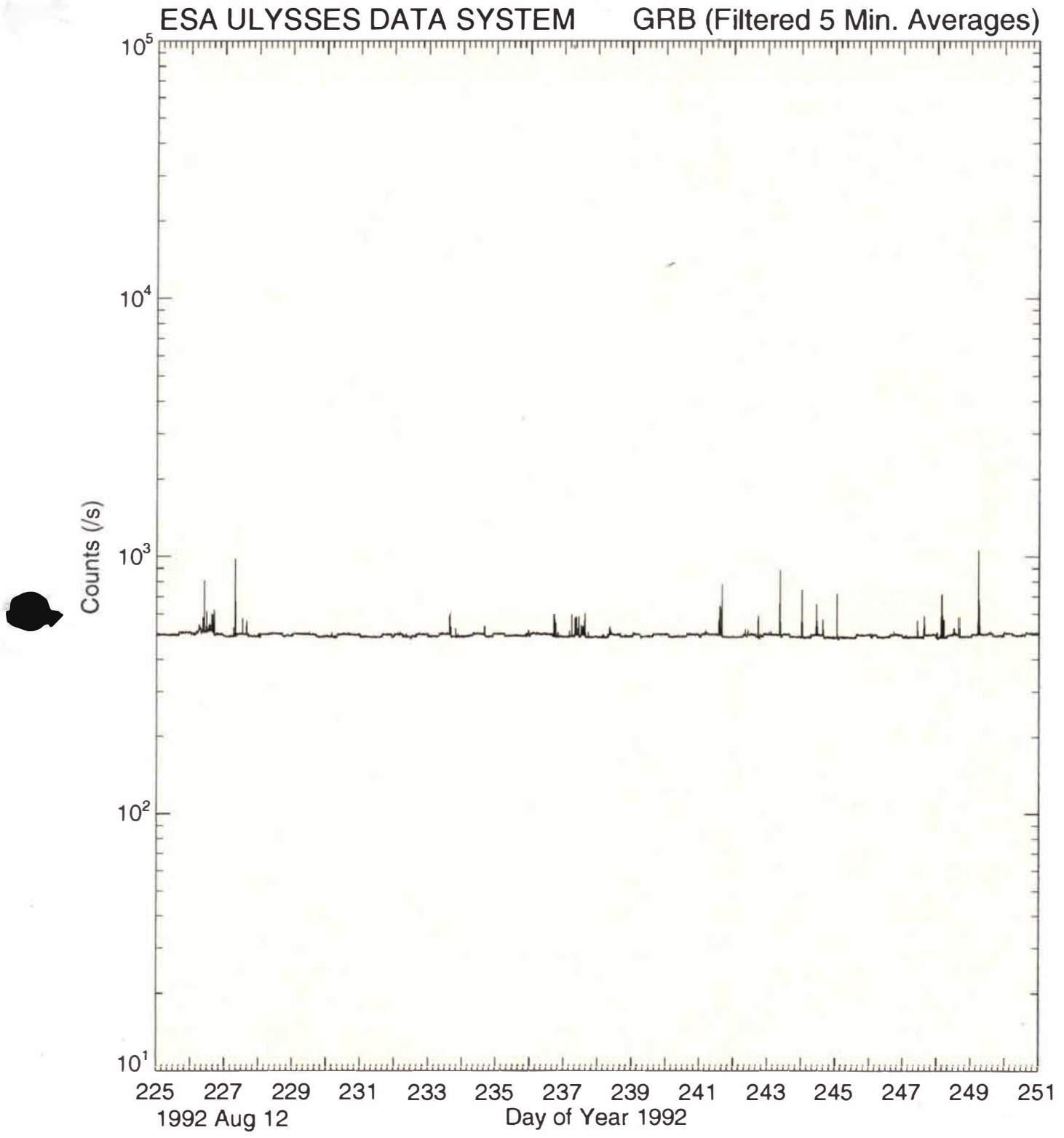
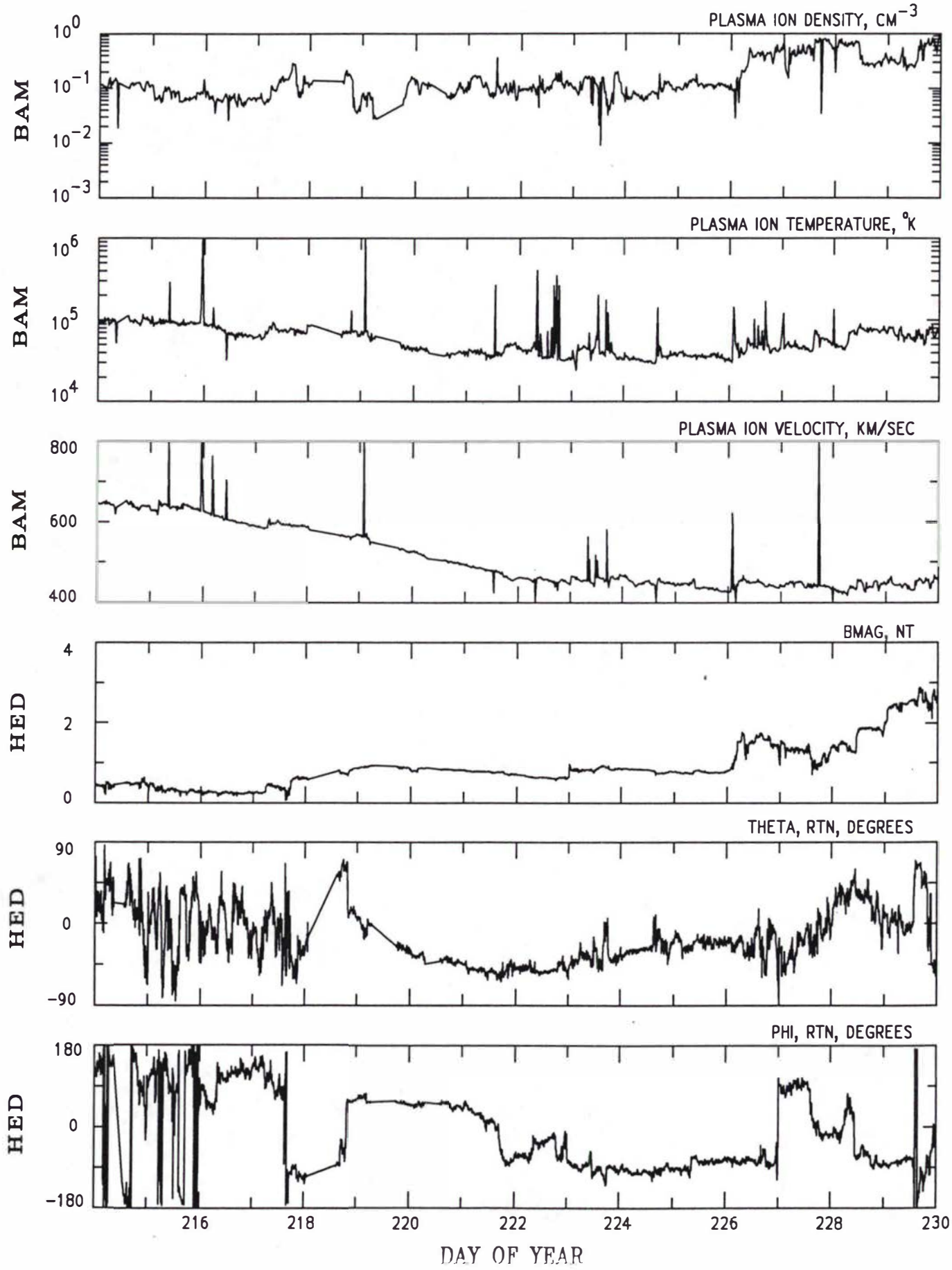
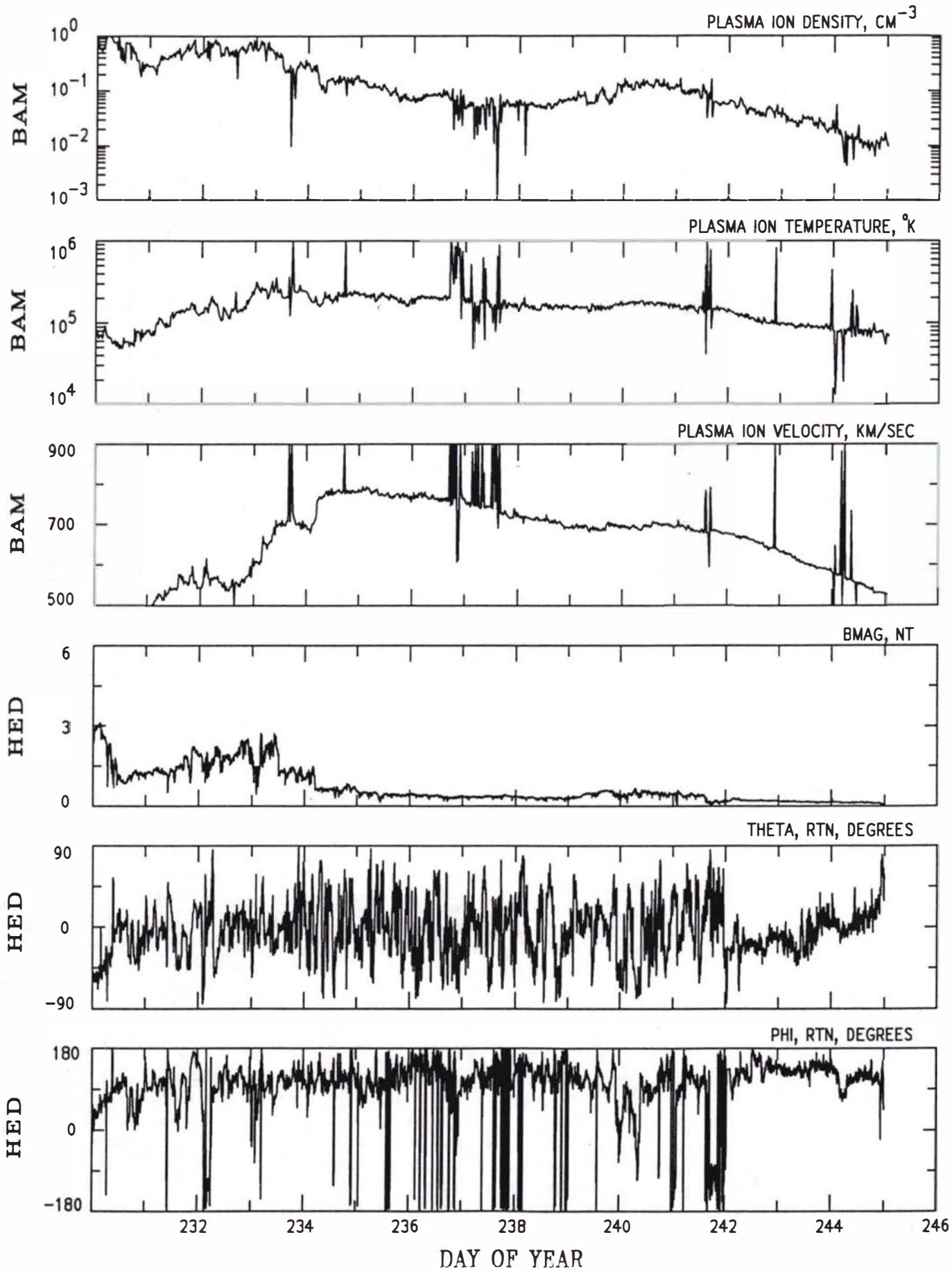
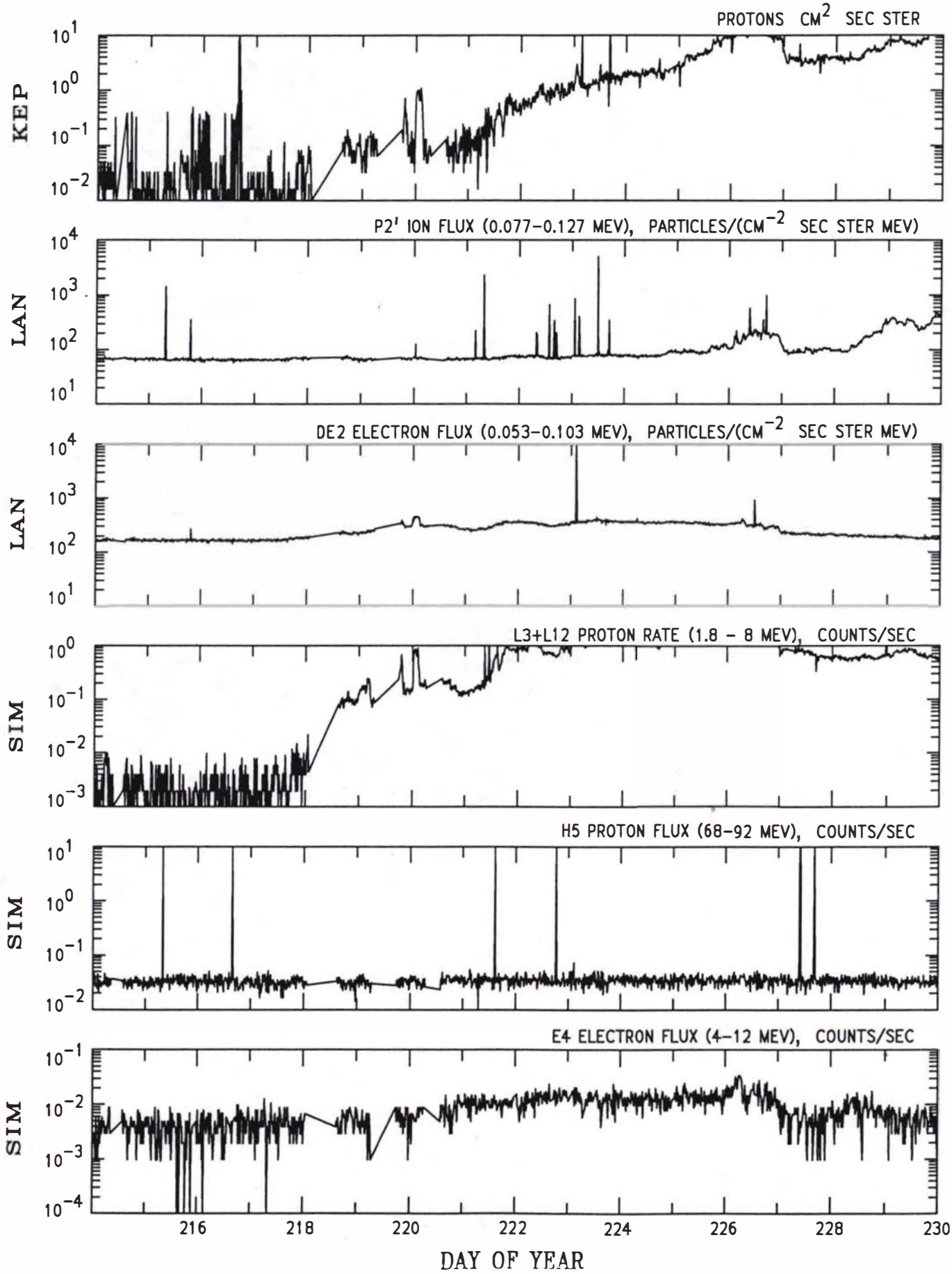

ESA ULYSSES DATA SYSTEM
GRB (Filtered 5 Min. Averages)
10^5
10^4
10^3
10^2
10^1
Counts (/s)
225 227 229 231 233 235 237 239 241 243 245 247 249 251
1992 Aug 12
Day of Year 1992
(AU) 5.30 5.29 5.29 5.29 5.29 5.28 5.28 5.28 5.28 5.27 5.27 5.27 5.27 5.26
Latitude (°) -15.25 -15.35 -15.46 -15.56 -15.66 -15.76 -15.86 -15.97 -16.07 -16.17 -16.27 -16.37 -16.48 -16.58
Generated from IDL by Ulysses Data System on Thu Oct 16 13:37:20 1997


ULYSSES CDR – SOLAR WIND PLASMA AND MAGNETIC FIELD
92 214 AUG 1 00:00:00.000 – 92 230 AUG 17 00:00:00.000
PLASMA ION DENSITY, CM^{-3}
BAM
10^0
10^{-1}
10^{-2}
10^{-3}
PLASMA ION TEMPERATURE, °K
BAM
10^6
10^5
10^4
PLASMA ION VELOCITY, KM/SEC
BAM
800
600
400
BMAG, NT
HED
4
2
0
THETA, RTN, DEGREES
HED
90
0
-90
PHI, RTN, DEGREES
HED
180
0
-180
216
218
220
222
224
226
228
230
DAY OF YEAR


ULYSSES CDR – SOLAR WIND PLASMA AND MAGNETIC FIELD
92 230 AUG 17 00:00:00.000 – 92 246 SEP 2 00:00:00.000
PLASMA ION DENSITY, CM^{-3}
BAM
10^0
10^{-1}
10^{-2}
10^{-3}
PLASMA ION TEMPERATURE, °K
BAM
10^6
10^5
10^4
PLASMA ION VELOCITY, KM/SEC
BAM
900
700
500
BMAG, NT
HED
6
3
0
THETA, RTN, DEGREES
HED
90
0
-90
PHI, RTN, DEGREES
HED
180
0
-180
232
234
236
238
240
242
244
246
DAY OF YEAR

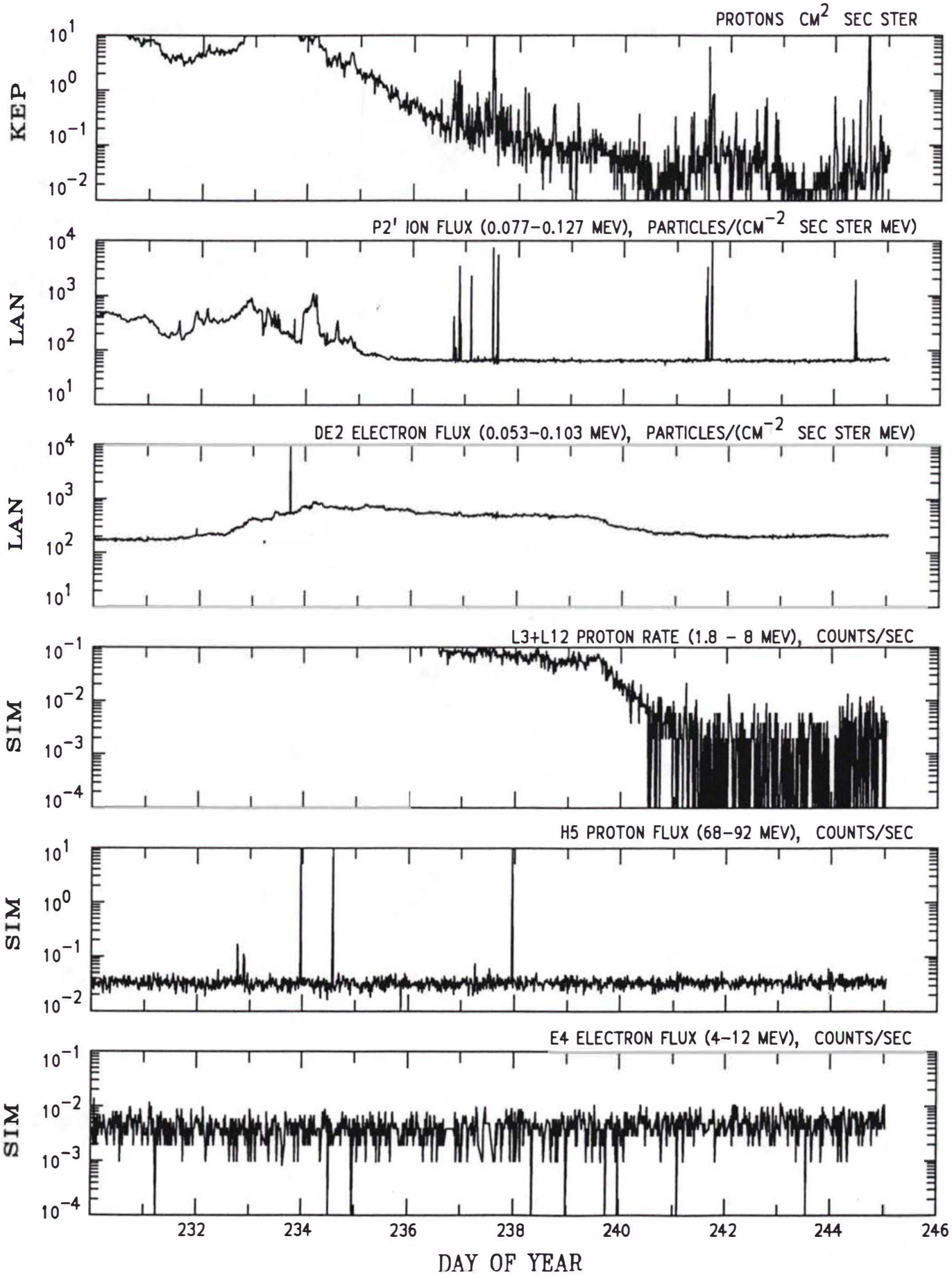
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

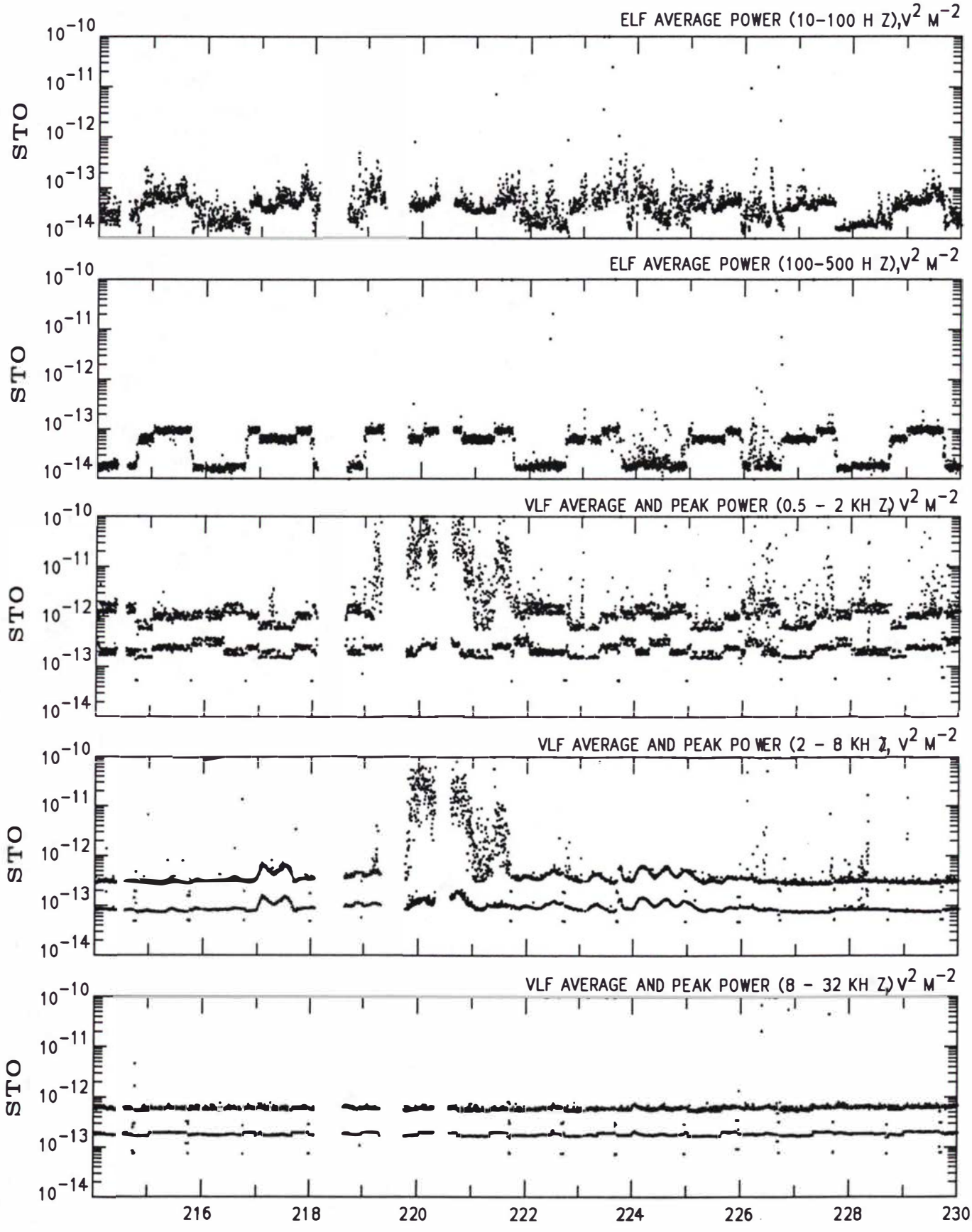
92 214 AUG 1 00:00:00.000 - 92 230 AUG 17 00:00:00.000

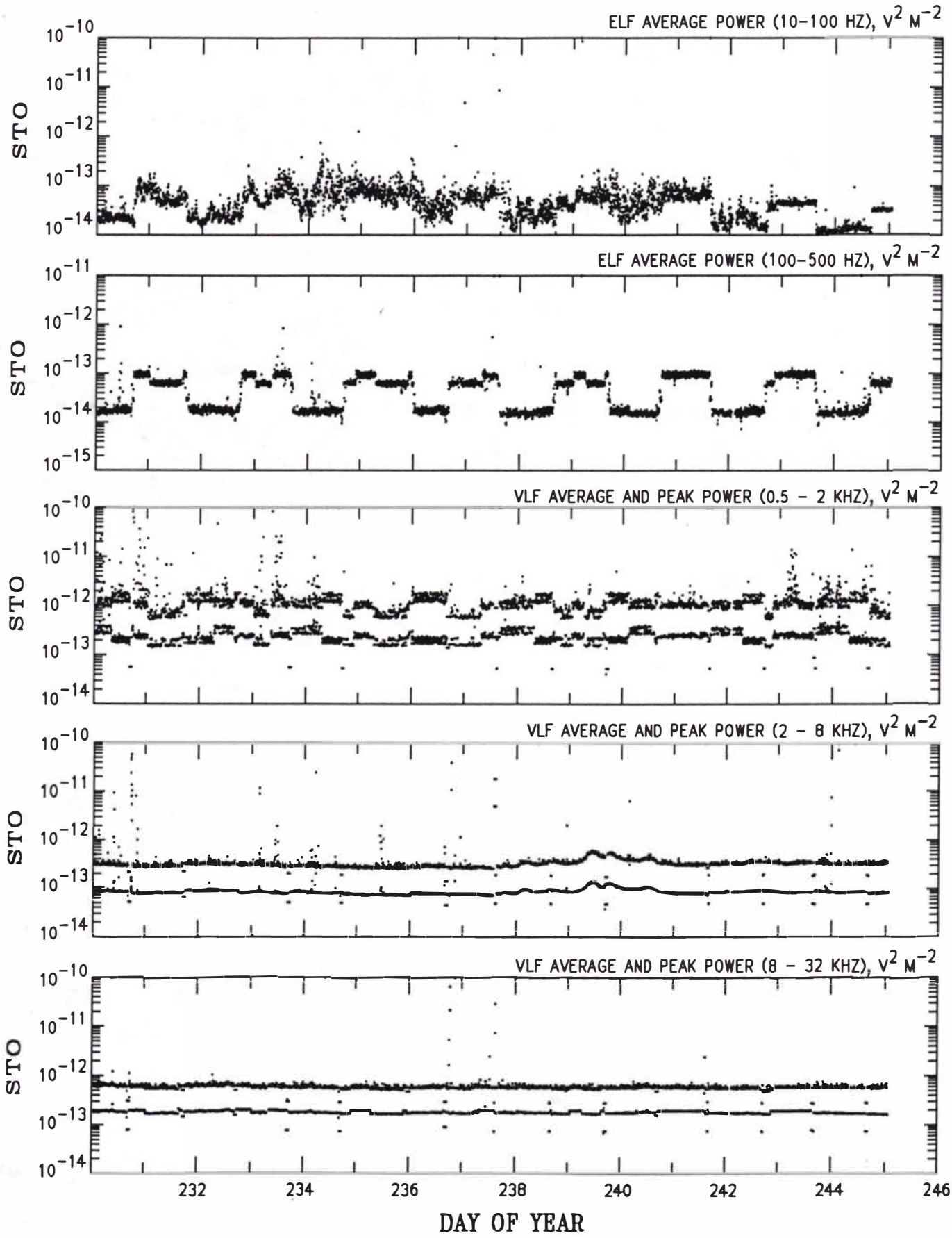


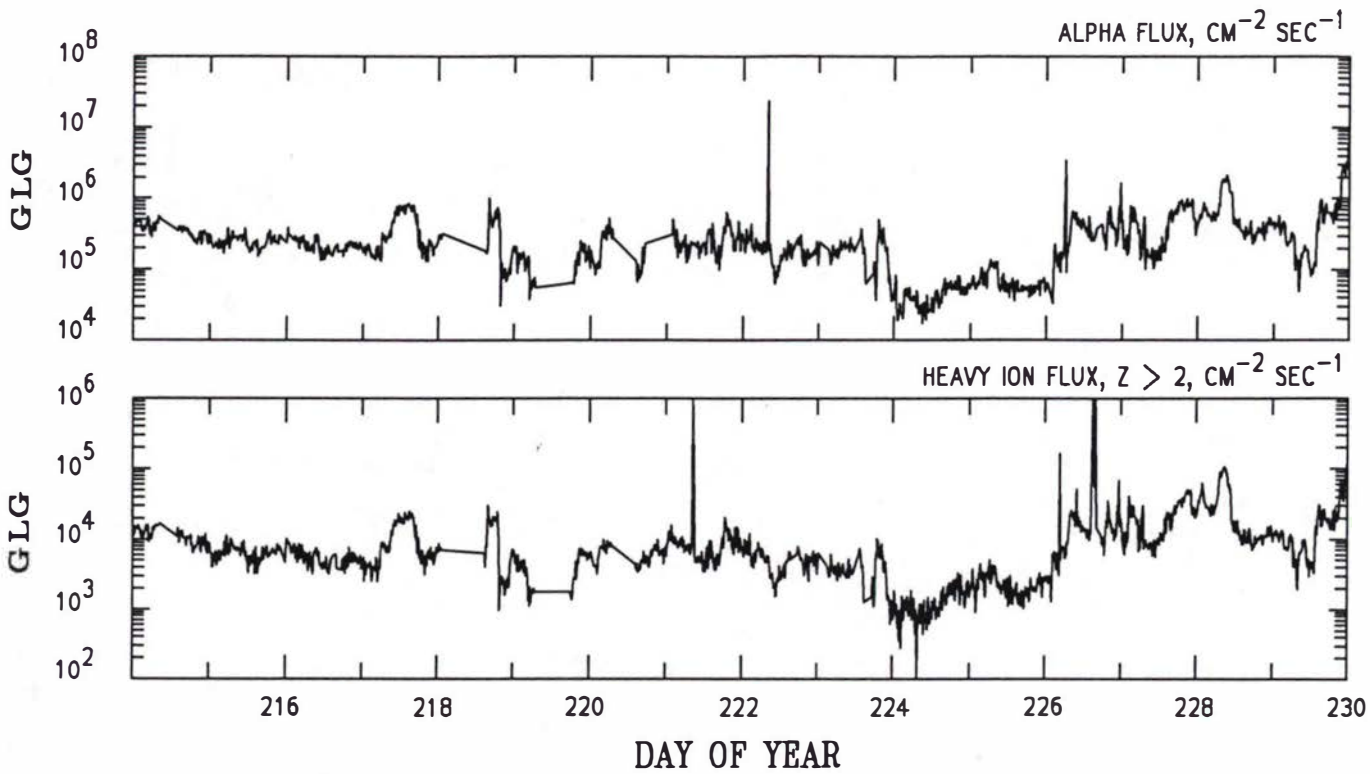
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

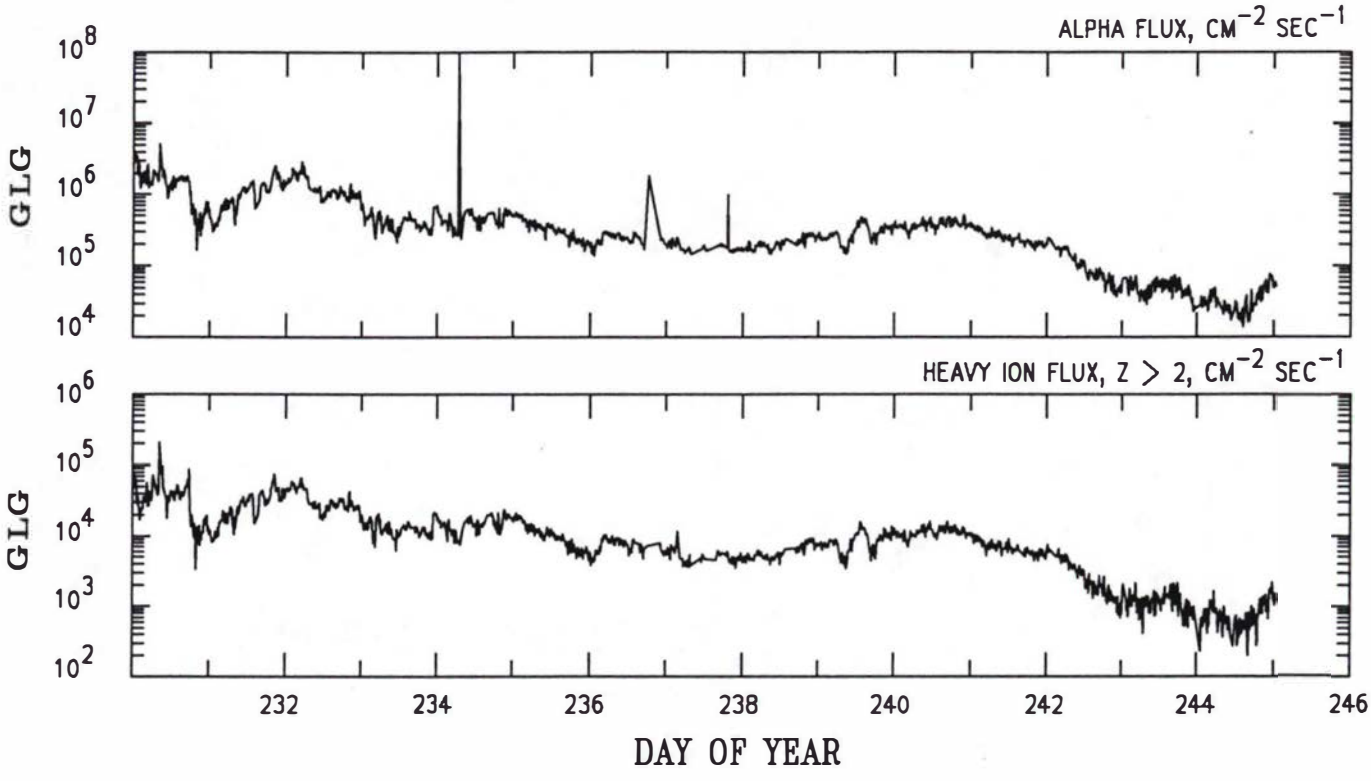
92 230 AUG 17 00:00:00.000 - 92 246 SEP 2 00:00:00.000




ULYSSES CDR - PLASMA WAVE
92 214 AUG 1 00:00:00.000 - 92 230 AUG 17 00:00:00.000
ELF AVERAGE POWER (10-100 H Z),V2 M-2
ELF AVERAGE POWER (100-500 H Z),V2 M-2
VLF AVERAGE AND PEAK POWER (0.5 - 2 KH Z) V2 M-2
VLF AVERAGE AND PEAK POWER (2 - 8 KH Z, V2 M-2
VLF AVERAGE AND PEAK POWER (8 - 32 KH Z) V2 M-2
STO
10-10
10-11
10-12
10-13
10-14
216
218
220
222
224
226
228
230
DAY OF YEAR

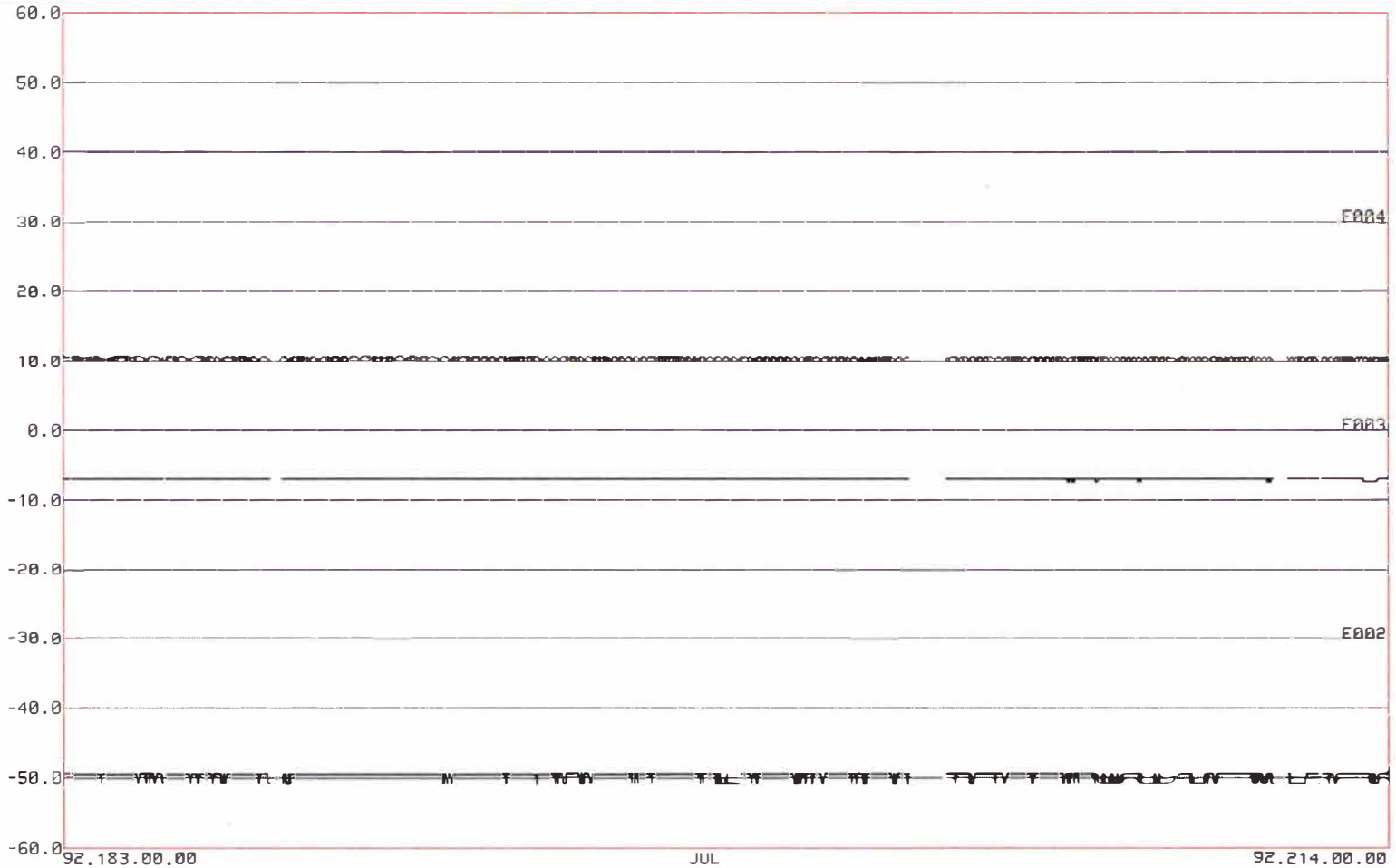

ULYSSES CDR - PLASMA WAVE
92 230 AUG 17 00:00:00.000 - 92 246 SEP 2 00:00:00.000
ELF AVERAGE POWER (10-100 HZ), V2 M-2
ELF AVERAGE POWER (100-500 HZ), V2 M-2
VLF AVERAGE AND PEAK POWER (0.5 - 2 KHZ), V2 M-2
VLF AVERAGE AND PEAK POWER (2 - 8 KHZ), V2 M-2
VLF AVERAGE AND PEAK POWER (8 - 32 KHZ), V2 M-2
STO
10-10
10-11
10-12
10-13
10-14
10-15
232
234
236
238
240
242
244
246
DAY OF YEAR


ULYSSES CDR – SOLAR WIND ION COMPOSITION
92 214 AUG 1 00:00:00.000 – 92 230 AUG 17 00:00:00.000
ALPHA FLUX, CM^{-2} SEC^{-1}
GLG
10^8
10^7
10^6
10^5
10^4
HEAVY ION FLUX, Z > 2, CM^{-2} SEC^{-1}
GLG
10^6
10^5
10^4
10^3
10^2
216
218
220
222
224
226
228
230
DAY OF YEAR


ULYSSES CDR – SOLAR WIND ION COMPOSITION
92 230 AUG 17 00:00:00.000 – 92 246 SEP 2 00:00:00.000
ALPHA FLUX, CM^{-2} SEC^{-1}
GLG
10^8
10^7
10^6
10^5
10^4
HEAVY ION FLUX, Z > 2, CM^{-2} SEC^{-1}
GLG
10^6
10^5
10^4
10^3
10^2
232
234
236
238
240
242
244
246
DAY OF YEAR

.92.214.00.12.00.579 HUS monthly long term thermal data 818 RET

E002 2ARADTMP S/C	-7.1	E003 2BSENTMP S/C	-49.3	E004 2ASENSTMP EX	10.73



From khurley@omni:.dna_node.jplgp.span Thu Nov 26 00:17:00 1992
Date: Thu, 26 Nov 92 00:06:57 -0800
From: khurley@omni:.dna_node.jplgp.span
To: "khurley@sunspot.ssl.berkeley.edu"%jpldig.span@JPLDIG.jpl.nasa.gov
Content-Length: 4787

Last updated : Wednesday 16 September 1992

1st Aug	Routine operations.
214.08:41-13:05 SCET	4h24m real time data loss. Transmitter failure at DSS-61, followed by station power failure and comms problem.
2nd Aug	Routine operations.
3rd Aug	KEP EPAC IFC. Earth pointing manoeuvre.
216.08:02-08:21 SCET	19m real time data loss. Slow bit rate change - DACS1 had to be restarted at DSS-61.
216.18:22 SCET	Dummy command transmitted to spacecraft for ground s/w test.
4th Aug	Routine operations.
5th Aug	KEP EPAC RAM dump.
218.01:33-14:40 SCET	Complete loss of 1 pass of playback data due to DSS-61 outage on DOY 219 caused by lightning strike. 13h07m data loss.
218.21:32-22:04 SCET	Antenna halted due to earthquake at DSS-12. 32m of real time data loss.
6th Aug	STO daily commands sequences 1 and 2 missed due to loss of pass.
219.07:02-17:52 SCET	Complete loss of 1 pass of real time data due to lightning strike on DSS-61. CCG Motor damaged and repaired. Subreflector out of commission for unspecified period. 10h50m of real time data loss. KEP GAS health check executed on board spacecraft, but no data due to loss of pass.
7th Aug	Earth pointing manoeuvre delayed by 2.5 hours. Nominal manoeuvre.
220.07:03-13:43 SCET	Real time data loss of 6h40m. Beginning of scheduled DSS-61 pass lost due to continuing subreflector problems. DSS-63 supported from 13:43-15:39, when DSS-61 began tracking again.
220.17:36-17:53 SCET	Real time data loss of 17m. DSS-61 pass ended early to allow further work on subreflector problem.
8th Aug	Routine operations.
9th Aug	Routine operations.
10th Aug	KEP EPAC IFC. Earth pointing manoeuvre.
11th Aug	Routine operations. KEP GAS Health check - rescheduled from lost pass on DOY 219.
12th Aug	HED Calibration. Routine operations.

13th Aug	Earth pointing manoeuvre. Routine operations.
14th Aug	Routine operations.
15th Aug	Routine operations.
16th Aug	Earth pointing manoeuvre.
17th Aug	KEP EPAC IFC. Routine operations.
230.08:17-08:32 SCET	Loss of 15 minutes real time data due to TPA restart at DSS-61 following S/C receiver lock up.
18th Aug	Routine operations.
19th Aug	HET Calibration and Reset. Earth pointing manoeuvre.
20th Aug	Routine operations.
233.06:47-07:43 SCET	Late AOS due to oil leak in antenna gearbox at DSS-61. 56m real time data loss.
21st Aug	Routine operations.
22nd Aug	Routine operations.
23rd Aug	Earth pointing manoeuvre. Routine operations.
24th Aug	KEP EPAC IFC. Routine operations.
25th Aug	Routine operations.
26th Aug	HED Calibration. Routine operations. Earth pointing manoeuvre.
239.08:30 (SCET)	Ulysses at maximum Geocentric range for Prime Mission - 938,418,000 km (583,106,000 miles).
27th Aug	Routine operations.
28th Aug	Routine operations.
29th Aug	Routine operations. Earth pointing manoeuvre.
242.00:53-02:23	1h30m of playback data loss due to real time data gap on DOY 243 during 2k interleaved playback period.
30th Aug	Routine operations.
243.00:35-01:20	45m of real time data loss during 2k interleaved playback period. Antenna DSS-43 went to brake due to film height alarm. Station cleared some debris from the track.
31st Aug	KEP EPAC IFC. Routine operations.
244.00:18-00:50	32m of playback loss due to real time data gap on DOY 244 during 2k interleaved playback period.
244.10:47-11:03	16m of real time data loss during 2k interleaved playback. Bad weather at DSS-61.
1st Sept	Earth pointing manoeuvre. Routine operations.
245.13:00-16:00	Many bad formats received due to Conjunction 2 geometry.

```
          ********************
          *CATSEARCH PROGRAM*
          ********************

 BATSE BURST # 1733
 EVENT OF 1992 AUG  1 DAY OF YEAR=214
 EVENT CROSSING TIME AT BATSE     :  4600. S. OR 01:16:40.4
 COORDINATES ARE    .000    .000       6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 164.300   68.700
 BATSE PEAK COUNTING RATE:  0000   C/S

 EVENT CROSSING TIME AT ULYSSES    WILL BE FOUND
 POSITION OF ULYSSES ON  1/ 8/  92 IS:
 RA=  153.684 DEC=    3.918 DIST=    6.197 AU
 BATSE-ULYSSES DISTANCE =  927122064. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=114.83 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1298.43 SECS.
 CROSSING TIME AT ULYSSES    IS  3302. S. OR 00:55:02.0 +/-  517.58 SECONDS
```

RI

```
From KOSHUT@ssl.msfc.nasa.gov Sun Aug  2 11:34:35 1992
Date:    Sun, 2 Aug 1992 13:36:43 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
       khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1377

                BATSE BURST TRIGGER
NO.: 01733
```

Aug 1

```
TIME: TJD=8835 SECONDS=04600

TYPE: BURST                    SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:       SIGMA

INTENSITY:          COUNTS/CM2

LOCATION: ZENITH=52.    AZIMUTH=61.    ERROR=      DEGREES

COMMENTS:
BURST OF ~26 SECOND DURATION WITH EMISSION DETECTED ABOVE 300 KEV.
SIMPLE TIME HISTORY WITH RELATIVELY SLOW RISE AND AN EXPONENTIAL DECAY.
PEAK RATE IS AT ~ TRIGGER + 3 SECONDS.
```

Helio corr removed

Date: Dec 8 '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?

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)?

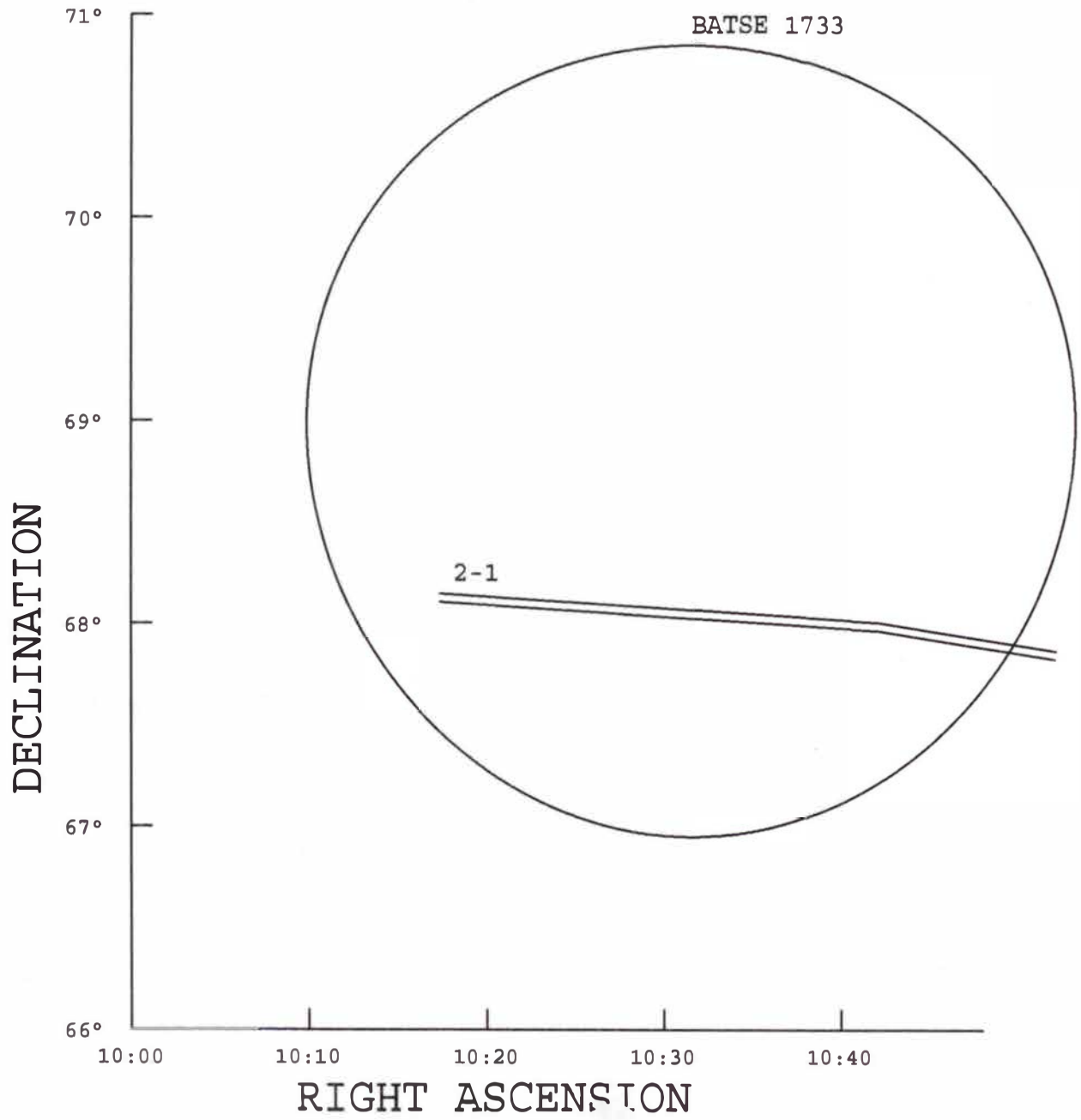
☐ 2000 coordinates used?

☐ Geocentric time used?

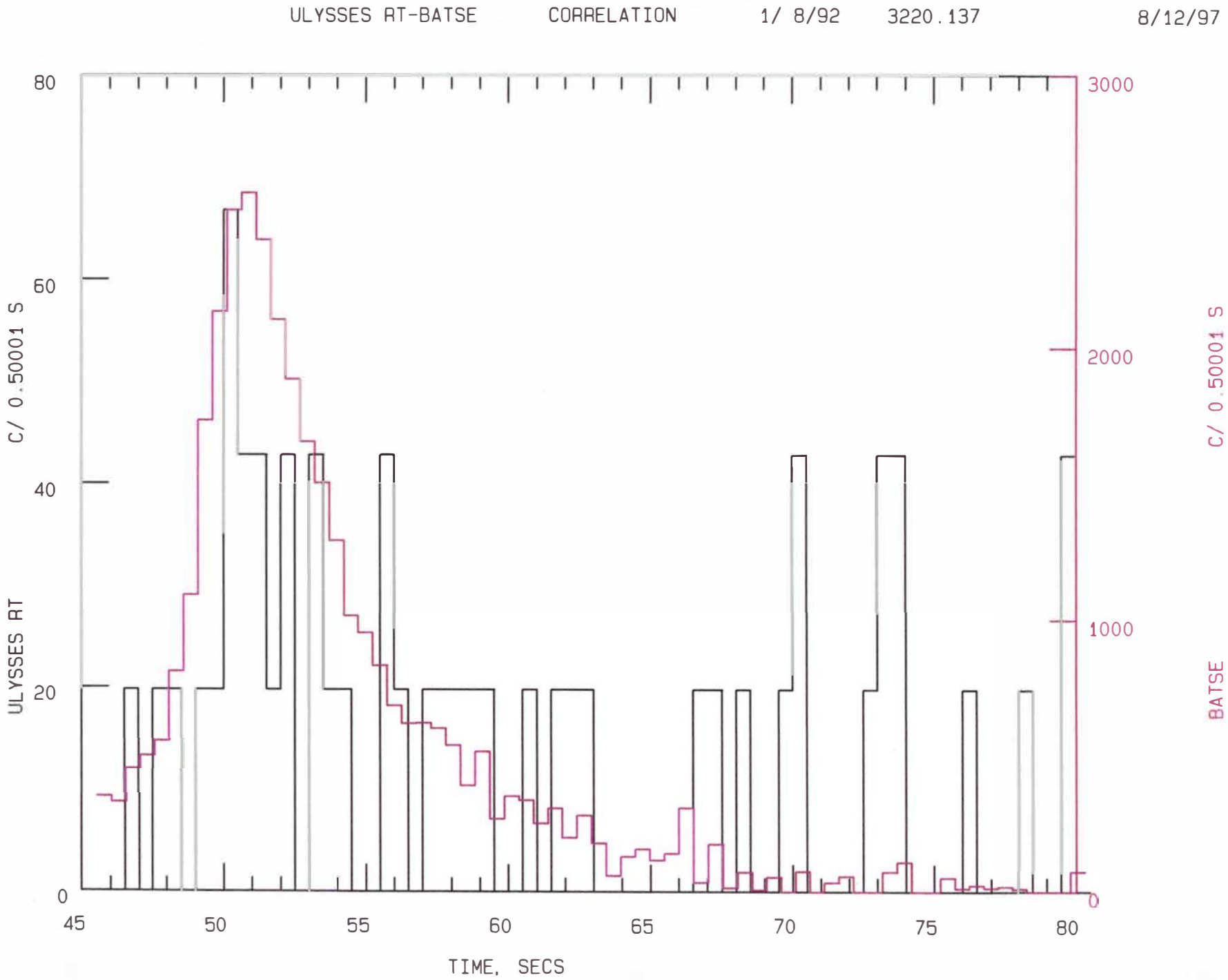
☑ ACCESS database updated?

EVENT OF AUG 1, 1992 0:53

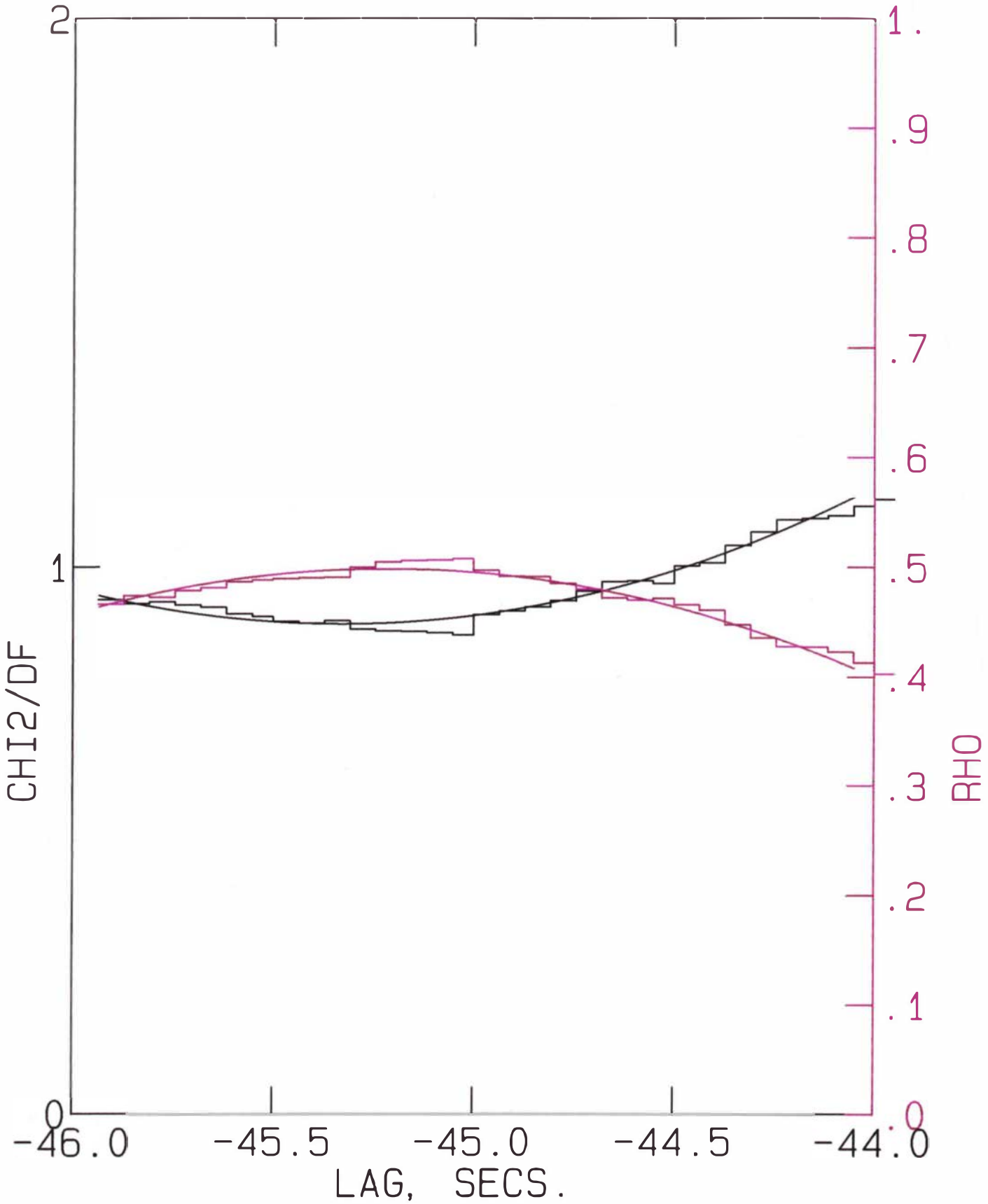
8/12/97



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


ULYSSES RT-BATSE CORRELATION 1/ 8/92 3220.137 8/12/97
80
60
40
20
0
C/ 0.50001 S
ULYSSES RT
3000
2000
1000
0
C/ 0.50001 S
BATSE
45
50
55
60
65
70
75
80
TIME, SECS

ULYSSES RT-BATSE CORRELATION 1/ 8/92 3220.137



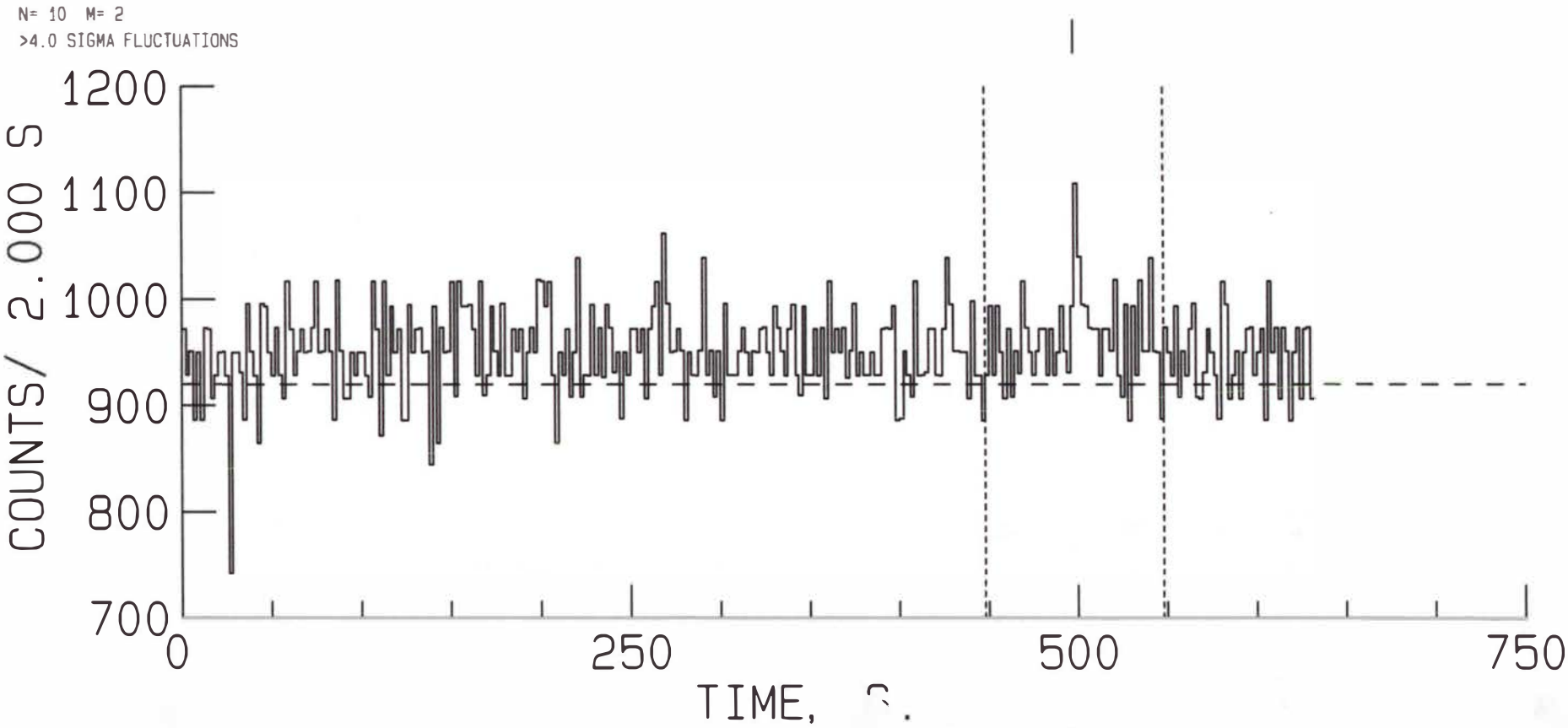
ULYSSES RT

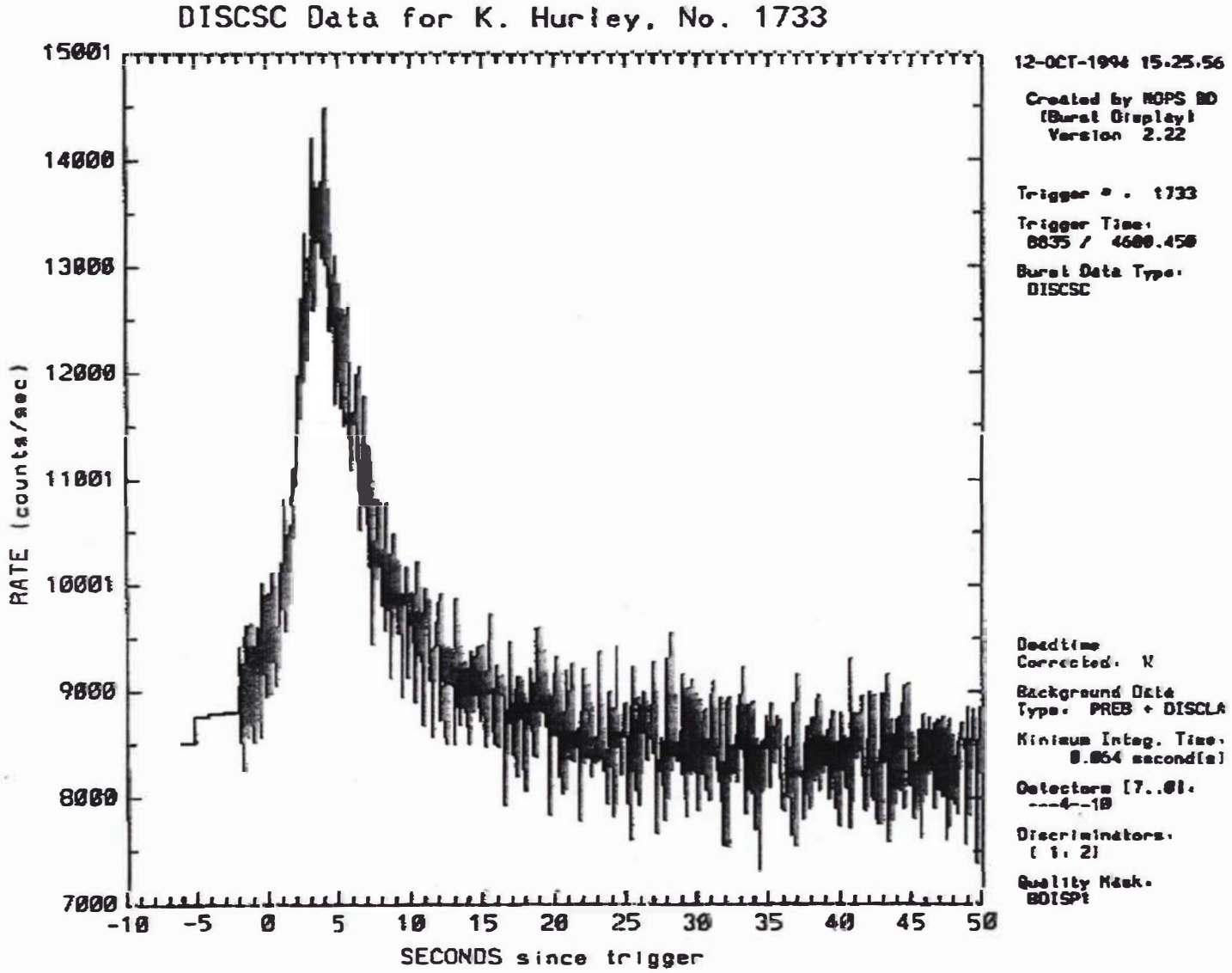
8/12/97

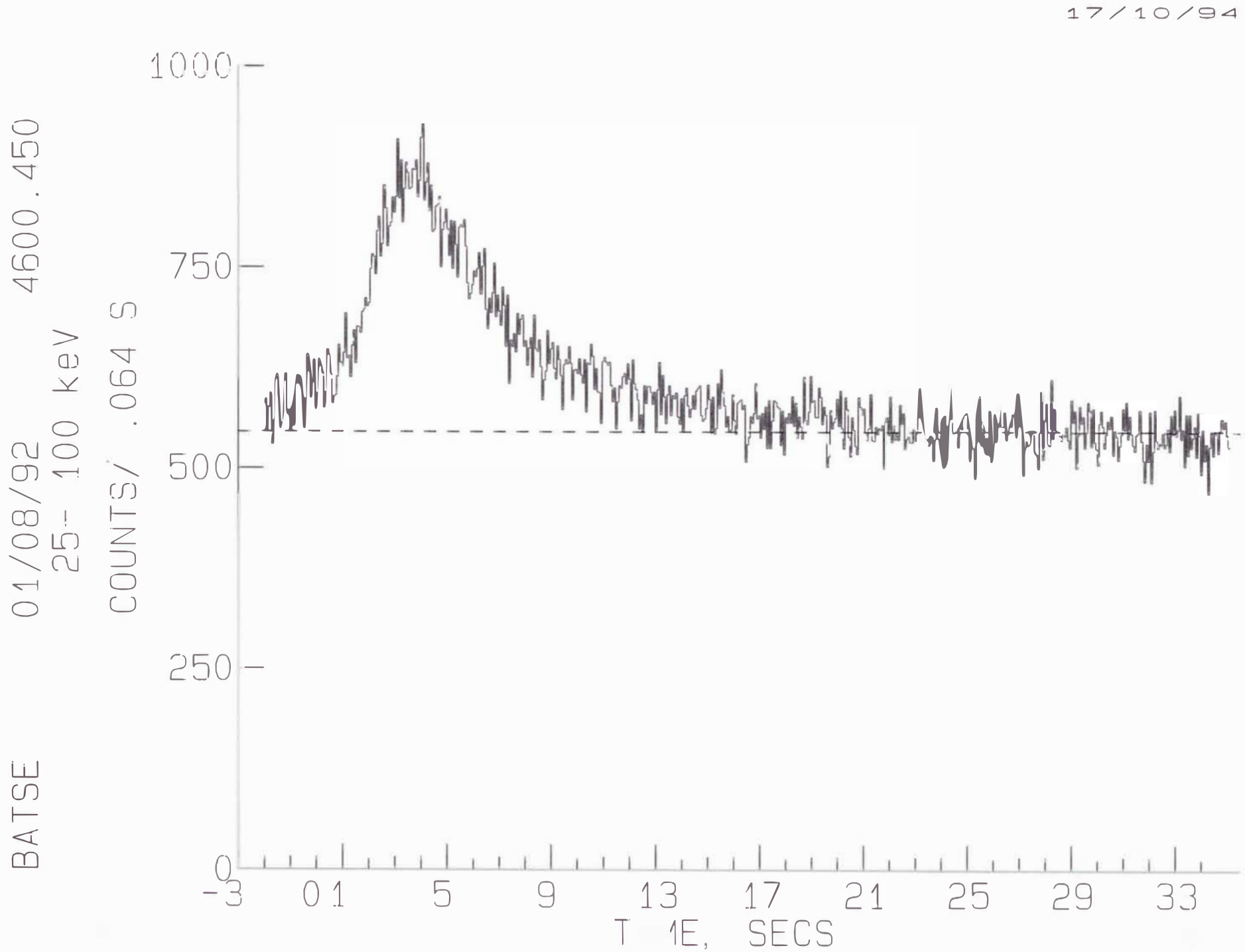
1/ 8/92 2772.274 s

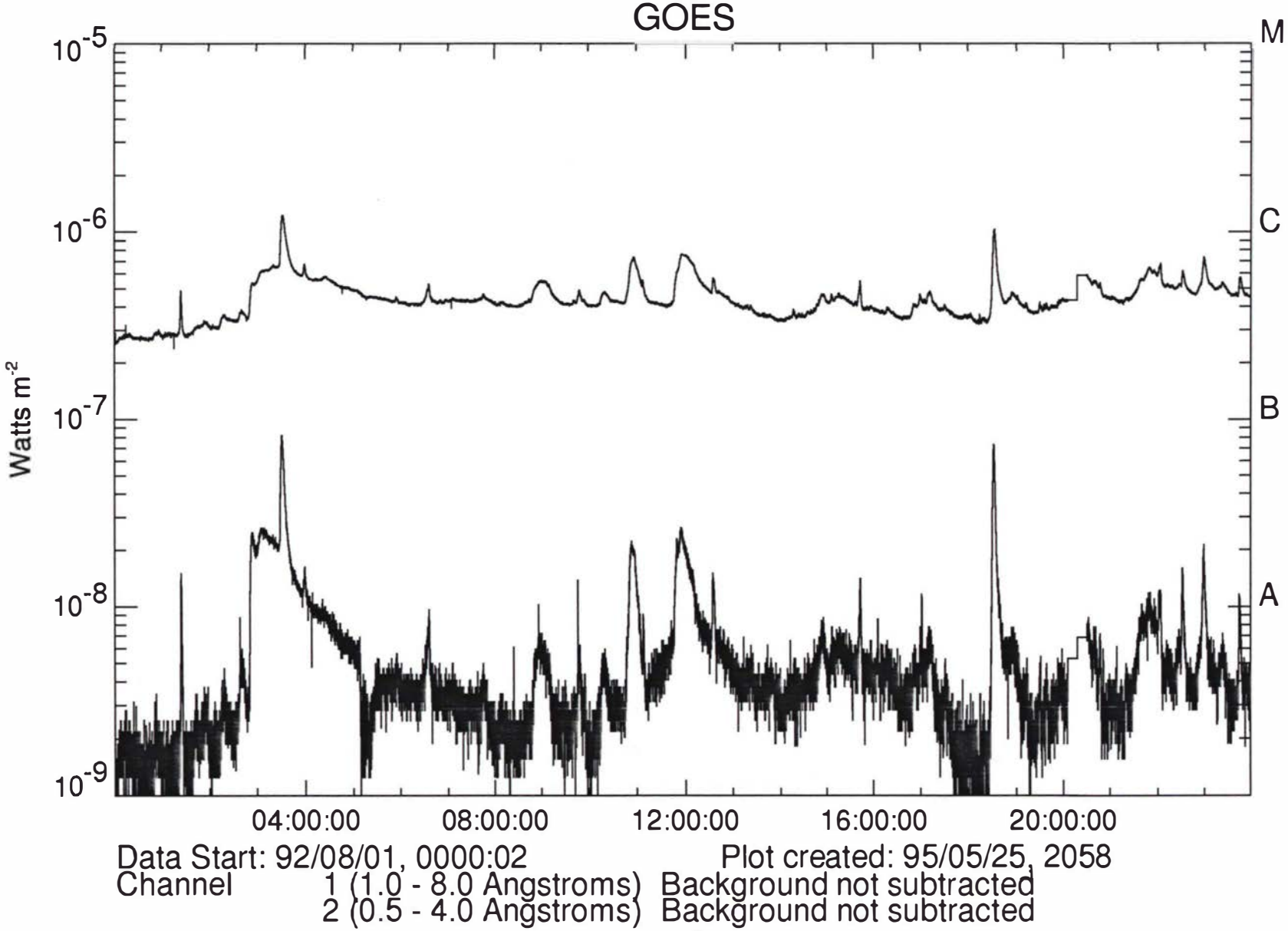
0.500 S INTERVALS REGROUPED BY 4

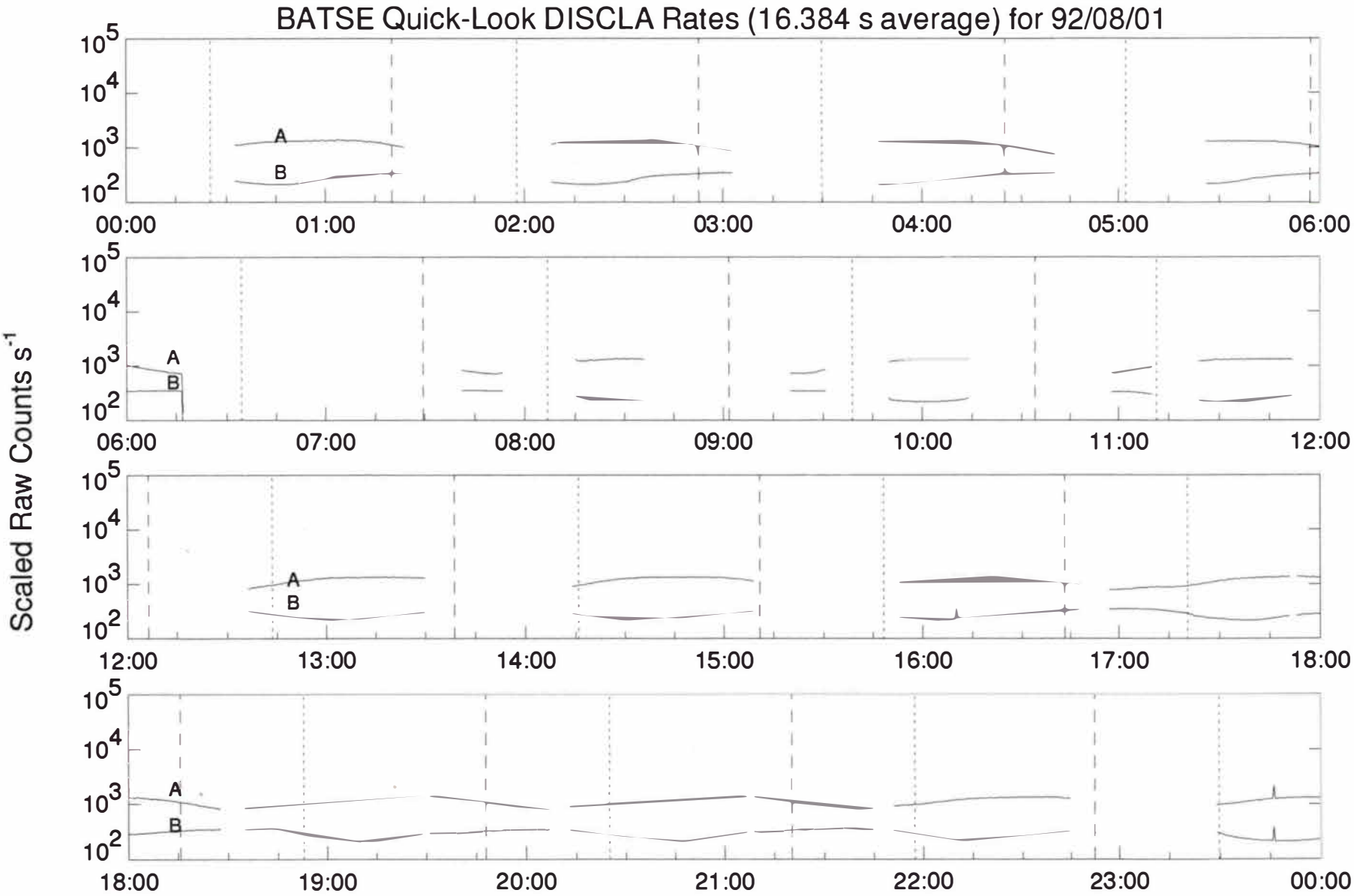
22- 153 keV



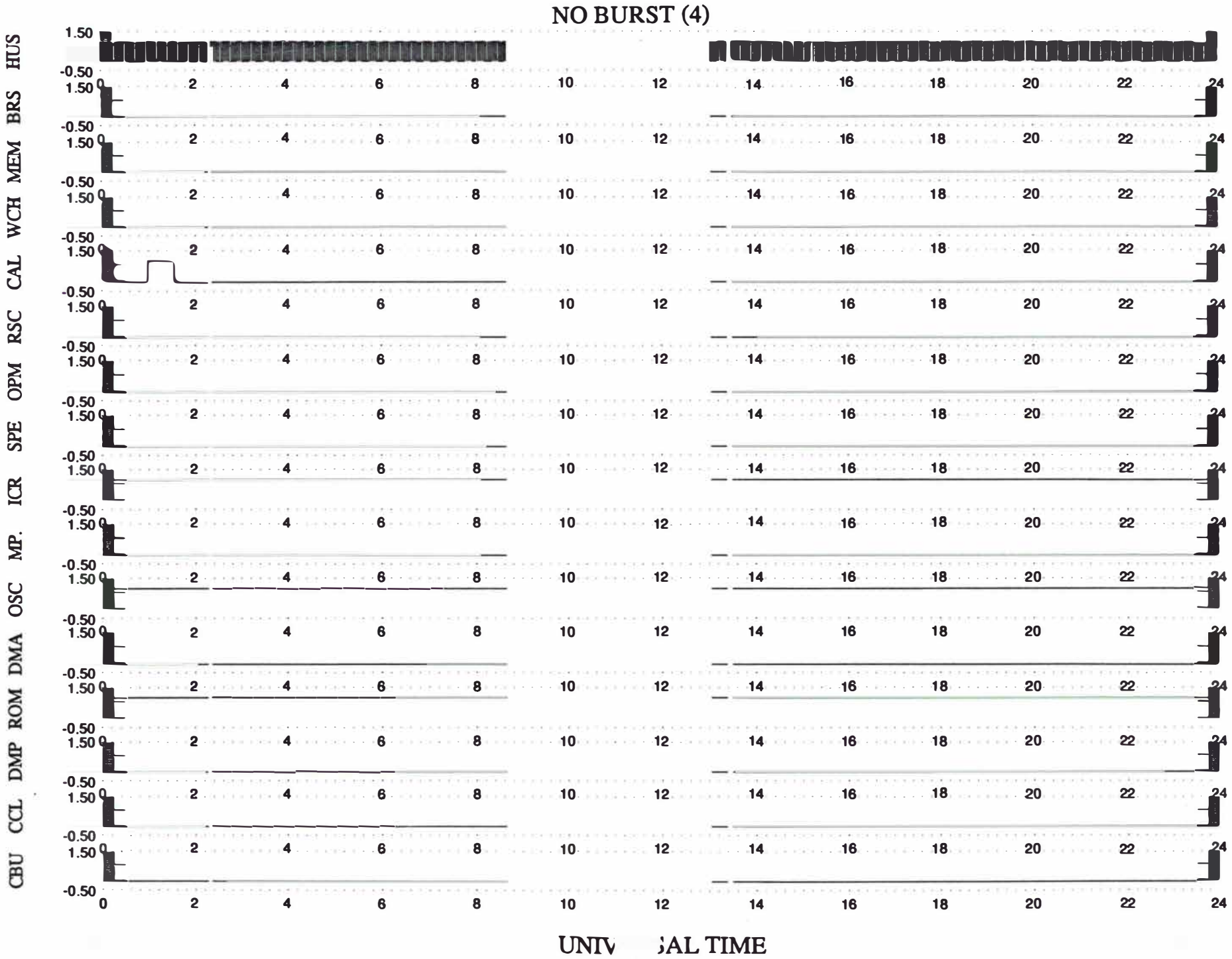

DISCSC Data for K. Hurley, No. 1733
RATE (counts/sec)
15001
14000
13000
12000
11001
10001
9000
8000
7000
-10 -5 0 5 10 15 20 25 30 35 40 45 50
SECONDS since trigger
12-OCT-1994 15:25.56
Created by MOPS BD
(Burst Display)
Version 2.22
Trigger # . 1733
Trigger Time:
8835 / 4600.450
Burst Data Type:
DISCSC
Deadtime
Corrected: N
Background Data
Type: PREB + DISCLA
Minimum Integ. Time:
0.064 second(s)
Detectors [7..0]:
---4--10
Discriminators:
[1: 2]
Quality Mask:
BDISPI


17/10/94
BATSE 01/08/92 4600.450
25- 100 keV
COUNTS/ .064 S
1000
750
500
250
0
-3
01
5
9
13
17
21
25
29
33
T 1E, SECS


GOES
M
C
B
A
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/01, 0000:02
Plot created: 95/05/25, 2058
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

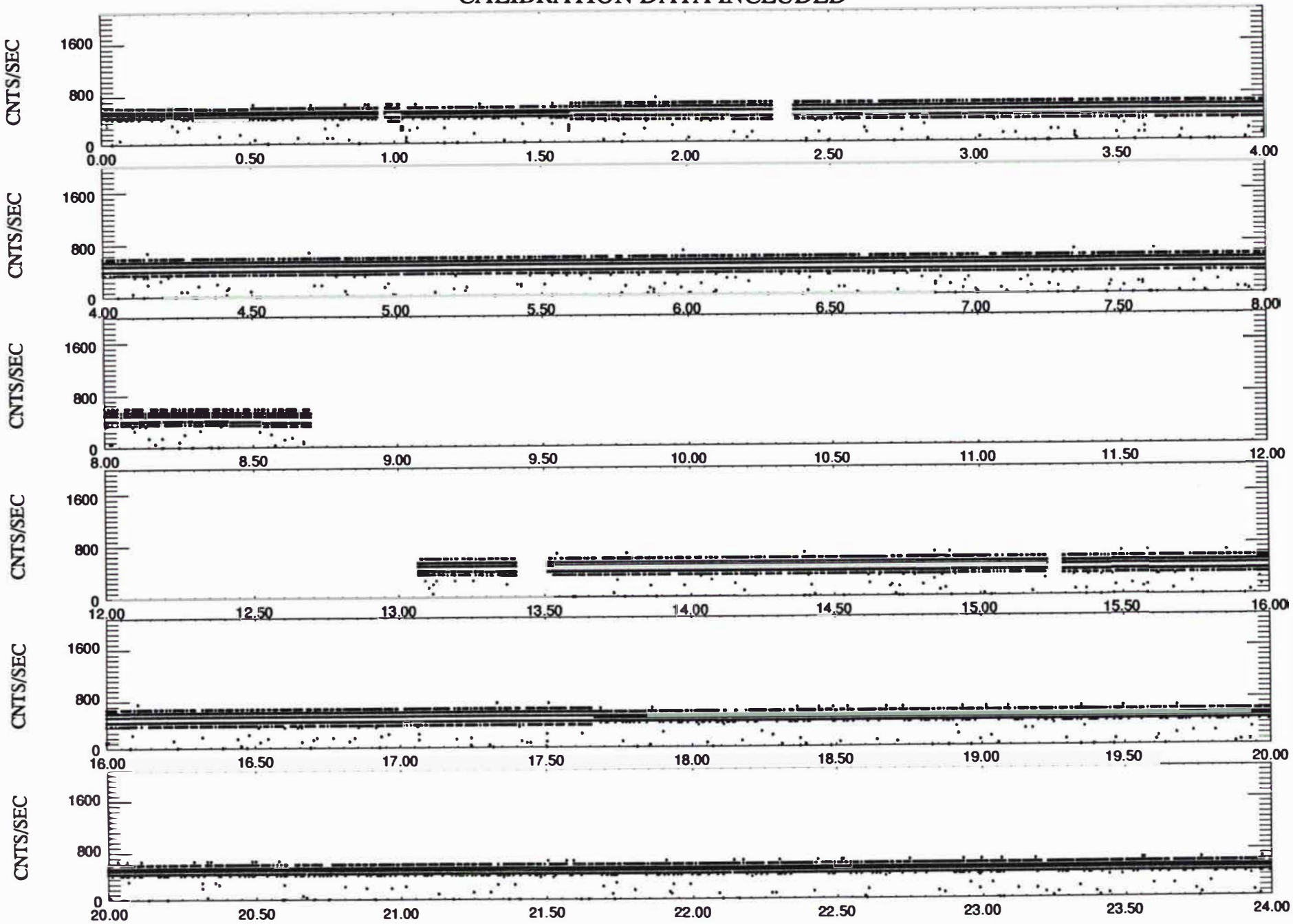

BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/01
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 92/08/28, 2116 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
+ Solar Flare
* Solar Burst Trigger

HUS MODES EDR day 214, year 1992 to day 214, year 1992 9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 214, year 1992 to day 214, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIV AL TIME

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          ********************
          *CATSEARCH PROGRAM*
          ********************

BATSE BURST # 1734
EVENT OF 1992 AUG  2 DAY OF YEAR=215
EVENT CROSSING TIME AT BATSE      : 16524. S. OR 04:35:24.1
COORDINATES ARE     .000     .000        6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 100.400  -48.200
BATSE PEAK COUNTING RATE:  0000   C/S

EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
POSITION OF ULYSSES ON  2/ 8/  92 IS:
RA=  153.811 DEC=     3.831 DIST=     6.203 AU
BATSE-ULYSSES DISTANCE =  927998720. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=110.28 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1072.90 SECS.
CROSSING TIME AT ULYSSES     IS 15451. S. OR 04:17:31.2 +/-  537.82 SECONDS
```

ND

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From WILSONB@ssl.msfc.nasa.gov Tue Aug  4 11:14:16 1992
Date:    Tue, 4 Aug 1992 13:16:36 -0500 (CDT)
From: WILSONB@ssl.msfc.nasa.gov (Robert B. Wilson (205)-544-7695)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
        khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1377

                BATSE BURST TRIGGER

NO.: 01734
```

Aug 2

```
TIME: TJD=8836 SECONDS=16524

TYPE: BURST                    SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:       SIGMA

INTENSITY:          COUNTS/CM2

LOCATION: ZENITH=144.4  AZIMUTH=317.6  ERROR=10.0  DEGREES

COMMENTS:
MULTIPLE SPIKE EVENT, LASTING ~7S. INDIVIDUAL SPIKES TYPICALLY 0.5S OR LESS,
RETURNING TO BACKGROUND IN BETWEEN OUTBURSTS. DETECTABLE ABOVE 300 KEV ONLY
DURING STRONGEST SPIKE. ABOUT 7000 C/S ABOVE 25 KEV AT MAXIMUM.
```

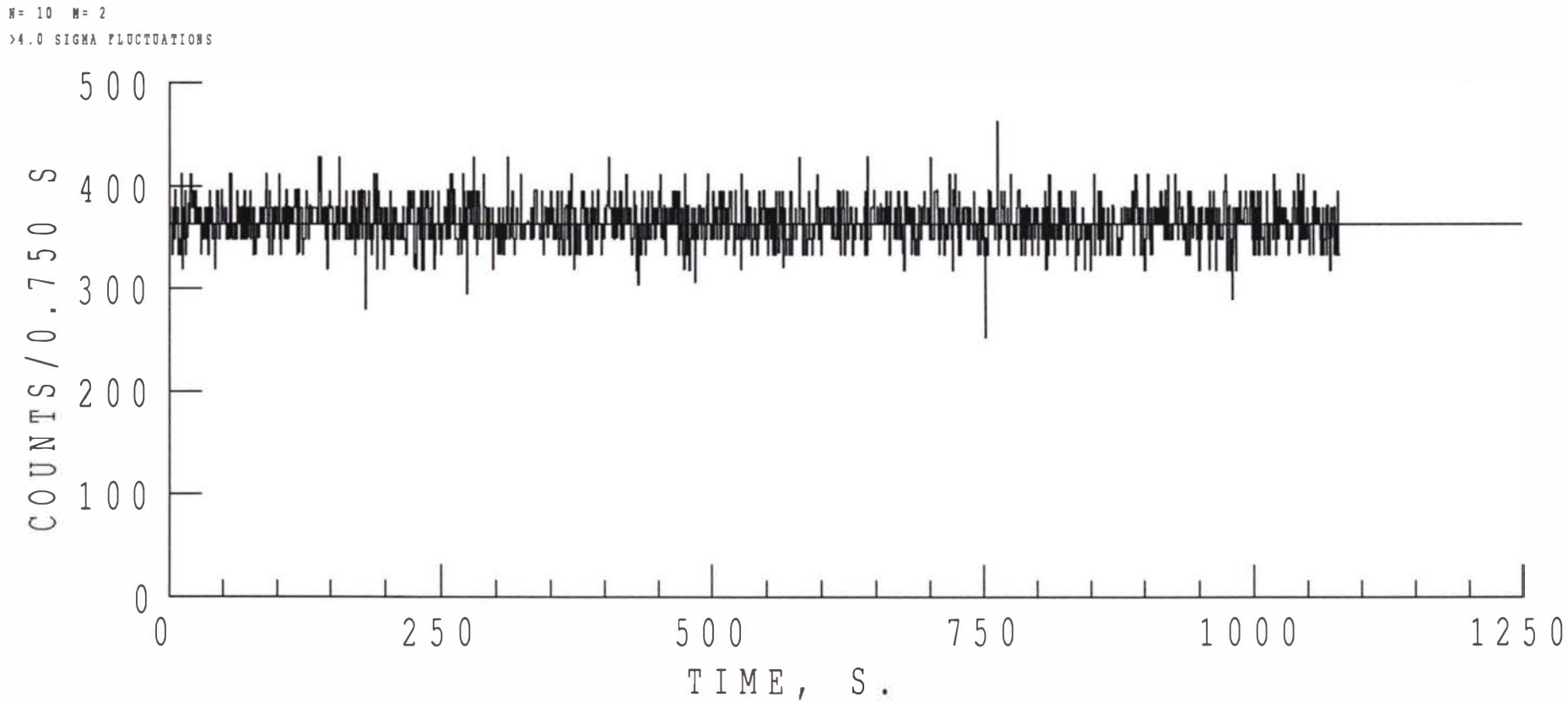
8/ 6/94

ULYSSES RT

2/ 8/92 14904.109 s

0.250 S INTERVALS REGROUPED BY 3

0- 0 keV



From WILSONB@ssl.msfc.nasa.gov Tue Aug 4 11:32:46 1992
Date: Tue, 4 Aug 1992 13:34:03 -0500 (CDT)
From: WILSONB@ssl.msfc.nasa.gov (Robert B. Wilson (205)-544-7695)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 01735

TIME: TJD=8836 SECONDS=82502

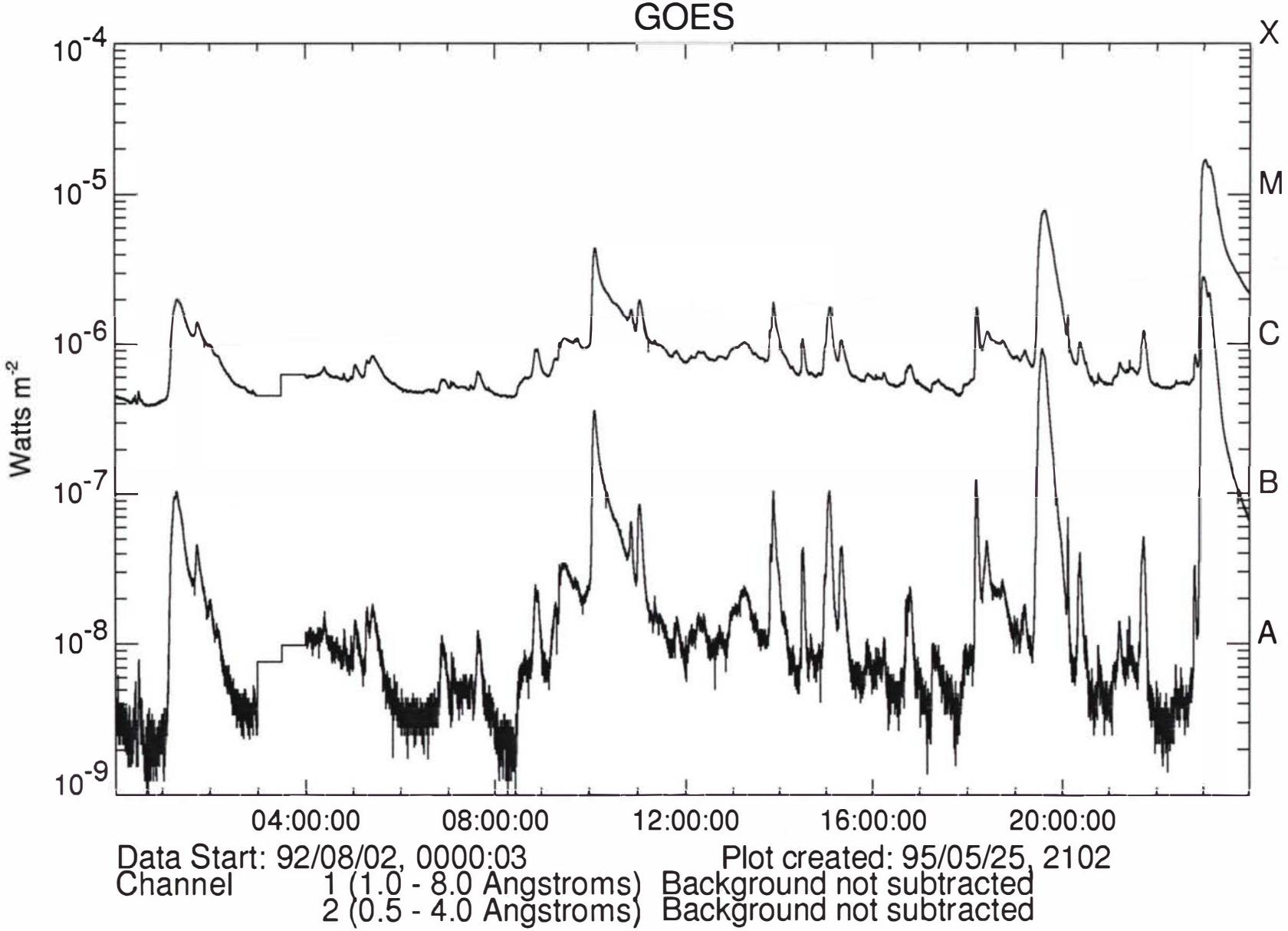
TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

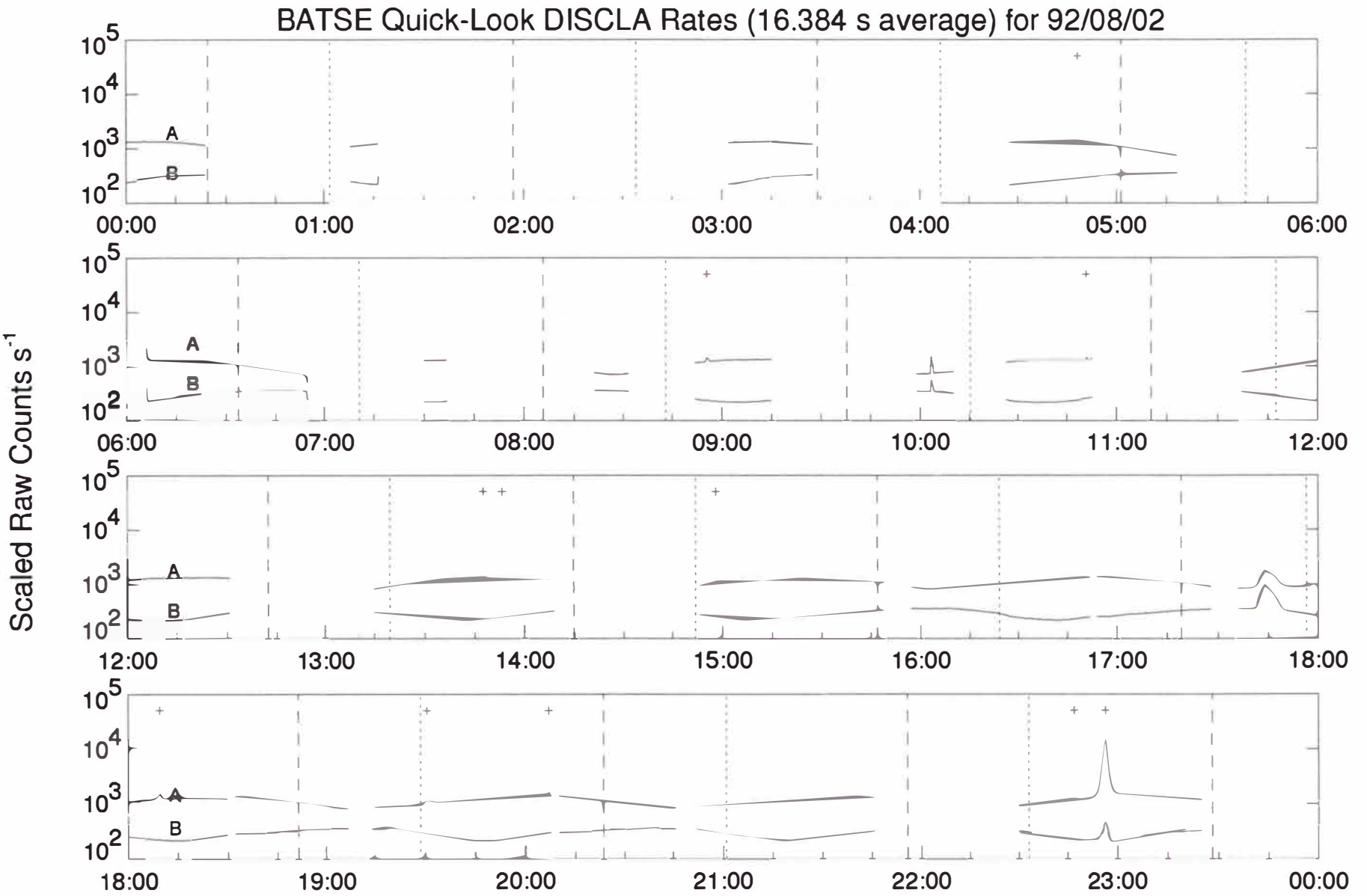
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

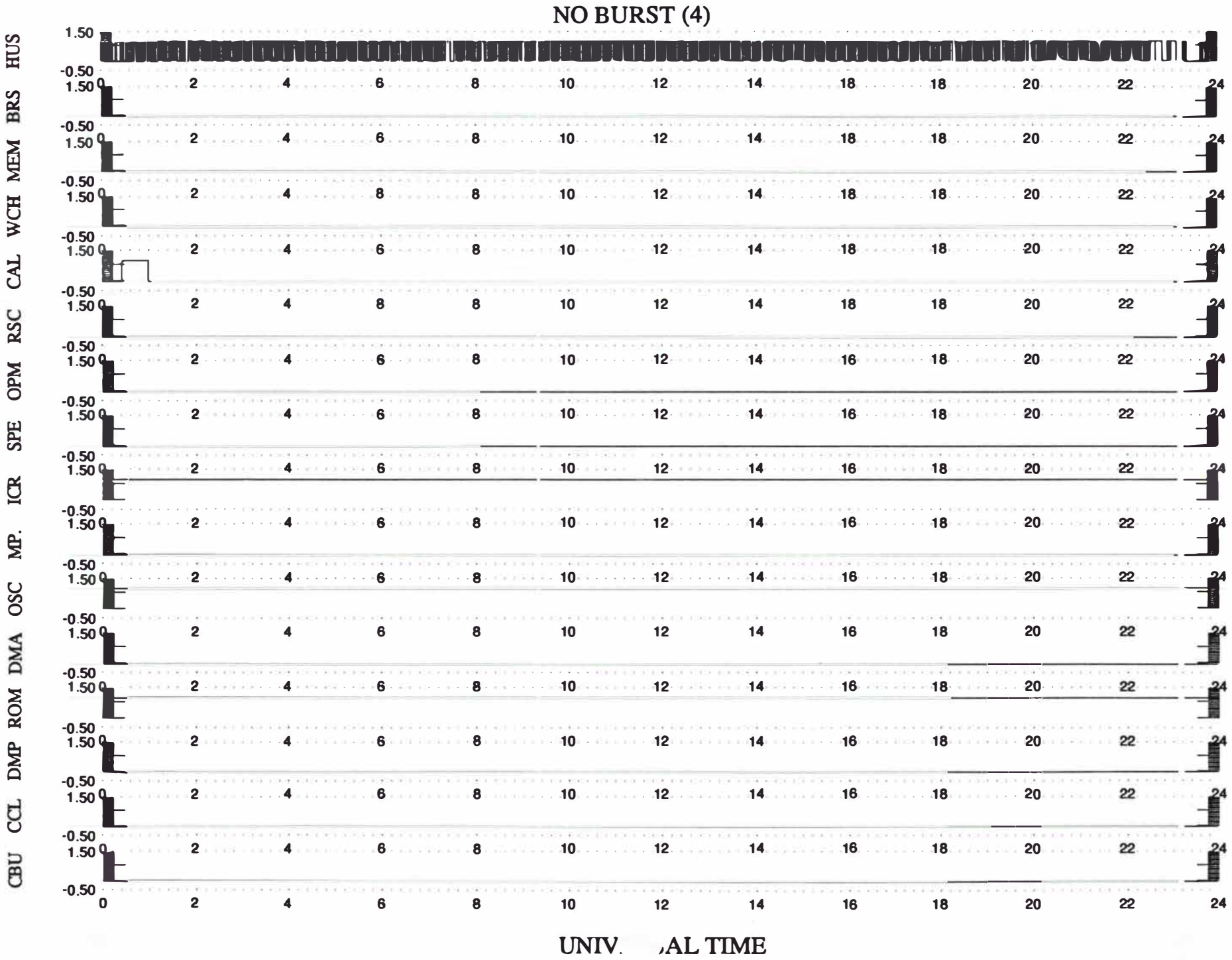
LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
GOES M1.6 SOLAR FLARE. STRONG EVENT (34K C/S ABOVE 25 KEV), LASTING FROM 50S BEFORE TRIGGER TO ~170S AFTER TRIGGER. MULTIPLE PEAKED STRUCTURE, RIDING ON BROAD RISE/FALL.


GOES
Watts m-2
10-4
10-5
10-6
10-7
10-8
10-9
X
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/02, 0000:03
Plot created: 95/05/25, 2102
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

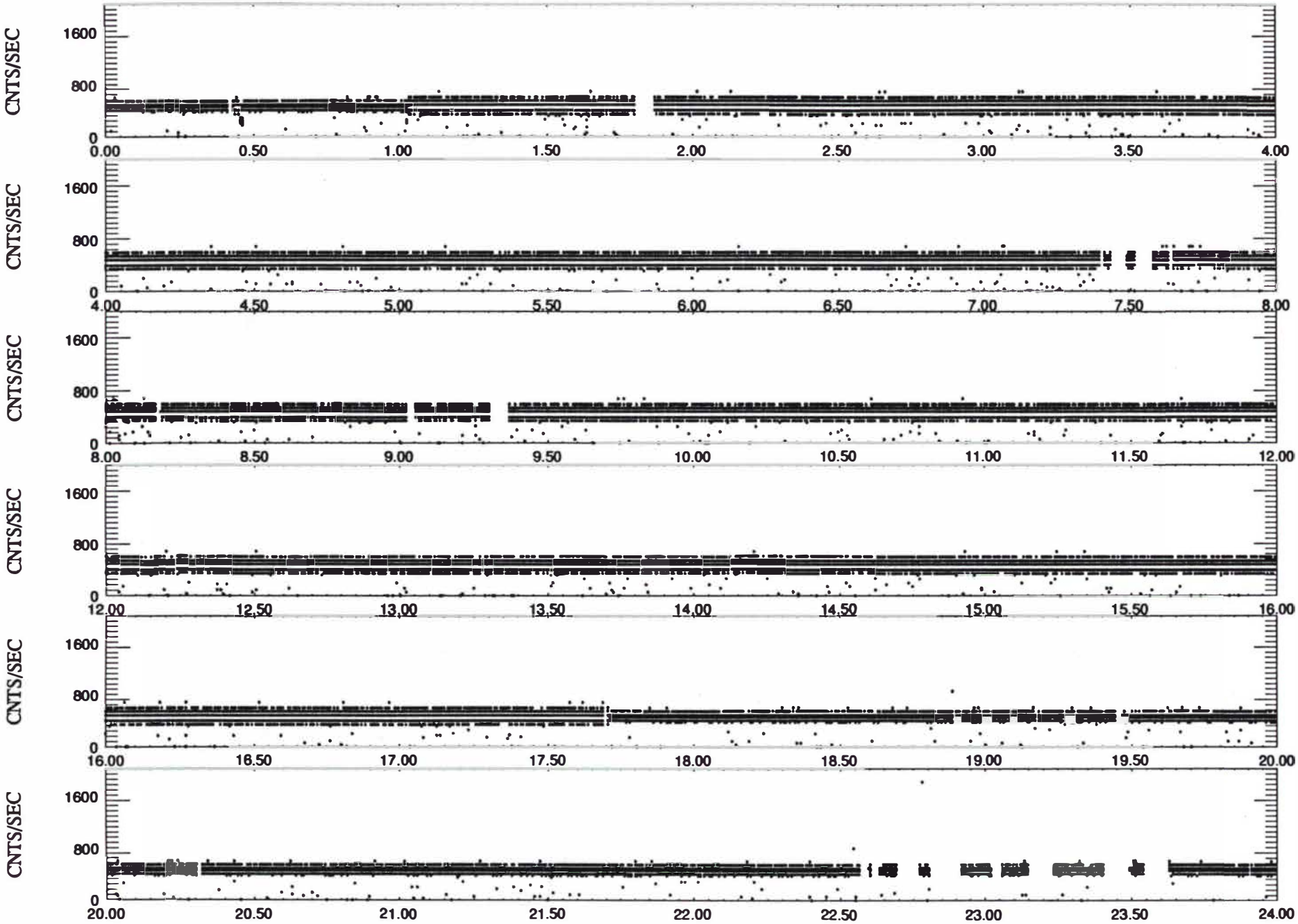

BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/02
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 92/08/28, 2155 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
+ Solar Flare
* Solar Burst Trigger

HUS MODES EDR day 215, year 1992 to day 215, year 1992 9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 215, year 1992 to day 215, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIV 'AL TIME

****
CATSEARCH PROGRAM
****

BATSE BURST # 1736
EVENT OF 1992 AUG 3 DAY OF YEAR=216
EVENT CROSSING TIME AT BATSE : 7804. S. OR 02:10:03.6
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 222.800 29.100
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 3/ 8/ 92 IS:
RA= 153.938 DEC= 3.744 DIST= 6.209 AU
BATSE-ULYSSES DISTANCE = 928840968. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=110.25 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1072.56 SECS.
CROSSING TIME AT ULYSSES IS 6731. S. OR 01:52:11.0 +/- 538.36 SECONDS

ND

From MALLOZZI@ssl.msfc.nasa.gov Thu Aug 6 06:13:23 1992
Date: Thu, 6 Aug 1992 8:15:44 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01736

TIME: TJD=8837 (Aug 3) SECONDS=07803

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=82.1 AZIMUTH=96.2 ERROR= DEGREES

COMMENTS:
SINGLE SPIKE EVENT OBSERVED ABOVE 100 KEV; NOT ABOVE 300 KEV.
DURATION ~0.5 SEC.

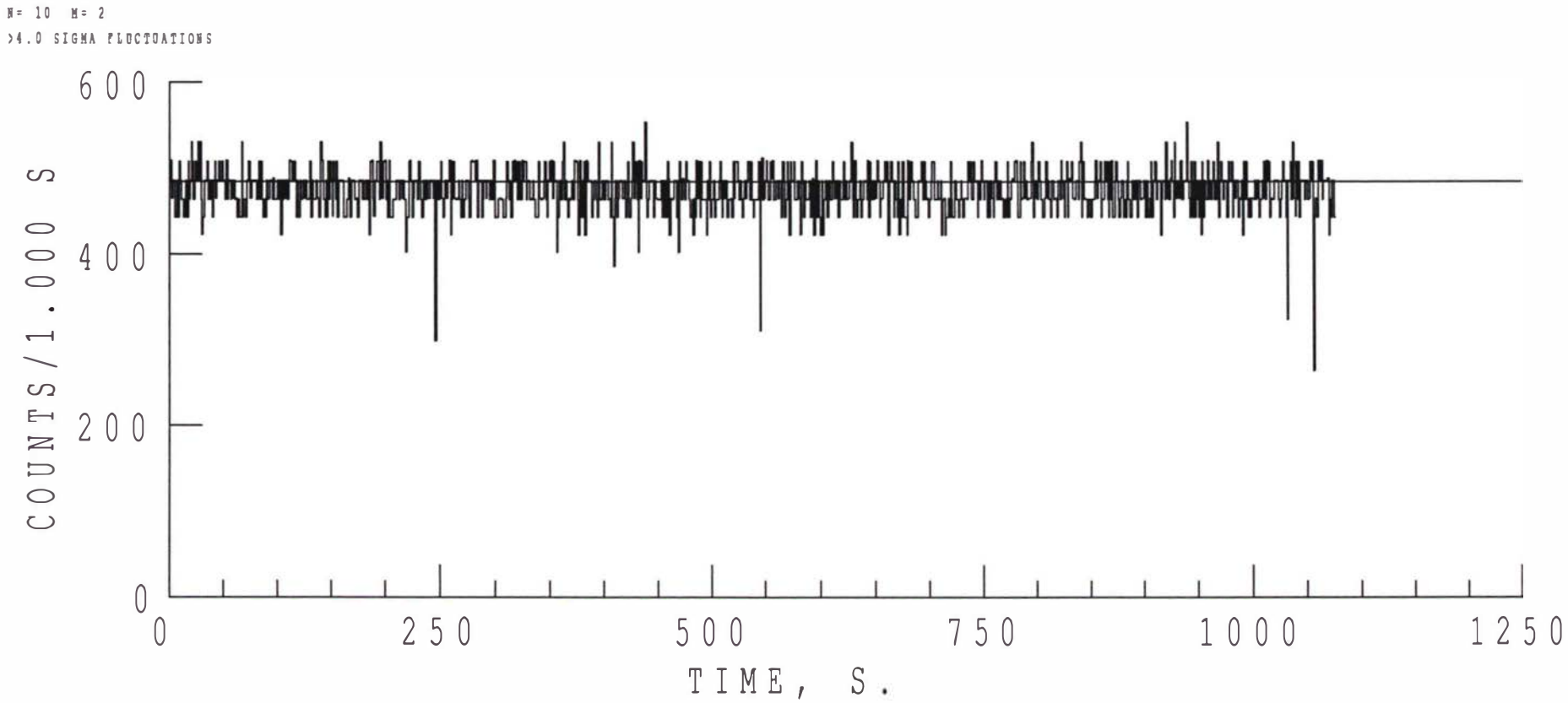
8/ 6/94

ULYSSES RT

3/ 8/92 6192.108 s

0.500 S INTERVALS REGROUPED BY 2

0- 0 keV



From MALLOZZI@ssl.msfc.nasa.gov Tue Aug 4 20:06:19 1992
Date: Tue, 4 Aug 1992 22:08:42 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER
NO.: 01738

TIME: TJD=8837 SECONDS=25226

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
GOES M4.8 FLARE. DURATION > 150 SEC WITH MUCH STRUCTURE.
OBSERVED ABOVE 100 KEV, BUT NOT ABOVE 300 KEV

Aug 3

From MALLOZZI@ssl.msfc.nasa.gov Tue Aug 4 20:10:19 1992
Date: Tue, 4 Aug 1992 22:12:50 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER
NO.: 1739

TIME: TJD=8837 SECONDS=36574

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
GOES M2.3 FLARE. OBSERVED ABOVE 100 KEV. RETURN TO BACKGROUND AT
~65 SEC AFTER TRIGGER, FOLLOWED BY SOFT EMISSION ~15 SEC LATER, LASTING
FOR ~10 SEC

```
          ********************
          *CATSEARCH PROGRAM*
          ********************

BATSE BURST # 1740
EVENT OF 1992 AUG  3 DAY OF YEAR=216
EVENT CROSSING TIME AT BATSE      : 60825. S. OR 16:53:44.6
COORDINATES ARE     .000     .000        6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 124.100    -6.900
BATSE PEAK COUNTING RATE:  0000   C/S

EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
POSITION OF ULYSSES ON  3/ 8/  92 IS:
RA=  153.938 DEC=     3.744 DIST=     6.209 AU
BATSE-ULYSSES DISTANCE =  928840968. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=148.37 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2638.09 SECS.
CROSSING TIME AT ULYSSES     IS 58187. S. OR 16:09:46.5 +/-  292.02 SECONDS
```

No

```
From MALLOZZI@ssl.msfc.nasa.gov Thu Aug  6 06:18:13 1992
Date:    Thu, 6 Aug 1992 8:20:43 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
        khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1300

                BATSE BURST TRIGGER
NO.: 01740

TIME: TJD=8837 SECONDS=60824

TYPE: BURST                     SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:       SIGMA

INTENSITY:          COUNTS/CM2

LOCATION: ZENITH=114.1  AZIMUTH=355.4  ERROR=      DEGREES

COMMENTS:
BURST WITH POSSIBLE EMISSION ABOVE 300 KEV.  DURATION ~10 SEC FOR MAIN
EMISSION WITH POSSIBLE EXCESS UP TO 40 SEC AFTER TRIGGER.
```

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          ********************
          *CATSEARCH PROGRAM*
          ********************

 ATSE BURST # 1740
EVENT OF 1992 AUG  3 DAY OF YEAR=216
EVENT CROSSING TIME AT BATSE      : 60825. S. OR 16:53:44.6
COORDINATES ARE   0.000   0.000       6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 134.710  -36.120
BATSE PEAK COUNTING RATE:  0000   C/S

EVENT CROSSING TIME AT ULYSSES    WILL BE FOUND
POSITION OF ULYSSES ON  3/ 8/  92 IS:
RA=  153.938 DEC=    3.744 DIST=    6.209 AU
BATSE-ULYSSES DISTANCE =  928840968. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL    DIRECTION=136.27 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2238.82 SECS.
CROSSING TIME AT ULYSSES    IS 58586. S. OR 16:16:25.8 +/-  387.84 SECONDS
```

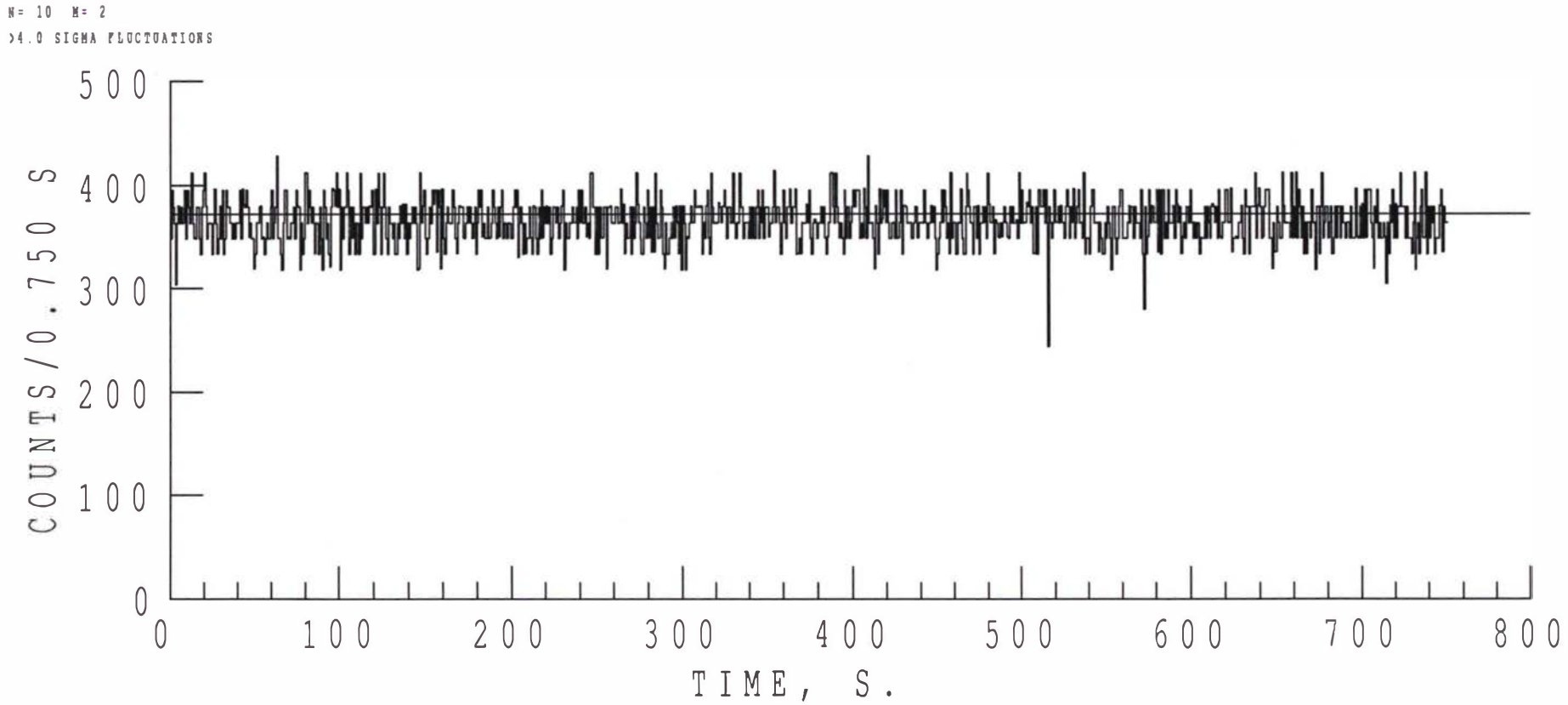
9/11/95

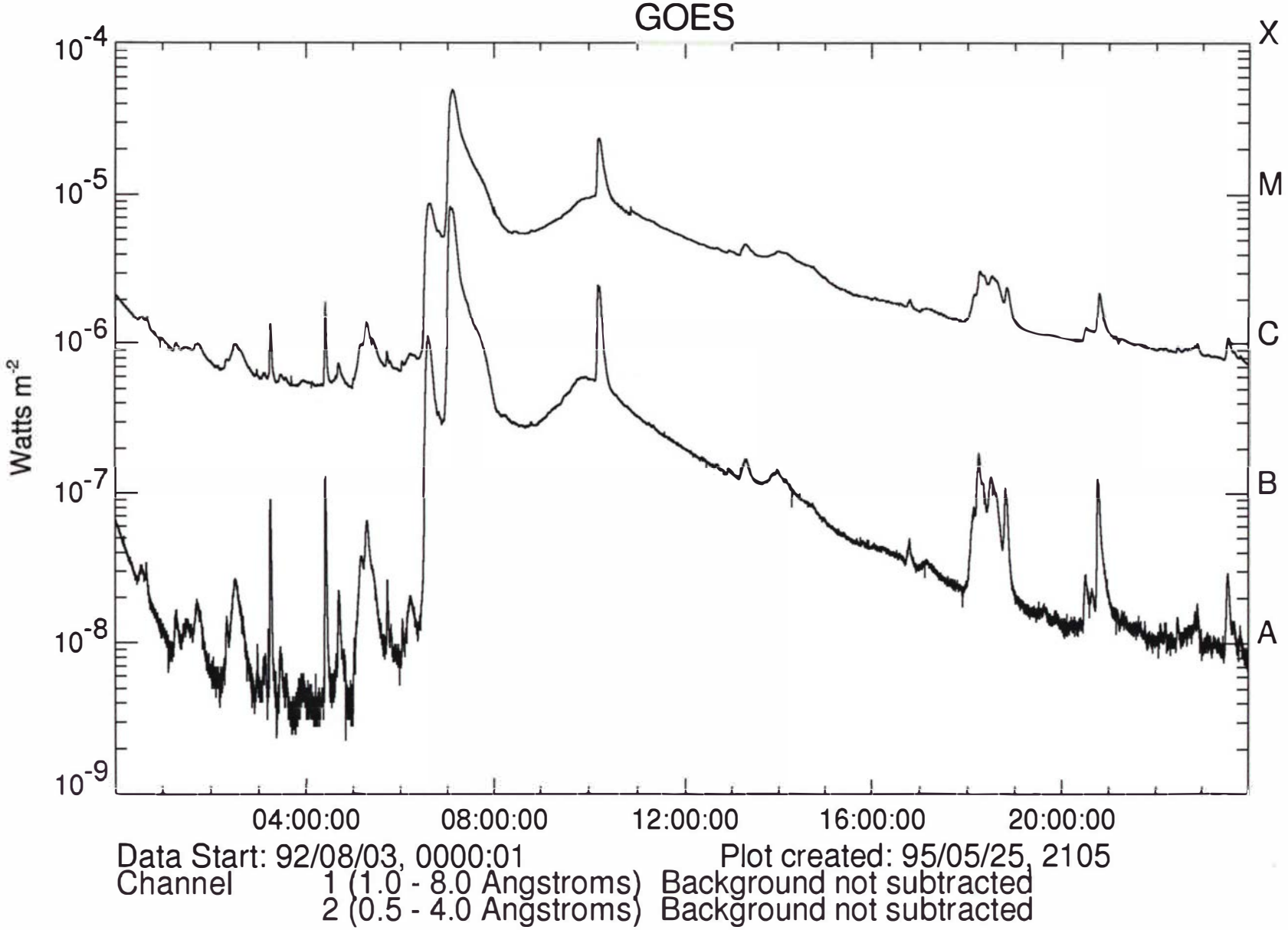
ULYSSES RT

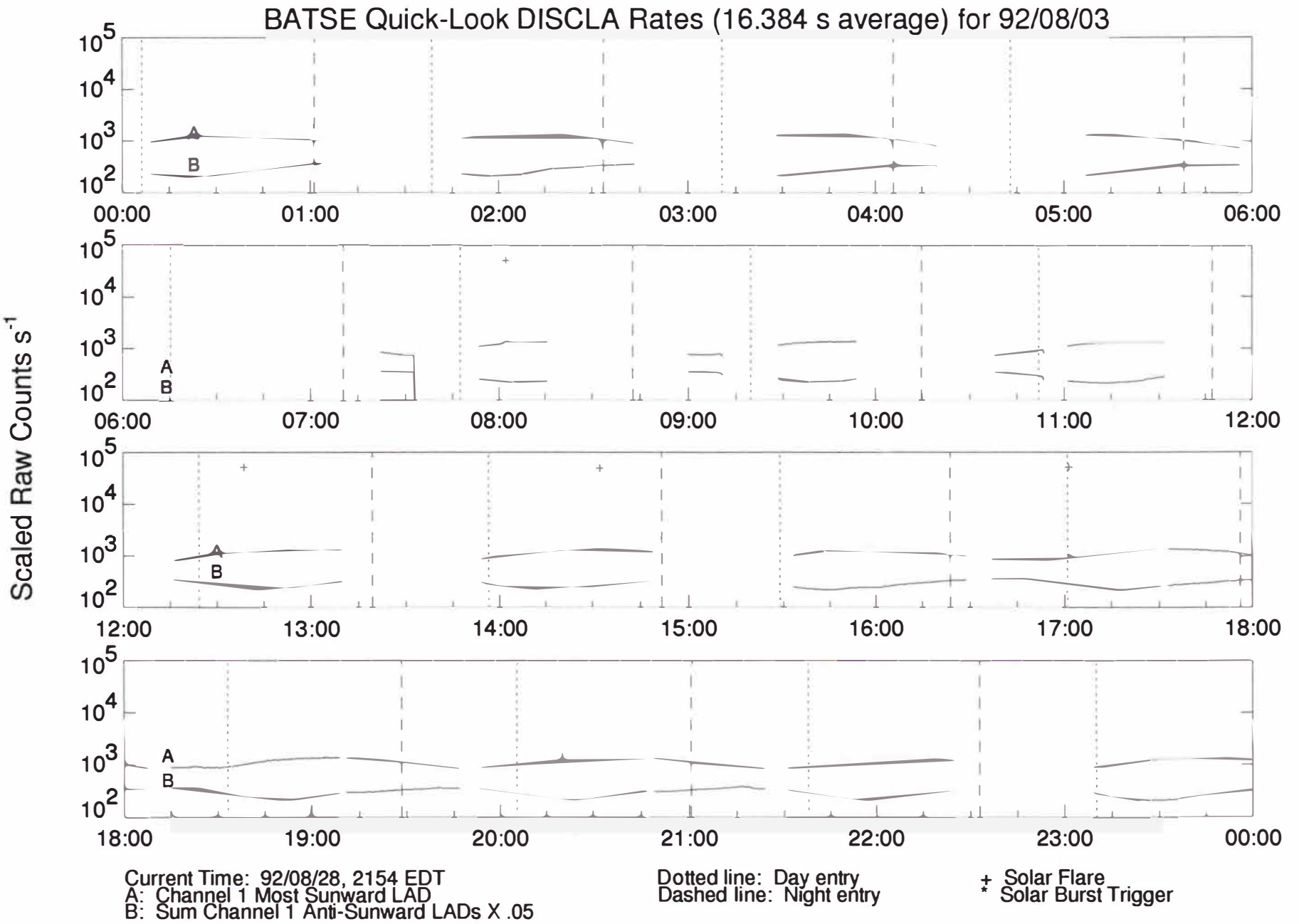
3/ 8/92 58212.199 s

0.250 S INTERVALS REGROUPED BY 3

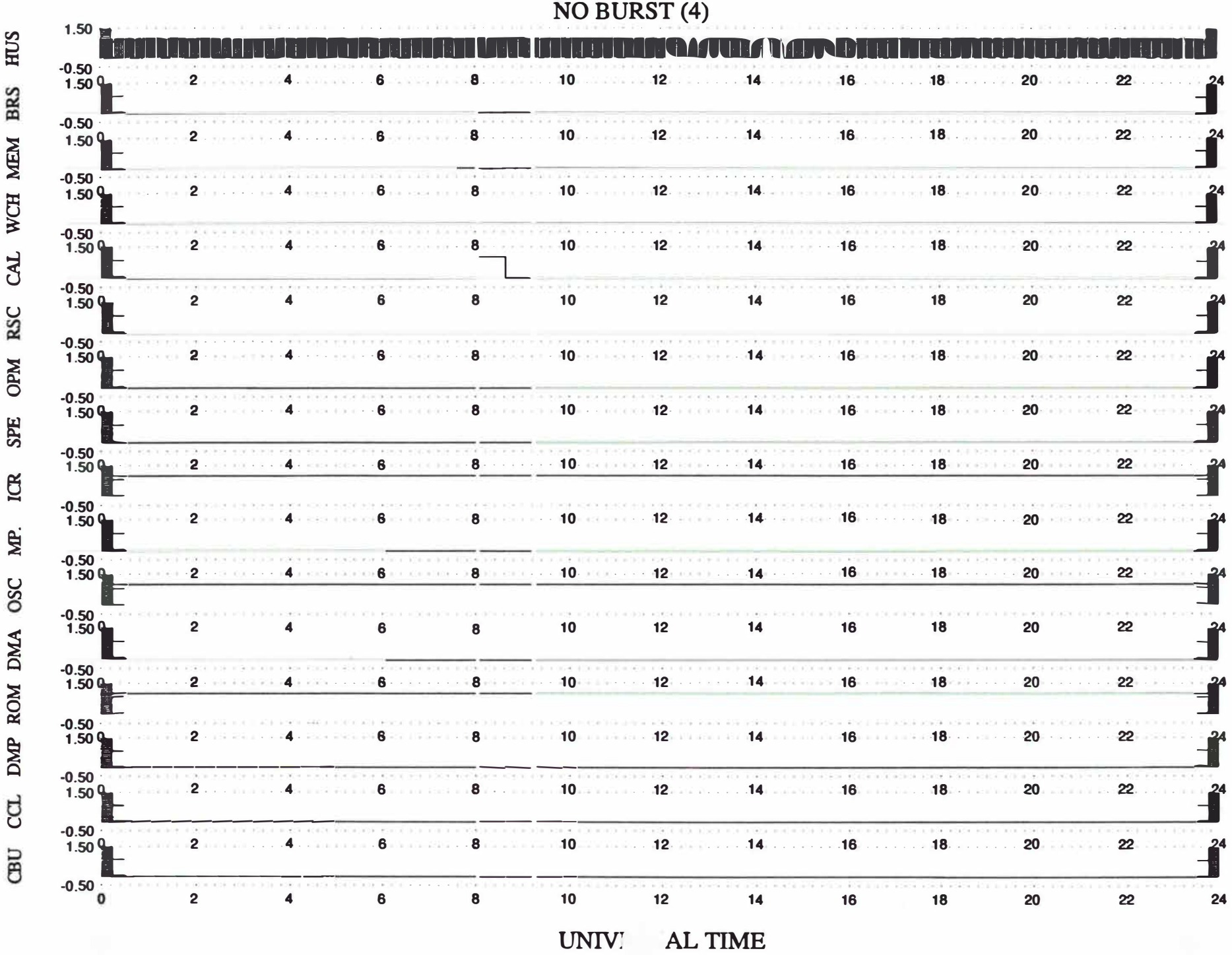
0- 0 keV




GOES
X
M
C
B
A
10^{-4}
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/03, 0000:01
Plot created: 95/05/25, 2105
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

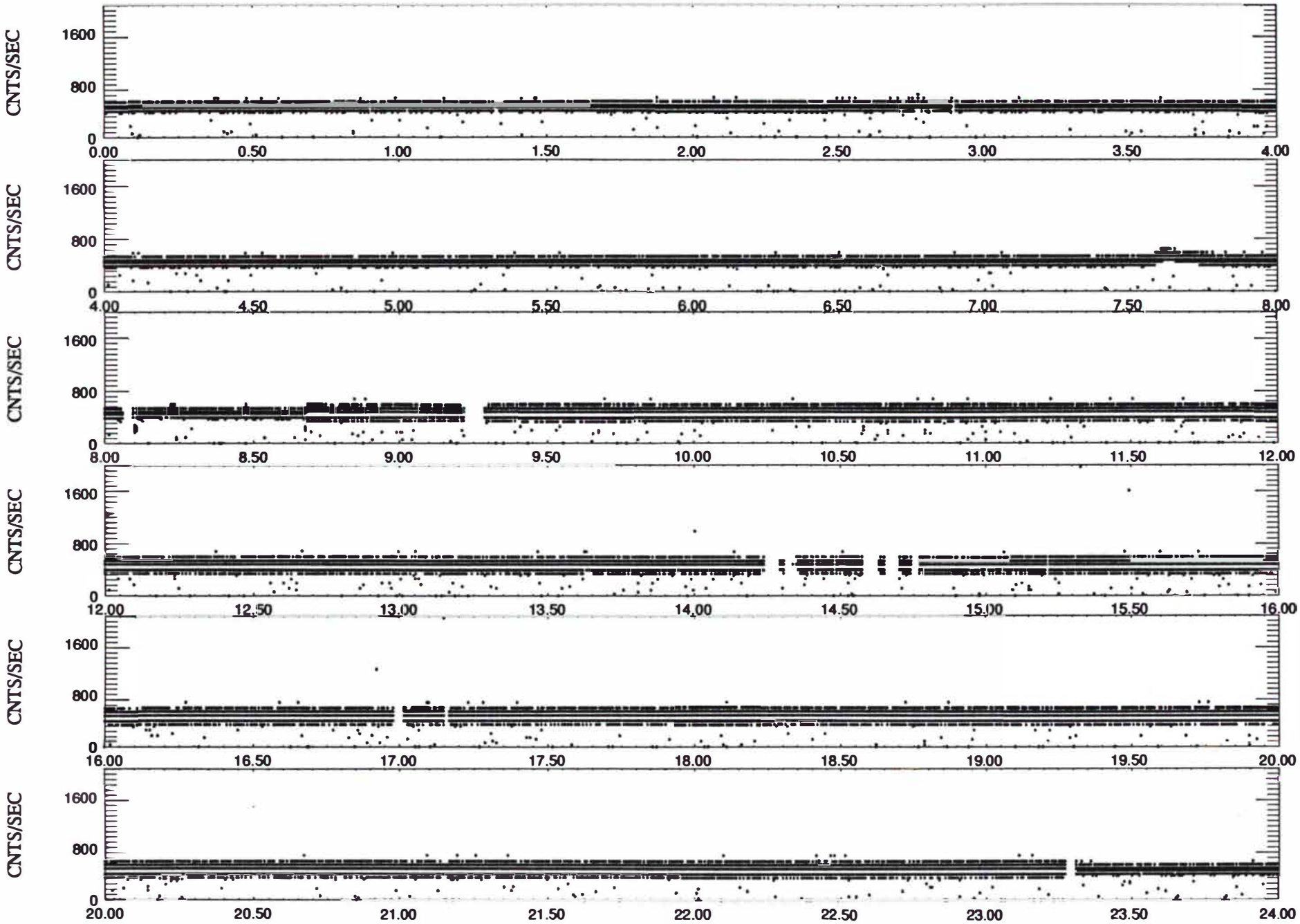

BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/03
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2154 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
+ Solar Flare
* Solar Burst Trigger

HUS MODES EDR day 216, year 1992 to day 216, year 1992 9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 216, year 1992 to day 216, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIV SAL TIME

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          ********************
          *CATSEARCH PROGRAM*
          ********************

BATSE BURST # 1741
EVENT OF 1992 AUG  4 DAY OF YEAR=217
EVENT CROSSING TIME AT BATSE      : 59933. S. OR 16:38:53.3
COORDINATES ARE     .000     .000        6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION:  68.900     5.200
BATSE PEAK COUNTING RATE:  0000   C/S

EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
POSITION OF ULYSSES ON  4/ 8/  92 IS:
RA=  154.066 DEC=     3.656 DIST=     6.214 AU
BATSE-ULYSSES DISTANCE =  929647312. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 95.14 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -277.63 SECS.
CROSSING TIME AT ULYSSES     IS 59656. S. OR 16:34:15.7 +/-  582.00 SECONDS
```

NO

~ .1s long

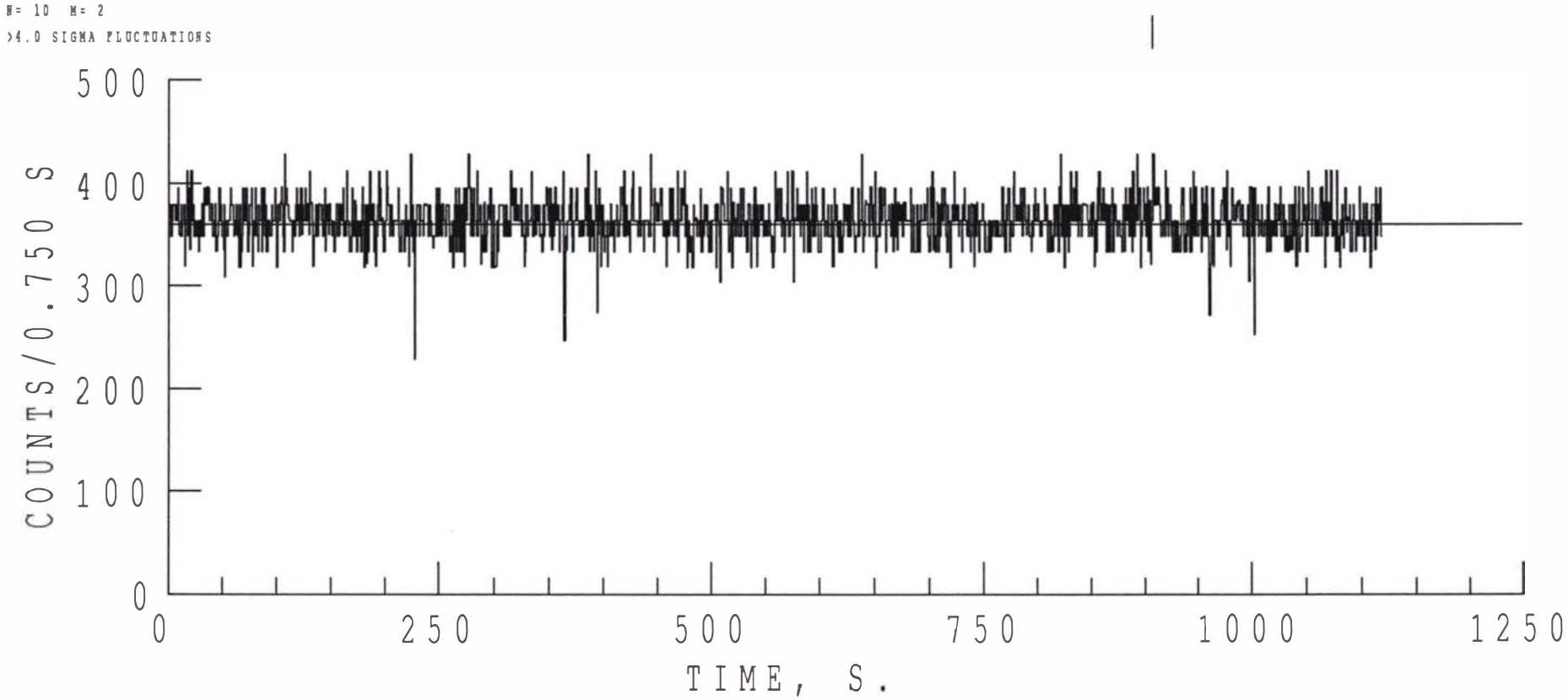
8/ 6/94

ULYSSES RT

4/ 8/92 59076.105 s

0.250 S INTERVALS REGROUPED BY 3

0- 0 keV



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          ********************
          *CATSEARCH PROGRAM*
          ********************

 BATSE BURST # 1742
 EVENT OF 1992 AUG  4 DAY OF YEAR=217
 EVENT CROSSING TIME AT BATSE      : 71602. S. OR 19:53:21.8
 COORDINATES ARE    .000    .000       6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 276.900   47.000
 BATSE PEAK COUNTING RATE:  0000   C/S

 EVENT CROSSING TIME AT ULYSSES    WILL BE FOUND
 POSITION OF ULYSSES ON  4/ 8/  92 IS:
 RA=  154.066 DEC=    3.656 DIST=    6.214 AU
 BATSE-ULYSSES DISTANCE =  929647312. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 71.19 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH=  999.75 SECS.
 CROSSING TIME AT ULYSSES    IS 72602. S. OR 20:10:01.5 +/-  574.81 SECONDS
```

No

```
From PREECE@ssl.msfc.nasa.gov Thu Aug  6 07:31:18 1992
Date:     Thu, 6 Aug 1992 9:33:53 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
        khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

                  BATSE BURST TRIGGER
NO.: 01742
```

Aug 4

```
TIME: TJD=8838 SECONDS=71601

TYPE: BURST                     SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:        SIGMA

INTENSITY:           COUNTS/CM2

LOCATION: ZENITH=037.   AZIMUTH=139.   ERROR=       DEGREES

COMMENTS:
WEAK GRB, TWO PEAKS SEPARATED BY 35 SEC., FIRST PEAK SEEN ABOVE 300 KEV.
```

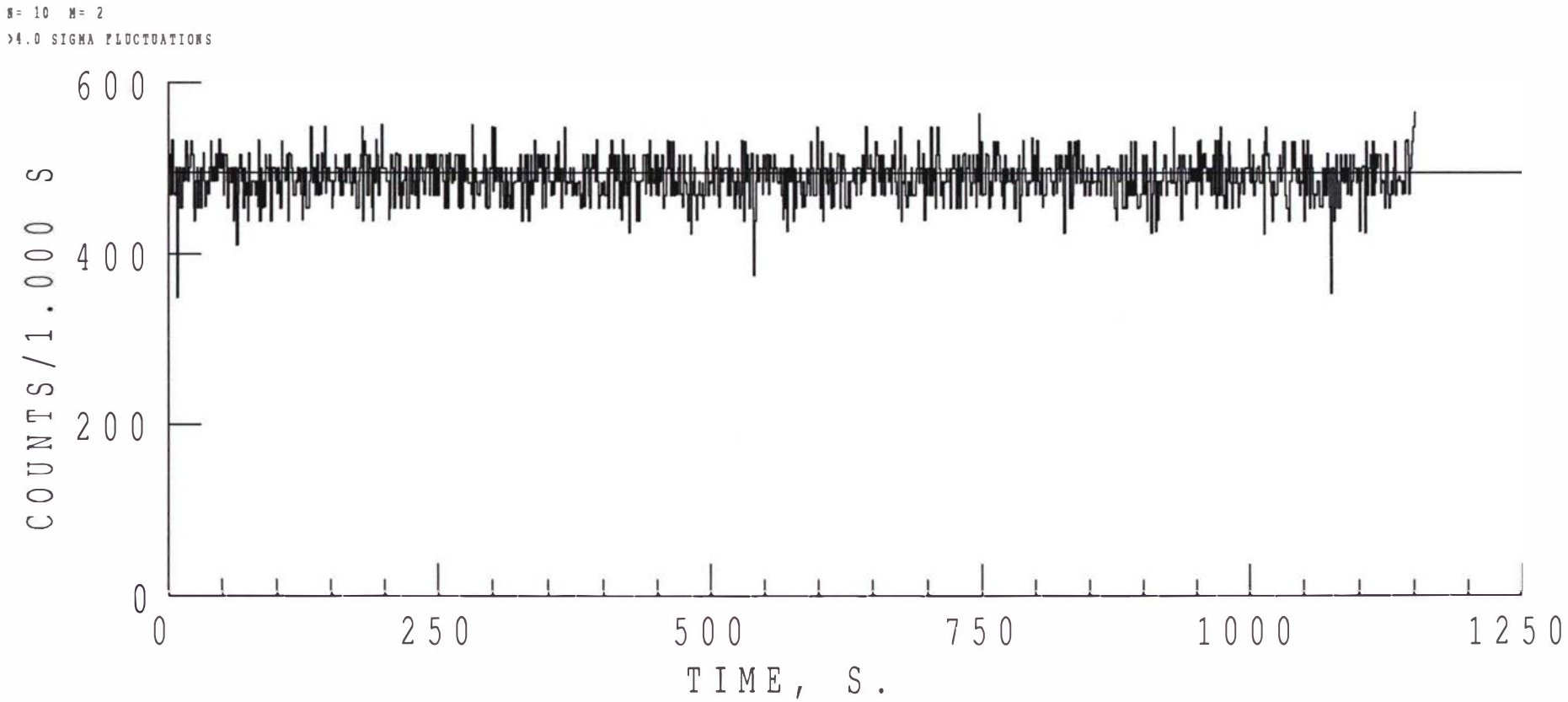
8/ 6/94

ULYSSES RT

4/ 8/92 72036.062 s

0.250 S INTERVALS REGROUPED BY 4

0- 0 keV



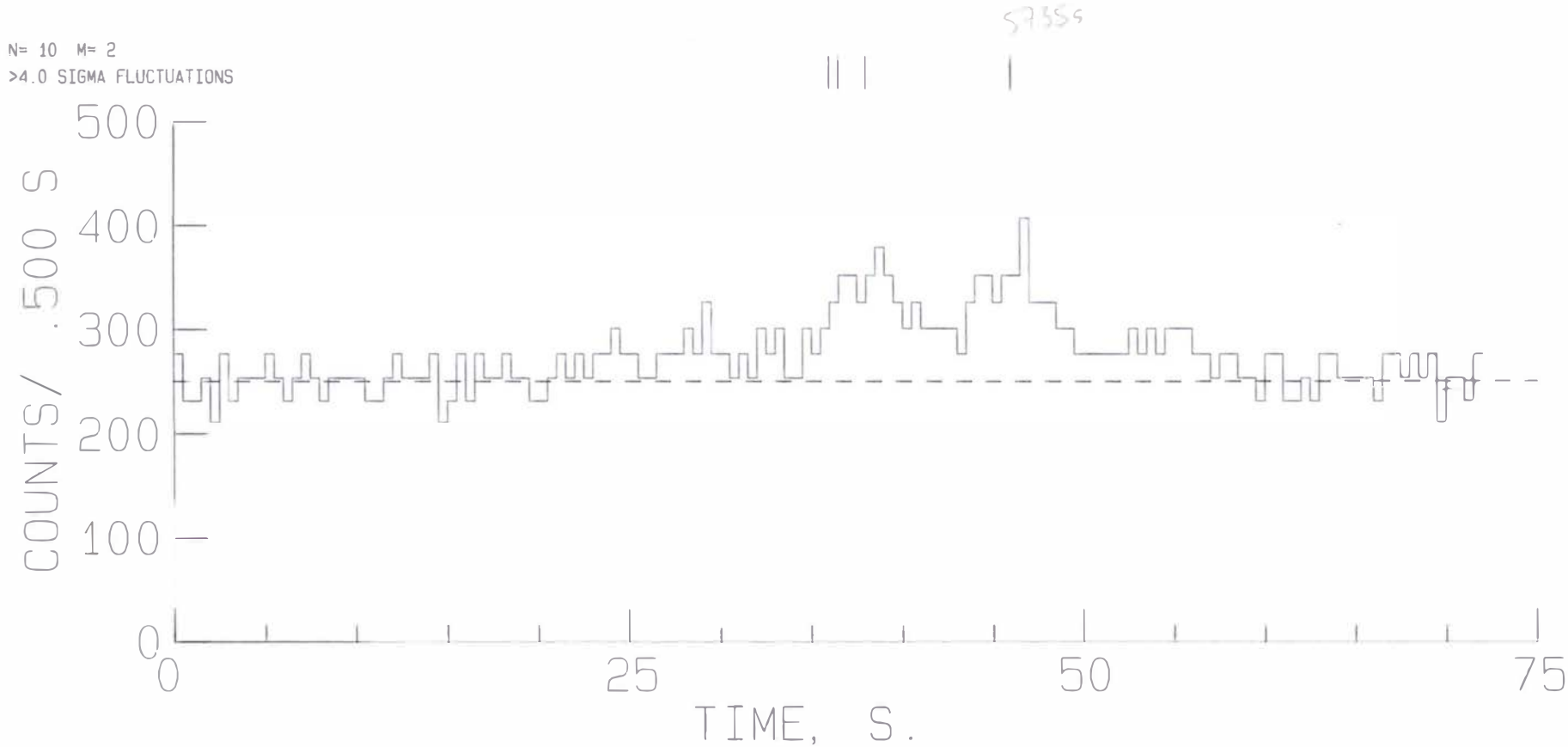
RK: PVO ~~off~~ at time of this event

19/ 8/92

ULYSSES RT

4/ 8/92 5688.490 s

0- 0 keV



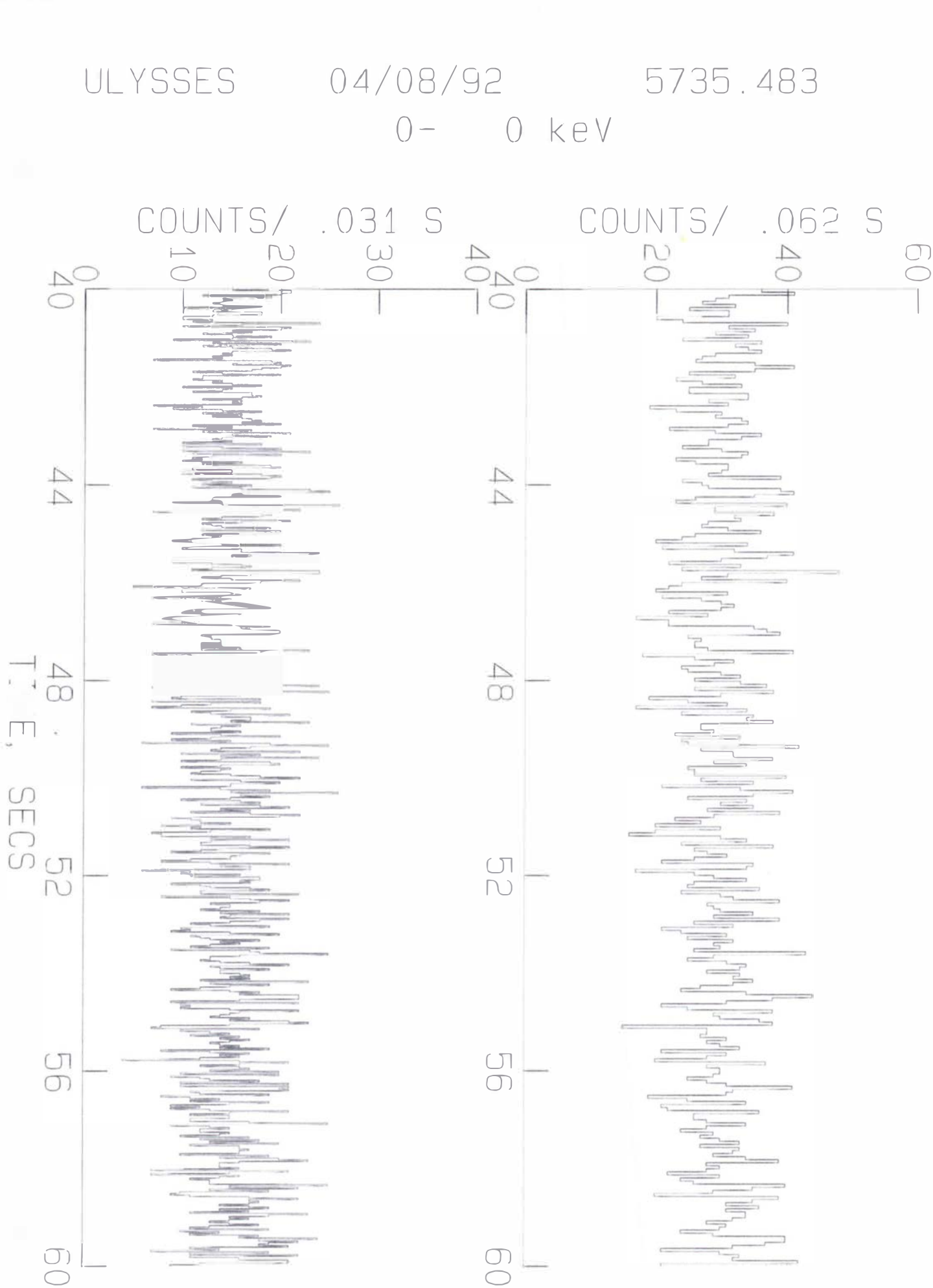
ULYSSES 04/08/92 5735.483

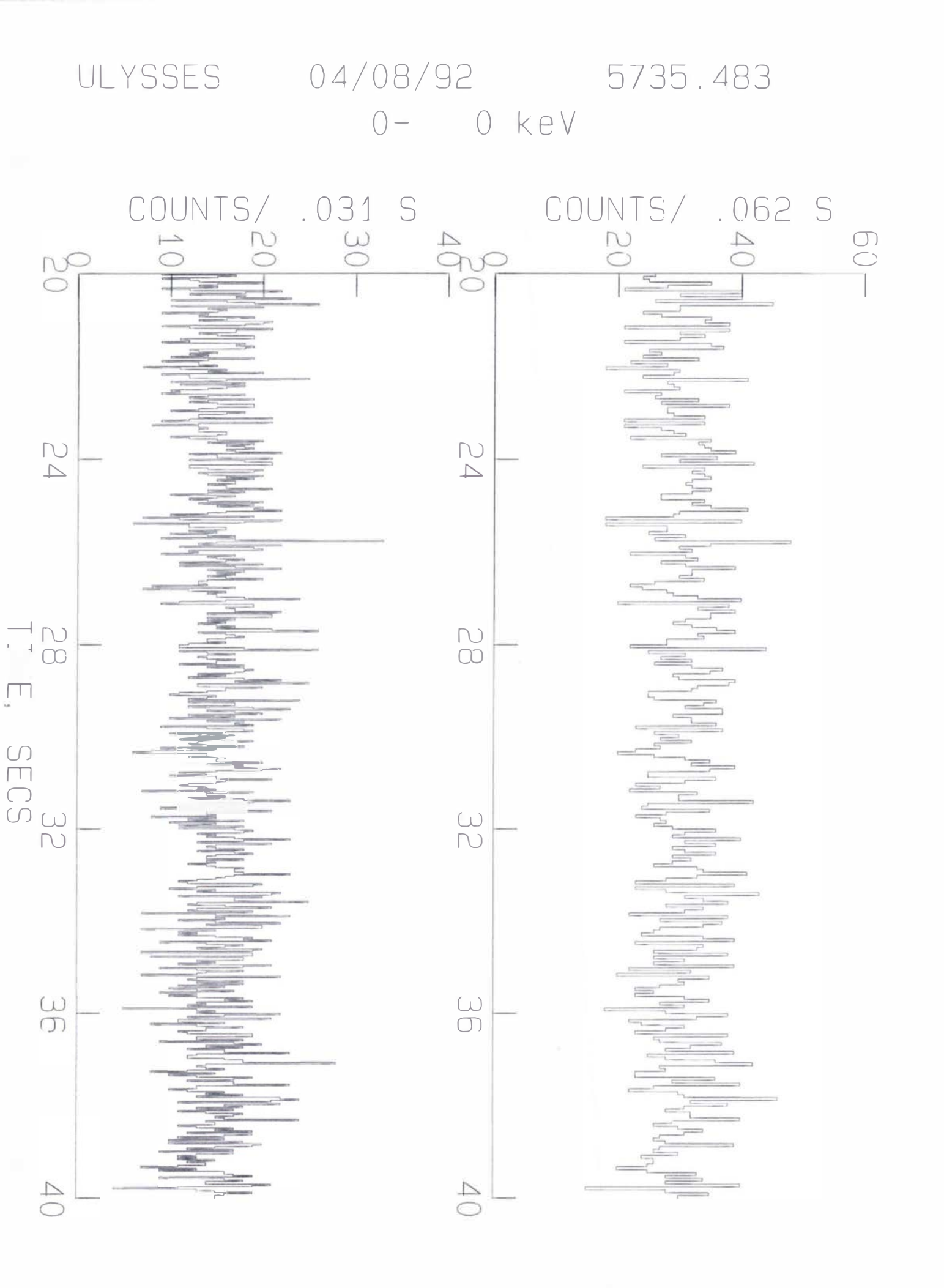
0- 0 keV

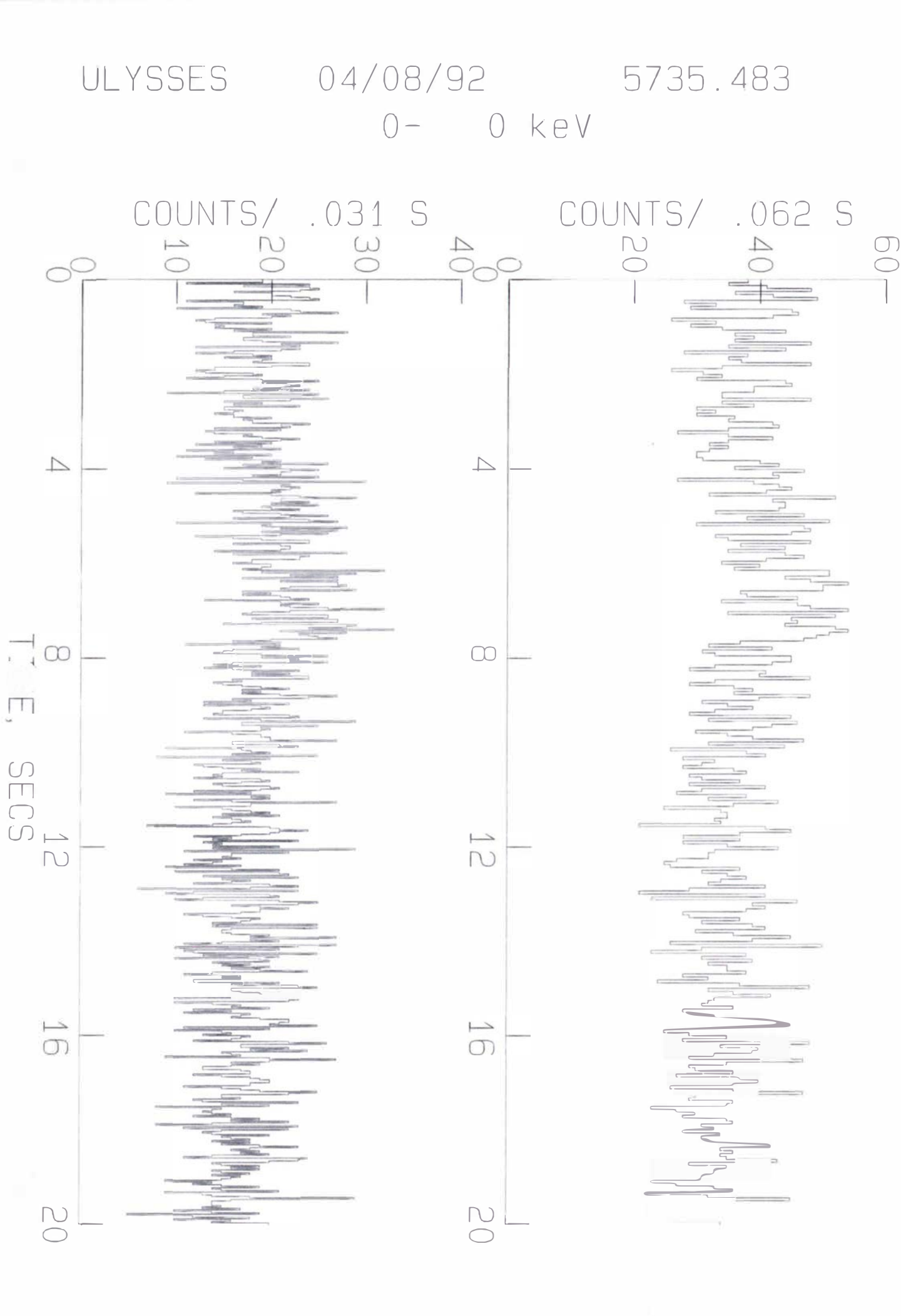
COUNTS/ .031 S

COUNTS/ .062 S

19/ 8/92


ULYSSES 04/08/92 5735.483
0- 0 keV
COUNTS/ .031 S
COUNTS/ .062 S
0
10
20
30
40
0
20
40
60
40
44
48
52
56
60
T-T E, SECS


ULYSSES 04/08/92 5735.483
0- 0 keV
COUNTS/ .031 S
COUNTS/ .062 S
0
10
20
30
40
0
20
40
60
20
24
28
32
36
40
T, E, SECS


ULYSSES 04/08/92 5735.483
0- 0 keV
COUNTS/ .031 S
COUNTS/ .062 S
0
10
20
30
40
0
20
40
60
0
4
8
12
16
20
T, E, SECS

