

.93.305.00.11.33.210

HUS monthly long term thermal data

818

RET

E002 2ARADTMP S/C

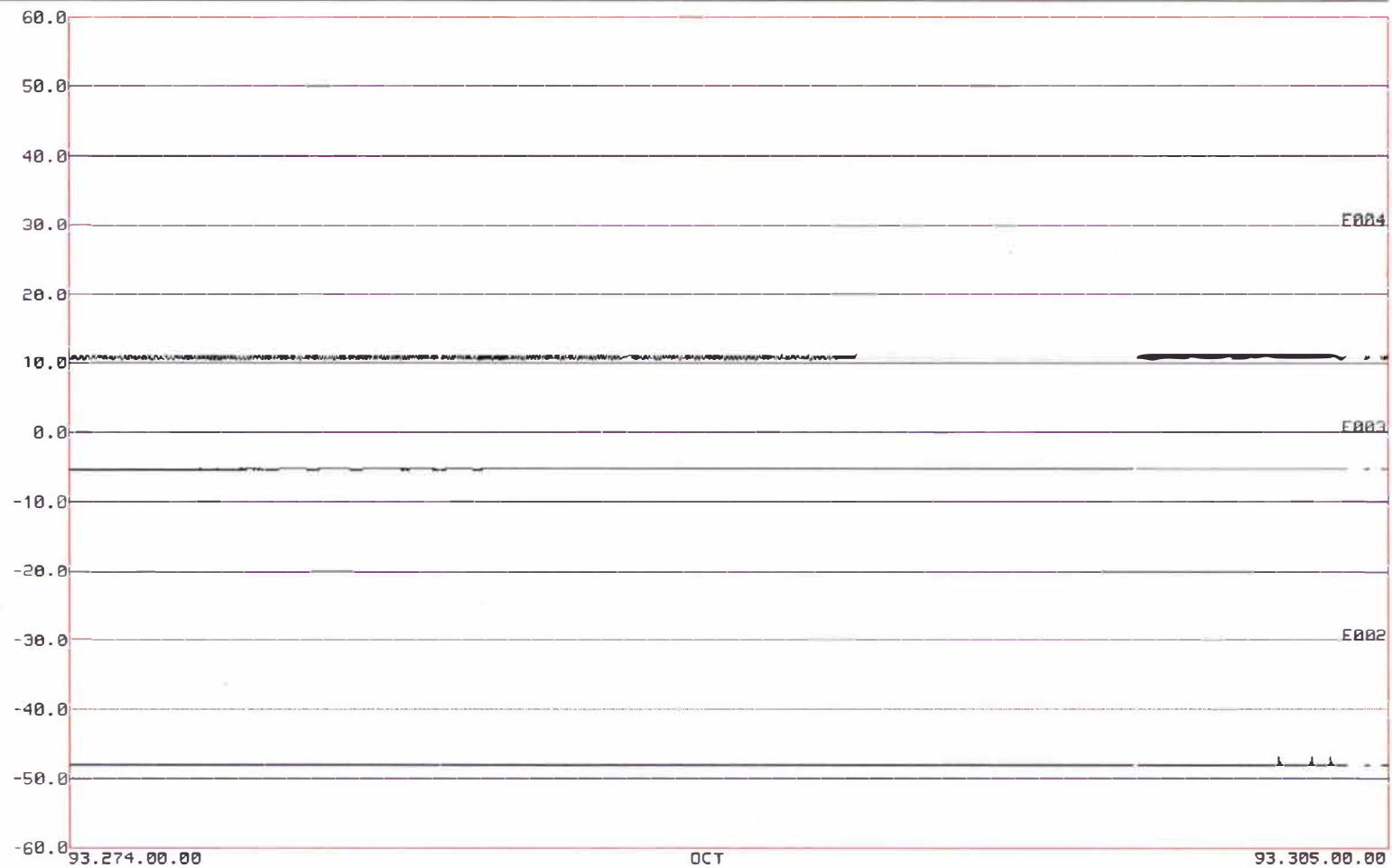
-5.1

E003 2BSENTMP S/C

-48.0

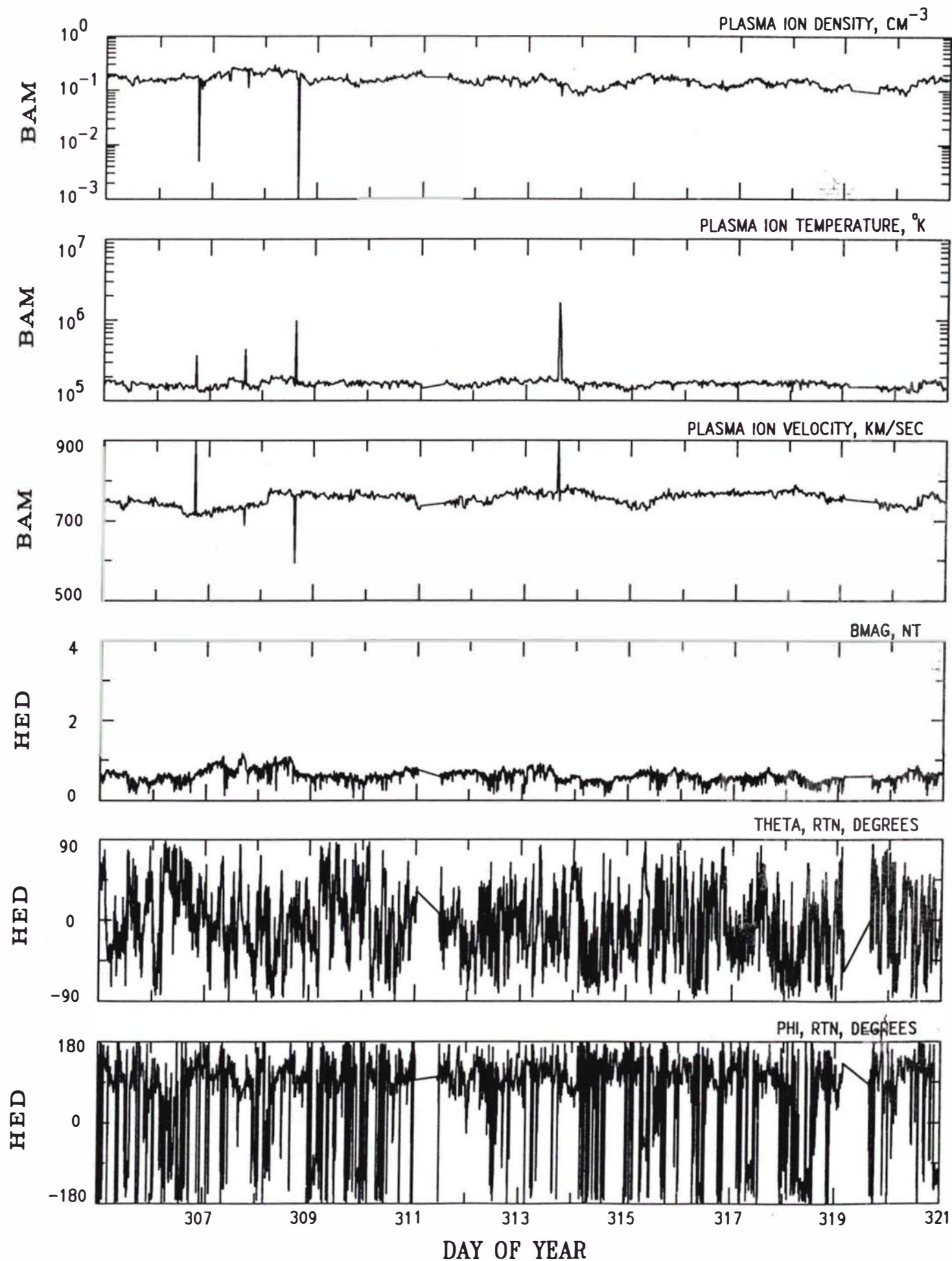
E004 2ASENSTMP EX

11.27



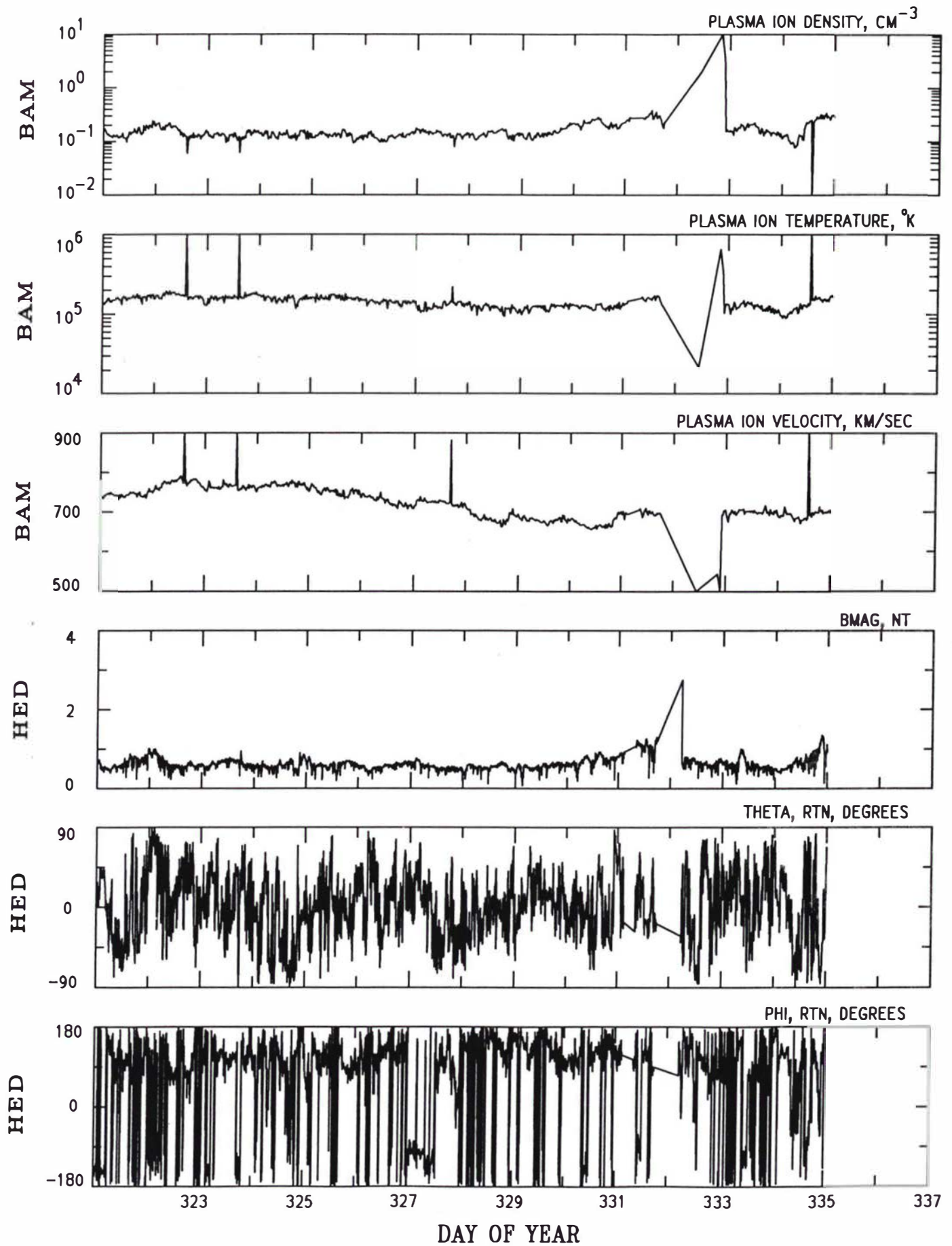
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

93 305 NOV 1 00:00:00.000 - 93 321 NOV 17 00:00:00.000



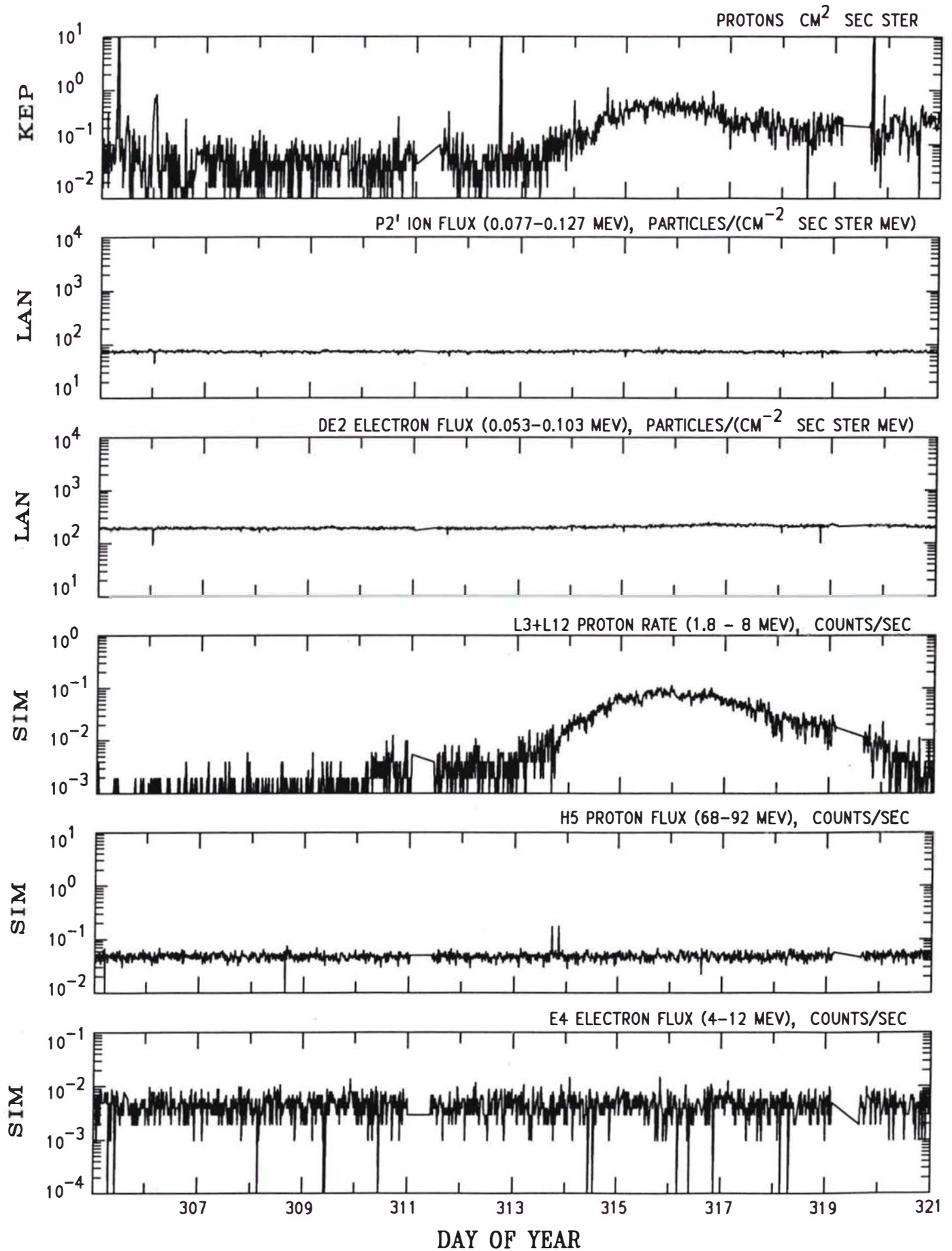
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

93 321 NOV 17 00:00:00.000 - 93 337 DEC 3 00:00:00.000



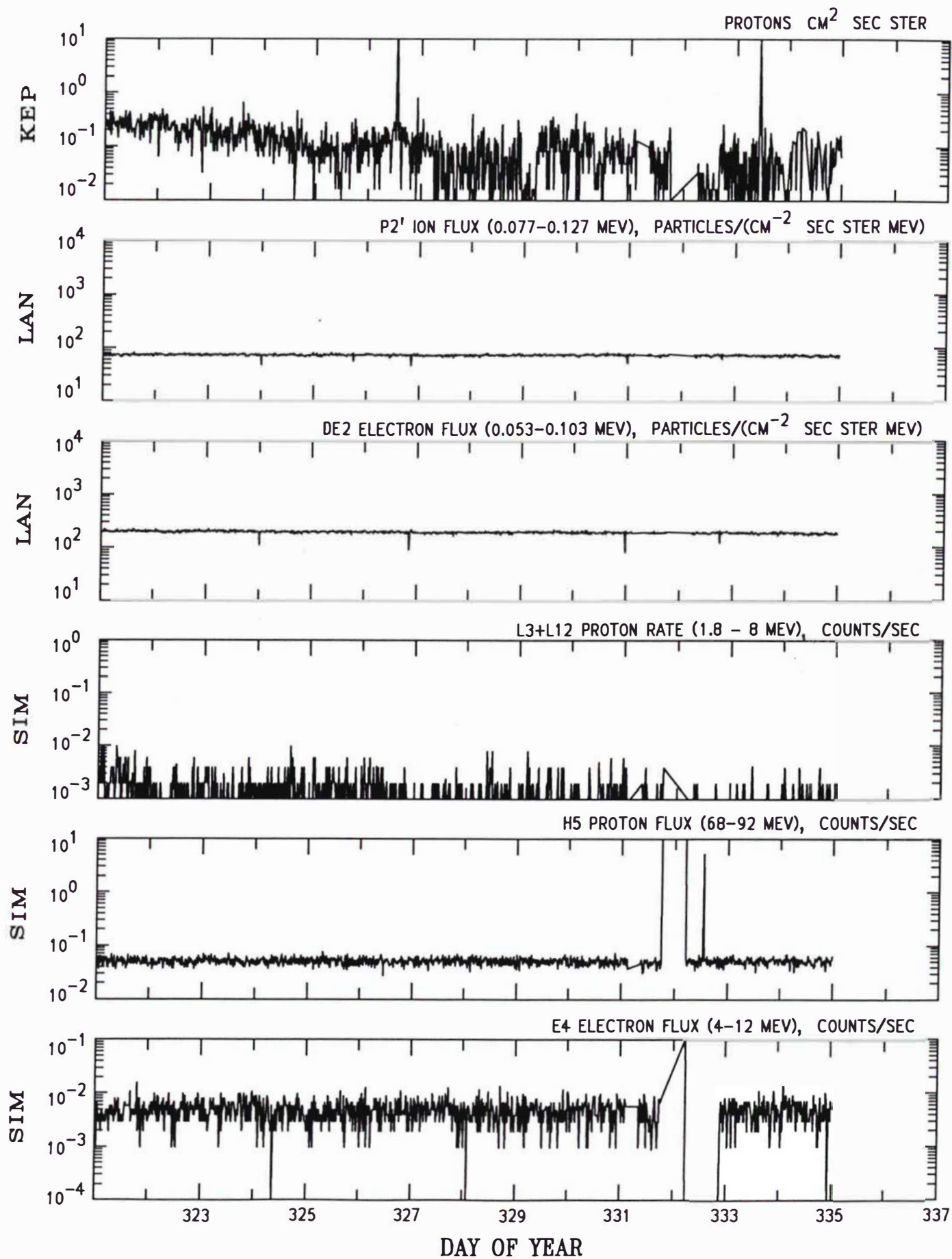
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

93 305 NOV 1 00:00:00.000 - 93 321 NOV 17 00:00:00.000



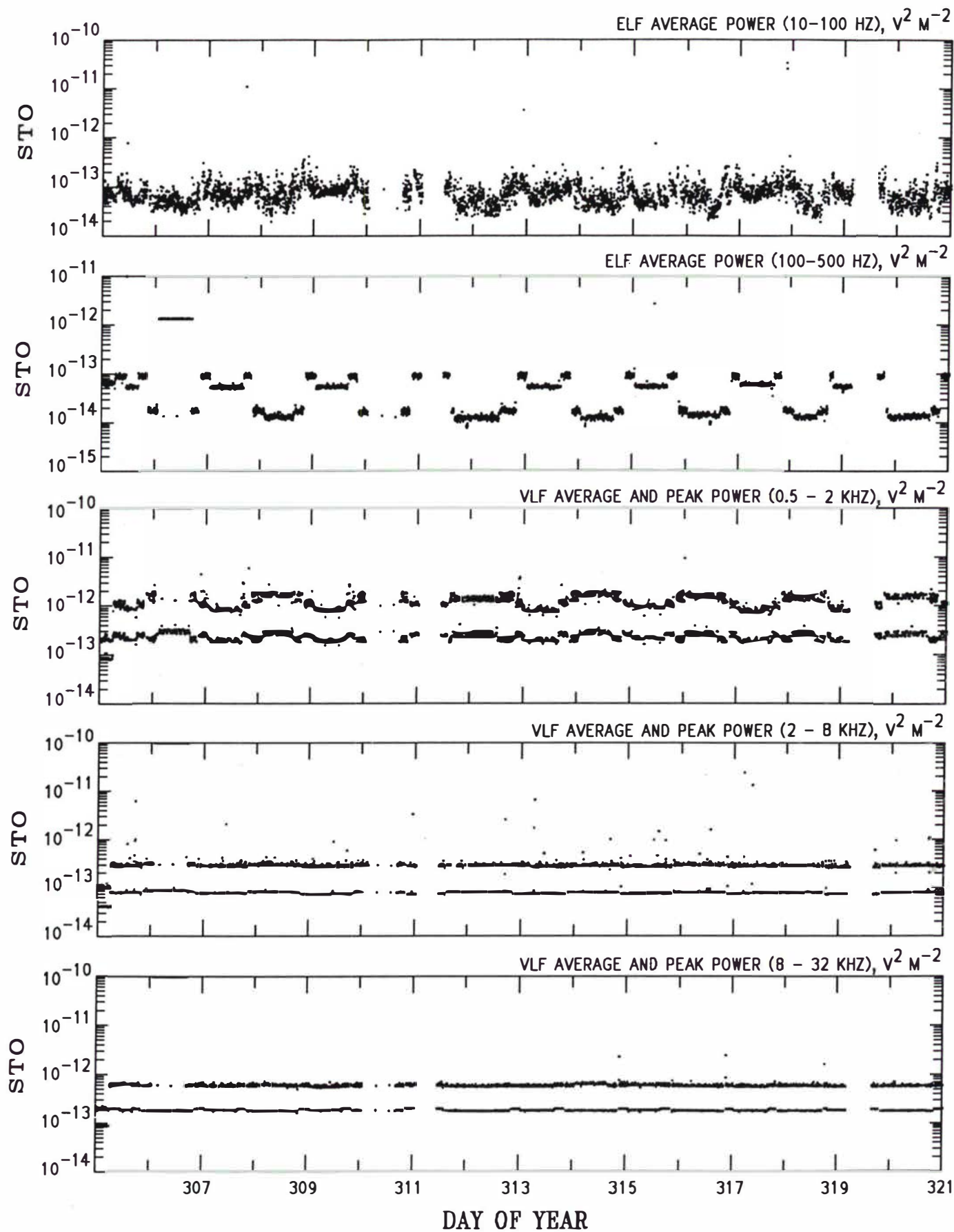
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

93 321 NOV 17 00:00:00.000 - 93 337 DEC 3 00:00:00.000



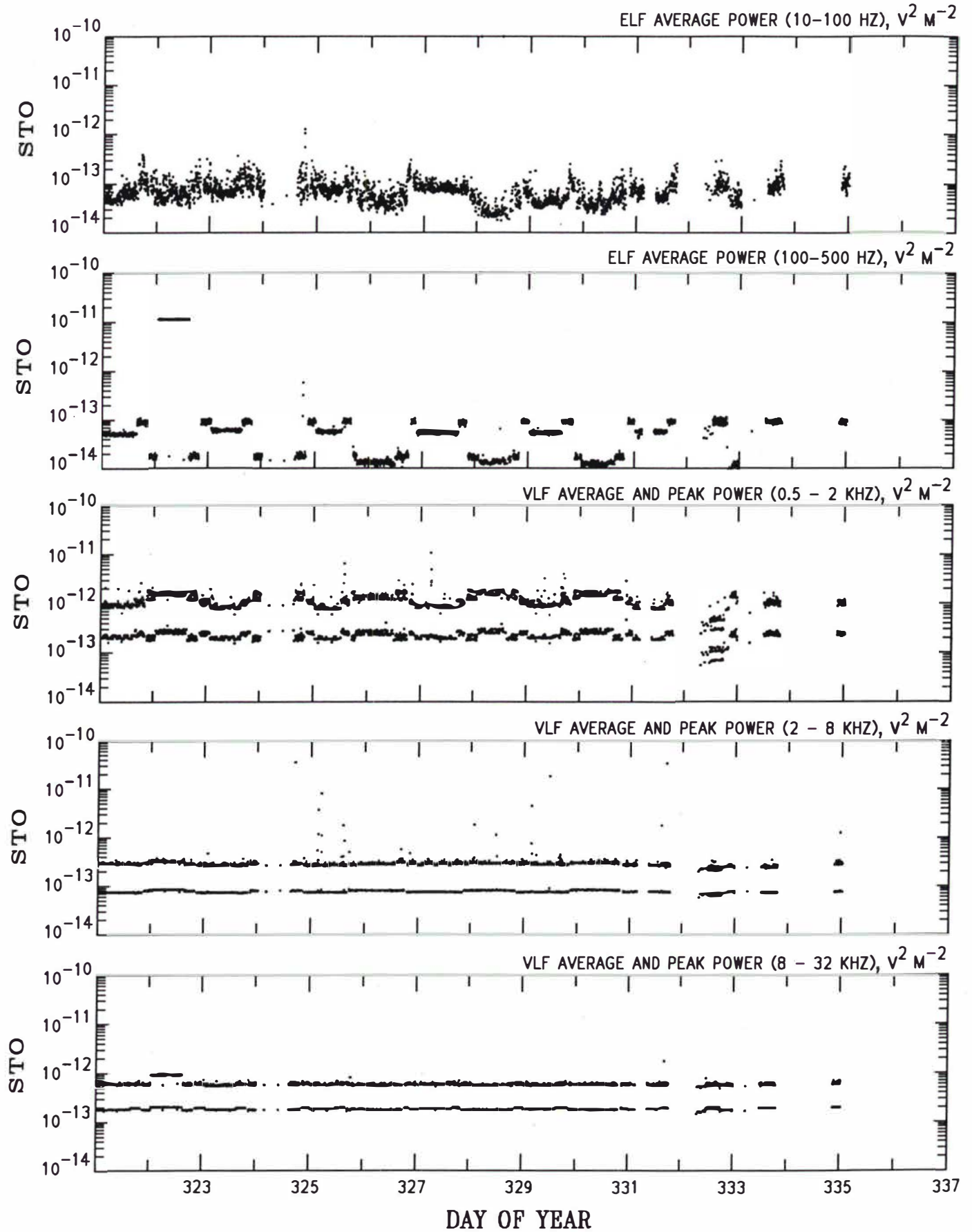
ULYSSES CDR - PLASMA WAVE

93 305 NOV 1 00:00:00.000 - 93 321 NOV 17 00:00:00.000



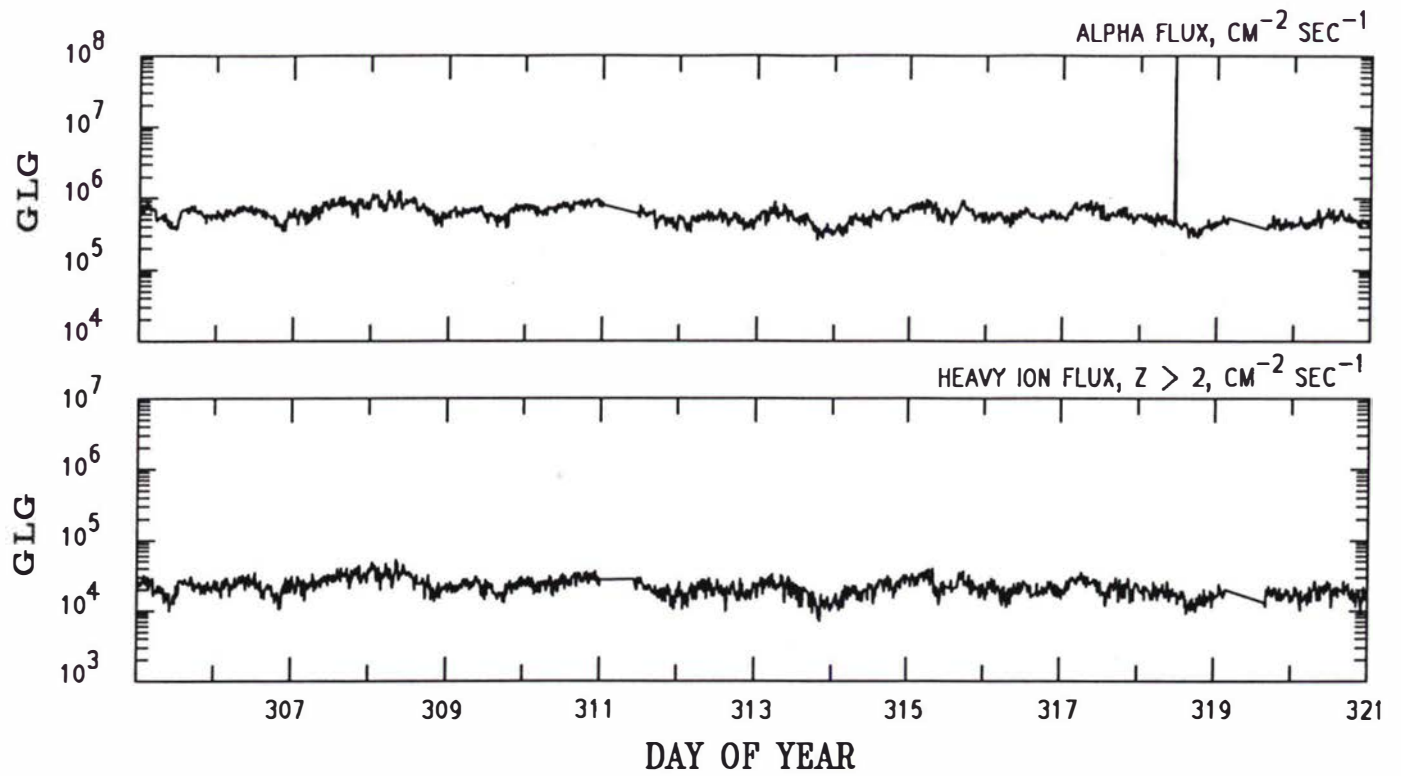
ULYSSES CDR - PLASMA WAVE

93 321 NOV 17 00:00:00.000 - 93 337 DEC 3 00:00:00.000



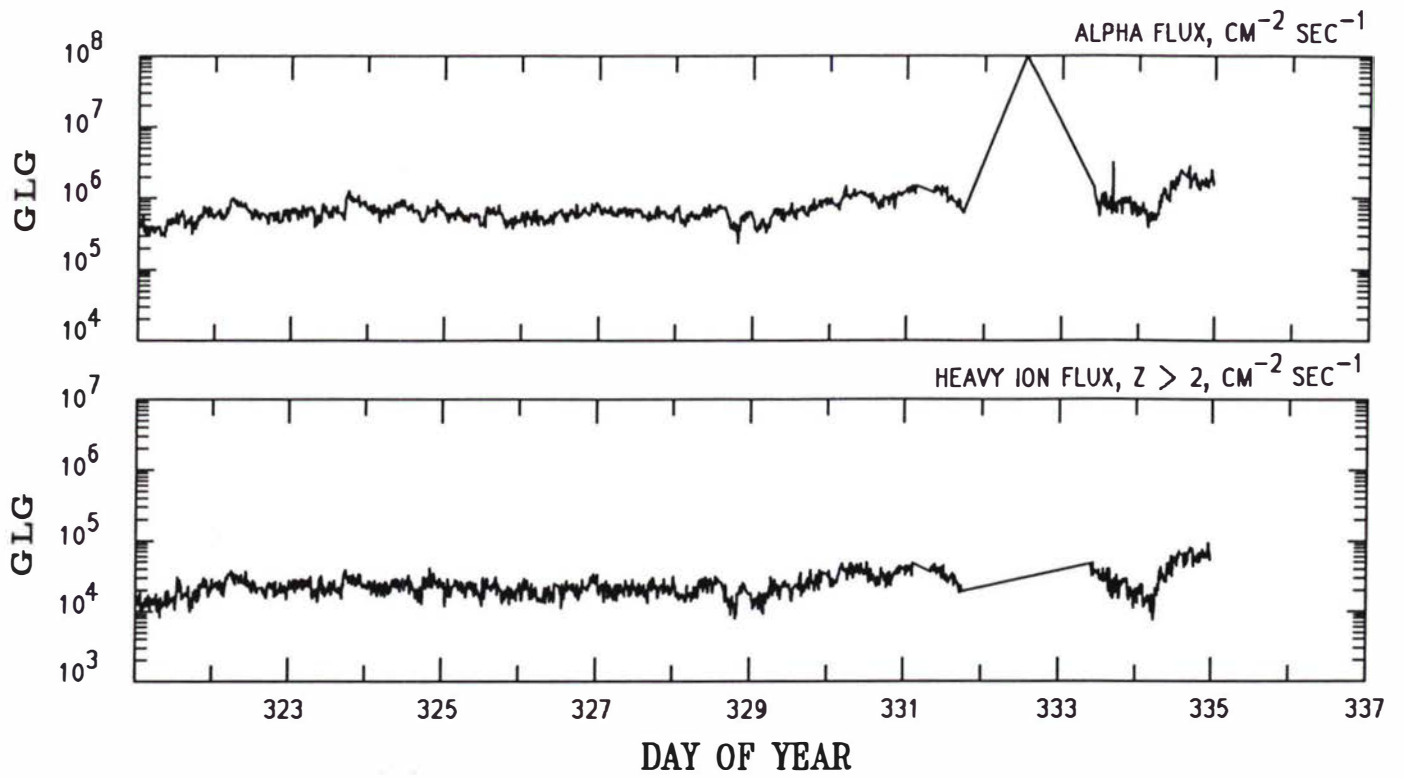
ULYSSES CDR - SOLAR WIND ION COMPOSITION

93 305 NOV 1 00:00:00.000 - 93 321 NOV 17 00:00:00.000



ULYSSES CDR - SOLAR WIND ION COMPOSITION

93 321 NOV 17 00:00:00.000 - 93 337 DEC 3 00:00:00.000



And here's another one I never got.

BATSEARCH PROGRAM

BATSE BURST #2614
EVENT OF 1993 NOV 1 DAY OF YEAR=305
EVENT CROSSING TIME AT BATSE : 11420. S. OR 03:10:20.0
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 237.000 -1.000
BATSE PEAK COUNTING RATE: 41000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 1/11/ 93 IS:
RA= 163.823 DEC= -26.849 DIST= 4.677 AU
BATSE-ULYSSES DISTANCE = 699614363. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=105.43 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -620.90 SECS.
CROSSING TIME AT ULYSSES IS 10799. S. OR 02:59:59 +/- 431.13 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 1/11/ 93 IS:
RA= 231.689 DEC= -19.089 DIST= 2.447 AU
MARS-BATSE DISTANCE = 366084000. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=161.18 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1155.81 SECS.
CROSSING TIME AT MARS IS 10264. S. OR 02:51:04 +/- 50.85 SECONDS
FOUND

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2614	931101	9292	11420	41000	237	-01

$0.4 = 16400 \Rightarrow 164 \text{ c in Ulysses}$

BATSE BURST TRIGGER

NO.: 02614

TIME: TJD=9292 SECONDS=11420

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=054.9 AZIMUTH=023.4 ERROR= DEGREES

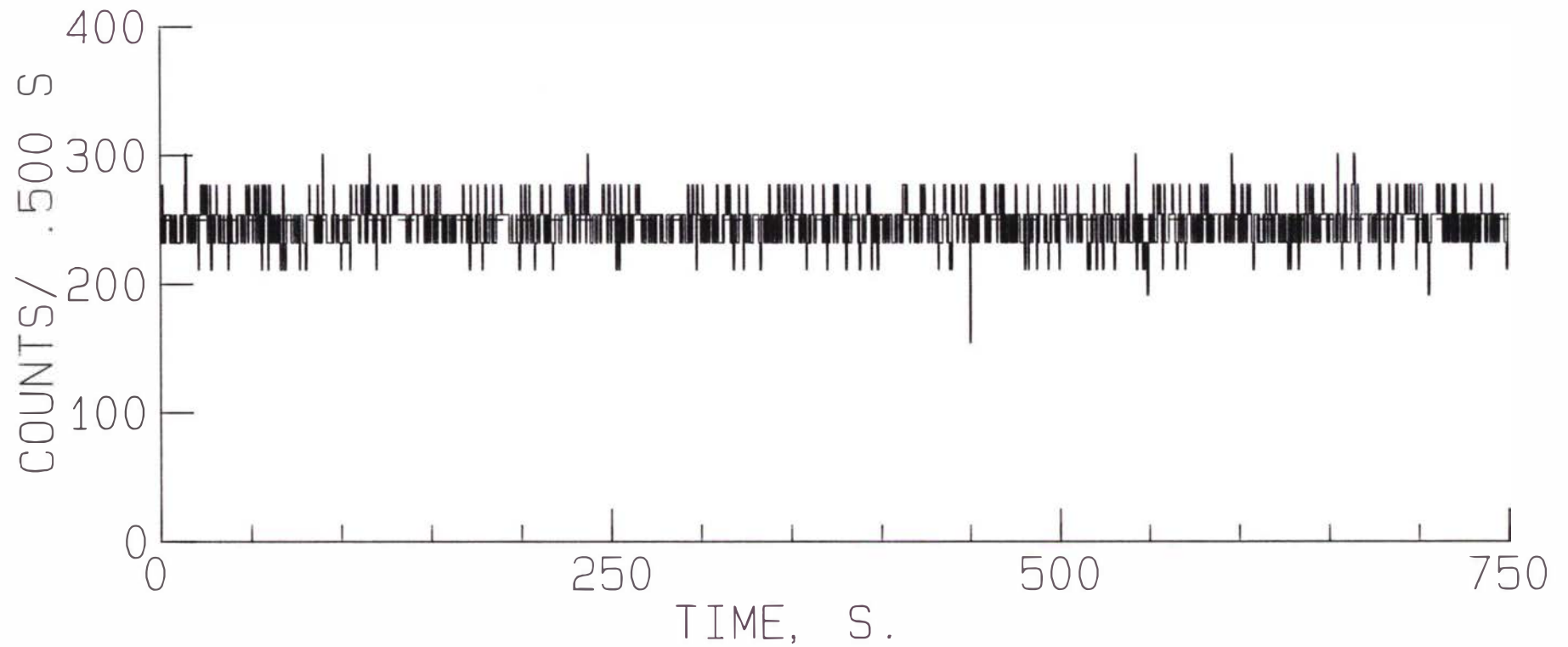
COMMENTS:

COSMIC BURST OF 0.4 SECONDS DURATION. SEEN ABOVE 300 KEV.

ULYSSES RT
1/11/93 10368.192 s
0- 0 keV

5/ 2/94

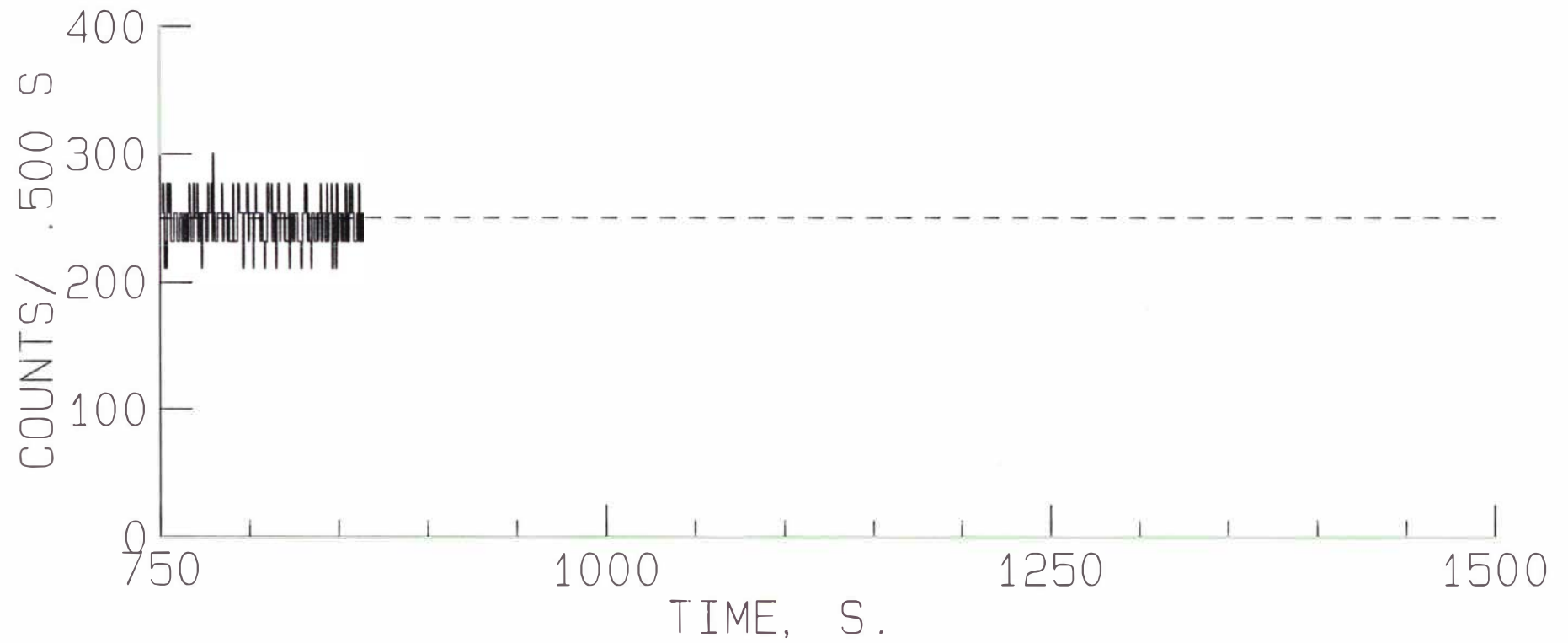
N= 10 M= 1
>4.0 SIGMA FLUCTUATIONS



ULYSSES RT
1/11/93 10368.192 s
0- 0 keV

5/ 2/94

N= 10 M= 1
>4.0 SIGMA FLUCTUATIONS



Ratse 2614

3 / 2 / 9 4

ULYSSES RT

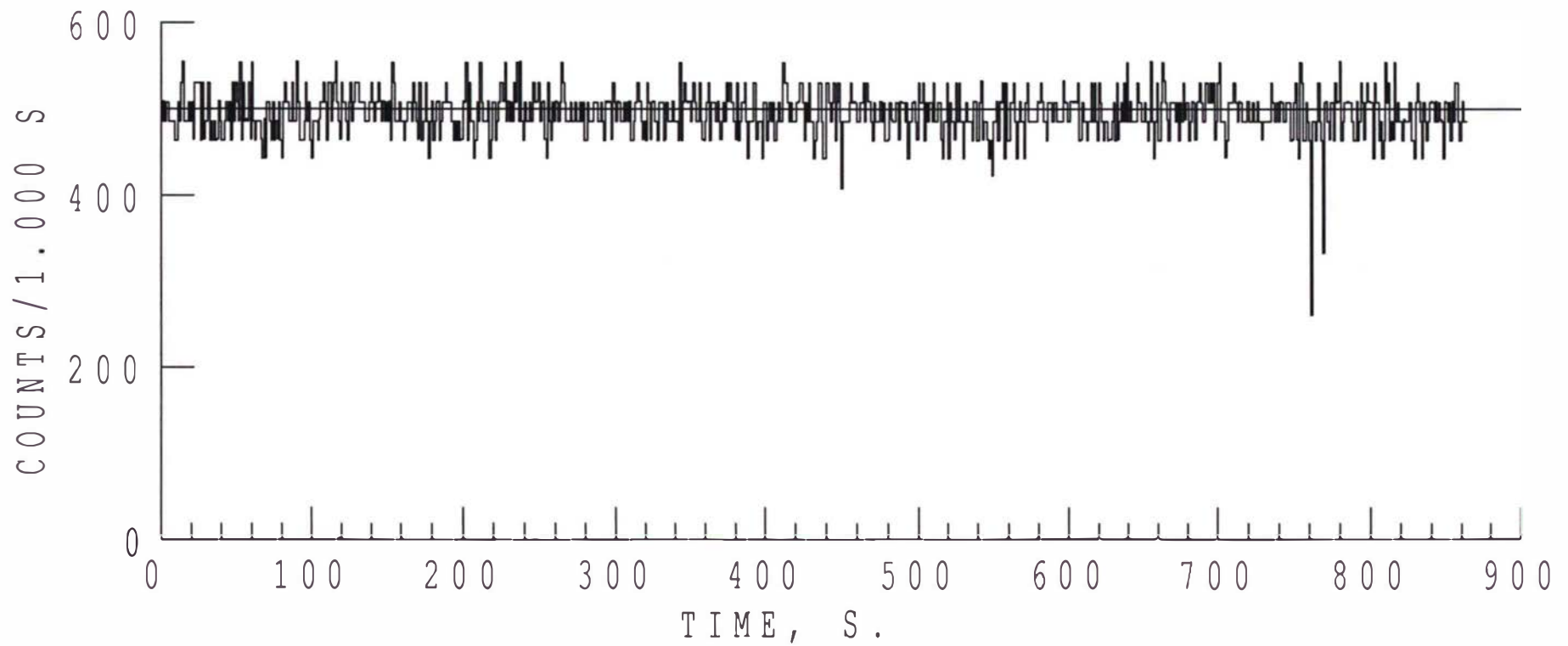
1 / 11 / 93 10368.192 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From BRAINERD@ssl.msfc.nasa.gov Tue Nov 2 19:24:39 1993
Date: Tue, 2 Nov 1993 21:25:49 -0600 (CST)
From: BRAINERD@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Cc: BRAINERD@ssl.msfc.nasa.gov
Subject: Crossing Windows for BATSE Burst 2615
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2615
EVENT OF 1993 NOV 1 DAY OF YEAR=305
EVENT CROSSING TIME AT BATSE : 83618. S. OR 23:13:38.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 134.000 7.000
BATSE PEAK COUNTING RATE: 7000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 1/11/ 93 IS:
RA= 163.925 DEC= -27.024 DIST= 4.664 AU
BATSE-ULYSSES DISTANCE = 697806739. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=135.31 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1654.77 SECS.
CROSSING TIME AT ULYSSES IS 81963. S. OR 22:46:03 +/- 309.07 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 1/11/ 93 IS:
RA= 231.689 DEC= -19.089 DIST= 2.447 AU
MARS-BATSE DISTANCE = 366083328. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 80.48 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 201.92 SECS.
CROSSING TIME AT MARS IS 83820. S. OR 23:16:59 +/- 212.15 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2615	931101	9292	83618	7000	134	+07

BATSE BURST TRIGGER

NO.: 02615

TIME: TJD=9292 SECONDS=83618

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=047.9 AZIMUTH=198.3 ERROR= DEGREES

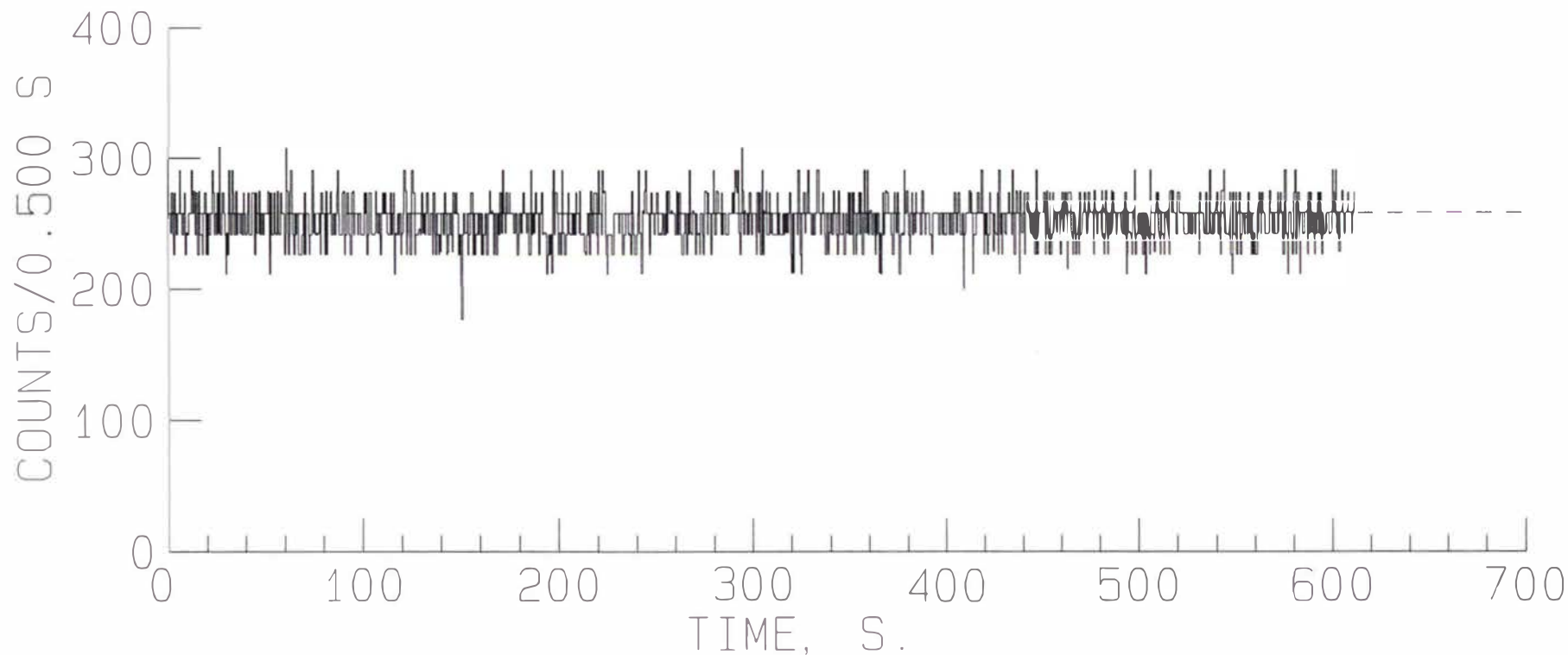
COMMENTS:

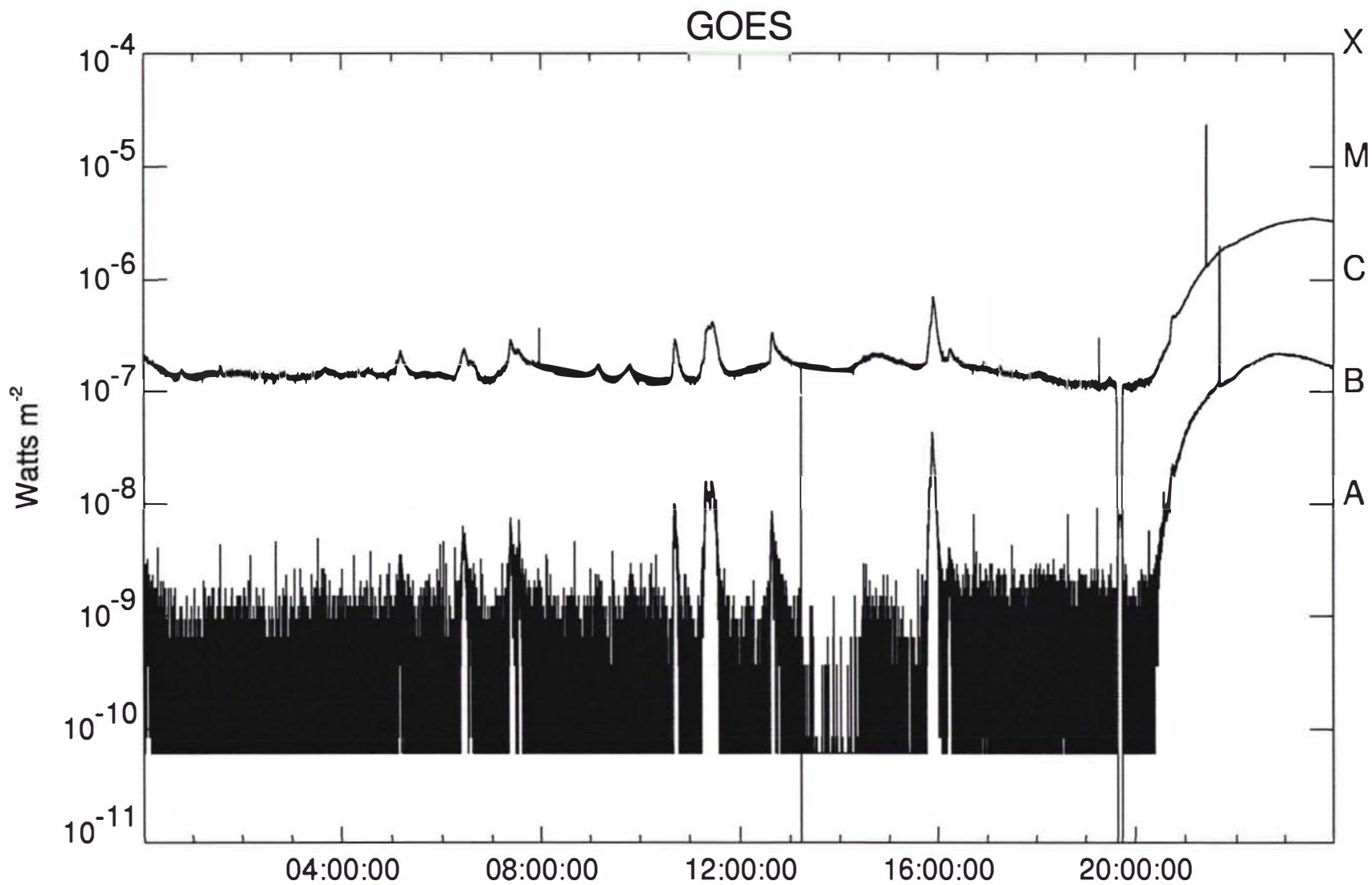
COSMIC BURST OF 0.04 SECONDS DURATION. SEEN ABOVE 300 KEV.

4/11/93

ULYSSES RT
1/11/93 81648.039 s
0.250 S INTERVALS REGROUPED BY 2
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



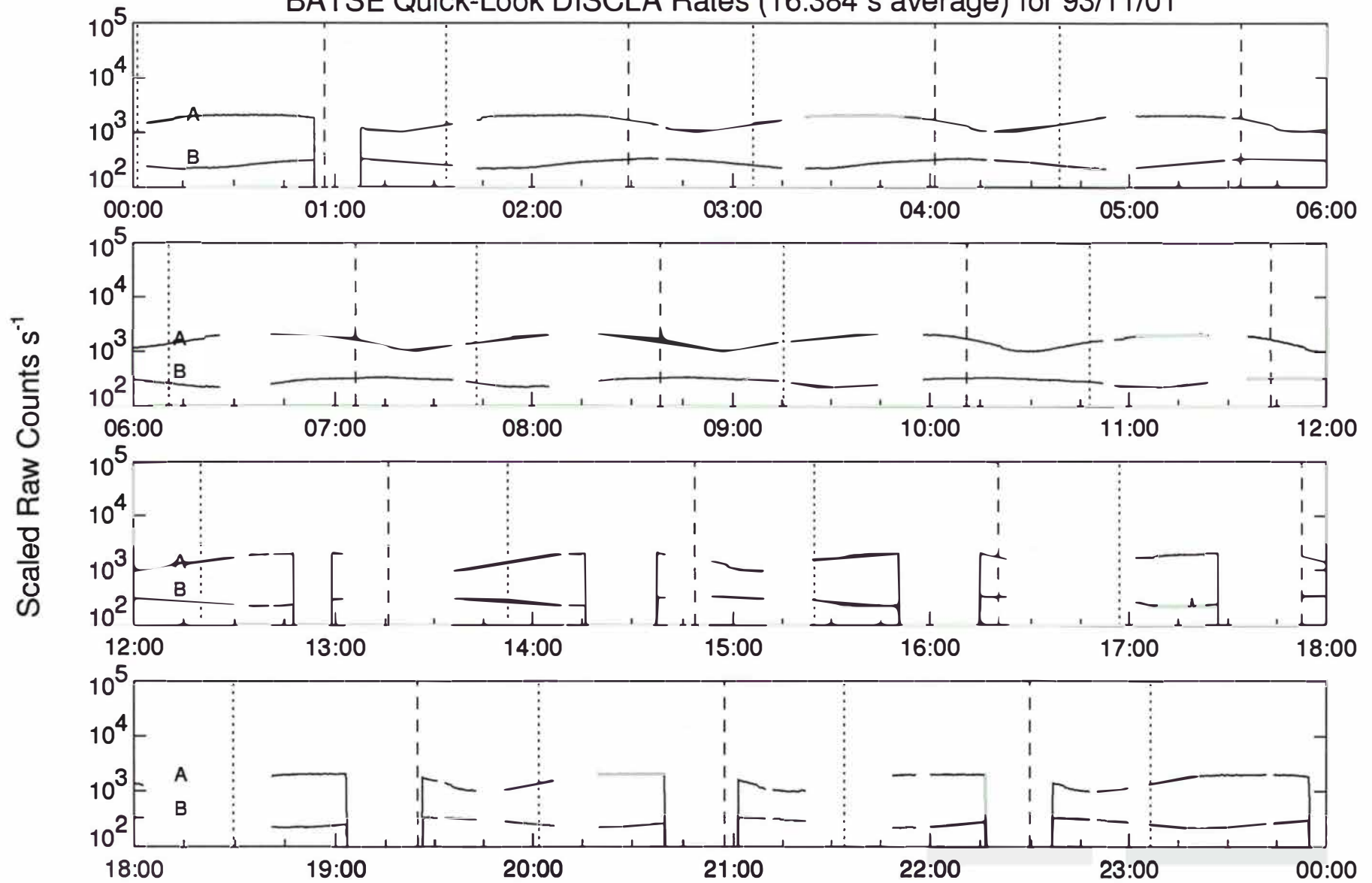


Data Start: 93/11/01, 0000:02

Plot created: 93/11/02, 1616

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

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/01

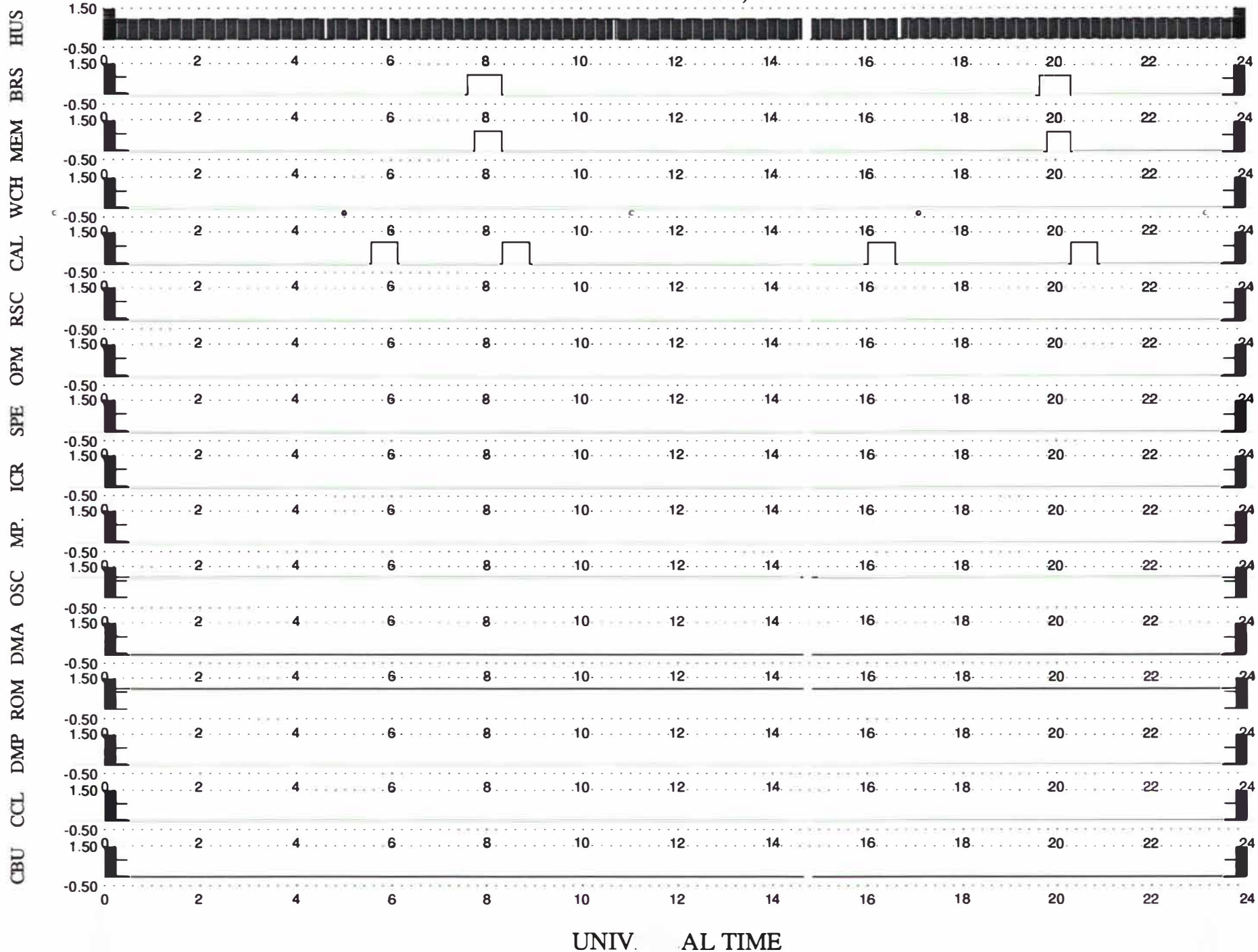


Current Time: 93/11/04, 1646 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

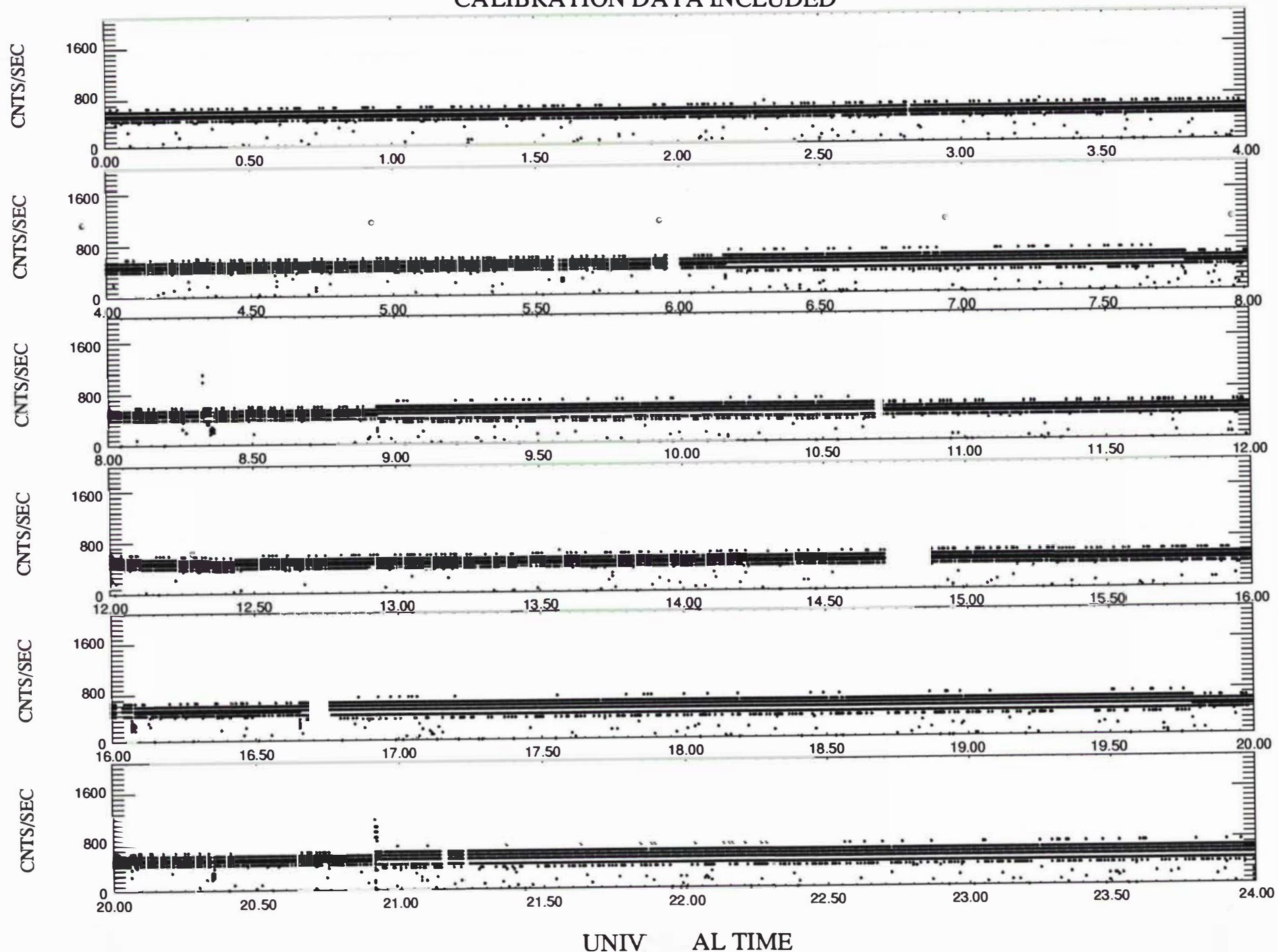
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

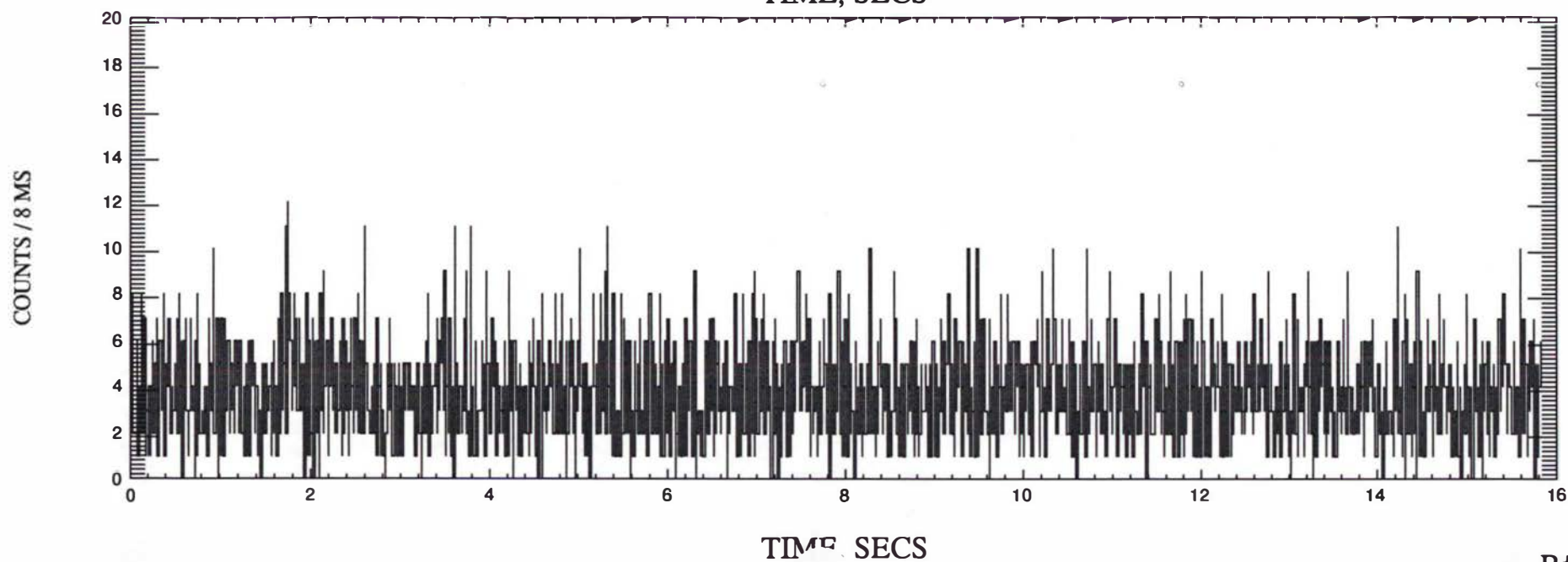
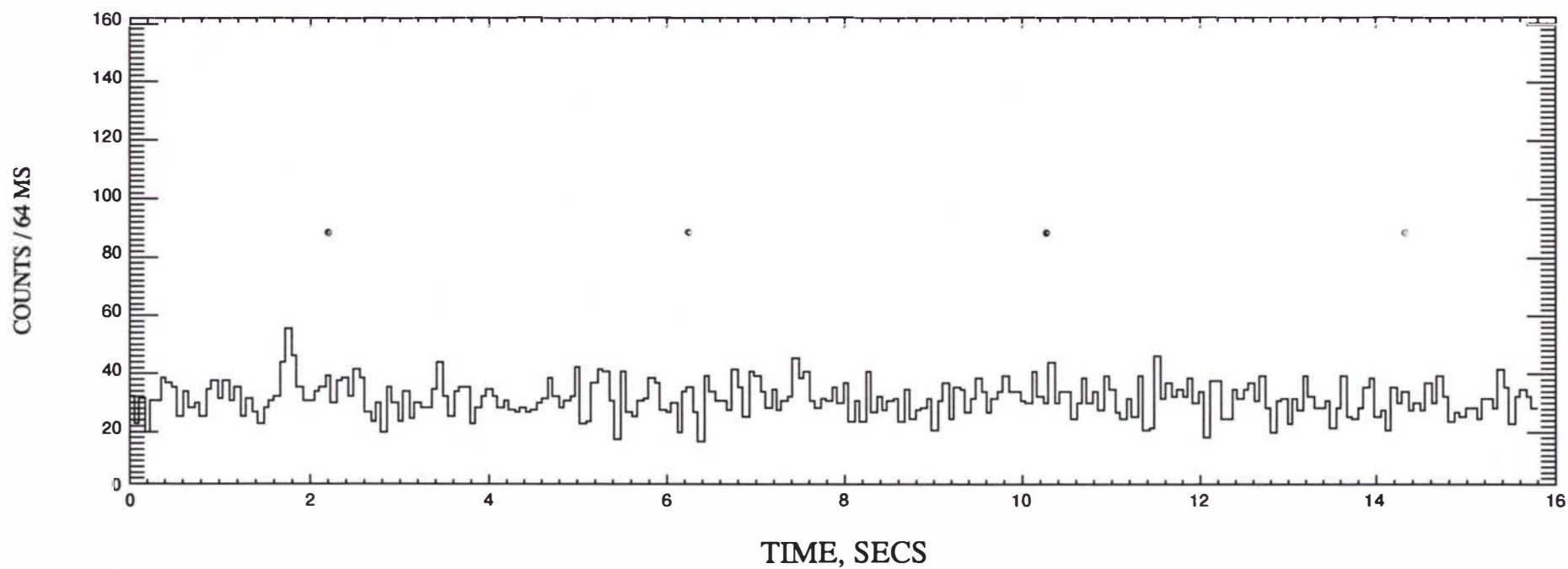
BURST NUMBER 5, 6



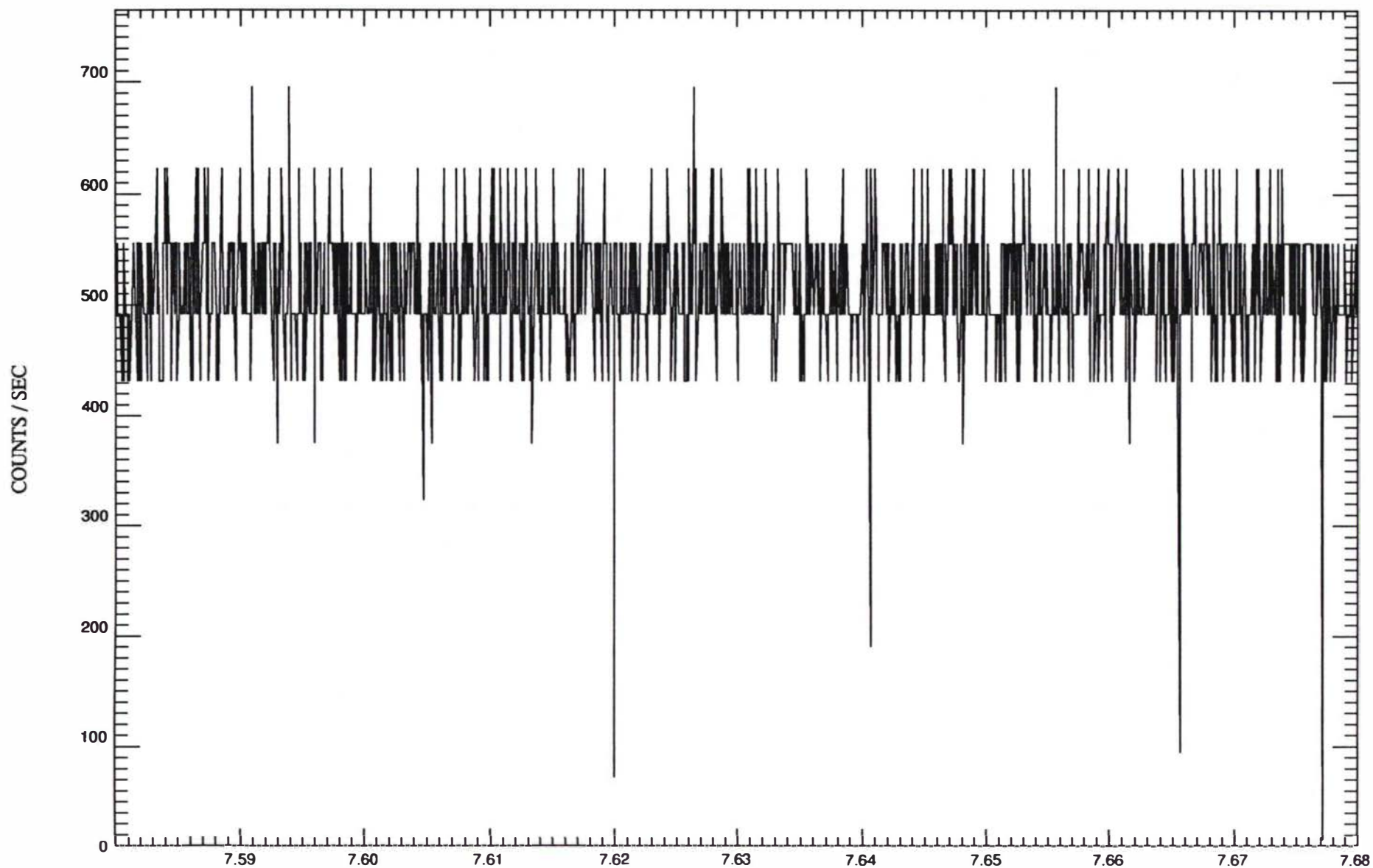
CALIBRATION DATA INCLUDED



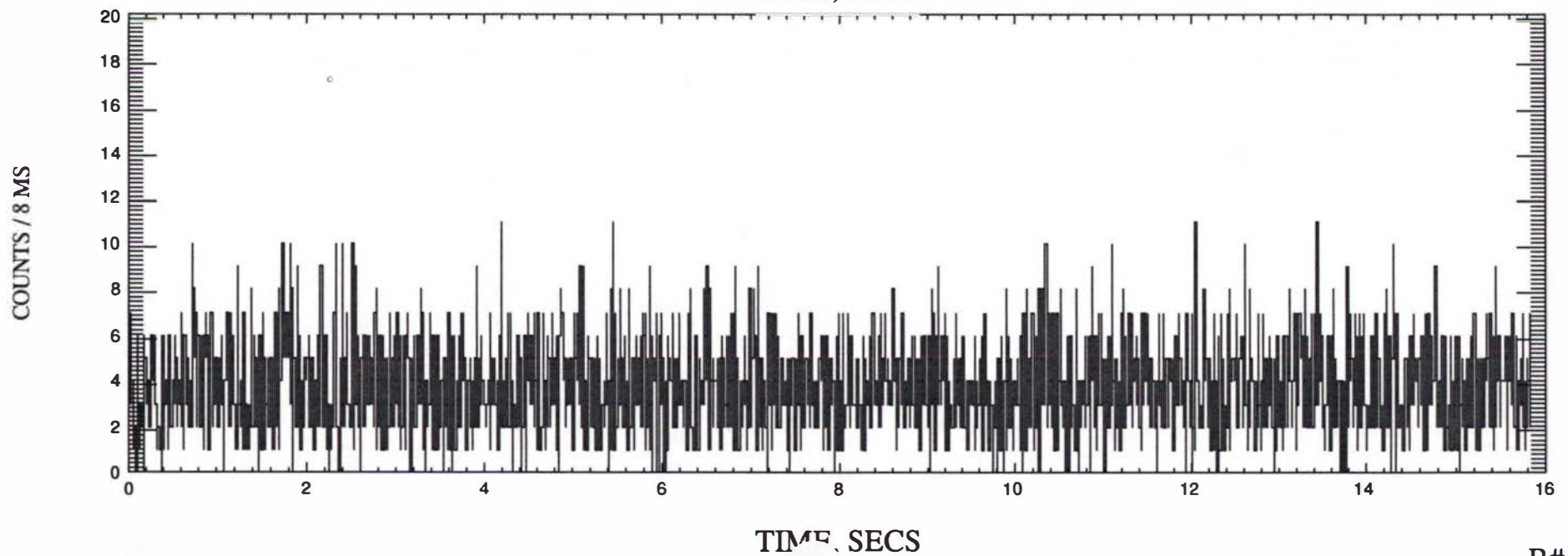
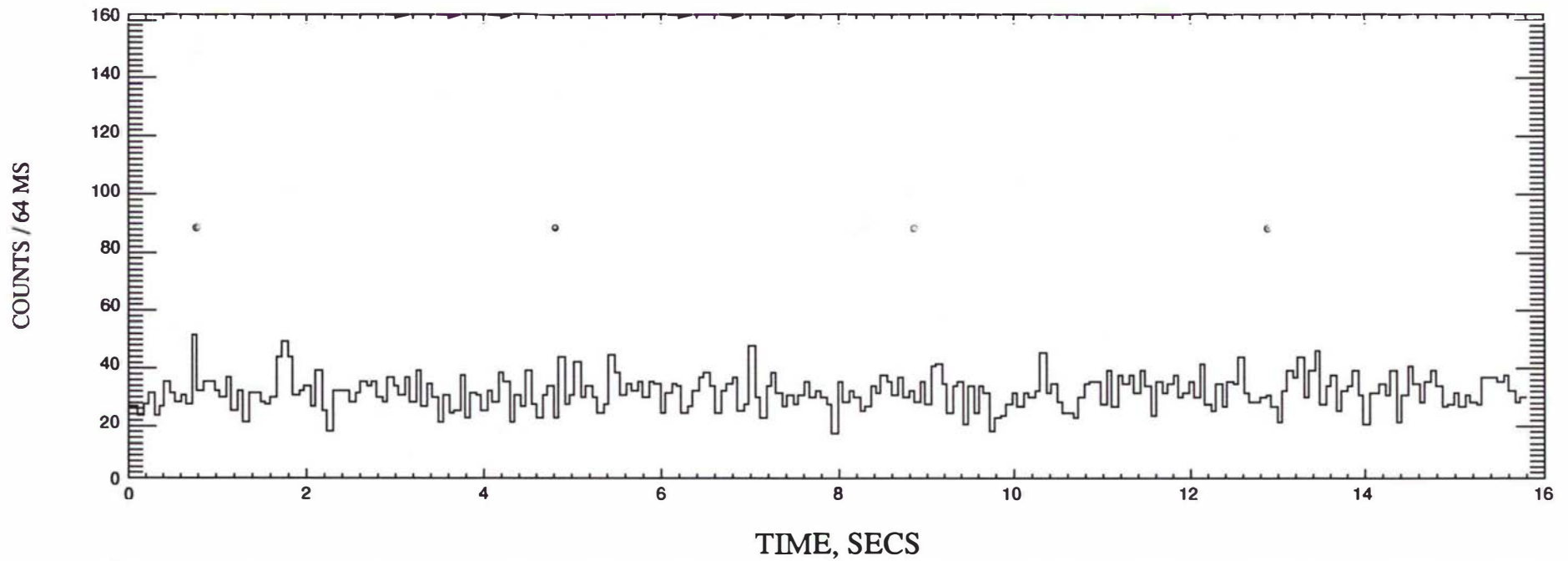
Burst Counter 5 at UT= 7.626513099670 h=27455.447 s 07:37:35.447



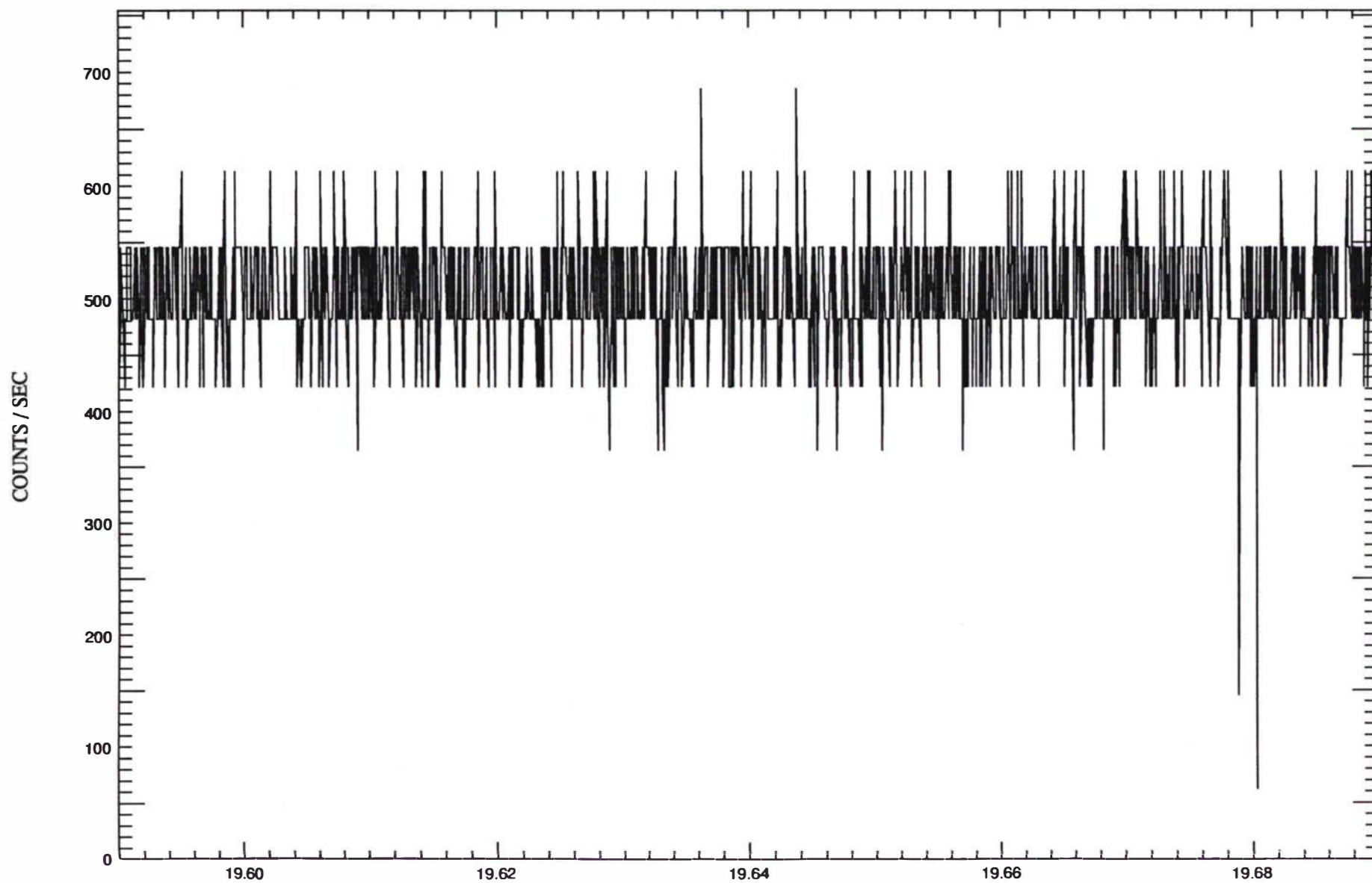
CALIBRATION DATA INCLUDED

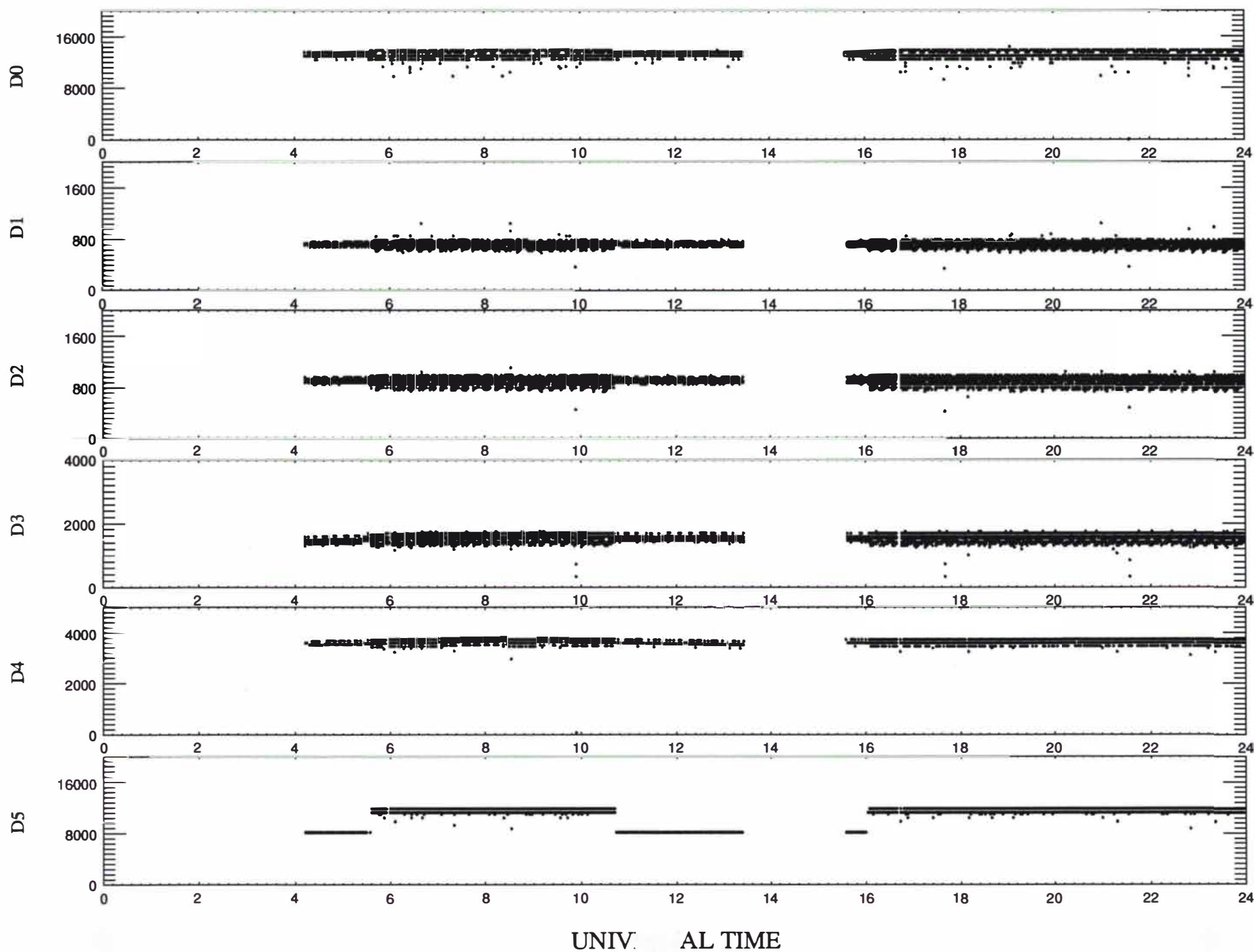


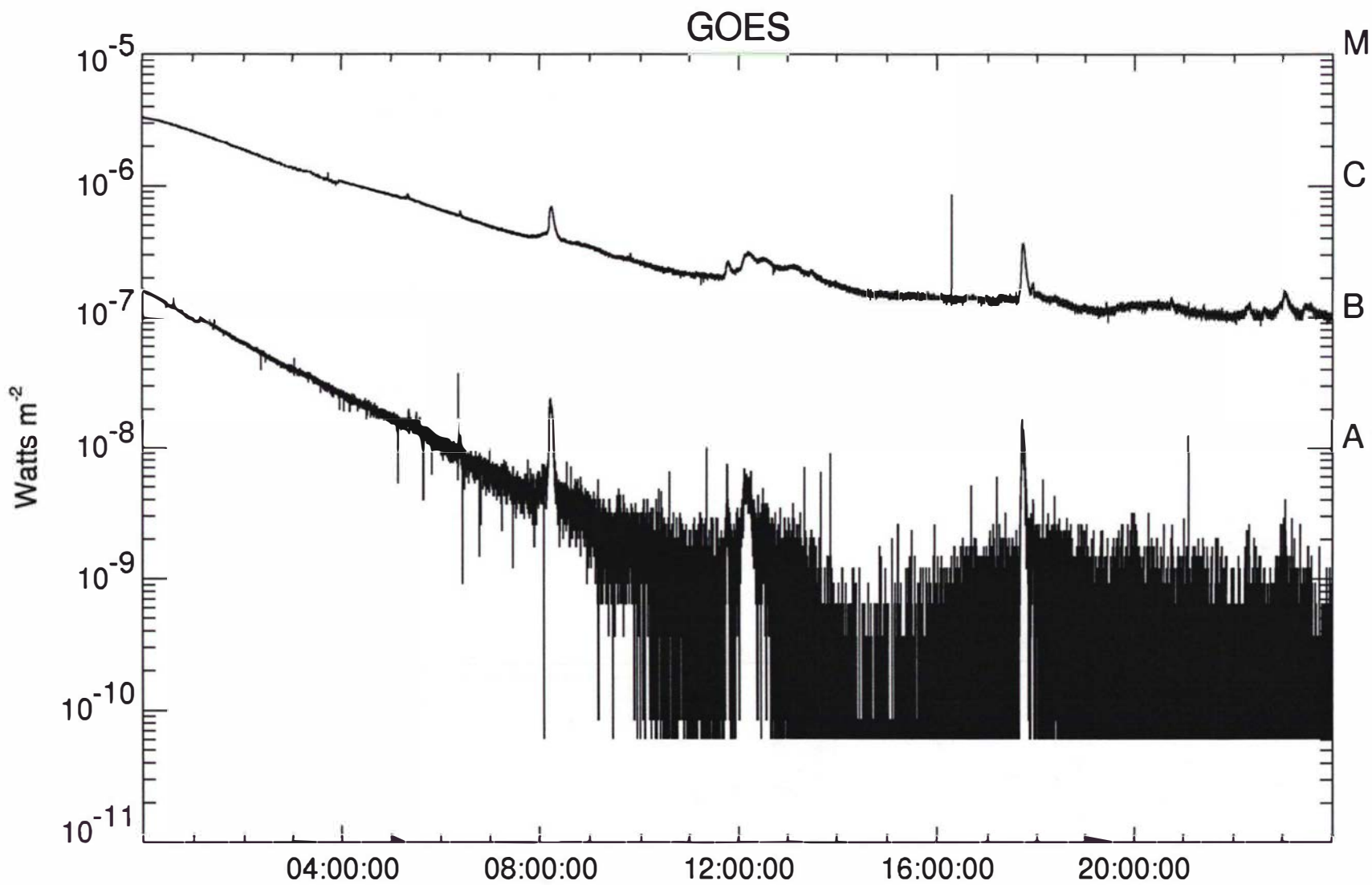
Burst Counter 6 at UT=19.636489787632 h=70691.363 s 19:38:11.363



