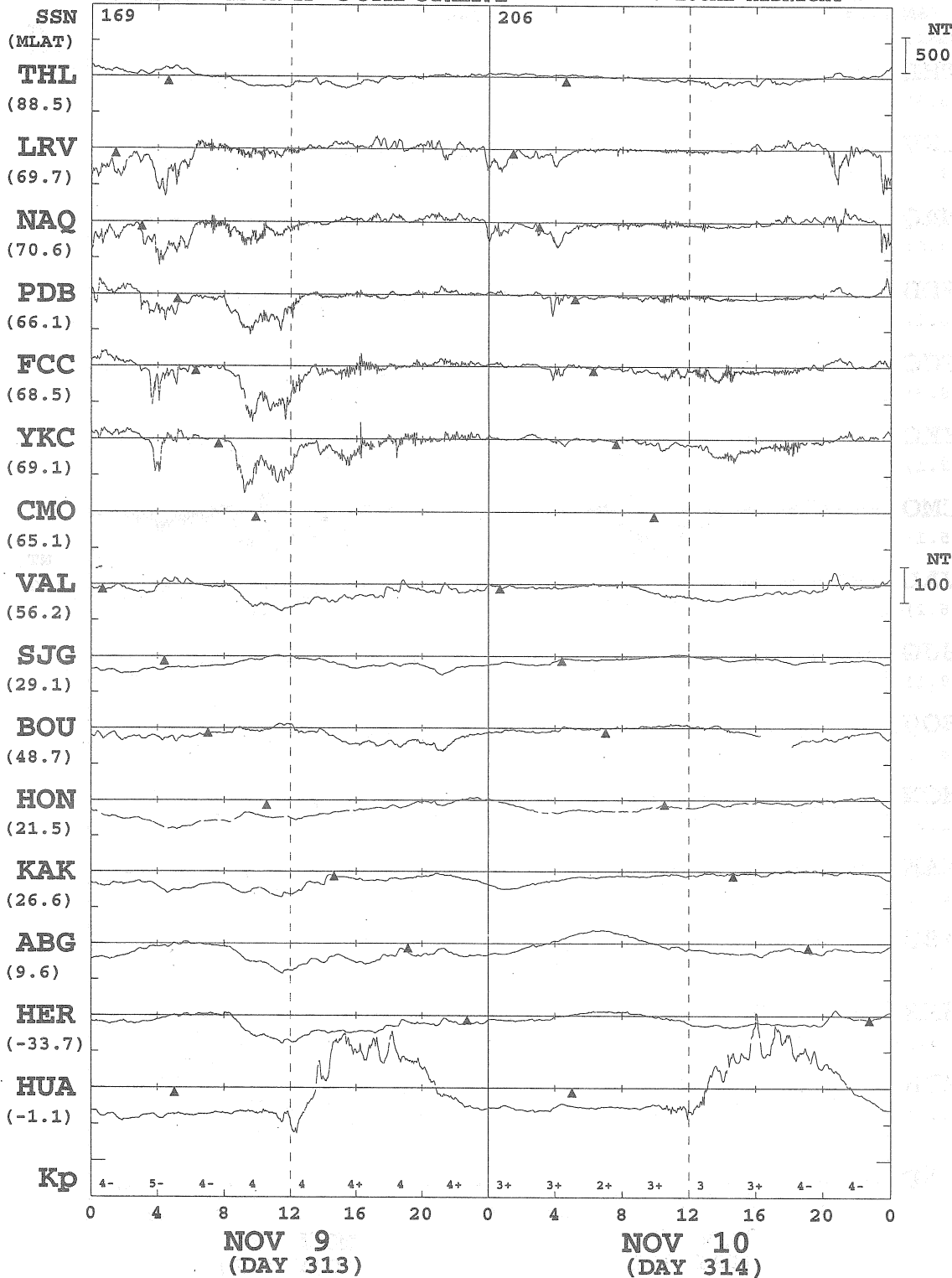
▲ : LOCAL MIDNIGHT



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

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

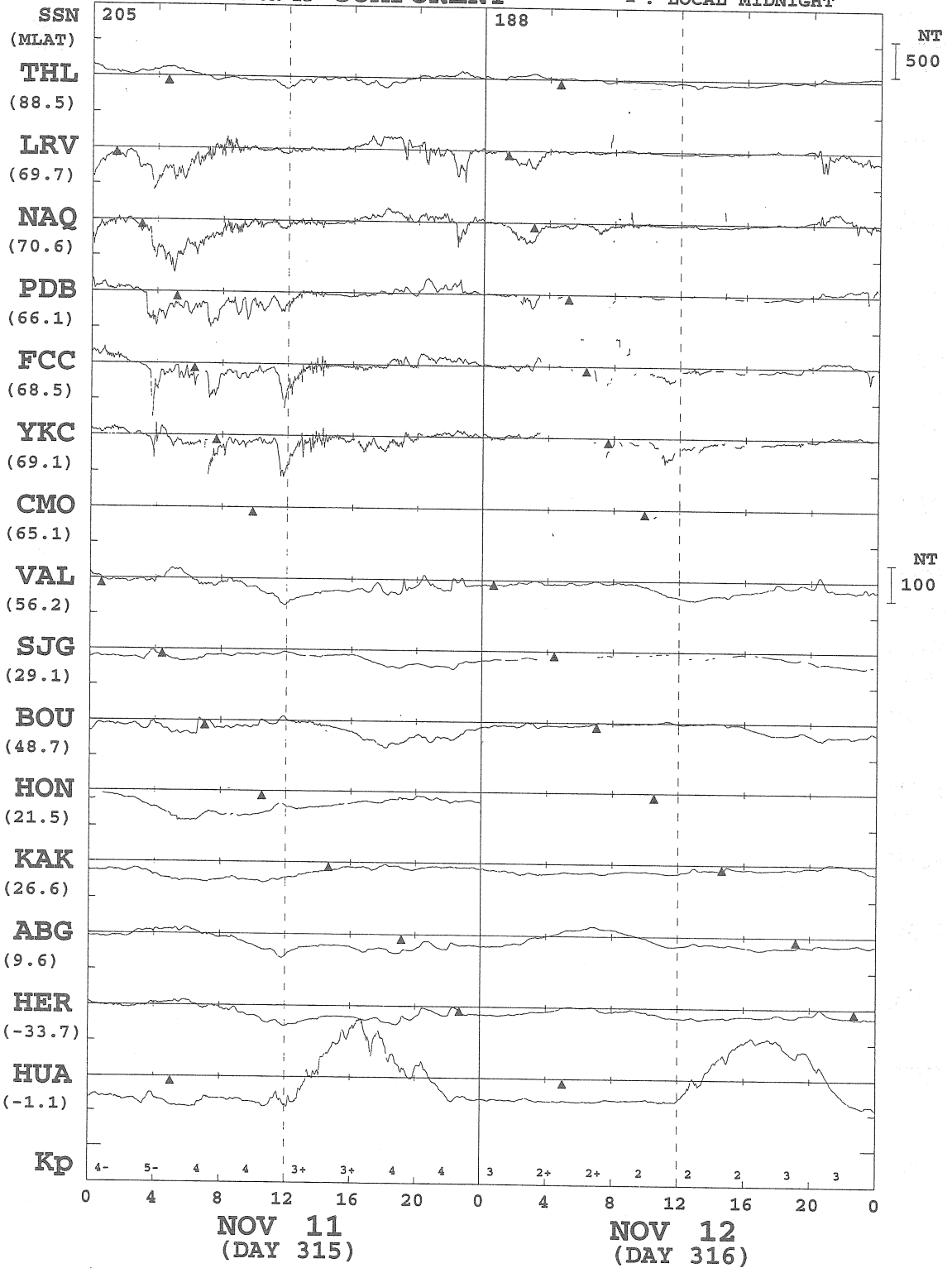


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

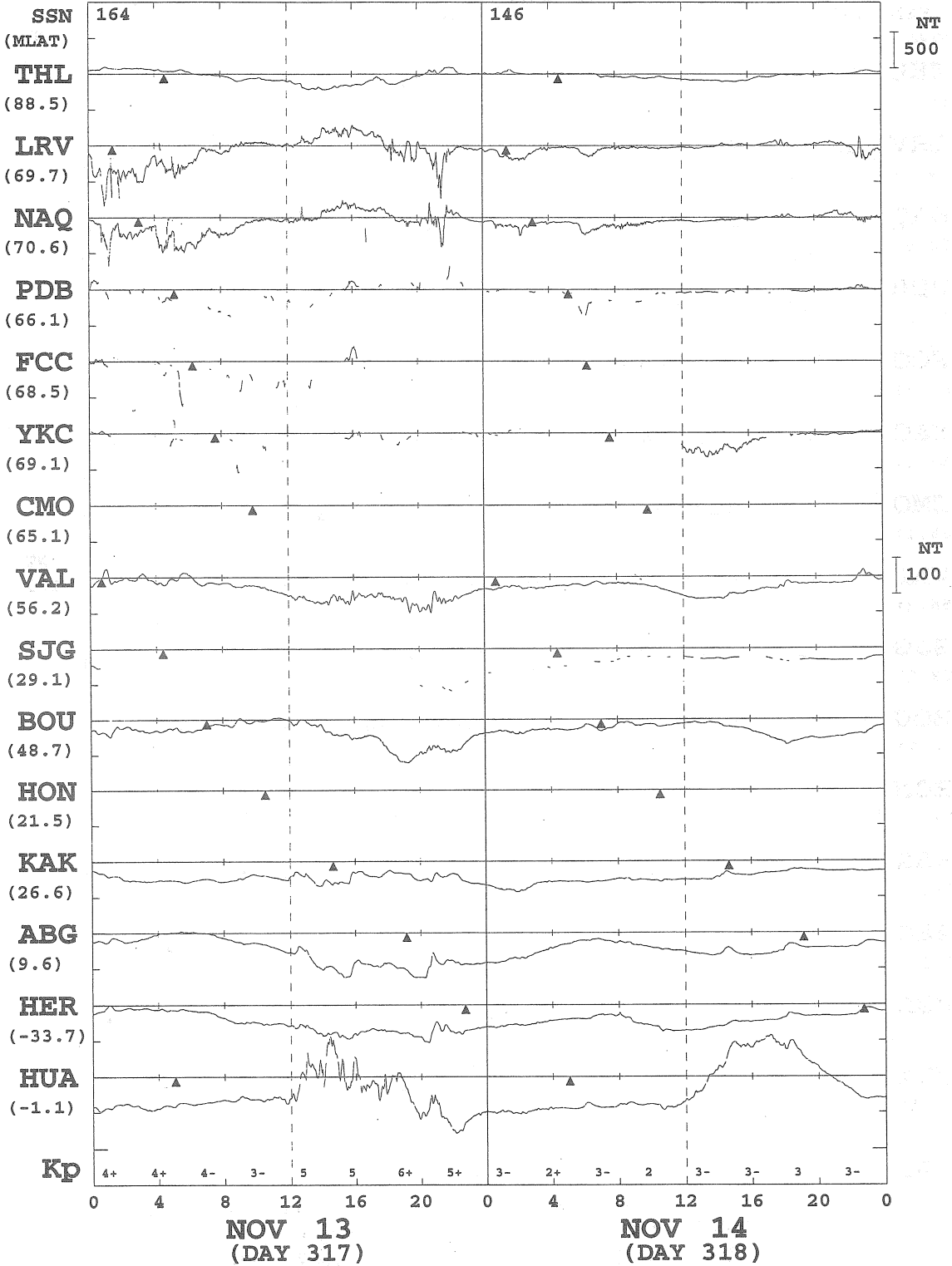


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

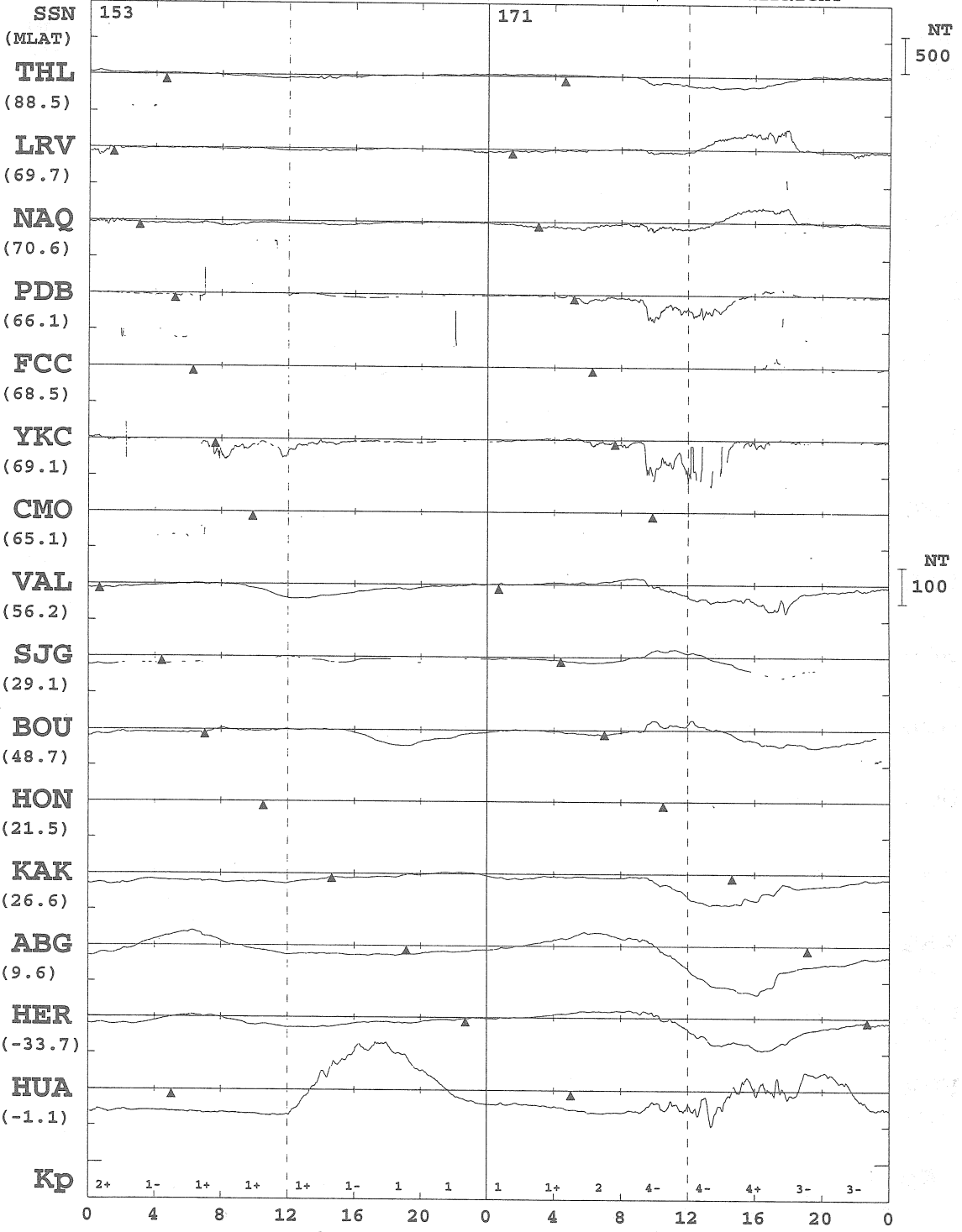