```
          ********************
          *CATSEARCH PROGRAM*
          ********************

BATSE BURST # 1743
EVENT OF 1992 AUG  4 DAY OF YEAR=217
EVENT CROSSING TIME AT BATSE      : 82755. S. OR 22:59:15.2
COORDINATES ARE    .000    .000       6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 168.500   50.300
BATSE PEAK COUNTING RATE:  0000   C/S

EVENT CROSSING TIME AT ULYSSES    WILL BE FOUND
POSITION OF ULYSSES ON  4/ 8/  92 IS:
RA=  154.066 DEC=    3.656 DIST=    6.214 AU
BATSE-ULYSSES DISTANCE =  929647312. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=131.79 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2066.51 SECS.
CROSSING TIME AT ULYSSES    IS 80689. S. OR 22:24:48.7 +/-  420.02 SECONDS
```

NO

~9s long

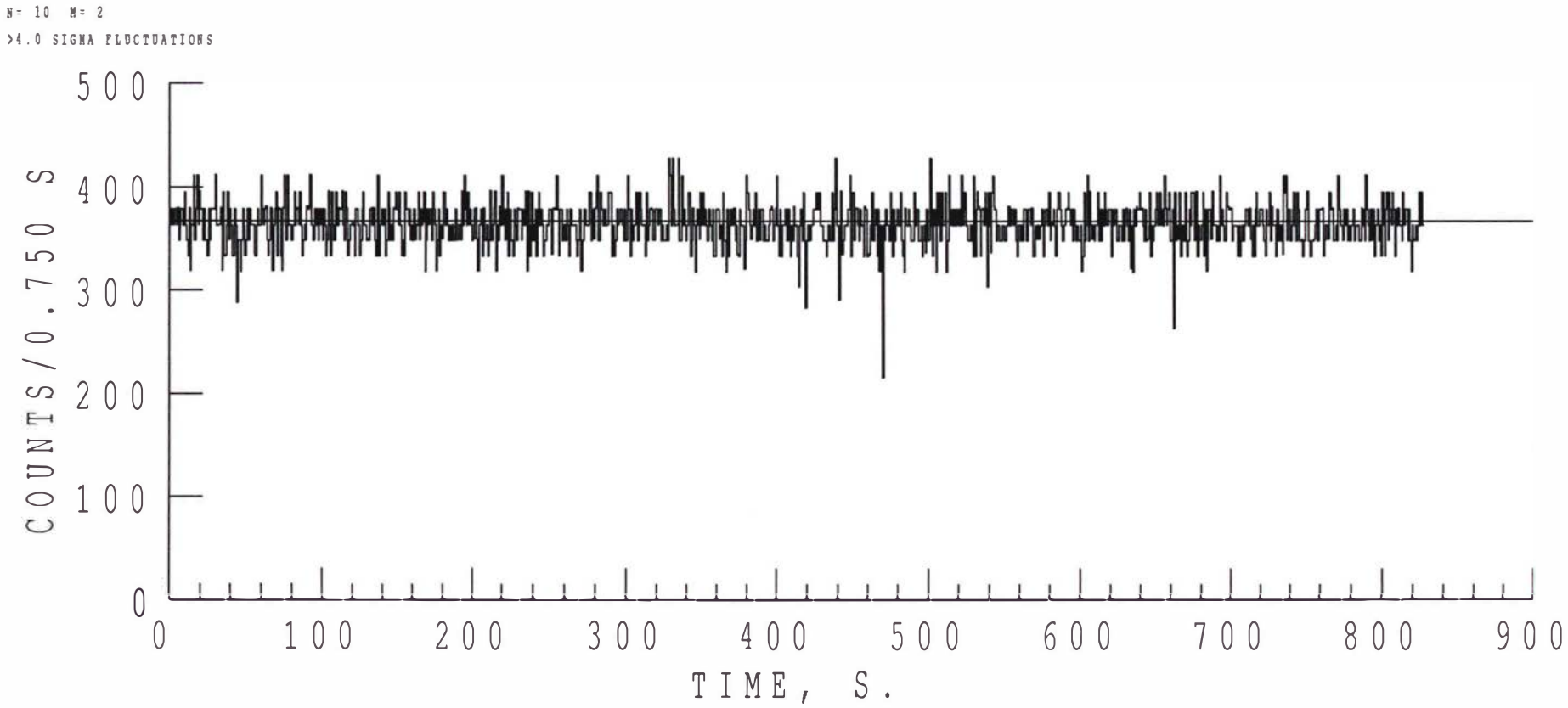
8/ 6/94

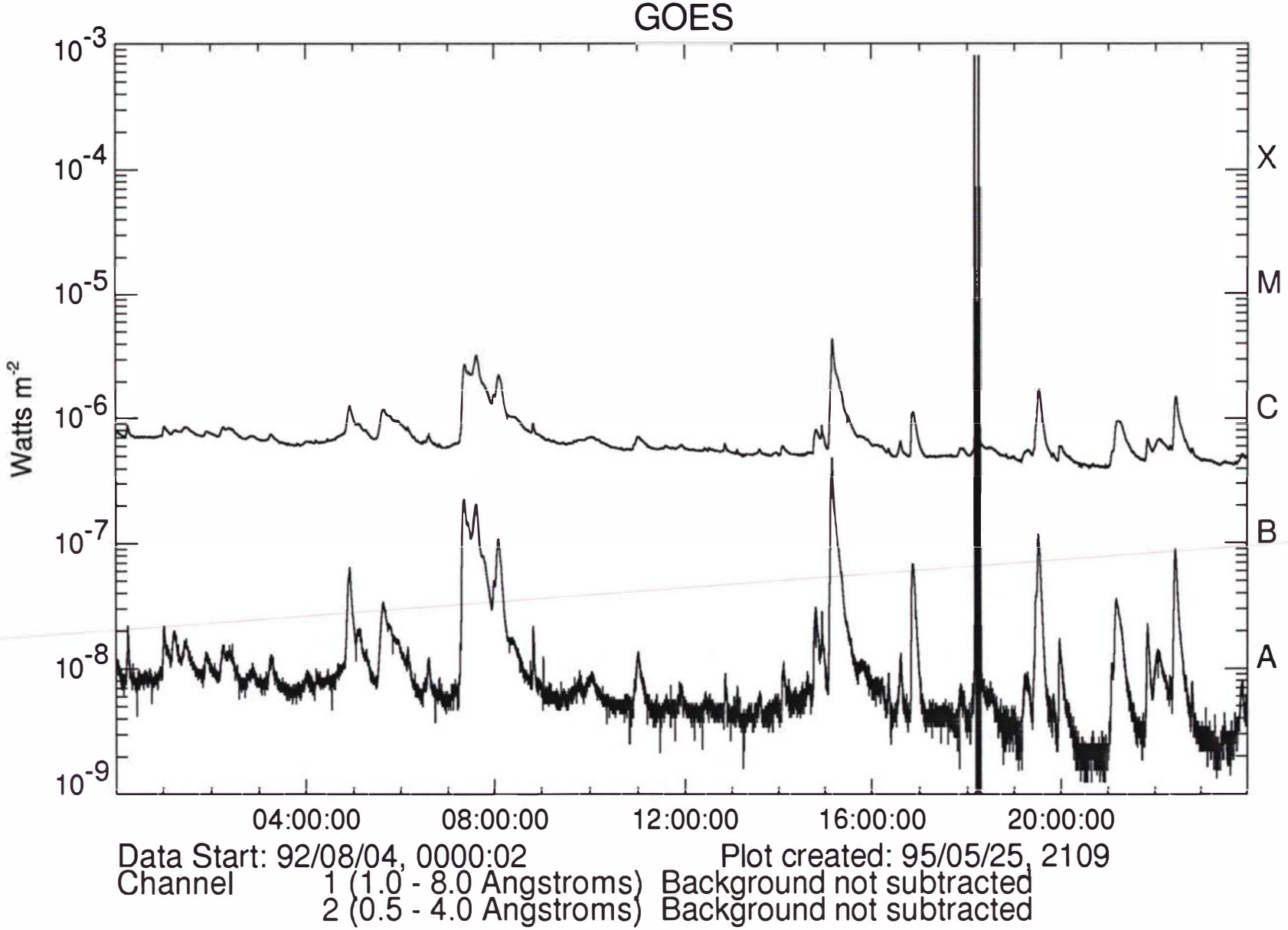
ULYSSES RT

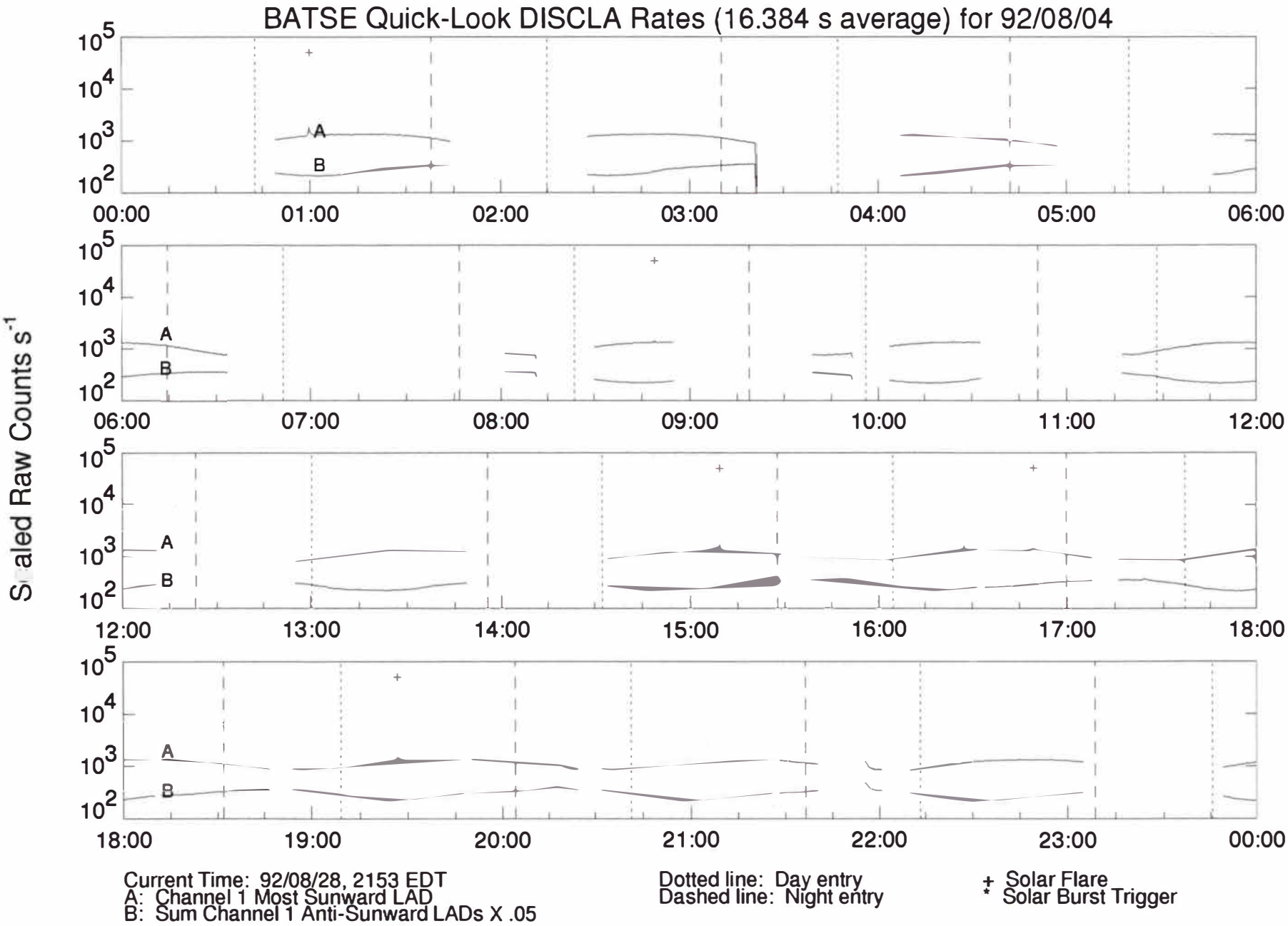
4/ 8/92 80280.195 s

0.250 S INTERVALS REGROUPED BY 3

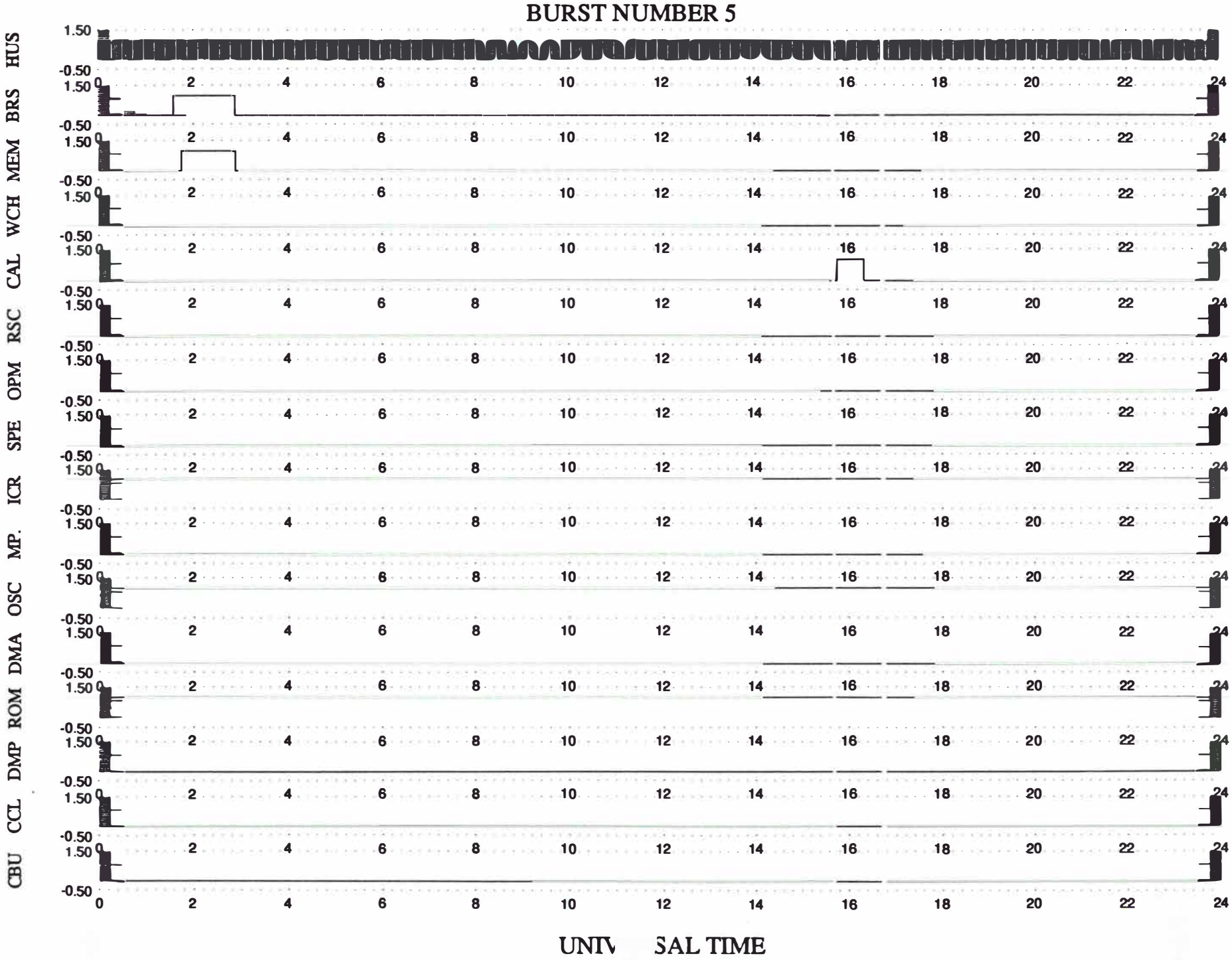
0- 0 keV




GOES
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
X
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/04, 0000:02
Plot created: 95/05/25, 2109
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

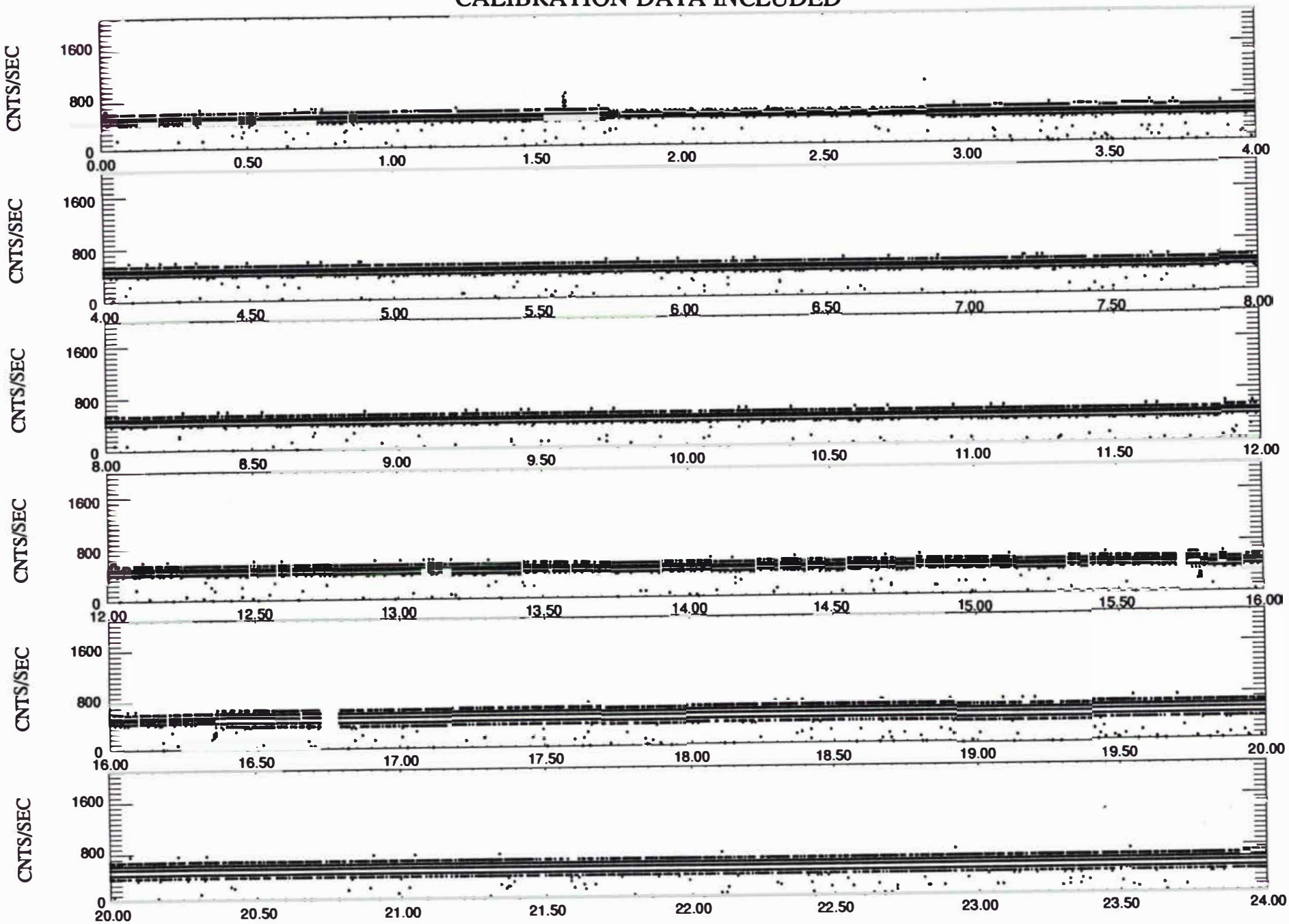

BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/04
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2153 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
+ Solar Flare
* Solar Burst Trigger

HUS MODES EDR day 217, year 1992 to day 217, year 1992 9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 217, year 1992 to day 217, year 1992 9/11/92

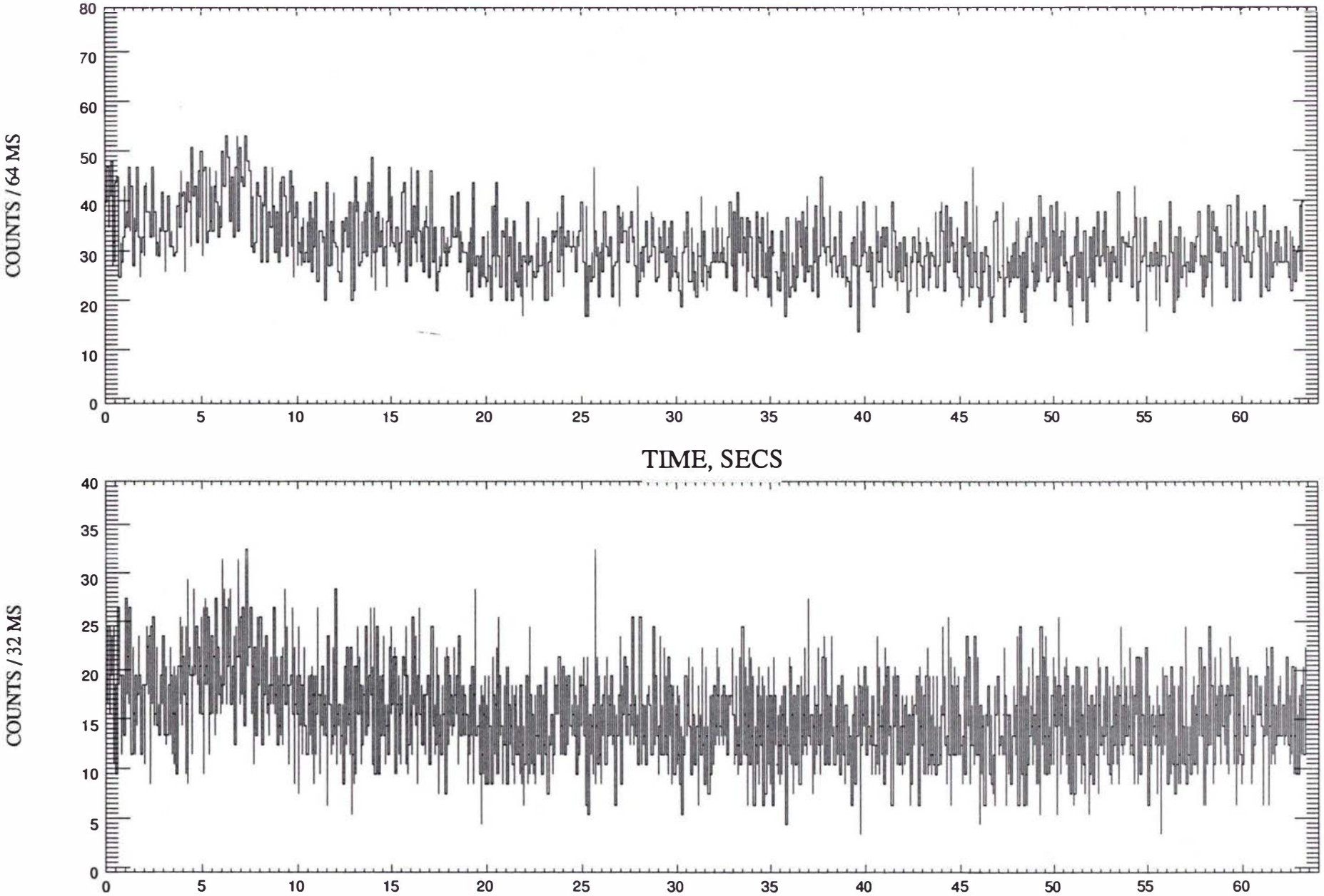
CALIBRATION DATA INCLUDED



UNIV SAL TIME

HUS 2A TRIGGERED DATA EDR day 217, year 1992 9/11/92

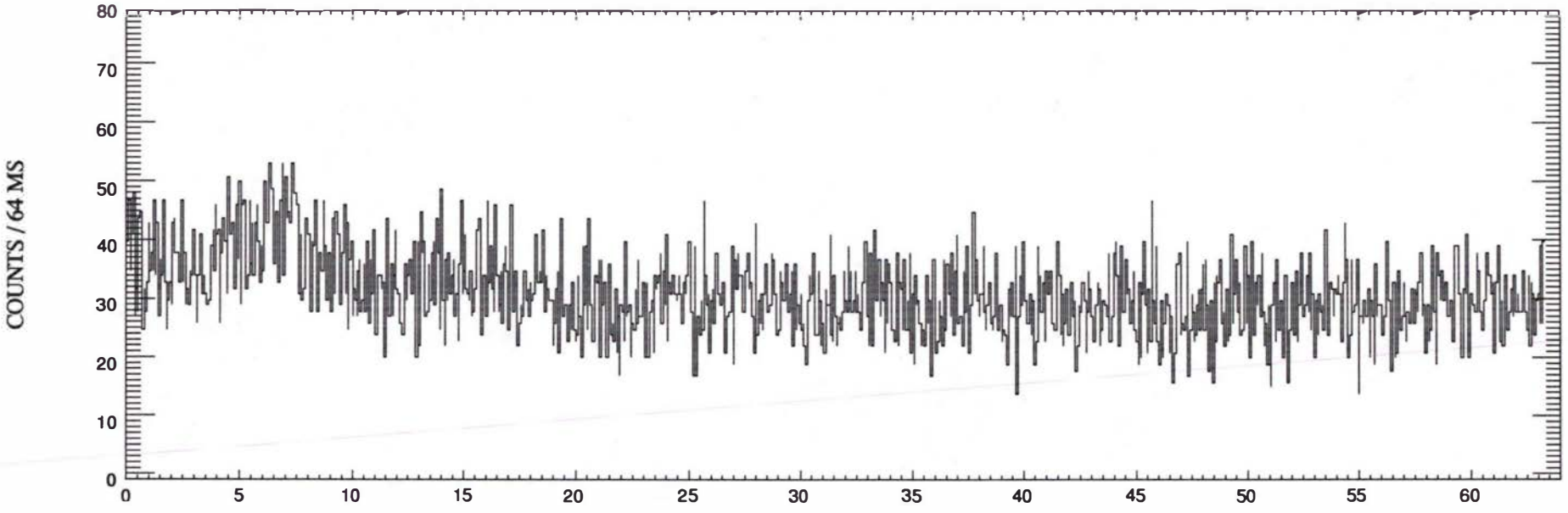
Burst Counter 5 at UT= 1.593187984890 h= 5735.477 s

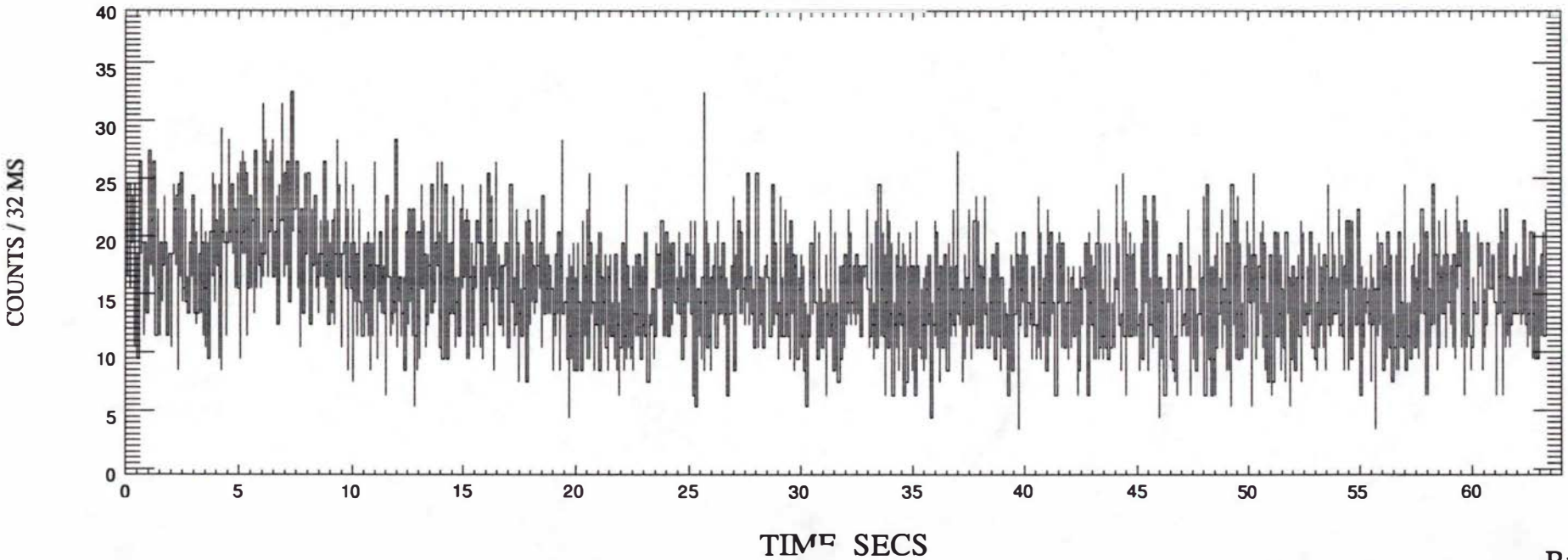


B# 1

HUS 2A TRIGGERED DATA QEDR day 217, year 1992 8/10/92

Burst Counter 5 at UT= 1.593189701504 h= 5735.483 s

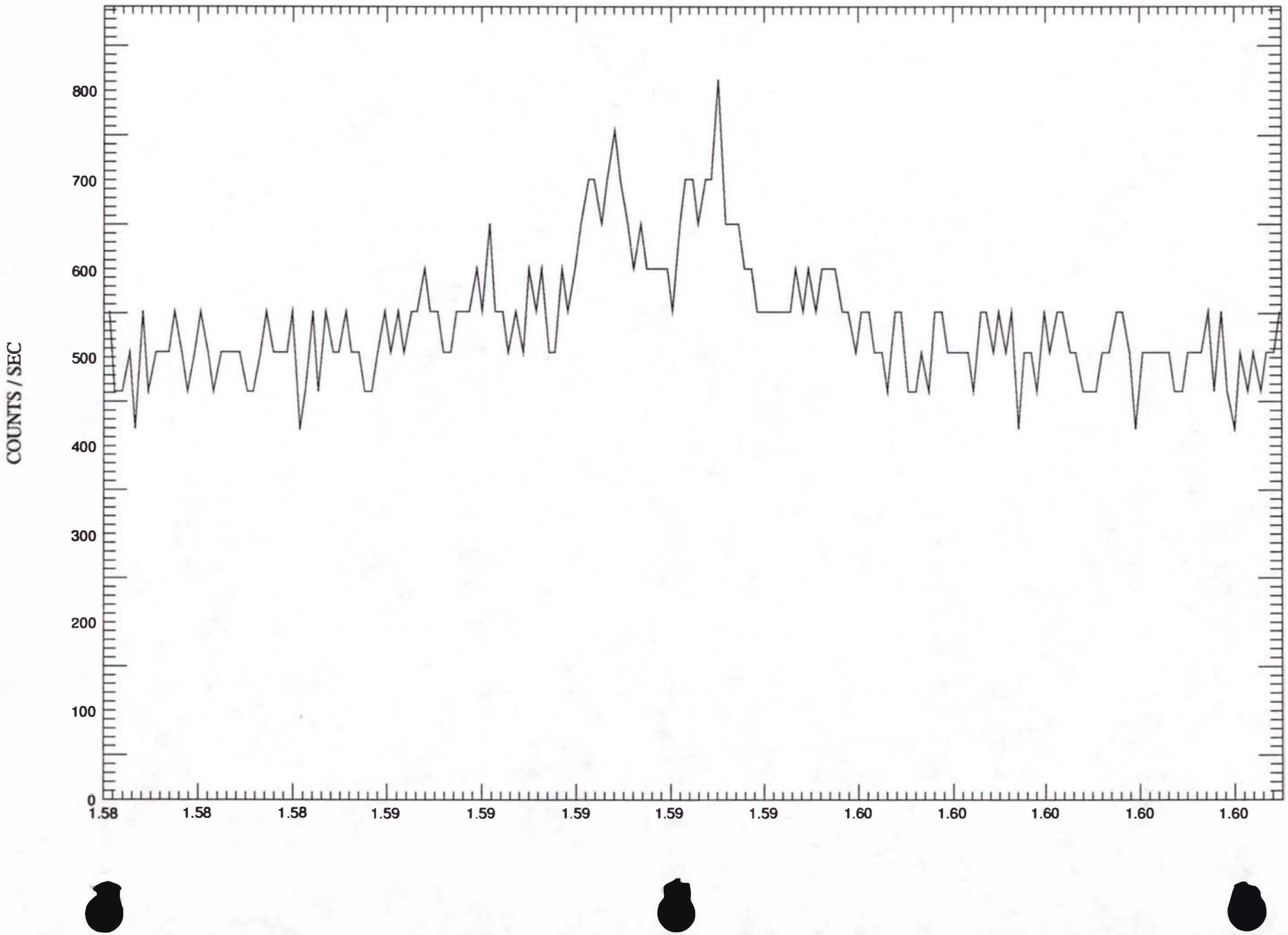




B# 1

HUS 2A, MODE 1, NOT AVERAGED QEDR day 217, year 1992 to day 217, year 1992 8/10/92

CALIBRATION DATA INCLUDED



****
CATSEARCH PROGRAM
****

BATSE BURST # 1744
EVENT OF 1992 AUG 5 DAY OF YEAR=218
EVENT CROSSING TIME AT BATSE : 40434. S. OR 11:13:54.0
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 104.400 21.700
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 5/ 8/ 92 IS:
RA= 154.194 DEC= 3.568 DIST= 6.219 AU
BATSE-ULYSSES DISTANCE = 930420744. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=128.44 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1929.28 SECS.
CROSSING TIME AT ULYSSES IS 38505. S. OR 10:41:44.7 +/- 442.77 SECONDS

From HORACK@ssl.msfc.nasa.gov Fri Aug 7 05:43:08 1992
Date: Fri, 7 Aug 1992 7:45:50 -0500 (CDT)
From: HORACK@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 01744 Aug 5

TIME: TJD=8839 SECONDS=40434

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=86. AZIMUTH=7. ERROR= DEGREES

COMMENTS:
WEAK EVENT LASTING ABOUT 0.5 SECONDS. NOT ENOUGH PRE-TRIGGER DATA TO DETERMINE THE DURATION PRECISELY. NO APPARENT DETAILED STRUCTURE, JUST A SINGLE EMISSION PULSE. DETECTED ABOVE 300 KEV, EVENT WAS OVER BEFORE TRIGGER TIME.

From HORACK@ssl.msfc.nasa.gov Fri Aug 7 05:48:04 1992
Date: Fri, 7 Aug 1992 7:50:40 -0500 (CDT)
From: HORACK@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1458

BATSE BURST TRIGGER

NO.: 01745

TIME: TJD=8839 SECONDS=76889

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=105. AZIMUTH=36. ERROR= DEGREES

COMMENTS:
LONG, COMPLEX FLARE LASTING OVER 300 SECONDS. CLASSIFIED BY GOES AS A C-1.5 EVENT. CONSISTS OF AT LEAST 5 MAIN EMISSION REGIONS, WITH DETAILED STRUCTURE THROUGHOUT THE DURATION OF THE FLARE. OCCURRED JUST AFTER SUNRISE. NOT DETECTED AT ENERGIES ABOVE 300 KEV. INTENSITY OF THE EVENT IS MODERATE.

From MEEGAN@ssl.msfc.nasa.gov Sun Aug 9 14:02:43 1992
Date: Sun, 9 Aug 1992 15:59:56 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @DISK4:[BATSEMOPS.SEND_MESSAGE]BURST_SPAN.DIS
Content-Length: 332

BATSE has detected a transient source at RA=66, Dec=32, with an error circle of about 1 degree. There are no known X-ray sources within the error box. It has been more intense than the Crab for the last two days. There are large fluctuations in intensity that have produced 18 burst triggers on days 8841 and 8842. Stay tuned!

```
         9 071  8432 GRB, PEAKS 8431.7,8437.4 @102DEG                      8430-448
        11 071  8429 GRB, VERY WEAK PEAKS 8429.2,8433.2 @38  (10NR@162)  8433-441
920325     085 62258 BATSE GRB, STRONG, SPIKY, RA6.5,DEC-8.5 (BNEWS17)
           085 61525 PVO TRIG 61525.5 @1.57A.U.
         8 085 62228 GRB, PEAKS 62228.2WEAK,256.2,282.2WEAK @107DEG      62230-284
         9 085 62256 GRB, PEAKS 62256.1,62278.1 @100 (10NA@60,11NRAD)    62258-282
920331     091 65750 BATSE GRB, INTENSE,110SEC, RA256,DEC33 (BNEWS18)
        10 091 65848 SOFT PEAKS 65805.9VW,847.9 @108 (GLIT65866)8SR,9SR 65811-859
        11 091 65750 PEAKS 65749.7,755.7,GAP781-831,843.7,849.7 @90DEG  65747-855
920403     094 86400   END OF DMSP-9 DATA
920406     097  9855 BATSE GRB,V.INTENSE,RA293,D-60(BN19) PVOTRIG9756.4
         8 097  9855 NO DET @141DEG (10SR,11NO @137DEG)
920408   8 099~37700 BURST? (10SRAD,11NA) (BATSE OFF)
920423   8 114~78600 HIGH SOFT BURST? (10NR,11NA) (BATSE OFF)
920501     122 76695 BATSE GRB,CMPLX,HARD.ULYS,PVO 123.84,-32.76(2000.0)
           122 76695 BATSE GRB: IAU5547,BN20 (123.35,-32.61(1950))
         8 122 76695 NO BURST@127(10NO@157,NO@147) (PVO TRIG 76840.7)
920517     138 11875 BATSE GRB,EX.INT.,RA201.0,DEC-21.9(2000.0) +PVO,UL
           138 11875 BATSE GRB:IAU5547(200.9,-21.8(1992)) (PVO 12672.8)
         8 138 11882 GRB, PEAK 11882.0(1000C/S) @54.6  JUST BEFORE SRAD 11878-888
        10 138 11885 GRB, PEAK 1184.6 (700C/S) @78.8 (11SRAD)           11886-892
920518   8 139~82100 BURST?, ALSO ~82400 (10NA,11NA) (BATSE OFF)
920519 10 140~59400 GRB (8SR,11NA) (PVO TRIGGER 59211.9) PHOEBUS/GRAN

                                                    TERRELL/DMSP.GAM 930505
920525     146 12427 BATSE GRB,V.INT.,RA302.4,D-43.6(2000.0) +PVO,ULYSS
           146 12427 BATSE GRB:IAU5547(302.2,-43.6(1992)) (PVO 12882.0)
        11 146 12427 GRB, STR PEAKS 12426.9,434.9,440.9UNRES(8SR,10NR)  12432-446
920615 10 167         GLITCHES END ON DMSP10 UNTIL 6/22 (MODE CYCLES)
        11 171~64666 WEAK BURST @96DEG (8NO @75, 10NA @68) (IAU5567)
920619     171 64666 BATSE SOFTREPEATER SGR,RA287,D11(1950?)(8,10,11NO)
920622     174 25506 BATSE HARD GRB, L172,B51 (GRONEWS #73,TRIG 1663)
         8 174~25506 NO DMSP DETECTION (8SAA,10NR,11SAA)
920623     175  3634 BATSE GRB (LAROS) (8NA,10YES?,11NA)
920625   8 177         HIGH POLAR COUNTS (ALSO DMSP10,11)
920628 10 180 76452 GRB PEAK 76452.3(250/S),464.3(350/S) (8ND,11NO)
           180 76453 GRB, PHOEBUS/GRANAT, GRO N/O
920629 10 181         GLITCHES END (MODE CHANGE)
920629 10 181 75897 SOFT BURST, PEAKS 75897.4,907.4 SUN@108(BATSE OFF) 75891-921
        11 181 75896 SOFT BURST, PEAKS 75896.0,906.0 ANGSUN=124 (8NA)   75888-920
920630 11 182 21781   GLITCH, RECURRING TO 920707 (MODE)
920630     182 86400   LEAP SECOND INTERCALATED HERE
920708     190 18957 BATSE SOFT REPEATER AGAIN (SEE 920619)(B1908+11)
         8 190~18957 NO DMSP BURST (8NO@70,10NO@52,11SAA)
920711     193 58157 BATSE GRB+PVO+ULY RA281.9,D73.0(2000.0) (IAU5565)
         8 193 58157 GRB PKS 58157.9(300/S),63.9,221.9,225.9,235.9@56.1 58160-238
        10 193 58157 GRB PKS157.8(550/S),65.8,73.8,81.8,221.8,25.8 @101 58159-249
        11 193 58157 NOT USEFUL (N.RAD)
920714     196 47071 GRANAT GRB(219.8,-29.9(1950))IAU5579(8,11NA,10SAA)
920716 10 198 60933 SOFT BURST PKS 60933.4(200/S),949.4(200),SUN@58.1
        11 198 60933 SOFT(1DET)PKS60933.4(150/S),949.4(200),SUN85.9,8NA
           198 60934 GRB,SIGMA/GRANAT
920720     202 11524 GRB BAT,ULY (PVO 11155)(202.94,36.74,J)(8,10,11NA)
920723     205 72188 GRANAT GRB(285.7,26.8(1950))IAU5579(8ND,10NA,11NR)
           205 72694 PVO TRIGGER, 72694.1
920805     218 ?     BATSE HARD X-RAY TRANSIENT,RA66,D32,VAR.,IAU5580
```

From @UCBSP.SSL.BERKELEY.EDU:046369@ESSDP2.SPAN.NASA.GOV Wed May 5 13:41:17 1993
Date: Tue 5 May 92 13:42:27-PST
From: $C <046369@ESSDP2.SPAN.NASA.GOV>
To: KHURLEY@sunspot.ssl.berkeley.edu
Subject: [Resent-MM Mail] DMSP GRB DATA
Content-Length: 8912

Received: from ESSDP2 by UCBSP.SSL.BERKELEY.EDU via MAIL-11 with
DECnet; Tue, 5 May 92 13:40:33-PST
Date: Tue 5 May 92 13:40:33-PST
From: 046369@ESSDP2.SPAN.NASA.GOV
Subject: DMSP GRB DATA
To: "UCBSP::KHURLEY"@ESSDP2.SPAN.NASA.GOV

FROM: ESSDP2::TERRELL 93/05/05
TO: UCBSP::KHURLEY
CC: BATSE::KOUVELIOTOU
SUBJ: DMSP GRB DATA

HERE IS A PARTIAL LIST OF 1992 DMSP GAMMA-RAY-BURST DATA, AS OF TODAY.
OTHER DATA APPEARING TO CONFIRM UNCONFIRMED EVENTS IN YOUR LISTING IS
BEING EXTRACTED, AND I WILL CHECK IT OUT WHEN I RETURN FROM HOUSTON.
THANKS FOR YOUR CONTINUING HELP--JIM TERRELL

DMSP GAMMA PEAKS 90281-92305 CHECKED,2-SEC CTS,TERRELL/DMSP.GAM 930505
ORBITAL PERIODS FOR 8,9,10: 6110,6080,6040SEC. ALT=800KM. INCLIN=99DEG
GRB PEAK TIMES CORRECTED (8,9,10=11) FOR AVG DELAYS: 1.82,1.98,5.50SEC
CHANS: (8)50,100,200,420 (9)50,100 (10,11)20,100,200,430,550(-1000KEV)

DATE	FL	DAY	TIME	NOTES--------(ND=NO DATA,NA=NOT APPARENT)----NOTES	DATATIMES
920101		001	0	JD8622.5	
920110		010	33480	BATSE GRB (16XMIN) (8ND,9NA,10SAA,11NA)	
920122		022		NO DMSP TAPES, DAYS 22-25 (92022-25)	
920126	9	026	55714	BURST? WIDE SOFT PEAK 55714.0 (4KC/S)(8SRAD,11SAA)	55646-768
	10	026	55704	STR SOFT BURST,COMPLEX PEAKS 55704.2,714.2(3KC/S)	55624-748
		026	55667	PVO TRIGGER (BURST?) AT 55666.9	
920210		041	35625	BATSE GRB,MOD STRONG RA154,DEC49 8NO,10SAA,11SAA	
	9	041	35633	VERY WEAK SOFT BURST,PEAKS 35632.6,636.6	35635-639
920211	8	042	15773	STRONG HARD BURST(+CHG),PEAKS 15772.7-4.7(2500C/S)	15765-783
	9	042	15775	STRONG HARD BURST, PEAK 15774.7(7KC/S) (BATSE OFF)	15761-791
	10	042	15776	STRONG HARD BURST,PEAK 15775.6(1700C/S) +SOFT BASE	15775-785
	11	042	15776	STRONG HARD BURST, PEAK 15775.8(12KC/S),ASYMM RESP	15765-799
		042	15631	PVO TRIGGER 15630.7 (0.7 HARDNESS RATIO)	
920214	9	045	83249	SHARP SOFT BURST, PEAK 83249.4 (8ND=NO DATA)	83243-273
	10	045	83250	SHARP SOFT BURST, PEAK 83250.1 (1000C/S),254.1	83244-280
	11	045	83250	SHARP SOFT BURST PEAKS 83249.8 (8KC/S),265.8	83237-295
		045	83066	BATSE SOLAR FLARE#2721, PEAK 83252(70K/S)&~83267	
920216	8	047	45219	STRONG SOFT BURST,PEAKS 45219.3,223.3(1KC/S)(10NO)	45177-239
	9	047	45220	STRONG SOFT BURST, PEAK 45219.7 (2KC/S)	45214-236
	11	047	45220	STRONG SOFT BURST,PEAKS 45184.2,196.2,220.2(8KC/S)	45180-252
		047	45052	PVO TRIGGER (BURST?) 45052.5	
920311		071	8426	BATSE GRB,VERY INTENSE,2PEAKS,RA129,D-40 (BNEWS16)	
	8	071	8431	GRB, PEAKS 8431.4,8437.4 @63DEG (PVO TRIG 8887.3)	8429-443

```
          218 ?     SOURCE J0422+32, IAU 5584,88,89:64.64,32.79(1950)
920815    228 ?     GRANAT HARD X-RAY .5CTRANS,288.7+10.5(1950)IAU5590
          228 ?     GRANAT SOURCE NAME GRS1915+105
920822    235 81321 BATSE WEAK SOLAR FLARE #3193
          235 81540 ULYSSES GRB 84184 (UNCONFIRMED COSMIC) NO BATSE
        8 235 81542 GRB PEAKS 81521.5W,541.5(700/S),551.5(200/S)SUN@87 81523-555
       10 235 81542 GRB PEAKS 81520.52,542.5(750/S),552.5(300/S)SUN@45 81526-562
       11 235 81543 GRB PEAK 81543.5(200/S) ULYS84184, SUN@100         81543-557
920824 10 237 39187 GRB PKS 39187.1(800/S),197.1(350) (8NR) SUN@116.1
       11 237 39186 GRB PKS 39185.9(500/S),189.9(550)  SUN@103.4
          237 39183 GRB (HURLEY), ULYSSES 38400
920830  8 243  6319 GRB PK 6317.7(150)SOFT  (BATSE STRONG 6317, GRO82)
       10 243  6320 GRB PEAK 6320.2 SOFT(150) (ULYS~5800) (11NR)
920902    246  1736 BATSE GRB (ULYSSES 3230)
        8 246  1742 GRB PEAK 1741.8(500/S),~5SEC, SHARP, HARD SUN@94.6  1740-750
       10 246  1743 GRB PEAK 1743.5(650/S), SUN@85.8                    1741-761
       11 246  1743 GRB PEAK 1742.9(200/S GT.100KEV) SUN@98.5           1746-750
920923    267~16589 GRANAT STRONG X-RAY 1CTRAN,309.3-40.4(1950)IAU5617 (DMSP NA)
920925    269       CHINESE NUCLEAR TEST (VENTED)
921004  8 278 50421 GRB,NARROW PKS 50421.0(1100/S),429.0(500/S)(11SR)
       10 278 50421 GRB,NARROW PK 50420.7(200/S)
          278 49107 GRB, UNCONFIRMED COSMIC, ULYSSES (BATSE N/O)
921008    282       PVO DIED, INTO VENUS (PIONEER 12)
921009    285 24070 BATSE GRB (ULYS 21980)
       10 285~24070 GRB? (8NA,11NA)
921011    285 ?     WATCH/EUREKA TRANS. EU1737-132(1950).5CRAB IAU5643
921016 10 290~33800 BURST? (10NA,11NA)
921022    296~55500 GRB, MARS OBSERVER (~100 LIGHT-SECONDS AWAY)
921031  8 287       HIGH POLAR COUNTS 10/31-11/05 (ALSO 10, 11)
921220    355       J0422 PEAK=.5CRAB(IAU5685), PER=5.098HR(IAU5692)
930131    031 68231 GRB,BATSE BIGGEST, 182.75,-10.7(J2000) IAU5707
        8 031 68231 GRB PEAK 68230.9(1400/S) (10SR EDGE,11SAA)          68233-235
930217    048 40187 XRB(15CRAB) WATCH/EUREKA (IAU 5710,17) 4U0614+09
                                                TERRELL/DMSP.GAM 930505
930220    051       ASTRO-D=ASUKA=ASCA X-RAY SPACECRAFT LAUNCHED
930302    061 51329 XRB,EUREKA,4U0614+09,20CRAB(6-15KEV)IN 16S IAU5717
930309    068 11278 COMPTEL GRB (323.13,54.65,J2000)(IAU5749,50,63,64)
930310    069 26418 GRB, 20S,GRANAT @285.56,-51.98(B1950.0) IAU5720
930430    120 54070 BATSE STRONG GRB, (~106,21) (BATSE ALERT)
930630    181 86400   LEAP SECOND AT 2400H(UTC-TA1=-28 SEC)(IAUC 5694)
```

From @UCBSP.SSL.BERKELEY.EDU:046369@ESSDP2.SPAN.NASA.GOV Wed May 5 13:41:17 1993
Date: Tue 5 May 92 13:42:27-PST
From: $C <046369@ESSDP2.SPAN.NASA.GOV>
To: KHURLEY@sunspot.ssl.berkeley.edu
Subject: [Resent-MM Mail] DMSP GRB DATA
Content-Length: 8912

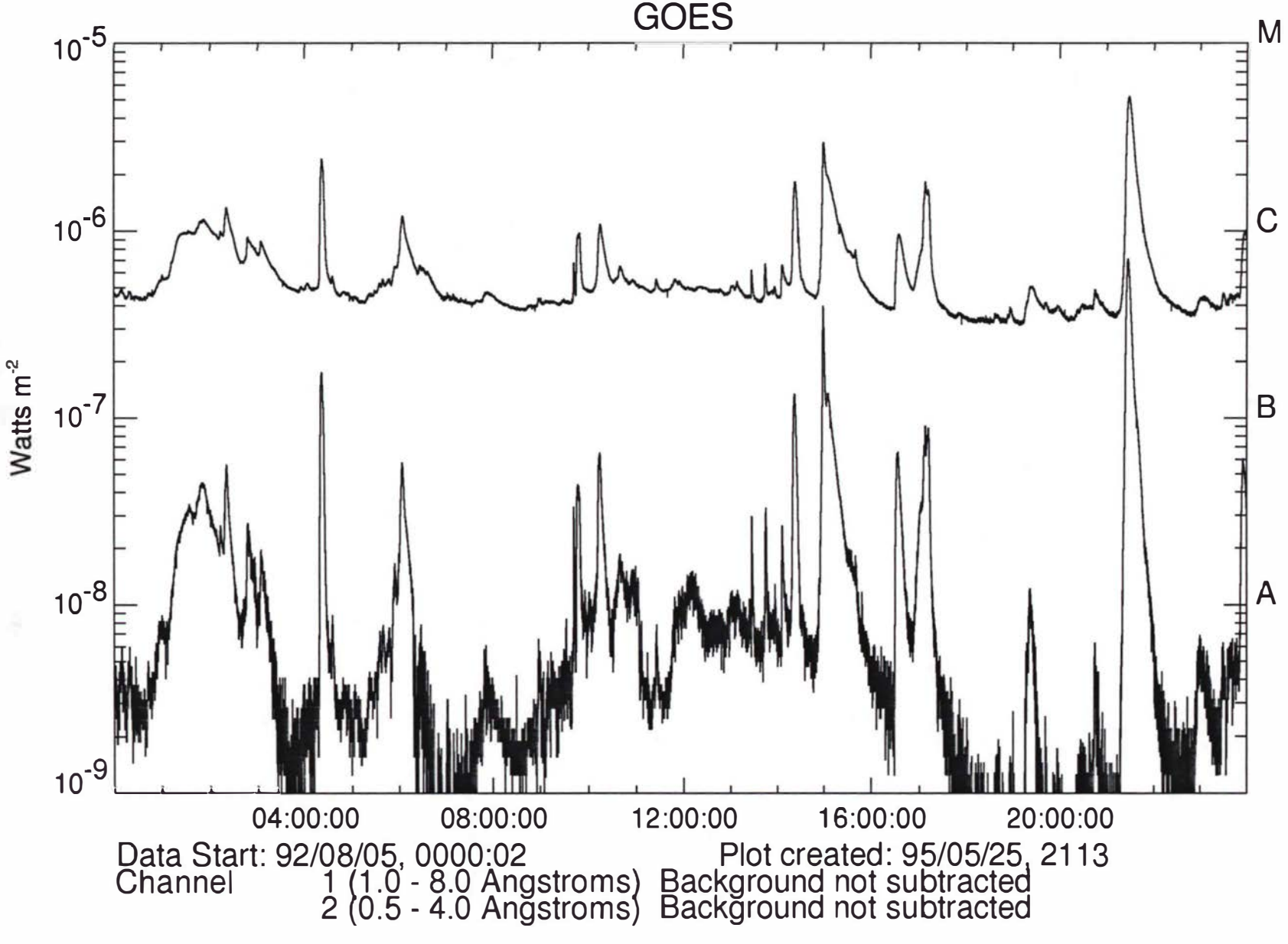
Received: from ESSDP2 by UCBSP.SSL.BERKELEY.EDU via MAIL-11 with
DECnet; Tue, 5 May 92 13:40:33-PST
Date: Tue 5 May 92 13:40:33-PST
From: 046369@ESSDP2.SPAN.NASA.GOV
Subject: DMSP GRB DATA
To: "UCBSP::KHURLEY"@ESSDP2.SPAN.NASA.GOV

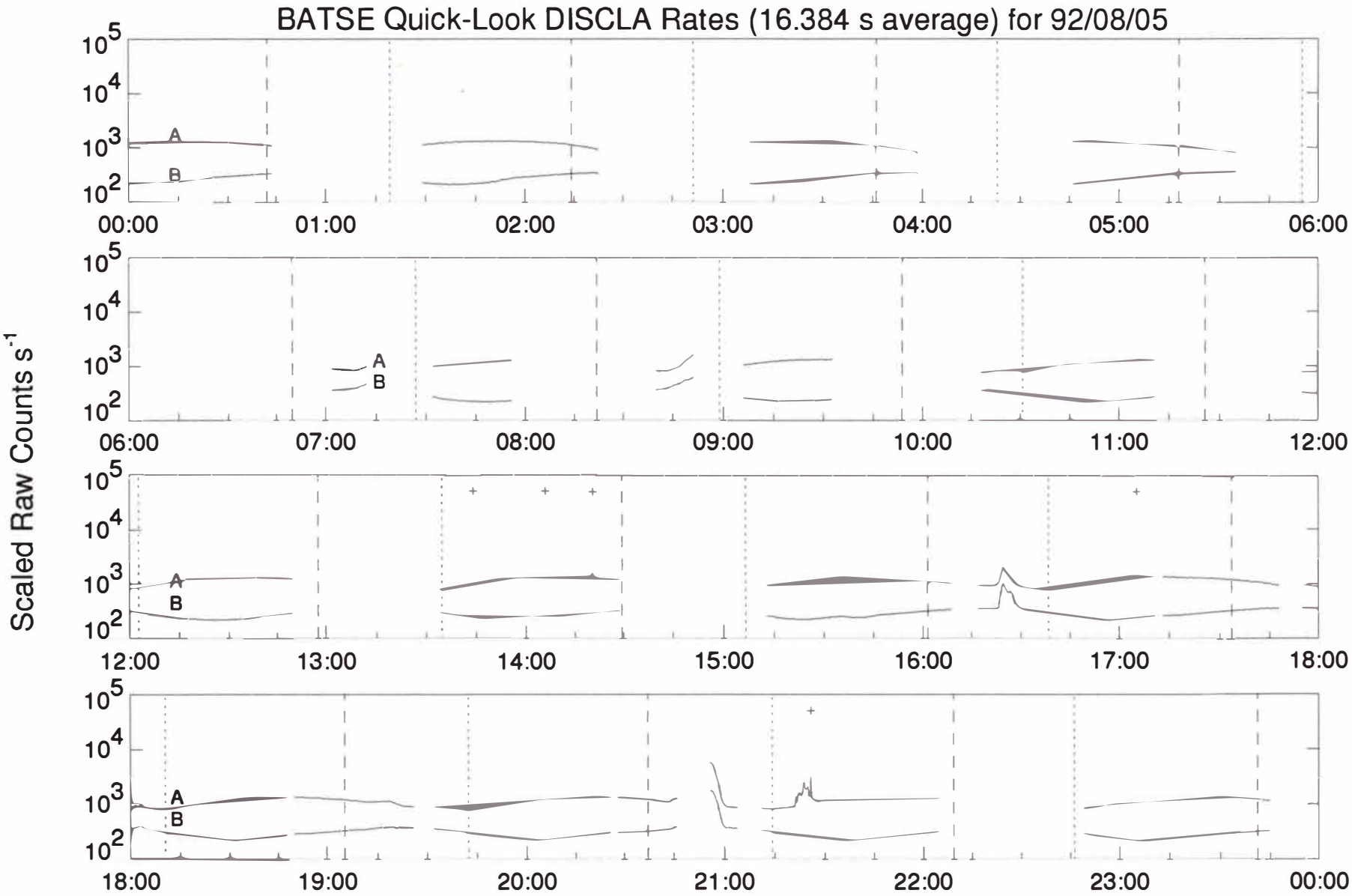
FROM: ESSDP2::TERRELL 93/05/05
TO: UCBSP::KHURLEY
CC: BATSE::KOUVELIOTOU
SUBJ: DMSP GRB DATA

HERE IS A PARTIAL LIST OF 1992 DMSP GAMMA-RAY-BURST DATA, AS OF TODAY.
OTHER DATA APPEARING TO CONFIRM UNCONFIRMED EVENTS IN YOUR LISTING IS
BEING EXTRACTED, AND I WILL CHECK IT OUT WHEN I RETURN FROM HOUSTON.
THANKS FOR YOUR CONTINUING HELP--JIM TERRELL

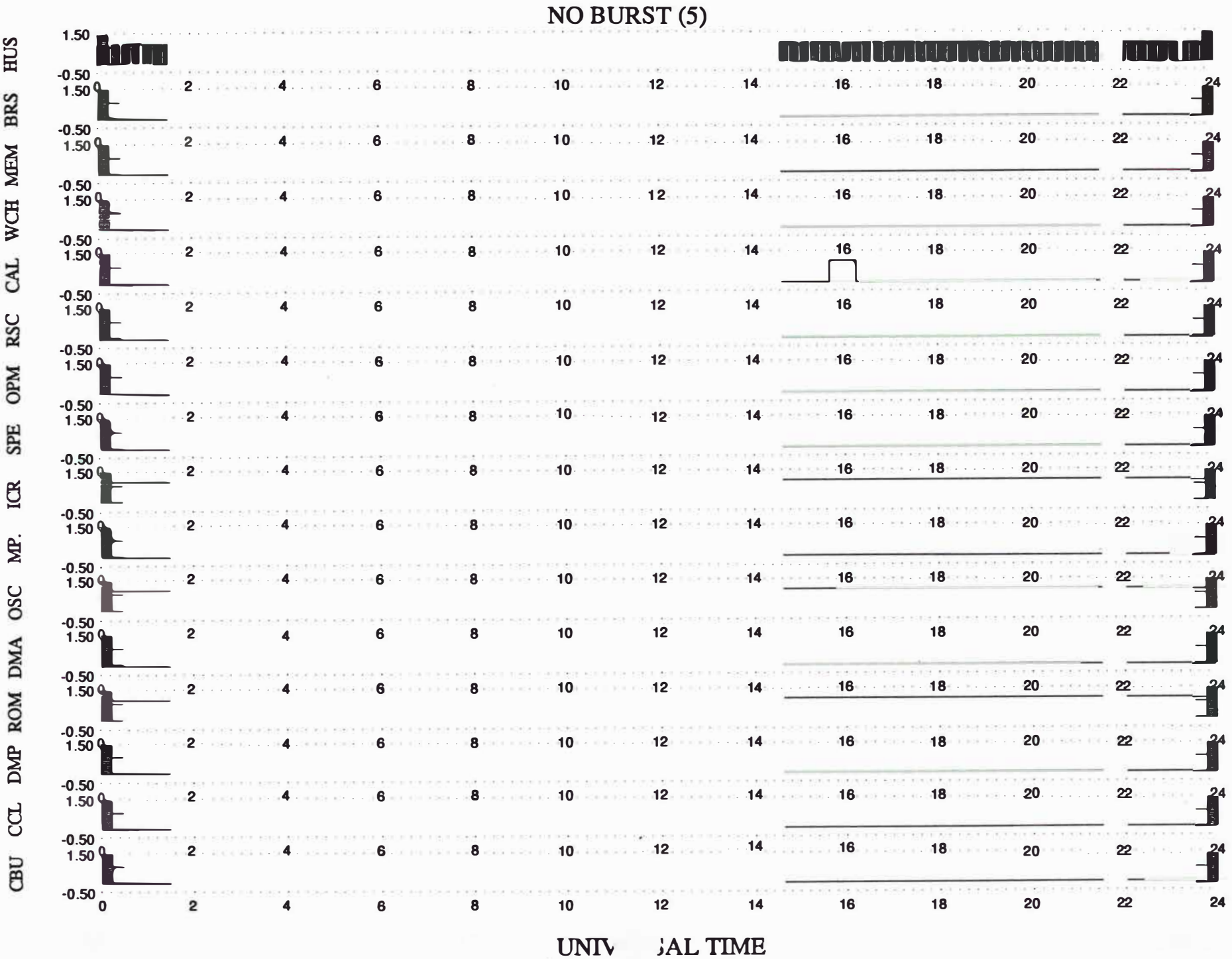
DMSP GAMMA PEAKS 90281-92305 CHECKED,2-SEC CTS,TERRELL/DMSP.GAM 930505
ORBITAL PERIODS FOR 8,9,10: 6110,6080,6040SEC. ALT=800KM. INCLIN=99DEG
GRB PEAK TIMES CORRECTED (8,9,10=11) FOR AVG DELAYS: 1.82,1.98,5.50SEC
CHANS: (8)50,100,200,420 (9)50,100 (10,11)20,100,200,430,550(-1000KEV)

DATE	FL	DAY	TIME	NOTES--------(ND=NO DATA,NA=NOT APPARENT)----NOTES	DATATIMES
920101		001	0	JD8622.5	
920110		010	33480	BATSE GRB (16XMIN) (8ND,9NA,10SAA,11NA)	
920122		022		NO DMSP TAPES, DAYS 22-25 (92022-25)	
920126	9	026	55714	BURST? WIDE SOFT PEAK 55714.0 (4KC/S)(8SRAD,11SAA)	55646-768
	10	026	55704	STR SOFT BURST,COMPLEX PEAKS 55704.2,714.2(3KC/S)	55624-748
		026	55667	PVO TRIGGER (BURST?) AT 55666.9	
920210		041	35625	BATSE GRB,MOD STRONG RA154,DEC49 8NO,10SAA,11SAA	
	9	041	35633	VERY WEAK SOFT BURST,PEAKS 35632.6,636.6	35635-639
920211	8	042	15773	STRONG HARD BURST(+CHG),PEAKS 15772.7-4.7(2500C/S)	15765-783
	9	042	15775	STRONG HARD BURST, PEAK 15774.7(7KC/S) (BATSE OFF)	15761-791
	10	042	15776	STRONG HARD BURST,PEAK 15775.6(1700C/S) +SOFT BASE	15775-785
	11	042	15776	STRONG HARD BURST, PEAK 15775.8(12KC/S),ASYMM RESP	15765-799
		042	15631	PVO TRIGGER 15630.7 (0.7 HARDNESS RATIO)	
920214	9	045	83249	SHARP SOFT BURST, PEAK 83249.4 (8ND=NO DATA)	83243-273
	10	045	83250	SHARP SOFT BURST, PEAK 83250.1 (1000C/S),254.1	83244-280
	11	045	83250	SHARP SOFT BURST PEAKS 83249.8 (8KC/S),265.8	83237-295
		045	83066	BATSE SOLAR FLARE#2721, PEAK 83252(70K/S)&~83267	
920216	8	047	45219	STRONG SOFT BURST,PEAKS 45219.3,223.3(1KC/S)(10NO)	45177-239
	9	047	45220	STRONG SOFT BURST, PEAK 45219.7 (2KC/S)	45214-236
	11	047	45220	STRONG SOFT BURST,PEAKS 45184.2,196.2,220.2(8KC/S)	45180-252
		047	45052	PVO TRIGGER (BURST?) 45052.5	
920311		071	8426	BATSE GRB,VERY INTENSE,2PEAKS,RA129,D-40 (BNEWS16)	
	8	071	8431	GRB, PEAKS 8431.4,8437.4 @63DEG (PVO TRIG 8887.3)	8429-443


GOES
M
C
B
A
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/05, 0000:02
Plot created: 95/05/25, 2113
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

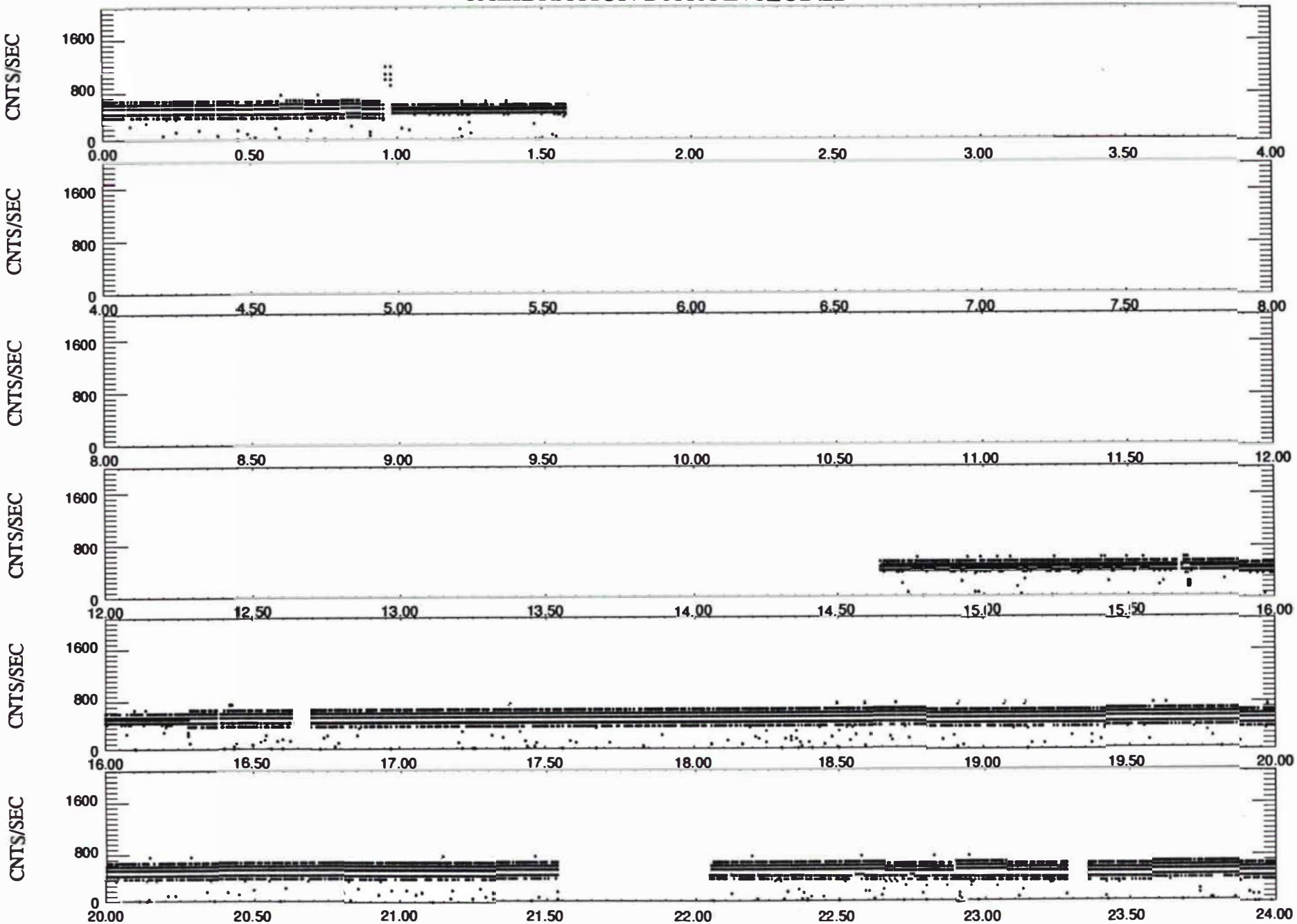

BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/05
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2151 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
+ Solar Flare
* Solar Burst Trigger

HUS MODES EDR day 218, year 1992 to day 218, year 1992 9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 218, year 1992 to day 218, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIV AL TIME

From MEEGAN@ssl.msfc.nasa.gov Mon Aug 10 13:35:32 1992
Date: Mon, 10 Aug 1992 15:38:07 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01746

TIME: TJD=8840 SECONDS=56741

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=146. AZIMUTH=75. ERROR= DEGREES

COMMENTS:
FLUCTUATION OF NEW X-RAY TRANSIENT.

```
          ********************
          *CATSEARCH PROGRAM*
          ********************

 BATSE BURST # 1747
 EVENT OF 1992 AUG  6 DAY OF YEAR=219
 EVENT CROSSING TIME AT BATSE      : 65358. S. OR 18:09:17.5
 COORDINATES ARE    .000    .000       6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 284.500  -15.500
 BATSE PEAK COUNTING RATE:  0000   C/S

 EVENT CROSSING TIME AT ULYSSES    WILL BE FOUND
 POSITION OF ULYSSES ON  6/ 8/  92 IS:
 RA=  154.323 DEC=    3.480 DIST=    6.224 AU
 BATSE-ULYSSES DISTANCE =  931161264. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 50.45 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1977.80 SECS.
 CROSSING TIME AT ULYSSES    IS 67335. S. OR 18:42:15.3 +/-  495.83 SECONDS
```

NO

```
From MEEGAN@ssl.msfc.nasa.gov Mon Aug 10 13:43:40 1992
Date:    Mon, 10 Aug 1992 15:42:13 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
        khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

                BATSE BURST TRIGGER
NO.: 01747

TIME: TJD=8840 SECONDS=65357

TYPE: BURST                     SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:       SIGMA

INTENSITY:          COUNTS/CM2

LOCATION: ZENITH= 51.   AZIMUTH=215.   ERROR=      DEGREES

COMMENTS:
TWO SPIKES 2 SECONDS APART.  NOT SEEN ABOVE 300 KEV.
```

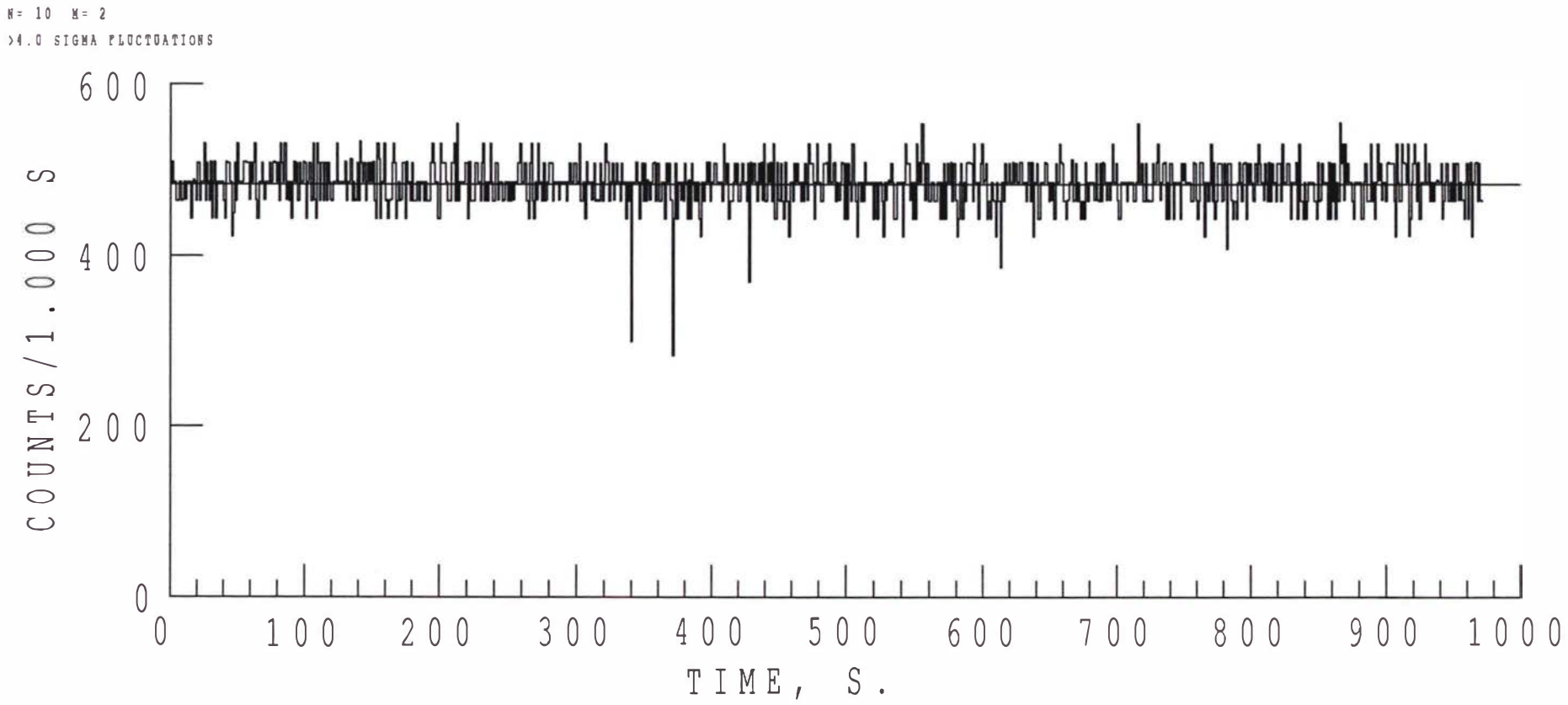
8/ 6/94

ULYSSES RT

6/ 8/92 66852.227 s

0.500 S INTERVALS REGROUPED BY 2

0- 0 keV



From MEEGAN@ssl.msfc.nasa.gov Mon Aug 10 13:46:45 1992
Date: Mon, 10 Aug 1992 15:45:15 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01748

TIME: TJD=8840 SECONDS=74207

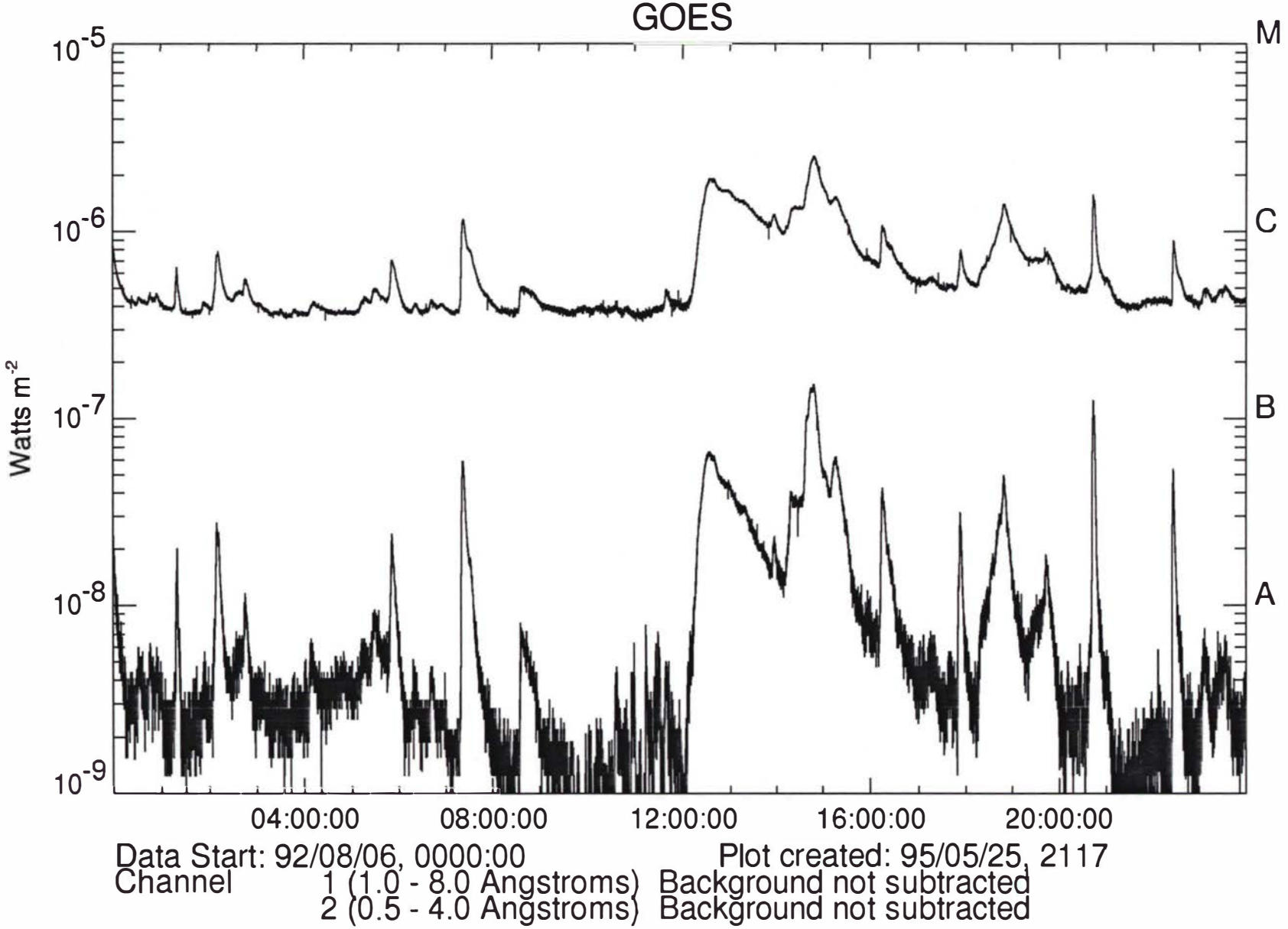
TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

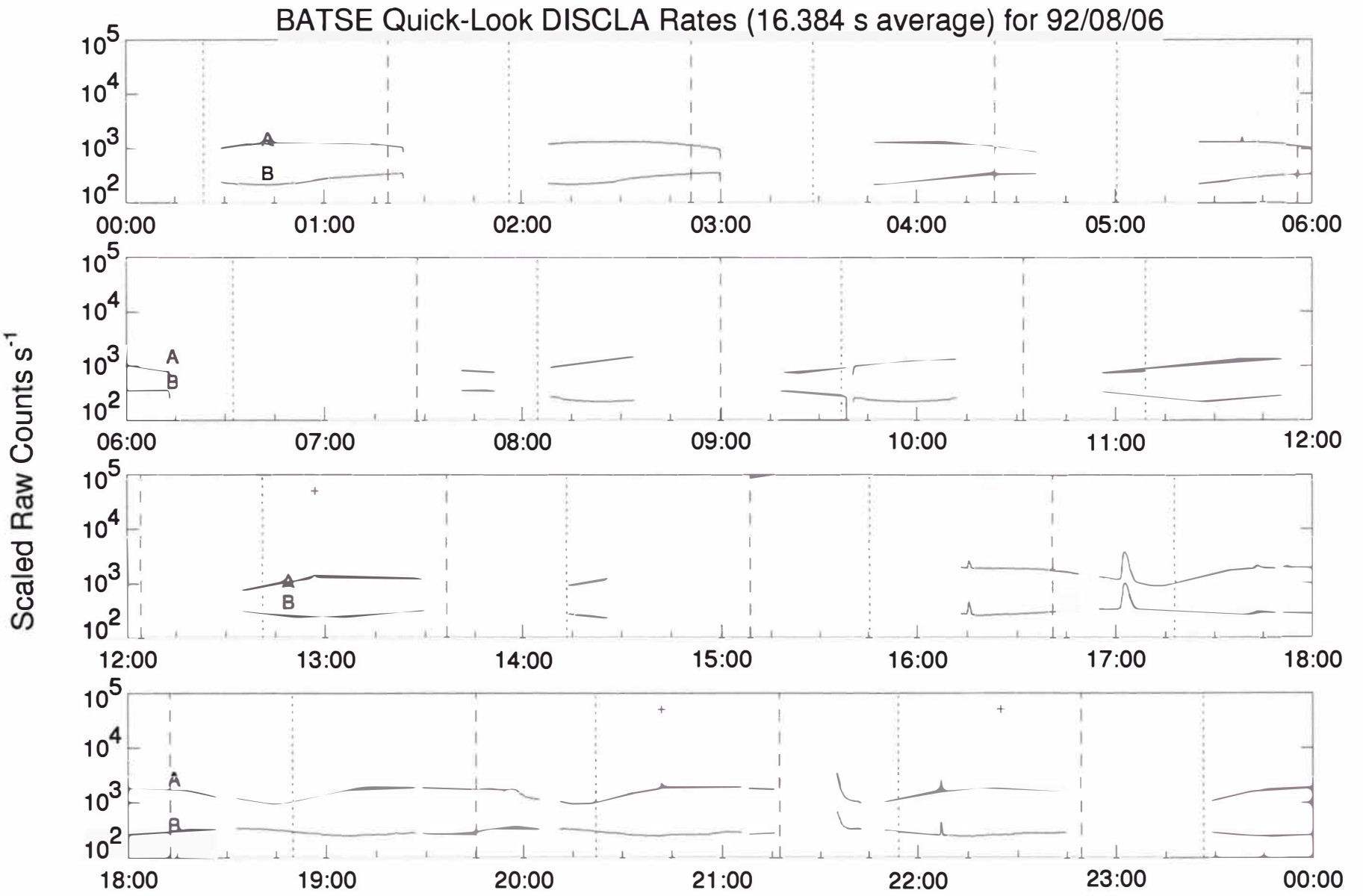
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=139. AZIMUTH= 97. ERROR= DEGREES

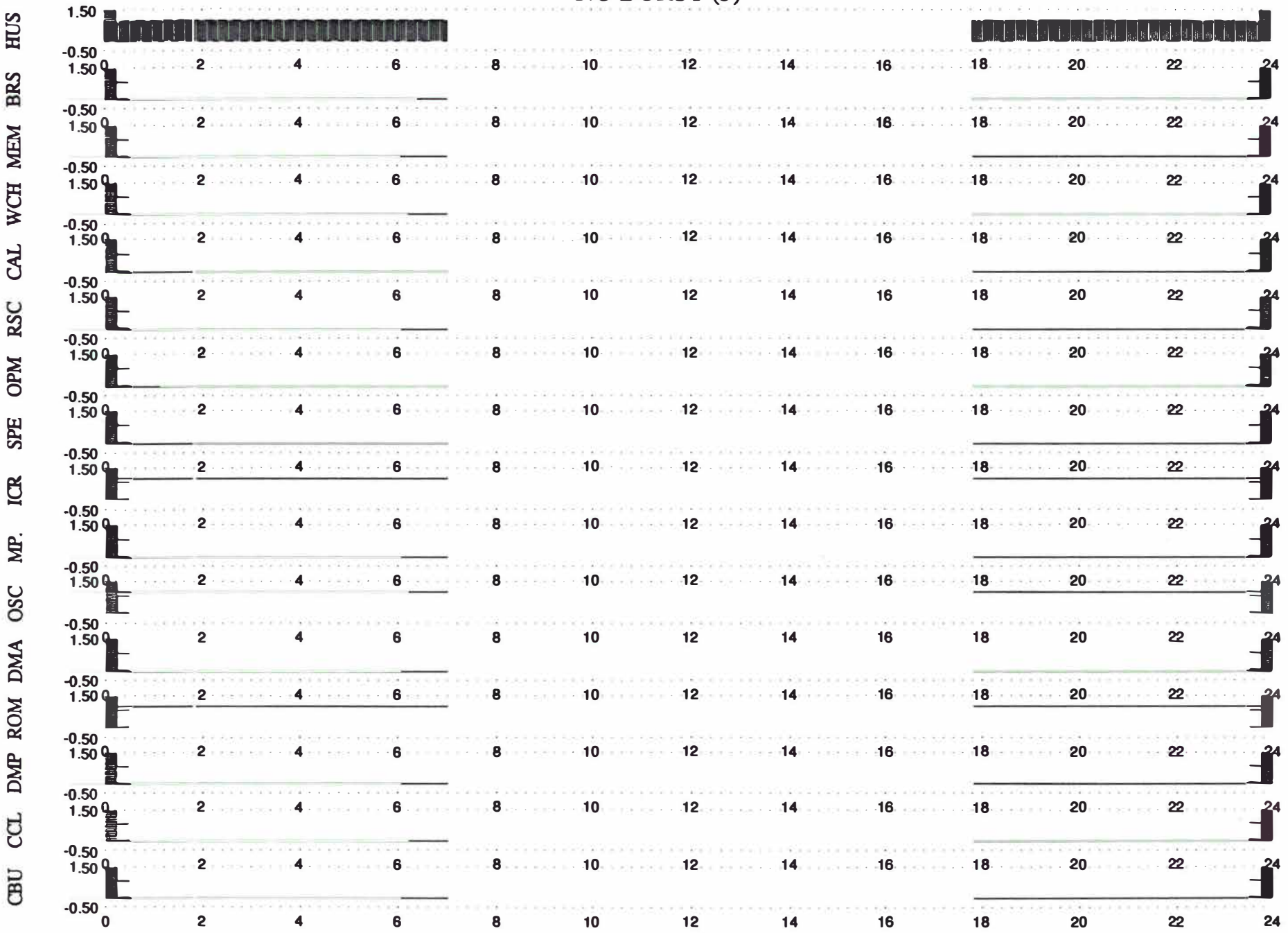
COMMENTS:
FLUCTUATION OF NEW X-RAY TRANSIENT


GOES
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/06, 0000:00
Plot created: 95/05/25, 2117
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/06
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2150 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 Flare
* Solar Burst Trigger

HUS MODES EDR day 219, year 1992 to day 219, year 1992 9/11/92

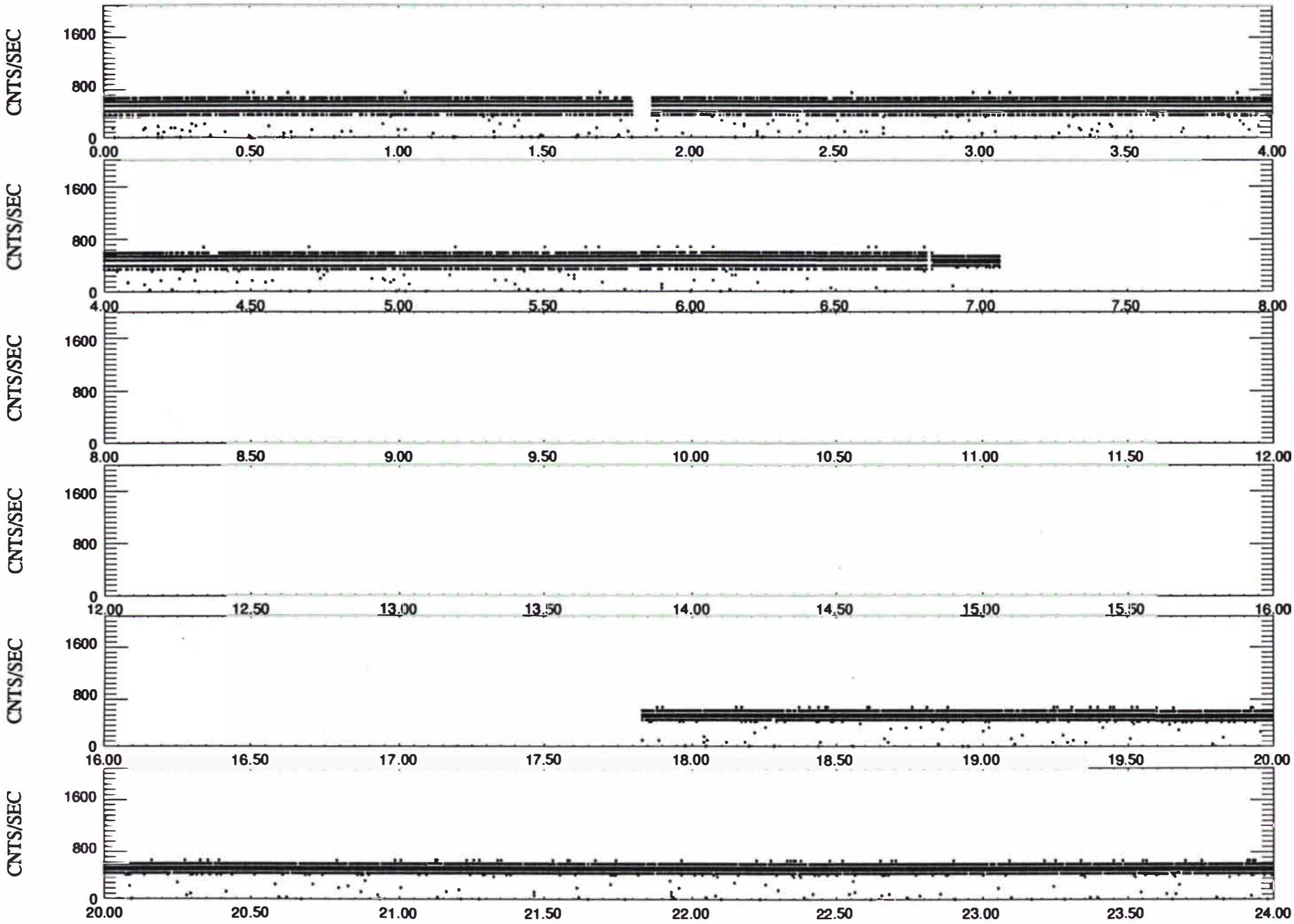
NO BURST (5)



UNIV SAL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 219, year 1992 to day 219, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIV SAL TIME

BATSE BURST TRIGGER

NO.: 01749

TIME: TJD=8841 SECONDS=16579

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=136.9 AZIMUTH=095.2 ERROR= DEGREES

COMMENTS:
FLUCTUATION FROM NEW HARD X-RAY TRANSIENT SOURCE.

BATSE BURST TRIGGER

NO.: 01750

TIME: TJD=8841 SECONDS=26089

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=147.9 AZIMUTH=89.0 ERROR= DEGREES

COMMENTS:
FLUCTUATION FROM NEW HARD X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01751

TIME: TJD=8841 SECONDS=32201

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=148.6 AZIMUTH=085.6 ERROR= DEGREES

COMMENTS:
FLUCTUATION FROM NEW HARD X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01752

TIME: TJD=8841 SECONDS=39029

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=159.6 AZIMUTH=088.1 ERROR= DEGREES

COMMENTS:
FLUCTUATION FROM NEW HARD X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01753

TIME: TJD=8841 SECONDS=47000

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=128.1 AZIMUTH=088.7 ERROR= DEGREES

COMMENTS:
FLUCTUATION FROM NEW HARD X-RAY TRANSIENT

BATSE BURST TRIGGER

NO.: 01754

TIME: TJD=8841 SECONDS=55466

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=154.9 AZIMUTH=340.5 ERROR= DEGREES

COMMENTS:
SOLAR FLARE. TRIGGERED AT START OF GOES B9.3 SOLAR FLARE.
WEAK & SOFT.

BATSE BURST TRIGGER

NO.: 01754

TIME: TJD=8841 SECONDS=55466

TYPE: TARNSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
THIS IS A CORRECTED MESSAGE. THIS TRIGGER WAS CAUSED BY A FLUCTUATION
OF THE NEW X-RAY TRANSIENT. THE SOLAR FLARE WHICH OCCURRED AT NEARLY
THE SAME TIME IS SOFT AND IS NOT RESPONSIBLE FOR THE TRIGGER.

BATSE BURST TRIGGER

NO.: 01755

TIME: TJD=8841 SECONDS=65015

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=125.8 AZIMUTH=087.7 ERROR= DEGREES

COMMENTS:
FLUCTUATION FROM NEW HARD X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01756

TIME: TJD=8441 SECONDS=72097

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=160.1 AZIMUTH=119.9 ERROR= DEGREES

COMMENTS:
FLUCTUATION FROM NEW HARD X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01757

TIME: TJD=8841 SECONDS=80963

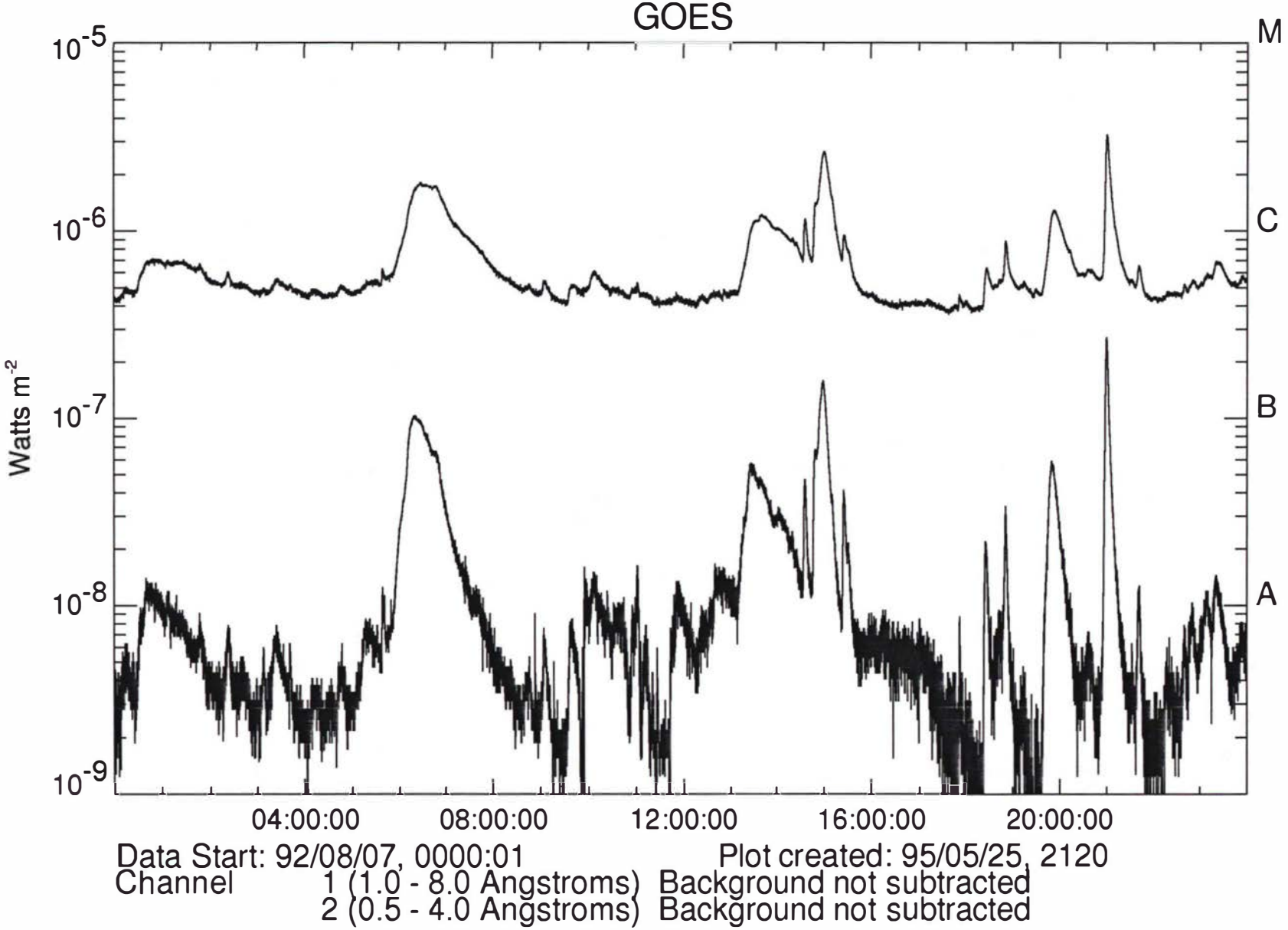
TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

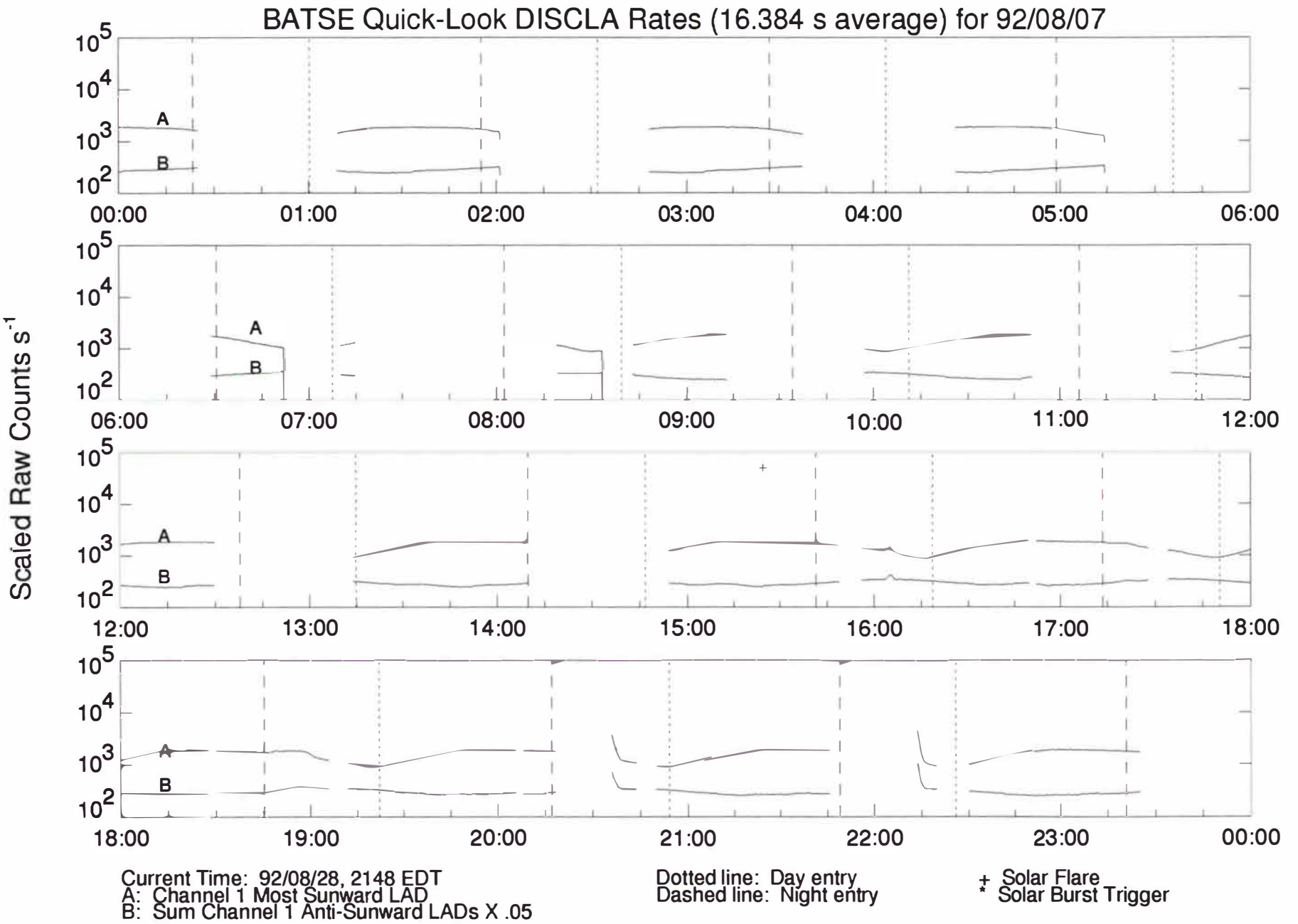
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=116.7 AZIMUTH=074.3 ERROR= DEGREES

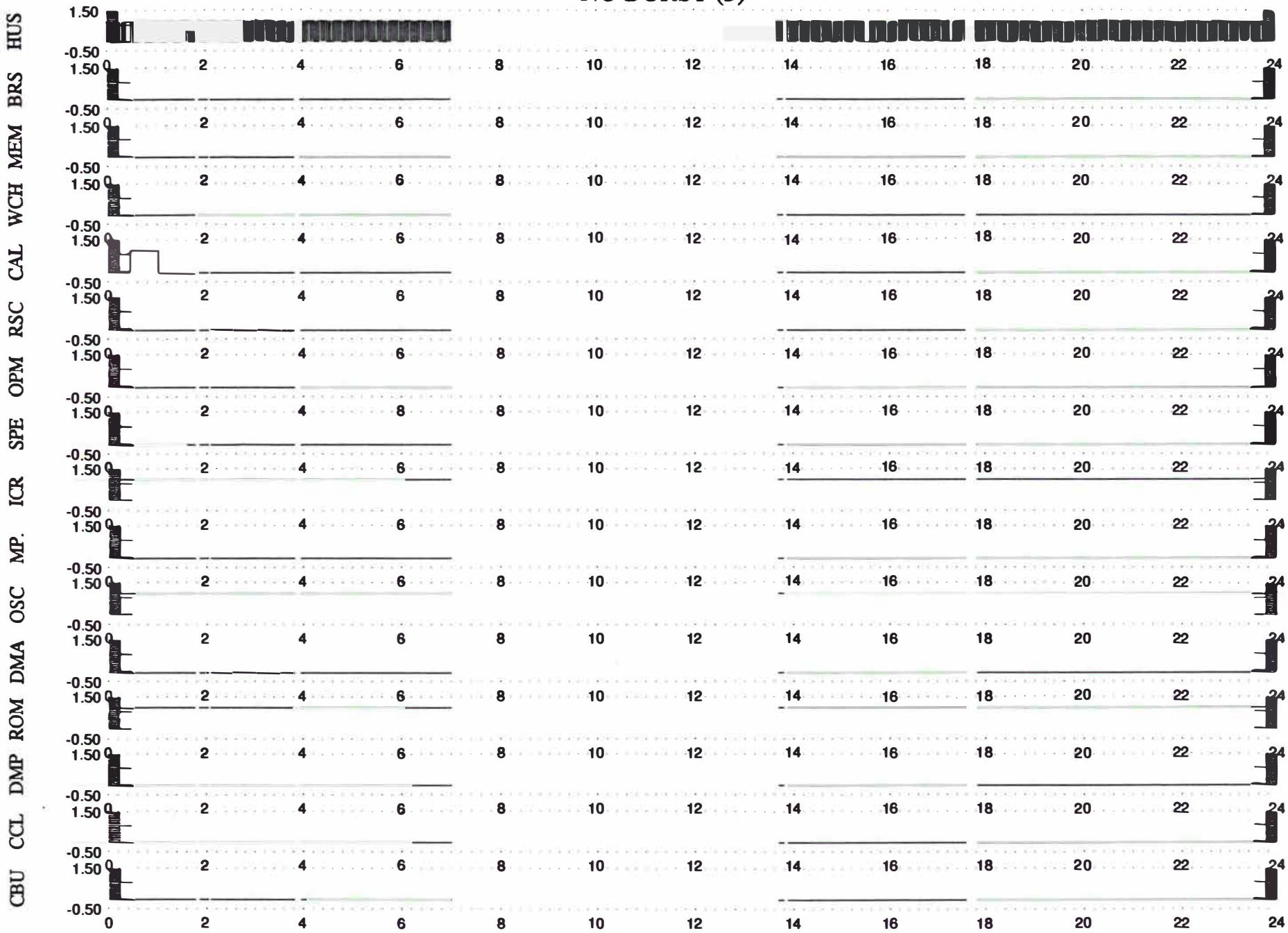
COMMENTS:
FLUCTUATION FROM NEW HARD X-RAY TRANSIENT.


GOES
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/07, 0000:01
Plot created: 95/05/25, 2120
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/07
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2148 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 Flare
* Solar Burst Trigger

HUS MODES EDR day 220, year 1992 to day 220, year 1992 9/11/92

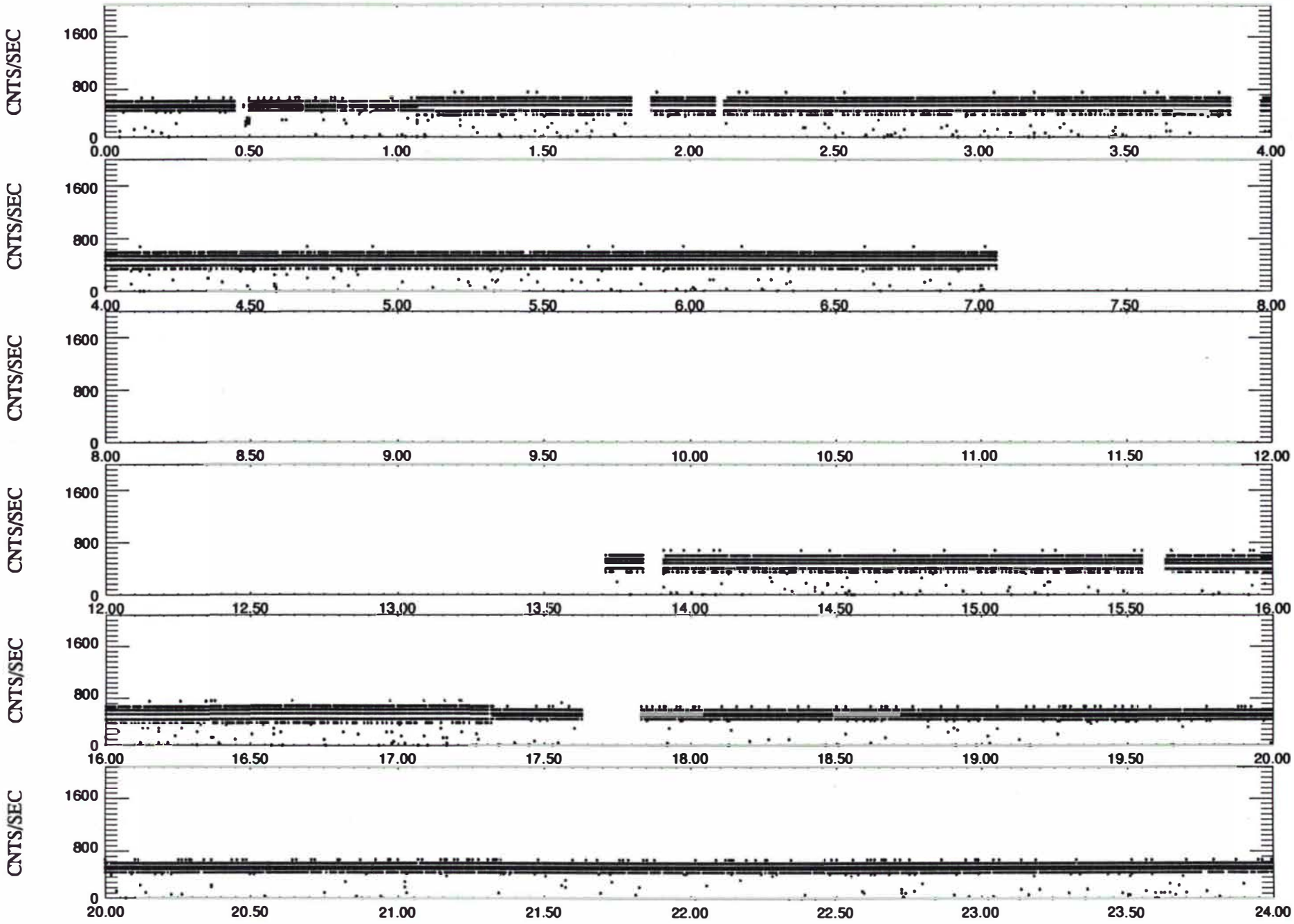
NO BURST (5)



UNIV AL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 220, year 1992 to day 220, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIVI AL TIME

From MEEGAN@ssl.msfc.nasa.gov Mon Aug 10 13:49:46 1992
Date: Mon, 10 Aug 1992 15:48:21 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 1758 Aug 8

TIME: TJD=8842 SECONDS=01885

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=157. AZIMUTH= 64. ERROR= DEGREES

COMMENTS:
FLUCTUATION OF NEW X-RAY TRANSIENT.

From MEEGAN@ssl.msfc.nasa.gov Mon Aug 10 13:54:26 1992
Date: Mon, 10 Aug 1992 15:52:47 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01759

TIME: TJD=8842 SECONDS=11428

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=122. AZIMUTH=105. ERROR= DEGREES

COMMENTS:
FLUCTUATION OF NEW X-RAY TRANSIENT.

****
CATSEARCH PROGRAM
****

BATSE BURST # 1760
EVENT OF 1992 AUG 8 DAY OF YEAR=221
EVENT CROSSING TIME AT BATSE : 14129. S. OR 03:55:28.8
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 260.500 -5.800
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 8/ 8/ 92 IS:
RA= 154.583 DEC= 3.301 DIST= 6.234 AU
BATSE-ULYSSES DISTANCE = 932536088. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 73.85 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 865.40 SECS.
CROSSING TIME AT ULYSSES IS 14994. S. OR 04:09:54.1 +/- 581.87 SECONDS

NO

From MEEGAN@ssl.msfc.nasa.gov Mon Aug 10 13:56:44 1992
Date: Mon, 10 Aug 1992 15:56:16 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 1760

Aug 8

TIME: TJD=8842 SECONDS=14128

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= 50. AZIMUTH=237. ERROR= DEGREES

COMMENTS:
FAIRLY STRONG BURST LASTING ABOUT 1 SECOND. SEEN ABOVE 300 KEV.

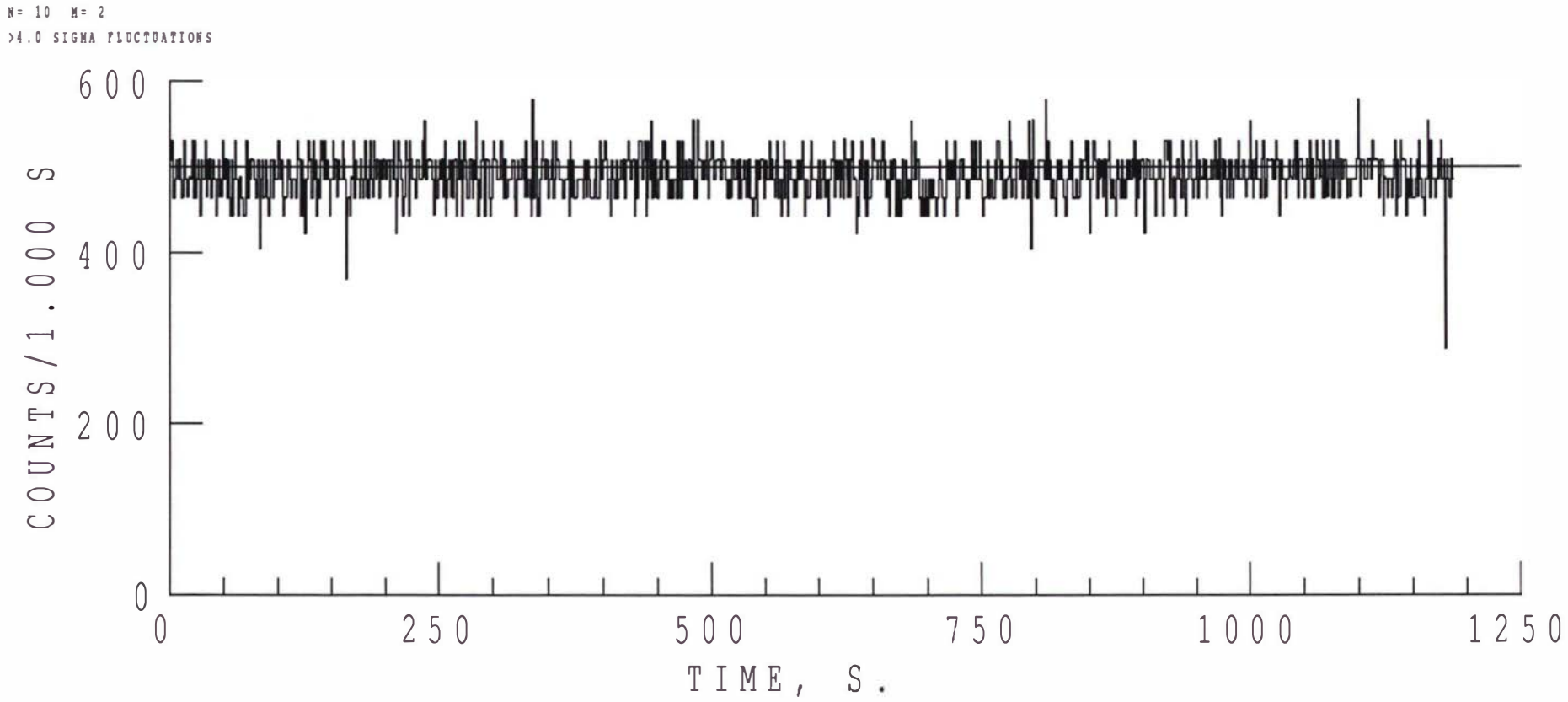
8/ 6/94

ULYSSES RT

8/ 8/92 14400.153 s

0.500 S INTERVALS REGROUPED BY 2

0- 0 keV



BATSE BURST TRIGGER

NO.: 1761

TIME: TJD=8842 SECONDS=28879

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=148. AZIMUTH=109. ERROR= DEGREES

COMMENTS:
FLUCTUATION OF NEW X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 1762

TIME: TJD=8842 SECONDS=43617

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=133. AZIMUTH= 91. ERROR= DEGREES

COMMENTS:
FLUCTUATION OF NEW X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 1763

TIME: TJD=8842 SECONDS=49471

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=134. AZIMUTH= 80. ERROR= DEGREES

COMMENTS:
FLUCTUATION OF NEW X-RAY TRANSIENT

BATSE BURST TRIGGER

NO.: 1764

TIME: TJD=8842 SECONDS=55303

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=148. AZIMUTH= 83. ERROR= DEGREES

COMMENTS:
FLUCTUATION OF NEW X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01765

TIME: TJD=8842 SECONDS=61399

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=132. AZIMUTH= 93. ERROR= DEGREES

COMMENTS:
FLUCTUATION IN NEW X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01766

TIME: TJD=8842 SECONDS=72463

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=121. AZIMUTH= 95. ERROR= DEGREES

COMMENTS:
FLUCTUATION OF X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01767

TIME: TJD=8842 SECONDS=78271

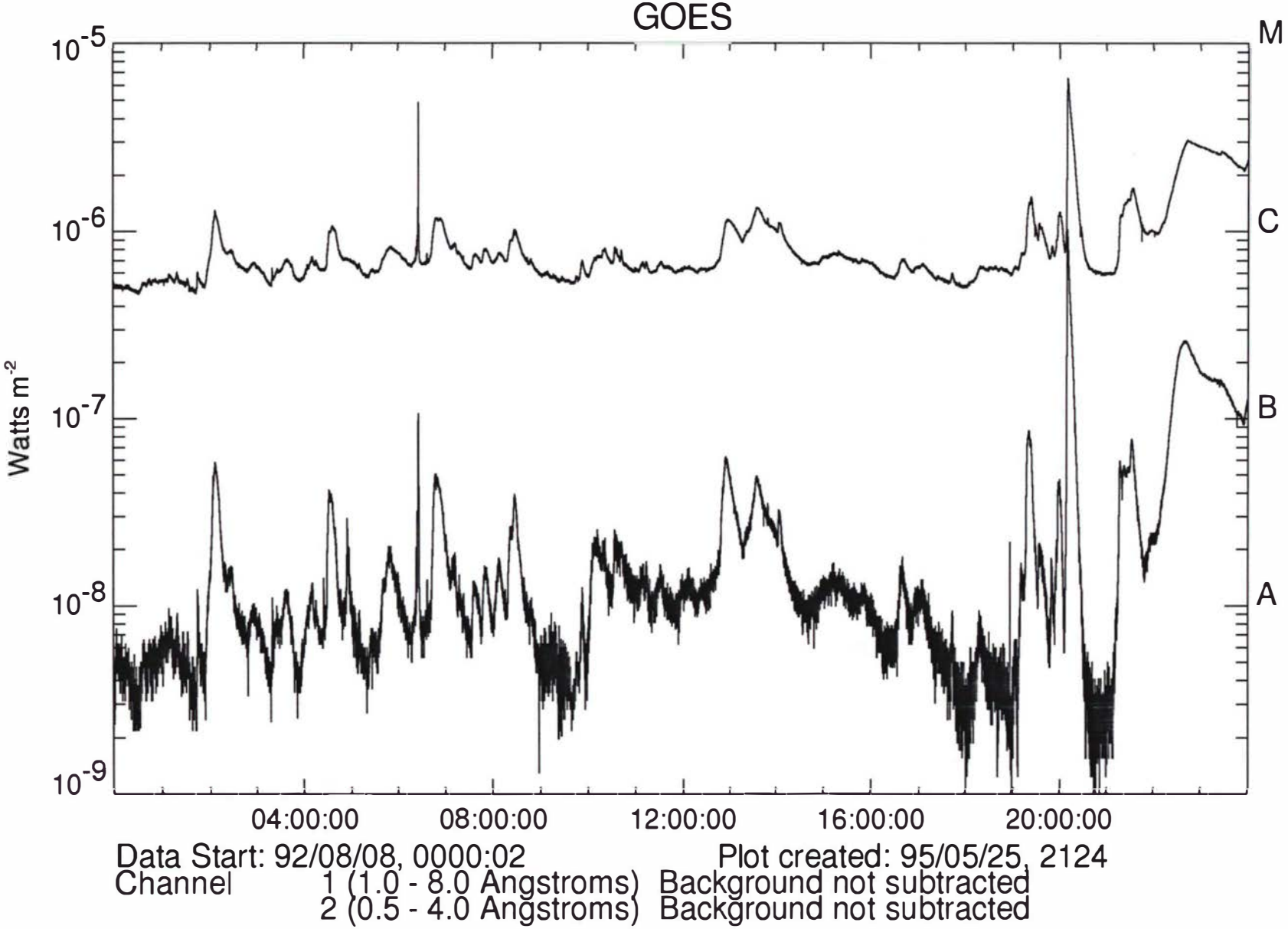
TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

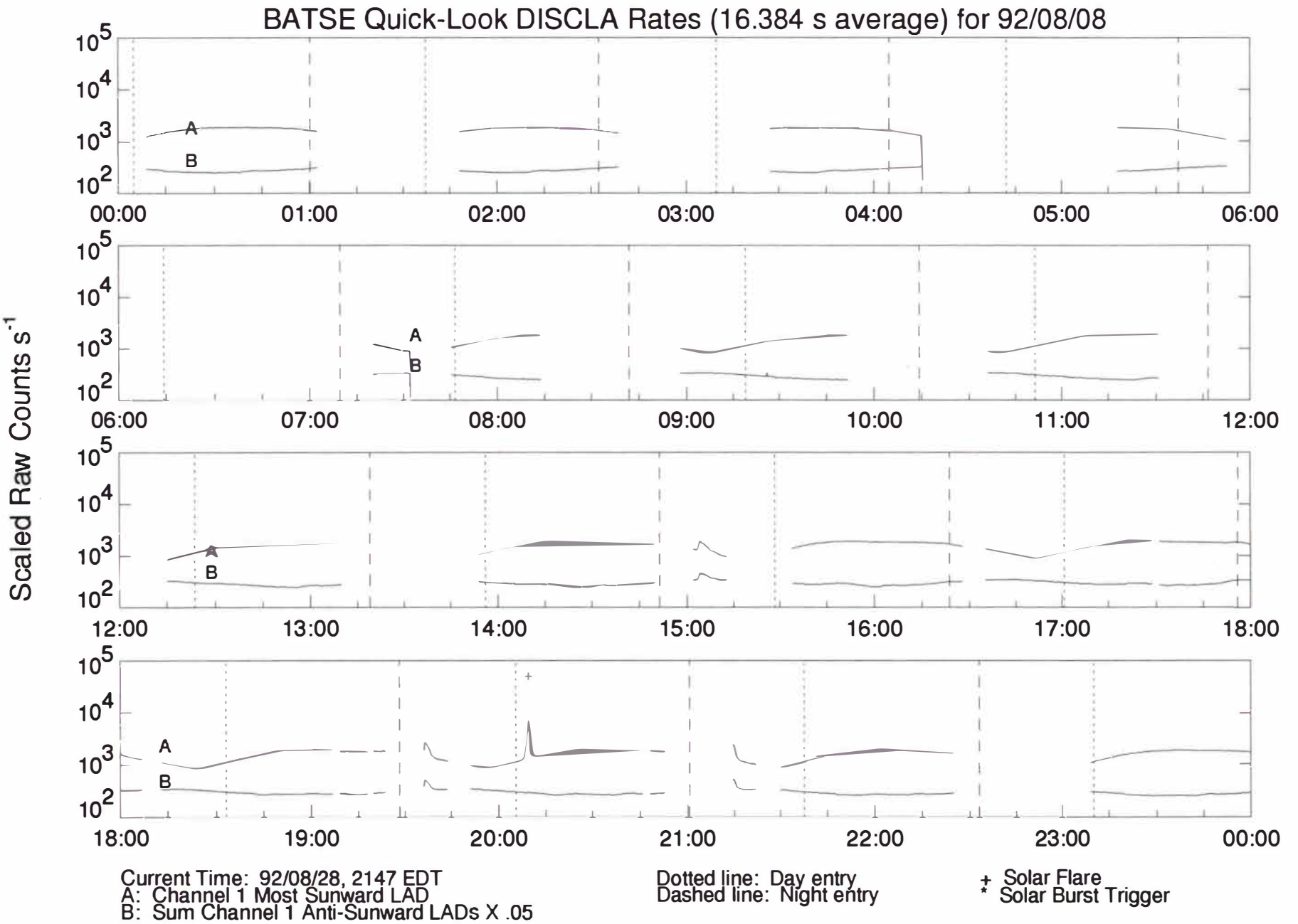
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

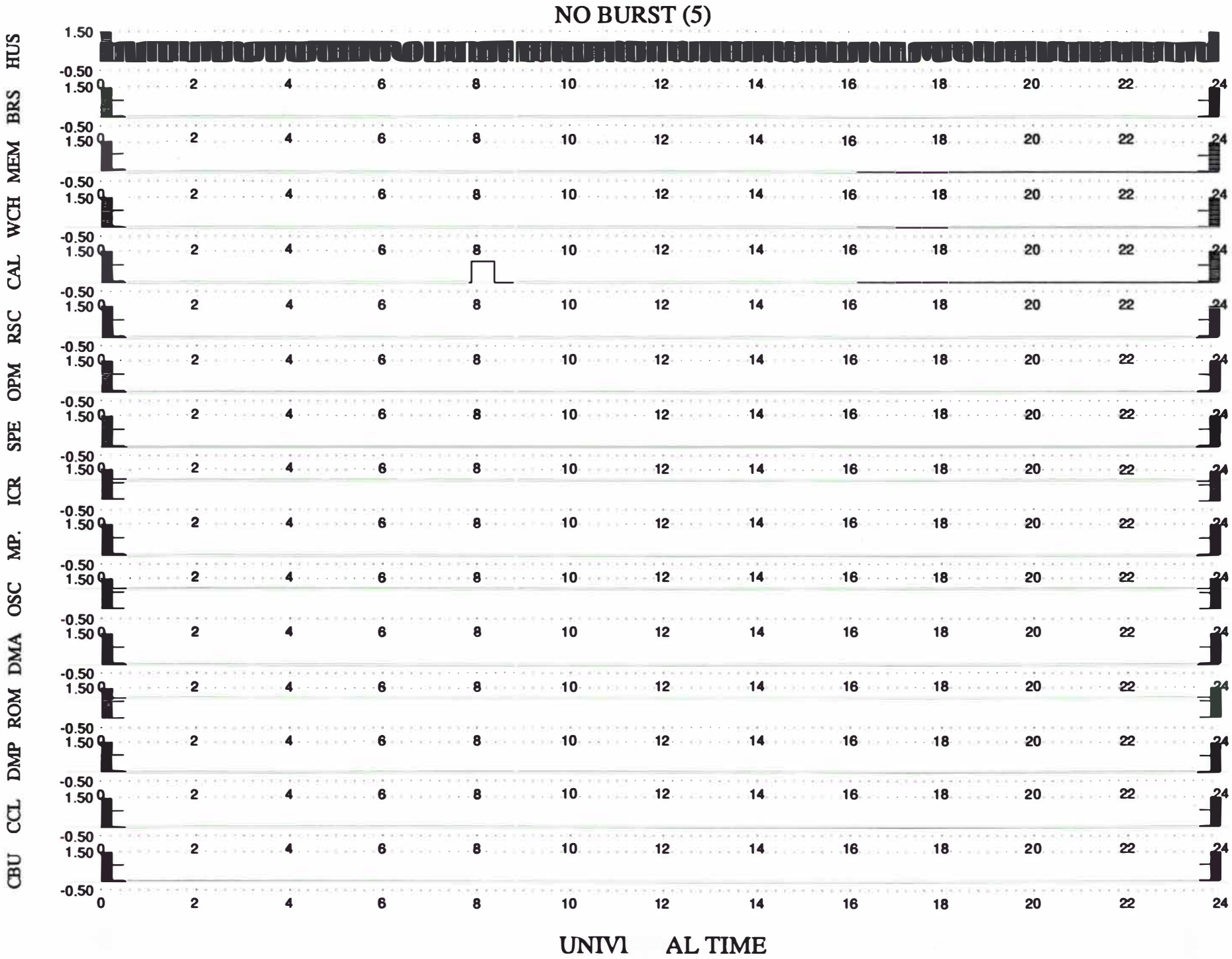
LOCATION: ZENITH=137. AZIMUTH= 96. ERROR= DEGREES

COMMENTS:
FLUCTUATION OF X-RAY TRANSIENT.


GOES
M
C
B
A
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/08, 0000:02
Plot created: 95/05/25, 2124
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

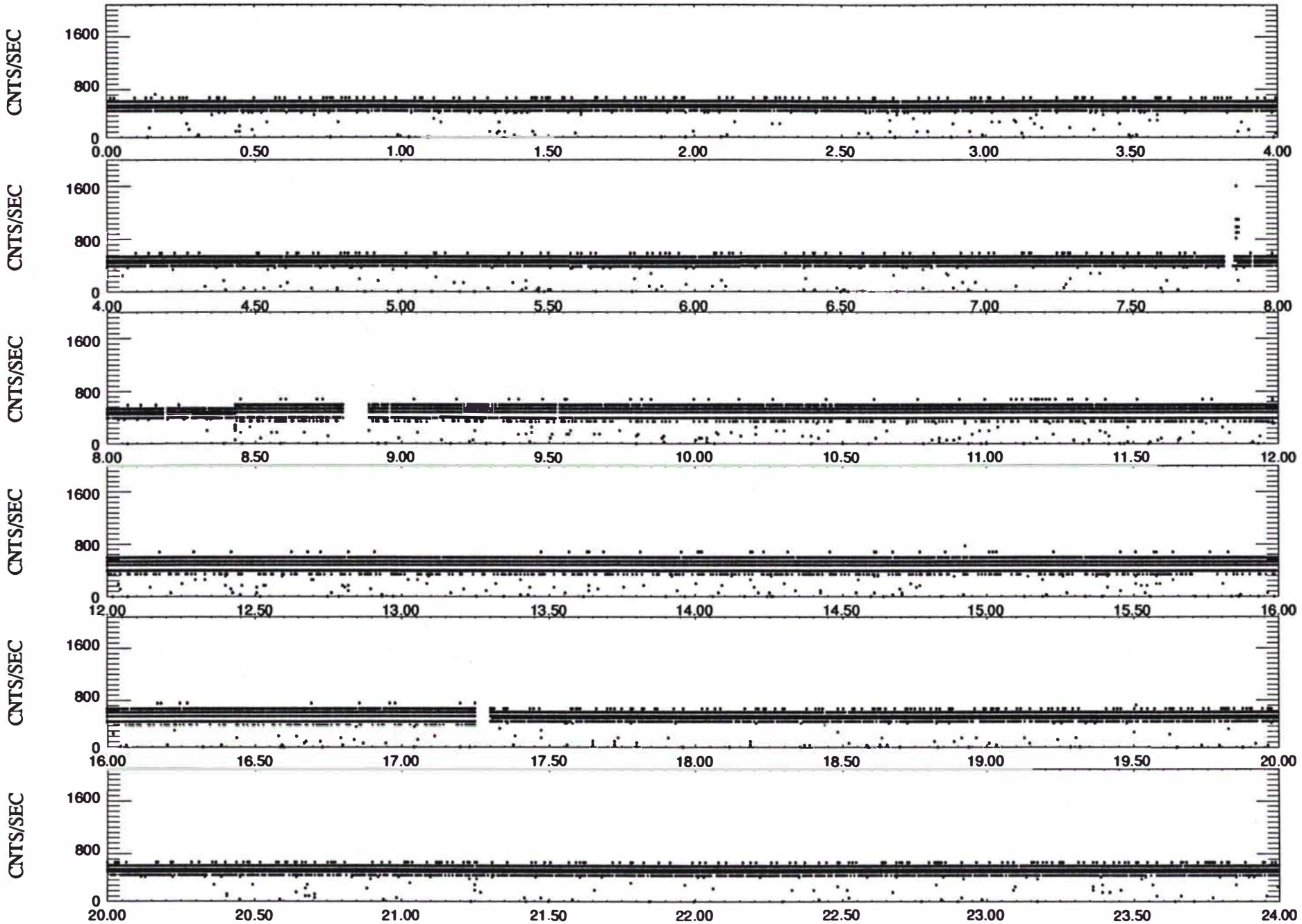

BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/08
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2147 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
+ Solar Flare
* Solar Burst Trigger

HUS MODES EDR day 221, year 1992 to day 221, year 1992 9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 221, year 1992 to day 221, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIVJ AL TIME

BATSE BURST TRIGGER

NO.: 01768 Aug 9

TIME: TJD=8843 SECONDS=08473

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=132. AZIMUTH=102. ERROR= DEGREES

COMMENTS:
FLUCTUATION IN NEW X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01769

TIME: TJD=8843 SECONDS=14957

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=144. AZIMUTH=106. ERROR= DEGREES

COMMENTS:
FLUCTUATION IN NEW X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01770

TIME: TJD=8843 SECONDS=25534

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=124. AZIMUTH=092. ERROR= DEGREES

COMMENTS:
FLUCTUATION IN NEW X-RAY TRANSIENT. SPARSE DATA.

BATSE BURST TRIGGER

NO.: 01771

TIME: TJD=8843 SECONDS=34712

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=140. AZIMUTH=095. ERROR= DEGREES

COMMENTS:
RISE IN NEW X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01772

TIME: TJD=8843 SECONDS=40695

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=159. AZIMUTH=132. ERROR= DEGREES

COMMENTS:
FLUCTUATION IN NEW X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01773

TIME: TJD=8843 SECONDS=47262

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=163. AZIMUTH=104. ERROR= DEGREES

COMMENTS:
FLUCTUATION IN NEW X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01774

TIME: TJD=8843 SECONDS=54404

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=123. AZIMUTH=132 ERROR= DEGREES

COMMENTS:
FLUCTUATION IN NEW X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01775

TIME: TJD=8843 SECONDS=60134

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=151. AZIMUTH=083. ERROR= DEGREES

COMMENTS:
FLUCTUATION IN NEW X-RAY TRANSIENT FOLLOWED BY GOES C4.4 SOLAR FLARE.

BATSE BURST TRIGGER

NO.: 01776

TIME: TJD=8843 SECONDS=67928

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=133. AZIMUTH=068. ERROR= DEGREES

COMMENTS:
A "REVOLUTIONARY" EVENT. FLUCTUATION IN NEW X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01777

TIME: TJD=8843 SECONDS=74270

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=150. AZIMUTH=091. ERROR= DEGREES

COMMENTS:
FLUCTUATION IN NEW X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 01778

TIME: TJD=8843 SECONDS=79936

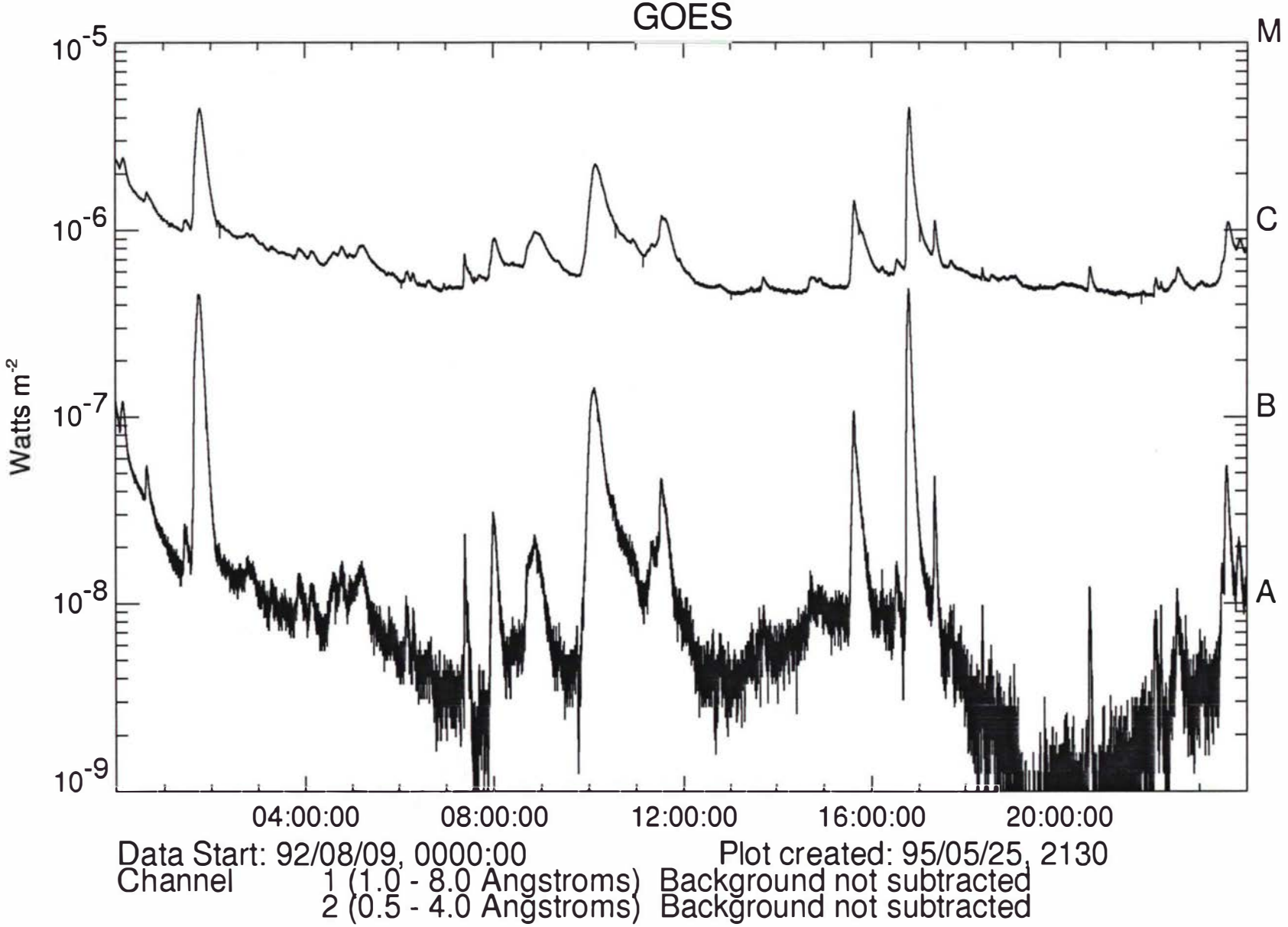
TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

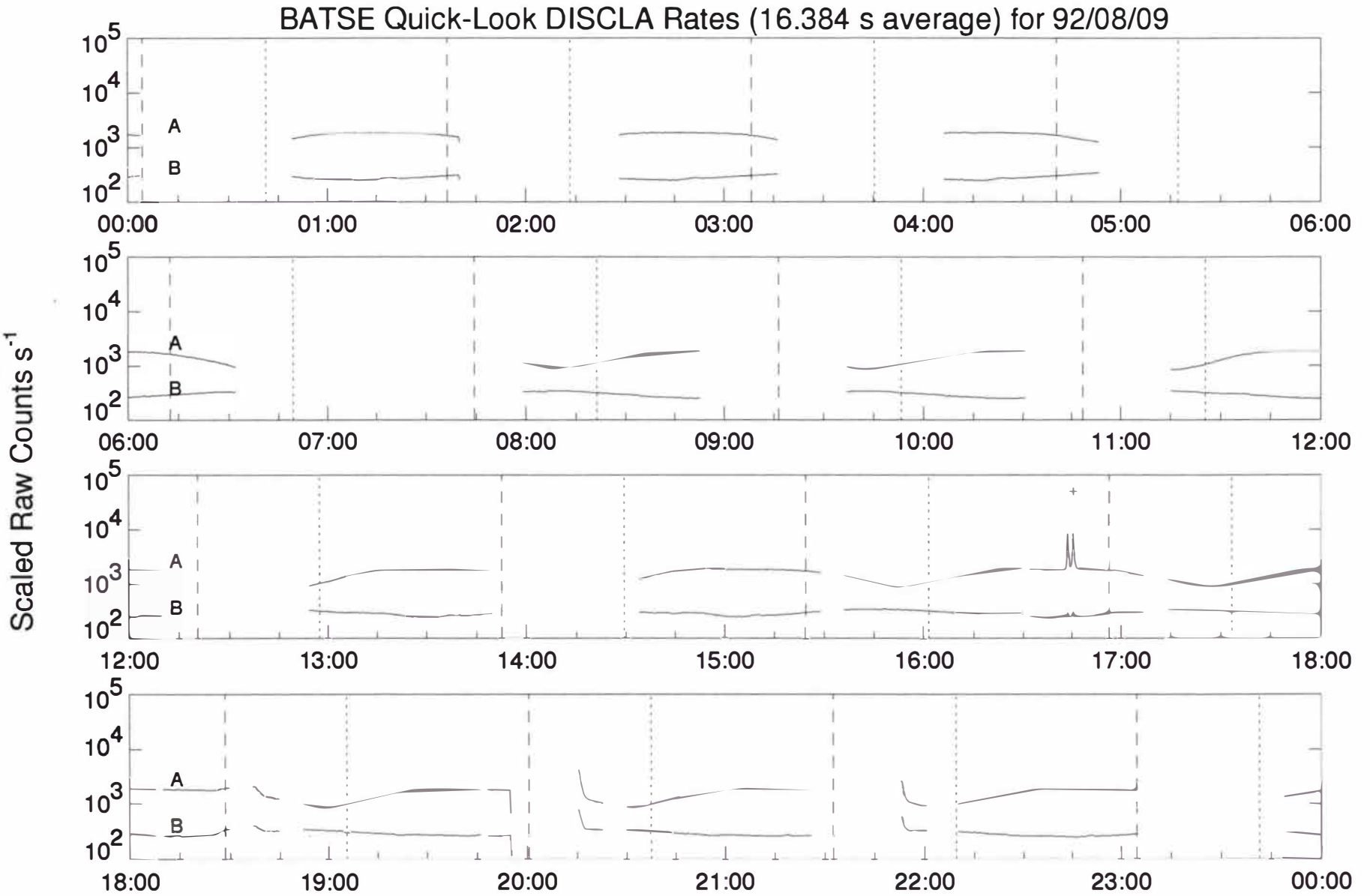
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

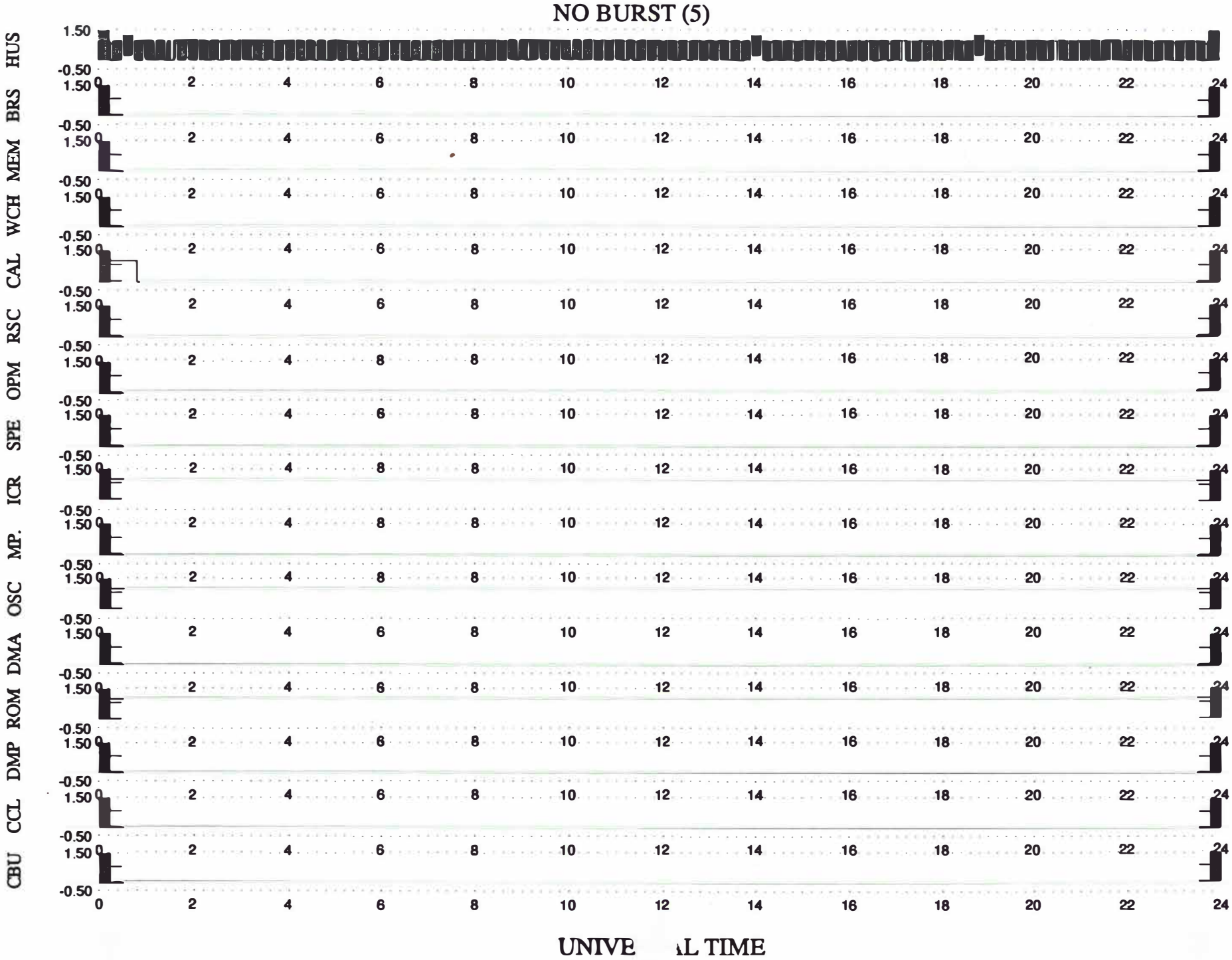
LOCATION: ZENITH=127. AZIMUTH=100 ERROR= DEGREES

COMMENTS:
FLUCTUATION IN NEW X-RAY TRANSIENT.


GOES
M
C
B
A
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/09, 0000:00
Plot created: 95/05/25, 2130
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

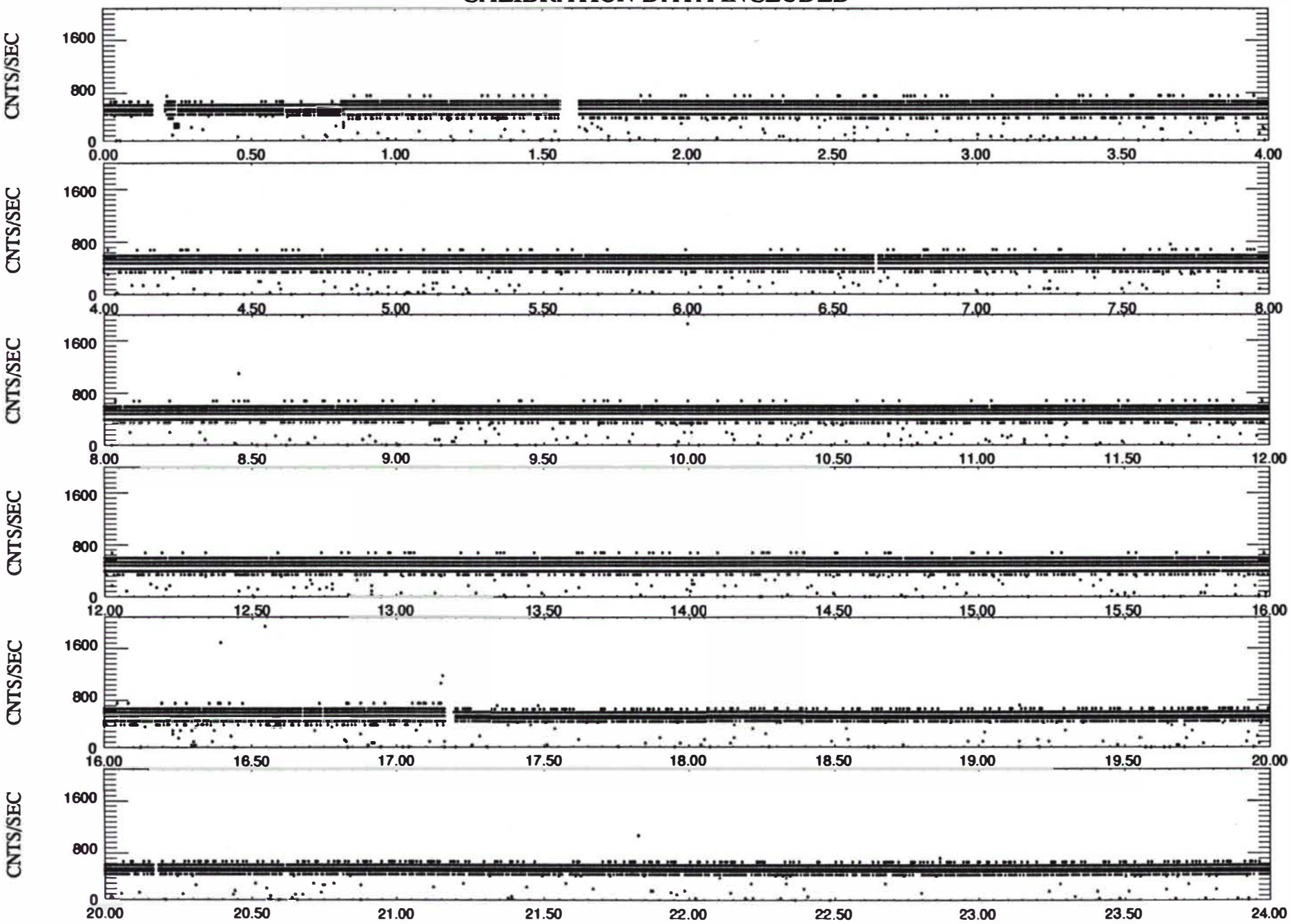

BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/09
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2146 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
+ Solar Flare
* Solar Burst Trigger

HUS MODES EDR day 222, year 1992 to day 222, year 1992 9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 222, year 1992 to day 222, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIV AL TIME

No helio or clock corrections done - GT is 4s so they're irrelevant

Date: Dec 2 '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)?

☐ 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?

91/12/21	06:17	N/O
91/12/21	22:03	N/O
91/12/27	15:56	N/O
92/01/05	17:41	N/O
92/01/13	20:52	N/O
92/01/25	08:57	N/O
92/01/30	00:29	N/O
92/01/30	22:50	N/O
92/02/18	18:42	N/O
92/02/21	06:14	N/O
92/02/26	18:15	YES TRIGGER AT 29336 S UT
92/02/27	06:00	N/O
92/02/27	08:45	N/O
92/03/02	06:16	N/O
92/03/04	14:34	N/O
92/03/07	00:18	N/0
92/03/21	12:50	(NO)
92/03/26	02:01	N/O
92/03/27	09:38	N/O
92/03/29	16:38	(NO)
92/04/04	22:37	N/O
92/04/08	12:05	N/O
92/04/20	02:12	N/O
92/04/29	18:59	N/O
92/05/02	19:05	N/O
92/06/01 THRU 92/06/29		TURNED OFF--N/O
92/07/01	19:39	N/O
92/07/07	06:33	N/O
92/07/17	01:15	N/O
92/07/23	00:59	N/O
92/07/23	01:00	N/O
92/07/23	21:48	N/O
92/07/25	19:30	N/O
92/07/25	22:49	N/O
92/07/26	00:34	N/O
92/07/31	17:07	N/O
92/08/10	21:35	N/O
92/08/14	06:10	N/O
92/08/16	12:36	N/O
92/08/22	22:39	N/O
92/08/30	01:45	N/O
92/09/04	04:41	N/O

THIS LIST IS NOT COMPLETE. IT INCLUDES EVENTS FOR WHICH NO REAL-TIME DATA ARE AVALIABLE BECAUSE OF INAPPROPRIATE MODE, NO TRACKING, OR THE EXPERIMENT WAS TURNED OFF. WHERE DATA HAVE BEEN CHECKED, SENSITIVITY DEPENDS UPON THE TIME RESOLUTION AVAILABLE IN THE DATA. I'LL BE SENDING ADDITIONAL RESULTS AS THEY BECOME AVAILABLE.

REGARDS,

RAY

From root Wed Dec 8 07:58 1993
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA08899; Wed, 8 Dec 93 07:57:44
Received: from mx.nsi.nasa.gov by sunspot.ssl.berkeley.edu (4.1/1.30.1)
id AA22497; Wed, 8 Dec 93 07:00:41 PST
Received: Wed, 8 Dec 93 07:03:53 PST from ESSDP2.dnet by mx.nsi.nasa.gov (4.1/1.2)
Message-Id: <9312081503.AA10272@mx.nsi.nasa.gov>
Received: from ESSDP2.dnet by AMES.dnet with MAIL-11
(utk-maillld v1.7); Wed, 8 Dec 93 07:03:57 PST
Date: Wed, 8 Dec 93 07:03:57 PST
From: 068486@essdp2.span.nasa.gov
X-To: AMES::"khurley@space6.ssl.berkeley.edu"
Subject: RE:
To: khurley@space6.ssl.berkeley.edu
Status: R

KEVIN,
HERE ARE THE RESULTS OF OUR SURVEY OF THE PVO REAL-TIME DATA FOR EVIDENCE OF
RESPONSE TO EVENTS LISTED IN YOUR CATALOG.

DATE	TIME	PVO RESPONSE
90/11/11	21:49	N/O
90/11/12	14:57	N/O
90/11/16	01:42	N/O
90/11/19	18:08	N/O
90/11/21	00:04	N/O
90/11/21	18:09	N/O
90/12/02	13:45	N/O
90/12/21	00:30	N/O
90/12/25	05:50	N/O
91/01/17	00:57	N/O
91/01/24	11:50	N/O
91/02/04	08:58	N/O
91/02/04	14:19	N/O
91/02/04	14:58	N/O
91/02/17	02:59	N/O
91/03/14	22:56	N/O
91/03/15	22:55	N/O
91/04/04	17:17	(NO)
91/05/18	17:10	N/O
91/05/23	19:03	N/O
91/05/27	23:44	N/O
91/05/28	21:26	N/O
91/06/02	22:55	N/O
91/06/09	00:48	N/O
91/06/29	19:55	N/O
91/07/09	20:22	N/O
91/07/17	13:07	N/O
91/08/03	08:24	N/O
91/08/15	12:34	N/O
91/08/15	14:24	N/O
91/08/16	01:57	(NO)
91/09/05	23:48	N/O
91/09/16	21:58	N/O
91/09/25	03:35	N/O
91/09/26	18:25	N/O
91/09/30	11:55	N/O
91/10/03	00:39	N/O
91/10/04	01:27	N/O
91/10/06	09:01	(NO)
91/10/22	04:13	N/O
91/10/25	21:25	N/O
91/11/06	03:42	N/O
91/11/14	01:40	N/O
91/11/17	01:58	N/O
91/12/05	23:04	N/O

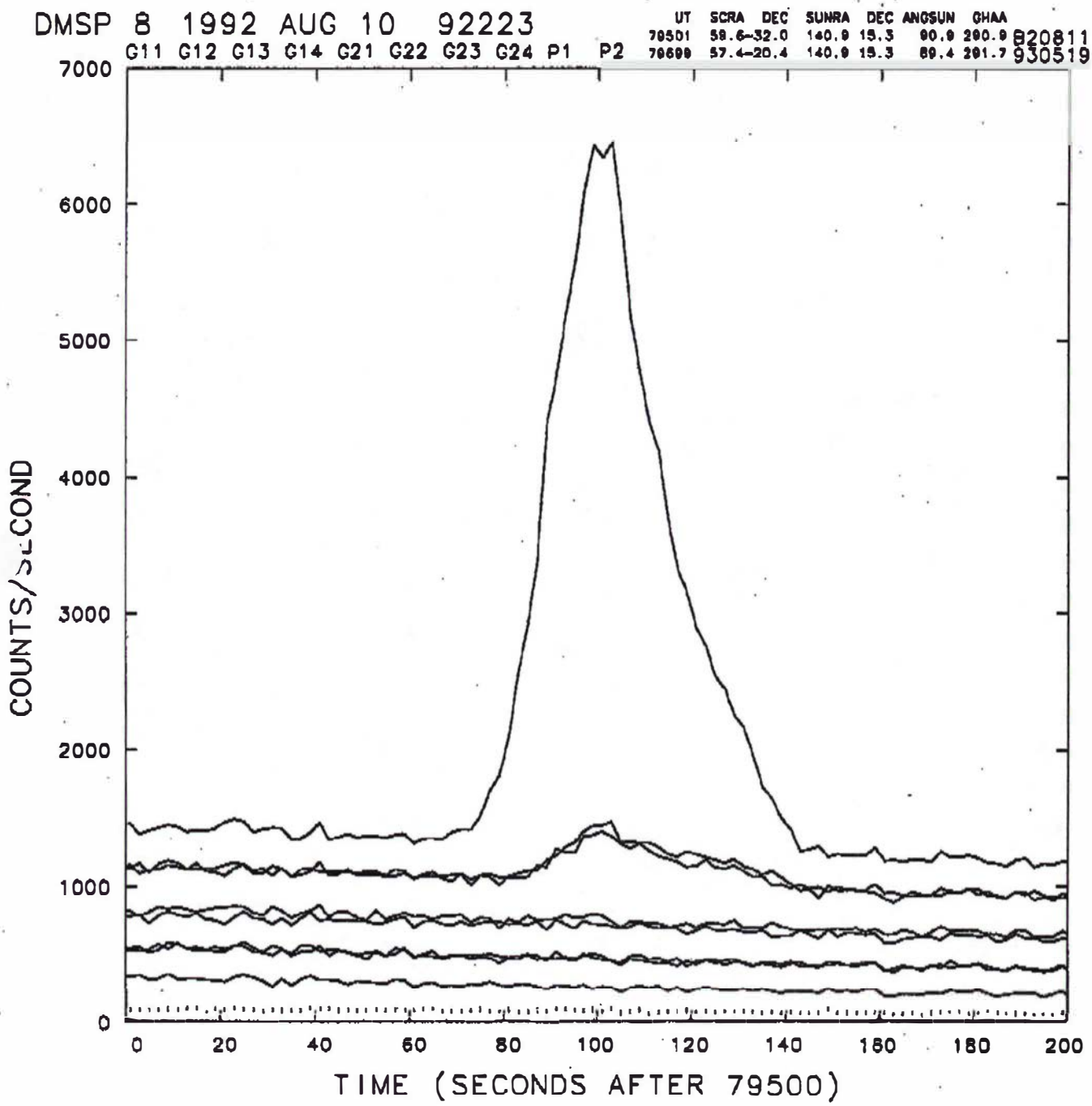
From root Fri Jul 16 15:29 1993
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
          id AA07838; Fri, 16 Jul 93 15:29:21
Received: from UCBSP.SSL.BERKELEY.EDU by sunspot.ssl.berkeley.edu (4.1/1.30.1)
        id AA21891; Fri, 16 Jul 93 15:30:05 PDT
Message-Id: <9307162230.AA21891@sunspot.ssl.berkeley.edu>
Date: Fri 16 Jul 93 15:31:54-PST
From: $C <046369@essdp2.span.nasa.gov>
To: KHURLEY@sunspot.ssl.berkeley.edu
Subject: [Resent-MM Mail]   DMSP GAMMA-RAY BURST DATA
Status: R

Received: from ESSDP2 by UCBSP.SSL.BERKELEY.EDU via MAIL-11 with
          DECnet; Fri, 16 Jul 93 15:31:29-PST
Date: Fri 16 Jul 93 15:31:29-PST
From: 046369@ESSDP2.SPAN.NASA.GOV
Subject: DMSP GAMMA-RAY BURST DATA
To: "UCBSP::HURLEY"@ESSDP2.SPAN.NASA.GOV

FROM: ESSDP2::TERRELL   (JAMES TERRELL, LOS ALAMOS NATL LAB)
TO: UCBSP::HURLEY (KEVIN HURLEY)
CC:
SUBJ: DMSP GAMMA-RAY BURST DATA, AS OF 16 JULY 1993

HERE ARE SOME NOTES CORRECTING DMSP PEAKTIMES FOR YOUR MASTER BURST LIST.
I HAVE MORE GRAPHS AND INFO TO SEND, BUT HAVE RUN OUT OF TIME.
I WILL SEND MORE INFO AFTER RETURNING 28 JULY--JIM.

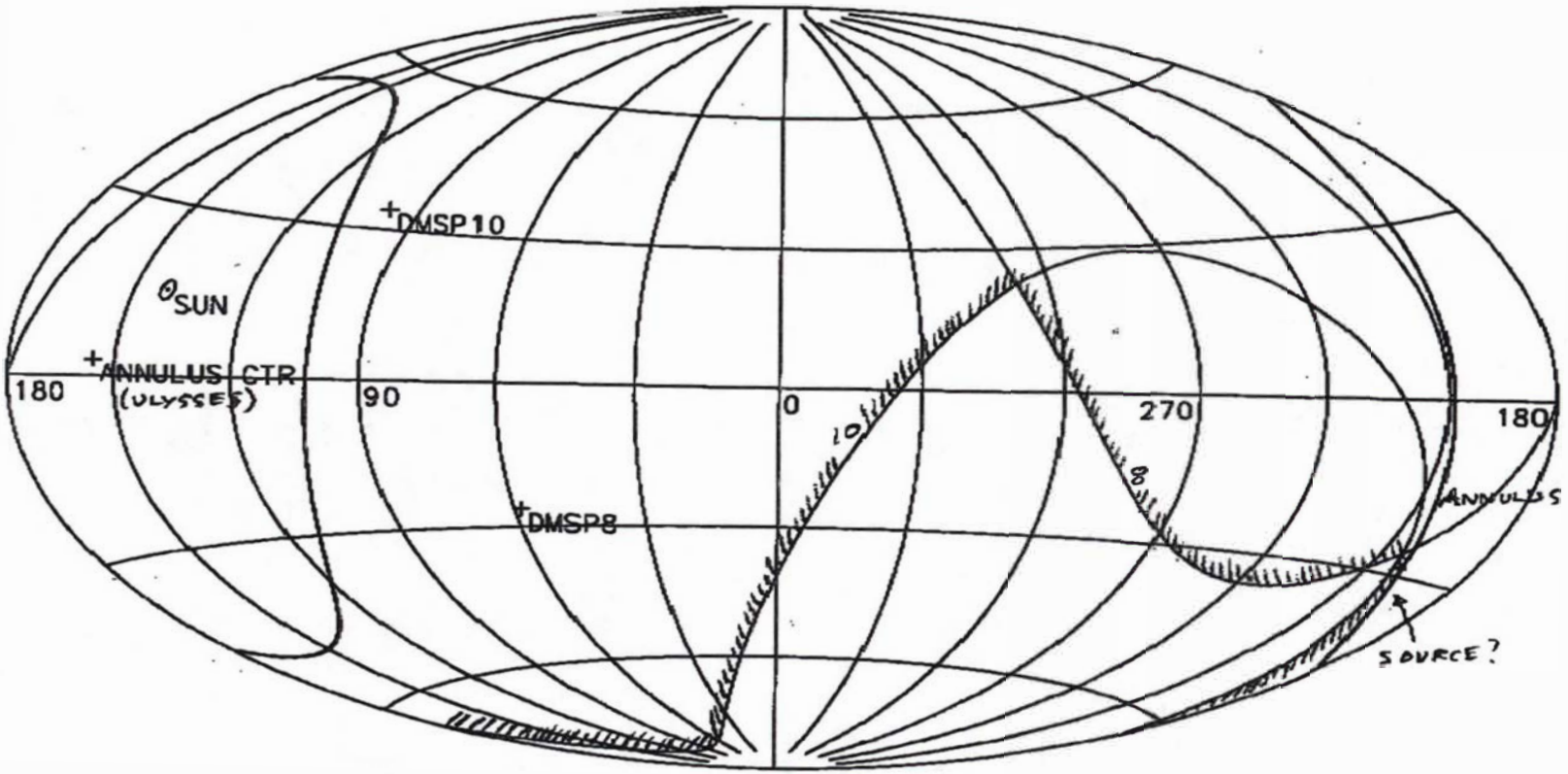
   27SEP91 84415 YES (8SAA,9YES,10SAA)
   16OCT91 36696 YES (8SAA,9YES,10NR)
    4NOV91 54286 YES (8SR,9YES,10YES)
   27NOV91 15739 YES (8NO,9NO,10YES)
    2DEC91 73733 YES (8YES,9NO@144DEG,10NR)
    9DEC91 66959 N/O (8SR,9SR,10NR,11ND)
   21DEC91 22686 YES (8ND,9NO,10NO,11YES)
   10JAN92 33478 NA (BLANK) (8ND,9NA,10SAA,11NA)
   10FEB92 35633 YES (8NO,9WEAK,10SAA,11SAA)
    6APR92 9855 N/O (OBSCURED) (8NO@141,10SR,11NO@137DEG)
    1MAY92 76696 N/O (OBSCURED) (8NO@127,10NO@157,11NO@147DEG)
   22JUN92 25506 N/O (8SAA,10NR,11SA)
   28JUN92 76452 YES (8ND,10YES,11NO)
   29JUN92 75897 YES (ALL YES, SOFT)
   14JUL92 47069 NA (BLANK) (8NA,10SAA,11SR)
   16JUL92 60933 YES (9NO.10YES,11YES)
   20JUL92 11524 N/O (OBSCURED) (8NA@130,10NA@145,11SR)
   23JUL92 72188 N/O (OBSCURED) (8ND,10NA@148,11NR)
   10AUG92 79599 YES?(8YES?,10NA,11NA) (LONG SOFT PEAK)
    4OCT92 50421 YES (8YES,10YES,11SR)
   23NOV92 22727 YES (8YES,10YES,1SR) (NOT AT 22712)
   23NOV92 46542 YES (8NR,10SR,11YES) (NOT AT 46584, BATSE GRB)
    7DEC92 57649 YES (8YES,10YES,11YES)
    6JAN93 55260 YES (8SAA,10YES,11SR)
   12JAN93 55082 YES (8YES,10NO@138,11VERYWEAK) (8:BIG PEAK AT 55202)
   20JAN93 84779 YES (8YES,10,YES,11YES) (NO, AT 84700!)



~79573 79599.1 PEAK ~79635

DMSP 8: (56.43, -26.24)
DMSP 10: (96, 34) (NO DET.)

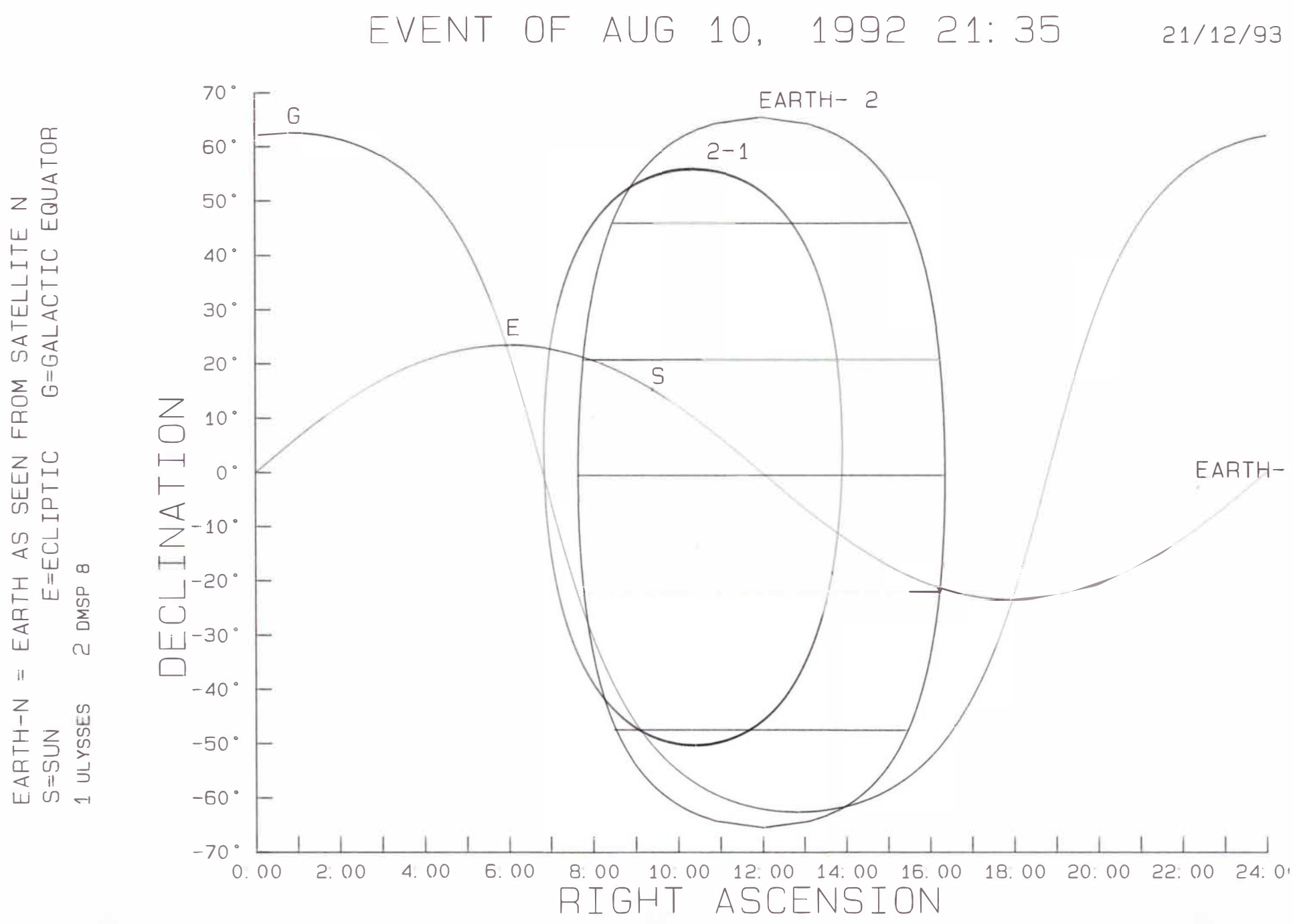
J. Terrell



DMSP POSITIONS+VIEW, 92/08/10 79599 UT
EQUATORIAL COORDINATES

940106

SENT BY:Xerox Telecopier 7021 ; 1- 7-94 ; 16:34 ; 5056654414→ 510 643 8302;# 2

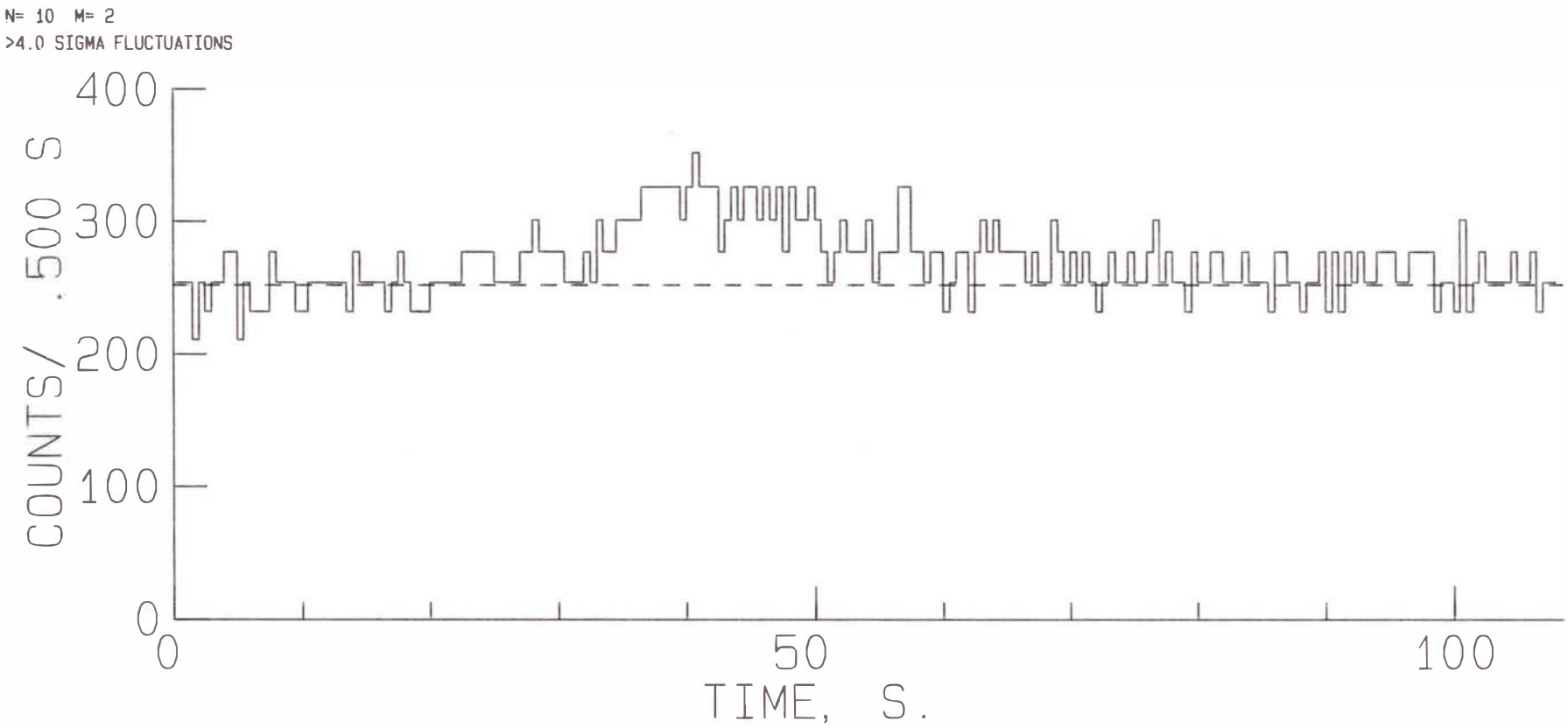

EVENT OF AUG 10, 1992 21:35
21/12/93
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 DMSP 8
DECLINATION
RIGHT ASCENSION
G
E
S
2-1
EARTH- 2
EARTH-
70°
60°
50°
40°
30°
20°
10°
0°
-10°
-20°
-30°
-40°
-50°
-60°
-70°
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00
18.00
20.00
22.00

ULYSSES RT

21/12/93

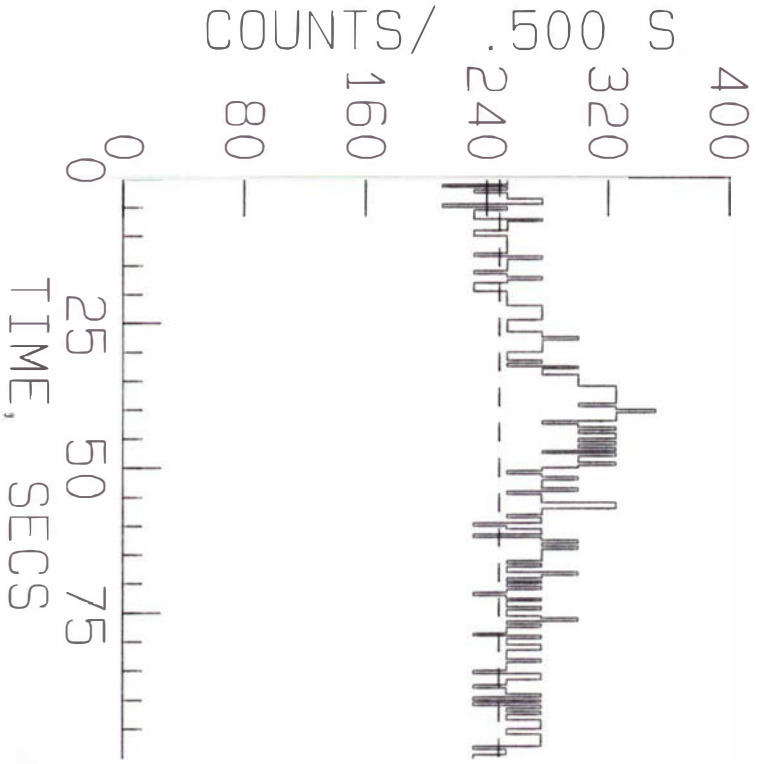
10/ 8/92 77688.437 s

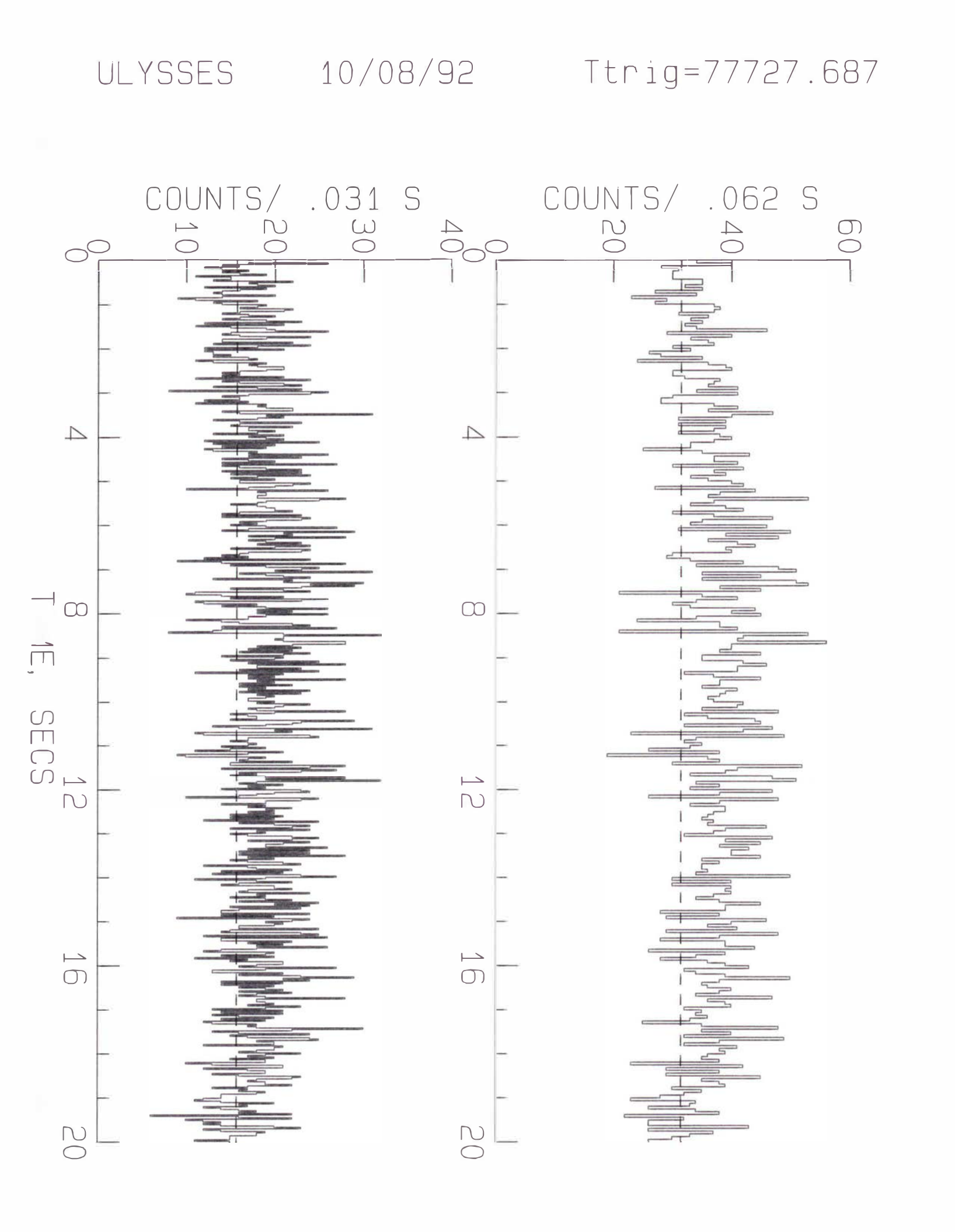
22- 152 keV

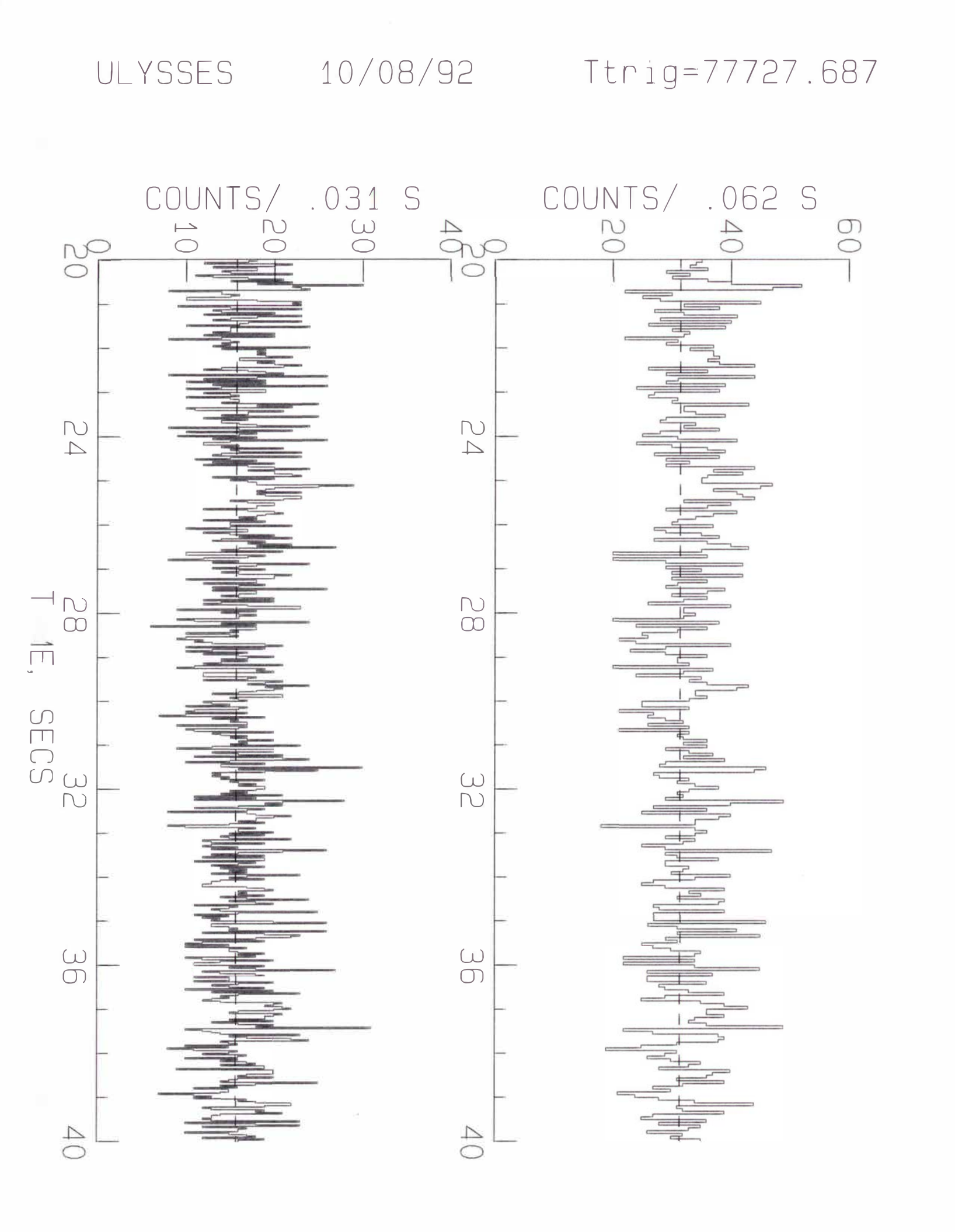


ULYSSES RT 10/ 8/92

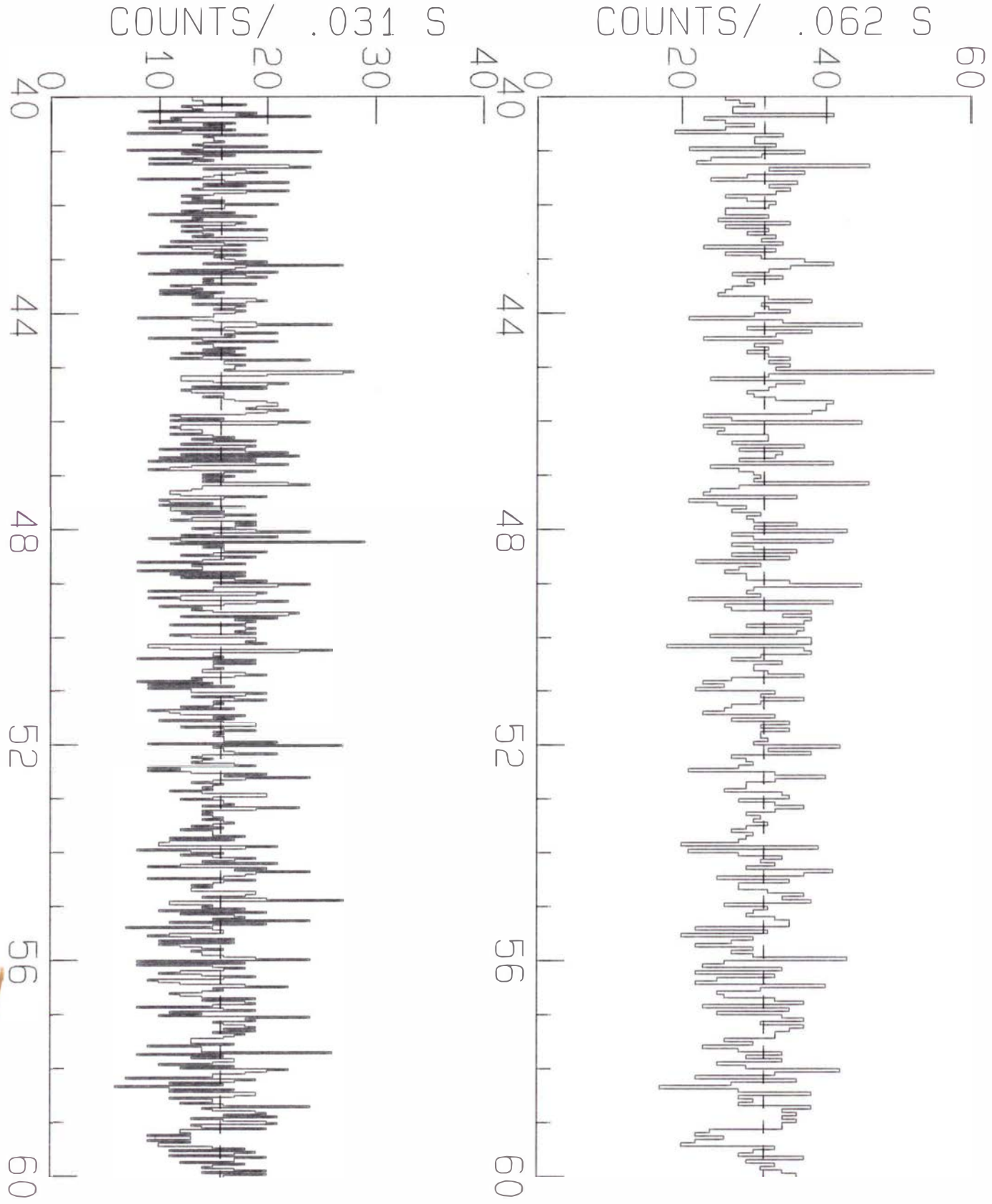
22- 152 keV 77688.942 S

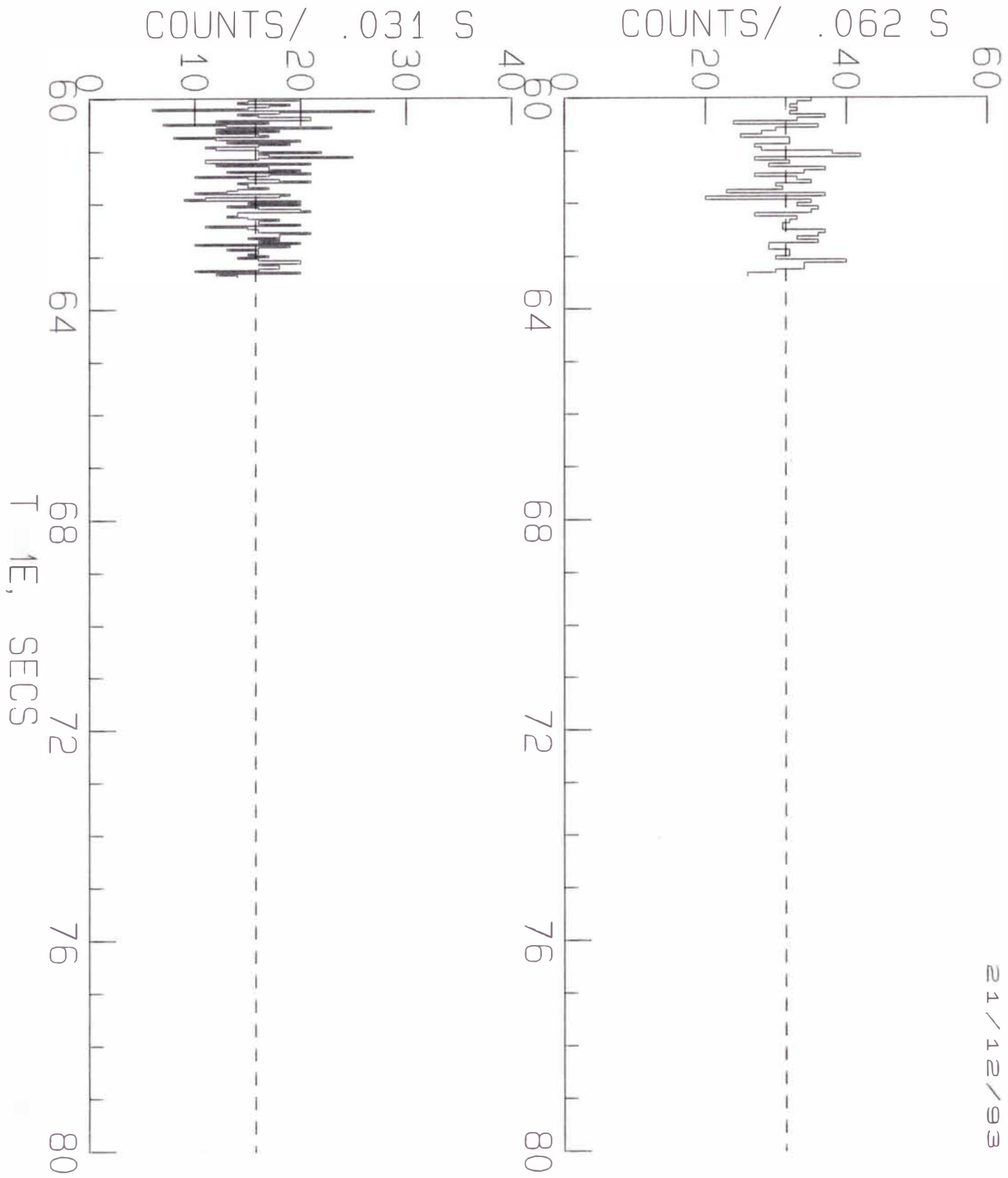


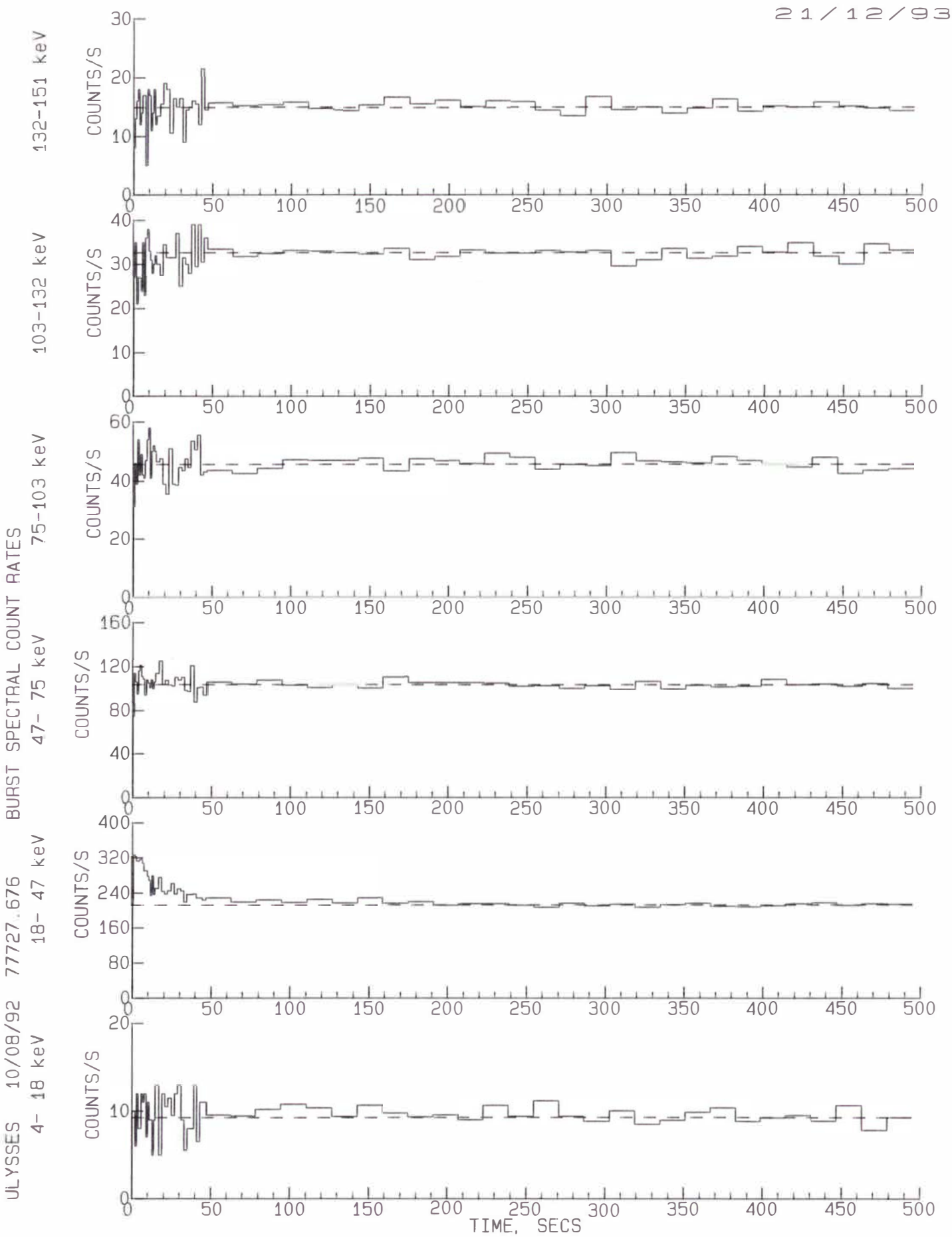

ULYSSES 10/08/92 Ttrig=77727.687
COUNTS/ .031 S
0 10 20 30 40
COUNTS/ .062 S
0 20 40 60
0 4 8 12 16 20
T-1E, SECS


ULYSSES 10/08/92 Ttrig=77727.687
COUNTS/ .031 S
COUNTS/ .062 S
0
10
20
30
40
0
20
40
60
20
24
28
32
36
40
T - 1E, SECS

ULYSSES 10/08/92 Ttrig=77727.687

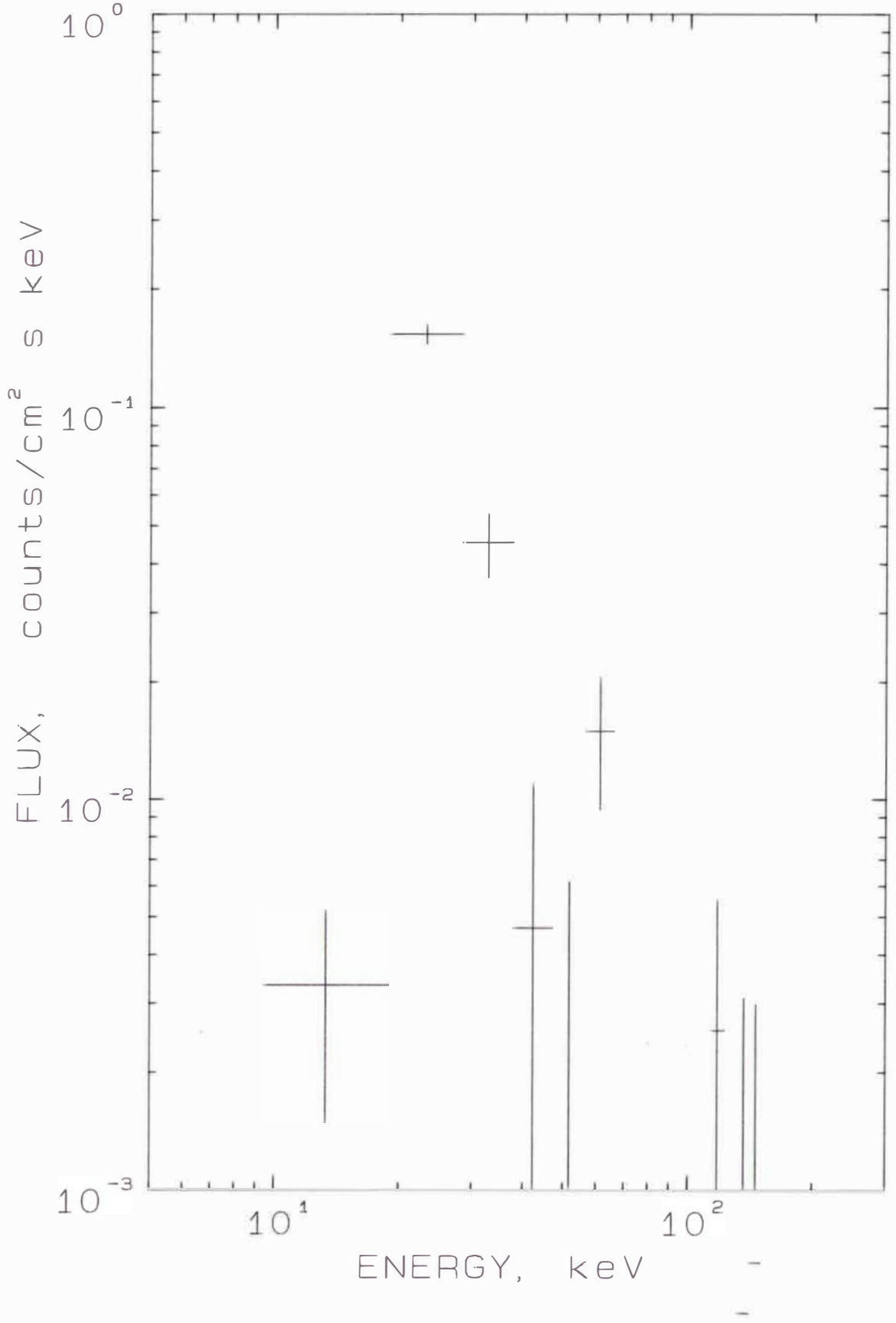



ULYSSES 10/08/92 Ttrig=77727.687
COUNTS/ .031 S
COUNTS/ .062 S
0
10
20
30
40
60
64
68
72
76
80
T - 1E, SECS
21/12/93


21/12/93
ULYSSES 10/08/92 77727.676 BURST SPECTRAL COUNT RATES
4- 18 keV
18- 47 keV
47- 75 keV
75-103 keV
103-132 keV
132-151 keV
COUNTS/S
TIME, SECS

ULYSSES 10/08/92 77727.676 21/12/93

SPECTRUM INTEGRATED OVER 62.8 SECONDS, INTERVALS 2 TO 34



From WILSONB@ssl.msfc.nasa.gov Thu Aug 13 09:32:18 1992
Date: Wed, 12 Aug 1992 15:07:44 -0500 (CDT)
From: WILSONB@ssl.msfc.nasa.gov (Robert B. Wilson (205)-544-7695)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@estec.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1211

BATSE BURST TRIGGER

NO.: 01783

Aug 10

TIME: TJD=8844 SECONDS=36874

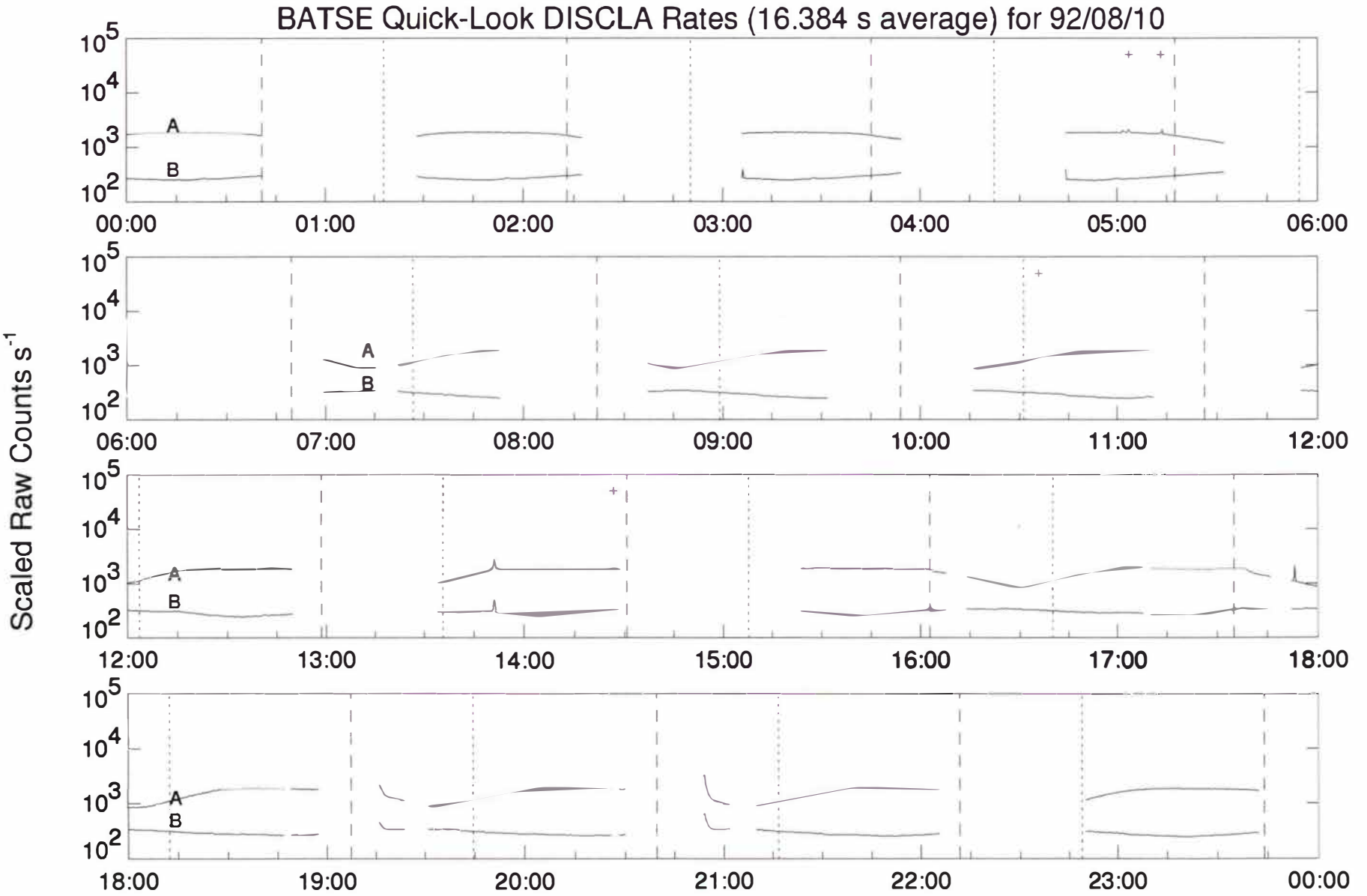
TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

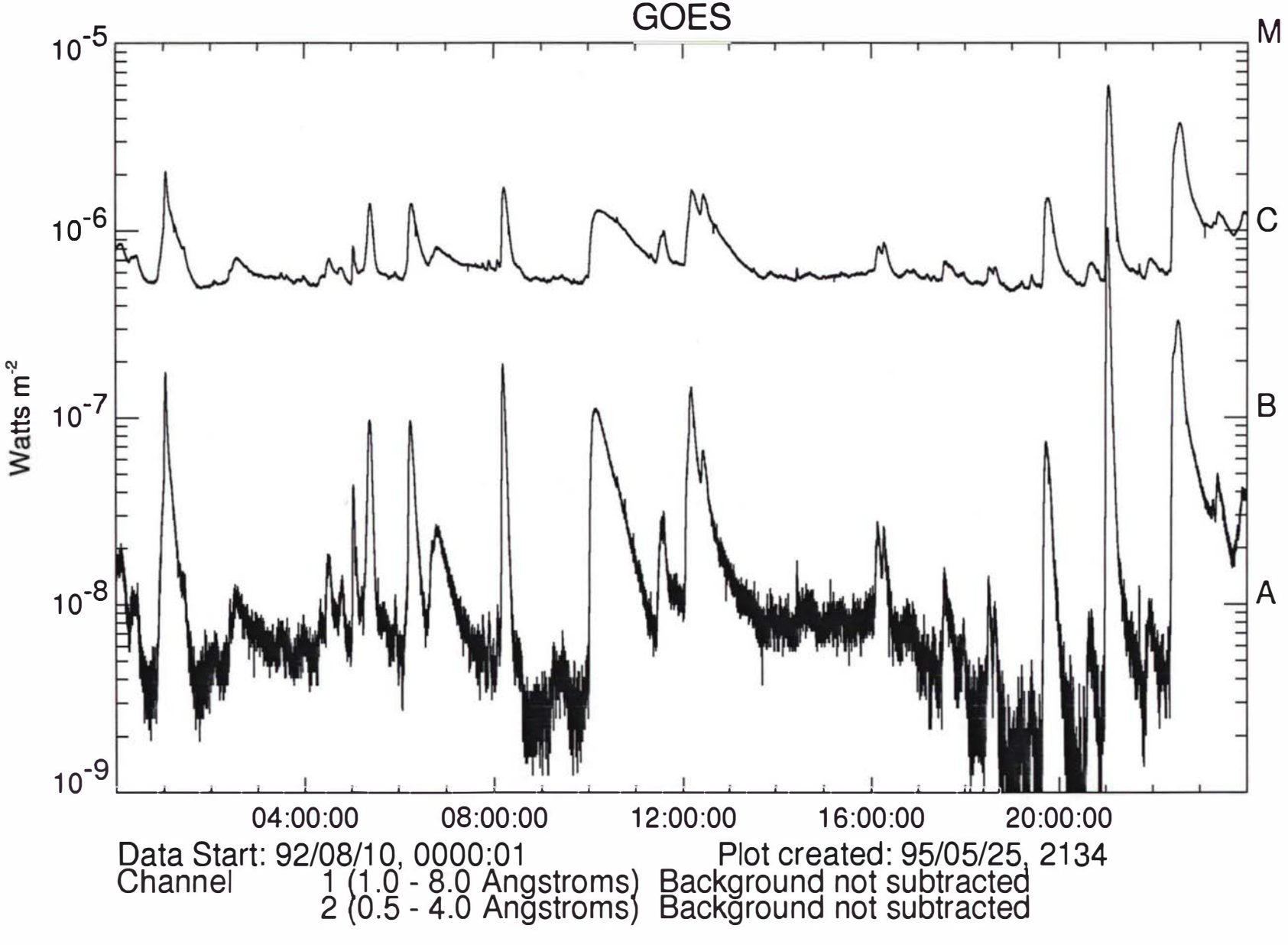
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=132.9 AZIMUTH=091.4 ERROR= DEGREES

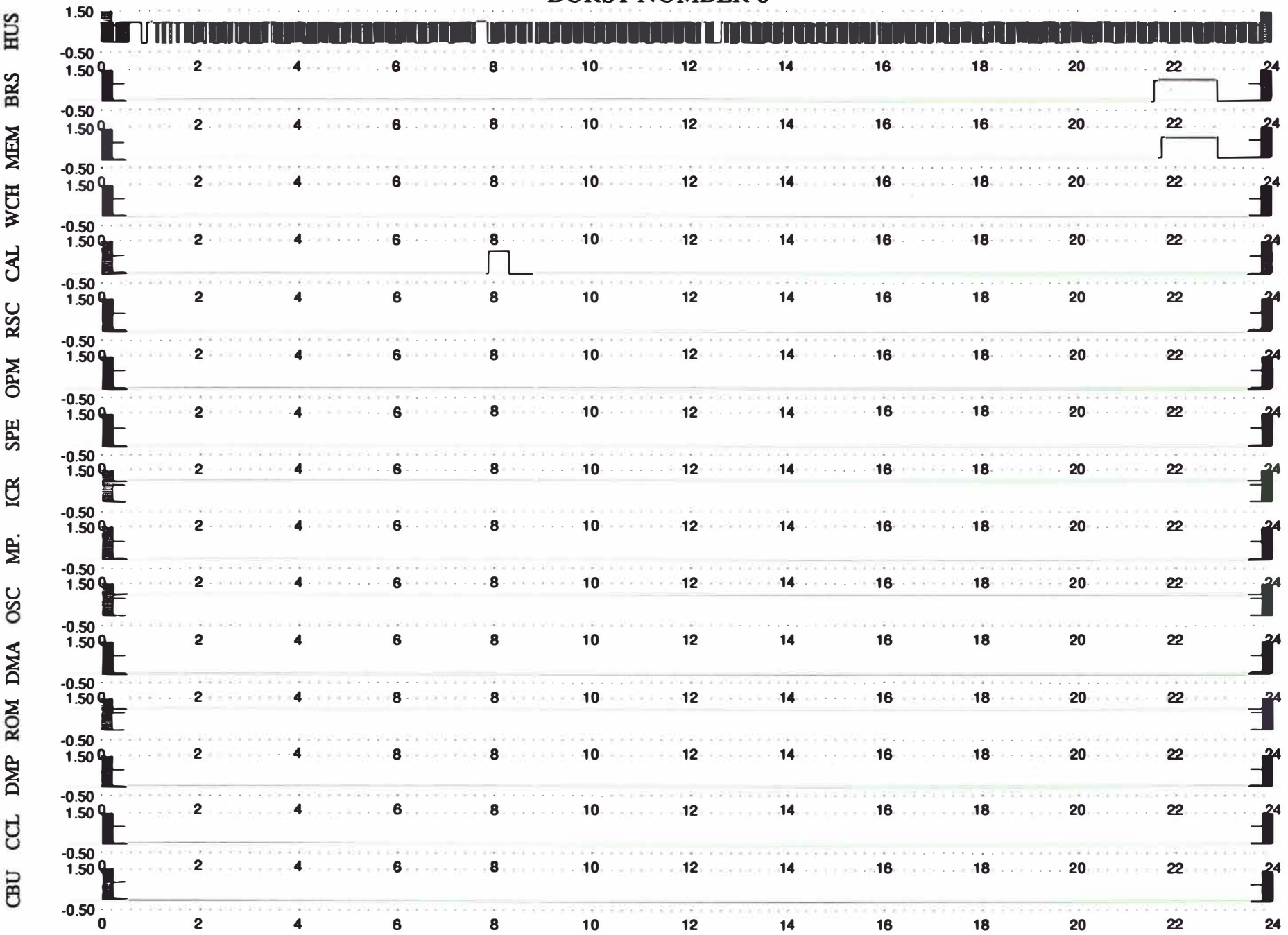
COMMENTS:
CAUSED BY FLUCTUATIONS OF NEW TRANSIENT (GRO J0422+32)


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/10
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 92/08/28, 2145 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 Flare
* Solar Burst Trigger


GOES
M
C
B
A
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/10, 0000:01
Plot created: 95/05/25, 2134
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

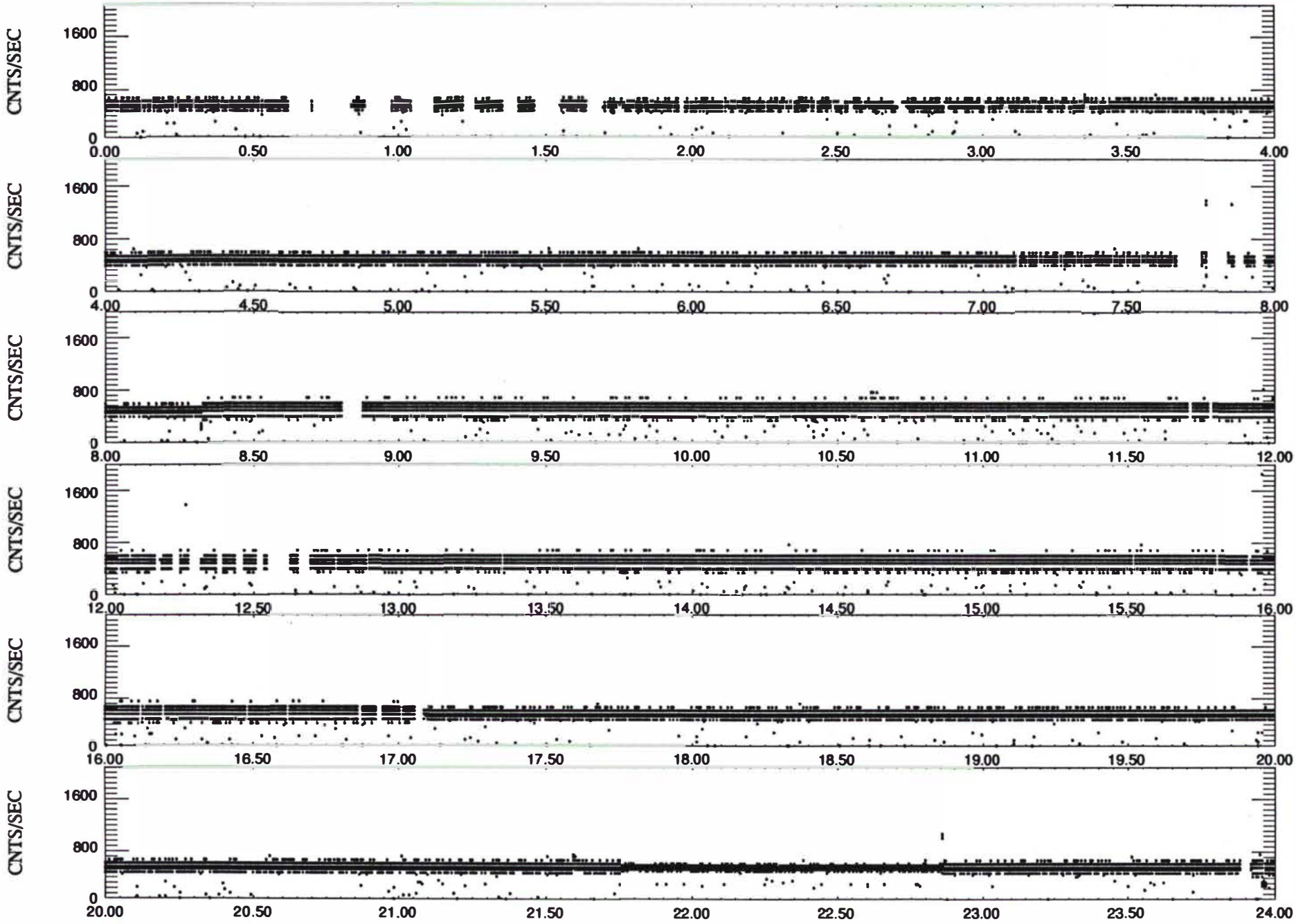
HUS MODES EDR day 223, year 1992 to day 223, year 1992 9/11/92

BURST NUMBER 6



HUS 2A, MODE 1, NOT AVERAGED EDR day 223, year 1992 to day 223, year 1992 9/11/92

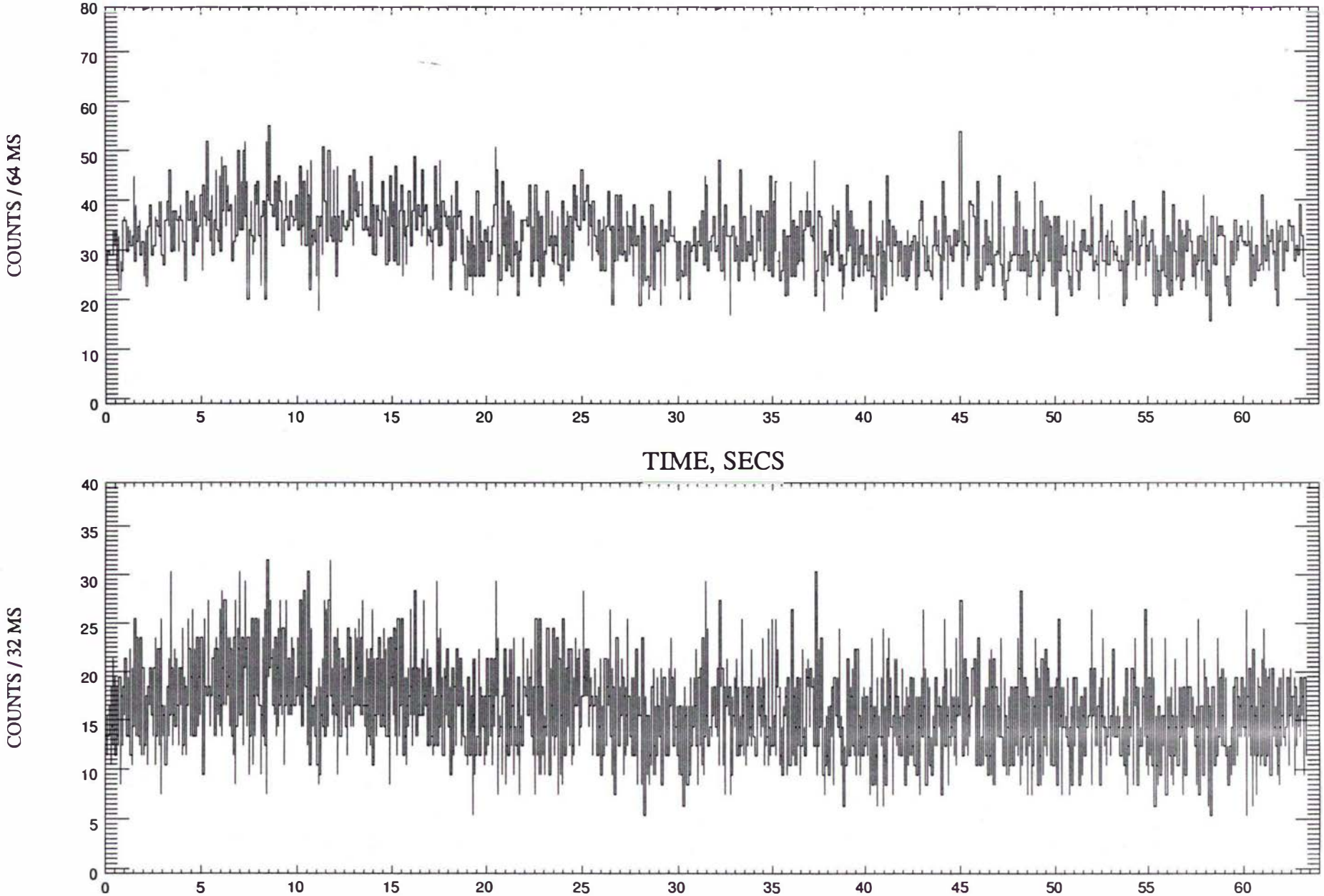
CALIBRATION DATA INCLUDED



UNIVE AL TIME

HUS 2A TRIGGERED DATA EDR day 223, year 1992 9/11/92

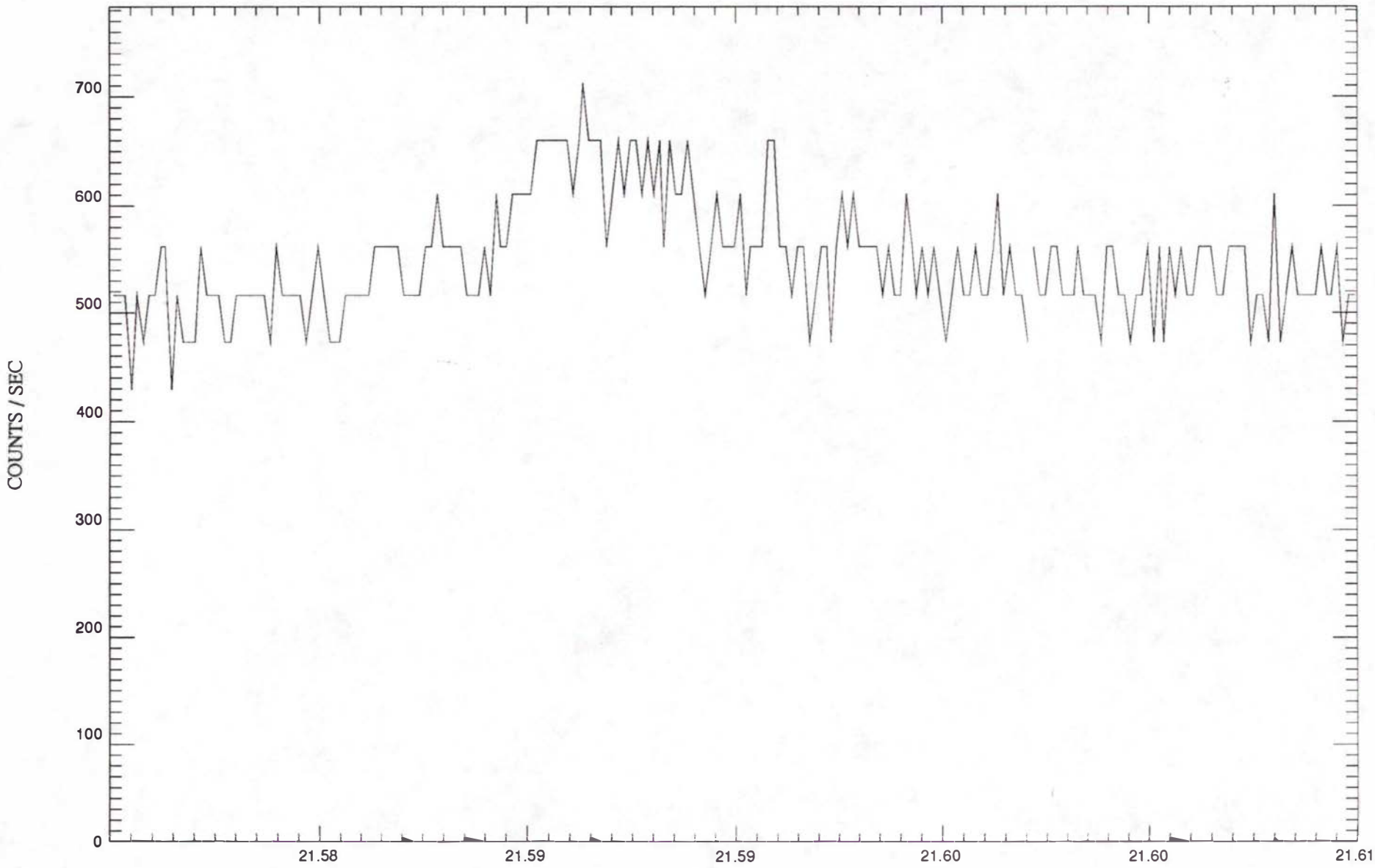
Burst Counter 6 at UT=21.591021050347 h=77727.676 s



B# 1

HUS 2A, MODE 1, NOT AVERAGED QEDR day 223, year 1992 to day 223, year 1992 8/13/92

CALIBRATION DATA INCLUDED



From KOSHUT@ssl.msfc.nasa.gov Thu Aug 13 11:31:45 1992
Date: Thu, 13 Aug 1992 13:31:17 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01790

TIME: TJD=8845 SECONDS=01587

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON FLUCTUATIONS ASSOCIATED WITH TRANSIENT GRO 0422+32.

