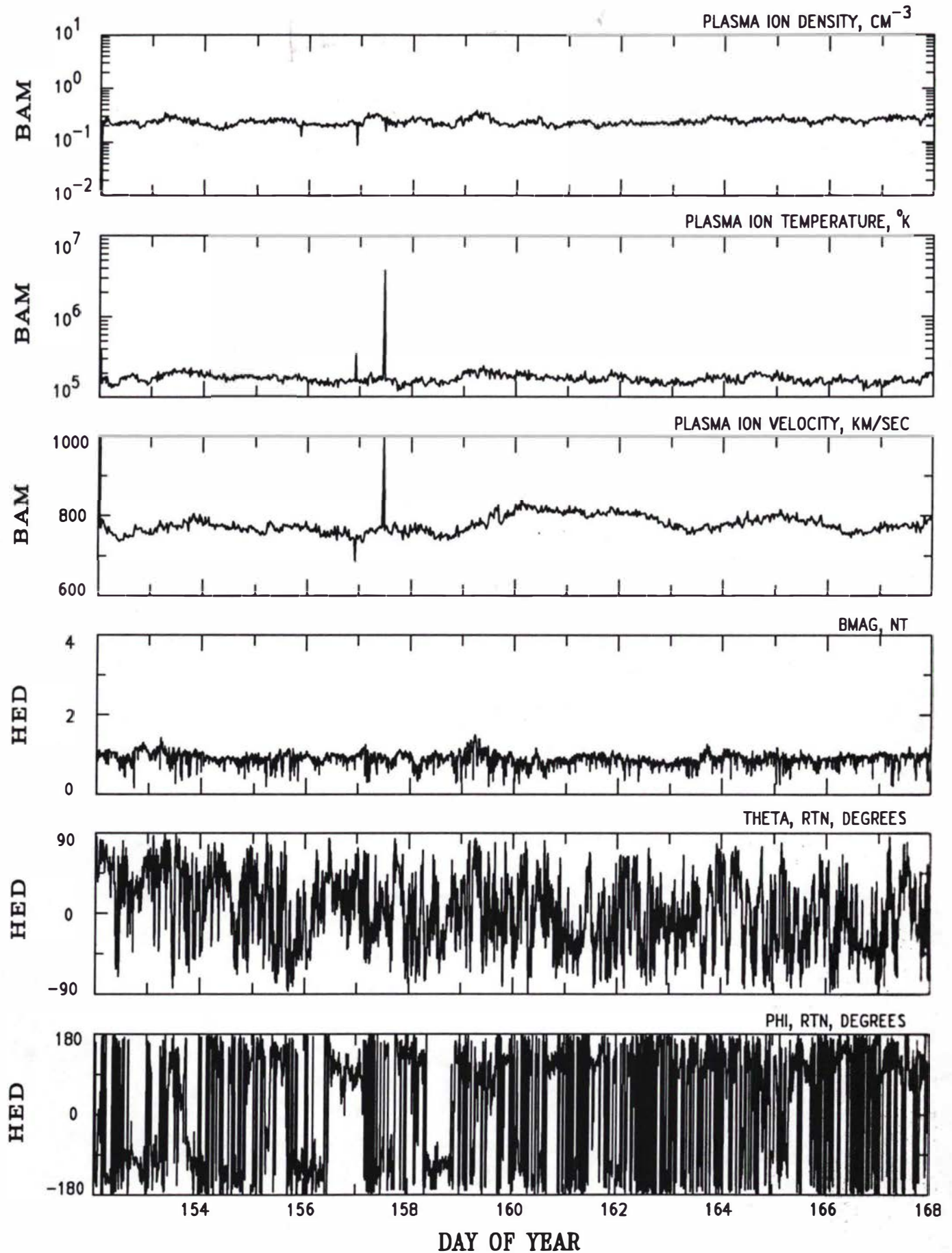


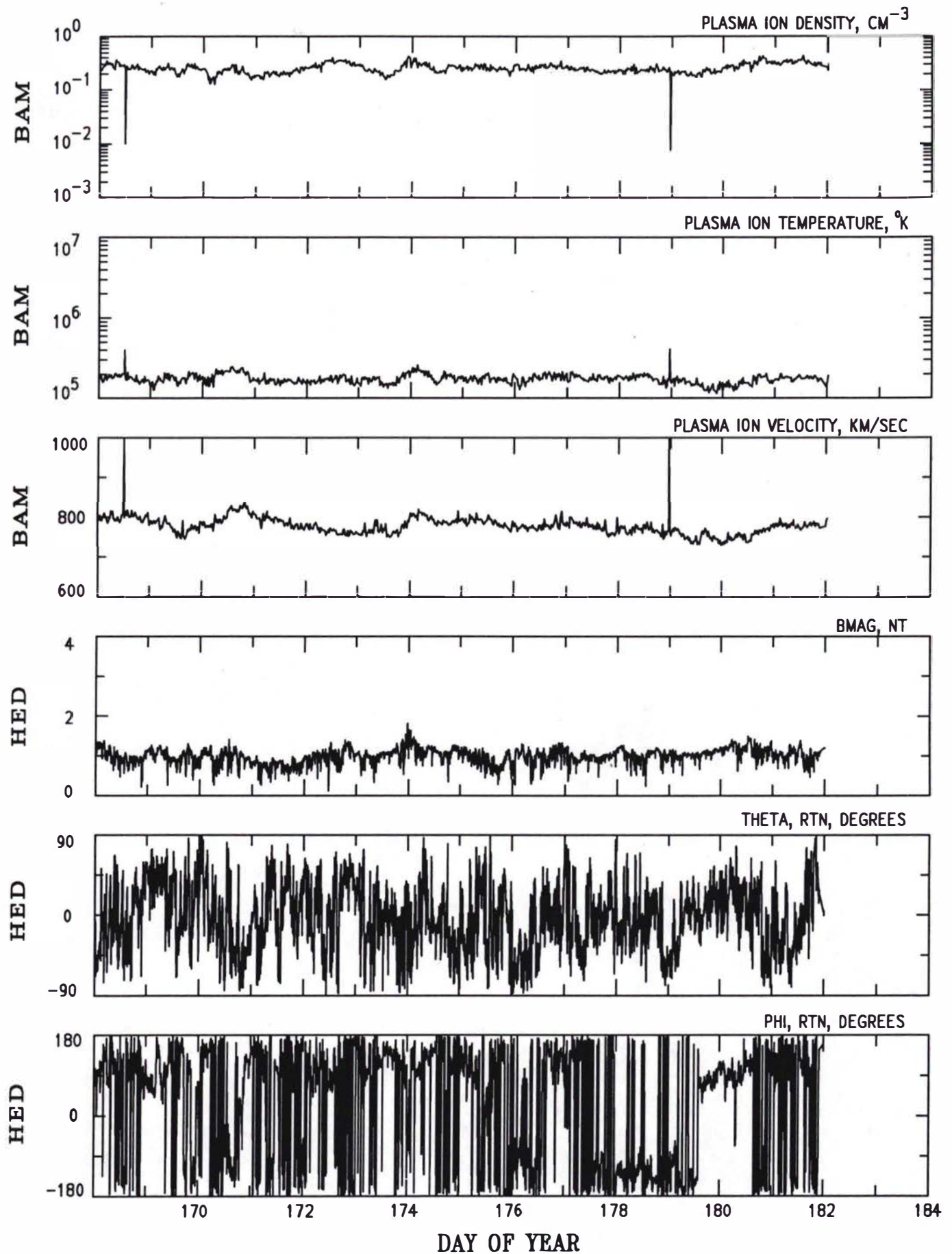
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

94 152 JUN 1 00:00:00.000 - 94 168 JUN 17 00:00:00.000



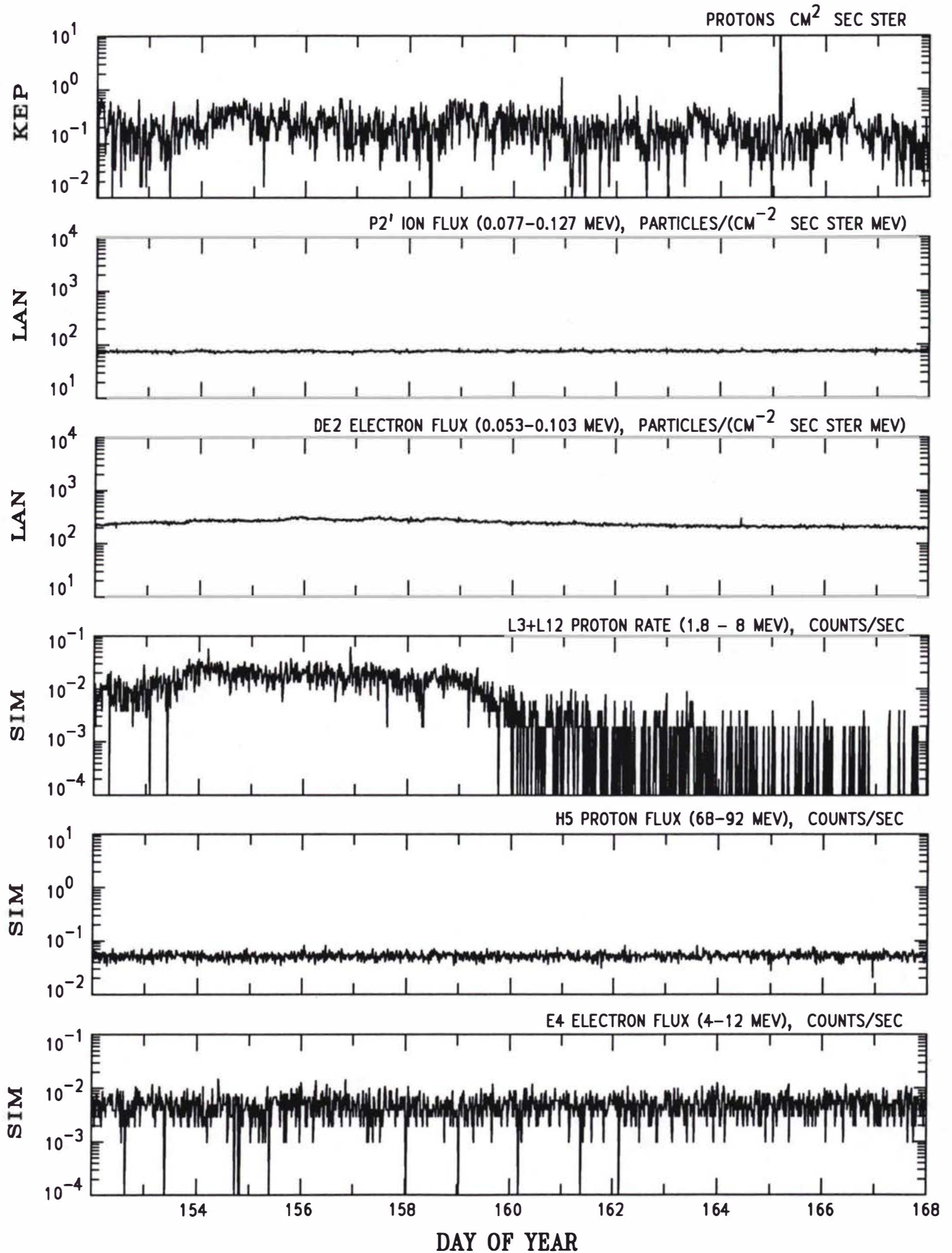
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

94 168 JUN 17 00:00:00.000 - 94 184 JUL 3 00:00:00.000



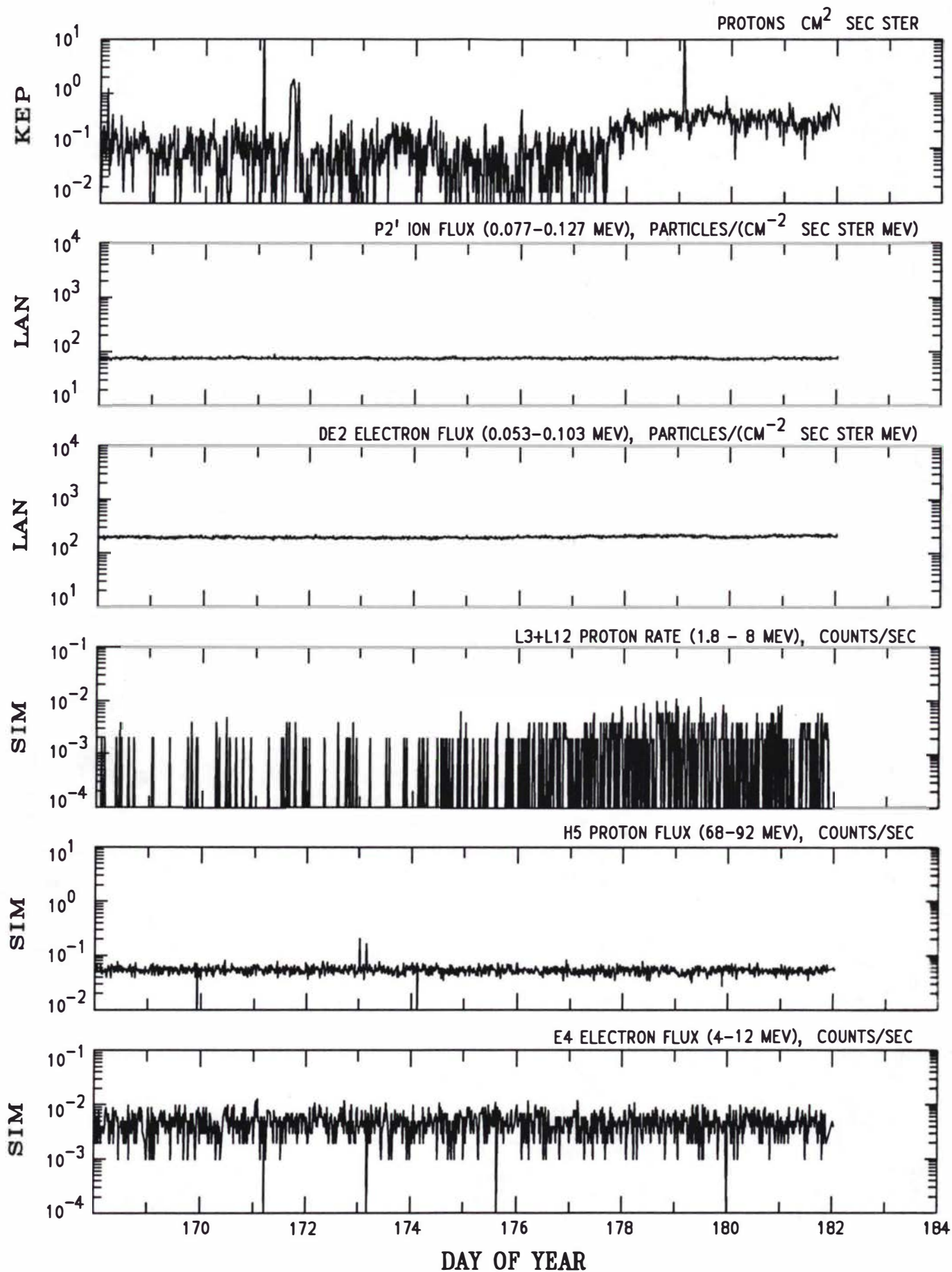
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

94 152 JUN 1 00:00:00.000 - 94 168 JUN 17 00:00:00.000



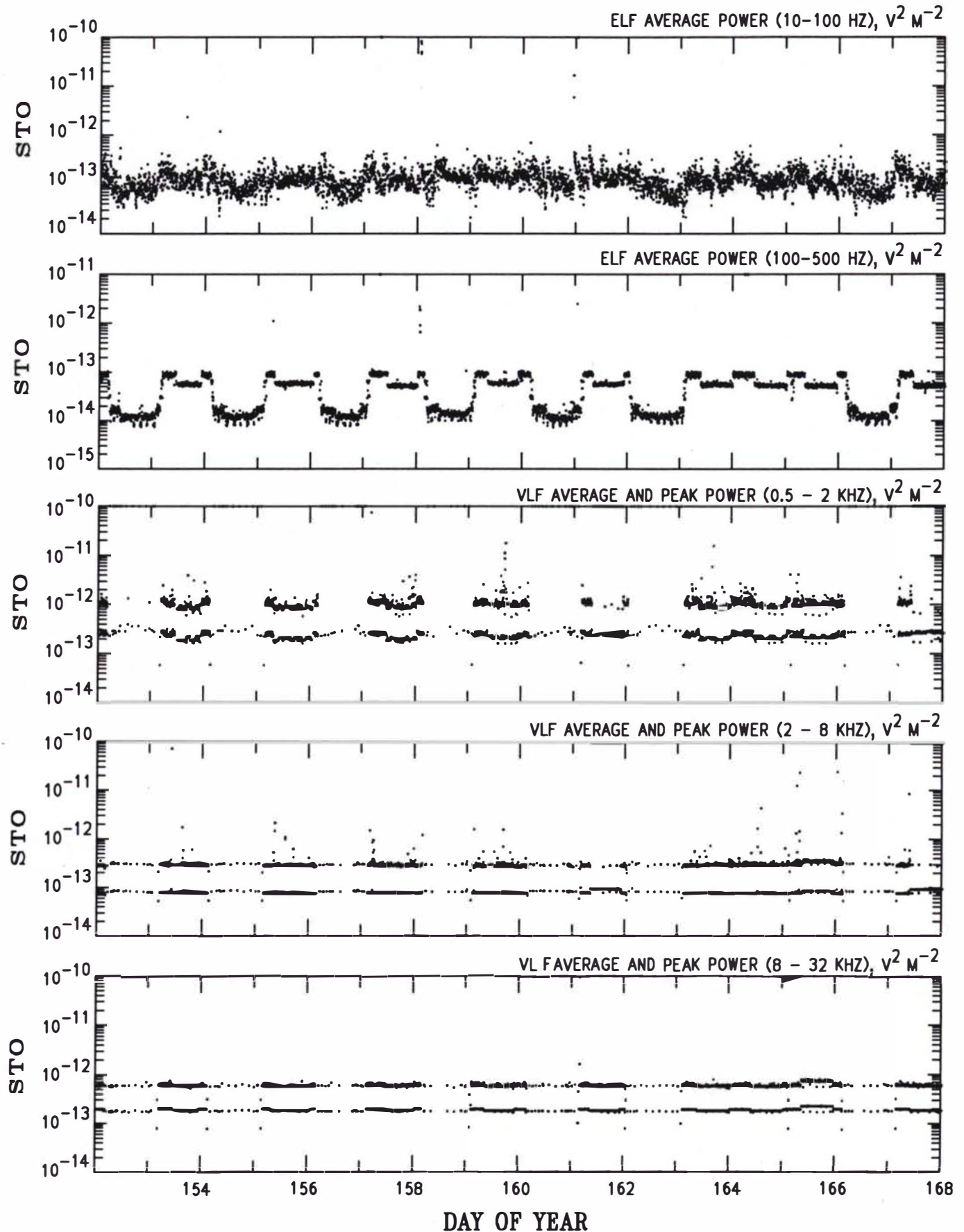
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

94 168 JUN 17 00:00:00.000 - 94 184 JUL 3 00:00:00.000



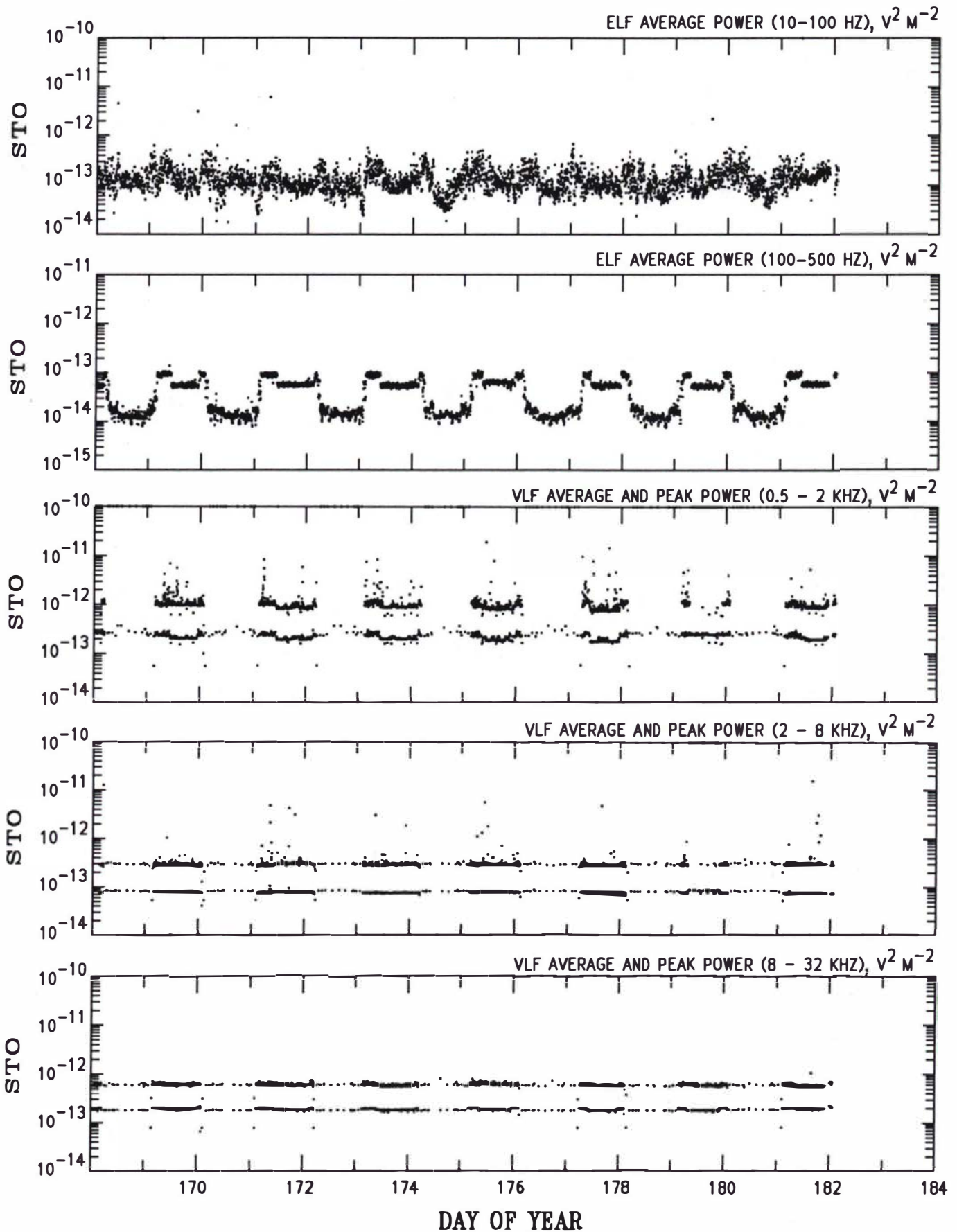
ULYSSES CDR - PLASMA WAVE

94 152 JUN 1 00:00:00.000 - 94 168 JUN 17 00:00:00.000



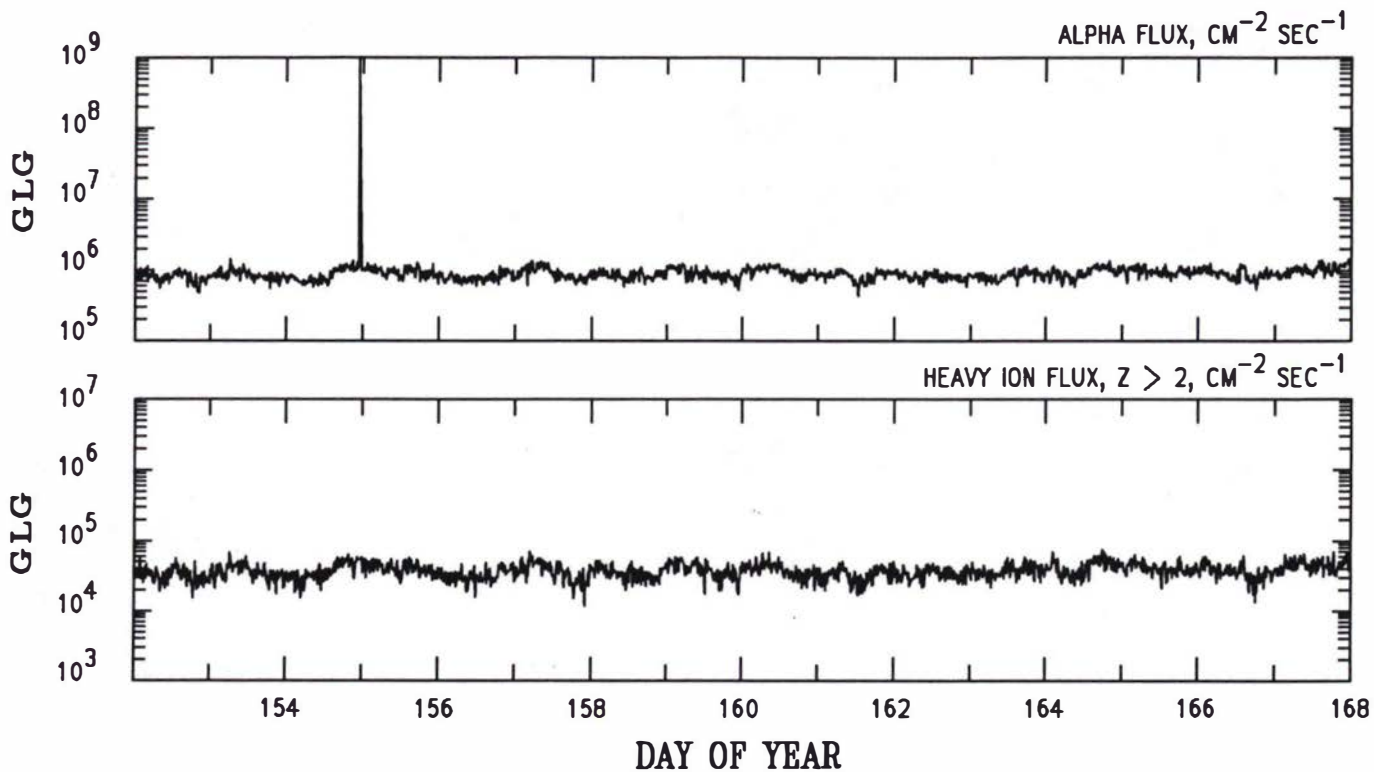
ULYSSES CDR - PLASMA WAVE

94 168 JUN 17 00:00:00.000 - 94 184 JUL 3 00:00:00.000



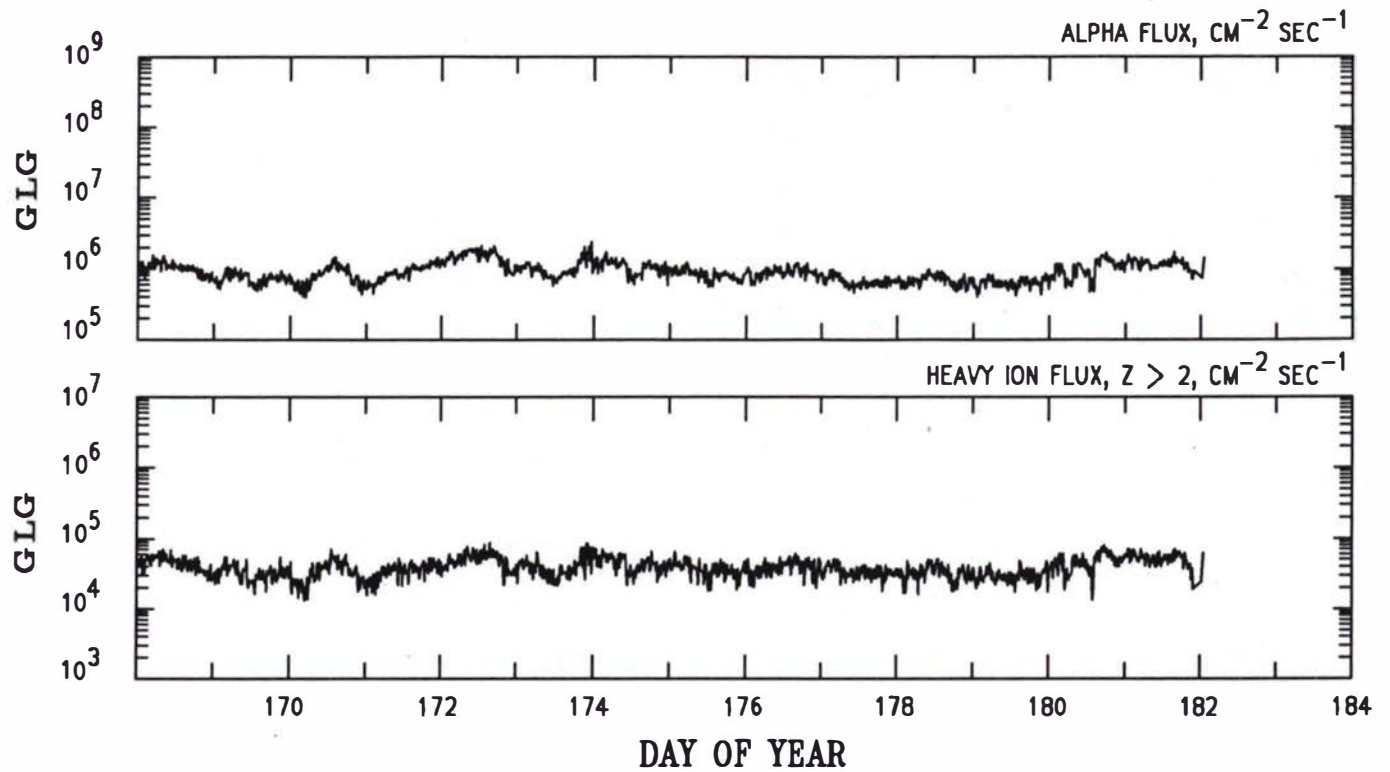
ULYSSES CDR - SOLAR WIND ION COMPOSITION

94 152 JUN 1 00:00:00.000 - 94 168 JUN 17 00:00:00.000



ULYSSES CDR - SOLAR WIND ION COMPOSITION

94 168 JUN 17 00:00:00.000 - 94 184 JUL 3 00:00:00.000



.94.152.00.10.57.821

HUS monthly long term thermal data

818

RET

E002 2ARADTMP S/C

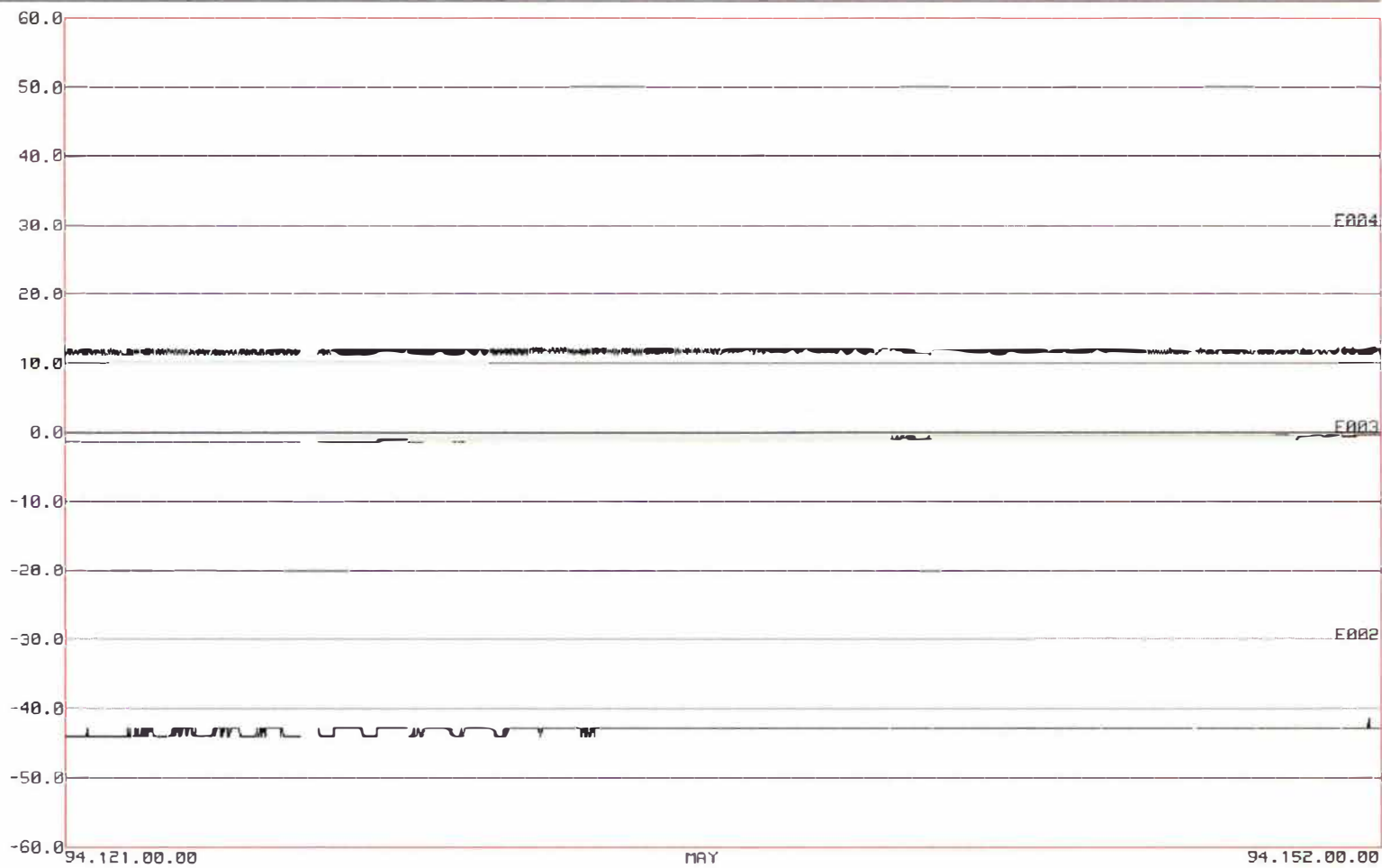
-0.3

E003 2BSENTMP S/C

-42.7

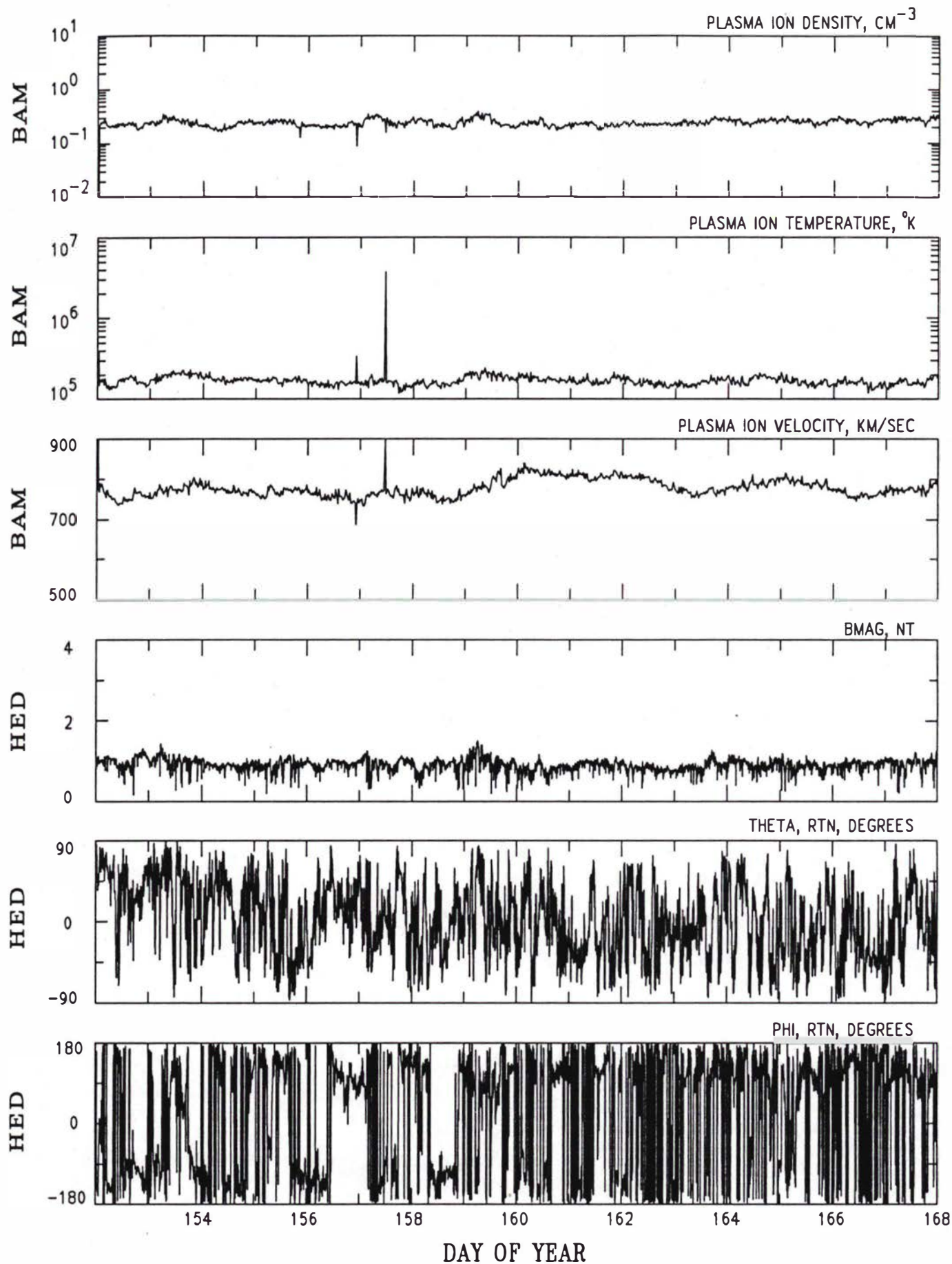
E004 2ASENSTMP EX

11.55



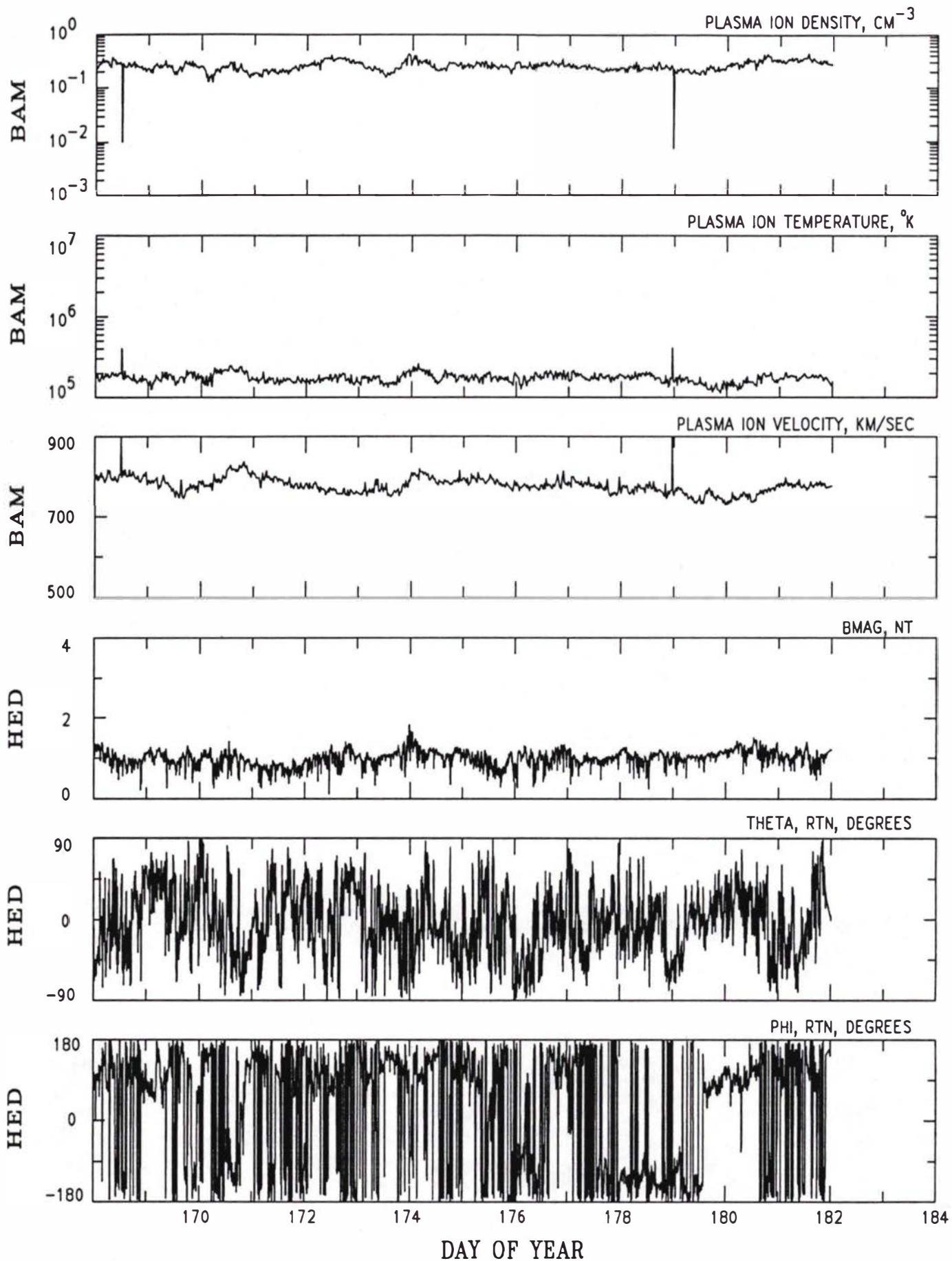
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

94 152 JUN 1 00:00:00.000 - 94 168 JUN 17 00:00:00.000



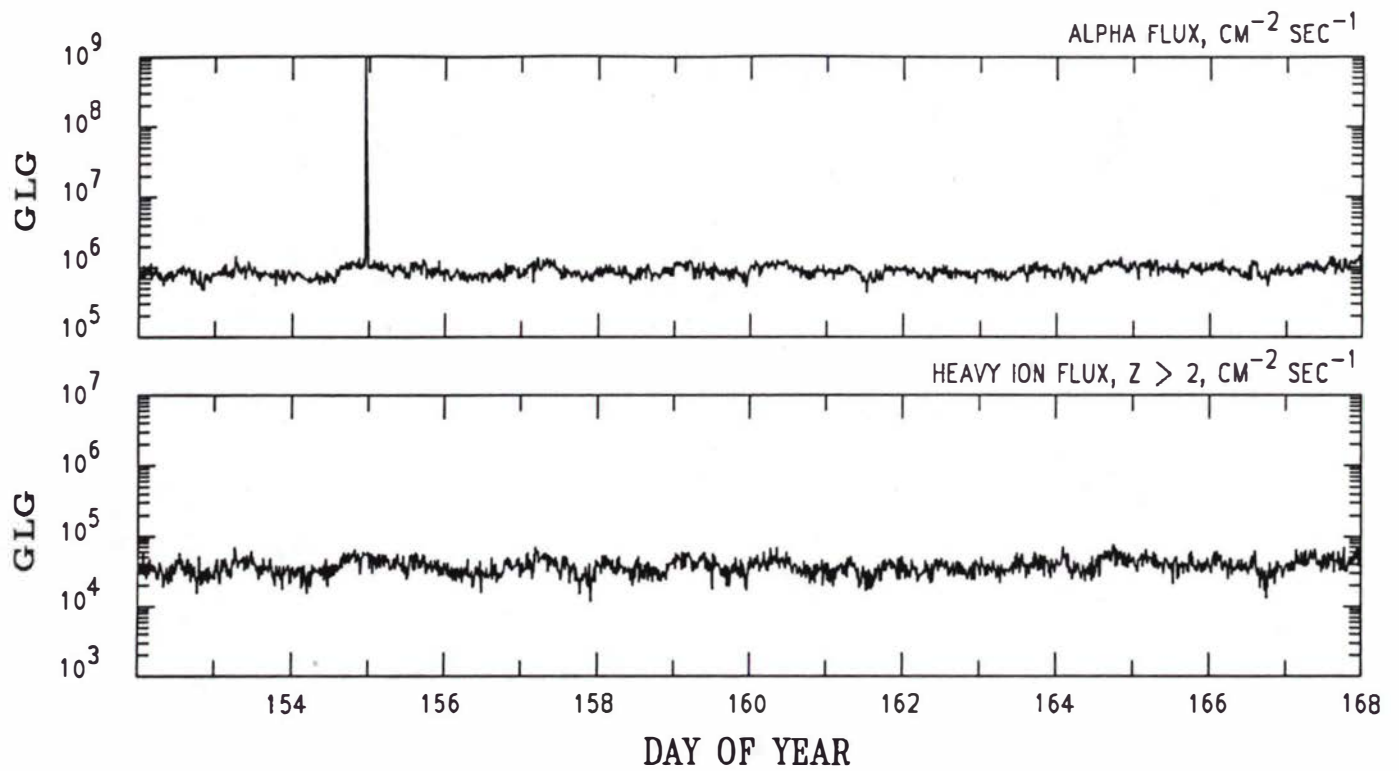
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

94 168 JUN 17 00:00:00.000 - 94 184 JUL 3 00:00:00.000



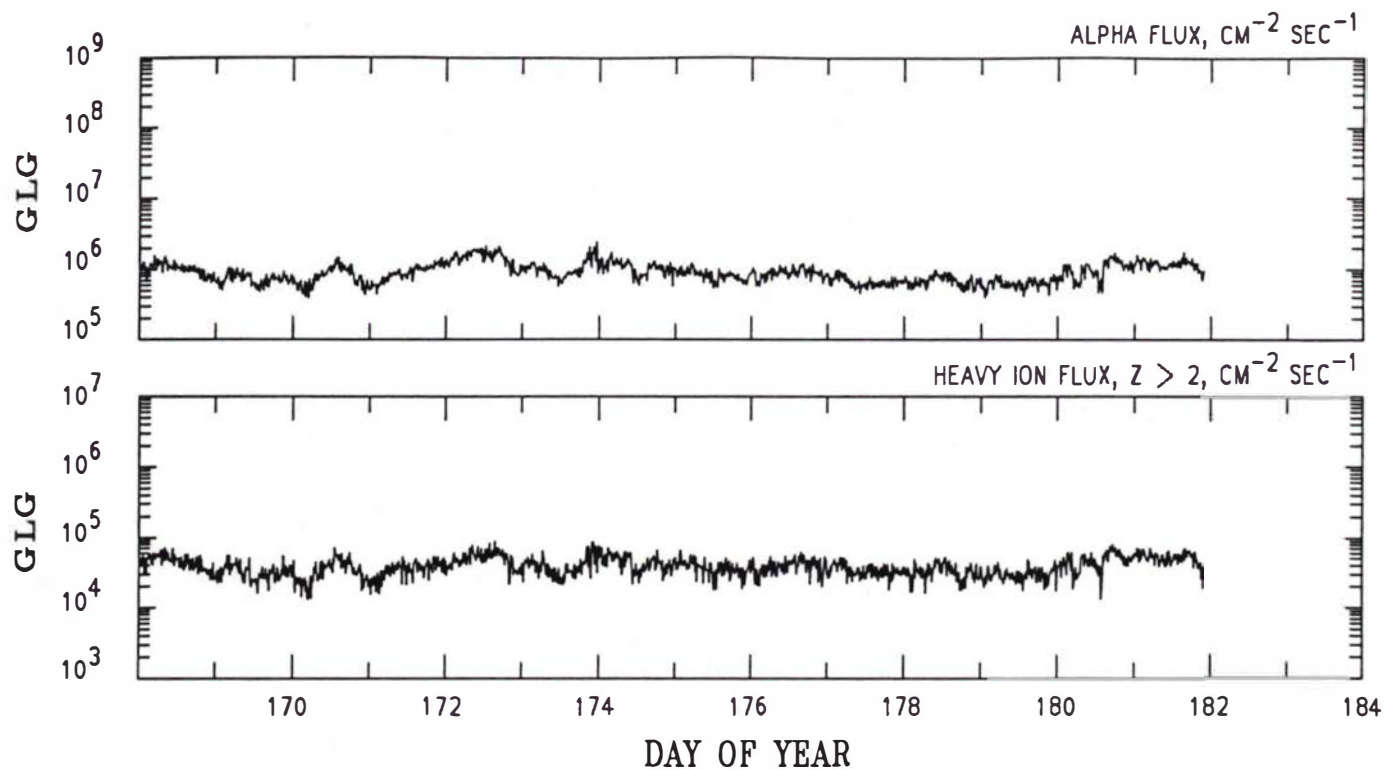
ULYSSES CDR - SOLAR WIND ION COMPOSITION

94 152 JUN 1 00:00:00.000 - 94 168 JUN 17 00:00:00.000



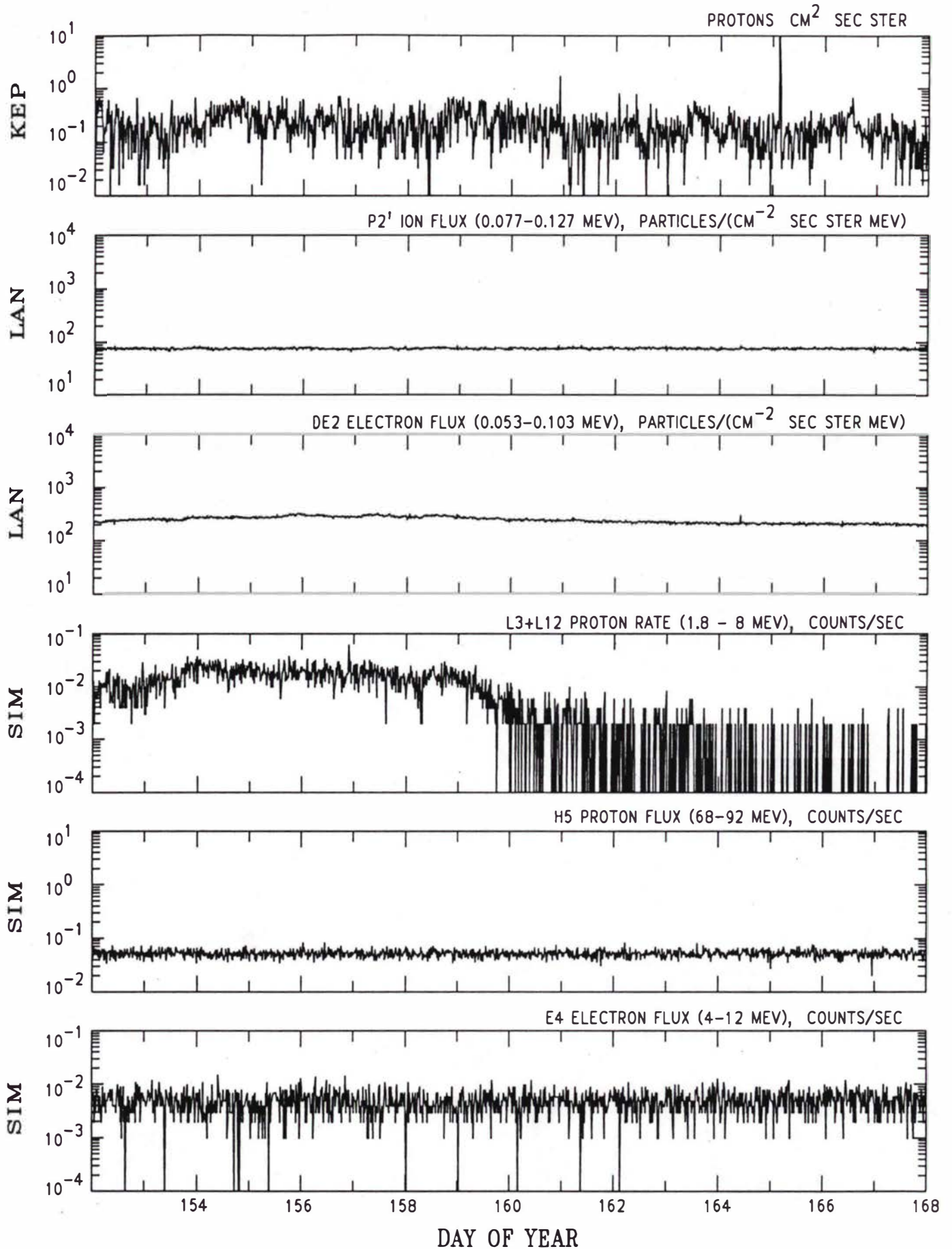
ULYSSES CDR - SOLAR WIND ION COMPOSITION

94 168 JUN 17 00:00:00.000 - 94 184 JUL 3 00:00:00.000



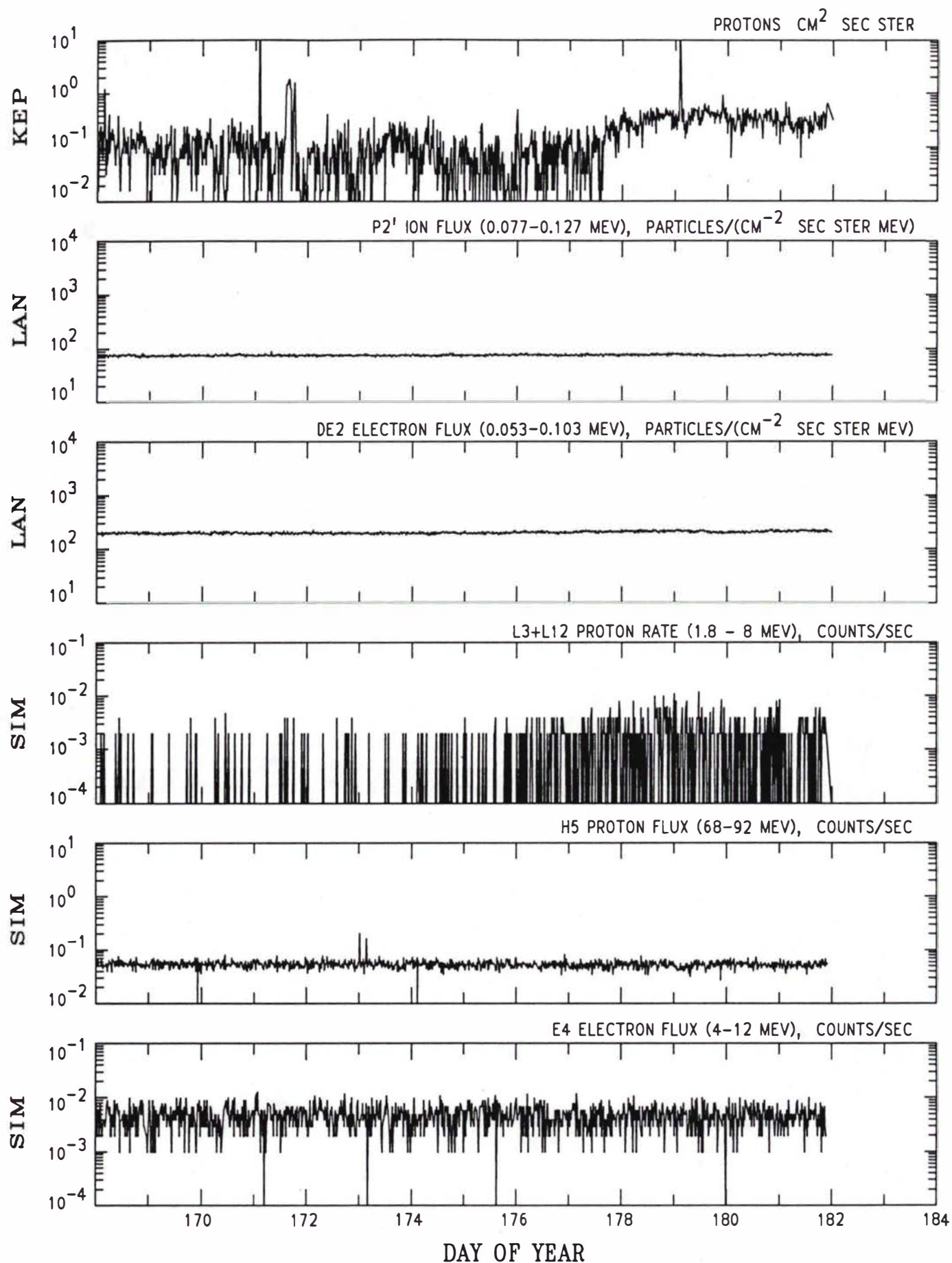
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

94 152 JUN 1 00:00:00.000 - 94 168 JUN 17 00:00:00.000



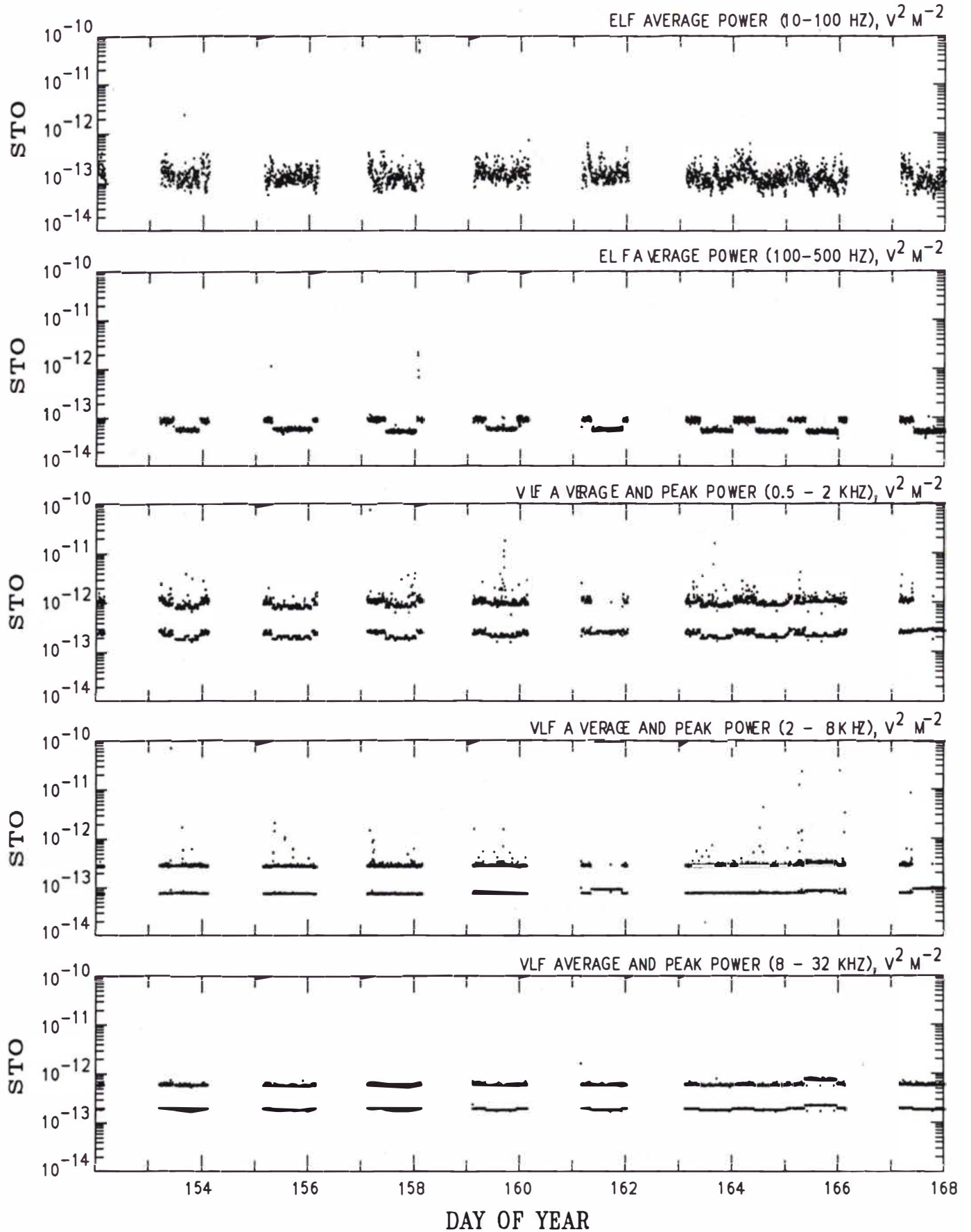
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

94 168 JUN 17 00:00:00.000 - 94 184 JUL 3 00:00:00.000



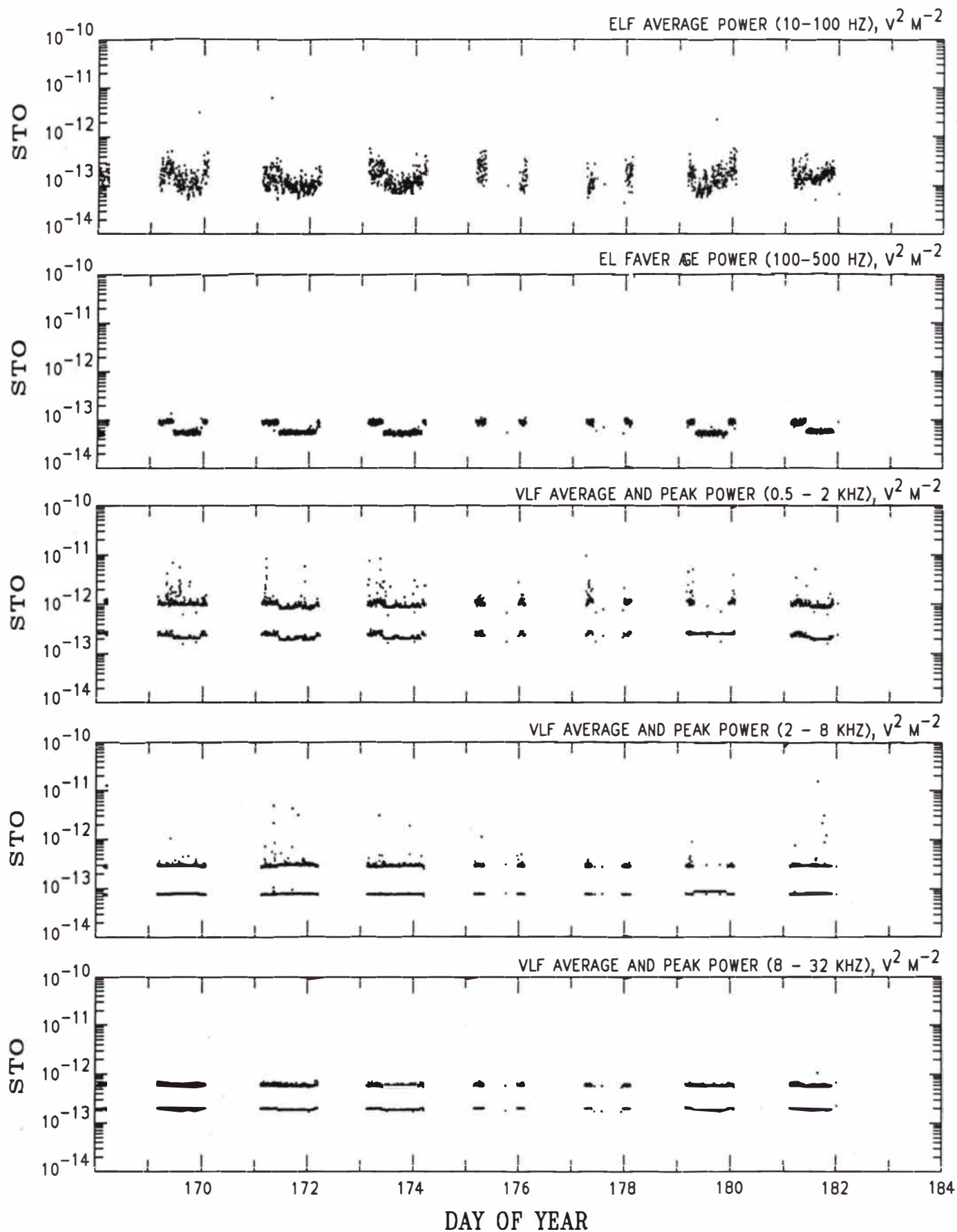
ULYSSES CDR - PLASMA WAVE

94 152 JUN 1 00:00:00.000 - 94 168 JUN 17 00:00:00.000



ULYSSES CDR - PLASMA WAVE

94 168 JUN 17 00:00:00.000 - 94 184 JUL 3 00:00:00.000



From HAGEDON@ssl.msfc.nasa.gov Thu Jun 2 08:07 PDT 1994
Date: Thu, 2 Jun 1994 10:09:53 -0500 (CDT)
From: HAGEDON@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
LHEAVXKWOK@ssl.msfc.nasa.gov, 15733SCHAEFER@ssl.msfc.nasa.gov,
CASS09BAND@ssl.msfc.nasa.gov, CASS09GRUBER@ssl.msfc.nasa.gov,
CASS09MATTESON@ssl.msfc.nasa.gov, PACIESAS@ssl.msfc.nasa.gov,
HORACK@ssl.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 3010

TIME: TJD=9504 SECONDS=71870

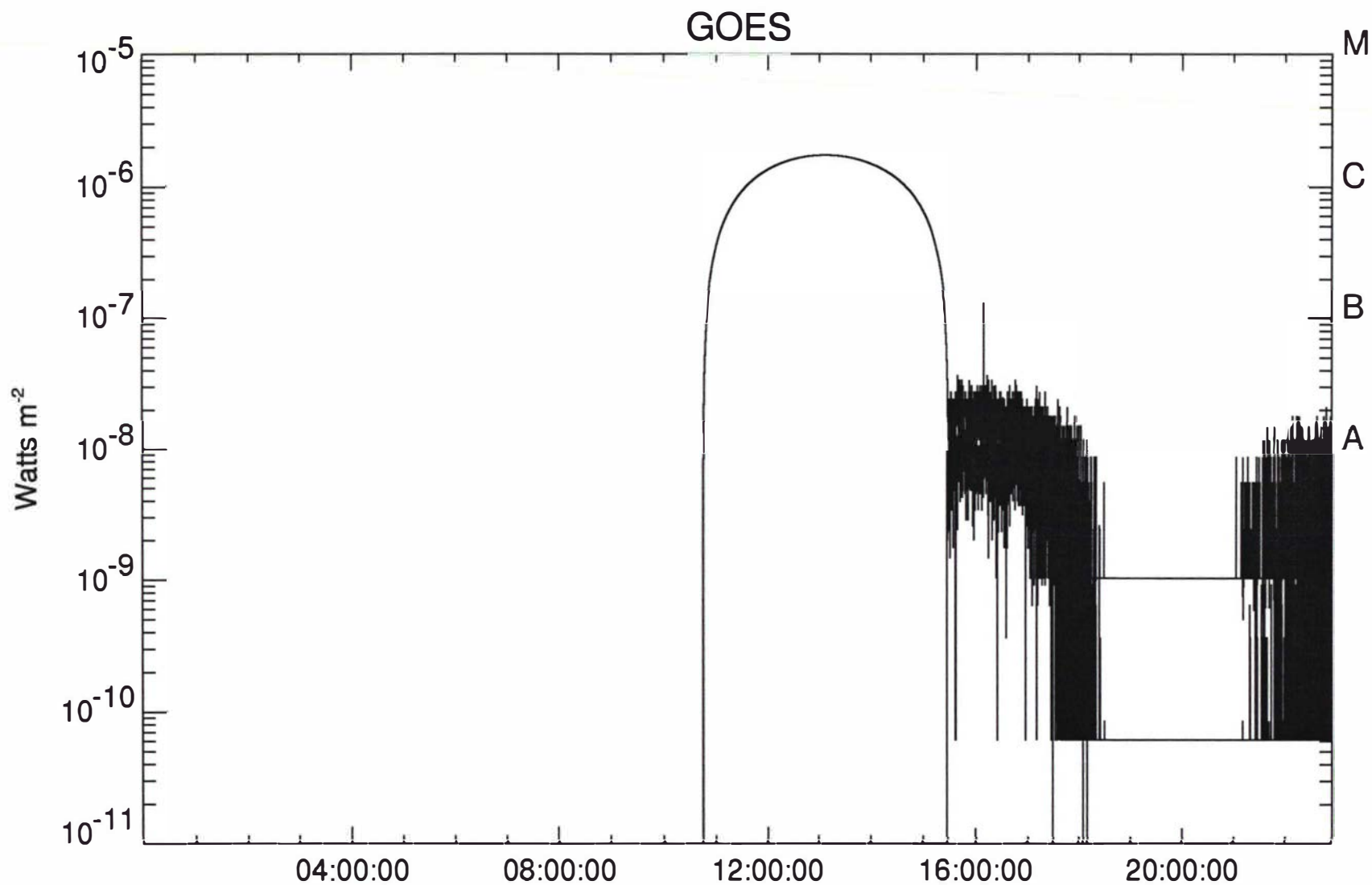
TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY.



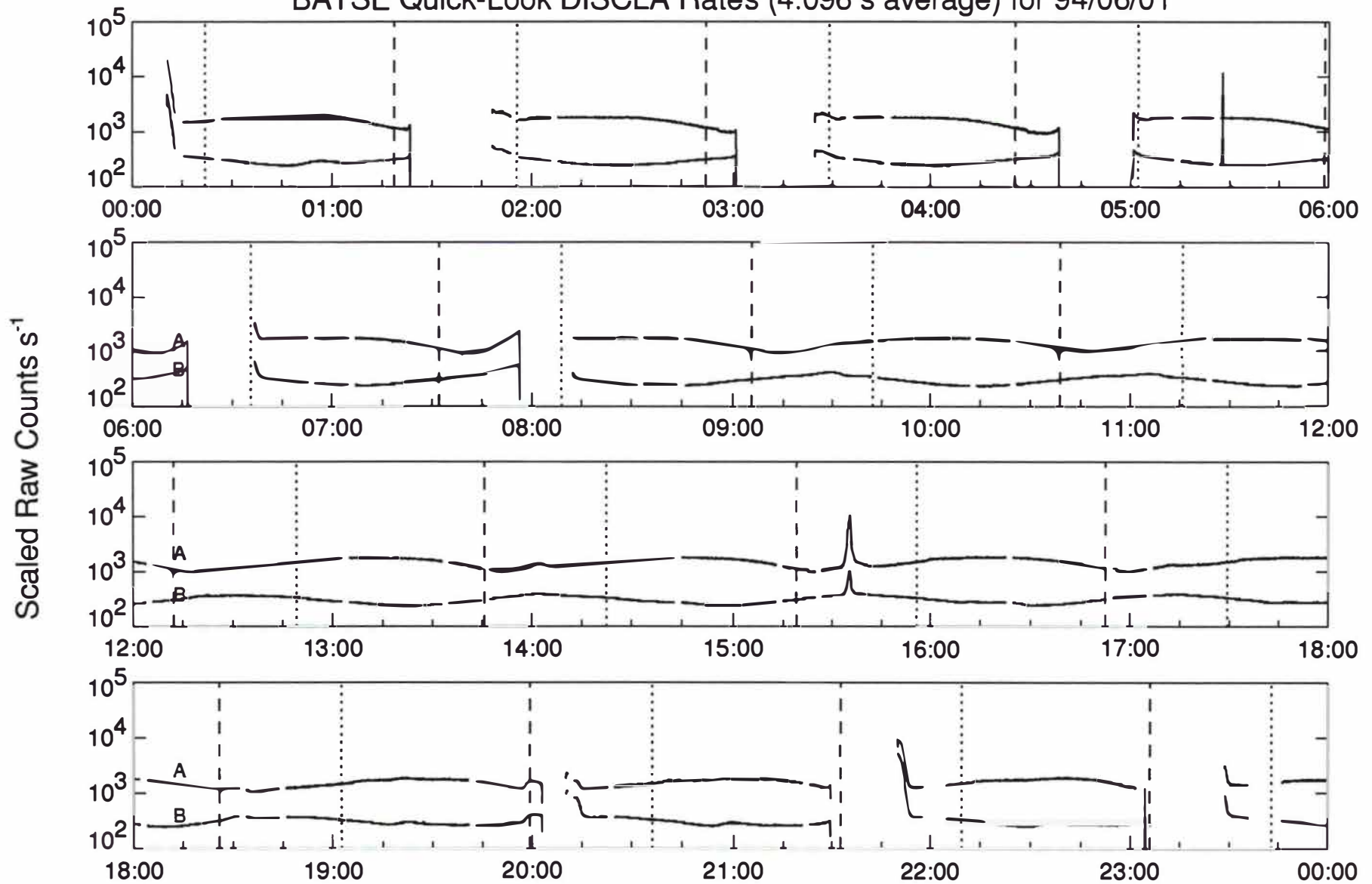
Data Start: 94/06/01, 0000:00

Plot created: 94/06/07, 1434

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/01

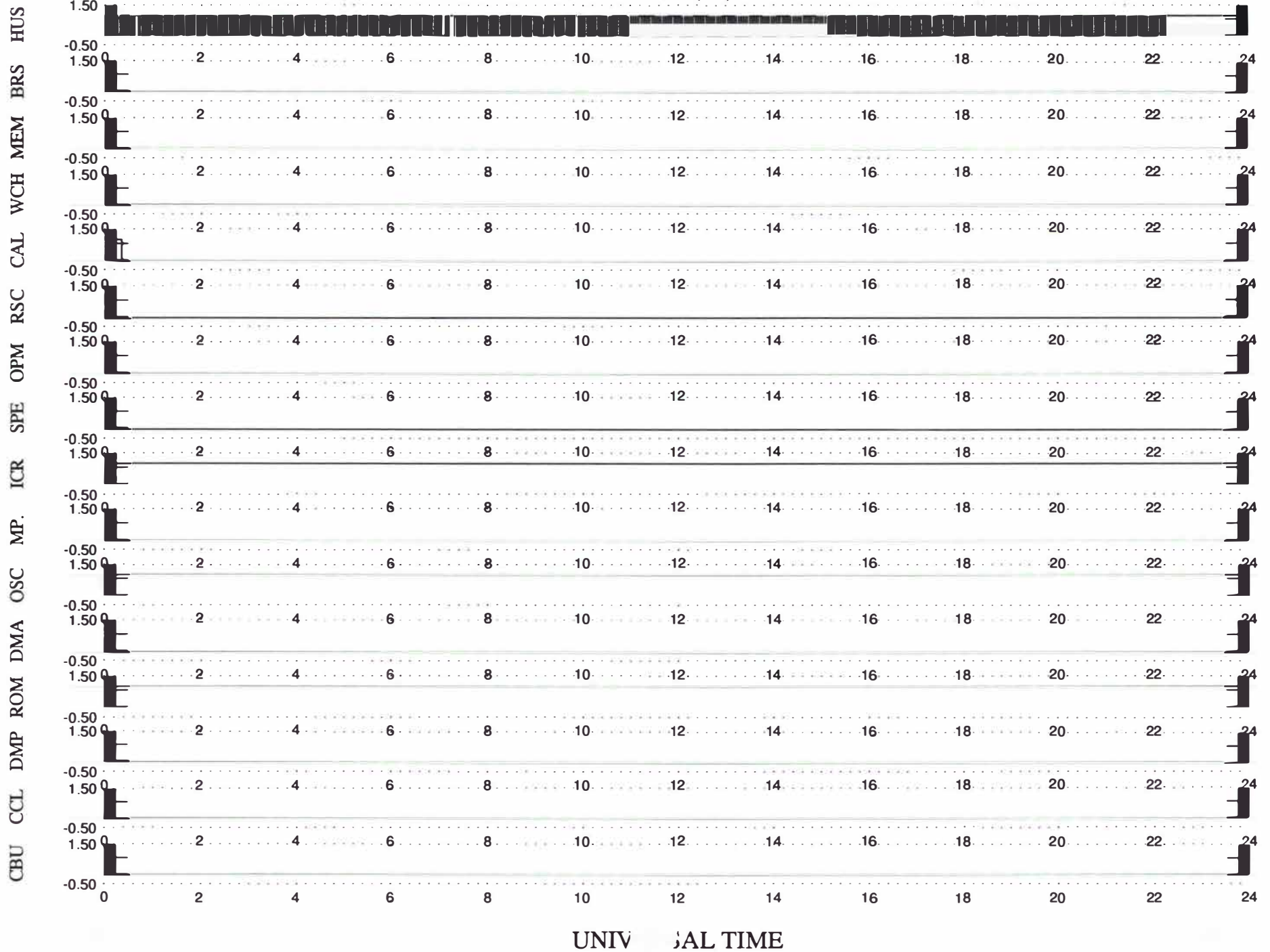


Current Time: 94/06/07, 1407 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05

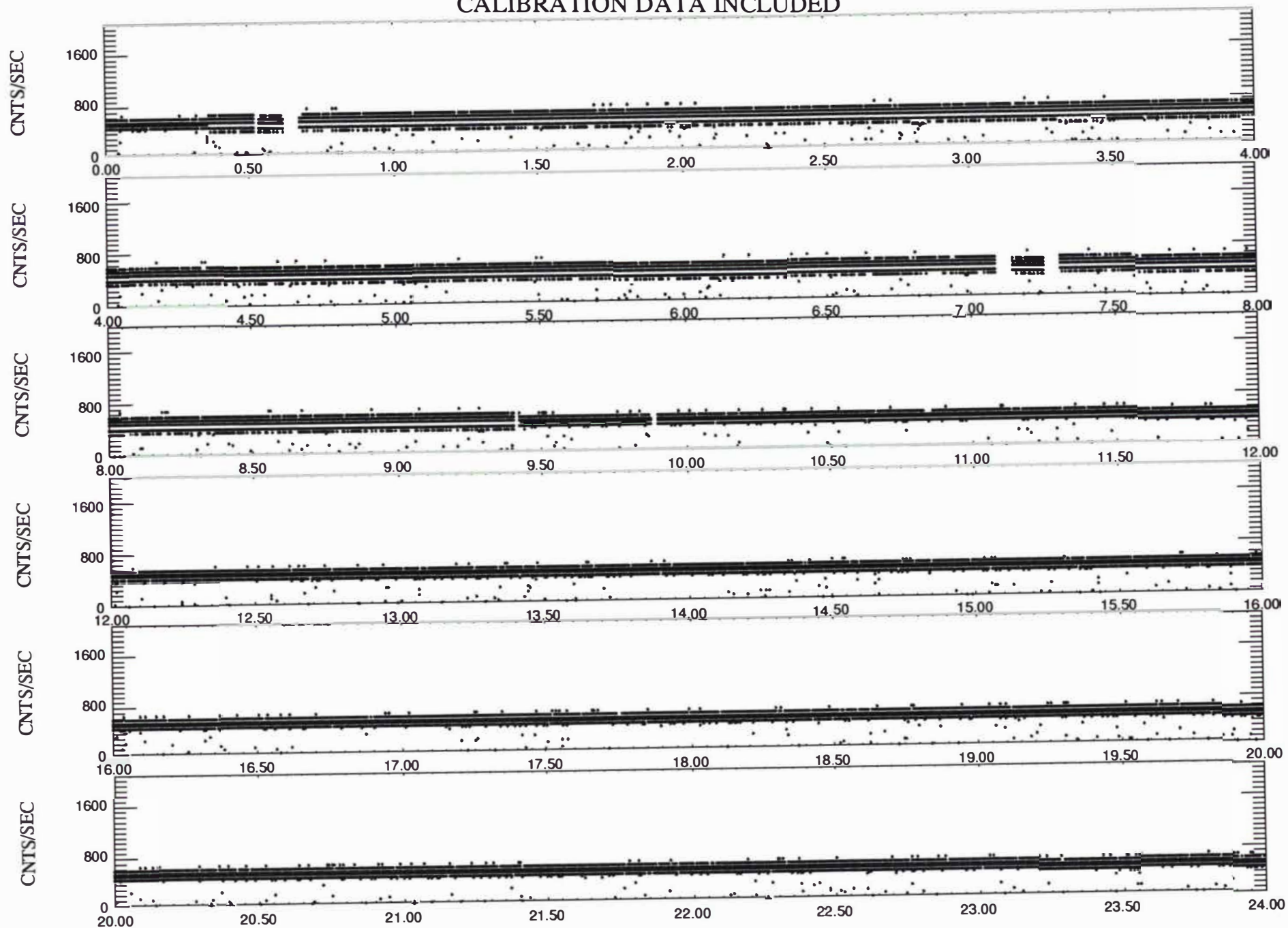
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

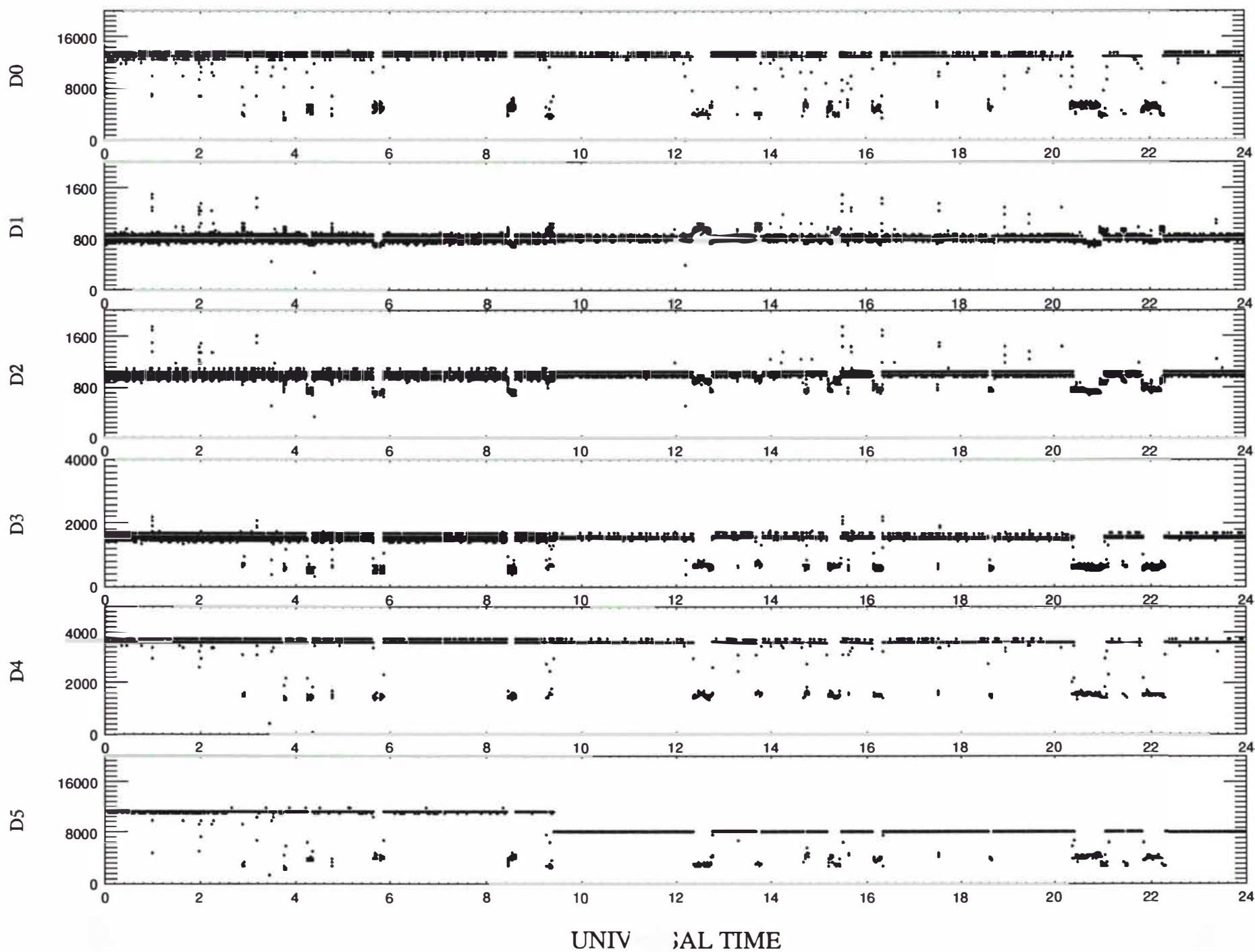
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV CAL TIME



From MALLOZZI@ssl.msfc.nasa.gov Fri Jun 3 10:02 PDT 1994
Date: Fri, 3 Jun 1994 12:05:02 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3011
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3011
EVENT OF 1994 JUN 2 DAY OF YEAR=153
EVENT CROSSING TIME AT BATSE : 857. S. OR 00:14:17.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 16.000 58.000
BATSE PEAK COUNTING RATE: 6100 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 2/ 6/ 94 IS:
RA= 120.808 DEC= -39.896 DIST= 3.018 AU
BATSE-ULYSSES DISTANCE = 451421306. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 49.62 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 975.52 SECS.
CROSSING TIME AT ULYSSES IS 1833. S. OR 00:30:32 +/- 263.96 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 2/ 6/ 94 IS:
RA= 34.681 DEC= 13.079 DIST= 2.118 AU
MARS-BATSE DISTANCE = 316919840. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=132.91 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -719.79 SECS.
CROSSING TIME AT MARS IS 137. S. OR 00:02:17 +/- 123.49 SECONDS

no

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3011	940602	9505	00857	6100	016	+58

BATSE BURST TRIGGER

NO.: 03011

TIME: TJD=9505 SECONDS=00857

TYPE: BURST

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=114.2 AZIMUTH=041.7 ERROR= DEGREES

COMMENTS:

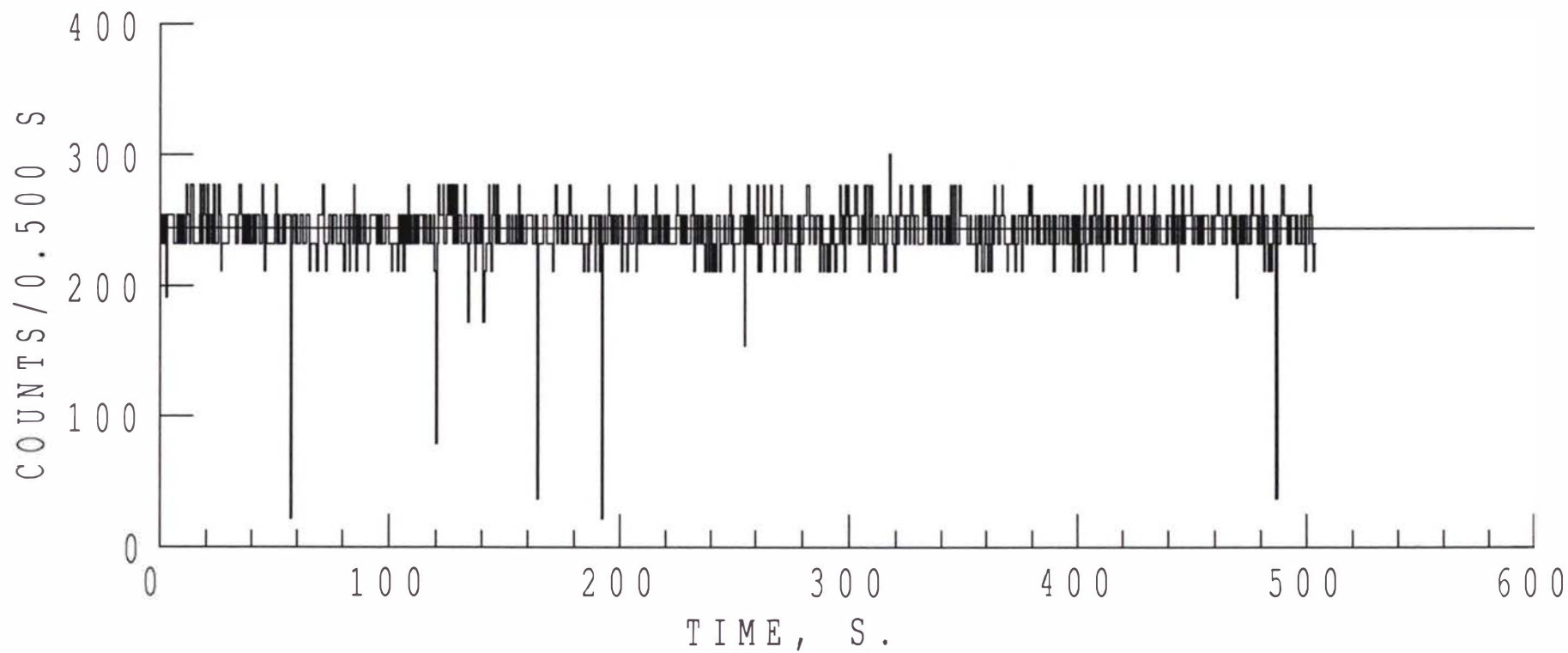
MULTI-PEAKED EVENT OF DURATION APPROX. 35 SECONDS, WITH POSSIBLE
SLIGHT EMISSION FOR ANOTHER 30 SECONDS.
OBSERVED ABOVE 300 KEV.
ALL PULSES HAVE FAIRLY FAST RISE AND DECAY.

3 / 6 / 94

ULYSSES RT
2 / 6 / 94 1584.124 s
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From MALLOZZI@ssl.msfc.nasa.gov Fri Jun 3 10:04 PDT 1994
Date: Fri, 3 Jun 1994 12:06:25 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3012
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3012
EVENT OF 1994 JUN 2 DAY OF YEAR=153
EVENT CROSSING TIME AT BATSE : 27454. S. OR 07:37:34.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 61.000 -6.000
BATSE PEAK COUNTING RATE: 4100 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 2/ 6/ 94 IS:
RA= 120.844 DEC= -39.871 DIST= 3.018 AU
BATSE-ULYSSES DISTANCE = 451513007. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=116.77 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -678.40 SECS.
CROSSING TIME AT ULYSSES IS 26776. S. OR 07:26:15 +/- 273.15 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 2/ 6/ 94 IS:
RA= 34.681 DEC= 13.079 DIST= 2.118 AU
MARS-BATSE DISTANCE = 316919840. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=147.63 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -892.90 SECS.
CROSSING TIME AT MARS IS 26561. S. OR 07:22:41 +/- 84.69 SECONDS

Ad

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3012	940602	9505	27454	4100	061	-06

BATSE BURST TRIGGER

NO.: 03012

TIME: TJD=9505 SECONDS=27454

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=041.6 AZIMUTH=026.5 ERROR= DEGREES

COMMENTS:

BURST WITH FOUR DISTINCT PEAKS; TOTAL DURATION APPROX. 10 SECONDS.
OBSERVED ABOVE 100 KEV, BUT NOT ABOVE 300 KEV.

3 / 6 / 94

ULYSSES RT

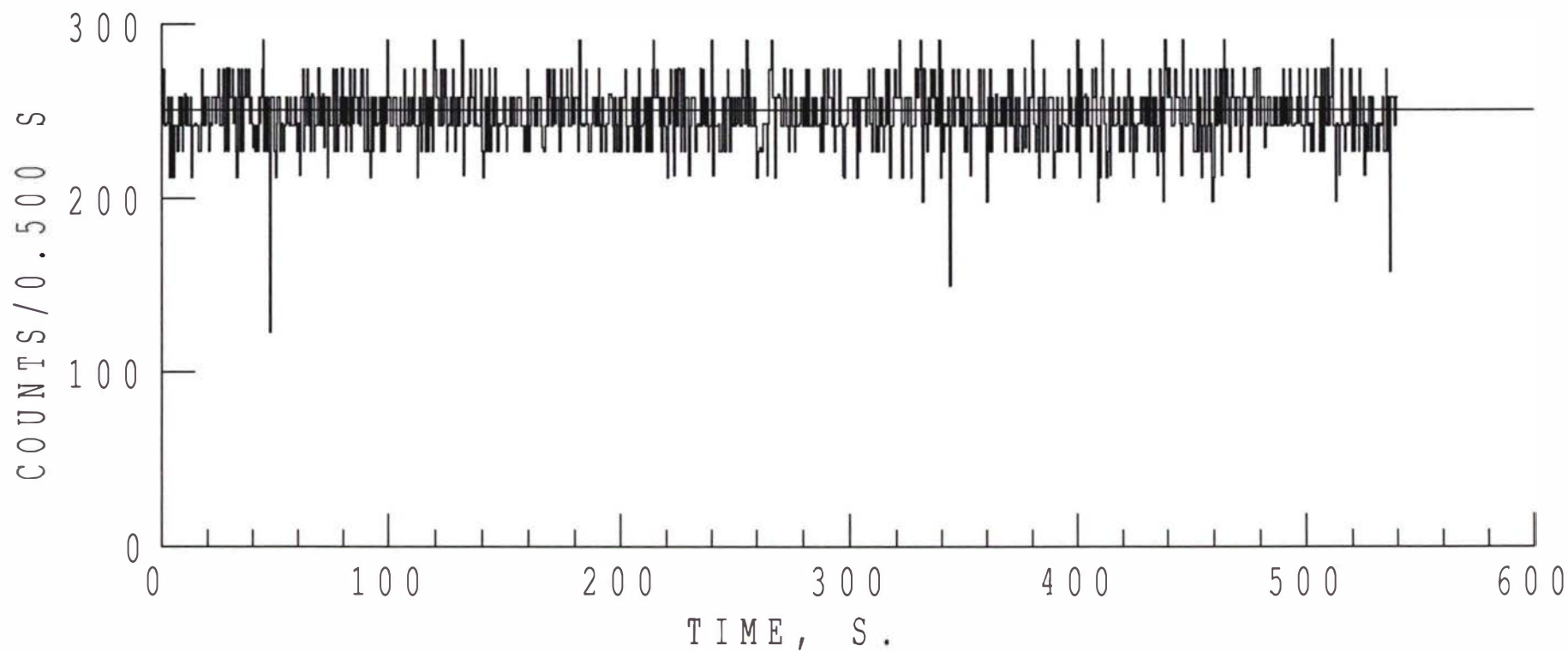
2 / 6 / 94 26496.004 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From MALLOZZI@ssl.msfc.nasa.gov Fri Jun 3 09:54 PDT 1994
Date: Fri, 3 Jun 1994 11:56:32 -0500 (CDT)
From: "ROBERT S. MALLOZZI 205-544-6257" <MALLOZZI@ssl.msfc.nasa.gov>
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
LHEAVXKWOK@ssl.msfc.nasa.gov, 15733SCHAEFER@ssl.msfc.nasa.gov,
CASS09BAND@ssl.msfc.nasa.gov, CASS09GRUBER@ssl.msfc.nasa.gov,
CASS09MATTESON@ssl.msfc.nasa.gov, PACIESAS@ssl.msfc.nasa.gov,
HORACK@ssl.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 03013

TIME: TJD=9505 SECONDS=69381

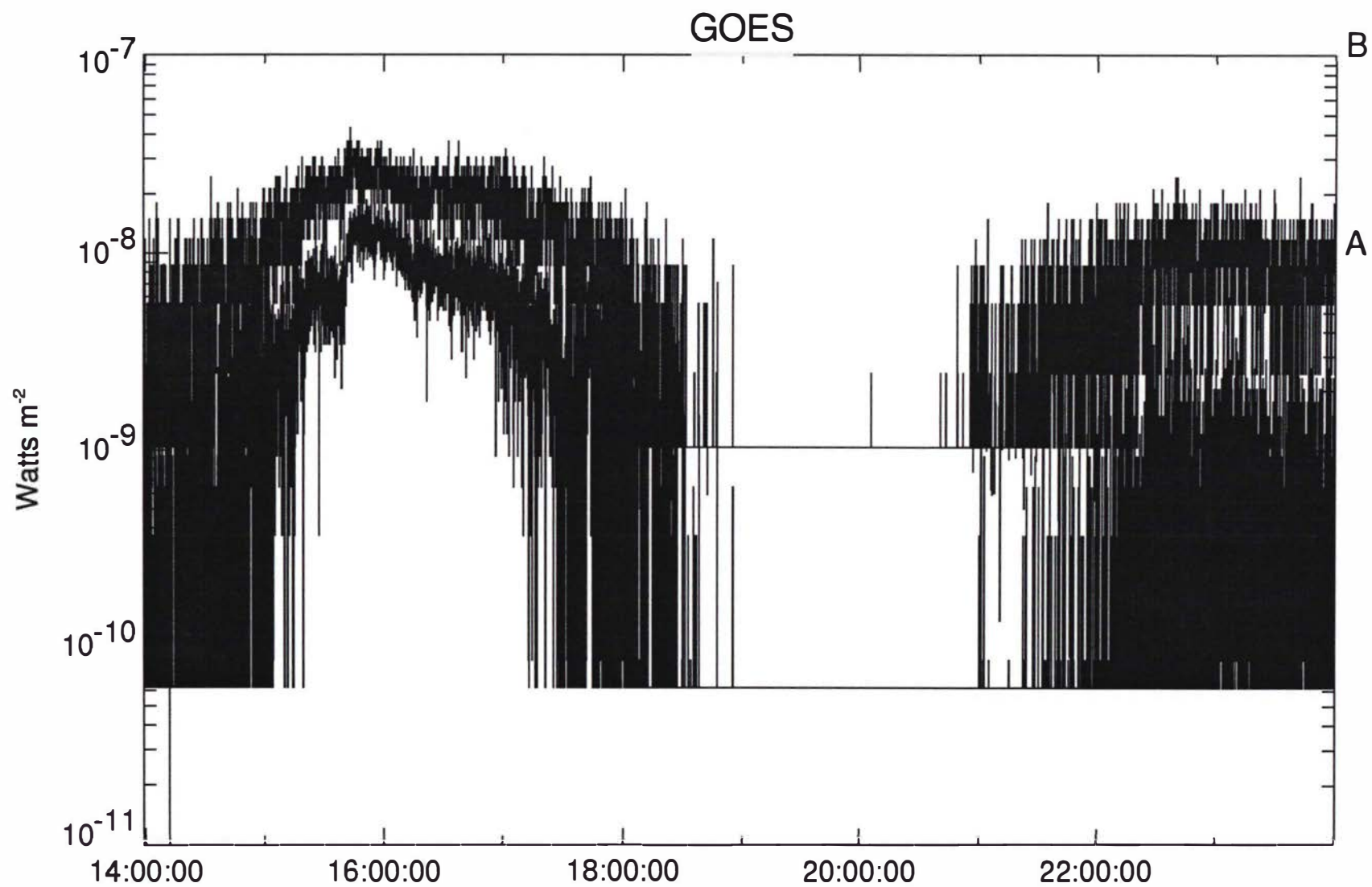
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT.



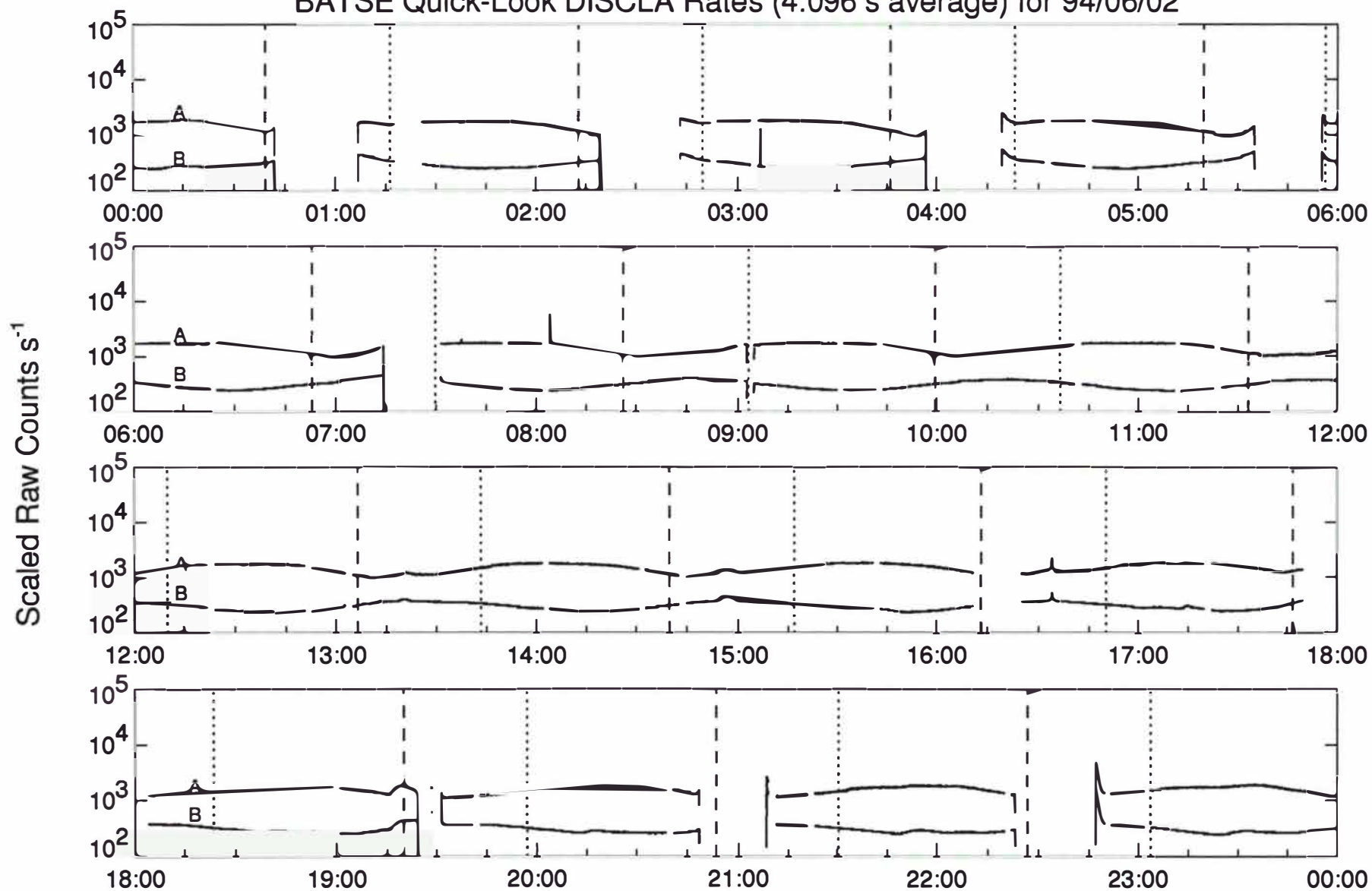
Data Start: 94/06/02, 1359:13

Plot created: 94/06/07, 1354

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/02

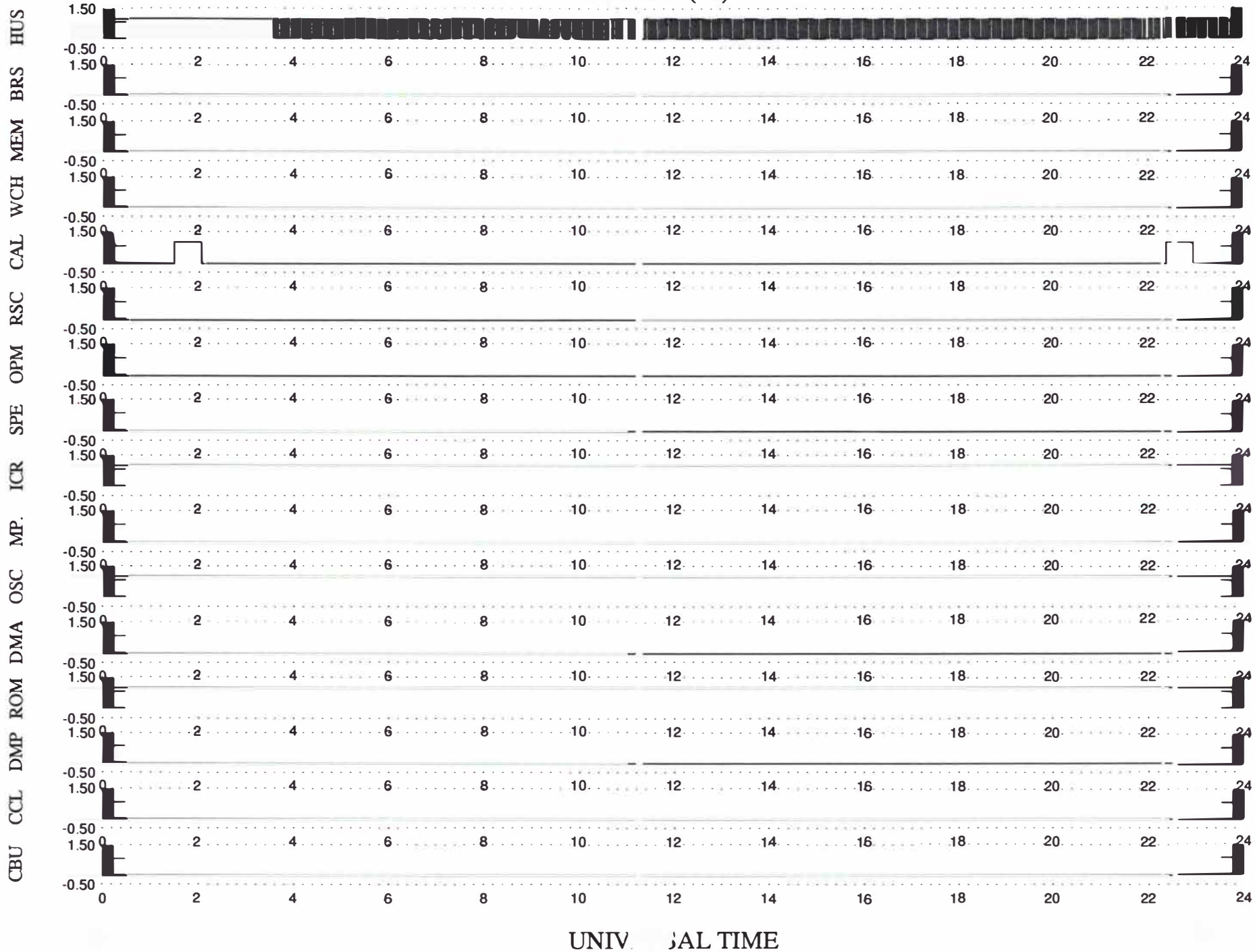


Current Time: 94/06/07, 1408 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

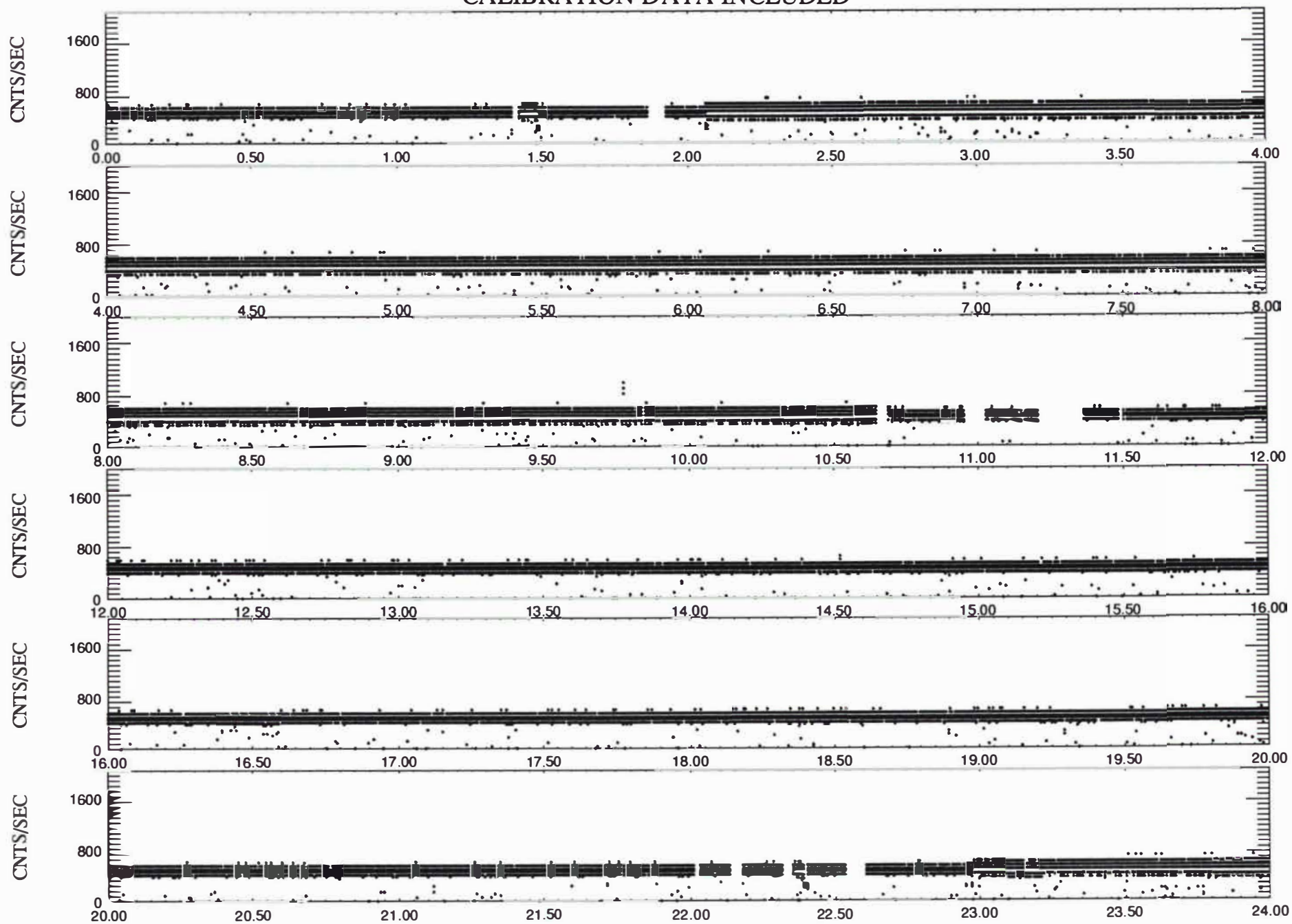
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

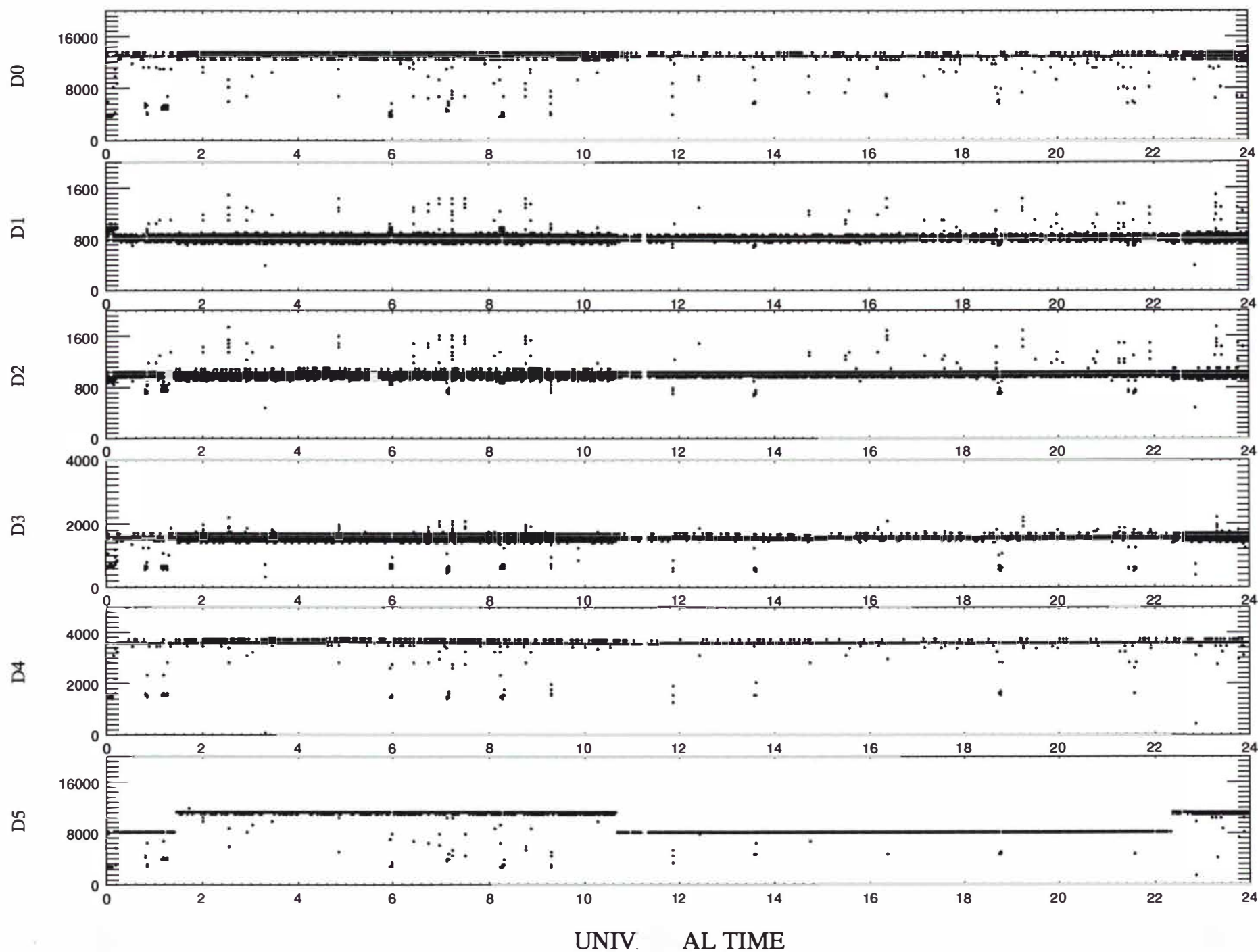
NO BURST (14)