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

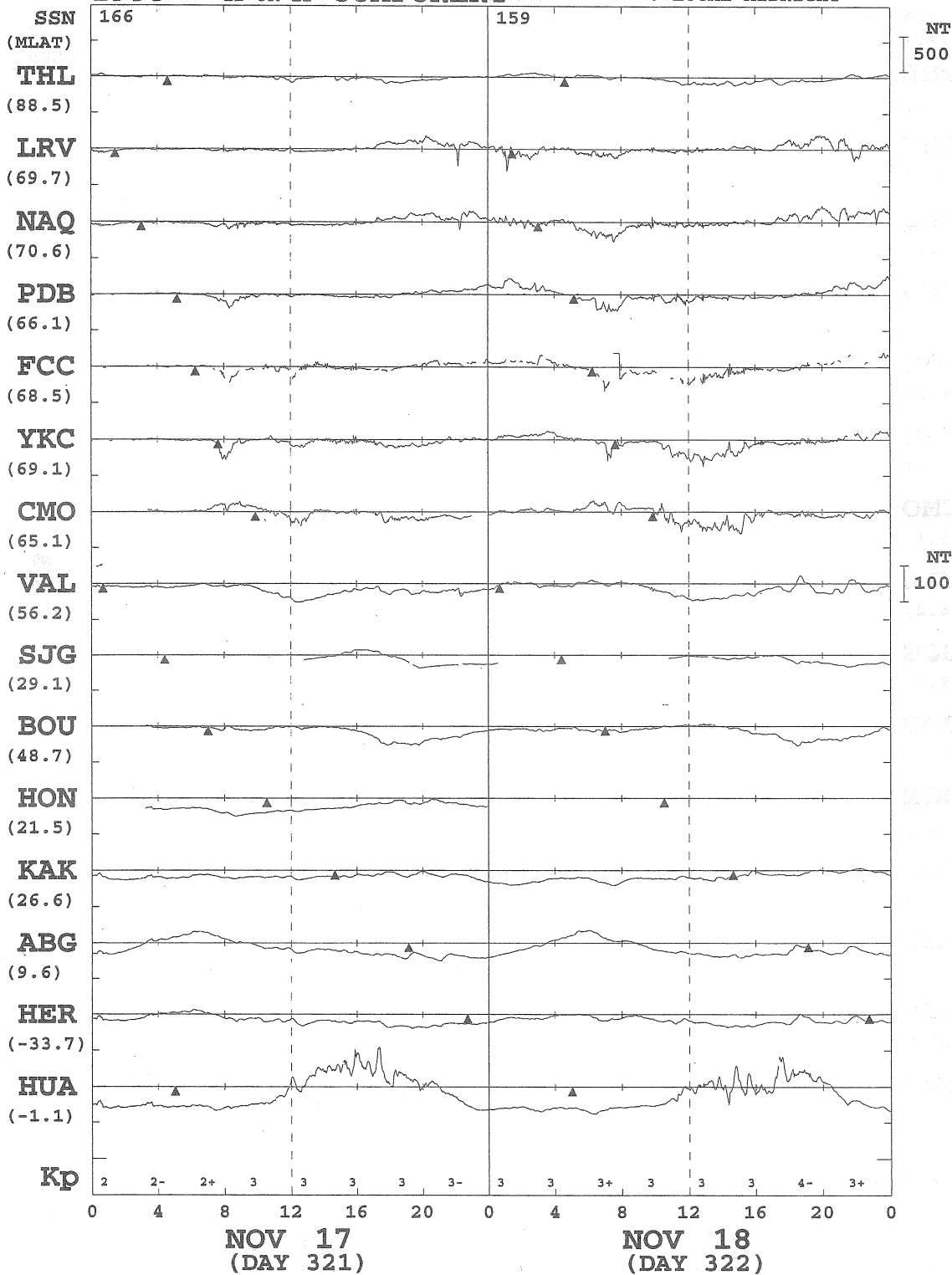
▲ : LOCAL MIDNIGHT



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

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

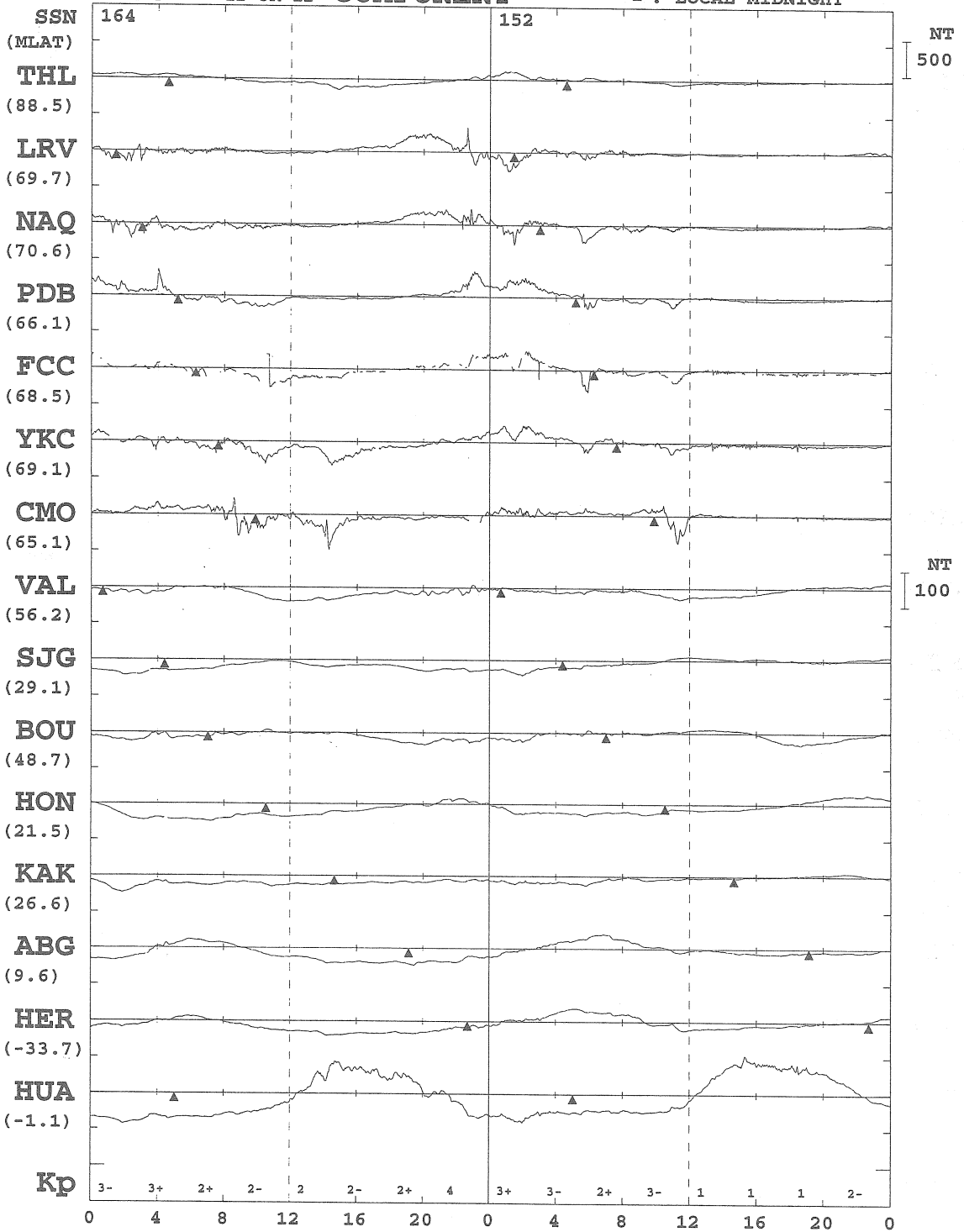


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



NOV 19
(DAY 323)

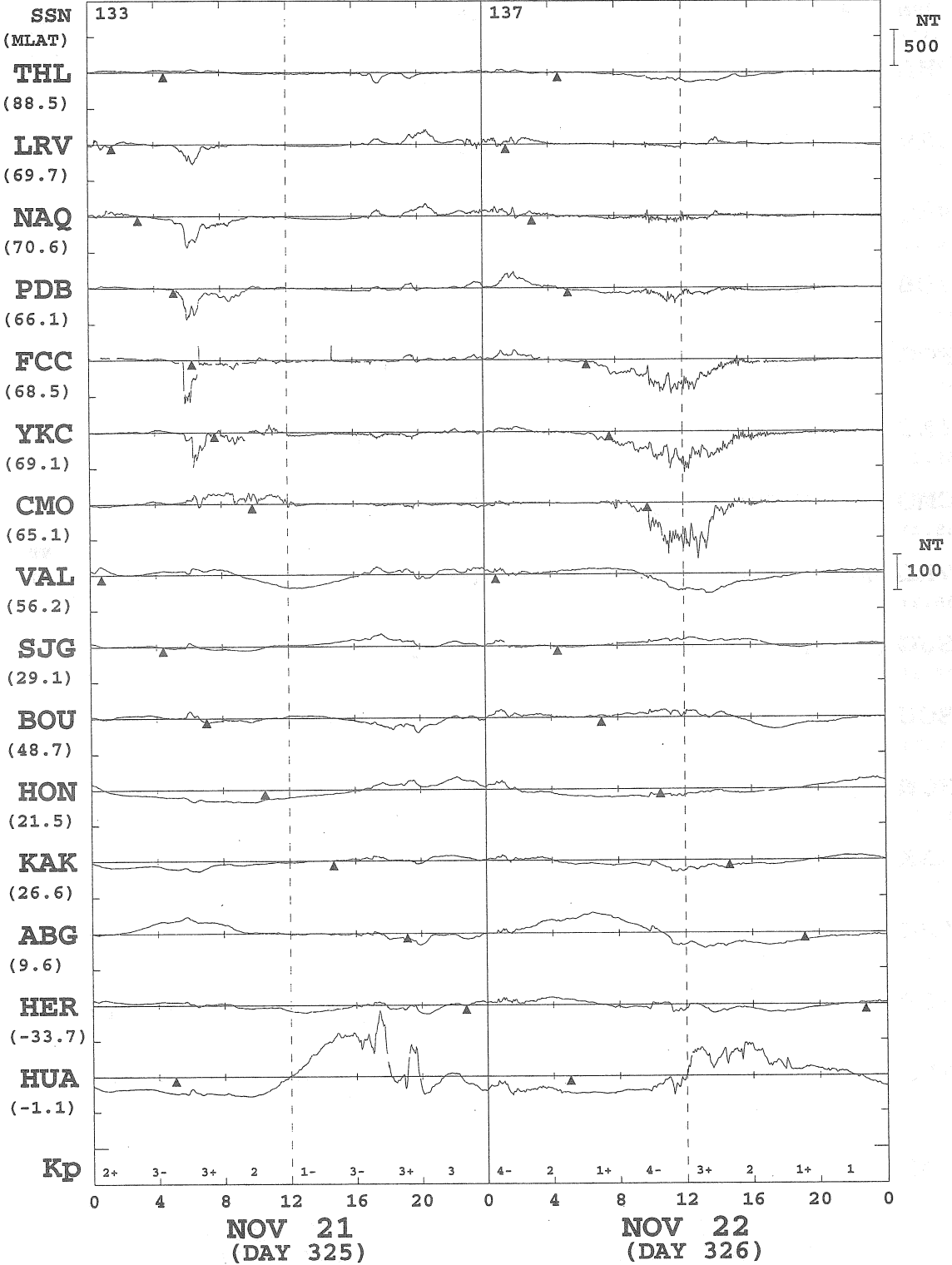
NOV 20
(DAY 324)