```
          ********************
          *CATSEARCH PROGRAM*
          ********************

BATSE BURST # 1791
EVENT OF 1992 AUG 11 DAY OF YEAR=224
EVENT CROSSING TIME AT BATSE      : 10198. S. OR 02:49:58.1
COORDINATES ARE     .000     .000        6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 295.500   48.900
BATSE PEAK COUNTING RATE:  0000   C/S

EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
POSITION OF ULYSSES ON 11/ 8/  92 IS:
RA=  154.977 DEC=     3.029 DIST=     6.246 AU
BATSE-ULYSSES DISTANCE =  934340264. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 62.17 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1455.12 SECS.
CROSSING TIME AT ULYSSES     IS 11653. S. OR 03:14:13.2 +/-  550.60 SECONDS
```

NO

```
From KOSHUT@ssl.msfc.nasa.gov Thu Aug 13 11:42:10 1992
Date:     Thu, 13 Aug 1992 13:41:59 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
        khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

                BATSE BURST TRIGGER
NO.: 01791

TIME: TJD=8845 SECONDS=10198

TYPE: BURST                     SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:       SIGMA

INTENSITY:          COUNTS/CM2

LOCATION: ZENITH=89.1   AZIMUTH=145.6  ERROR=      DEGREES

COMMENTS:
BURST OF ~ .5 SECOND DURATION WITH NO EMISSION DETECTED ABOVE 300 KEV.
```

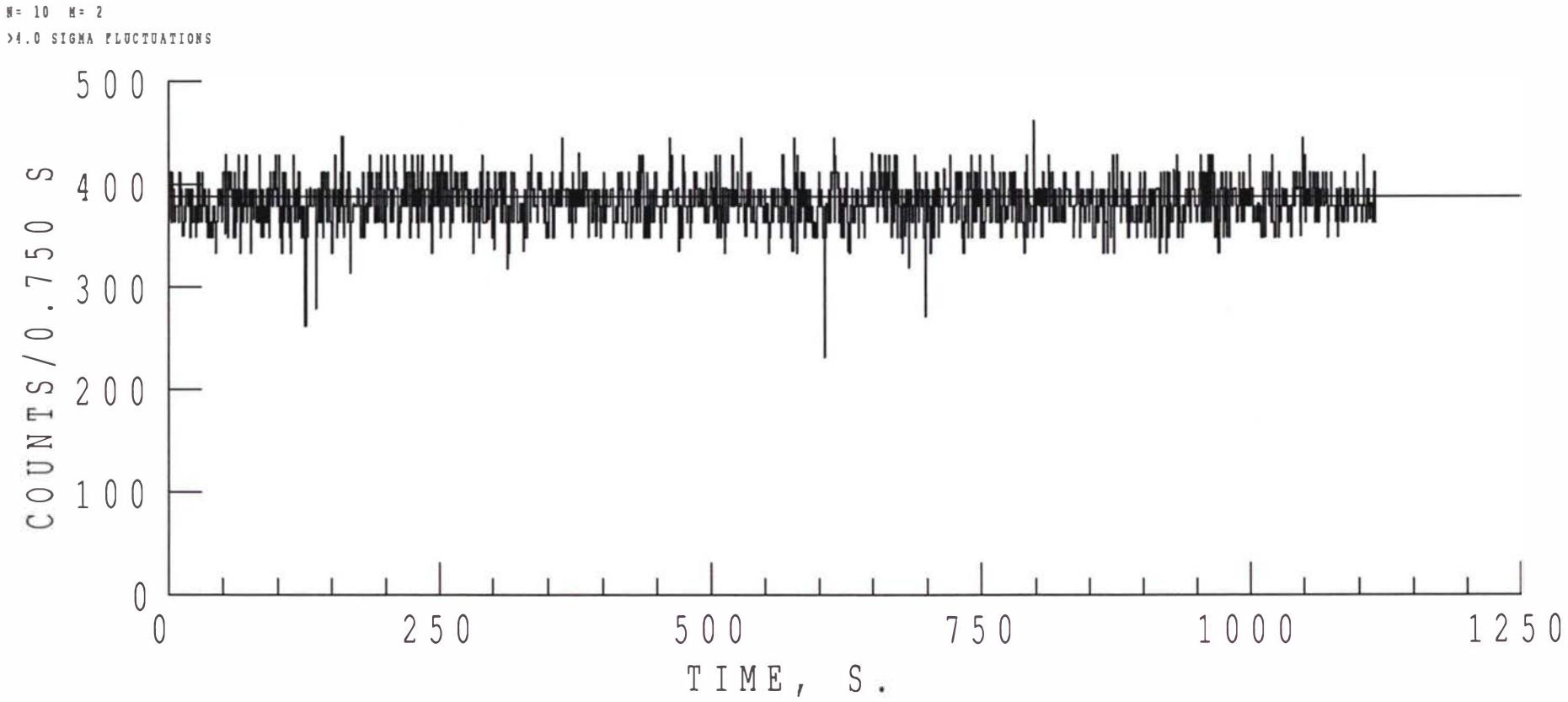
8/ 6/94

ULYSSES RT

11/ 8/92 11088.005 s

0.250 S INTERVALS REGROUPED BY 3

0- 0 keV



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          ********************
          *CATSEARCH PROGRAM*
          ********************

BATSE BURST # 1792
EVENT OF 1992 AUG 12 DAY OF YEAR=225
EVENT CROSSING TIME AT BATSE      : 19074. S. OR 05:17:54.1
COORDINATES ARE     .000     .000        6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 122.900     7.100
BATSE PEAK COUNTING RATE:  0000   C/S

EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
POSITION OF ULYSSES ON 12/ 8/  92 IS:
RA=  155.109 DEC=     2.937 DIST=     6.249 AU
BATSE-ULYSSES DISTANCE =  934871344. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=147.66 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2634.58 SECS.
CROSSING TIME AT ULYSSES     IS 16440. S. OR 04:33:59.5 +/-  299.64 SECONDS
```

NO

```
From KOSHUT@ssl.msfc.nasa.gov Sun Aug 16 14:45:41 1992
Date:     Sun, 16 Aug 1992 16:45:36 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
        khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1296

                BATSE BURST TRIGGER
NO.: 01792

TIME: TJD=8845 SECONDS=19074

TYPE: BURST                     SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:       SIGMA

INTENSITY:          COUNTS/CM2

LOCATION: ZENITH=55.5   AZIMUTH=19.2   ERROR=      DEGREES

COMMENTS:
NOT MUCH DATA AVAILABLE FOR THIS BURST.  DURATION IS LESS THAN 0.1 SECONDS,
WITH NO EMISSION BEING OBSERVED ABOVE 300 KEV.
```

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          ********************
          *CATSEARCH PROGRAM*
          ********************

 ATSE BURST # 1792
EVENT OF 1992 AUG 11 DAY OF YEAR=224
EVENT CROSSING TIME AT BATSE      : 19074. S. OR 05:17:54.1
COORDINATES ARE    0.000    0.000        6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 101.330    16.830
BATSE PEAK COUNTING RATE:  0000    C/S

EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
POSITION OF ULYSSES ON 11/ 8/  92 IS:
RA=  154.977 DEC=     3.029 DIST=     6.246 AU
BATSE-ULYSSES DISTANCE =  934340264. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL     DIRECTION=125.58 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1813.48 SECS.
CROSSING TIME AT ULYSSES     IS 17261. S. OR 04:47:40.6 +/-  462.52 SECONDS
```

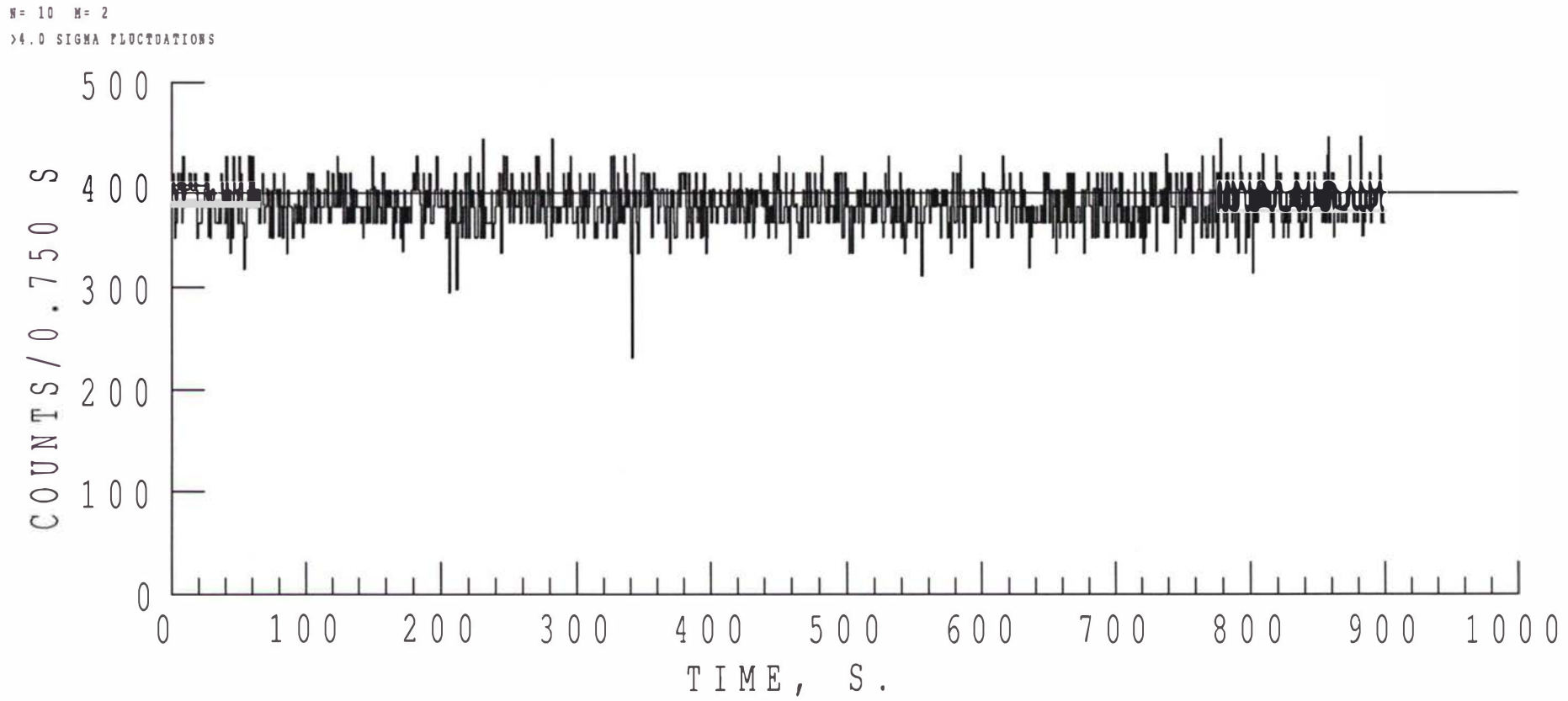
9/11/95

ULYSSES RT

11/ 8/92 16812.100 s

0.250 S INTERVALS REGROUPED BY 3

0- 0 keV



BATSE BURST TRIGGER

NO.: 01793

TIME: TJD=8845 SECONDS=27965

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON OCCULTATION STEP OF TRANSIENT GRO 422+32.

Content Length: 1215

BATSE BURST TRIGGER

NO.: 01794

TIME: TJD=8845 SECONDS=39034

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON OCCULTATION STEP OF TRANSIENT GRO 0422+32.

Content Length: 1215

BATSE BURST TRIGGER

NO.: 01795

TIME: TJD=8845 SECONDS=50121

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON FLUCTUATIONS ASSOCIATED WITH TRANSIENT GRO 0422+32.

Content-Length: 1215

BATSE BURST TRIGGER
NO.: 01796

TIME: TJD=8845 SECONDS=61188

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON FLUCTUATIONS ASSOCIATED WITH TRANSIENT GRO 0422+32.

Content-Length: 1377

BATSE BURST TRIGGER
NO.: 01797

TIME: TJD=8845 SECONDS=80677

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SOLAR FLARE OF ~ 140 SECOND DURATION, WITH NO EMISSION DETECTED
ABOVE 300 KEV. THE LIGHT CURVE CONSISTS OF A RELATIVELY SMOOTH RISE TO
AND FALL FROM THE PEAK. CLASSIFIED AS M1.4 FLARE IN GOES X-RAY DATA.

Content-Length: 1215

BATSE BURST TRIGGER
NO.: 01798

TIME: TJD=8845 SECONDS=86310

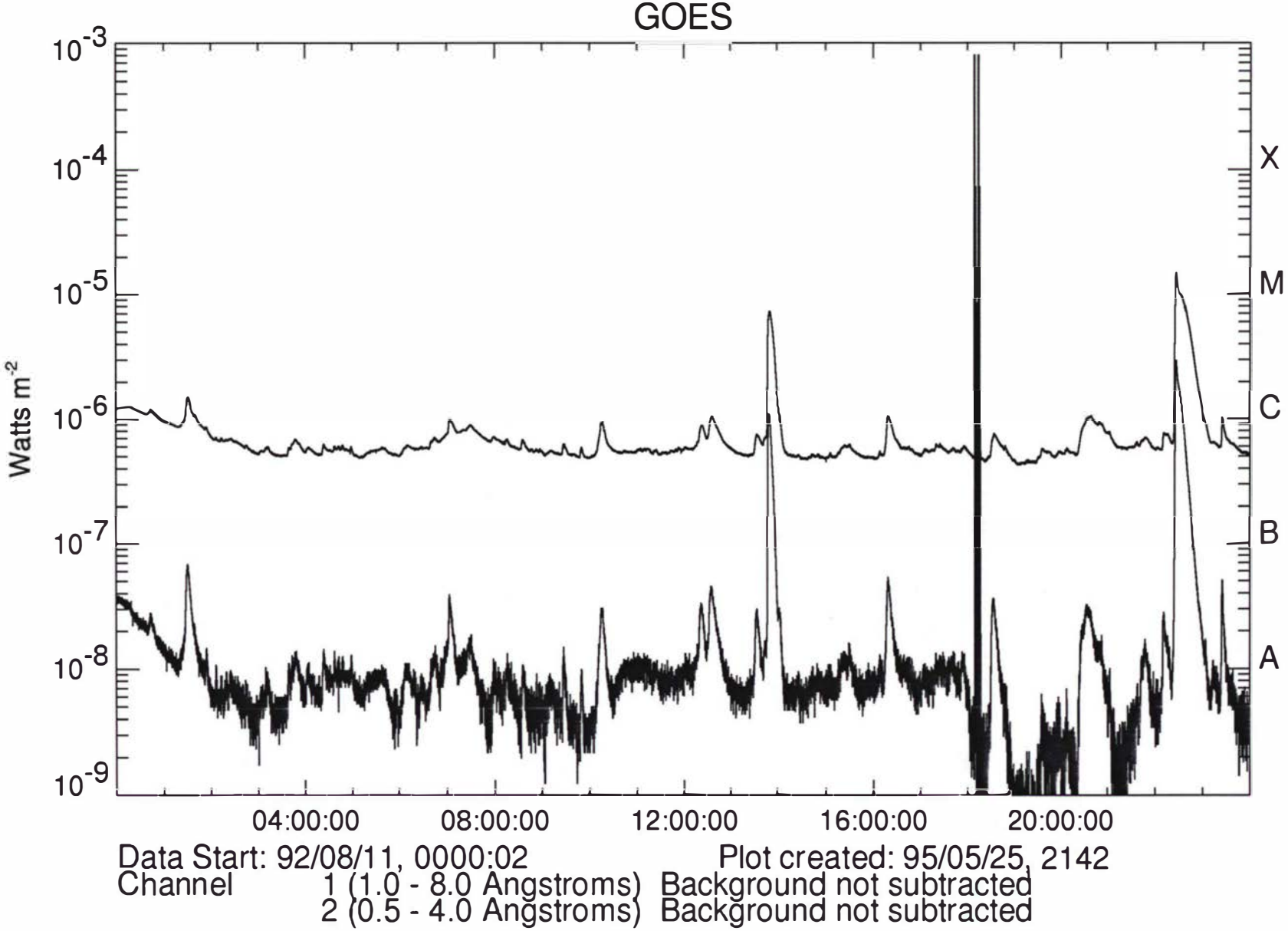
TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

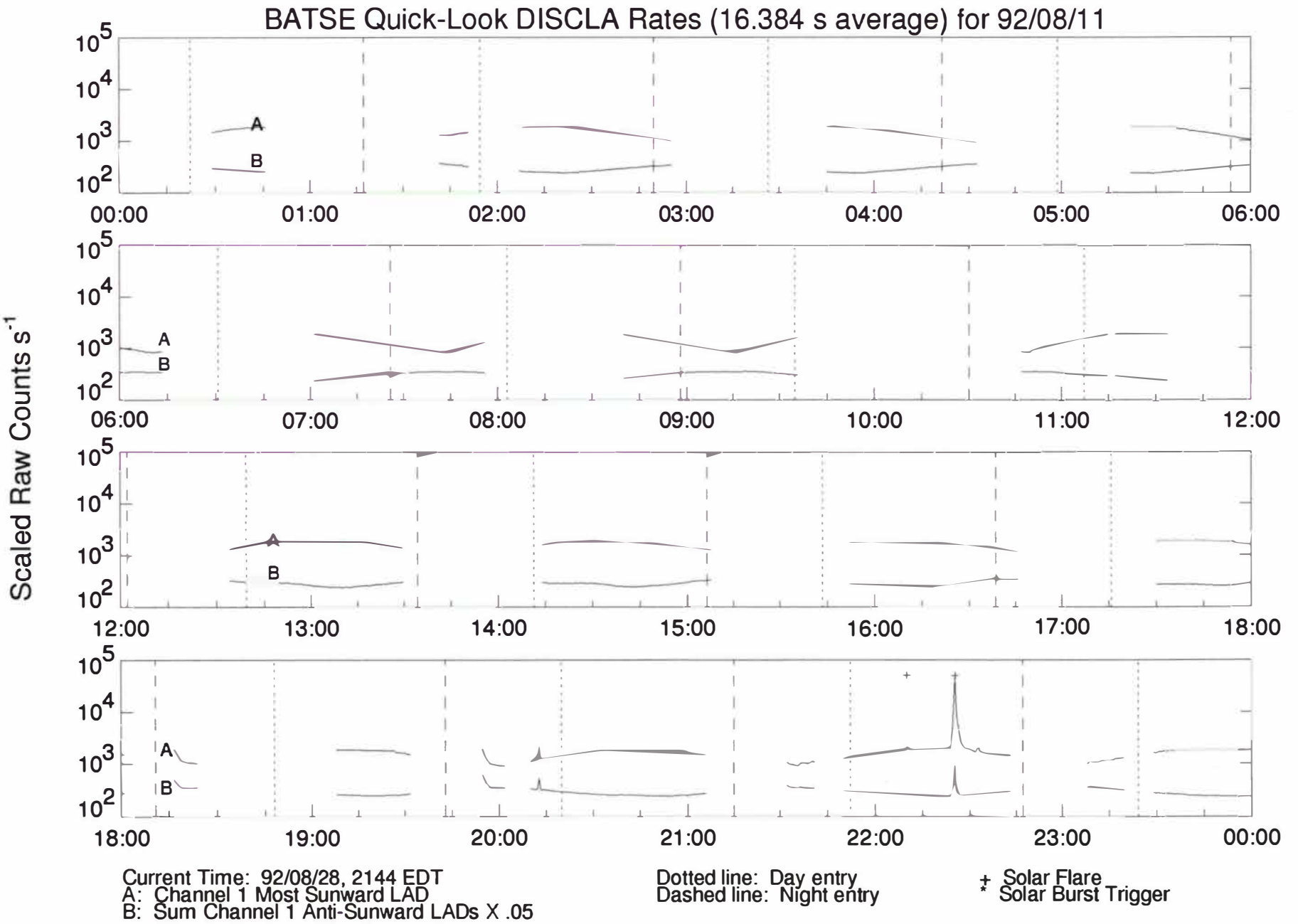
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

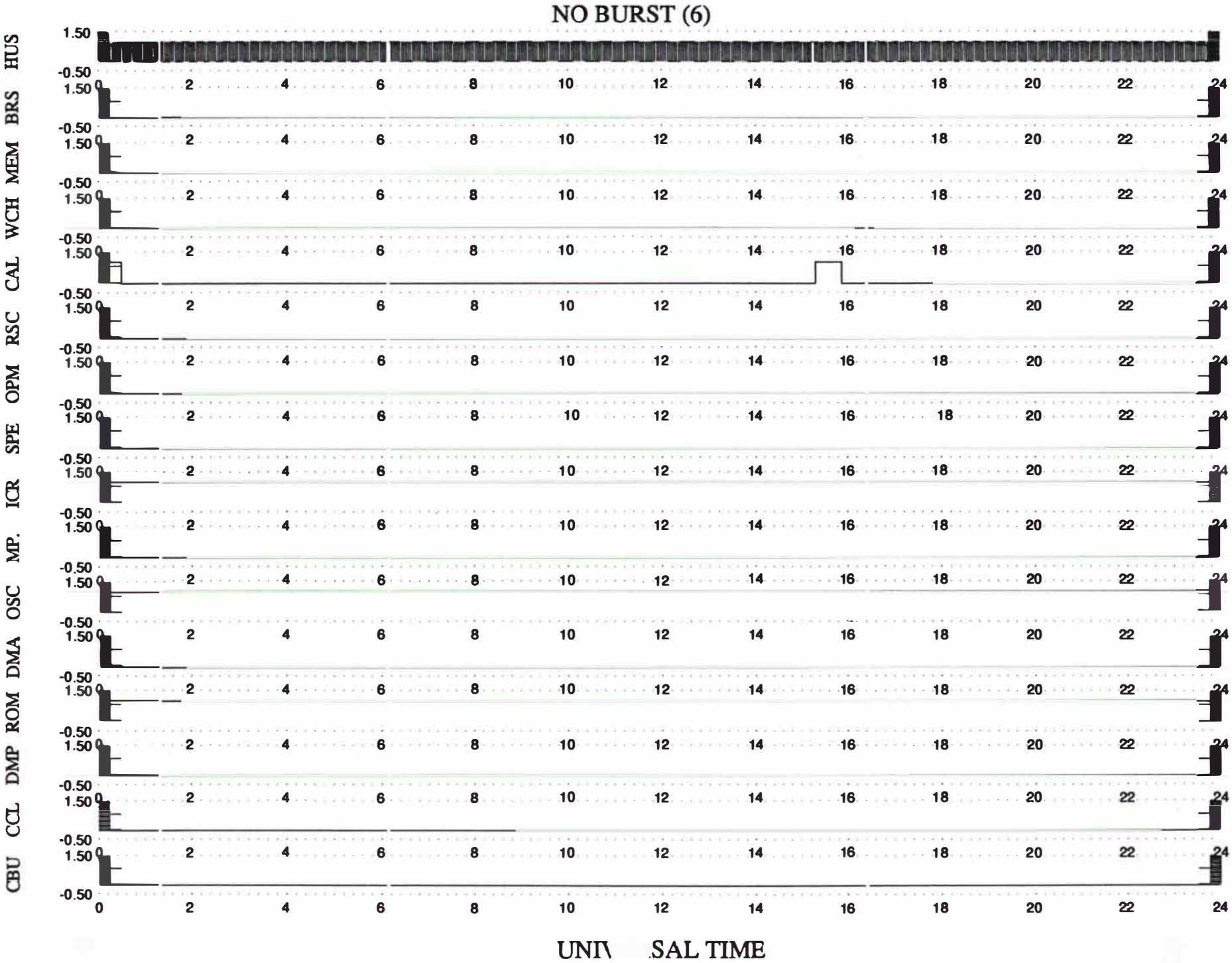
LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON FLUCTUATIONS ASSOCIATED WITH TRANSIENT GRO 0422+32.


GOES
Watts m-2
10-3
10-4
10-5
10-6
10-7
10-8
10-9
X
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/11, 0000:02
Plot created: 95/05/25, 2142
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

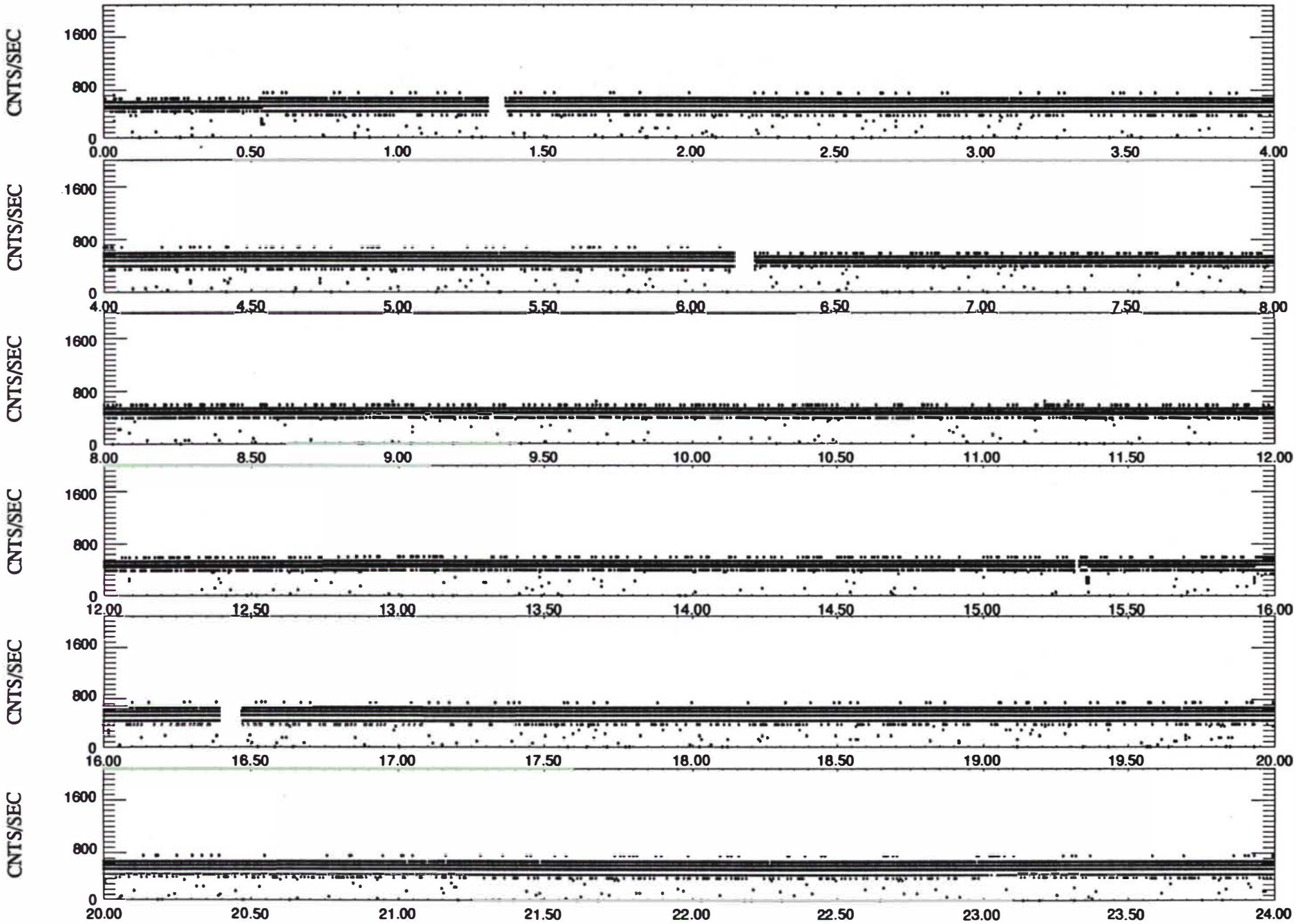

BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/11
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2144 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
Solar Flare
Solar Burst Trigger

HUS MODES EDR day 224, year 1992 to day 224, year 1992 9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 224, year 1992 to day 224, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIV SAL TIME

From HORACK@ssl.msfc.nasa.gov Fri Aug 14 10:35:05 1992
Date: Fri, 14 Aug 1992 12:34:54 -0500 (CDT)
From: HORACK@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1458

BATSE BURST TRIGGER

NO.: 01799

Aug 12

TIME: TJD=8846 SECONDS=09117

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=66. AZIMUTH=49. ERROR= DEGREES

COMMENTS:
COMPLEX GOES M-1.0 FLARE LASTING APPROXIMATELY 100 SECONDS. SEEN BY BATSE TO ENERGIES OF APPROXIMATELY 100 KEV. EMISSION FROM THE FLARE AT TRIG + 40 SECONDS AND AFTER IS SEEN ONLY TO 50 KEV. LOCATION CONSISTENT WITH SOLAR ORIGIN

```
          ********************
          *CATSEARCH PROGRAM*
          ********************

BATSE BURST # 1800
EVENT OF 1992 AUG 12 DAY OF YEAR=225
EVENT CROSSING TIME AT BATSE      : 20007. S. OR 05:33:26.5
COORDINATES ARE     .000     .000       6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 119.200  -12.500
BATSE PEAK COUNTING RATE:  0000   C/S

EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
POSITION OF ULYSSES ON 12/ 8/  92 IS:
RA=  155.109 DEC=     2.937 DIST=     6.249 AU
BATSE-ULYSSES DISTANCE =  934871344. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=141.13 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2428.05 SECS.
CROSSING TIME AT ULYSSES     IS 17579. S. OR 04:52:58.5 +/-  352.85 SECONDS
```

ND

```
From HORACK@ssl.msfc.nasa.gov Fri Aug 14 10:41:20 1992
Date:    Fri, 14 Aug 1992 12:41:09 -0500 (CDT)
From: HORACK@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
        khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1377

                BATSE BURST TRIGGER
NO.: 01800

TIME: TJD=8846 SECONDS=20006

TYPE: BURST                     SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:       SIGMA

INTENSITY:          COUNTS/CM2

LOCATION: ZENITH=65.    AZIMUTH=359.   ERROR=      DEGREES

COMMENTS:
COMPLEX EVENT LASTING OVER 150 SECONDS, WITH MODERATE INTENSITY.  INITIAL
EMISSION COMES IN TWO PARTS BETWEEN 0-40 SECONDS.  INTENSE SPIKE SEEN AT
TRIG + 135 SECONDS.  SEEN TO ENERGIES ABOVE 300 KEV.
```

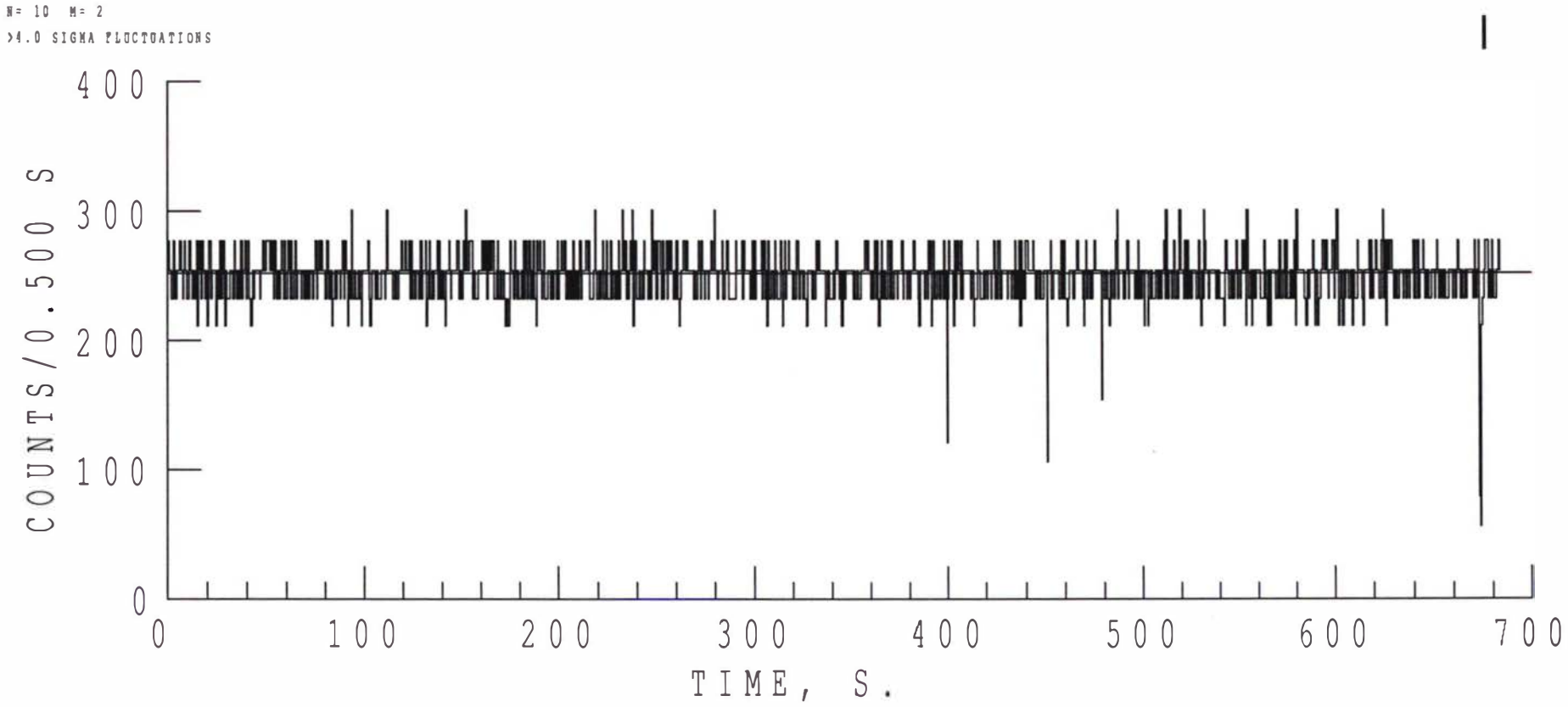
BATSE BURST# 1800

8/ 6/94

ULYSSES RT

12/ 8/92 17244.236 s

0- 0 keV



BATSE BURST TRIGGER

NO.: 01801

TIME: TJD=8846 SECONDS=30118

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=2. AZIMUTH=242. ERROR= DEGREES

COMMENTS:
BATSE TRIGGER ON FLUCTUATION FROM GRO J0422+32

BATSE BURST TRIGGER

NO.: 01802

TIME: TJD=8846 SECONDS=35871

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=17. AZIMUTH=305. ERROR= DEGREES

COMMENTS:
BATSE TRIGGERED ON EMISSION FROM GRO J0422+32.

BATSE BURST TRIGGER

NO.: 01803

TIME: TJD=8846 SECONDS=46723

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=17. AZIMUTH=188. ERROR= DEGREES

COMMENTS:
BATSE TRIGGERED ON FLUCTUATION OF GRO J0422+32.

BATSE BURST TRIGGER

NO.: 01804

TIME: TJD=8846 SECONDS=57808

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=18. AZIMUTH=217. ERROR= DEGREES

COMMENTS:
BATSE TRIGGERED ON EMISSION FROM GRO J0422+32

BATSE BURST TRIGGER

NO.: 01805

TIME: TJD=8846 SECONDS=68866

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
BATSE TRIGGERED ON EMISSION FROM GRO J0422+32. BURST LOCATION IN THIS MESSAGE IS BLANK DUE TO DIFFICULTY RUNNING THE SOFTWARE FOR THIS TIME, BECAUSE OF THE PROXIMITY OF THE REPOINTING.

****
CATSEARCH PROGRAM
****

BATSE BURST # 1806
EVENT OF 1992 AUG 12 DAY OF YEAR=225
EVENT CROSSING TIME AT BATSE : 75568. S. OR 20:59:27.7
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 102.000 -52.300
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 12/ 8/ 92 IS:
RA= 155.109 DEC= 2.937 DIST= 6.249 AU
BATSE-ULYSSES DISTANCE = 934871344. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=109.03 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1016.82 SECS.
CROSSING TIME AT ULYSSES IS 74551. S. OR 20:42:30.9 +/- 546.37 SECONDS

KJO

From HORACK@ssl.msfc.nasa.gov Fri Aug 14 11:00:47 1992
Date: Fri, 14 Aug 1992 13:00:38 -0500 (CDT)
From: HORACK@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1539

BATSE BURST TRIGGER
NO.: 01806

TIME: TJD=8846 SECONDS=75567

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=84. AZIMUTH=285. ERROR= DEGREES

COMMENTS:
WEAK TO MODERATE BURST, WITH A DURATION OF APPROXIMATELY 60 SECONDS. THE EVENT CONSISTS OF TWO EMISSION REGIONS, THE FIRST FROM -5 TO 10 SEC. THE 2ND IS FROM 15-25 SECONDS. PROBABLE THIRD EMISSION FEATURE SEEN ONLY ABOVE 100 KEV AT T + 60 SECONDS. FIRST REGION IS THE MOST INTENSE, WITH SECOND REGION FOLLOWING.

```
          ********************
          *CATSEARCH PROGRAM*
          ********************

 ATSE BURST # 1806
EVENT OF 1992 AUG 12 DAY OF YEAR=225
EVENT CROSSING TIME AT BATSE      : 75568. S. OR 20:59:27.7
COORDINATES ARE    0.000    0.000        6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 115.220   -37.910
BATSE PEAK COUNTING RATE:  0000    C/S

EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
POSITION OF ULYSSES ON 12/ 8/  92 IS:
RA=  155.109 DEC=     2.937 DIST=     6.249 AU
BATSE-ULYSSES DISTANCE =  934871344. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL     DIRECTION=124.97 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1787.13 SECS.
CROSSING TIME AT ULYSSES     IS 73781. S. OR 20:29:40.6 +/-  466.53 SECONDS
```

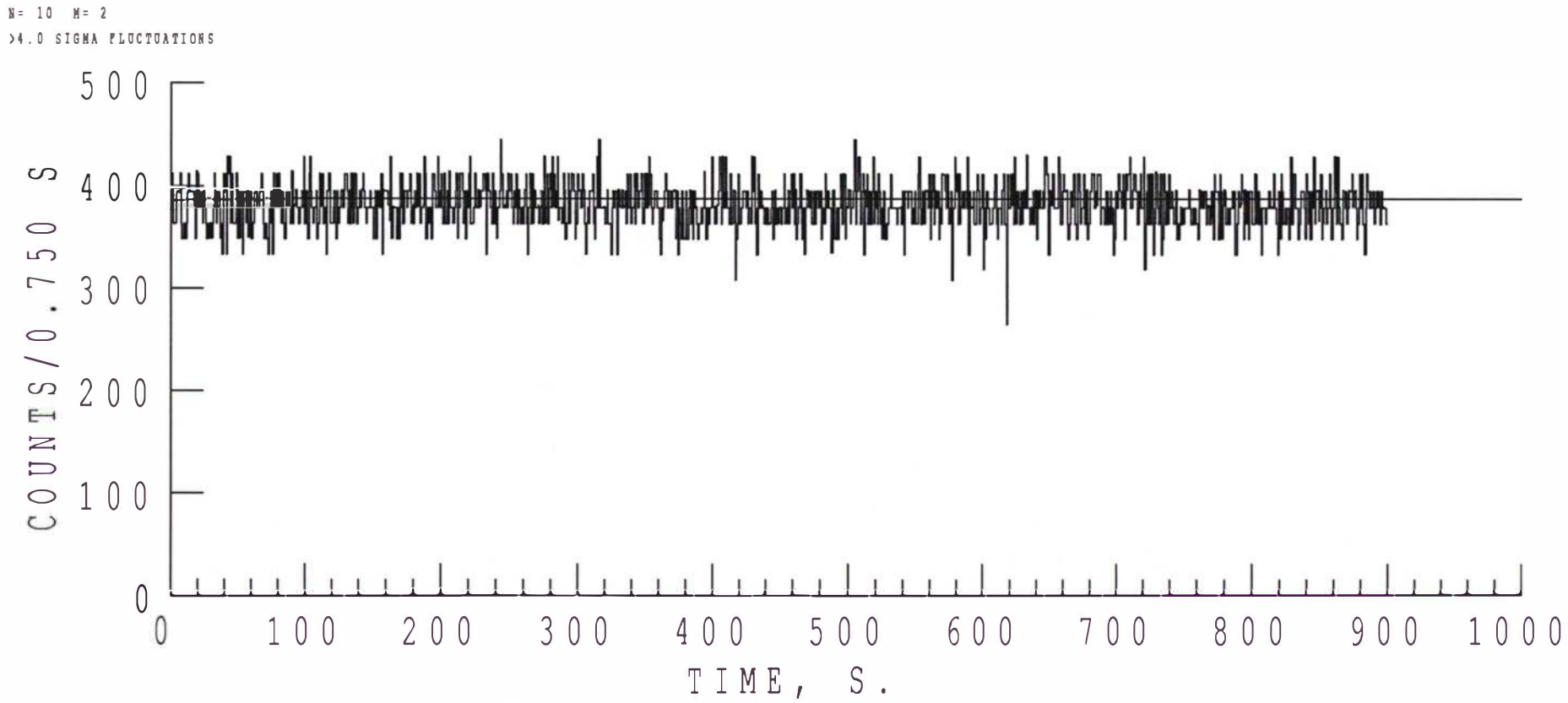
9/11/95

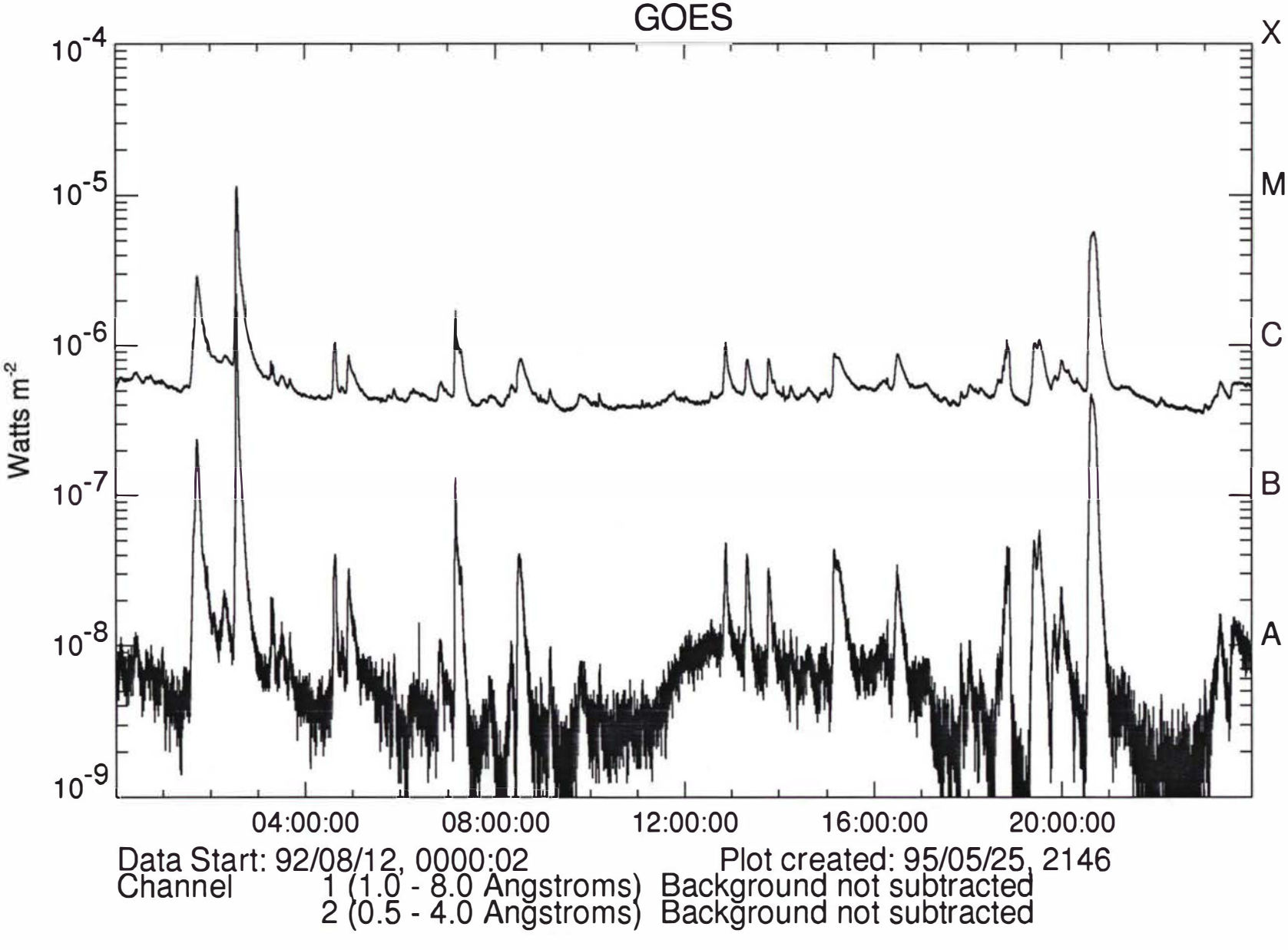
ULYSSES RT

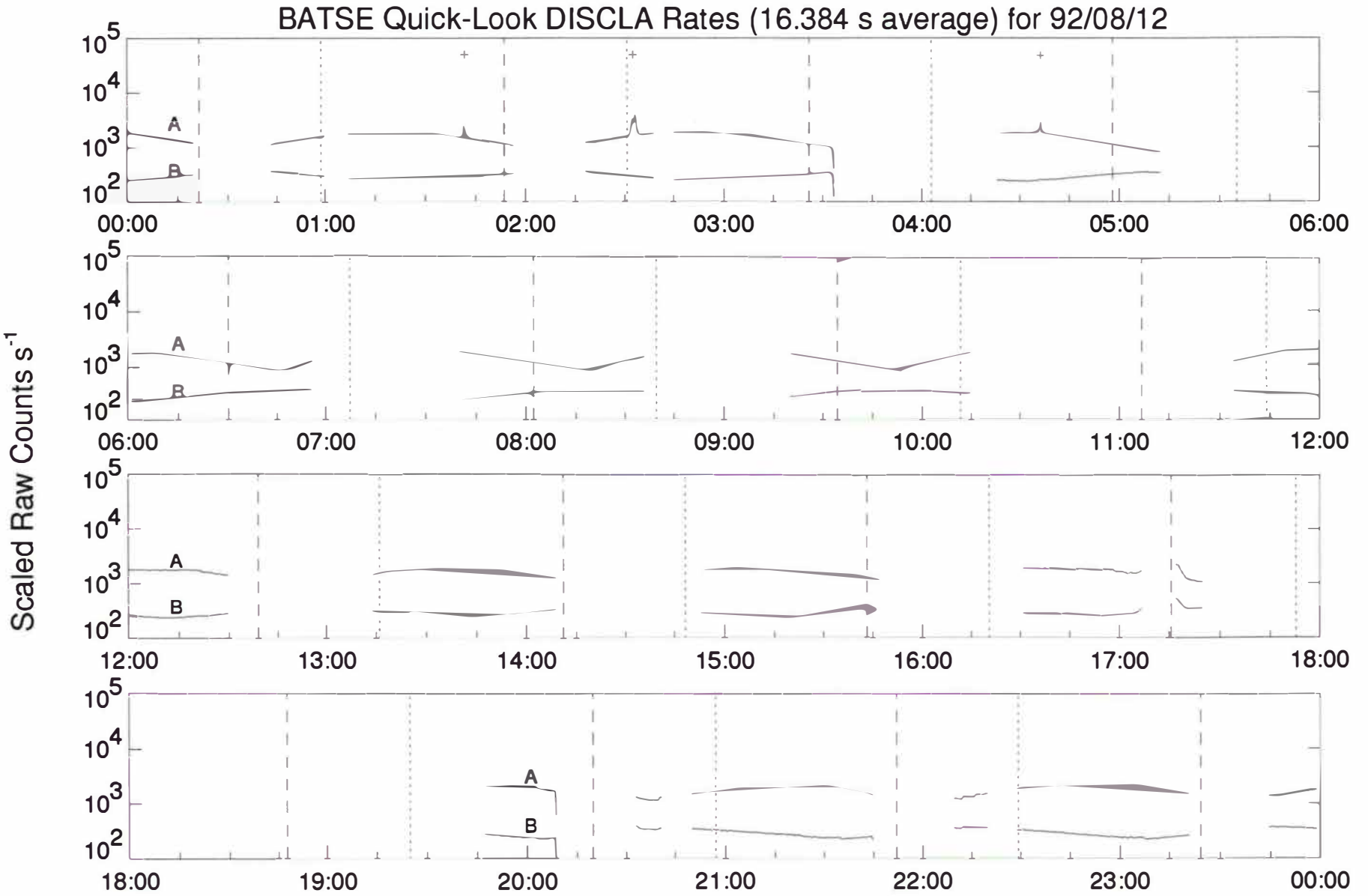
12/ 8/92 73332.141 s

0.250 S INTERVALS REGROUPED BY 3

0- 0 keV




GOES
Watts m-2
10-4
10-5
10-6
10-7
10-8
10-9
X
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/12, 0000:02
Plot created: 95/05/25, 2146
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/12
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2143 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 Flare
* Solar Burst Trigger

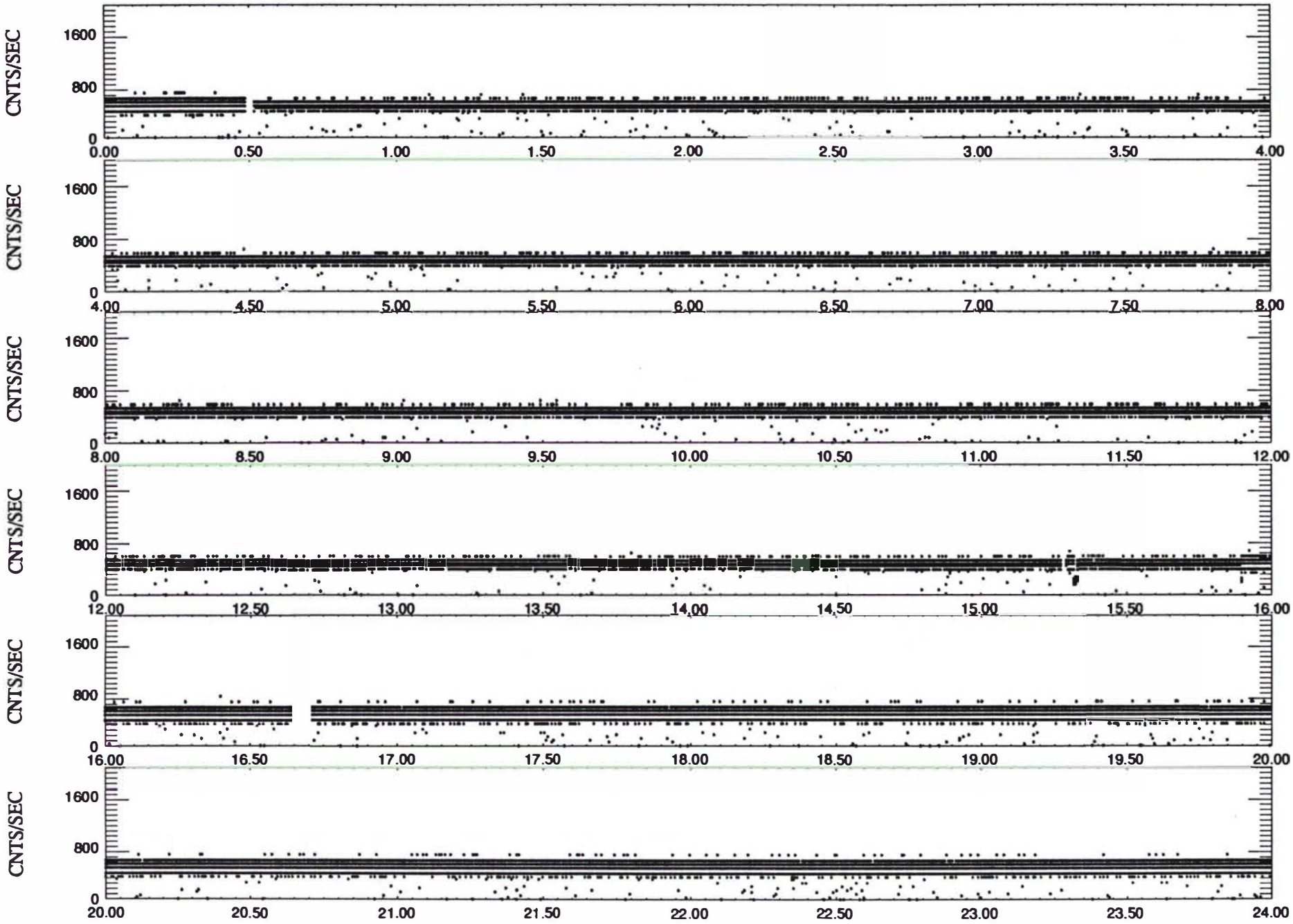
HUS MODES EDR day 225, year 1992 to day 225, year 1992 9/11/92

NO BURST (6)

UNIV. AL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 225, year 1992 to day 225, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIV AL TIME

```
          ********************
          *CATSEARCH PROGRAM*
          ********************

 BATSE BURST # 1807
 EVENT OF 1992 AUG 13 DAY OF YEAR=226
 EVENT CROSSING TIME AT BATSE      : 12829. S. OR 03:33:48.5
 COORDINATES ARE     .000     .000       6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 217.600  -29.800
 BATSE PEAK COUNTING RATE:  0000   C/S

 EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
 POSITION OF ULYSSES ON 13/ 8/  92 IS:
 RA=  155.242 DEC=     2.845 DIST=     6.252 AU
 BATSE-ULYSSES DISTANCE =  935368016. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=112.17 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1177.60 SECS.
 CROSSING TIME AT ULYSSES     IS 11651. S. OR 03:14:10.9 +/-  533.74 SECONDS
```

RI

```
From BHAT@ssl.msfc.nasa.gov Mon Aug 17 08:22:40 1992
Date:    Mon, 17 Aug 1992 10:22:41 -0500 (CDT)
From: BHAT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
        khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1376

                  BATSE BURST TRIGGER
NO.:  1807

TIME: TJD=8847 SECONDS=12828

TYPE: BURST                       SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:        SIGMA

INTENSITY:           COUNTS/CM2

LOCATION: ZENITH=142.5  AZIMUTH=342.1  ERROR=       DEGREES

COMMENTS:
AN INTERESTING BURST TRIGGERED BY A SHARP SPIKE IMMEDIATELY FOLLOWED BY A WEAKER
SMOOTHER PULSE. THE TOTAL BURST LASTS FOR ABOUT 60 S AND THE INITITAL SPIKE
ONLY HAS SIGNIFICANT SIGNAL ABOVE 300 KEV.
```

Aug 13

Helio corr removed

Date: July 2 '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

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

☑ Does T_0 in data file agree with T_0 in plot?

☑ 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?

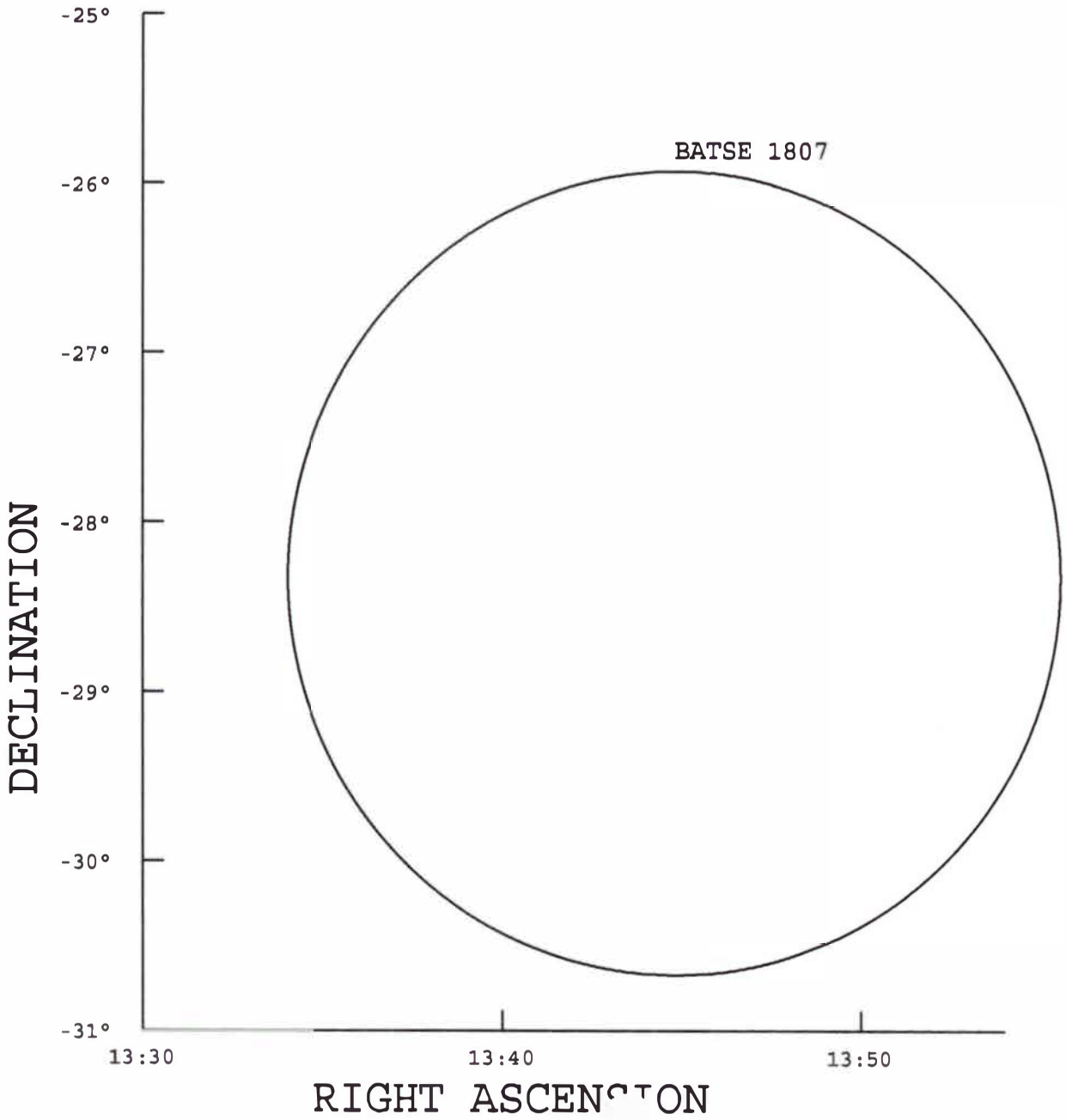
☐ Geocentric time used?

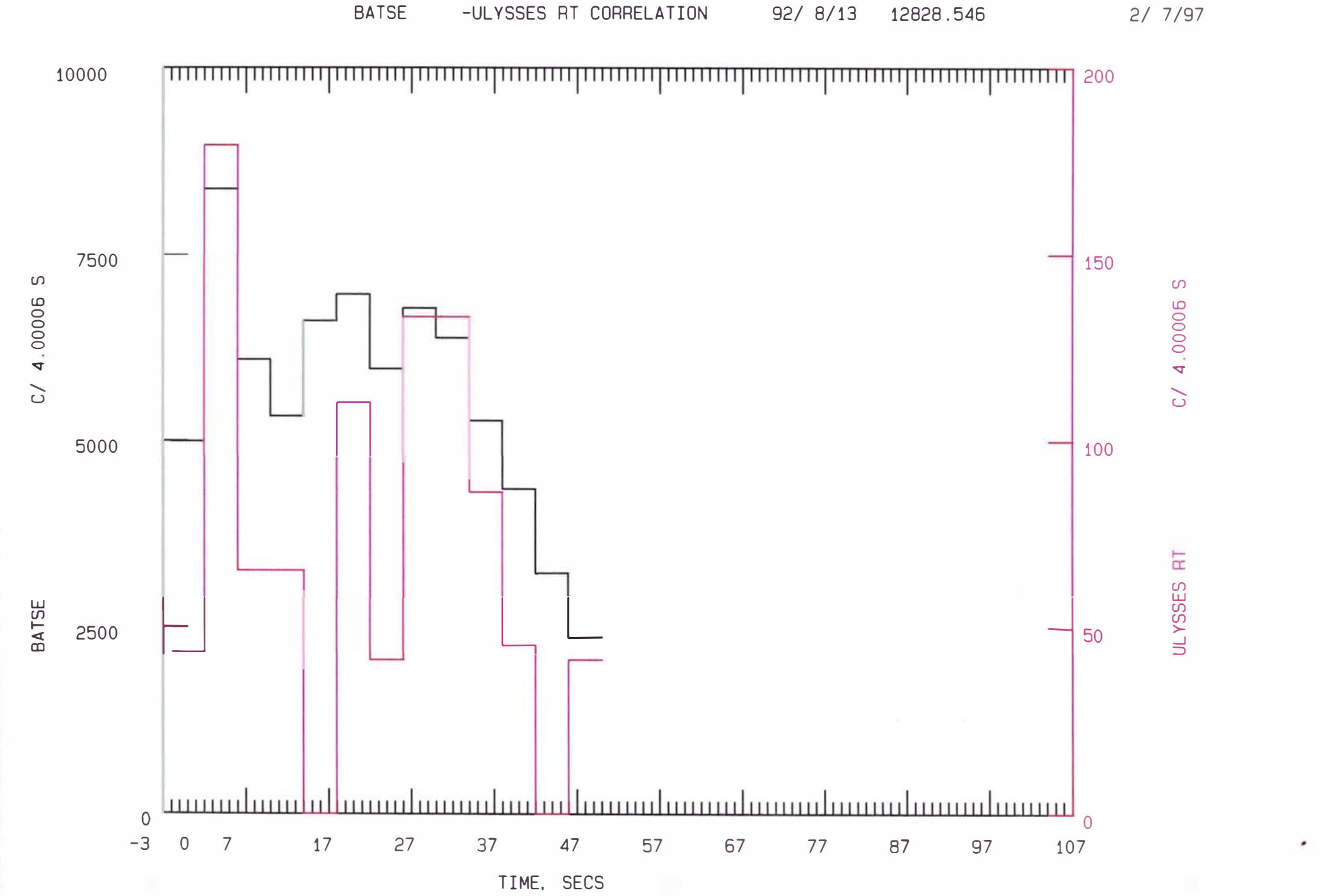
☑ ACCESS database updated?

EVENT OF AUG 13, 1992 3:10

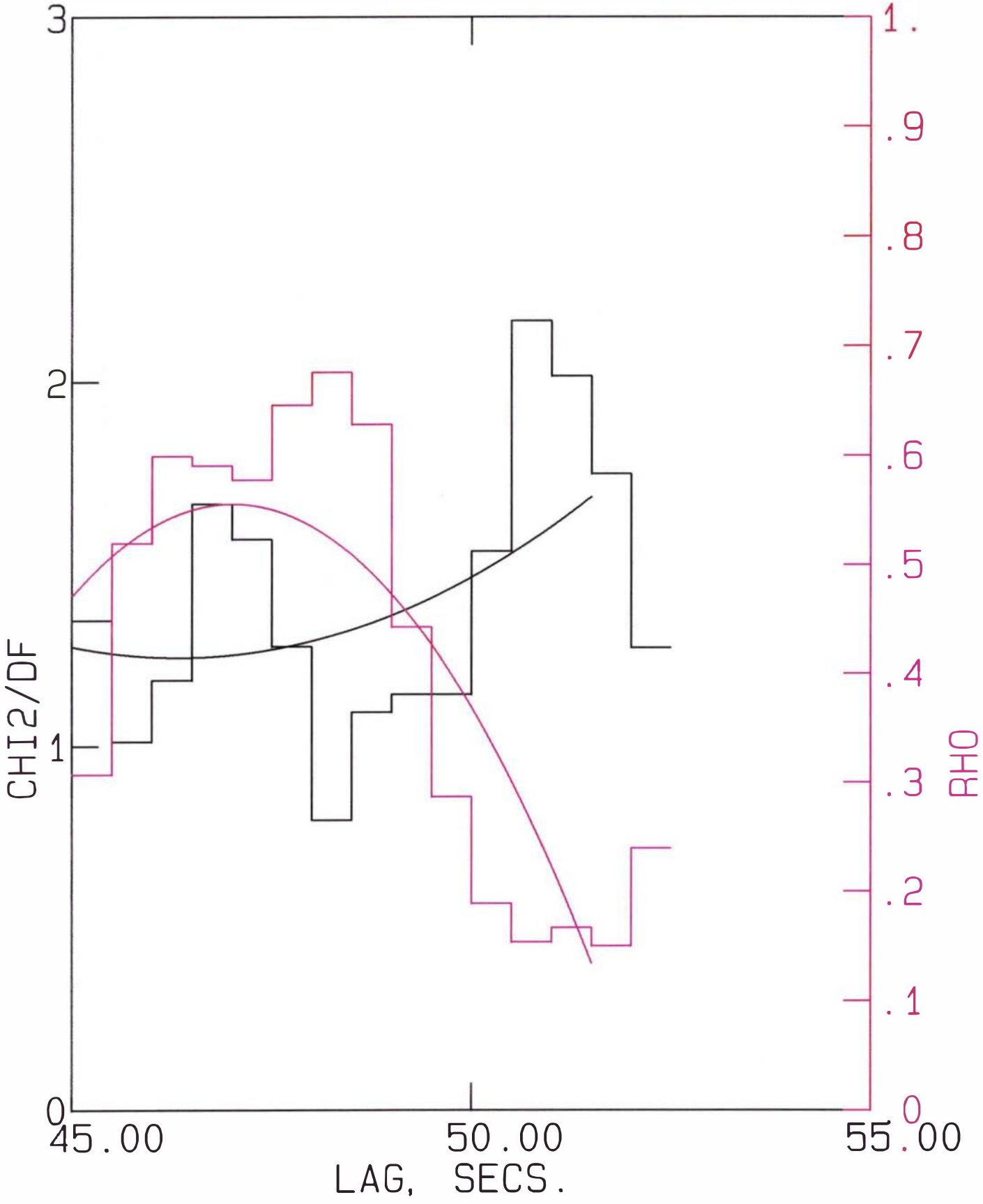
2/ 7/97

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




BATSE -ULYSSES RT CORRELATION 92/ 8/13 12828.546 2/ 7/97
10000
7500
5000
2500
0
BATSE
C/ 4.00006 S
200
150
100
50
0
ULYSSES RT
C/ 4.00006 S
-3
0
7
17
27
37
47
57
67
77
87
97
107
TIME, SECS

BATSE -ULYSSES RT CORRELATION 92/ 8/13 12828.546

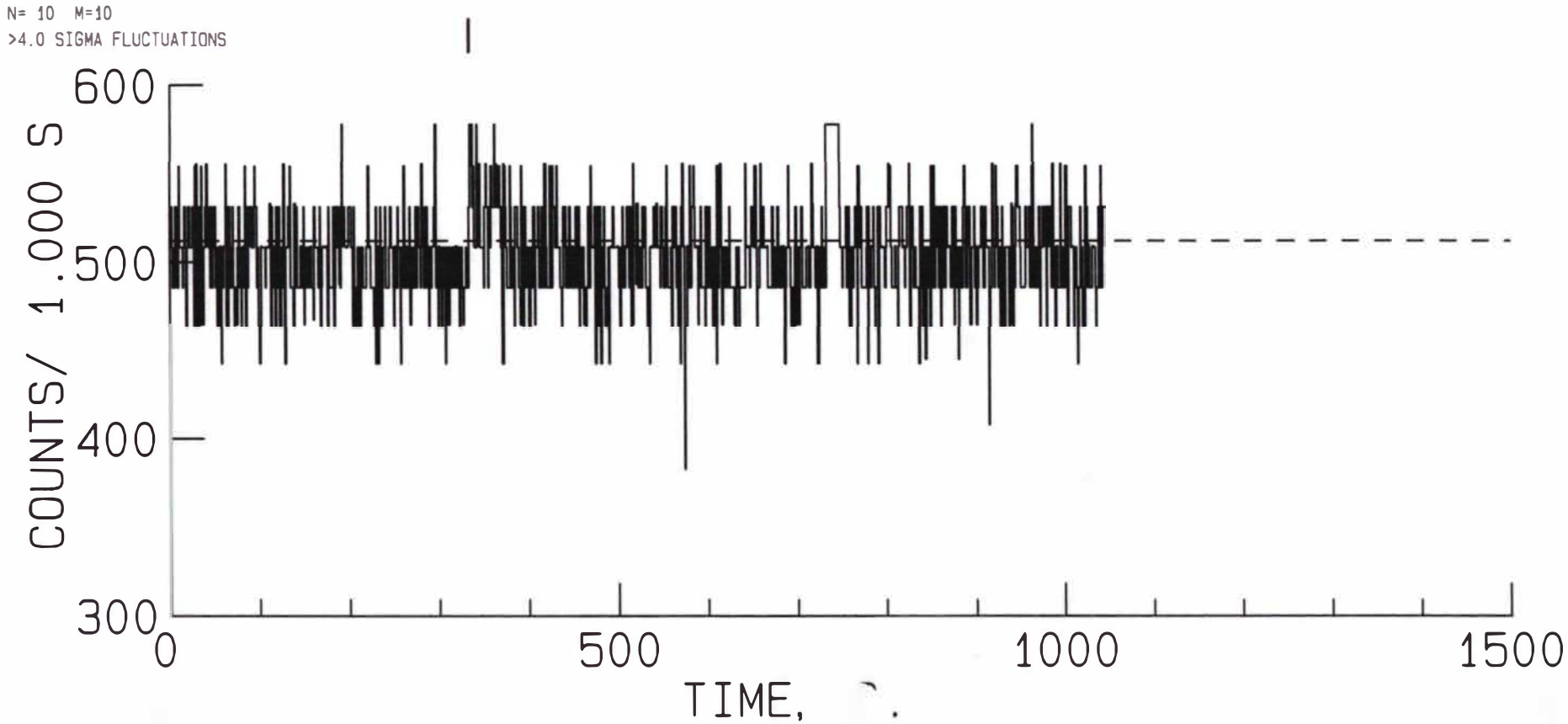


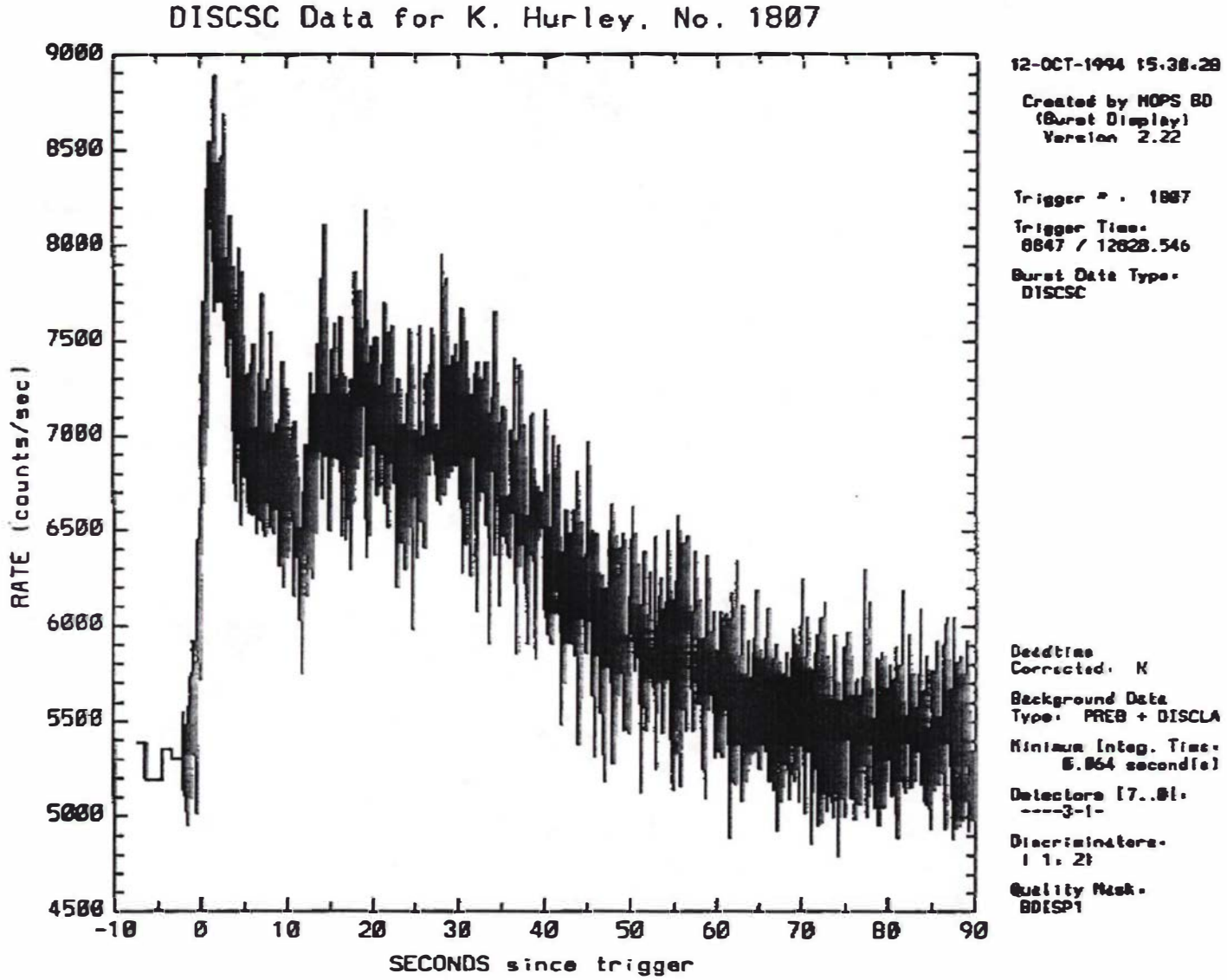
ULYSSES RT 2/ 7/97

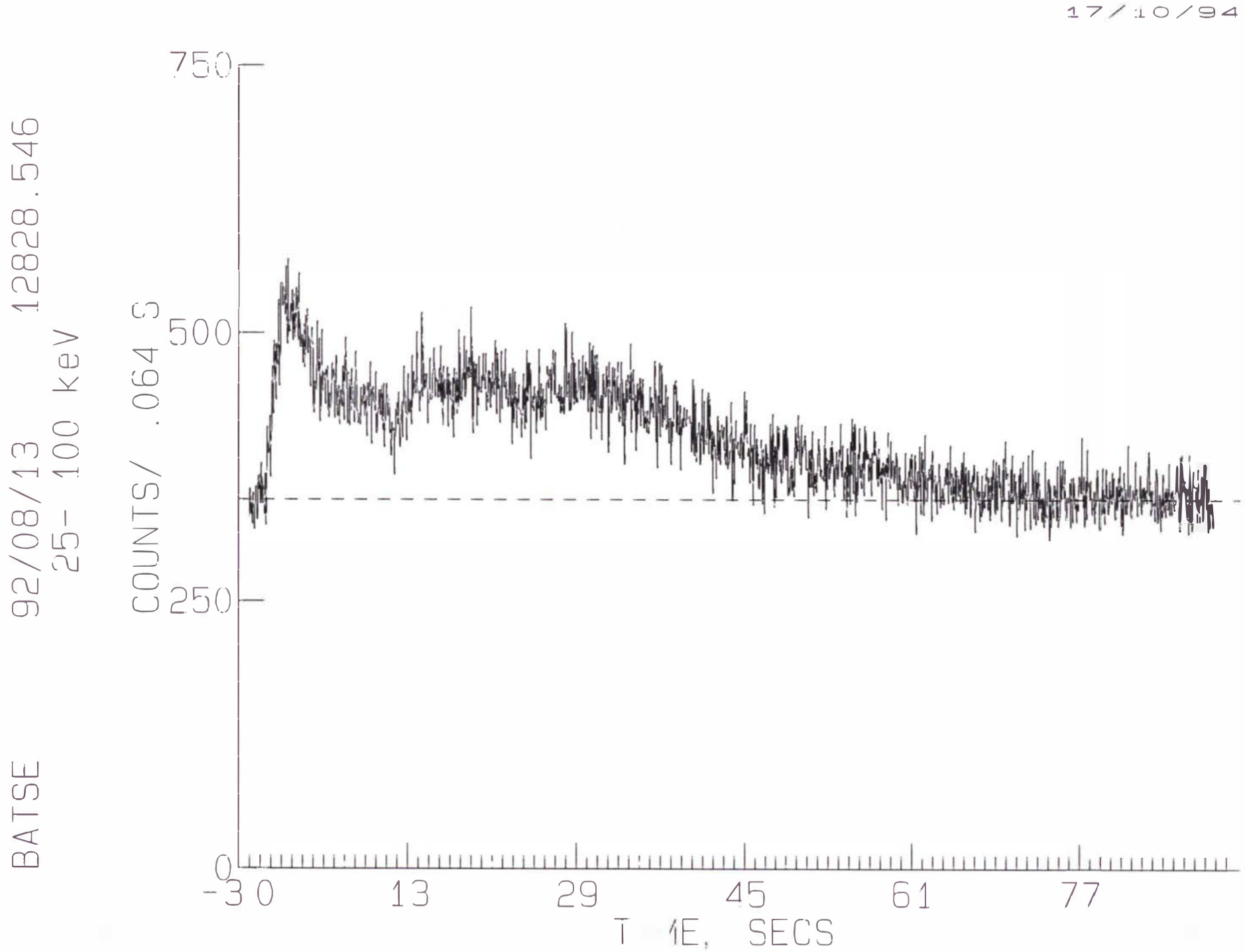
13/ 8/92 11124.026 s

0.500 S INTERVALS REGROUPED BY 2

22- 150 keV




DISCSC Data for K. Hurley. No. 1807
RATE (counts/sec)
9000
8500
8000
7500
7000
6500
6000
5500
5000
4500
-10
0
10
20
30
40
50
60
70
80
90
SECONDS since trigger
12-OCT-1994 15:38:28
Created by MOPS BD
(Burst Display)
Version 2.22
Trigger # . 1807
Trigger Time:
8847 / 12628.546
Burst Data Type:
DISCSC
Deadtime
Corrected: N
Background Data
Type: PREB + DISCLA
Minimum [integ. Time:
5.864 second[s]
Detectors [7..0]:
----3-1-
Discriminators:
[1: 2]
Quality Mask:
BDISP1


17/10/94
BATSE 92/08/13 12828.546
25- 100 keV
COUNTS/ .064 S
750
500
250
0
-30
13
29
45
61
77
TIME, SECS

NO.: 1808

TIME: TJD=8847 SECONDS=21208

TYPE: GRO0424 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=9.5 AZIMUTH=218.4 ERROR= DEGREES

COMMENTS:
NEW HARD X-RAY TRANSIENT.

BATSE BURST TRIGGER

NO.: 1809

TIME: TJD=8847 SECONDS=32280

TYPE: GR00424 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=4.1 AZIMUTH=245.9 ERROR= DEGREES

COMMENTS:
NEW HARD X-RAY TRANSIENT FLUCTUATION.

BATSE BURST TRIGGER

NO.: 1810

TIME: TJD=8847 SECONDS=43349

TYPE: GRO0424 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=15.6 AZIMUTH=218.9 ERROR= DEGREES

COMMENTS:
NEW HARD X-RAY TRANSIENT FLUCTUATION.

BATSE BURST TRIGGER

NO.: 1811

TIME: TJD=8847 SECONDS=50442

TYPE: E-PREC SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON PRECIPITATION EVENT.

BATSE BURST TRIGGER

NO.: 1812

TIME: TJD=8847 SECONDS=59949

TYPE: GRO0424 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=13.2 AZIMUTH=194 ERROR= DEGREES

COMMENTS:
NEW HARD X-RAY TRANSIENT FLUCTUATION.

BATSE BURST TRIGGER

NO.: 1813

TIME: TJD=8847 SECONDS=71025

TYPE: GRO0424 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=44.0 AZIMUTH=140.2 ERROR= DEGREES

COMMENTS:
A WEAK FLUCTUATION OF GRO0424+32.

BATSE BURST TRIGGER

NO.: 1814

TIME: TJD=8847 SECONDS=82103

TYPE: GRO0424 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=12.9 AZIMUTH=194.2 ERROR= DEGREES

COMMENTS:
HARD X-RAY TRANSIENT GRO0424+32 FLUCTUATION.

From khurley@space6.ssl.berkeley.edu Tue Dec 15 16:52:38 1992
Date: Tue, 15 Dec 92 16:46:51
From: khurley@space6.ssl.berkeley.edu
Content-Length: 1193

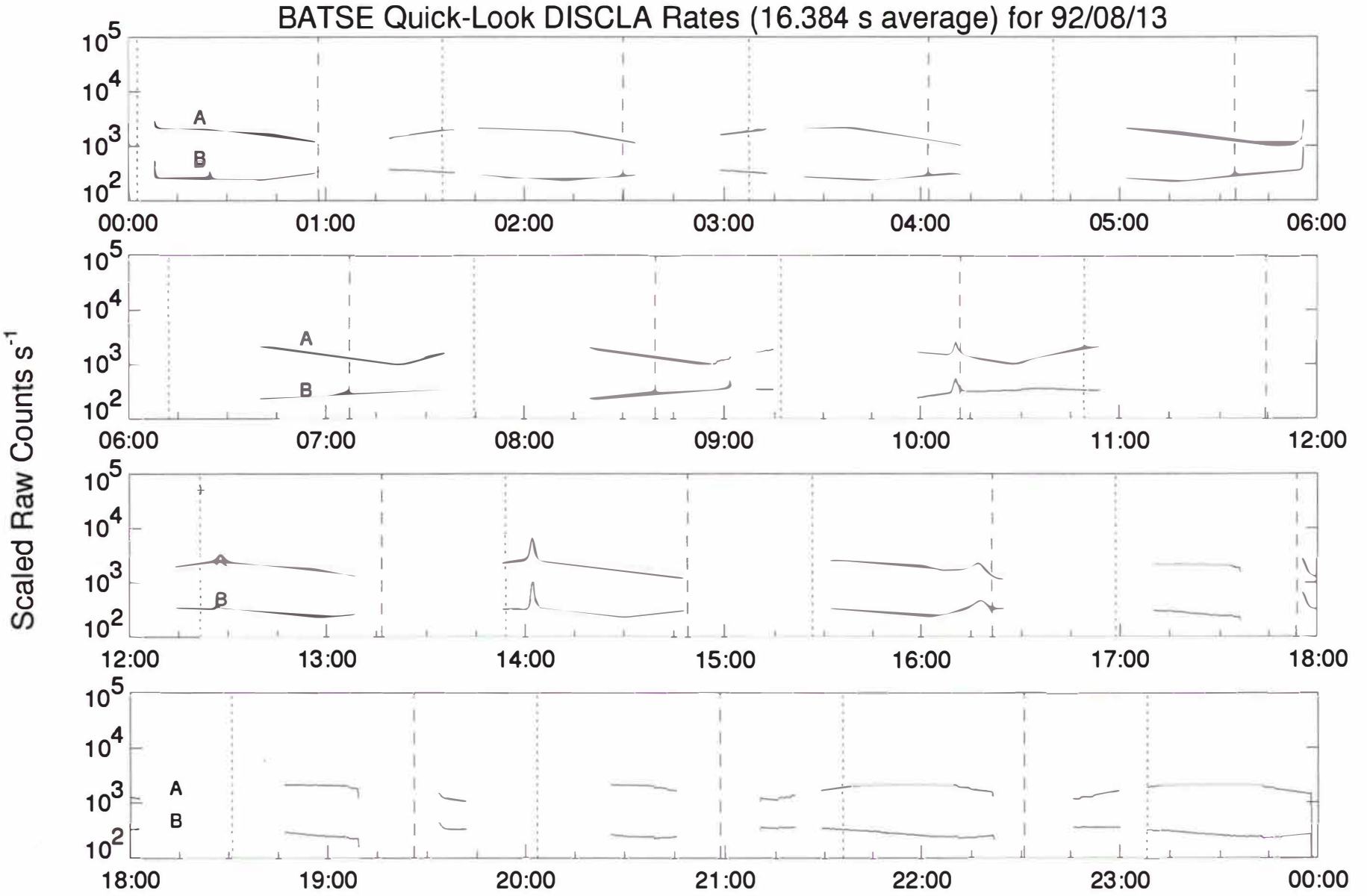
get Venus crossing times
FAX to Robin

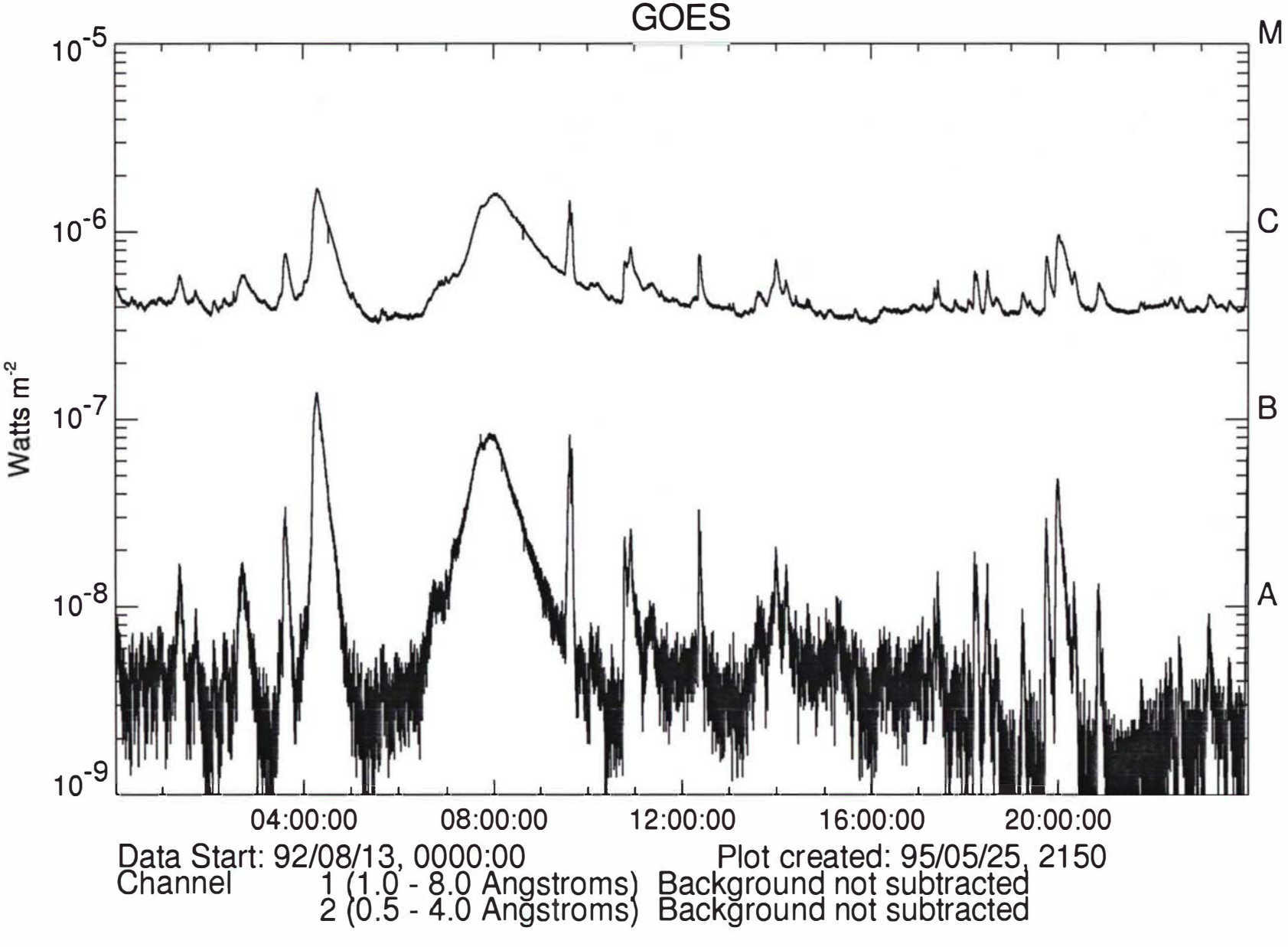
Dear John,

Here is a fairly complete list of Ulysses events from July to October 1992, excepting the events I already gave you. I have listed the Ulysses and Earth crossing times where available.

July	UCT	ECT	
1	72000	70740	N/O
7	25300	23615	N/O
14	46000	47040	← Only one they have PVO data for! (Among the ones for which ECT is given) Sent Mar 2
18	55000	52860	N/O
26	02066	----	
31	62196	61620	N/O
August			
10	77700	-----	
13	11000	12828	N/O
16	42600	45360	N/O
17	15055	-----	
19	40612	-----	
22	84184	-----	DMSP 81542 (3 satellite)
24	38400	39183	N/O DMSP (2)
27	85245	-----	
29	30755	-----	
29	63712	-----	
30	05800	06318	N/O
30	32310	-----	
September			
1	04311	-----	(solar?)
2	03230	-----	DMSP (3) ~01743
3		84540	N/O
4	00420		Same as previous event
19	28450	-----	(solar?)
21	00060	-----	
October			
1	80900	-----	
3	20880	-----	
4	49100	-----	
6	40720	-----	
9	21980	24070	N/O
13	81256	-----	
15	04000	05792	N/O
22	55200	55200	N/O
25	52578	-----	
27	26805	-----	
29	42125	-----	
30	64000	-----	(solar)
31	40000	-----	

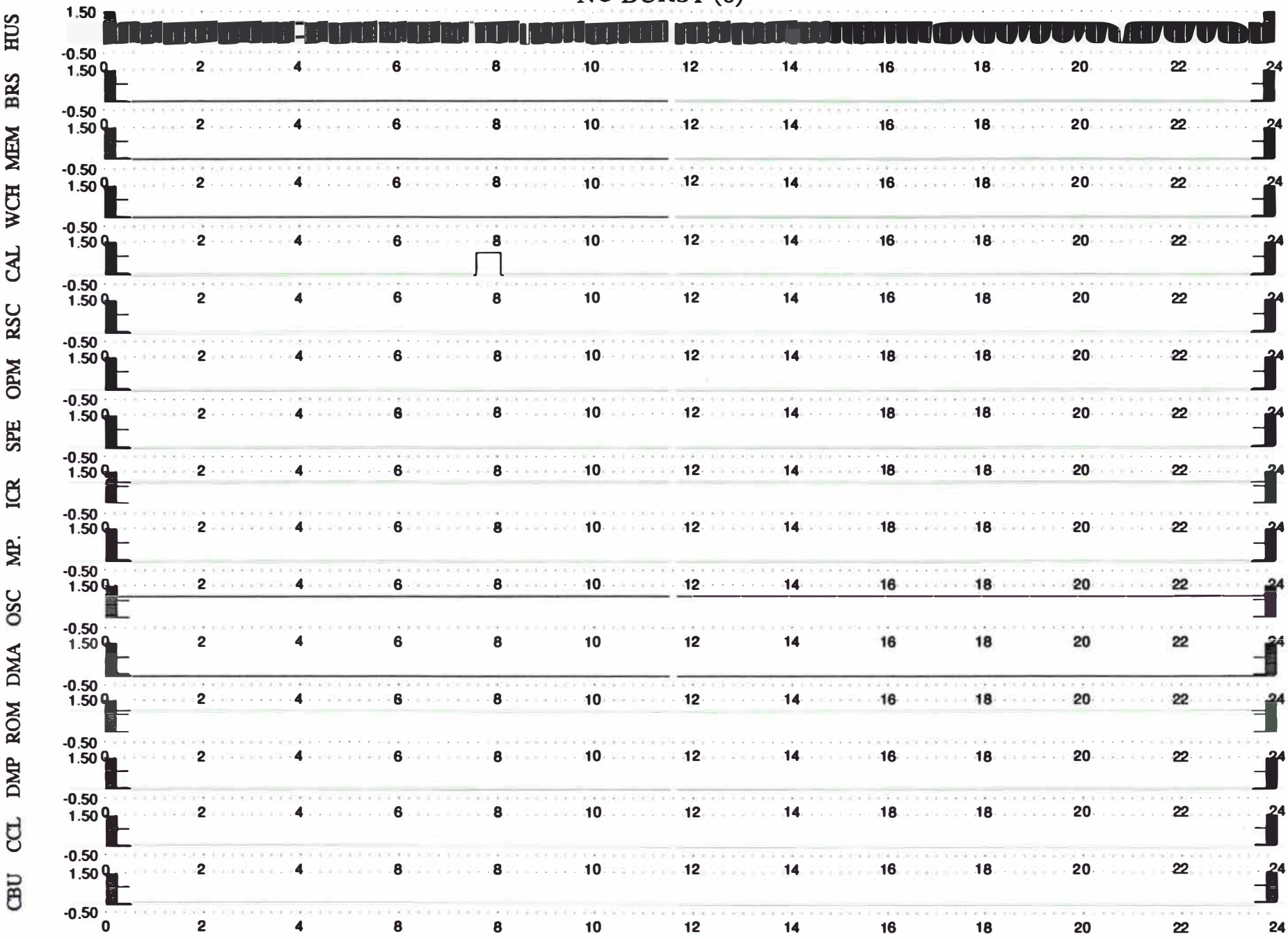
The Earth-Ulysses distance varied between about 5.76 and 6.28 AU in this period.


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/13
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 92/08/28, 2142 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 Flare
* Solar Burst Trigger


GOES
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/13, 0000:00
Plot created: 95/05/25, 2150
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 226, year 1992 to day 226, year 1992 9/11/92

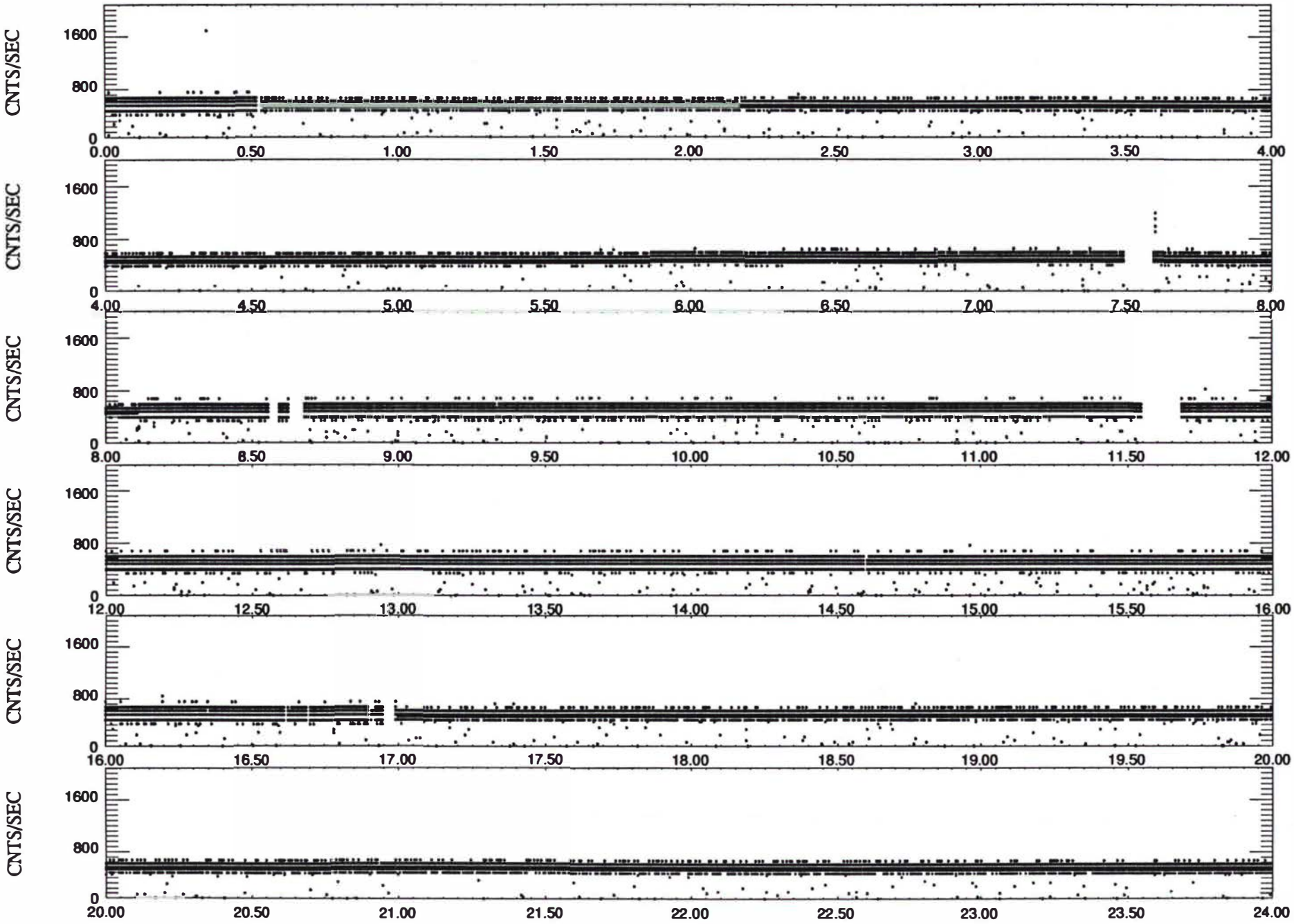
NO BURST (6)



UNIV AL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 226, year 1992 to day 226, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIV AL TIME