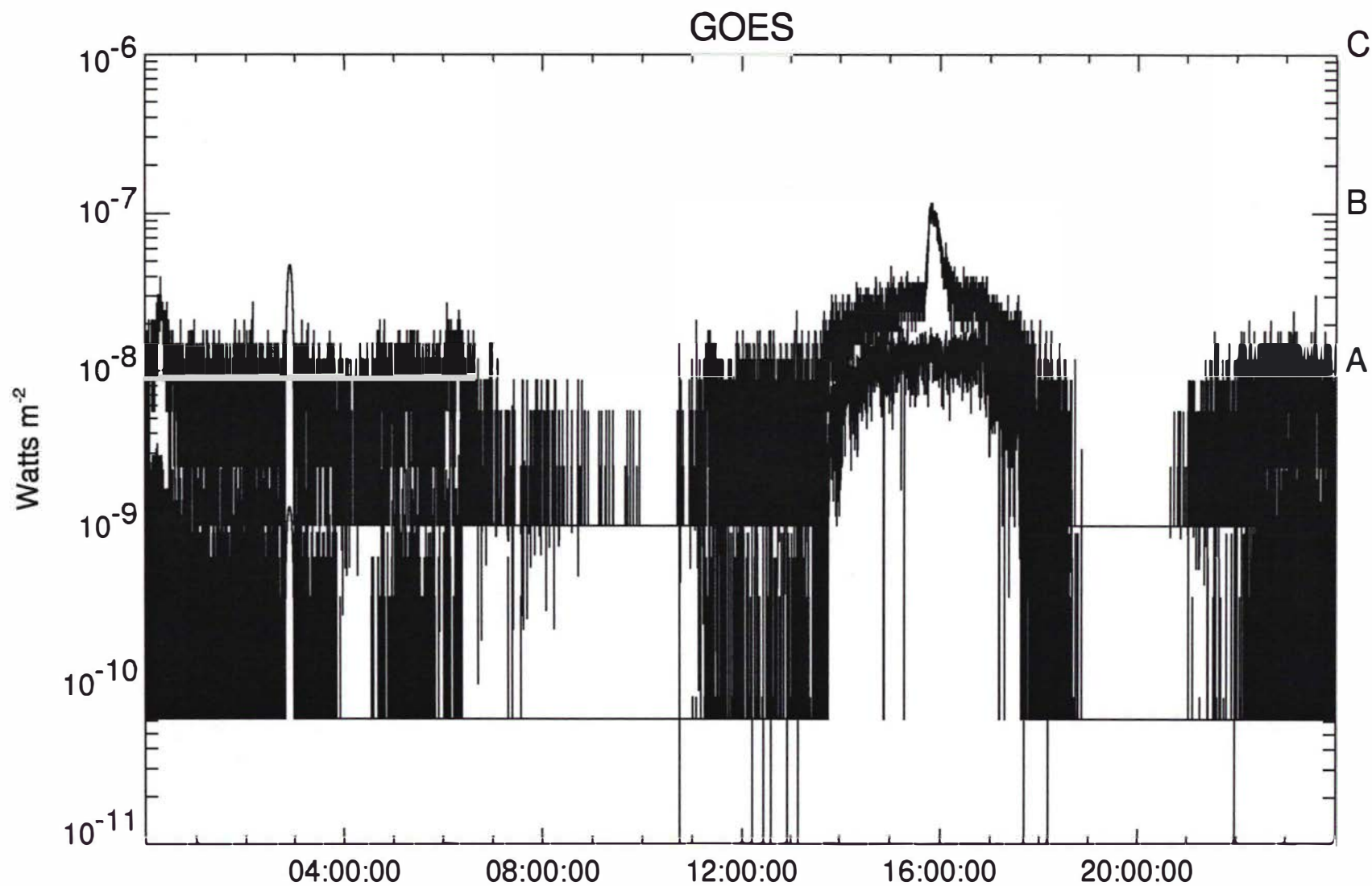


CALIBRATION DATA INCLUDED



UNIV AL TIME



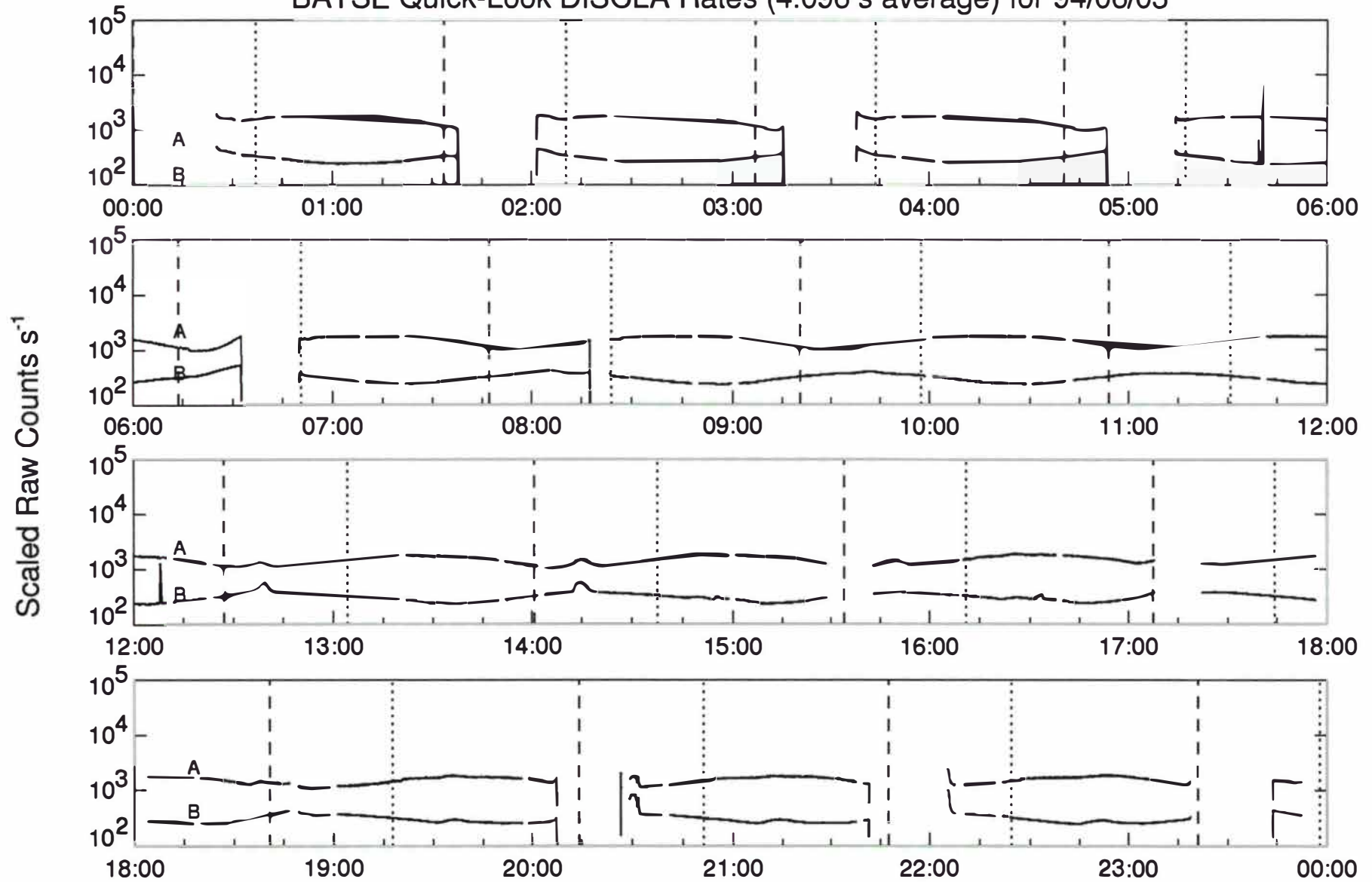


Data Start: 94/06/03, 0000:02

Plot created: 94/06/07, 1356

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/03

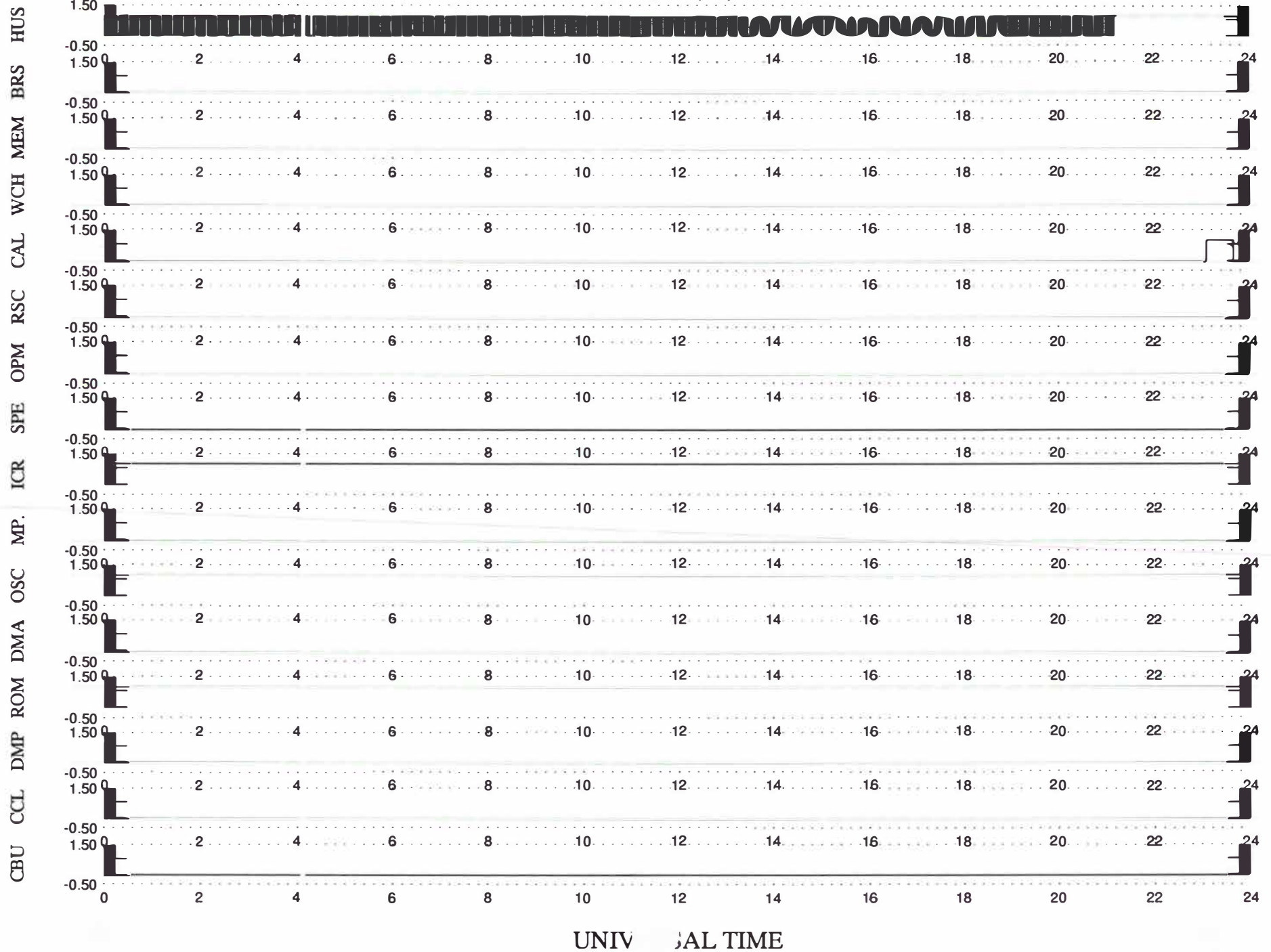


Current Time: 94/06/07, 1408 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05

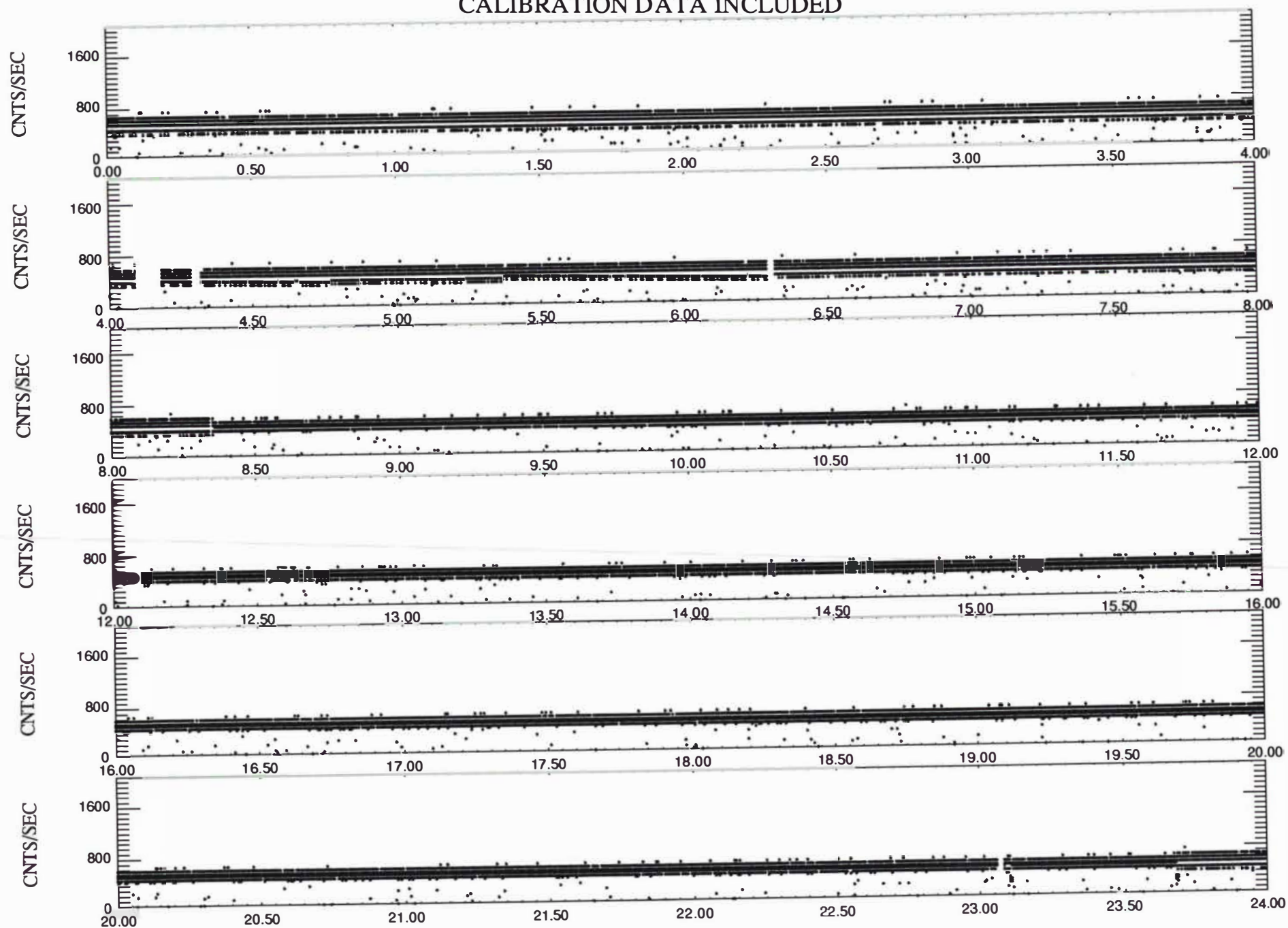
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

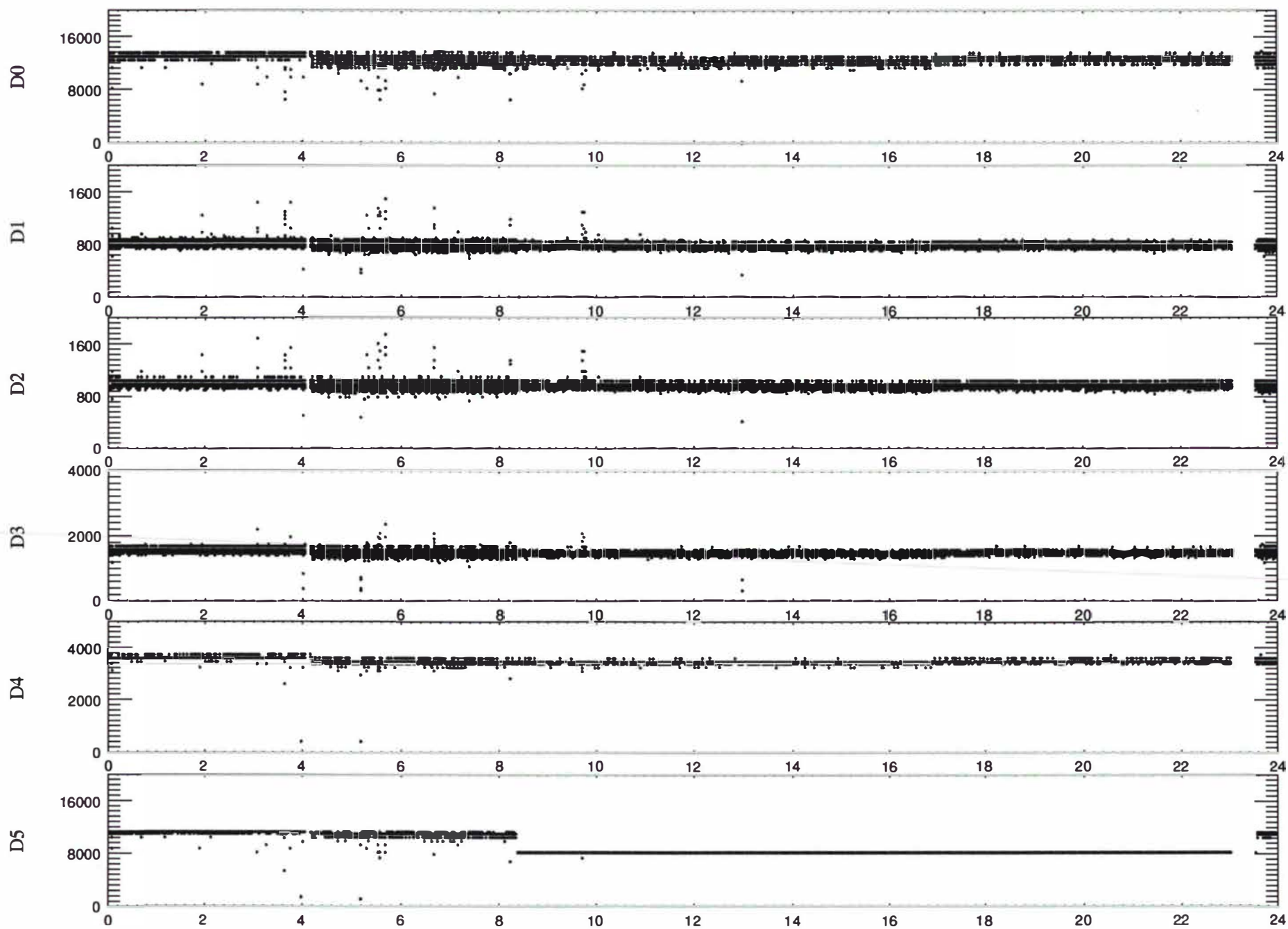
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV AL TIME



UNIV AL TIME

From HENZE@fender.msfc.nasa.gov Mon Jun 6 08:05 PDT 1994
Date: Mon, 6 Jun 1994 10:07:25 -0500 (CDT)
From: HENZE@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3014
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3014
EVENT OF 1994 JUN 4 DAY OF YEAR=155
EVENT CROSSING TIME AT BATSE : 23966. S. OR 06:39:26.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 130.000 -46.000
BATSE PEAK COUNTING RATE: 1300 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 4/ 6/ 94 IS:
RA= 121.082 DEC= -39.718 DIST= 3.022 AU
BATSE-ULYSSES DISTANCE = 452061286. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=170.94 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1489.12 SECS.
CROSSING TIME AT ULYSSES IS 22477. S. OR 06:14:36 +/- 68.59 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 4/ 6/ 94 IS:
RA= 36.118 DEC= 13.578 DIST= 2.113 AU
MARS-BATSE DISTANCE = 316133088. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 77.61 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 226.30 SECS.
CROSSING TIME AT MARS IS 24192. S. OR 06:43:12 +/- 182.25 SECONDS

No

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3014	940604	9507	23966	1300	130	-46

BATSE BURST TRIGGER

NO.: 03014

TIME: TJD=9507 SECONDS=23966

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=40.6 AZIMUTH=261.6 ERROR= DEGREES

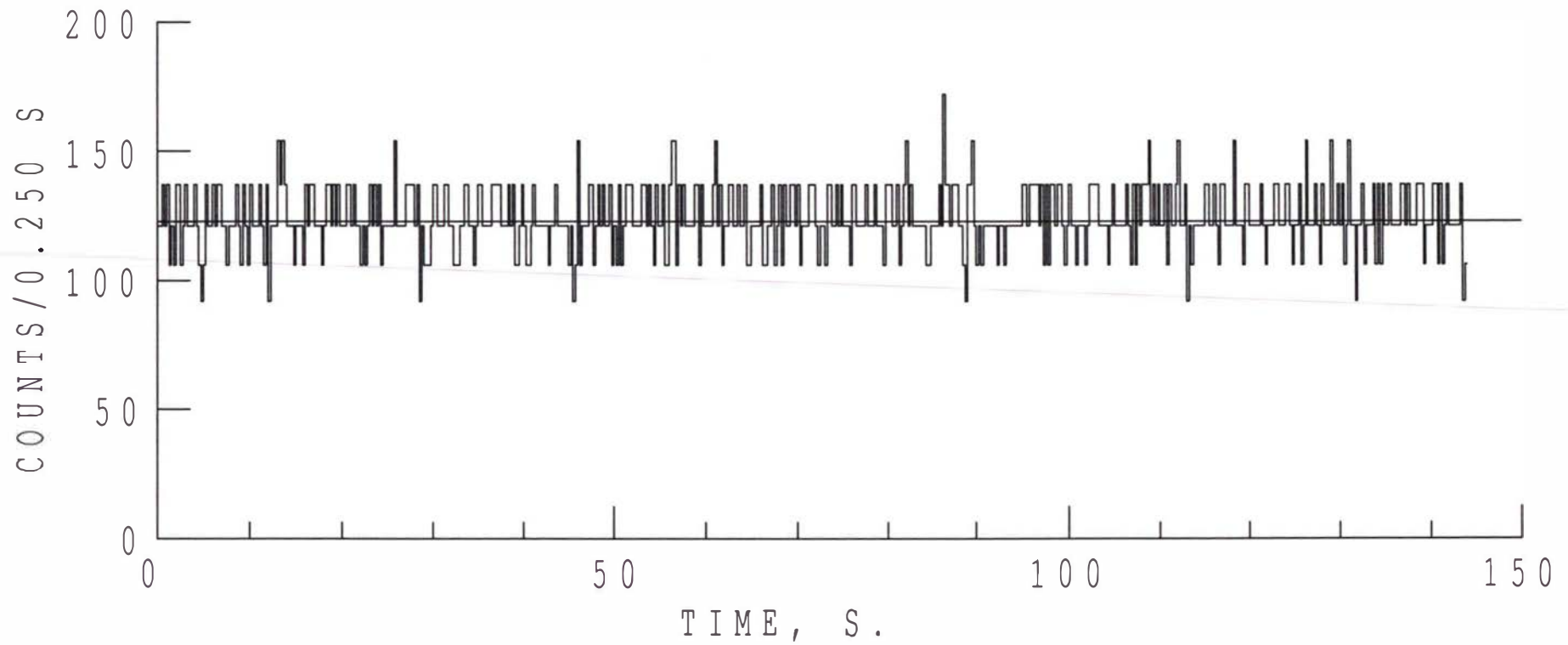
COMMENTS:

SINGLE PULSE, RISE FASTER THAN FALL. TOTAL DUR. APPROX. 34 S.
OCCURRED DURING DATA GAP. NOT VISIBLE ABOVE 300 KEV.

6 / 6 / 94

ULYSSES RT
4 / 6 / 94 22392.039 s
0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From HENZE@fender.msfc.nasa.gov Mon Jun 6 08:08 PDT 1994
Date: Mon, 6 Jun 1994 10:10:20 -0500 (CDT)
From: HENZE@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3015
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3015
EVENT OF 1994 JUN 4 DAY OF YEAR=155
EVENT CROSSING TIME AT BATSE : 52627. S. OR 14:37:07.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 127.000 -13.000
BATSE PEAK COUNTING RATE: 5500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 4/ 6/ 94 IS:
RA= 121.124 DEC= -39.693 DIST= 3.022 AU
BATSE-ULYSSES DISTANCE = 452150276. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=152.81 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1341.53 SECS.
CROSSING TIME AT ULYSSES IS 51285. S. OR 14:14:45 +/- 149.28 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 4/ 6/ 94 IS:
RA= 36.118 DEC= 13.578 DIST= 2.113 AU
MARS-BATSE DISTANCE = 316133088. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 86.14 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 71.07 SECS.
CROSSING TIME AT MARS IS 52698. S. OR 14:38:18 +/- 183.74 SECONDS

RI

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3015	940604	9507	52627	5500	127	-13

BATSE BURST TRIGGER

NO.: 03015

TIME: TJD=9507 SECONDS=52627

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=059.0 AZIMUTH=299.0 ERROR= DEGREES

COMMENTS:
SINGLE PULSE WITH STRUCTURE. DUR. APPROX. 29 S.
NOT VISIBLE ABOVE 300 KEV.

Date: Jan 29 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☐ Jim Schmidling's stat file correction applied?
- ☐ Final ephemeris used?
- ☐ Final, CDROM data used?
- ☐ Were data checked by Joe Springer for 0.5 s errors?
- ☐ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☐ Is the order of the data in CORREL such that a vernier is done on the data with the best time resolution?

Too weak to triangulate reliably, although it was detected. Different groupings give very different ΔT 's

2. BATSE Data

- ☐ 2.042 s subtracted for bursts prior to June 25 1992 and DISCSC programs prior to Version 2.16 (August 28 1992)?
- ☐ BATSE ephemeris for T_0 ?
- ☐ Error circle position and radius from public catalog used?
- ☐ If MER data were used, is a 30 ms systematic error included?

3. PVO Data

- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☐ ACCESS database updated?

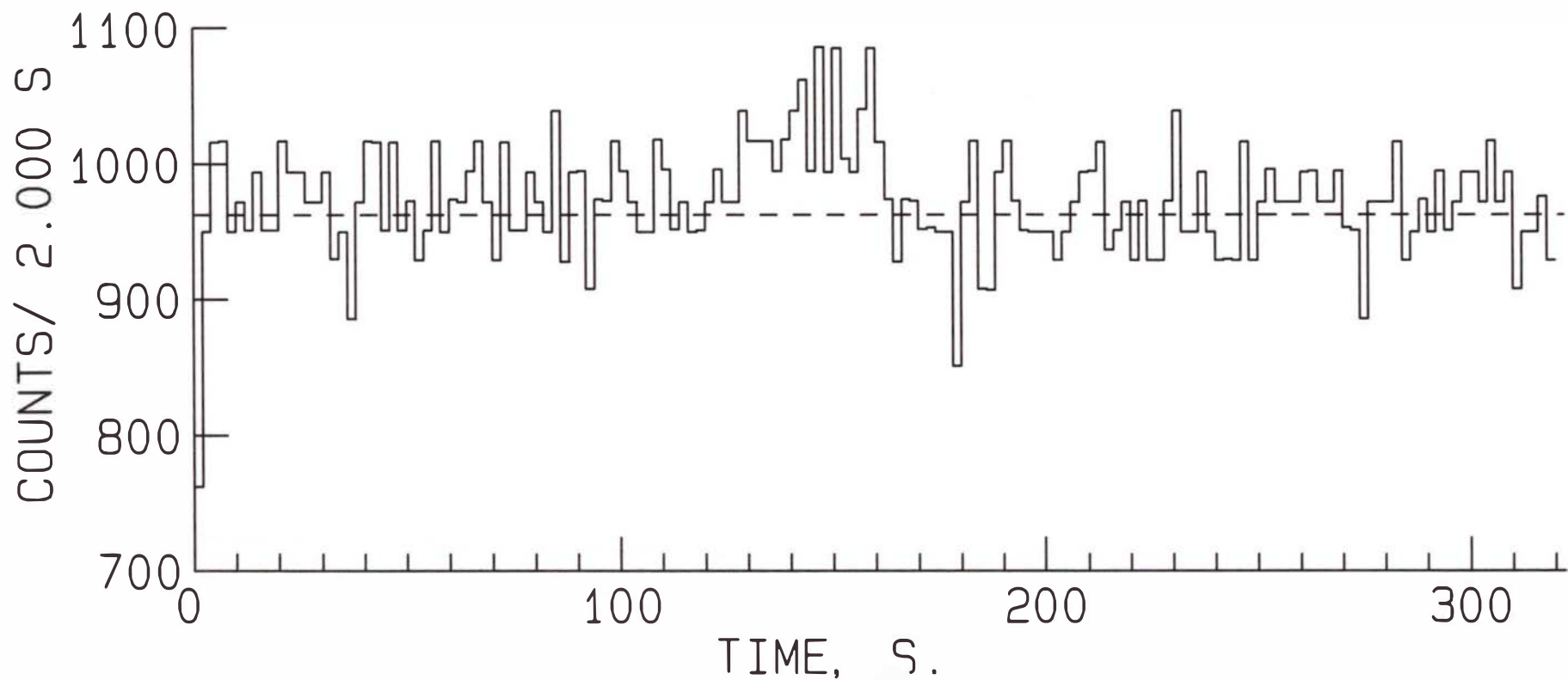
ULYSSES RT

11/11/95

4/ 6/94 51120.468 s

0.500 S INTERVALS REGROUPED BY 4
22- 148 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

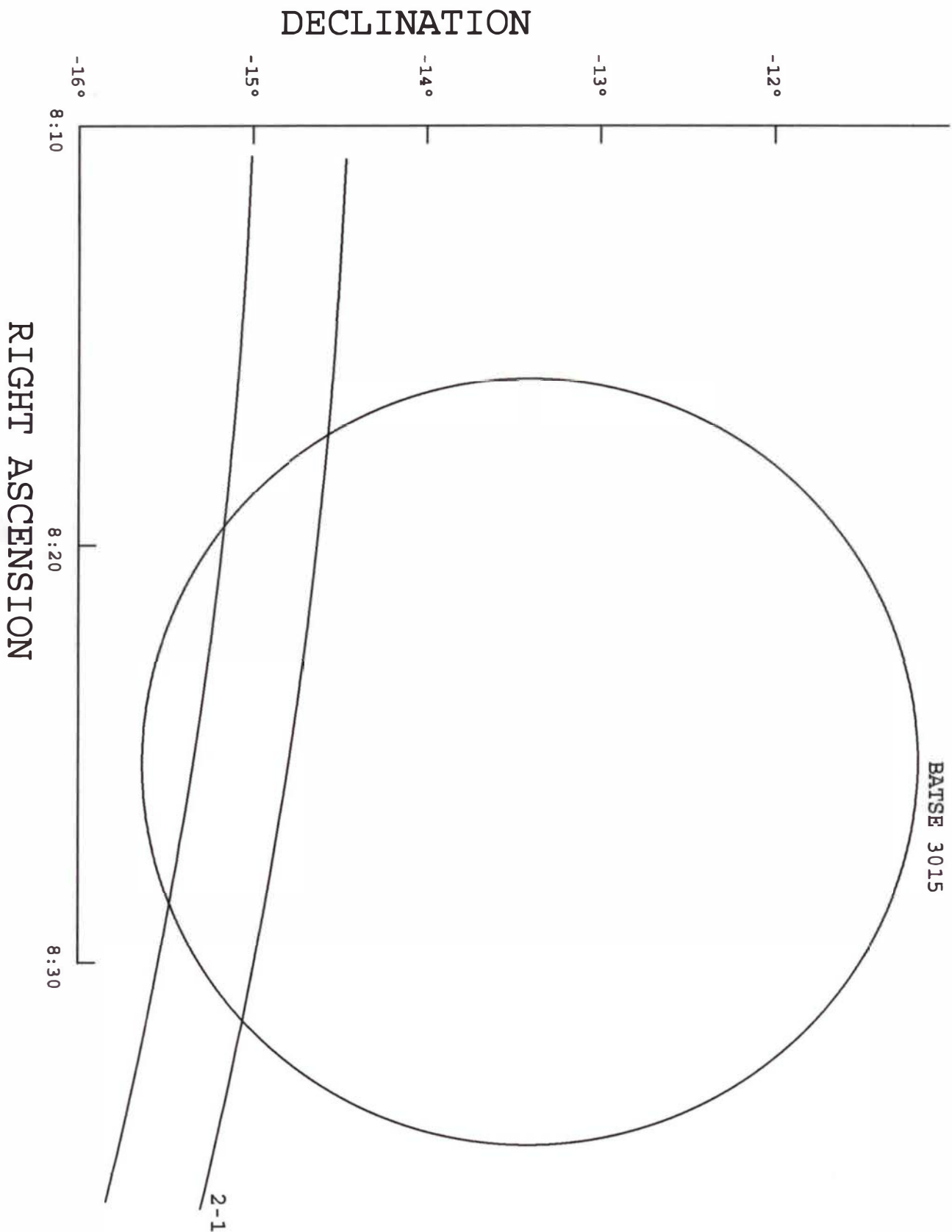
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF JUN 4, 1994 14:13

11/11/95



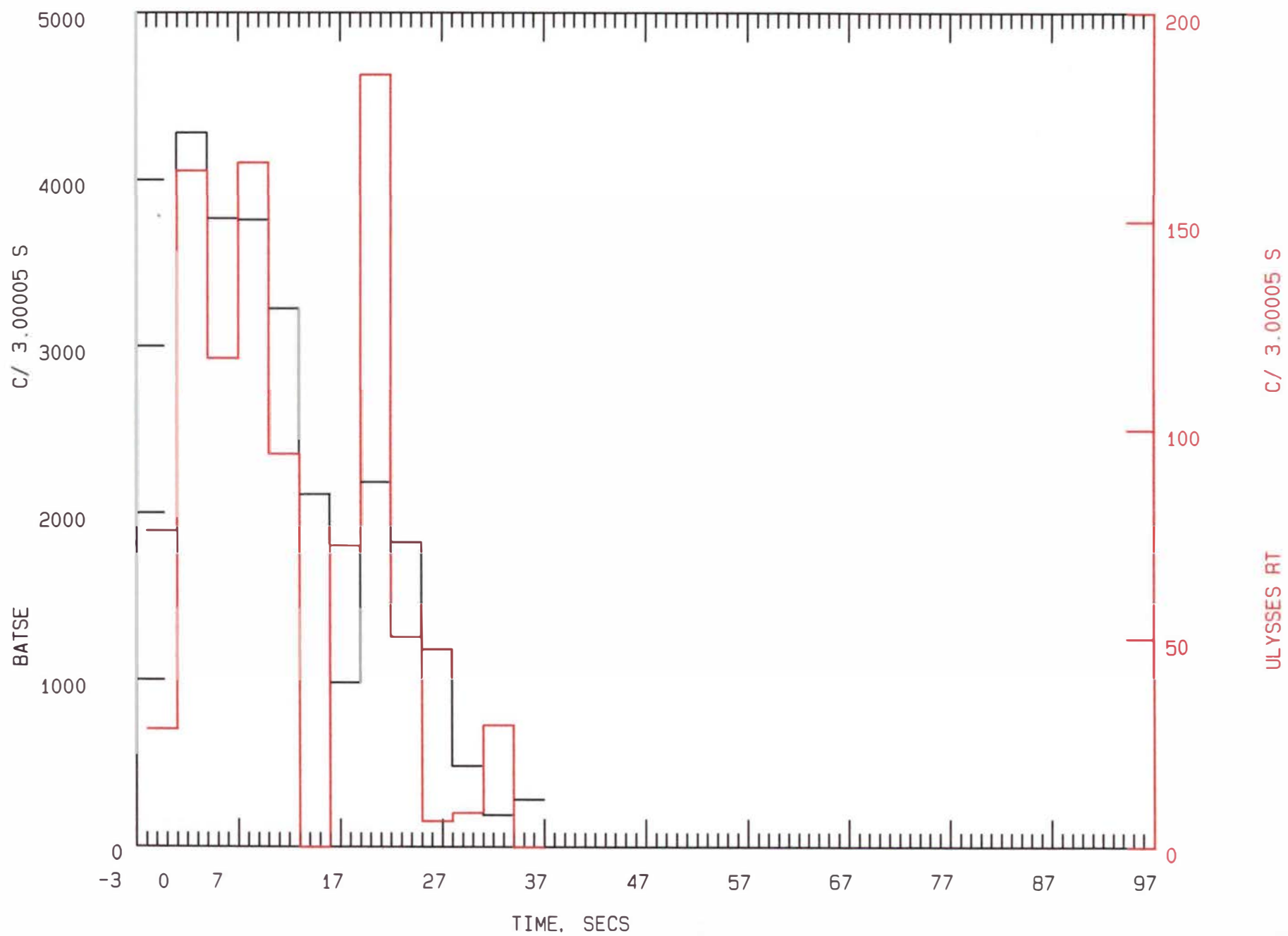
BATSE

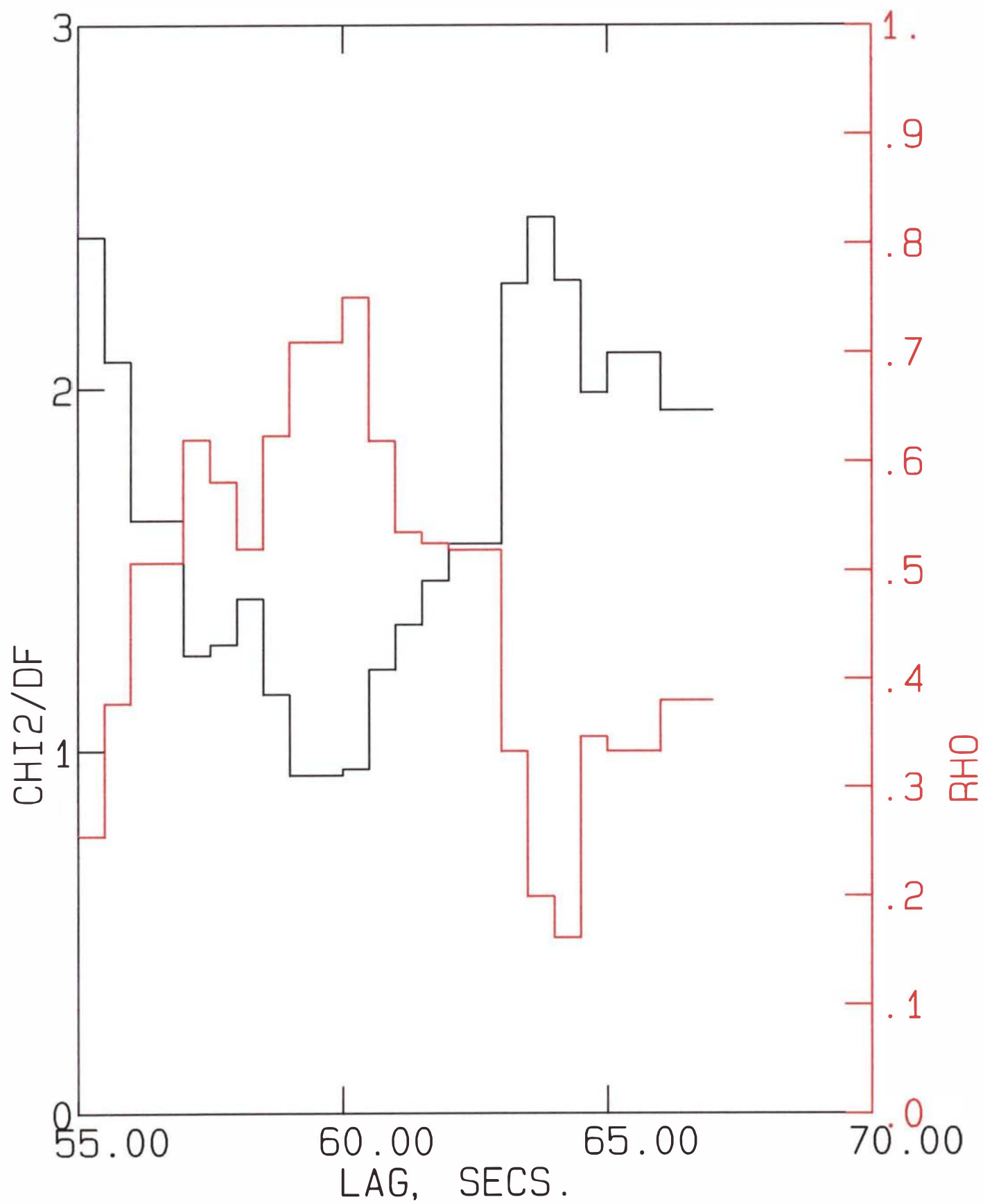
-ULYSSES RT CORRELATION

4/ 6/94

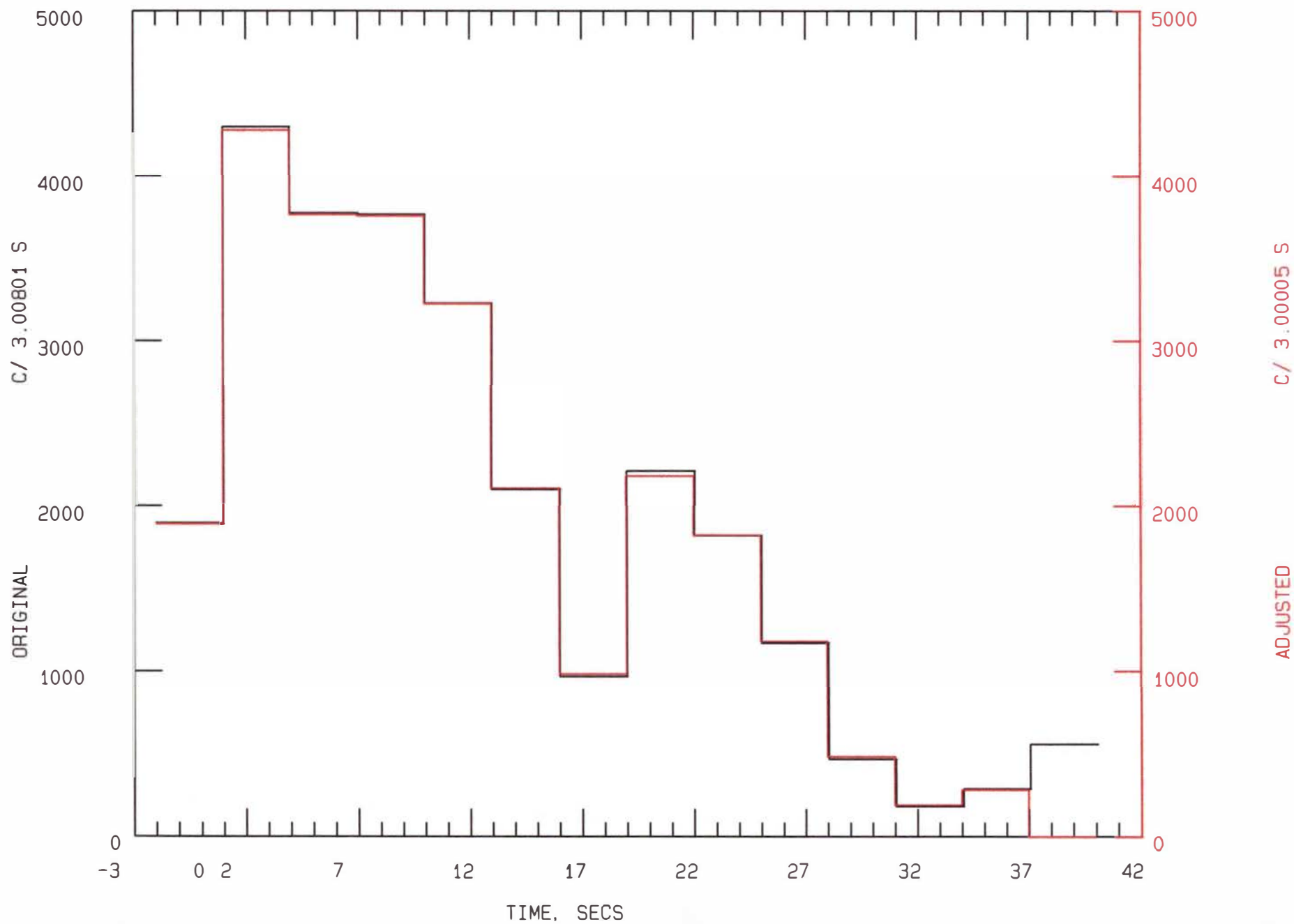
52627.098

11/11/95





11/11/95



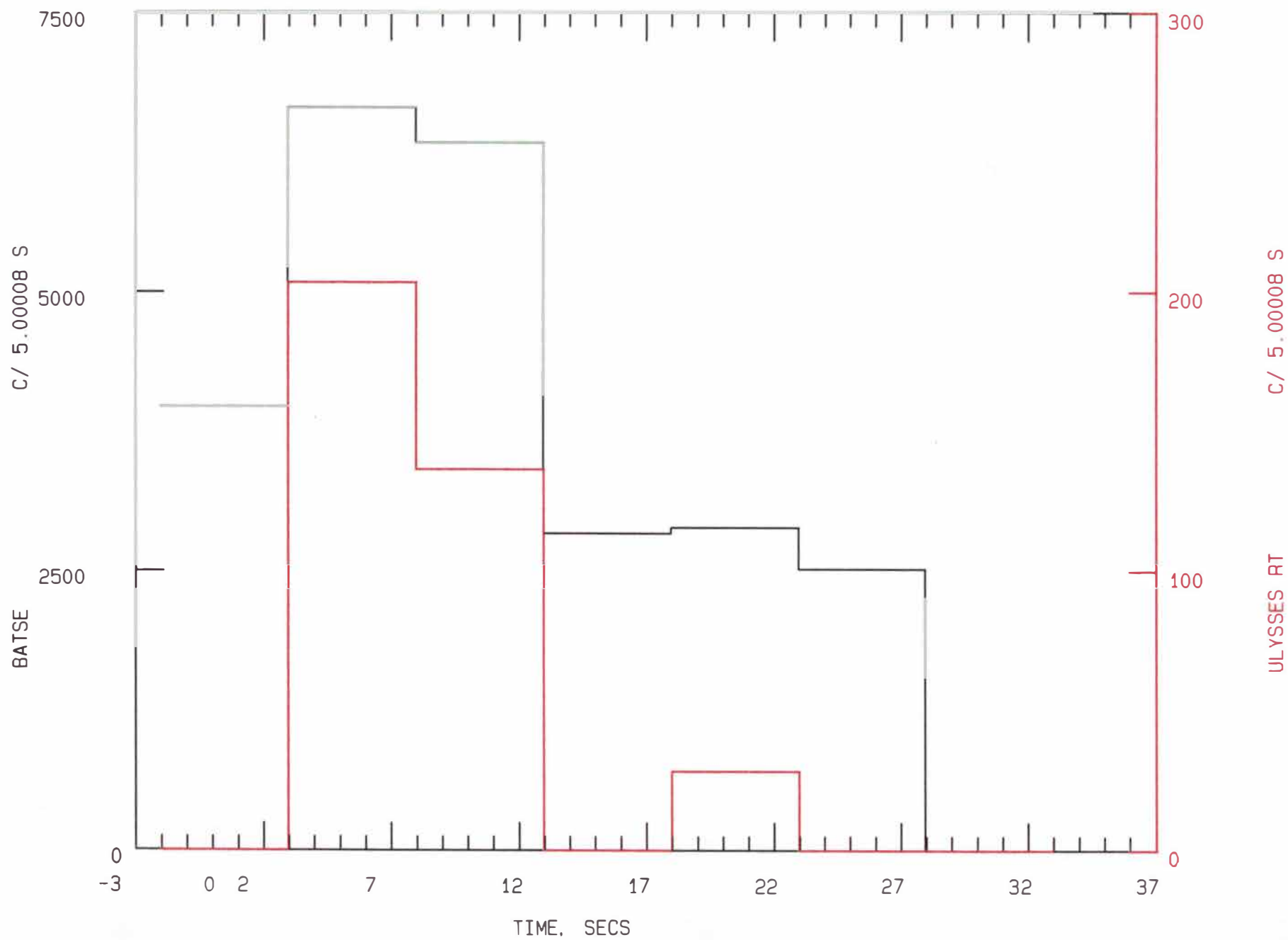
BATSE

-ULYSSES RT CORRELATION

4/ 6/94

52627.098

29/ 1/98



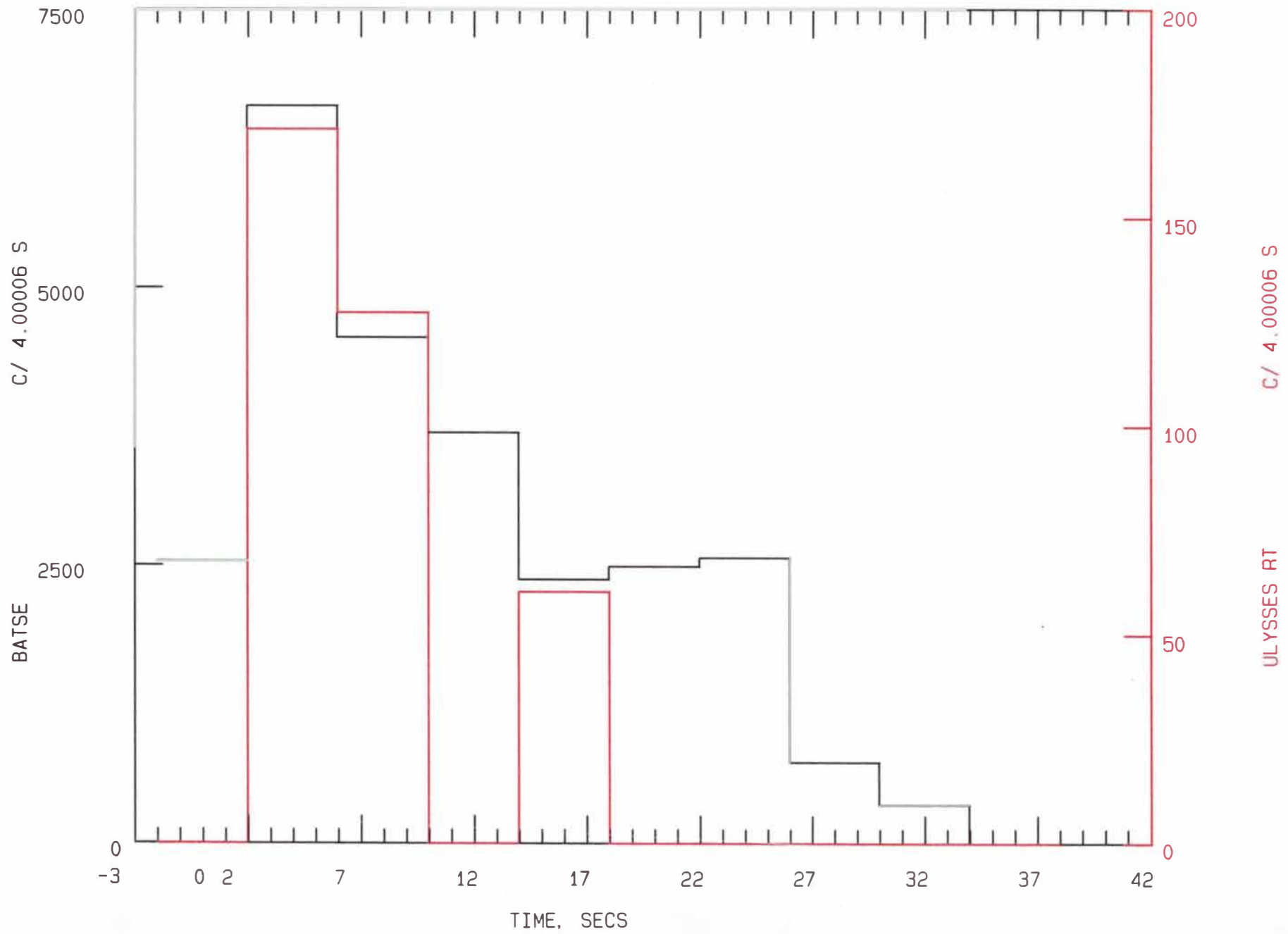
BATSE

-ULYSSES RT CORRELATION

4/ 6/94

52627.098

29/ 1/98



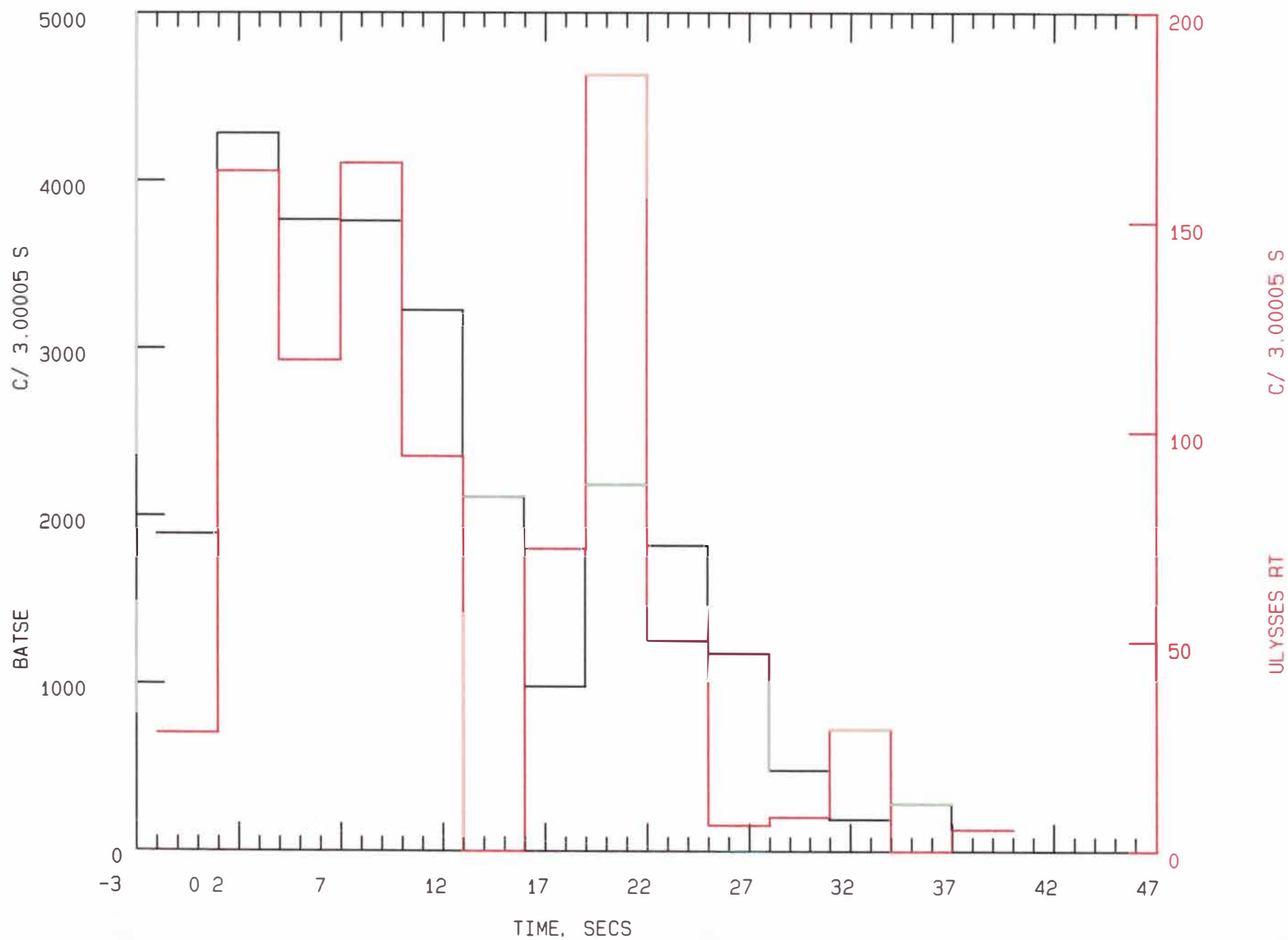
BATSE

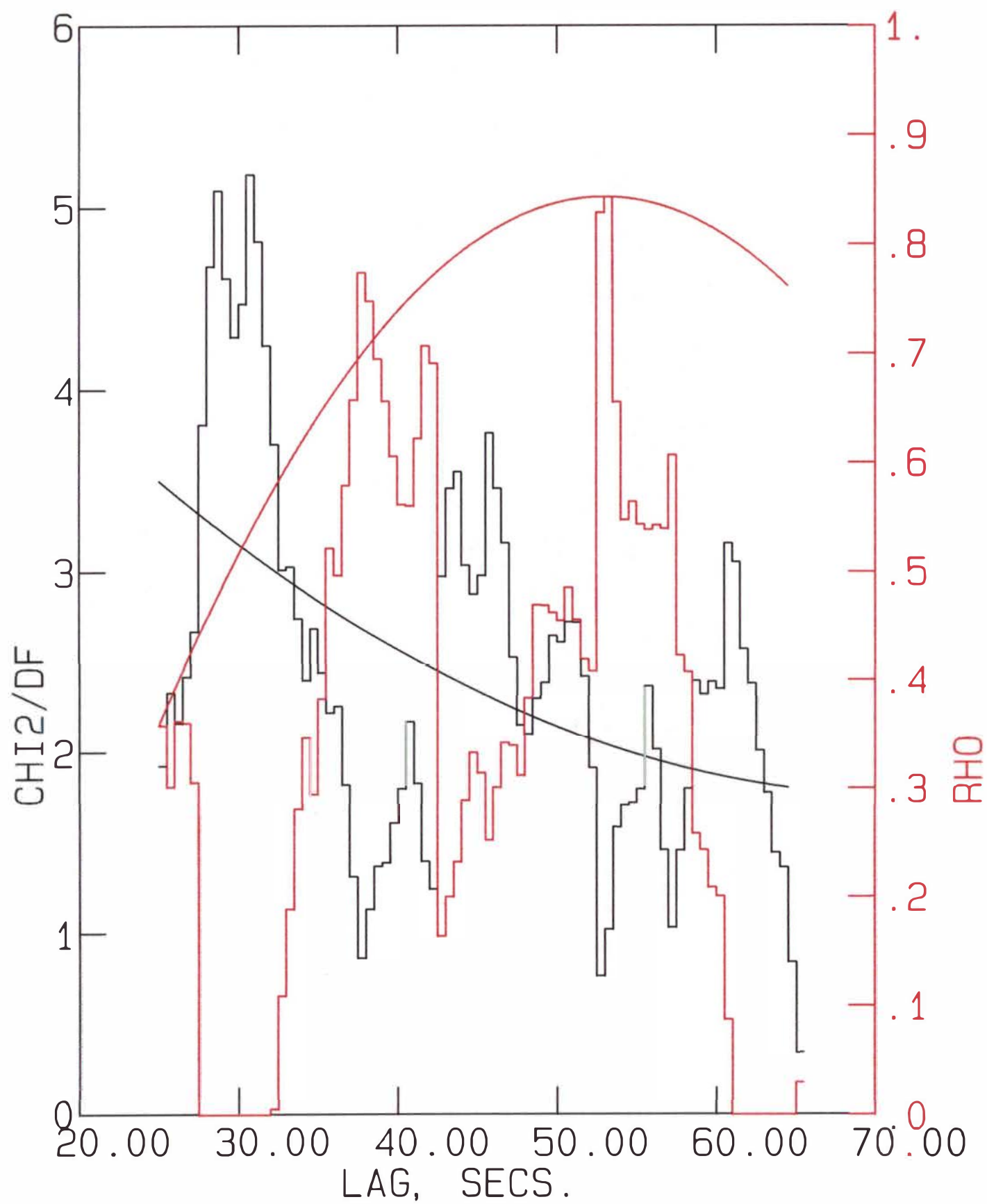
-ULYSSES RT CORRELATION

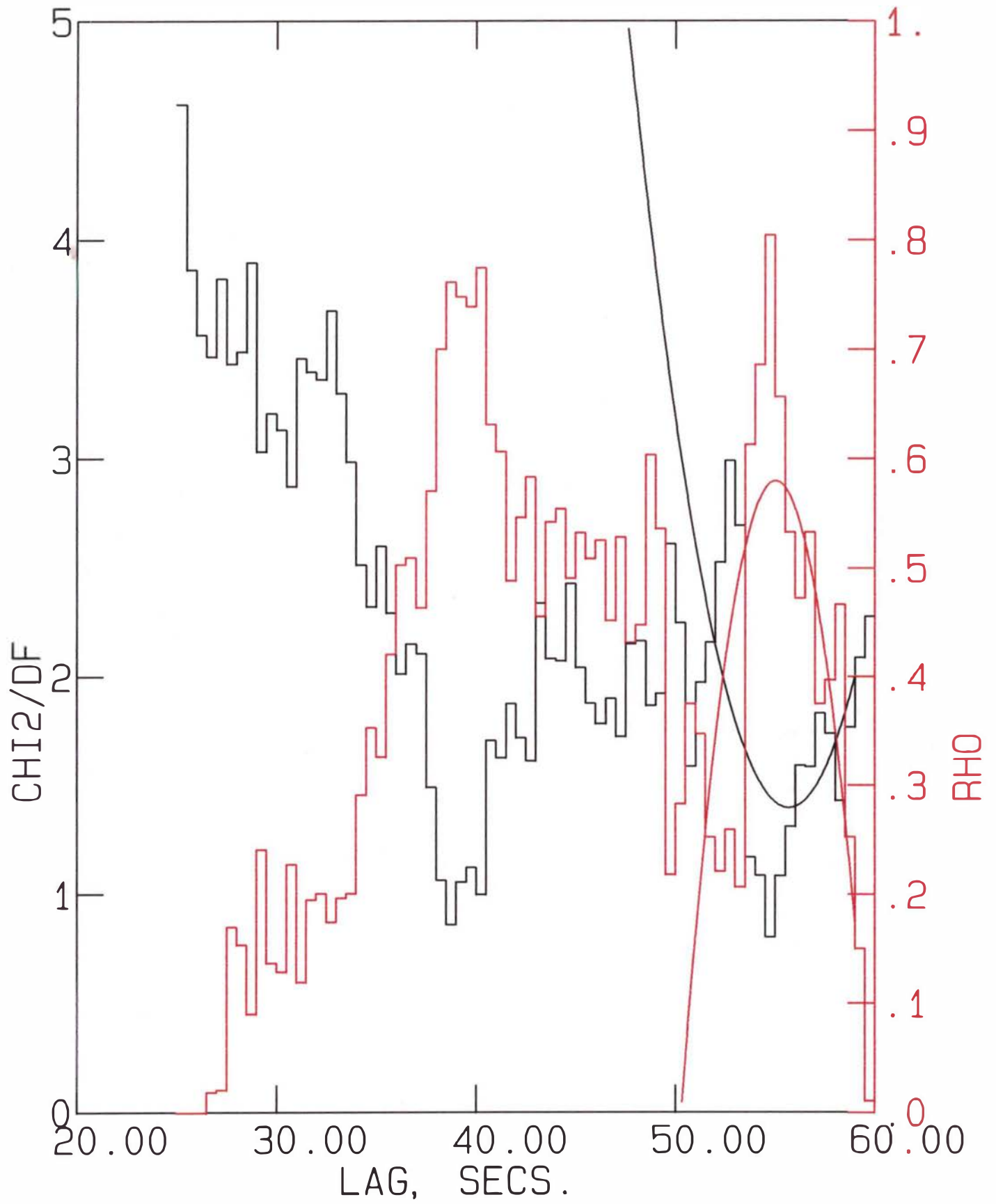
4/ 6/94

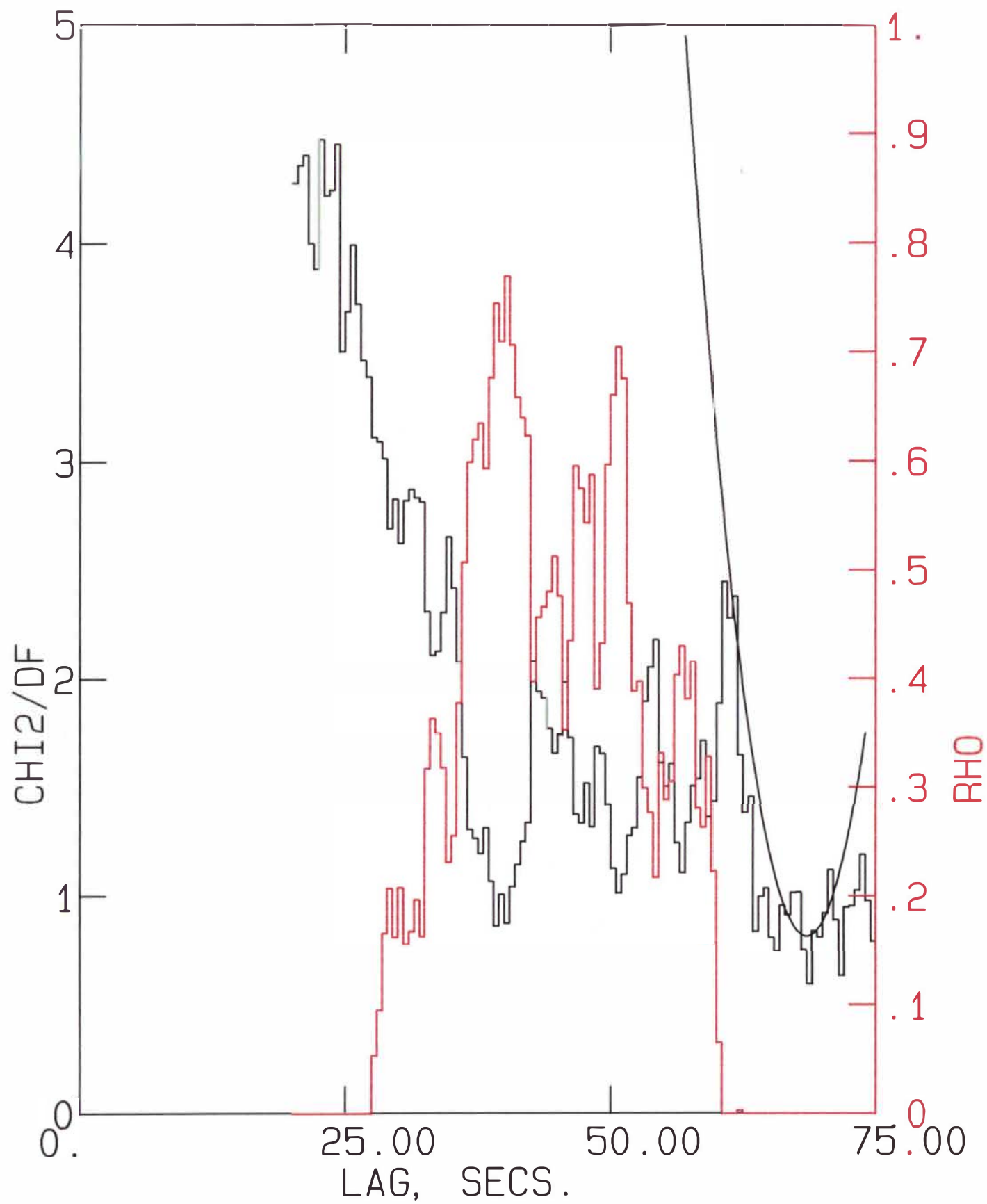
52627.098

29/ 1/98

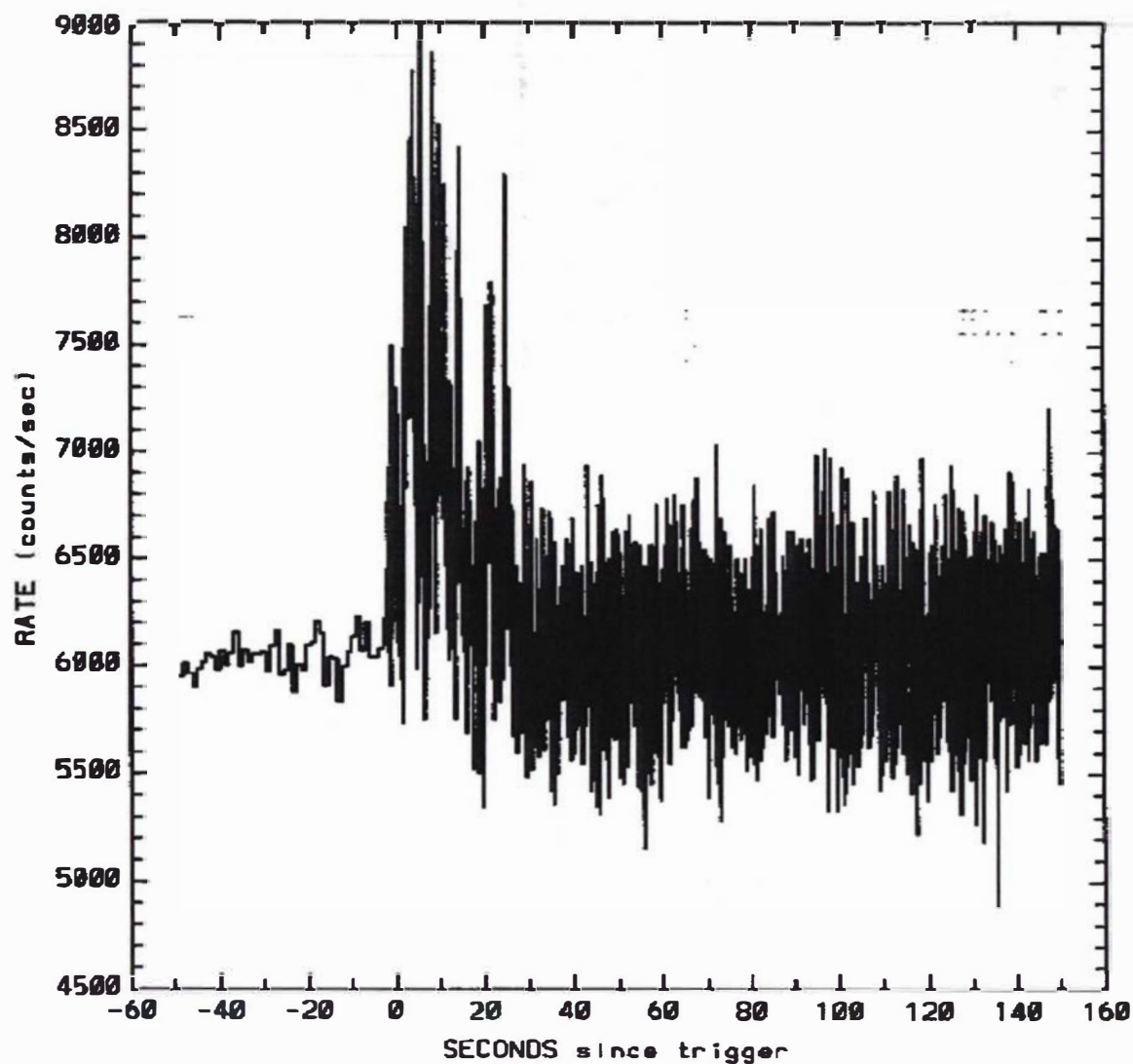








DATA FOR K. HURLEY



19-JUN-1994 17:04.29

Created by MOPS BD
(Burst Display)
Version 2.20

Trigger * . 3815

Trigger Time:
9507 / 52627.098Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: PREB + DISCLAMinimum Integ. Time:
0.064 secondsDetectors [7..8]:
01000100Discriminators:
(1, 2)Quality Mask:
BUISP1

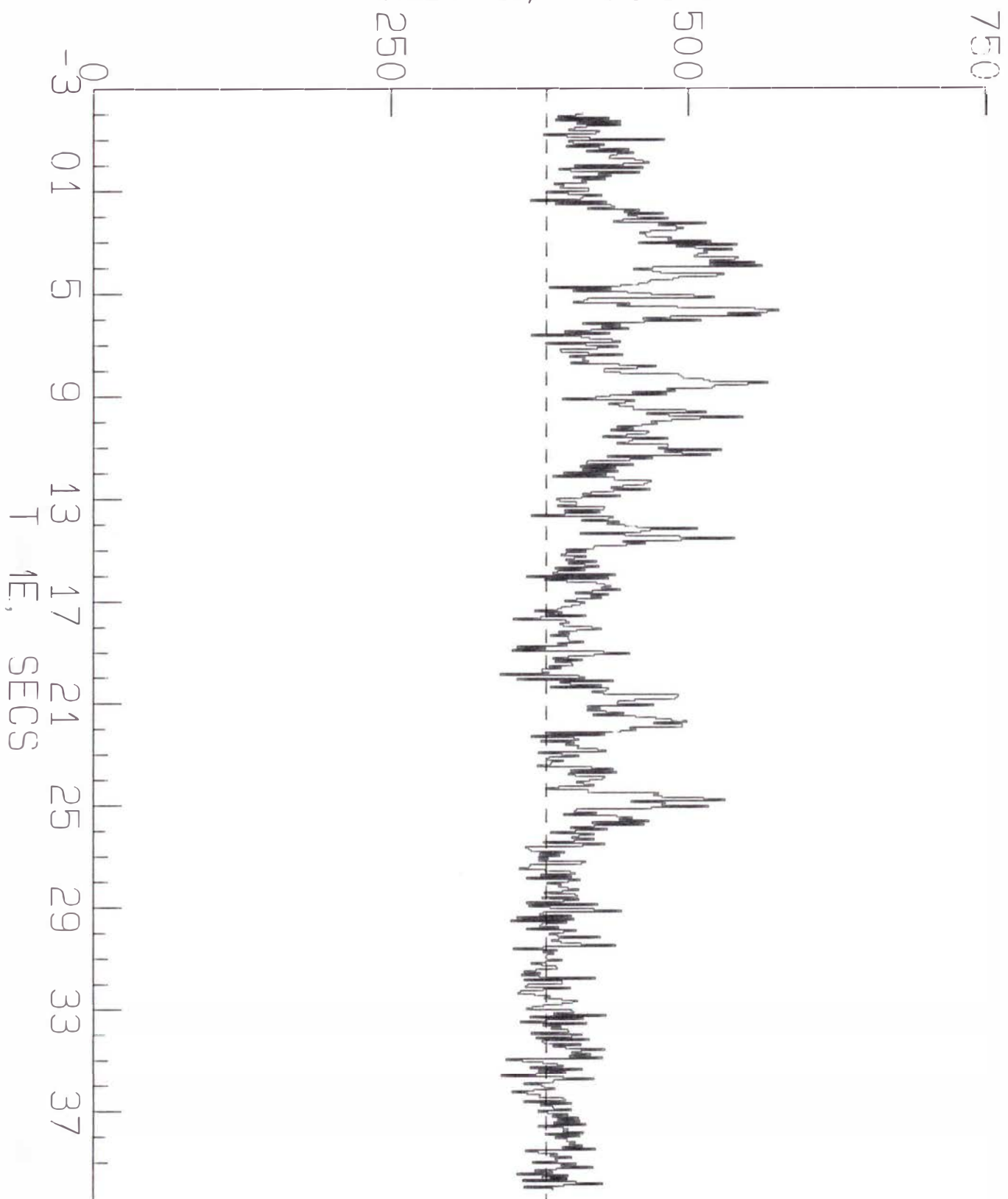
BATSE

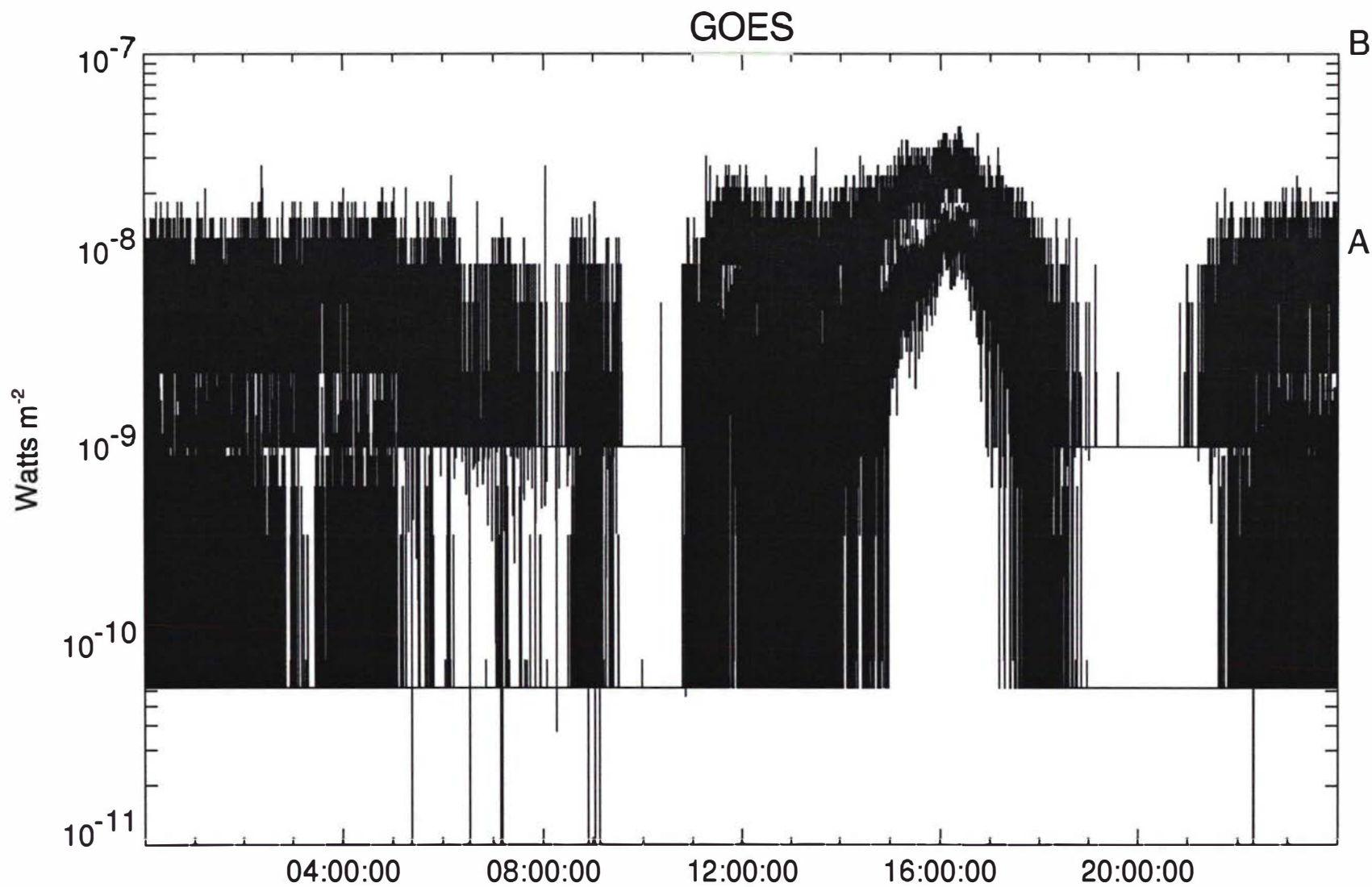
04/06/94

52627.098

25- 100 keV

COUNTS/ .064 S





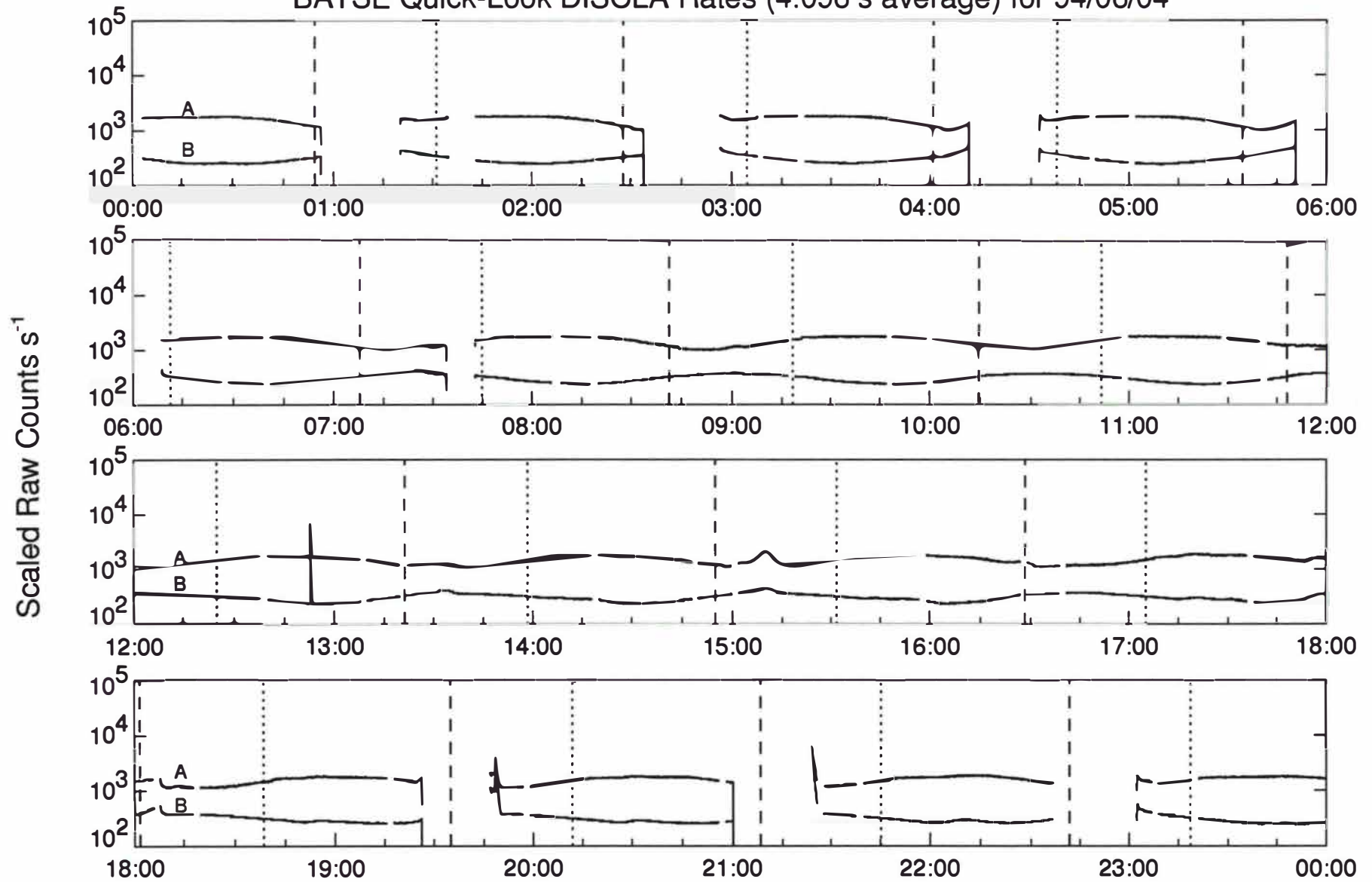
Data Start: 94/06/04, 0000:02

Plot created: 94/06/07, 1359

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/04

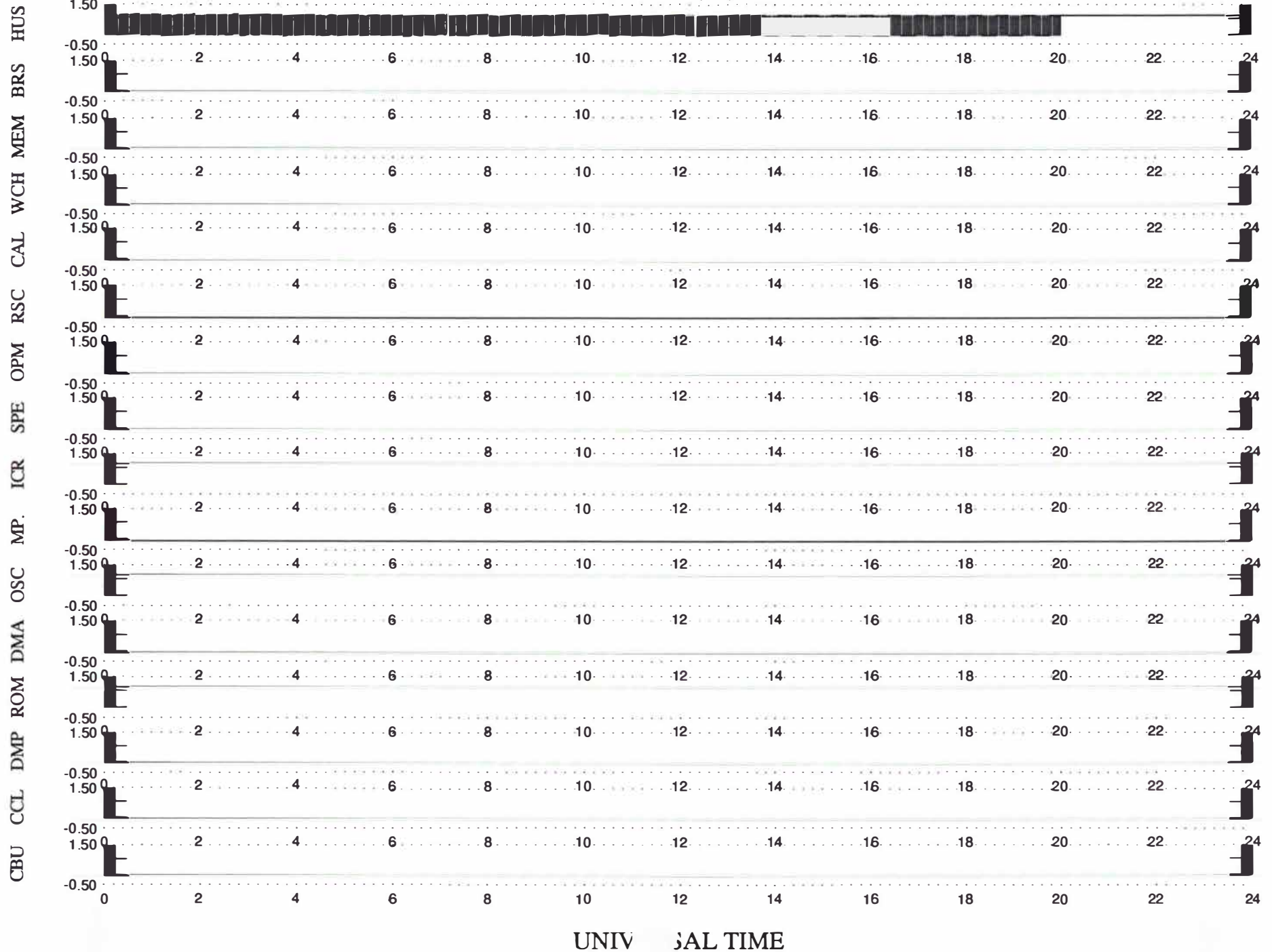


Current Time: 94/06/07, 1408 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

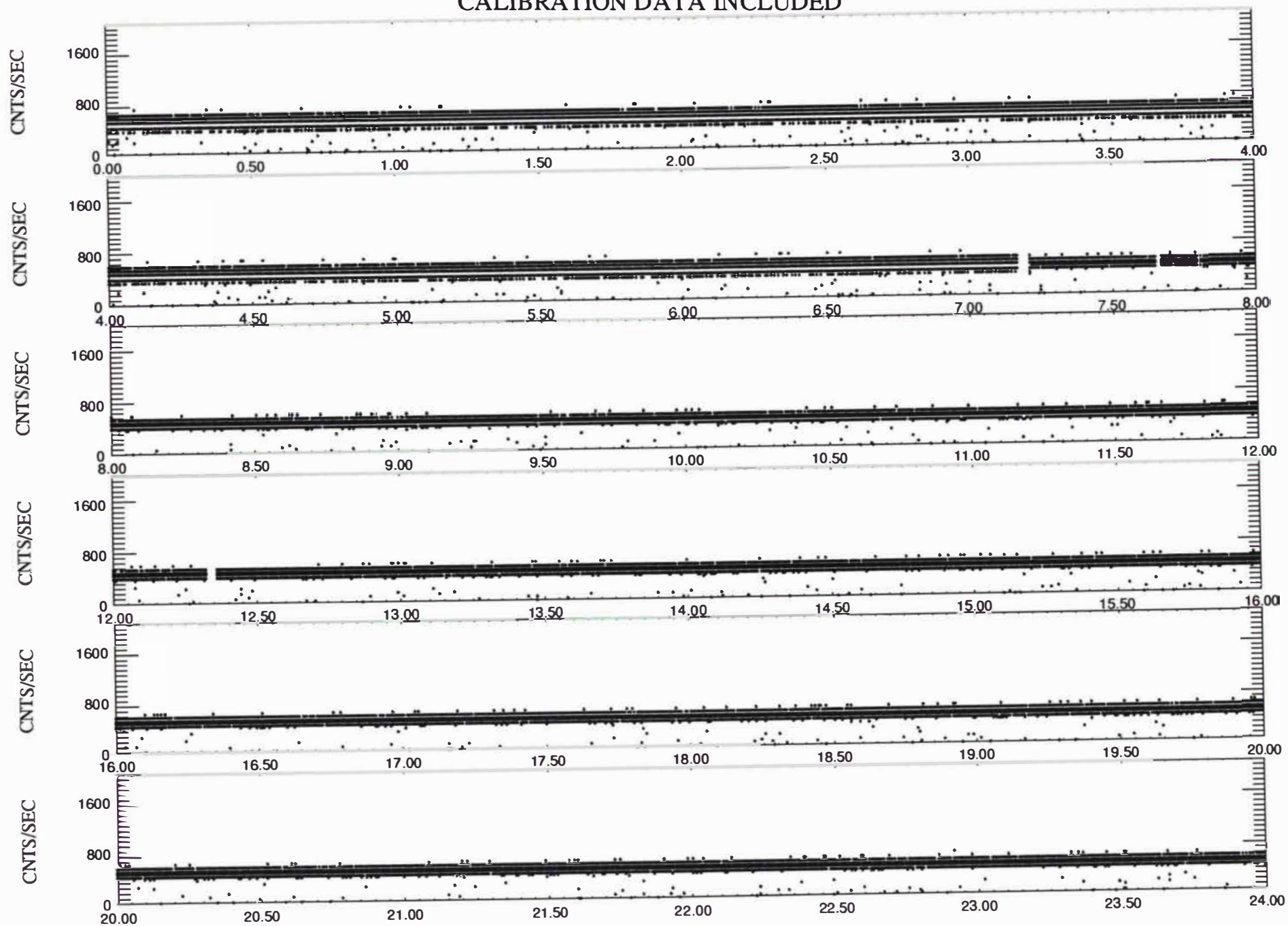
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

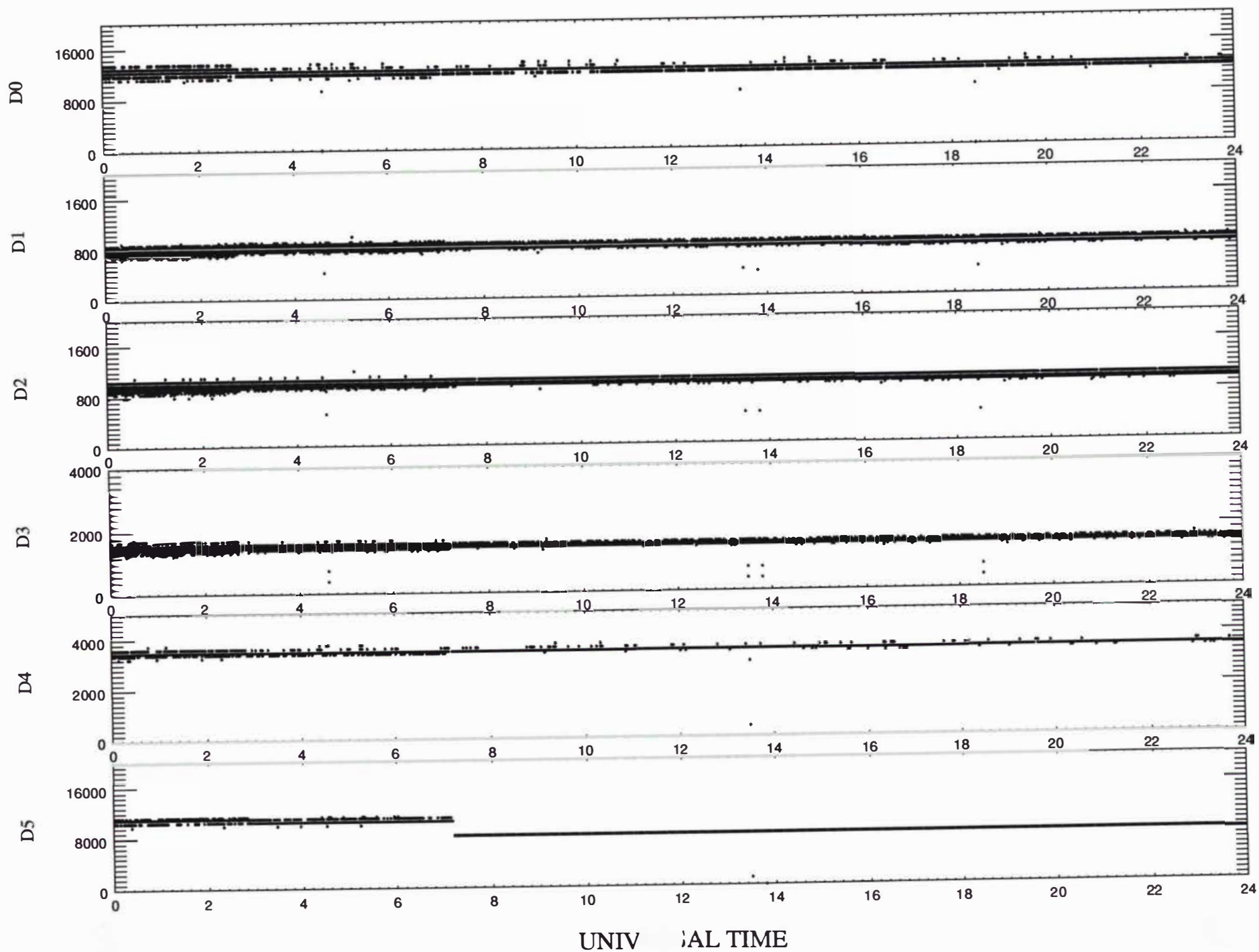
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV. CAL TIME



From PREECE@ssl.msfc.nasa.gov Tue Jun 7 07:21 PDT 1994
Date: Tue, 7 Jun 1994 9:24:15 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3016
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3016
EVENT OF 1994 JUN 5 DAY OF YEAR=156
EVENT CROSSING TIME AT BATSE : 53974. S. OR 14:59:34.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 108.000 41.000
BATSE PEAK COUNTING RATE: 1800 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 5/ 6/ 94 IS:
RA= 121.256 DEC= -39.620 DIST= 3.024 AU
BATSE-ULYSSES DISTANCE = 452414429. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 98.48 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -222.57 SECS.
CROSSING TIME AT ULYSSES IS 53751. S. OR 14:55:51 +/- 305.76 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 5/ 6/ 94 IS:
RA= 36.837 DEC= 13.824 DIST= 2.111 AU
MARS-BATSE DISTANCE = 315735328. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=113.17 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -414.31 SECS.
CROSSING TIME AT MARS IS 53560. S. OR 14:52:39 +/- 161.81 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3016	940605	9508	53974	1800	108	+41

BATSE BURST TRIGGER

NO.: 03016

TIME: TJD=9508 SECONDS=53974

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=095.2 AZIMUTH=345.2 ERROR=005.0 DEGREES

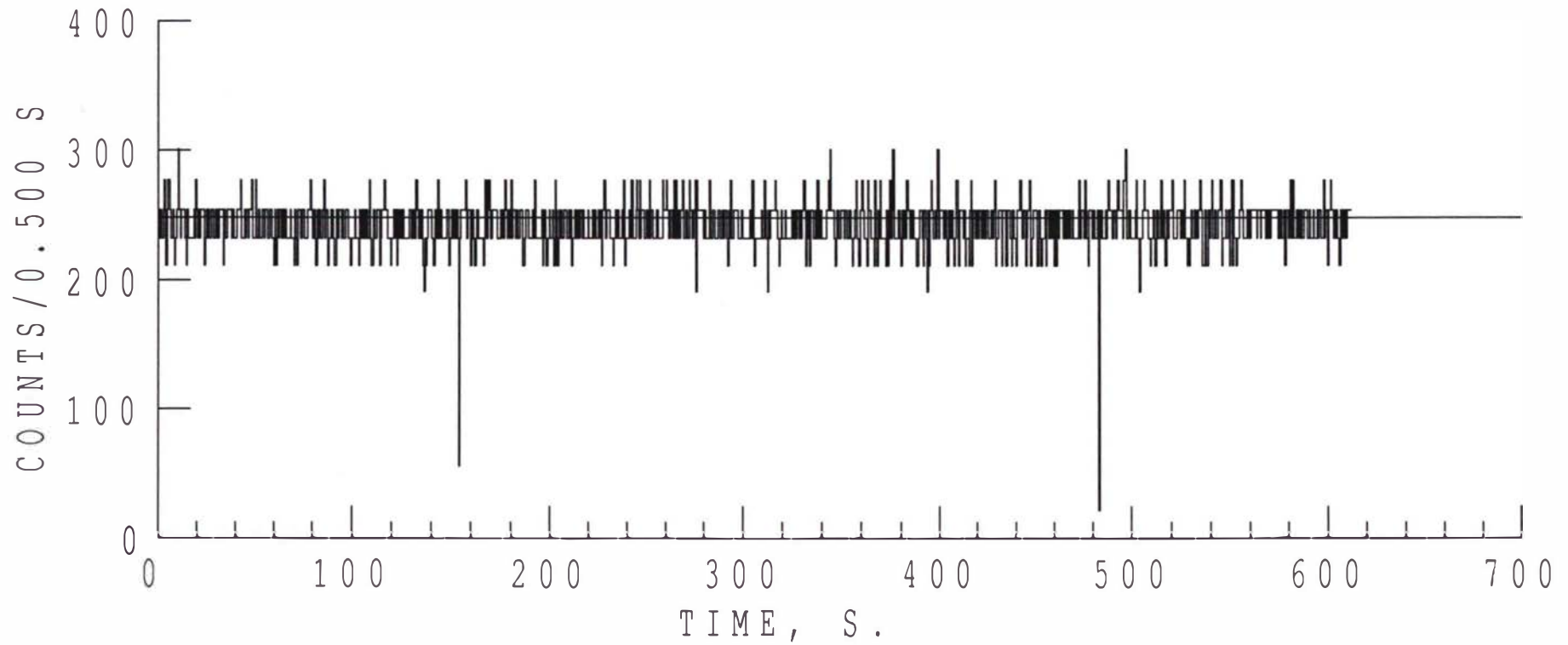
COMMENTS:

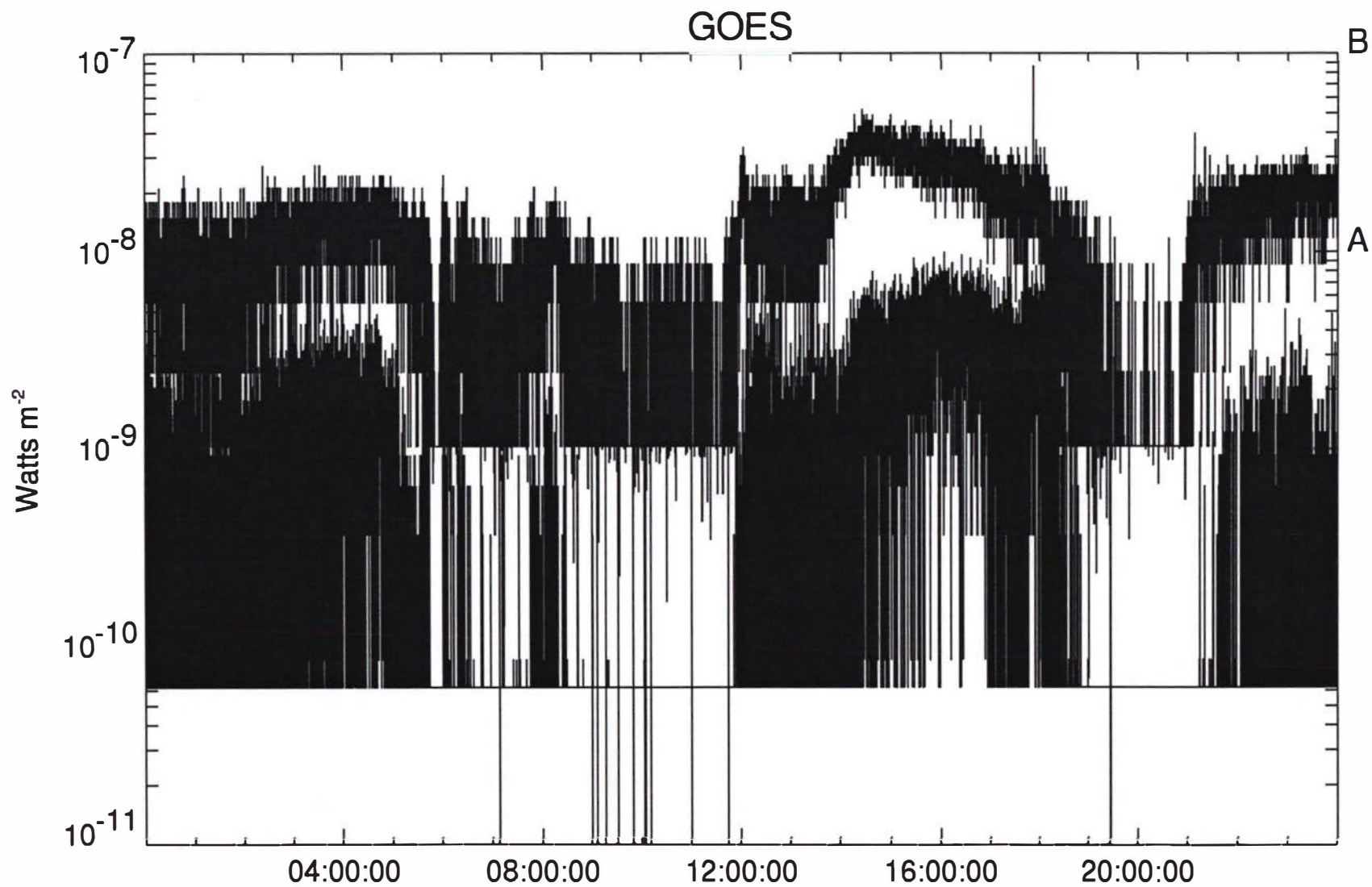
GRB: WEAK, 8 S DURATION, MARGINAL ABOVE 300 KEV.

7 / 6 / 94

ULYSSES RT
5 / 6 / 94 53460.305 s
0 - 0 keV

N=10 M=2
>4.0 SIGMA FLUCTUATIONS





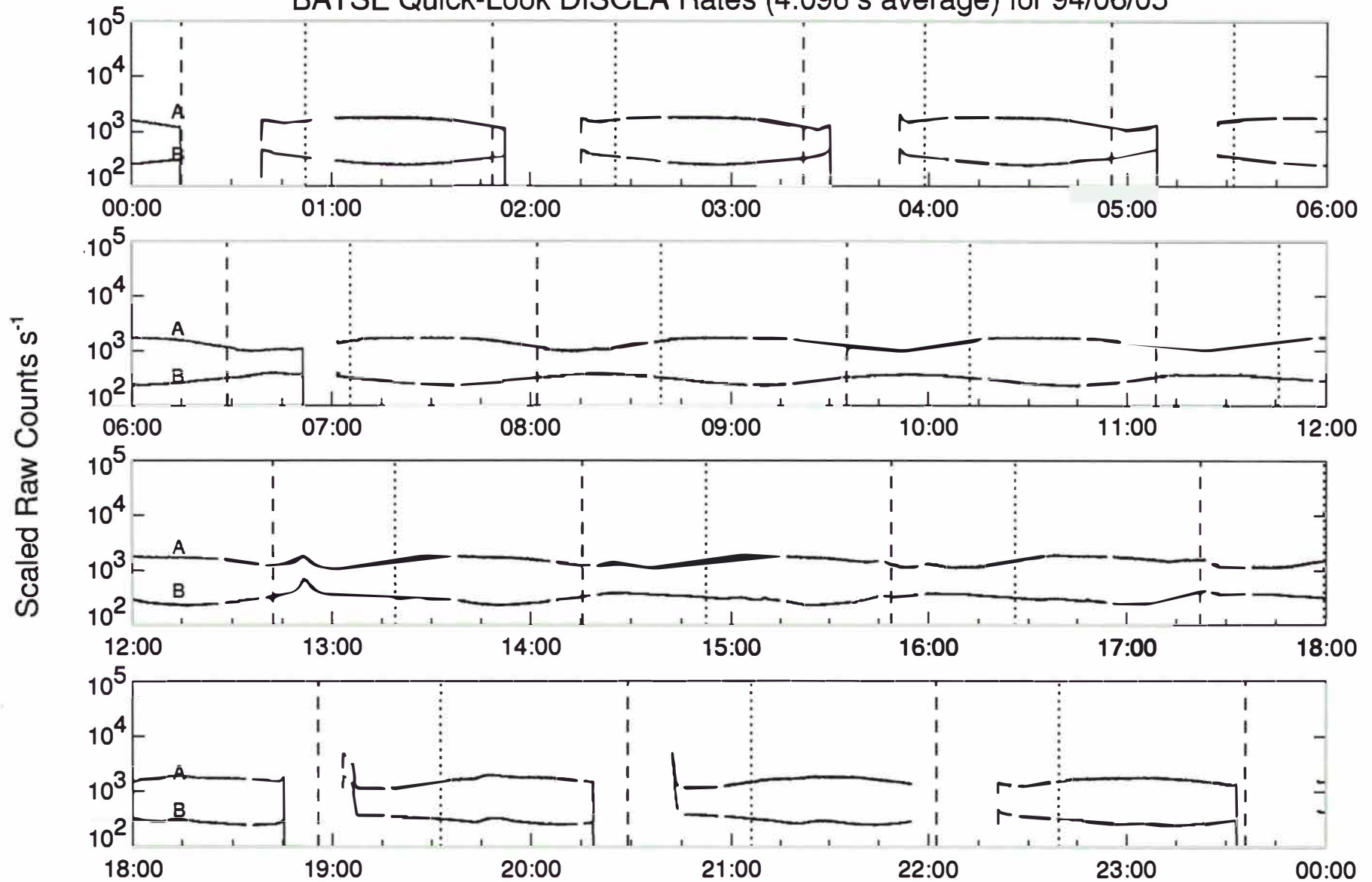
Data Start: 94/06/05, 0000:02

Plot created: 94/06/07, 1401

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/05

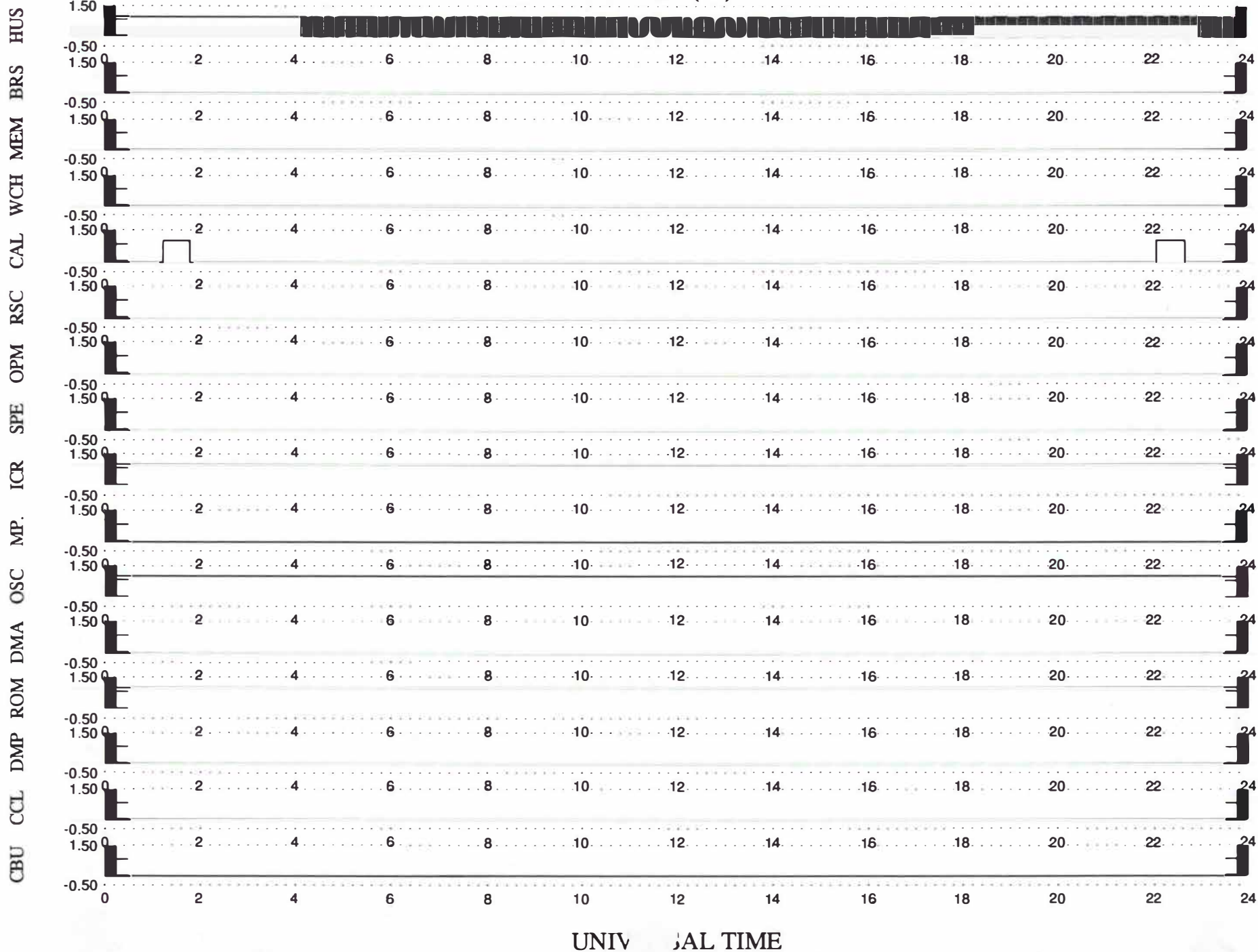


Current Time: 94/06/07, 1408 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

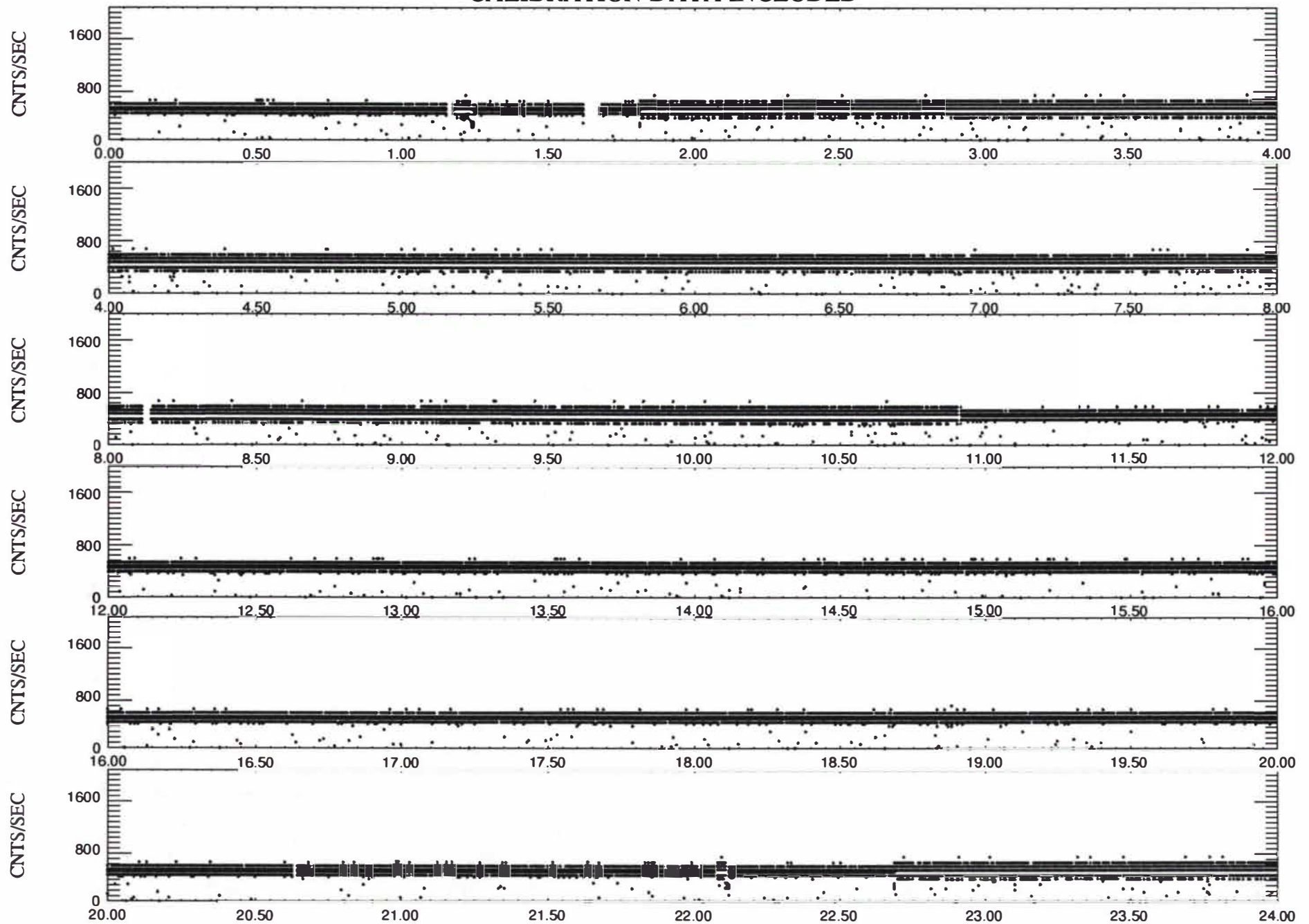
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

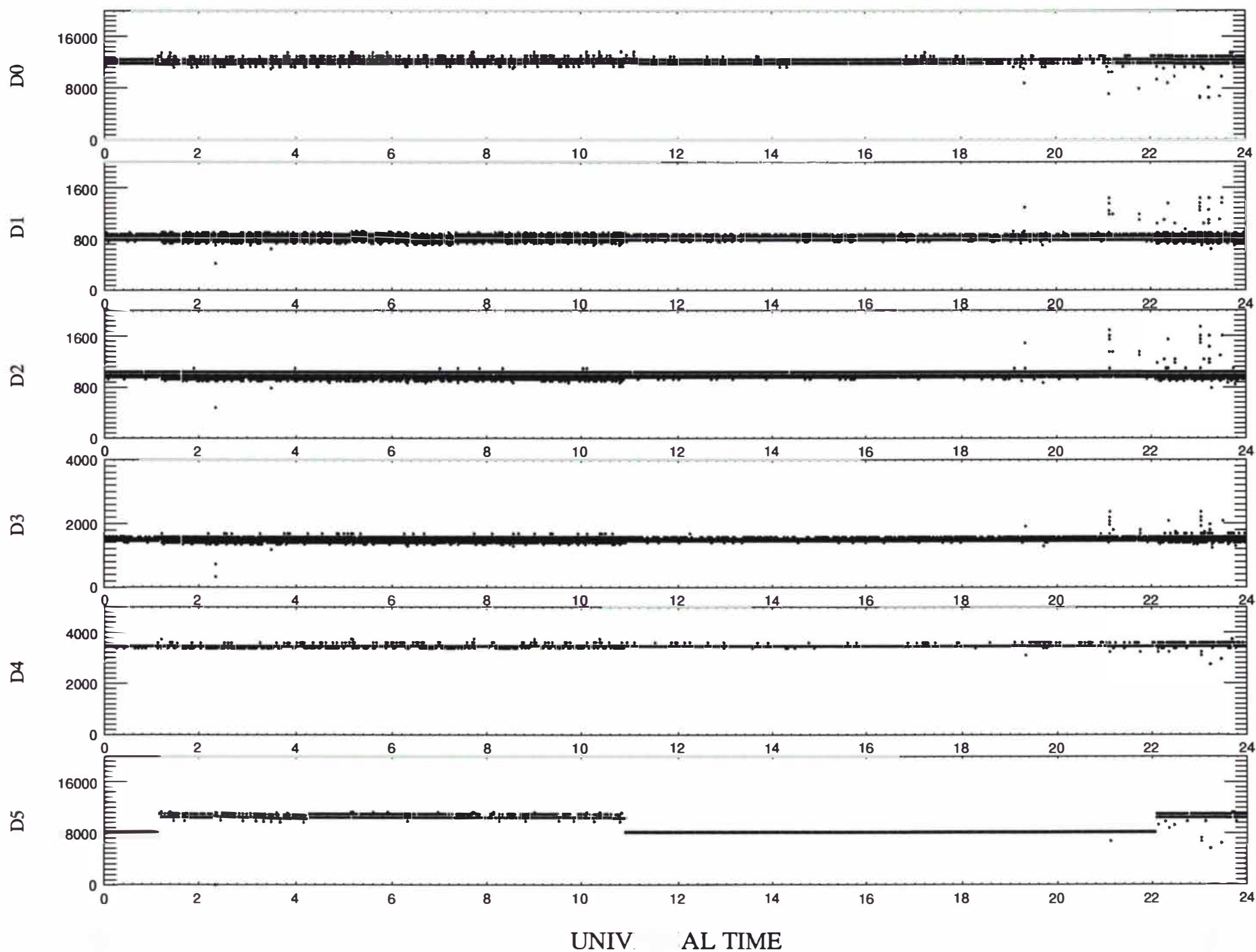
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV UNIV TIME



From HAGEDON@fender.msfc.nasa.gov Tue Jun 7 12:17 PDT 1994
Date: Tue, 7 Jun 1994 14:20:14 -0500 (CDT)
From: HAGEDON@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3017
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3017
EVENT OF 1994 JUN 6 DAY OF YEAR=157
EVENT CROSSING TIME AT BATSE : 44793. S. OR 12:26:33.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 311.000 47.000
BATSE PEAK COUNTING RATE: 3900 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 6/ 6/ 94 IS:
RA= 121.376 DEC= -39.559 DIST= 3.026 AU
BATSE-ULYSSES DISTANCE = 452641845. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 10.21 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1485.96 SECS.
CROSSING TIME AT ULYSSES IS 46279. S. OR 12:51:18 +/- 119.01 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 6/ 6/ 94 IS:
RA= 37.557 DEC= 14.068 DIST= 2.108 AU
MARS-BATSE DISTANCE = 315334560. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=102.56 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -228.77 SECS.
CROSSING TIME AT MARS IS 44564. S. OR 12:22:44 +/- 174.77 SECONDS

No

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3017	940606	9509	44793	3900	311	+47

BATSE BURST TRIGGER

NO.: 3017

TIME: TJD=9509 SECONDS=44793

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=139 AZIMUTH=80 ERROR= DEGREES

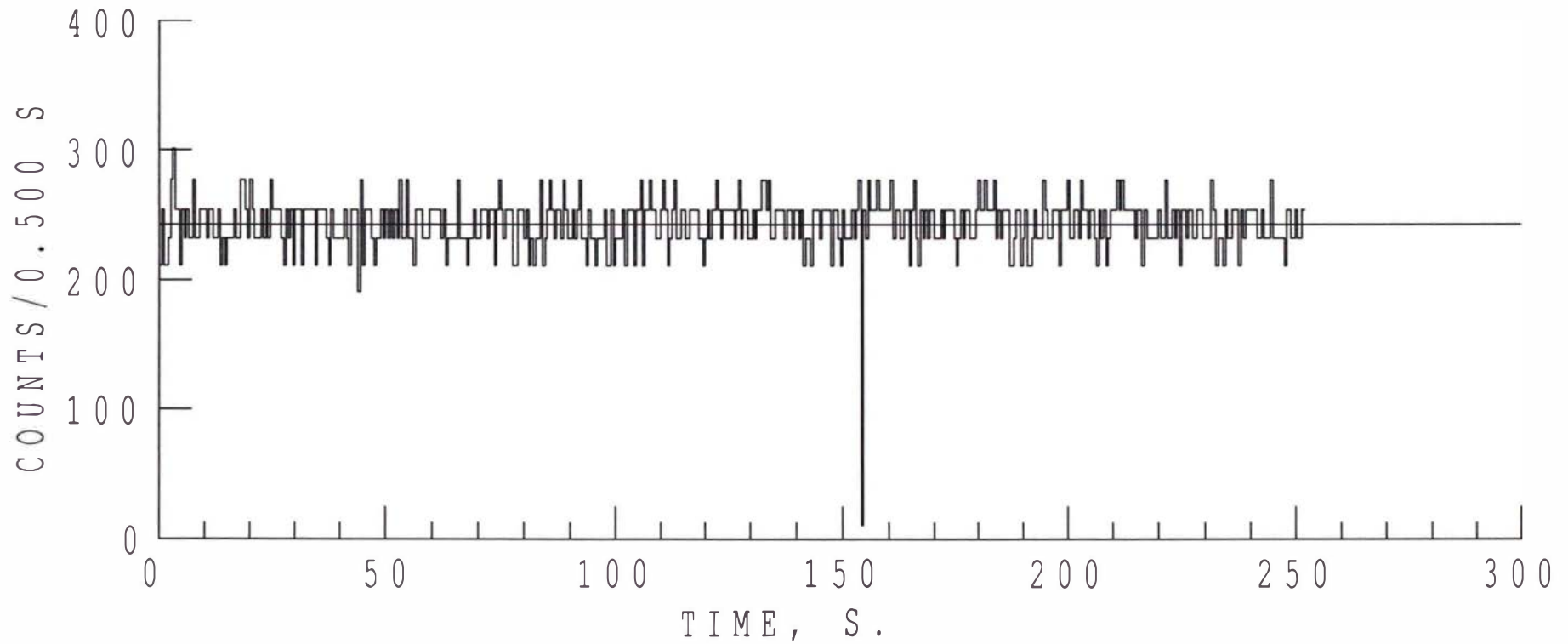
COMMENTS:

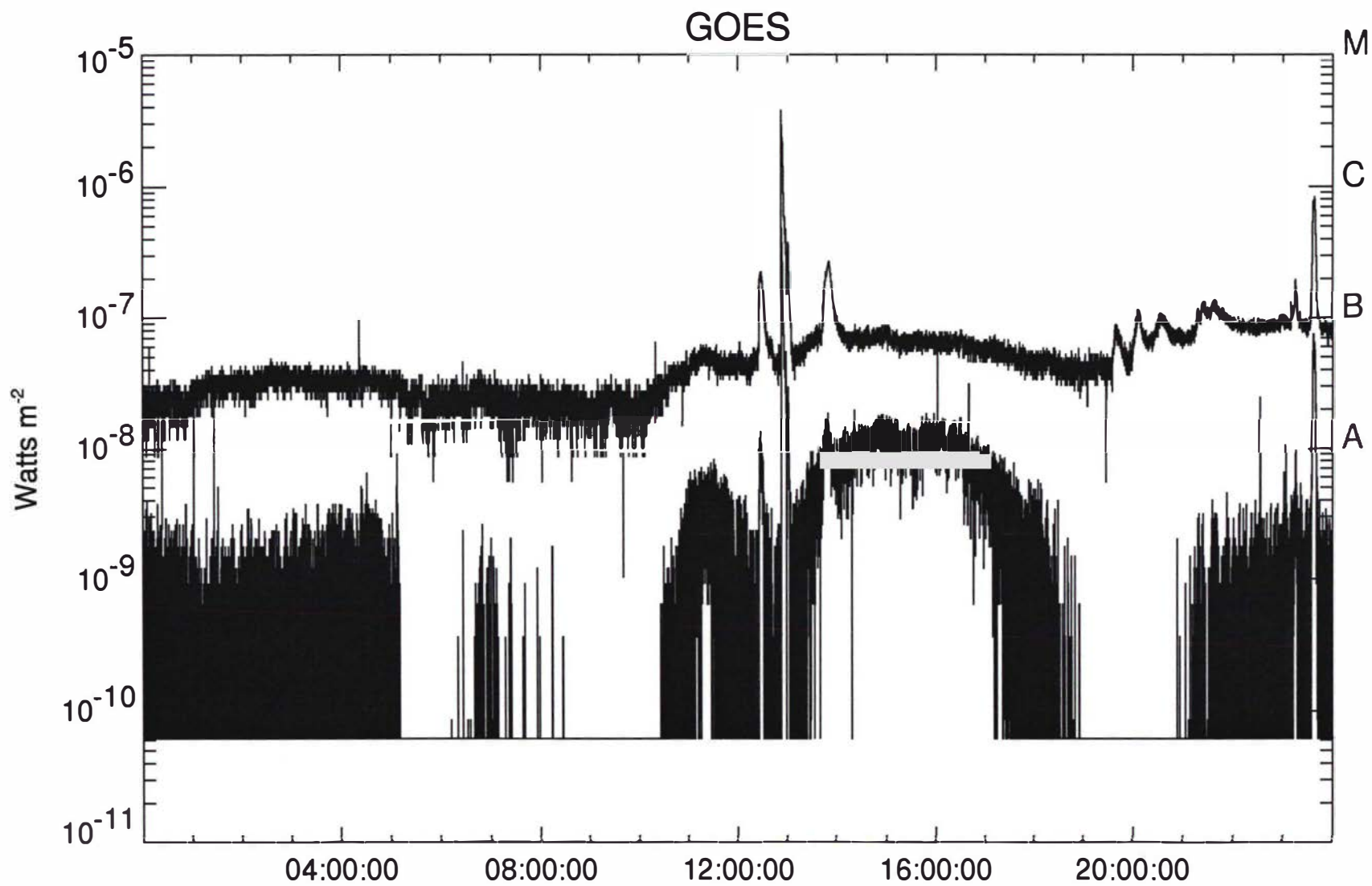
BURST. SINGLE PULSE WITH TWO DISTINCT PEAKS. TOTAL DUR.~130 SEC.
WEAKLY VISIBLE ABOVE 300 KEV.