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

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

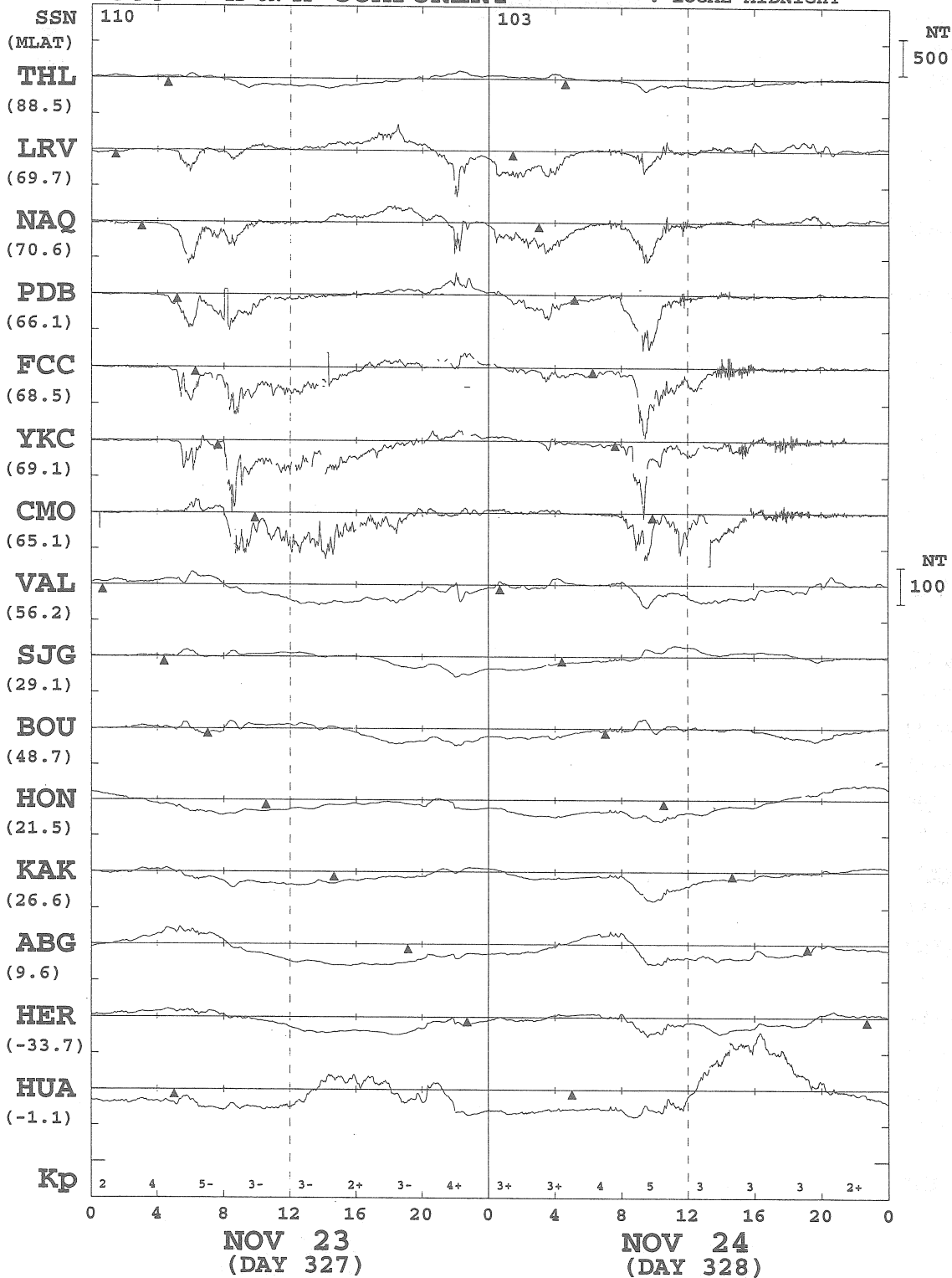


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

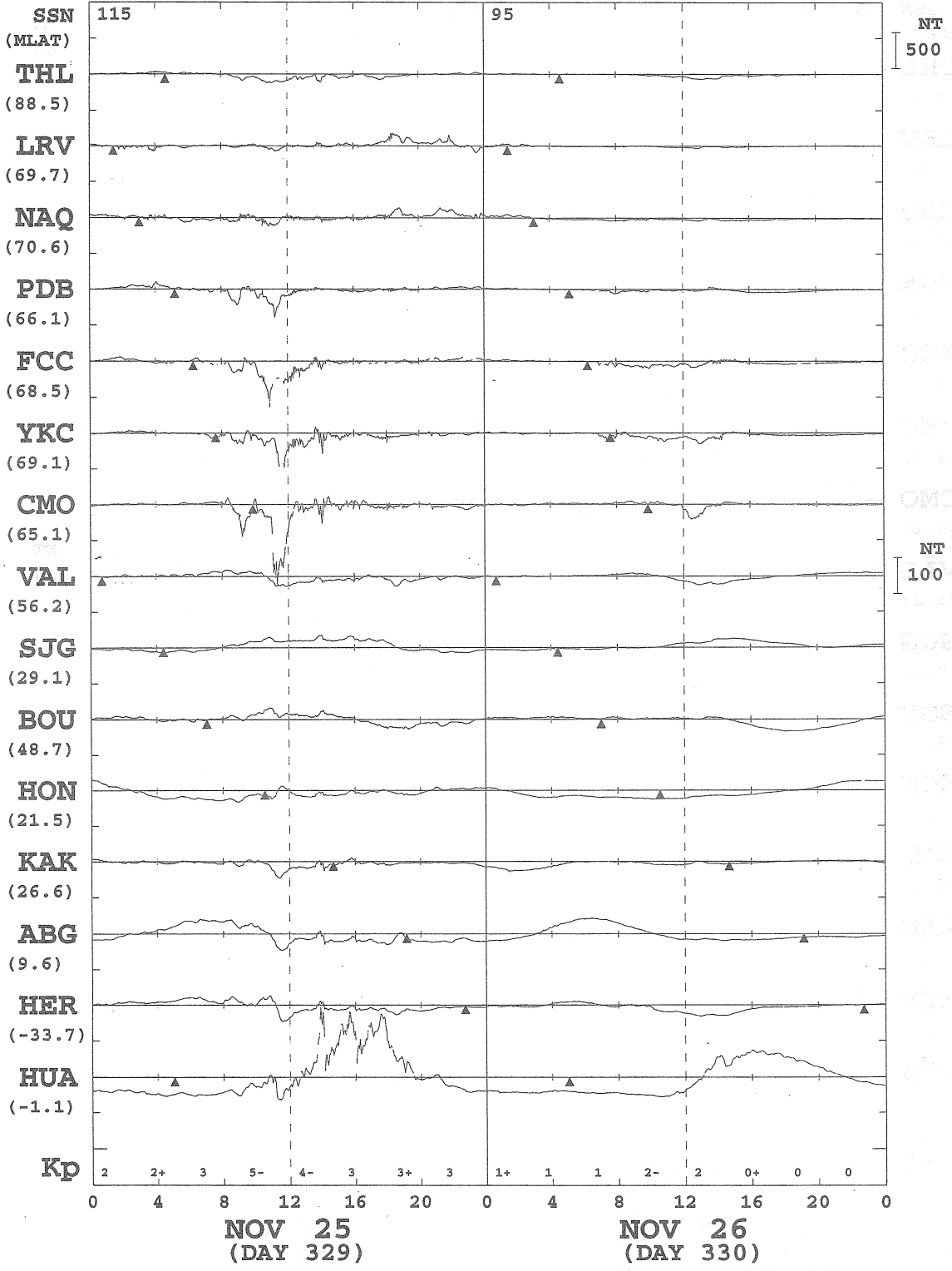
▲ : LOCAL MIDNIGHT



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

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