```
          ********************
          *CATSEARCH PROGRAM*
          ********************

BATSE BURST # 1815
EVENT OF 1992 AUG 14 DAY OF YEAR=227
EVENT CROSSING TIME AT BATSE      : 22194. S. OR 06:09:53.8
COORDINATES ARE     .000     .000        6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 260.200  -44.900
BATSE PEAK COUNTING RATE:  0000   C/S

EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
POSITION OF ULYSSES ON 14/ 8/  92 IS:
RA=  155.375 DEC=     2.753 DIST=     6.256 AU
BATSE-ULYSSES DISTANCE =  935830280. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 77.59 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=  670.95 SECS.
CROSSING TIME AT ULYSSES     IS 22865. S. OR 06:21:04.7 +/-  589.48 SECONDS
```

RI

```
          ********************
          *BATSEARCH PROGRAM*
          ********************

BATSE ~~BURST~~ # WATCH
EVENT OF 1992 AUG 14 DAY OF YEAR=227
EVENT CROSSING TIME AT BATSE      : 22231. S. OR 06:10:31.0
COORDINATES ARE     .000     .000        6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 260.000  -46.000
BATSE PEAK COUNTING RATE: 0          C/S

EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 14/ 8/  92 IS:
RA=  155.409 DEC=     2.729 DIST=     6.256 AU
BATSE-ULYSSES DISTANCE =  935939551. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 77.93 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=  652.65 SECS.
CROSSING TIME AT ULYSSES     IS 22884. S. OR   06:21:23 +/-  589.96 SECONDS

EVENT CROSSING TIME AT MARS        WILL BE FOUND
POSITION OF MARS ON 14/ 8/  92 IS:
RA=   70.691 DEC=    21.651 DIST=     1.432 AU
MARS-BATSE DISTANCE =  214223700. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 25.50 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=  644.94 SECS.
CROSSING TIME AT MARS        IS 22876. S. OR   06:21:15 +/-   63.21 SECONDS
```

RI

Helio corr removed

Date: Dec 8 '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?

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?

3. PVO Data

☐ Ephemeris of PVO used (not Venus)?

☐ 2000 coordinates used?

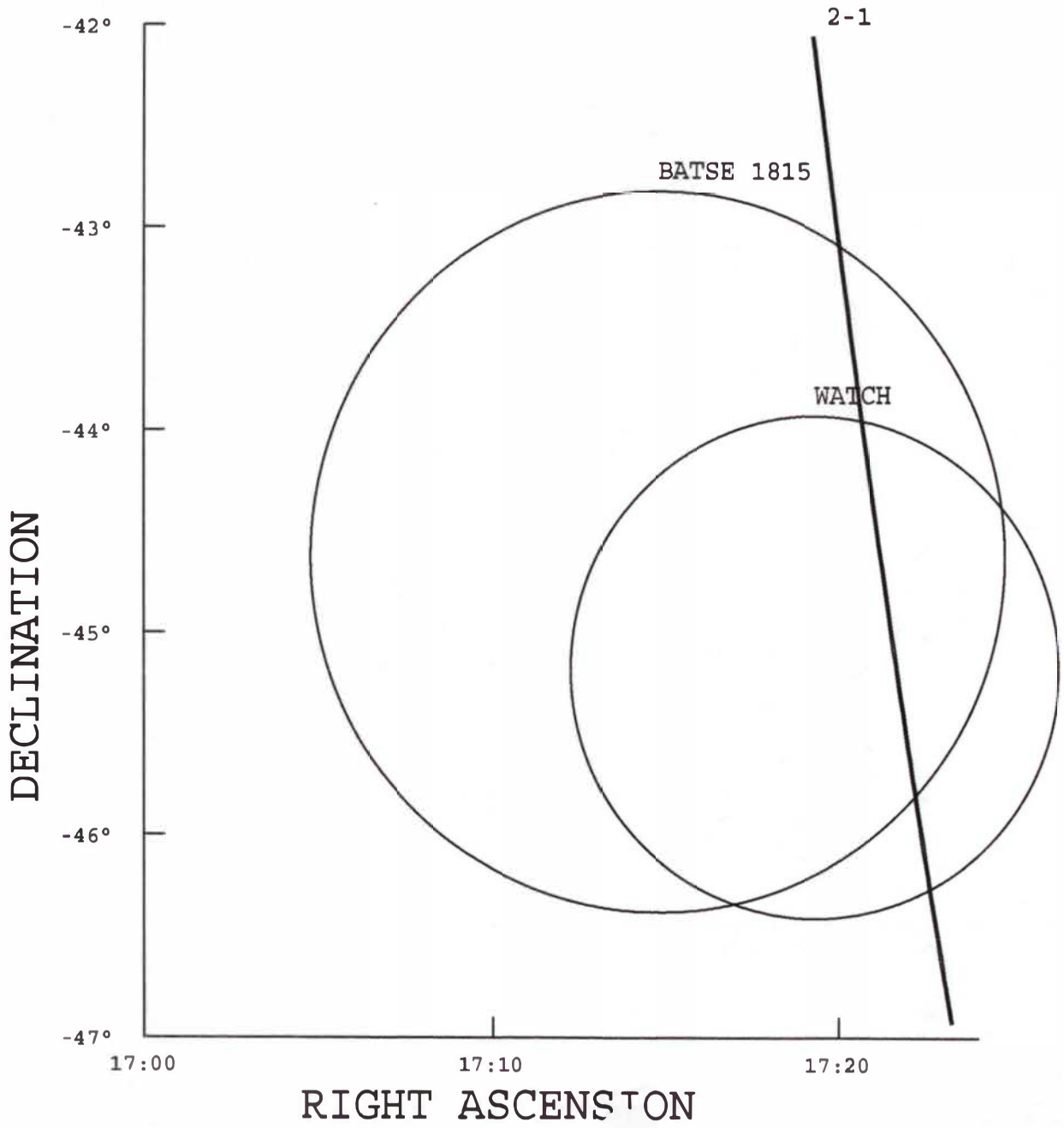
☐ Geocentric time used?

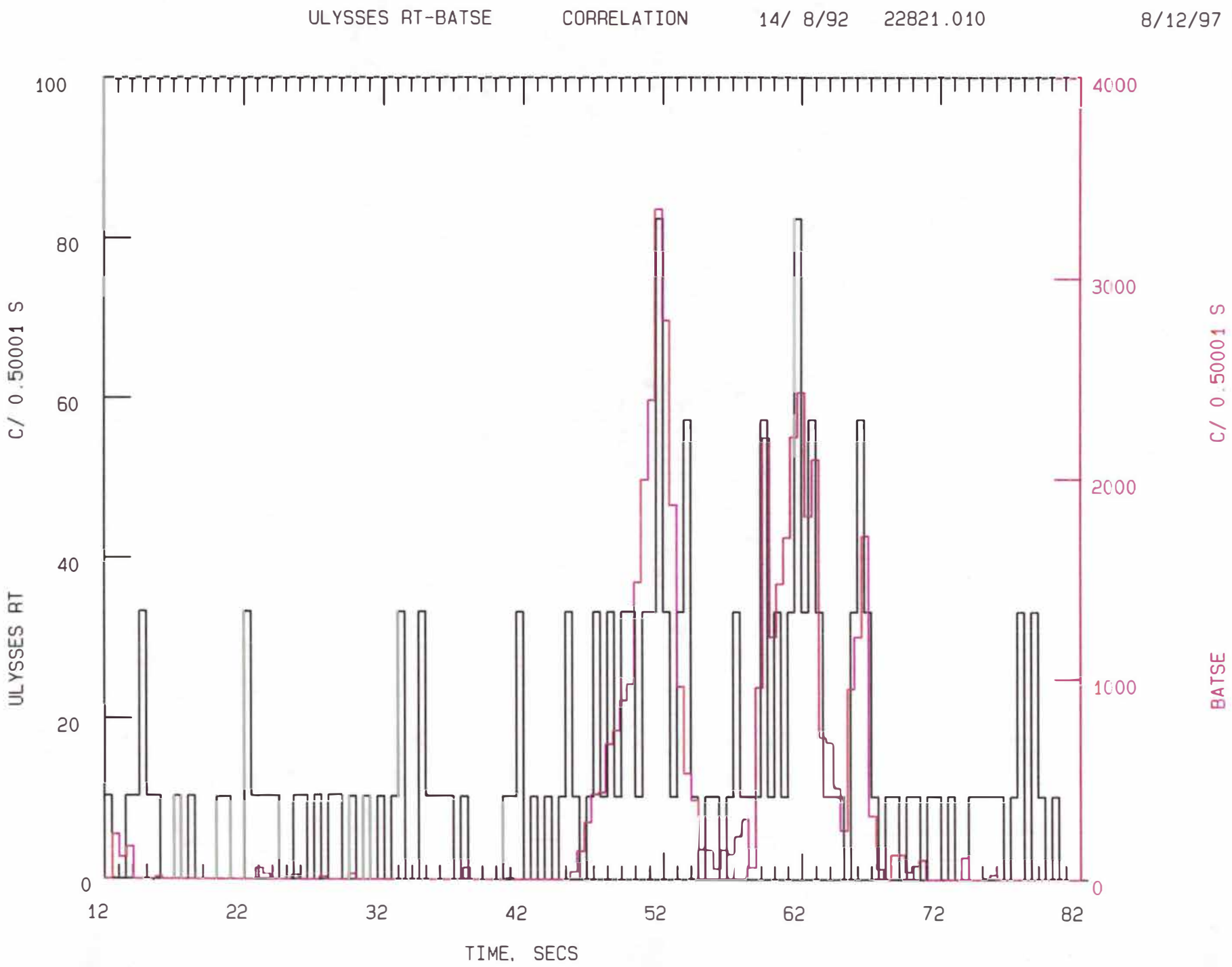
☑ ACCESS database updated?

EVENT OF AUG 14, 1992 6:20

8/12/97

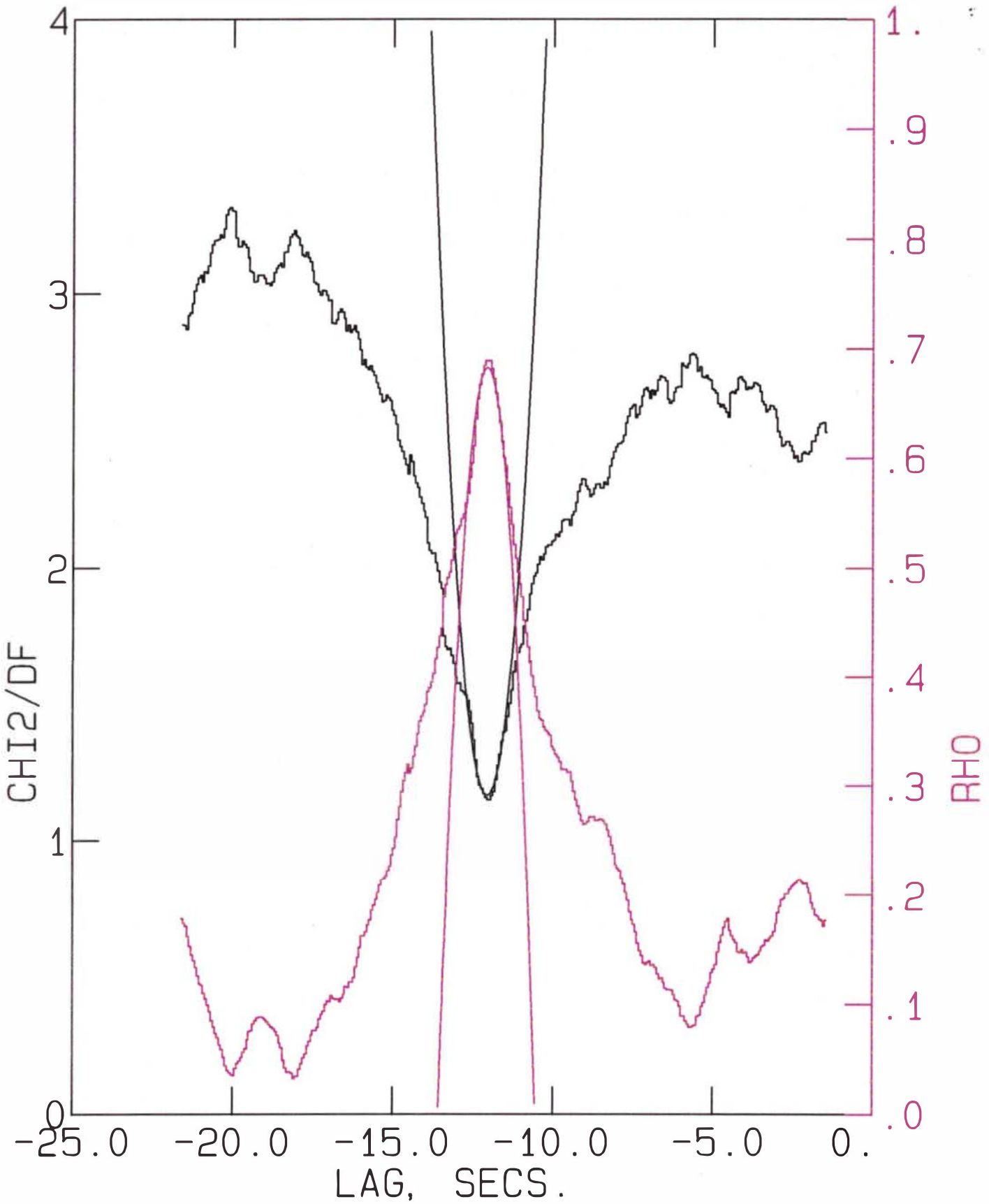
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 BATSE




ULYSSES RT-BATSE CORRELATION 14/ 8/92 22821.010 8/12/97
100
80
60
40
20
0
C/ 0.50001 S
ULYSSES RT
4000
3000
2000
1000
0
C/ 0.50001 S
BATSE
12
22
32
42
52
62
72
82
TIME, SECS

8/12/97

ULYSSES RT-BATSE CORRELATION 14/ 8/92 22821.010



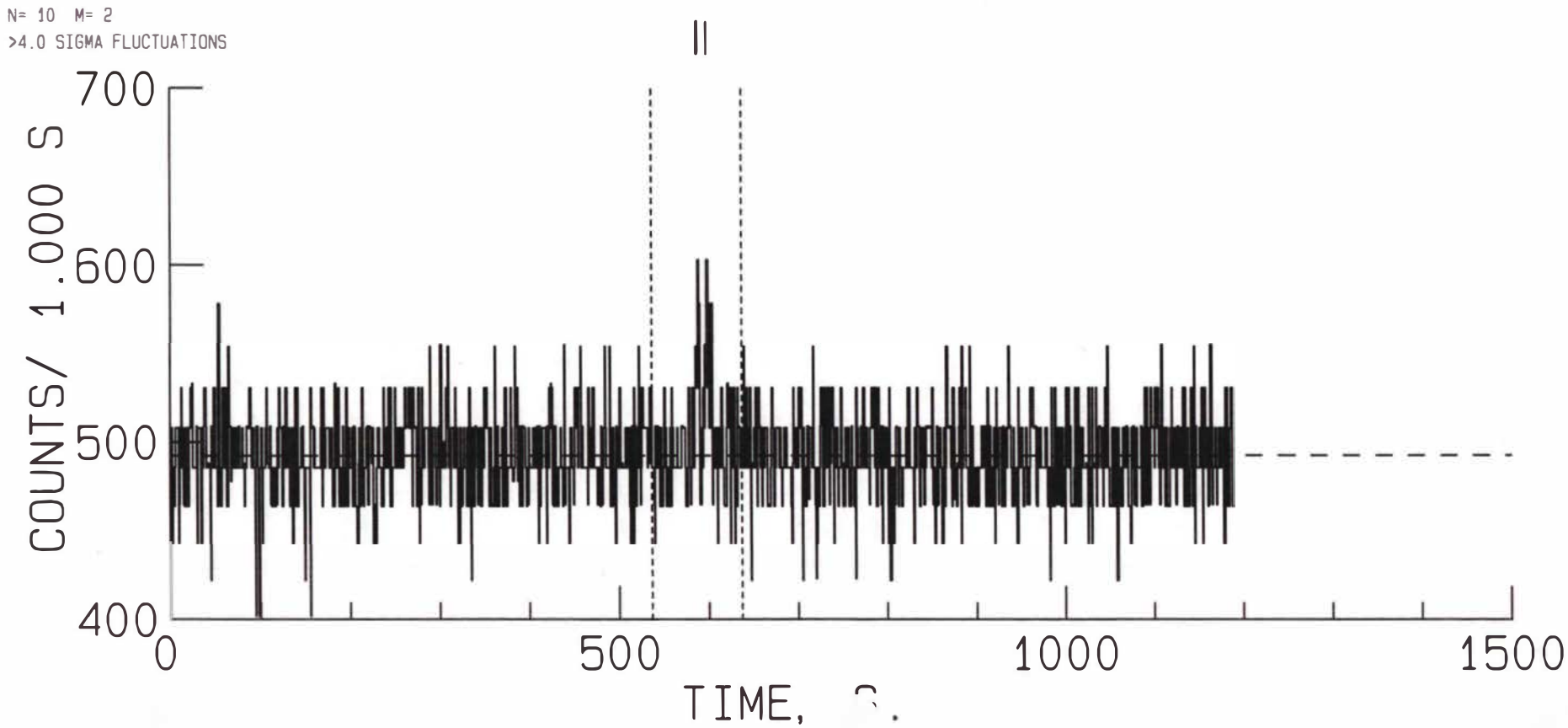
ULYSSES RT

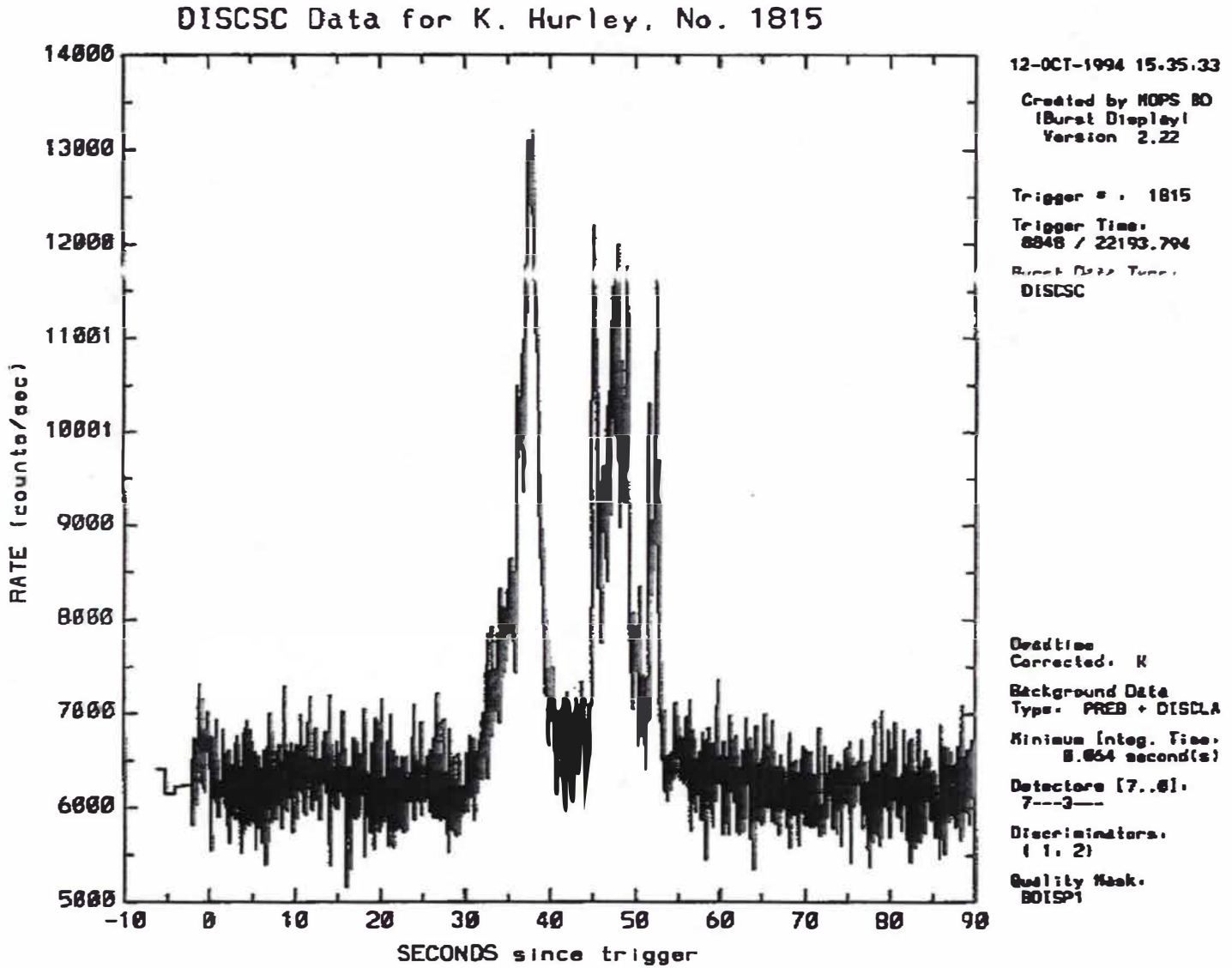
8/12/97

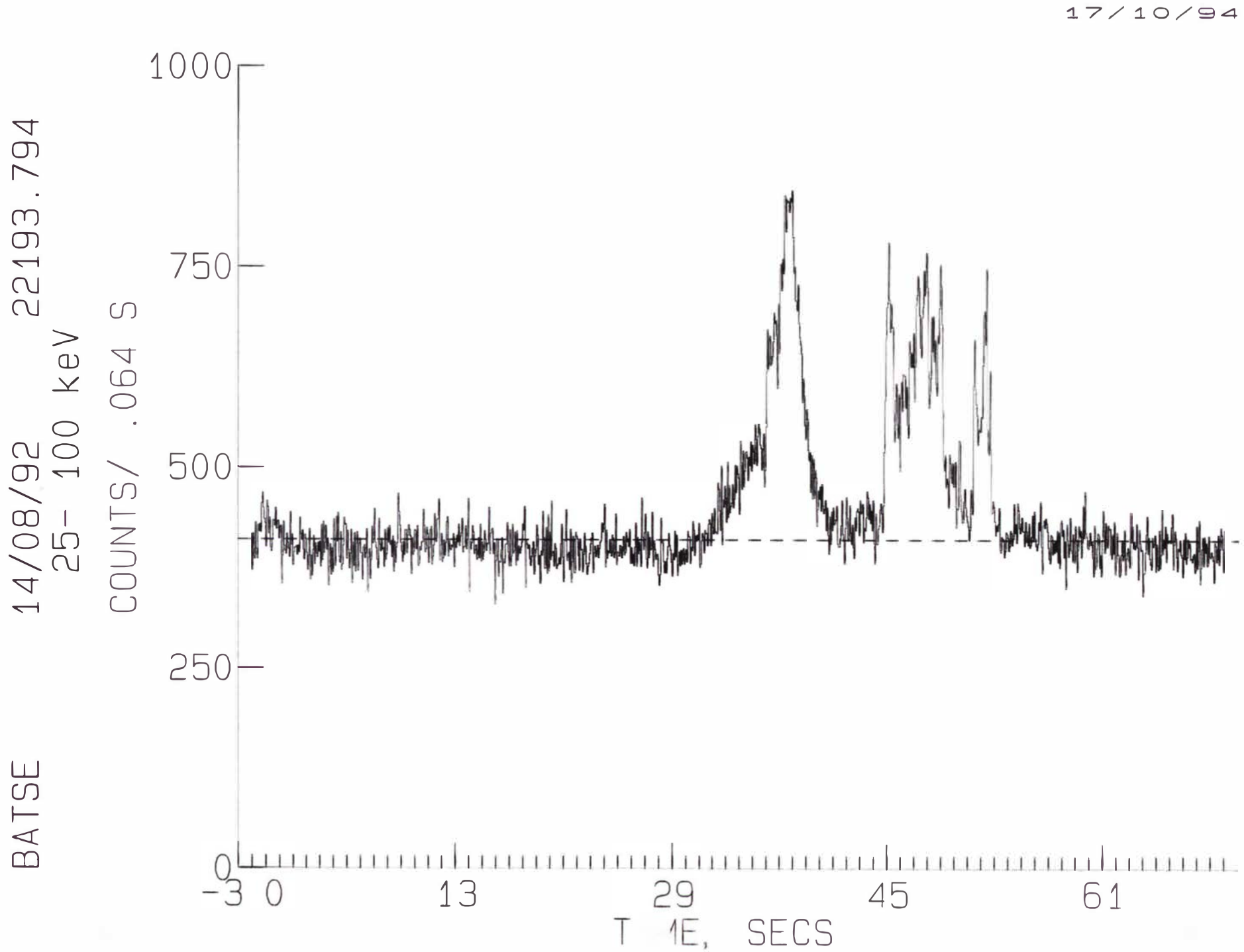
14/ 8/92 22284.093 s

0.500 S INTERVALS REGROUPED BY 2

22- 152 keV




DISCSC Data for K. Hurley, No. 1815
RATE (counts/sec)
14000
13000
12000
11001
10001
9000
8000
7000
6000
5000
-10
0
10
20
30
40
50
60
70
80
90
SECONDS since trigger
12-OCT-1994 15.35.33
Created by MOPS BD
(Burst Display)
Version 2.22
Trigger # . 1815
Trigger Time:
8848 / 22193.794
Burst Data Type:
DISCSC
Deadtime
Corrected: N
Background Data
Type: PREB + DISCLA
Minimum Integ. Time:
0.064 second(s)
Detectors [7..0]:
7---3---
Discriminators:
(1, 2)
Quality Mask:
BDISP1


17/10/94
BATSE 14/08/92 22193.794
25- 100 keV
COUNTS/ .064 S
1000
750
500
250
0
-3 0
13
29
45
61
T 1E, SECS

91/12/21 06:17 N/O
91/12/21 22:03 N/O
91/12/27 15:56 N/O
92/01/05 17:41 N/O
92/01/13 20:52 N/O
92/01/25 08:57 N/O
92/01/30 00:29 N/O
92/01/30 22:50 N/O
92/02/18 18:42 N/O
92/02/21 06:14 N/O
92/02/26 18:15 YES TRIGGER AT 29336 S UT
92/02/27 06:00 N/O
92/02/27 08:45 N/O
92/03/02 06:16 N/O
92/03/04 14:34 N/O
92/03/07 00:18 N/0
92/03/21 12:50 (NO)
92/03/26 02:01 N/O
92/03/27 09:38 N/O
92/03/29 16:38 (NO)
92/04/04 22:37 N/O
92/04/08 12:05 N/O
92/04/20 02:12 N/O
92/04/29 18:59 N/O
92/05/02 19:05 N/O
92/06/01 THRU 92/06/29 TURNED OFF--N/O
92/07/01 19:39 N/O
92/07/07 06:33 N/O
92/07/17 01:15 N/O
92/07/23 00:59 N/O
92/07/23 01:00 N/O
92/07/23 21:48 N/O
92/07/25 19:30 N/O
92/07/25 22:49 N/O
92/07/26 00:34 N/O
92/07/31 17:07 N/O
92/08/10 21:35 N/O
92/08/14 06:10 N/O
92/08/16 12:36 N/O
92/08/22 22:39 N/O
92/08/30 01:45 N/O
92/09/04 04:41 N/O

THIS LIST IS NOT COMPLETE. IT INCLUDES EVENTS FOR WHICH NO REAL-TIME DATA ARE AVALIABLE BECAUSE OF INAPPROPRIATE MODE, NO TRACKING, OR THE EXPERIMENT WAS TURNED OFF. WHERE DATA HAVE BEEN CHECKED, SENSITIVITY DEPENDS UPON THE TIME RESOLUTION AVAILABLE IN THE DATA. I'LL BE SENDING ADDITIONAL RESULTS AS THEY BECOME AVAILABLE.

REGARDS,

RAY

From root Wed Dec 8 07:58 1993
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA08899; Wed, 8 Dec 93 07:57:44
Received: from mx.nsi.nasa.gov by sunspot.ssl.berkeley.edu (4.1/1.30.1)
id AA22497; Wed, 8 Dec 93 07:00:41 PST
Received: Wed, 8 Dec 93 07:03:53 PST from ESSDP2.dnet by mx.nsi.nasa.gov (4.1/1.2)
Message-Id: <9312081503.AA10272@mx.nsi.nasa.gov>
Received: from ESSDP2.dnet by AMES.dnet with MAIL-11
(utk-mail11d v1.7); Wed, 8 Dec 93 07:03:57 PST
Date: Wed, 8 Dec 93 07:03:57 PST
From: 068486@essdp2.span.nasa.gov
X-To: AMES::"khurley@space6.ssl.berkeley.edu"
Subject: RE:
To: khurley@space6.ssl.berkeley.edu
Status: R

KEVIN,
HERE ARE THE RESULTS OF OUR SURVEY OF THE PVO REAL-TIME DATA FOR EVIDENCE OF
RESPONSE TO EVENTS LISTED IN YOUR CATALOG.

DATE	TIME	PVO RESPONSE
90/11/11	21:49	N/O
90/11/12	14:57	N/O
90/11/16	01:42	N/O
90/11/19	18:08	N/O
90/11/21	00:04	N/O
90/11/21	18:09	N/O
90/12/02	13:45	N/O
90/12/21	00:30	N/O
90/12/25	05:50	N/O
91/01/17	00:57	N/O
91/01/24	11:50	N/O
91/02/04	08:58	N/O
91/02/04	14:19	N/O
91/02/04	14:58	N/O
91/02/17	02:59	N/O
91/03/14	22:56	N/O
91/03/15	22:55	N/O
91/04/04	17:17	(NO)
91/05/18	17:10	N/O
91/05/23	19:03	N/O
91/05/27	23:44	N/O
91/05/28	21:26	N/O
91/06/02	22:55	N/O
91/06/09	00:48	N/O
91/06/29	19:55	N/O
91/07/09	20:22	N/O
91/07/17	13:07	N/O
91/08/03	08:24	N/O
91/08/15	12:34	N/O
91/08/15	14:24	N/O
91/08/16	01:57	(NO)
91/09/05	23:48	N/O
91/09/16	21:58	N/O
91/09/25	03:35	N/O
91/09/26	18:25	N/O
91/09/30	11:55	N/O
91/10/03	00:39	N/O
91/10/04	01:27	N/O
91/10/06	09:01	(NO)
91/10/22	04:13	N/O
91/10/25	21:25	N/O
91/11/06	03:42	N/O
91/11/14	01:40	N/O
91/11/17	01:58	N/O
91/12/05	23:04	N/O

From sb@dsri.dk Tue Oct 19 10:38:38 1993
Date: Tue, 19 Oct 93 18:36:43 +0100
From: Soeren Brandt <sb@dsri.dk>
To: khurley@sunspot.ssl.berkeley.edu
Subject: GRB 920814
Content-Length: 1211

Watch. 920814

Hello Kevin,
I start by sending the WATCH data for GRB 920814.
I will be very interested in knowning where the timing
circle meets the circle from GRB 911209.
The other data will follow soon.

Soren

****
WATCH-EURECA data for GRB 920814

number of bins 128
start of first bin 22202.147 06:10:02.147
end of last bin 22320.230 06:12:00.230
duration per bin 0.923 sec

231	262	224	231	274	245	234	260	231	240
233	218	264	248	248	262	272	228	248	239
224	263	234	249	243	232	247	287	282	295
346	400	353	285	266	258	246	263	246	306
284	324	352	304	317	297	294	329	255	278
246	254	243	249	230	258	243	242	261	261
272	241	250	263	259	262	265	243	252	263
249	245	249	284	249	264	240	253	257	230
261	272	265	225	250	251	237	262	243	254
263	258	281	242	265	246	226	238	262	238
258	257	271	271	246	269	245	232	253	245
269	256	233	223	233	272	262	297	242	242
283	257	244	265	224	234	258	255		

From sb@dsri.dk Fri Oct 15 06:35:14 1993
Date: Fri, 15 Oct 93 14:33:16 +0100
From: Soeren Brandt <sb@dsri.dk>
To: khurley@sunspot.ssl.berkeley.edu
Subject: more bursts
Content-Length: 583

Hello Kevin,

I have localized a few more bursts in the WATCH-EURECA data.
Here follows the preliminary positions (J2000) and the time
of peak flux.

GRB 920814 06:10:31.2 (22231s) 17h20m22s -46d10' 260.09, -46.17

GRB 920918 09:41:20 16h23m30s -04d18' 245.875, -4.30 RI

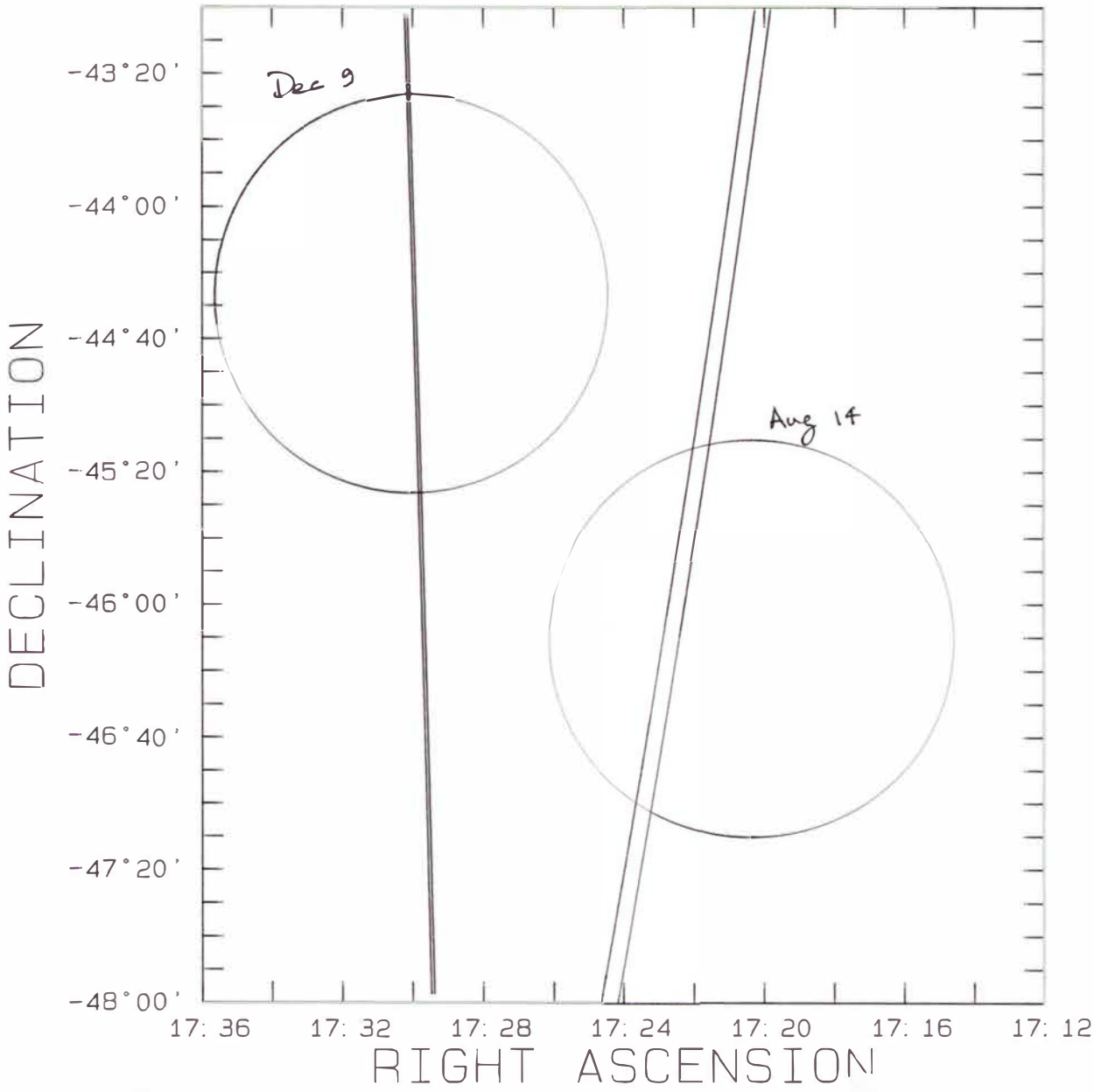
GRB 921118 22:12:12 23h23m26s 49d34' 350.858, 49.57 Weak RI

I am particularly interested in the event of Aug 14 1992.
It happens to be rather close to the error box of GRB 911209.
So it would be very interesting to see where the timing circles
from those two event meet.
Do you see that burst at all, it does not appear on your list.

Best regards,
Soren

27/10/93

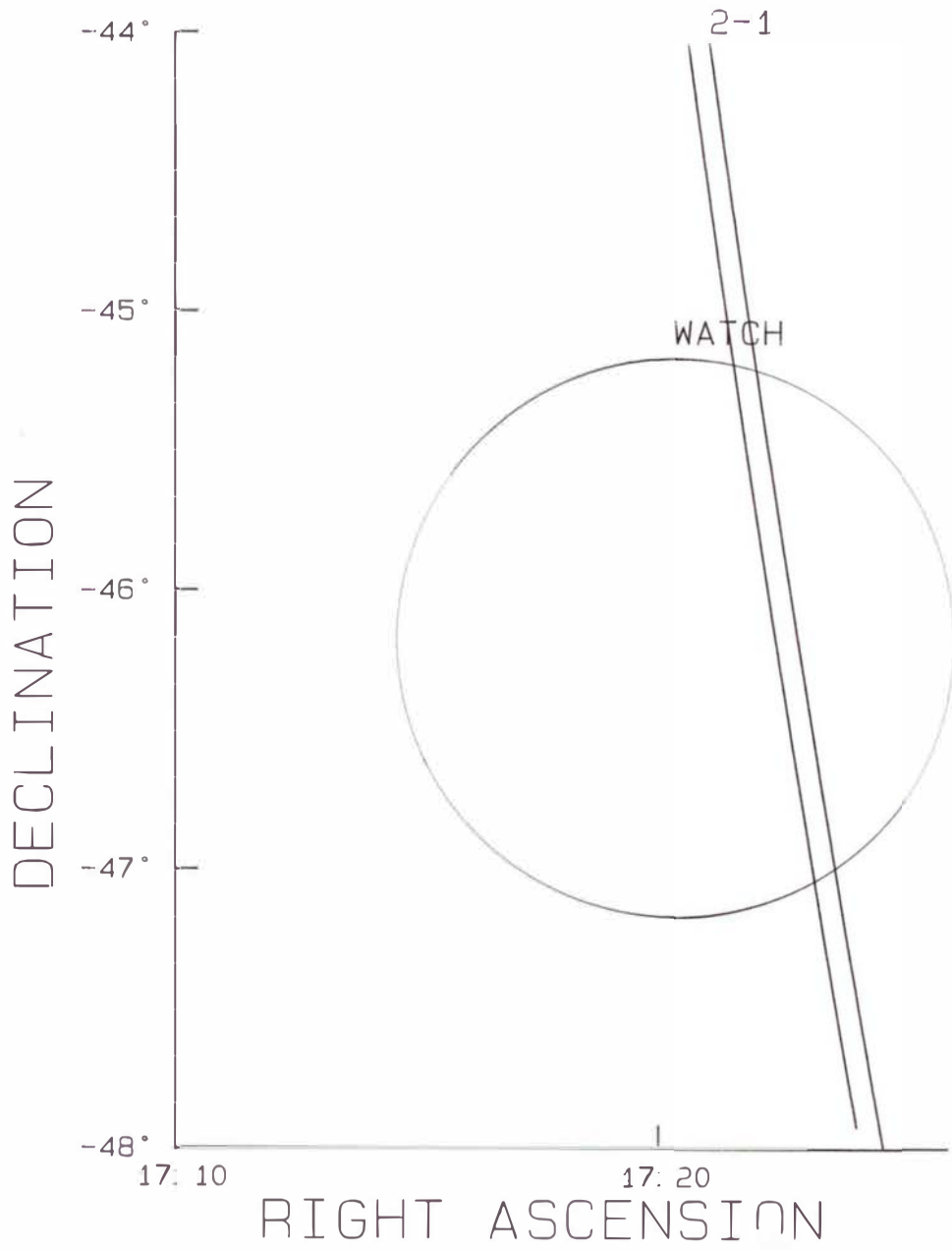
AUG 14, 1992 6:20

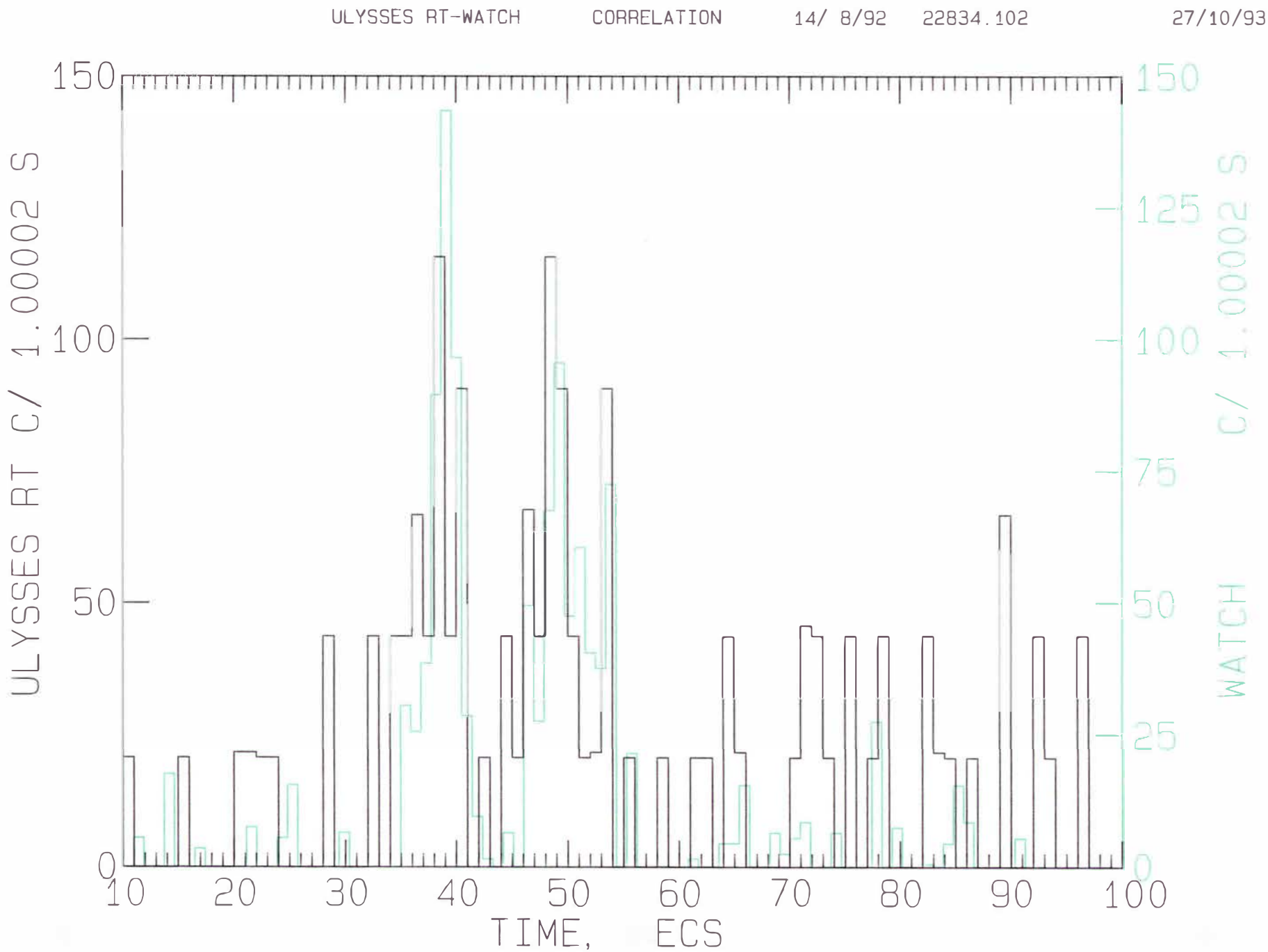


EVENT OF AUG 14, 1992 6:20

27/10/93

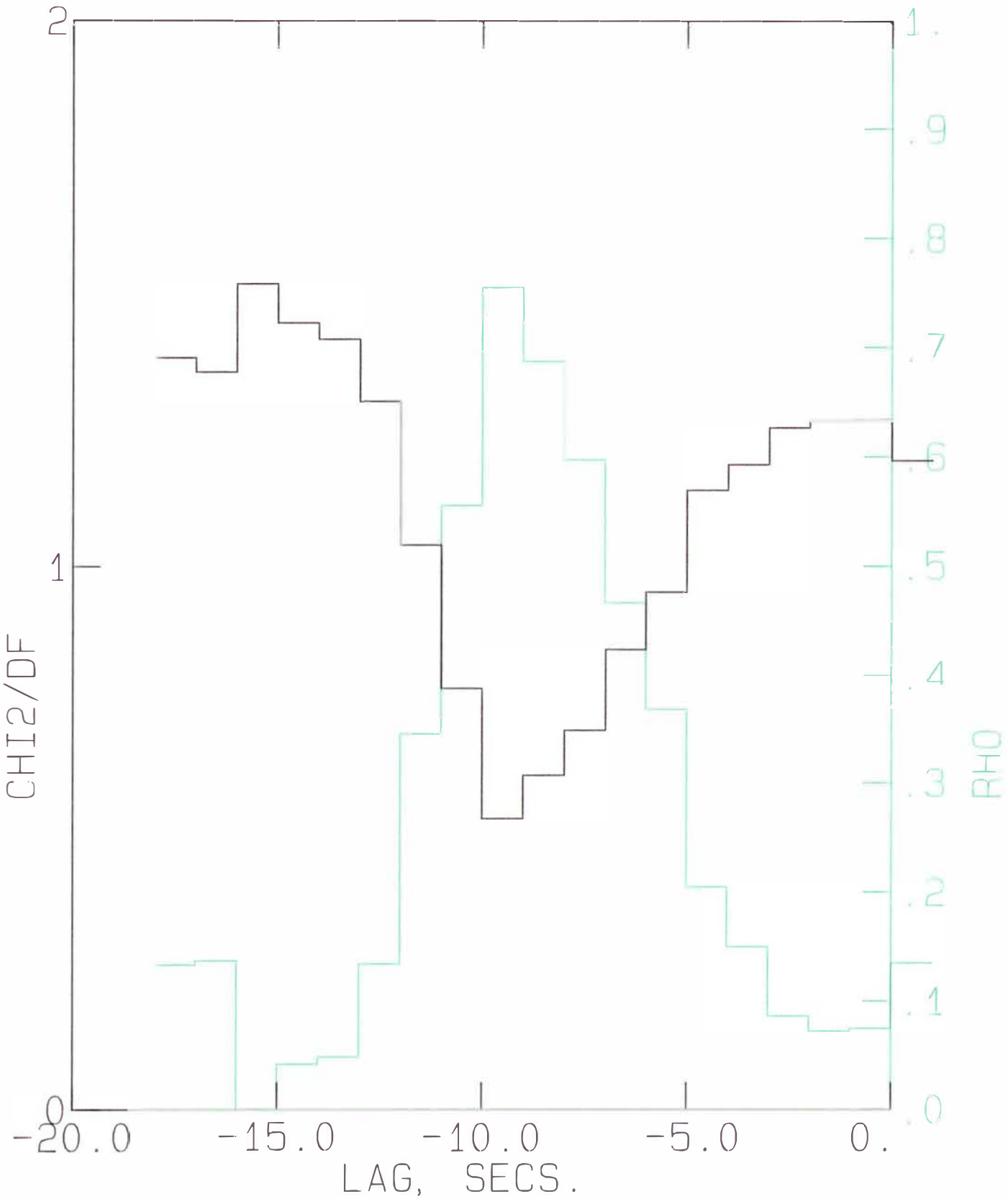
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 WATCH

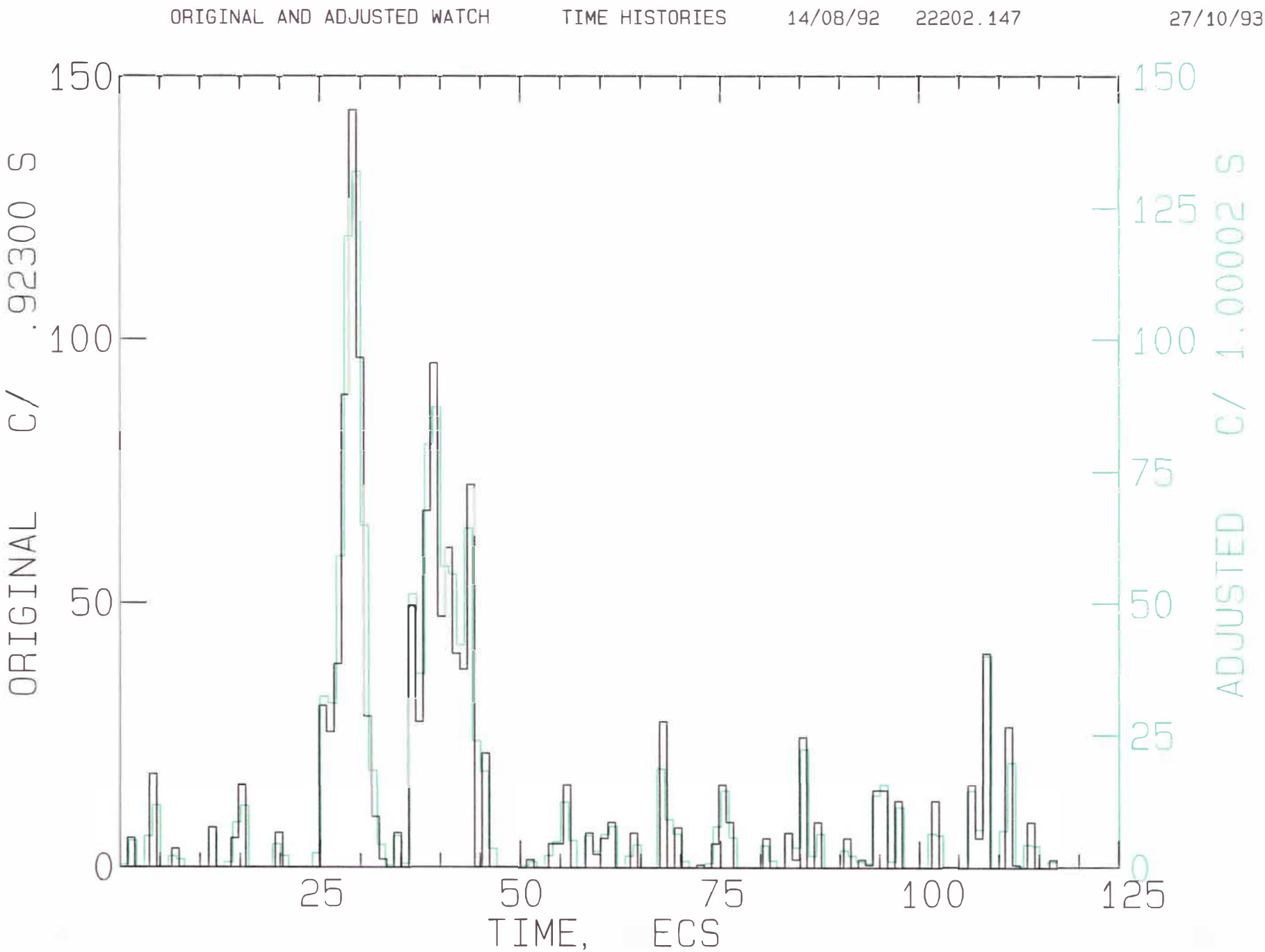



ULYSSES RT-WATCH CORRELATION 14/ 8/92 22834.102 27/10/93
ULYSSES RT C/ 1.00002 S
WATCH C/ 1.00002 S
TIME, ECS
0
50
100
150
25
75
125
10
20
30
40
50
60
70
80
90
100

27/10/93

ULYSSES RT-WATCH CORRELATION 14/ 8/92 22834.102




ORIGINAL AND ADJUSTED WATCH TIME HISTORIES 14/08/92 22202.147 27/10/93
ORIGINAL C/ .92300 S
ADJUSTED C/ 1.00002 S
TIME, ECS
0
25
50
75
100
125
150

WATCH 14/08/92 22202.147

15- 150 keV

COUNTS/ .923 S

0 80 160 240 320 400 480

0 25 50 75 100

TIME, SECS

27/10/93

From RUBIN@ssl.msfc.nasa.gov Wed Aug 19 15:12:17 1992
Date: Wed, 19 Aug 1992 17:12:24 -0500 (CDT)
From: RUBIN@ssl.msfc.nasa.gov
Subject: AD Messages
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @MOPS$SEND_MSG:BURST_SPAN
Content-Length: 1488

From: SSL::RUBIN 15-AUG-1992 17:49:00.84
To: BILLYB::BATSE
CC: RUBIN
Subj: AD Messages

AD EGRET/GSFC BURST.AD;1998 SM 2.04 15-AUG-1992 17:45
BATSE BURST TRIGGER
NO.: 01816

TIME: TJD=8848 SECONDS=28894

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=005.1 AZIMUTH=158.6 ERROR= DEGREES

COMMENTS:
RISING OCCULTATION STEP OF X-RAY TRANSIENT GRO J0422+32
(This is a retransmission of an earlier message which was
not received by everyone on the list).

From RUBIN@ssl.msfc.nasa.gov Sat Aug 15 16:08:03 1992
Date: Sat, 15 Aug 1992 18:07:20 -0500 (CDT)
From: RUBIN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER
NO.: 01817 Aug 14

TIME: TJD=8848 SECONDS=39965

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=002.9 AZIMUTH=167.8 ERROR= DEGREES

COMMENTS:
RISING OCCULTATION STEP OF X-RAY TRANSIENT GRO J0422+32

From RUBIN@ssl.msfc.nasa.gov Wed Aug 19 15:16:27 1992
Date: Wed, 19 Aug 1992 17:16:36 -0500 (CDT)
From: RUBIN@ssl.msfc.nasa.gov
Subject: AD Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @MOPS$SEND_MSG:BURST_SPAN
Content-Length: 1300

BATSE BURST TRIGGER

NO.: 01818

TIME: TJD=8848 SECONDS=46971

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON PRECIPITATION EVENT
(This is a retransmission of an earlier message which was not
received by everyone).

```
          ********************
          *CATSEARCH PROGRAM*
          ********************

BATSE BURST # 1819
EVENT OF 1992 AUG 14 DAY OF YEAR=227
EVENT CROSSING TIME AT BATSE      : 48303. S. OR 13:25:03.2
COORDINATES ARE     .000     .000        6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 229.500  -25.100
BATSE PEAK COUNTING RATE:  0000   C/S

EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
POSITION OF ULYSSES ON 14/ 8/  92 IS:
RA=  155.375 DEC=     2.753 DIST=     6.256 AU
BATSE-ULYSSES DISTANCE =  935830280. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=103.12 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -708.75 SECS.
CROSSING TIME AT ULYSSES     IS 47595. S. OR 13:13:14.5 +/-  567.04 SECONDS
```

ND

```
From RUBIN@ssl.msfc.nasa.gov Wed Aug 19 15:20:08 1992
Date:    Wed, 19 Aug 1992 17:20:16 -0500 (CDT)
From: RUBIN@ssl.msfc.nasa.gov
Subject: AD Messages
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
        khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @MOPS$SEND_MSG:BURST_SPAN
Content-Length: 1543

                BATSE BURST TRIGGER
NO.: 01819

TIME: TJD=8848 SECONDS=48303

TYPE: BURST                     SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:       SIGMA

INTENSITY:          COUNTS/CM2

LOCATION: ZENITH=146.1  AZIMUTH=20.7   ERROR=      DEGREES

COMMENTS:
BURST WITH ONE MAIN PEAK OF DURATION ~ 5 SECS. SMALLER PEAKS MAY
ALSO BE PRESENT, INCLUDING TWO LONGER, WEAKER PULSES OF DURATION
~ 10 SECS. THE SECOND PULSE ENDS ~ 60 SECS AFTER THE MAIN PEAK
BEGINS. THE MAIN PEAK IS STRONG ABOVE 300 KEV.
(This is a retransmission of an earlier message which
was not received by everyone).
```

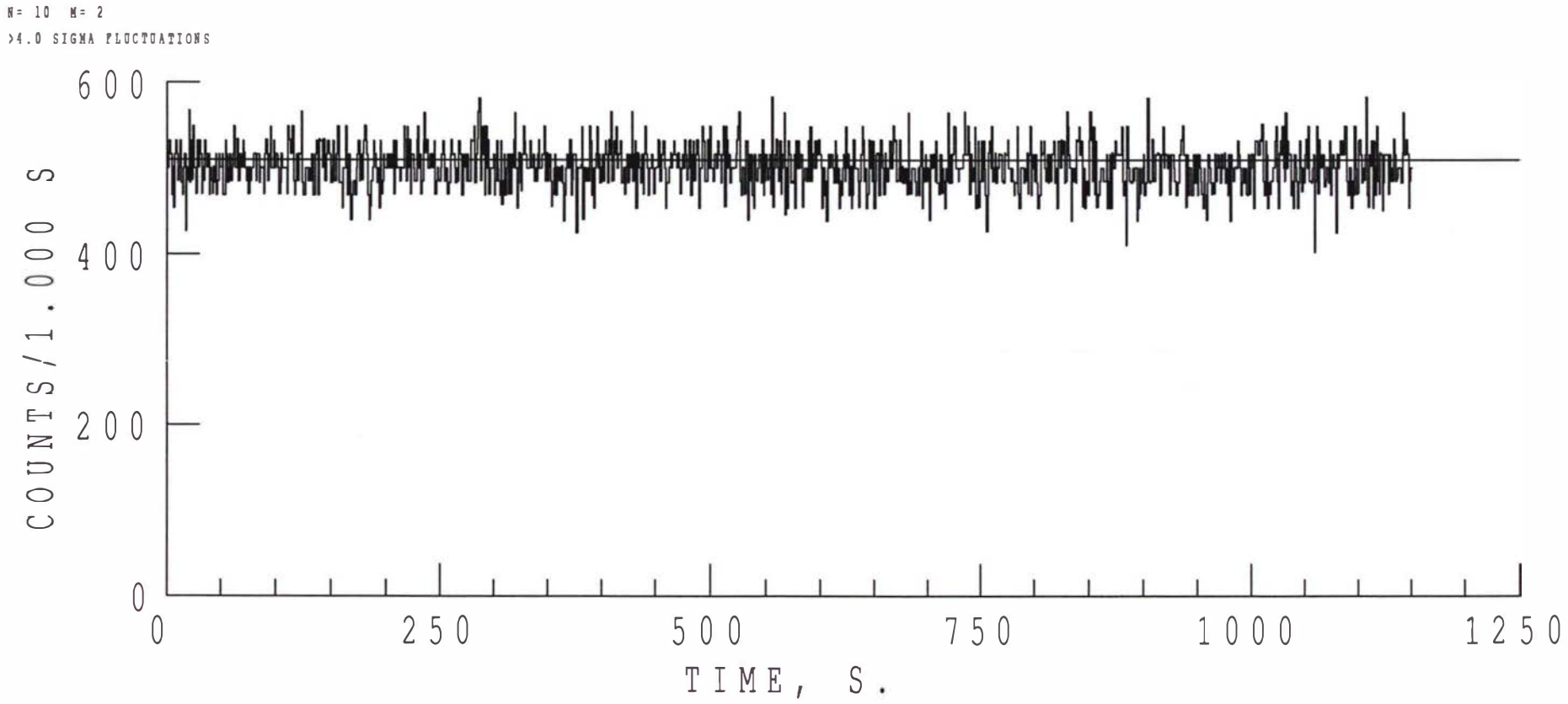
8/ 6/94

ULYSSES RT

14/ 8/92 47016.234 s

0.250 S INTERVALS REGROUPED BY 4

0- 0 keV



From RUBIN@ssl.msfc.nasa.gov Wed Aug 19 15:23:22 1992
Date: Wed, 19 Aug 1992 17:23:27 -0500 (CDT)
From: RUBIN@ssl.msfc.nasa.gov
Subject: AD Messages
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @MOPS$SEND_MSG:BURST_SPAN
Content-Length: 1300

BATSE BURST TRIGGER
NO.: 01820

TIME: TJD=8848 SECONDS=56571

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=021.1 AZIMUTH=156.7 ERROR= DEGREES

COMMENTS:
RISING OCCULTATION STEP OF X-RAY TRANSIENT
(This is a retransmission of an earlier message which
was not received by everyone).

From RUBIN@ssl.msfc.nasa.gov Wed Aug 19 15:27:48 1992
Date: Wed, 19 Aug 1992 17:27:42 -0500 (CDT)
From: RUBIN@ssl.msfc.nasa.gov
Subject: AD Messages
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @MOPS$SEND_MSG:BURST_SPAN
Content-Length: 1300

BATSE BURST TRIGGER
NO.: 01821

TIME: TJD=8848 SECONDS=67645

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=008.1 AZIMUTH=138.5 ERROR= DEGREES

COMMENTS:
RISING OCCULTATION STEP OF X-RAY TRANSIENT
(This is a retransmission of an earlier message which
was not received by everyone).

From RUBIN@ssl.msfc.nasa.gov Mon Aug 17 12:50:50 1992
Date: Mon, 17 Aug 1992 14:50:53 -0500 (CDT)
From: RUBIN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01822 Aug 14

TIME: TJD=8848 SECONDS=78712

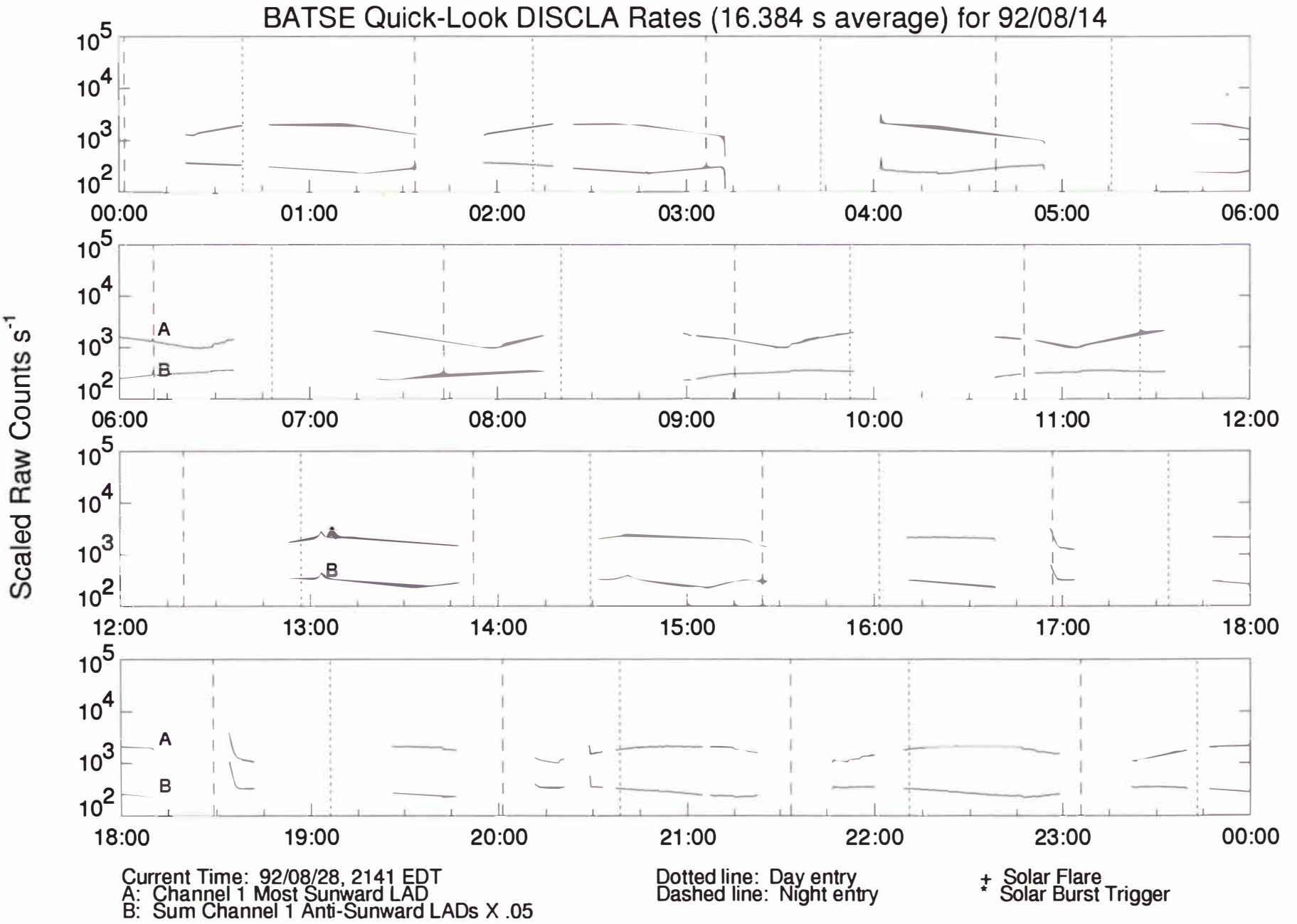
TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

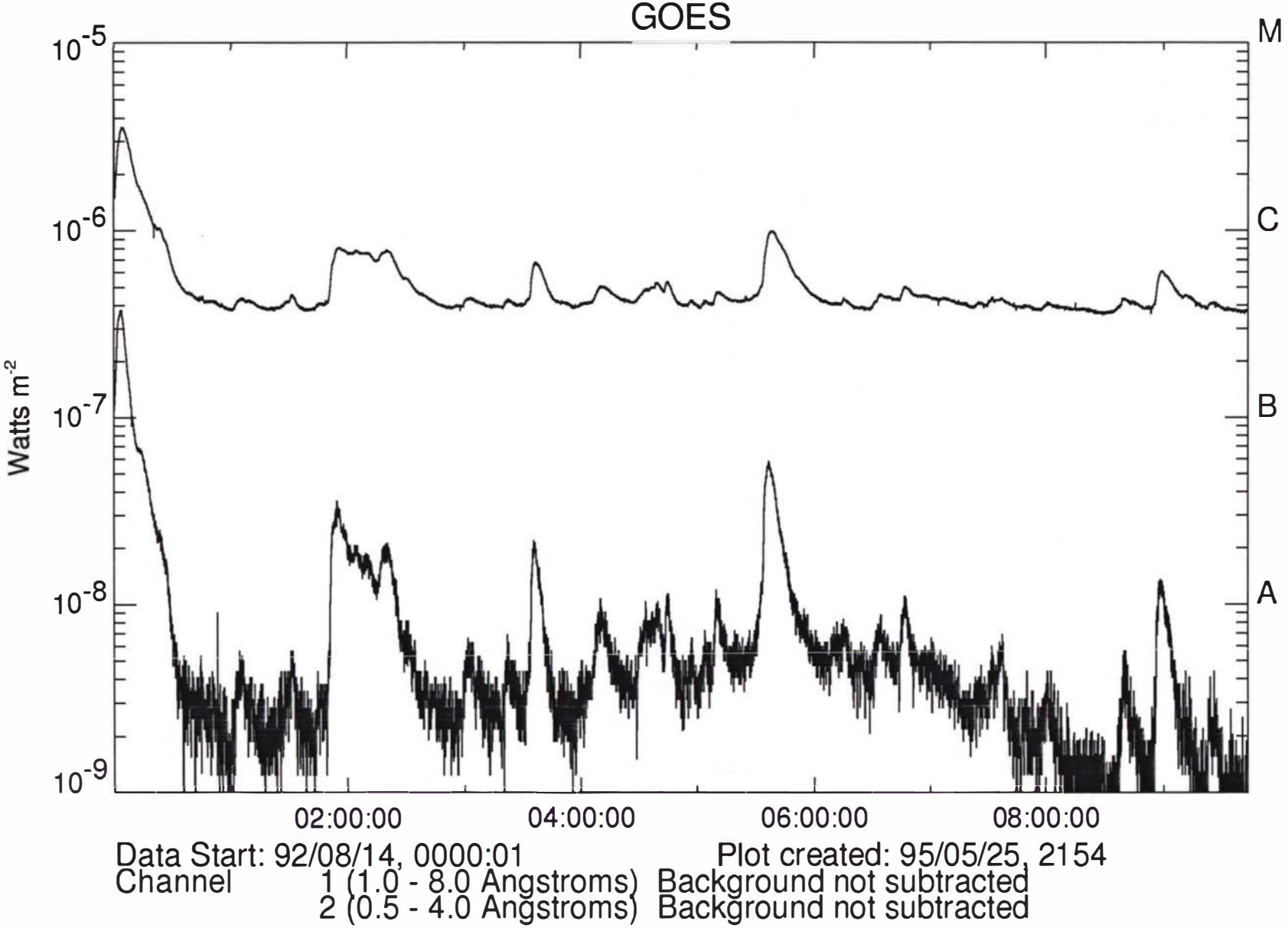
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=012.5 AZIMUTH=117.2 ERROR= DEGREES

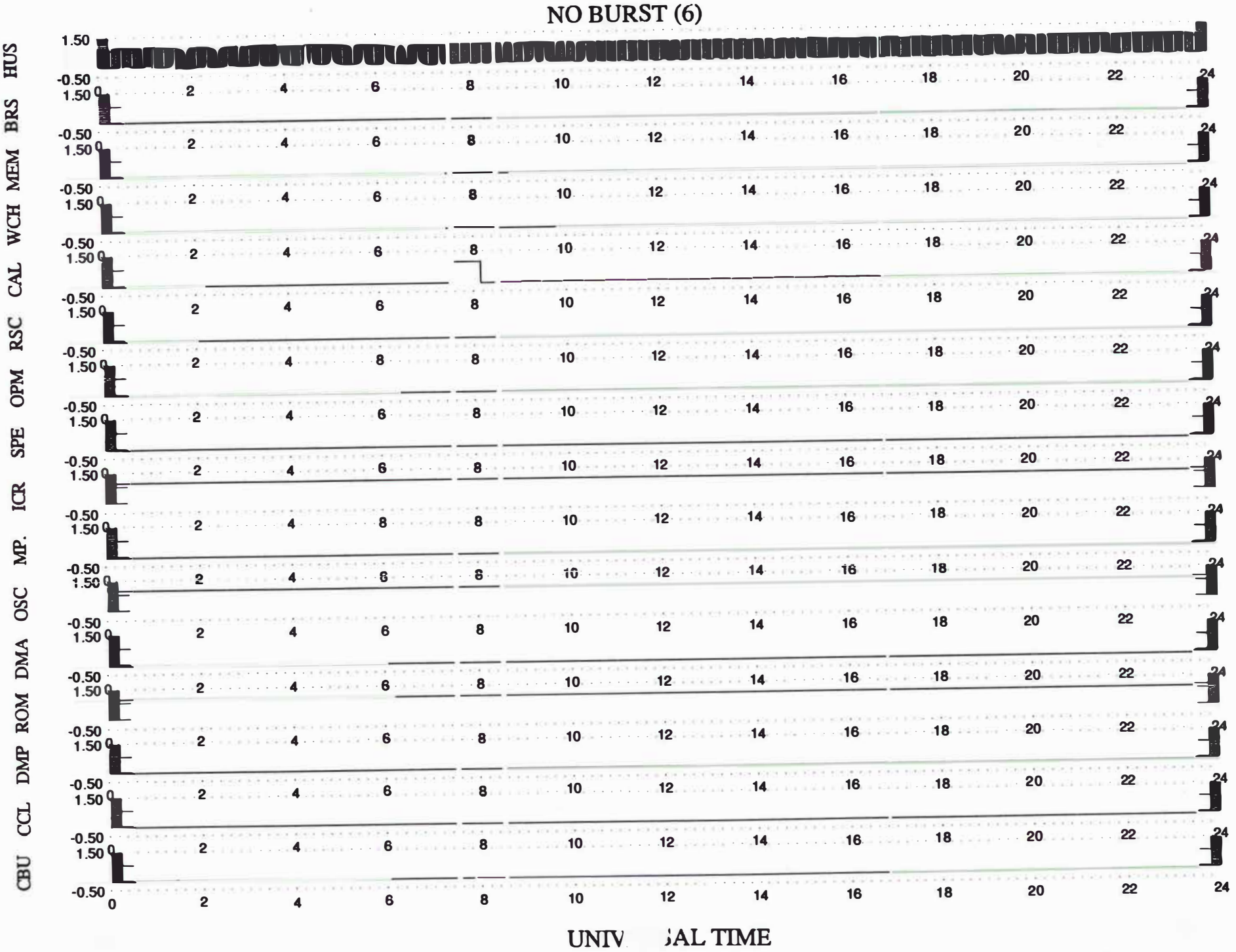
COMMENTS:
RISING OCCULTATION STEP OF X-RAY TRANSIENT


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/14
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2141 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 Flare
Solar Burst Trigger


GOES
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
M
C
B
A
02:00:00
04:00:00
06:00:00
08:00:00
Data Start: 92/08/14, 0000:01
Plot created: 95/05/25, 2154
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

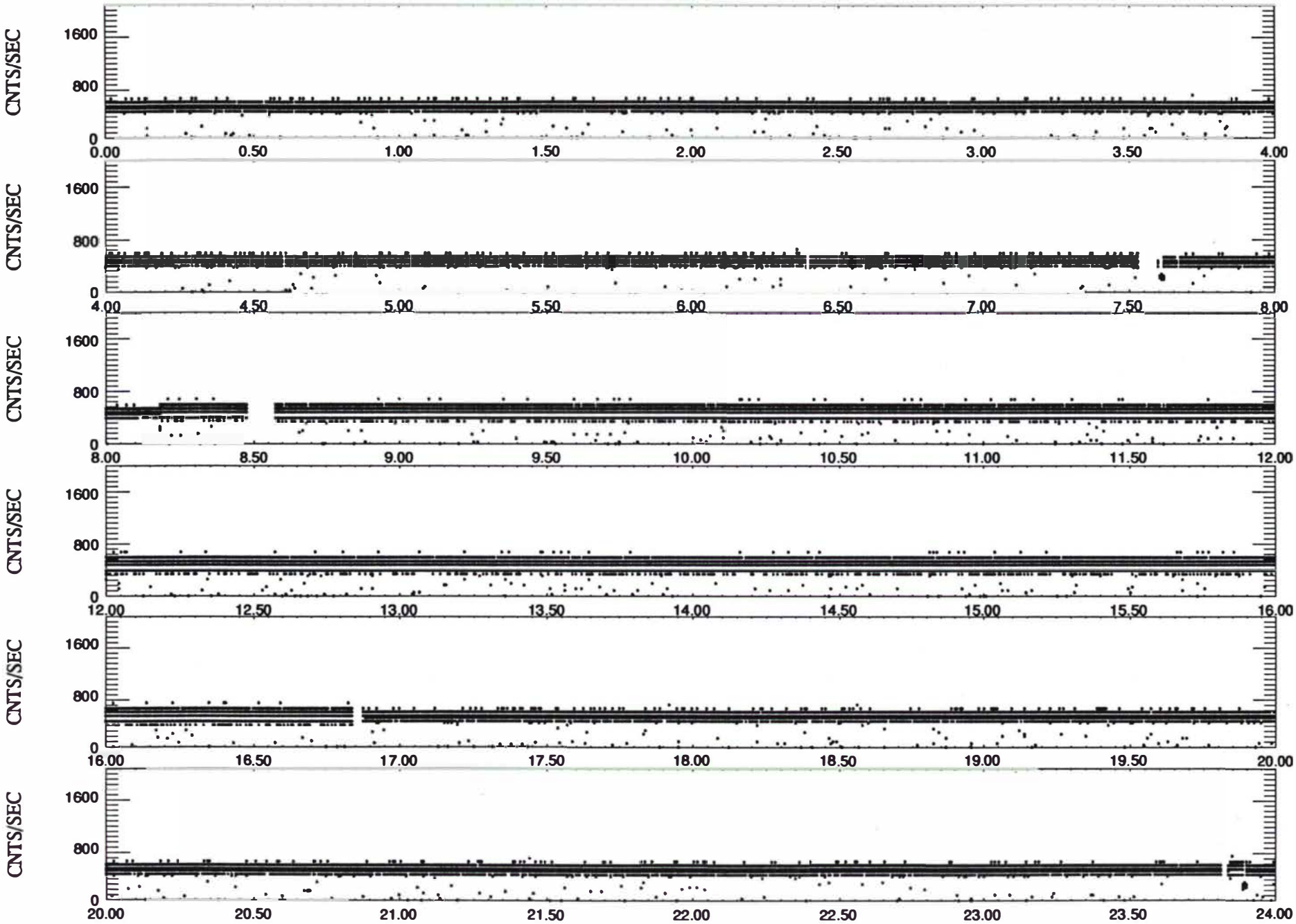
HUS MODES EDR day 227, year 1992 to day 227, year 1992

9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 227, year 1992 to day 227, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIV SAL TIME

```
         218 ?     SOURCE J0422+32, IAU 5584,88,89:64.64,32.79(1950)
920815   228 ?     GRANAT HARD X-RAY .5CTRANS,288.7+10.5(1950)IAU5590
         228 ?     GRANAT SOURCE NAME GRS1915+105
920822   235 81321 BATSE WEAK SOLAR FLARE #3193
         235 81540 ULYSSES GRB 84184 (UNCONFIRMED COSMIC) NO BATSE
       8 235 81542 GRB PEAKS 81521.5W,541.5(700/S),551.5(200/S)SUN@87 81523-555
      10 235 81542 GRB PEAKS 81520.52,542.5(750/S),552.5(300/S)SUN@45 81526-562
      11 235 81543 GRB PEAK 81543.5(200/S) ULYS84184, SUN@100         81543-557
920824 10 237 39187 GRB PKS 39187.1(800/S),197.1(350) (8NR) SUN@116.1
      11 237 39186 GRB PKS 39185.9(500/S),189.9(550)  SUN@103.4
         237 39183 GRB (HURLEY), ULYSSES 38400
920830  8 243  6319 GRB PK 6317.7(150)SOFT  (BATSE STRONG 6317, GRO82)
      10 243  6320 GRB PEAK 6320.2 SOFT(150) (ULYS~5800) (11NR)
920902   246  1736 BATSE GRB (ULYSSES 3230)
       8 246  1742 GRB PEAK 1741.8(500/S),~5SEC, SHARP, HARD SUN@94.6  1740-750
      10 246  1743 GRB PEAK 1743.5(650/S), SUN@85.8                    1741-761
      11 246  1743 GRB PEAK 1742.9(200/S GT.100KEV) SUN@98.5           1746-750
920923   267~16589 GRANAT STRONG X-RAY 1CTRAN,309.3-40.4(1950)IAU5617 (DMSP NA)
920925   269         CHINESE NUCLEAR TEST (VENTED)
921004  8 278 50421 GRB,NARROW PKS 50421.0(1100/S),429.0(500/S)(11SR)
      10 278 50421 GRB,NARROW PK 50420.7(200/S)
         278 49107 GRB, UNCONFIRMED COSMIC, ULYSSES (BATSE N/O)
921008   282         PVO DIED, INTO VENUS (PIONEER 12)
921009   285 24070 BATSE GRB (ULYS 21980)
      10 285~24070 GRB? (8NA,11NA)
921011   285 ?     WATCH/EUREKA TRANS. EU1737-132(1950).5CRAB IAU5643
921016 10 290~33800 BURST? (10NA,11NA)
921022   296~55500 GRB, MARS OBSERVER (~100 LIGHT-SECONDS AWAY)
921031  8 287      HIGH POLAR COUNTS 10/31-11/05 (ALSO 10, 11)
921220   355       J0422 PEAK=.5CRAB(IAU5685), PER=5.098HR(IAU5692)
930131   031 68231 GRB,BATSE BIGGEST, 182.75,-10.7(J2000) IAU5707
       8 031 68231 GRB PEAK 68230.9(1400/S) (10SR EDGE,11SAA)          68233-235
930217   048 40187 XRB(15CRAB) WATCH/EUREKA (IAU 5710,17) 4U0614+09
                                              TERRELL/DMSP.GAM 930505
930220   051         ASTRO-D=ASUKA=ASCA X-RAY SPACECRAFT LAUNCHED
930302   061 51329 XRB,EUREKA,4U0614+09,20CRAB(6-15KEV)IN 16S IAU5717
930309   068 11278 COMPTEL GRB (323.13,54.65,J2000)(IAU5749,50,63,64)
930310   069 26418 GRB, 20S,GRANAT @285.56,-51.98(B1950.0) IAU5720
930430   120 54070 BATSE STRONG GRB, (~106,21) (BATSE ALERT)
930630   181 86400   LEAP SECOND AT 2400H(UTC-TA1=-28 SEC)(IAUC 5694)
```

From @UCBSP.SSL.BERKELEY.EDU:046369@ESSDP2.SPAN.NASA.GOV Wed May 5 13:41:17 1993
Date: Tue 5 May 92 13:42:27-PST
From: SC <046369@ESSDP2.SPAN.NASA.GOV>
To: KHURLEY@sunspot.ssl.berkeley.edu
Subject: [Resent-MM Mail] DMSP GRB DATA
Content-Length: 8912

Received: from ESSDP2 by UCBSP.SSL.BERKELEY.EDU via MAIL-11 with
DECnet; Tue, 5 May 92 13:40:33-PST
Date: Tue 5 May 92 13:40:33-PST
From: 046369@ESSDP2.SPAN.NASA.GOV
Subject: DMSP GRB DATA
To: "UCBSP::KHURLEY"@ESSDP2.SPAN.NASA.GOV

FROM: ESSDP2::TERRELL 93/05/05
TO: UCBSP::KHURLEY
CC: BATSE::KOUVELIOTOU
SUBJ: DMSP GRB DATA

HERE IS A PARTIAL LIST OF 1992 DMSP GAMMA-RAY-BURST DATA, AS OF TODAY.
OTHER DATA APPEARING TO CONFIRM UNCONFIRMED EVENTS IN YOUR LISTING IS
BEING EXTRACTED, AND I WILL CHECK IT OUT WHEN I RETURN FROM HOUSTON.
THANKS FOR YOUR CONTINUING HELP--JIM TERRELL

DMSP GAMMA PEAKS 90281-92305 CHECKED,2-SEC CTS,TERRELL/DMSP.GAM 930505
ORBITAL PERIODS FOR 8,9,10: 6110,6080,6040SEC. ALT=800KM. INCLIN=99DEG
GRB PEAK TIMES CORRECTED (8,9,10=11) FOR AVG DELAYS: 1.82,1.98,5.50SEC
CHANS: (8)50,100,200,420 (9)50,100 (10,11)20,100,200,430,550(-1000KEV)

DATE	FL	DAY	TIME	NOTES--------(ND=NO DATA,NA=NOT APPARENT)----NOTES	DATATIMES
920101		001	0	JD8622.5	
920110		010	33480	BATSE GRB (16XMIN) (8ND,9NA,10SAA,11NA)	
920122		022		NO DMSP TAPES, DAYS 22-25 (92022-25)	
920126	9	026	55714	BURST? WIDE SOFT PEAK 55714.0 (4KC/S)(8SRAD,11SAA)	55646-768
	10	026	55704	STR SOFT BURST,COMPLEX PEAKS 55704.2,714.2(3KC/S)	55624-748
		026	55667	PVO TRIGGER (BURST?) AT 55666.9	
920210		041	35625	BATSE GRB,MOD STRONG RA154,DEC49 8NO,10SAA,11SAA	
	9	041	35633	VERY WEAK SOFT BURST,PEAKS 35632.6,636.6	35635-639
920211	8	042	15773	STRONG HARD BURST(+CHG),PEAKS 15772.7-4.7(2500C/S)	15765-783
	9	042	15775	STRONG HARD BURST, PEAK 15774.7(7KC/S) (BATSE OFF)	15761-791
	10	042	15776	STRONG HARD BURST,PEAK 15775.6(1700C/S) +SOFT BASE	15775-785
	11	042	15776	STRONG HARD BURST, PEAK 15775.8(12KC/S),ASYMM RESP	15765-799
		042	15631	PVO TRIGGER 15630.7 (0.7 HARDNESS RATIO)	
920214	9	045	83249	SHARP SOFT BURST, PEAK 83249.4 (8ND=NO DATA)	83243-273
	10	045	83250	SHARP SOFT BURST, PEAK 83250.1 (1000C/S),254.1	83244-280
	11	045	83250	SHARP SOFT BURST PEAKS 83249.8 (8KC/S),265.8	83237-295
		045	83066	BATSE SOLAR FLARE#2721, PEAK 83252(70K/S)&~83267	
920216	8	047	45219	STRONG SOFT BURST,PEAKS 45219.3,223.3(1KC/S)(10NO)	45177-239
	9	047	45220	STRONG SOFT BURST, PEAK 45219.7 (2KC/S)	45214-236
	11	047	45220	STRONG SOFT BURST,PEAKS 45184.2,196.2,220.2(8KC/S)	45180-252
		047	45052	PVO TRIGGER (BURST?) 45052.5	
920311		071	8426	BATSE GRB,VERY INTENSE,2PEAKS,RA129,D-40 (BNEWS16)	
	8	071	8431	GRB, PEAKS 8431.4,8437.4 @63DEG (PVO TRIG 8887.3)	8429-443

BATSE BURST TRIGGER

NO.: 01823 Aug 15

TIME: TJD=8849 SECONDS=25944

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON FLUCTUATIONS ASSOCIATED WITH TRANSIENT GRO 0422+32.

BATSE BURST TRIGGER

NO.: 01824

TIME: TJD=8849 SECONDS=36587

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON OCCULTATION STEP OF TRANSIENT GRO 0422+32.

BATSE BURST TRIGGER

NO.: 01825

TIME: TJD=8849 SECONDS=47650

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON FLUCTUATIONS ASSOCIATED WITH TRANSIENT GRO 0422+32.

BATSE BURST TRIGGER

NO.: 01826

TIME: TJD=8849 SECONDS=58727

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON FLUCTUATIONS ASSOCIATED WITH TRANSIENT GRO 0422+32.

BATSE BURST TRIGGER

NO.: 01827

TIME: TJD=8849 SECONDS=69791

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON FLUCTUATIONS ASSOCIATED WITH TRANSIENT GRO 0422+32.

BATSE BURST TRIGGER

NO.: 01828

TIME: TJD=8849 SECONDS=86392

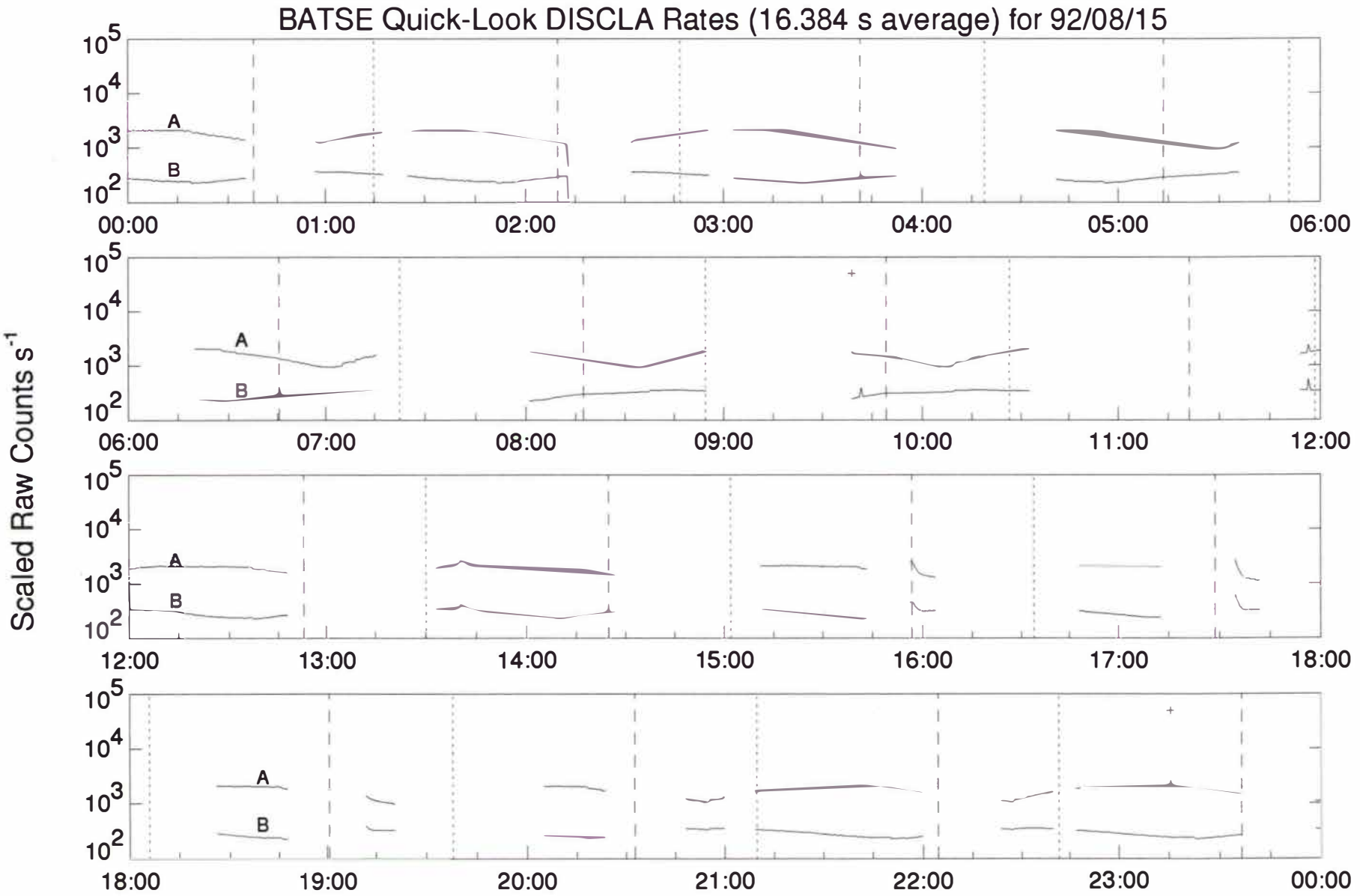
TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

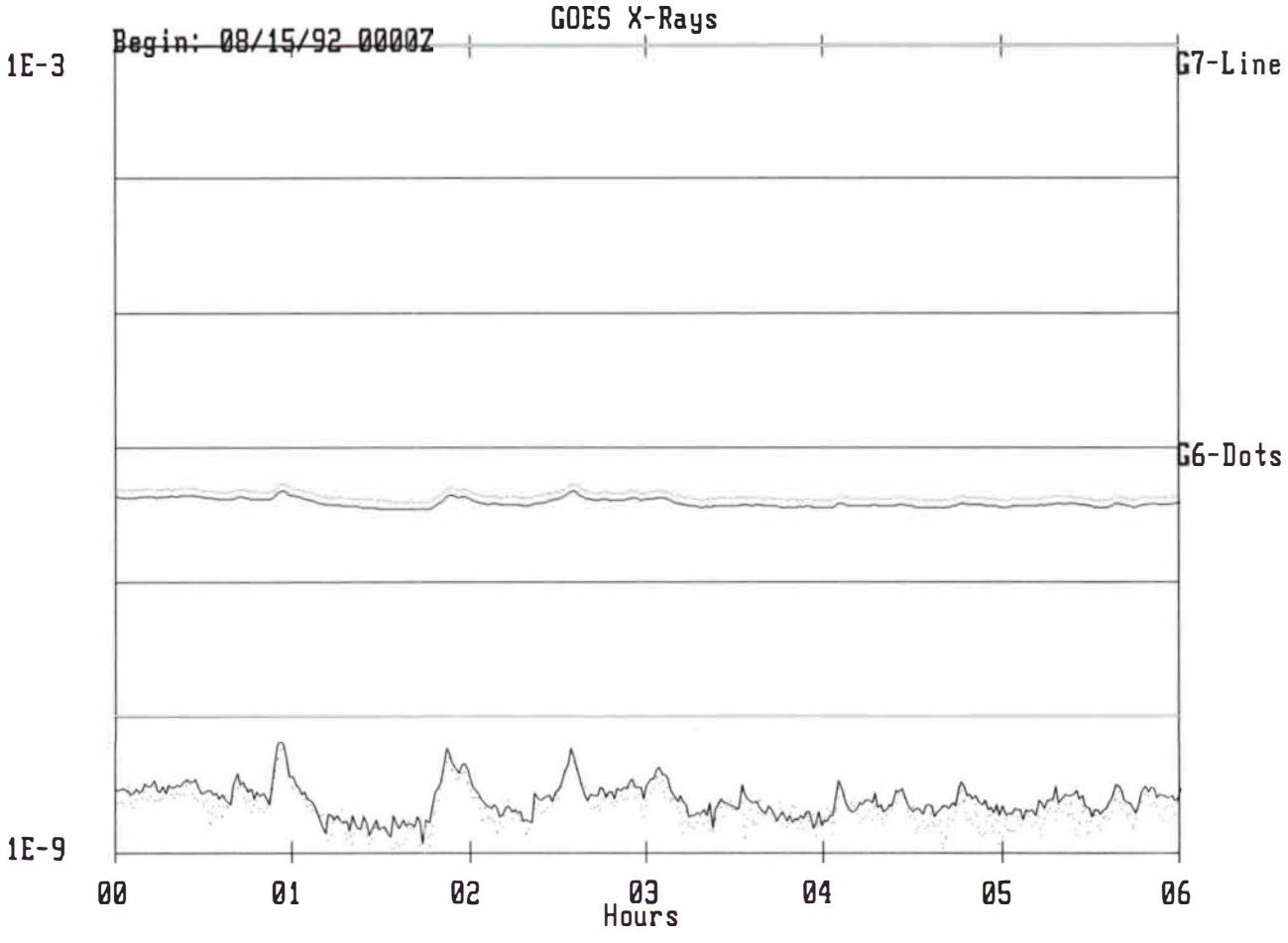
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

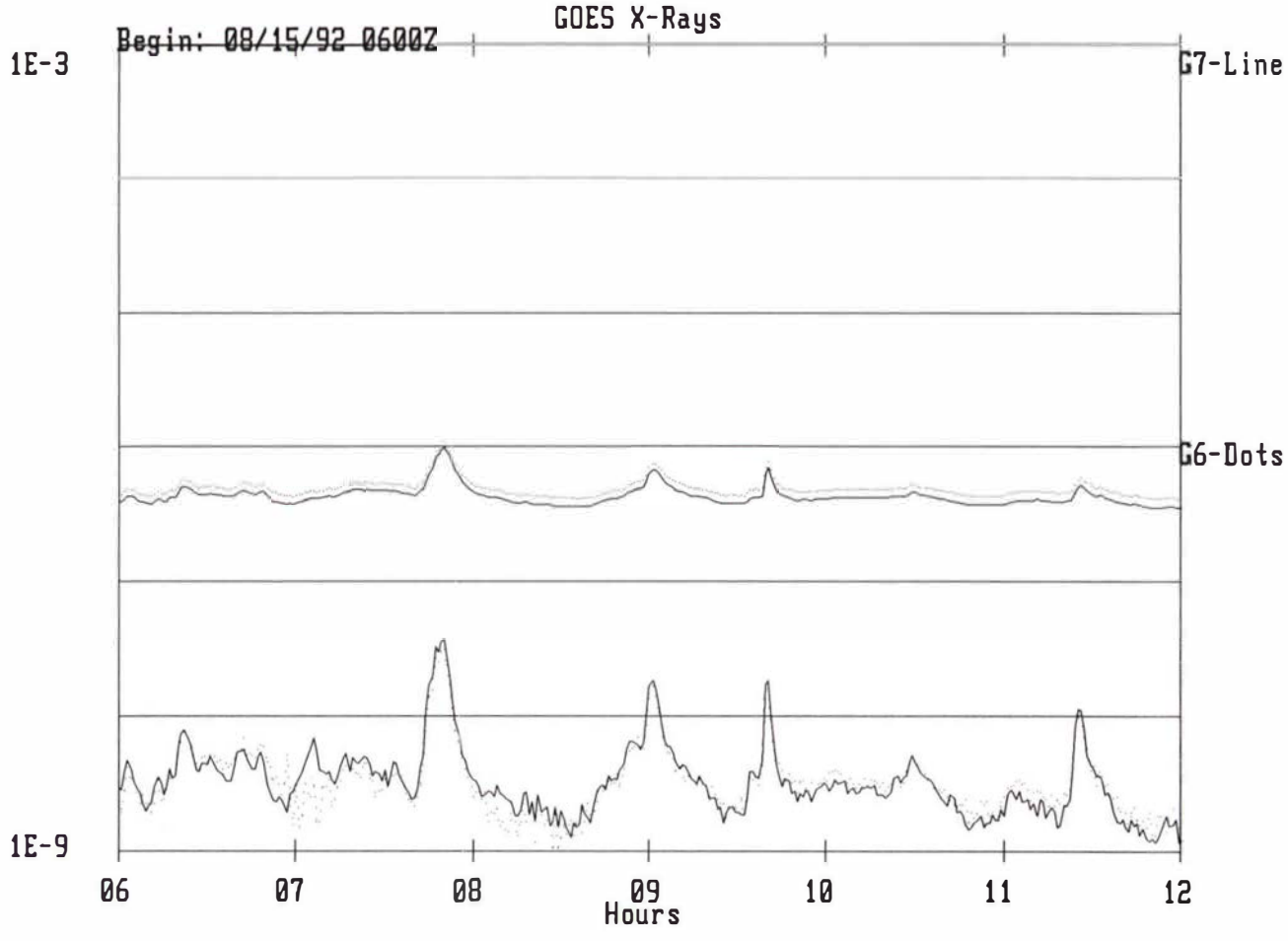
LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON OCCULTATION STEP OF TRANSIENT GRO 0422+32.

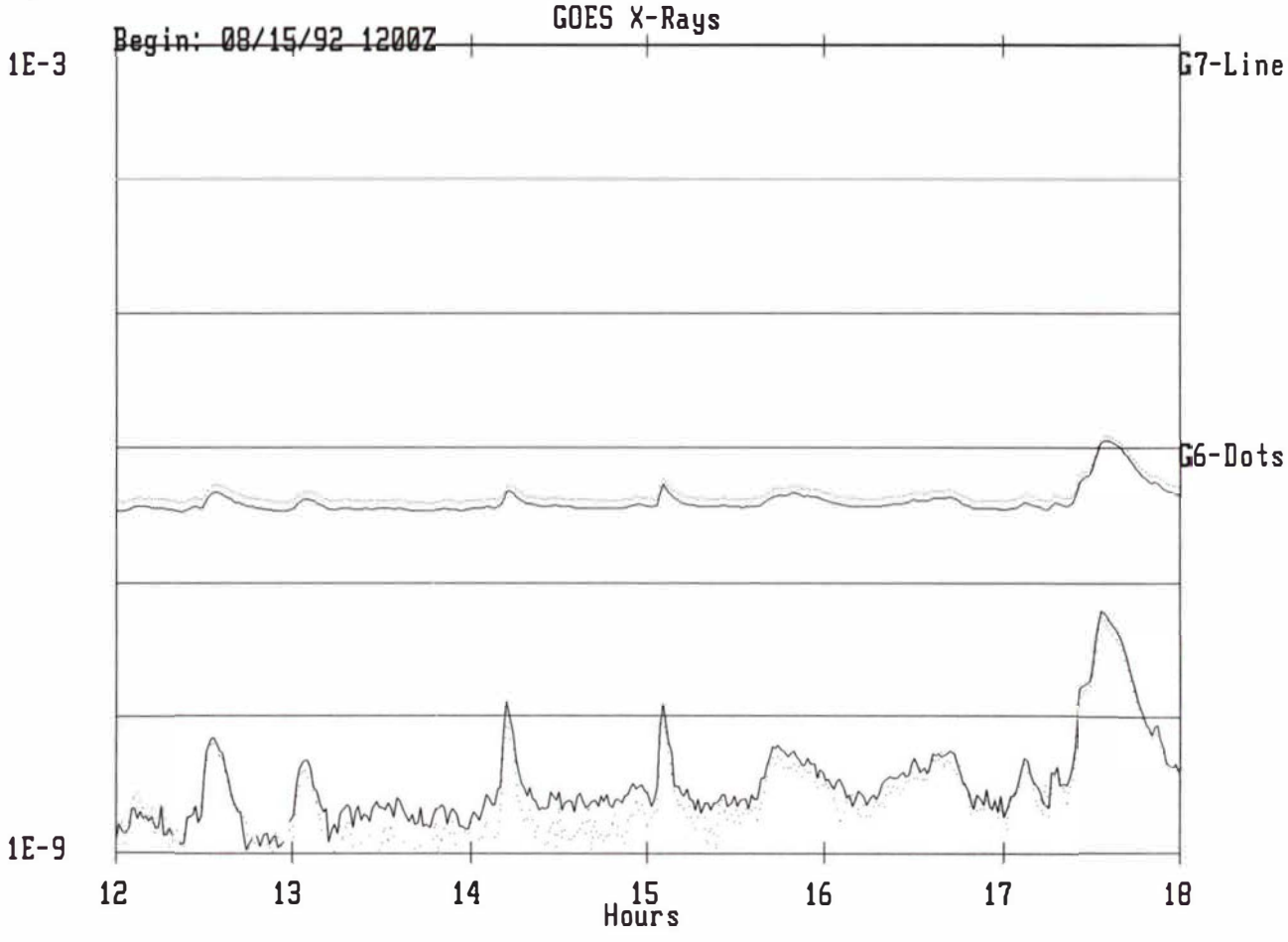

BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/15
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 92/08/28, 2140 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
+ Solar Flare
* Solar Burst Trigger


GOES X-Rays
Begin: 08/15/92 0000Z
1E-3
1E-9
G7-Line
G6-Dots
00
01
02
03
04
05
06
Hours

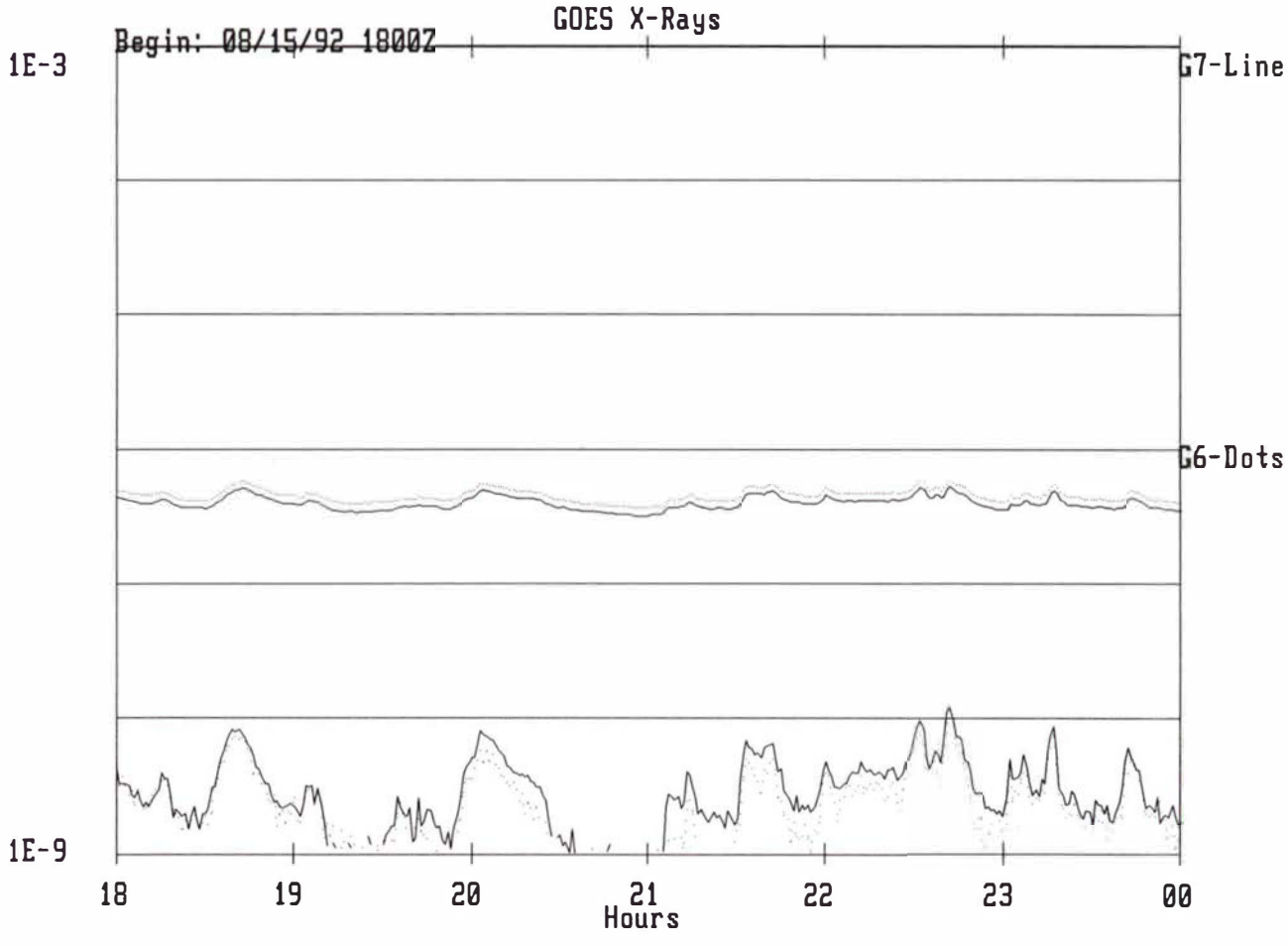
Finished


GOES X-Rays
Begin: 08/15/92 0600Z
1E-3
1E-9
G7-Line
G6-Dots
06
07
08
09
10
11
12
Hours

Finished

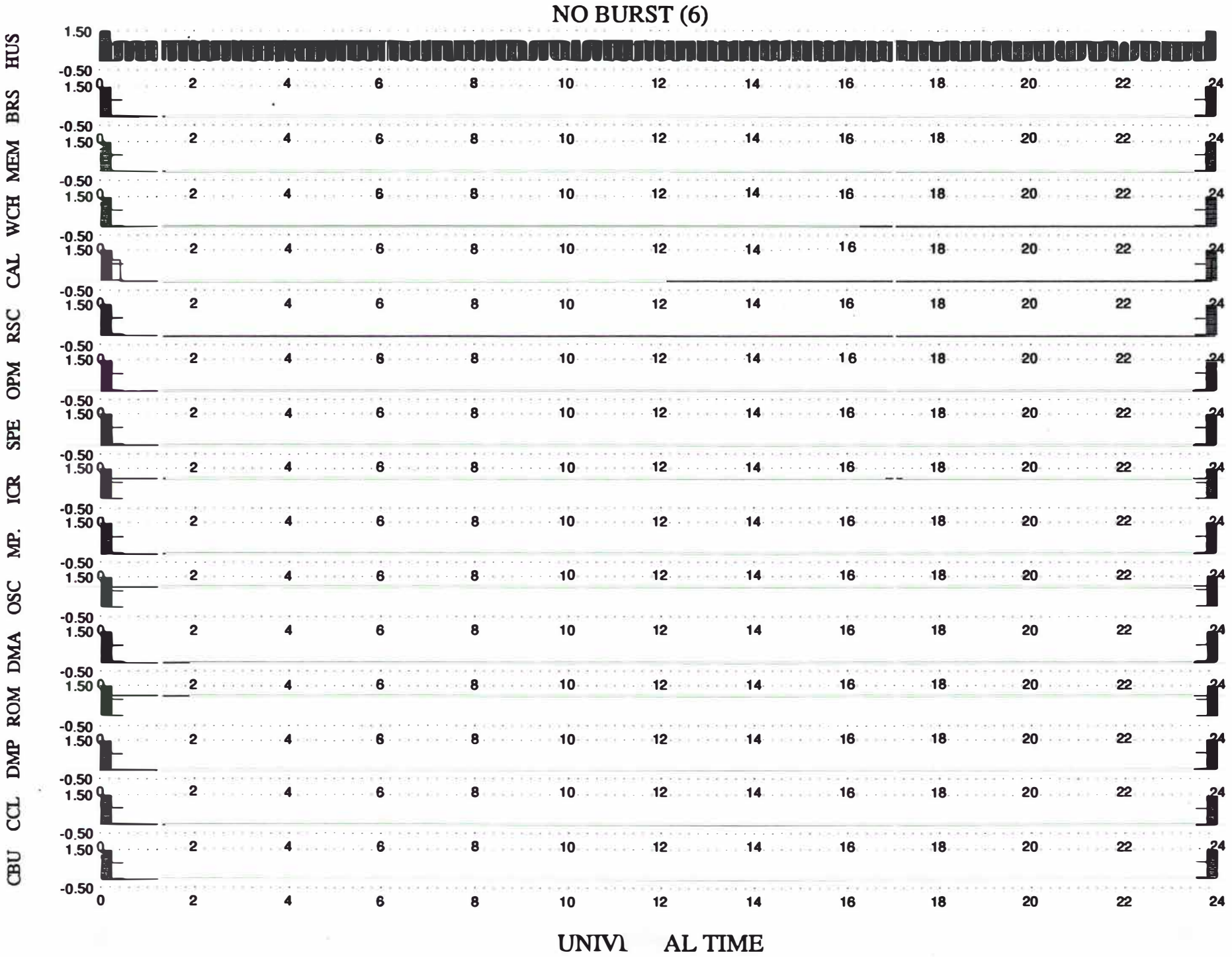

GOES X-Rays
Begin: 08/15/92 1200Z
1E-3
1E-9
G7-Line
G6-Dots
12
13
14
15
16
17
18
Hours

Finished


GOES X-Rays
Begin: 08/15/92 1800Z
1E-3
1E-9
G7-Line
G6-Dots
18
19
20
21
22
23
00
Hours

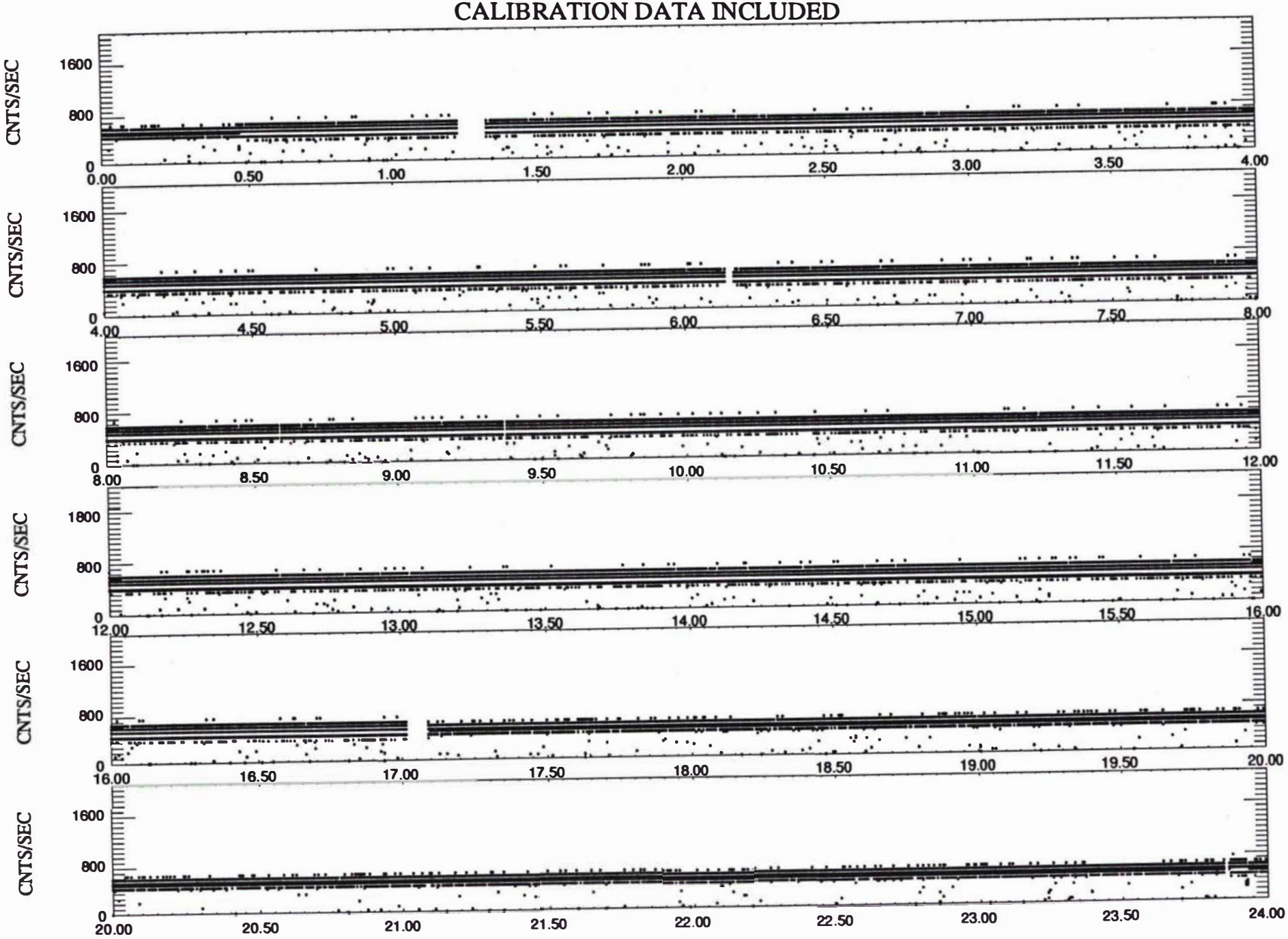
Finished

HUS MODES EDR day 228, year 1992 to day 228, year 1992 9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 228, year 1992 to day 228, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIV SAL TIME

Subject: PHEBUS files
From: "Claude BARAT" <cl.barat@wanadoo.fr>
Date: Sat, 4 Sep 2010 15:24:58 +0200
To: "Kevin Hurley" <khurley@ssl.berkeley.edu>

Hello Kevin

I send you 31 PHEBUS event ASCII files (to be compared with the 34 events of your request). The three "forgotten" events are GRB901218, GRB910204 (at 53433 UT), and GRB930323. They do not exist in the calc-gen5-ci database as well as in the official list of GRB events detected by PHEBUS. Presently, I cannot investigate raw data from the S.T.A.F. (Fortran programs have to be rewritten as the raw data treatment was performed with my (defunct) SUN SPARC workstation), so that I don't know whether these possible PHEBUS triggers really exist.

From the 31 treated events, there is an excellent agreement between the PHEBUS trigger times (indicated in line #2 of file headers) and the approximate UT given in your list, for 26 GRBs.

For GRB901219 and GRB920816, there is a discrepancy in trigger times of ~450 and ~40 seconds, respectively. This discrepancy is in excess of 4000 seconds for GRB931012. Note that the PHEBUS trigger times are the same for each of the three electronic blocks (which are totally independent), so that the PHEBUS trigger times are not questionable.

For the two remaining events, GRB930322 and GRB940325, the PHEBUS trigger time cannot be computed due to the existence of spurious bytes in line #0 of the bulb memory (which gives the GRANAT onboard time). A value equal to zero is written in line #2 of file headers.

Your remarks are welcome.

Amitiés et bon travail

Claude

GRB901111	**Content-Type:** application/octet-stream **Content-Encoding:** quoted-printable

GRB901121a

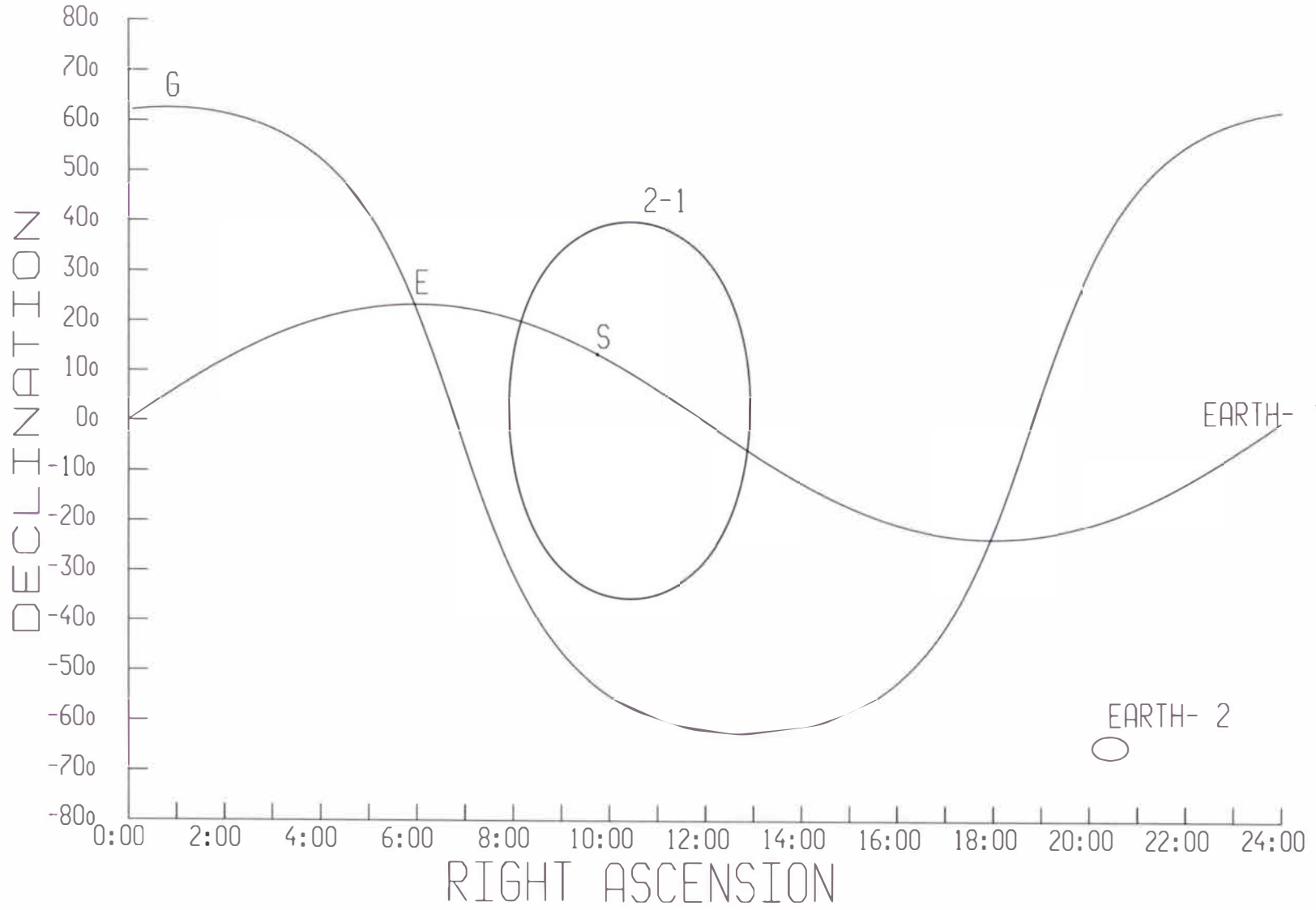
GRB901121a	**Content-Type:** application/octet-stream **Content-Encoding:** quoted-printable

GRB901213a

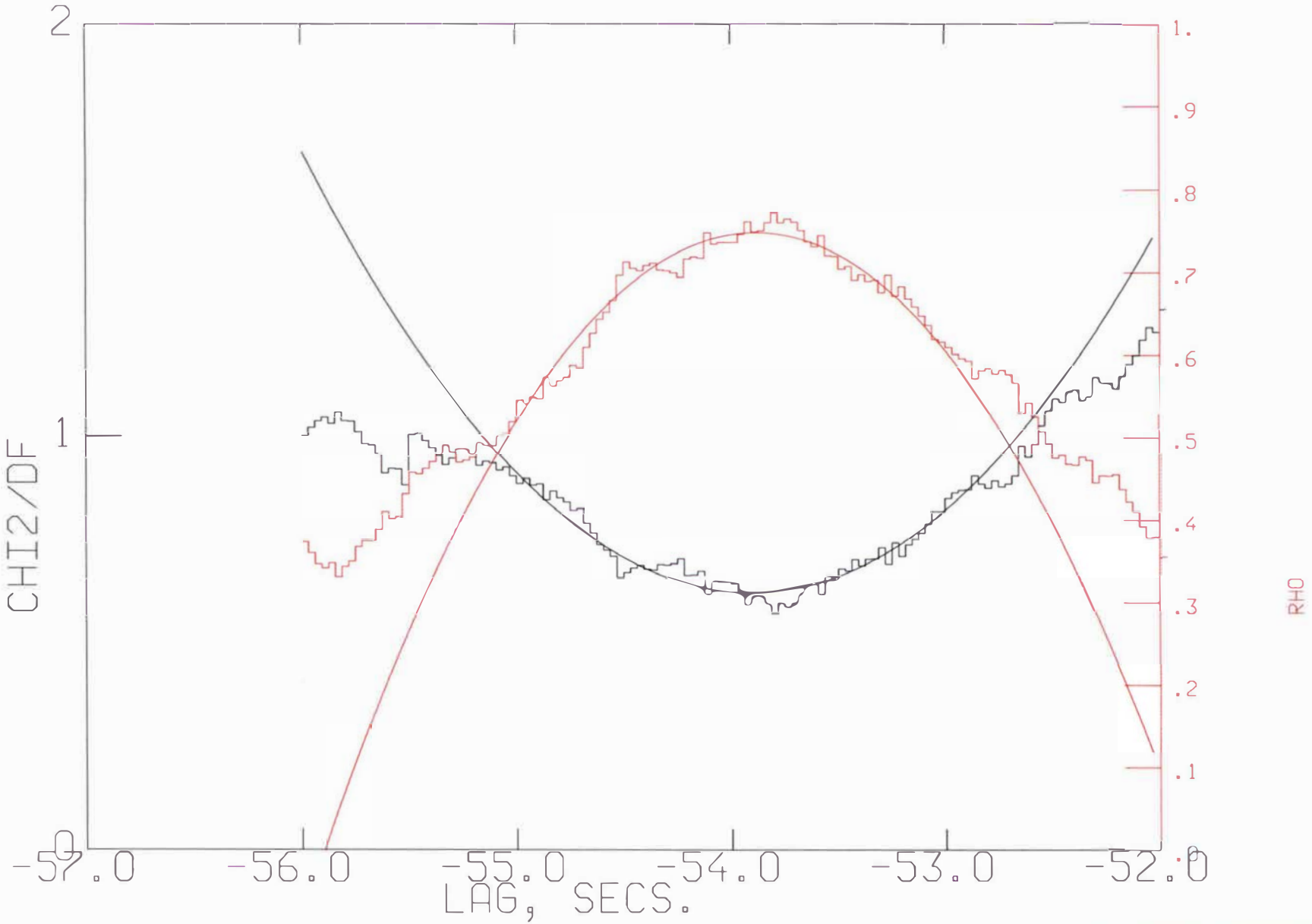
EVENT OF AUG 16, 1992 11:55

28/07/2011

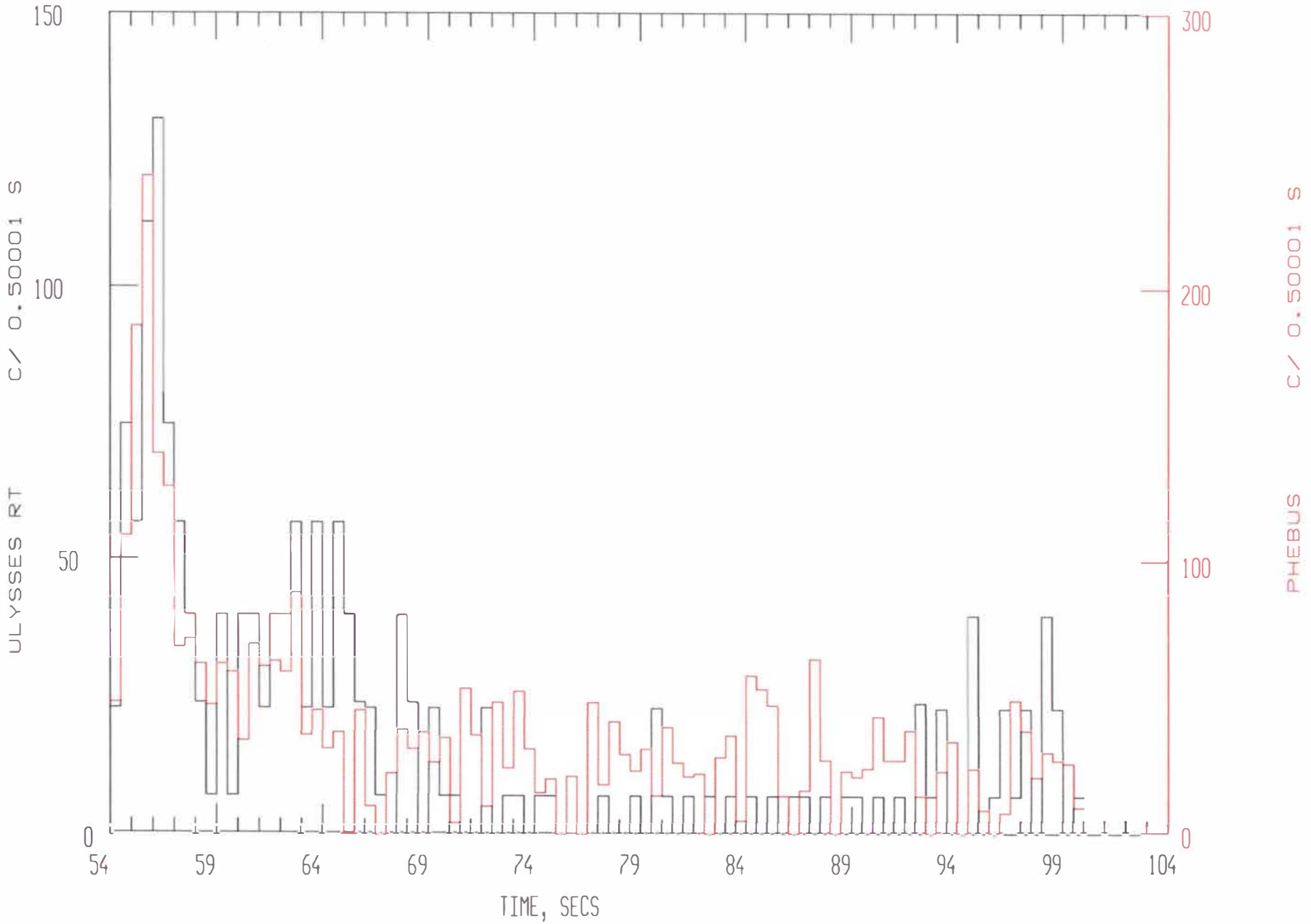
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 PHEBUS



ULYSSES RT- PHEBUS CORRELATION 16/ 8/92 42923.184



ULYSSES RT- PHEBUS CORRELATION 16/ 8/92 42923.184 28/ 7/11



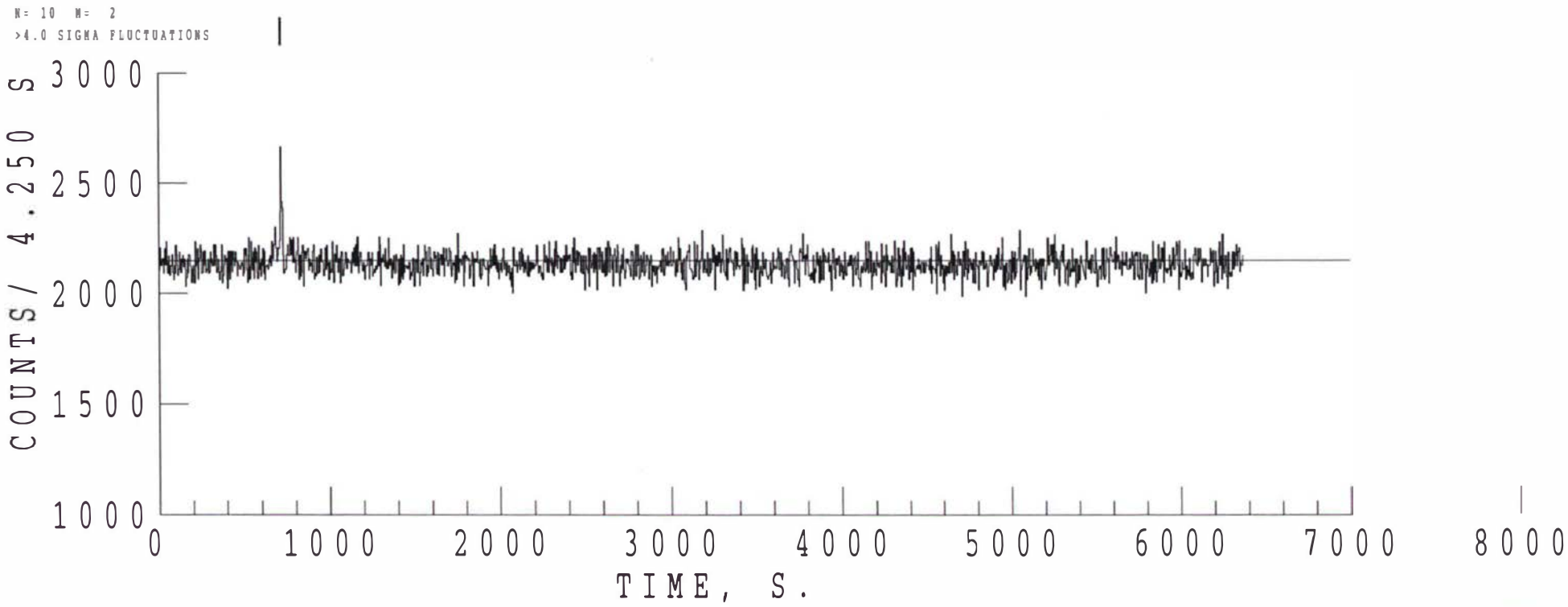
PHEBUS 19920816 45449

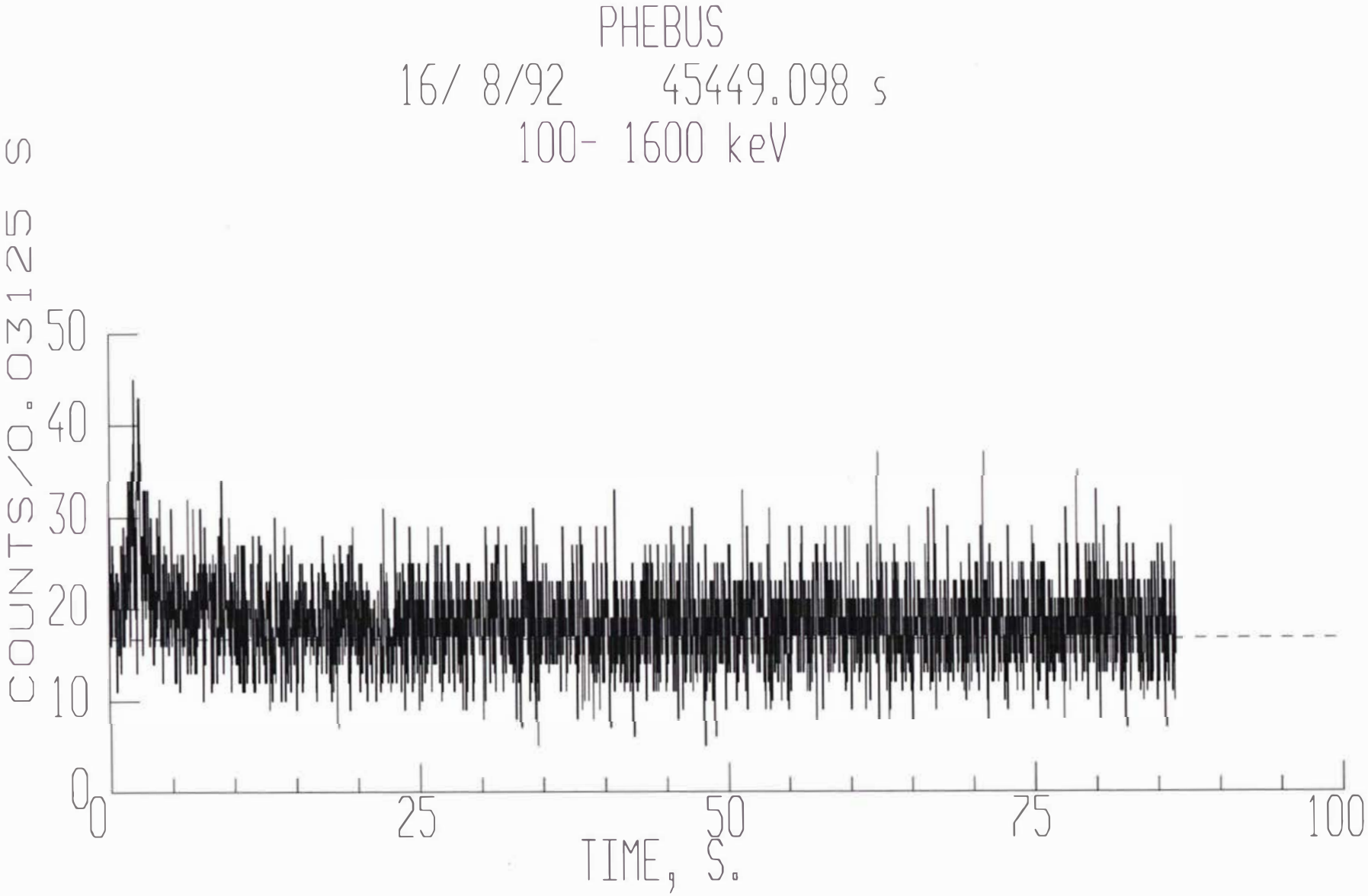
ULYSSES RT 28/07/11

16/08/92 42264.180 s

0.250 S INTERVALS REGROUPED BY 17

0- 0 keV




PHEBUS
16/ 8/92 45449.098 s
100- 1600 keV
COUNTS/0.03125 S
50
40
30
20
10
0
0
25
50
75
100
TIME, S.

From KOUVELIOTOU@ssl.msfc.nasa.gov Tue Aug 18 12:57:40 1992
Date: Tue, 18 Aug 1992 14:57:24 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01829

Aug 16

TIME: TJD=8850 SECONDS=16598

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=012.0 AZIMUTH=125.0 ERROR= DEGREES

COMMENTS:
X-RAY TRANSIENT FLUCTUATION.

```
          ********************
          *CATSEARCH PROGRAM*
          ********************

BATSE BURST # 1830
EVENT OF 1992 AUG 16 DAY OF YEAR=229
EVENT CROSSING TIME AT BATSE      : 26137. S. OR 07:15:37.2
COORDINATES ARE     .000     .000       6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 248.100   66.800
BATSE PEAK COUNTING RATE:  0000   C/S

EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
POSITION OF ULYSSES ON 16/ 8/  92 IS:
RA=  155.642 DEC=     2.566 DIST=     6.261 AU
BATSE-ULYSSES DISTANCE =  936647096. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 91.39 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=  -75.83 SECS.
CROSSING TIME AT ULYSSES     IS 26061. S. OR 07:14:21.4 +/-  591.12 SECONDS
```

```
From KOUVELIOTOU@ssl.msfc.nasa.gov Tue Aug 18 13:05:45 1992
Date:     Tue, 18 Aug 1992 15:05:45 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
        khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1296

                  BATSE BURST TRIGGER
NO.: 01830

TIME: TJD=8850 SECONDS=26137

TYPE: BURST                       SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:        SIGMA

INTENSITY:           COUNTS/CM2

LOCATION: ZENITH=078.0  AZIMUTH=071.0  ERROR=       DEGREES

COMMENTS:
DOUBLE PULSE EVENT. TOTAL DUR. 160S. PULSE SEPERATION IS ~ 140 S.
EACH PULSE LASTS ~ 25 S . SEEN ABOVE 300 KEV.
```

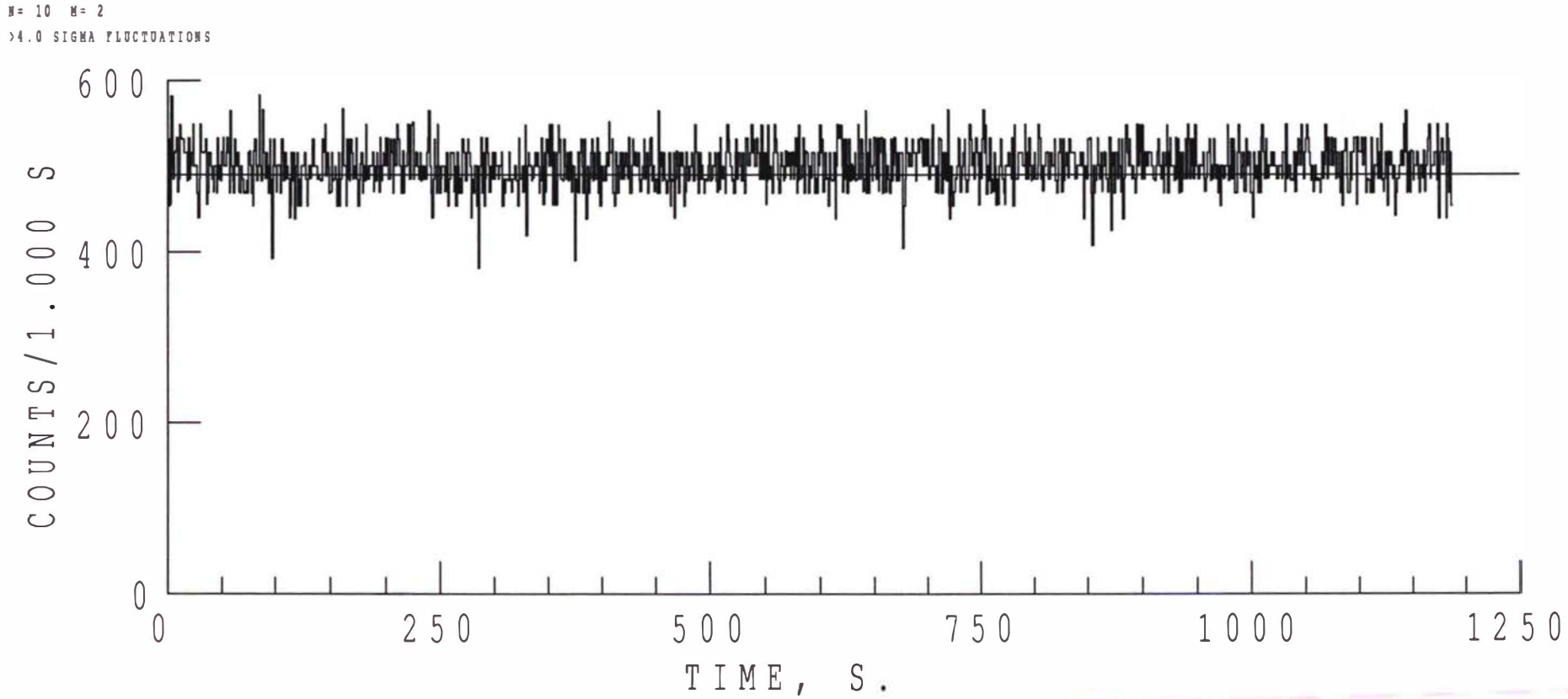
8/ 6/94

ULYSSES RT

16/ 8/92 25452.164 s

0.250 S INTERVALS REGROUPED BY 4

0- 0 keV



From KOUVELIOTOU@ssl.msfc.nasa.gov Tue Aug 18 13:09:22 1992
Date: Tue, 18 Aug 1992 15:09:27 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER
NO.: 01831

TIME: TJD=8850 SECONDS=33199

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRANSIENT STEP.

From KOUVELIOTOU@ssl.msfc.nasa.gov Tue Aug 18 13:15:04 1992
Date: Tue, 18 Aug 1992 15:15:05 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER
NO.: 01832

TIME: TJD=8850 SECONDS=41698

TYPE: UNKNOWN SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=073.0 AZIMUTH=188.0 ERROR= DEGREES

COMMENTS:
SPARSE DATA. POOR LOCATION INDICATES VERY LOW GEOCENTER
ANGLE.

91/12/21 06:17 N/O
91/12/21 22:03 N/O
91/12/27 15:56 N/O
92/01/05 17:41 N/O
92/01/13 20:52 N/O
92/01/25 08:57 N/O
92/01/30 00:29 N/O
92/01/30 22:50 N/O
92/02/18 18:42 N/O
92/02/21 06:14 N/O
92/02/26 18:15 YES TRIGGER AT 29336 S UT
92/02/27 06:00 N/O
92/02/27 08:45 N/O
92/03/02 06:16 N/O
92/03/04 14:34 N/O
92/03/07 00:18 N/0
92/03/21 12:50 (NO)
92/03/26 02:01 N/O
92/03/27 09:38 N/O
92/03/29 16:38 (NO)
92/04/04 22:37 N/O
92/04/08 12:05 N/O
92/04/20 02:12 N/O
92/04/29 18:59 N/O
92/05/02 19:05 N/O
92/06/01 THRU 92/06/29 TURNED OFF--N/O
92/07/01 19:39 N/O
92/07/07 06:33 N/O
92/07/17 01:15 N/O
92/07/23 00:59 N/O
92/07/23 01:00 N/O
92/07/23 21:48 N/O
92/07/25 19:30 N/O
92/07/25 22:49 N/O
92/07/26 00:34 N/O
92/07/31 17:07 N/O
92/08/10 21:35 N/O
92/08/14 06:10 N/O
92/08/16 12:36 N/O
92/08/22 22:39 N/O
92/08/30 01:45 N/O
92/09/04 04:41 N/O

THIS LIST IS NOT COMPLETE. IT INCLUDES EVENTS FOR WHICH NO REAL-TIME DATA ARE AVALIABLE BECAUSE OF INAPPROPRIATE MODE, NO TRACKING, OR THE EXPERIMENT WAS TURNED OFF. WHERE DATA HAVE BEEN CHECKED, SENSITIVITY DEPENDS UPON THE TIME RESOLUTION AVAILABLE IN THE DATA. I'LL BE SENDING ADDITIONAL RESULTS AS THEY BECOME AVAILABLE.

REGARDS,

RAY

From root Wed Dec 8 07:58 1993
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA08899; Wed, 8 Dec 93 07:57:44
Received: from mx.nsi.nasa.gov by sunspot.ssl.berkeley.edu (4.1/1.30.1)
id AA22497; Wed, 8 Dec 93 07:00:41 PST
Received: Wed, 8 Dec 93 07:03:53 PST from ESSDP2.dnet by mx.nsi.nasa.gov (4.1/1.2)
Message-Id: <9312081503.AA10272@mx.nsi.nasa.gov>
Received: from ESSDP2.dnet by AMES.dnet with MAIL-11
(utk-mail11d v1.7); Wed, 8 Dec 93 07:03:57 PST
Date: Wed, 8 Dec 93 07:03:57 PST
From: 068486@essdp2.span.nasa.gov
X-To: AMES::"khurley@space6.ssl.berkeley.edu"
Subject: RE:
To: khurley@space6.ssl.berkeley.edu
Status: R

KEVIN,
HERE ARE THE RESULTS OF OUR SURVEY OF THE PVO REAL-TIME DATA FOR EVIDENCE OF RESPONSE TO EVENTS LISTED IN YOUR CATALOG.

DATE	TIME	PVO RESPONSE
90/11/11	21:49	N/O
90/11/12	14:57	N/O
90/11/16	01:42	N/O
90/11/19	18:08	N/O
90/11/21	00:04	N/O
90/11/21	18:09	N/O
90/12/02	13:45	N/O
90/12/21	00:30	N/O
90/12/25	05:50	N/O
91/01/17	00:57	N/O
91/01/24	11:50	N/O
91/02/04	08:58	N/O
91/02/04	14:19	N/O
91/02/04	14:58	N/O
91/02/17	02:59	N/O
91/03/14	22:56	N/O
91/03/15	22:55	N/O
91/04/04	17:17	(NO)
91/05/18	17:10	N/O
91/05/23	19:03	N/O
91/05/27	23:44	N/O
91/05/28	21:26	N/O
91/06/02	22:55	N/O
91/06/09	00:48	N/O
91/06/29	19:55	N/O
91/07/09	20:22	N/O
91/07/17	13:07	N/O
91/08/03	08:24	N/O
91/08/15	12:34	N/O
91/08/15	14:24	N/O
91/08/16	01:57	(NO)
91/09/05	23:48	N/O
91/09/16	21:58	N/O
91/09/25	03:35	N/O
91/09/26	18:25	N/O
91/09/30	11:55	N/O
91/10/03	00:39	N/O
91/10/04	01:27	N/O
91/10/06	09:01	(NO)
91/10/22	04:13	N/O
91/10/25	21:25	N/O
91/11/06	03:42	N/O
91/11/14	01:40	N/O
91/11/17	01:58	N/O
91/12/05	23:04	N/O

Dezaley-> KM 7/93

DATE	U.T.	Nr UGB	Event Nature
1992-06-28	21:14:12.932	473-a	GRB
1992-07-08	16:30:01.944	479-a	Solar Flare
1992-07-14	13:04:30.544	482-a	GRB
1992-07-16	16:55:27.526	484-a	Solar Flare
1992-07-18	21.32:44.275	485-a	GRB
1992-07-20	03:12:04.391	486-a	GRB
1992-07-23	00:59:16.612	488-a	GRB
1992-07-23	20:03:08.386	489-a	GRB
1992-07-23	21:48:54.786	489-b	GRB
1992-08-16	12:37:31.102	493-a	GRB
1992-08-26	02:47:07.423	500-a	GRB
1992-08-30	01:45:19.113	503-a	GRB
1992-09-02	00:29:00.916	504-a	GRB
1992-09-03	00:49:18.142	505-a	GRB
1992-09-03	01:37:17.202	505-b	GRB ?
1992-09-03	23:29:01.404	506-a	GRB
1992-09-04	04:41:38.922	506-b	GRB
1992-09-05	15:56:15.844	507-a	Solar Flare
1992-09-06	18:45:29.617	507-b	Solar Flare
1992-09-06	20:56:31.135	507-c	Solar Flare
1992-09-14	07:14:50.878	508-a	Unknown
1992-09-18	09:41:19.340	511-a	GRB
1992-09-25	20:30:41.410	517-a	GRB
1992-09-25	21:40:47.837	517-b	No Available data
1992-09-30	00:47:46.089	518-a	Unknown
1992-10-04	22:19:05.006	522-a	Solar Flare
1992-10-12	13:14:44.786	523-a	Solar Flare
1992-10-13	23:01:01.582	524-a	GRB
1992-10-25	13:53:16.735	527-a	GRB
1992-10-27	06:52:02.336	528-a	Solar Flare
1992-10-29	15:23:10.349	530-a	SF ou Unknown?
1992-10-29	16:11:39.173	530-b	SF ou Unknown?
1992-10-29	16:26:49.045	530-c	SF ou Unknown?
1992-11-23	16:32:04.840	534-a	SF ou Unknown?
1992-11-23	17:11:35.698	534-b	SF ou Unknown?

From khurley@space6.ssl.berkeley.edu Tue Dec 1 17:49:52 1992
Date: Tue, 1 Dec 92 17:43:25
From: khurley@space6.ssl.berkeley.edu
Content-Length: 1348

Dear Dr. Yoshimori

Thanks for the e-mail list. I have done a preliminary check, and here are the results.

27/11/91 4:22 Ulysses, BATSE triggers. Position is around 17:40,+50
21/12/91 6:17 No Ulysses or BATSE trigger*
18/02/92 18:44 Ulysses Rate Increase, no BATSE
19/04/92 1:22 PVO trigger, no Ulysses, no BATSE*
19/05/92 16:30 Ulysses Rate Increase, PVO trigger, no BATSE
17/06/92 5:29 Ulysses Rate Increase, BATSE
01/07/92 19:39 No Ulysses or BATSE trigger
11/07/92 16:09 Ulysses trigger, no BATSE
16/08/92 12:36 No Ulysses trigger, no BATSE*

* for the cases where there is no Ulysses trigger, I will search the real-time data (typically 0.25 - 0.5 second time resolution) over the appropriate time window (about +/- 3000 seconds for this time period). I'll keep you informed about the results.

Where I have indicated no BATSE response, this means either:

If there was a Ulysses trigger, we looked for a BATSE response and found none.

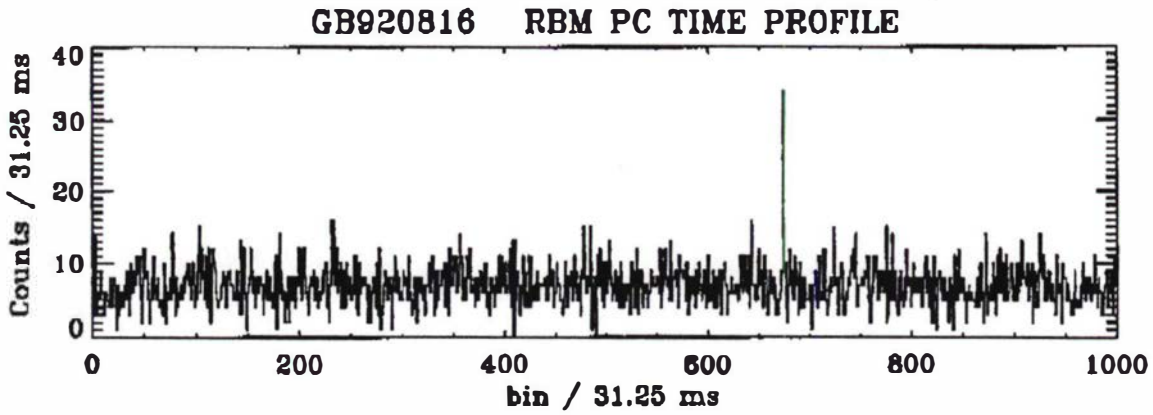
If there was no Ulysses trigger or rate increase, we probably did not look for a BATSE event. We would have been notified of one if it was intense, ut if it was weak, we probably would not have received any information. hryssa Kouveliotou of the BATSE team will be contacting you soon, and you might wish to request that she take a closer look at their data.

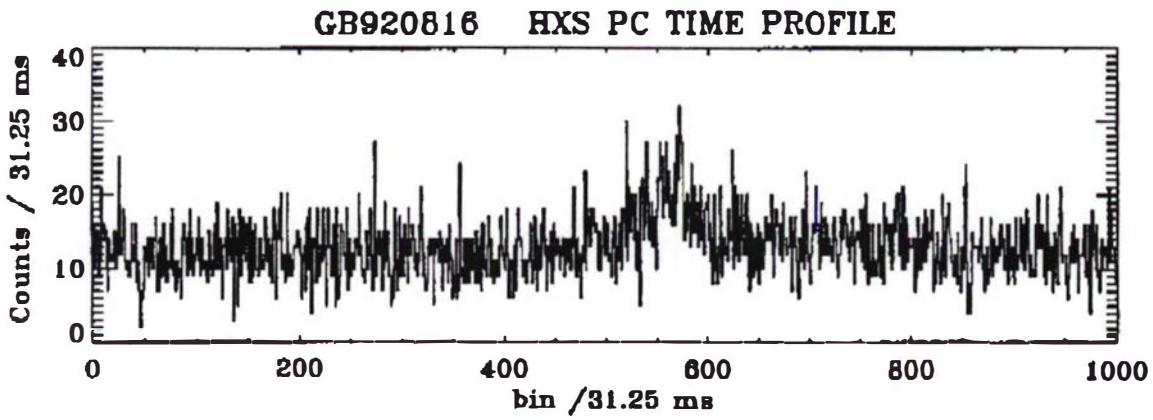
Best regards,

Kevin Hurley

8/19

Yohkoh


GB920816 RBM PC TIME PROFILE
Counts / 31.25 ms
0
10
20
30
40
0
200
400
600
800
1000
bin / 31.25 ms


GB920816 HXS PC TIME PROFILE
Counts / 31.25 ms
0
10
20
30
40
0
200
400
600
800
1000
bin /31.25 ms

From @space6.ssl.berkeley.edu,@cmsa.berkeley.edu:X024862@JPNRKY00.BITNET Wed Dec 16 04:28:08 1

Date: 16 DEC 1992 21:06:34 JST
From: <X024862%JPNRKY00.BITNET@cmsa.berkeley.edu>
Subject: Yohkoh GBD data
To: <khurley@space6.ssl.berkeley.edu>
Content-Length: 789

To: Dr. K. Hurley (SSL/UCB)
Fr: Masato Yoshimori (Rikkyo Univ.)
Date: Wed. 16 Dec. 1992.

Dear Dr. Hurley:
I am sending the Yohkoh GBD data of following five events.

1. GRB date (yy/mm/dd)
2. Start time (hh/mm/ss) UT
3. Equatorial Coordinates of the Earth Center for the YOHKOH
4. Altitude of the YOHKOH (km)

Date	Time (UT)	alpha	delta	Altitude (km)
1992/02/18	1844:21	308.7	-22.9	780.1
1992/07/11	1609:17	56.5	25.1	764.0
1992/07/31	1707:42	101.3	-28.6	728.7
1992/08/16	1236:38	327.9	-31.1	559.7
1992/09/03	2329:05	224.7	-31.2	746.7

That's all.
I hope our data are helpful to you.

With best regards,

Masato Yoshimori
\cknowledge-To: <X024862@JPNRKY00>

From @space6.ssl.berkeley.edu,@cmsa.berkeley.edu:X024862@JPNRKY00.BITNET Thu Nov 26 03:41:24 1
Date: 26 NOV 1992 18:19:41 JST
From: <X024862%JPNRKY00.BITNET@cmsa.berkeley.edu>
Subject: YOHKOH GRB Event List
To: <khurley@space6.ssl.berkeley.edu>
Content-Length: 1674

To: Dr. K. Hurley (SSL/UCB)
Fr. Masato Yoshimori (Rikkyo Univ.)
Date: Thu. 26 Nov. 1992

Dear Dr. Hurley:
I am sending the YOHKOH GRB event list. YOHKOH has two GRB detectors, hard X-ray spectrometer (HXS) and radiation belt monitor (RBM). HXS is a NaI detector (3 in. dia x 1 in. thick) which provides a 32 channel energy spectrum (20 - 600 keV) every 2 sec and a time profile every 31 ms. RBM is a NaI detector (2 in. dia x 1 cm thick) which provides a 32 channel energy spectrum (10 - 300 keV) every 2 sec and a time profile every 31 ms.

YOHKOH GRB Event List (1991 Oct. 1 - 1992 Sept.3)

Date (Day/Month/Year)	UT (hh:mm)	Comment
27/11/91*	04:22	HXS
09/12/91	18:36	HXS/RBM
21/12/91*	06:17	HXS/RBM
18/02/92*	18:44	HXS
06/04/92	02:45	HXS/RBM
19/04/92*	01:22	HXS/RBM
19/05/92*	16:30	HXS/RBM
17/06/92*	05:29	HXS
22/06/92	07:05	HXS/RBM
01/07/92*	19:39	HXS
11/07/92	16:09	HXS/RBM
31/07/92	17:07	HXS/RBM
16/08/92	12:36	HXS
24/08/92	10:56	HXS/RBM
03/09/92	23:29	HXS

* Recorded with time resolution of 0.25 or 2 sec.
Accurate burst times (hh:mm:ss) are available shortly.

We hope the YOHKOH GRB event list is helpful to you.

With best regards,

Masato Yoshimori
Acknowledge-To: <X024862@JPNRKY00>

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**********
*ESEARCH PROGRAM*
**********

EVENT OF 1992 AUG 16 DAY OF YEAR=229
EVENT CROSSING TIME AT NEAR-EARTH S/C : 45398. S. OR 12:36:38.0
EARTH COORDINATES ARE 327.900 -31.100        6938. (RA, DEC, DIST.)
EVENT CROSSING TIME AT ULYSSES    WILL BE FOUND
EARTH SUBTENDS CONE OF HALF ANGLE 66.828 DEGREES AT NEAR EARTH SPACECRAFT
POSITION OF ULYSSES ON 16/ 8/  92 IS:
RA=  155.642 DEC=    2.566 DIST=    6.261 AU
ULYSSES/EARTH/SC ANGLE= 150.54     SC/ULYSSES DISTANCE= 936653200.0
COMPLEMENT OF ULYSSES/SC/EARTH ANGLE=  29.46
MAXIMUM LIGHT TRAVEL TIME = 3124.34 SECS.
EARTH BLOCKS THE ULYSSES-NEAR EARTH SPACECRAFT LINE EXTENSION
ULYSSES CROSSING WINDOW IS 42263.662 TO 47890.952 SECS., OR
                           11:44:23.662 TO 13:18:10.952
```

From khurley@space6.ssl.berkeley.edu Mon Dec 7 17:31:51 1992
Date: Mon, 7 Dec 92 17:25:42
From: khurley@space6.ssl.berkeley.edu
Content-Length: 987

Dear Dr. Yoshimori,

Good news! I think I have found the remaining four Yohkoh events in the Ulysses data. For December 21, 1991, and July 1 and August 16, 1992, we have fairly strong count rate increases (but no trigger) at 0.25 second resolution, and there is no doubt that they are bursts. For April 19, 1992, we have a weaker event lasting about 2 seconds (our time resolution was 0.5 seconds). Since we had to search about 6000 seconds of data (the Ulysses crossing window) it is possible that this one is just a fluctuation. If you can give me more information about the Yohkoh event, I can decide. Also, it will be helpful if you can give me the coordinates (RA and dec) of the Earth center for Yohkoh for this and any future events, since Earth-blocking can eliminate part of the Ulysses window.