7 / 6 / 94

ULYSSES RT
6 / 6 / 94 46152.496 s
0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



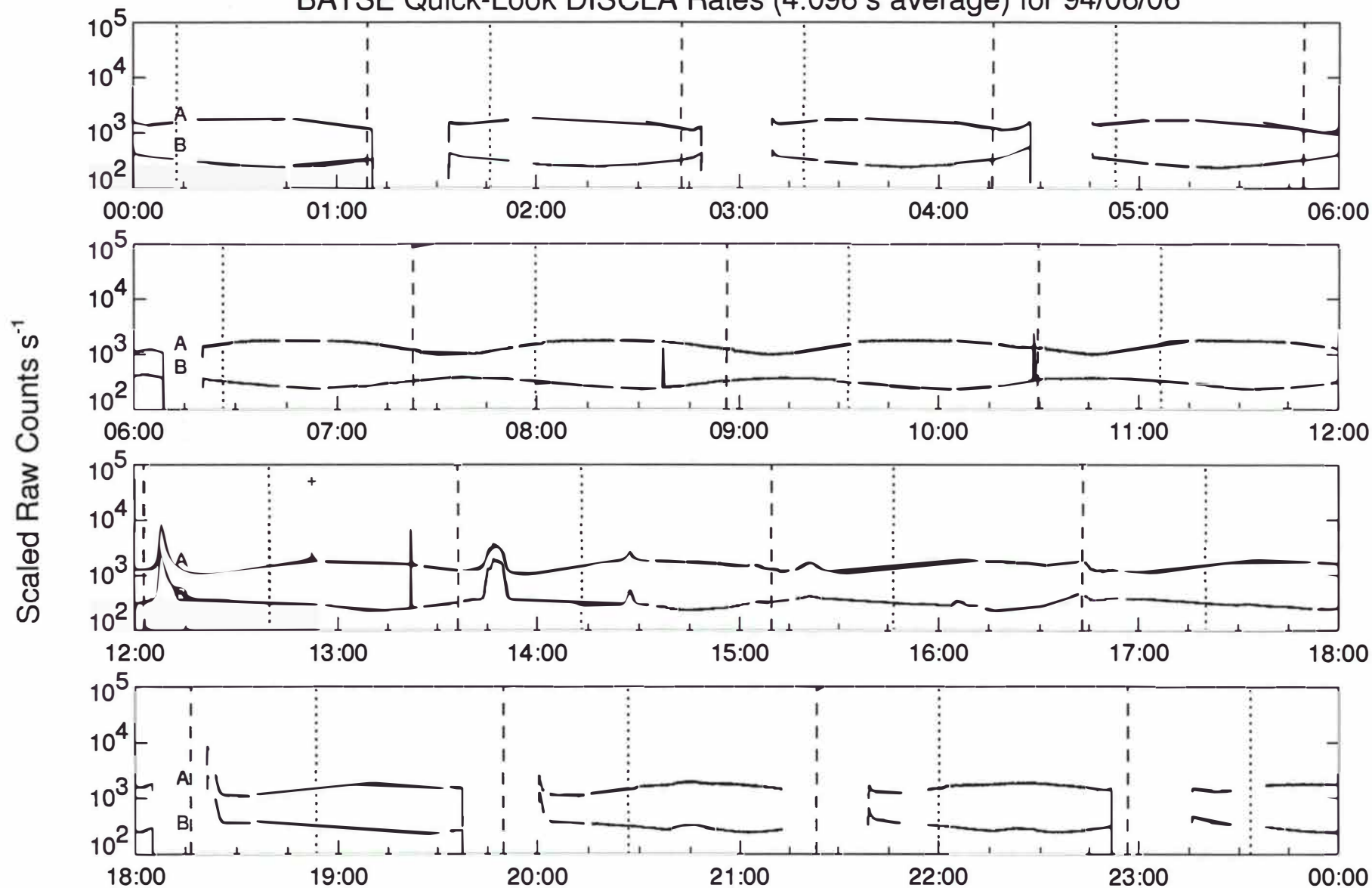


Data Start: 94/06/06, 0000:02

Plot created: 94/06/07, 1351

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/06

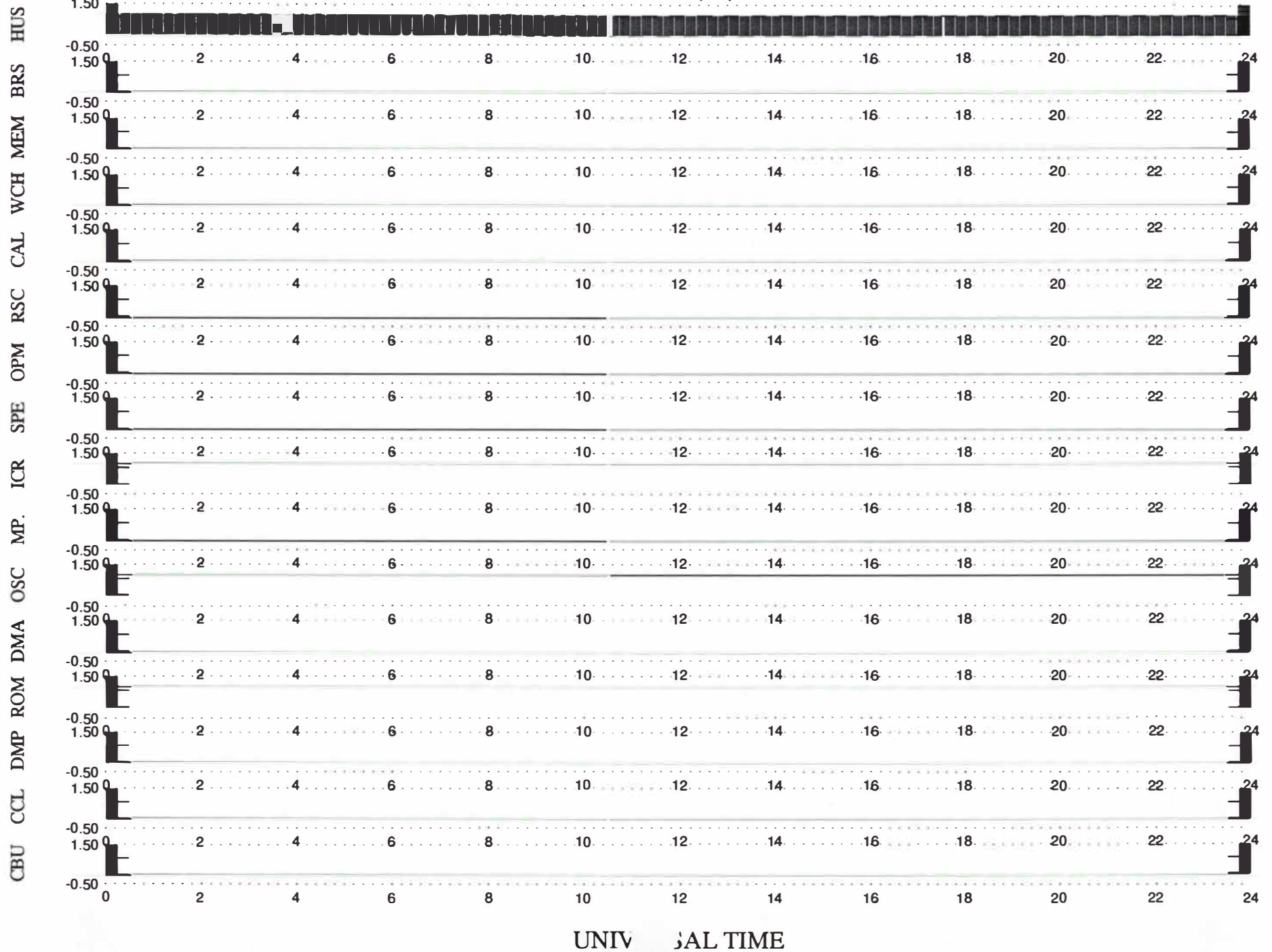


Current Time: 94/06/10, 1445 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

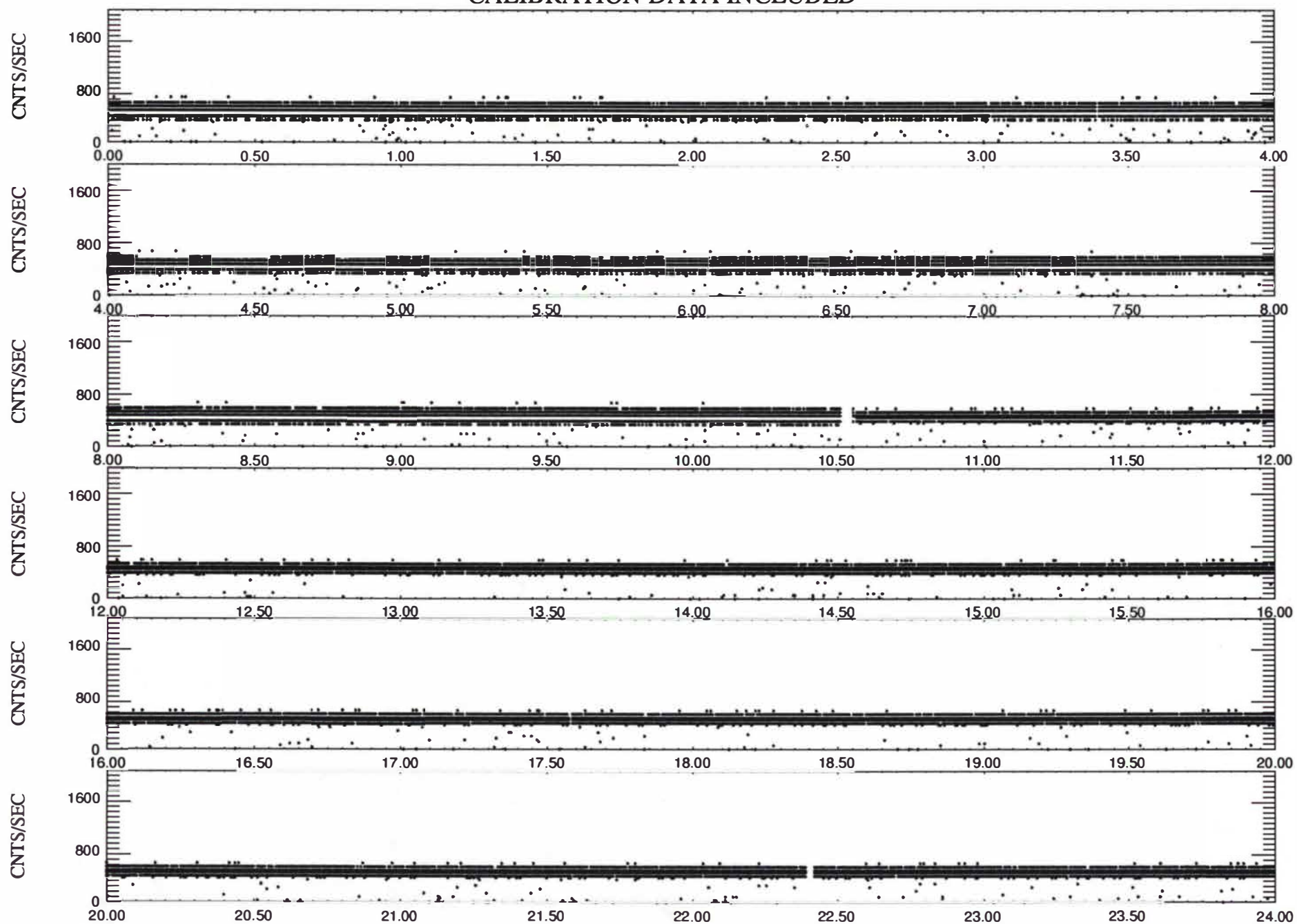
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

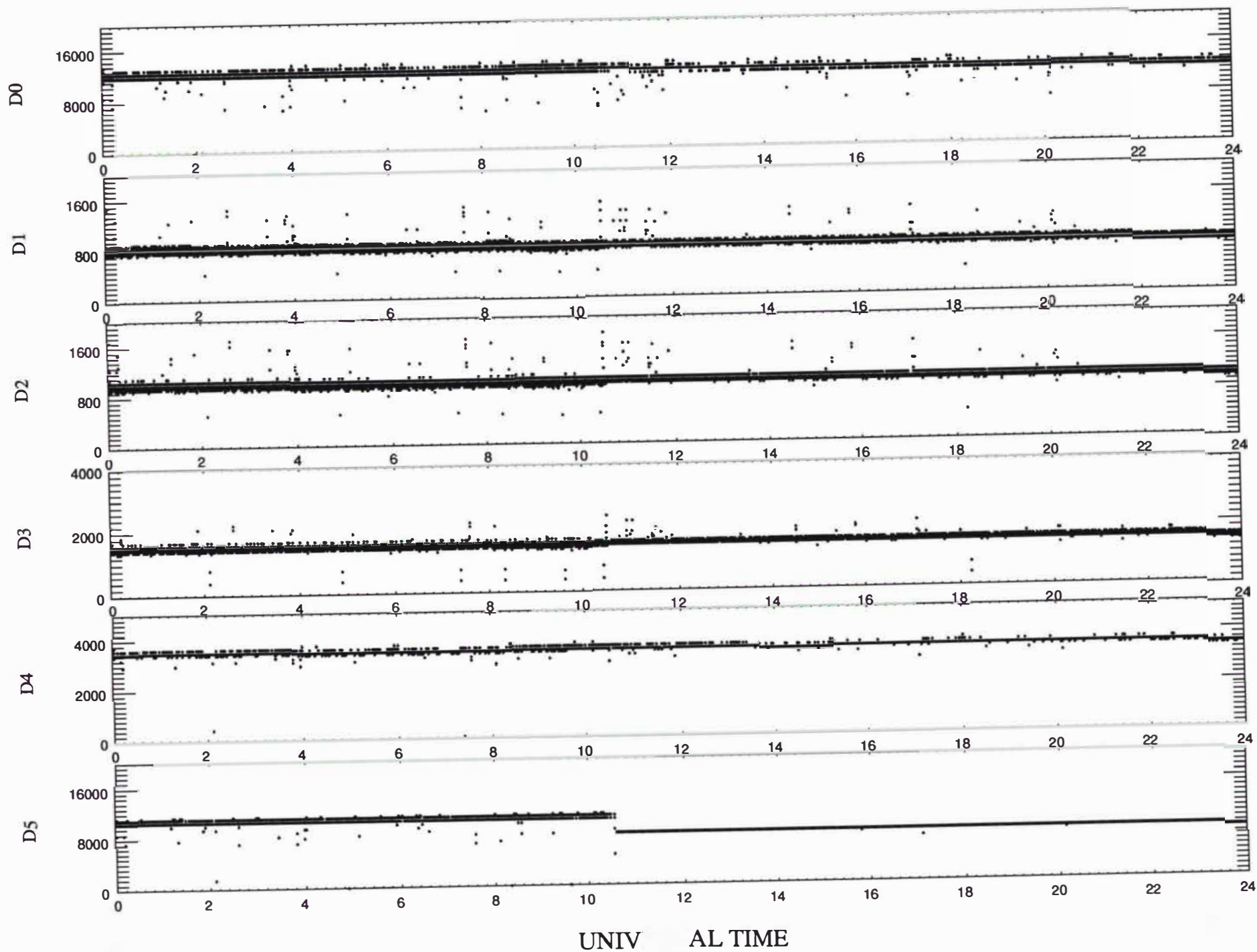
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV. AL TIME



BATSE BURST TRIGGER

NO.: 03018

TIME: TJD=9510 SECONDS=01733

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

TRIGGERED ON ENTRY INTO SAA.

BATSE BURST TRIGGER

NO.: 03019

TIME: TJD=9510 SECONDS=23619

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=070.7 AZIMUTH=008.3 ERROR= DEGREES

COMMENTS:

GOES B2.8 FLARE.

SINGLE PULSE; DURATION APPROX. 15 SEC.

BATSE BURST TRIGGER

NO.: 03020

TIME: TJD=9510 SECONDS=62704

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

PARTICLE EVENT.

Fax to 00-1-510-643-8640

इसरो उपग्रह केन्द्र

प्रन्तरिक्ष विभाग

भारत सरकार

हवाईपत्तन मार्ग, विमानपुर डाक घर,

बैंगलूर-560 017, भारत

तार: 'उपग्रह' टेलिक्स : 0845-2325 और 2769

दूरभाष : 566251



ISRO SATELLITE CENTRE

DEPARTMENT OF SPACE

GOVERNMENT OF INDIA

AIRPORT ROAD, VIMANAPURA P.O.,

BANGALORE-560 017. INDIA

Telegram : UPAGRAH Telex : 0845-2325 & 2769

Telephone : 566251

25 June 94

Dear Kevin,

Our GRB expt. on SROSS-C2 is working satisfactorily. The satellite is in 436×920 km orbit and so we have plenty of triggers - mostly false! Starting today, the orbit manoeuvres will take place and by July 10th, we expect to reach an orbit of 436×620 km. Till then the payloads are switched off.

Following interesting triggers need a check from your end:

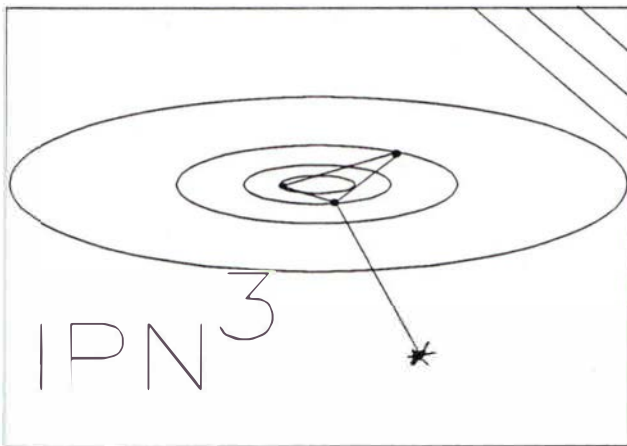
Orbit	Date	Time (UT)
371	29 May	05 ^h 32 ^m 23 ^s
374	29 May	10 42 34
514	7 JUNE	23 05 47
521	8 JUNE	11 40 37
558	10 JUNE	23 08 49
391	30 MAY	14 56 43
389	30 MAY	11 16 24

I would appreciate it if you can check these events in the IPN files.
Many thanks.

— Krishnam

Our FAX 91-80-558 5409
91-80-558-5407

भारतीय अन्तरिक्ष अनुसंधान संगठन INDIAN SPACE RESEARCH ORGANISATION (ISRO)



FAX FROM K. HURLEY
UNIVERSITY OF CALIFORNIA
SPACE SCIENCES LABORATORY
BERKELEY, CA. 94720
PHONE: (510) 643-9173
FAX: (510) 643-8640 (OFFICE), -8302 (SECT'Y)
E-MAIL: khurley@sunspot.ssl.berkeley.edu

TO: K. Marar

FAX #: 0091 080 5585490 *Bangalore India*

DATE: June 25, 1994

TOTAL NUMBER OF PAGES: 1

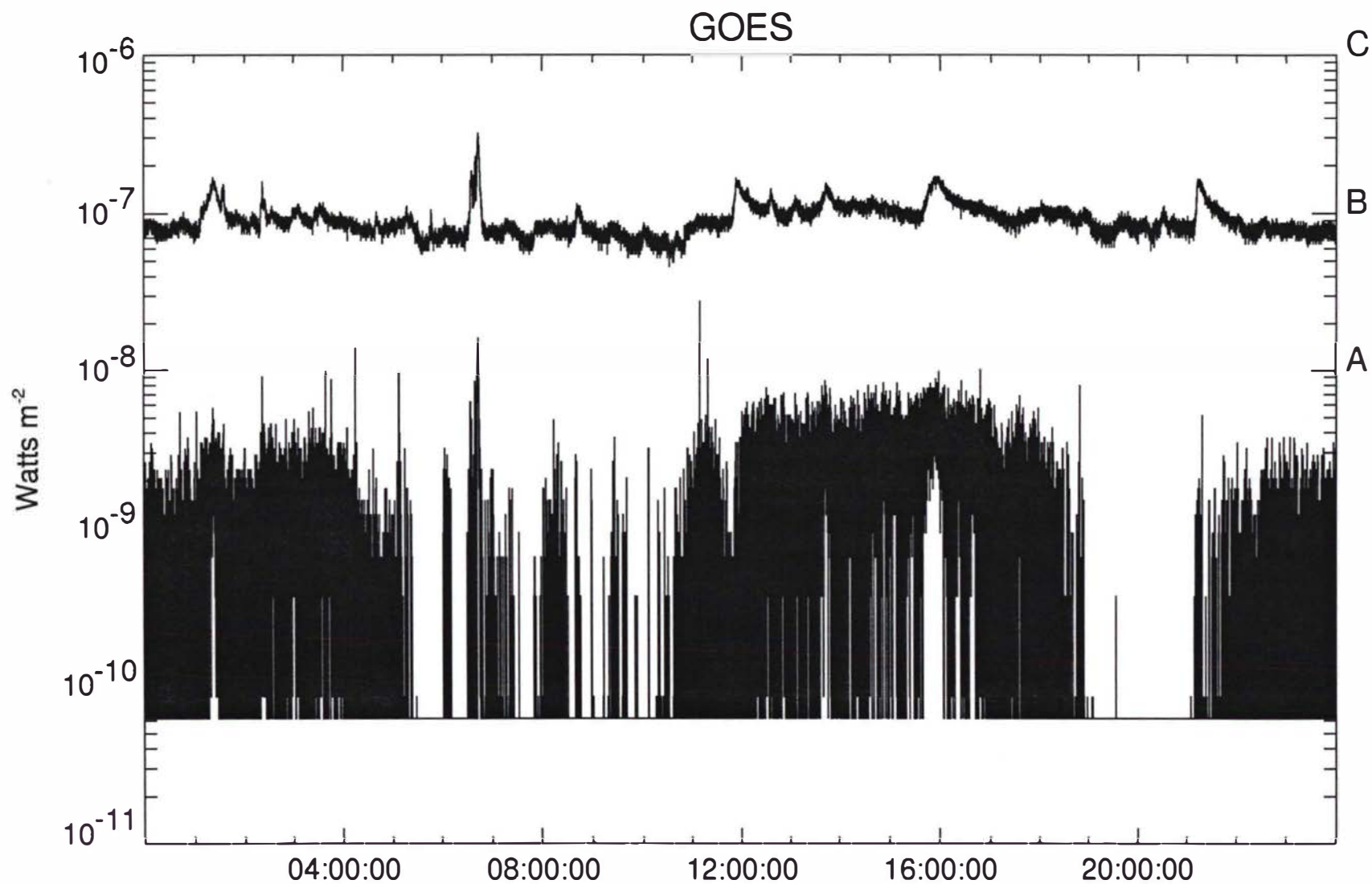
FAXED
6/30/94

Dear Krishnan,

Unfortunately none of the events you listed corresponds to an IPN event. It is still possible that some of them could be confirmed if I look in the Ulysses real time data, but to do that, it would be best to get the SROSS earth center position and distance for these events, so that I can limit the time window to search.

Kevin

PS It would be good if we could communicate by e-mail, but I can't find a gateway to India here in the U.S. Any ideas?



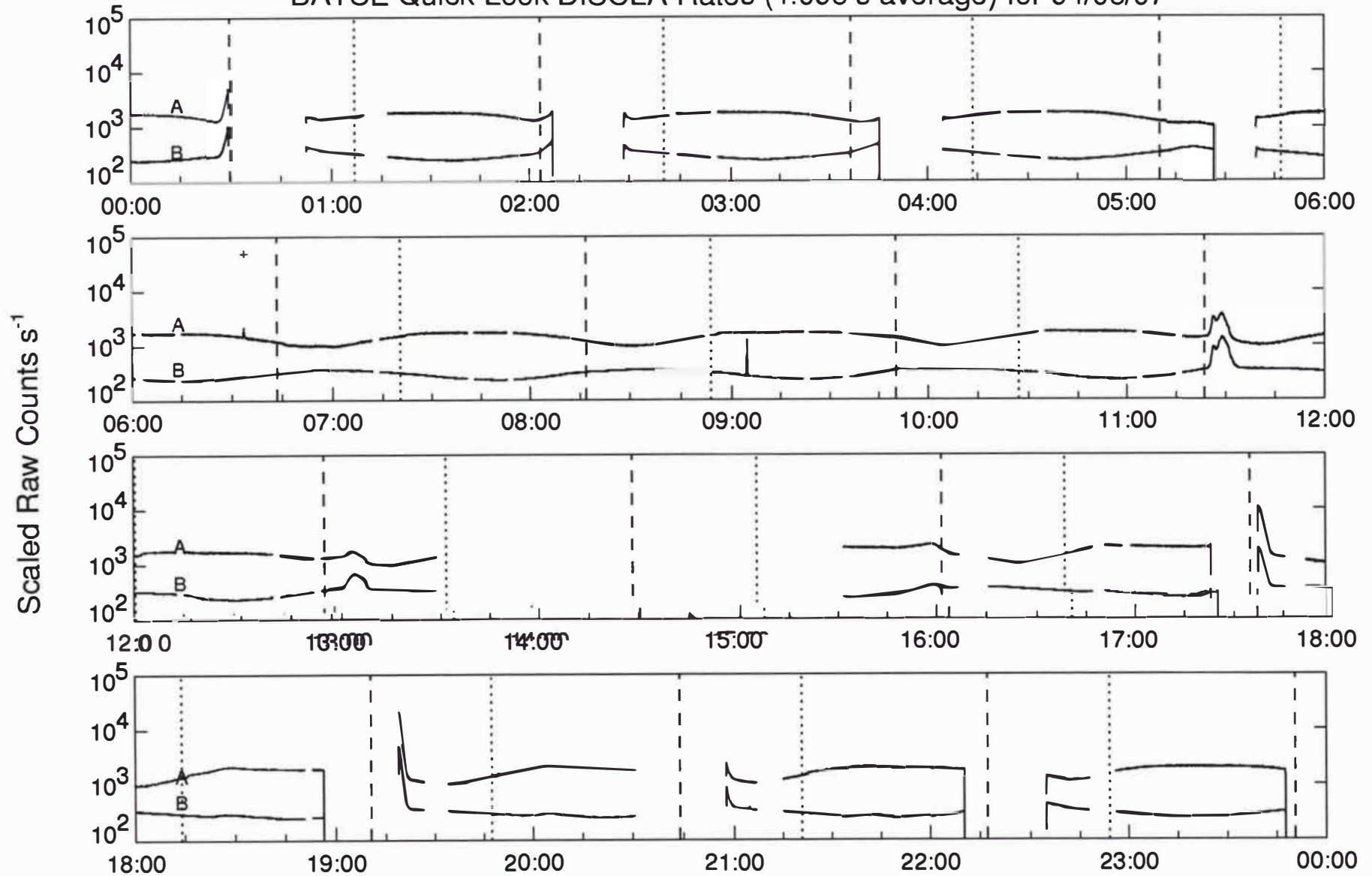
Data Start: 94/06/07, 0000:01

Plot created: 94/06/10, 1437

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/07

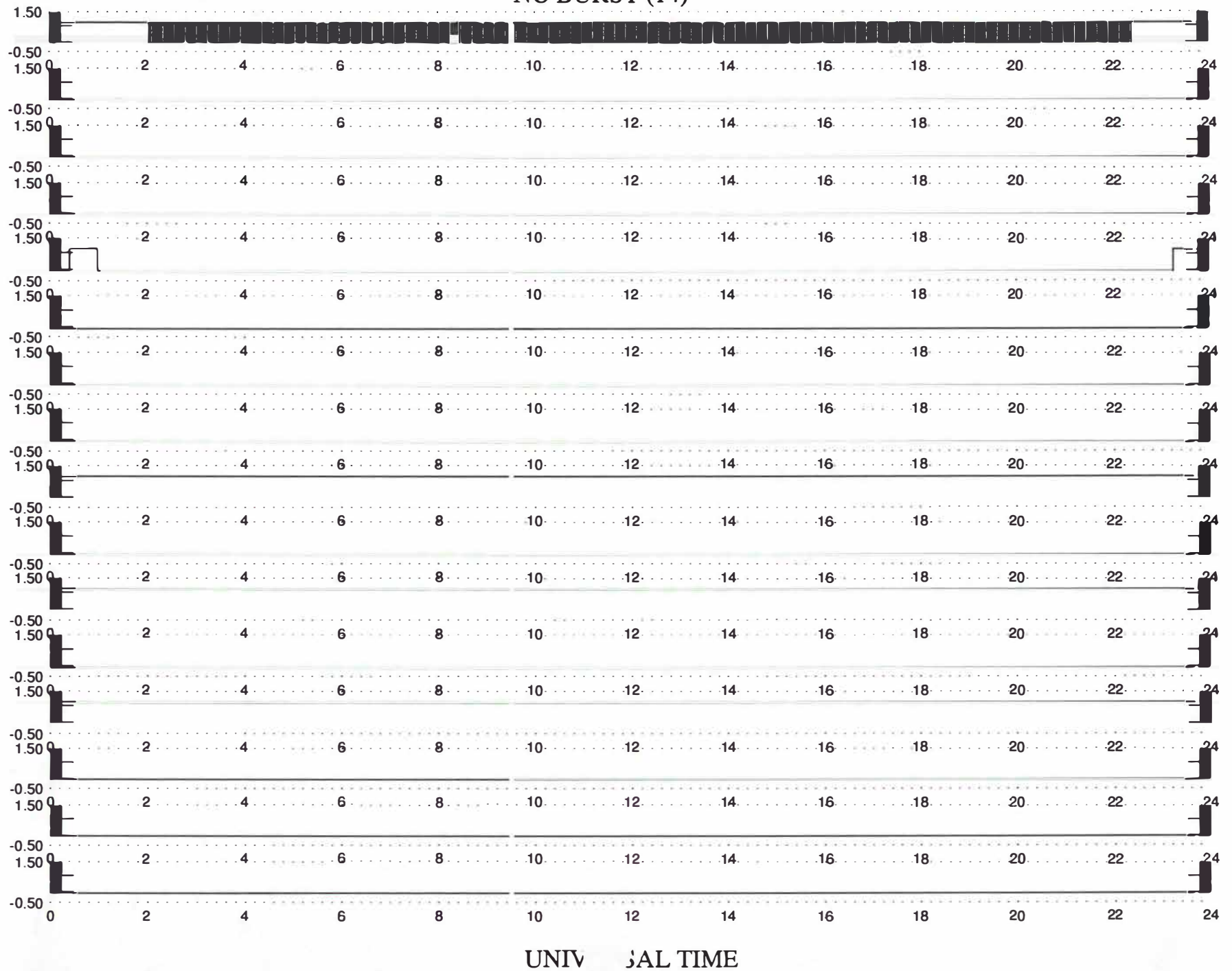


Current Time: 94/06/10, 1445 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

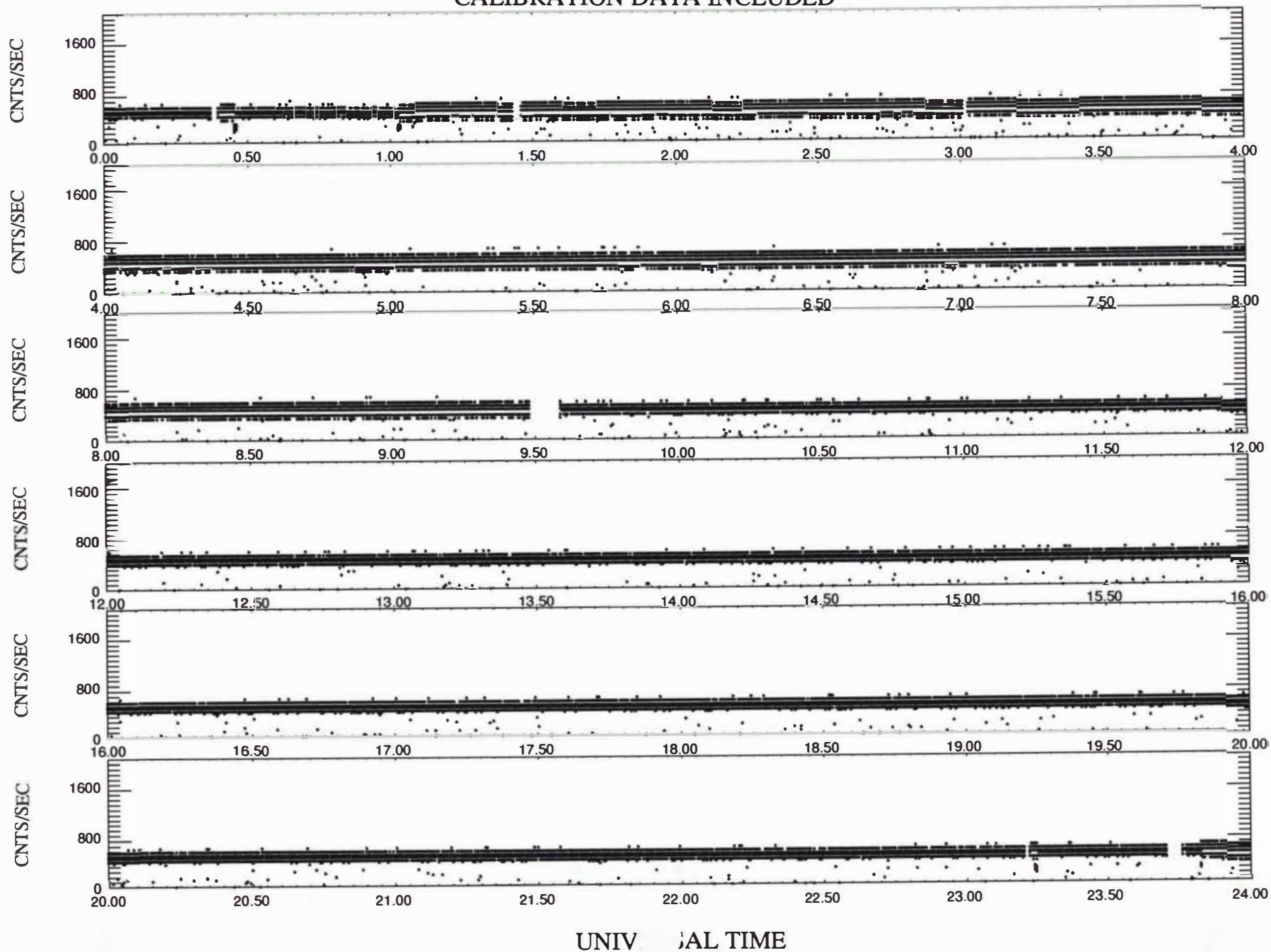
Dotted line: Day entry
 Dashed line: Night entry

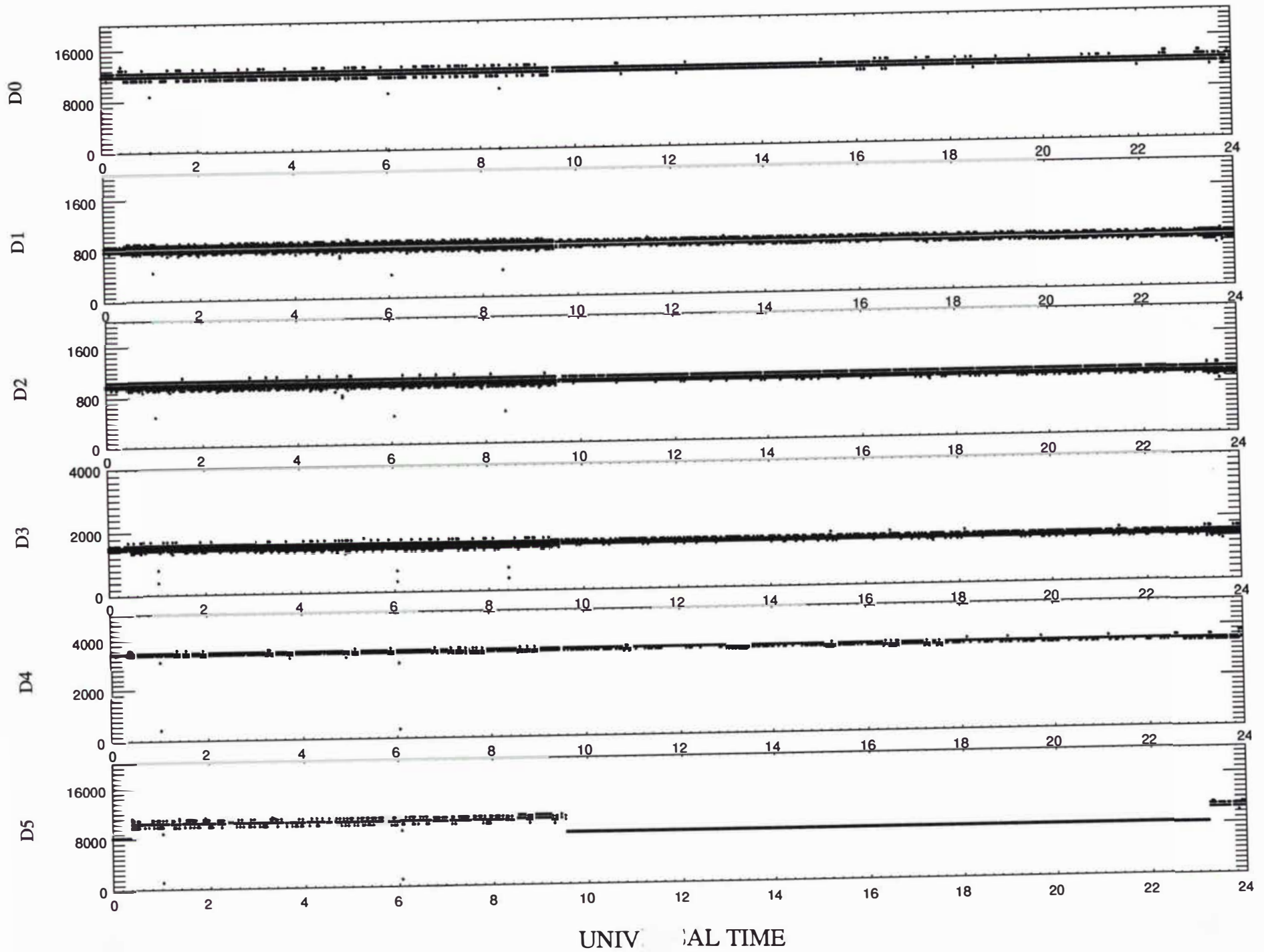
* Solar Burst Trigger
 + Solar Flare

CBU CCL DMP ROM DMA OSC MP. ICR SPE OPM RSC CAL WCH MEM BRS HUS



CALIBRATION DATA INCLUDED





From PREECE@ssl.msfc.nasa.gov Mon Jun 13 08:51 PDT 1994
Date: Mon, 13 Jun 1994 10:49:56 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
LHEAVXKWOK@ssl.msfc.nasa.gov, 15733SCHAEFER@ssl.msfc.nasa.gov,
CASS09BAND@ssl.msfc.nasa.gov, CASS09GRUBER@ssl.msfc.nasa.gov,
CASS09MATTESON@ssl.msfc.nasa.gov, PACIESAS@ssl.msfc.nasa.gov,
HORACK@ssl.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 03021

TIME: TJD=9511 SECONDS=41210

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

NO, YOU DIDN'T FALL ASLEEP FOR 2 1/2 YEARS, THE PREVIOUS MESSAGE FOR TRIGGER NO. 3921 SHOULD BE IGNORED. THE CORRECT TRIGGER NO. IS '3021'. IT STILL IS AN ELECTRON EVENT, HOWEVER.

From PREECE@ssl.msfc.nasa.gov Mon Jun 13 07:56 PDT 1994
Date: Mon, 13 Jun 1994 9:56:02 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
LHEAVXKWOK@ssl.msfc.nasa.gov, 15733SCHAEFER@ssl.msfc.nasa.gov,
CASS09BAND@ssl.msfc.nasa.gov, CASS09GRUBER@ssl.msfc.nasa.gov,
CASS09MATTESON@ssl.msfc.nasa.gov, PACIESAS@ssl.msfc.nasa.gov,
HORACK@ssl.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 03022

TIME: TJD=9511 SECONDS=60247

TYPE: SAA ENT SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SAA ENTRY

Fax to 00-1-510-643-8640

इसरो उपग्रह केन्द्र

पन्तरिक्ष विभाग

भारत सरकार

हवाई पत्तन मार्ग, विमानपुर डाक घर,

बैंगलूर - 560 017, भारत

तार: 'उपग्रह' टेलिक्स : 0845-2325 और 2769

दूरभाष : 566251



ISRO SATELLITE CENTRE

DEPARTMENT OF SPACE

GOVERNMENT OF INDIA

AIRPORT ROAD, VIMANAPURA P. O.,

BANGALORE-560 017. INDIA

Telegram : UPAGRAH Telex : 0845-2325 & 2769

Telephone : 566251

25 June 94

Dear Kevin,

Our GRB expt. on SROSS-C2 is working satisfactorily. The satellite is in 436 x 920 km orbit and so we have plenty of triggers - mostly false! Starting today, the orbit manoeuvres will take place and by July 10th, we expect to reach an orbit of 436 x 620 km. Till then the payloads are switched off.

Following interesting triggers need a check from your end:

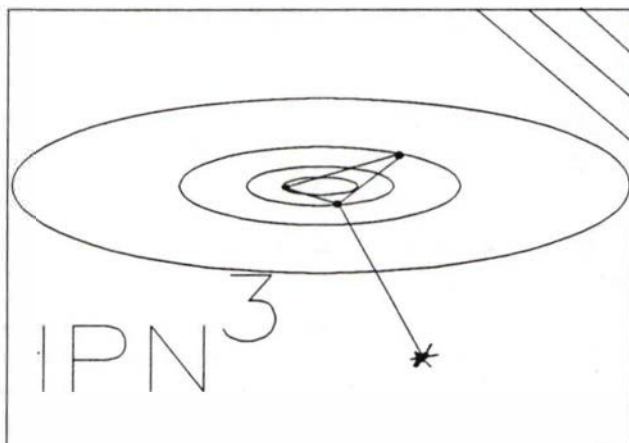
Orbit	Date	Time (UT)
371	29 May	05 ^h 32 ^m 23 ^s
374	29 May	10 42 34
514	7 JUNE	23 05 47
521	8 JUNE	11 40 37
558	10 JUNE	23 08 49
391	30 MAY	14 56 43
389	30 MAY	11 16 24

I would appreciate it if you can check these events in the IPN files.
Many thanks.

Krishnam

Our FAX 91-80-558 5409
91-80-558-5401

भारतीय अन्तरिक्ष अनुसंधान संगठन INDIAN SPACE RESEARCH ORGANISATION (ISRO)



FAX FROM K. HURLEY
UNIVERSITY OF CALIFORNIA
SPACE SCIENCES LABORATORY
BERKELEY, CA. 94720
PHONE: (510) 643-9173
FAX: (510) 643-8640 (OFFICE), -8302 (SECT'Y)
E-MAIL: khurley@sunspot.ssl.berkeley.edu

TO: K. Marar

FAX #: 0091 080 5585490 *Bangalore India*

DATE: June 25, 1994

TOTAL NUMBER OF PAGES: 1

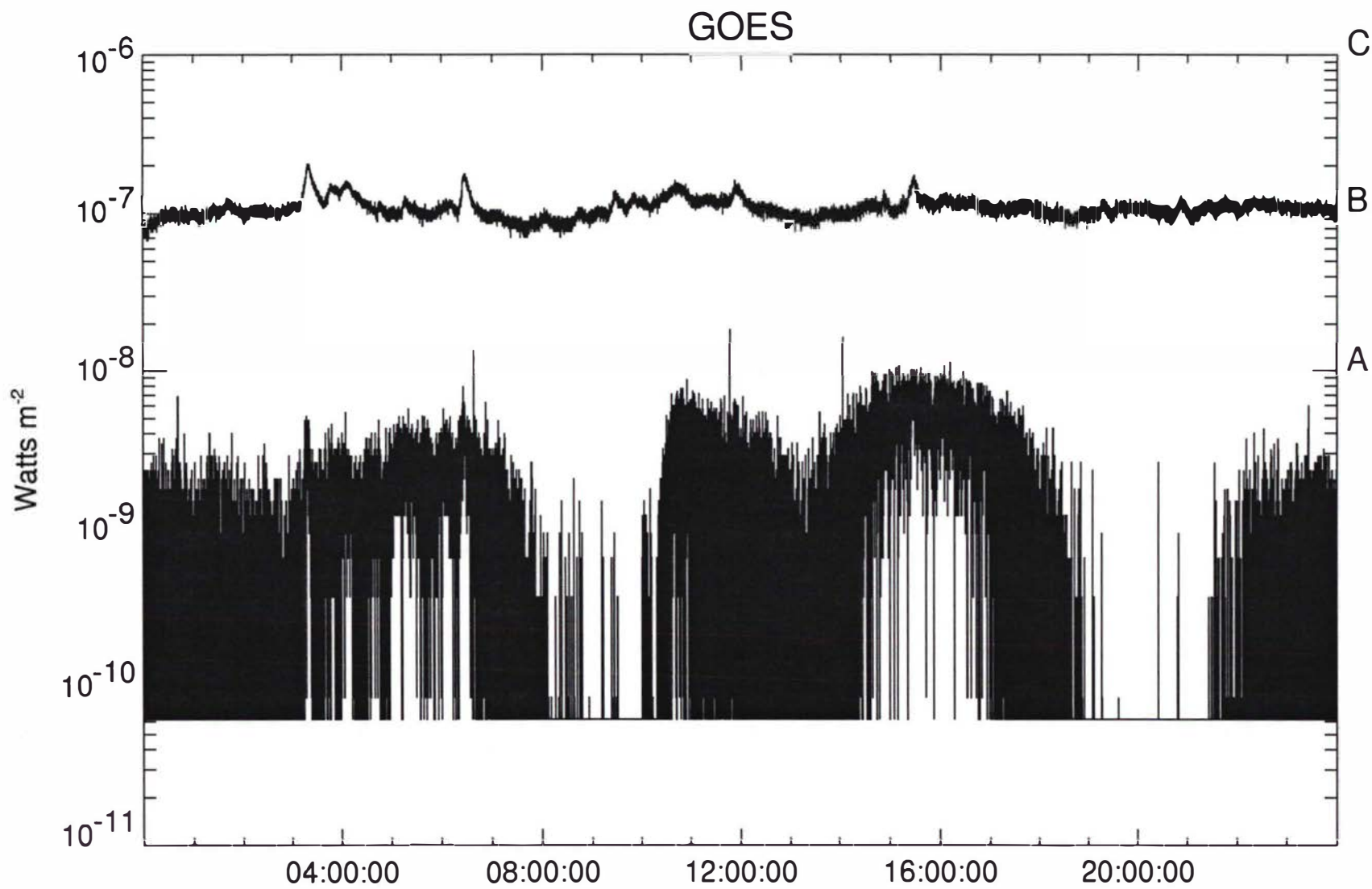
FAXED
6/30/94

Dear Krishnan,

Unfortunately none of the events you listed corresponds to an IPN event. It is still possible that some of them could be confirmed if I look in the Ulysses real time data, but to do that, it would be best to get the SROSS earth center position and distance for these events, so that I can limit the time window to search.

Kevin

PS It would be good if we could communicate by e-mail, but I can't find a gateway to India here in the U.S. Any ideas?



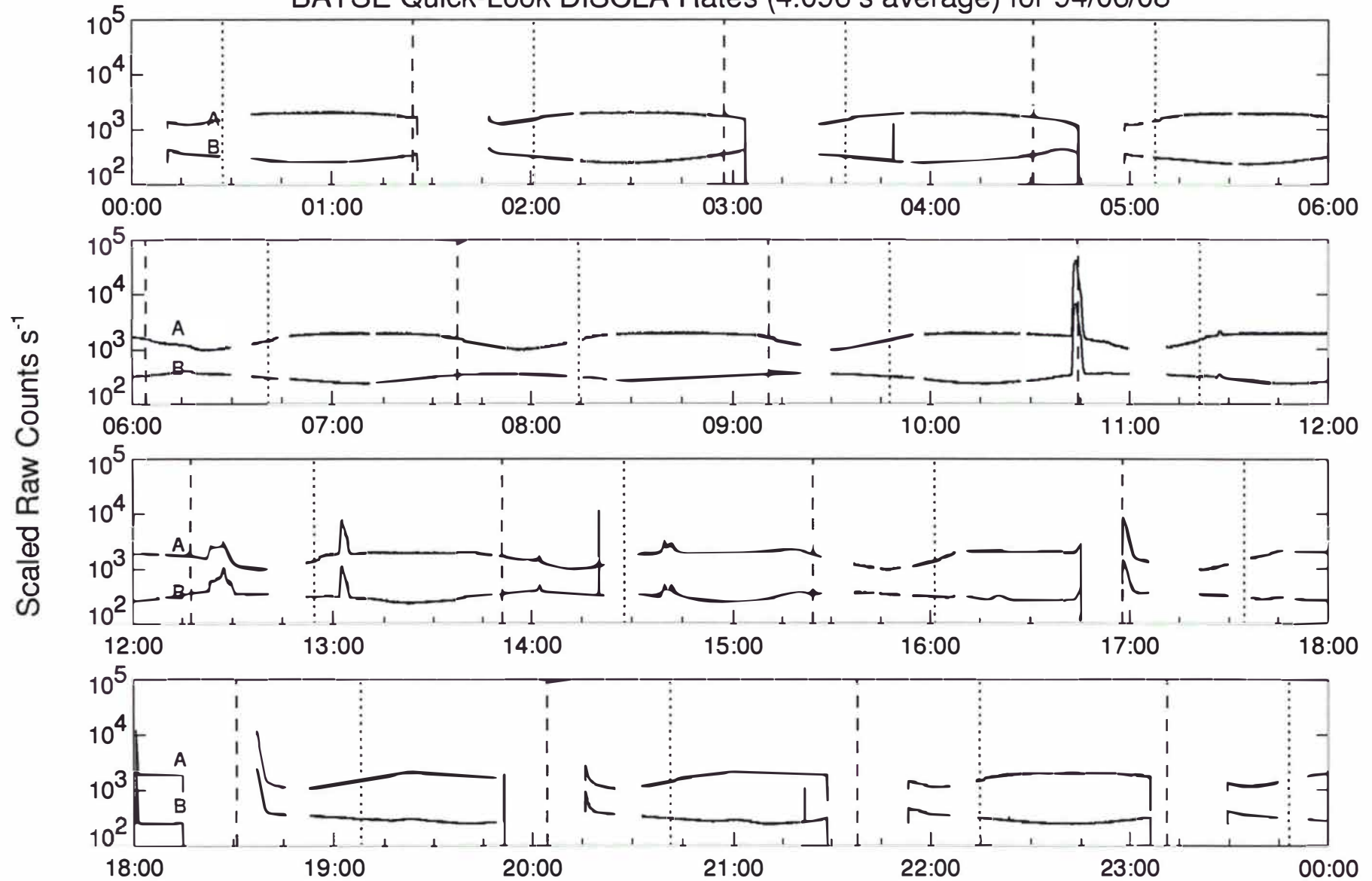
Data Start: 94/06/08, 0000:02

Plot created: 94/06/10, 1442

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/08

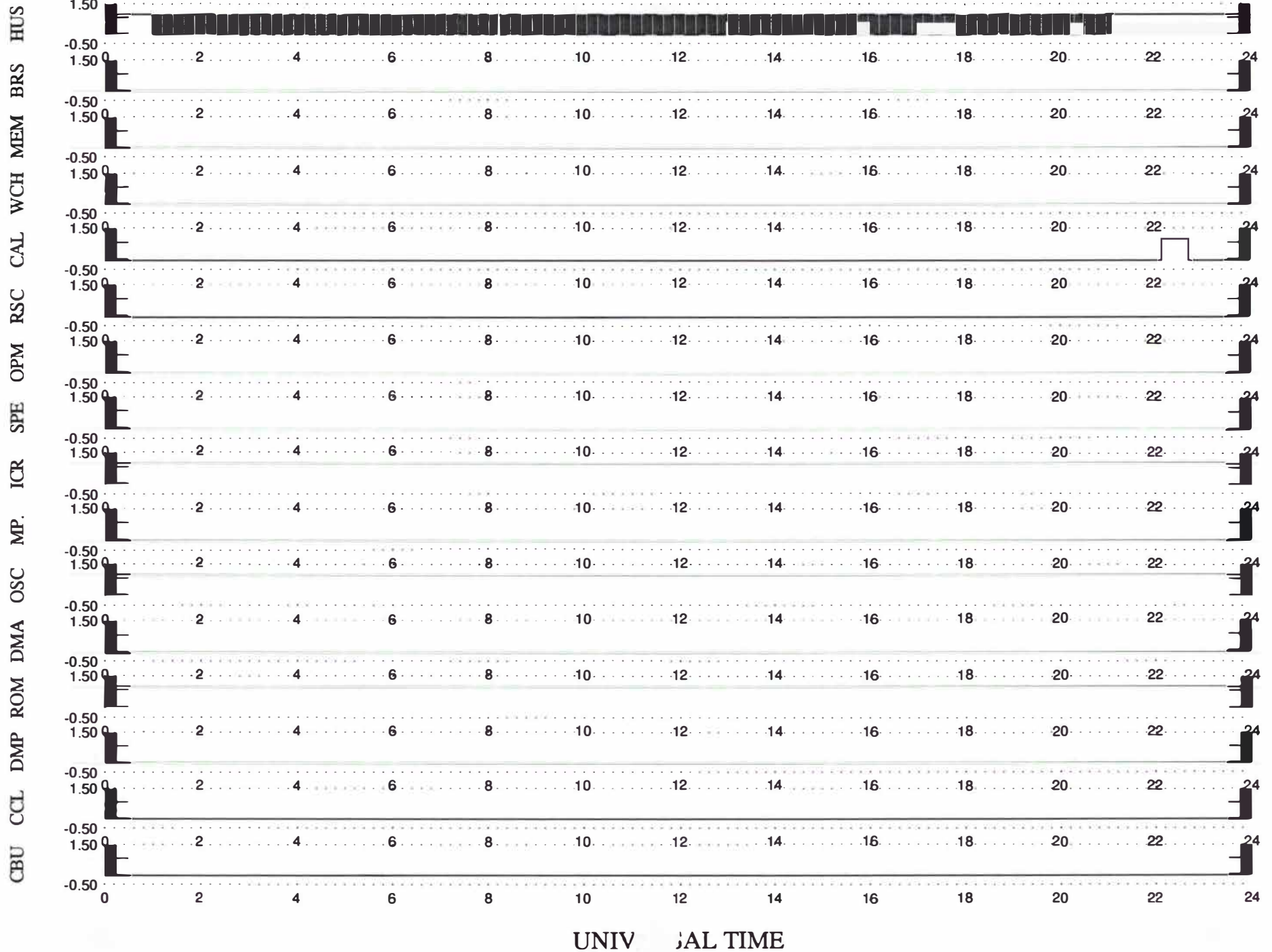


Current Time: 94/06/10, 1446 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05

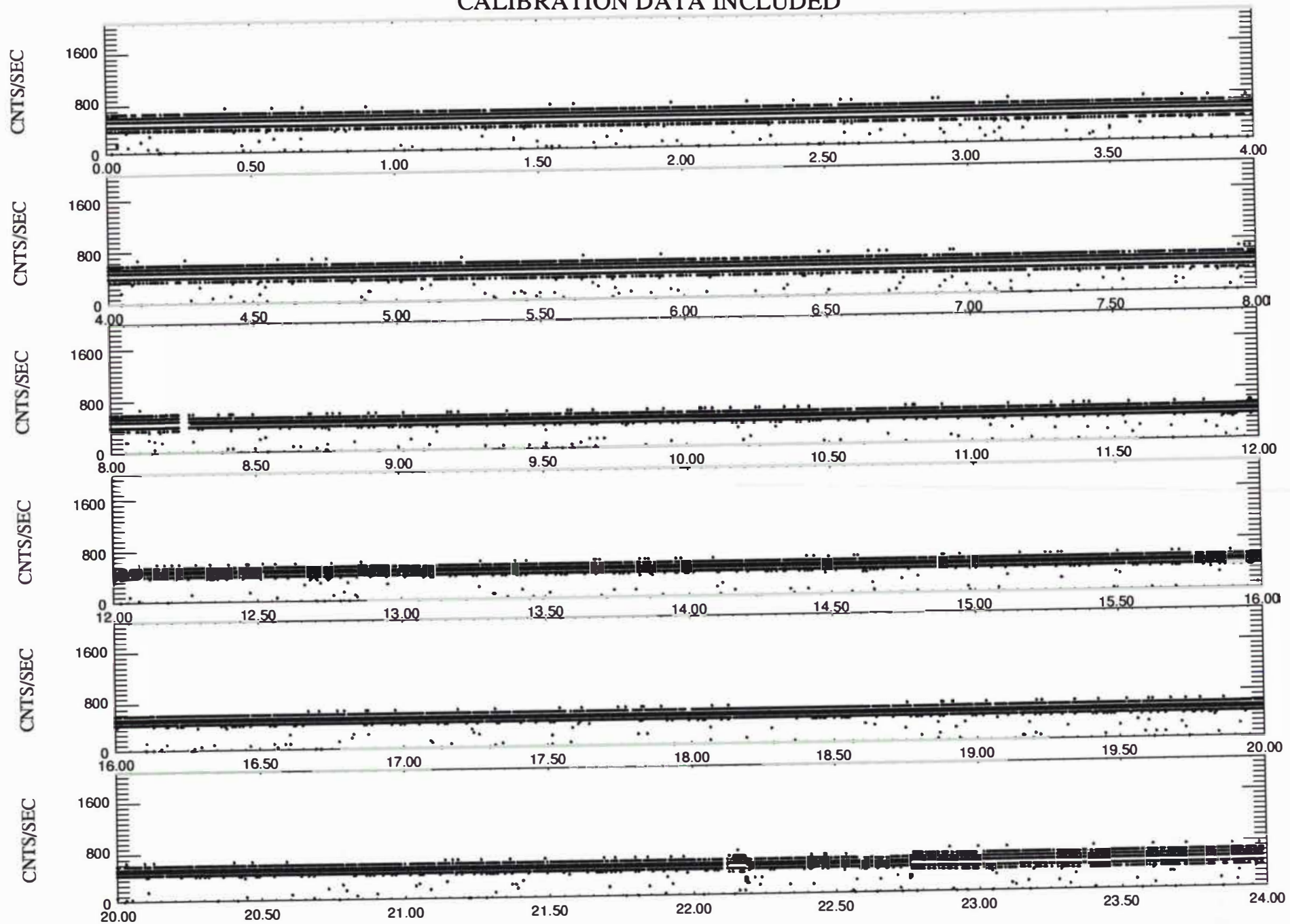
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

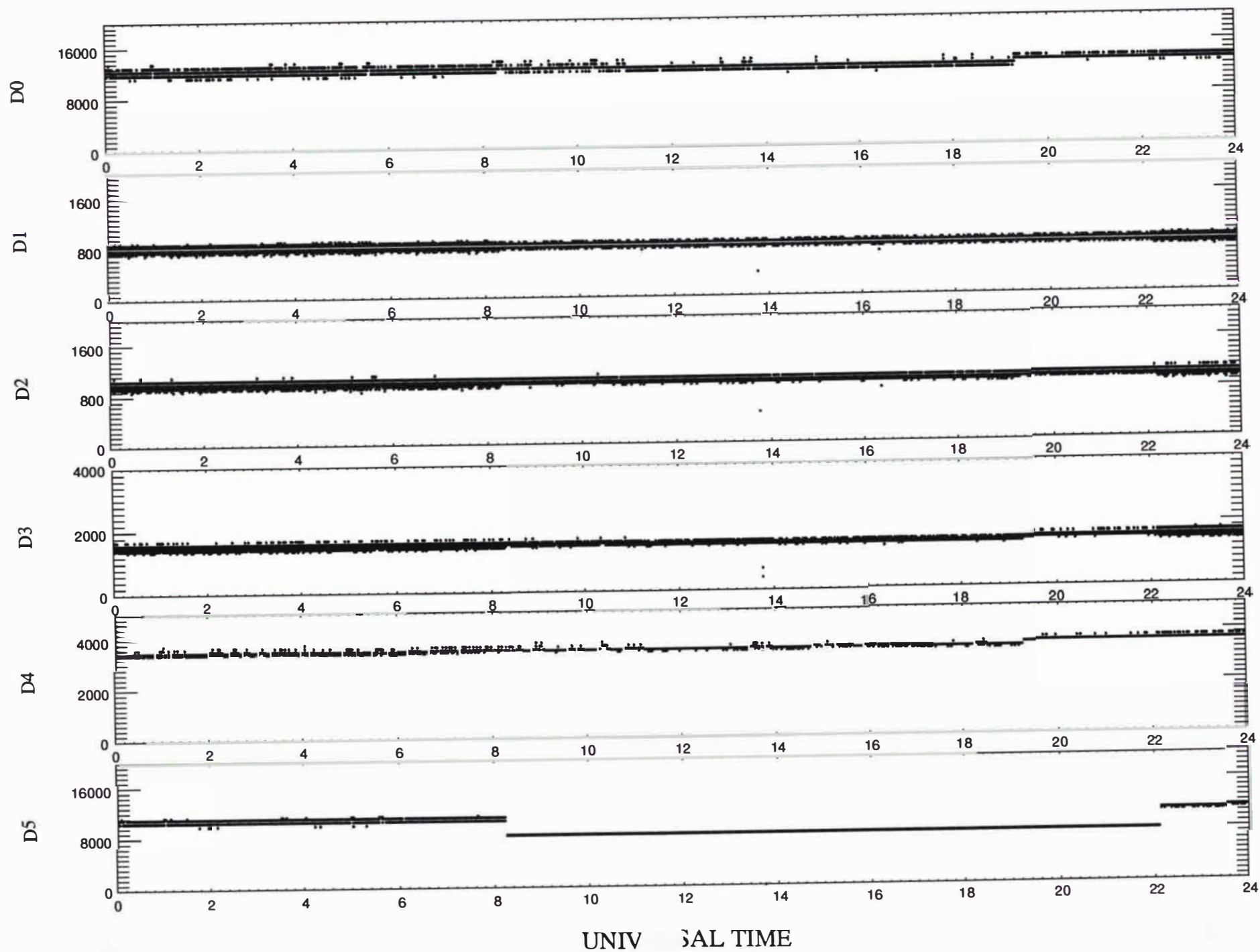
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIVSAL TIME



From SHARIFF@ssl.msfc.nasa.gov Fri Jun 10 13:47 PDT 1994
Date: Fri, 10 Jun 1994 15:47:46 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
LHEAVXKWOK@ssl.msfc.nasa.gov, 15733SCHAEFER@ssl.msfc.nasa.gov,
CASS09BAND@ssl.msfc.nasa.gov, CASS09GRUBER@ssl.msfc.nasa.gov,
CASS09MATTESON@ssl.msfc.nasa.gov, PACIESAS@ssl.msfc.nasa.gov,
HORACK@ssl.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 03023

TIME: TJD=9512 SECONDS=57792

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SAA ENTRY (PARTICLES).

From SHARIFF@ssl.msfc.nasa.gov Fri Jun 10 13:55 PDT 1994
Date: Fri, 10 Jun 1994 15:55:26 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3024
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3024
EVENT OF 1994 JUN 9 DAY OF YEAR=160
EVENT CROSSING TIME AT BATSE : 59346. S. OR 16:29:06.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 285.000 23.000
BATSE PEAK COUNTING RATE: 15000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 9/ 6/ 94 IS:
RA= 121.827 DEC= -39.364 DIST= 3.030 AU
BATSE-ULYSSES DISTANCE = 453342353. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 21.72 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1404.85 SECS.
CROSSING TIME AT ULYSSES IS 60751. S. OR 16:52:30 +/- 168.48 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 9/ 6/ 94 IS:
RA= 39.721 DEC= 14.784 DIST= 2.100 AU
MARS-BATSE DISTANCE = 314113760. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 74.19 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 285.54 SECS.
CROSSING TIME AT MARS IS 59632. S. OR 16:33:51 +/- 179.36 SECONDS

RI

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3024	940609	9512	59346	15000	285	+23

BATSE BURST TRIGGER

NO.: 03024

TIME: TJD=9512 SECONDS=59346

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=014.0 AZIMUTH=138.7 ERROR= DEGREES

COMMENTS:

BURST, SINGLE PULSE WITH SUBSTRUCTURE, LASTING ~8 SEC. VISIBLE ABOVE 300KEV.

Hello corr removed

Date: Oct 30 '97

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☐ Is the order of the data in CORREL such that a vernier is done on the data with the best time resolution? *No - bad stats.*

2. BATSE Data

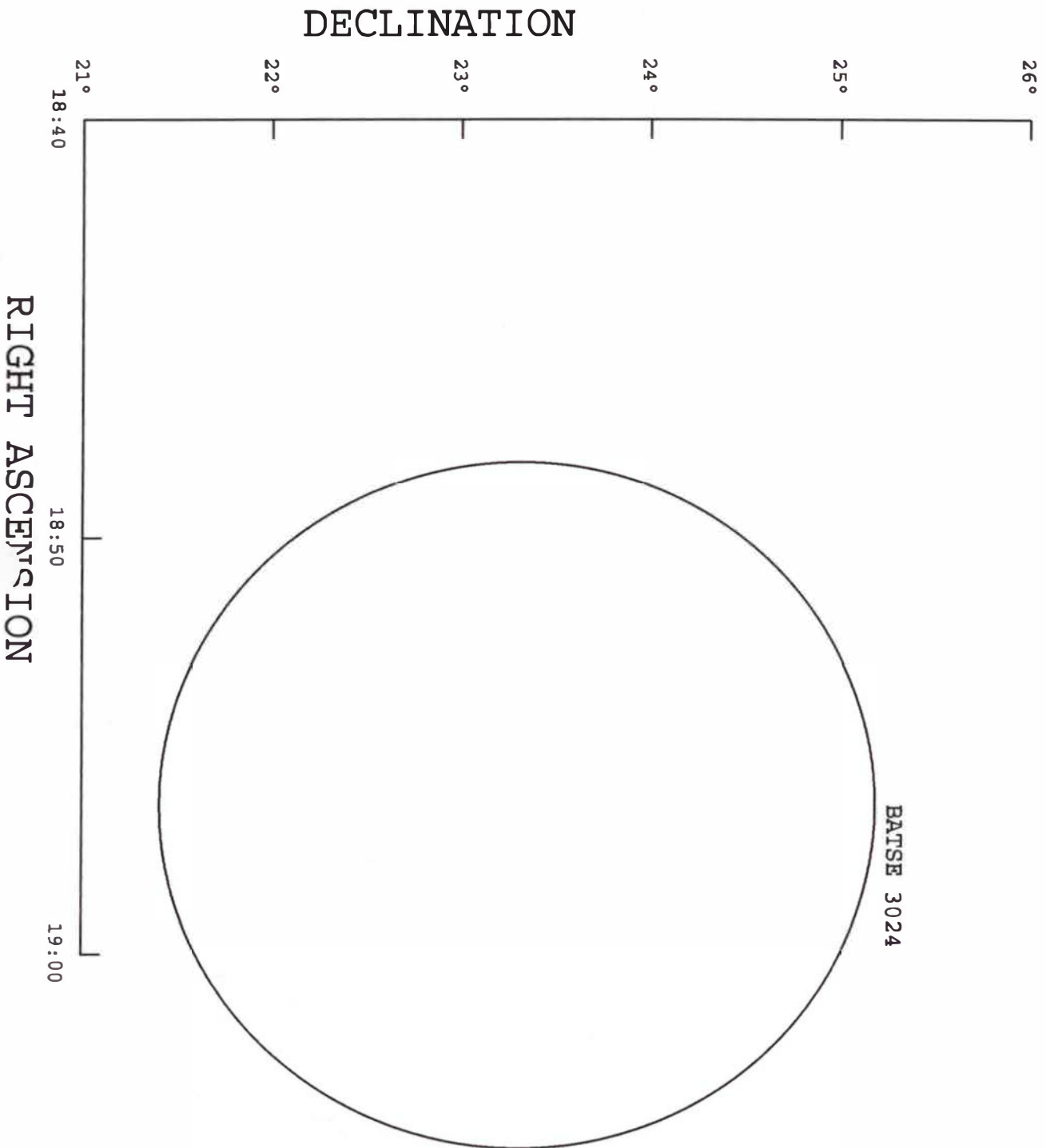
- ☒ 2.042 s subtracted for bursts prior to June 25 1992 and DISCSC programs prior to Version 2.16 (August 28 1992)? *N/A*
- ☐ BATSE ephemeris for T_0 ? *off by ~300 s*
- ☒ Error circle position and radius from public catalog used?
- ☒ If MER data were used, is a 30 ms systematic error included?

3. PVO Data

- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS database updated?

N-M = CORRELATION BETWEEN SATELLITES N AND M
 EARTH-N = EARTH AS SEEN FROM SATELLITE N
 S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
 1 ULYSSES 2 BATSE

EVENT OF JUN 9, 1994 16:52



2-1

30/10/97

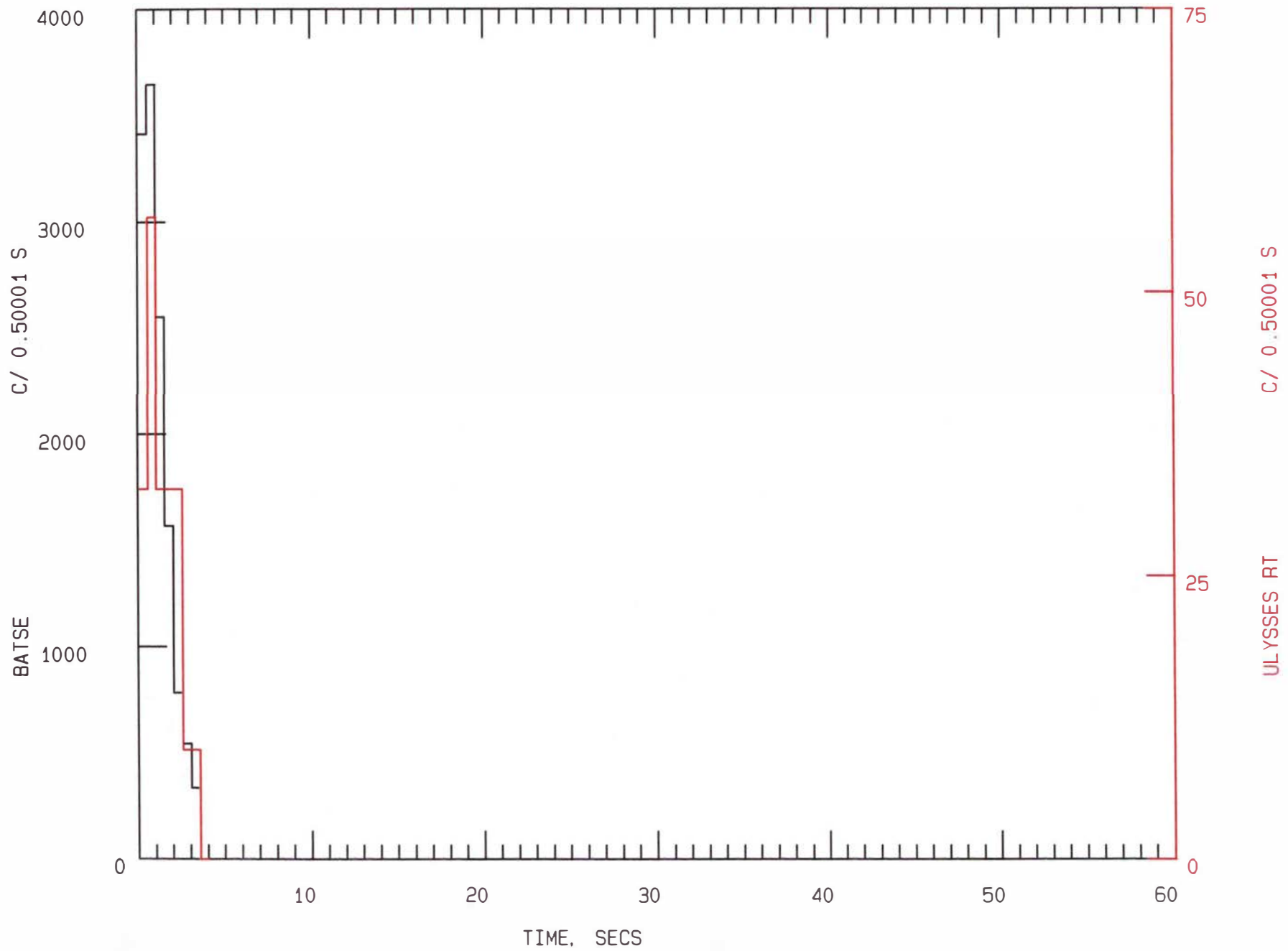
BATSE

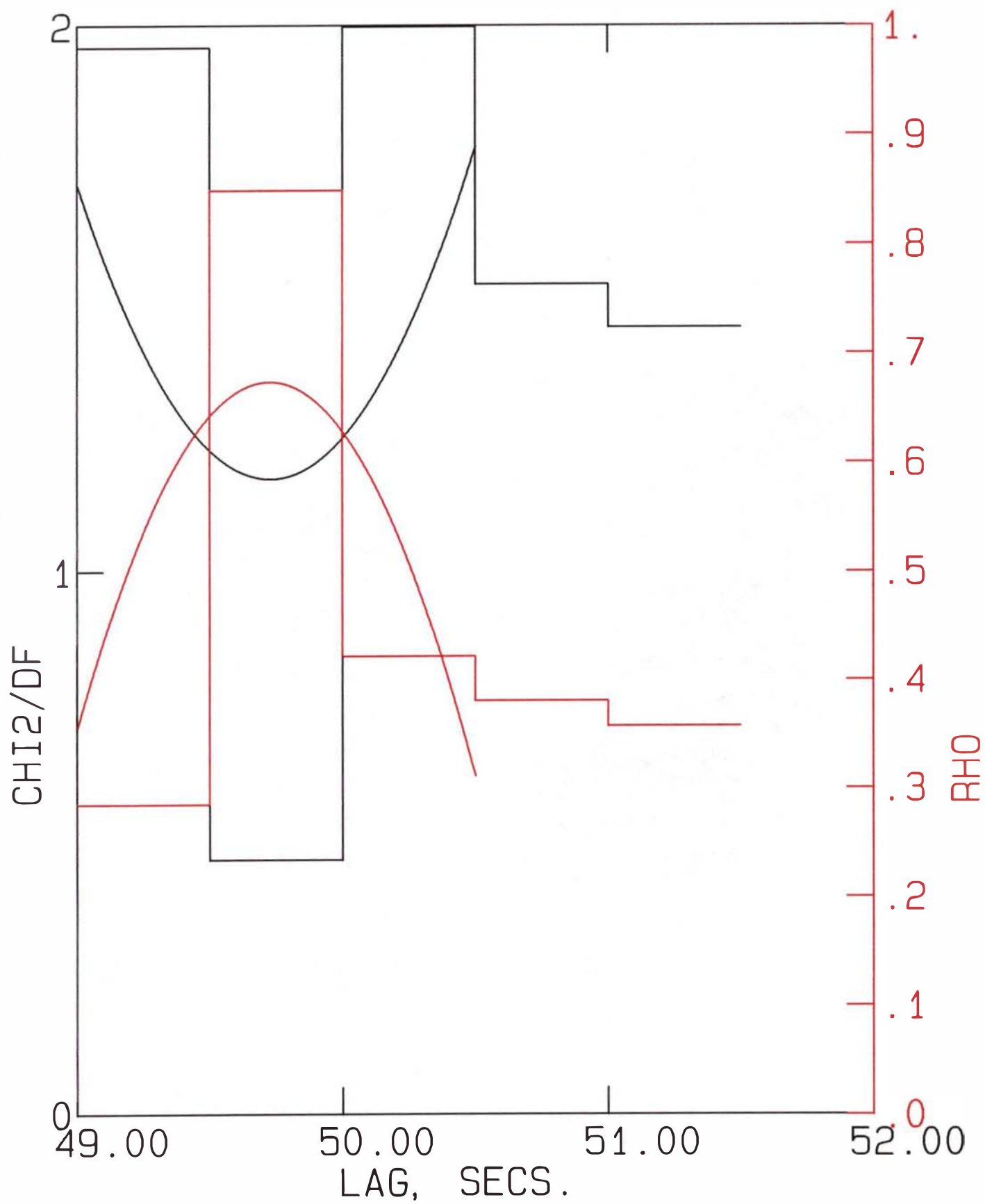
-ULYSSES RT CORRELATION

9/ 6/94

59346.650

30/10/97





ULYSSES RT

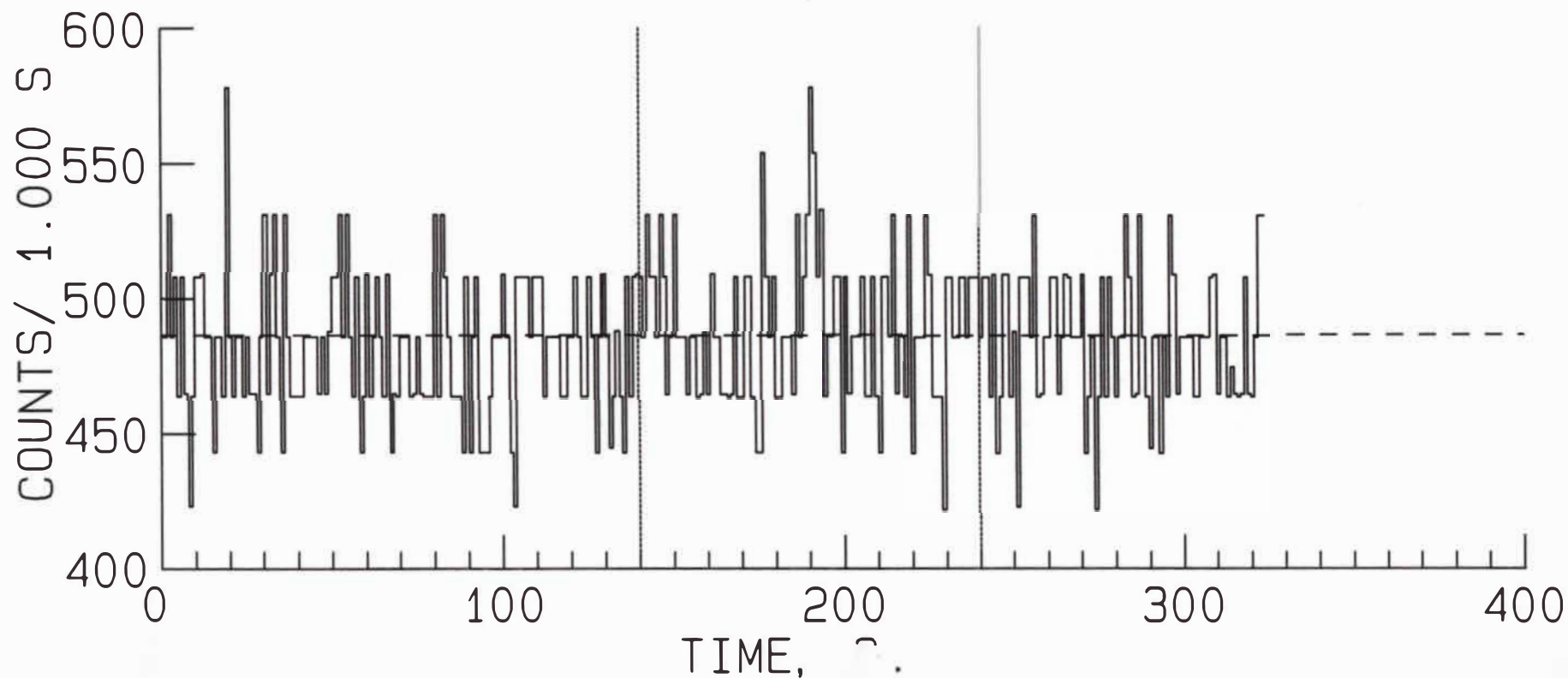
30/10/97

9/ 6/94 60588.106 s

0.500 S INTERVALS REGROUPED BY 2

22- 148 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

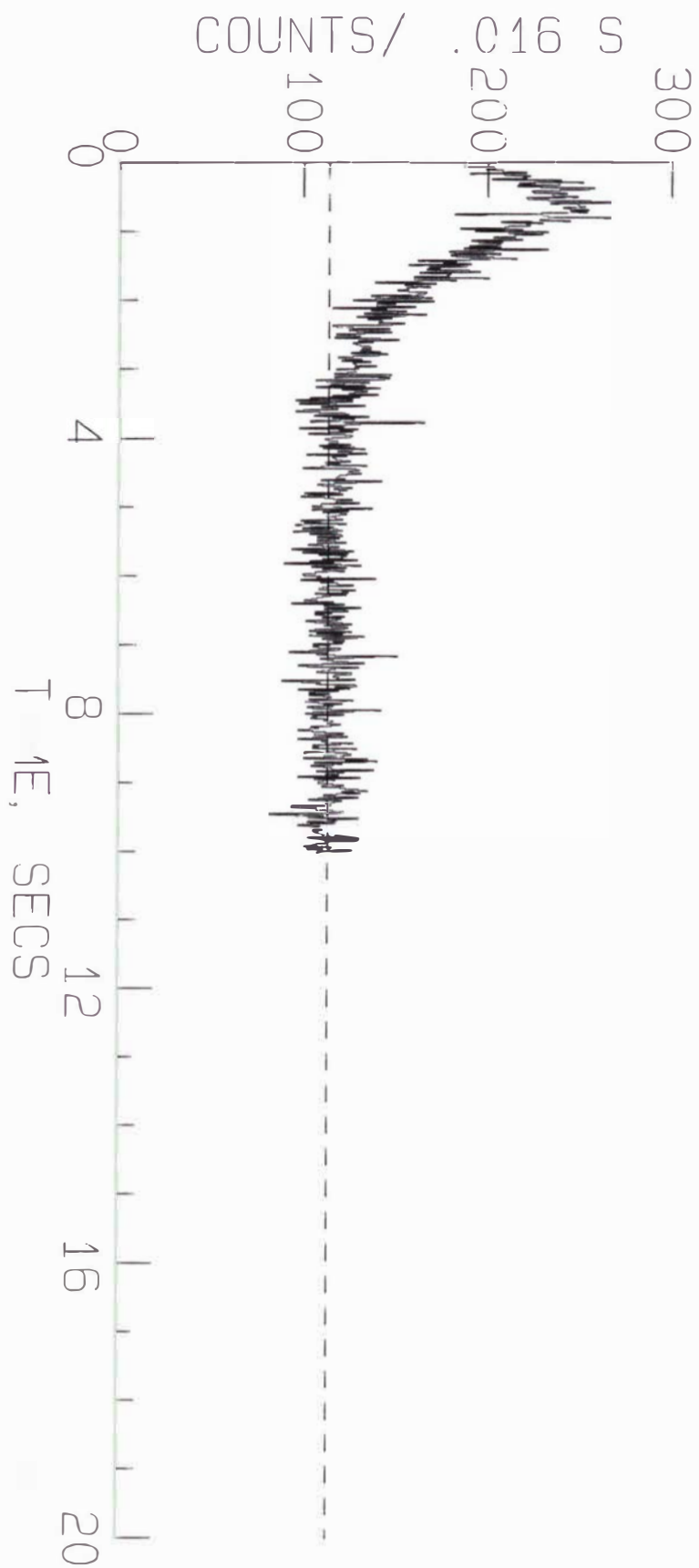


BATSE

0~~4~~⁹/06/94

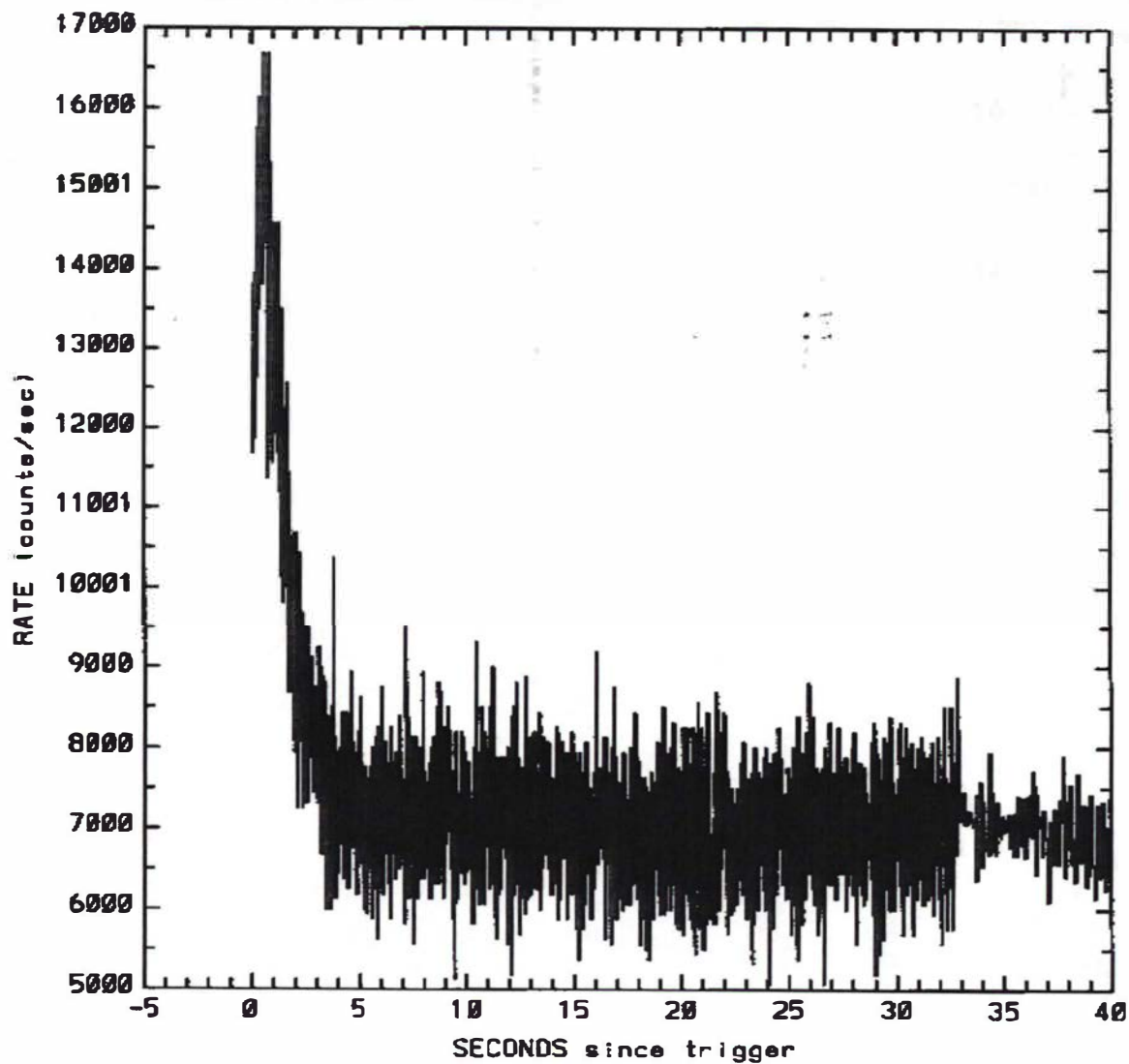
59346.650

25- 100 keV



23 / 6 / 94

DATA FOR K. HURLEY



19-JUN-1994 17:28.89

Created by MOPS BD
 Buret Display
 Version 2.28

Trigger * . 3824

Trigger Time:
 9312 / 59346.658

Buret Data Type:
 MER

Deadtime
 Corrected: N

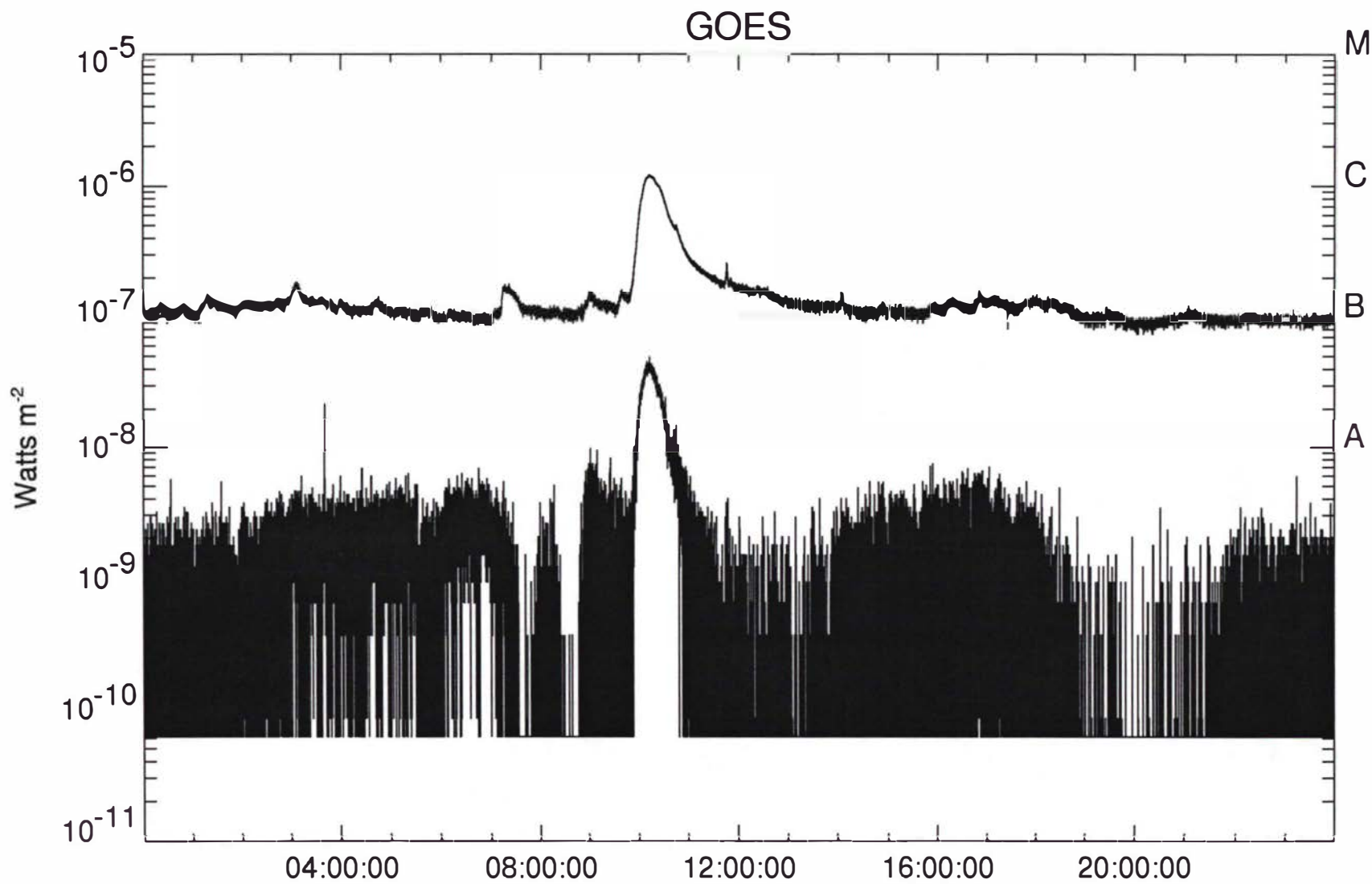
Background Data
 Type: CONT

Minimum Integ. Time:
 8.616 seconds

Detectors (7..8):
 00010001

Channels:
 (0, 6)

Quality Mask:
 001SP1



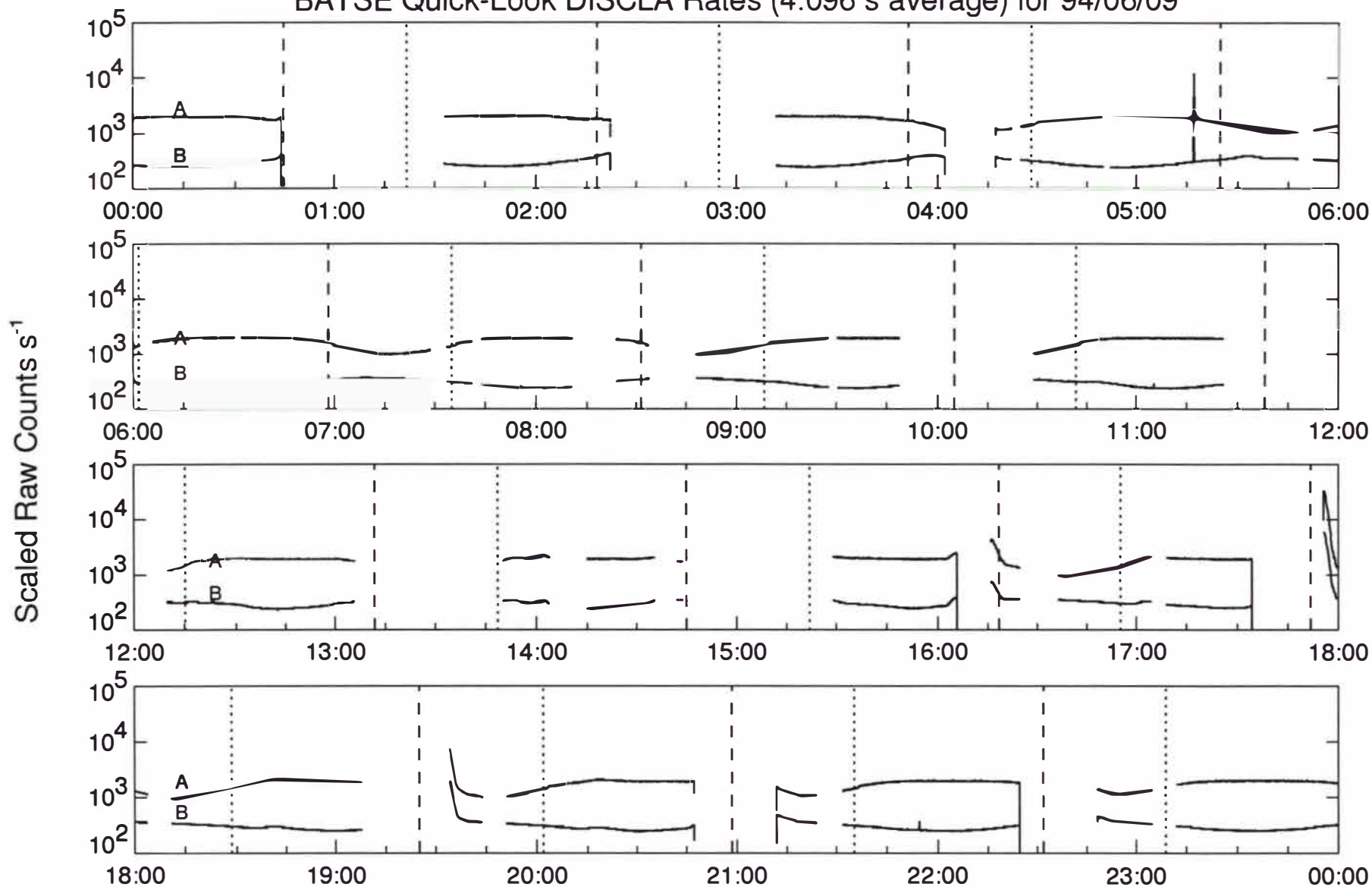
Data Start: 94/06/09, 0000:02

Plot created: 94/06/13, 1343

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/09

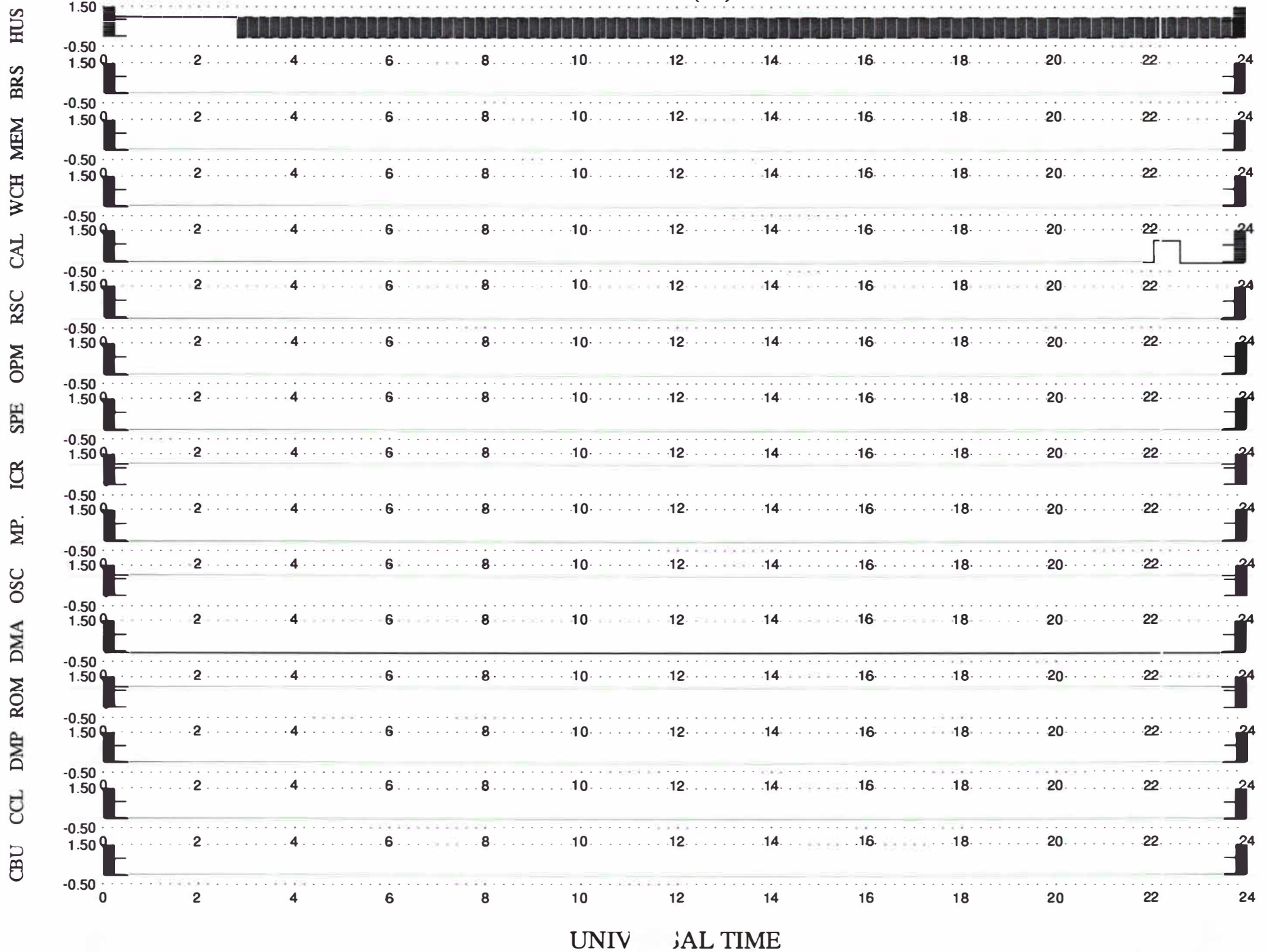


Current Time: 94/06/13, 1342 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

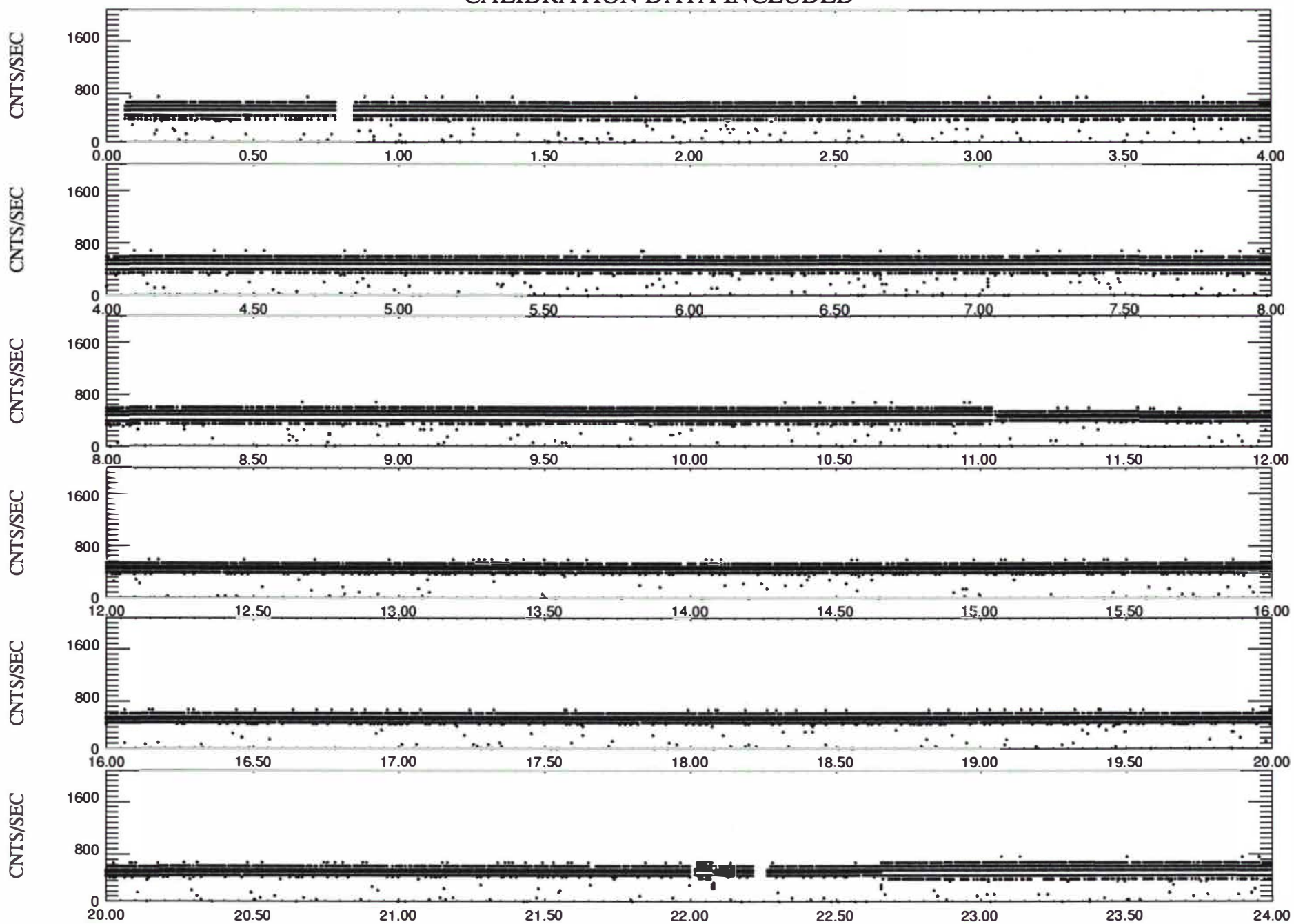
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

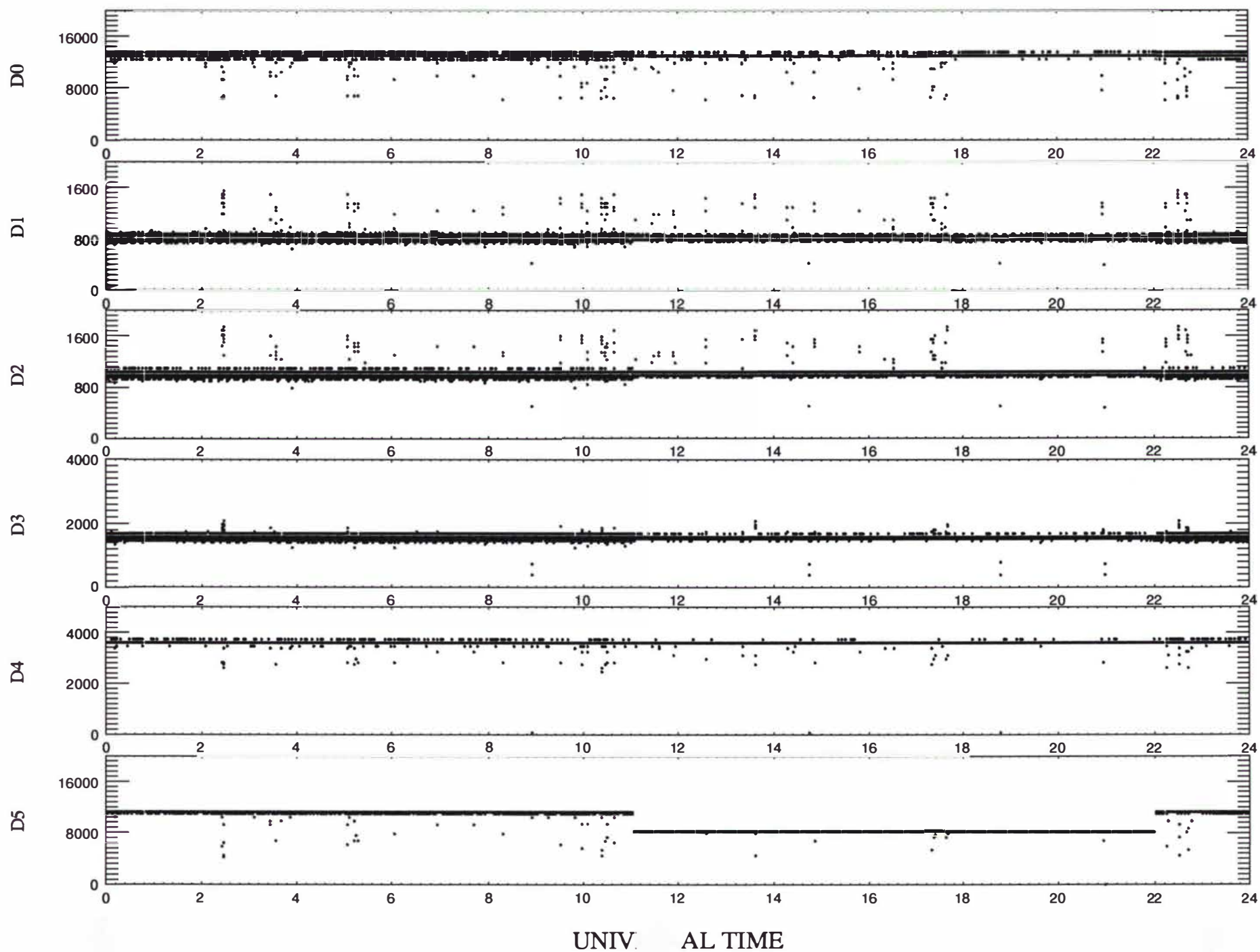
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV TIME



Fax to 00-1-510-643-8640

इसरो उपग्रह केन्द्र

अन्तरिक्ष विभाग

भारत सरकार

हवाई पत्तन मार्ग, विमानपुर हाफ थर,

बैंगलूर-560 017, भारत

तार: 'उपग्रह' टेलिफोन : 0845-2325 और 2769

दूरभाष : 566251



सत्यमेव जयते

ISRO SATELLITE CENTRE

DEPARTMENT OF SPACE

GOVERNMENT OF INDIA

AIRPORT ROAD, VIMANAPURA P. O.,

BANGALORE-560 017. INDIA

Telegram : UPAGRAH Telex : 0845-2325 & 2769

Telephone : 566251

25 June 94

Dear Kevin,

Our GRB expt. on SROSS-C2 is working satisfactorily. The satellite is in 436×920 km orbit and so we have plenty of triggers - mostly false! Starting today, the orbit manoeuvres will take place and by July 10th, we expect to reach an orbit of 436×620 km. Till then the payloads are switched off.

Following interesting triggers need a check from your end:

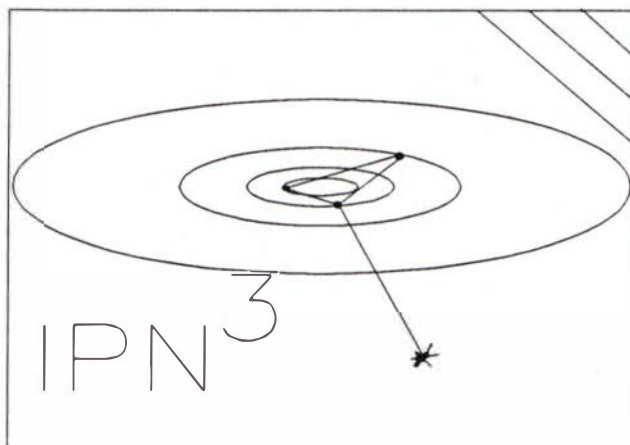
Orbit	Date	Time (UT)
371	29 May	05 ^h 32 ^m 23 ^s
374	29 May	10 42 34
514	7 JUNE	23 05 47
521	8 JUNE	11 40 37
558	10 JUNE	23 08 49
391	30 MAY	14 56 43
389	30 MAY	11 16 24

I would appreciate it if you can check these events in the IPN files.
Many thanks.

