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PROMIS SERIES

VOLUME 7

GOES 5 and GOES 6 Geosynchronous
Magnetic Field Data
for March-June 1986

NASA

National Aeronautics and
Space Administration

Goddard Space Flight Center

PROMIS SERIES.

VOLUME 7 ⁻

GOES 5 and GOES 6 Geosynchronous
Magnetic Field Data
for March-June 1986

November 1989
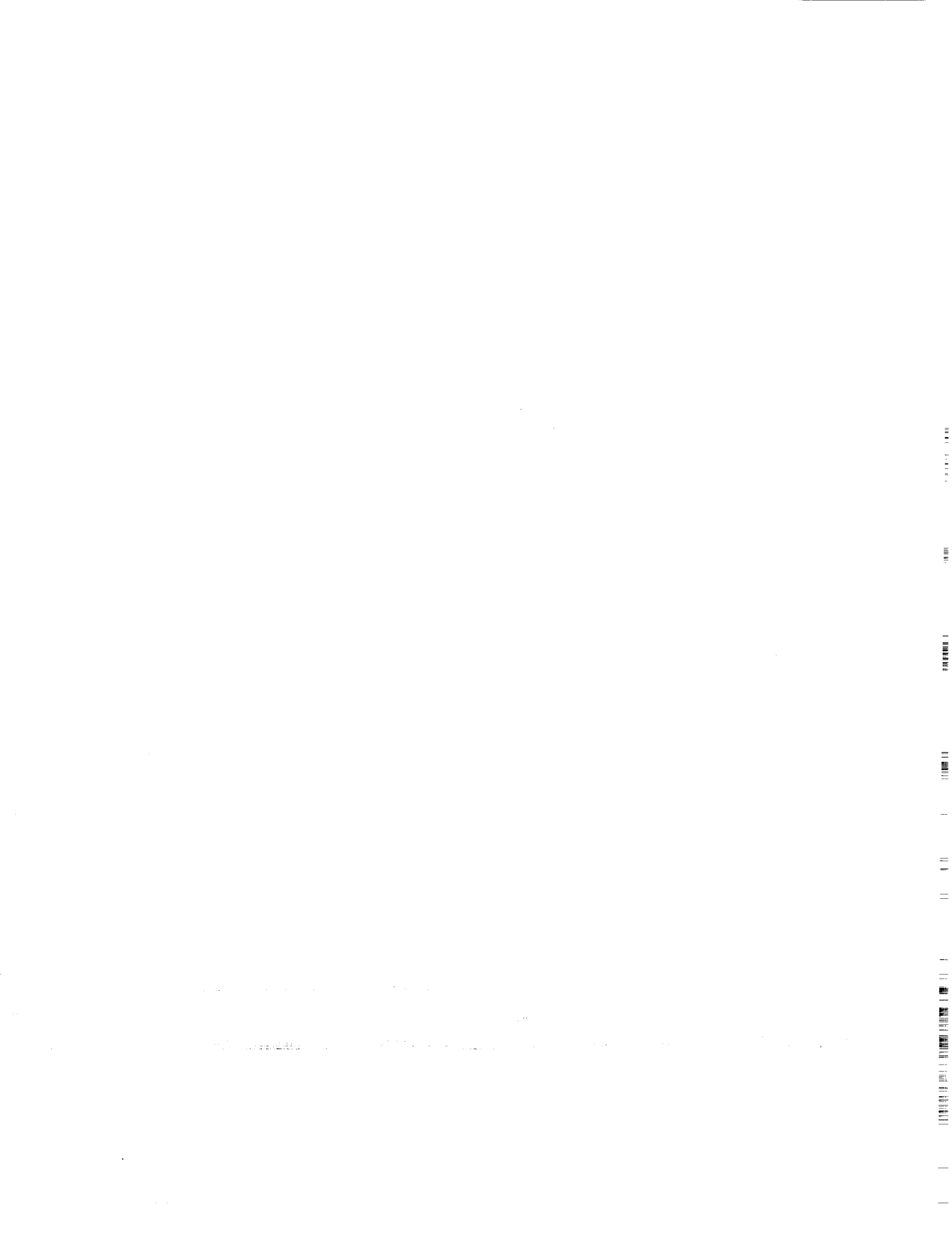
Prepared by

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Lab. for Extraterrestrial Physics, NASA Goddard Space Flight Center
and
K. Takahashi
Applied Physics Laboratory, Johns Hopkins University, Laurel, Maryland

Foreword

This is the seventh in a series of volumes pertaining to the Polar Region Outer Magnetosphere International Study (PROMIS). It contains 24 hour plots of approximately 1 minute average magnetic fields from the GOES 5 and GOES 6 spacecraft for the period March 10-June 16 1986. Data are displayed in a VDH coordinate system based on a centered dipole with northern hemisphere geographic coordinates of the pole at 78.80° latitude and 289.24° longitude. The magnetic field components are BH parallel to the dipole axis and positive northward, BV perpendicular to BH and in the plane of BH and the radius vector from the center of the earth to the spacecraft (positive outward) and BD perpendicular to the HV plane and positive eastward. The top trace BT indicates the total field magnitude and the bottom trace ELEV represents the latitude angle of the field in the VDH system (a 0° field is in the equatorial plane, a 90° field is northward). Magnetic local times are shown along the upper horizontal axis and universal times and dipole tilt angles (the geomagnetic latitude of the sun) along the bottom horizontal axis. The lighter trace represents GOES 5 and the darker trace GOES 6. Data have not been edited to remove noise points or time-dependent spacecraft fields. Also, the corrections to the spin axis component of the field determined by Fairfield and Zanetti [JGR p 3565, 1989] have not been applied to this data.

During the PROMIS interval, the GOES spacecraft were separated by about 2 hours local time and located within a few degrees of 75° West Geographic Longitude (GOES 5) and 108° West Geographic Longitude (GOES 6). These locations relative to three Los Alamos geosynchronous spacecraft (see Volume 6 of this series) are shown in Figure 1. The positions are shown for 0600 Universal Time, an hour that provides optimal coverage of the midnight region. Tic marks inside the synchronous orbit denote the geographic longitude of 11 midlatitude ground magnetic observatories whose digital magnetic data are available in the UCLA data base. The stations range from Kanoya, Kakioka and Memambetsu in the west through Honolulu, Victoria, Newport, Tucson, Boulder, Ottawa, San Juan and Saint John's in the east. Geosynchronous spacecraft orbit essentially in the geographic equatorial plane and remain fixed with respect to the rotating field, but the geomagnetic latitude of the various spacecraft is different at the different longitudes. These dipole latitudes at the various geographic longitudes are shown in Figure 2 along with spacecraft positions appropriate for the PROMIS period.
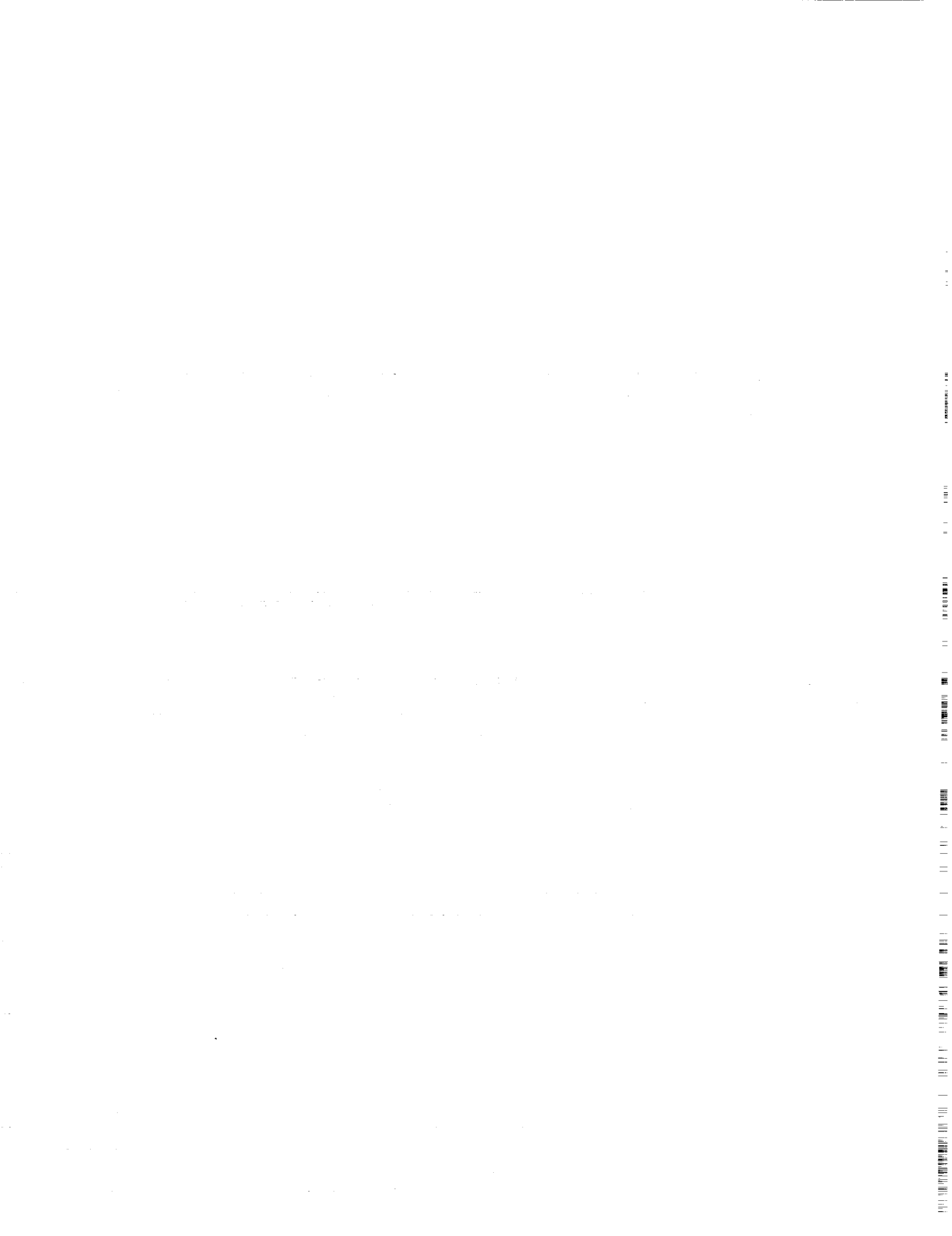
GEOSYNCHRONOUS SPACECRAFT POSITIONS
PROMIS PERIOD – 0600 UT

Figure 1

DIPOLE LATITUDE OF SYNCHRONOUS SPACECRAFT
PROMIS PERIOD
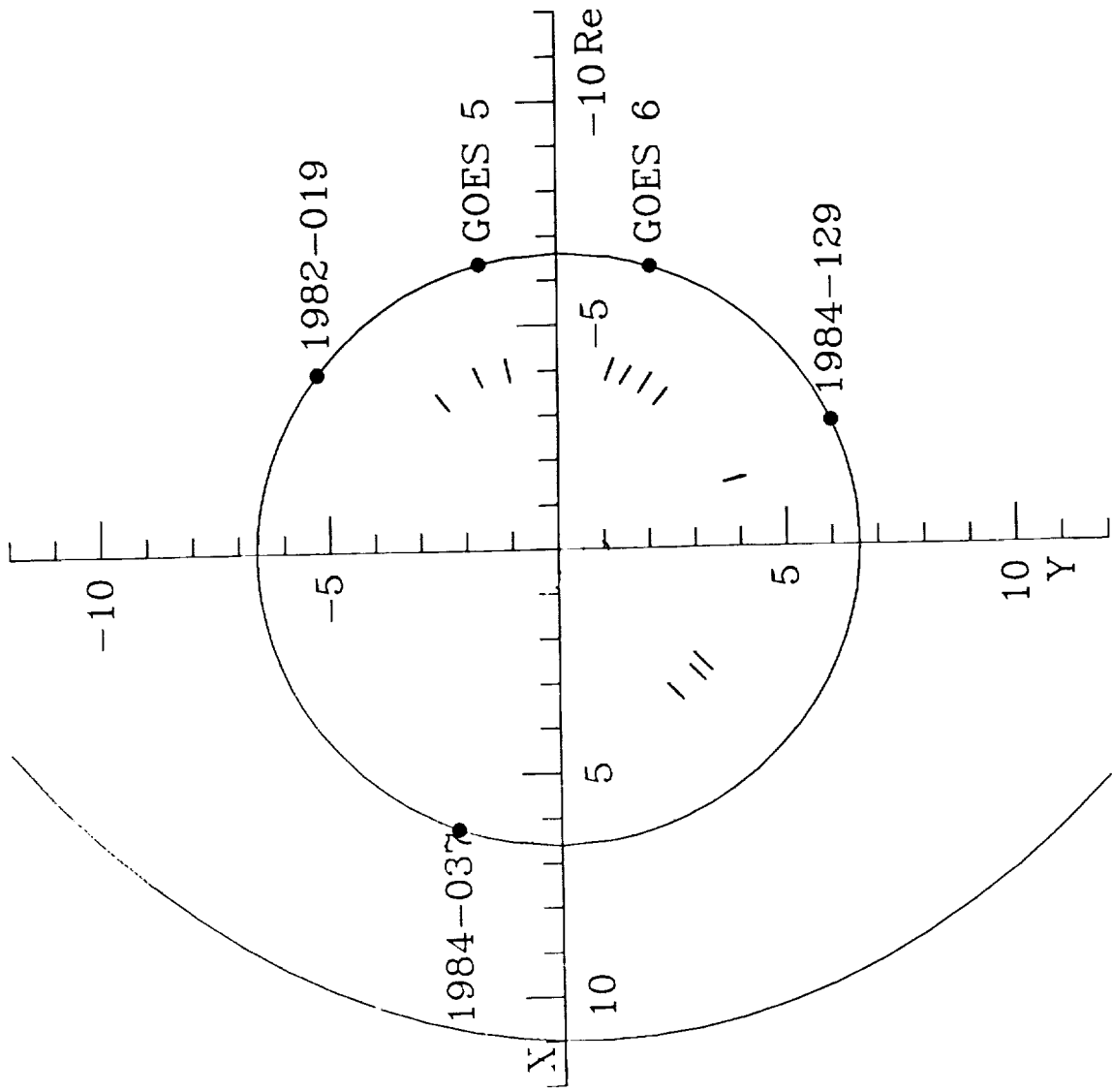
Figure 2

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 69   MAR 10
GEOLON, MAGLAT = 5(−74.8, 11.2)   6(−108.0,   8.9)

| MLT 5 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 |
| MLT 6 | 1800 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 |

10.0 nT/division

BT 110

BH 80

BV −60

BD 0

10.0 deg/division

ELEV 0

| UT | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 0000 |
| TILT | −7.4 | −12.3 | −15.1 | −14.9 | −11.8 | −6.6 | −0.9 | 4.1 | 6.9 | 6.7 | 3.7 | −1.3 | −7.0 |

PLOT2GOES   8−JUN−1989 20.42.42.31

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY 70   MAR 11
GEOLON, MAGLAT = 5(−74.9, 11.2)   6(−108.0,   8.9)

| MLT 5 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 |
| MLT 6 | 1800 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 |

10.0 nT/division

BT 110

BH 90

BV −60

BD 0

10.0 deg/division

ELEV 0

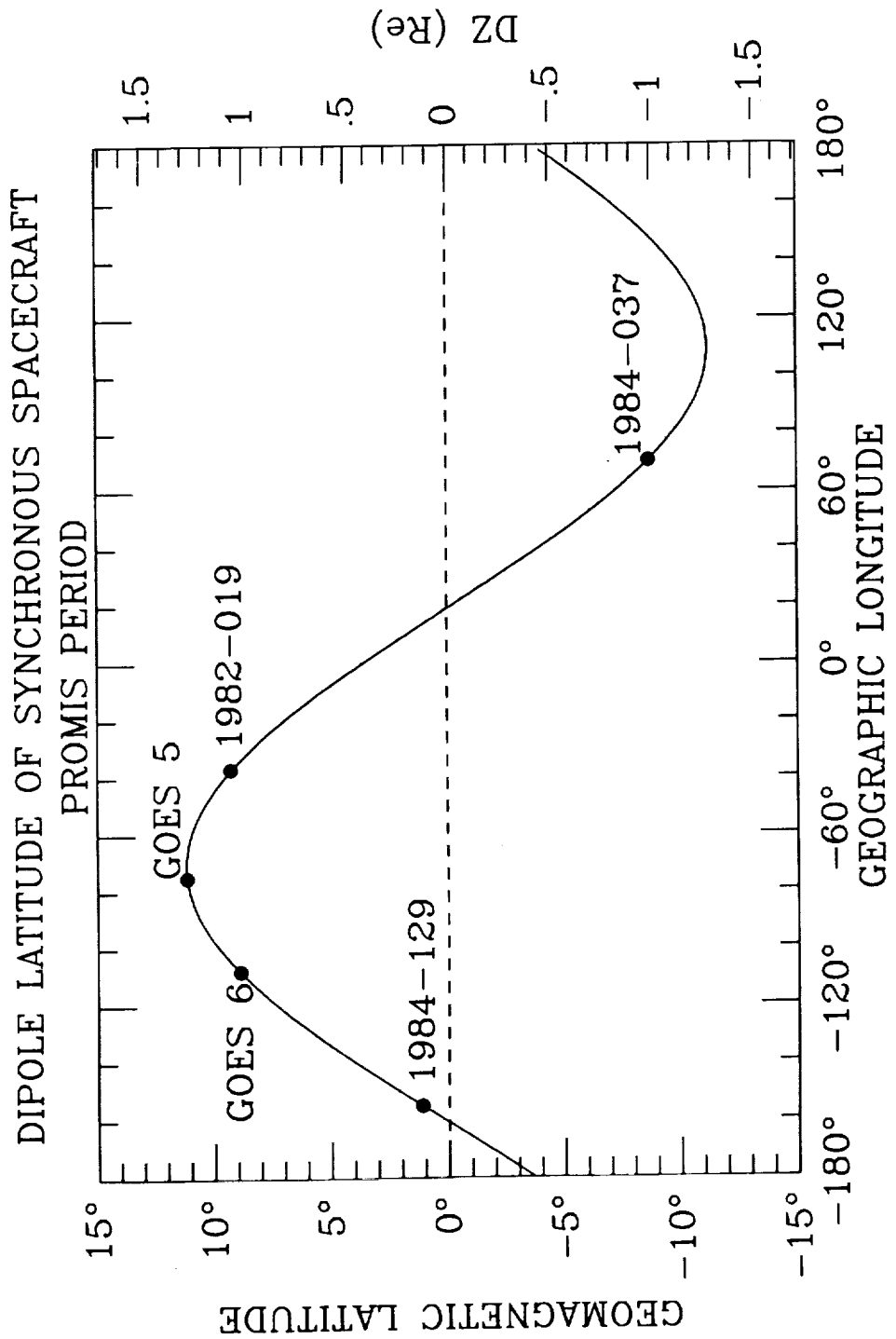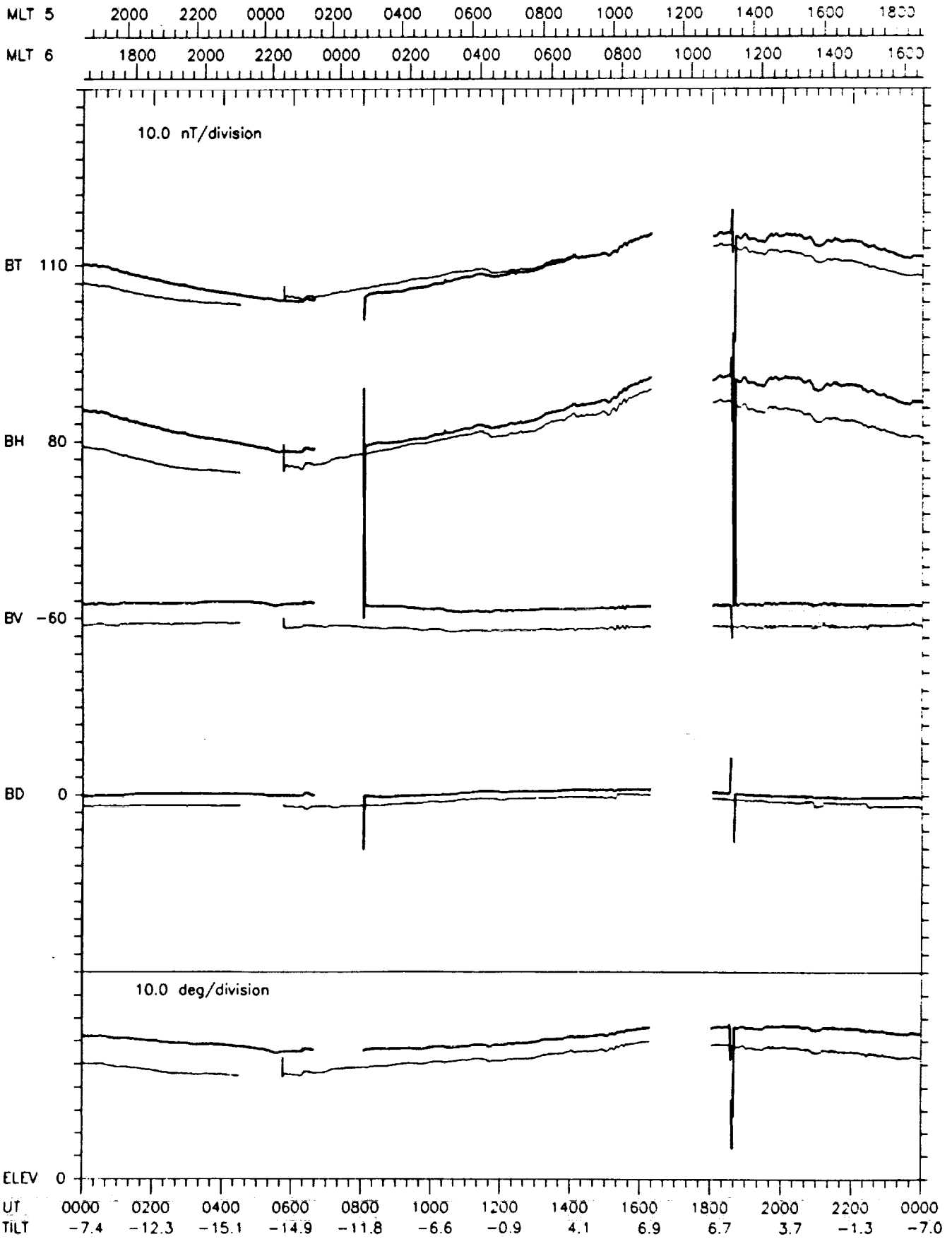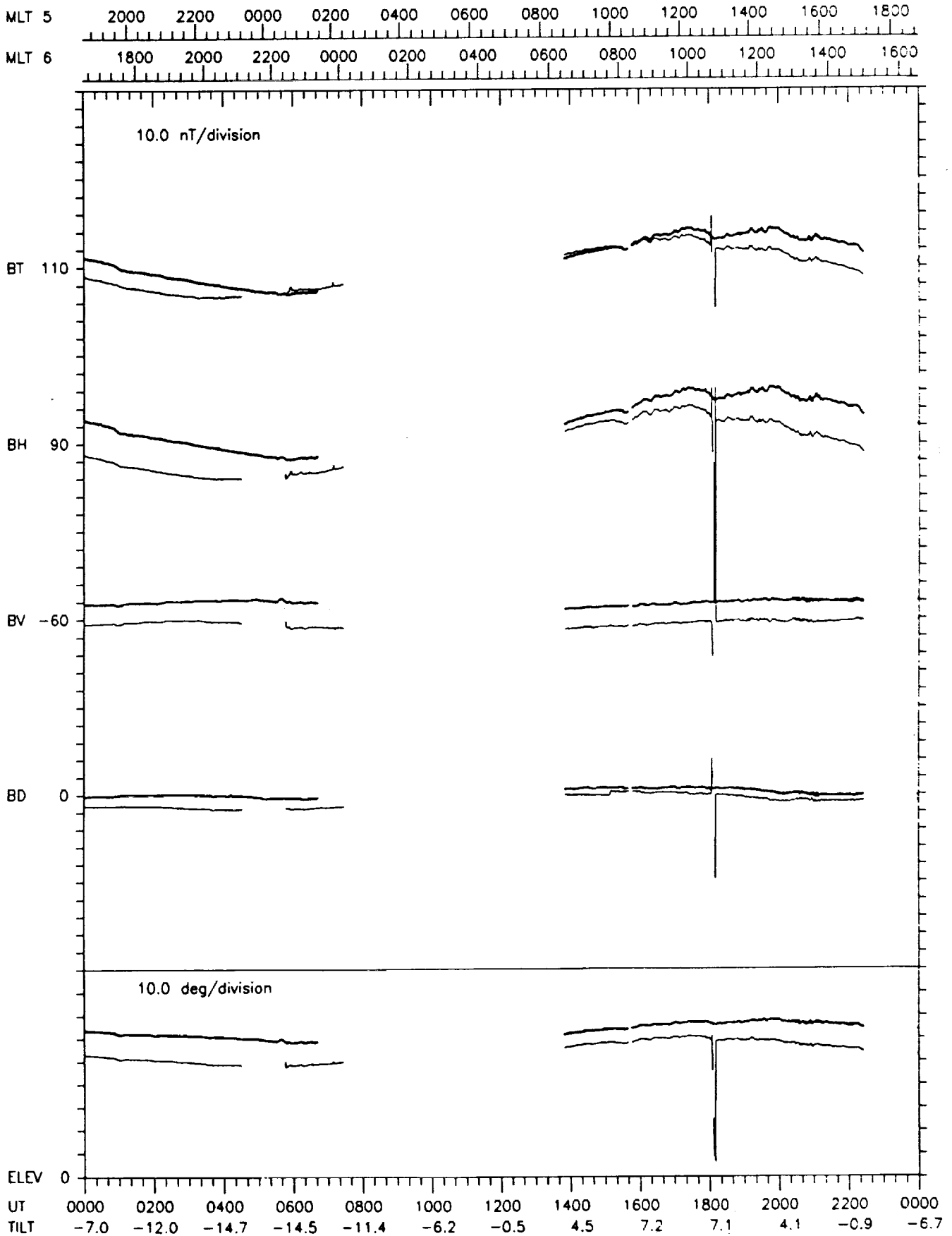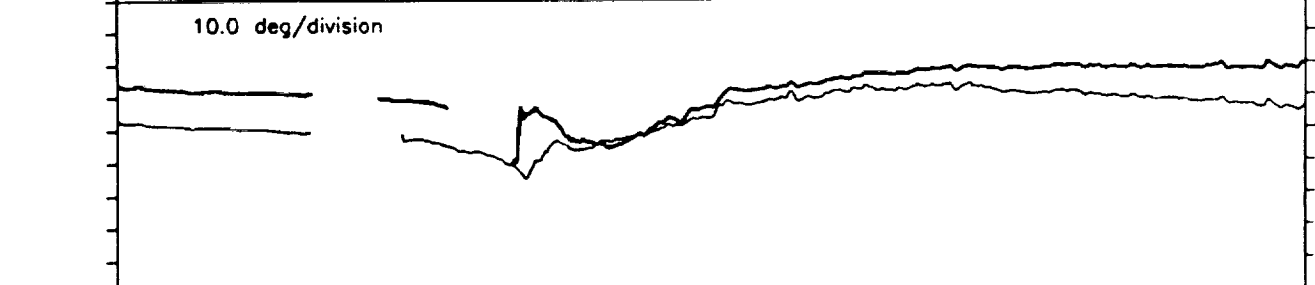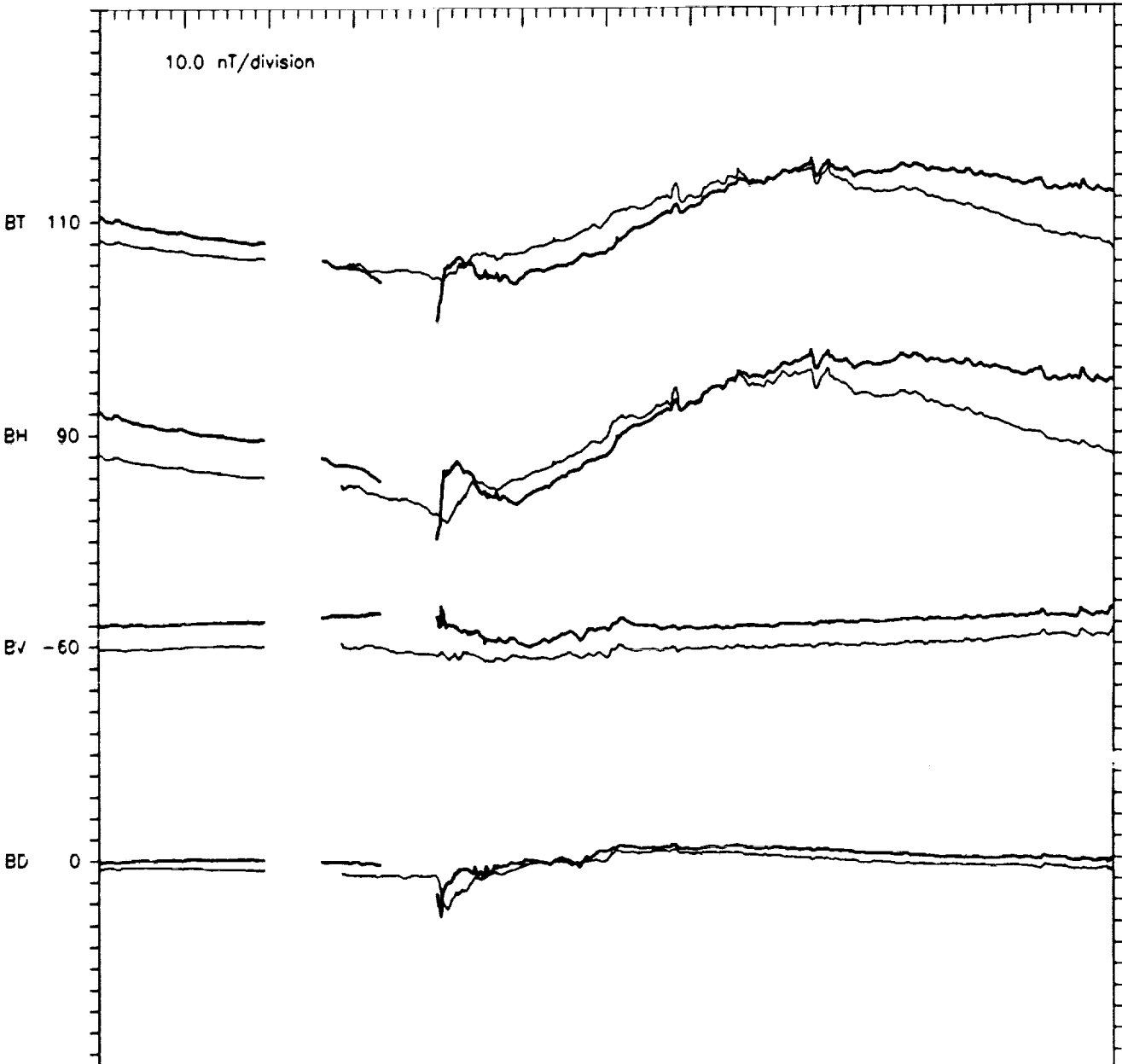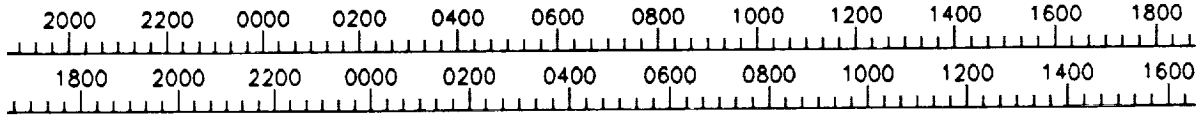| UT | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 0000 |
| TILT | −7.0 | −12.0 | −14.7 | −14.5 | −11.4 | −6.2 | −0.5 | 4.5 | 7.2 | 7.1 | 4.1 | −0.9 | −6.7 |

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 71   MAR 12
GEOLON, MAGLAT = 5(−74.9, 11.2)   6(−108.0,   8.9)

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY 72 MAR 13
GEOLON, MAGLAT = 5(−75.0, 11.2)   6(−107.9, 8.9)

10.0 nT/division

10.0 deg/division

| MLT 5 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 |
| MLT 6 | 1800 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 |

BT 100
BH 70
BV −60
BD 0
ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	−6.3	−11.2	−14.0	−13.7	−10.6	−5.4	0.3	5.3	8.0	7.9	4.9	−0.2	−5.9

PLOT2GOES   8−JUN−1989 21:35:58.84

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 110

BH 80

BV −70

BD 0

10.0 deg/division

ELEV 0

UT   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800   2000   2200   0000
TILT −5.9   −10.8   −13.6   −13.3   −10.2   −5.0   0.7   5.7   8.4   8.3   5.2   0.2   −5.5

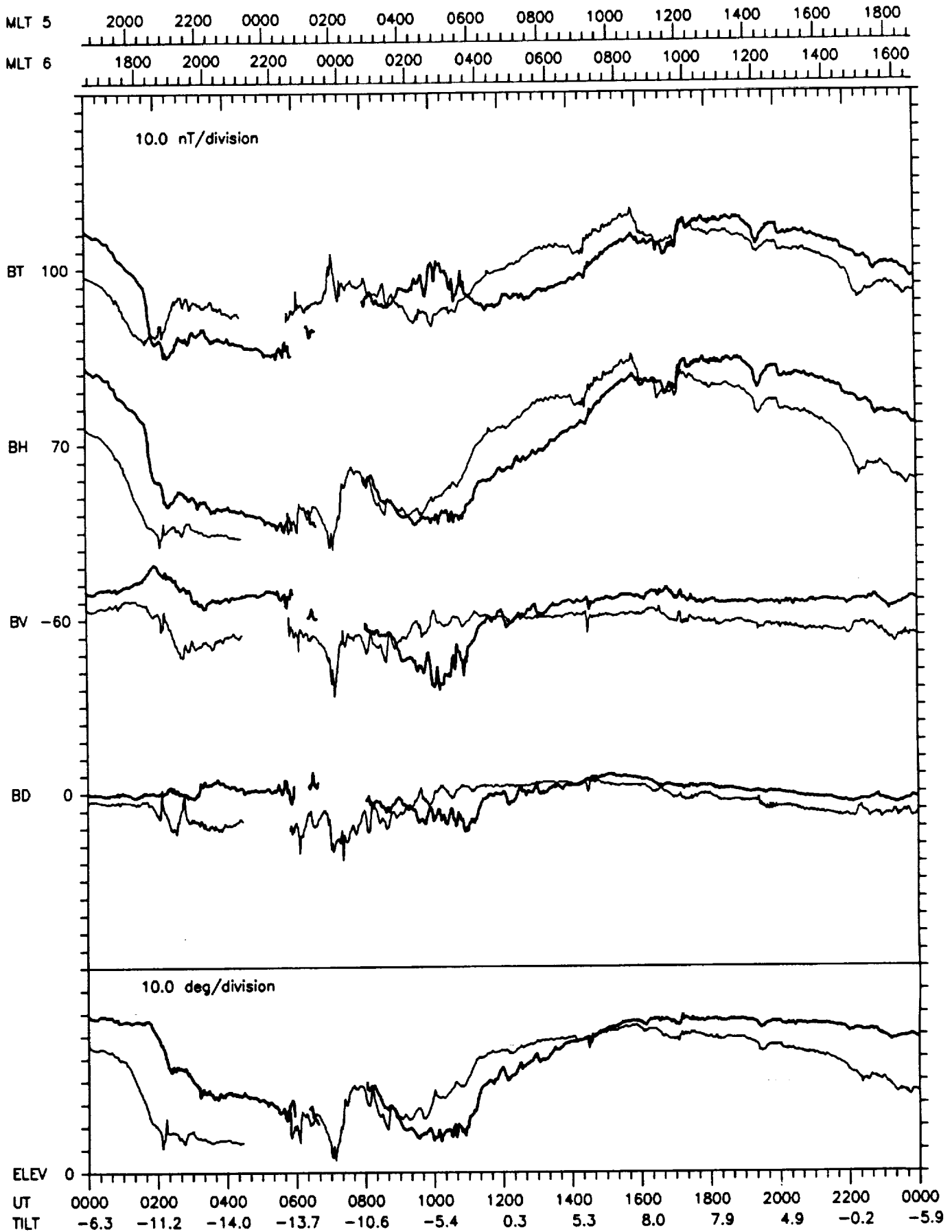PLOT2GOES   8-JUN-1989 22.41.23.00

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 74   MAR 15
GEOLON, MAGLAT = 5(−75.1, 11.2)   6(−108.0,   8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600
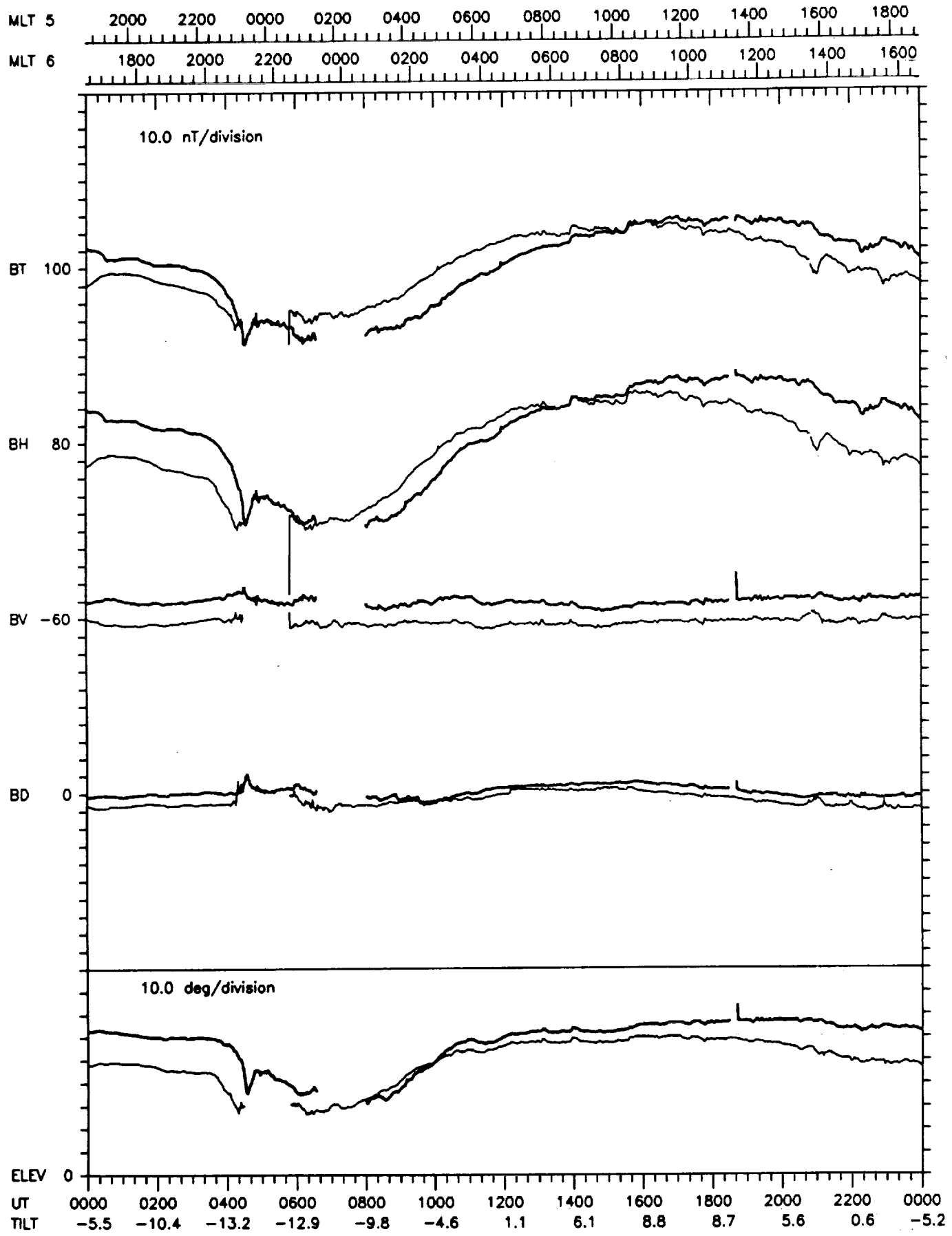
10.0 nT/division

BT   100

BH   80

BV   −60

BD   0

10.0 deg/division

ELEV   0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	−5.5	−10.4	−13.2	−12.9	−9.8	−4.6	1.1	6.1	8.8	8.7	5.6	0.6	−5.2

PLOT2GOES   8−JUN−1989 22:56:06.91

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 75   MAR 16
GEOLON, MAGLAT = 5(−75.2, 11.2)   6(−108.0,   8.9)
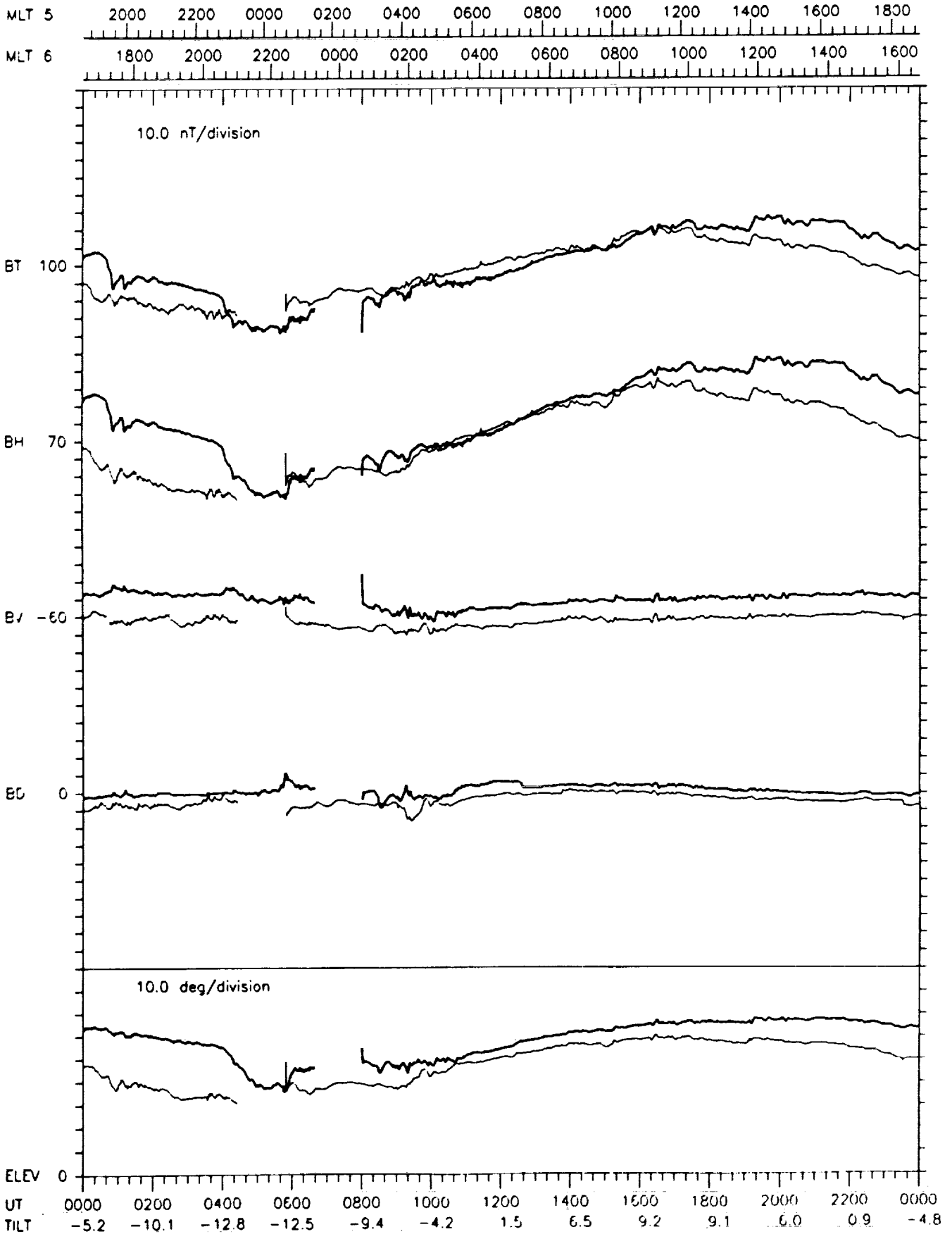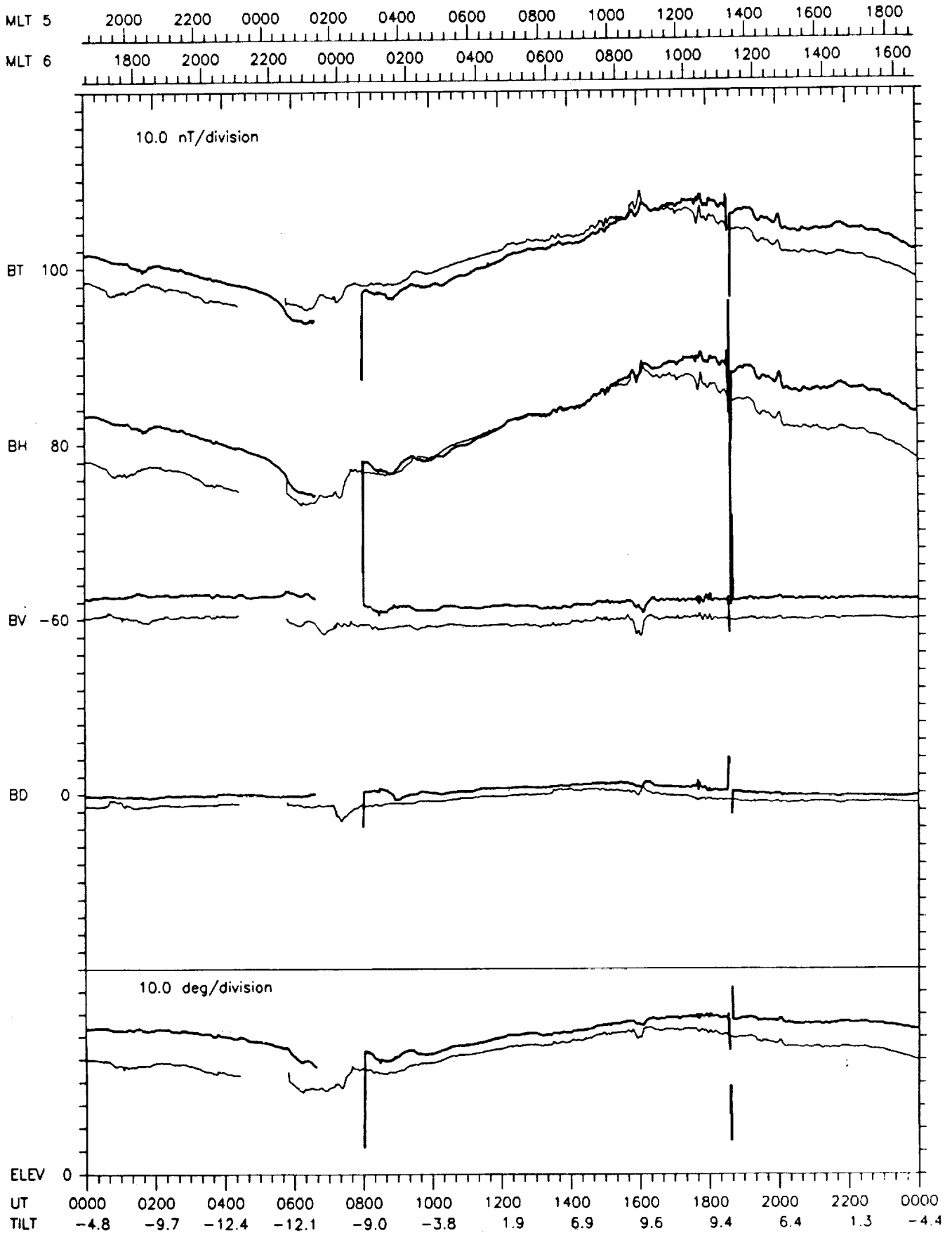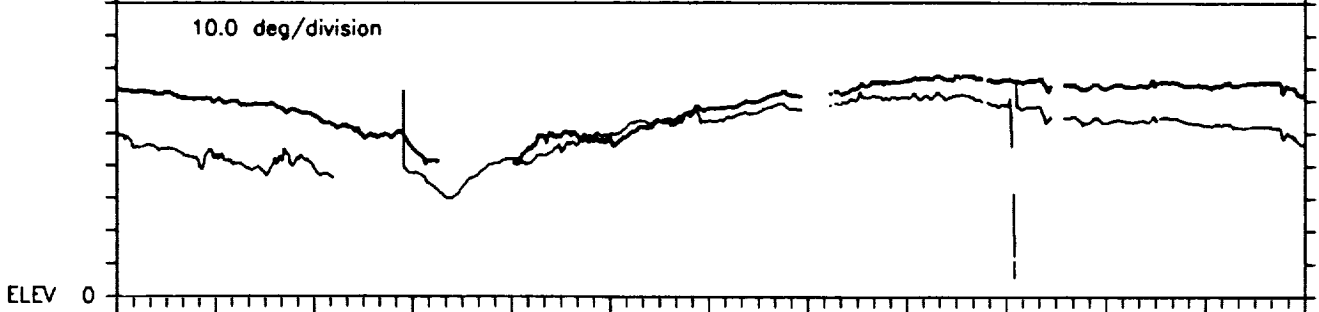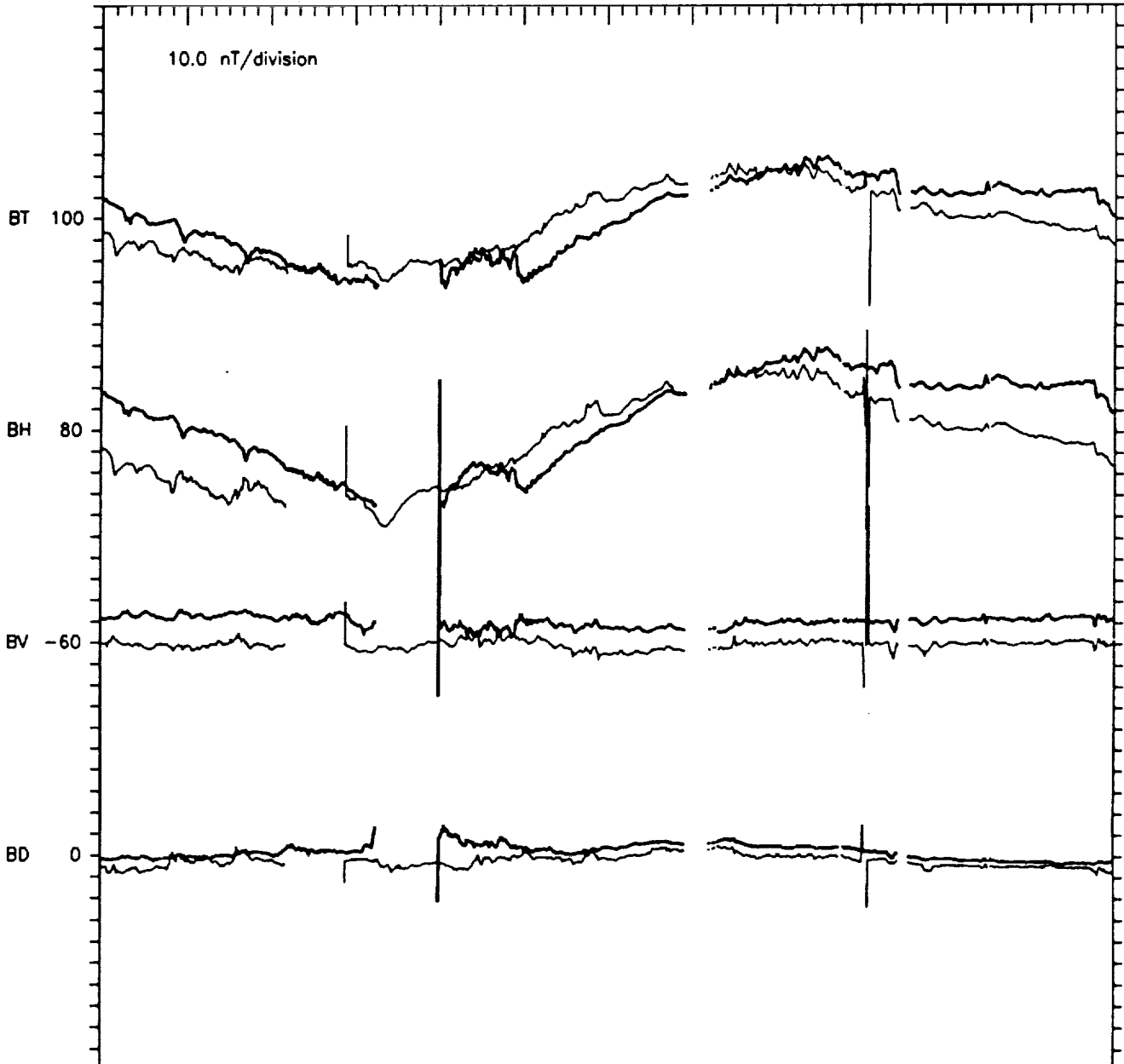
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY 76 MAR 17
GEOLON, MAGLAT = 5(-75.2, 11.2) 6(-108.0, 8.9)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800

MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 100

BH 80

BV -60

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	-4.8	-9.7	-12.4	-12.1	-9.0	-3.8	1.9	6.9	9.6	9.4	6.4	1.3	-4.4

PLOT2GOES   8-JUN-1989 23:26:53.97

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 77   MAR 18
GEOLON, MAGLAT = 5(−75.3, 11.2)   6(−108.0, 8.9)

8-JUN-1989 23:42:43.89

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 78   MAR 19
GEOLON, MAGLAT = 5(−75.3, 11.2)   6(−107.9,   8.9)

| MLT 5 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 |

| MLT 6 | 1800 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 |

10.0 nT/division

BT 100

BH 70

BV −60

BD 0

10.0 deg/division

ELEV 0

| UT | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 0000 |
| TILT | −4.0 | −8.9 | −11.6 | −11.3 | −8.2 | −3.0 | 2.7 | 7.7 | 10.4 | 10.2 | 7.1 | 2.1 | −3.7 |