I suggest we now proceed to exchange data. I will e-mail you some Ulysses files with an explanation of how to read them.

Best regards,

Kevin Hurley

cc: Chryssa Kouveliotou

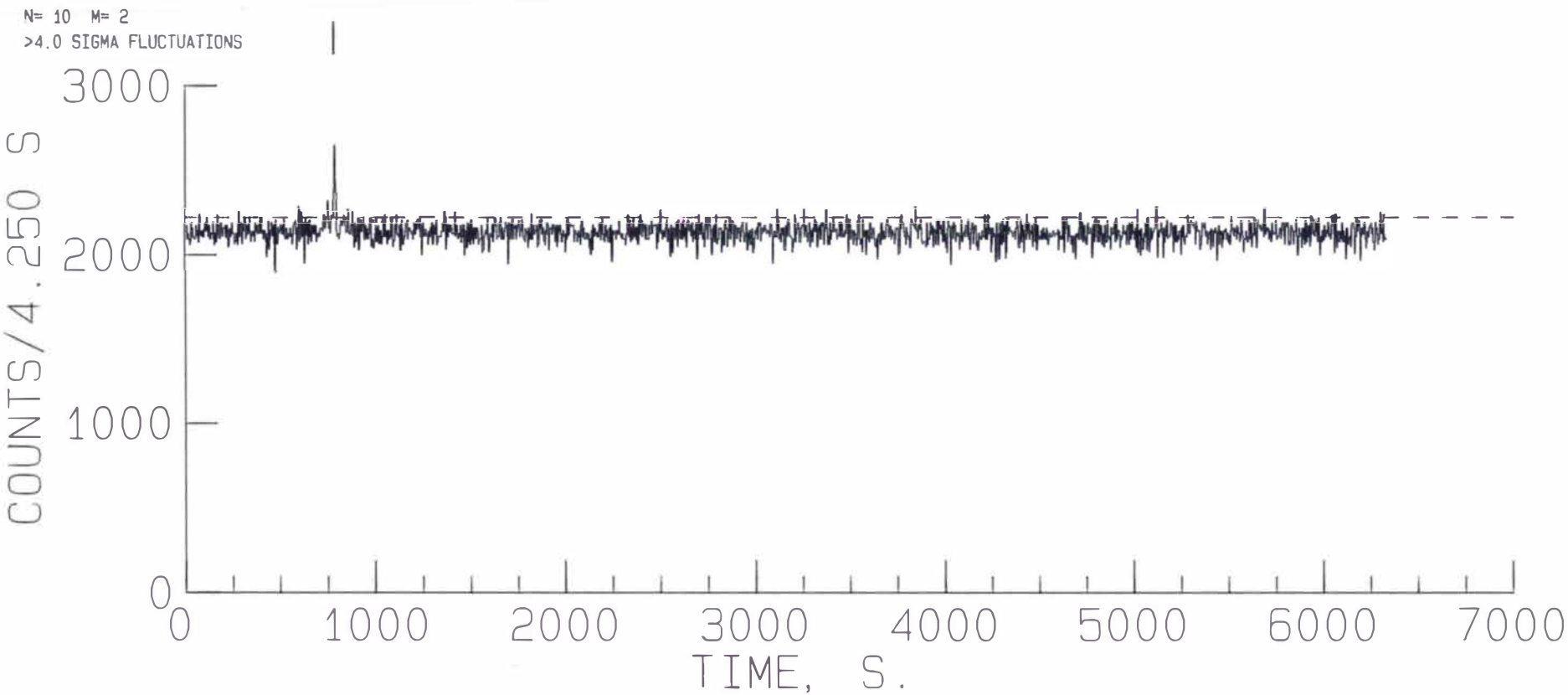
7/12/92

ULYSSES RT

16/ 8/92 42192.184 s

.250 S INTERVALS REGROUPED BY 17

0- 0 keV



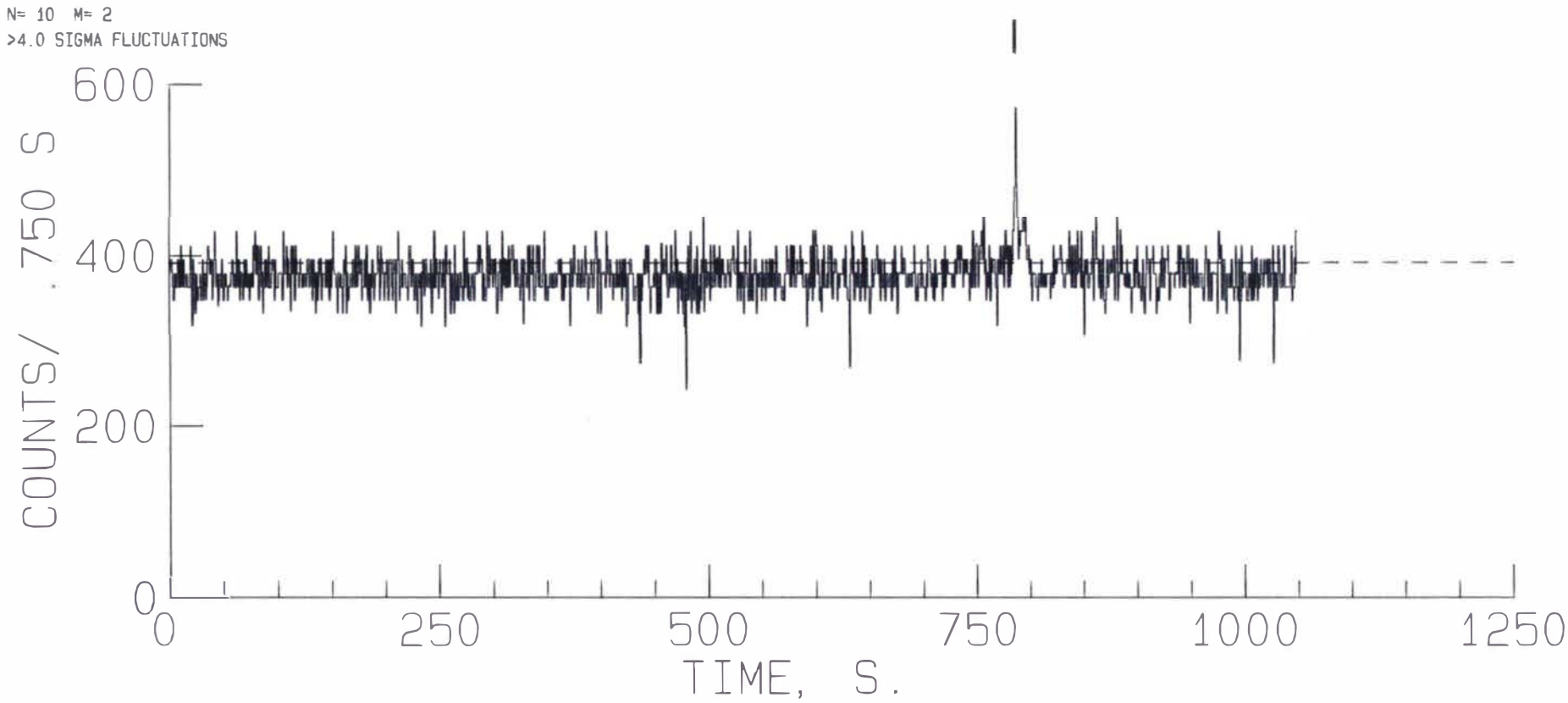
7/12/92

ULYSSES RT

16/ 8/92 42192.184 s

.250 S INTERVALS REGROUPED BY 3

0- 0 keV



From KOUVELIOTOU@ssl.msfc.nasa.gov Tue Aug 18 13:21:13 1992
Date: Tue, 18 Aug 1992 15:20:45 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER
NO.: 01833

TIME: TJD=8850 SECONDS=49803

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=009.0 AZIMUTH=176.0 ERROR= DEGREES

COMMENTS:
X-RAY TRANSIENT FLUCTUATION.

From KOUVELIOTOU@ssl.msfc.nasa.gov Tue Aug 18 13:25:24 1992
Date: Tue, 18 Aug 1992 15:25:10 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER
NO.: 01834

TIME: TJD=8850 SECONDS=56763

TYPE: UNKNOWN SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
LOTS OF MISSING DATA. POOR LOCATION. MAYBE PARTICLES.

From KOUVELIOTOU@ssl.msfc.nasa.gov Tue Aug 18 13:31:42 1992
Date: Tue, 18 Aug 1992 15:31:26 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER
NO.: 01835

TIME: TJD=8850 SECONDS=66407

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=014.0 AZIMUTH=158.0 ERROR= DEGREES

COMMENTS:
X-RAY TRANSIENT FLUCTUATION.

From KOUVELIOTOU@ssl.msfc.nasa.gov Tue Aug 18 13:35:19 1992
Date: Tue, 18 Aug 1992 15:35:17 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER
NO.: 01836

TIME: TJD=8850 SECONDS=77475

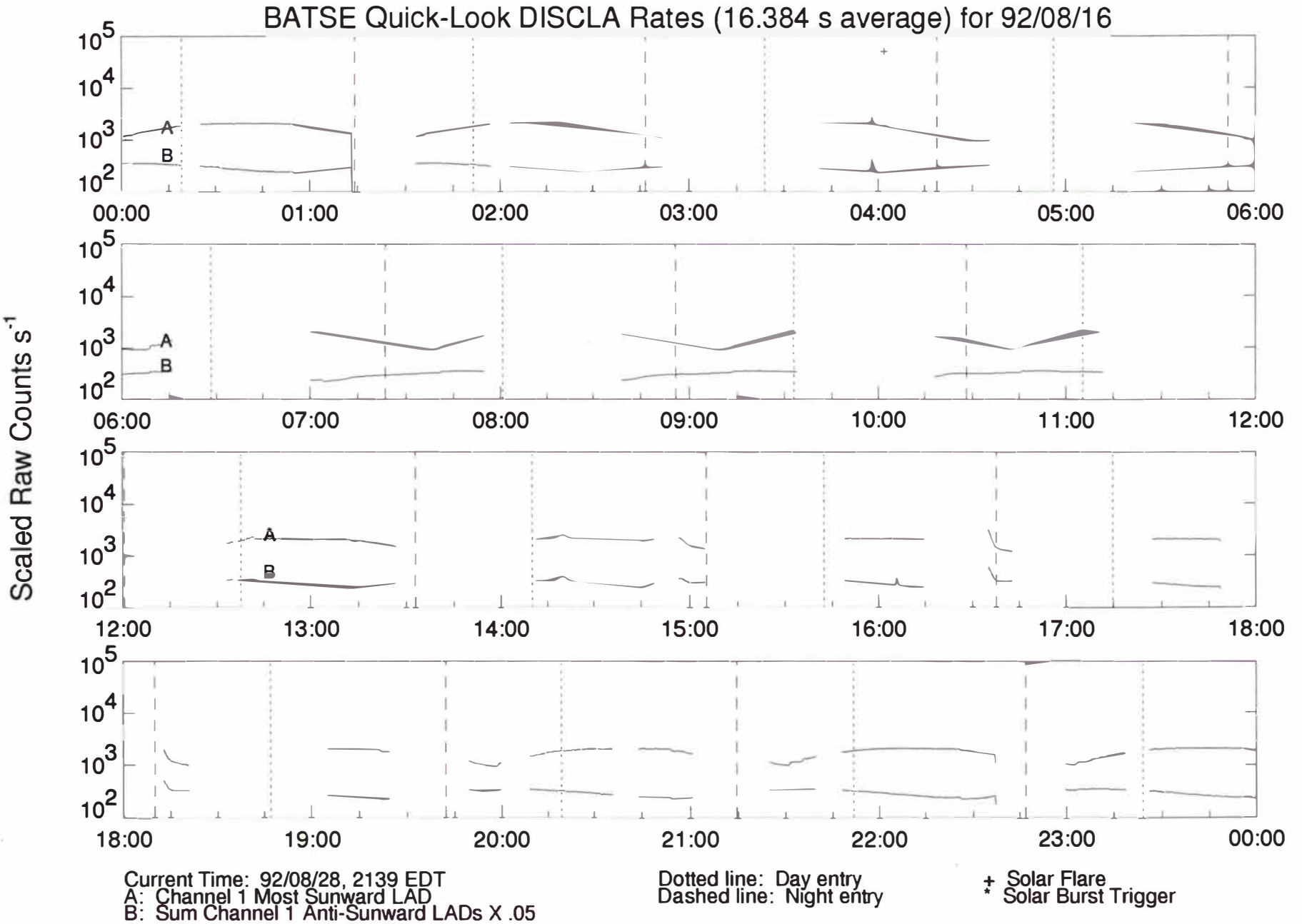
TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

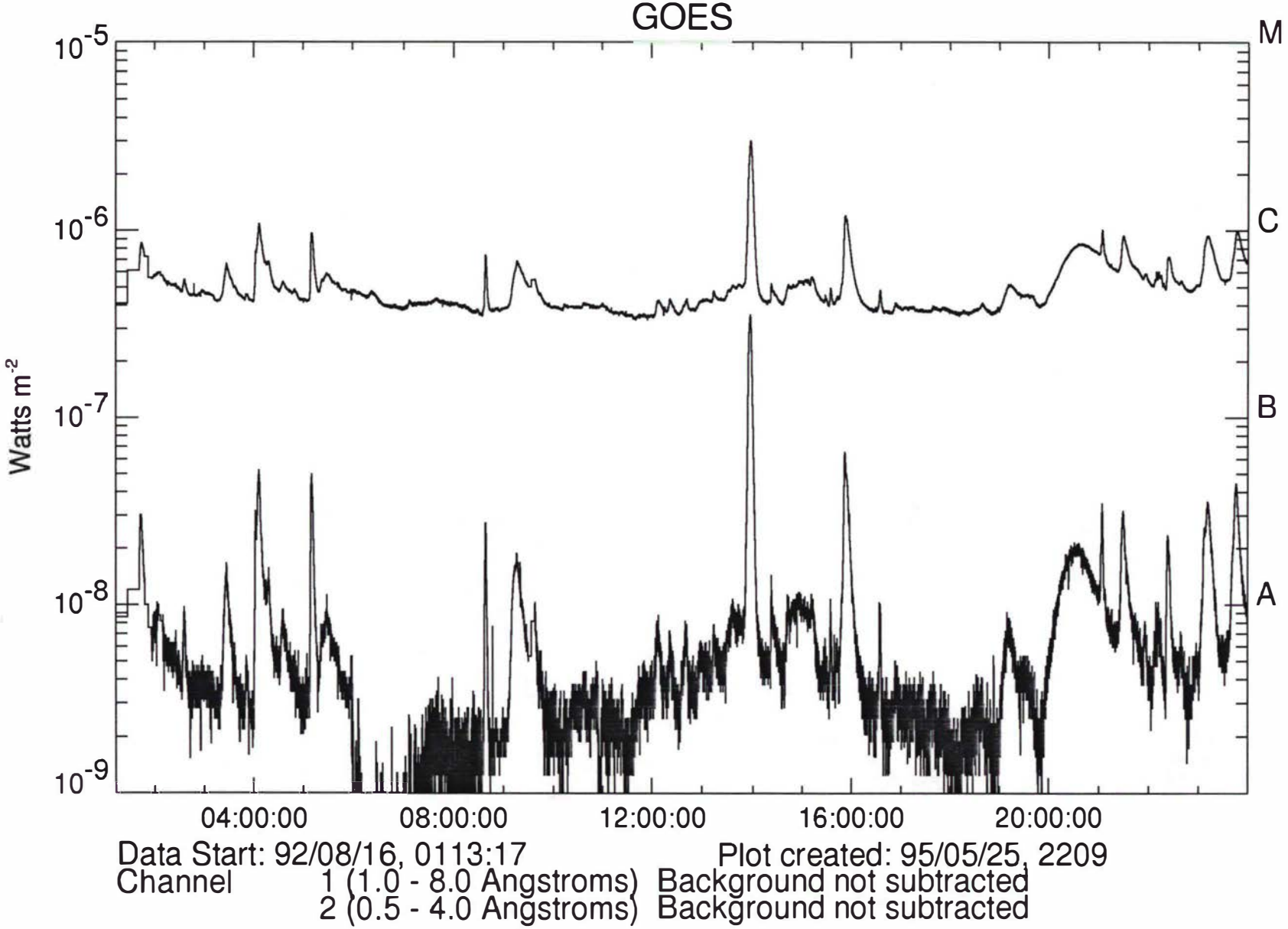
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

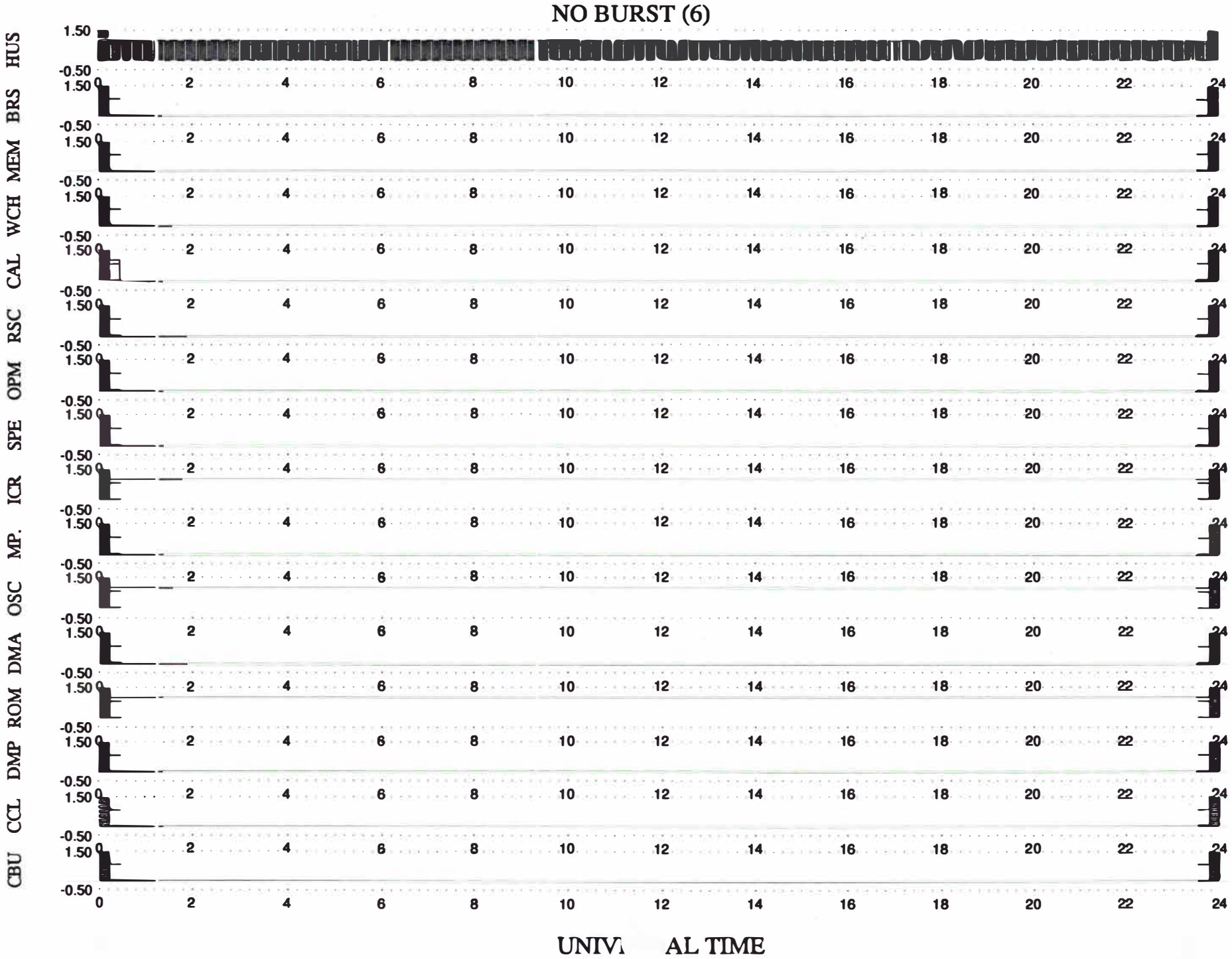
LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
X-RAY TRANSIENT RISE.


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/16
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2139 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 Flare
* Solar Burst Trigger

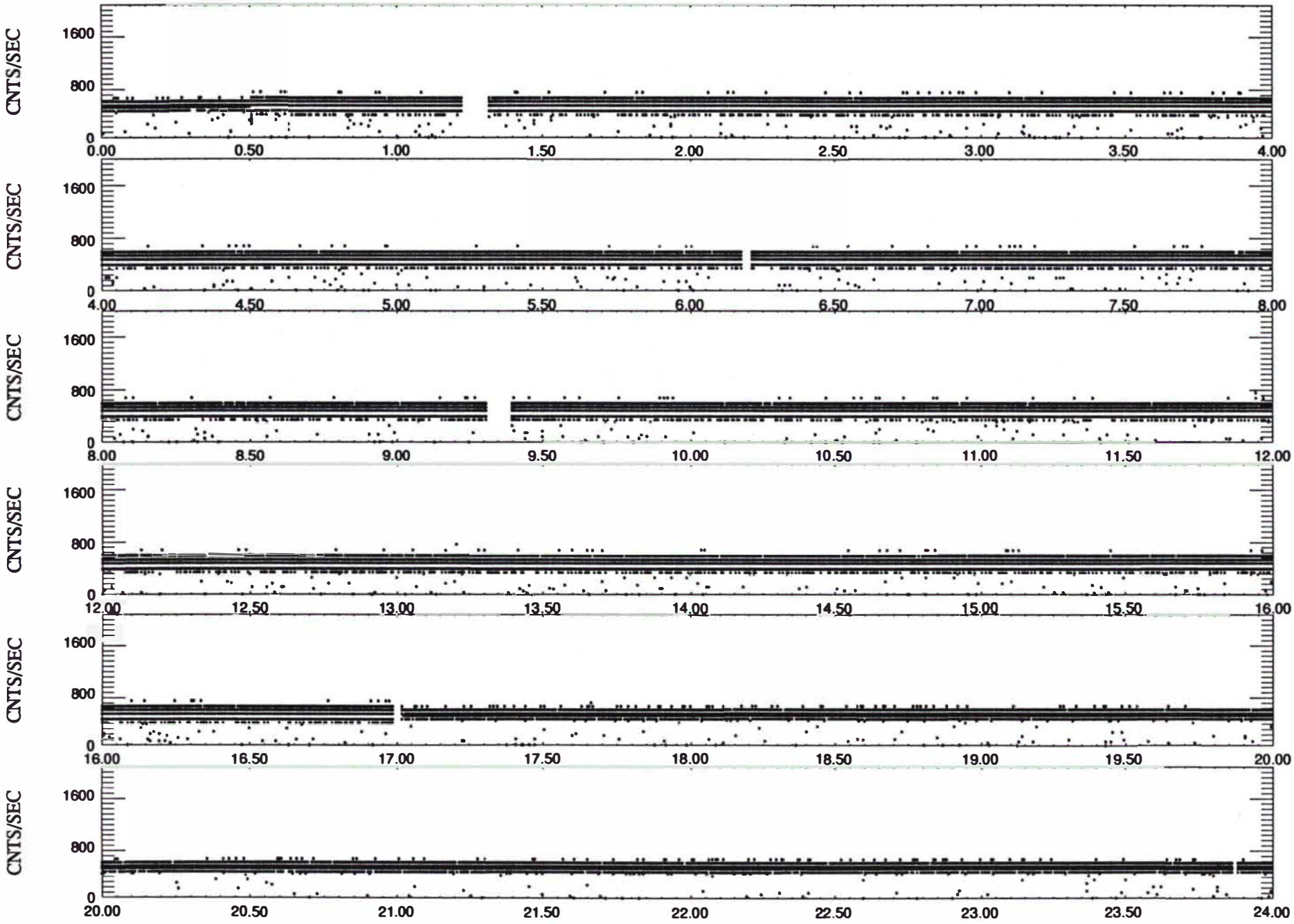

GOES
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/16, 0113:17
Plot created: 95/05/25, 2209
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 229, year 1992 to day 229, year 1992 9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 229, year 1992 to day 229, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIVERSAL TIME

BATSE BURST TRIGGER

NO.: 01837 Aug 17

TIME: TJD=8851 SECONDS=02143

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=008.6 AZIMUTH=059.4 ERROR=10.0 DEGREES

COMMENTS:
RISE OF GRO J0422+32

BATSE BURST TRIGGER

NO.: 01838

TIME: TJD=8851 SECONDS=11526

TYPE: CYG X-1 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=096.3 AZIMUTH=122.2 ERROR=010.0 DEGREES

COMMENTS:
VERY INTENSE CYGNUS X-1 OUTBURST. TRIGGERED ON SOURCE RISE, WITH MAX. OUTBURST ~170 AFTER TRIGGER. SIGNIFICANT FLUCTUATIONS ON TIMESCALES OF ~1S, CONTINUING UNTIL END OF DATA SHORTLY AFTER 12730S OF DAY. SOURCE IS INTENSE AT LATER TIMES IN THE DAY, BUT NO FURTHER STRONG FLUCTUATIONS ARE PRESENT. ABOUT 1300 C/S AT PEAK OF OUTBURST, 25-300 KEV

BATSE BURST TRIGGER

NO.: 01839

TIME: TJD=8851 SECONDS=08745

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=007.1 AZIMUTH=153.1 ERROR=10.0 DEGREES

COMMENTS:
RISE OF GRO J0422+32

BATSE BURST TRIGGER

NO.: 01840

Reclassified as solar by Briggs 2001

TIME: TJD=8851 SECONDS=27108

TYPE: UNKNOWN SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=054.8 AZIMUTH=339.0 ERROR=15.0 DEGREES

COMMENTS:
VERY SOFT EVENT, ONLY SEEN UP TO 100 KEV. LOCATES NEAR THE SUN (ABOUT 20 DEGREES AWAY). PROBABLY SOLAR. DURATION ~10S.

BATSE BURST TRIGGER

NO.: 01841

TIME: TJD=8851 SECONDS=35349

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=003.4 AZIMUTH=238.5 ERROR=10.0 DEGREES

COMMENTS:
RISE OF GRO J0422+32

BATSE BURST TRIGGER

NO.: 01842

TIME: TJD=8851 SECONDS=42526

TYPE: UNKNOWN SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=90.7 AZIMUTH=097.1 ERROR=15.0 DEGREES

COMMENTS:
PROBABLY A CYG X-1 FLUCTUATION. LOCATES ~12 DEG FROM THAT SOURCE. WEAK EVENT, NOT MUCH DATA COVERAGE.

BATSE BURST TRIGGER

NO.: 01843

TIME: TJD=8851 SECONDS=51955

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=007.0 AZIMUTH=198.8 ERROR=10.0 DEGREES

COMMENTS:
RISE OF GRO J0422+32

BATSE BURST TRIGGER

NO.: 01844

TIME: TJD=8851 SECONDS=63033

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=008.5 AZIMUTH=155.3 ERROR=10.0 DEGREES

COMMENTS:
RISE OF GRO J0422+32

BATSE BURST TRIGGER

NO.: 01845

TIME: TJD=8851 SECONDS=74097

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=018.9 AZIMUTH=173.3 ERROR=10.0 DEGREES

COMMENTS:
RISE OF GRO J0422+32

BATSE BURST TRIGGER

NO.: 01846

TIME: TJD=8851 SECONDS=86339

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
GOES C4.3 FLARE.

From khurley@space6.ssl.berkeley.edu Tue Dec 15 16:52:38 1992
Date: Tue, 15 Dec 92 16:46:51
From: khurley@space6.ssl.berkeley.edu
Content-Length: 1193

get Venus crossing times
FAX to Robin

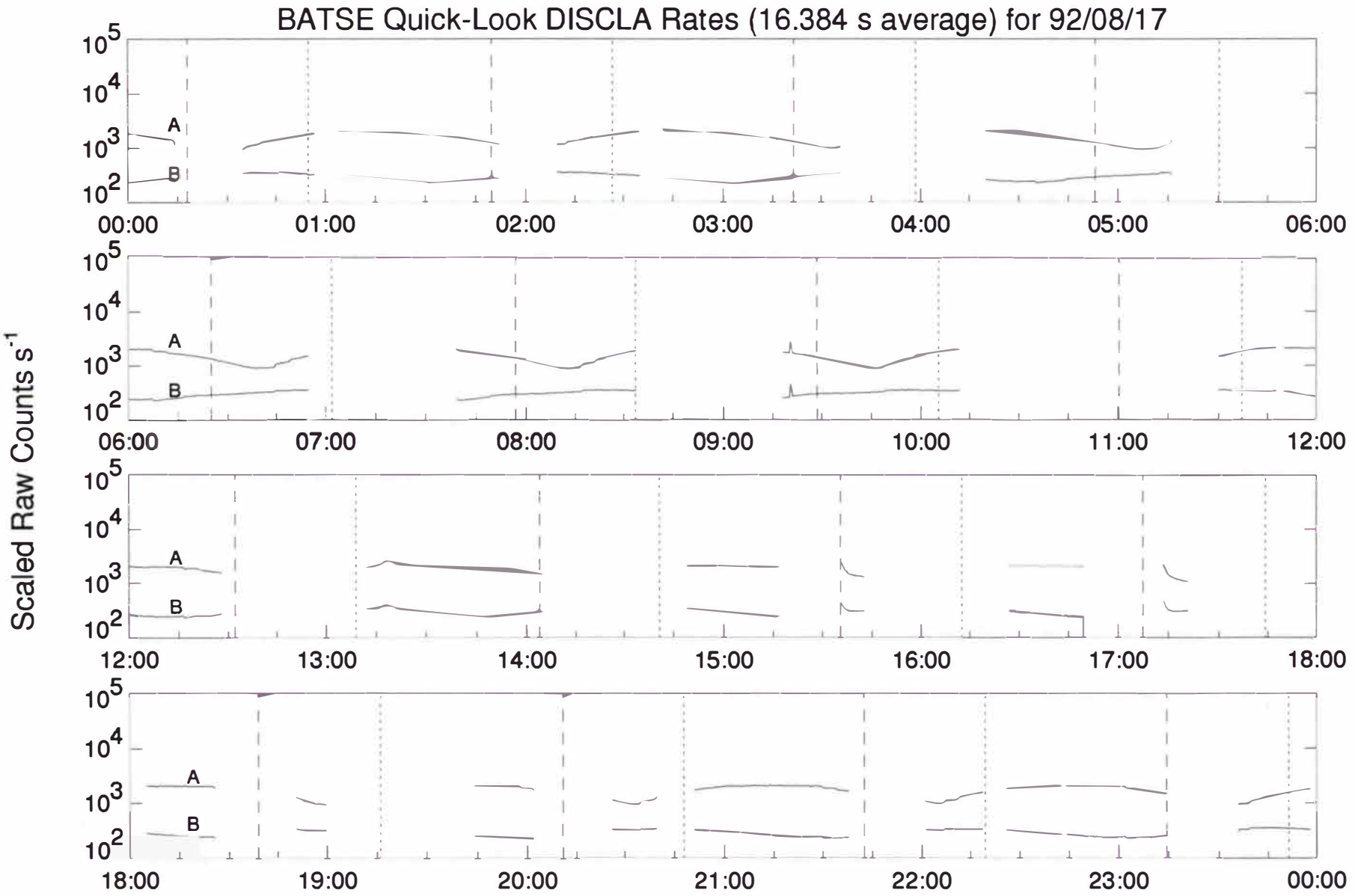
Dear John,

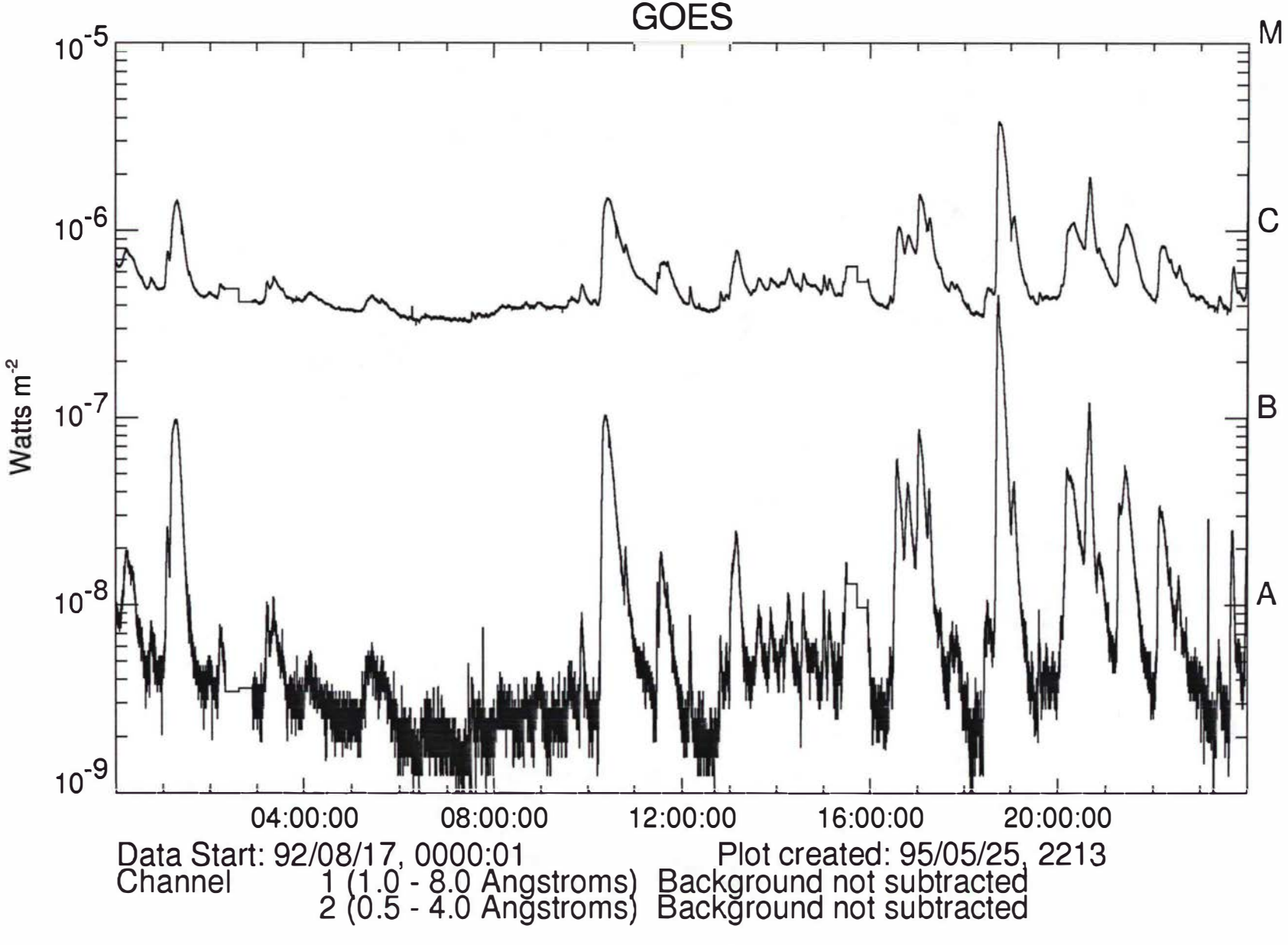
Here is a fairly complete list of Ulysses events from July to October 1992, excepting the events I already gave you. I have listed the Ulysses and Earth crossing times where available.

July	UCT	ECT	
1	72000	70740	N/O
7	25300	23615	N/O
14	46000	47040	← Only one they have PVO data for! (Among the ones for which ECT is given) Sent Mar 2
18	55000	52860	N/O
26	02066	----	
31	62196	61620	N/O
August			
10	77700	-----	
13	11000	12828	N/O
16	42600	45360	N/O
17	15055	-----	RK will check 4/93
19	40612	-----	
22	84184	-----	DMSP 81542 (3 sec ?)
24	38400	39183	N/O DMSP (2)
27	85245	-----	
29	30755	-----	
29	63712	-----	
30	05800	06318	N/O
30	32310	-----	
September			
1	04311	-----	(solar?)
2	03230	-----	DMSP (3) ~01743
3		84540	N/O
4	00420		Same as previous event
19	28450	-----	(solar?)
21	00060	-----	
October			
1	80900	-----	
3	20880	-----	
4	49100	-----	
6	40720	-----	
9	21980	24070	N/O
13	81256	-----	
15	04000	05792	N/O
22	55200	55200	N/O
25	52578	-----	
27	26805	-----	
29	42125	-----	
30	64000	-----	(solar)
31	40000	-----	

The Earth-Ulysses distance varied between about 5.76 and 6.28 AU in this period.

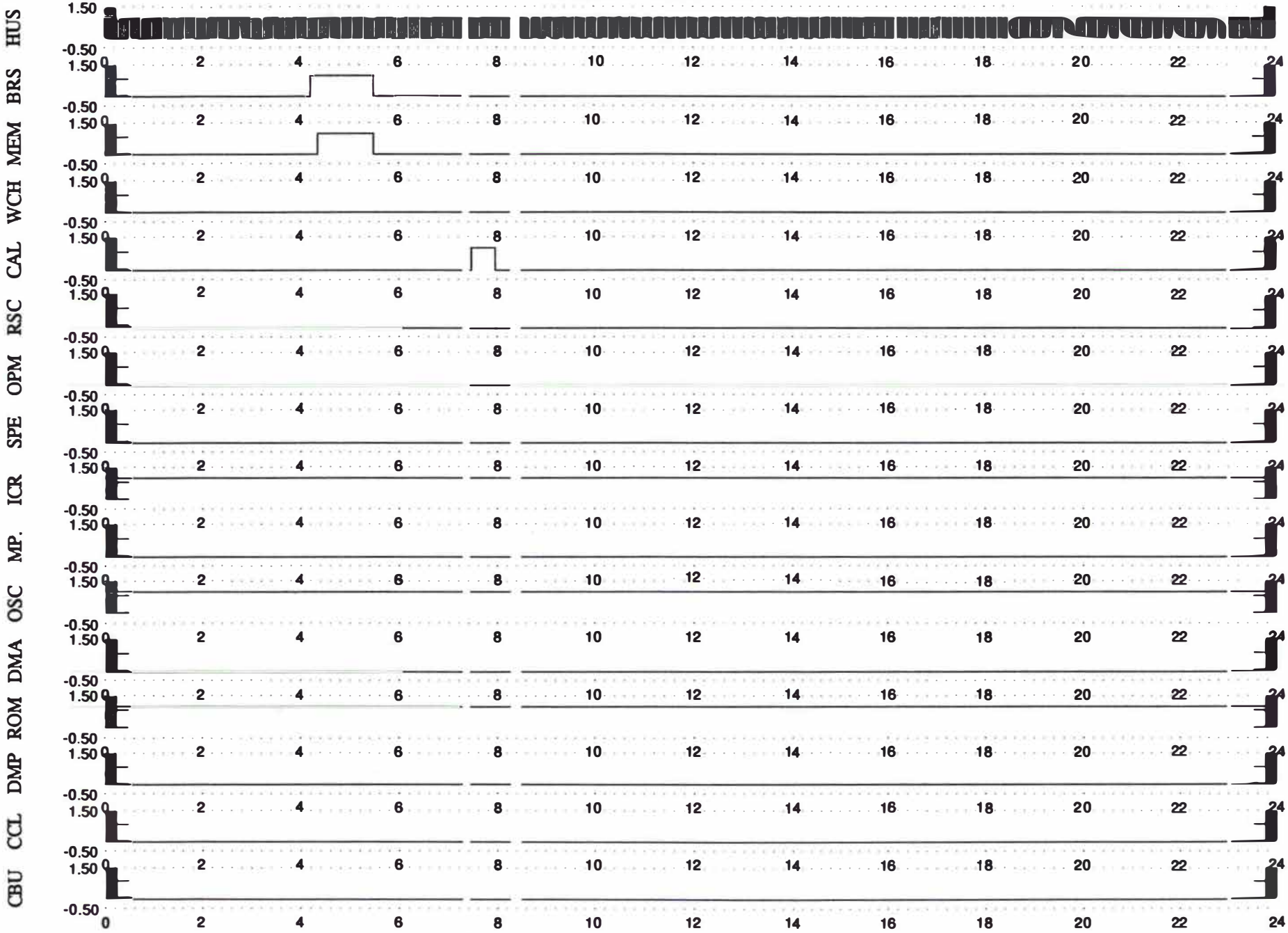
POSITION OF ULYSSES ON 17/ 8/1992 IS:
RA= 155.776 DEC= 2.472 DIST= 6.263 AU
PO TION OF VENUS ON 17/ 8/1992 IS ALPHA= 163.915 DELTA= 8.383 DISTANCE=1.61604 AU
TH. DISTANCE BETWEEN TWO OBJECTS AT
155.776 2.472 937003200.00 KM. AND
163.915 8.383 241760300.00 KM. IS
700201300.00 KM., OR 4.681 A.U., OR 2335.62 LIGHT-SECONDS
THE ANGLE BETWEEN THEM IS 10.026 DEGREES


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/17
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 92/08/28, 2138 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 Flare
* Solar Burst Trigger


GOES
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/17, 0000:01
Plot created: 95/05/25, 2213
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 230, year 1992 to day 230, year 1992 9/11/92

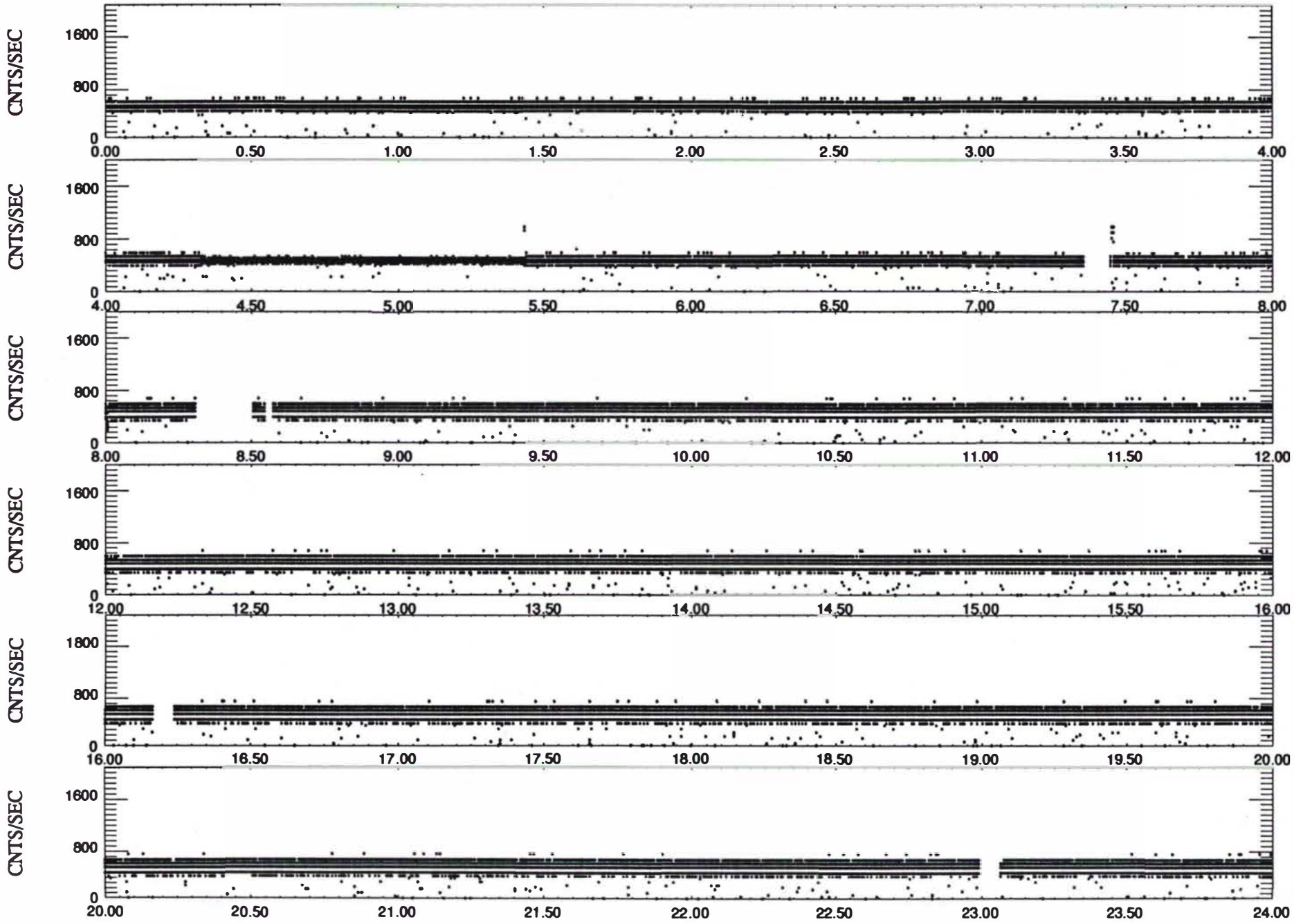
BURST NUMBER 7



UNIVERSAL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 230, year 1992 to day 230, year 1992 9/11/92

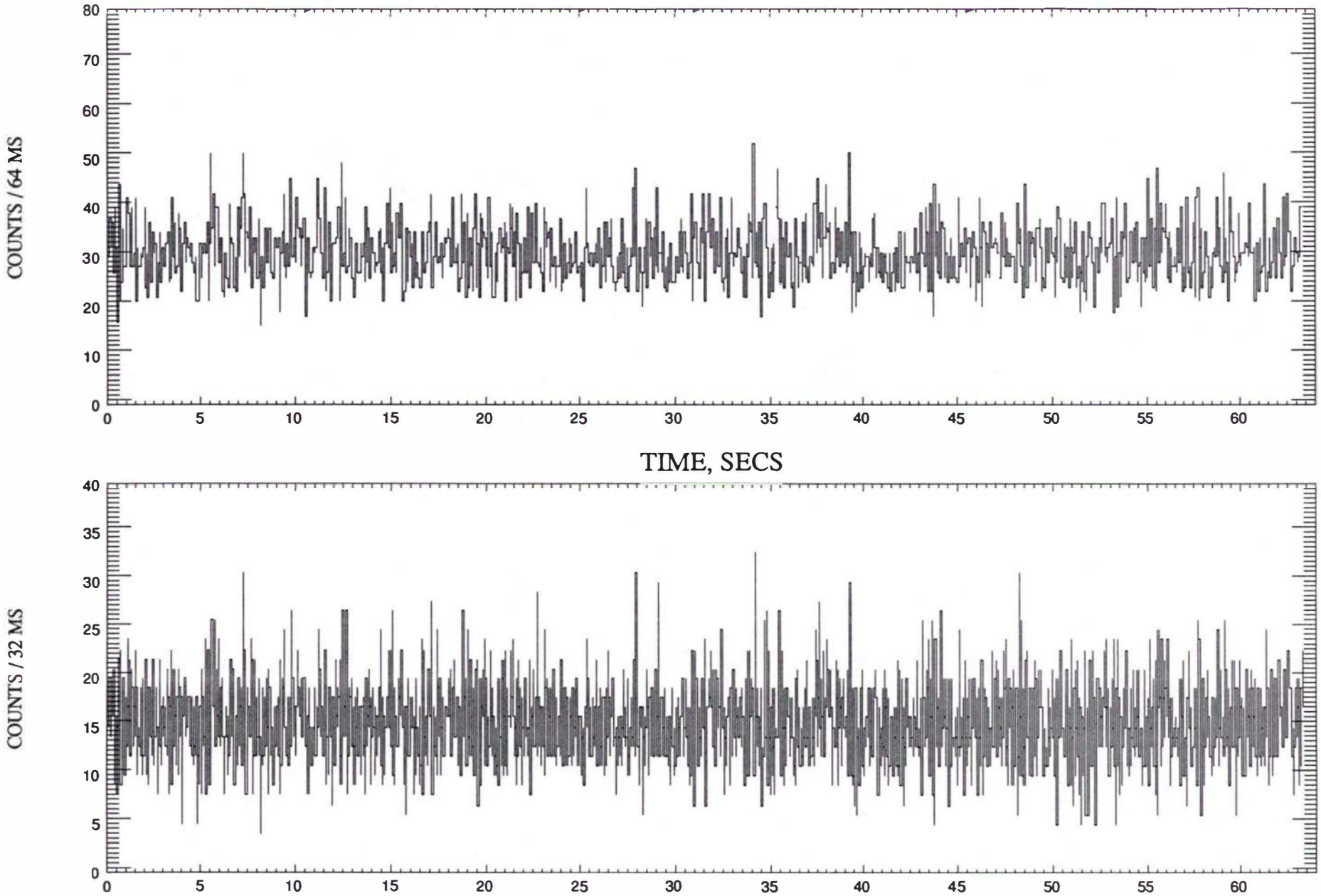
CALIBRATION DATA INCLUDED



UNIVI AL TIME

HUS 2A TRIGGERED DATA EDR day 230, year 1992 9/11/92

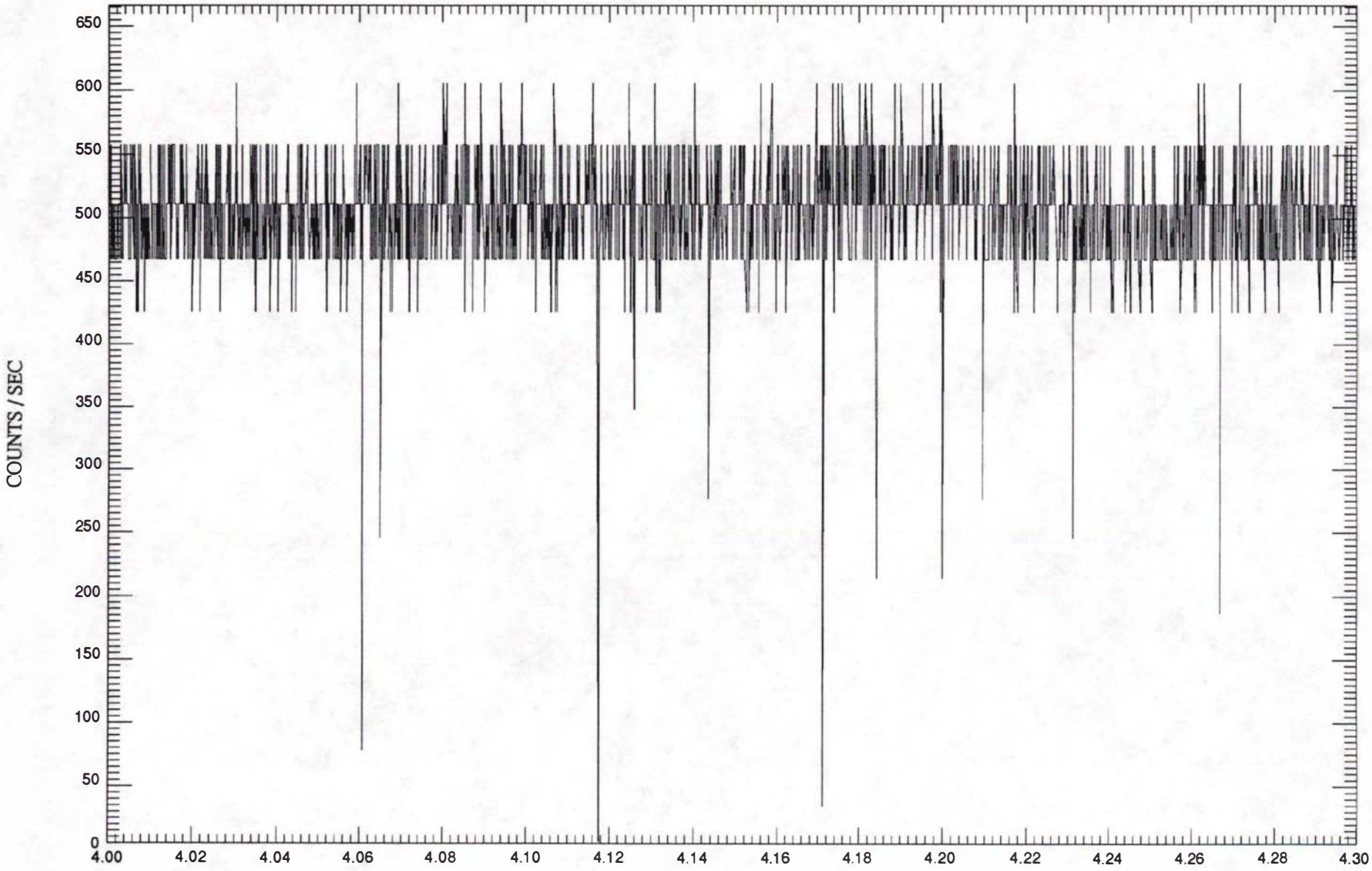
Burst Counter 7 at UT= 4.182046148512 h=15055.366 s



B# 1

HUS 2A, MODE 1, NOT AVERAGED QEDR day 230, year 1992 to day 230, year 1992 8/18/92

CALIBRATION DATA INCLUDED



From MALLOZZI@ssl.msfc.nasa.gov Thu Aug 20 06:06:17 1992
Date: Thu, 20 Aug 1992 8:06:20 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01847 Aug 18

TIME: TJD=8852 SECONDS=15357

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON RISE OF GROJ0422+32

From MALLOZZI@ssl.msfc.nasa.gov Thu Aug 20 06:13:25 1992
Date: Thu, 20 Aug 1992 8:13:38 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01848

TIME: TJD=8852 SECONDS=26427

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON RISE OF GROJ0422+32

From MALLOZZI@ssl.msfc.nasa.gov Thu Aug 20 06:16:39 1992
Date: Thu, 20 Aug 1992 8:16:43 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1220

BATSE BURST TRIGGER
NO.: 01849

TIME: TJD=8852 SECONDS=37495

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON RISE OF GROJ0422+32

From MALLOZZI@ssl.msfc.nasa.gov Thu Aug 20 06:19:25 1992
Date: Thu, 20 Aug 1992 8:19:30 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER
NO.: 01850

TIME: TJD=8852 SECONDS=48573

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON RISE OF GROJ0422+32

****
CATSEARCH PROGRAM
****

BATSE BURST # 1851
EVENT OF 1992 AUG 18 DAY OF YEAR=231
EVENT CROSSING TIME AT BATSE : 50982. S. OR 14:09:41.5
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 44.700 -20.800
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 18/ 8/ 92 IS:
RA= 155.911 DEC= 2.378 DIST= 6.266 AU
BATSE-ULYSSES DISTANCE = 937323288. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 69.35 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1102.64 SECS.
CROSSING TIME AT ULYSSES IS 52084. S. OR 14:28:04.2 +/- 574.69 SECONDS

ND

From MALLOZZI@ssl.msfc.nasa.gov Thu Aug 20 07:06:14 1992
Date: Thu, 20 Aug 1992 9:06:25 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER
NO.: 01851

TIME: TJD=8852 SECONDS=50981

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=58.6 AZIMUTH=226.2 ERROR= DEGREES

COMMENTS:
SINGLE SPIKE EVENT. OBSERVED ABOVE 300 KEV.
DURATION ~128 MS.

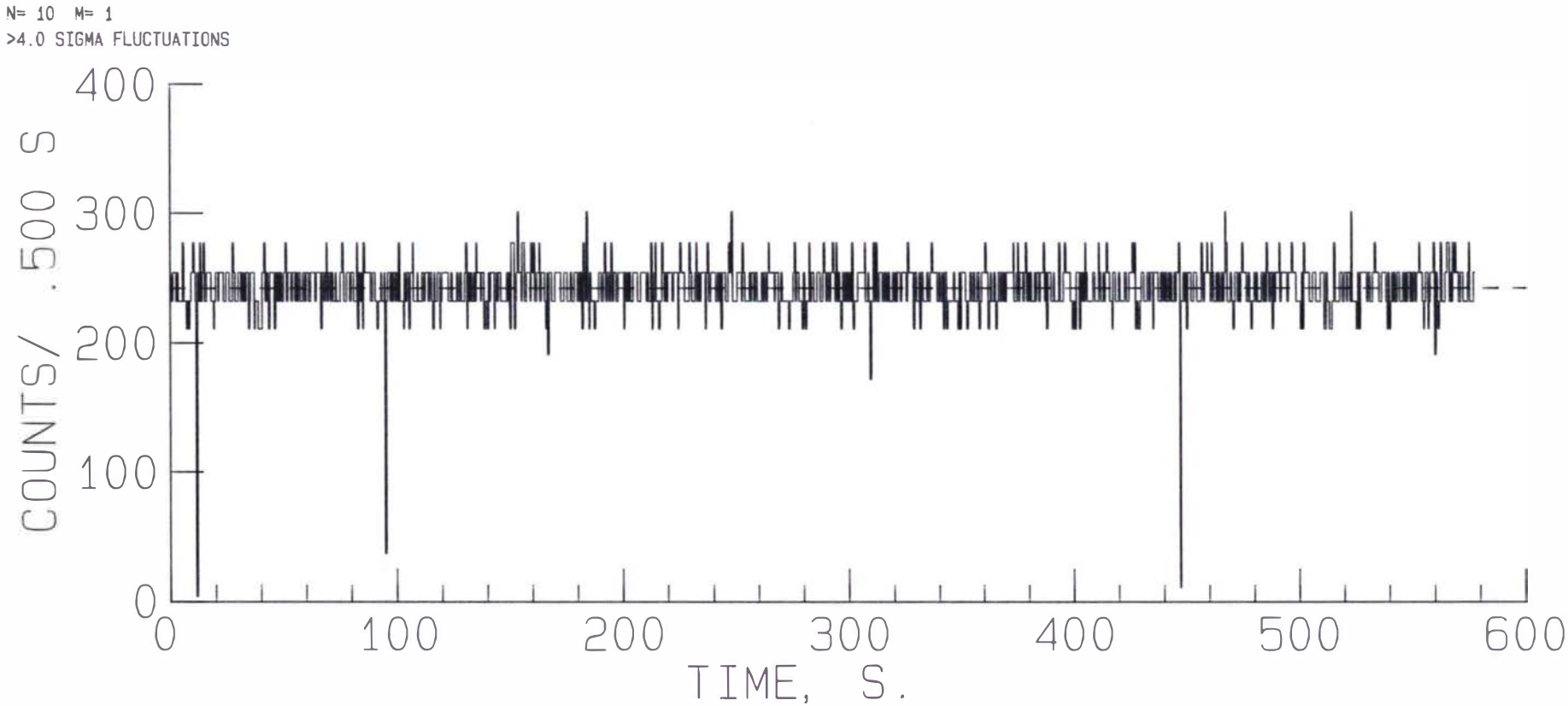
No trigger

20/ 8/92

ULYSSES RT

18/ 8/92 51480.102 s

0- 0 keV

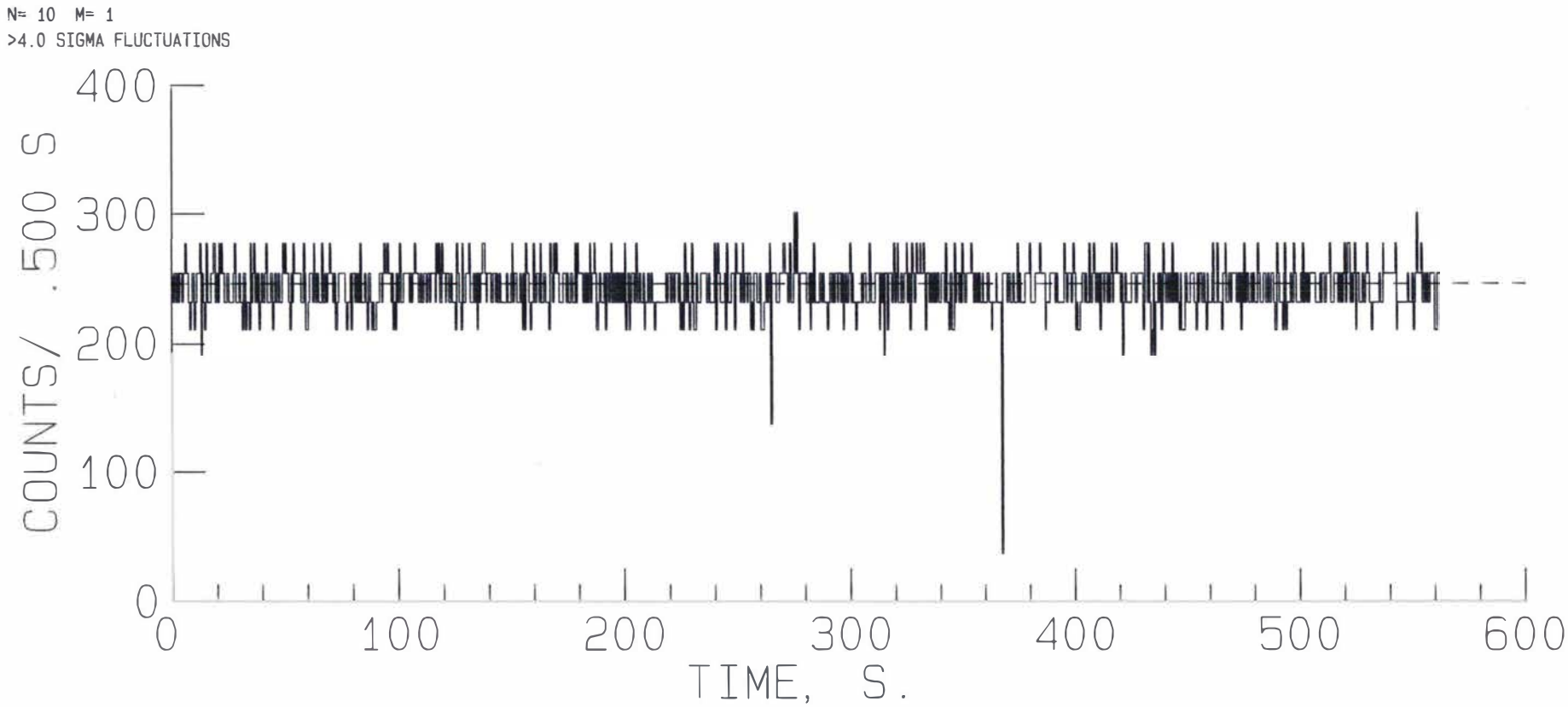


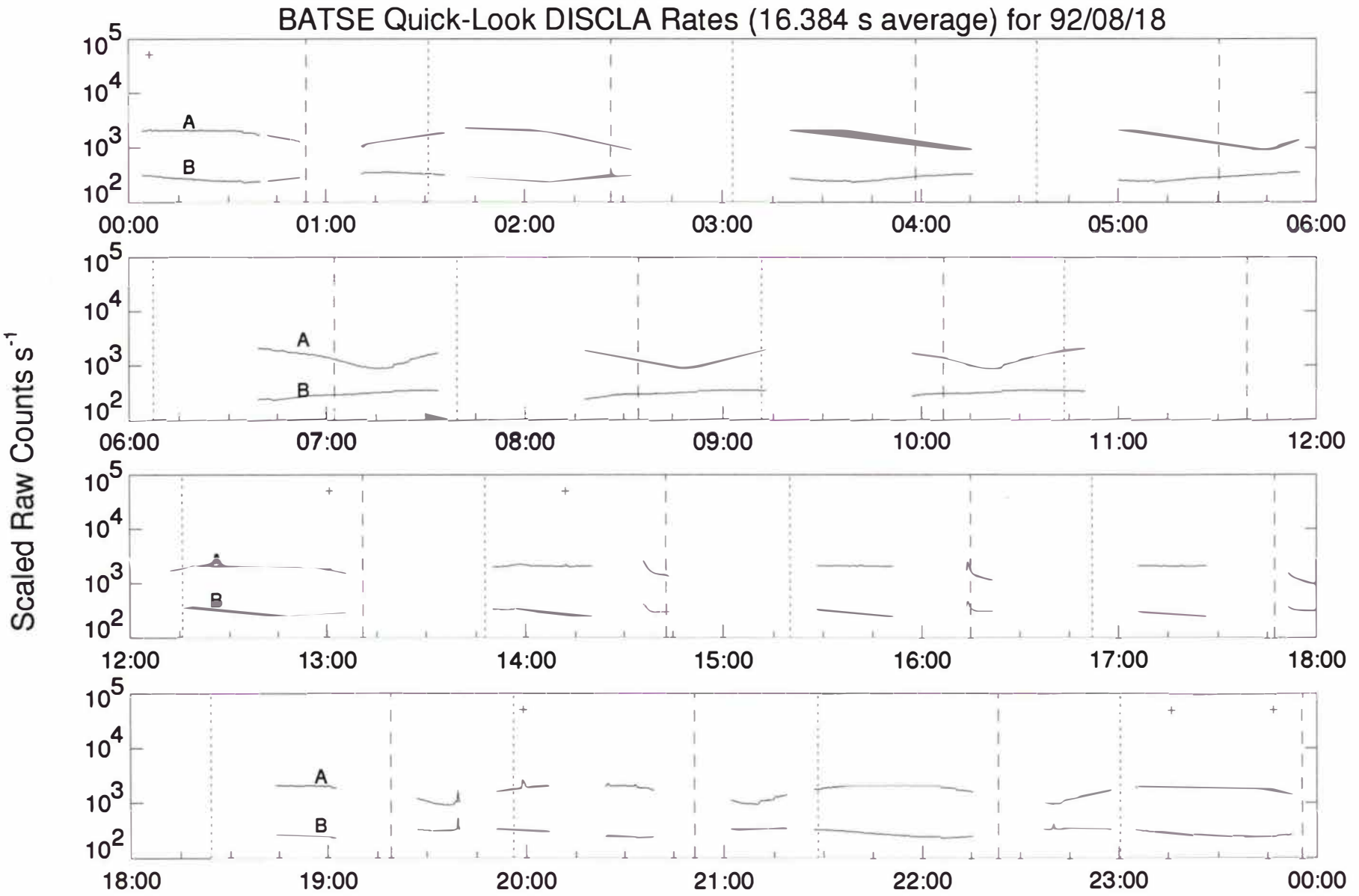
20/ 8/92

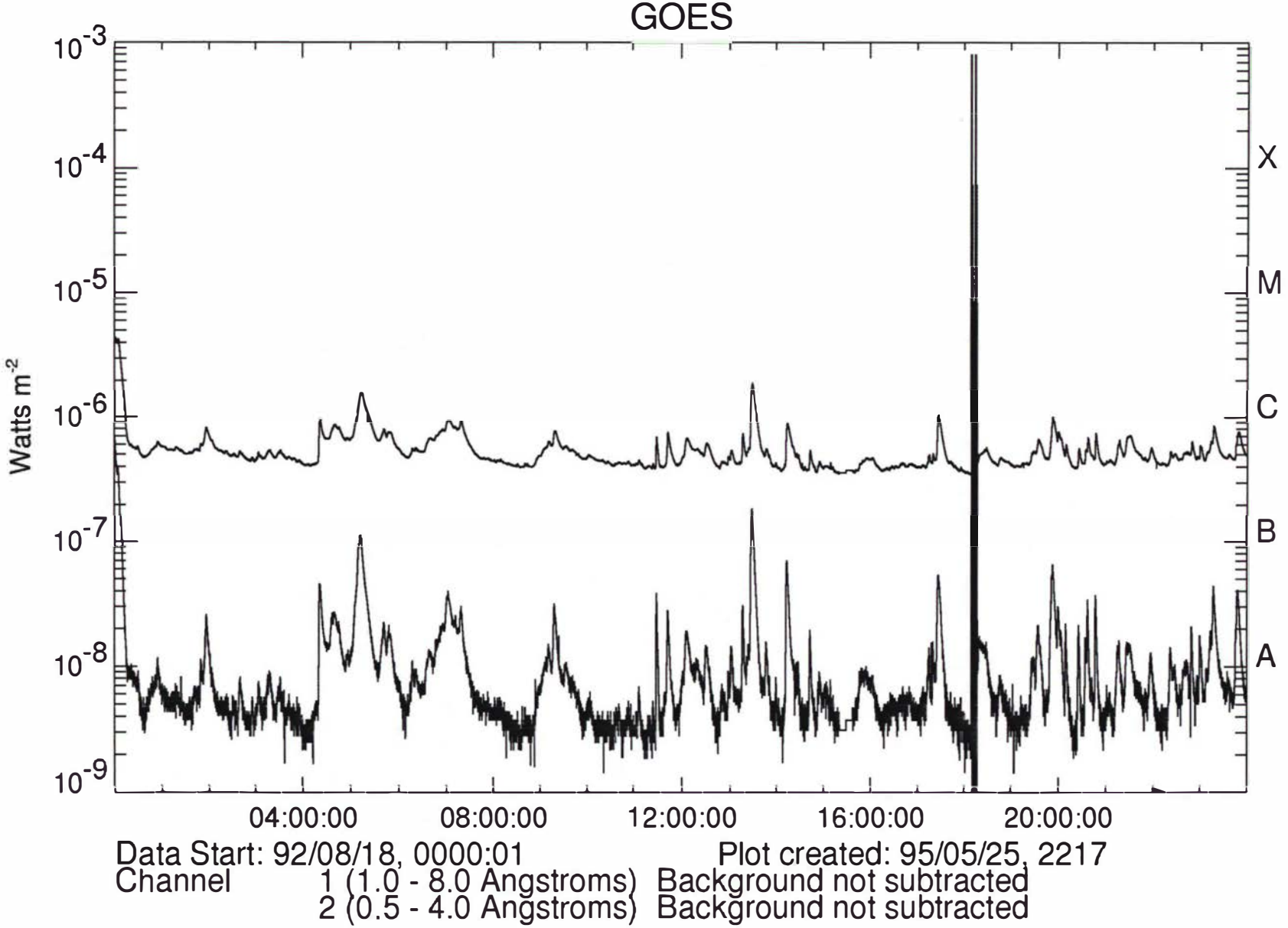
ULYSSES RT

18/ 8/92 52027.109 s

0- 0 keV

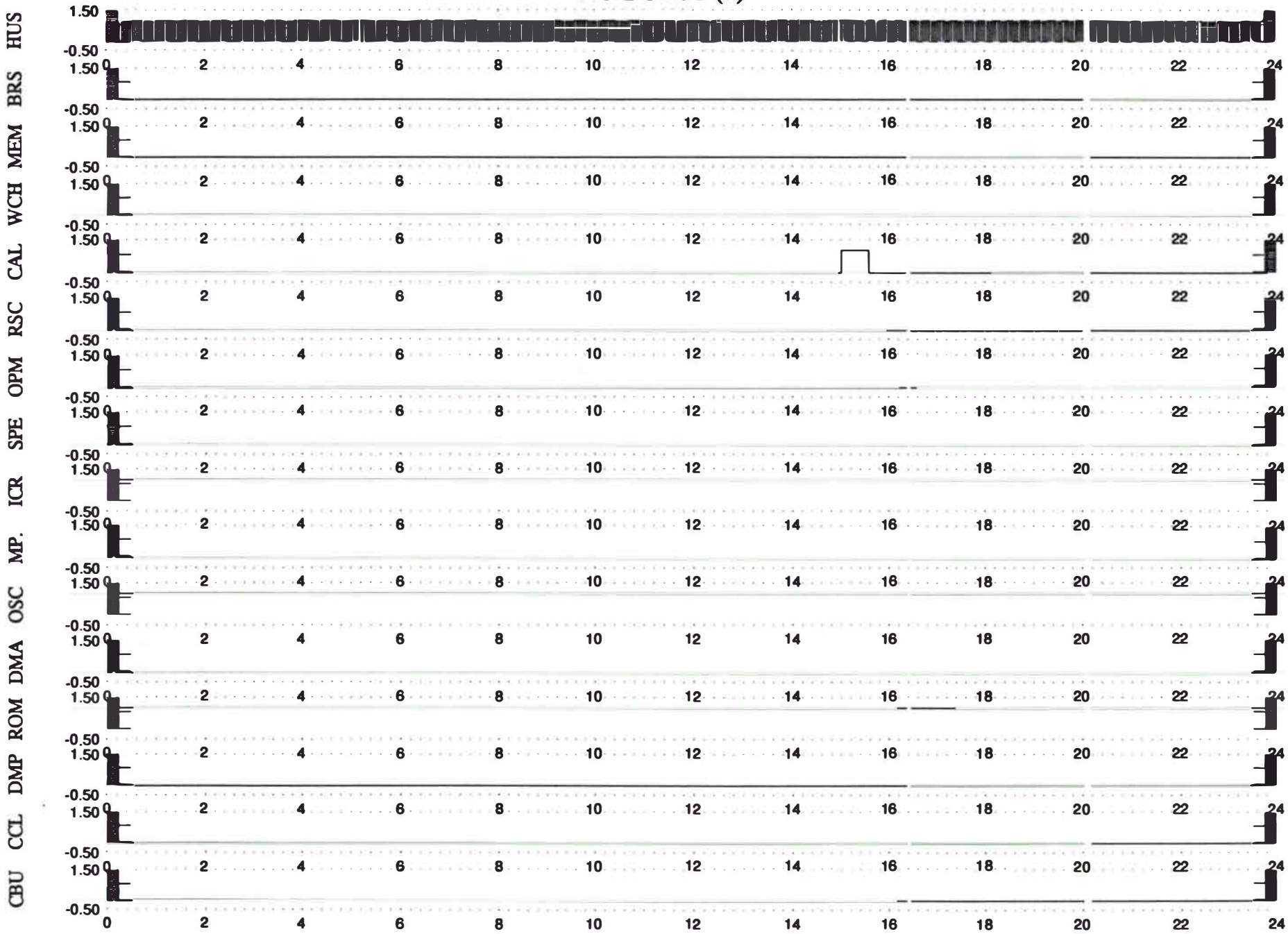



BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/18
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 92/08/28, 2137 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
+ Solar Flare
* Solar Burst Trigger


GOES
Watts m-2
10-3
10-4
10-5
10-6
10-7
10-8
10-9
X
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/18, 0000:01
Plot created: 95/05/25, 2217
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 231, year 1992 to day 231, year 1992 9/11/92

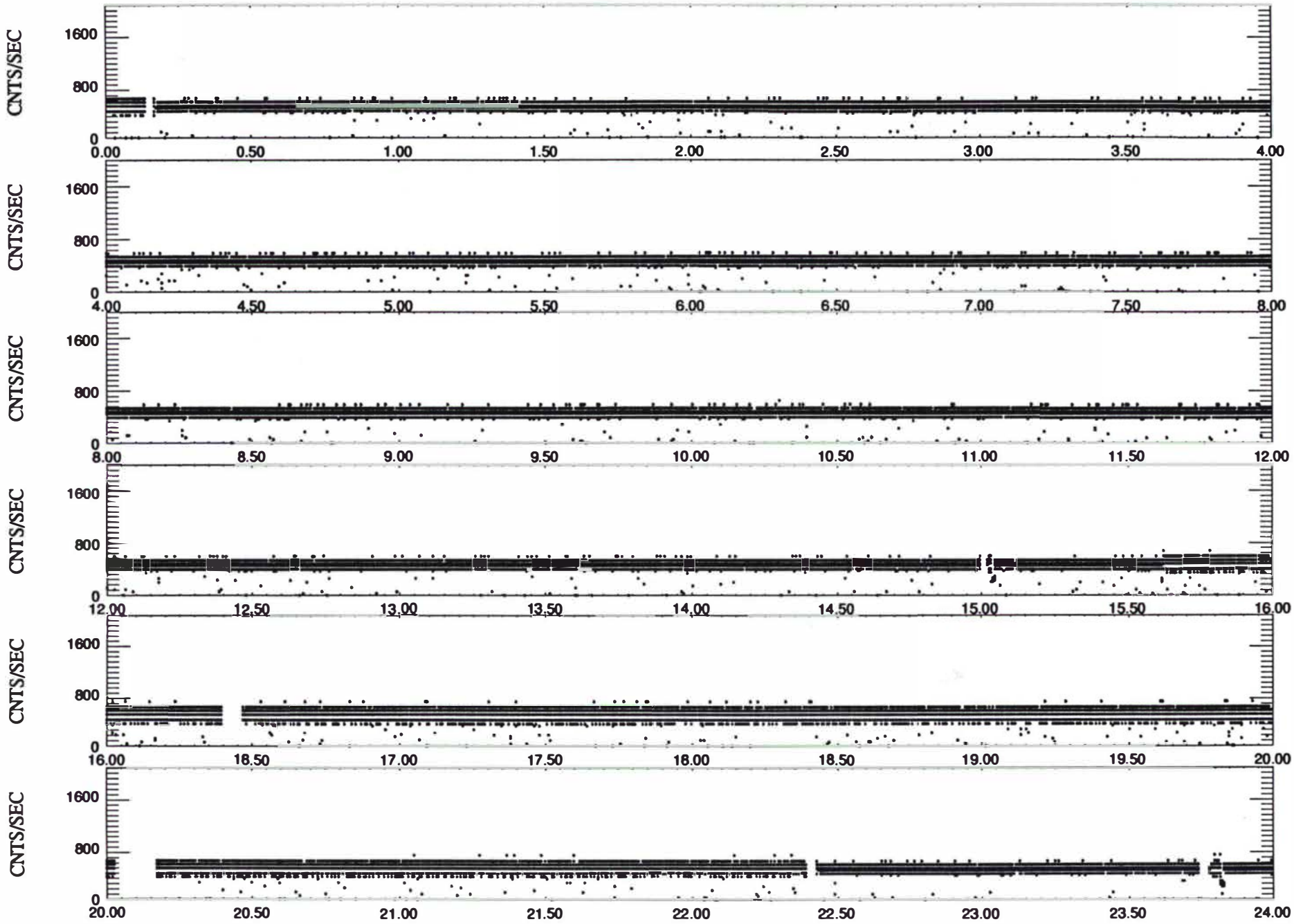
NO BURST (7)



UNIVERSAL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 231, year 1992 to day 231, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIVI AL TIME

From HORACK@ssl.msfc.nasa.gov Fri Aug 21 08:00:03 1992
Date: Fri, 21 Aug 1992 10:00:05 -0500 (CDT)
From: HORACK@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1458

BATSE BURST TRIGGER

NO.: 01852 Aug 19

TIME: TJD=8853 SECONDS=17859.842

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=120. AZIMUTH=121. ERROR= DEGREES

COMMENTS:
MODERATE EVENT LASTING APPROXIMATELY 0.1 SECONDS. MOST ALL OF THE EVENT IS PRIOR TO THE DECLARATION OF THE TRIGGER. THE PEAK OF EMISSION IS RATHER SMOOTH, WITH A SMALL VALLEY IN THE MIDDLE. SPECTRUM IS SOMEWHAT SOFT, BEING ONLY BARELY DETECTABLE ABOVE 100 KEV.

are well fitted with an optically thin thermal bremsstrahlung (OTTB) function with temperatures between 30 and 40 keV (refs 4, 14) and show no evidence for spectral evolution[4]. The total numbers of events so far observed from SGR0526−66, SGR1900+14 and SGR1806−20 are 16, 3 and over 100, respectively, with intervals between events that vary stochastically from hours to years.

The first SGR event detected with BATSE[7] (Fig. 1*a* and *b*) consists of two pulses separated by ~0.5 s. The first pulse (Fig. 1*a*) lasts 40 ms and has a trapezoidal shape. It initially rises

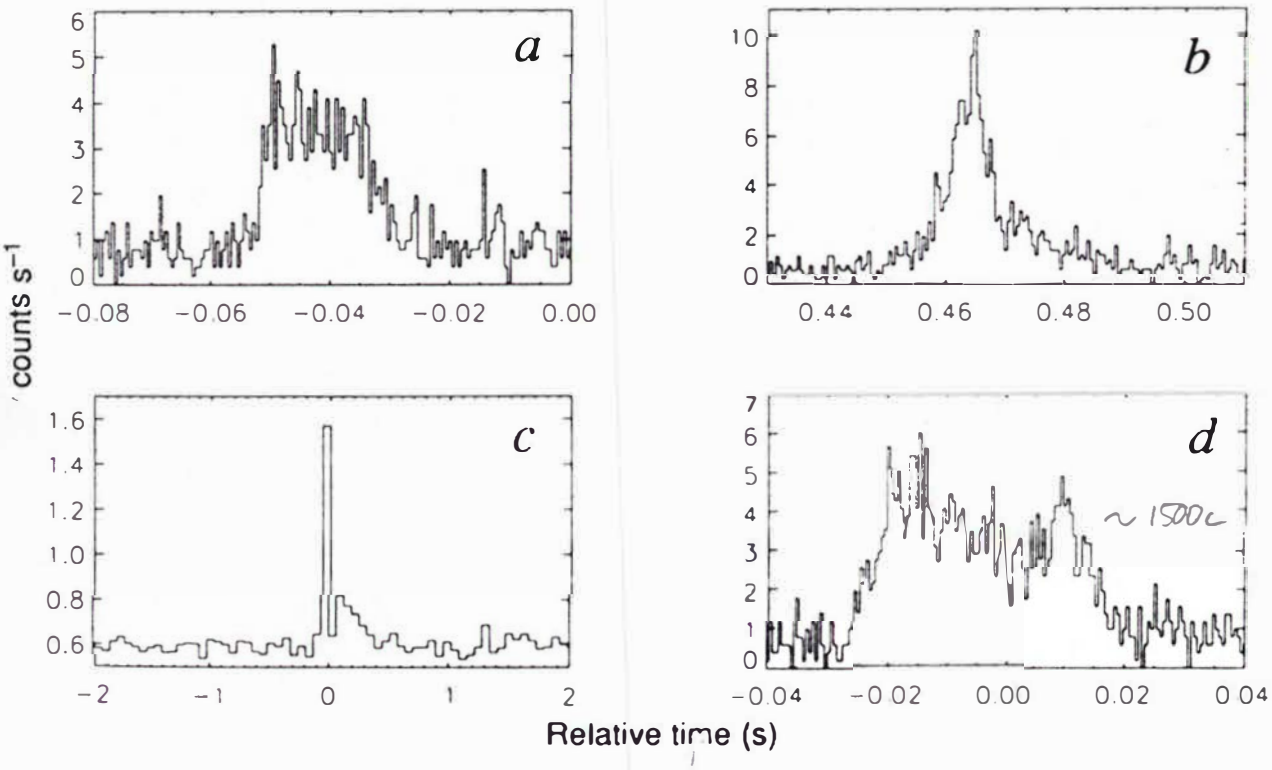


FIG. 1 Light curves of the three SGR bursts detected with the Burst and Transient Source Experiment (BATSE) on the Compton Gamma Ray Observatory. BATSE is unique in combining good sensitivity to weak γ-ray and SGR-like bursts with the capability of determining their locations in a single experiment. *a*, *b*, First and second pulse, respectively, of the 19 June 1992 trigger. The counts are integrated between 20 and 100 keV. Time resolution is 0.512 ms. *c*, Event of 8 July 1992 recorded with 64-ms time resolution (the only resolution available). The initial spike of <64 ms appears only up to 100 keV. *d*, Event of 19 August 1992 recorded with 0.512-ms resolution between 20 and 100 keV. Notice the similarity in structure between *a* and *d*.

From HORACK@ssl.msfc.nasa.gov Fri Aug 21 08:03:02 1992
Date: Fri, 21 Aug 1992 10:03:12 -0500 (CDT)
From: HORACK@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01853

TIME: TJD=8853 SECONDS=34109

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=7. AZIMUTH=154. ERROR= DEGREES

COMMENTS:
TRIGGER ON THE RISE OF GRO J0422+32.

From khurley@space6.ssl.berkeley.edu Tue Dec 15 16:52:38 1992
Date: Tue, 15 Dec 92 16:46:51
From: khurley@space6.ssl.berkeley.edu
Content-Length: 1193

get Venus crossing times
FAX to Robin

Dear John,

Here is a fairly complete list of Ulysses events from July to October 1992, excepting the events I already gave you. I have listed the Ulysses and Earth crossing times where available.

July	UCT	ECT	
1	72000	70740	N/O
7	25300	23615	N/O
14	46000	47040	← Only one they have PVO data for! (Among the ones for which ECT is given) Sent Mar 2
18	55000	52860	N/O
26	02066	----	
31	62196	61620	N/O
August			
10	77700	-----	
13	11000	12828	N/O
16	42600	45360	N/O
17	15055	-----	
19	40612	-----	
22	84184	-----	DMSP 81542 (3 saw it) RK will check 4/93
24	38400	39183	N/O DMSP (2)
27	85245	-----	
29	30755	-----	
29	63712	-----	
30	05800	06318	N/O
30	32310	-----	
September			
1	04311	-----	(solar?)
2	03230	-----	DMSP (3) ~01743
3		84540	N/O
4	00420		Same as previous event
19	28450	-----	(solar?)
21	00060	-----	
October			
1	80900	-----	
3	20880	-----	
4	49100	-----	
6	40720	-----	
9	21980	24070	N/O
13	81256	-----	
15	04000	05792	N/O
22	55200	55200	N/O
25	52578	-----	
27	26805	-----	
29	42125	-----	
30	64000	-----	(solar)
31	40000	-----	

The Earth-Ulysses distance varied between about 5.76 and 6.28 AU in this period.

```
POSITION OF ULYSSES ON 19/ 8/1992 IS:
RA=  156.046 DEC=    2.283 DIST=    6.267 AU
POSITION OF VENUS ON 19/ 8/1992 IS ALPHA= 166.196 DELTA=  7.414 DISTANCE=1.60881 AU
T   DISTANCE BETWEEN TWO OBJECTS AT
156.046    2.283  937607500.00  KM. AND
166.196    7.414  240677700.00  KM. IS
 703220200.00 KM., OR   4.701 A.U., OR 2345.69 LIGHT-SECONDS
THE ANGLE BETWEEN THEM IS  11.338 DEGREES
```

From kouveliotou%8868.span@Sdsc.Edu Fri Aug 28 08:10:43 1992
Date: Fri, 28 Aug 92 15:10:56 GMT
From: kouveliotou%8868.span@Sdsc.Edu (Chryssa Kouveliotou NASA/MSFC (205) 544-7711)
Subject: answer from Atteia on the sgr
To: khurley@sunspot.ssl.berkeley.edu
X-St-Vmsmail-To: HURLEY
Content-Length: 643

From: CNESTA::ATTEIA 28-AUG-1992 09:24:37.76
To: 8868::KOUVELIOTOU
CC:
Subj: B1900+14

Dear Chryssa,
Excuse-me to answer so late to your message on B1900+14.
In fact I was on holidays (they are finished now !).
Unfortunately, GRANAT was inside the radiation belts,
and thus everything was OFF, on august 19. I also tried to look
HUS data but they didn't yet arrive here, I guess Kevin already knows the
answer, in any case I will have a look as soon as the data will be
available and I will tell you the results. I would appreciate if you
could continue to inform me about further repetitions if any.
Thank you,
Best Regards,
Jean-Luc

CK 8/21

SGR 1900+14: 17859 Aug 19 #1852 ~10^{-8} erg/cm²s

~100 ms

~~α 291~~ ~~δ 13~~

New α, δ 274 −28 25 Aug

New time window

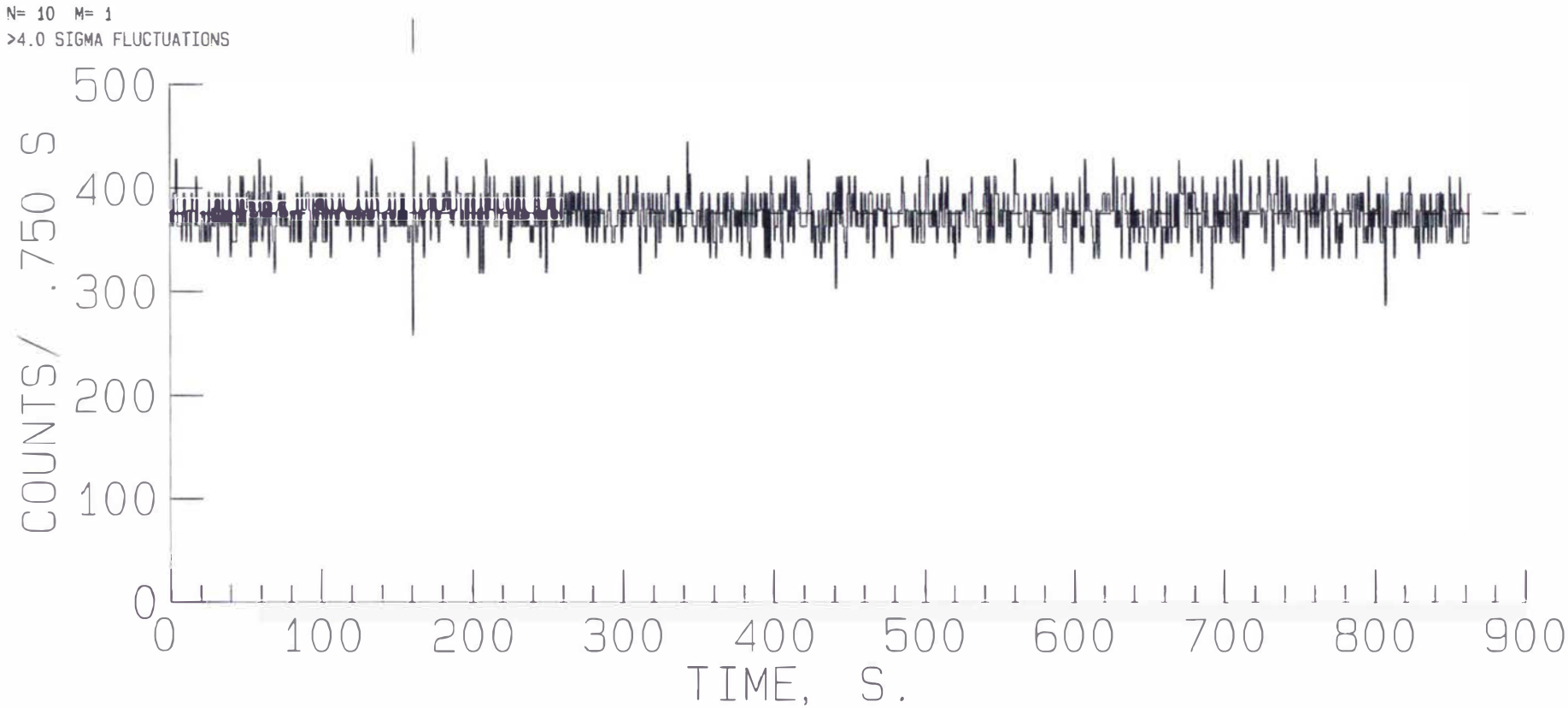
26/ 8/92

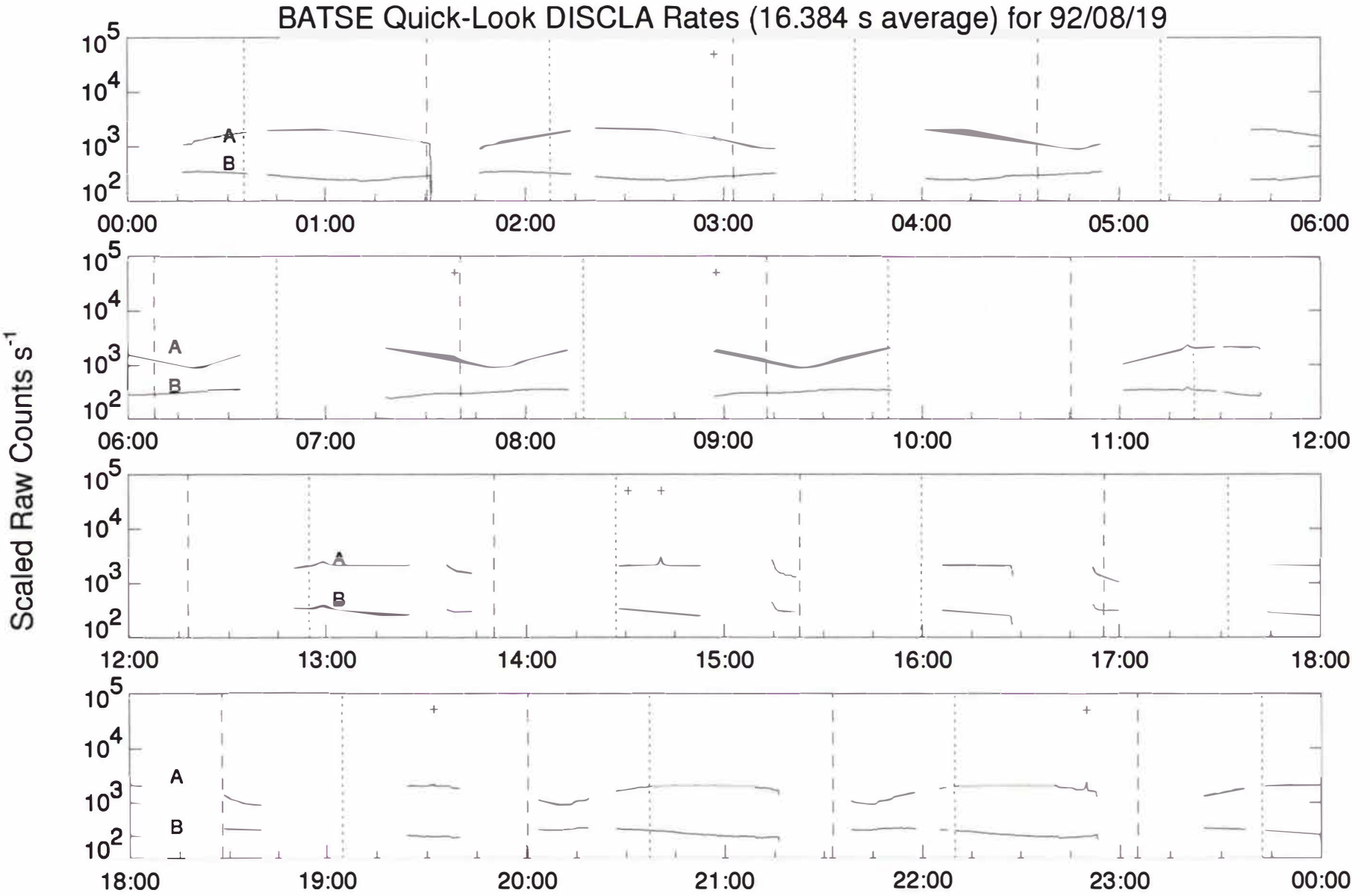
ULYSSES RT

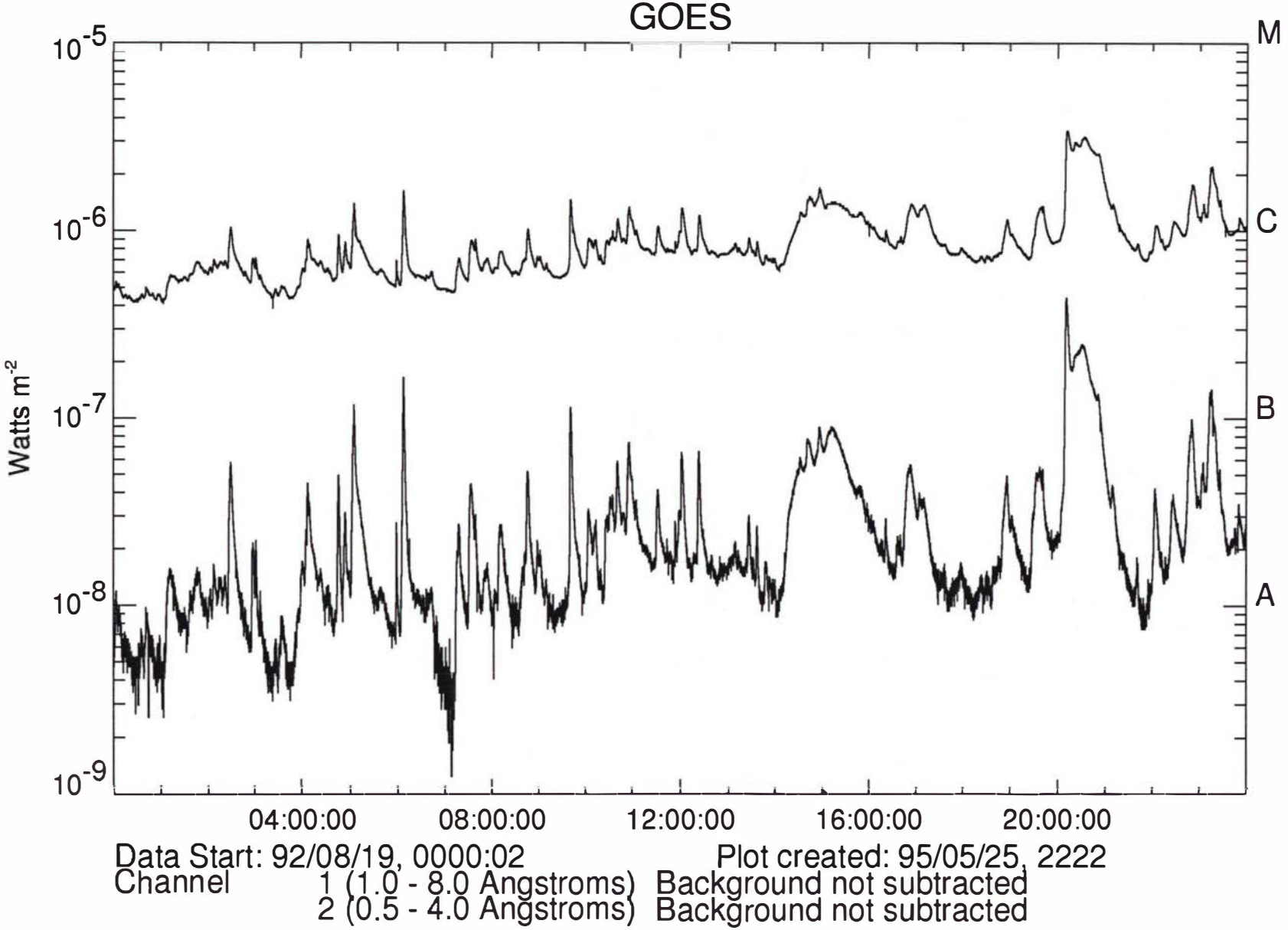
19/ 8/92 18612.207 s

.250 S INTERVALS REGROUPED BY 3

0- 0 keV

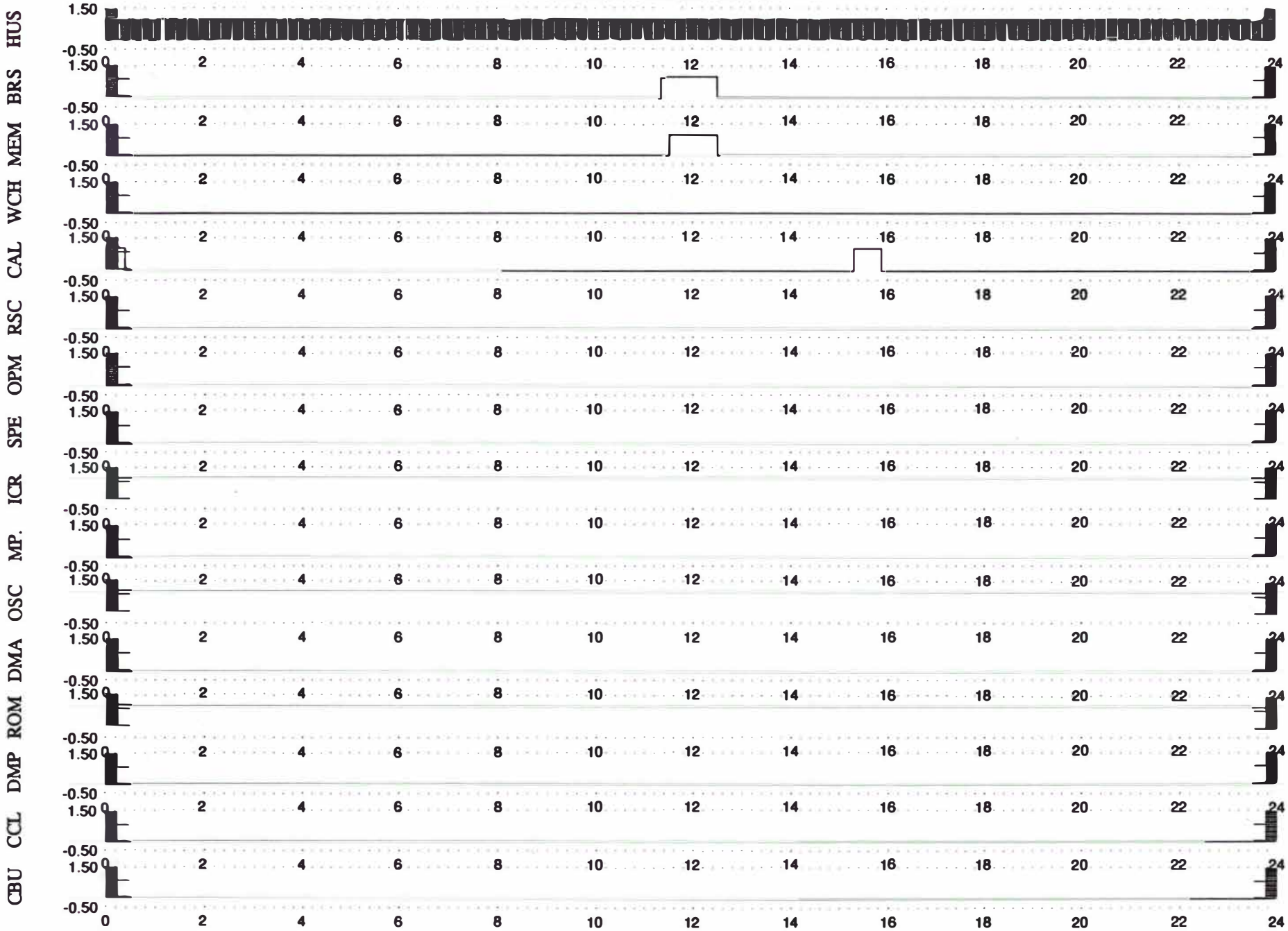



BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/19
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 92/08/28, 2133 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 Flare
* Solar Burst Trigger


GOES
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/19, 0000:02
Plot created: 95/05/25, 2222
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 232, year 1992 to day 232, year 1992 9/11/92

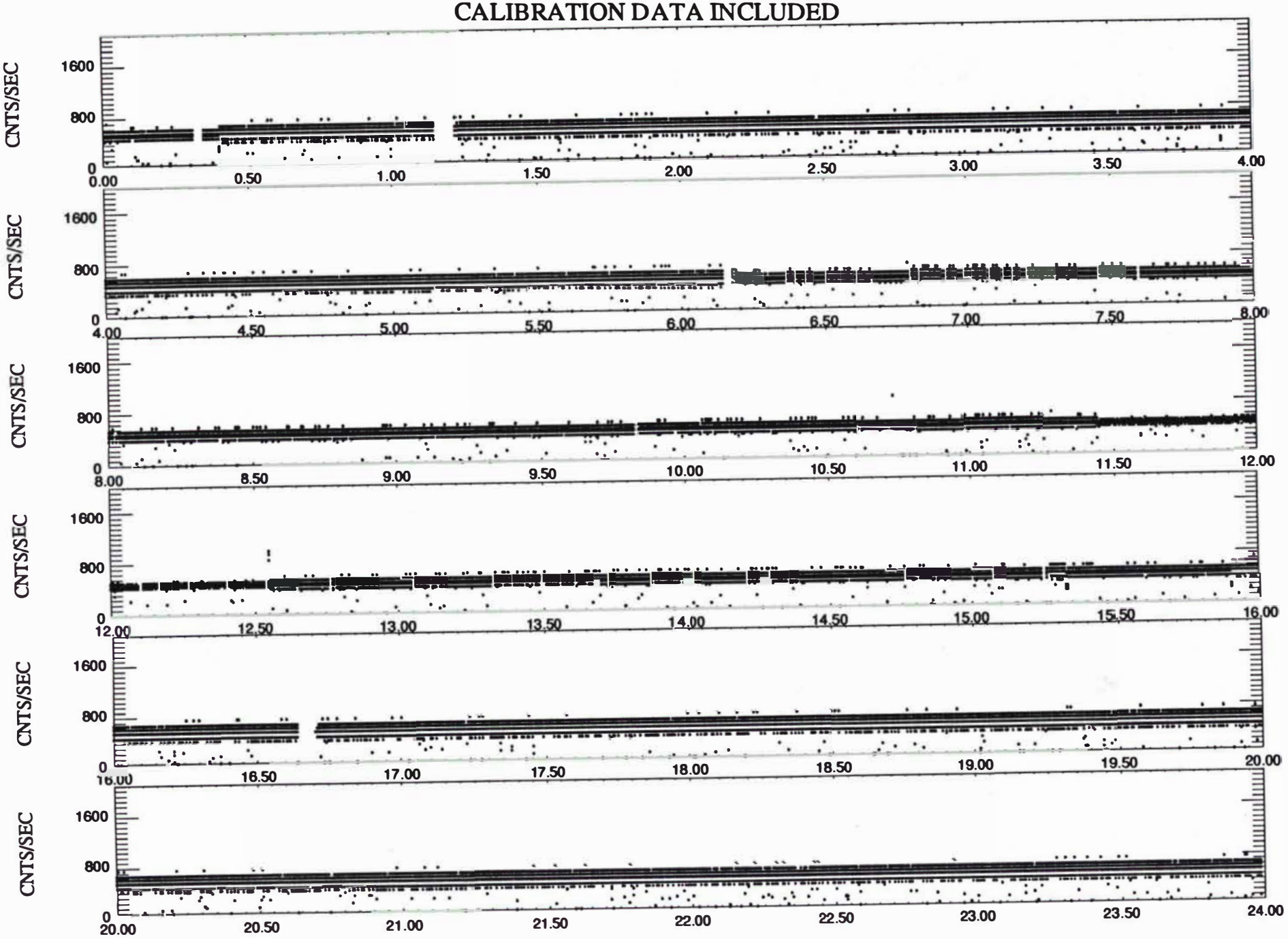
BURST NUMBER 8



UNIVERSAL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 232, year 1992 to day 232, year 1992 9/11/92

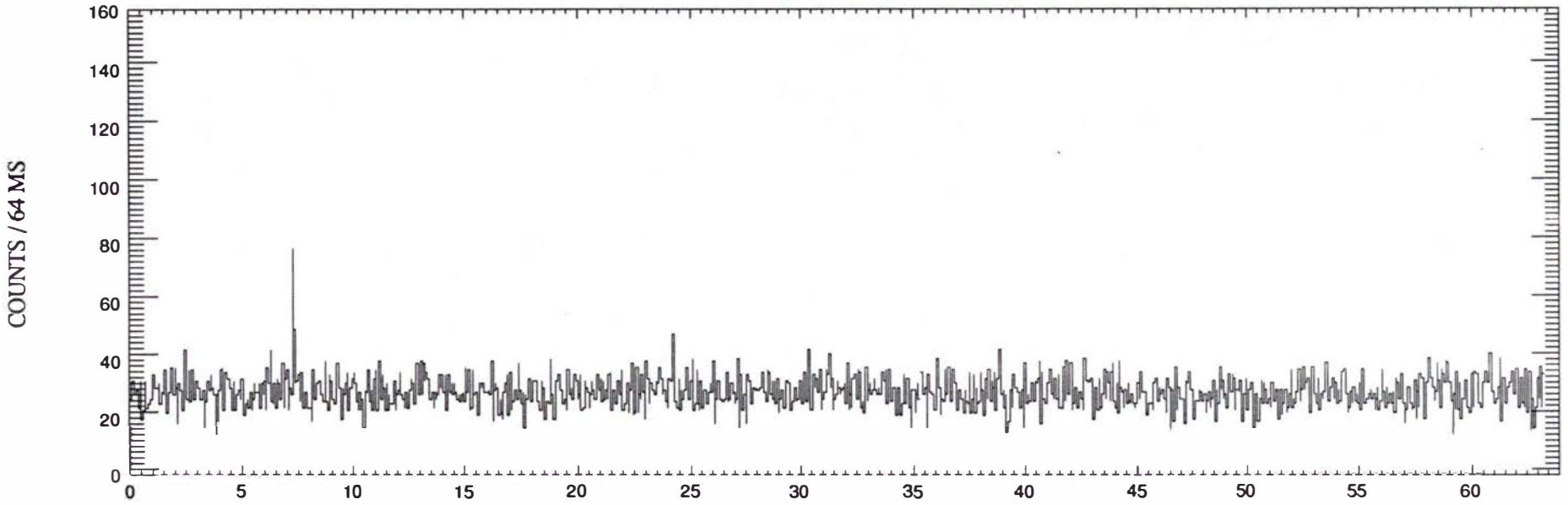
CALIBRATION DATA INCLUDED

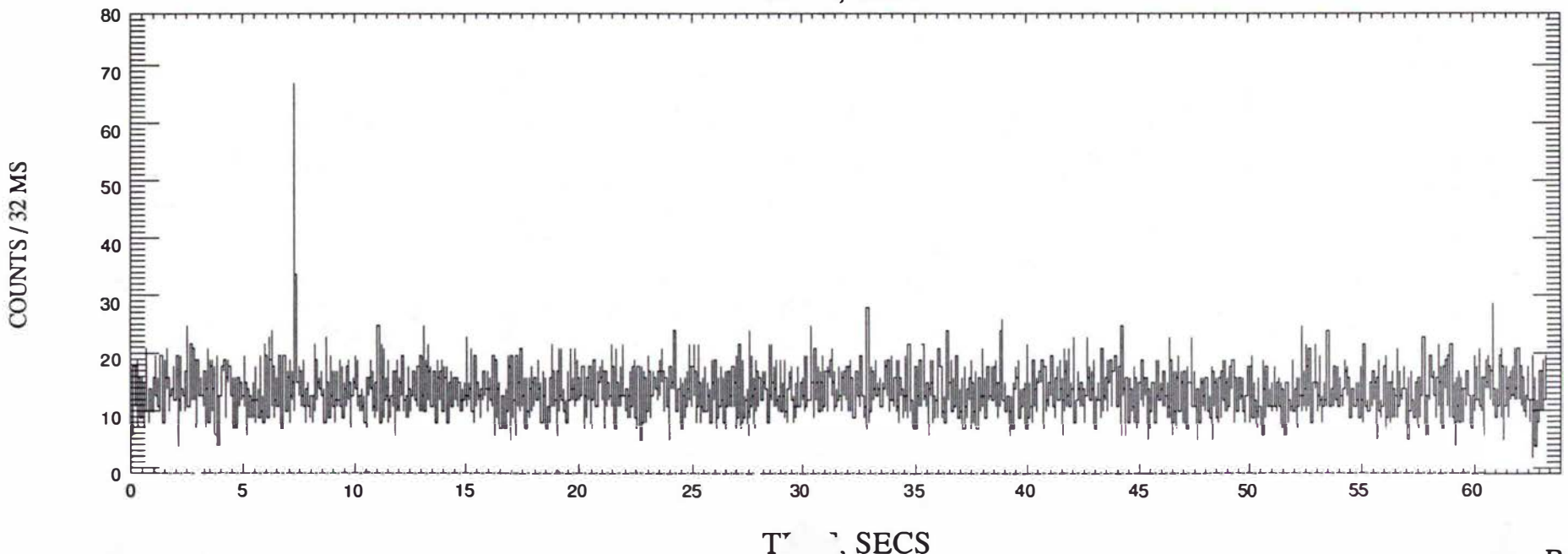


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR day 232, year 1992 9/11/92

Burst Counter 8 at UT=11.281219702827 h=40612.391 s

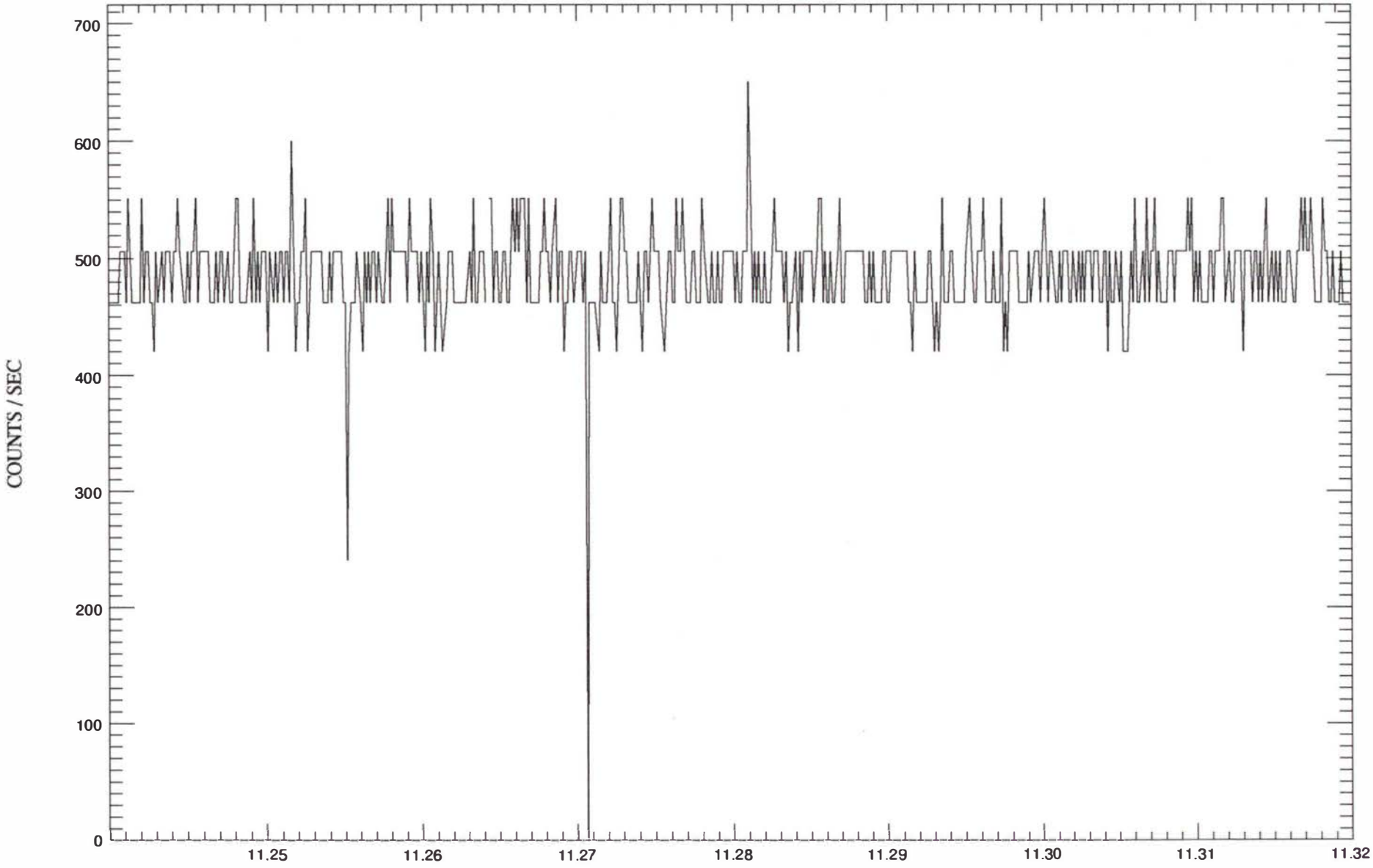


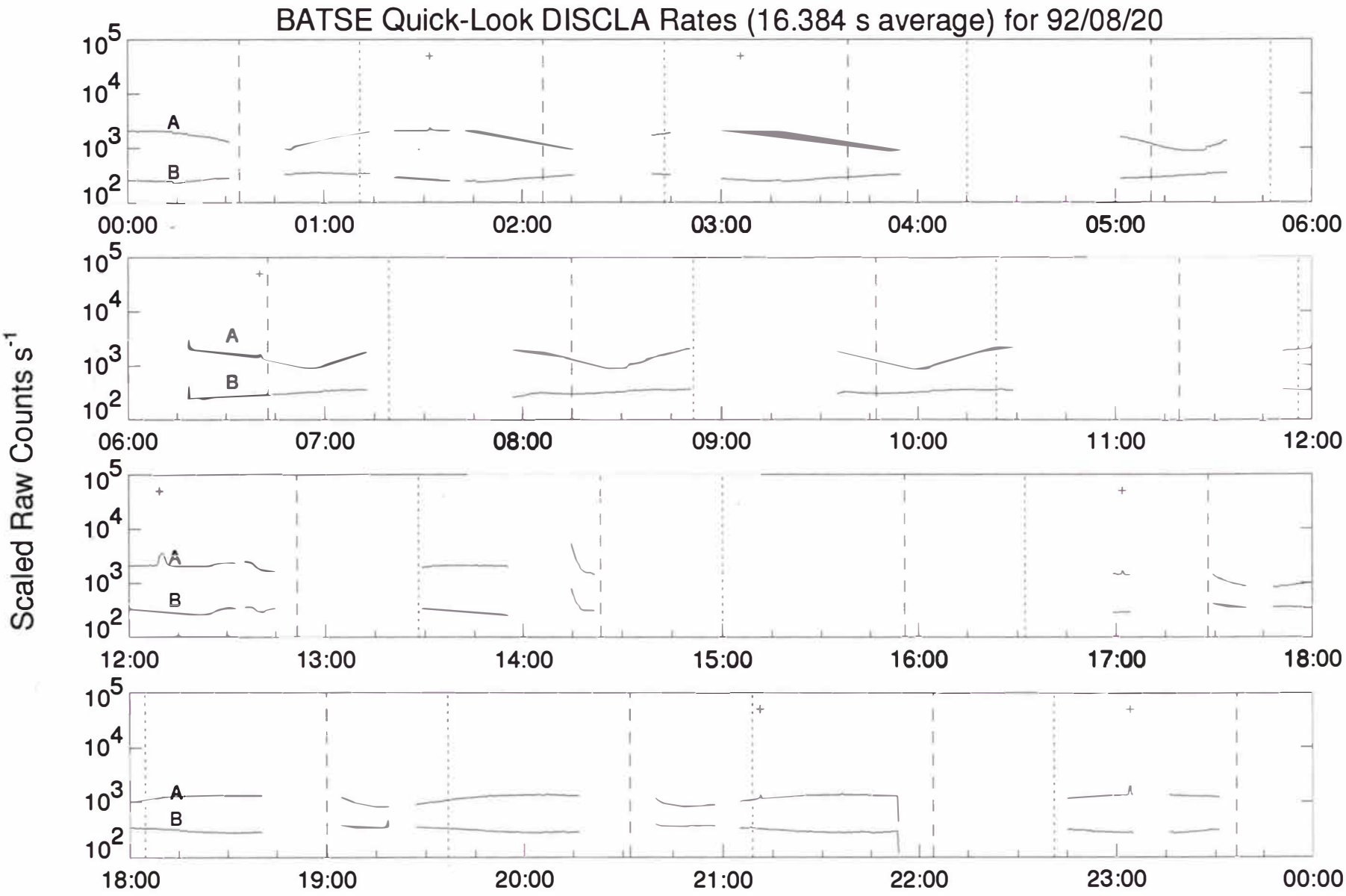


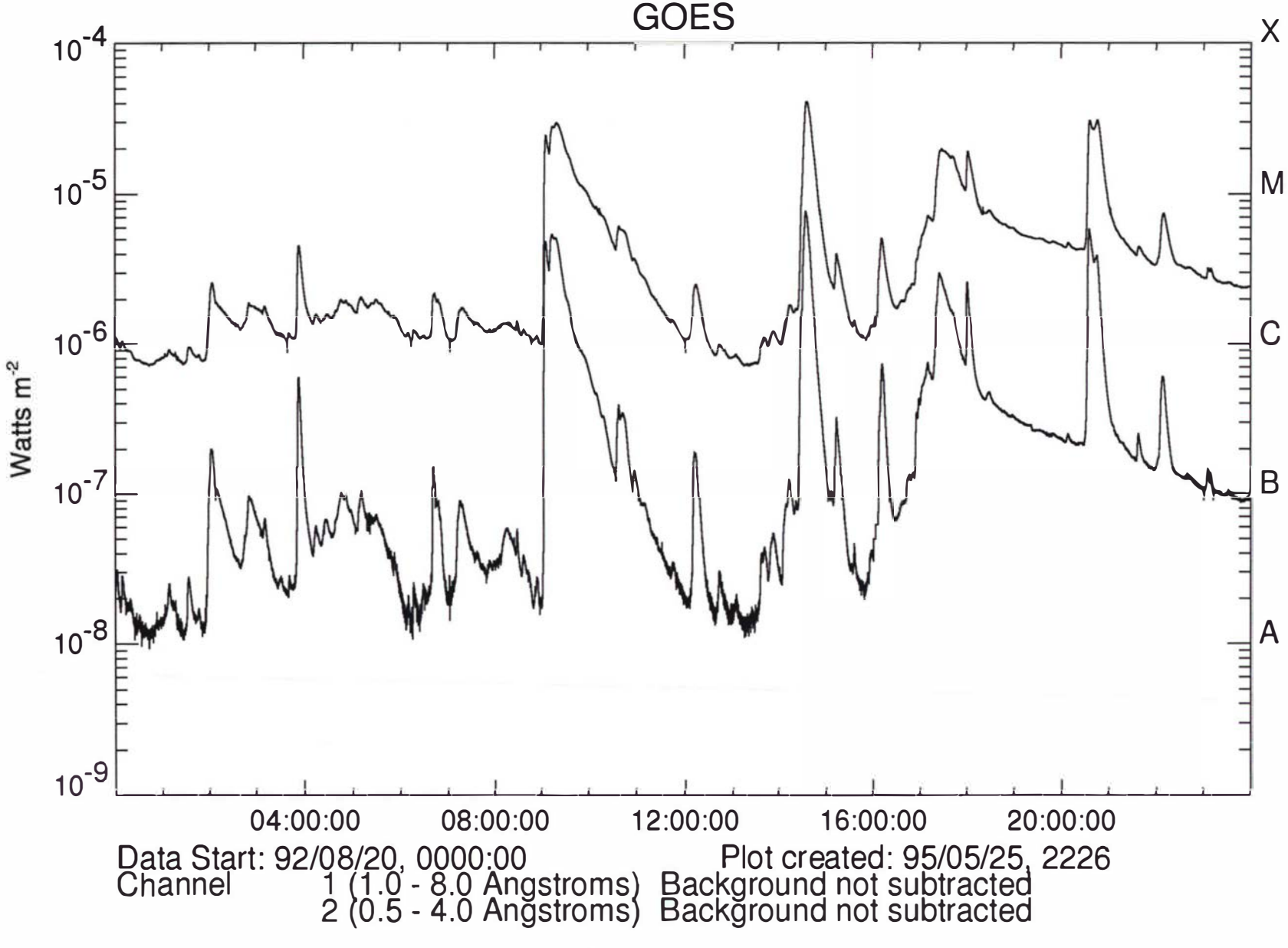
B# 1

HUS 2A, MODE 1, NOT AVERAGED QEDR day 232, year 1992 to day 232, year 1992 8/20/92

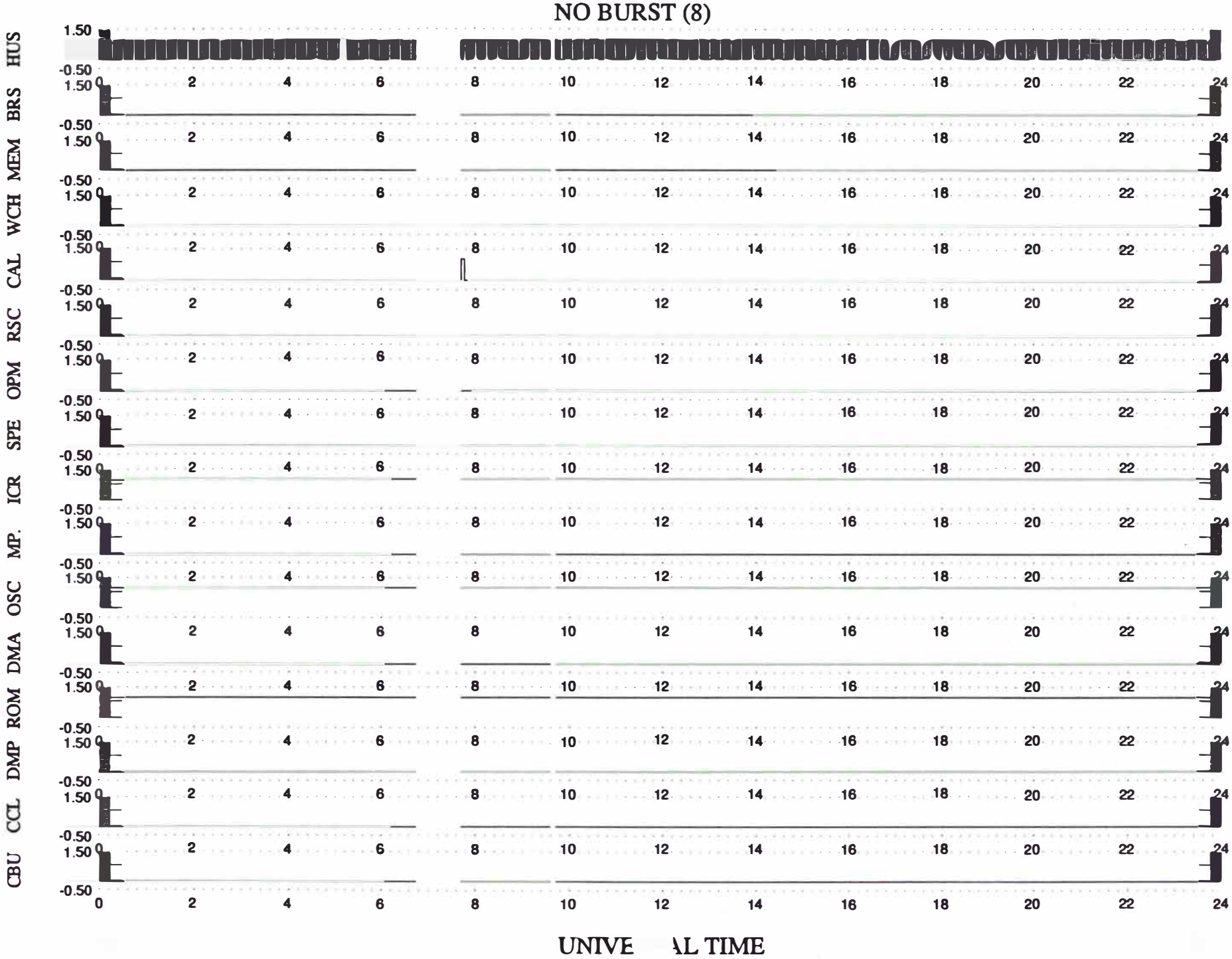
CALIBRATION DATA INCLUDED




BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/20
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 92/08/28, 2132 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 Flare
Solar Burst Trigger

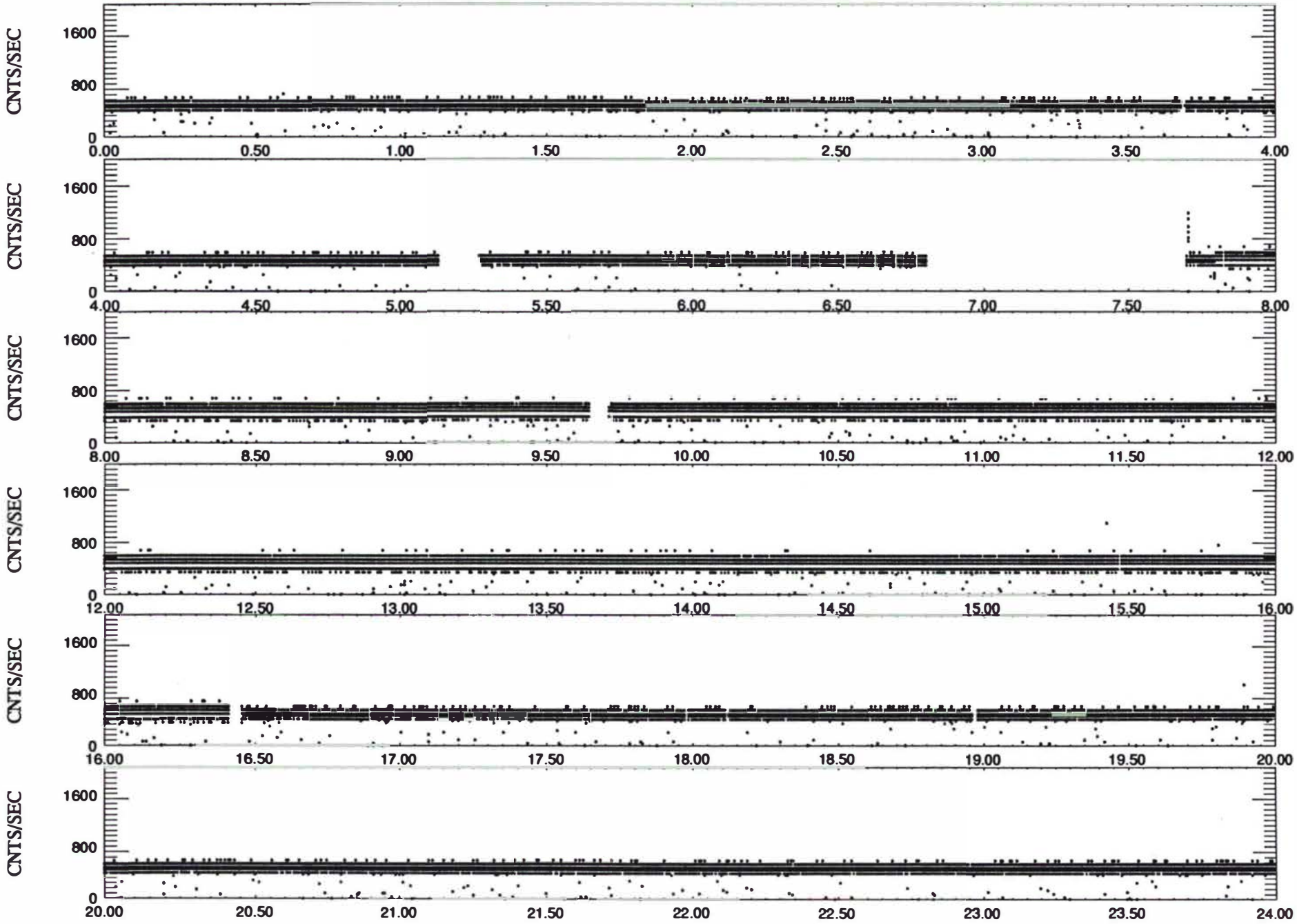

GOES
Watts m-2
10-4
10-5
10-6
10-7
10-8
10-9
X
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/20, 0000:00
Plot created: 95/05/25, 2226
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 233, year 1992 to day 233, year 1992 9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 233, year 1992 to day 233, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNI RSAL TIME

From KOSHUT@ssl.msfc.nasa.gov Sat Aug 22 11:11:17 1992
Date: Sat, 22 Aug 1992 13:11:36 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1539

BATSE BURST TRIGGER

NO.: 01856

Aug 21

TIME: TJD=8855 SECONDS=00891

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SOLAR FLARE WITH NO EMISSION DETECTED ABOVE 300 KEV. NO PRE-TRIGGER DATA IS AVAILABLE FOR THIS EVENT, THEREFORE ONLY A LOWER LIMIT OF 80 SECONDS CAN BE GIVEN FOR THE DURATION. THE PEAK RATE IS OBSERVED AT ~ TRIGGER + 21 SECONDS. GOES X-RAY CLASSIFICATION FOR THIS EVENT IS M1.3

From KOSHUT@ssl.msfc.nasa.gov Sat Aug 22 13:12:54 1992
Date: Sat, 22 Aug 1992 15:13:07 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01857

TIME: TJD=8855 SECONDS=34027

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTCILE PRECIPITATION EVENT.

From KOSHUT@ssl.msfc.nasa.gov Mon Aug 24 09:11:06 1992
Date: Mon, 24 Aug 1992 11:11:28 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER
NO.: 01858

TIME: TJD=8855 SECONDS=52108

Classified as probable T&F by Briggs 2001

TYPE: UNKNOWN SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
THE DATA NEEDED FOR PROPER IDENTIFICATION OF THIS TRIGGER IN MISSING.

From KOSHUT@ssl.msfc.nasa.gov Sat Aug 22 10:35:34 1992
Date: Sat, 22 Aug 1992 12:35:53 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER
NO.: 01859

TIME: TJD=8855 SECONDS=60528

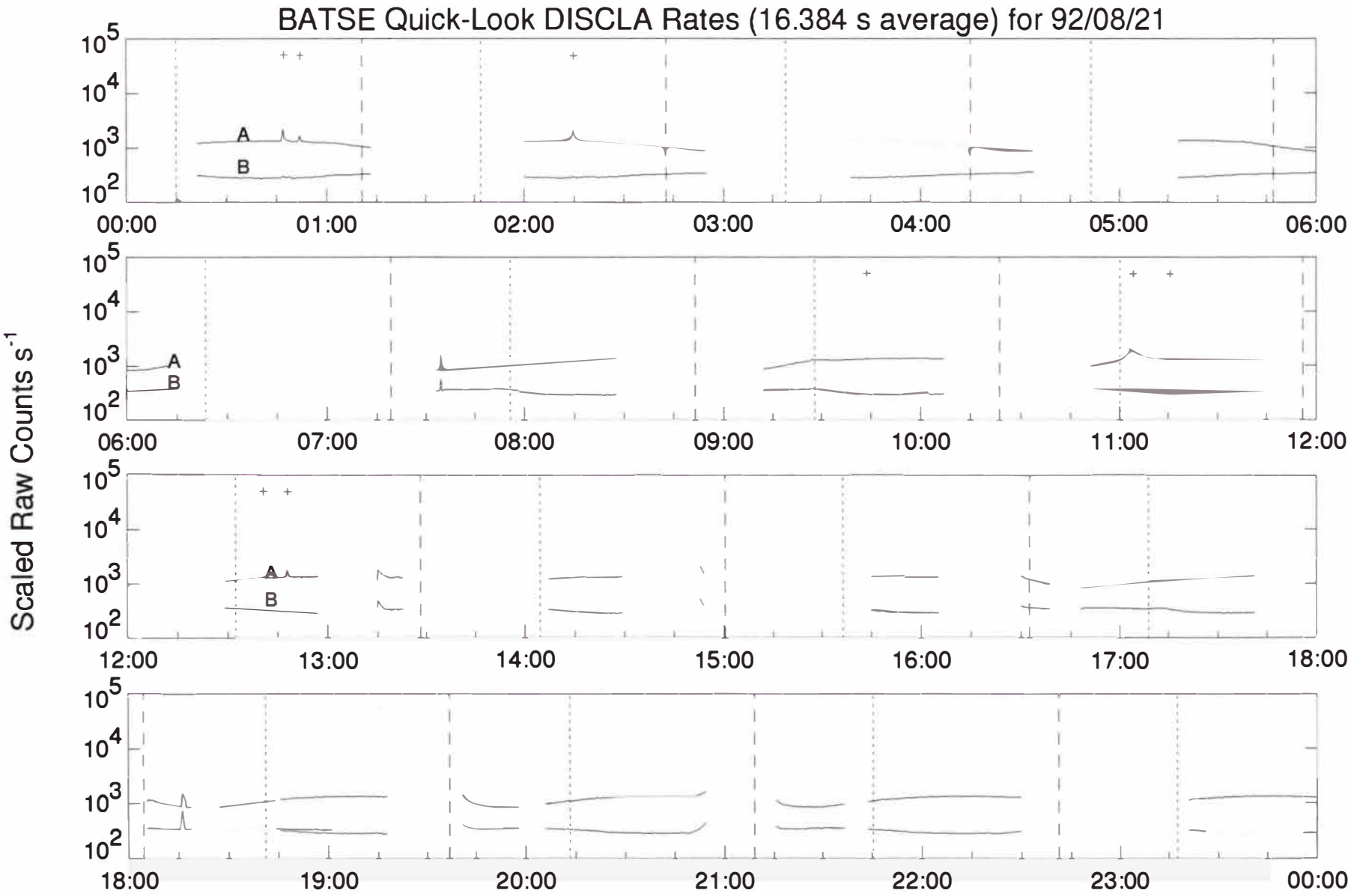
TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

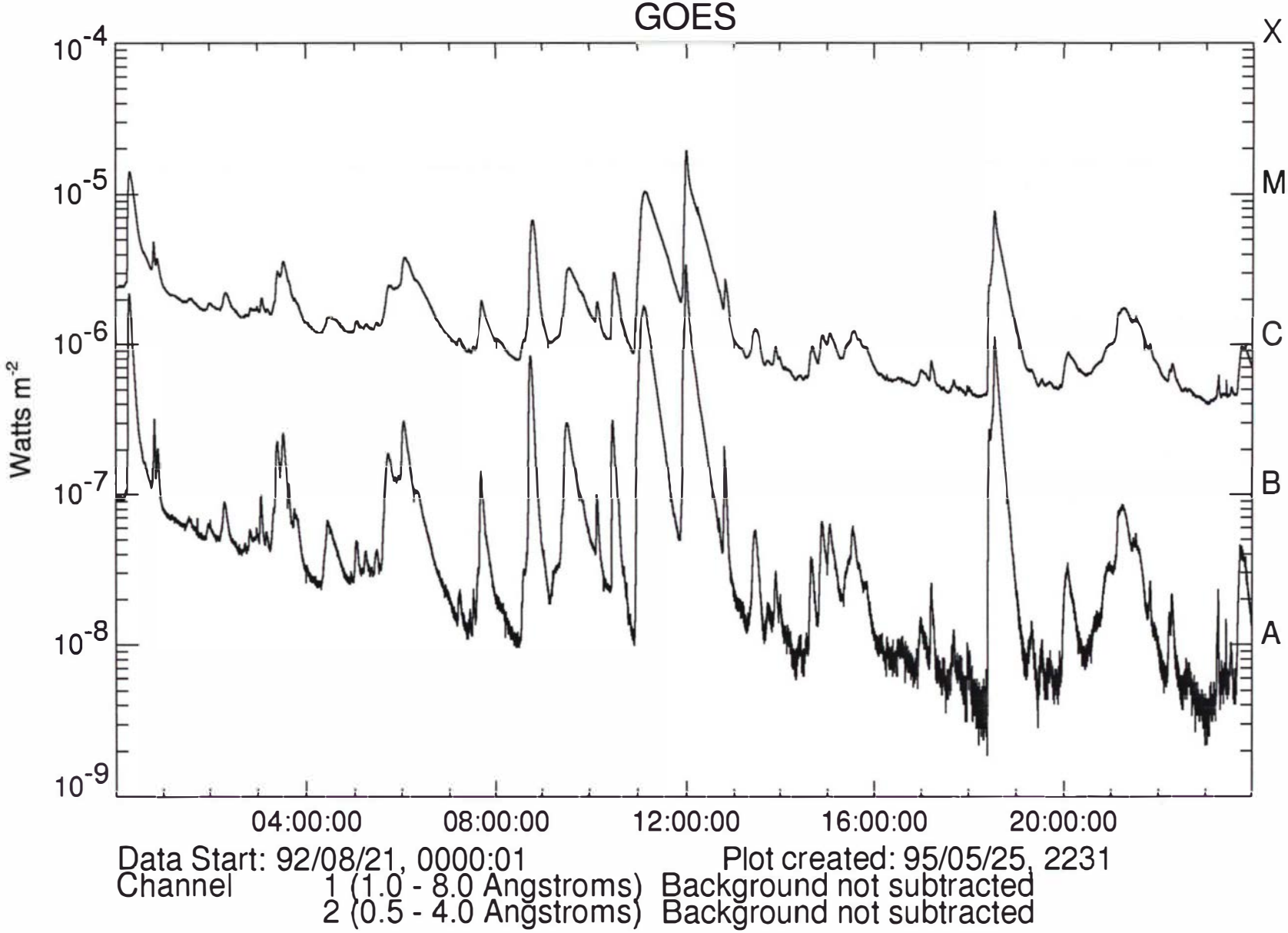
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

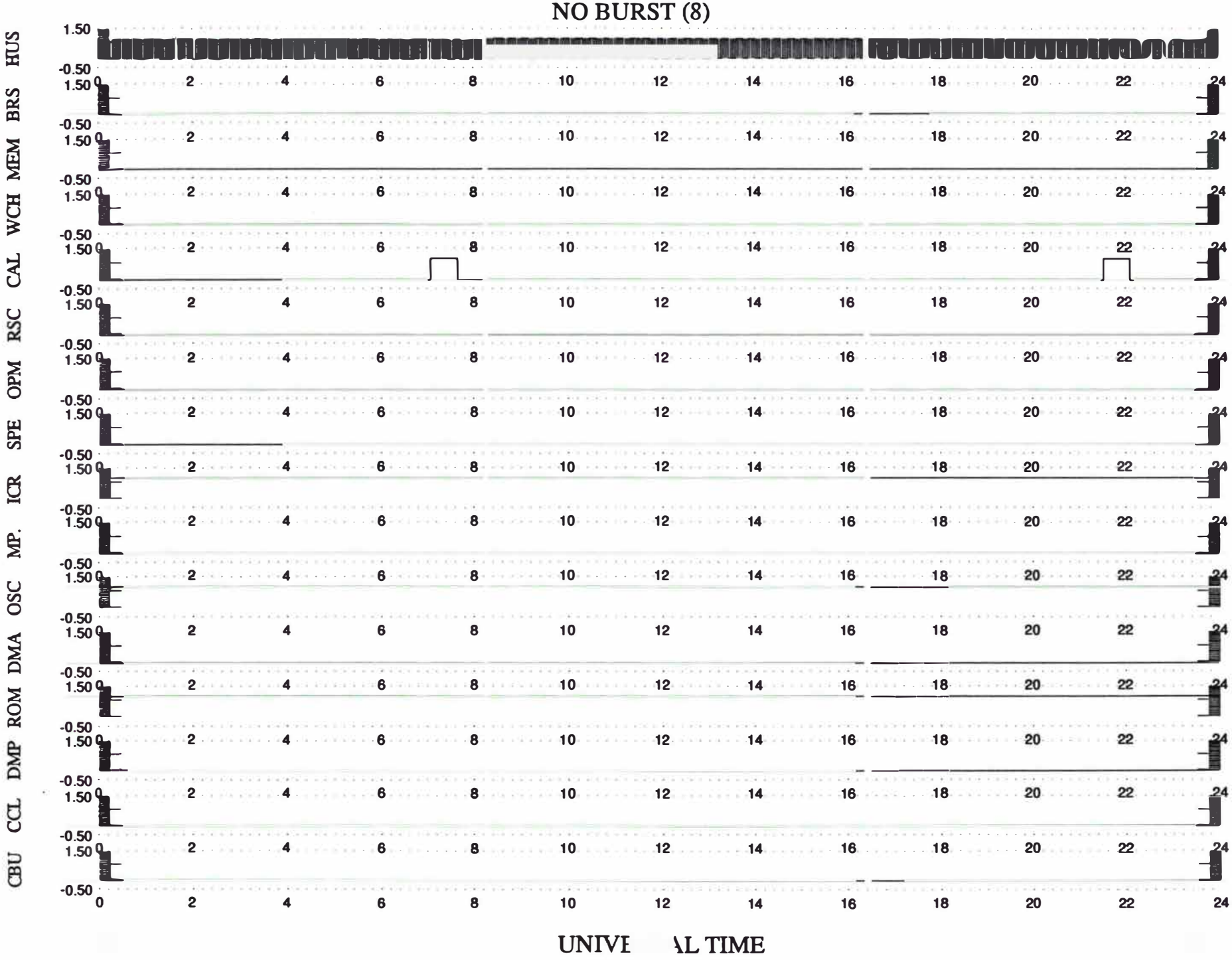
LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON OCCULTATION STEP ASSOCIATED WITH TRANSIENT GRO 0422+32.