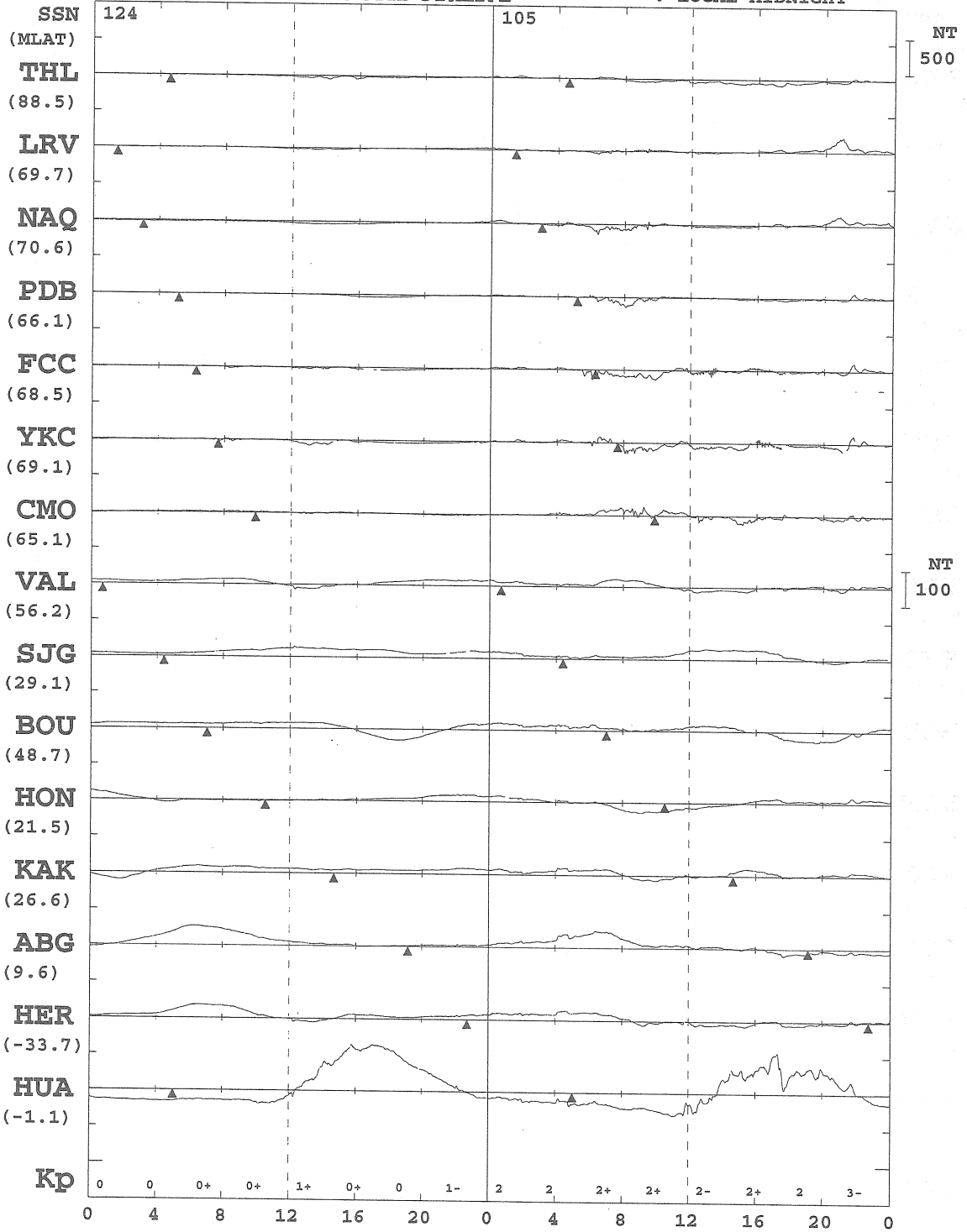


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



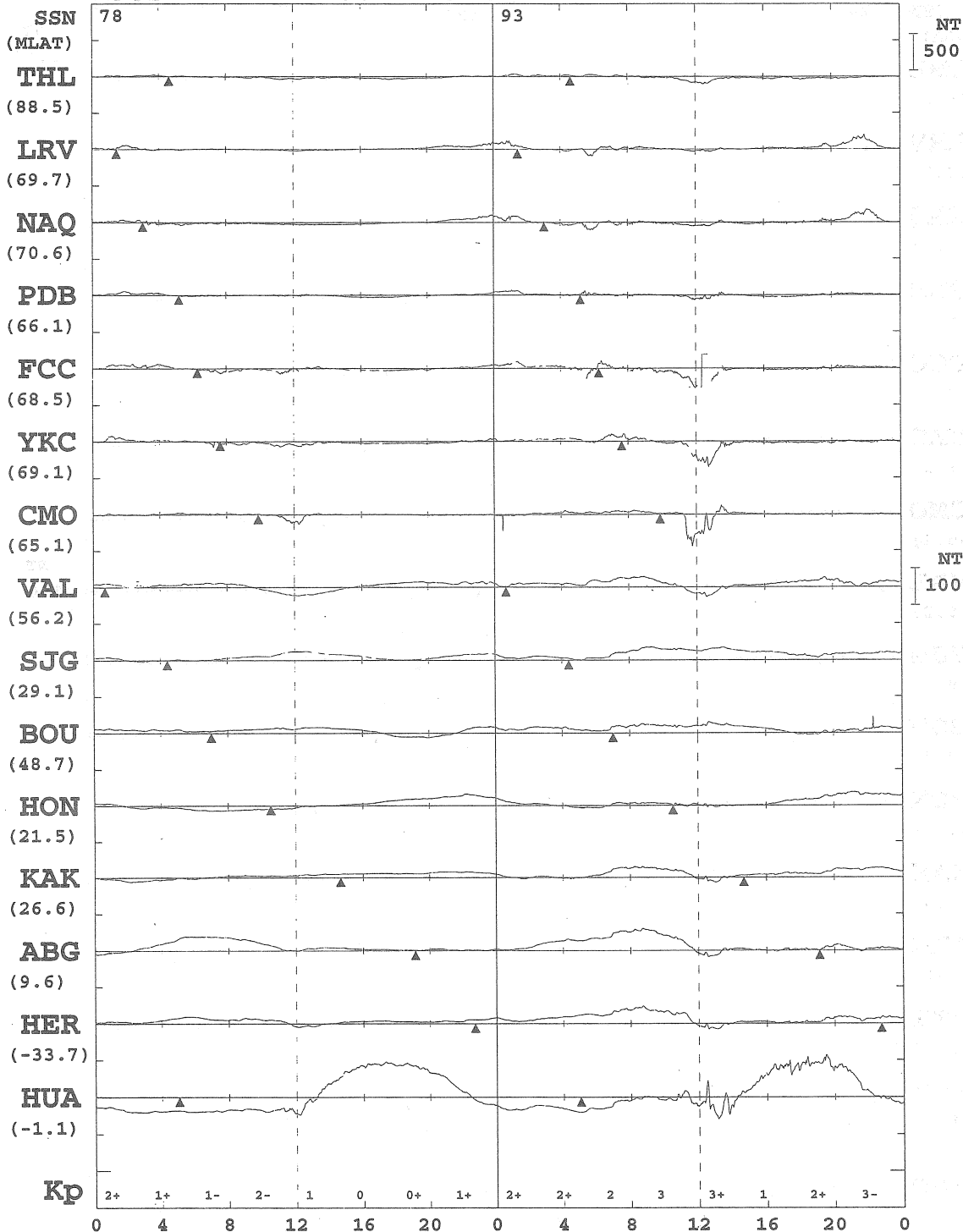
NOV 27
(DAY 331)

NOV 28
(DAY 332)

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

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT



NOV 29
(DAY 333)

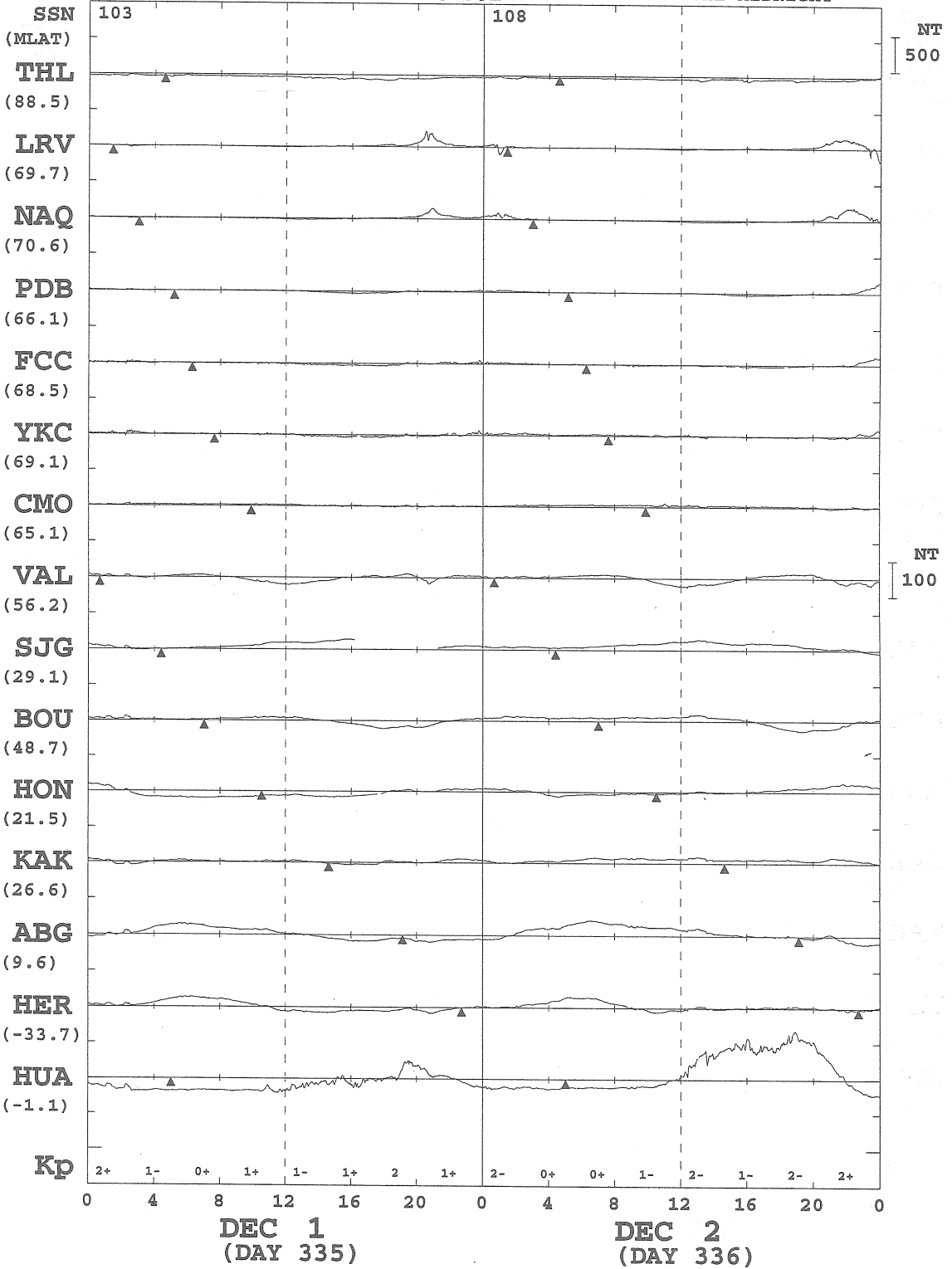
NOV 30
(DAY 334)