CALIBRATION DATA INCLUDED







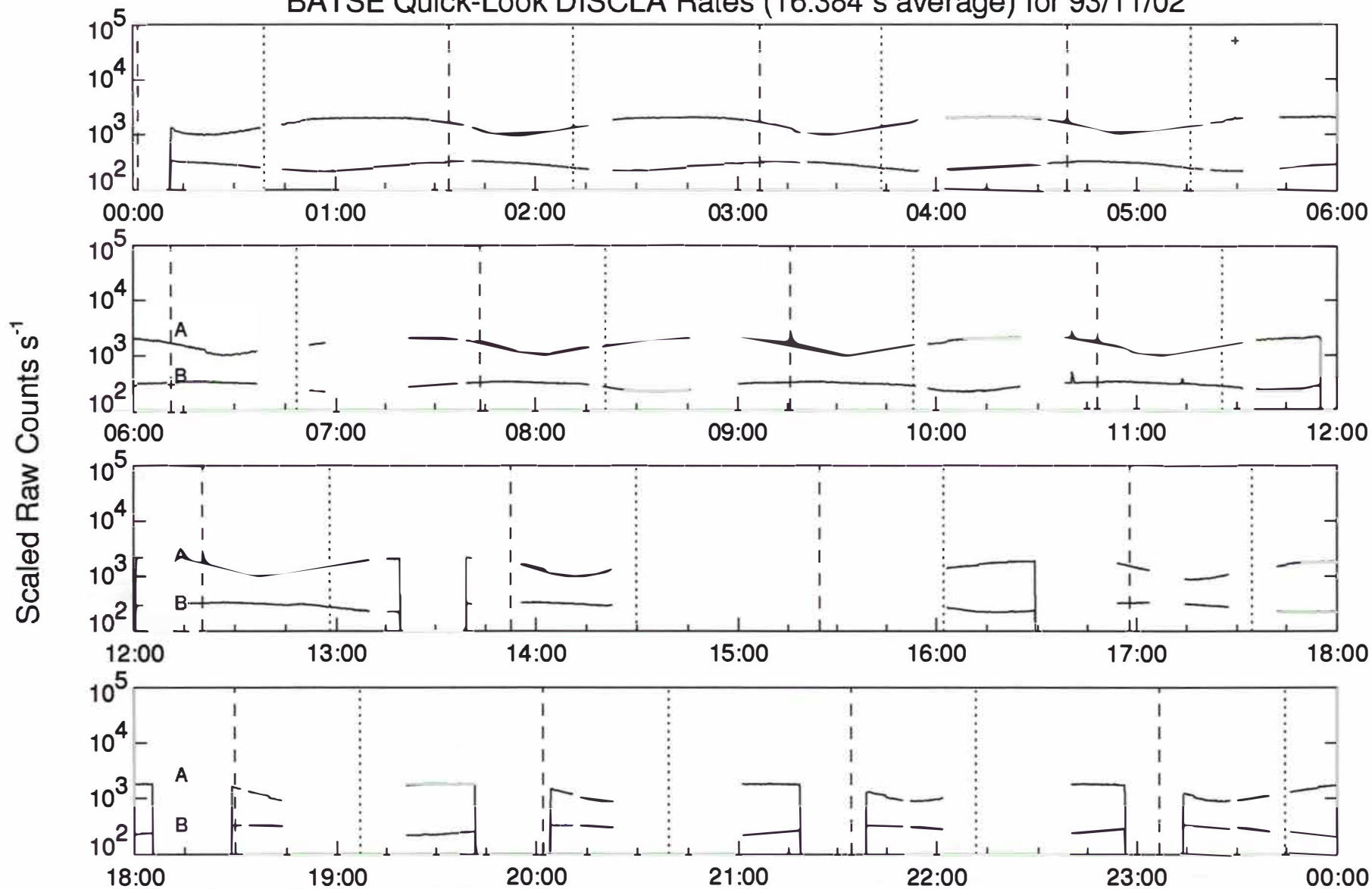
Data Start: 93/11/02, 0000:02

Plot created: 93/11/04, 1608

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/02

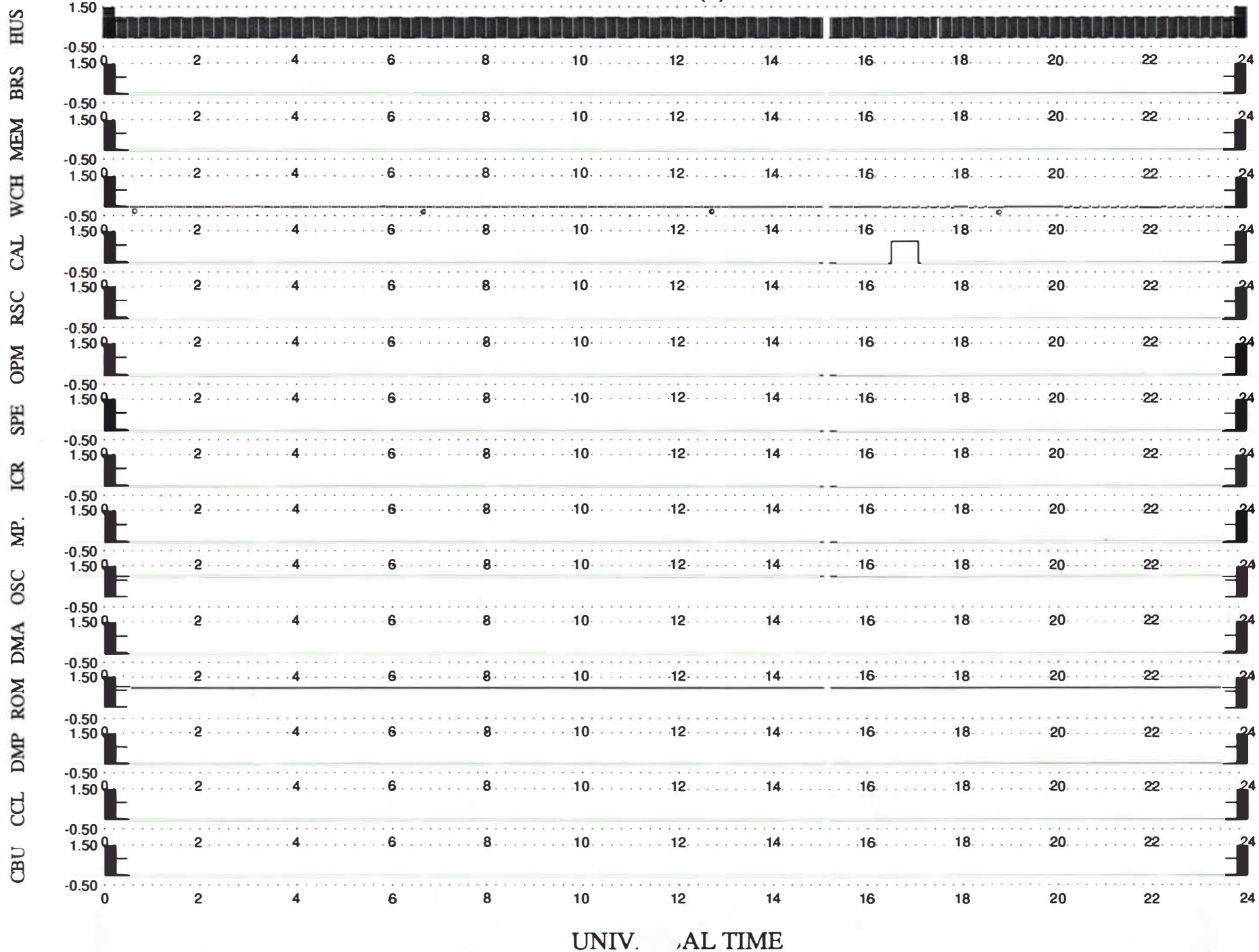


Current Time: 93/11/04, 1634 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

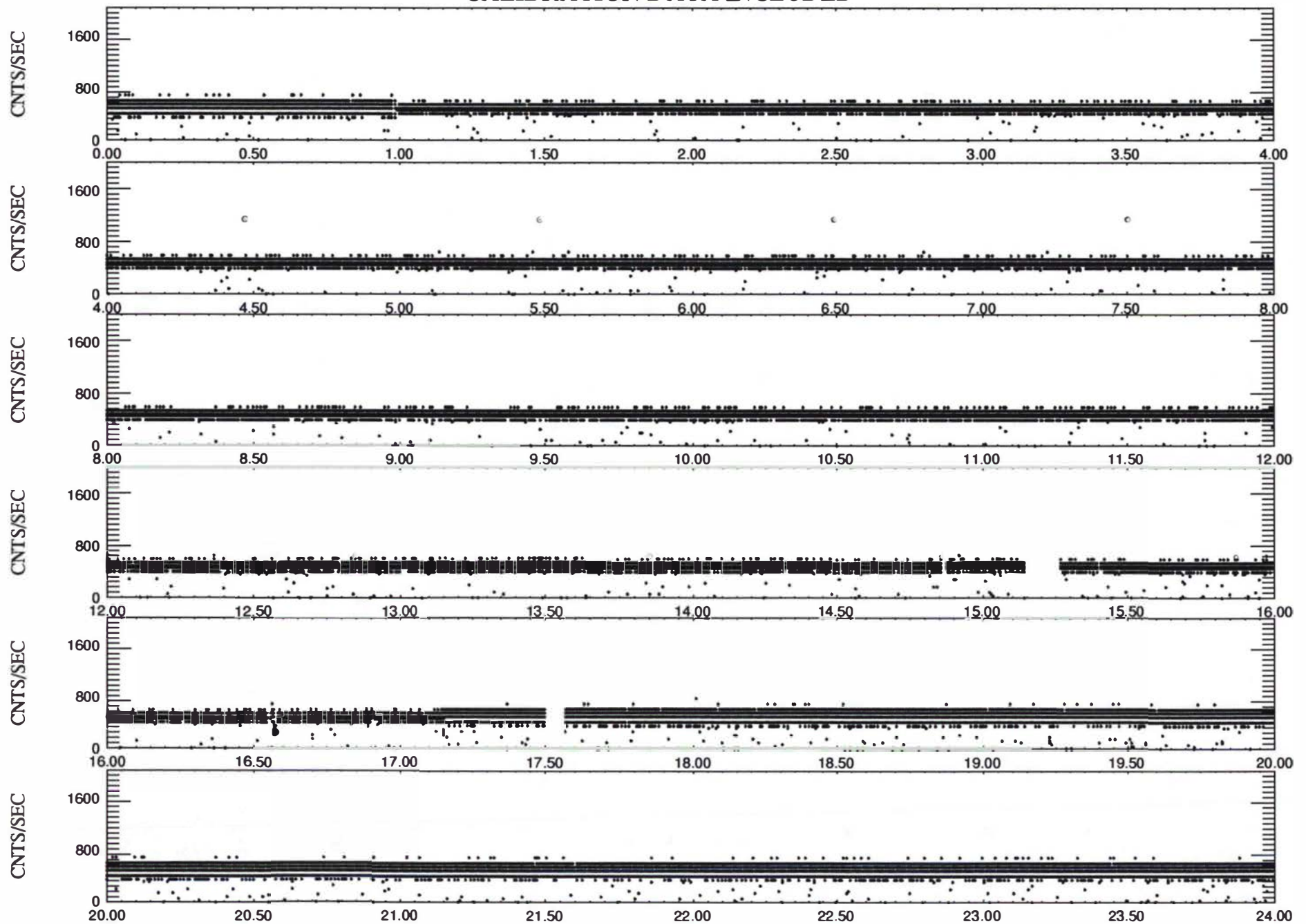
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

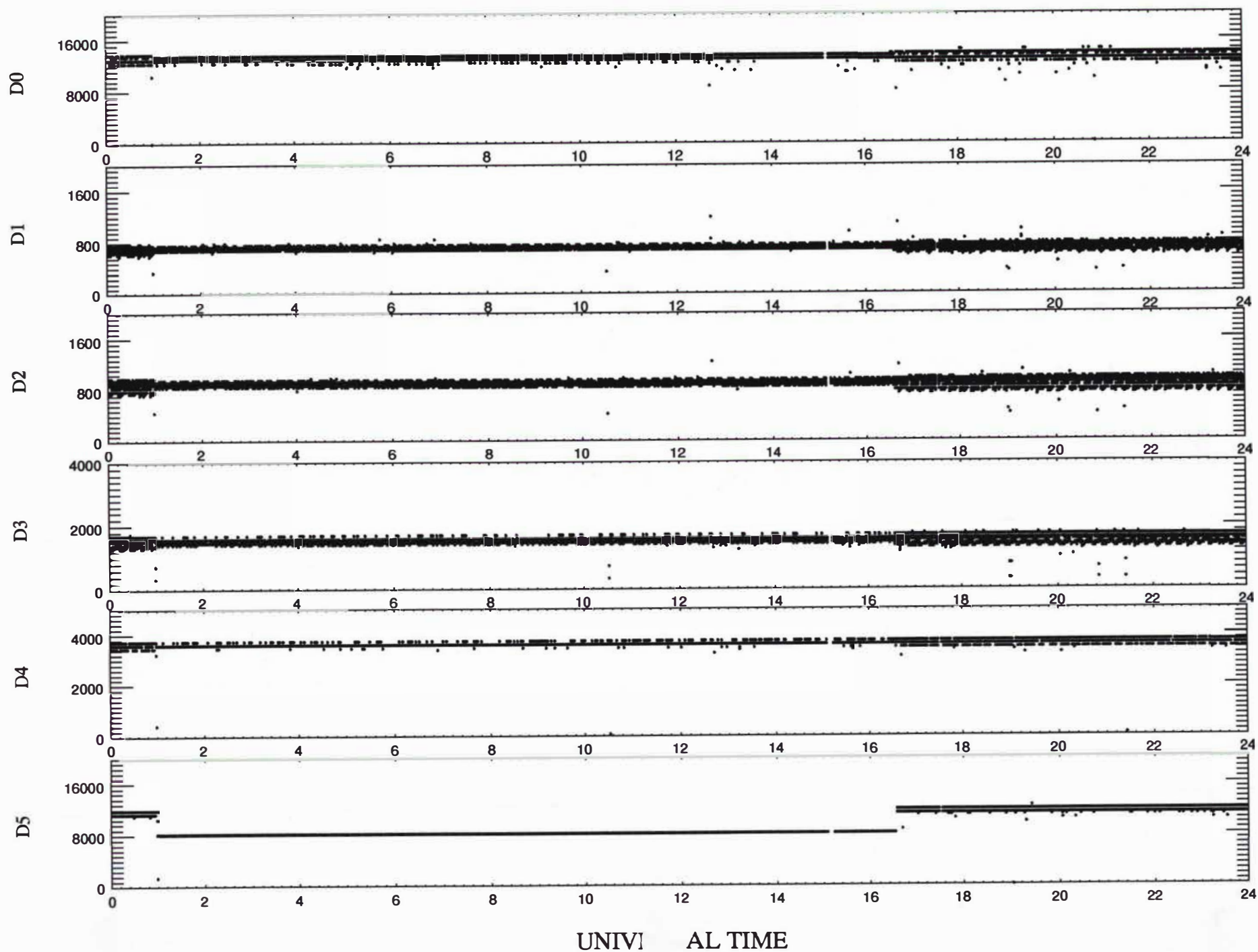
NO BURST (6)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From HAGEDON@ssl.msfc.nasa.gov Fri Nov 5 09:59:14 1993
Date: Fri, 5 Nov 1993 12:00:32 -0600 (CST)
From: HAGEDON@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2616
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2616
EVENT OF 1993 NOV 3 DAY OF YEAR=307
EVENT CROSSING TIME AT BATSE : 22862. S. OR 06:21:02.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 308.000 3.000
BATSE PEAK COUNTING RATE: 10000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 3/11/ 93 IS:
RA= 164.080 DEC= -27.299 DIST= 4.646 AU
BATSE-ULYSSES DISTANCE = 694968325. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 42.17 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1718.22 SECS.
CROSSING TIME AT ULYSSES IS 24580. S. OR 06:49:40 +/- 346.27 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 3/11/ 93 IS:
RA= 233.143 DEC= -19.453 DIST= 2.448 AU
MARS-BATSE DISTANCE = 366268928. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=103.21 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -279.22 SECS.
CROSSING TIME AT MARS IS 22583. S. OR 06:16:22 +/- 202.26 SECONDS

No

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2616	931103	9294	22862	10000	308	+03

BATSE BURST TRIGGER

NO.: 02616

TIME: TJD=9294 SECONDS=22862

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=059. AZIMUTH=128. ERROR= DEGREES

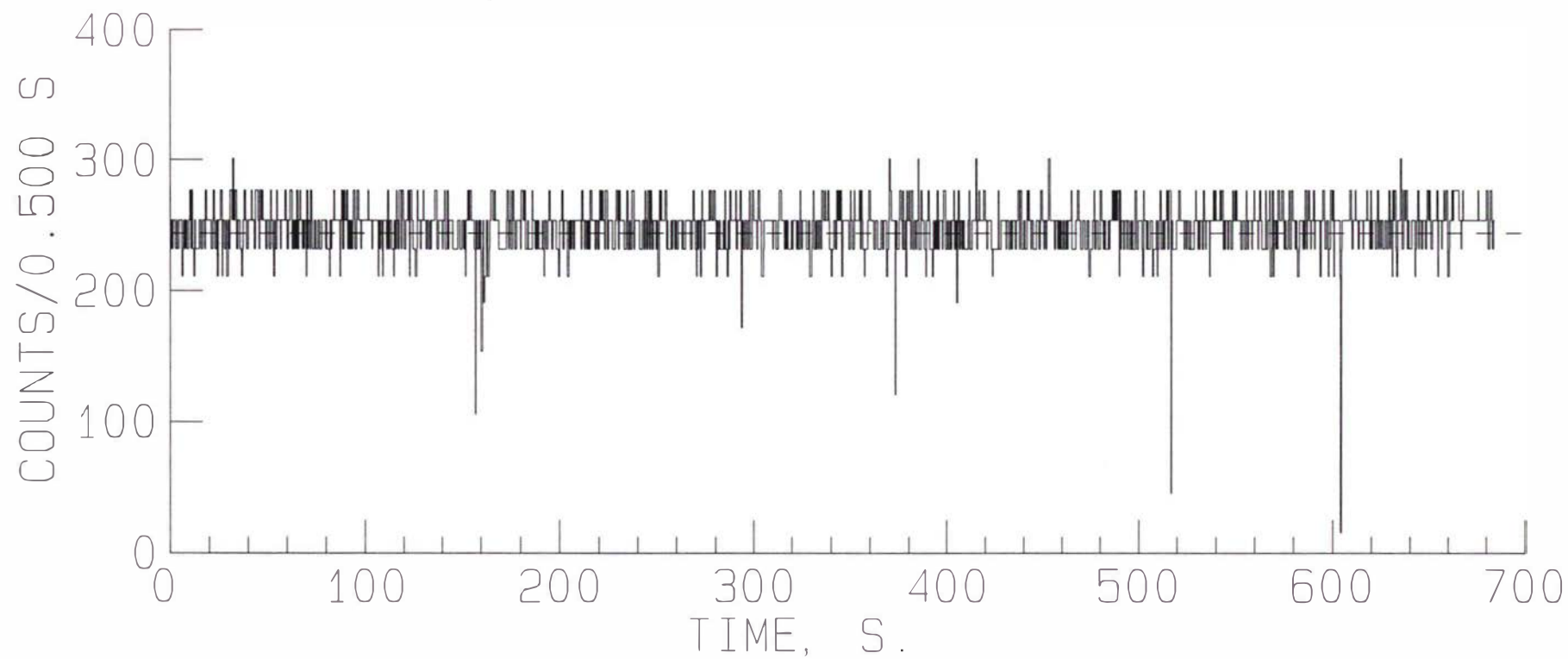
COMMENTS:

BURST. TWO PEAKS WITH SUBSTRUCTURE. TOTAL DUR.~0.5 SEC.
VISIBLE ABOVE 300 KEV.

5/11/93

ULYSSES RT
3/11/93 24228.064 s
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From HAGEDON@ssl.msfc.nasa.gov Fri Nov 5 10:05:35 1993
Date: Fri, 5 Nov 1993 12:06:55 -0600 (CST)
From: HAGEDON@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2617
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2617
EVENT OF 1993 NOV 3 DAY OF YEAR=307
EVENT CROSSING TIME AT BATSE : 59142. S. OR 16:25:42.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 84.000 69.000
BATSE PEAK COUNTING RATE: 30000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 3/11/ 93 IS:
RA= 164.130 DEC= -27.388 DIST= 4.639 AU
BATSE-ULYSSES DISTANCE = 694049461. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 67.98 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 867.96 SECS.
CROSSING TIME AT ULYSSES IS 60010. S. OR 16:40:09 +/- 435.80 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 3/11/ 93 IS:
RA= 233.143 DEC= -19.453 DIST= 2.448 AU
MARS-BATSE DISTANCE = 366268928. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 53.06 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 734.25 SECS.
CROSSING TIME AT MARS IS 59876. S. OR 16:37:56 +/- 180.68 SECONDS

RI

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2617	931103	9294	59142	30000	084	+69

BATSE BURST TRIGGER
NO.: 02617
TIME: TJD=9294 SECONDS=59142
TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N
SIGNIFICANCE: SIGMA
INTENSITY: COUNTS/CM2
LOCATION: ZENITH=094. AZIMUTH=140. ERROR= DEGREES
COMMENTS:
BURST. STRONG, COMPLEX, MULTI-PEAKED EVENT. DUR.~25 SEC.
VISIBLE ABOVE 300 KEV.

Helio corr removed

Date: Jan 20 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

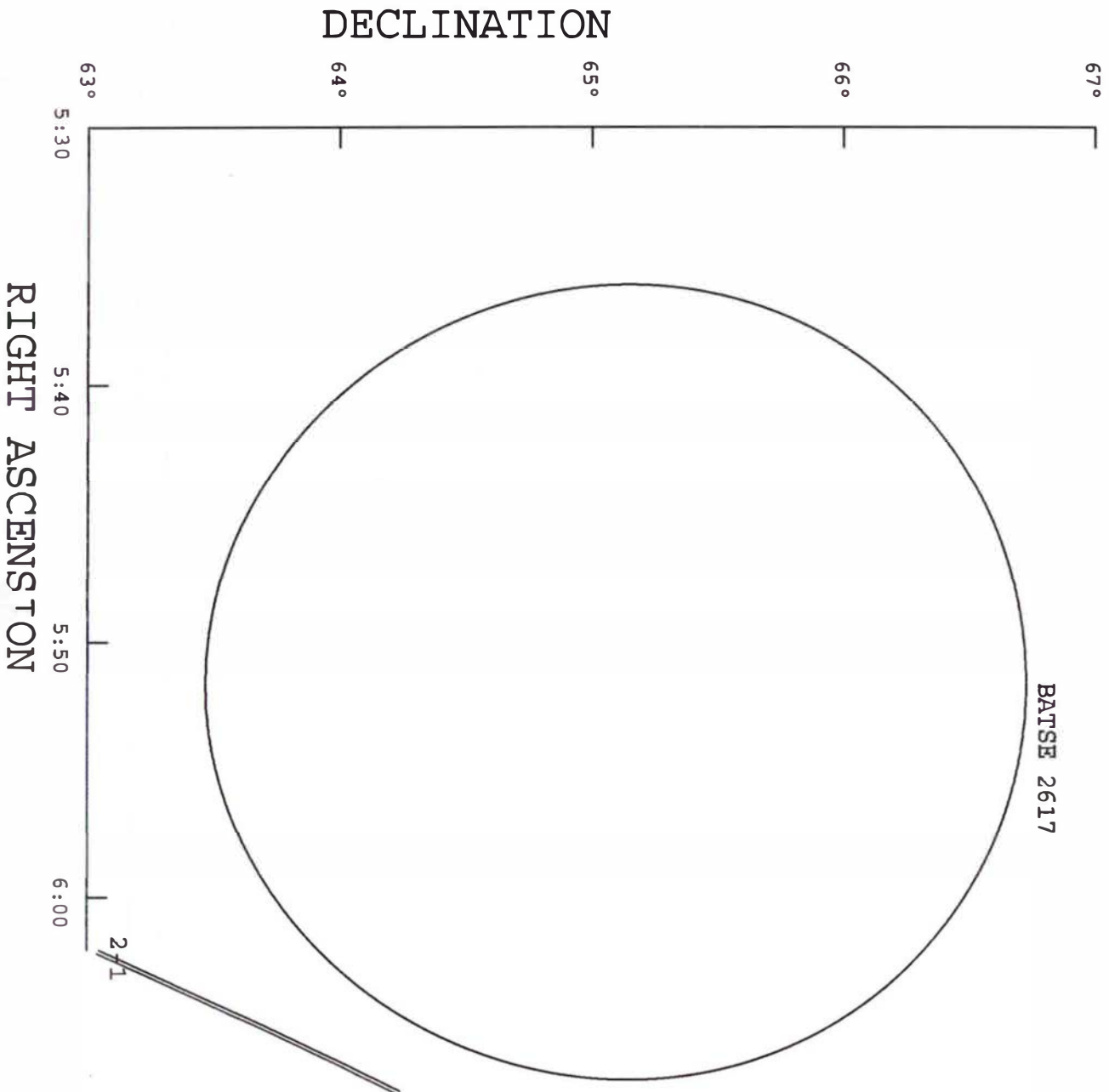
G=GALACTIC EQUATOR

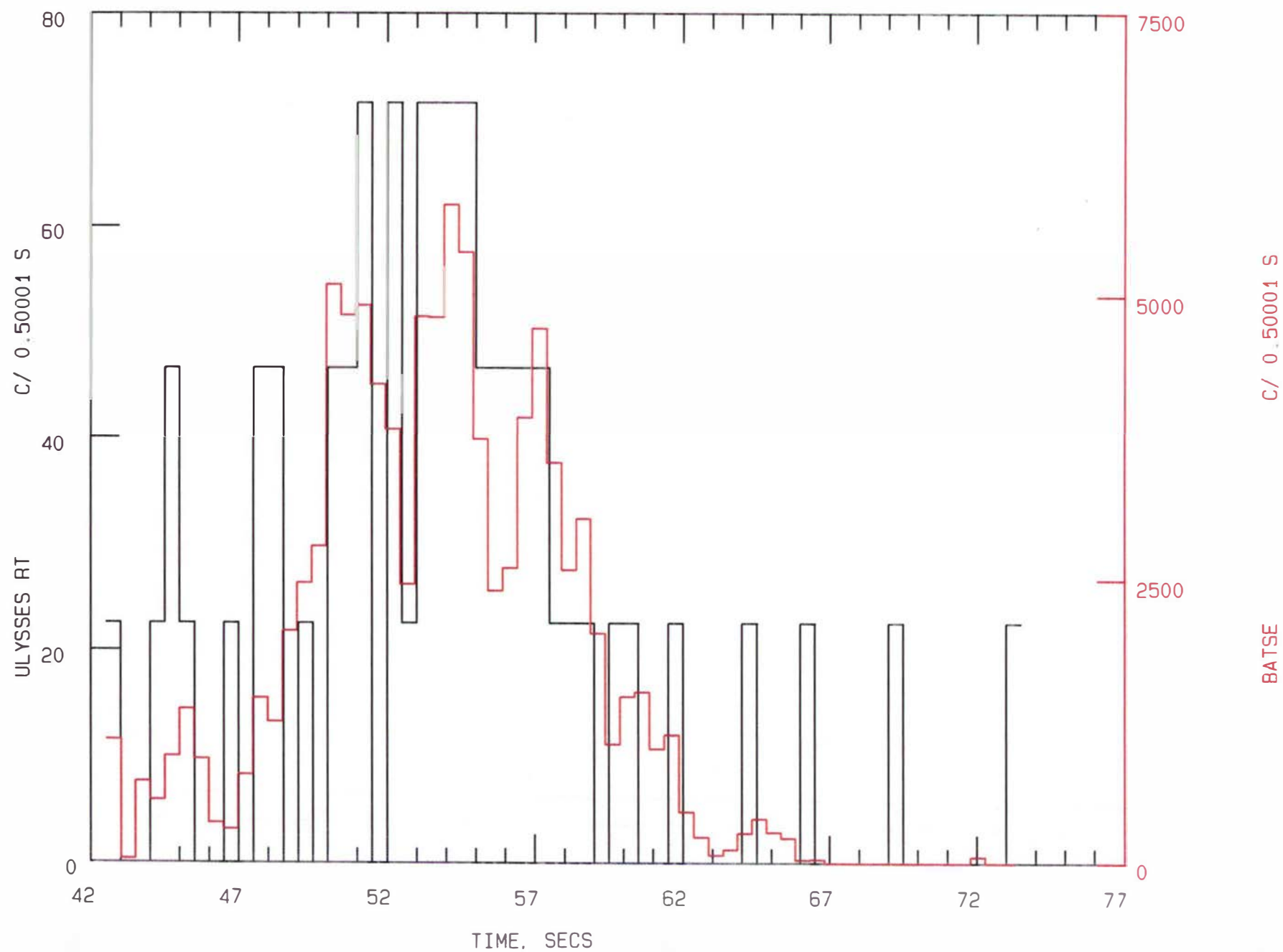
1 ULYSSES

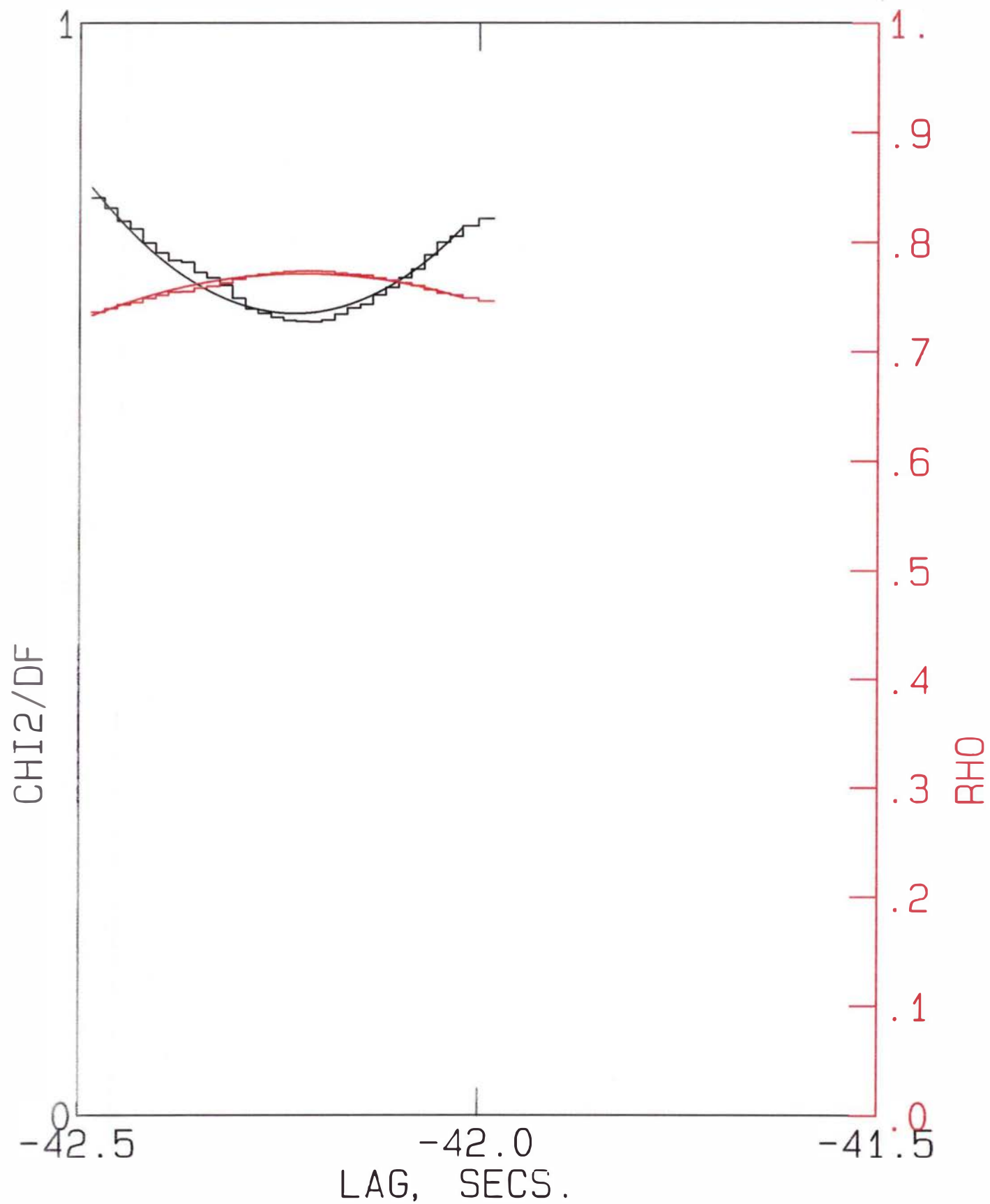
2 BATSE

EVENT OF NOV 3, 1993 16:36

20 / 1/98







ULYSSES RT

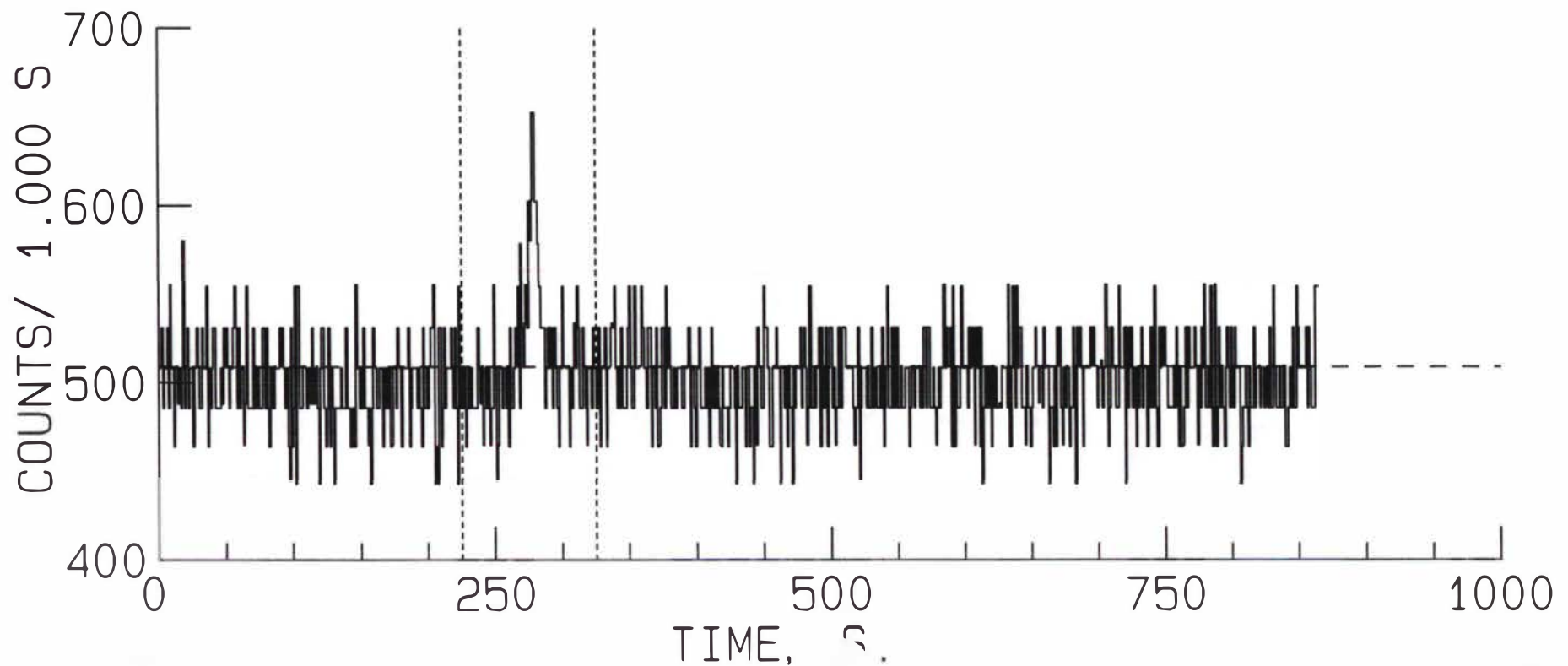
20 / 1 / 98

3/11/93 59580.106 s

0.500 S INTERVALS REGROUPED BY 2

20- 139 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From root Thu Mar 10 14:22 1994
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA05865; Thu, 10 Mar 94 14:22:44
Received: from SSTDP2.LANL.GOV by sunspot.ssl.berkeley.edu (5.0/SMI-SVR4)
id AA23477; Thu, 10 Mar 1994 13:30:14 +0800
Date: Thu, 10 Mar 1994 14:30:44 -0700 (MST)
From: 046369@SSTDP2.LANL.GOV
To: khurley@space6.ssl.berkeley.edu
Message-Id: <940310143044.25e02930@SSTDP2.LANL.GOV>
Subject: dmosp observations
Content-Length: 2472
Status: R

FROM: SMTP%"JTERRELL.LANL.GOV" (JAMES TERRELL) 3/10/04
TO: SMTP%"KHURLEY@SPACE6.SSL.BERKELEY.EDU"
SUBJ: DMSP OBSERVATIONS

Kevin:

Here are more additions, questions, or corrections for your GRB list of 930217.
Some of the errors for DMSP data seem to be the matter of interpreting
"NA" as used by me. It means, unless otherwise specified, no peak
apparent in the 20-sec averaged data, but 2-sec data not obtained
and examined. Thus it is not an absolute NO (or N/O unless it is known
that the spacecraft view was obscured by the earth).
Thus NA means that any peak which might show up in full data is
pretty weak, anyway. In your list NA should be left blank, I believe.
We now have data processed through 930128! Thus we will be needing
more events to look for in the DMSP data.--Jim

DATE	UT	DMSP
910208	32238U	DMSP8YES AT 32415.7, 9YES AT 32415.5, 10SAA
910421	33245	DMSP NA (NOT NO) (I.E., SHOULD BE BLANK IN YOUR LIST)
910627	16159	DMSP NA (NOT NO)
910717	16386	DMSP N/O (NOT NO)
911118	68260	DMSP N/O (NO DATA)
920110	33478	DMSP NA (NOT NO)
920229	69677	DMSP NA (NOT N/O)
920404	47506	DMSP NA (NOT N/O)
920414	84166	DMSP NA (NOT N/O) (GRO GRB AT 84163!)
920714	47069	DMSP NA (NOT NO)
920718	77563	DMSP NA (NOT N/O)
920727	43145U	(ULYSSES TIME) BATSE YES AT ? (DMSP NA)
921022	55259	DMSP NA (NOT N/O)
921209	41738	DMSP NA (NOT N/O)
930106	56259	WHY LISTED TWICE (56260)?
930106	56260	DMSP10YES AT 55260.4 (8SAA,11SR)
930309	11269	DMSP NA (NOT NO)
930318	44993U	DMSP NA (BATSE YES! ULYSSES TIME?)
930329	11365	DMSP NA (NOT N/O)
930406	26185	DMSP NA (NOT N/O)
930428	4032	DMSP NA (NOT N/O)
930506	65631	DMSP NA (NOT NO)
930511	892U	(ULYSSES TIME) DMSP NO
930825	31643U	DMSP8YES AT 33477.4(100/S),11YES AT 33477.0(500/S), 10SR
930922	12830U	DMSP NA (NOT NO)
930922	23086U	(BATSE YES AT ?) DMSP10YES AT 23088.1(270/S),8?,11YES AT 22085.1
930925	73995U	DMSP NA (NOT NO)
930929	31751	(CORRECTED ULYSSES TIME) DMSP NO
931006	18161	(CORRECTED ULYSSES TIME) TO 931111 34178, NUMEROUS: DMSP NA
931006	69587U	DMSP NA (NOT NO)
931006	77510U	(ULYSSES TIME?)(BATSE YES AT ?) DMSP NA (NOT NO)
931031	14795	DMSP11YES AT 14796.8,14810.8 (8SAA,10SAA)
931103	59142	DMSP10YES AT 59152.4,158.4,11YES AT 59151.0,155.0 (8SR)
931131	60360	IS THIS DATE FOR SURE? (DMSP NA, 93/11/30)
931204	35290	DMSP8YES AT 35301.3,10NO AT 156DEG, 11NR
931217	65953U	10YES AT 64188.0,192.0,232.0, 11NO AT 64188 (8SR AT 64188)

MESSAGE FOR RENE HUDEC

Dear Rene,

The preliminary timing annulus for the Nov 3 event follows. I think that we also observed the Oct 31 burst, but there is a gap in the quick look data, so it will be a few weeks before I know for sure.

Kevin

SATELLITE POSITIONAL INFORMATION AND BURST ARRIVAL TIME

NO	NAME	DIST. FROM EARTH, KM.	ALPHA, DEG.	DELTA, DEG.
1	ULYSSES	694026926.0000+/-	500.0000000 164.73230+/-	.00500 -27.65790+/-
2	BATSE	6794.7720+/-	50.0000000 55.52900+/-	.01000 23.70600+/-

JULIAN DAY NUMBER IS 34275.19 DAYS SINCE 1900 JAN 0.5

15.40 BY 15.00 CM MAP FOR RA= 73.00 TO 96.00, DEC= 65.00 TO 73.00

INTERSATELLITE CORRELATIONS

SEPARATION BETWEEN SATELLITES 1 AND 2 IS 2315.03459 LIGHT SECONDS. TIME DELAY IS -
CORRELATION BETWEEN SATELLITE 1 (ULYSSES) AND SATELLITE 2 (BATSE)
GIVES A CIRCLE OF RADIUS 72.284231 DEGREES CENTERED AT ALPHA=344.732848 DEGREES, DELTA= 27.6
ERROR IN DETERMINATION OF RADIUS IS .033000 DEGREES OR 3.959961 ' TOTAL WIDTH
(.007016 DUE TO POSITION, .025983 DEGREES DUE TO TIMING)
INTERSATELLITE TIMING ERROR IS 1000000 MICROSECONDS

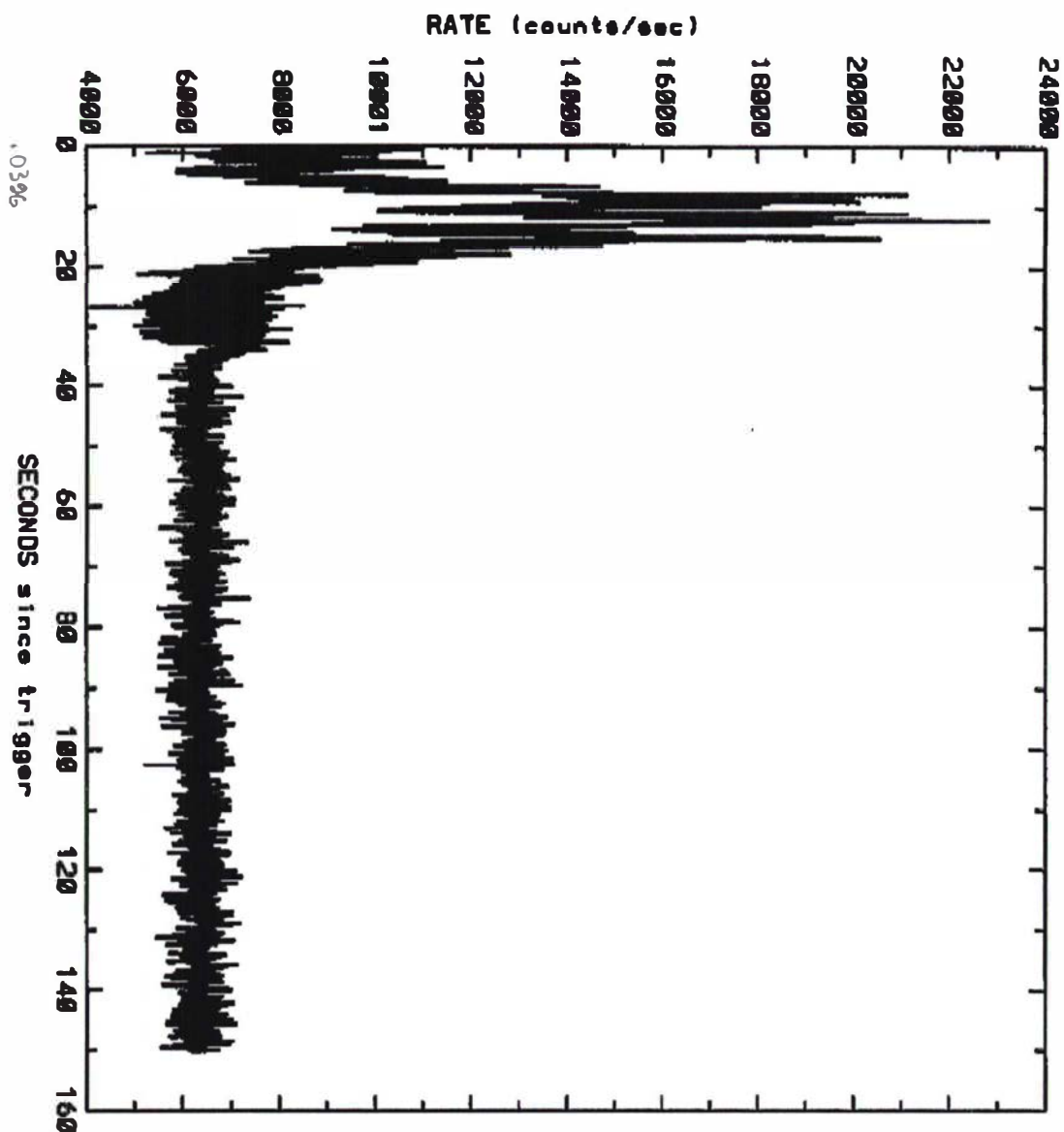
BASED ON THIS ANNULUS, THE EARTH CROSSING TIME IS 59100.659+/- .019 SECS.

AT SATELLITE 1, EARTH SUBTENDS .000526 DEGREES HALF ANGLE CENTERED AT ALPHA=344.732300 DE
AT SATELLITE 2, EARTH SUBTENDS 69.560909 DEGREES HALF ANGLE CENTERED AT ALPHA=235.529000 DE

CIRCLE CENTERED AT ALPHA= 84.000 DEG, DELTA= 69.000 DEG, RADIUS= 4.000 DEG WILL BE TRACED WITH
MINIMUM DISTANCE BETWEEN THE POINT OR CENTER OF THE CIRCLE AND THE TRIANGULATION ANNULUS IS

SUN IS AT ALPHA=218.844924 DEGREES, DELTA=-15.213186 DEGREES
TODAY IS 27/11/93

DATA FOR K. HURLEY



5-NOV-1993 09:35:26

Created by MOPS BD
(Burst Display)
Version 2.28

Trigger = 2617

Trigger Time:

9294 / 59142.618

Burst Data Type:

MEN

Deadtime

Corrected: N

Background Data

Type: CONT

Minimum Integ. Time:

8.016 second(s)

Detector (7.0)

Channel:

(8.6)

Quality Mask:

BDISP1

BATSE

03/11/93

59142.618

25- 100 keV

COUNTS/ .016 S

400
300
200
100
0

0

4

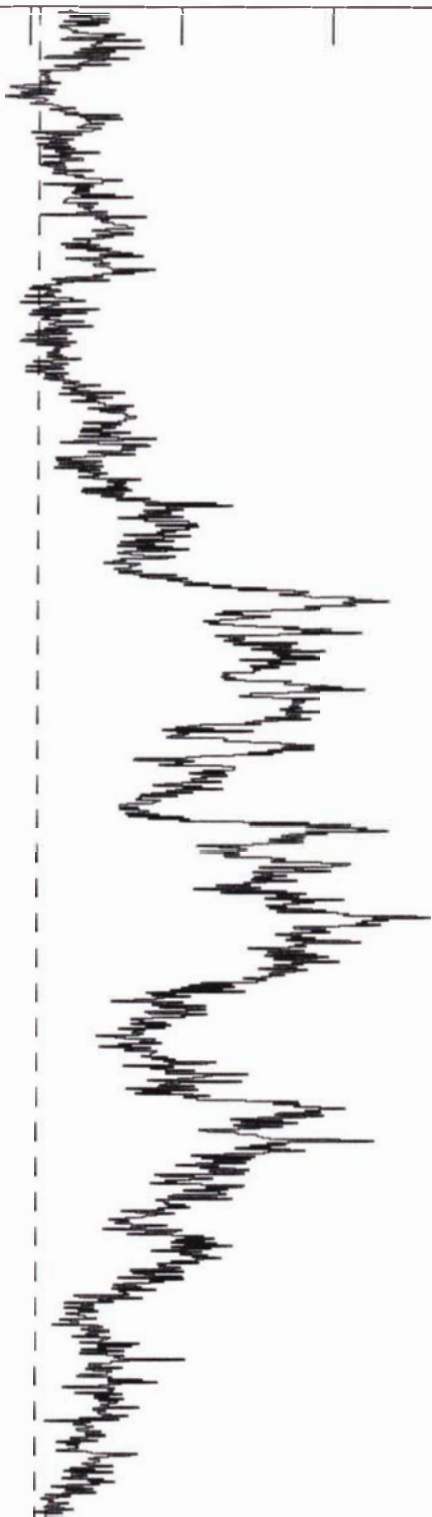
8

12

16

20

T
1E, SECS



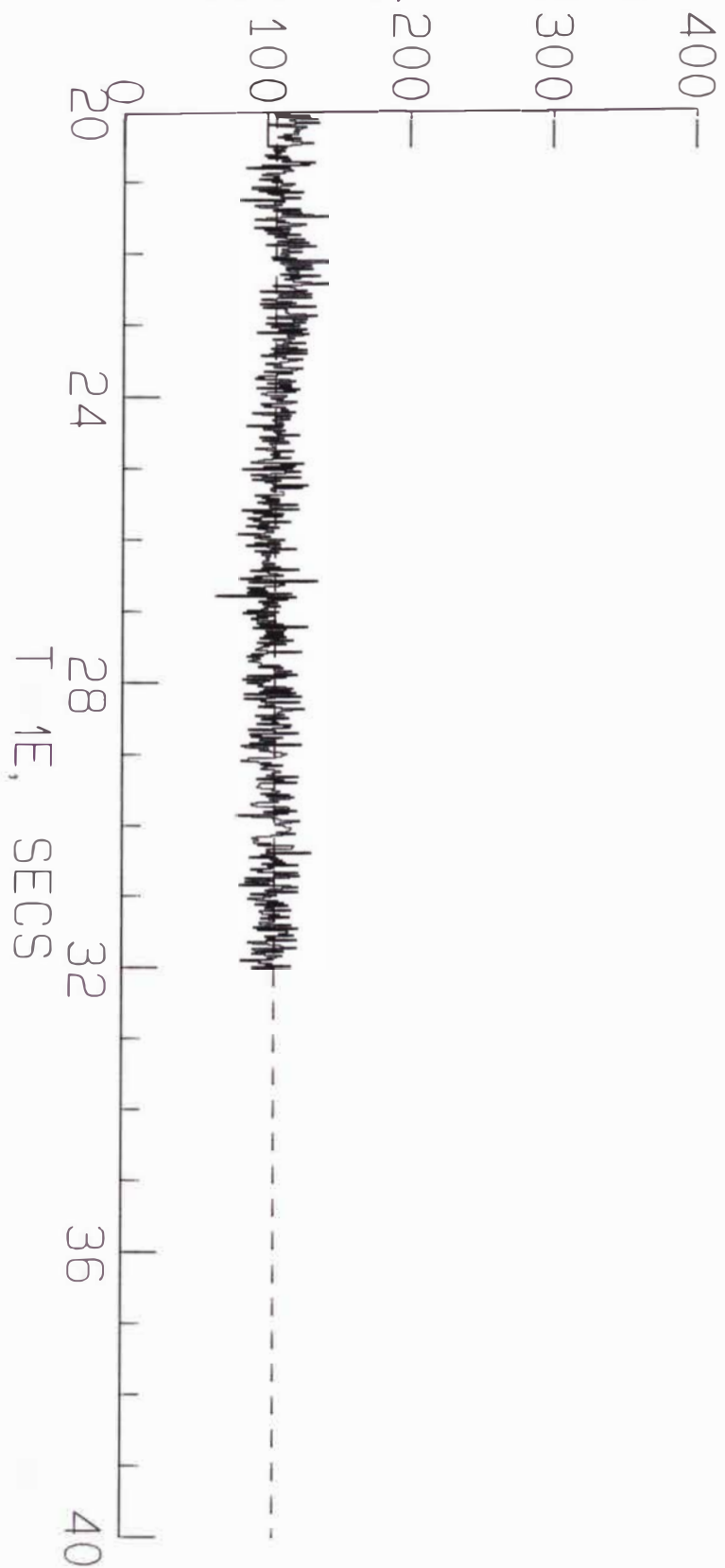
BATSE

03/11/93

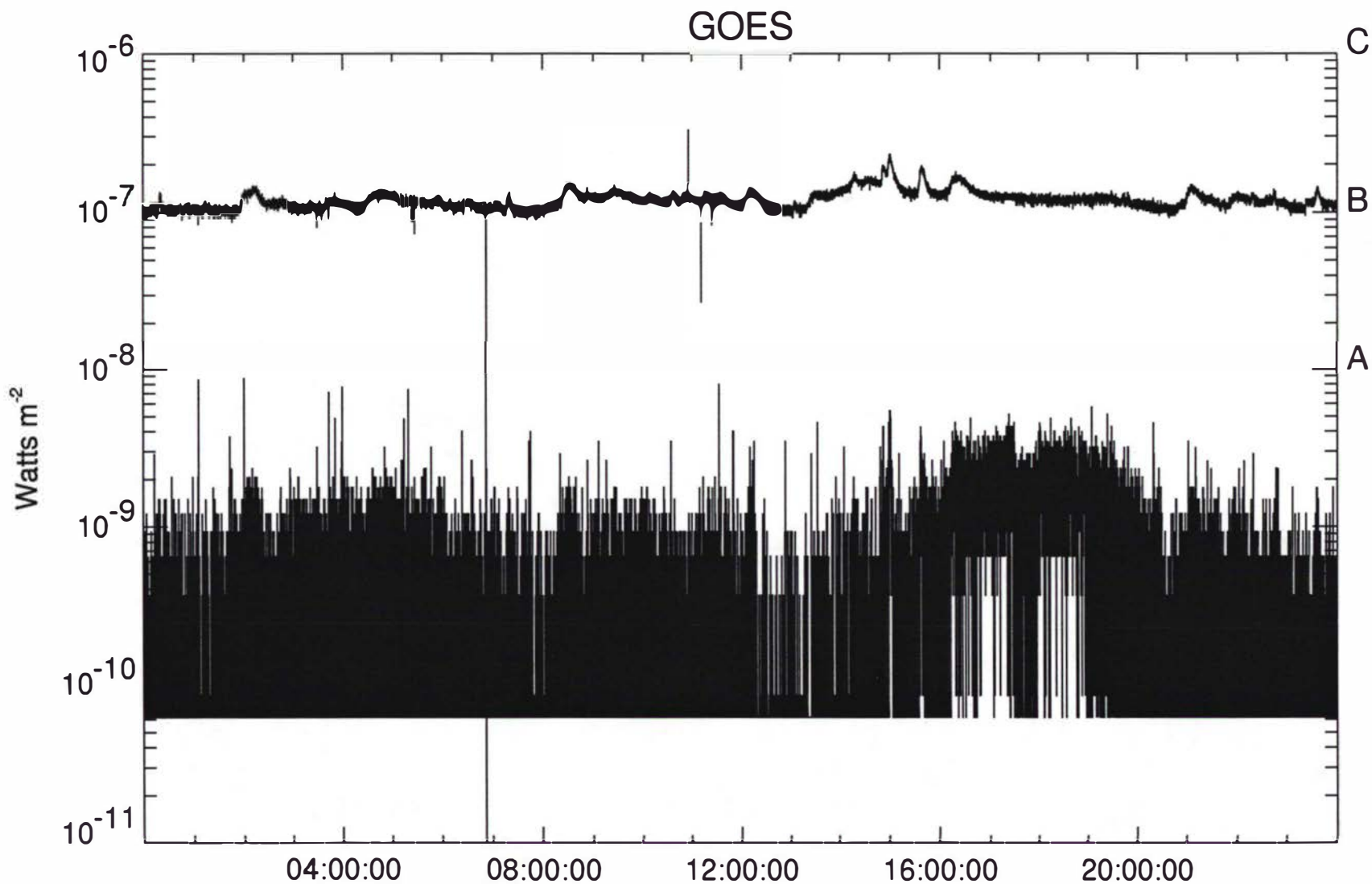
59142.618

25- 100 keV

COUNTS/ .016 S



13 / 11 / 93



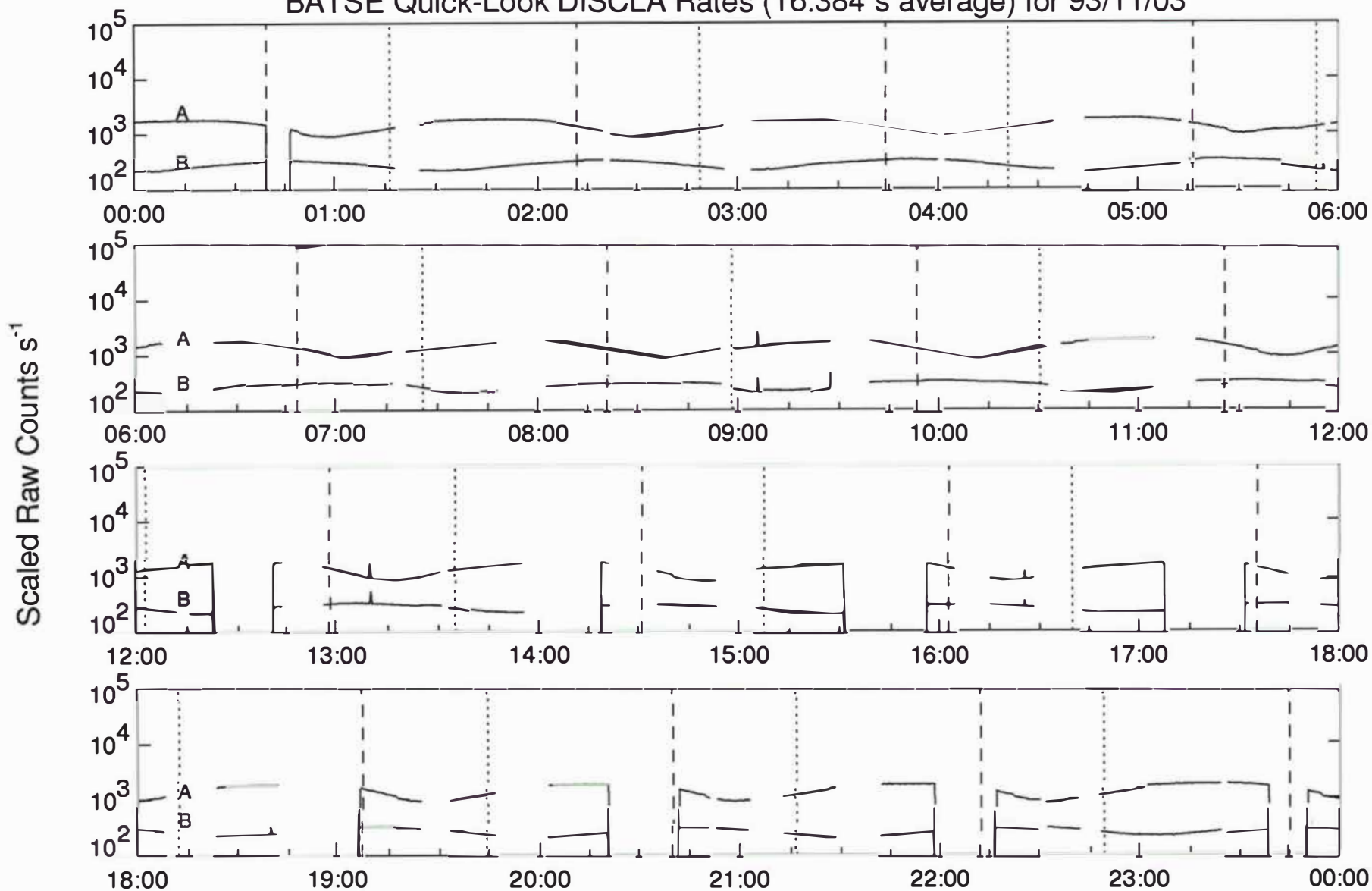
Data Start: 93/11/03, 0000:02

Plot created: 93/11/04, 1628

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/03

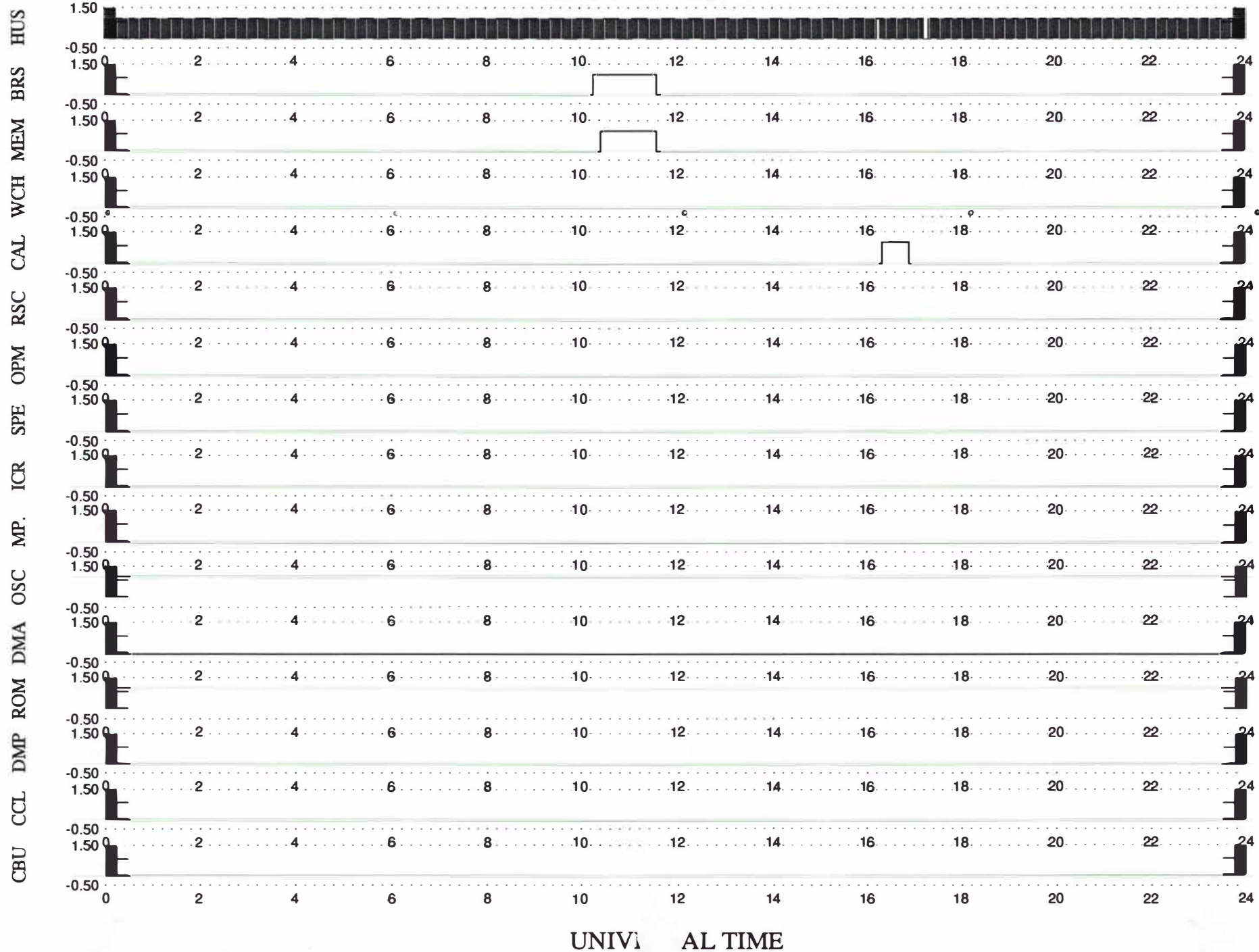


Current Time: 93/11/08, 1617 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05

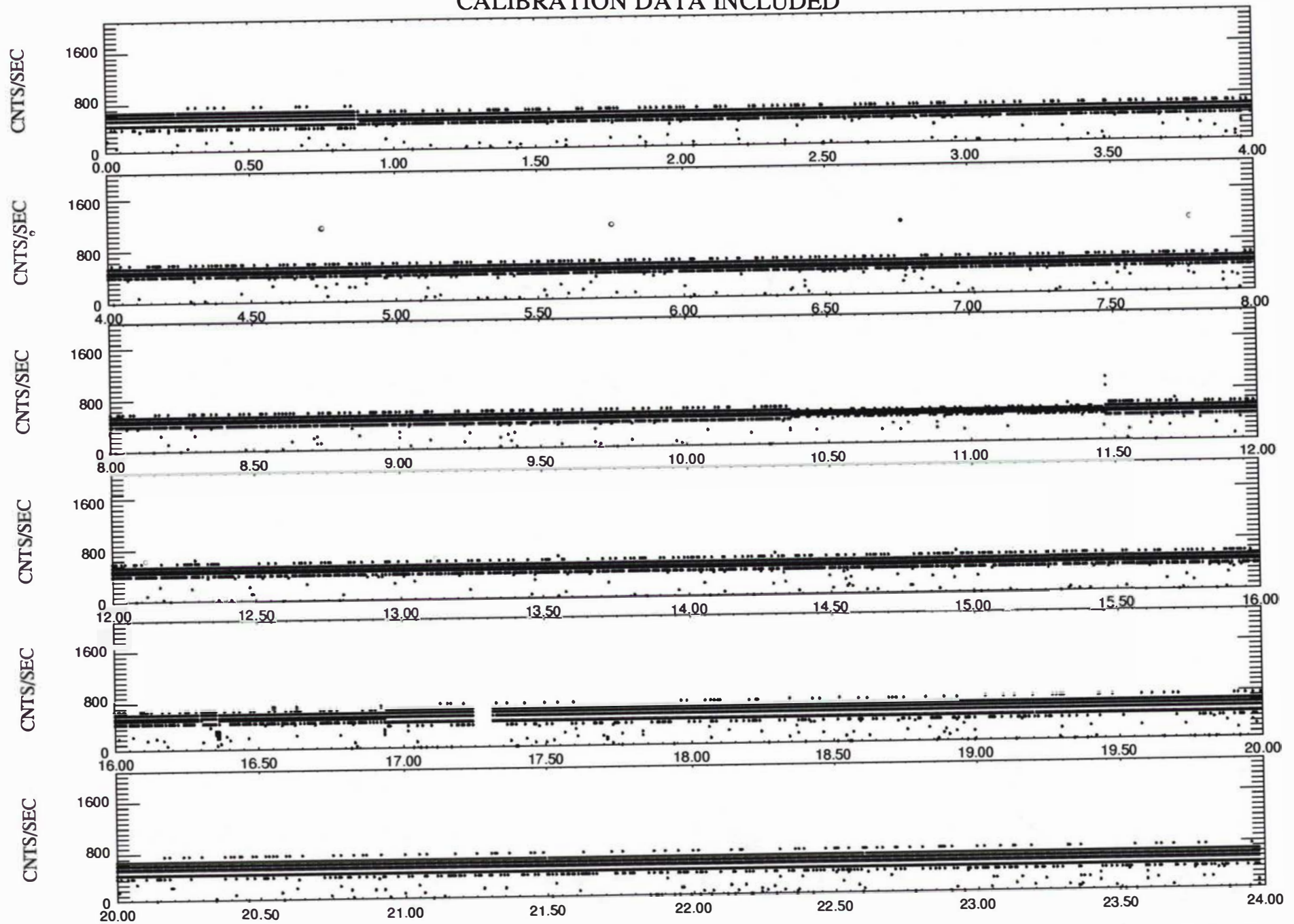
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

BURST NUMBER 7

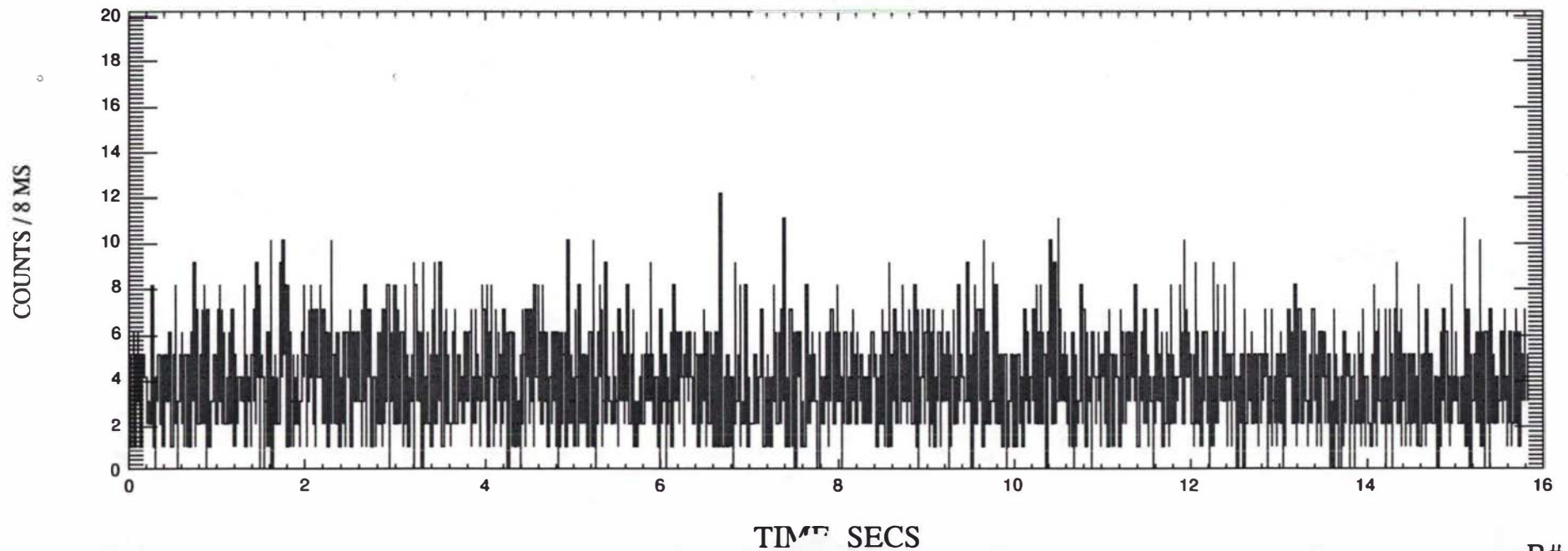
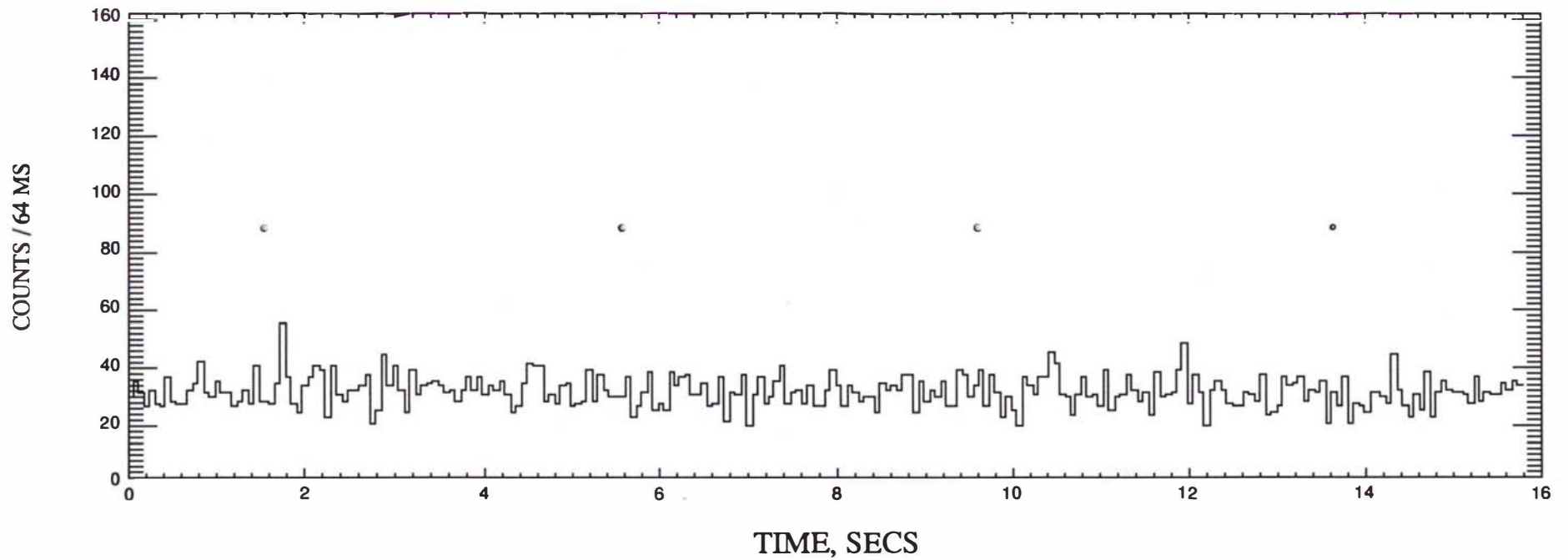


CALIBRATION DATA INCLUDED

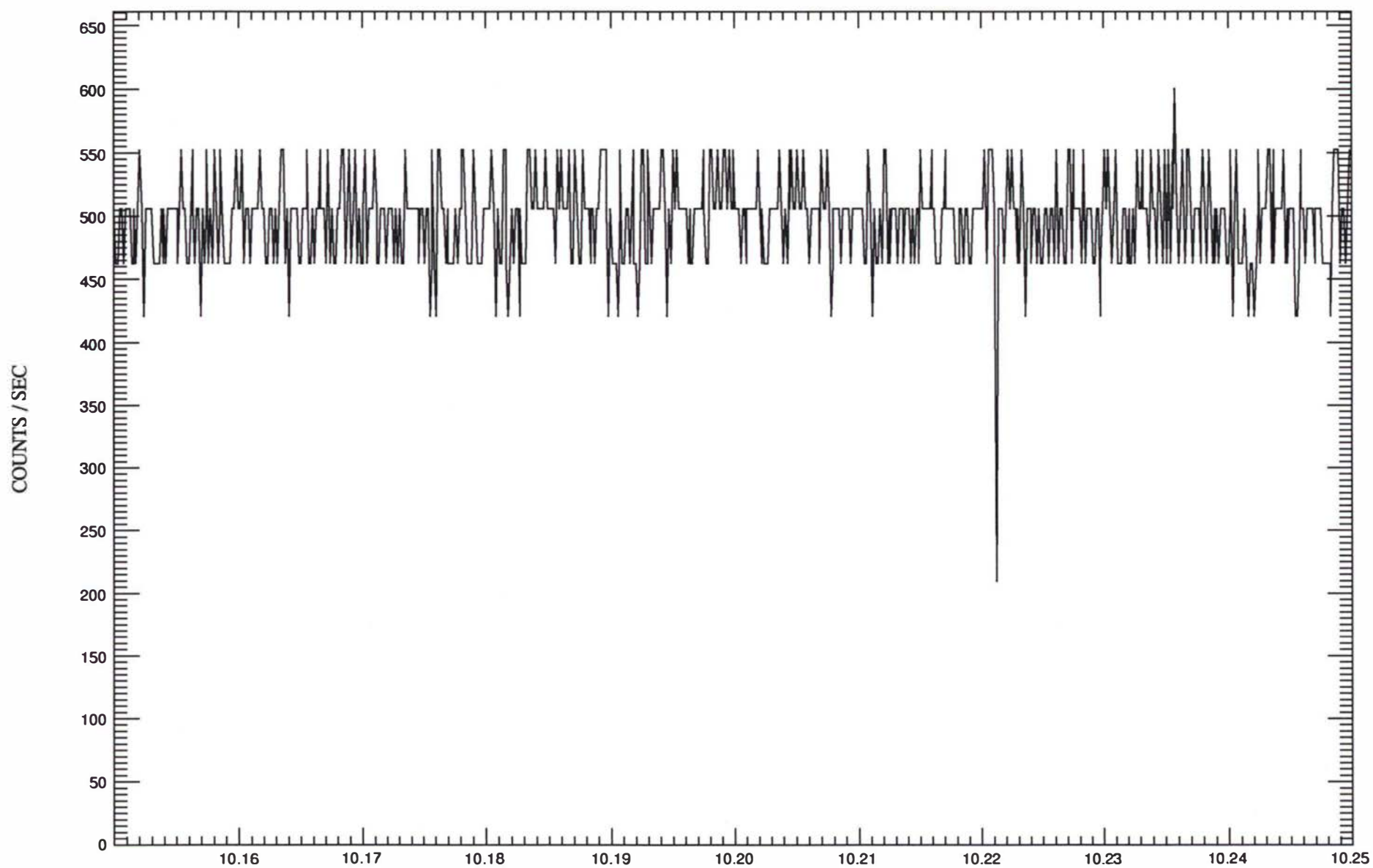


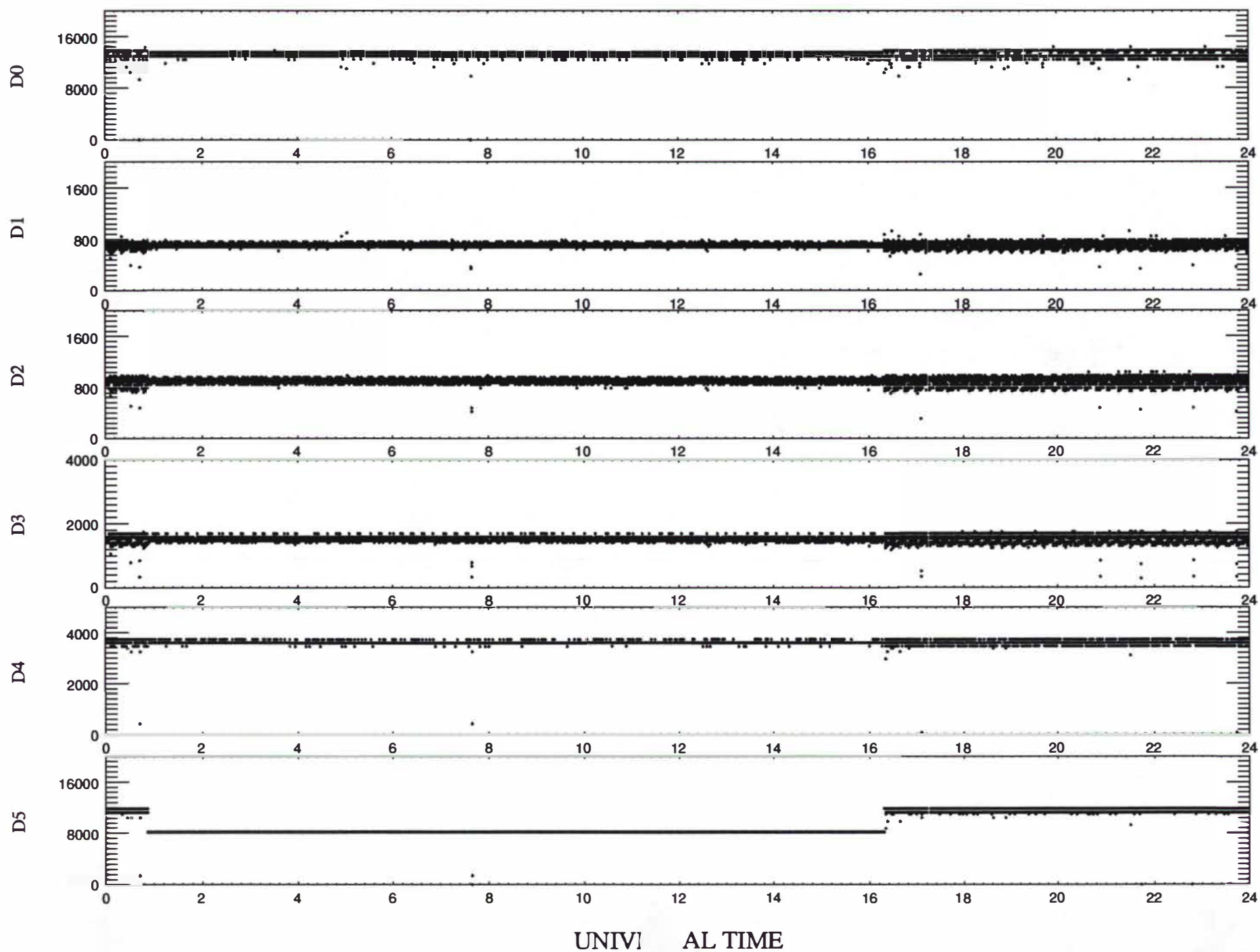
UNIV AL TIME

Burst Counter 7 at UT=10.199338696798 h=36717.619 s 10:11:57.619



CALIBRATION DATA INCLUDED





From SHARIFF@ssl.msfc.nasa.gov Mon Nov 8 09:17:02 1993
Date: Mon, 8 Nov 1993 11:18:16 -0600 (CST)
From: SHARIFF@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02618

TIME: TJD=9295 SECONDS=33823

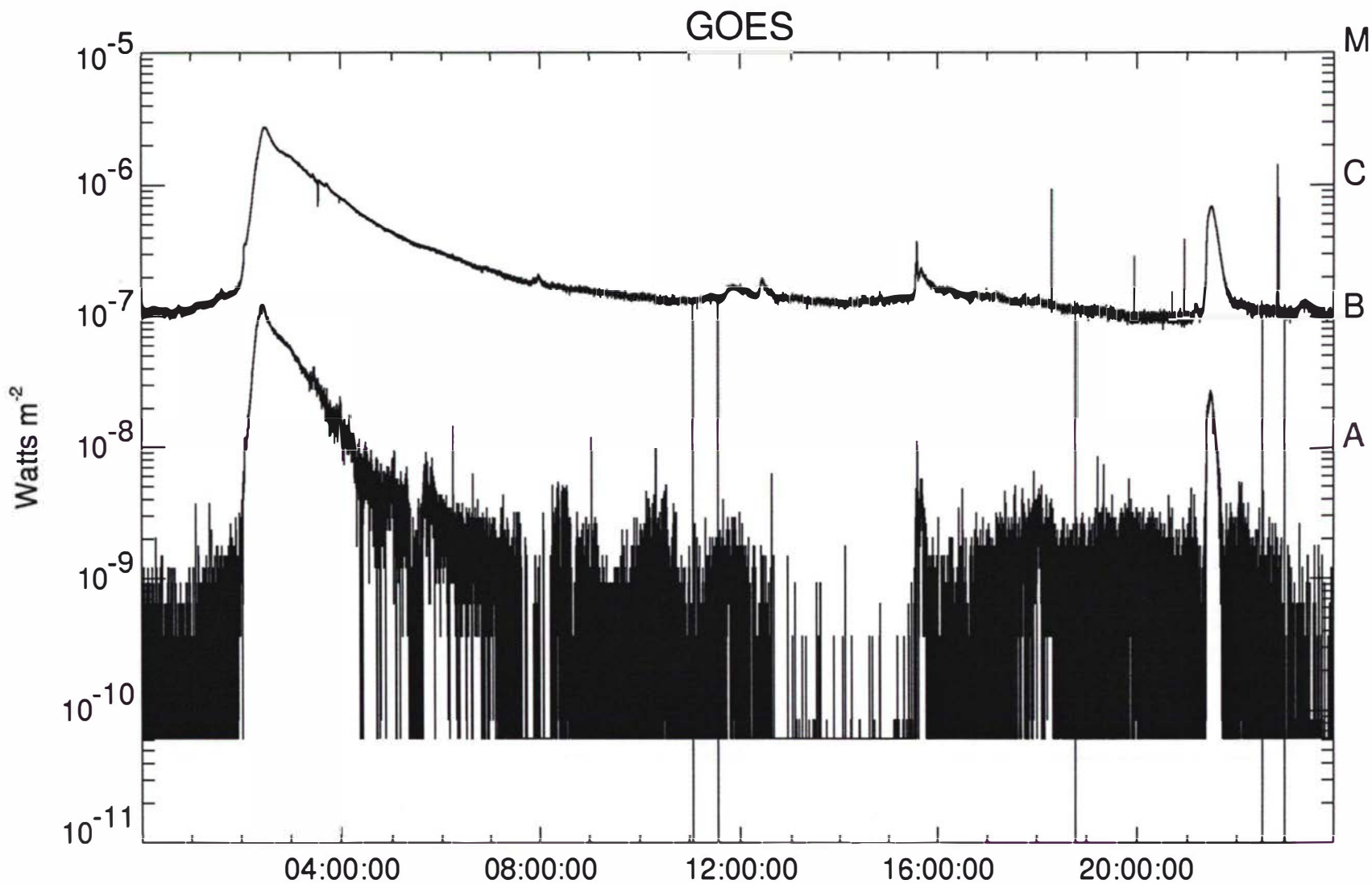
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON PREC. EVENT.