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/21
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 92/08/28, 2130 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 Flare
* Solar Burst Trigger

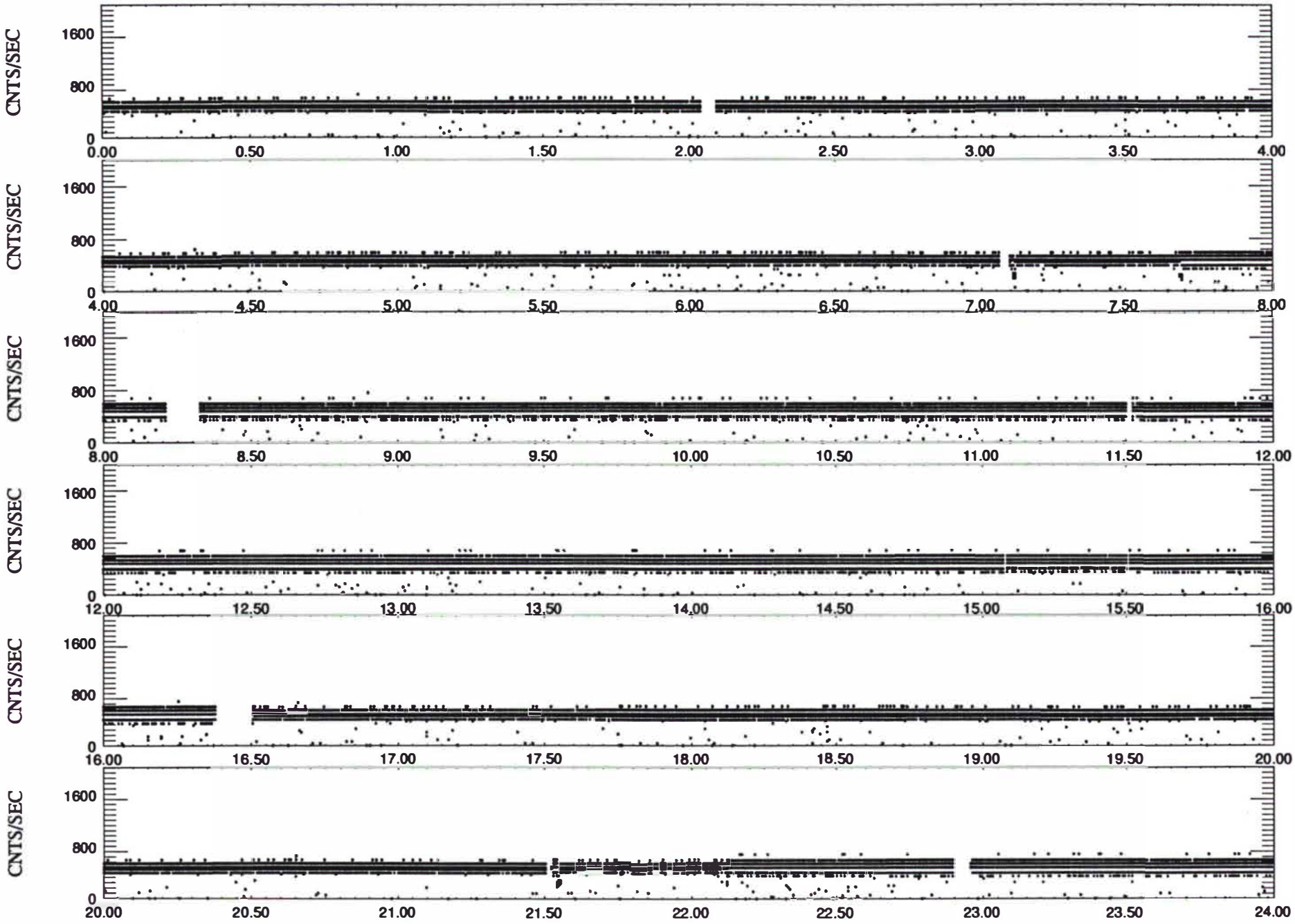

GOES
Watts m-2
10-4
10-5
10-6
10-7
10-8
10-9
X
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/21, 0000:01
Plot created: 95/05/25, 2231
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 234, year 1992 to day 234, year 1992 9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 234, year 1992 to day 234, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIVE AL TIME

From BRIGGS@ssl.msfc.nasa.gov Sun Aug 23 13:30:54 1992
Date: Sun, 23 Aug 1992 15:31:11 -0500 (CDT)
From: BRIGGS@ssl.msfc.nasa.gov (Michael S. Briggs, 205-544-7716, Code ES-62, MSFC)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01860

Aug 22

TIME: TJD=8856 SECONDS=01769

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: 10.0 SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=55.0 AZIMUTH=358.0 ERROR= DEGREES

COMMENTS:
OCCULTATION RISE OF GRO J0422+32.

From BRIGGS@ssl.msfc.nasa.gov Sun Aug 23 14:06:09 1992
Date: Sun, 23 Aug 1992 16:06:31 -0500 (CDT)
From: BRIGGS@ssl.msfc.nasa.gov (Michael S. Briggs, 205-544-7716, Code ES-62, MSFC)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 01861

TIME: TJD=8856 SECONDS=23930

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL: N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=071.5 AZIMUTH=359.8 ERROR= DEGREES

COMMENTS:
OCCULTATION RISE OF GRO J0422+32.
CORRECTED LOCATION.

BATSE BURST TRIGGER

NO.: 01861

TIME: TJD=8856 SECONDS=23930

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=359.8 AZIMUTH=071.5 ERROR= DEGREES

COMMENTS:
OCCULTATION RISE OF GRO J0422+32

BATSE BURST TRIGGER

NO.: 01862

TIME: TJD=8856 SECONDS=46061

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=56.1 AZIMUTH=356.6 ERROR= DEGREES

COMMENTS:
OCCULTATION RISE OF GRO J0422+32.
CORRECTED LOCATION.

BATSE BURST TRIGGER

NO.: 01862

TIME: TJD=8856 SECONDS=46061

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=356.6 AZIMUTH=56.1 ERROR= DEGREES

COMMENTS:
OCCULTATION RISE OF GRO J0422+32.

91/12/21 06:17 N/O
91/12/21 22:03 N/O
91/12/27 15:56 N/O
92/01/05 17:41 N/O
92/01/13 20:52 N/O
92/01/25 08:57 N/O
92/01/30 00:29 N/O
92/01/30 22:50 N/O
92/02/18 18:42 N/O
92/02/21 06:14 N/O
92/02/26 18:15 YES TRIGGER AT 29336 S UT
92/02/27 06:00 N/O
92/02/27 08:45 N/O
92/03/02 06:16 N/O
92/03/04 14:34 N/O
92/03/07 00:18 N/0
92/03/21 12:50 (NO)
92/03/26 02:01 N/O
92/03/27 09:38 N/O
92/03/29 16:38 (NO)
92/04/04 22:37 N/O
92/04/08 12:05 N/O
92/04/20 02:12 N/O
92/04/29 18:59 N/O
92/05/02 19:05 N/O
92/06/01 THRU 92/06/29 TURNED OFF--N/O
92/07/01 19:39 N/O
92/07/07 06:33 N/O
92/07/17 01:15 N/O
92/07/23 00:59 N/O
92/07/23 01:00 N/O
92/07/23 21:48 N/O
92/07/25 19:30 N/O
92/07/25 22:49 N/O
92/07/26 00:34 N/O
92/07/31 17:07 N/O
92/08/10 21:35 N/O
92/08/14 06:10 N/O
92/08/16 12:36 N/O
92/08/22 22:39 N/O
92/08/30 01:45 N/O
92/09/04 04:41 N/O

THIS LIST IS NOT COMPLETE. IT INCLUDES EVENTS FOR WHICH NO REAL-TIME DATA ARE AVALIABLE BECAUSE OF INAPPROPRIATE MODE, NO TRACKING, OR THE EXPERIMENT WAS TURNED OFF. WHERE DATA HAVE BEEN CHECKED, SENSITIVITY DEPENDS UPON THE TIME RESOLUTION AVAILABLE IN THE DATA. I'LL BE SENDING ADDITIONAL RESULTS AS THEY BECOME AVAILABLE.

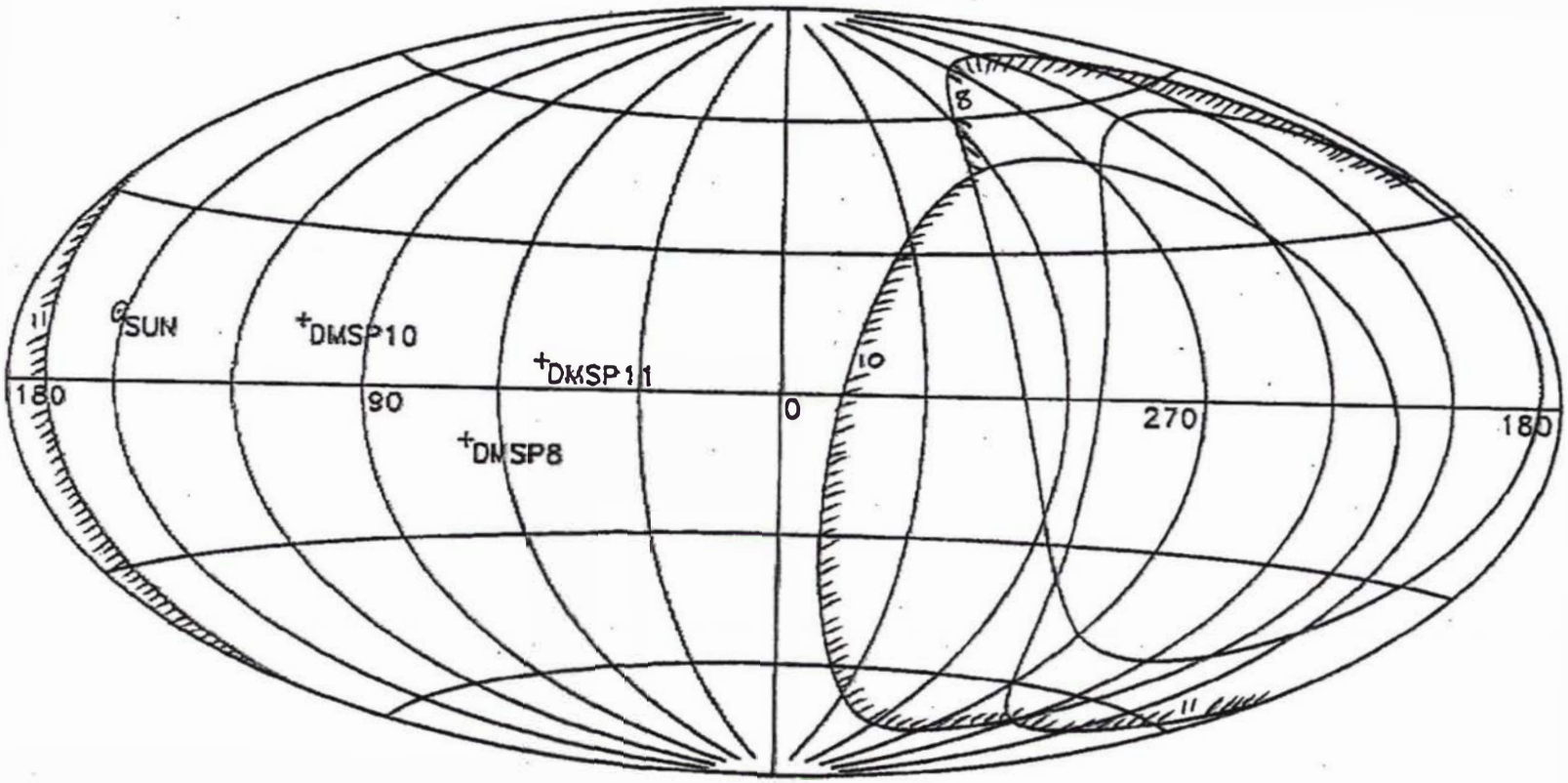
REGARDS,

RAY

From root Wed Dec 8 07:58 1993
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA08899; Wed, 8 Dec 93 07:57:44
Received: from mx.nsi.nasa.gov by sunspot.ssl.berkeley.edu (4.1/1.30.1)
id AA22497; Wed, 8 Dec 93 07:00:41 PST
Received: Wed, 8 Dec 93 07:03:53 PST from ESSDP2.dnet by mx.nsi.nasa.gov (4.1/1.2)
Message-Id: <9312081503.AA10272@mx.nsi.nasa.gov>
Received: from ESSDP2.dnet by AMES.dnet with MAIL-11
(utk-mail11d v1.7); Wed, 8 Dec 93 07:03:57 PST
Date: Wed, 8 Dec 93 07:03:57 PST
From: 068486@essdp2.span.nasa.gov
X-To: AMES::"khurley@space6.ssl.berkeley.edu"
Subject: RE:
To: khurley@space6.ssl.berkeley.edu
Status: R

KEVIN,
HERE ARE THE RESULTS OF OUR SURVEY OF THE PVO REAL-TIME DATA FOR EVIDENCE OF RESPONSE TO EVENTS LISTED IN YOUR CATALOG.

DATE	TIME	PVO RESPONSE
90/11/11	21:49	N/O
90/11/12	14:57	N/O
90/11/16	01:42	N/O
90/11/19	18:08	N/O
90/11/21	00:04	N/O
90/11/21	18:09	N/O
90/12/02	13:45	N/O
90/12/21	00:30	N/O
90/12/25	05:50	N/O
91/01/17	00:57	N/O
91/01/24	11:50	N/O
91/02/04	08:58	N/O
91/02/04	14:19	N/O
91/02/04	14:58	N/O
91/02/17	02:59	N/O
91/03/14	22:56	N/O
91/03/15	22:55	N/O
91/04/04	17:17	(NO)
91/05/18	17:10	N/O
91/05/23	19:03	N/O
91/05/27	23:44	N/O
91/05/28	21:26	N/O
91/06/02	22:55	N/O
91/06/09	00:48	N/O
91/06/29	19:55	N/O
91/07/09	20:22	N/O
91/07/17	13:07	N/O
91/08/03	08:24	N/O
91/08/15	12:34	N/O
91/08/15	14:24	N/O
91/08/16	01:57	(NO)
91/09/05	23:48	N/O
91/09/16	21:58	N/O
91/09/25	03:35	N/O
91/09/26	18:25	N/O
91/09/30	11:55	N/O
91/10/03	00:39	N/O
91/10/04	01:27	N/O
91/10/06	09:01	(NO)
91/10/22	04:13	N/O
91/10/25	21:25	N/O
91/11/06	03:42	N/O
91/11/14	01:40	N/O
91/11/17	01:58	N/O
91/12/05	23:04	N/O



DMSP POSITIONS+VIEW, 92/08/22 81542 UT
EQUATORIAL COORDINATES

930628

SENT BY:Xerox Telecopier 7021 ; 8-23-93 ; 14:47 ; 5056654414→ 510 643 8302;# 8

```
From root Mon Aug 23 10:30  1993
Received: by space6.ssl.berkeley.edu (AIX  2.1 2/4.03)
          id AA19302; Mon, 23 Aug 93 10:29:49
Received: from east.gsfc.nasa.gov by sunspot.ssl.berkeley.edu (4.1/1.30.1)
        id AA23093; Mon, 23 Aug 93 10:33:20 PDT
Received: from ESSDP2.DECnet MAIL11D_V3 by east.gsfc.nasa.gov (5.57/Ultrix3.0-C)
        id AA16832; Mon, 23 Aug 93 13:33:34 -0400
Date: Mon, 23 Aug 93 13:33:34 -0400
Message-Id: <9308231733.AA16832@east.gsfc.nasa.gov>
From: 046369@essdp2.dnet.nasa.gov
To: "khurley@space6.ssl.berkeley.edu"@east.dnet.nasa.gov
Subject: DMSP GAMMA-RAY BURST DATA
Status: R

FROM:  ESSDP2::TERRELL   (JAMES TERRELL, LOS ALAMOS NATL LAB)      MAILOUT.0823
TO:    UCBSP::KHURLEY  (KEVIN HURLEY) (EAST::"KHURLEY@SPACE6.SSL.BERKELEY.EDU"}
CC:    BATSE::KOUVELIOTOU
SUBJ:  DMSP GAMMA-RAY BURST DATA, AS OF 16 JULY 1993 (EXTENDED, 8/23/93)

HERE ARE SOME NOTES RE DMSP PEAKTIMES FOR YOUR MASTER BURST LIST:
 +  8FEB91 32416 YES (8YES,9YES,10SAA)
 + 19FEB91 42325 YES (8YES,9YES,10SAA)
 + 10MAR91 46923 YES (8YES,9YES,10YES)
 +  1JUN91 69757 YES (8SR,9YES,10YES) NO AT 69736!
 + 14AUG91 40232 YES (8NR,9YES,10YES) NO AT 40182!
   27SEP91 84415 YES (8SAA,9YES,10SAA)
   16OCT91 36696 YES (8SAA,9YES,10NR)
    4NOV91 54286 YES (8SR,9YES,10YES)
   27NOV91 15739 YES (8NO,9NO,10YES)
    2DEC91 73733 YES (8YES,9NO@144DEG,10NR)
    9DEC91 66959 N/O (8SR,9SR,10NR,11ND)
   21DEC91 22686 YES (8ND,9NO,10NO,11YES)
   10JAN92 33478 NA  (BLANK) (8ND,9NA,10SAA,11NA)
   10FEB92 35633 YES (8NO,9WEAK,10SAA,11SAA)
    6APR92  9855 N/O (OBSCURED) (8NO@141,10SR,11NO@137DEG)
    1MAY92 76696 N/O (OBSCURED) (8NO@127,10NO@157,11NO@147DEG)
*+ 19MAY92 59406 YES (8SR,10YES,11NO)
   22JUN92 25506 N/O (8SAA,10NR,11SA)
*  28JUN92 76452 YES (8ND,10YES,11NO)
   29JUN92 75897 YES (ALL YES, SOFT)
   14JUL92 47069 NA  (BLANK) (8NA,10SAA,11SR)
*  16JUL92 60933 YES (9NO.10YES,11YES)
   20JUL92 11524 N/O (OBSCURED) (8NA@130,10NA@145,11SR)
   23JUL92 72188 N/O (OBSCURED) (8ND,10NA@148,11NR)
 + 26JUL92   165 YES (8NO,10YES,11YES,BOTH SOFT AND WEAK)
*+ 31JUL92 61660 YES (8SA,10YES,11NO) NO AT 61620!
   10AUG92 79599 YES?(8YES?,10NA,11NA) (LONG SOFT PEAK)        (SEE NOTE BELOW)
*+ 22AUG92 81542 YES (8YES,10YES,11YES)
*   4OCT92 50421 YES (8YES,10YES,11SR)
   23NOV92 22727 YES (8YES,10YES,1SR) (NOT AT 22712)
   23NOV92 46542 YES (8NR,10SR,11YES) (NOT AT 46584, BATSE GRB)
    7DEC92 57649 YES (8YES,10YES,11YES)
    6JAN93 55260 YES (8SAA,10YES,11SR)
   12JAN93 55082 YES (8YES,10NO@138,11VERYWEAK) (8:BIG PEAK AT 55202)
   20JAN93 84779 YES (8YES,10,YES,11YES) (NO, AT 84700!)

*  I WILL BE SENDING YOU BY FAX DMSP LOCATION PLOTS FOR THE EVENTS MARKED
ABOVE WITH AN ASTERISK, PLUS A DATA PLOT FOR DMSP8, 10AUG92.
I WOULD APPRECIATE KNOWING WHETHER THESE HELP IN LOCATING EVENTS.
IF YOU WANT MORE COMPLETE INFORMATION PLEASE TELL ME.  I HAVE RECEIVED
NO SOURCE LIST FROM YOU SINCE 920626. DID YOU RECEIVE MY LIST SENT 920716?

+  LISTINGS ADDED 930823 TO 930716 LIST.              --JIM TERRELL
```

```
          218 ?     SOURCE J0422+32, IAU 5584,88,89:64.64,32.79(1950)
920815    228 ?     GRANAT HARD X-RAY .5CTRANS,288.7+10.5(1950)IAU5590
          228 ?     GRANAT SOURCE NAME GRS1915+105
920822    235 81321 BATSE WEAK SOLAR FLARE #3193
          235 81540 ULYSSES GRB 84184 (UNCONFIRMED COSMIC) NO BATSE
        8 235 81542 GRB PEAKS 81521.5W,541.5(700/S),551.5(200/S)SUN@87 81523-555
       10 235 81542 GRB PEAKS 81520.52,542.5(750/S),552.5(300/S)SUN@45 81526-562
       11 235 81543 GRB PEAK 81543.5(200/S) ULYS84184, SUN@100         81543-557
920824 10 237 39187 GRB PKS 39187.1(800/S),197.1(350) (8NR) SUN@116.1
       11 237 39186 GRB PKS 39185.9(500/S),189.9(550)  SUN@103.4
          237 39183 GRB (HURLEY), ULYSSES 38400
920830  8 243  6319 GRB PK 6317.7(150)SOFT  (BATSE STRONG 6317, GRO82)
       10 243  6320 GRB PEAK 6320.2 SOFT(150) (ULYS~5800) (11NR)
920902    246  1736 BATSE GRB (ULYSSES 3230)
        8 246  1742 GRB PEAK 1741.8(500/S),~5SEC, SHARP, HARD SUN@94.6  1740-750
       10 246  1743 GRB PEAK 1743.5(650/S), SUN@85.8                    1741-761
       11 246  1743 GRB PEAK 1742.9(200/S GT.100KEV) SUN@98.5           1746-750
920923    267~16589 GRANAT STRONG X-RAY 1CTRAN,309.3-40.4(1950)IAU5617 (DMSP NA)
920925    269       CHINESE NUCLEAR TEST (VENTED)
921004  8 278 50421 GRB,NARROW PKS 50421.0(1100/S),429.0(500/S)(11SR)
       10 278 50421 GRB,NARROW PK 50420.7(200/S)
          278 49107 GRB, UNCONFIRMED COSMIC, ULYSSES (BATSE N/O)
921008    282       PVO DIED, INTO VENUS (PIONEER 12)
921009    285 24070 BATSE GRB (ULYS 21980)
       10 285~24070 GRB? (8NA,11NA)
921011    285 ?     WATCH/EUREKA TRANS. EU1737-132(1950).5CRAB IAU5643
921016 10 290~33800 BURST? (10NA,11NA)
921022    296~55500 GRB, MARS OBSERVER (~100 LIGHT-SECONDS AWAY)
921031  8 287       HIGH POLAR COUNTS 10/31-11/05 (ALSO 10, 11)
921220    355       J0422 PEAK=.5CRAB(IAU5685), PER=5.098HR(IAU5692)
930131    031 68231 GRB,BATSE BIGGEST, 182.75,-10.7(J2000) IAU5707
        8 031 68231 GRB PEAK 68230.9(1400/S) (10SR EDGE,11SAA)          68233-235
930217    048 40187 XRB(15CRAB) WATCH/EUREKA (IAU 5710,17) 4U0614+09
                                                TERRELL/DMSP.GAM 930505
930220    051       ASTRO-D=ASUKA=ASCA X-RAY SPACECRAFT LAUNCHED
930302    061 51329 XRB,EUREKA,4U0614+09,20CRAB(6-15KEV)IN 16S IAU5717
930309    068 11278 COMPTEL GRB (323.13,54.65,J2000)(IAU5749,50,63,64)
930310    069 26418 GRB, 20S,GRANAT @285.56,-51.98(B1950.0) IAU5720
930430    120 54070 BATSE STRONG GRB, (~106,21) (BATSE ALERT)
930630    181 86400   LEAP SECOND AT 2400H(UTC-TA1=-28 SEC)(IAUC 5694)
```

From @UCBSP.SSL.BERKELEY.EDU:046369@ESSDP2.SPAN.NASA.GOV Wed May 5 13:41:17 1993
Date: Tue 5 May 92 13:42:27-PST
From: $C <046369@ESSDP2.SPAN.NASA.GOV>
To: KHURLEY@sunspot.ssl.berkeley.edu
Subject: [Resent-MM Mail] DMSP GRB DATA
Content-Length: 8912

Received: from ESSDP2 by UCBSP.SSL.BERKELEY.EDU via MAIL-11 with
DECnet; Tue, 5 May 92 13:40:33-PST
Date: Tue 5 May 92 13:40:33-PST
From: 046369@ESSDP2.SPAN.NASA.GOV
Subject: DMSP GRB DATA
To: "UCBSP::KHURLEY"@ESSDP2.SPAN.NASA.GOV

FROM: ESSDP2::TERRELL 93/05/05
TO: UCBSP::KHURLEY
CC: BATSE::KOUVELIOTOU
SUBJ: DMSP GRB DATA

HERE IS A PARTIAL LIST OF 1992 DMSP GAMMA-RAY-BURST DATA, AS OF TODAY.
OTHER DATA APPEARING TO CONFIRM UNCONFIRMED EVENTS IN YOUR LISTING IS
BEING EXTRACTED, AND I WILL CHECK IT OUT WHEN I RETURN FROM HOUSTON.
THANKS FOR YOUR CONTINUING HELP--JIM TERRELL

DMSP GAMMA PEAKS 90281-92305 CHECKED,2-SEC CTS,TERRELL/DMSP.GAM 930505
ORBITAL PERIODS FOR 8,9,10: 6110,6080,6040SEC. ALT=800KM. INCLIN=99DEG
GRB PEAK TIMES CORRECTED (8,9,10=11) FOR AVG DELAYS: 1.82,1.98,5.50SEC
CHANS: (8)50,100,200,420 (9)50,100 (10,11)20,100,200,430,550(-1000KEV)

DATE	FL	DAY	TIME	NOTES--------(ND=NO DATA,NA=NOT APPARENT)----NOTES	DATATIMES
920101		001	0	JD8622.5	
920110		010	33480	BATSE GRB (16XMIN) (8ND,9NA,10SAA,11NA)	
920122		022		NO DMSP TAPES, DAYS 22-25 (92022-25)	
920126	9	026	55714	BURST? WIDE SOFT PEAK 55714.0 (4KC/S)(8SRAD,11SAA)	55646-768
	10	026	55704	STR SOFT BURST,COMPLEX PEAKS 55704.2,714.2(3KC/S)	55624-748
		026	55667	PVO TRIGGER (BURST?) AT 55666.9	
920210		041	35625	BATSE GRB,MOD STRONG RA154,DEC49 8NO,10SAA,11SAA	
	9	041	35633	VERY WEAK SOFT BURST,PEAKS 35632.6,636.6	35635-639
920211	8	042	15773	STRONG HARD BURST(+CHG),PEAKS 15772.7-4.7(2500C/S)	15765-783
	9	042	15775	STRONG HARD BURST, PEAK 15774.7(7KC/S) (BATSE OFF)	15761-791
	10	042	15776	STRONG HARD BURST,PEAK 15775.6(1700C/S) +SOFT BASE	15775-785
	11	042	15776	STRONG HARD BURST, PEAK 15775.8(12KC/S),ASYMM RESP	15765-799
		042	15631	PVO TRIGGER 15630.7 (0.7 HARDNESS RATIO)	
920214	9	045	83249	SHARP SOFT BURST, PEAK 83249.4 (8ND=NO DATA)	83243-273
	10	045	83250	SHARP SOFT BURST, PEAK 83250.1 (1000C/S),254.1	83244-280
	11	045	83250	SHARP SOFT BURST PEAKS 83249.8 (8KC/S),265.8	83237-295
		045	83066	BATSE SOLAR FLARE#2721, PEAK 83252(70K/S)&~83267	
920216	8	047	45219	STRONG SOFT BURST,PEAKS 45219.3,223.3(1KC/S)(10NO)	45177-239
	9	047	45220	STRONG SOFT BURST, PEAK 45219.7 (2KC/S)	45214-236
	11	047	45220	STRONG SOFT BURST,PEAKS 45184.2,196.2,220.2(8KC/S)	45180-252
		047	45052	PVO TRIGGER (BURST?) 45052.5	
920311		071	8426	BATSE GRB,VERY INTENSE,2PEAKS,RA129,D-40 (BNEWS16)	
	8	071	8431	GRB, PEAKS 8431.4,8437.4 @63DEG (PVO TRIG 8887.3)	8429-443

LOS ALAMOS
NATIONAL LABORATORY
Space Science Technology Division
Astrophysics and Radiation Measurements, SST-9, MS D436
Los Alamos, New Mexico 87545

Telephone: (505) 667-5127
Fax: (505) 665-4414

UNCLASSIFIED FAX TRANSMITTAL

DATE: 10 FEB 1993

TO: KEVIN HURLEY
U.C.B. (S.S.L.)

TELEPHONE: (510) - 643 - 9173

FAX: (510) - 643 - 8640

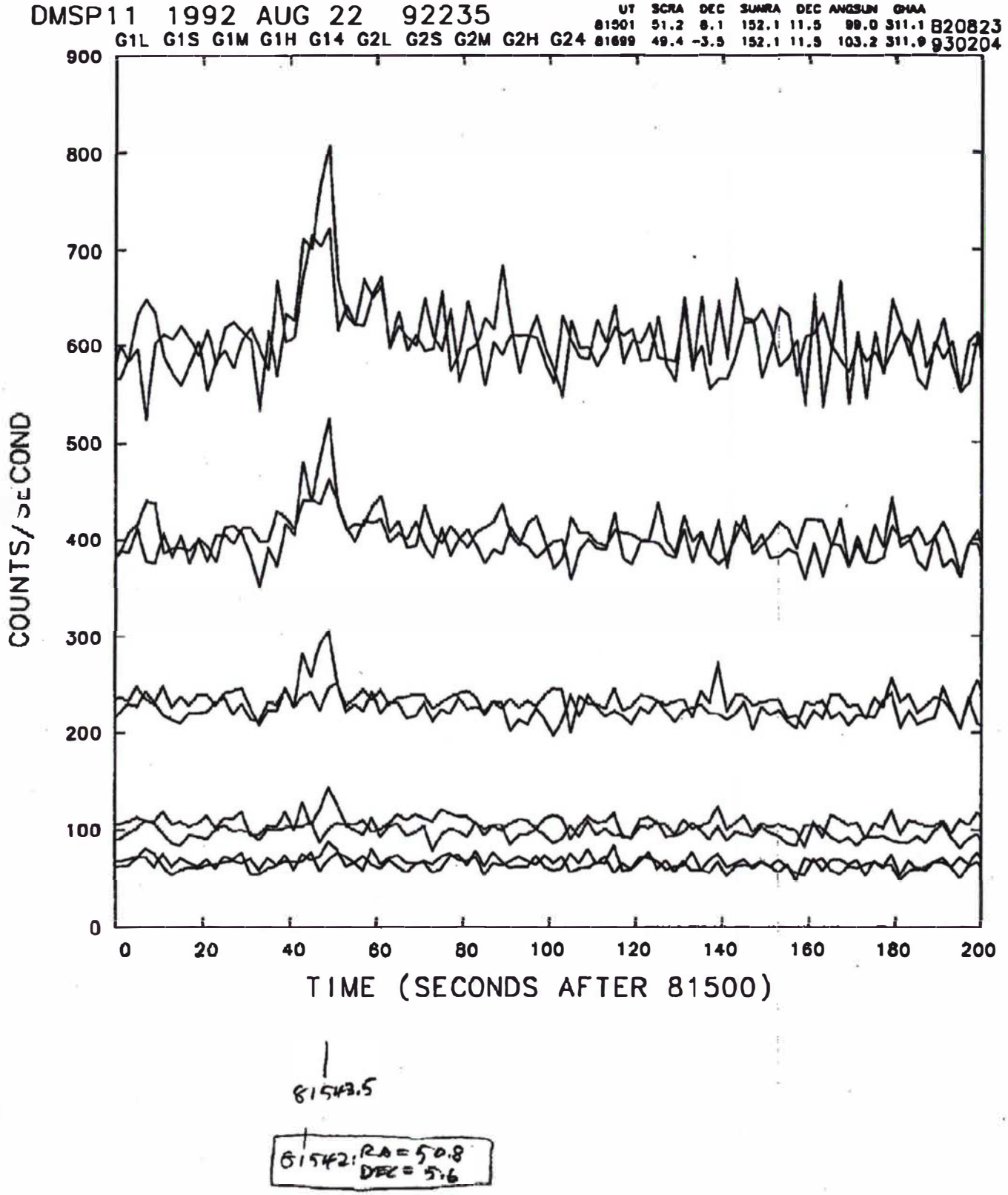
MESSAGE: Here are the DMSP RdEs graphs for 8/22/92 (G.R.B.). S/C pointing are also noted — sat. orientation up to ~117° from ZENITH. — Jim Terrell

FROM: JIM TERRELL

TELEPHONE (505) - 662-7582 (FAX: 665-4414)

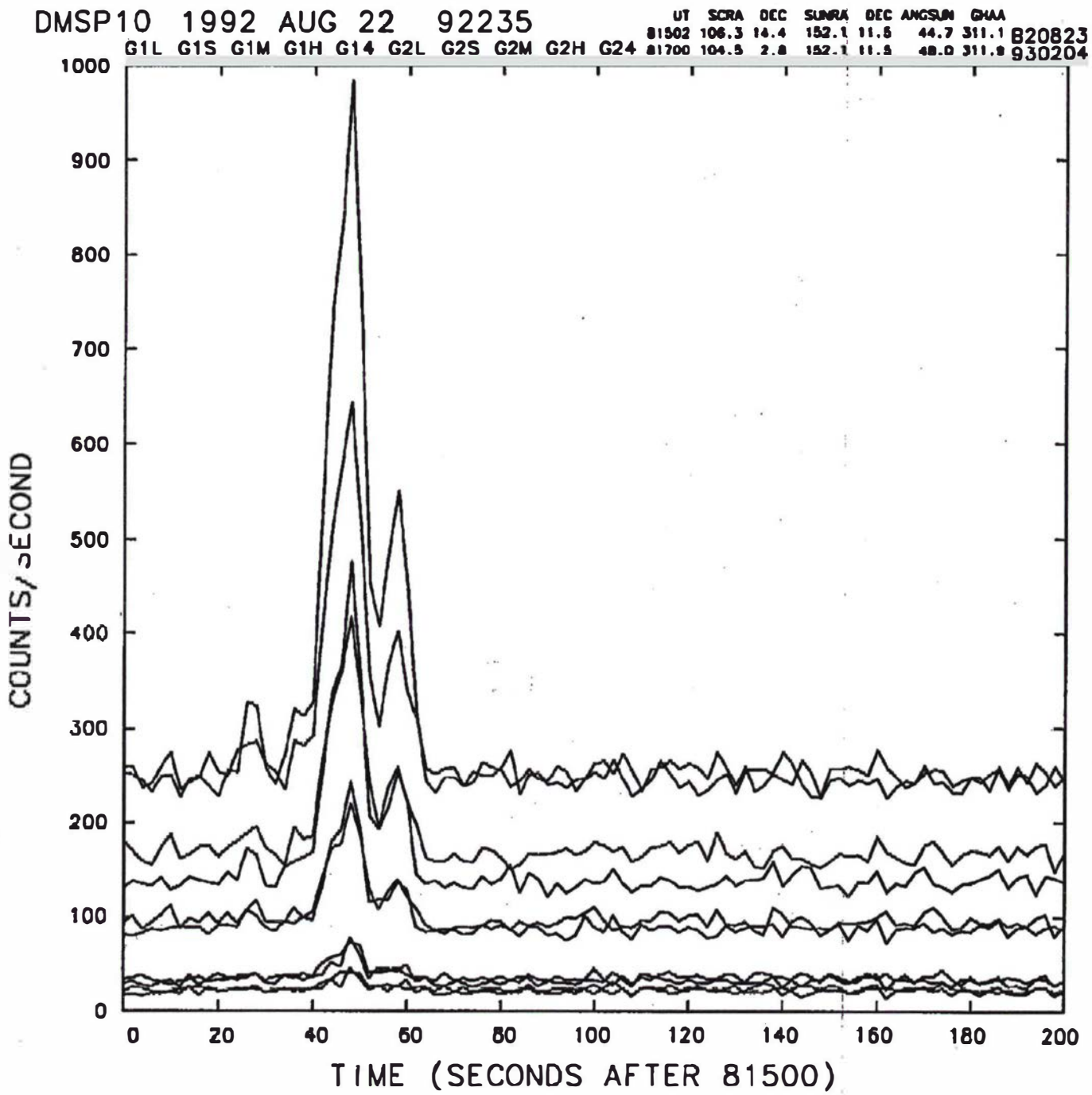
NUMBER OF PAGES ATTACHED: 3

If you do not receive all pages transmitted, please contact the Group Office at (505) 667-5127.



81543.5

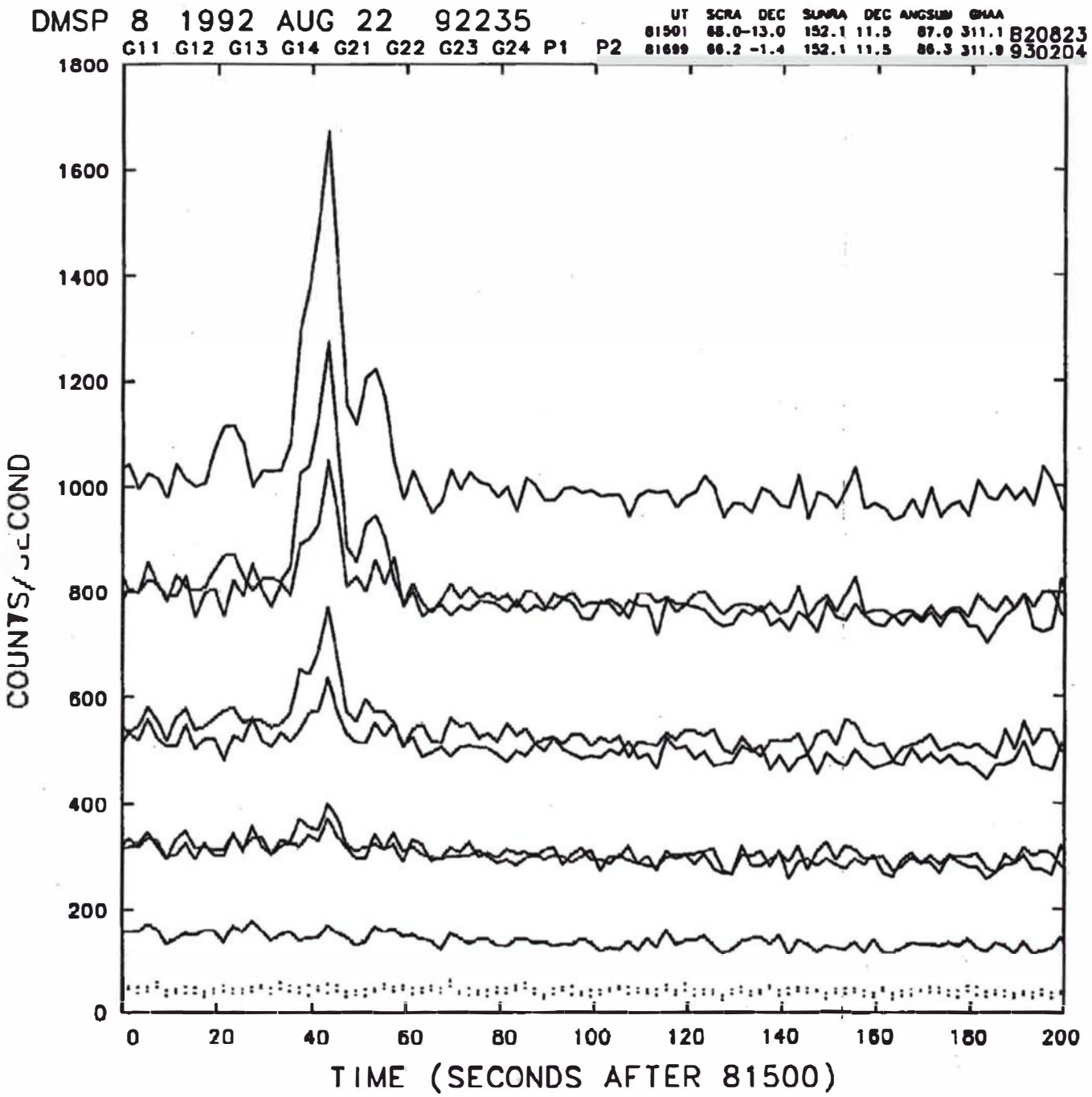
81542: RA = 50.8
DEC = 5.6



81552.5

81520.5 81542.5

(81542)
RA=105.9
DEC=12.1



81521.5 81641.5

81551.5

81542 : RA = 67.6
DEC = −10.6

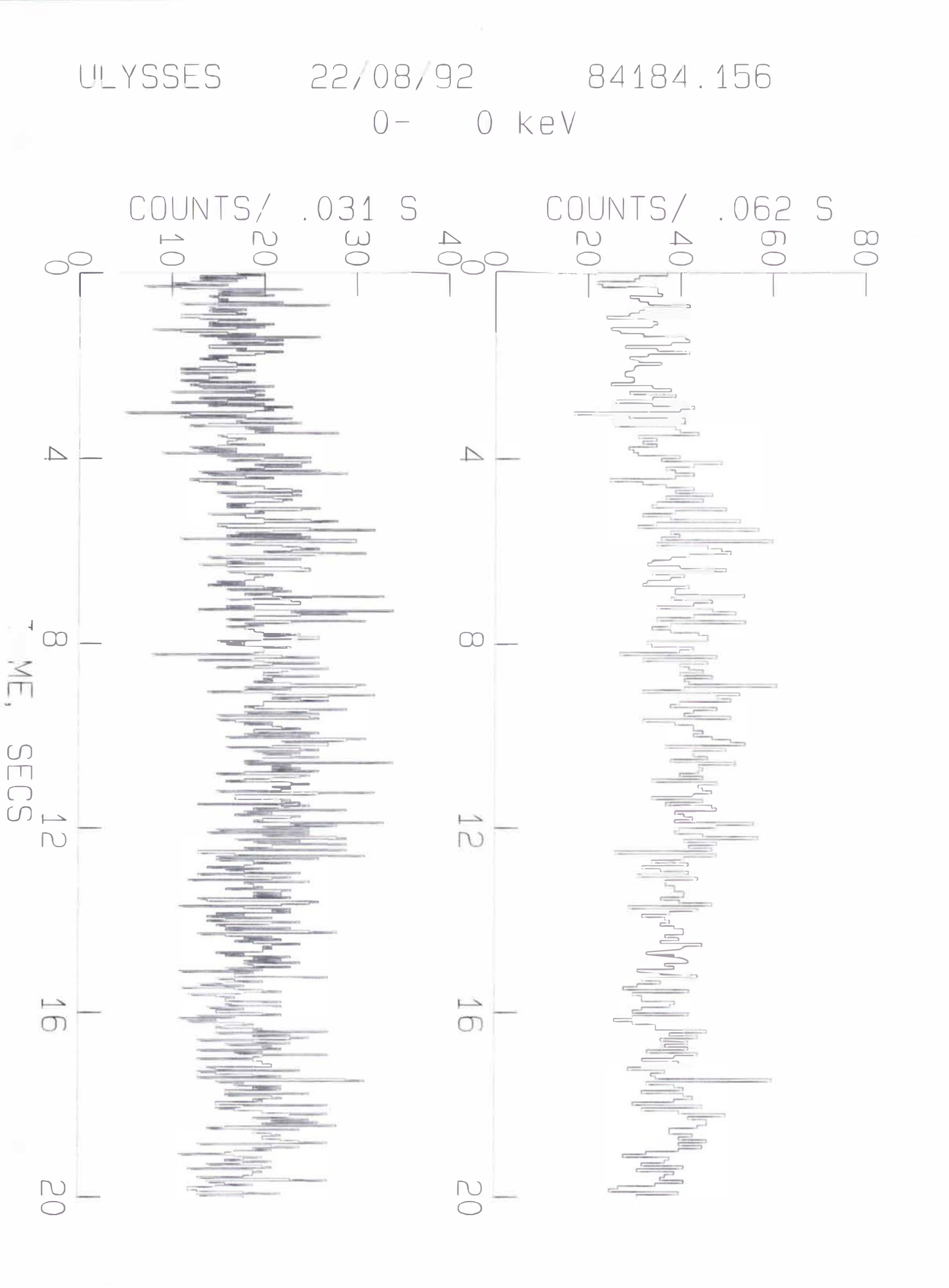
J Terrell 1/8/93 22 Aug 92

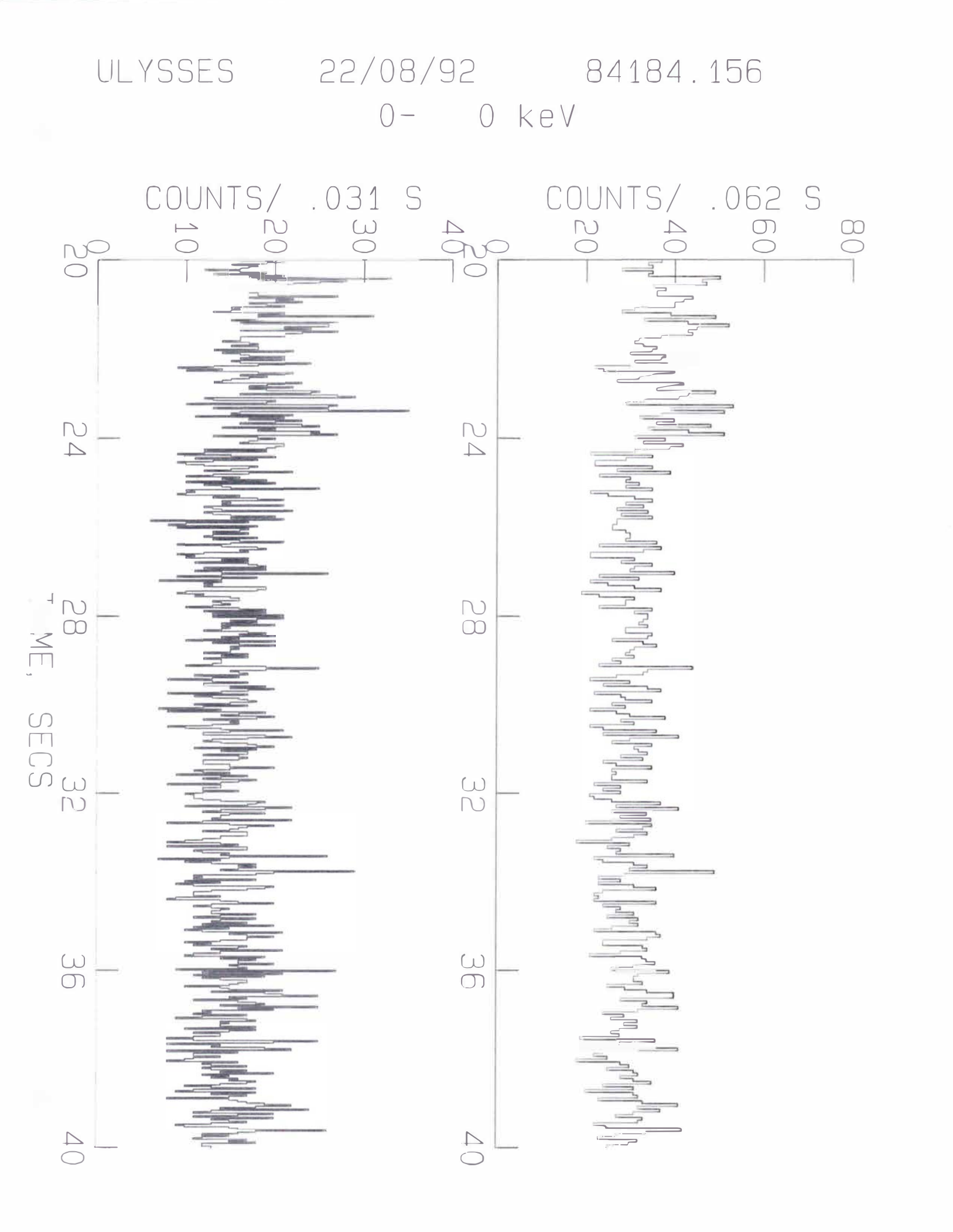
81540 DMSP's saw it (3 of them!)

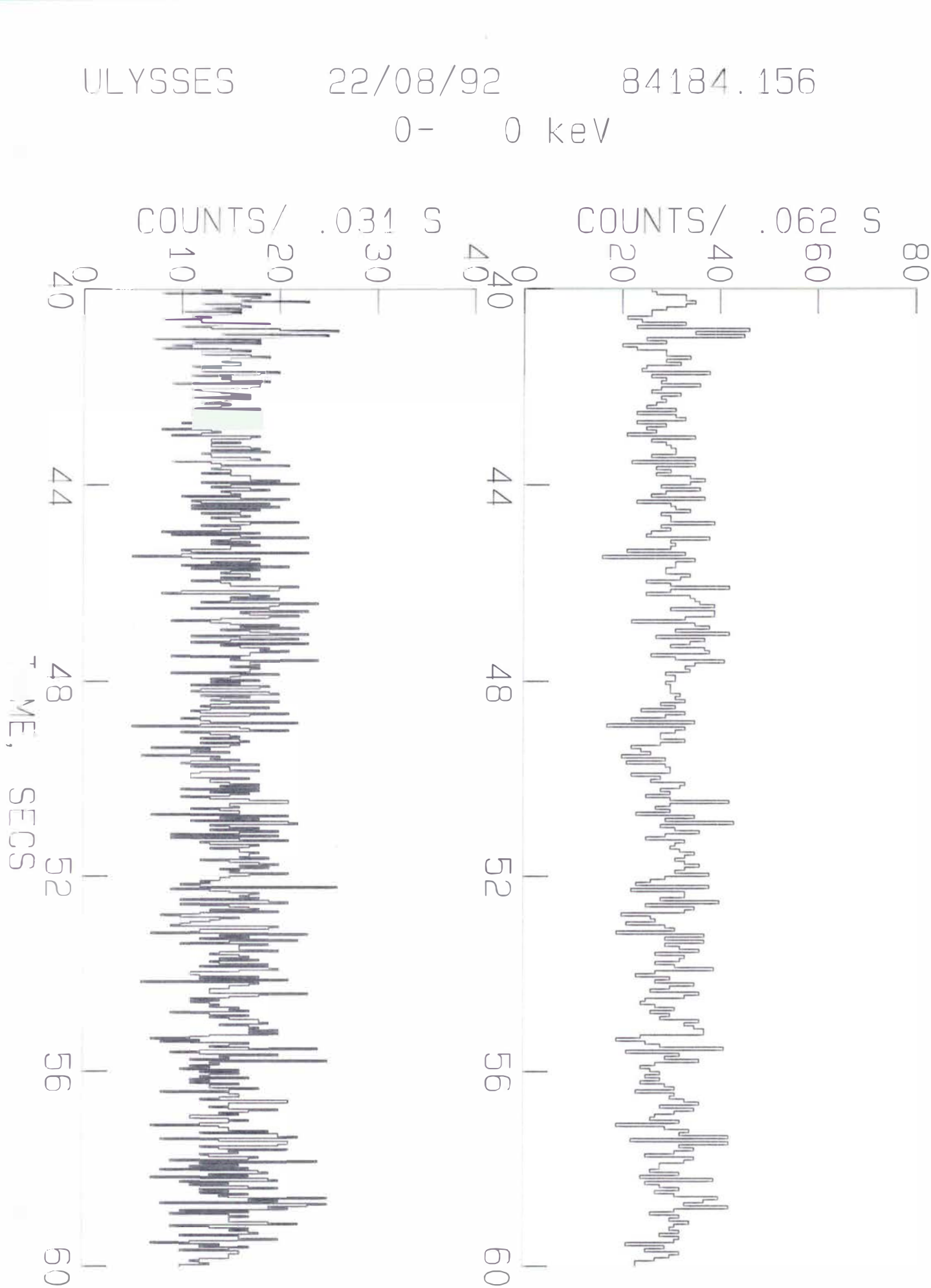
Very strong burst

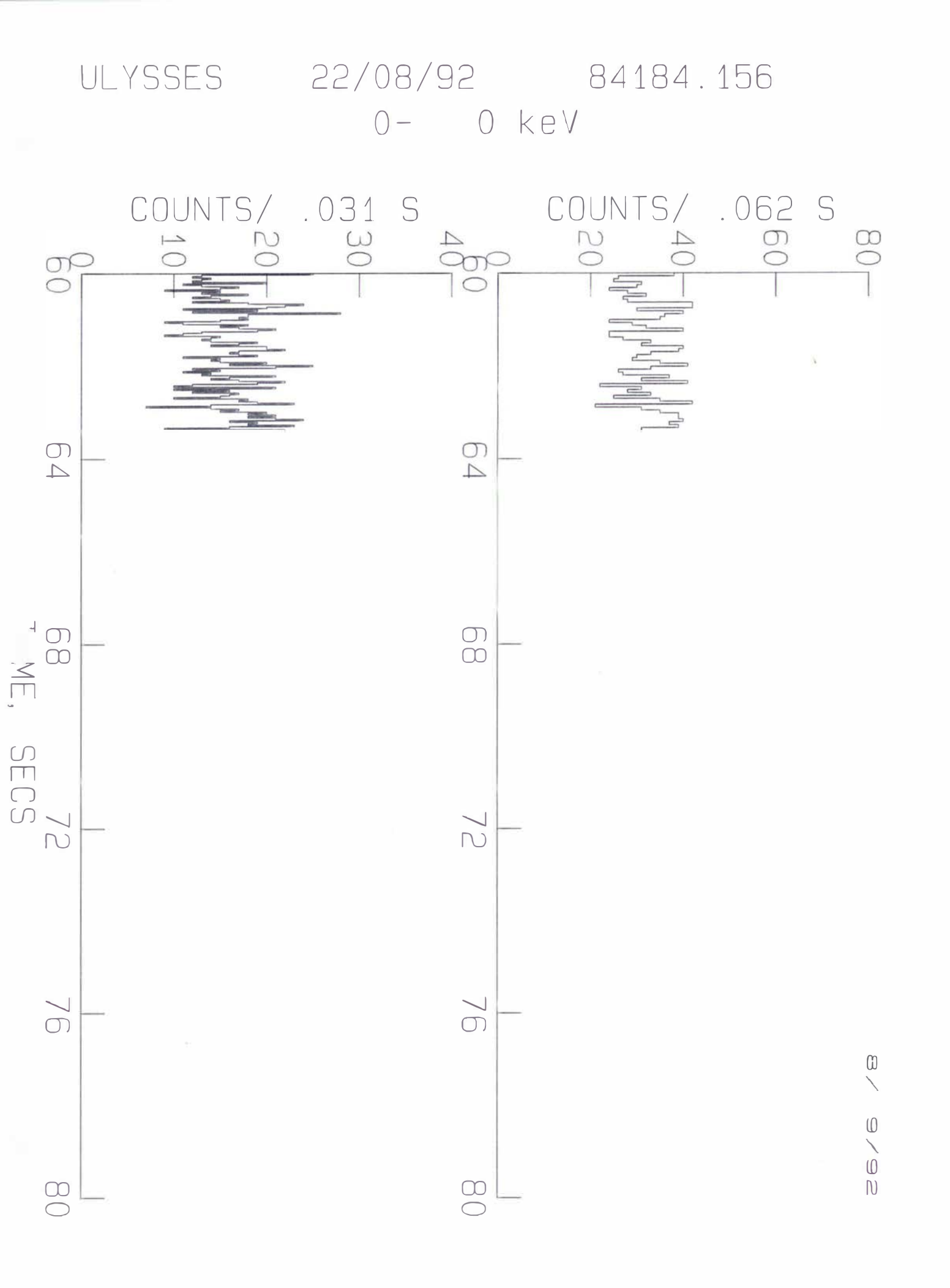
8, 10, +11 saw it - 1st peak 81542
2nd ~ 2s later

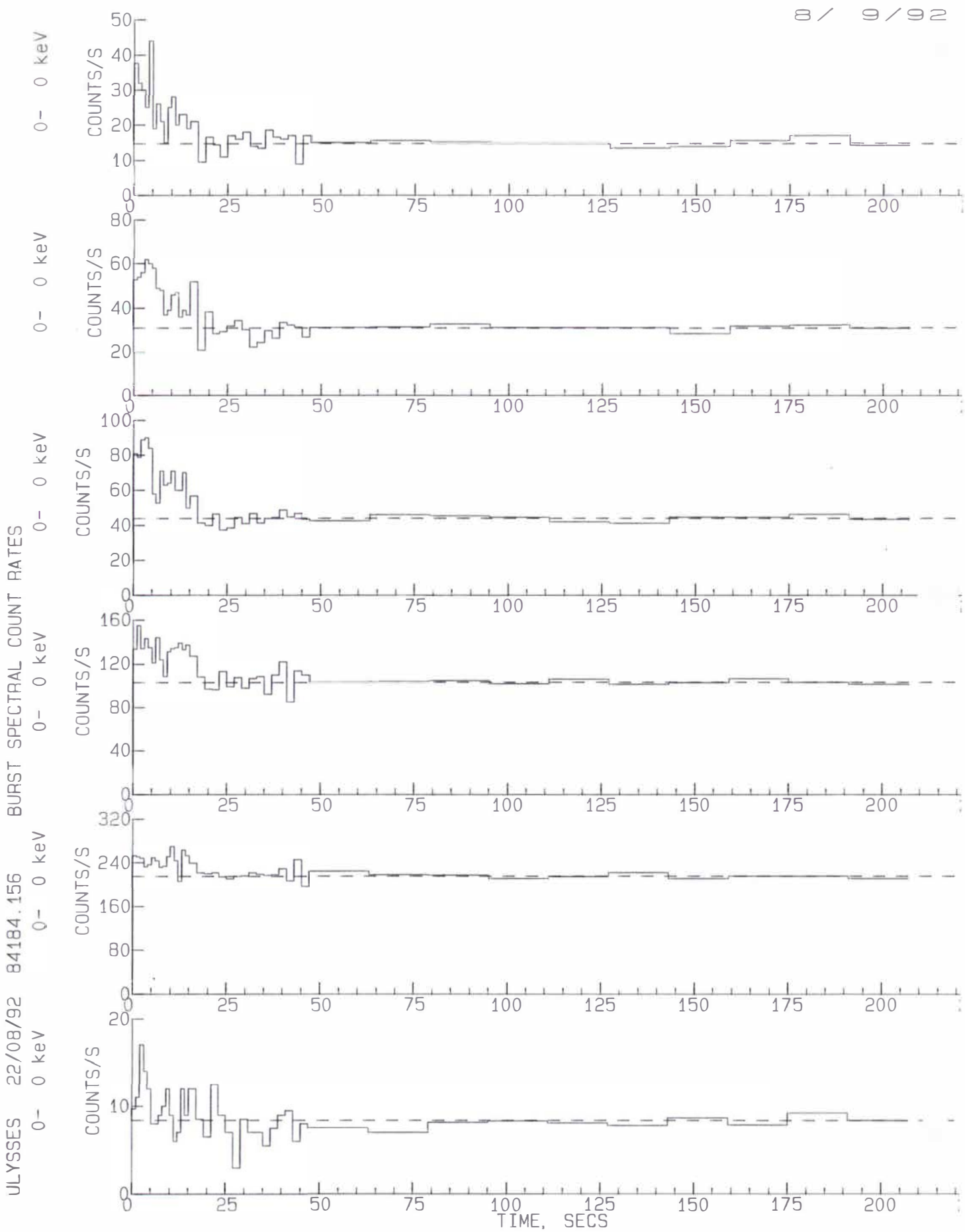
All 3 sat could have seen sum.


ULYSSES 22/08/92 84184.156
0- 0 keV
COUNTS/ .031 S
COUNTS/ .062 S
0
10
20
30
40
0
20
40
60
80
0
4
8
12
16
20
TIME, SECS


ULYSSES 22/08/92 84184.156
0- 0 keV
COUNTS/ .031 S
COUNTS/ .062 S
0
10
20
30
40
0
20
40
60
80
20
24
28
32
36
40
TIME, SECS

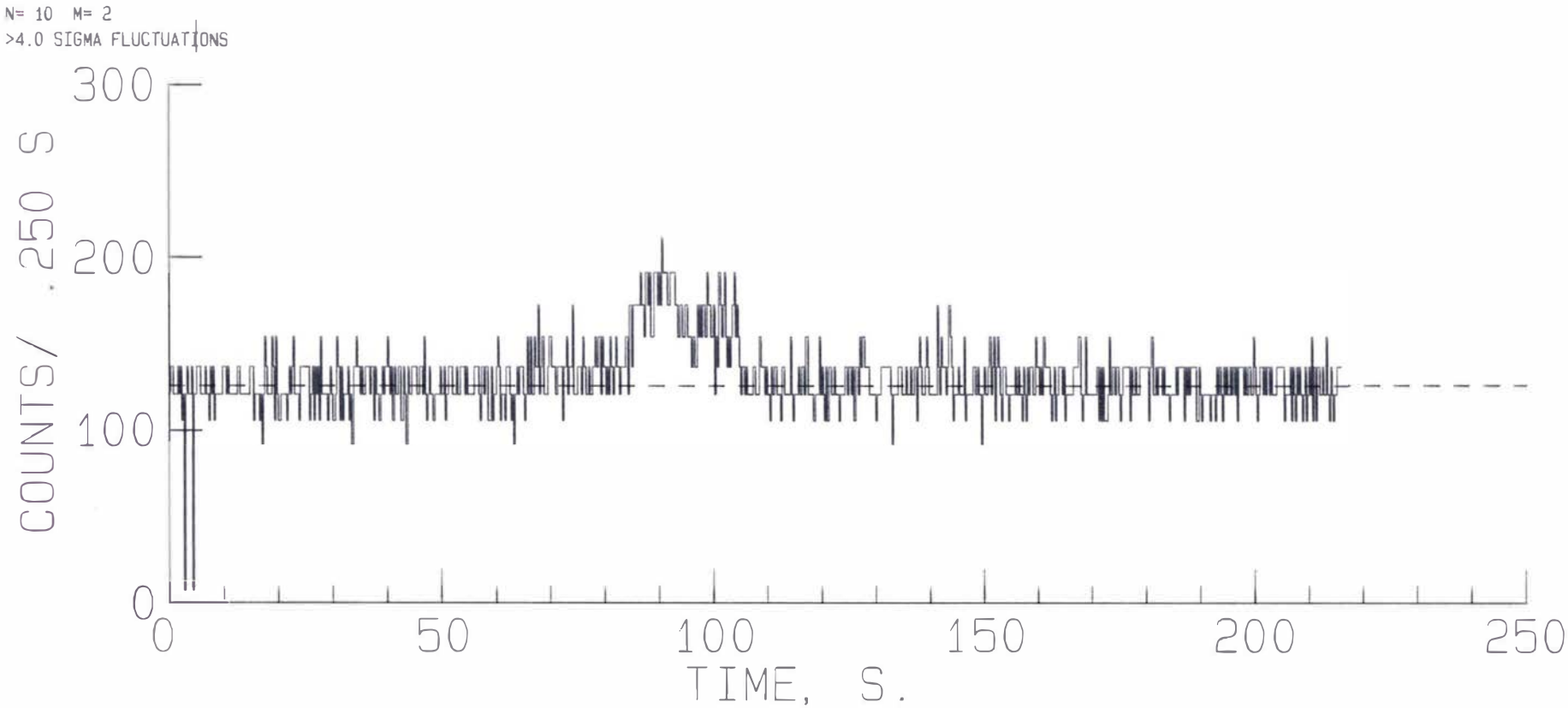

ULYSSES 22/08/92 84184.156
0- 0 keV
COUNTS/ .031 S
COUNTS/ .062 S
0
10
20
30
40
0
20
40
60
80
40
44
48
52
56
60
TIME, SECS


ULYSSES 22/08/92 84184.156
0- 0 keV
COUNTS/ .031 S
COUNTS/ .062 S
0
10
20
30
40
0
20
40
60
80
60
64
68
72
76
80
+ ME, SECS
8/ 9/92


8/ 9/92
ULYSSES 22/08/92 84184.156 BURST SPECTRAL COUNT RATES
0- 0 keV
COUNTS/S
TIME, SECS

8/ 9/92

ULYSSES RT
22/ 8/92 84096.156 s
0- 0 keV



From MEEGAN@ssl.msfc.nasa.gov Mon Aug 24 13:20:47 1992
Date: Mon, 24 Aug 1992 15:21:11 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01864

TIME: TJD=8856 SECONDS=84797 Aug 22 23:33:17

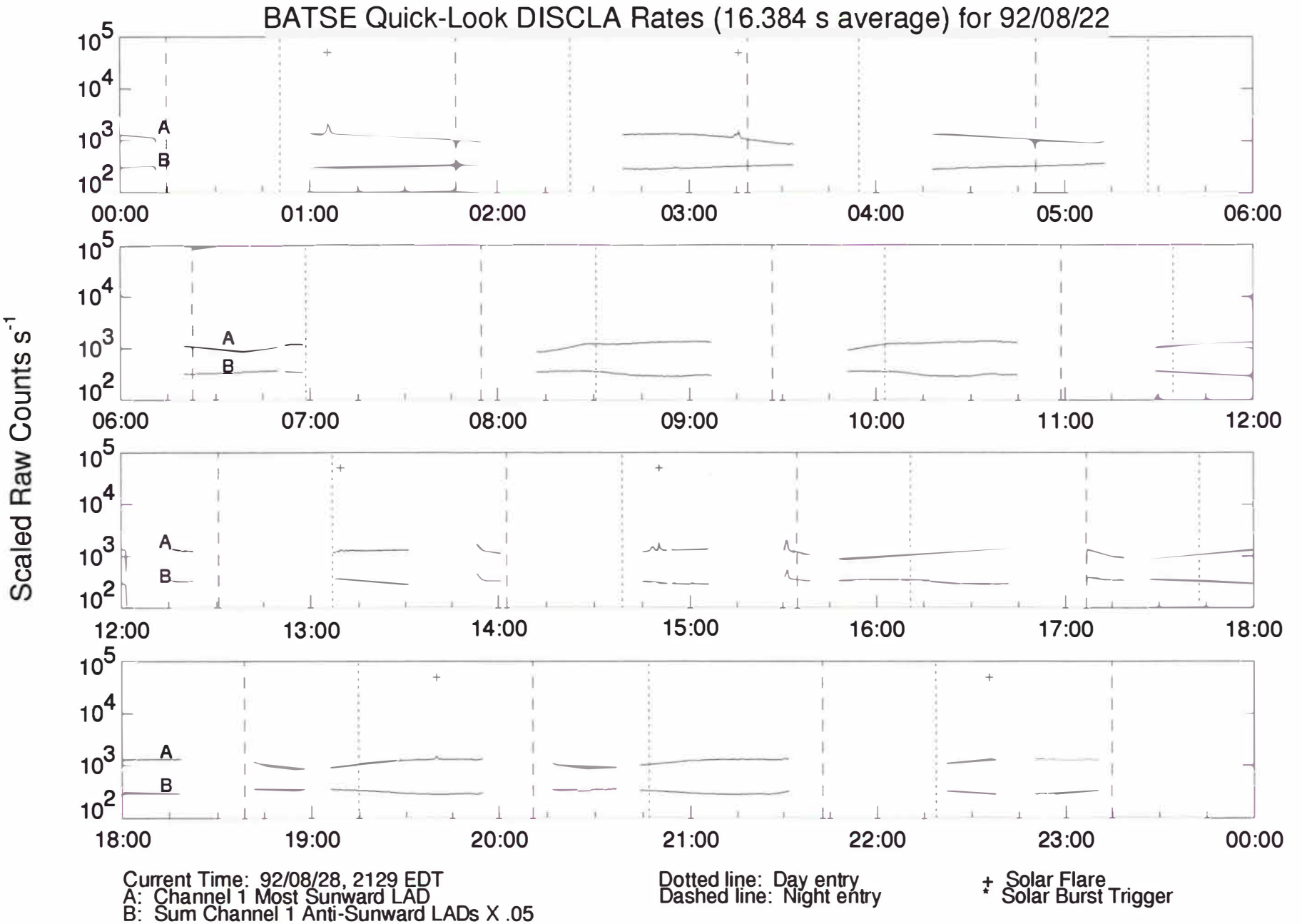
TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

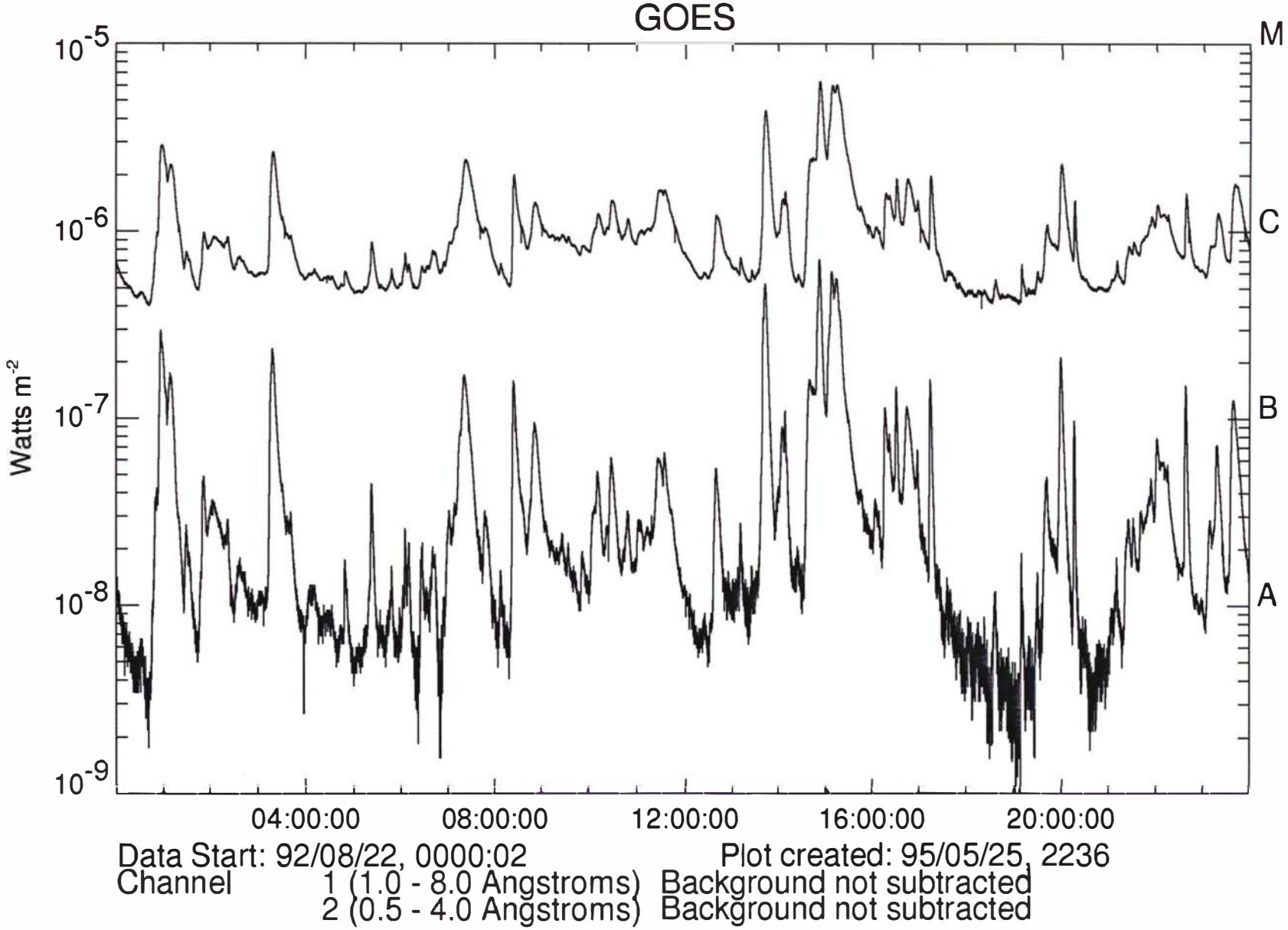
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=063.0 AZIMUTH=043.4 ERROR= DEGREES

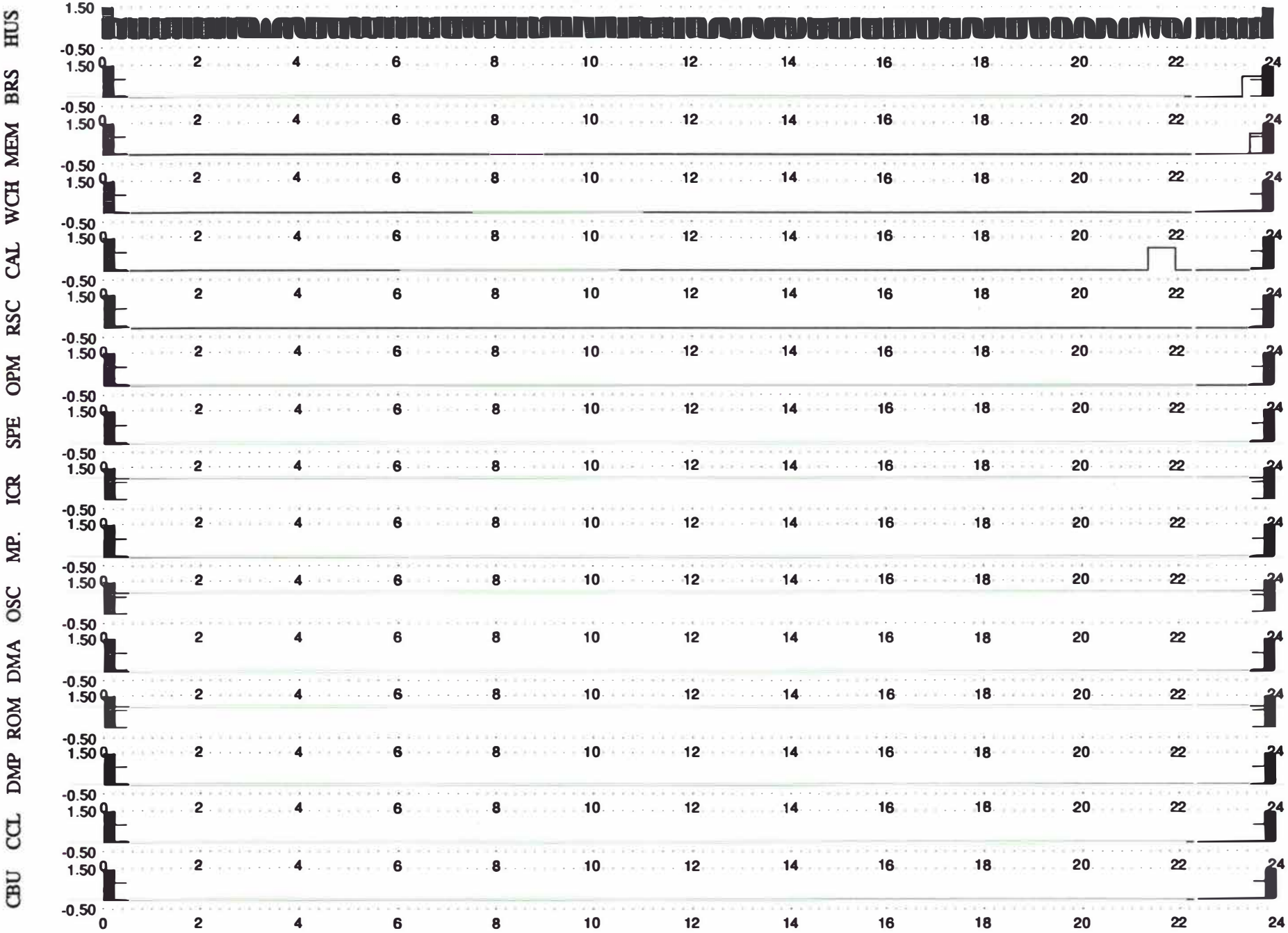
COMMENTS:
RISE OF TRANSIENT SOURCE GRO J0422+32.


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/22
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2129 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 Flare
Solar Burst Trigger


GOES
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/22, 0000:02
Plot created: 95/05/25, 2236
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 235, year 1992 to day 235, year 1992 9/11/92

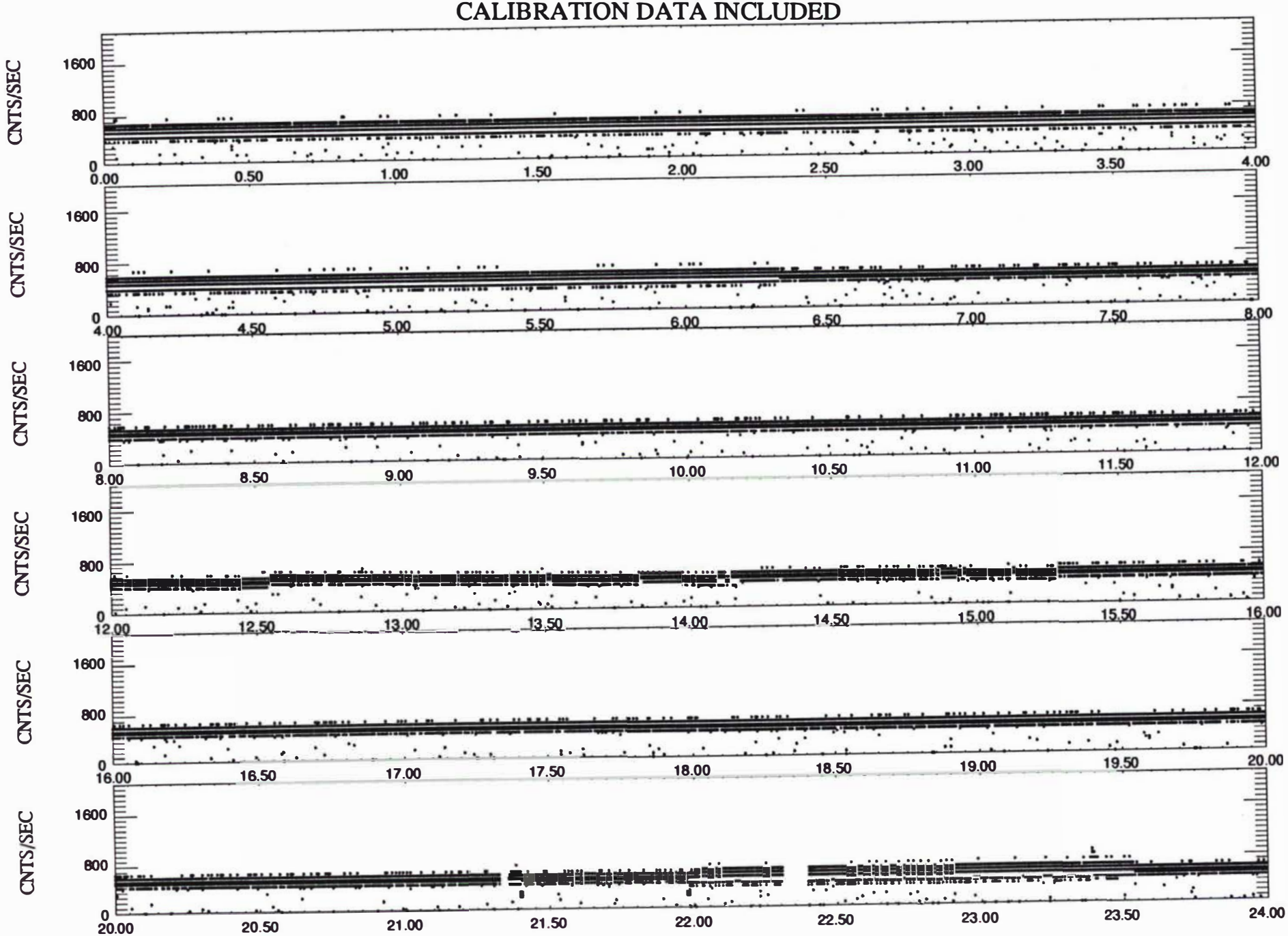
BURST NUMBER 9



UNIVE .L TIME

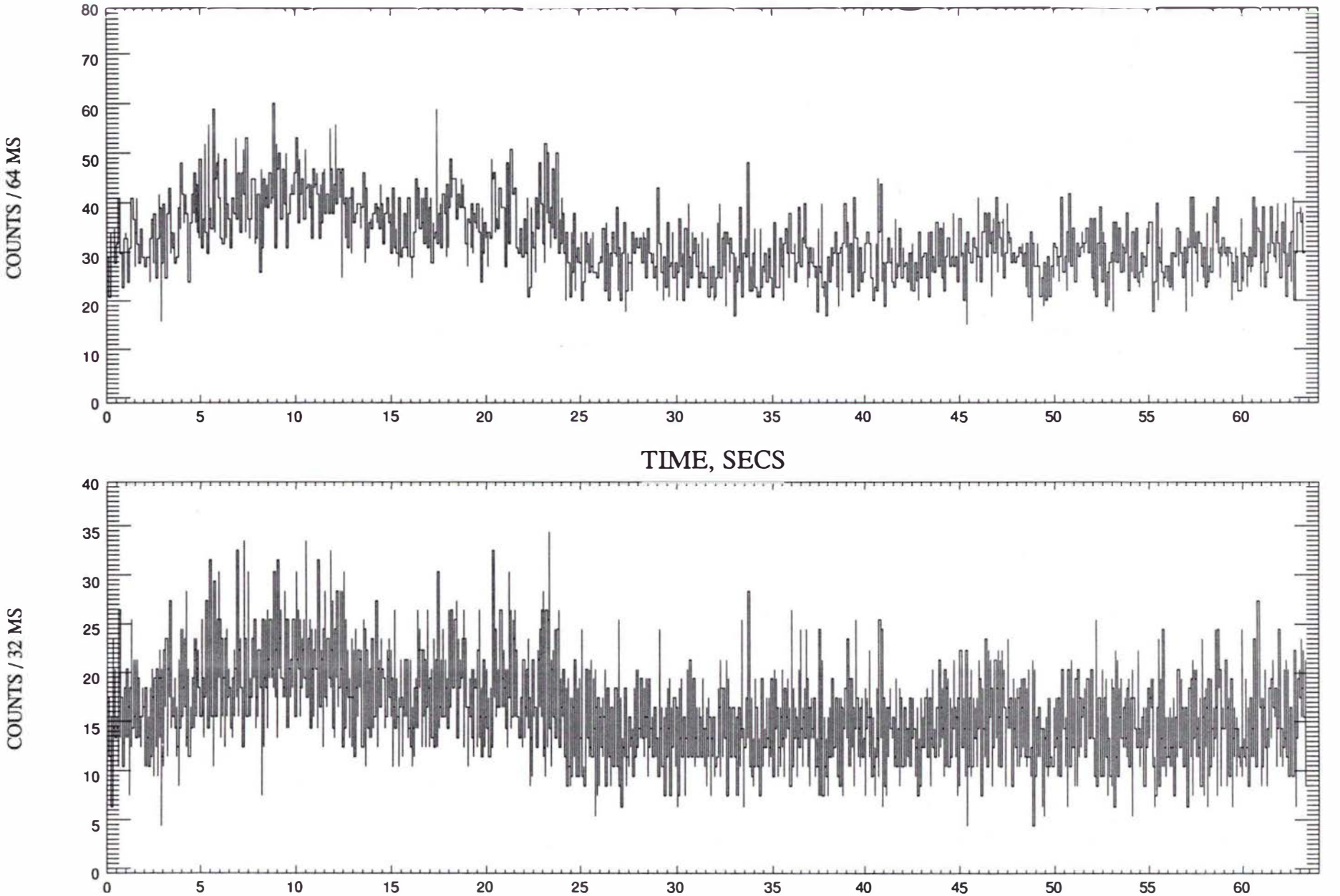
HUS 2A, MODE 1, NOT AVERAGED EDR day 235, year 1992 to day 235, year 1992 9/11/92

CALIBRATION DATA INCLUDED



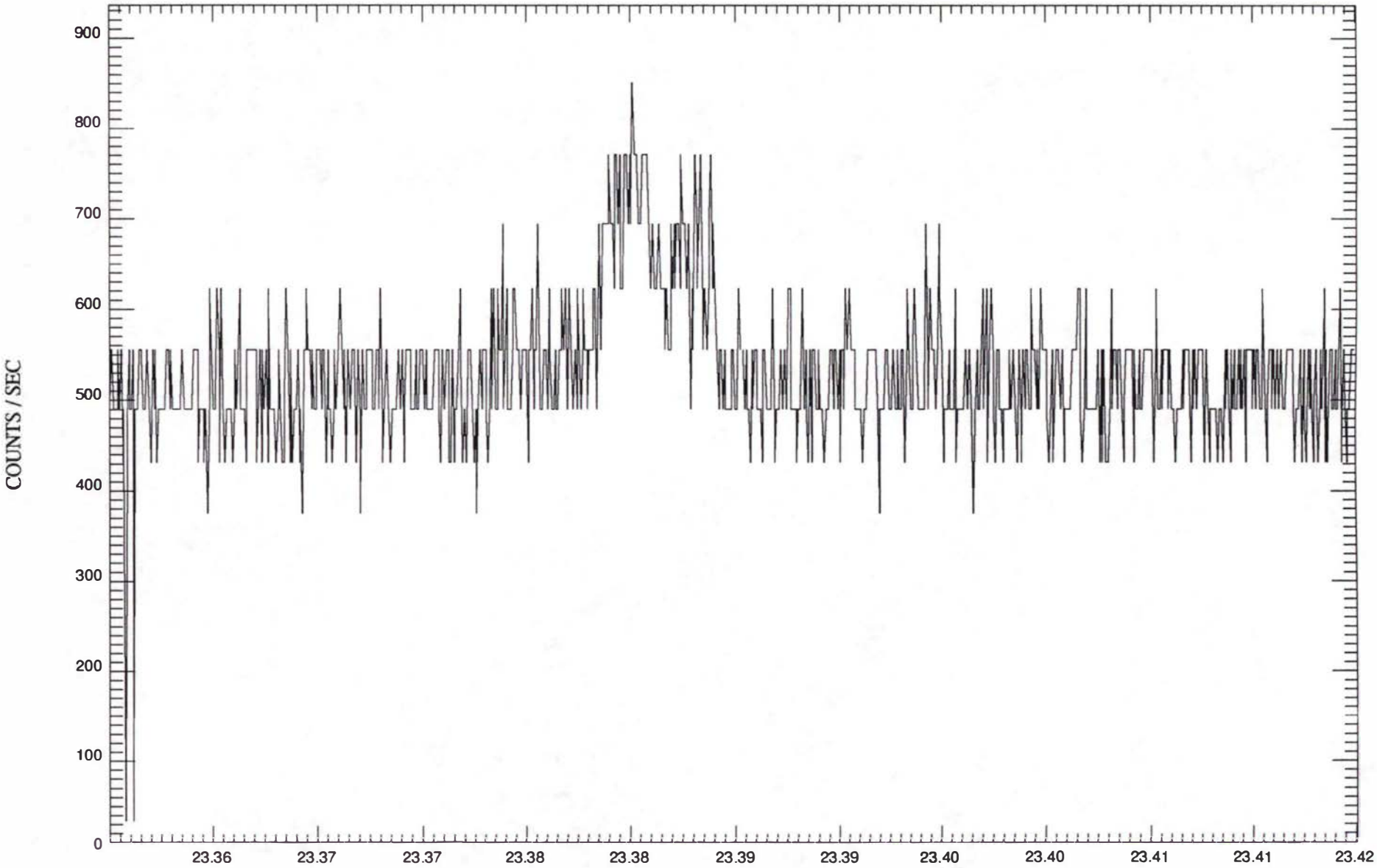
UNIVE AL TIME

Burst Counter 9 at UT=23.384487775167 h=84184.156 s



HUS 2A, MODE 1, NOT AVERAGED QEDR day 235, year 1992 to day 235, year 1992 8/25/92

CALIBRATION DATA INCLUDED



From MEEGAN@ssl.msfc.nasa.gov Mon Aug 24 13:28:17 1992
Date: Mon, 24 Aug 1992 15:28:36 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01865 Aug 23

TIME: TJD=8857 SECONDS=14996

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
RISE OF TRANSIENT SOURCE GRO 0422+32

From MEEGAN@ssl.msfc.nasa.gov Mon Aug 24 13:31:48 1992
Date: Mon, 24 Aug 1992 15:32:17 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01866

TIME: TJD=8857 SECONDS=33174

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

From MEEGAN@ssl.msfc.nasa.gov Mon Aug 24 13:35:44 1992
Date: Mon, 24 Aug 1992 15:36:13 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01867

TIME: TJD=8857 SECONDS=70338

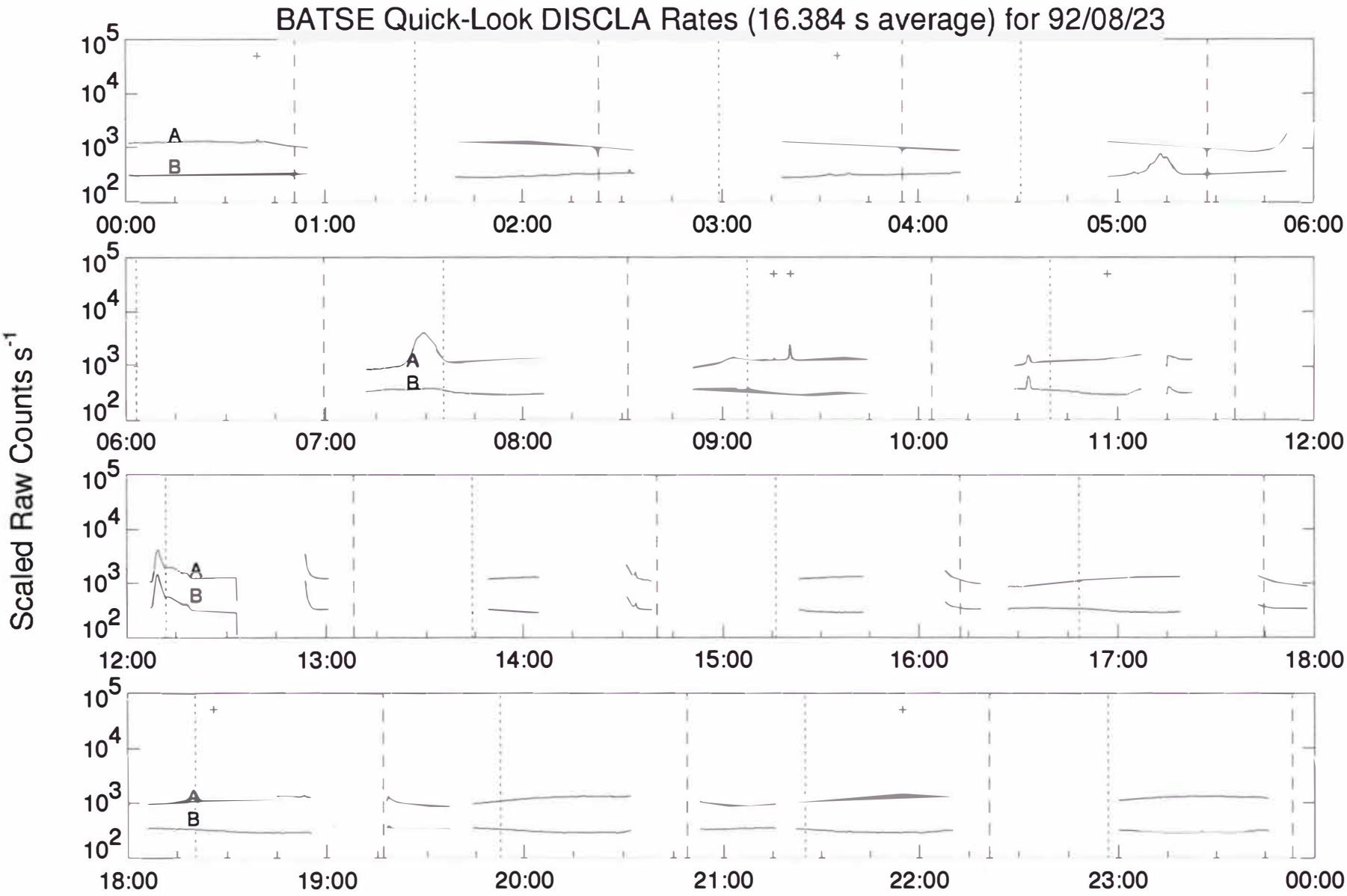
TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

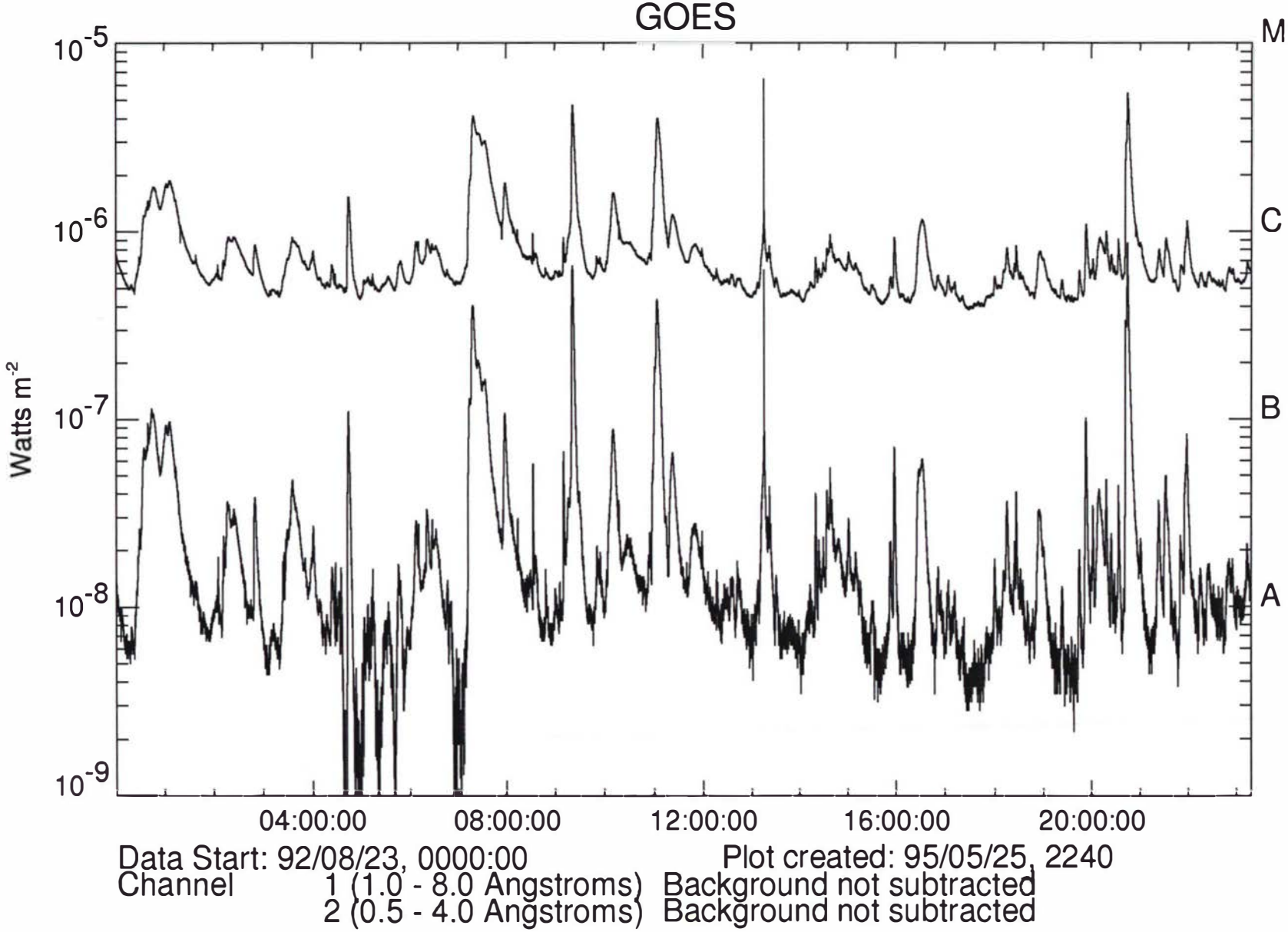
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

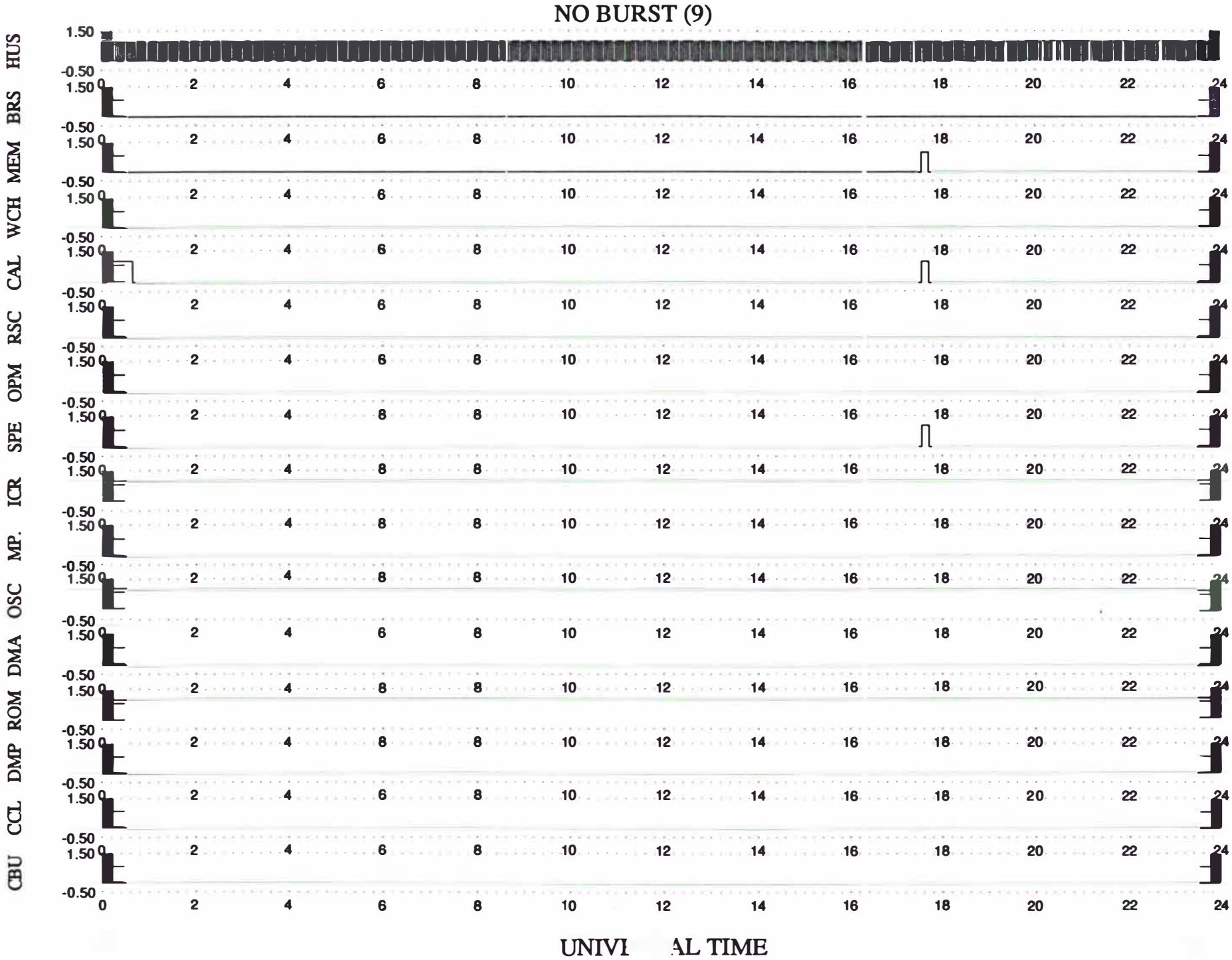
LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
FLUCTUATION SHORTLY AFTER RISE OF TRANSIENT SOURCE GRO J0422+32.


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/23
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 92/08/28, 2127 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 Flare
* Solar Burst Trigger

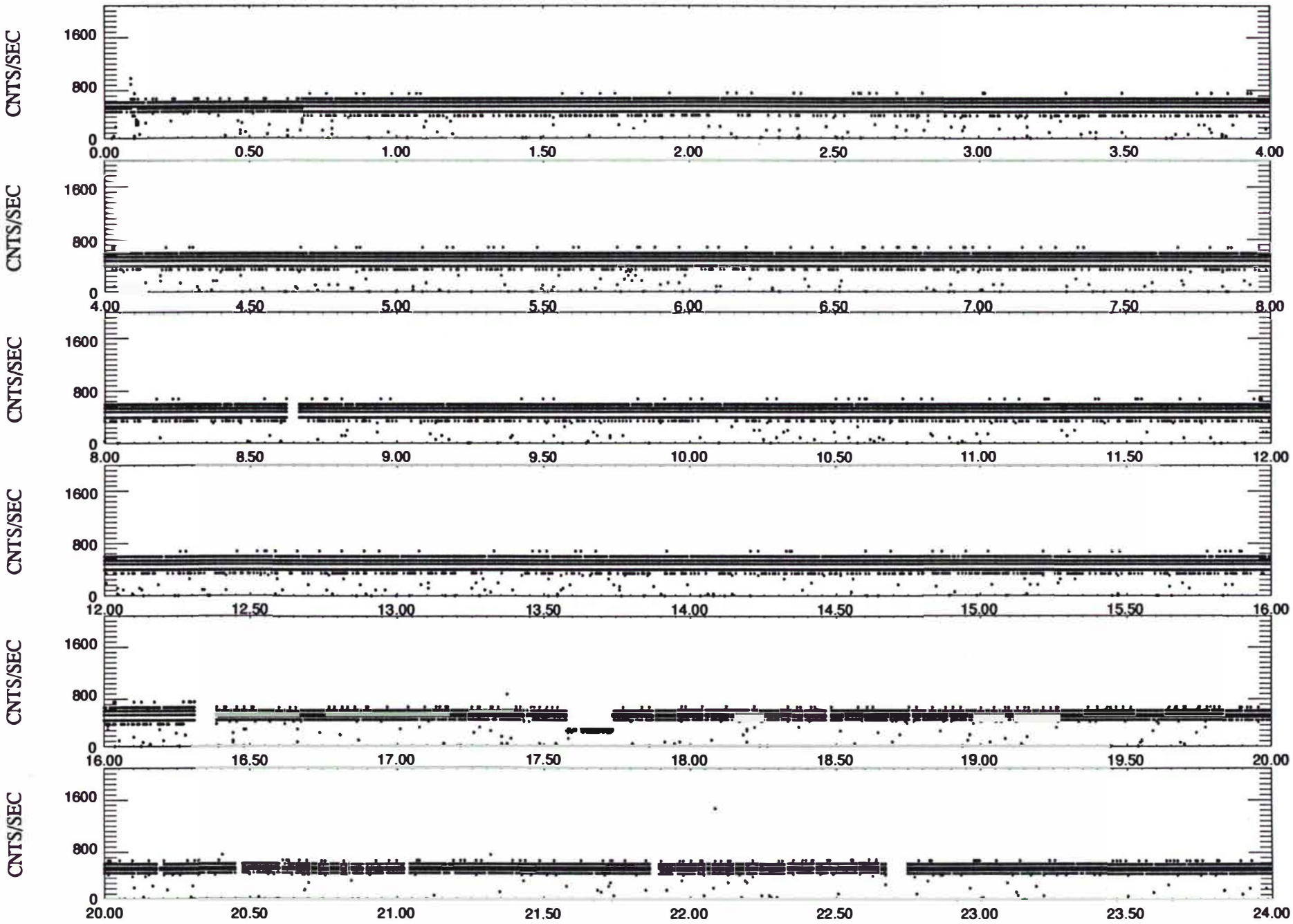

GOES
M
C
B
A
Watts m-2
10-5
10-6
10-7
10-8
10-9
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/23, 0000:00
Plot created: 95/05/25, 2240
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 236, year 1992 to day 236, year 1992 9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 236, year 1992 to day 236, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIVE \L TIME

BATSE BURST TRIGGER

NO.: 01868

Aug 24

TIME: TJD=8588 SECONDS=03487

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=140.7 AZIMUTH=012.1 ERROR= DEGREES

COMMENTS:
SOLAR FLARE. NOT SEEN IN GOES DATA.

BATSE BURST TRIGGER

NO.: 01869

TIME: TJD=8588 SECONDS=11595

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=064. AZIMUTH=004. ERROR= DEGREES

COMMENTS:
RISE OF TRANSIENT GROJ0422+32.

BATSE BURST TRIGGER

NO.: 01870

TIME: TJD=8858 SECONDS=32232

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=130. AZIMUTH=20 ERROR= DEGREES

COMMENTS:
SOLAR FLARE. NOT SEEN IN GOES DATA.

****
CATSEARCH PROGRAM
****

Helio corr removed

BATSE BURST # 1872
EVENT OF 1992 AUG 24 DAY OF YEAR=237
EVENT CROSSING TIME AT BATSE : 39183. S. OR 10:53:03.1
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 224.700 -48.800
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 24/ 8/ 92 IS:
RA= 156.723 DEC= 1.802 DIST= 6.273 AU
BATSE-ULYSSES DISTANCE = 938493160. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=102.90 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -698.76 SECS.
CROSSING TIME AT ULYSSES IS 38484. S. OR 10:41:24.3 +/- 569.18 SECONDS

Trigger

From HAGEDON@ssl.msfc.nasa.gov Wed Aug 26 11:25:10 1992
Date: Wed, 26 Aug 1992 13:25:37 -0500 (CDT)
From: HAGEDON@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER
NO.: 01872

Aug 24

TIME: TJD=8858 SECONDS=39183

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=133. AZIMUTH=202. ERROR= DEGREES

COMMENTS:
GREAT BURST! 2 COMPLEX EPISODES ~120S APART. FIRST EPISODE ~20S.
TOTAL DURATION >160S.

Ulysses trig's

Date: Nov 3 '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 - but only x 2 difference

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?

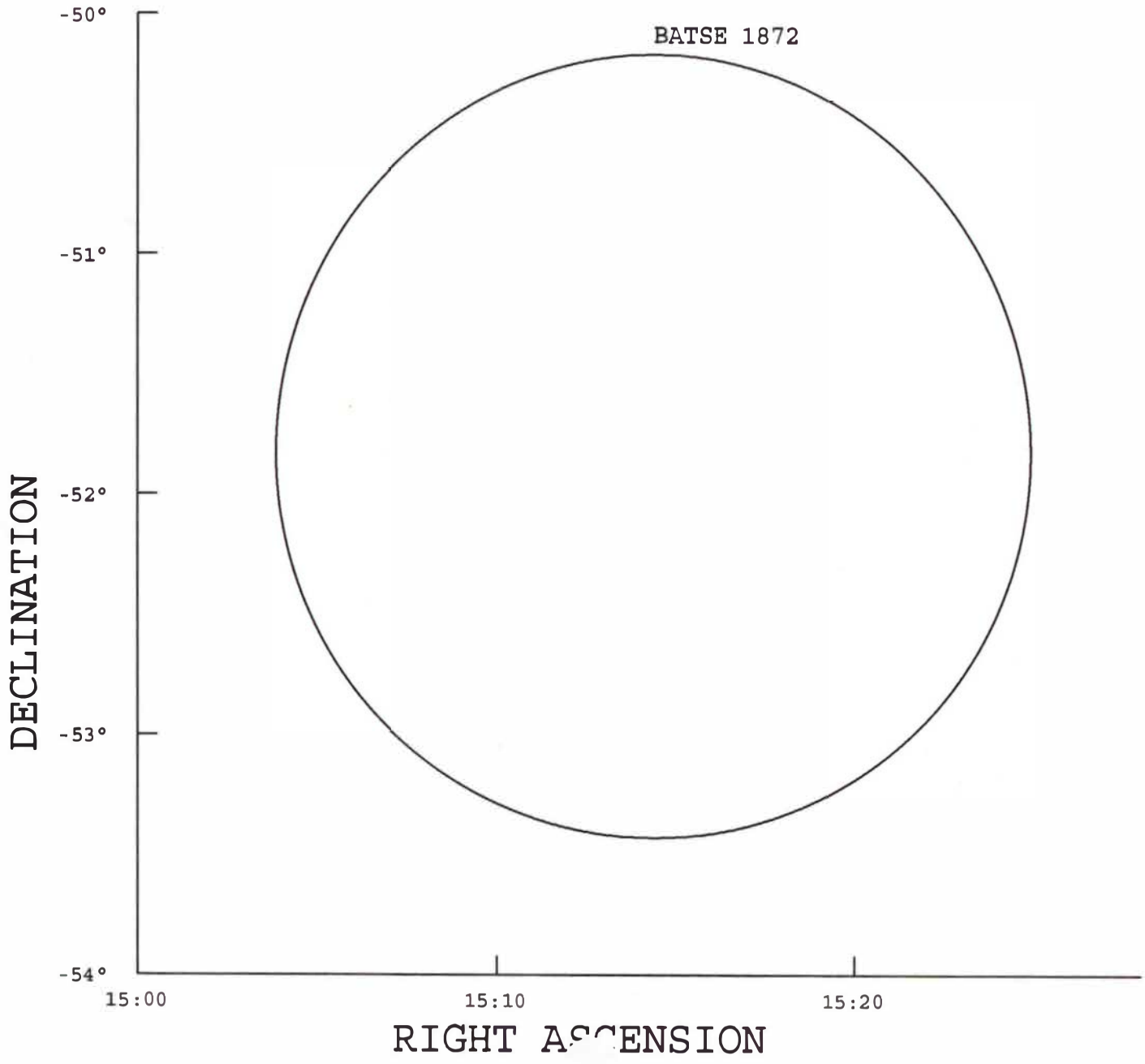
☐ Geocentric time used?

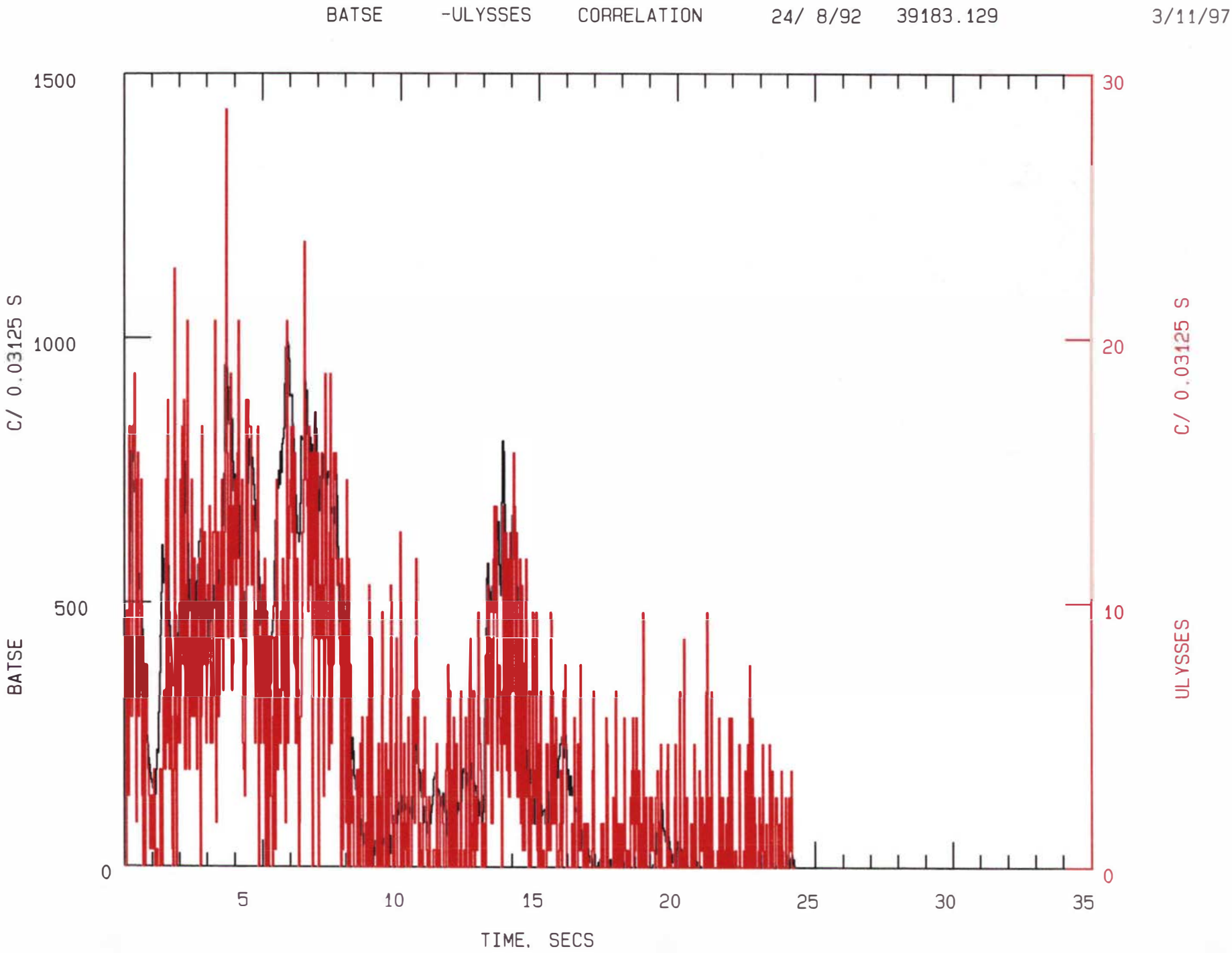
☑ ACCESS database updated?

EVENT OF AUG 24, 1992 10:41

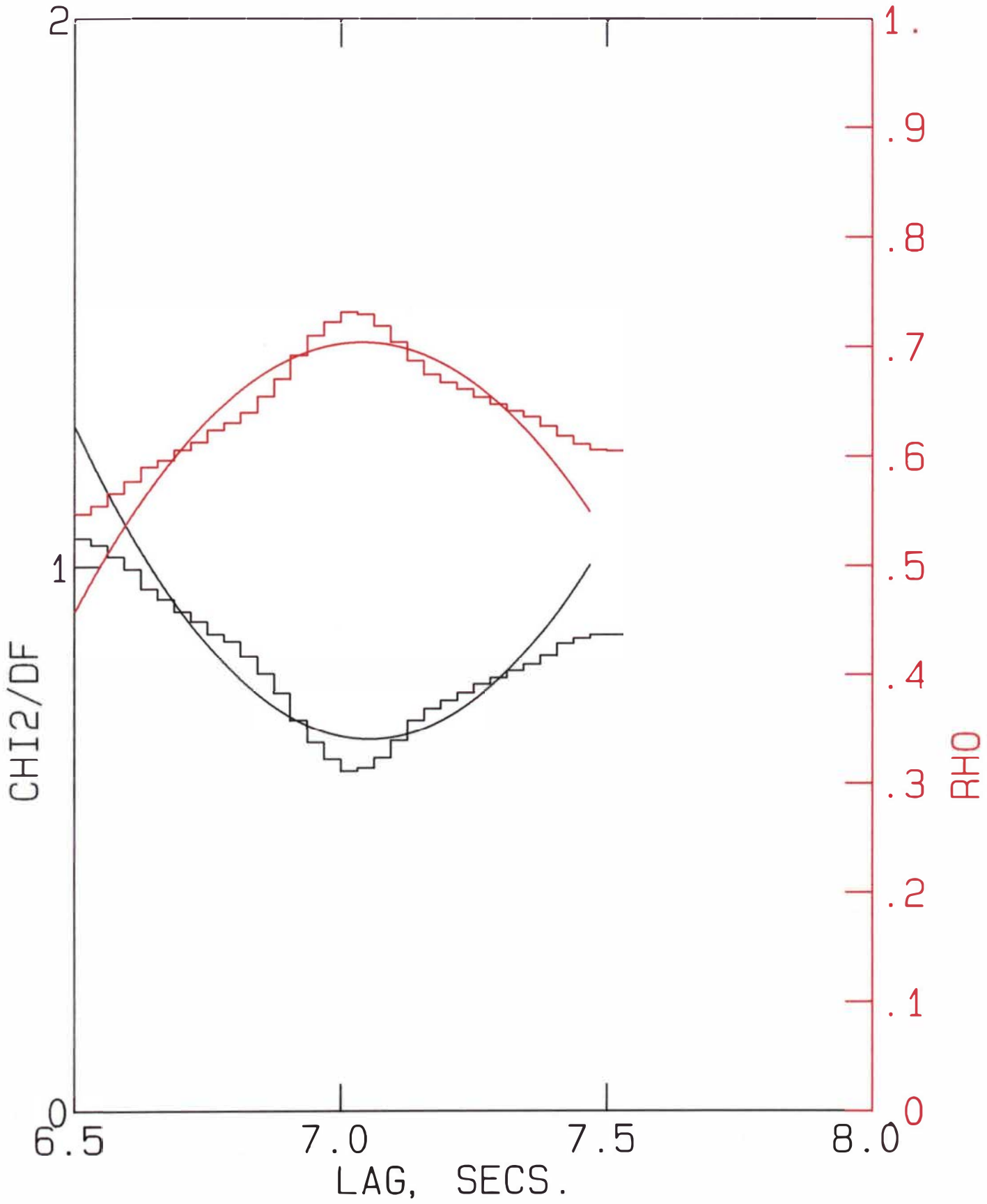
3/11/97

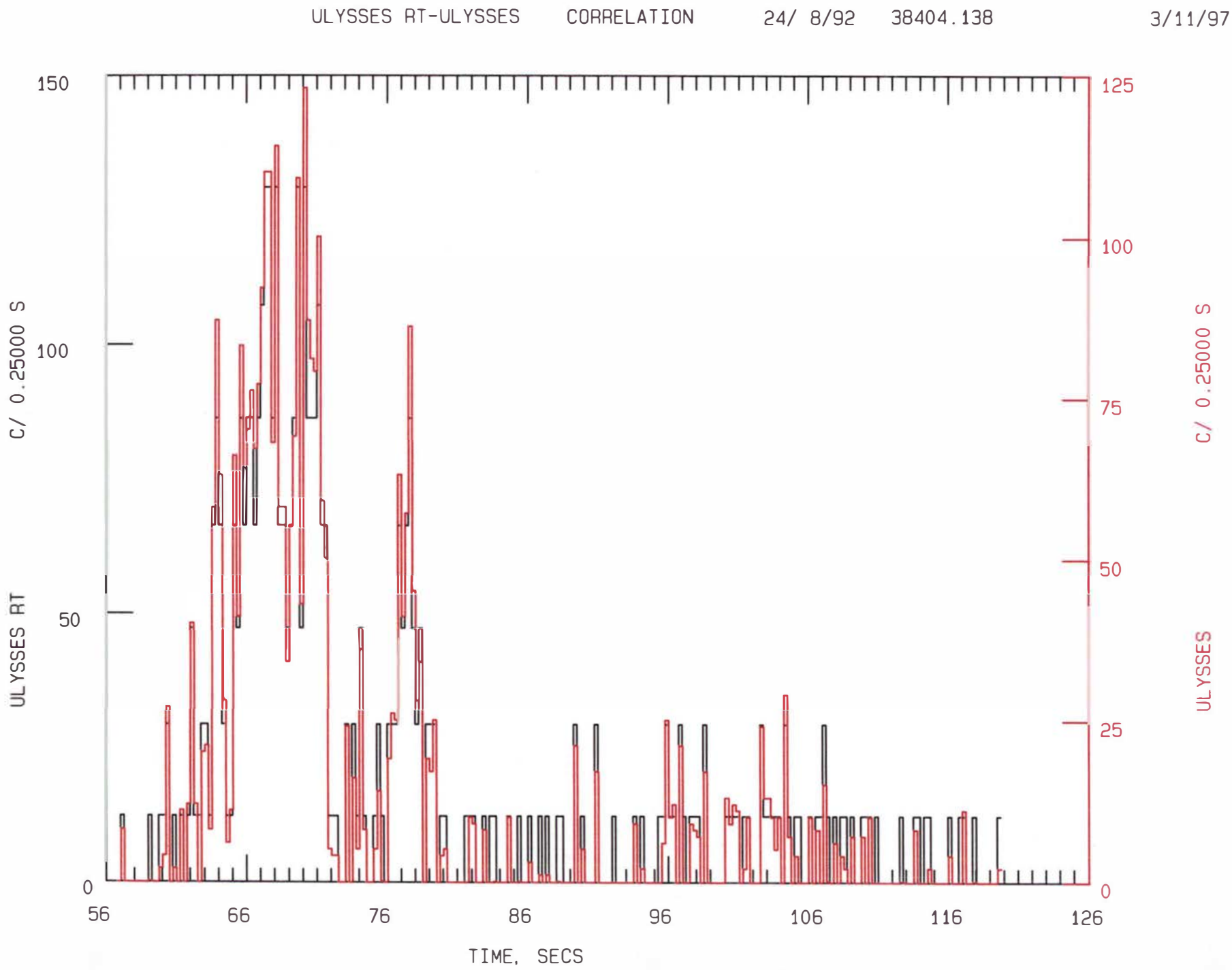
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 BATSE



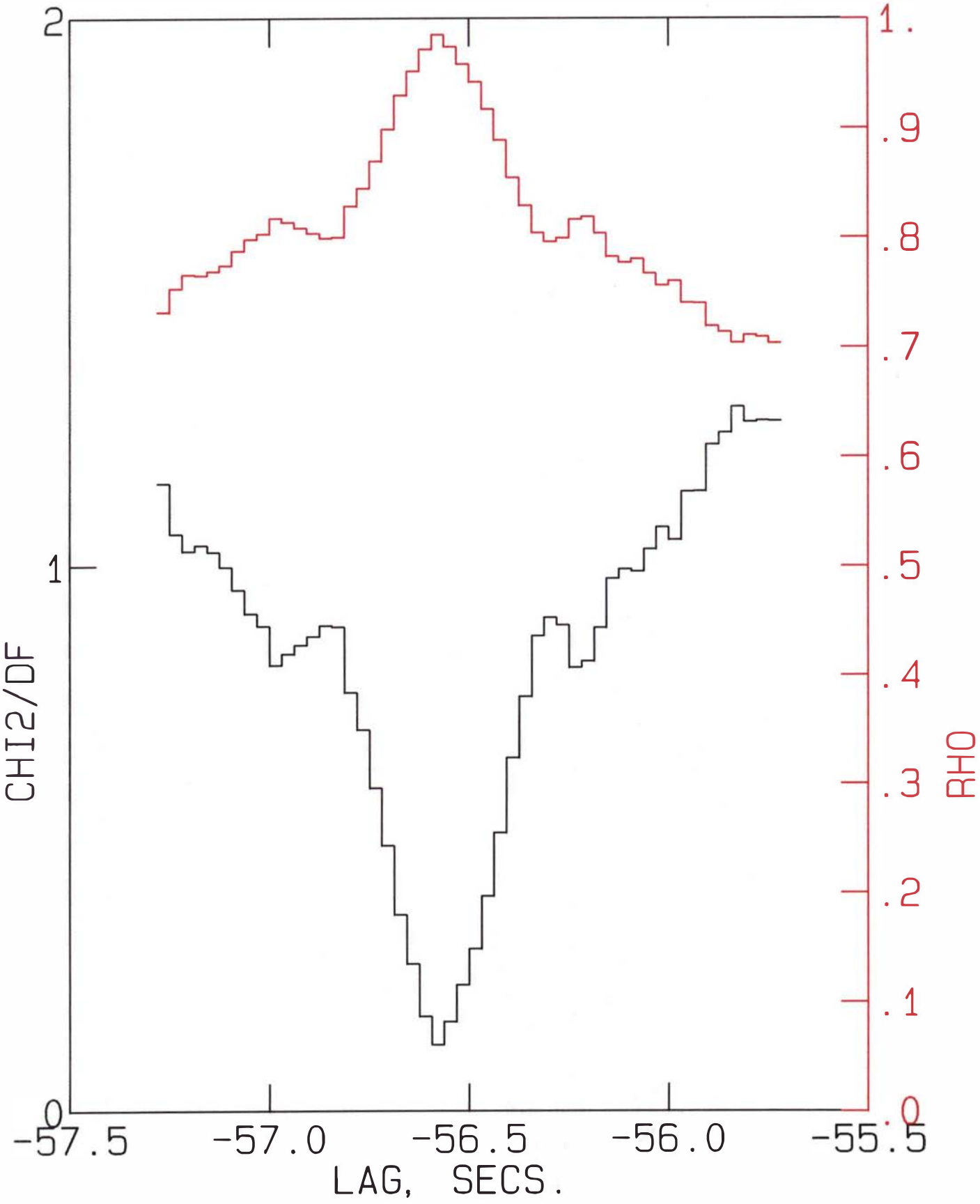

BATSE -ULYSSES CORRELATION 24/ 8/92 39183.129 3/11/97
1500
1000
500
0
C/ 0.03125 S
BATSE
30
20
10
0
C/ 0.03125 S
ULYSSES
5
10
15
20
25
30
35
TIME. SECS

BATSE -ULYSSES CORRELATION 24/ 8/92 39183.129




ULYSSES RT-ULYSSES CORRELATION 24/ 8/92 38404.138 3/11/97
150
100
50
0
C/ 0.25000 S
ULYSSES RT
125
100
75
50
25
0
C/ 0.25000 S
ULYSSES
56
66
76
86
96
106
116
126
TIME, SECS

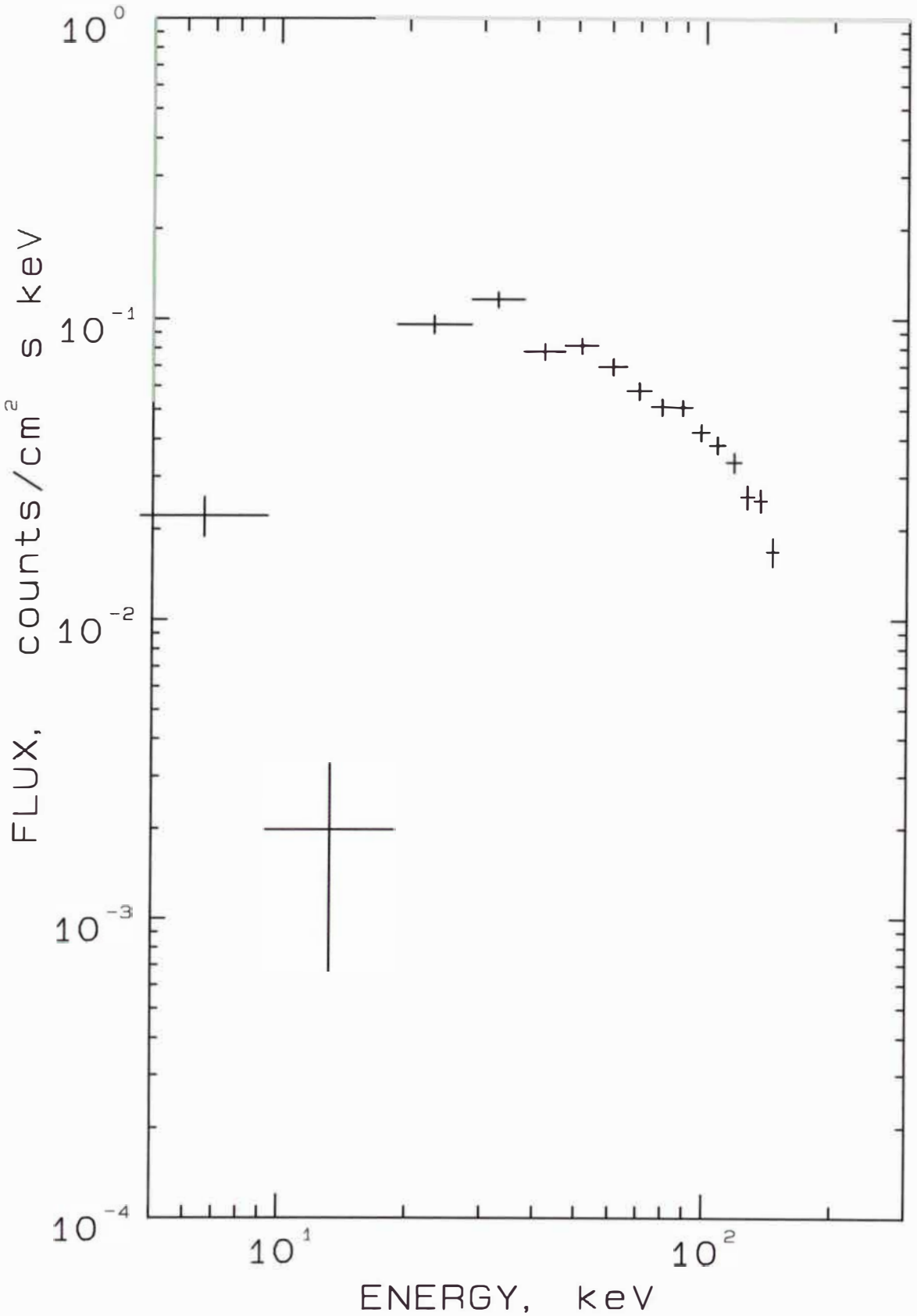
ULYSSES RT-ULYSSES CORRELATION 24/ 8/92 38404.138

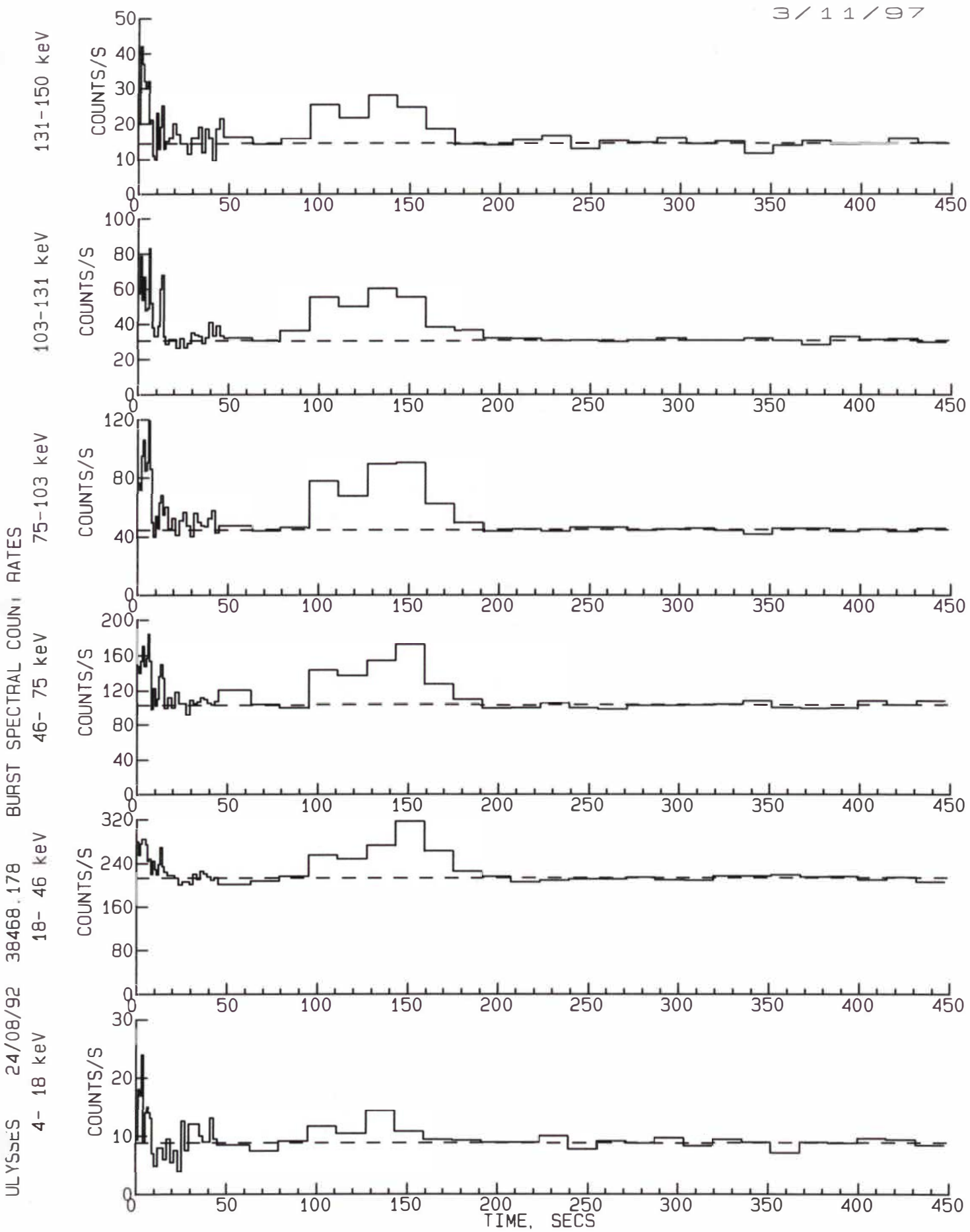


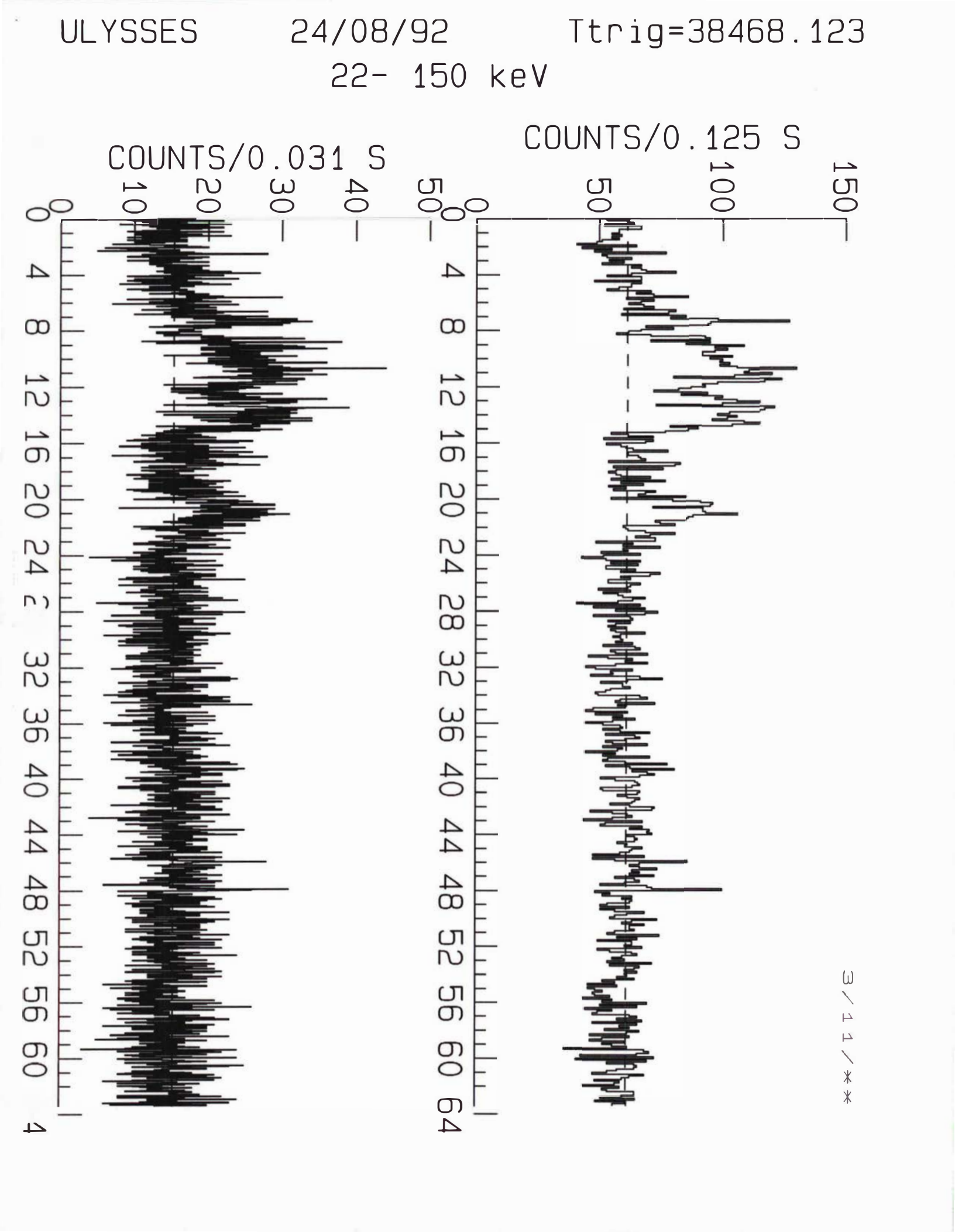
ULYSSES 24/08/92 38468.178

3/11/97

SPECTRUM INTEGRATED OVER 207.1 SECONDS, INTERVALS 2 TO 43




3/11/97
ULYSSES 24/08/92 38468.178 BURST SPECTRAL COUNT RATES
4- 18 keV
18- 46 keV
46- 75 keV
75-103 keV
103-131 keV
131-150 keV
COUNTS/S
TIME, SECS

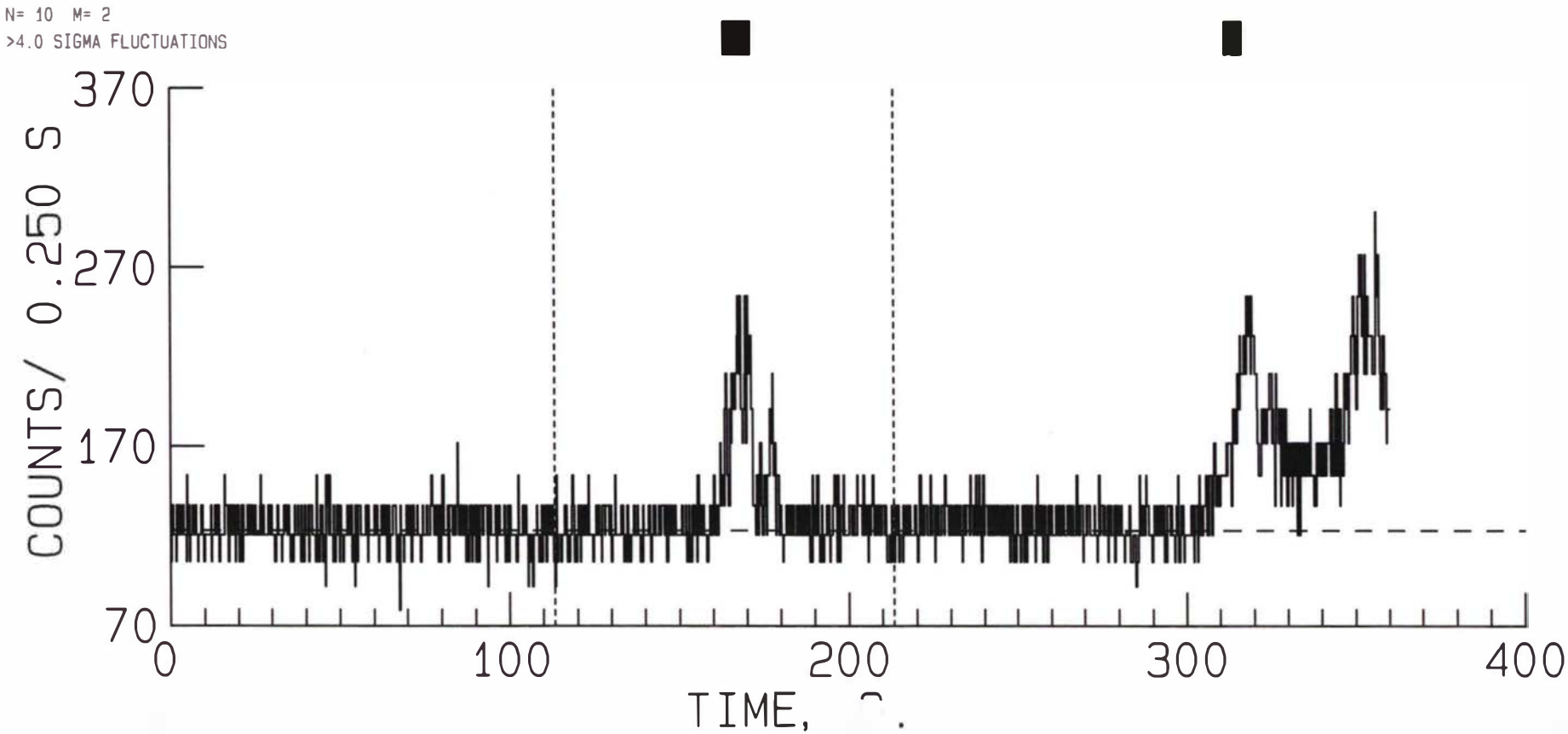

ULYSSES 24/08/92 Ttrig=38468.123
22- 150 keV
COUNTS/0.031 S
COUNTS/0.125 S
0 10 20 30 40 50
0 50 100 150
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64
3/11/***

ULYSSES RT

3/11/97

24/ 8/92 38304.201 s

22- 150 keV



RK- KH Nov 11 93

PVO Replies to the WATCH/Ulysses Huntsville ms

8 Apr 91 N/O - PVO in synapse mode. No RT data, and definitely no trigger

18 July 92 - N/O - Data gap - NO RT data, definitely no trigger

24 Aug 92 N/O - OFF

3 Sep 92 N/O No RT data, no trigger

25 Sep 92 N/O - OFF

Note: 8 Oct was lost data. Instrument returned ~ 90% data for the 1.5 hrs prior to that

WATCH-EURECA Gamma Ray Bursts. Niels Lund, Soren Brandt & Alberto Castro-Tira
Danish Space Research Institute.

Version 1.0 Aug. 9. 1993.

The data given below is pre-publication data. The data should not be quoted without prior consultations with the above authors. The list is prepared in support of searches for counterparts or multi-spacecraft identifications.
The positional uncertainty is 1 degree error circle radius.

#	date	UT-time	sd	l(s)	m(s)	m/l	position(J2000)		t	comments	#Wm	sdp	theta	phi
1	920824	10:53					--------	-------	2	Weak (BATSE)				
2	921004	14:00:21		?	15	>5	14h37.5m	34.1d	1	Two peaks			63.2	222.1
3	921022	15:20:57		60	55	>5	16h56.7m	-09.5d	2	Two peaks				
4	921118	22:11					--------	-------	2	Weak (BATSE)				
5	921207	16:00:48		?	16	>5	20h36.1m	-41.8d	1	Two peaks			65.9	136.3
6	921218	02:30					--------	-------	2	Weak (BATSE)				
7	930106	15:37					--------	-------	2	Weak (BATSE)				
8	930201	16:42:12					--------	-------	2	Weak (BATSE?)				
7	930217	14:44					--------	-------	2	Weak (BATSE)				
8	930316	12:31:28		?	30	>5	10h03.3m*	-20.0d*	2	BATSE trig 95s early?				
9	930410	14:19							1					
10	930426	12:40:35		?	18	>5			1					
11	930502	13:52					--------	-------	2	Weak (BATSE)				
12	930610								1					
13	930614	03:40:32		11	9	2	11h20.7m	+23.1d	1					

#	date	UT-time	sd	l(s)	m(s)	m/l	position(J2000)	t	comments	#Wm

comments:
UT-time: Time for peak count rate in Med CsI band. Note time resolution!
*) Times marked with an asterisk are not yet well calibrated to UT.
sd: Standard deviations above background (in count rates).
l(s): Duration in 6-10 keV band (Low NaI channel)
m(s): Duration in 10-180 keV band (Med CsI channel)
m/l: Hardness: (sd(Med NaI)+sd(Med CsI)) / sd(Low NaI) (NOTE: EURECA energy bands)
Positions marked with asterisk can not be determined more than once from the WATCH data!
t: Best time resolution available: 1, 4, 8, 16 motor rotations (approx. 0.9 s)
m: 1 motor rotation in 4 ms steps
r: raw memory (4 ms steps)
#Wm Telemetry session and WATCH unit identifier
sdp: Standard deviations above background in final modulation pattern used for source localization. As a rough guide, the statistical uncertainty in the source position is 240/sdp arcminutes. In most cases the systematic errors dominates the error budget.

theta and phi: Source position in WATCH instrument coordinates.

WATCH-GRANAT Gamma Ray Bursts. Niels Lund, Alberto Castro-Tirado & Soren Brandt,
Danish Space Research Institute.

Version 2.0 Aug. 9. 1993.

The data given below is pre-publication data. The data should not be quoted without prior

```
          218 ?     SOURCE J0422+32, IAU 5584,88,89:64.64,32.79(1950)
920815    228 ?     GRANAT HARD X-RAY .5CTRANS,288.7+10.5(1950)IAU5590
          228 ?     GRANAT SOURCE NAME GRS1915+105
920822    235 81321 BATSE WEAK SOLAR FLARE #3193
          235 81540 ULYSSES GRB 84184 (UNCONFIRMED COSMIC) NO BATSE
        8 235 81542 GRB PEAKS 81521.5W,541.5(700/S),551.5(200/S)SUN@87 81523-555
       10 235 81542 GRB PEAKS 81520.52,542.5(750/S),552.5(300/S)SUN@45 81526-562
       11 235 81543 GRB PEAK 81543.5(200/S) ULYS84184, SUN@100         81543-557
920824 10 237 39187 GRB PKS 39187.1(800/S),197.1(350) (8NR) SUN@116.1
       11 237 39186 GRB PKS 39185.9(500/S),189.9(550)  SUN@103.4
          237 39183 GRB (HURLEY), ULYSSES 38400
920830  8 243  6319 GRB PK 6317.7(150)SOFT  (BATSE STRONG 6317, GRO82)
       10 243  6320 GRB PEAK 6320.2 SOFT(150) (ULYS~5800) (11NR)
920902    246  1736 BATSE GRB (ULYSSES 3230)
        8 246  1742 GRB PEAK 1741.8(500/S),~5SEC, SHARP, HARD SUN@94.6  1740-750
       10 246  1743 GRB PEAK 1743.5(650/S), SUN@85.8                    1741-761
       11 246  1743 GRB PEAK 1742.9(200/S GT.100KEV) SUN@98.5           1746-750
920923    267~16589 GRANAT STRONG X-RAY 1CTRAN,309.3-40.4(1950)IAU5617 (DMSP NA)
920925    269       CHINESE NUCLEAR TEST (VENTED)
921004  8 278 50421 GRB,NARROW PKS 50421.0(1100/S),429.0(500/S)(11SR)
       10 278 50421 GRB,NARROW PK 50420.7(200/S)
          278 49107 GRB, UNCONFIRMED COSMIC, ULYSSES (BATSE N/O)
921008    282       PVO DIED, INTO VENUS (PIONEER 12)
921009    285 24070 BATSE GRB (ULYS 21980)
       10 285~24070 GRB? (8NA,11NA)
921011    285 ?     WATCH/EUREKA TRANS. EU1737-132(1950).5CRAB IAU5643
921016 10 290~33800 BURST? (10NA,11NA)
921022    296~55500 GRB, MARS OBSERVER (~100 LIGHT-SECONDS AWAY)
921031  8 287       HIGH POLAR COUNTS 10/31-11/05 (ALSO 10, 11)
921220    355       J0422 PEAK=.5CRAB(IAU5685), PER=5.098HR(IAU5692)
930131    031 68231 GRB,BATSE BIGGEST, 182.75,-10.7(J2000) IAU5707
        8 031 68231 GRB PEAK 68230.9(1400/S) (10SR EDGE,11SAA)          68233-235
930217    048 40187 XRB(15CRAB) WATCH/EUREKA (IAU 5710,17) 4U0614+09
                                              TERRELL/DMSP.GAM 930505
930220    051       ASTRO-D=ASUKA=ASCA X-RAY SPACECRAFT LAUNCHED
930302    061 51329 XRB,EUREKA,4U0614+09,20CRAB(6-15KEV)IN 16S IAU5717
930309    068 11278 COMPTEL GRB (323.13,54.65,J2000)(IAU5749,50,63,64)
930310    069 26418 GRB, 20S,GRANAT @285.56,-51.98(B1950.0) IAU5720
930430    120 54070 BATSE STRONG GRB, (~106,21) (BATSE ALERT)
930630    181 86400   LEAP SECOND AT 2400H(UTC-TA1=-28 SEC)(IAUC 5694)
```

From @UCBSP.SSL.BERKELEY.EDU:046369@ESSDP2.SPAN.NASA.GOV Wed May 5 13:41:17 1993
Date: Tue 5 May 92 13:42:27-PST
From: $C <046369@ESSDP2.SPAN.NASA.GOV>
To: KHURLEY@sunspot.ssl.berkeley.edu
Subject: [Resent-MM Mail] DMSP GRB DATA
Content-Length: 8912

Received: from ESSDP2 by UCBSP.SSL.BERKELEY.EDU via MAIL-11 with
DECnet; Tue, 5 May 92 13:40:33-PST
Date: Tue 5 May 92 13:40:33-PST
From: 046369@ESSDP2.SPAN.NASA.GOV
Subject: DMSP GRB DATA
To: "UCBSP::KHURLEY"@ESSDP2.SPAN.NASA.GOV

FROM: ESSDP2::TERRELL 93/05/05
TO: UCBSP::KHURLEY
CC: BATSE::KOUVELIOTOU
SUBJ: DMSP GRB DATA

HERE IS A PARTIAL LIST OF 1992 DMSP GAMMA-RAY-BURST DATA, AS OF TODAY.
OTHER DATA APPEARING TO CONFIRM UNCONFIRMED EVENTS IN YOUR LISTING IS
BEING EXTRACTED, AND I WILL CHECK IT OUT WHEN I RETURN FROM HOUSTON.
THANKS FOR YOUR CONTINUING HELP--JIM TERRELL

DMSP GAMMA PEAKS 90281-92305 CHECKED,2-SEC CTS,TERRELL/DMSP.GAM 930505
ORBITAL PERIODS FOR 8,9,10: 6110,6080,6040SEC. ALT=800KM. INCLIN=99DEG
GRB PEAK TIMES CORRECTED (8,9,10=11) FOR AVG DELAYS: 1.82,1.98,5.50SEC
CHANS: (8)50,100,200,420 (9)50,100 (10,11)20,100,200,430,550(-1000KEV)

DATE	FL	DAY	TIME	NOTES--------(ND=NO DATA,NA=NOT APPARENT)----NOTES	DATATIMES
920101		001	0	JD8622.5	
920110		010	33480	BATSE GRB (16XMIN) (8ND,9NA,10SAA,11NA)	
920122		022		NO DMSP TAPES, DAYS 22-25 (92022-25)	
920126	9	026	55714	BURST? WIDE SOFT PEAK 55714.0 (4KC/S)(8SRAD,11SAA)	55646-768
	10	026	55704	STR SOFT BURST,COMPLEX PEAKS 55704.2,714.2(3KC/S)	55624-748
		026	55667	PVO TRIGGER (BURST?) AT 55666.9	
920210		041	35625	BATSE GRB,MOD STRONG RA154,DEC49 8NO,10SAA,11SAA	
	9	041	35633	VERY WEAK SOFT BURST,PEAKS 35632.6,636.6	35635-639
920211	8	042	15773	STRONG HARD BURST(+CHG),PEAKS 15772.7-4.7(2500C/S)	15765-783
	9	042	15775	STRONG HARD BURST, PEAK 15774.7(7KC/S) (BATSE OFF)	15761-791
	10	042	15776	STRONG HARD BURST,PEAK 15775.6(1700C/S) +SOFT BASE	15775-785
	11	042	15776	STRONG HARD BURST, PEAK 15775.8(12KC/S),ASYMM RESP	15765-799
		042	15631	PVO TRIGGER 15630.7 (0.7 HARDNESS RATIO)	
920214	9	045	83249	SHARP SOFT BURST, PEAK 83249.4 (8ND=NO DATA)	83243-273
	10	045	83250	SHARP SOFT BURST, PEAK 83250.1 (1000C/S),254.1	83244-280
	11	045	83250	SHARP SOFT BURST PEAKS 83249.8 (8KC/S),265.8	83237-295
		045	83066	BATSE SOLAR FLARE#2721, PEAK 83252(70K/S)&~83267	
920216	8	047	45219	STRONG SOFT BURST,PEAKS 45219.3,223.3(1KC/S)(10NO)	45177-239
	9	047	45220	STRONG SOFT BURST, PEAK 45219.7 (2KC/S)	45214-236
	11	047	45220	STRONG SOFT BURST,PEAKS 45184.2,196.2,220.2(8KC/S)	45180-252
		047	45052	PVO TRIGGER (BURST?) 45052.5	
920311		071	8426	BATSE GRB,VERY INTENSE,2PEAKS,RA129,D-40 (BNEWS16)	
	8	071	8431	GRB, PEAKS 8431.4,8437.4 @63DEG (PVO TRIG 8887.3)	8429-443

From @space6.ssl.berkeley.edu,@cmsa.berkeley.edu:X024862@JPNRKY00.BITNET Thu Nov 26 03:41:24 1
Date: 26 NOV 1992 18:19:41 JST
From: <X024862%JPNRKY00.BITNET@cmsa.berkeley.edu>
Subject: YOHKOH GRB Event List
To: <khurley@space6.ssl.berkeley.edu>
Content-Length: 1674

To: Dr. K. Hurley (SSL/UCB)
Fr. Masato Yoshimori (Rikkyo Univ.)
Date: Thu. 26 Nov. 1992

Dear Dr. Hurley:

I am sending the YOHKOH GRB event list. YOHKOH has two GRB detectors, hard X-ray spectrometer (HXS) and radiation belt monitor (RBM). HXS is a NaI detector (3 in. dia x 1 in. thick) which provides a 32 channel energy spectrum (20 - 600 keV) every 2 sec and a time profile every 31 ms. RBM is a NaI detector (2 in. dia x 1 cm thick) which provides a 32 channel energy spectrum (10 - 300 keV) every 2 sec and a time profile every 31 ms.

YOHKOH GRB Event List (1991 Oct. 1 - 1992 Sept.3)

Date (Day/Month/Year)	UT (hh:mm)	Comment
27/11/91*	04:22	HXS
09/12/91	18:36	HXS/RBM
21/12/91*	06:17	HXS/RBM
18/02/92*	18:44	HXS
06/04/92	02:45	HXS/RBM
19/04/92*	01:22	HXS/RBM
19/05/92*	16:30	HXS/RBM
17/06/92*	05:29	HXS
22/06/92	07:05	HXS/RBM
01/07/92*	19:39	HXS
11/07/92	16:09	HXS/RBM
31/07/92	17:07	HXS/RBM
16/08/92	12:36	HXS
24/08/92	10:56	HXS/RBM
03/09/92	23:29	HXS

* Recorded with time resolution of 0.25 or 2 sec.
Accurate burst times (hh:mm:ss) are available shortly.

We hope the YOHKOH GRB event list is helpful to you.

With best regards,

Masato Yoshimori

Acknowledge-To: <X024862@JPNRKY00>

From khurley@space6.ssl.berkeley.edu Tue Nov 24 08:06:08 1992
Date: Tue, 24 Nov 92 07:59:26
From: khurley@space6.ssl.berkeley.edu
Content-Length: 1629

Dear Dr. Yoshimori

Thank you for your recent fax inquiring about the locations of Yohkoh gamma ray bursts. Here are the replies.

1991 Dec 9 18:36: Observed by Ulysses, BATSE, and WATCH. Triangulated position combined with independent BATSE and WATCH positions consistent with source location around RA 17:30, Dec -45.

1992 Apr 6 02:45: Observed by Ulysses, PVO, and BATSE. Triangulated position indicates location around RA 19:15, Dec -57

1992 Jun 22 07:05: Observed by Ulysses, SIGMA/GRANAT, COMPTEL, and BATSE. Preliminary triangulated position combined with COMPTEL location consistent with source location around RA 10:00 Dec +48.

1992 July 31 17:07: Observed by Ulysses. Apparently no other observations.

1992 Aug 24 10:56: Observed by Ulysses and BATSE. Triangulated position and independent BATSE location consistent with source position around RA 15:00, Dec -50.

1992 Sep 3 23:29: Observed by Ulysses on September 4. Apparently no other observations.

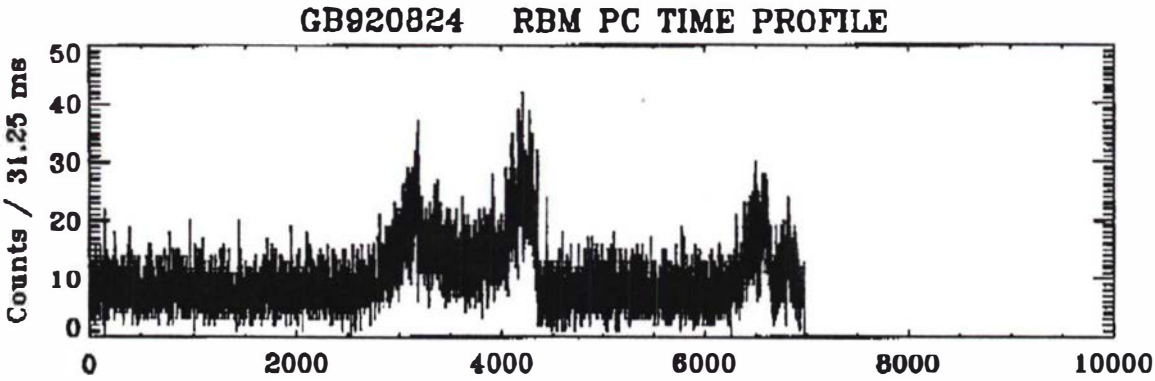
As you are aware, I sent a letter to Professor Uchida on January 31 of this year, proposing to collaborate with Yohkoh scientists on burst locations. I am particularly interested in events which were detected by Ulysses, but not by GRO or any other near-earth spacecraft (there seem to be two of these in your list). I never received a reply to this letter, so I am not sure what the status of this suggestion is. If there is agreement that a collaboration is possible, then we should establish formats for data exchange by e-mail and proceed to exchange lists of candidate events. Please let me know whether you agree.