PLOT2GOES   9−JUN−1989 12:10:26.50

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 79   MAR 20
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−107.9,   8.9)
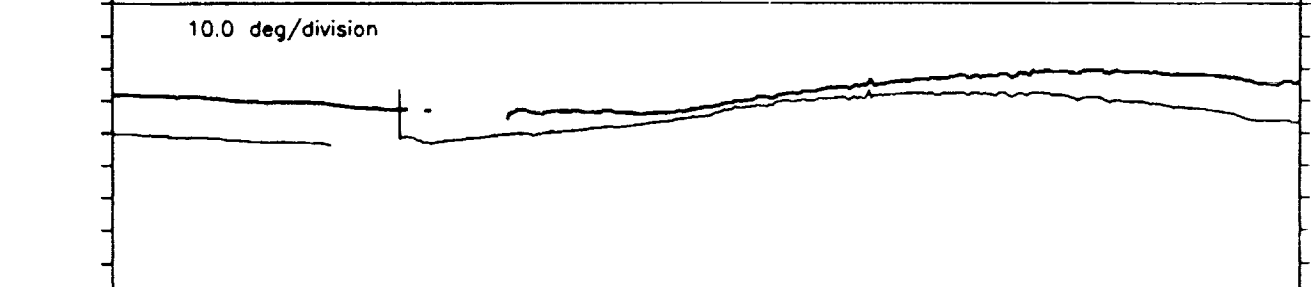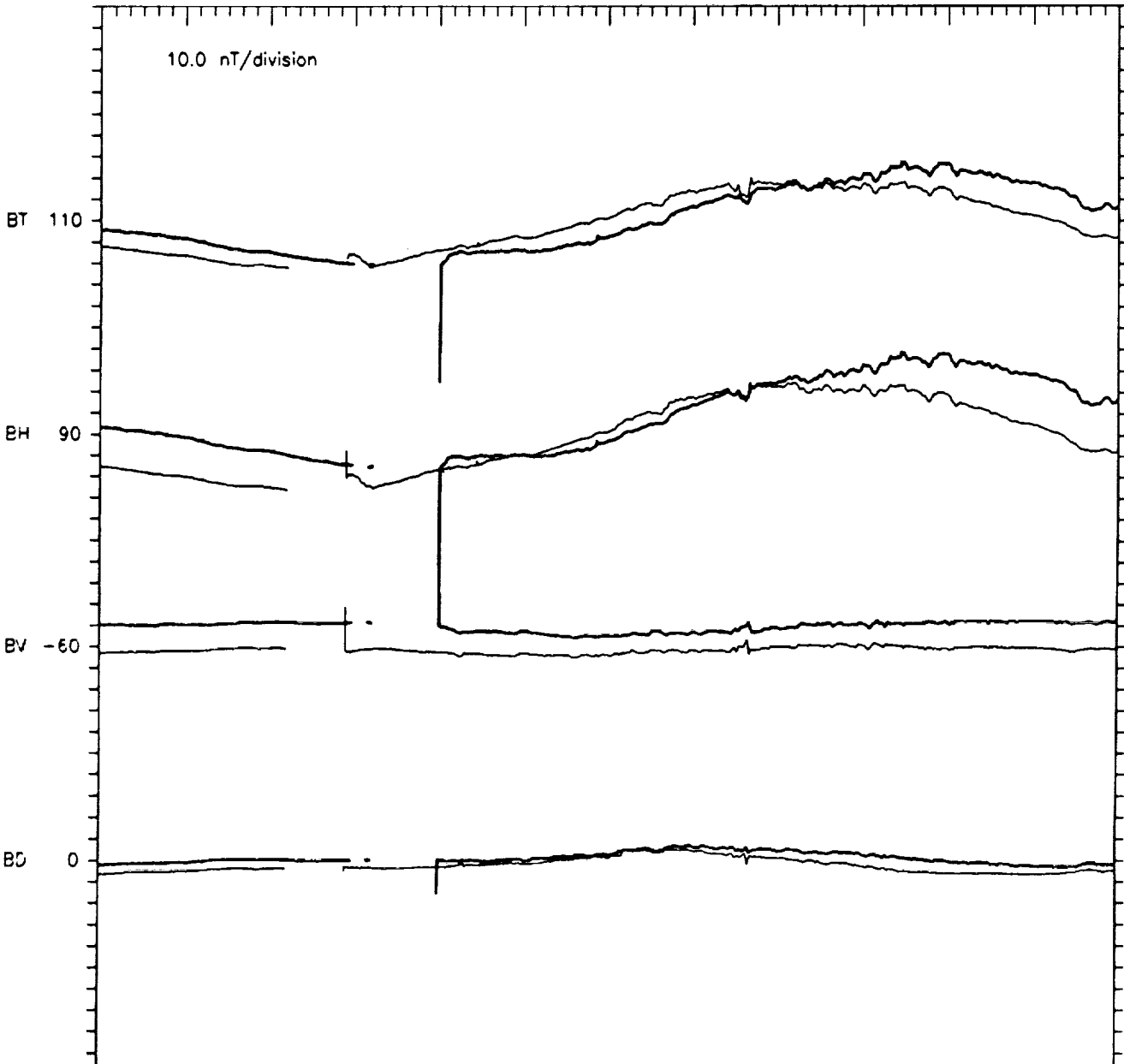
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 80   MAR 21
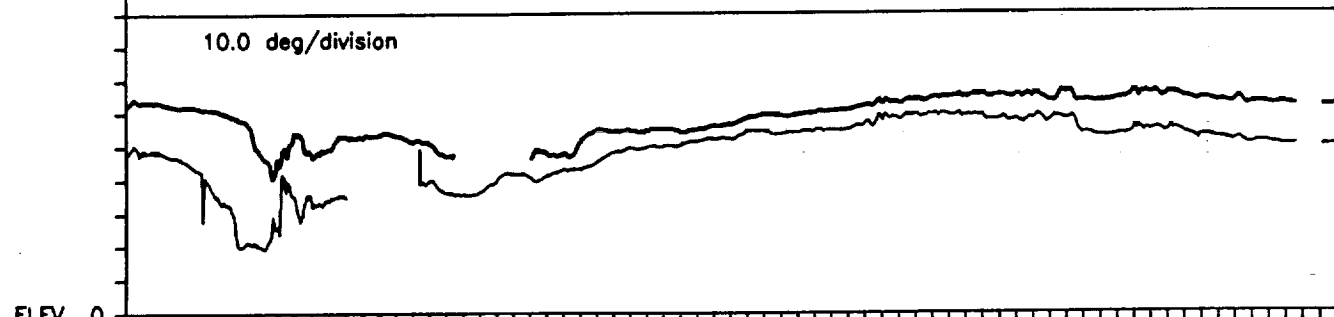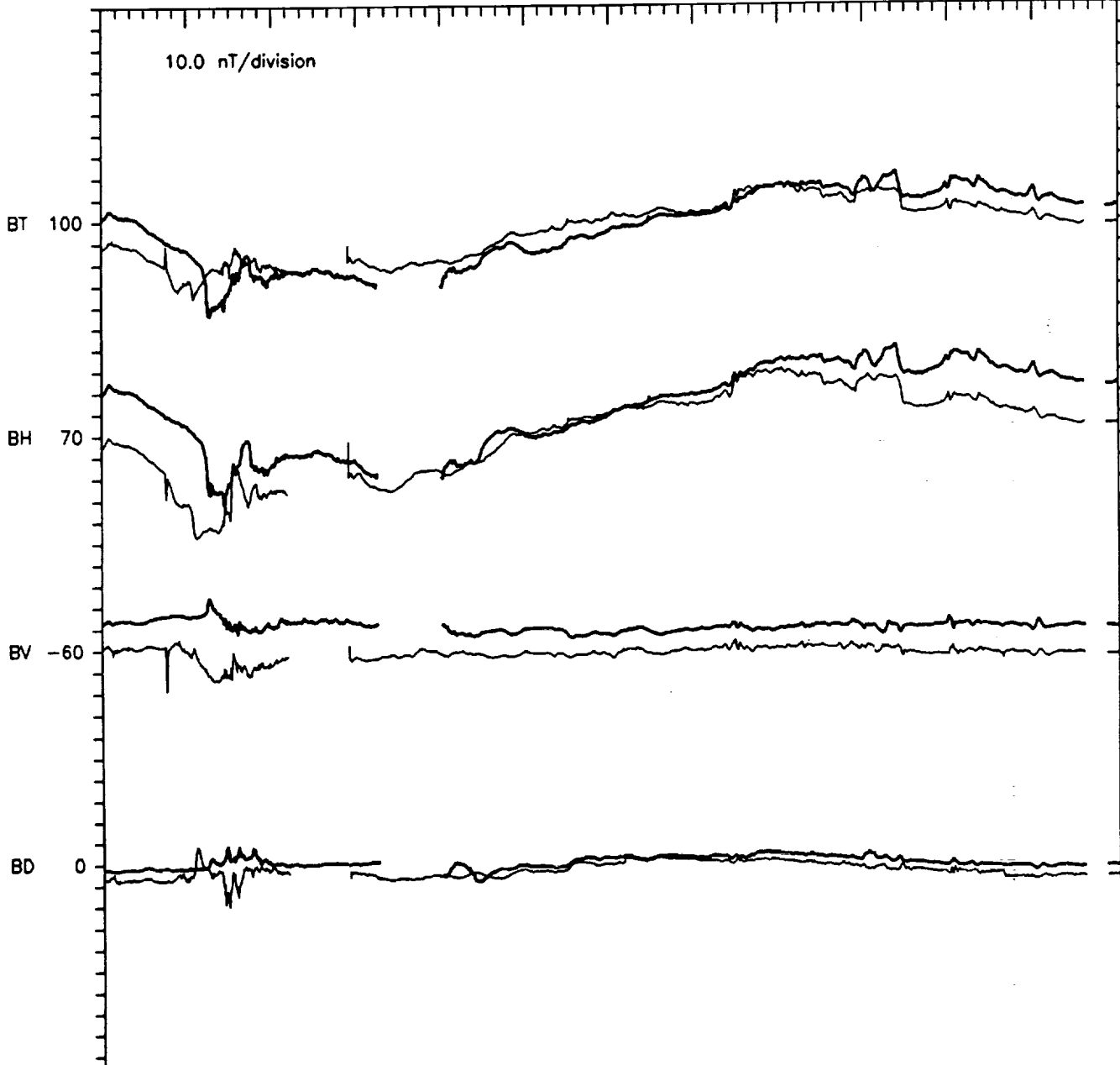GEOLON, MAGLAT = 5(−75.5, 11.2)   6(−107.9, 8.9)

PLOT2GOES   9-JUN-1989 13:11:02.67

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 81   MAR 22
GEOLON, MAGLAT = 5(−75.5, 11.2)   6(−107.9,   8.9)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800

MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 100

BH 70

BV −70

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	−2.9	−7.8	−10.4	−10.2	−7.0	−1.8	4.0	8.9	11.6	11.4	8.3	3.2	−2.5

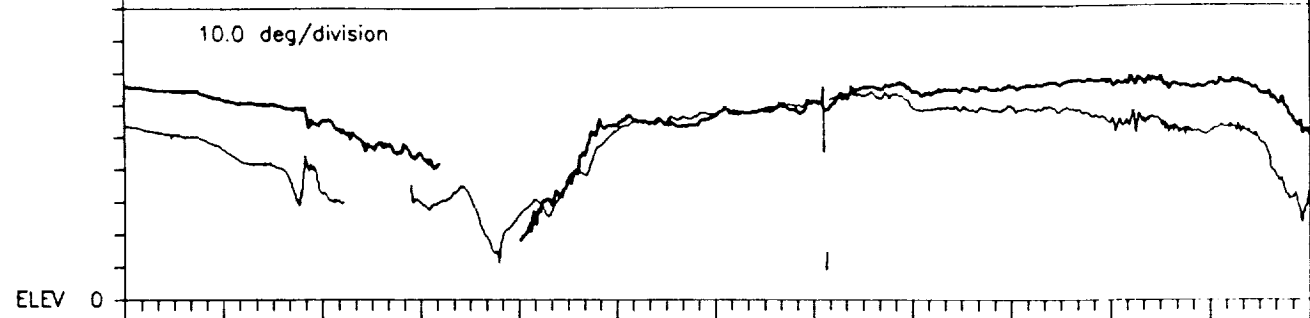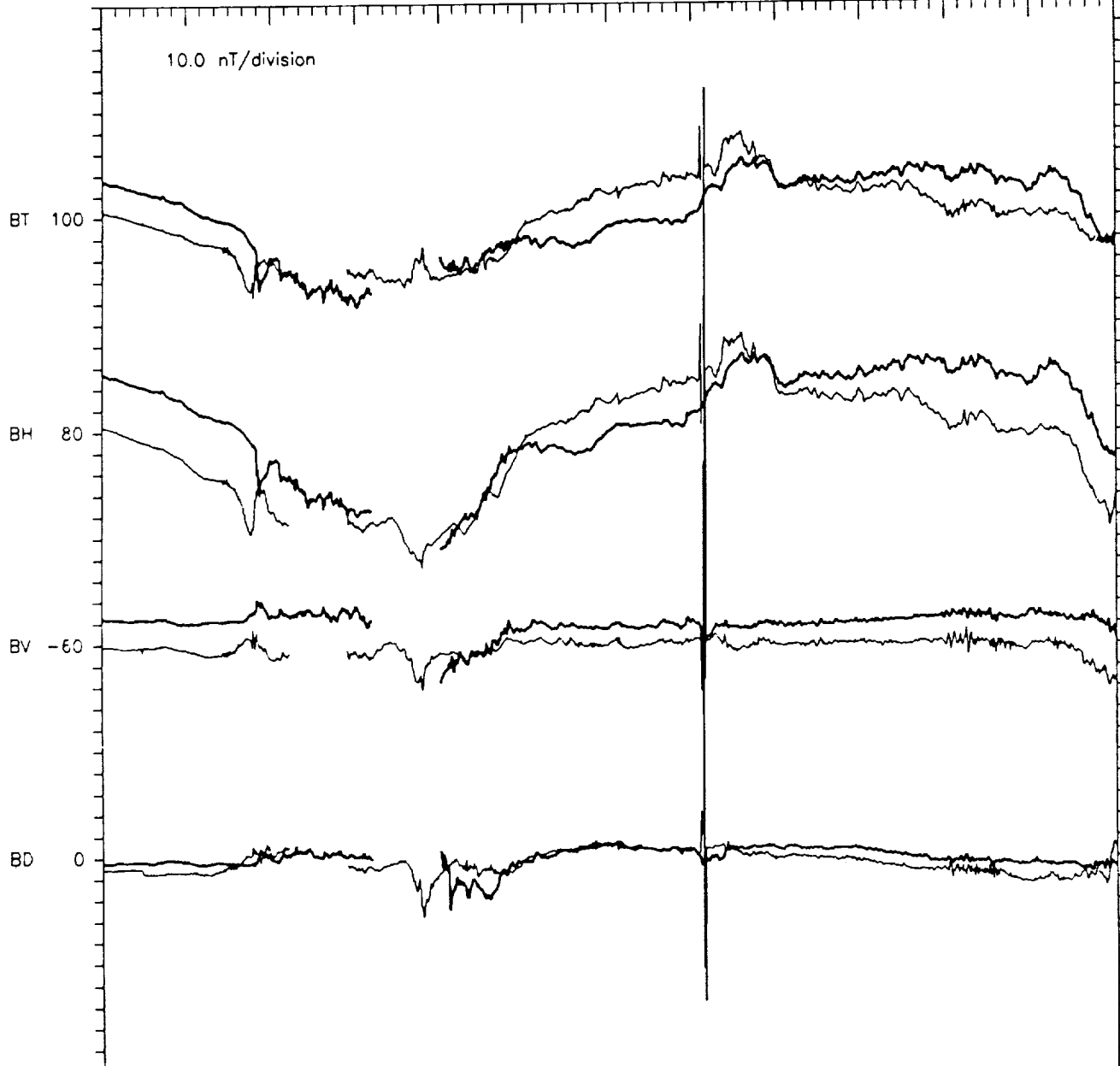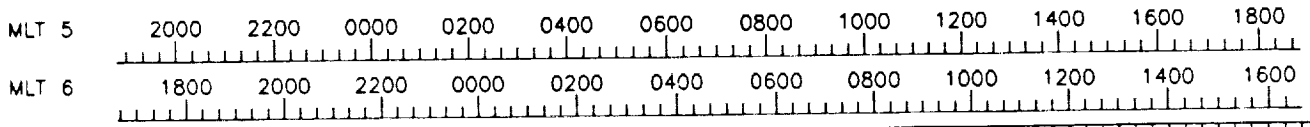PLOT2GOES   9−JUN−1989 13.43.02.91
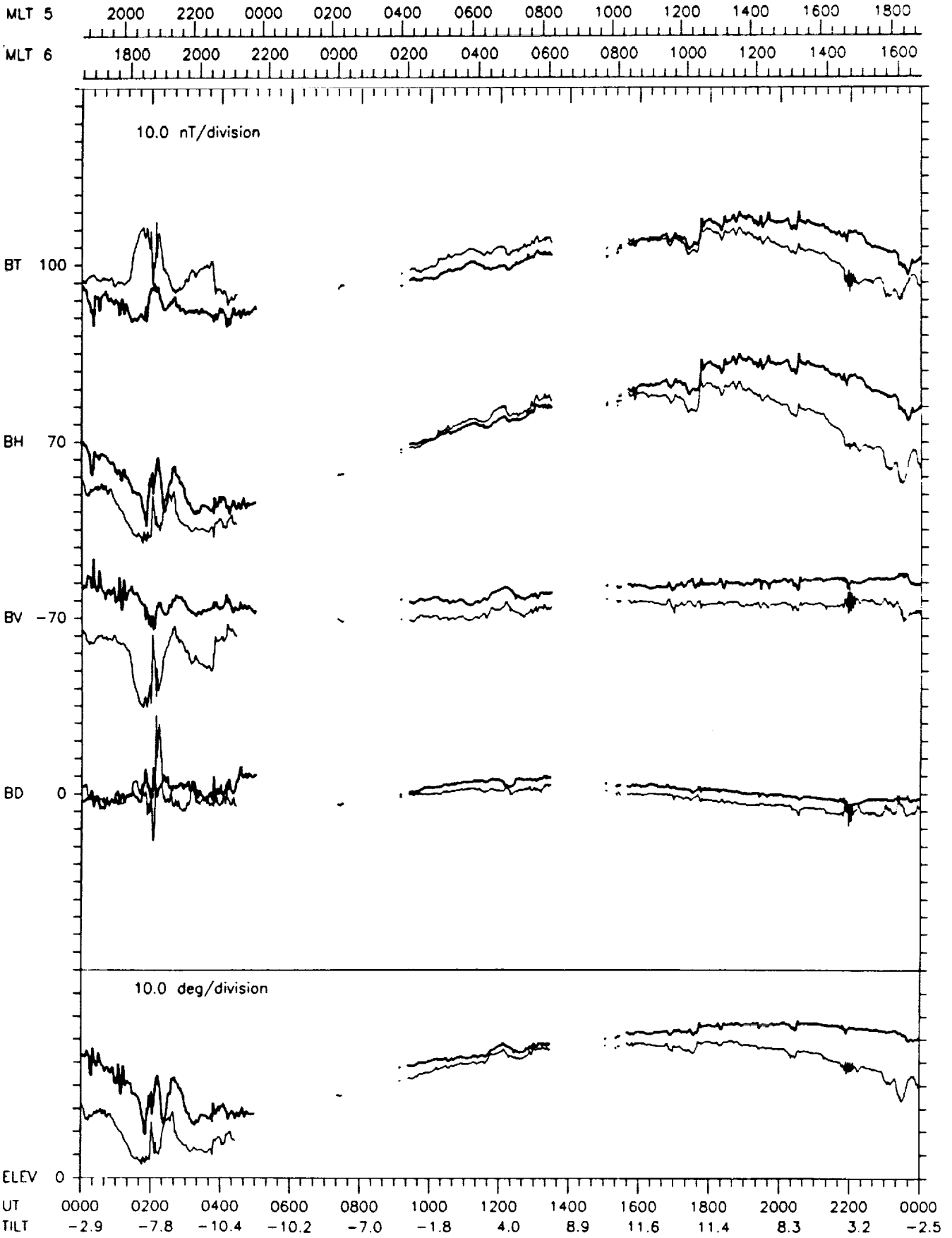
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 82   MAR 23
GEOLON, MAGLAT = 5(−75.6, 11.2)   6(−107.9,   8.9)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800

MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 100

BH   80

BV −60

BD   0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	−2.5	−7.4	−10.0	−9.8	−6.6	−1.4	4.4	9.3	12.0	11.8	8.7	3.6	−2.2

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 83   MAR 24
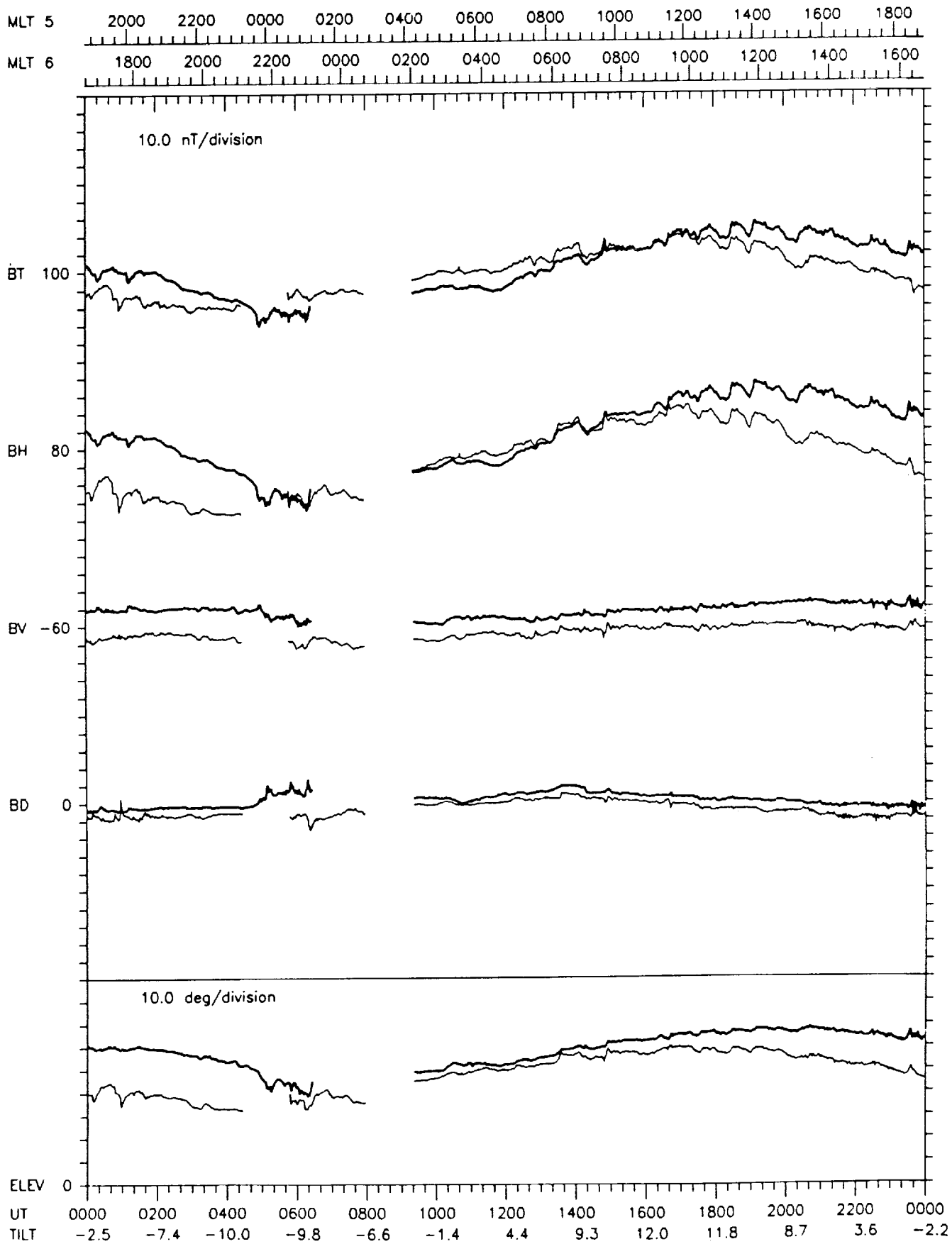GEOLON, MAGLAT = 5(-75.7, 11.2)   6(-107.9,   8.9)

PLOT2GOES   9-JUN-1989 14.35.24.98
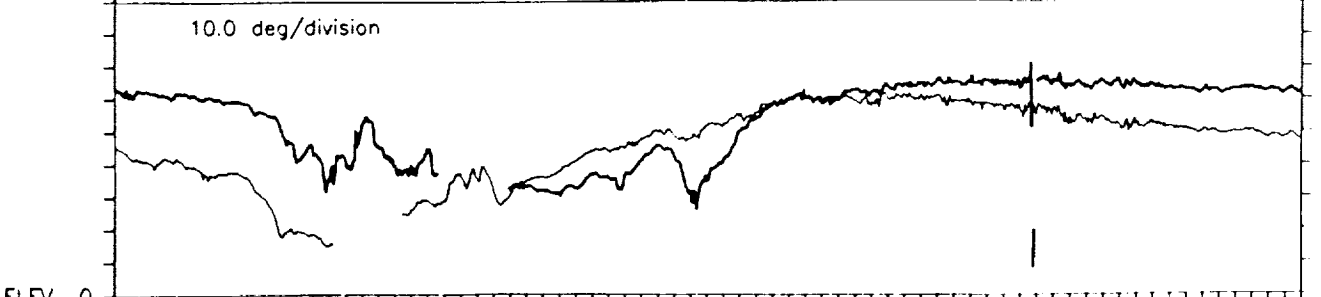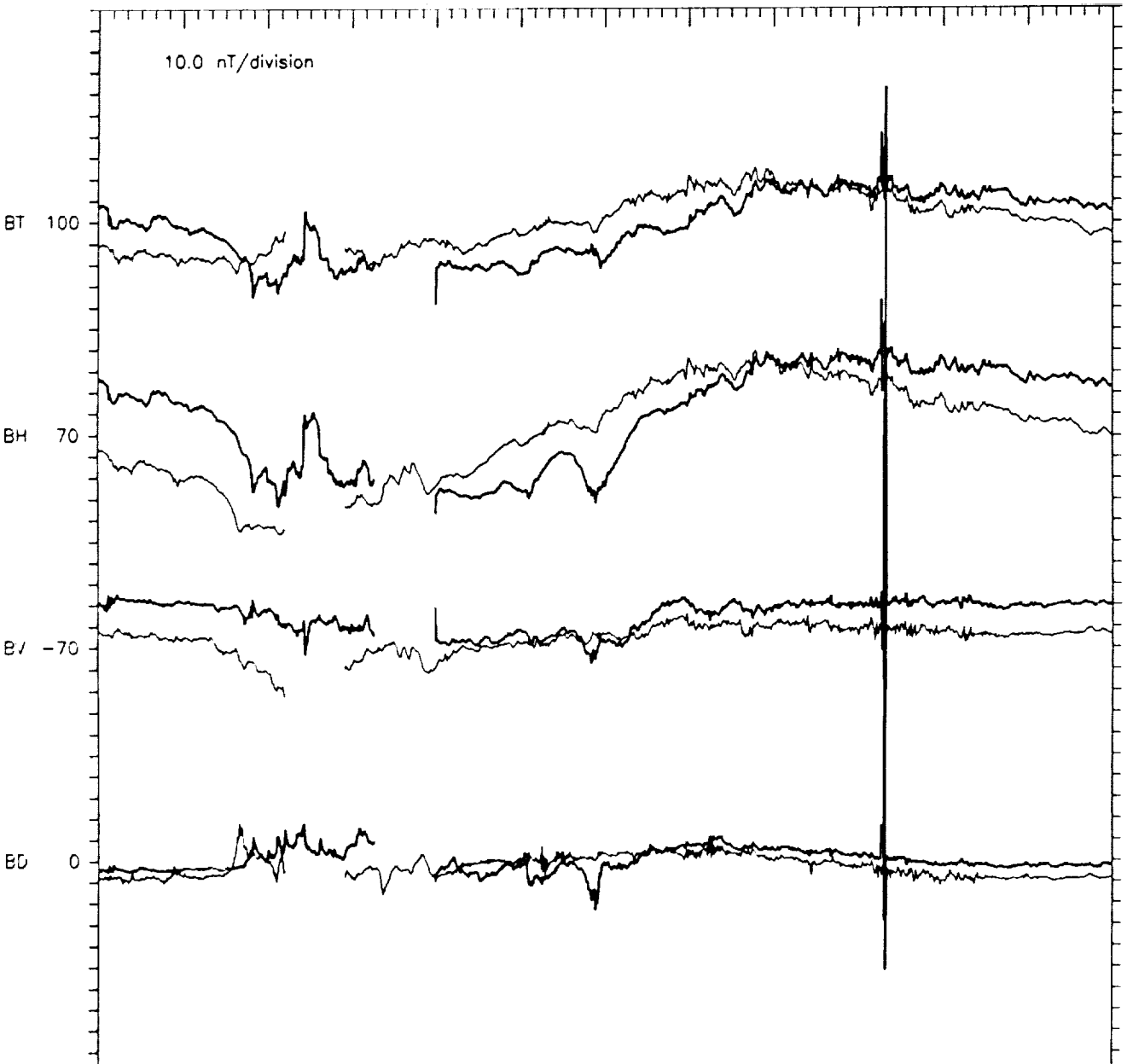
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 84   MAR 25
GEOLON, MAGLAT = 5(−75.7, 11.2)   6(−107.4, 9.0)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800
MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 100

BH   70

BV −70

BD   0

10.0 deg/division

ELEV   0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	−1.8	−6.6	−9.3	−9.0	−5.8	−0.6	5.2	10.1	12.8	12.6	9.4	4.3	−1.4

PLOT2GOES   8−JUN−1989 15:00:42.84

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 85   MAR 26
GEOLON, MAGLAT = 5(-75.8, 11.2)   6(-107.9,   8.9)

PLOT2GOES   9-JUN-1989 15:25:24.43

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 86   MAR 27
GEOLON, MAGLAT = 5(−75.9, 11.2)   6(−107.9, 8.9)
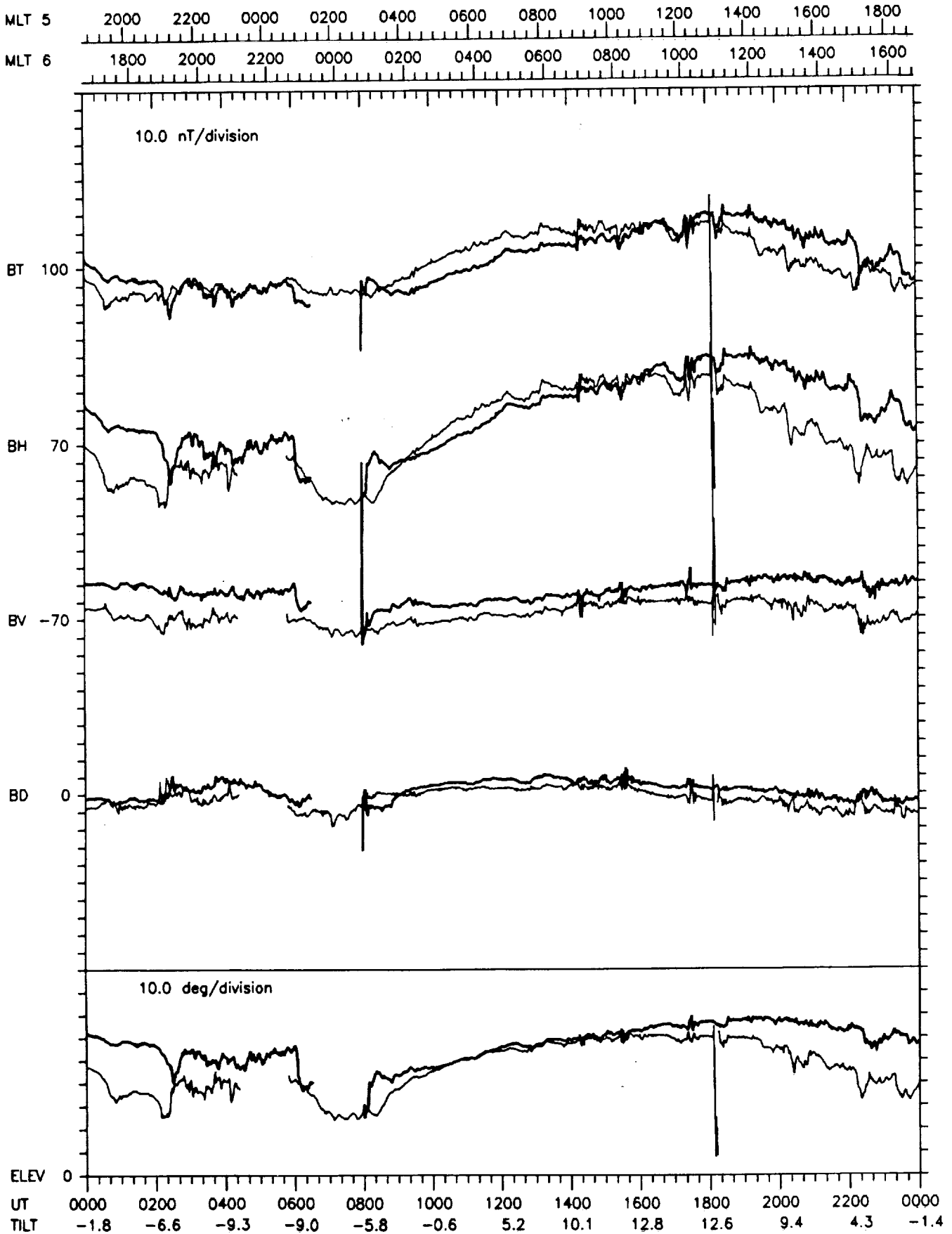

MLT 5   2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600 1800

MLT 6   1800 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600

10.0 nT/division

BT 100

BH 70

BV −70

BD 0

10.0 deg/division

ELEV 0

UT   0000 0200 0400 0600 0800 1000 1200 1400 1600 1800 2000 2200 0000
TILT   −1.1 −5.9 −8.5 −8.2 −5.0   0.2   6.0 10.9 13.6 13.3 10.2   5.0 −0.7

PLOT2GOES   9-JUN-1989 15:42:16.41
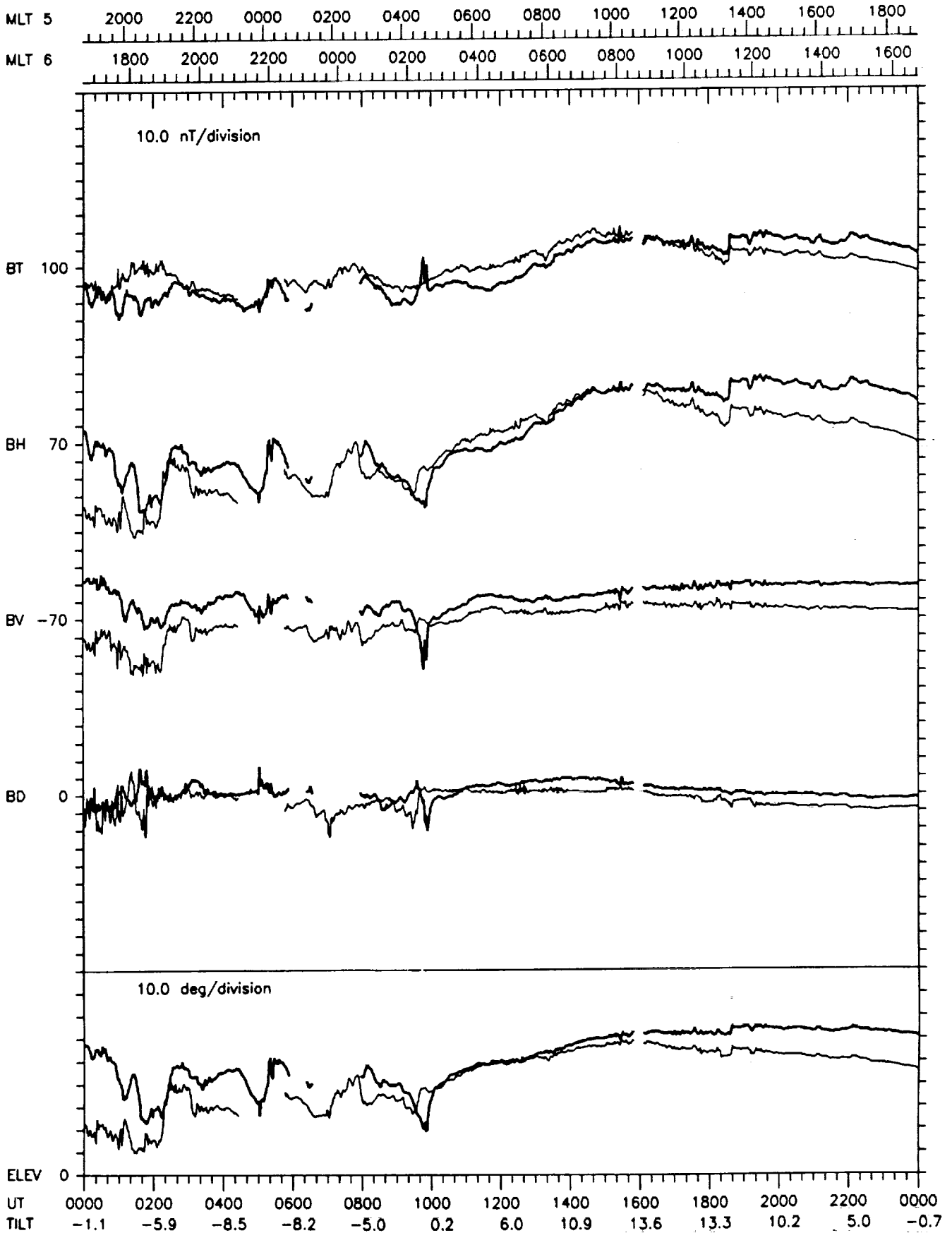
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 87   MAR 28
GEOLON, MAGLAT = 5(-75.9, 11.2)   6(-107.9,   8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

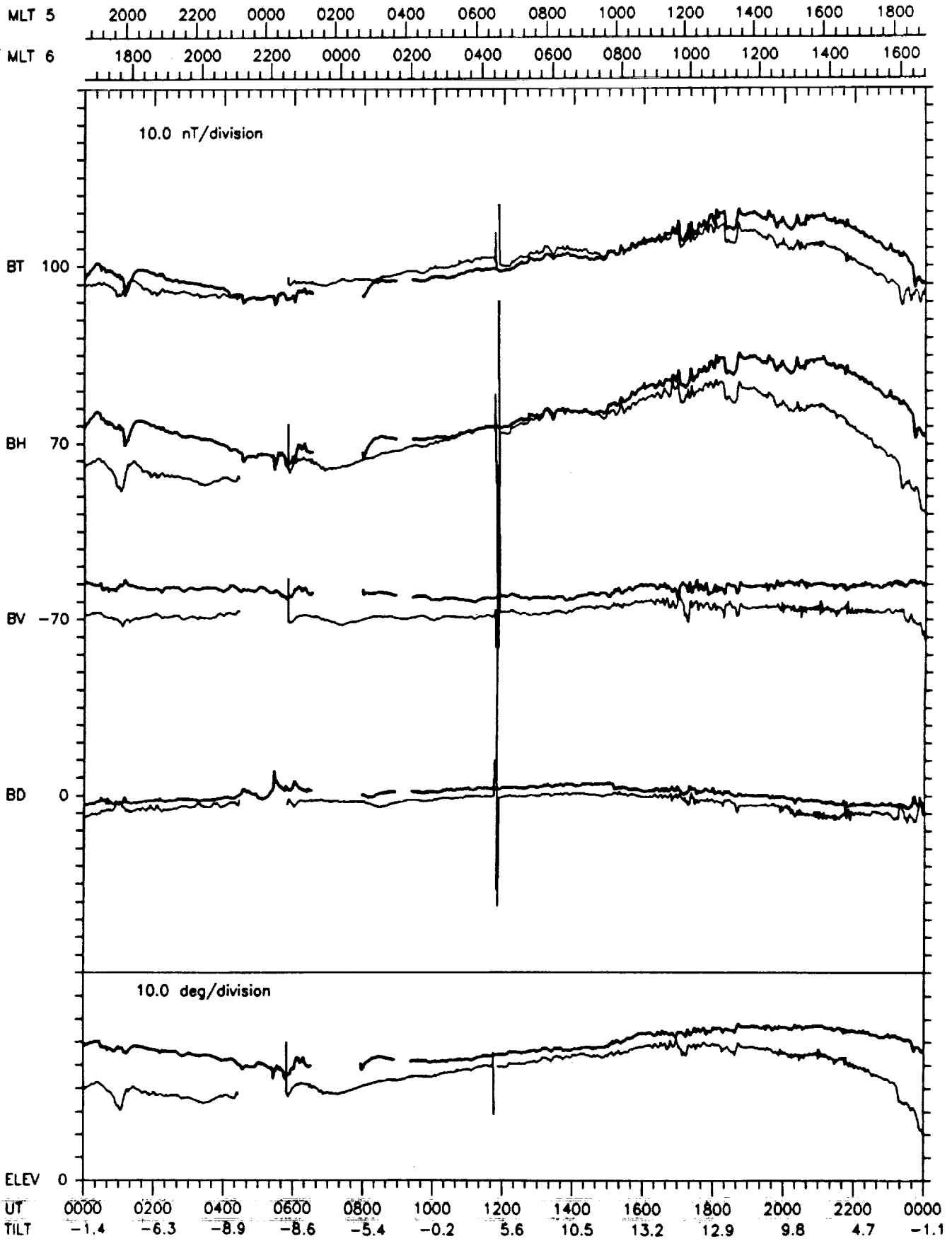MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 100

BH 70

BV -70

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	-0.7	-5.5	-8.1	-7.8	-4.6	0.6	6.4	11.3	14.0	13.7	10.6	5.4	-0.3

PLOT2GOES   8-JUN-1989 16:09:50.86
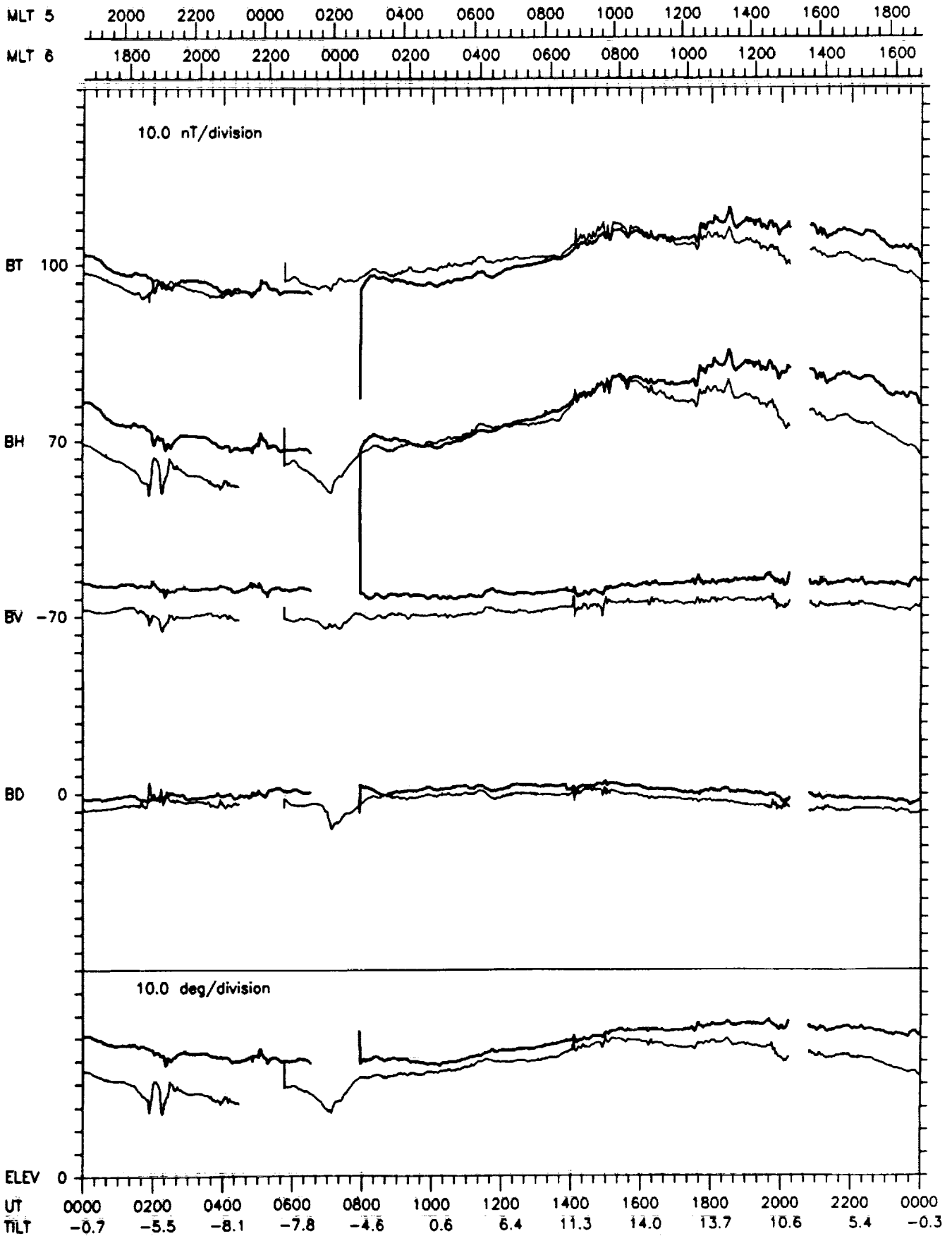
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY 88 MAR 29
GEOLON, MAGLAT = 5(−76.0, 11.2)   6(−107.9, 8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 100

BH 70

BV −70

BD 0

10.0 deg/division

ELEV 0

UT   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800   2000   2200   0000
TILT −0.3   −5.1   −7.7   −7.4   −4.2   1.0   6.8   11.7   14.4   14.1   10.9   5.8   0.1

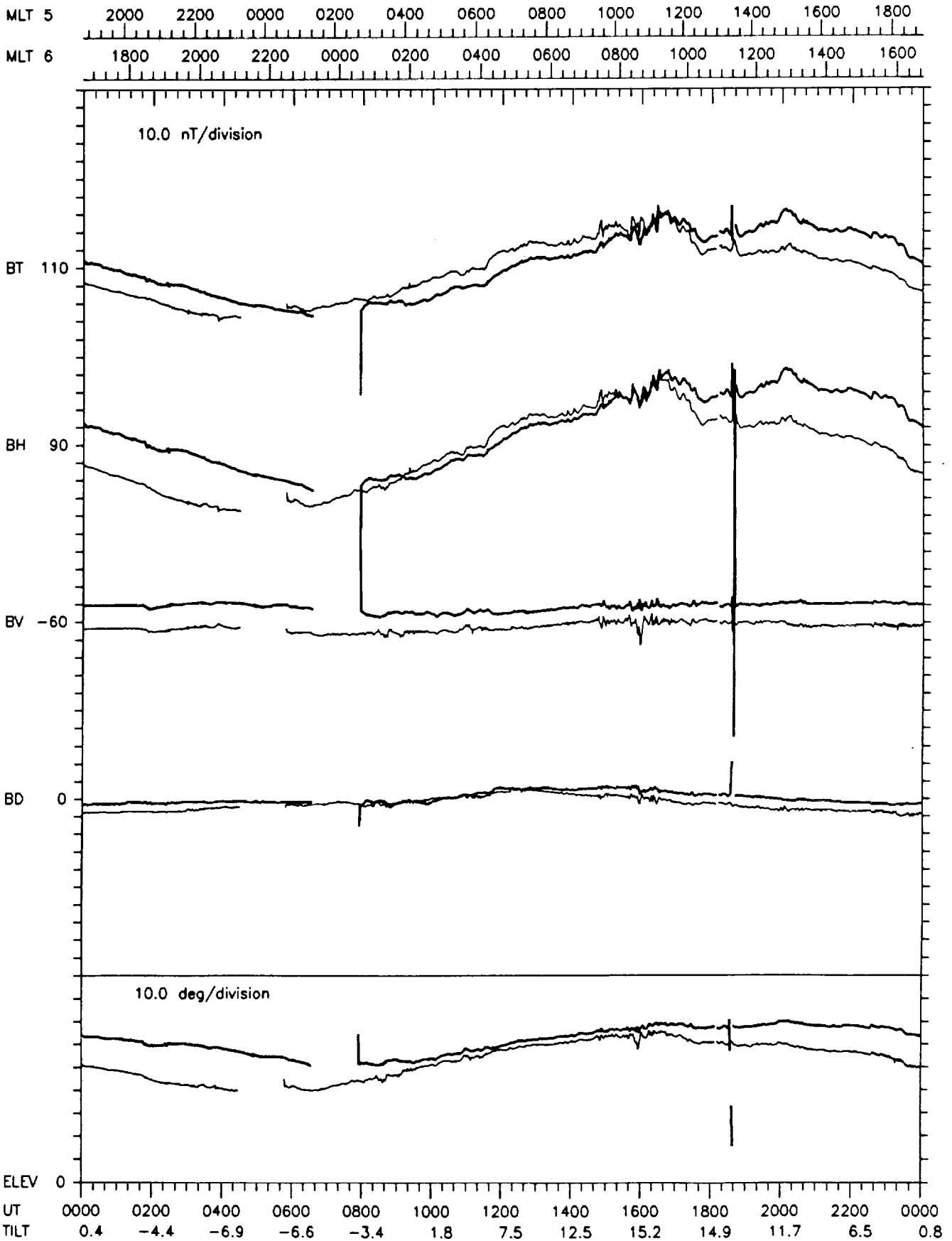PLOT2GOES   9−JUN−1989 21:20:43.22
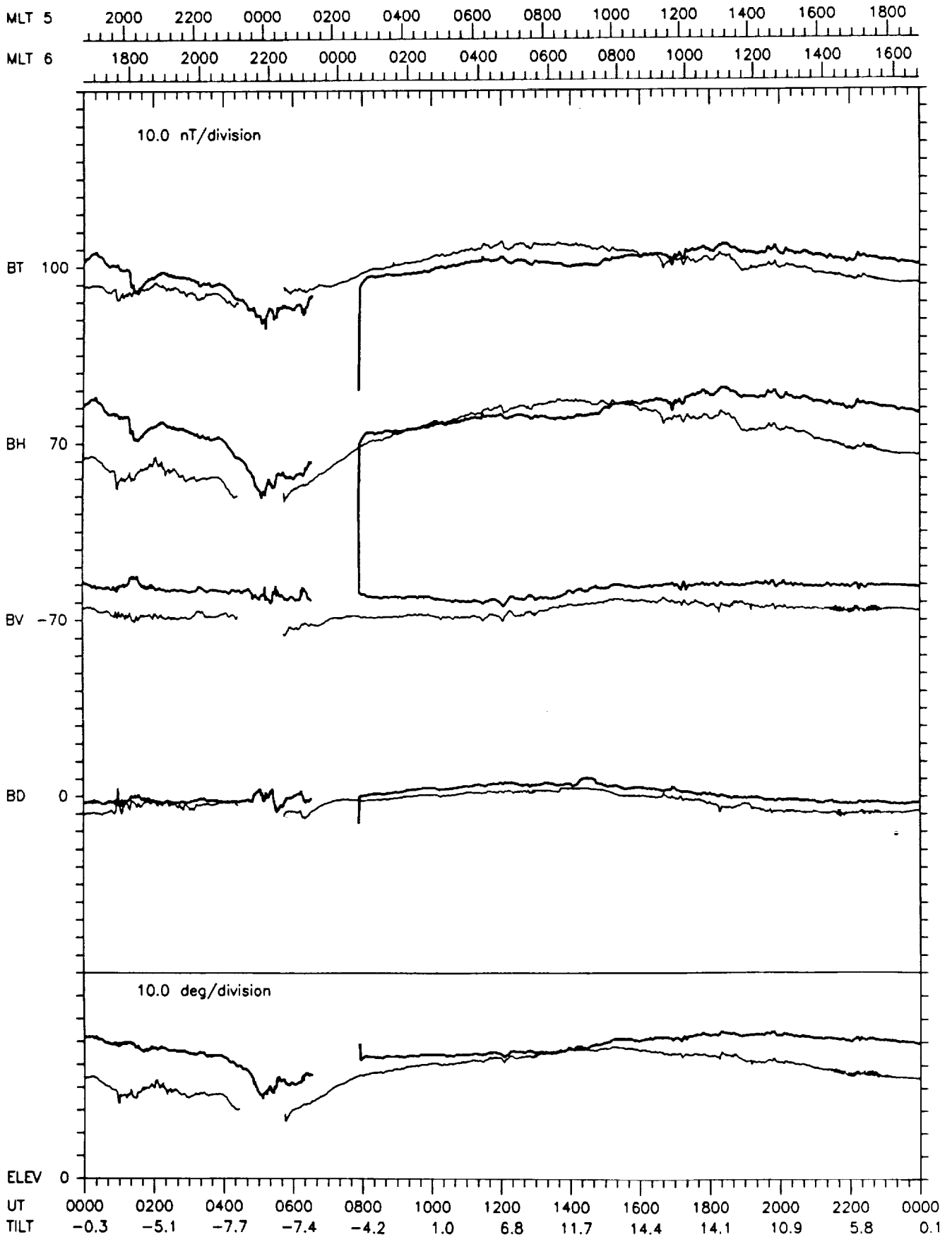
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 89   MAR 30
GEOLON, MAGLAT = 5(−76.1, 11.2)   6(−107.9,   8.9)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800
MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 100

BH 80

BV −70

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	0.1	−4.7	−7.3	−7.0	−3.8	1.4	7.2	12.1	14.8	14.5	11.3	6.1	0.4
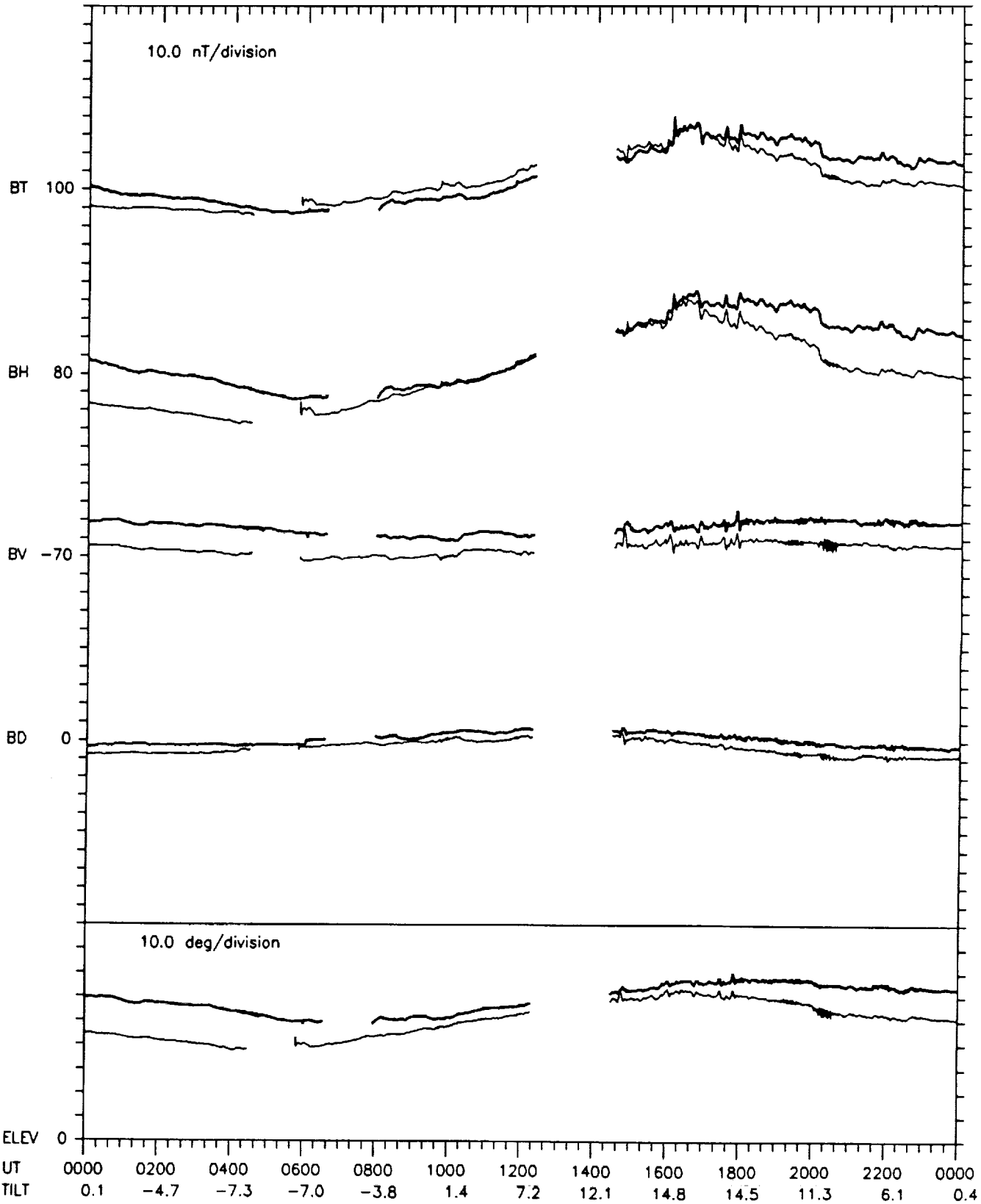
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY 90 MAR 31
GEOLON, MAGLAT = 5(−76.2, 11.1)   6(−107.9, 8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

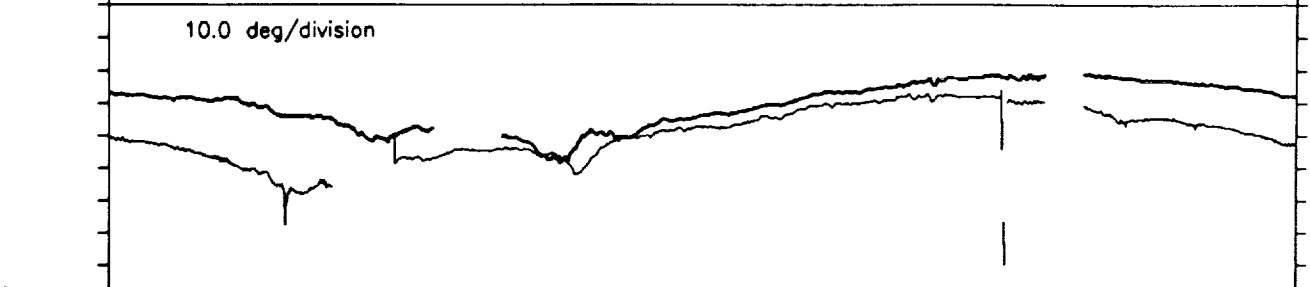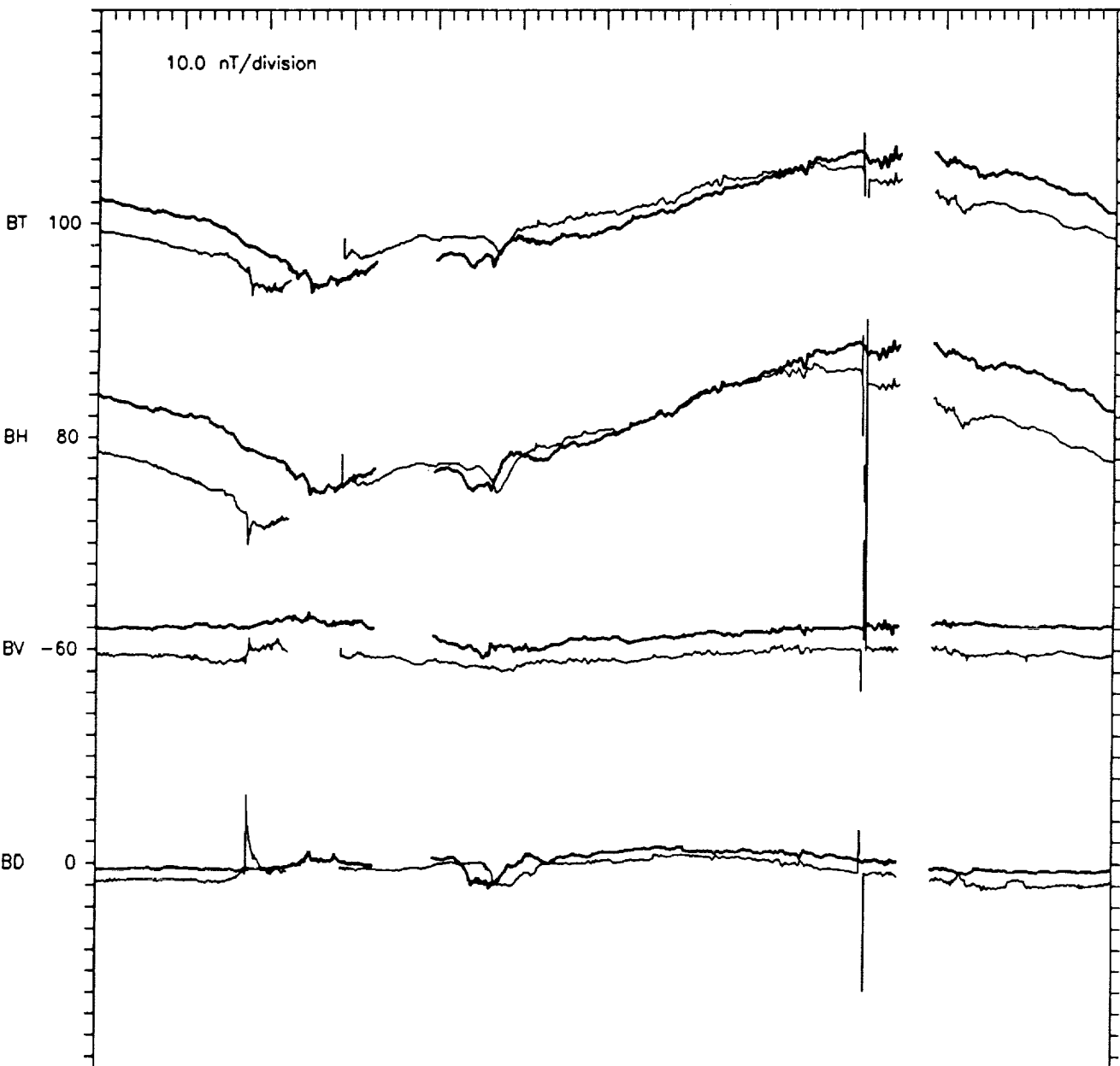MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 110

BH 90

BV −60

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	0.4	−4.4	−6.9	−6.6	−3.4	1.8	7.5	12.5	15.2	14.9	11.7	6.5	0.8

PLOT2GOES   9-JUN-1989 21:58:08.11

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 91   APR   1
GEOLON, MAGLAT = 5(−76.2, 11.1)   6(−107.9,   8.9)

| MLT 5 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 |
| MLT 6 | 1800 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 |

10.0 nT/division

BT 100

BH 80

BV −60

BD 0

10.0 deg/division

ELEV 0

| UT | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 0000 |
| TILT | 0.8 | −4.0 | −6.6 | −6.2 | −3.0 | 2.1 | 7.9 | 12.9 | 15.6 | 15.3 | 12.0 | 6.9 | 1.2 |

PLOT2GOES   9-JUN-1989 22:09:09.22

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY 92 APR 2
GEOLON, MAGLAT = 5(−76.2, 11.1)   6(−107.9, 8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