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

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

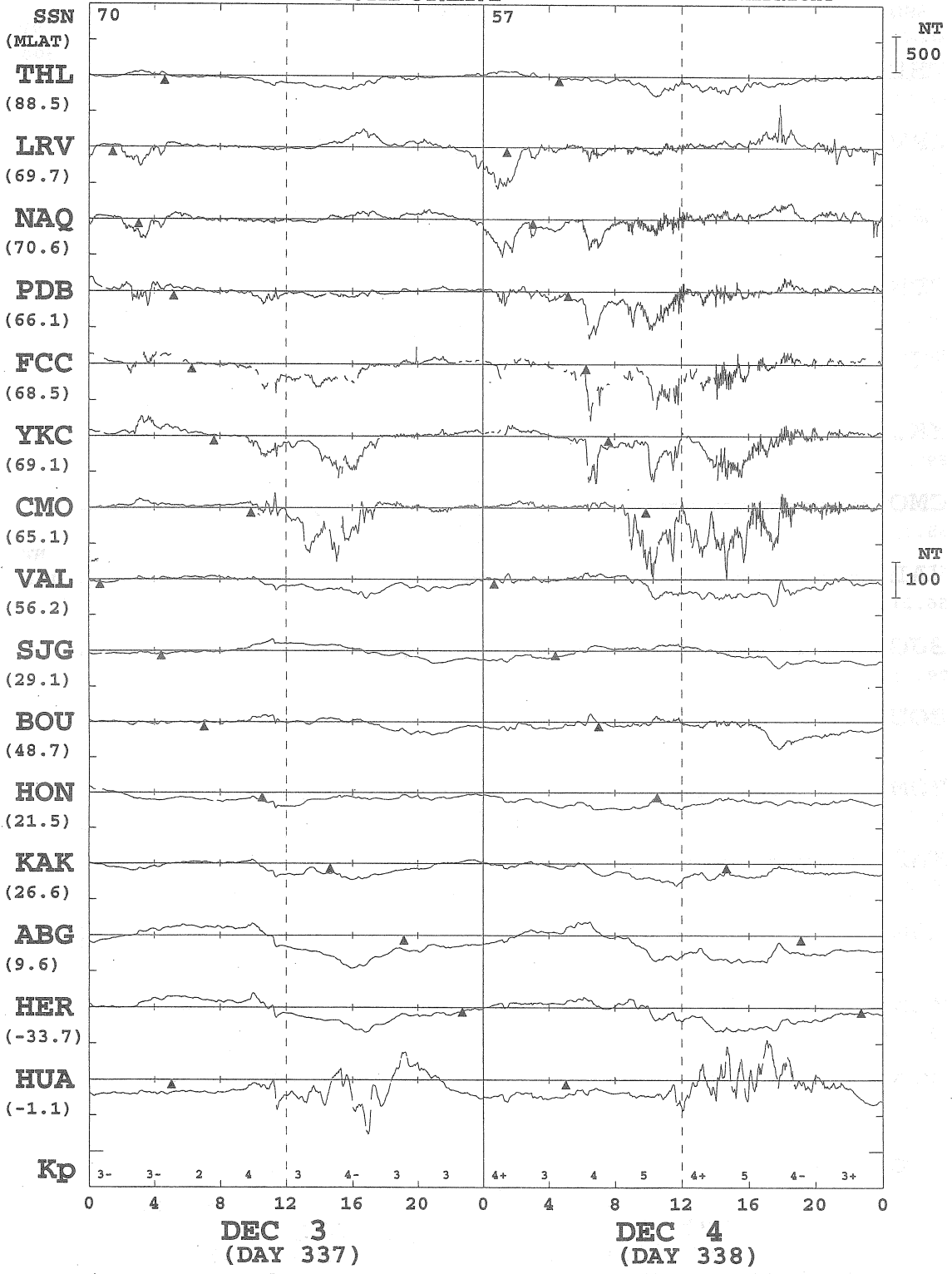


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

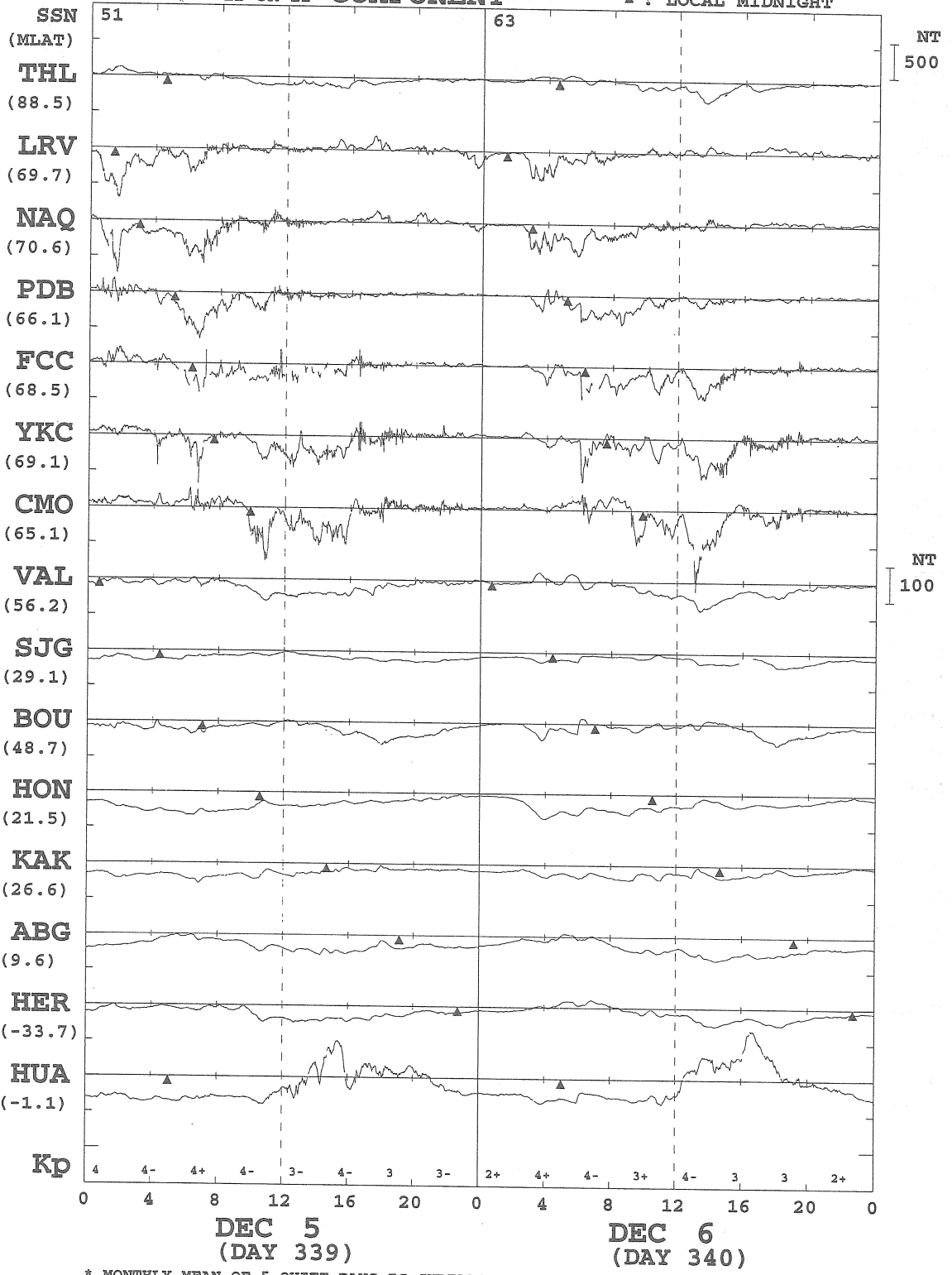


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

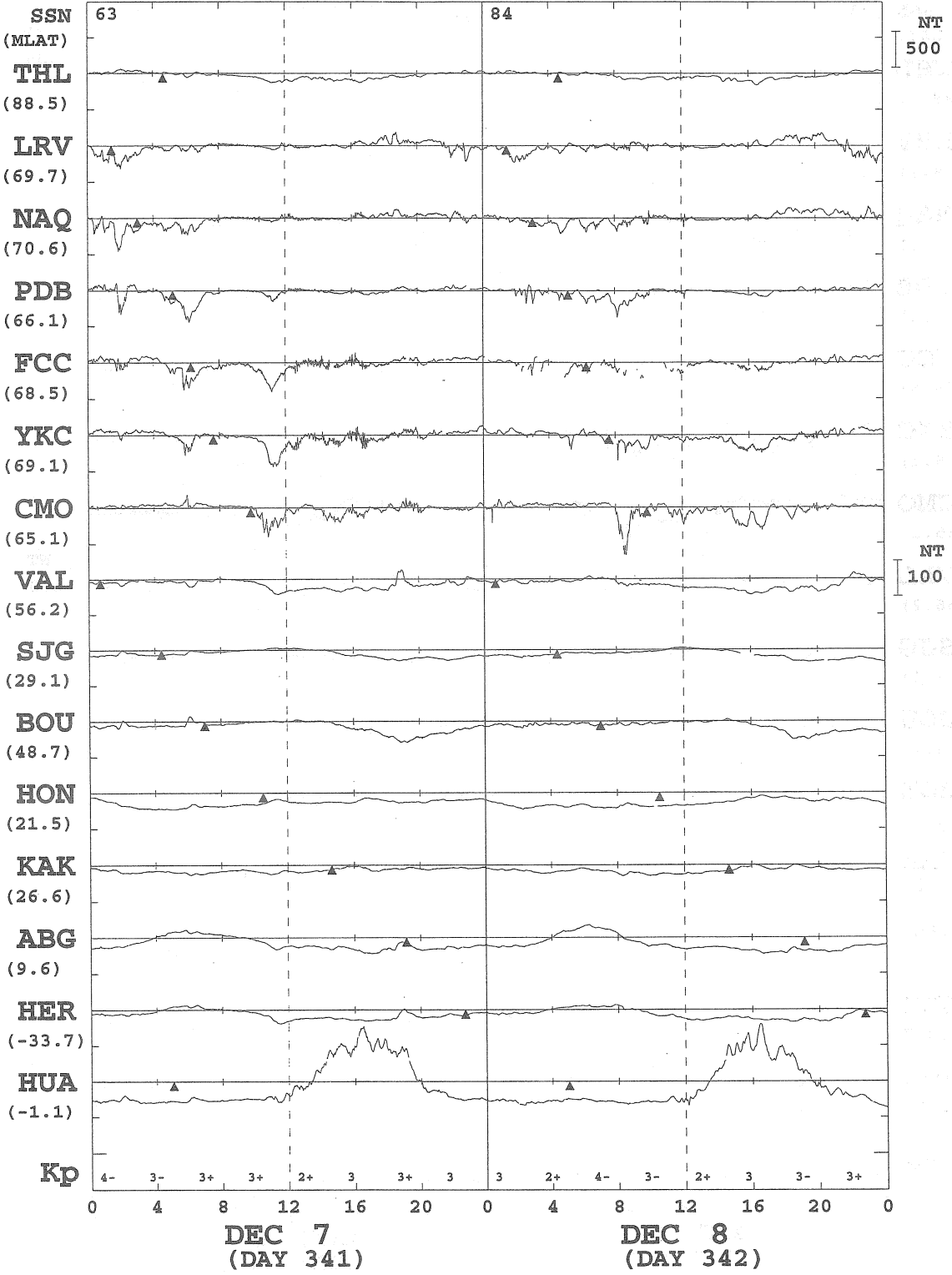


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
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KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