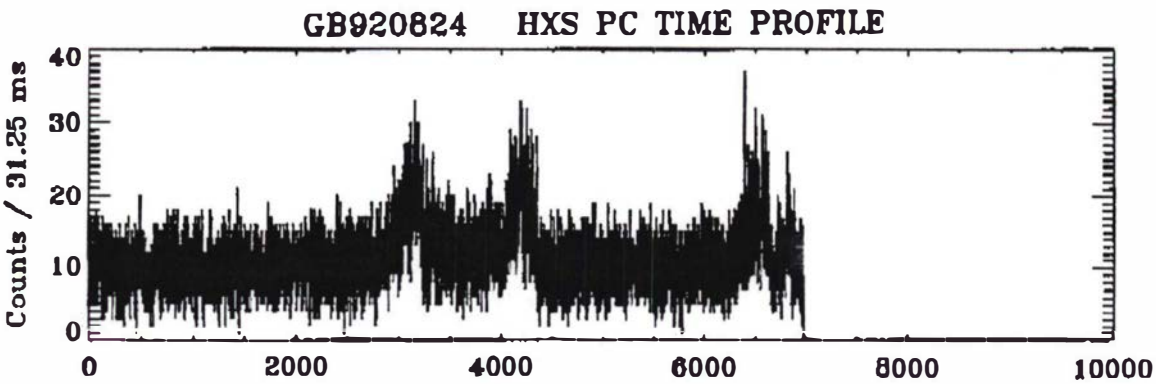
Best regards,

Kevin Hurley

9/19

Yoshioka





M. Yoshimori

Department of Physics
Rikkyo University
3-34-1 Nishi-Ikebukuro, Toshima-ku, Tokyo 171, Japan
Phone. 011-81-3-3985-2391
Fax. 011-81-3-5992-3434
E-Mail: X024862@JPNRKY00.BITNET

To: Dr. K. Hurley (Space Sciences Lab. UCB)
Fax. 001-1-510-643-7629
Date: Fri. 20 Nov. 1992

Dear Dr. Hurley:

Yohkoh has observed the following six gamma-ray bursts since its launch (Aug. 30, 1991):

Date	Start Time (UT)
1991 Dec.09	18 h 36 m
1992 Apr.06	02 h 45 m
1992 June 22	07 h 05 m
1992 July 31	17 h 07 m
1992 Aug.24	10 h 56 m
1992 Sept.03	23 h 29 m

If you have the data of their locations obtained from GRO/ BATSE and Ulysses, please let me know them. I am sending the time profiles of four Yohkoh bursts.
Thank you in advance for it.

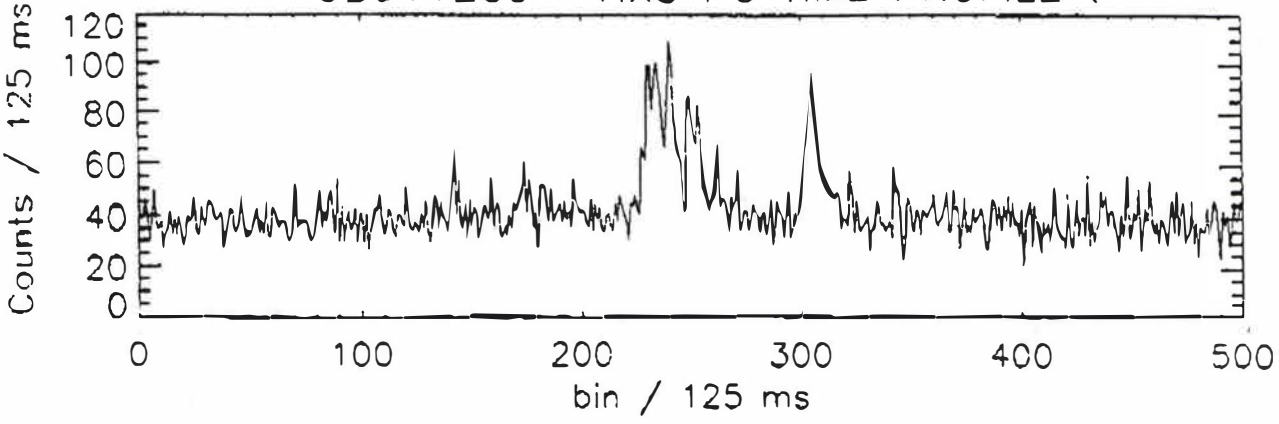
With best regards,

Masato Yoshimori

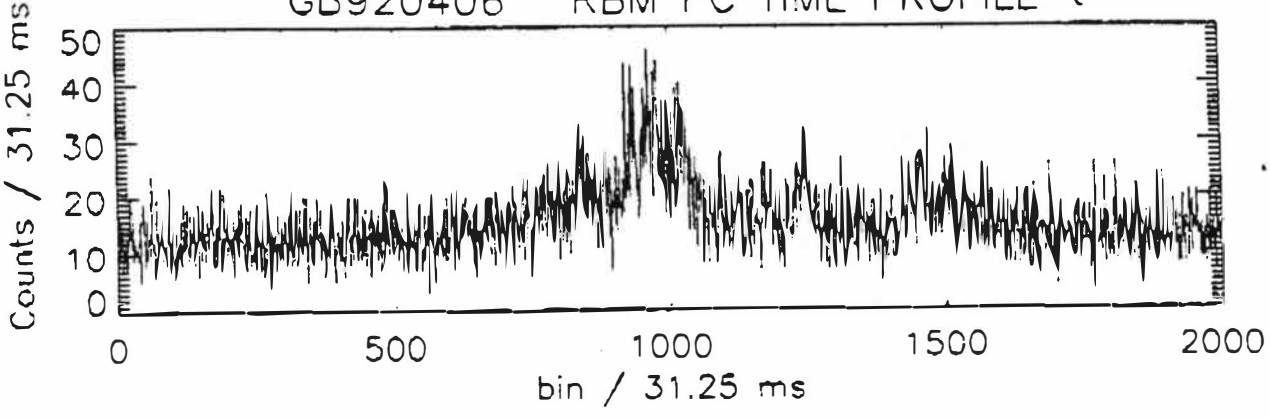
M. Yoshimori

1/2

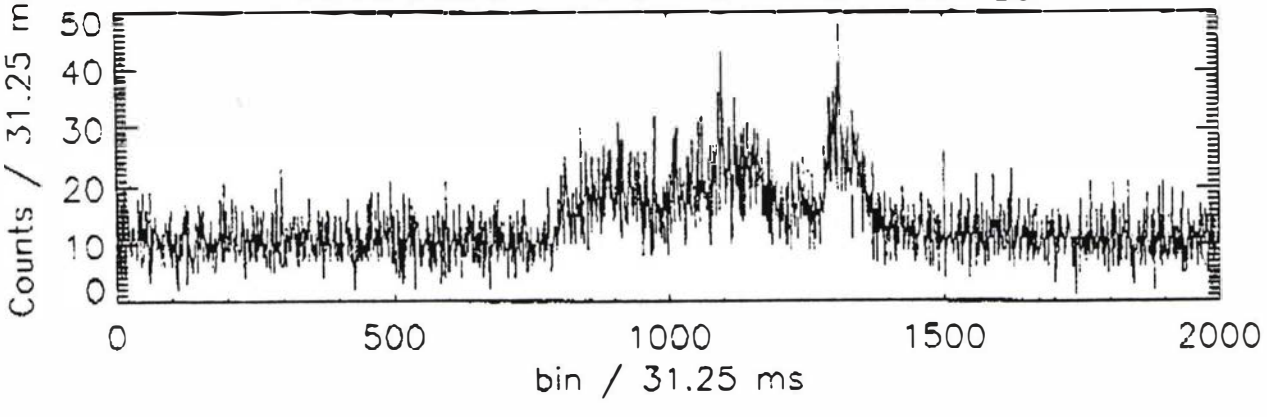
GB911209 HXS PC TIME PROFILE (20--600keV)



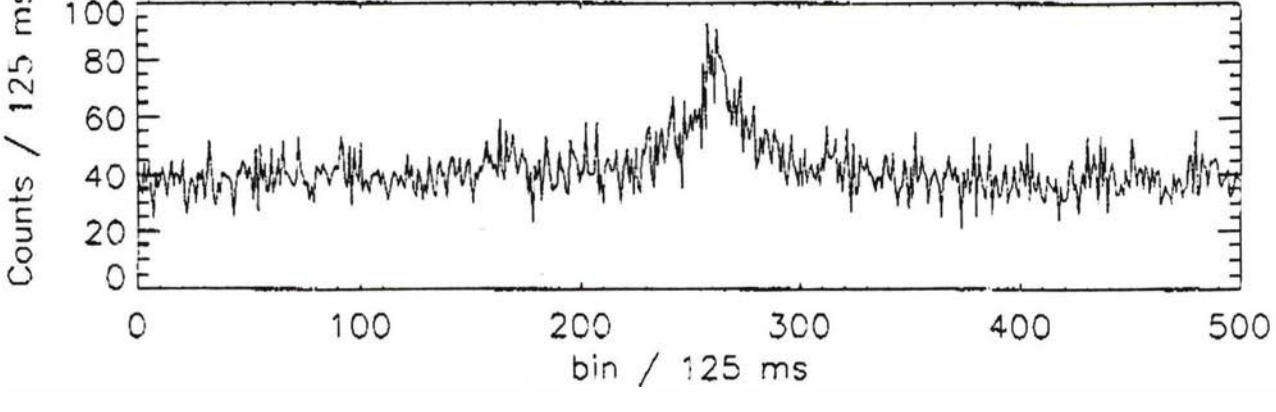
GB920406 RBM PC TIME PROFILE (10 — 300keV)

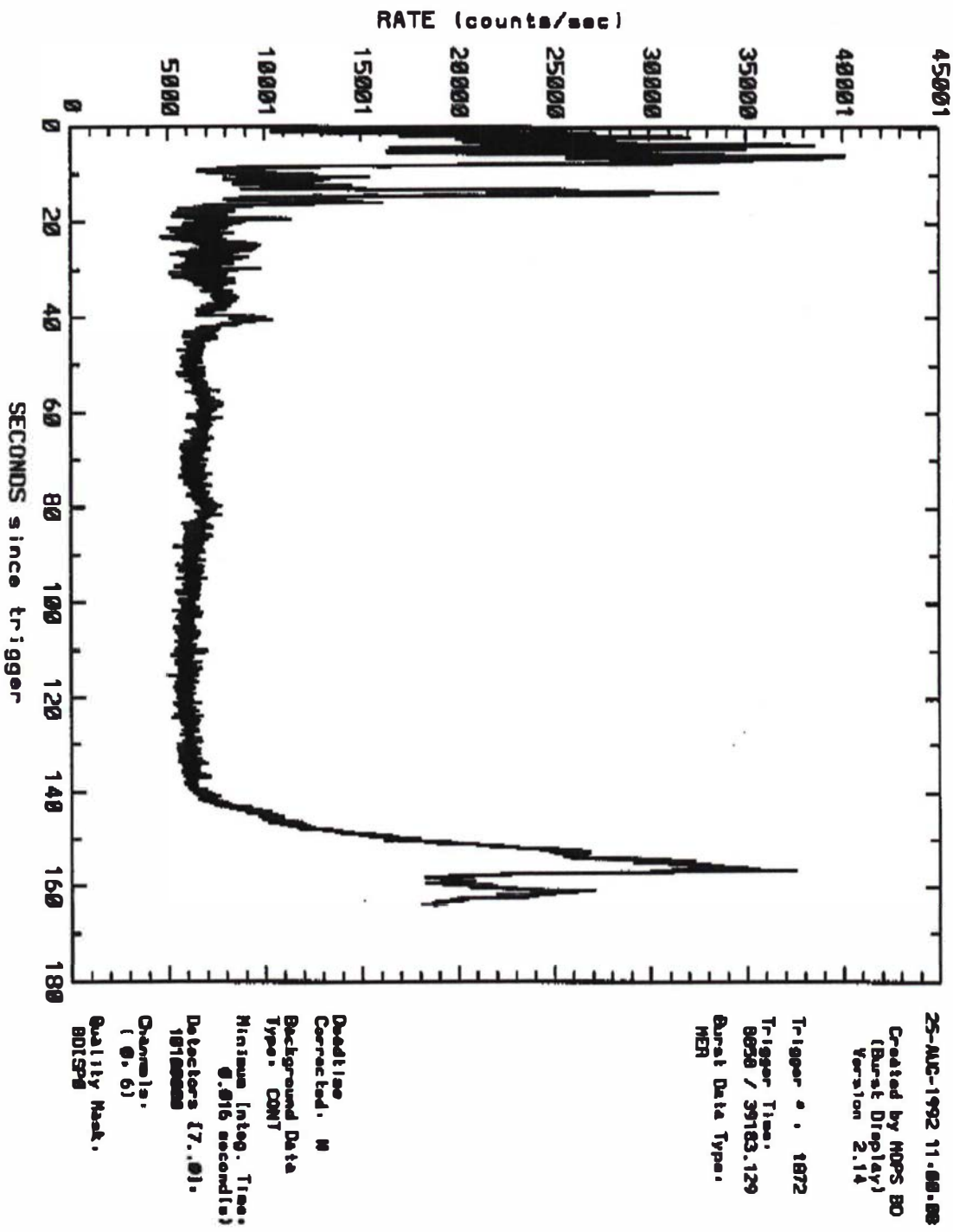


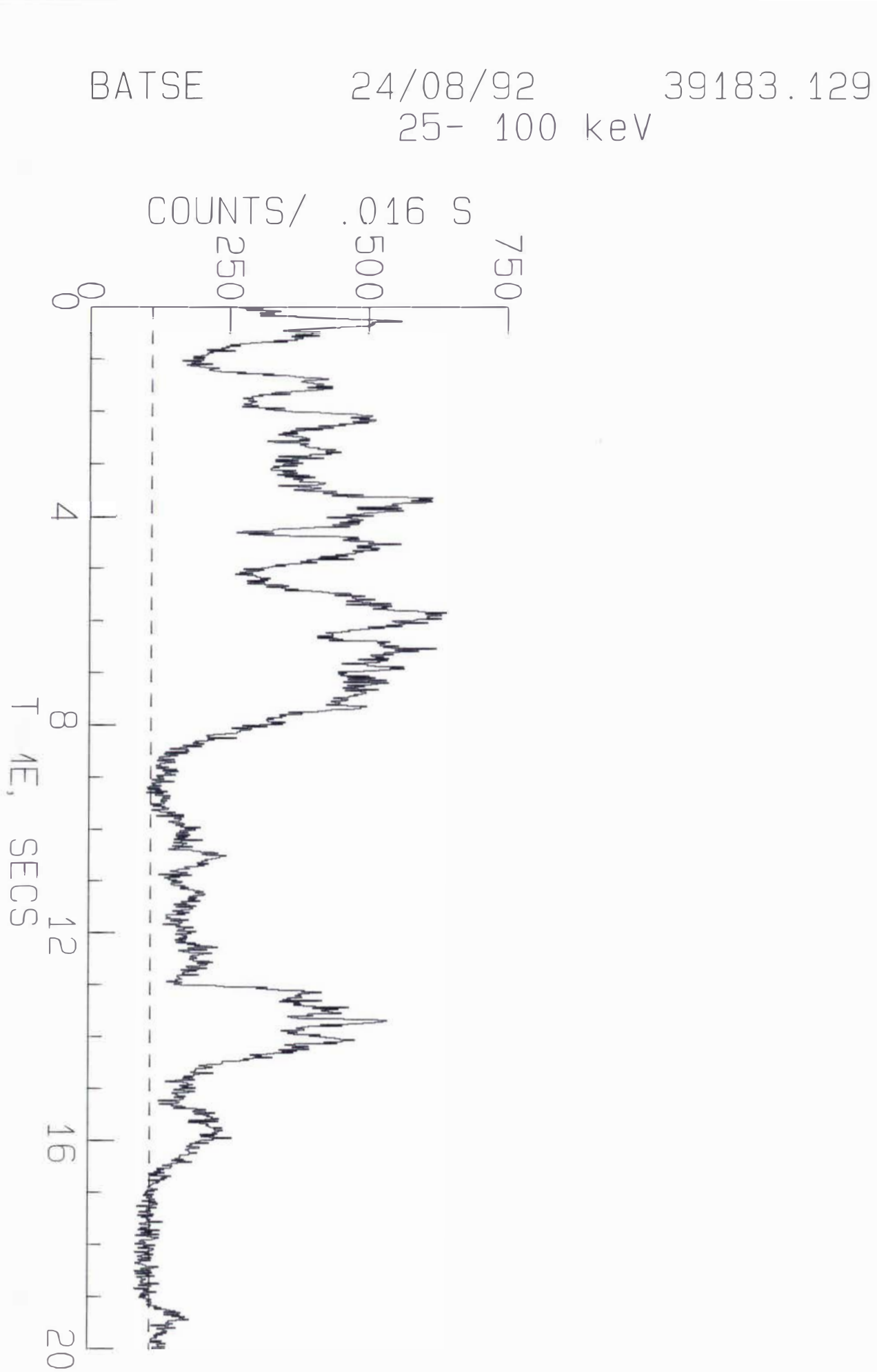
GB920622 HXS PC TIME PROFILE (20-600ke

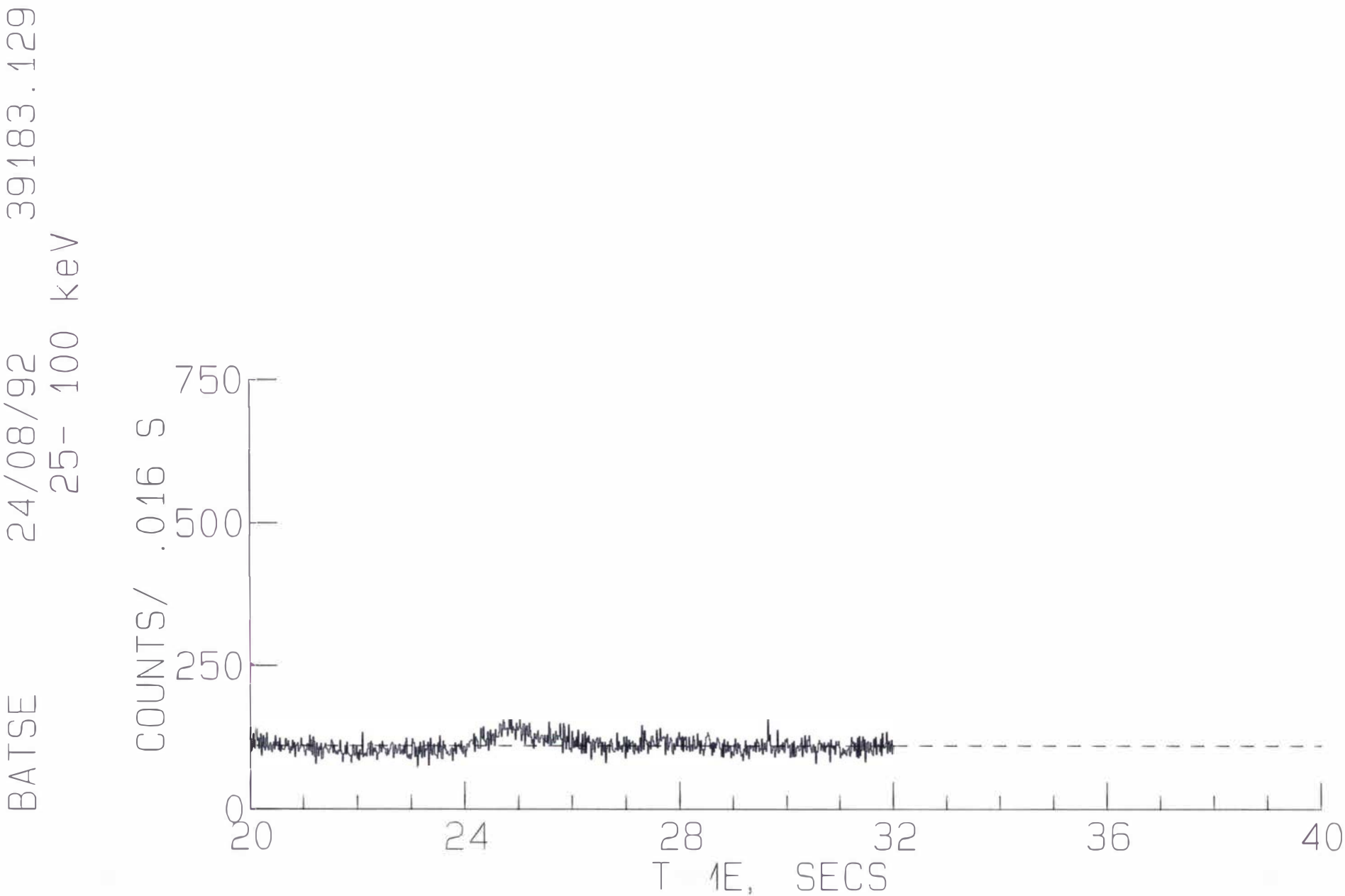


GB920903 HXS PC TIME PROFILE (20 — 600keV)




RATE (counts/sec)
0
5000
10001
15001
20000
25000
30000
35000
40001
45001
0
20
40
60
80
100
120
140
160
180
SECONDS since trigger
Data for K. Hurley
25-AUG-1992 11:00:00
Created by MOPS BO
(Burst Display)
Version 2.14
Trigger # . 1872
Trigger Time:
8038 / 39183.129
Burst Data Type:
MER
Deadtime
Corrected. N
Background Data
Type. CONT
Minimum Integ. Time:
0.016 seconds)
Detectors (7..0).
10100000
Channels.
(0. 6)
Quality Mask.
BDLSPM


BATSE 24/08/92 39183.129
25- 100 keV
COUNTS/ .016 S
0
250
500
750
0
4
8
12
16
20
T 4E, SECS


BATSE 24/08/92 39183.129
25- 100 keV
COUNTS/ .016 S
750
500
250
0
20
24
28
32
36
40
T 1E, SECS

From khurley@space6.ssl.berkeley.edu Tue Dec 15 16:52:38 1992
Date: Tue, 15 Dec 92 16:46:51
From: khurley@space6.ssl.berkeley.edu
Content-Length: 1193

get Venus crossing times
FAX to Robin

Dear John,

Here is a fairly complete list of Ulysses events from July to October 1992, excepting the events I already gave you. I have listed the Ulysses and Earth crossing times where available.

July	UCT	ECT	
1	72000	70740	N/O
7	25300	23615	N/O
14	46000	47040	← Only one they have PVO data for! (Among the ones for which ECT is gre Sent Mar 2
18	55000	52860	N/O
26	02066	-----	
31	62196	61620	N/O
August			
10	77700	-----	
13	11000	12828	N/O
16	42600	45360	N/O
17	15055	-----	
19	40612	-----	
22	84184	-----	DMSP 8:542 (3 sec it)
24	38400	39183	N/O DMSP (2)
27	85245	-----	
29	30755	-----	
29	63712	-----	
30	05800	06318	N/O
30	32310	-----	
September			
1	04311	-----	(solar?)
2	03230	-----	DMSP (3) ~01743
3		84540	N/O
4	00420		Same as previous event
19	28450	-----	(solar?)
21	00060	-----	
October			
1	80900	-----	
3	20880	-----	
4	49100	-----	
6	40720	-----	
9	21980	24070	N/O
13	81256	-----	
15	04000	05792	N/O
22	~~55~~200	55200	N/O
25	52578	-----	
27	26805	-----	
29	42125	-----	
30	64000	-----	(solar)
31	40000	-----	

The Earth-Ulysses distance varied between about 5.76 and 6.28 AU in this period.

From HAGEDON@ssl.msfc.nasa.gov Wed Aug 26 11:31:40 1992
Date: Wed, 26 Aug 1992 13:31:41 -0500 (CDT)
From: HAGEDON@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01873

TIME: TJD=8858 SECONDS=66921

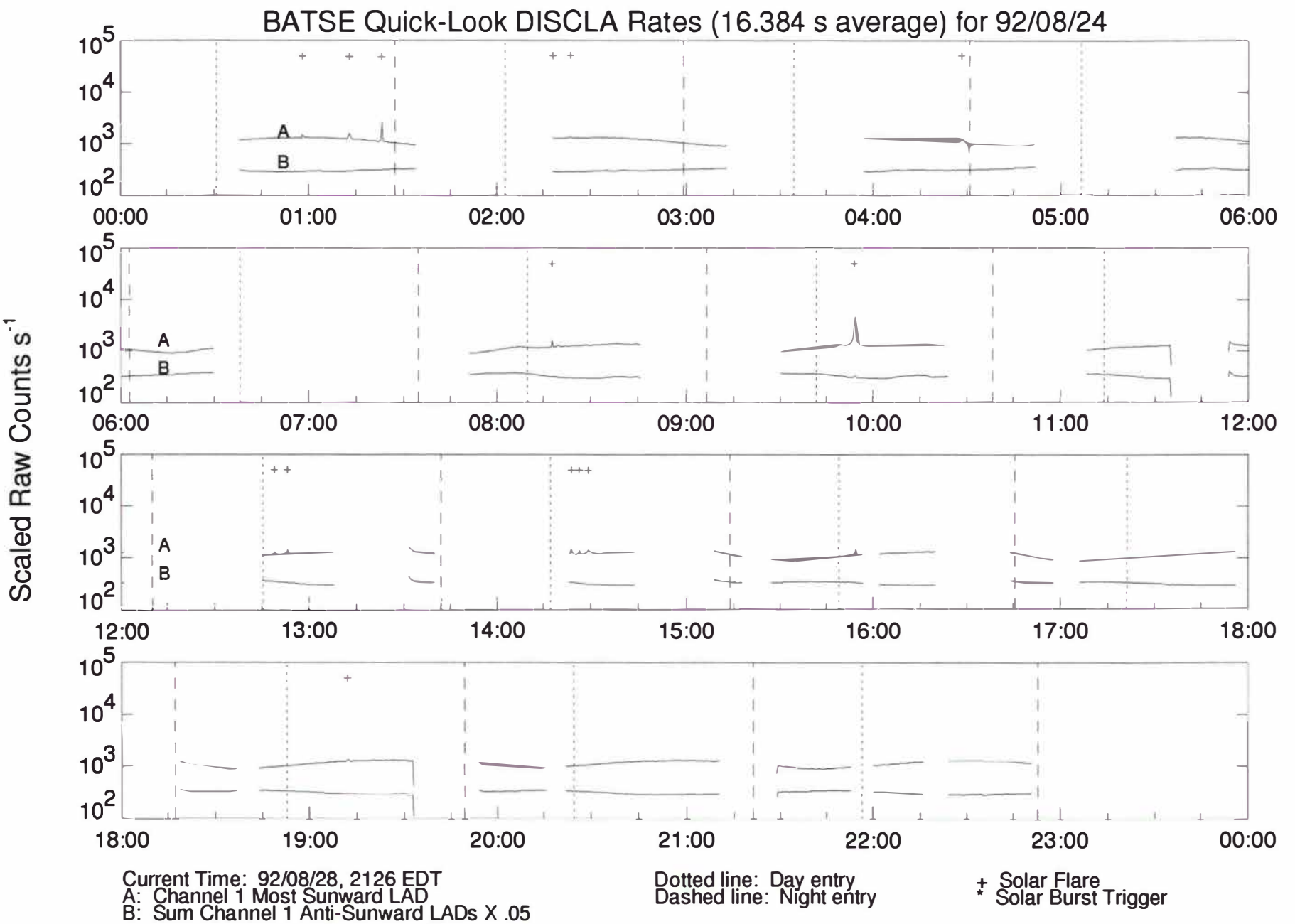
TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

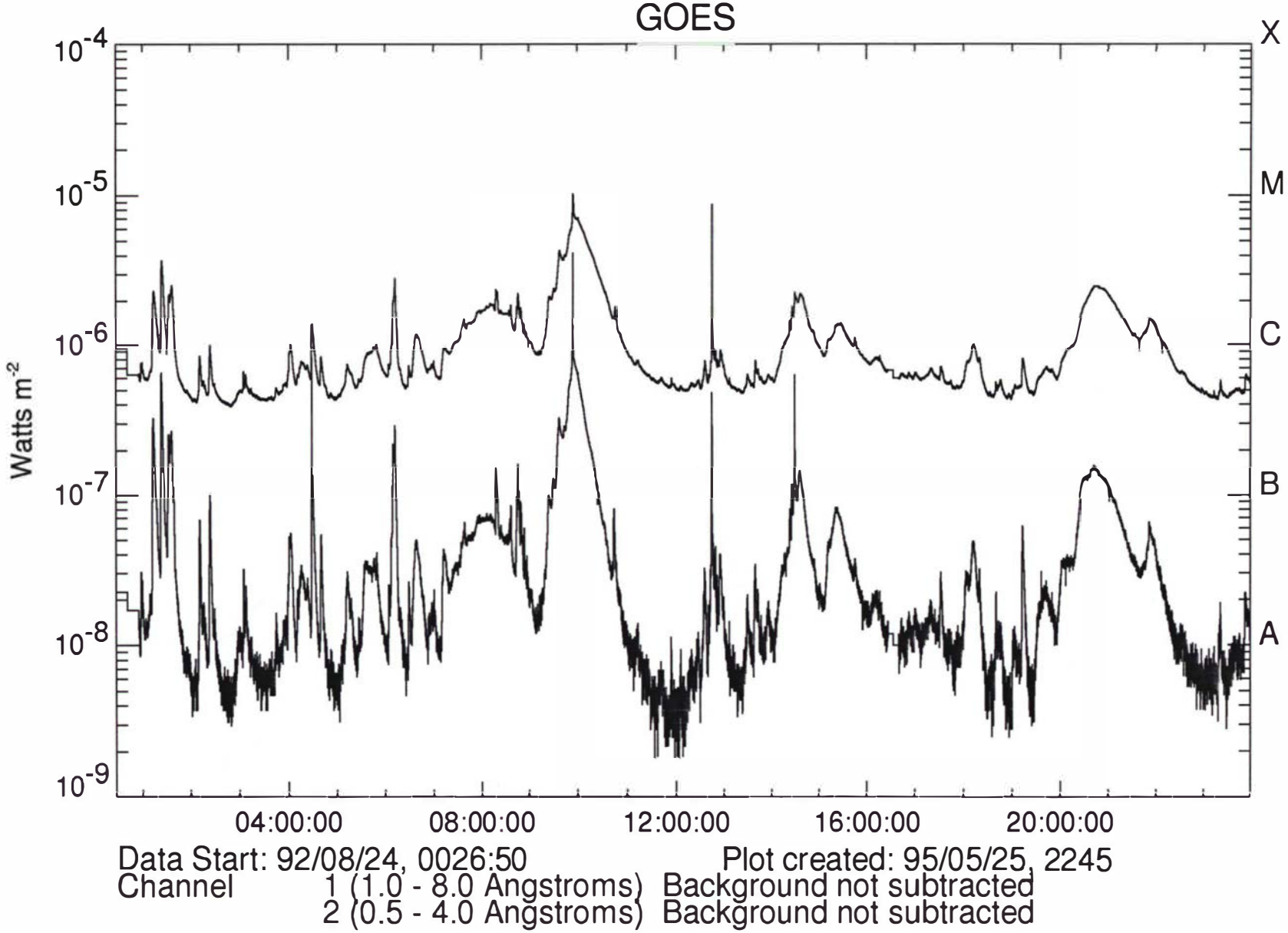
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=053. AZIMUTH=006. ERROR= DEGREES

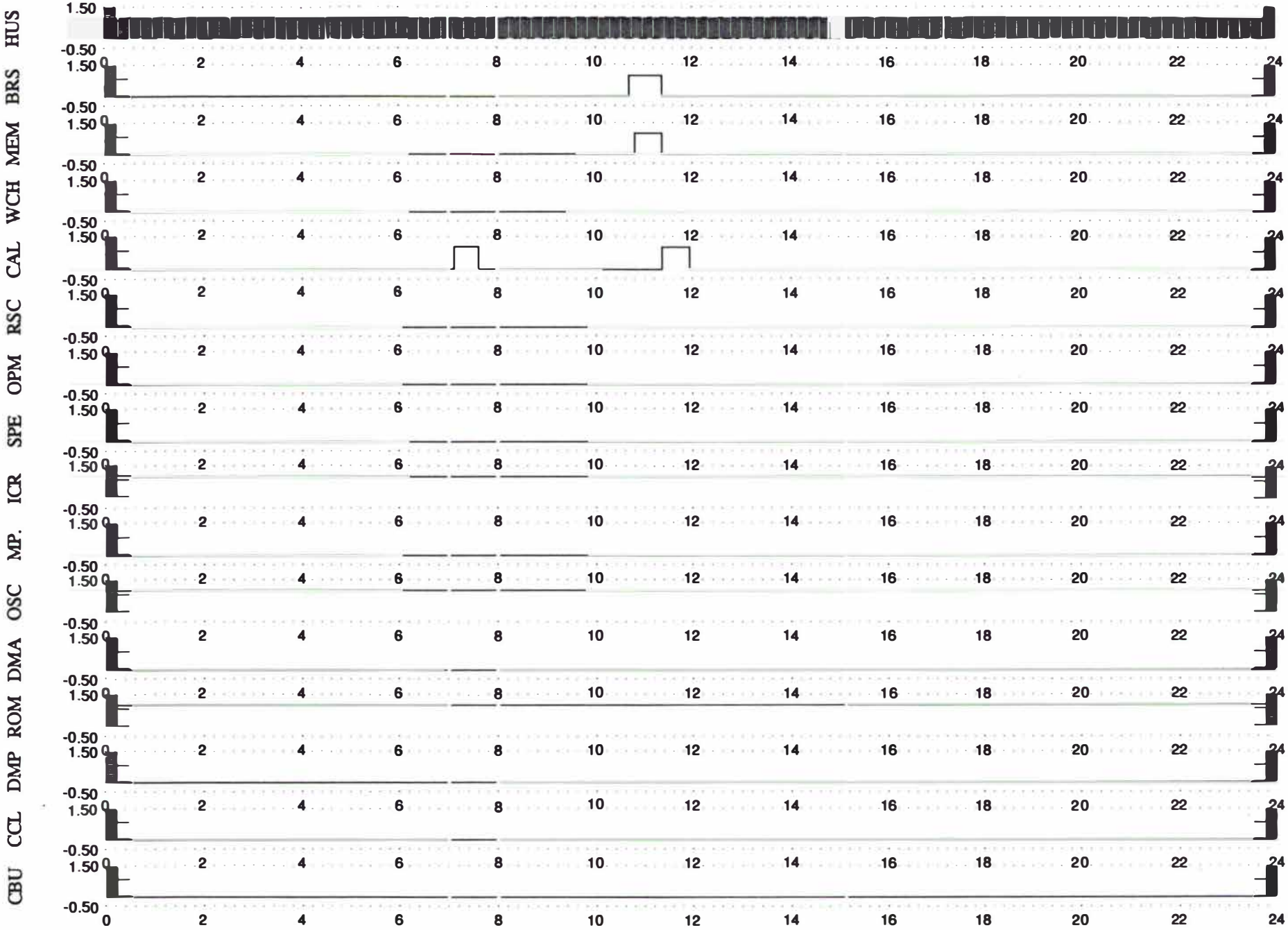
COMMENTS:
RISE OF TRANSIENT SOURCE GROJ0422+32.


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/24
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2126 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 Flare
* Solar Burst Trigger


GOES
Watts m-2
10-4
10-5
10-6
10-7
10-8
10-9
X
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/24, 0026:50
Plot created: 95/05/25, 2245
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 237, year 1992 to day 237, year 1992 9/11/92

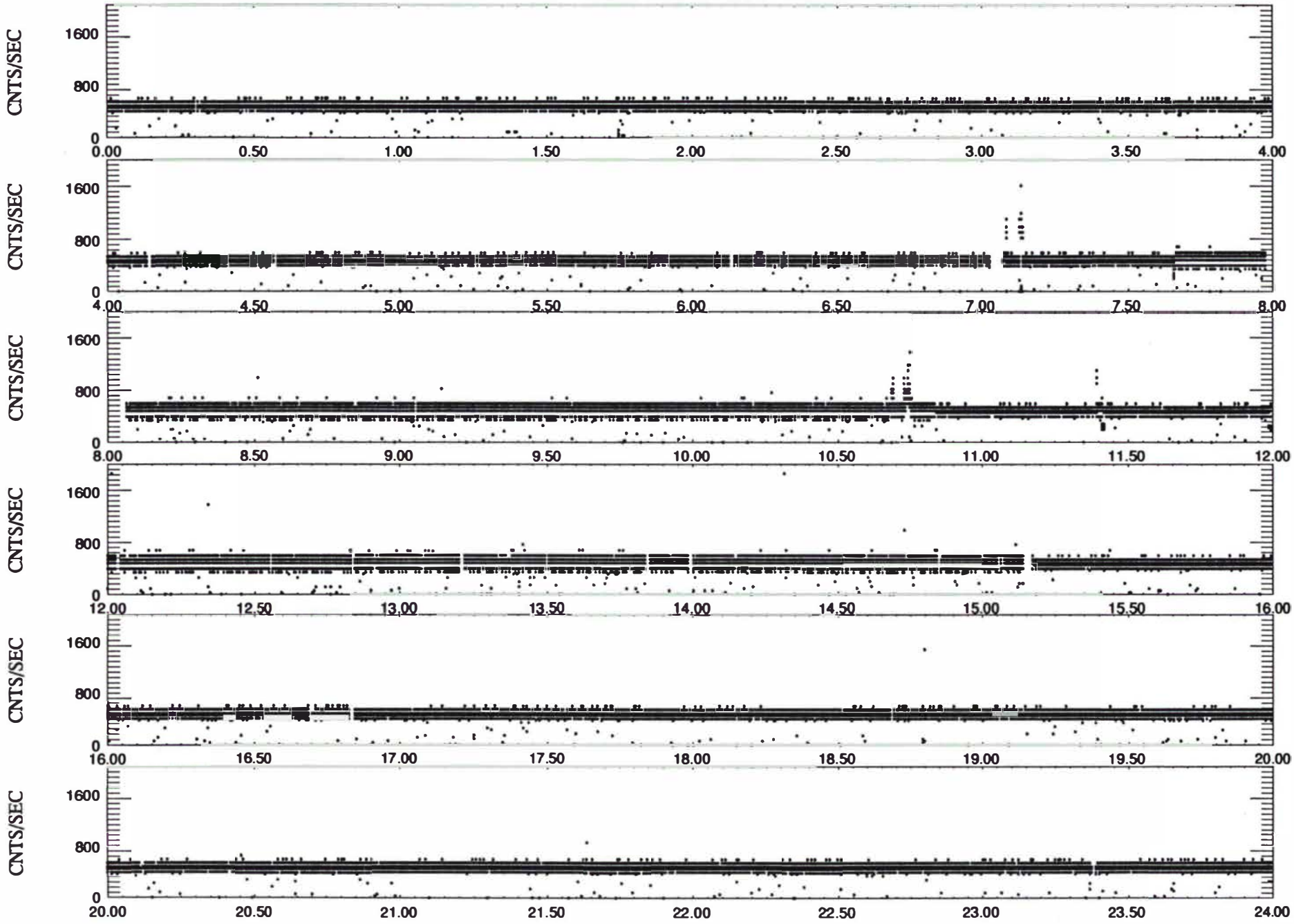
BURST NUMBER 10



UNIVERSAL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 237, year 1992 to day 237, year 1992 9/11/92

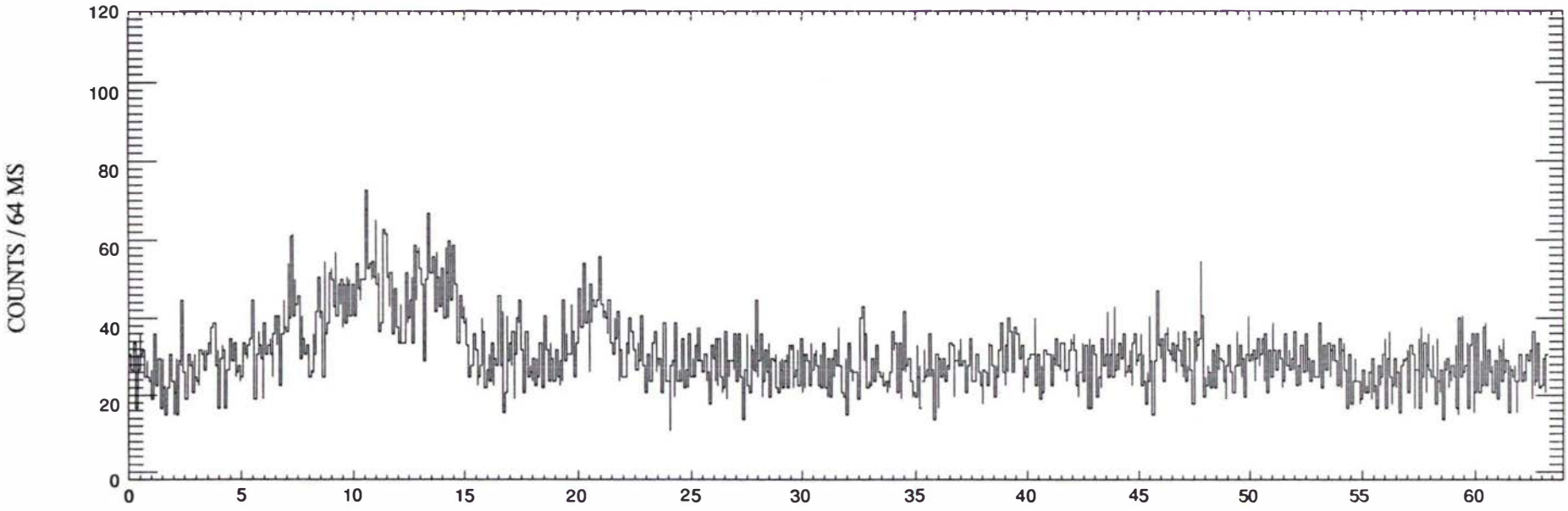
CALIBRATION DATA INCLUDED

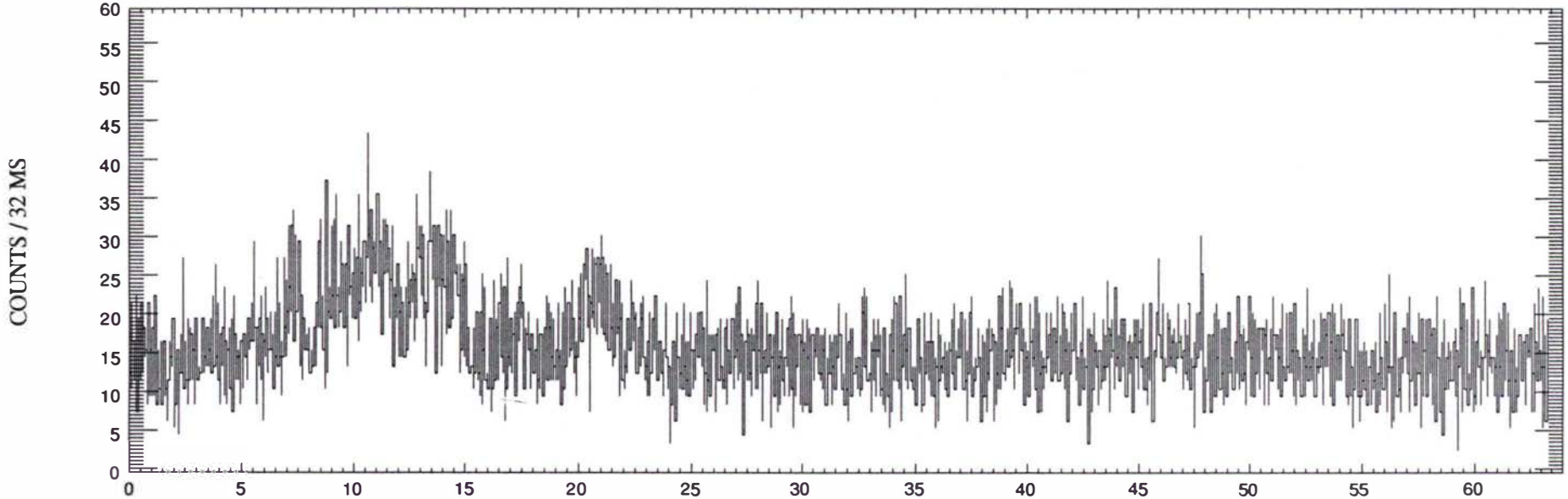


UNIVE AL TIME

HUS 2A TRIGGERED DATA EDR day 237, year 1992 9/11/92

Burst Counter 10 at UT=10.685605010986 h=38468.178 s





B# 1

From MALLOZZI@ssl.msfc.nasa.gov Thu Aug 27 09:20:37 1992
Date: Thu, 27 Aug 1992 11:21:03 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01874

Aug 25

TIME: TJD=8859 SECONDS=19262

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON RISE OF GROJ0422+32.

From MALLOZZI@ssl.msfc.nasa.gov Thu Aug 27 09:24:10 1992
Date: Thu, 27 Aug 1992 11:24:29 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01875

TIME: TJD=8859 SECONDS=30315

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON FLUCTUATION OF GROJ0422+32.

From MALLOZZI@ssl.msfc.nasa.gov Thu Aug 27 09:26:46 1992
Date: Thu, 27 Aug 1992 11:27:14 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01876

TIME: TJD=8859 SECONDS=52451

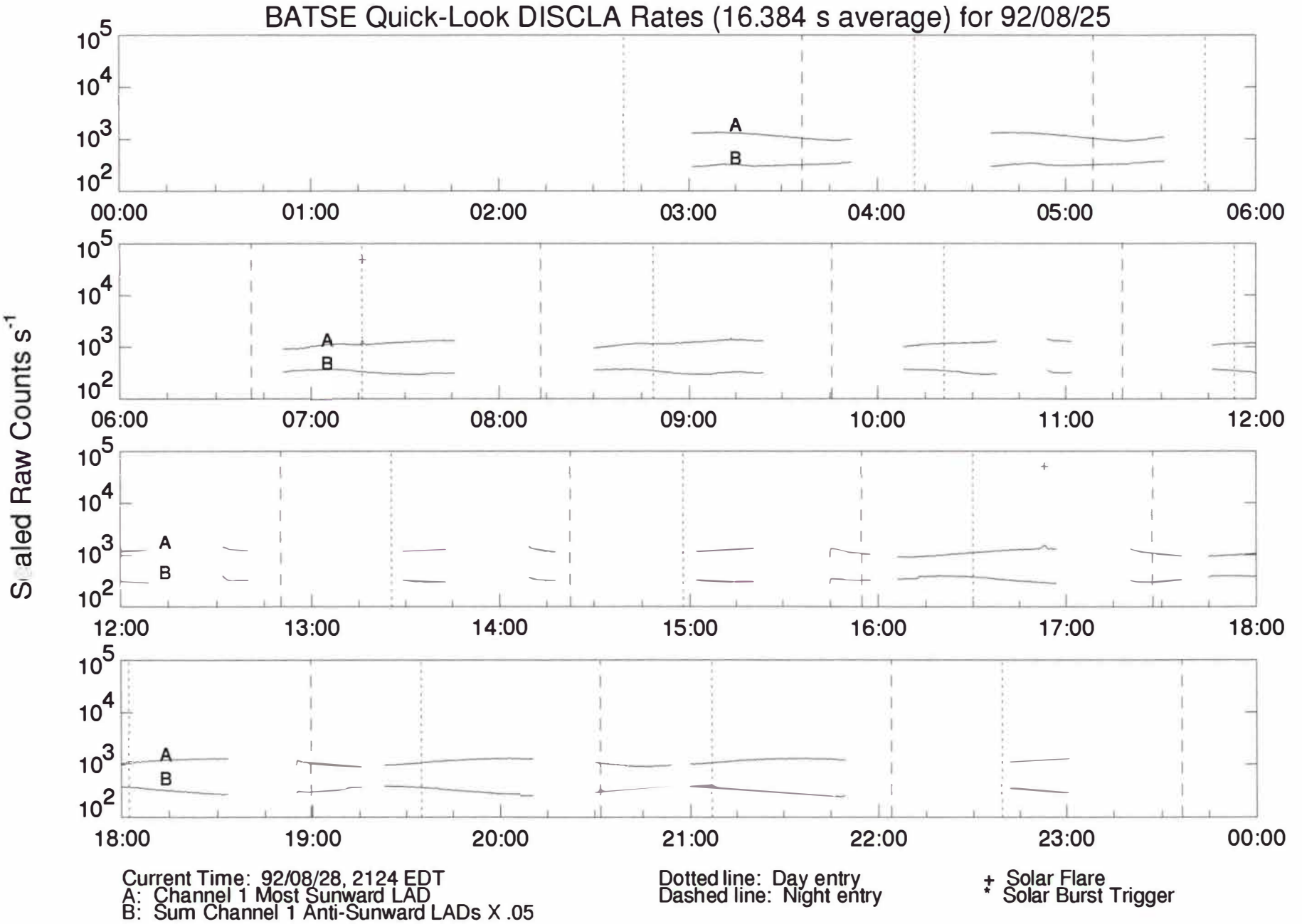
TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

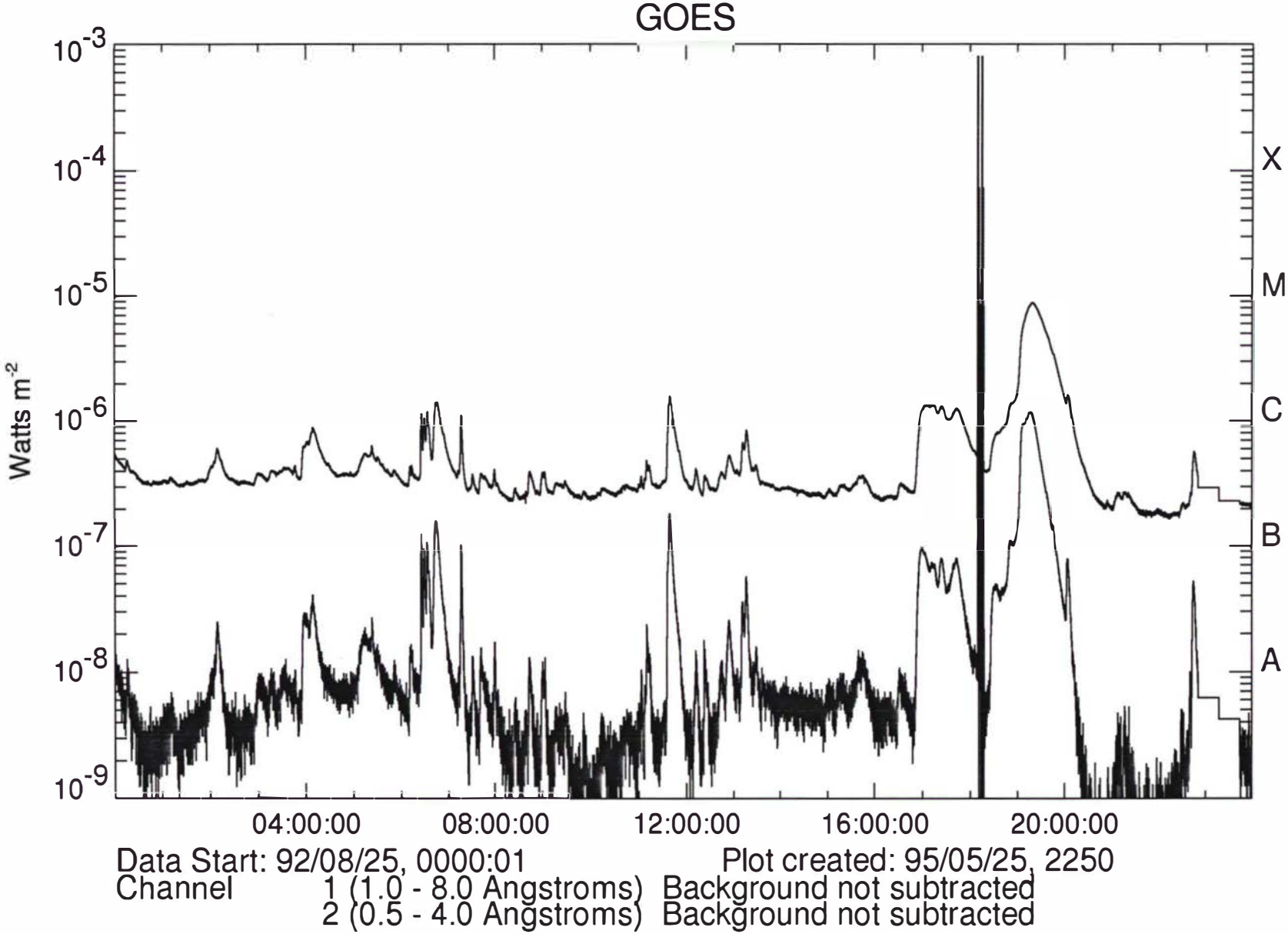
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

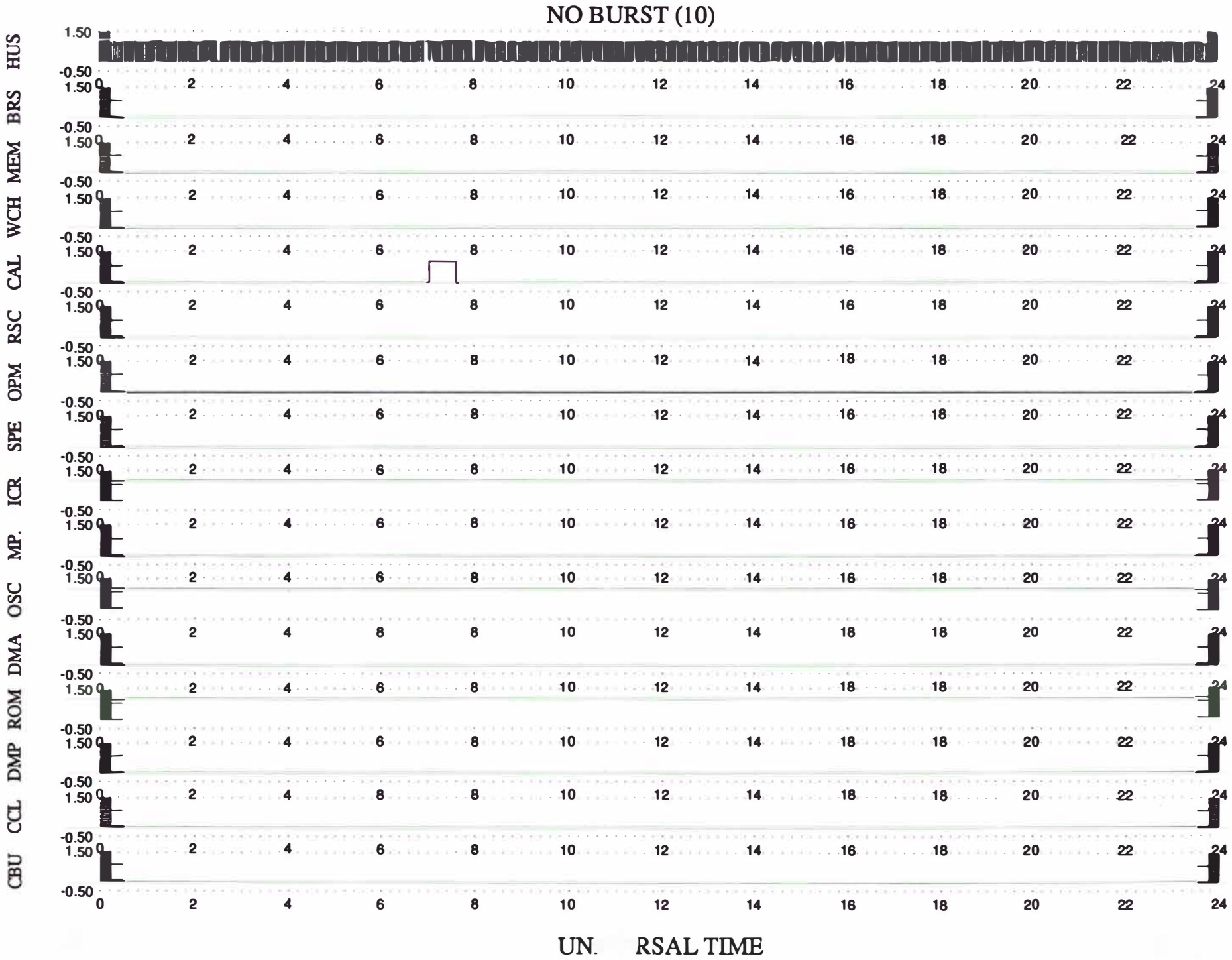
LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
GROJ0422+32. PROBABLY A FLUCTUATION...


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/25
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2124 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 Flare
* Solar Burst Trigger

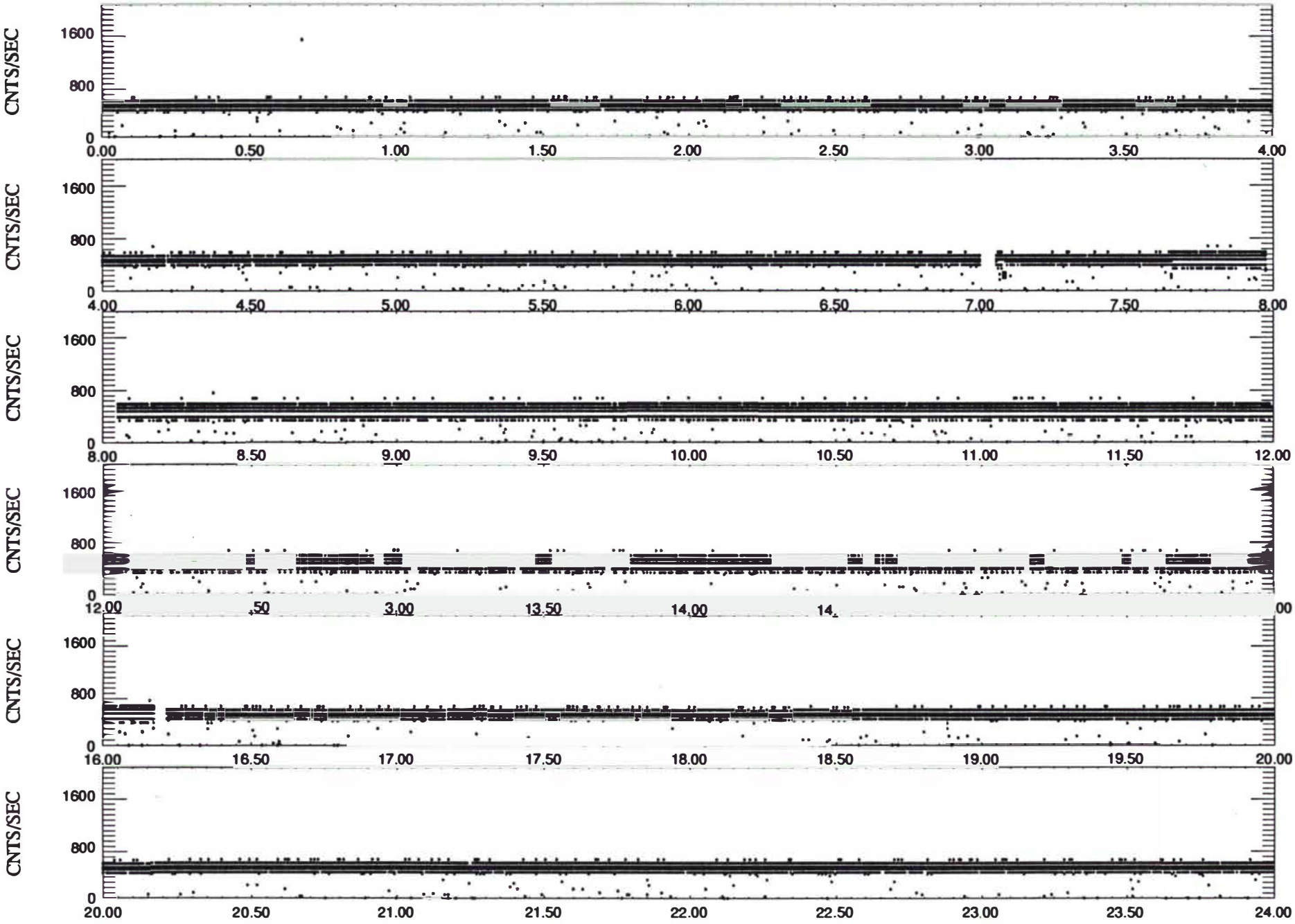

GOES
Watts m-2
10-3
10-4
10-5
10-6
10-7
10-8
10-9
X
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/25, 0000:01
Plot created: 95/05/25, 2250
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 238, year 1992 to day 238, year 1992 9/11/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 238, year 1992 to day 238, year 1992 9/11/92

CALIBRATION DATA INCLUDED



UNIV AL TIME

Dezalay-> KH 7/93

DATE	U.T.	Nr UGB	Event Nature
1992-06-28	21:14:12.932	473-a	GRB
1992-07-08	16:30:01.944	479-a	Solar Flare
1992-07-14	13:04:30.544	482-a	GRB
1992-07-16	16:55:27.526	484-a	Solar Flare
1992-07-18	21.32:44.275	485-a	GRB
1992-07-20	03:12:04.391	486-a	GRB
1992-07-23	00:59:16.612	488-a	GRB
1992-07-23	20:03:08.386	489-a	GRB
1992-07-23	21:48:54.786	489-b	GRB
1992-08-16	12:37:31.102	493-a	GRB
1992-08-26	02:47:07.423	500-a	GRB
1992-08-30	01:45:19.113	503-a	GRB
1992-09-02	00:29:00.916	504-a	GRB
1992-09-03	00:49:18.142	505-a	GRB
1992-09-03	01:37:17.202	505-b	GRB ?
1992-09-03	23:29:01.404	506-a	GRB
1992-09-04	04:41:38.922	506-b	GRB
1992-09-05	15:56:15.844	507-a	Solar Flare
1992-09-06	18:45:29.617	507-b	Solar Flare
1992-09-06	20:56:31.135	507-c	Solar Flare
1992-09-14	07:14:50.878	508-a	Unknown
1992-09-18	09:41:19.340	511-a	GRB
1992-09-25	20:30:41.410	517-a	GRB
1992-09-25	21:40:47.837	517-b	No Available data
1992-09-30	00:47:46.089	518-a	Unknown
1992-10-04	22:19:05.006	522-a	Solar Flare
1992-10-12	13:14:44.786	523-a	Solar Flare
1992-10-13	23:01:01.582	524-a	GRB
1992-10-25	13:53:16.735	527-a	GRB
1992-10-27	06:52:02.336	528-a	Solar Flare
1992-10-29	15:23:10.349	530-a	SF ou Unknown?
1992-10-29	16:11:39.173	530-b	SF ou Unknown?
1992-10-29	16:26:49.045	530-c	SF ou Unknown?
1992-11-23	16:32:04.840	534-a	SF ou Unknown?
1992-11-23	17:11:35.698	534-b	SF ou Unknown?

HUS DATA

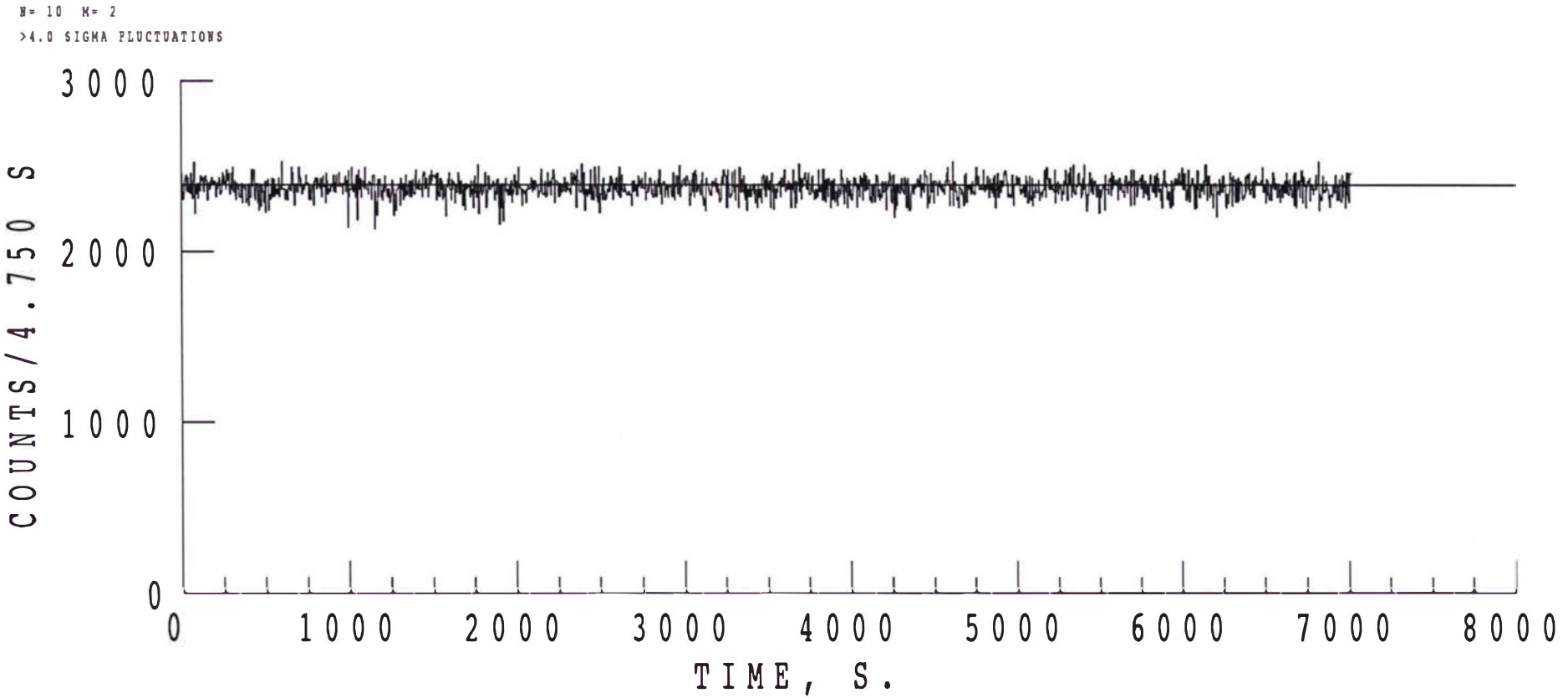
23/ 9/96

ULYSSES RT

26/ 8/92 6516.175 s

0.250 S INTERVALS REGROUPED BY 19

0- 0 keV



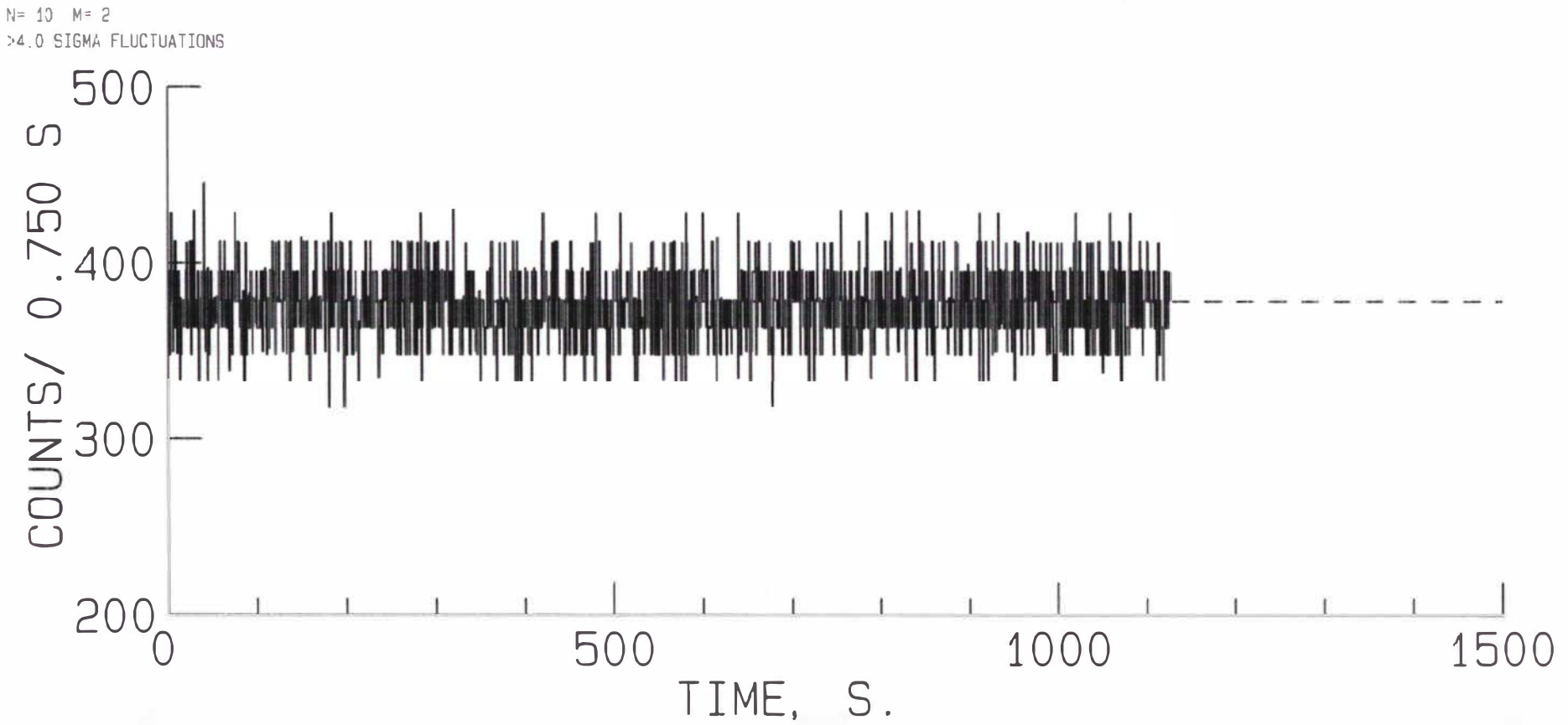
ULYSSES RT

23/ 9/96

26/ 8/92 6516.175 s

0.250 S INTERVALS REGROUPED BY 3

22- 150 keV



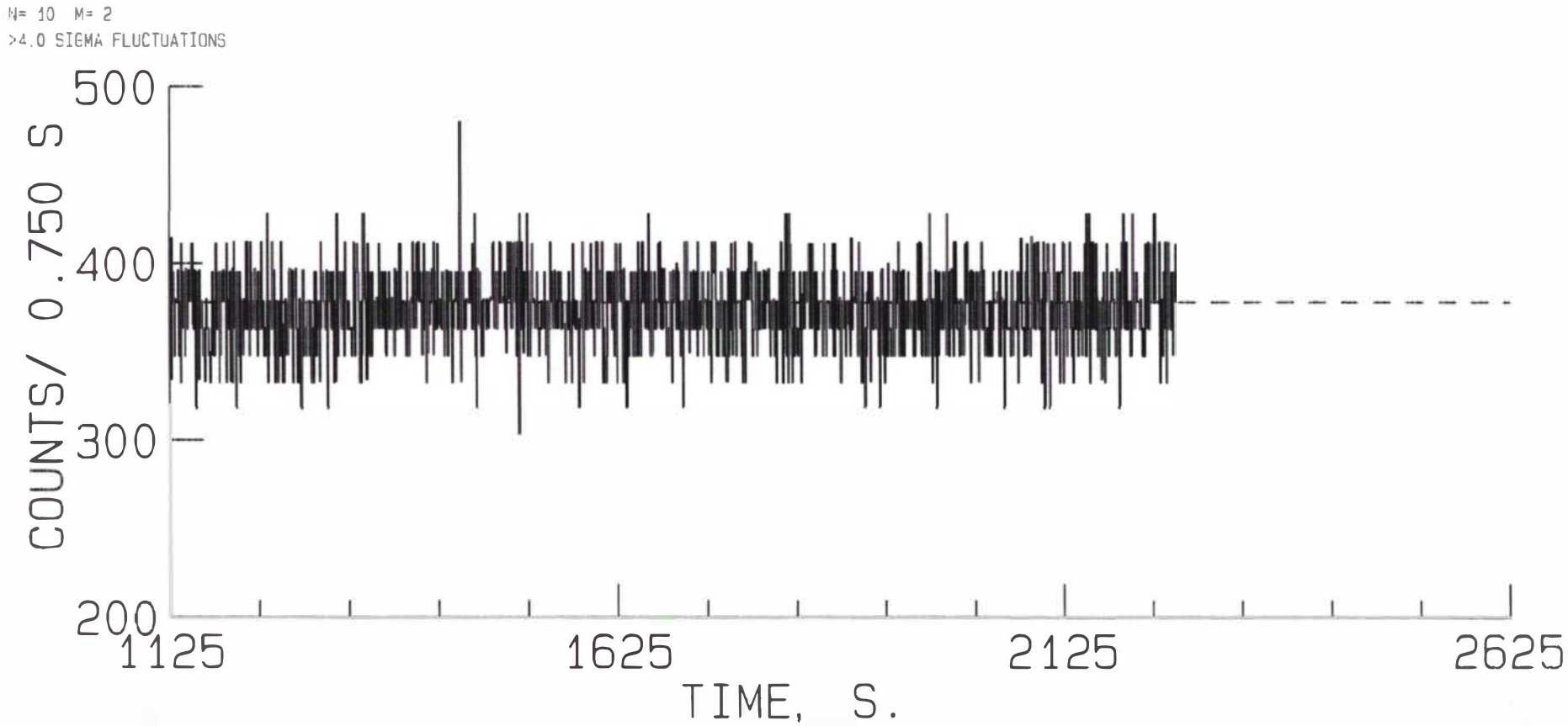
ULYSSES RT

23/ 9/96

26/ 8/92 6516.175 s

0.250 S INTERVALS REGROUPED BY 3

22- 150 keV



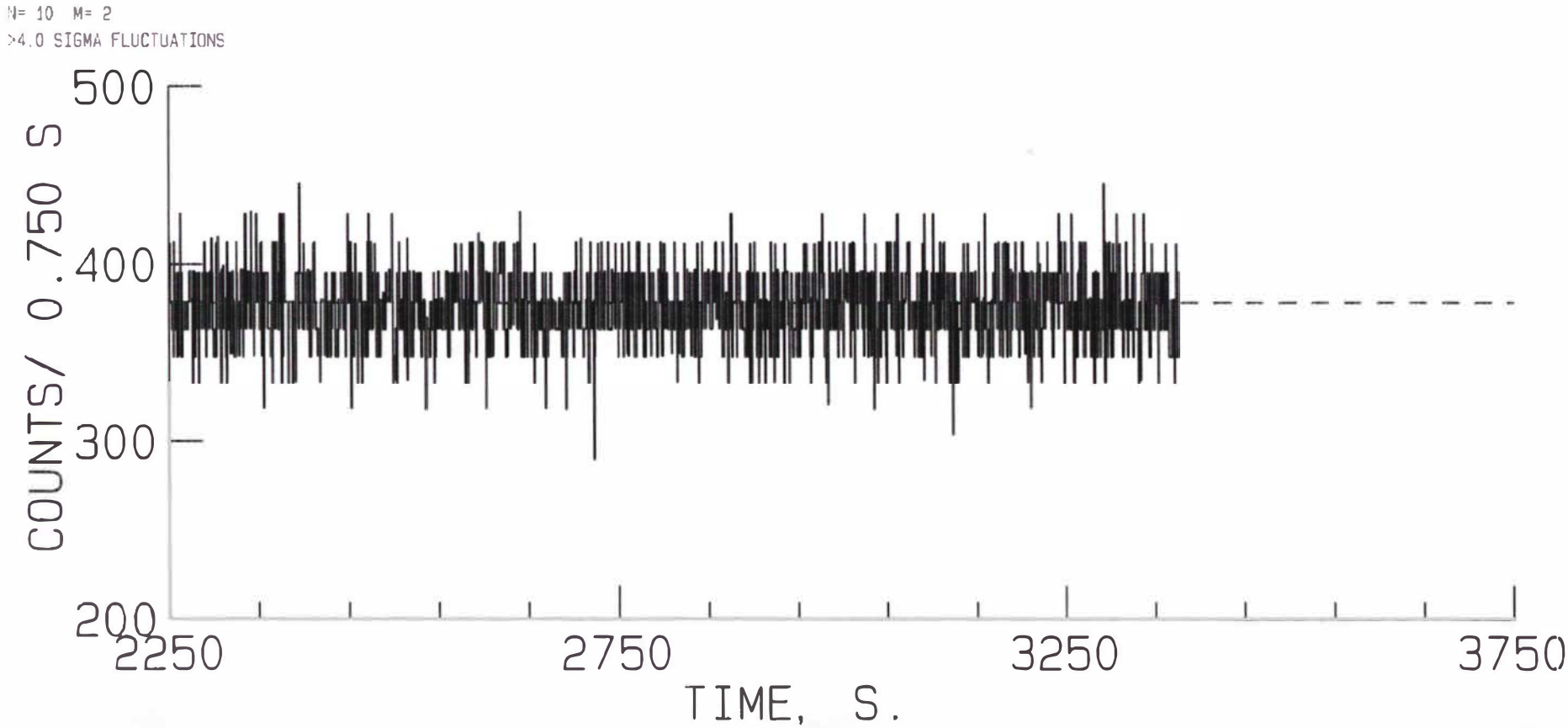
ULYSSES RT

23/ 9/96

26/ 8/92 6516.175 s

0.250 S INTERVALS REGROUPED BY 3

22- 150 keV

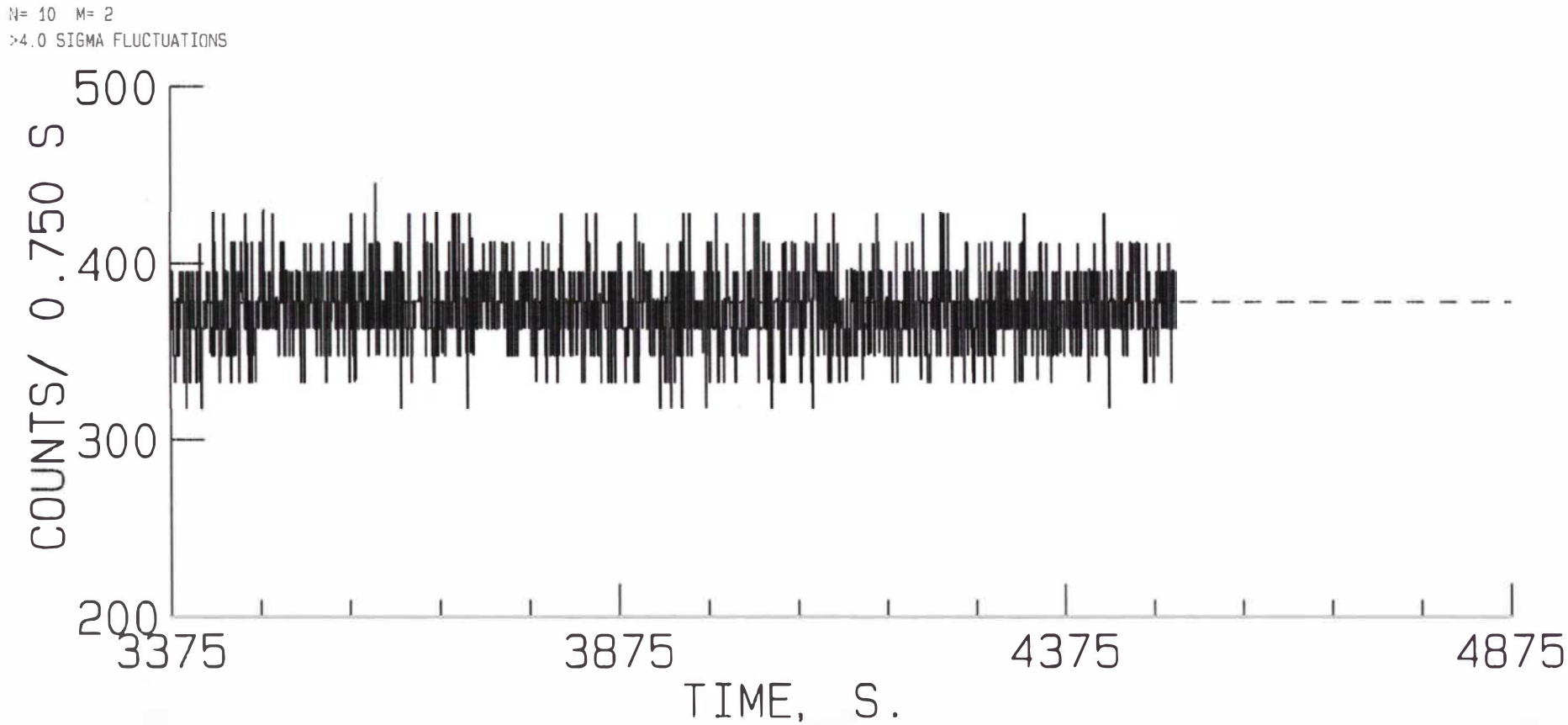


ULYSSES RT 23/ 9/96

26/ 8/92 6516.175 s

0.250 S INTERVALS REGROUPED BY 3

22- 150 keV



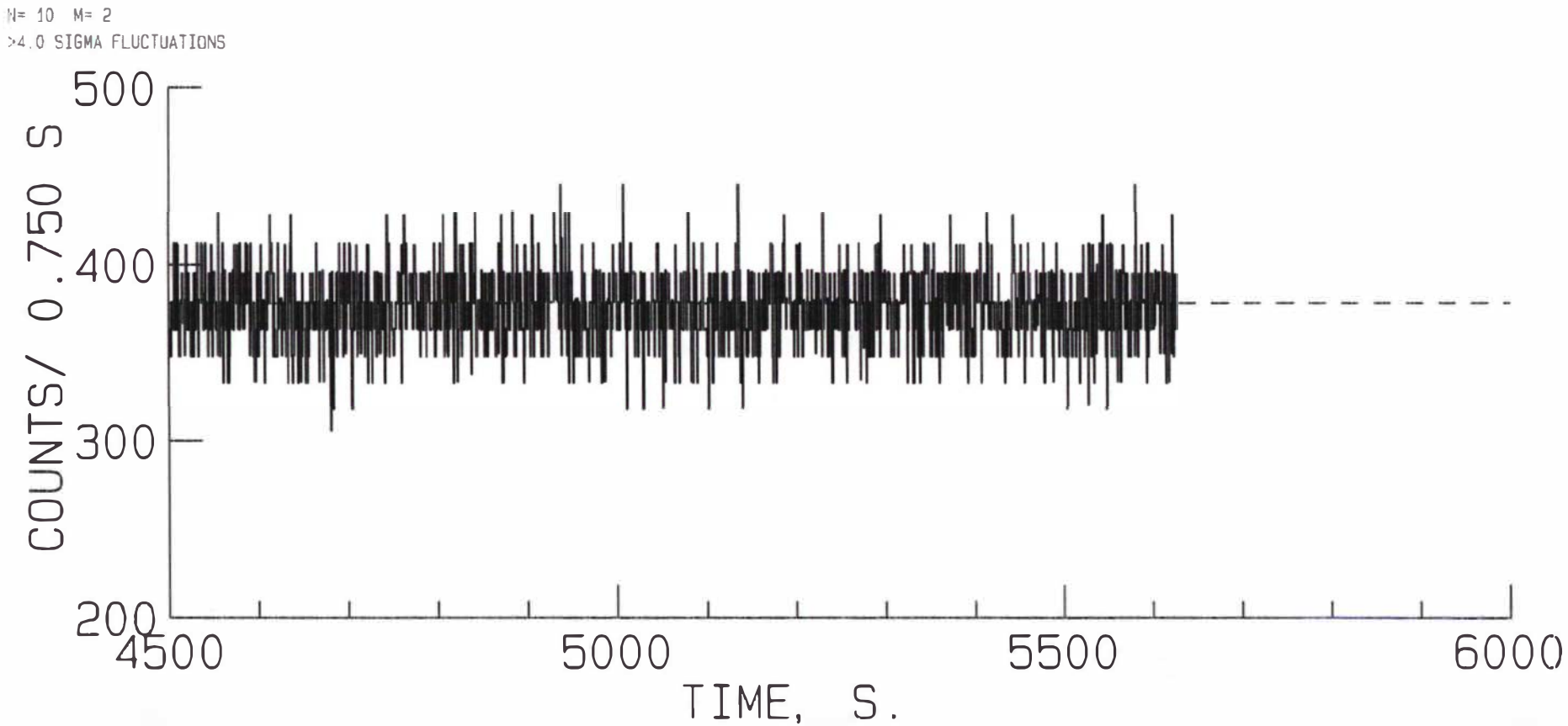
ULYSSES RT

23/ 9/96

26/ 8/92 6516.175 s

0.250 S INTERVALS REGROUPED BY 3

22- 150 keV



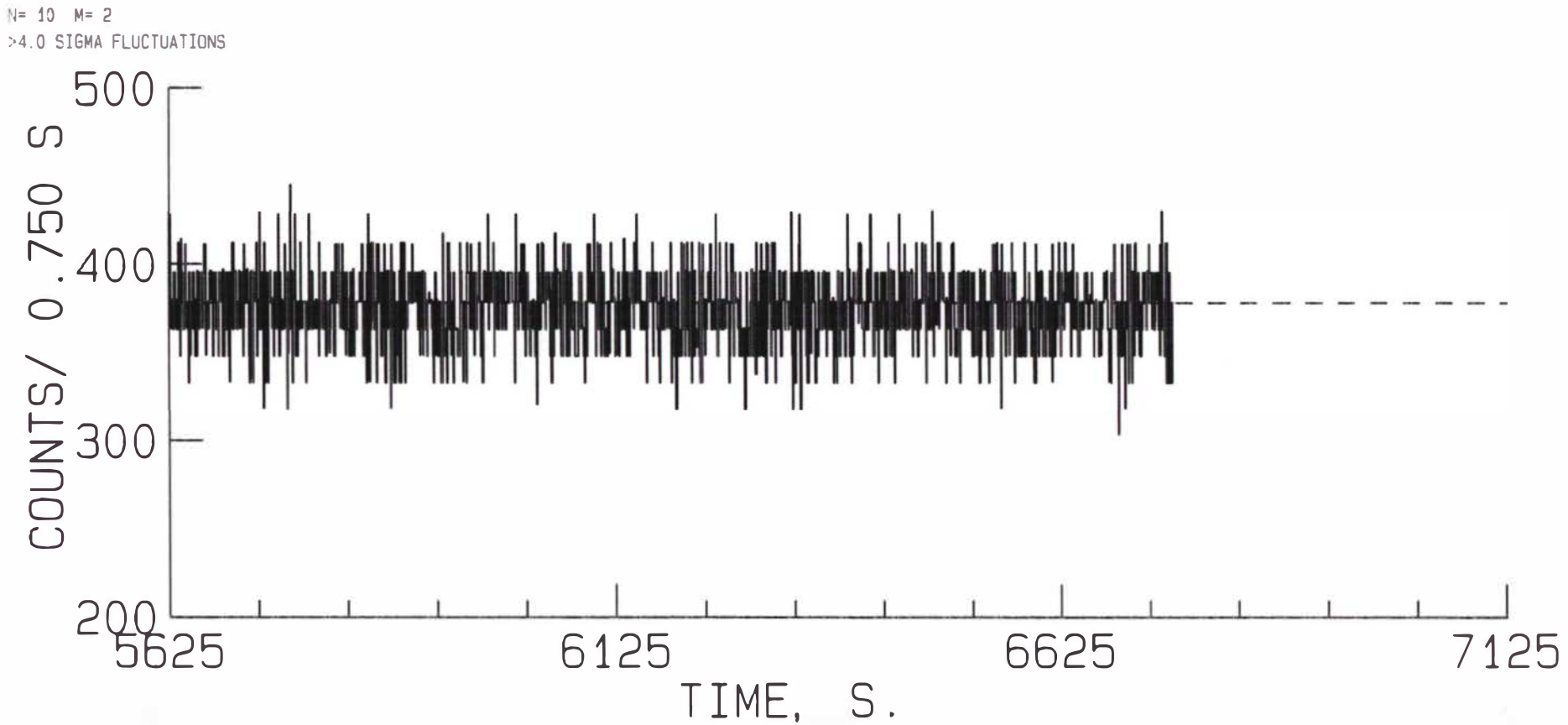
ULYSSES RT

23/ 9/96

26/ 8/92 6516.175 s

0.250 S INTERVALS REGROUPED BY 3

22- 150 keV



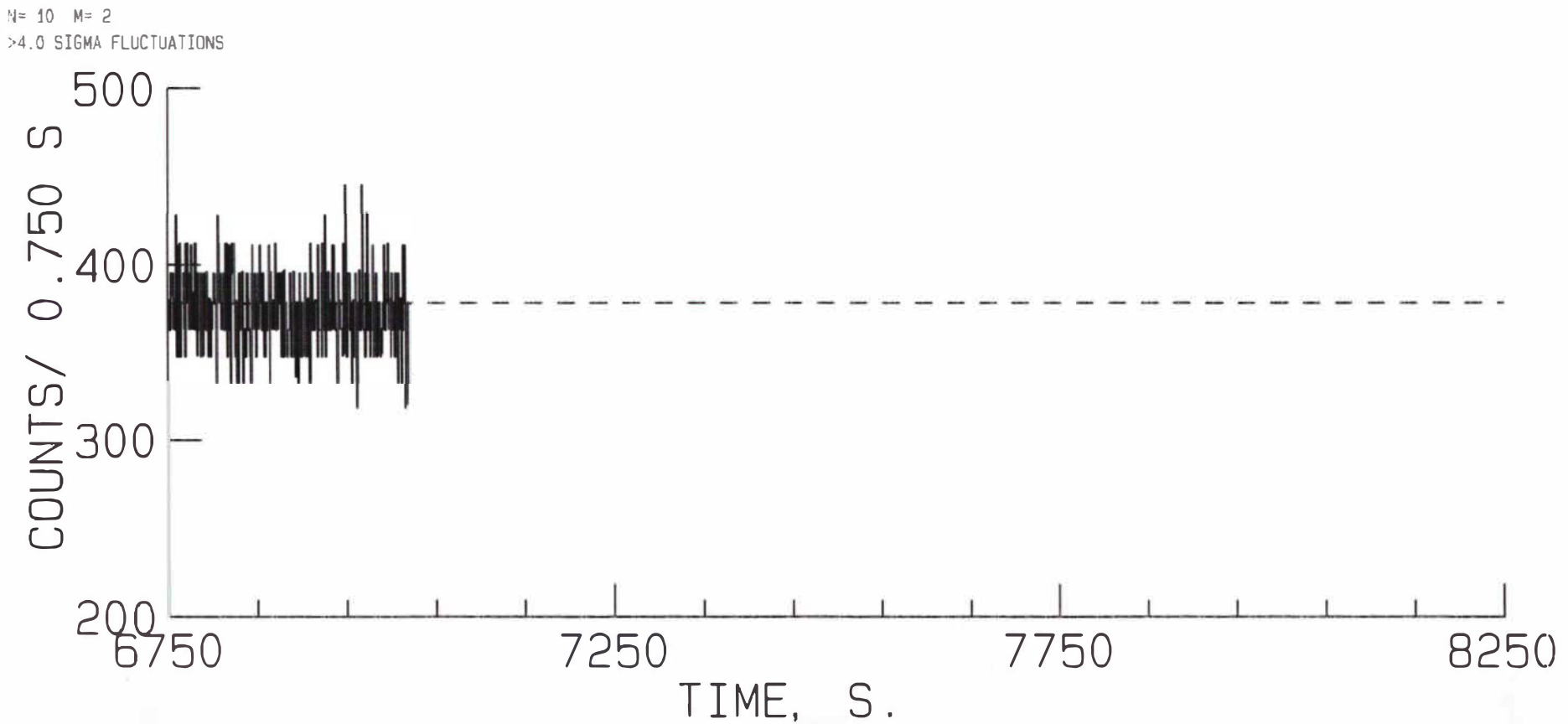
ULYSSES RT

23/ 9/96

26/ 8/92 6516.175 s

0.250 S INTERVALS REGROUPED BY 3

22- 150 keV



From HORACK@ssl.msfc.nasa.gov Thu Aug 27 12:00:56 1992
Date: Thu, 27 Aug 1992 14:01:16 -0500 (CDT)
From: HORACK@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 01878

Aug 26

TIME: TJD=8860 SECONDS=32441

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=62. AZIMUTH=358. ERROR= DEGREES

COMMENTS:
INSTRUMENT TRIGGERED ON RISE OF GRO J0422+#2
(OBVIOUSLY I MEAN J0422+32. FORGOT TO RELEASE THE CAPS KEY.)

From HORACK@ssl.msfc.nasa.gov Thu Aug 27 12:03:07 1992
Date: Thu, 27 Aug 1992 14:03:41 -0500 (CDT)
From: HORACK@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01879

TIME: TJD=8860 SECONDS=54573

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=60. AZIMUTH=357. ERROR= DEGREES

COMMENTS:
AGAIN, BATSE TRIGGERS ON GRO J0422+32 COMING OVER THE HORIZON.

From HORACK@ssl.msfc.nasa.gov Thu Aug 27 12:05:44 1992
Date: Thu, 27 Aug 1992 14:06:13 -0500 (CDT)
From: HORACK@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01880

TIME: TJD=8860 SECONDS=76717

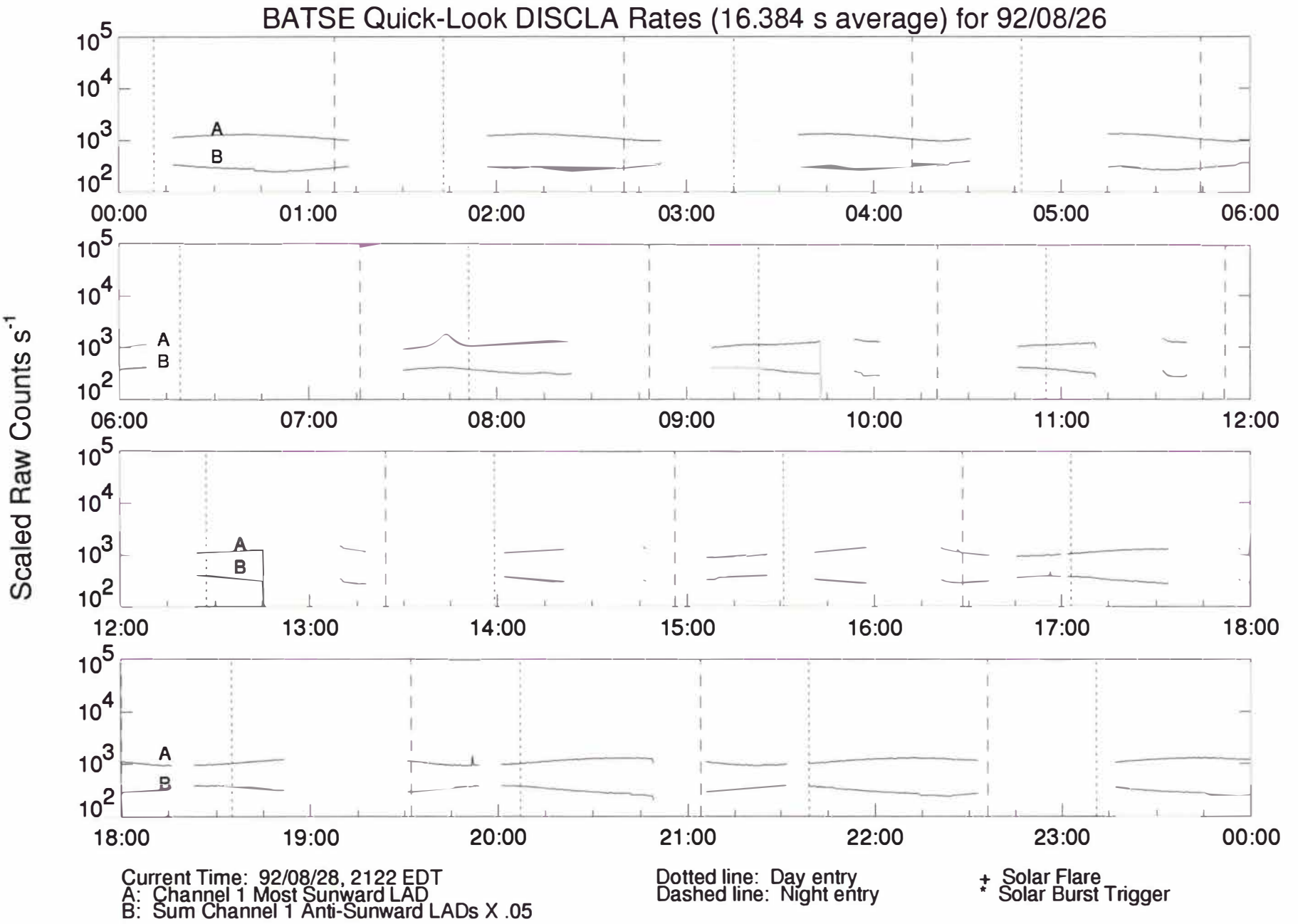
TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

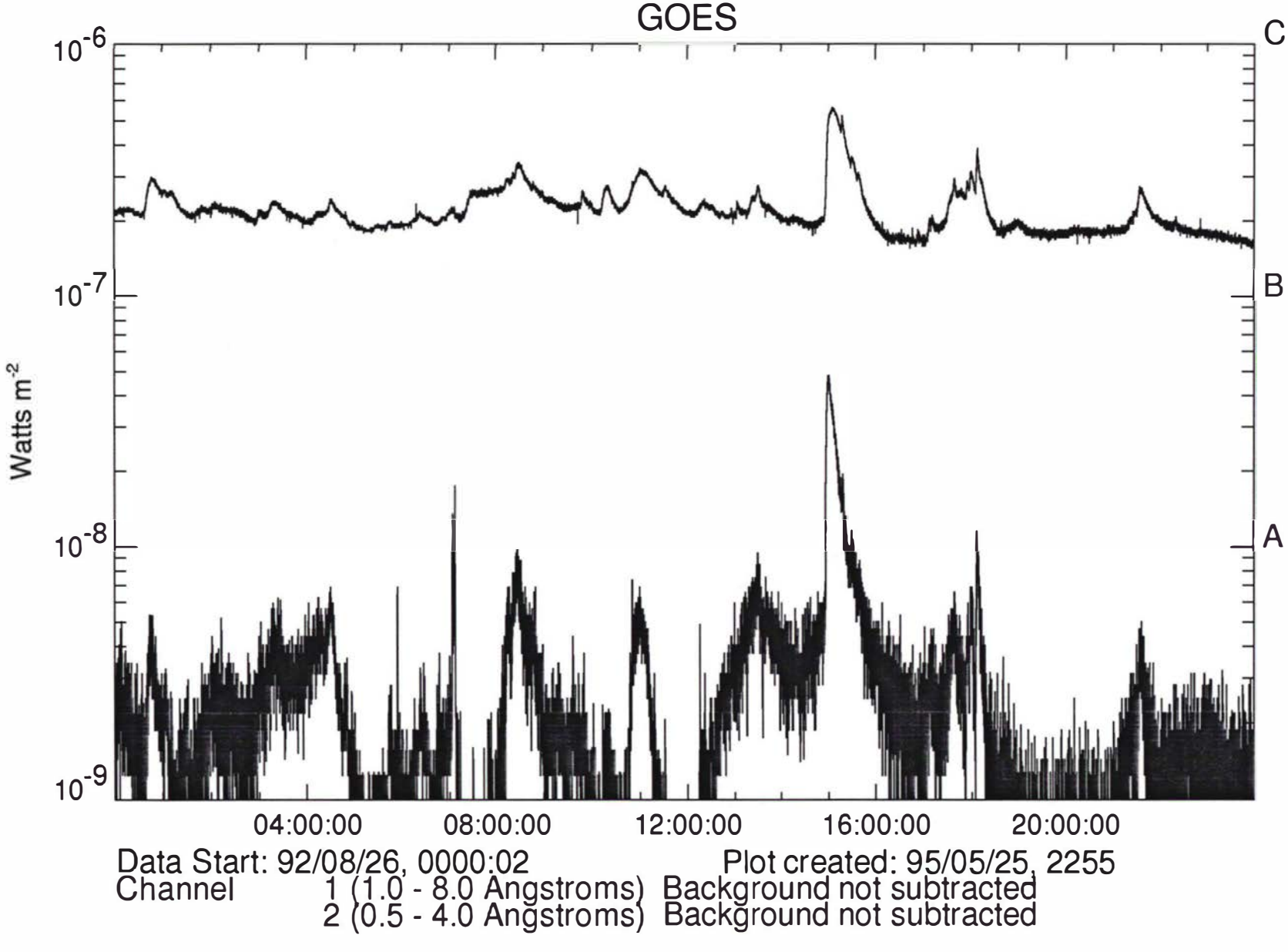
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

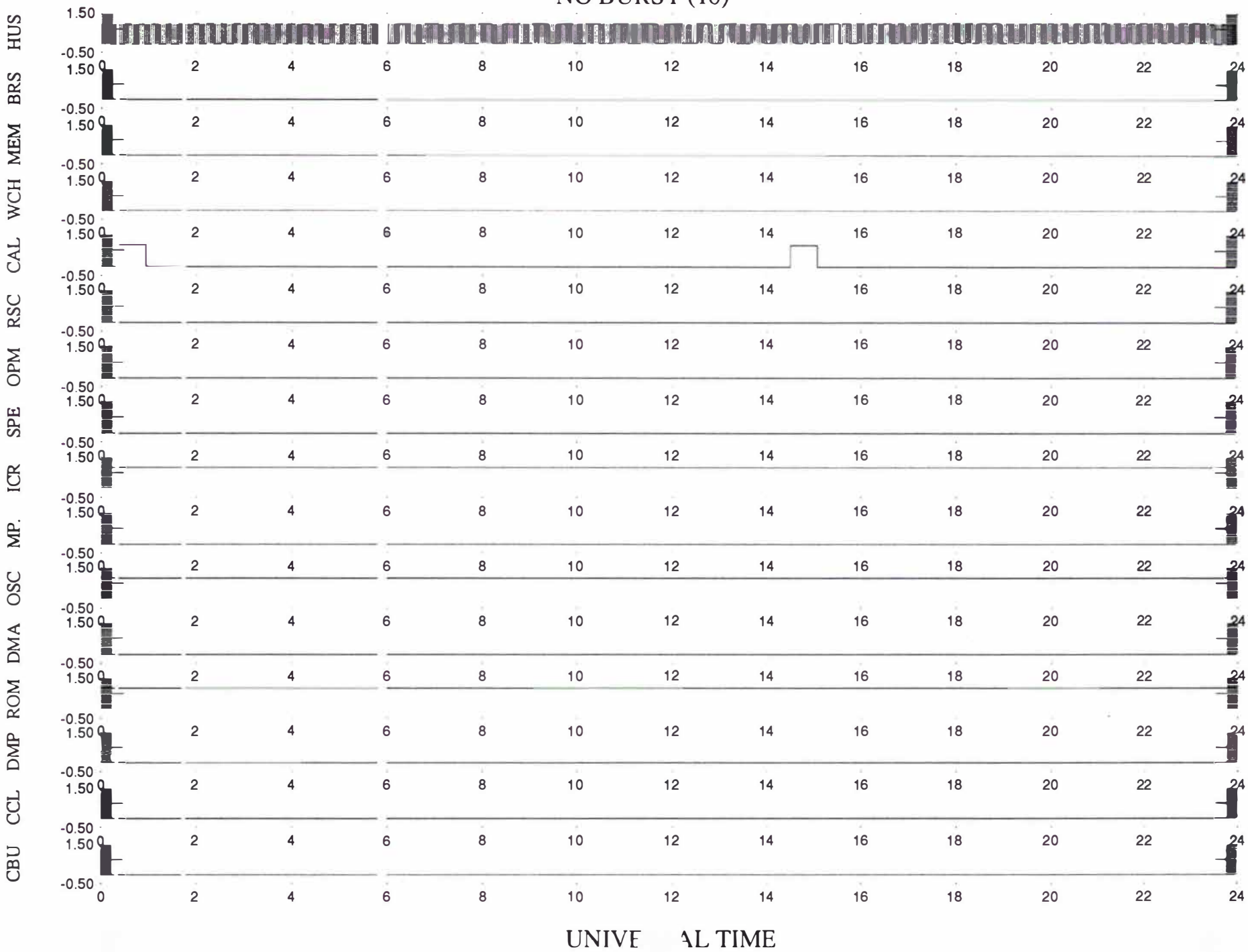
LOCATION: ZENITH=63. AZIMUTH=357. ERROR= DEGREES

COMMENTS:
TRIGGER ON THE RISE OF GRO J0422+32.


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/26
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/08/28, 2122 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 Flare
* Solar Burst Trigger

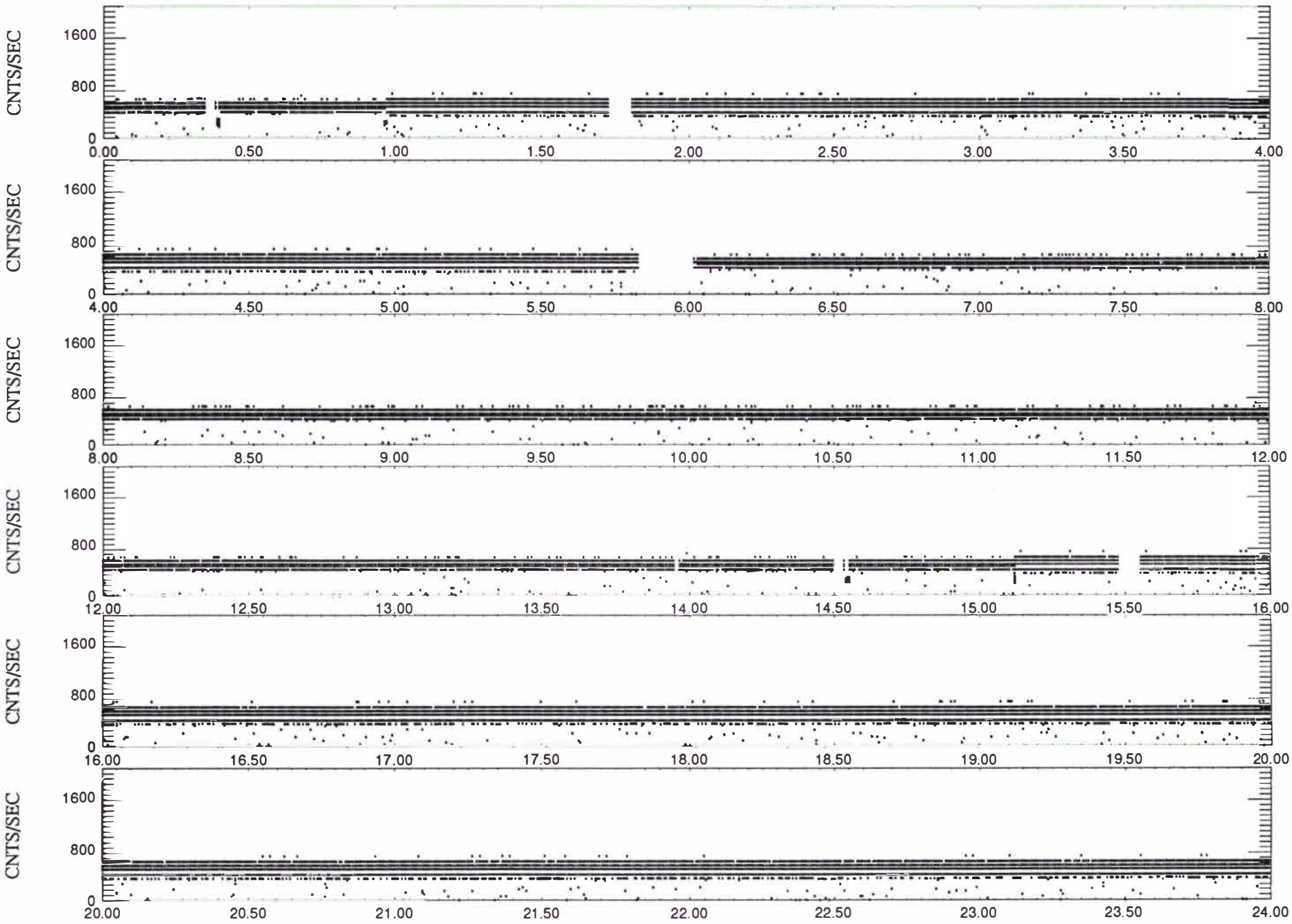

GOES
C
B
A
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/26, 0000:02
Plot created: 95/05/25, 2255
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 239, year 1992 to day 239, year 1992 10/28/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 239, year 1992 to day 239, year 1992 10/28/92

CALIBRATION DATA INCLUDED



UNIVERSAL TIME

From khurley@space6.ssl.berkeley.edu Tue Dec 15 16:52:38 1992
Date: Tue, 15 Dec 92 16:46:51
From: khurley@space6.ssl.berkeley.edu
Content-Length: 1193

get Venus crossing times
FAX to Robin

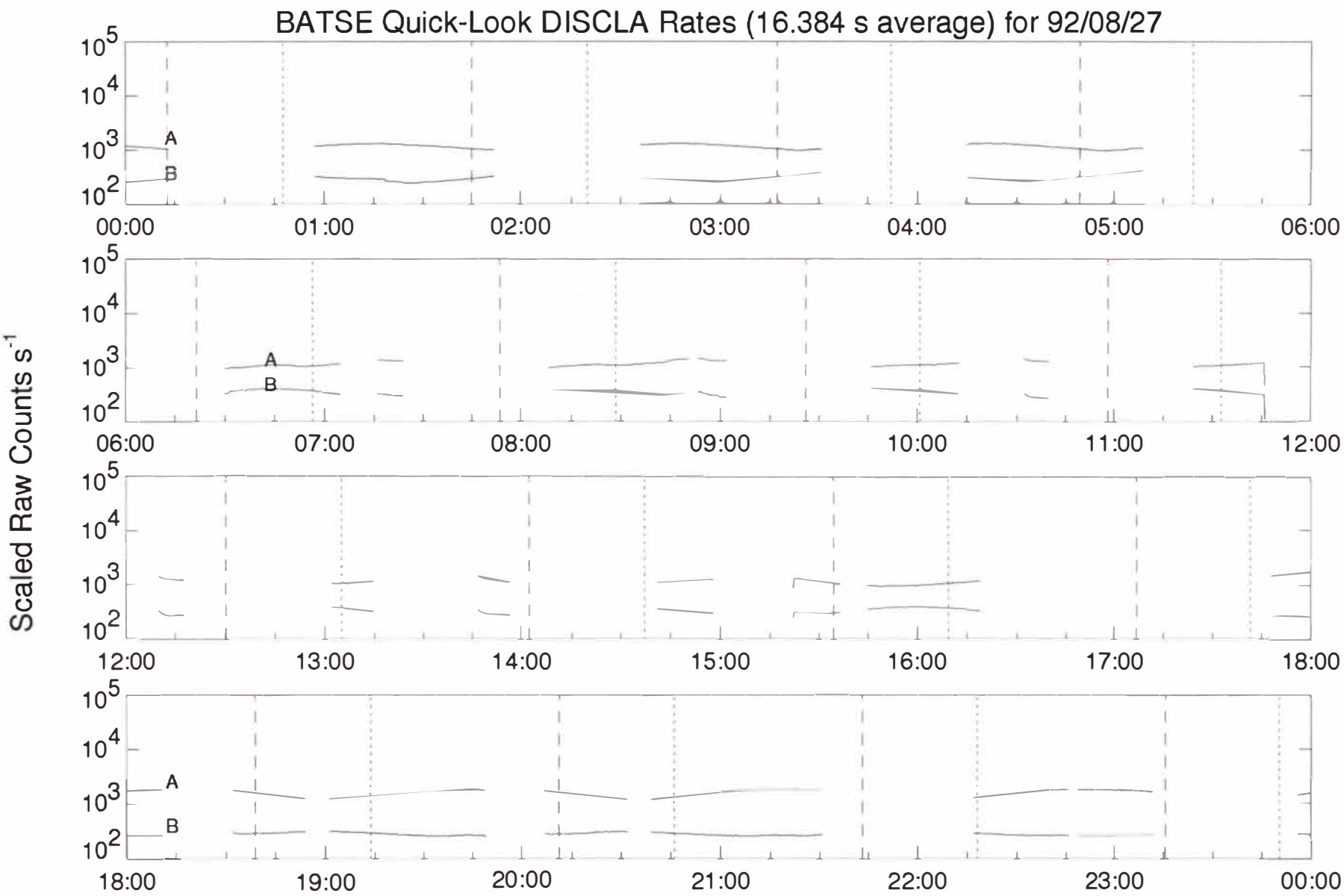
Dear John,

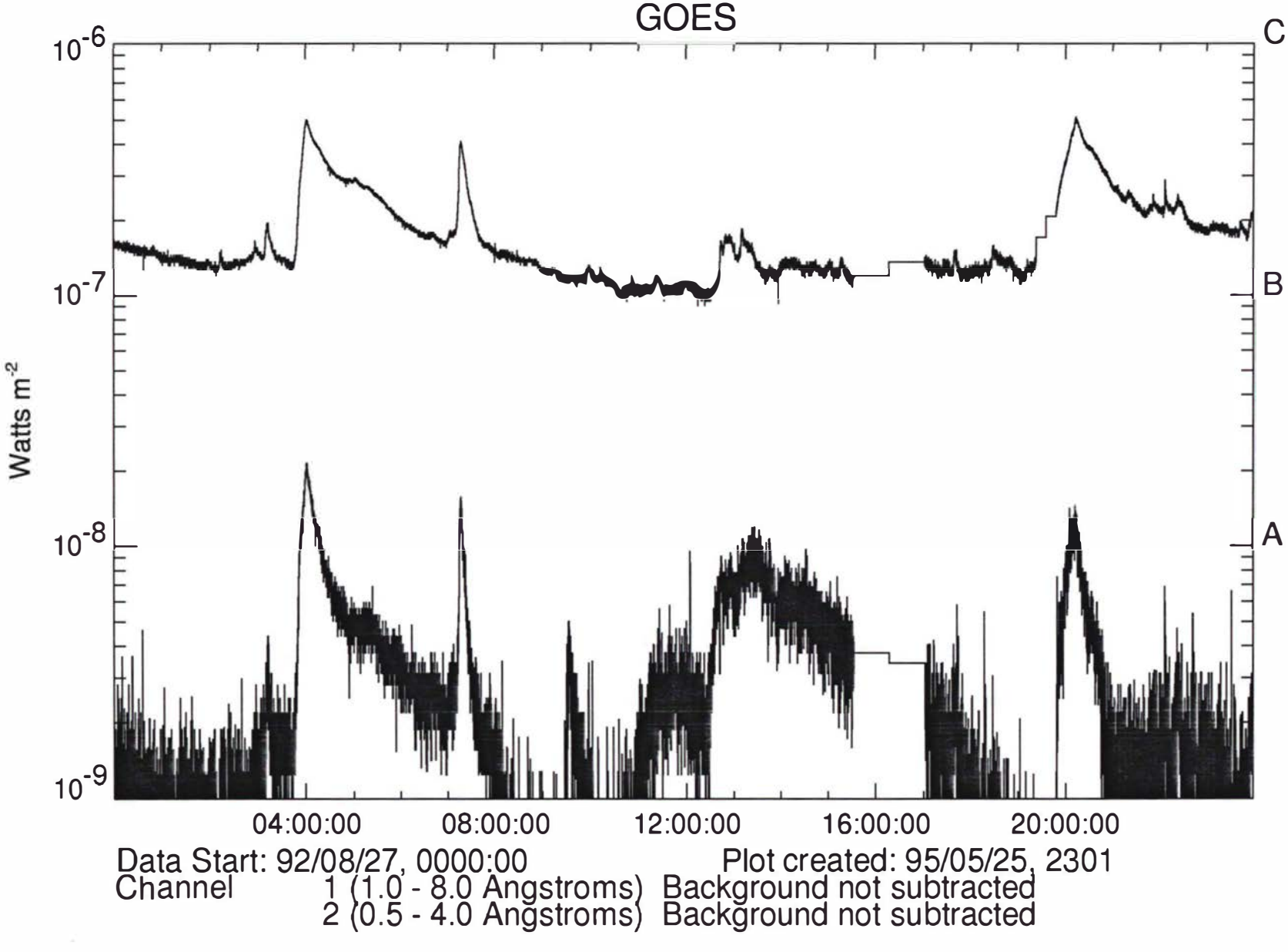
Here is a fairly complete list of Ulysses events from July to October 1992, excepting the events I already gave you. I have listed the Ulysses and Earth crossing times where available.

July	UCT	ECT	
1	72000	70740	N/O
7	25300	23615	N/O
14	46000	47040	← Only one they have PVO data for! (Among the ones for which ECT is given) Sent Mar 2
18	55000	52860	N/O
26	02066	----	
31	62196	61620	N/O
August			
10	77700	-----	
13	11000	12828	N/O
16	42600	45360	N/O
17	15055	-----	
19	40612	-----	
22	84184	-----	DMSP 81542 (3 sec)
24	38400	39183	N/O DMSP (2)
27	85245	-----	RK will check 4/93
29	30755	-----	
29	63712	-----	
30	05800	06318	N/O
30	32310	-----	
September			
1	04311	-----	(solar?)
2	03230	-----	DMSP (3) ~01743
3		84540	N/O
4	00420		Same as previous event
19	28450	-----	(solar?)
21	00060	-----	
October			
1	80900	-----	
3	20880	-----	
4	49100	-----	
6	40720	-----	
9	21980	24070	N/O
13	81256	-----	
15	04000	05792	N/O
22	55200	55200	N/O
25	52578	-----	
27	26805	-----	
29	42125	-----	
30	64000	-----	(solar)
31	40000	-----	

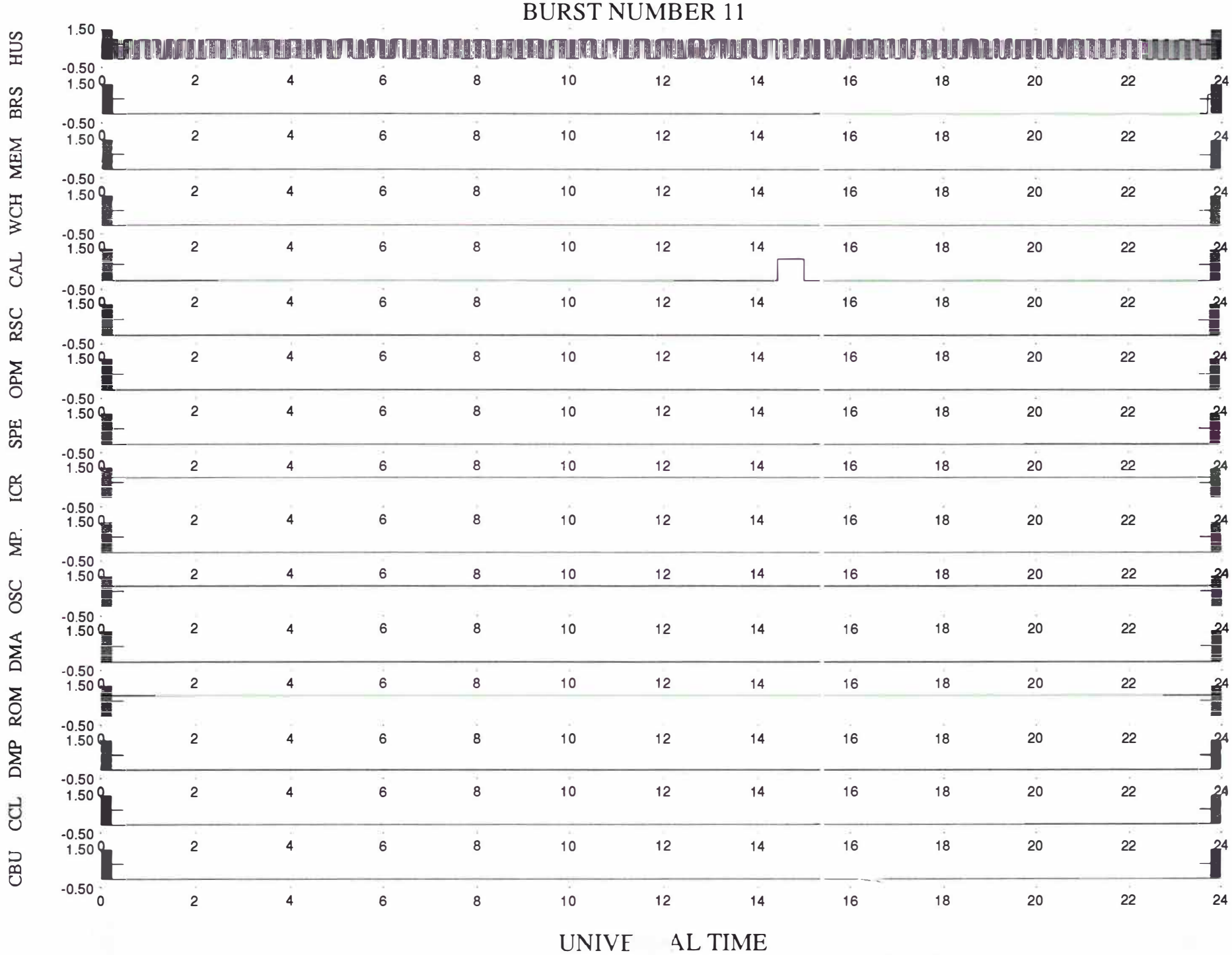
The Earth-Ulysses distance varied between about 5.76 and 6.28 AU in this period.

POSITION OF ULYSSES ON 27/ 8/1992 IS:
RA= 157.132 DEC= 1.509 DIST= 6.274 AU
POSITION OF VENUS ON 27/ 8/1992 IS ALPHA= 175.223 DELTA= 3.424 DISTANCE=1.57807 AU
T DISTANCE BETWEEN TWO OBJECTS AT
157.132 1.509 938590500.00 KM. AND
175.223 3.424 236079700.00 KM. IS
718073800.00 KM., OR 4.800 A.U., OR 2395.24 LIGHT-SECONDS
THE ANGLE BETWEEN THEM IS 18.174 DEGREES


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/27
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 92/09/29, 0221 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

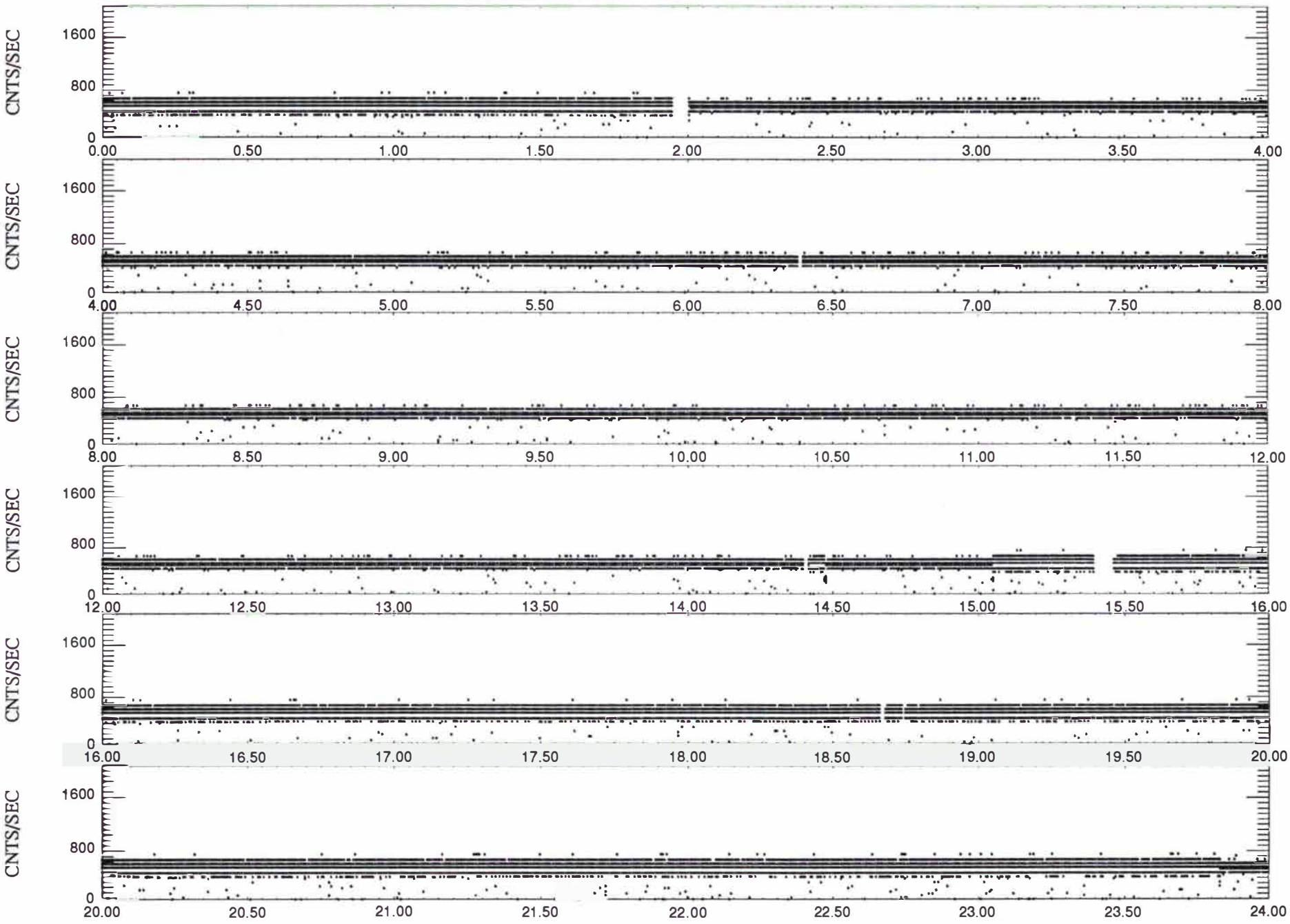

GOES
C
B
A
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/27, 0000:00
Plot created: 95/05/25, 2301
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 240, year 1992 to day 240, year 1992 10/28/92



HUS 2A, MODE 1, NOT AVERAGED EDR day 240, year 1992 to day 240, year 1992 10/28/92

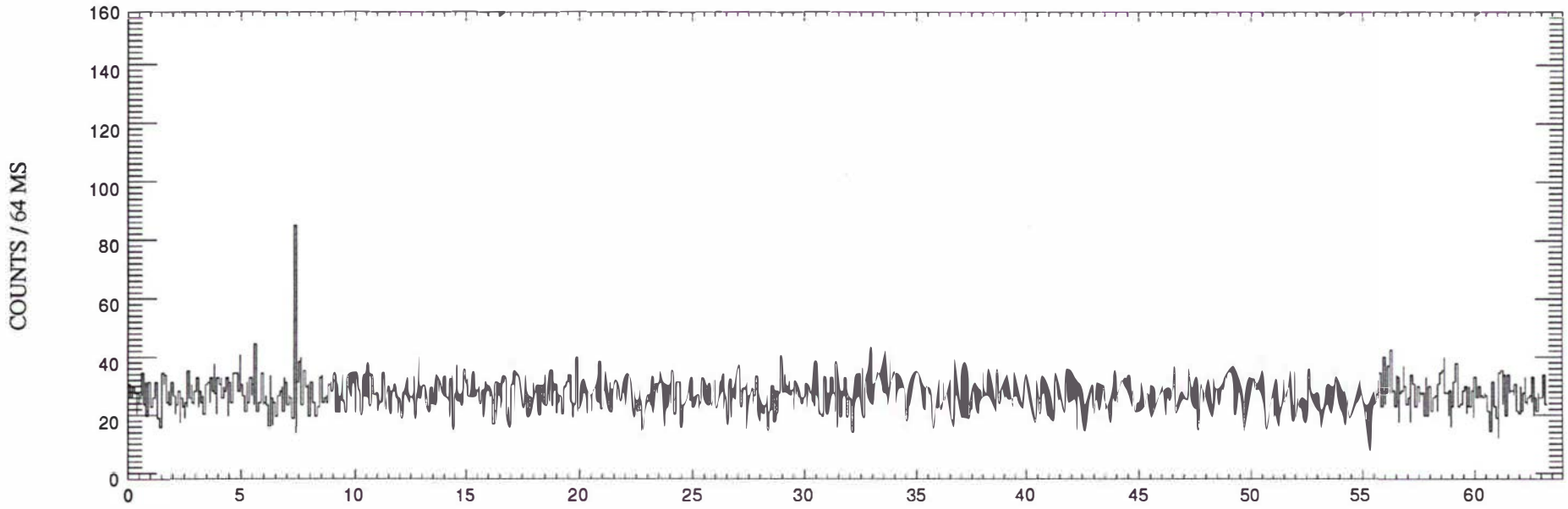
CALIBRATION DATA INCLUDED



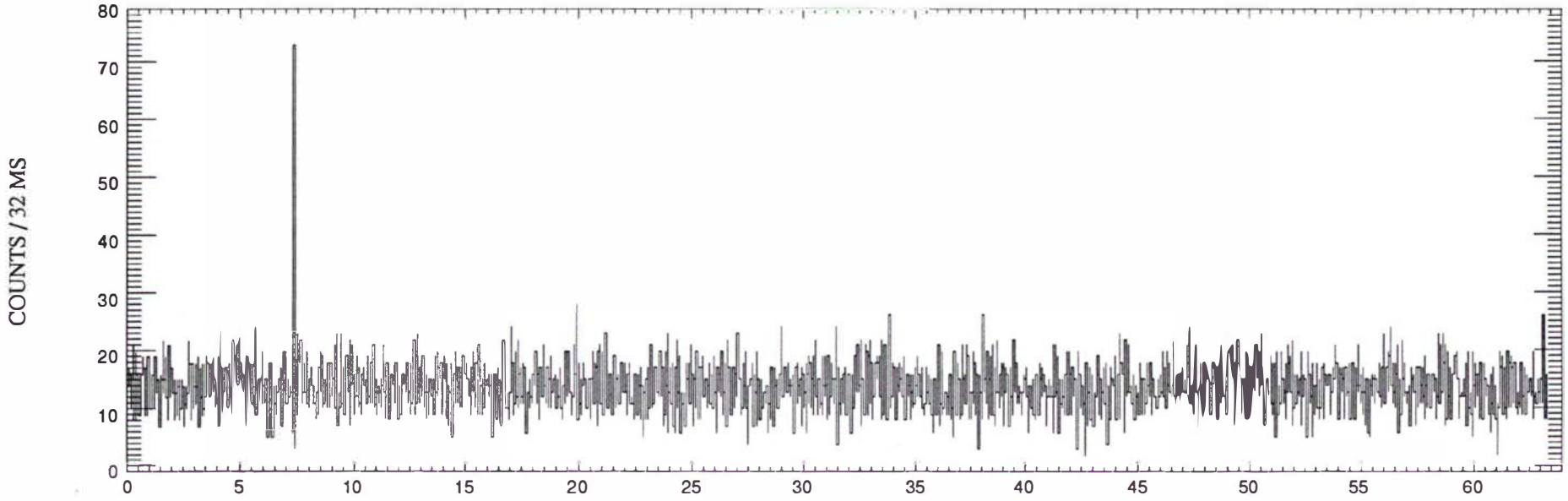
UNIVE AL TIME

HUS 2A TRIGGERED DATA EDR day 240, year 1992 10/28/92

Burst Counter 11 at UT=23.679388012356 h=85245.797 s



TIME, SECS

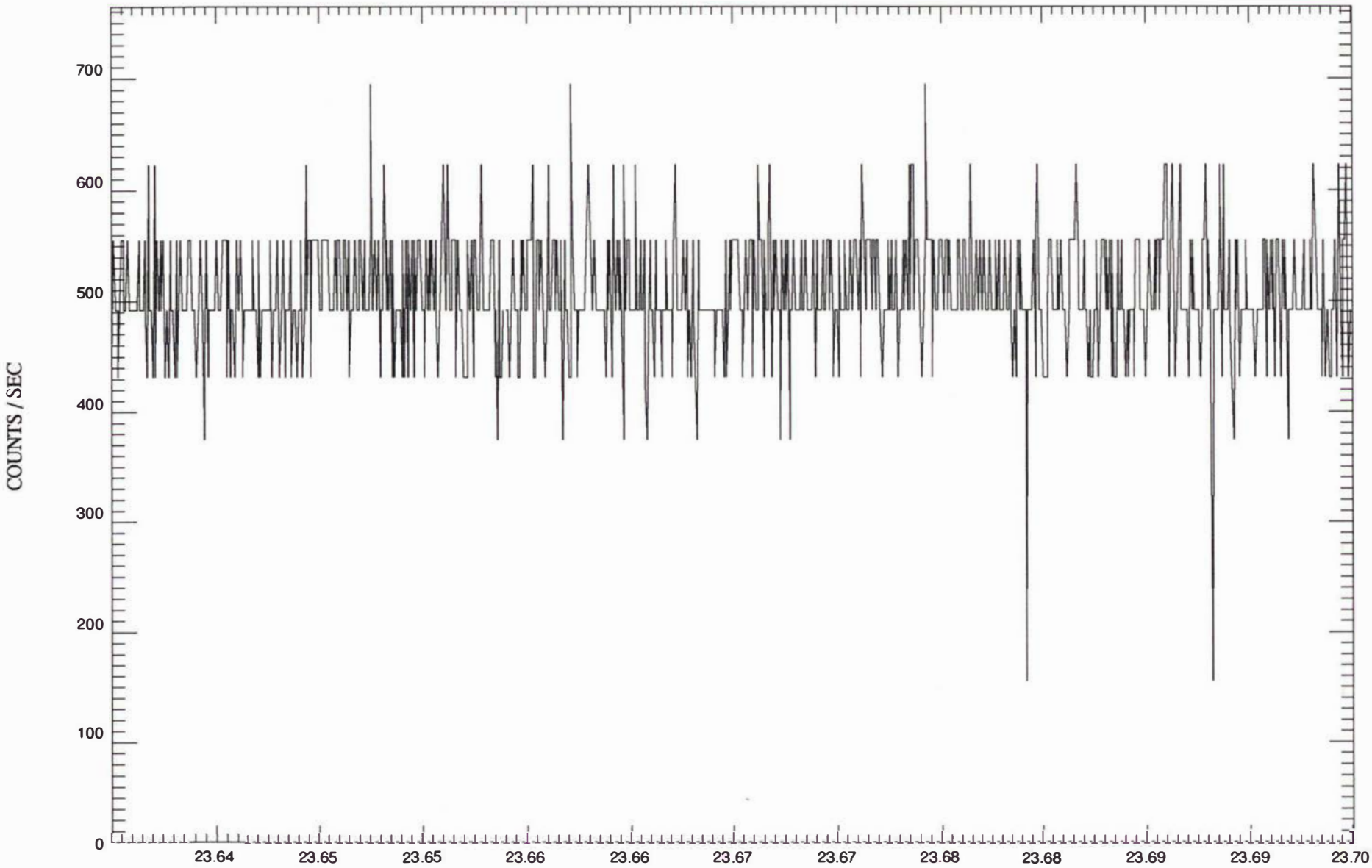


TIME, SECS

B# 1

HUS 2A, MODE 1, NOT AVERAGED QEDR day 240, year 1992 to day 240, year 1992 8/28/92

CALIBRATION DATA INCLUDED



From MEEGAN@ssl.msfc.nasa.gov Sun Aug 30 08:49:45 1992
Date: Sun, 30 Aug 1992 10:50:29 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01881

Aug 28

TIME: TJD=8862 SECONDS=25621

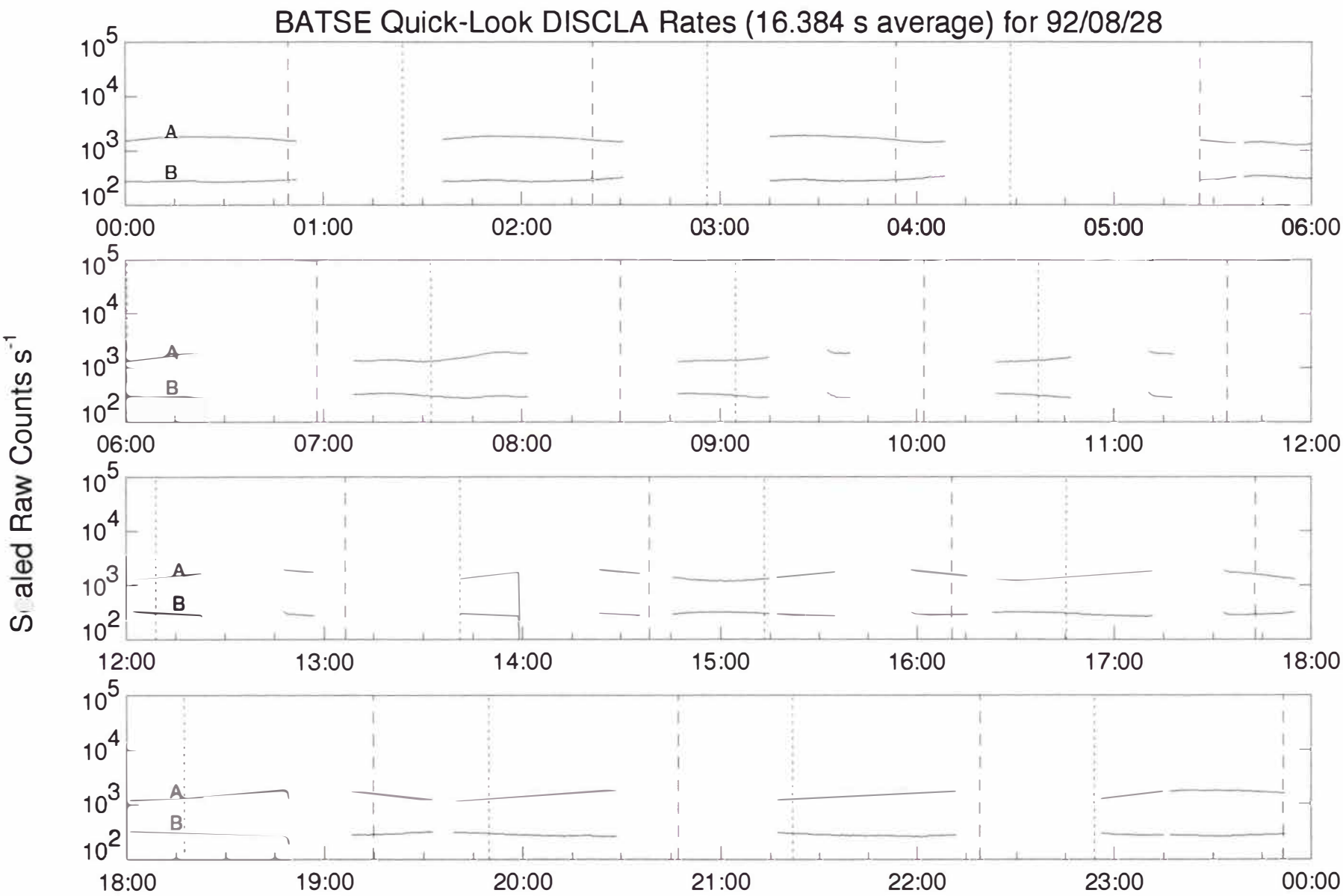
TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

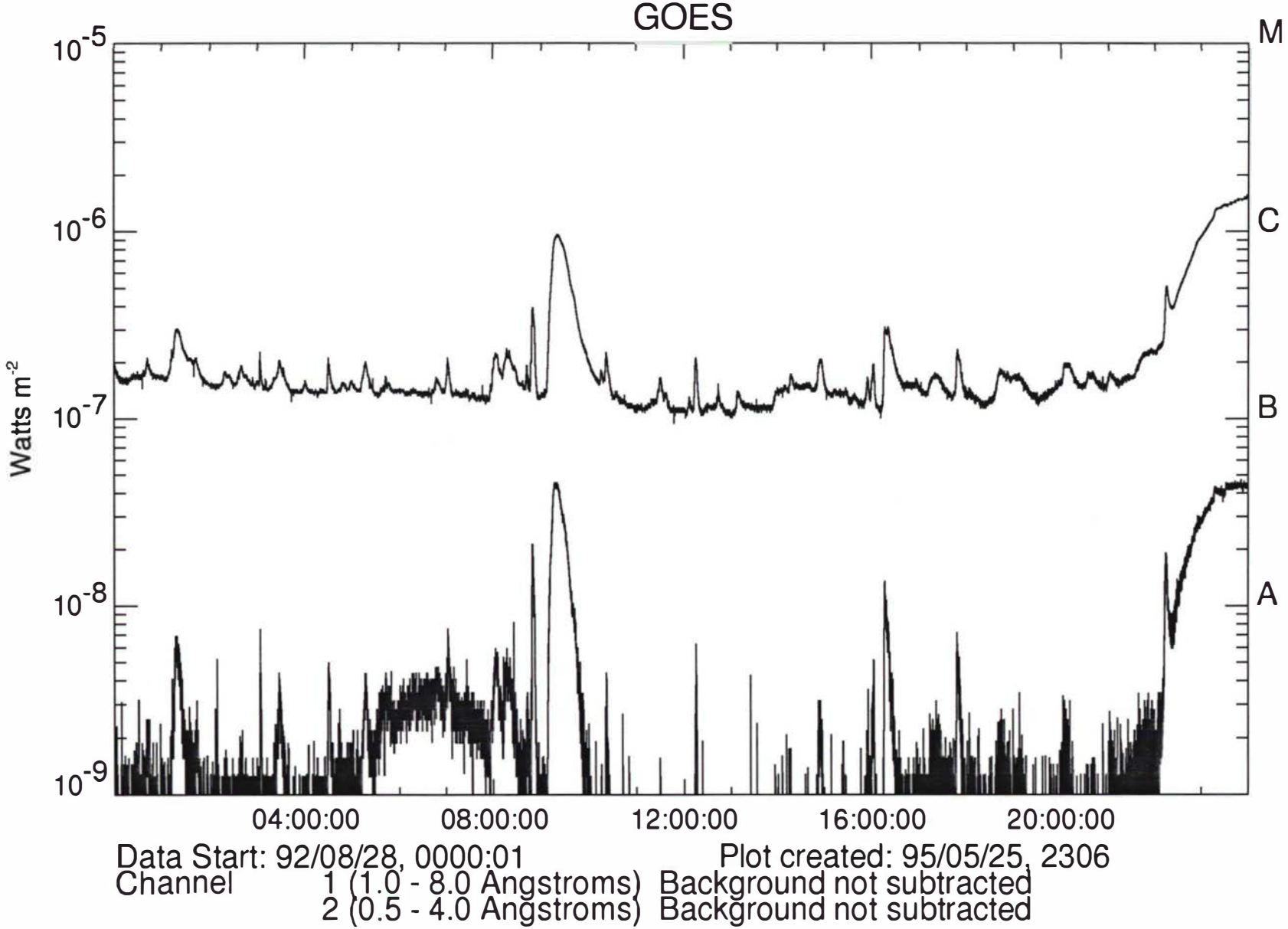
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

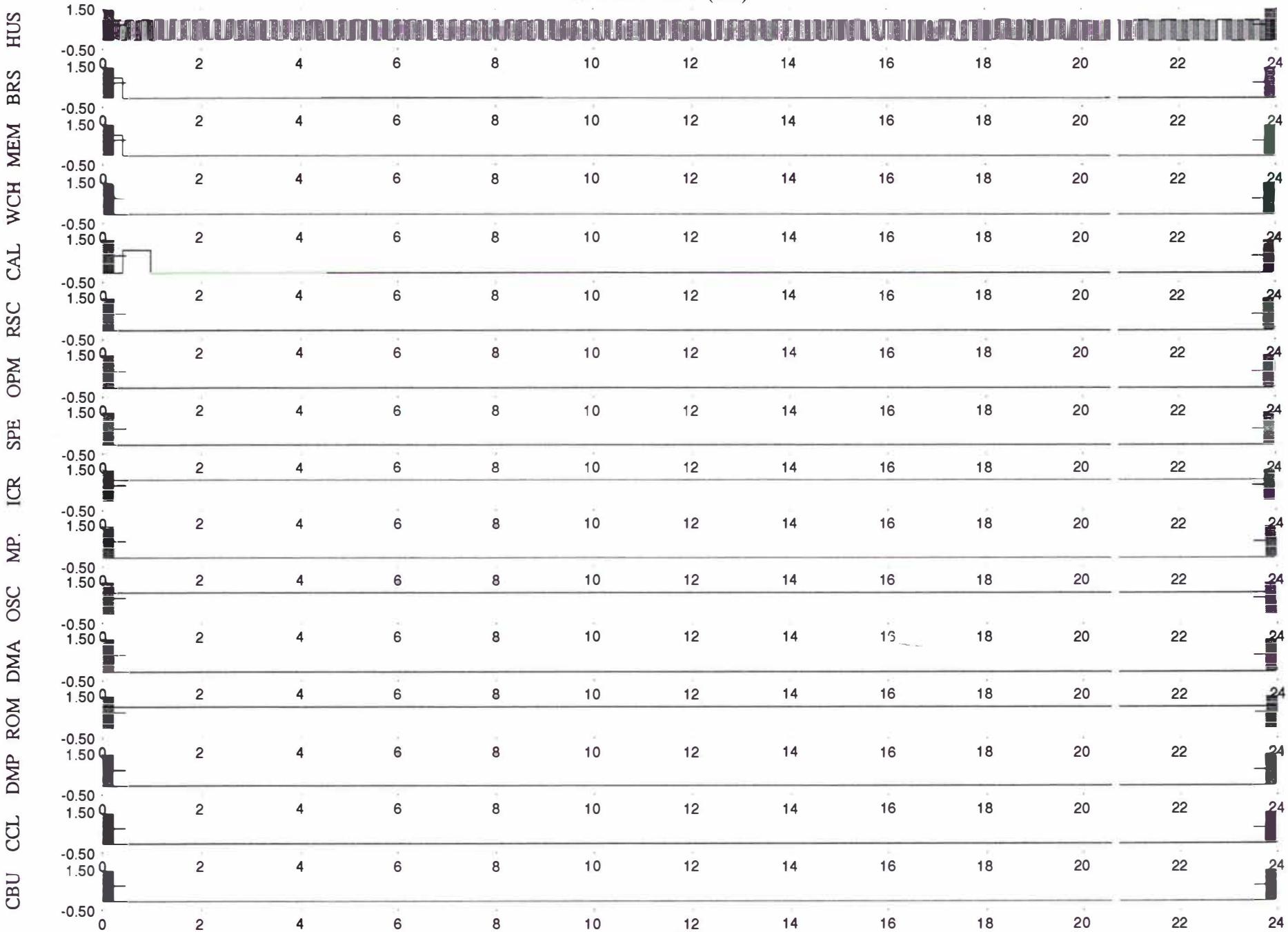
COMMENTS:
FLUCTUATION OF GRO J0422+32 RIGHT AFTER RISE.