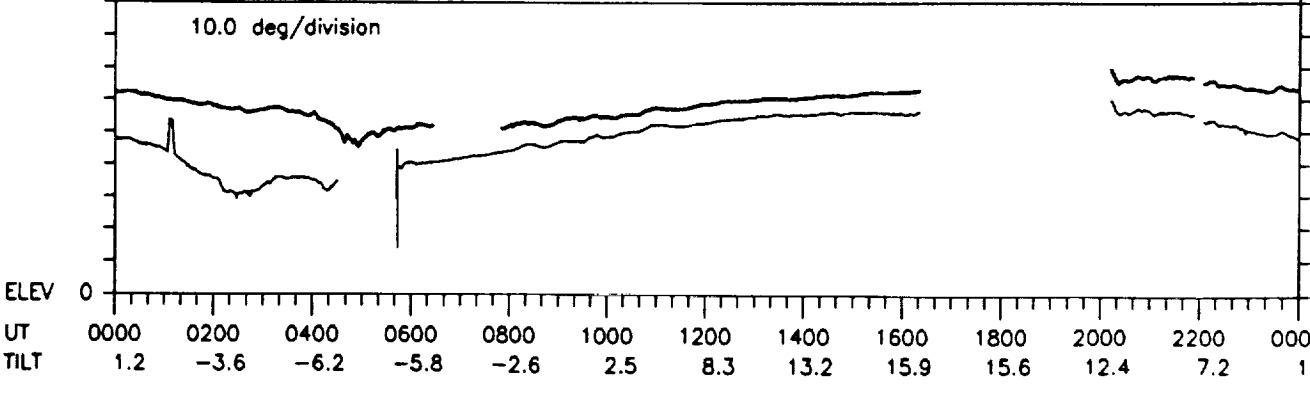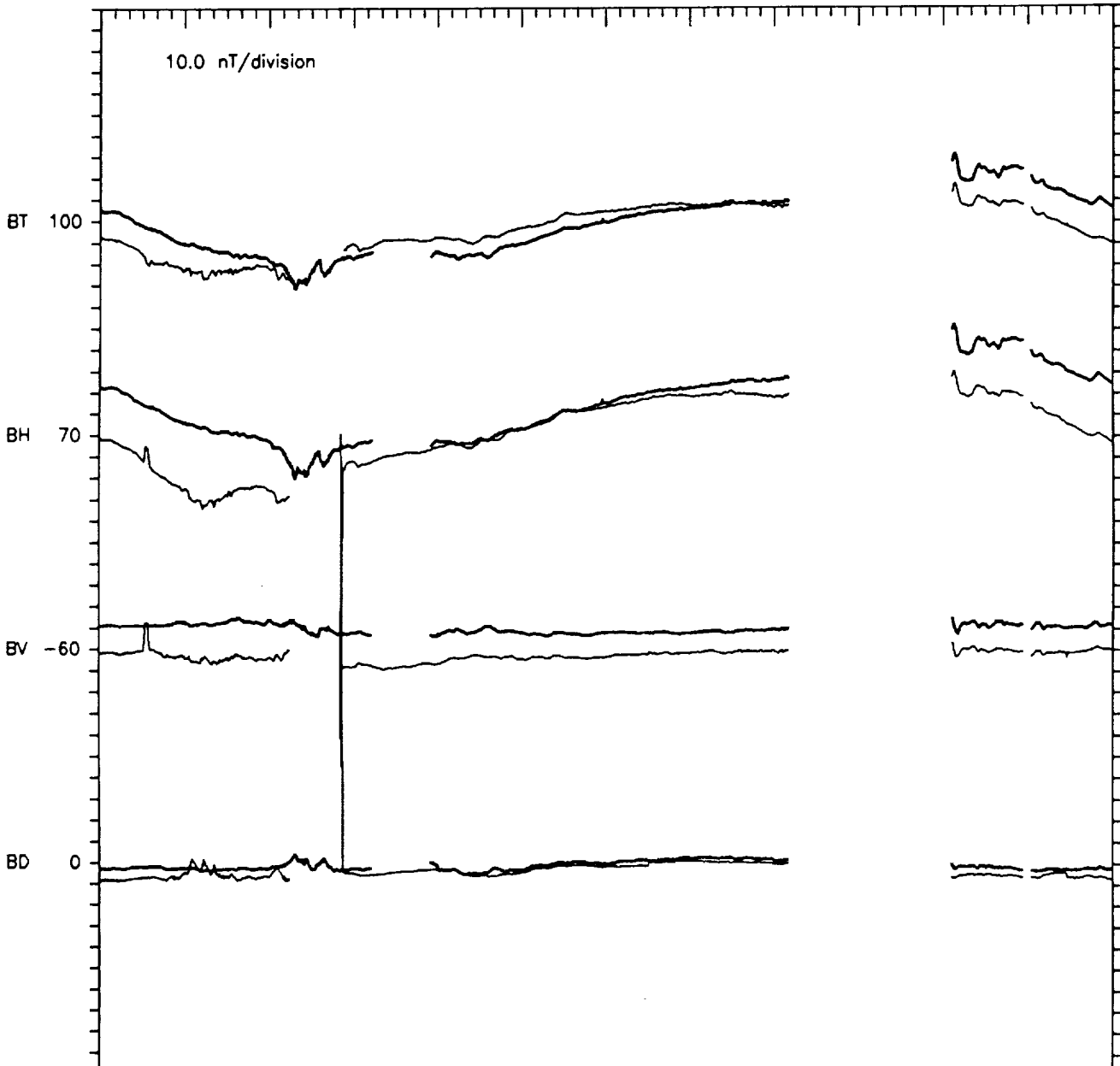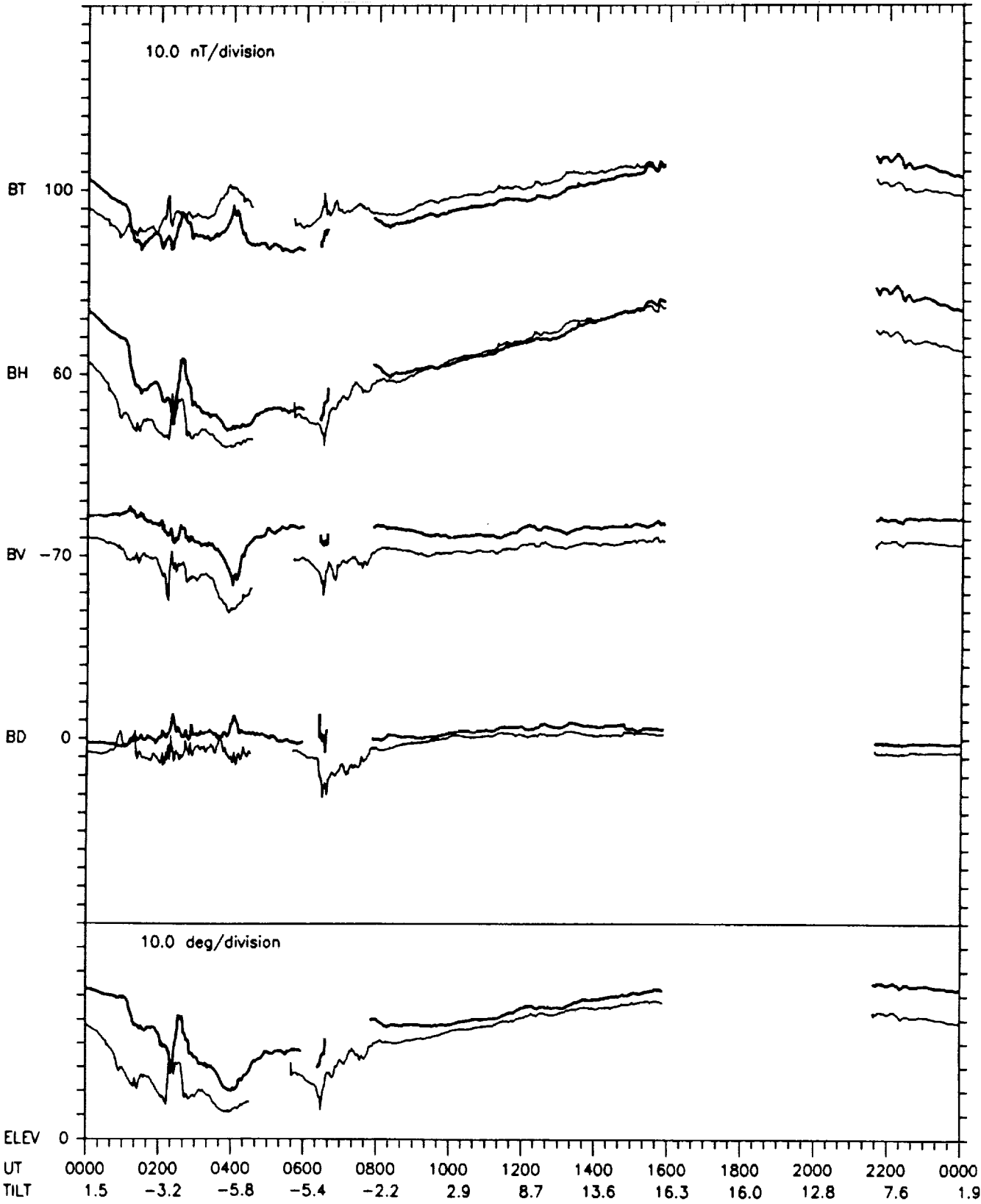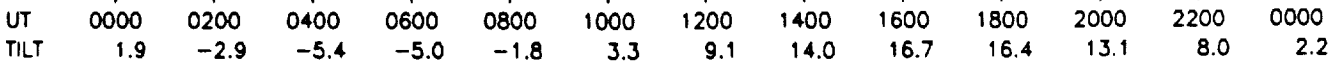MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 100

BH 70

BV −60

BD 0

10.0 deg/division

ELEV 0

UT   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800   2000   2200   0000
TILT   1.2   −3.6   −6.2   −5.8   −2.6   2.5   8.3   13.2   15.9   15.6   12.4   7.2   1.5

PLOT2GOES   9−JUN−1989 22:20:34.91

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 93   APR   3
GEOLON, MAGLAT = 5(−76.2, 11.1)   6(−107.8,   8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

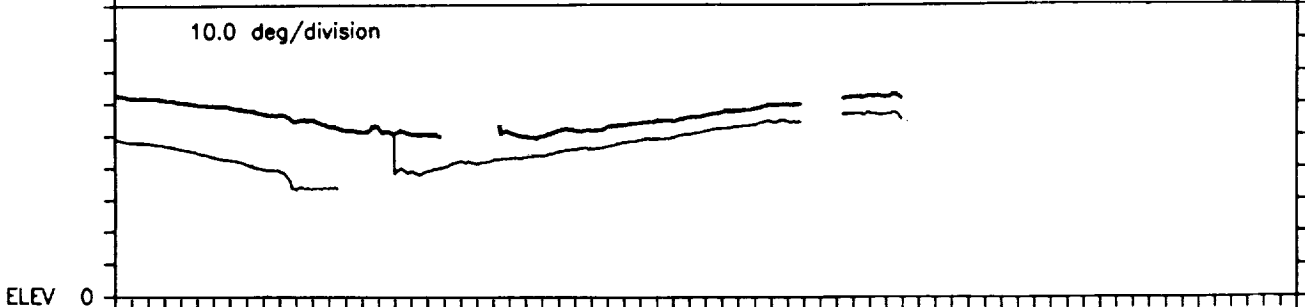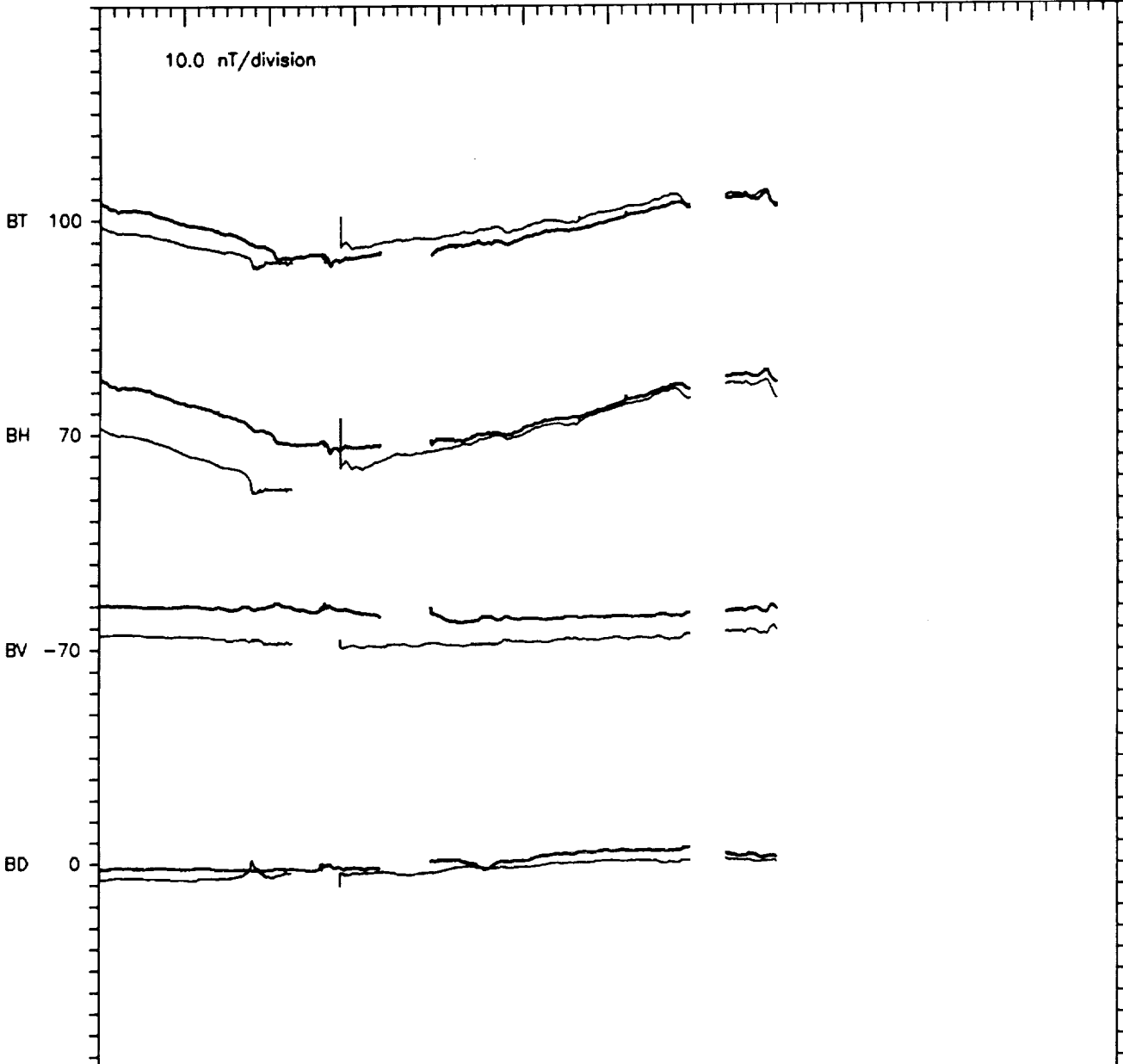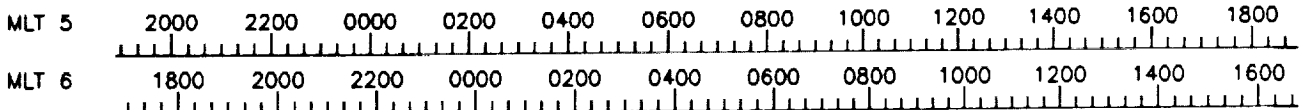MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 100

BH   60

BV −70

BD   0

10.0 deg/division

ELEV 0

UT   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800   2000   2200   0000
TILT   1.5   −3.2   −5.8   −5.4   −2.2   2.9   8.7   13.6   16.3   16.0   12.8   7.6   1.9

PLOT2GOES   9−JUN−1989 22:52:38.36

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 94   APR   4
GEOLON, MAGLAT = 5(−76.2, 11.1)   6(−107.8,   8.9)
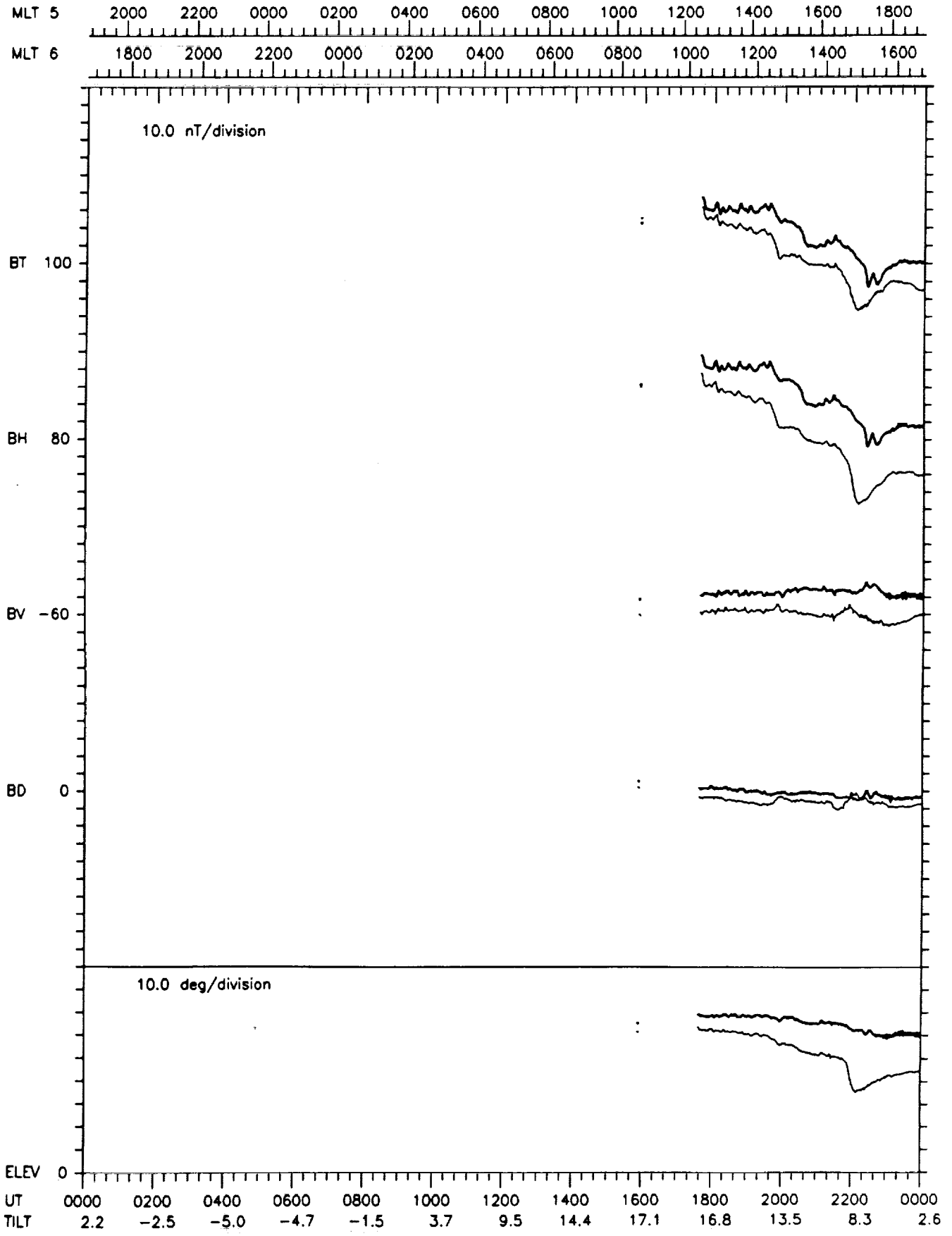
MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

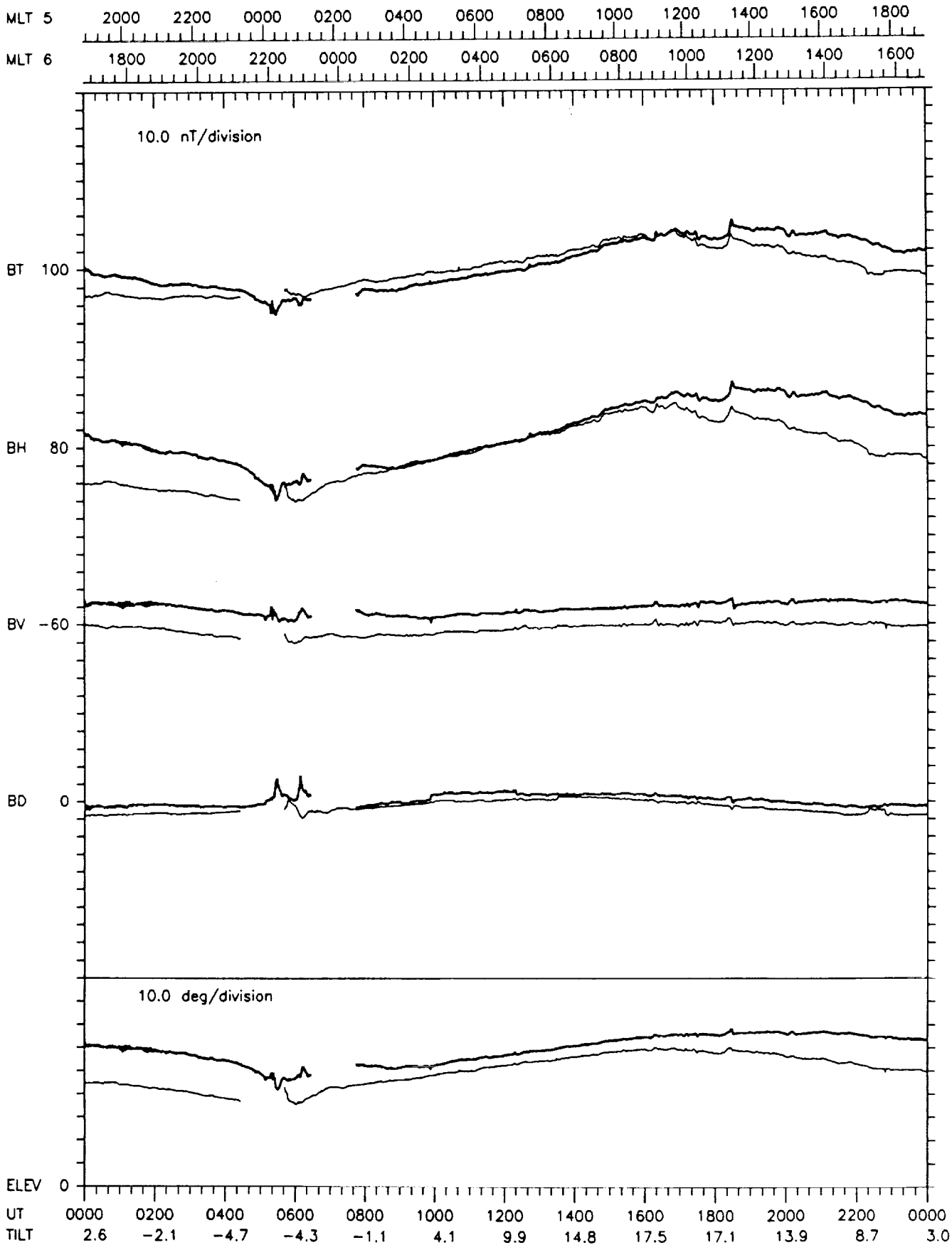MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 100

BH   70

BV −70

BD   0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	1.9	−2.9	−5.4	−5.0	−1.8	3.3	9.1	14.0	16.7	16.4	13.1	8.0	2.2

PLOT2GOES   9-JUN-1989 23:02:04.40

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 95   APR   5
GEOLON, MAGLAT = 5(−76.1, 11.2)   6(−107.8,   8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 100

BH 80

BV −60

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	2.2	−2.5	−5.0	−4.7	−1.5	3.7	9.5	14.4	17.1	16.8	13.5	8.3	2.6

PLOT2GOES   9−JUN−1989 23:24:28.87
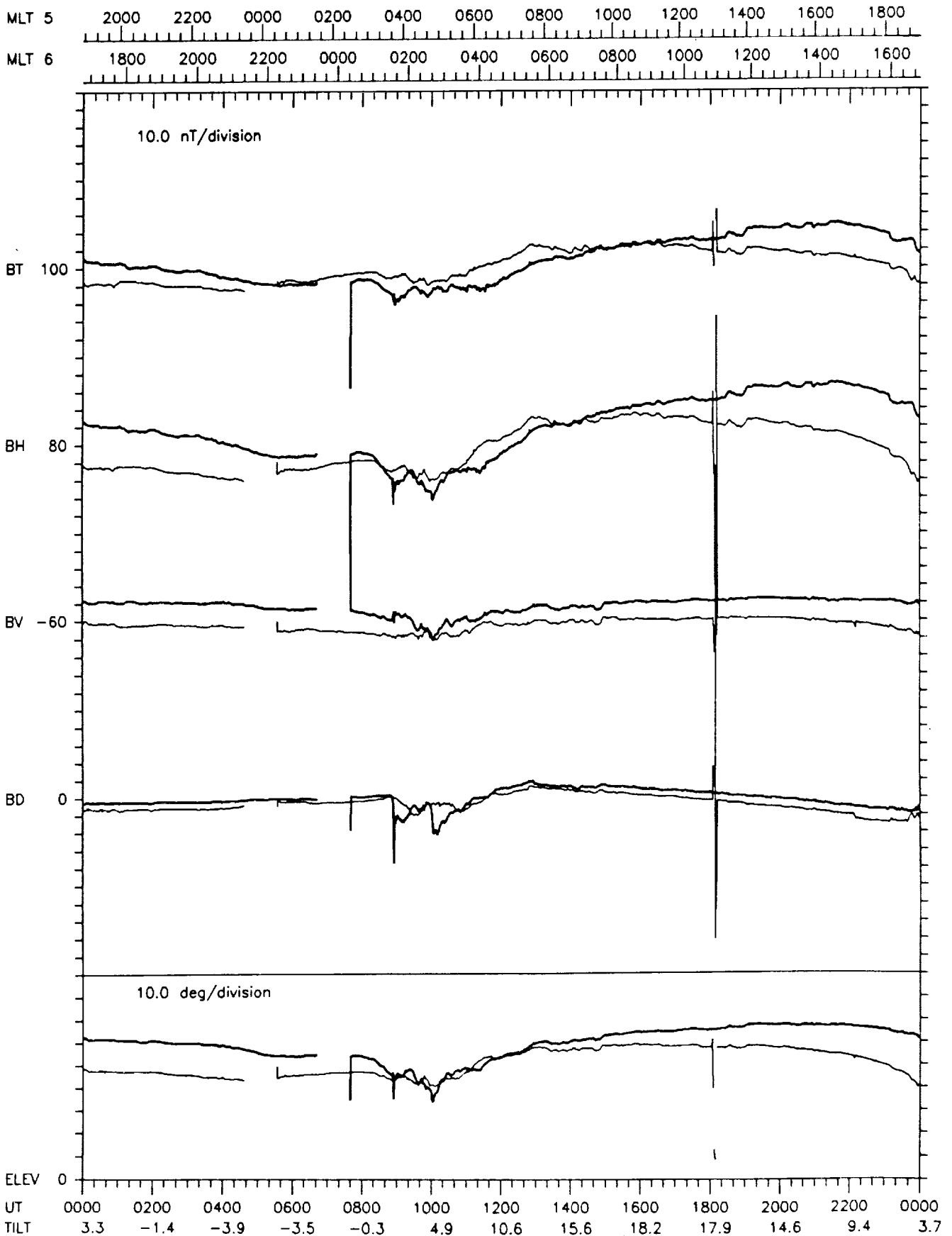
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 96   APR   6
GEOLON, MAGLAT = 5(−76.1, 11.2)   6(−107.8, 8.9)

MLT 5   2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600 1800

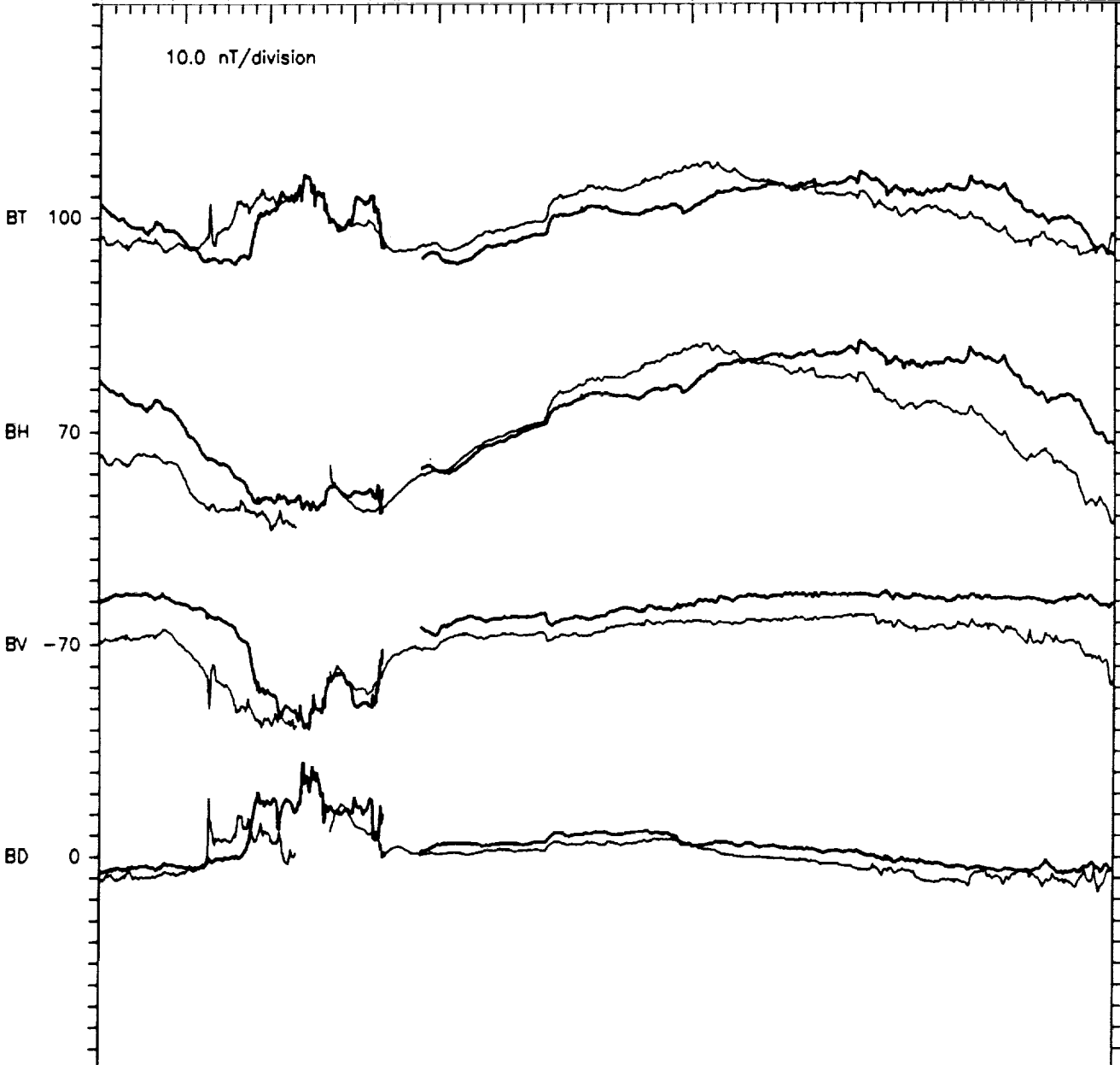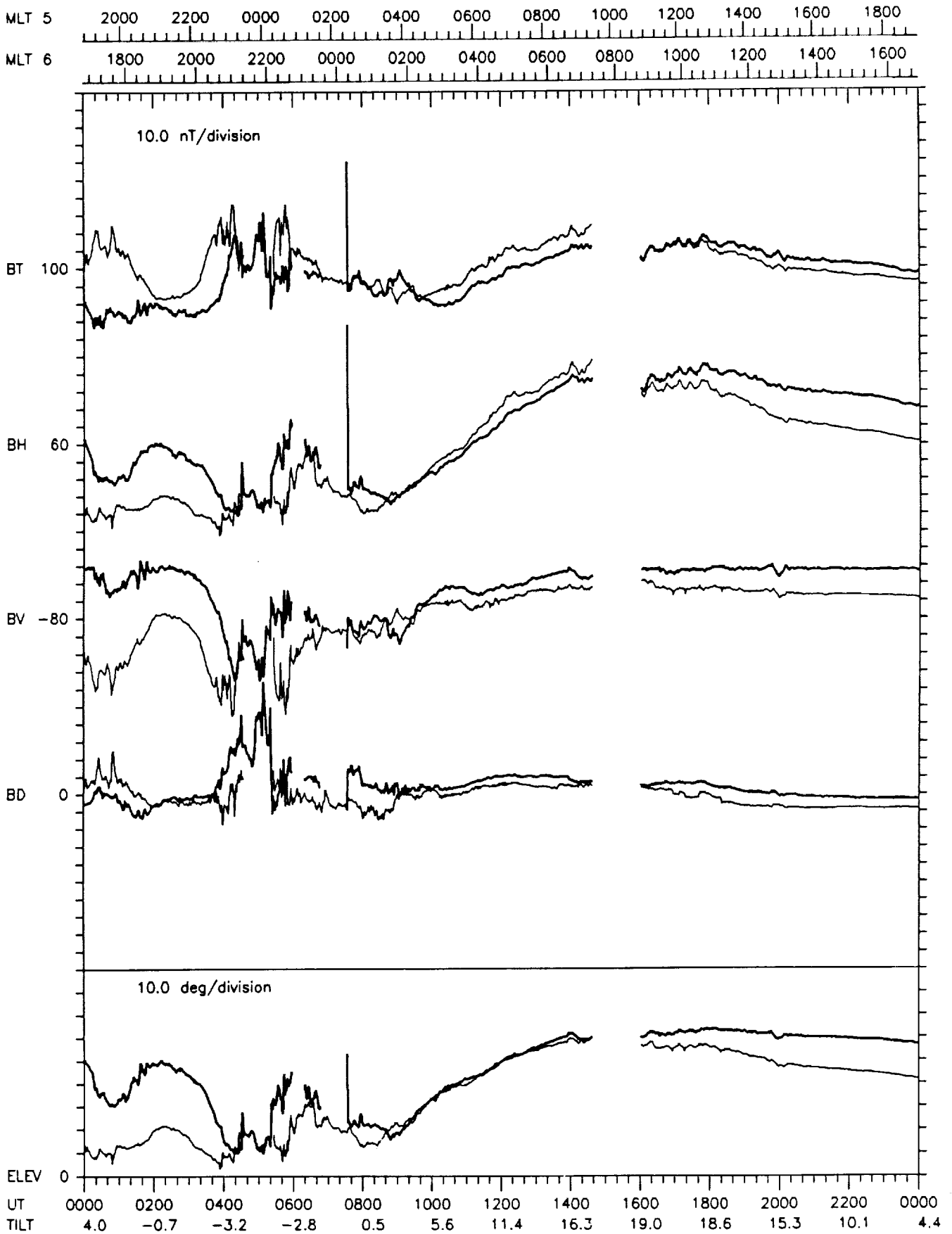MLT 6   1800 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600

10.0 nT/division

BT 100

BH 80

BV −60

BD 0

10.0 deg/division

ELEV 0

UT   0000 0200 0400 0600 0800 1000 1200 1400 1600 1800 2000 2200 0000
TILT 2.6   −2.1 −4.7 −4.3 −1.1 4.1   9.9   14.8 17.5 17.1 13.9 8.7   3.0

PLOT2GOES   9−JUN−1989 23:31:48.59

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY 97 APR 7
GEOLON, MAGLAT = 5(−76.0, 11.2)   6(−107.8,   8.9)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800

MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 100

BH 70

BV −60

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	3.0	−1.8	−4.3	−3.9	−0.7	4.5	10.3	15.2	17.9	17.5	14.2	9.0	3.3

PLOT2GOES   9−JUN−1989 23:40:38.55
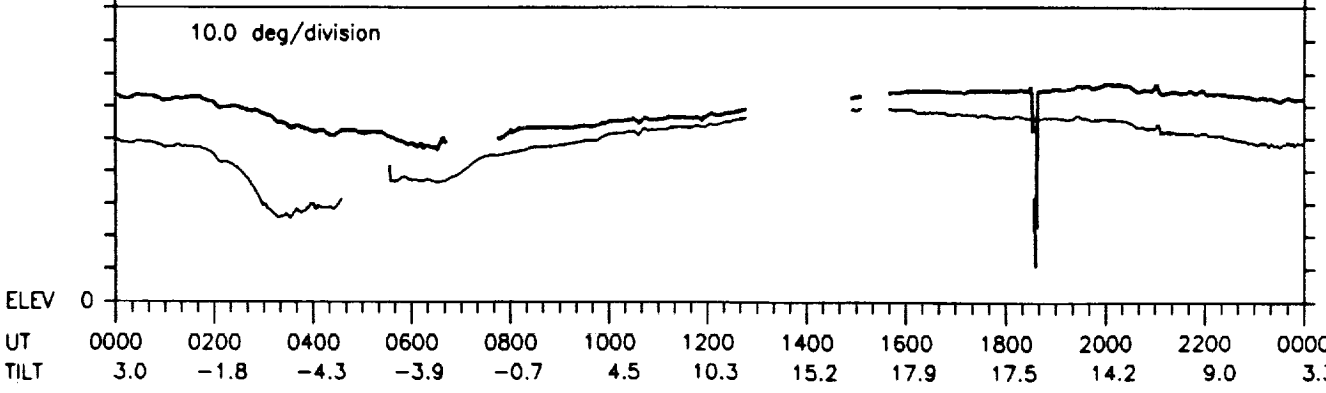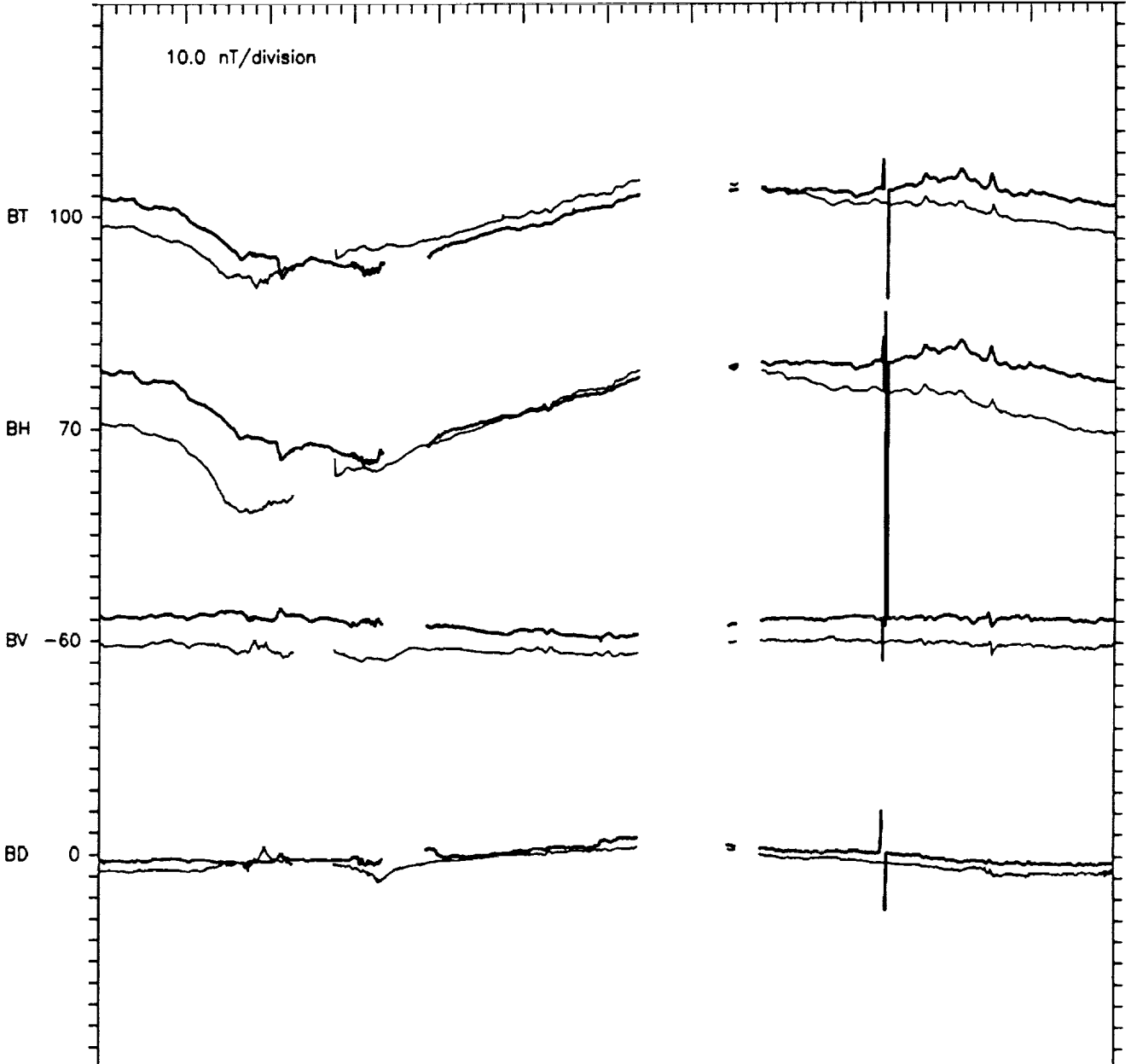
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY 98   APR   8
GEOLON, MAGLAT = 5(−76.0, 11.2)   6(−107.8,   8.9)

PLOT2GOES   9−JUN−1989 23:51:37.48

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY 99 APR 9
GEOLON, MAGLAT = 5(−76.0, 11.2)   6(−107.8, 8.9)

PLOT2GOES   10-JUN-1989 00:03:12.60

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY100 APR 10
GEOLON, MAGLAT = 5(-76.0, 11.2)   6(-107.8, 8.9)
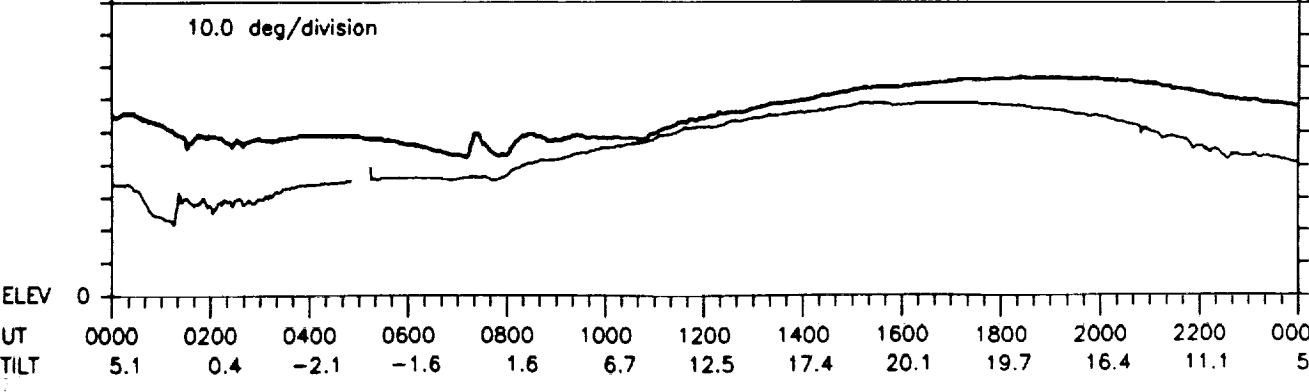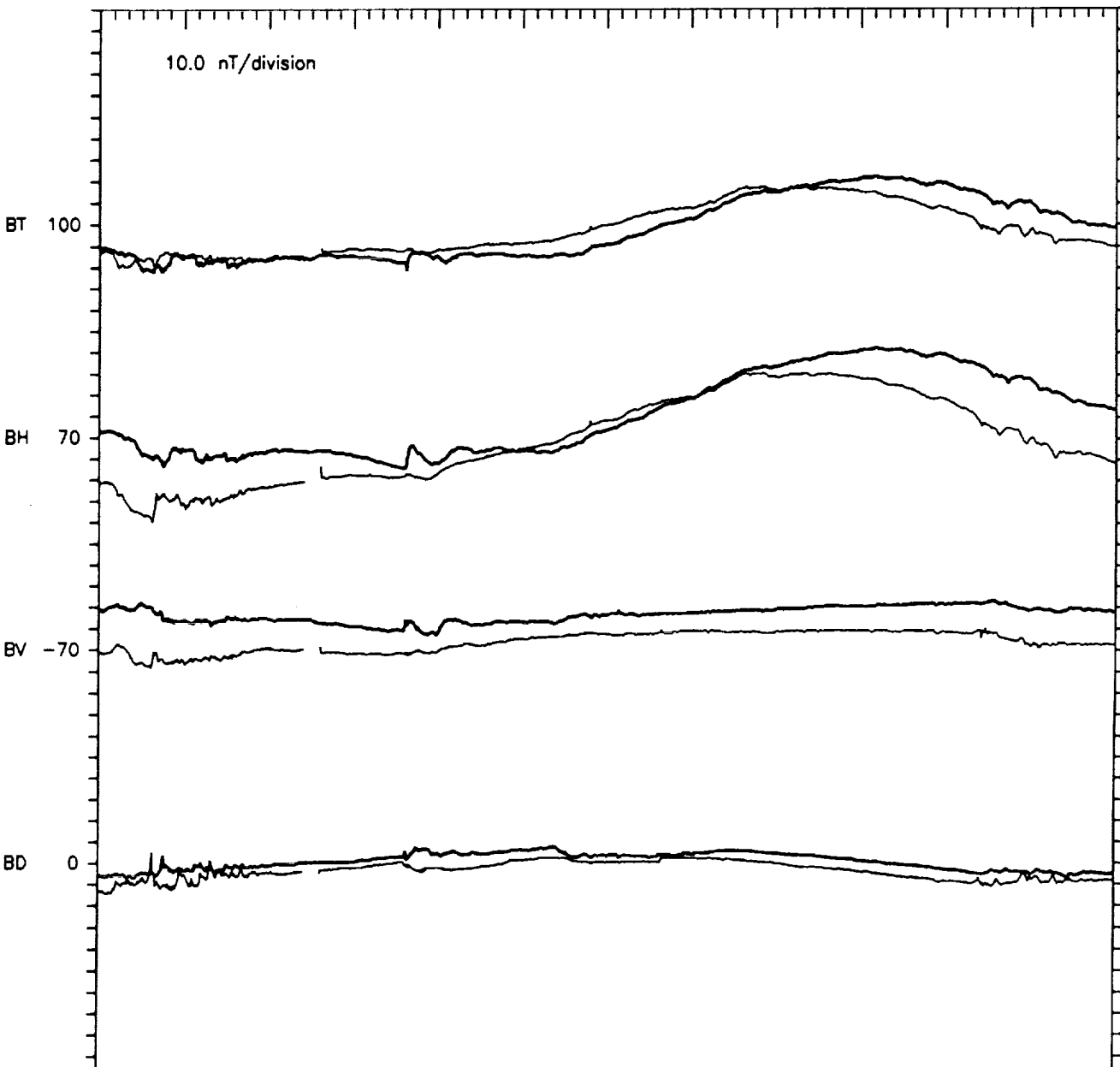

MLT 5 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600 1800

MLT 6 1800 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600

10.0 nT/division

BT 100

BH 60

BV -80

BD 0

10.0 deg/division

ELEV 0

UT   0000 0200 0400 0600 0800 1000 1200 1400 1600 1800 2000 2200 0000
TILT 4.0   -0.7 -3.2 -2.8 0.5   5.6   11.4 16.3 19.0 18.6 15.3 10.1 4.4

PLOT2GOES   10-JUN-1989 00:15:34.18

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY101   APR 11
GEOLON, MAGLAT =   5(−75.9, 11.2)   6(−107.8,   8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

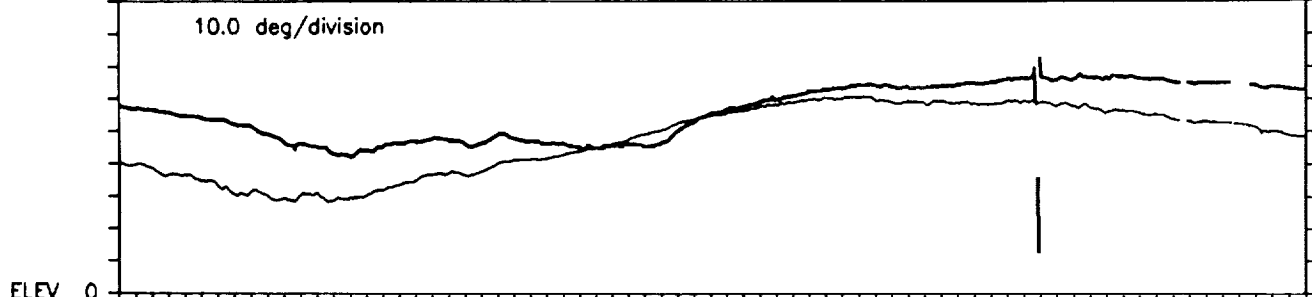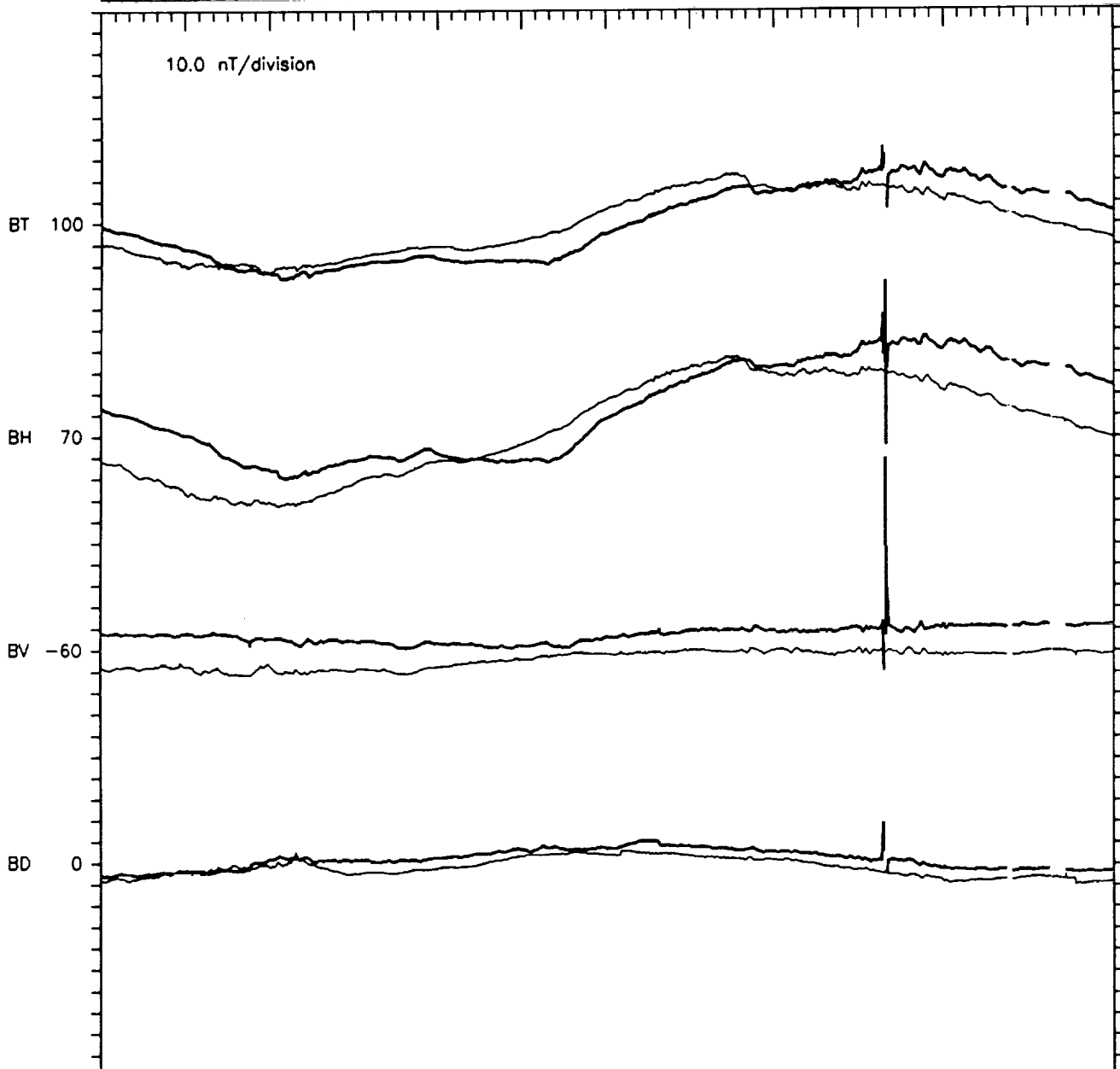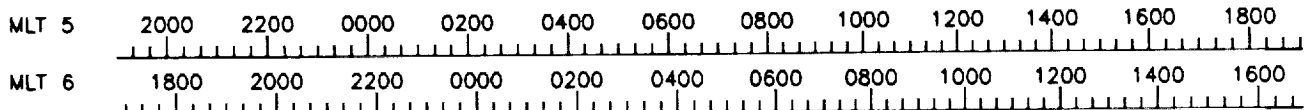MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 100

BH   70

BV −70

BD   0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	4.4	−0.3	−2.8	−2.4	0.8	6.0	11.8	16.7	19.4	19.4	15.7	10.4	4.7
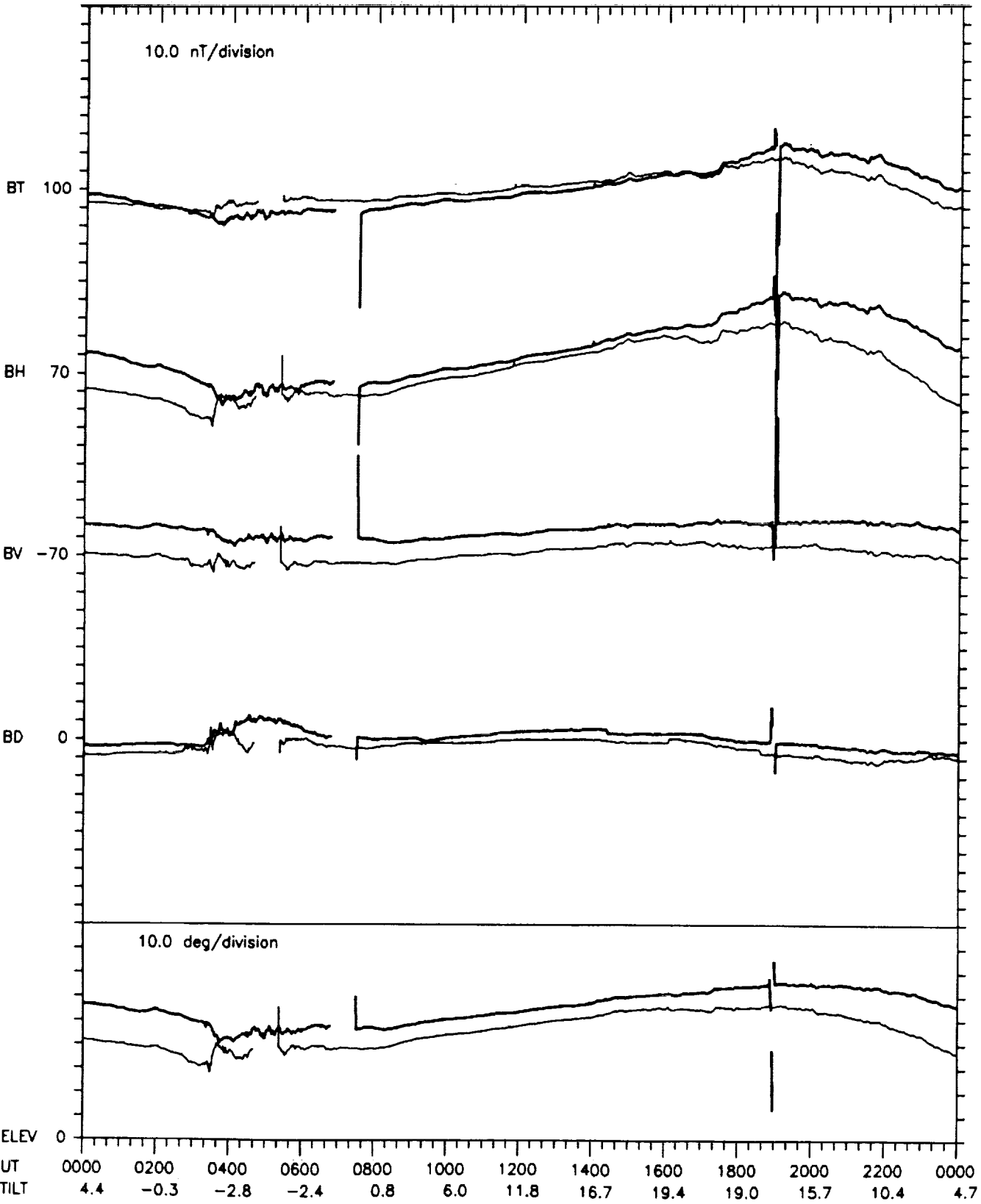
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY102 APR 12
GEOLON, MAGLAT = 5(−75.9, 11.2)   6(−107.8, 8.9)

| MLT 5 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 |
| MLT 6 | 1800 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 |