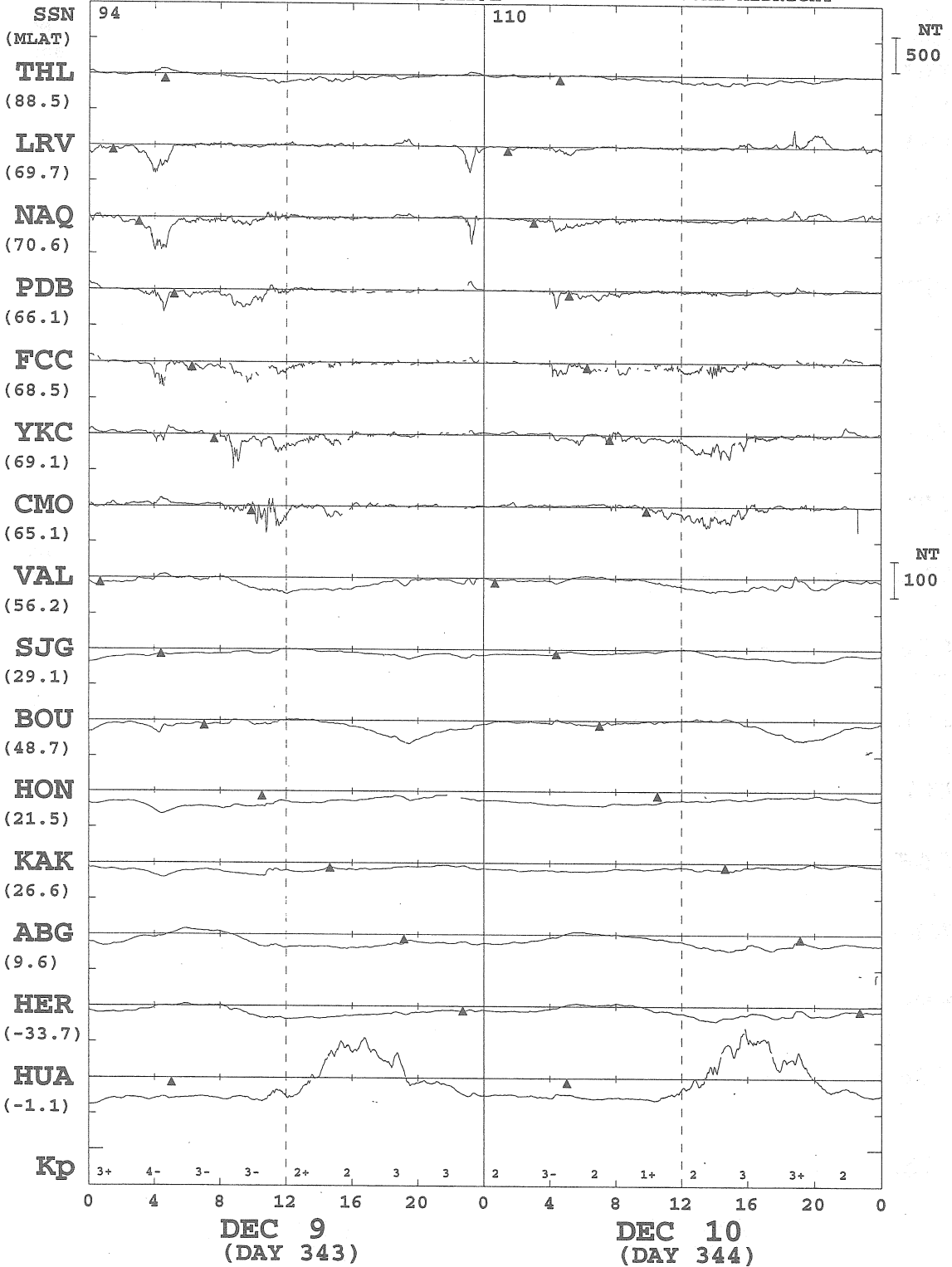


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

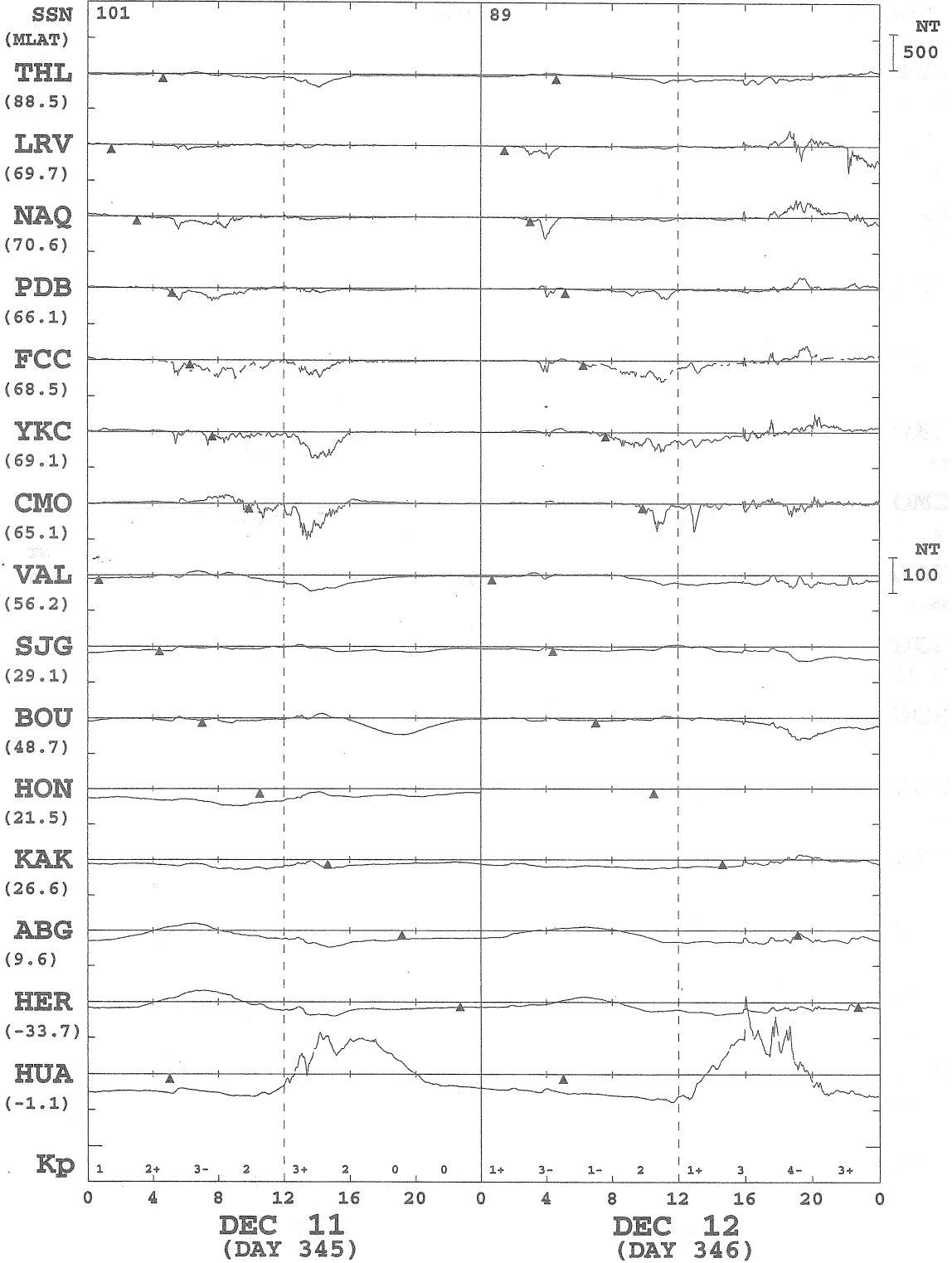
▲ : LOCAL MIDNIGHT



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

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

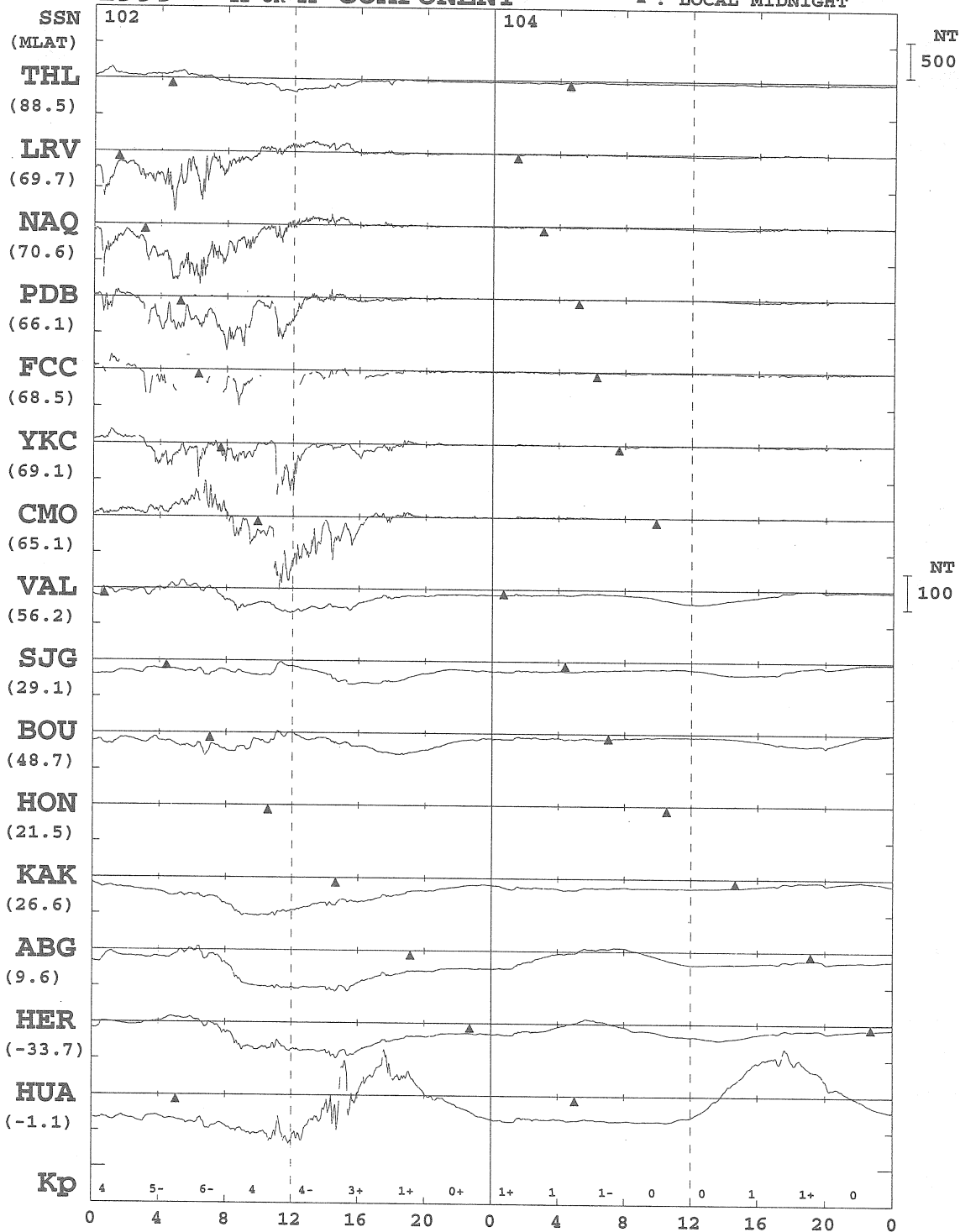


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT



DEC 13
(DAY 347)

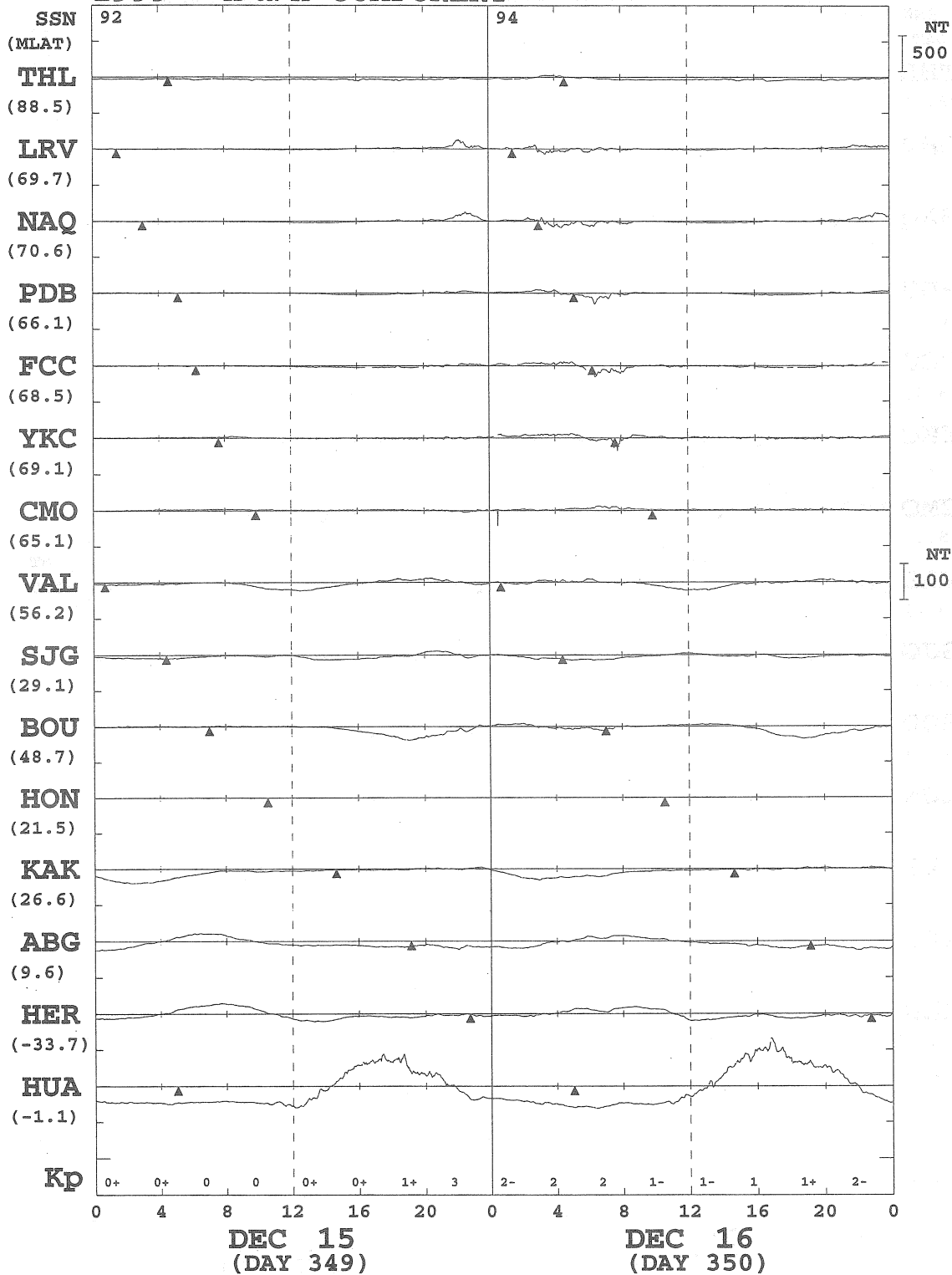
DEC 14
(DAY 348)

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

KYOTO UNIV.