Krishnam

Our FAX 91-80-558 5409
91-80-558-5407

भारतीय अन्तरिक्ष अनुसंधान संगठन INDIAN SPACE RESEARCH ORGANISATION (ISRO)



FAX FROM K. HURLEY
UNIVERSITY OF CALIFORNIA
SPACE SCIENCES LABORATORY
BERKELEY, CA. 94720
PHONE: (510) 643-9173
FAX: (510) 643-8640 (OFFICE), -8302 (SECT'Y)
E-MAIL: khurley@sunspot.ssl.berkeley.edu

TO: K. Marar

FAX #: 0091 080 5585490 *Bangalore India*

DATE: June 25, 1994

TOTAL NUMBER OF PAGES: 1

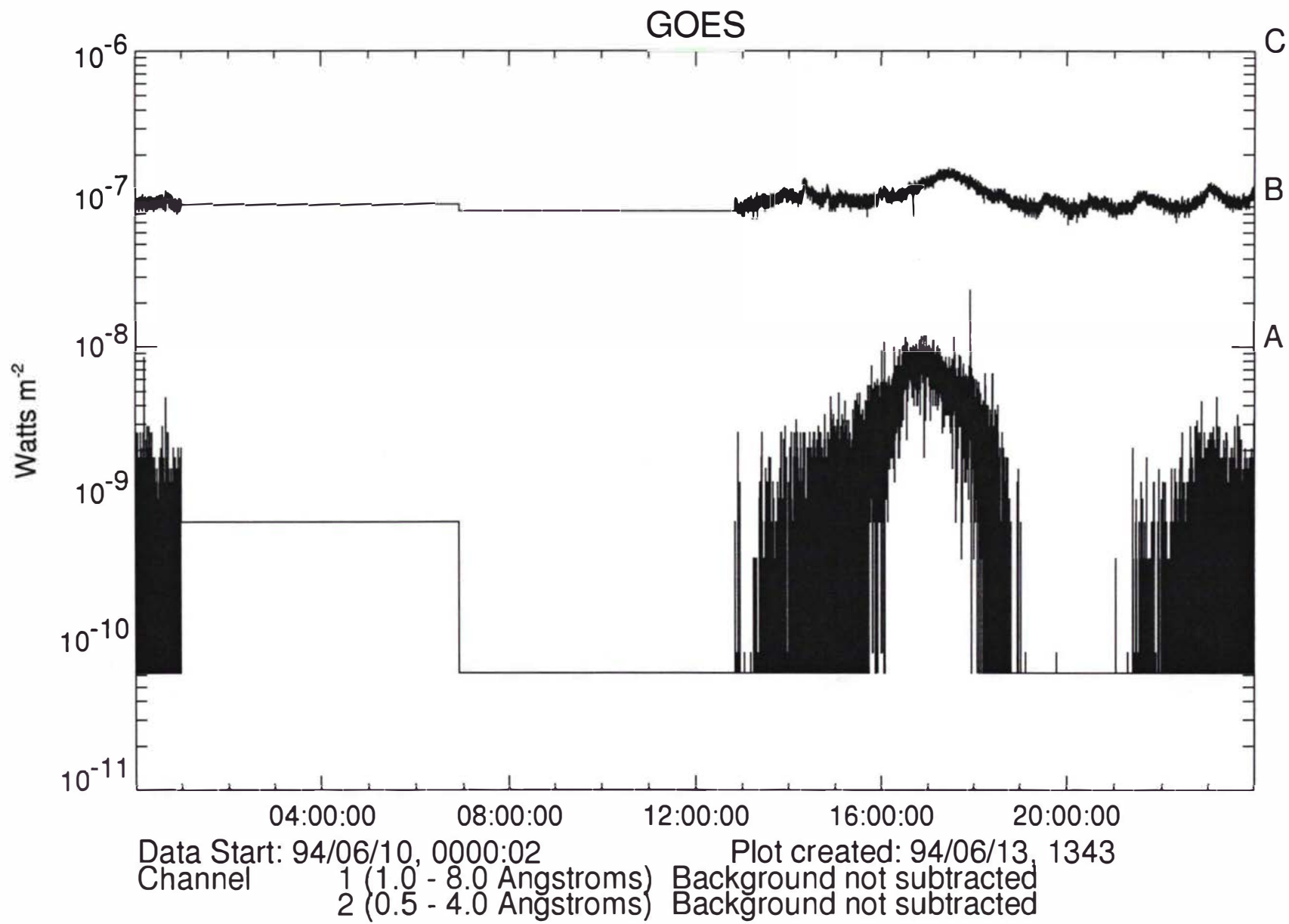
FAXED
6/30/94

Dear Krishnan,

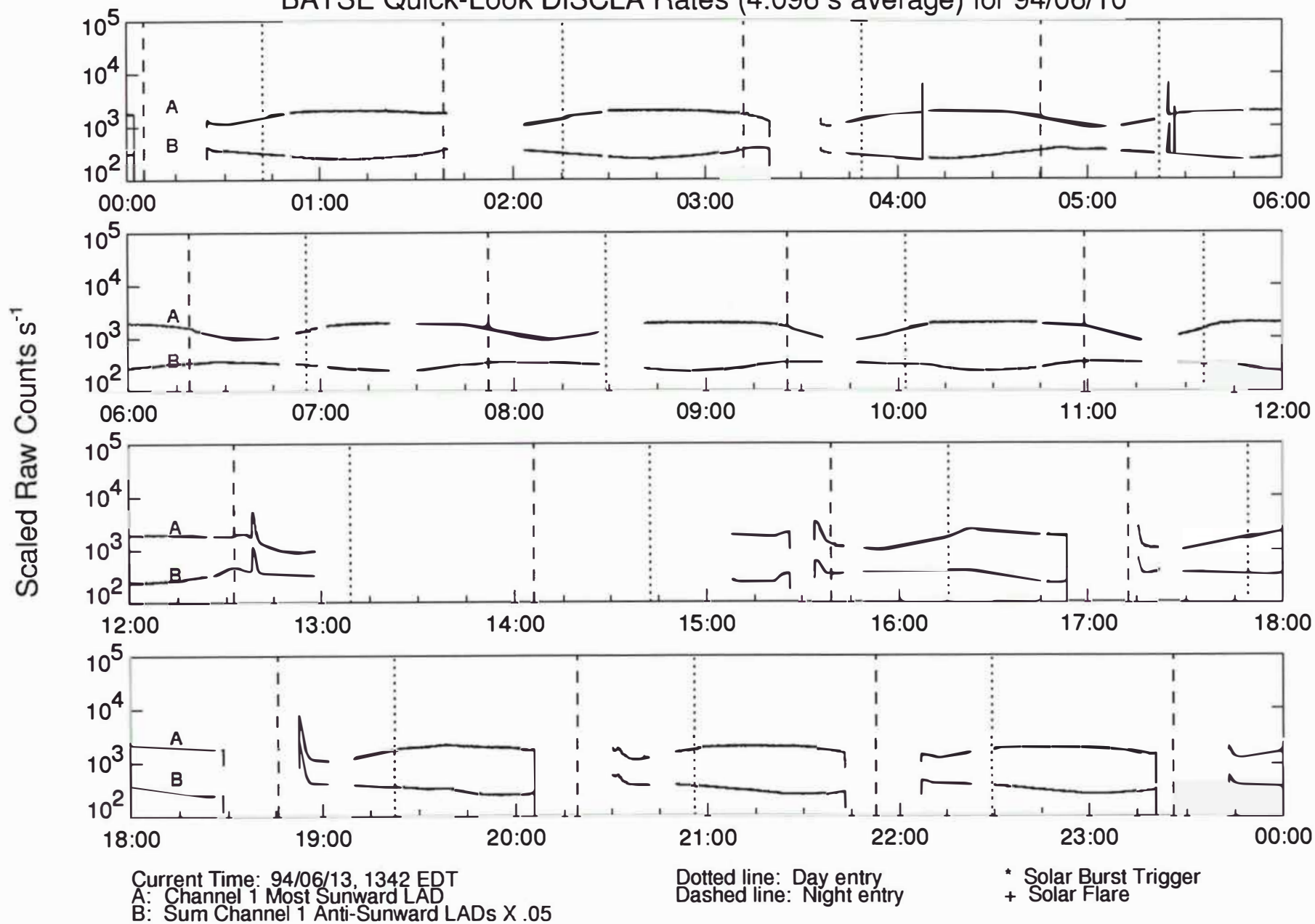
Unfortunately none of the events you listed corresponds to an IPN event. It is still possible that some of them could be confirmed if I look in the Ulysses real time data, but to do that, it would be best to get the SROSS earth center position and distance for these events, so that I can limit the time window to search.

Kevin

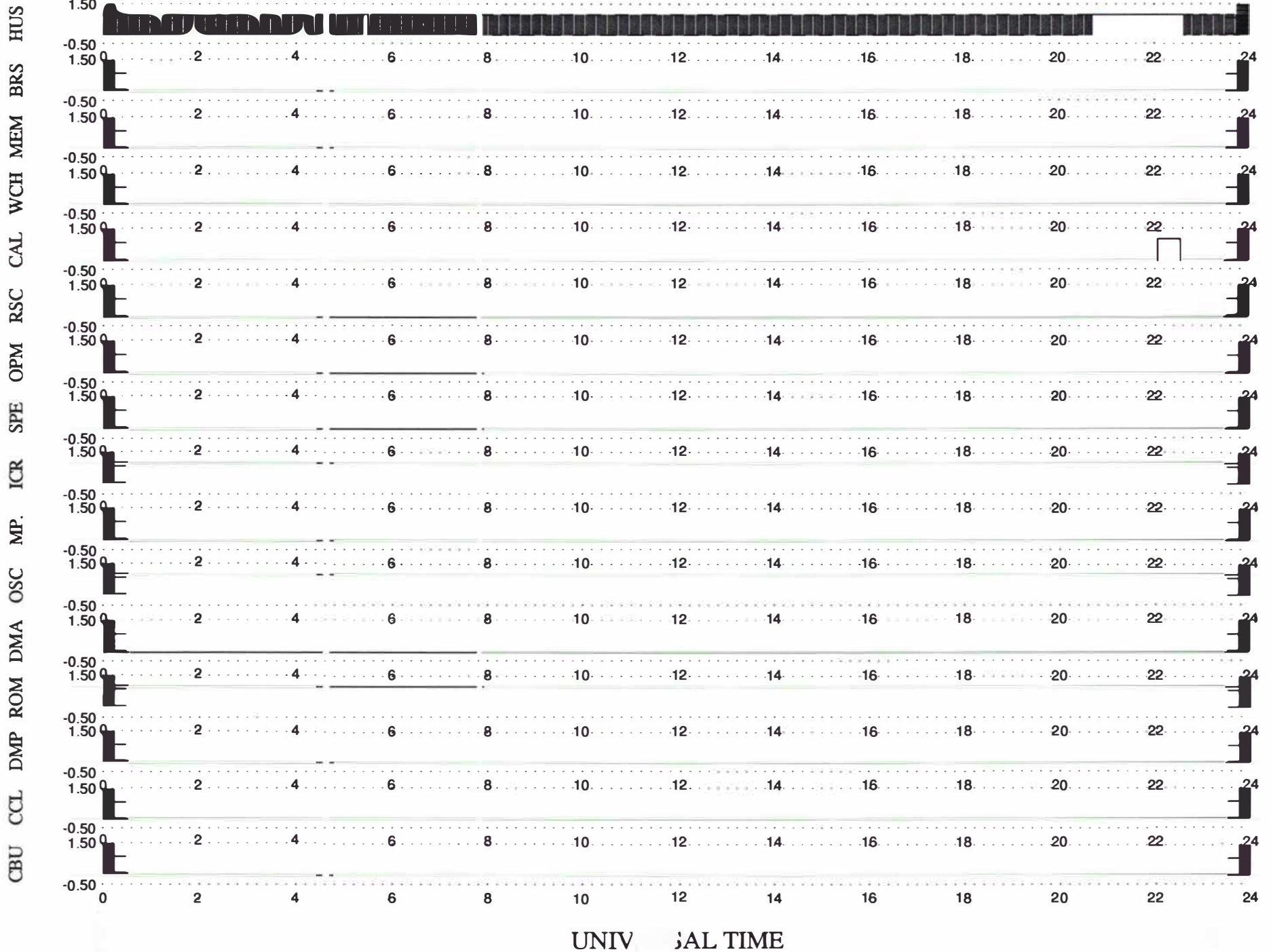
PS It would be good if we could communicate by e-mail, but I can't find a gateway to India here in the U.S. Any ideas?



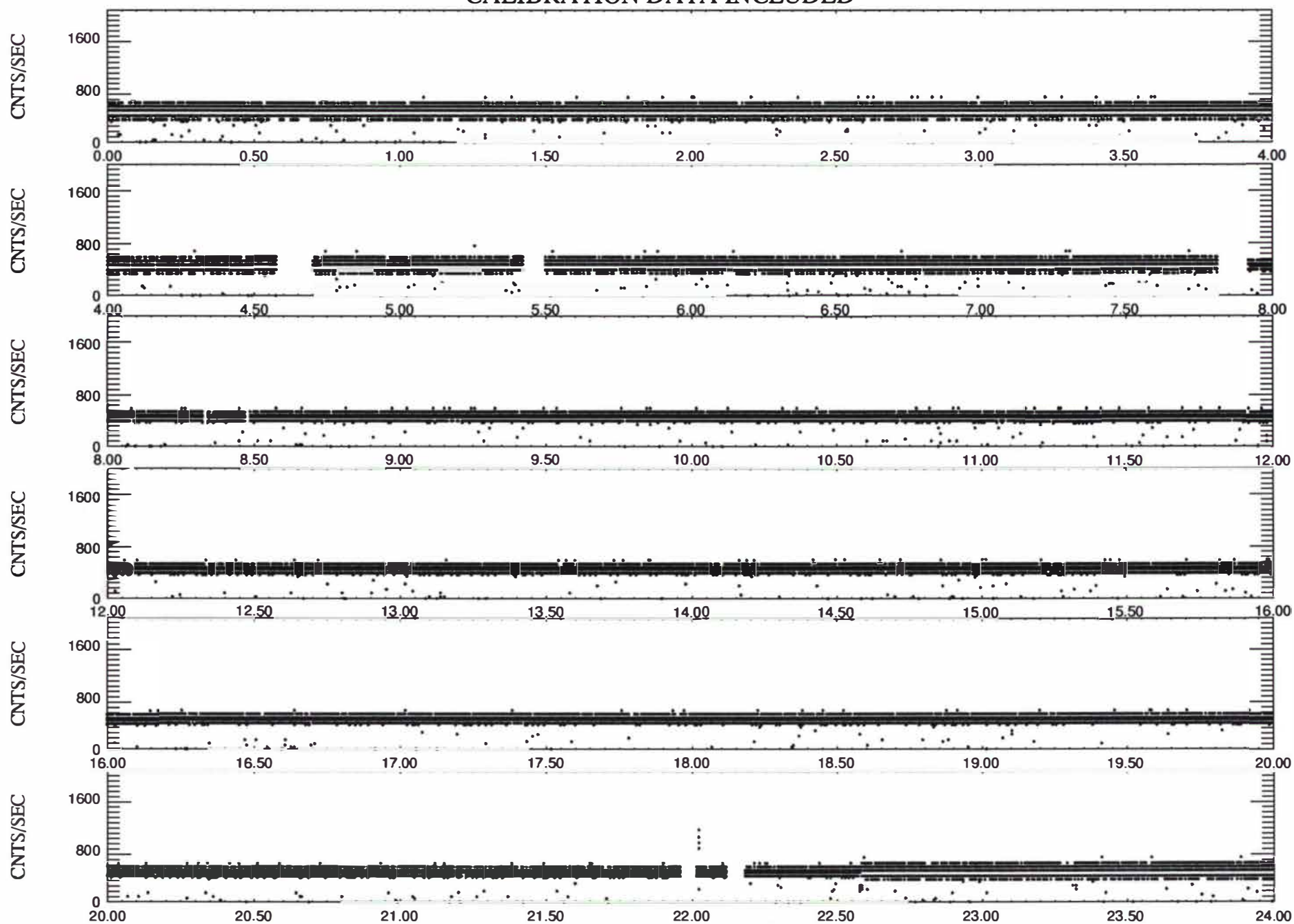
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/10



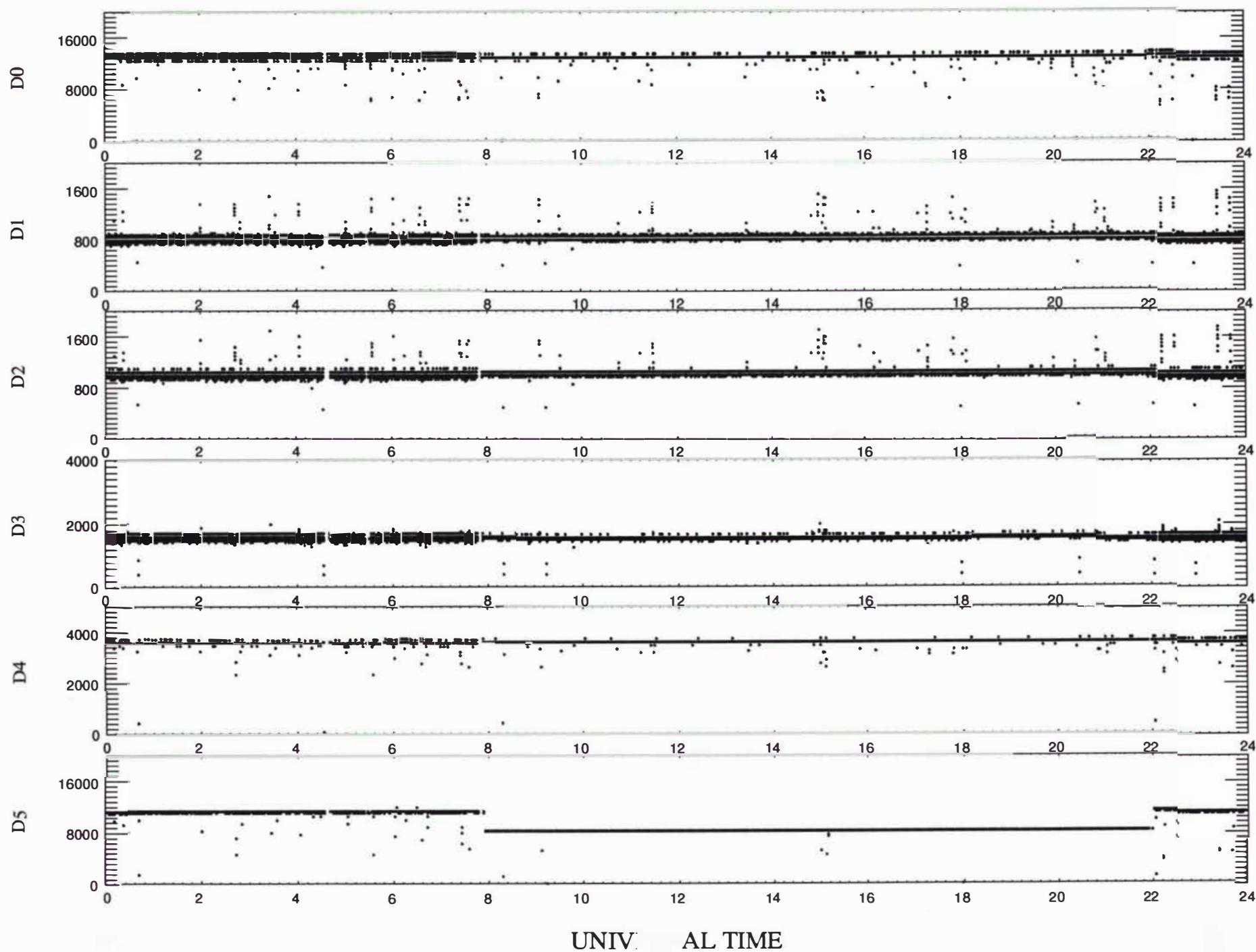
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From SHARIFF@ssl.msfc.nasa.gov Mon Jun 13 09:30 PDT 1994
Date: Mon, 13 Jun 1994 11:30:33 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
LHEAVXKWOK@ssl.msfc.nasa.gov, 15733SCHAEFER@ssl.msfc.nasa.gov,
CASS09BAND@ssl.msfc.nasa.gov, CASS09GRUBER@ssl.msfc.nasa.gov,
CASS09MATTESON@ssl.msfc.nasa.gov, PACIESAS@ssl.msfc.nasa.gov,
HORACK@ssl.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1219

BATSE BURST TRIGGER

NO.: 03025

TIME: TJD=9514 SECONDS=39455

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON PREC. EVENT.

From SHARIFF@ssl.msfc.nasa.gov Mon Jun 13 09:36 PDT 1994
Date: Mon, 13 Jun 1994 11:37:31 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3026
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3026
EVENT OF 1994 JUN 11 DAY OF YEAR=162
EVENT CROSSING TIME AT BATSE : 85872. S. OR 23:51:12.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 70.000 -1.000
BATSE PEAK COUNTING RATE: 4500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 11/ 6/ 94 IS:
RA= 122.180 DEC= -39.245 DIST= 3.033 AU
BATSE-ULYSSES DISTANCE = 453765796. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=119.07 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -735.37 SECS.
CROSSING TIME AT ULYSSES IS 85137. S. OR 23:38:56 +/- 268.52 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 11/ 6/ 94 IS:
RA= 41.167 DEC= 15.248 DIST= 2.094 AU
MARS-BATSE DISTANCE = 313284064. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=147.19 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -878.29 SECS.
CROSSING TIME AT MARS IS 84994. S. OR 23:36:33 +/- 84.97 SECONDS

10

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3026	940611	9514	85872	4500	070	-01

BATSE BURST TRIGGER

NO.: 03026

TIME: TJD=9514 SECONDS=85872

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=150.1 AZIMUTH=271.7 ERROR= DEGREES

COMMENTS:

BURST, SINGLE PULSE WITH SUBSTRUCTURE, LASTING ~6 SECONDS. NOT VISIBLE ABOVE 300 KEV.

13 / 6 / 94

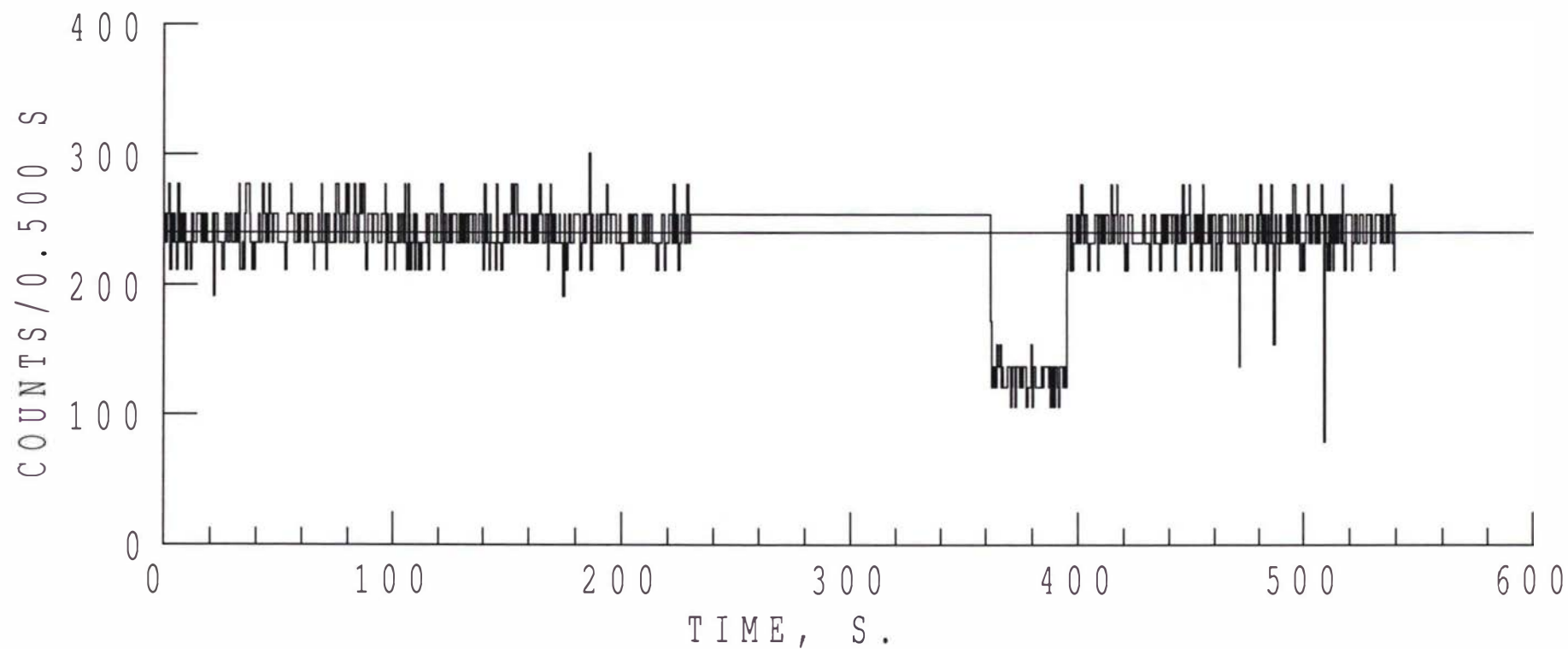
ULYSSES RT

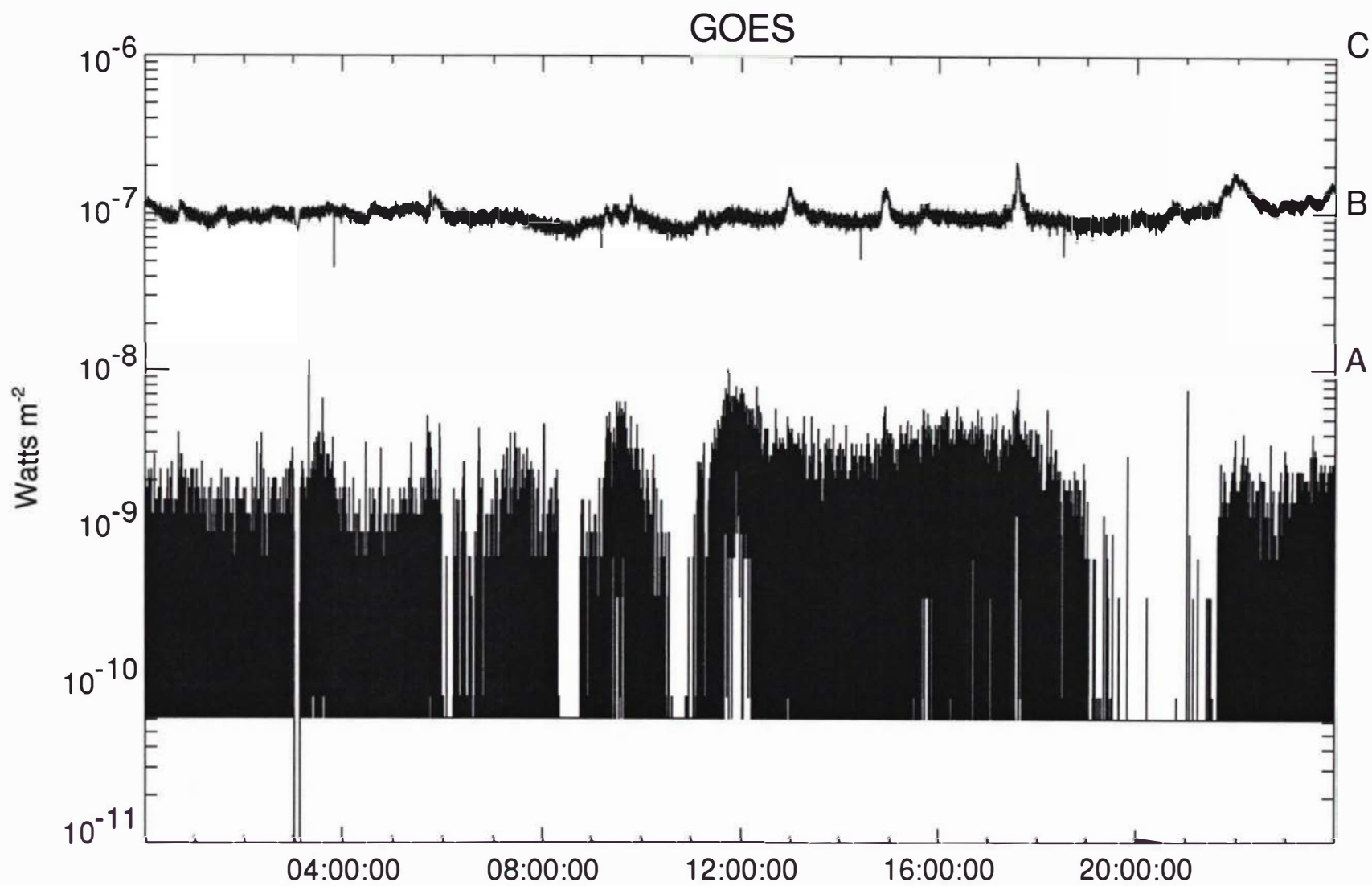
11 / 6 / 94 84852.070 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





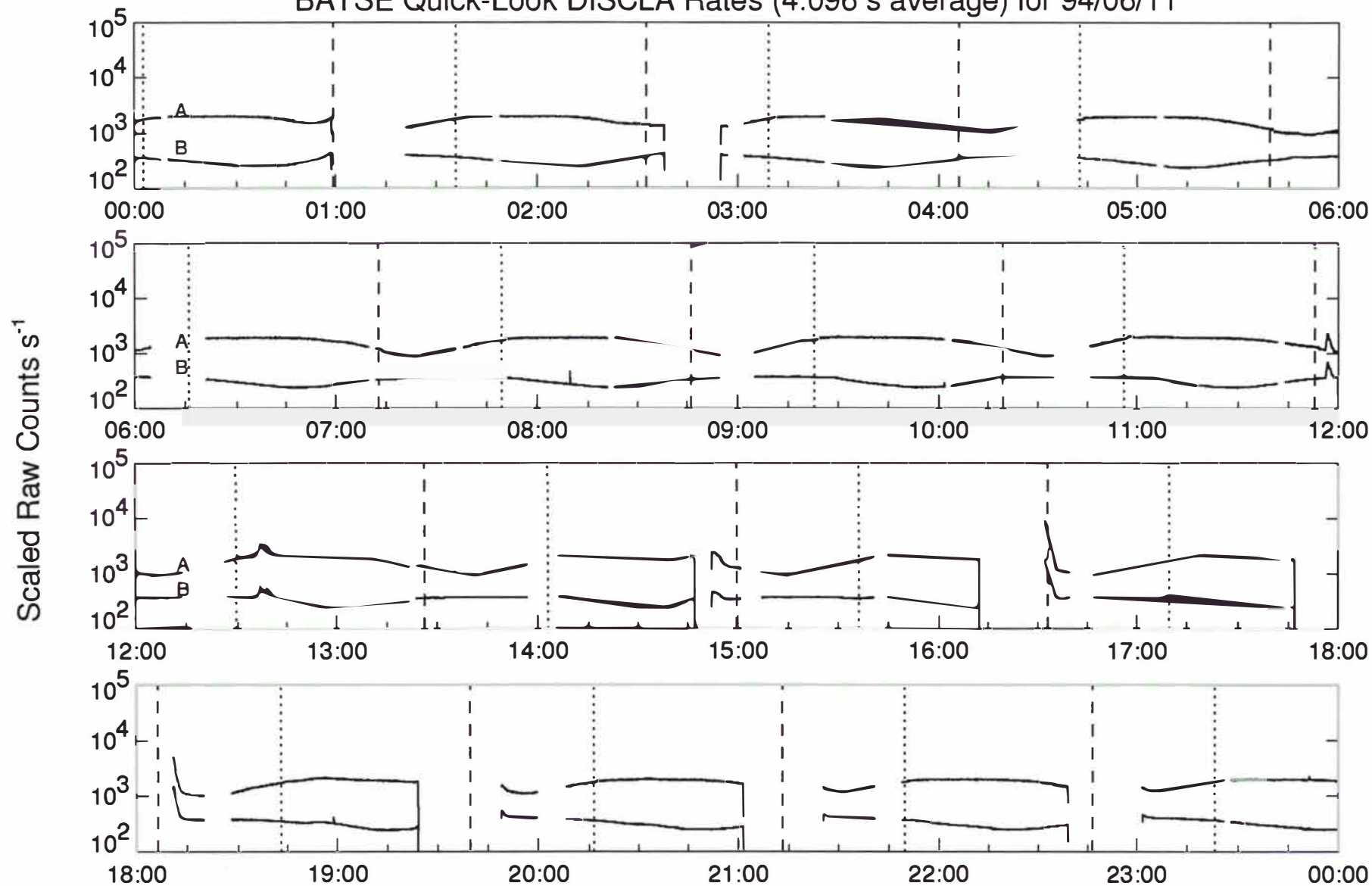
Data Start: 94/06/11, 0000:02

Plot created: 94/06/14, 1612

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/11

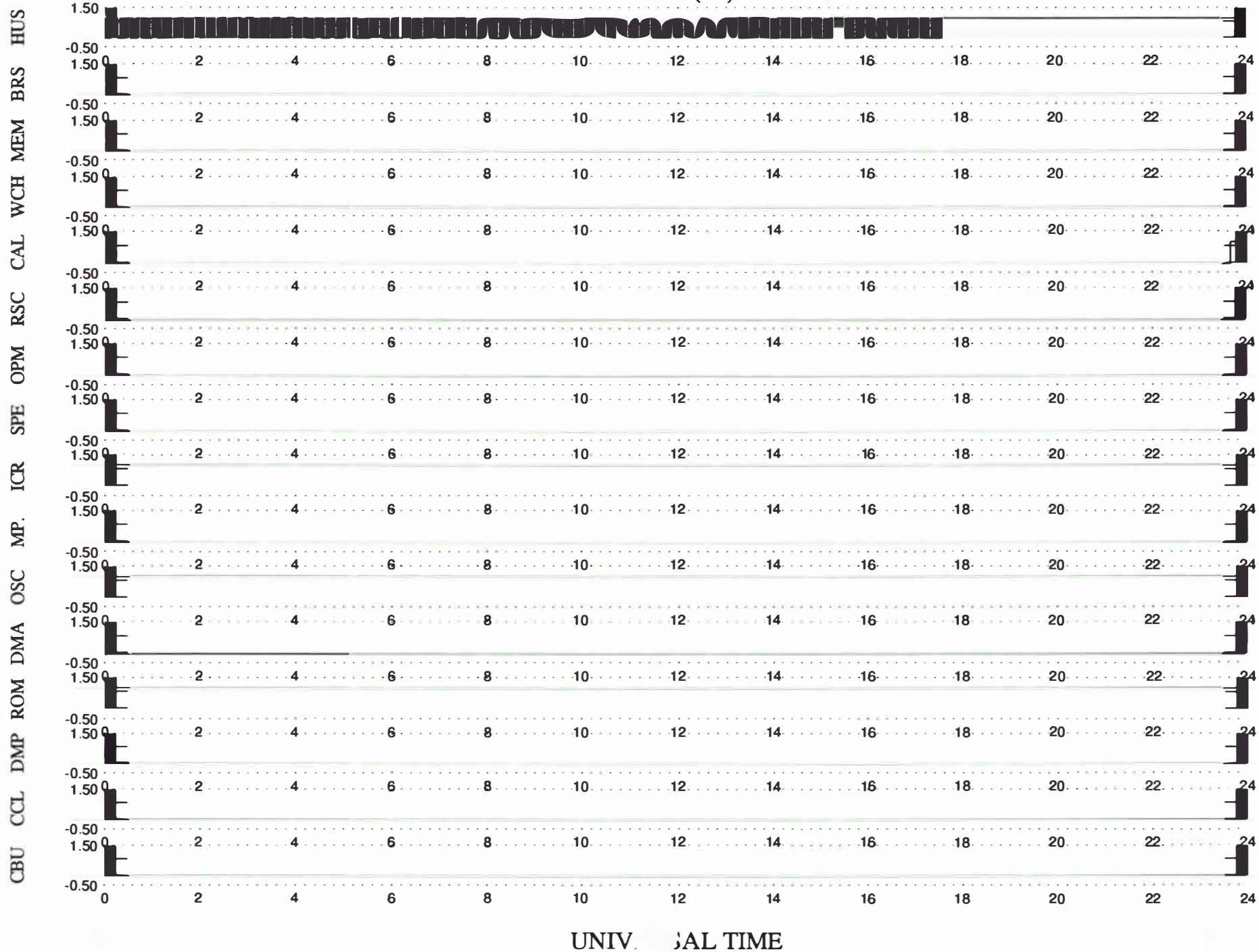


Current Time: 94/06/14, 1618 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

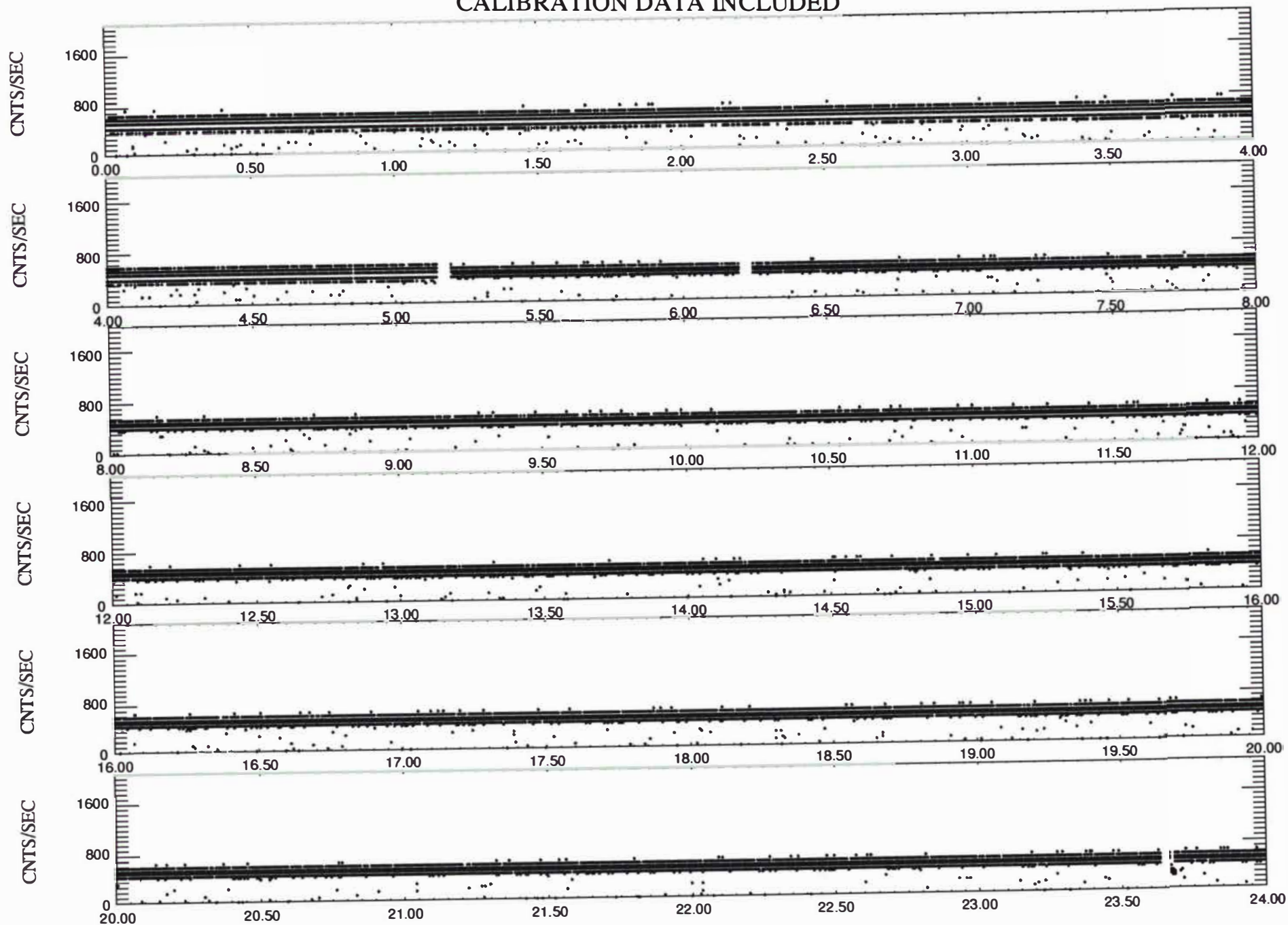
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

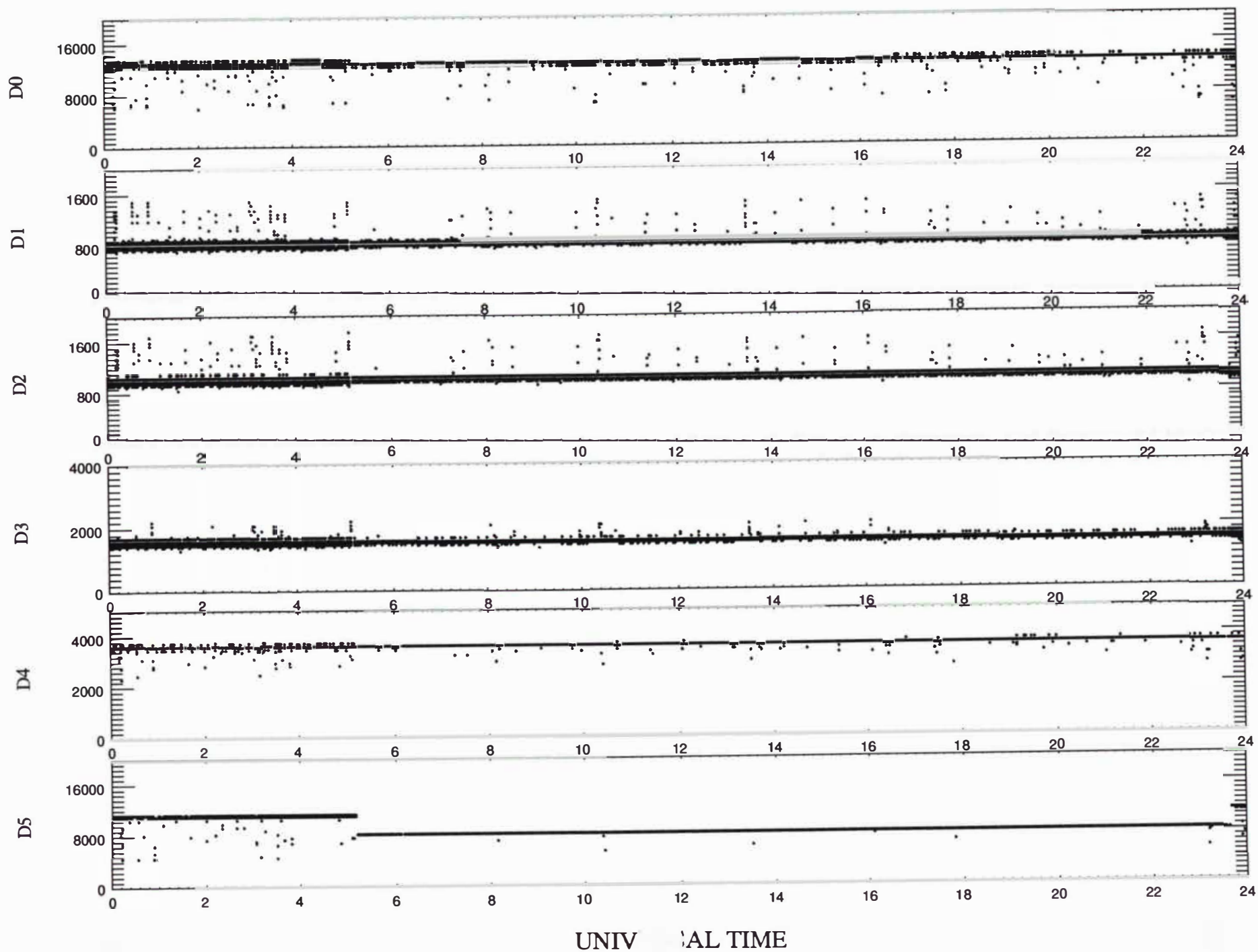
NO BURST (14)

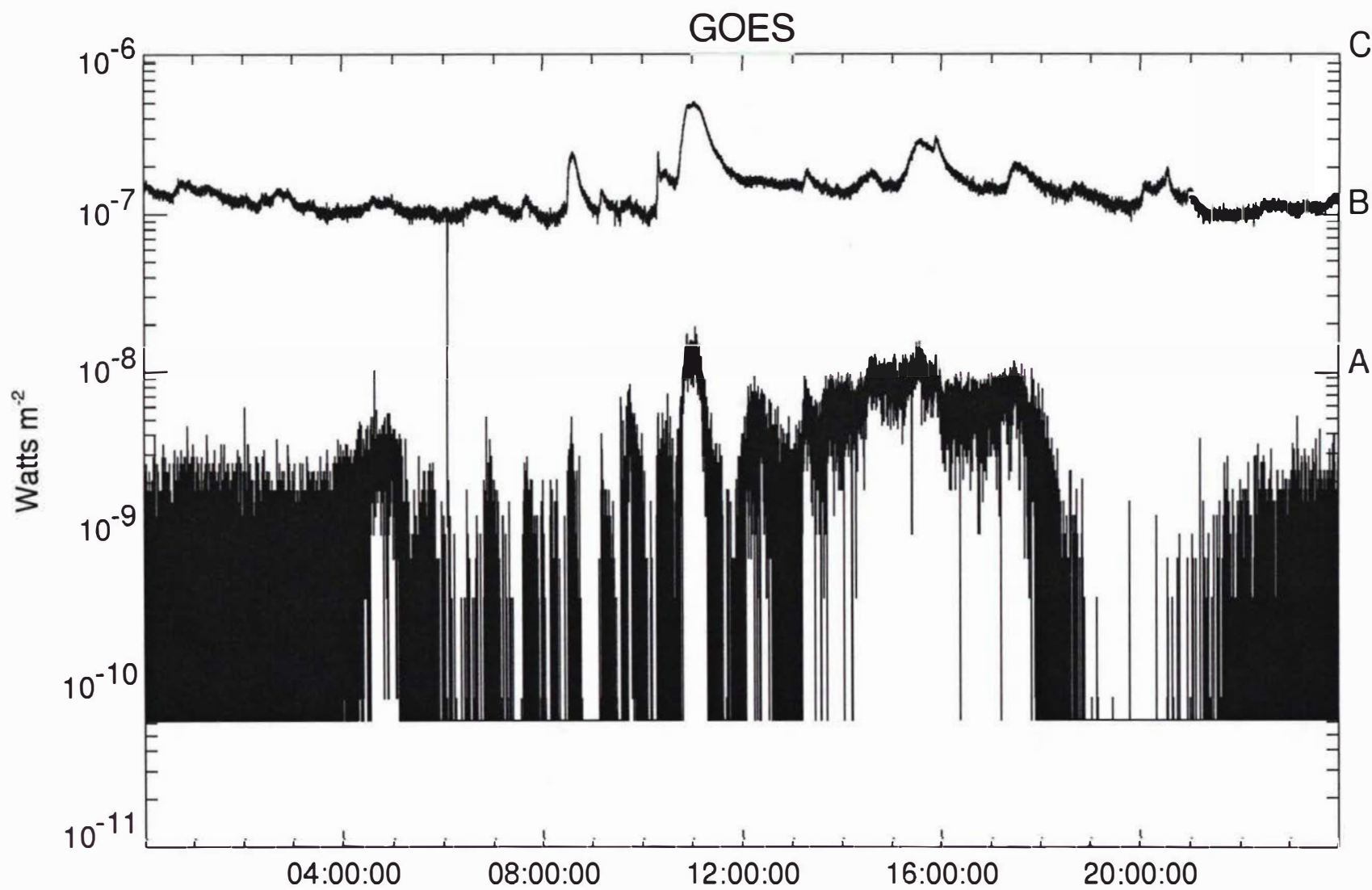


CALIBRATION DATA INCLUDED



UNIV CAL TIME





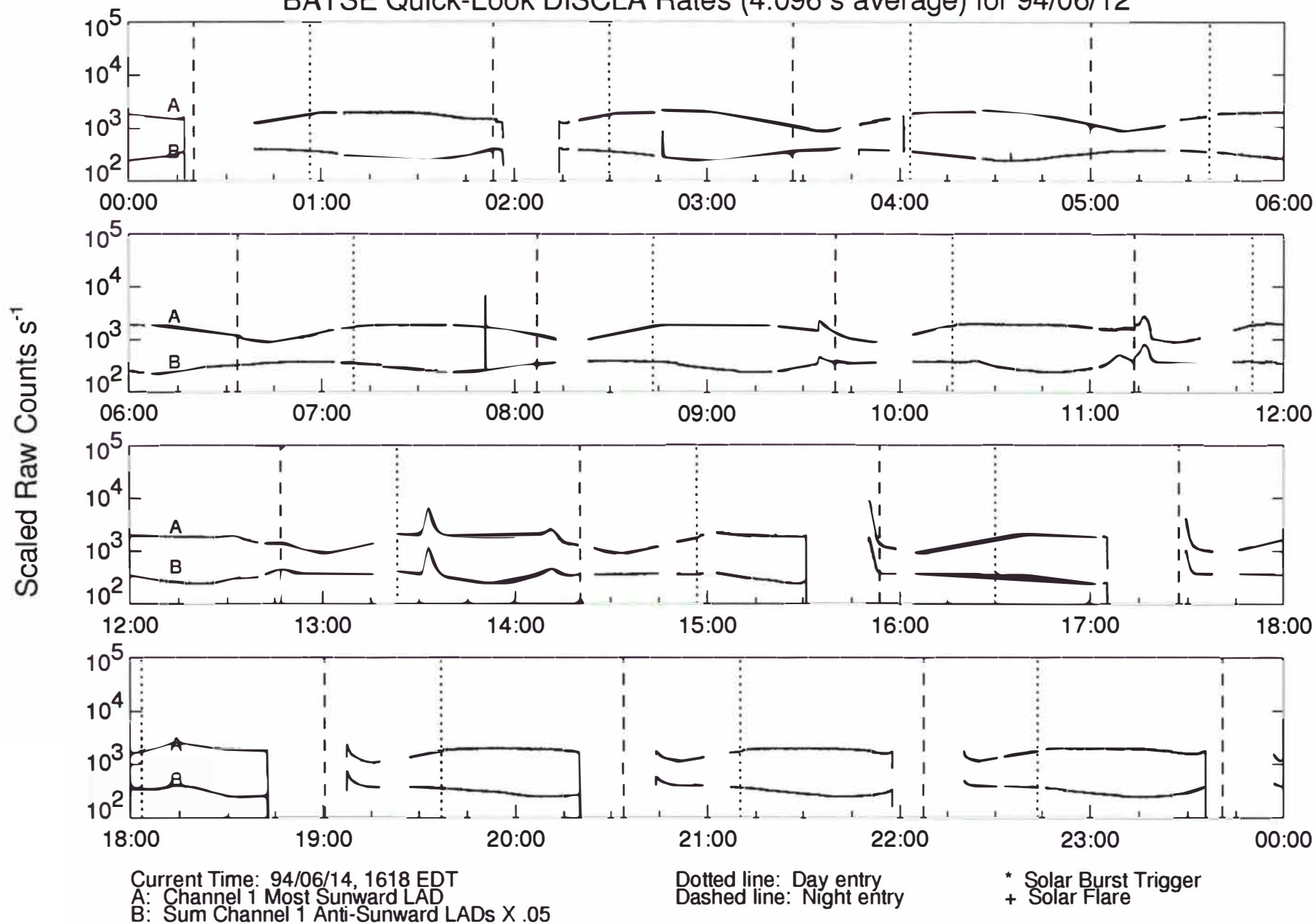
Data Start: 94/06/12, 0000:02

Plot created: 94/06/14, 1613

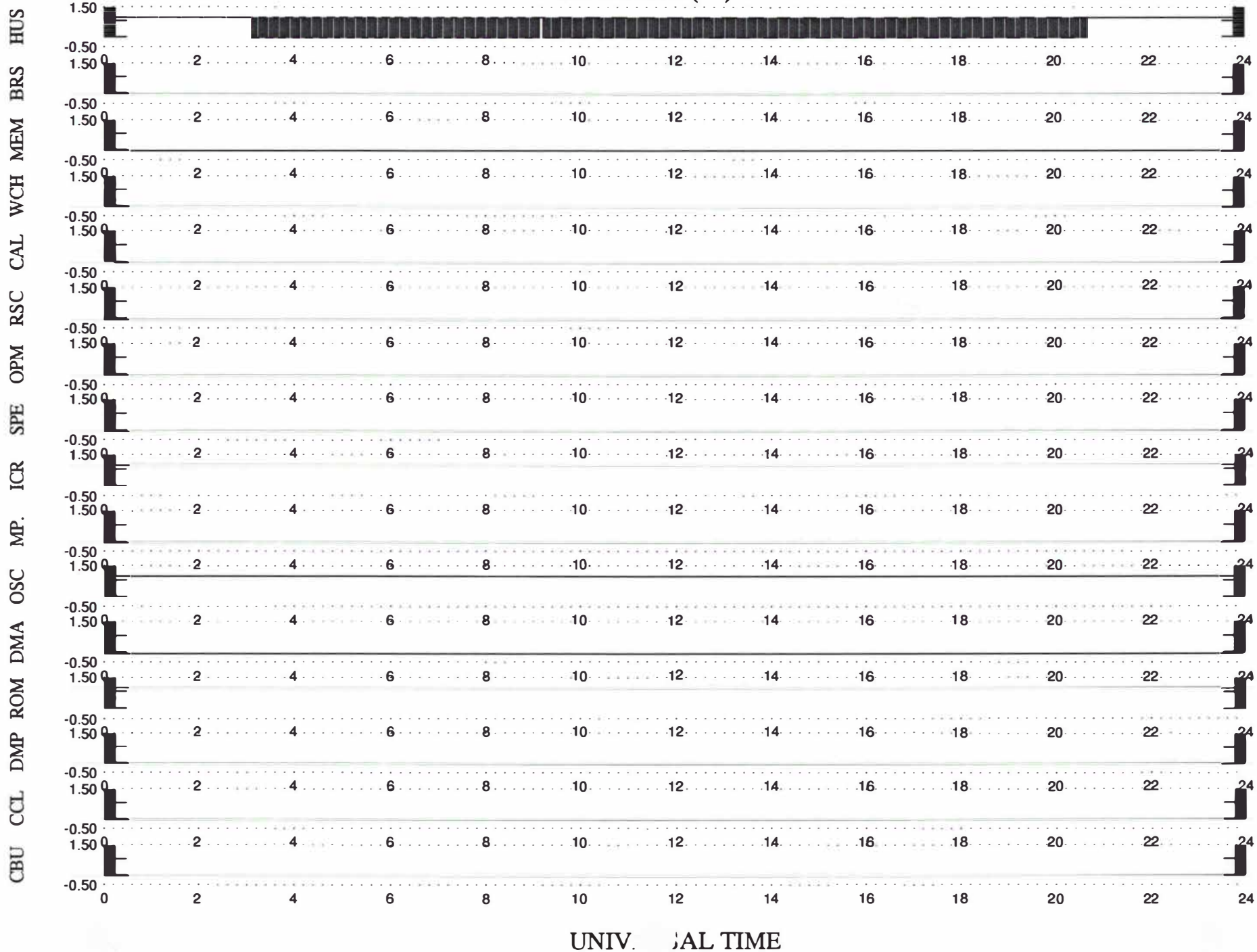
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

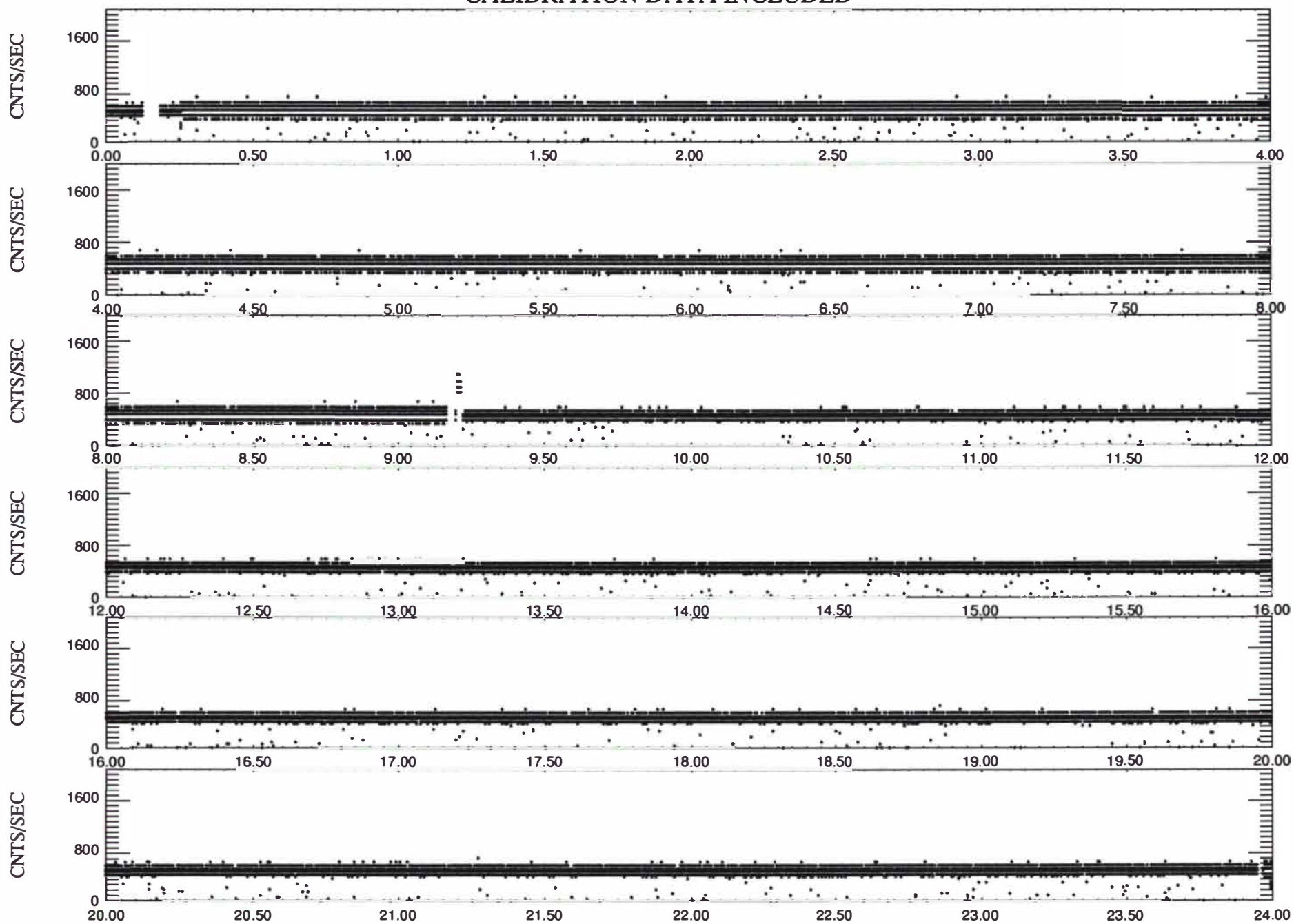
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/12



NO BURST (14)

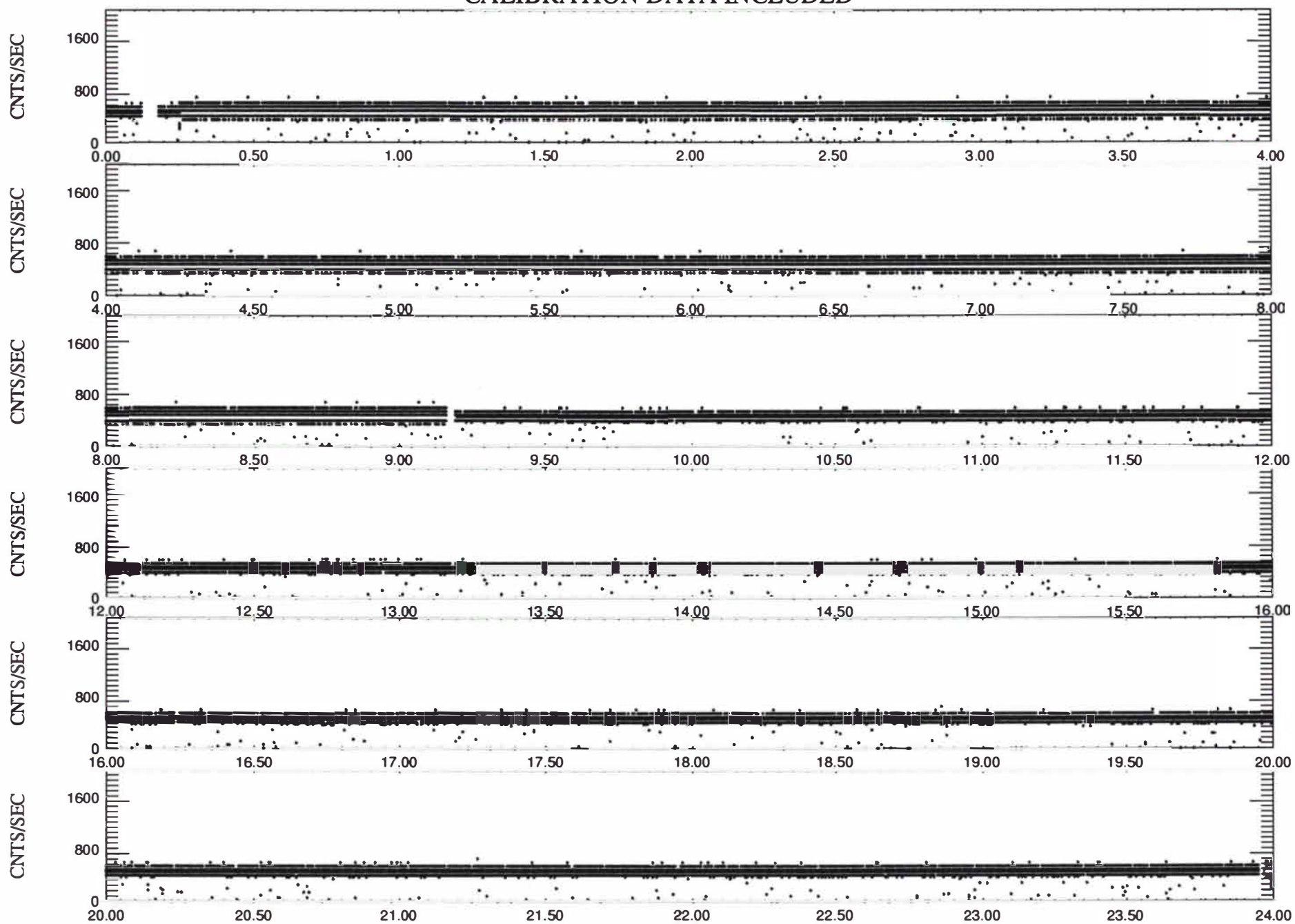


CALIBRATION DATA INCLUDED



UNIV 3AL TIME

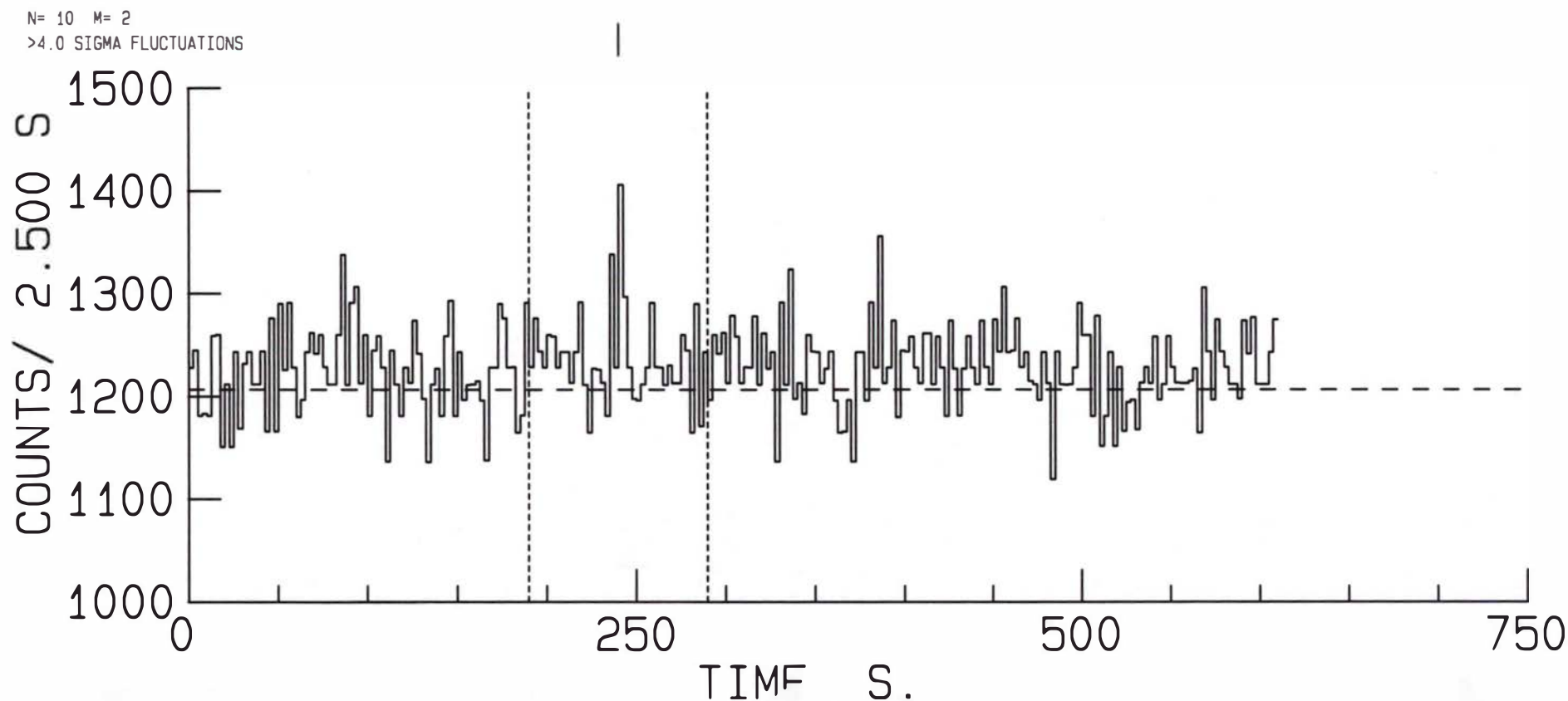
CALIBRATION DATA INCLUDED



UNIV AL TIME

Stern untriggered
Too weak, and v/3
ratio out of bounds
7/10/2

ULYSSES RT
13/ 6/94 31680.123 s
0.250 S INTERVALS REGROUPED BY 10
22- 148 keV



From PREECE@ssl.msfc.nasa.gov Tue Jun 14 11:02 PDT 1994
Date: Tue, 14 Jun 1994 13:01:35 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3027
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3027
EVENT OF 1994 JUN 13 DAY OF YEAR=164
EVENT CROSSING TIME AT BATSE : 74322. S. OR 20:38:42.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 309.000 -10.000
BATSE PEAK COUNTING RATE: 7000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 13/ 6/ 94 IS:
RA= 122.481 DEC= -39.164 DIST= 3.035 AU
BATSE-ULYSSES DISTANCE = 454060053. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 49.54 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 982.91 SECS.
CROSSING TIME AT ULYSSES IS 75305. S. OR 20:55:04 +/- 264.99 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 13/ 6/ 94 IS:
RA= 42.615 DEC= 15.702 DIST= 2.089 AU
MARS-BATSE DISTANCE = 312441504. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 83.87 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 111.28 SECS.
CROSSING TIME AT MARS IS 74433. S. OR 20:40:33 +/- 181.60 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3027	940613	9516	74322	7000	309	-10

BATSE BURST TRIGGER

NO.: 03027

TIME: TJD=9516 SECONDS=74322

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=032.1 AZIMUTH=299.1 ERROR=013.0 DEGREES

COMMENTS:

GRB. SHORT (~.1 S LONG), FAIRLY INTENSE, VISIBLE ABOVE 300 KEV.

14 / 6 / 94

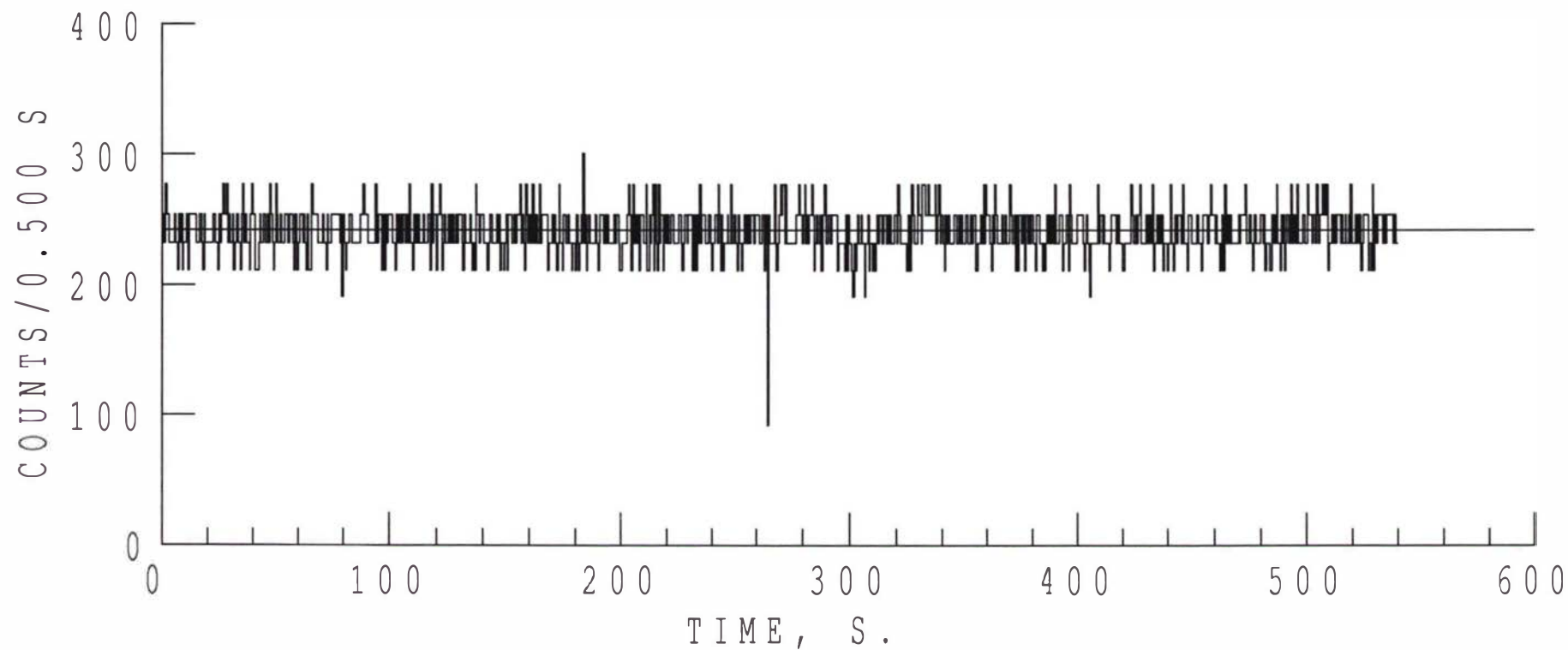
ULYSSES RT

13 / 6 / 94 75024.023 s

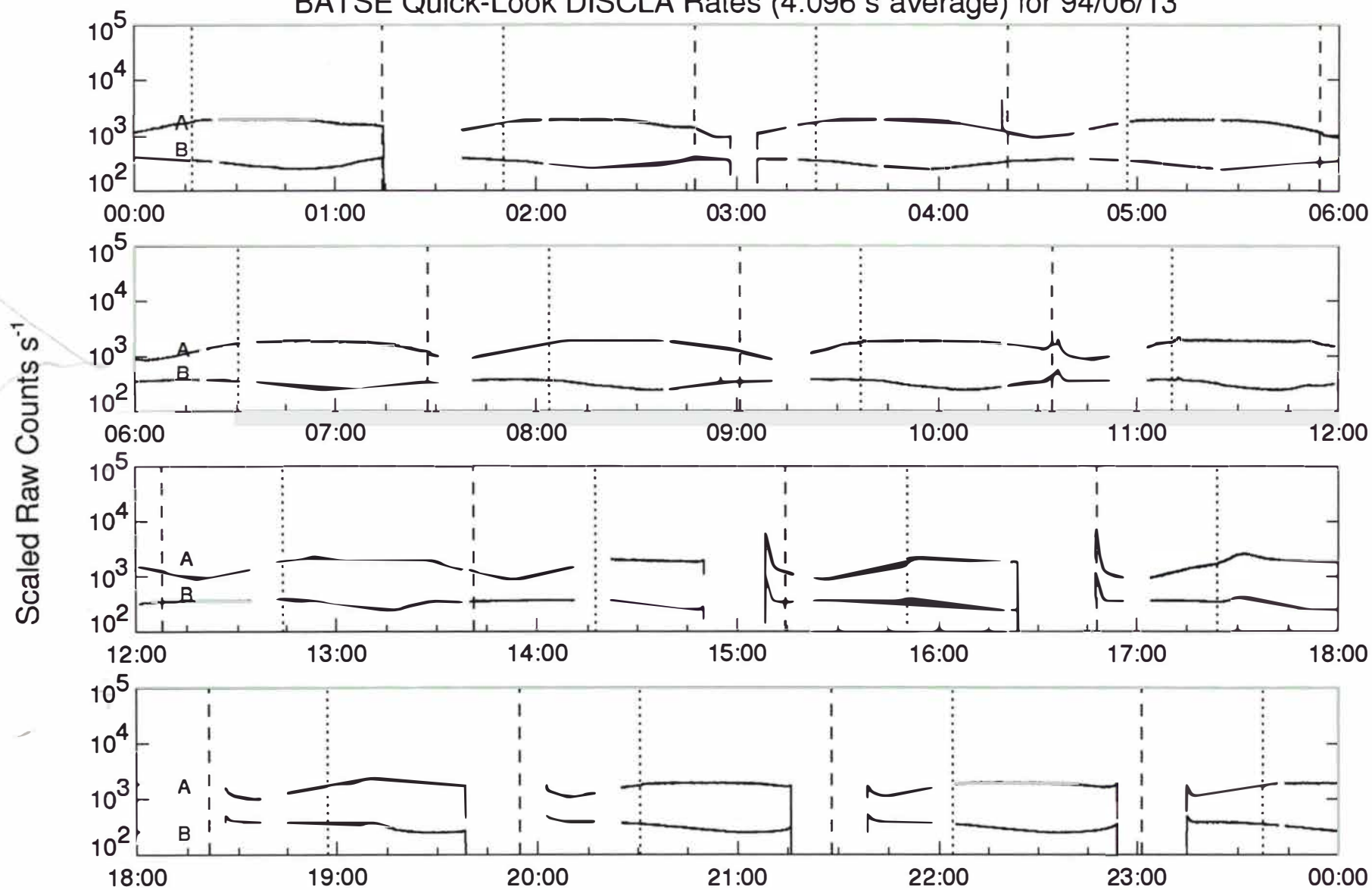
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



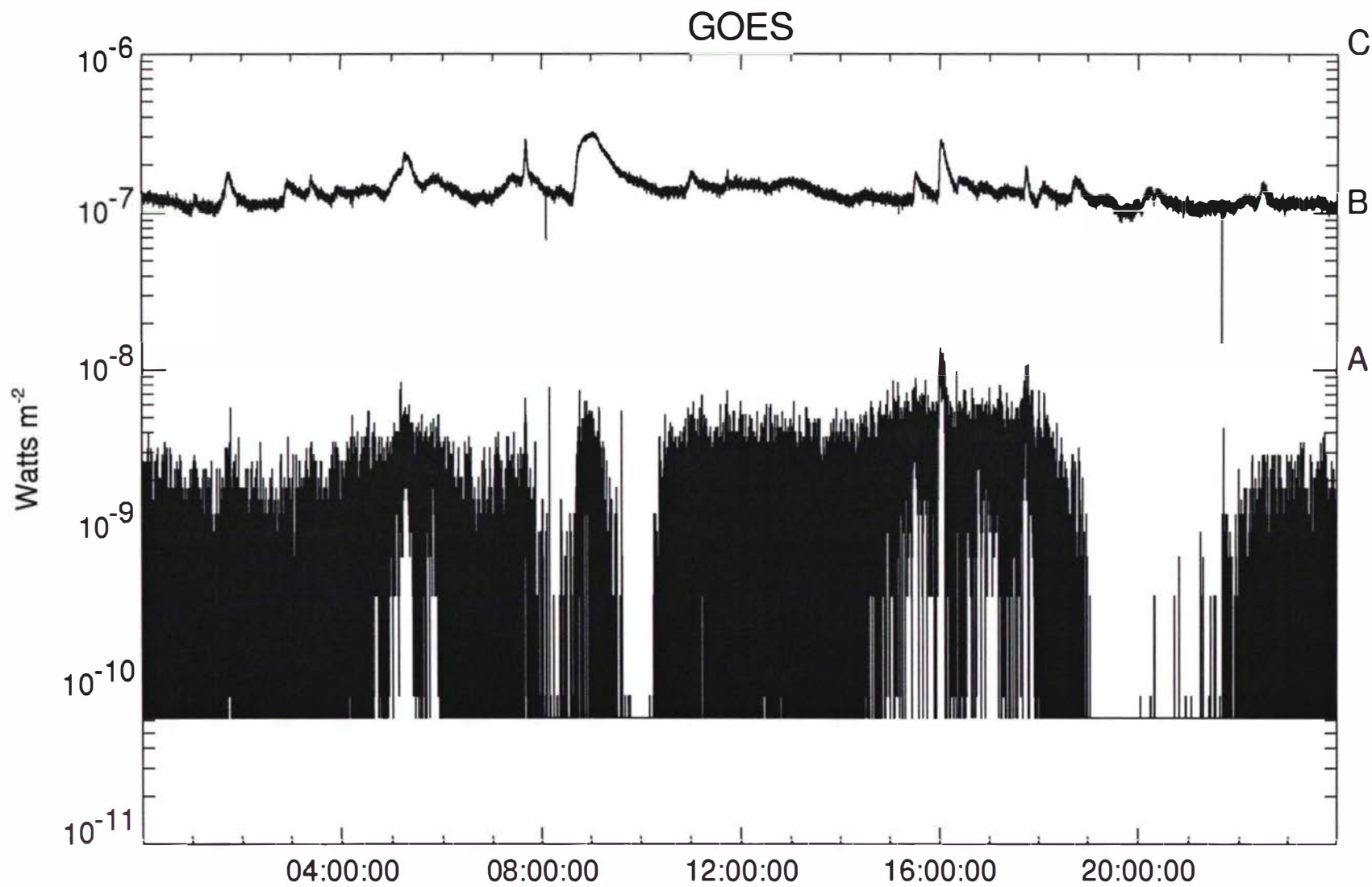
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/13



Current Time: 94/06/17, 1325 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



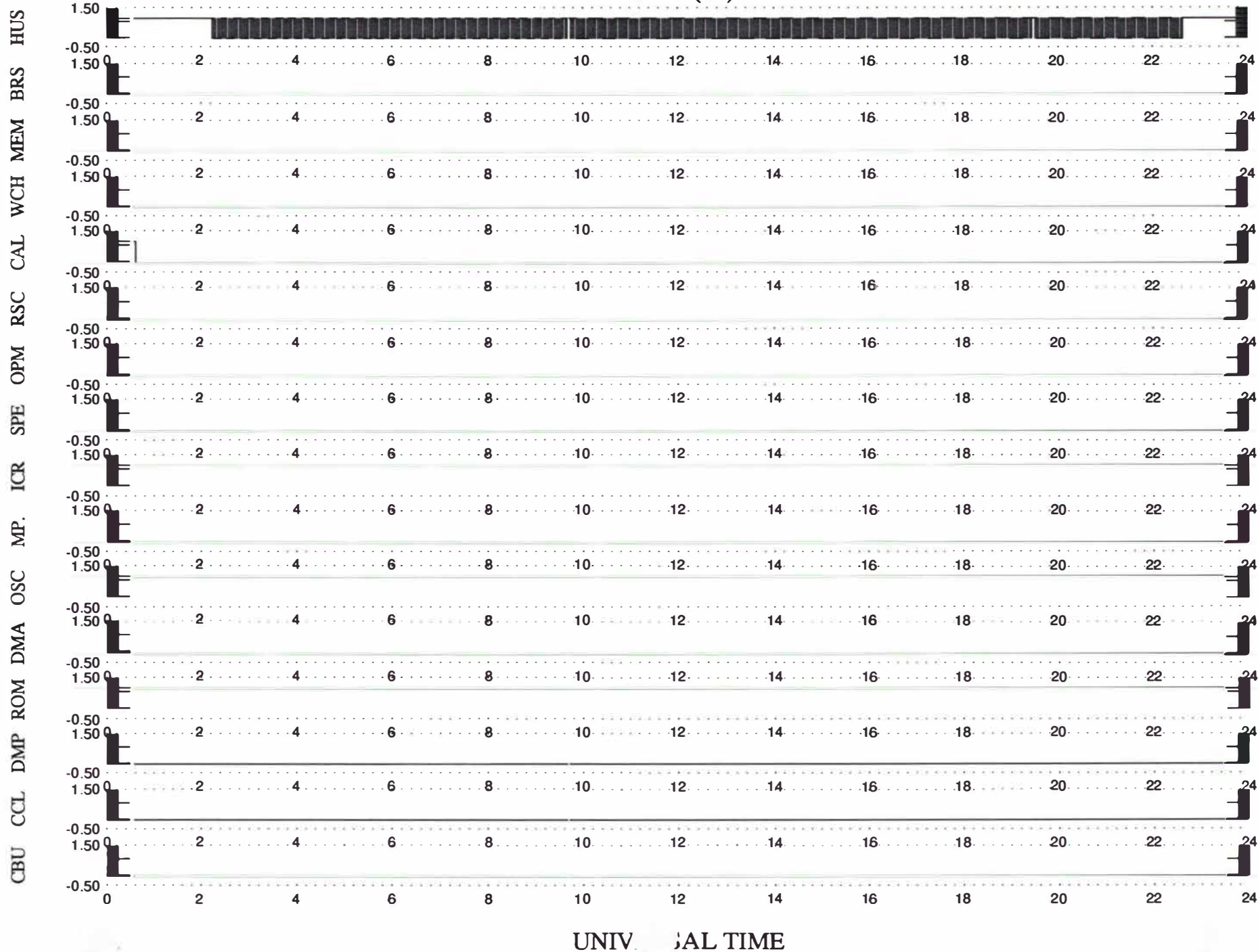
Data Start: 94/06/13, 0000:01

Plot created: 94/06/14, 1614

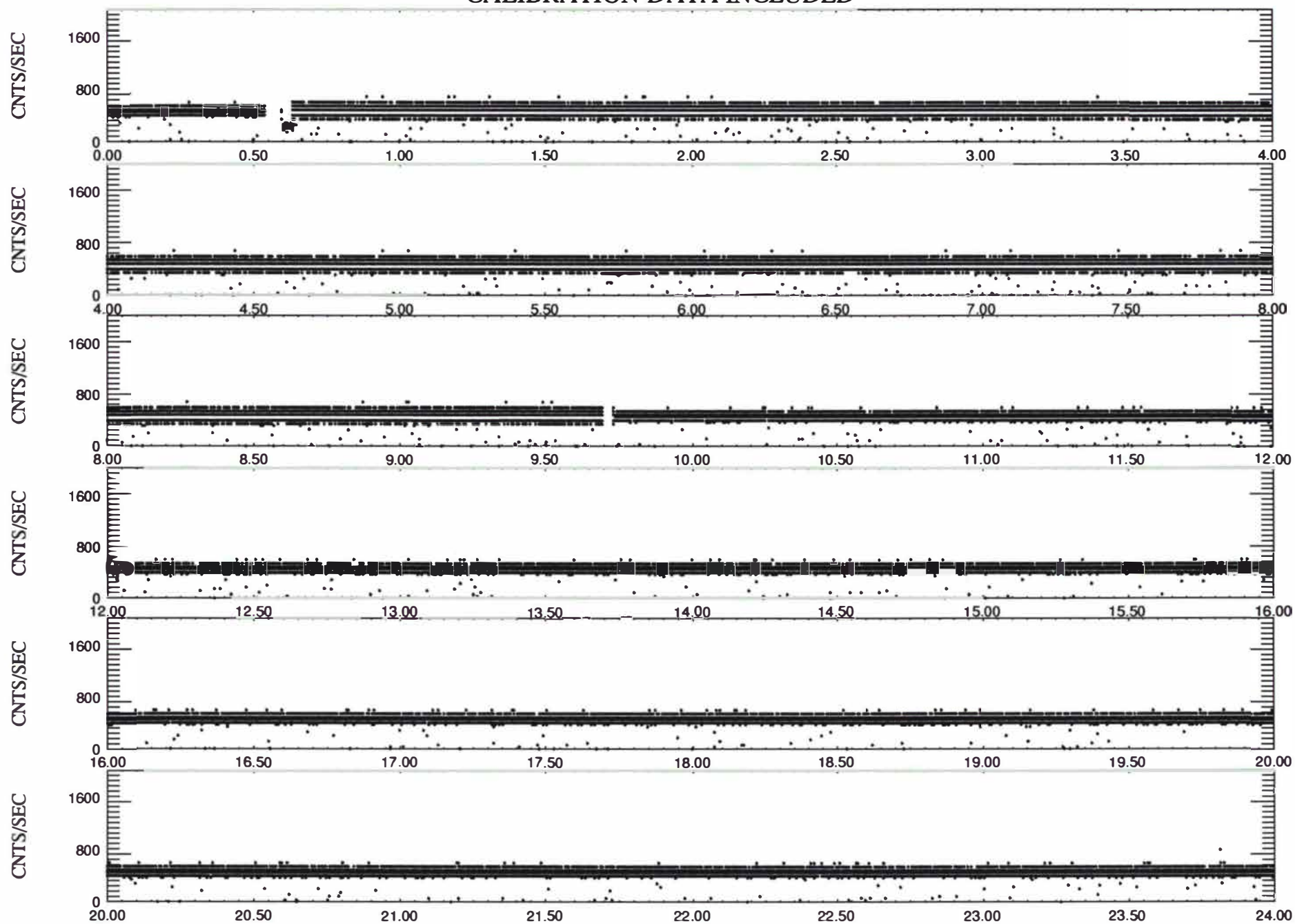
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

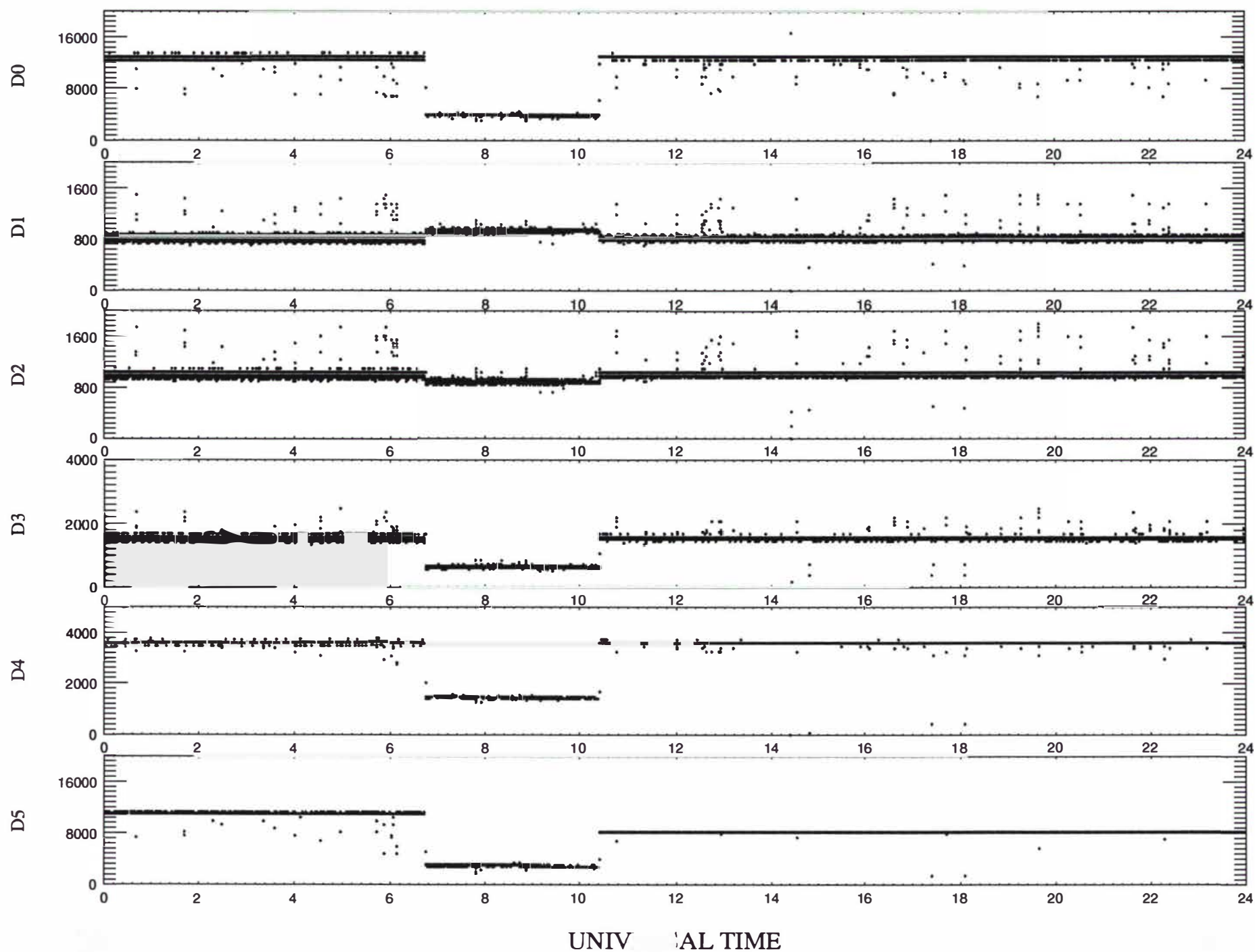
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV JAL TIME



 BATSEARCH PROGRAM

BATSE BURST # 3028
 EVENT OF 1994 JUN 14 DAY OF YEAR=165
 EVENT CROSSING TIME AT BATSE : 44851. S. OR 12:27:31.0
 COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 161.000 9.000
 BATSE PEAK COUNTING RATE: 6000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
 INTERPOLATED POSITION OF ULYSSES ON 14/ 6/ 94 IS:
 RA= 122.591 DEC= -39.138 DIST= 3.036 AU
 BATSE-ULYSSES DISTANCE = 454150826. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=120.10 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= -759.79 SECS.
 CROSSING TIME AT ULYSSES IS 44091. S. OR 12:14:51 +/- 266.00 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
 POSITION OF MARS ON 14/ 6/ 94 IS:
 RA= 43.340 DEC= 15.925 DIST= 2.086 AU
 MARS-BATSE DISTANCE = 312015392. KM.
 ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 66.55 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= 414.22 SECS.
 CROSSING TIME AT MARS IS 45265. S. OR 12:34:25 +/- 172.06 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3028	940614	9517	44851	6000	161	+09

BATSE BURST TRIGGER

NO.: 3028

TIME: TJD=9517 SECONDS=44851

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=116.1 AZIMUTH=113.4 ERROR= DEGREES

COMMENTS:

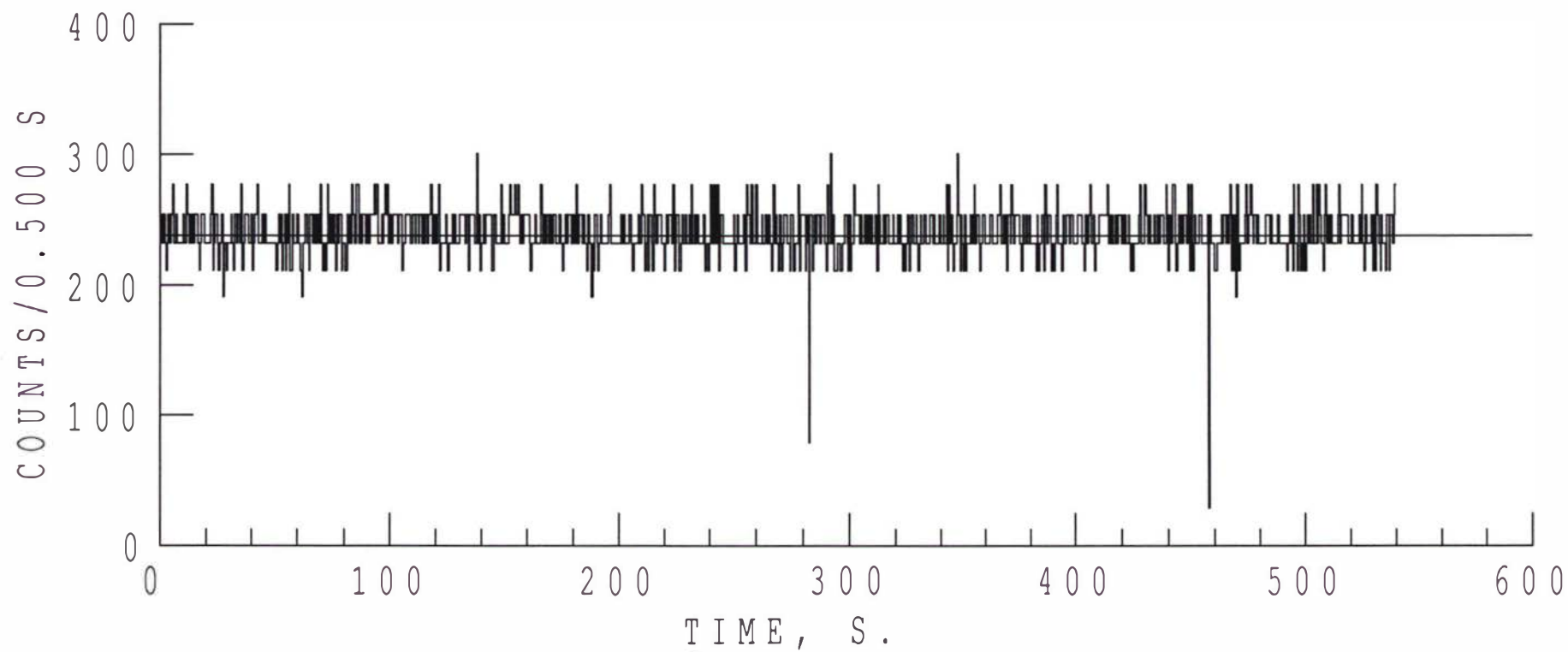
BURST. SHORT, COMPLEX EVENT WITH 4 PEAKS. TRIGGERED ON 4TH PEAK.
 TOTAL DUR.~2.5 SEC. NOT VISIBLE ABOVE 300 KEV.

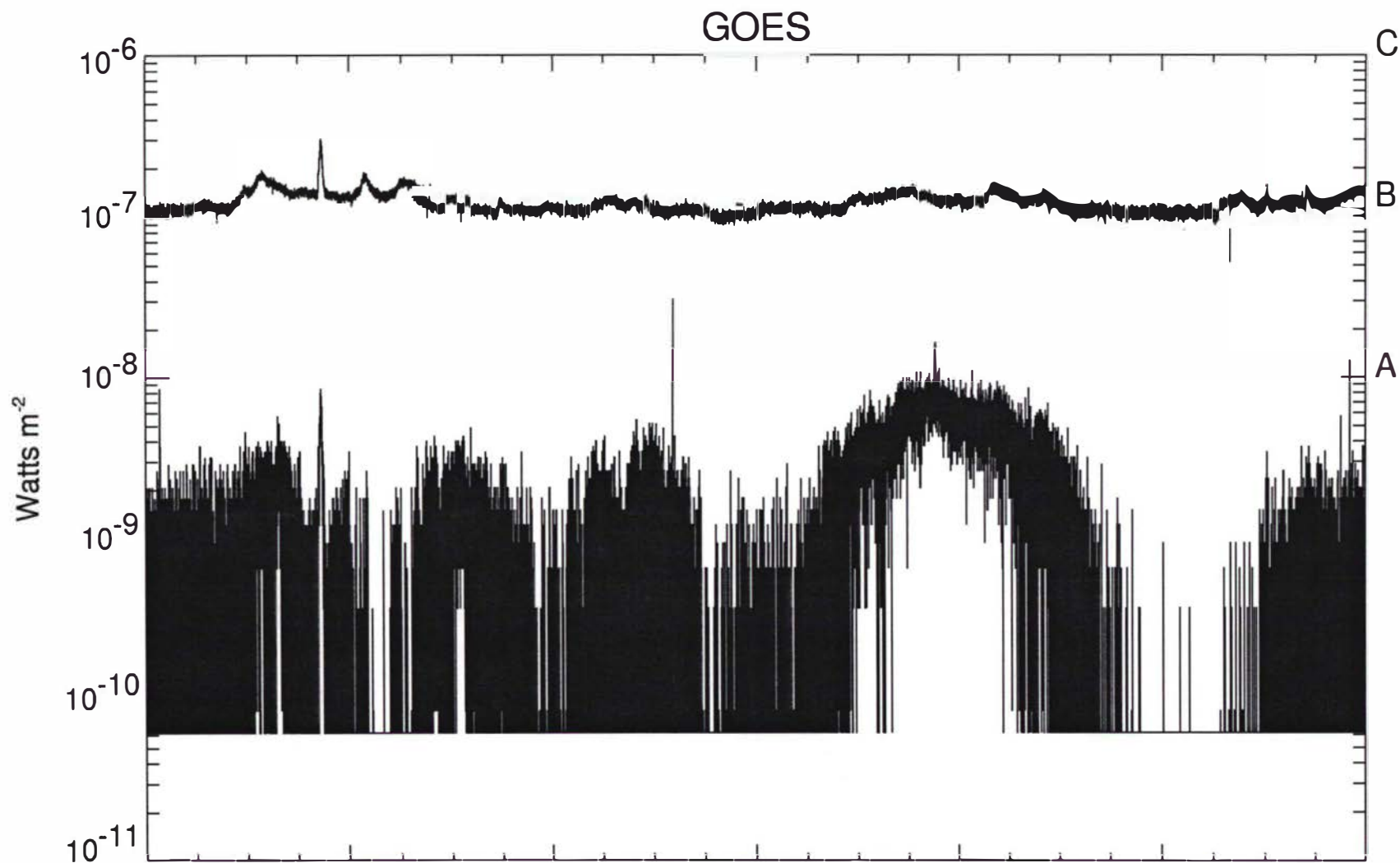
15 / 6 / 94

ULYSSES RT
14 / 6 / 94 43812.395 s
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





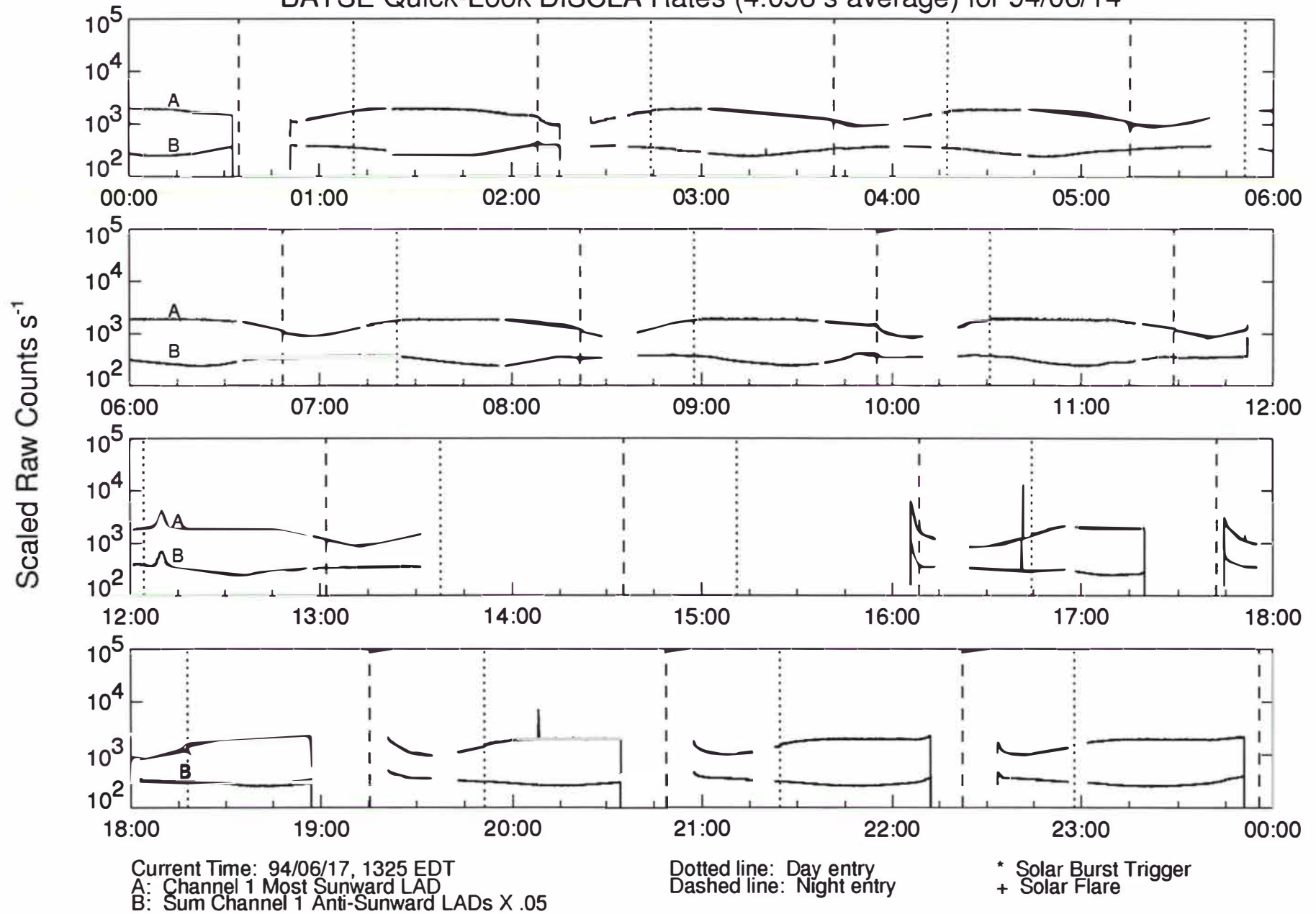
Data Start: 94/06/14, 0000:01

Plot created: 94/06/17, 1317

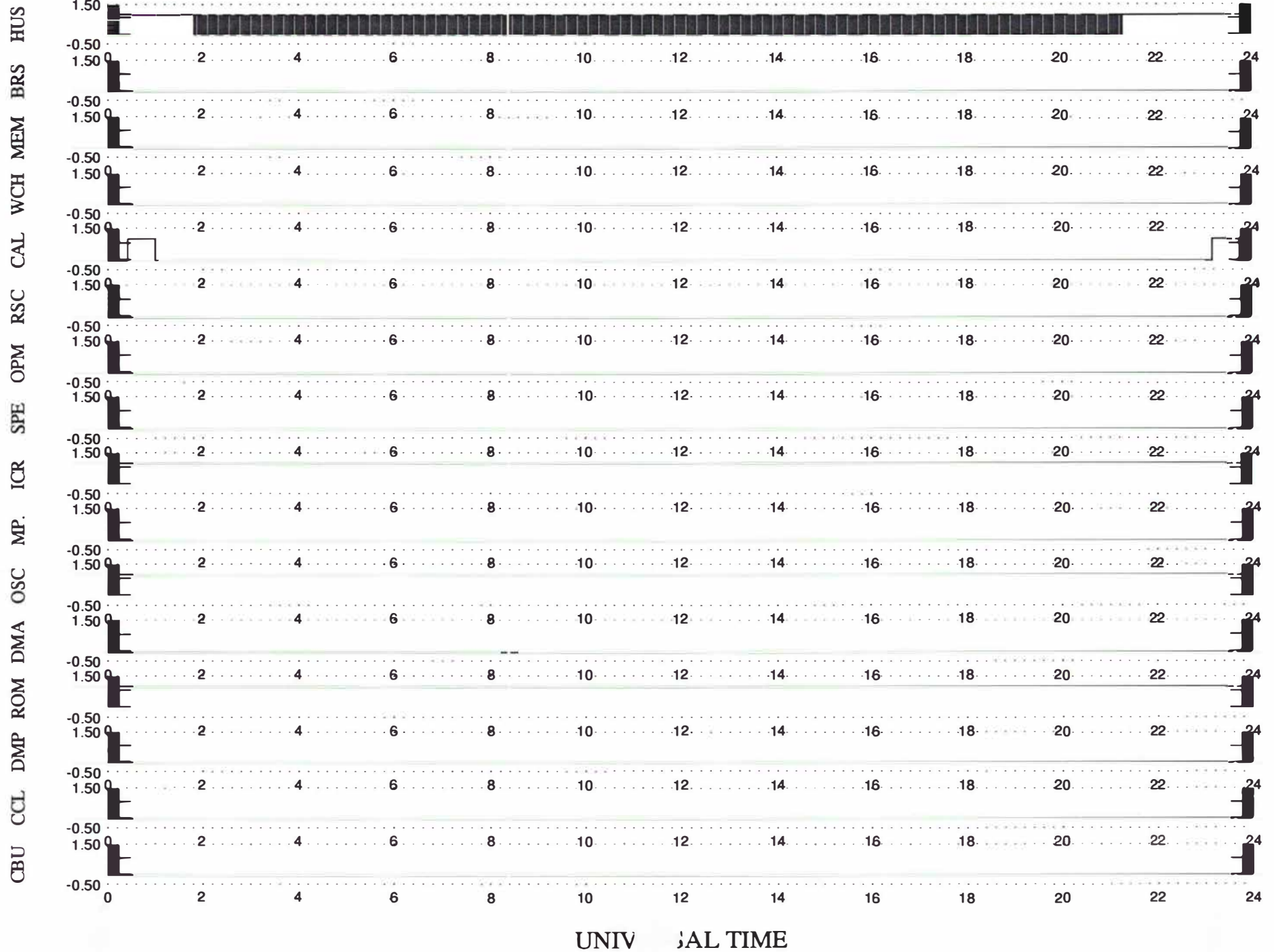
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

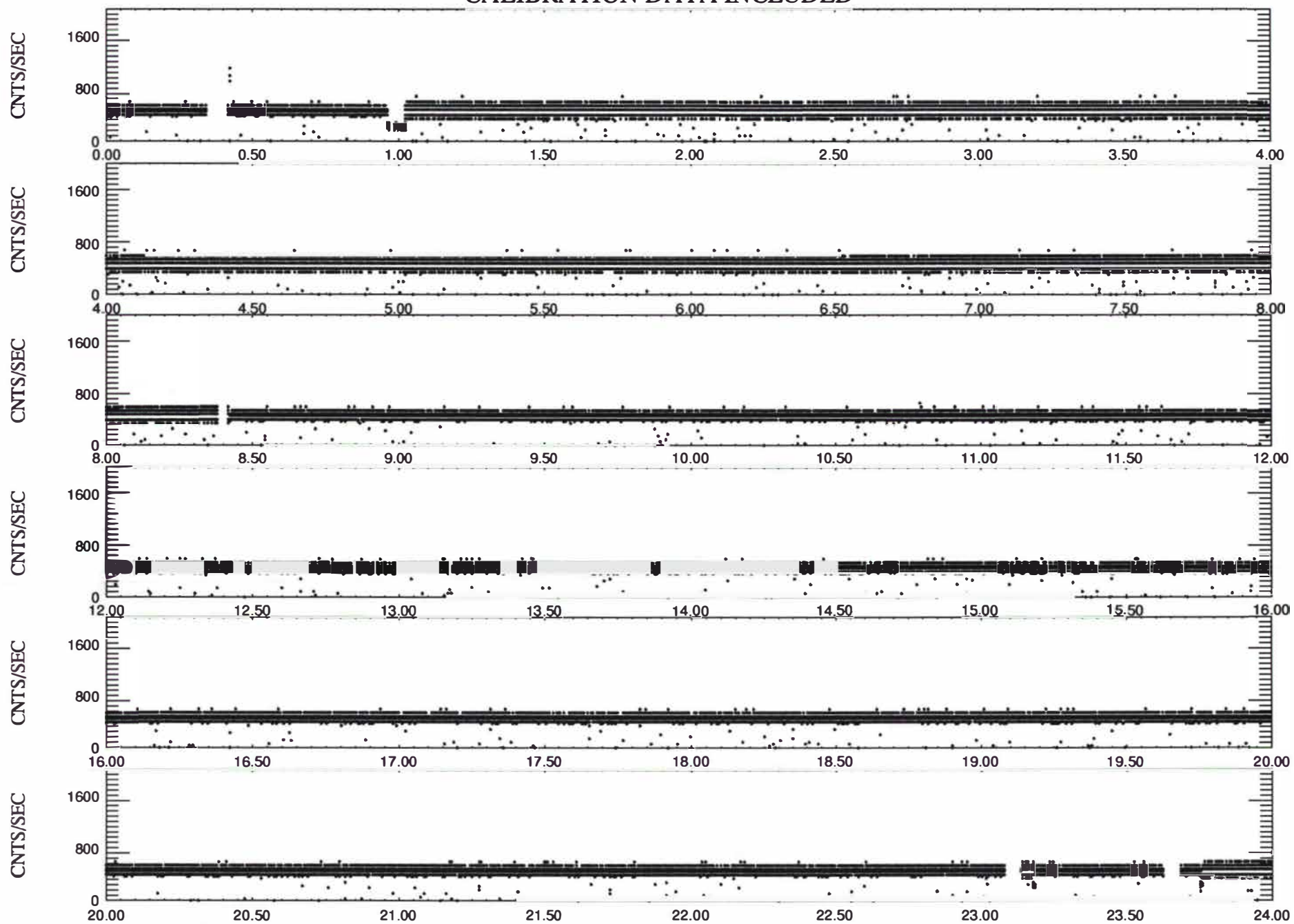
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/14



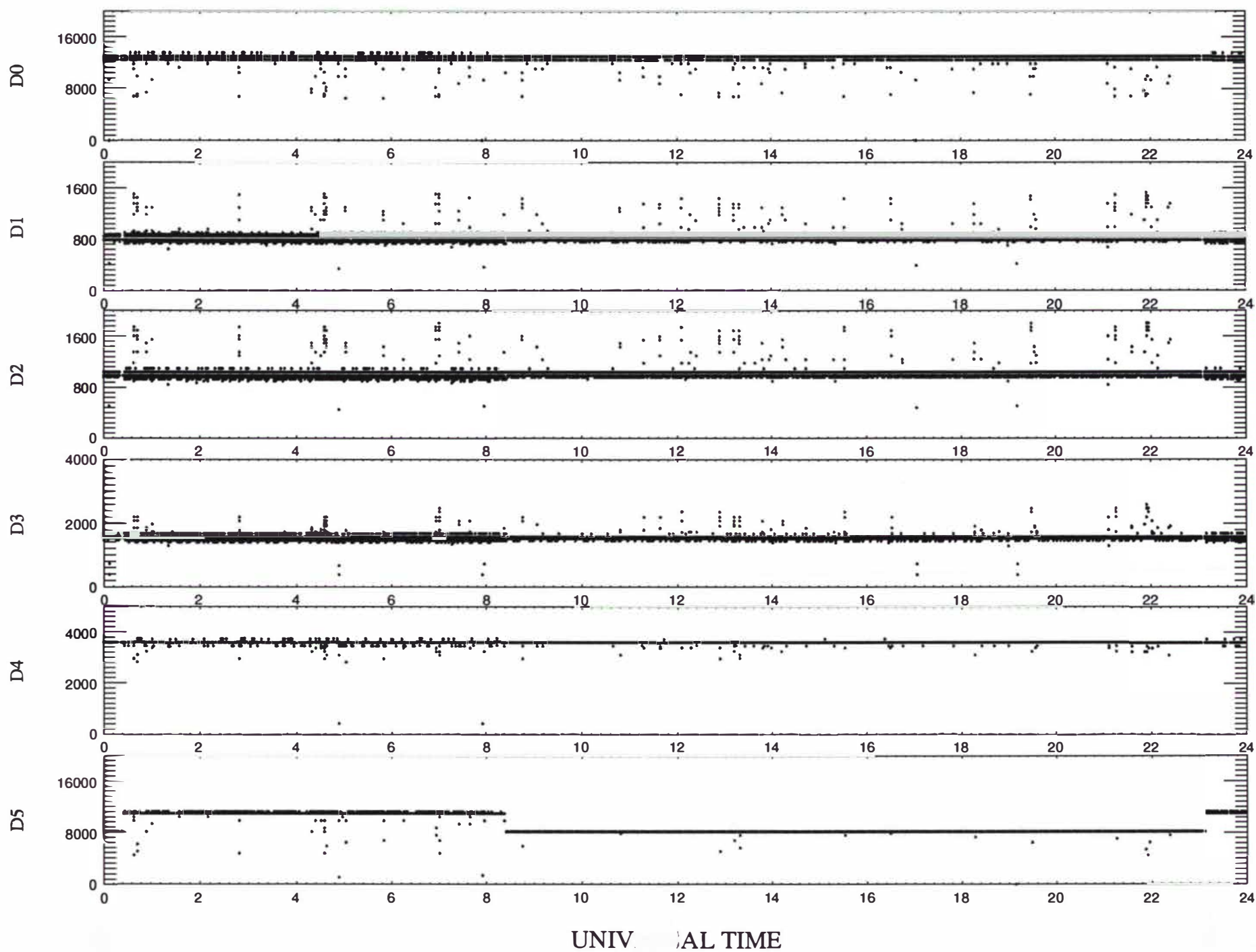
NO BURST (14)