10.0 nT/division

BT 100

BH 60

BV −70

BD 0

10.0 deg/division

ELEV 0
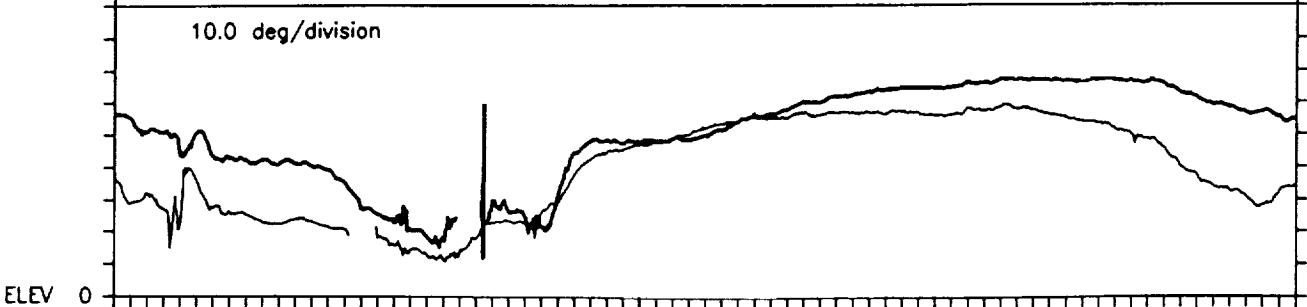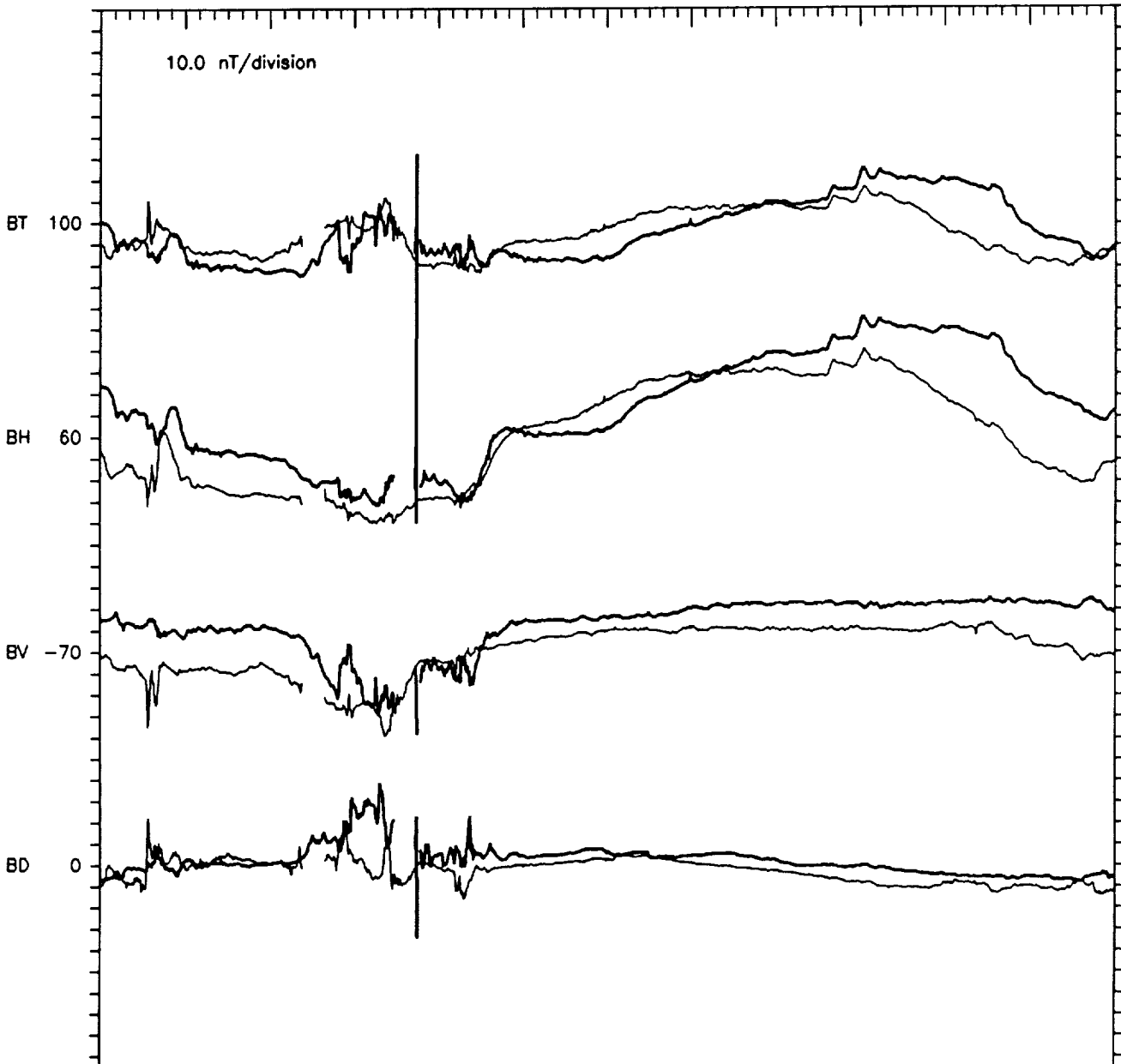
| UT | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 0000 |
| TILT | 4.7 | 0.0 | −2.4 | −2.0 | 1.2 | 6.4 | 12.2 | 17.1 | 19.7 | 19.3 | 16.0 | 10.8 | 5.1 |

PLOT2GOES   10-JUN-1989 00:37:54.70

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY103   APR 13
GEOLON, MAGLAT = 5(−75.8, 11.2)   6(−107.8,   8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 100

BH 70

BV −70

BD 0

10.0 deg/division

ELEV 0

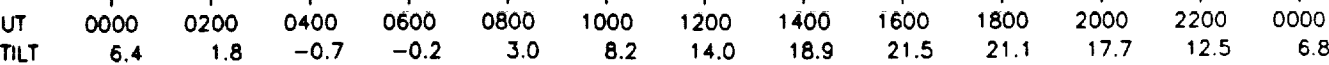| UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	5.1	0.4	−2.1	−1.6	1.6	6.7	12.5	17.4	20.1	19.7	16.4	11.1	5.4

PLOT2GOES   10-JUN-1989 01:22:12.76

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY104   APR 14
GEOLON, MAGLAT = 5(−75.8, 11.2)   6(−107.8,   8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 100

BH   70

BV −60

BD   0

10.0 deg/division

ELEV 0

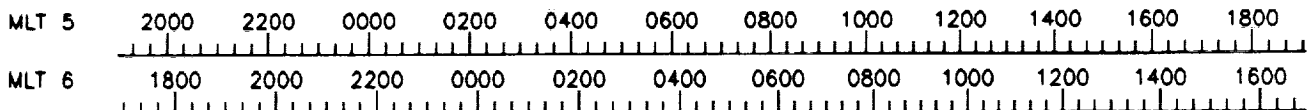| UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	5.4	0.7	−1.7	−1.3	1.9	7.1	12.9	17.8	20.5	20.0	16.7	11.5	5.8

PLOT2GOES   10-JUN-1989 01:33:50.04

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY105   APR 15
GEOLON, MAGLAT = 5(-75.8, 11.2)   6(-107.7,   8.9)

10.0 nT/division

10.0 deg/division

PLOT2GOES   10-JUN-1989 01:51:10.03
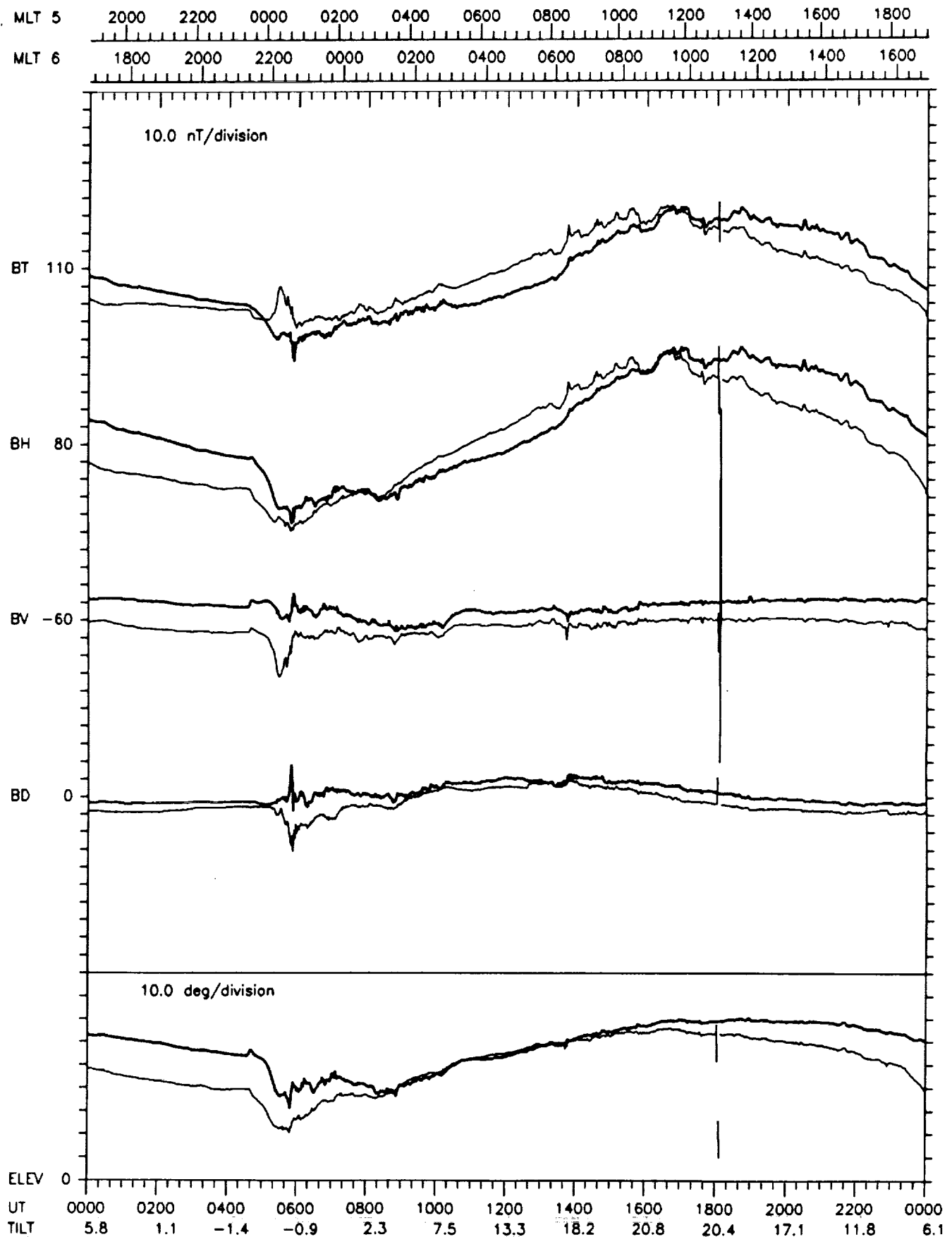
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY106 APR 16
GEOLON, MAGLAT = 5(−75.7, 11.2)   6(−107.7,   8.9)

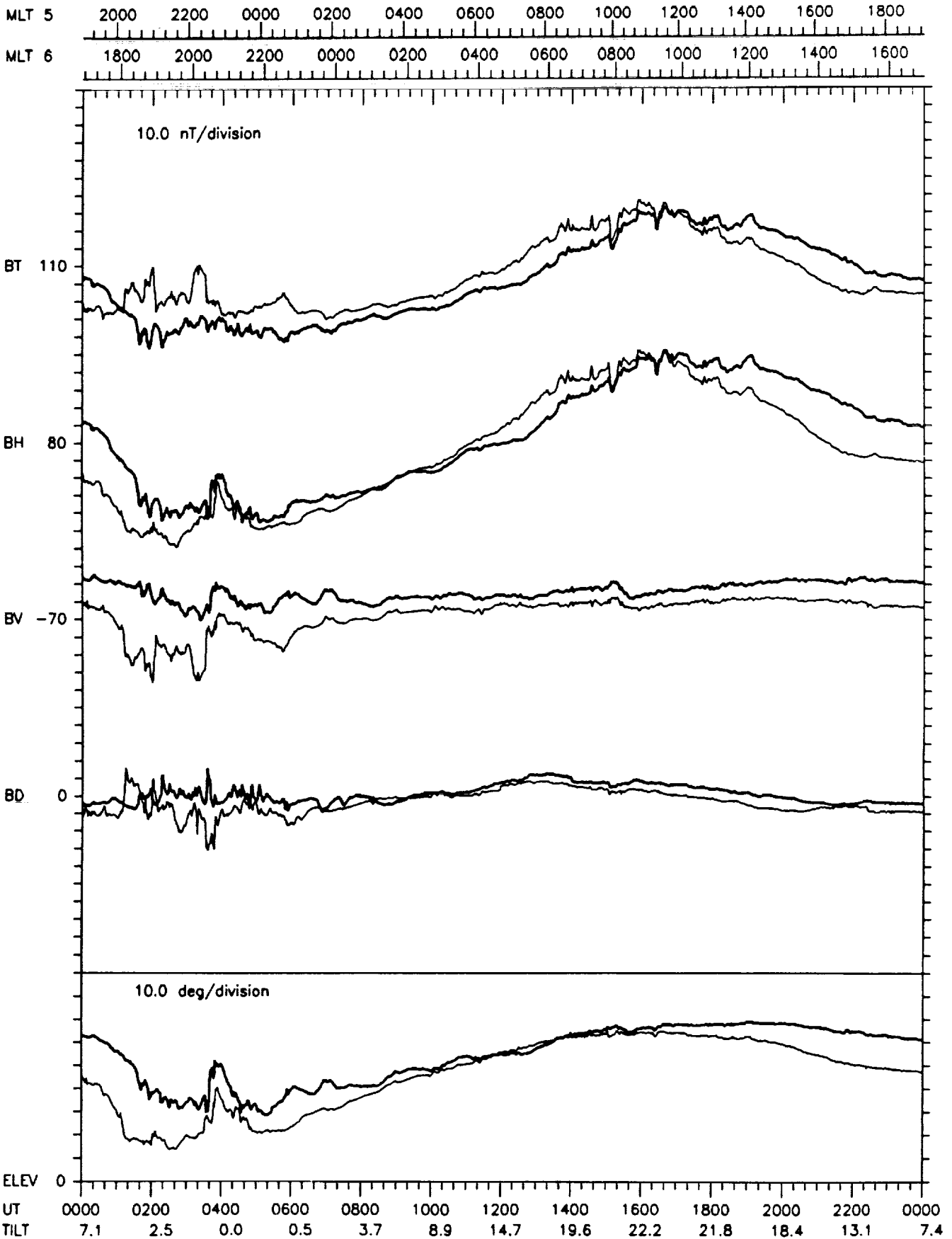MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 100

BH 70

BV −60

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	6.1	1.4	−1.0	−0.6	2.7	7.8	13.6	18.5	21.2	20.7	17.4	12.1	6.4

PLOT2GOES   10-JUN-1989 02:05:13.76
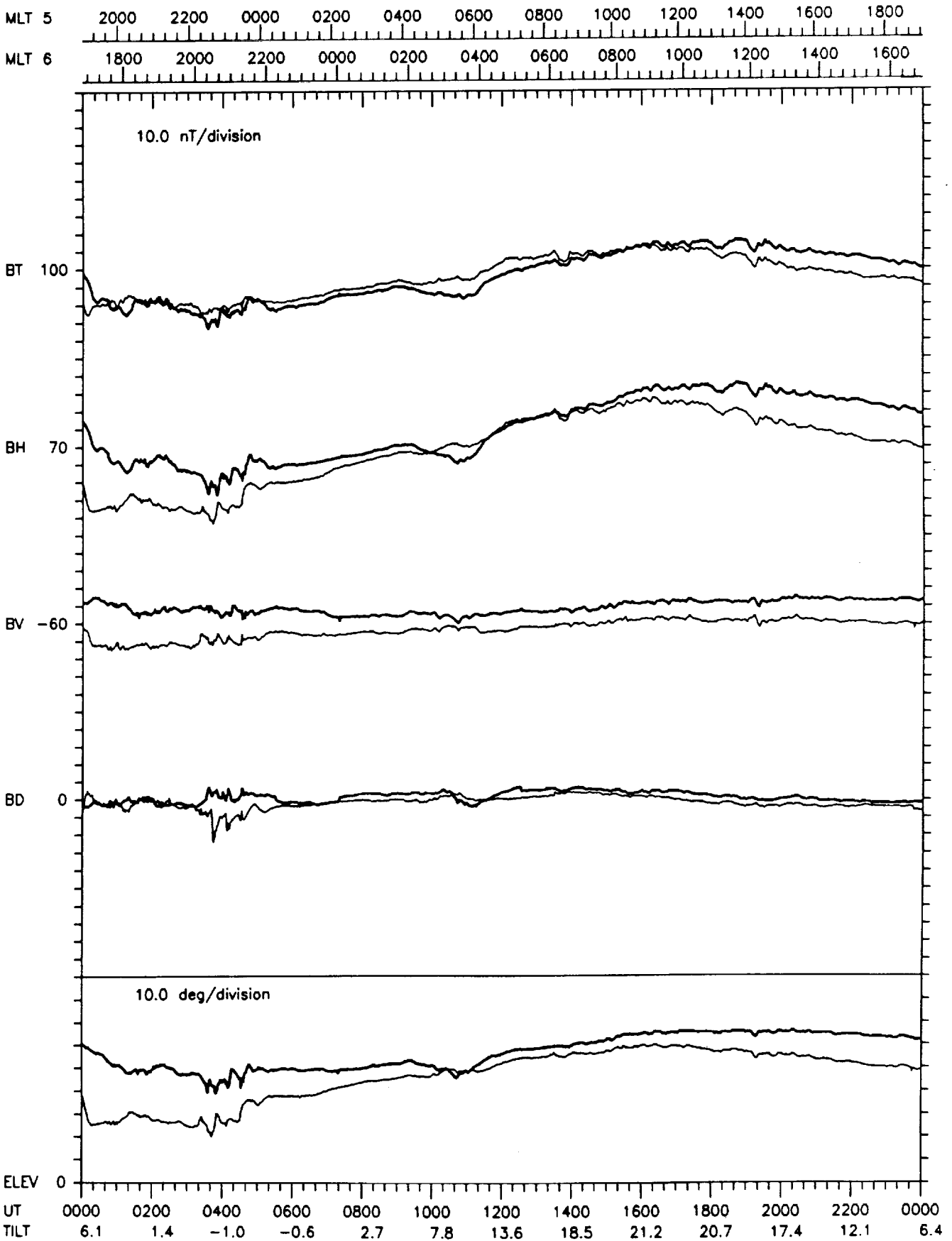
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY107   APR 17
GEOLON, MAGLAT = 5(−75.7, 11.2)   6(−107.7,   8.9)

PLOT2GOES   10-JUN-1989 02:24:28.07
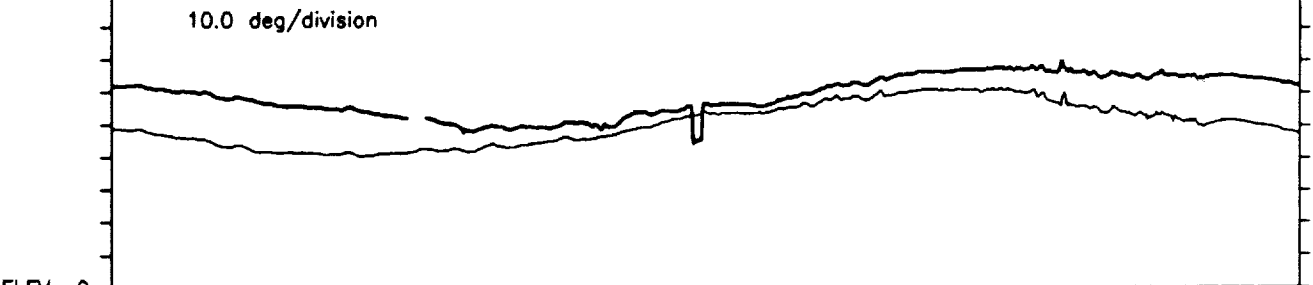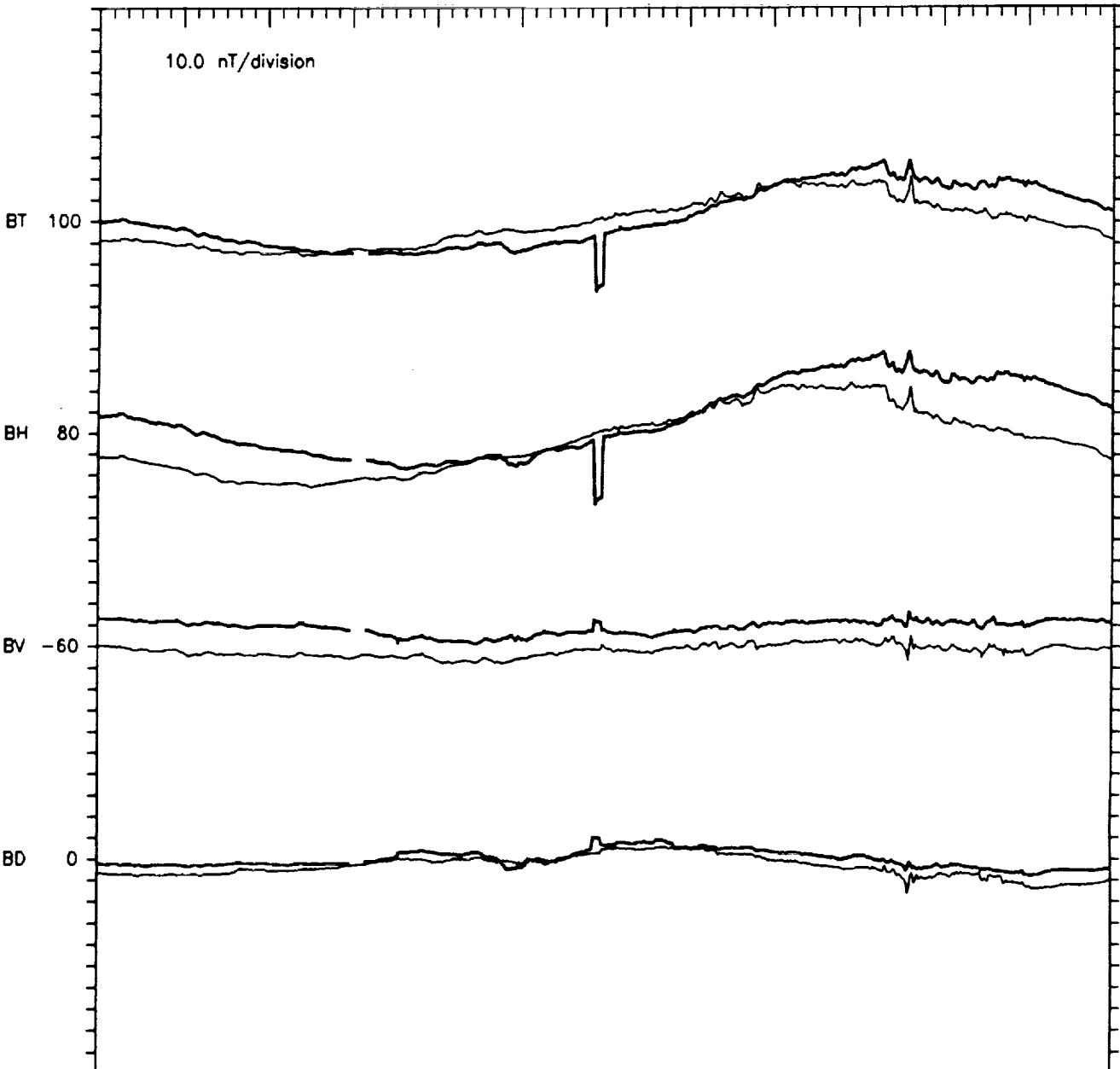
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY108 APR 18
GEOLON, MAGLAT = 5(-75.7, 11.2)   6(-107.7, 8.9)
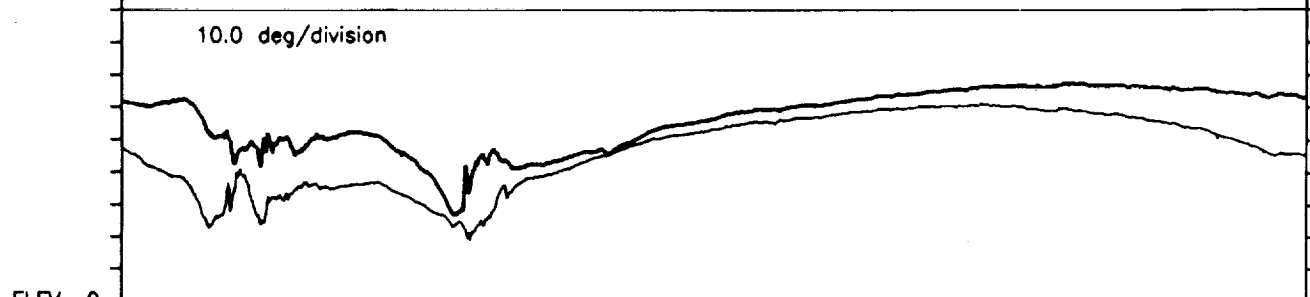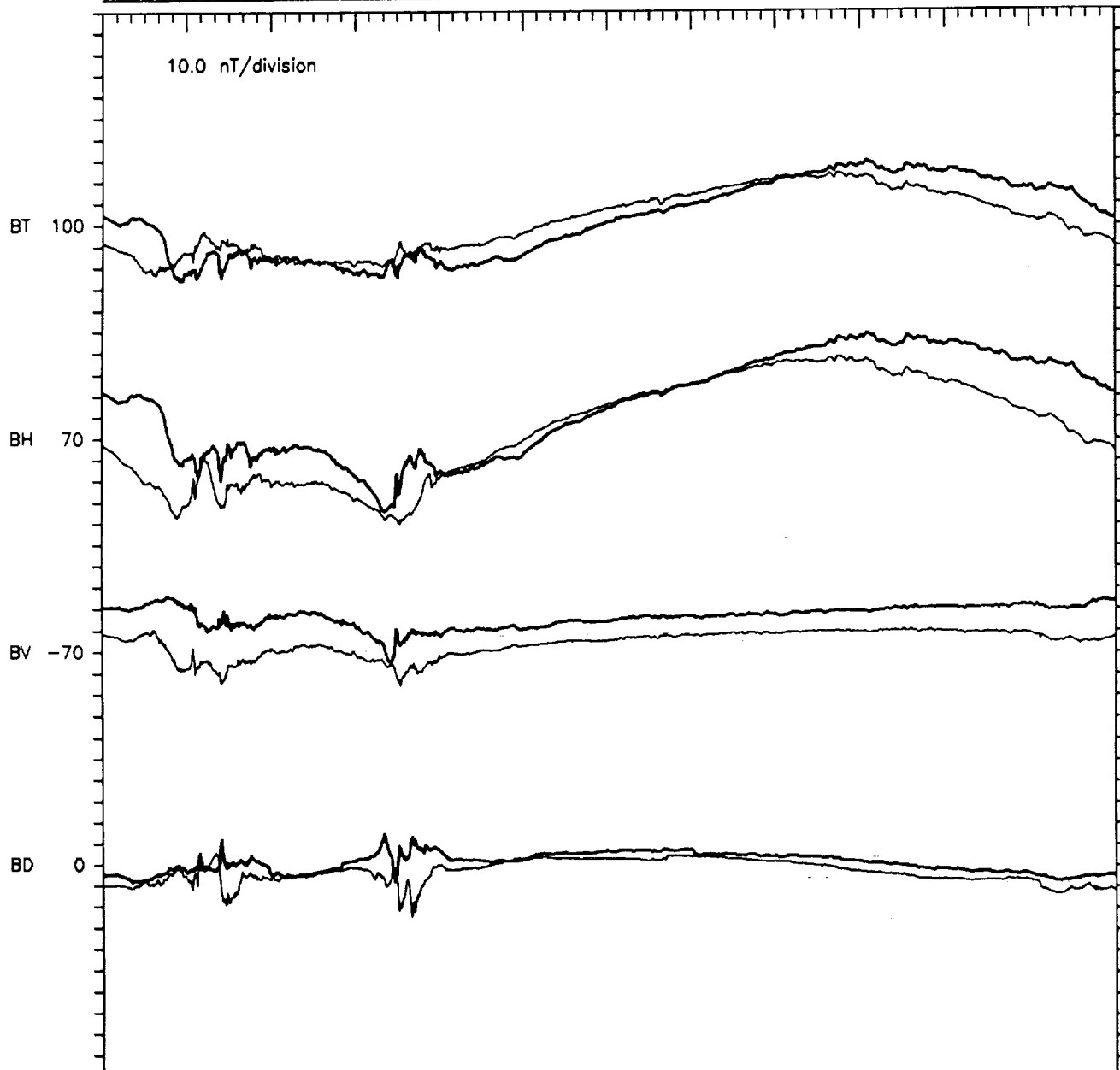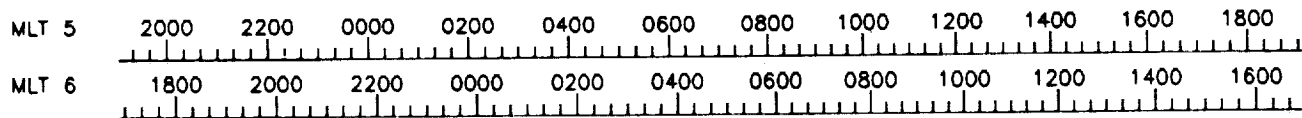
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
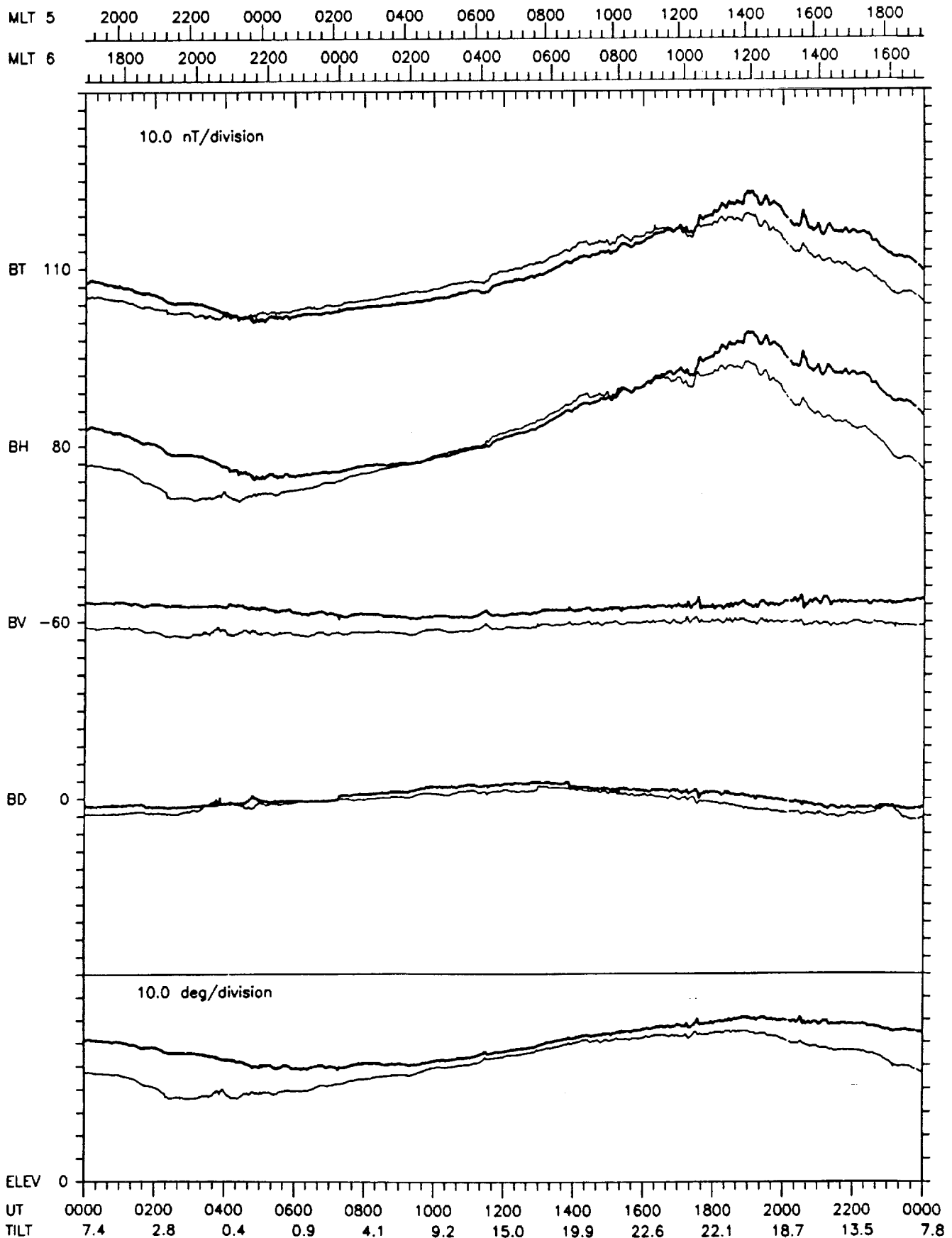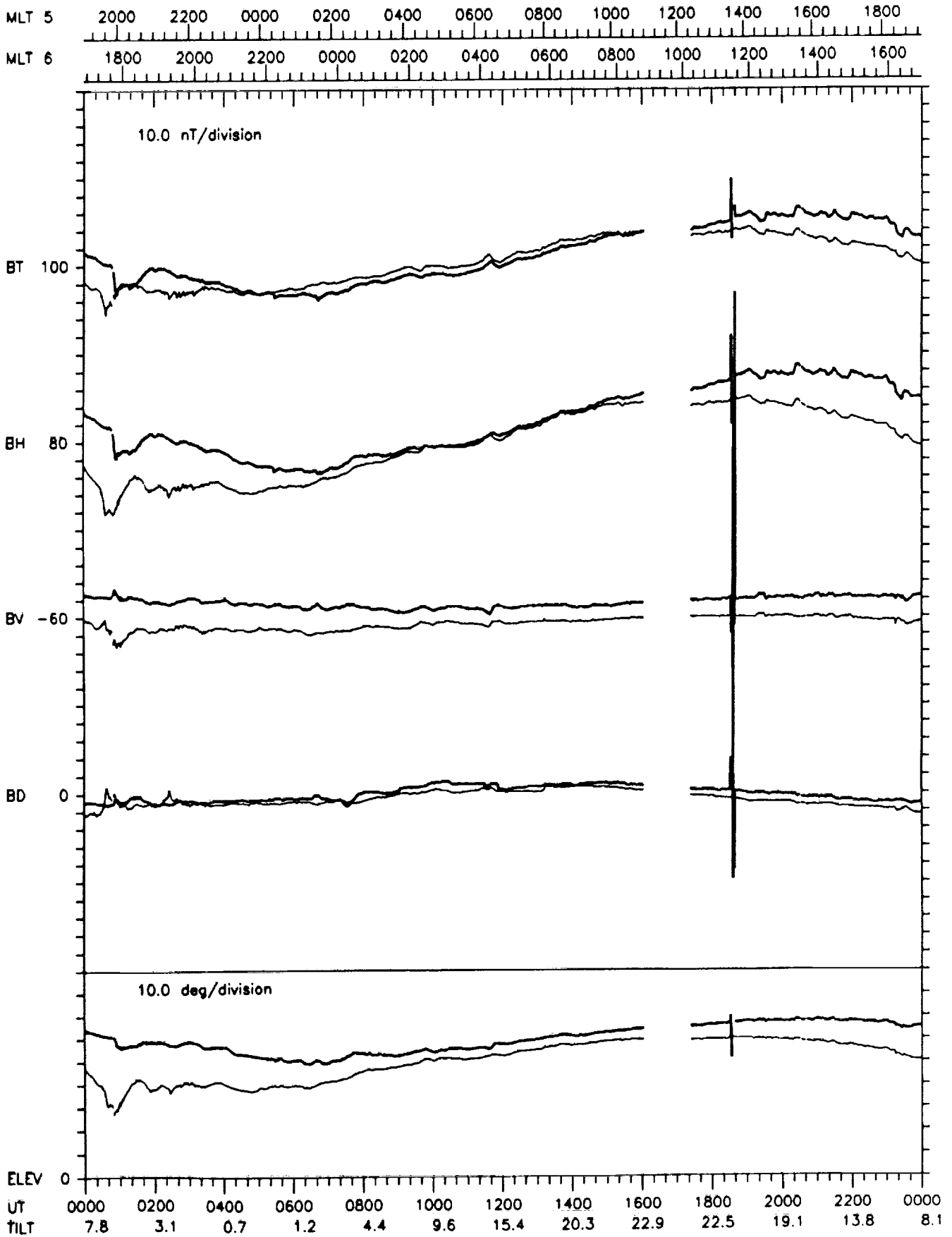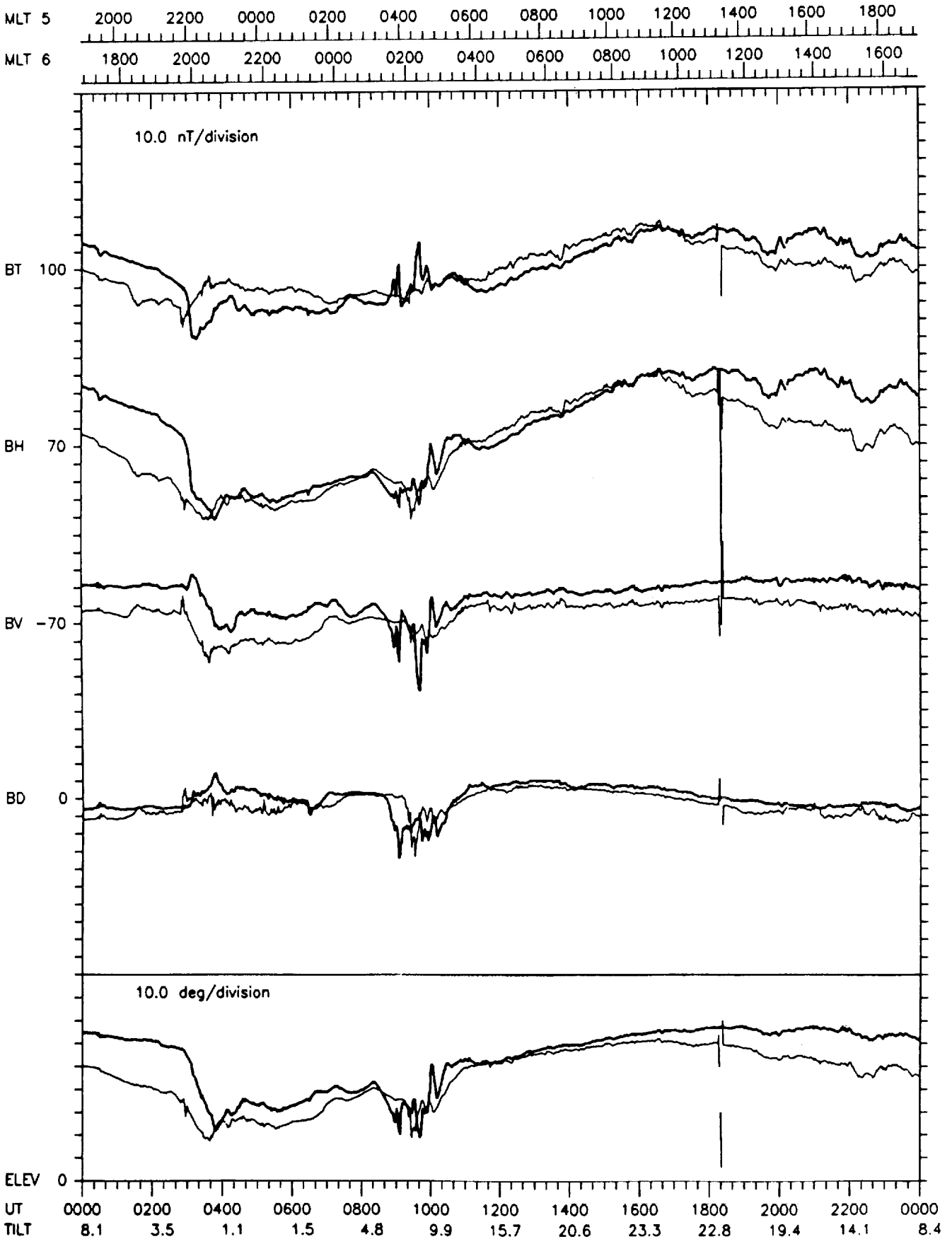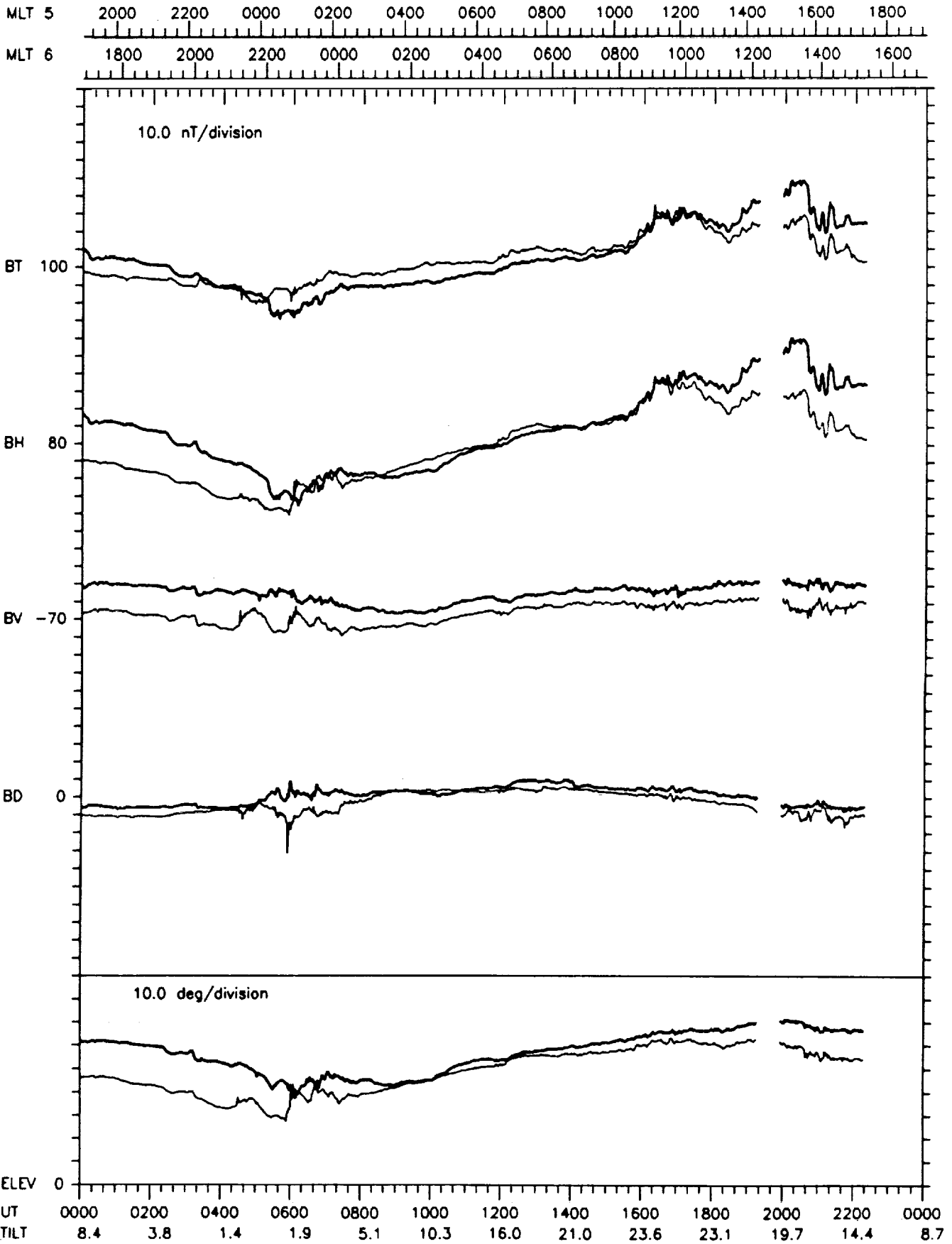## 1986   DAY109   APR 19
GEOLON, MAGLAT = 5(−75.7, 11.2)   6(−107.0,   9.0)

| MLT 5 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 |
| MLT 6 | 1800 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 |

10.0 nT/division

BT 110

BH 80

BV −70

BD 0

10.0 deg/division

ELEV 0

| UT | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 0000 |
| TILT | 7.1 | 2.5 | 0.0 | 0.5 | 3.7 | 8.9 | 14.7 | 19.6 | 22.2 | 21.8 | 18.4 | 13.1 | 7.4 |

PLOT2GOES   12-JUN-1989 08:35:09.86

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY110   APR 20
GEOLON, MAGLAT = 5(−75.6, 11.2)   6(−107.7,   8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 110

BH 80

BV −60

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	7.4	2.8	0.4	0.9	4.1	9.2	15.0	19.9	22.6	22.1	18.7	13.5	7.8

PLOT2GOES   12−JUN−1989 08:41:45.41

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY111 APR 21
GEOLON, MAGLAT = 5(−75.6, 11.2)   6(−107.7, 8.9)

| MLT 5 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 |

| MLT 6 | 1800 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 |

10.0 nT/division

BT 100

BH 80

BV −60

BD 0

10.0 deg/division

ELEV 0

| UT | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 0000 |
| TILT | 7.8 | 3.1 | 0.7 | 1.2 | 4.4 | 9.6 | 15.4 | 20.3 | 22.9 | 22.5 | 19.1 | 13.8 | 8.1 |

PLOT2GOES   12-JUN-1989 08:47:45.88

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY112 APR 22
GEOLON, MAGLAT = 5(−75.6, 11.2)   6(−107.7, 8.9)

| MLT 5 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 |
| MLT 6 | 1800 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 |

10.0 nT/division

BT 100

BH 70

BV −70

BD 0

10.0 deg/division

ELEV 0

| UT | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 0000 |
| TILT | 8.1 | 3.5 | 1.1 | 1.5 | 4.8 | 9.9 | 15.7 | 20.6 | 23.3 | 22.8 | 19.4 | 14.1 | 8.4 |

PLOT2GOES   12−JUN−1989 08:55:17.89

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY113   APR 23
GEOLON, MAGLAT = 5(−75.6, 11.2)   6(−107.7,   8.9)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800
MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 100

BH 80

BV −70

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	8.4	3.8	1.4	1.9	5.1	10.3	16.0	21.0	23.6	23.1	19.7	14.4	8.7

PLOT2GOES   12-JUN-1989 09:04:40.41

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY114   APR 24
GEOLON, MAGLAT = 5(−75.6, 11.2)   6(−107.7,   8.9)

10.0 nT/division

BT 100

BH   80

BV −60

BD   0

MLT 5: 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600 1800
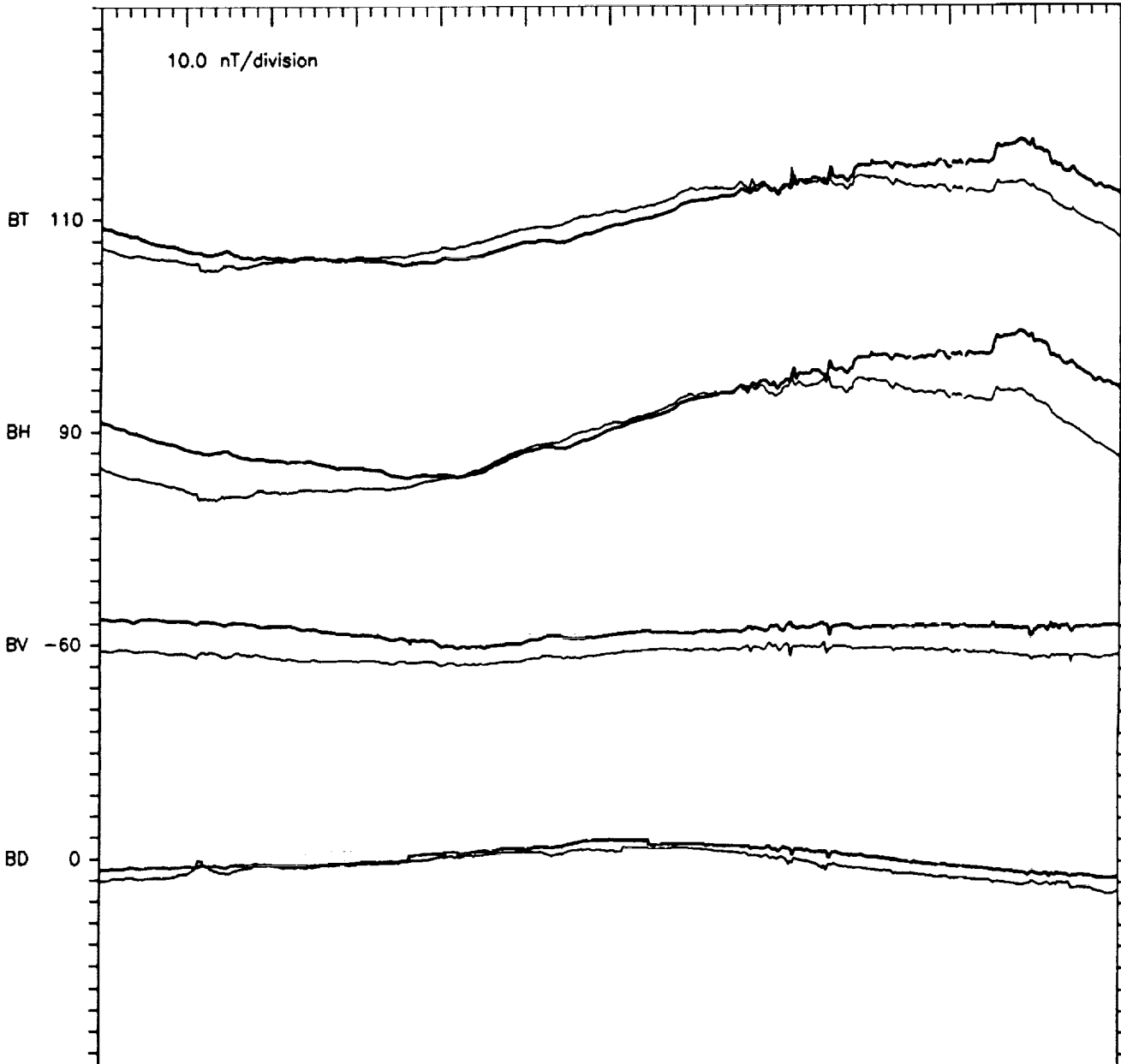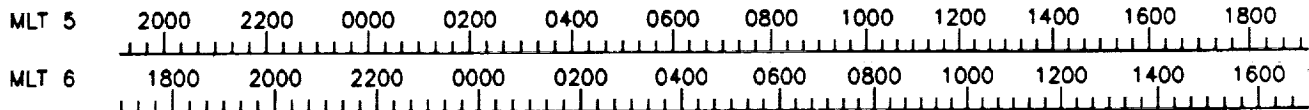MLT 6: 1800 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	8.7	4.1	1.7	2.2	5.4	10.6	16.4	21.3	23.9	23.4	20.0	14.7	9.0

PLOT2GOES   12-JUN-1989 09:11:01.64
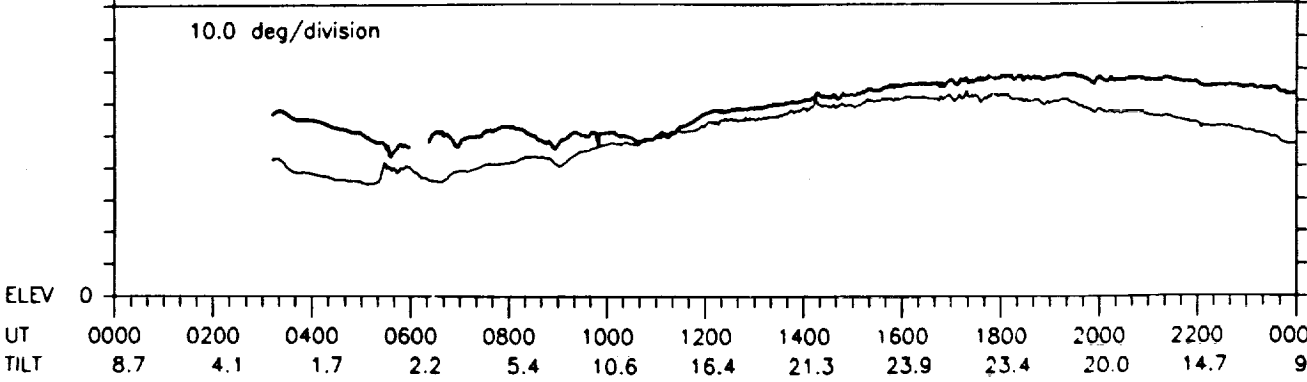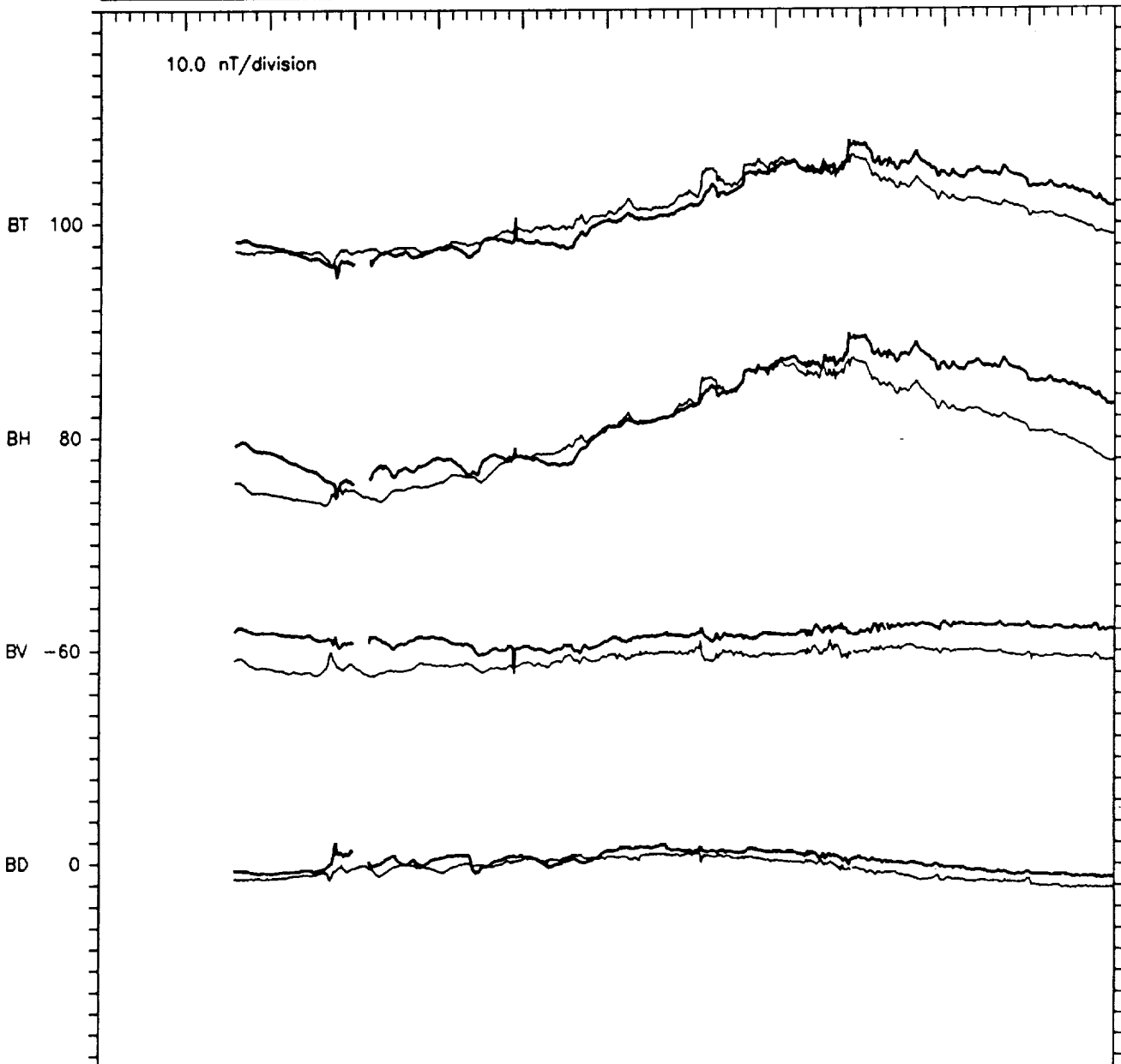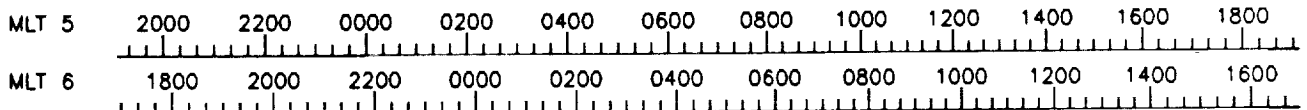
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY115   APR 25
GEOLON, MAGLAT = 5(−75.5, 11.2)   6(−107.7, 8.9)

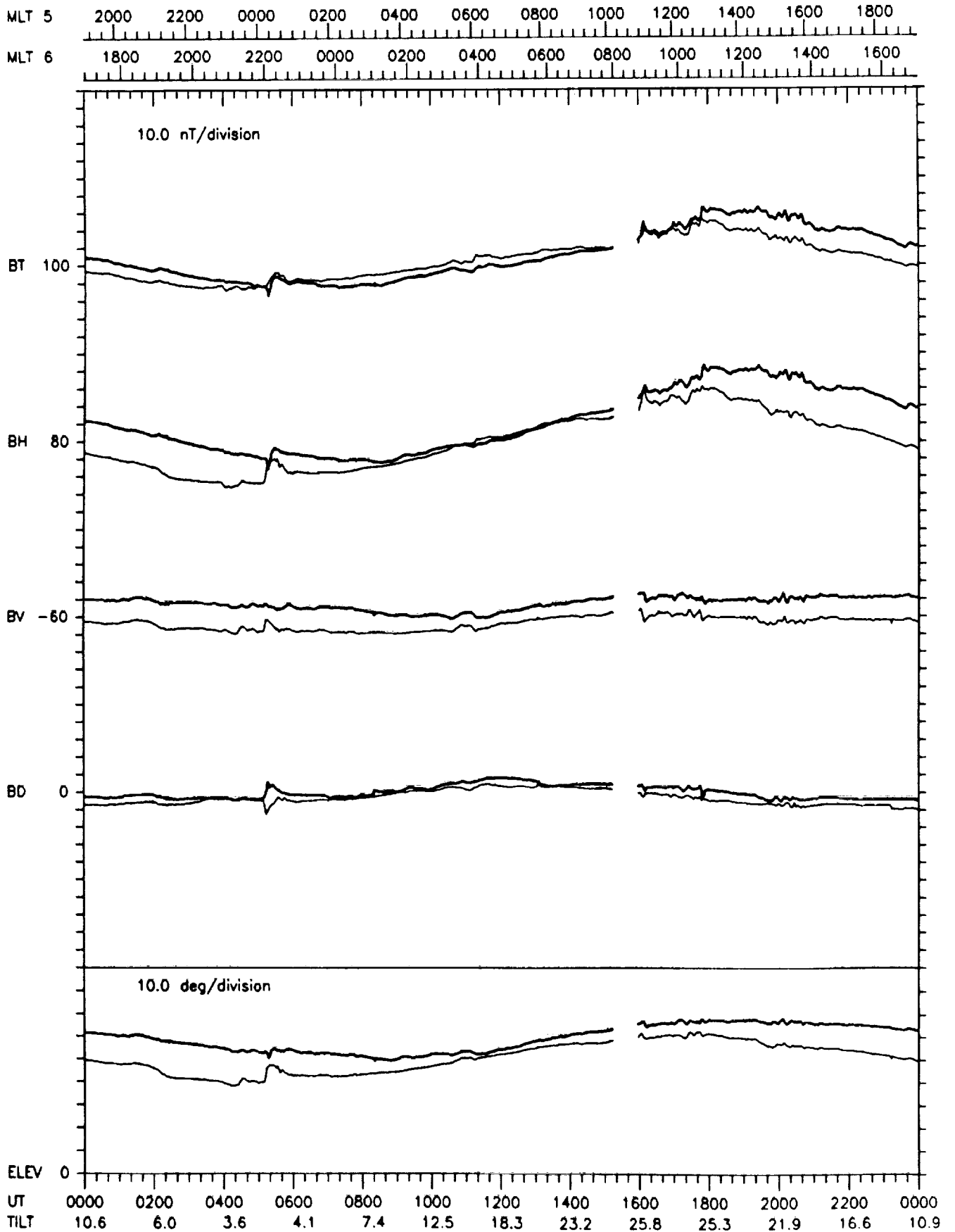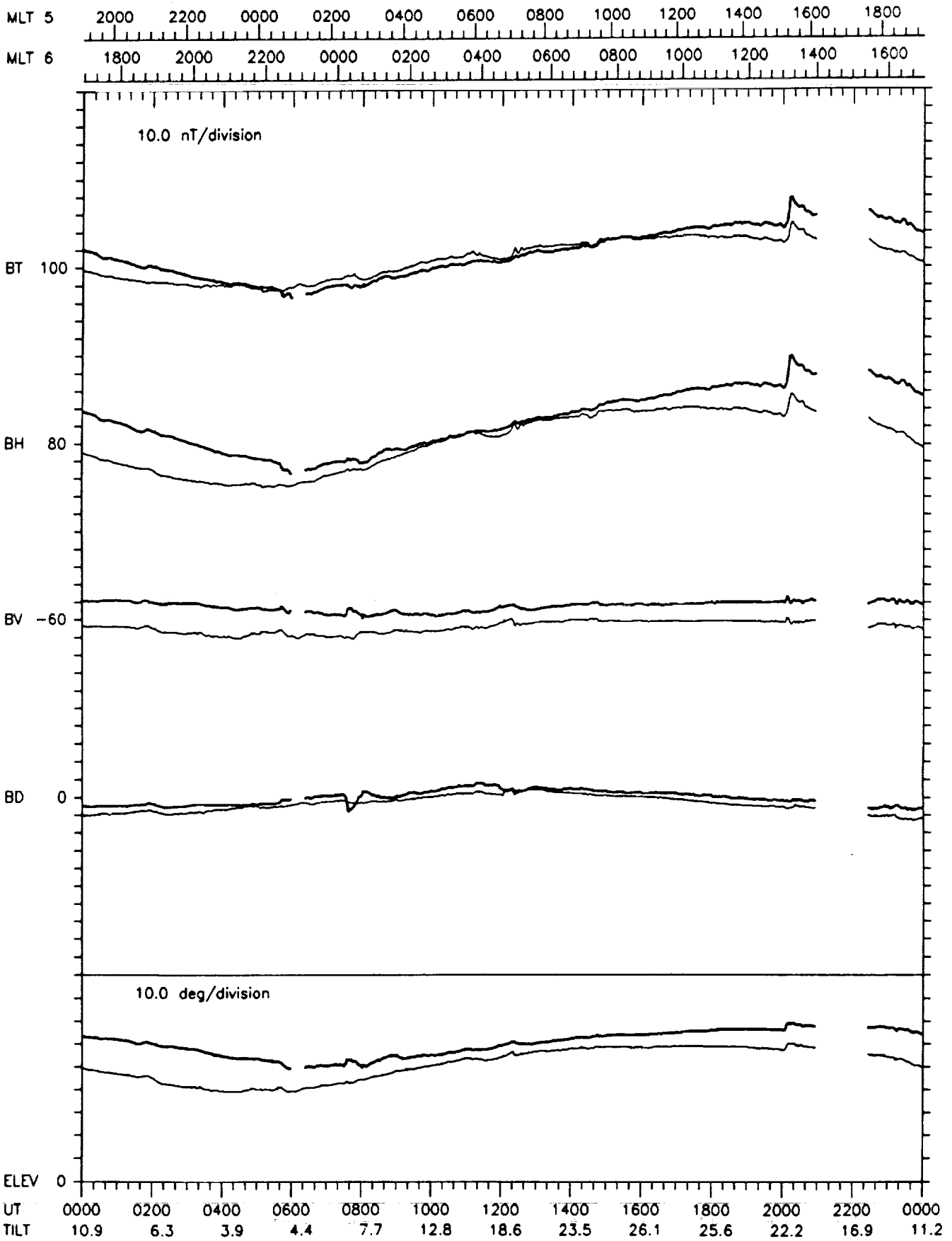MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT   100