Data Start: 93/11/04, 0000:01

Plot created: 93/11/08, 1622

Channel

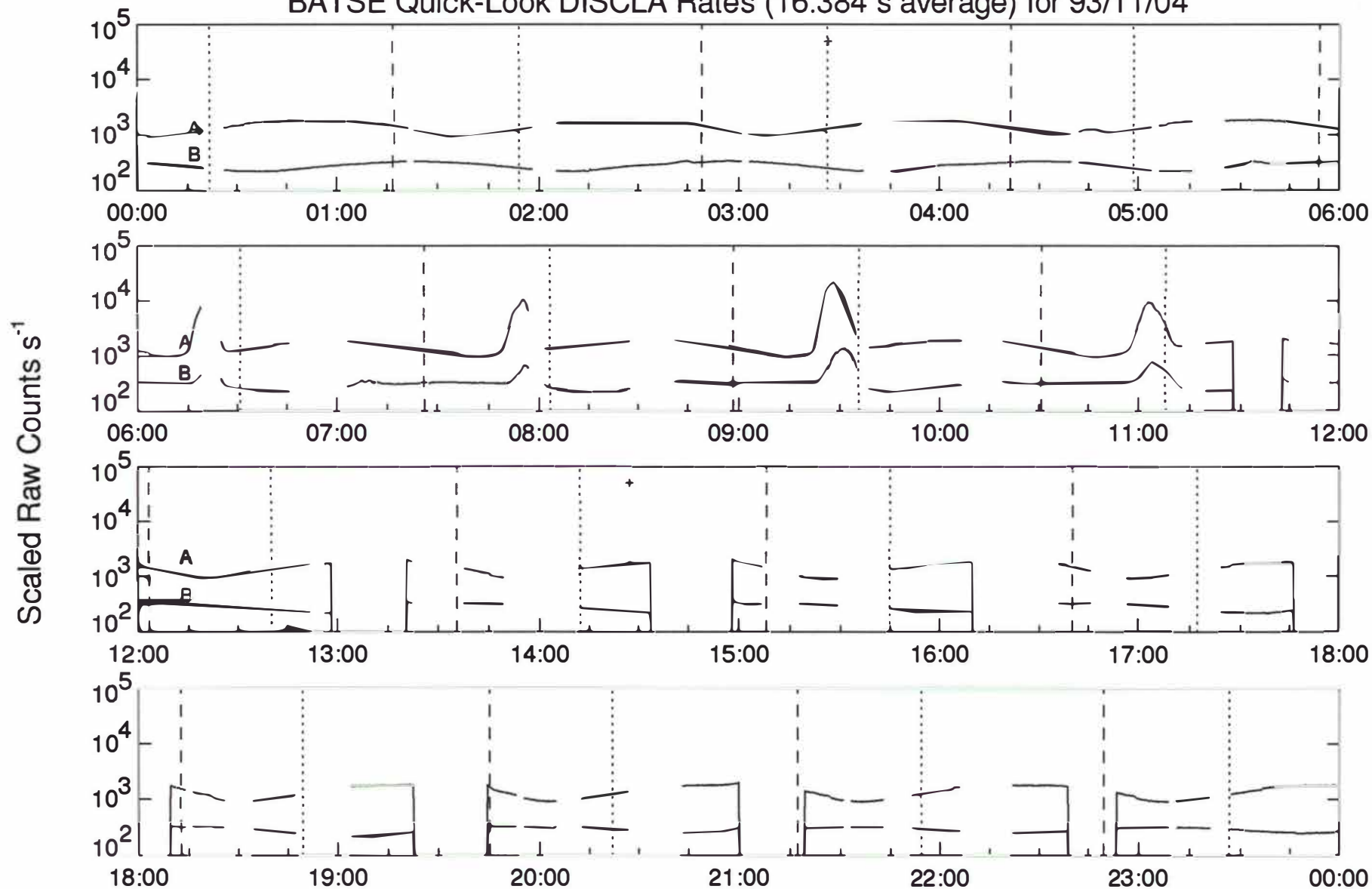
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/04

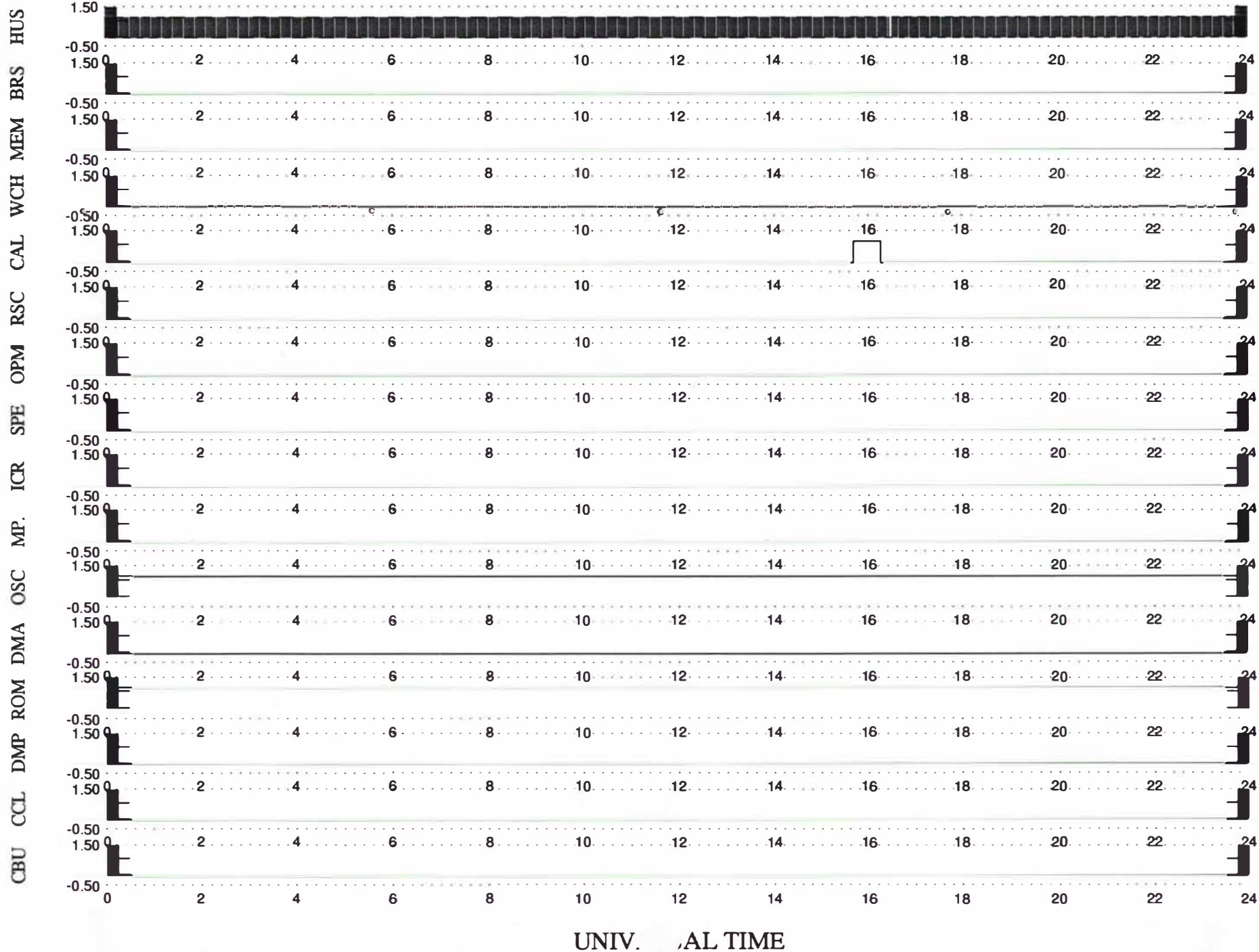


Current Time: 93/11/08, 1617 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

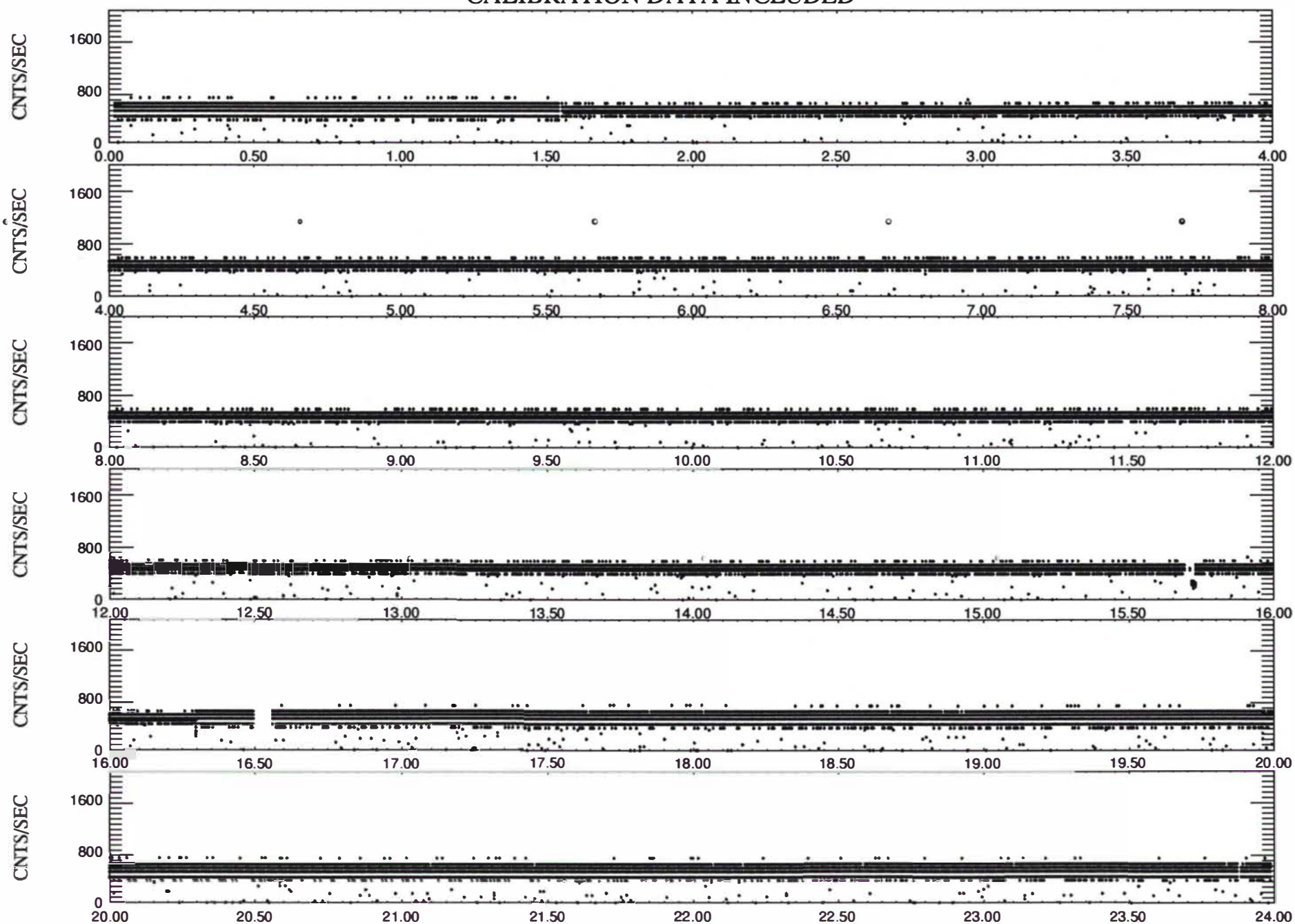
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

BURST NUMBER 8

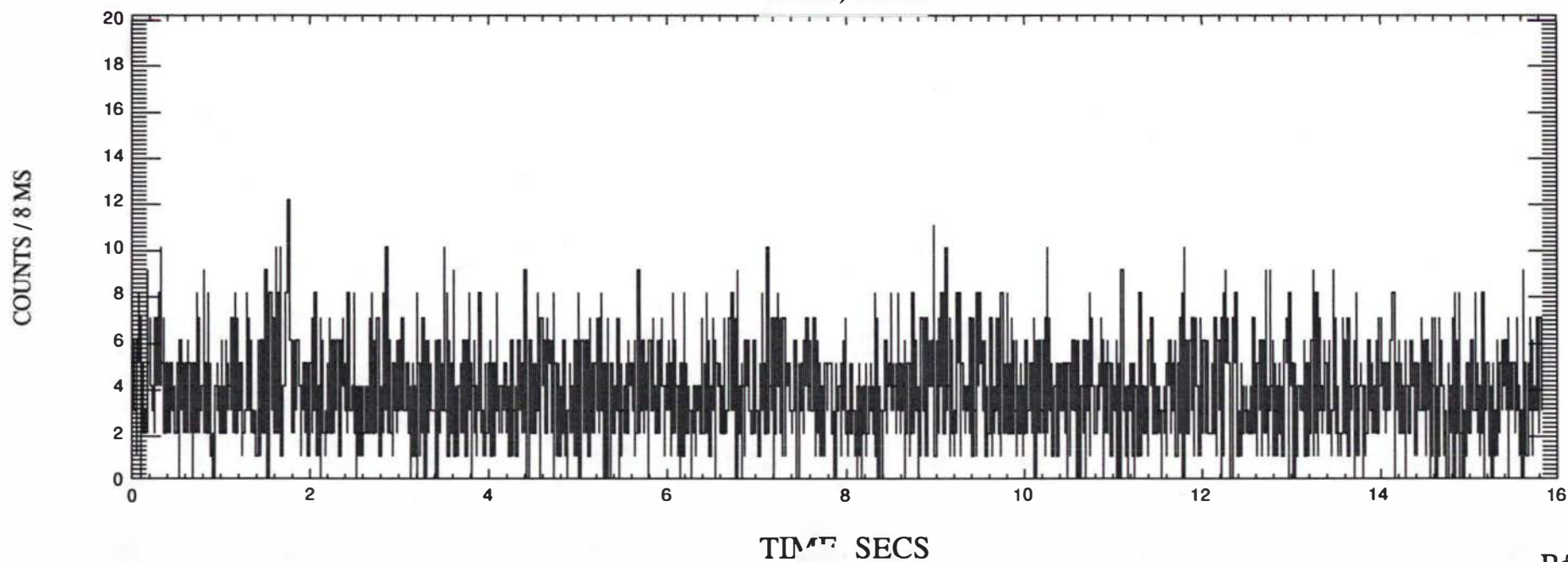
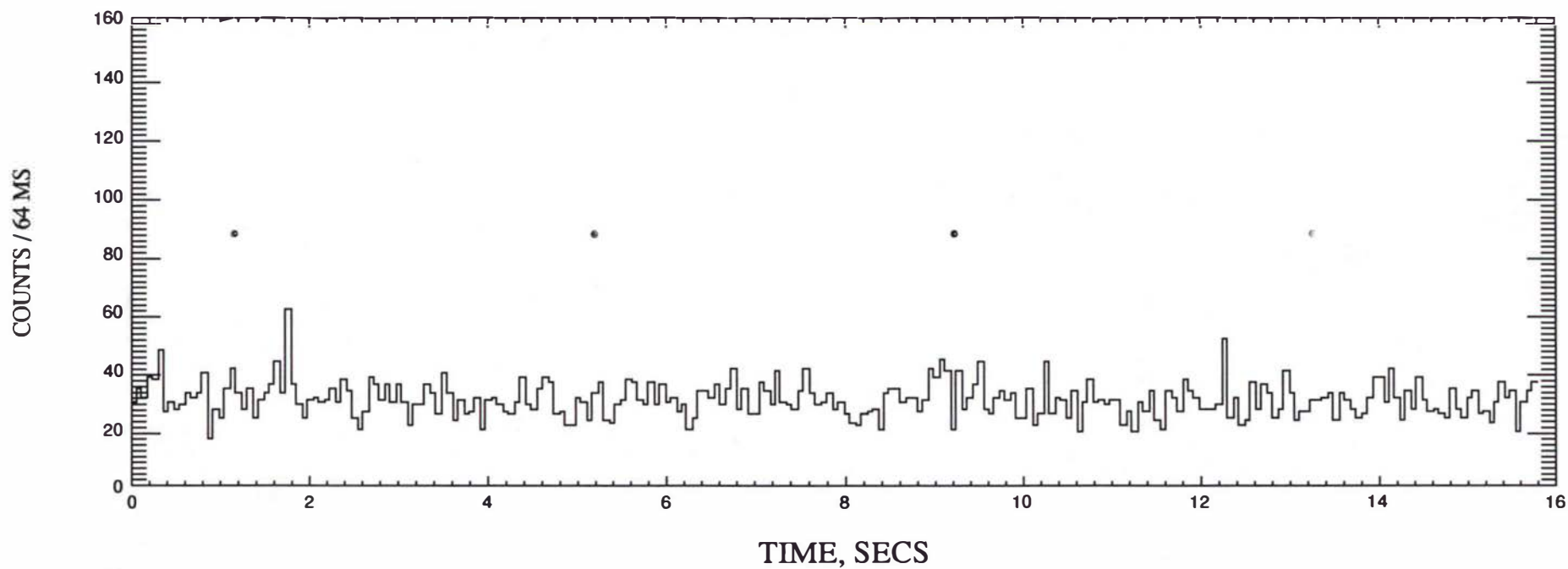


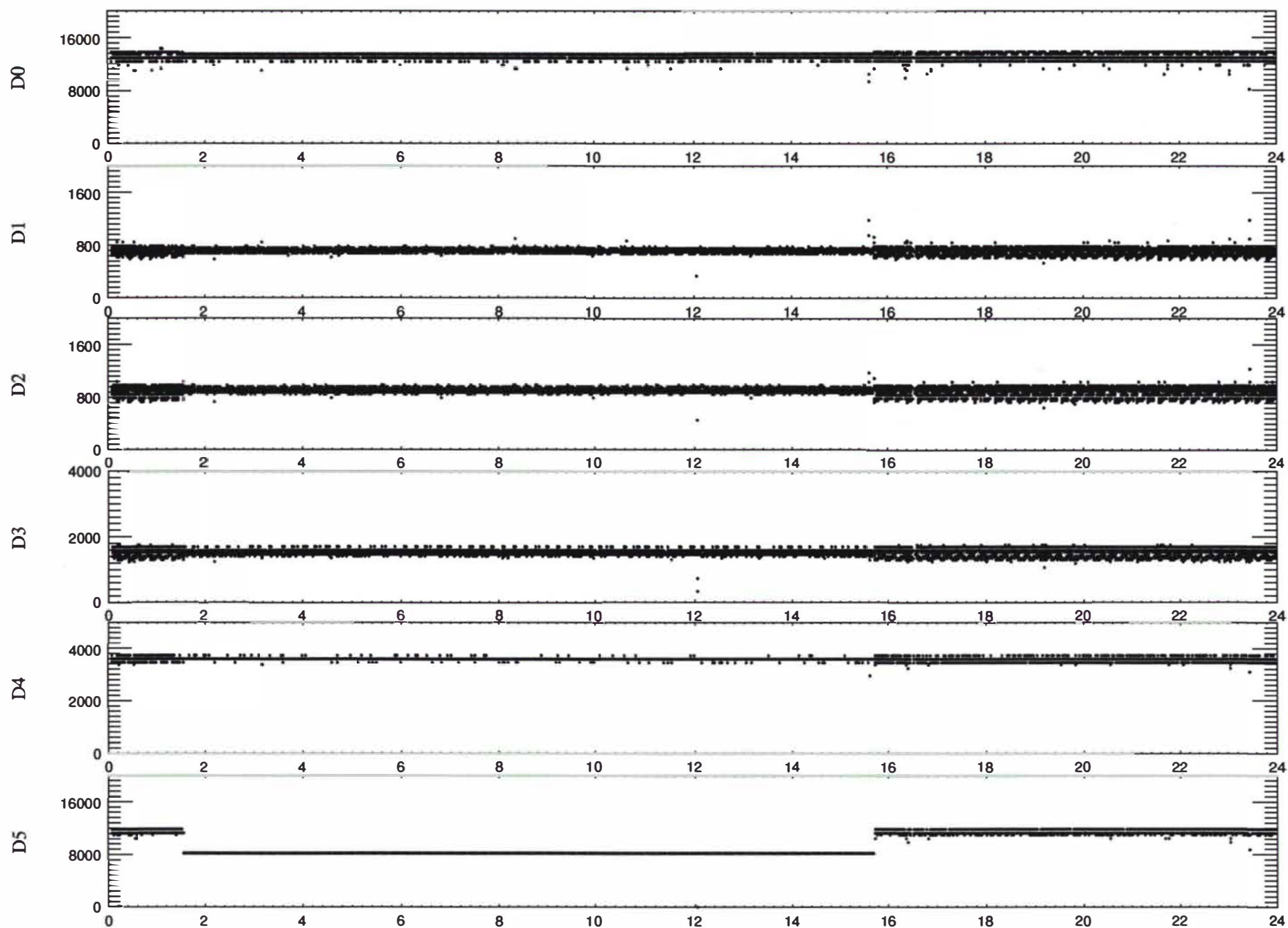
CALIBRATION DATA INCLUDED



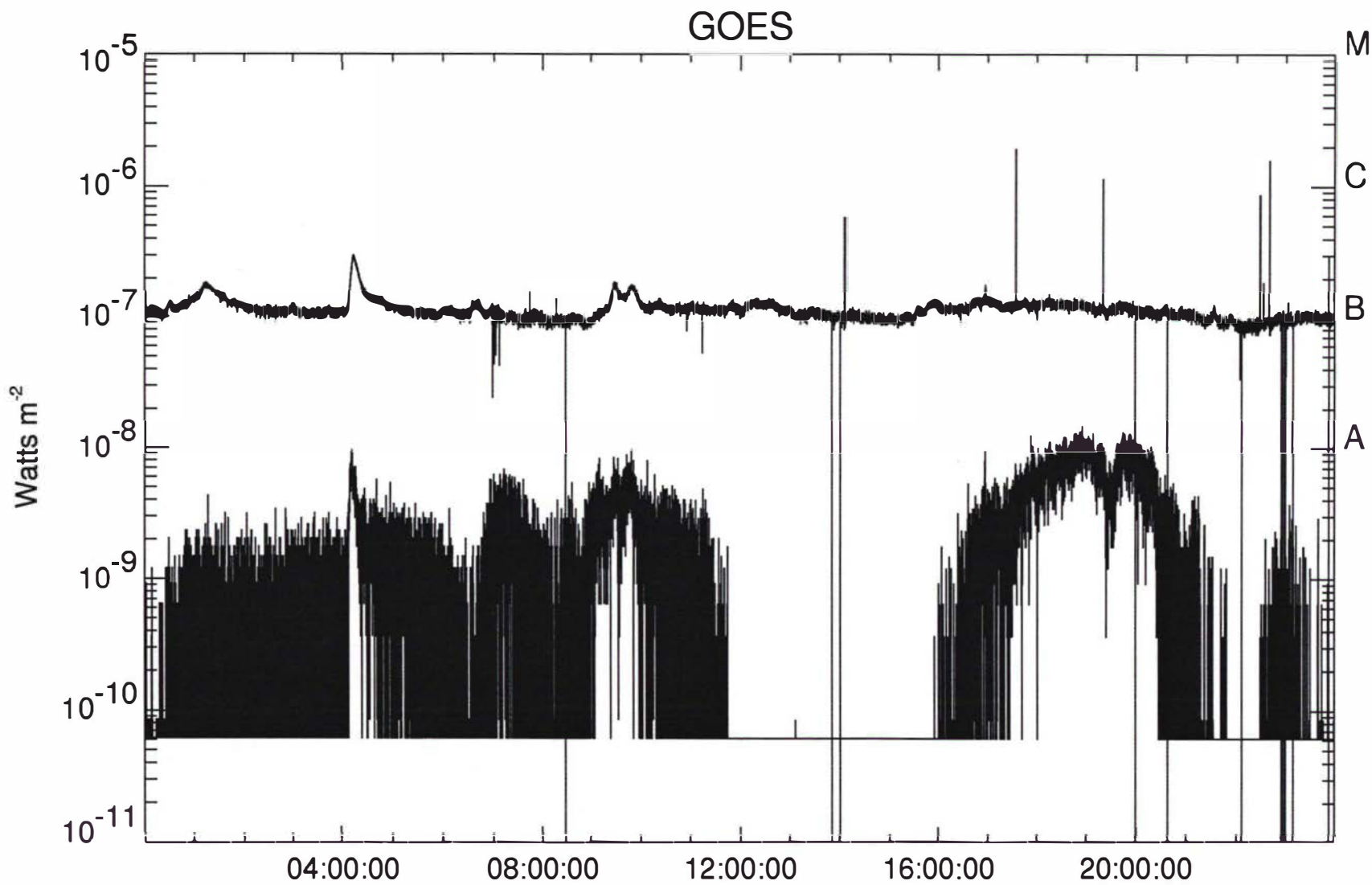
UNIV AL TIME

Burst Counter 8 at UT=23.904331347148 h=86055.593 s 23:54:15.593





UNIV. AL TIME



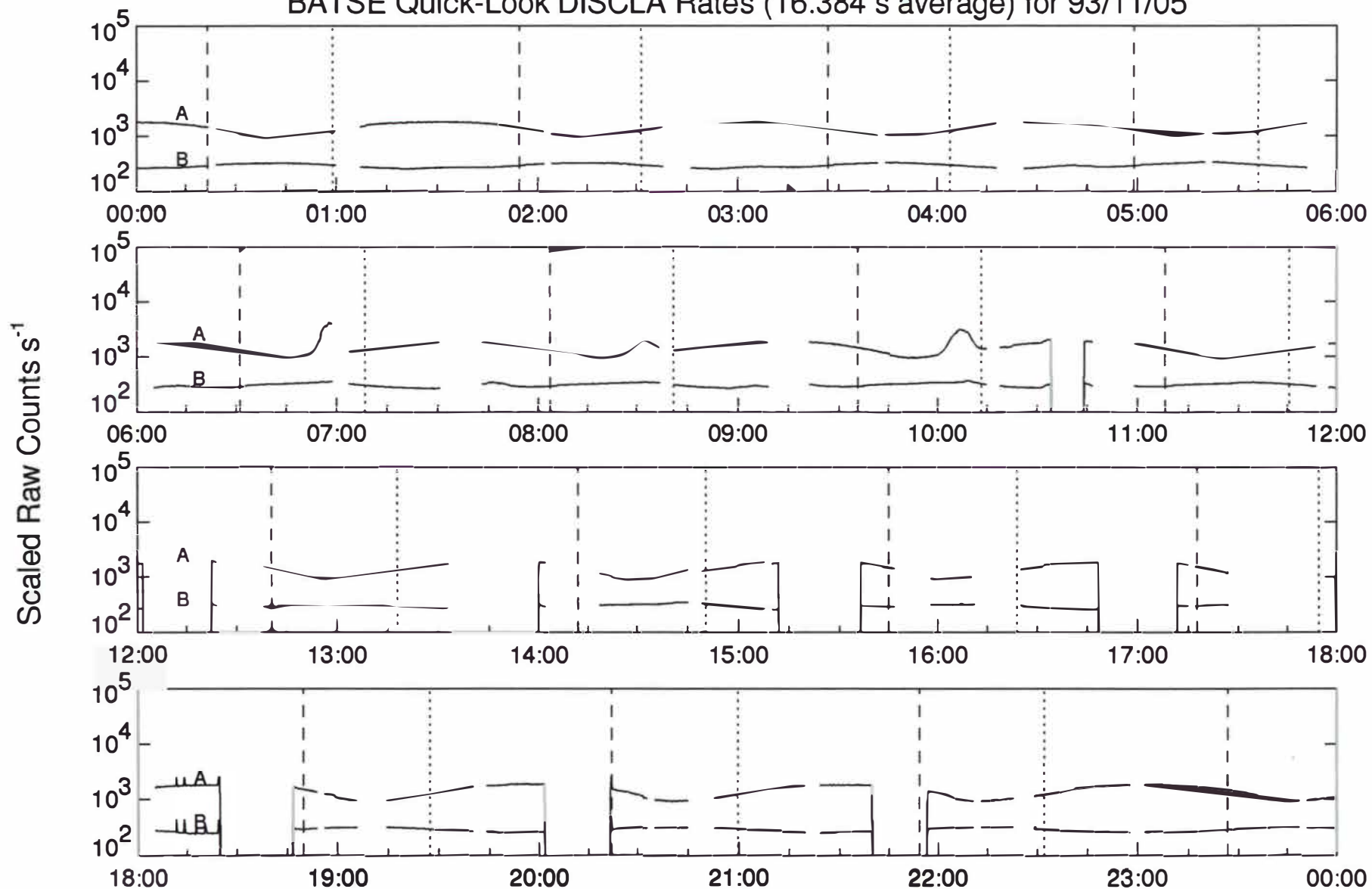
Data Start: 93/11/05, 0000:01

Plot created: 93/11/08, 1747

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/05



Current Time: 93/11/08, 1617 EDT

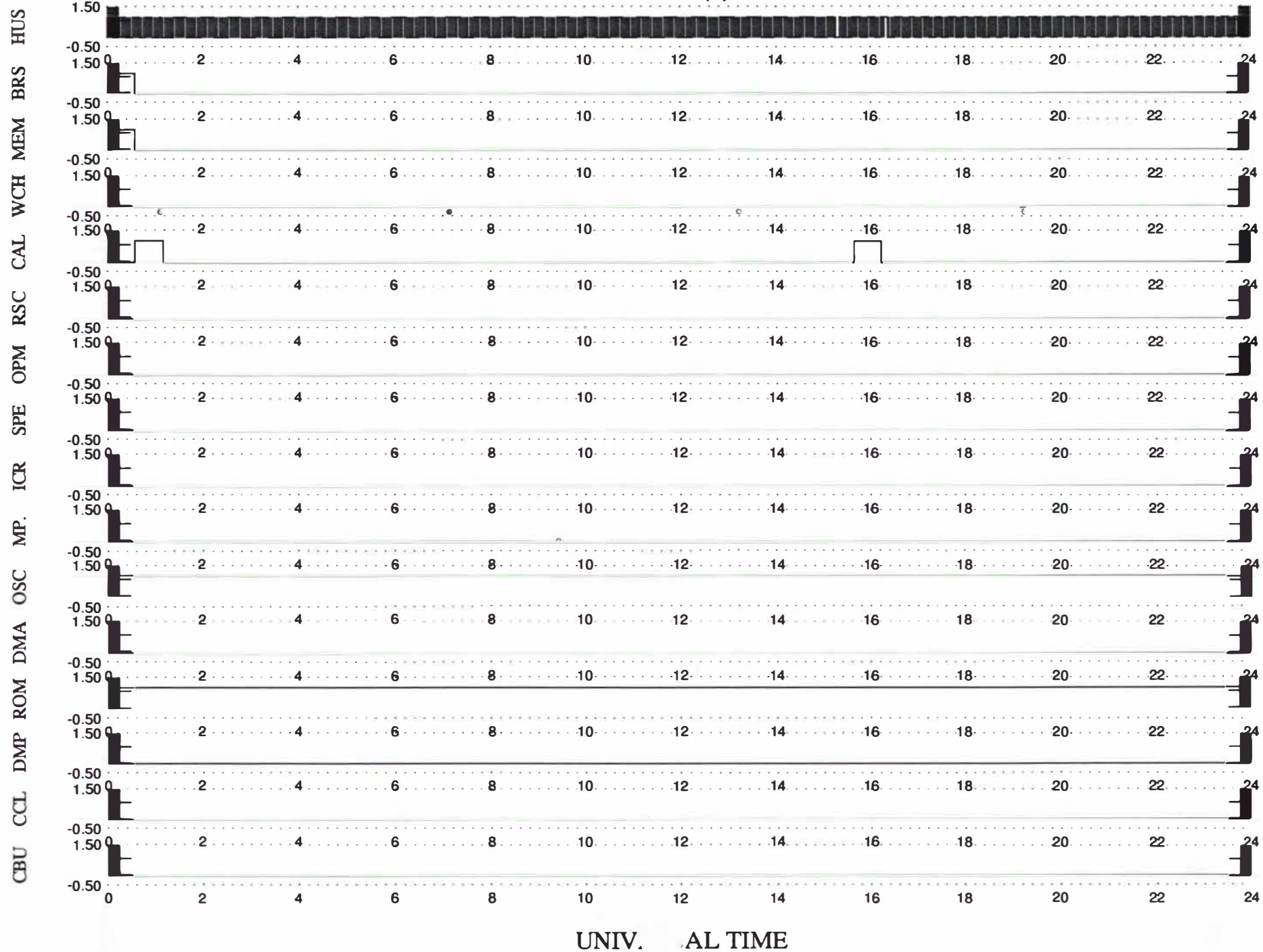
A: Channel 1 Most Sunward LAD

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

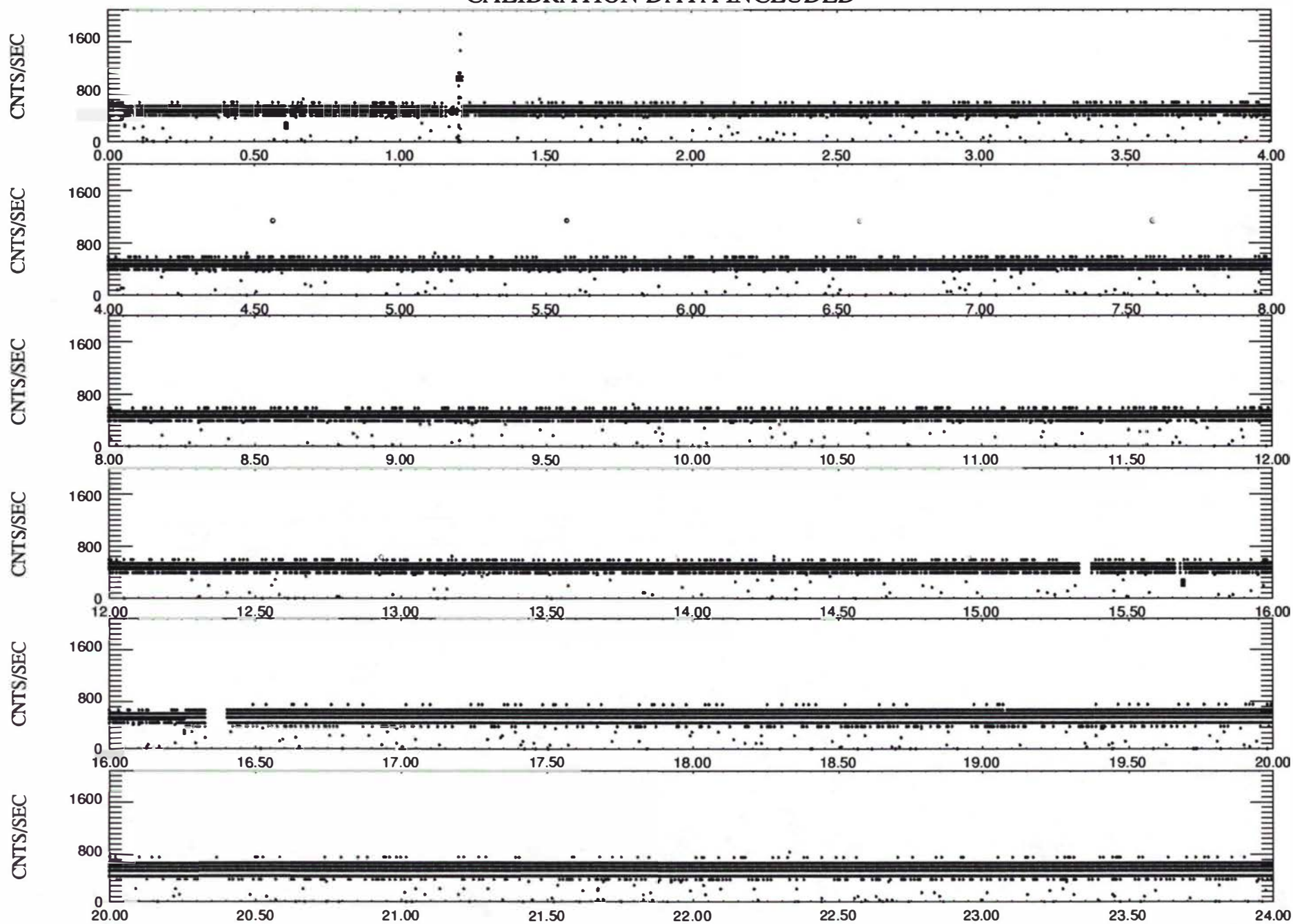
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

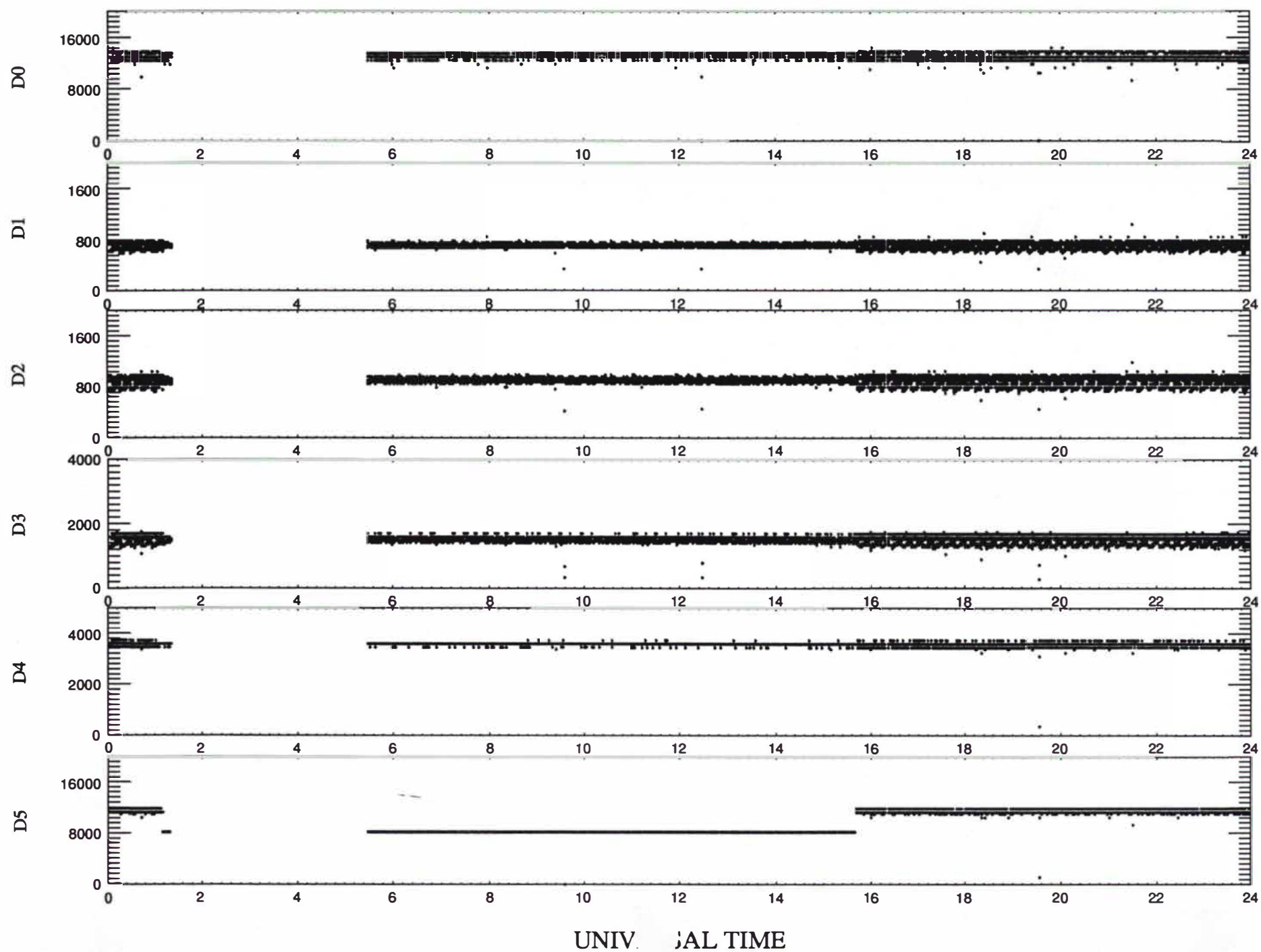
NO BURST (8)



CALIBRATION DATA INCLUDED



UNIV. AL TIME



Lowess
UNTRIGGERED

ULYSSES RT

22 / 5 / 97

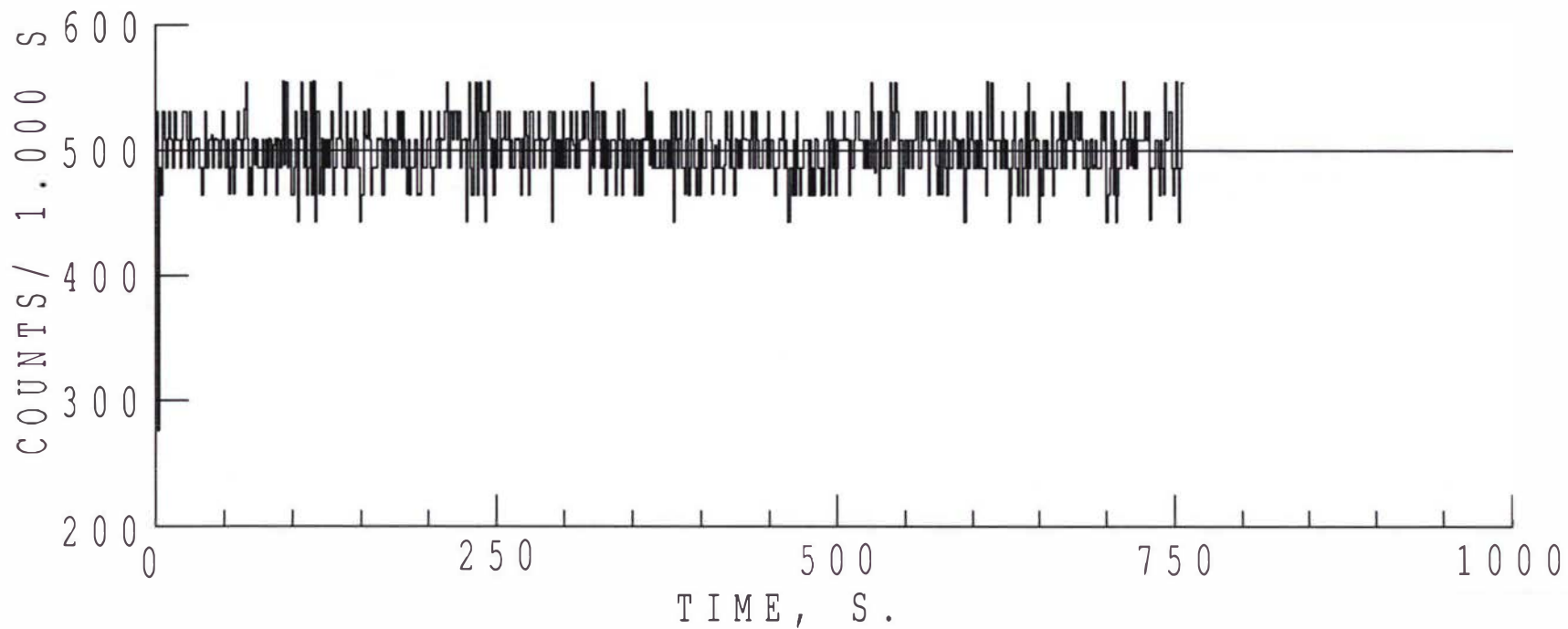
6/11/93 43308.371 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



Kammers

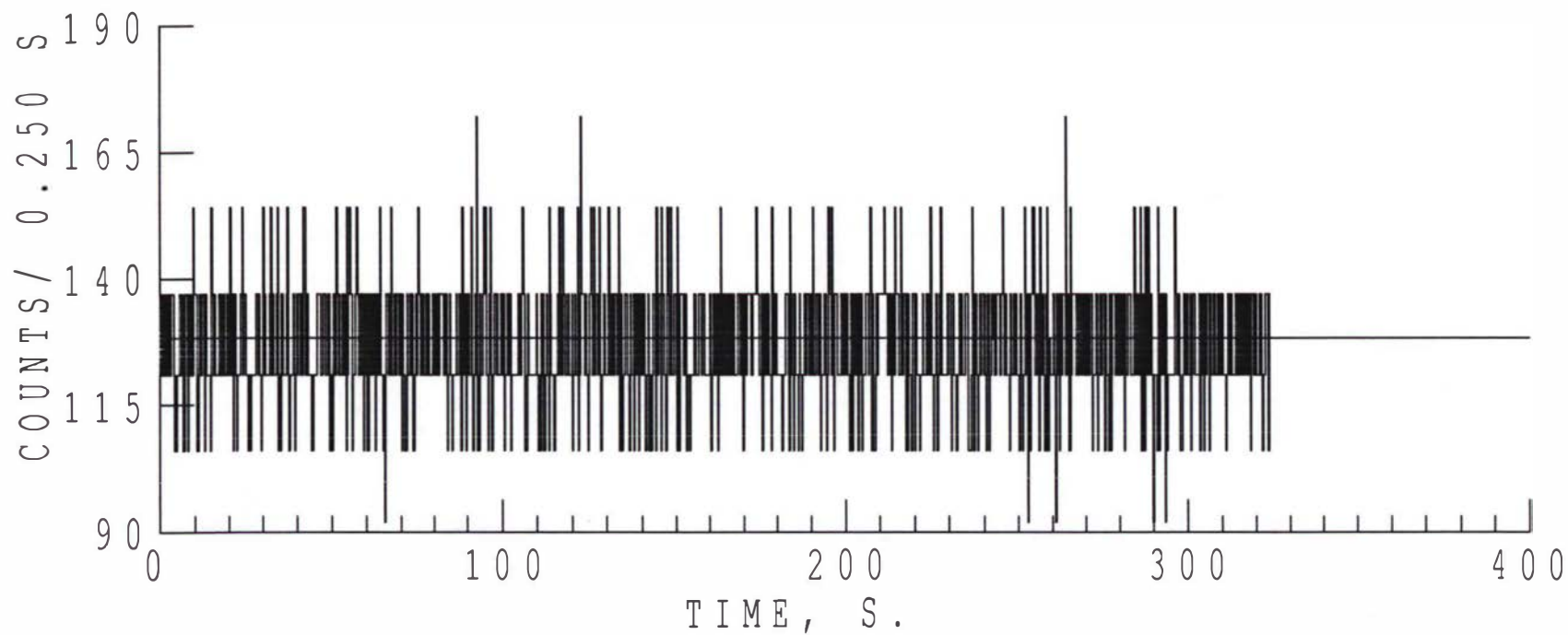
UNTRIGGERED

ULYSSES RT
6 / 11 / 93 75996.125 s
0 - 0 keV

22 / 5 / 97

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From SHARIFF@ssl.msfc.nasa.gov Mon Nov 8 09:37:07 1993
Date: Mon, 8 Nov 1993 11:38:34 -0600 (CST)
From: SHARIFF@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2619
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2619
EVENT OF 1993 NOV 6 DAY OF YEAR=310
EVENT CROSSING TIME AT BATSE : 73924. S. OR 20:32:04.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 197.000 -3.000
BATSE PEAK COUNTING RATE: 5000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 6/11/ 93 IS:
RA= 164.493 DEC= -28.071 DIST= 4.592 AU
BATSE-ULYSSES DISTANCE = 686946366. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=140.15 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1759.18 SECS.
CROSSING TIME AT ULYSSES IS 72165. S. OR 20:02:44 +/- 278.20 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 6/11/ 93 IS:
RA= 235.342 DEC= -19.978 DIST= 2.450 AU
MARS-BATSE DISTANCE = 366502464. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=138.94 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -921.77 SECS.
CROSSING TIME AT MARS IS 73002. S. OR 20:16:42 +/- 125.42 SECONDS

RI

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2619	931106	9297	73924	5000	197	-03

BATSE BURST TRIGGER

NO.: 02619

TIME: TJD=9297 SECONDS=73924

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=017.4 AZIMUTH=023.4 ERROR= DEGREES

COMMENTS:

BURST, TWO PEAKS, LASTING ~200S. MARGINALLY VISIBLE ABOVE 300KEV.

Helio corr removed

Date: Jan 20 '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? *No - bad stats*

2. BATSE Data

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

3. PVO Data

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

- ☒ ACCESS database updated?

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

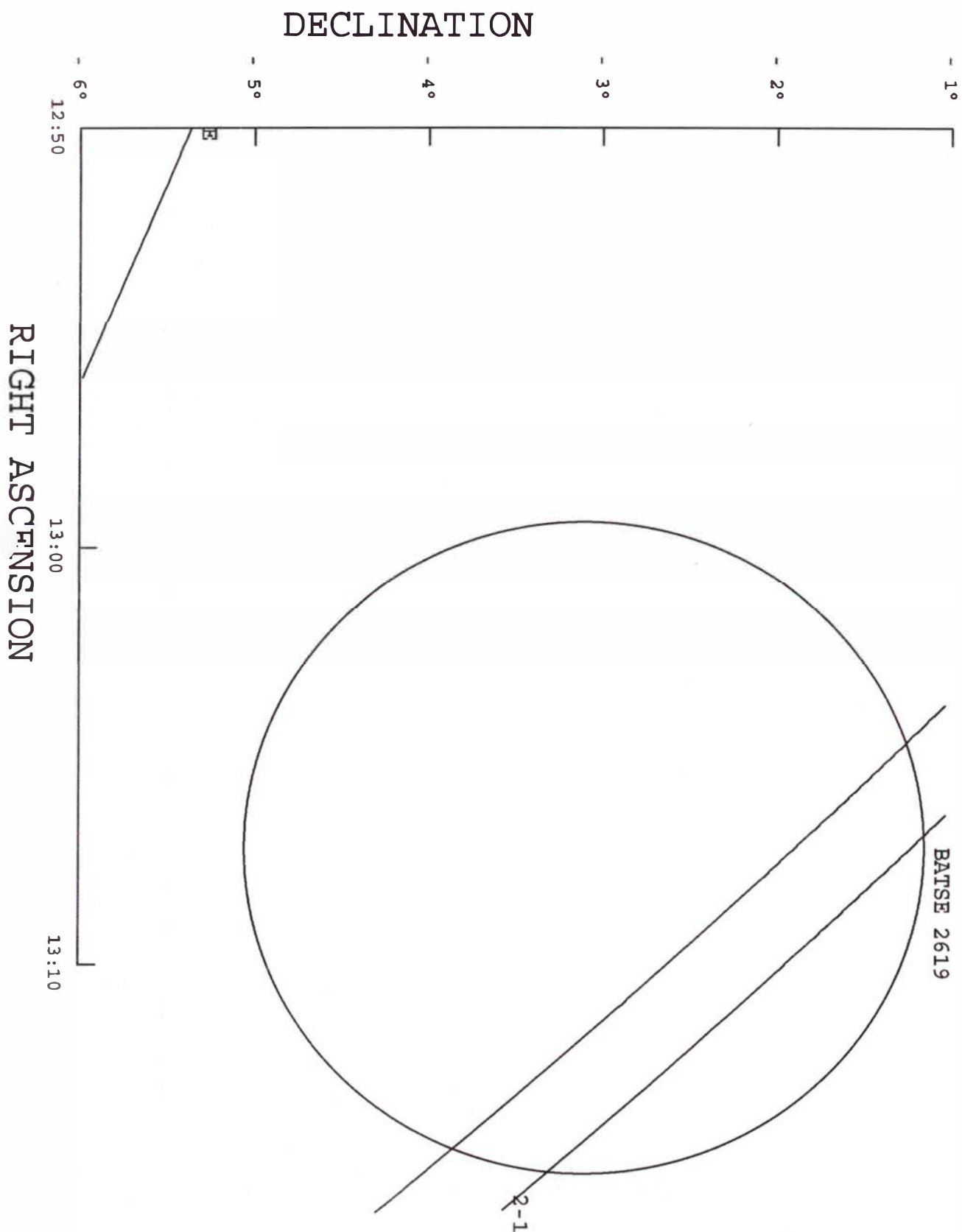
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF NOV 6, 1993 20:03

20 / 1/98



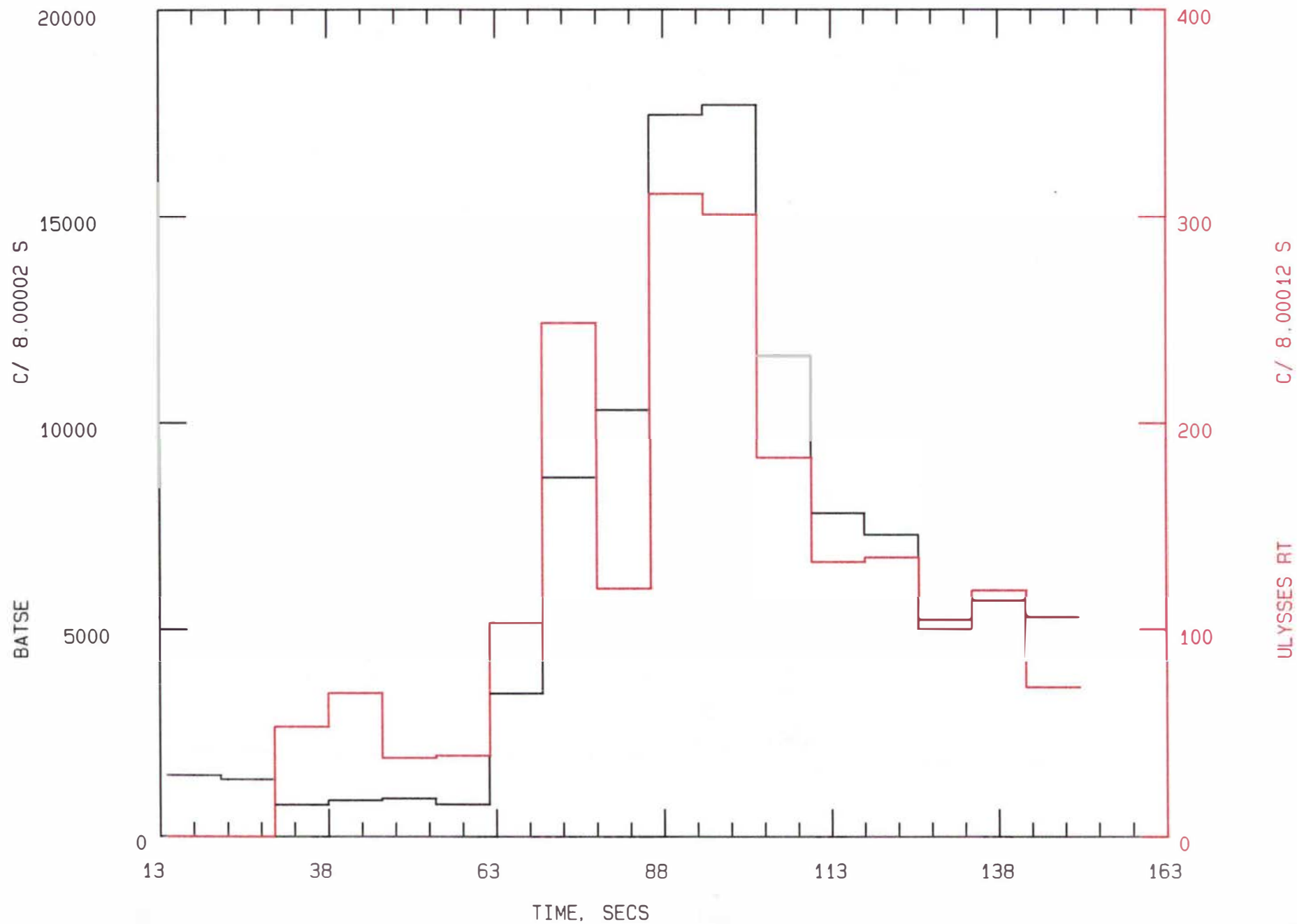
BATSE

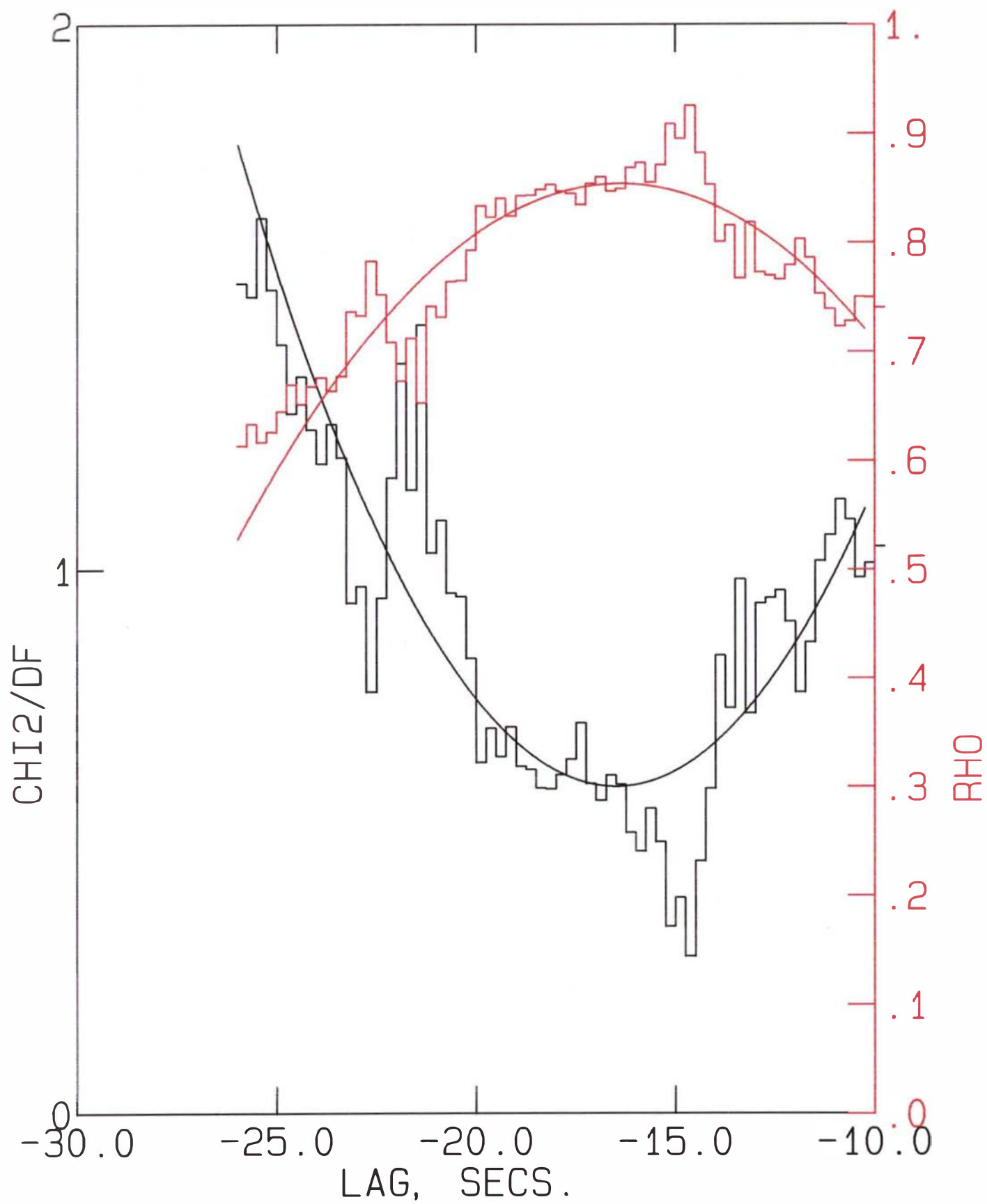
-ULYSSES RT CORRELATION

6/11/93

73924.250

20/ 1/98





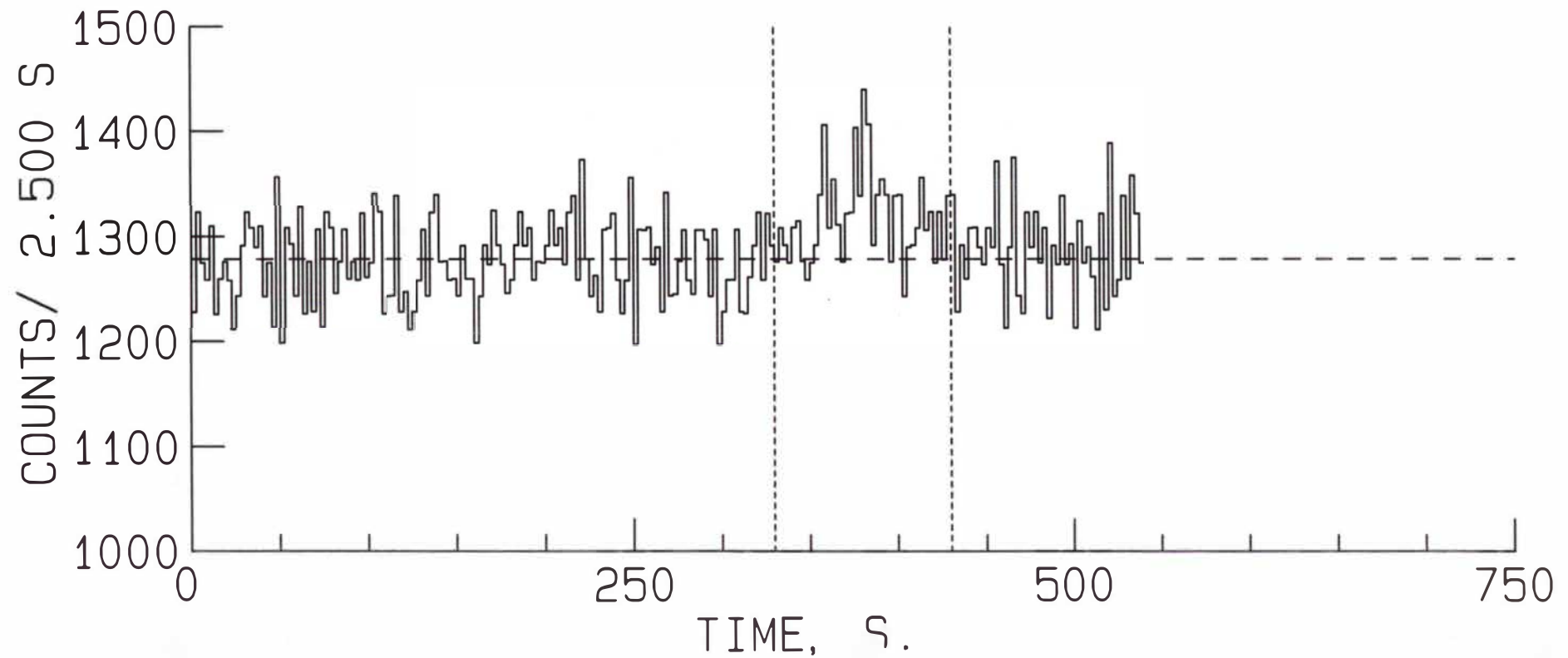
ULYSSES RT

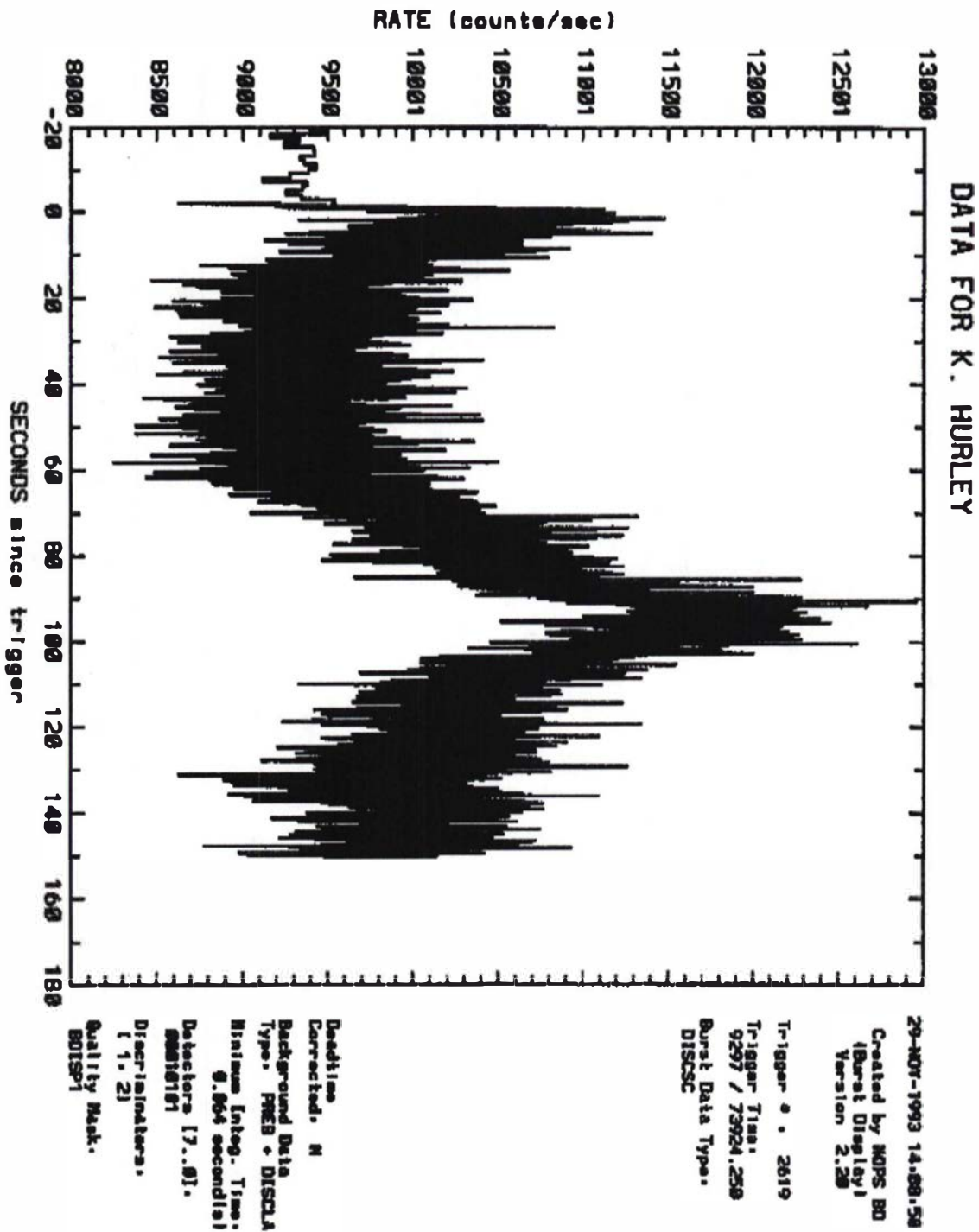
20 / 1 / 98

6/11/93 71892.062 s

0.250 S INTERVALS REGROUPED BY 10

21- 140 keV





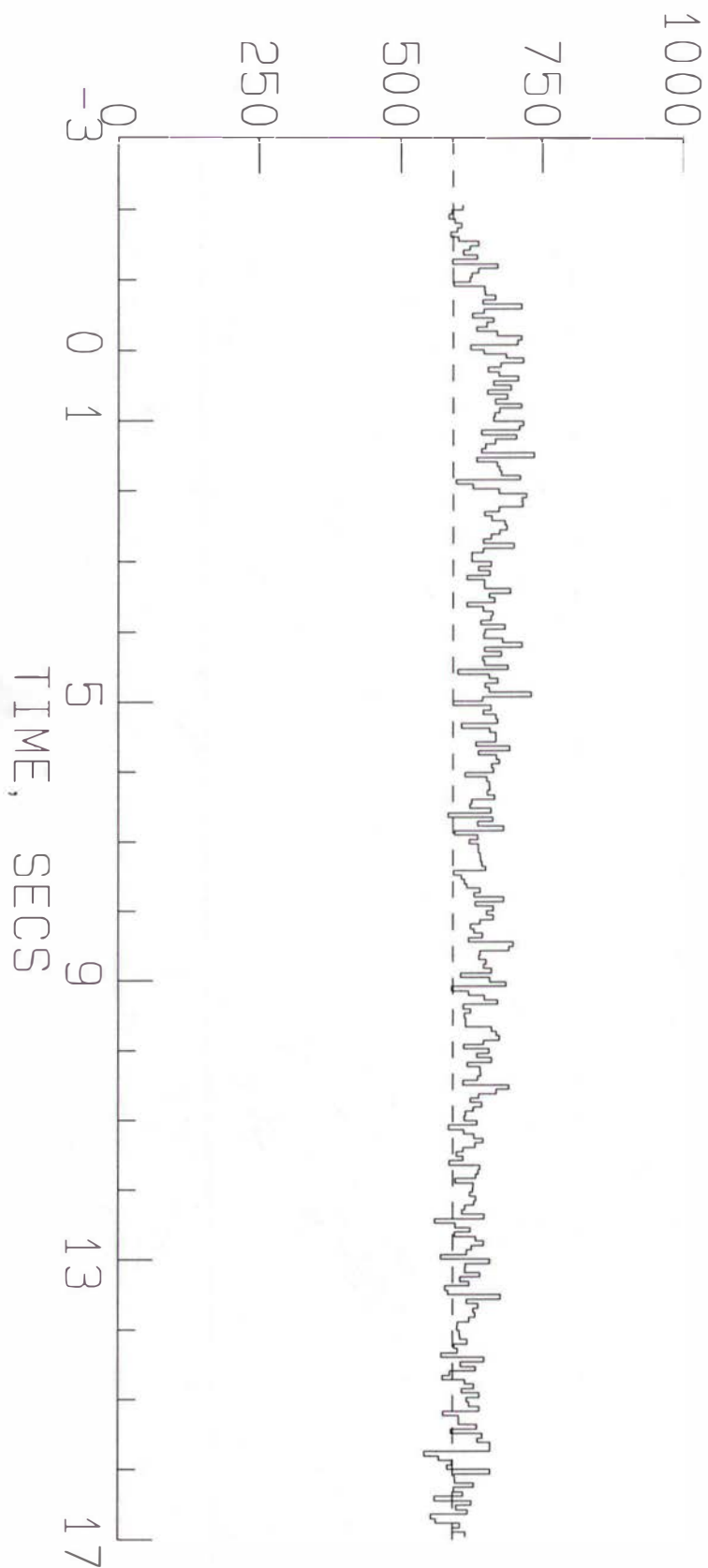
BATSE

06/11/93

73924.250

25- 100 keV

COUNTS/ .064 S



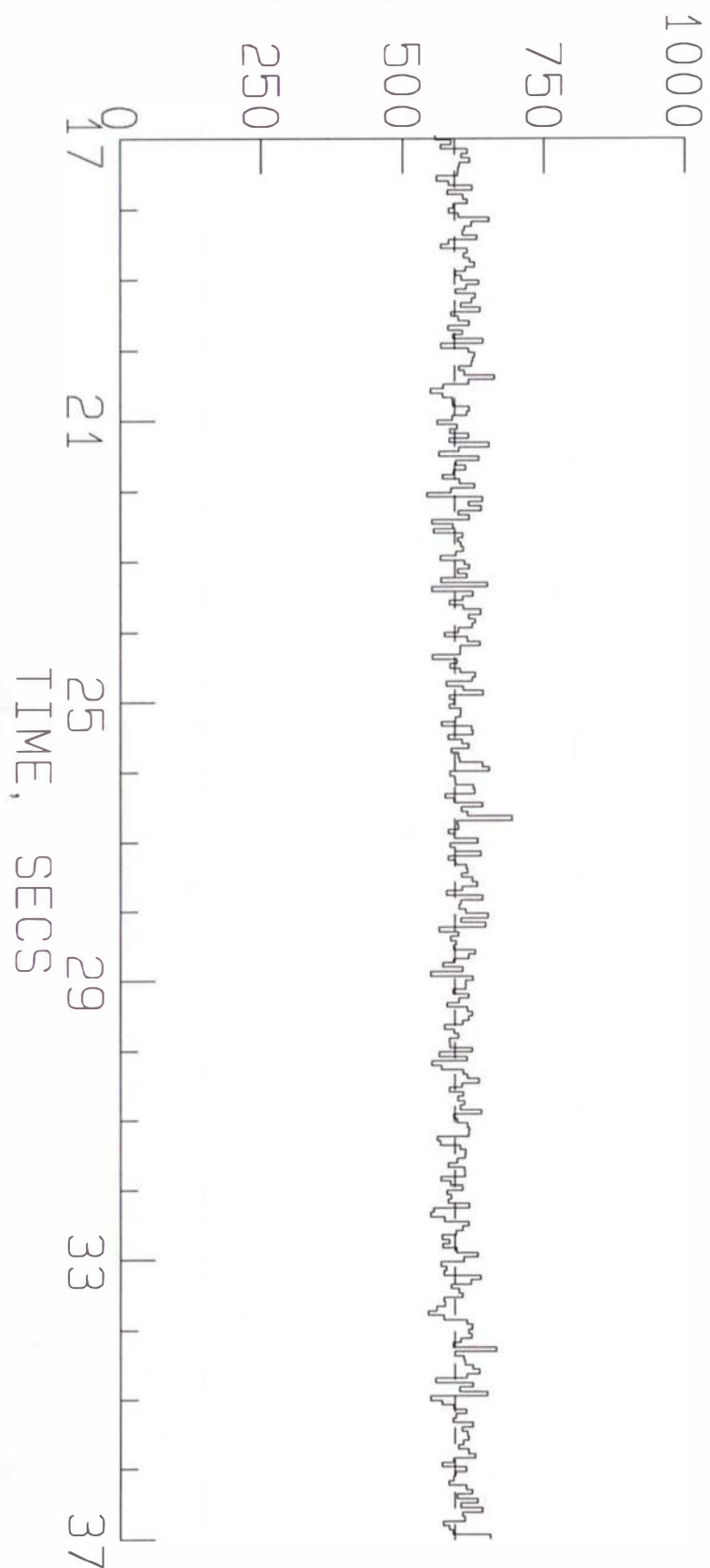
BATSE

06/11/93

73924.250

25- 100 keV

COUNTS/ .064 S



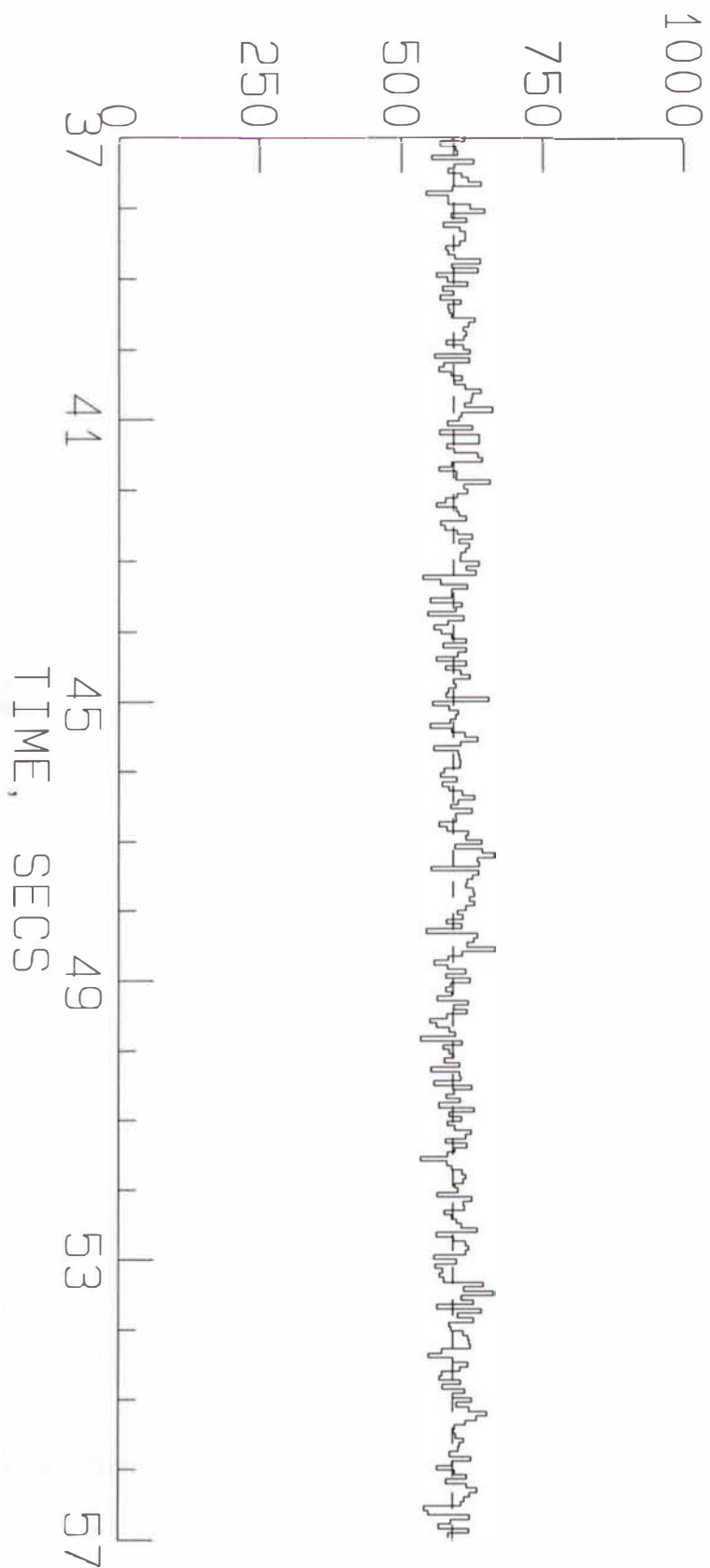
BATSE

06/11/93

73924.250

25- 100 keV

COUNTS/ .064 S



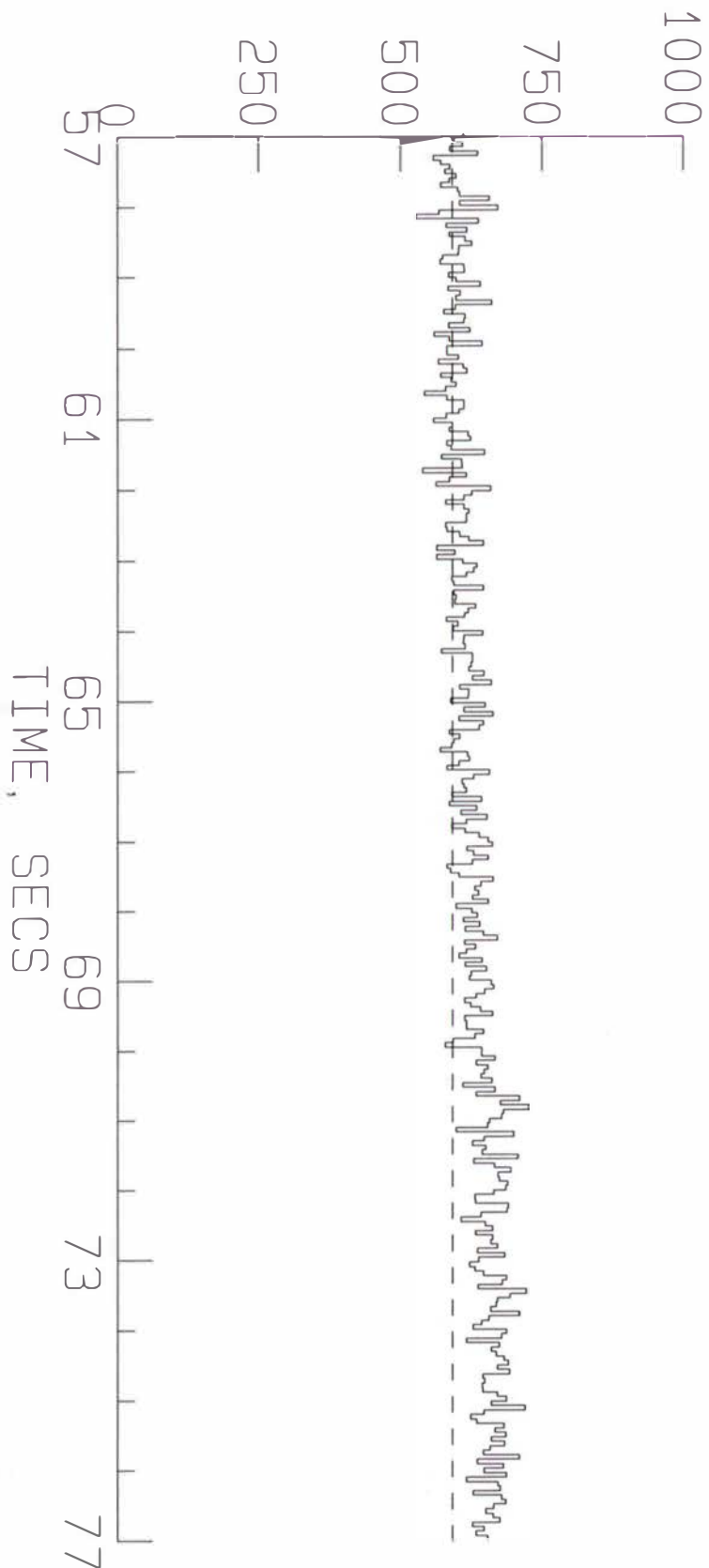
BATSE

06/11/93

73924.250

25- 100 keV

COUNTS/ .064 S



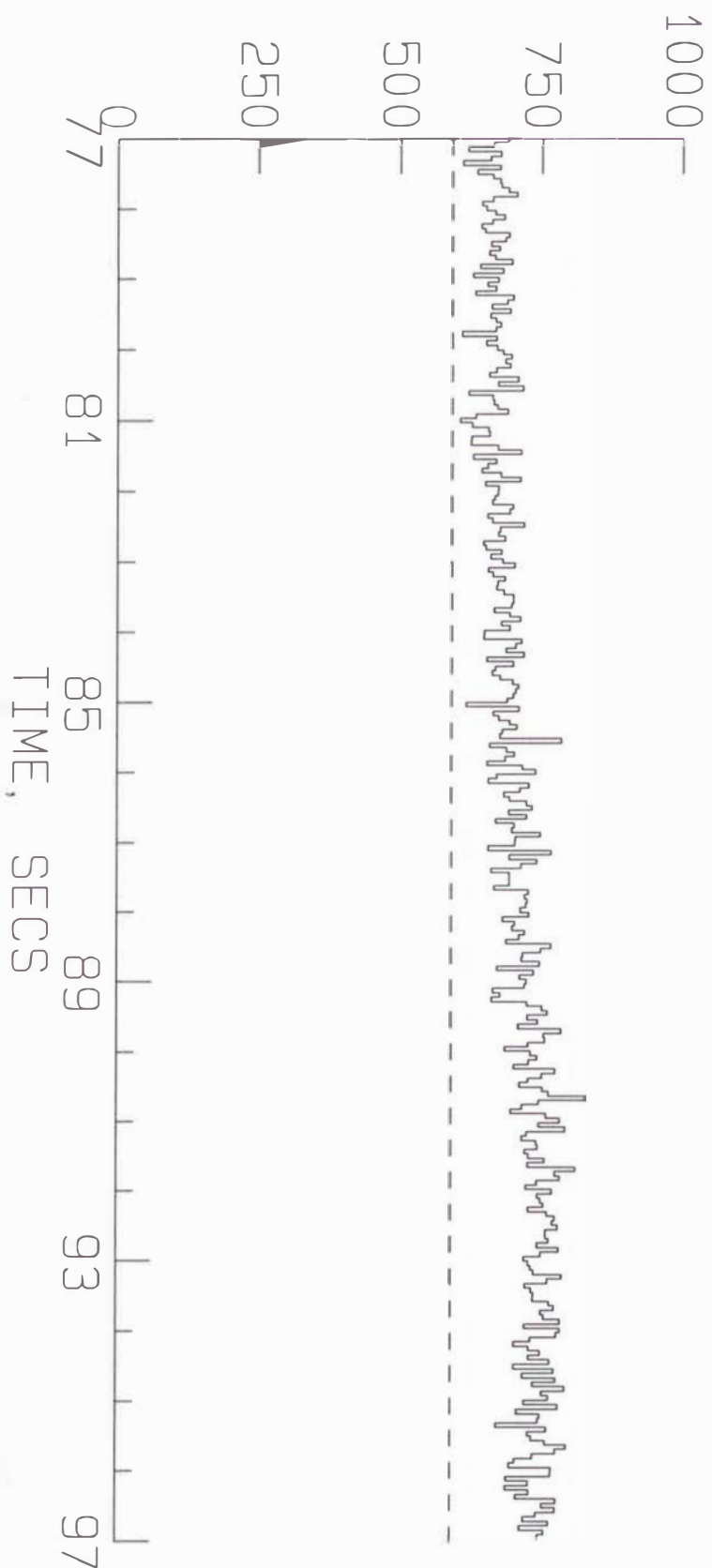
BATSE

06/11/93

73924.250

25- 100 keV

COUNTS/ .064 S



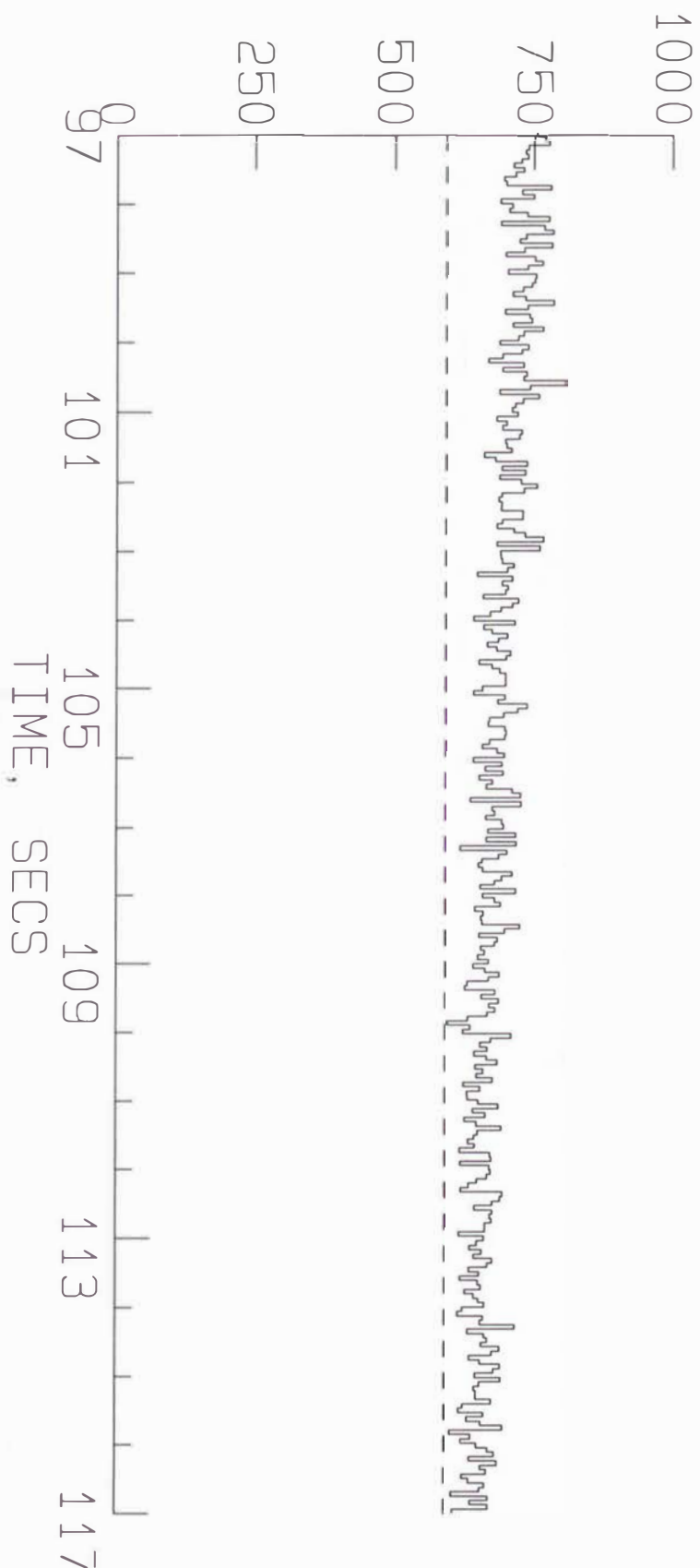
BATSE

06/11/93

73924.250

25- 100 keV

COUNTS/ .064 S



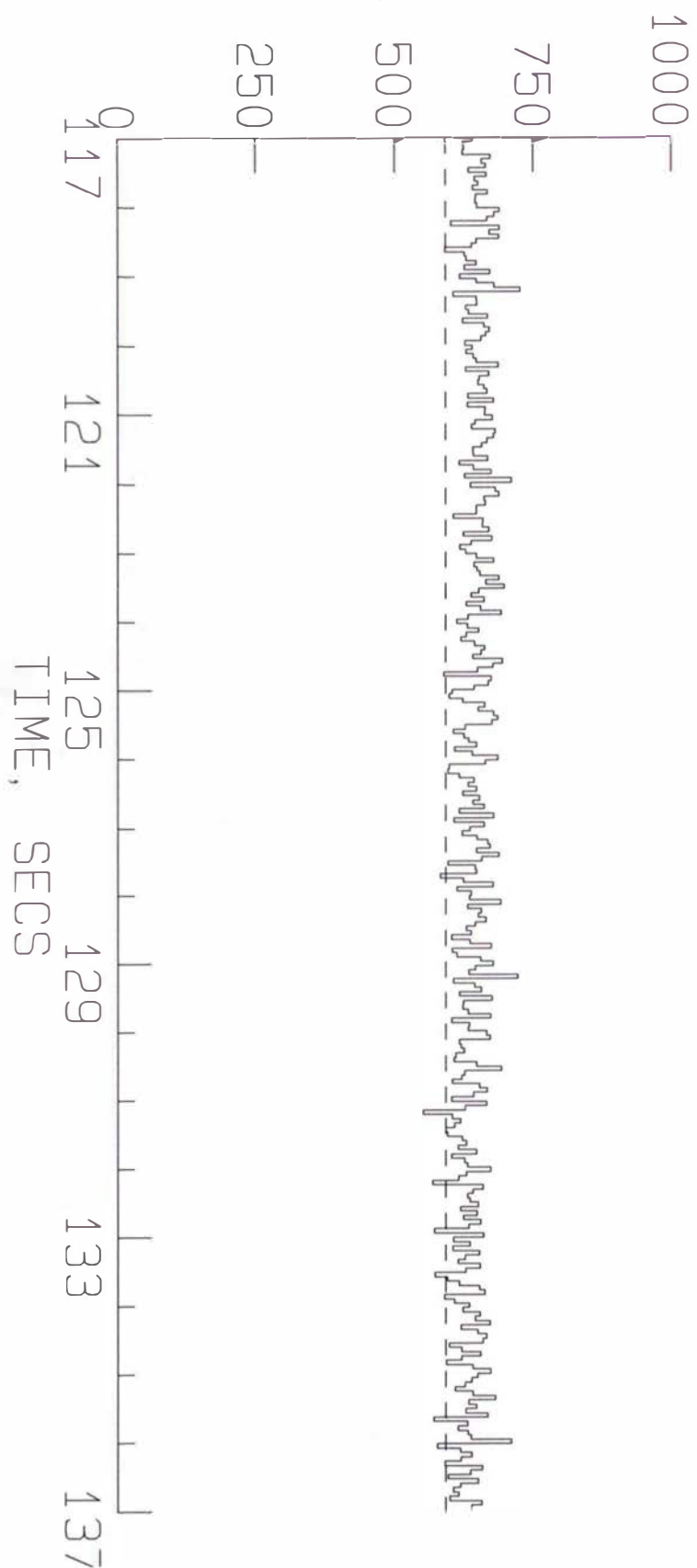
BATSE

06/11/93

73924.250

25- 100 keV

COUNTS/ .064 S



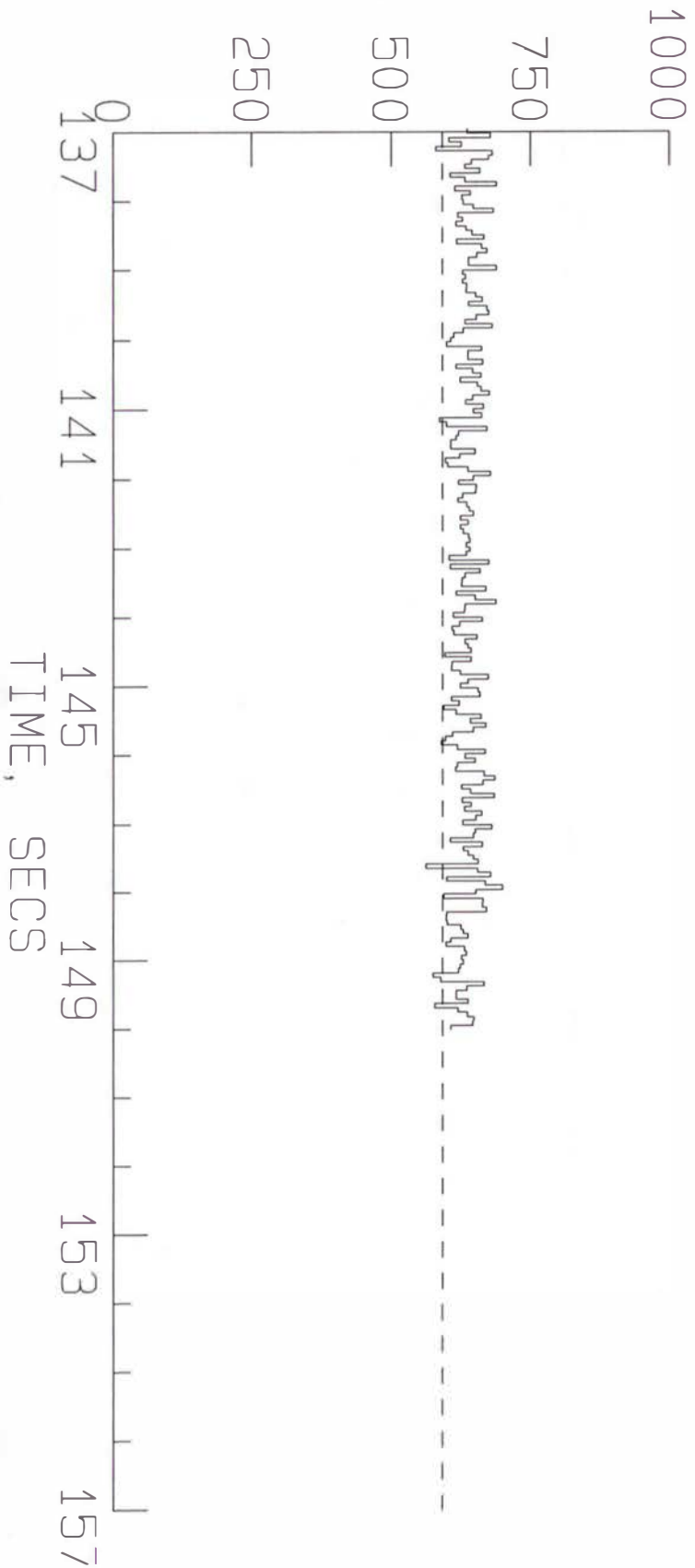
BATSE

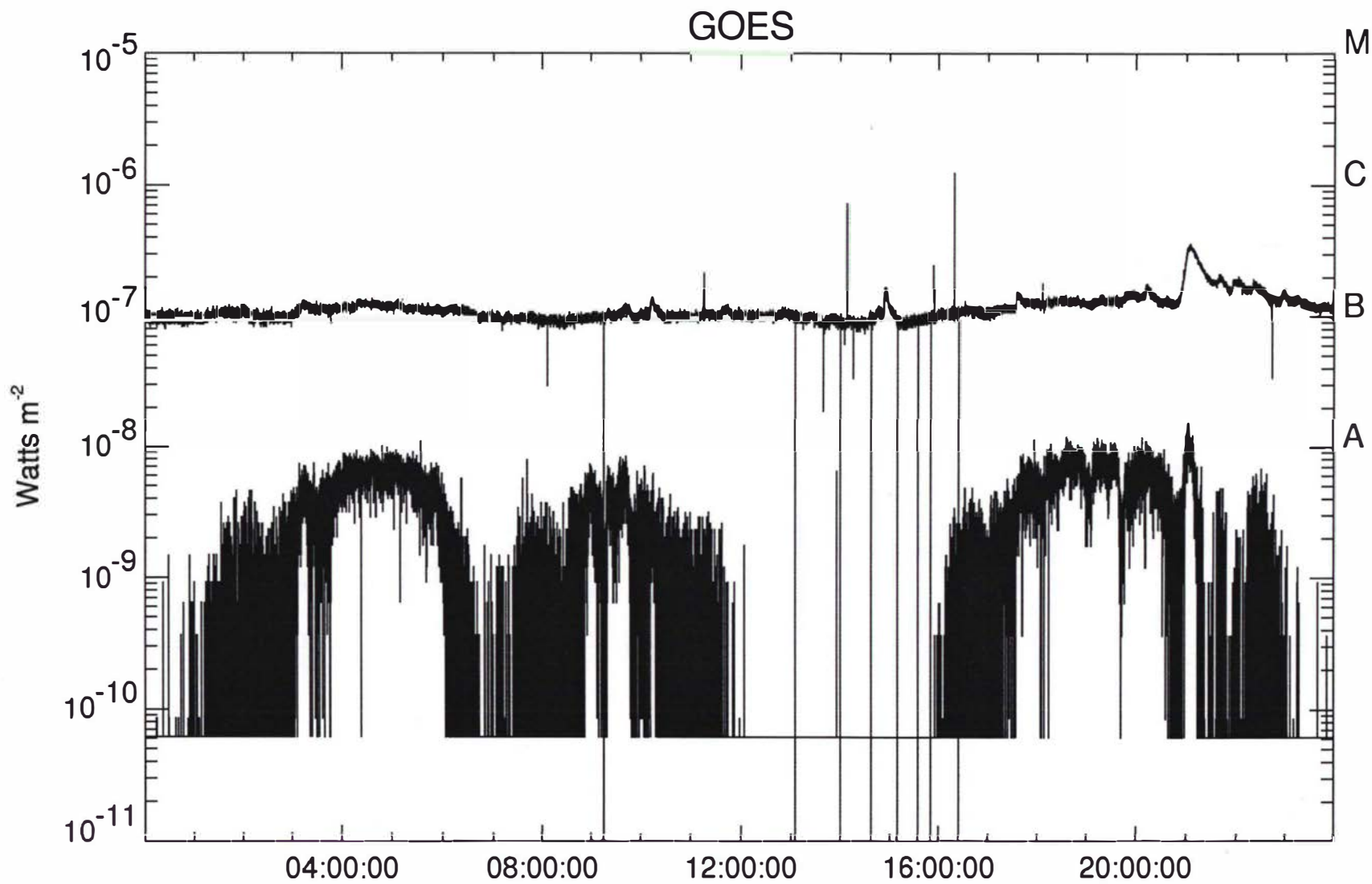
06/11/93

73924.250

25- 100 keV

COUNTS/ .064 S





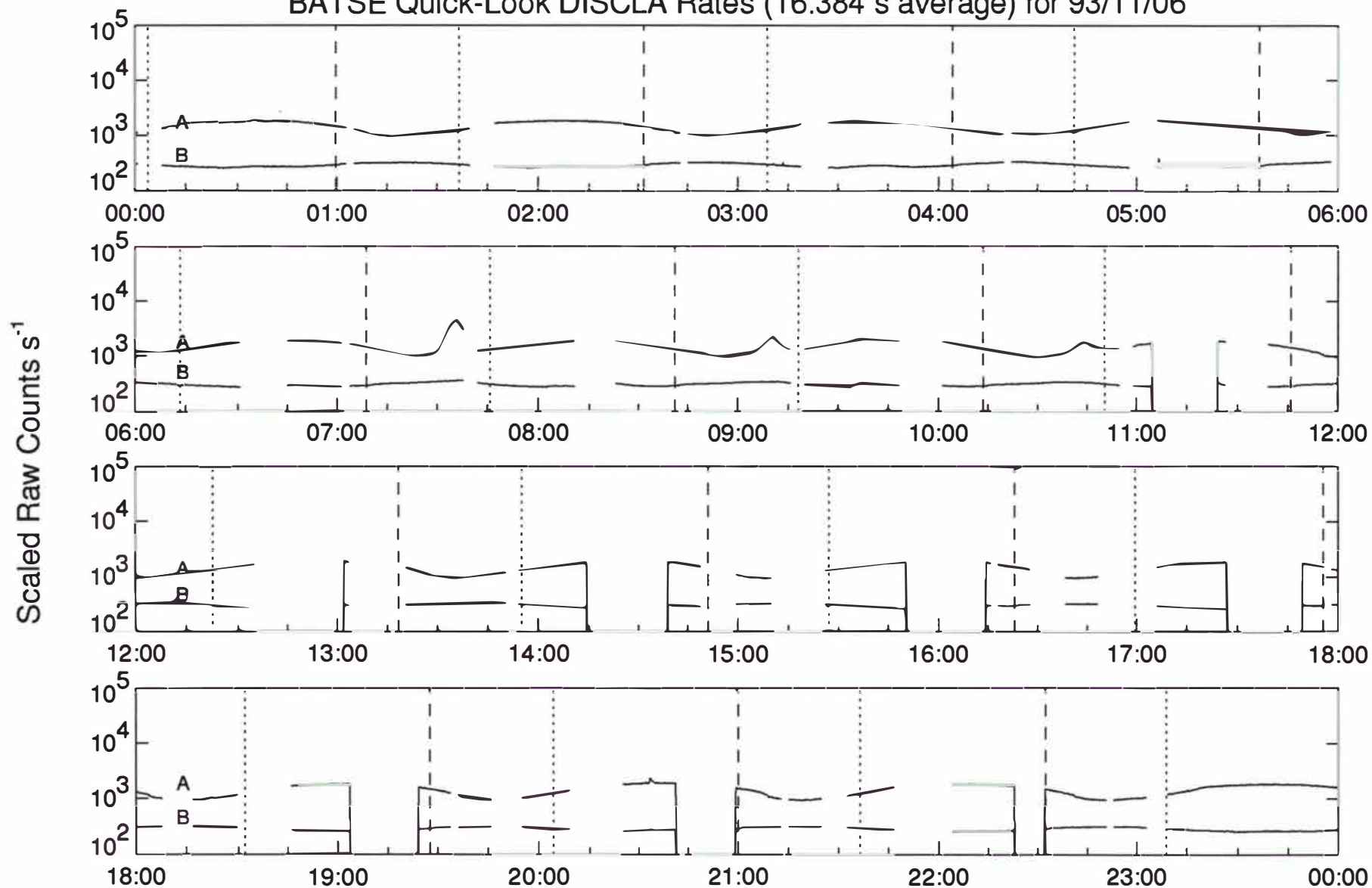
Data Start: 93/11/06, 0000:01

Plot created: 93/11/08, 1747

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 93/11/06

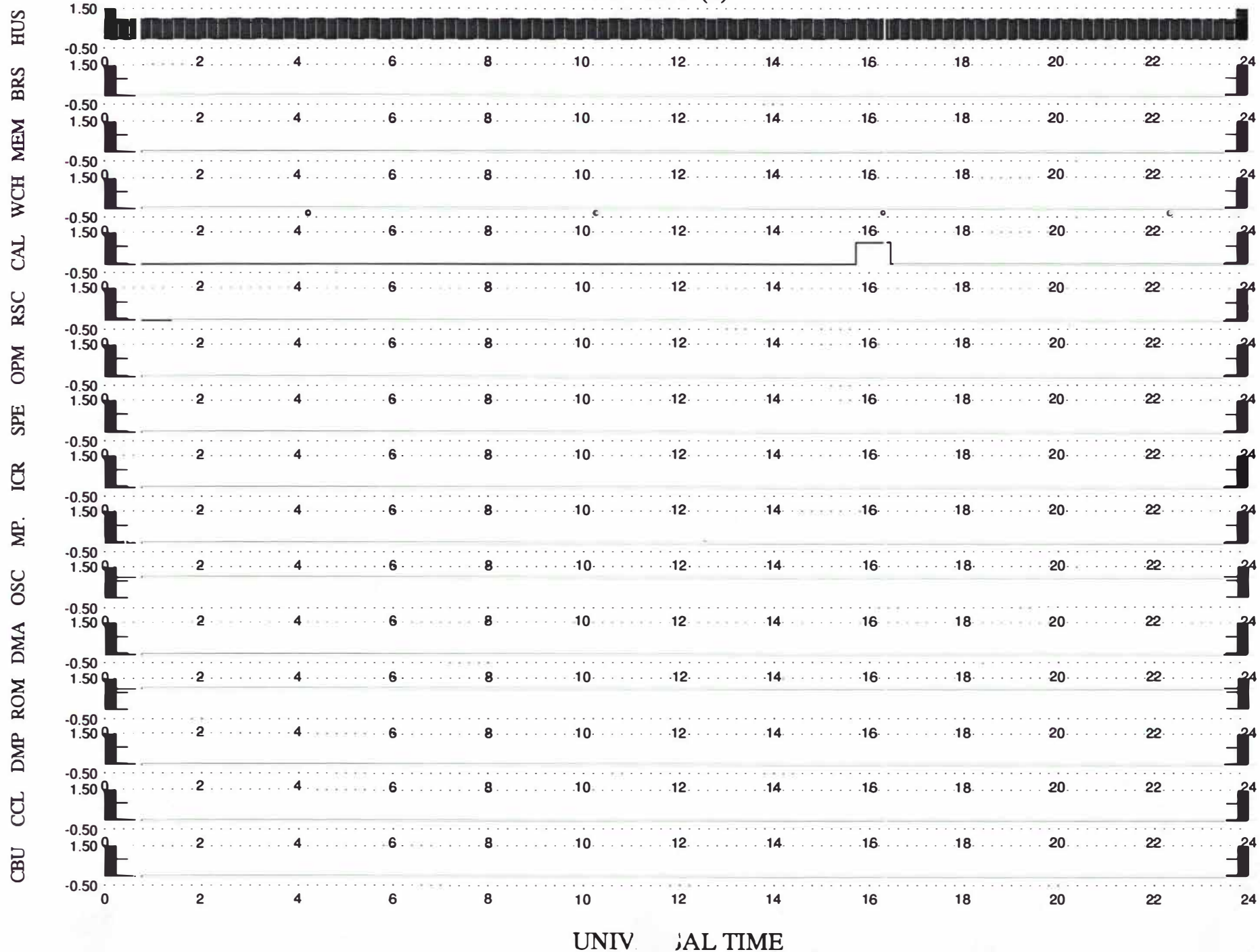


Current Time: 93/11/09, 1524 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05