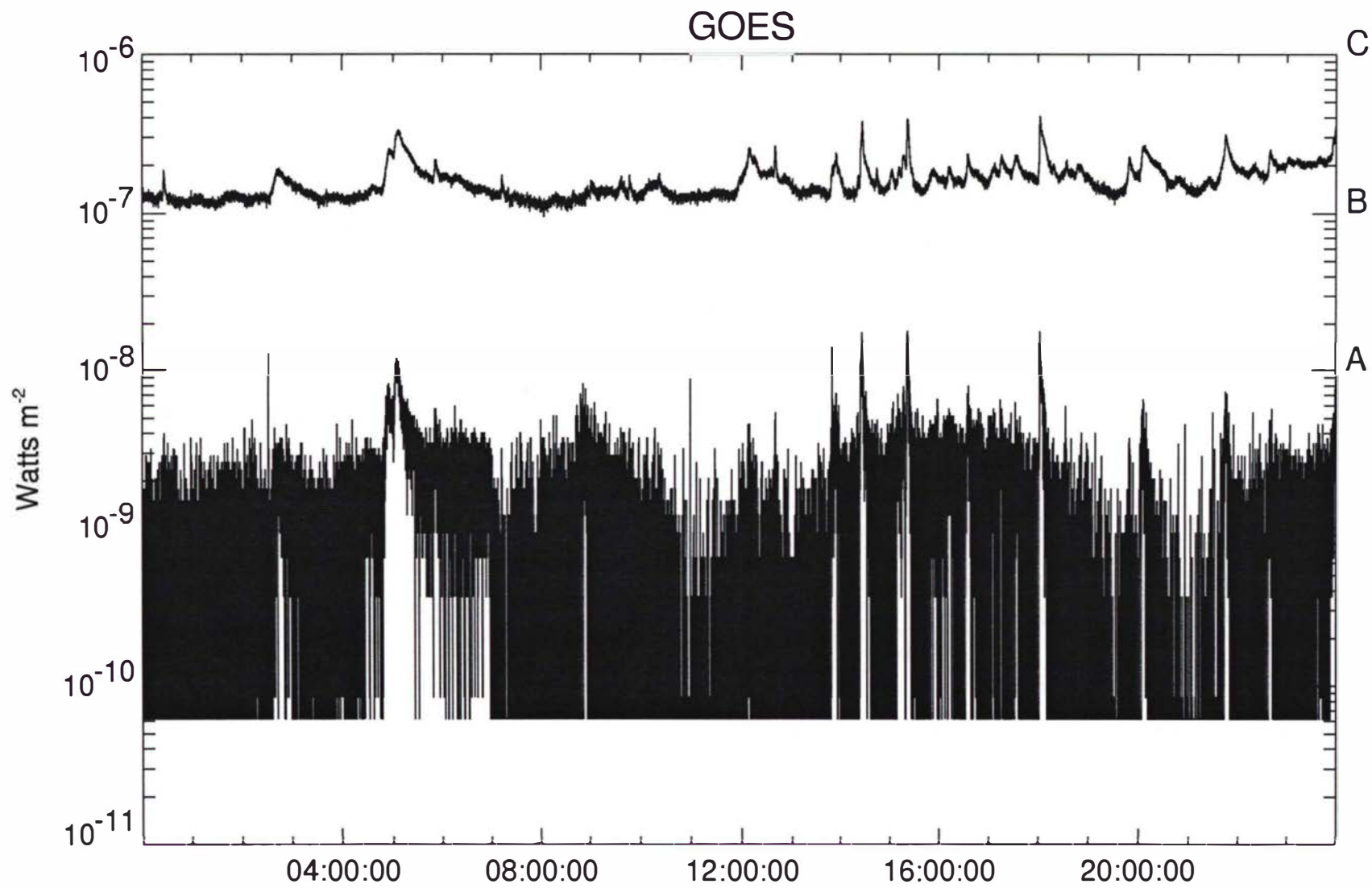


CALIBRATION DATA INCLUDED



UNIV UNIV TIME





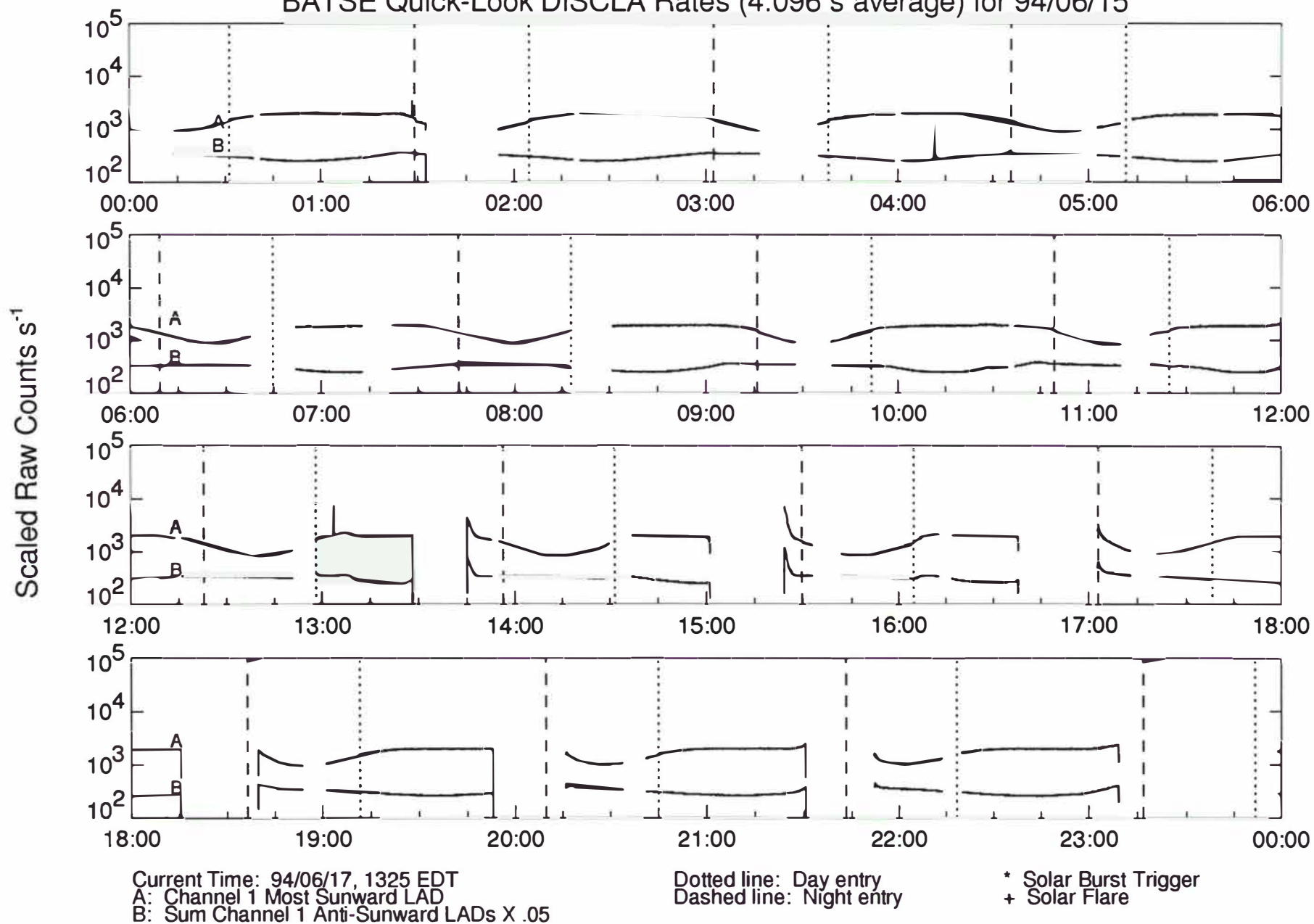
Data Start: 94/06/15, 0000:01

Plot created: 94/06/17, 1320

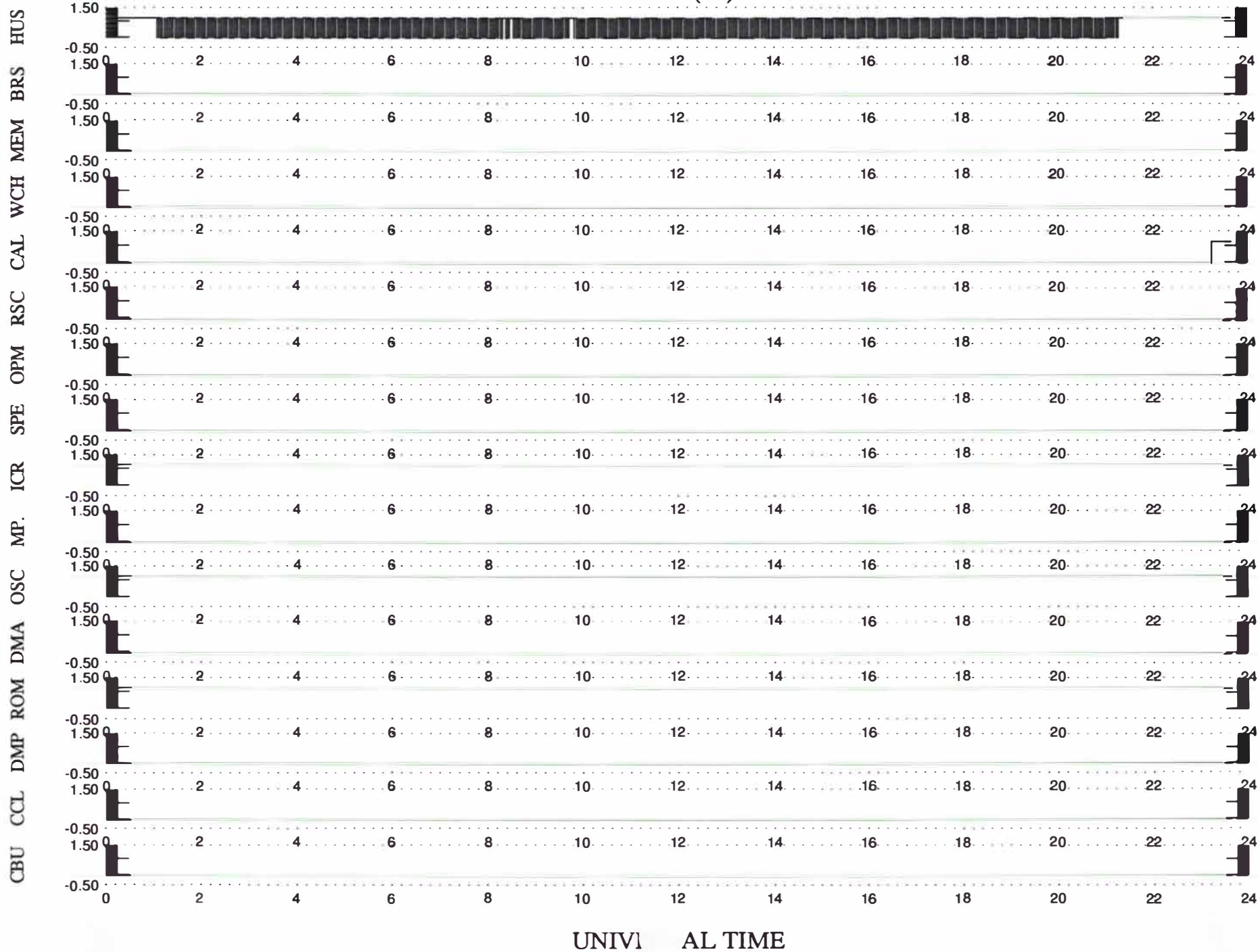
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

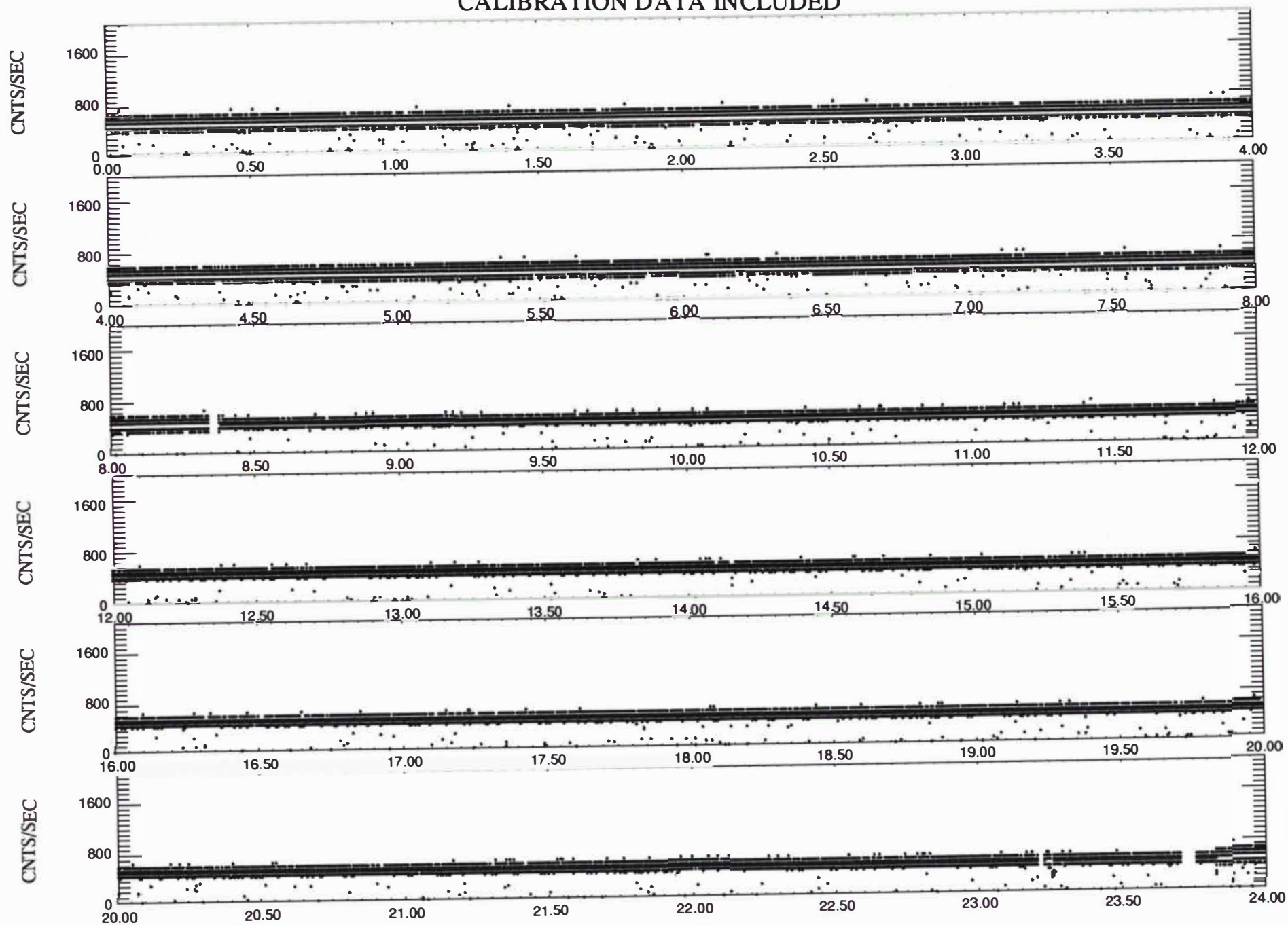
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/15



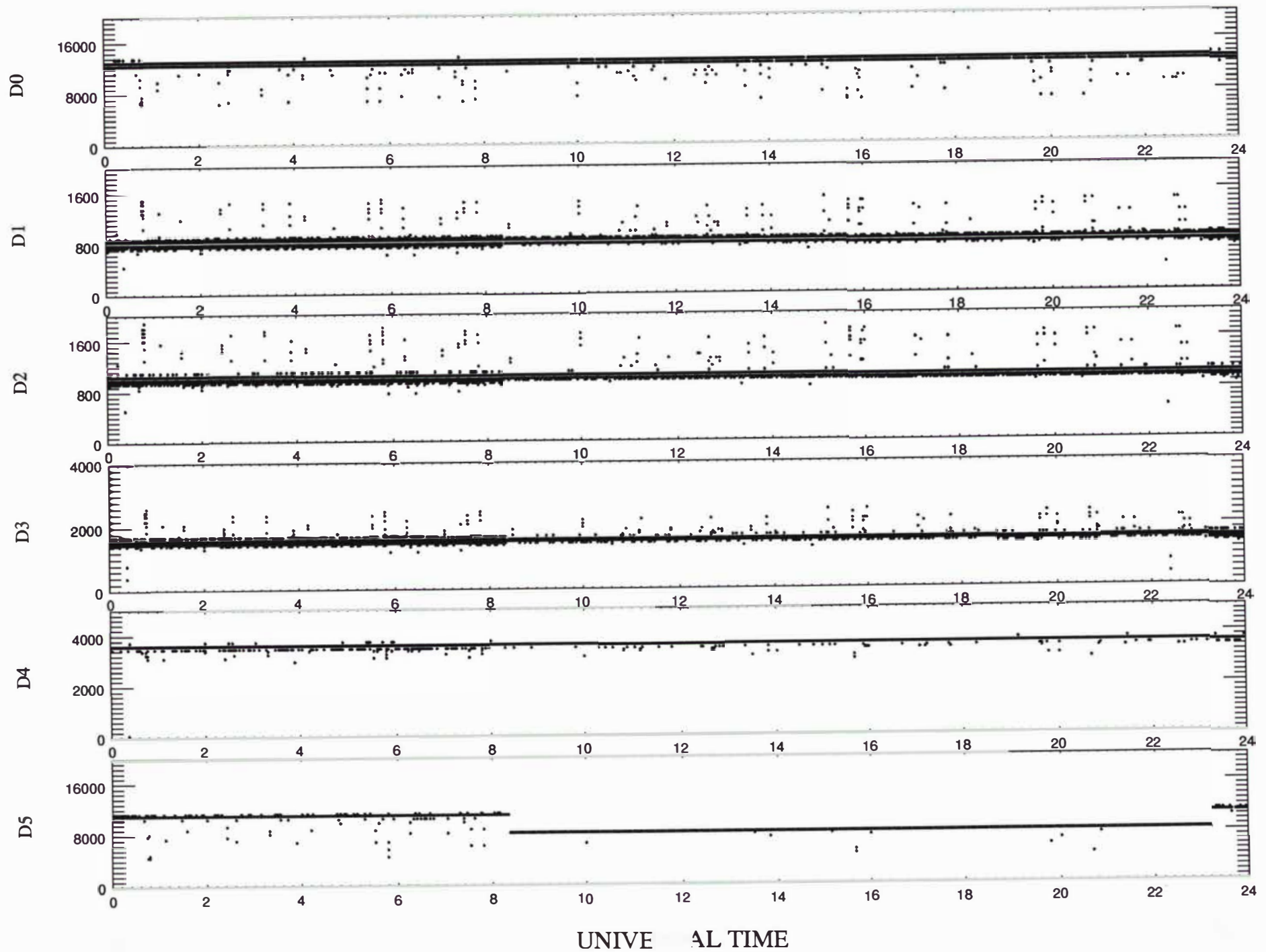
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From PREECE@ssl.msfc.nasa.gov Fri Jun 17 12:40 PDT 1994
Date: Fri, 17 Jun 1994 14:41:38 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3029
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3029
EVENT OF 1994 JUN 16 DAY OF YEAR=167
EVENT CROSSING TIME AT BATSE : 18126. S. OR 05:02:06.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 157.000 -61.000
BATSE PEAK COUNTING RATE: 3500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 16/ 6/ 94 IS:
RA= 122.879 DEC= -39.079 DIST= 3.037 AU
BATSE-ULYSSES DISTANCE = 454353952. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=149.64 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1307.79 SECS.
CROSSING TIME AT ULYSSES IS 16818. S. OR 04:40:18 +/- 163.11 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 16/ 6/ 94 IS:
RA= 44.791 DEC= 16.362 DIST= 2.080 AU
MARS-BATSE DISTANCE = 311153440. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 65.03 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 438.22 SECS.
CROSSING TIME AT MARS IS 18564. S. OR 05:09:24 +/- 170.00 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3029	940616	9519	18126	3500	157	-61

BATSE BURST TRIGGER

NO.: 03029

TIME: TJD=9519 SECONDS=18126

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=138.4 AZIMUTH=181.1 ERROR=006.7 DEGREES

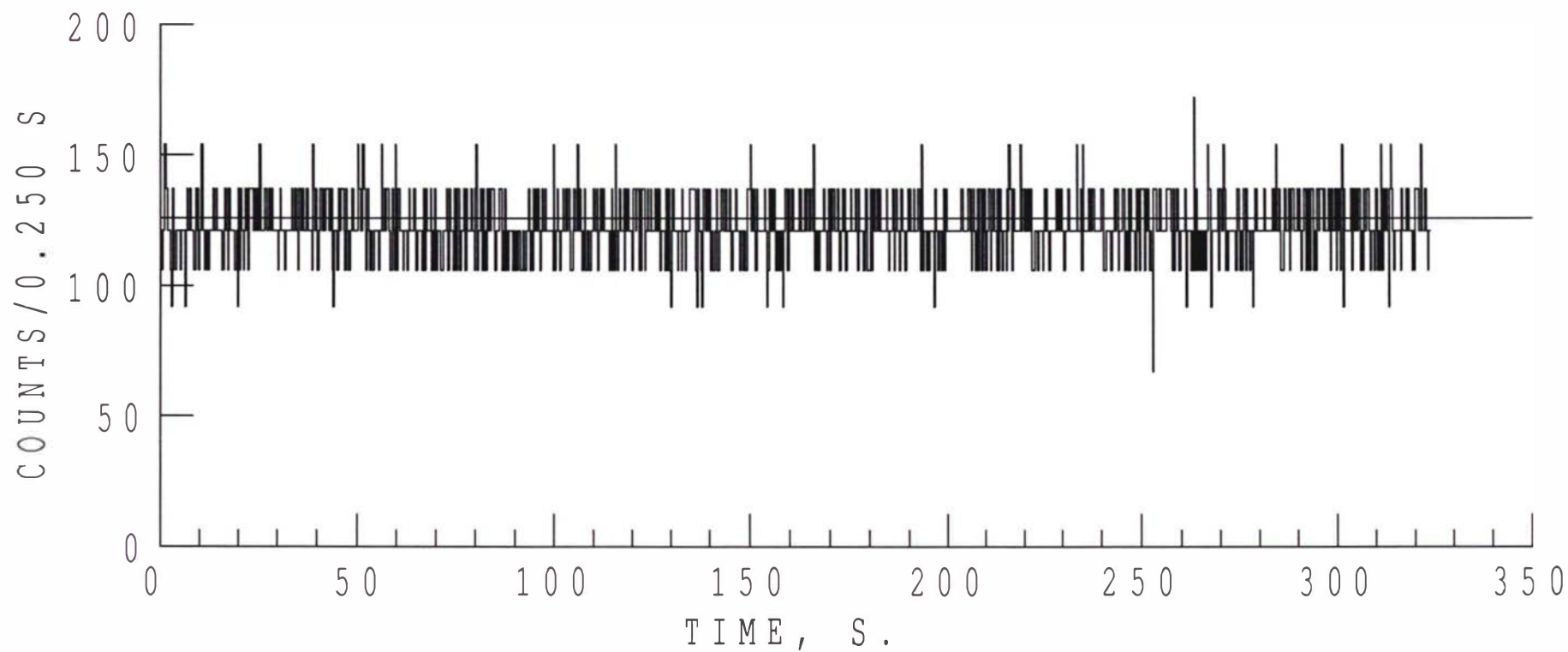
COMMENTS:

SINGLE PULSE, FAST RISE, EMISSION SEEMS TO PERSIST FOR ~80 S. VISIBLE ABOVE 300 KEV.

17 / 6 / 94

ULYSSES RT
16 / 6 / 94 16668.104 s
0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From PREECE@ssl.msfc.nasa.gov Fri Jun 17 12:39 PDT 1994
Date: Fri, 17 Jun 1994 14:39:46 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3030
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3030
EVENT OF 1994 JUN 16 DAY OF YEAR=167
EVENT CROSSING TIME AT BATSE : 39674. S. OR 11:01:14.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 336.000 -12.000
BATSE PEAK COUNTING RATE: 6000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 16/ 6/ 94 IS:
RA= 122.922 DEC= -39.071 DIST= 3.037 AU
BATSE-ULYSSES DISTANCE = 454376458. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 59.65 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 765.84 SECS.
CROSSING TIME AT ULYSSES IS 40440. S. OR 11:13:59 +/- 288.71 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 16/ 6/ 94 IS:
RA= 44.791 DEC= 16.362 DIST= 2.080 AU
MARS-BATSE DISTANCE = 311153440. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=106.32 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -291.60 SECS.
CROSSING TIME AT MARS IS 39382. S. OR 10:56:22 +/- 168.51 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3030	940616	9519	39674	6000	336	-12

BATSE BURST TRIGGER

NO.: 03030

TIME: TJD=9519 SECONDS=39674

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=053.9 AZIMUTH=255.9 ERROR=005.1 DEGREES

COMMENTS:

LONG, MULTI-SPIKED EVENT. MAIN PEAK CENTERED AROUND T+50 S. MARGINAL ABOVE 300 KEV.

27 / 9 / 94

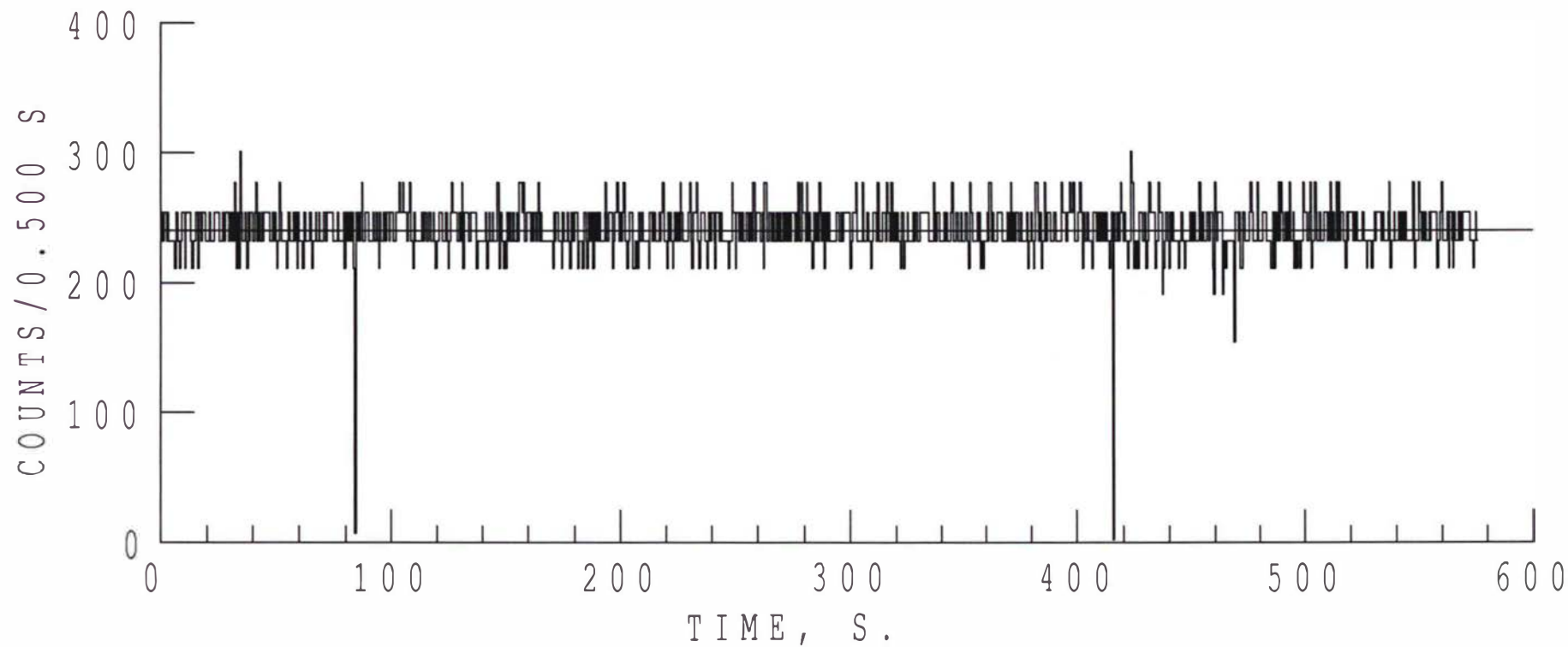
ULYSSES RT

16 / 6 / 94 40140.457 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From PREECE@ssl.msfc.nasa.gov Fri Jun 17 12:37 PDT 1994
Date: Fri, 17 Jun 1994 14:38:01 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3031
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3031
EVENT OF 1994 JUN 16 DAY OF YEAR=167
EVENT CROSSING TIME AT BATSE : 71840. S. OR 19:57:20.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 350.000 2.000
BATSE PEAK COUNTING RATE: 2600 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 16/ 6/ 94 IS:
RA= 122.987 DEC= -39.059 DIST= 3.037 AU
BATSE-ULYSSES DISTANCE = 454409700. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 56.56 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 835.35 SECS.
CROSSING TIME AT ULYSSES IS 72675. S. OR 20:11:15 +/- 282.27 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 16/ 6/ 94 IS:
RA= 44.791 DEC= 16.362 DIST= 2.080 AU
MARS-BATSE DISTANCE = 311153440. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=124.24 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -584.02 SECS.
CROSSING TIME AT MARS IS 71256. S. OR 19:47:35 +/- 140.09 SECONDS

nb

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3031	940616	9519	71840	2600	350	+02

BATSE BURST TRIGGER

NO.: 03031

TIME: TJD=9519 SECONDS=71840

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=055.7 AZIMUTH=279.8 ERROR=008.3 DEGREES

COMMENTS:

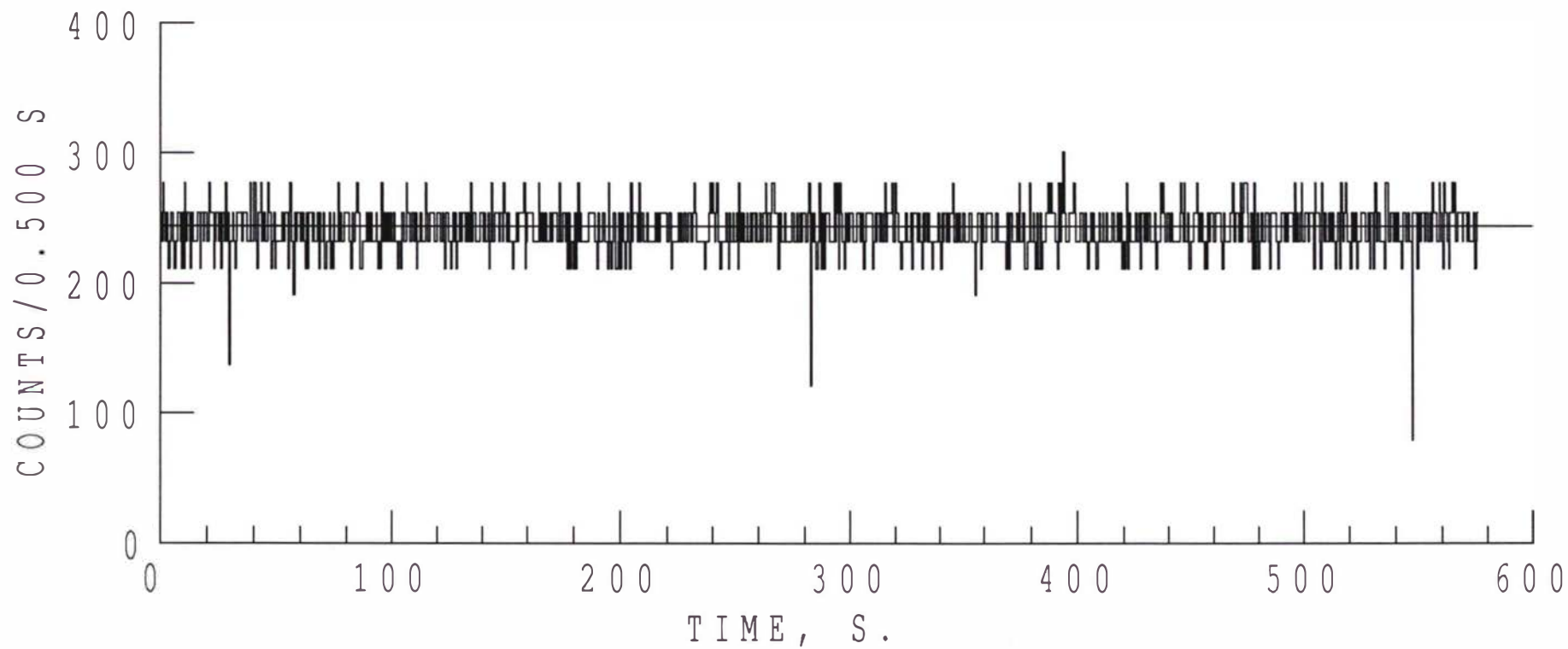
SINGLE 35 S PULSE, FASTER RISE THAN DECAY. BARELY VISIBLE ABOVE 300 KEV.

20 / 6 / 94

ULYSSES RT
16 / 6 / 94 72396.445 s
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From PREECE@ssl.msfc.nasa.gov Fri Jun 17 12:32 PDT 1994
Date: Fri, 17 Jun 1994 14:32:51 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3032
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3032
EVENT OF 1994 JUN 16 DAY OF YEAR=167
EVENT CROSSING TIME AT BATSE : 86096. S. OR 23:54:56.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 212.000 -12.000
BATSE PEAK COUNTING RATE: 11000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 16/ 6/ 94 IS:
RA= 123.016 DEC= -39.054 DIST= 3.038 AU
BATSE-ULYSSES DISTANCE = 454424467. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 98.31 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -218.98 SECS.
CROSSING TIME AT ULYSSES IS 85877. S. OR 23:51:17 +/- 307.08 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 16/ 6/ 94 IS:
RA= 44.791 DEC= 16.362 DIST= 2.080 AU
MARS-BATSE DISTANCE = 311153440. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 13.14 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1010.72 SECS.
CROSSING TIME AT MARS IS 87107. S. OR 24:11:46 +/- 56.32 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3032	940616	9519	86096	11000	212	-12

BATSE BURST TRIGGER

NO.: 03032

TIME: TJD=9519 SECONDS=86096

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=093.2 AZIMUTH=130.4 ERROR=002.6 DEGREES

COMMENTS:

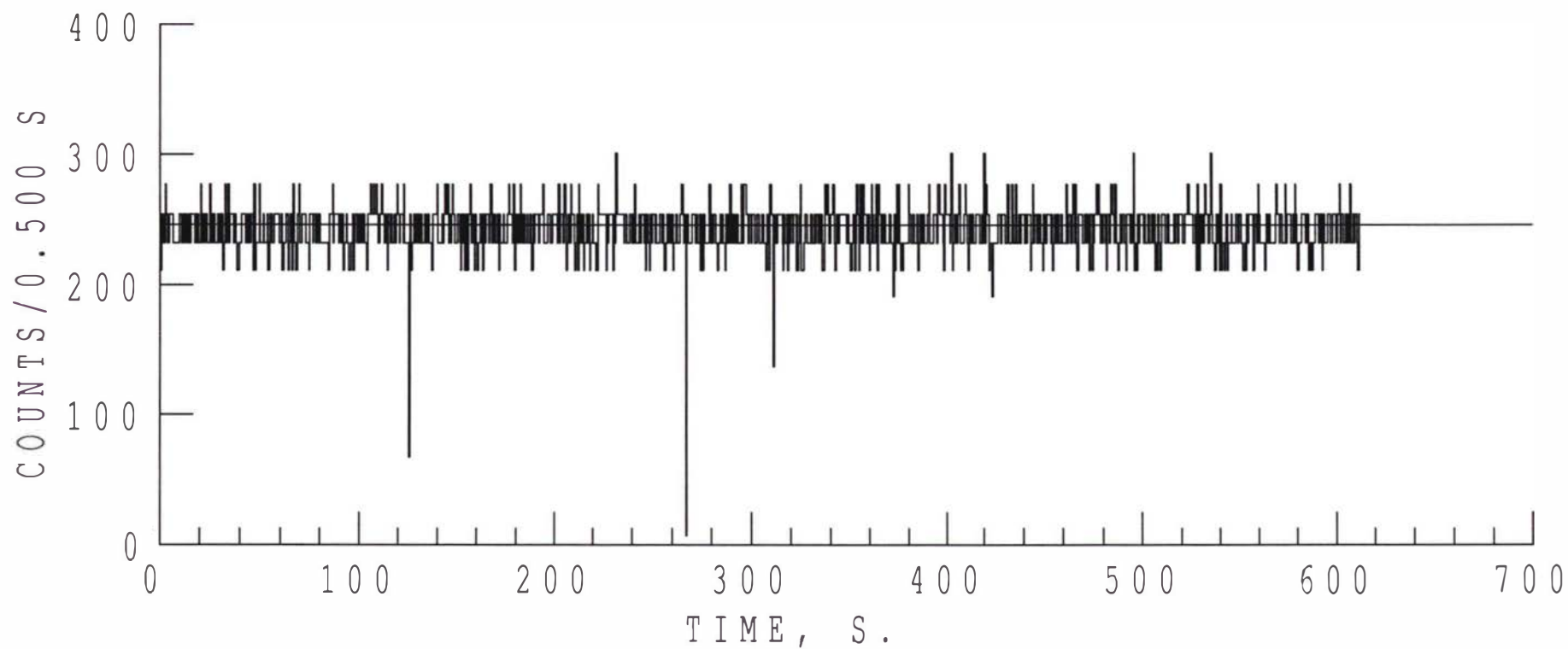
MULTI-SPIKED EVENT LASTING 15 S. PEAK CENTERED ON T+10 S. NOT VISIBLE ABOVE 300 KEV.

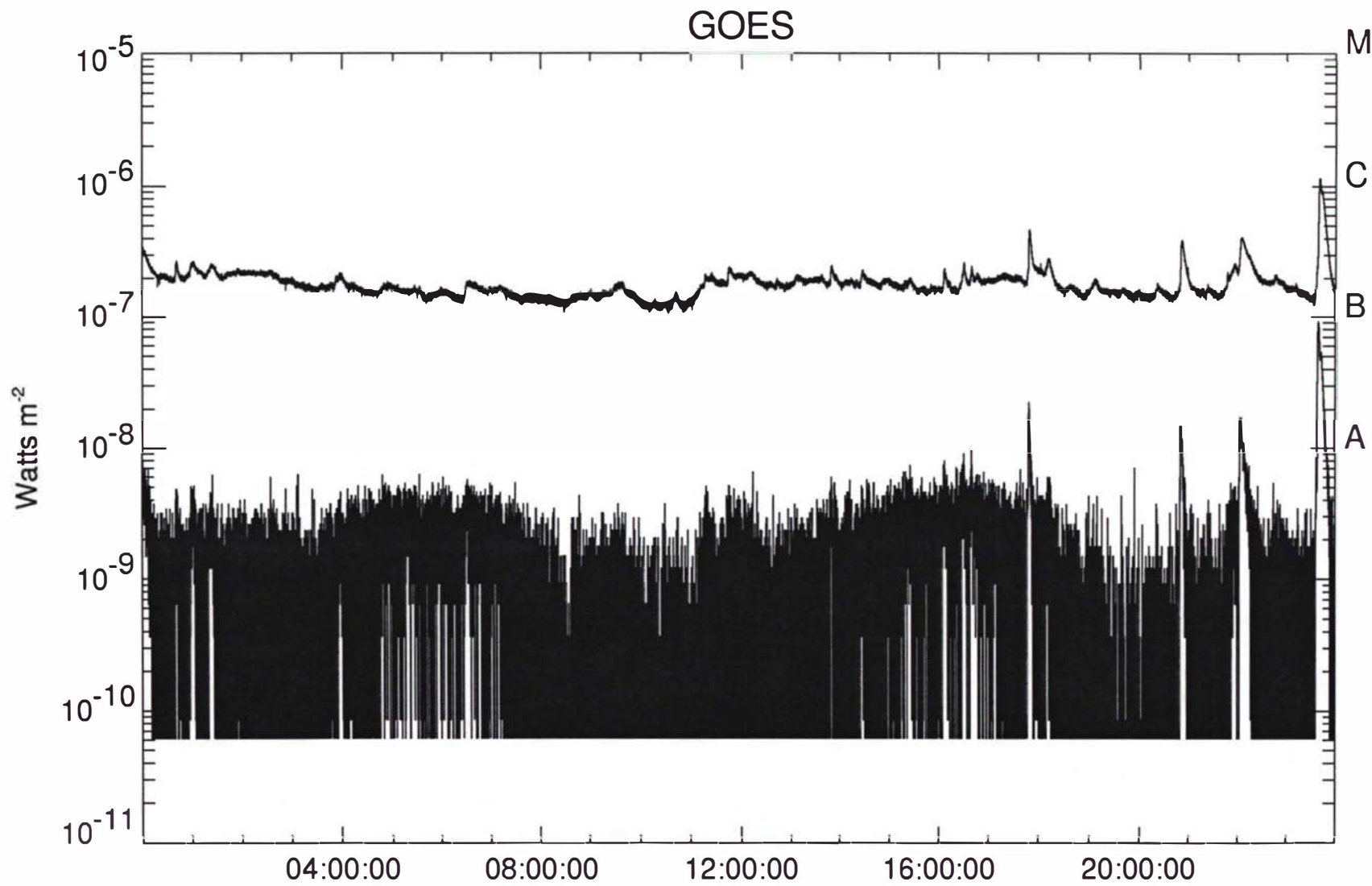
20 / 6 / 94

ULYSSES RT
16 / 6 / 94 85572.141 s
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



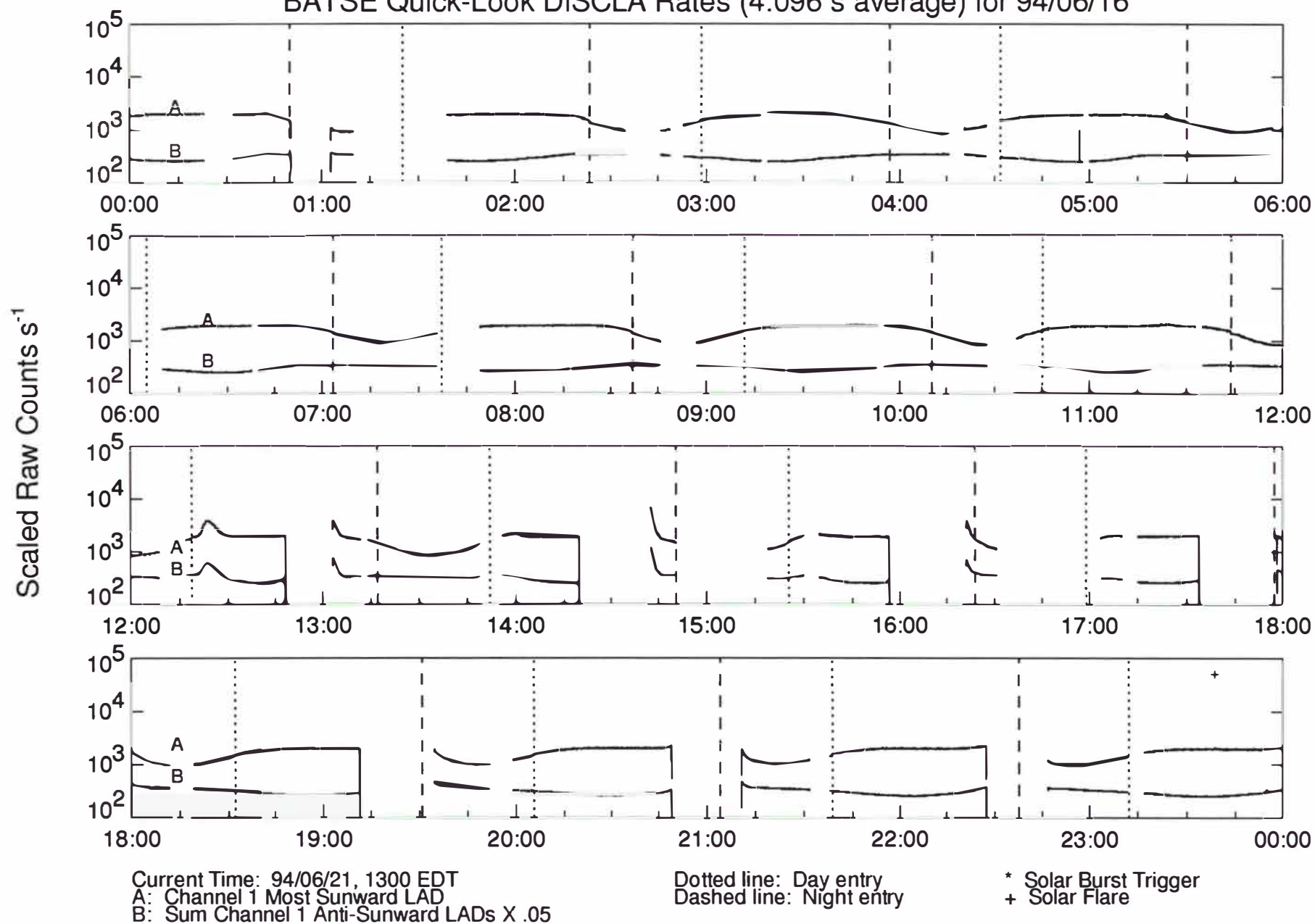


Data Start: 94/06/16, 0000:01

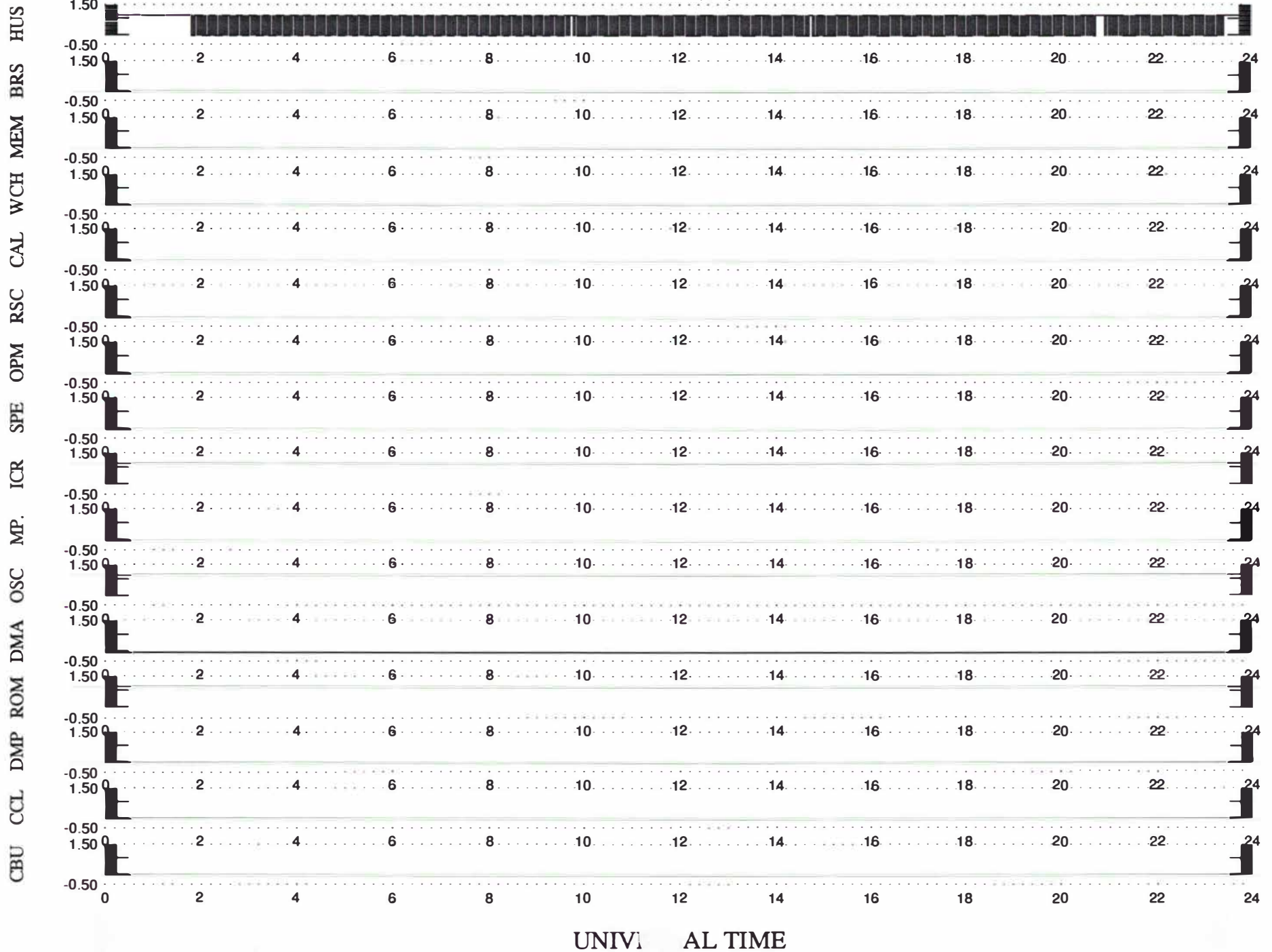
Plot created: 94/06/17, 1321

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

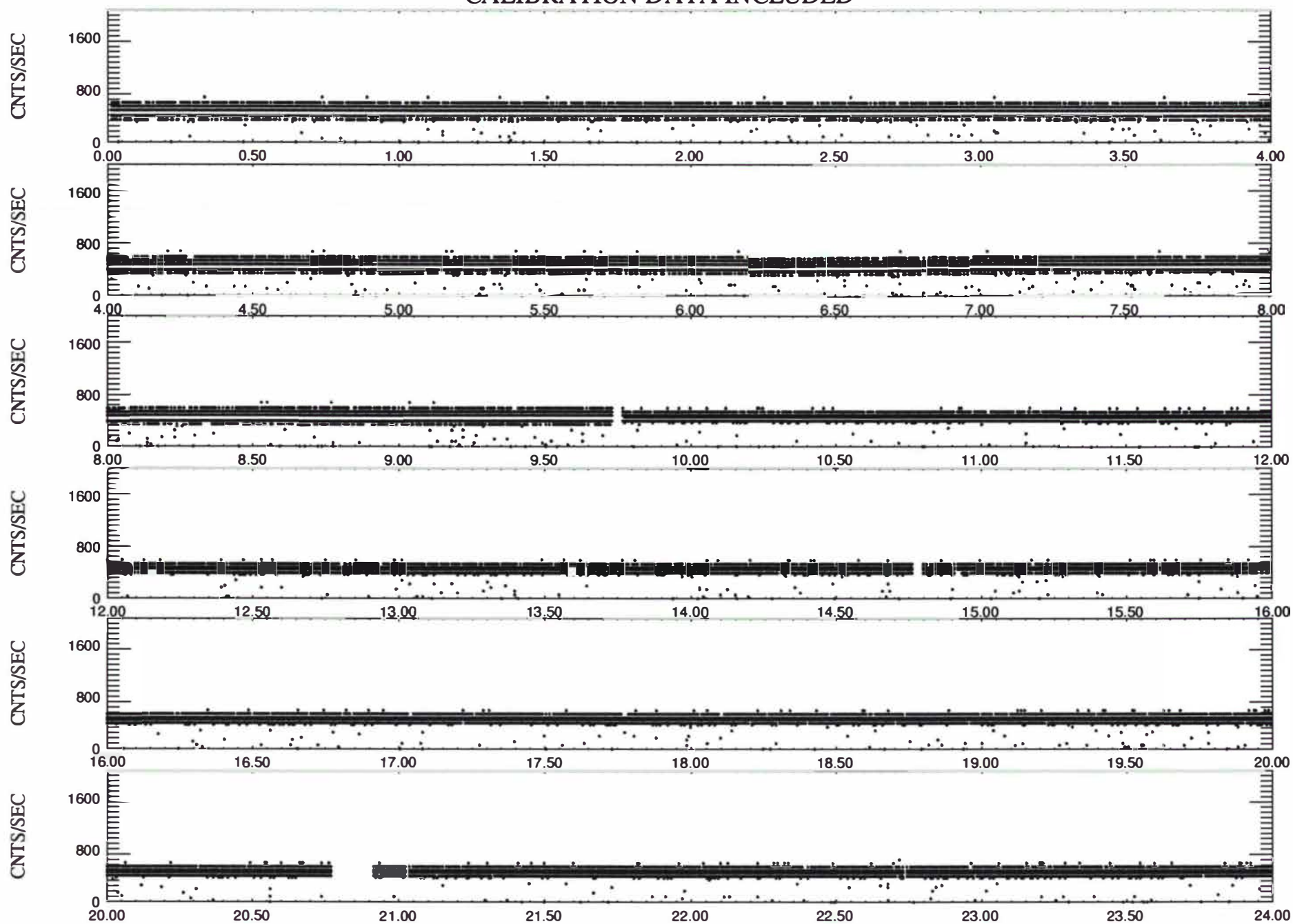
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/16



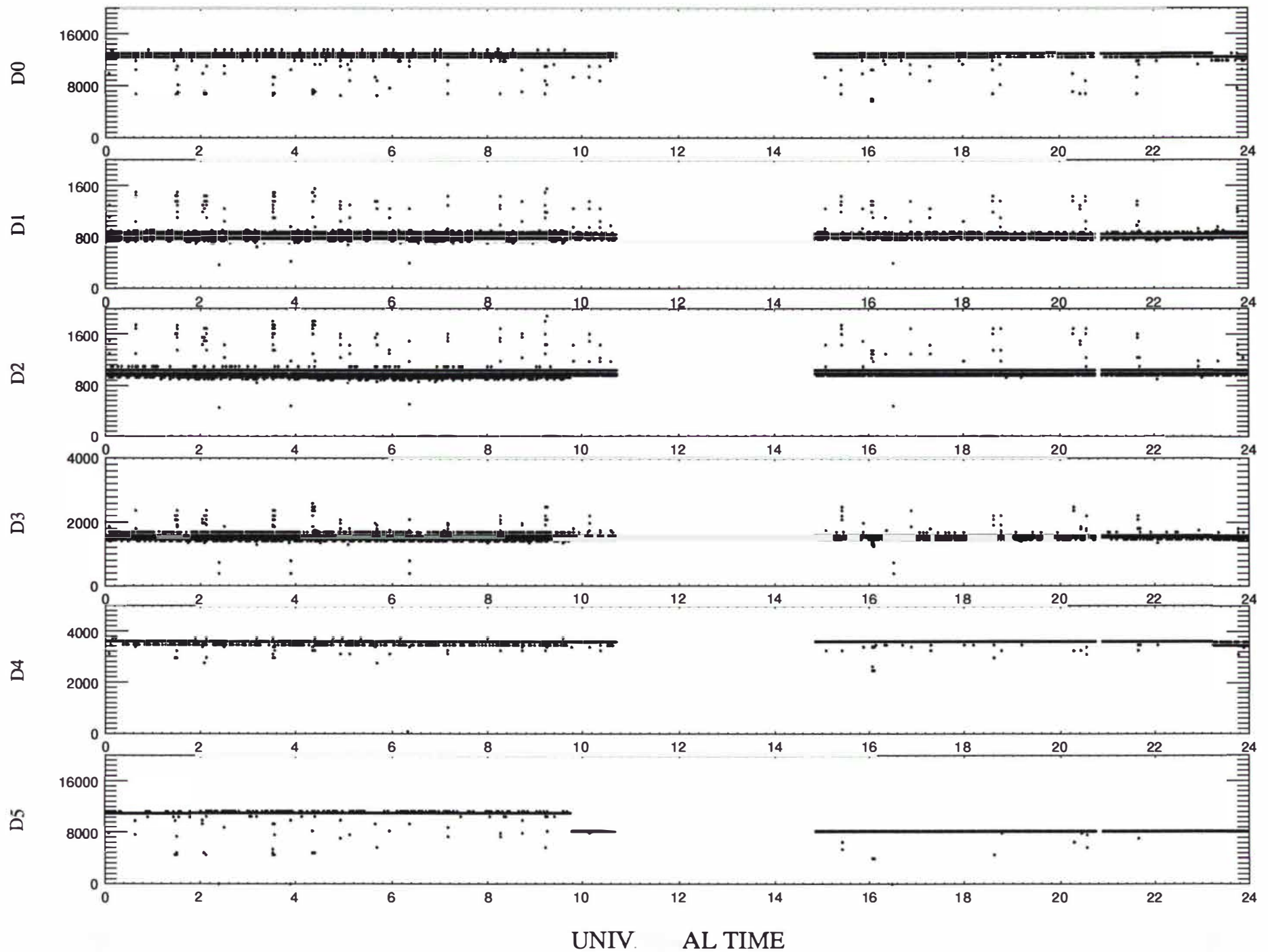
NO BURST (14)

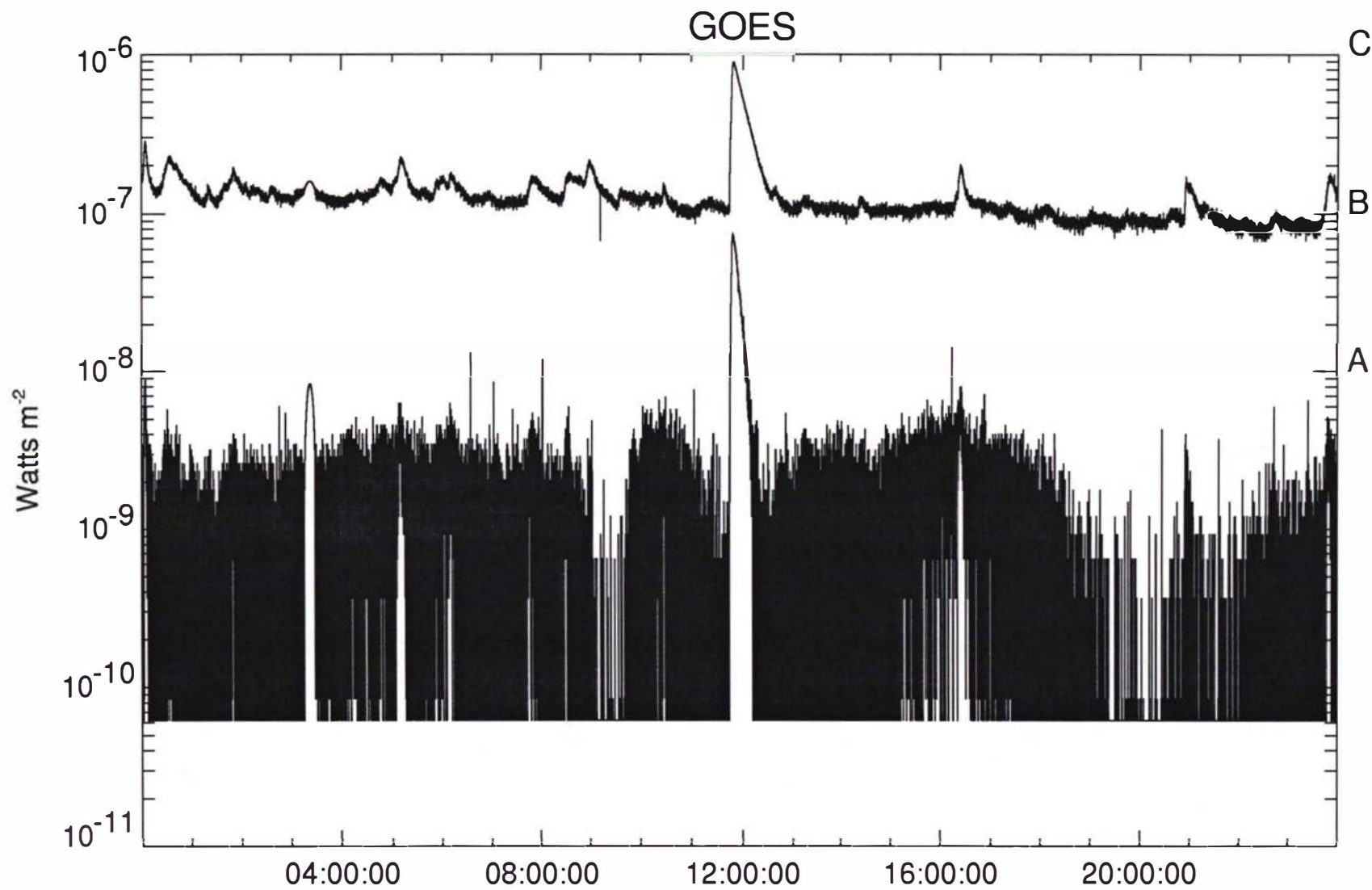


CALIBRATION DATA INCLUDED



UNIV AL TIME





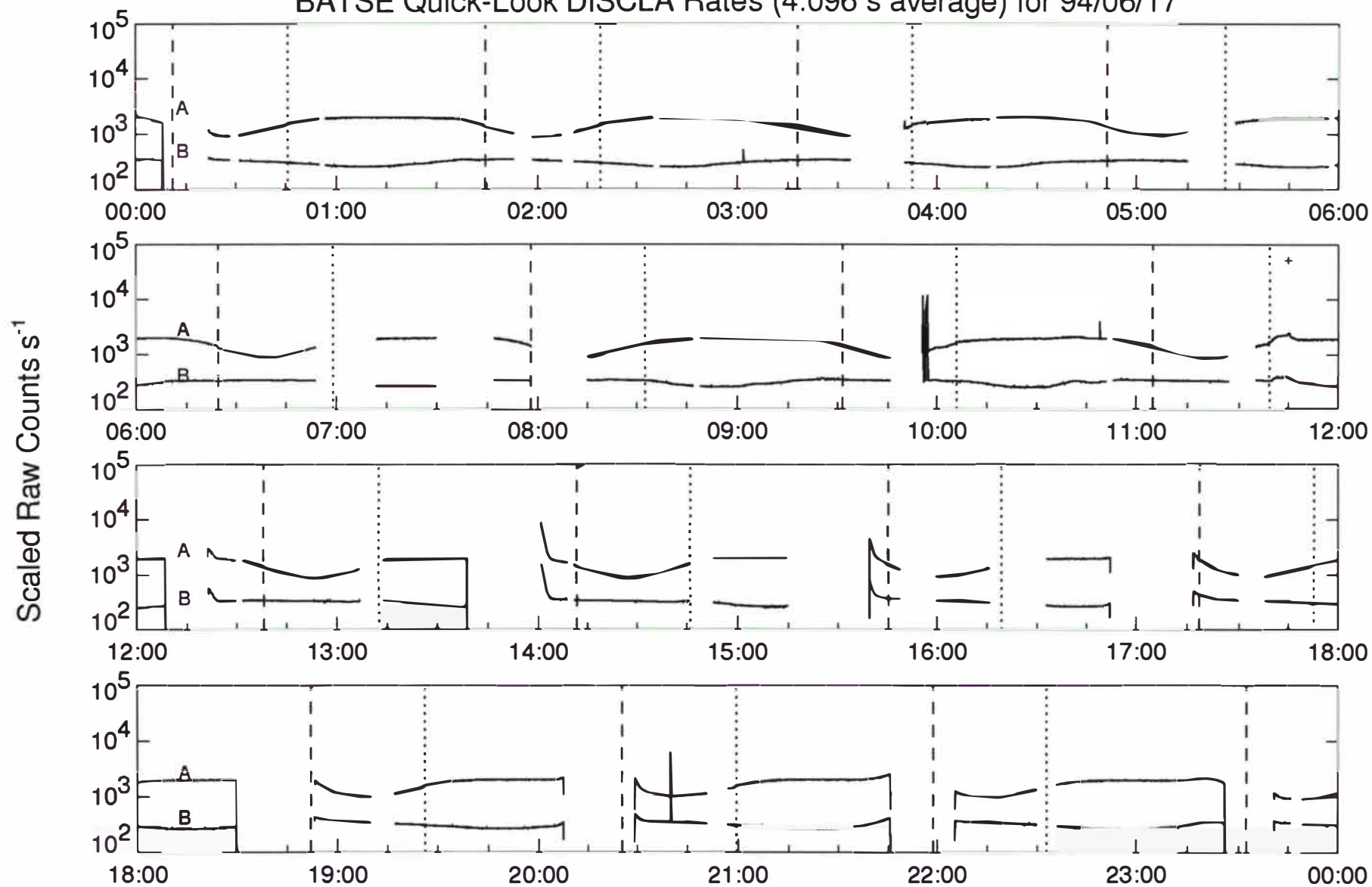
Data Start: 94/06/17, 0000:00

Plot created: 94/06/21, 1252

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/17

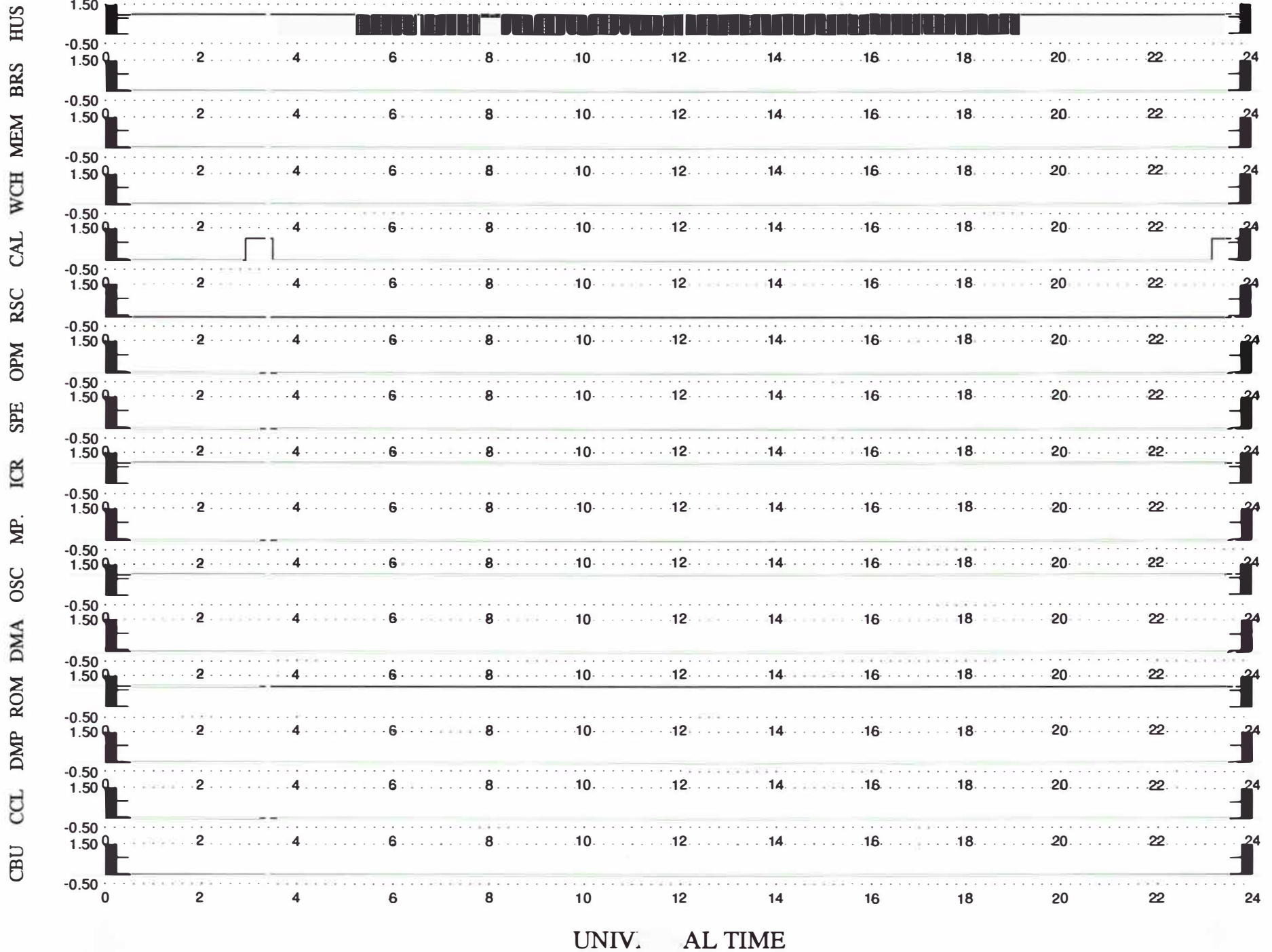


Current Time: 94/06/21, 1300 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

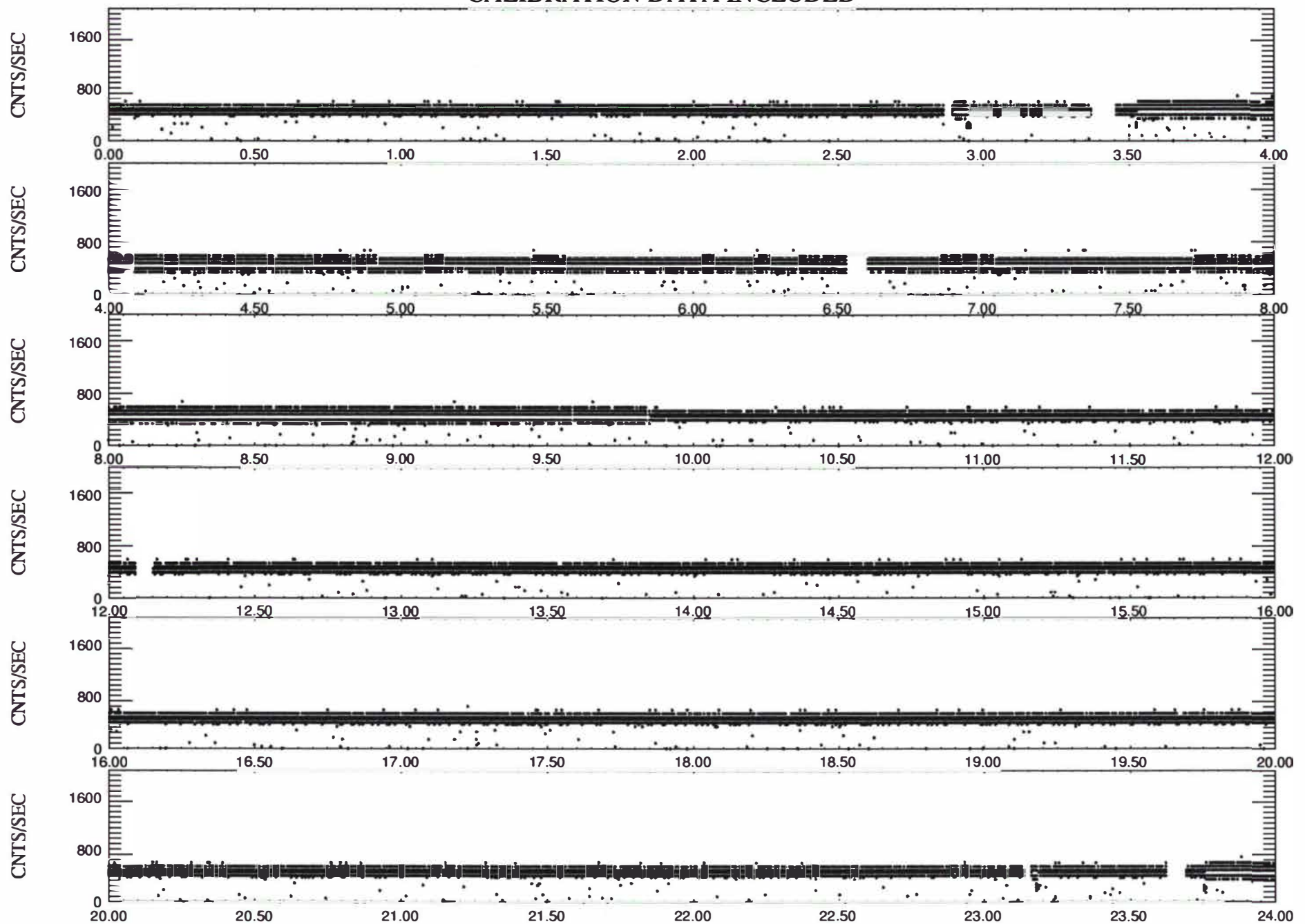
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

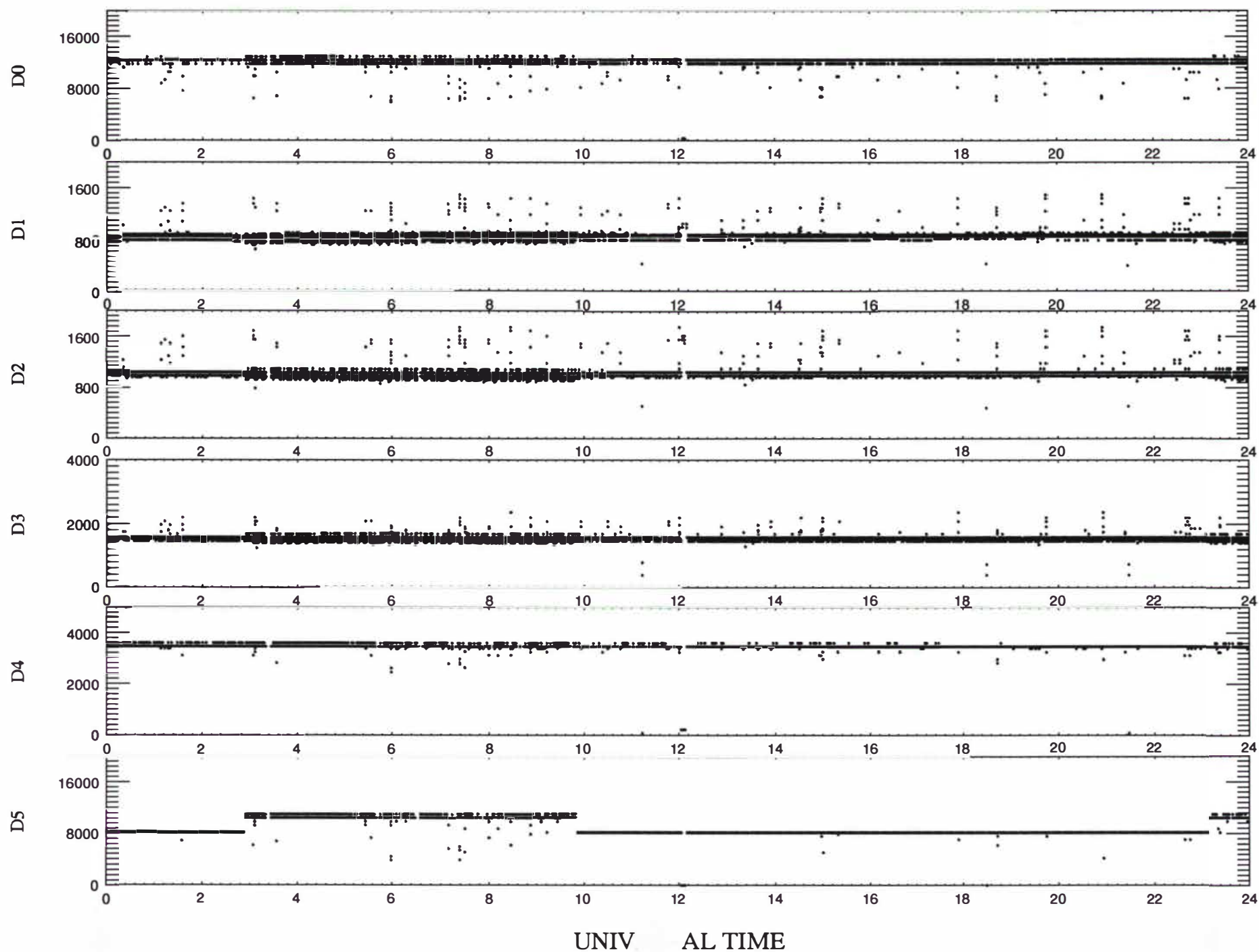
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From RICHARDSON@ssl.msfc.nasa.gov Sun Jun 19 08:22 PDT 1994
Date: Sun, 19 Jun 1994 10:23:42 -0500 (CDT)
From: RICHARDSON@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
LHEAVXKWOK@ssl.msfc.nasa.gov, 15733SCHAEFER@ssl.msfc.nasa.gov,
CASS09BAND@ssl.msfc.nasa.gov, CASS09GRUBER@ssl.msfc.nasa.gov,
CASS09MATTESON@ssl.msfc.nasa.gov, PACIESAS@ssl.msfc.nasa.gov,
HORACK@ssl.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 03033

TIME: TJD=9521 SECONDS=39453

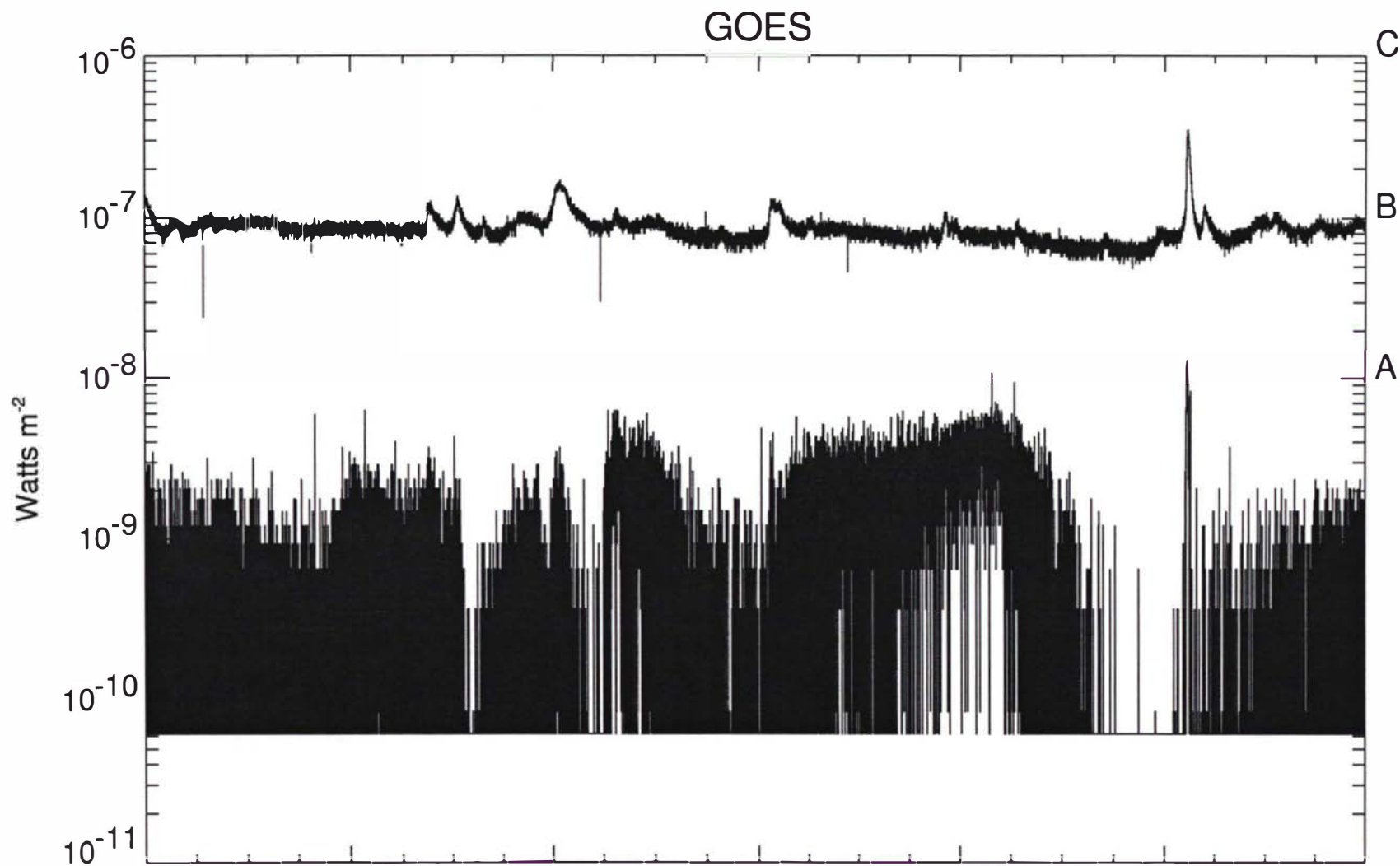
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT



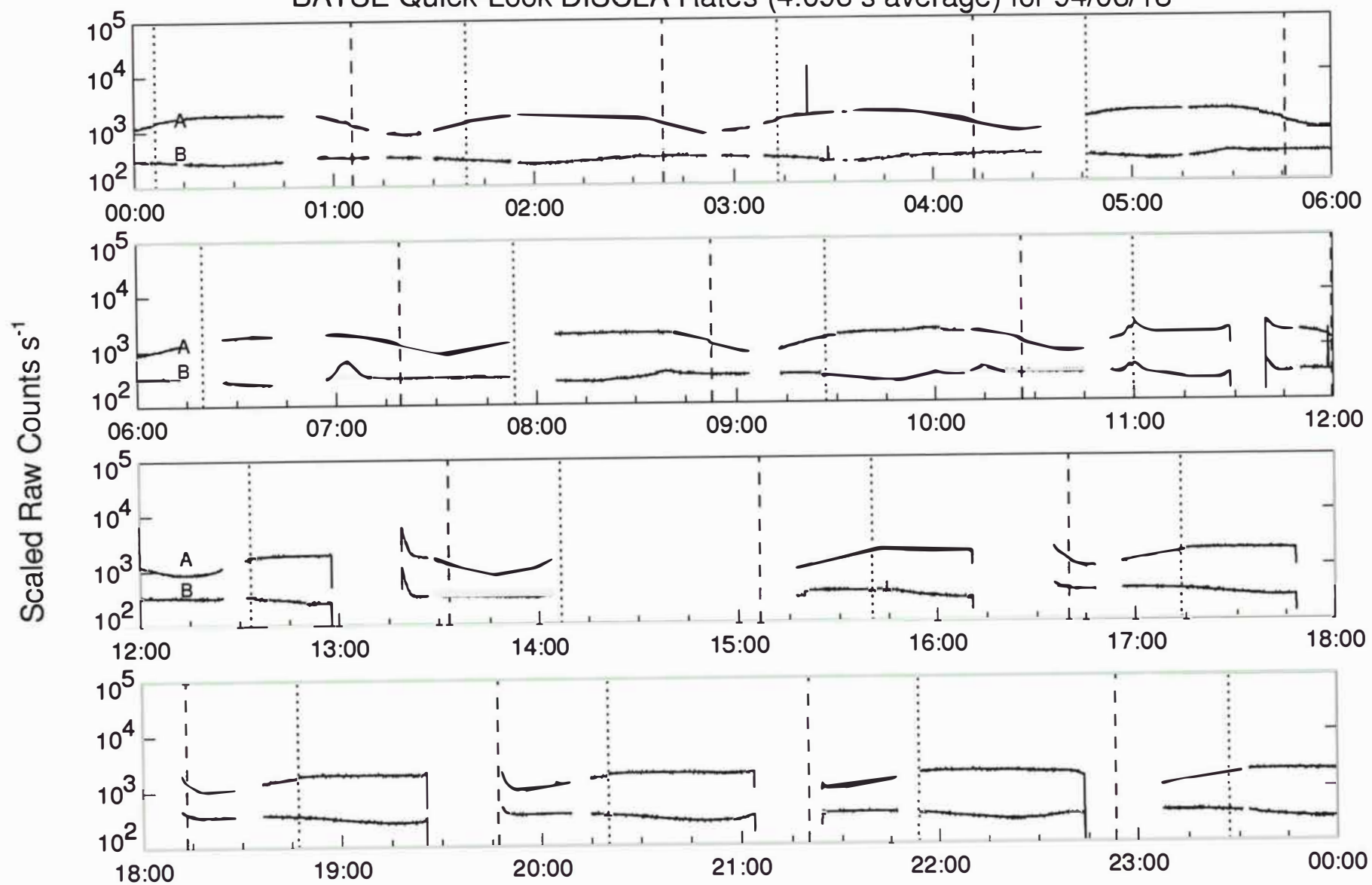
Data Start: 94/06/18, 0000:00

Plot created: 94/06/21, 1253

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/18

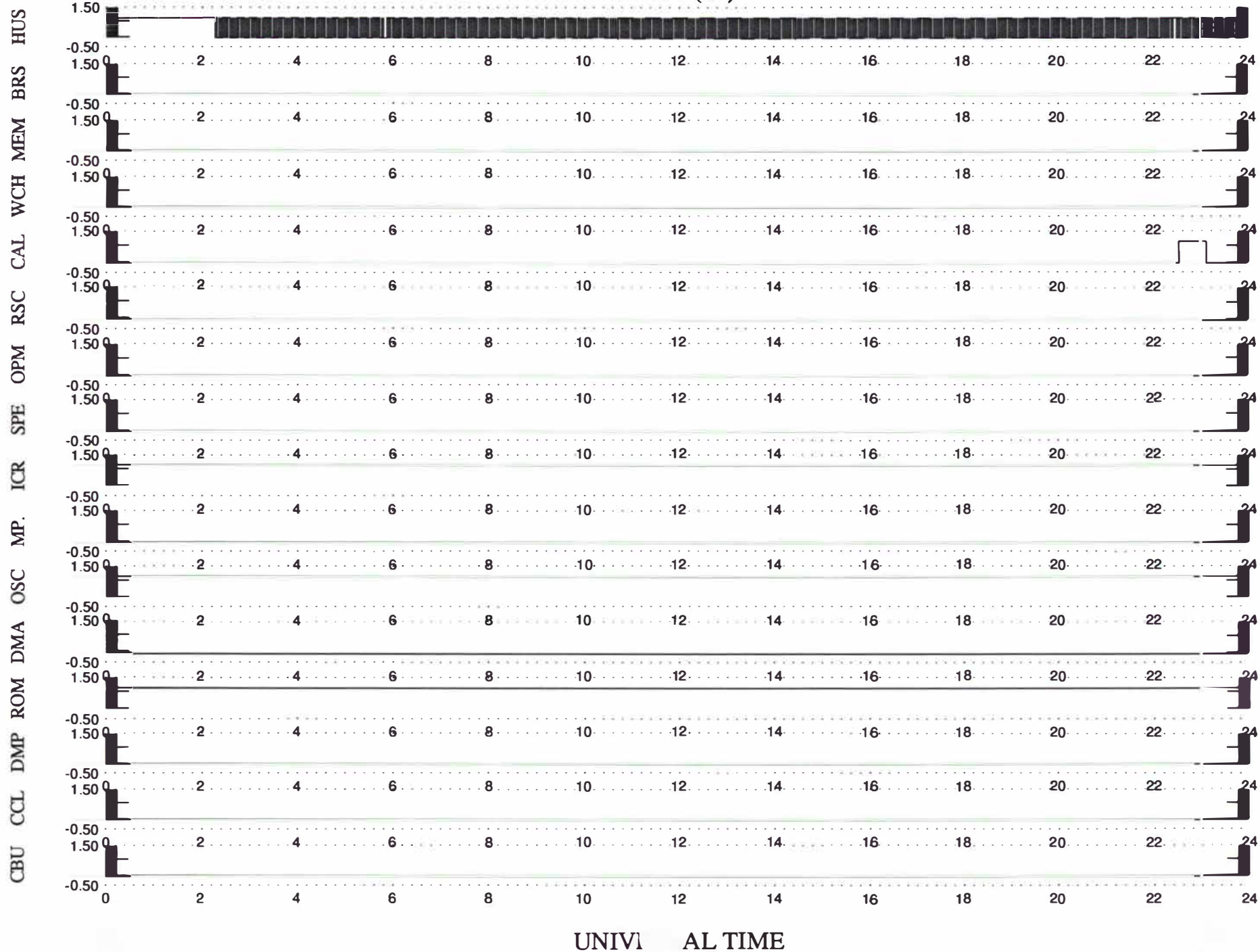


Current Time: 94/06/21, 1301 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

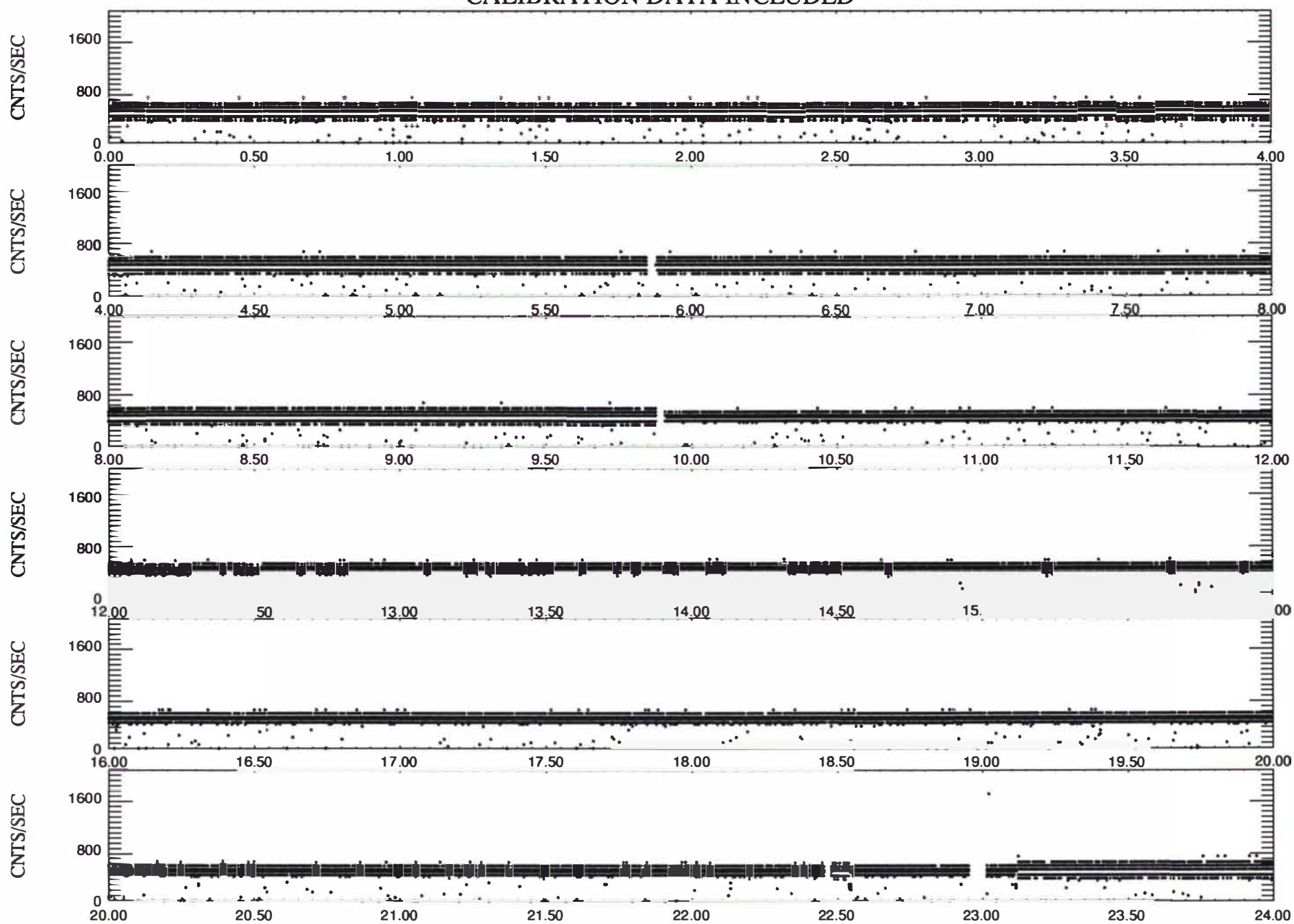
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

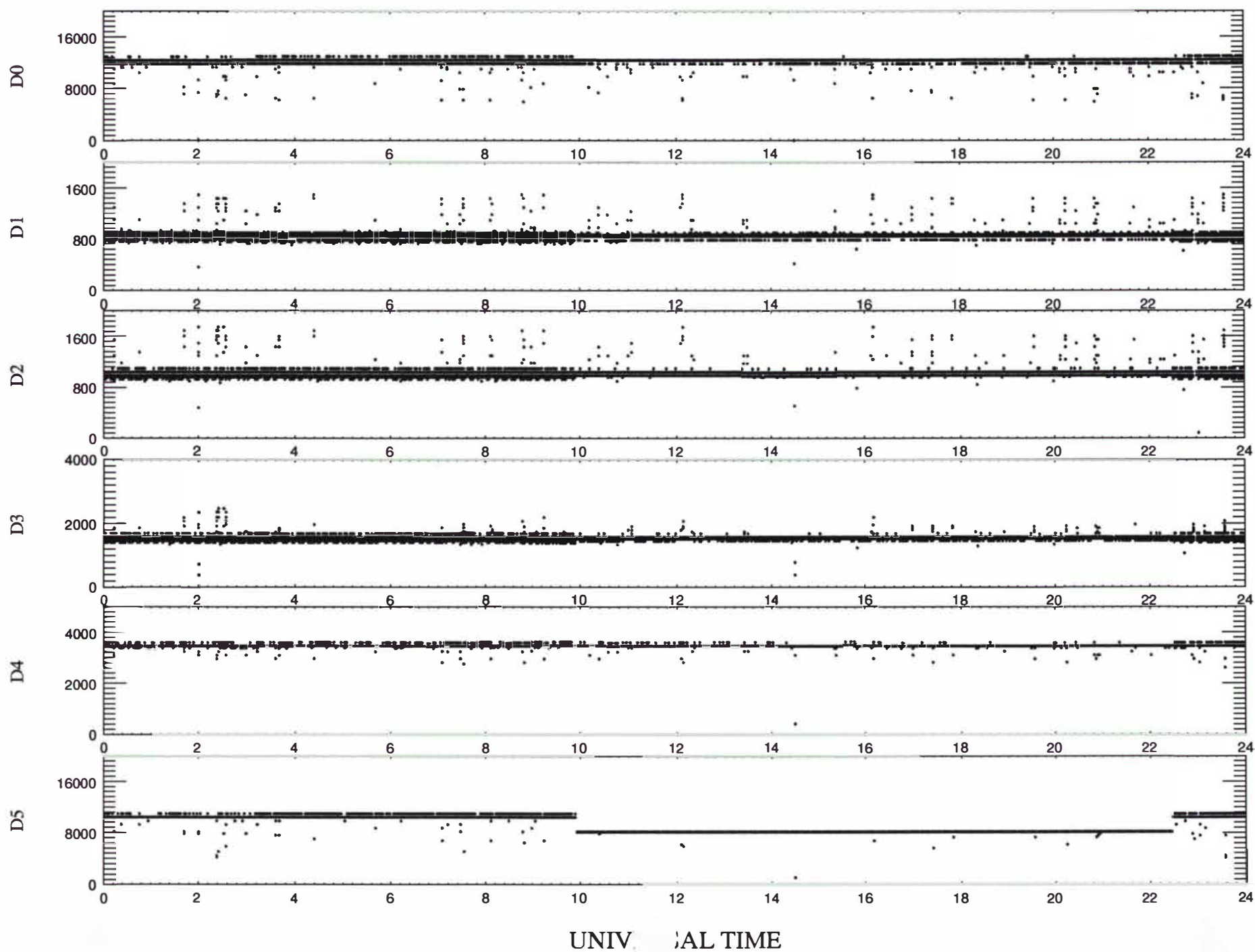
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From KOSHUT@ssl.msfc.nasa.gov Mon Jun 20 10:32 PDT 1994
Date: Mon, 20 Jun 1994 12:29:03 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
LHEAVXKWOK@ssl.msfc.nasa.gov, 15733SCHAEFER@ssl.msfc.nasa.gov,
CASS09BAND@ssl.msfc.nasa.gov, CASS09GRUBER@ssl.msfc.nasa.gov,
CASS09MATTESON@ssl.msfc.nasa.gov, PACIESAS@ssl.msfc.nasa.gov,
HORACK@ssl.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 3034

TIME: TJD=9522 SECONDS=38686

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON ENTRY INTO SAA.

From KOSHUT@ssl.msfc.nasa.gov Mon Jun 20 12:37 PDT 1994
Date: Mon, 20 Jun 1994 14:38:37 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3035
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3035
EVENT OF 1994 JUN 19 DAY OF YEAR=170
EVENT CROSSING TIME AT BATSE : 77480. S. OR 21:31:20.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 299.000 -33.000
BATSE PEAK COUNTING RATE: 20000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 19/ 6/ 94 IS:
RA= 123.543 DEC= -38.986 DIST= 3.039 AU
BATSE-ULYSSES DISTANCE = 454629768. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 72.11 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 465.87 SECS.
CROSSING TIME AT ULYSSES IS 77946. S. OR 21:39:05 +/- 307.63 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 19/ 6/ 94 IS:
RA= 46.973 DEC= 16.997 DIST= 2.071 AU
MARS-BATSE DISTANCE = 309836032. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 66.00 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 420.32 SECS.
CROSSING TIME AT MARS IS 77900. S. OR 21:38:20 +/- 170.31 SECONDS

RI

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3035	940619	9522	77480	20000	299	-33

BATSE BURST TRIGGER

NO.: 3035

TIME: TJD=9522 SECONDS=77480

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=28.8 AZIMUTH=248.7 ERROR= DEGREES

COMMENTS:

BURST OF ~ 150 SECONDS DURATION, WITH EMISSION OBSERVED ABOVE 300 KEV.
TIME HISTORY CONSISTS OF SEVERAL SPIKES ON TOP OF A SMOOTH UNDERLYING
ENVELOPE. THE SPIKES ALSO SHOW SIGNIFICANT SUBSTRUCTURE. THE PEAK RATE
(~20000 C/S) IS OBSERVED AT ~ TRIGGER + 67 SECONDS.

Helio corr removed

Date: Jan 29 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☐ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☐ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☒ Is the order of the data in CORREL such that a vernier is done on the data with the best time resolution?

2. BATSE Data

- ☐ 2.042 s subtracted for bursts prior to June 25 1992 and DISCSC programs prior to Version 2.16 (August 28 1992)? *N/A*
- ☒ BATSE ephemeris for T_0 ?
- ☒ Error circle position and radius from public catalog used?
- ☐ If MER data were used, is a 30 ms systematic error included? *N/A*

3. PVO Data

- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS database updated?

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

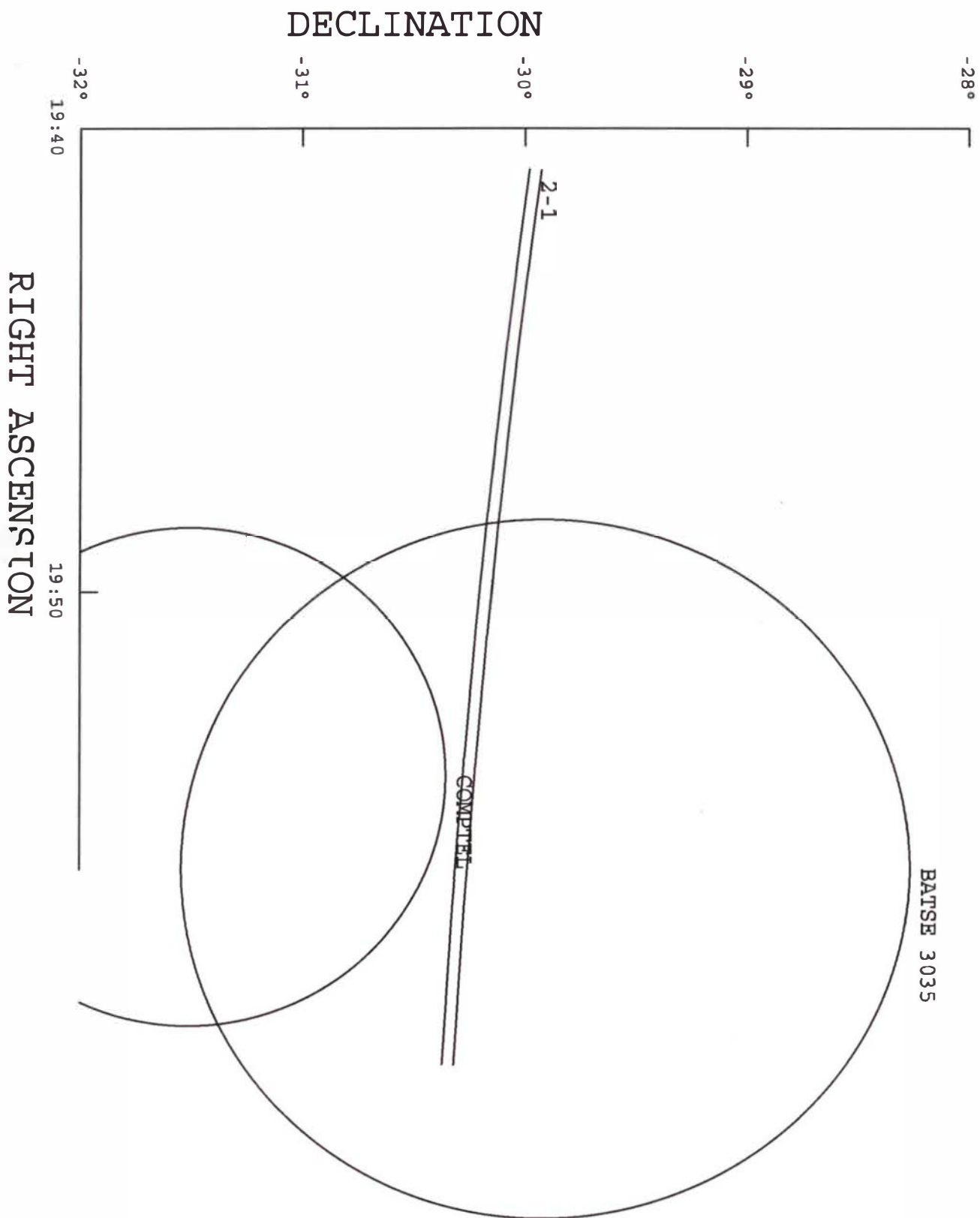
G=GALACTIC EQUATOR

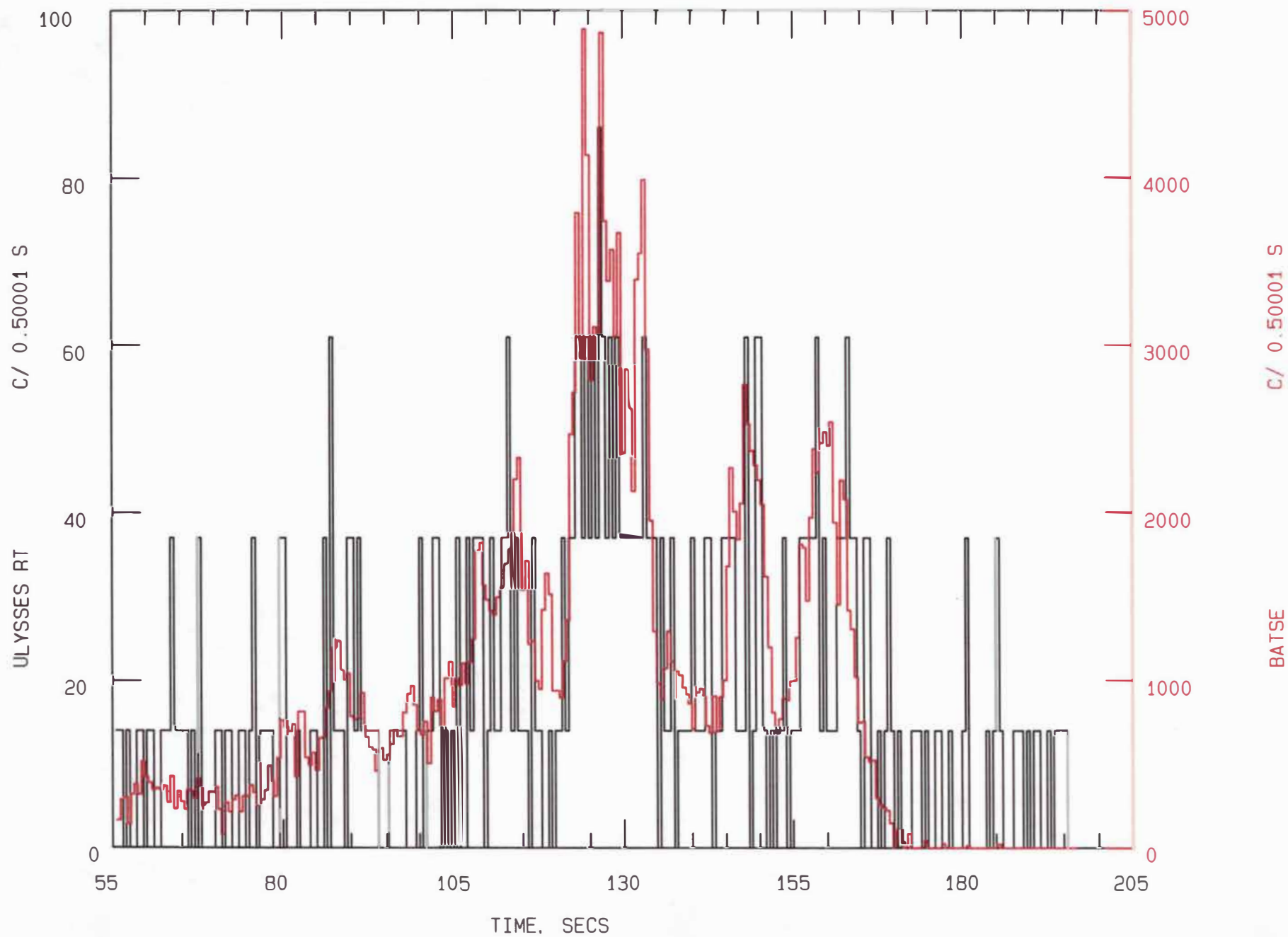
1 ULYSSES

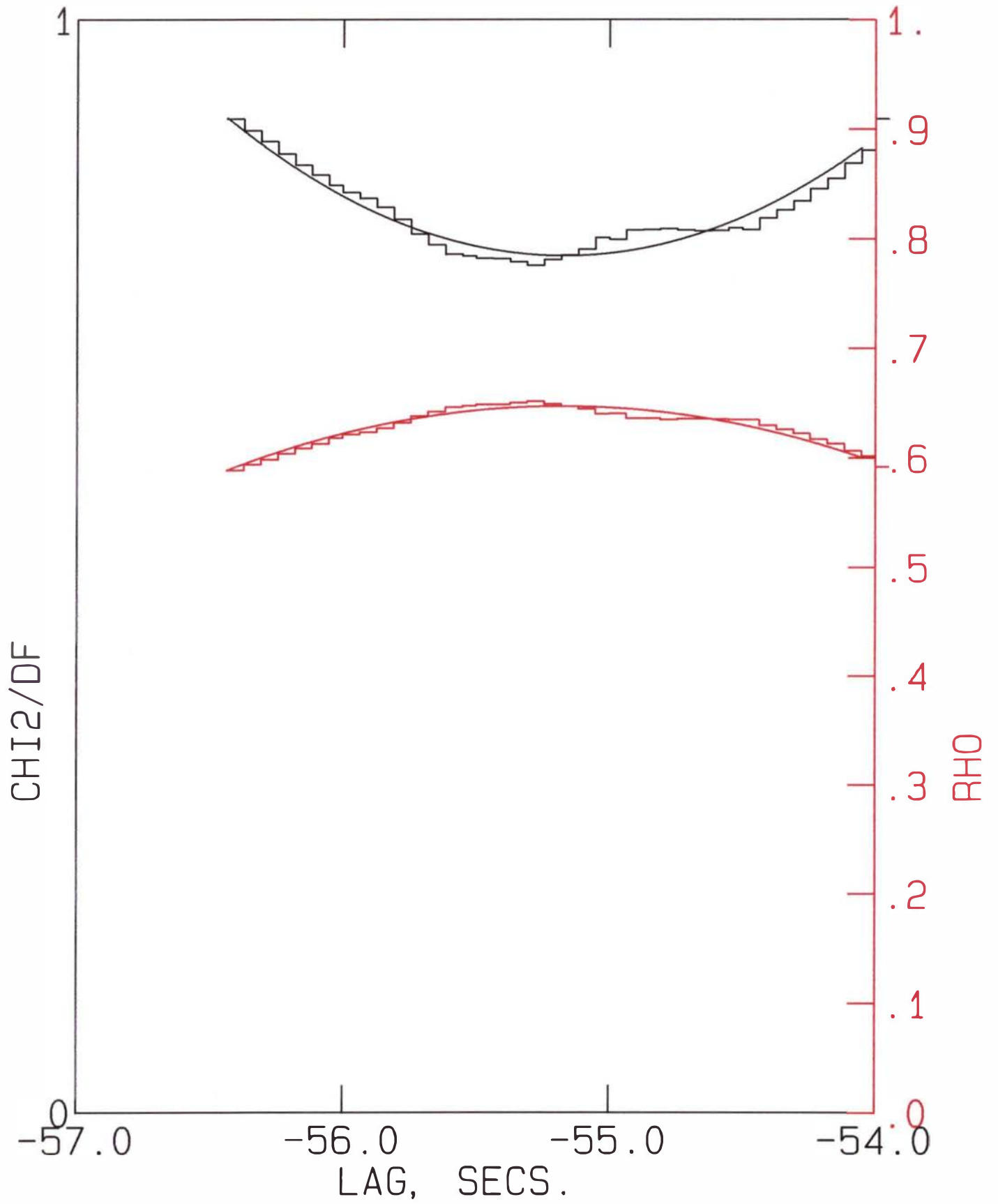
2 BATSE

EVENT OF JUN 19, 1994 21:39

29 / 1/98





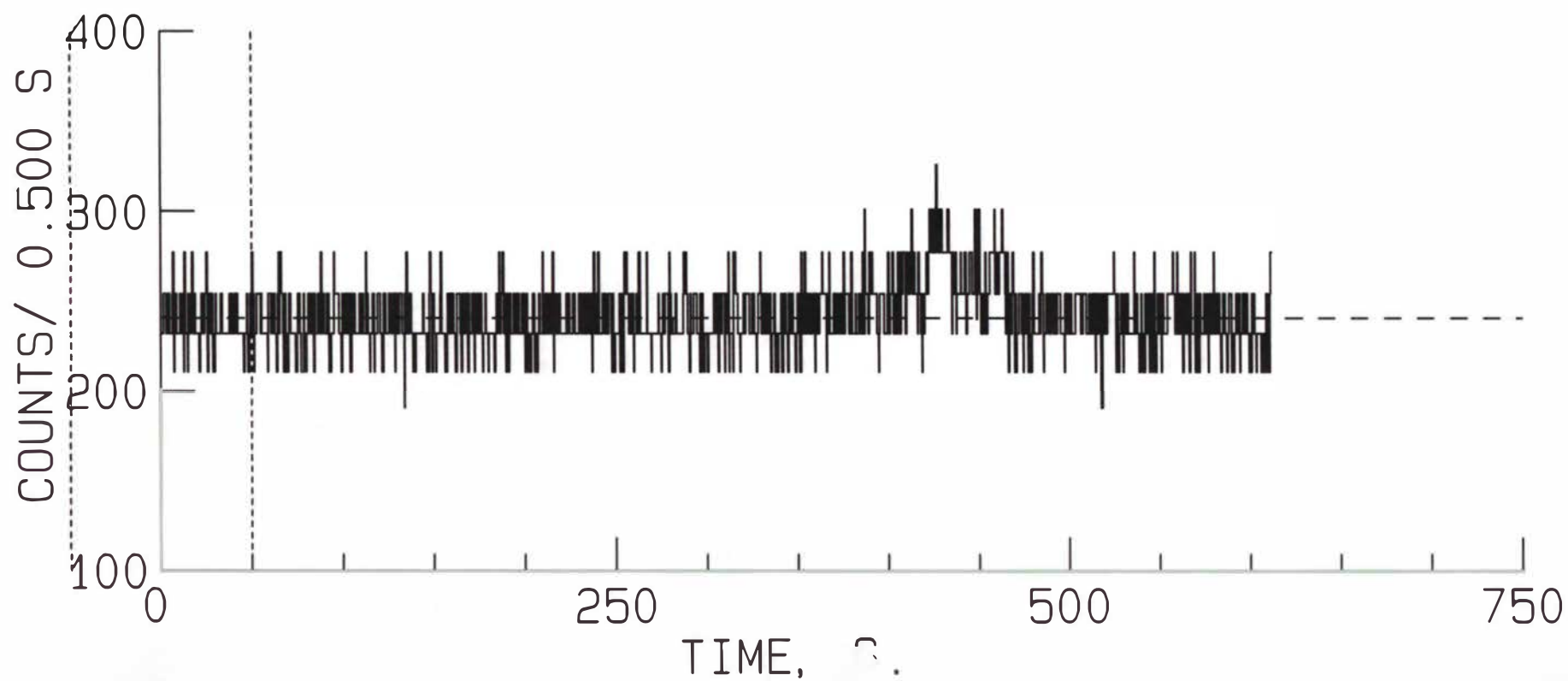


ULYSSES RT

29 / 1 / 98

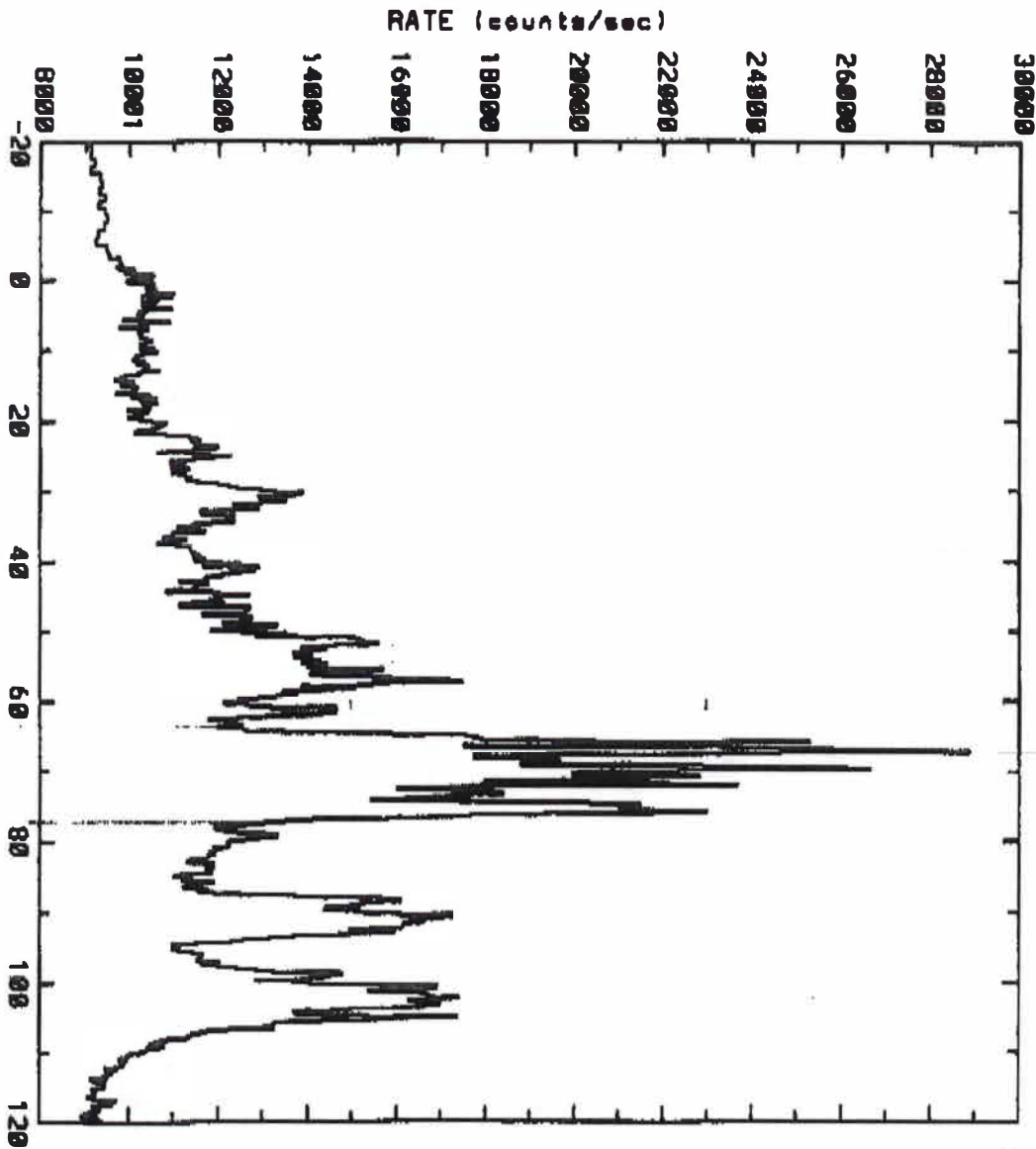
19 / 6 / 94 77652.451 s

22- 148 keV



Trigger No. 3035

67.25 after trigger



28-JUN-1994 13:17:34

Created by MOPS 80
(Burst Display)
Version 2.20

Trigger = 3035

Trigger Time:

9322 / 77400.002

Burst Data Type:

DISCSC

Deadtime

Corrected, N

Background Data

Type: PREB + DISCUA

Minimum (nteg. Time:

8.256 seconds)

Dataclerk (7.8).