BH   70

BV −60

BD   0

10.0 deg/division

ELEV   0
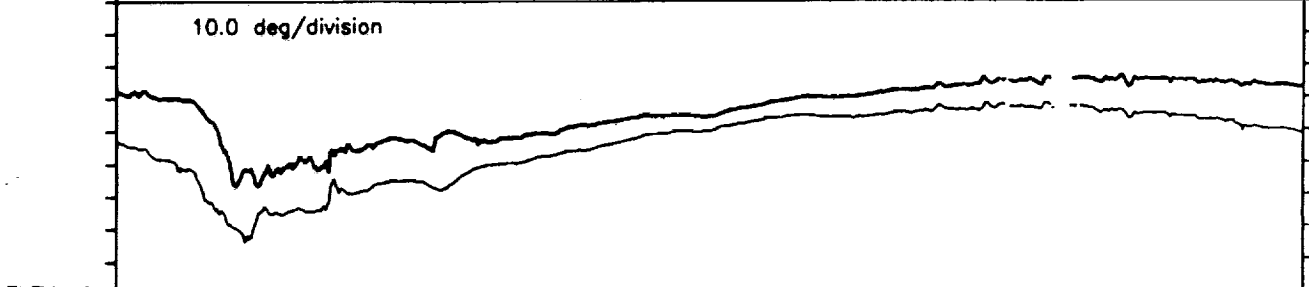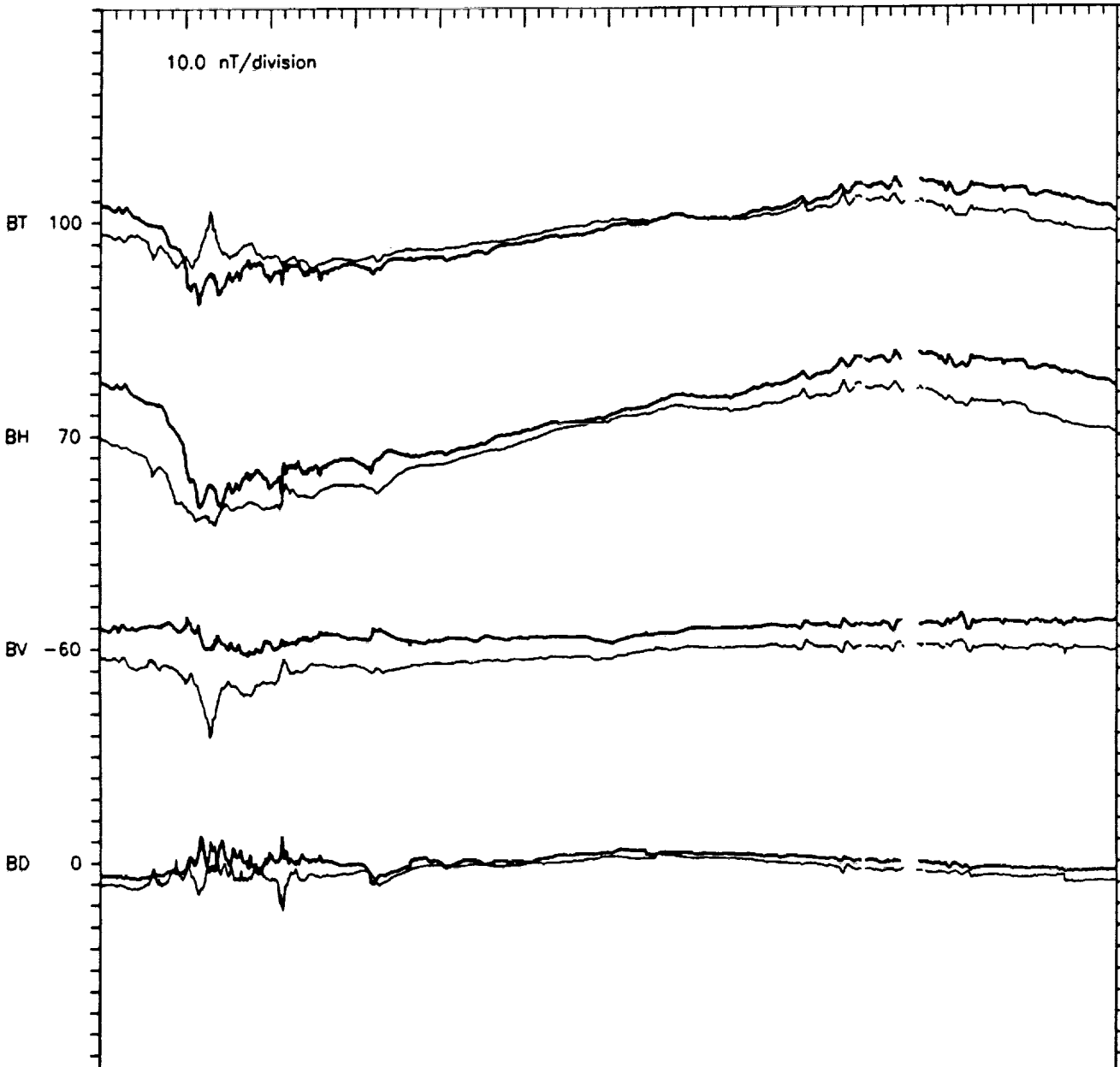
UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	9.0	4.4	2.1	2.5	5.8	10.9	16.7	21.6	24.2	23.8	20.4	15.1	9.4

PLOT2GOES   12-JUN-1989 09:18:59.20

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY116   APR 26
GEOLON, MAGLAT =   5(−75.5, 11.2)   6(−107.7,   8.9)

PLOT2GOES   12-JUN-1989 09:25:26.32
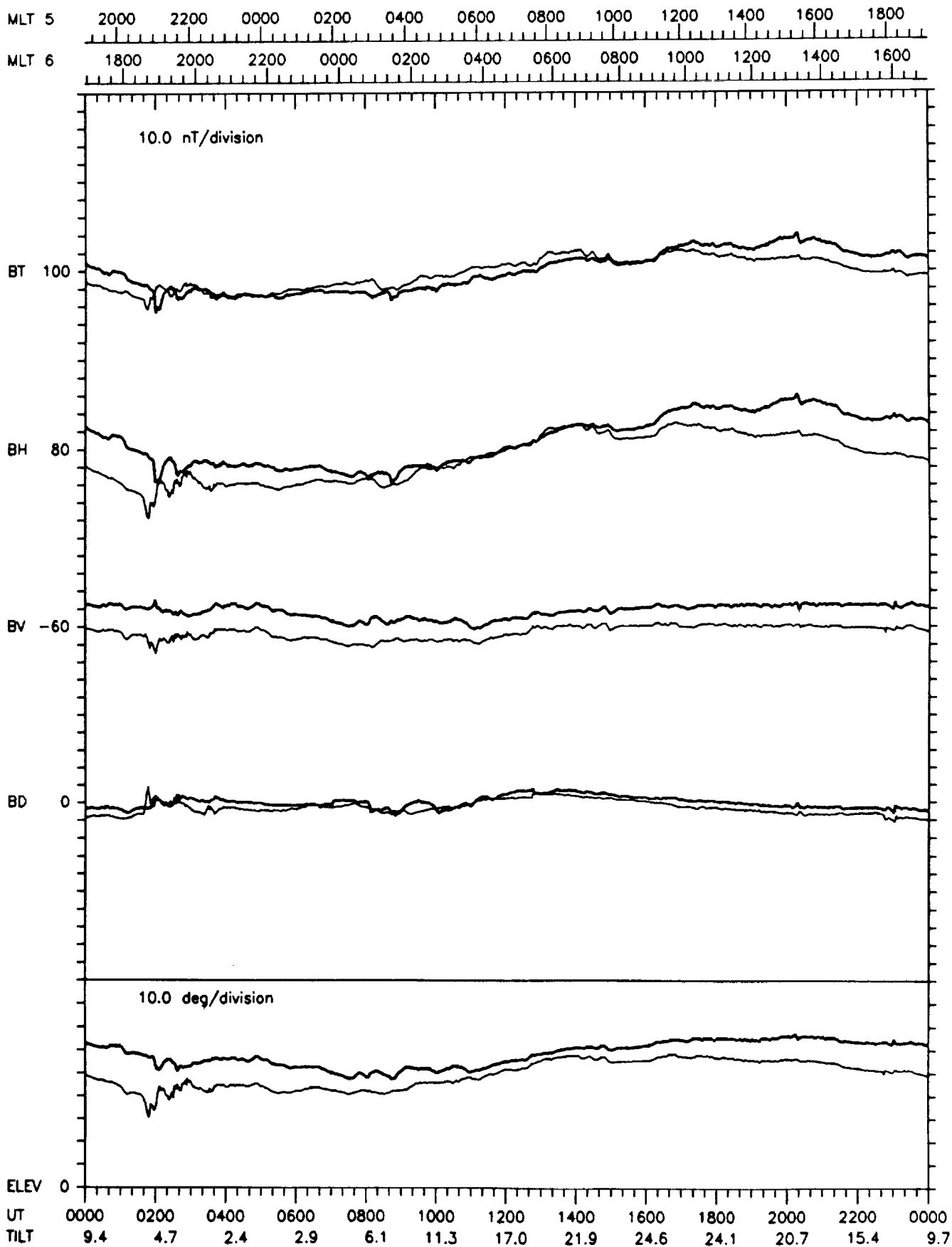
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY117   APR 27
GEOLON, MAGLAT = 5(−75.5, 11.2)   6(−107.7,   8.9)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800
MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 110

BH 90

BV −60

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	9.7	5.1	2.7	3.2	6.4	11.6	17.4	22.3	24.9	24.4	21.0	15.7	10.0

PLOT2GOES   12-JUN-1989 09:34:54.68
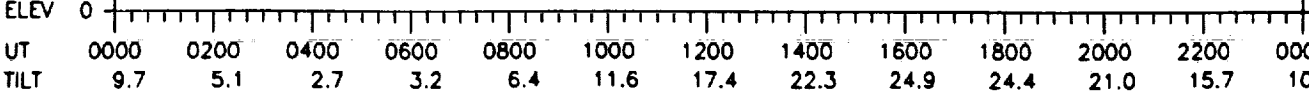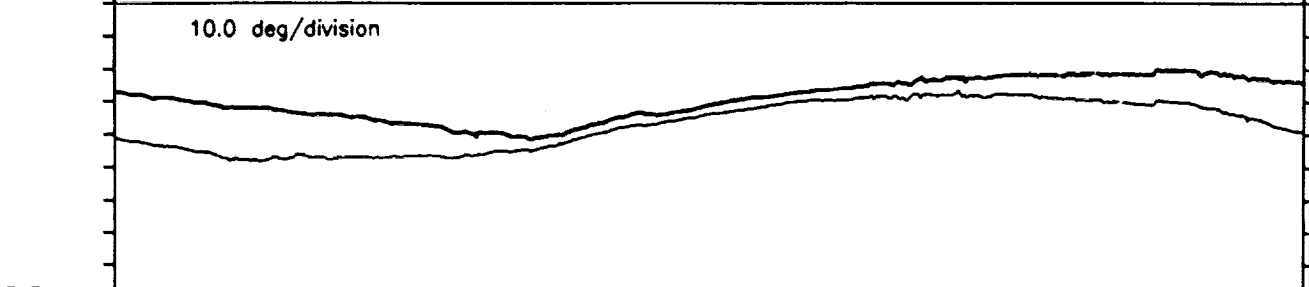
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY118   APR 28
GEOLON, MAGLAT = 5(−75.5, 11.2)   6(−107.8,   8.9)

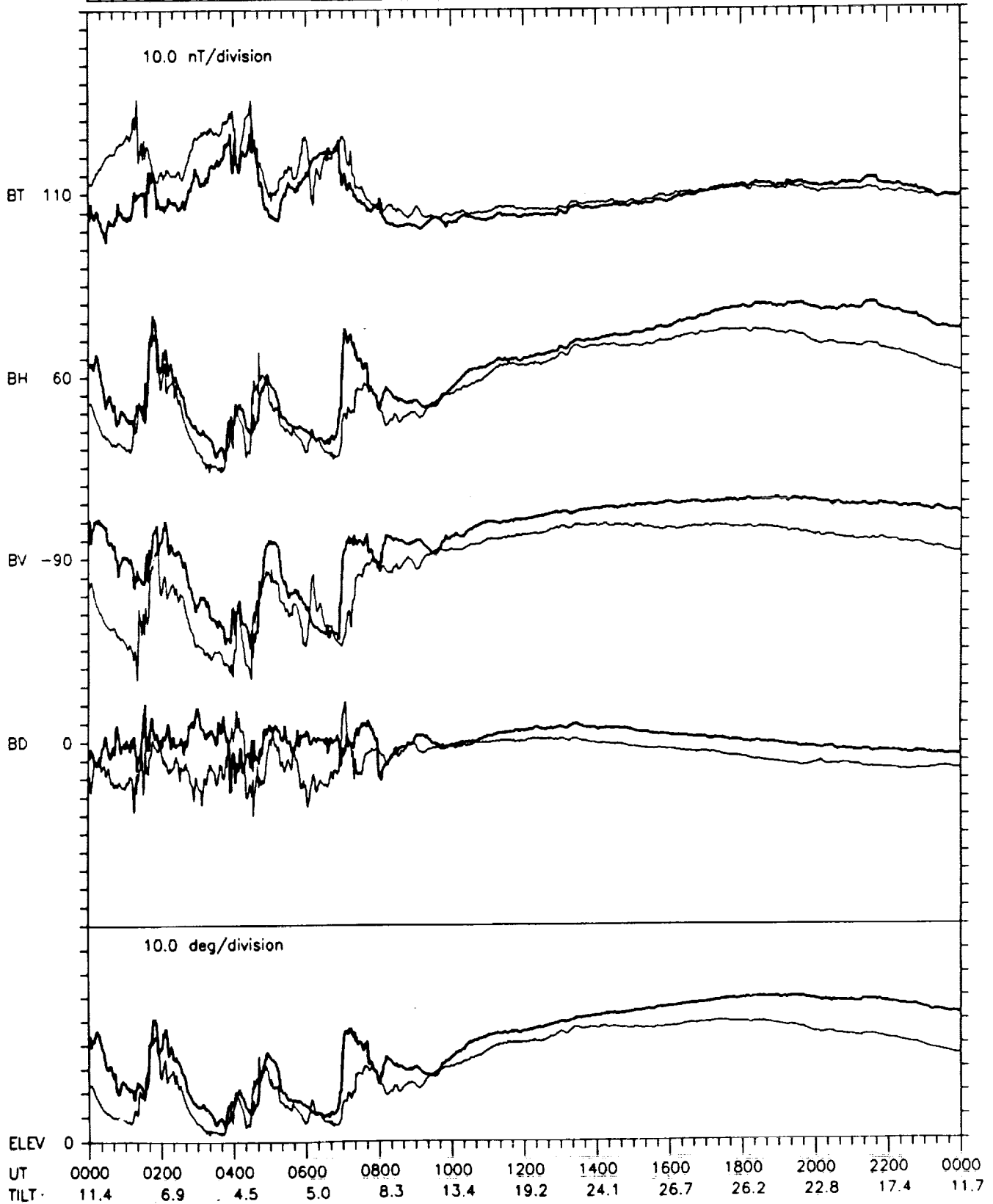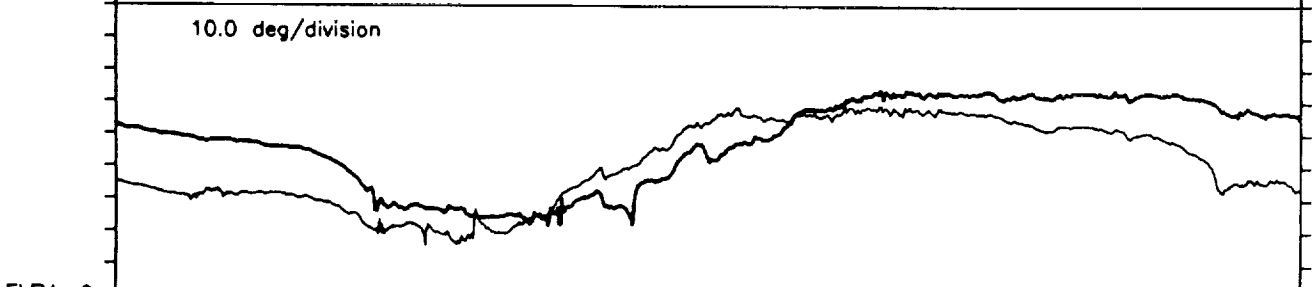
MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 100

BH 60

BV −70

BD 0

10.0 deg/division

ELEV 0

UT   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800   2000   2200   0000
TILT 10.0   5.4   3.0   3.5   6.7   11.9   17.7   22.6   25.2   24.7   21.3   16.0   10.3

PLOT2GOES   12-JUN-1989 09:42:15.35
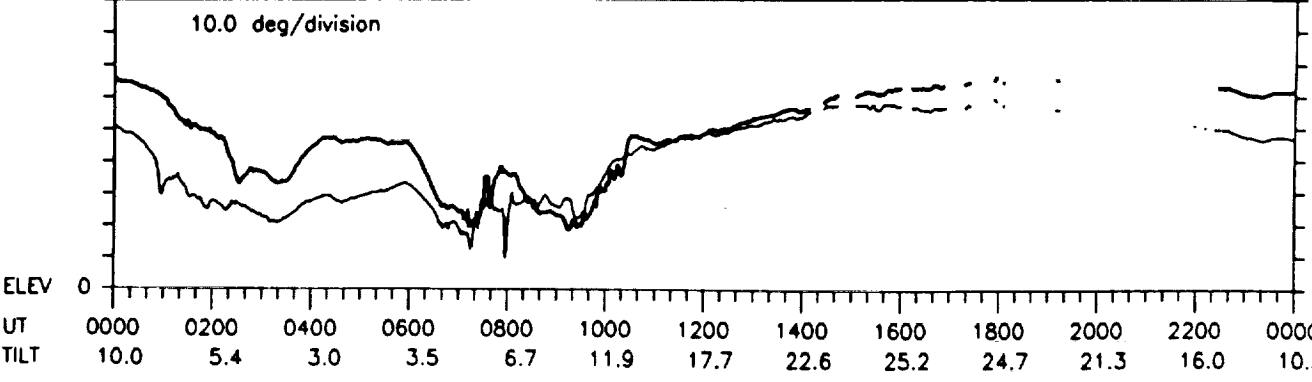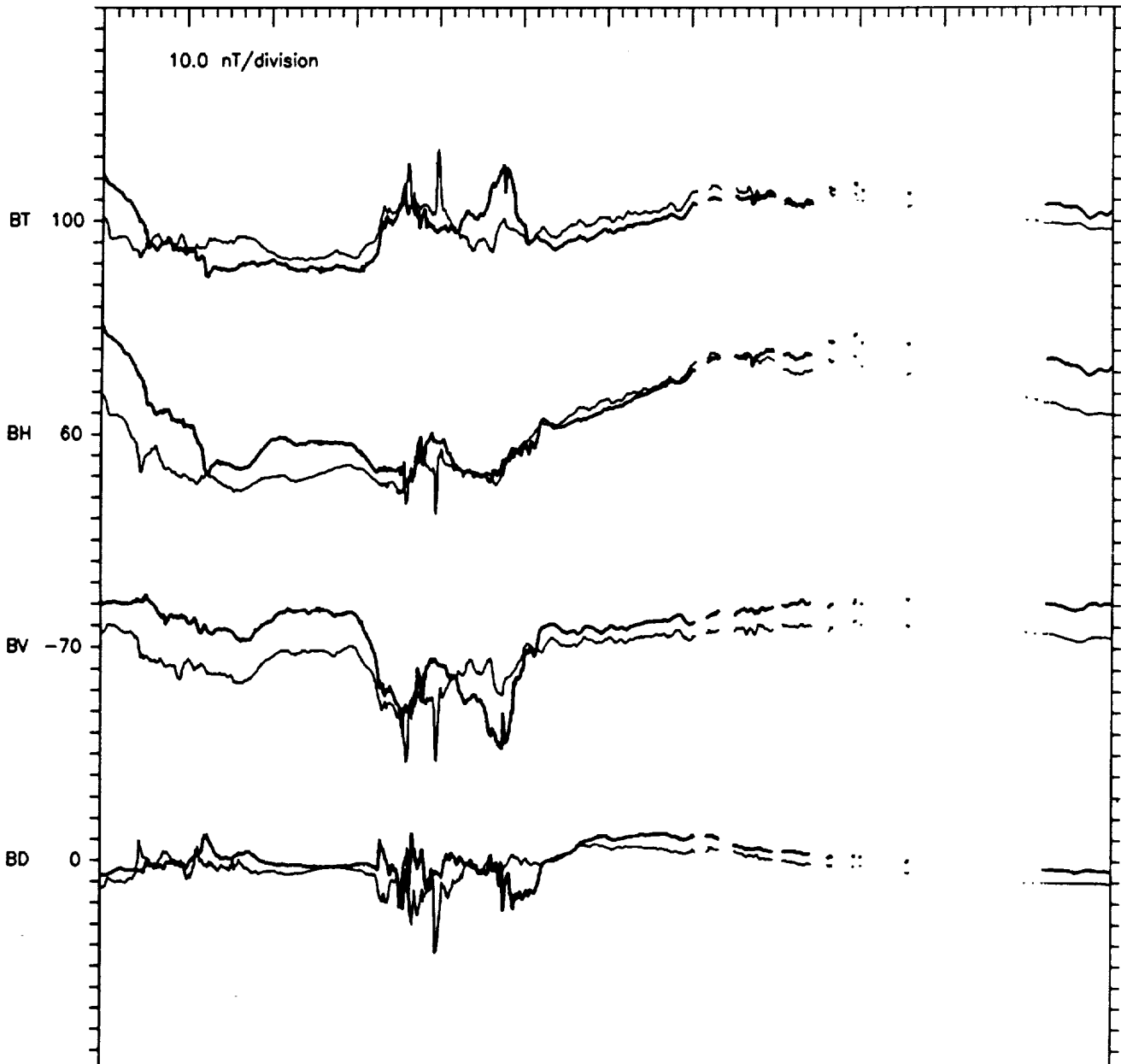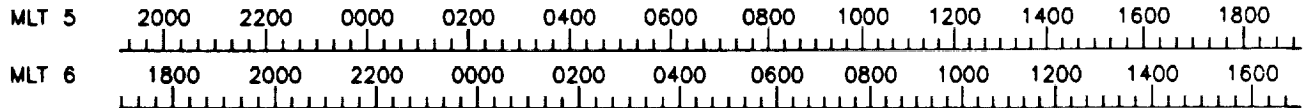
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY119 APR 29
GEOLON, MAGLAT = 5(-75.5, 11.2)   6(-107.8, 8.9)

PLOT2GOES   12-JUN-1989 09:47:06.31
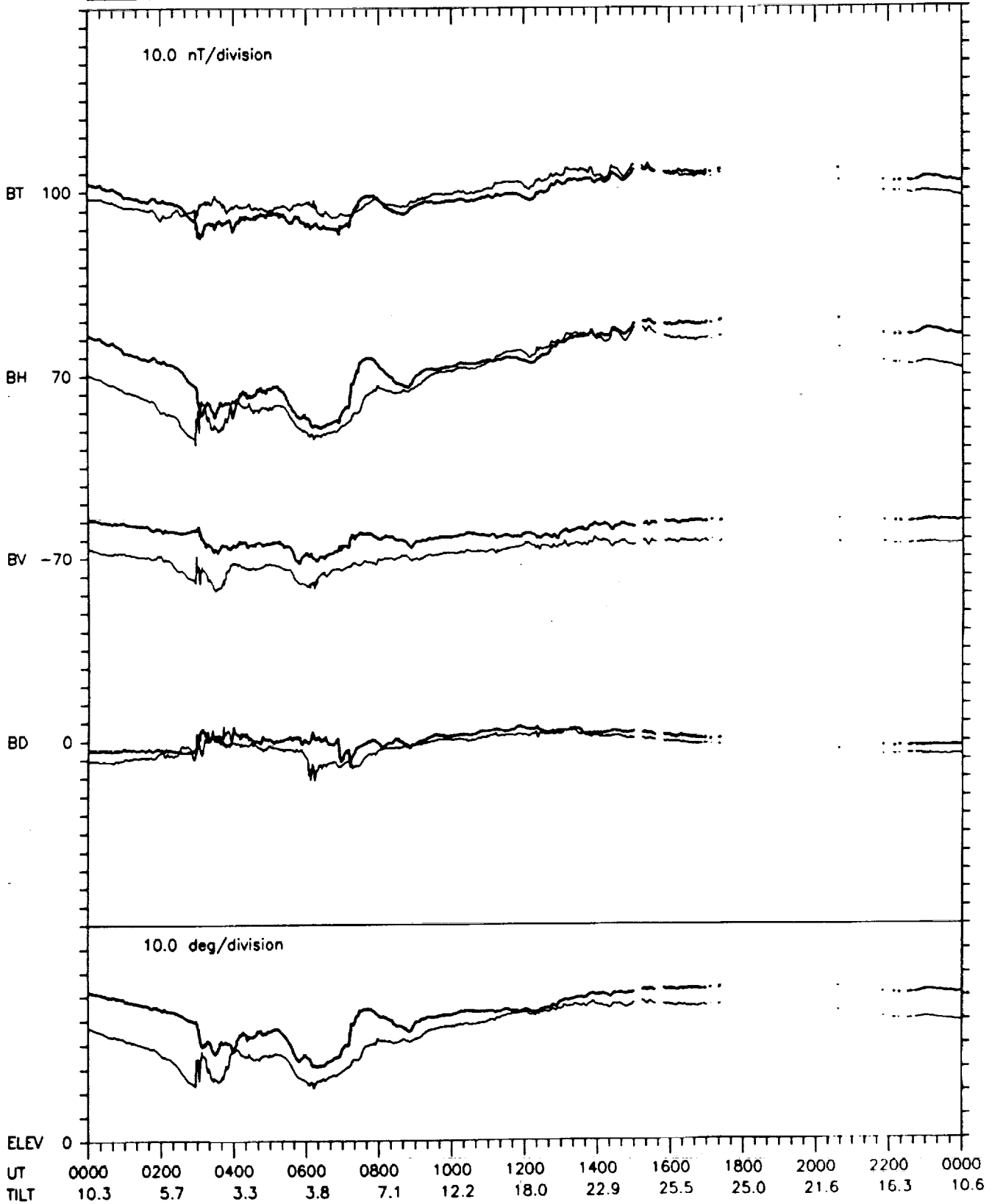
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY120   APR 30
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−107.8,   8.9)
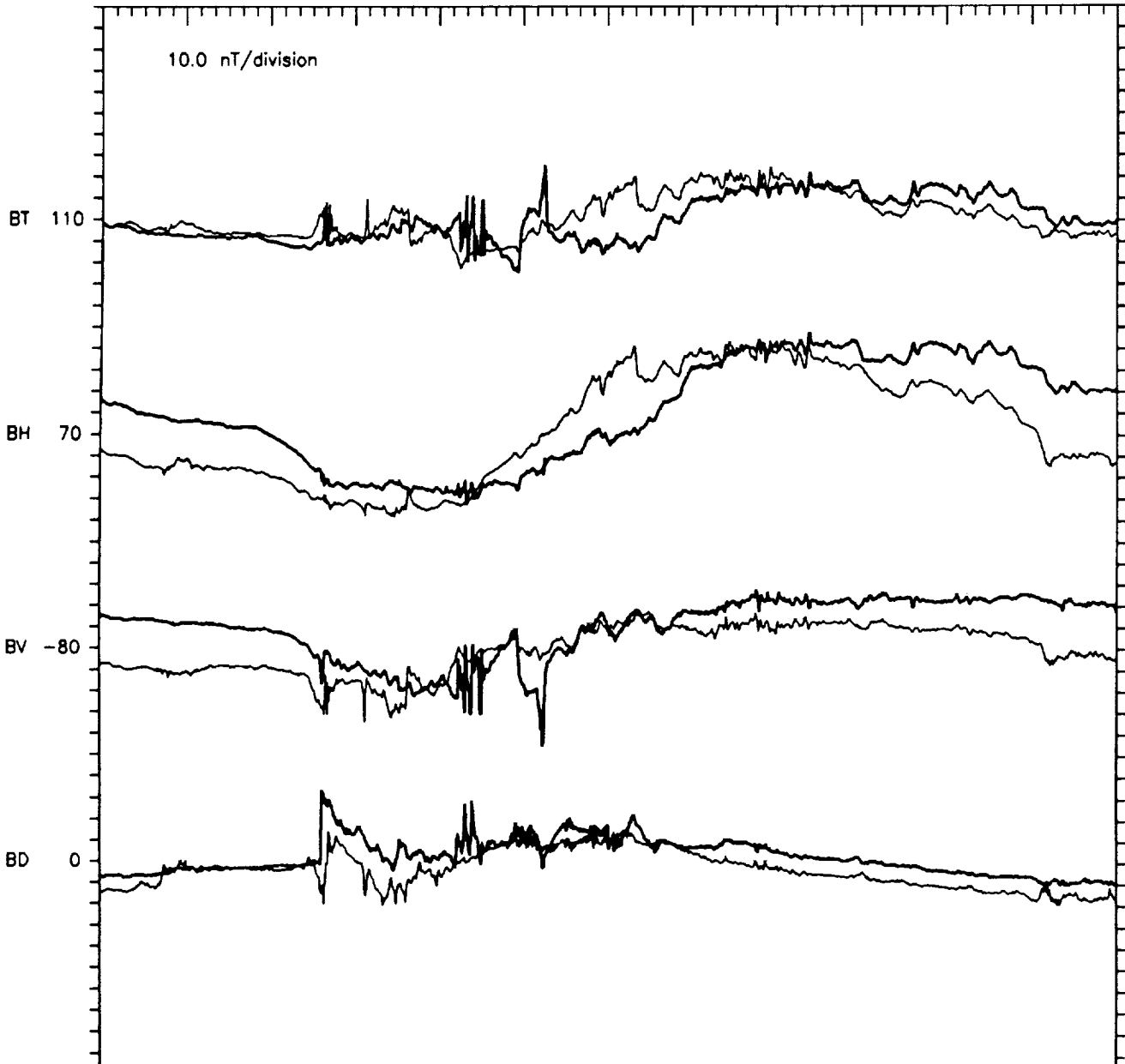
MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

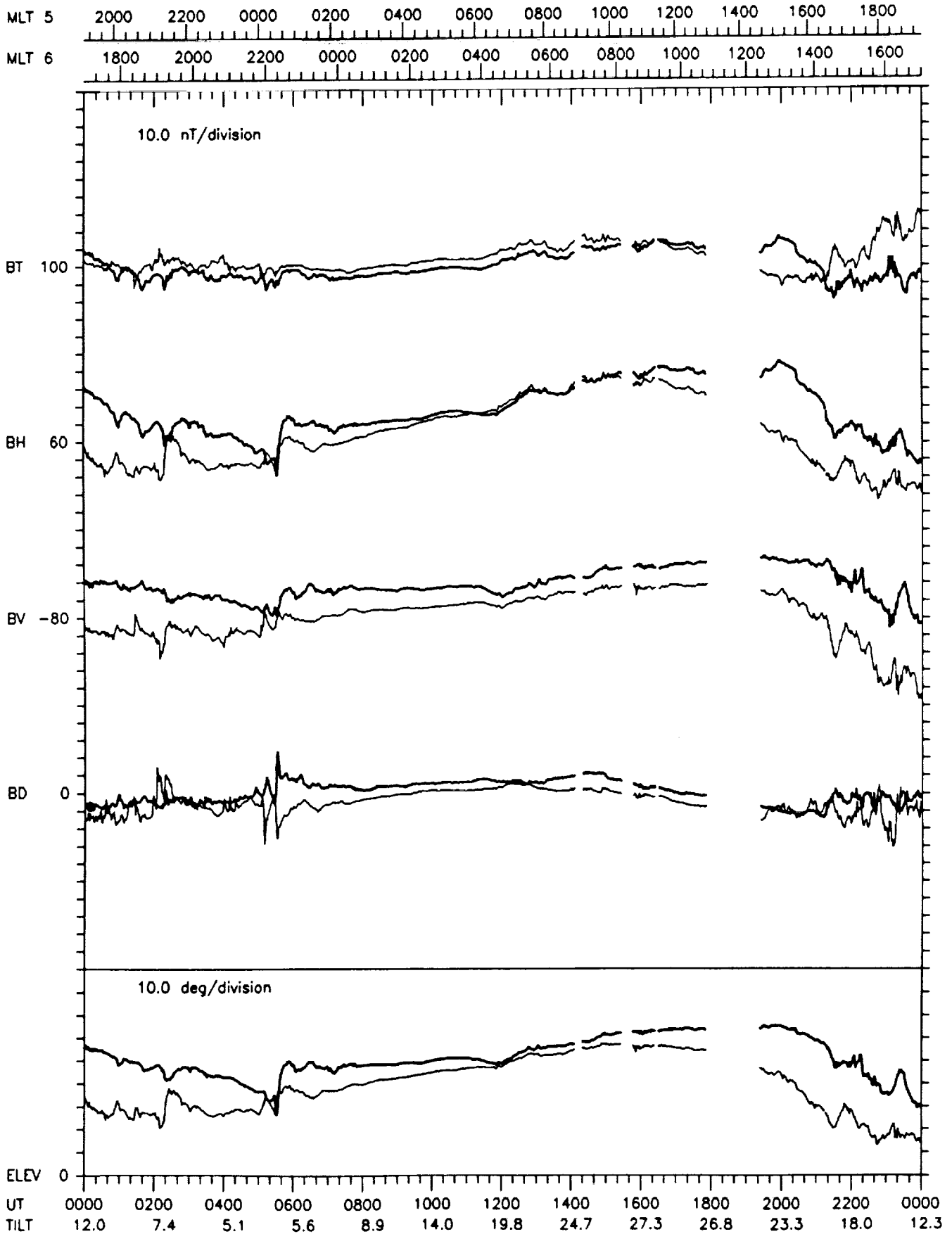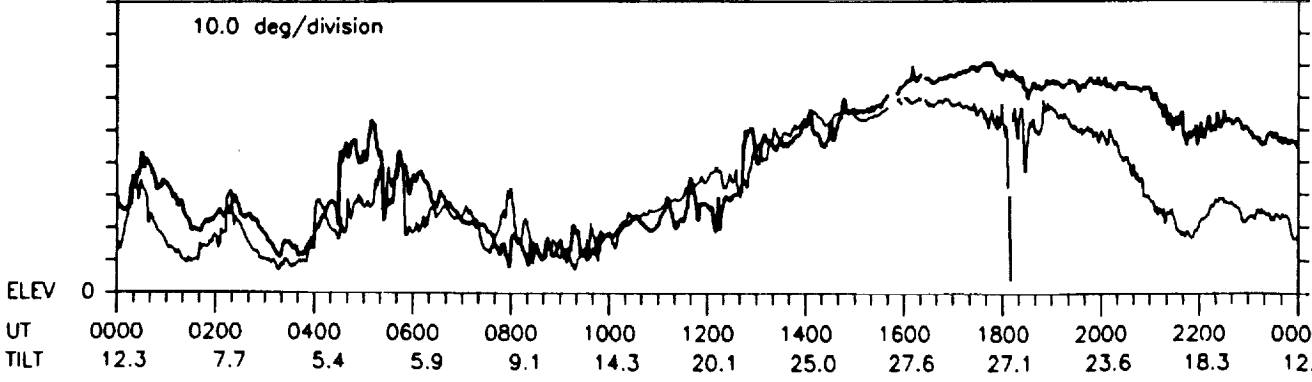MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 100

BH 80

BV −60

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	10.6	6.0	3.6	4.1	7.4	12.5	18.3	23.2	25.8	25.3	21.9	16.6	10.9

PLOT2GOES   12-JUN-1989 09:52:31.23

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY121 MAY 1
GEOLON, MAGLAT = 5(−75.4, 11.2) 6(−107.8, 8.9)

| MLT 5 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 |
| MLT 6 | 1800 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 |

10.0 nT/division

BT 100

BH 80

BV −60

BD 0

10.0 deg/division

ELEV 0

| UT | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 0000 |
| TILT | 10.9 | 6.3 | 3.9 | 4.4 | 7.7 | 12.8 | 18.6 | 23.5 | 26.1 | 25.6 | 22.2 | 16.9 | 11.2 |

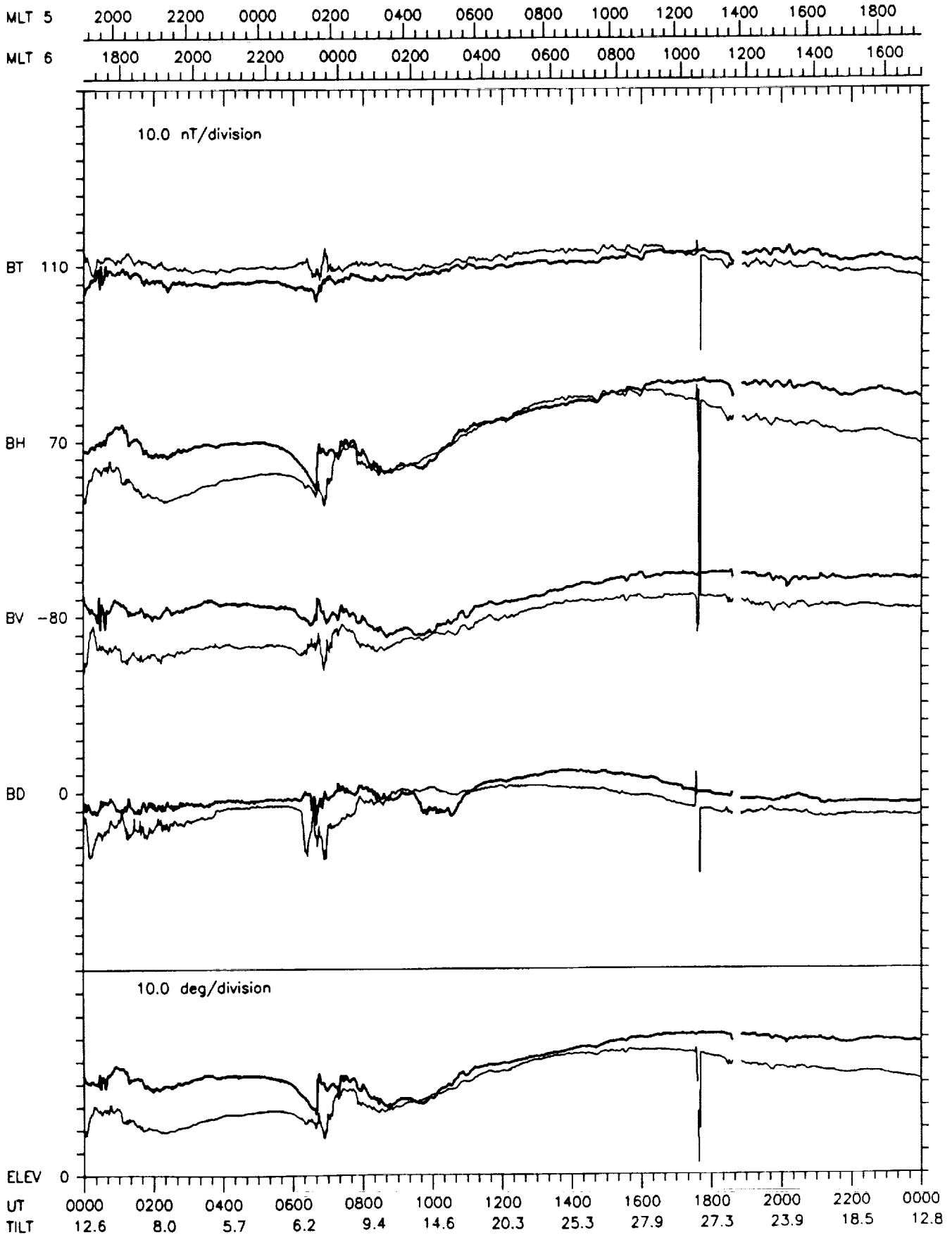PLOT2GOES   12-JUN-1989 09:58:43.68

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY122 MAY 2
GEOLON, MAGLAT = 5(-75.4, 11.2)   6(-107.8, 8.9)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800

MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 100

BH 60

BV -70

BD 0

10.0 deg/division

ELEV 0
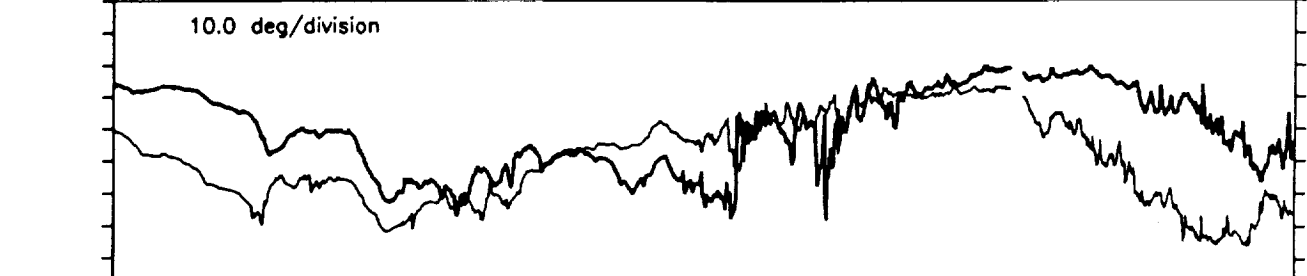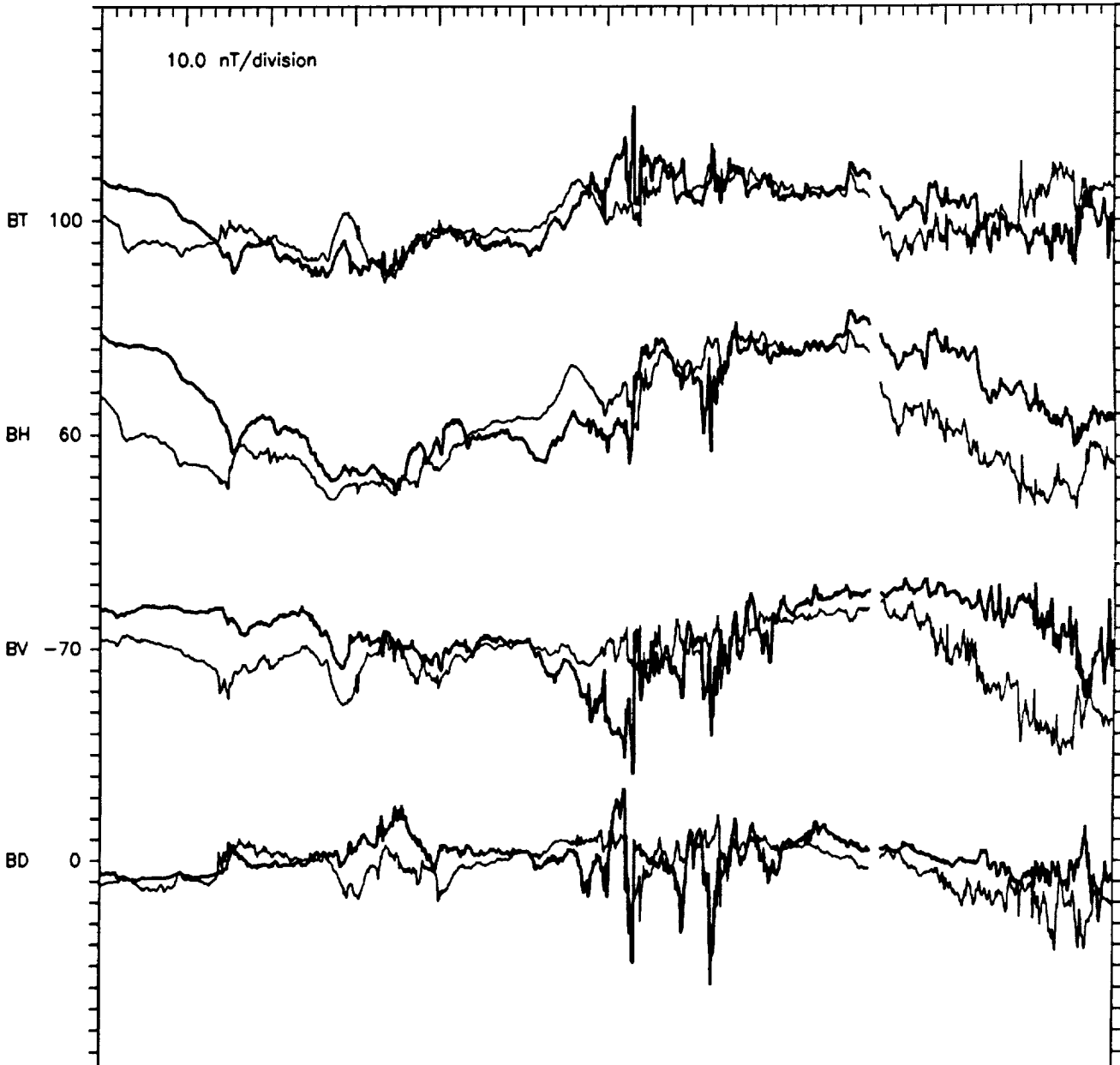
UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	11.2	6.6	4.2	4.7	8.0	13.1	18.9	23.8	26.4	25.9	22.5	17.1	11.4

PLOT2GOES   12-JUN-1989 10:04:31.02

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY123 MAY 3
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−107.8, 8.9)

PLOT2GOES   12−JUN−1989 10:12:42.74

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY124 MAY 4
GEOLON, MAGLAT = 5(−75.4, 11.2) 6(−107.8, 8.9)

MLT 5 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600 1800

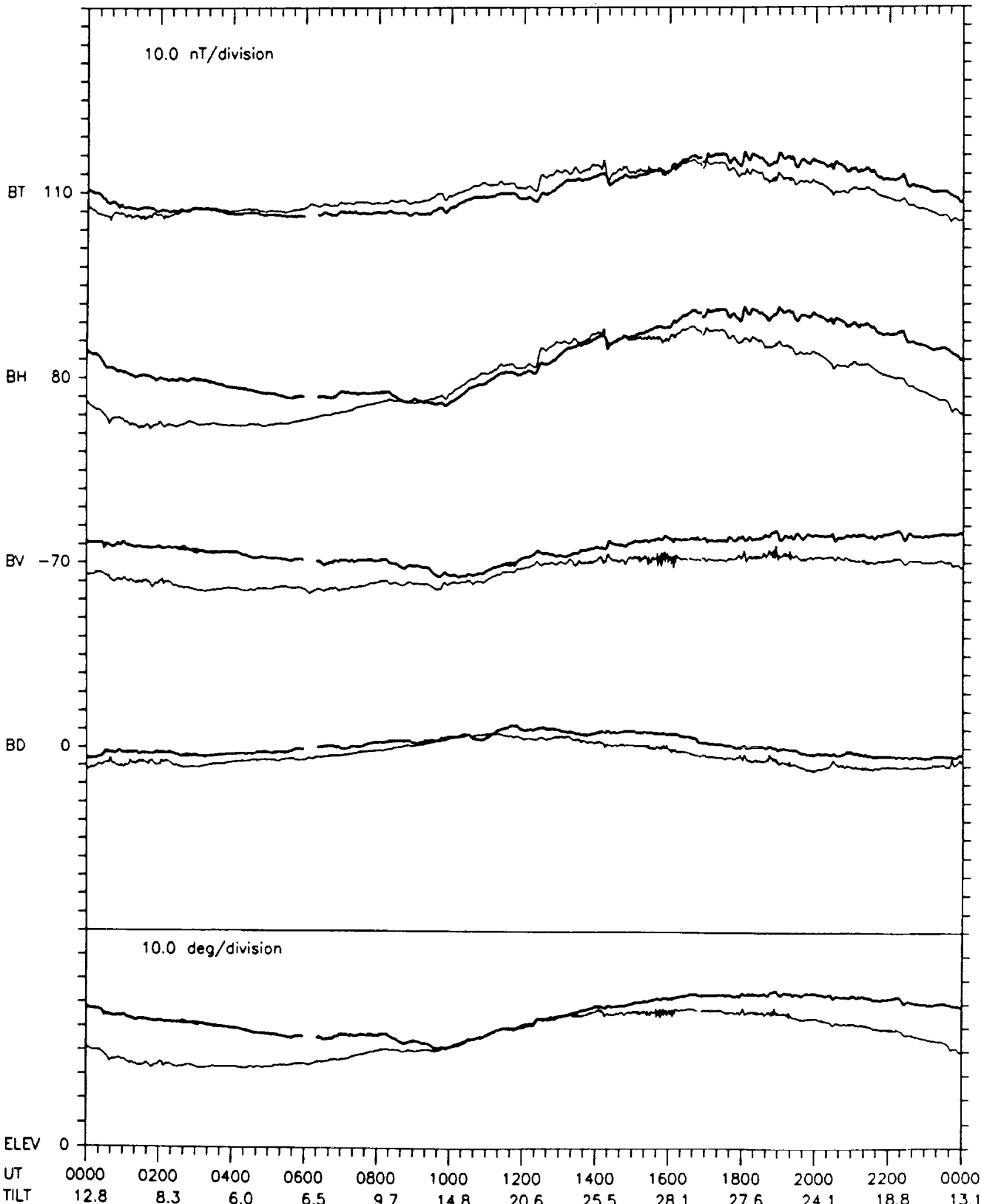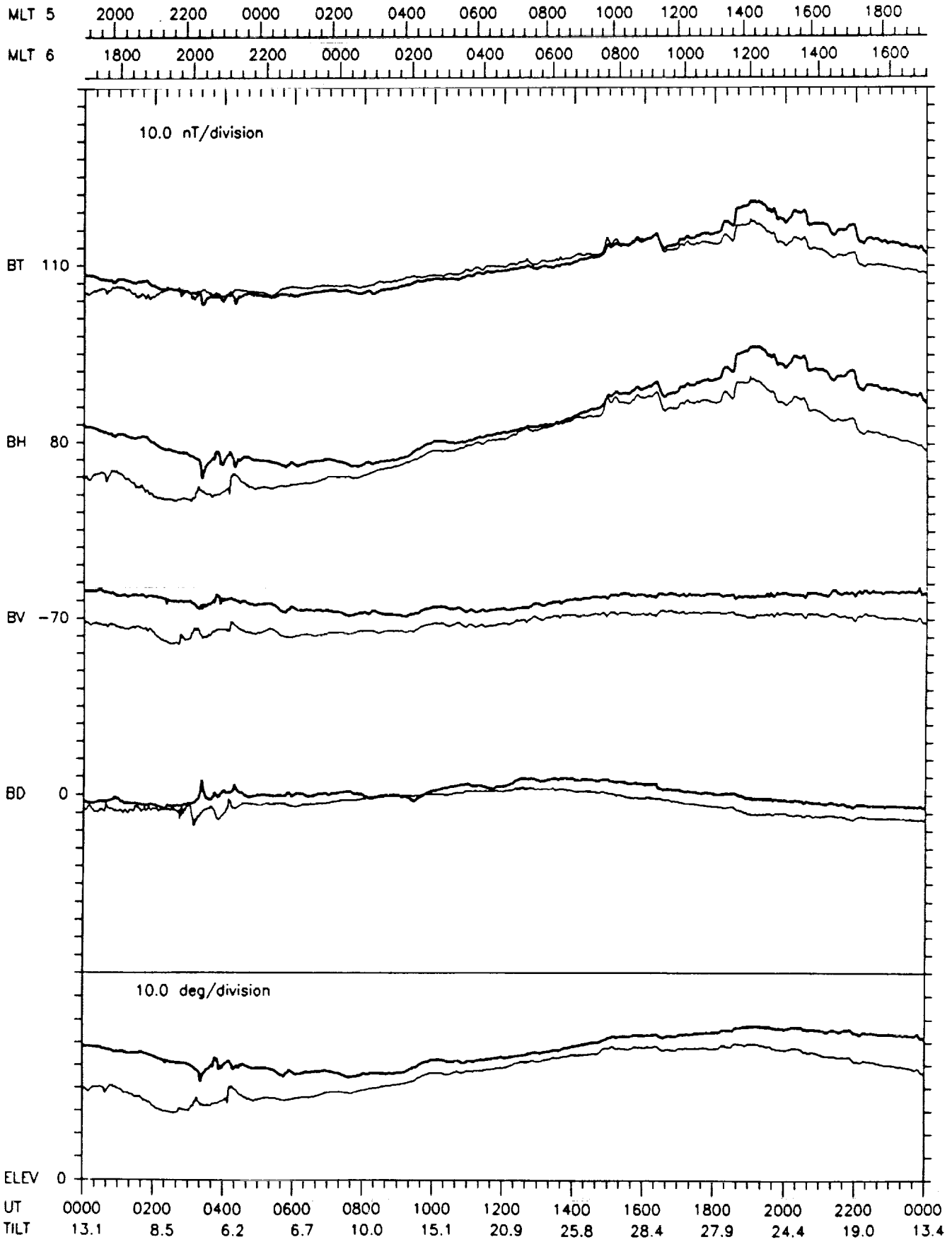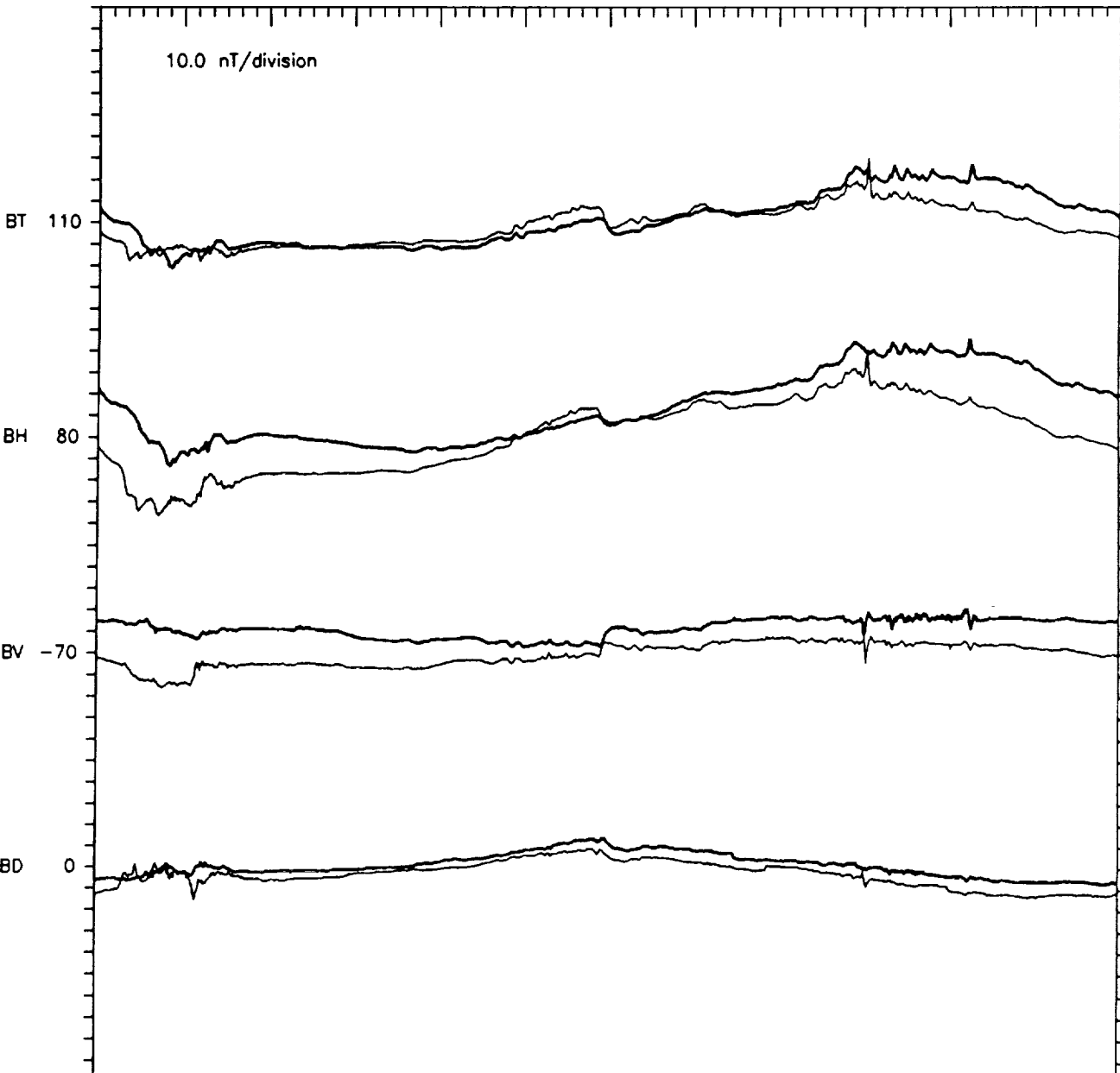MLT 6 1800 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600