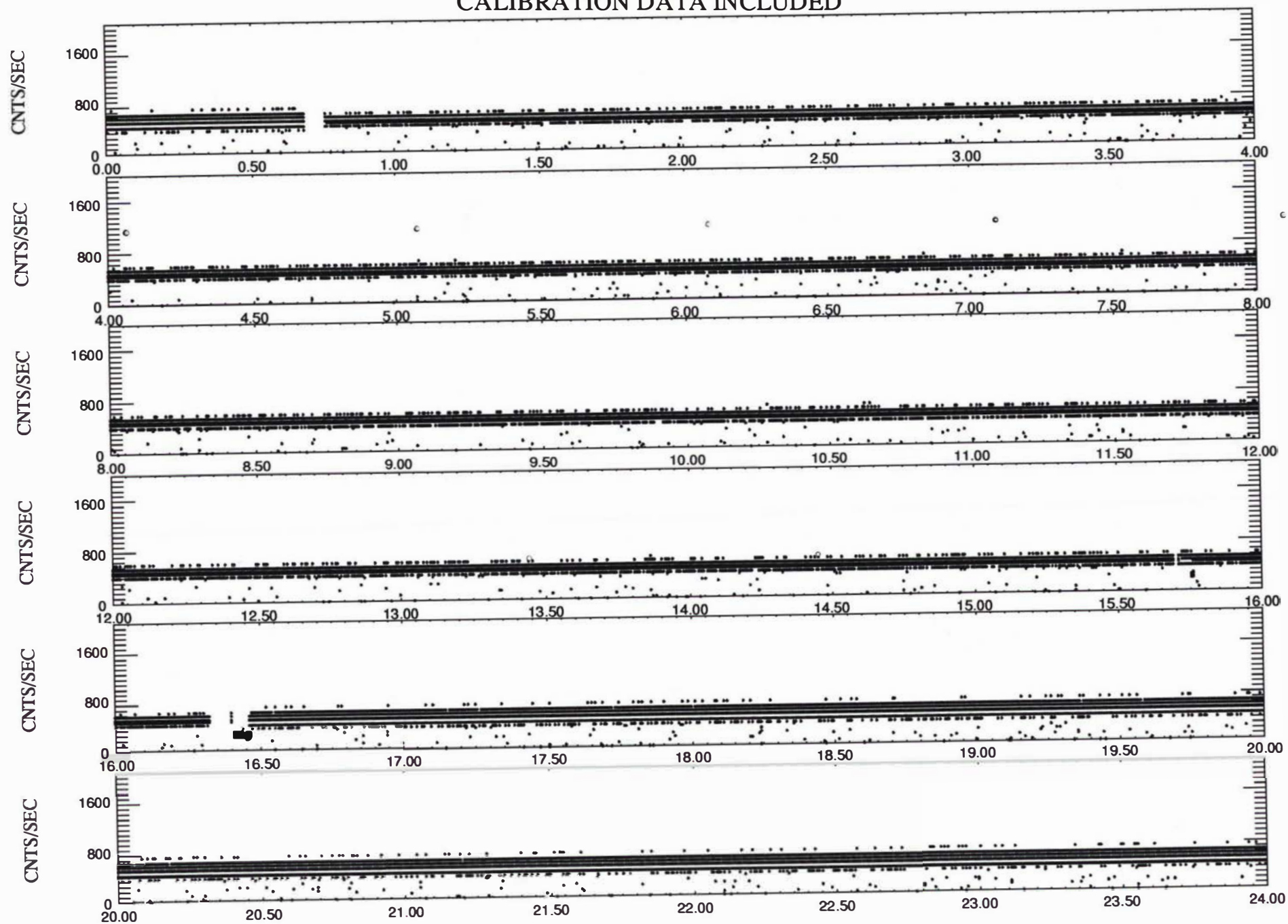
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

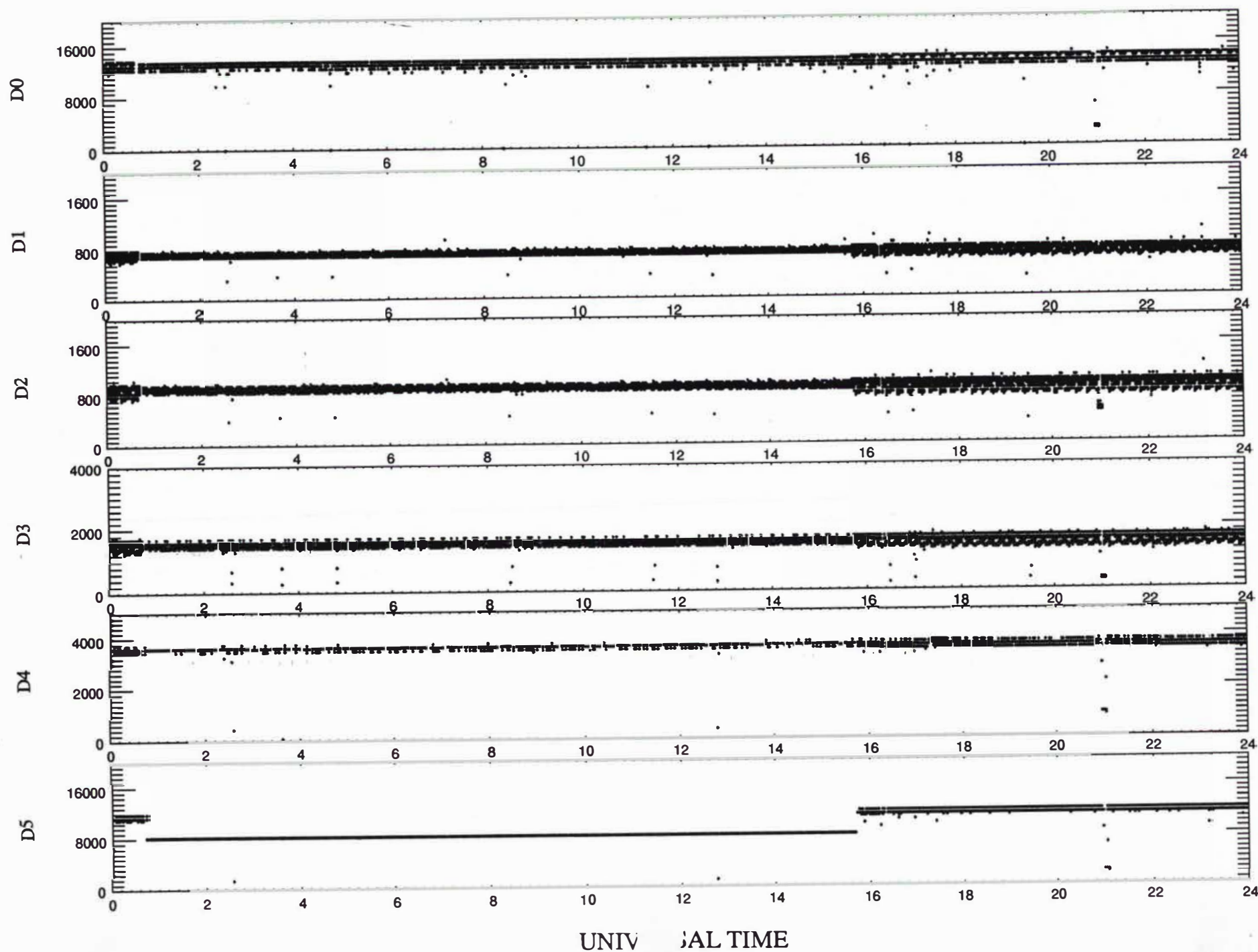
NO BURST (8)

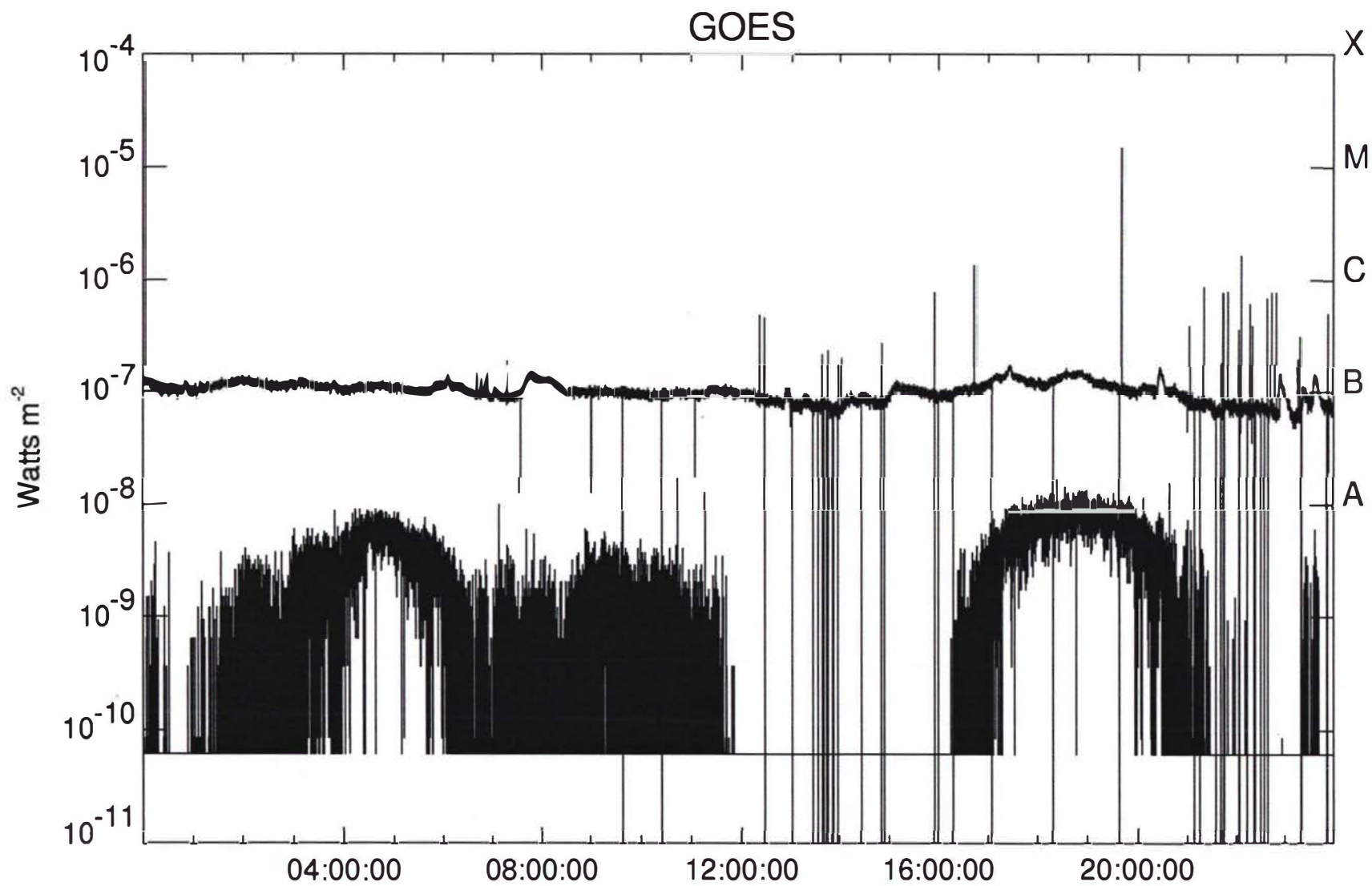


CALIBRATION DATA INCLUDED



UNIV TIME





Data Start: 93/11/07, 0000:01

Plot created: 93/11/08, 1622

Channel

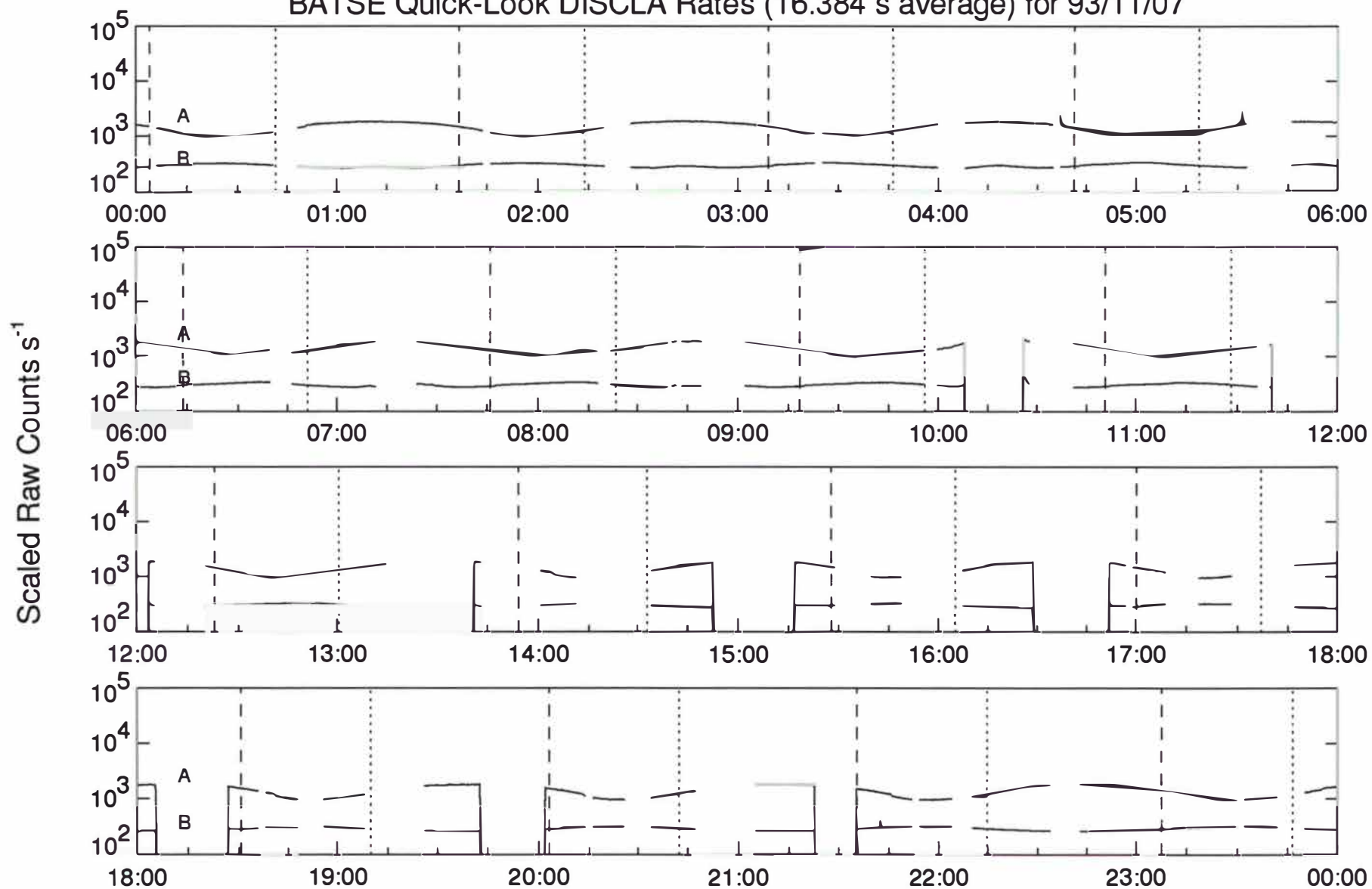
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/07

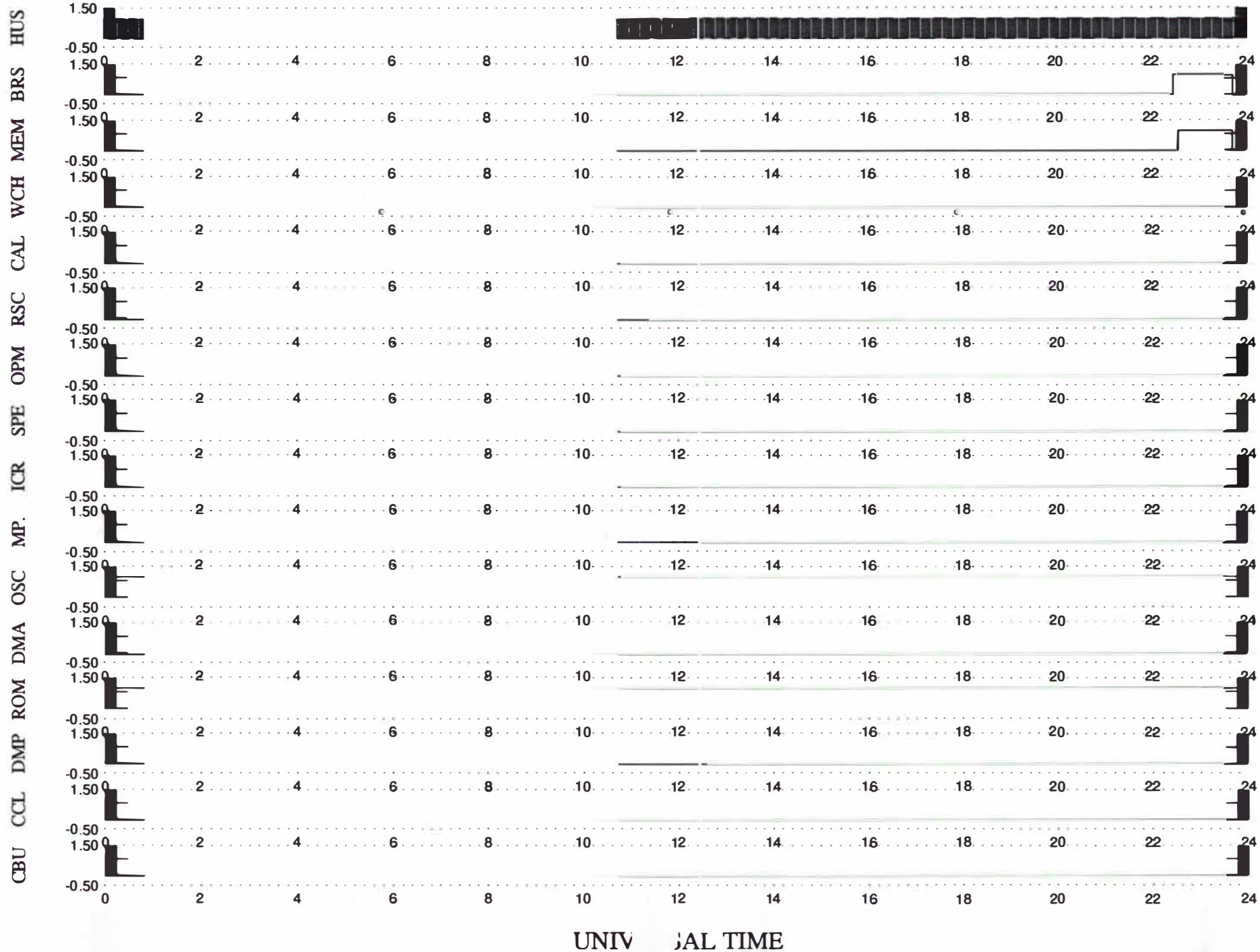


Current Time: 93/11/09, 1524 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

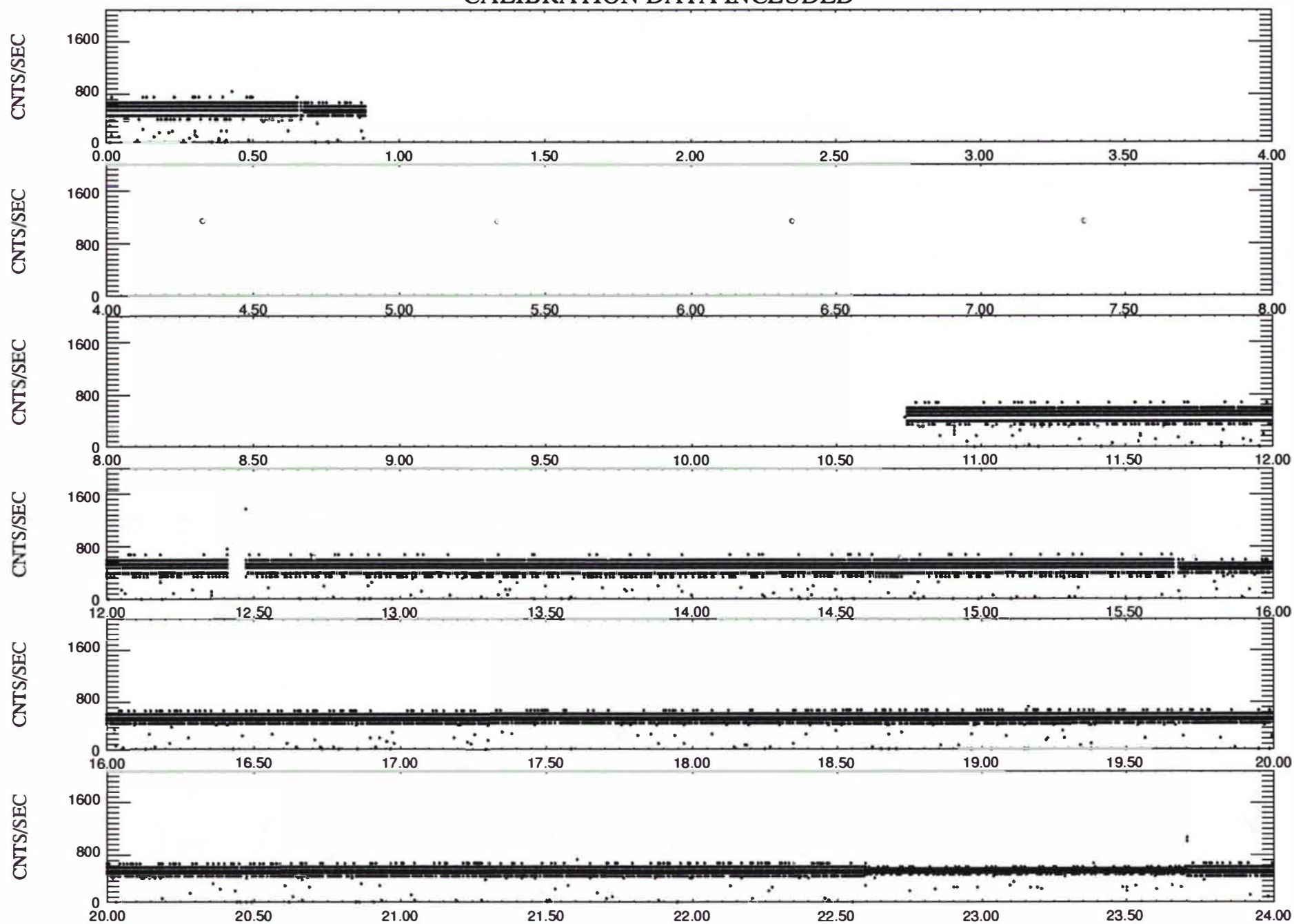
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

BURST NUMBER 9

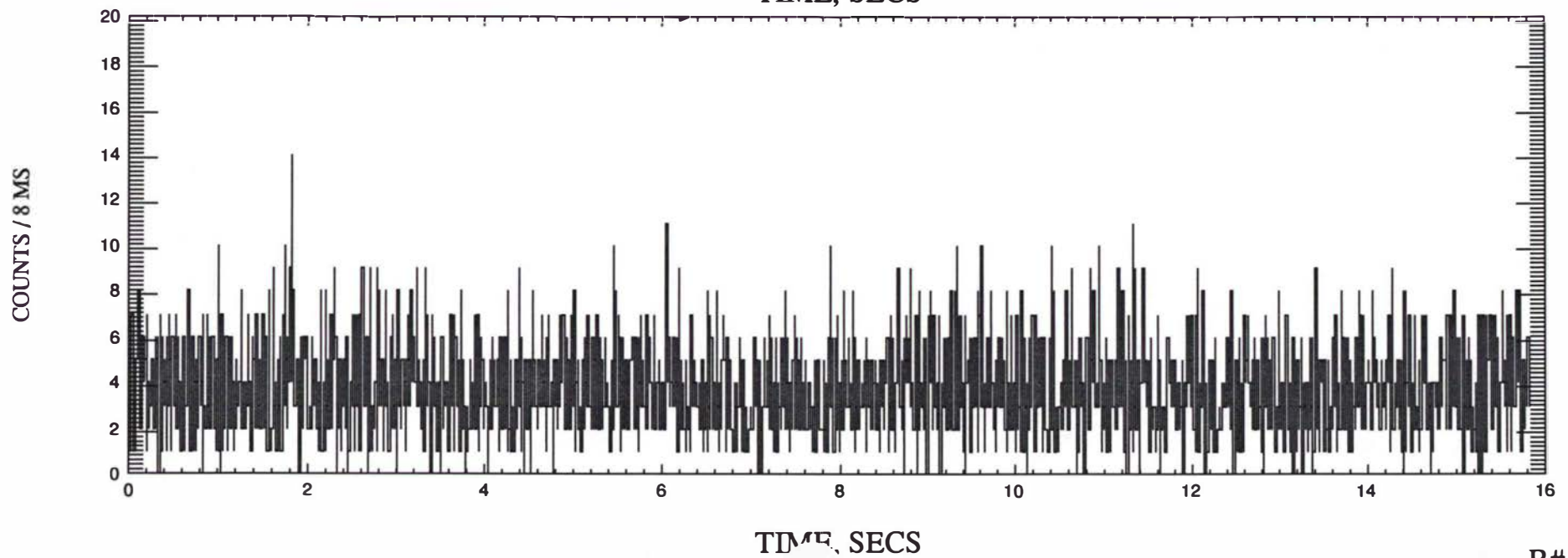
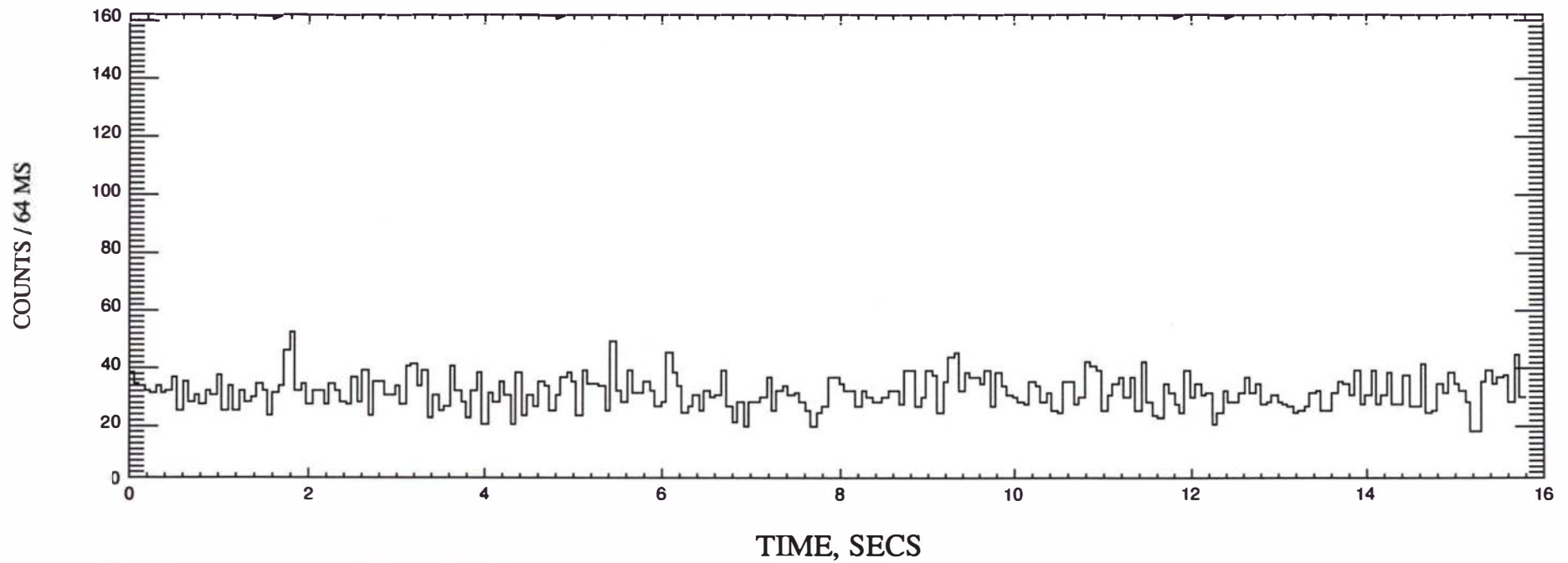


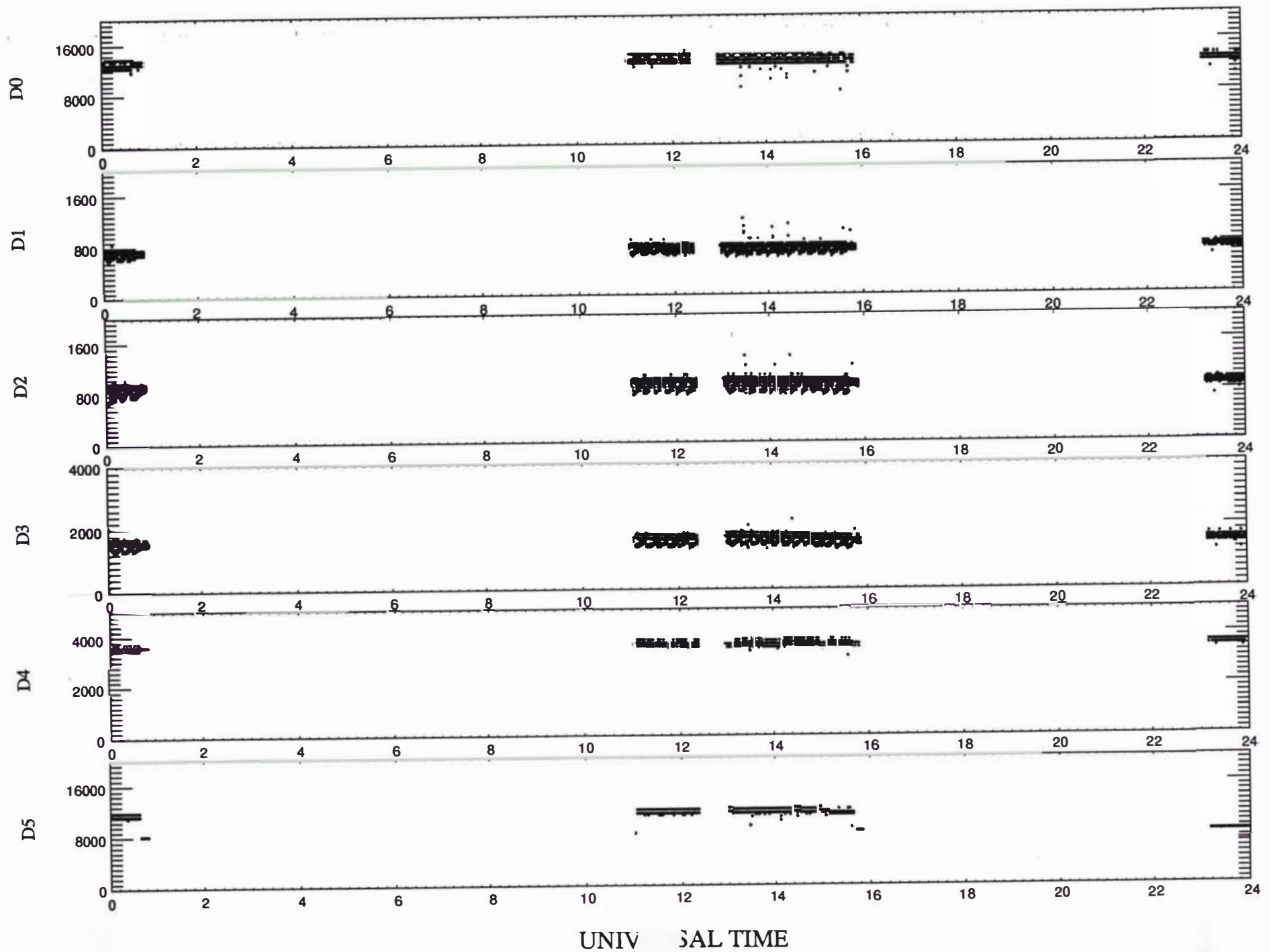
CALIBRATION DATA INCLUDED



UNIV UNIV TIME

Burst Counter 9 at UT=22.433440886603 h=80760.387 s 22:26:00.387





From HAGEDON@ssl.msfc.nasa.gov Wed Nov 10 11:00:38 1993
Date: Wed, 10 Nov 1993 13:02:06 -0600 (CST)
From: HAGEDON@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2620
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2620
EVENT OF 1993 NOV 8 DAY OF YEAR=312
EVENT CROSSING TIME AT BATSE : 82297. S. OR 22:51:37.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 60.000 -7.000
BATSE PEAK COUNTING RATE: 3500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 8/11/ 93 IS:
RA= 164.721 DEC= -28.530 DIST= 4.560 AU
BATSE-ULYSSES DISTANCE = 682164649. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 80.60 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 371.78 SECS.
CROSSING TIME AT ULYSSES IS 82669. S. OR 22:57:48 +/- 445.39 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 8/11/ 93 IS:
RA= 236.822 DEC= -20.314 DIST= 2.451 AU
MARS-BATSE DISTANCE = 366628288. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 27.49 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1084.84 SECS.
CROSSING TIME AT MARS IS 83382. S. OR 23:09:41 +/- 114.49 SECONDS

NO

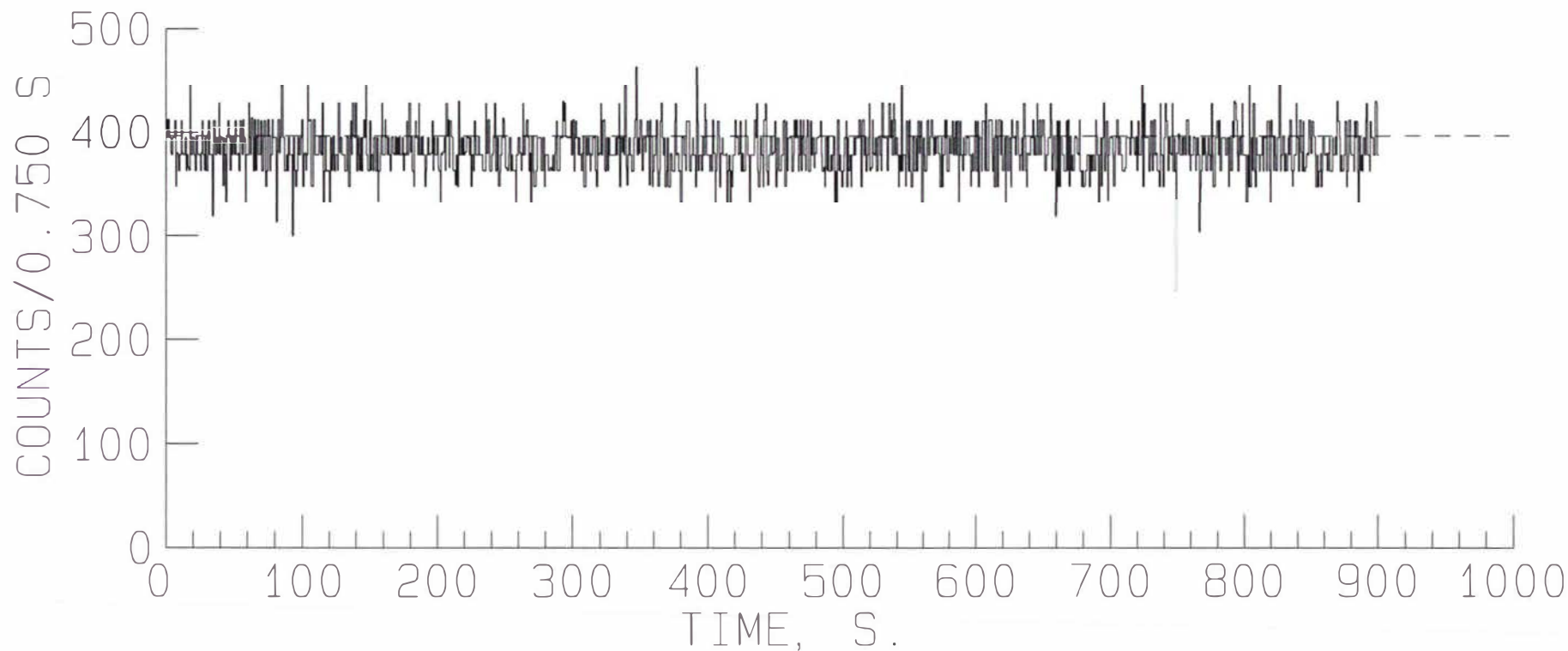
BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2620	931108	9299	82297	3500	060	-07

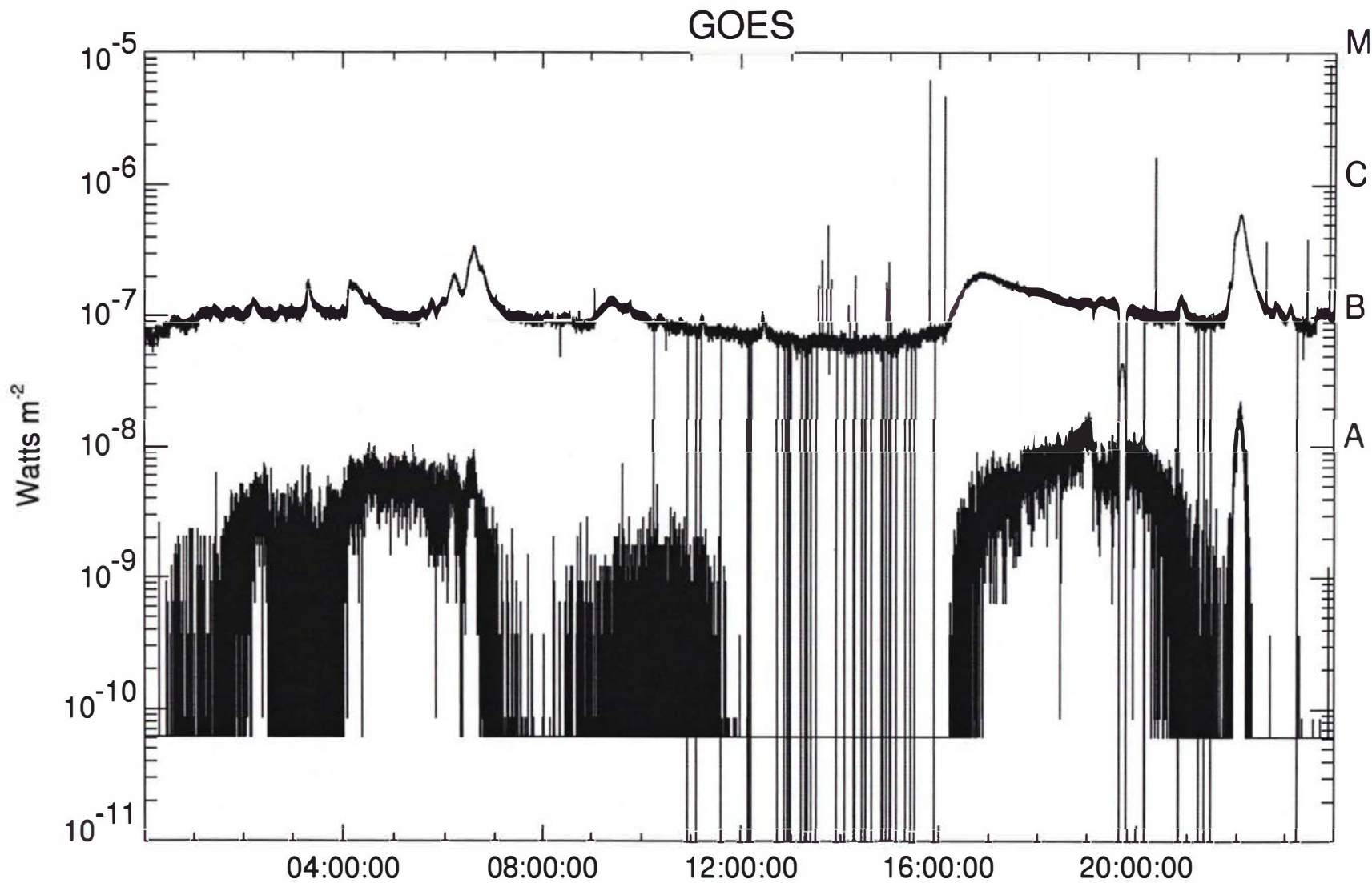
BATSE BURST TRIGGER
NO.: 02620
TIME: TJD=9299 SECONDS=82297
TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N
SIGNIFICANCE: SIGMA
INTENSITY: COUNTS/CM2
LOCATION: ZENITH=120. AZIMUTH=218. ERROR= DEGREES
COMMENTS:
BURST. WEAK SINGLE SPIKE. FASTER RISE THAN FALL. DUR.~12 SEC.
MARGINALLY VISIBLE ABOVE 300 KEV.

11 / 11 / 93

ULYSSES RT
8/11/93 82224.117 s
0.250 S INTERVALS REGROUPED BY 3
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



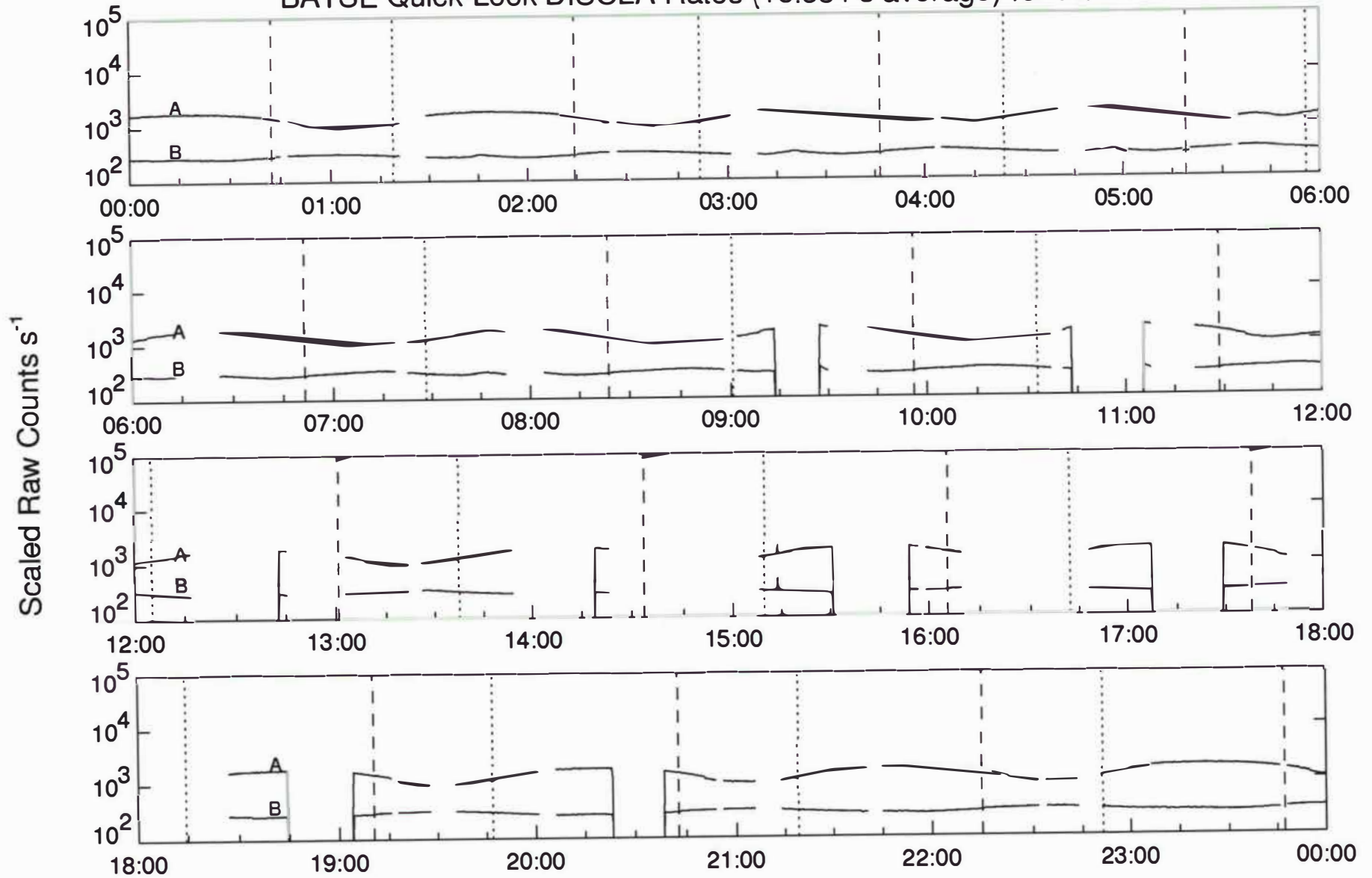


Data Start: 93/11/08, 0000:01

Plot created: 93/11/09, 1518

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 93/11/08

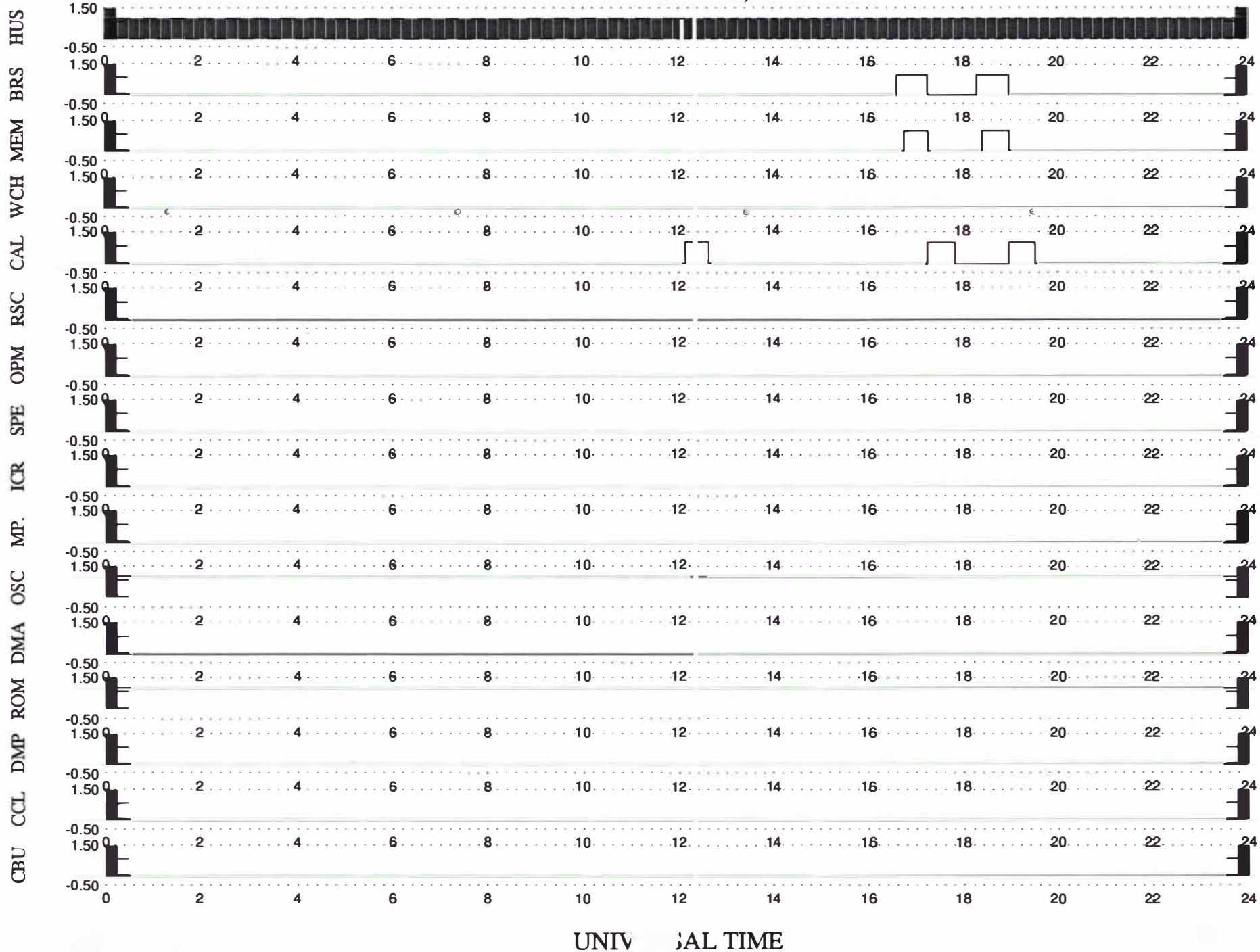


Current Time: 93/11/11, 1551 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

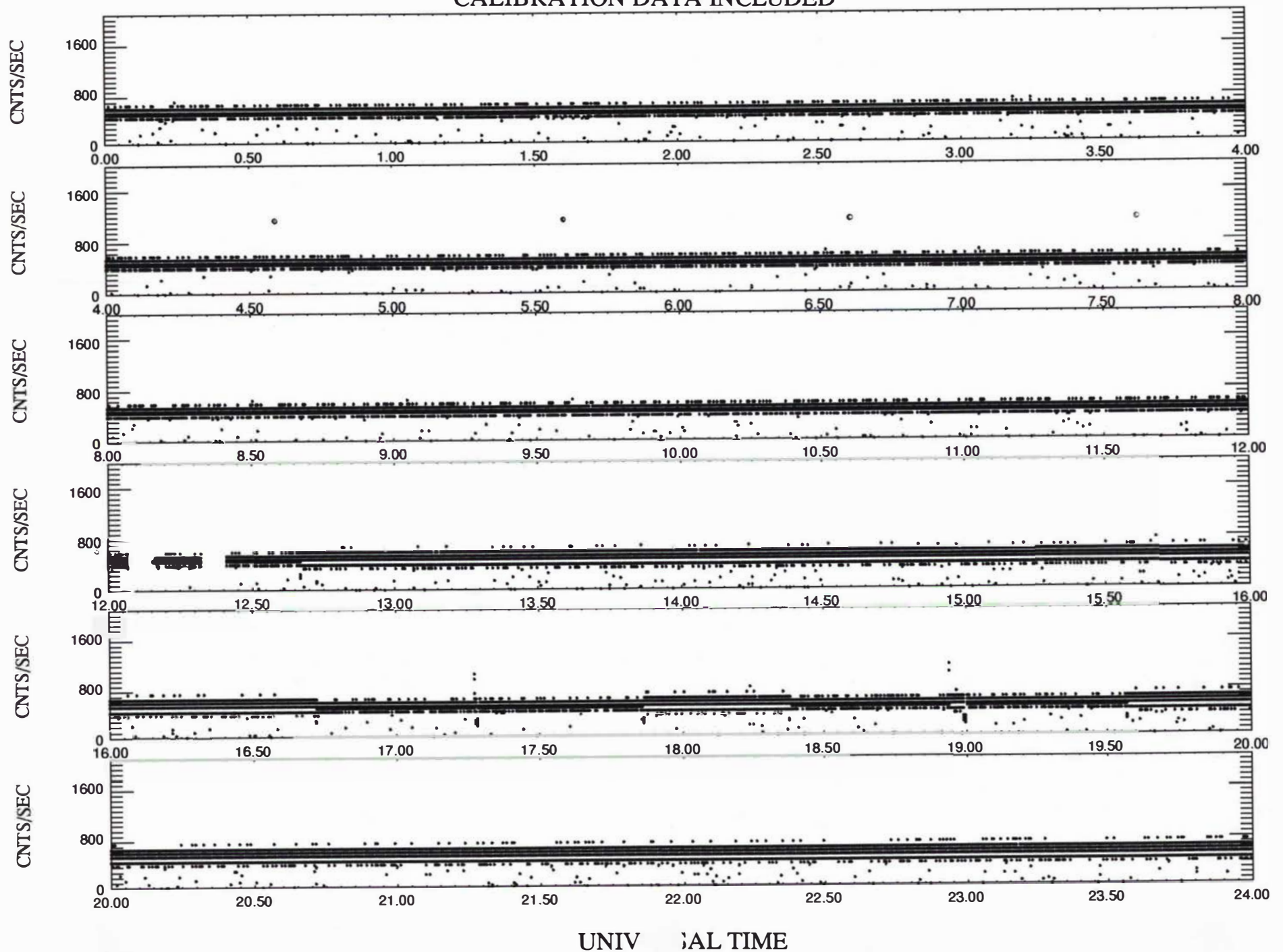
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

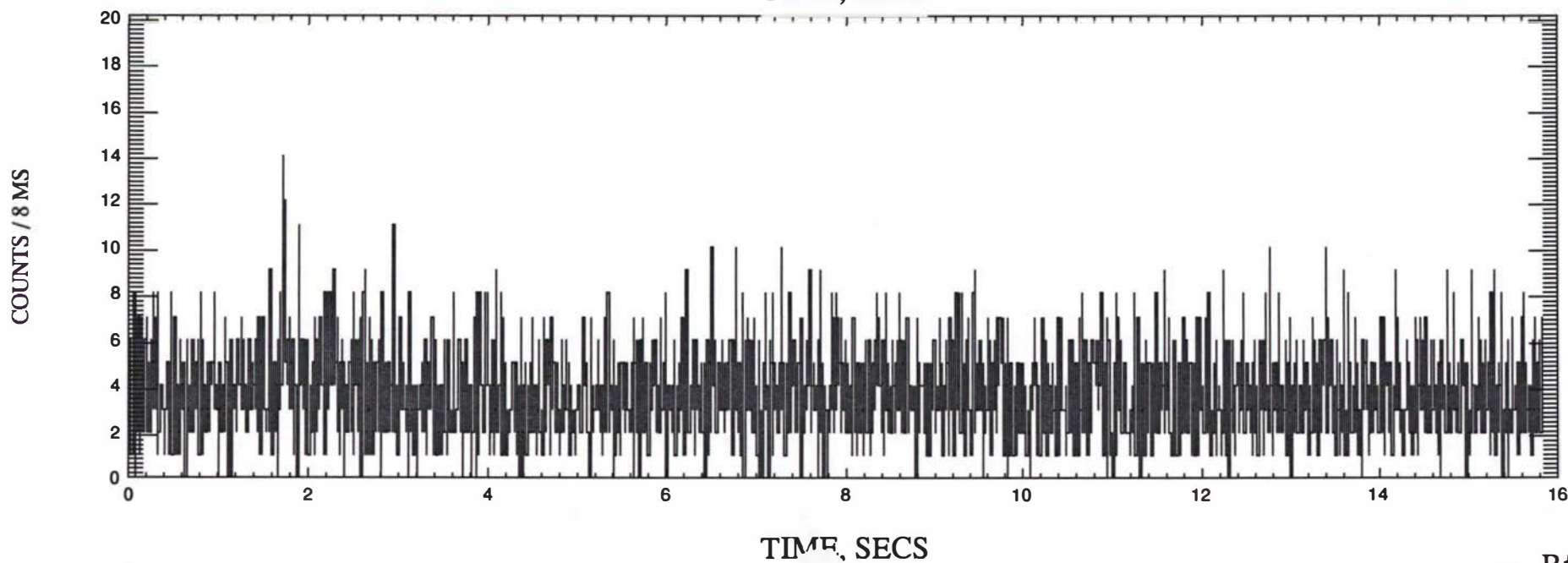
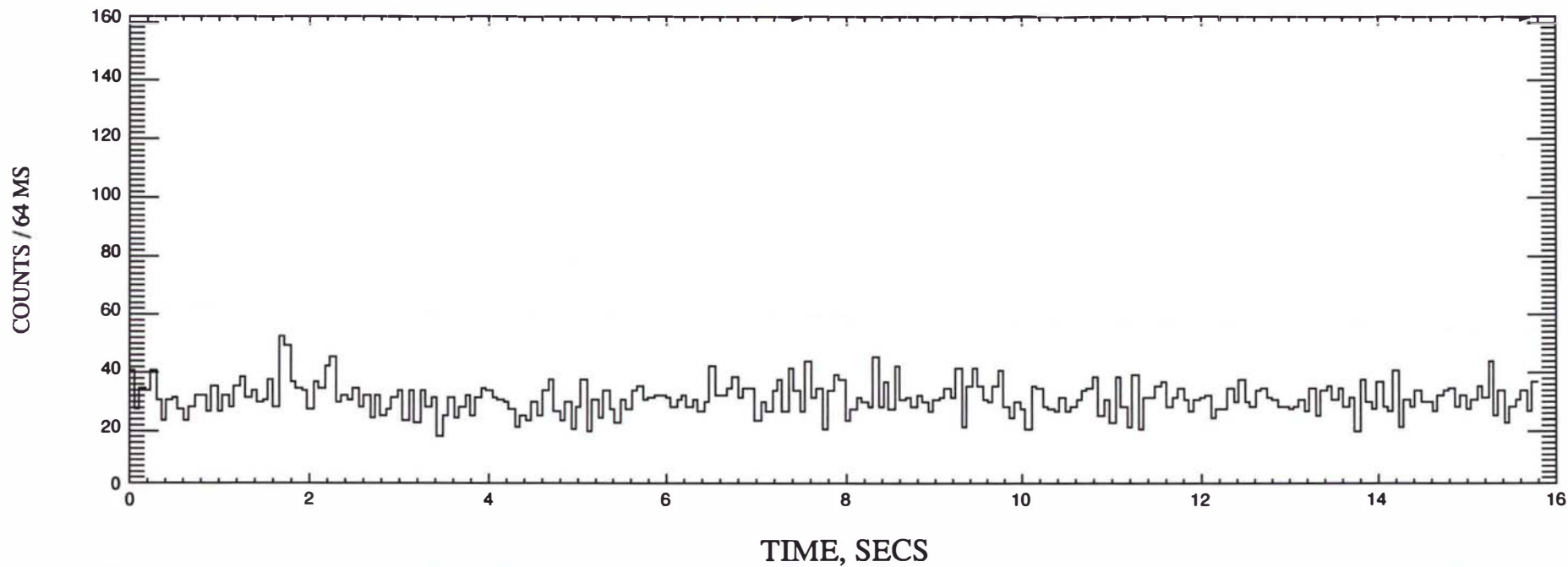
BURST NUMBER 10, 11



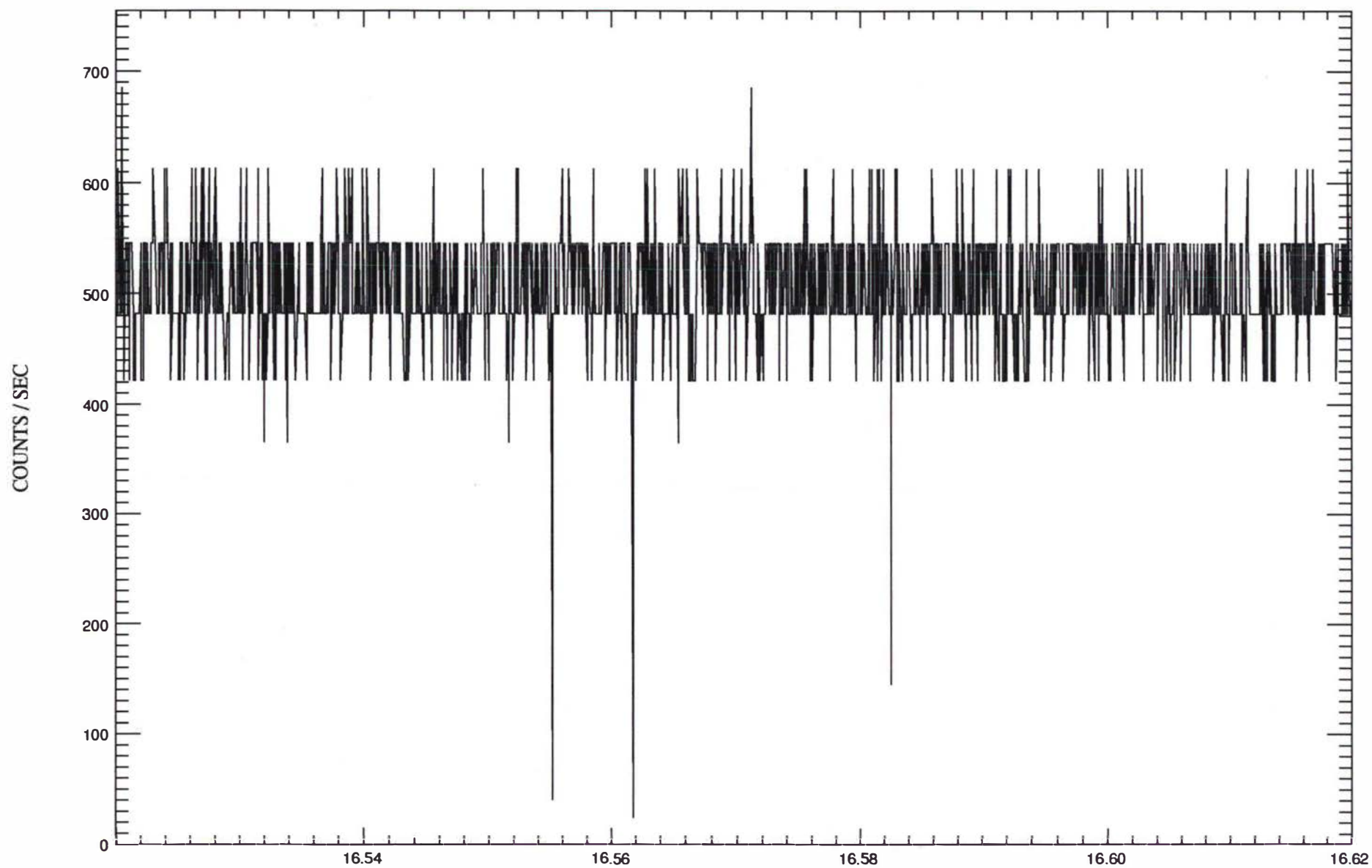
CALIBRATION DATA INCLUDED



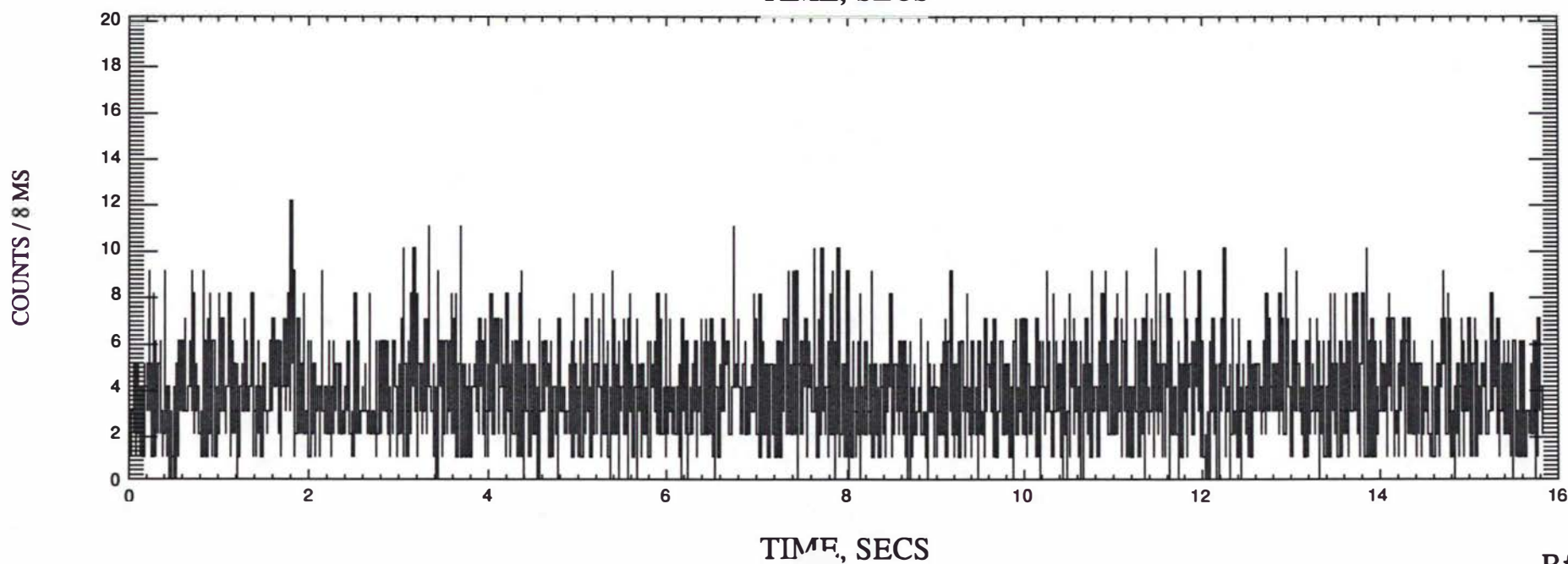
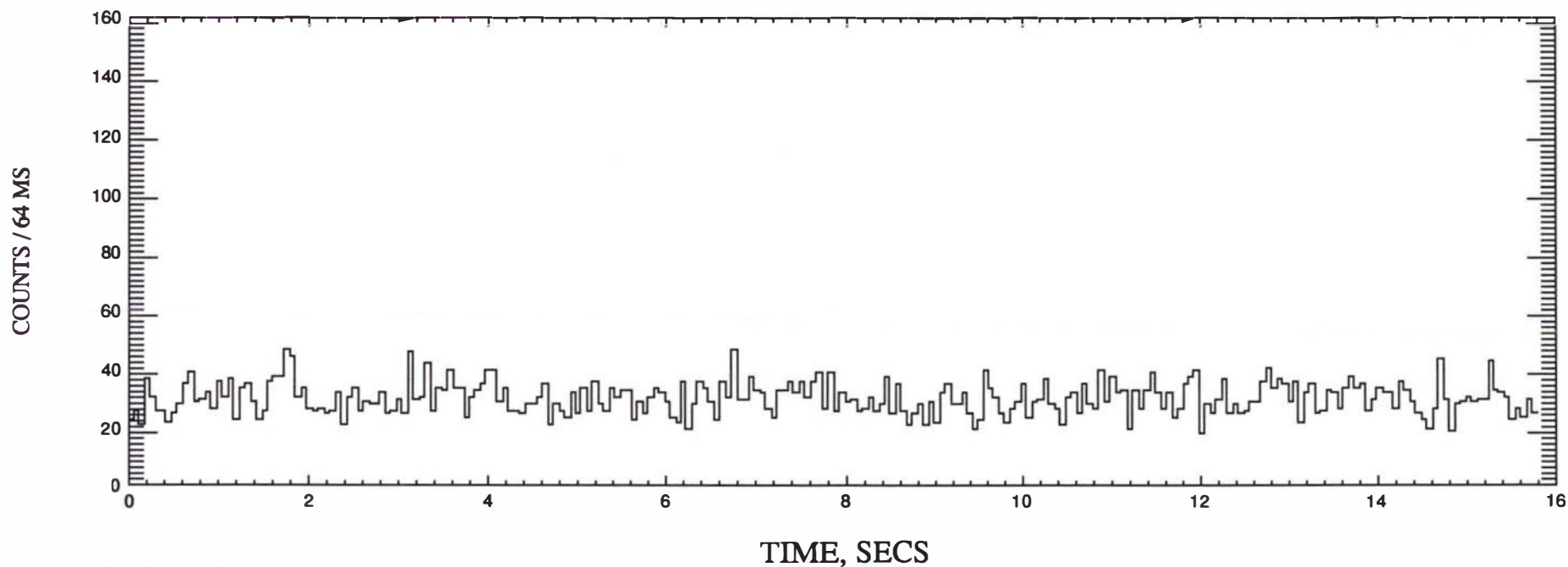
Burst Counter 10 at UT=16.571255391439 h=59656.519 s 16:34:16.519



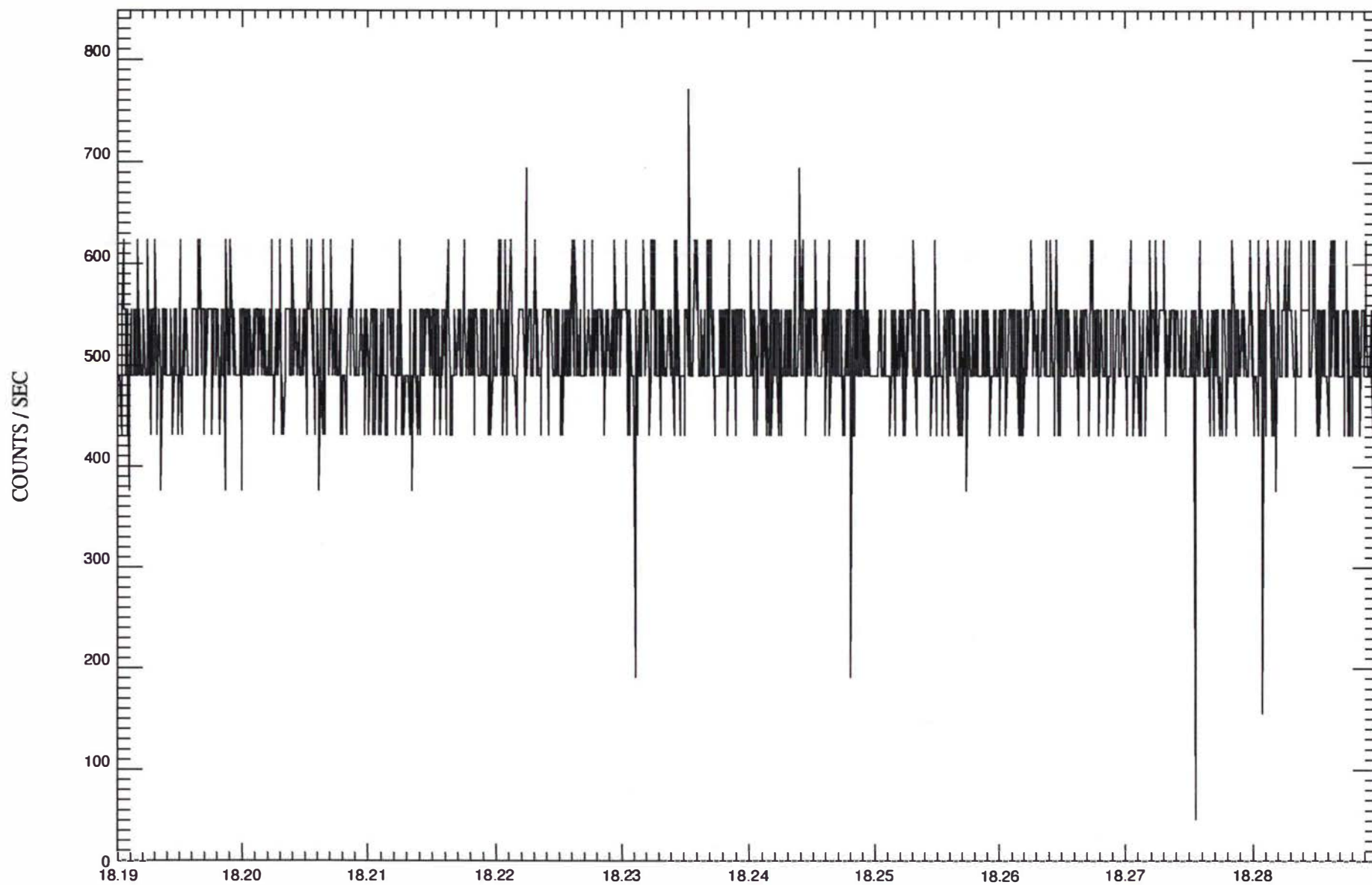
CALIBRATION DATA INCLUDED

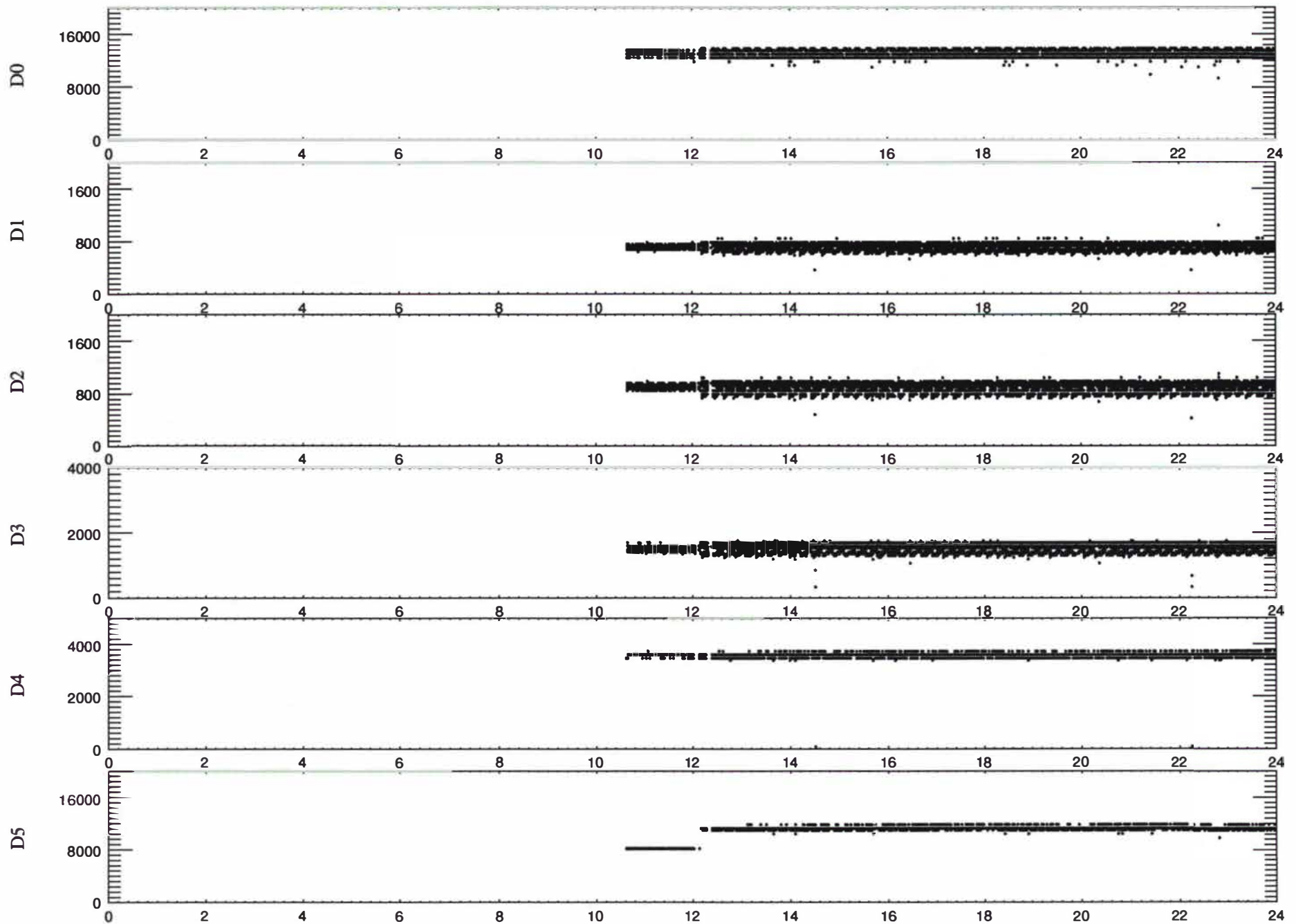


Burst Counter 11 at UT=18.235516615974 h=65647.860 s 18:14:07.860



CALIBRATION DATA INCLUDED





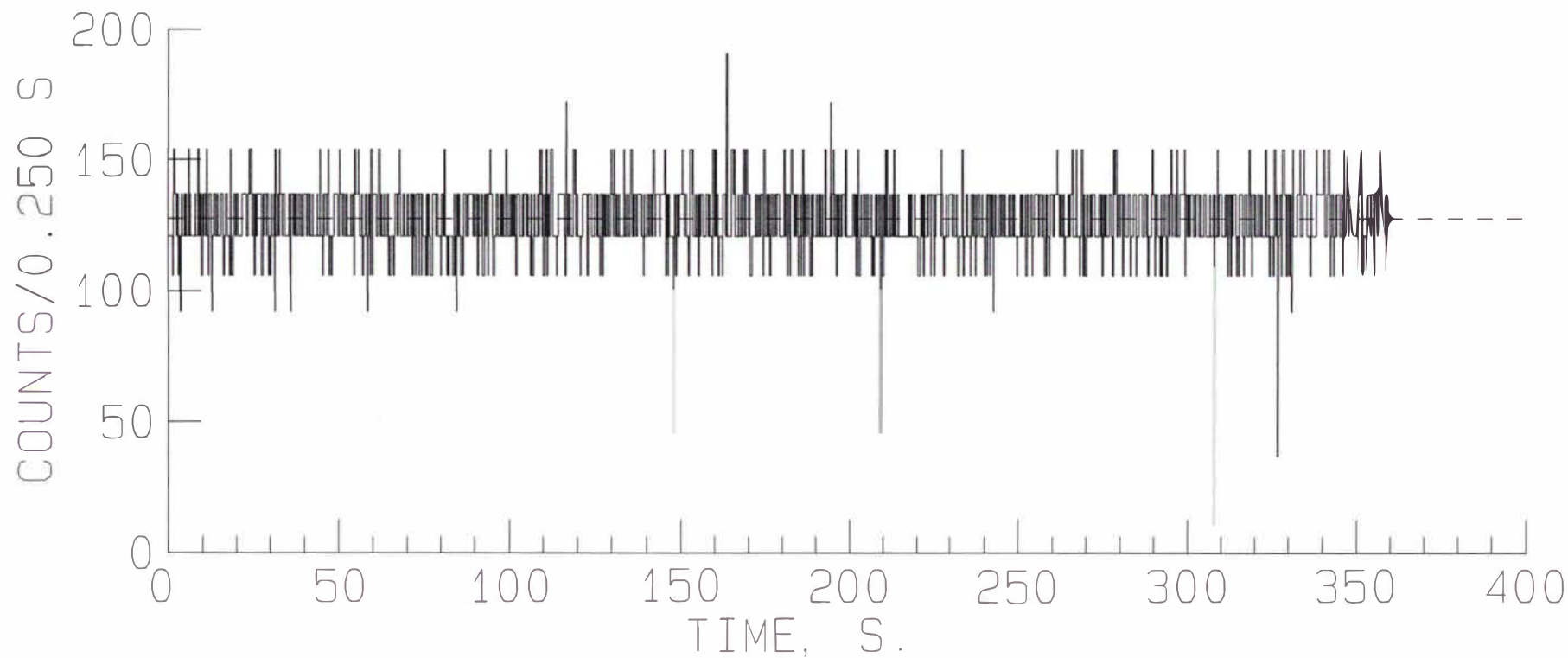
UNIVI AL TIME

HOS trigger

9/11/93

ULYSSES RT
8/11/93 65484.117 s
0- 0 keV

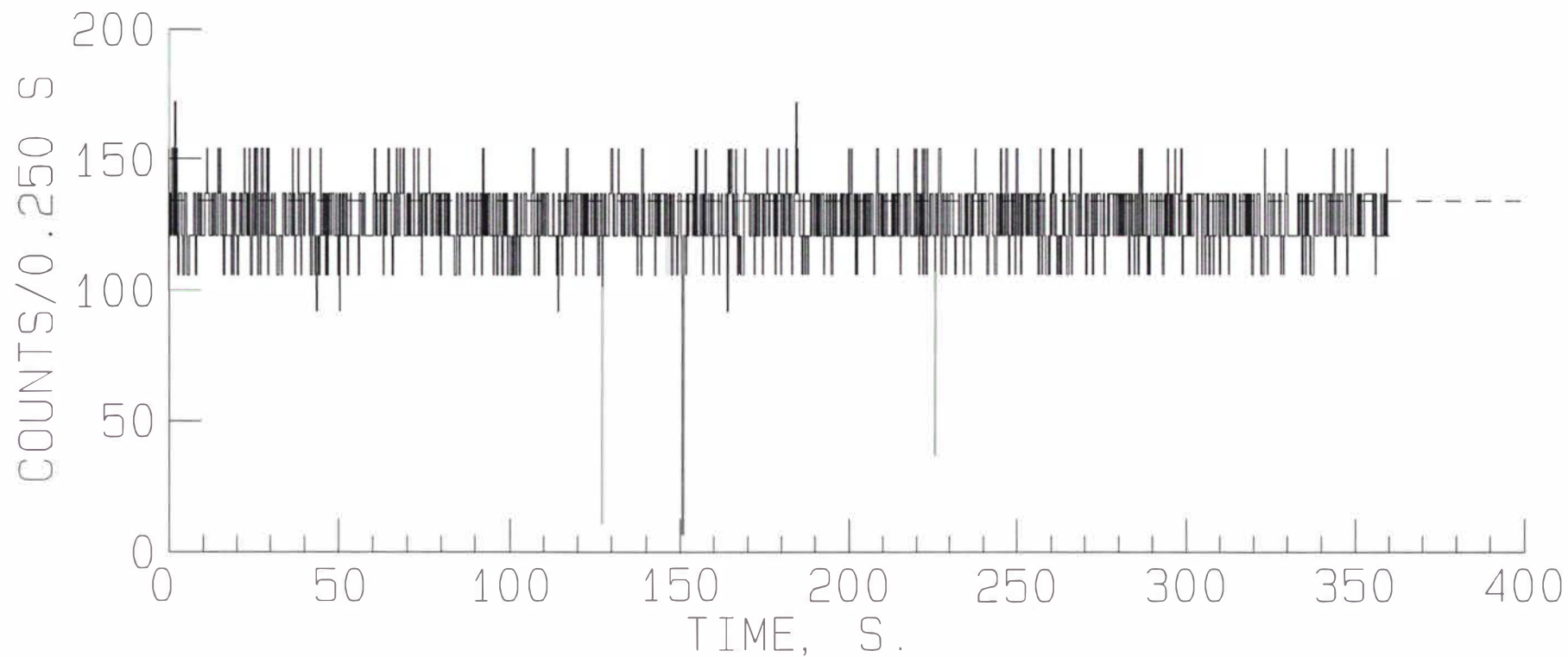
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



9/11/93

ULYSSES RT
8/11/93 59472.023 s
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From MALLOZZI@ssl.msfc.nasa.gov Fri Nov 12 09:22:48 1993
Date: Fri, 12 Nov 1993 11:24:32 -0600 (CST)
From: MALLOZZI@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2621
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2621
EVENT OF 1993 NOV 9 DAY OF YEAR=313
EVENT CROSSING TIME AT BATSE : 56218. S. OR 15:36:58.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 109.000 37.000
BATSE PEAK COUNTING RATE: 800 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 9/11/ 93 IS:
RA= 164.794 DEC= -28.684 DIST= 4.549 AU
BATSE-ULYSSES DISTANCE = 680544920. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 96.03 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -238.37 SECS.
CROSSING TIME AT ULYSSES IS 55980. S. OR 15:32:59 +/- 438.32 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 9/11/ 93 IS:
RA= 237.565 DEC= -20.478 DIST= 2.451 AU
MARS-BATSE DISTANCE = 366682272. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 47.39 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 828.00 SECS.
CROSSING TIME AT MARS IS 57046. S. OR 15:50:45 +/- 168.87 SECONDS

No

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2621	931109	9300	56218	800	109	+37

BATSE BURST TRIGGER

NO.: 2621

TIME: TJD=9300 SECONDS=56218

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=70.0 AZIMUTH=170.2 ERROR= DEGREES

COMMENTS:

SHORT, WEAK BURST OF DURATION LESS THAN 1 SECOND.
LITTLE DATA AVAILABLE FOR THE EVENT.