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/28
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 92/09/29, 0222 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


GOES
M
C
B
A
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/28, 0000:01
Plot created: 95/05/25, 2306
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 241, year 1992 to day 241, year 1992 10/28/92

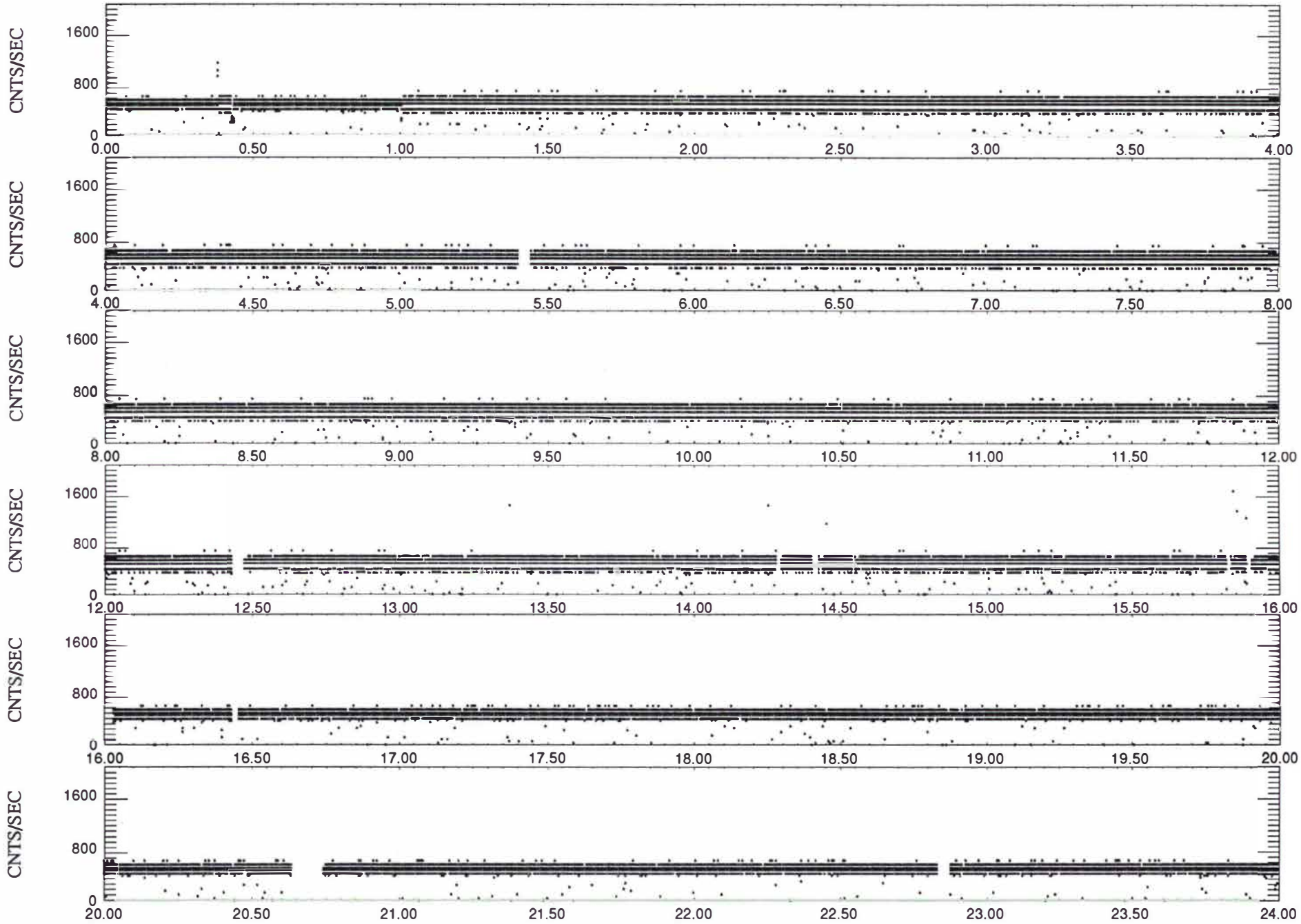
NO BURST (11)



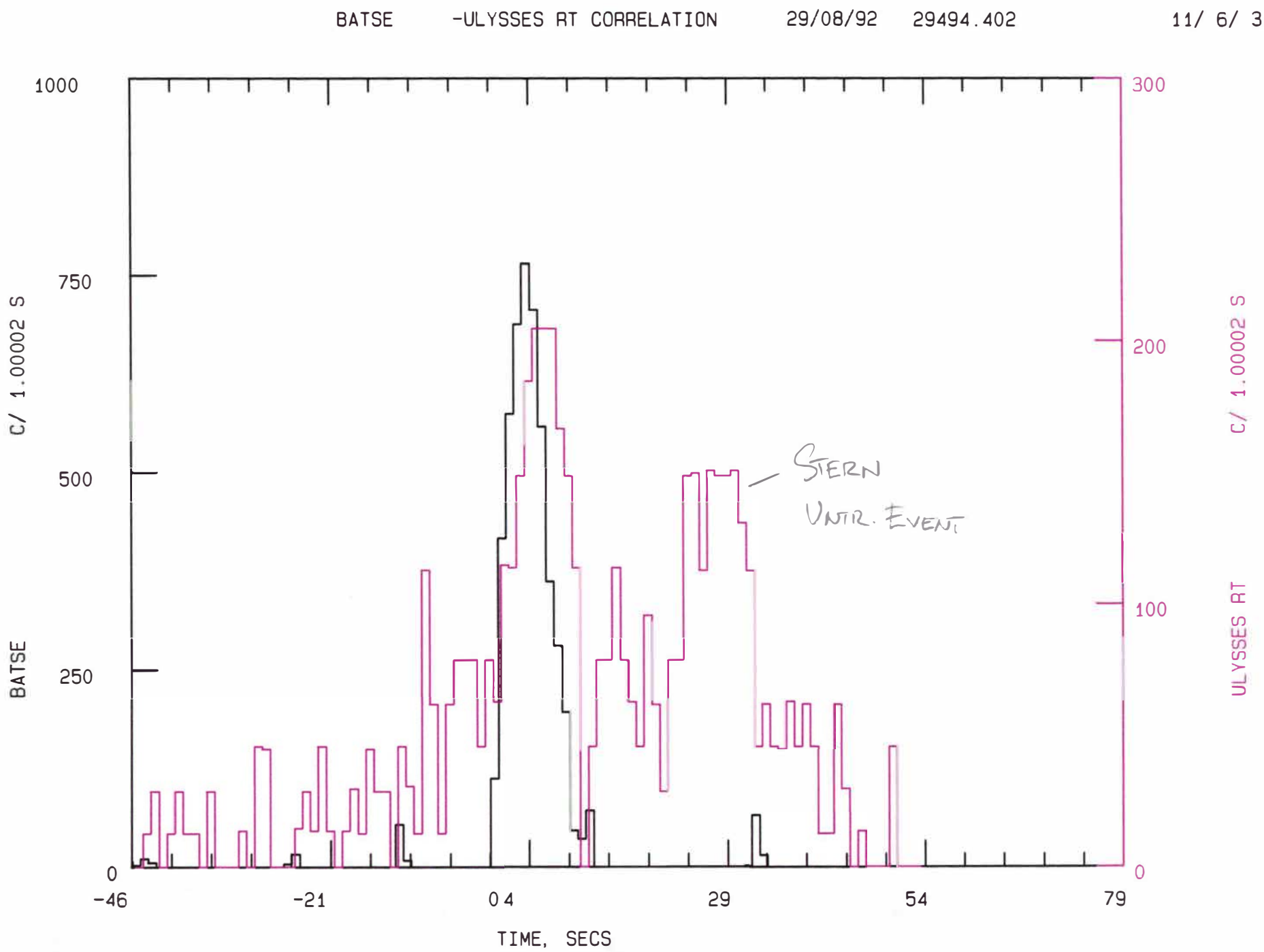
UNIVERSAL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 241, year 1992 to day 241, year 1992 10/28/92

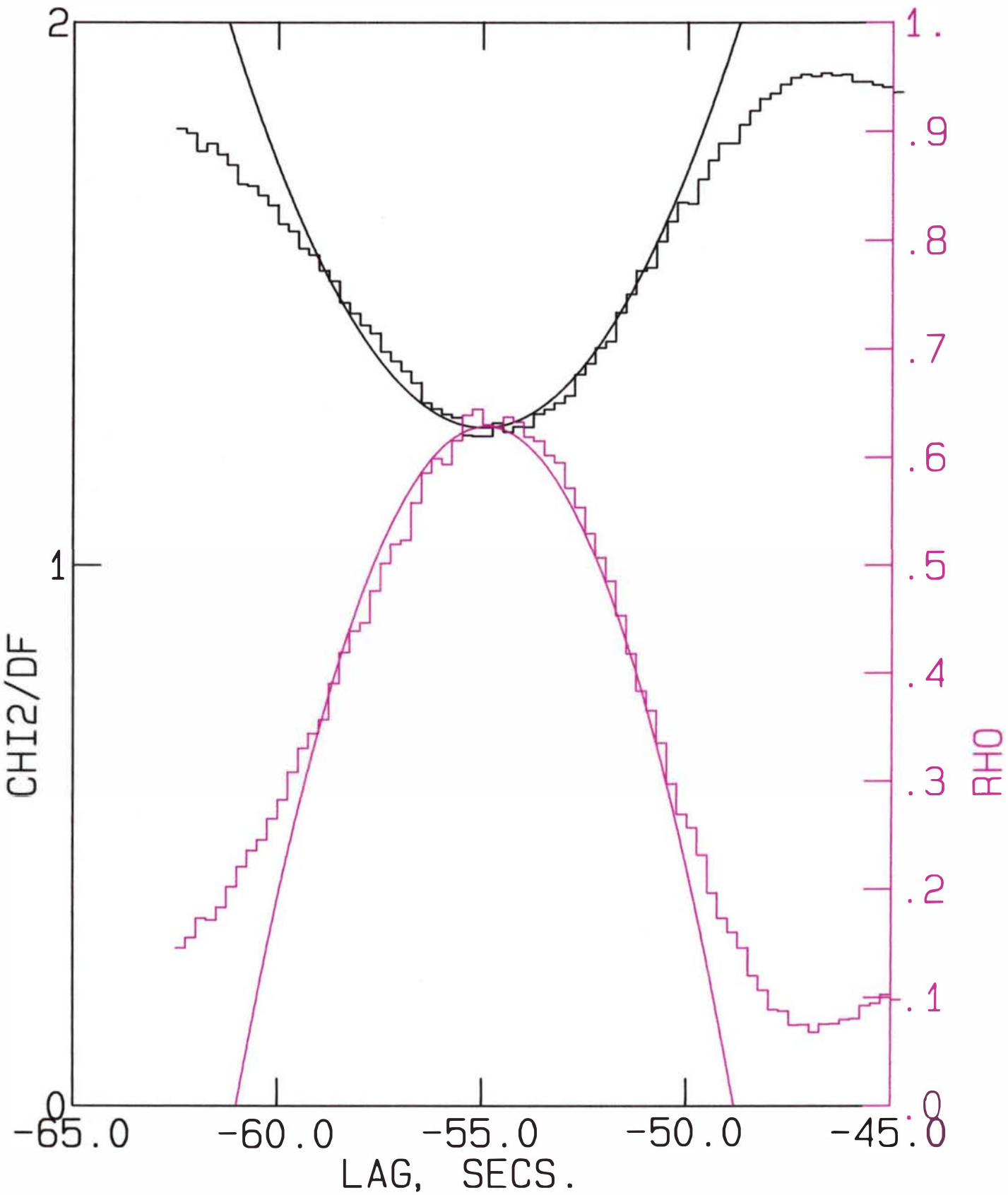
CALIBRATION DATA INCLUDED

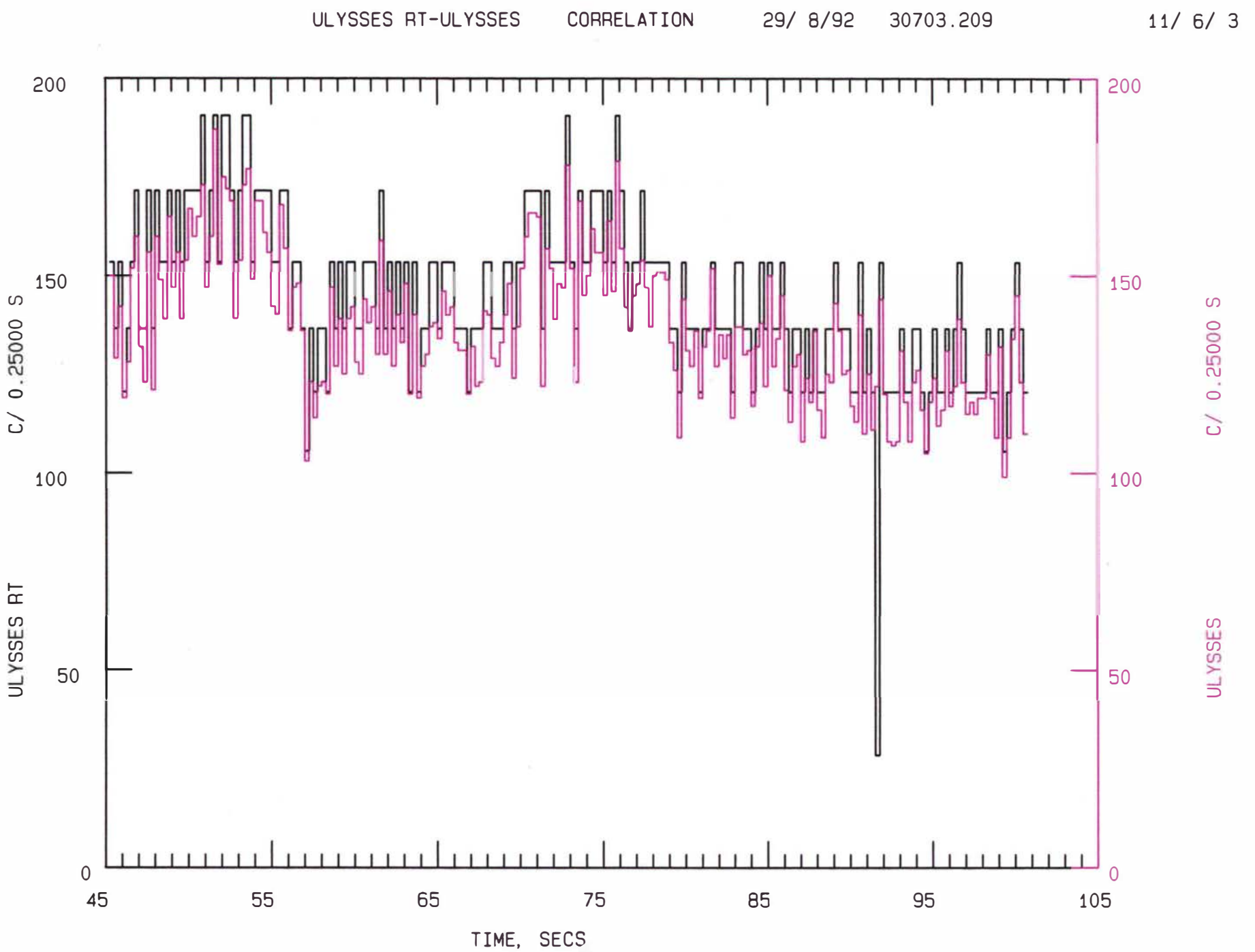


UNIVERSAL TIME

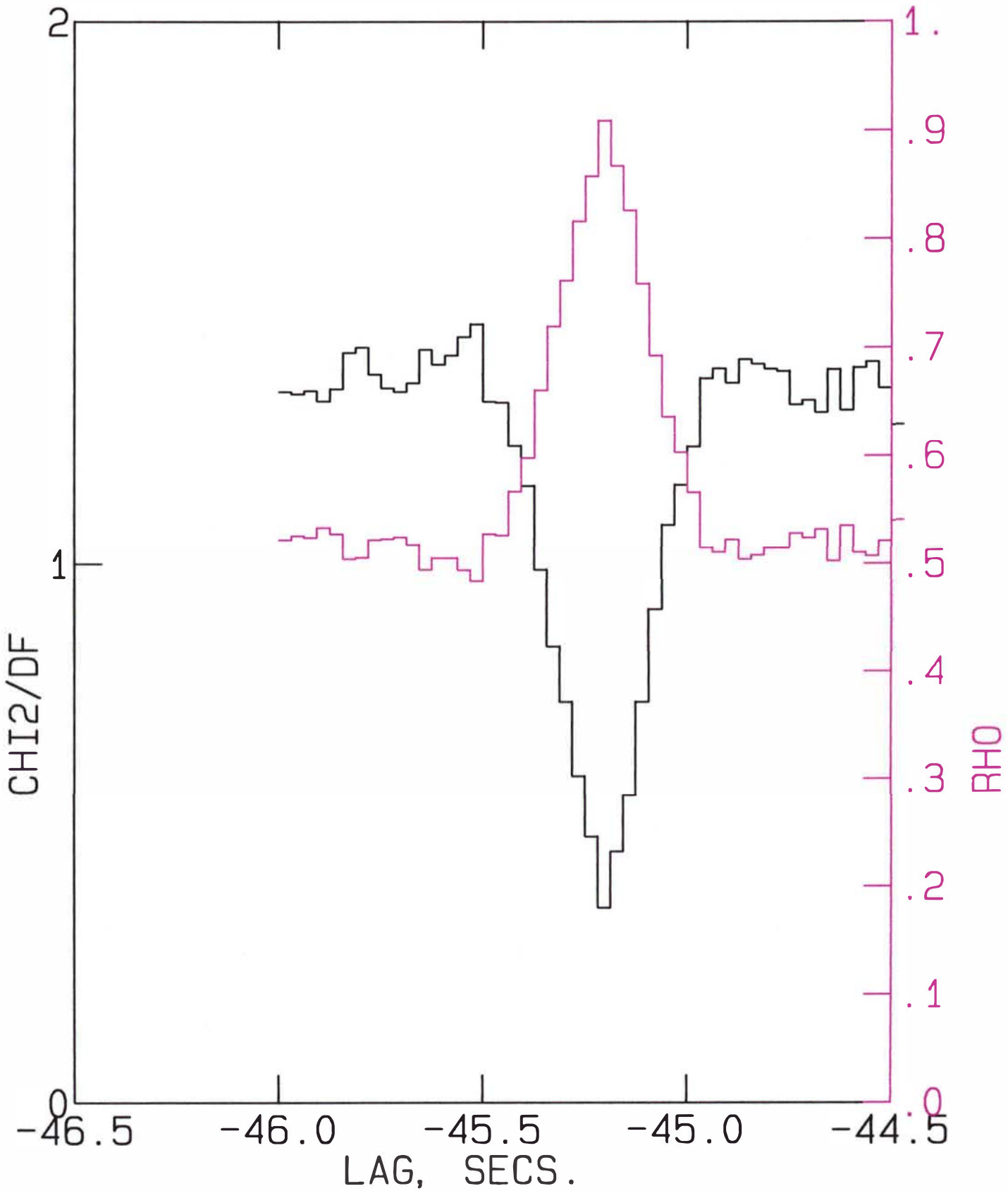

BATSE -ULYSSES RT CORRELATION 29/08/92 29494.402 11/ 6/ 3
1000
750
500
250
0
C/ 1.00002 S
BATSE
300
200
100
0
C/ 1.00002 S
ULYSSES RT
-46
-21
0 4
29
54
79
TIME, SECS
STERN
UNTR. EVENT

BATSE -ULYSSES RT CORRELATION 29/08/92 29494.402



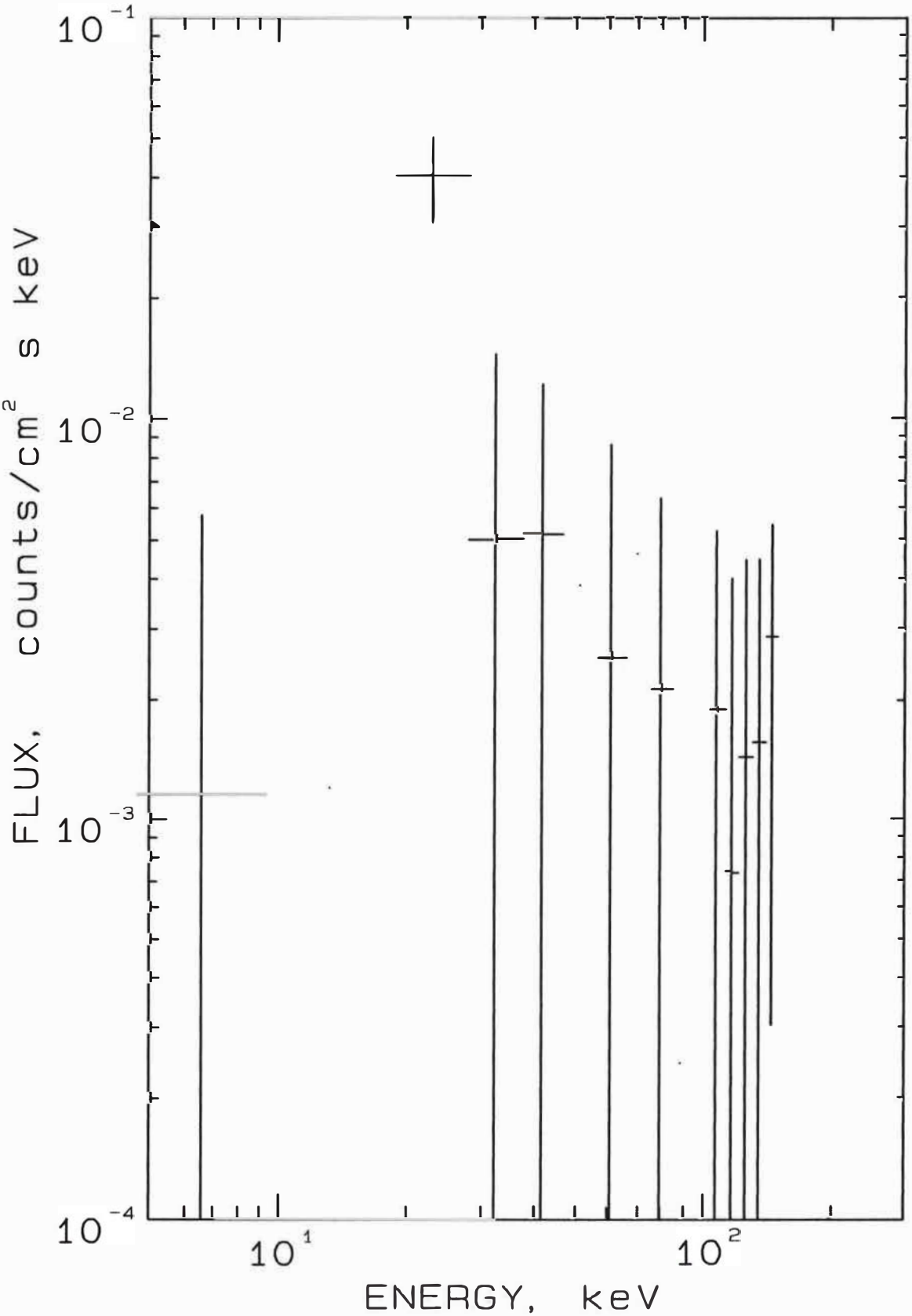

ULYSSES RT-ULYSSES CORRELATION 29/ 8/92 30703.209 11/ 6/ 3
200
150
100
50
0
C/ 0.25000 S
ULYSSES RT
45
55
65
75
85
95
105
TIME, SECS
ULYSSES

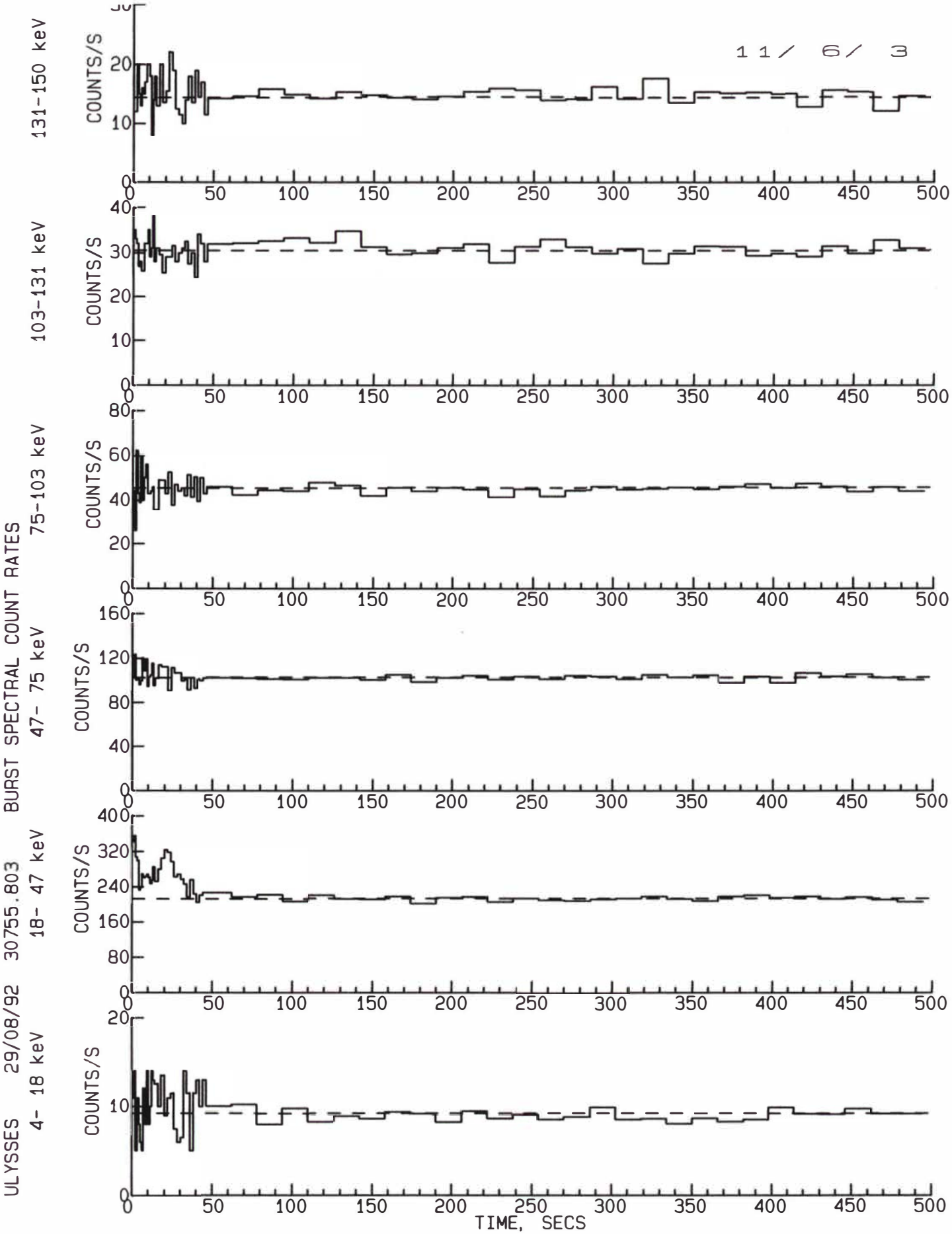
ULYSSES RT-ULYSSES CORRELATION 29/ 8/92 30703.209

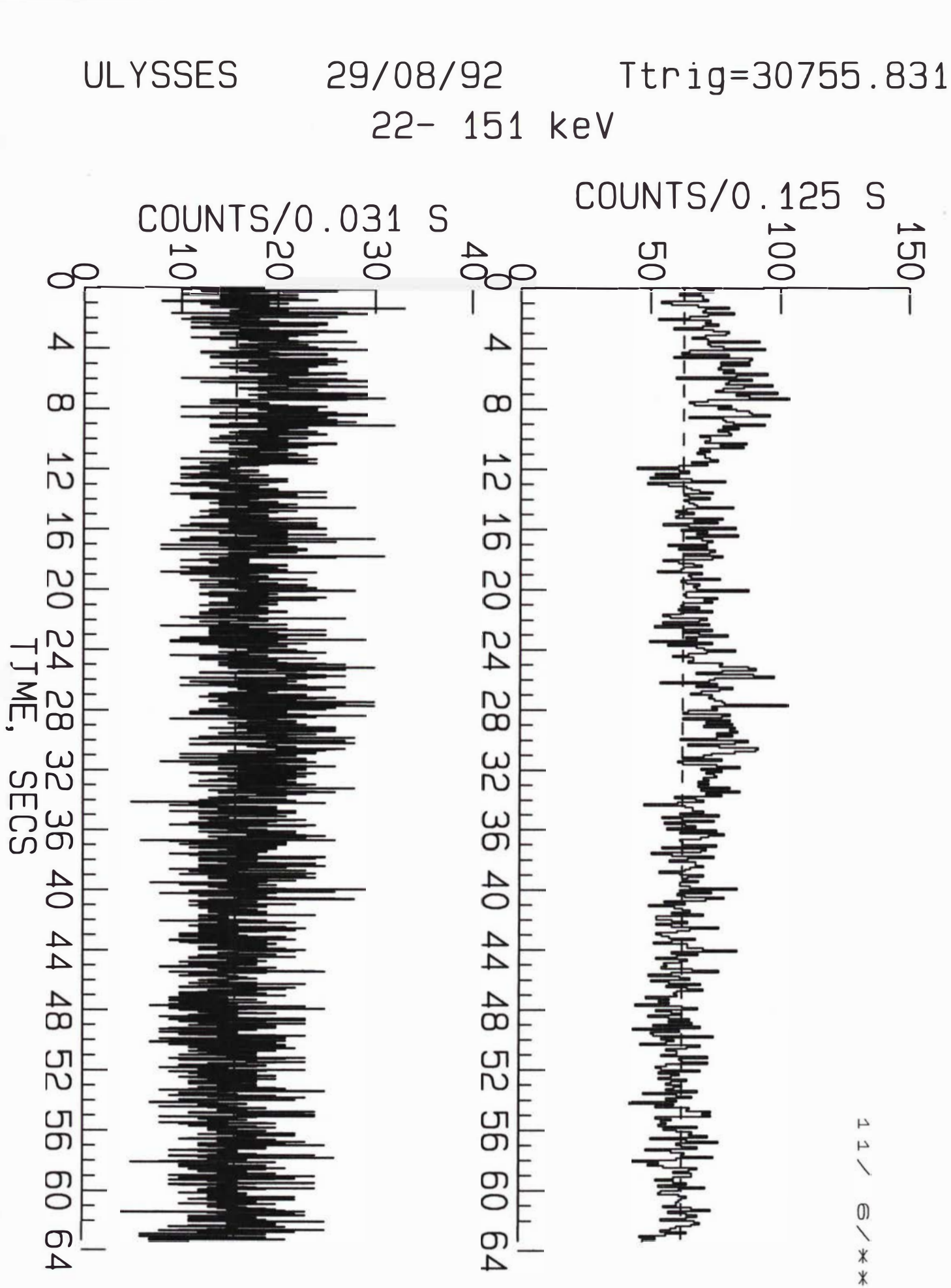


ULYSSES 29/08/92 30755.803

SPECTRUM INTEGRATED OVER 334.1 SECONDS, INTERVALS 2 TO 50




ULYSSES 29/08/92 30755.803 BURST SPECTRAL COUNT RATES
4- 18 keV
18- 47 keV
47- 75 keV
75-103 keV
103-131 keV
131-150 keV
COUNTS/S
11/ 6/ 3
TIME, SECS

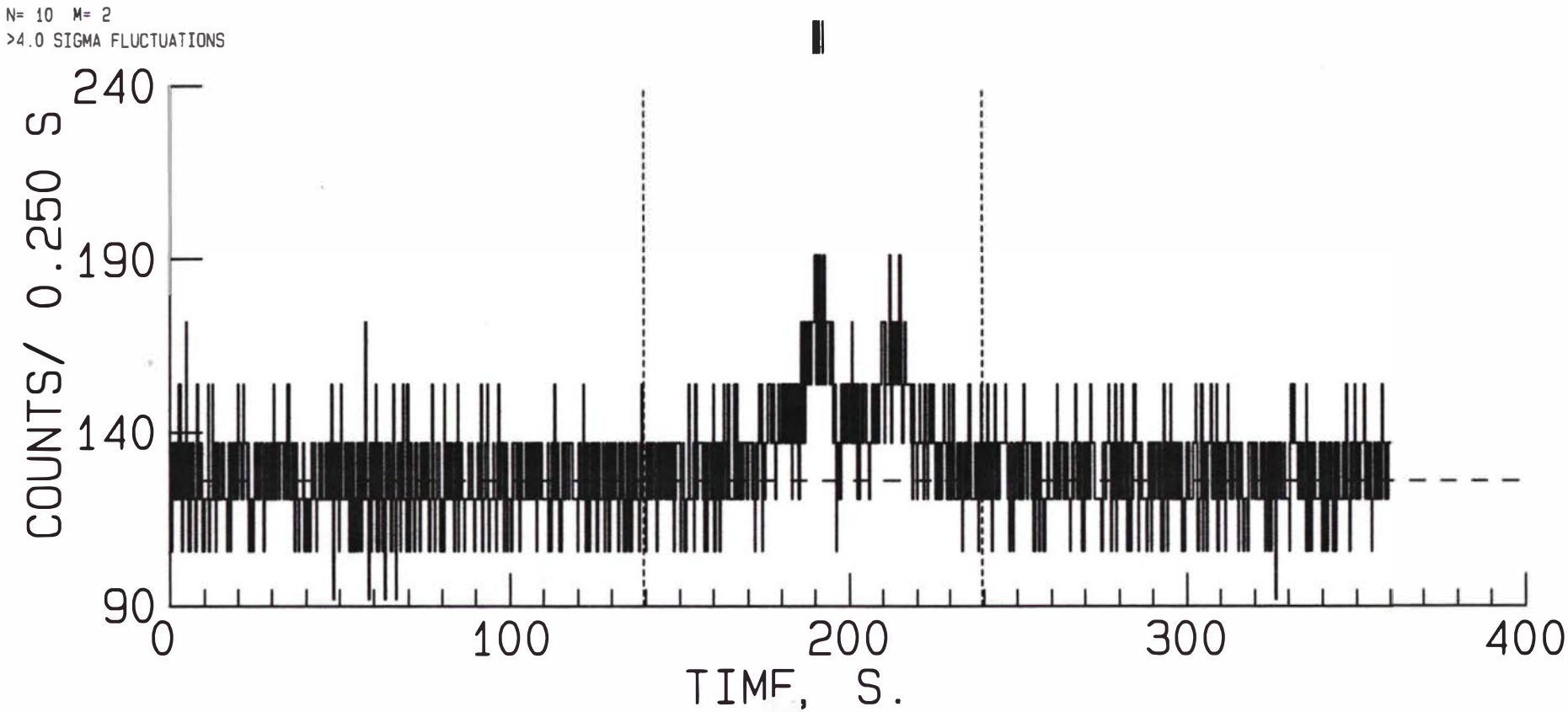

ULYSSES 29/08/92 Ttrig=30755.831
22- 151 keV
COUNTS/0.031 S
0
10
20
30
COUNTS/0.125 S
0
40
50
100
150
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64
TIME, SECS
11/ 6/**

ULYSSES RT

11/ 6/ 3

29/ 8/92 30564.191 s

22- 151 keV



```
          ********************
          *CATSEARCH PROGRAM*
          ********************

BATSE BURST # 1882
EVENT OF 1992 AUG 29 DAY OF YEAR=242
EVENT CROSSING TIME AT BATSE      : 43900. S. OR 12:11:39.8
COORDINATES ARE     .000     .000       6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 180.000   10.600
BATSE PEAK COUNTING RATE:  0000   C/S

EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
POSITION OF ULYSSES ON 29/ 8/  92 IS:
RA=  157.404 DEC=     1.311 DIST=     6.273 AU
BATSE-ULYSSES DISTANCE =  938470720. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=155.71 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2853.21 SECS.
CROSSING TIME AT ULYSSES     IS 41047. S. OR 11:24:06.5 +/-  230.26 SECONDS
```

NO

```
From HAGEDON@ssl.msfc.nasa.gov Mon Aug 31 09:24:25 1992
Date:    Mon, 31 Aug 1992 11:25:17 -0500 (CDT)
From: HAGEDON@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
        khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

                BATSE BURST TRIGGER
NO.: 01882      Aug 29

TIME: TJD=8863 SECONDS=43899

TYPE: BURST                     SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:       SIGMA

INTENSITY:          COUNTS/CM2

LOCATION: ZENITH=107    AZIMUTH=313    ERROR=      DEGREES

COMMENTS:
WEAK BURST.  SINGLE SPIKE.  DURATION ~3S.
```

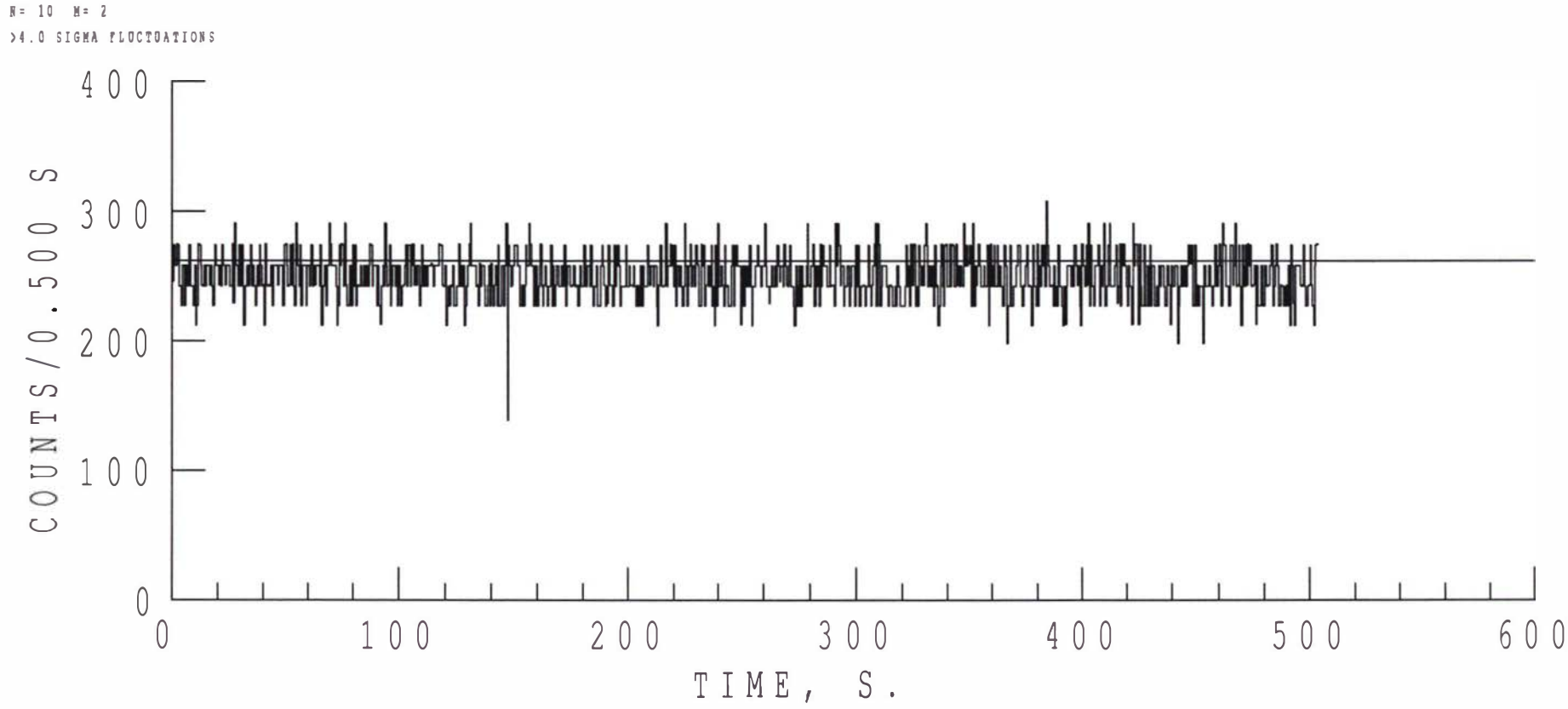
17/ 6/94

ULYSSES RT

29/ 8/92 40788.105 s

0.250 S INTERVALS REGROUPED BY 2

0- 0 keV



From kouveliotou%8868.span@Sdsc.Edu Wed Sep 2 07:01:12 1992
Date: Wed, 2 Sep 92 14:02:15 GMT
From: kouveliotou%8868.span@Sdsc.Edu (Chryssa Kouveliotou NASA/MSFC (205) 544-7711)
Subject: eso obsns of grb920830
To: khurley@sunspot.ssl.berkeley.edu
X-St-Vmsmail-To: HURLEY,SSL::FISHMAN
Content-Length: 572

From: ESOMC1::SMTP%"asmette@eso.org" 1-SEP-1992 20:42:13.21
To: 8868::KOUVELIOTOU@mc1.hq.eso.org
CC:
Subj: Re: grb920830

Date: Wed, 2 Sep 92 03:09:41 +0200
From: asmette@eso.org (Alain Smette)
Message-Id: <9209020109.AA19445@ns1.hq.eso.org>
To: 8868::KOUVELIOTOU@mc1.hq.eso.org
Subject: Re: grb920830

Chryssa,

 Great! (is the weather) Perfect photometric night...We'll do it tonight!

And thank you for the coordinates. But they are quite different
of the first you gave me (269, -70)...
If red alerts arrive again, should I consider a much wider error box?

Alain

From khurley@space6.ssl.berkeley.edu Tue Dec 15 16:52:38 1992
Date: Tue, 15 Dec 92 16:46:51
From: khurley@space6.ssl.berkeley.edu
Content-Length: 1193

got Venus crossing times
FAX to Robin

Dear John,

Here is a fairly complete list of Ulysses events from July to October 1992, excepting the events I already gave you. I have listed the Ulysses and Earth crossing times where available.

July	UCT	ECT	
1	72000	70740	N/O
7	25300	23615	N/O
14	46000	47040	← Only one they have PVO data for! (Among the ones for which ECT is given)
18	55000	52860	N/O
26	02066	----	
31	62196	61620	N/O

Sent Mar 2

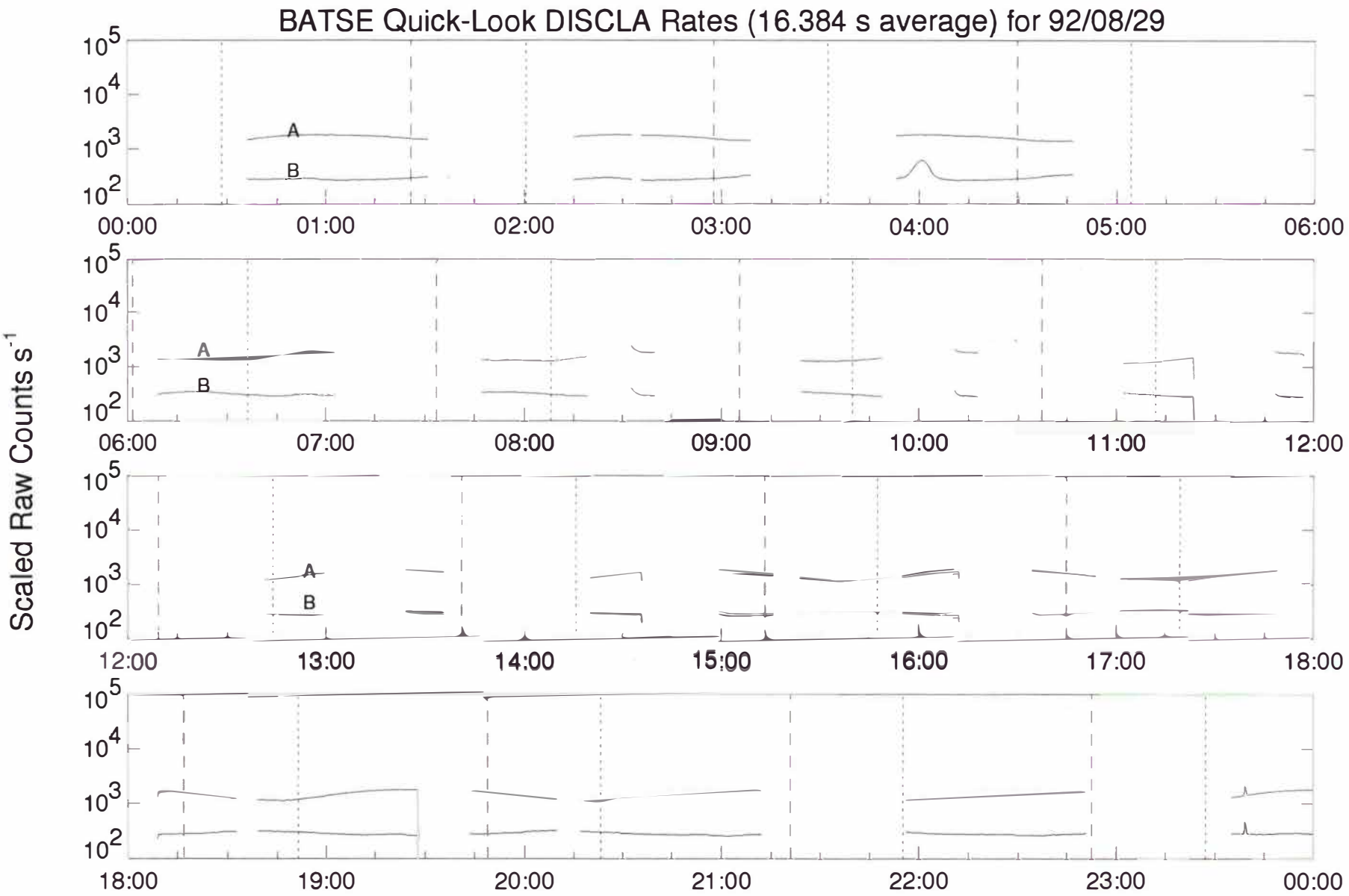
August			
10	77700	-----	
13	11000	12828	N/O
16	42600	45360	N/O
17	15055	-----	
19	40612	-----	
22	84184	-----	DMSP 8:54Z (3 sat.)
24	38400	39183	N/O DMSP (2)
27	85245	-----	
29	30755	-----	RK will check 4/93
29	63712	-----	
30	05800	06318	N/O
30	32310	-----	

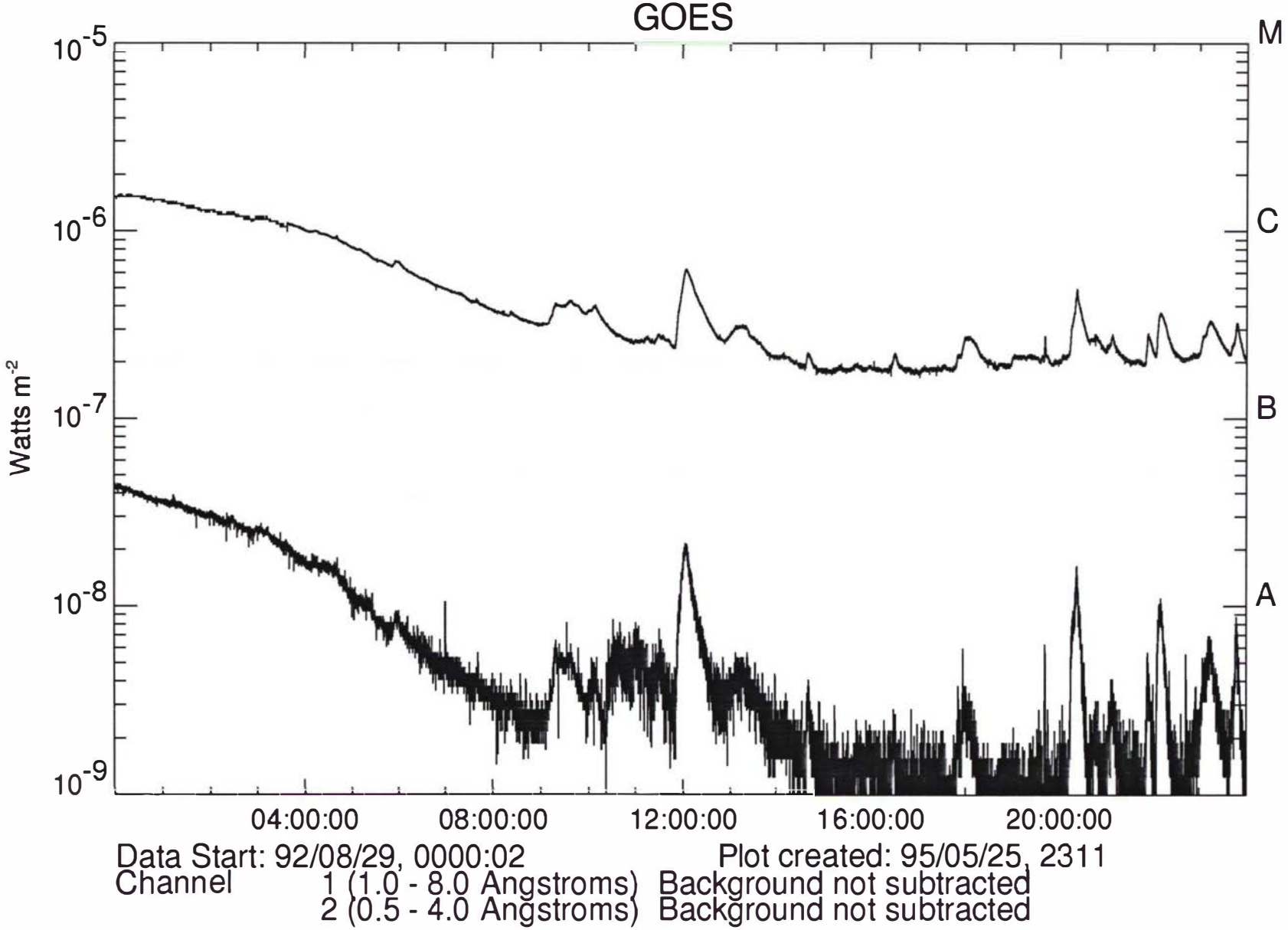
September			
1	04311	-----	(solar?)
2	03230	-----	DMSP (3) ~01743
3		84540	N/O
4	00420		Same as previous event
19	28450	-----	(solar?)
21	00060	-----	

October			
1	80900	-----	
3	20880	-----	
4	49100	-----	
6	40720	-----	
9	21980	24070	N/O
13	81256	-----	
15	04000	05792	N/O
22	55200	55200	N/O
25	52578	-----	
27	26805	-----	
29	42125	-----	
30	64000	-----	(solar)
31	40000	-----	

The Earth-Ulysses distance varied between about 5.76 and 6.28 AU in this period.

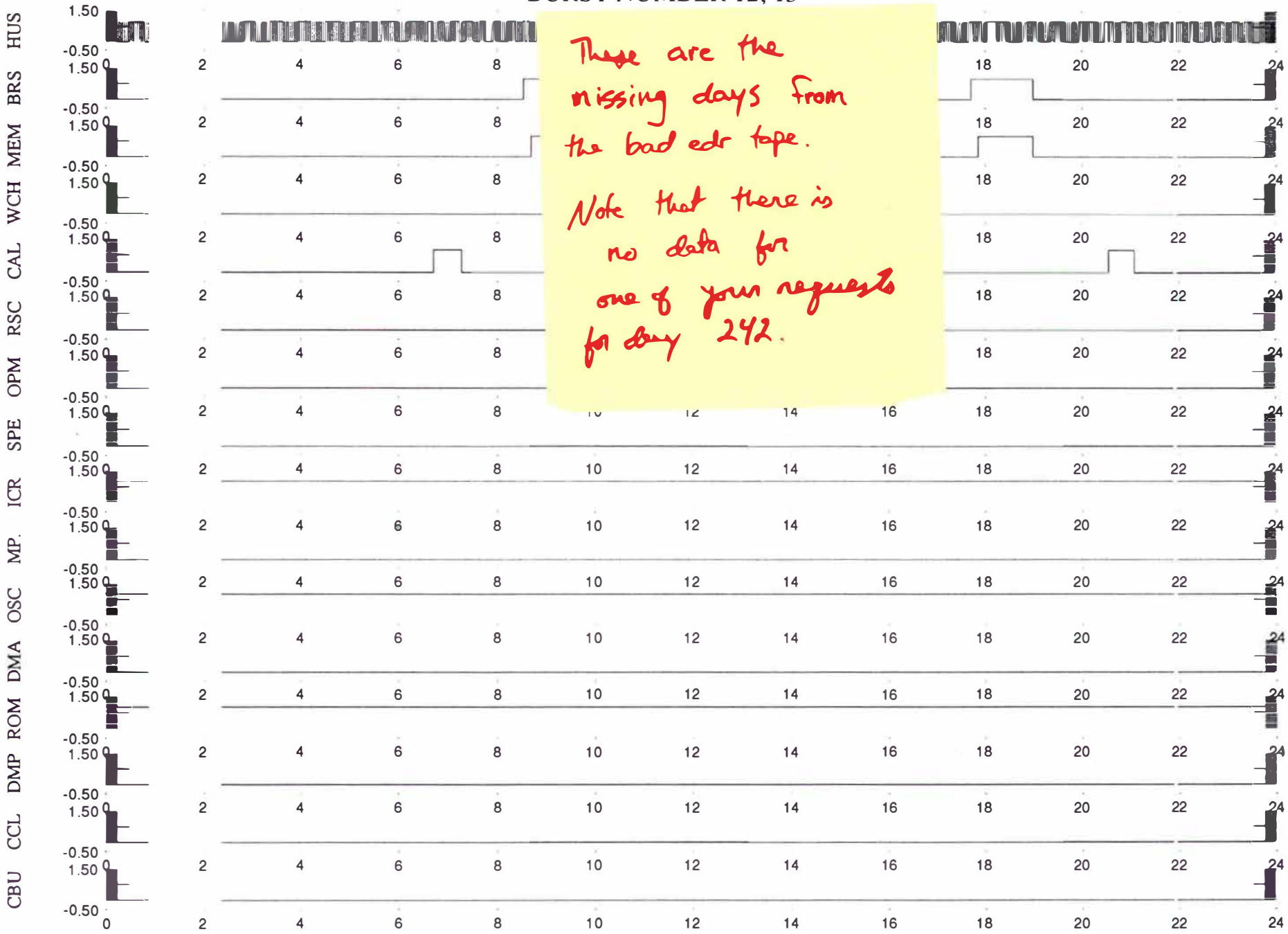
POSITION OF ULYSSES ON 29/ 8/1992 IS:
RA= 157.404 DEC= 1.311 DIST= 6.273 AU
PO TION OF VENUS ON 29/ 8/1992 IS ALPHA= 177.462 DELTA= 2.405 DISTANCE=1.56995 AU
TH DISTANCE BETWEEN TWO OBJECTS AT
157.404 1.311 938470300.00 KM. AND
177.462 2.405 234864200.00 KM. IS
722391700.00 KM., OR 4.829 A.U., OR 2409.64 LIGHT-SECONDS
THE ANGLE BETWEEN THEM IS 20.077 DEGREES


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/29
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/09/29, 0222 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


GOES
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/29, 0000:02
Plot created: 95/05/25, 2311
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 242, year 1992 to day 242, year 1992 10/28/92

BURST NUMBER 12, 13



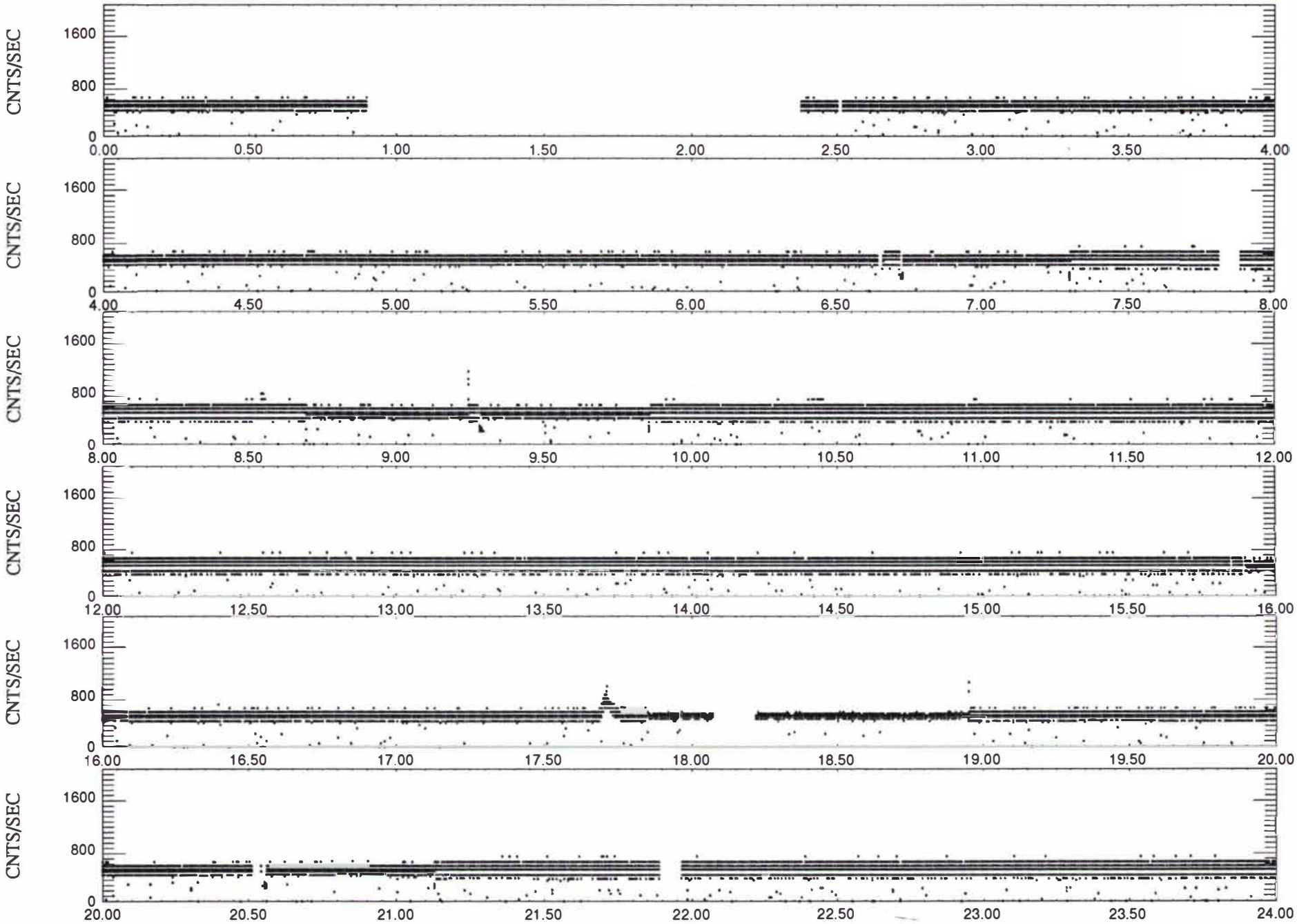
These are the missing days from the bad edr tape.

Note that there is no data for one of your requests for day 242.

UNIVERSAL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 242, year 1992 to day 242, year 1992 10/28/92

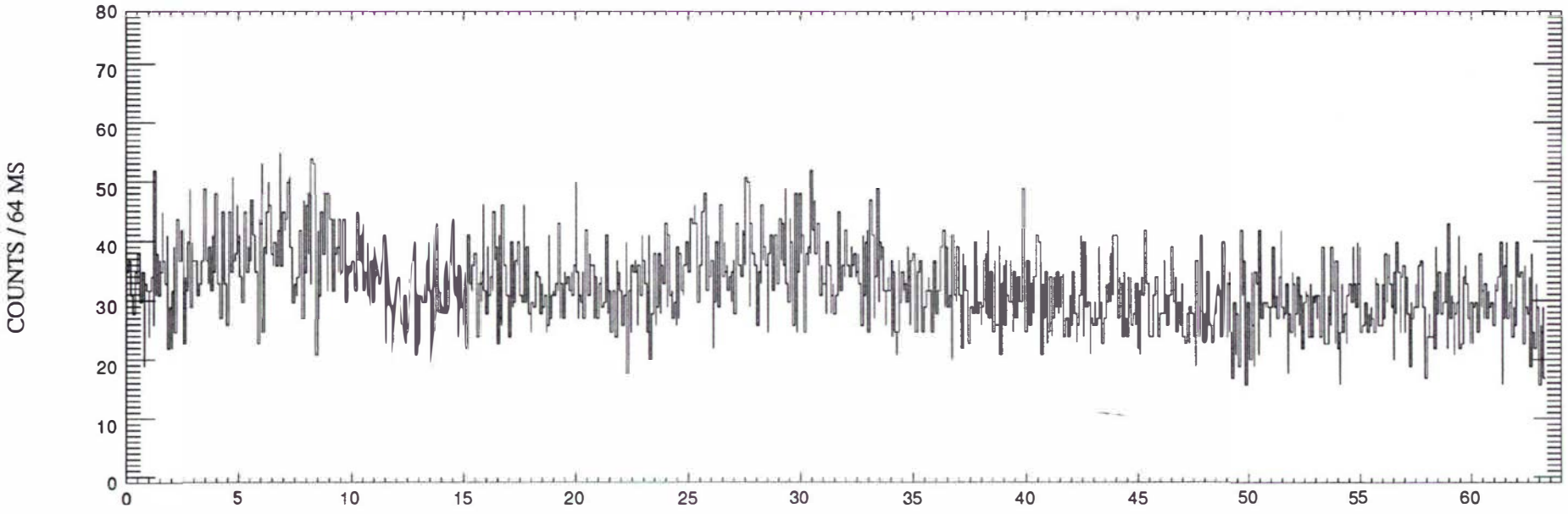
CALIBRATION DATA INCLUDED

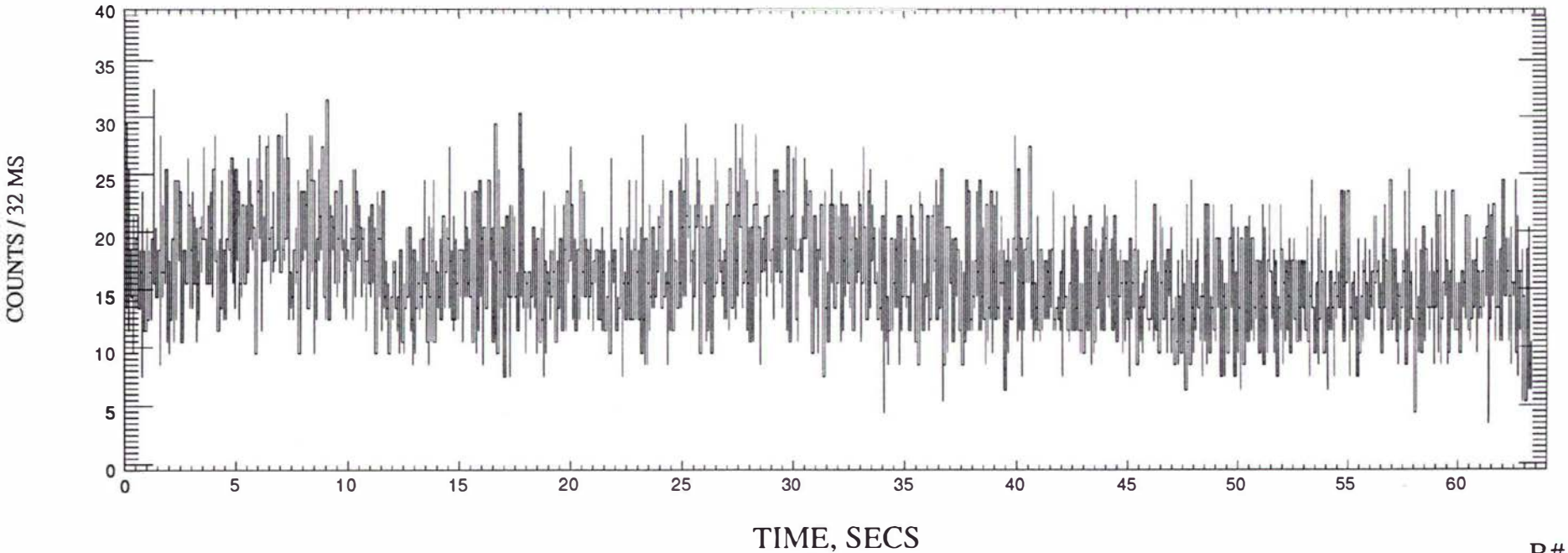


UNIV' 'AL TIME

HUS 2A TRIGGERED DATA EDR day 242, year 1992 10/28/92

Burst Counter 12 at UT= 8.543278240628 h=30755.802 s

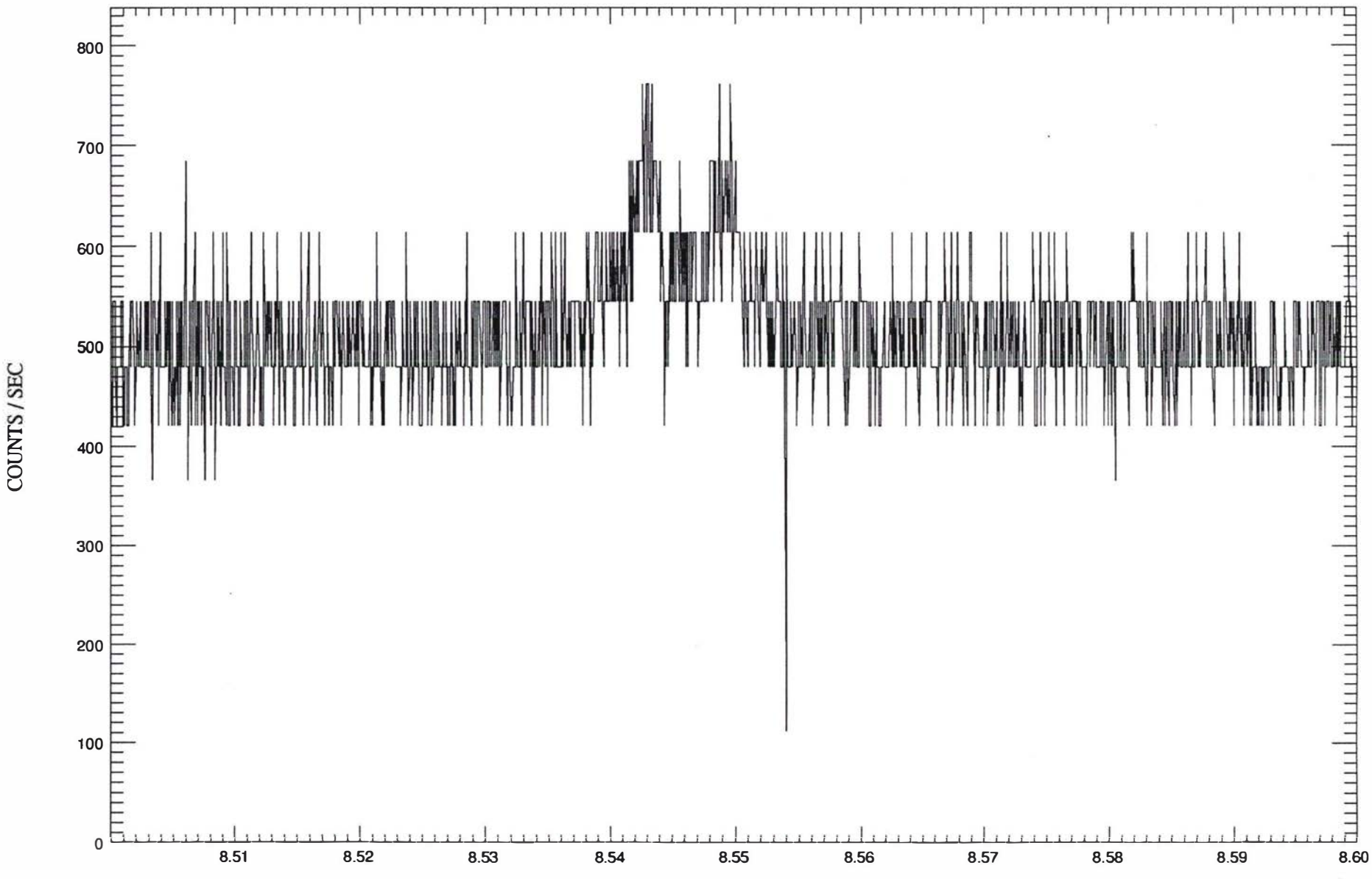




B# 1

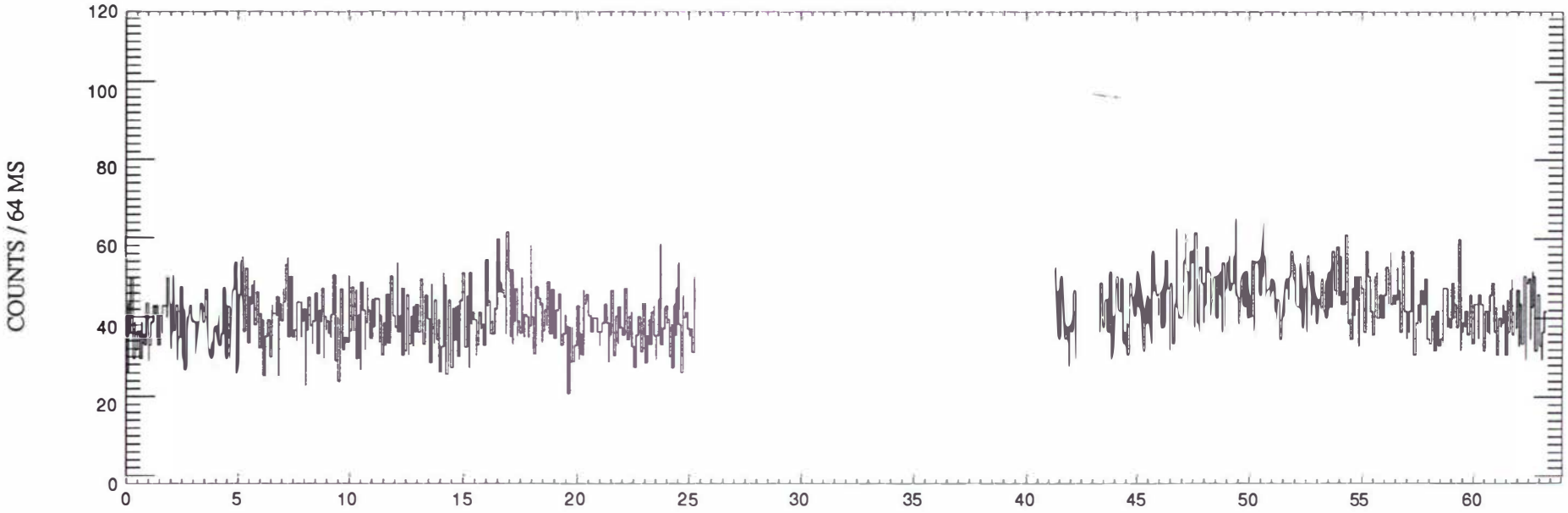
HUS 2A, MODE 1, NOT AVERAGED QEDR day 242, year 1992 to day 242, year 1992 8/31/92

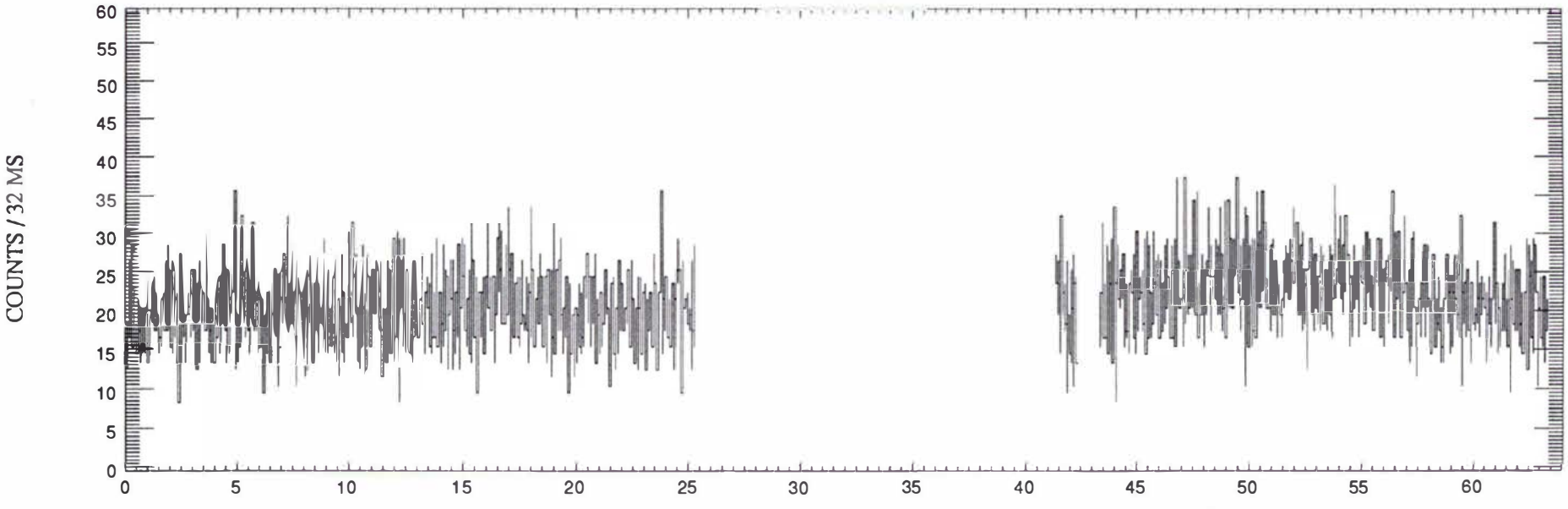
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR day 242, year 1992 10/28/92

Burst Counter 13 at UT=17.697973081801 h=63712.703 s

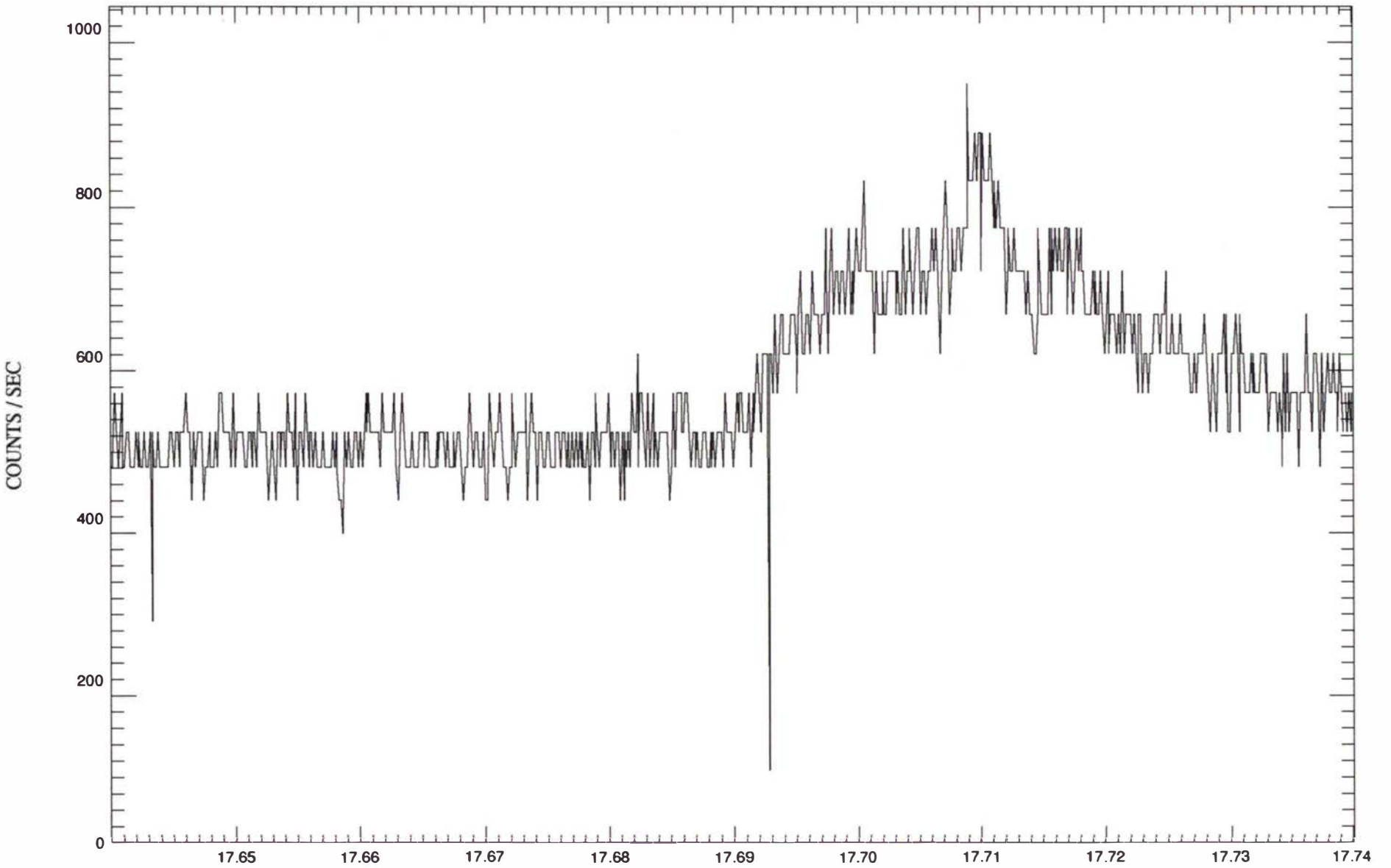




B# 2

HUS 2A, MODE 1, NOT AVERAGED QEDR day 242, year 1992 to day 242, year 1992 9/1/92

CALIBRATION DATA INCLUDED



```
          ********************
          *CATSEARCH PROGRAM*
          ********************
```

RI

```
BATSE BURST # 1883
EVENT OF 1992 AUG 30 DAY OF YEAR=243
EVENT CROSSING TIME AT BATSE      :  6318. S. OR 01:45:17.5
COORDINATES ARE     .000     .000       6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 258.500  -73.400
BATSE PEAK COUNTING RATE:  0000   C/S

EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
POSITION OF ULYSSES ON 30/ 8/  92 IS:
RA=  157.541 DEC=     1.211 DIST=     6.272 AU
BATSE-ULYSSES DISTANCE =  938357024. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 85.72 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=  233.36 SECS.
CROSSING TIME AT ULYSSES     IS  6551. S. OR 01:49:10.9 +/-  595.45 SECONDS
```

```
From BHAT@ssl.msfc.nasa.gov Mon Aug 31 12:45:28 1992
Date:    Mon, 31 Aug 1992 14:46:14 -0500 (CDT)
From: BHAT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
        khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1296

                BATSE BURST TRIGGER
NO.:  1883   Aug 30
TIME: TJD=8864 SECONDS=6318

TYPE: BURST                     SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:        SIGMA

INTENSITY:           COUNTS/CM2

LOCATION: ZENITH= 20.5  AZIMUTH=  1.4  ERROR=      DEGREES

COMMENTS:
THIS BURST HAS A SHARP RISE AND A SLOW DECAY TIME PROFILE AND LASTS FOR ABOUT
10 SEC. GOOD SIGNAL IS SEEN ABOVE 300 KEV.
```

COMPTEL/BATSE/IPN Burst Localizations

All Coordinates Epoch J2000.0

UB= Ulysses/BATSE UP = Ulysses/PVO BP= BATSE/PVO

		Center		Radius			BATSE Position					COMPTEL Position			
Burst	Rf	Ra	Dec	Raduis	(-/+)	D (AU)	Ra	Dec	1σ	Smin	Rf	Ra	Dec	1σ	Smin
GRB910425 UB	1	115.140	23.172	51.733	0.053	2.848	91.29	-22.77	1.02	0.27	3	90.20	-22.20	0.92	0.28
GRB910503 UB	1	117.730	22.657	30.352	0.010	3.042	87.45	38.74	0.87	0.03	3	87.00	38.60	0.44	0.30
GRB910601 UB	1	307.038	-20.538	52.936	0.011	3.708	310.12	32.34	0.17	0.02	3	309.90	32.70	0.46	0.37
GRB910627 UB	1	134.824	18.425	66.820	0.031	4.215	197.99	-2.48	0.28	1.28	3	199.40	-5.00	1.63	0.96
UP	1	133.523	18.792	68.352	0.036	3.621	-	-	-	1.53	-	-	-	-	0.71
GRB910709	NA	NA	NA	NA	NA	NA	172.77	81.67	2.31	NA	3	144.10	75.60	1.80	NA
GRB910814 UB	1	328.558	-13.966	45.699	0.018	4.918	346.35	30.43	0.48	1.89	3	343.80	29.50	0.39	0.19
UP	1	328.287	-14.629	46.428	0.019	4.626	-	-	-	1.87	-	-	-	-	0.17
GRB911118 UB	1	166.979	6.889	30.110	0.017	4.972	167.03	-20.85	0.36	2.37	3	166.30	-22.50	1.11	0.71
UP	1	162.619	8.562	32.018	0.019	4.248	-	-	-	2.29	-	-	-	-	0.75
BP	1	190.131	-2.551	30.766	0.086	0.813	-	-	-	1.76	-	-	-	-	0.23
GRB920622 UB	1	150.167	6.667	41.335	0.009	5.800	162.1	47.17	0.31	0.43	3	162.50	49.20	0.81	2.44
GRB920627 UB	1	150.590	6.327	23.540	0.049	5.869	166.02	-2.58	0.65	5.74		166.80	-8.50	1.18	1.61
GRB920830 UB	1	338.192	0.949	86.268	0.018	?	258.53	-73.99	0.54	1.81	3	259.00	-74.50	1.35	1.78
GRB930118	NA	NA	NA	NA	NA	NA	228.40	-34.30	?	NA	4	221.80	-34.80	1.47	NA
GRB930131 UB	1	161.411	-14.563	22.256	0.011	4.218	182.04	-8.24	2.16	1.09	3	186.20	-7.90	1.77	2.93
GRB930309 UB	1	332.600	14.645	36.601	0.035	3.998	325.41	51.73	0.72	0.93	3	322.70	55.20	0.74	4.67
GRB930612 UB	1	143.974	-11.184	63.928	0.053	4.870	103.07	-69.76	0.4	0.07	3	106.50	-71.00	1.60	0.17
GRB930704 UB	1	146.146	-11.823	82.959	0.113	5.089	100.9	60.8	0.59	2.01	3	99.30	62.80	1.08	0.07
BM	1	159.825	8.635	68.701	2.319	1.981	-	-	-	1.04	-	-	-	-	0.45
GRB931229	NA	NA	NA	NA	NA	NA	240.06	19.7	1.4	NA	3	241.90	21.00	2.35	NA
GRB940217 UB	1	328.736	51.947	69.334	0.050	3.038	29.07	4.55	0.69	0.84	3	30.10	3.10	0.32	0.94
GRB940301 UB	1	321.914	52.508	59.395	0.136	2.953	103.51	64.35	0.35	0.02	3	102.70	64.00	0.40	0.17
GRB940314 UB	1	314.850	51.972	64.530	0.220	?	354.86	-2.14	0.94	0.77	3	356.00	-1.40	1.43	0.92
GRB940520 UB	1	300.149	41.387	40.380	0.133	2.986	323.5	6.93	0.88	0.16	3	324.70	7.70	0.70	0.27
GRB940619 UB	1	303.998	39.140	69.375	0.211	3.039	299.05	-29.89	0.34	0.20	3	298.50	-31.50	1.15	1.44
GRB940708 UB	1	308.119	39.489	17.431	0.038	?	301.58	24.66	1.02	1.61	3	300.50	22.70	1.03	0.56
GRB940728 UB	1	133.614	-41.397	36.245	0.131	?	85.49	-39.87	1.44	0.17	3	85.10	-38.00	1.10	0.75
GRB940921 UB	2	155.516	-55.210	54.361	0.121	2.583	196.59	-18.71	?	6.49	4	207.10	-16.40	0.68	0.75
GRB941017	NA	NA	NA	NA	NA	NA	302.63	11.10	?	NA	4	301.70	13.30	2.10	NA
GRB950208 UB	2	334.715	-27.012	83.397	0.022	2.301	337.06	54.19	?	2.17	4	344.80	56.00	1.95	0.05
GRB950421 UB	2	177.048	-19.097	81.048	0.226	2.171	71.92	-63.03	?	1.41	4	70.10	-61.70	1.43	0.11
GRB950425 UB	2	178.121	-21.566	17.005	0.207	2.154	163.16	-35.21	?	1.90	4	164.90	-33.80	0.34	0.11
GRB950522 UB	2	7.656	42.578	86.989	0.063	2.039	109.57	19.31	?	1.60	4	110.81	20.34	1.14	1.47

1 Hurley, K. et al Huntsville workshop (1995)

2 BACODINE/IPN burst alert messages (Hurley)

3 BATSE 3B Catalog

4 Meegan, C. Priv. Comm. (Trigger Messages)

Smin = minimum distance between point and IPN annulus

91/12/21	06:17	N/O
91/12/21	22:03	N/O
91/12/27	15:56	N/O
92/01/05	17:41	N/O
92/01/13	20:52	N/O
92/01/25	08:57	N/O
92/01/30	00:29	N/O
92/01/30	22:50	N/O
92/02/18	18:42	N/O
92/02/21	06:14	N/O
92/02/26	18:15	YES TRIGGER AT 29336 S UT
92/02/27	06:00	N/O
92/02/27	08:45	N/O
92/03/02	06:16	N/O
92/03/04	14:34	N/O
92/03/07	00:18	N/0
92/03/21	12:50	(NO)
92/03/26	02:01	N/O
92/03/27	09:38	N/O
92/03/29	16:38	(NO)
92/04/04	22:37	N/O
92/04/08	12:05	N/O
92/04/20	02:12	N/O
92/04/29	18:59	N/O
92/05/02	19:05	N/O
92/06/01 THRU 92/06/29		TURNED OFF--N/O
92/07/01	19:39	N/O
92/07/07	06:33	N/O
92/07/17	01:15	N/O
92/07/23	00:59	N/O
92/07/23	01:00	N/O
92/07/23	21:48	N/O
92/07/25	19:30	N/O
92/07/25	22:49	N/O
92/07/26	00:34	N/O
92/07/31	17:07	N/O
92/08/10	21:35	N/O
92/08/14	06:10	N/O
92/08/16	12:36	N/O
92/08/22	22:39	N/O
92/08/30	01:45	N/O
92/09/04	04:41	N/O

THIS LIST IS NOT COMPLETE. IT INCLUDES EVENTS FOR WHICH NO REAL-TIME DATA ARE AVALIABLE BECAUSE OF INAPPROPRIATE MODE, NO TRACKING, OR THE EXPERIMENT WAS TURNED OFF. WHERE DATA HAVE BEEN CHECKED, SENSITIVITY DEPENDS UPON THE TIME RESOLUTION AVAILABLE IN THE DATA. I'LL BE SENDING ADDITIONAL RESULTS AS THEY BECOME AVAILABLE.

REGARDS,

RAY

From root Wed Dec 8 07:58 1993
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA08899; Wed, 8 Dec 93 07:57:44
Received: from mx.nsi.nasa.gov by sunspot.ssl.berkeley.edu (4.1/1.30.1)
id AA22497; Wed, 8 Dec 93 07:00:41 PST
Received: Wed, 8 Dec 93 07:03:53 PST from ESSDP2.dnet by mx.nsi.nasa.gov (4.1/1.2)
Message-Id: <9312081503.AA10272@mx.nsi.nasa.gov>
Received: from ESSDP2.dnet by AMES.dnet with MAIL-11
(utk-maillld v1.7); Wed, 8 Dec 93 07:03:57 PST
Date: Wed, 8 Dec 93 07:03:57 PST
From: 068486@essdp2.span.nasa.gov
X-To: AMES::"khurley@space6.ssl.berkeley.edu"
Subject: RE:
To: khurley@space6.ssl.berkeley.edu
Status: R

KEVIN,
HERE ARE THE RESULTS OF OUR SURVEY OF THE PVO REAL-TIME DATA FOR EVIDENCE OF RESPONSE TO EVENTS LISTED IN YOUR CATALOG.

DATE	TIME	PVO RESPONSE
90/11/11	21:49	N/O
90/11/12	14:57	N/O
90/11/16	01:42	N/O
90/11/19	18:08	N/O
90/11/21	00:04	N/O
90/11/21	18:09	N/O
90/12/02	13:45	N/O
90/12/21	00:30	N/O
90/12/25	05:50	N/O
91/01/17	00:57	N/O
91/01/24	11:50	N/O
91/02/04	08:58	N/O
91/02/04	14:19	N/O
91/02/04	14:58	N/O
91/02/17	02:59	N/O
91/03/14	22:56	N/O
91/03/15	22:55	N/O
91/04/04	17:17	(NO)
91/05/18	17:10	N/O
91/05/23	19:03	N/O
91/05/27	23:44	N/O
91/05/28	21:26	N/O
91/06/02	22:55	N/O
91/06/09	00:48	N/O
91/06/29	19:55	N/O
91/07/09	20:22	N/O
91/07/17	13:07	N/O
91/08/03	08:24	N/O
91/08/15	12:34	N/O
91/08/15	14:24	N/O
91/08/16	01:57	(NO)
91/09/05	23:48	N/O
91/09/16	21:58	N/O
91/09/25	03:35	N/O
91/09/26	18:25	N/O
91/09/30	11:55	N/O
91/10/03	00:39	N/O
91/10/04	01:27	N/O
91/10/06	09:01	(NO)
91/10/22	04:13	N/O
91/10/25	21:25	N/O
91/11/06	03:42	N/O
91/11/14	01:40	N/O
91/11/17	01:58	N/O
91/12/05	23:04	N/O

Dezalay-> KH 7/93

DATE	U.T.	Nr UGB	Event Nature
1992-06-28	21:14:12.932	473-a	GRB
1992-07-08	16:30:01.944	479-a	Solar Flare
1992-07-14	13:04:30.544	482-a	GRB
1992-07-16	16:55:27.526	484-a	Solar Flare
1992-07-18	21.32:44.275	485-a	GRB
1992-07-20	03:12:04.391	486-a	GRB
1992-07-23	00:59:16.612	488-a	GRB
1992-07-23	20:03:08.386	489-a	GRB
1992-07-23	21:48:54.786	489-b	GRB
1992-08-16	12:37:31.102	493-a	GRB
1992-08-26	02:47:07.423	500-a	GRB
1992-08-30	01:45:19.113	503-a	GRB
1992-09-02	00:29:00.916	504-a	GRB
1992-09-03	00:49:18.142	505-a	GRB
1992-09-03	01:37:17.202	505-b	GRB ?
1992-09-03	23:29:01.404	506-a	GRB
1992-09-04	04:41:38.922	506-b	GRB
1992-09-05	15:56:15.844	507-a	Solar Flare
1992-09-06	18:45:29.617	507-b	Solar Flare
1992-09-06	20:56:31.135	507-c	Solar Flare
1992-09-14	07:14:50.878	508-a	Unknown
1992-09-18	09:41:19.340	511-a	GRB
1992-09-25	20:30:41.410	517-a	GRB
1992-09-25	21:40:47.837	517-b	No Available data
1992-09-30	00:47:46.089	518-a	Unknown
1992-10-04	22:19:05.006	522-a	Solar Flare
1992-10-12	13:14:44.786	523-a	Solar Flare
1992-10-13	23:01:01.582	524-a	GRB
1992-10-25	13:53:16.735	527-a	GRB
1992-10-27	06:52:02.336	528-a	Solar Flare
1992-10-29	15:23:10.349	530-a	SF ou Unknown?
1992-10-29	16:11:39.173	530-b	SF ou Unknown?
1992-10-29	16:26:49.045	530-c	SF ou Unknown?
1992-11-23	16:32:04.840	534-a	SF ou Unknown?
1992-11-23	17:11:35.698	534-b	SF ou Unknown?

```
         218 ?     SOURCE J0422+32, IAU 5584,88,89:64.64,32.79(1950)
920815   228 ?     GRANAT HARD X-RAY .5CTRANS,288.7+10.5(1950)IAU5590
         228 ?     GRANAT SOURCE NAME GRS1915+105
920822   235 81321 BATSE WEAK SOLAR FLARE #3193
         235 81540 ULYSSES GRB 84184 (UNCONFIRMED COSMIC) NO BATSE
       8 235 81542 GRB PEAKS 81521.5W,541.5(700/S),551.5(200/S)SUN@87 81523-555
      10 235 81542 GRB PEAKS 81520.52,542.5(750/S),552.5(300/S)SUN@45 81526-562
      11 235 81543 GRB PEAK 81543.5(200/S) ULYS84184, SUN@100         81543-557
920824 10 237 39187 GRB PKS 39187.1(800/S),197.1(350) (8NR) SUN@116.1
      11 237 39186 GRB PKS 39185.9(500/S),189.9(550)  SUN@103.4
         237 39183 GRB (HURLEY), ULYSSES 38400
920830  8 243  6319 GRB PK 6317.7(150)SOFT  (BATSE STRONG 6317, GRO82)
      10 243  6320 GRB PEAK 6320.2 SOFT(150) (ULYS~5800) (11NR)
920902   246  1736 BATSE GRB (ULYSSES 3230)
       8 246  1742 GRB PEAK 1741.8(500/S),~5SEC, SHARP, HARD SUN@94.6  1740-750
      10 246  1743 GRB PEAK 1743.5(650/S), SUN@85.8                    1741-761
      11 246  1743 GRB PEAK 1742.9(200/S GT.100KEV) SUN@98.5           1746-750
920923   267~16589 GRANAT STRONG X-RAY 1CTRAN,309.3-40.4(1950)IAU5617 (DMSP NA)
920925   269       CHINESE NUCLEAR TEST (VENTED)
921004  8 278 50421 GRB,NARROW PKS 50421.0(1100/S),429.0(500/S)(11SR)
      10 278 50421 GRB,NARROW PK 50420.7(200/S)
         278 49107 GRB, UNCONFIRMED COSMIC, ULYSSES (BATSE N/O)
921008   282       PVO DIED, INTO VENUS (PIONEER 12)
921009   285 24070 BATSE GRB (ULYS 21980)
      10 285~24070 GRB? (8NA,11NA)
921011   285 ?     WATCH/EUREKA TRANS. EU1737-132(1950).5CRAB IAU5643
921016 10 290~33800 BURST? (10NA,11NA)
921022   296~55500 GRB, MARS OBSERVER (~100 LIGHT-SECONDS AWAY)
921031  8 287      HIGH POLAR COUNTS 10/31-11/05 (ALSO 10, 11)
921220   355       J0422 PEAK=.5CRAB(IAU5685), PER=5.098HR(IAU5692)
930131   031 68231 GRB,BATSE BIGGEST, 182.75,-10.7(J2000) IAU5707
       8 031 68231 GRB PEAK 68230.9(1400/S) (10SR EDGE,11SAA)          68233-235
930217   048 40187 XRB(15CRAB) WATCH/EUREKA (IAU 5710,17) 4U0614+09
                                              TERRELL/DMSP.GAM 930505
930220   051       ASTRO-D=ASUKA=ASCA X-RAY SPACECRAFT LAUNCHED
930302   061 51329 XRB,EUREKA,4U0614+09,20CRAB(6-15KEV)IN 16S IAU5717
930309   068 11278 COMPTEL GRB (323.13,54.65,J2000)(IAU5749,50,63,64)
930310   069 26418 GRB, 20S,GRANAT @285.56,-51.98(B1950.0) IAU5720
930430   120 54070 BATSE STRONG GRB, (~106,21) (BATSE ALERT)
930630   181 86400   LEAP SECOND AT 2400H(UTC-TA1=-28 SEC)(IAUC 5694)
```

From @UCBSP.SSL.BERKELEY.EDU:046369@ESSDP2.SPAN.NASA.GOV Wed May 5 13:41:17 1993
Date: Tue 5 May 92 13:42:27-PST
From: $C <046369@ESSDP2.SPAN.NASA.GOV>
To: KHURLEY@sunspot.ssl.berkeley.edu
Subject: [Resent-MM Mail] DMSP GRB DATA
Content-Length: 8912

Received: from ESSDP2 by UCBSP.SSL.BERKELEY.EDU via MAIL-11 with
DECnet; Tue, 5 May 92 13:40:33-PST
Date: Tue 5 May 92 13:40:33-PST
From: 046369@ESSDP2.SPAN.NASA.GOV
Subject: DMSP GRB DATA
To: "UCBSP::KHURLEY"@ESSDP2.SPAN.NASA.GOV

FROM: ESSDP2::TERRELL 93/05/05
TO: UCBSP::KHURLEY
CC: BATSE::KOUVELIOTOU
SUBJ: DMSP GRB DATA

HERE IS A PARTIAL LIST OF 1992 DMSP GAMMA-RAY-BURST DATA, AS OF TODAY.
OTHER DATA APPEARING TO CONFIRM UNCONFIRMED EVENTS IN YOUR LISTING IS
BEING EXTRACTED, AND I WILL CHECK IT OUT WHEN I RETURN FROM HOUSTON.
THANKS FOR YOUR CONTINUING HELP--JIM TERRELL

DMSP GAMMA PEAKS 90281-92305 CHECKED,2-SEC CTS,TERRELL/DMSP.GAM 930505
ORBITAL PERIODS FOR 8,9,10: 6110,6080,6040SEC. ALT=800KM. INCLIN=99DEG
GRB PEAK TIMES CORRECTED (8,9,10=11) FOR AVG DELAYS: 1.82,1.98,5.50SEC
CHANS: (8)50,100,200,420 (9)50,100 (10,11)20,100,200,430,550(-1000KEV)

DATE	FL	DAY	TIME	NOTES--------(ND=NO DATA,NA=NOT APPARENT)----NOTES	DATATIMES
920101		001	0	JD8622.5	
920110		010	33480	BATSE GRB (16XMIN) (8ND,9NA,10SAA,11NA)	
920122		022		NO DMSP TAPES, DAYS 22-25 (92022-25)	
920126	9	026	55714	BURST? WIDE SOFT PEAK 55714.0 (4KC/S)(8SRAD,11SAA)	55646-768
	10	026	55704	STR SOFT BURST,COMPLEX PEAKS 55704.2,714.2(3KC/S)	55624-748
		026	55667	PVO TRIGGER (BURST?) AT 55666.9	
920210		041	35625	BATSE GRB,MOD STRONG RA154,DEC49 8NO,10SAA,11SAA	
	9	041	35633	VERY WEAK SOFT BURST,PEAKS 35632.6,636.6	35635-639
920211	8	042	15773	STRONG HARD BURST(+CHG),PEAKS 15772.7-4.7(2500C/S)	15765-783
	9	042	15775	STRONG HARD BURST, PEAK 15774.7(7KC/S) (BATSE OFF)	15761-791
	10	042	15776	STRONG HARD BURST,PEAK 15775.6(1700C/S) +SOFT BASE	15775-785
	11	042	15776	STRONG HARD BURST, PEAK 15775.8(12KC/S),ASYMM RESP	15765-799
		042	15631	PVO TRIGGER 15630.7 (0.7 HARDNESS RATIO)	
920214	9	045	83249	SHARP SOFT BURST, PEAK 83249.4 (8ND=NO DATA)	83243-273
	10	045	83250	SHARP SOFT BURST, PEAK 83250.1 (1000C/S),254.1	83244-280
	11	045	83250	SHARP SOFT BURST PEAKS 83249.8 (8KC/S),265.8	83237-295
		045	83066	BATSE SOLAR FLARE#2721, PEAK 83252(70K/S)&~83267	
920216	8	047	45219	STRONG SOFT BURST,PEAKS 45219.3,223.3(1KC/S)(10NO)	45177-239
	9	047	45220	STRONG SOFT BURST, PEAK 45219.7 (2KC/S)	45214-236
	11	047	45220	STRONG SOFT BURST,PEAKS 45184.2,196.2,220.2(8KC/S)	45180-252
		047	45052	PVO TRIGGER (BURST?) 45052.5	
920311		071	8426	BATSE GRB,VERY INTENSE,2PEAKS,RA129,D-40 (BNEWS16)	
	8	071	8431	GRB, PEAKS 8431.4,8437.4 @63DEG (PVO TRIG 8887.3)	8429-443

Helio. corr removed

Date: Dec 8 '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?

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?

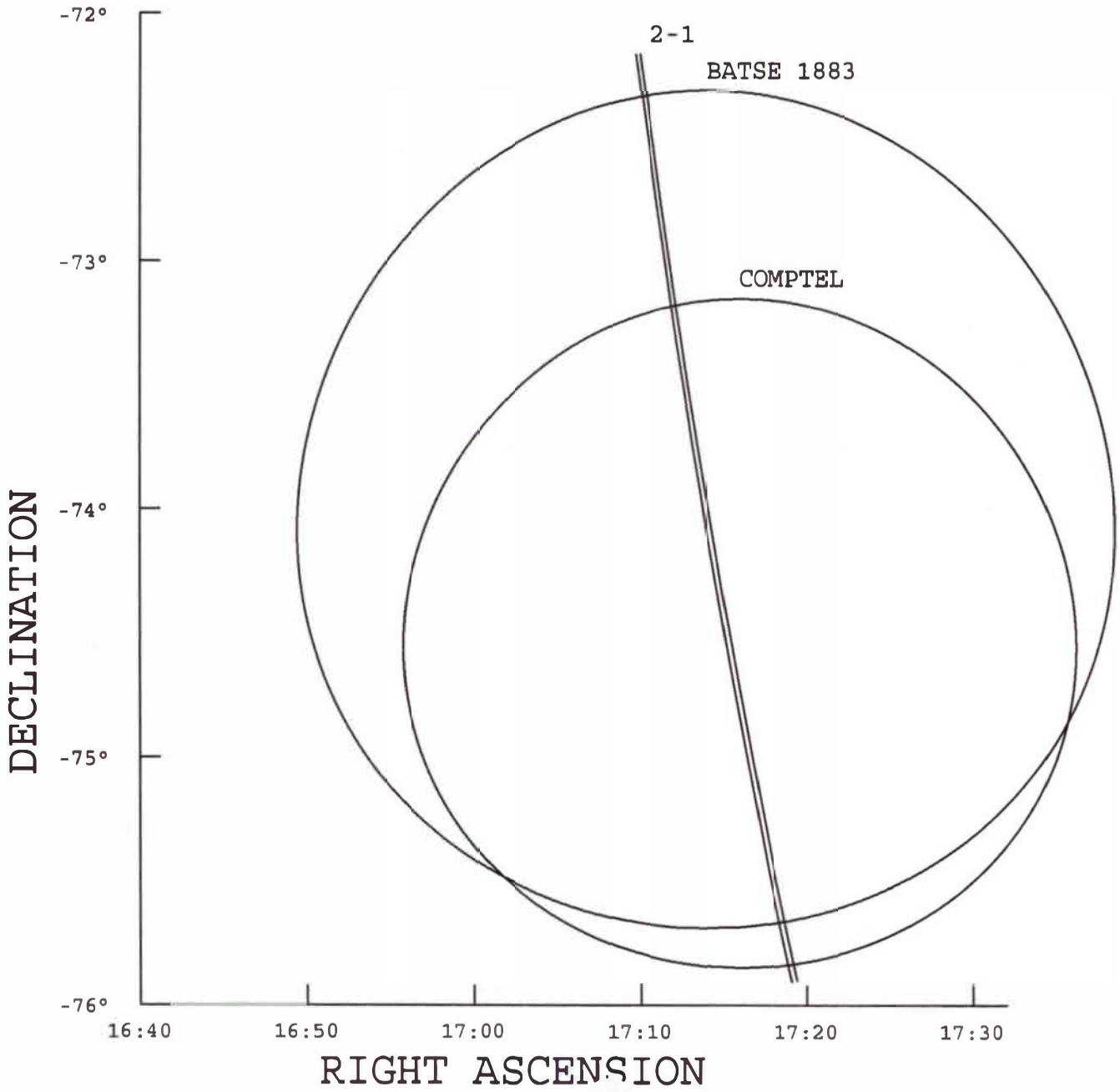
☐ Geocentric time used?

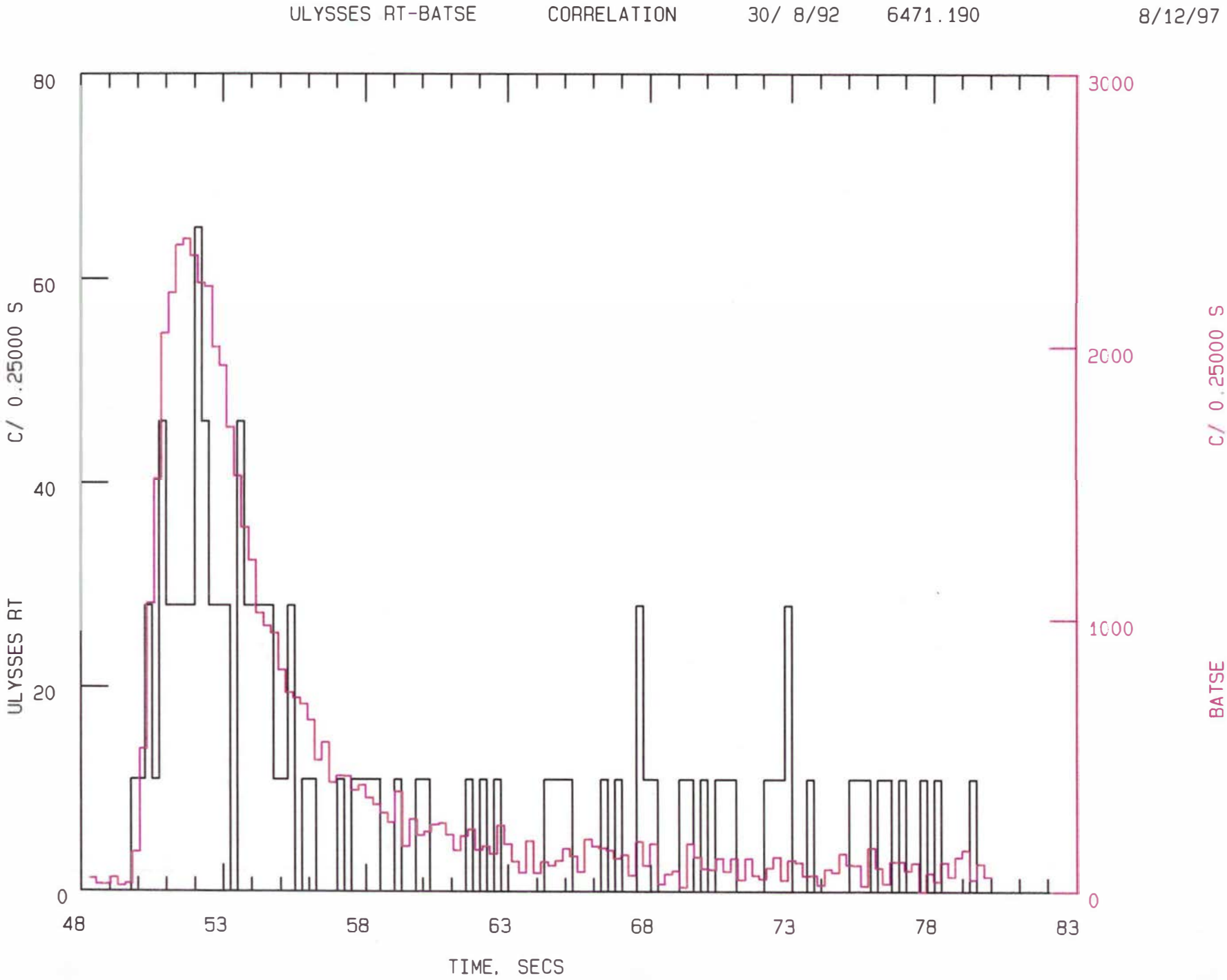
☑ ACCESS database updated?

EVENT OF AUG 30, 1992 1:47

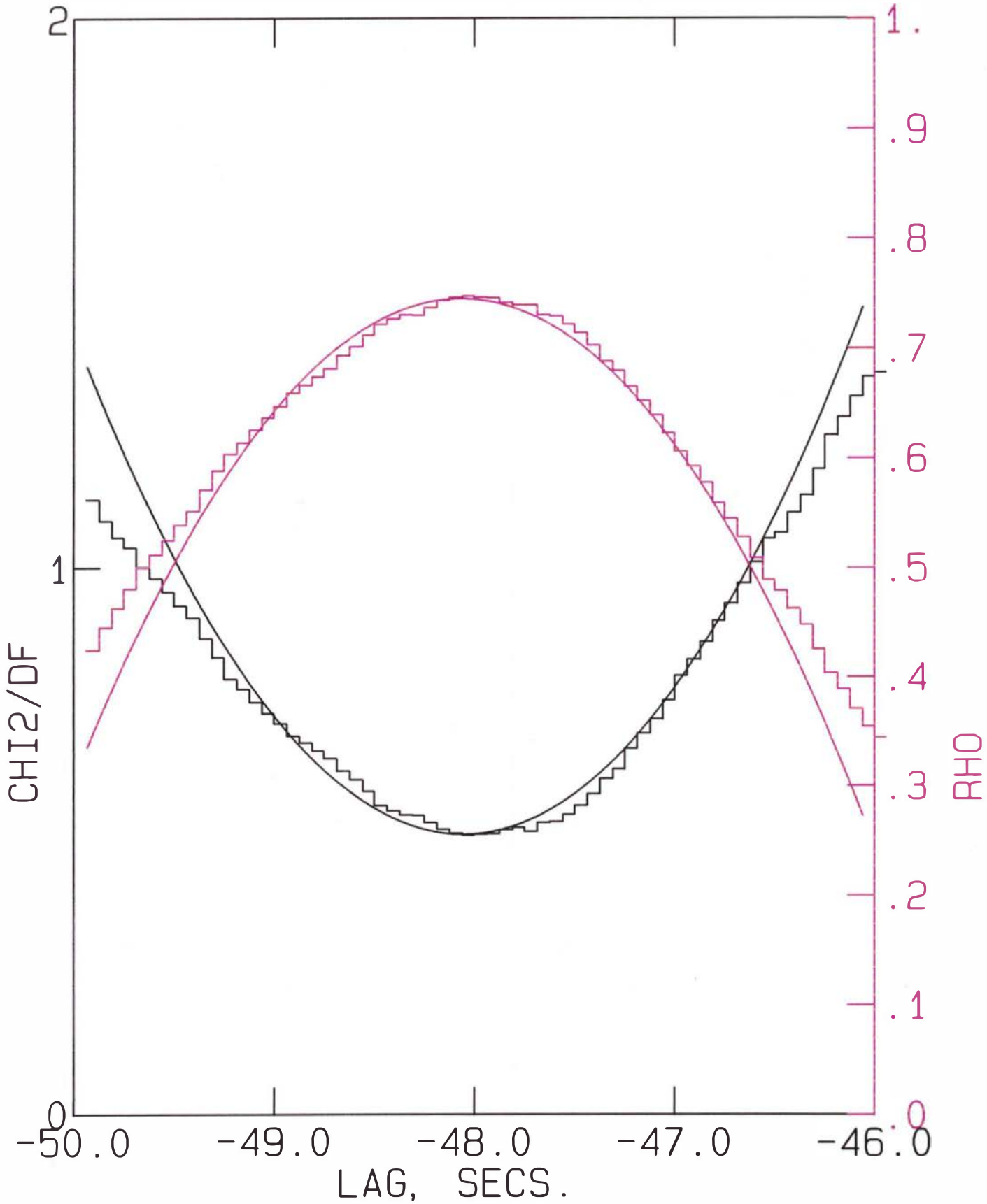
8/12/97

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




ULYSSES RT-BATSE CORRELATION 30/ 8/92 6471.190 8/12/97
80
60
40
20
0
C/ 0.25000 S
ULYSSES RT
3000
2000
1000
0
C/ 0.25000 S
BATSE
48
53
58
63
68
73
78
83
TIME, SECS

ULYSSES RT-BATSE CORRELATION 30/ 8/92 6471.190



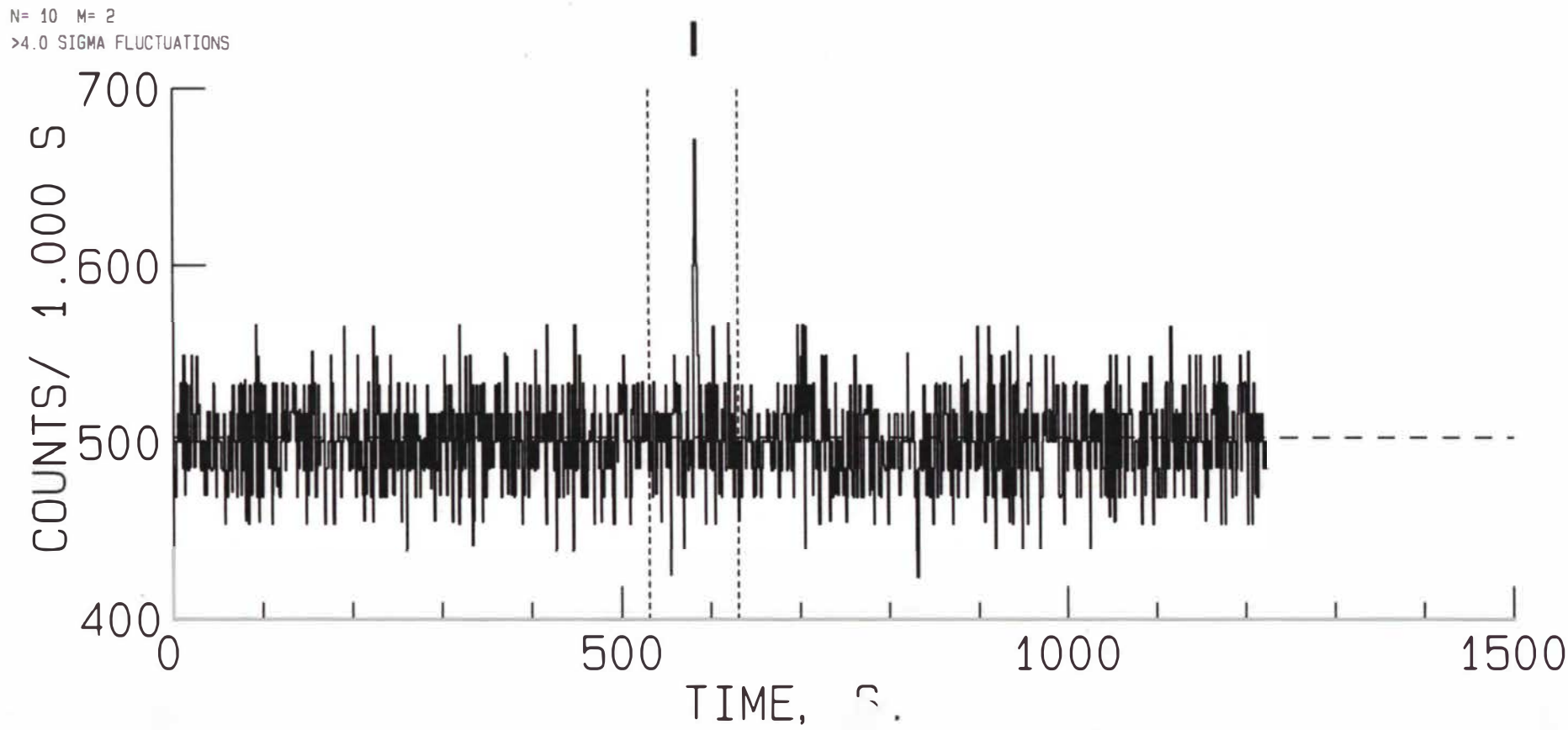
ULYSSES RT

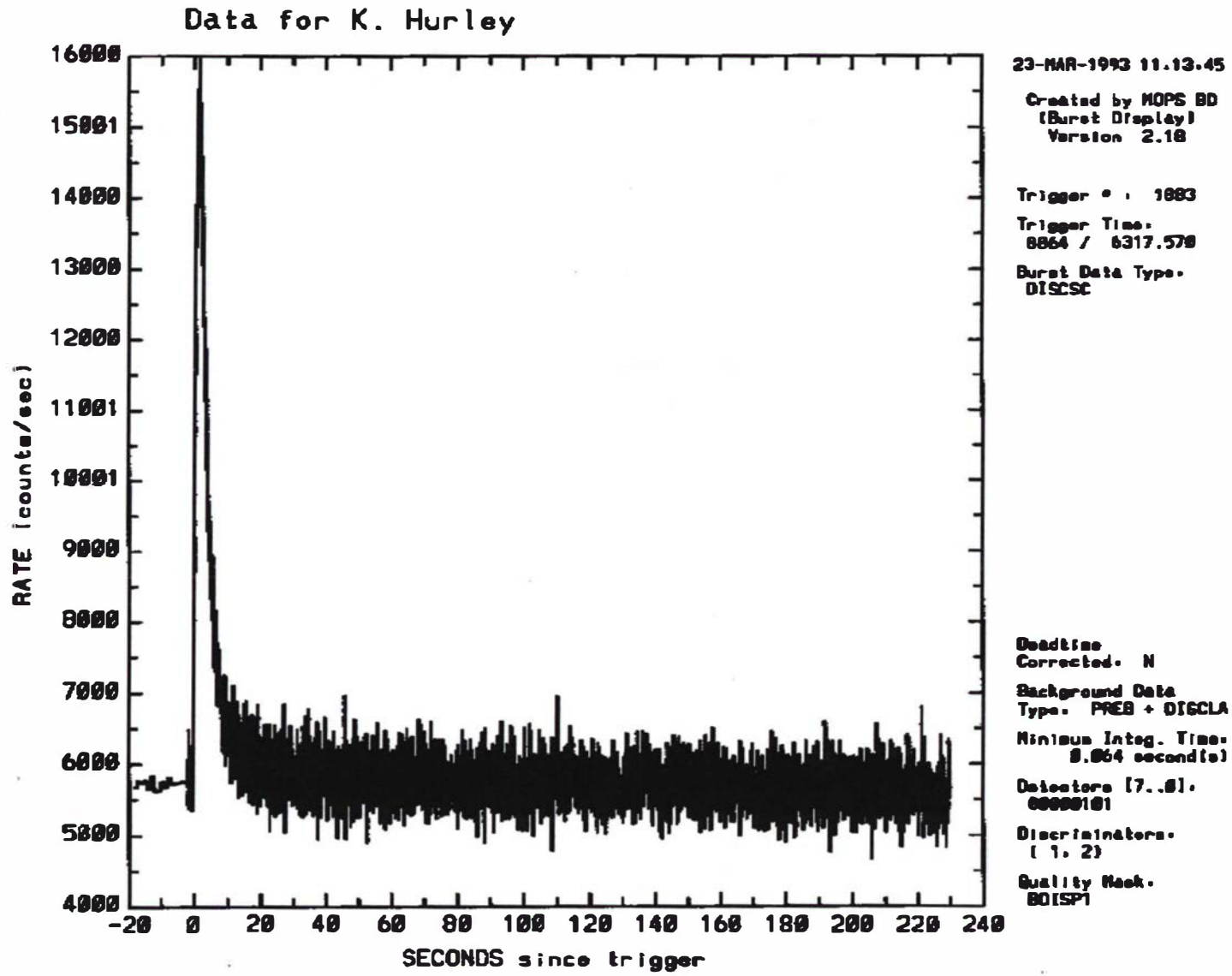
8/12/97

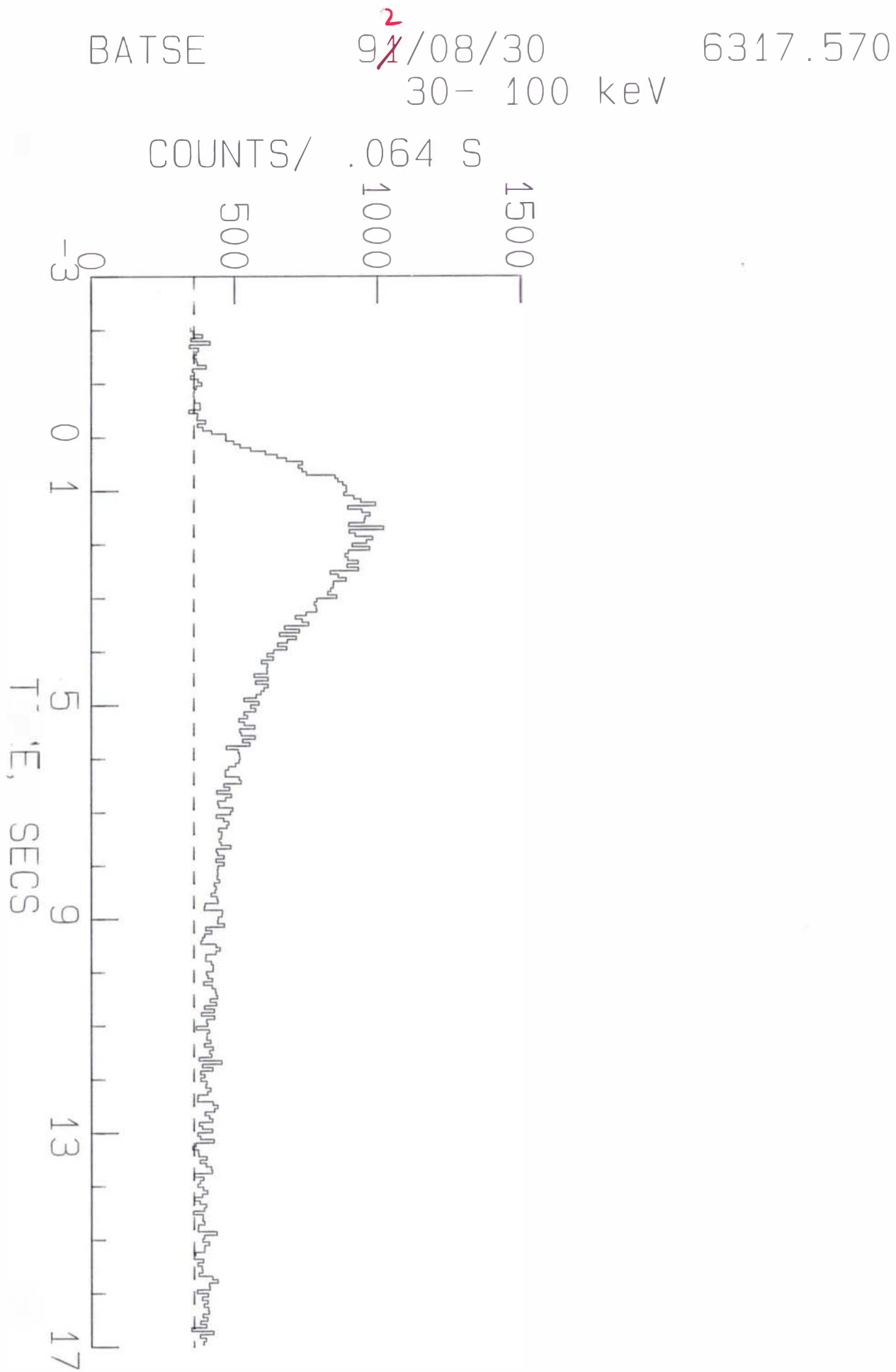
30/ 8/92 5940.178 s

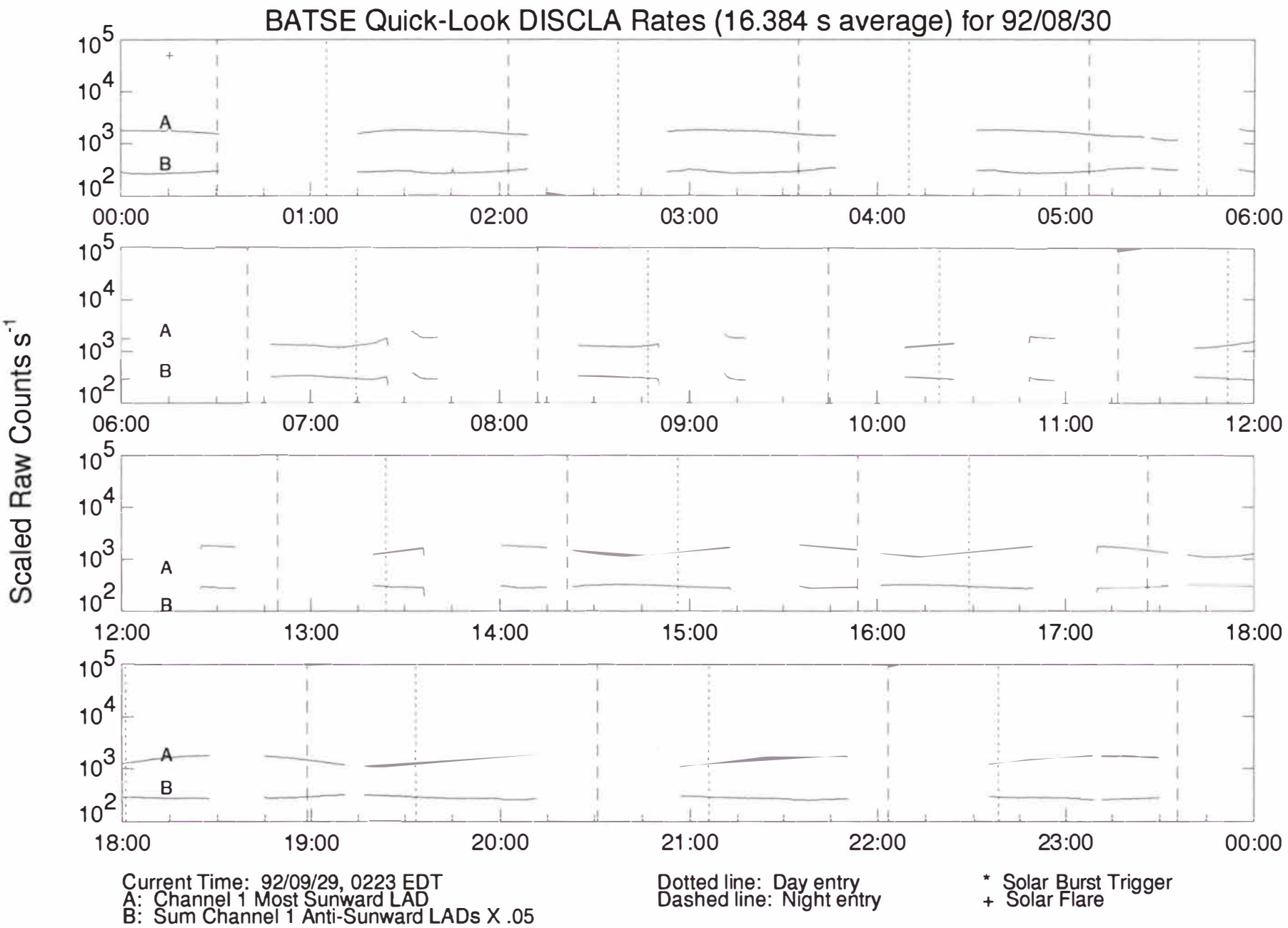
0.250 S INTERVALS REGROUPED BY 4

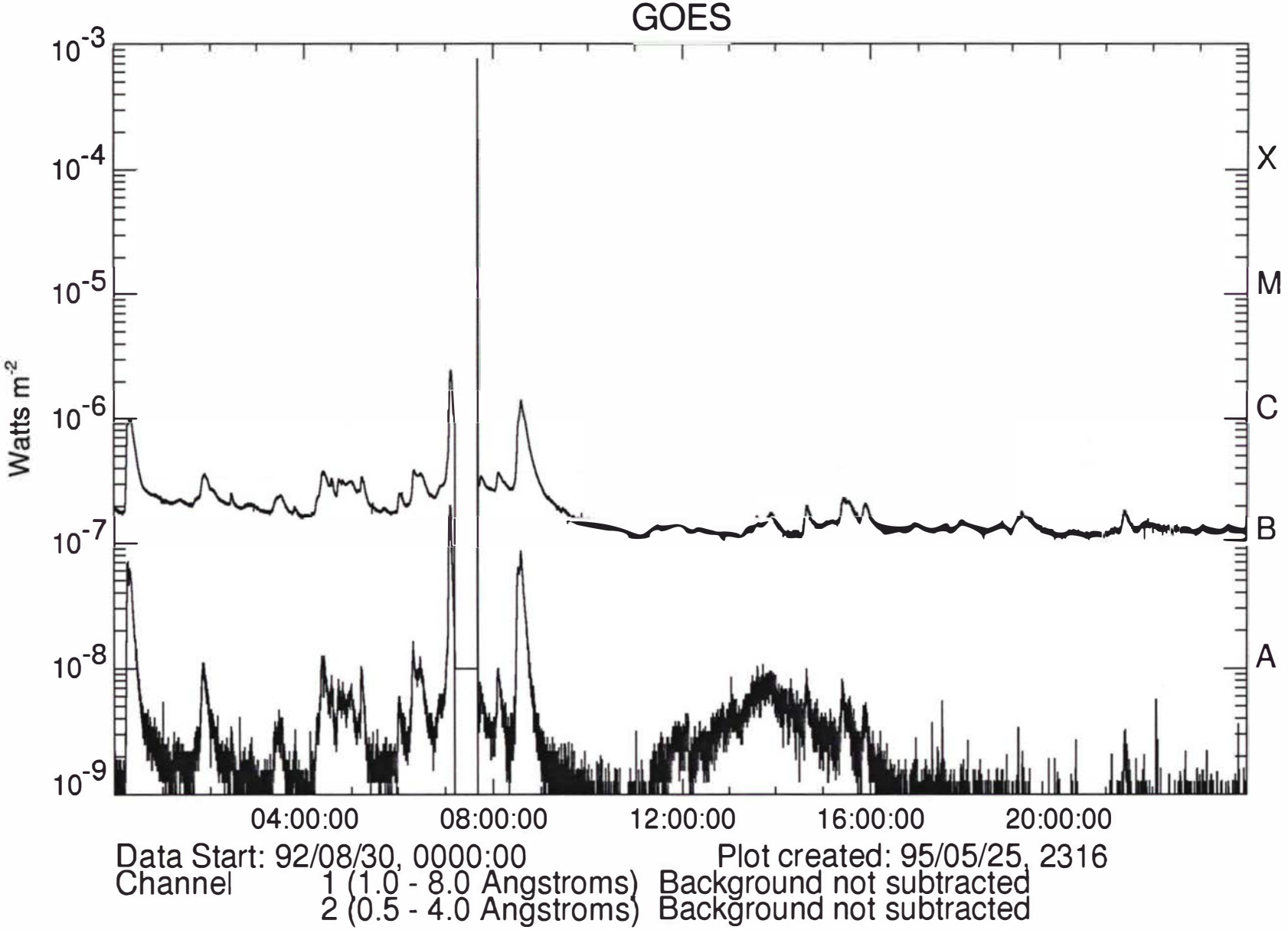
22- 150 keV




Data for K. Hurley
RATE (counts/sec)
16000
15001
14000
13000
12000
11001
10001
9000
8000
7000
6000
5000
4000
-20
0
20
40
60
80
100
120
140
160
180
200
220
240
SECONDS since trigger
23-MAR-1993 11.13.45
Created by MOPS BD
(Burst Display)
Version 2.18
Trigger # : 1883
Trigger Time:
8864 / 6317.578
Burst Data Type:
DISCSC
Deadtime
Corrected: N
Background Data
Type: PREB + DISCLA
Minimum Integ. Time:
0.064 second(s)
Detectors [7..0]:
00000101
Discriminators:
(1, 2)
Quality Mask:
BDISP1

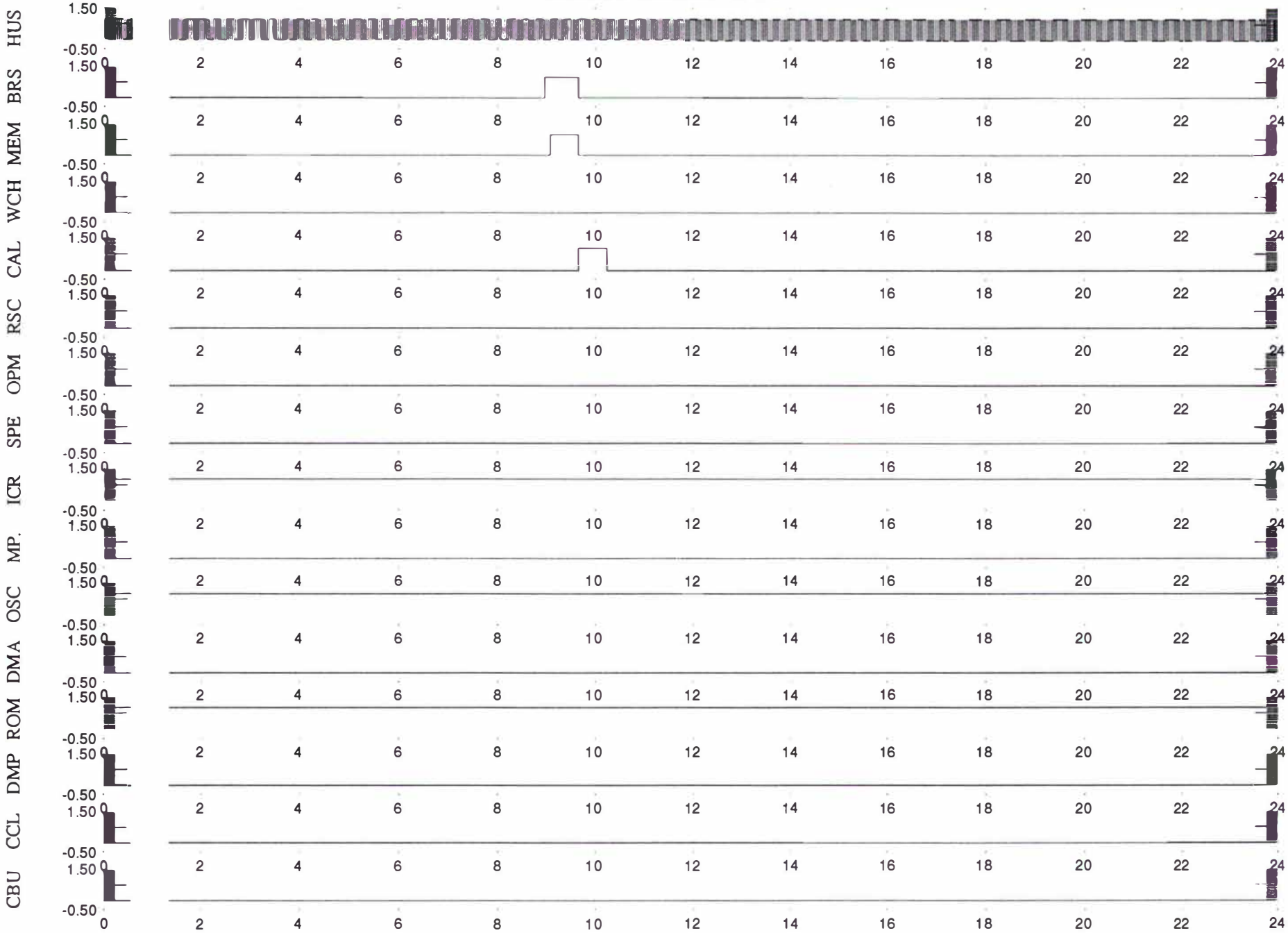

BATSE 91/08/30 6317.570
30- 100 keV
COUNTS/ .064 S
500
1000
1500
-3
0
1
5
9
13
17
T-E, SECS


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/30
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 92/09/29, 0223 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


GOES
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
Watts m^{-2}
X
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/30, 0000:00
Plot created: 95/05/25, 2316
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

HUS MODES EDR day 243, year 1992 to day 243, year 1992 10/28/92

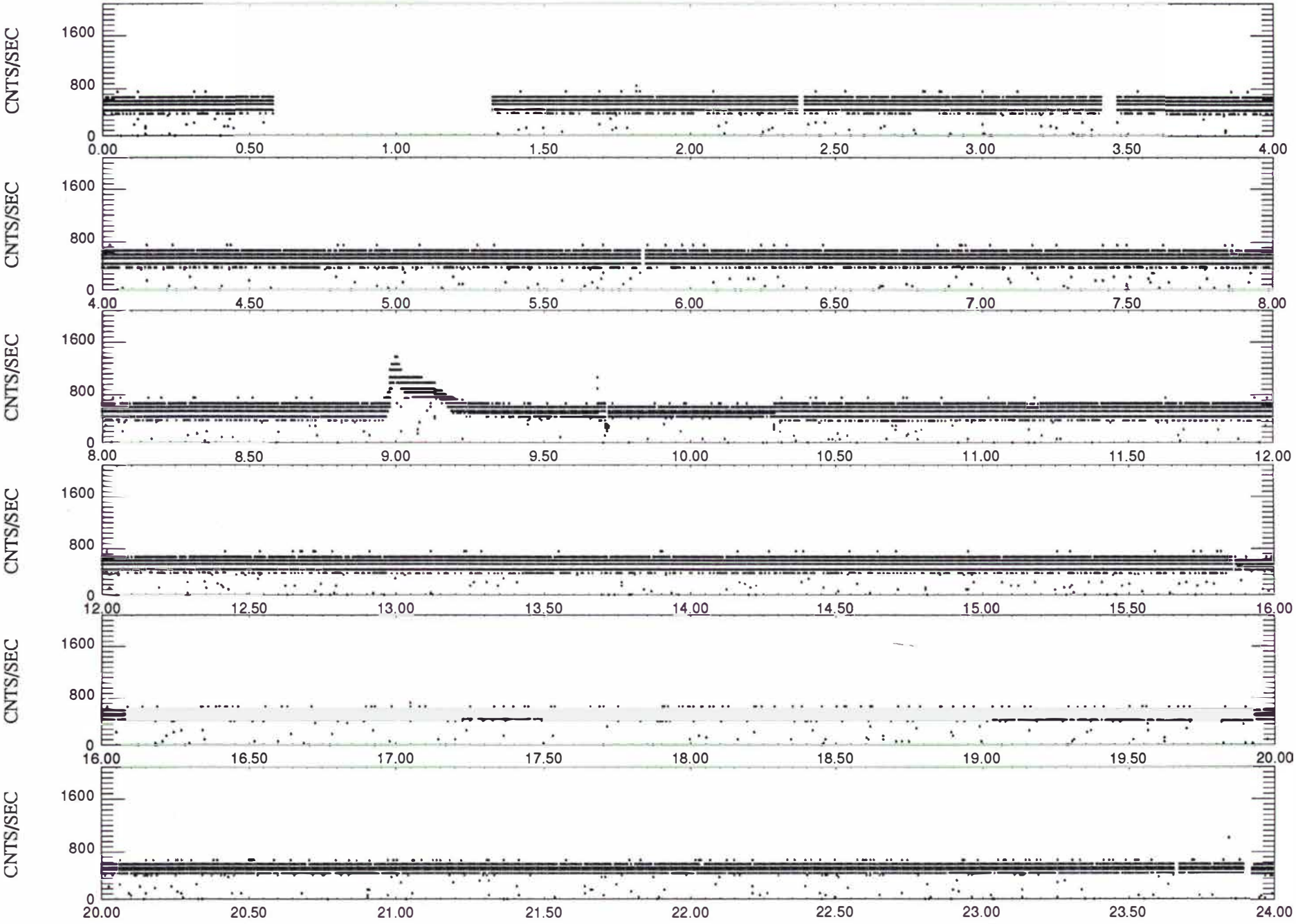
BURST NUMBER 14



UNIVERSAL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 243, year 1992 to day 243, year 1992 10/28/92

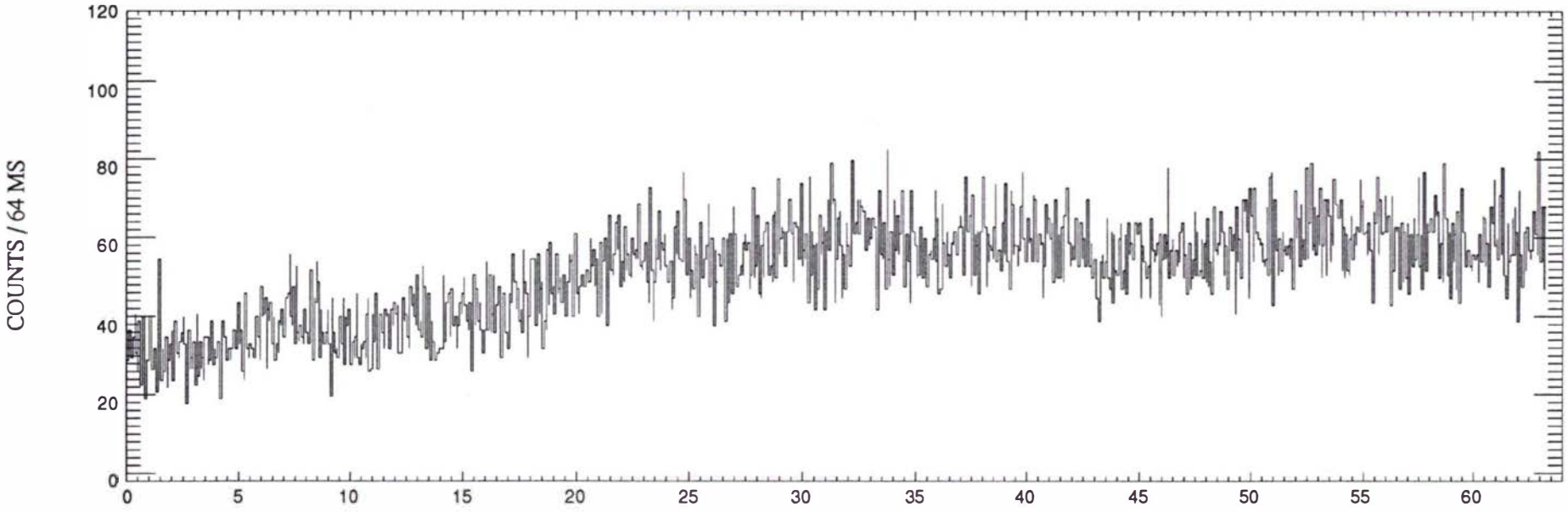
CALIBRATION DATA INCLUDED

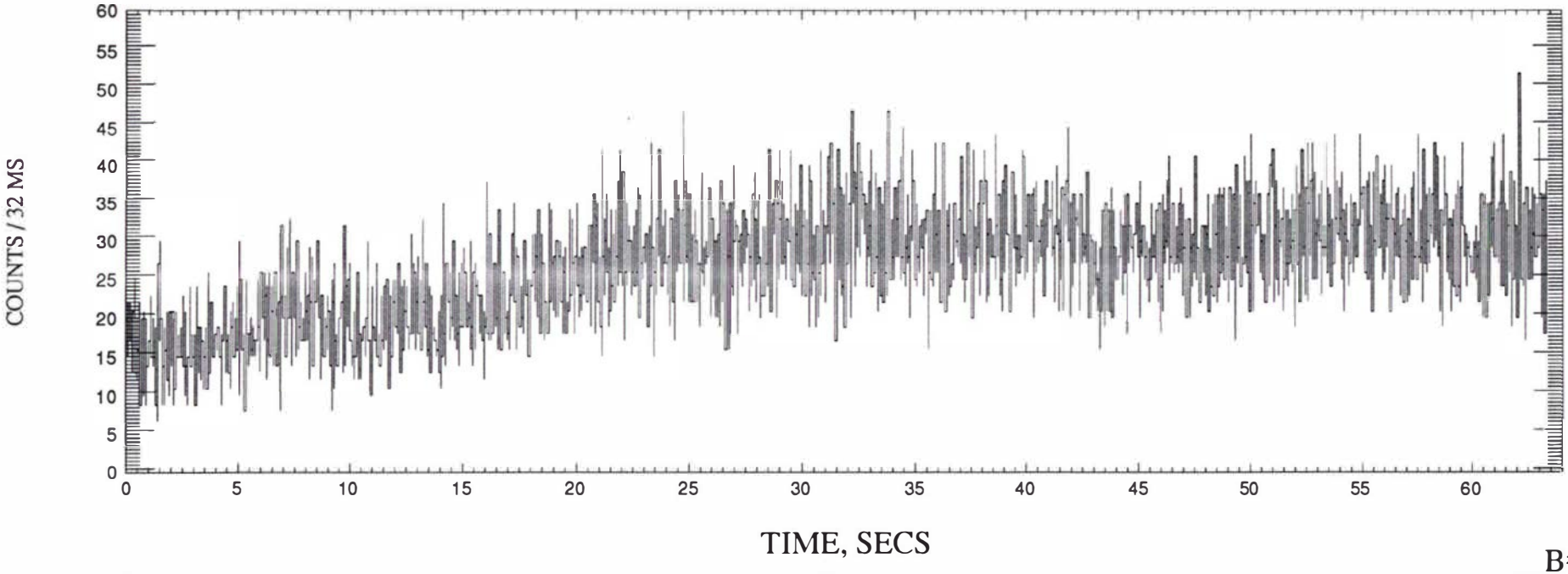


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR day 243, year 1992 10/28/92

Burst Counter 14 at UT= 8.975059225294 h=32310.213 s

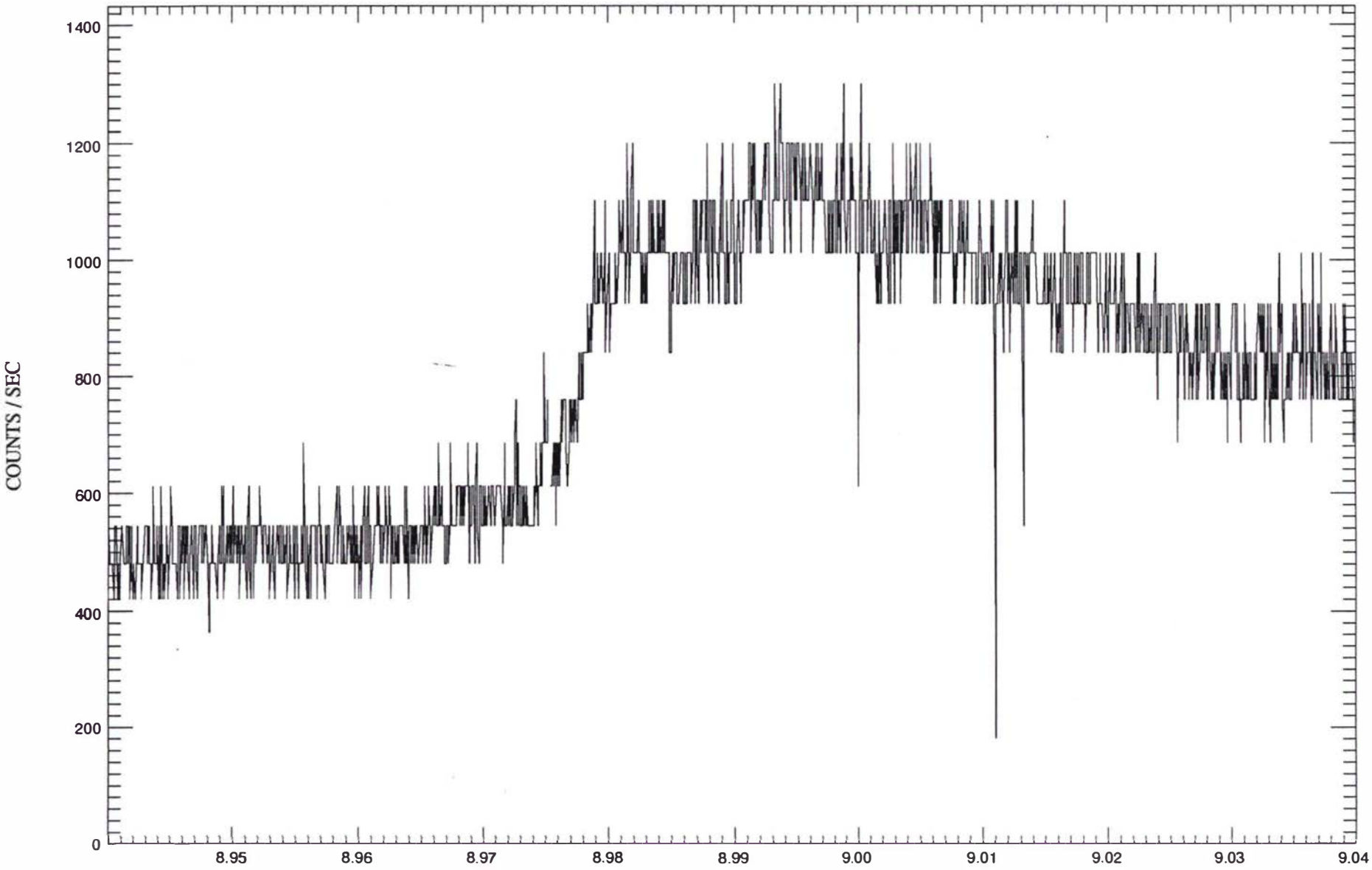




B# 1

HUS 2A, MODE 1, NOT AVERAGED QEDR day 243, year 1992 to day 243, year 1992 8/31/92

CALIBRATION DATA INCLUDED



From WILSONB@ssl.msfc.nasa.gov Wed Sep 2 07:30:05 1992
Date: Wed, 2 Sep 1992 9:30:56 -0500 (CDT)
From: WILSONB@ssl.msfc.nasa.gov (Robert B. Wilson (205)-544-7695)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01884

TIME: TJD=8865 SECONDS=20987

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=120.9 AZIMUTH=089.0 ERROR=10.0 DEGREES

COMMENTS:
RISE OF GRO J0422+32

From khurley@space6.ssl.berkeley.edu Tue Oct 6 08:19:09 1992
Date: Tue, 6 Oct 92 07:14:03
From: khurley@space6.ssl.berkeley.edu
Content-Length: 330

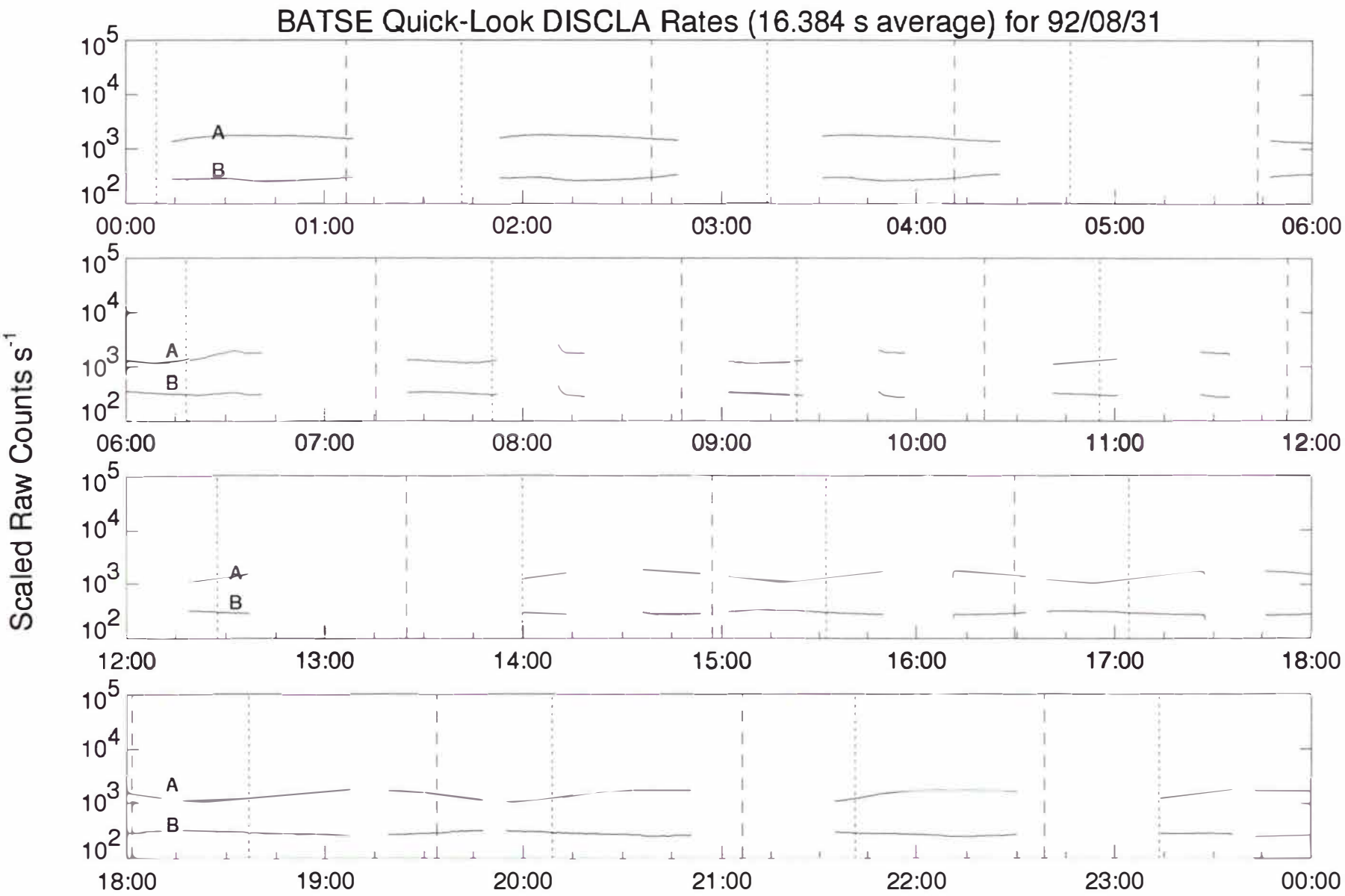
Hello Chryssa,

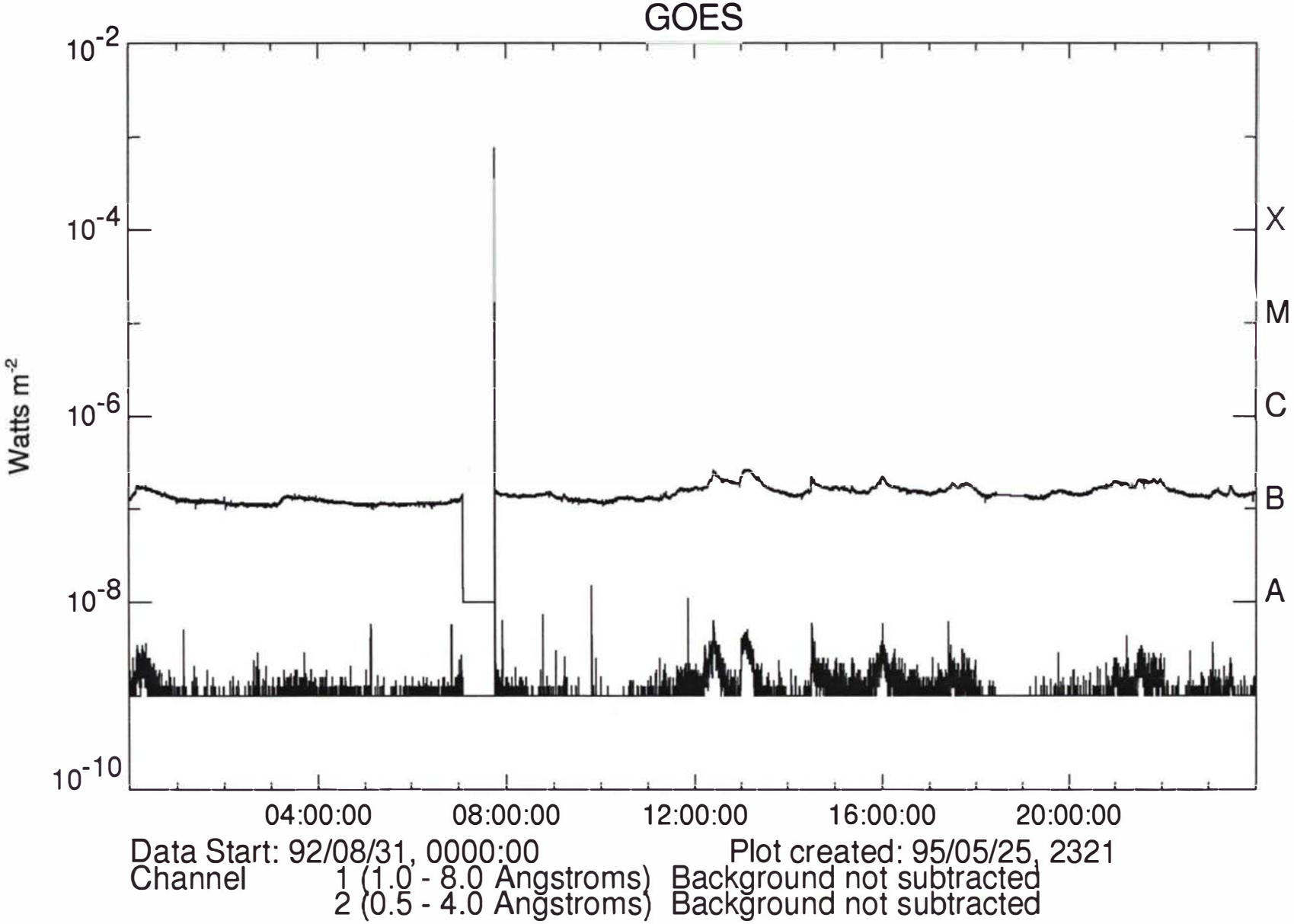
Thanks for the data. Michael Sommer has asked me to check on a burst which was apparently observed by BATSE on August 31 1992. He said it was a strong event, and we see only a solar trigger on that day. I have no record of the BATSE event. Can you give me the time and arrival direction please? Thanks.

Kevin

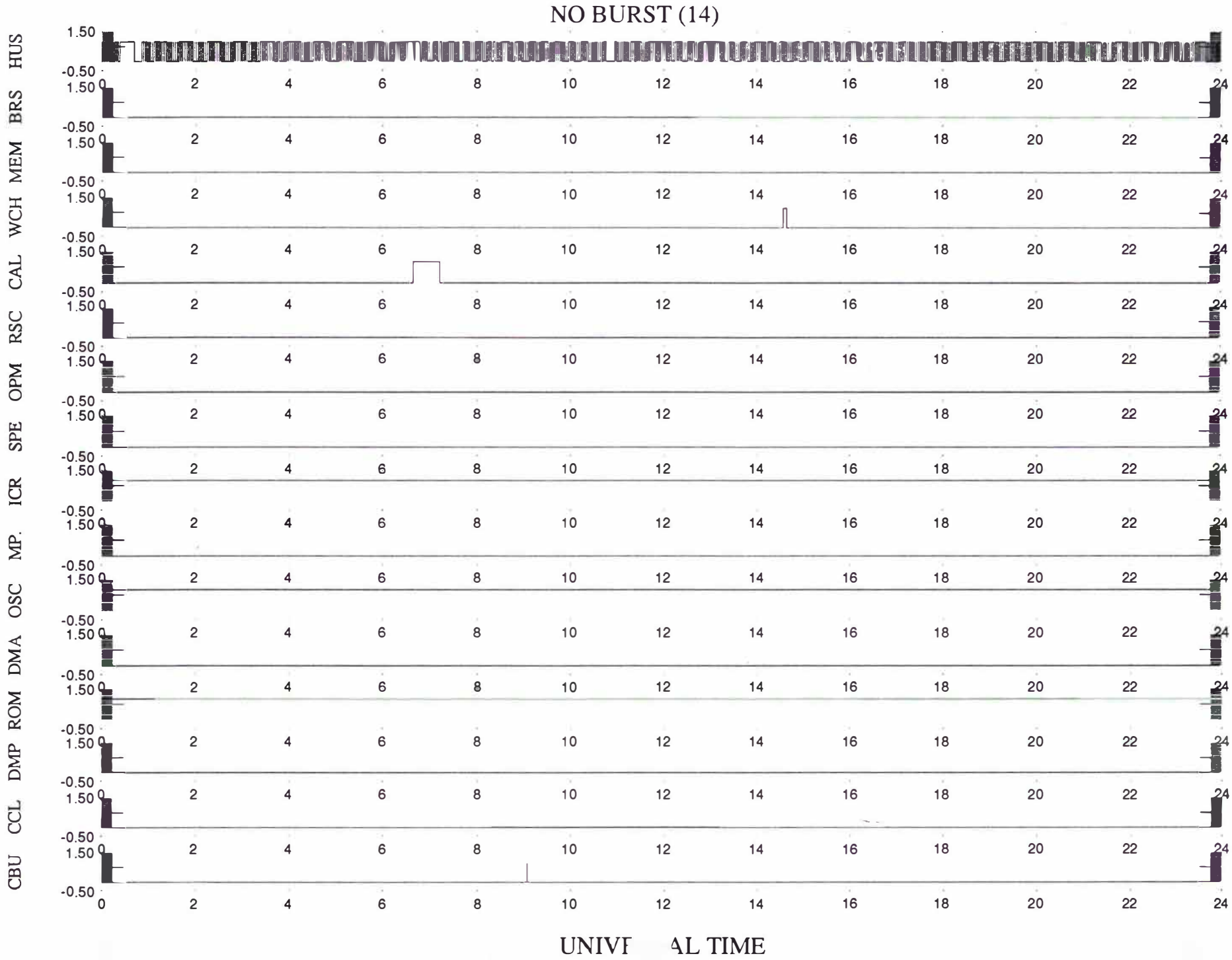
From kouveliotou%8868.span@Sdsc.Edu Tue Oct 6 08:24:22 1992
Date: Tue, 6 Oct 92 15:27:04 GMT
From: kouveliotou%8868.span@Sdsc.Edu (Chryssa Kouveliotou NASA/MSFC (205) 544-7711)
Subject: grb920830
To: khurley@sunspot.ssl.berkeley.edu
X-St-Vmsmail-To: HURLEY
Content-Length: 244

Kevin,
I have no record of a triggered event on August 31st. I have a rather strong event (FRED) on August 30th, #1883, UT:6318,ra = 243 dec = -75. Next event is # 1885, on Sept 1st. and is much weaker. LEt me know if you need more.
Cheers,
CK


BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/08/31
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 92/09/29, 0224 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


GOES
10^{-2}
10^{-4}
10^{-6}
10^{-8}
10^{-10}
Watts m^{-2}
X
M
C
B
A
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 92/08/31, 0000:00
Plot created: 95/05/25, 2321
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted

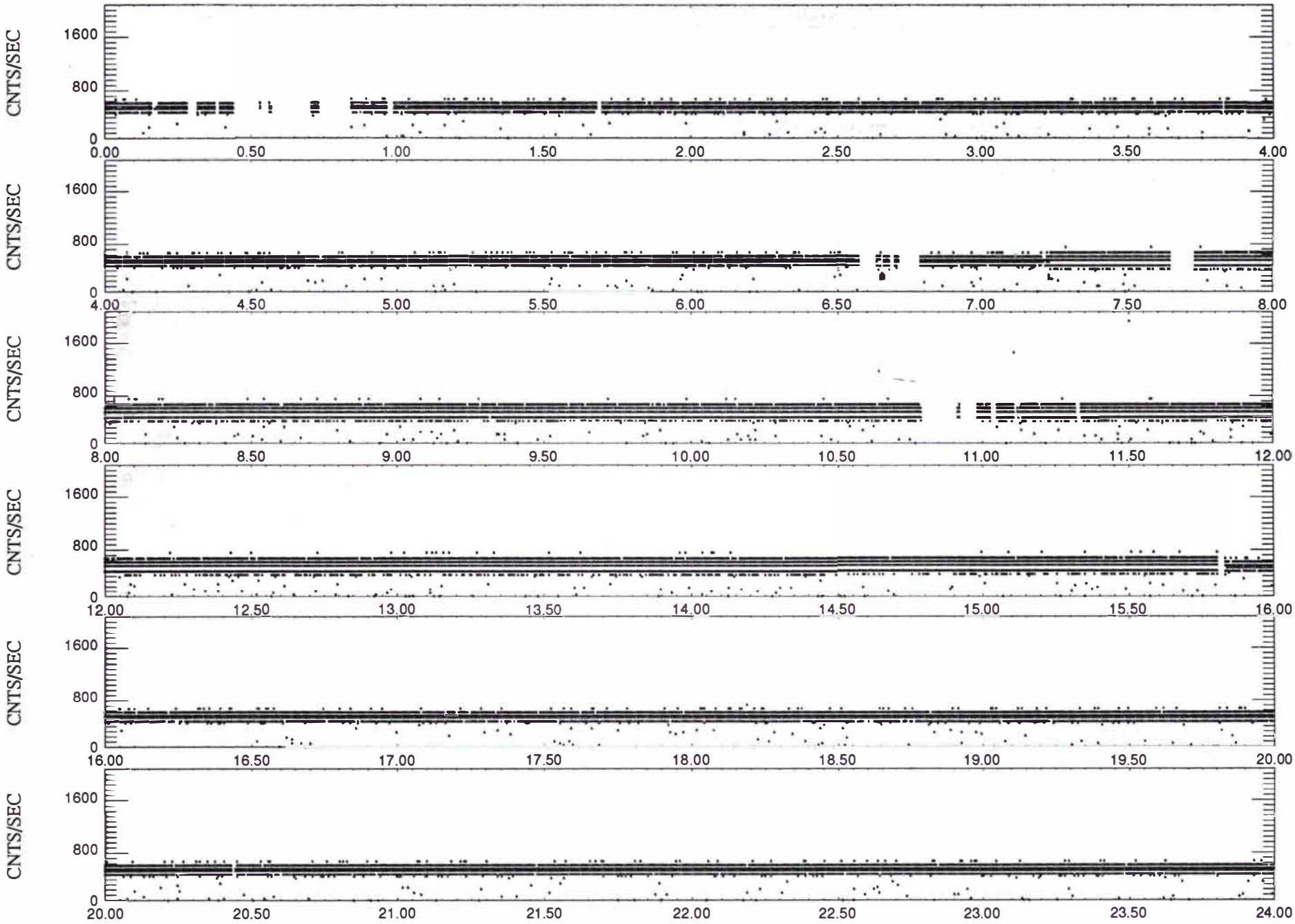
HUS MODES EDR day 244, year 1992 to day 244, year 1992 10/28/92



CALIBRATION DATA INCLUDED

HUS 2A, MODE 1, NOT AVERAGED EDR day 244, year 1992 to day 244, year 1992 10/28/92

CALIBRATION DATA INCLUDED



UNIVERSAL TIME