1999 H OR X-COMPONENT

▲ : LOCAL MIDNIGHT

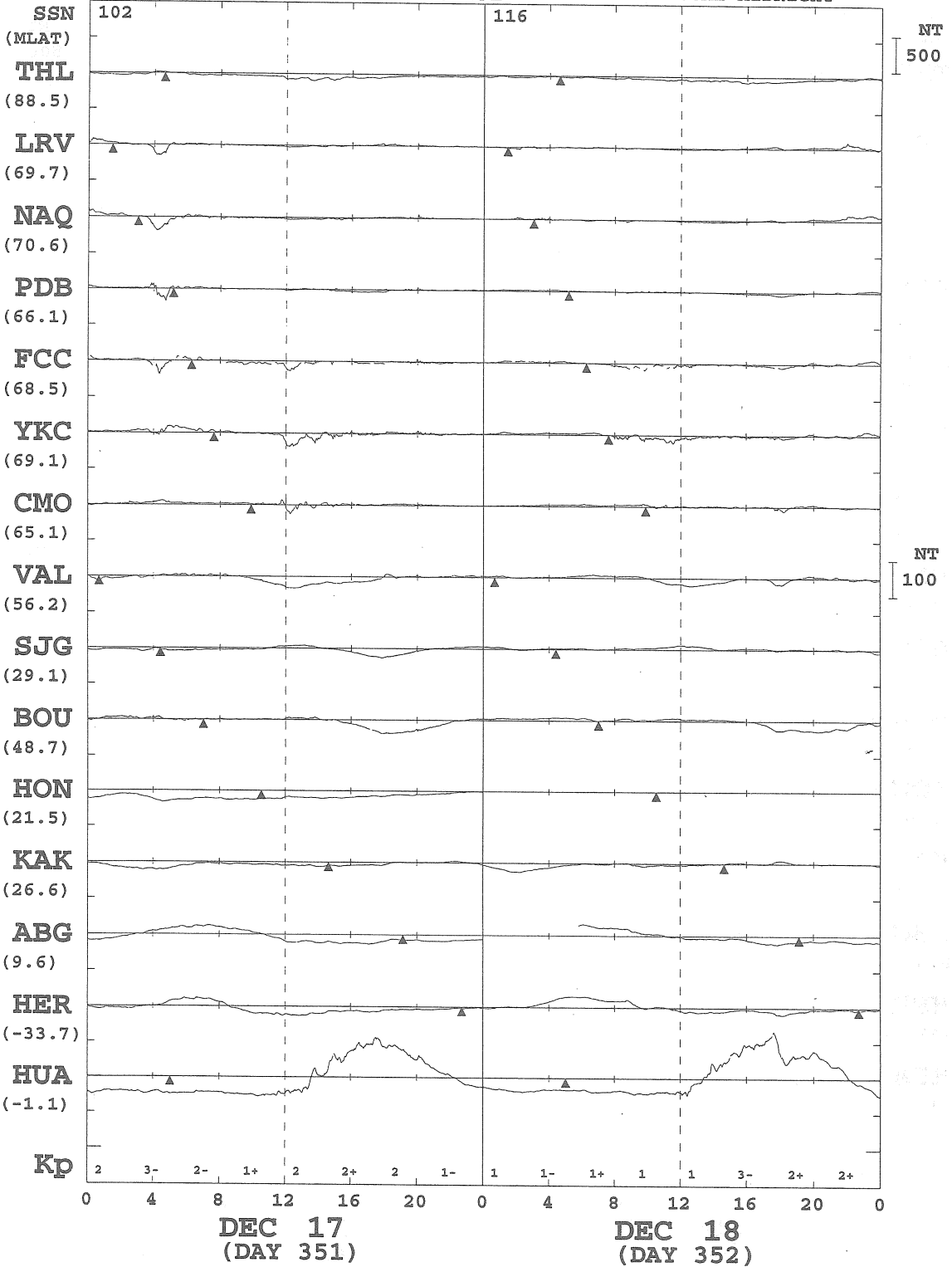


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

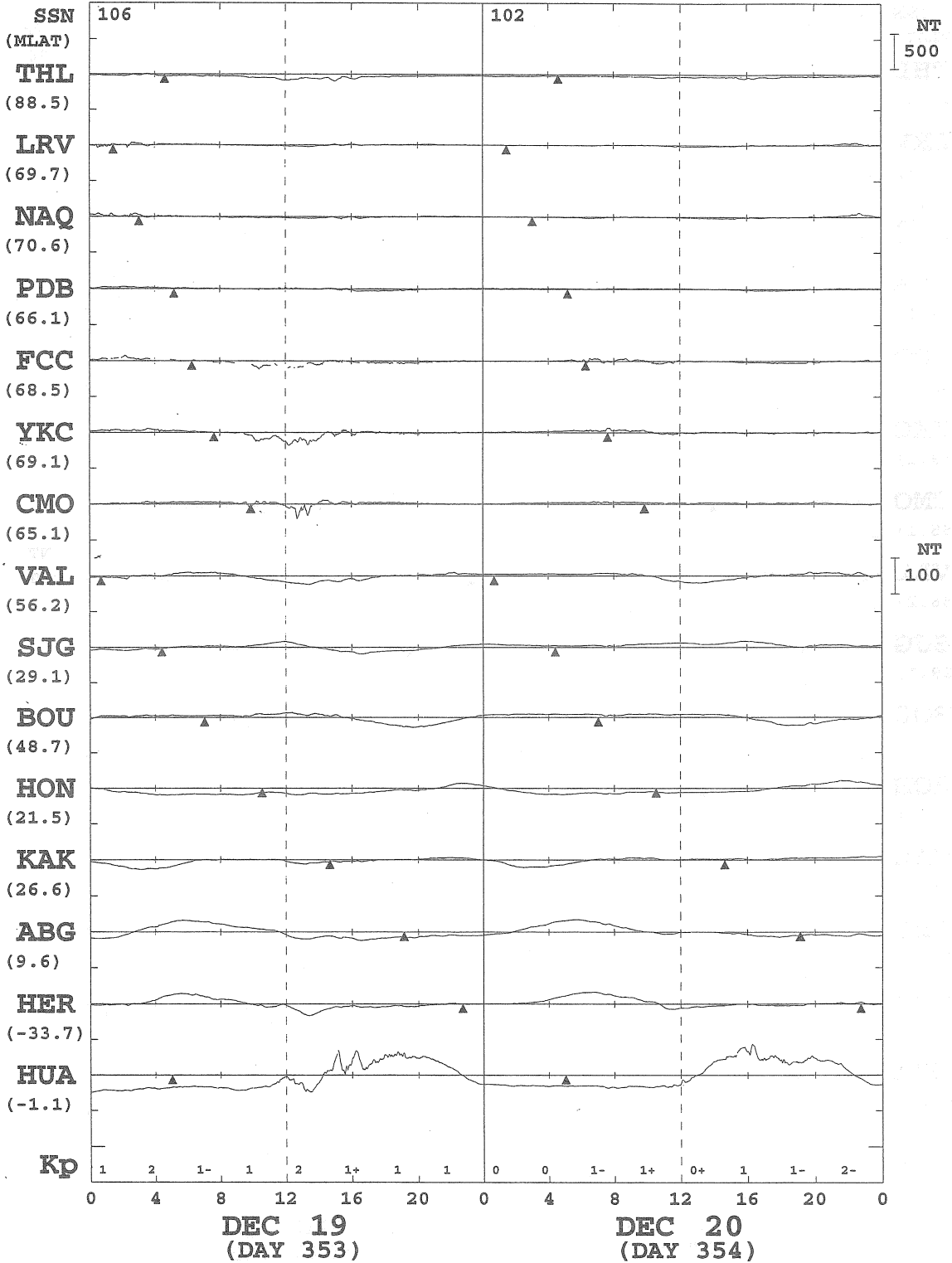
▲ : LOCAL MIDNIGHT



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

KYOTO UNIV.

1999 H OR X-COMPONENT Δ : LOCAL MIDNIGHT

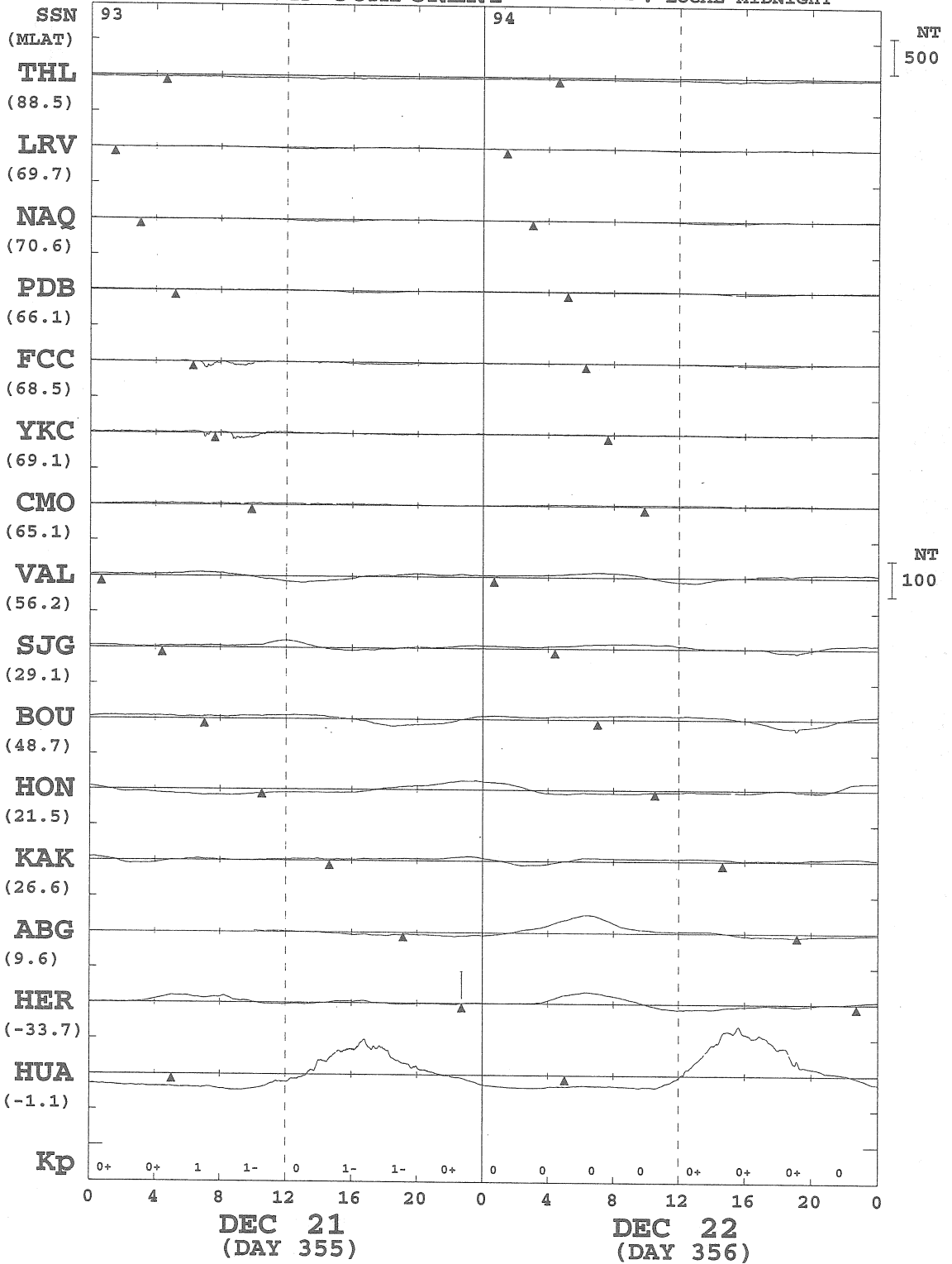


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

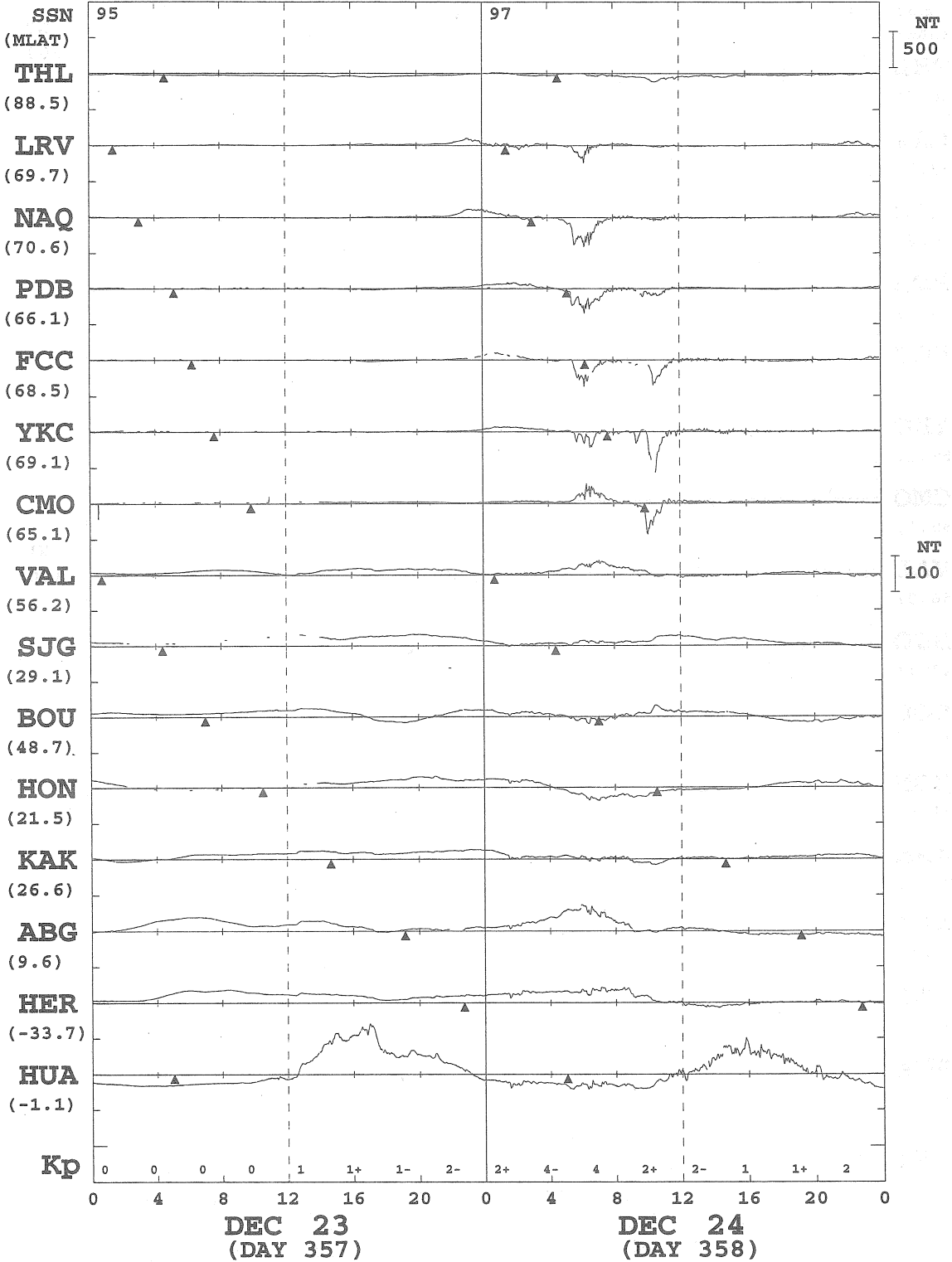
▲ : LOCAL MIDNIGHT



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

KYOTO UNIV.