BATSE BURST # 2621

12/11/93

ULYSSES RT

9/11/93 55548.035 s

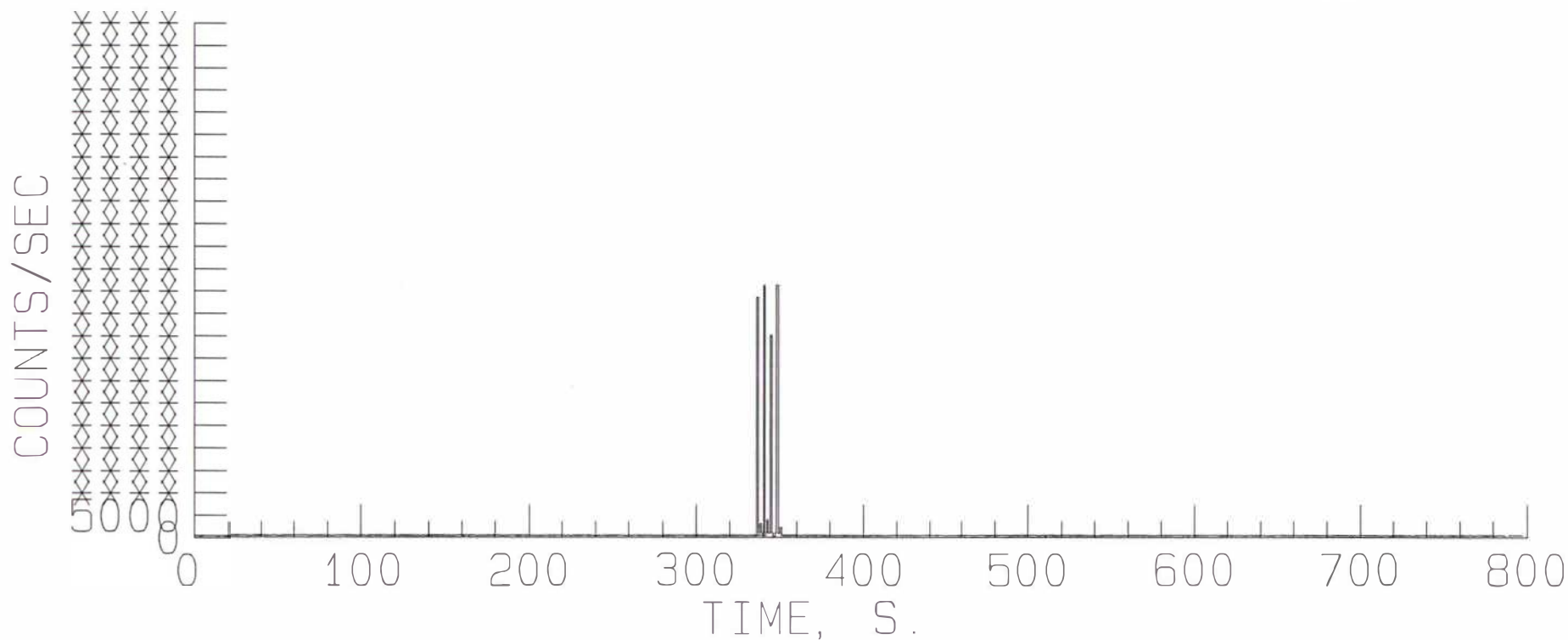
0.500 S INTERVALS REGROUPED BY 2

0- 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS

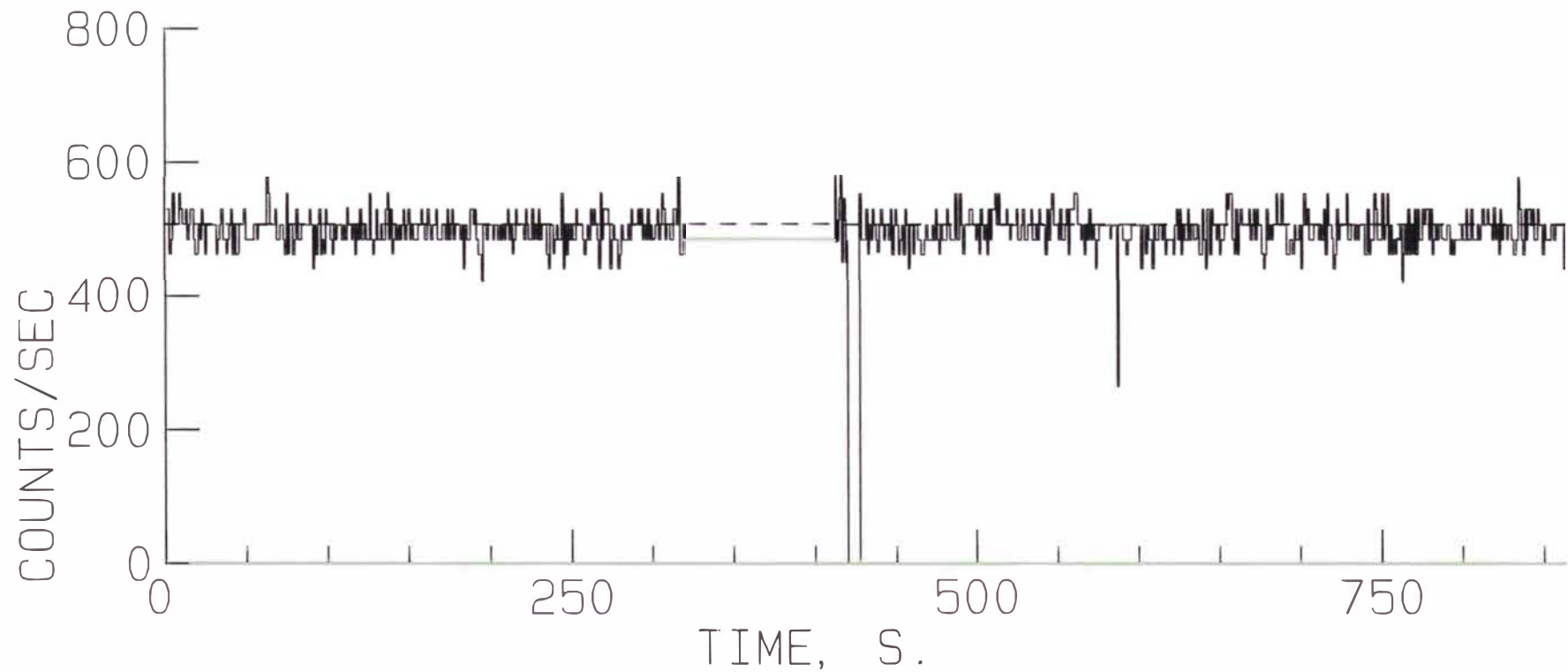
||||



ULYSSES RT
9/11/93 55548.035 s
INTERVALS REGROUPED BY 2
0- 0 keV

13/11/93

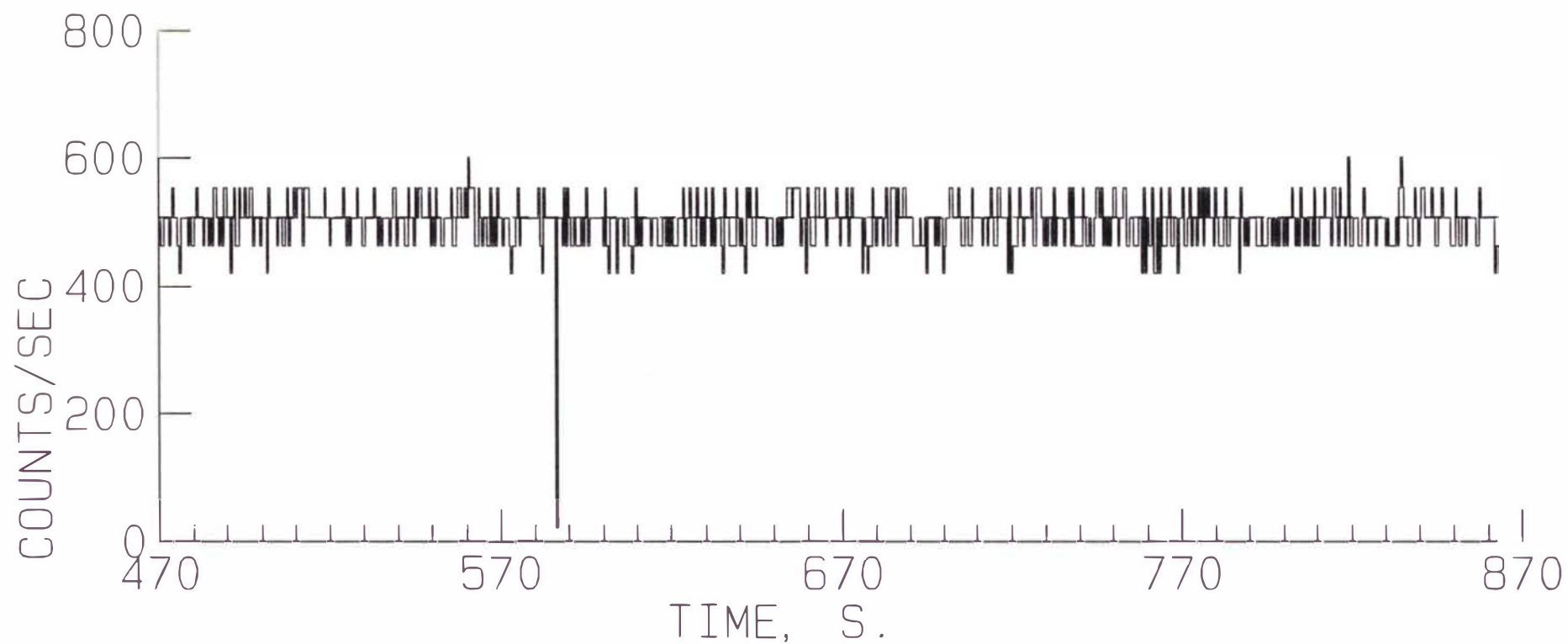
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



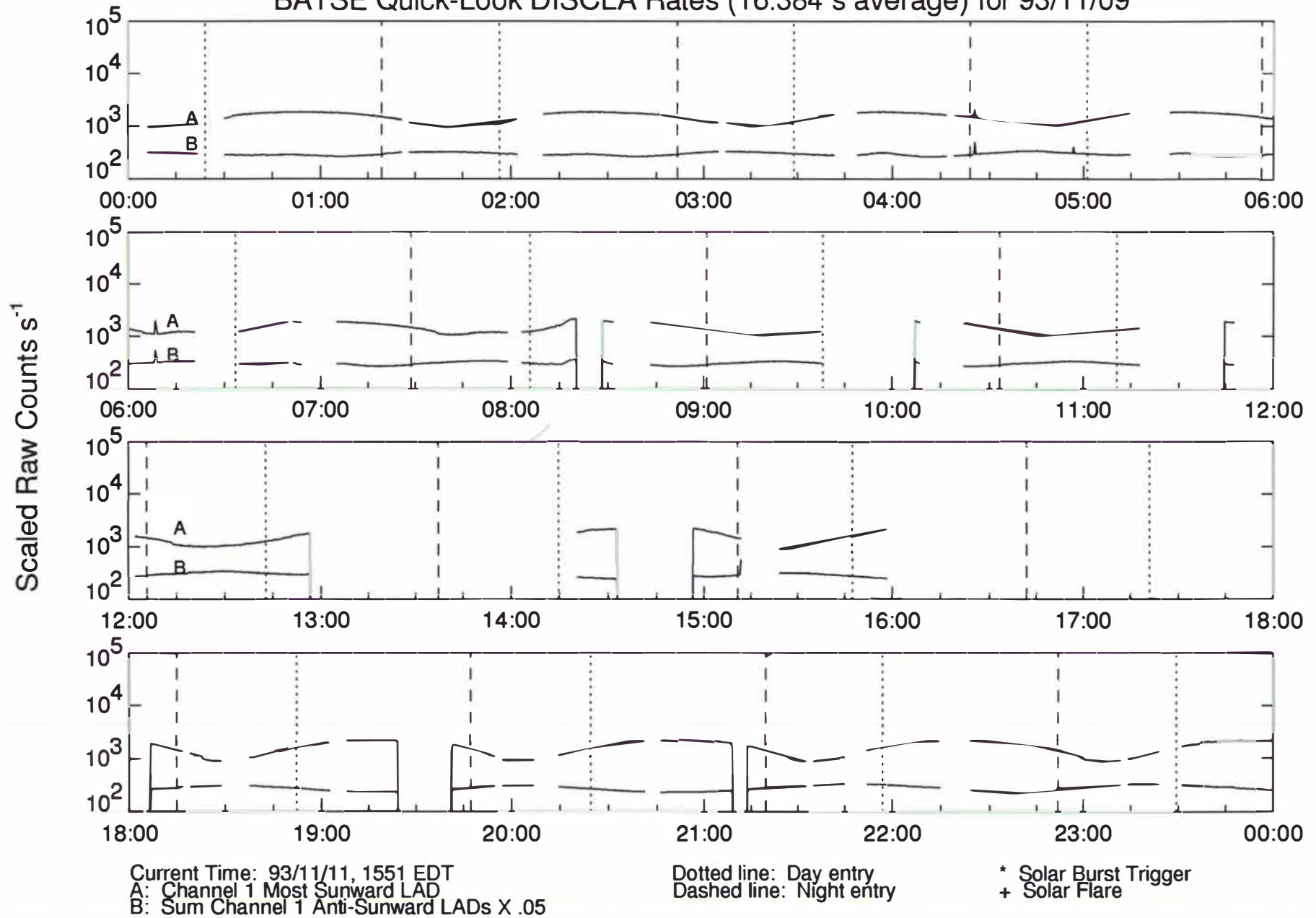
ULYSSES RT
9/11/93 55548.035 s
INTERVALS REGROUPED BY 2
0- 0 keV

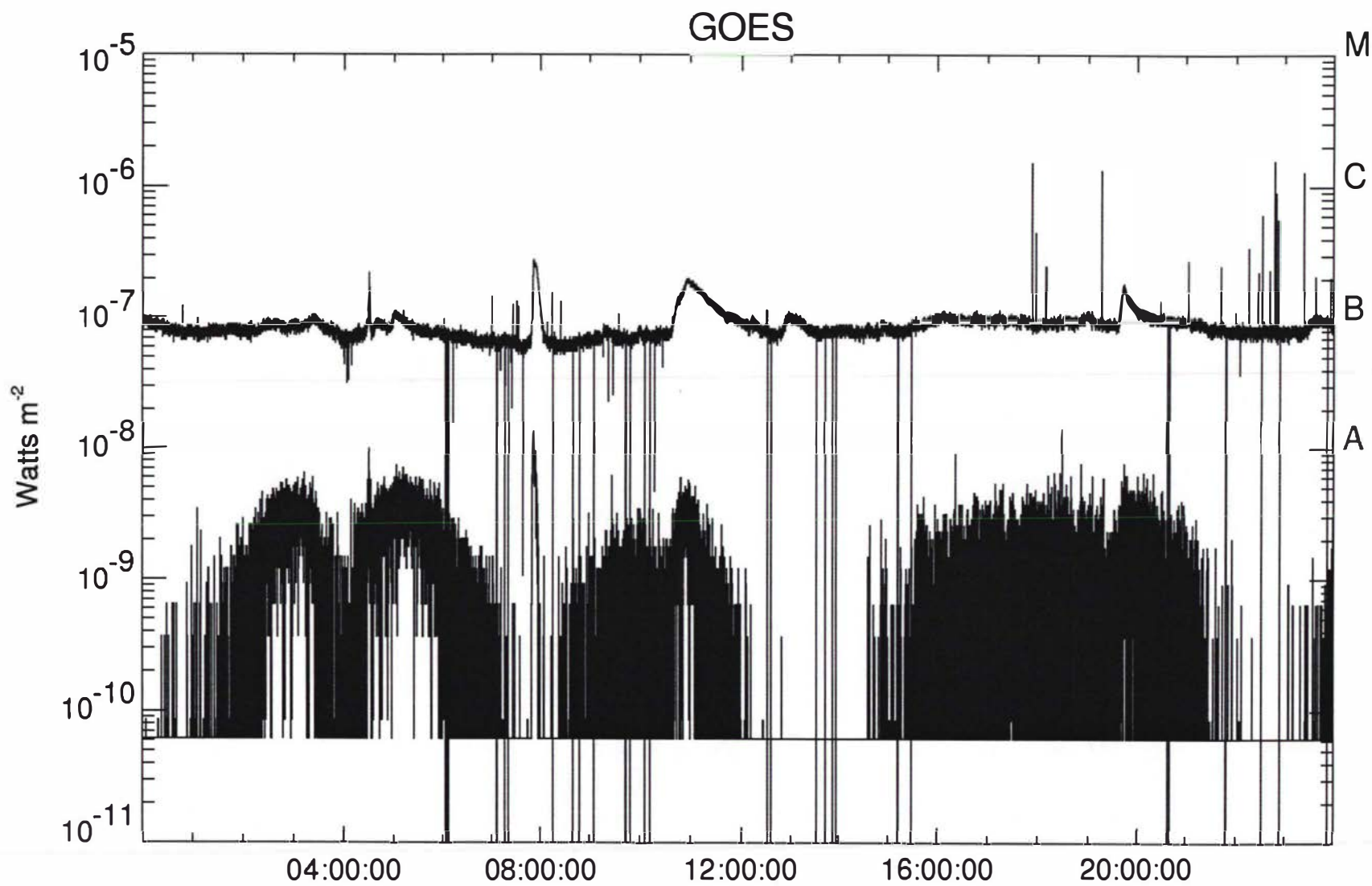
13/11/93

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/09





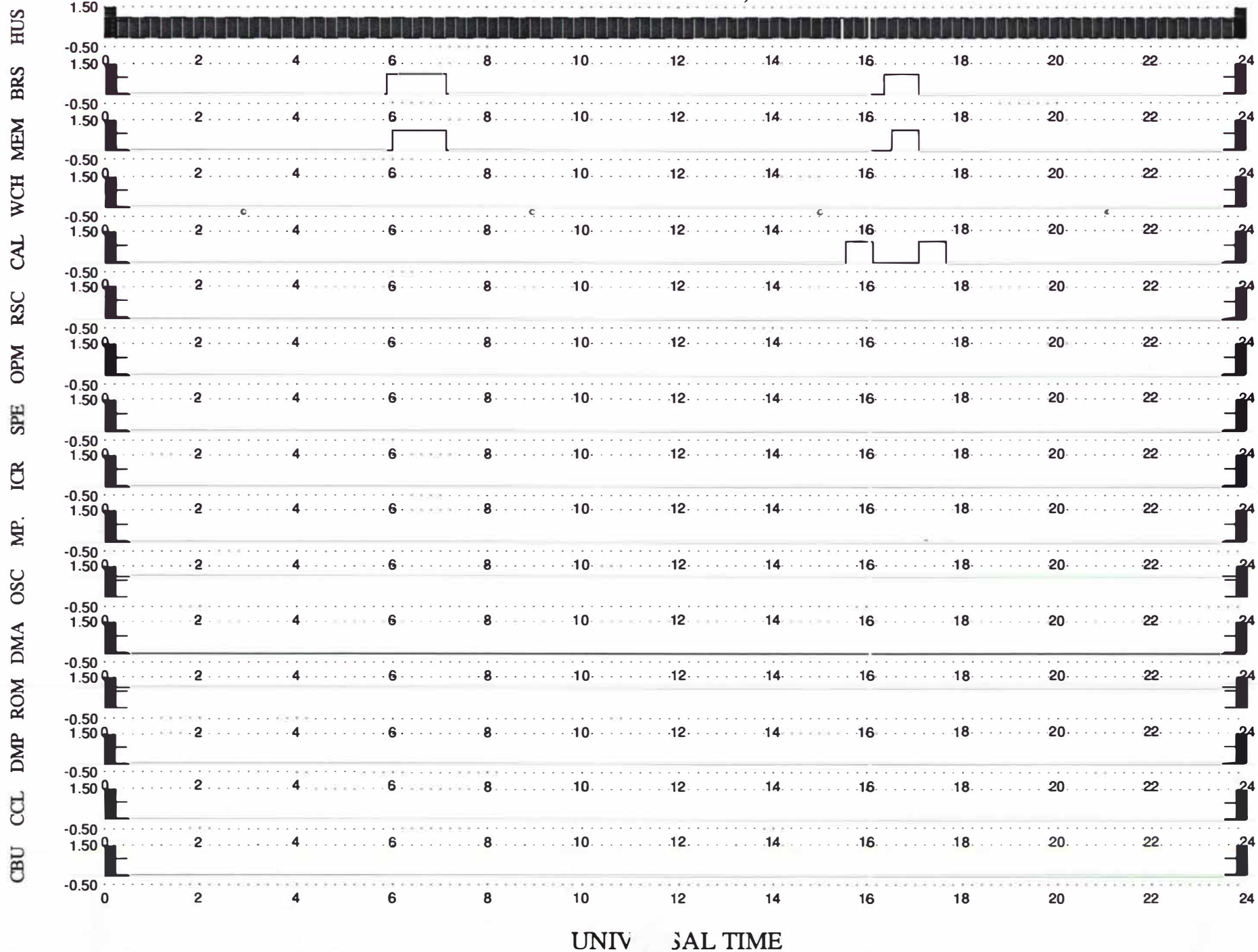
Data Start: 93/11/09, 0000:00

Plot created: 93/11/11, 1546

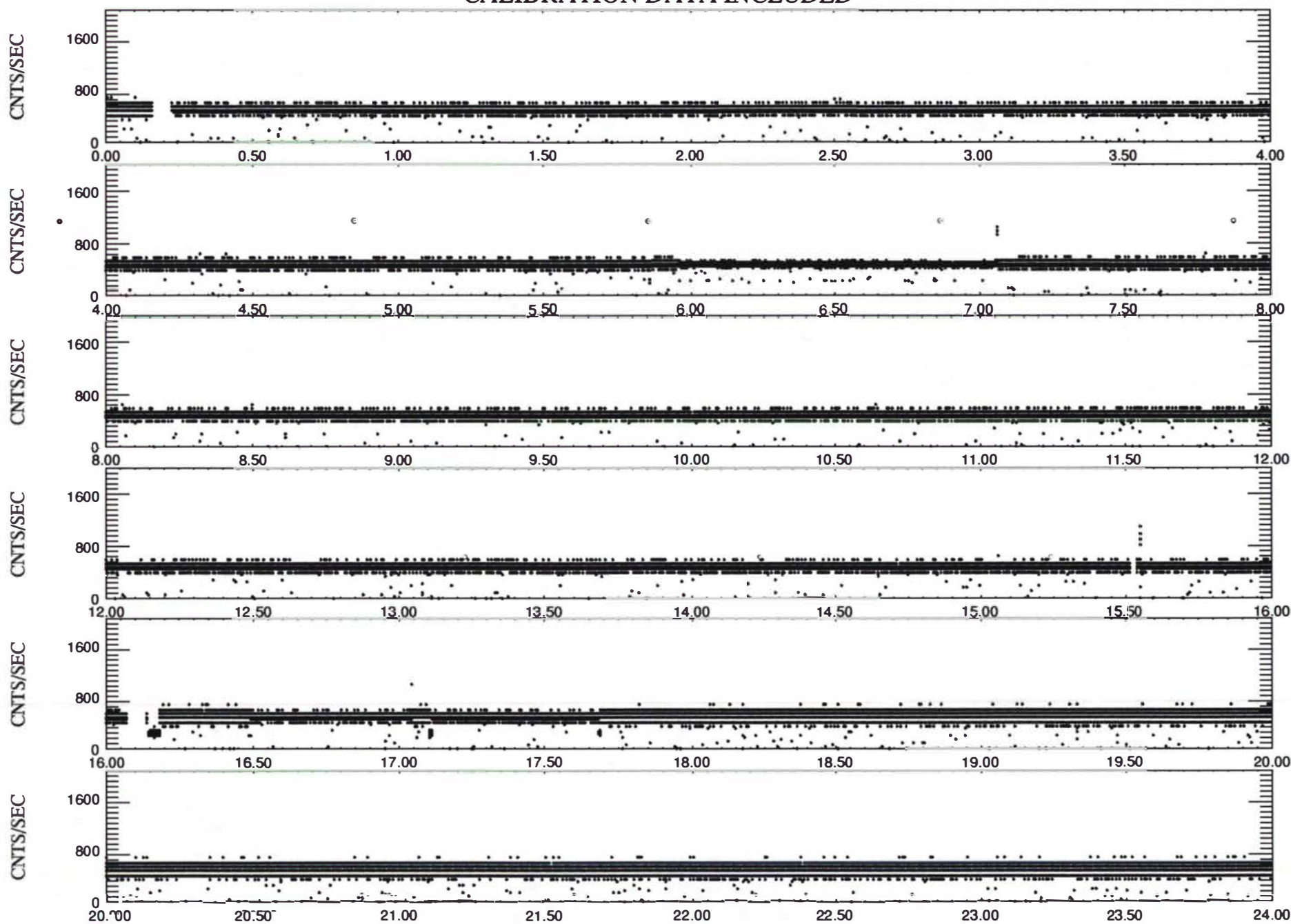
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BURST NUMBER 12, 13

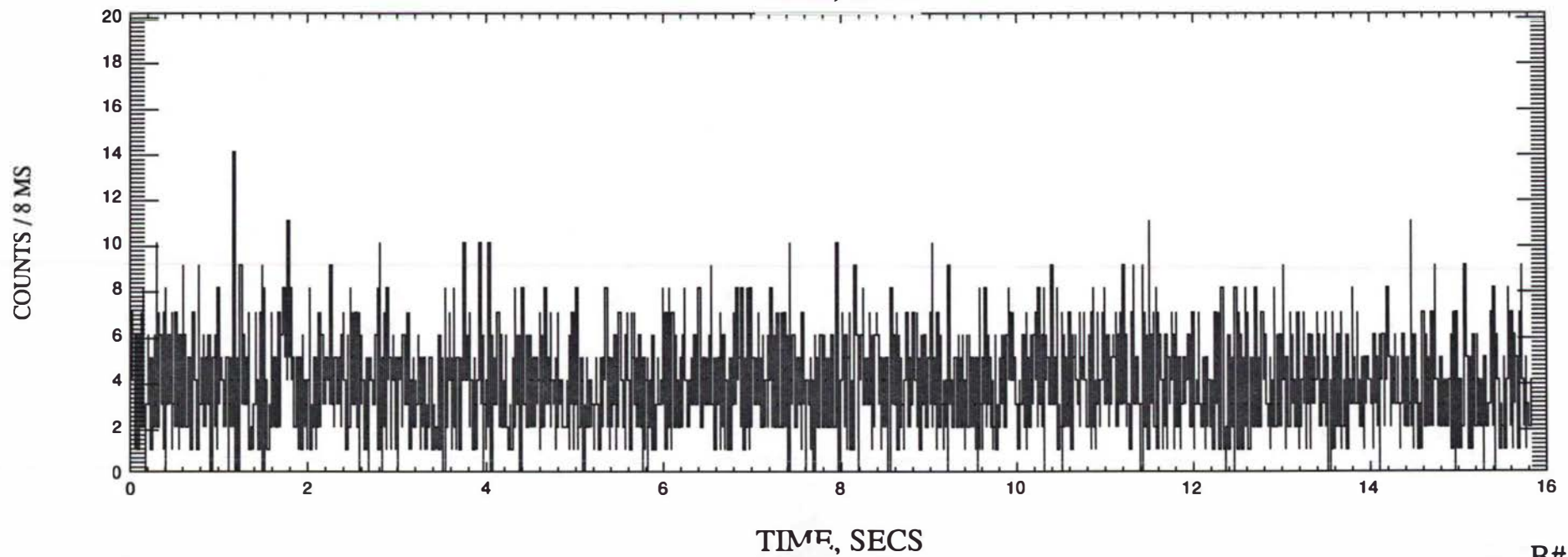
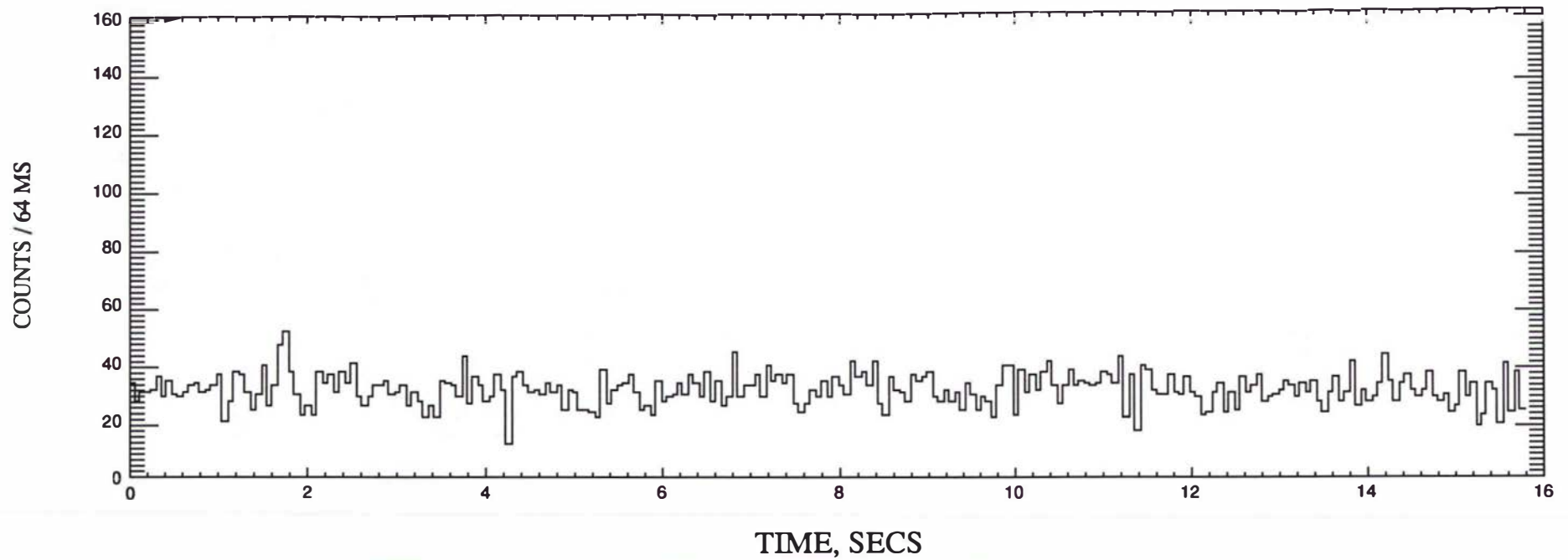


CALIBRATION DATA INCLUDED

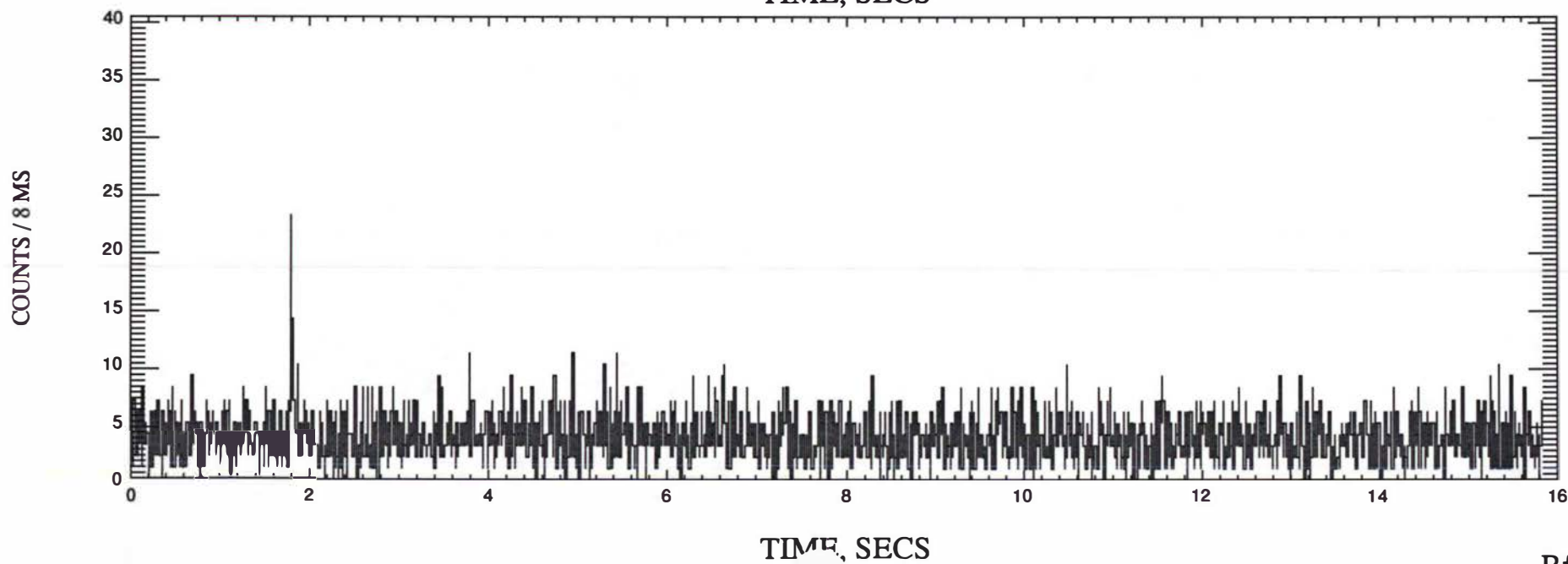
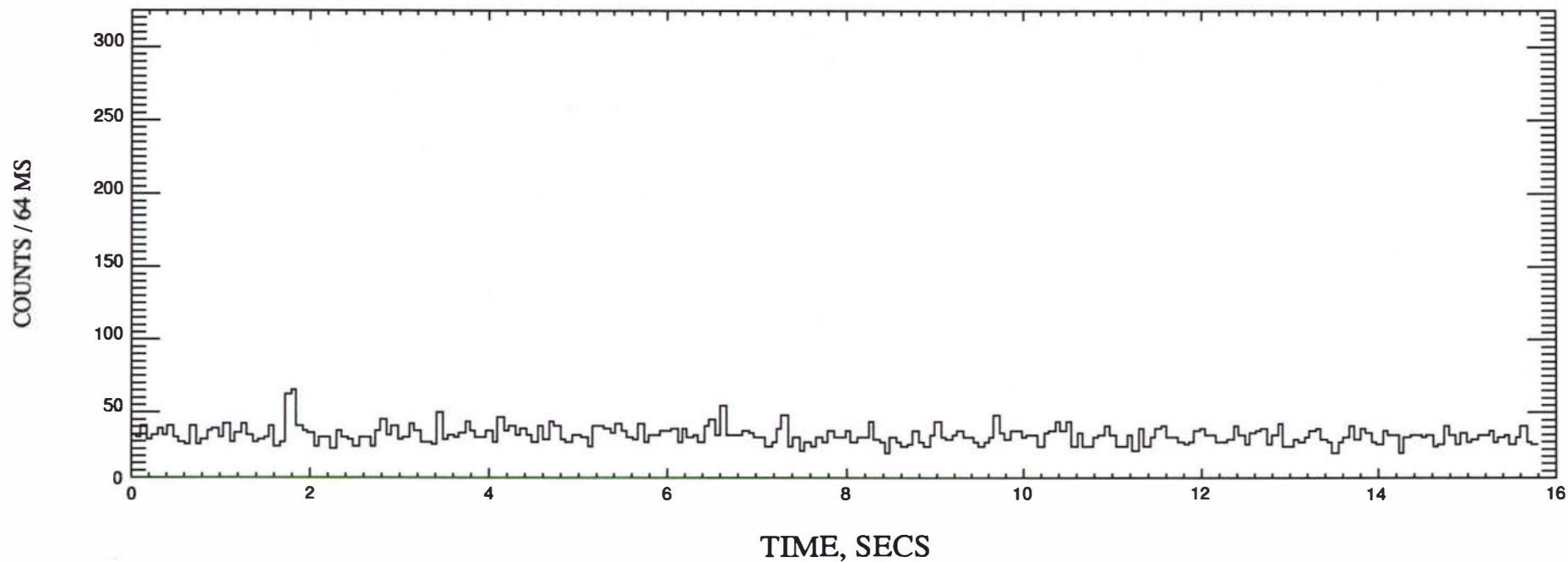


UNIV TIME

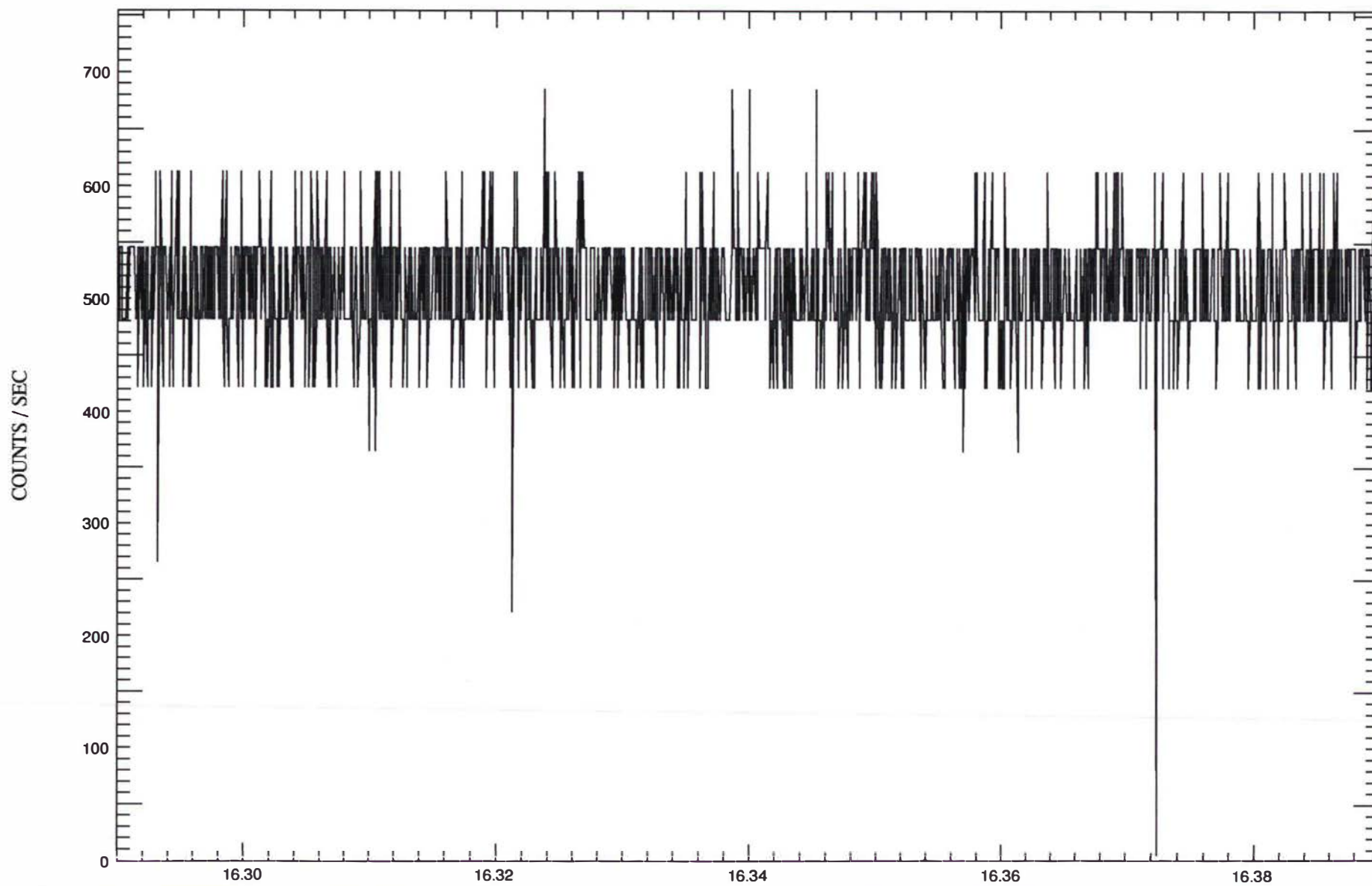
Burst Counter 12 at UT= 5.800415441725 h=20881.496 s 05:48:01.496



Burst Counter 13 at UT=16.340222498576 h=58824.801 s 16:20:24.801



CALIBRATION DATA INCLUDED

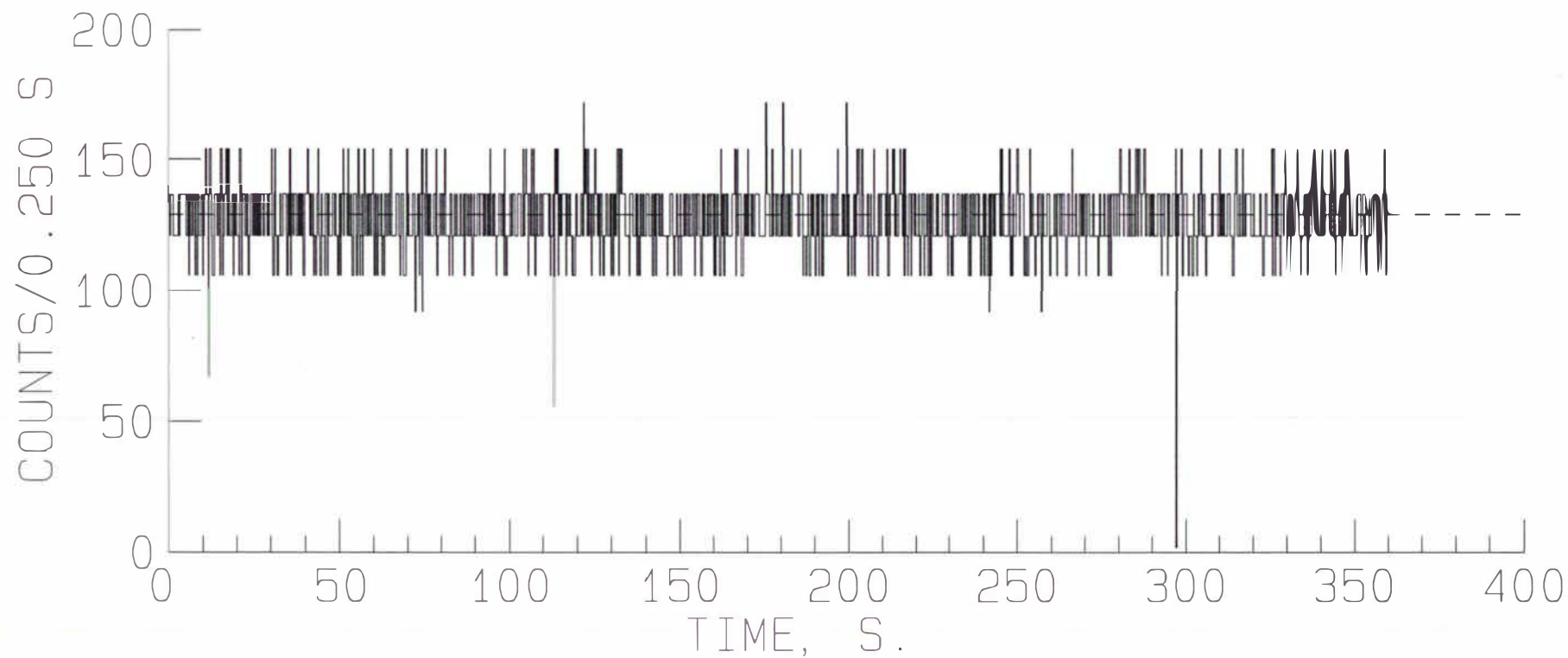


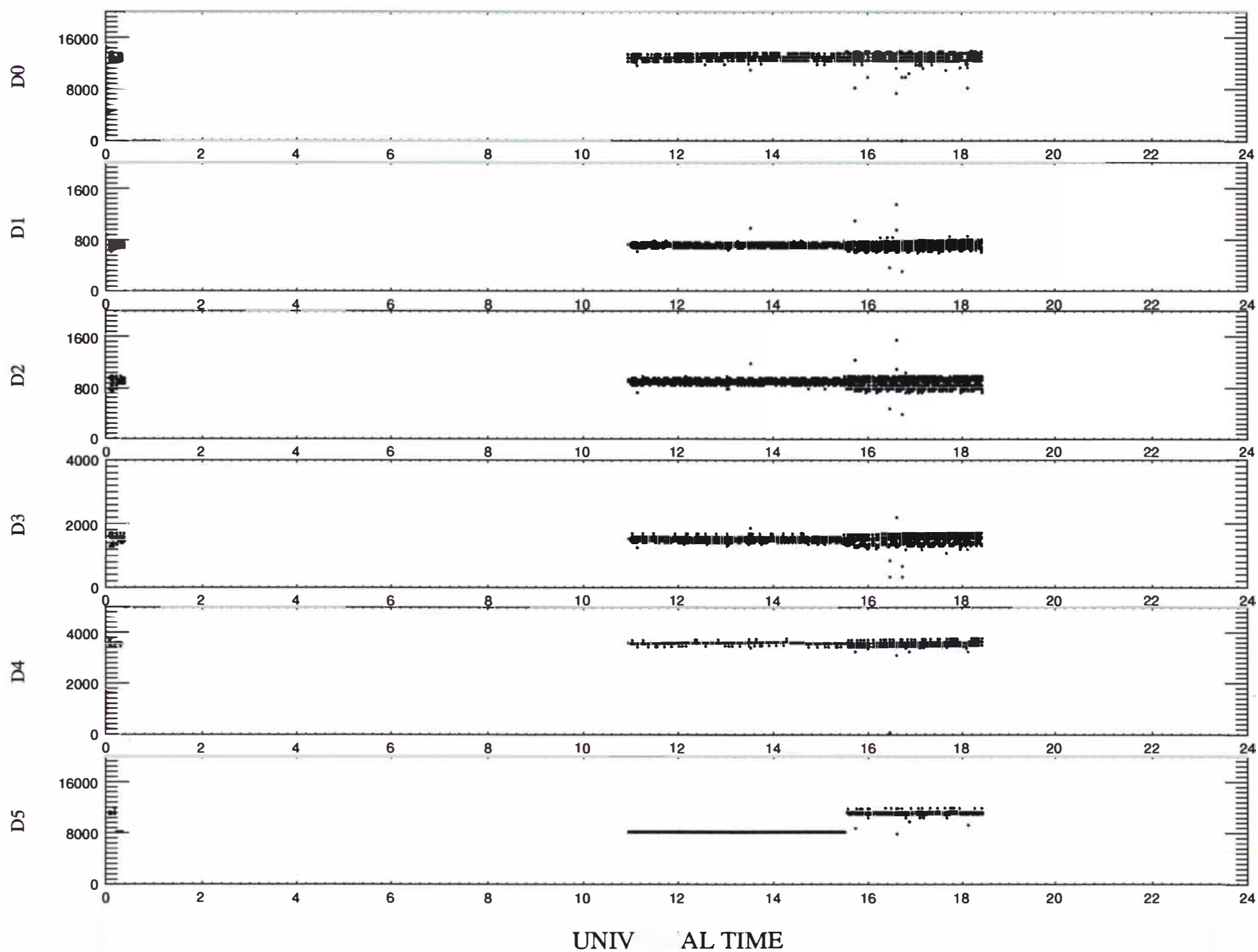
HUS trigger

11 / 11 / 93

ULYSSES RT
9/11/93 58644.090 s
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





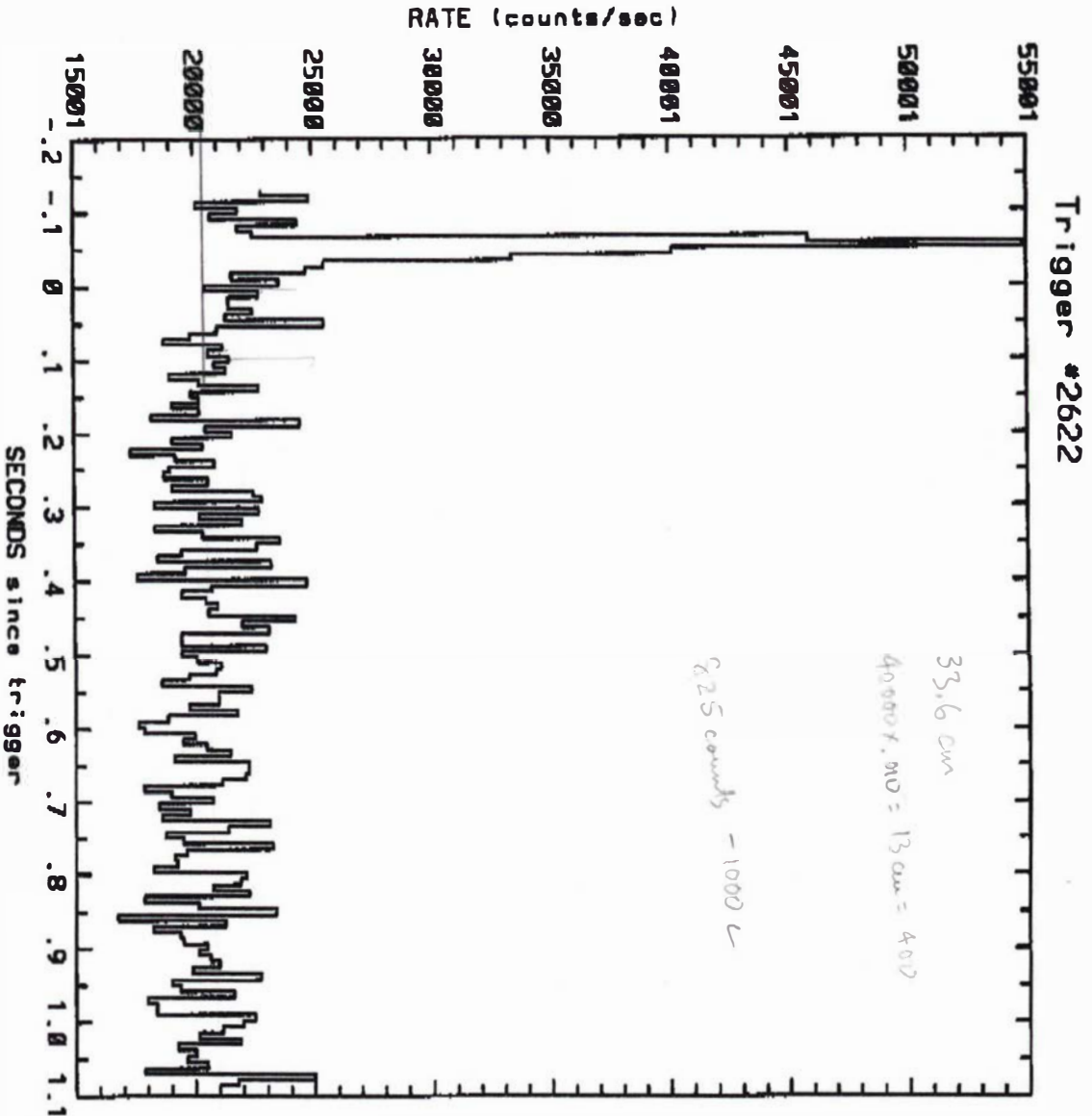
BATSEARCH PROGRAM

Not in 3B cat

BATSE BURST # *SGR*
EVENT OF 1993 NOV 10 DAY OF YEAR=314
EVENT CROSSING TIME AT BATSE : 38943. S. OR 10:49:03.0
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 272.000 -20.000
BATSE PEAK COUNTING RATE: 0 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 10/11/ 93 IS:
RA= 164.877 DEC= -28.861 DIST= 4.537 AU
BATSE-ULYSSES DISTANCE = 678684436. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 85.57 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 174.80 SECS.
CROSSING TIME AT ULYSSES IS 39118. S. OR 10:51:57 +/- 444.52 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 10/11/ 93 IS:
RA= 238.311 DEC= -20.638 DIST= 2.451 AU
MARS-BATSE DISTANCE = 366730800. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=148.46 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1042.55 SECS.
CROSSING TIME AT MARS IS 37900. S. OR 10:31:40 +/- 95.27 SECONDS



12-MAY-1993 09:14:42

Created by MDPS BD
 (Burst Display)
 Version 2.20

Trigger # 2622

Trigger Time:
 9301 / 38043.046

Burst Data Type:
 TTE

Multiple Events
 Ignored. 67

Deadtime
 Corrected. N
 Background Data
 Type: DISCLA
 Minimum Integ. Time:
 8.000000 seconds
 Detectors (7..0):
 0000111
 Discriminators:
 (1..4)
 Quality Mask:
 BDSP1

From root Tue Nov 9 11:05 1993
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA00995; Tue, 9 Nov 93 11:05:35
Received: from SSL.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (4.1/1.30.1)
id AA01635; Tue, 9 Nov 93 10:09:38 PST
Date: Tue, 9 Nov 1993 12:11:08 -0600 (CST)
From: Chryssa Kouveliotou NASA/MSFC (205) 544-7711 <"BATSE::KOUVELIOTOU"@ssl.msfc.nasa.gov>
To: khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: SSL::SMTP%"khurley@space6.ssl.berkeley.edu"
Message-Id: <931109121108.2040107f@ssl.msfc.nasa.gov>
Subject: sgrs
Status: R

kevin,

I am sorry for this long silence. I have been working my butts off to write a paper for nature to include (hopefully) in the same issue with the asca paper. here are the sgr times (I will ask stayce to send the ephemerides):

9/29/93	34801.626
"	73581.722
"	83732.890
10/5/93	82288.602
10/9/93	80698.074

these are the triggered events. John Horack has some "likely's" I will ask him to end you the times.

seeya

ck

10/11/93 38943.066

From KOUVELIOTOU@ssl.msfc.nasa.gov Tue Nov 16 13:15:56 1993
Date: Tue, 16 Nov 1993 15:13:13 -0600 (CST)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 02622

TIME: TJD=9301 SECONDS=38943

TYPE: SGR SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=098.5 AZIMUTH=007.3 ERROR= DEGREES

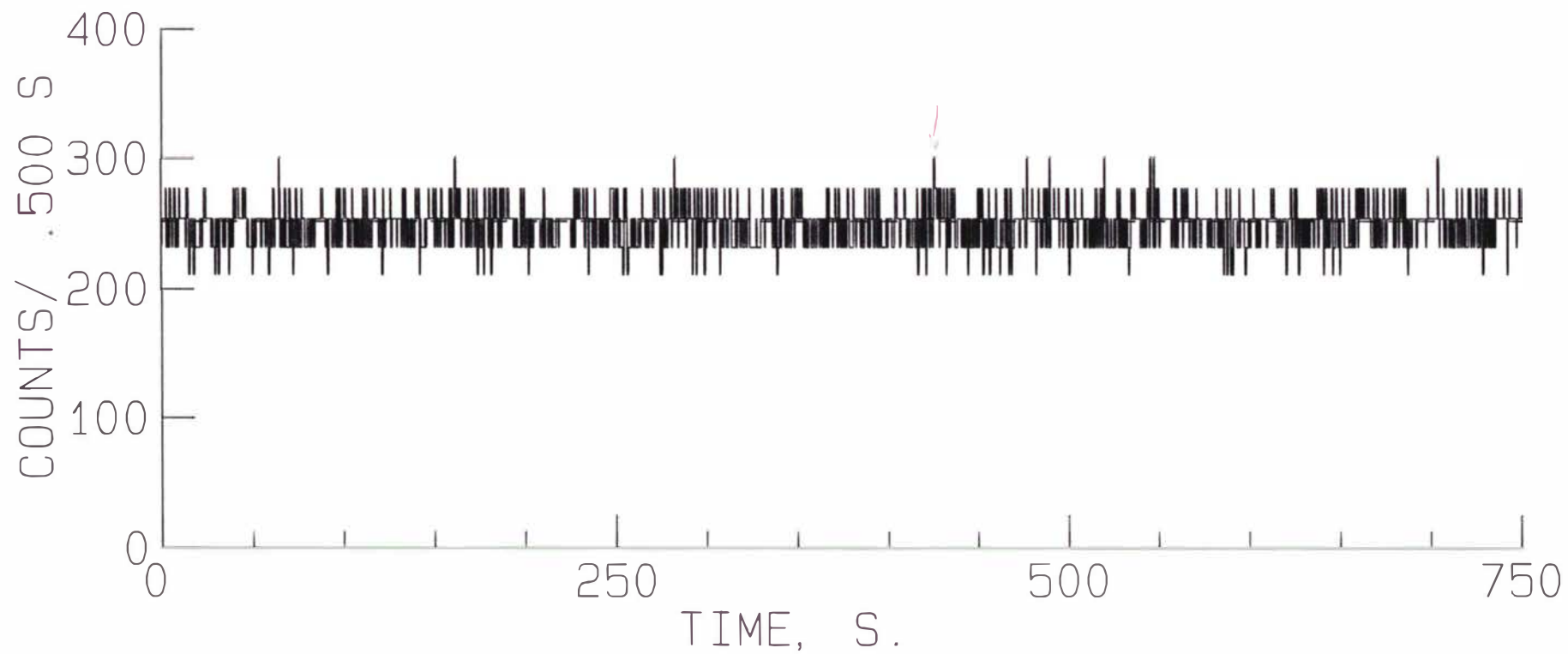
COMMENTS:

EMISSION FROM SGR1806-20. SINGLE, TRIANGULAR PULSE LASTING ~ 50 MSEC.
NOT SEEN ABOVE 100 KEV.

ULYSSES RT
10/11/93 38664.109 s
0- 0 keV

13/11/93

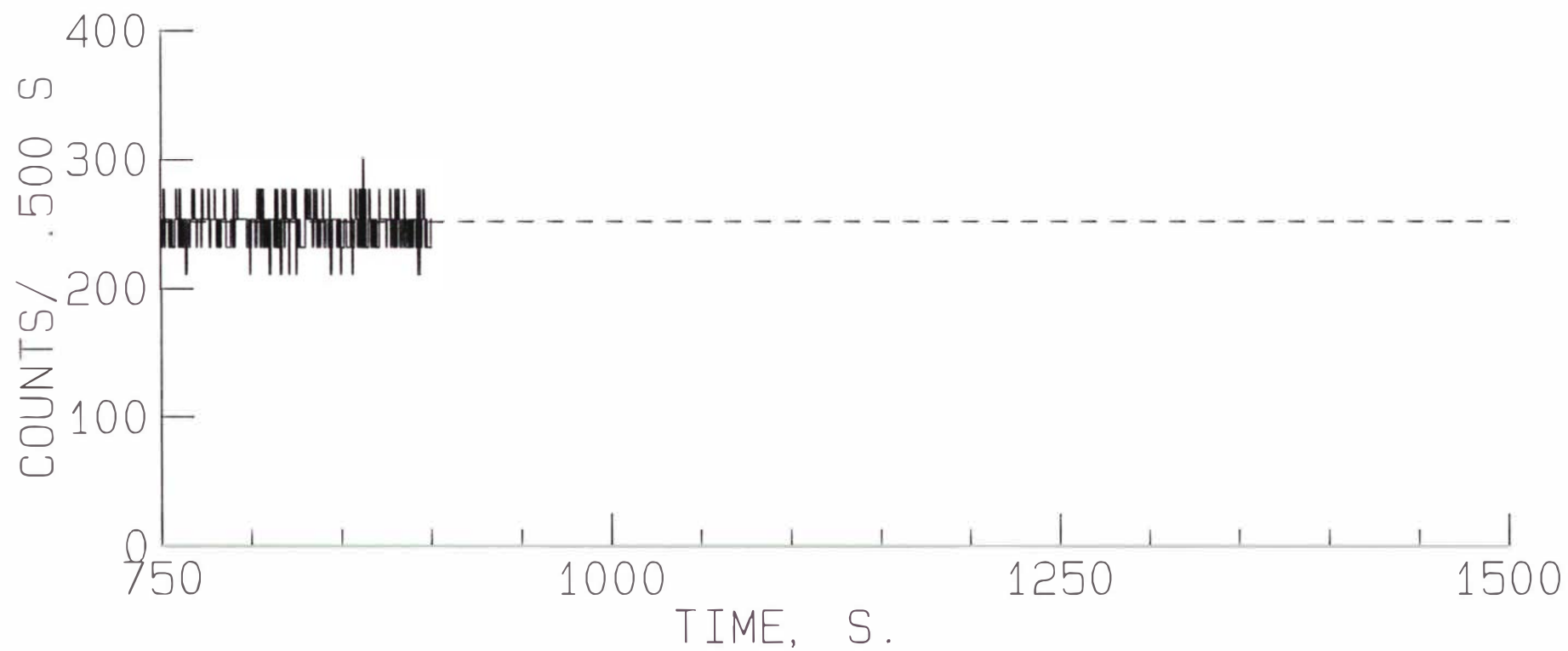
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



ULYSSES RT
10/11/93 38664.109 s
0- 0 keV

13/11/93

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From ZMYEWSKI@ssl.msfc.nasa.gov Fri Nov 12 09:26:39 1993
Date: Fri, 12 Nov 1993 11:28:24 -0600 (CST)
From: ZMYEWSKI@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2623
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2623
EVENT OF 1993 NOV 10 DAY OF YEAR=314
EVENT CROSSING TIME AT BATSE : 62043. S. OR 17:14:03.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 216.000 -22.000
BATSE PEAK COUNTING RATE: 9500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 10/11/ 93 IS:
RA= 164.904 DEC= -28.921 DIST= 4.532 AU
BATSE-ULYSSES DISTANCE = 678060328. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=133.70 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1562.50 SECS.
CROSSING TIME AT ULYSSES IS 60481. S. OR 16:48:00 +/- 310.18 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 10/11/ 93 IS:
RA= 238.312 DEC= -20.638 DIST= 2.451 AU
MARS-BATSE DISTANCE = 366730272. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=159.19 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1143.47 SECS.
CROSSING TIME AT MARS IS 60900. S. OR 16:54:59 +/- 58.09 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2623	931110	9301	62043	9500	216	-22

BATSE BURST TRIGGER

NO.: 2623

TIME: TJD=9301 SECONDS=62043

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=46.2 AZIMUTH=338.0 ERROR= DEGREES

COMMENTS:

GRB LASTING APPROX. 4 SECONDS. LOCATION IS CLOSE TO SUN BUT NO EVENT
SEEN BY GOES. WEAKLY VISIBLE ABOVE 300KEV.

BATSE BURST #2623

12/11/93

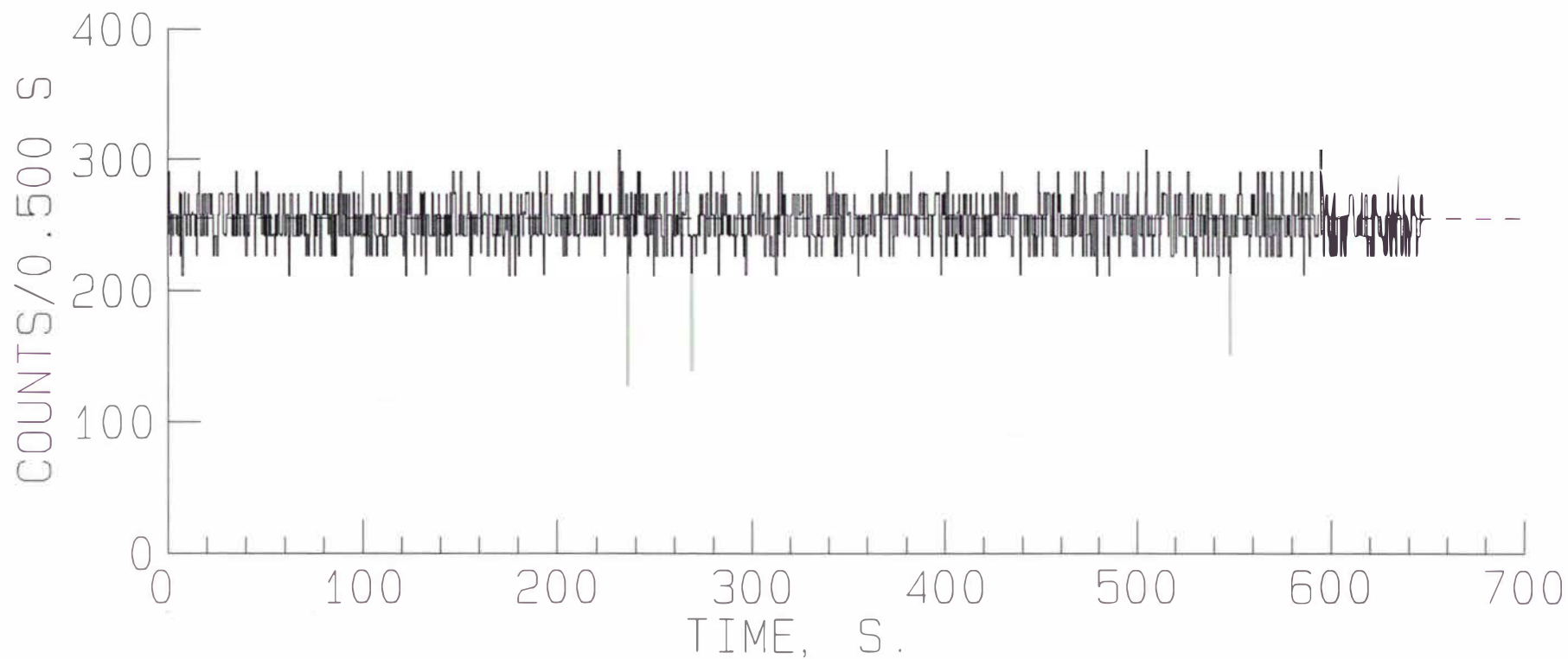
ULYSSES RT

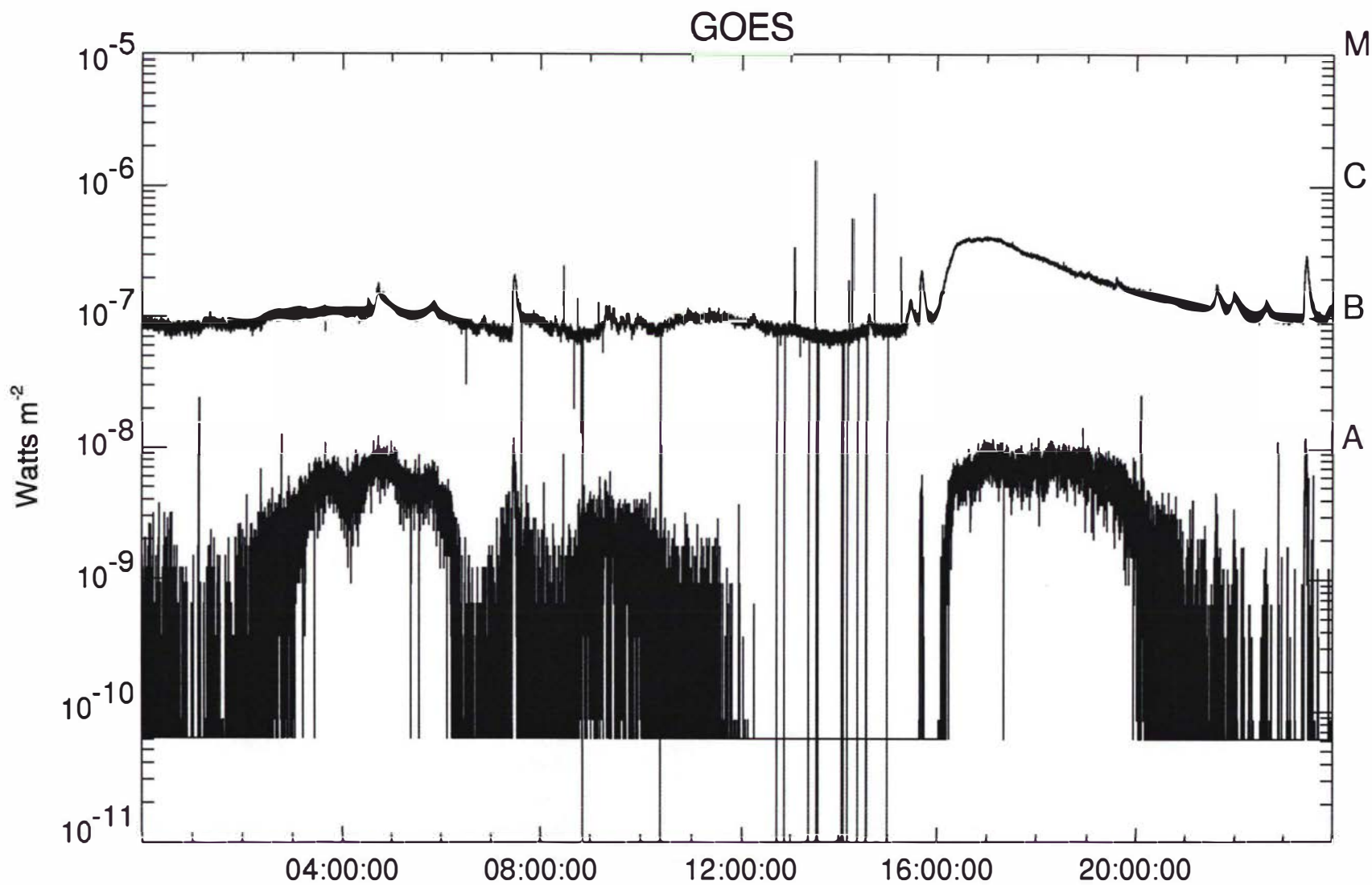
10/11/93 60156.188 s

0.250 S INTERVALS REGROUPED BY 2

0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



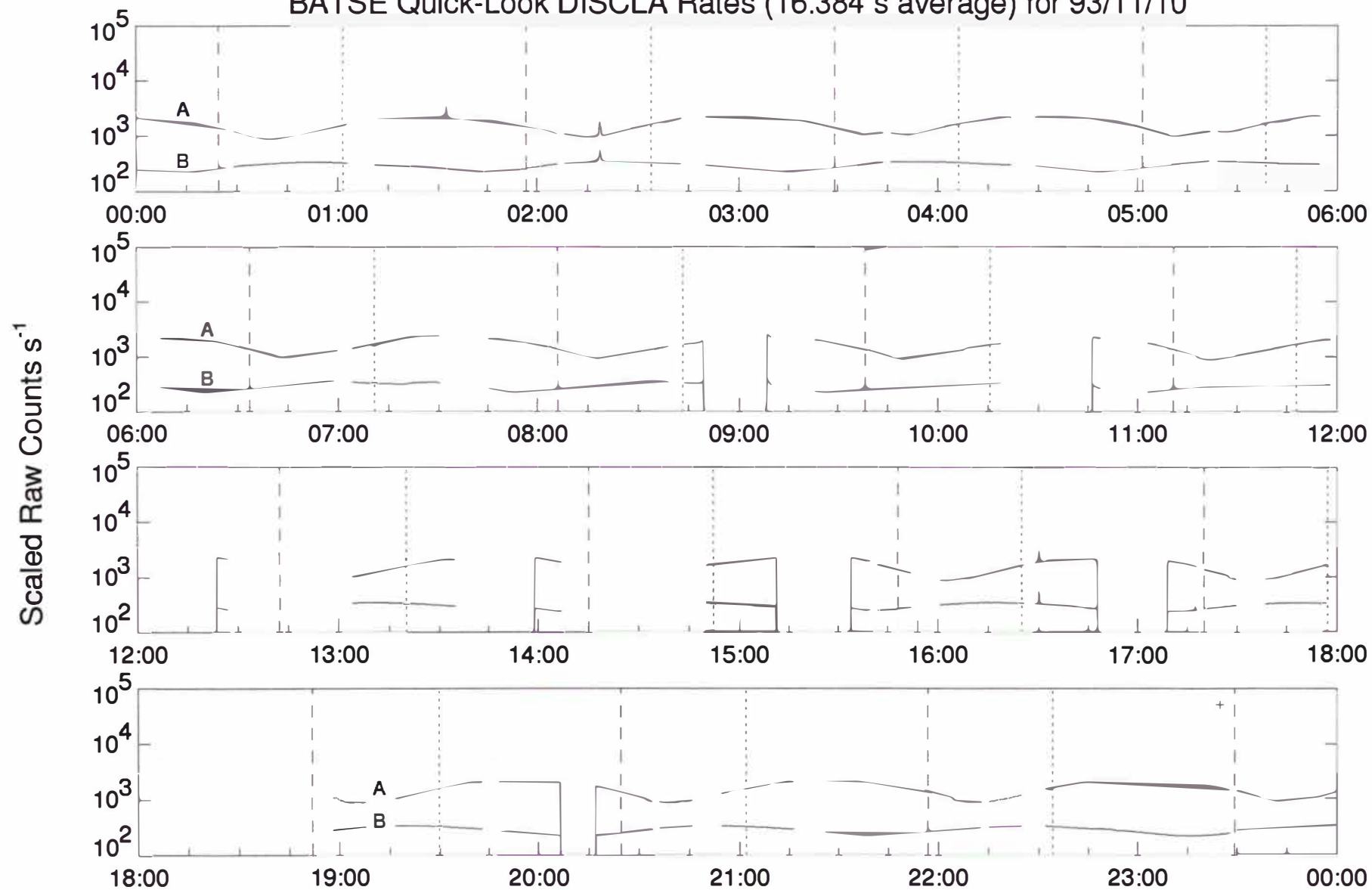


Data Start: 93/11/10, 0000:00

Plot created: 93/11/11, 1548

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

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/10

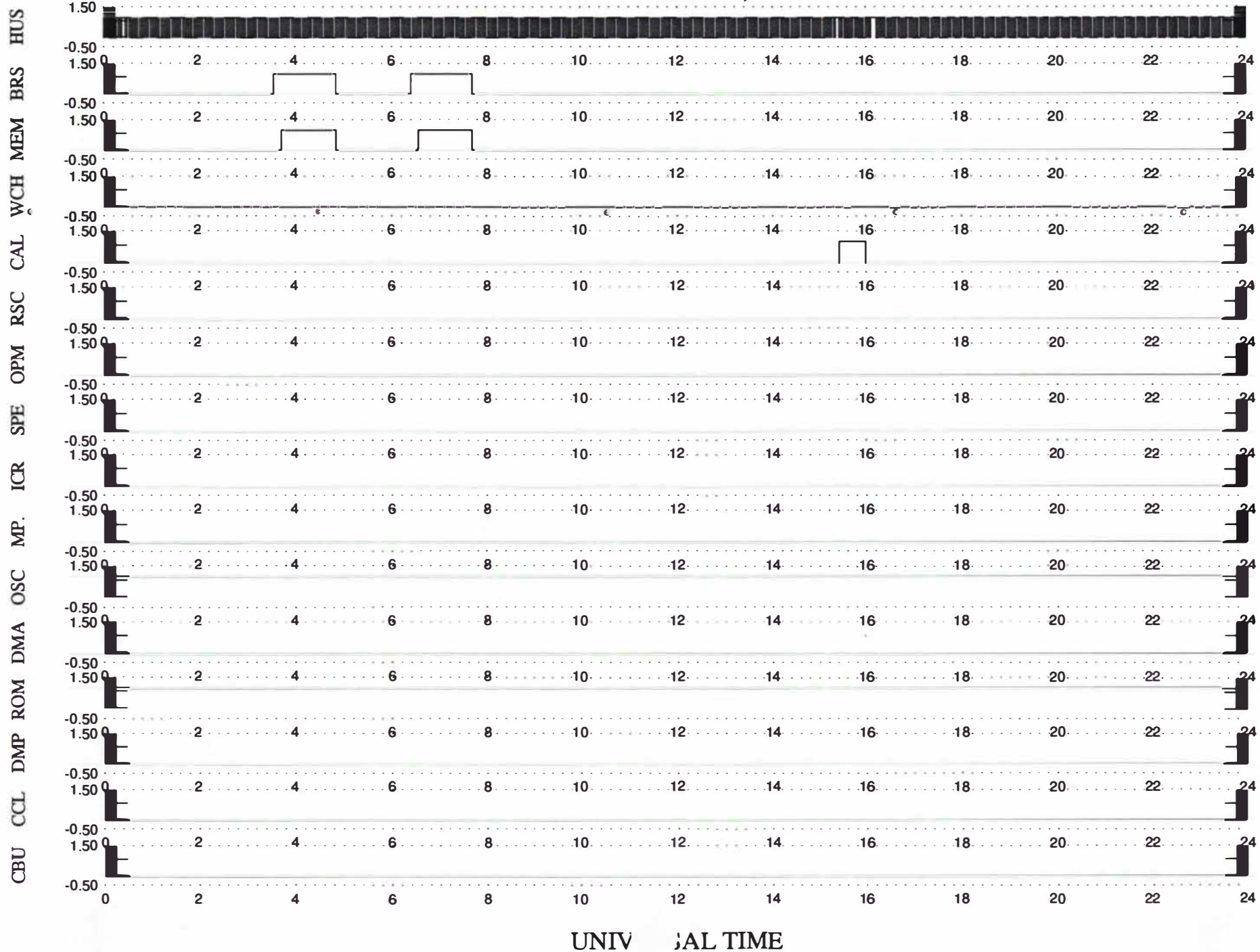


Current Time: 93/11/12, 1801 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05

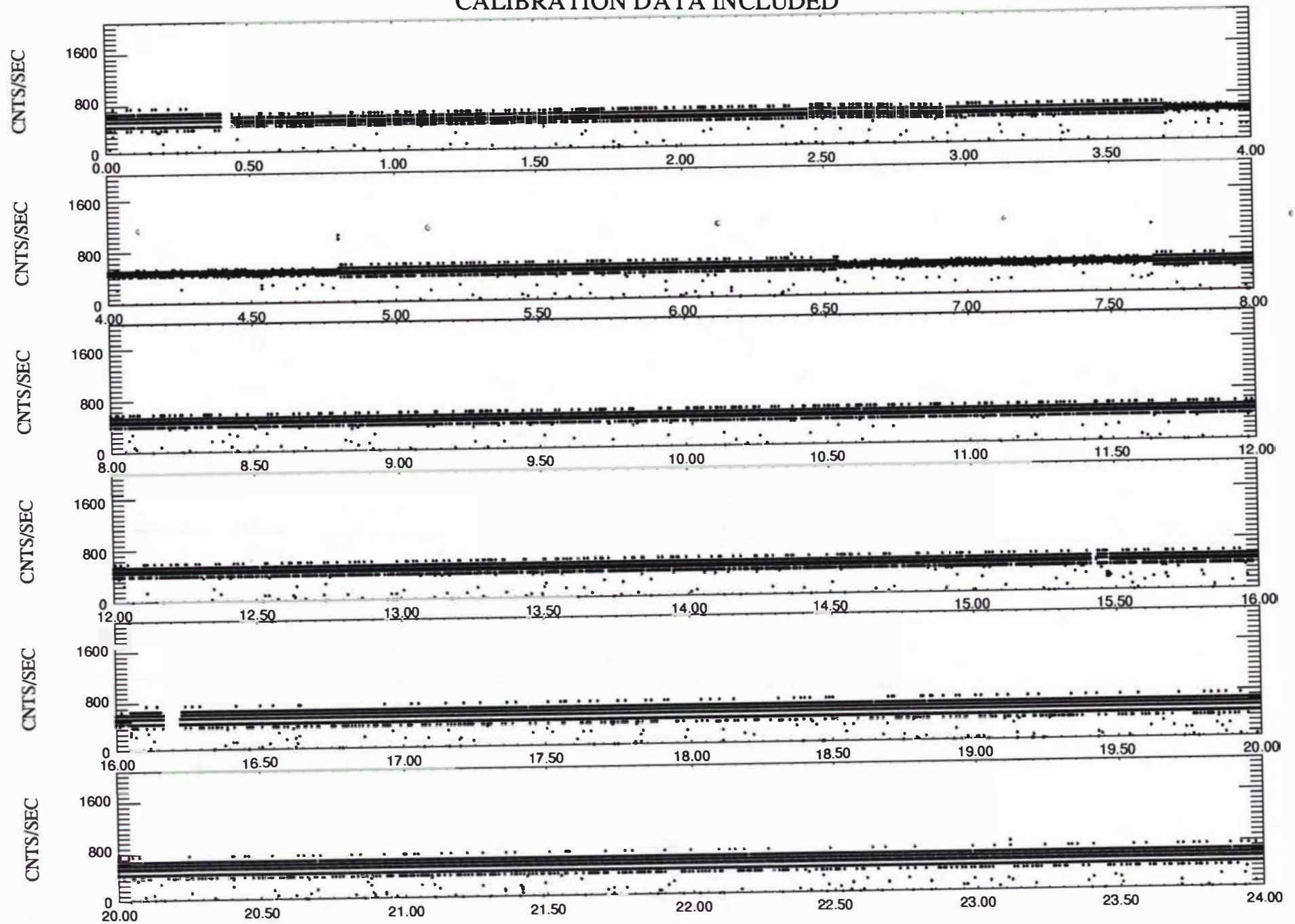
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

BURST NUMBER 14, 15

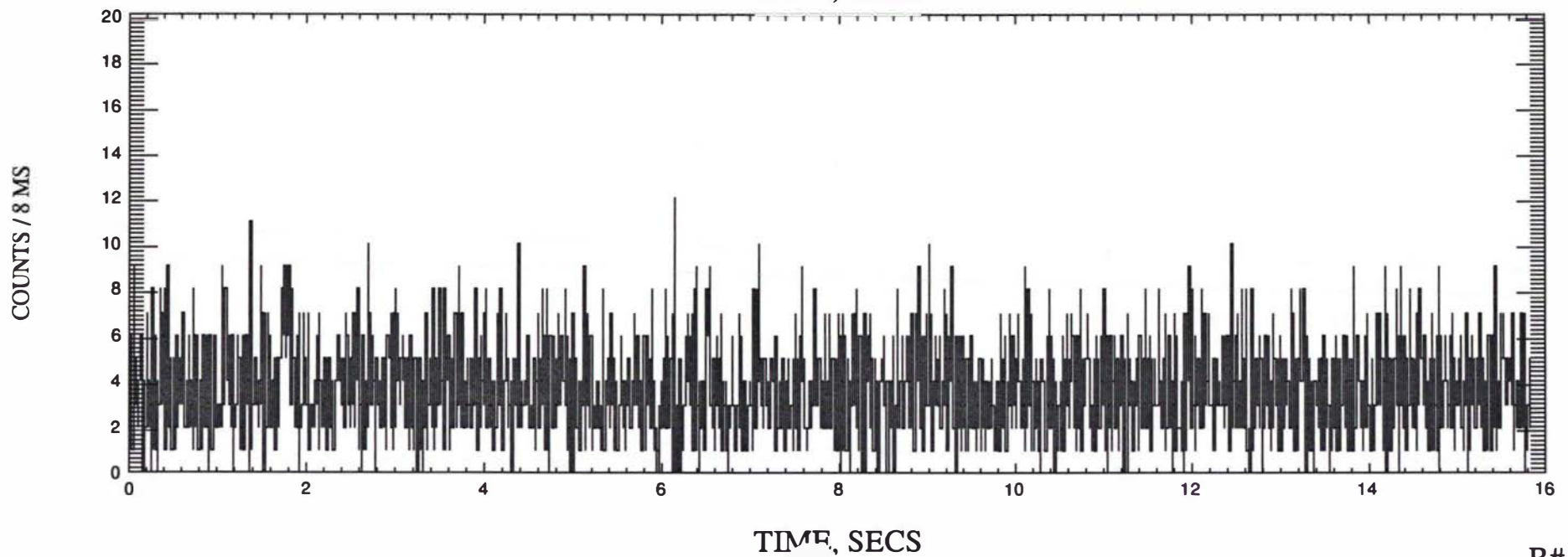
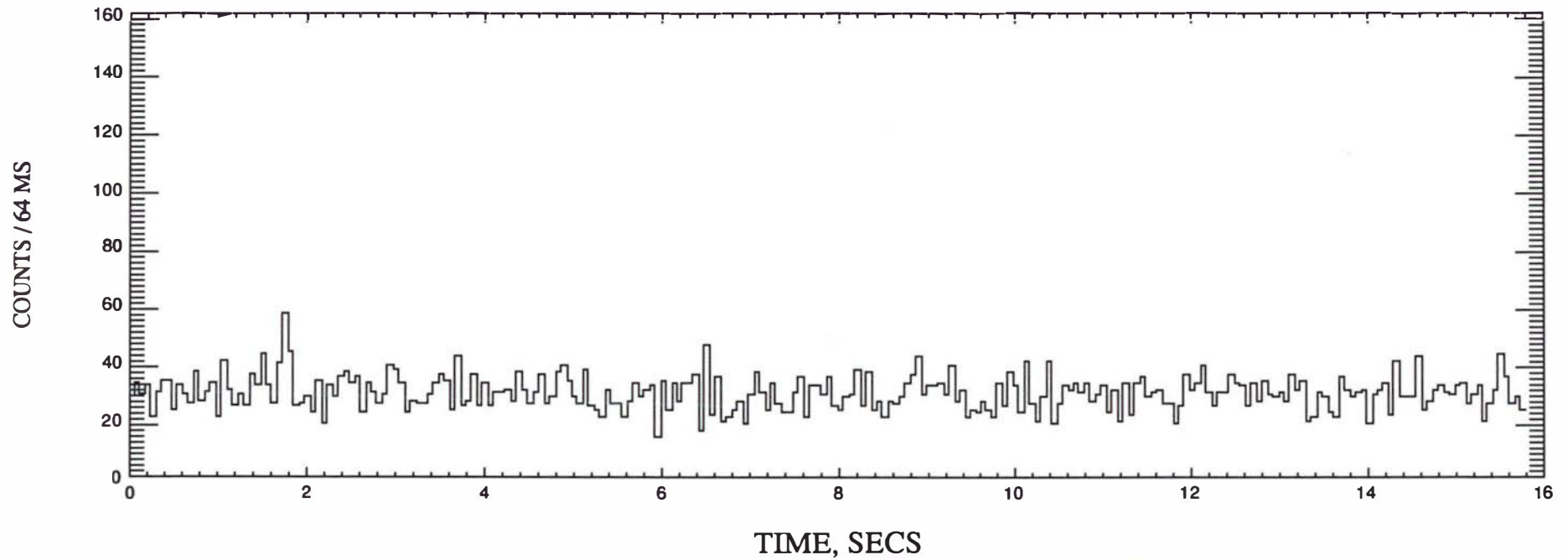


CALIBRATION DATA INCLUDED

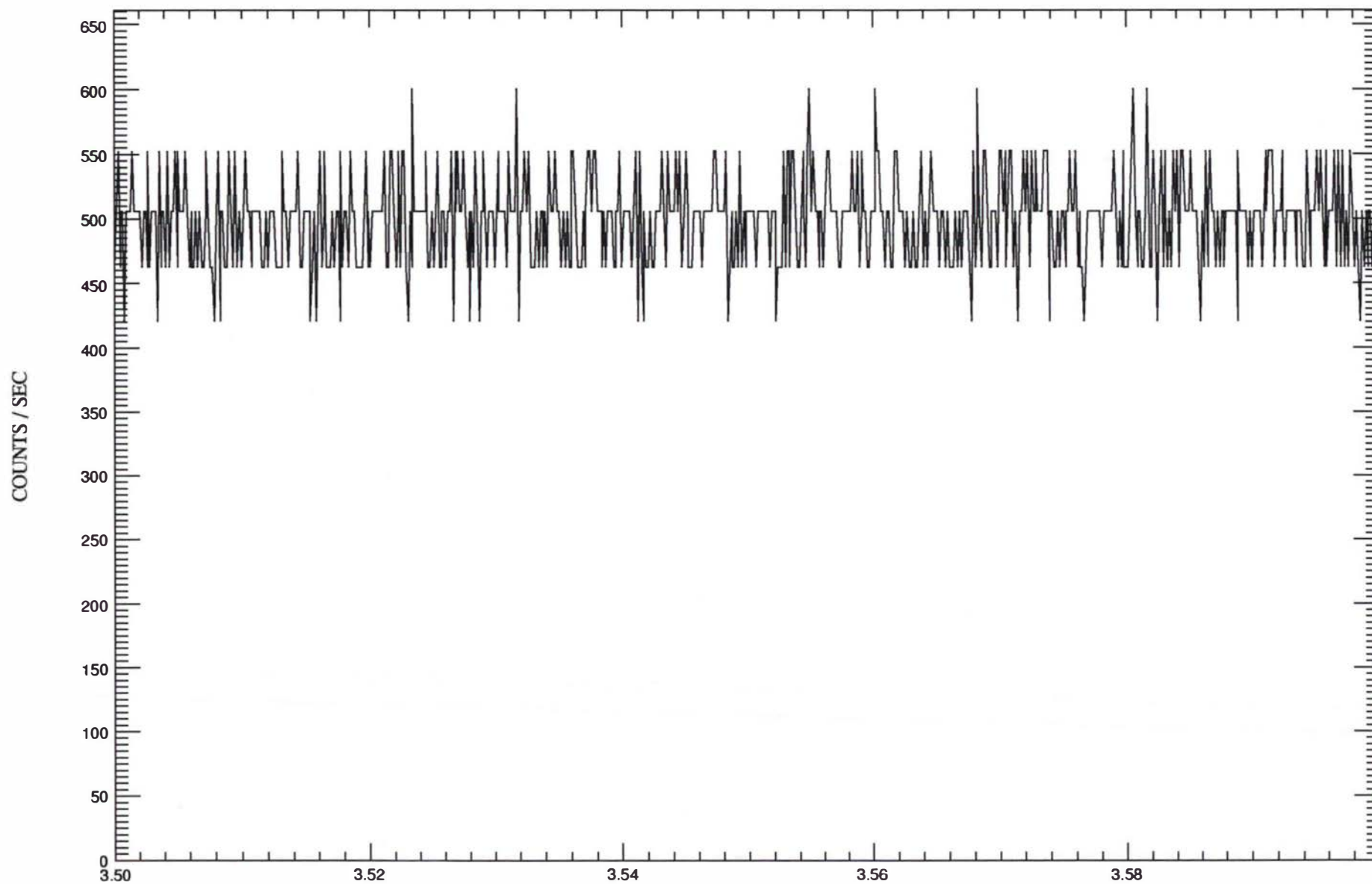


UNIV CAL TIME

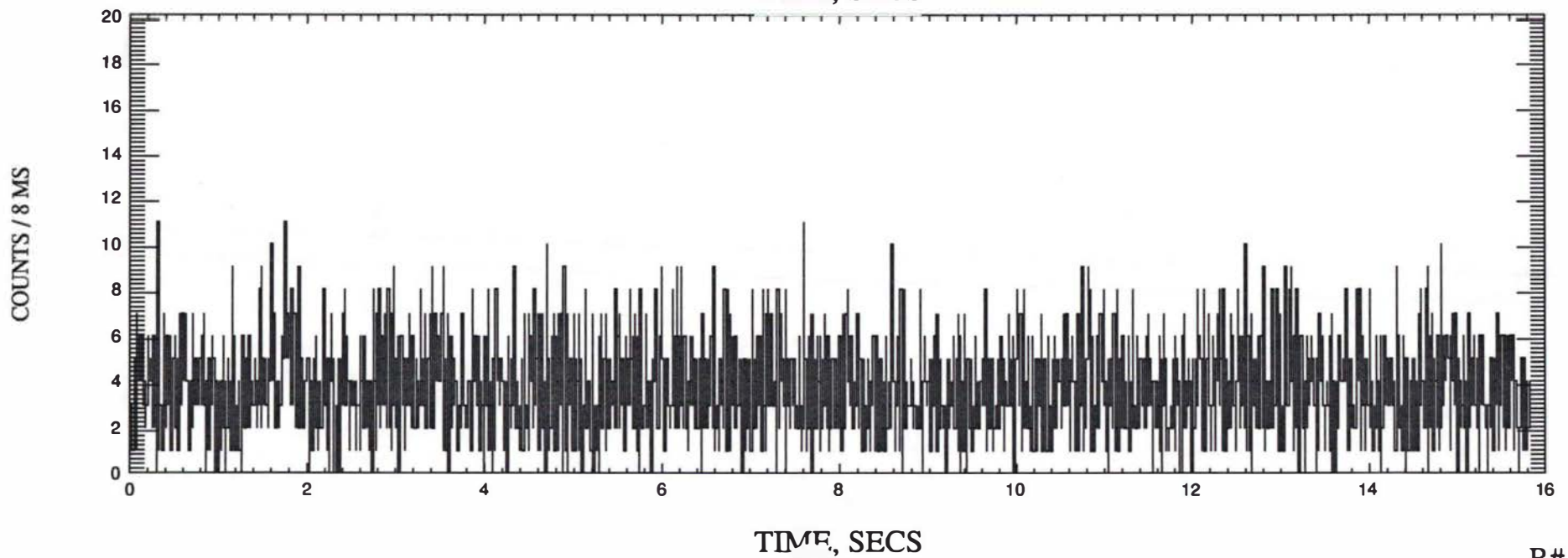
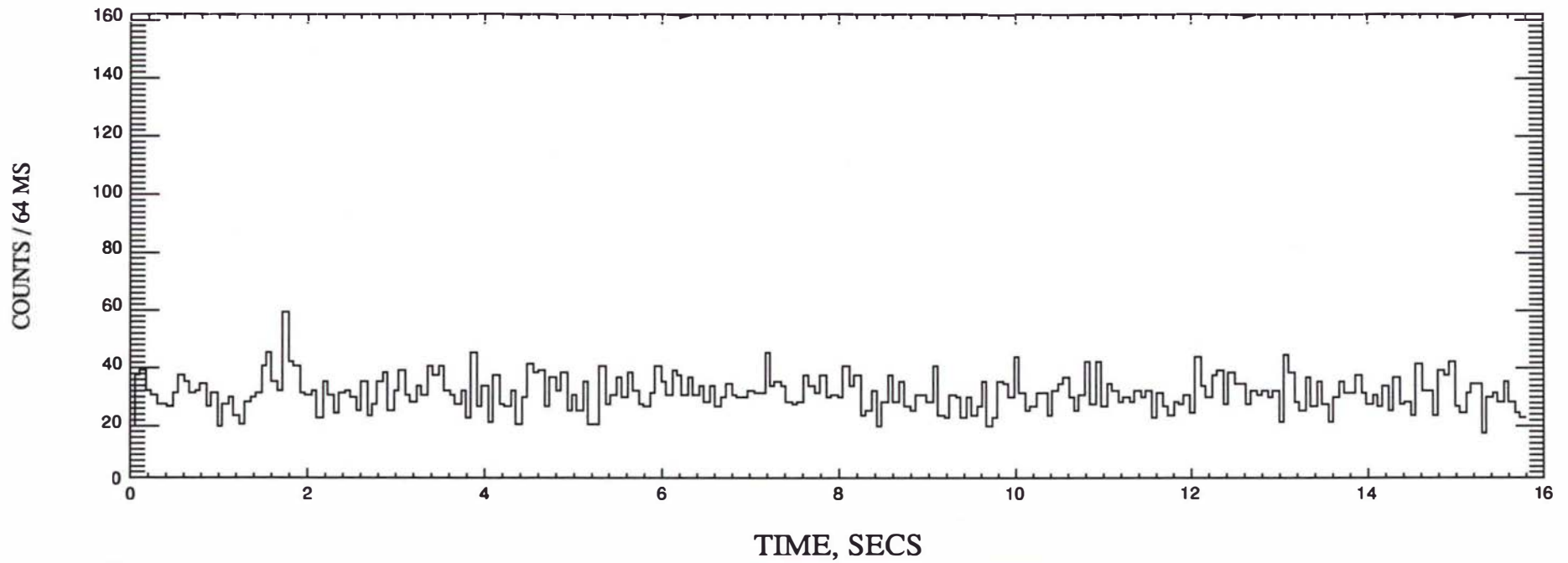
Burst Counter 14 at UT= 3.547449840970 h=12770.819 s 03:32:50.819