10.0 nT/division

BT 110

BH 70

BV −80

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	11.7	7.2	4.8	5.3	8.6	13.7	19.5	24.4	27.0	26.5	23.0	17.7	12.0

PLOT2GOES   12-JUN-1989 10:19:41.74
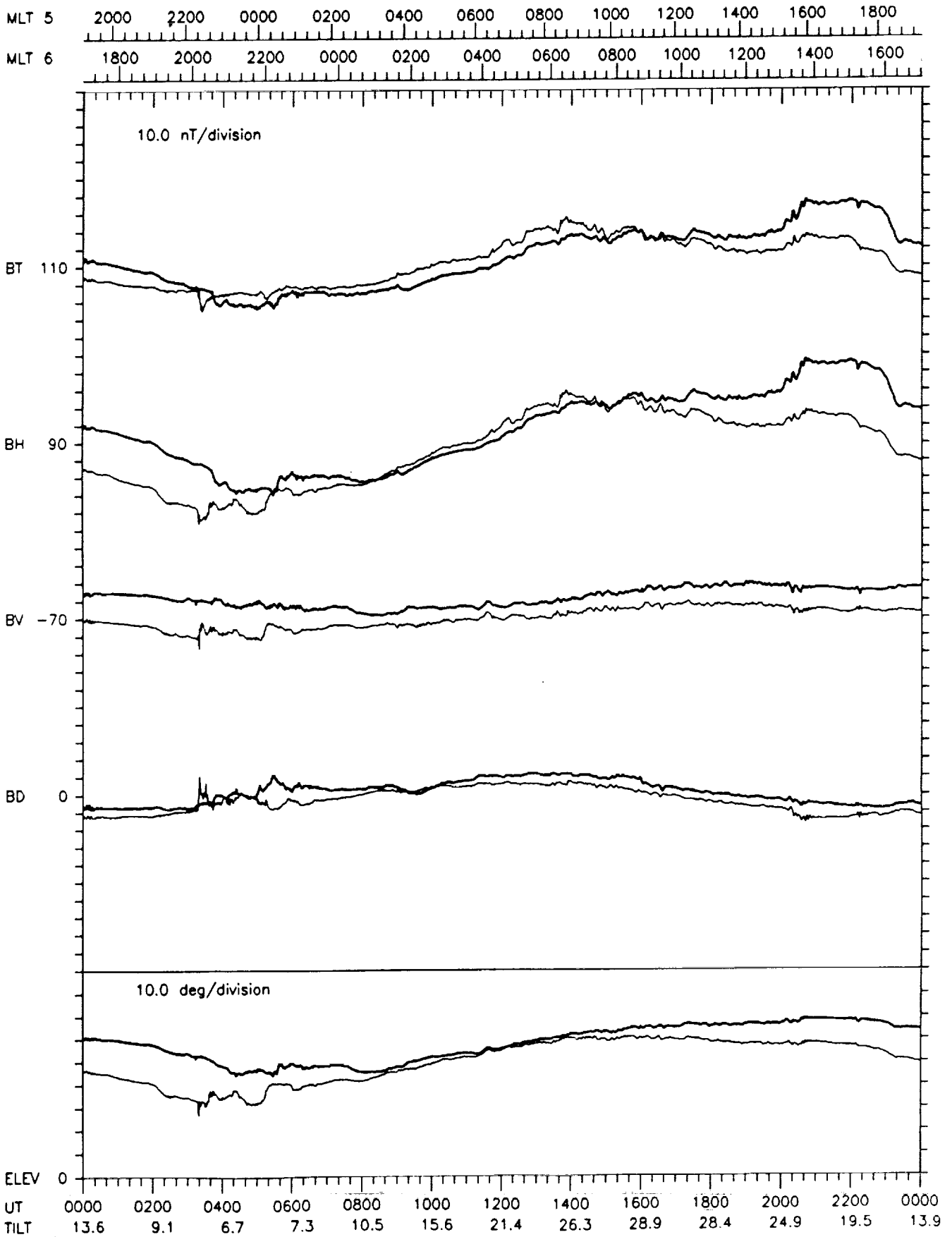
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY125 MAY 5
GEOLON, MAGLAT = 5(-75.4, 11.2)   6(-107.9, 8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

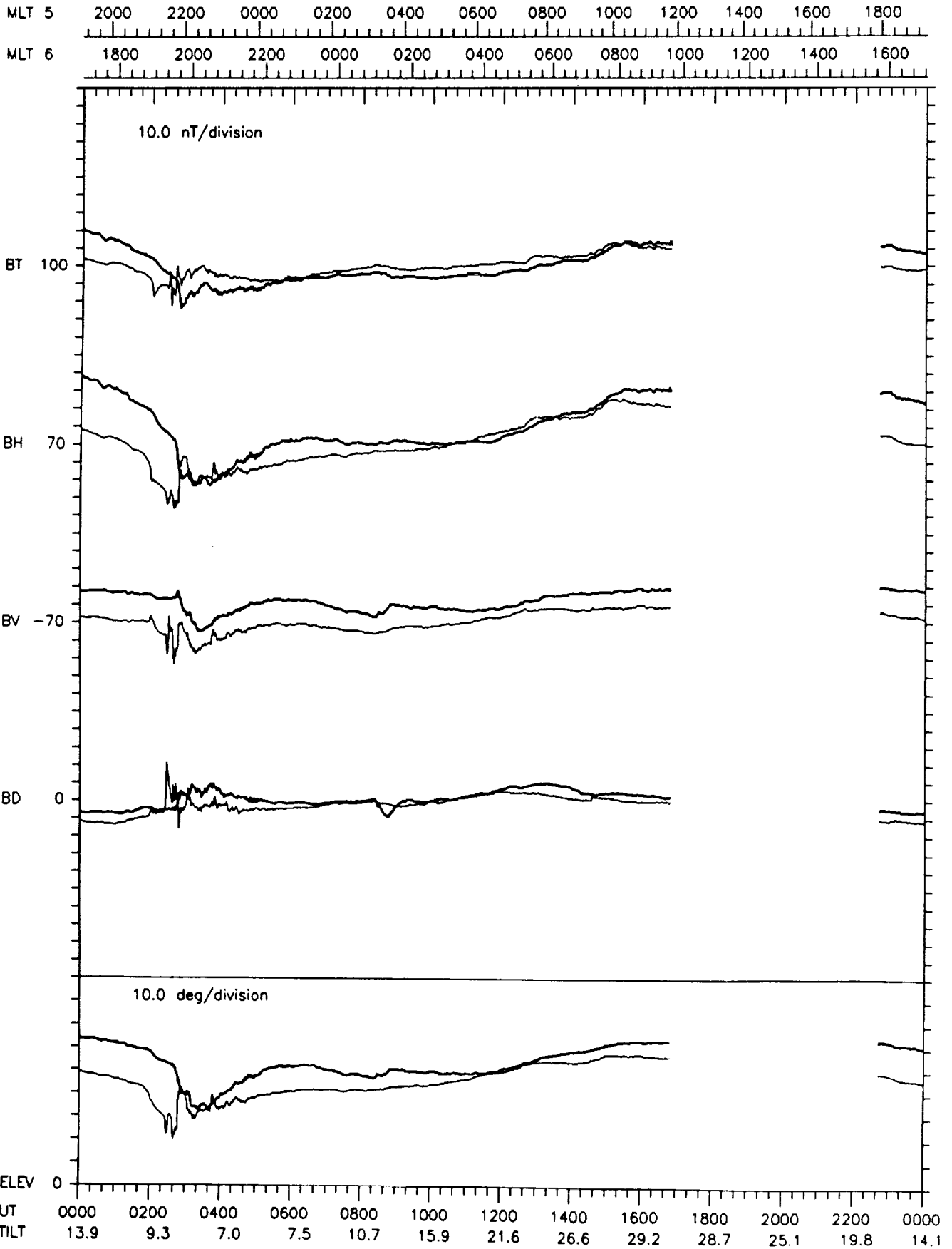MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 100

BH   60

BV -80

BD   0

10.0 deg/division

ELEV 0

UT   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800   2000   2200   0000
TILT 12.0   7.4   5.1   5.6   8.9   14.0   19.8   24.7   27.3   26.8   23.3   18.0   12.3

PLOT2GOES   12-JUN-1989 10:29:36.73

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY126 MAY 6
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−107.9,   8.9)

PLOT2GOES   12-JUN-1989 10:37:43.78
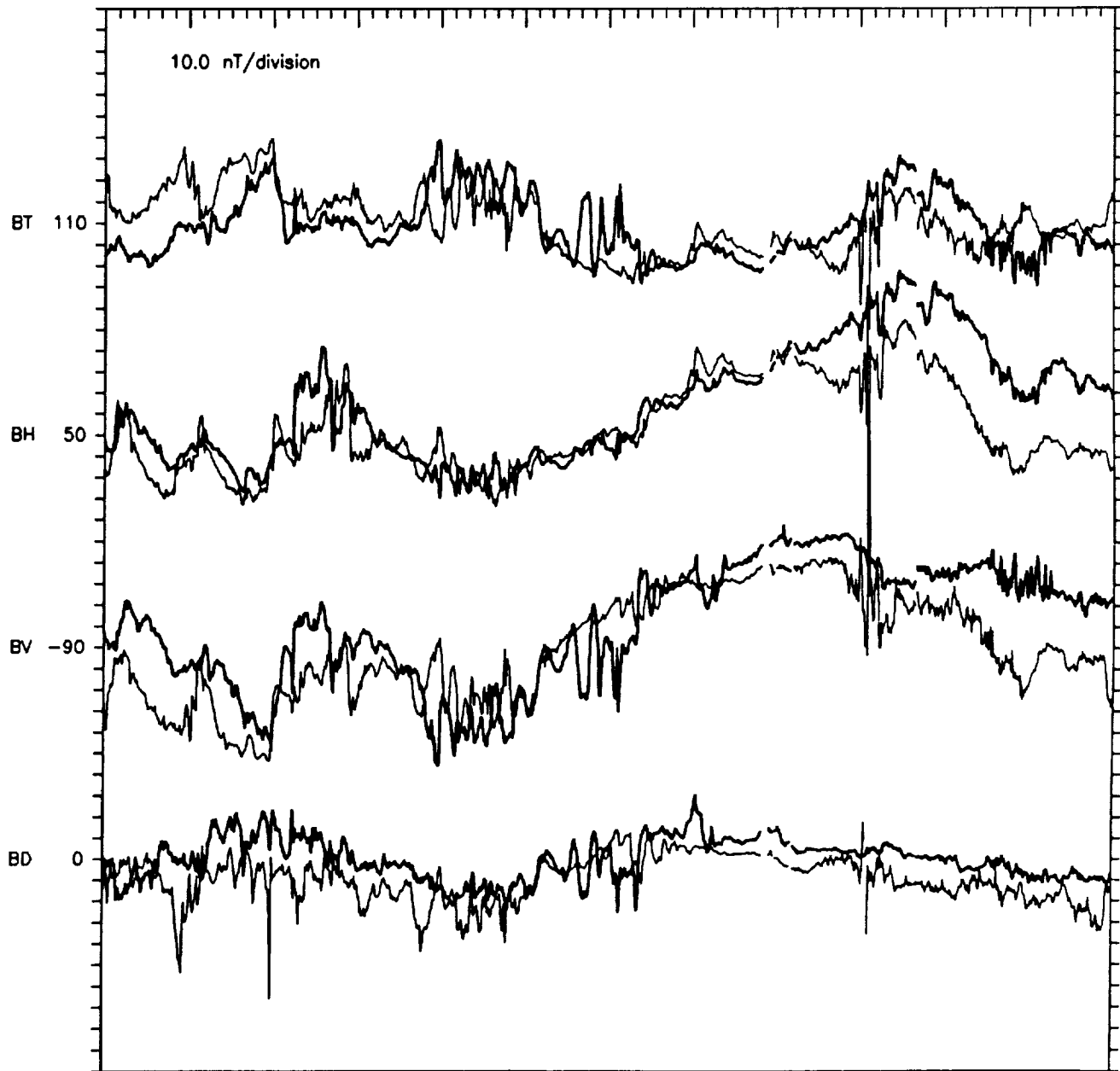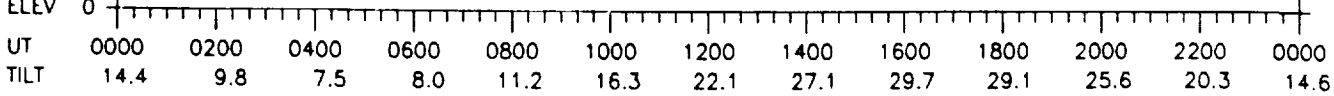
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY127 MAY 7
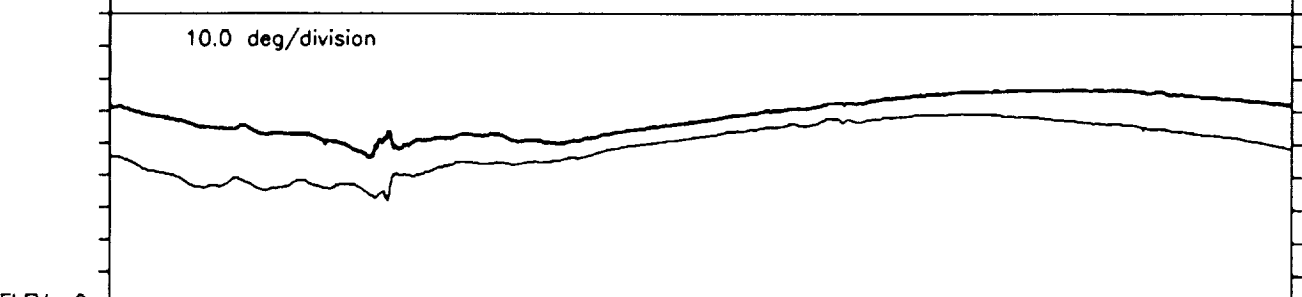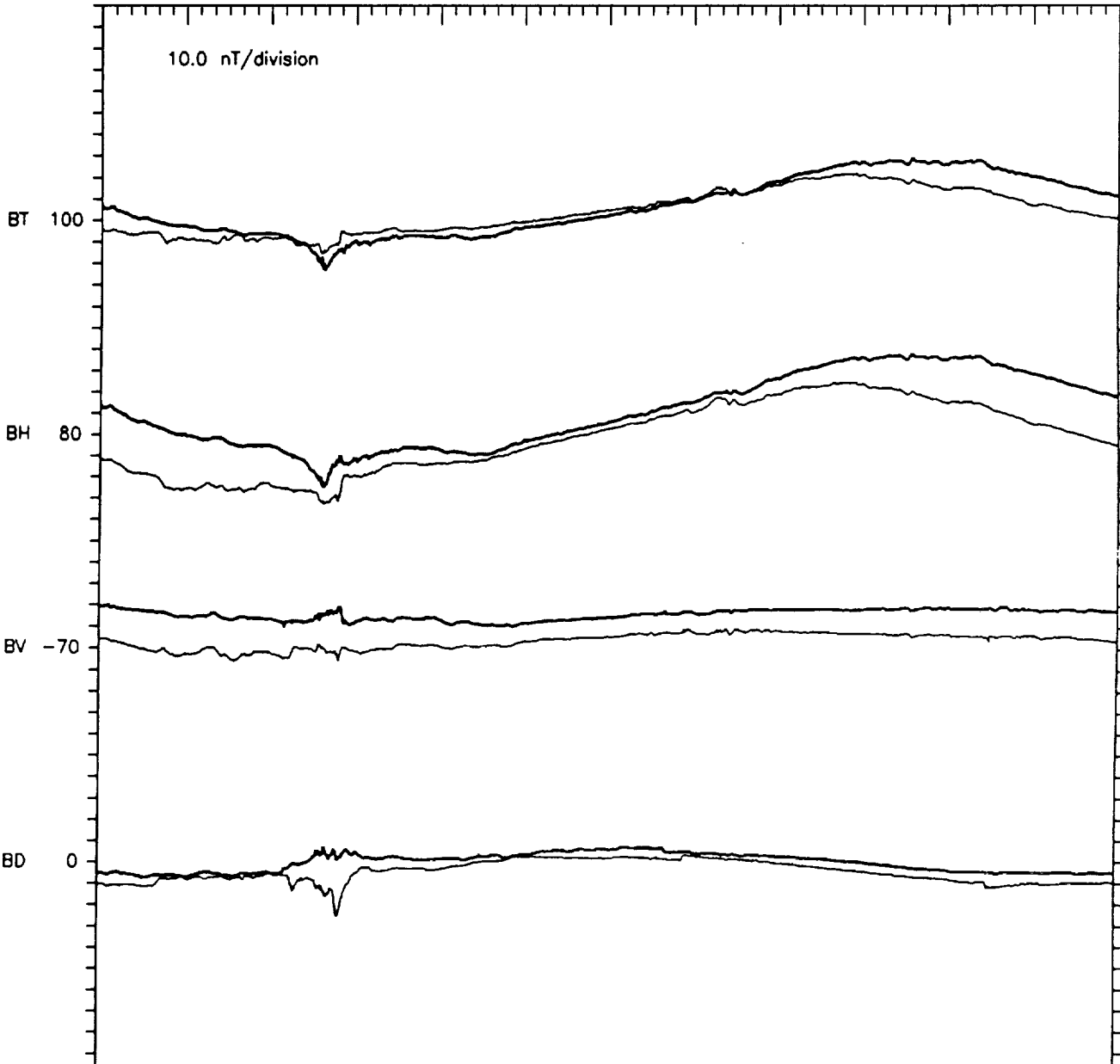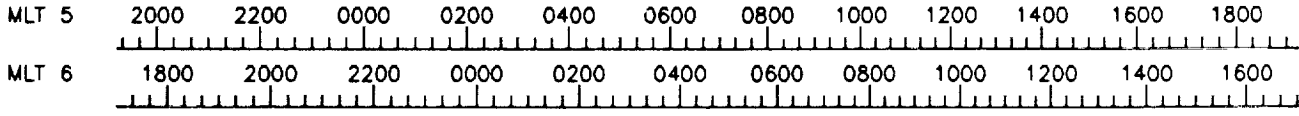GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−107.9, 8.9)

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY128 MAY 8
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−107.9,   8.9)

MLT 5   2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600 1800
MLT 6   1800 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600

10.0 nT/division

BT 110

BH 80

BV −70

BD 0

10.0 deg/division

ELEV 0

UT   0000 0200 0400 0600 0800 1000 1200 1400 1600 1800 2000 2200 0000
TILT 12.8   8.3   6.0   6.5   9.7 14.8 20.6 25.5 28.1 27.6 24.1 18.8 13.1

PLOT2GOES   12-JUN-1989 10:54:25.40

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY129   MAY   9
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−107.9,   8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 110

BH 80

BV −70

BD 0

10.0 deg/division

ELEV 0

UT   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800   2000   2200   0000
TILT   13.1   8.5   6.2   6.7   10.0   15.1   20.9   25.8   28.4   27.9   24.4   19.0   13.4

PLOT2GOES   12−JUN−1989 11:02:00.27

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY130   MAY 10
GEOLON, MAGLAT = 5(-75.4, 11.2)   6(-107.9,   8.9)

PLOT2GOES   12-JUN-1989 11:08:39.87

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY131   MAY 11
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−107.9,   8.9)

PLOT2GOES   12-JUN-1989 11:16:00.77

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY132 MAY 12
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−107.9, 8.9)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800
MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 100

BH 70

BV −70

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	13.9	9.3	7.0	7.5	10.7	15.9	21.6	26.6	29.2	28.7	25.1	19.8	14.1

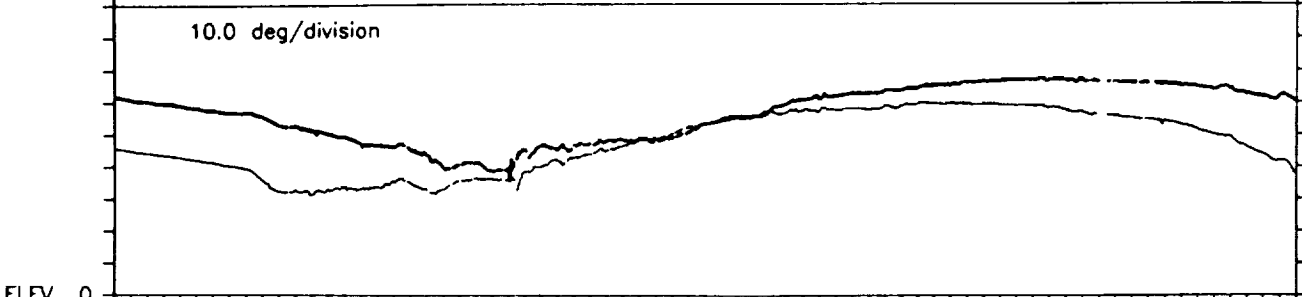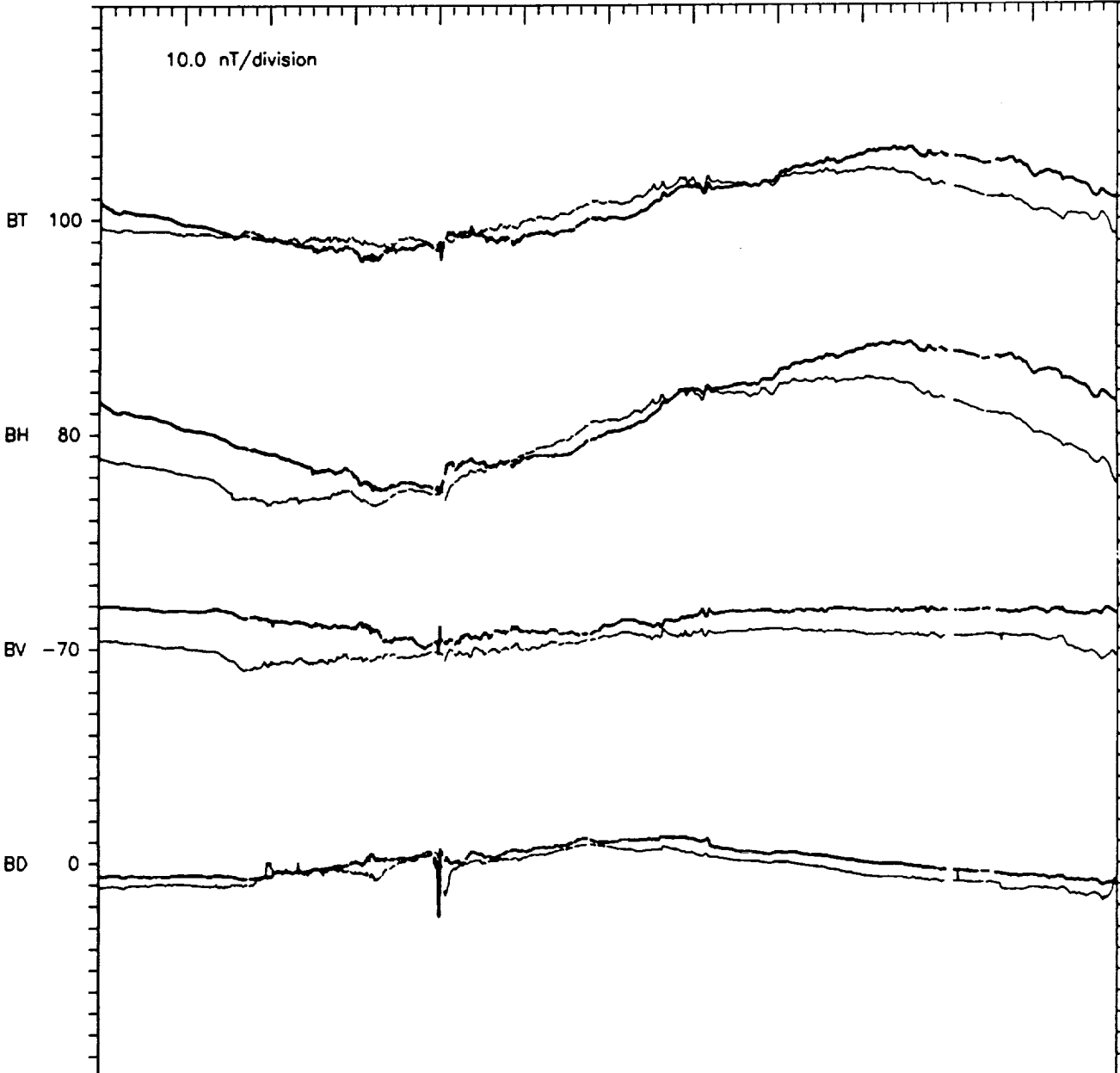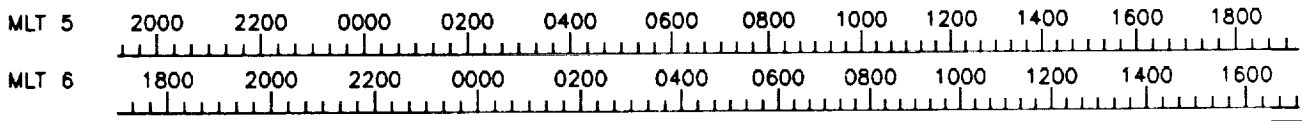PLOT2GOES   12-JUN-1989 11:28:16.57

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY133   MAY 13
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−108.0,   8.9)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800
MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 100

BH 80

BV −70

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	14.1	9.6	7.3	7.8	11.0	16.1	21.9	26.8	29.4	28.9	25.4	20.0	14.4

PLOT2GOES   12-JUN-1989 11:38:27.17
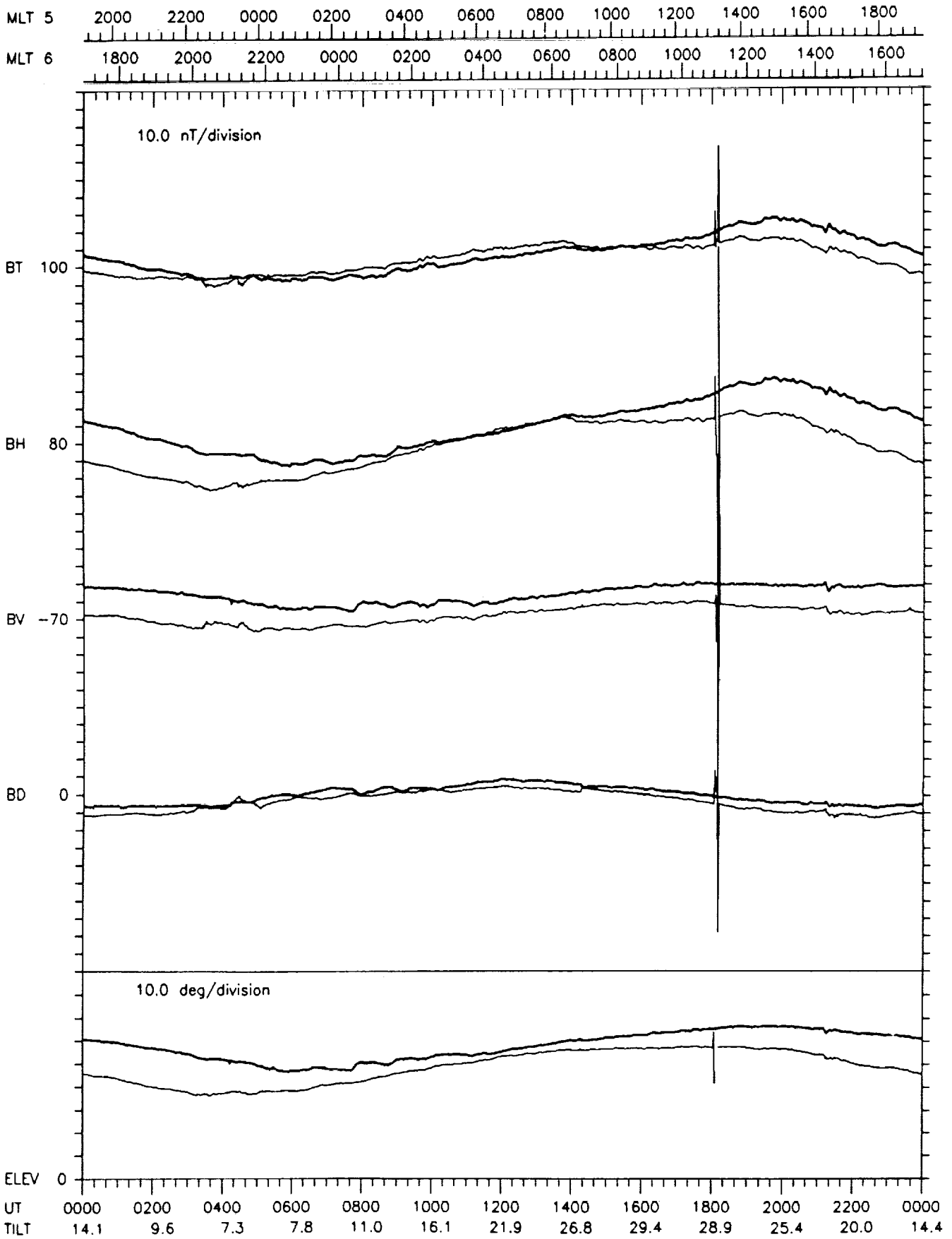
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY134   MAY 14
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−108.0,   8.9)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800
MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 100

BH 80

BV −70

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	14.4	9.8	7.5	8.0	11.2	16.3	22.1	27.1	29.7	29.1	25.6	20.3	14.6

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY135 MAY 15
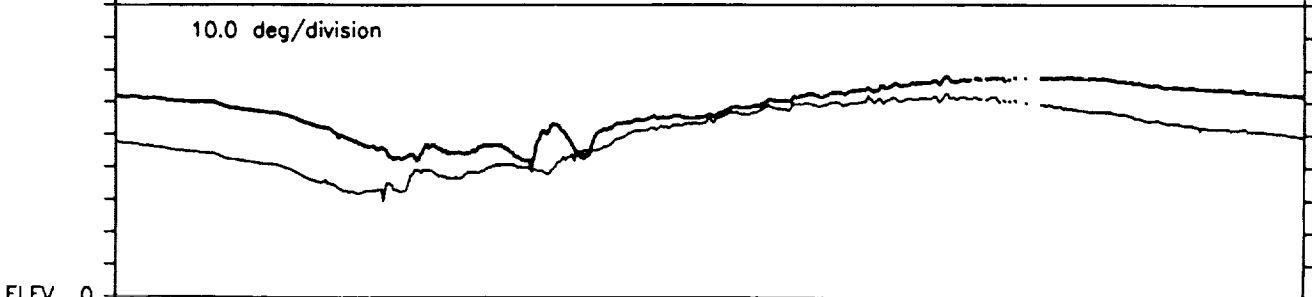### GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−108.0, 8.9)

| MLT 5 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 |
| MLT 6 | 1800 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 |

10.0 nT/division

BT 100

BH 80

BV −70

BD 0

10.0 deg/division

ELEV 0

| UT | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 0000 |
| TILT | 14.6 | 10.0 | 7.7 | 8.3 | 11.5 | 16.6 | 22.4 | 27.3 | 29.9 | 29.4 | 25.9 | 20.5 | 14.8 |

PLOT2GOES   12-JUN-1989 12:01:33.66
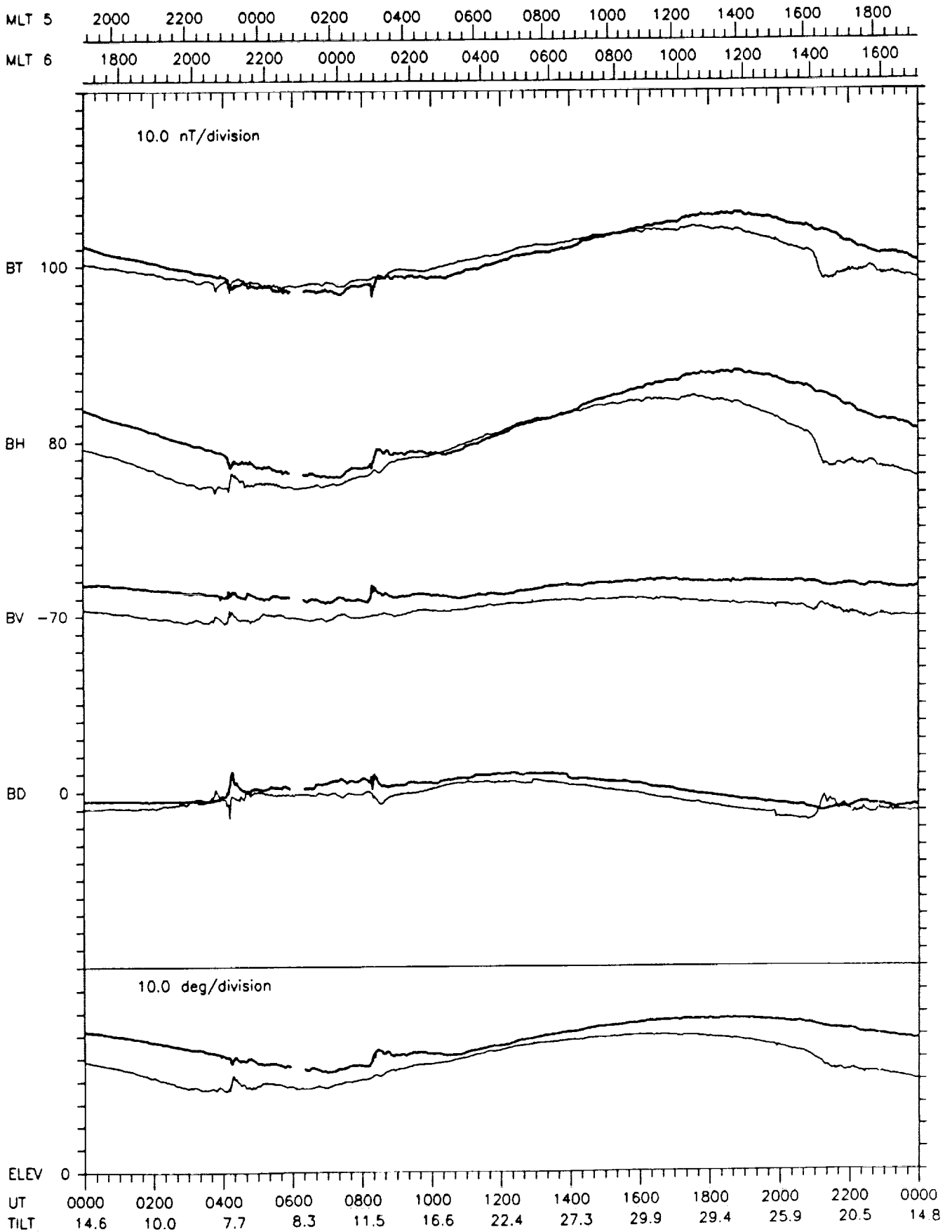
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY136   MAY 16
GEOLON, MAGLAT = 5(-75.4, 11.2)   6(-108.0, 8.9)

PLOT2GOES   12-JUN-1989 12:07:59.19
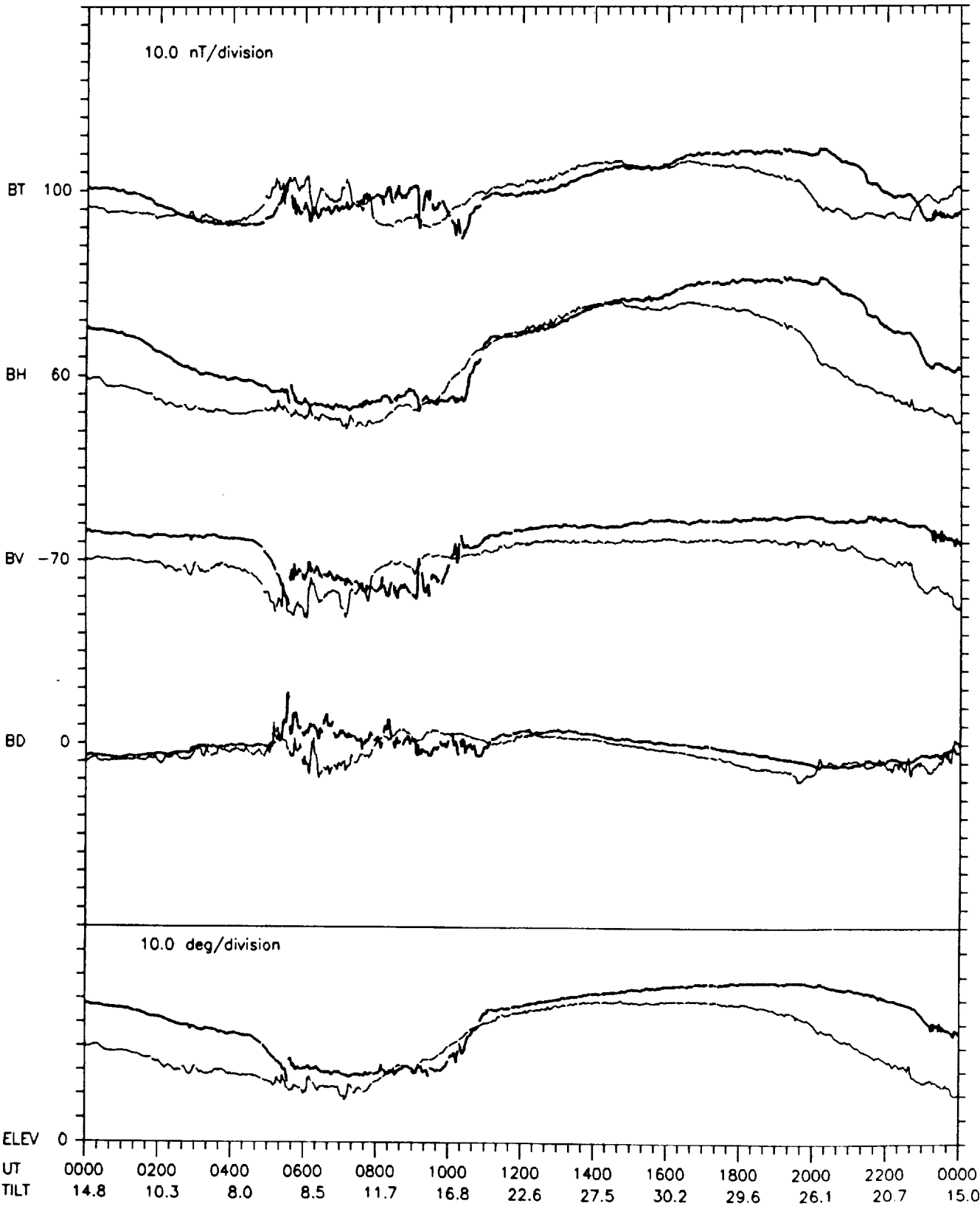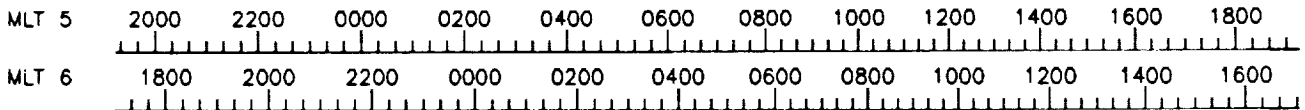
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY137 MAY 17
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−108.0, 8.9)

PLOT2GOES   12-JUN-1989 12:20:07.62
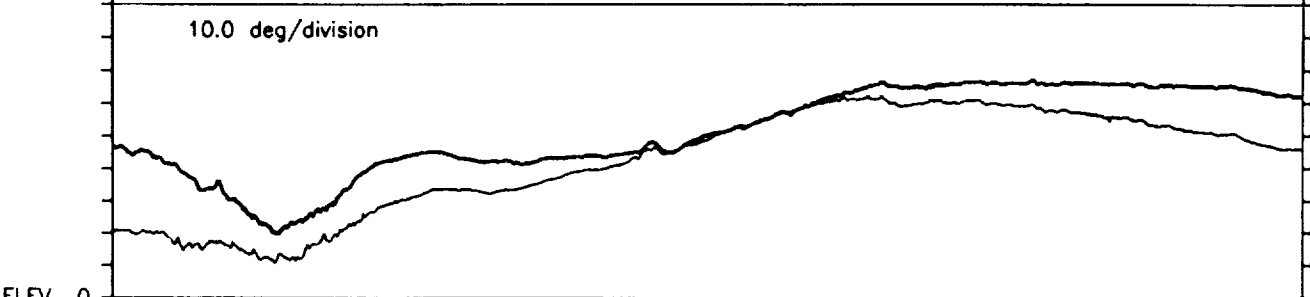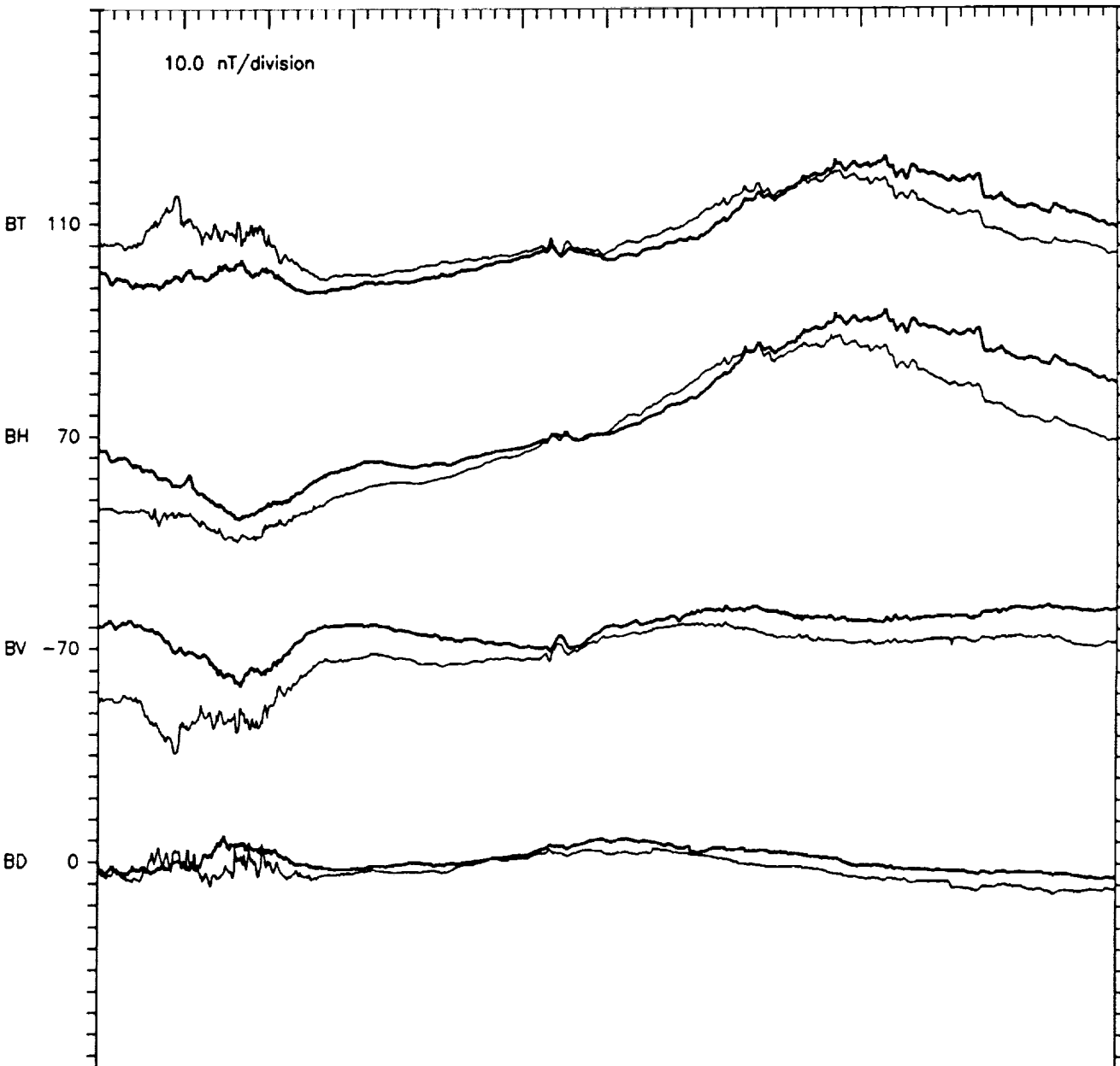
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY138   MAY 18
GEOLON, MAGLAT = 5(-75.4, 11.2)   6(-108.0,   8.9)
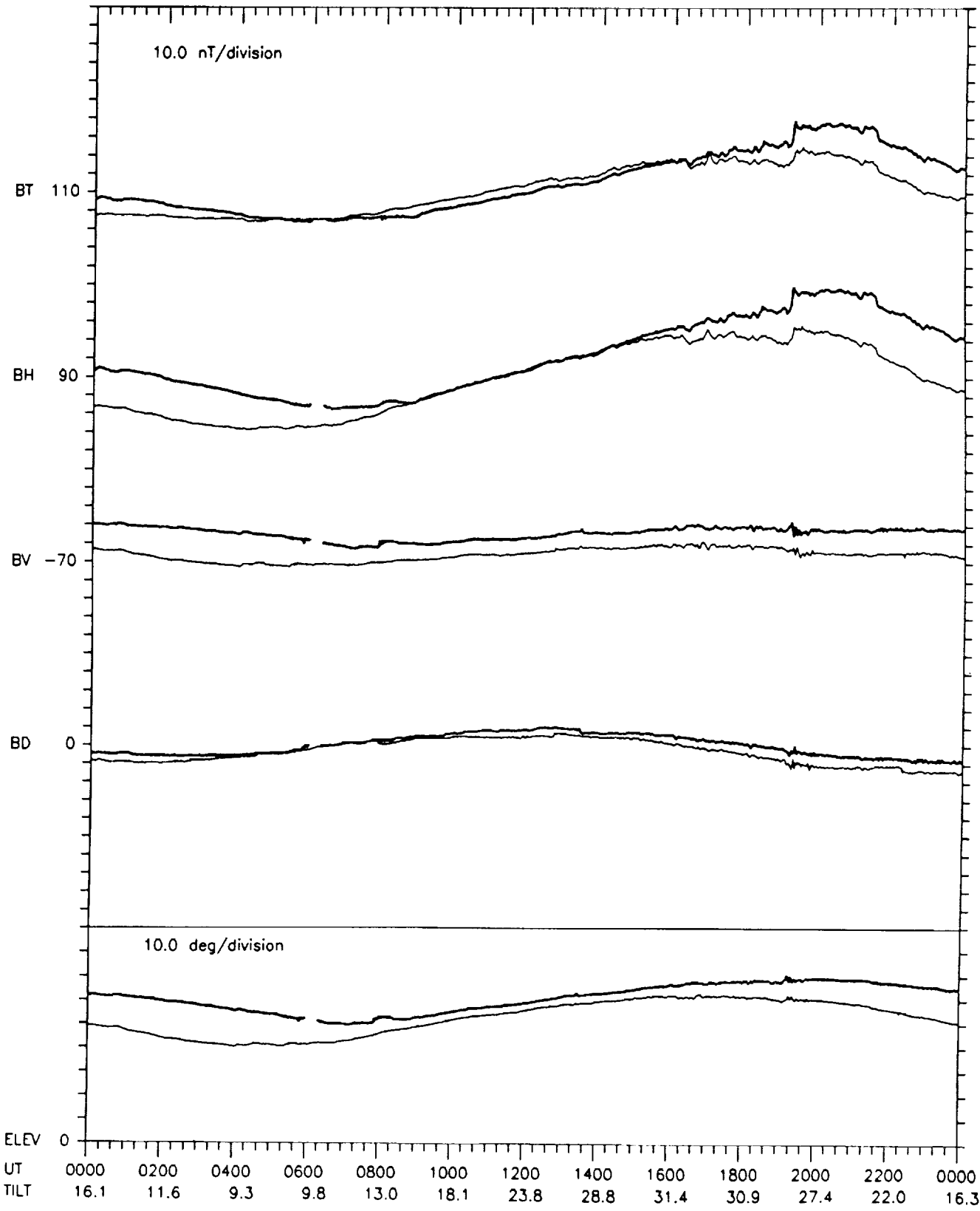
MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

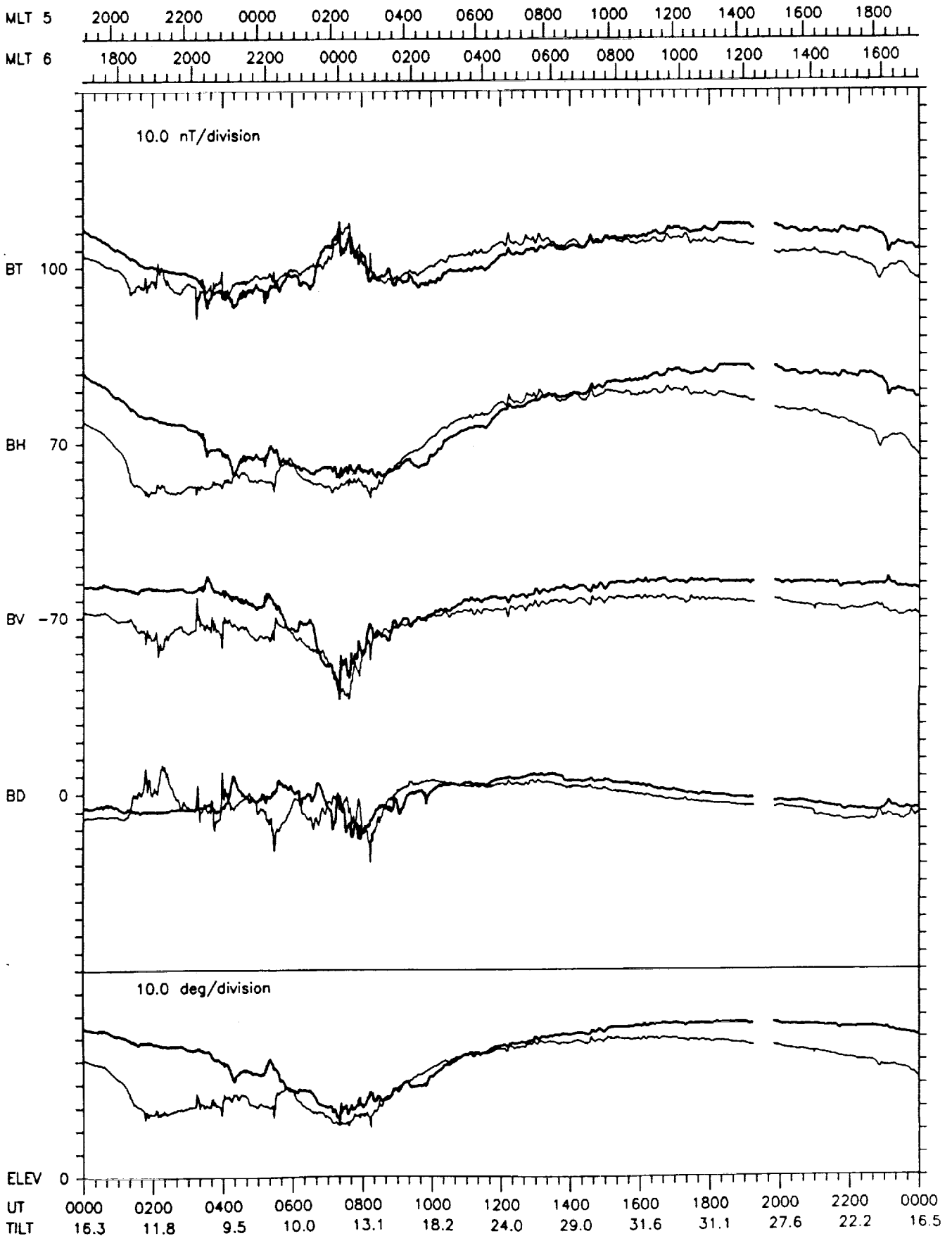MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT   100

BH   80

BV   -70

BD   0

10.0 deg/division

ELEV   0

UT   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800   2000   2200   0000
TILT   15.3   10.7   8.4   8.9   12.1   17.2   23.0   28.0   30.6   30.1   26.5   21.2   . 15.5

PLOT2GOES   12-JUN-1989 12:32:52.53

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY139   MAY 19
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−108.0, 8.9)

MLT 5 2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

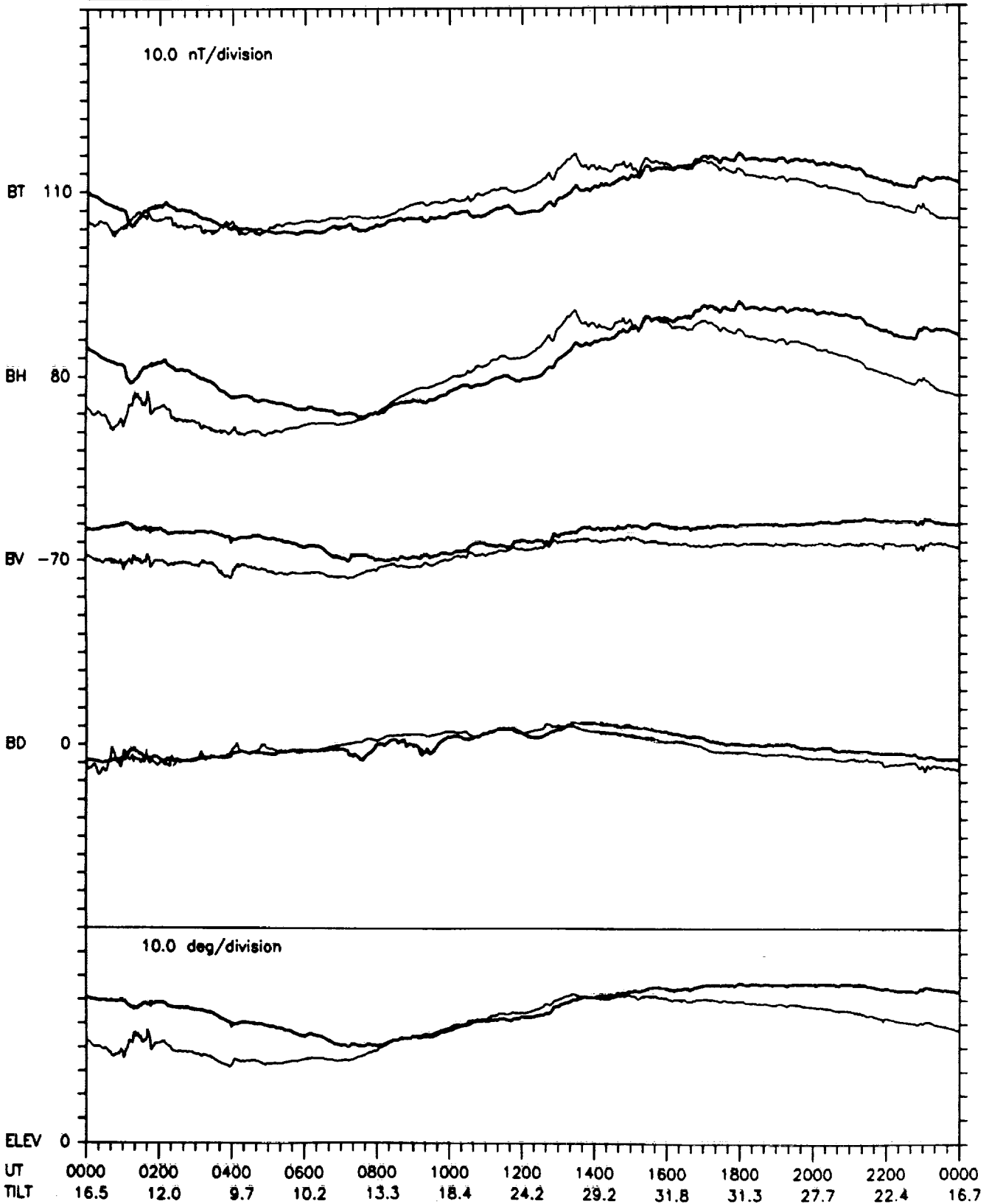MLT 6 1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 110

BH   80

BV −70

BD   0

10.0 deg/division

ELEV   0

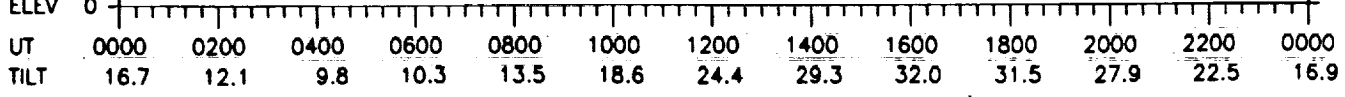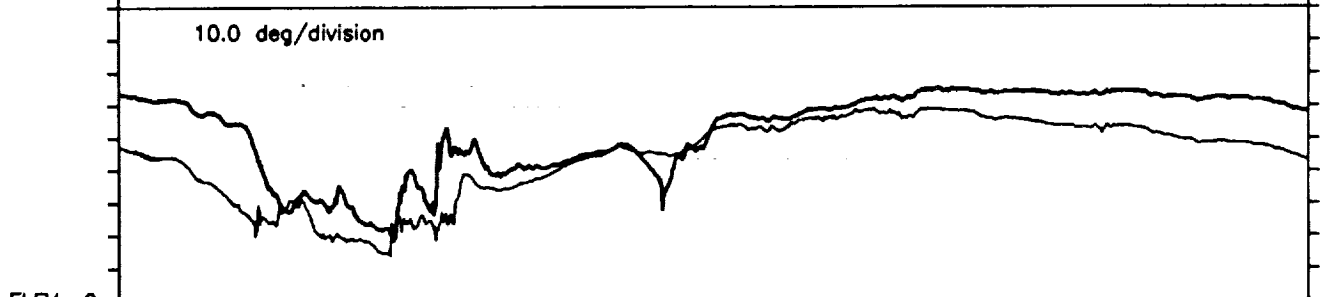| UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	15.5	10.9	8.7	9.2	12.4	17.5	23.2	28.2	30.8	30.3	26.8	21.4	15.7