01000100

Discriminator:

(1.4)

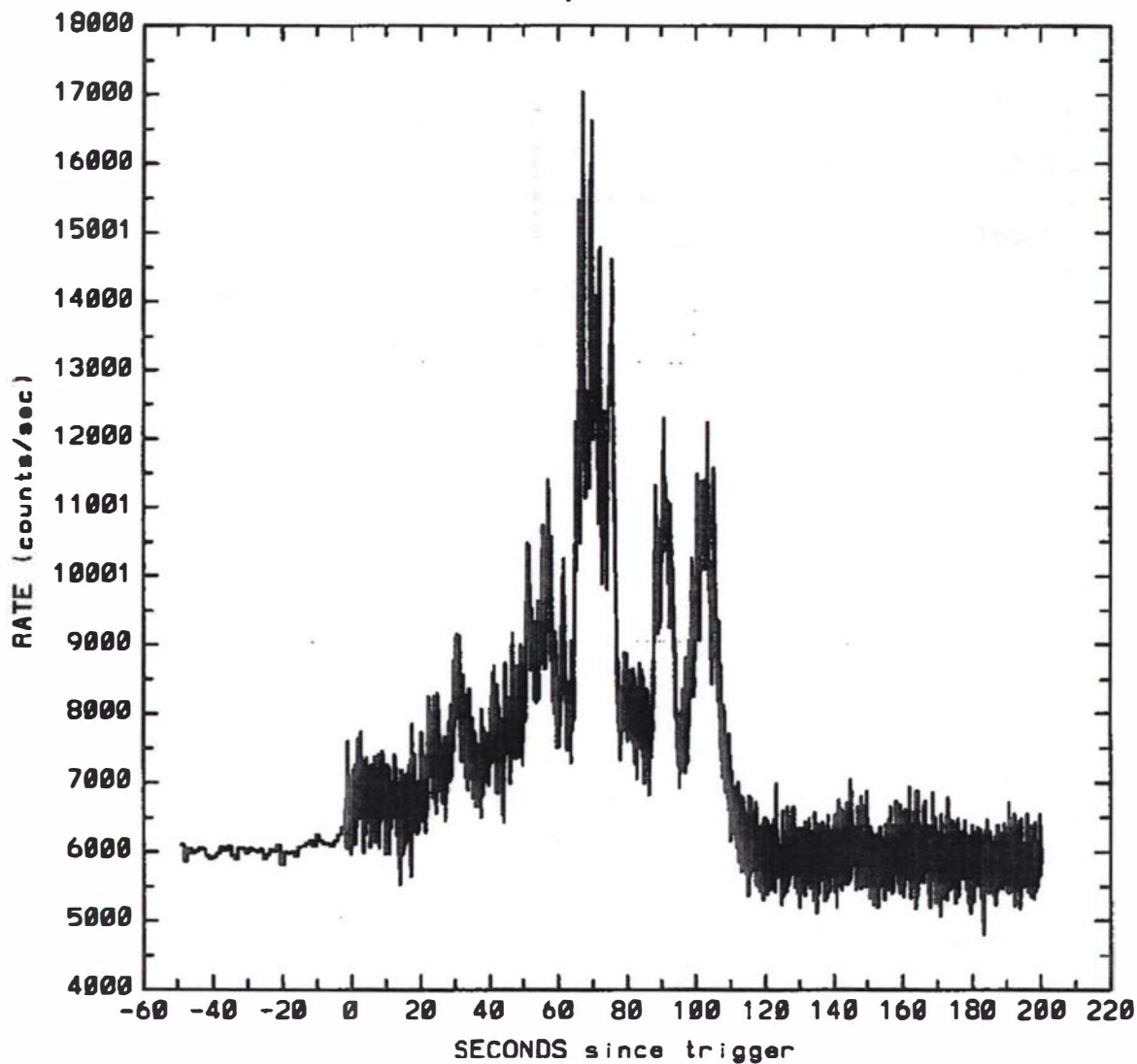
Quality Mask:

001571

57

110

Data for K. Hurley



24-JUN-1994 16.25.24

Created by MDPS 8D
(Burst Display)
Version 2.28

Trigger = . 3835

Trigger Time:
9522 / 77480.602Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: PREB + DISCLAMinimum Integ. Time:
8.864 secondsDetectors [7..0].
01000100Discriminators:
(1, 2)Quality Mask:
801SP1

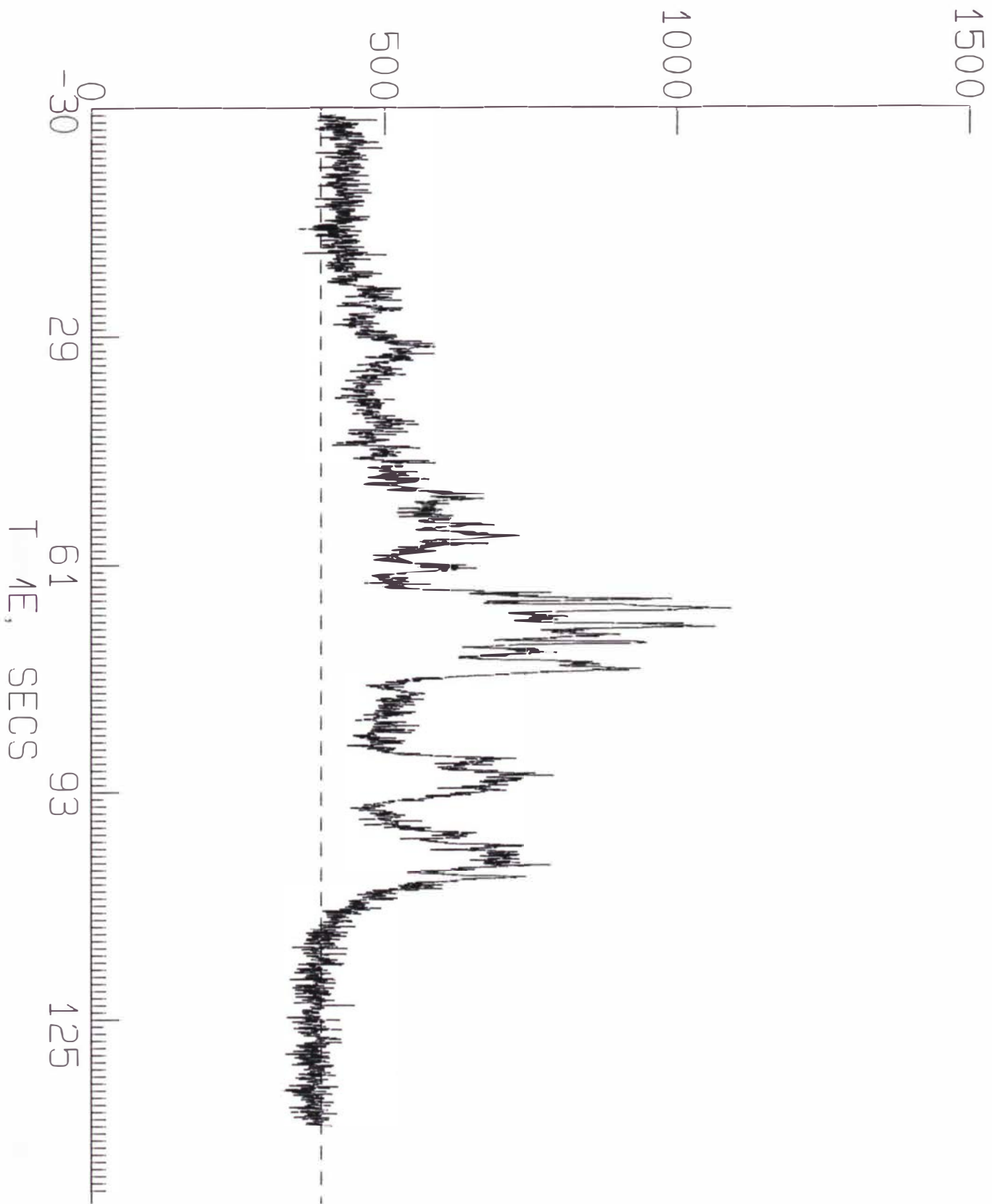
BATSE

19/06/94

77480.602

25- 100 keV

COUNTS/ .064 S



Ulyssa + Mark Kppen

From khurley@space6.ssl.berkeley.edu Sat Jun 25 12:45 PDT 1994
Date: Sat, 25 Jun 94 12:35:53
From: khurley@space6.ssl.berkeley.edu
Content-Type: text
Content-Length: 2138

For technical reasons, I wasn't able to access my Ulysses data today, so this is still pretty much done by eye. Feel free to use it in the updated COMPTel announcement if you want, or we can wait until I get back from travel in a week and I can re-do it.

SATELLITE POSITIONAL INFORMATION AND BURST ARRIVAL TIME

NO	NAME	DIST. FROM EARTH, KM.	ALPHA, DEG.	DELTA, DEG.
1	ULYSSES	454632815.0000+/-	500.0000000 123.99660+/-	.00500 -39.14060+/-
2	BATSE	6700.0000+/-	100.0000000 .00000+/-	180.00000 .00000+/-

JULIAN DAY NUMBER IS 34503.40 DAYS SINCE 1900 JAN 0.5

18.00 BY 15.00 CM MAP FOR RA= 290.00 TO 310.00, DEC= -40.00 TO -26.00

INTERSATELLITE CORRELATIONS

SEPARATION BETWEEN SATELLITES 1 AND 2 IS 1516.50132 LIGHT SECONDS. TIME DELAY IS -
CORRELATION BETWEEN SATELLITE 1(ULYSSES) AND SATELLITE 2(BATSE)
GIVES A CIRCLE OF RADIUS 69.374502 DEGREES CENTERED AT ALPHA=303.997503 DEGREES, DELTA= 39.1
ERROR IN DETERMINATION OF RADIUS IS .211910 DEGREES OR 25.429214 ' TOTAL WIDTH
(.009930 DUE TO POSITION, .201980 DEGREES DUE TO TIMING)
INTERSATELLITE TIMING ERROR IS 5000000 MICROSECONDS

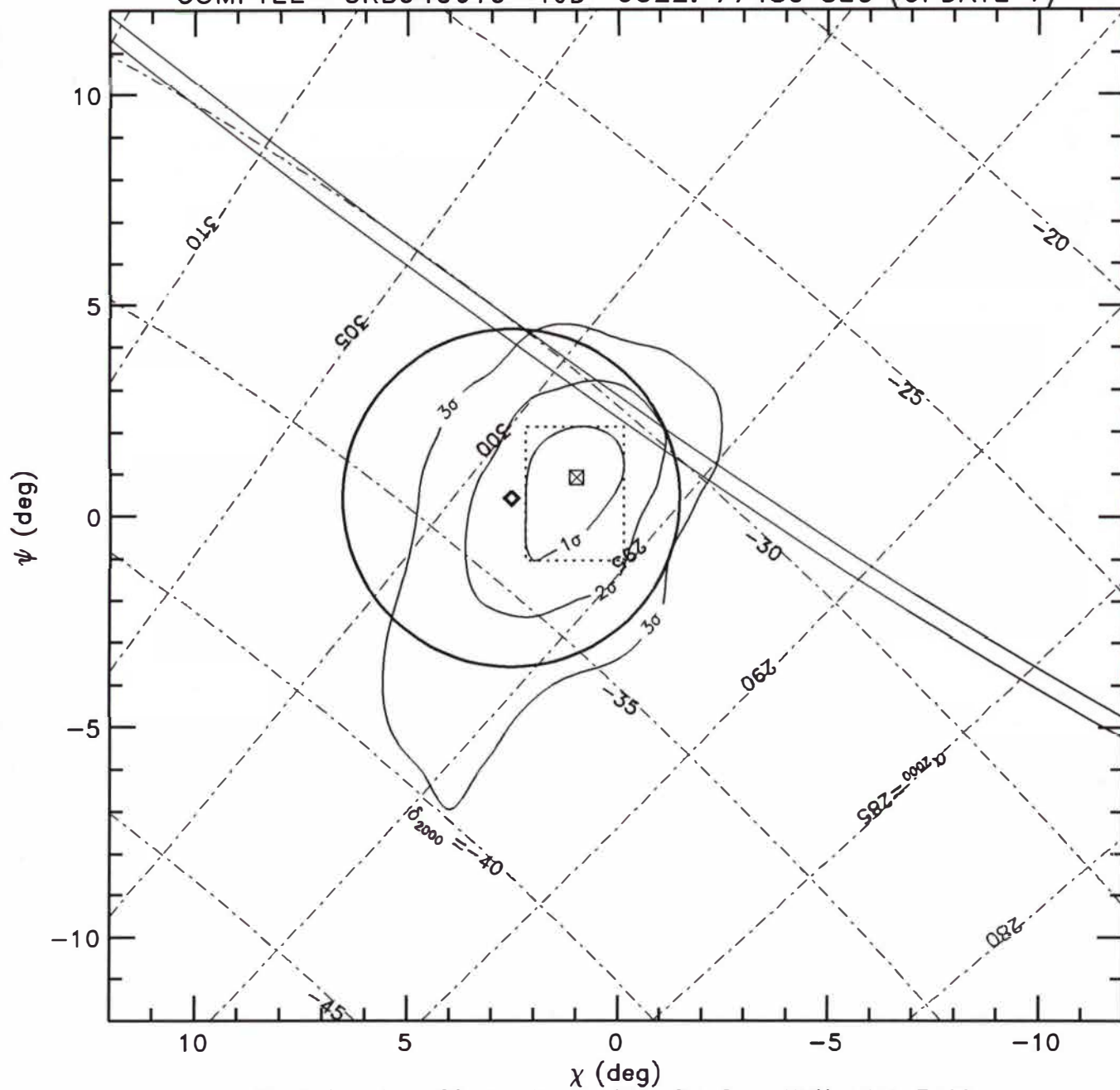
BASED ON THIS ANNULUS, THE EARTH CROSSING TIME IS 77547.803+/- .019 SECS.

AT SATELLITE 1, EARTH SUBTENDS .000802 DEGREES HALF ANGLE CENTERED AT ALPHA=303.996600 DE
AT SATELLITE 2, EARTH SUBTENDS 71.859982 DEGREES HALF ANGLE CENTERED AT ALPHA=180.000000 DE

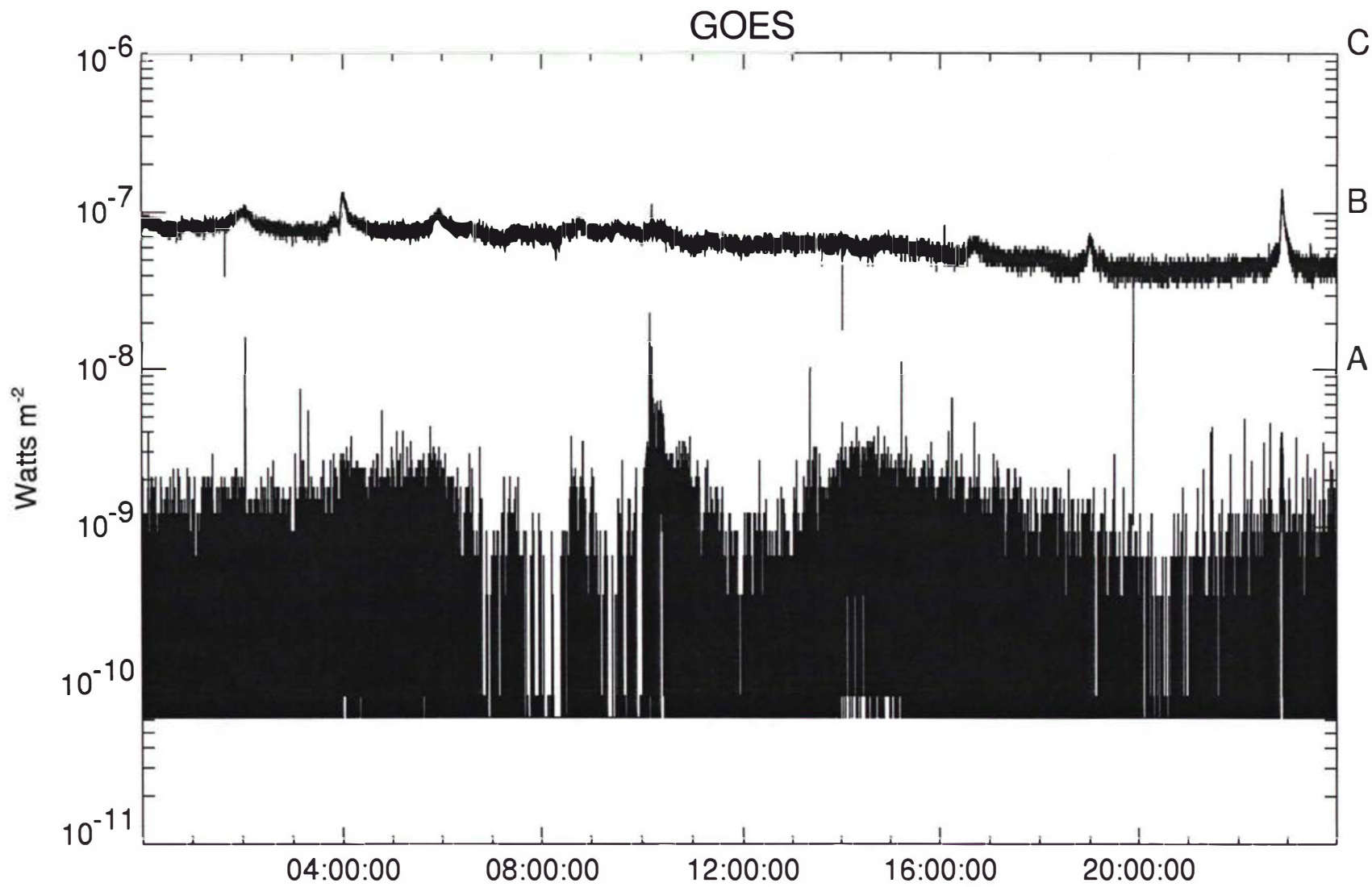
CIRCLE CENTERED AT ALPHA=299.000 DEG, DELTA=-33.000 DEG, RADIUS= 7.000 DEG WILL BE TRACED WITH
MINIMUM DISTANCE BETWEEN THE POINT OR CENTER OF THE CIRCLE AND THE TRIANGULATION ANNULUS IS

SUN IS AT ALPHA= 88.219891 DEGREES, DELTA= 23.429908 DEGREES
TODAY IS 25/ 6/94

COMPTTEL- GRB940619 TJD 9522: 77480 SEC (UPDATE 1)



[CHI, PSI] [α_{2000} , δ_{2000}]	[CHI, PSI] [α_{2000} , δ_{2000}]
◆ [2.54, 0.42] [298.70, -33.29] BATSE	⊠ [1.00, 0.90] [297.66, -31.93] Max Lik Position
	1 [-0.13, -1.05] [295.15, -32.67] 1σ Error Box Coords
	2 [-0.13, 2.11] [297.57, -30.28]
	3 [2.21, 2.11] [299.67, -31.77]
	4 [2.21, -1.05] [297.27, -34.20]



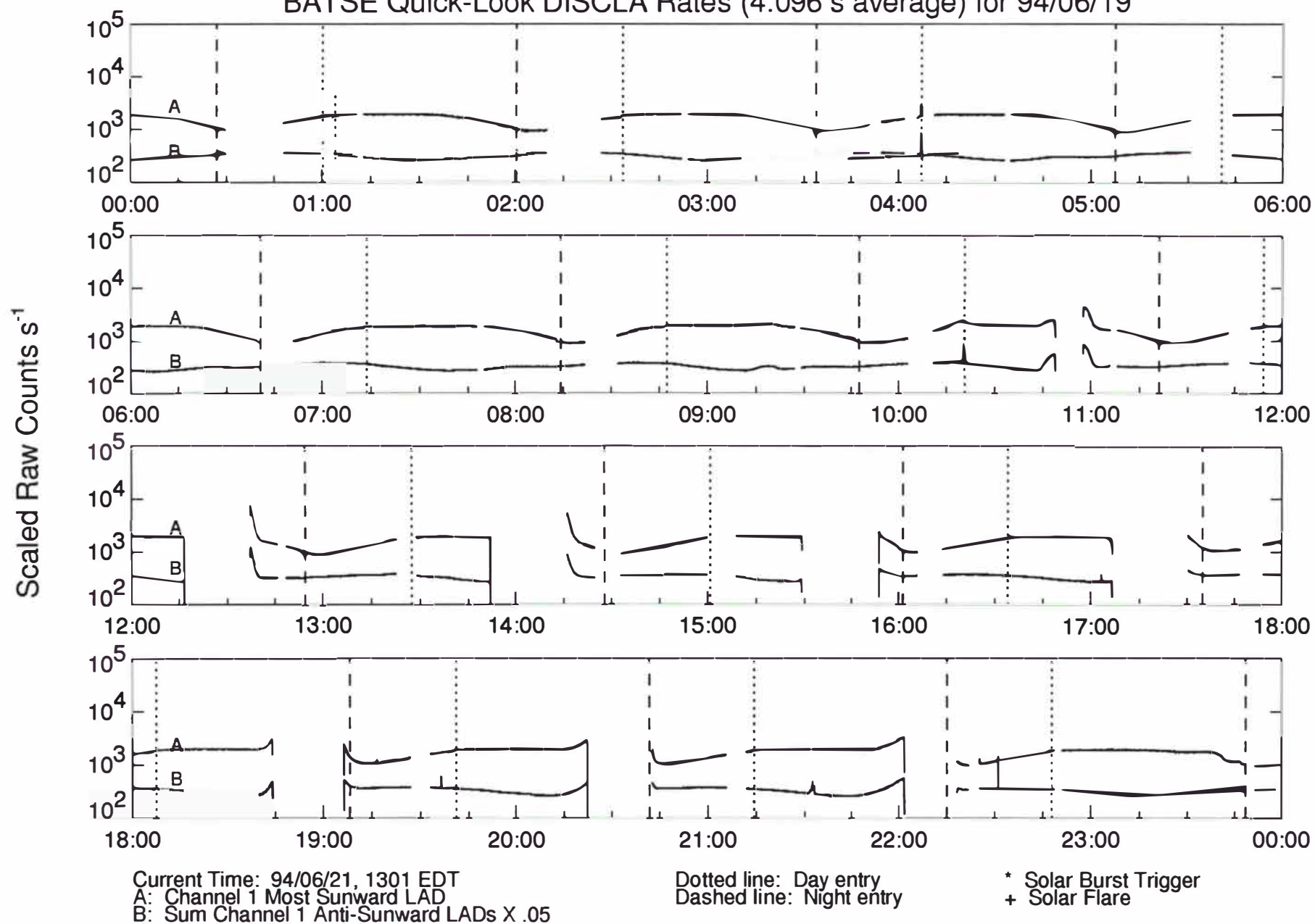
Data Start: 94/06/19, 0000:00

Plot created: 94/06/21, 1255

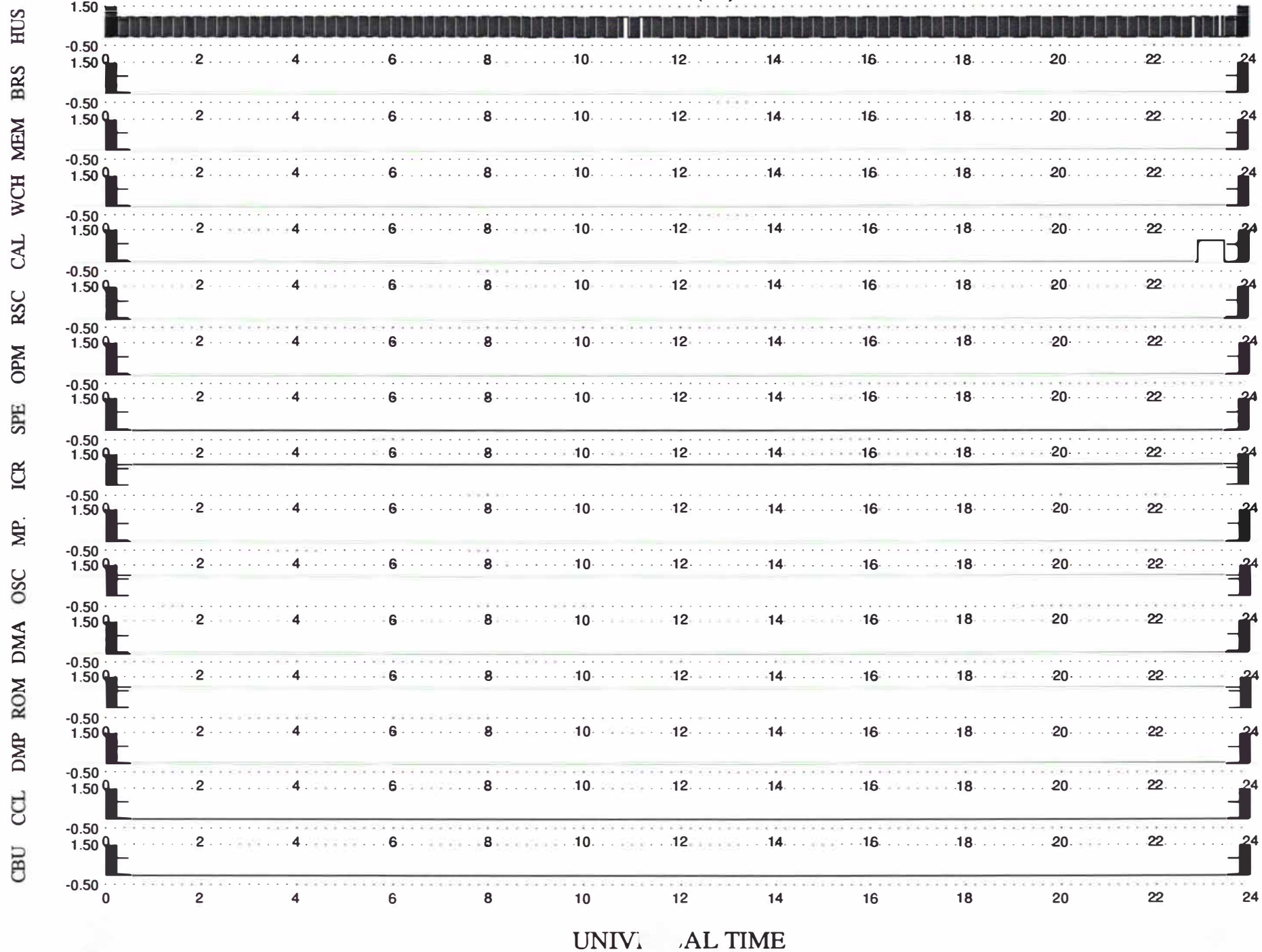
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

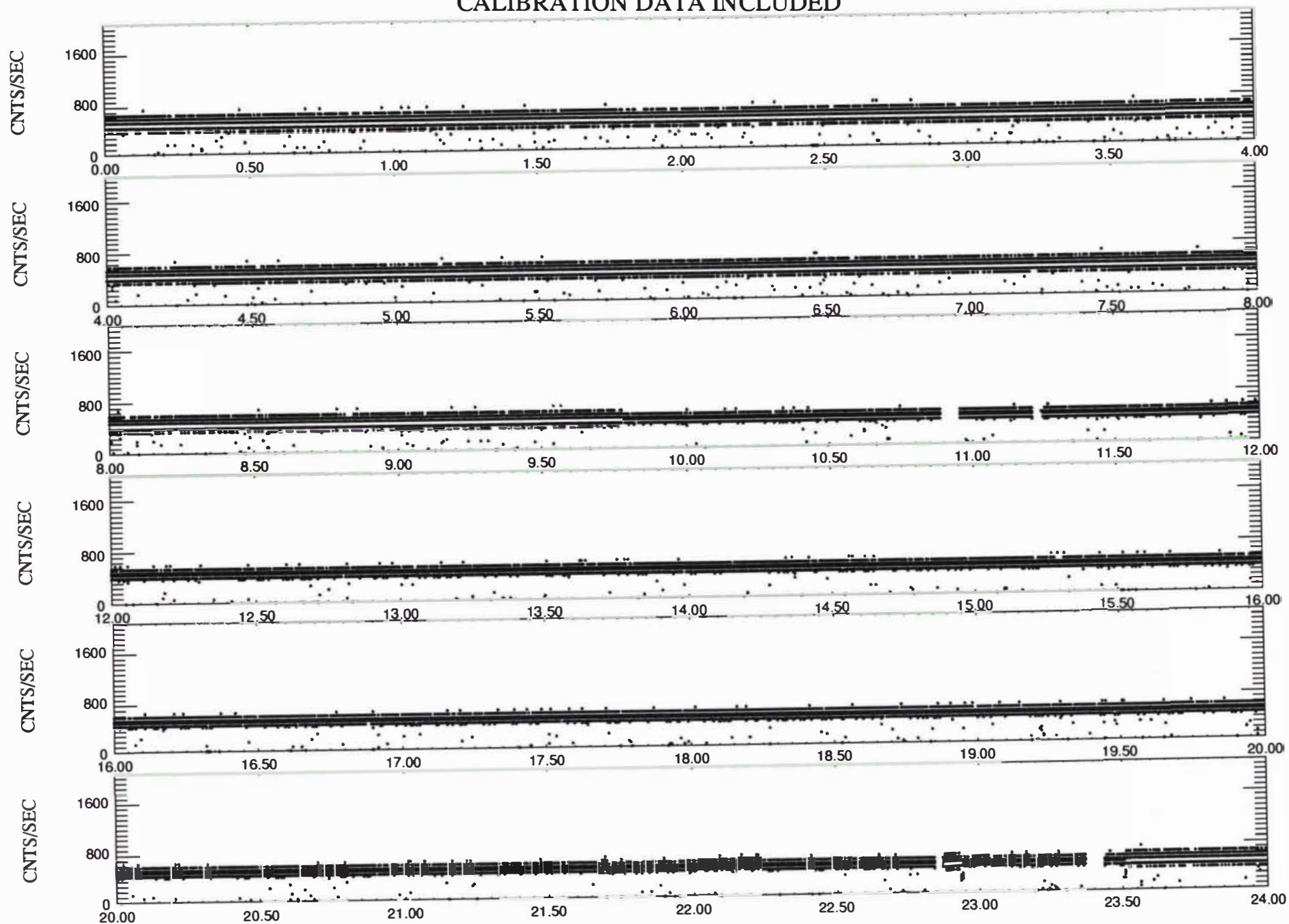
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/19



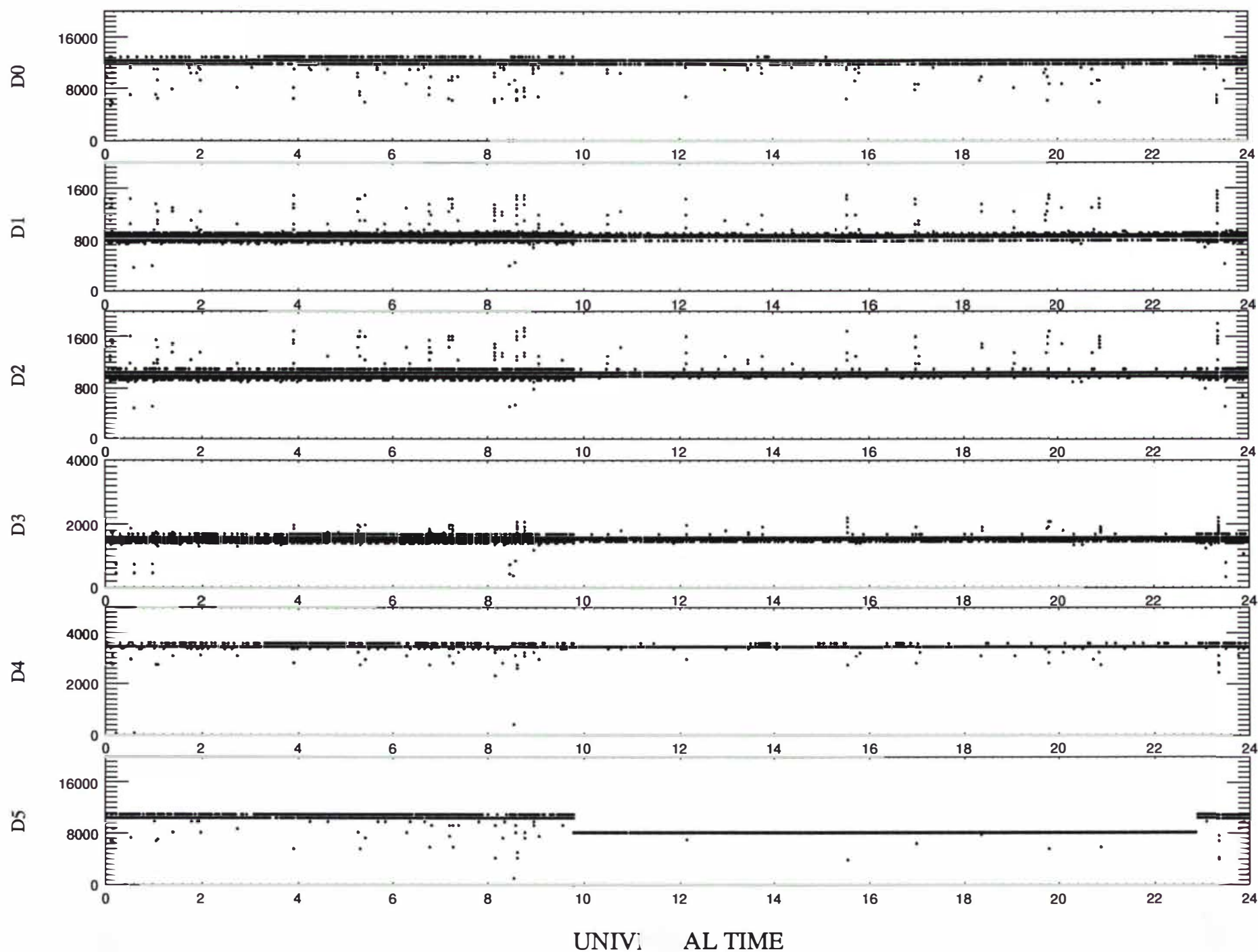
NO BURST (14)

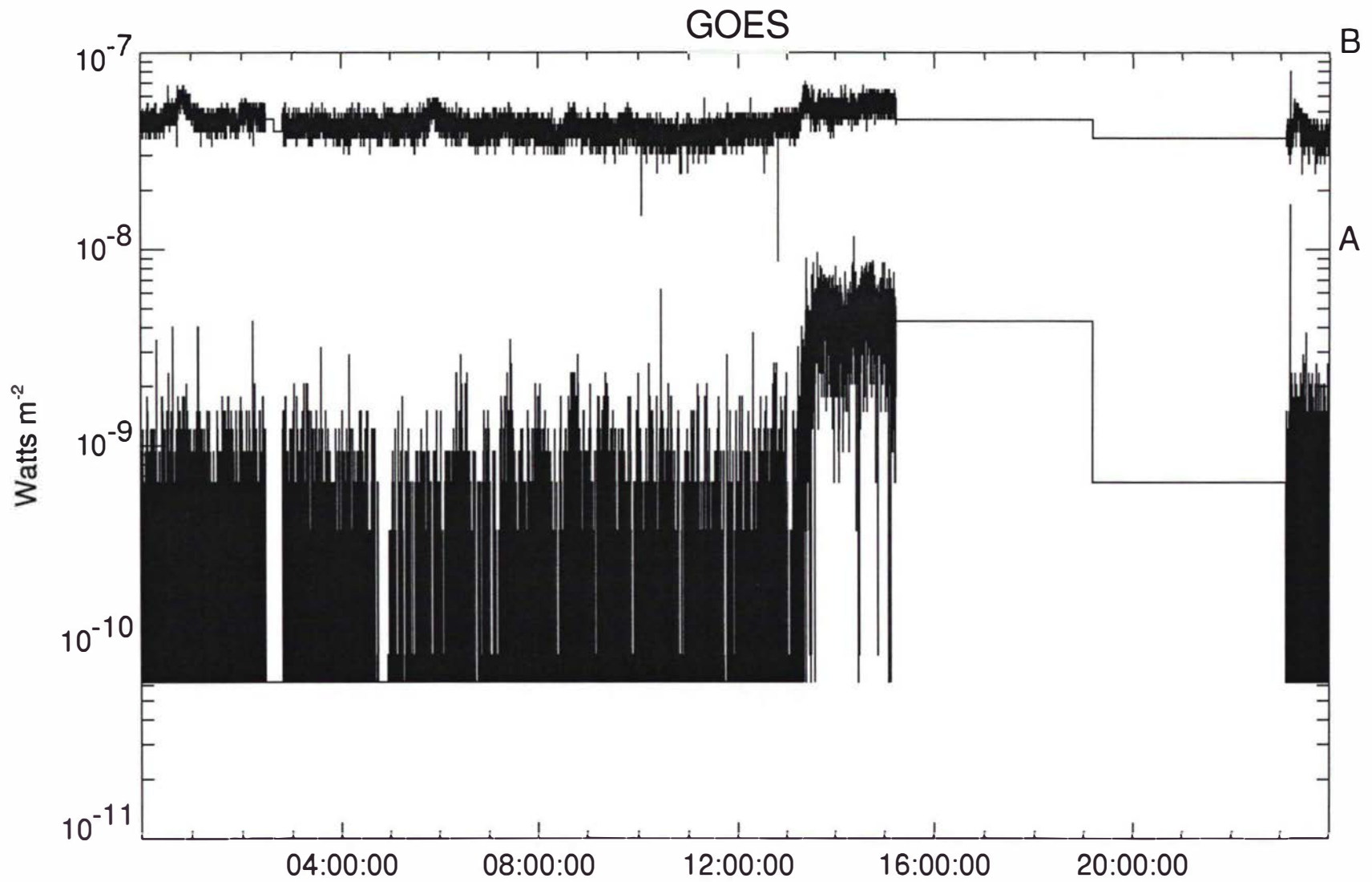


CALIBRATION DATA INCLUDED



UNIV AL TIME





Data Start: 94/06/20, 0000:00

Plot created: 94/06/21, 1256

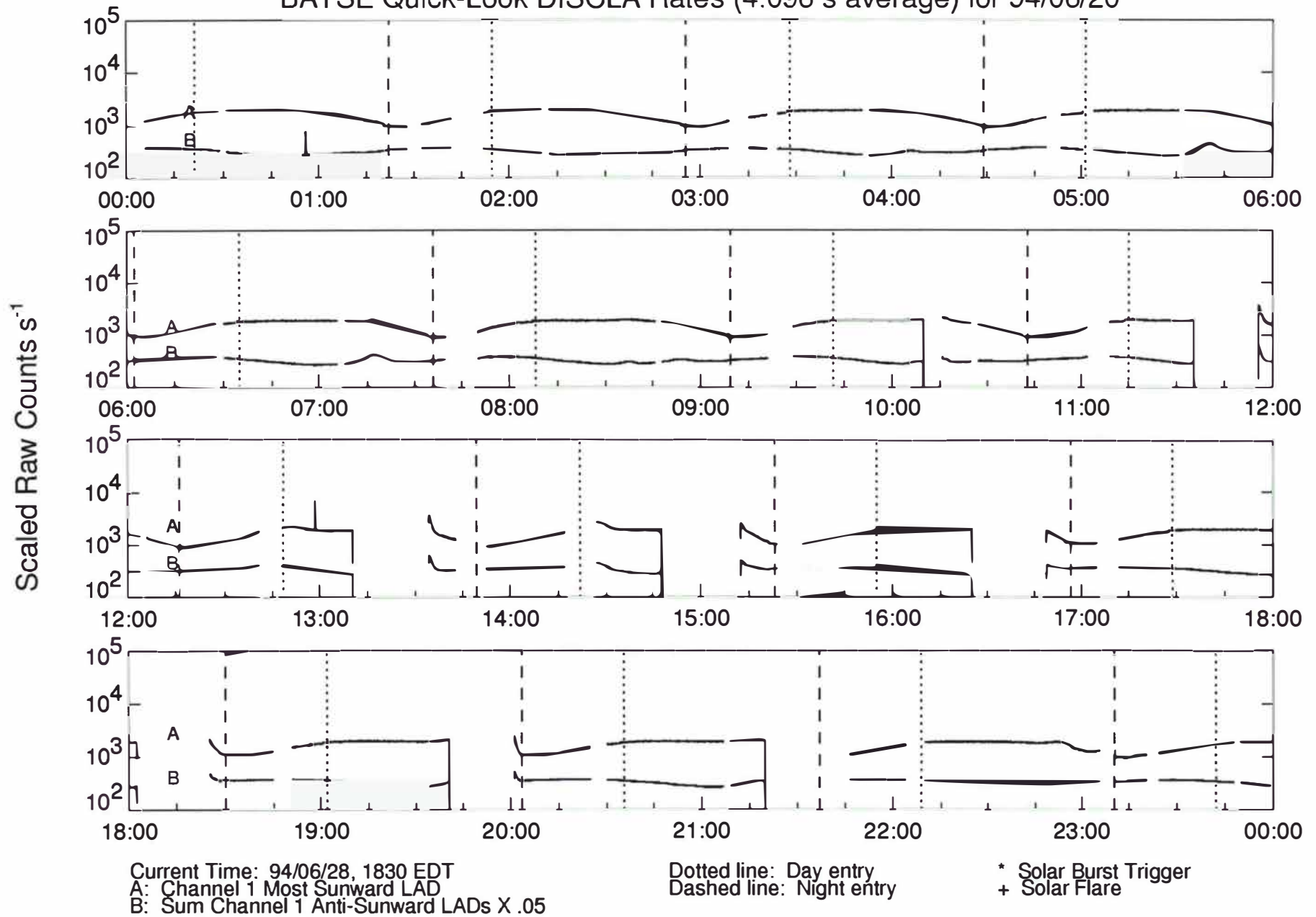
Channel 1 (1.0 - 8.0 Angstroms)

Background not subtracted

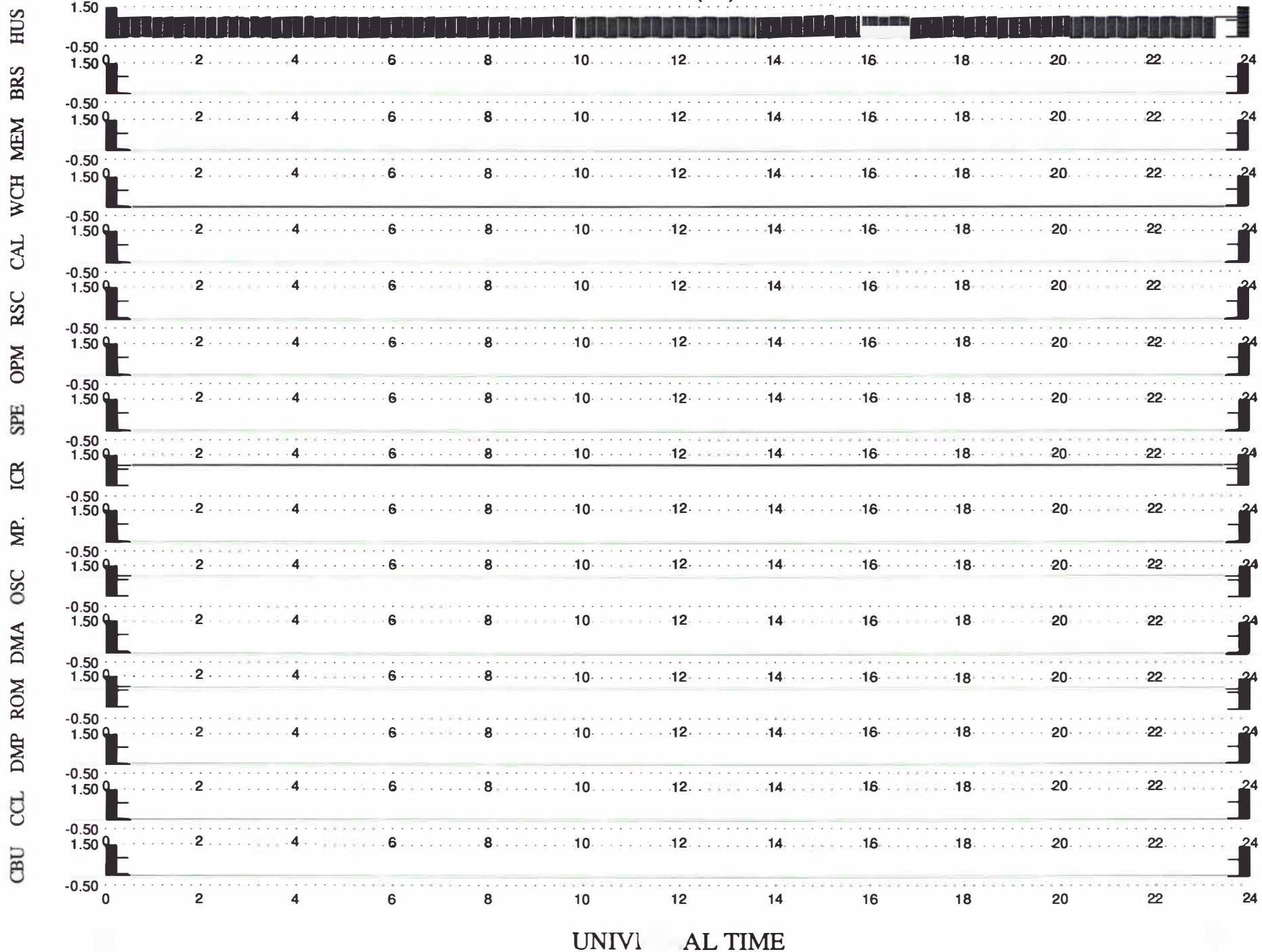
Channel 2 (0.5 - 4.0 Angstroms)

Background not subtracted

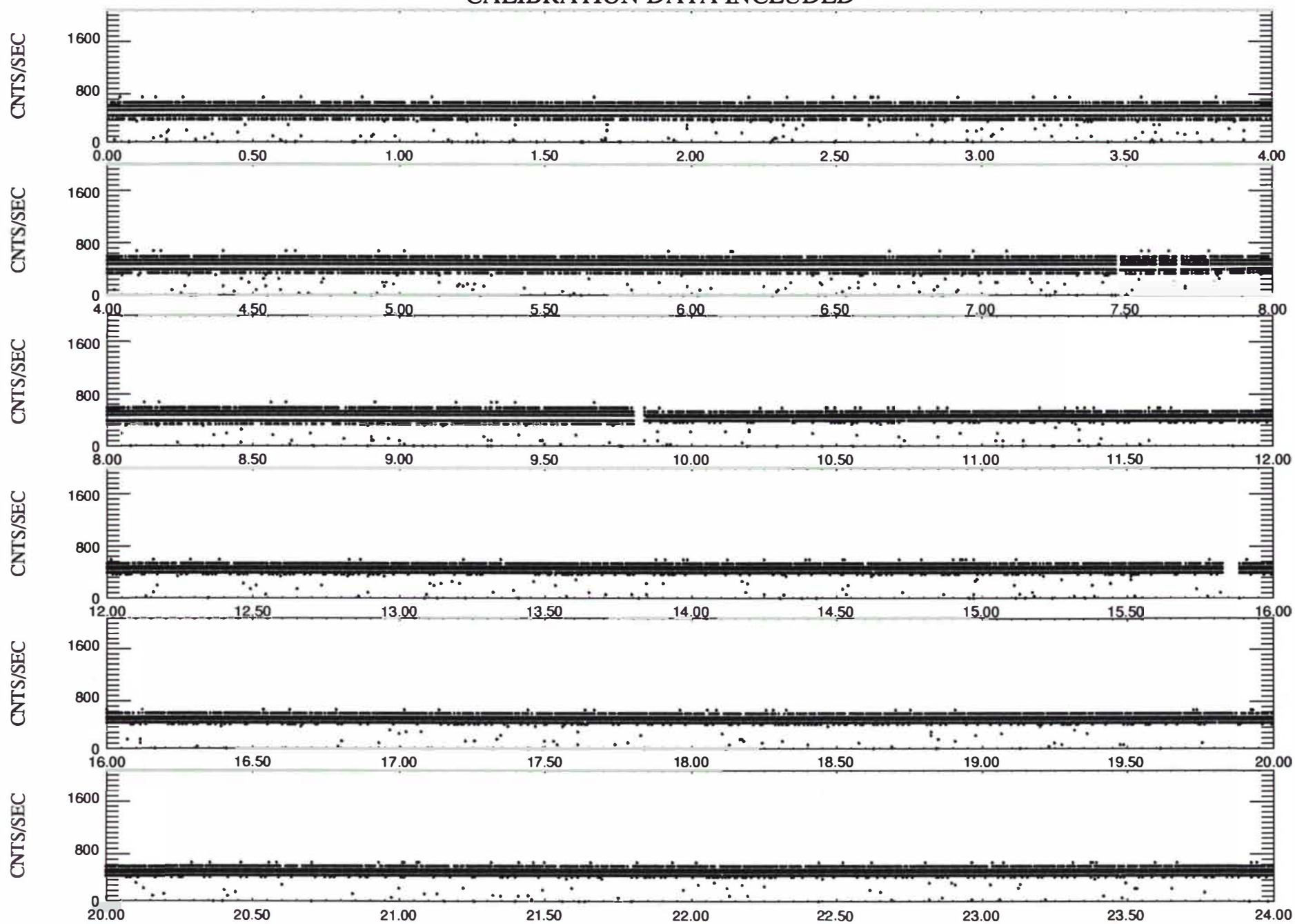
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/20



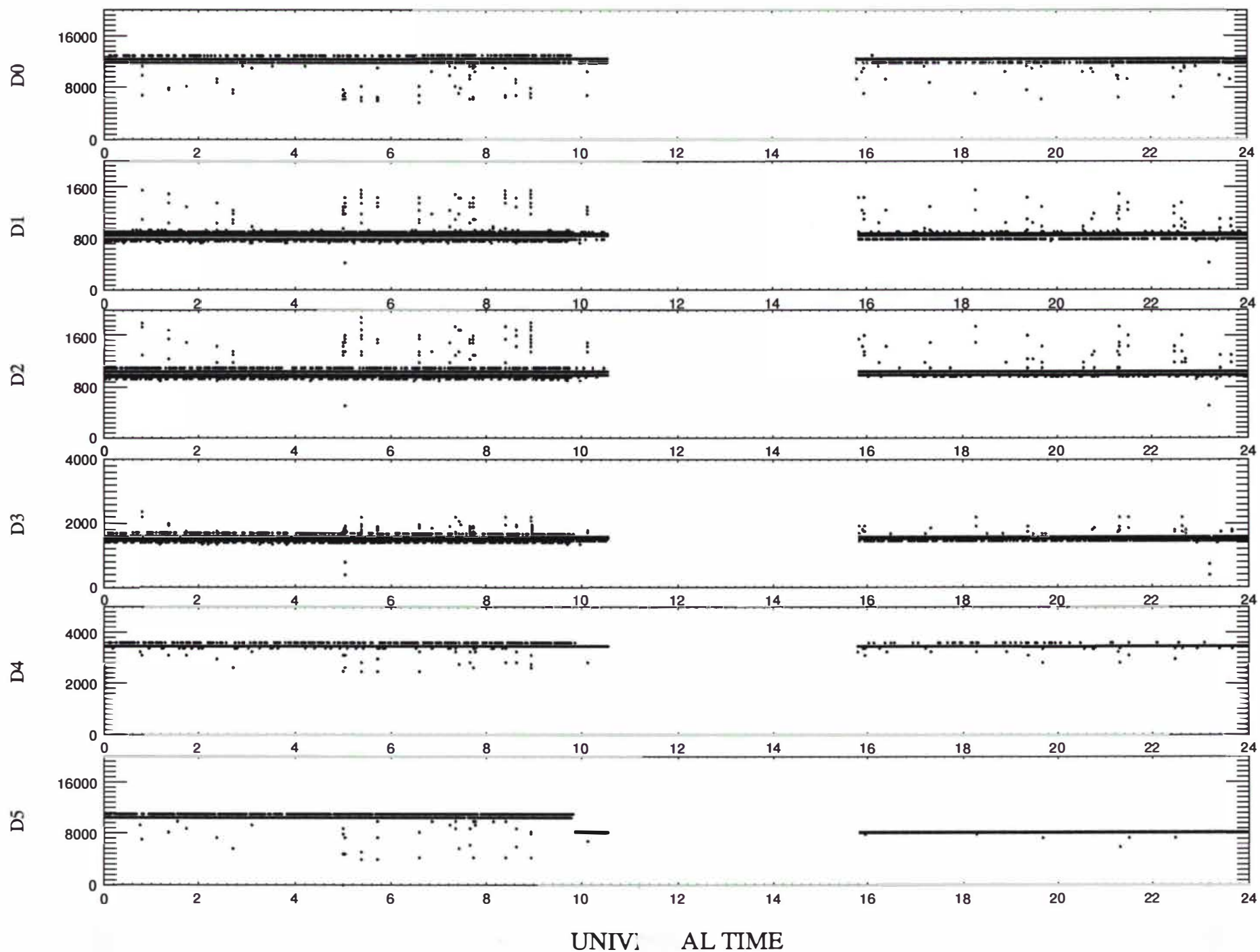
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From DEAL@fender.msfc.nasa.gov Thu Jun 23 09:33 PDT 1994
Date: Thu, 23 Jun 1994 11:34:38 -0500 (CDT)
From: DEAL@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3036
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3036
EVENT OF 1994 JUN 21 DAY OF YEAR=172
EVENT CROSSING TIME AT BATSE : 8070. S. OR 02:14:30.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 212.000 4.000
BATSE PEAK COUNTING RATE: 3100 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 21/ 6/ 94 IS:
RA= 123.768 DEC= -38.967 DIST= 3.039 AU
BATSE-ULYSSES DISTANCE = 454680701. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 88.86 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 30.24 SECS.
CROSSING TIME AT ULYSSES IS 8100. S. OR 02:15:00 +/- 313.72 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 21/ 6/ 94 IS:
RA= 48.430 DEC= 17.406 DIST= 2.065 AU
MARS-BATSE DISTANCE = 308941152. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 26.86 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 919.37 SECS.
CROSSING TIME AT MARS IS 8989. S. OR 02:29:49 +/- 94.79 SECONDS

No

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3036	940621	9524	08070	3100	212	+04

BATSE BURST TRIGGER

NO.: 03036

TIME: TJD=9524 SECONDS=08070

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=065.4 AZIMUTH=105.0 ERROR= DEGREES

COMMENTS:

BURST LASTING APPROX. 2S. NOT VISIBLE ABOVE 300KEV.

23 / 6 / 94

ULYSSES RT

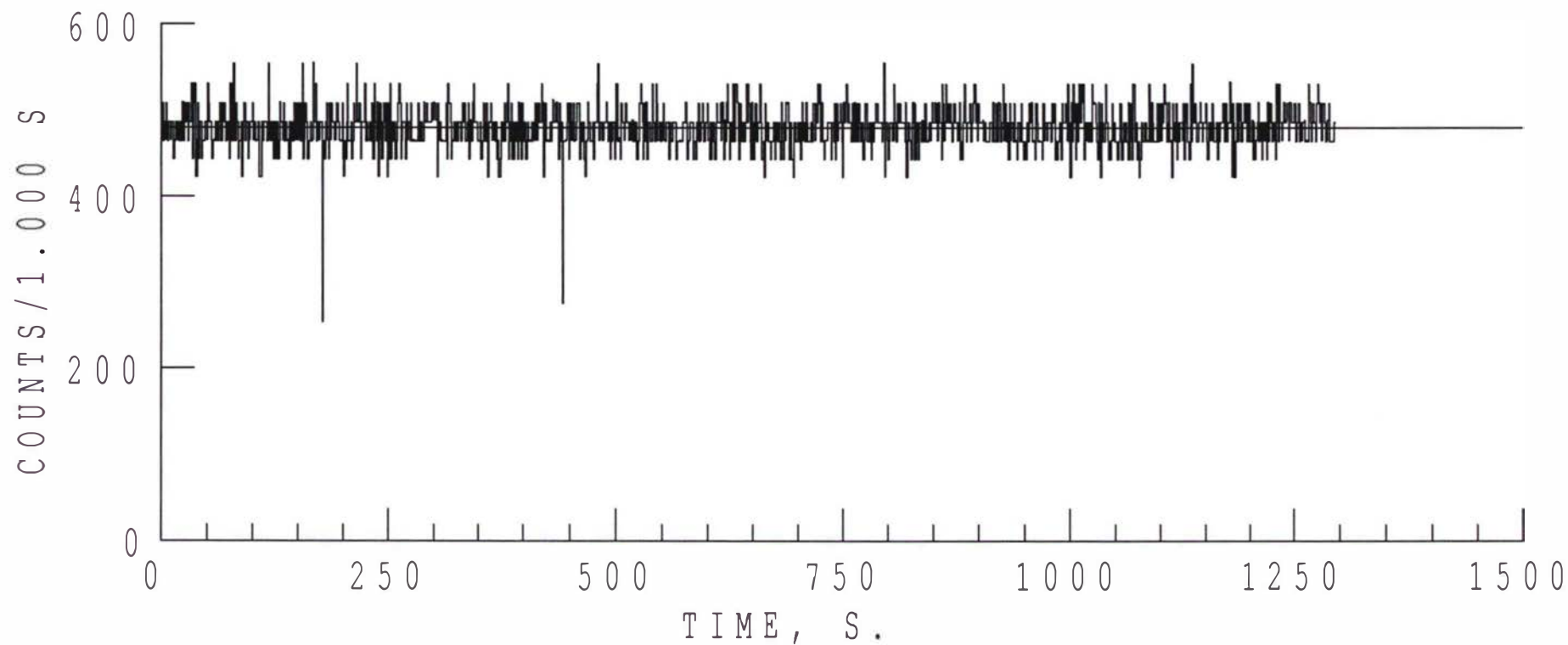
21 / 6 / 94 7776.013 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From DEAL@fender.msfc.nasa.gov Thu Jun 23 09:35 PDT 1994
Date: Thu, 23 Jun 1994 11:36:12 -0500 (CDT)
From: DEAL@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3037
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3037
EVENT OF 1994 JUN 21 DAY OF YEAR=172
EVENT CROSSING TIME AT BATSE : 43875. S. OR 12:11:15.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 55.000 25.000
BATSE PEAK COUNTING RATE: 6250 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 21/ 6/ 94 IS:
RA= 123.847 DEC= -38.962 DIST= 3.039 AU
BATSE-ULYSSES DISTANCE = 454686872. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 89.34 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 17.36 SECS.
CROSSING TIME AT ULYSSES IS 43892. S. OR 12:11:32 +/- 313.56 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 21/ 6/ 94 IS:
RA= 48.430 DEC= 17.406 DIST= 2.065 AU
MARS-BATSE DISTANCE = 308941152. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=170.25 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1015.63 SECS.
CROSSING TIME AT MARS IS 42859. S. OR 11:54:19 +/- 14.88 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3037	940621	9524	43875	6250	055	+25

BATSE BURST TRIGGER

NO.: 03037

TIME: TJD=9524 SECONDS=43875

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=140.4 AZIMUTH=320.4 ERROR= DEGREES

COMMENTS:

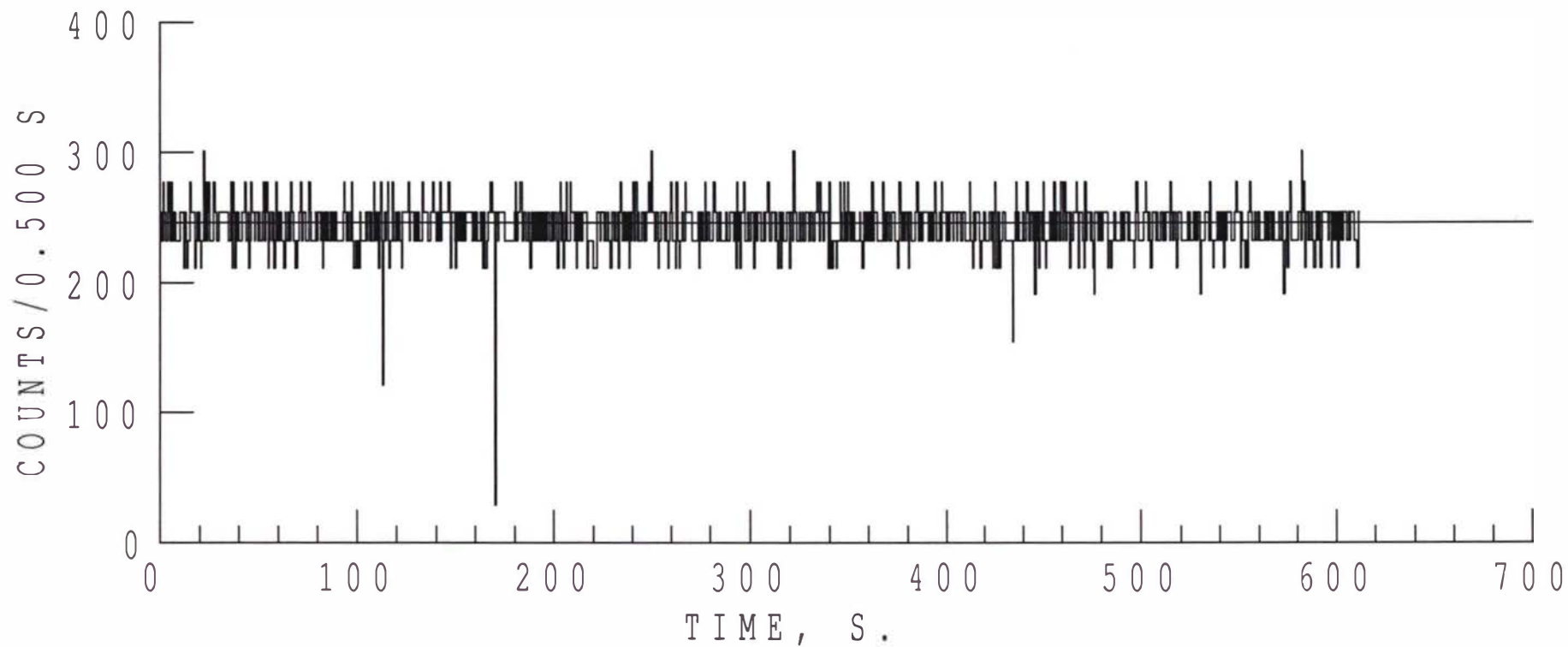
BURST LASTING APPROX. 1S. VISIBLE ABOVE 300KEV.

27 / 9 / 94

ULYSSES RT
21 / 6 / 94 43596.055 s
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From DEAL@fender.msfc.nasa.gov Thu Jun 23 09:36 PDT 1994
Date: Thu, 23 Jun 1994 11:37:50 -0500 (CDT)
From: DEAL@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3038
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3038
EVENT OF 1994 JUN 21 DAY OF YEAR=172
EVENT CROSSING TIME AT BATSE : 54217. S. OR 15:03:37.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 274.000 -69.000
BATSE PEAK COUNTING RATE: 5250 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 21/ 6/ 94 IS:
RA= 123.870 DEC= -38.960 DIST= 3.039 AU
BATSE-ULYSSES DISTANCE = 454688655. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=110.20 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -523.82 SECS.
CROSSING TIME AT ULYSSES IS 53693. S. OR 14:54:53 +/- 289.16 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 21/ 6/ 94 IS:
RA= 48.430 DEC= 17.406 DIST= 2.065 AU
MARS-BATSE DISTANCE = 308941152. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 58.76 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 534.49 SECS.
CROSSING TIME AT MARS IS 54751. S. OR 15:12:31 +/- 161.08 SECONDS

no

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3038	940621	9524	54217	5250	274	-69

BATSE BURST TRIGGER

NO.: 03038

TIME: TJD=9524 SECONDS=54217

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=056.5 AZIMUTH=206.1 ERROR= DEGREES

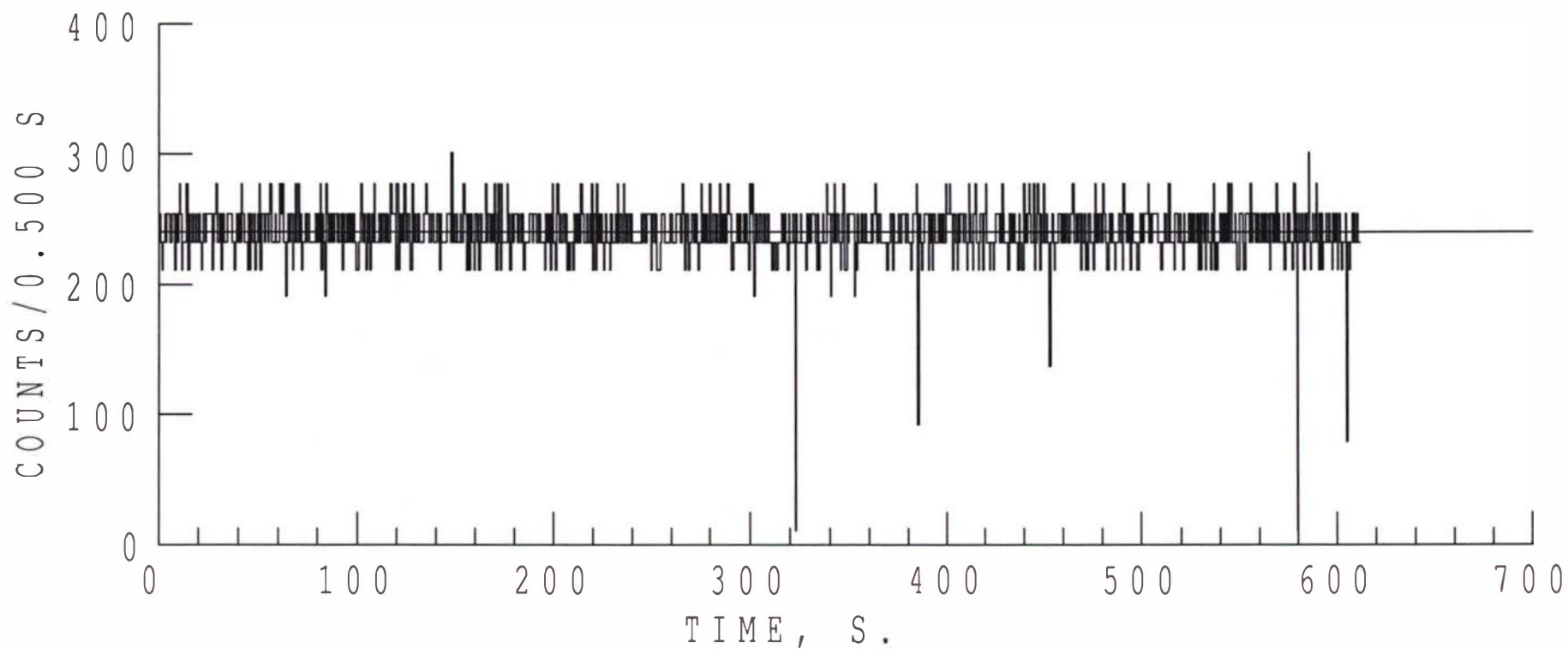
COMMENTS:

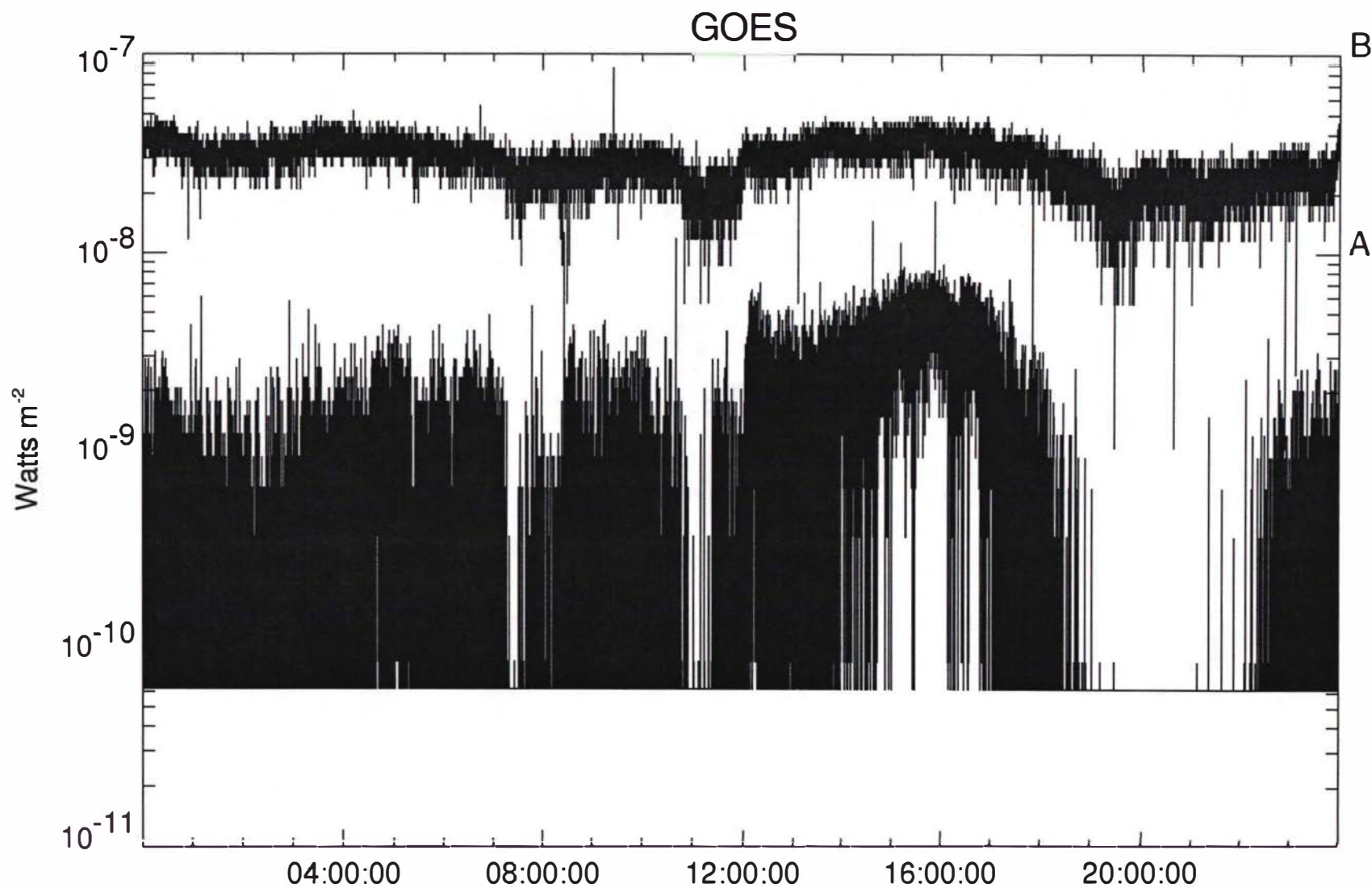
BURST LASTING APPROX. 1S. VISIBLE ABOVE 300KEV.

27 / 9 / 94

ULYSSES RT
21 / 6 / 94 53388.199 s
0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





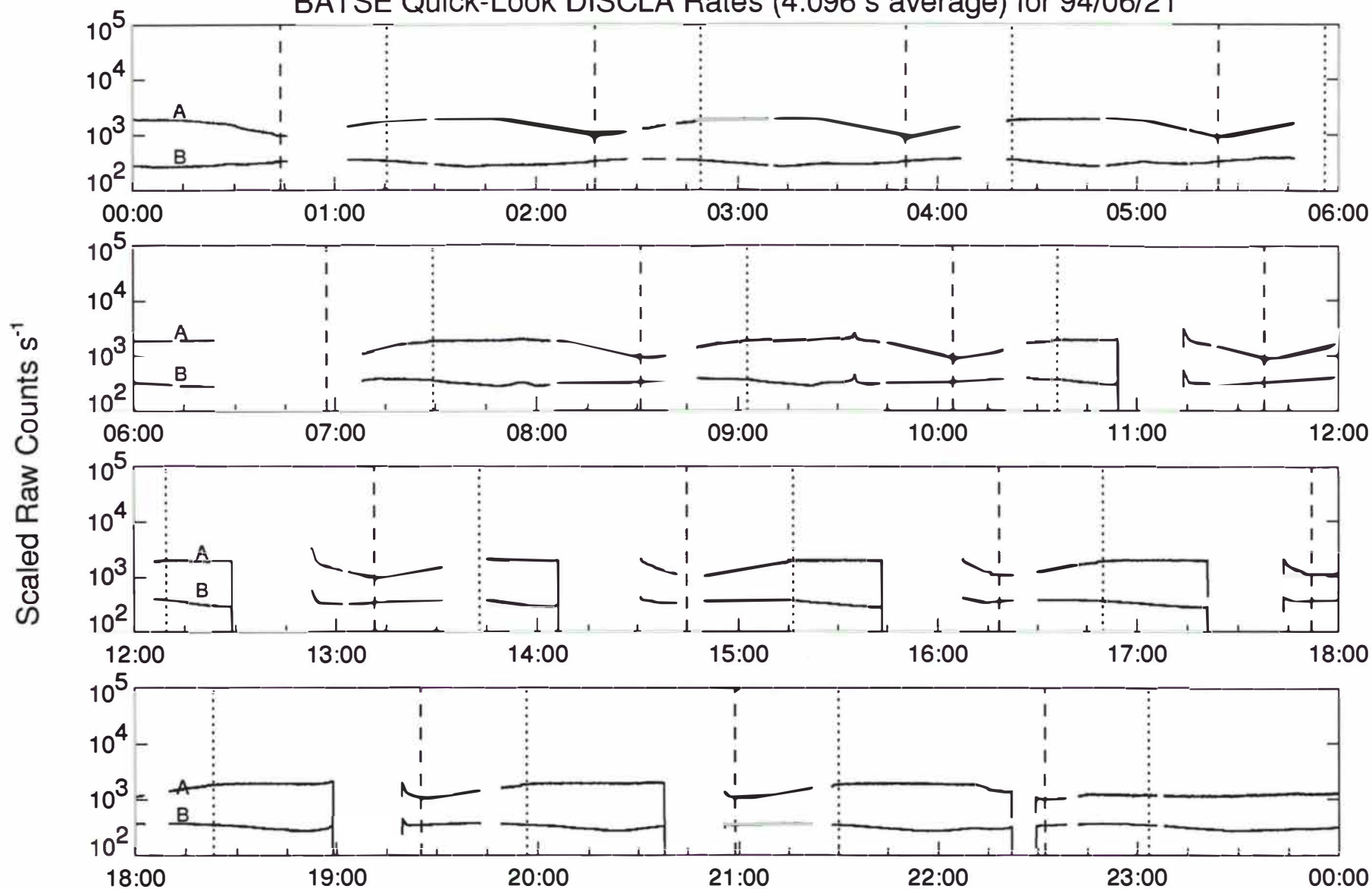
Data Start: 94/06/21, 0000:02

Plot created: 94/06/28, 1819

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/21

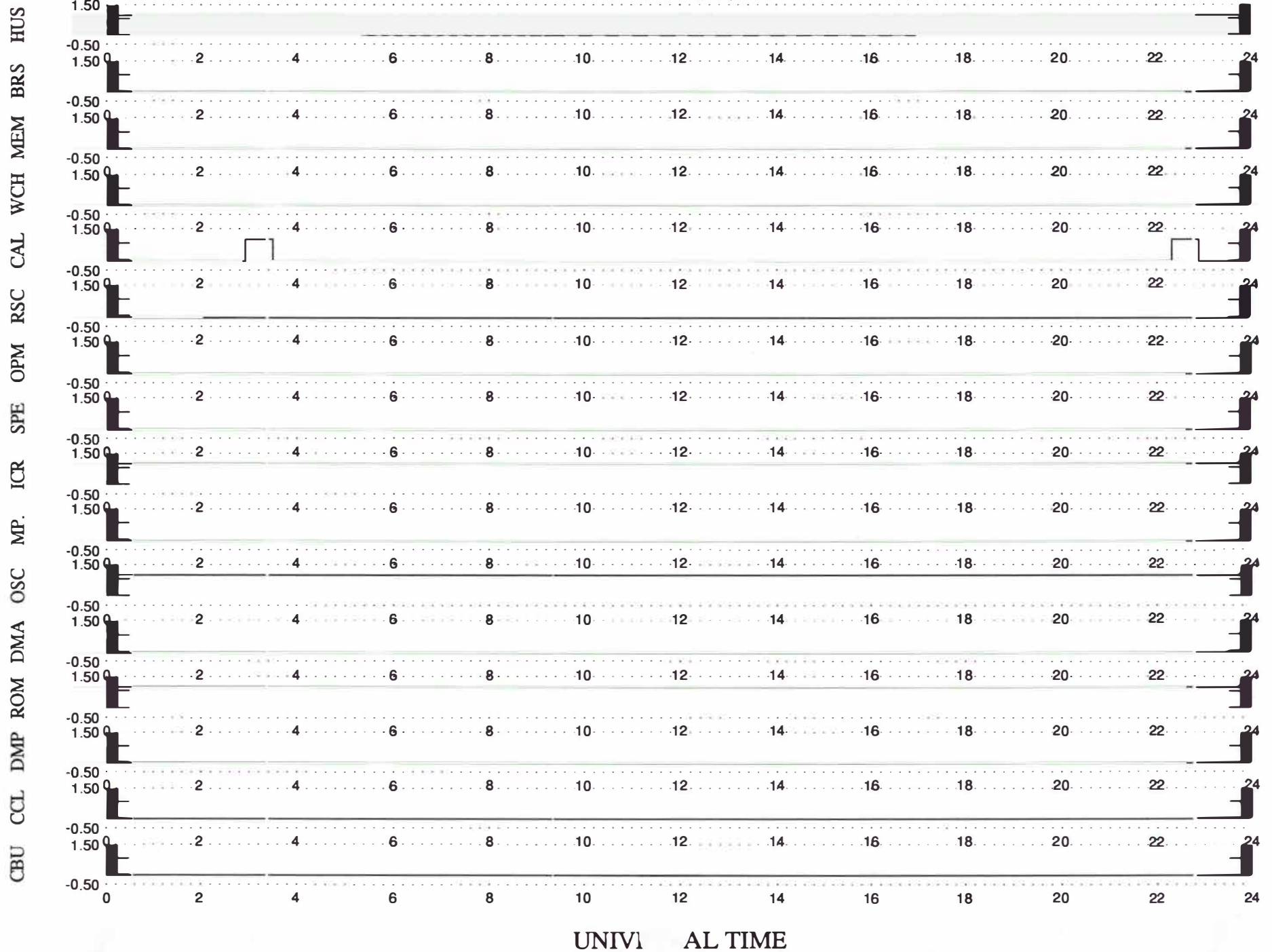


Current Time: 94/06/28, 1830 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

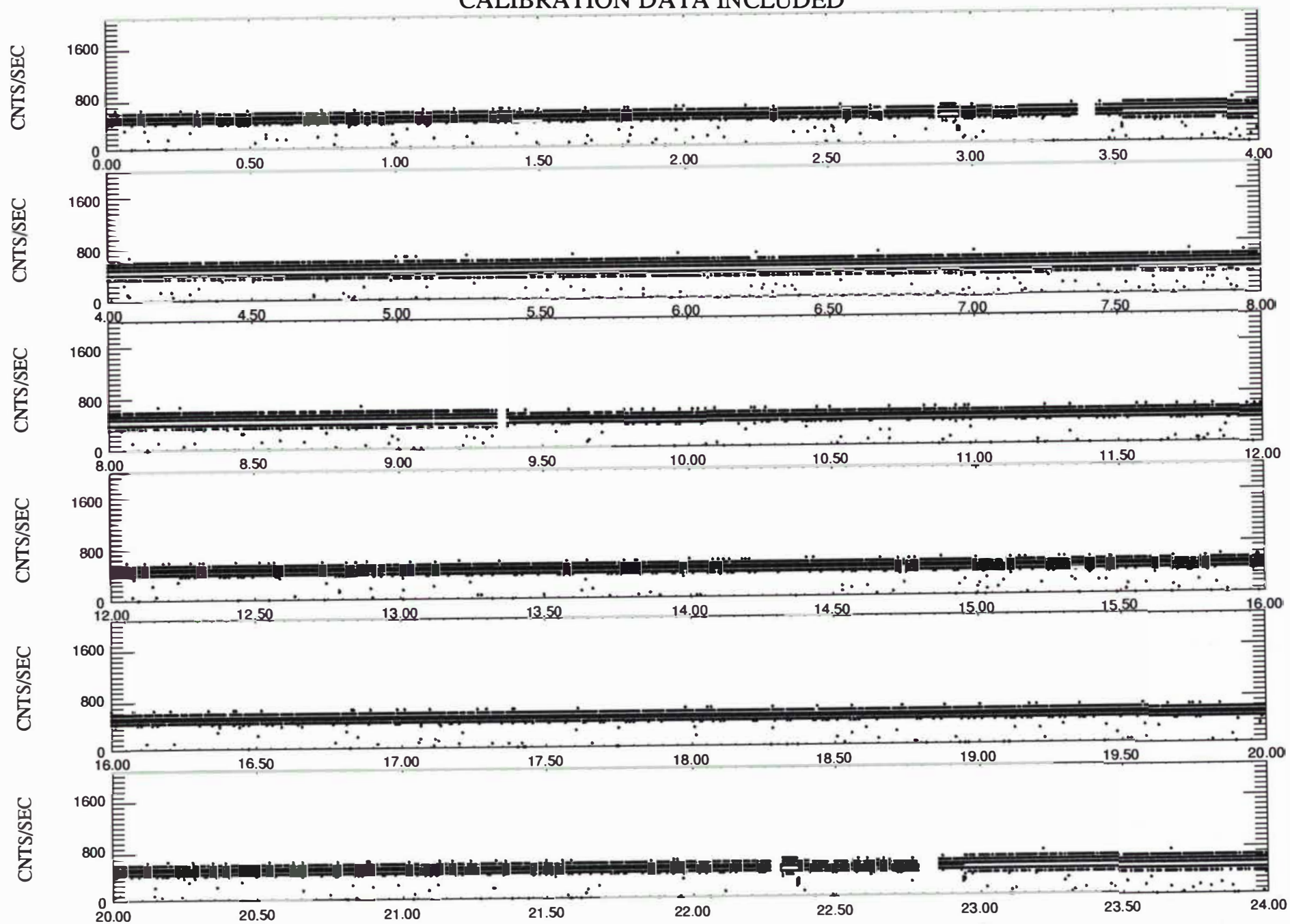
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

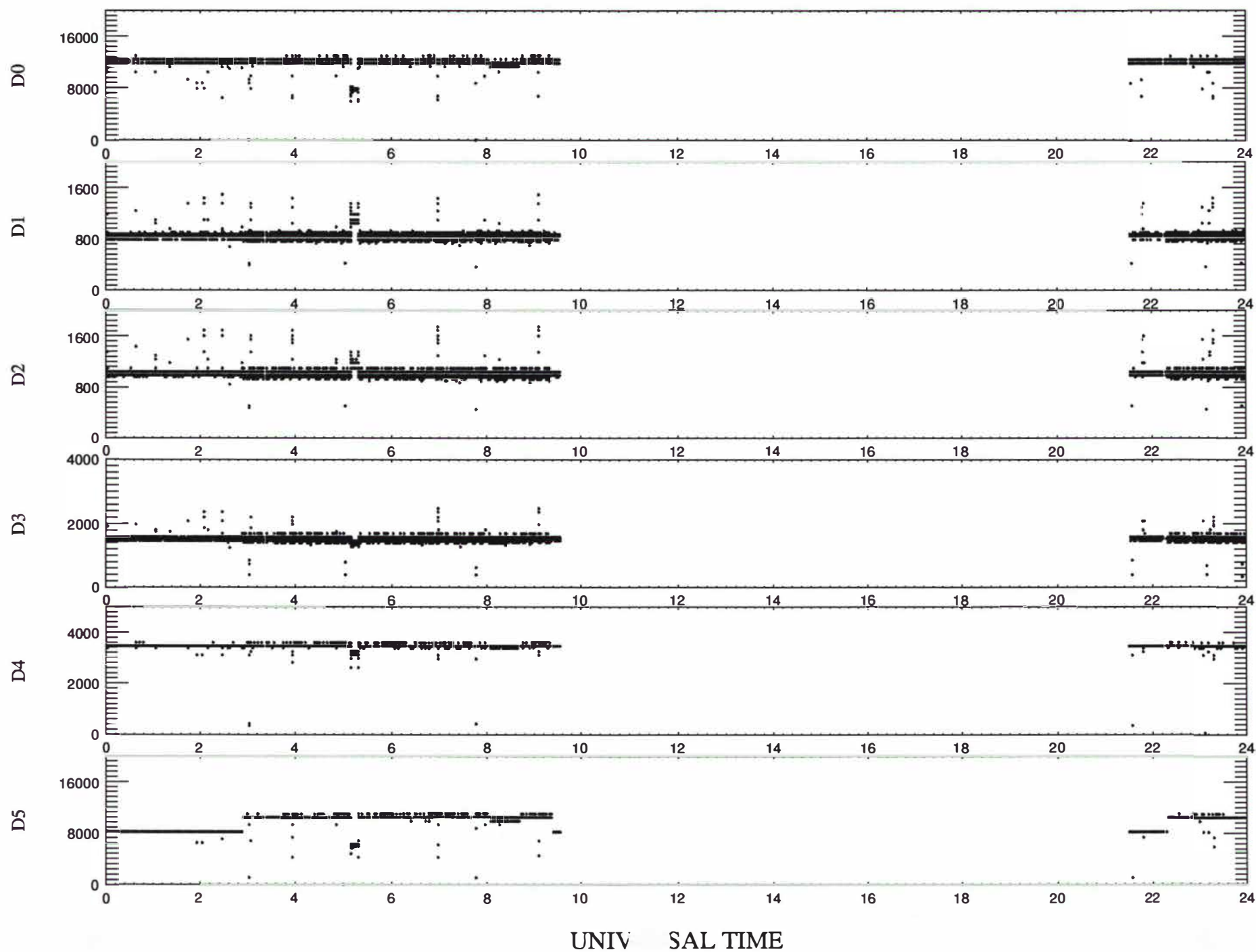
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From KOUVELIOTOU@ssl.msfc.nasa.gov Thu Jun 23 12:56 PDT 1994
Date: Thu, 23 Jun 1994 14:57:37 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3039
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3039
EVENT OF 1994 JUN 22 DAY OF YEAR=173
EVENT CROSSING TIME AT BATSE : 47896. S. OR 13:18:16.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 299.000 -35.000
BATSE PEAK COUNTING RATE: 34000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 22/ 6/ 94 IS:
RA= 124.051 DEC= -38.951 DIST= 3.039 AU
BATSE-ULYSSES DISTANCE = 454694255. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 74.10 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 415.56 SECS.
CROSSING TIME AT ULYSSES IS 48312. S. OR 13:25:11 +/- 309.56 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 22/ 6/ 94 IS:
RA= 49.159 DEC= 17.607 DIST= 2.062 AU
MARS-BATSE DISTANCE = 308488576. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 63.73 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 455.41 SECS.
CROSSING TIME AT MARS IS 48351. S. OR 13:25:51 +/- 167.12 SECONDS

RI

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3039	940622	9525	47896	34000	299	-35

BATSE BURST TRIGGER

NO.: 03039

TIME: TJD=9525 SECONDS=47896

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=030.3 AZIMUTH=246.4 ERROR= DEGREES

COMMENTS:

MULTIPEAKED EVENT IN TWO EPISODES ~ 100 S APART. FIRST EPISODE
CONSISTS OF 5 PULSES AND LASTS ~ 5 S. IT IS NOT SEEN ABOVE 300 KEV.
SECOND EPISODE LASTS ~ 50 S AND STARTS AT ~ T+105. IT CONSISTS OF
AT LEAST 2 PULSES AND IS SEEN marginally ABOVE 300 KEV.

Helio corr removed

Date: Jan 28 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☒ Is the order of the data in CORREL such that a vernier is done on the data with the best time resolution?

2. BATSE Data

- ☐ 2.042 s subtracted for bursts prior to June 25 1992 and DISCSC programs prior to Version 2.16 (August 28 1992)? N/A
- ☒ BATSE ephemeris for T_0 ?
- ☒ Error circle position and radius from public catalog used?
- ☐ If MER data were used, is a 30 ms systematic error included? N/A

3. PVO Data

- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS database updated?

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

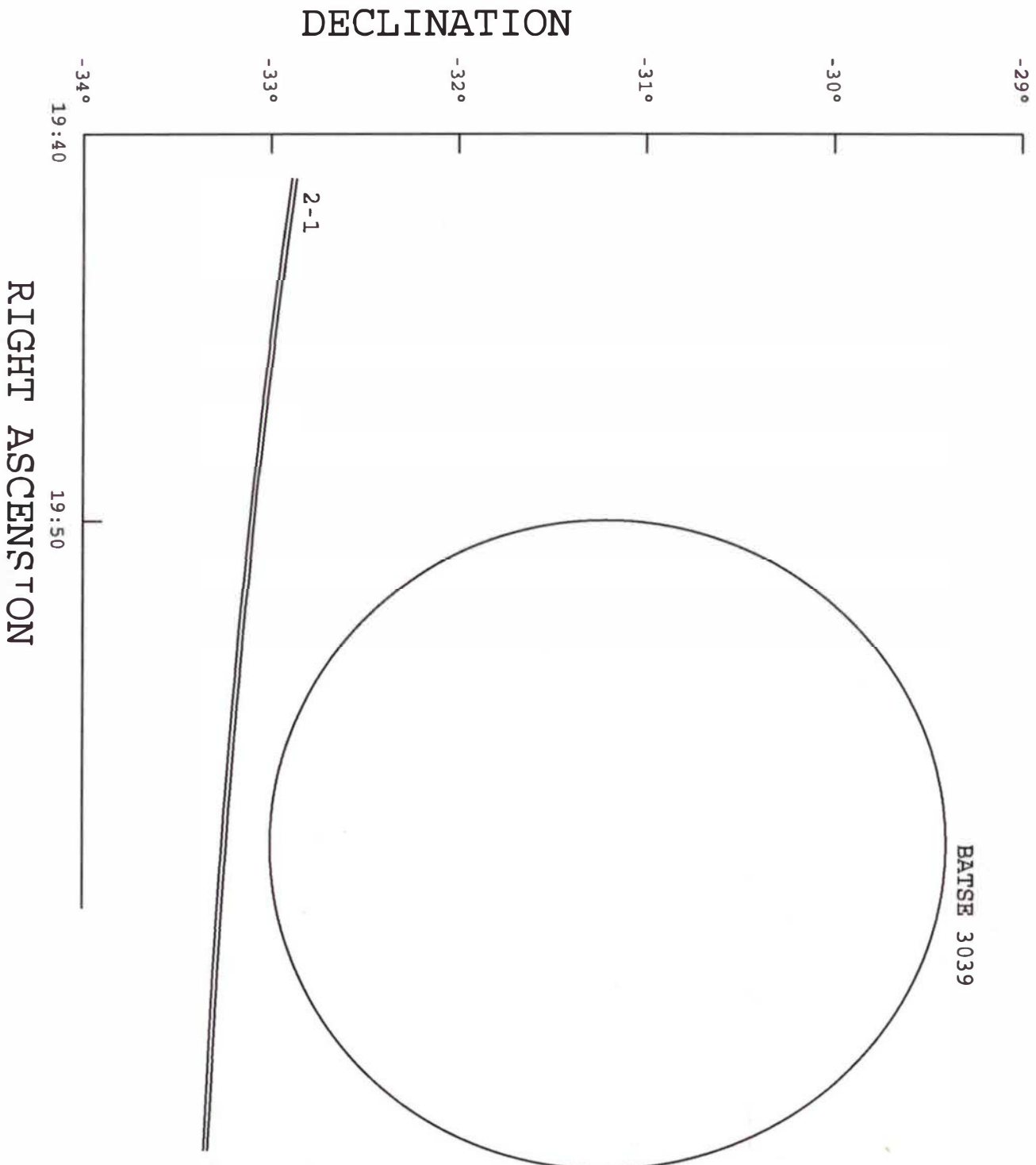
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF JUN 22, 1994 13:25

29 / 1/98



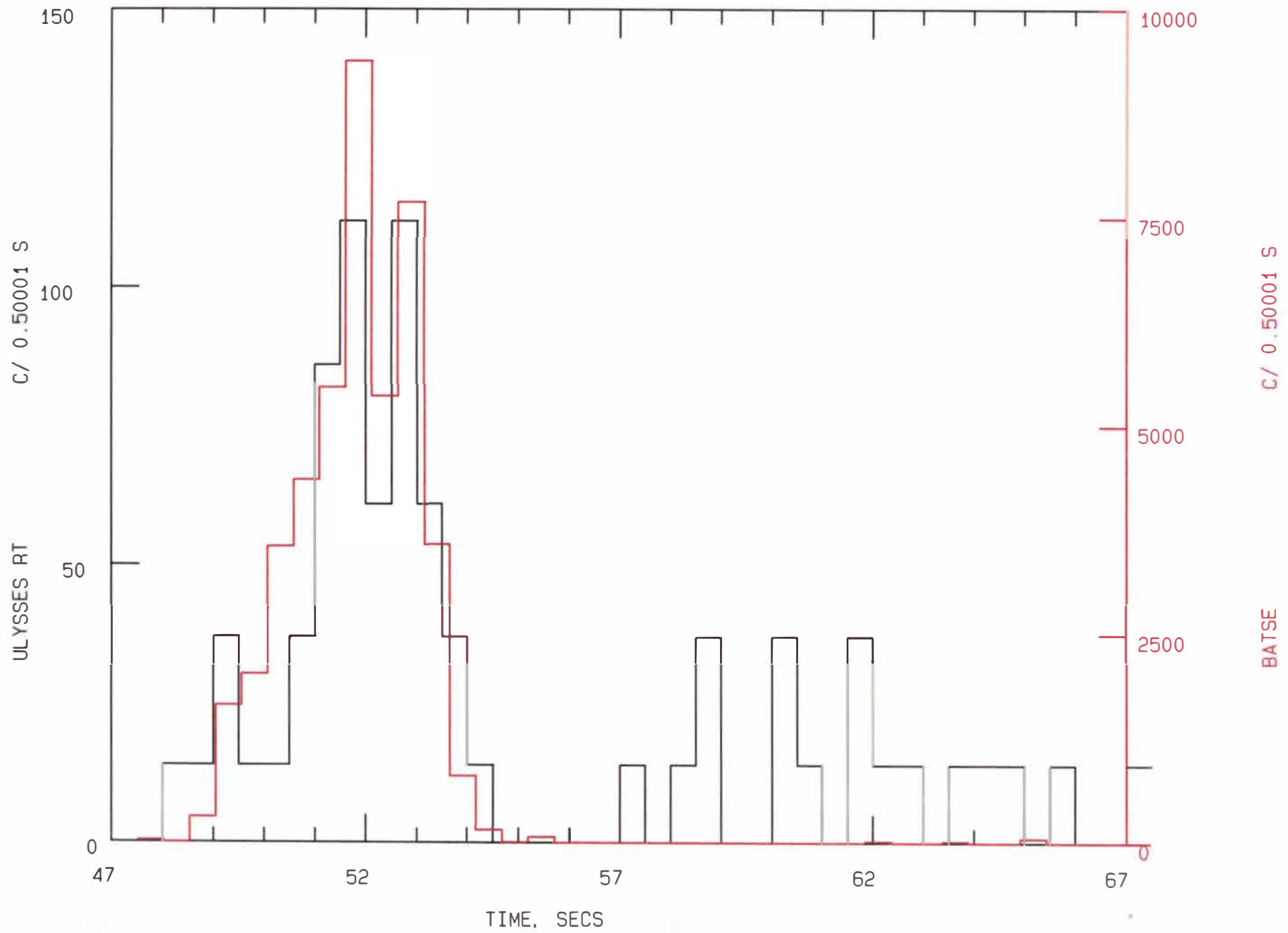
ULYSSES RT-BATSE

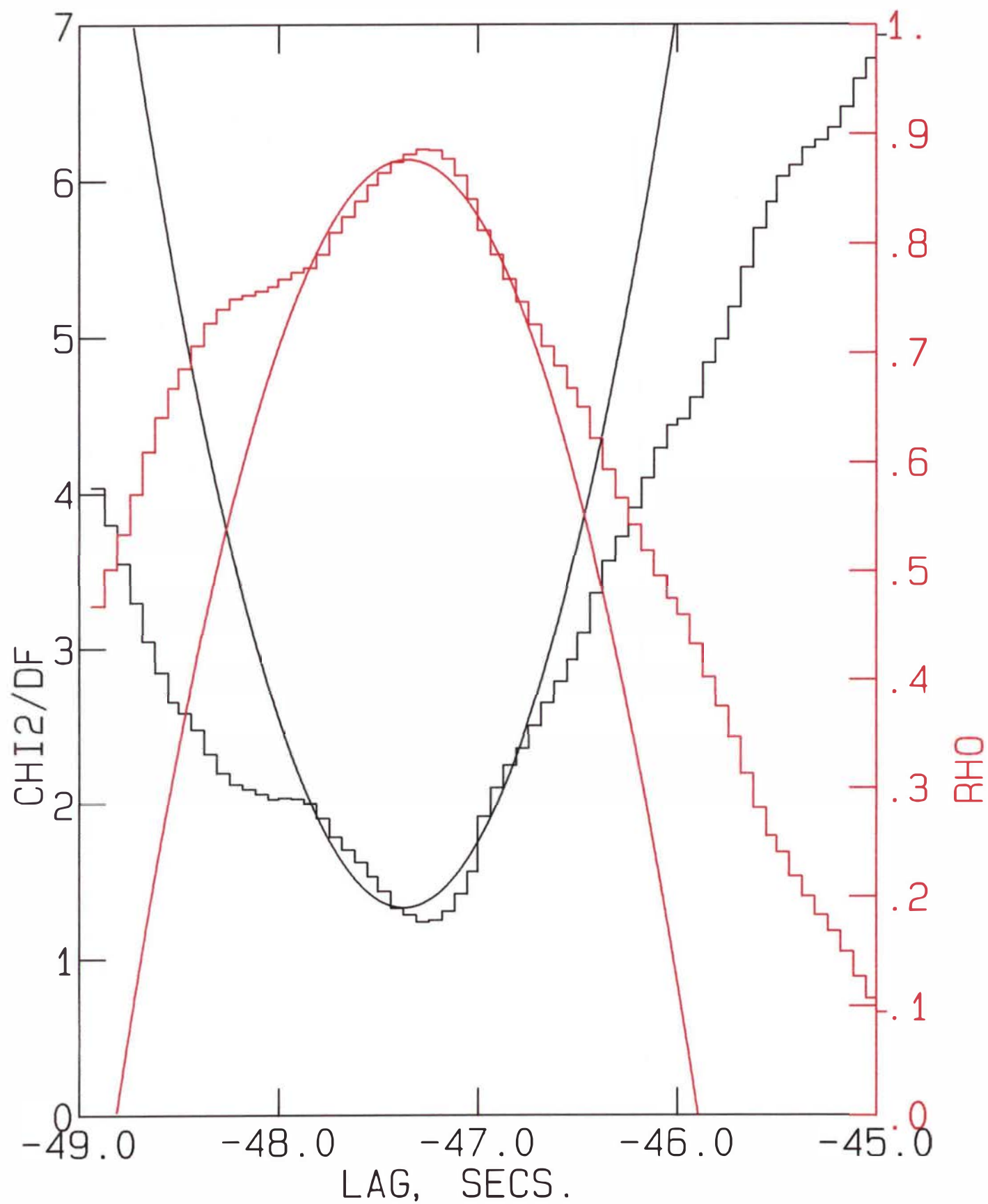
CORRELATION

22/ 6/94

48303.452

29/ 1/98





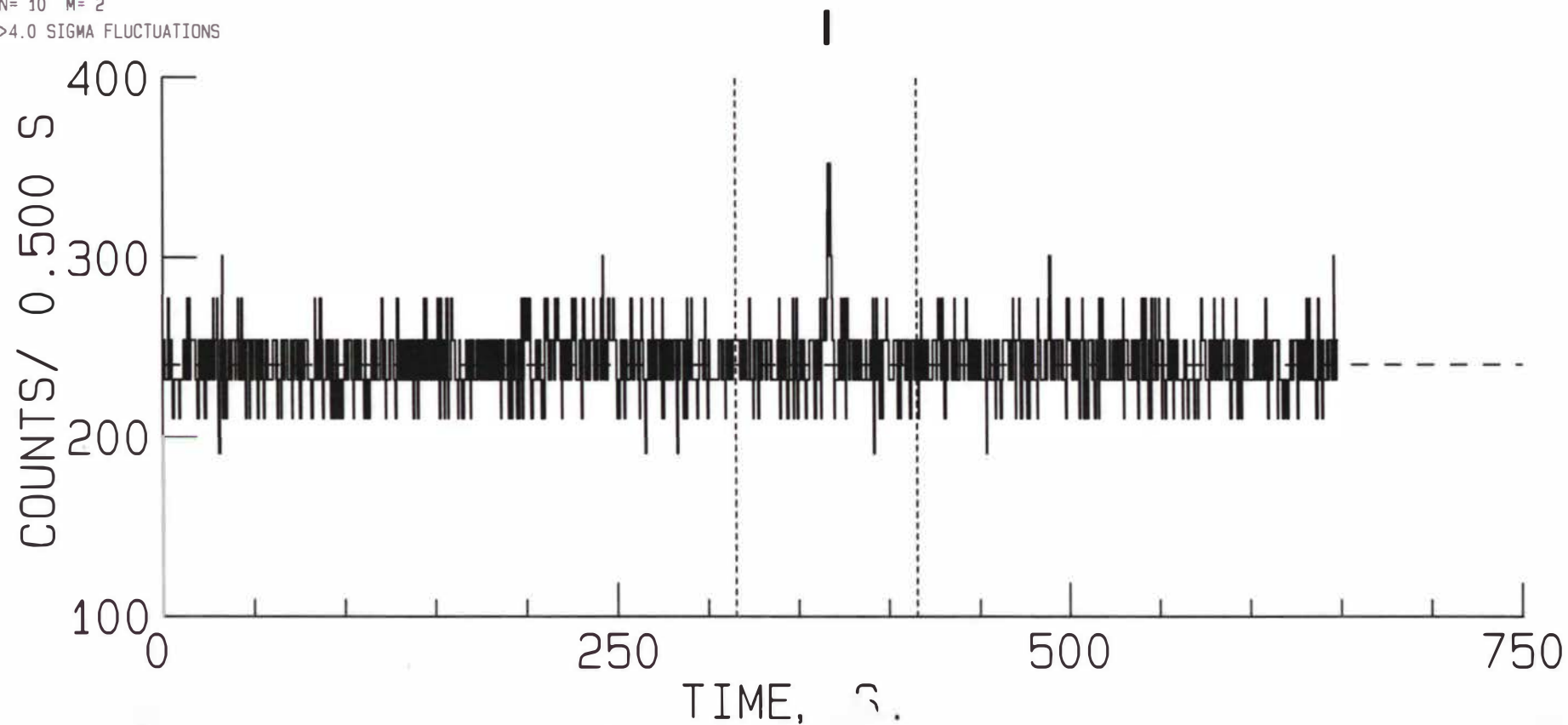
ULYSSES RT

29 / 1 / 98

22 / 6 / 94 47988.474 s

22- 148 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



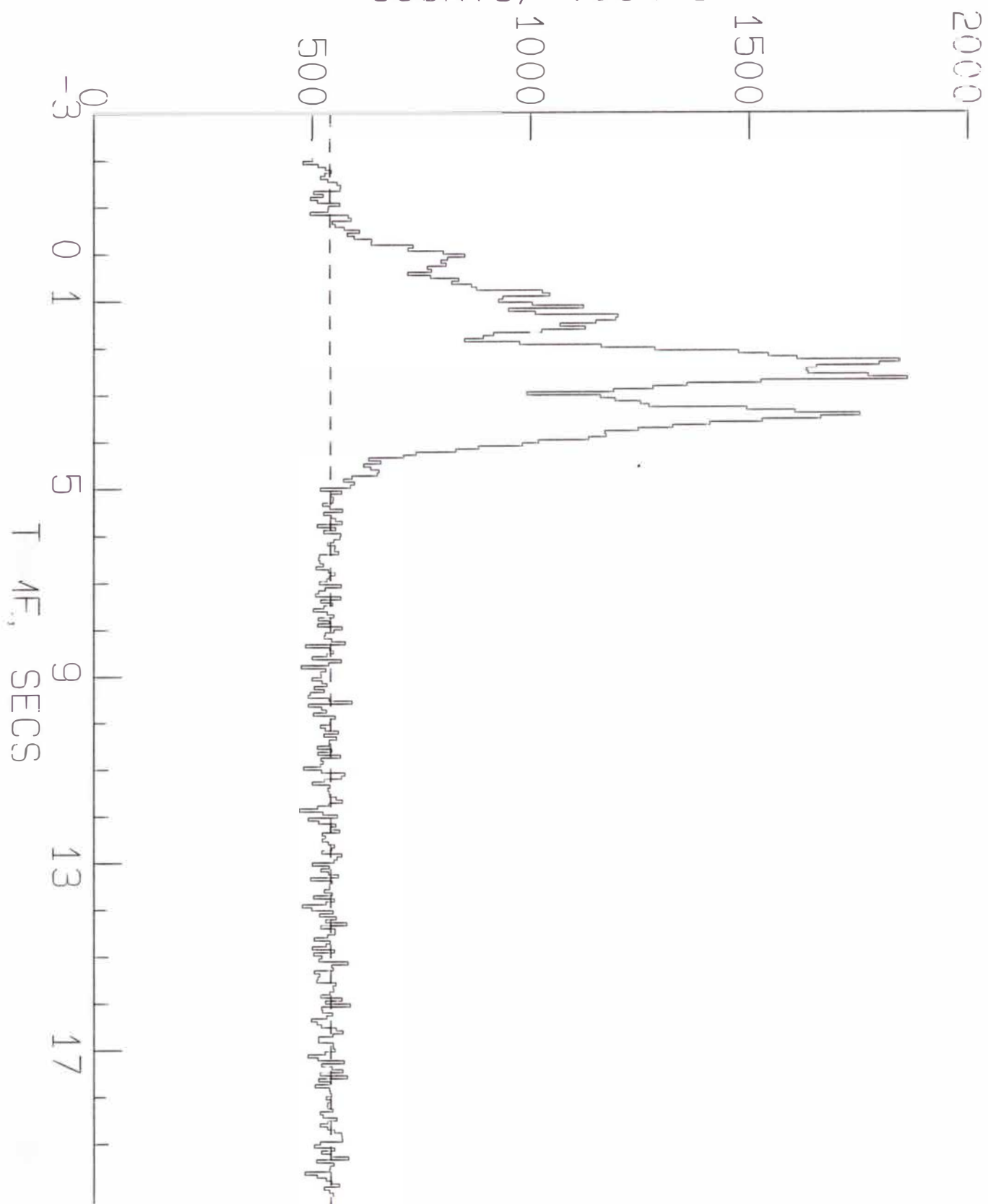
BATSE

22/06/94

47896.666

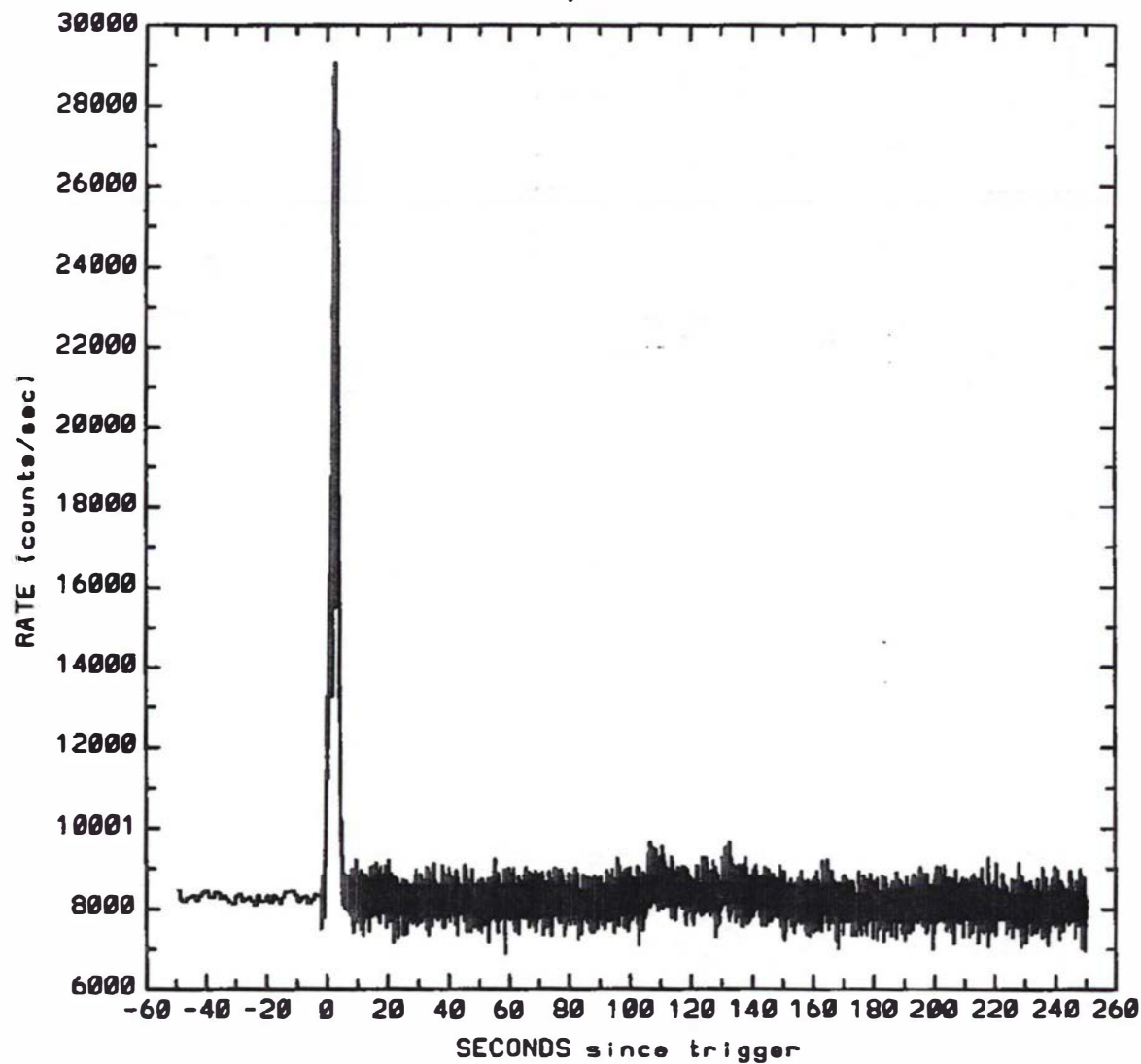
25- 100 keV

COUNTS/ .064 S



25 / 6 / 94

Data for K. Hurley



24-JUN-1994 16:34.05

Created by MOPS 80
(Burst Display)
Version 2.20

Trigger = 3839

Trigger Time:
9525 / 47896.666Burst Data Type:
DISCSCDeadtime
Corrected: N
Background Data
Type: PREB + DISCLA
Minimum Integ. Time:
0.064 secondsDetectors (7..0):
01010100Discriminators:
(1..2)Quality Mask:
BOISP1

From root Wed Jun 22 07:40 1994
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA21609; Wed, 22 Jun 94 07:40:16
Received: from xtelab.gsfc.nasa.gov by sunspot.ssl.berkeley.edu (5.0/SMI-SVR4)
id AA06369; Wed, 22 Jun 1994 07:49:24 +0800
Received: (from scott@localhost) by xtelab.gsfc.nasa.gov (LHEA9404/940426.s1) id KAA03572 for
Date: Wed, 22 Jun 1994 10:50:27 -0400
From: Scott Barthelmy <scott@xtelab.gsfc.nasa.gov>
Message-Id: <199406221450.KAA03572@xtelab.gsfc.nasa.gov>
To: khurley@space6.ssl.berkeley.edu
Subject: fax of bacodine light curves for grb940622
Content-Length: 353
Status: R

Kevein,
I just fax-ed you the bacodine light curves for the bright batse burst
of earlier this morning. it is in the comptel fov so they are working
on getting a location. so the question is di ulysses see it?
if so we (brad, david, myself) would like to get any ipn arc
so that we can invoke the ctio ToO on the schmidt.

with fingers crossed,
scott

From: jryan@comptel.unh.edu (Jim Ryan)
Message-Id: <9406231634.AA03498@comptel.unh.edu>
Subject: burst light curve
To: meegan@ssl.msfc.nasa.gov (Chip Meegan (BATSE))
Date: Thu, 23 Jun 1994 12:34:16 -0400 (EDT)
Cc: khurley@space6.ssl.berkeley.edu (Kevin Hurley), mkippen (R Marc Kippen)
X-Mailer: ELM [version 2.4 PL23]
Mime-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit
Content-Length: 295
Status: R

Chip,

We are forwarding the BATSE light curve from the Sunday burst to Kevin Hurley. Save you guys a step. Okay?

Neither of yesterday's bursts had quite enough oomph to get a good image. The latter one was large enough to trigger BACODINE and awaken several members of the COMPTTEL team.

Jim

Wed June 22

From tharriso@NMSU.Edu Wed Aug 24 12:10 PDT 1994
From: tharriso@NMSU.Edu
Date: Wed, 24 Aug 1994 13:10:39 -0600
To: khurley@sunspot.ssl.berkeley.edu
Subject: IPN Data

Dear Kevin:

I am currently in the process of analyzing and writing-up the first year's results from our Rapid-Response Network. We have 10 bursts for which we have obtained some amount of coverage. You have kindly provided me IPN data for four of those bursts. I'd like to get from you the other IPN results if they have been calculated (or letting me know whether they were detected by the IPN). Are these data routinely published (or available from) somewhere? I hate to continually bother you about them.

We appreciate your help, and would welcome your participation on the resulting paper.

-Tom

The bursts for which IPN annuli are needed are:

GRB931031:

BATSE triggered on an intense GRB on 931031 at 04:06:35 UT. The event lasted approximately 15 second(s). Final BATSE location: RA = 329 deg, Dec = +60 deg (~4 deg error circle). ✓

Follow-up observations are encouraged. Intense double episode event. Second pulse appears at ~ T+12 s. Seen well above 300 keV. First pulse lasts ~ 2 s and shows substructure.

GRB931226:

BATSE trigger time: 12/26/93 at 72669 s UT (20:11:09), the BATSE position was RA=208, Dec=28. ✓

GRB940520:

TITLE: BACODINE BURST POSITION NOTICE
NOTICE_DATE: Fri 20 May 94 00:24:46 UT
TRIGGER_NUM: 2984
GRB_RA: 319.88d {+21h 19m 31s} (J2000),
GRB_DEC: +11.40d {+11d 24' 14"} (J2000),
GRB_INTEN: 2805 [cnts] Peak=2805 [cnts/sec]
GRB_TIME: 1300.12 SOD {00:21:40.12} UT
GRB_DATE: 9492 TJD; 140 DOY; 94/05/20

Sent BACODINE/Ulysses annulus 14/19

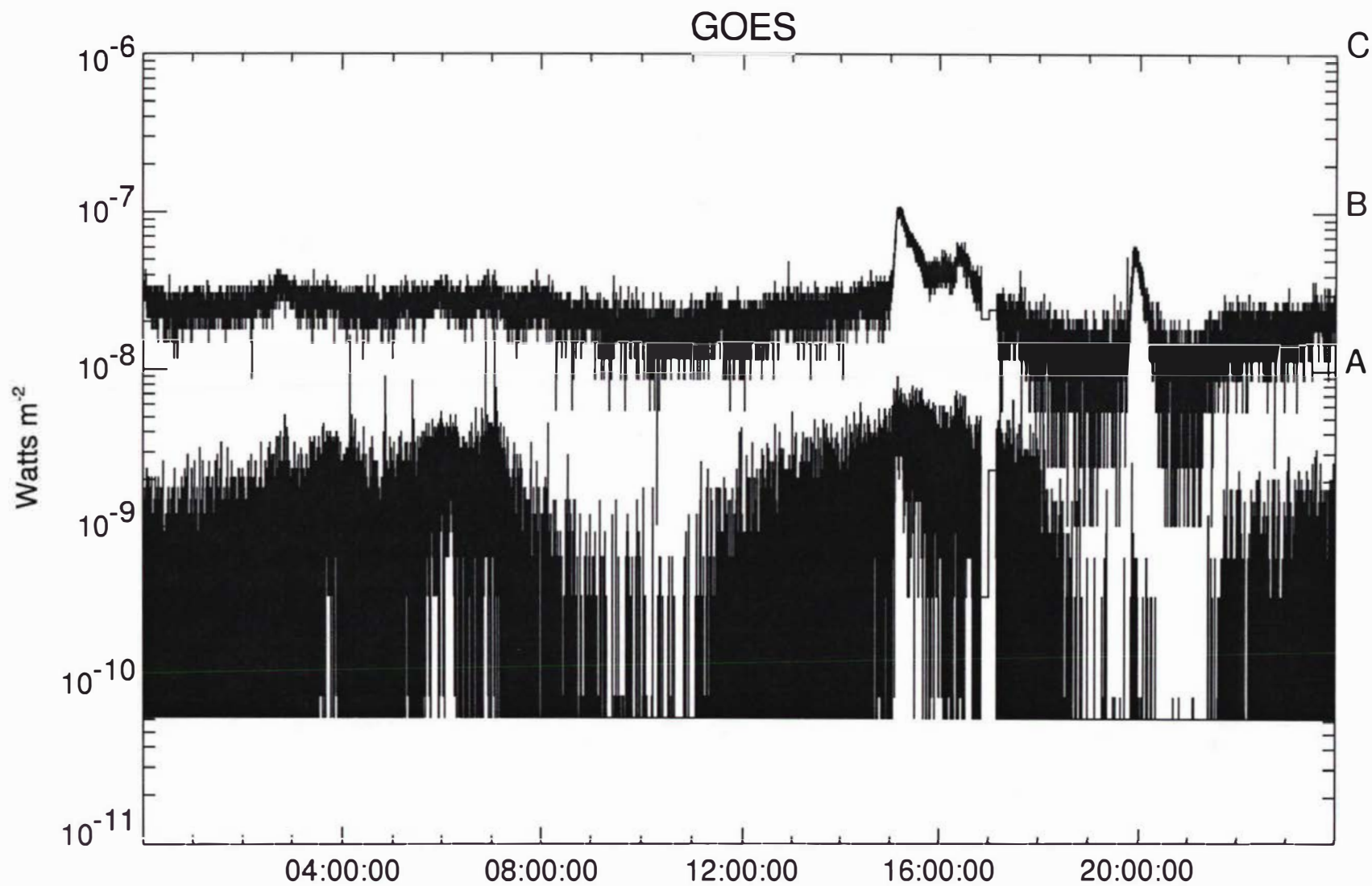
GRB940622:

TITLE: BACODINE BURST POSITION NOTICE
NOTICE_DATE: Wed 22 Jun 94 13:18:19 UT
NOTICE_TYPE: Original
TRIGGER_NUM: 3039
GRB_RA: 300.62d {+20h 02m 30s} (J2000),
GRB_DEC: -40.43d {-40d 26' 03"} (J2000),
GRB_INTEN: 1940 [cnts] Peak=1940 [cnts/sec]
GRB_TIME: 47898.26 SOD {13:18:18.26} UT
GRB_DATE: 9525 TJD; 173 DOY; 94/06/22

GRB940708:

The BATSE position of the burst is: RA(2000)= 20h 08m Dec(2000)= +21 deg.