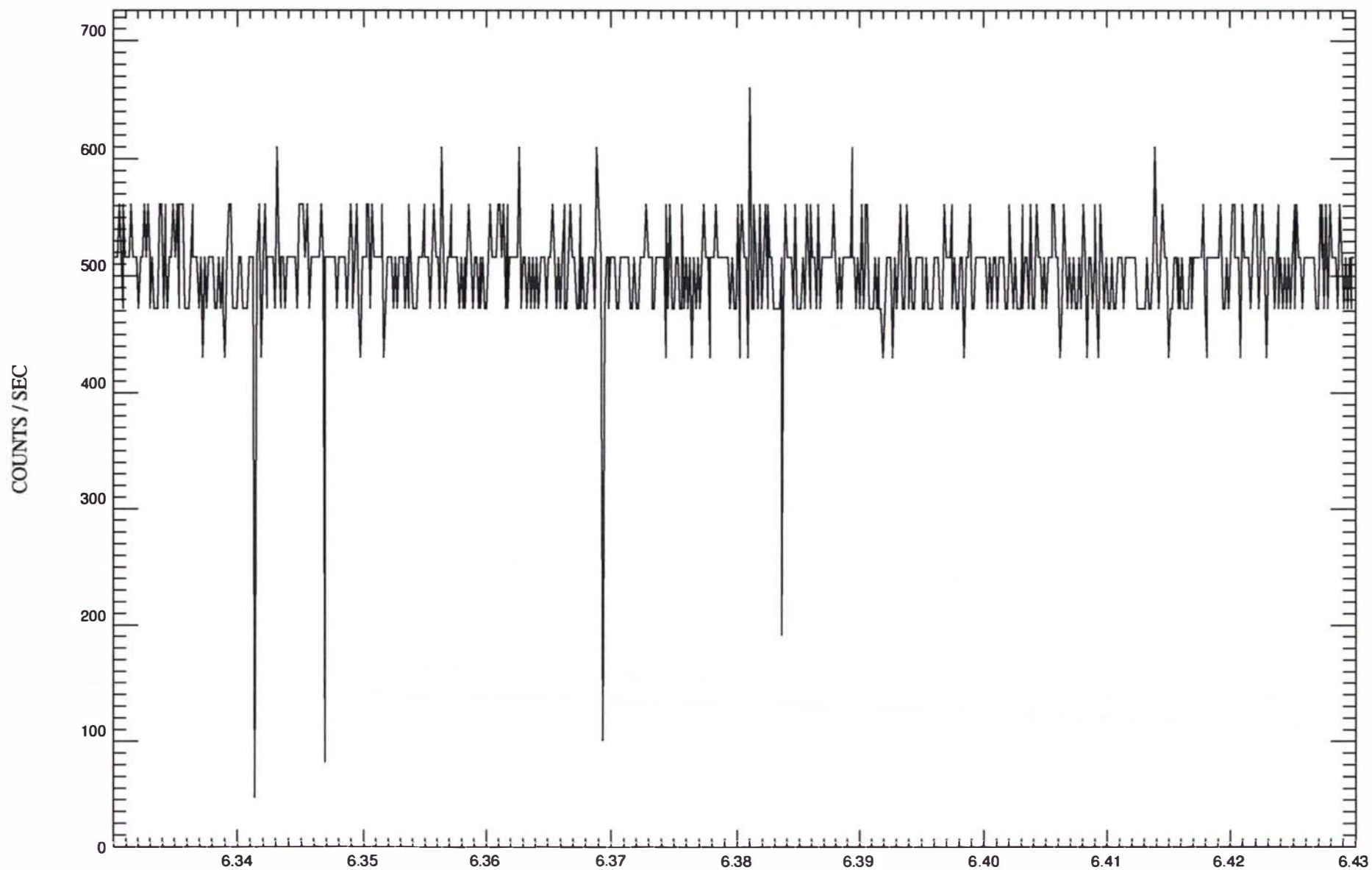
CALIBRATION DATA INCLUDED

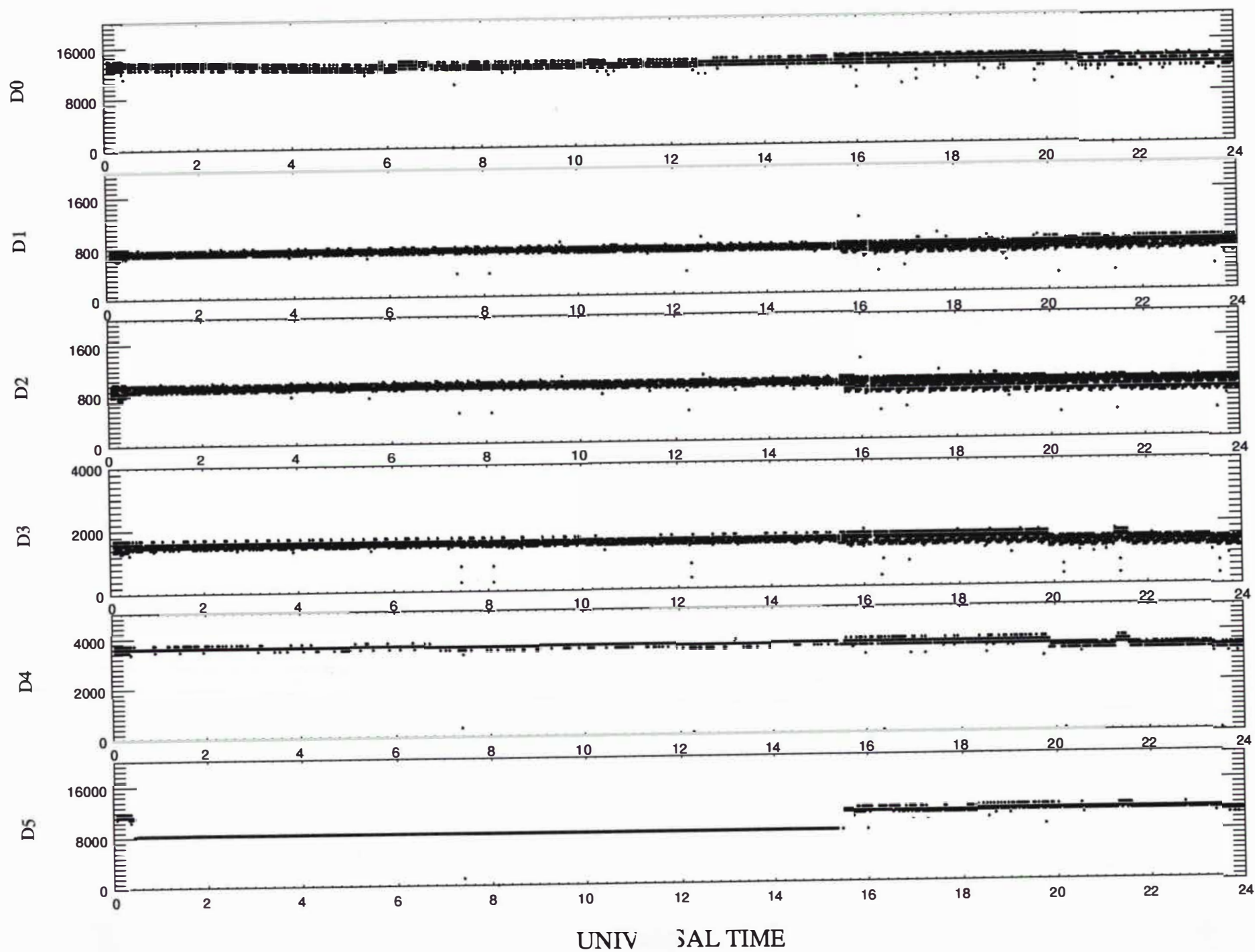


Burst Counter 15 at UT= 6.381174070570 h=22972.227 s 06:22:52.227



CALIBRATION DATA INCLUDED





Lammers
UNTRIGGERED

ULYSSES RT

22 / 5 / 97

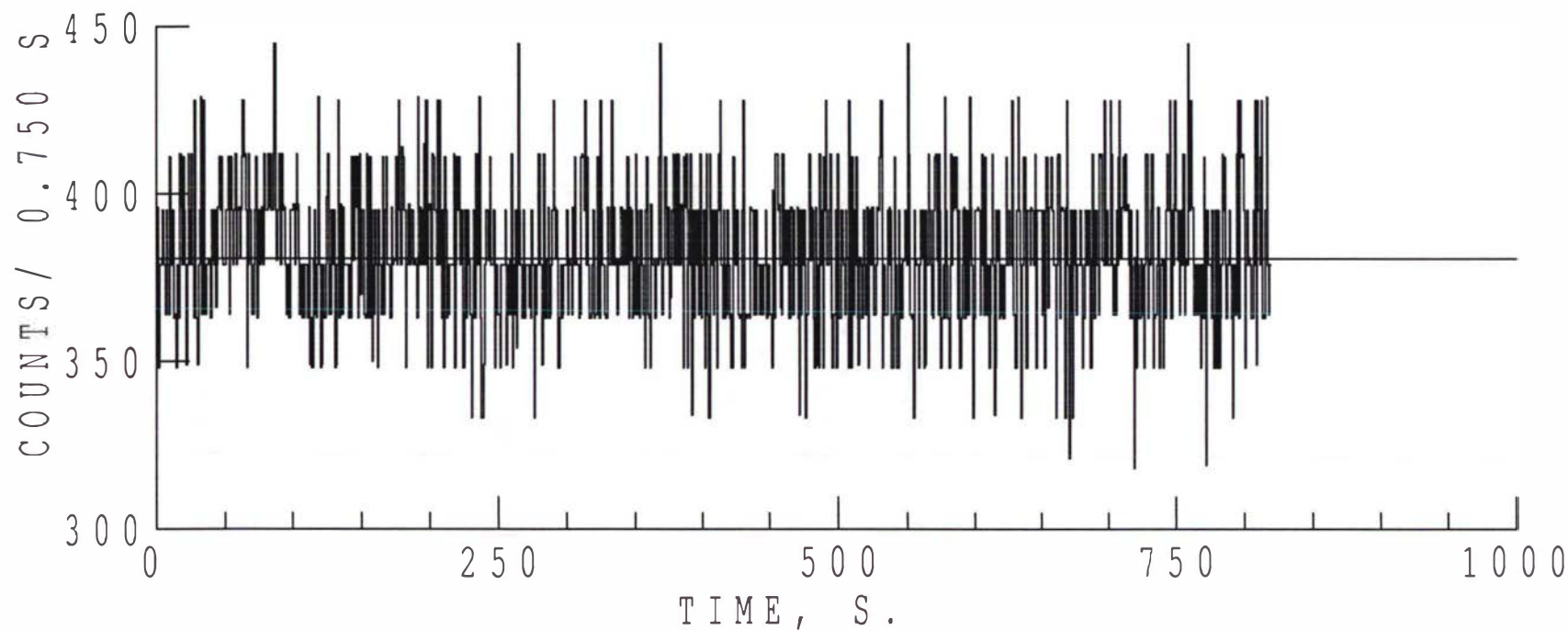
11/11/93 62100.043 s

0.250 S INTERVALS REGROUPED BY 3

0 - 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From BRAINERD@ssl.msfc.nasa.gov Fri Nov 12 13:52:49 1993
Date: Fri, 12 Nov 1993 15:54:21 -0600 (CST)
From: "Jim Brainerd, (205) 544-4970" <BRAINERD@ssl.msfc.nasa.gov>
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Cc: BRAINERD@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02624

TIME: TJD=9302 SECONDS=23600

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT

From BRAINERD@ssl.msfc.nasa.gov Fri Nov 12 13:56:57 1993
Date: Fri, 12 Nov 1993 15:58:28 -0600 (CST)
From: "Jim Brainerd, (205) 544-4970" <BRAINERD@ssl.msfc.nasa.gov>
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Cc: BRAINERD@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 2625

TIME: TJD=9302 SECONDS=53069

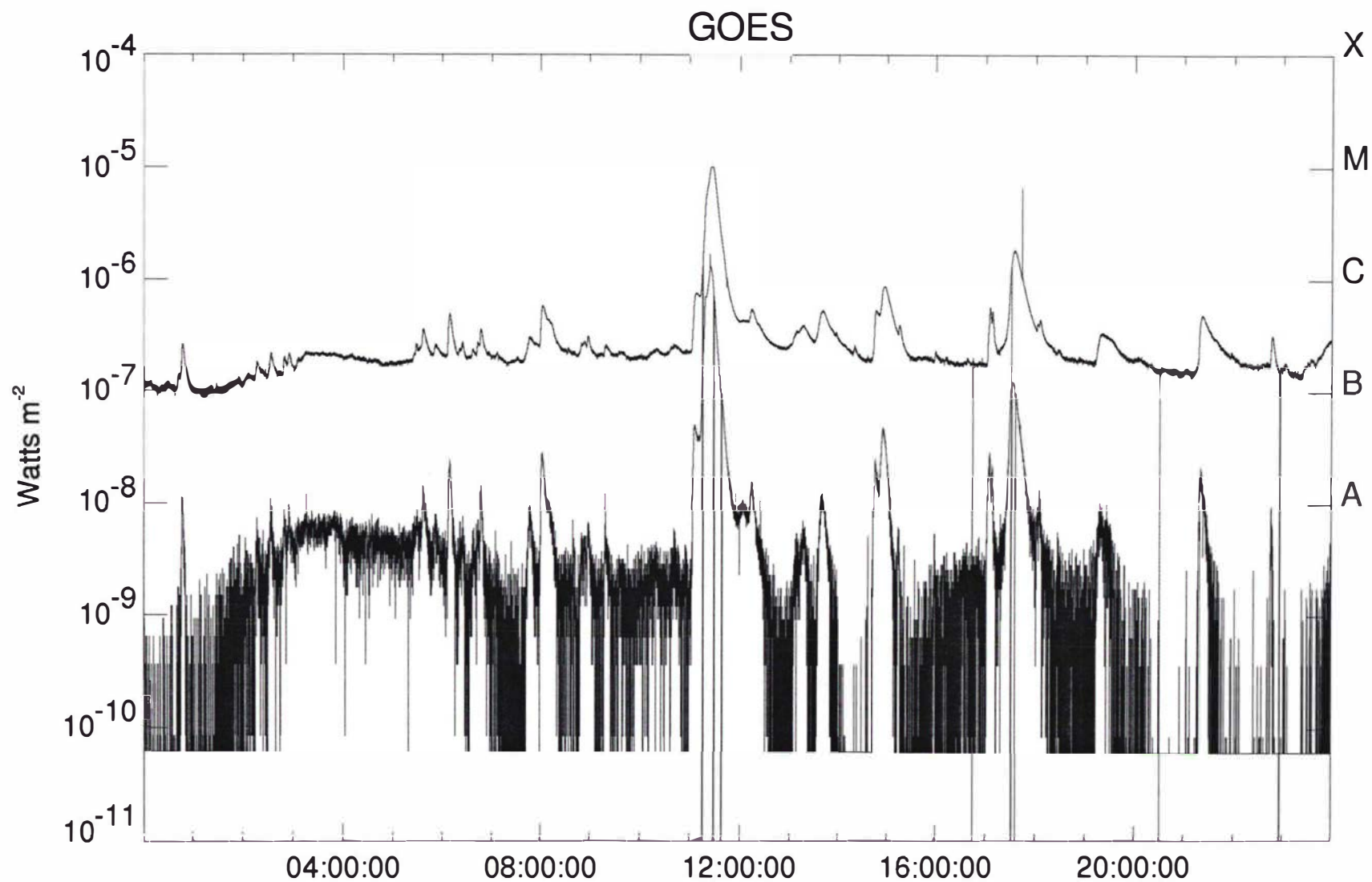
TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=46.0 AZIMUTH=343.7 ERROR= DEGREES

COMMENTS:
SOLAR FLARE, GOES B8.4, 60 SECONDS DURATION, WEAK ABOVE 100 KEV,
NOT SEEN ABOVE 300 KEV.

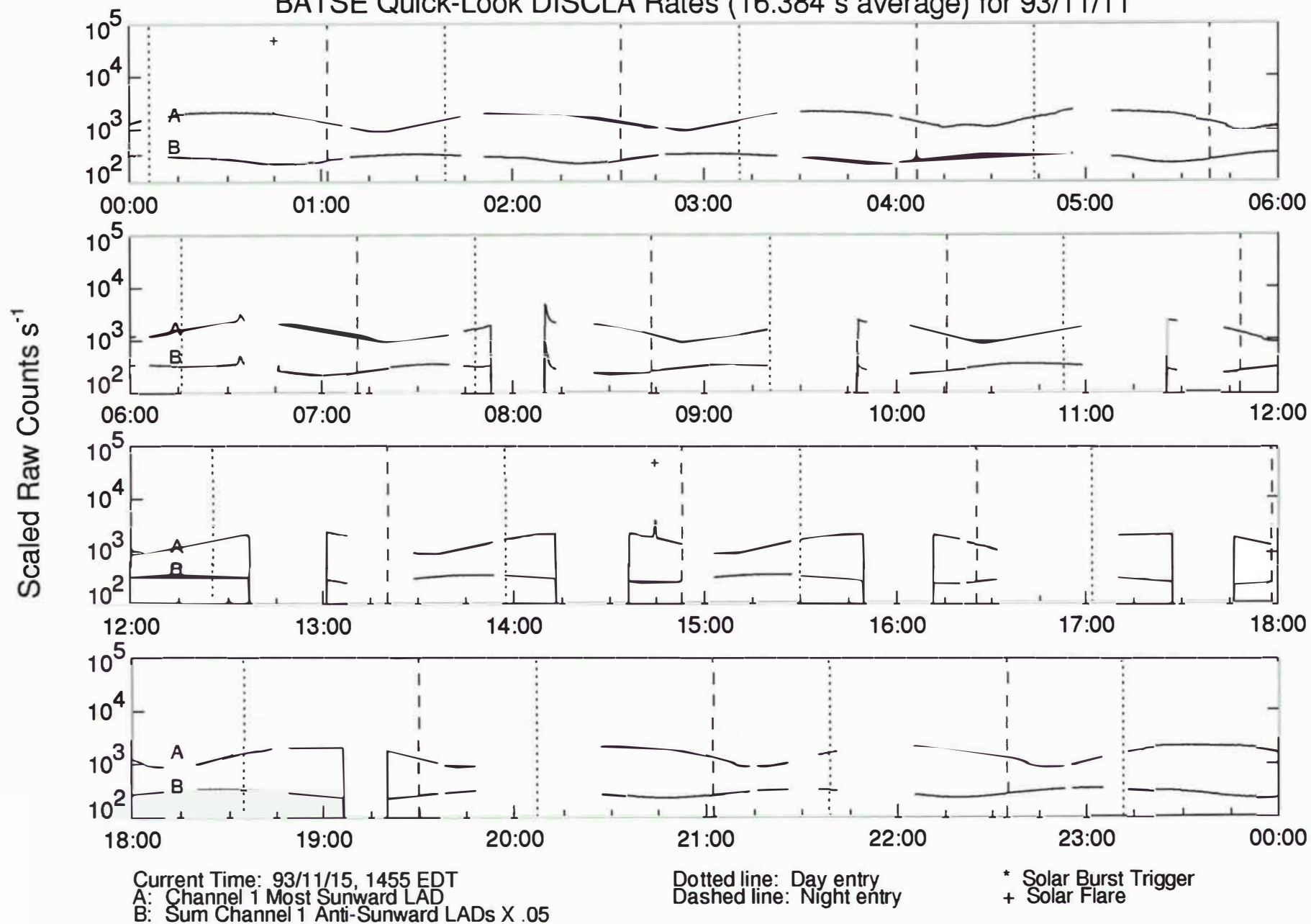


Data Start: 93/11/11, 0000:00

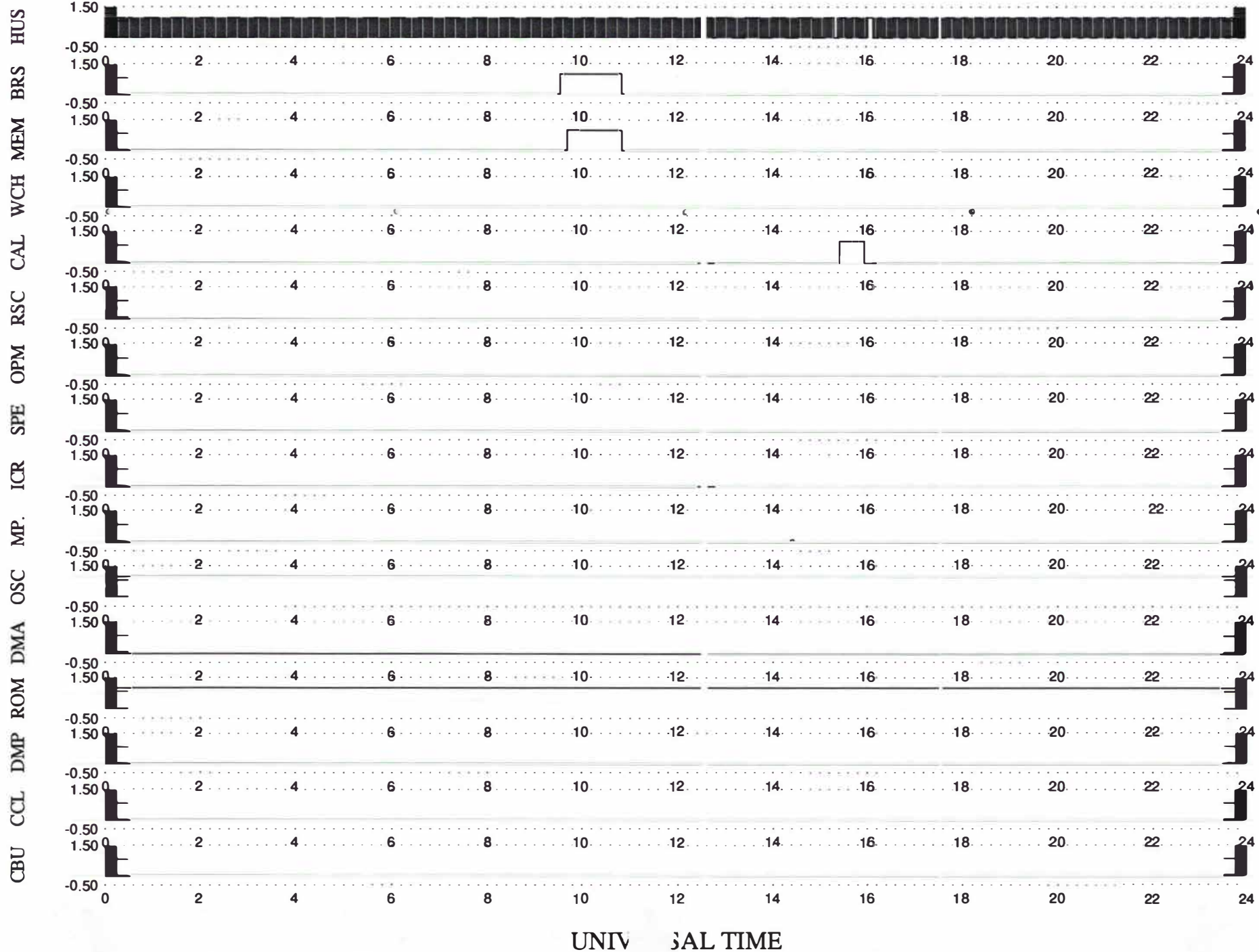
Plot created: 93/11/12, 1756

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

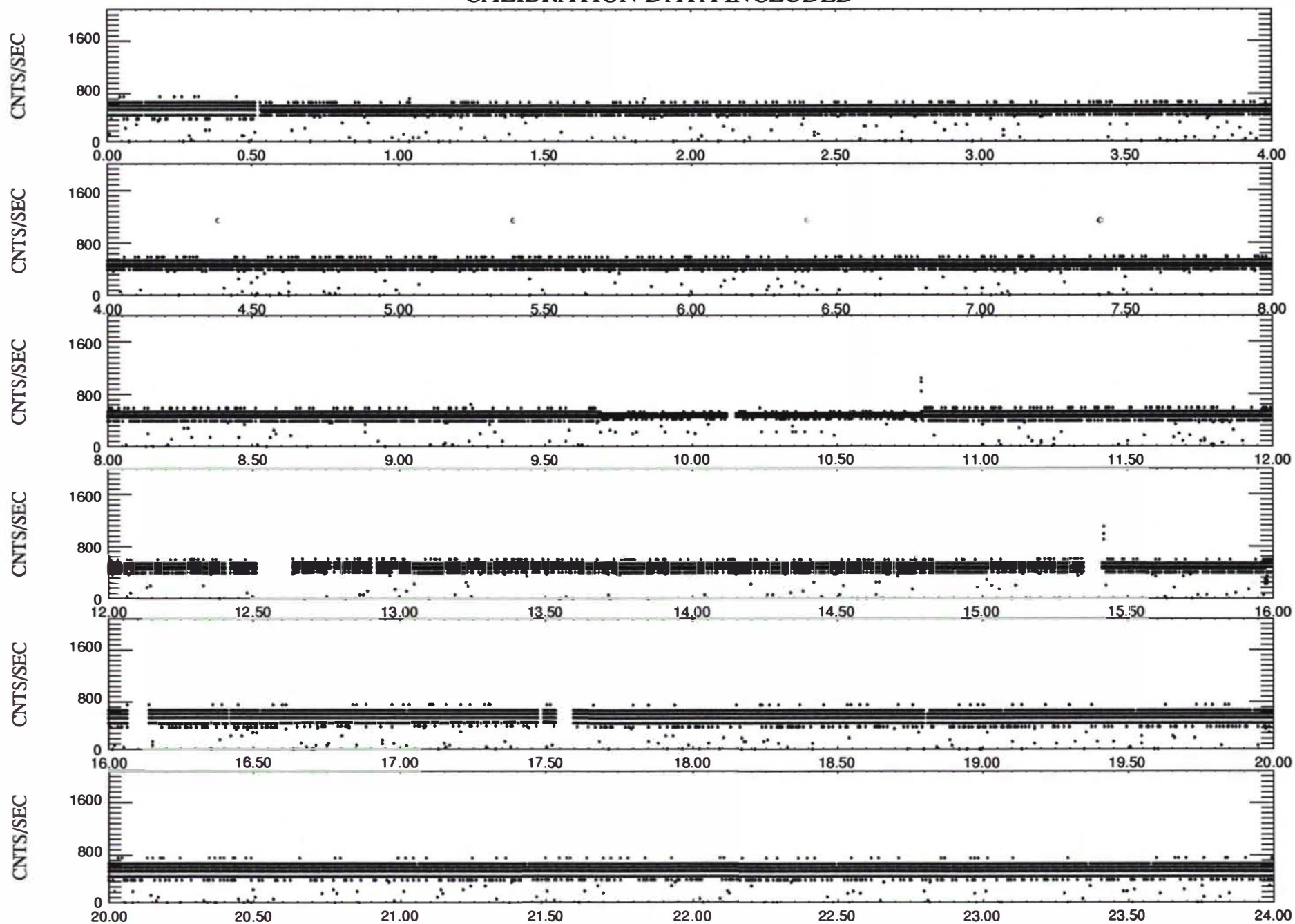
BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/11



BURST NUMBER 0

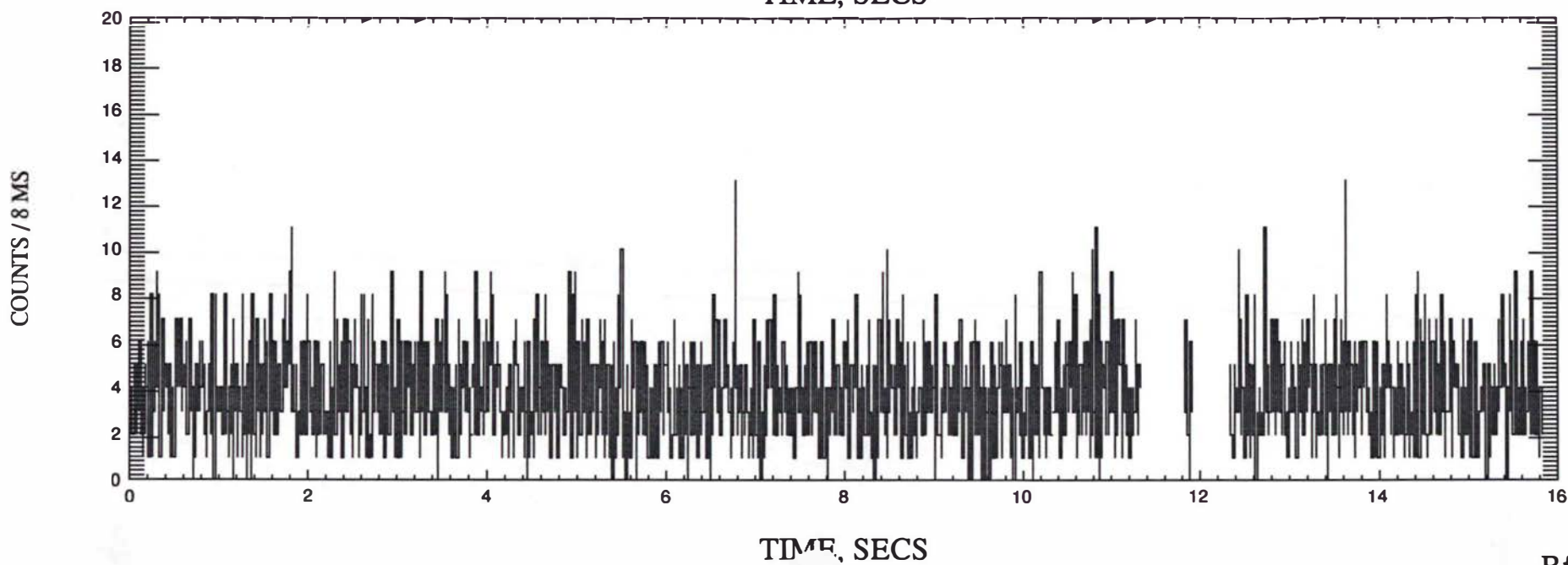
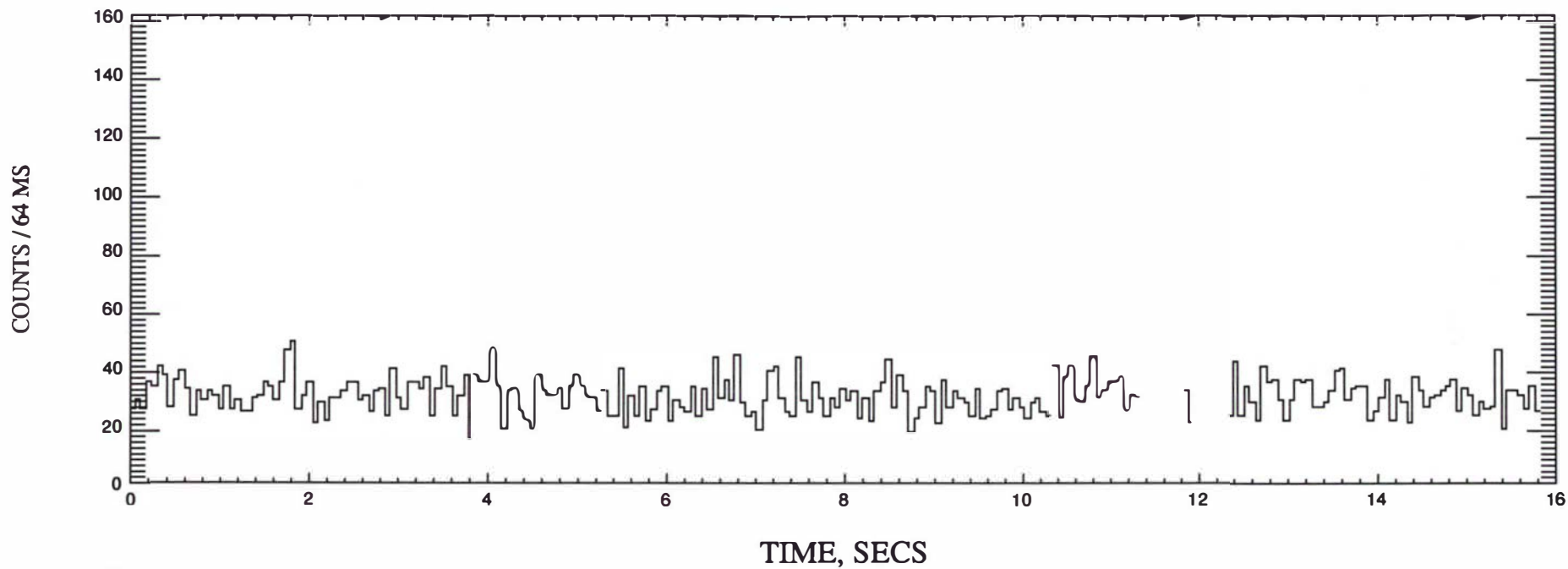


CALIBRATION DATA INCLUDED



UNIV 3AL TIME

Burst Counter 0 at UT= 9.540689468384 h=34346.482 s 09:32:26.482

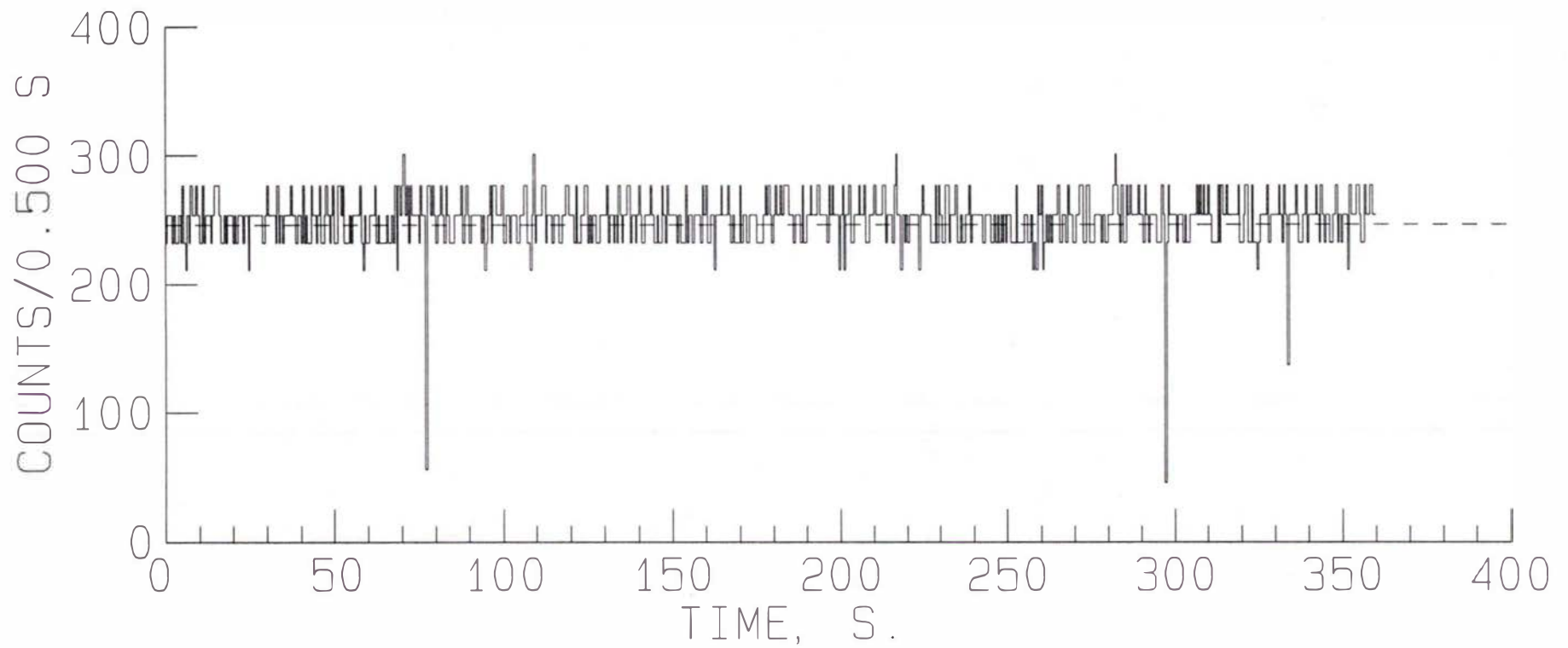


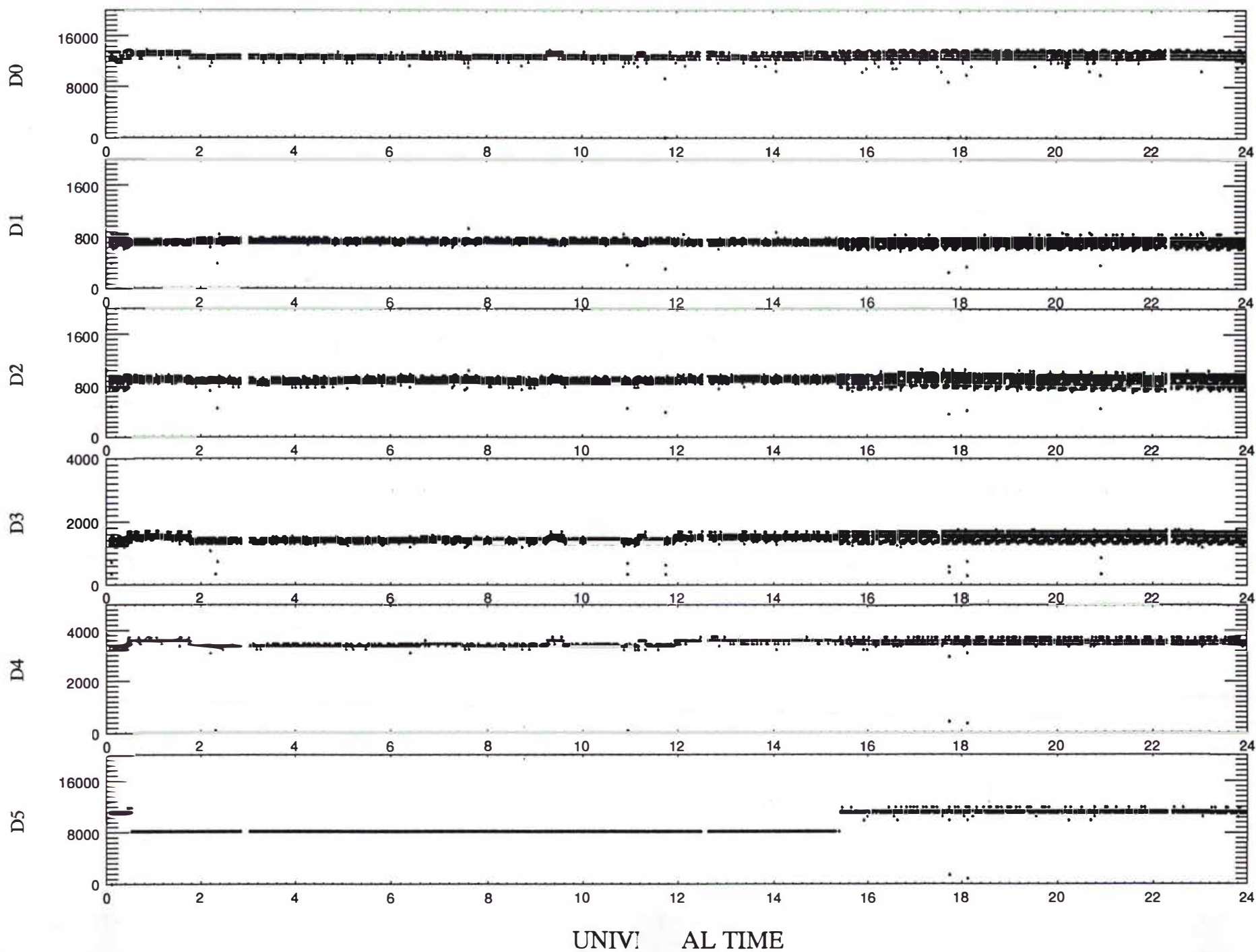
HUS BURST ● 9:32

12/11/93

ULYSSES RT
11/11/93 34164.363 s
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





From SHARIFF@ssl.msfc.nasa.gov Tue Nov 16 08:51:15 1993
Date: Tue, 16 Nov 1993 10:52:56 -0600 (CST)
From: SHARIFF@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02626

TIME: TJD=9303 SECONDS=08469

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SOLAR FLARE, GOES M2.0, LASTING >220S. NOT VISIBLE ABOVE 300KEV.

From SHARIFF@ssl.msfc.nasa.gov Tue Nov 16 08:54:37 1993
Date: Tue, 16 Nov 1993 10:56:16 -0600 (CST)
From: SHARIFF@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02627

TIME: TJD=9303 SECONDS=65012

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SOLAR FLARE, GOES C3.5, LASTING ~40S. MARGINALLY VISIBLE ABOVE 100KEV.

From SHARIFF@fender.msfc.nasa.gov Tue Nov 16 08:52:48 1993
Date: Tue, 16 Nov 1993 10:54:41 -0600 (CST)
From: SHARIFF@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2628
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2628
EVENT OF 1993 NOV 12 DAY OF YEAR=316
EVENT CROSSING TIME AT BATSE : 67553. S. OR 18:45:53.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 313.000 55.000
BATSE PEAK COUNTING RATE: 27000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 12/11/ 93 IS:
RA= 165.110 DEC= -29.382 DIST= 4.500 AU
BATSE-ULYSSES DISTANCE = 673226465. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 34.39 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1853.21 SECS.
CROSSING TIME AT ULYSSES IS 69406. S. OR 19:16:46 +/- 298.34 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 12/11/ 93 IS:
RA= 239.812 DEC= -20.951 DIST= 2.452 AU
MARS-BATSE DISTANCE = 366808352. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 82.07 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 168.82 SECS.
CROSSING TIME AT MARS IS 67722. S. OR 18:48:41 +/- 212.96 SECONDS

RT

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2628	931112	9303	67553	27000	313	+55

BATSE BURST TRIGGER

NO.: 02628

TIME: TJD=9303 SECONDS=67553

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=104.1 AZIMUTH=085.2 ERROR= DEGREES

COMMENTS:

BURST. COMPLEX, LASTING ~10S. VISIBLE ABOVE 300KEV.

Helio corr removed

Date: Jan 20 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

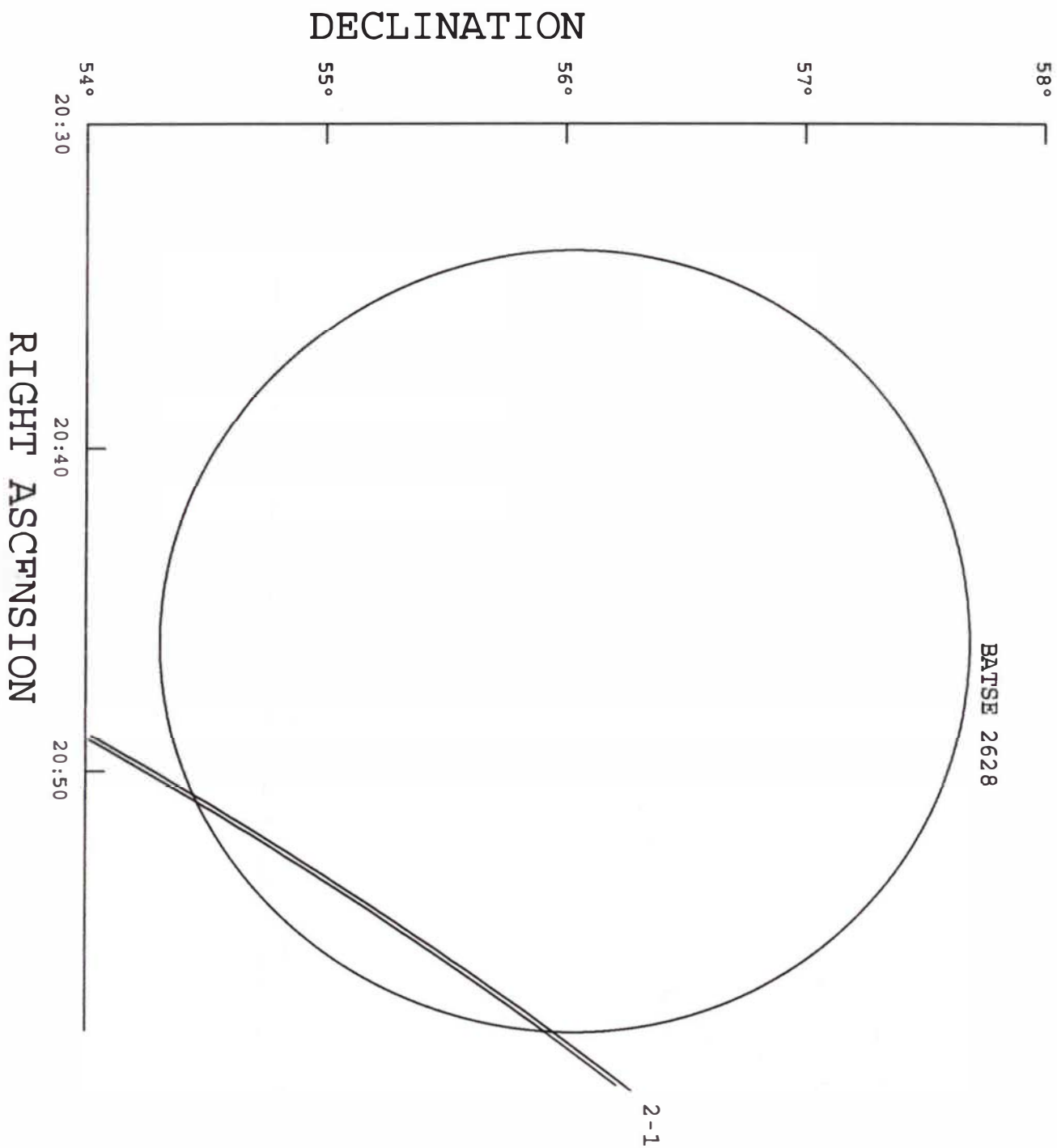
- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?

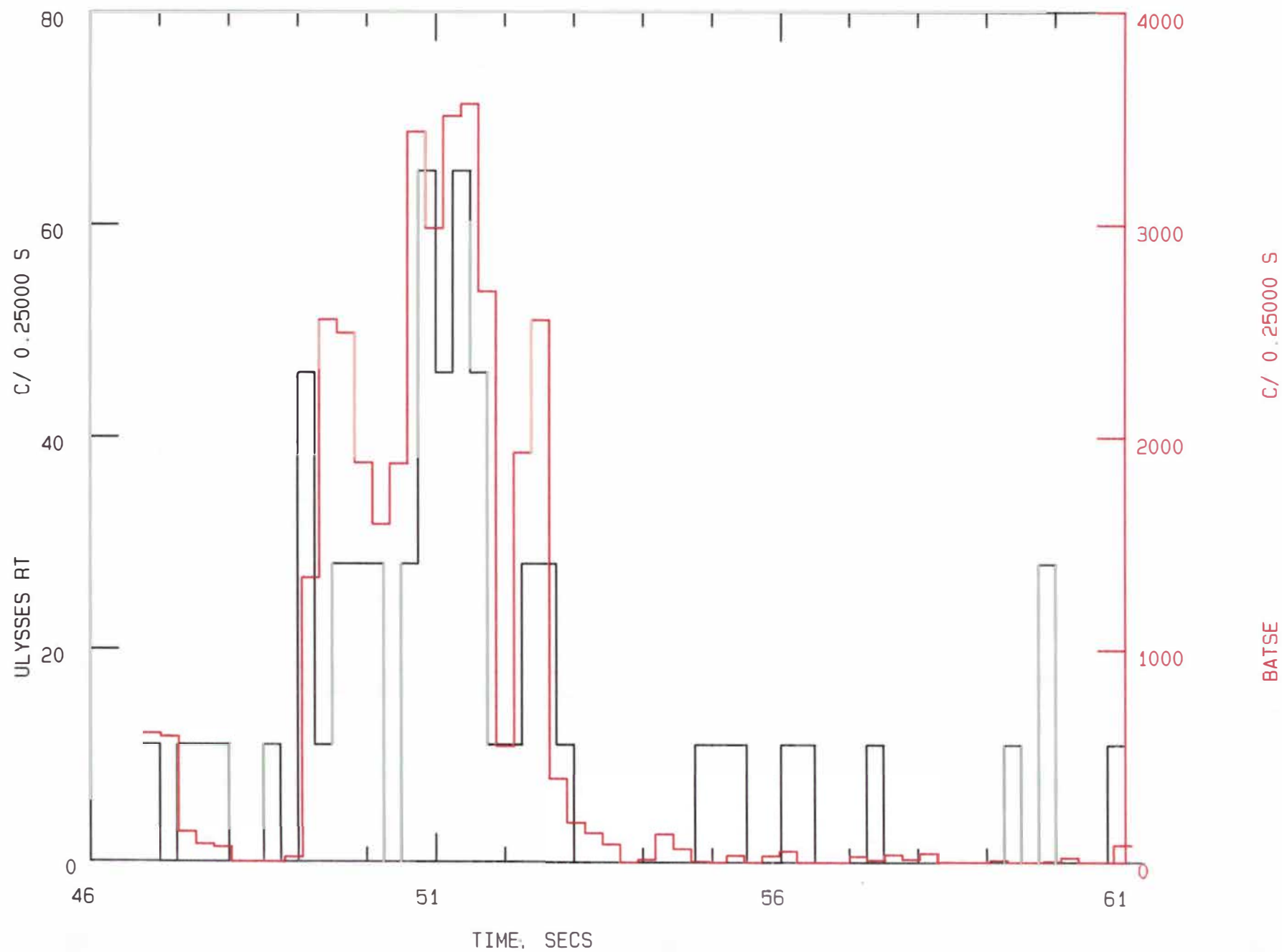
- ☒ ACCESS database updated?

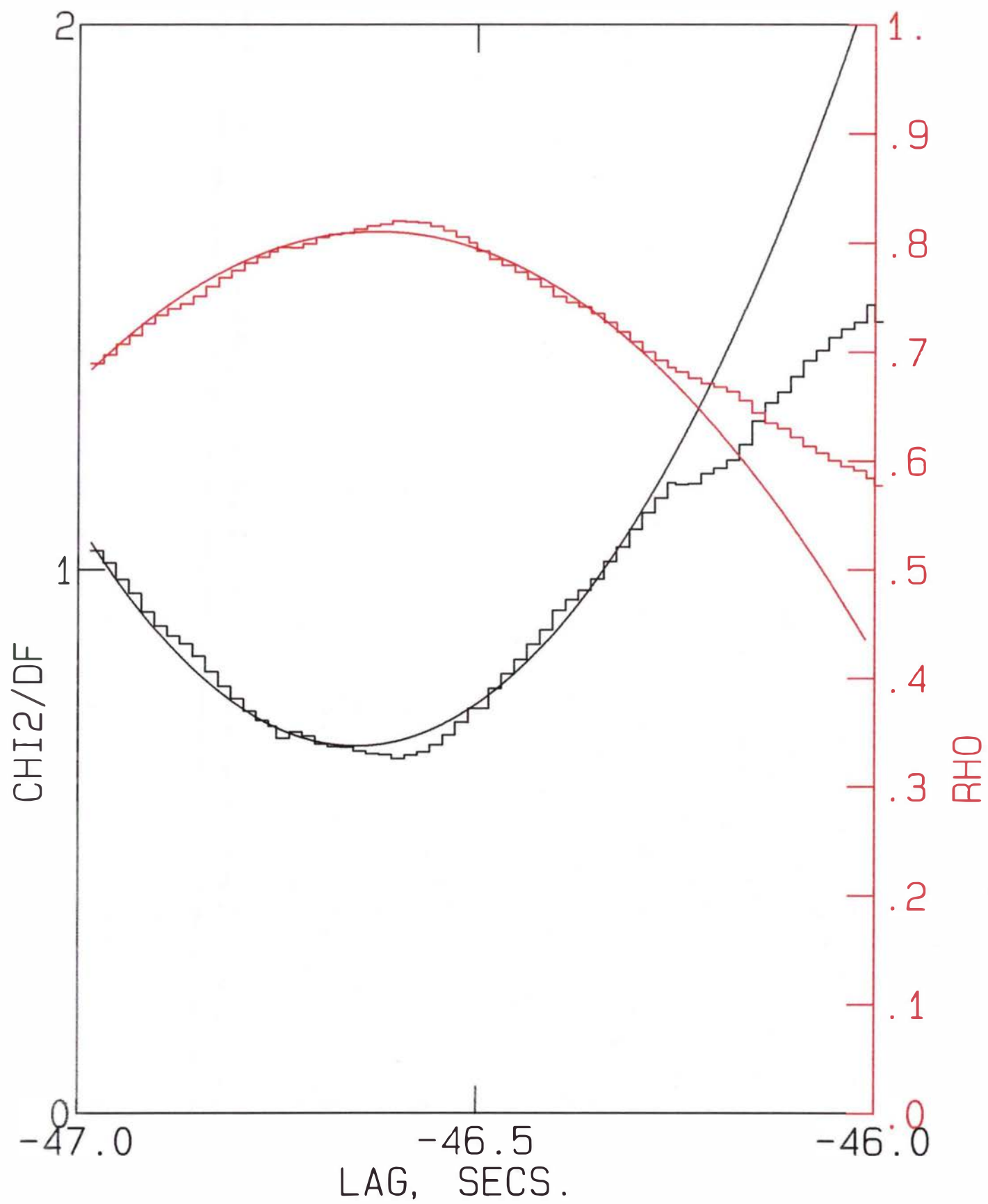
N-M = CORRELATION BETWEEN SATELLITES N AND M
 EARTH-N = EARTH AS SEEN FROM SATELLITE N
 S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
 1 ULYSSES 2 BATSE

EVENT OF NOV 12, 1993 19:16

20 / 1/98







ULYSSES RT

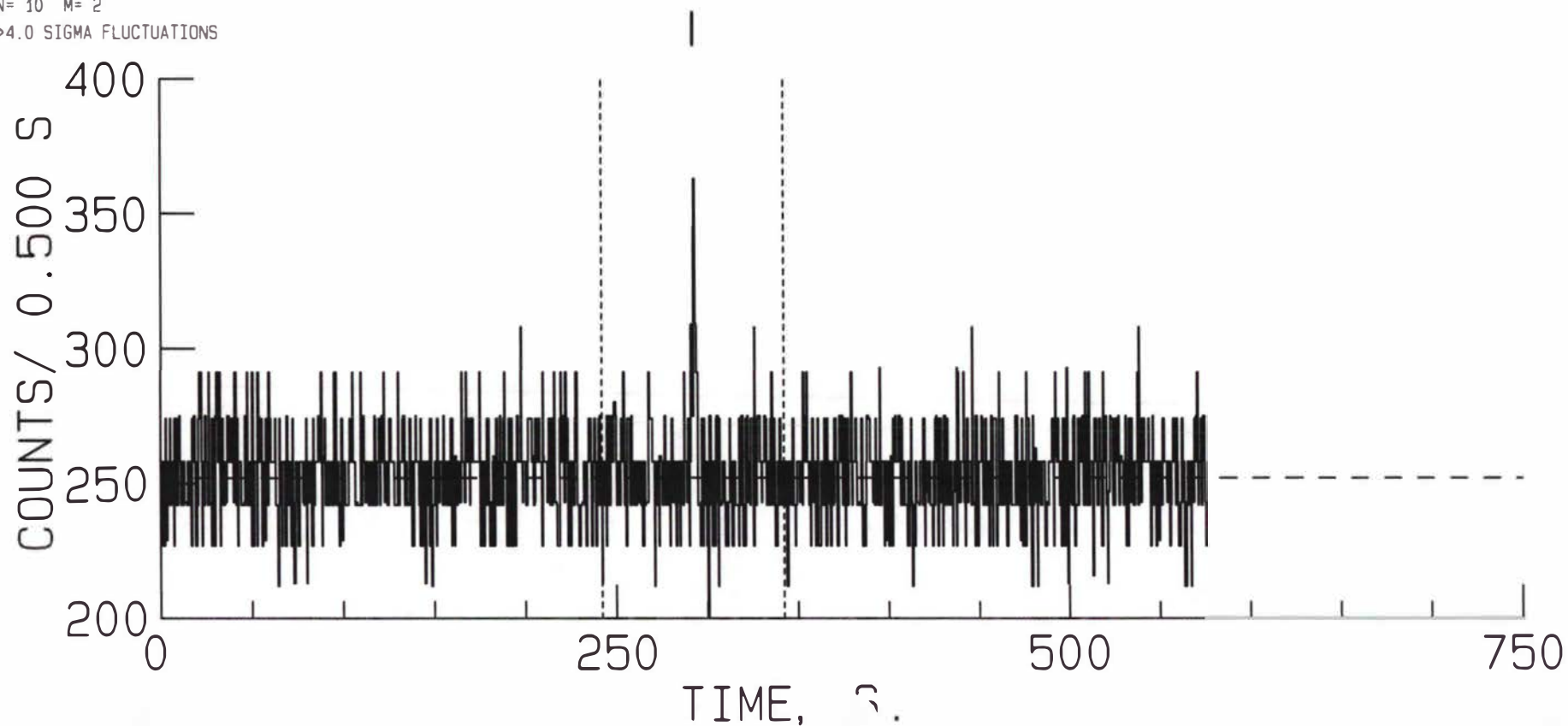
20 / 1 / 98

12/11/93 69120.014 s

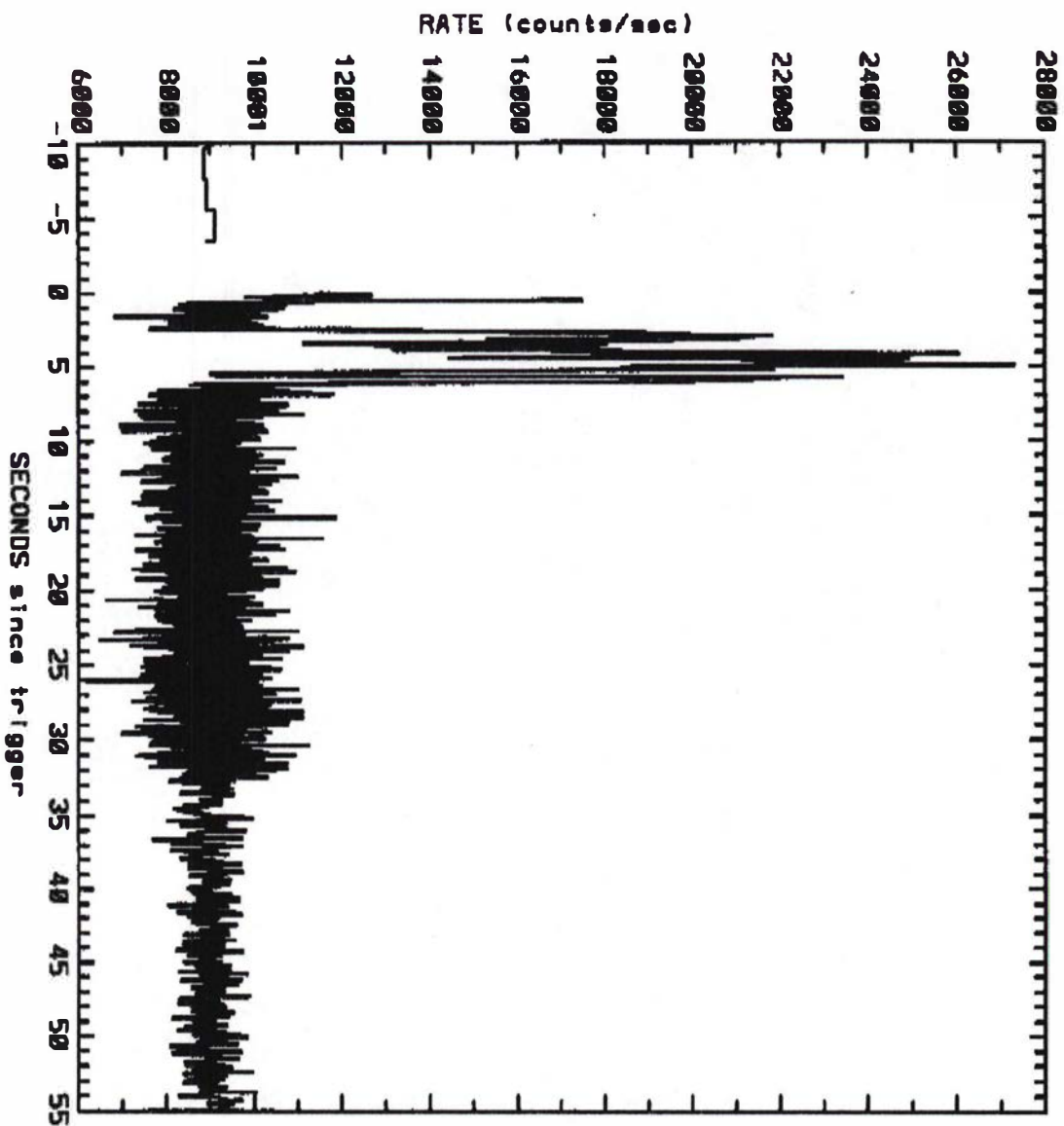
0.250 S INTERVALS REGROUPED BY 2

20- 140 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



DATA FOR K. HURLEY



3-DEC-1993 13:46:54

Created by HOPS 80
(Burnt Display)
Version 2.28

Trigger # : 2628

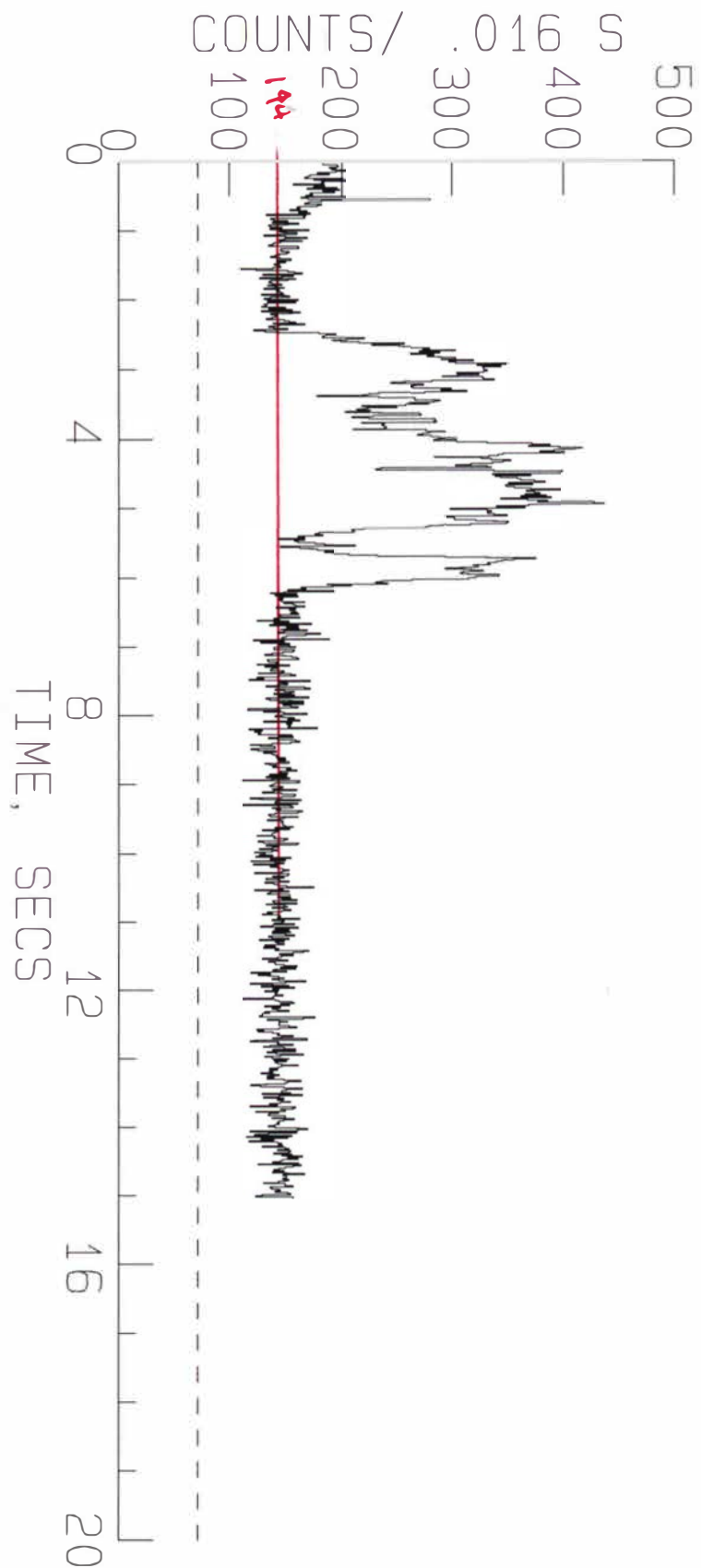
Trigger Time:
9383 / 67523.386Burnt Data Type:
MERDeadtime
Corrected: N
Background Data
Type: CDMTMinimum Integ. Time:
0.016 secondsDetectors (7.6):
BD18001Channels:
(0.6)Quality Mask:
BD1801

BATSE

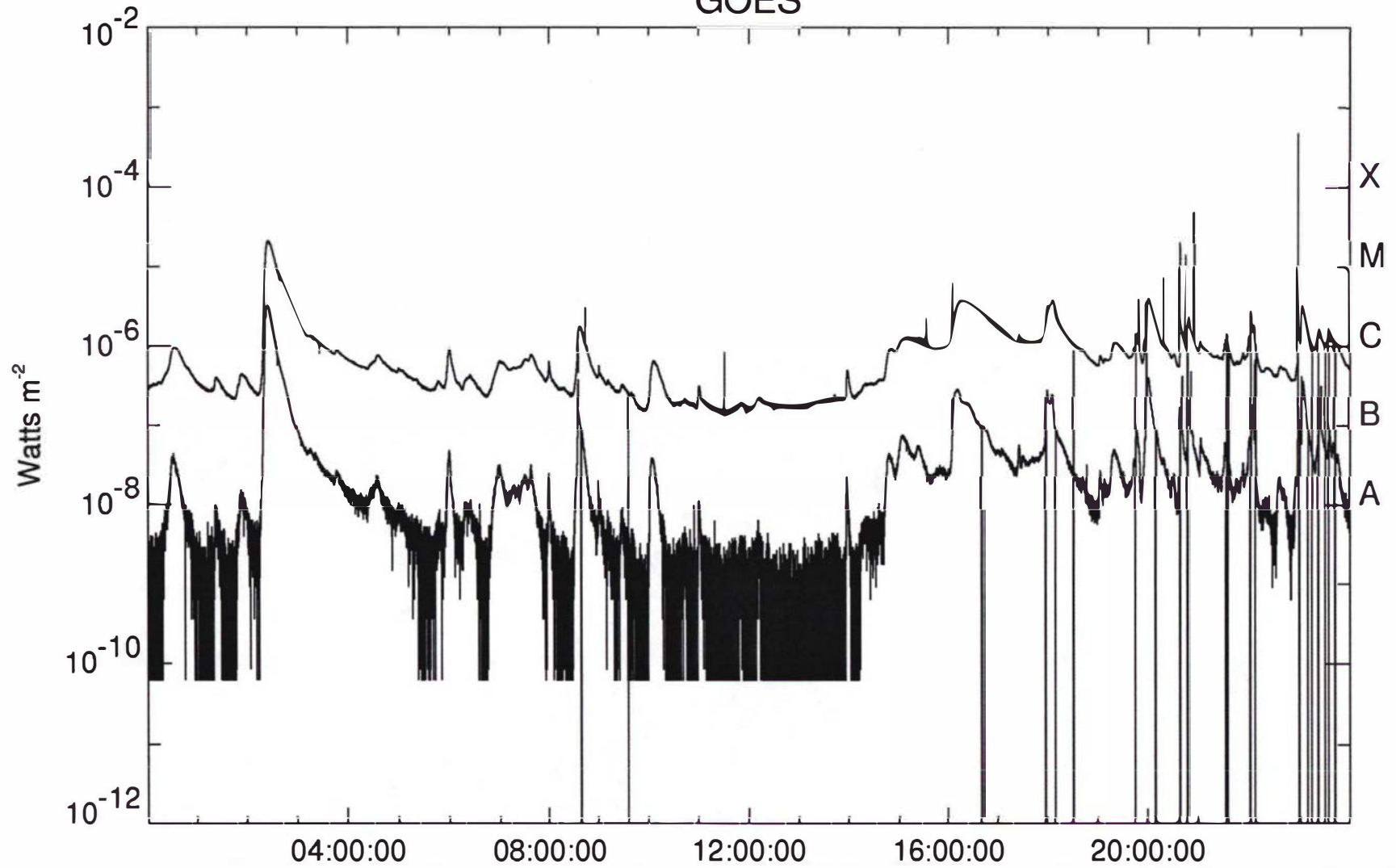
12/11/93

67553.306

25- 100 keV



GOES

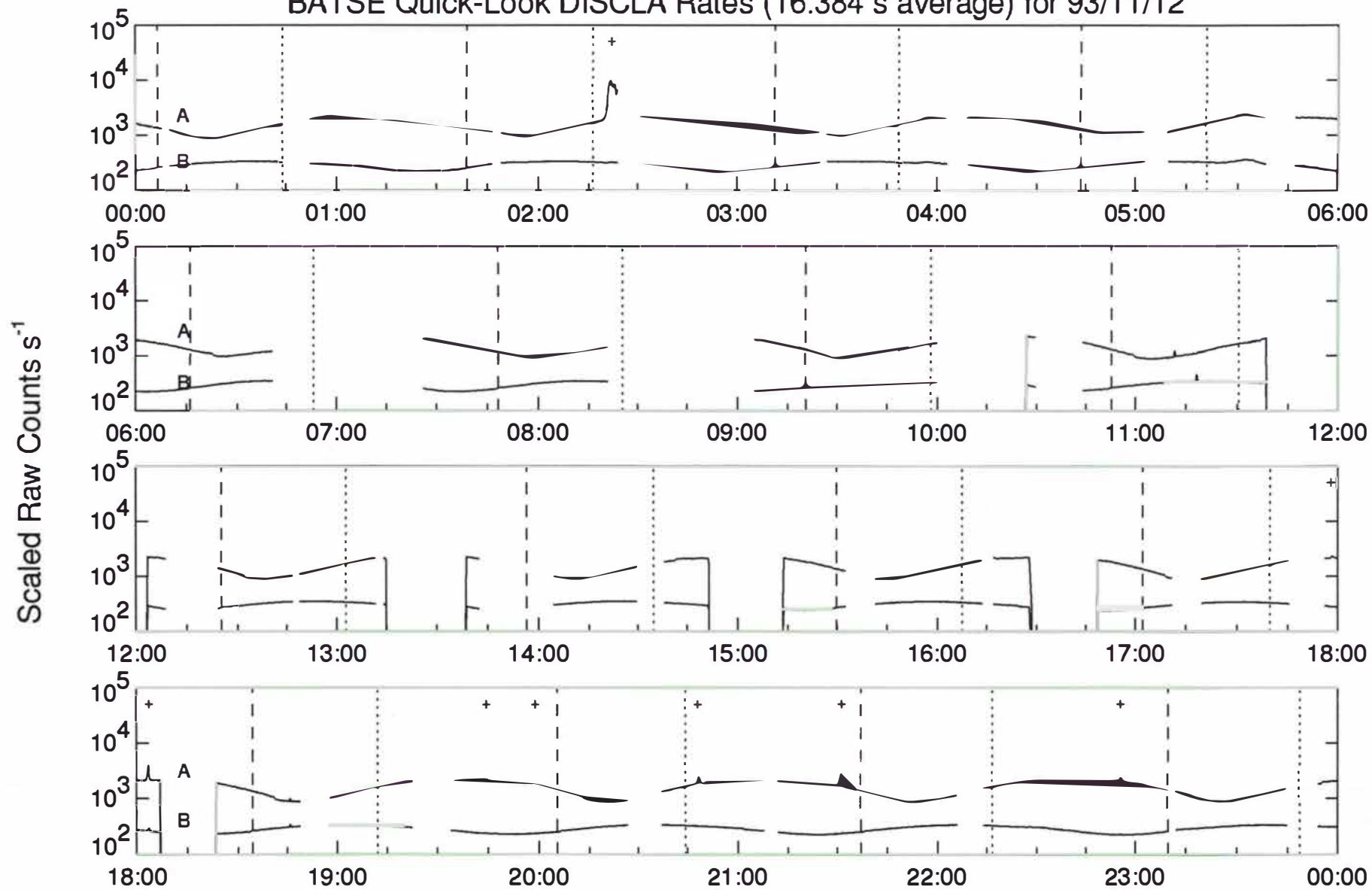


Data Start: 93/11/12, 0000:00

Plot created: 93/11/15, 1503

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

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/12

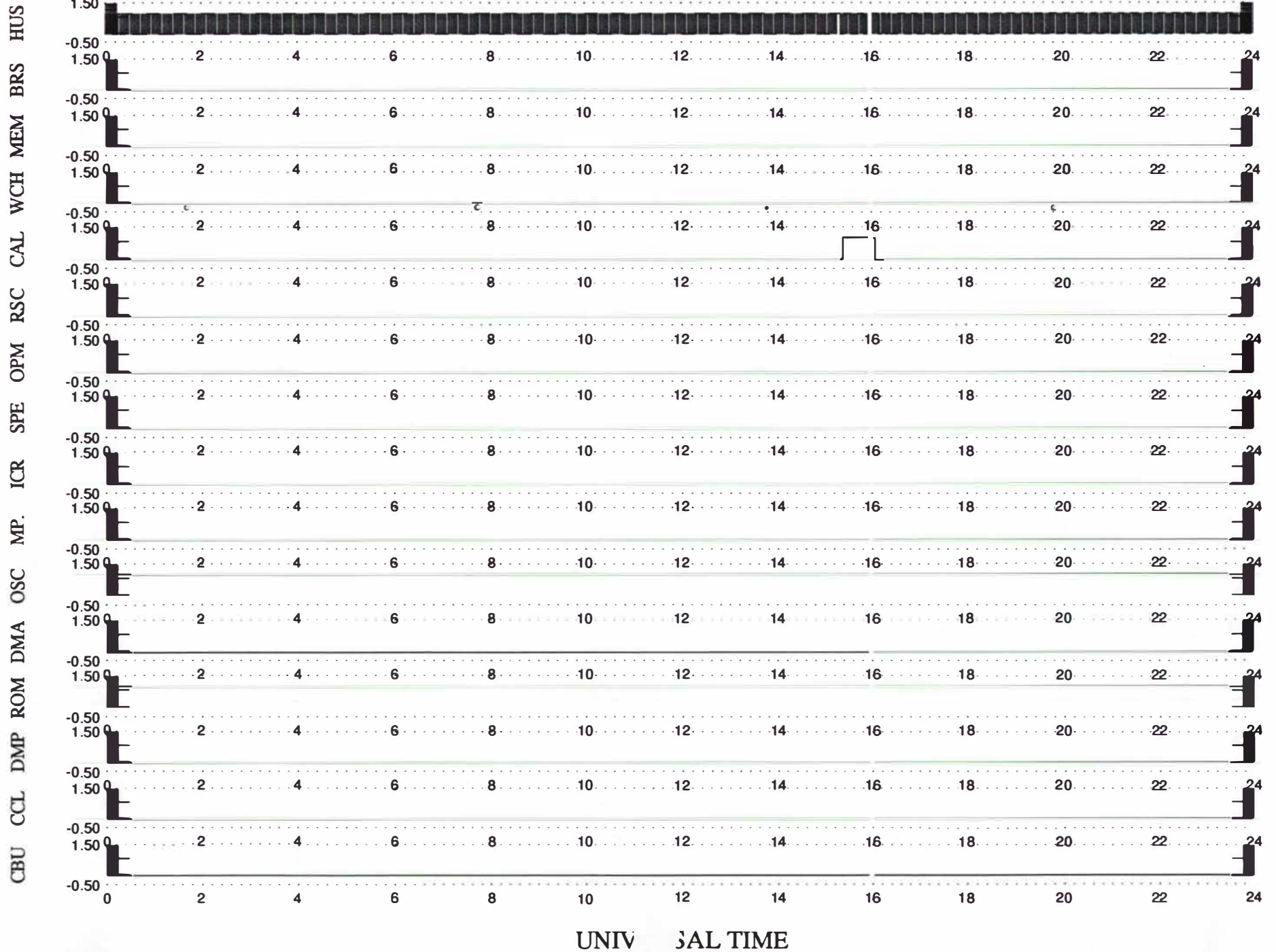


Current Time: 93/11/15, 1455 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

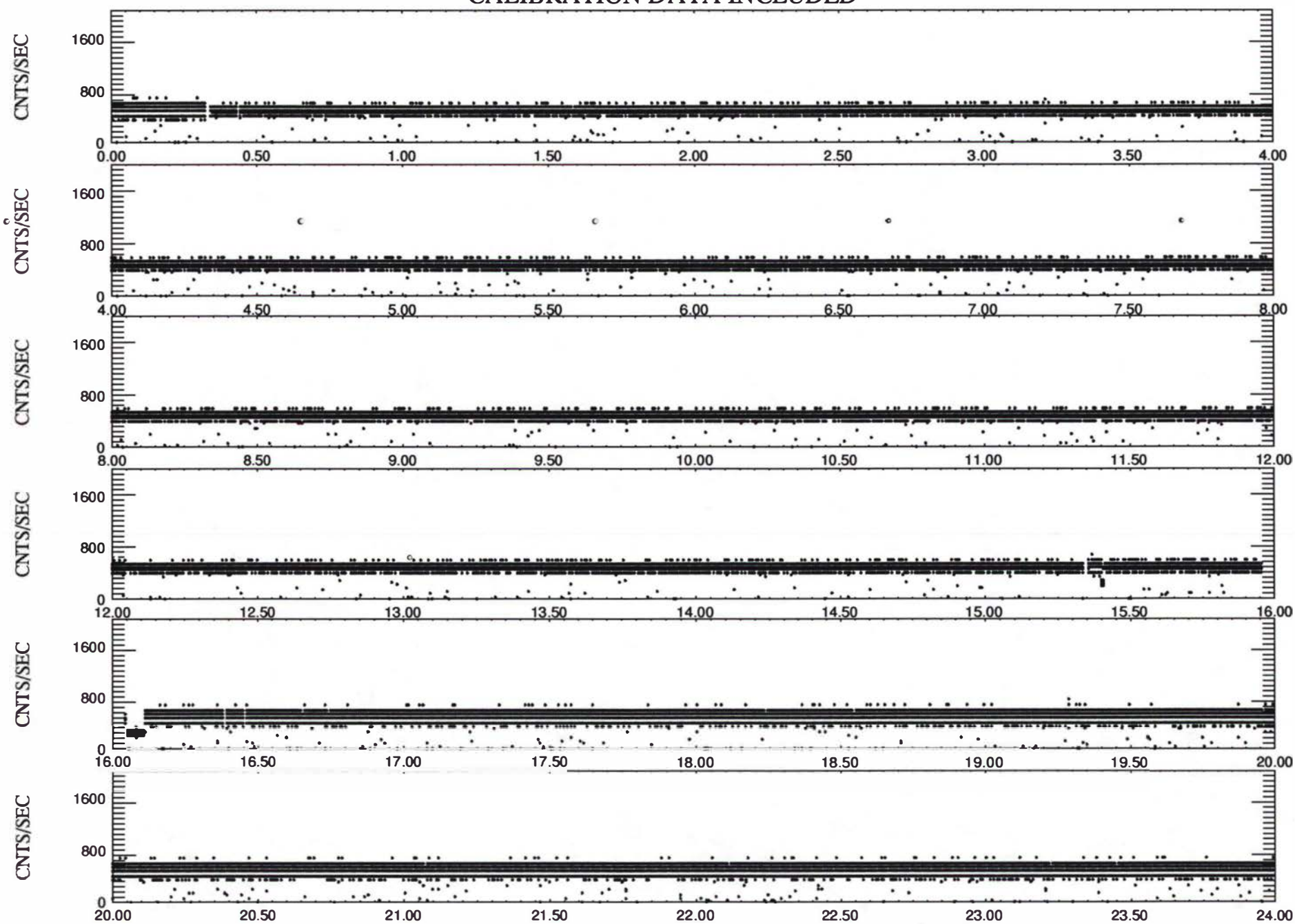
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

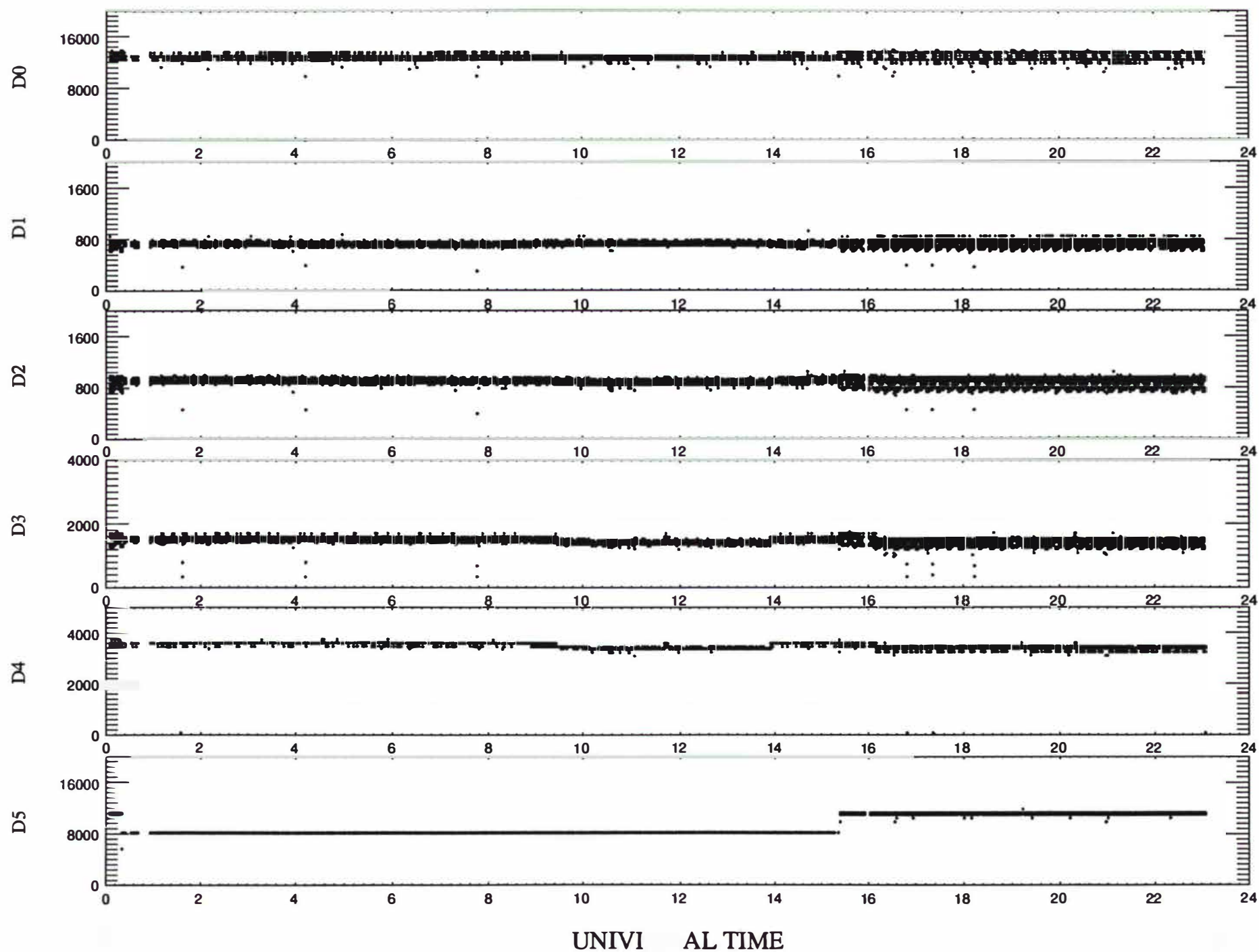
NO BURST (0)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



Low-mass
UNTRIGGERED

ULYSSES RT

22 / 5 / 97

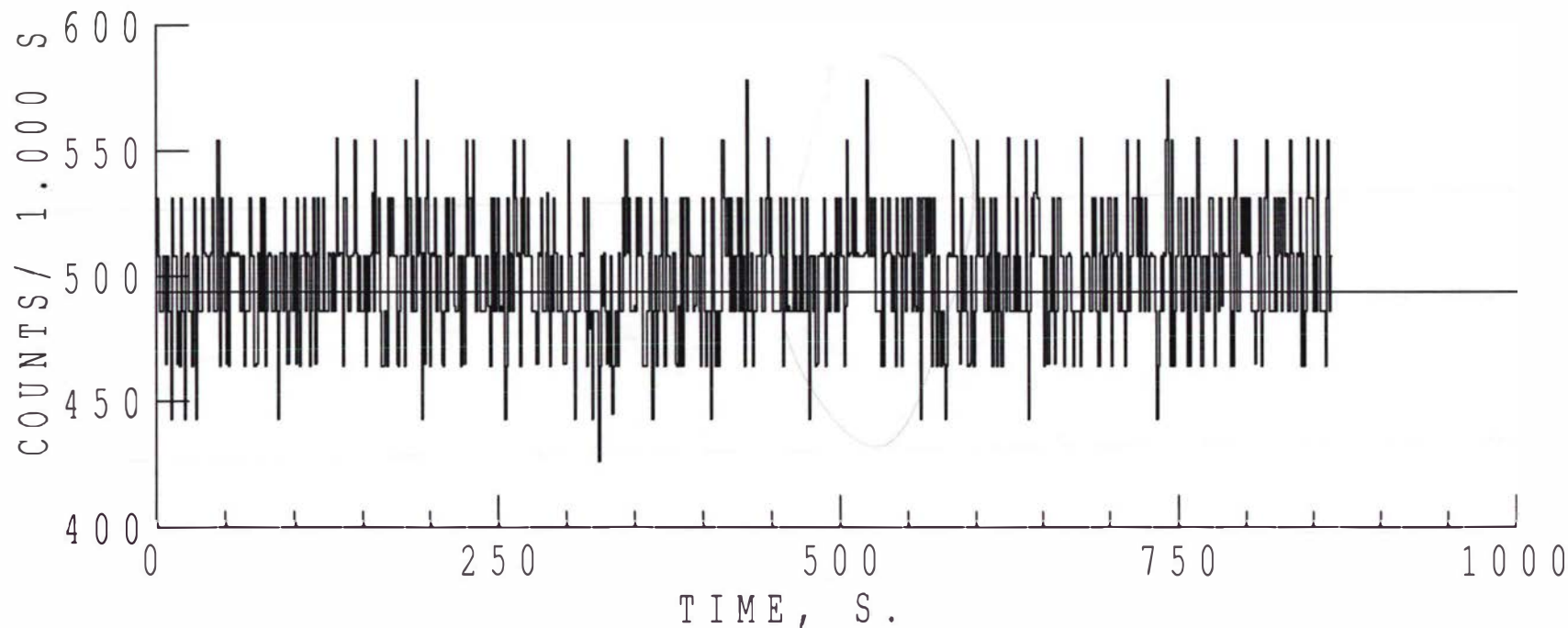
13/11/93 3132.076 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



BATSE BURST TRIGGER

NO.: 02629

TIME: TJD=9304 SECONDS=00847

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=41.2 AZIMUTH=338.7 ERROR= DEGREES

COMMENTS:

GOES C2.0 SOLAR FLARE LASTING APPROX. 10 SECONDS. VERY SMOOTH, HARD.

BATSE BURST TRIGGER

NO.: 02630

TIME: TJD=9304 SECONDS=22333

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

ELECTRON EVENT.

BATSE BURST TRIGGER

NO.: 02631

TIME: TJD=9304 SECONDS=38341

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

WEAK, 20 S PULSE. WEAKLY DETECTED ABOVE 100 KEV.

BATSE

~~20~~¹³ 11/92

847.514

25- 100 keV

COUNTS/ .064 S

3000
2000
1000
0

-3

0 1

5

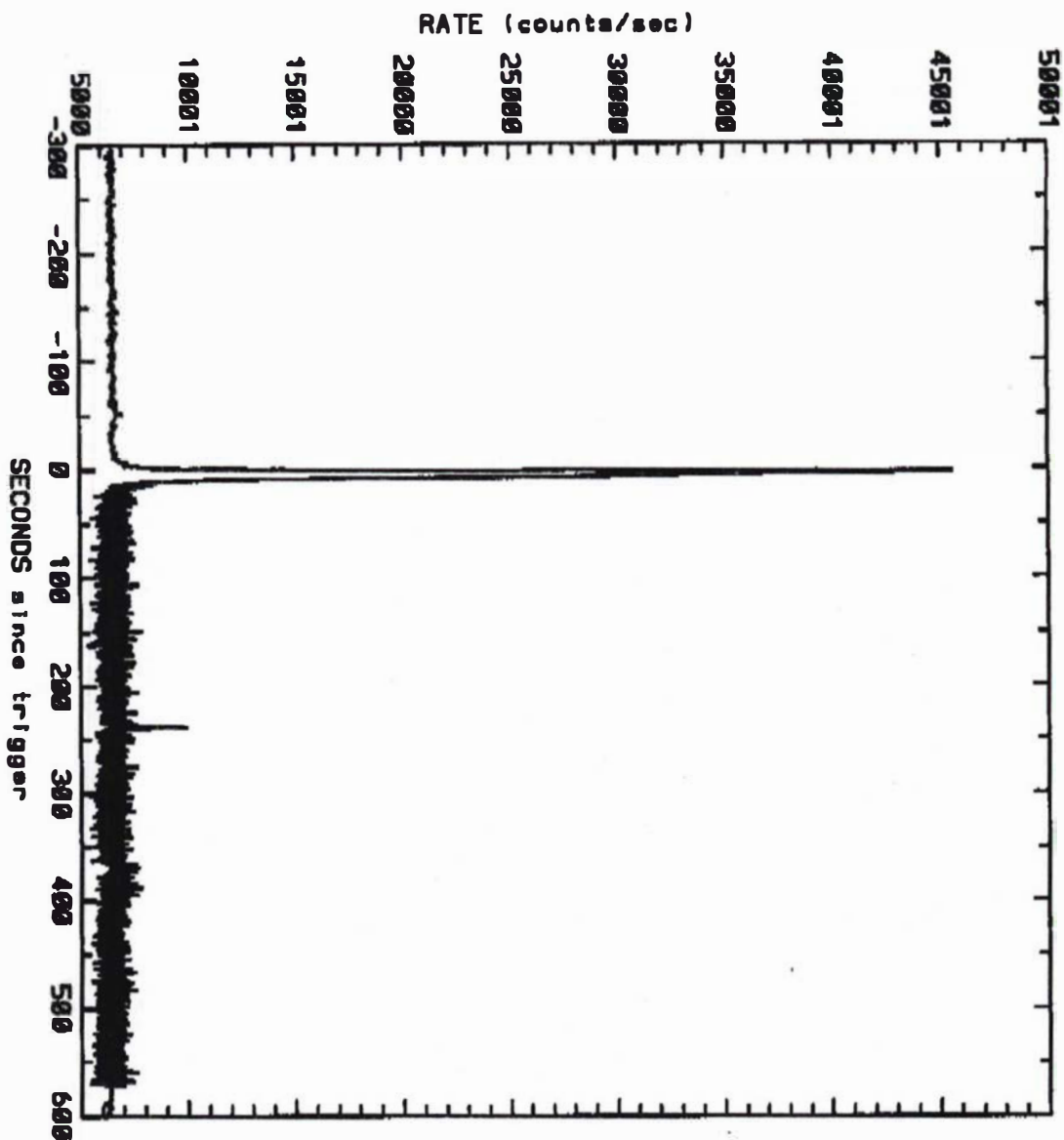
9

13

17

TIN, SECS

21/12/93



3-DEC-1993 14:24:37

Created by MOPS 80

[Burst Display]

Version 2.28

Trigger = 2629

Trigger Time:

9384 / 847.514

Burst Data Type:

DISCSC

2629
isnt a GRB

Dedtime

Corrected. N

Background Data

Type: PHEB + DISCLA

Minimum Integ. Time:

0.064 seconds

Datastore [7.0].