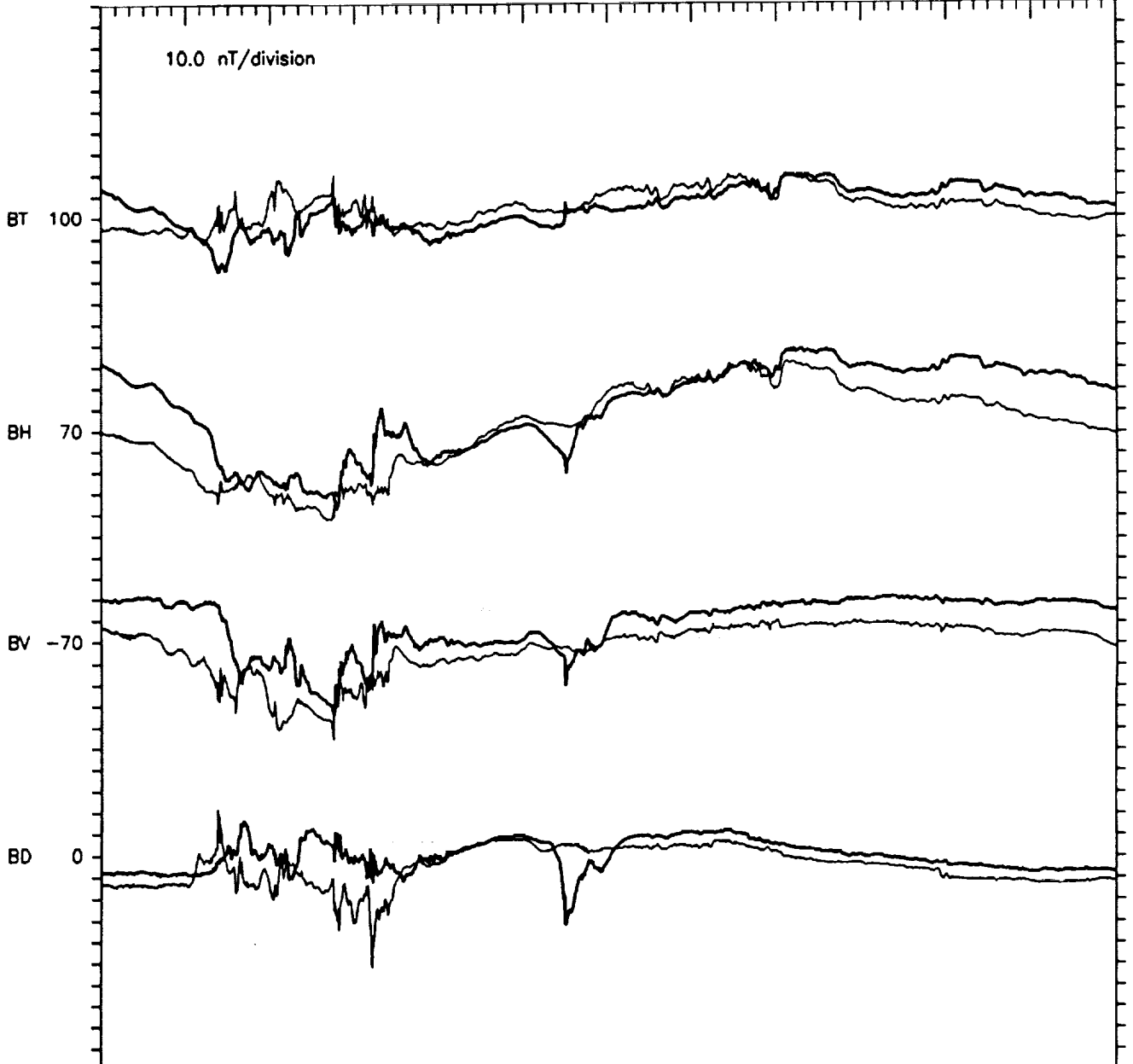PLOT2GOES   12−JUN−1989 12:46:07.72
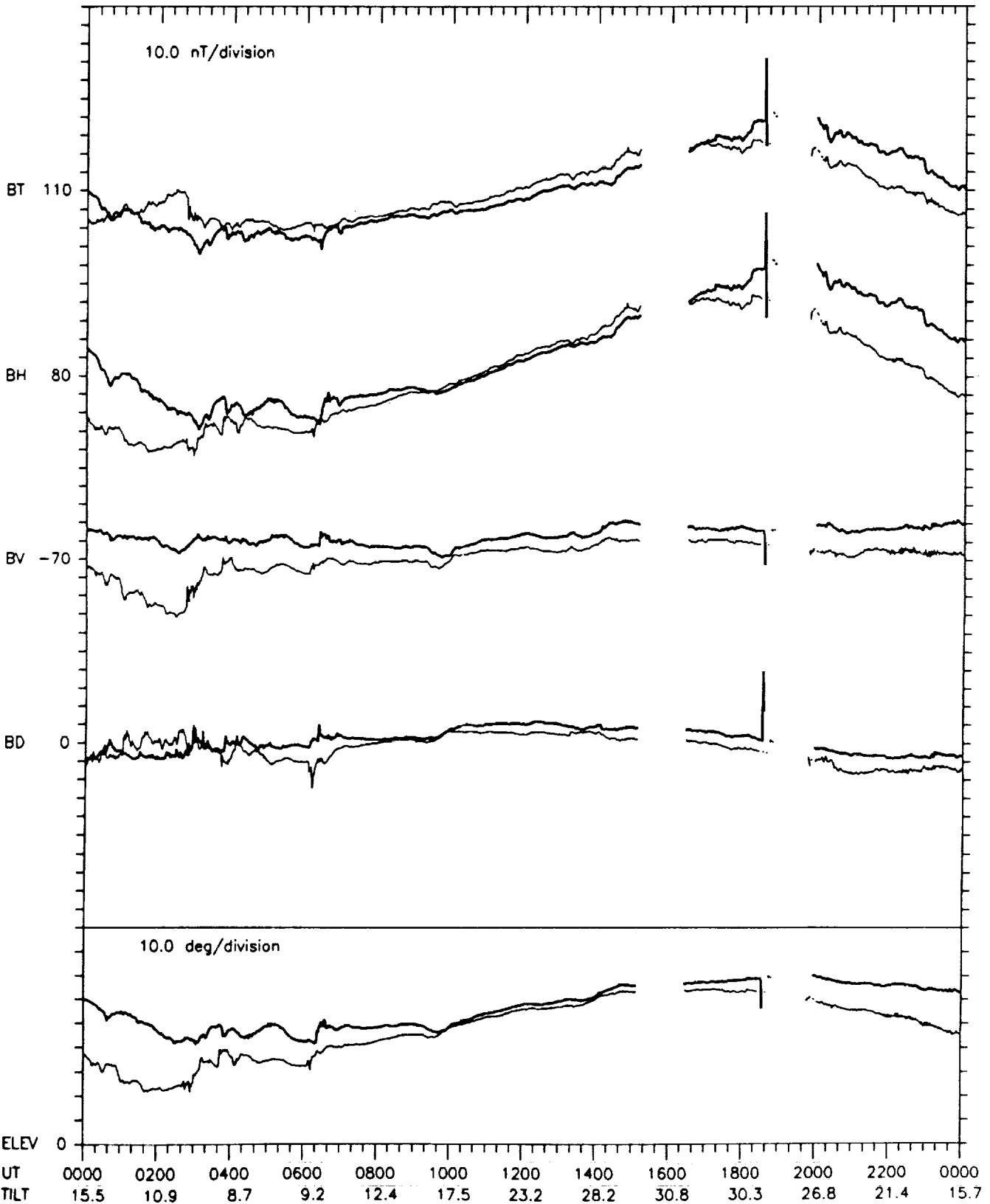
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY140 MAY 20
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−108.0, 8.9)

| MLT 5 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 |
| MLT 6 | 1800 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 |

10.0 nT/division

BT 100

BH 80

BV −70

BD 0

10.0 deg/division

ELEV 0

| UT | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 0000 |
| TILT | 15.7 | 11.2 | 8.9 | 9.4 | 12.6 | 17.7 | 23.4 | 28.4 | 31.0 | 30.5 | 27.0 | 21.6 | 15.9 |

PLOT2GOES   12−JUN−1989 12:57:25.42
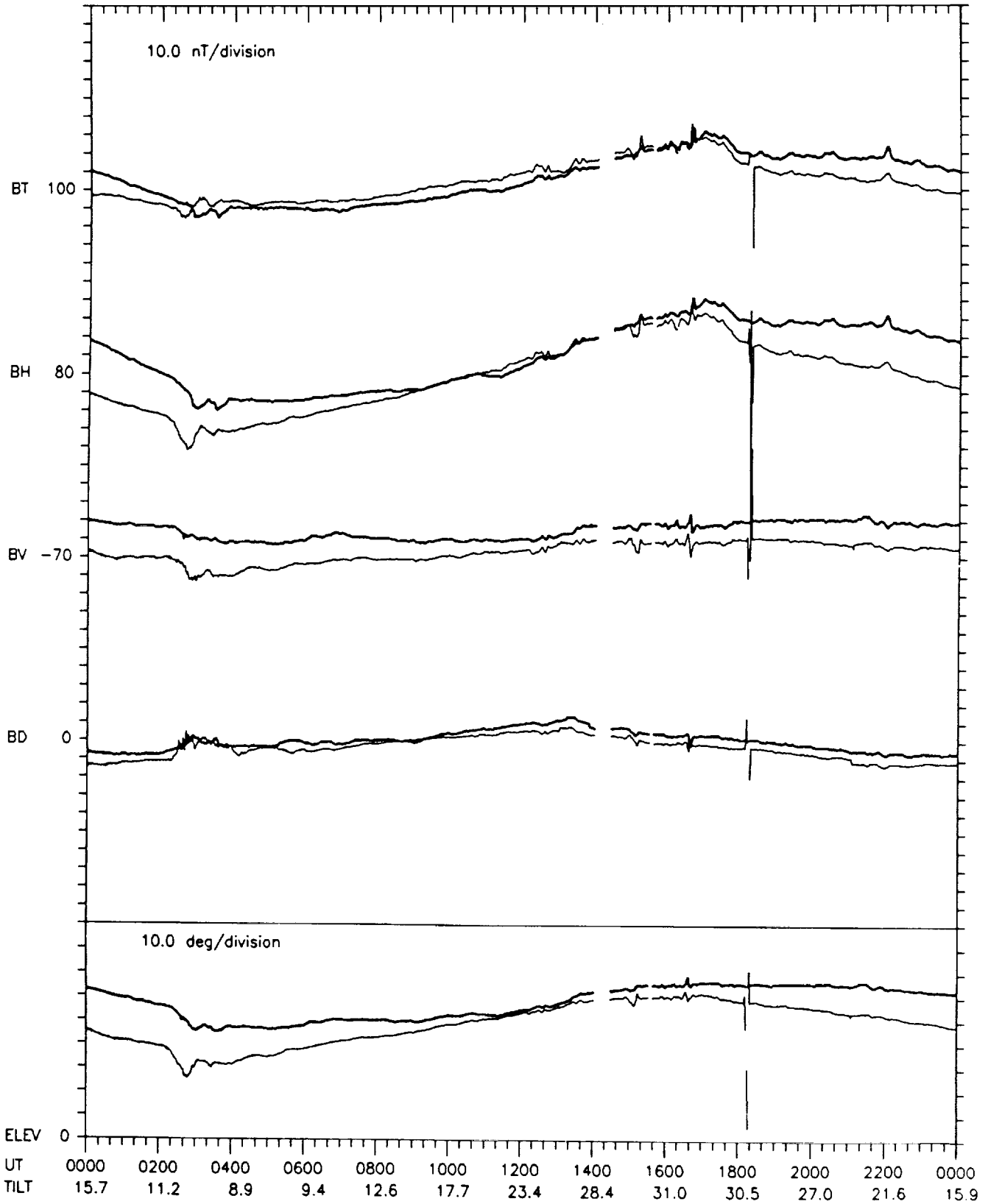
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY141 MAY 21
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−108.0,   8.9)

PLOT2GOES   12-JUN-1989 13:08:59.53
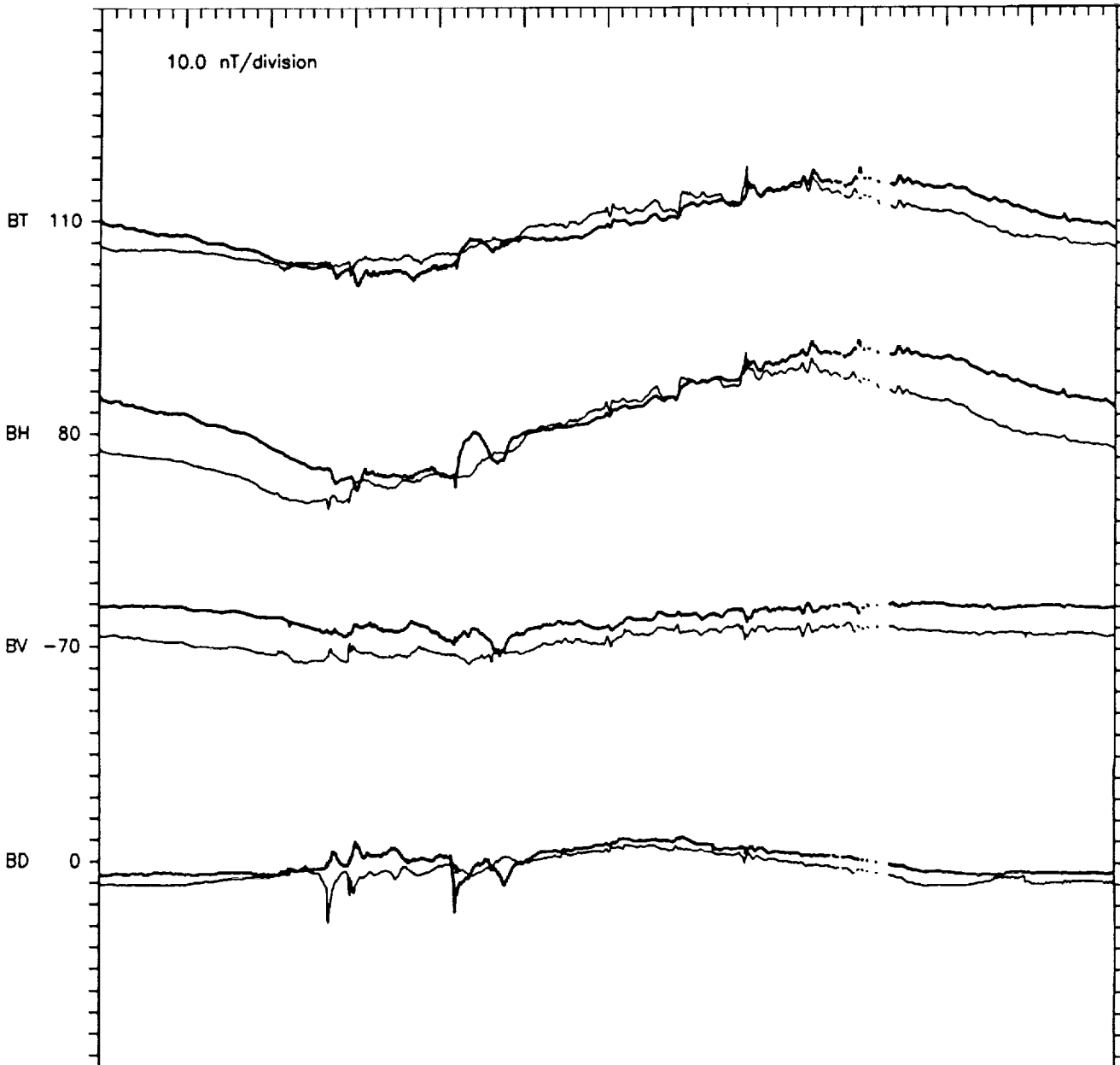
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY142   MAY 22
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−108.1,   8.9)

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY143   MAY 23
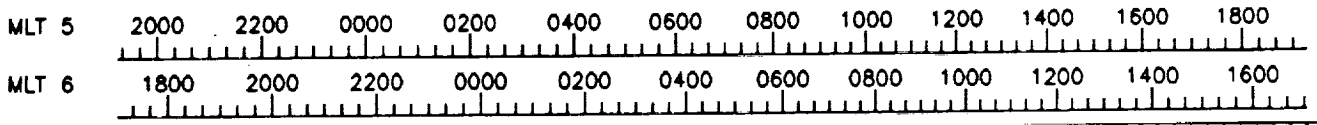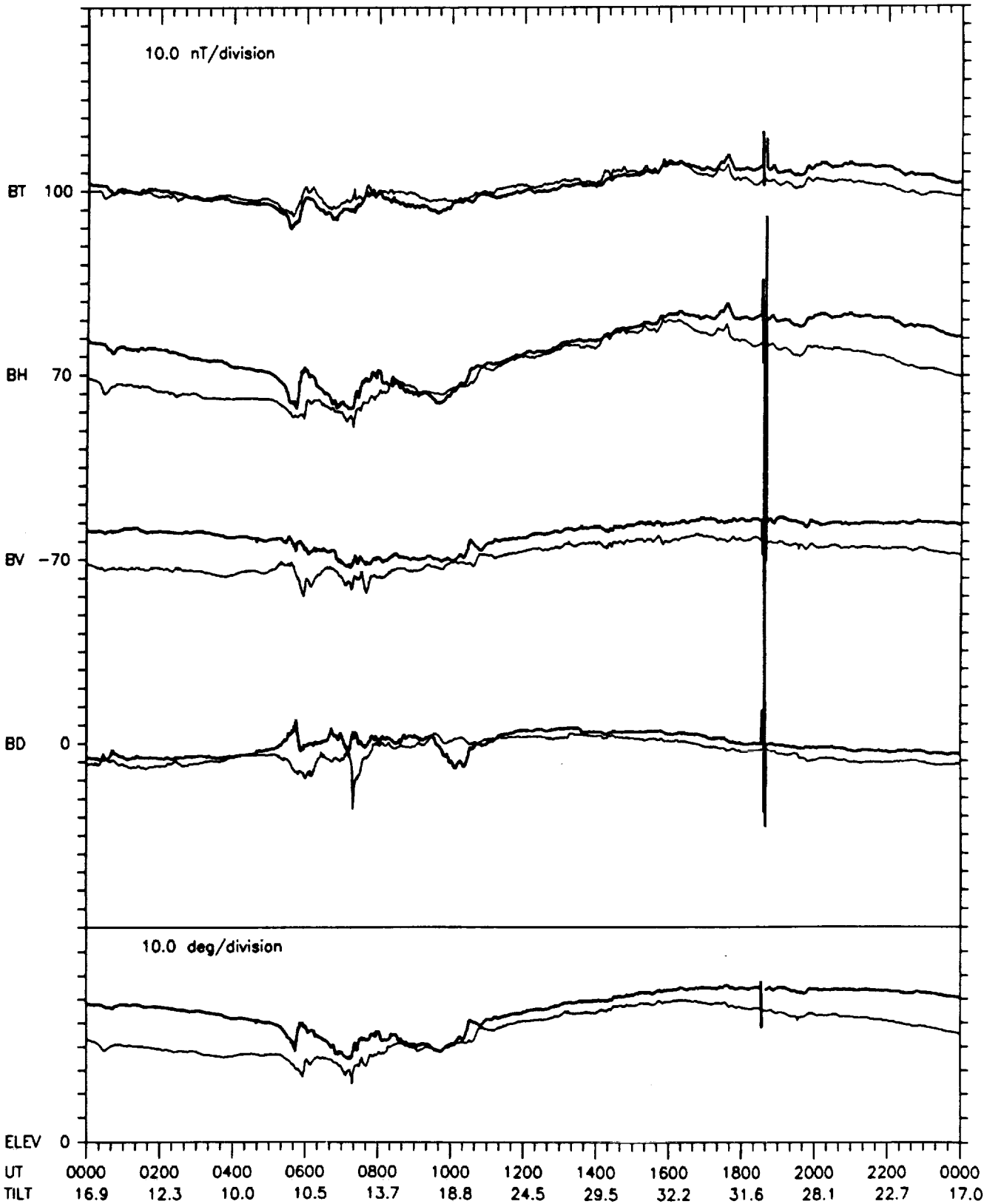GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−108.1,   8.9)

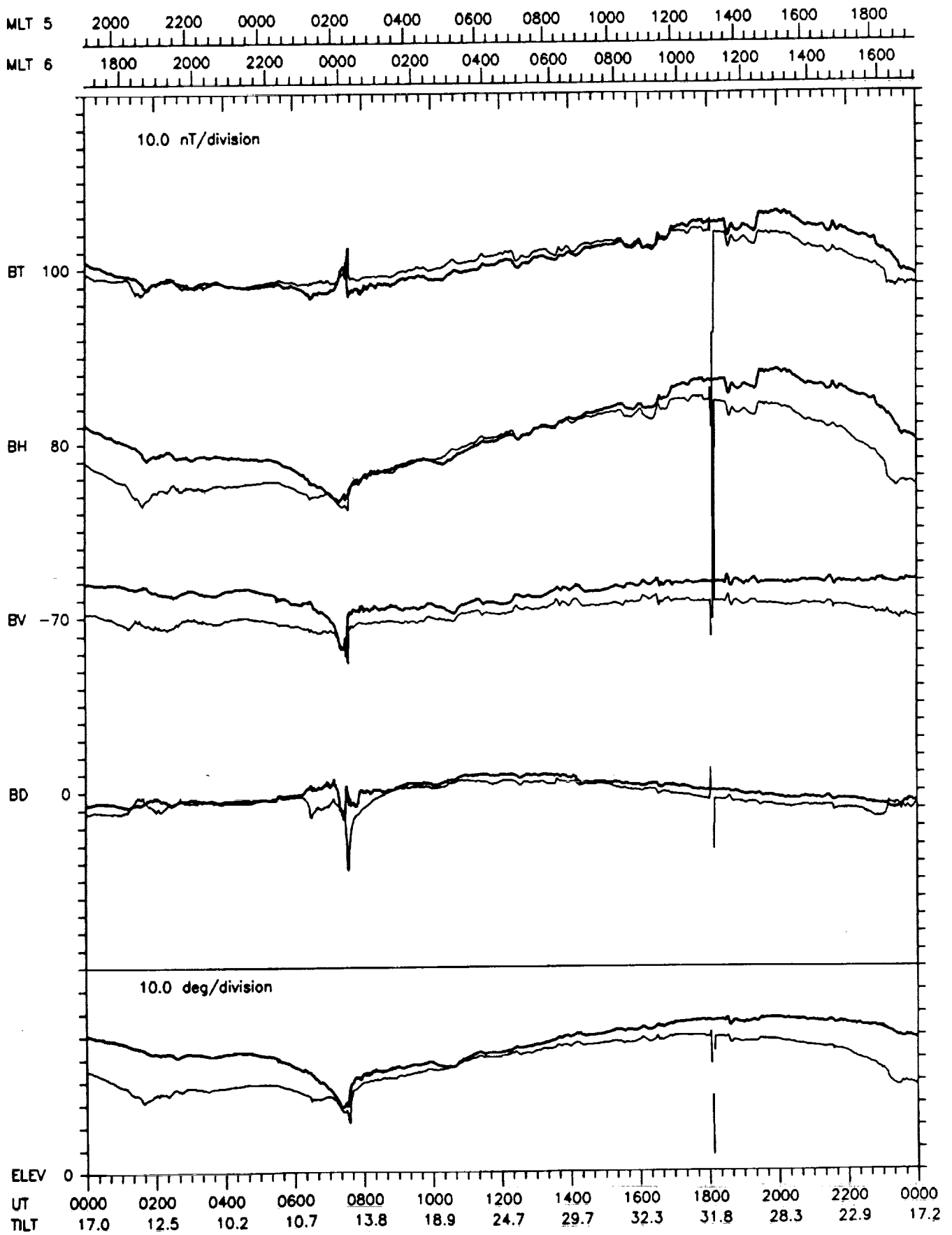PLOT2GOES   12-JUN-1989 13:26:01.38

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY144 MAY 24
GEOLON, MAGLAT = 5(−75.4, 11.2)   6(−108.1, 8.9)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800
MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 110

BH 80

BV −70

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	16.5	12.0	9.7	10.2	13.3	18.4	24.2	29.2	31.8	31.3	27.7	22.4	16.7

PLOT2GOES   12-JUN-1989 13:38:56.80

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY145 MAY 25
GEOLON, MAGLAT = 5(−75.5, 11.2)   6(−108.1,   8.9)

PLOT2GOES   12-JUN-1989 14:14:48.50

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY146   MAY 26
GEOLON, MAGLAT = 5(−75.5, 11.2)   6(−108.1, 8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

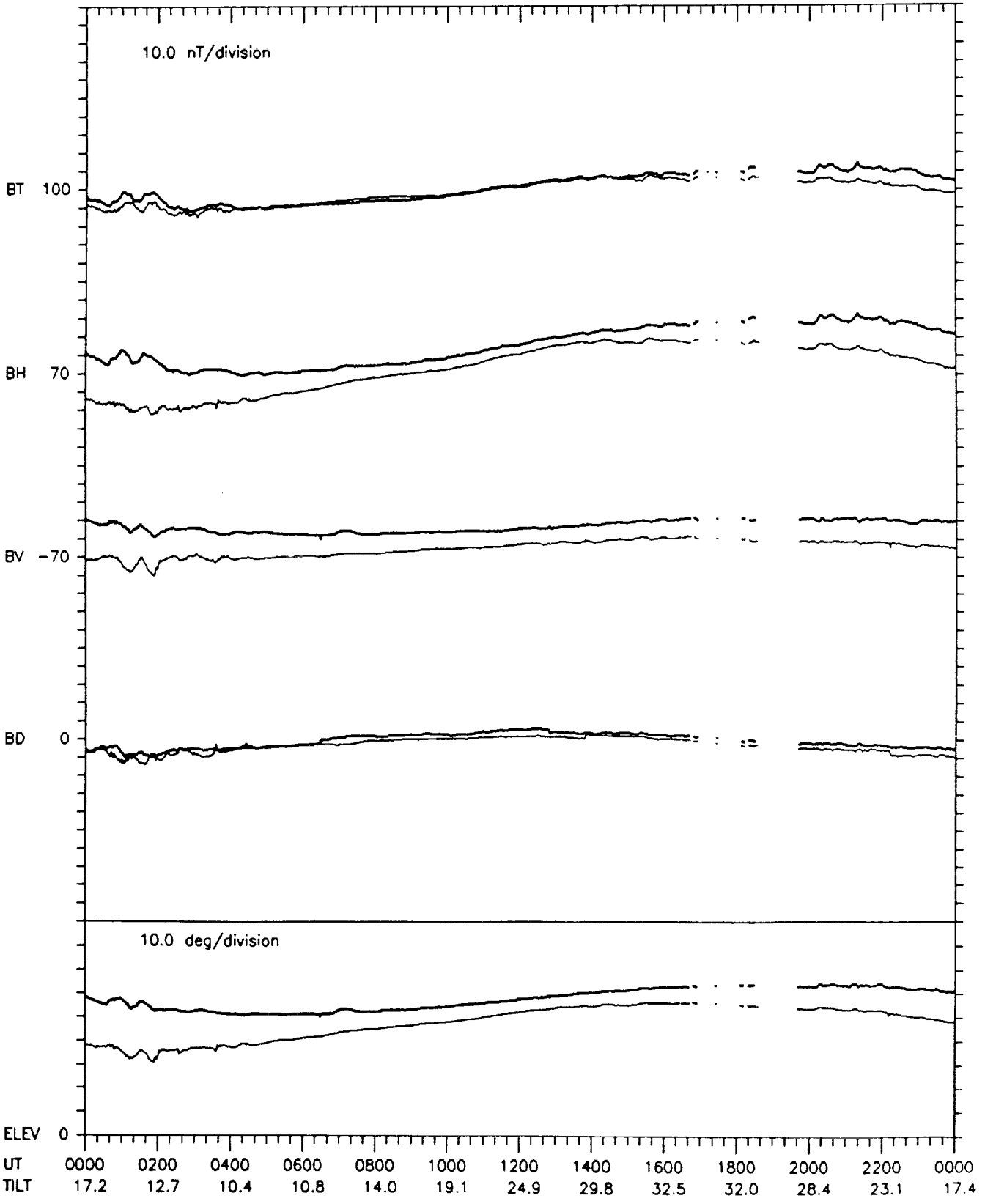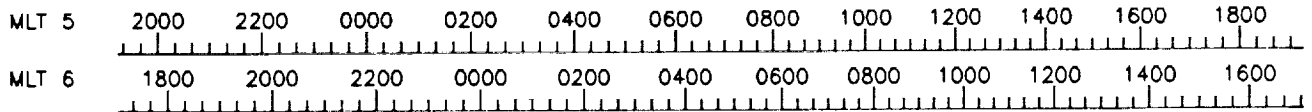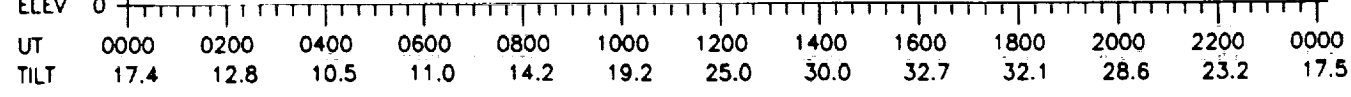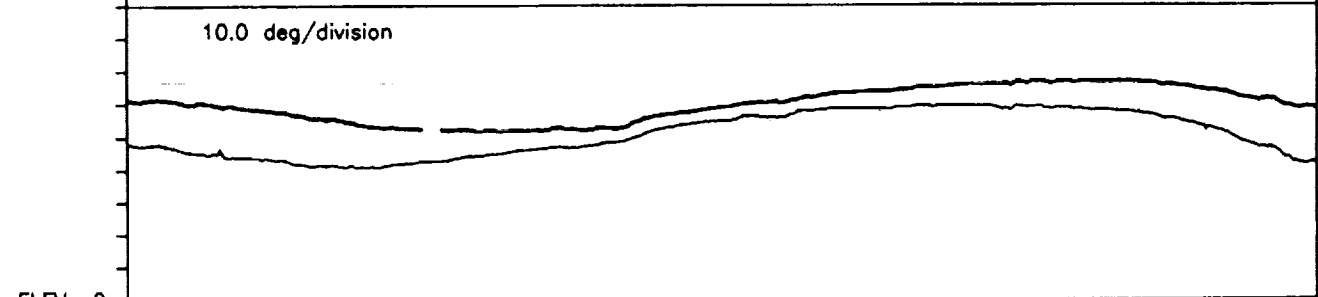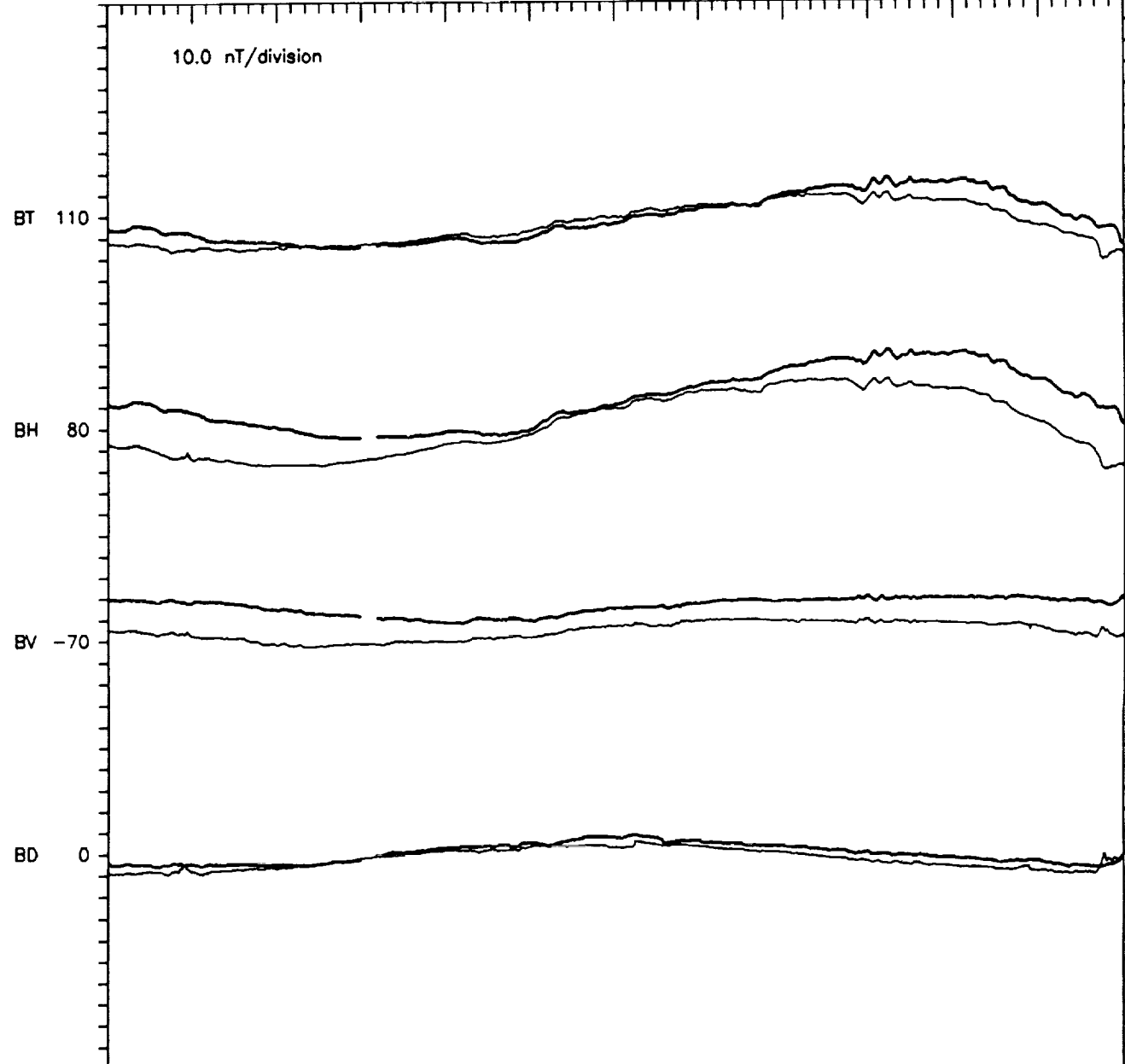MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 100

BH 70

BV −70

BD 0

10.0 deg/division

ELEV 0

UT   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800   2000   2200   0000
TILT 16.9   12.3   10.0   10.5   13.7   18.8   24.5   29.5   32.2   31.6   28.1   22.7   17.0

PLOT2GOES   12-JUN-1989 14:32:42.80

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY147   MAY 27
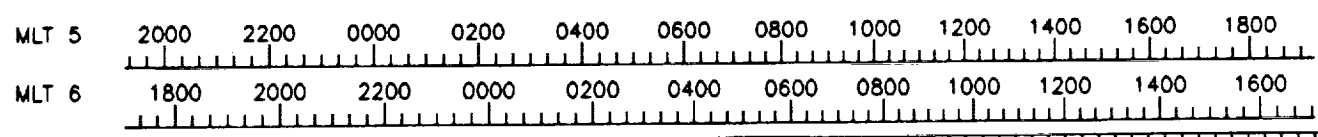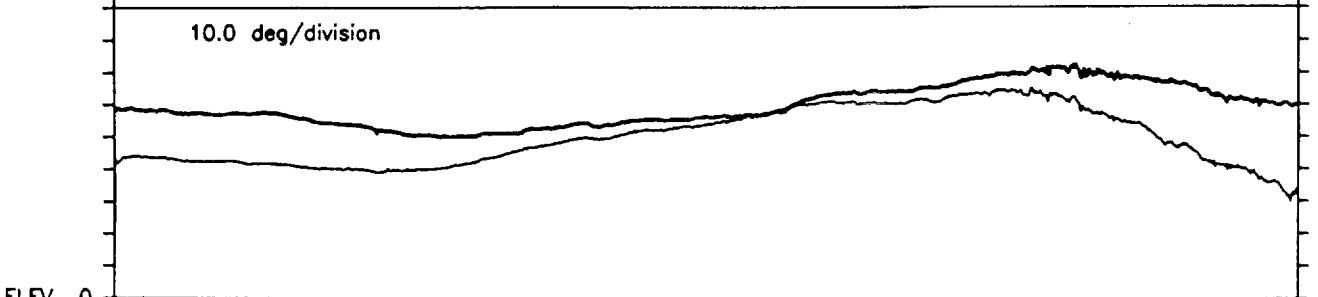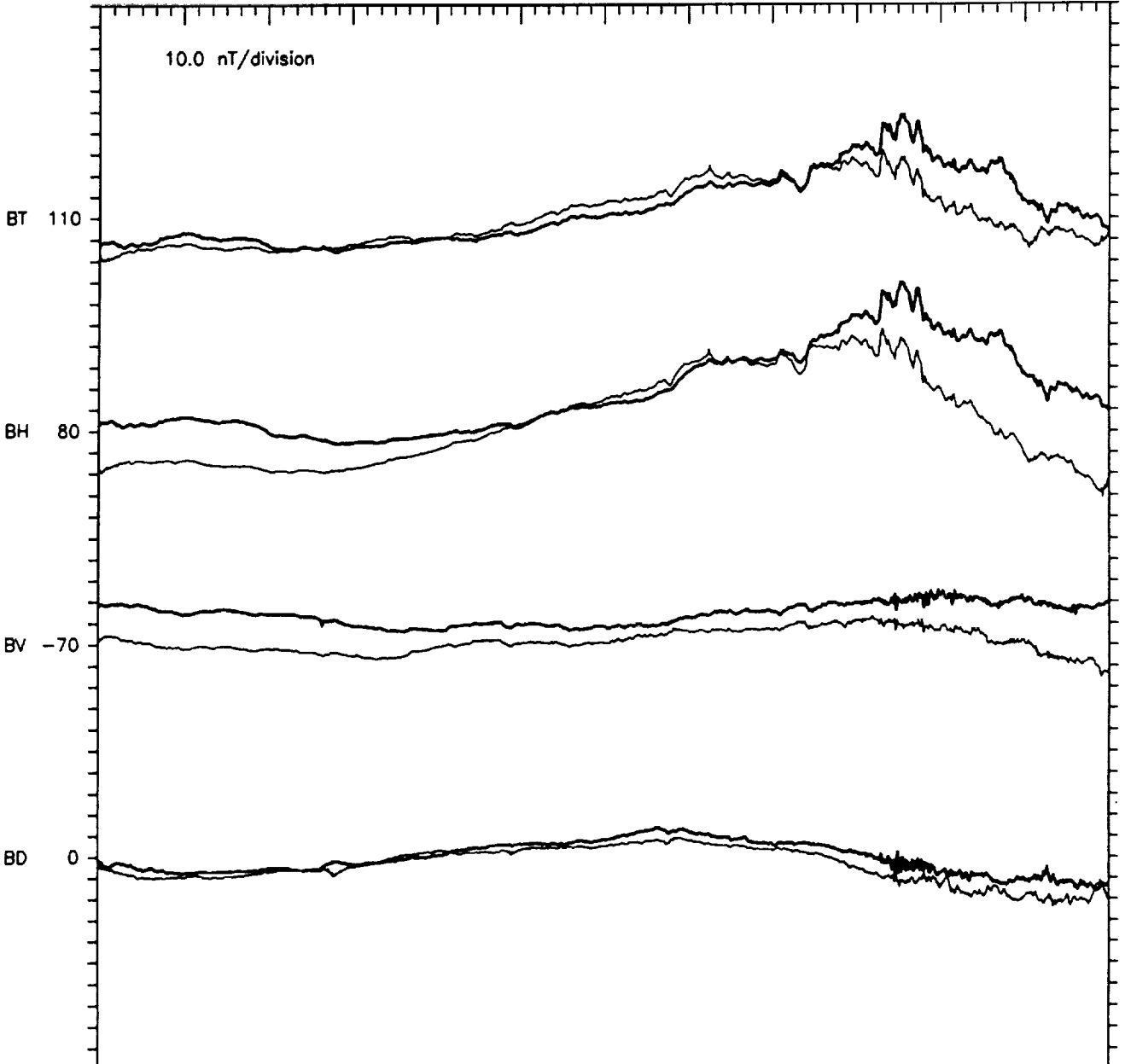GEOLON, MAGLAT = 5(−75.5, 11.2)   6(−108.1,   8.9)

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY148 MAY 28
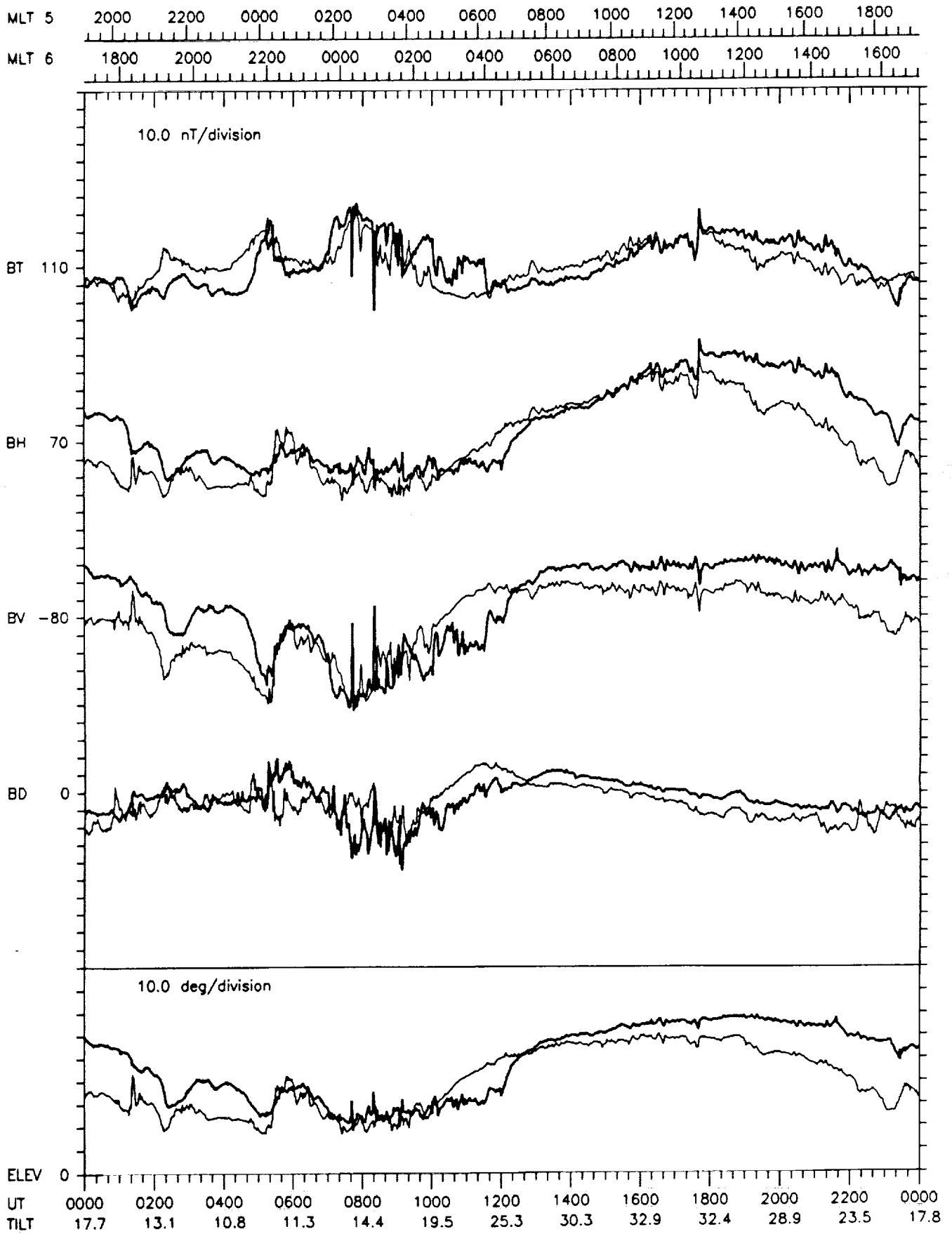GEOLON, MAGLAT = 5(−75.7, 11.2)   6(−108.1,   8.9)

PLOT2GOES   12-JUN-1989 15:35:34.06

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY149 MAY 29
GEOLON, MAGLAT = 5(-75.5, 11.2)   6(-108.1, 8.9)

PLOT2GOES   12-JUN-1989 15:44:42.17

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY150   MAY 30
GEOLON, MAGLAT = 5(−75.5, 11.2)   6(−108.1, 8.9)

| MLT 5 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 |
| MLT 6 | 1800 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 |

10.0 nT/division

BT 110

BH 80

BV −70

BD   0

10.0 deg/division

ELEV 0

| UT | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 0000 |
| TILT | 17.5 | 13.0 | 10.7 | 11.2 | 14.3 | 19.4 | 25.2 | 30.1 | 32.8 | 32.3 | 28.7 | 23.4 | 17.7 |

PLOT2GOES   12-JUN-1989 16:02:13.45

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY151 MAY 31
GEOLON, MAGLAT = 5(−75.6, 11.2)   6(−108.1, 8.9)

PLOT2GOES   12-JUN-1989 16:21:17.00

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY152 JUN 1
GEOLON, MAGLAT = 5(−75.6, 11.2)   6(−108.2, 8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800
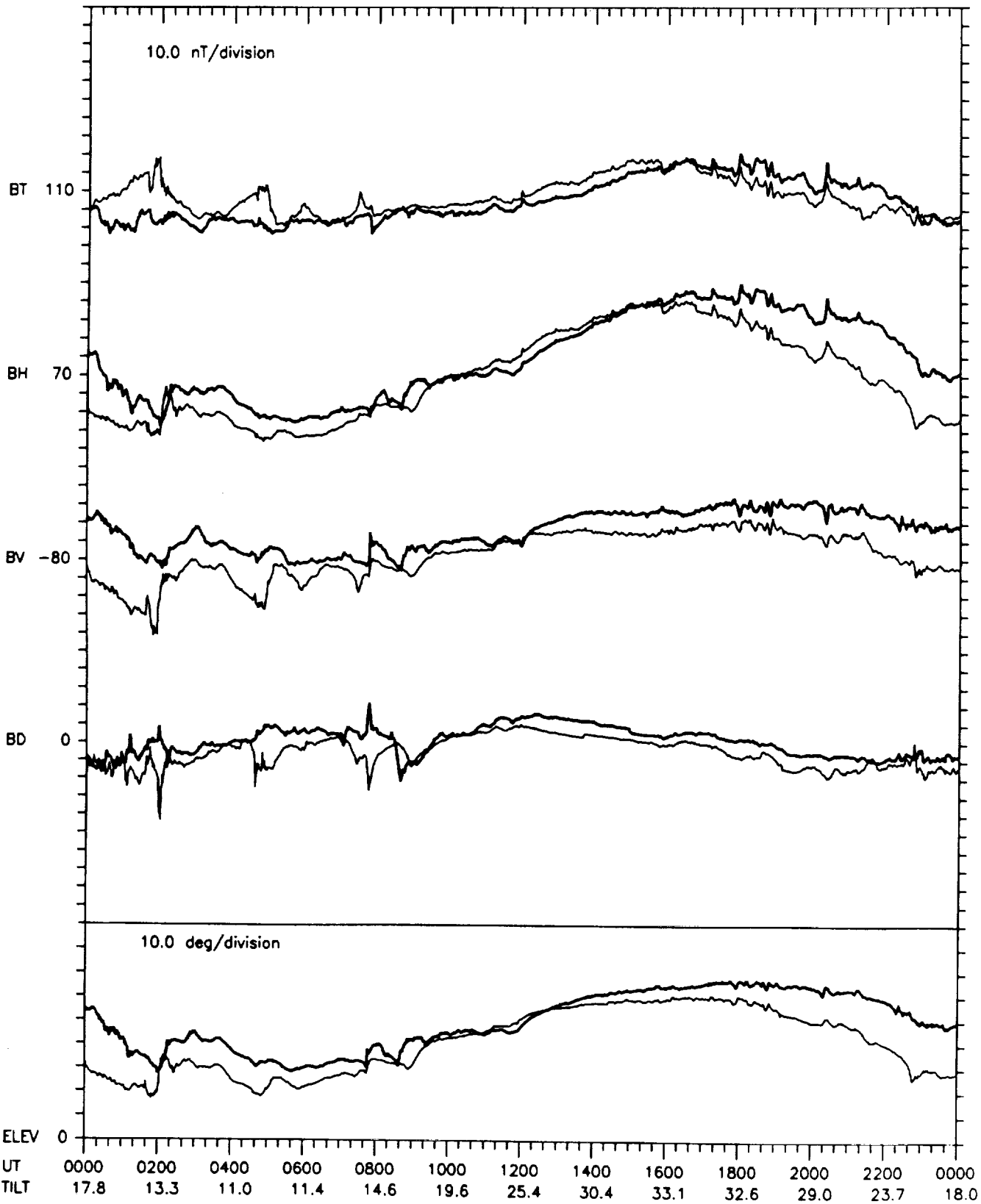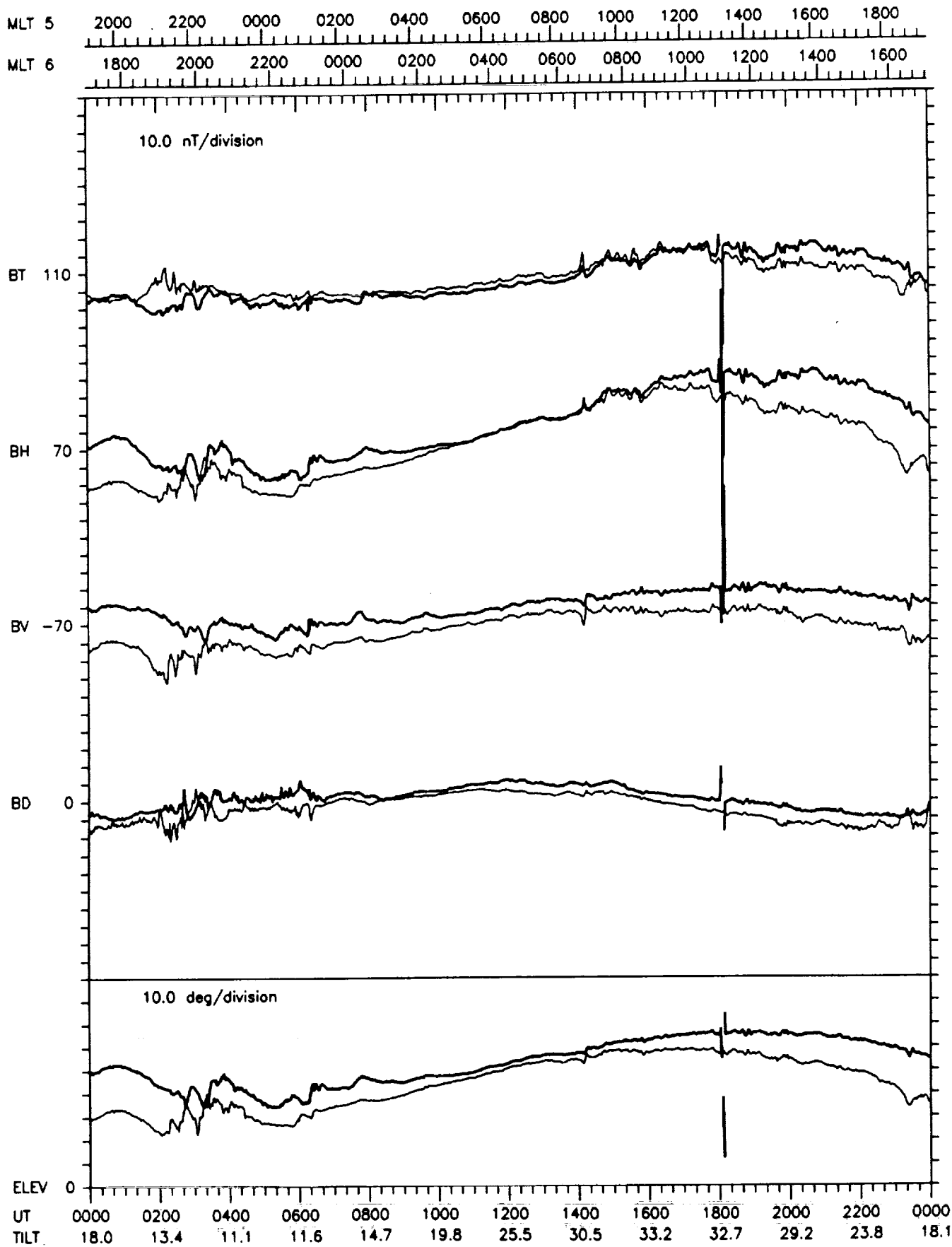MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 110

BH   70

BV −80

BD   0

10.0 deg/division

ELEV 0

UT   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800   2000   2200   0000
TILT 17.8   13.3   11.0   11.4   14.6   19.6   25.4   30.4   33.1   32.6   29.0   23.7   18.0

PLOT2GOES   13-JUN-1989 08:50:41.61

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY153 JUN 2
GEOLON, MAGLAT = 5(−75.6, 11.2)   6(−108.2, 8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

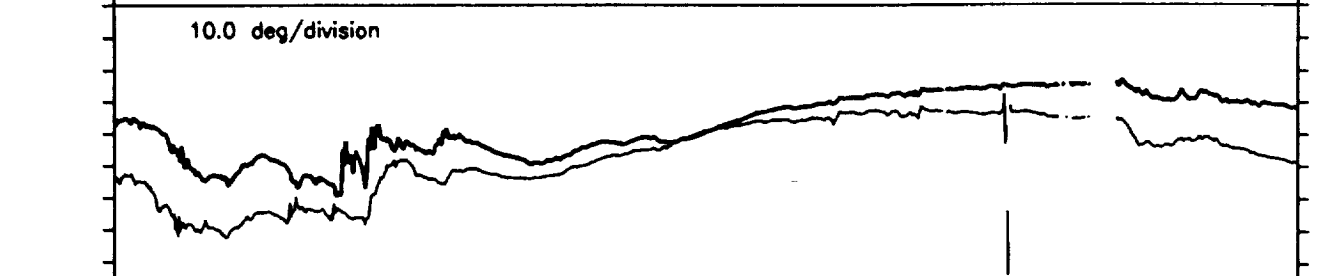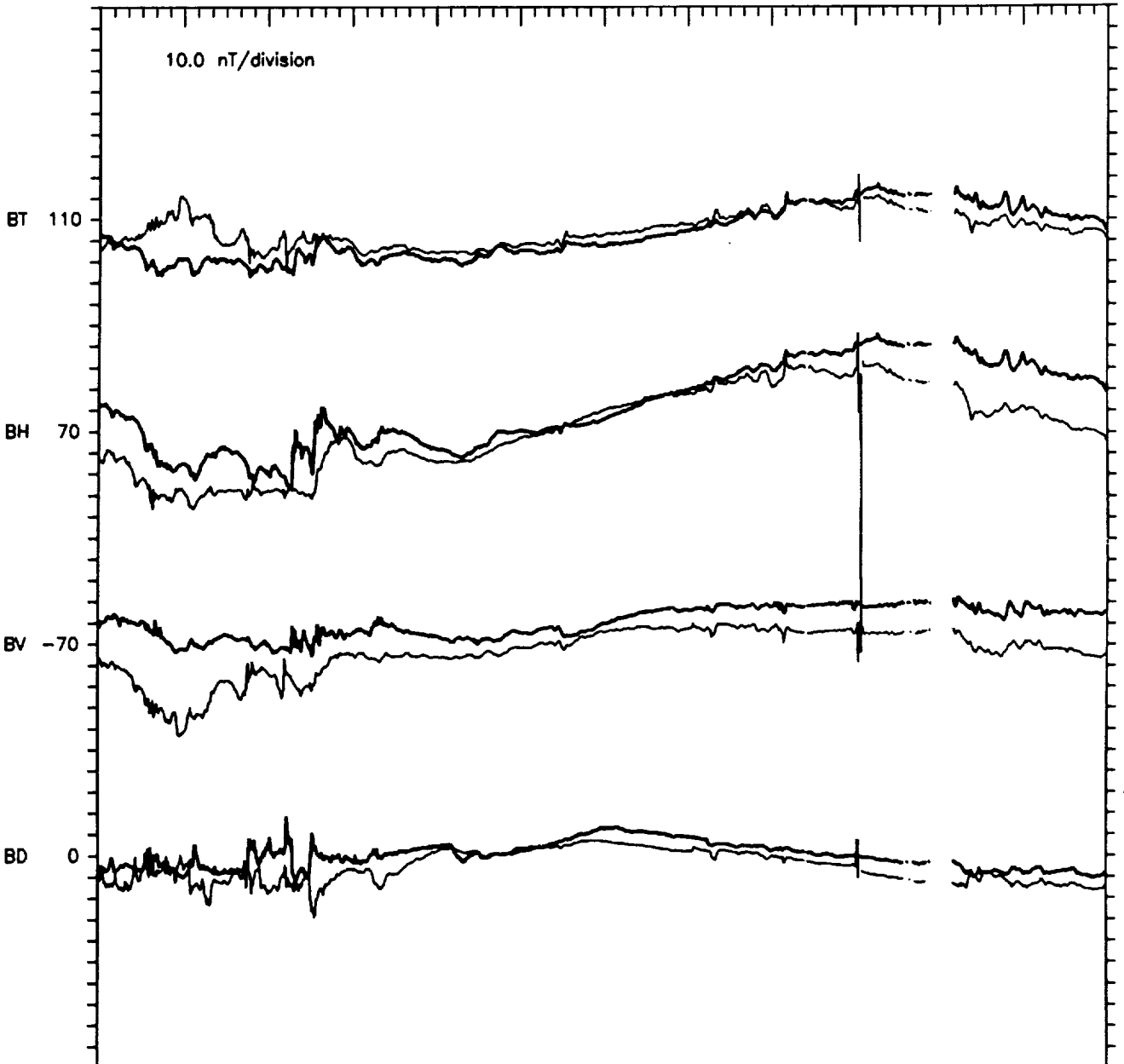MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 110

BH 70

BV −70

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	18.0	13.4	11.1	11.6	14.7	19.8	25.5	30.5	33.2	32.7	29.2	23.8	18.1