TITLE : COMPTTEL BURST POSITION NOTICE: GRB940708
NOTICE_DATE: Sat Jul 9 01:16:32 GMT 1994
BURST_DATE : 9541 TJD; 8-JUL-1994
BURST_TIME : 74526.00 SEC; 20:42: 6 UT
BURST_SCZEN: 6.0 Deg.
BURST_SCAZI: 139.0 Deg.
BURST_CLASS: Weak (Approx 37 events)



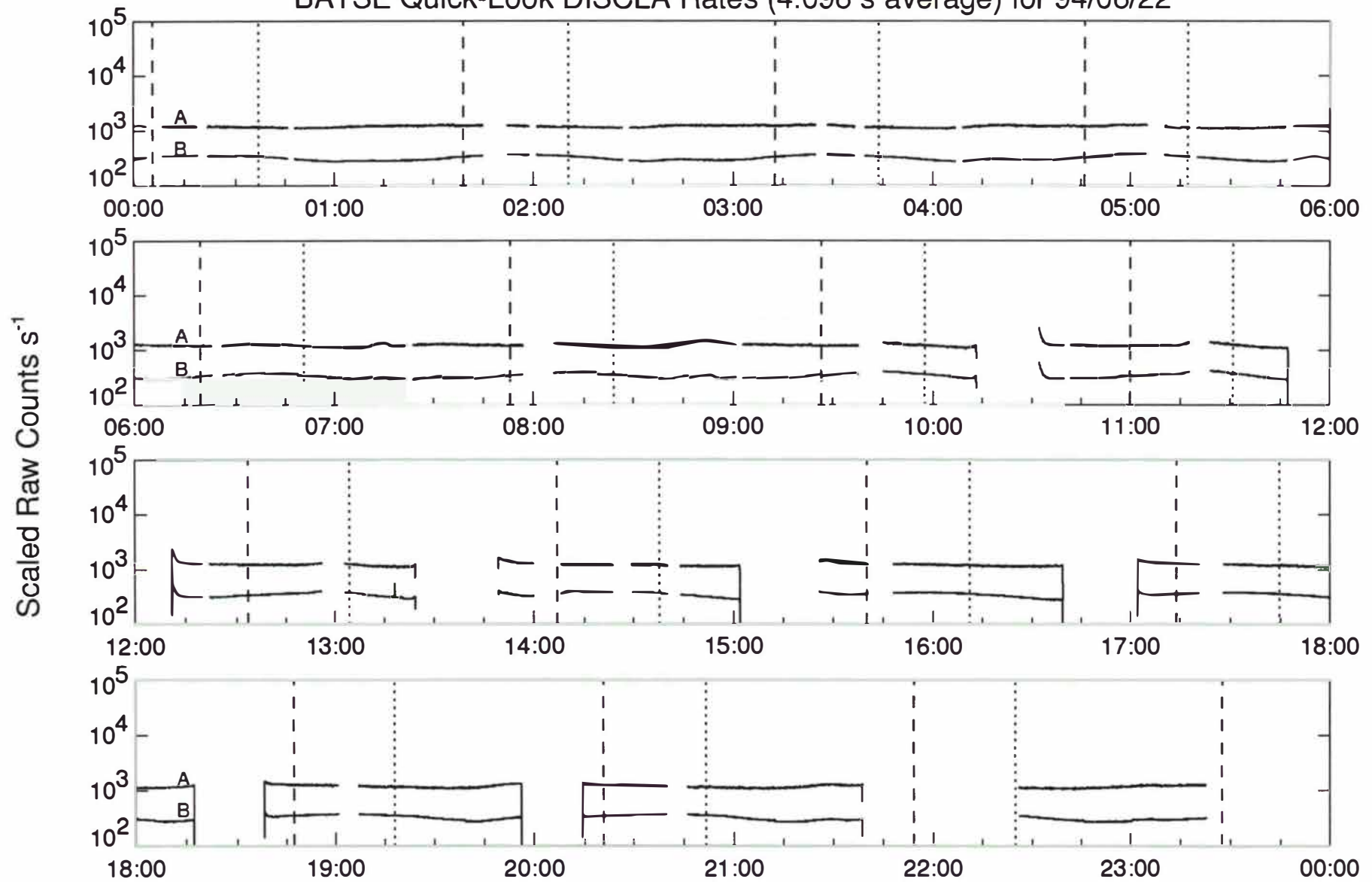
Data Start: 94/06/22, 0000:02

Plot created: 94/06/28, 1821

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/22

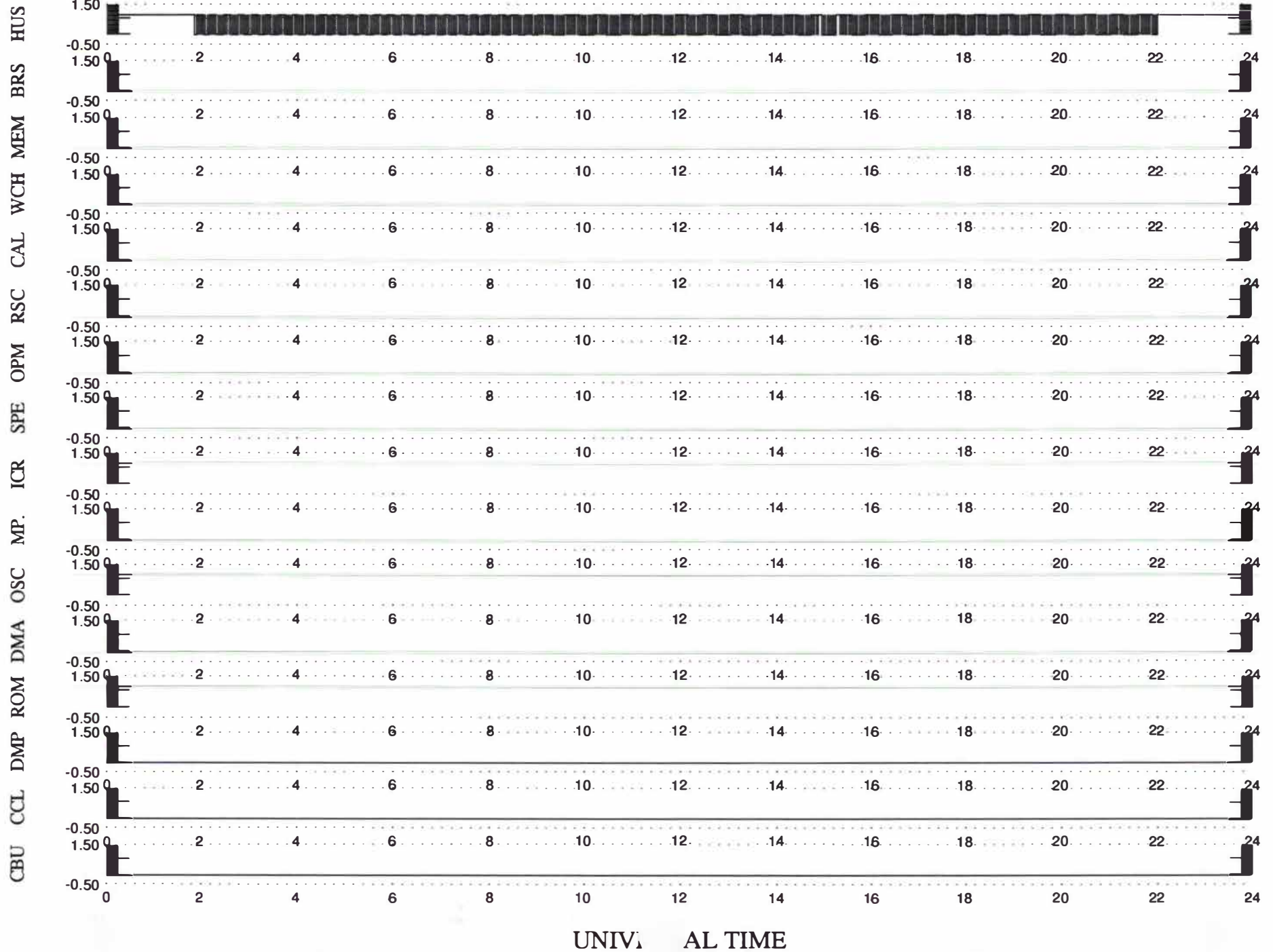


Current Time: 94/06/28, 1830 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

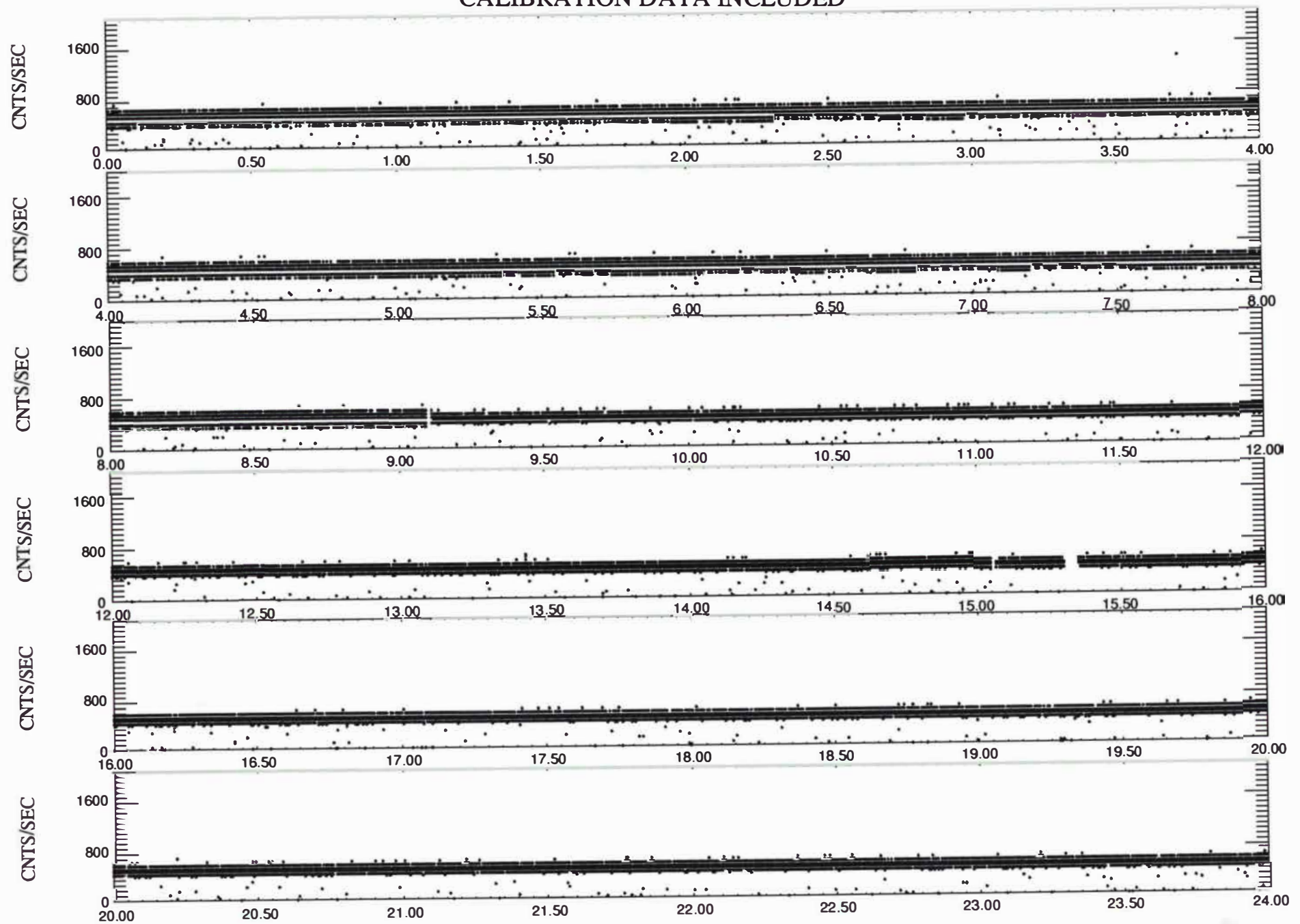
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

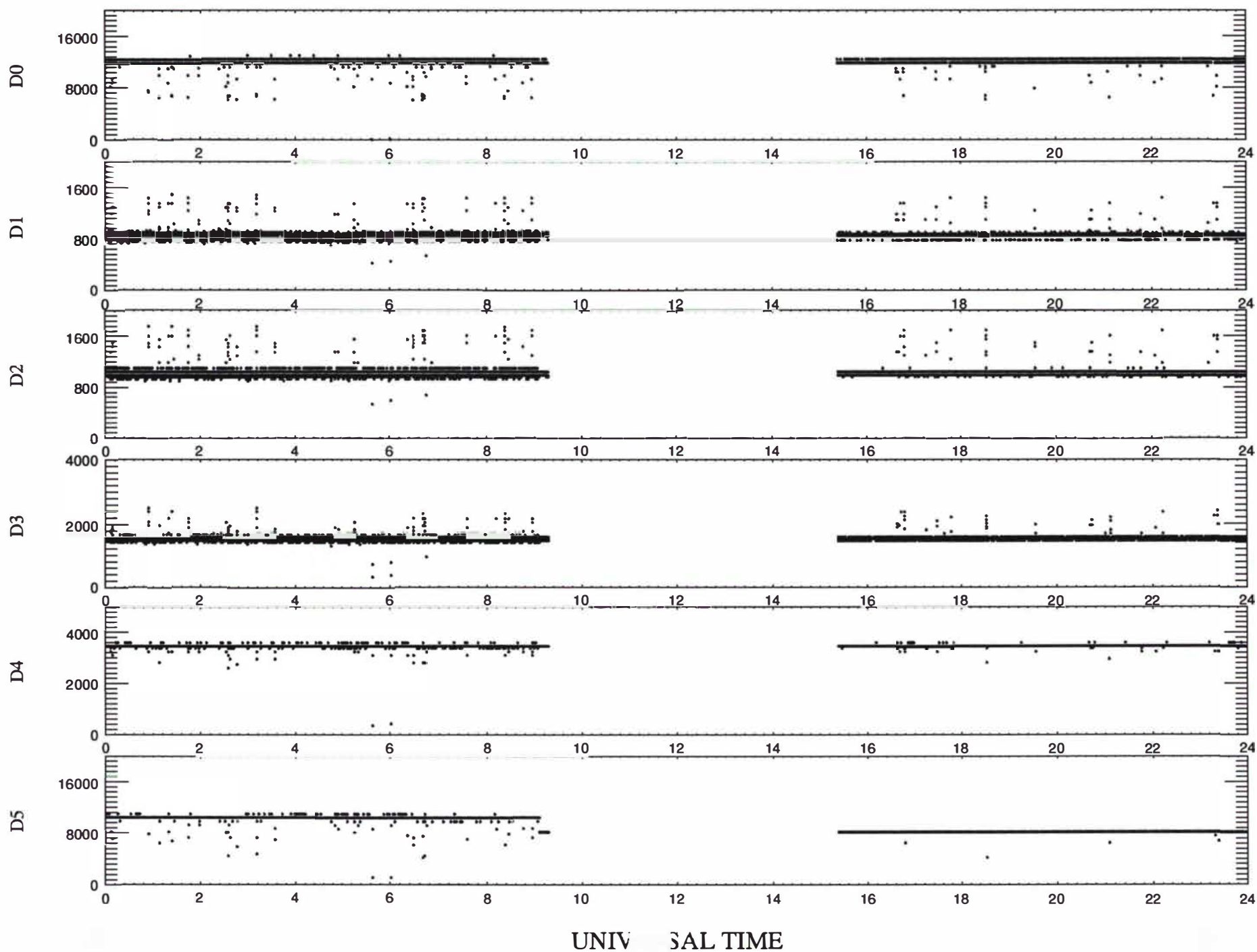
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV. AL TIME



From PREECE@ssl.msfc.nasa.gov Fri Jun 24 15:16 PDT 1994
Date: Fri, 24 Jun 1994 17:17:27 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3040
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3040
EVENT OF 1994 JUN 23 DAY OF YEAR=174
EVENT CROSSING TIME AT BATSE : 19546. S. OR 05:25:46.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 250.000 11.000
BATSE PEAK COUNTING RATE: 6000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 23/ 6/ 94 IS:
RA= 124.183 DEC= -38.946 DIST= 3.039 AU
BATSE-ULYSSES DISTANCE = 454690831. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 55.48 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 859.52 SECS.
CROSSING TIME AT ULYSSES IS 20406. S. OR 05:40:05 +/- 280.01 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 23/ 6/ 94 IS:
RA= 49.889 DEC= 17.804 DIST= 2.059 AU
MARS-BATSE DISTANCE = 308032512. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 34.99 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 841.81 SECS.
CROSSING TIME AT MARS IS 20388. S. OR 05:39:47 +/- 115.07 SECONDS

ND

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3040	940623	9526	19546	6000	250	+11

BATSE BURST TRIGGER

NO.: 03040

TIME: TJD=9526 SECONDS=19546

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=035.6 AZIMUTH=074.4 ERROR=002.8 DEGREES

COMMENTS:

GRB. SINGLE FAST-RISE PULSE, 35 S DURATION. VISIBLE ABOVE 300 KEV.

24 / 6 / 94

ULYSSES RT

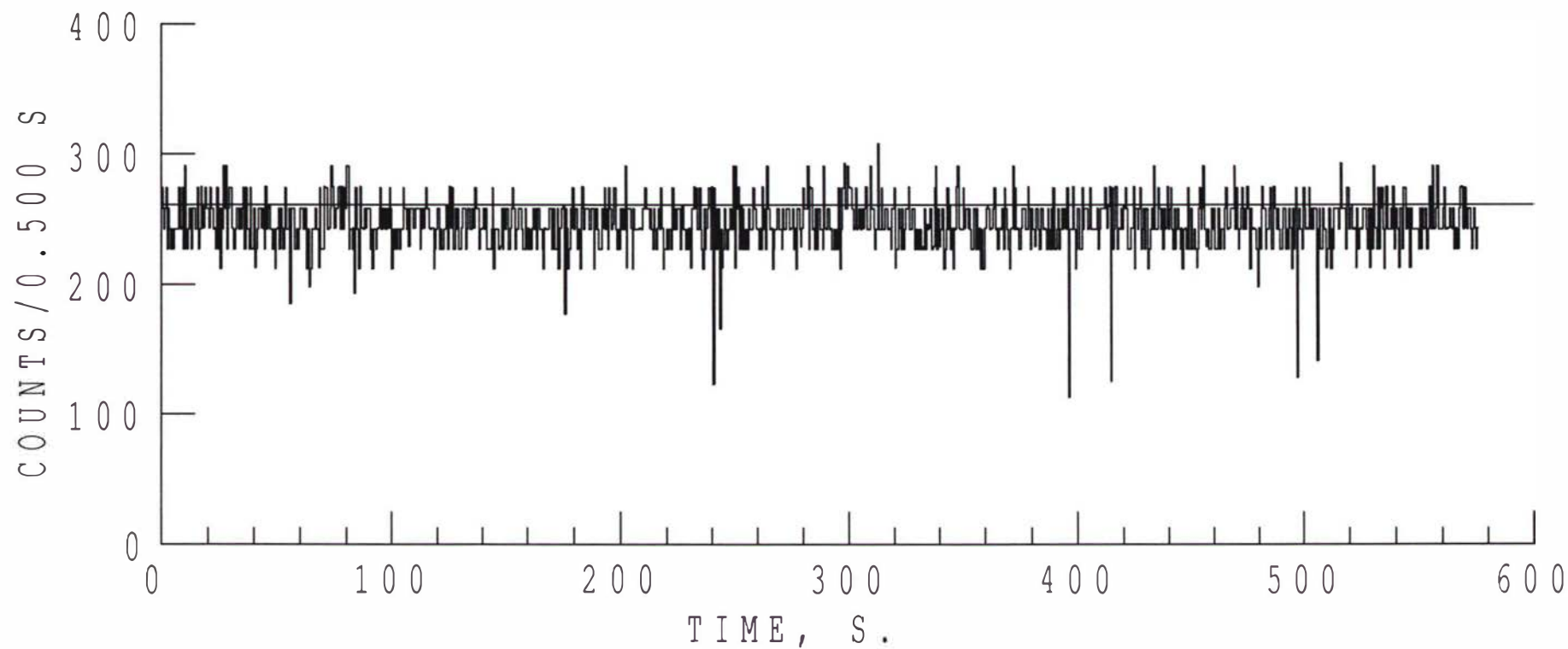
23 / 6 / 94 20124.121 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



GROCSE/LLNL

burstlog

Tue Sep 13 10:49:58 1994

4

SUMMARY

Date (UTC)	TJD	SOD	Trig#	Hunts_RA (J2000)	Hunts_DEC	Hunts_error	BACO-Hunts	Raw data
1/29/94	9381	38599	2793	125.75	27.73	? 0.6035	4.3 deg	
3/29/94	9440	42636	2896	179.98	8.24	? 1.731	~4 deg	
4/28/94	9470	38193	2952	350.59	-0.98	2.063 32.4 deg	59. deg	
6/23/94	9526	19547	3040	249.88	11.22	7.809 2.4 deg	5.3 deg	
8/27/94	9591	19087	3139	280.42	-5.11	4.365 ?	9.6 deg	-19.45
8/28/94	9592	24439	3141	340.56	50.57	? 3.839	8.3 deg	-19.45
9/07/94	9602	30336	3159	105.71	73.56	? 6.252	18.6 deg	-22.43

From PREECE@ssl.msfc.nasa.gov Fri Jun 24 15:18 PDT 1994
Date: Fri, 24 Jun 1994 17:19:37 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3041
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3041
EVENT OF 1994 JUN 23 DAY OF YEAR=174
EVENT CROSSING TIME AT BATSE : 32152. S. OR 08:55:52.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 210.000 44.000
BATSE PEAK COUNTING RATE: 1800 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 23/ 6/ 94 IS:
RA= 124.212 DEC= -38.945 DIST= 3.039 AU
BATSE-ULYSSES DISTANCE = 454688655. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 66.70 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 599.93 SECS.
CROSSING TIME AT ULYSSES IS 32752. S. OR 09:05:51 +/- 300.95 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 23/ 6/ 94 IS:
RA= 49.889 DEC= 17.804 DIST= 2.059 AU
MARS-BATSE DISTANCE = 308032512. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 64.43 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 443.51 SECS.
CROSSING TIME AT MARS IS 32596. S. OR 09:03:15 +/- 167.65 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3041	940623	9526	32152	1800	210	+44

BATSE BURST TRIGGER

NO.: 03041

TIME: TJD=9526 SECONDS=32152

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=082.7 AZIMUTH=067.6 ERROR=004.2 DEGREES

COMMENTS:

GRB. SINGLE PULSE, 15 S DURATION. NOT VISBLE ABOVE 300 KEV.

24 / 6 / 94

ULYSSES RT

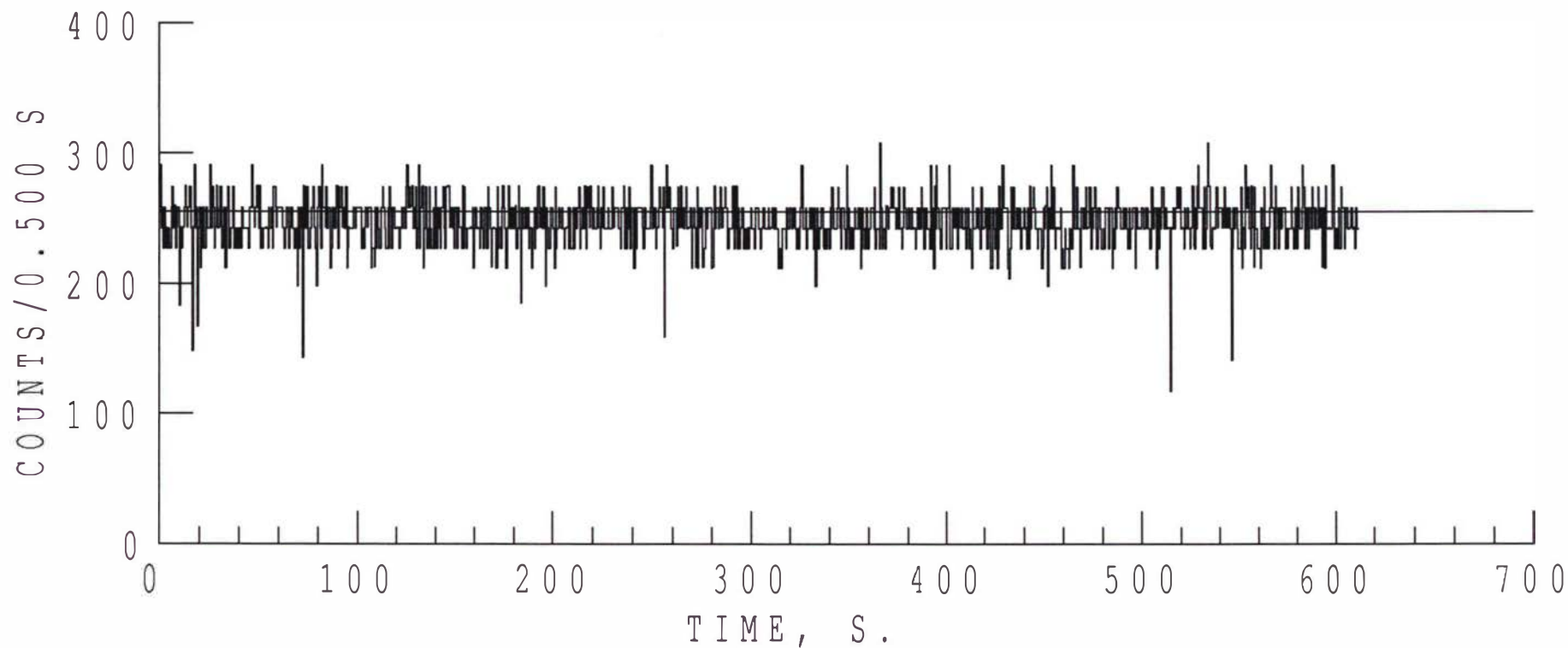
23 / 6 / 94 32436.061 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From PREECE@ssl.msfc.nasa.gov Fri Jun 24 15:20 PDT 1994
Date: Fri, 24 Jun 1994 17:21:23 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3042
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3042
EVENT OF 1994 JUN 23 DAY OF YEAR=174
EVENT CROSSING TIME AT BATSE : 67583. S. OR 18:46:23.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 108.000 76.000
BATSE PEAK COUNTING RATE: 20000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 23/ 6/ 94 IS:
RA= 124.293 DEC= -38.943 DIST= 3.039 AU
BATSE-ULYSSES DISTANCE = 454682520. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 64.58 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 651.06 SECS.
CROSSING TIME AT ULYSSES IS 68234. S. OR 18:57:14 +/- 297.71 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 23/ 6/ 94 IS:
RA= 49.889 DEC= 17.804 DIST= 2.059 AU
MARS-BATSE DISTANCE = 308032512. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=114.73 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -429.85 SECS.
CROSSING TIME AT MARS IS 67153. S. OR 18:39:13 +/- 155.50 SECONDS

RI

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3042	940623	9526	67583	20000	108	+76

BATSE BURST TRIGGER

NO.: 03042

TIME: TJD=9526 SECONDS=67583

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=116.8 AZIMUTH=029.9 ERROR=000.5 DEGREES

COMMENTS:

GRB. COMPLEX OF SPIKES, 230 S DURATION, QUIESCENT INBETWEEN. STRONGLY SEEN
ABOVE 300 KEV IN SOME SPIKES. PEAK OF EMISSION AT T+10 S.

Helio corr removed

Date: Jan 29 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☐ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☒ Is the order of the data in CORREL such that a vernier is done on the data with the best time resolution?

2. BATSE Data

- ☐ 2.042 s subtracted for bursts prior to June 25 1992 and DISCSC programs prior to Version 2.16 (August 28 1992)? *N/A*
- ☒ BATSE ephemeris for T_0 ?
- ☒ Error circle position and radius from public catalog used?
- ☐ If MER data were used, is a 30 ms systematic error included? *N/A*

3. PVO Data

- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS database updated?

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

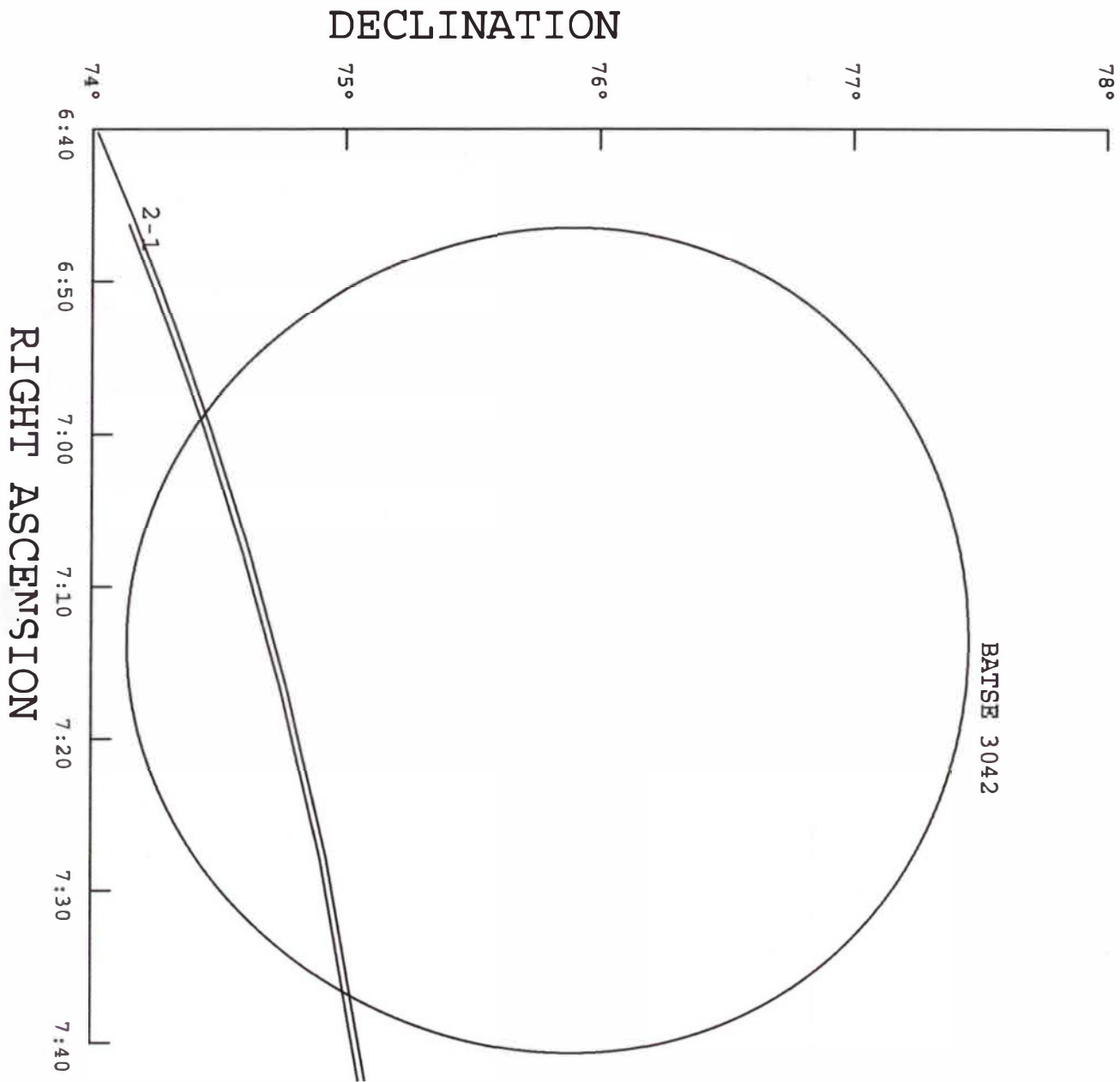
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF JUN 23, 1994 18:56

29 / 1/98



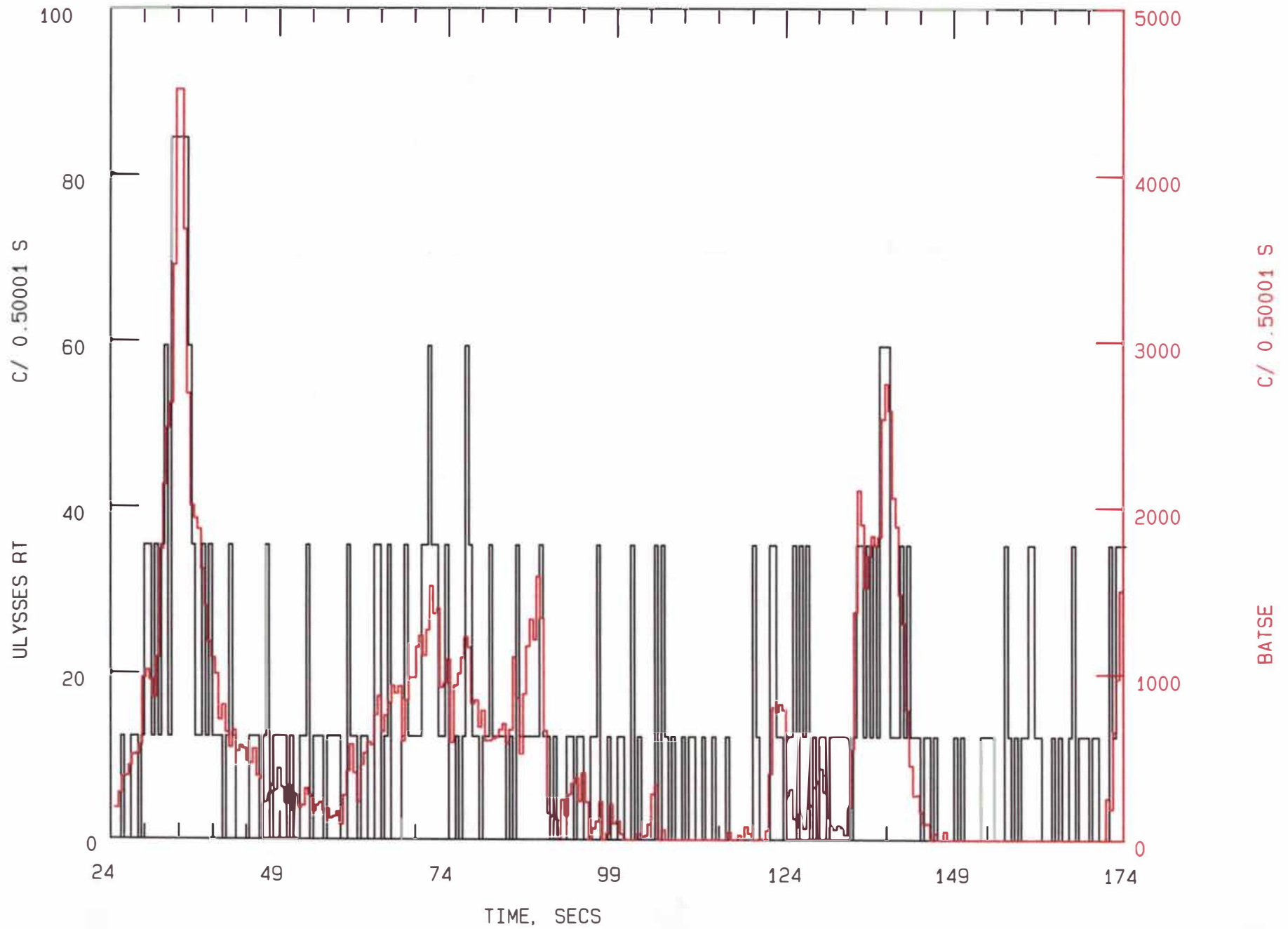
ULYSSES RT-BATSE

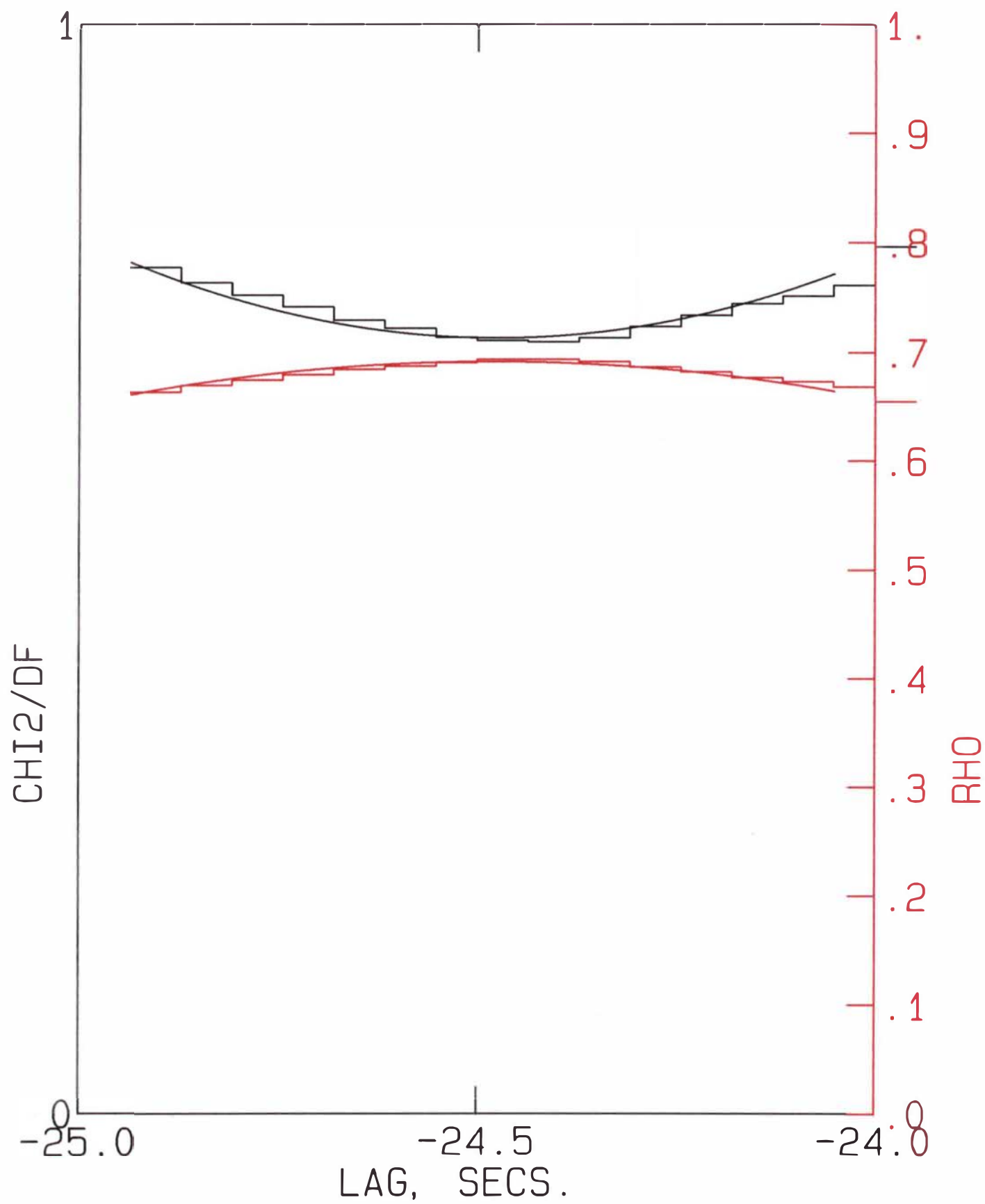
CORRELATION

23/ 6/94

68182.042

29/ 1/98





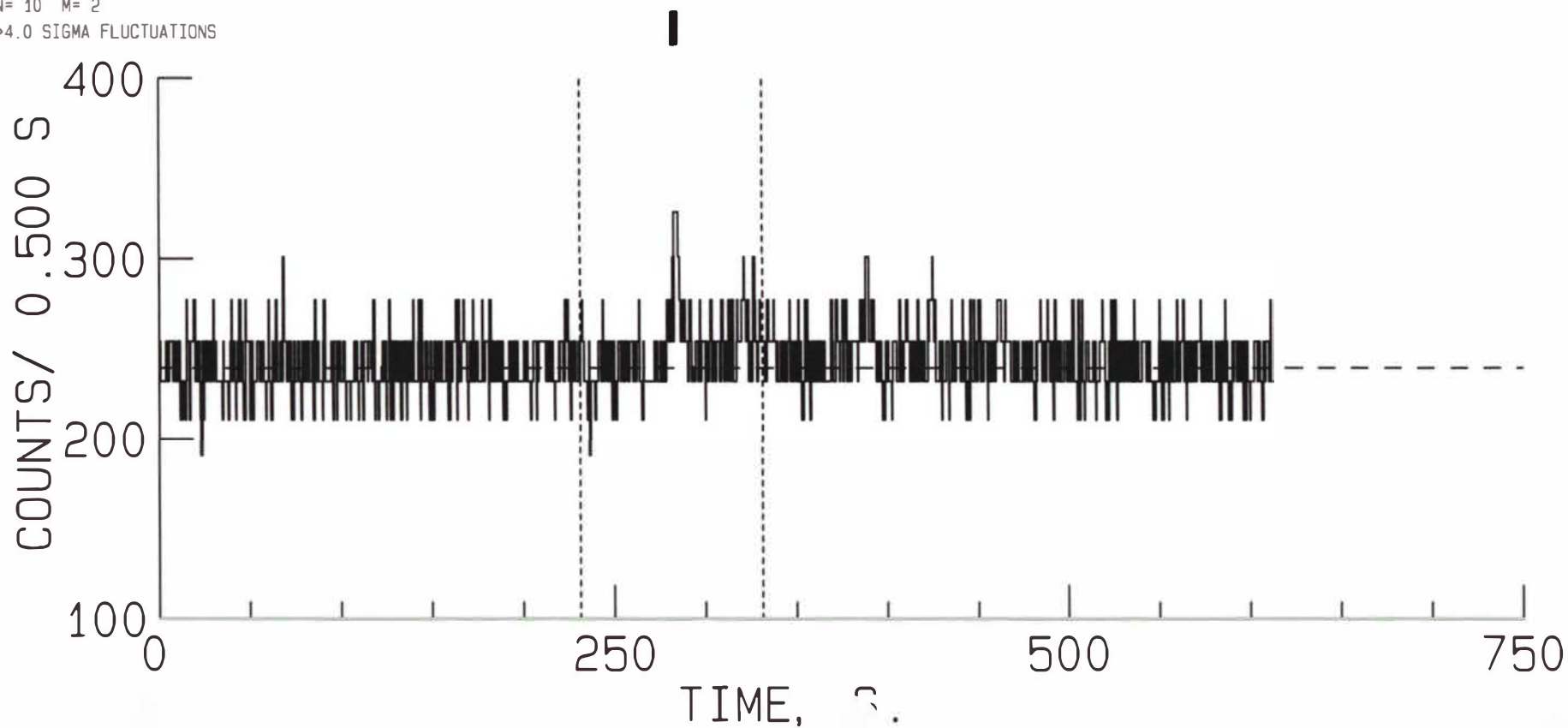
ULYSSES RT

29 / 1 / 98

23 / 6 / 94 67932.097 s

22- 149 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



I found an error in the ephemeris file you sent recently. I requested an ephemeris for 940623 at 67583, and in the file it is listed is 940622. Is the time right and the date wrong, or vice-versa? Please note that e-mail Stayce is bouncing back again, so she will not receive this.

Kevin

cc: Stayce Cole

Bill Henze

Chryssa Kouveliotou

From root Tue Jul 26 11:13 1994

Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)

id AA02905; Tue, 26 Jul 94 11:13:02

Received: from SSLLES.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (5.0/SMI-SVR4)

id AA13221; Tue, 26 Jul 1994 11:23:51 +0800

Date: Tue, 26 Jul 1994 13:24:04 -0500 (CDT)

From: COLE@ssl.msfc.nasa.gov

To: khurley@space6.ssl.berkeley.edu, lhevxcline@ssl.msfc.nasa.gov

Message-Id: <940726132404.20209094@ssl.msfc.nasa.gov>

Subject: 940623

Content-Length: 321

Status: R

KEVIN,

SORRY FOR THE TYPO.

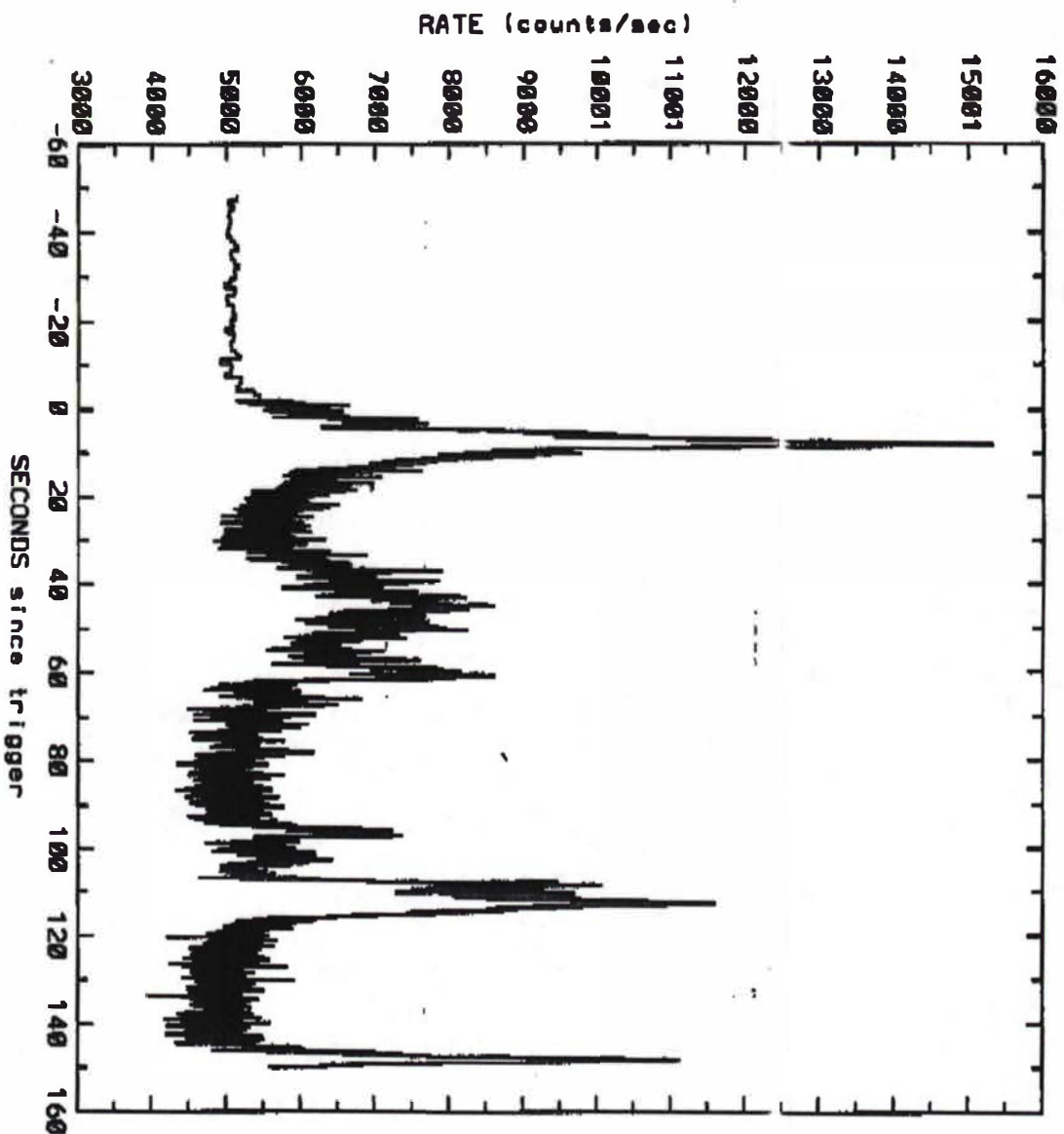
THE DATE IS 940623 AT 67583.

I WILL CORRECT THIS IN THE UPDATED EPHEM FILE.

EXPECT 10 FILES LATE TODAY OR EARLY MORNING. PLEASE LET ME KNOW WHEN YOU ARE
DY TO RECEIVE MORE FILES. I AM TRYING TO COMPLETE MOST REQUEST ON THIS LIST
ORE THE OPERATIONS TEAM TAKES OVER THIS TASK.

STAYCE

DATA FOR K. HURLEY



14-JUL-1994 14:42:32

Created by HOPS BD
(Burst Display)
Version 2.28

Trigger = 2842

Trigger Time:

9526 / 67583.642

Burst Data Type:

DISC

Deadtime
Corrected: NBackground Data
Type: PREB + DISCLAMinimum Integ. Time:
0.064 (seconds)

Detectors (7..8):

00000011

Discriminators:

1 1 21

Quality Mask:

BDISP1

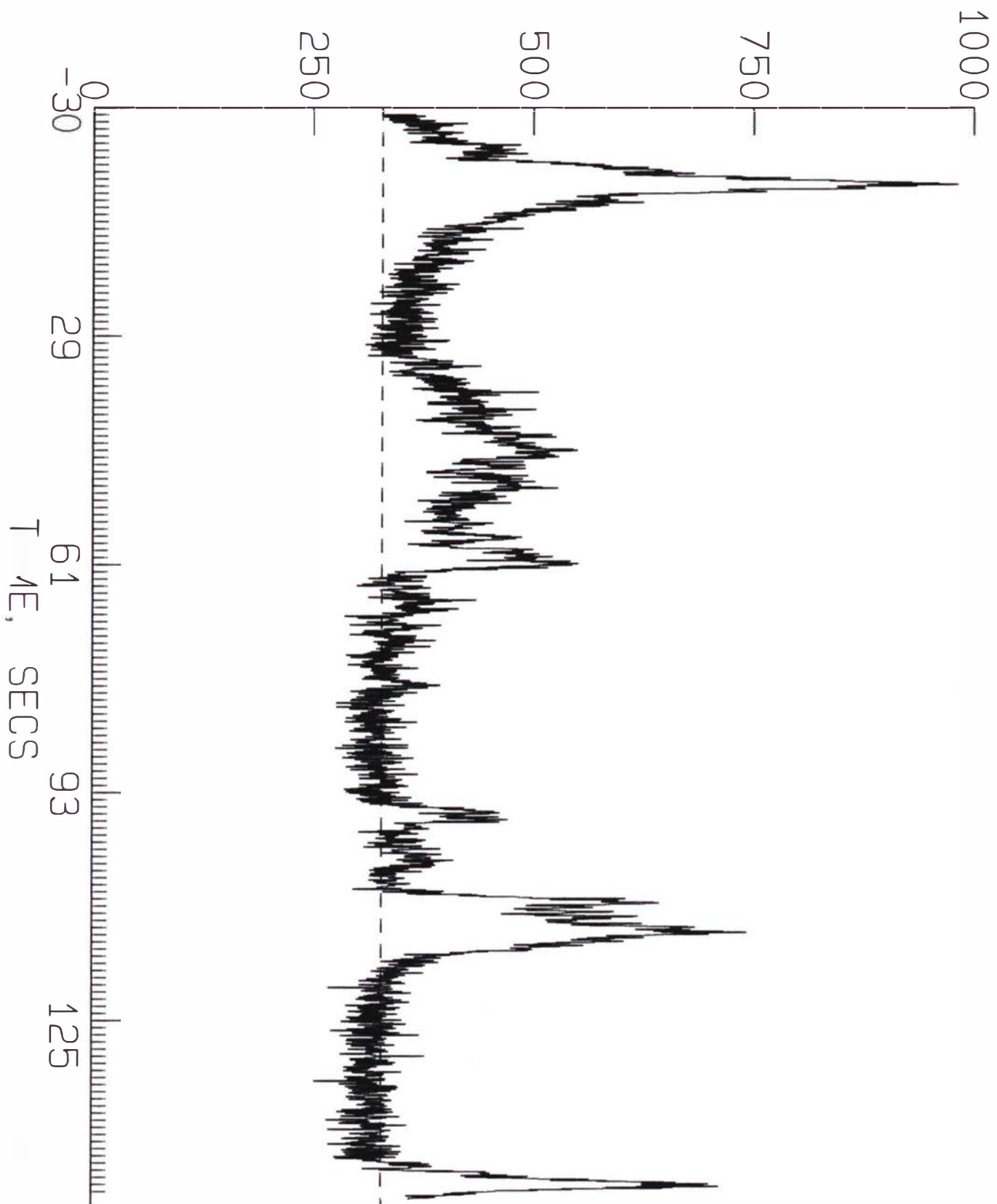
BATSE

23/06/94

67583.642

25- 100 keV

COUNTS/ .064 S



25 / 7 / 94

From PREECE@ssl.msfc.nasa.gov Fri Jun 24 15:22 PDT 1994
Date: Fri, 24 Jun 1994 17:23:48 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3043
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3043
EVENT OF 1994 JUN 23 DAY OF YEAR=174
EVENT CROSSING TIME AT BATSE : 85685. S. OR 23:48:05.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 31.000 -45.000
BATSE PEAK COUNTING RATE: 4200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 23/ 6/ 94 IS:
RA= 124.334 DEC= -38.942 DIST= 3.039 AU
BATSE-ULYSSES DISTANCE = 454679417. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=114.36 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -625.54 SECS.
CROSSING TIME AT ULYSSES IS 85059. S. OR 23:37:39 +/- 280.37 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 23/ 6/ 94 IS:
RA= 49.889 DEC= 17.804 DIST= 2.059 AU
MARS-BATSE DISTANCE = 308032512. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=114.88 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -432.35 SECS.
CROSSING TIME AT MARS IS 85253. S. OR 23:40:52 +/- 155.26 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3043	940623	9526	85685	4200	031	-45

BATSE BURST TRIGGER

NO.: 03043

TIME: TJD=9526 SECONDS=85685

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=097.1 AZIMUTH=246.5 ERROR=011.2 DEGREES

COMMENTS:

2 GRBS! TRIGGERED BURST IS SHORT, 0.08 S DURATION; NOT VISIBLE ABOVE 300 KEV.
PRECEDED BY UNTRIGGERED, UNCORRELATED EVENT LASTING 35 S AT T-70S.

28 / 6 / 94

ULYSSES RT

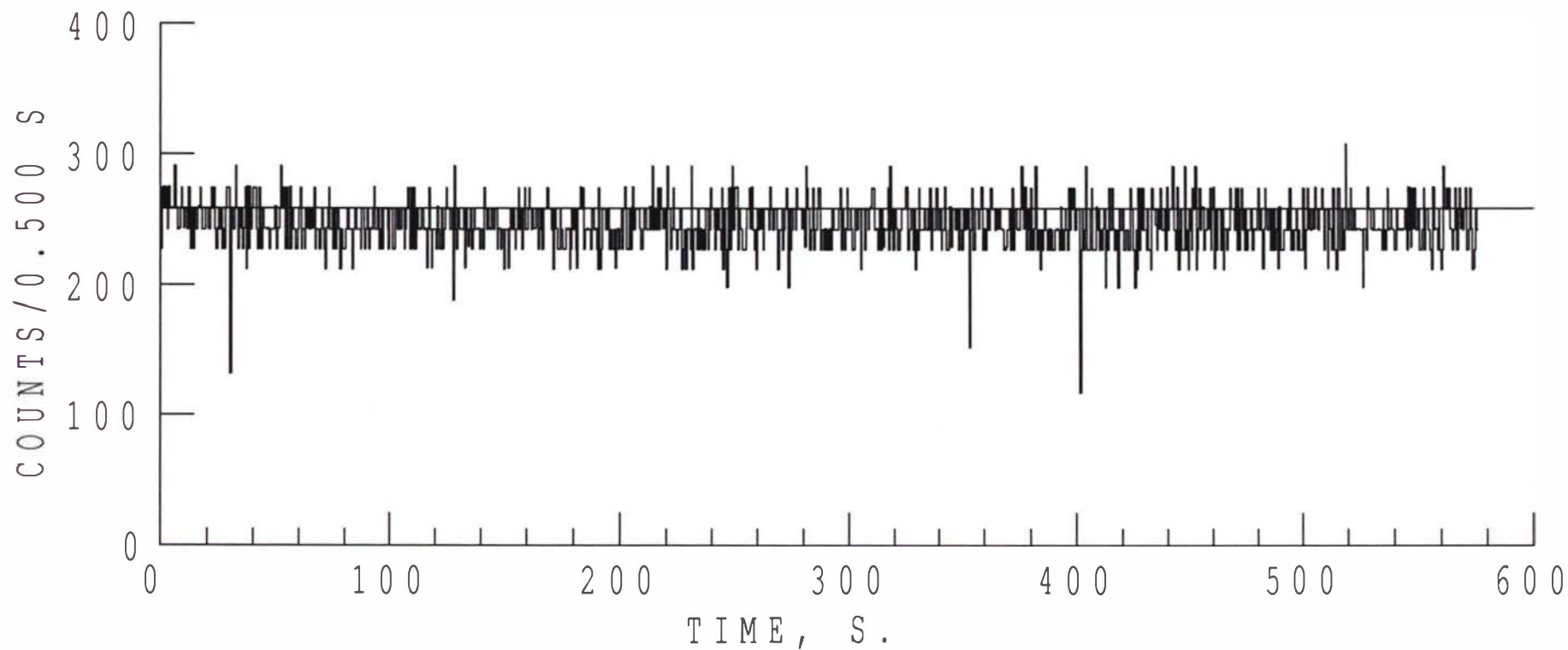
23 / 6 / 94 84780.109 s

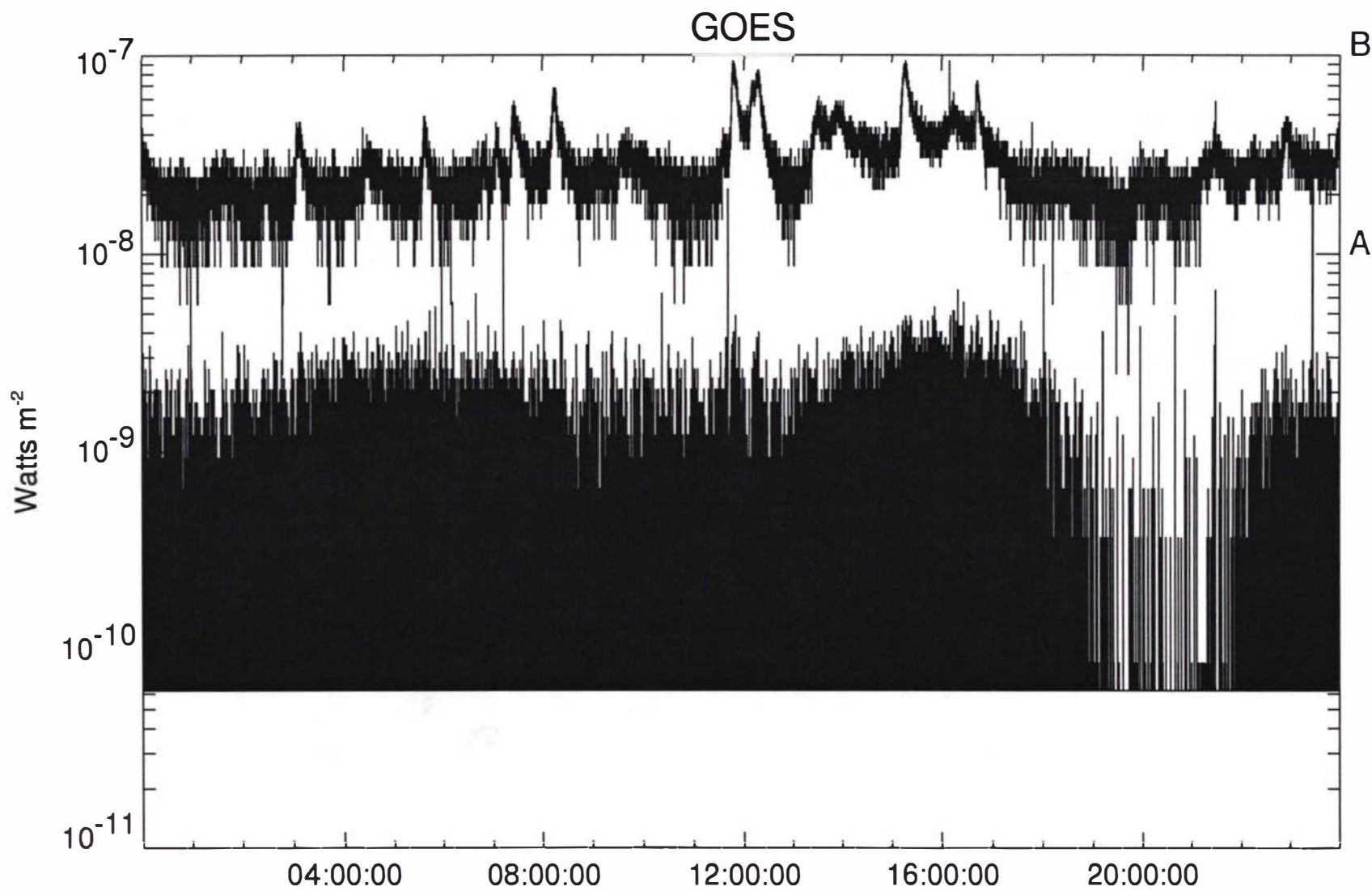
0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





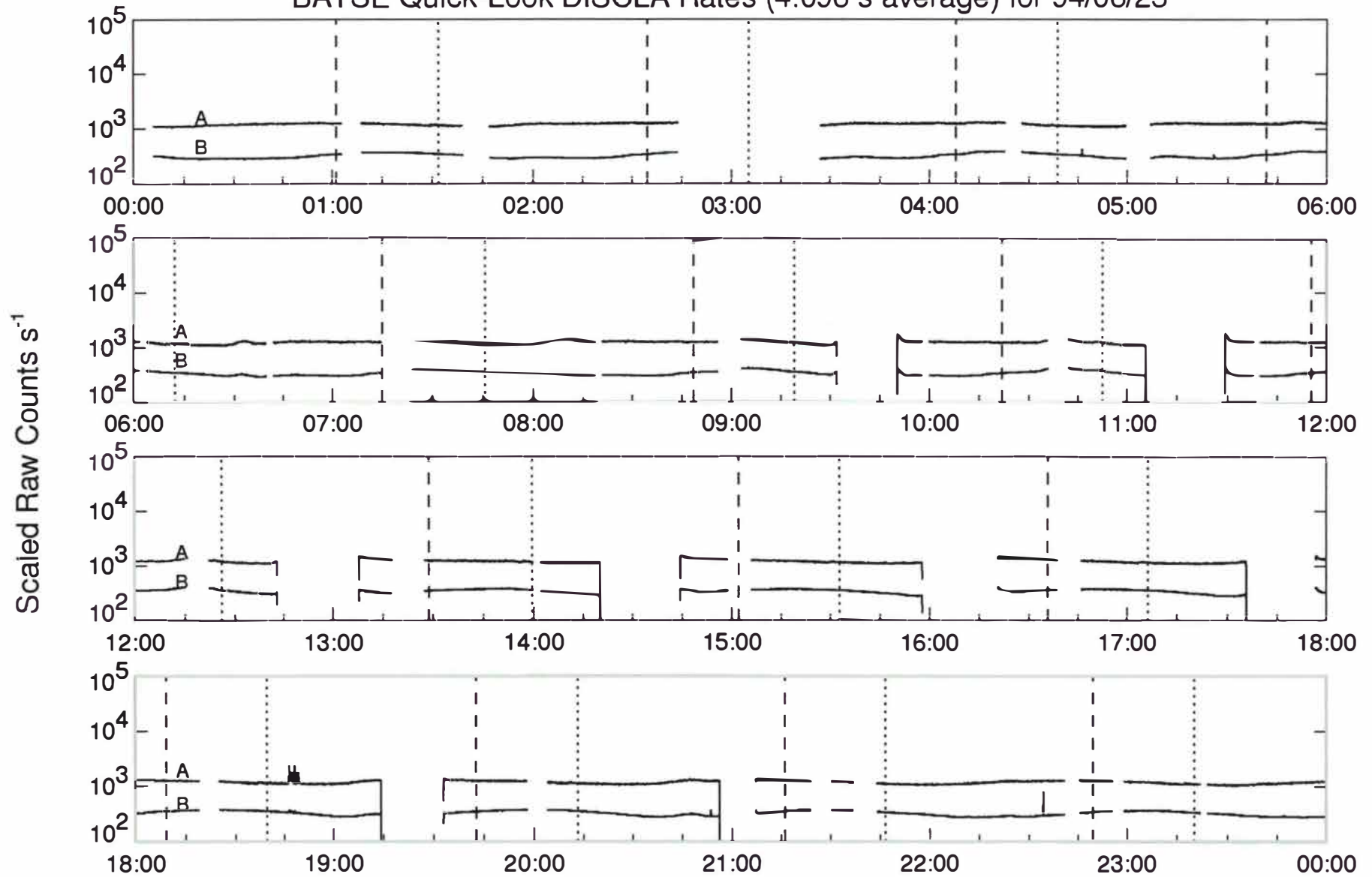
Data Start: 94/06/23, 0000:02

Plot created: 94/06/28, 1822

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/23

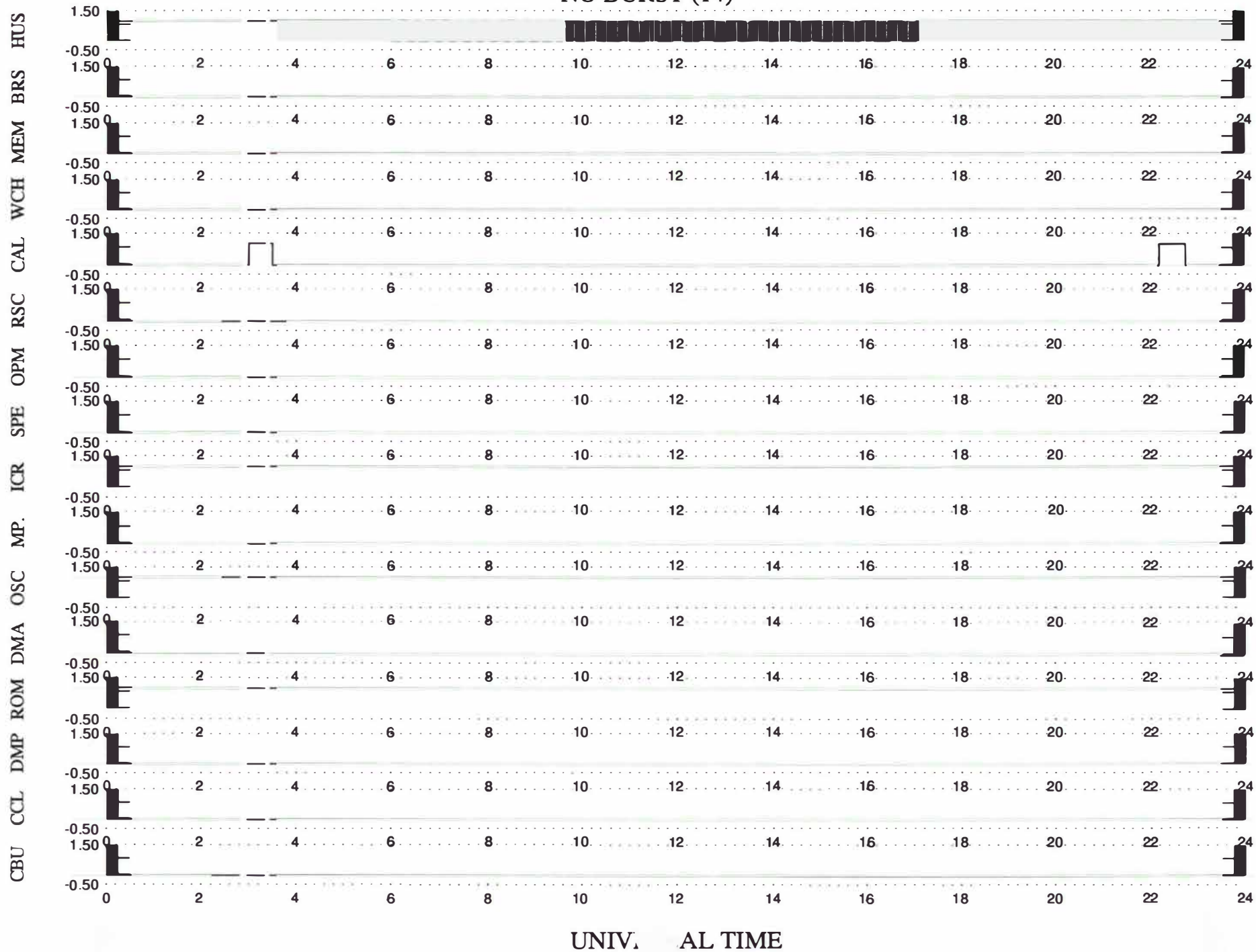


Current Time: 94/06/28, 1830 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

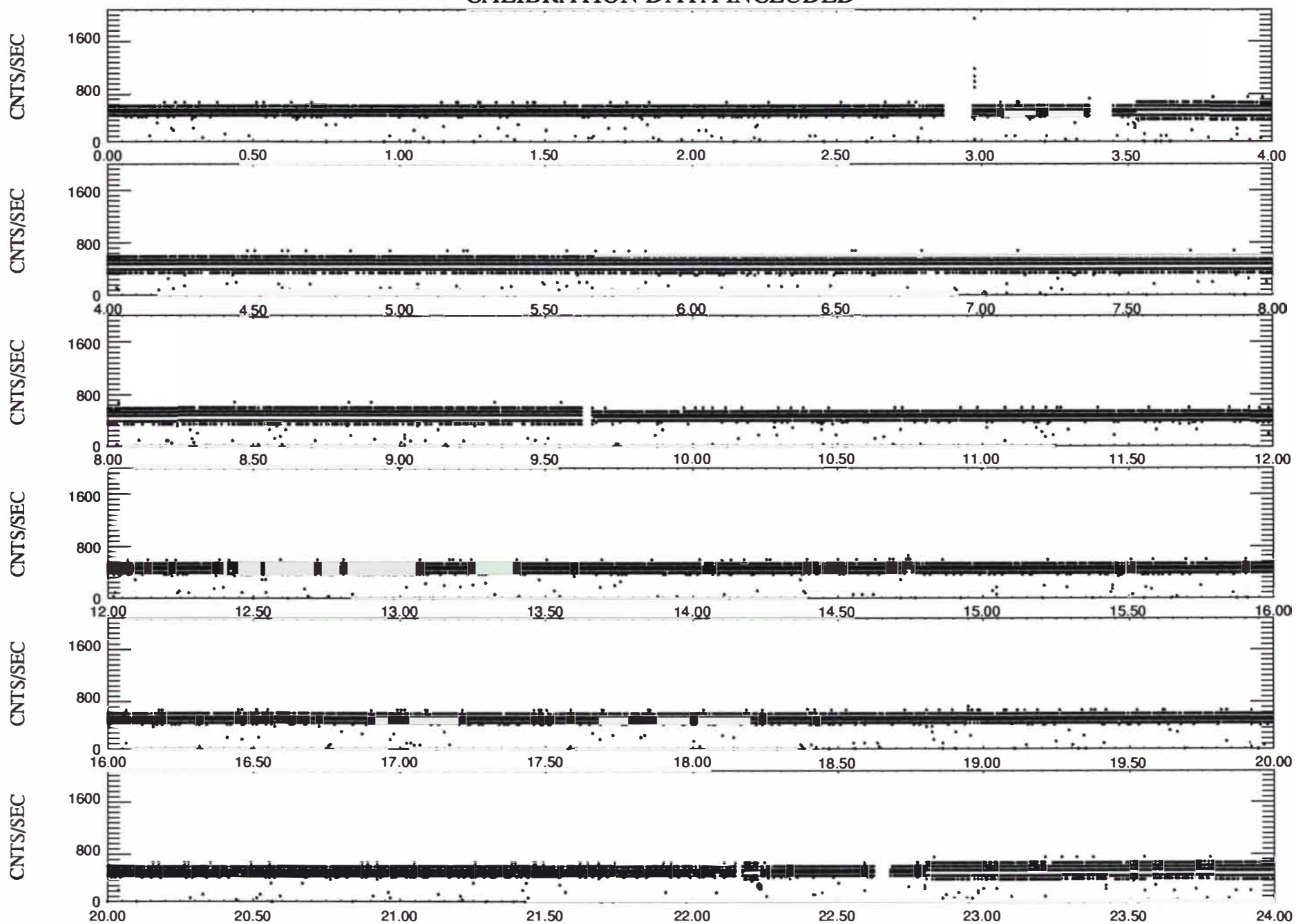
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

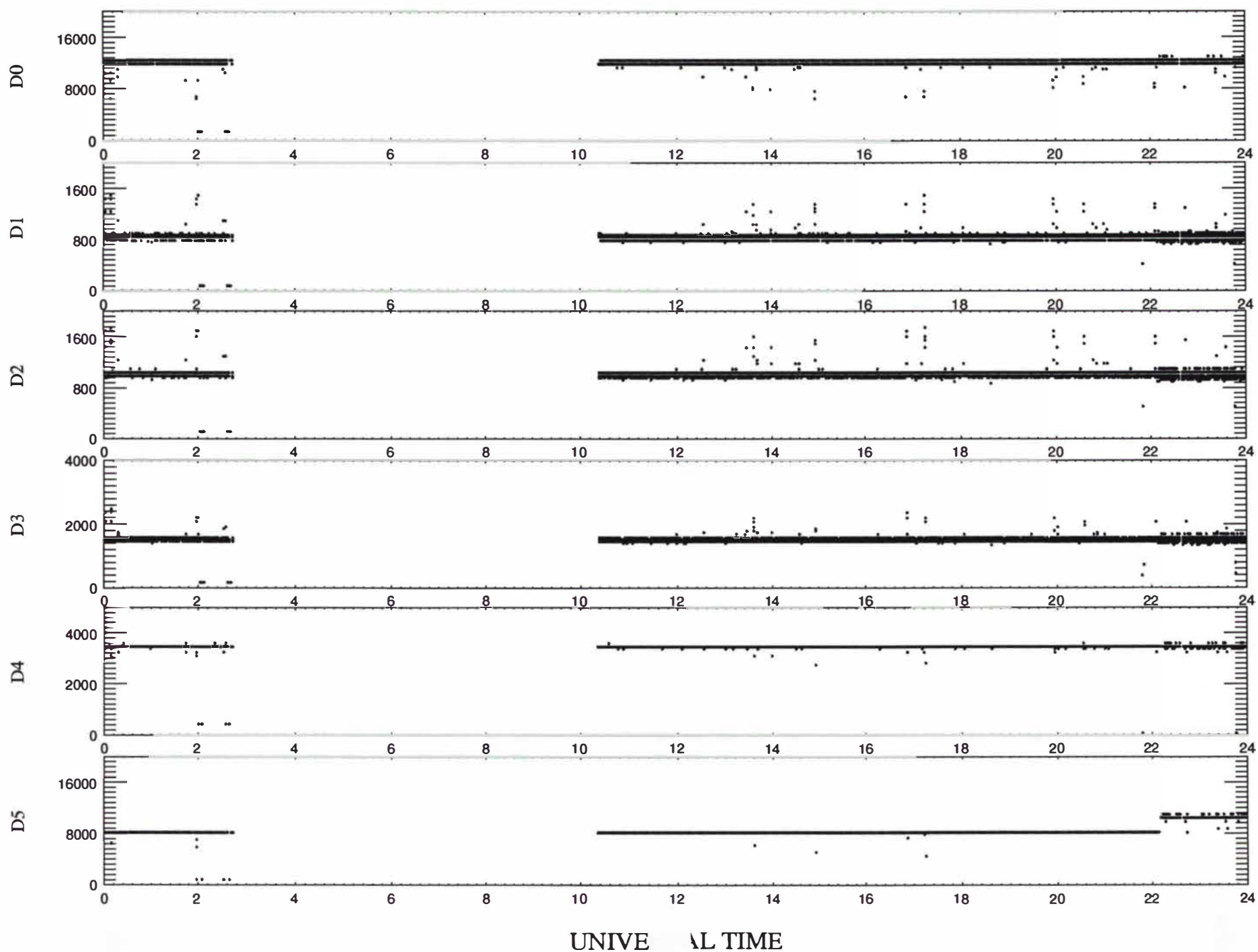
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From RICHARDSON@ssl.msfc.nasa.gov Tue Jun 28 08:11 PDT 1994
Date: Tue, 28 Jun 1994 10:12:58 -0500 (CDT)
From: RICHARDSON@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3044
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3044
EVENT OF 1994 JUN 24 DAY OF YEAR=175
EVENT CROSSING TIME AT BATSE : 52394. S. OR 14:33:14.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 276.000 -42.000
BATSE PEAK COUNTING RATE: 2200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 24/ 6/ 94 IS:
RA= 124.458 DEC= -38.941 DIST= 3.039 AU
BATSE-ULYSSES DISTANCE = 454670215. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 84.97 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 132.86 SECS.
CROSSING TIME AT ULYSSES IS 52527. S. OR 14:35:26 +/- 314.31 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 24/ 6/ 94 IS:
RA= 50.619 DEC= 17.998 DIST= 2.056 AU
MARS-BATSE DISTANCE = 307572896. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 45.32 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 721.44 SECS.
CROSSING TIME AT MARS IS 53115. S. OR 14:45:15 +/- 137.60 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3044	940624	9527	52394	2200	276	-42

BATSE BURST TRIGGER

NO.: 03044

TIME: TJD=9527 SECONDS=52394

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=028.7 AZIMUTH=206.6 ERROR= DEGREES

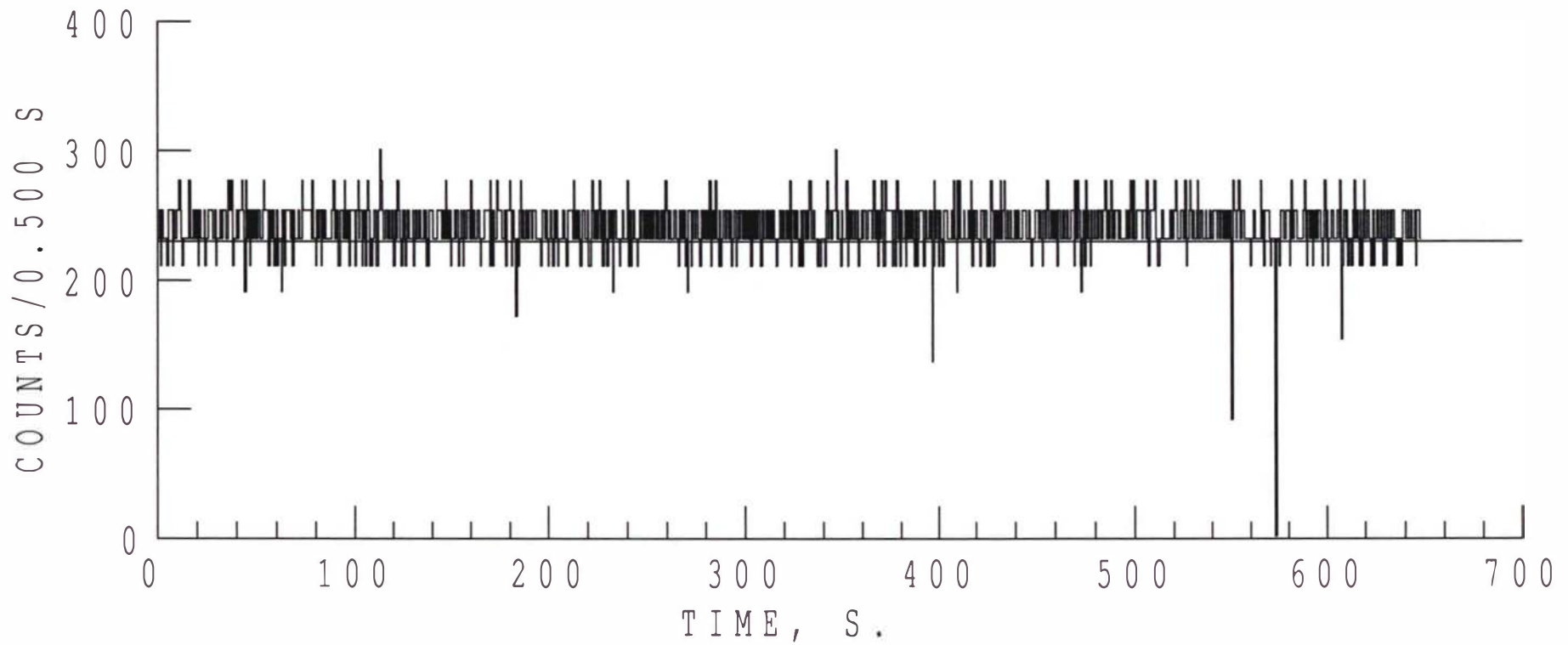
COMMENTS:

GRB. SINGLE SPIKE LASTING APROX. 2SEC. NOT VISIBLE ABOVE 300KEV.

28 / 6 / 94

ULYSSES RT
24 / 6 / 94 52200.176 s
0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From RICHARDSON@ssl.msfc.nasa.gov Tue Jun 28 08:51 PDT 1994
Date: Tue, 28 Jun 1994 10:52:51 -0500 (CDT)
From: RICHARDSON@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3045
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3045
EVENT OF 1994 JUN 24 DAY OF YEAR=175
EVENT CROSSING TIME AT BATSE : 69712. S. OR 19:21:52.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 21.000 8.000
BATSE PEAK COUNTING RATE: 14000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 24/ 6/ 94 IS:
RA= 124.499 DEC= -38.941 DIST= 3.039 AU
BATSE-ULYSSES DISTANCE = 454667219. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 74.50 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 405.33 SECS.
CROSSING TIME AT ULYSSES IS 70117. S. OR 19:28:37 +/- 309.88 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 24/ 6/ 94 IS:
RA= 50.619 DEC= 17.998 DIST= 2.056 AU
MARS-BATSE DISTANCE = 307572896. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=149.51 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -884.11 SECS.
CROSSING TIME AT MARS IS 68828. S. OR 19:07:07 +/- 76.94 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3045	940624	9527	69712	14000	021	+08

BATSE BURST TRIGGER
NO.: 3045

TIME: TJD=9527 SECONDS=69712

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=105.9 AZIMUTH=301.4 ERROR= DEGREES

COMMENTS:

GRB. SINGLE SPIKE WITH STRUCTURE. LASTING APROX. .5SEC. NOT VISIBLE ABOVE 300KEV

28 / 6 / 94

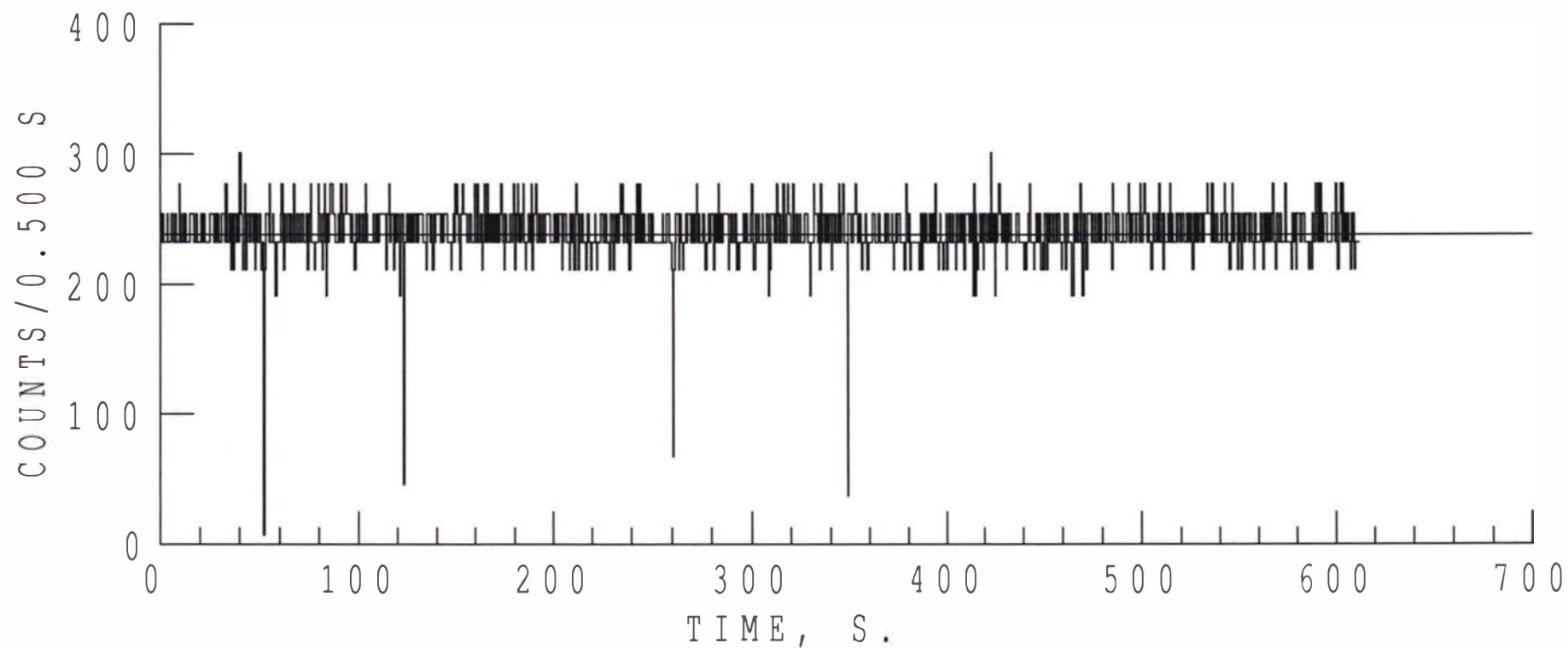
ULYSSES RT

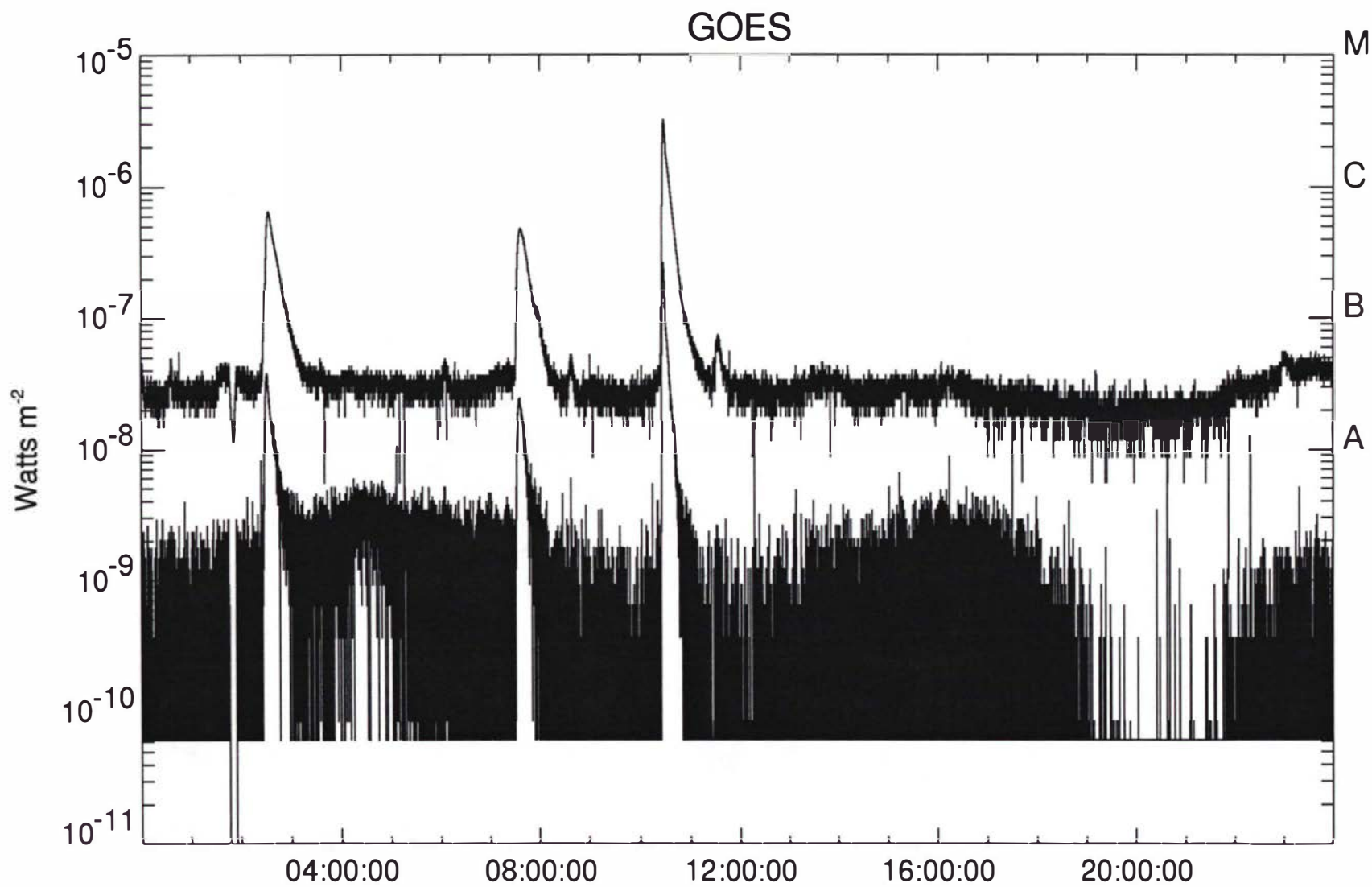
24 / 6 / 94 69804.438 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





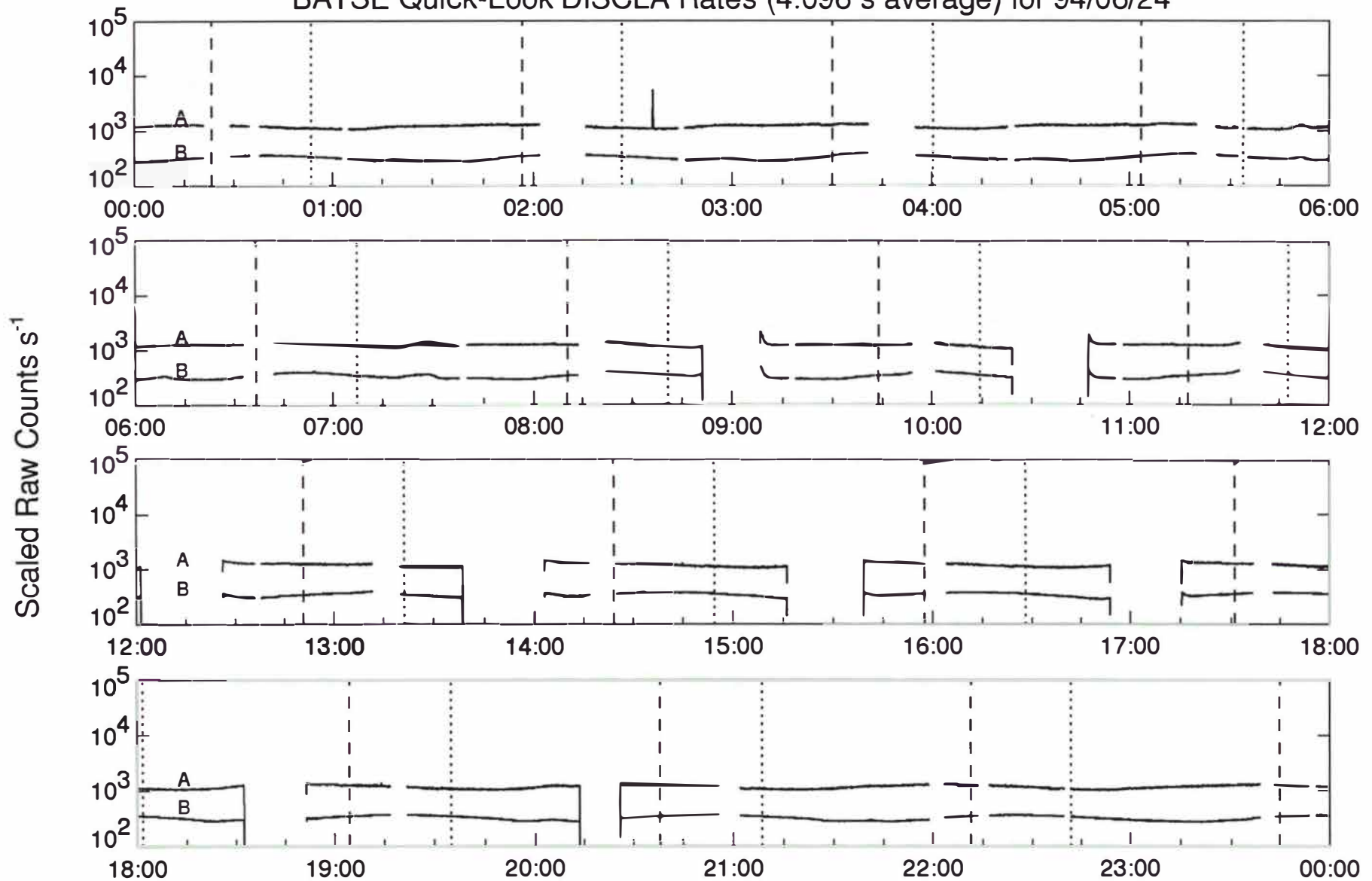
Data Start: 94/06/24, 0000:02

Plot created: 94/06/28, 1823

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/24

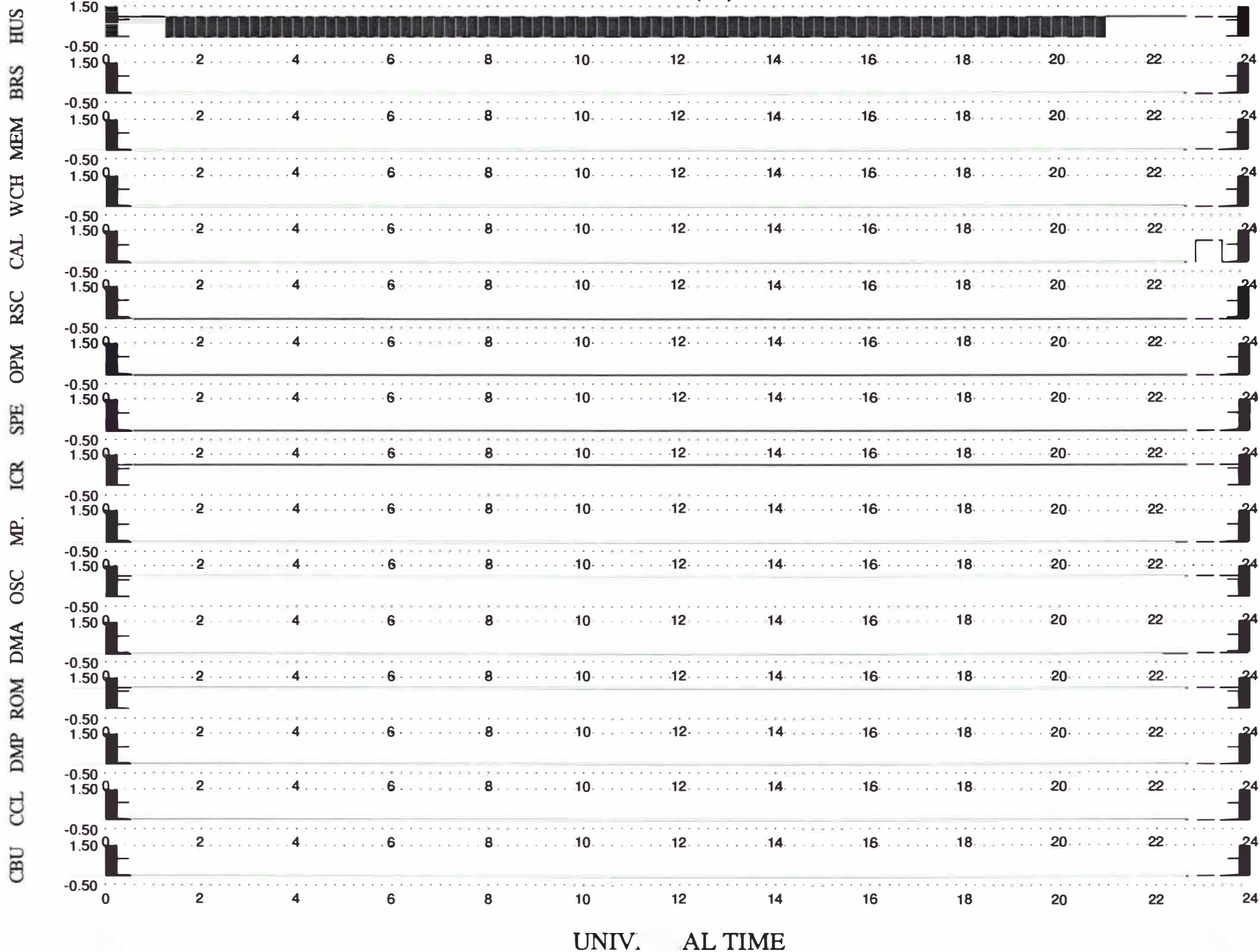


Current Time: 94/06/28, 1830 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

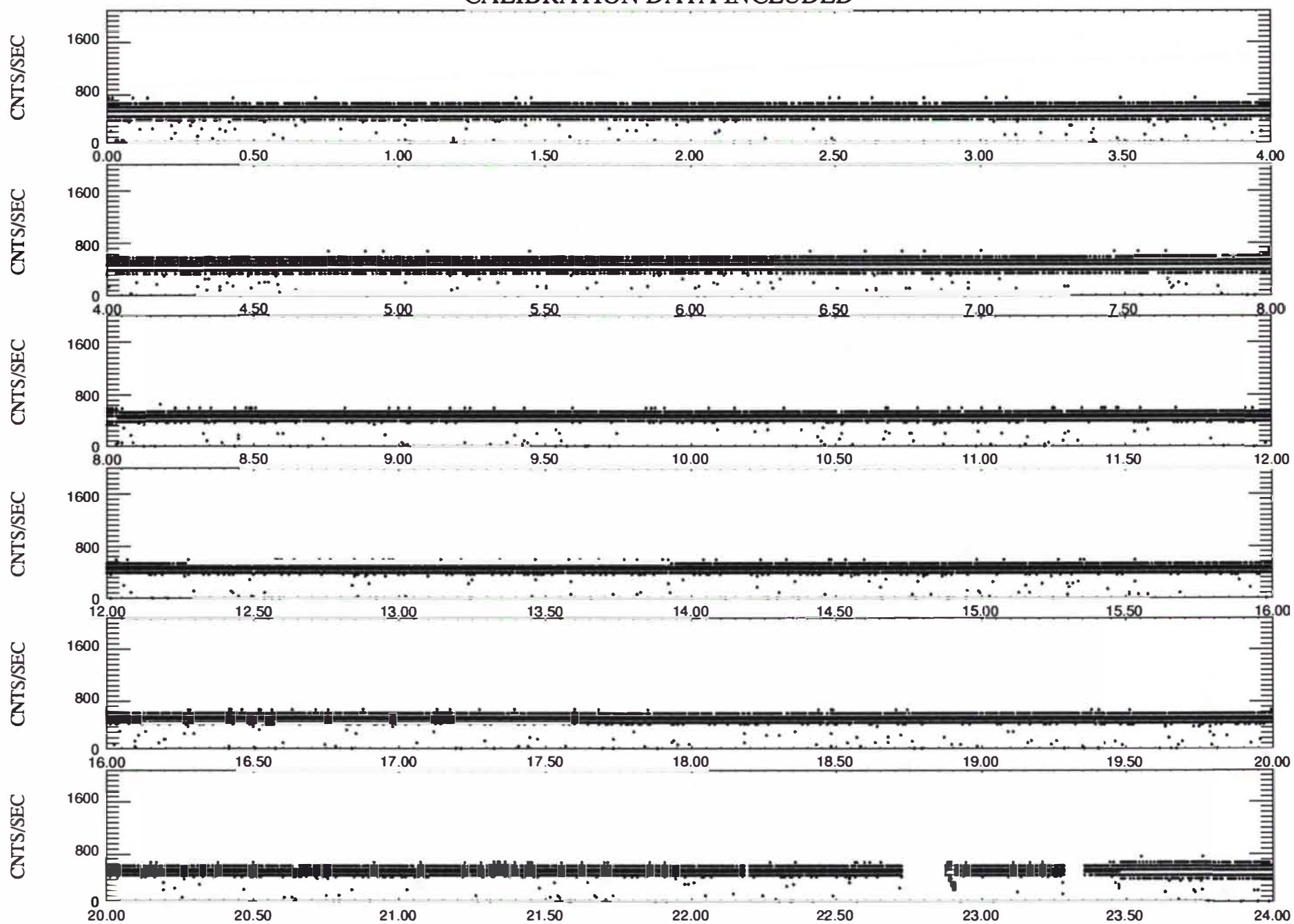
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

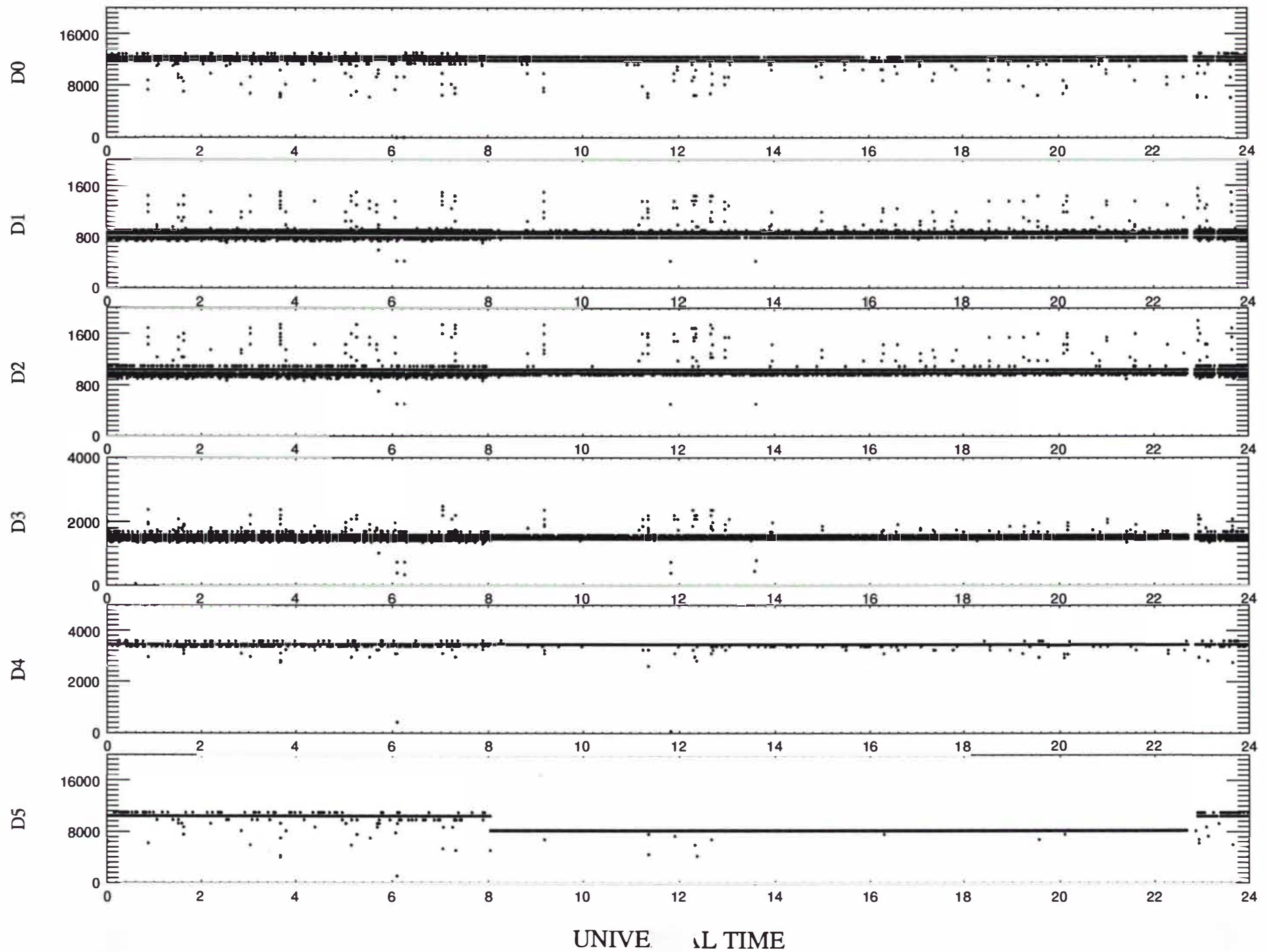
NO BURST (14)

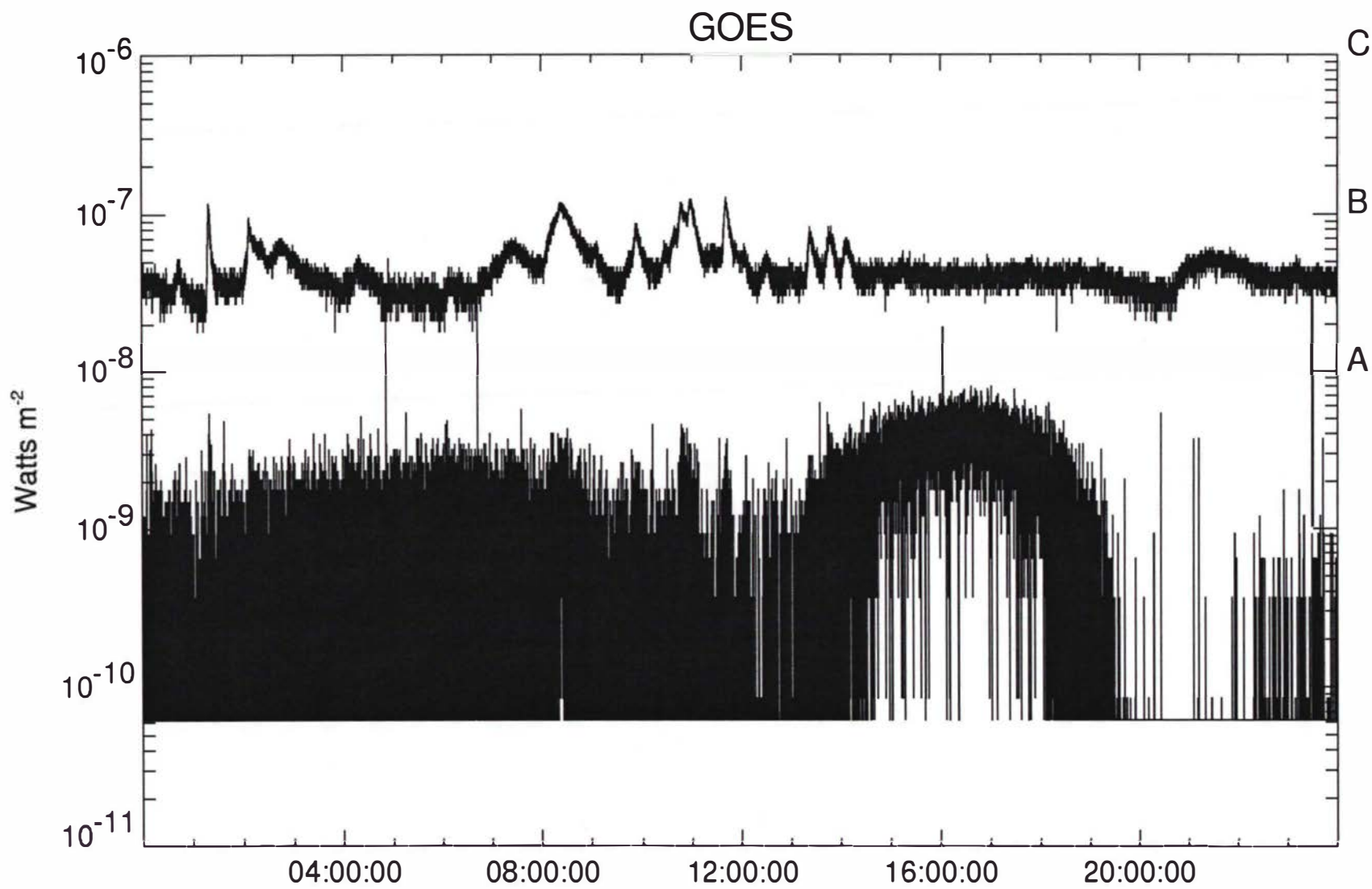


CALIBRATION DATA INCLUDED



UNIV AL TIME





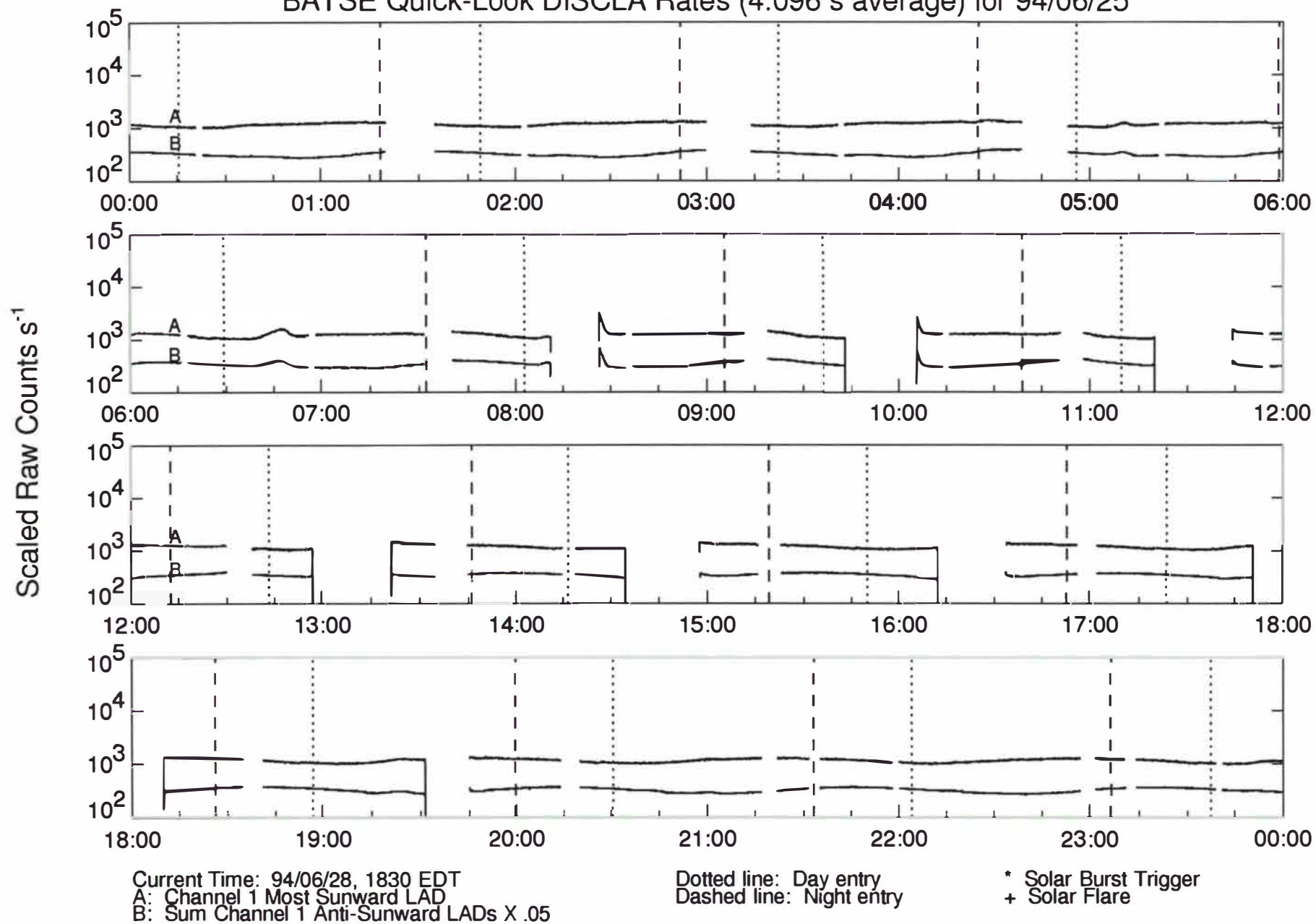
Data Start: 94/06/25, 0000:01

Plot created: 94/06/28, 1824

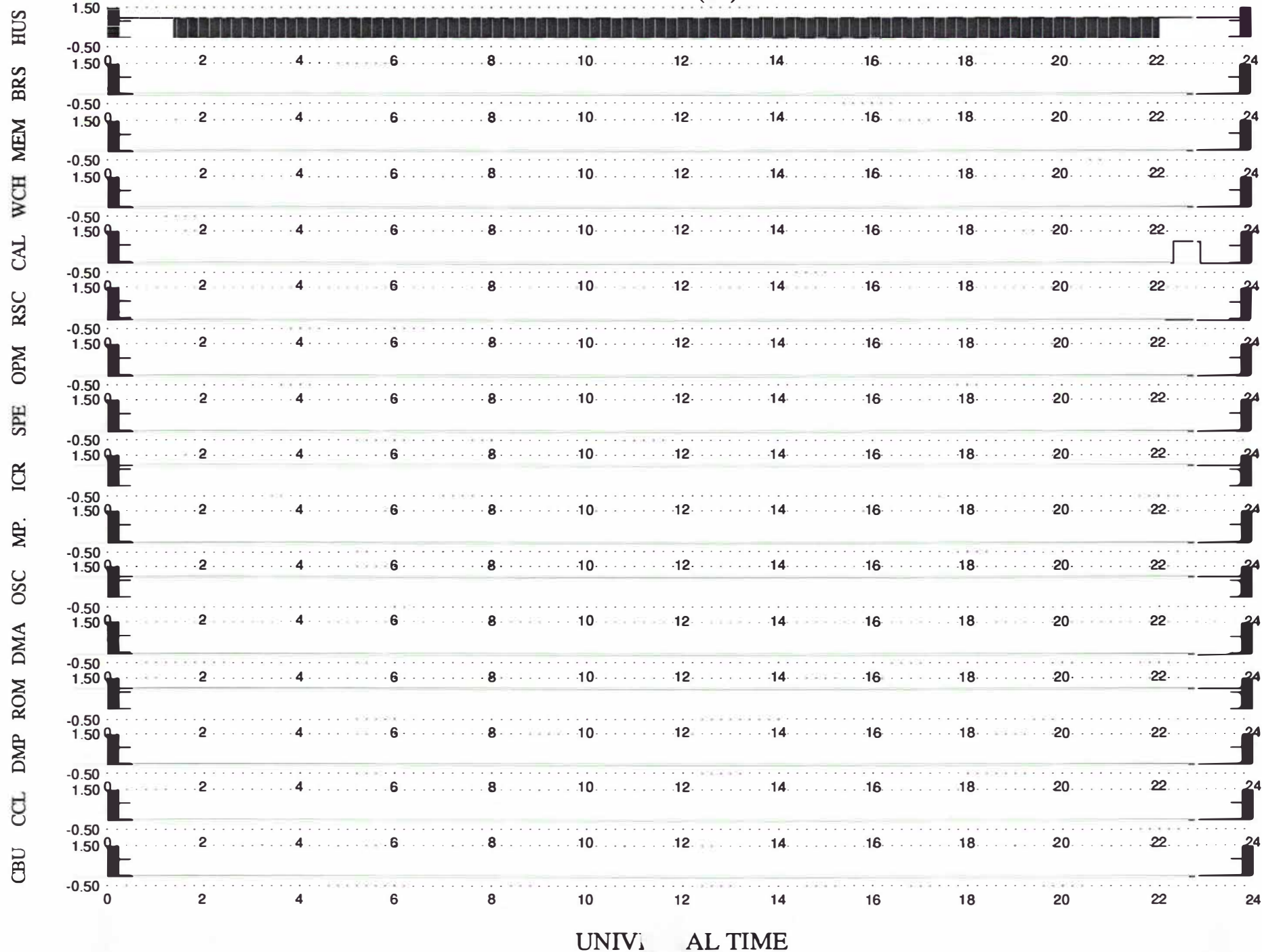
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

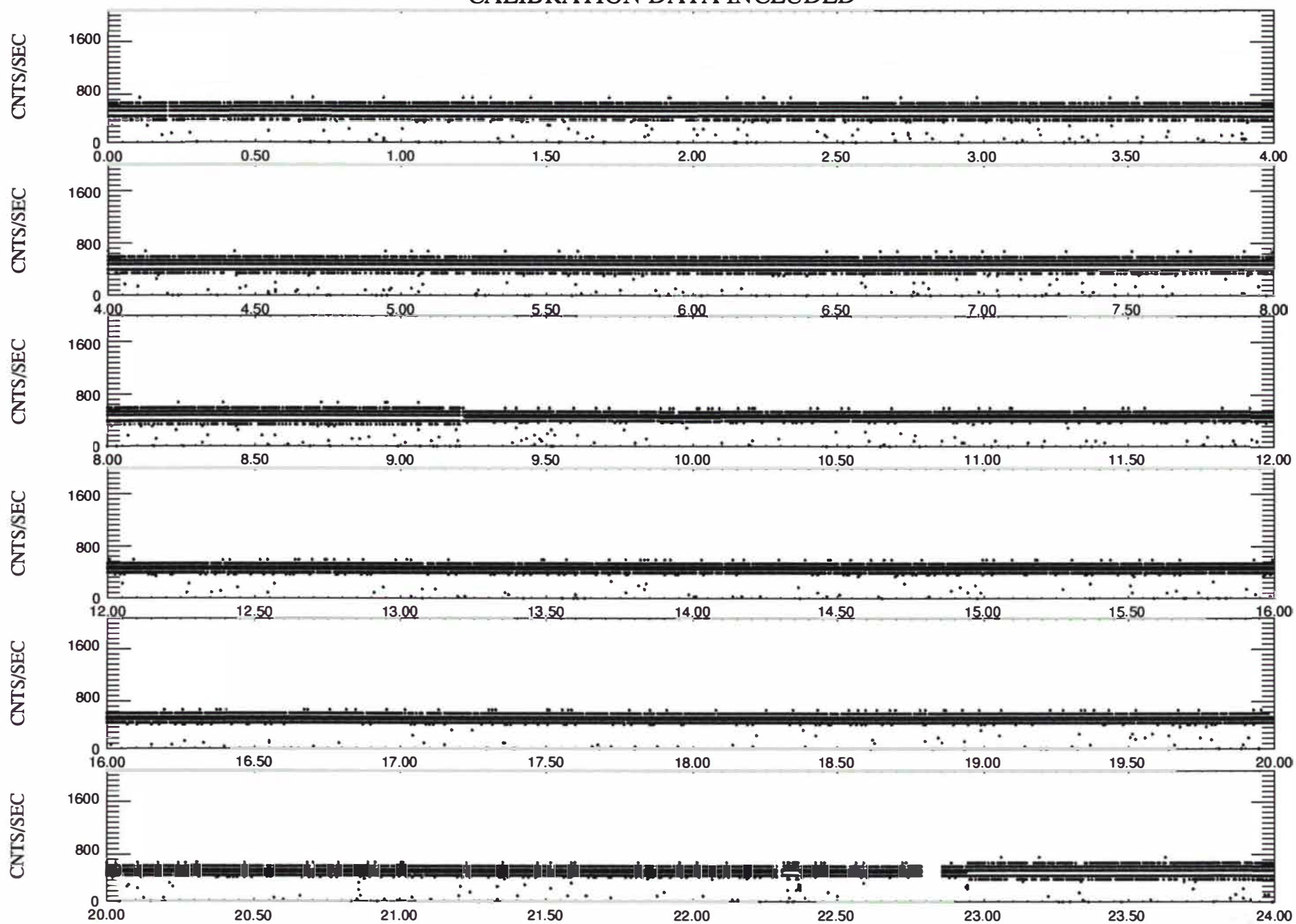
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/25



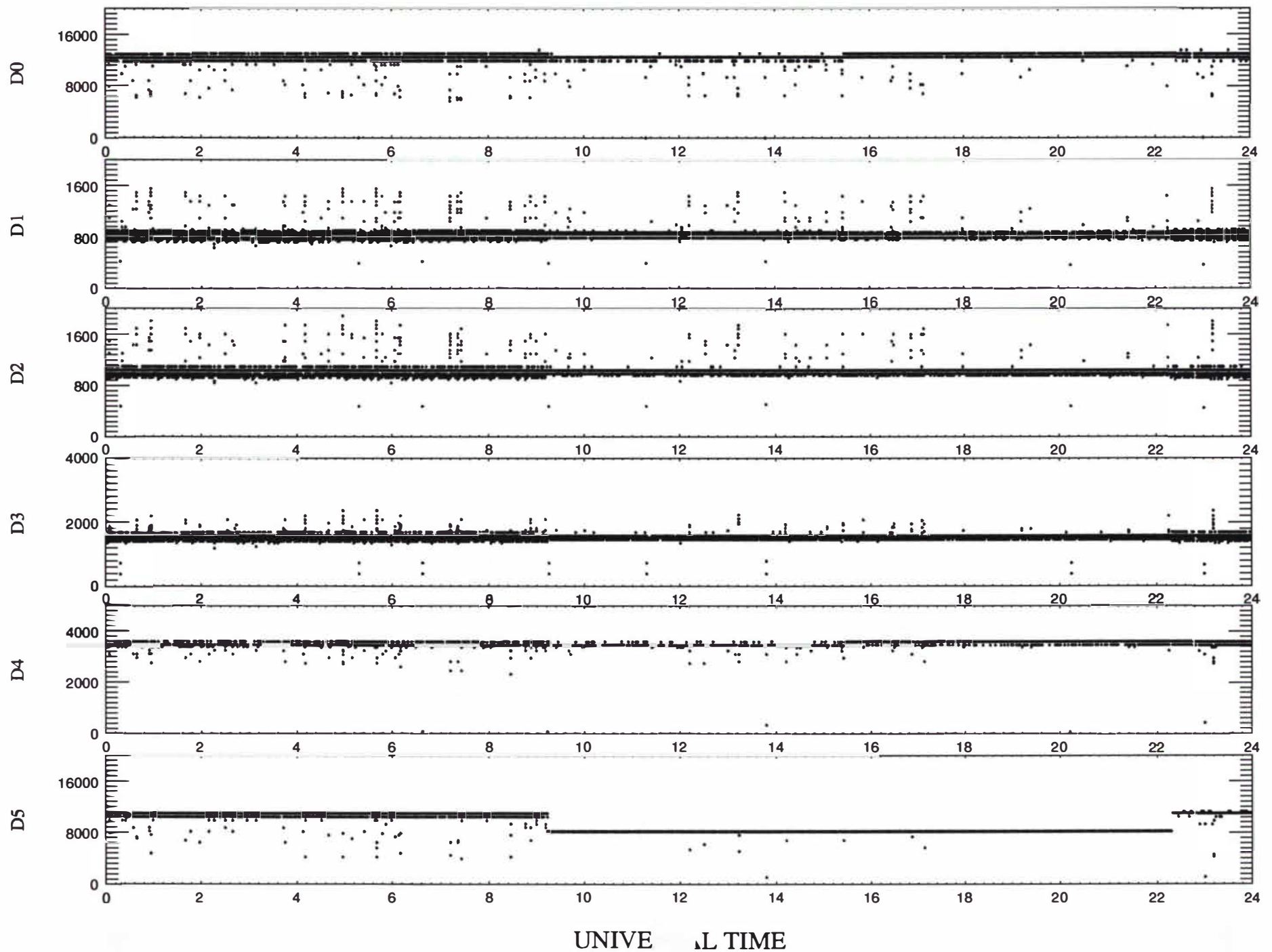
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From KOSHUT@ssl.msfc.nasa.gov Mon Jun 27 09:11 PDT 1994
Date: Mon, 27 Jun 1994 11:12:33 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3046
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3046
EVENT OF 1994 JUN 26 DAY OF YEAR=177
EVENT CROSSING TIME AT BATSE : 2757. S. OR 00:45:57.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 188.000 -24.000
BATSE PEAK COUNTING RATE: 1200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 26/ 6/ 94 IS:
RA= 124.749 DEC= -38.944 DIST= 3.039 AU
BATSE-ULYSSES DISTANCE = 454602661. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=125.13 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -872.61 SECS.
CROSSING TIME AT ULYSSES IS 1884. S. OR 00:31:24 +/- 252.06 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 26/ 6/ 94 IS:
RA= 52.082 DEC= 18.378 DIST= 2.050 AU
MARS-BATSE DISTANCE = 306642592. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 41.32 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 768.17 SECS.
CROSSING TIME AT MARS IS 3525. S. OR 00:58:45 +/- 128.92 SECONDS

No

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3046	940626	9529	02757	1200	188	-24

BATSE BURST TRIGGER

NO.: 3046

TIME: TJD=9529 SECONDS=02757

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=83. AZIMUTH=140. ERROR= DEGREES

COMMENTS:

BURST OF ~ 25 SECONDS DURATION, WITH NO EMISSION OBSERVED ABOVE 300 KEV.
PEAK RATE (~1200 C/S) IS OBSERVED AT THE TRIGGER TIME.