0000181

Discriminator:

[1.2]

Quality Mask:

001001

From SHARIFF@fender.msfc.nasa.gov Tue Nov 16 09:02:27 1993
Date: Tue, 16 Nov 1993 11:04:21 -0600 (CST)
From: SHARIFF@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2632
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2632
EVENT OF 1993 NOV 13 DAY OF YEAR=317
EVENT CROSSING TIME AT BATSE : 63747. S. OR 17:42:27.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 101.000 31.000
BATSE PEAK COUNTING RATE: 6200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 13/11/ 93 IS:
RA= 165.202 DEC= -29.599 DIST= 4.485 AU
BATSE-ULYSSES DISTANCE = 670950527. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 94.01 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -156.60 SECS.
CROSSING TIME AT ULYSSES IS 63590. S. OR 17:39:50 +/- 435.23 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 13/11/ 93 IS:
RA= 240.566 DEC= -21.103 DIST= 2.452 AU
MARS-BATSE DISTANCE = 366838464. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 37.43 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 971.71 SECS.
CROSSING TIME AT MARS IS 64719. S. OR 17:58:38 +/- 143.87 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2632	931113	9304	63747	6200	101	+31

BATSE BURST TRIGGER

NO.: 02632

TIME: TJD=9304 SECONDS=63747

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=077.2 AZIMUTH=172.2 ERROR= DEGREES

COMMENTS:

BURST, SINGLE PEAK, LASTING ~2S. MARGINALLY VISIBLE ABOVE 300KEV. (PLEASE NOTE THE CORRECTION, SORRY).

16 / 11 / 93

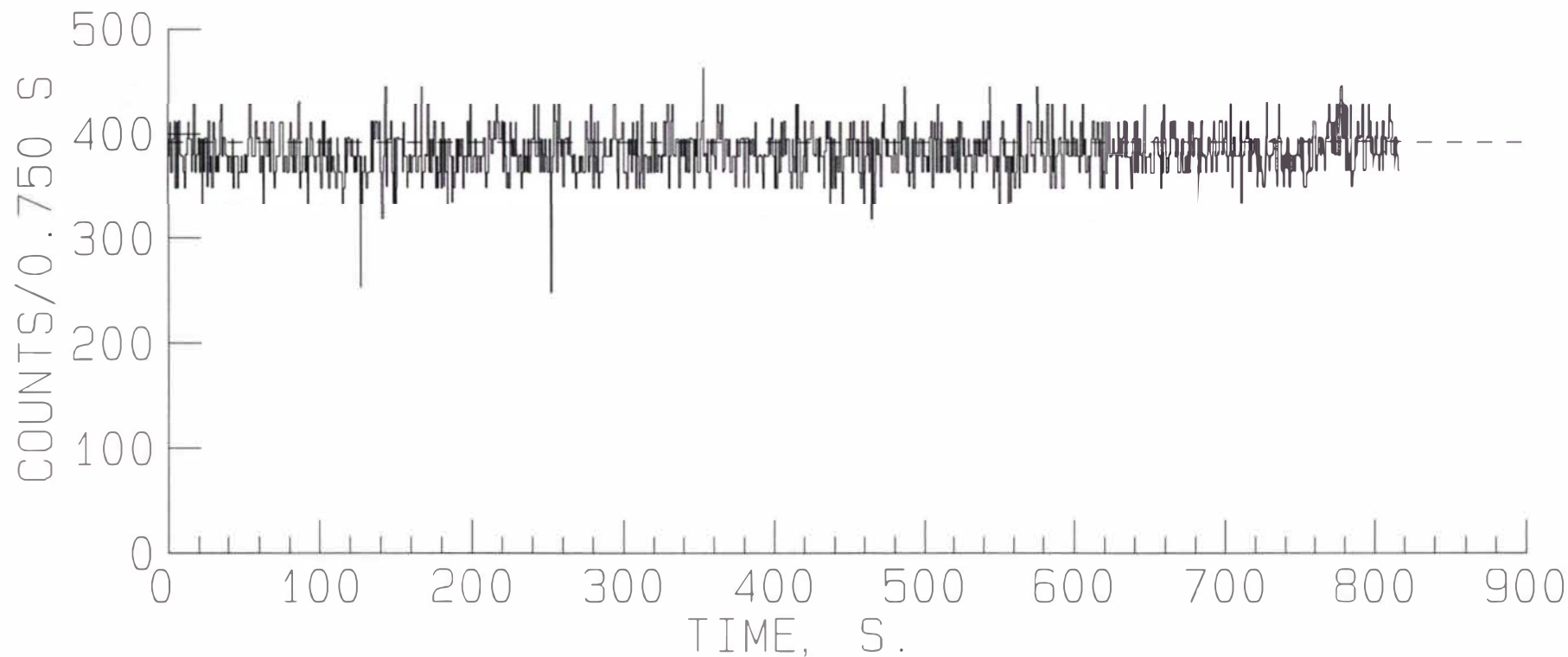
ULYSSES RT

13/11/93 63144.000 s

0.250 S INTERVALS REGROUPED BY 3

0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From SHARIFF@fender.msfc.nasa.gov Tue Nov 16 09:41:15 1993
Date: Tue, 16 Nov 1993 11:43:05 -0600 (CST)
From: SHARIFF@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2633
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2633
EVENT OF 1993 NOV 13 DAY OF YEAR=317
EVENT CROSSING TIME AT BATSE : 83241. S. OR 23:07:21.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 108.000 -31.000
BATSE PEAK COUNTING RATE: 4500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 13/11/ 93 IS:
RA= 165.224 DEC= -29.650 DIST= 4.481 AU
BATSE-ULYSSES DISTANCE = 670413804. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=131.15 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1471.61 SECS.
CROSSING TIME AT ULYSSES IS 81769. S. OR 22:42:49 +/- 319.99 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 13/11/ 93 IS:
RA= 240.566 DEC= -21.103 DIST= 2.452 AU
MARS-BATSE DISTANCE = 366838464. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 69.18 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 435.01 SECS.
CROSSING TIME AT MARS IS 83676. S. OR 23:14:36 +/- 205.17 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2633	931113	9304	83241	4500	108	-31

BATSE BURST TRIGGER

NO.: 02633

TIME: TJD=9304 SECONDS=83241

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=080.8 AZIMUTH=234.8 ERROR= DEGREES

COMMENTS:

BURST, TWO PEAKS, LASTING ~1.3S. VISIBLE ABOVE 300KEV.

CATSEARCH PROGRAM

BATSE BURST # 2633
EVENT OF 1993 NOV 13 DAY OF YEAR=317
EVENT CROSSING TIME AT BATSE : 83241. S. OR 23:07:21.3
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 107.820 -46.800
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 13/11/ 93 IS:
RA= 165.131 DEC= -29.432 DIST= 4.497 AU
BATSE-ULYSSES DISTANCE = 672712304. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=132.86 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1526.32 SECS.
CROSSING TIME AT ULYSSES IS 81715. S. OR 22:41:55.0 +/- 312.39 SECONDS

9 / 11 / 95

ULYSSES RT

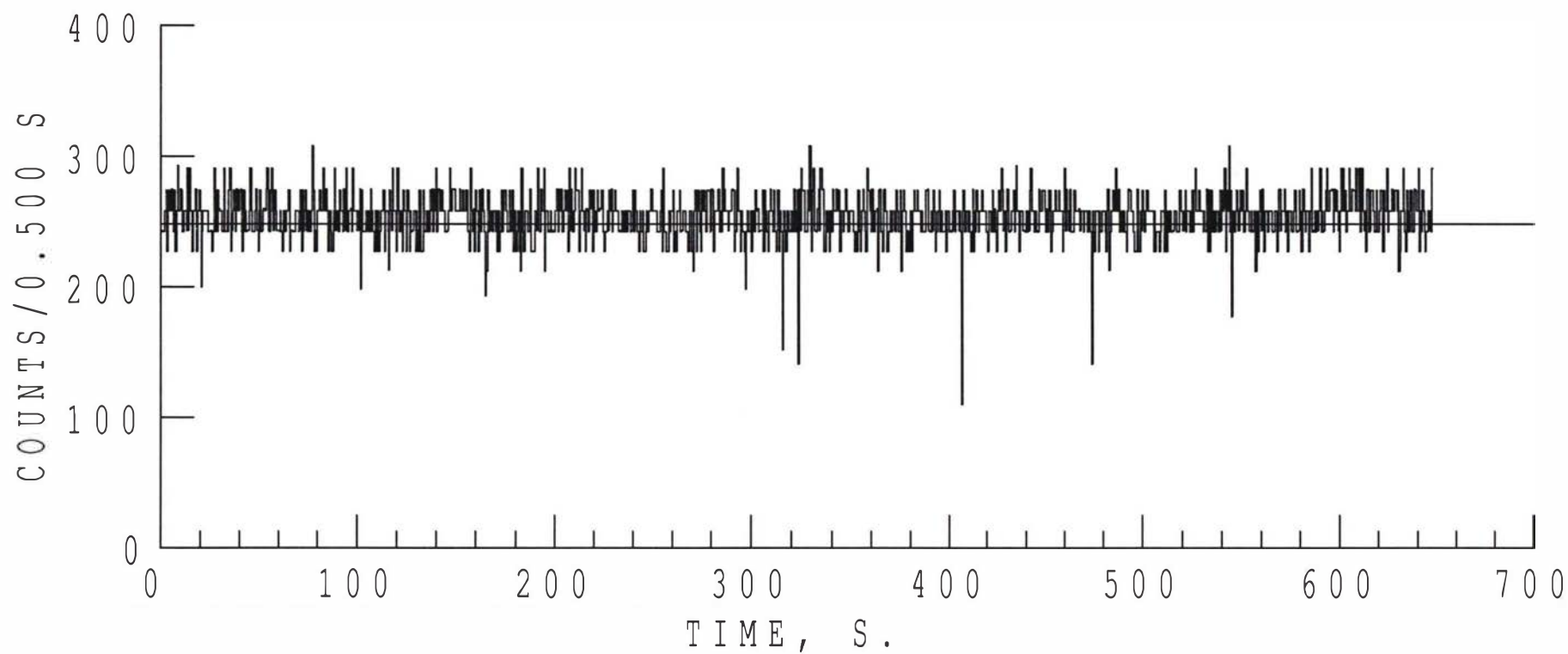
13/11/93 81396.031 s

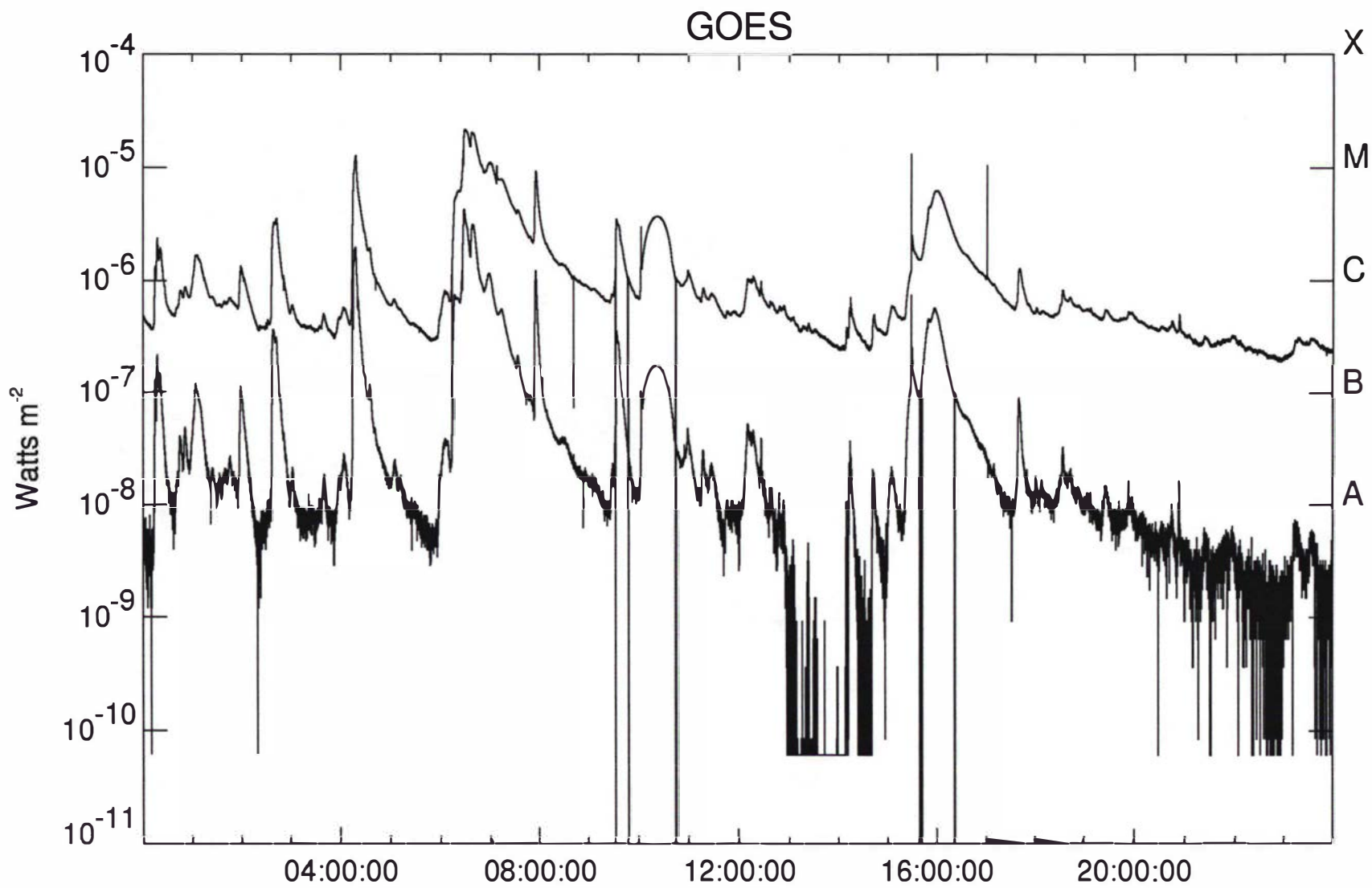
0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





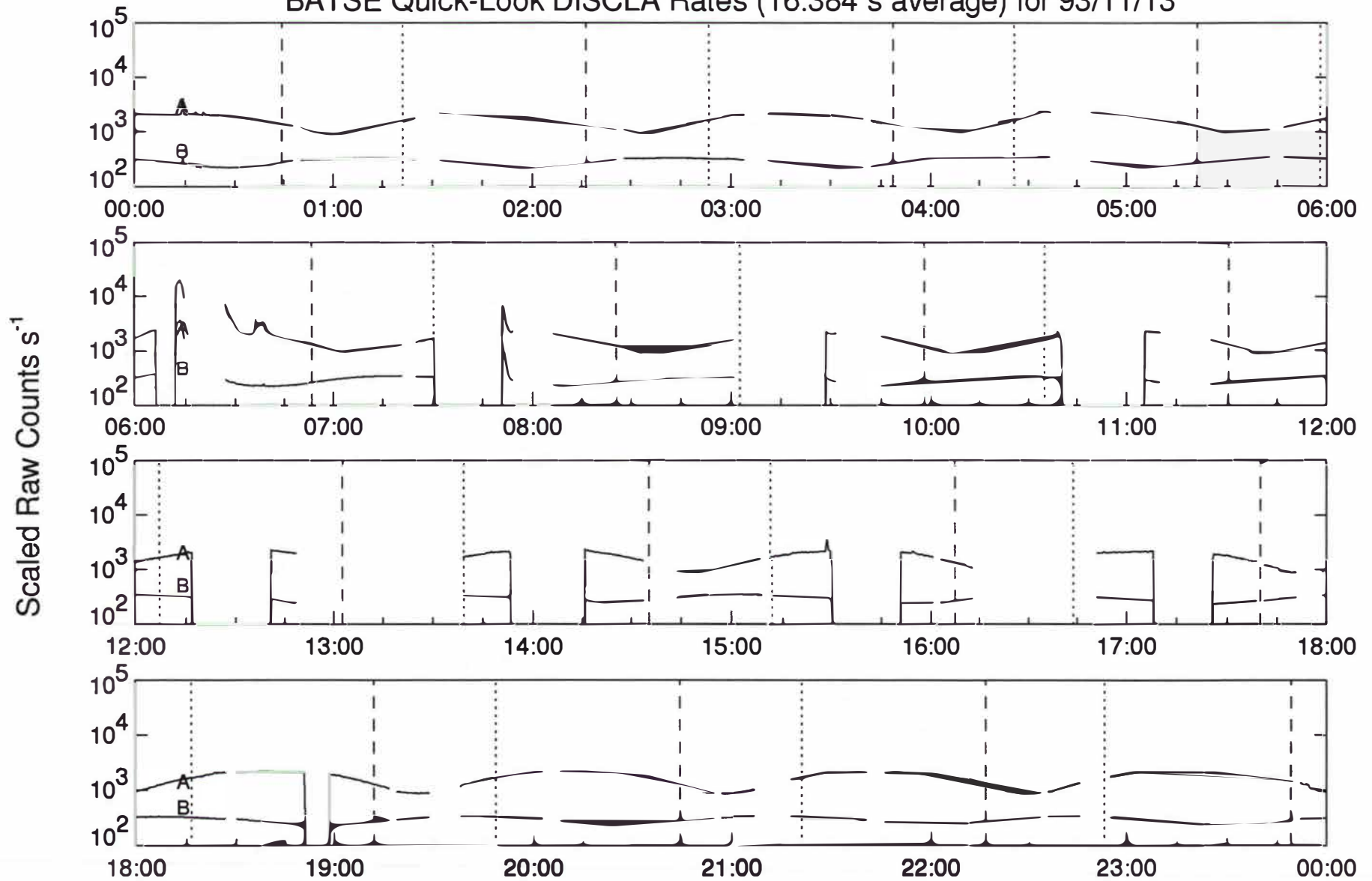
Data Start: 93/11/13, 0000:02

Plot created: 93/11/15, 1504

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/13

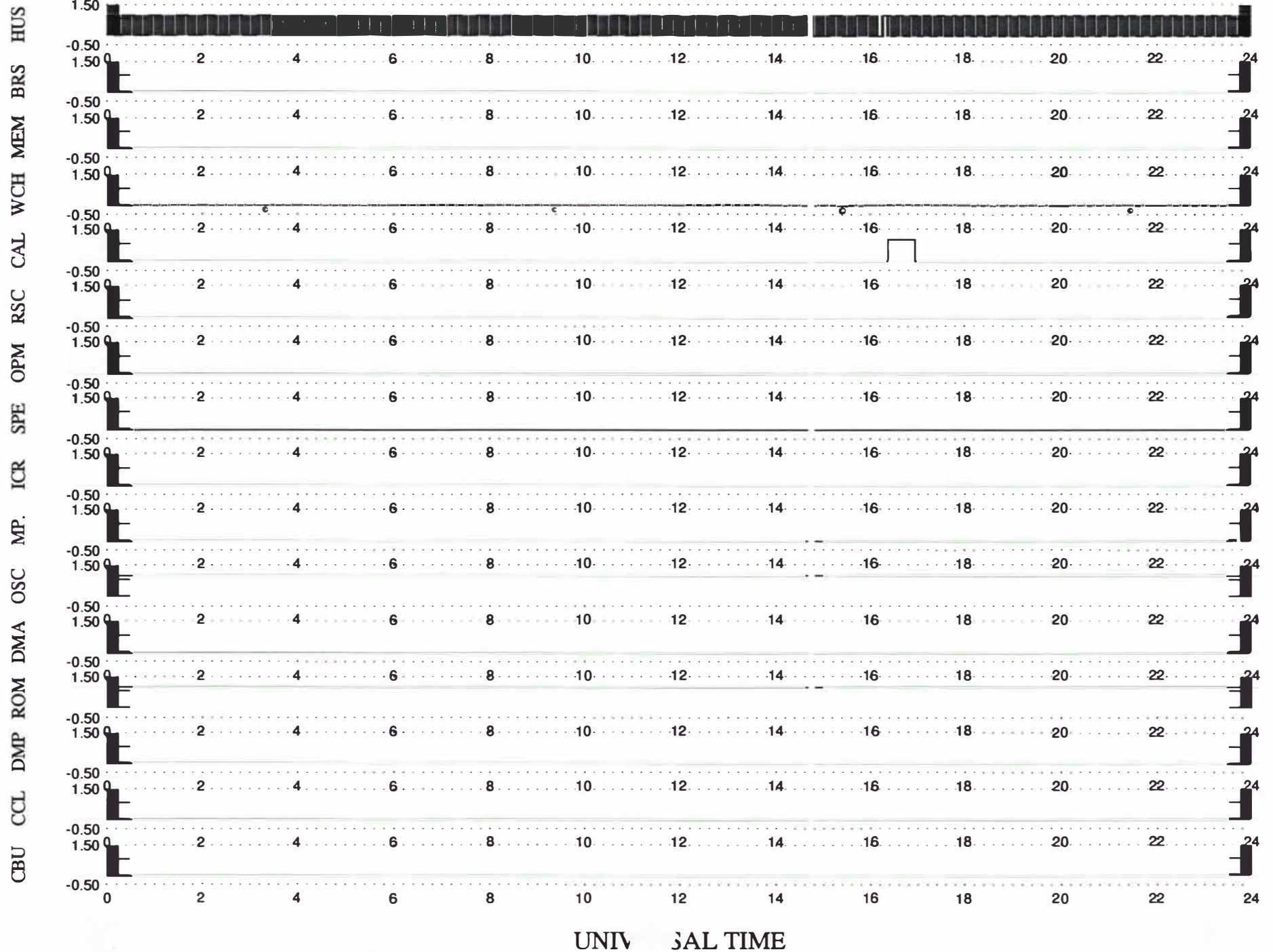


Current Time: 93/11/15, 1455 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

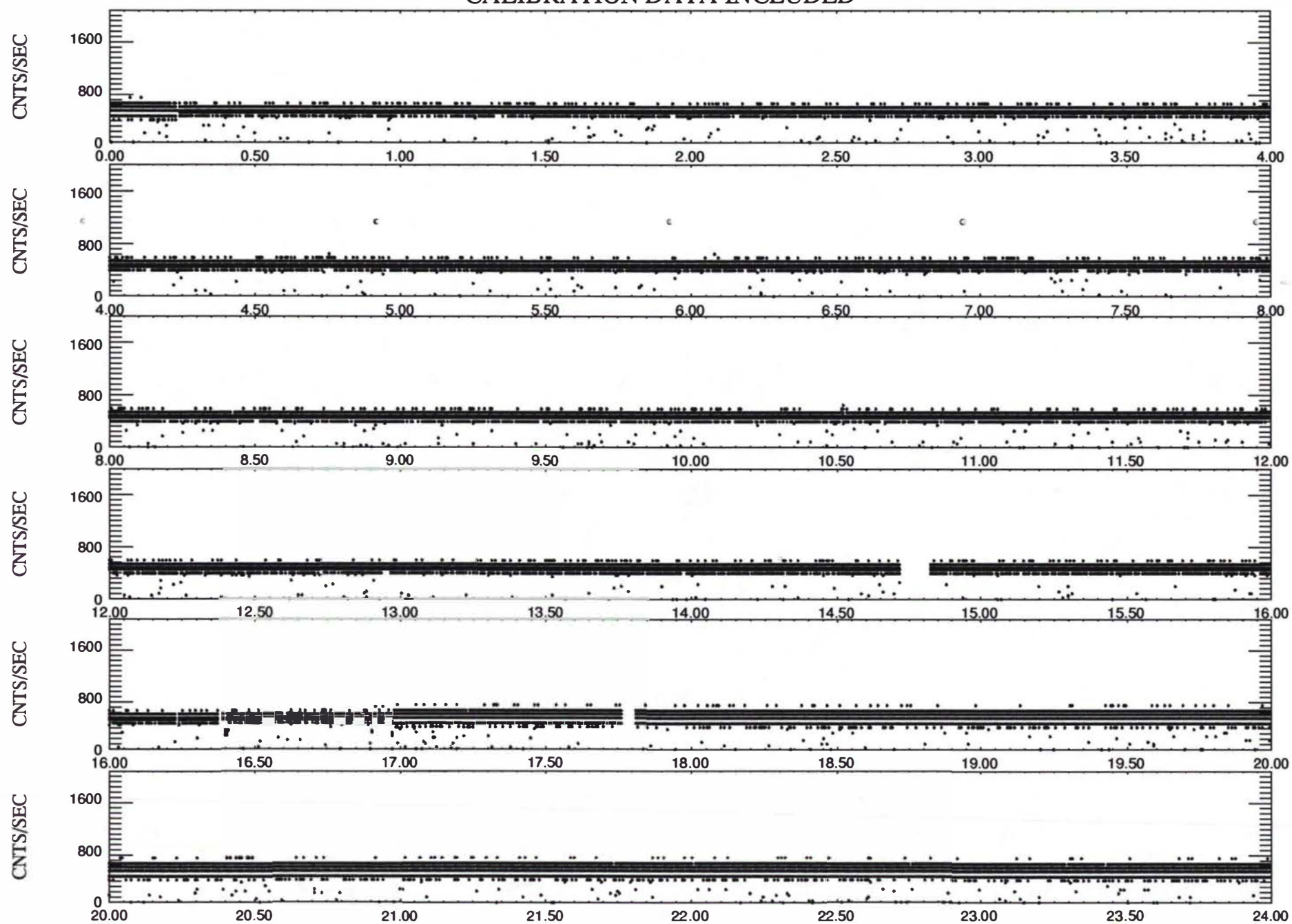
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

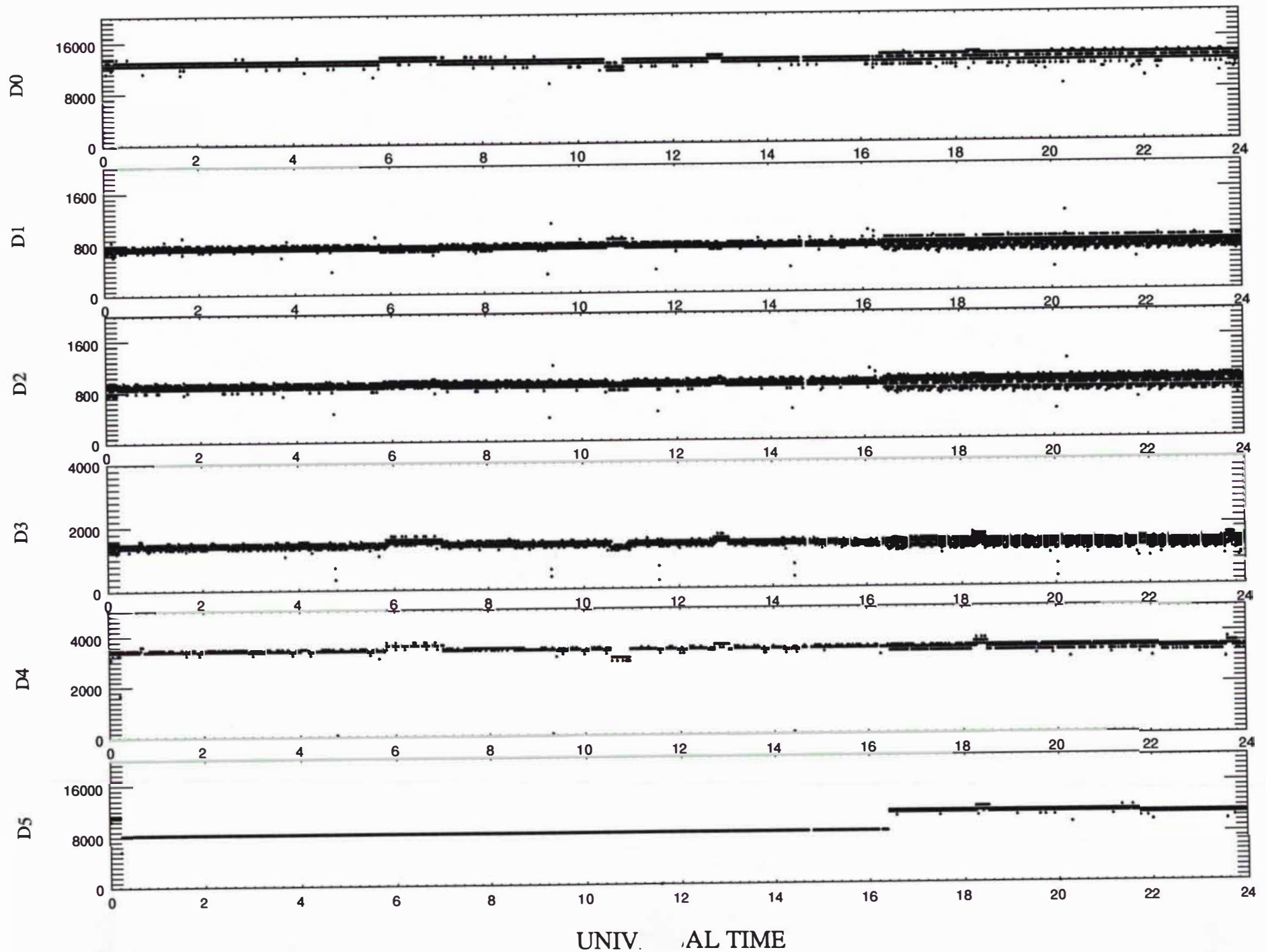
NO BURST (0)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From MEEGAN@ssl.msfc.nasa.gov Tue Nov 16 06:56:24 1993
Date: Tue, 16 Nov 1993 8:58:22 -0600 (CST)
From: MEEGAN@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu, KOUVELIOTOU@ssl.msfc.nasa.gov,
COLE@ssl.msfc.nasa.gov
Cc: MEEGAN@ssl.msfc.nasa.gov
Subject: BATSE Burst 2634
Content-Length: 108

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2634	931114	9305	18795	6000	029	-43

From MEEGAN@ssl.msfc.nasa.gov Tue Nov 16 06:53:20 1993
Date: Tue, 16 Nov 1993 8:55:07 -0600 (CST)
From: MEEGAN@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02634

TIME: TJD=9305 SECONDS=18795

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=139 AZIMUTH=260. ERROR= DEGREES

COMMENTS:

SINGLE 20 S LONG PULSE. NOT SEEN ABOVE 300 KEV.

Probably not

16 / 11 / 93

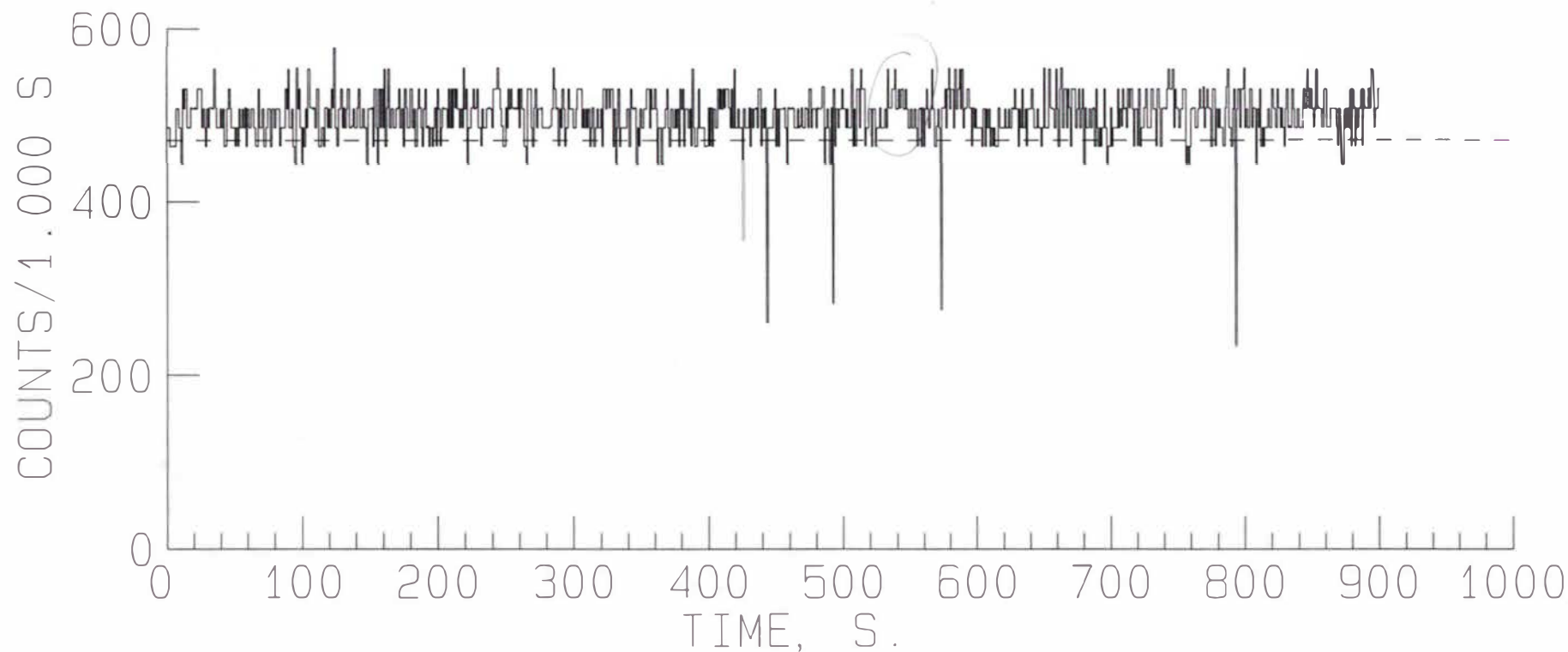
ULYSSES RT

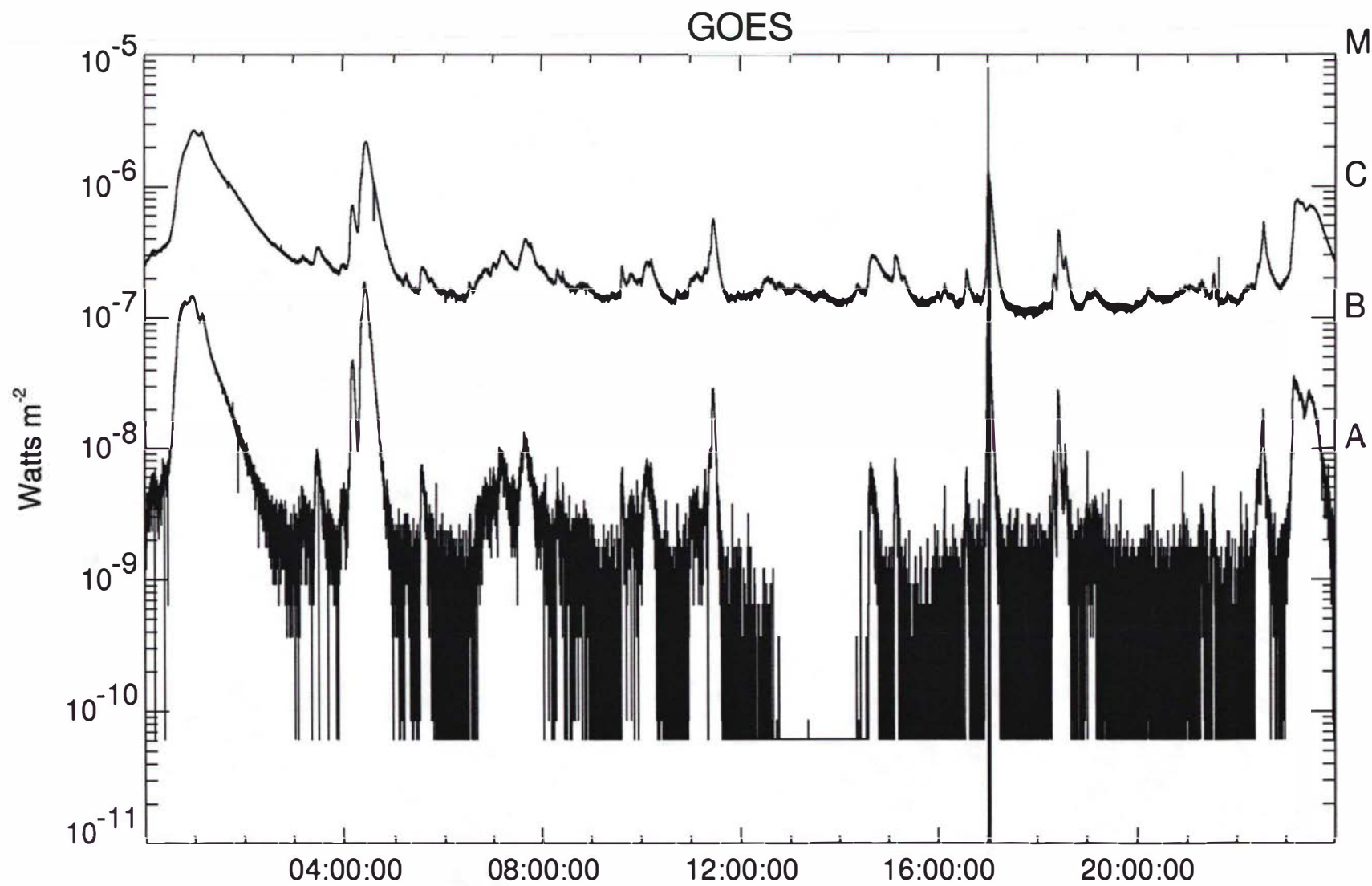
14/11/93 18612.141 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





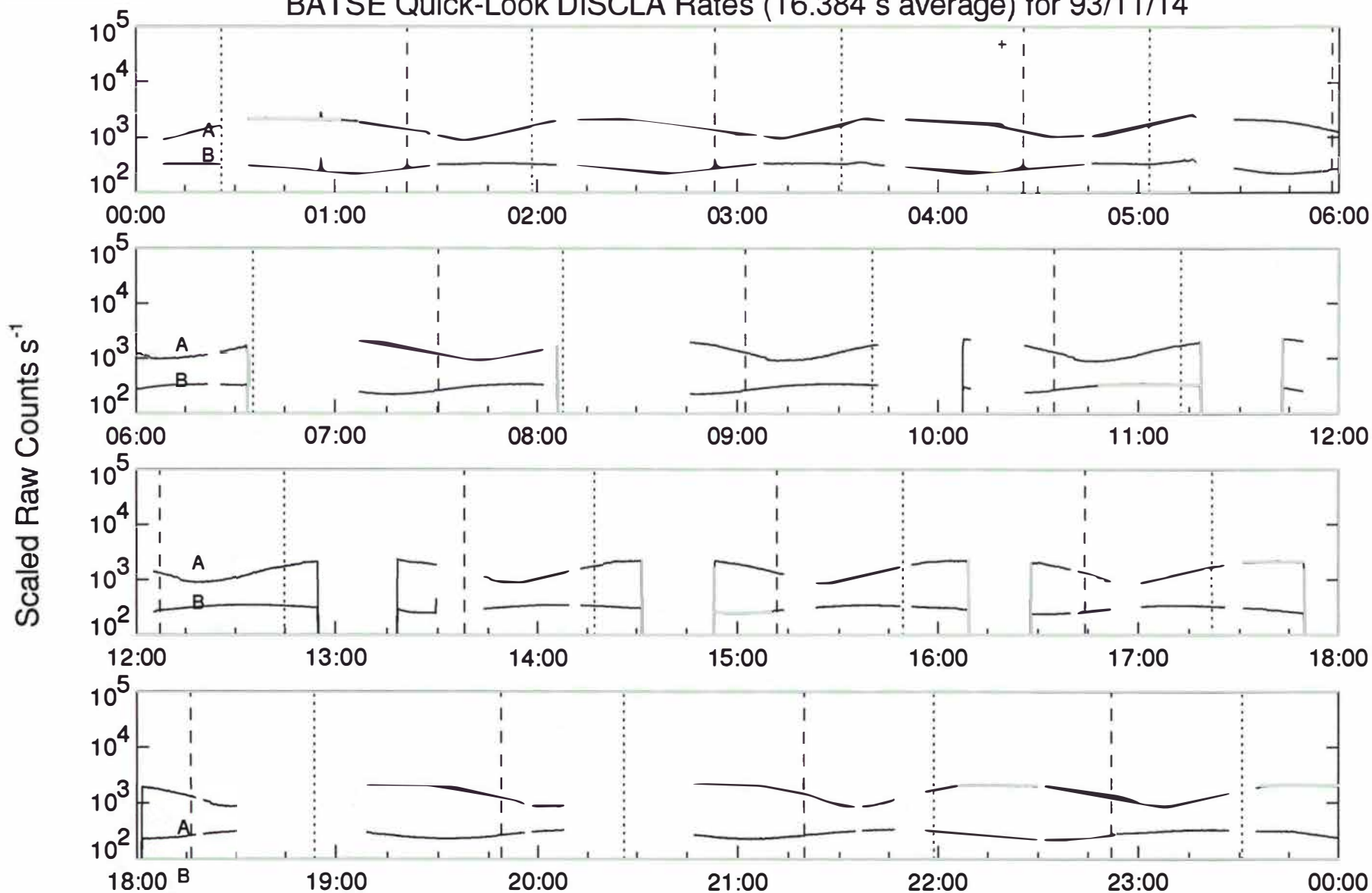
Data Start: 93/11/14, 0000:02

Plot created: 93/11/15, 1504

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 93/11/14

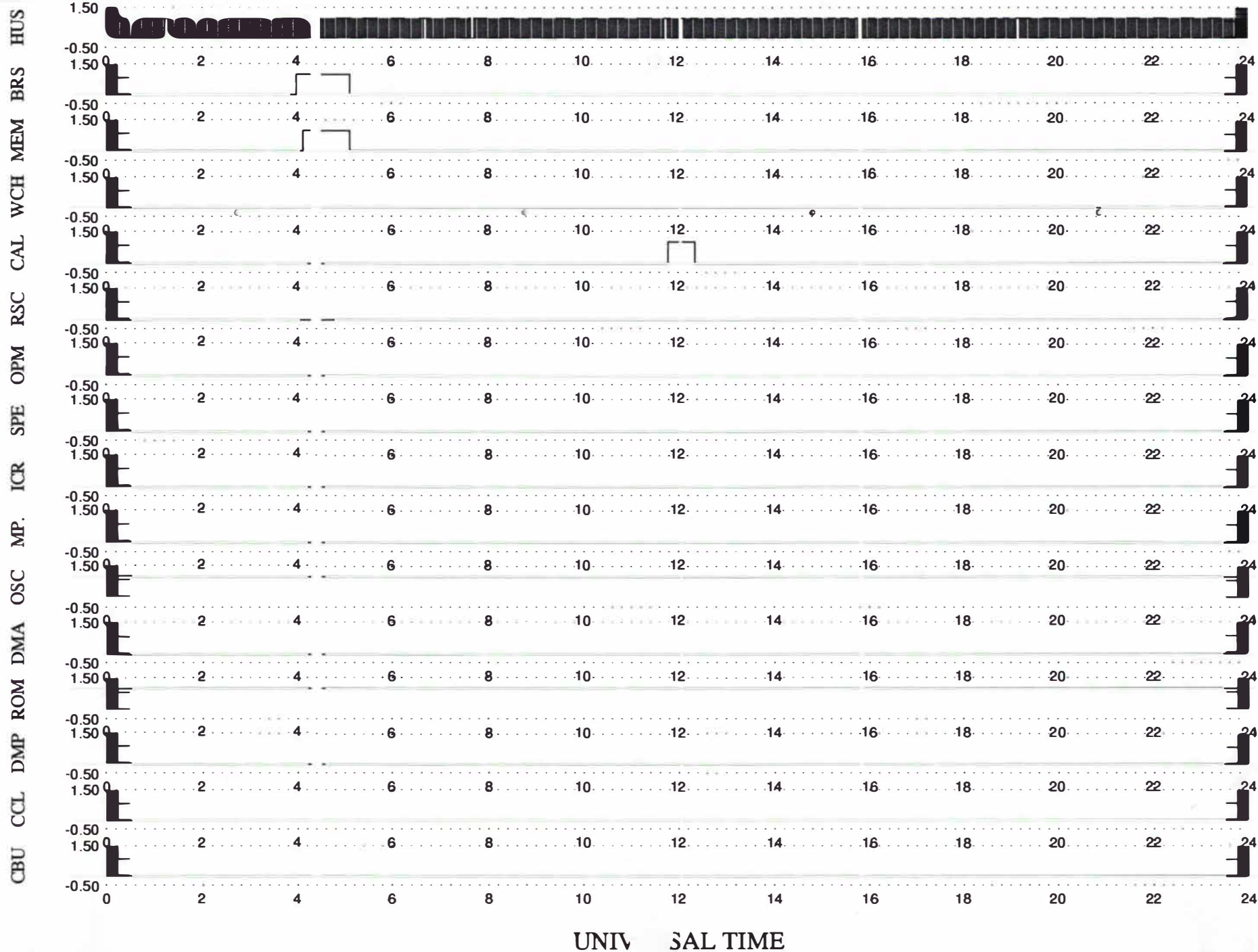


Current Time: 93/11/16, 1355 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

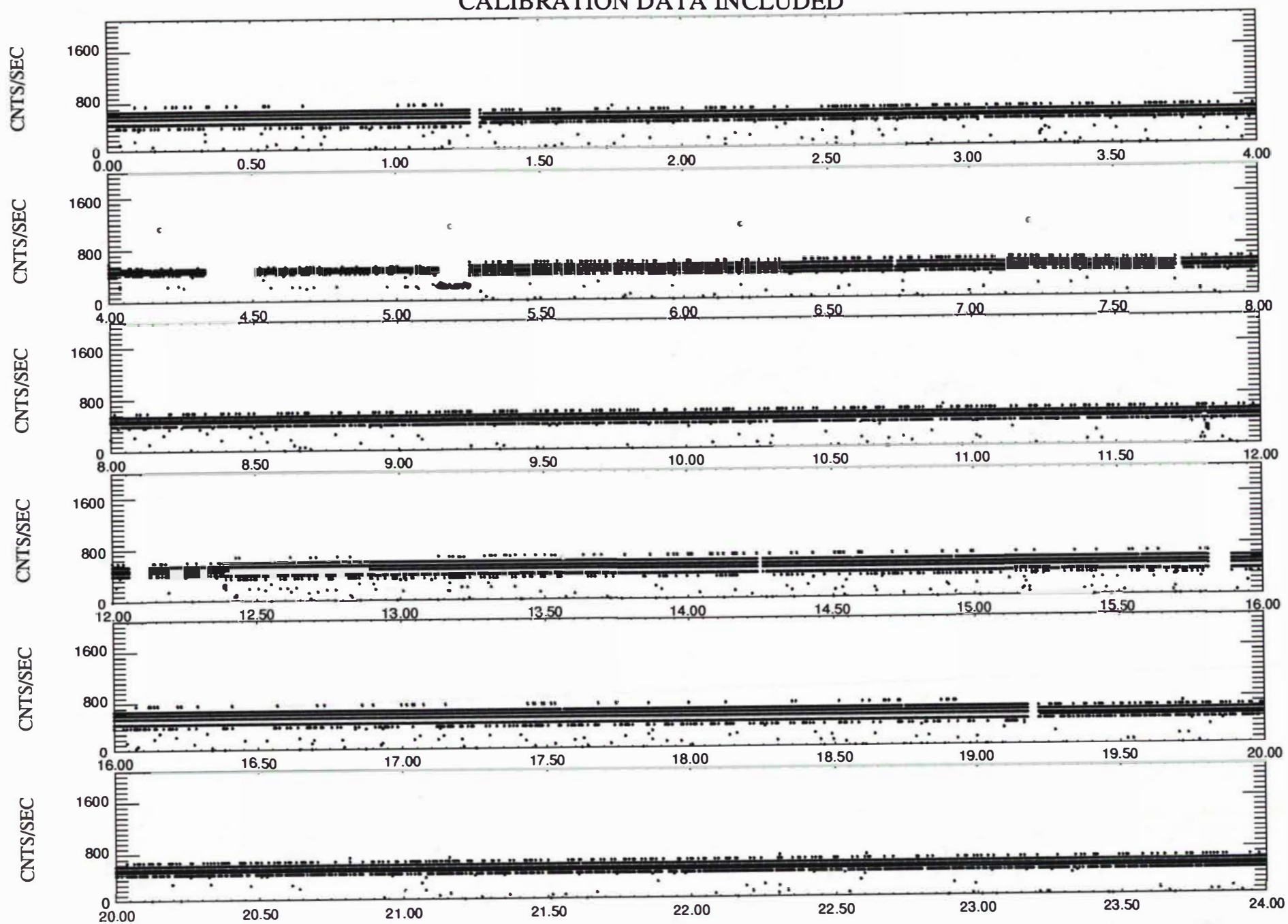
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

BURST NUMBER 1

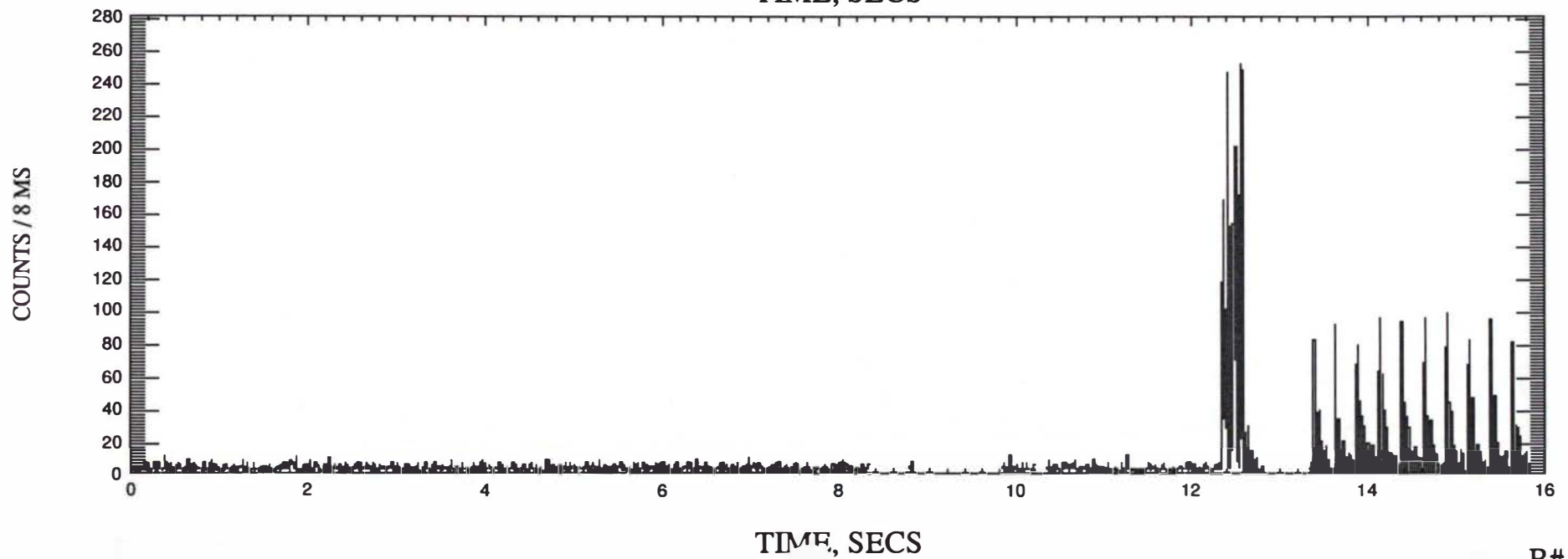
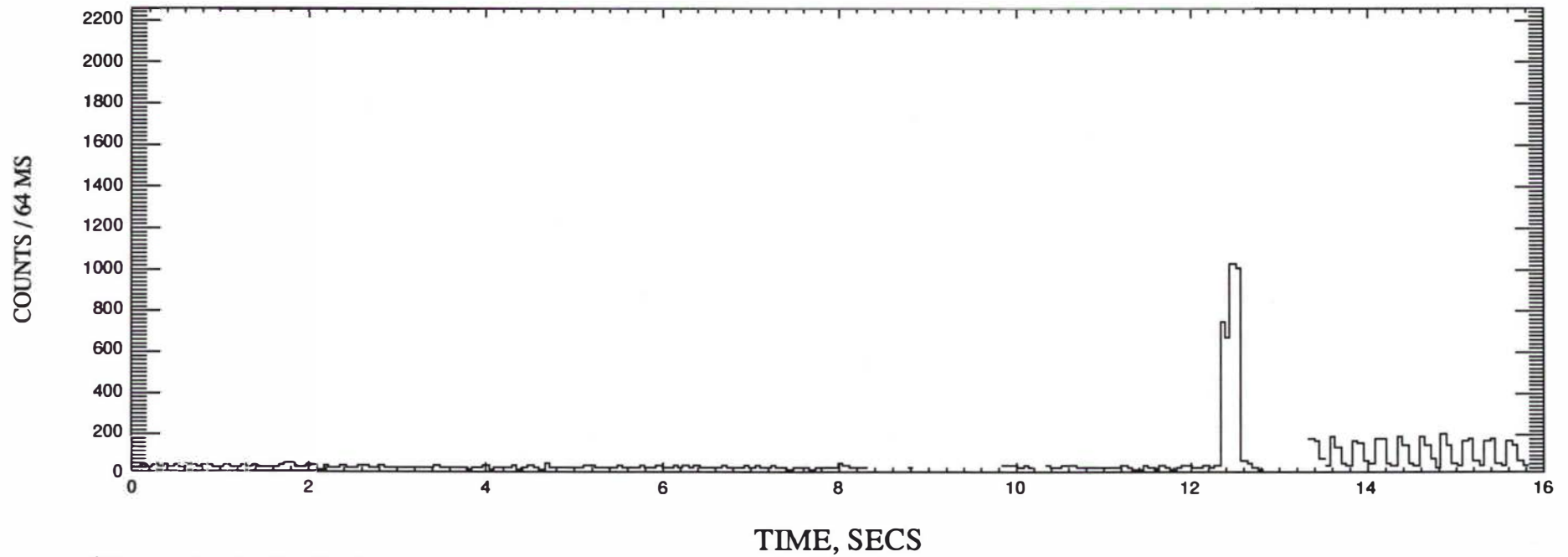


CALIBRATION DATA INCLUDED

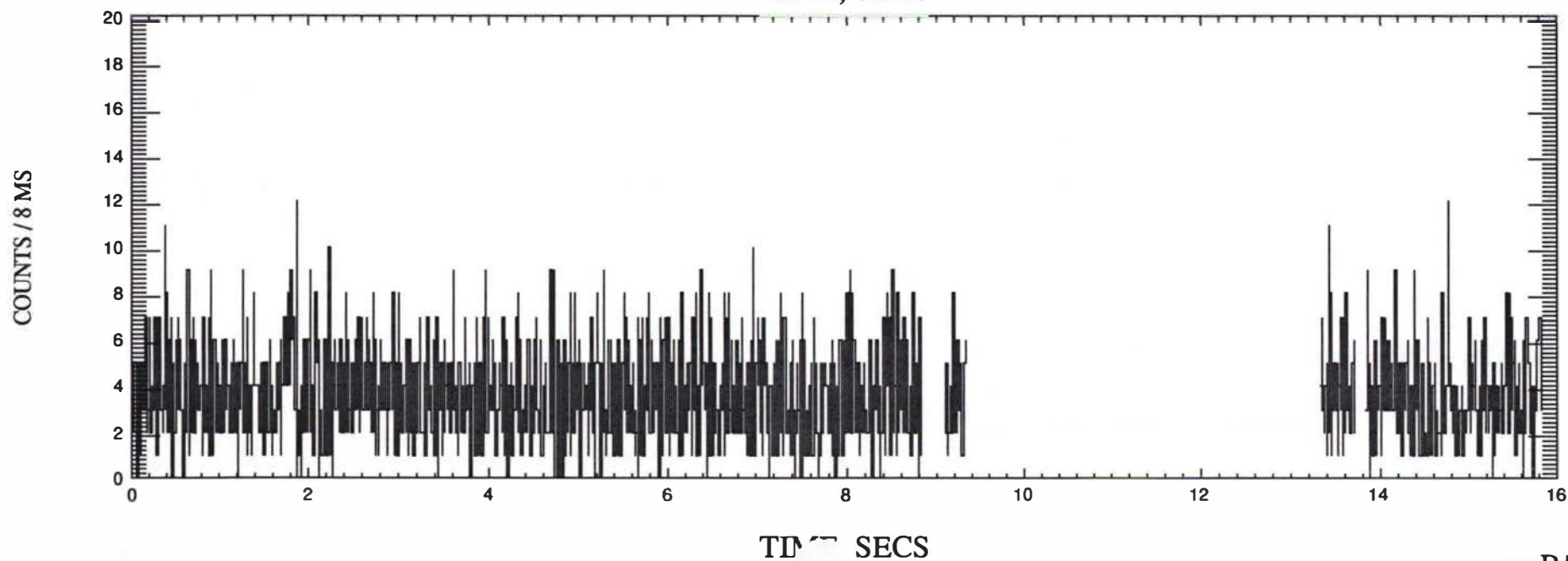
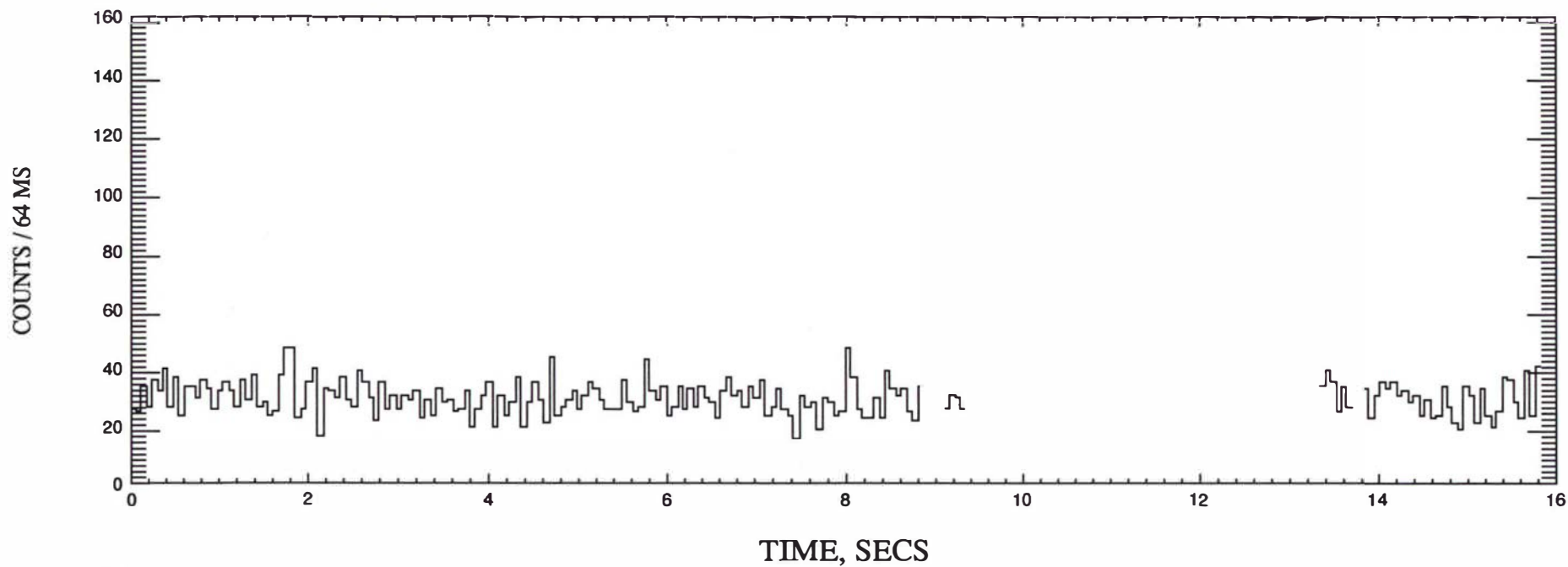


UNIV SAL TIME

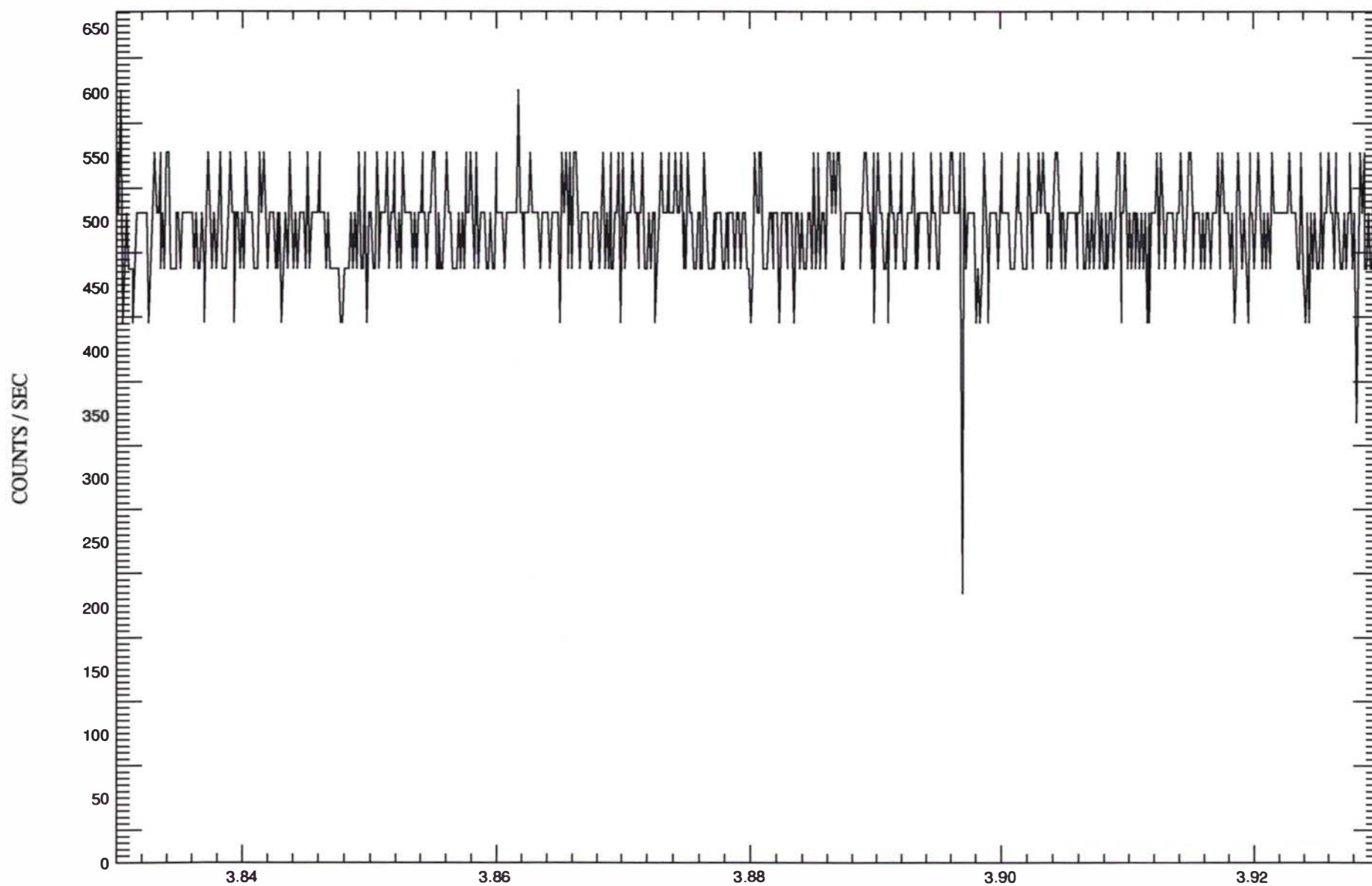
Burst Counter 1 at UT= 3.880885420905 h=13971.188 s 03:52:51.188

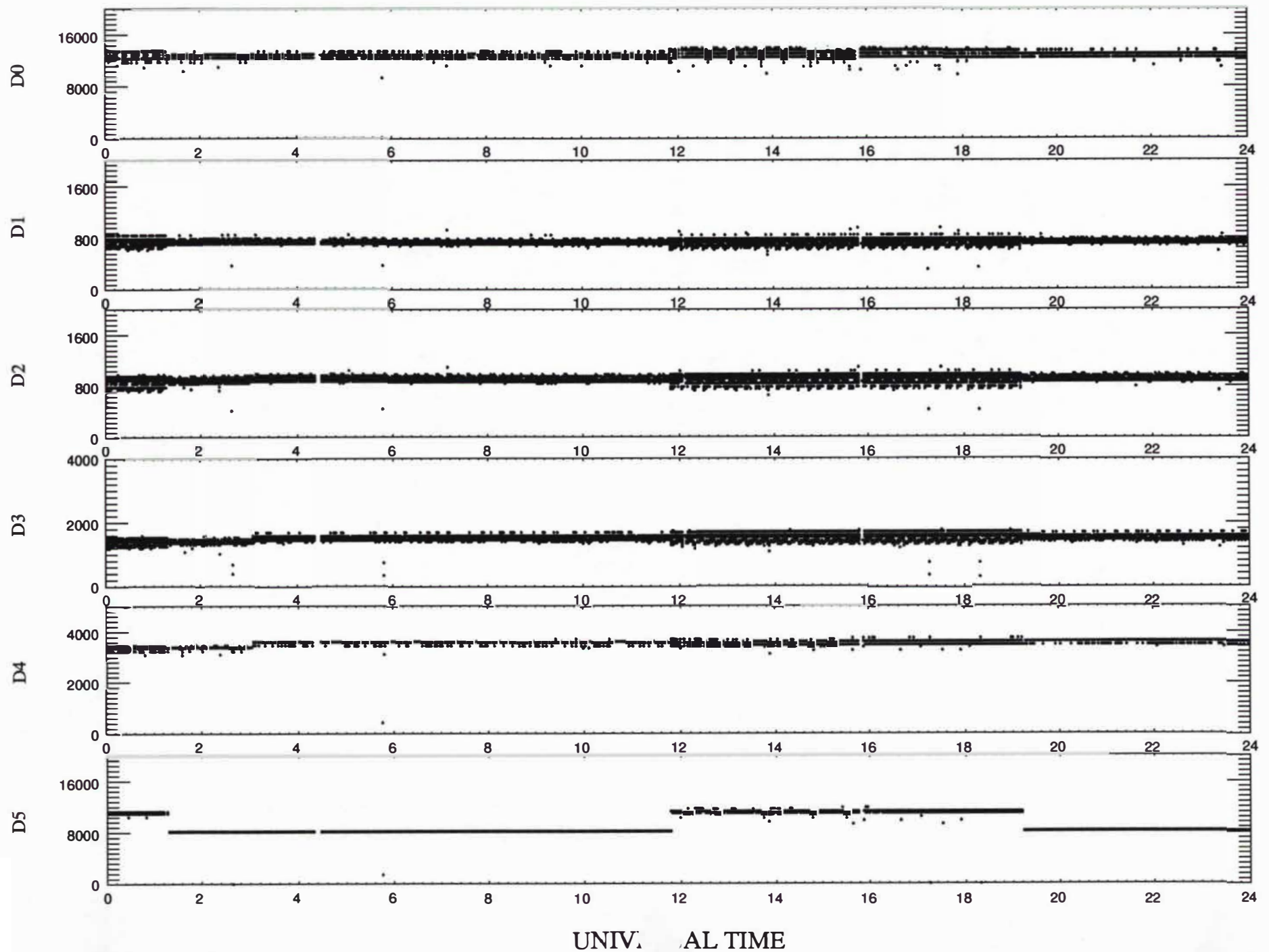


Burst Counter 1 at UT= 3.880885420905 h=13971.188 s 03:52:51.188



CALIBRATION DATA INCLUDED





Kawmang

UNTRIGGERED

ULYSSES RT

22 / 5 / 97

15/11/93 67356.227 s

0.250 S INTERVALS REGROUPED BY 3

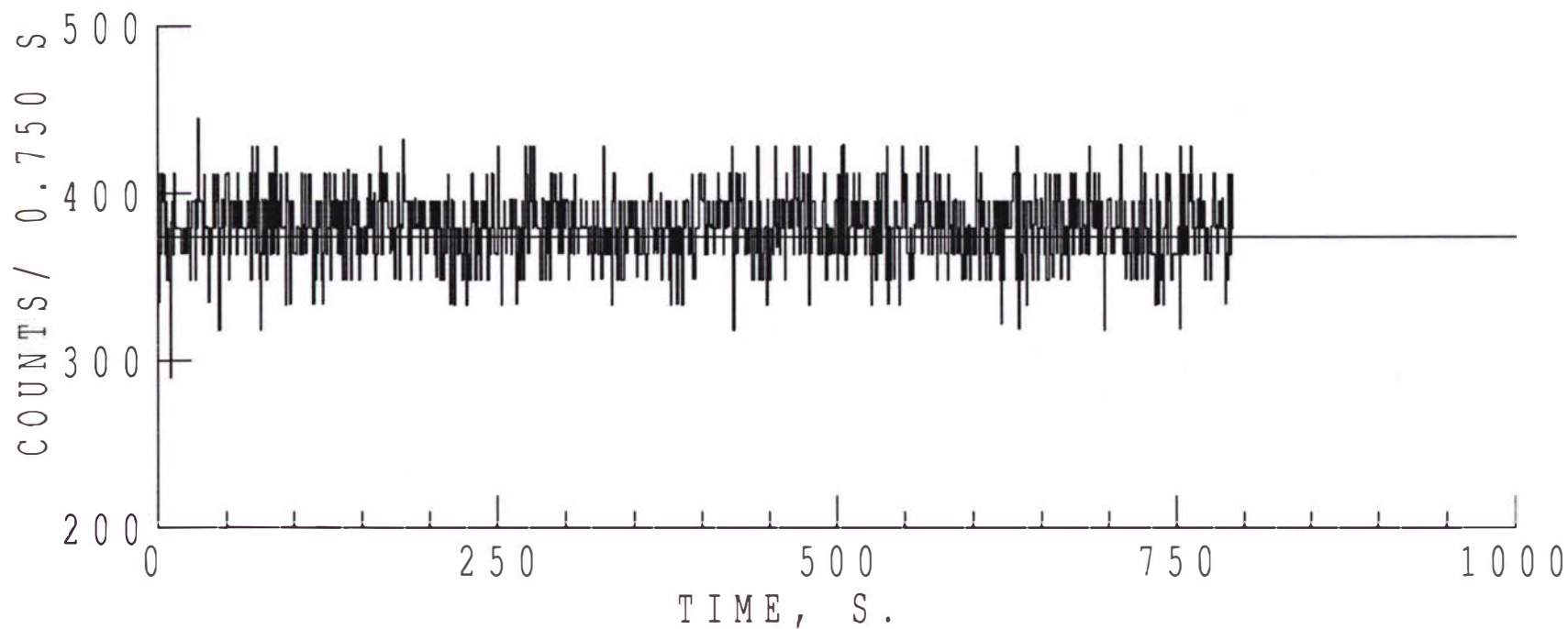
0 - 0 keV

N= 10 M=10

>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From KOSHUT@ssl.msfc.nasa.gov Tue Nov 16 15:26:18 1993
Date: Tue, 16 Nov 1993 17:27:45 -0600 (CST)
From: KOSHUT@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 2635

TIME: TJD=9306 SECONDS=21210

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON EXIT FROM SAA.

From KOSHUT@ssl.msfc.nasa.gov Wed Nov 17 09:30:12 1993
Date: Wed, 17 Nov 1993 11:32:14 -0600 (CST)
From: KOSHUT@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2636
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2636
EVENT OF 1993 NOV 15 DAY OF YEAR=319
EVENT CROSSING TIME AT BATSE : 59607. S. OR 16:33:27.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 62.000 25.000
BATSE PEAK COUNTING RATE: 2200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 15/11/ 93 IS:
RA= 165.381 DEC= -30.044 DIST= 4.454 AU
BATSE-ULYSSES DISTANCE = 666285229. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 66.85 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 873.78 SECS.
CROSSING TIME AT ULYSSES IS 60481. S. OR 16:48:00 +/- 418.06 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 15/11/ 93 IS:
RA= 242.081 DEC= -21.397 DIST= 2.452 AU
MARS-BATSE DISTANCE = 366880928. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 3.60 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1221.36 SECS.
CROSSING TIME AT MARS IS 60828. S. OR 16:53:48 +/- 31.90 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2636	931115	9306	59607	2200	062	+25

BATSE BURST TRIGGER

NO.: 2636

TIME: TJD=9306 SECONDS=59607

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=112. AZIMUTH=169. ERROR= DEGREES

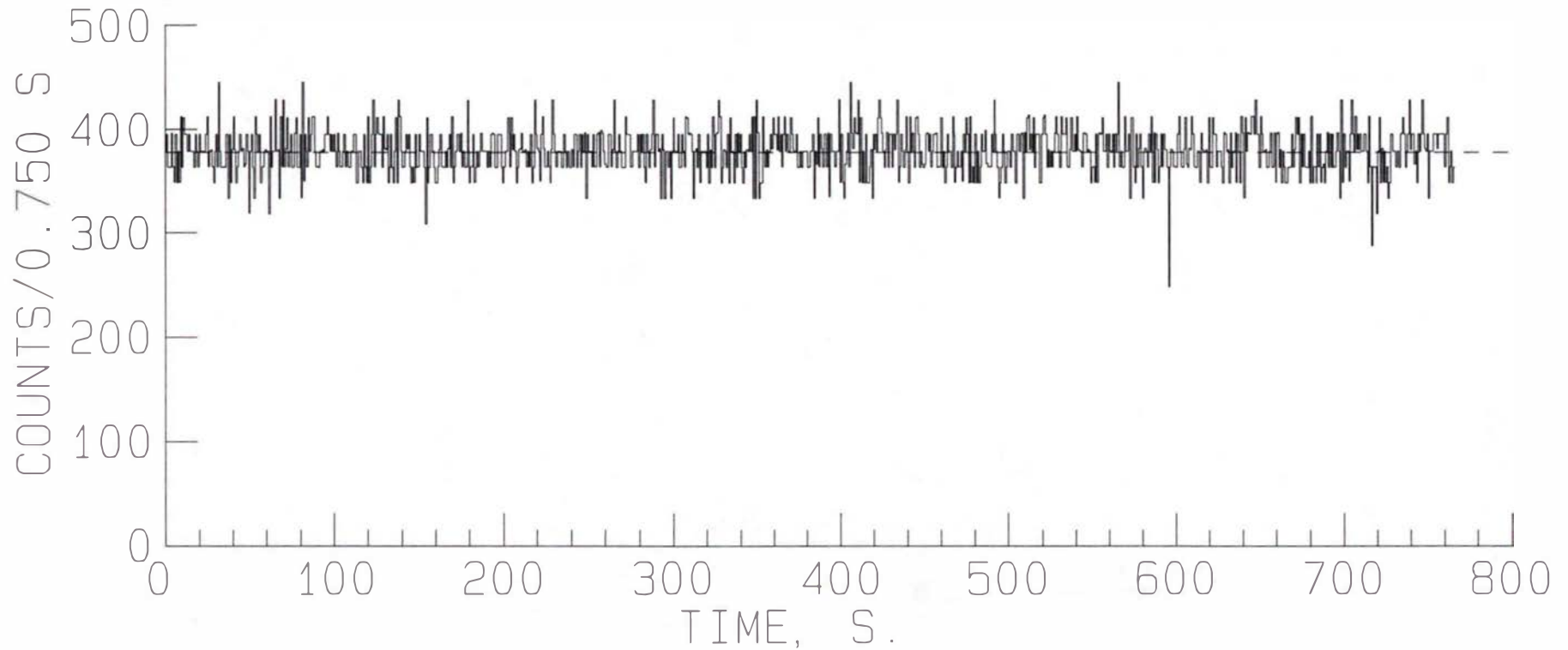
COMMENTS:

BURST OF ~ 30 SECONDS DURATION WITH NO EMISSION OBSERVED ABOVE 300 KEV.
PEAK RATE IS ~ 2200 C/S, BACKGROUND SUBTRACTED.

17 / 11 / 93

ULYSSES RT
 15/11/93 60048.113 s
 0.250 S INTERVALS REGROUPED BY 3
 0- 0 keV

N= 10 M= 2
 >4.0 SIGMA FLUCTUATIONS



From KOSHUT@ssl.msfc.nasa.gov Tue Nov 16 15:35:52 1993
Date: Tue, 16 Nov 1993 17:37:16 -0600 (CST)
From: KOSHUT@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 2637

TIME: TJD=9306 SECONDS=82175

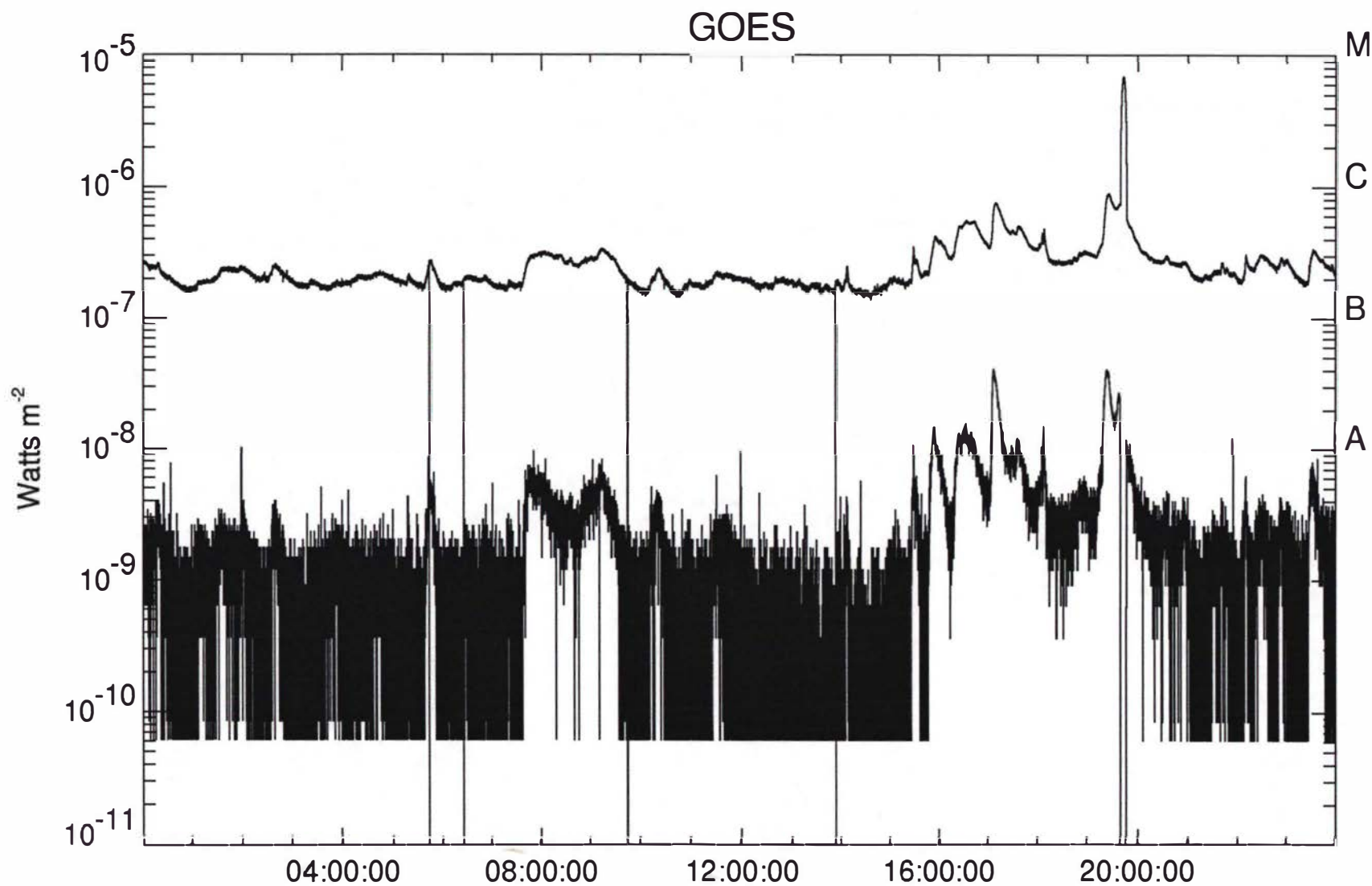
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE PRECIPITATION EVENT.