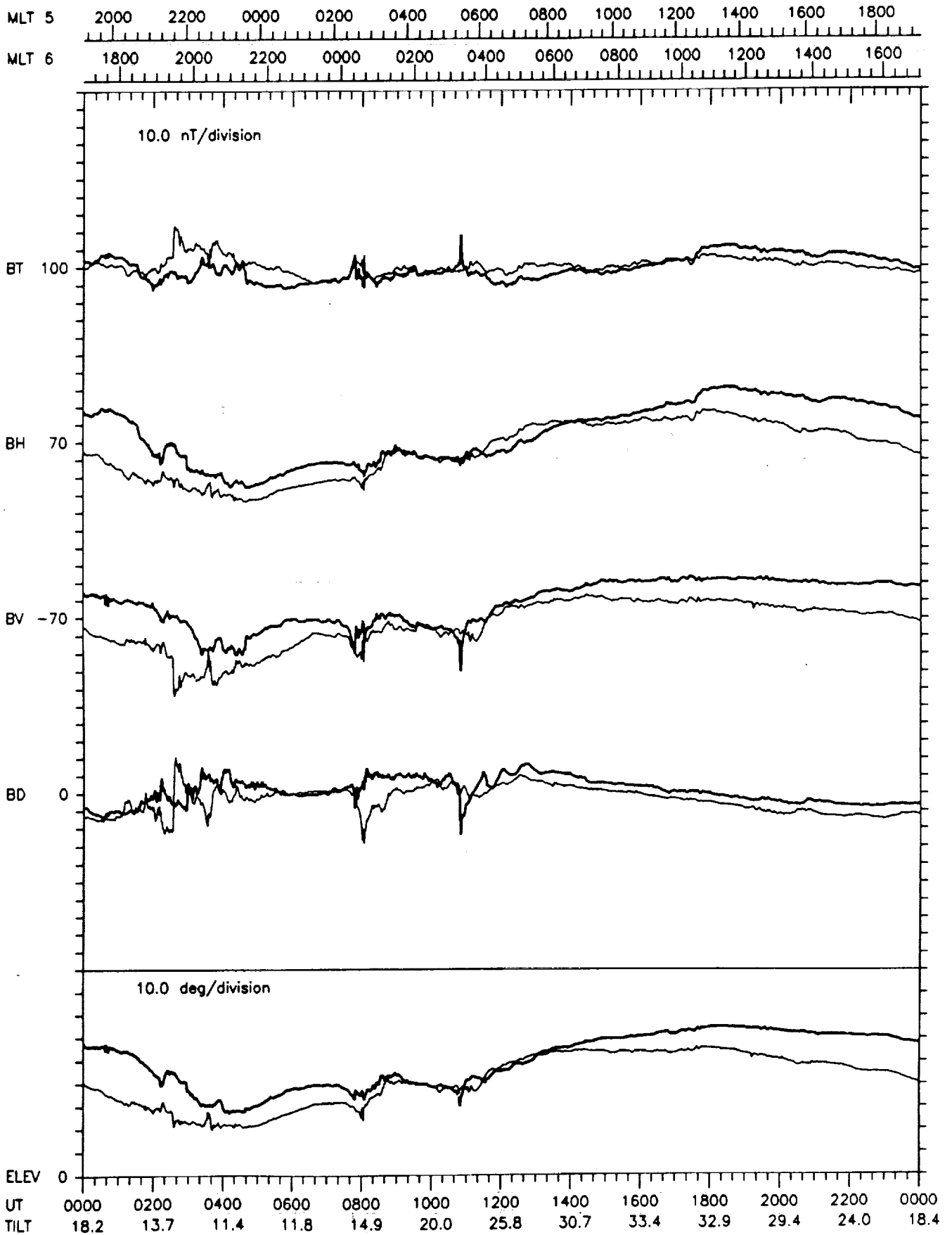PLOT2GOES   13−JUN−1989 09:18:05.14

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY154 JUN 3
GEOLON, MAGLAT = 5(−75.6, 11.2)   6(−108.2,   8.9)

MLT 5: 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600 1800

MLT 6: 1800 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600

10.0 nT/division

BT 110

BH 70

BV −70

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	18.1	13.6	11.2	11.7	14.8	19.9	25.7	30.6	33.3	32.8	29.3	23.9	18.2

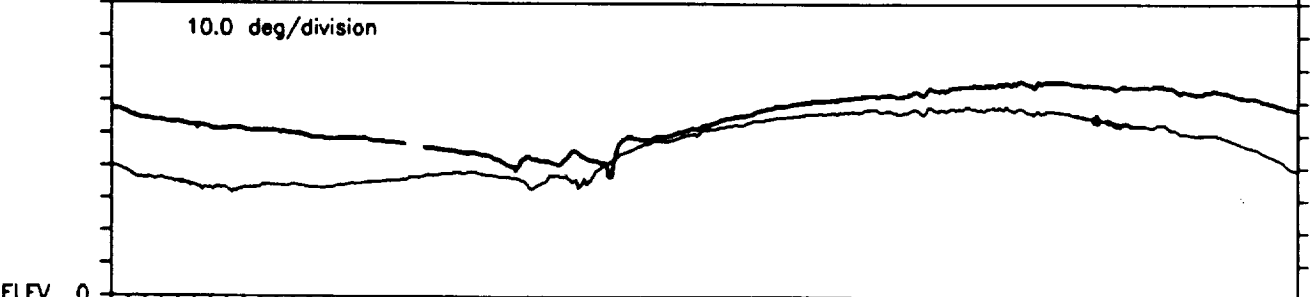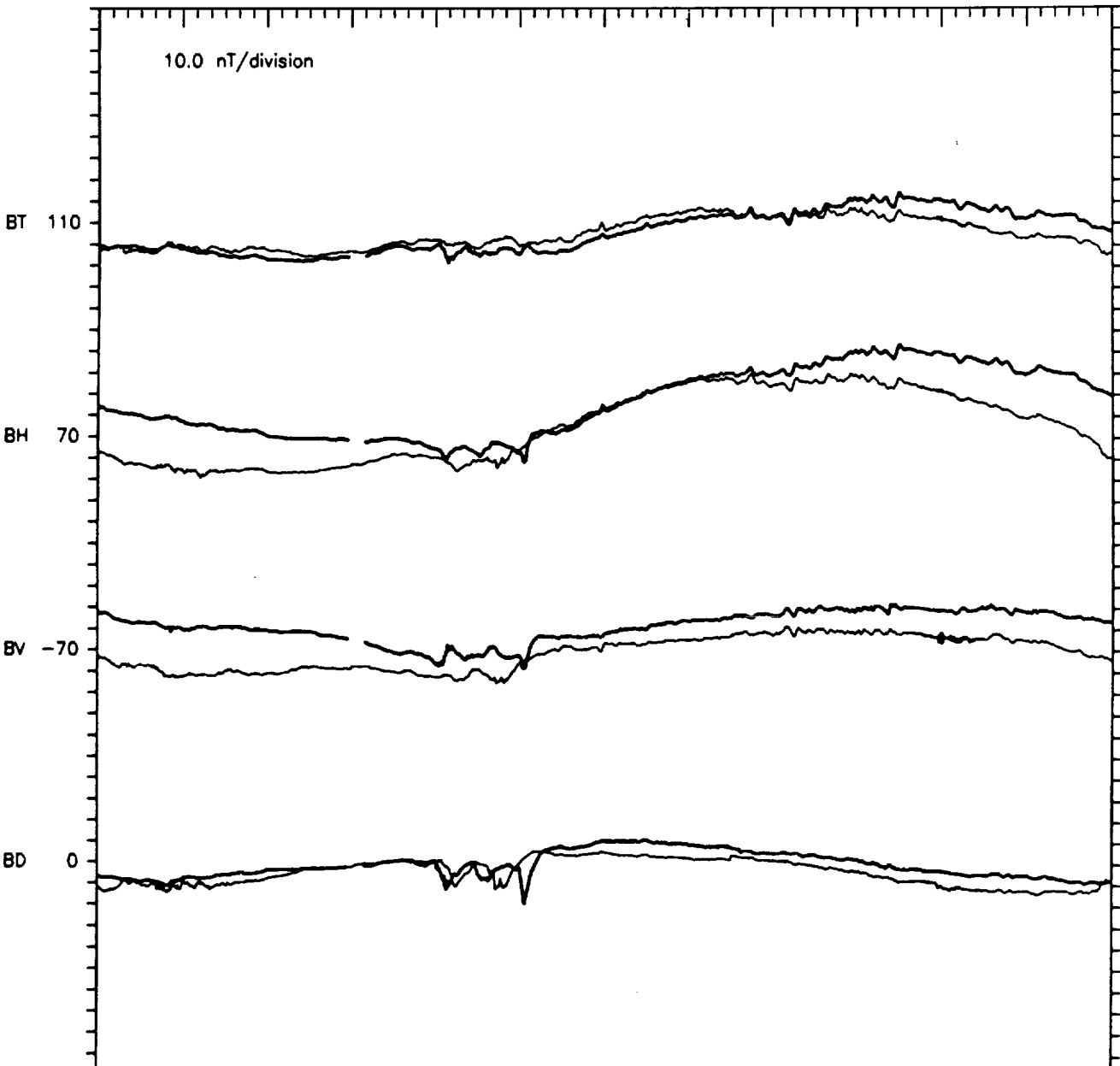PLOT2GOES   13-JUN-1989 09:47:06.32

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY155   JUN   4
GEOLON, MAGLAT = 5(−75.7, 11.2)   6(−108.2,   8.9)

10.0 nT/division

BT 100

BH 70

BV −70

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	18.2	13.7	11.4	11.8	14.9	20.0	25.8	30.7	33.4	32.9	29.4	24.0	18.4

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY156 JUN 5
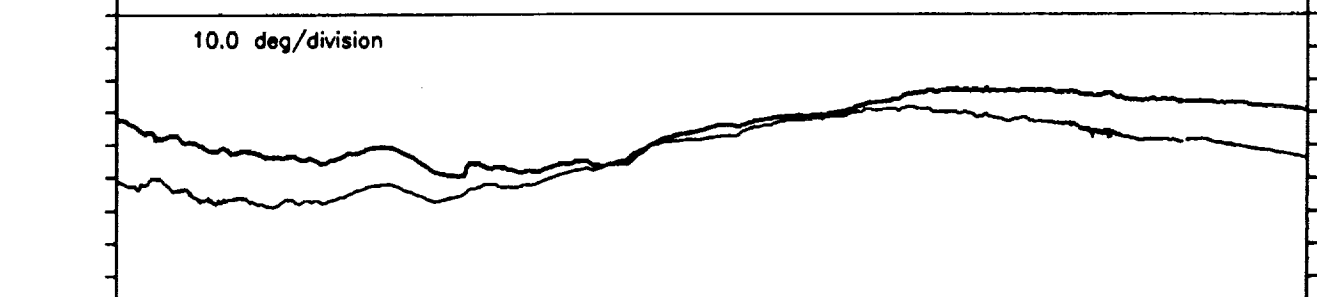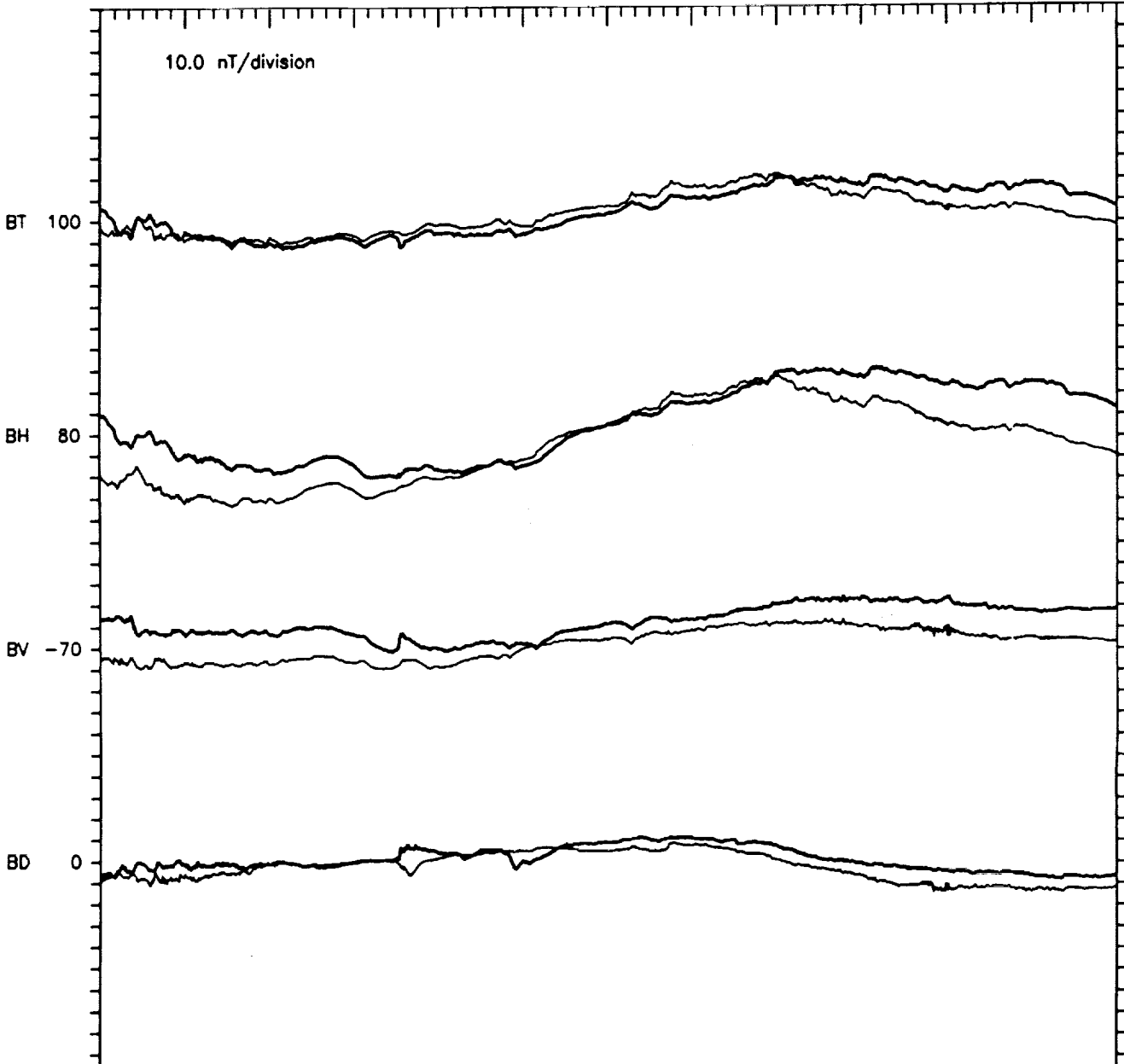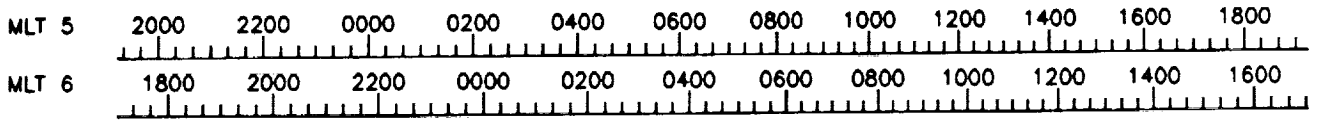GEOLON, MAGLAT = 5(−75.7, 11.2)   6(−108.2, 8.9)

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY157 JUN 6
GEOLON, MAGLAT = 5(-75.7, 11.2)   6(-108.2, 8.9)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800
MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 100

BH 80

BV -70

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	18.5	13.9	11.6	12.0	15.1	20.2	26.0	31.0	33.7	33.2	29.6	24.3	18.6

PLOT2GOES   13-JUN-1989 11:11:27.85

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY158   JUN 7
GEOLON, MAGLAT = 5(−75.8, 11.2)   6(−108.2,   8.9)

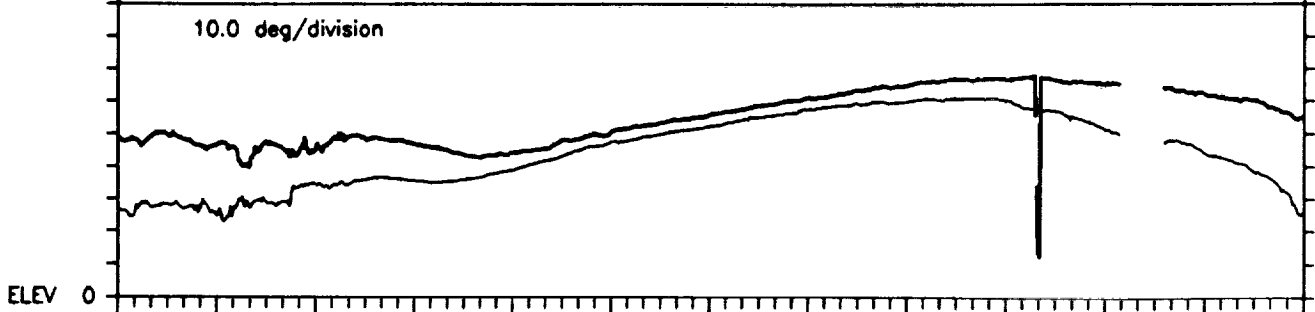PLOT2GOES   13-JUN-1989 11:37:24.23
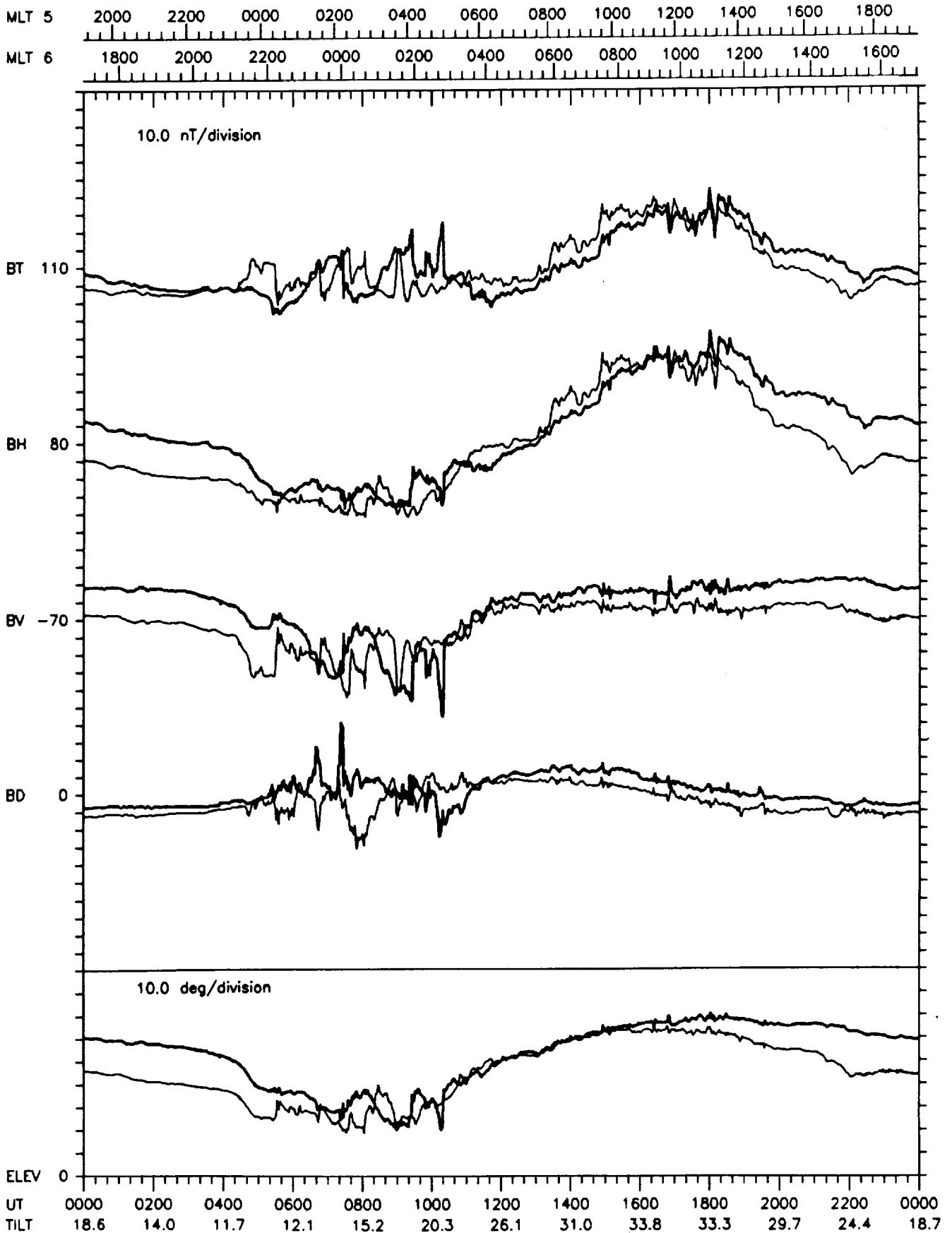
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY159   JUN   8
GEOLON, MAGLAT = 5(−75.8, 11.2)   6(−108.2,   8.9)

MLT 5	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800
MLT 6	1800	2000	2200	0000	0200	0400	0600	0800	1000	1200	1400	1600

10.0 nT/division

BT 100

BH 70

BV −70

BD 0

10.0 deg/division

ELEV 0

UT	0000	0200	0400	0600	0800	1000	1200	1400	1600	1800	2000	2200	0000
TILT	18.7	14.1	11.8	12.2	15.3	20.4	26.1	31.1	33.9	33.4	29.8	24.5	18.8

PLOT2GOES   13−JUN−1989 11:44:01.95
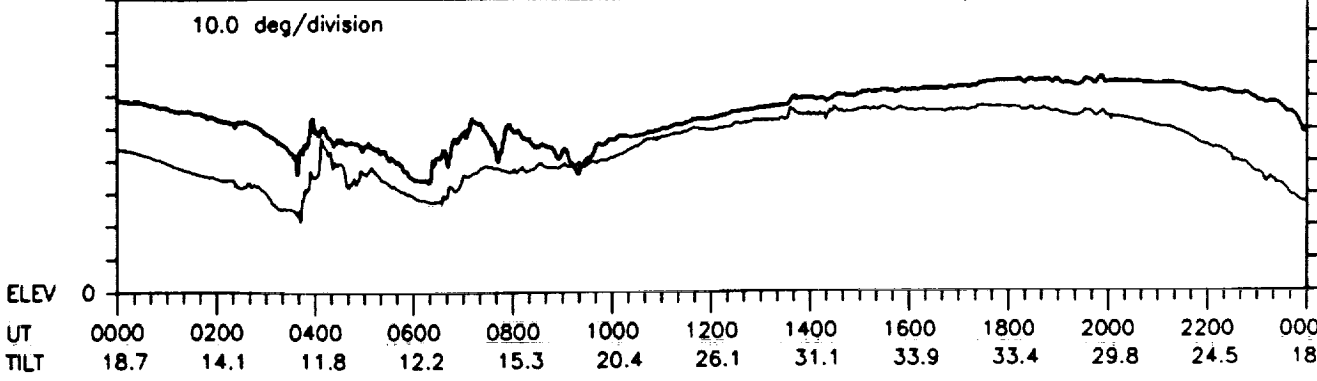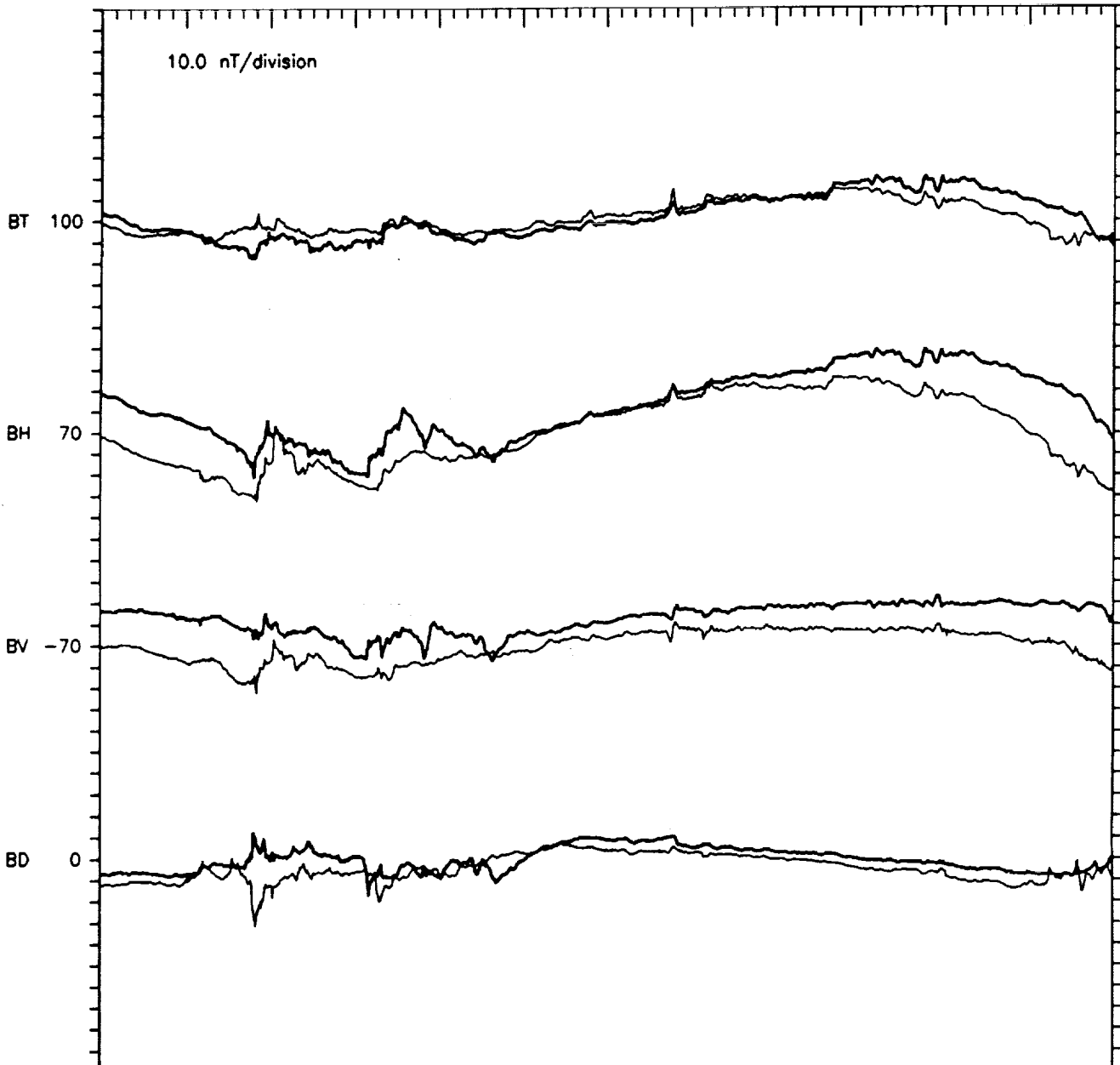
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY160 JUN 9
GEOLON, MAGLAT = 5(-75.8, 11.2) 6(-108.2, 8.9)

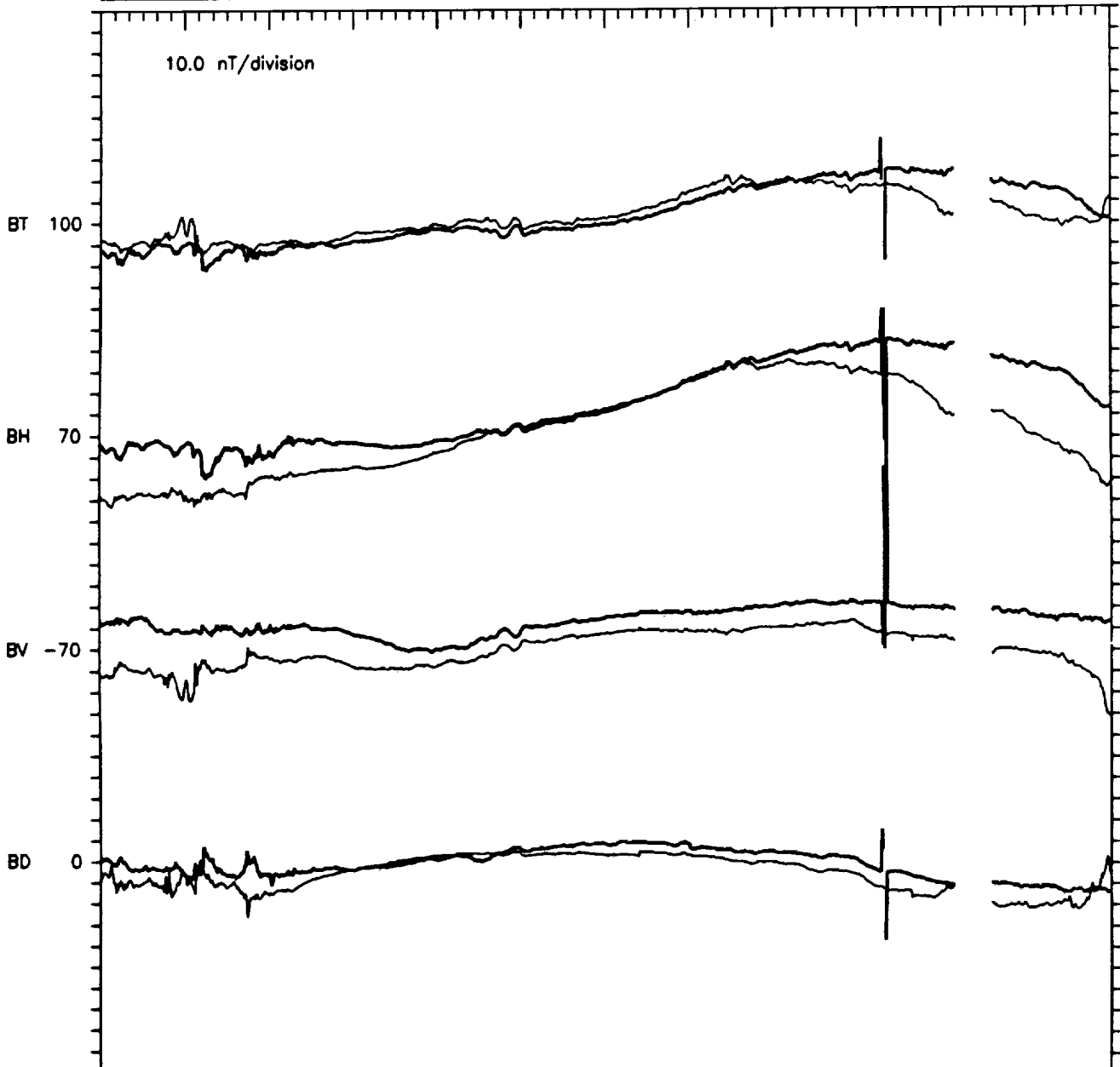PLOT2GOES   13-JUN-1989 11:52:25.63

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY161 JUN 10
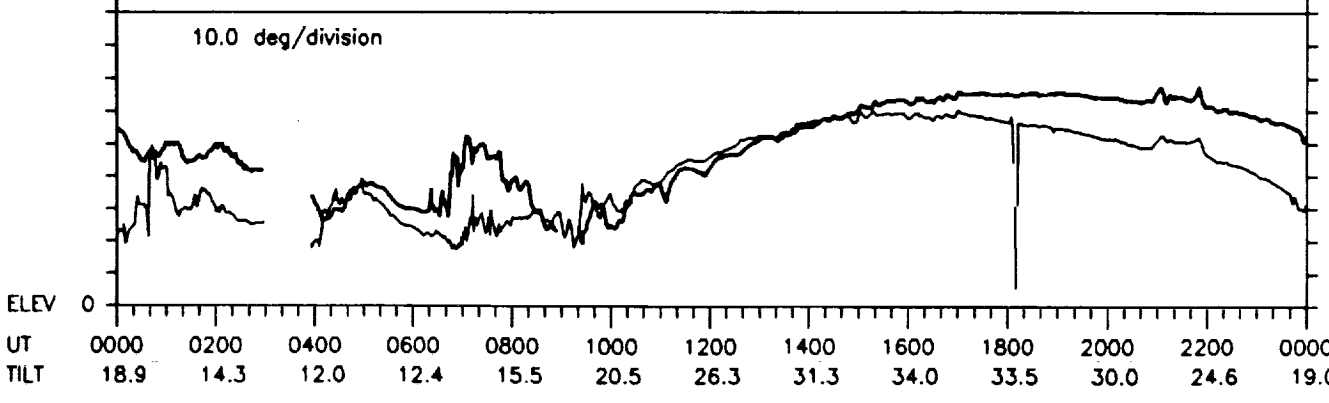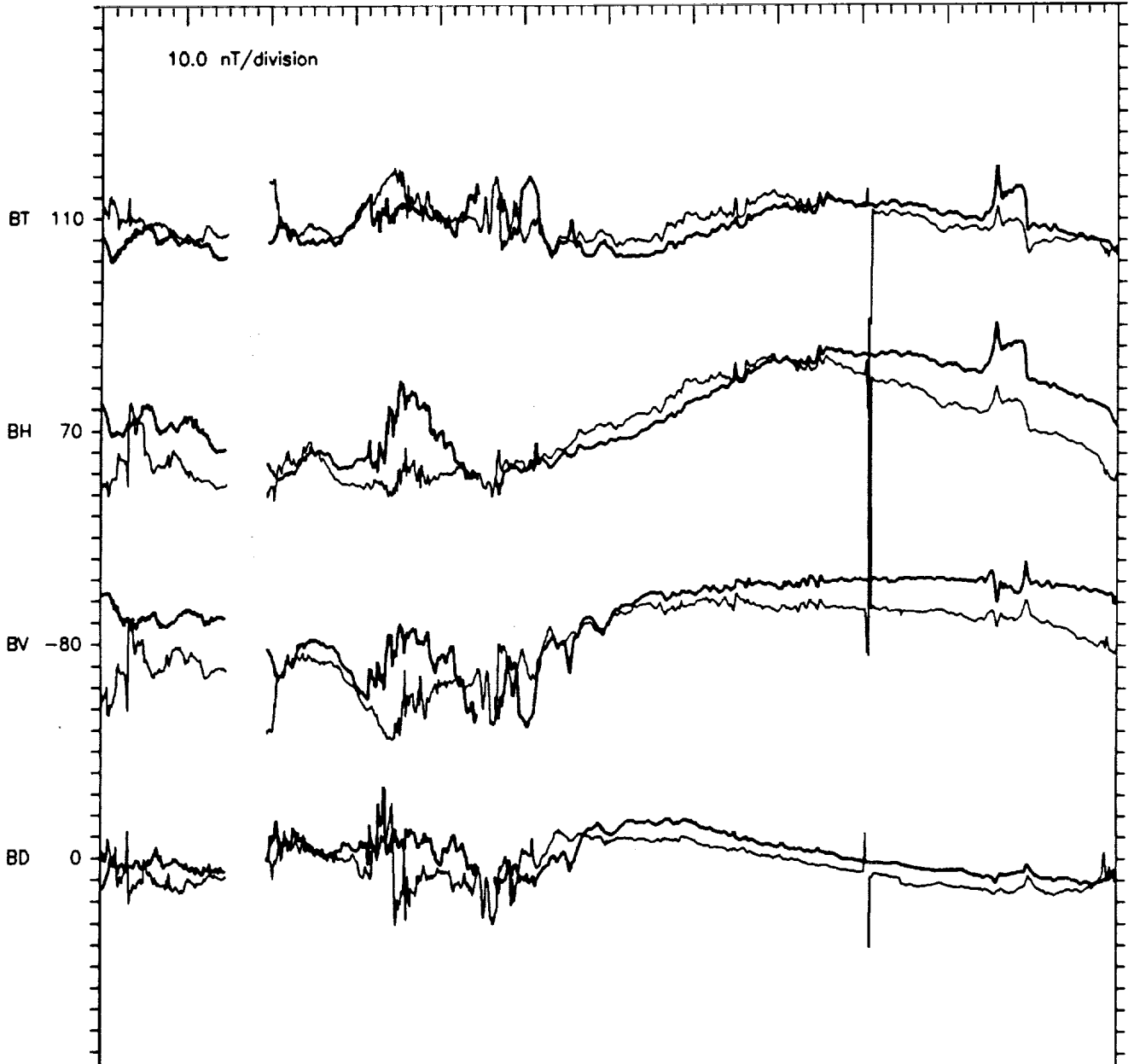### GEOLON, MAGLAT = 5(−75.8, 11.2) 6(−108.2, 8.9)

MLT 5 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600 1800

MLT 6 1800 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600

10.0 nT/division

BT 110

BH 70

BV −80

BD 0

10.0 deg/division

ELEV 0

UT 0000 0200 0400 0600 0800 1000 1200 1400 1600 1800 2000 2200 0000

TILT 18.9 14.3 12.0 12.4 15.5 20.5 26.3 31.3 34.0 33.5 30.0 24.6 19.0

PLOT2GOES   13-JUN-1989 12:00:19.62   C-2

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY162   JUN 11
GEOLON, MAGLAT = 5(−75.9, 11.2)   6(−108.2,   8.9)

MLT 5

| 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 |

MLT 6

| 1800 | 2000 | 2200 | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 |

10.0 nT/division

BT 110

BH 70

BV −70

BD 0

10.0 deg/division

ELEV 0

| UT | 0000 | 0200 | 0400 | 0600 | 0800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 2200 | 0000 |
| TILT | 19.0 | 14.4 | 12.0 | 12.5 | 15.5 | 20.6 | 26.3 | 31.3 | 34.1 | 33.6 | 30.1 | 24.7 | 19.0 |

PLOT2GOES   13-JUN-1989 12:09:20.17

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY163   JUN 12
GEOLON, MAGLAT = 5(−75.8, 11.2)   6(−108.2,   8.9)
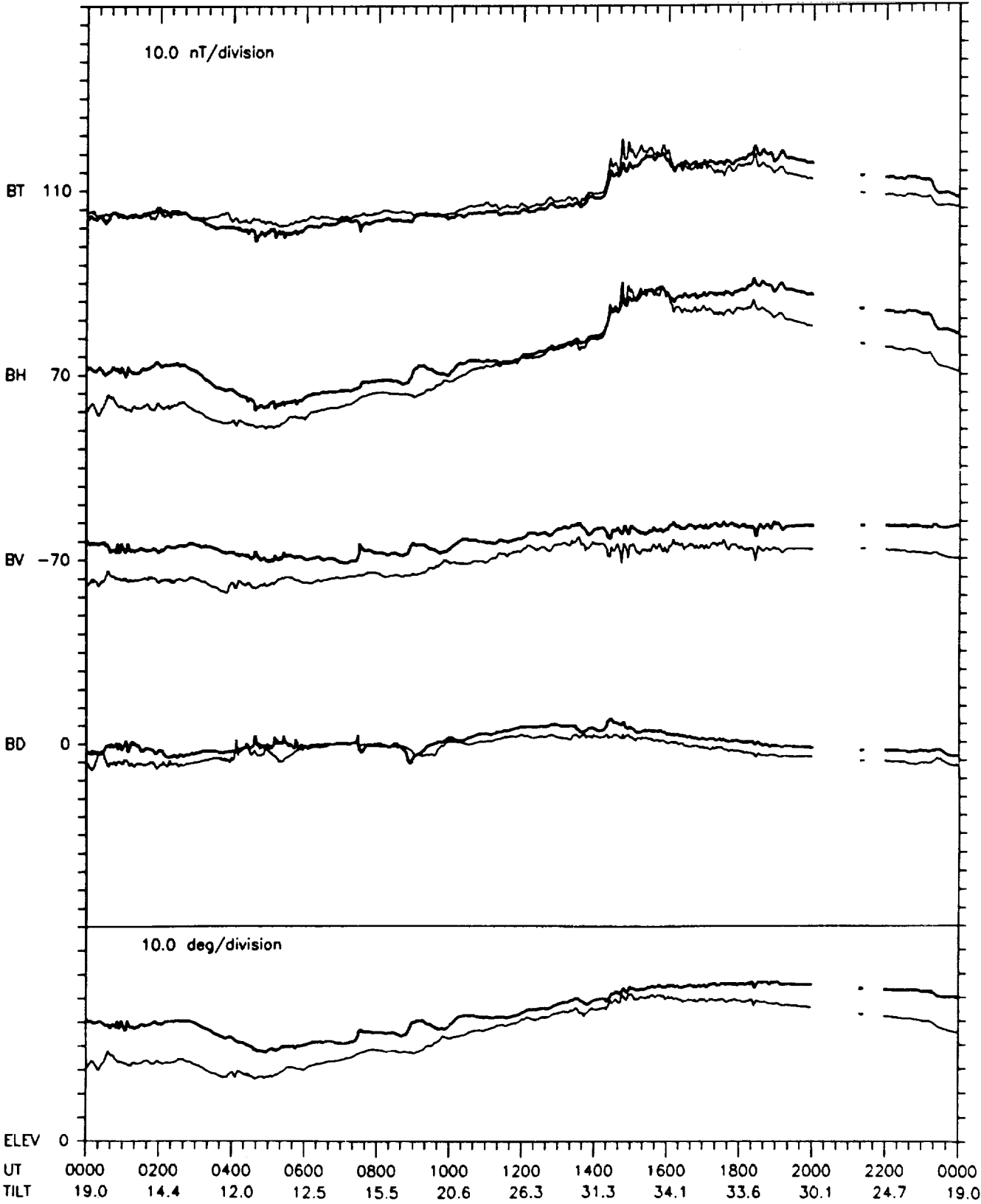

MLT 5: 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600 1800
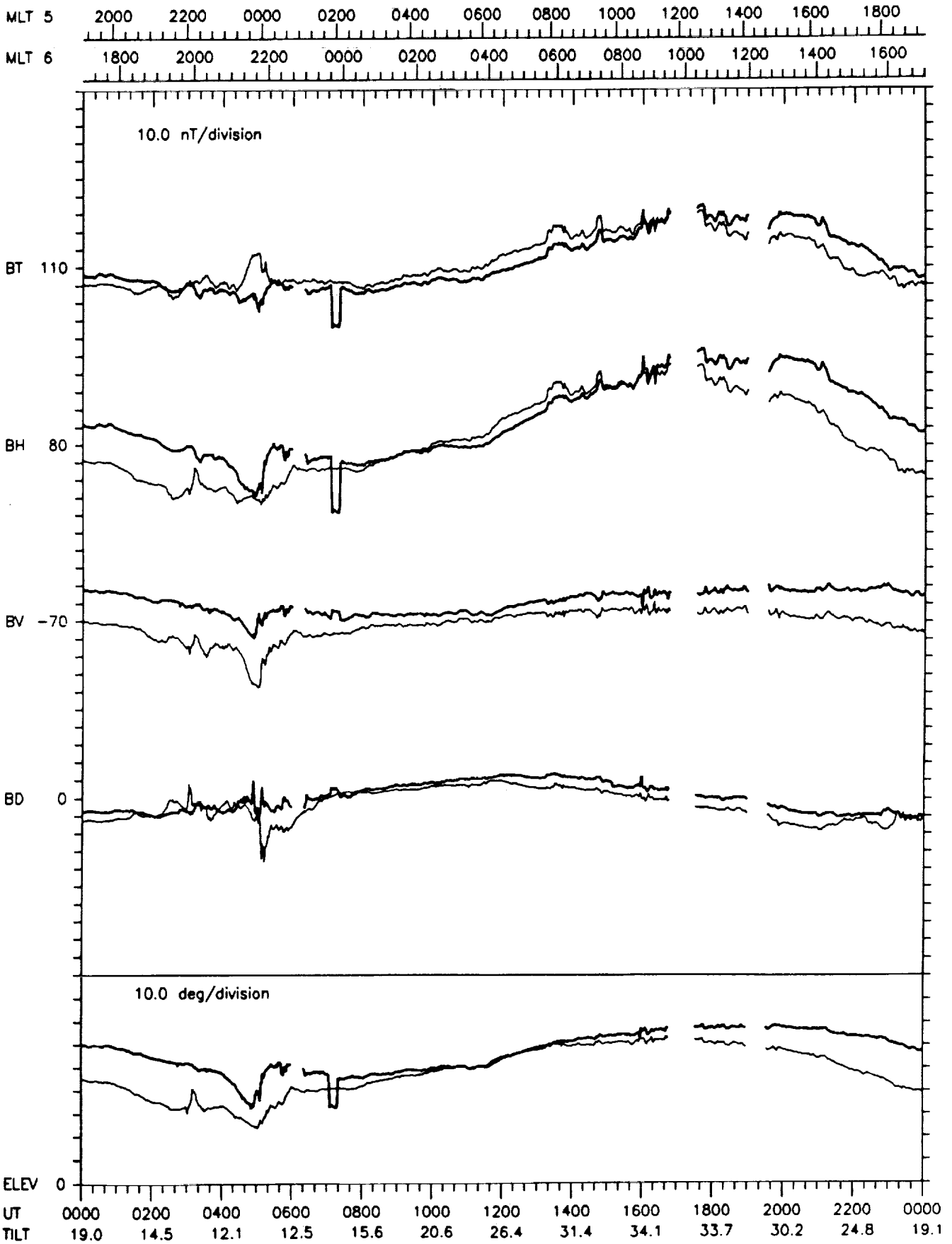MLT 6: 1800 2000 2200 0000 0200 0400 0600 0800 1000 1200 1400 1600

10.0 nT/division

BT 110

BH 80

BV −70

BD 0

10.0 deg/division

ELEV 0

UT   0000 0200 0400 0600 0800 1000 1200 1400 1600 1800 2000 2200 0000
TILT 19.0 14.5 12.1 12.5 15.6 20.6 26.4 31.4 34.1 33.7 30.2 24.8 19.1

PLOT2GOES   13-JUN-1989 12:18:20.11

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY164   JUN 13
GEOLON, MAGLAT = 5(−75.8, 11.2)   6(−108.3,   8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

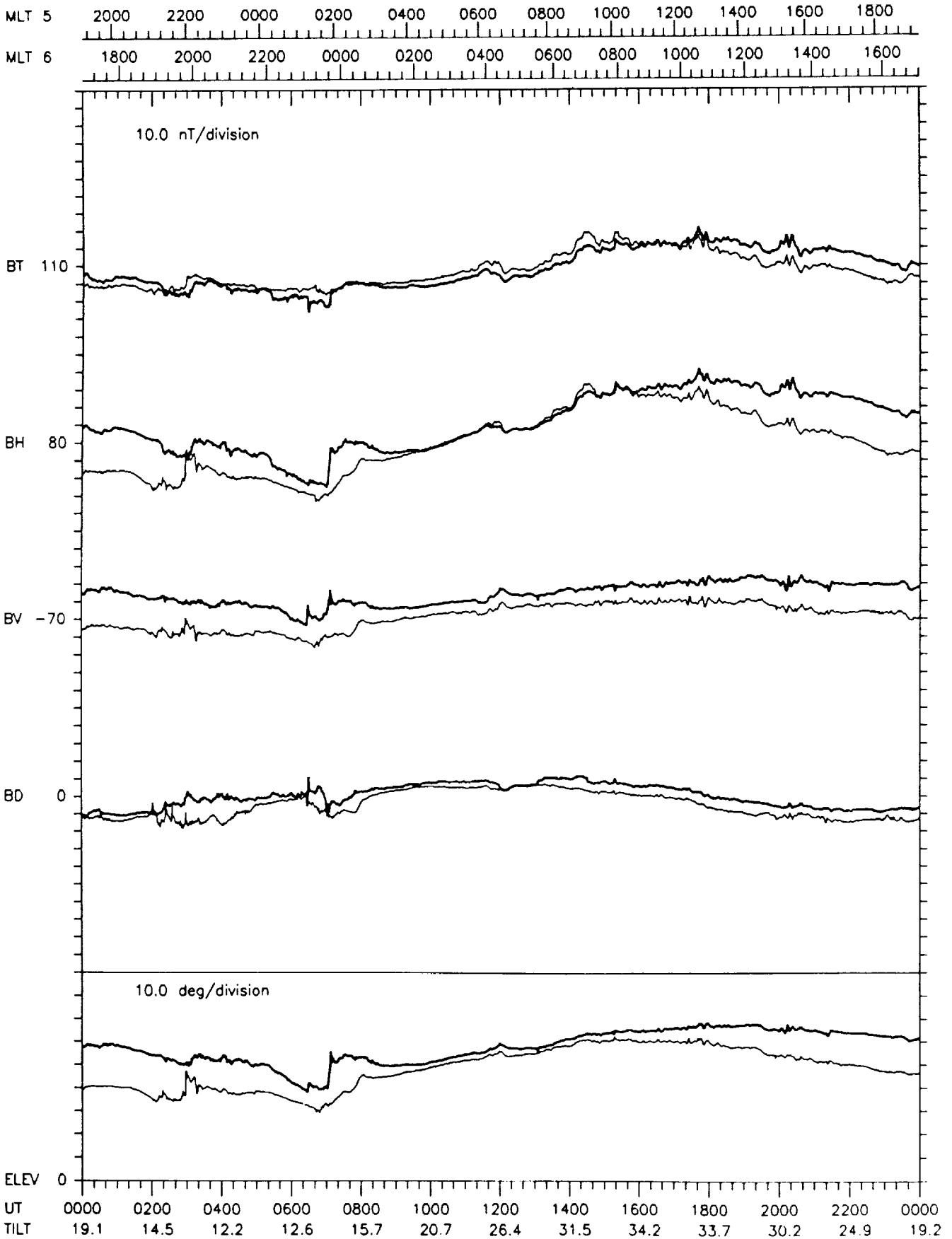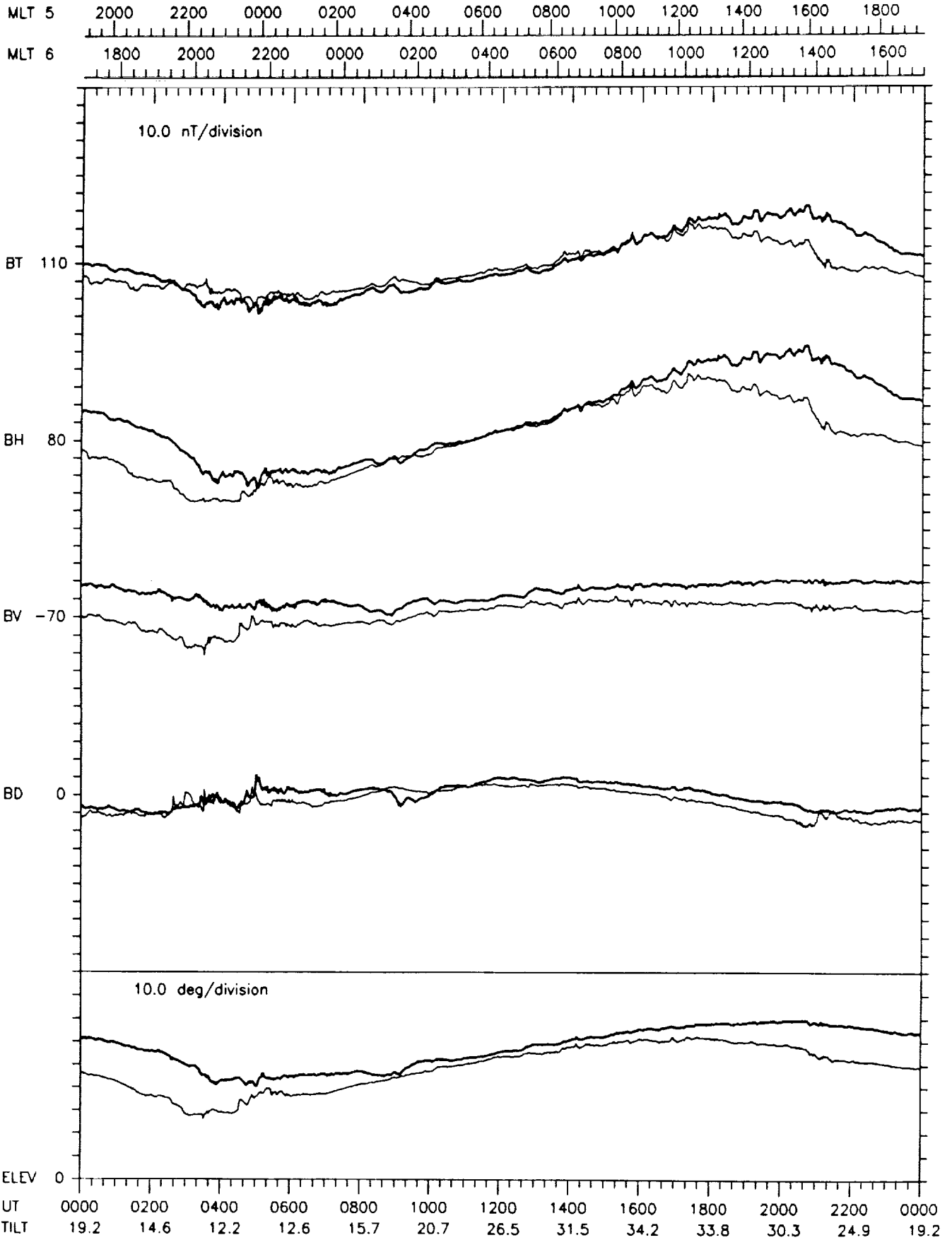MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 110

BH   80

BV −70

BD   0

10.0 deg/division

ELEV 0

UT   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800   2000   2200   0000
TILT 19.1   14.5   12.2   12.6   15.7   20.7   26.4   31.5   34.2   33.7   30.2   24.9   19.2

PLOT2GOES   13-JUN-1989 12:36:02.92

GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY165   JUN 14
GEOLON, MAGLAT = 5(−75.7, 11.2)   6(−108.3,   8.9)

MLT 5   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800

MLT 6   1800   2000   2200   0000   0200   0400   0600   0800   1000   1200   1400   1600

10.0 nT/division

BT 110

BH 80

BV −70

BD 0

10.0 deg/division

ELEV 0

UT   0000   0200   0400   0600   0800   1000   1200   1400   1600   1800   2000   2200   0000
TILT 19.2   14.6   12.2   12.6   15.7   20.7   26.5   31.5   34.2   33.8   30.3   24.9   19.2

PLOT2GOES   13-JUN-1989 12:53:28.80
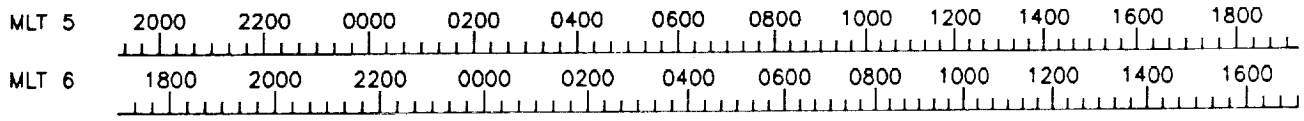
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986   DAY166   JUN 15
GEOLON, MAGLAT = 5(−75.6, 11.2)   6(−108.3,   8.9)
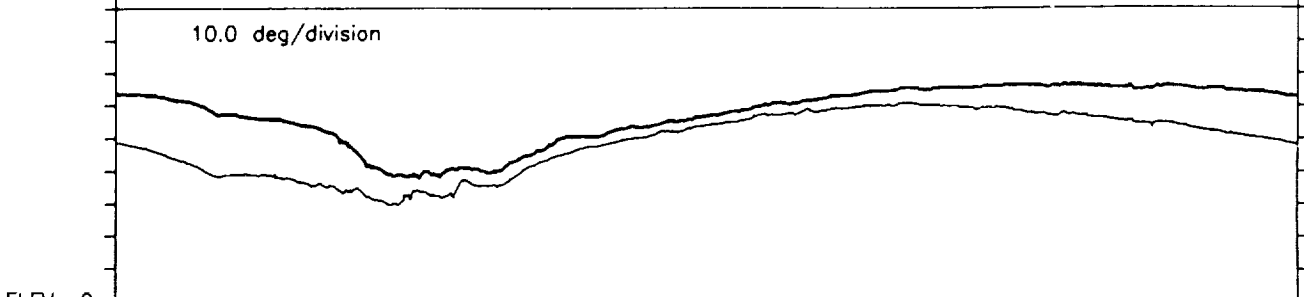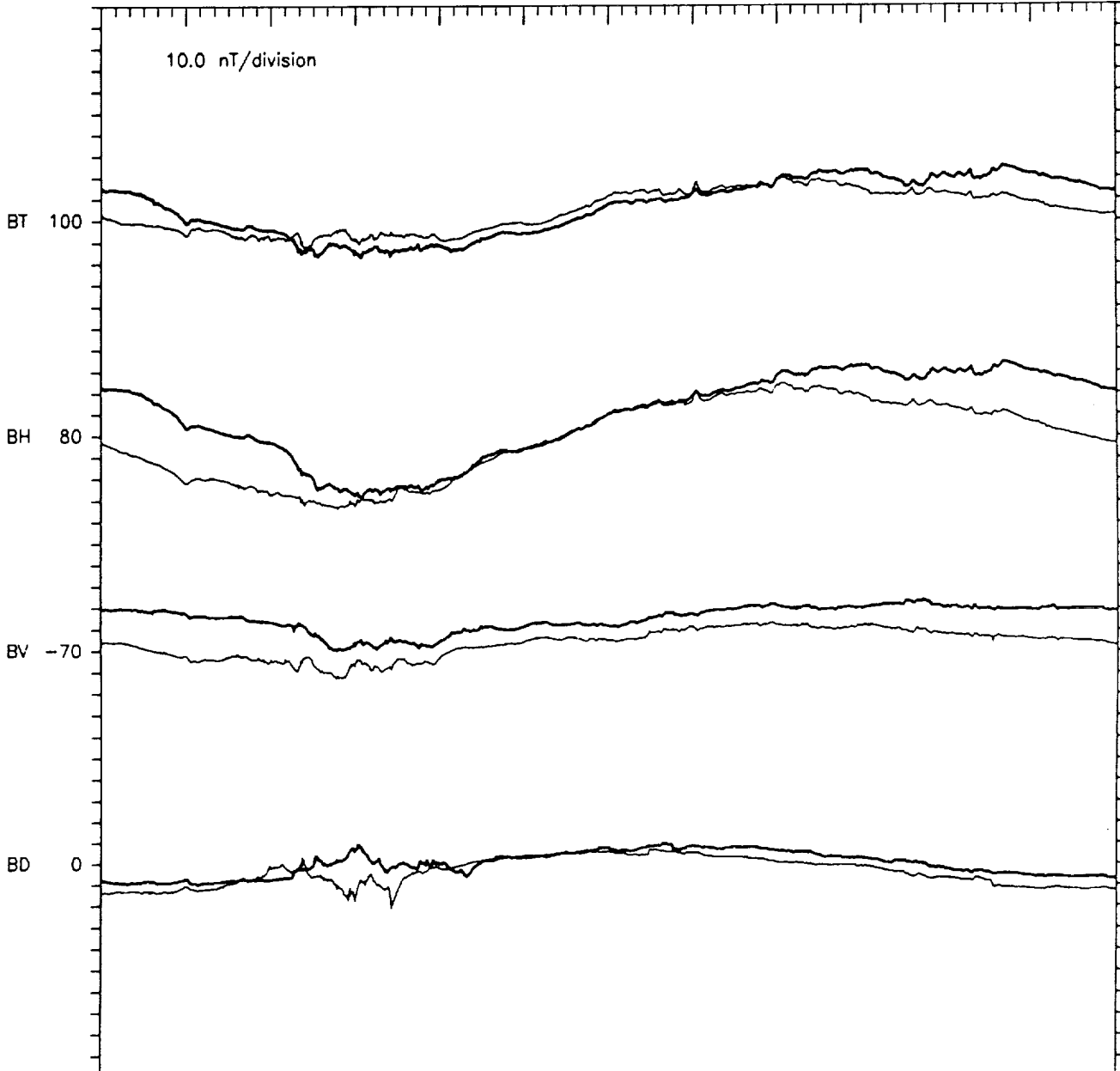
GOES 5 & 6 MAG DATA IN DIPOLE VDH COORDINATES
1986 DAY167   JUN 16
GEOLON, MAGLAT = 5(-75.6, 11.2)   6(-108.3, 8.9)

PLOT2GOES   13-JUN-1989 13:22:47.22