28 / 6 / 94

ULYSSES RT

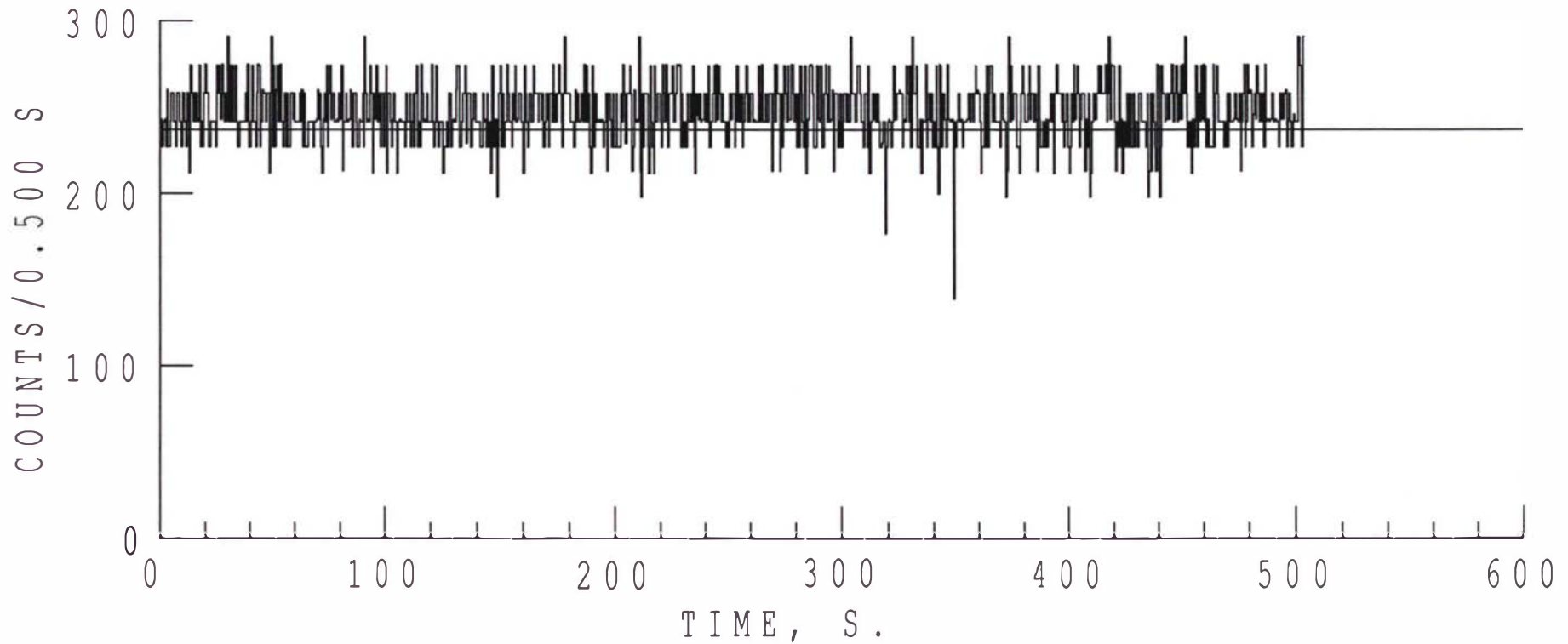
26 / 6 / 94 1620.043 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From KOSHUT@ssl.msfc.nasa.gov Mon Jun 27 07:56 PDT 1994
Date: Mon, 27 Jun 1994 9:58:13 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
LHEAVXKWOK@ssl.msfc.nasa.gov, 15733SCHAEFER@ssl.msfc.nasa.gov,
CASS09BAND@ssl.msfc.nasa.gov, CASS09GRUBER@ssl.msfc.nasa.gov,
CASS09MATTESON@ssl.msfc.nasa.gov, PACIESAS@ssl.msfc.nasa.gov,
HORACK@ssl.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 03047

TIME: TJD=9529 SECONDS=27016

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON ENTRY INTO SAA.

From KOSHUT@ssl.msfc.nasa.gov Mon Jun 27 08:01 PDT 1994
Date: Mon, 27 Jun 1994 10:03:15 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
LHEAVXKWOK@ssl.msfc.nasa.gov, 15733SCHAEFER@ssl.msfc.nasa.gov,
CASS09BAND@ssl.msfc.nasa.gov, CASS09GRUBER@ssl.msfc.nasa.gov,
CASS09MATTESON@ssl.msfc.nasa.gov, PACIESAS@ssl.msfc.nasa.gov,
HORACK@ssl.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 03048

TIME: TJD=9529 SECONDS=38173

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

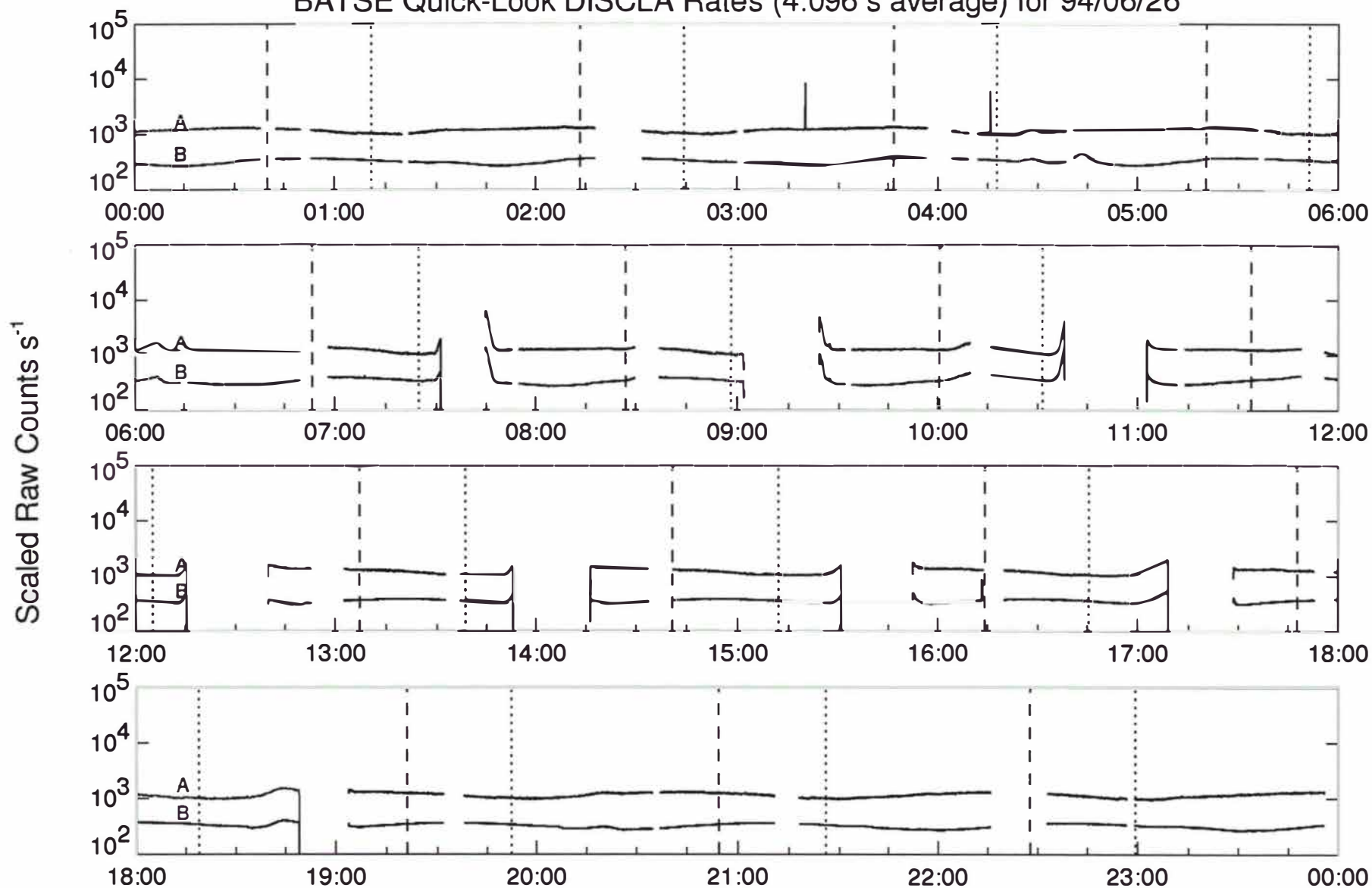
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON ENTRY INTO SAA.

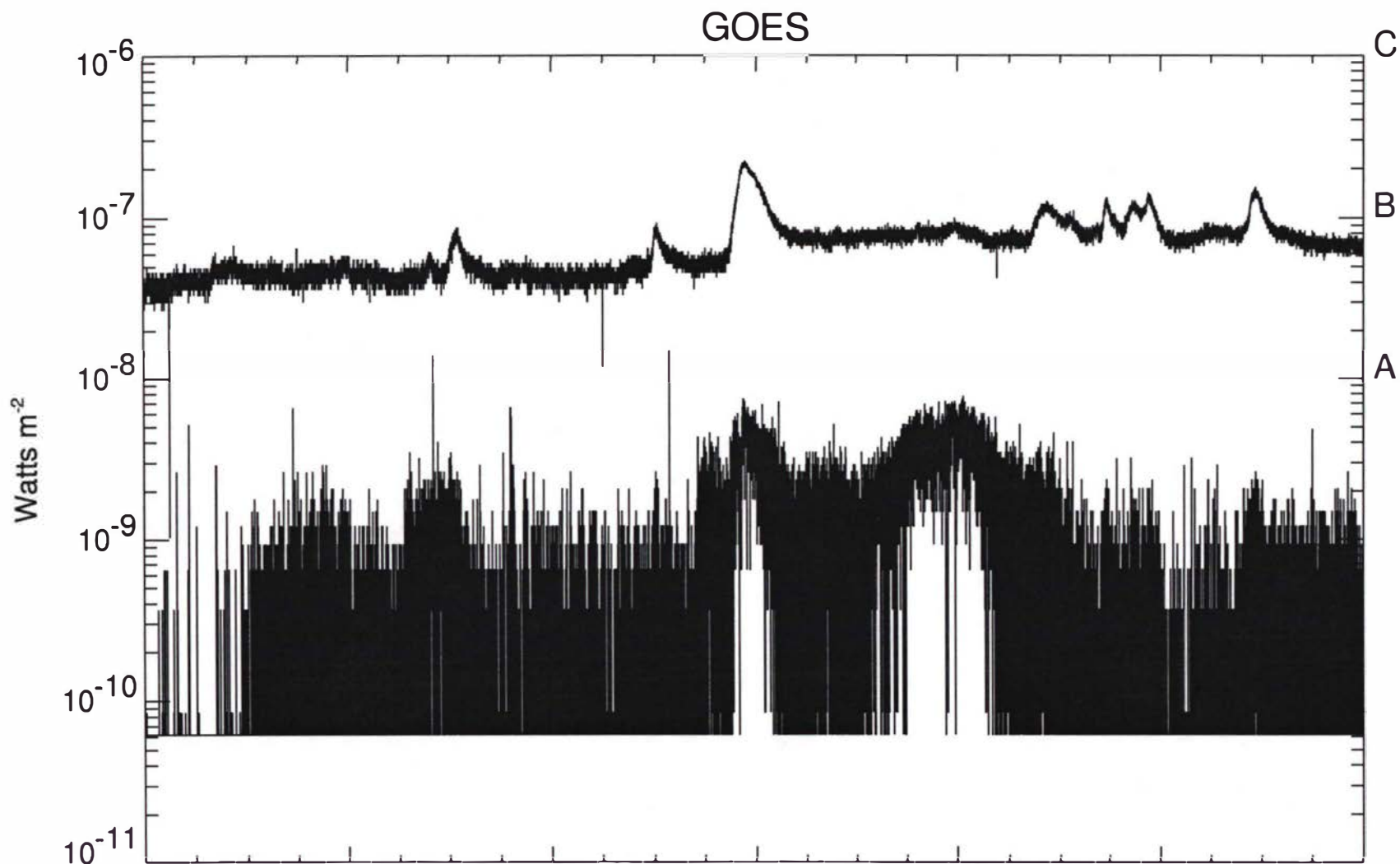
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/26



Current Time: 94/06/28, 1830 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



Data Start: 94/06/26, 0000:00

Plot created: 94/06/28, 1825

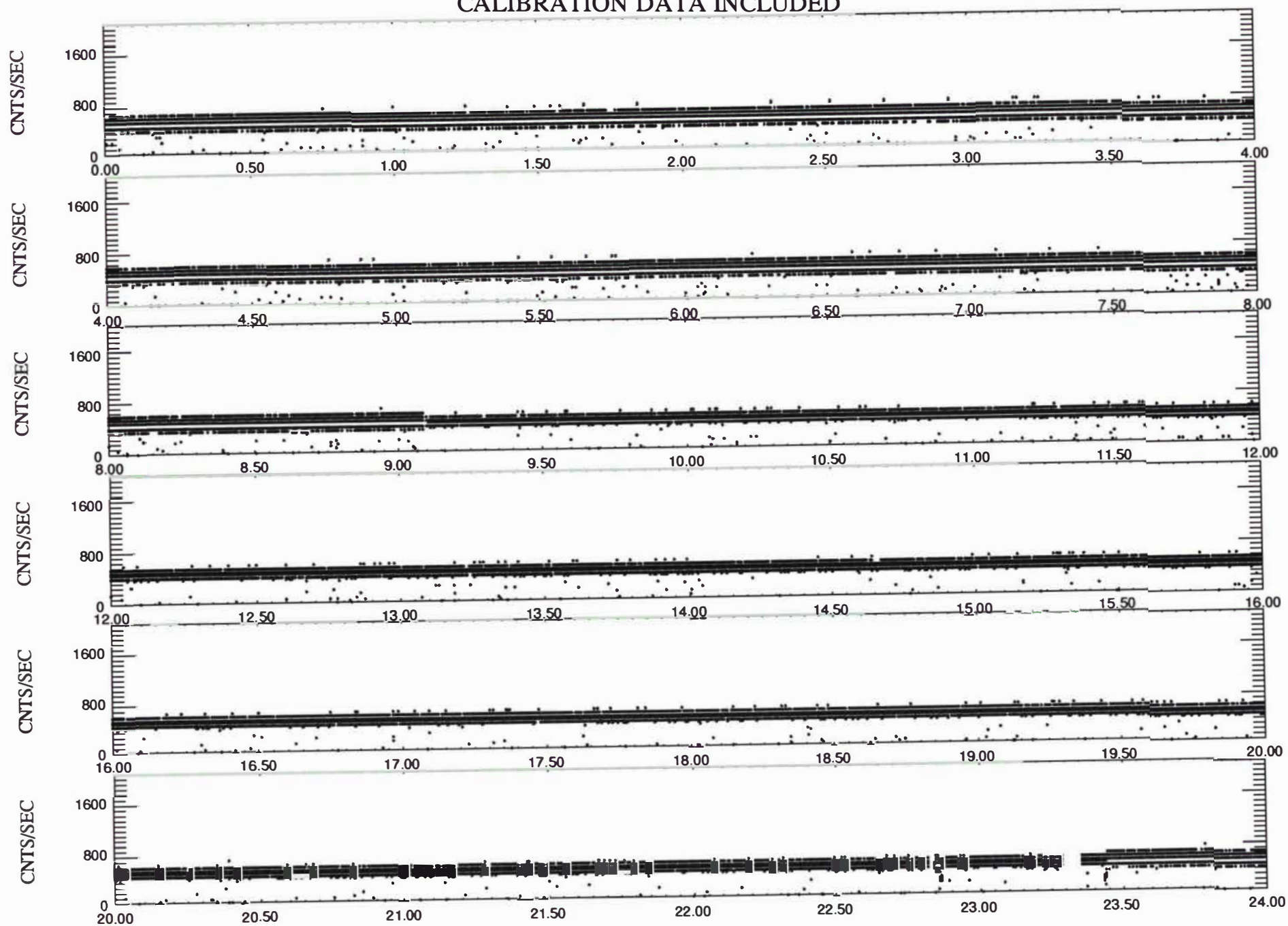
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

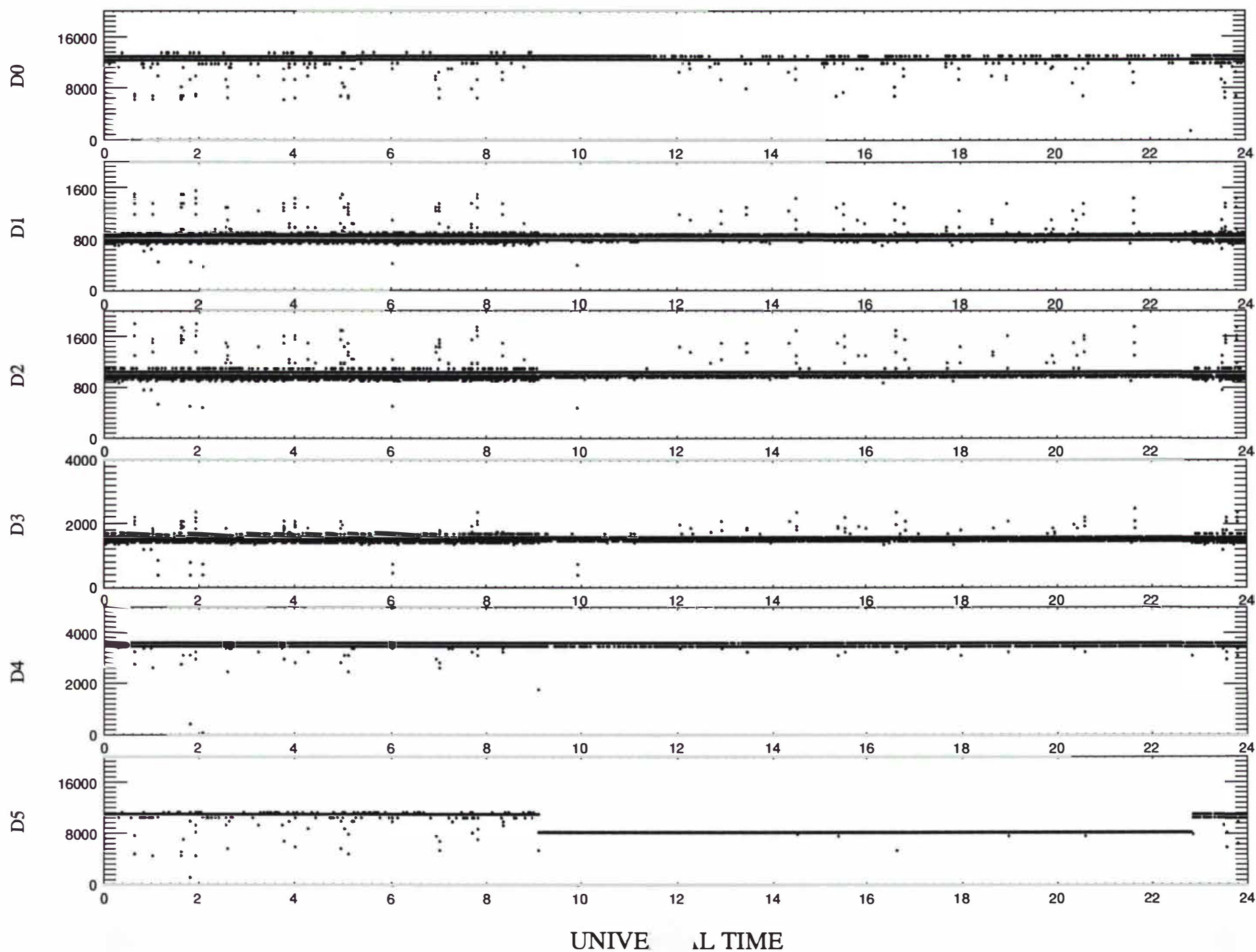
CBU	CCL	DMP	ROM	DMA	OSC	MP.	ICR	SPE	OPM	RSC	CAL	WCH	MEM	BRS	HUS
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



CALIBRATION DATA INCLUDED



UNIV AL TIME



From HAGEDON@ssl.msfc.nasa.gov Tue Jun 28 13:48 PDT 1994
Date: Tue, 28 Jun 1994 15:49:55 -0500 (CDT)
From: HAGEDON@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
LHEAVXKWOK@ssl.msfc.nasa.gov, 15733SCHAEFER@ssl.msfc.nasa.gov,
CASS09BAND@ssl.msfc.nasa.gov, CASS09GRUBER@ssl.msfc.nasa.gov,
CASS09MATTESON@ssl.msfc.nasa.gov, PACIESAS@ssl.msfc.nasa.gov,
HORACK@ssl.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 3049

TIME: TJD=9530 SECONDS=19547

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

From HAGEDON@ssl.msfc.nasa.gov Tue Jun 28 13:52 PDT 1994
Date: Tue, 28 Jun 1994 15:53:45 -0500 (CDT)
From: HAGEDON@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
LHEAVXKWOK@ssl.msfc.nasa.gov, 15733SCHAEFER@ssl.msfc.nasa.gov,
CASS09BAND@ssl.msfc.nasa.gov, CASS09GRUBER@ssl.msfc.nasa.gov,
CASS09MATTESON@ssl.msfc.nasa.gov, PACIESAS@ssl.msfc.nasa.gov,
HORACK@ssl.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 3050

TIME: TJD=9530 SECONDS=24577

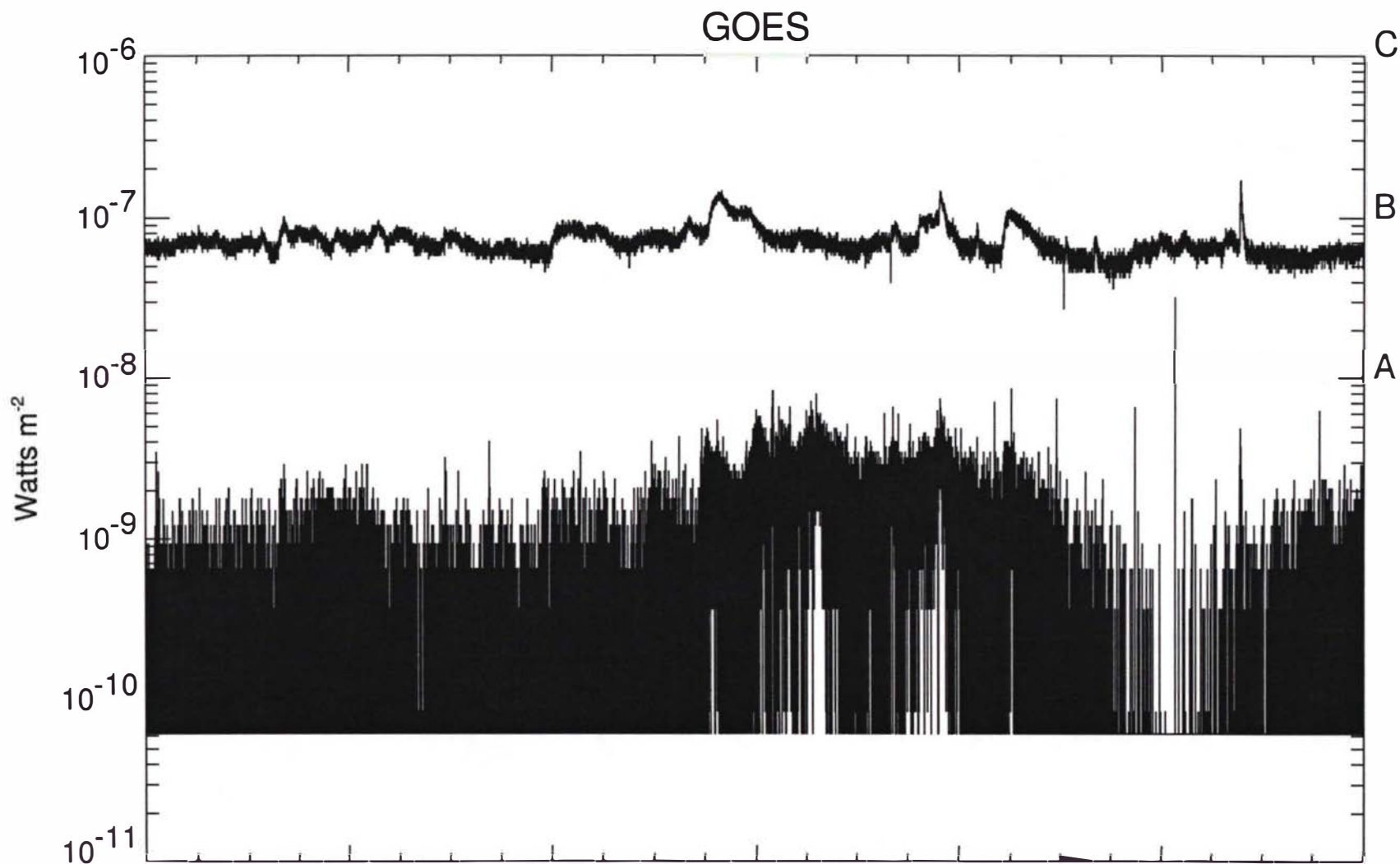
TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY.



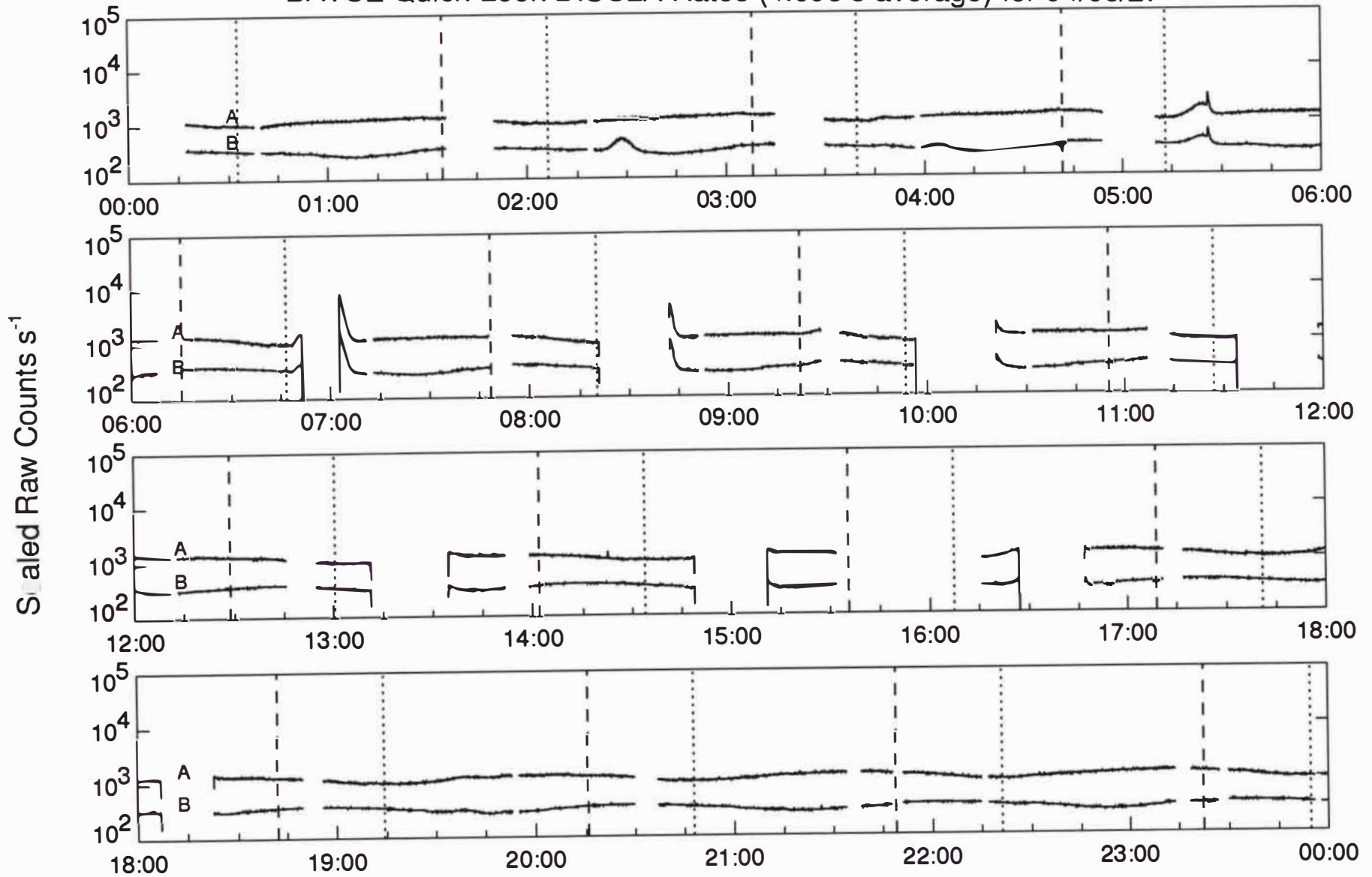
Data Start: 94/06/27, 0000:02

Plot created: 94/06/28, 1826

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/27

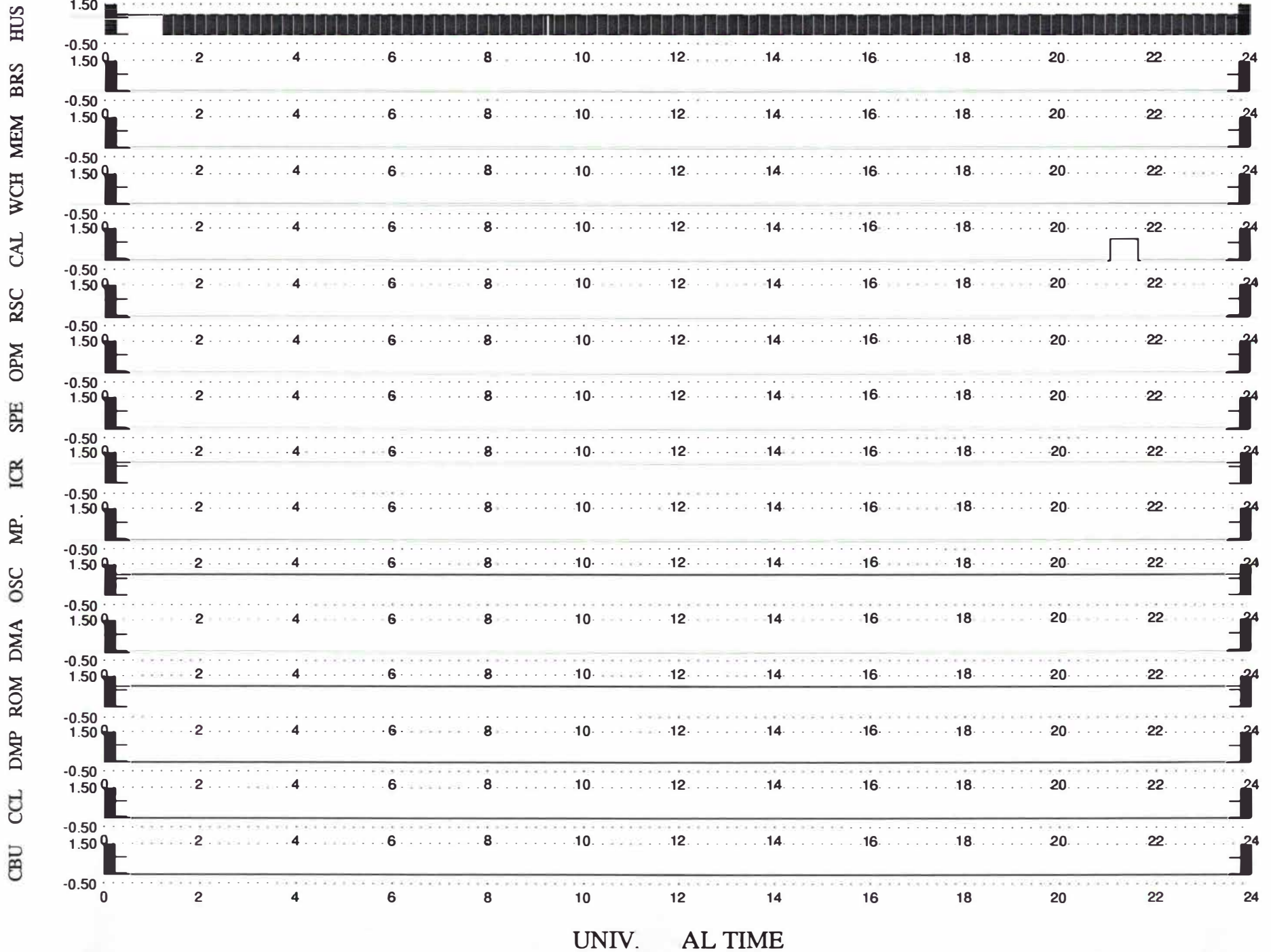


Current Time: 94/07/11, 1935 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

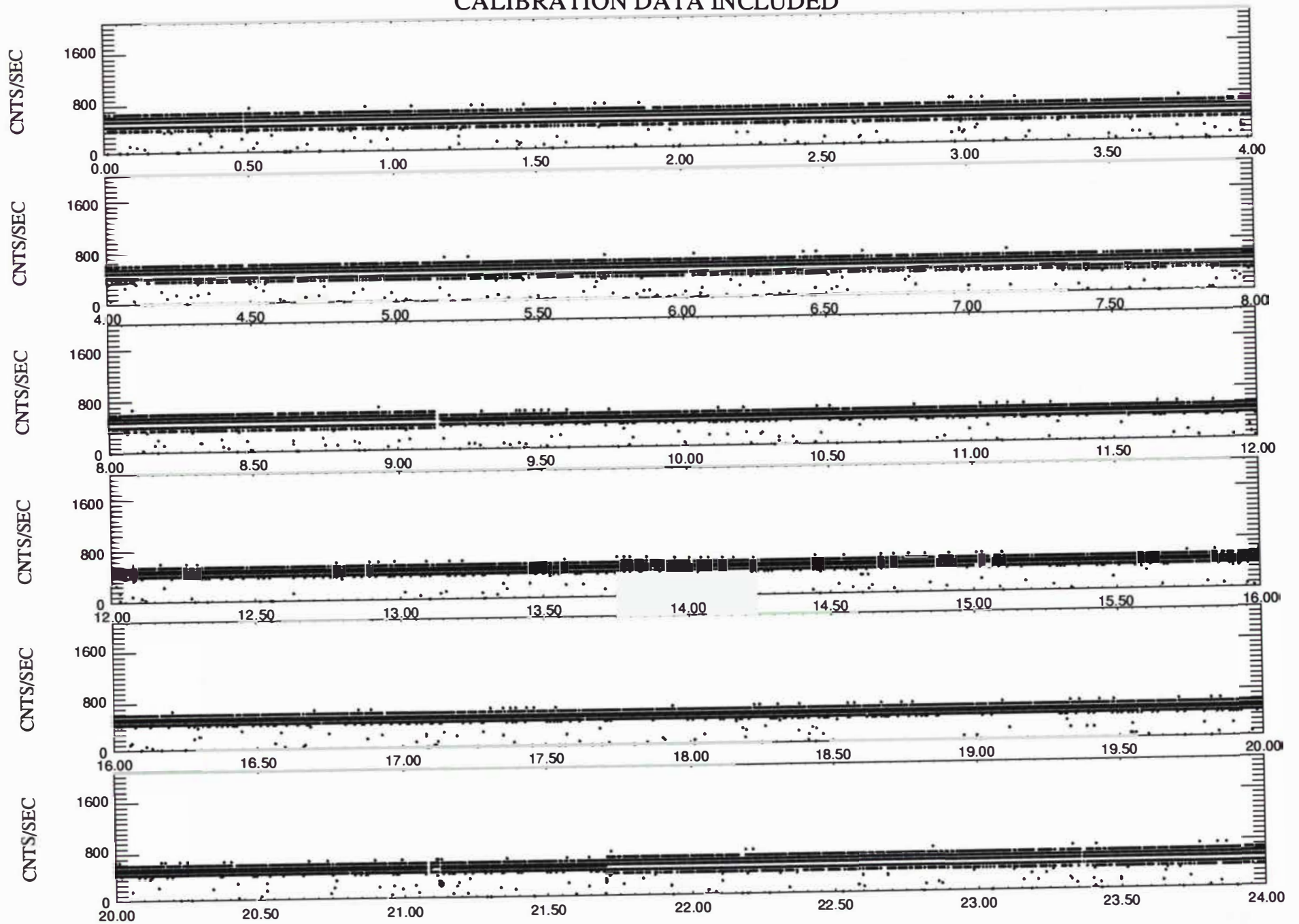
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

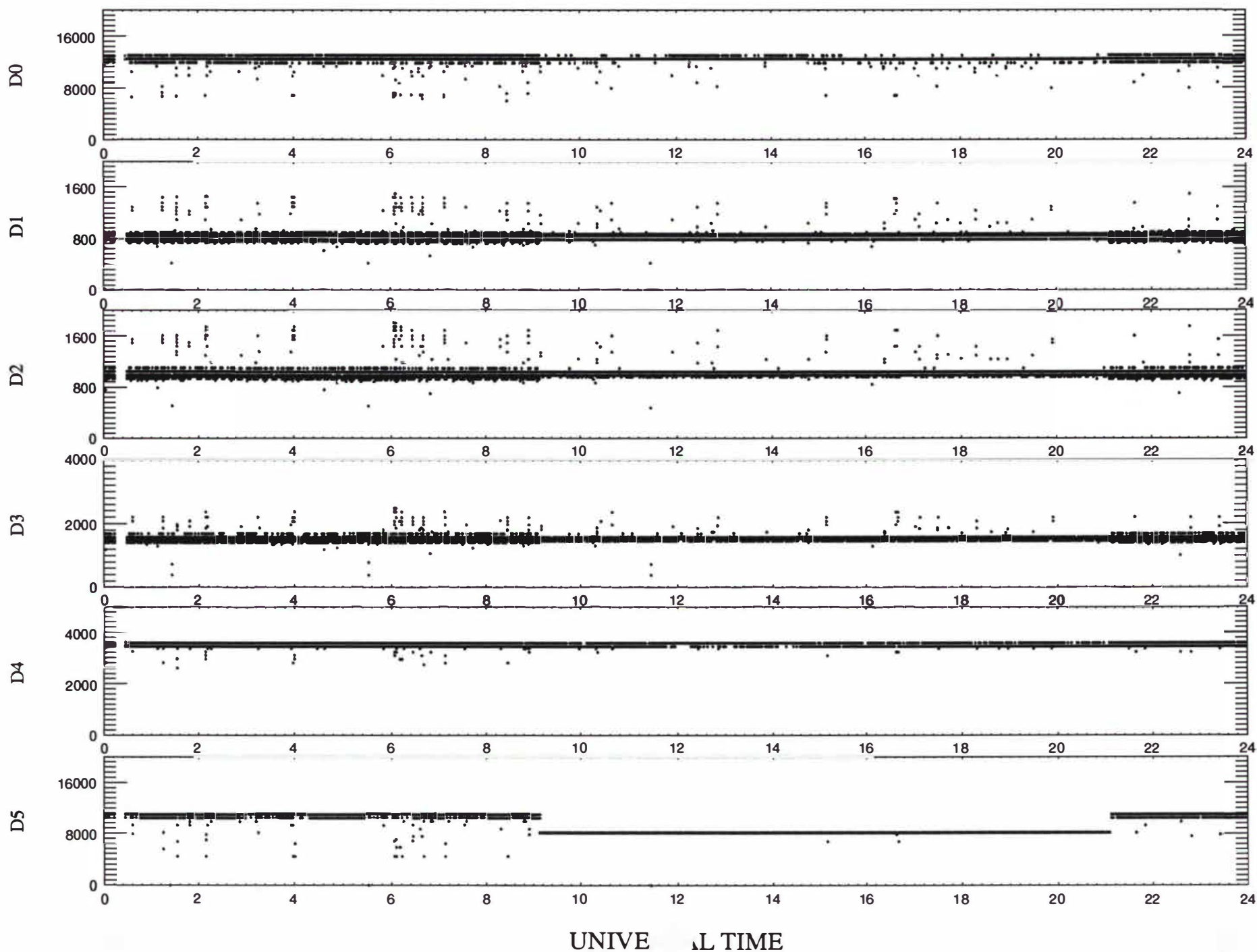
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV. AL TIME



From HAGEDON@fender.msfc.nasa.gov Thu Jun 30 09:30 PDT 1994
Date: Thu, 30 Jun 1994 11:31:45 -0500 (CDT)
From: HAGEDON@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3051
Content-Type: text
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 3051
EVENT OF 1994 JUN 28 DAY OF YEAR=179
EVENT CROSSING TIME AT BATSE : 18340. S. OR 05:05:40.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 254.000 -30.000
BATSE PEAK COUNTING RATE: 3300 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 28/ 6/ 94 IS:
RA= 125.208 DEC= -38.963 DIST= 3.038 AU
BATSE-ULYSSES DISTANCE = 454447651. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 83.83 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 162.91 SECS.
CROSSING TIME AT ULYSSES IS 18503. S. OR 05:08:22 +/- 314.13 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 28/ 6/ 94 IS:
RA= 53.547 DEC= 18.745 DIST= 2.043 AU
MARS-BATSE DISTANCE = 305696960. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 21.71 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 947.37 SECS.
CROSSING TIME AT MARS IS 19287. S. OR 05:21:27 +/- 79.87 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3051	940628	9531	18340	3300	254	-30

BATSE BURST TRIGGER

NO.: 3051

TIME: TJD=9531 SECONDS=18340

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=26.6 AZIMUTH=160.4 ERROR= DEGREES

COMMENTS:

BURST. WEAK SINGLE SPIKE. DUR.~0.04 SEC. NOT VISIBLE ABOVE 300 KEV.

30 / 6 / 94

ULYSSES RT

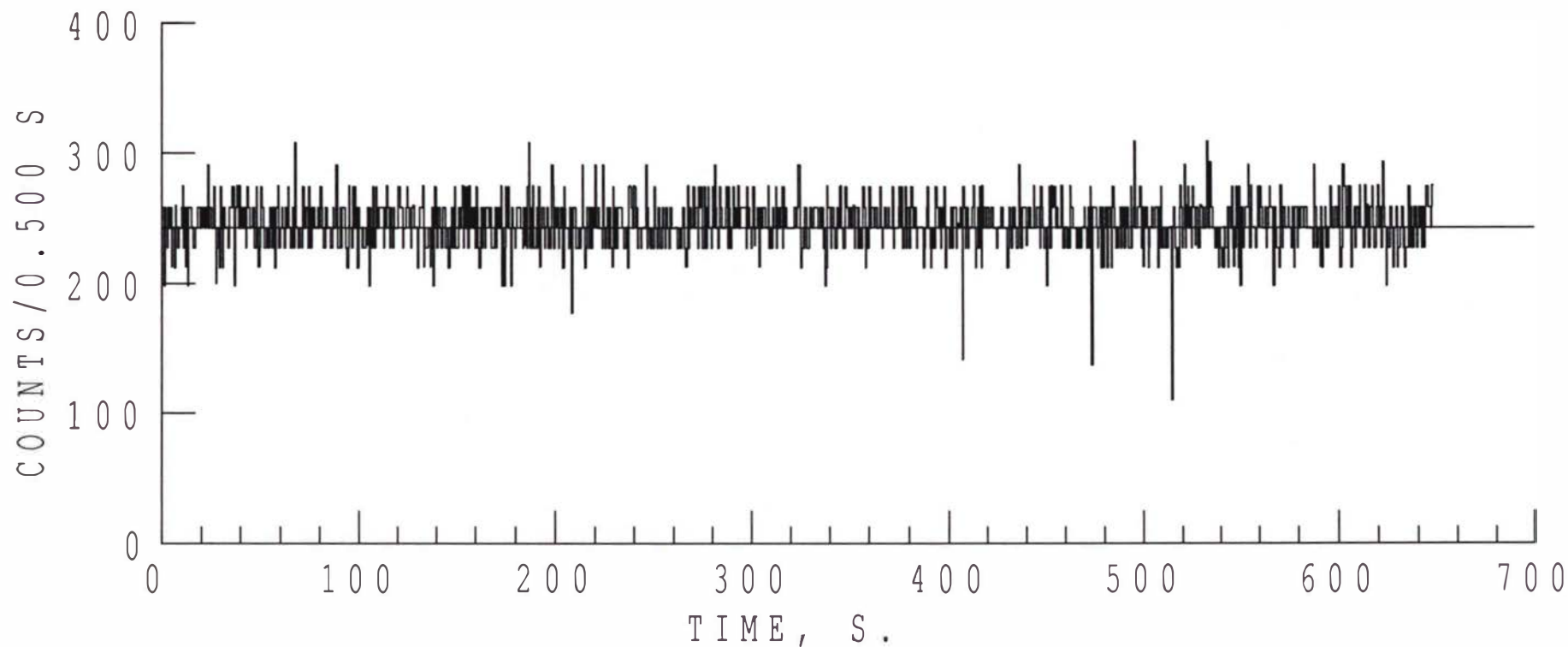
28 / 6 / 94 18180.180 s

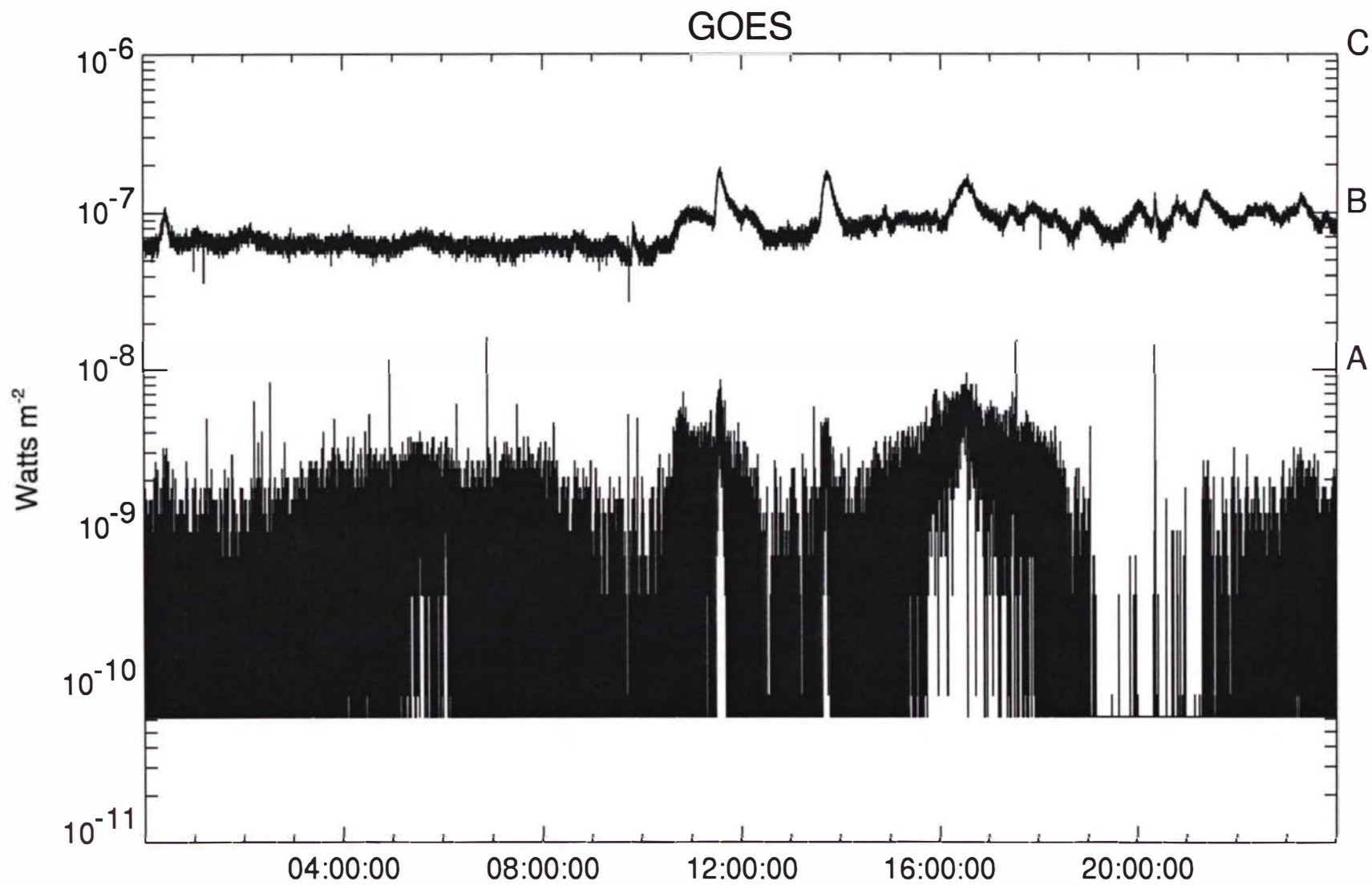
0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





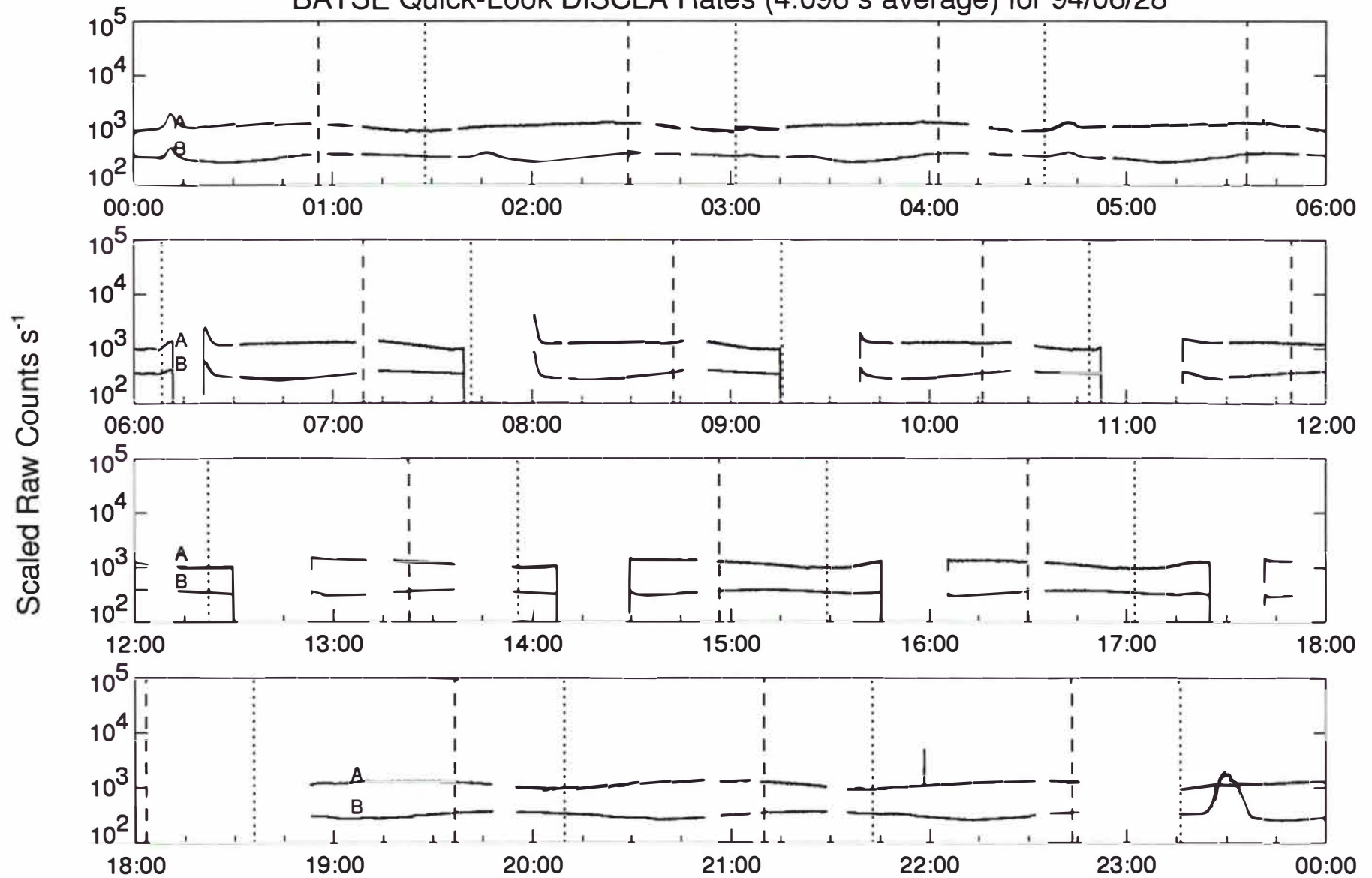
Data Start: 94/06/28, 0000:01

Plot created: 94/07/11, 1911

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/28

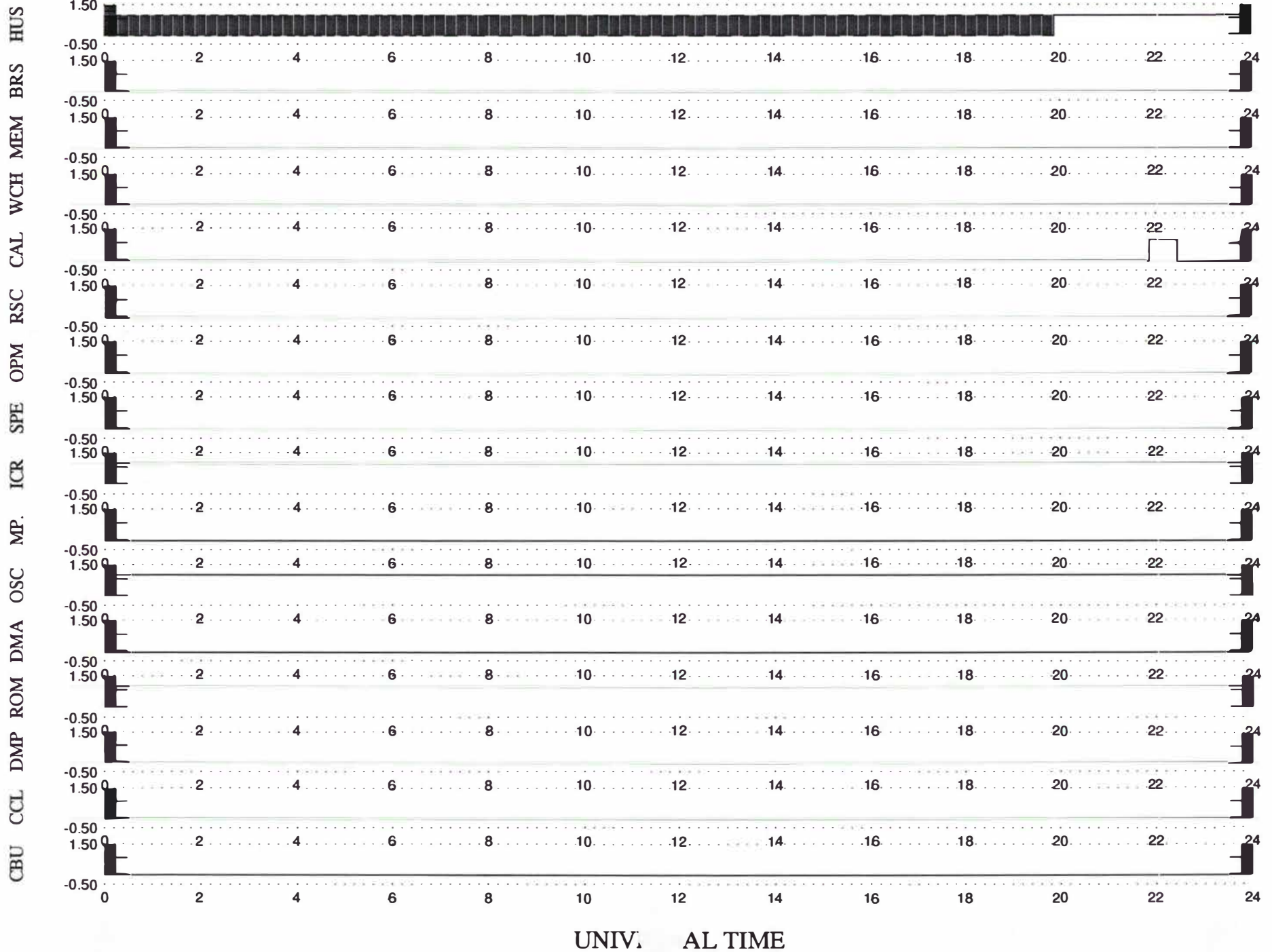


Current Time: 94/07/11, 1935 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

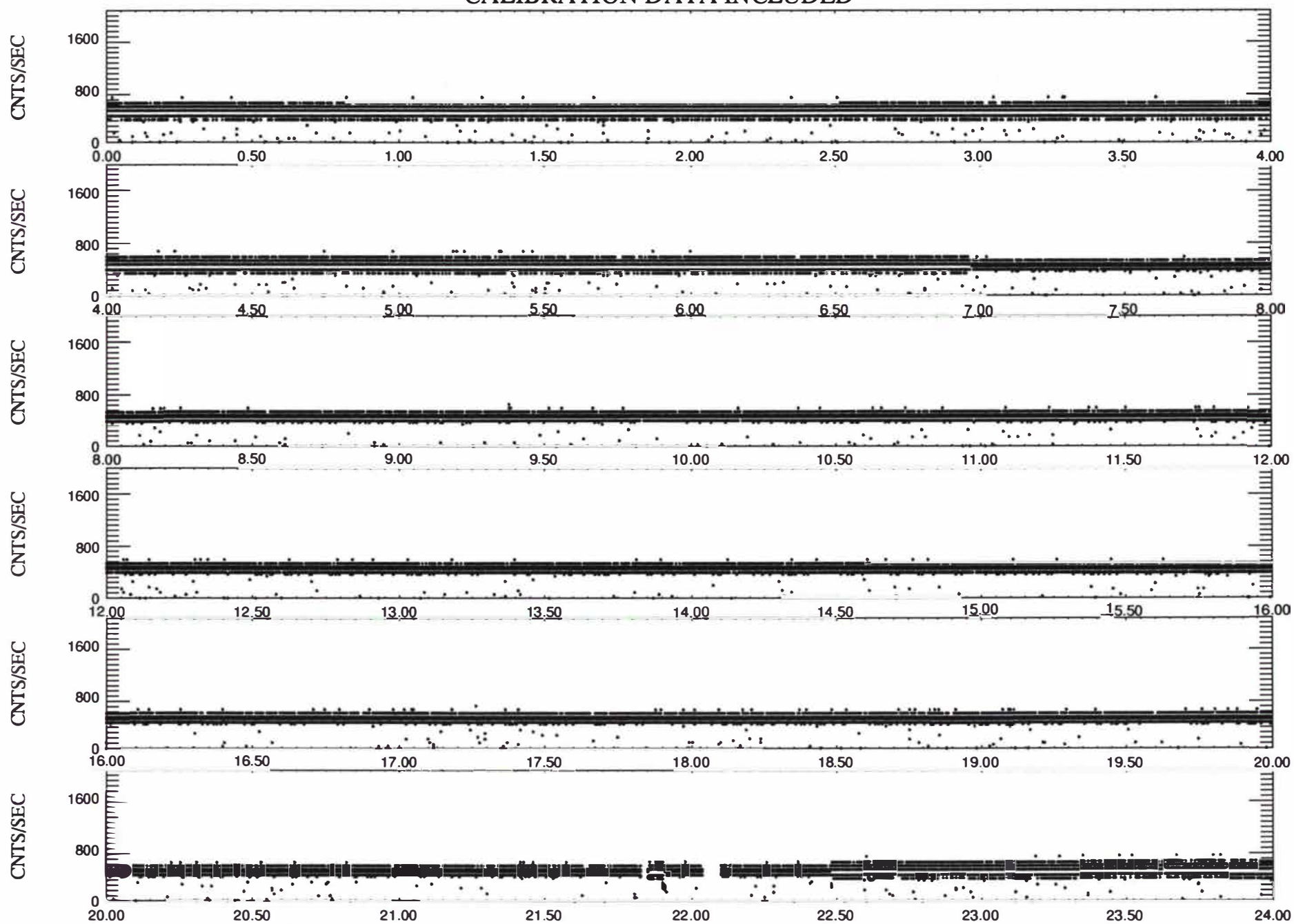
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

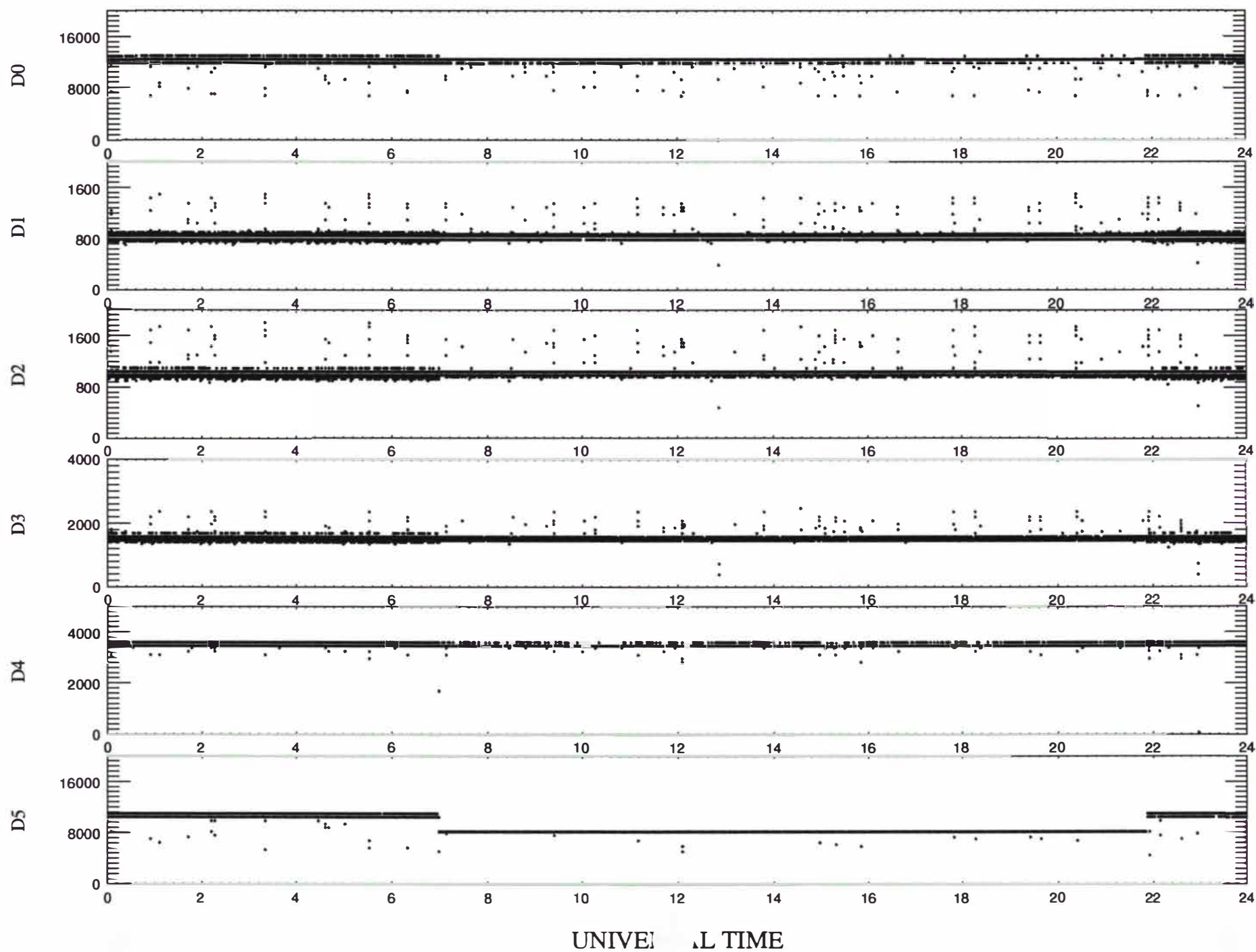
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From HORACK@fender.msfc.nasa.gov Thu Jun 30 12:38 PDT 1994
Date: Thu, 30 Jun 1994 14:39:39 -0500 (CDT)
From: HORACK@fender.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
LHEAVXKWOK@fender.msfc.nasa.gov, 15733SCHAEFER@fender.msfc.nasa.gov,
CASS09BAND@fender.msfc.nasa.gov, CASS09GRUBER@fender.msfc.nasa.gov,
CASS09MATTESON@fender.msfc.nasa.gov, PACIESAS@fender.msfc.nasa.gov,
HORACK@fender.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 03052

TIME: TJD=9532 SECONDS=15171

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON PRECIPITATION EVENT

From HORACK@fender.msfc.nasa.gov Thu Jun 30 12:40 PDT 1994
Date: Thu, 30 Jun 1994 14:41:31 -0500 (CDT)
From: HORACK@fender.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
LHEAVXKWOK@fender.msfc.nasa.gov, 15733SCHAEFER@fender.msfc.nasa.gov,
CASS09BAND@fender.msfc.nasa.gov, CASS09GRUBER@fender.msfc.nasa.gov,
CASS09MATTESON@fender.msfc.nasa.gov, PACIESAS@fender.msfc.nasa.gov,
HORACK@fender.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 03053

TIME: TJD=9532 SECONDS=25100

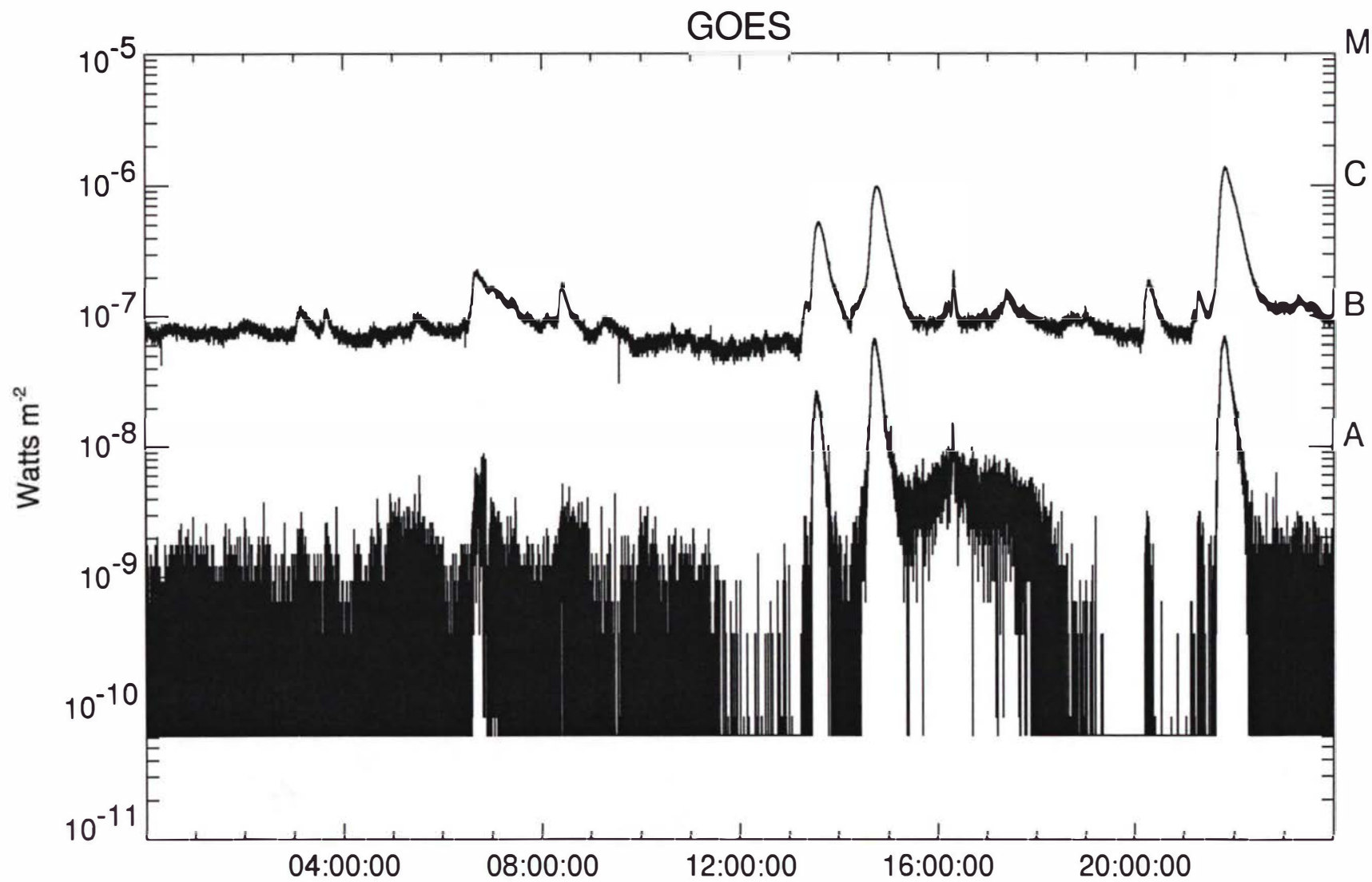
TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGER ON ENTRY INTO THE SAA



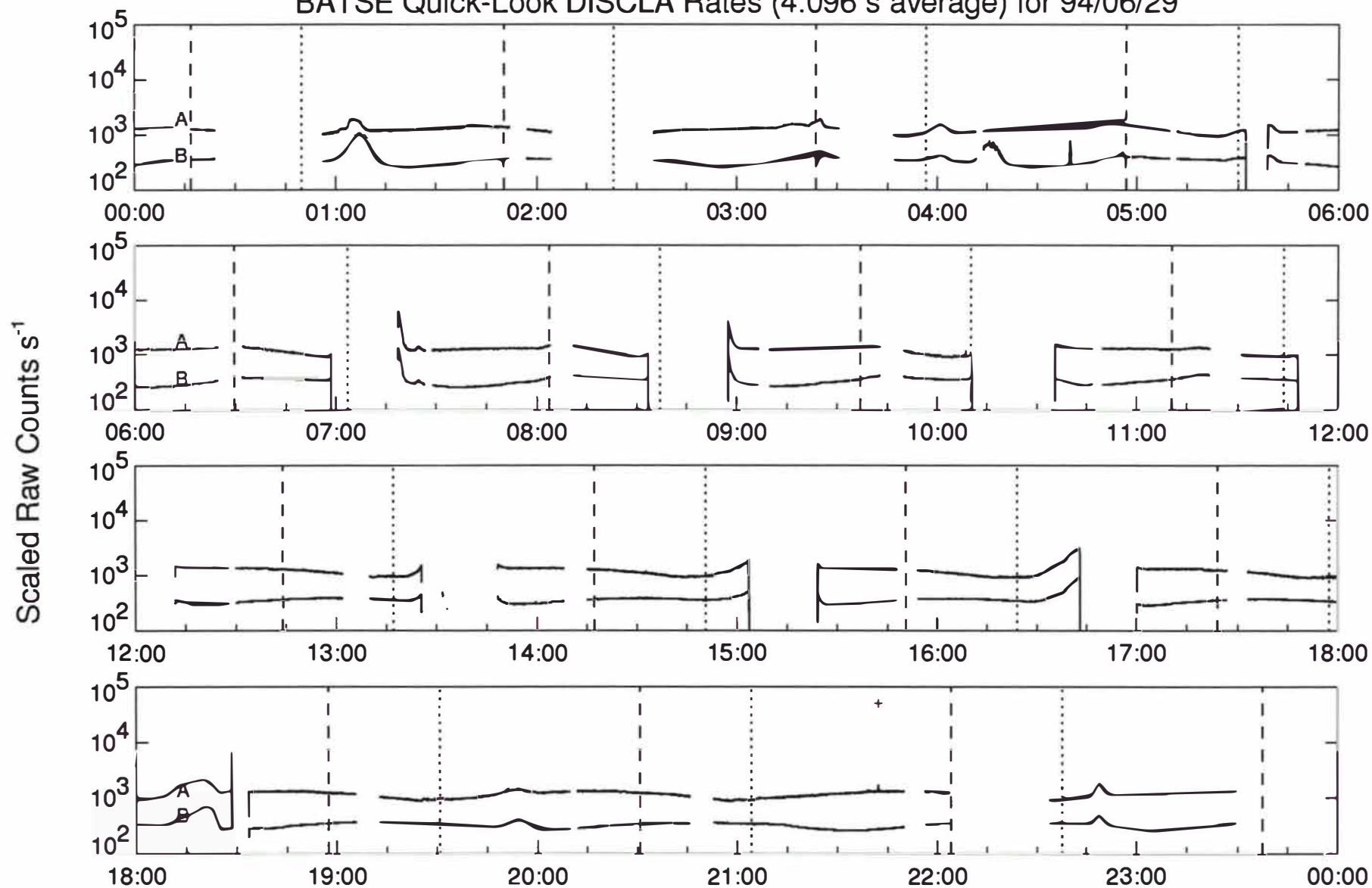
Data Start: 94/06/29, 0000:00

Plot created: 94/07/11, 1913

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/29

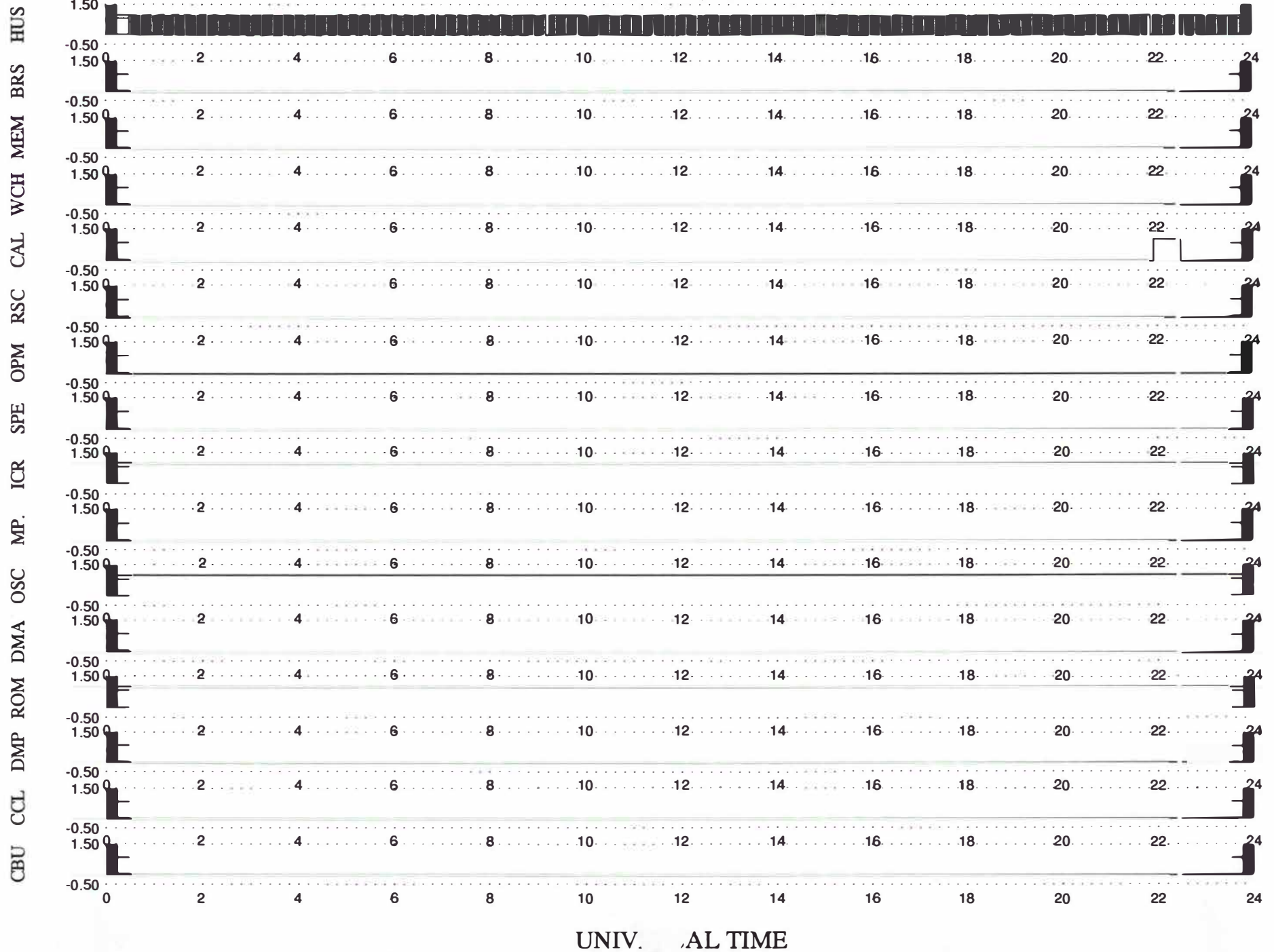


Current Time: 94/07/11, 1935 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

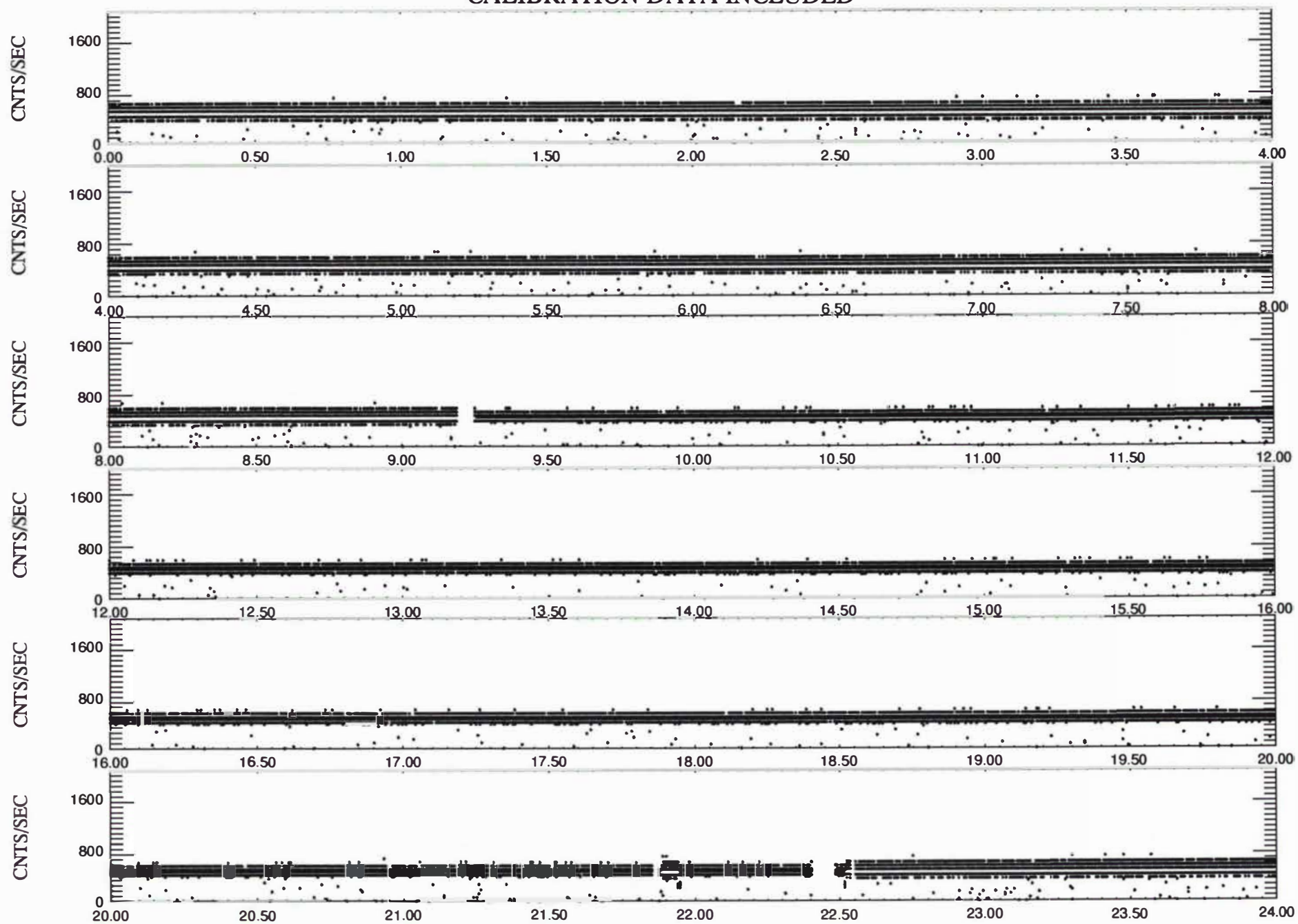
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

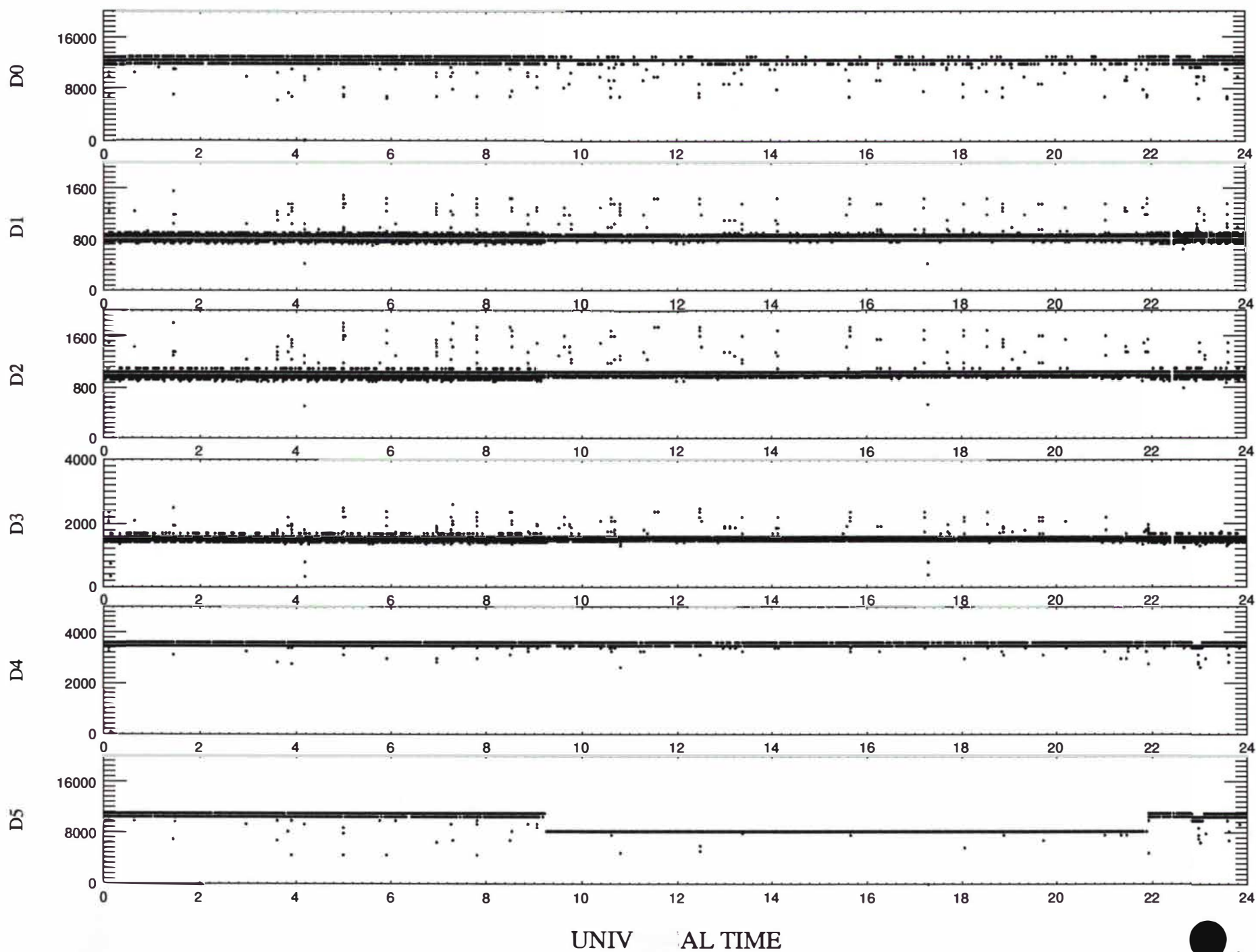
NO BURST (14)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From SHARIFF@ssl.msfc.nasa.gov Fri Jul 1 15:27 PDT 1994
Date: Fri, 1 Jul 1994 17:28:48 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
LHEAVXKWOK@ssl.msfc.nasa.gov, 15733SCHAEFER@ssl.msfc.nasa.gov,
CASS09BAND@ssl.msfc.nasa.gov, CASS09GRUBER@ssl.msfc.nasa.gov,
CASS09MATTESON@ssl.msfc.nasa.gov, PACIESAS@ssl.msfc.nasa.gov,
HORACK@ssl.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Type: text
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 03054

TIME: TJD=9533 SECONDS=76735

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

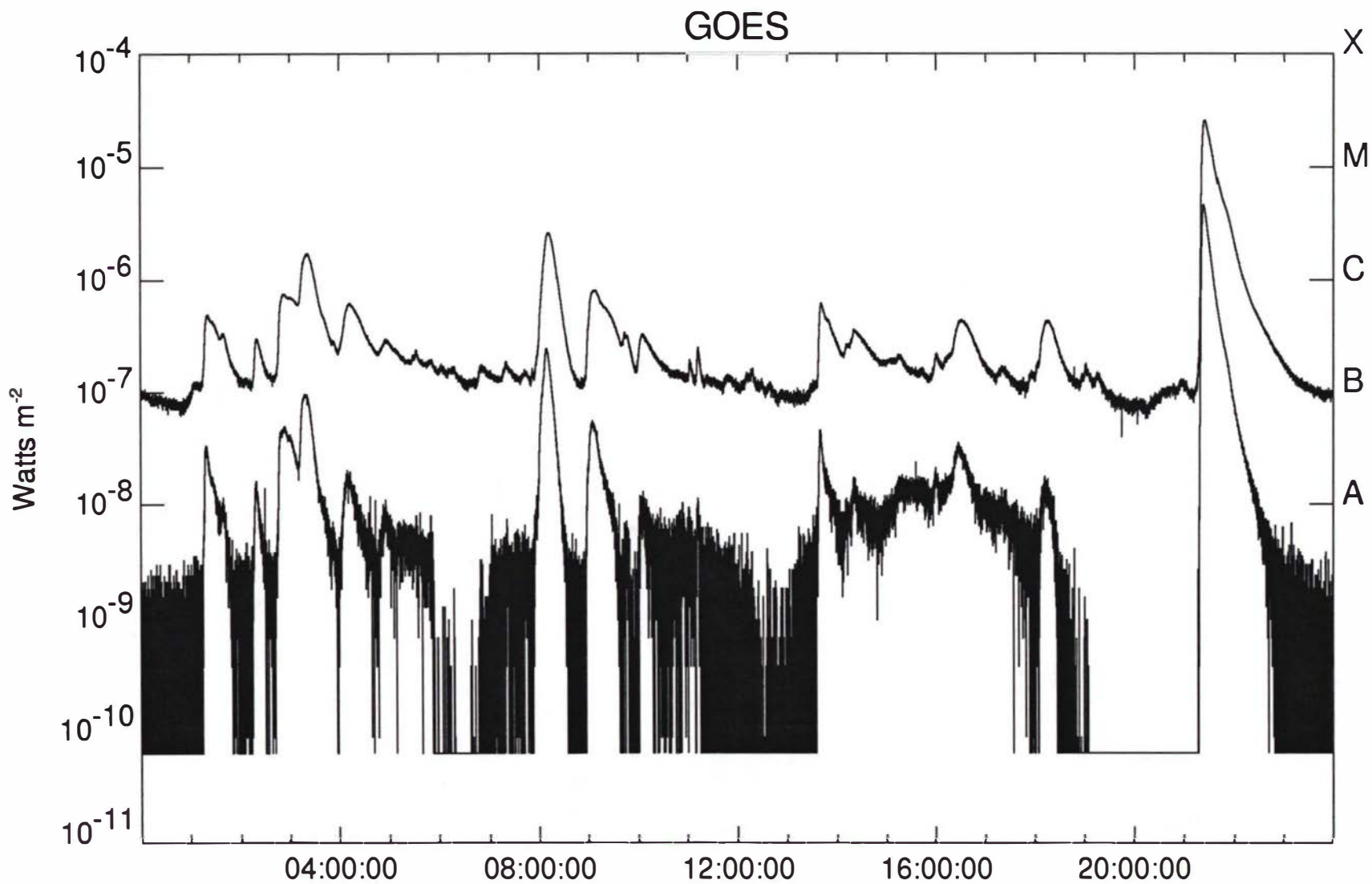
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SOLAR FLARE, GOES M2.5, COMPLEX, LASTING ~350S. VISIBLE ABOVE 300KEV.



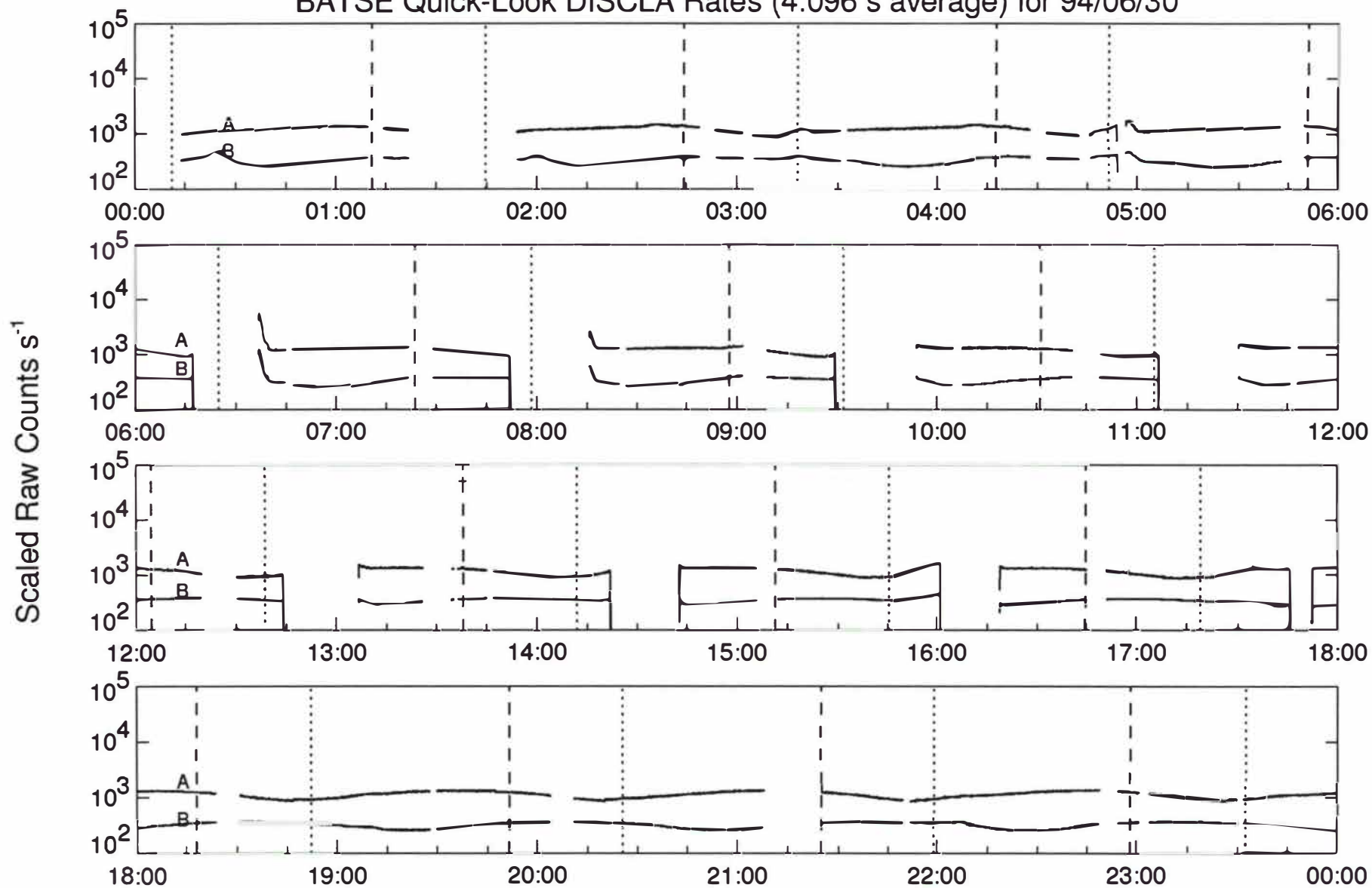
Data Start: 94/06/30, 0000:00

Plot created: 94/07/11, 1914

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/06/30



Current Time: 94/07/11, 1935 EDT

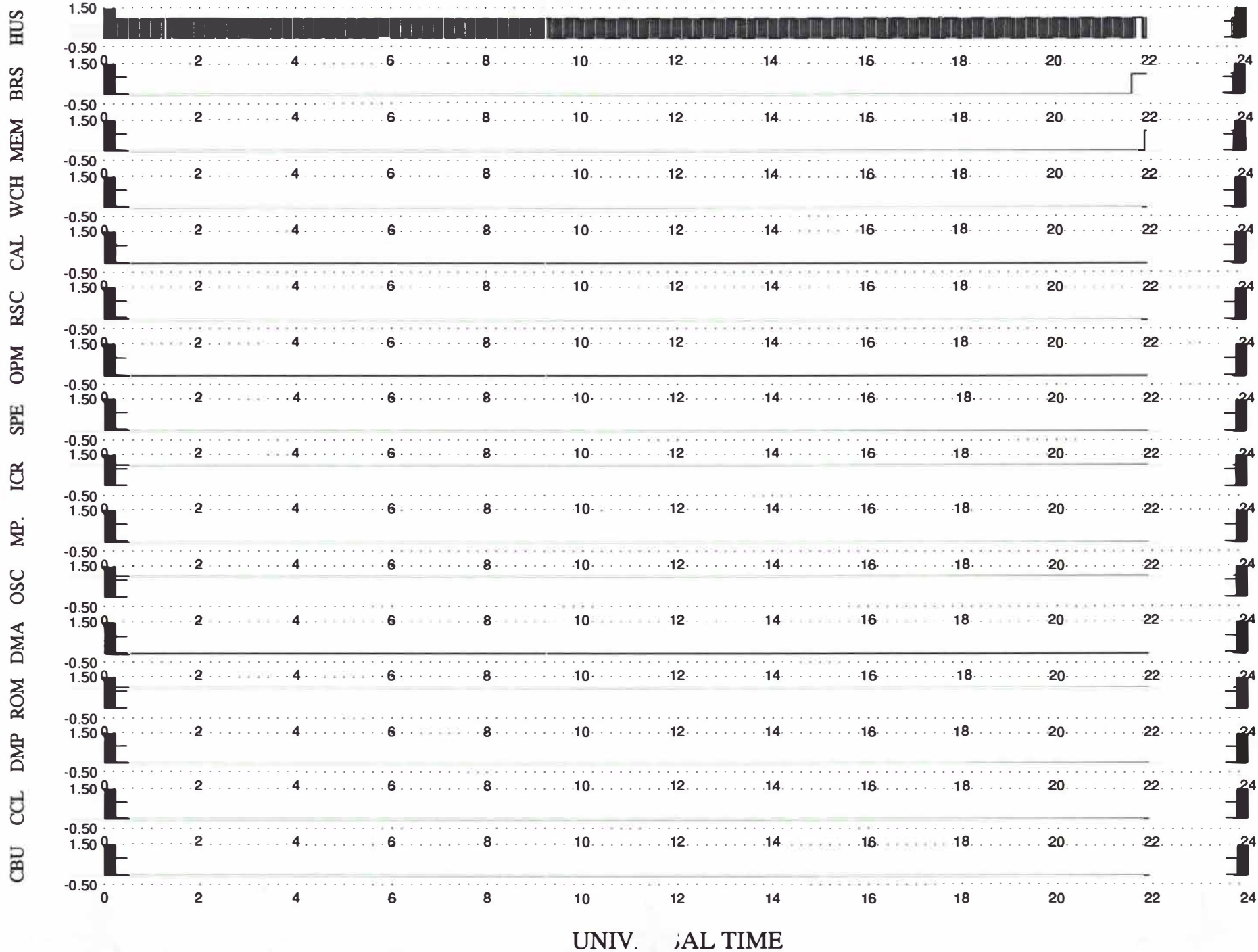
A: Channel 1 Most Sunward LAD

B: Sum Channel 1 Anti-Sunward LADs X .05

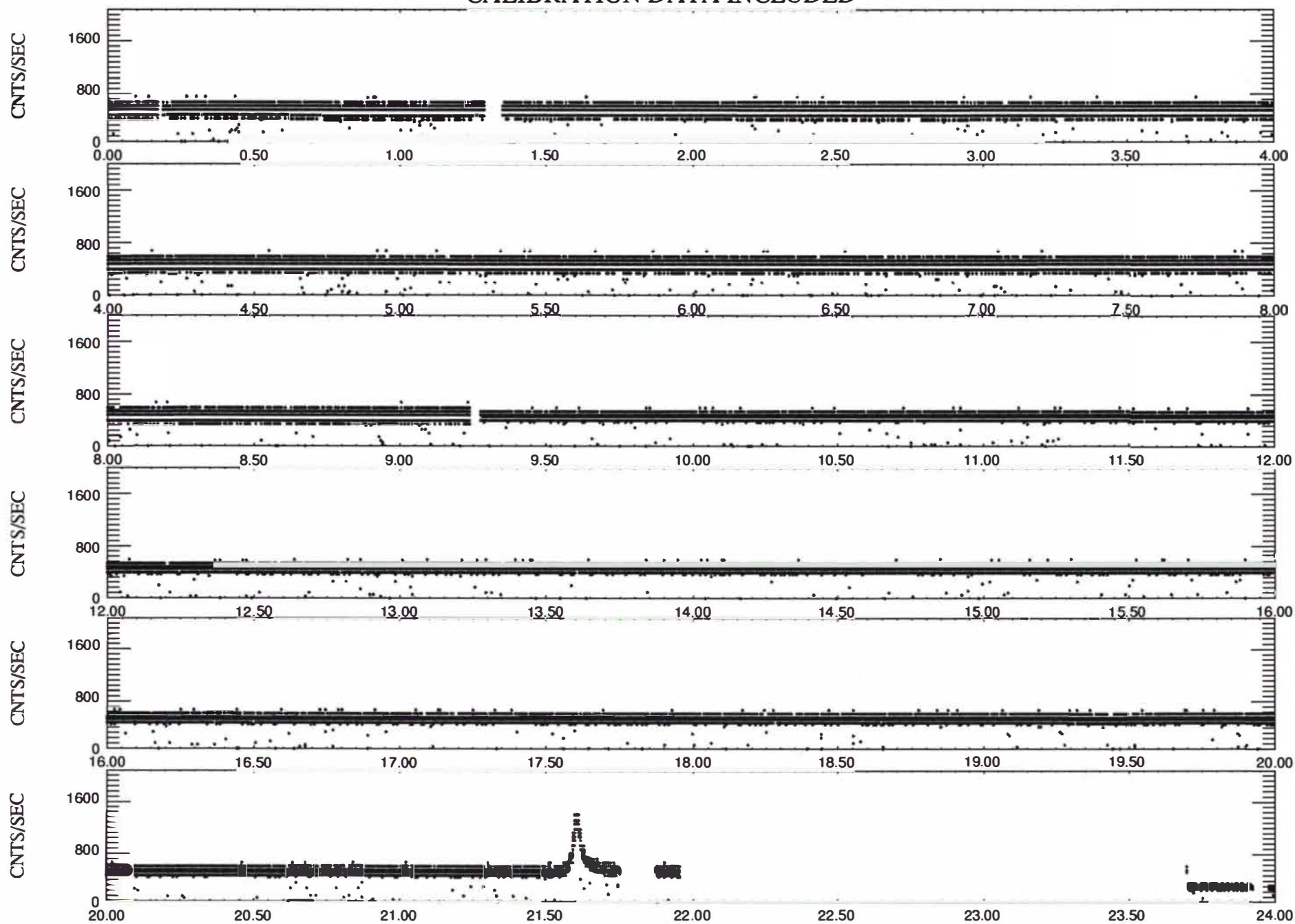
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

BURST NUMBER 15

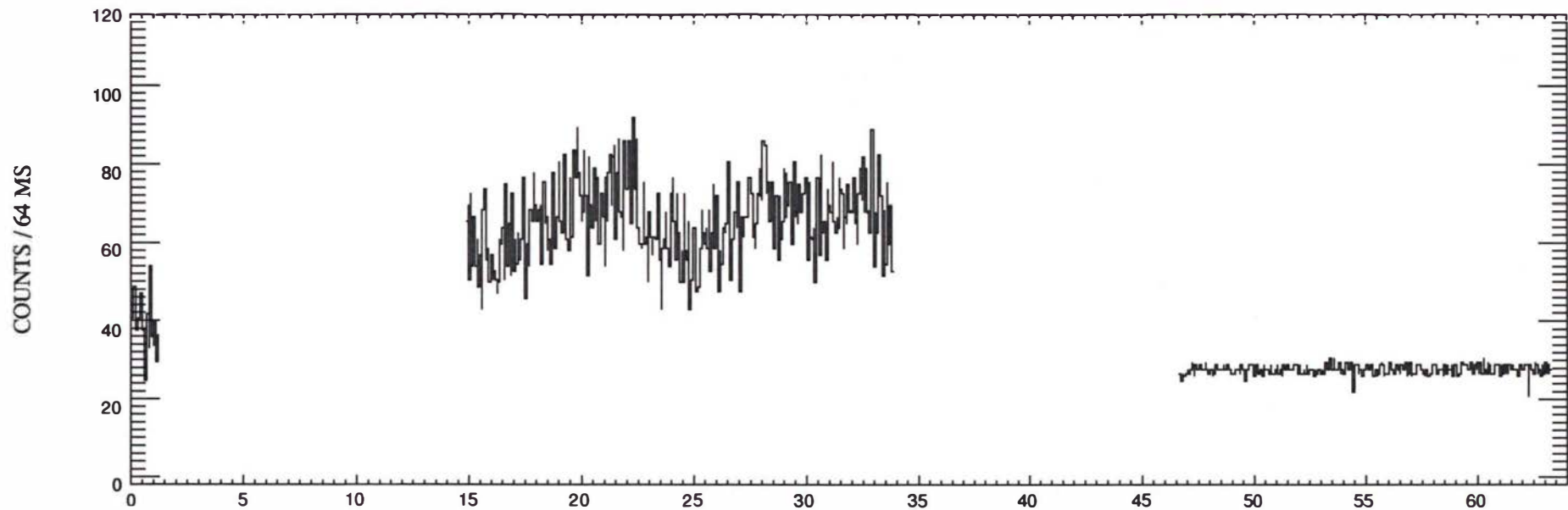


CALIBRATION DATA INCLUDED

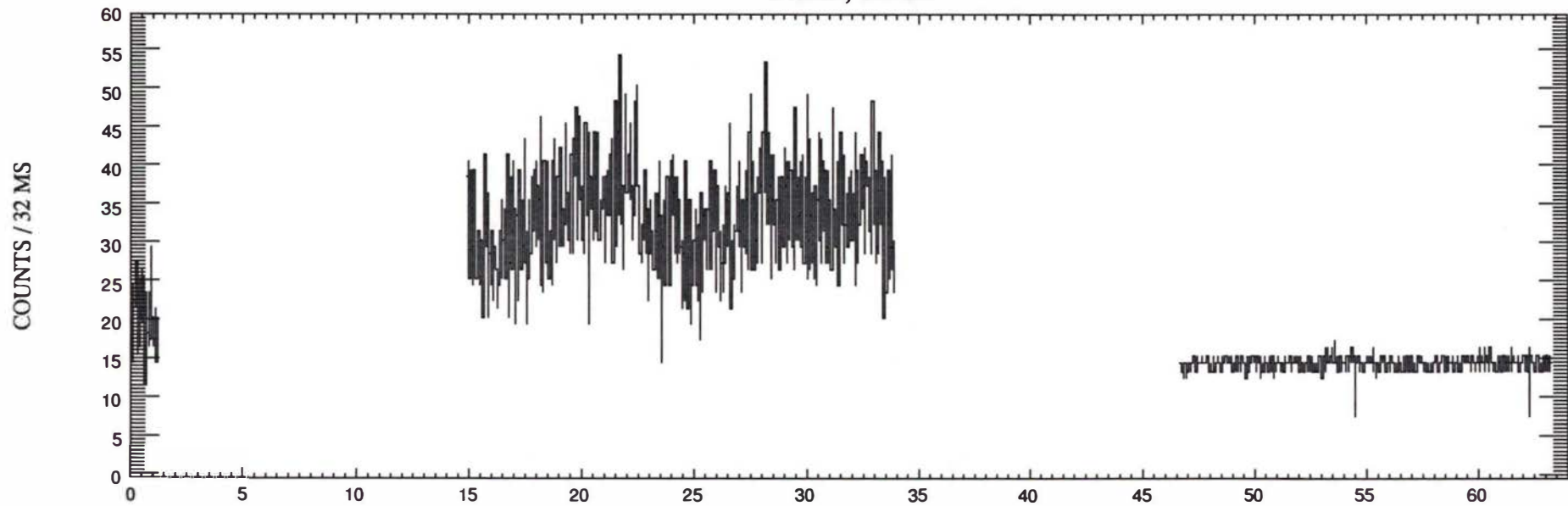


UNIV. TIME

Burst Counter 15 at UT=21.587190466987 h=77713.886 s 21:35:13.886



TIME, SECS



TIME, SECS

CALIBRATION DATA INCLUDED