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

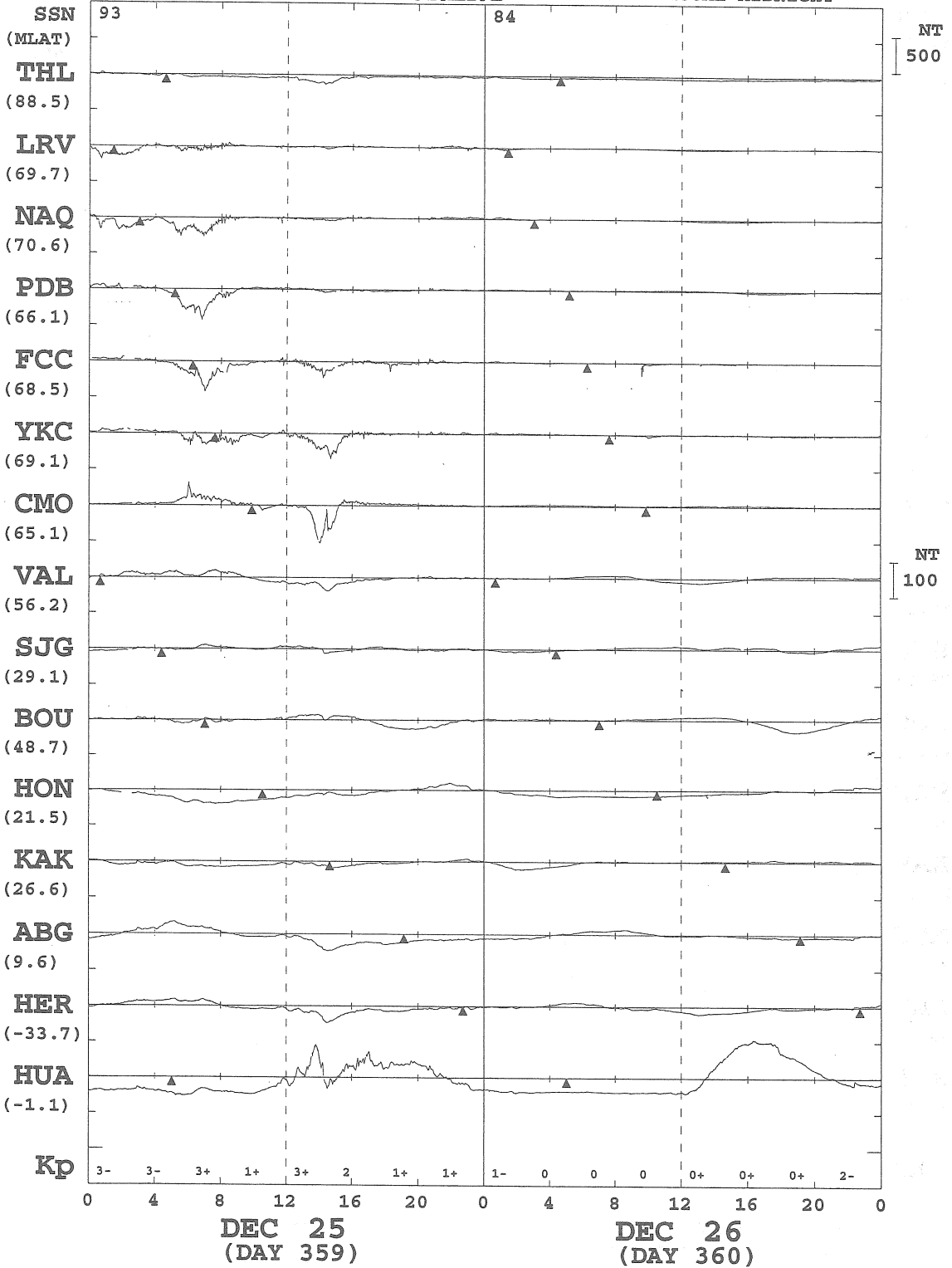


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

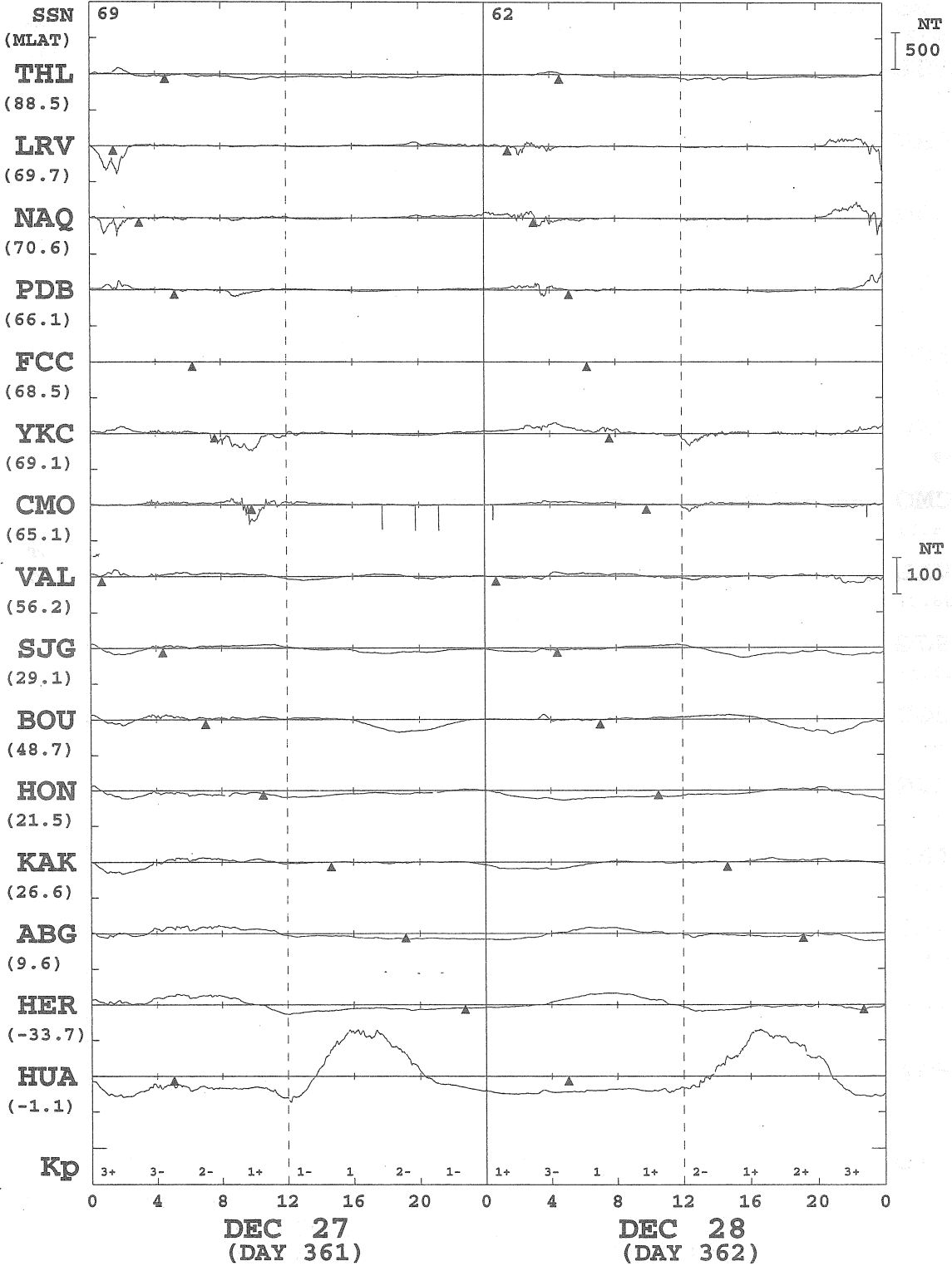
▲ : LOCAL MIDNIGHT



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

1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT

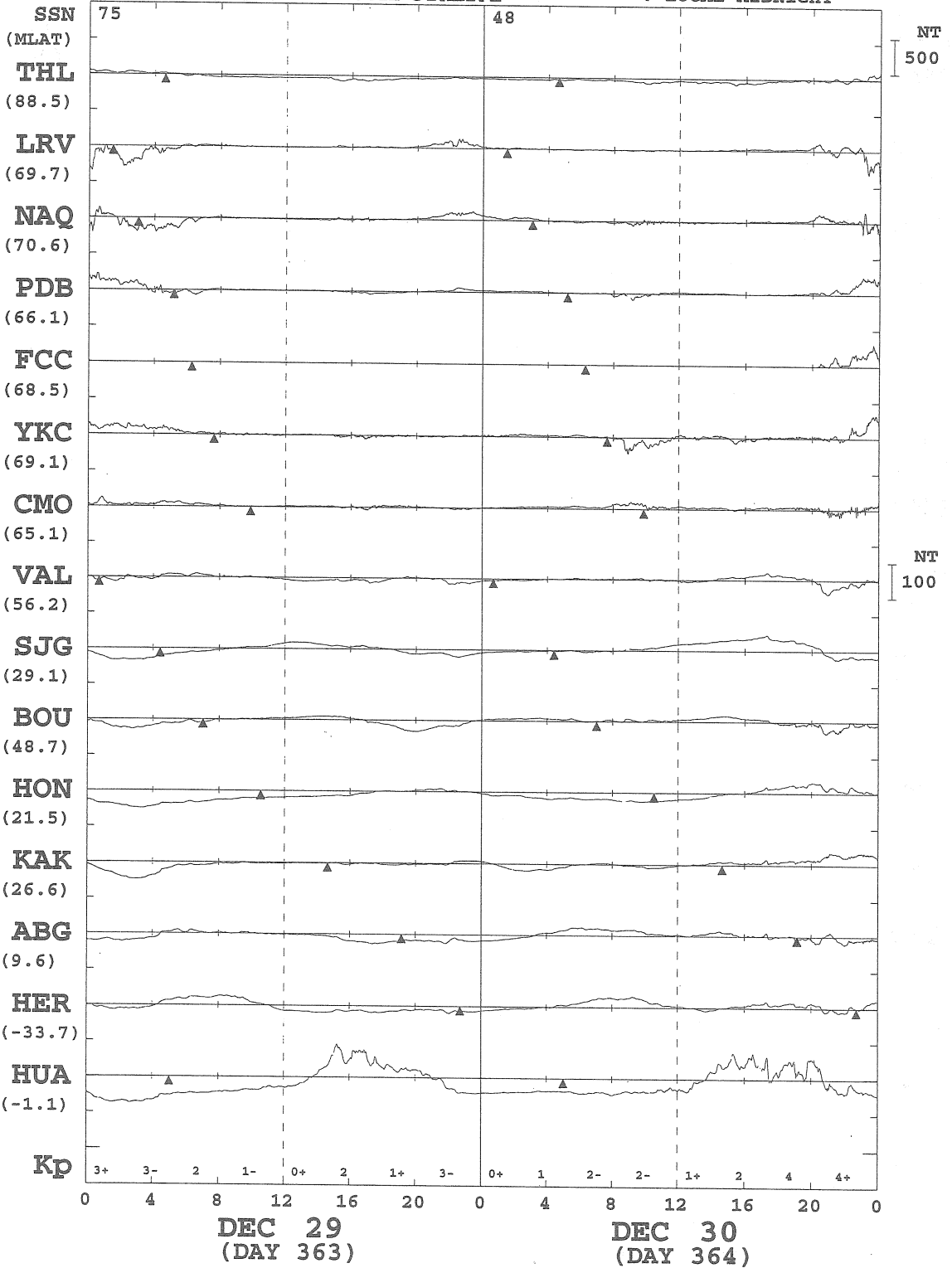


* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
 * PROMPT DATA ARE INCLUDED
 * ARTIFICIAL NOISES ARE NOT ELIMINATED ENOUGH

KYOTO UNIV.

1999 H OR X-COMPONENT

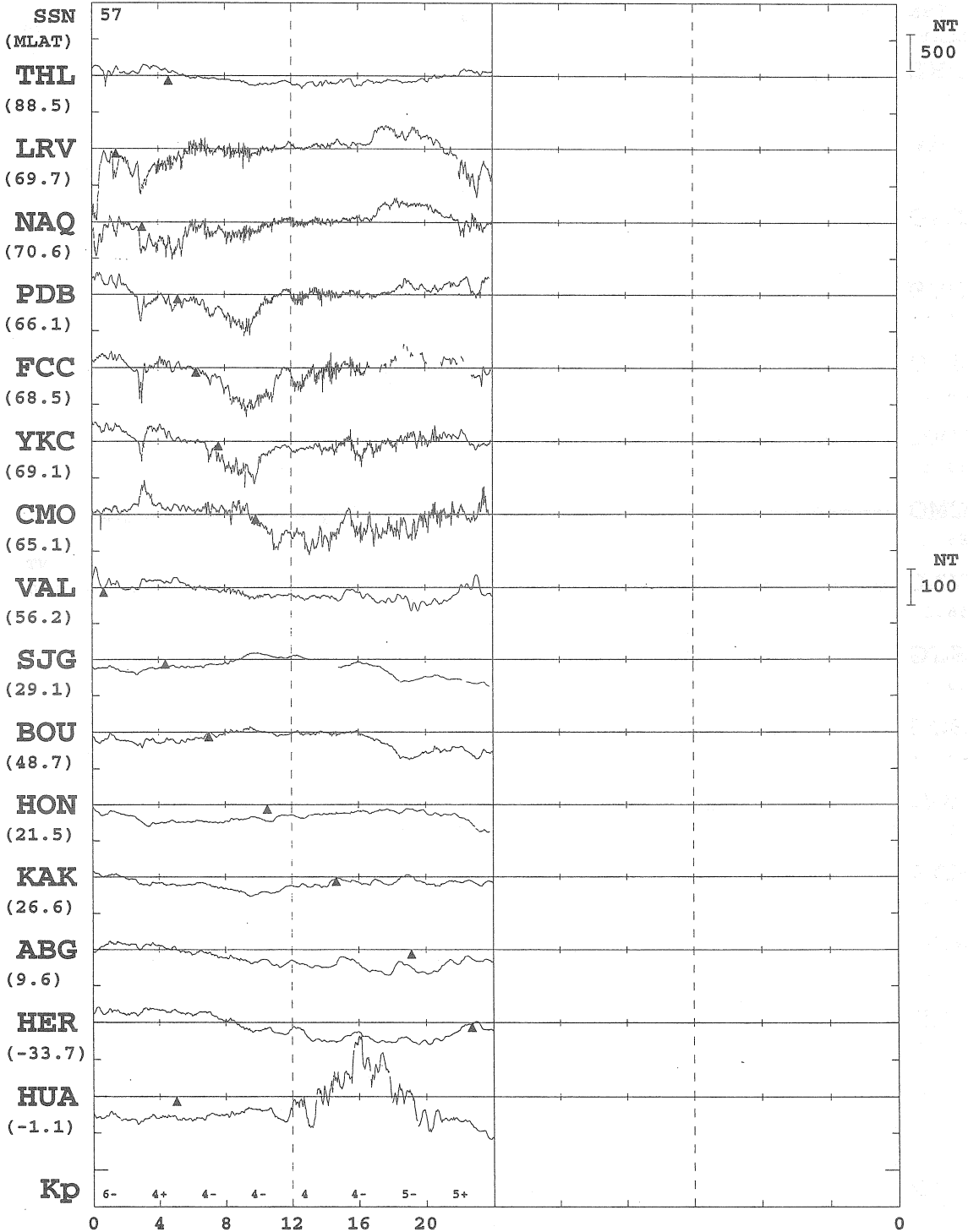
△ : LOCAL MIDNIGHT



* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
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1999 H OR X-COMPONENT ▲ : LOCAL MIDNIGHT



DEC 31
(DAY 365)

* MONTHLY MEAN OF 5-QUIET DAYS IS SUBTRACTED
* PROMPT DATA ARE INCLUDED
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