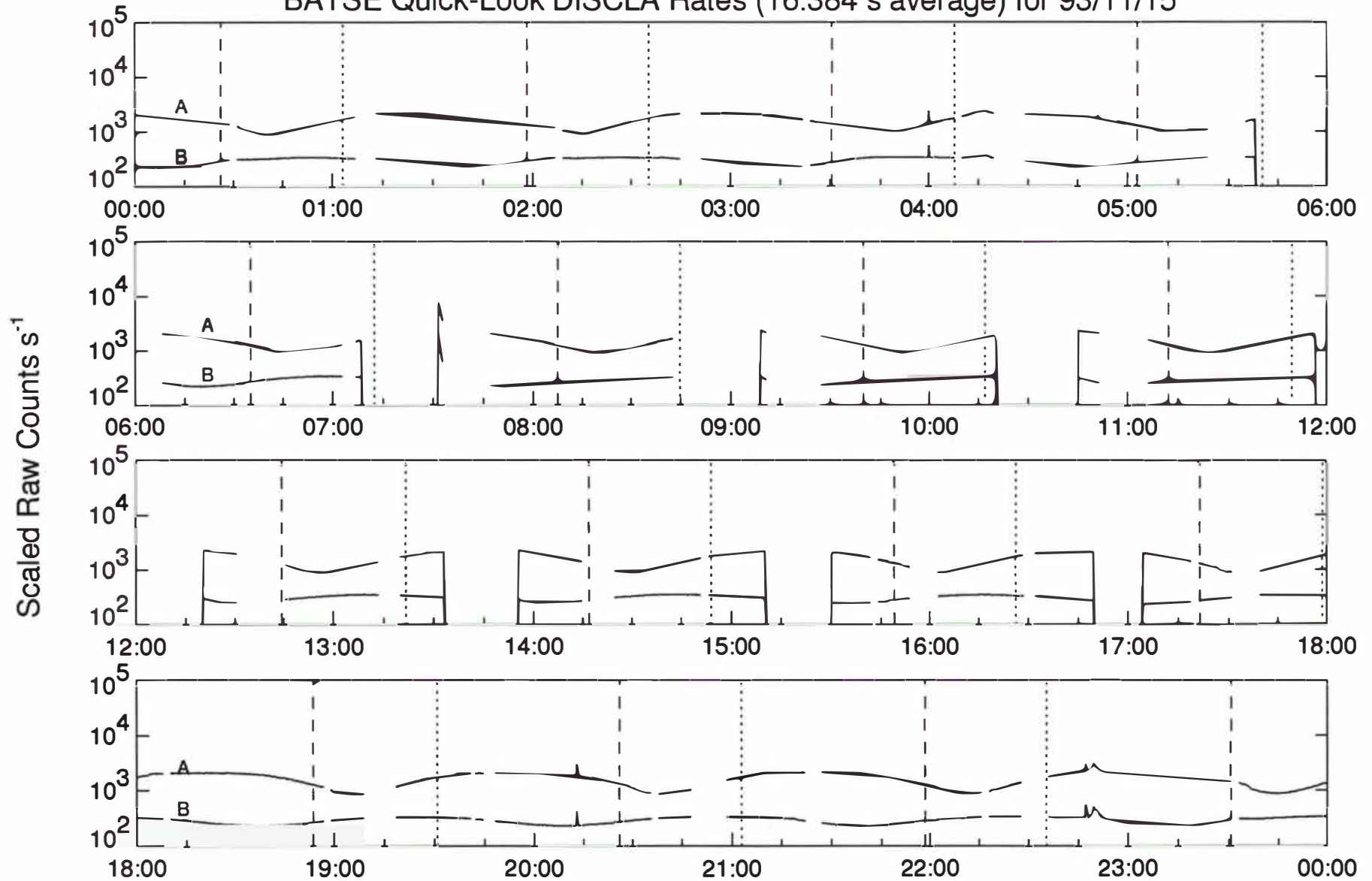
Data Start: 93/11/15, 0000:02

Plot created: 93/11/16, 1354

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/15

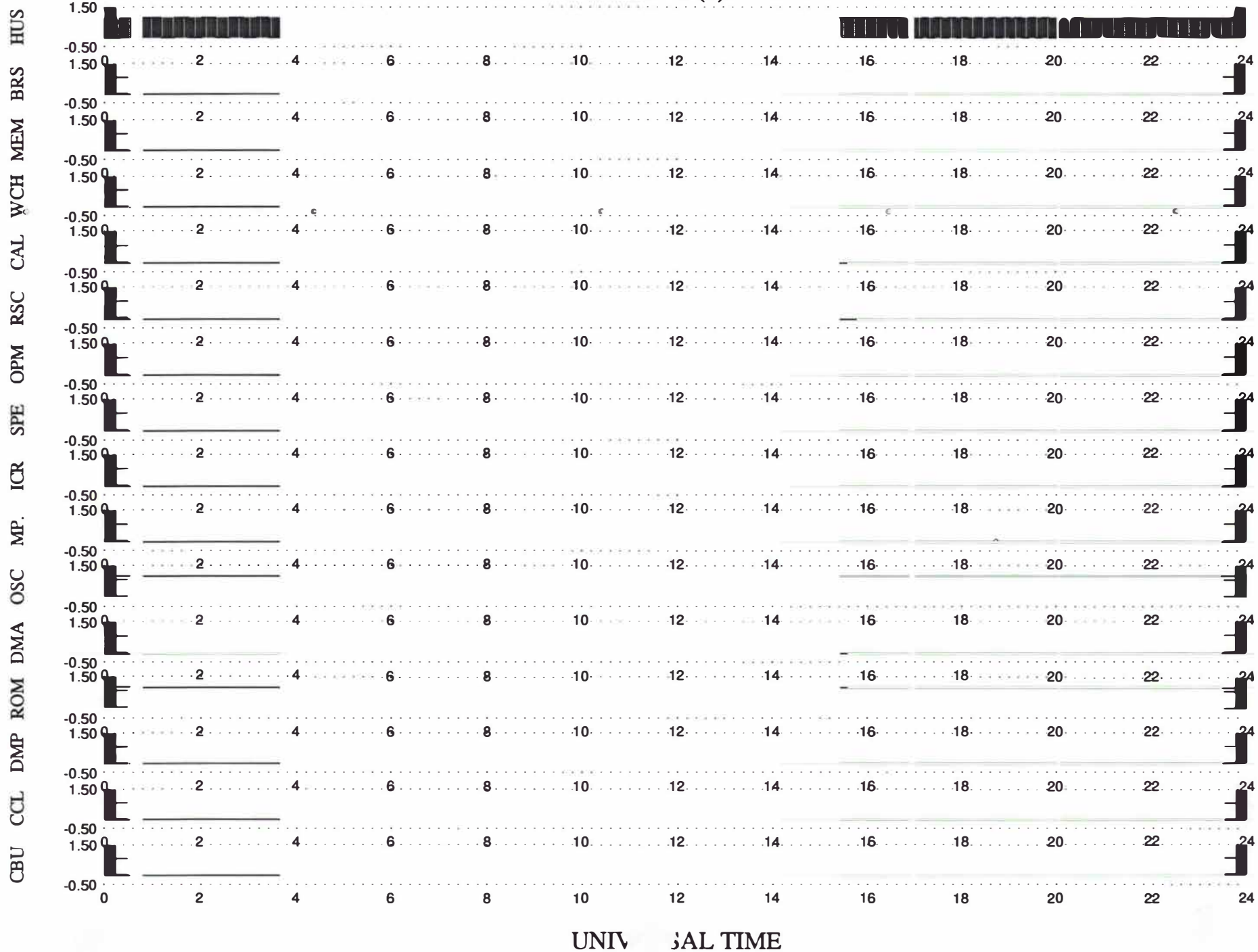


Current Time: 93/11/18, 1441 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

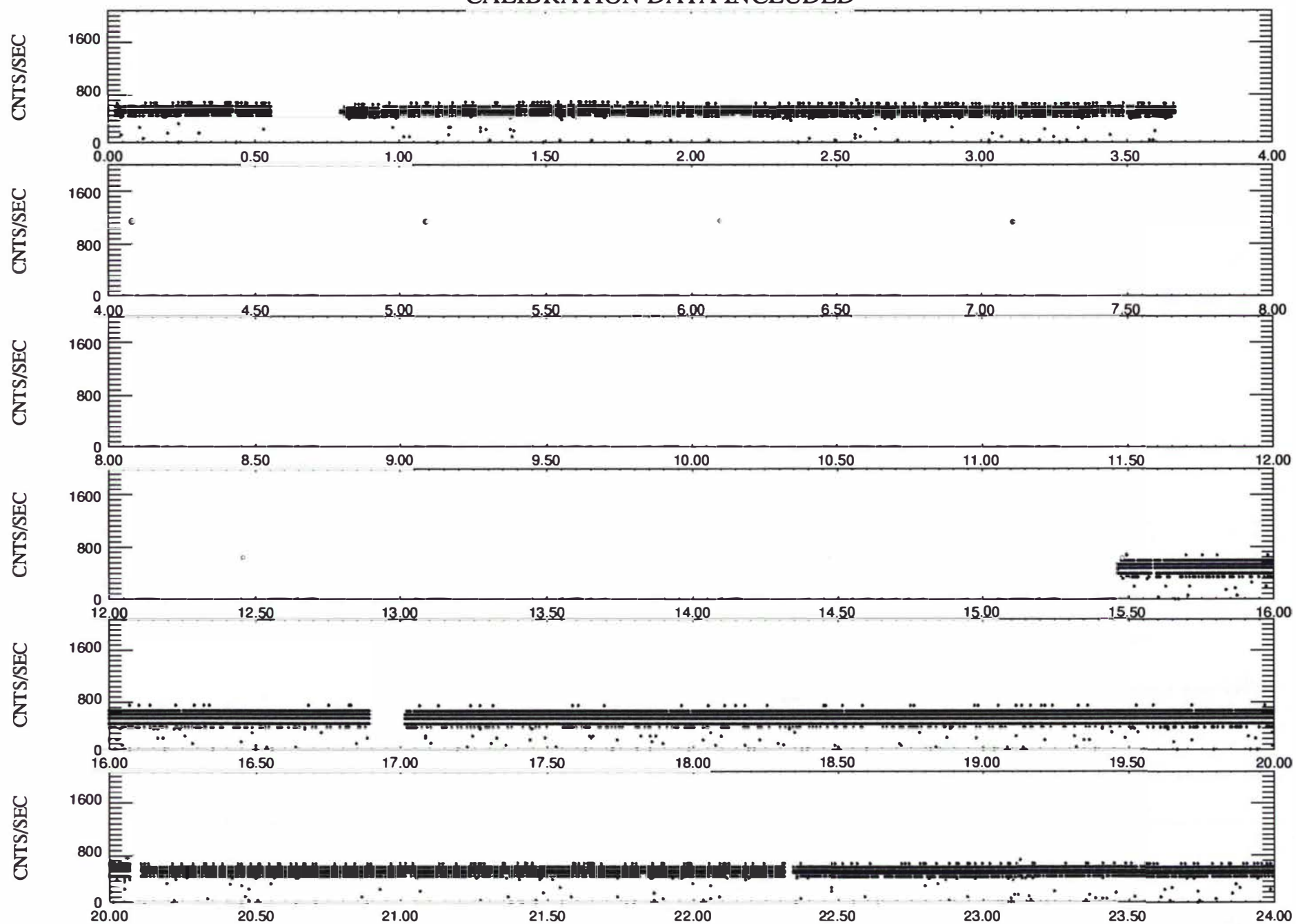
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

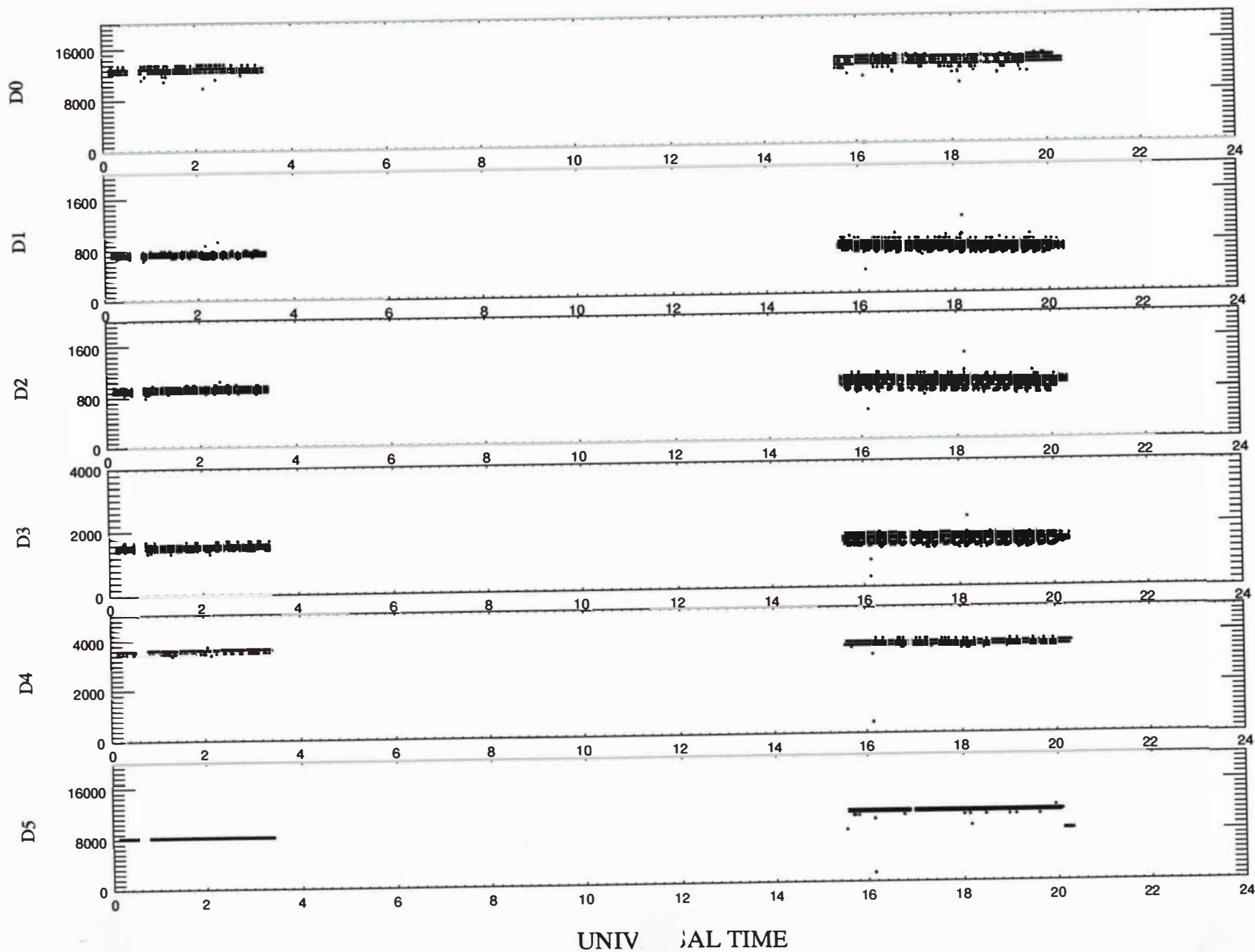
NO BURST (1)

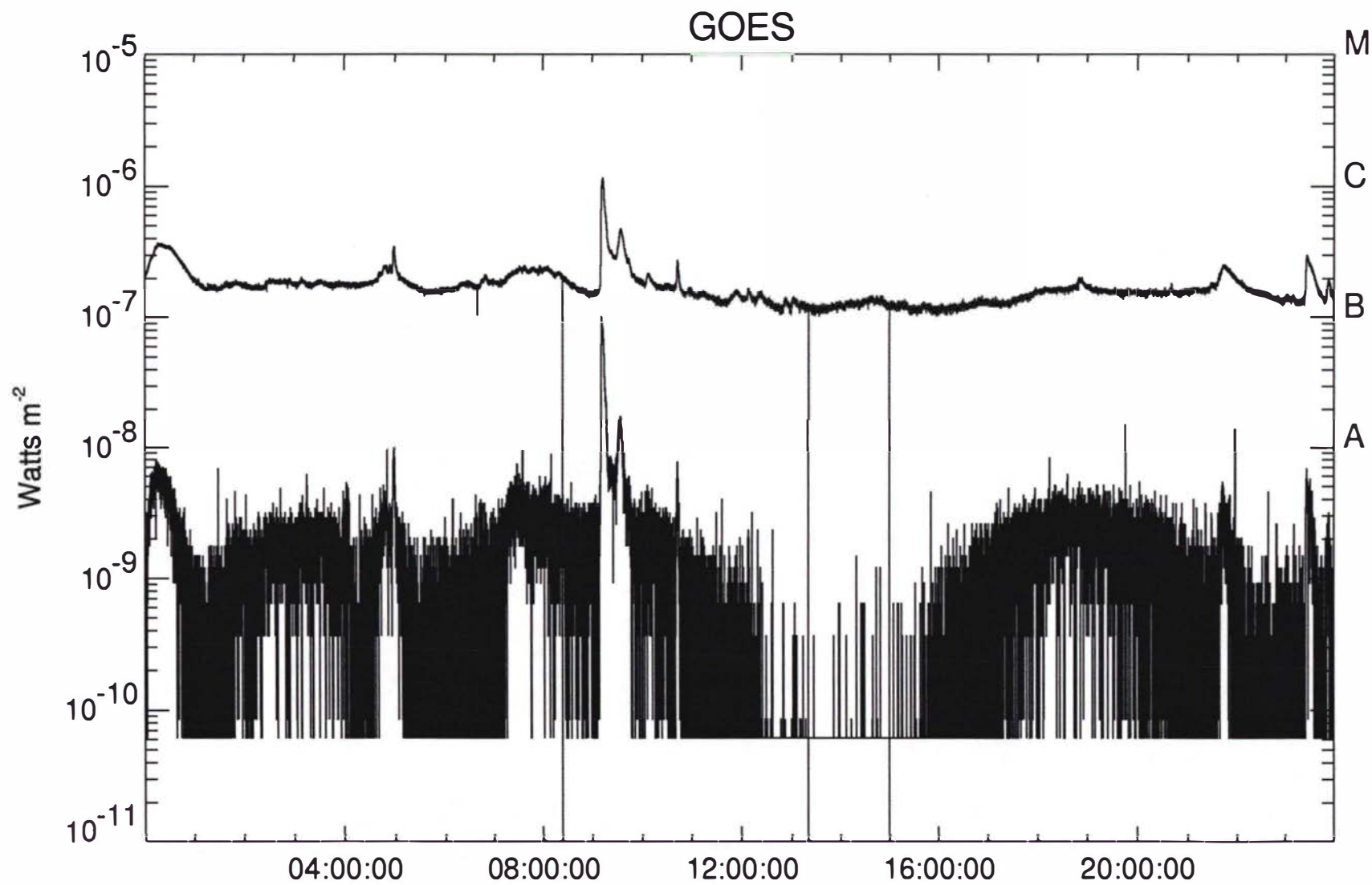


CALIBRATION DATA INCLUDED



UNIV SAL TIME



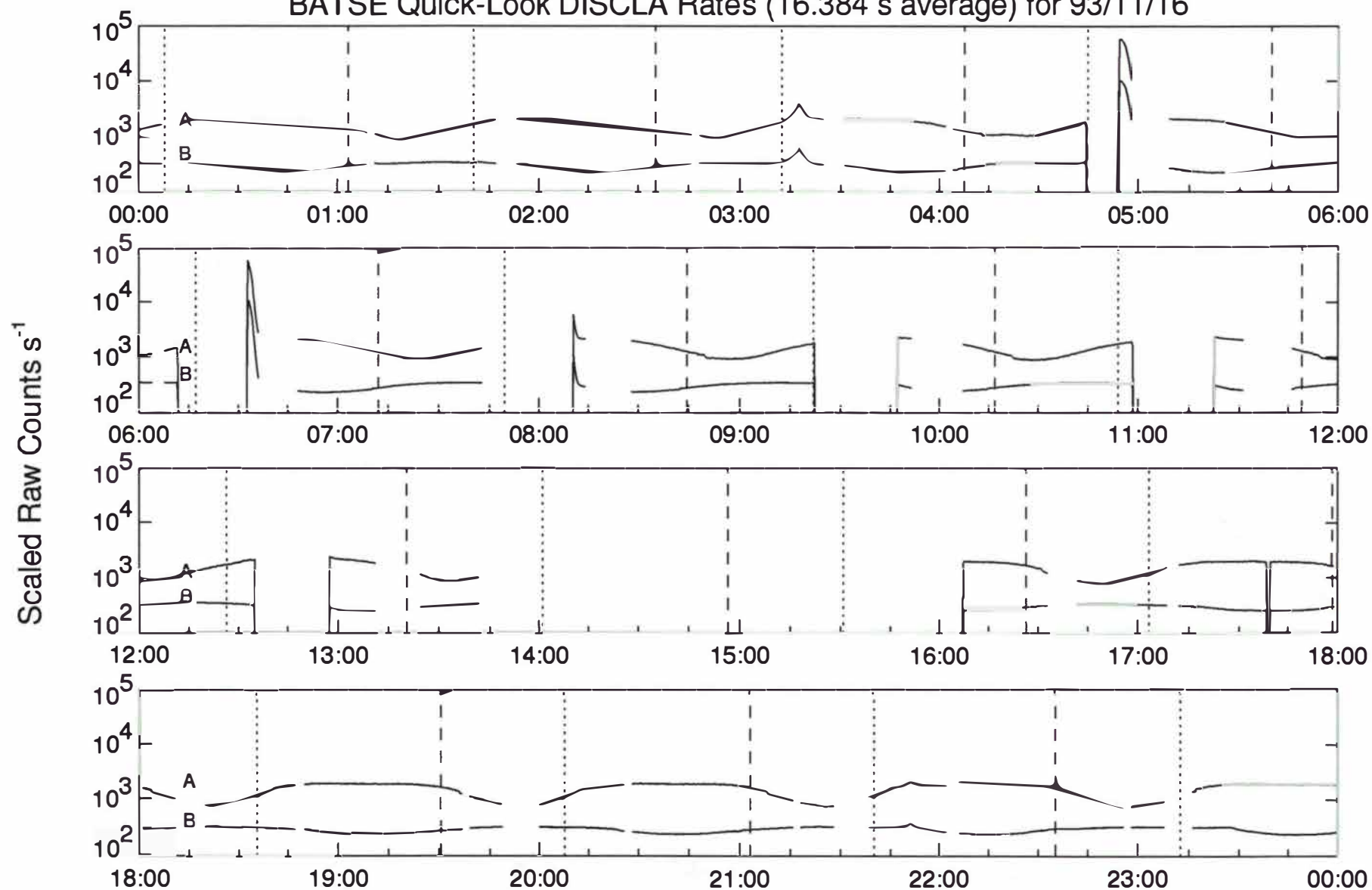


Data Start: 93/11/16, 0000:02

Plot created: 93/11/18, 1440

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

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/16



Current Time: 93/11/18, 1441 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

From MALLOZZI@ssl.msfc.nasa.gov Wed Nov 17 11:38:18 1993
Date: Wed, 17 Nov 1993 13:40:12 -0600 (CST)
From: "ROBERT S. MALLOZZI 205-544-6257" <MALLOZZI@ssl.msfc.nasa.gov>
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02638

TIME: TJD=9307 SECONDS=17670

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:Y

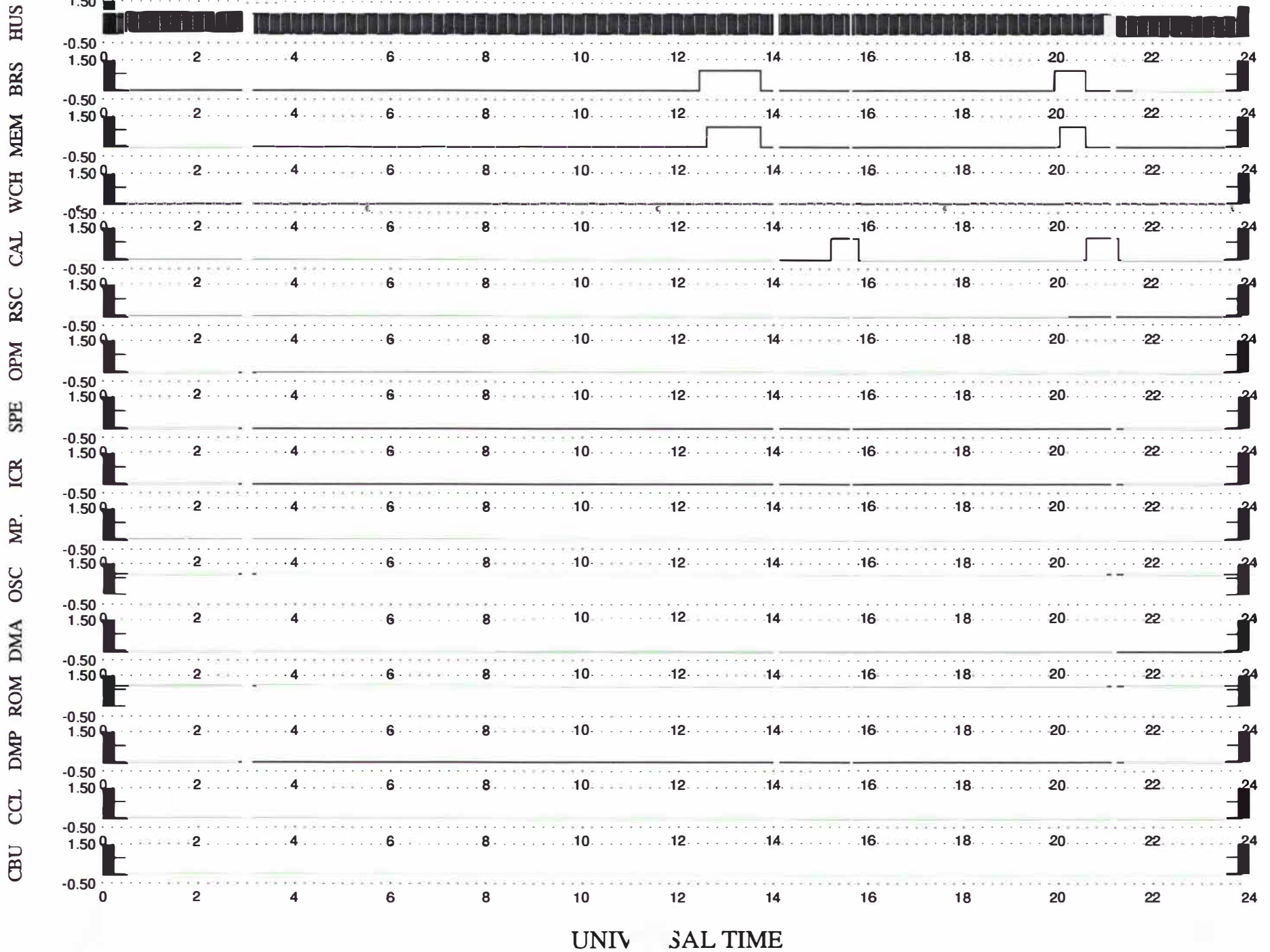
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

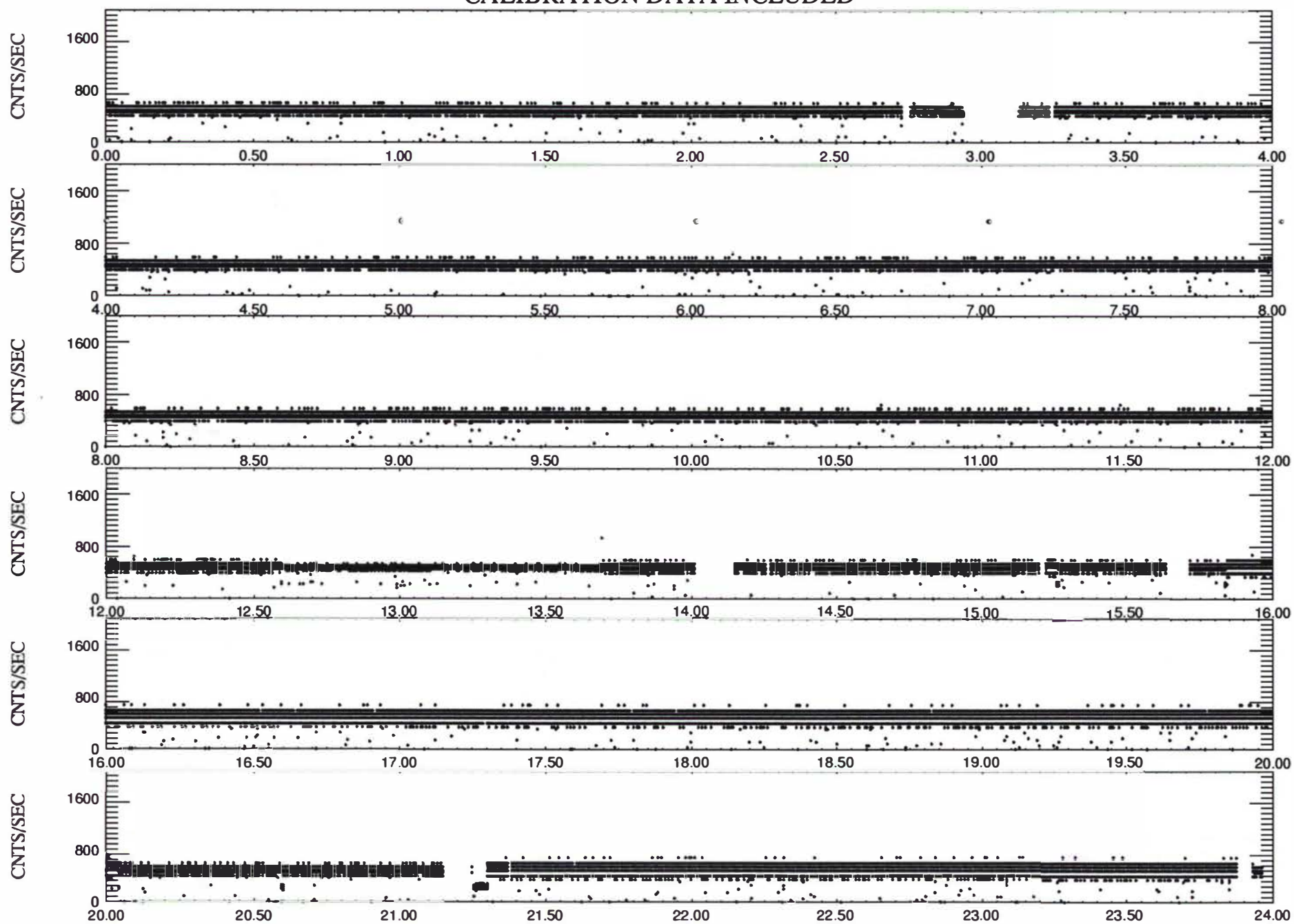
LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT.

BURST NUMBER 2, 3

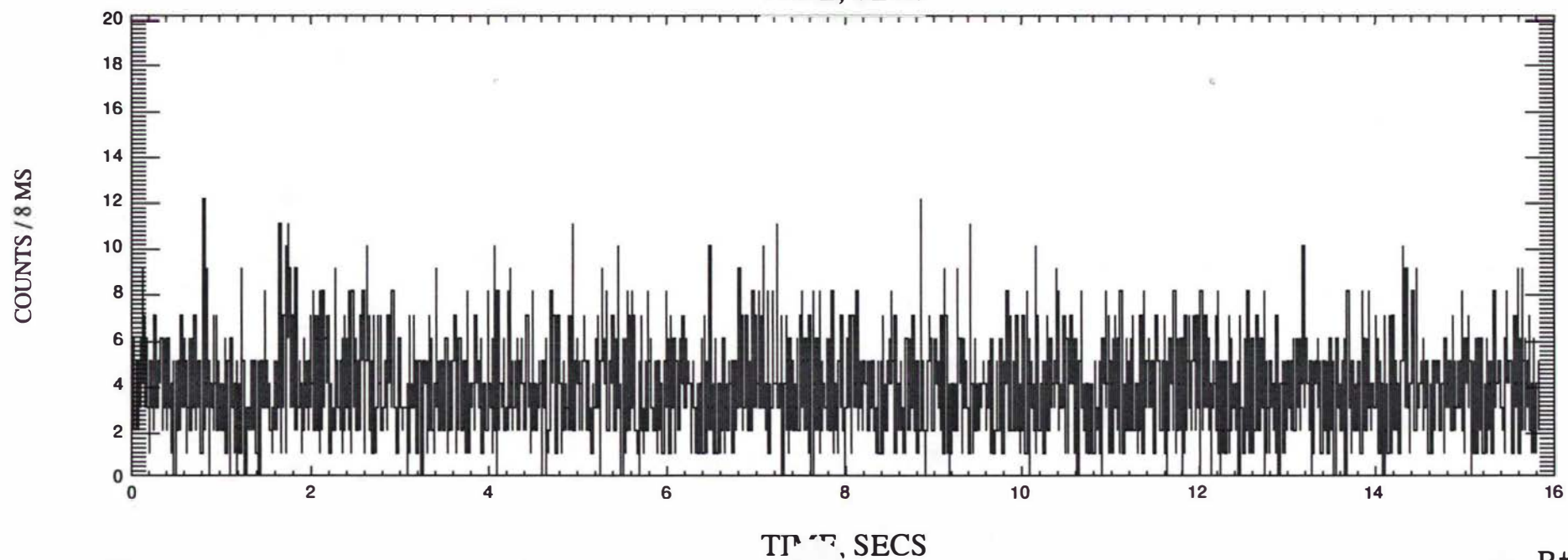
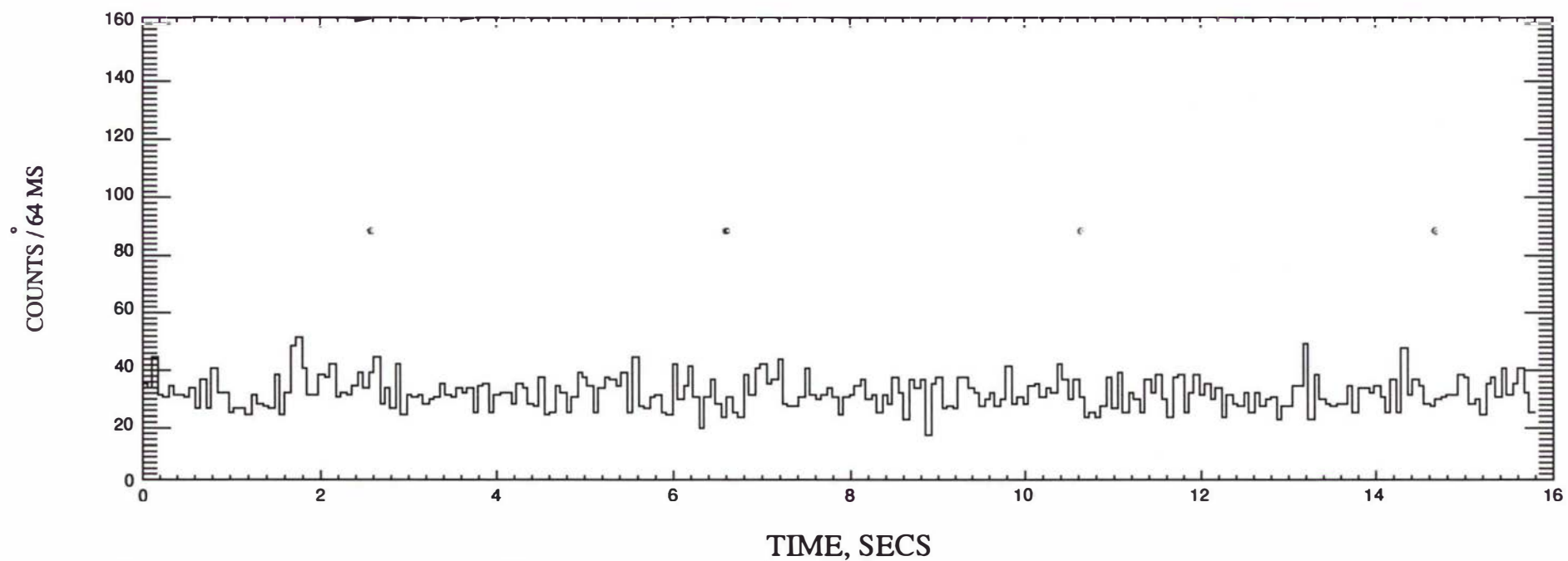


CALIBRATION DATA INCLUDED

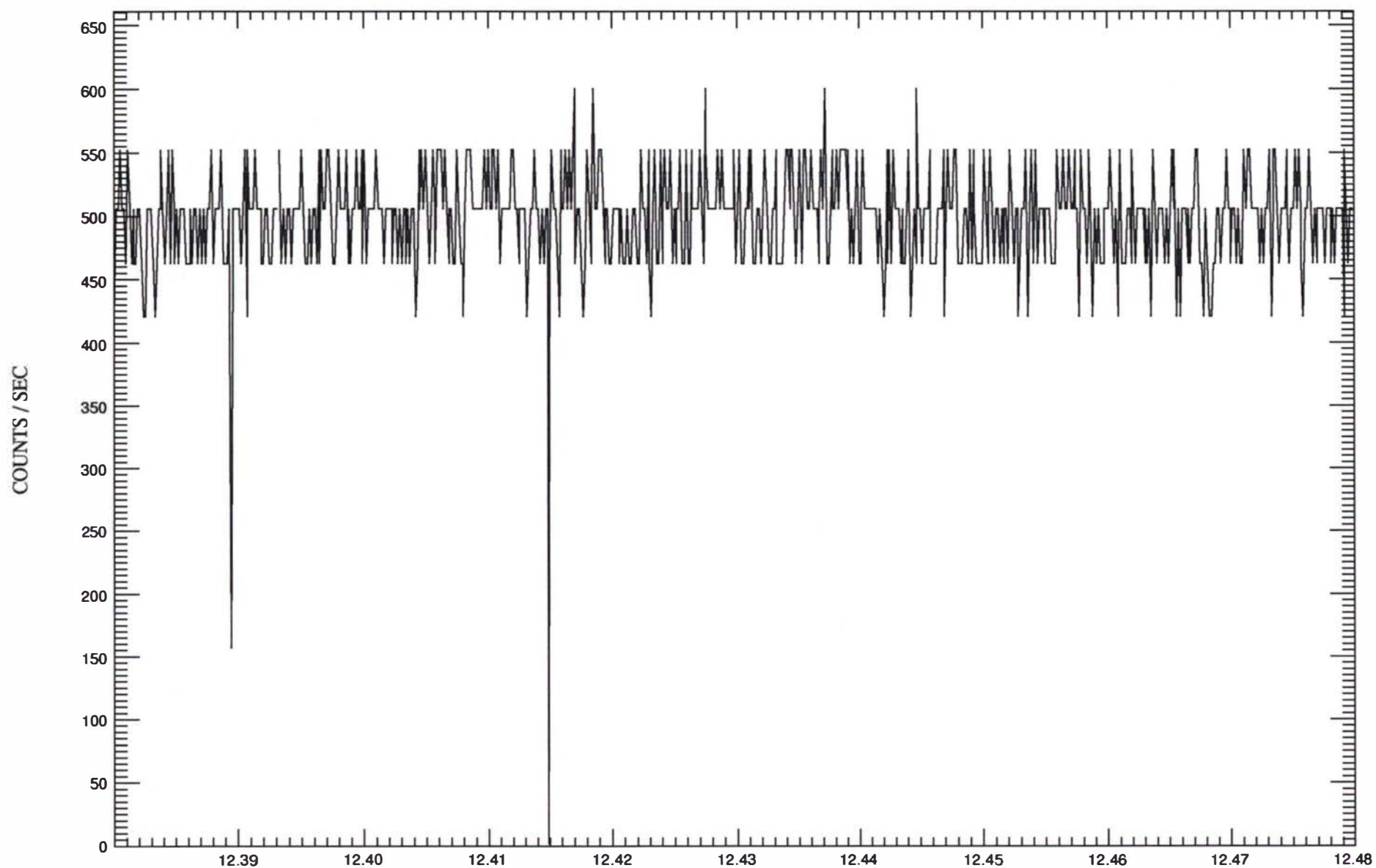


UNIV TIME

Burst Counter 2 at UT=12.427621290419 h=44739.437 s 12:25:39.437



CALIBRATION DATA INCLUDED

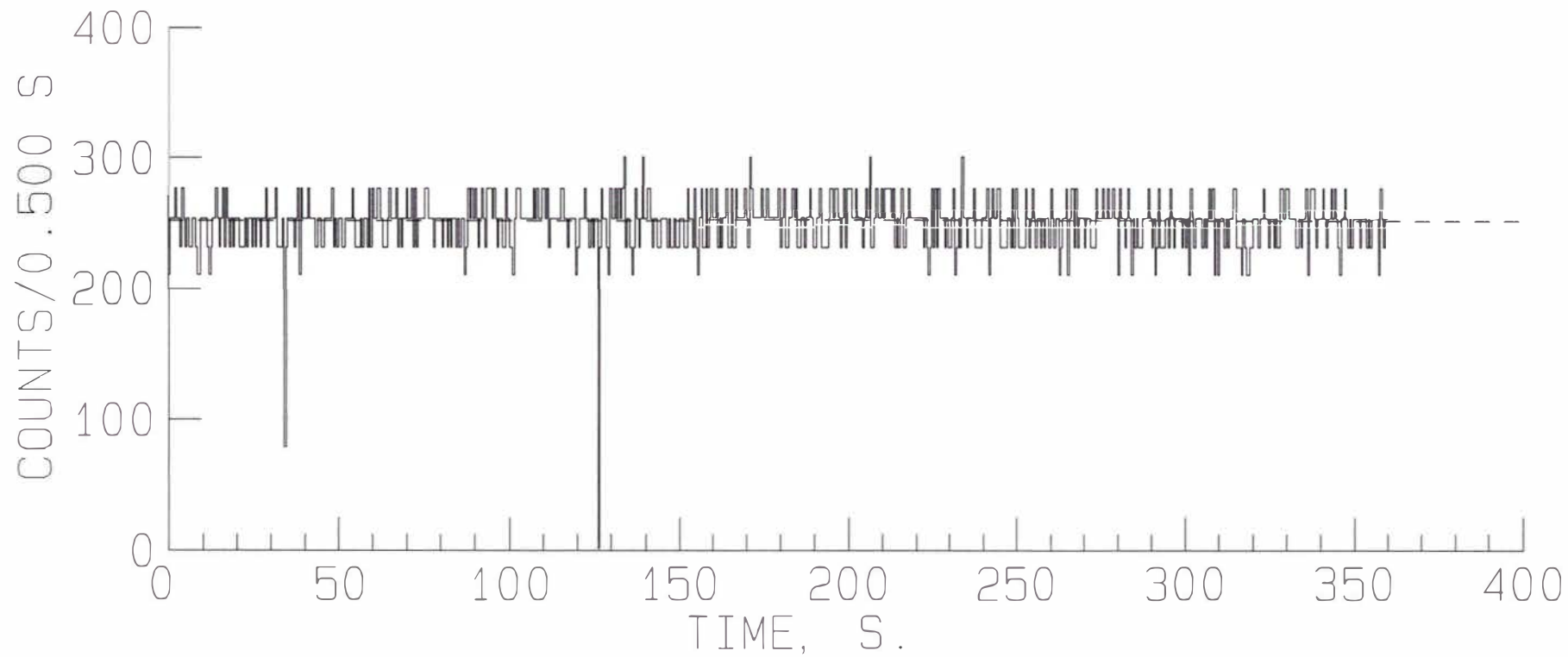


HDS TRIGGER

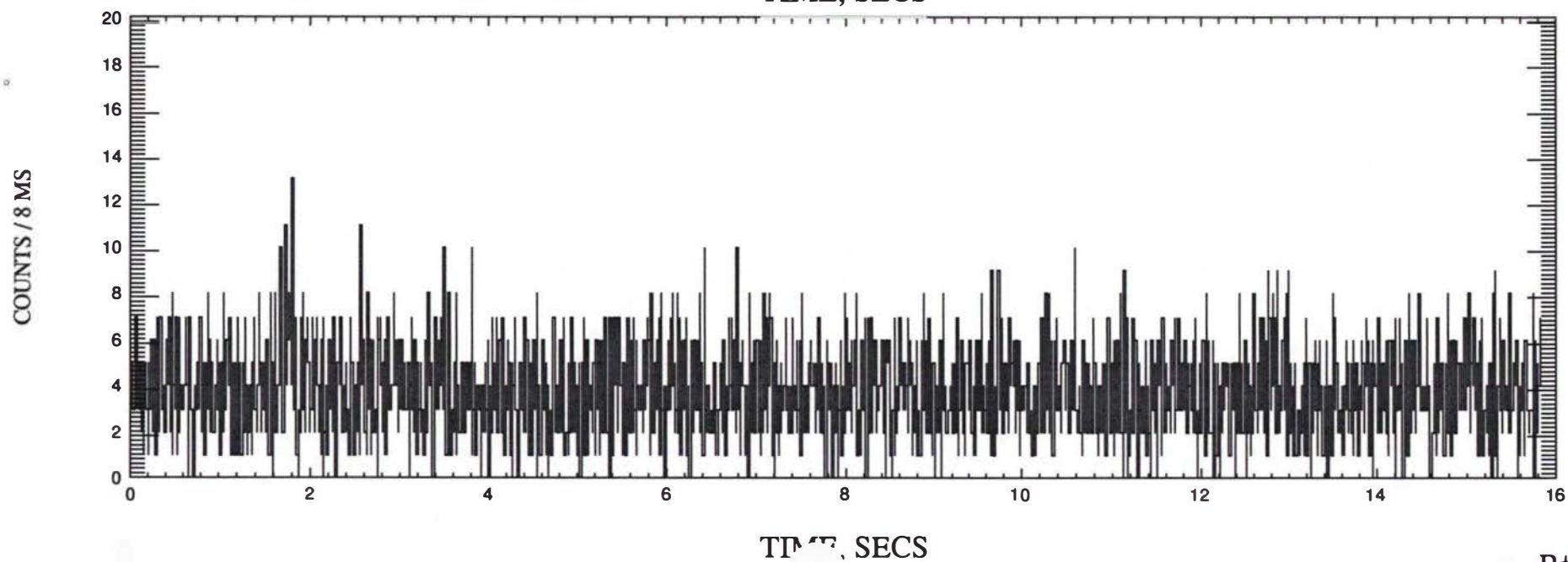
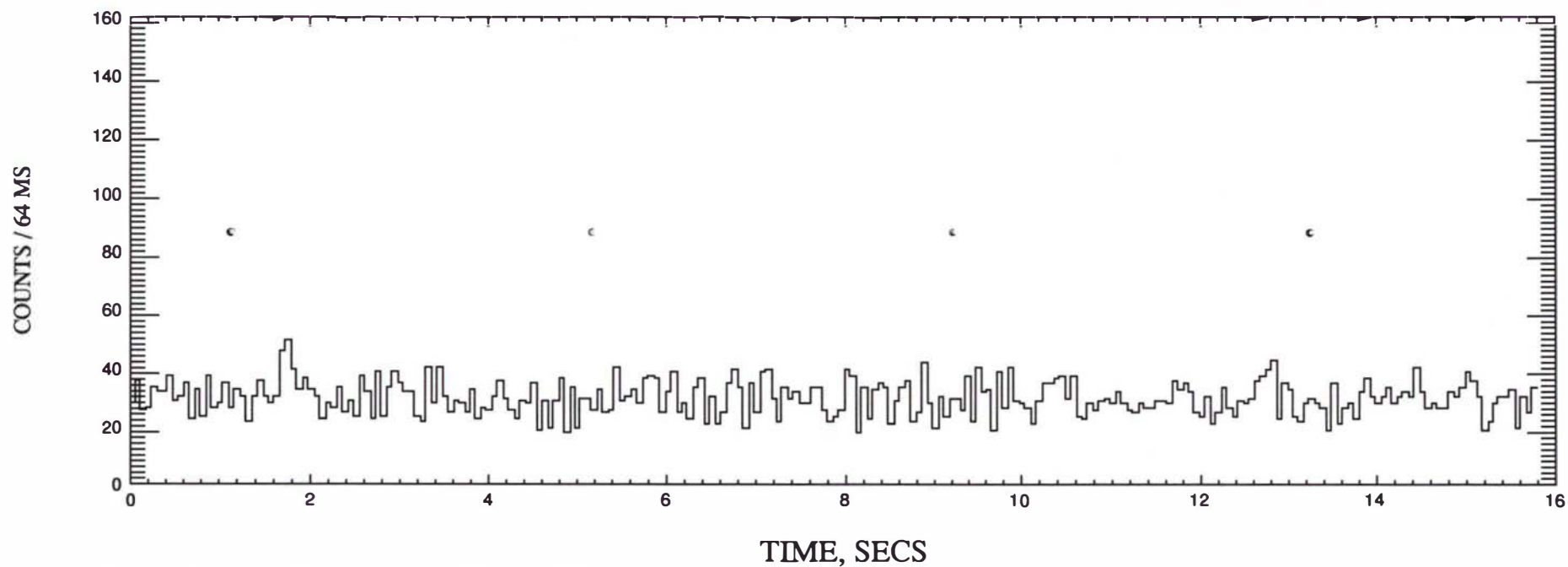
17/11/93

ULYSSES RT
16/11/93 44568.195 s
0- 0 keV

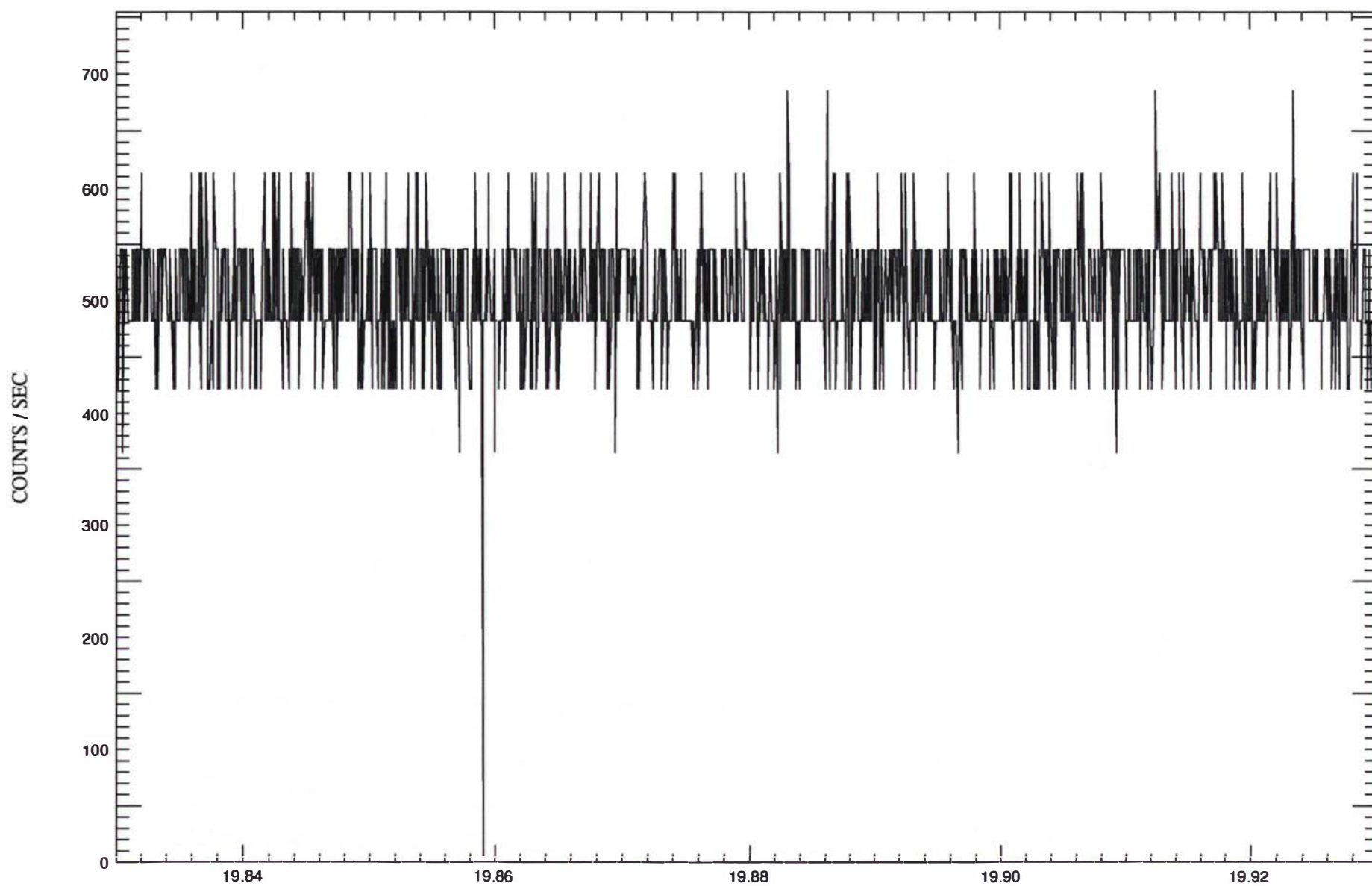
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



Burst Counter 3 at UT=19.883294139438 h=71579.859 s 19:52:59.859



CALIBRATION DATA INCLUDED

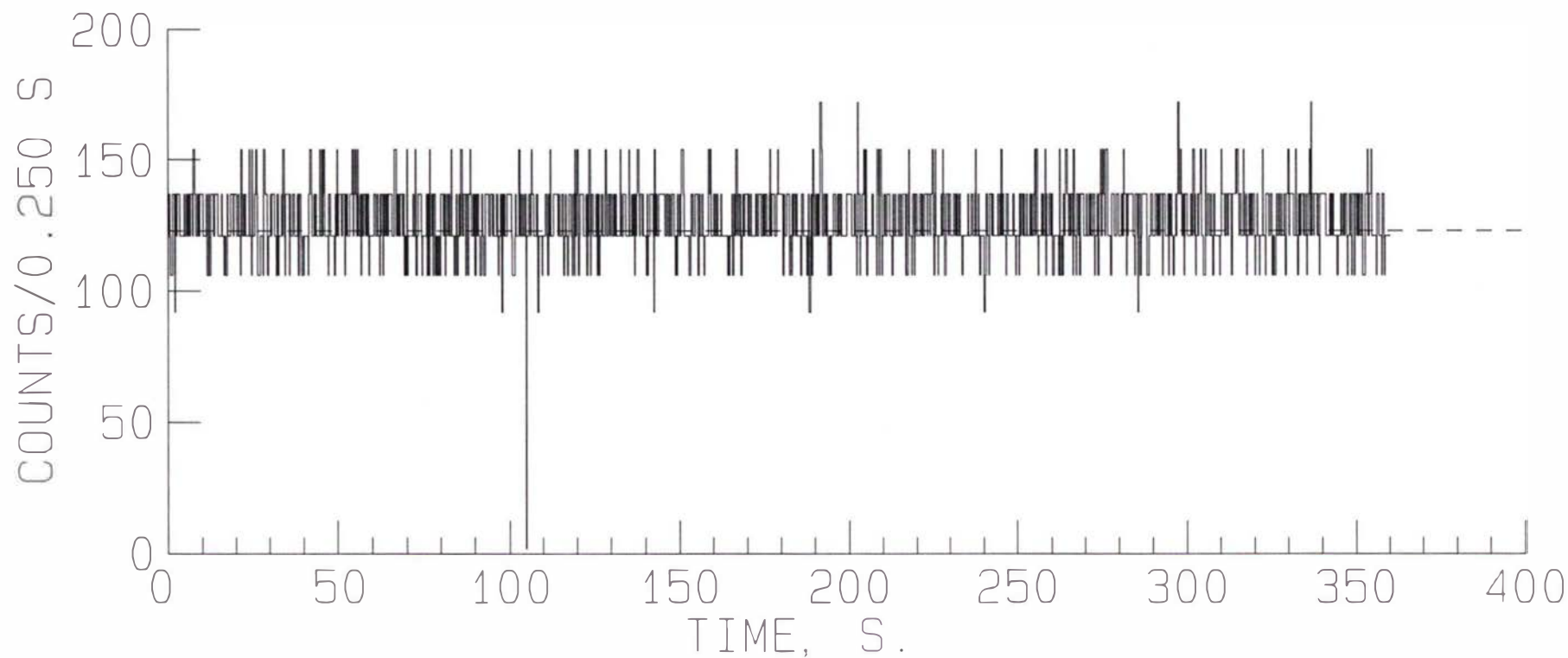


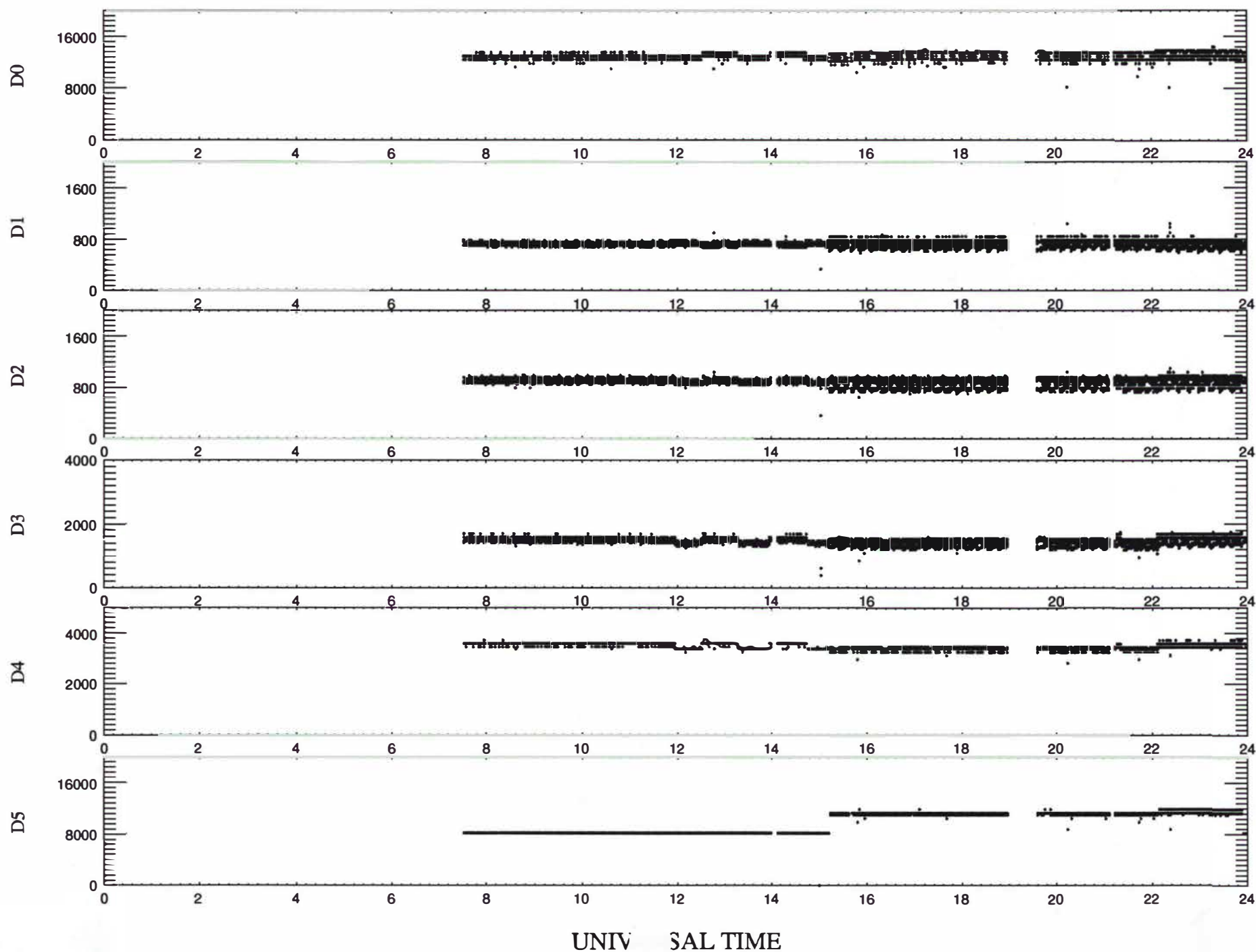
HUS trigger (#2)

18/11/93

ULYSSES RT
16/11/93 71388.109 s
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





From ulsdmt@omni:.dna_node.jplsp.span Wed Dec 22 12:06:09 1993
Date: Wed, 22 Dec 93 12:06:23 -0800
From: ulsdmt@omni:.dna_node.jplsp.span
To: "khurley@sunspot.ssl.berkeley.edu"%jpldig.span@JPLDIG.jpl.nasa.gov (SENT TO @LIST1.DIS)
Subject: Data Problem
Content-Length: 647

December 22, 1993

Dear Colleague,

It has come to our attention that the Error Correction Indicator (ECI) bits in the EDR tertiary header are set on (indication an error condition) for DOY 321-324 in both the DACS and the AMMOS data. The fact that these bits are set is an error. The data should be good; thus I would suggest that your software ignore these bits on those days. The problem is somewhere in the Deep Space Network and is being investigated. I apologize for the inconvenience.

mahalo,
Jo4hn Johnson

From HORACK@fender.msfc.nasa.gov Thu Nov 18 12:05:46 1993

Date: Thu, 18 Nov 1993 14:07:20 -0600 (CST)

From: HORACK@fender.msfc.nasa.gov

To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET,

LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,

LHEAVXKWOK@fender.msfc.nasa.gov, 15733SCHAEFER@fender.msfc.nasa.gov,

CASS09BAND@fender.msfc.nasa.gov, CASS09GRUBER@fender.msfc.nasa.gov,

CASS09MATTESON@fender.msfc.nasa.gov, PACIESAS@fender.msfc.nasa.gov,

HORACK@fender.msfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu

Subject: Burst Trigger Message

Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02639

TIME: TJD=9308 SECONDS=14207

TYPE: PARTICL

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

ELECTRON PRECIPITATION EVENT JUST OUTSIDE SAA.

BATSEARCH PROGRAM

BATSE BURST #2640

EVENT OF 1993 NOV 17 DAY OF YEAR=321

EVENT CROSSING TIME AT BATSE : 78949. S. OR 21:55:49.0

COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)

BURST ARRIVAL DIRECTION: 341.000 -50.000

BATSE PEAK COUNTING RATE: 0 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND

INTERPOLATED POSITION OF ULYSSES ON 17/11/ 93 IS:

RA= 165.573 DEC= -30.557 DIST= 4.418 AU

BATSE-ULYSSES DISTANCE = 660902730. KM.

ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 80.66 DEG.

LIGHT TRAVEL TIME ALONG PROJECTED PATH= 357.81 SECS.

CROSSING TIME AT ULYSSES IS 79307. S. OR 22:01:46 +/- 433.10 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND

POSITION OF MARS ON 17/11/ 93 IS:

RA= 243.606 DEC= -21.678 DIST= 2.453 AU

MARS-BATSE DISTANCE = 366900400. KM.

ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=101.89 DEG.

LIGHT TRAVEL TIME ALONG PROJECTED PATH= -252.23 SECS.

CROSSING TIME AT MARS IS 78697. S. OR 21:51:36 +/- 204.09 SECONDS

/- 50.85 SECONDS

FOUND

POSITION OF MARS ON 31/10/ 93 IS:

RA= 230.966 DEC= -18.904 DIST= 2.446 AU

MARS-BATSE DISTANCE = 365982100. KM.

ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 69.72 DEG.

LIGHT TRAVEL TIME ALONG PROJECTED PATH= 423.23 SECS.

CROSSING TIME AT MARS IS 15218. S. OR 04:13:38 +/- 205.23 SECONDS

S. OR 07:44:36 +/- 87.29 SECONDS

1 SECS.

CROSSING TIME AT MARS IS 76832. S. OR 21:20:32 +/- 209.62 SECONDS

NDS

LIGHT TRAVEL TIME ALONG PROJECTED PATH= -231.60 SECS.

CROSSING TIME AT MARS IS 5896. S. OR 01:38:16 +/- 16.51 SECONDS

BATSE BURST TRIGGER

NO.: 02640

TIME: TJD=9308 SECONDS=78949

TYPE: BURST

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=158. AZIMUTH=2. ERROR= DEGREES

COMMENTS:

INTERESTING BURST LASTING ~22 SEC, CONSISTING OF TWO EMISSION EPISODES

FIRST IS ~2SEC LONG, CONSISTING OF 2 SUB-PULSES. 11-SEC HIATUS BETWEEN PULSES.

SECOND PULSE IS LONGER, LASTING~6 SEC, AND HAS A FRED-LIKE ENVELOPE WITH AT LEAS

6 SUB-PULSES. NOT SEEN ABOVE 300 KEV.

$\alpha = 340.60$ $\delta = -50.09$

6 / 4 / 94

ULYSSES RT

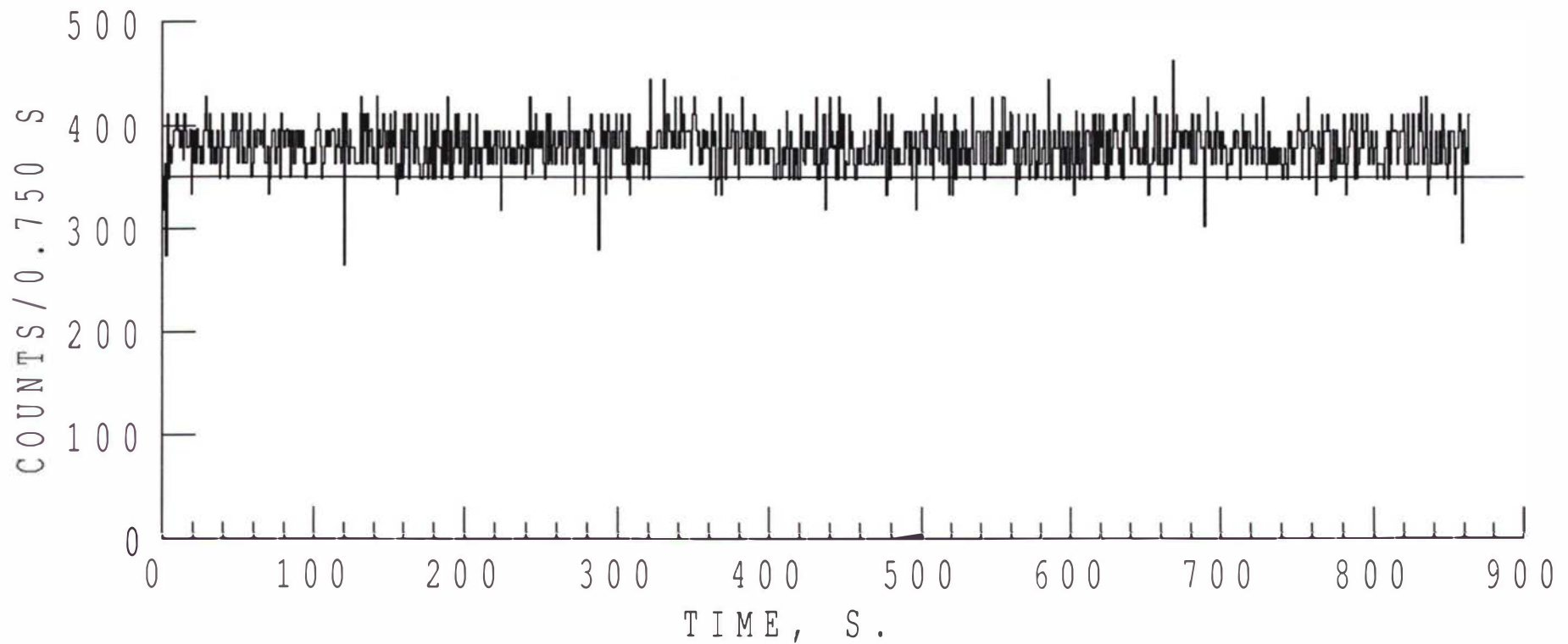
17/11/93 78876.055 s

0.250 S INTERVALS REGROUPED BY 3

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



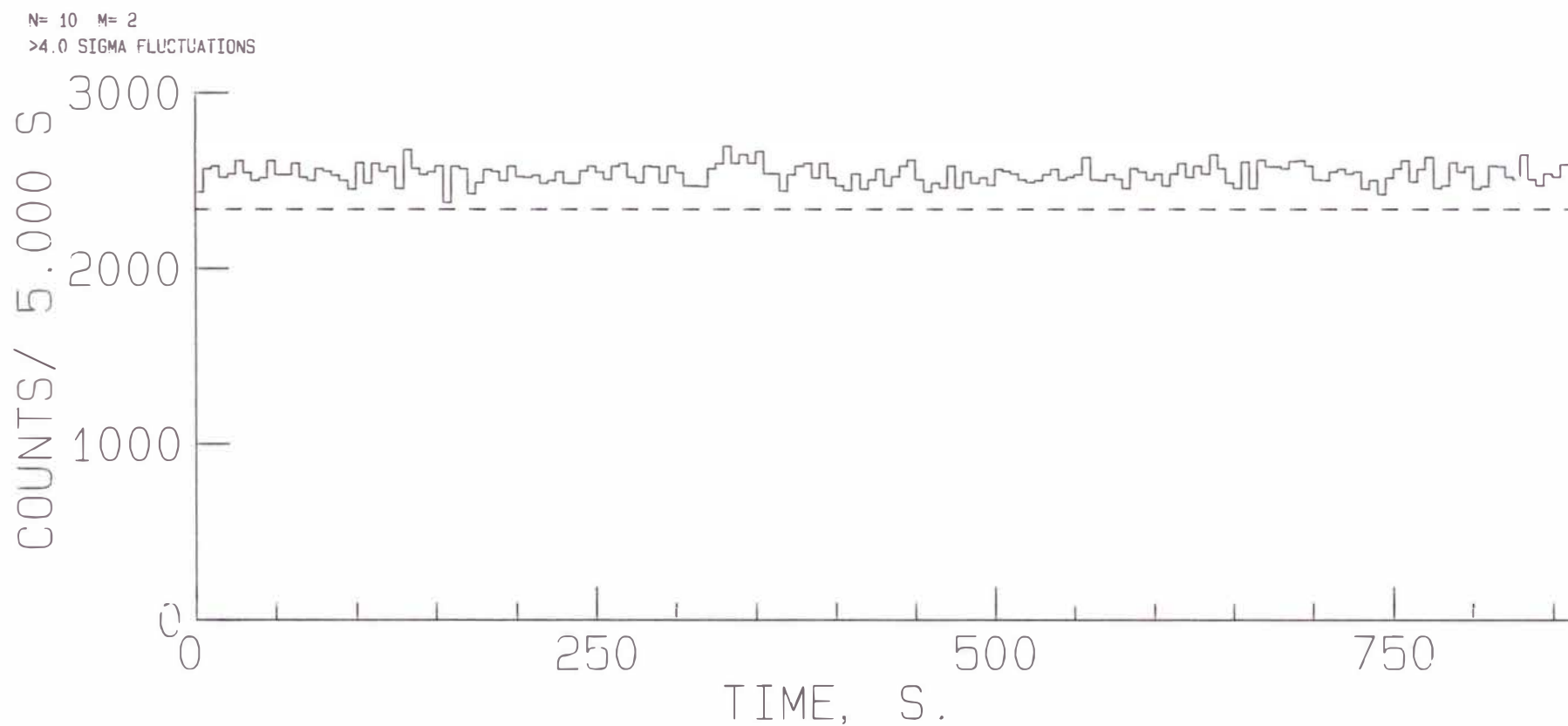
ULYSSES RT

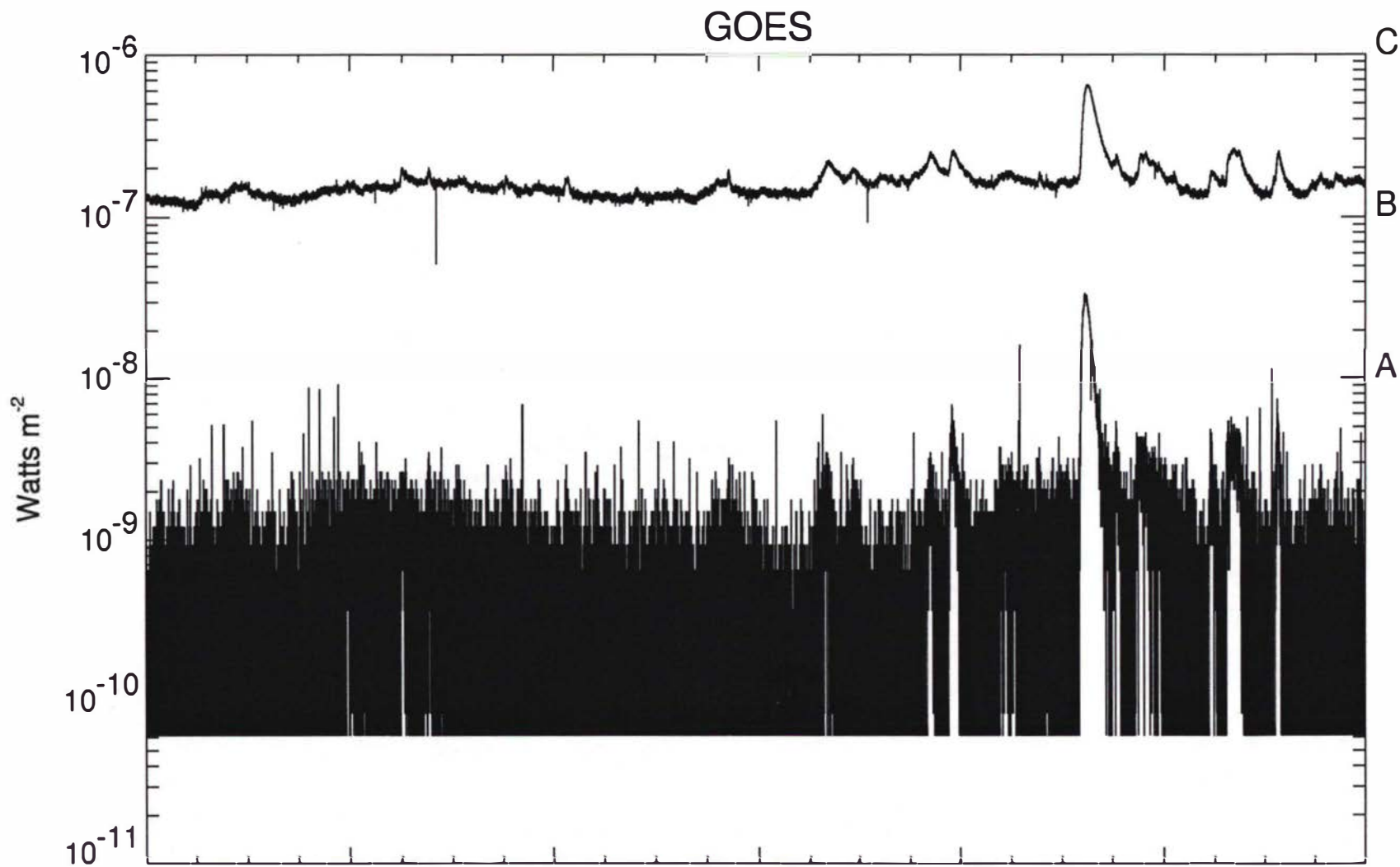
7 / 4 / 94

17/11/93 78876.055 s

.250 S INTERVALS REGROUPED BY 20

0 - 0 keV





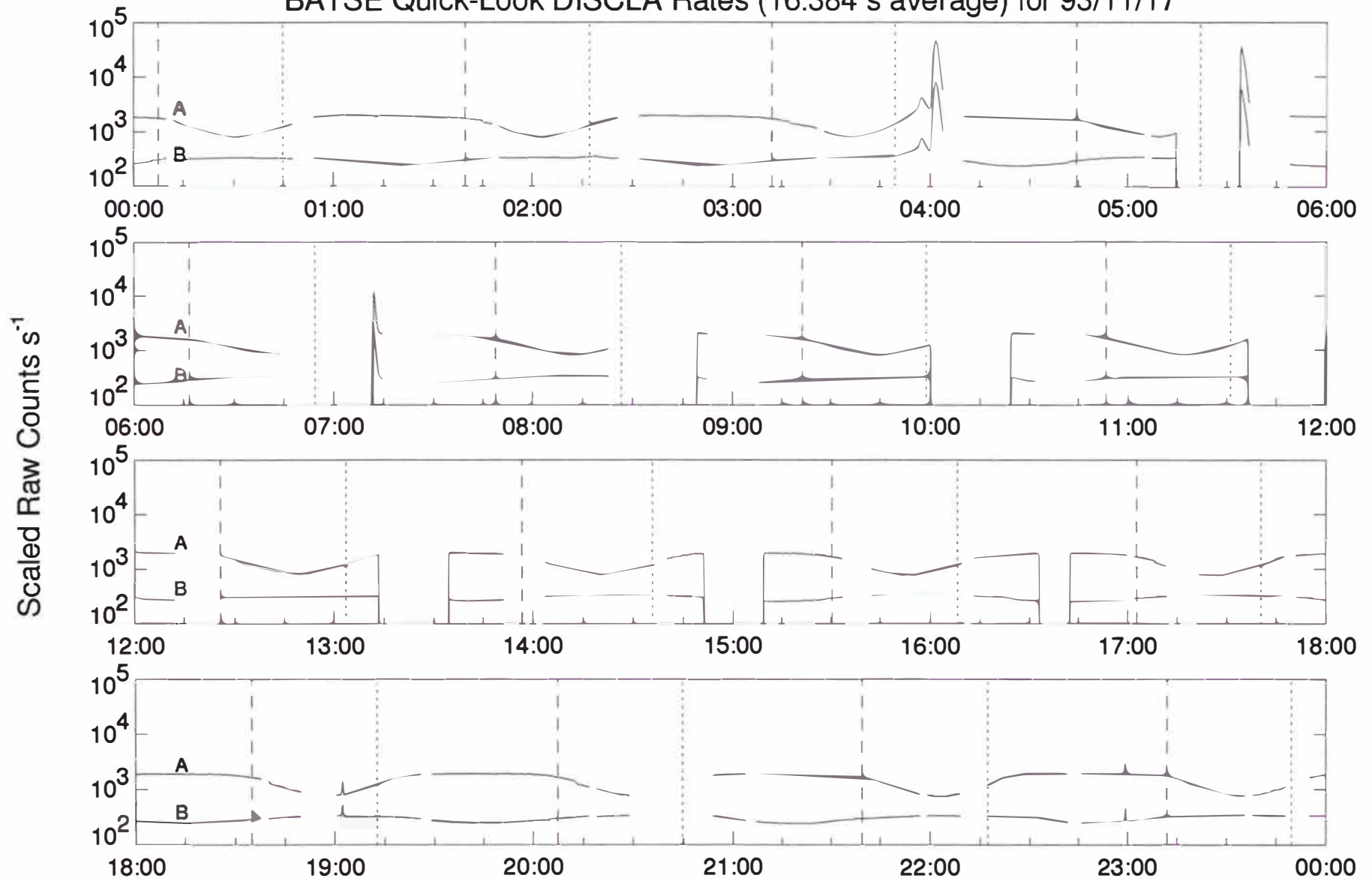
Data Start: 93/11/17, 0000:01

Plot created: 93/11/18, 1440

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 93/11/17

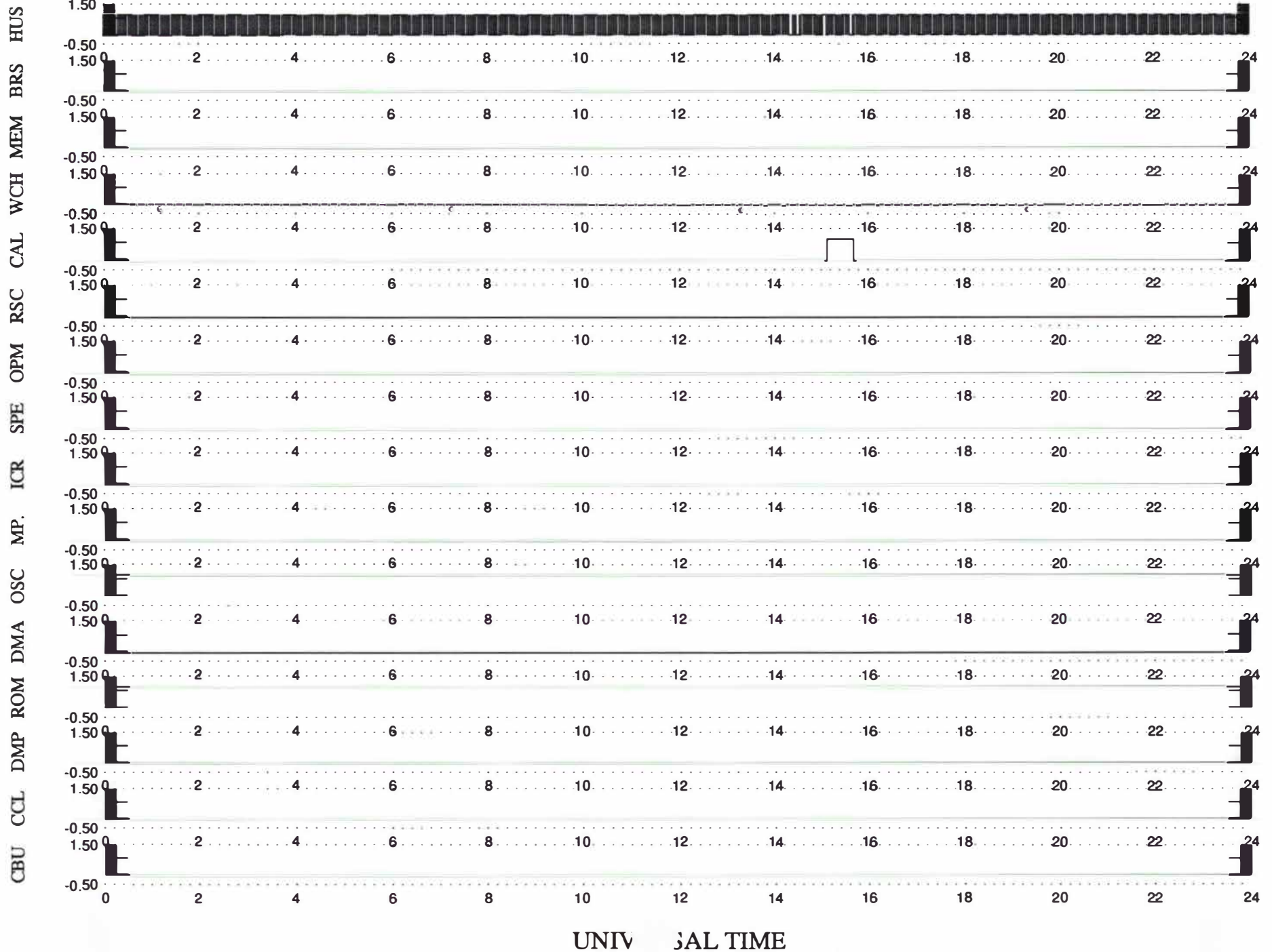


Current Time: 93/11/19, 1824 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

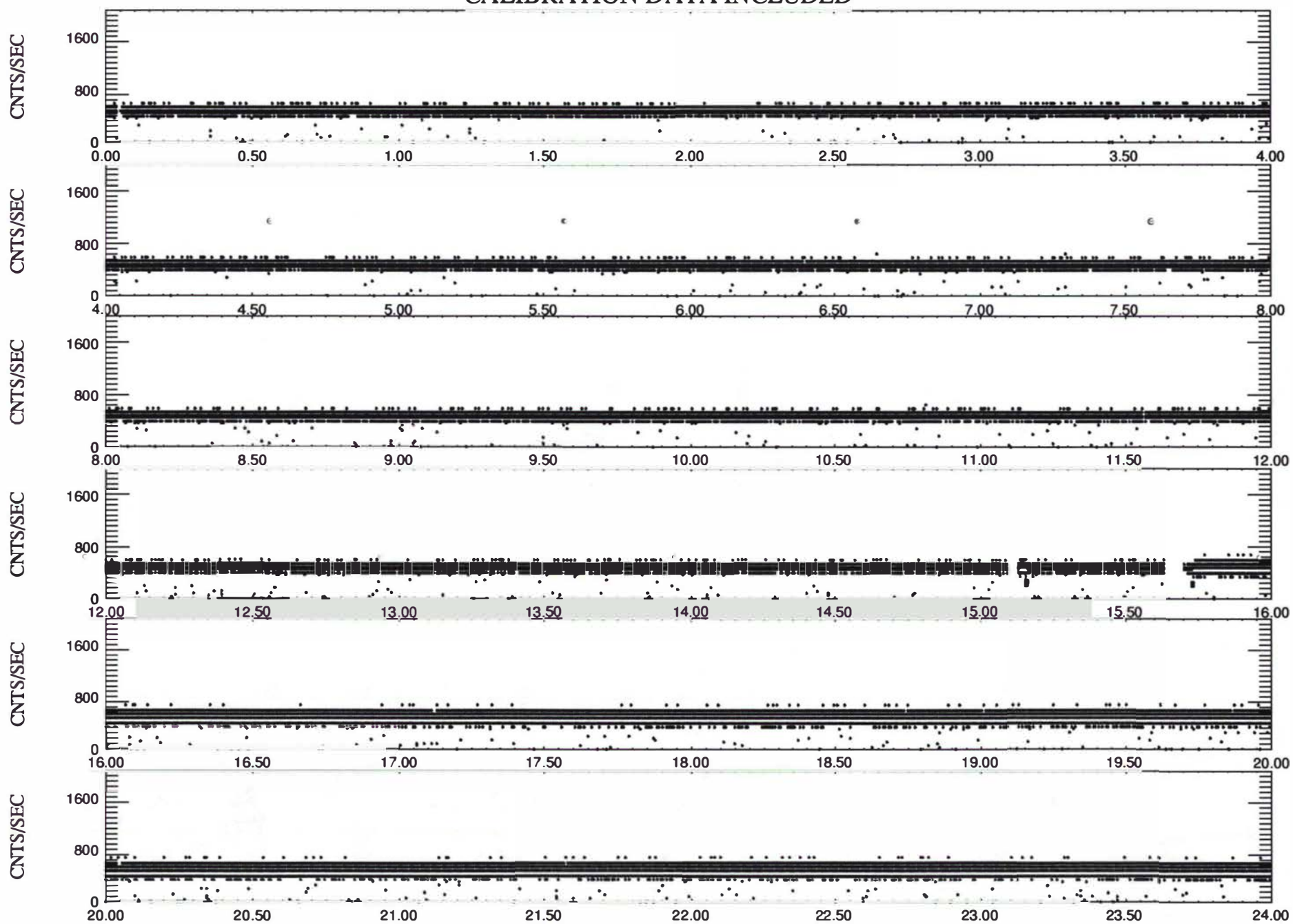
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

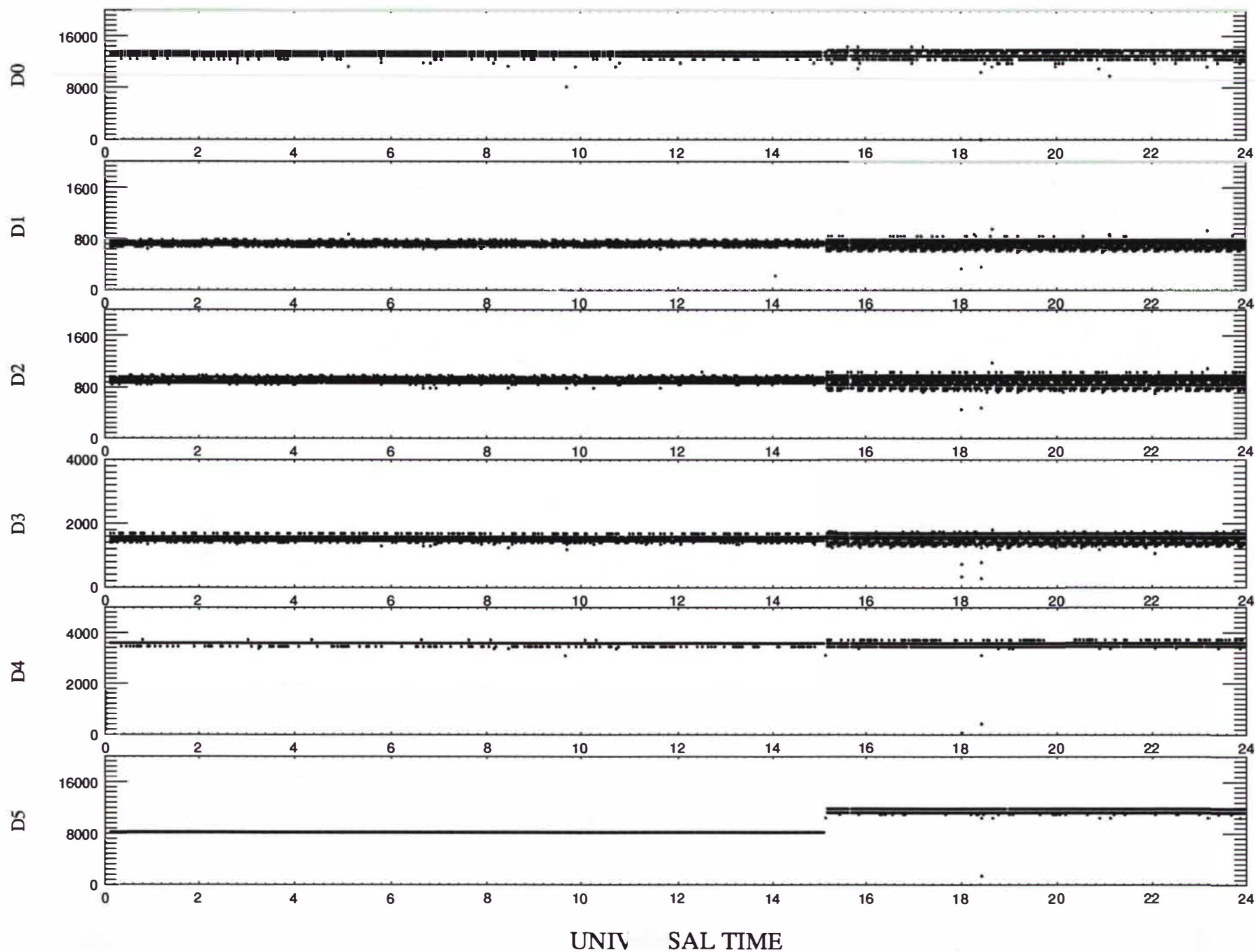
NO BURST (3)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From MEEGAN@ssl.msfc.nasa.gov Fri Nov 19 14:18:17 1993
Date: Fri, 19 Nov 1993 16:20:26 -0600 (CST)
From: MEEGAN@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2641
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2641
EVENT OF 1993 NOV 18 DAY OF YEAR=322
EVENT CROSSING TIME AT BATSE : 41507. S. OR 11:31:47.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 20.000 -3.000
BATSE PEAK COUNTING RATE: 2300 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 18/11/ 93 IS:
RA= 165.619 DEC= -30.689 DIST= 4.409 AU
BATSE-ULYSSES DISTANCE = 659518335. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 47.00 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1500.42 SECS.
CROSSING TIME AT ULYSSES IS 43007. S. OR 11:56:47 +/- 352.11 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 18/11/ 93 IS:
RA= 244.373 DEC= -21.814 DIST= 2.453 AU
MARS-BATSE DISTANCE = 366900800. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 49.96 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 787.26 SECS.
CROSSING TIME AT MARS IS 42294. S. OR 11:44:54 +/- 174.64 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2641	931118	9309	41507	2300	020	-03

BATSE BURST TRIGGER

NO.: 02641

TIME: TJD=9309 SECONDS=41507

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=164. AZIMUTH=194. ERROR= DEGREES

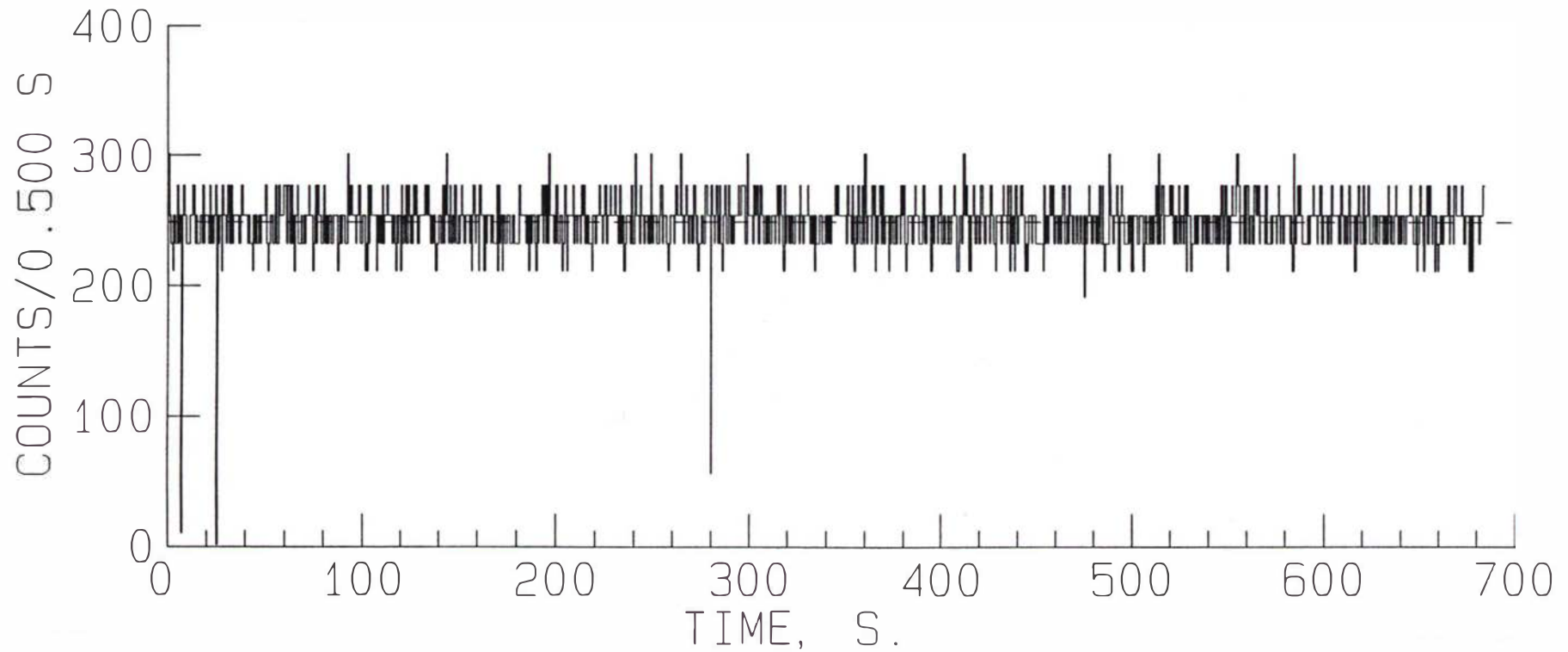
COMMENTS:

WEAK 4 SECOND PULSE. NOT SEEN ABOVE 300 KEV.

19/11/93

ULYSSES RT
18/11/93 42660.328 s
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From MEEGAN@ssl.msfc.nasa.gov Fri Nov 19 14:15:59 1993
Date: Fri, 19 Nov 1993 16:17:53 -0600 (CST)
From: MEEGAN@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02642

TIME: TJD=9309 SECONDS=71487

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

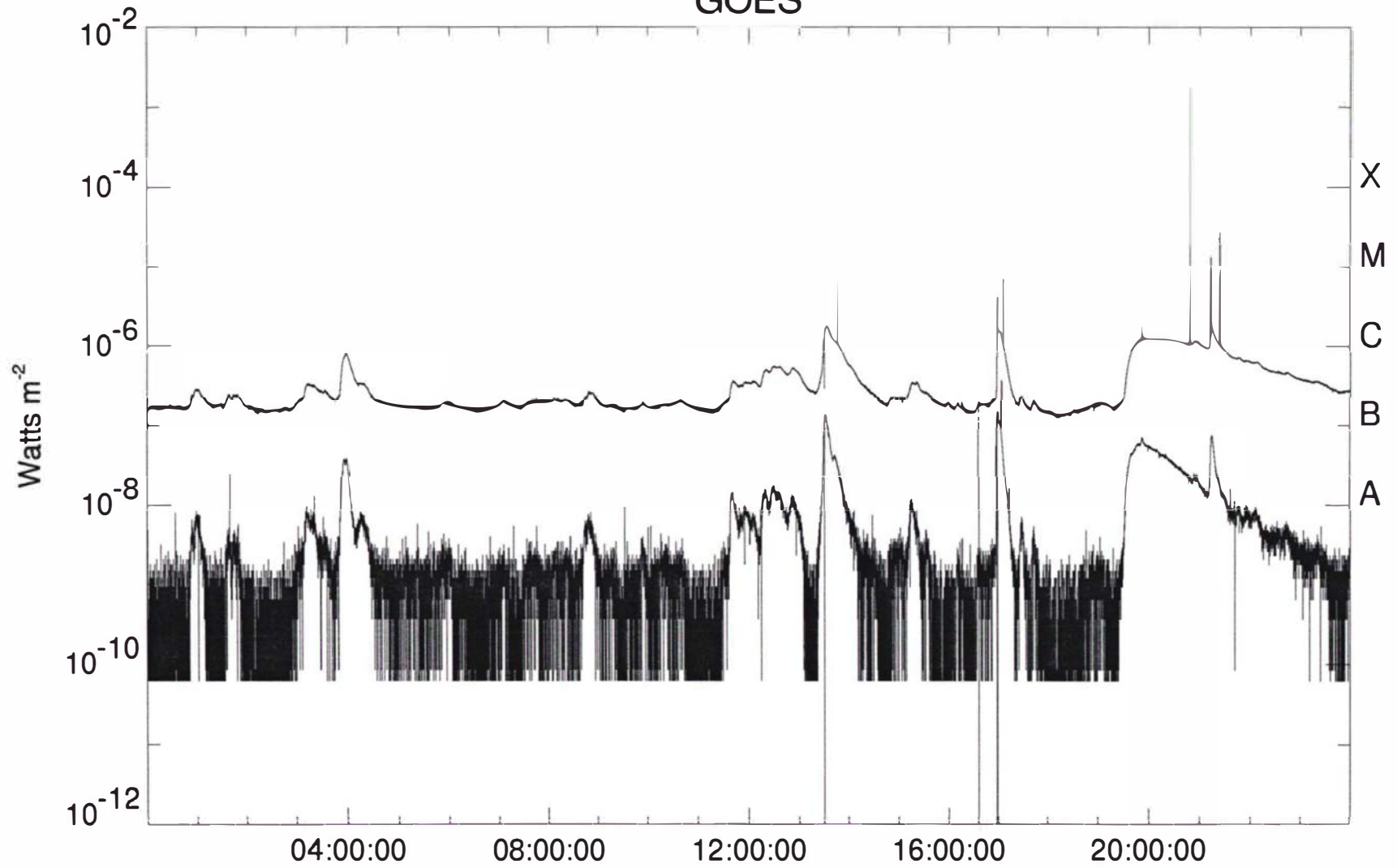
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON PRECIPITATION.

GOES



Data Start: 93/11/18, 0000:01

Plot created: 93/11/19, 1823

Channel

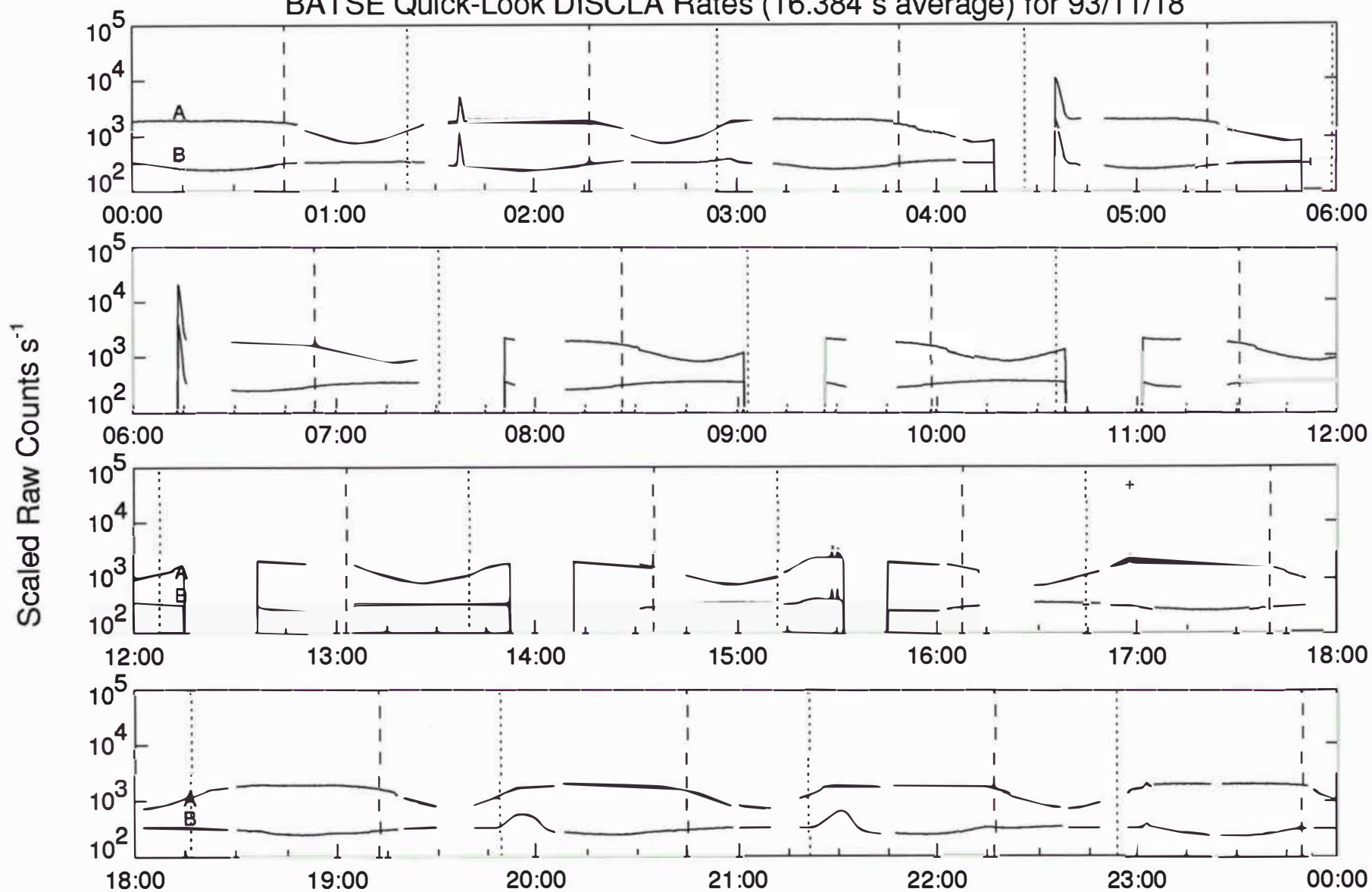
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/18

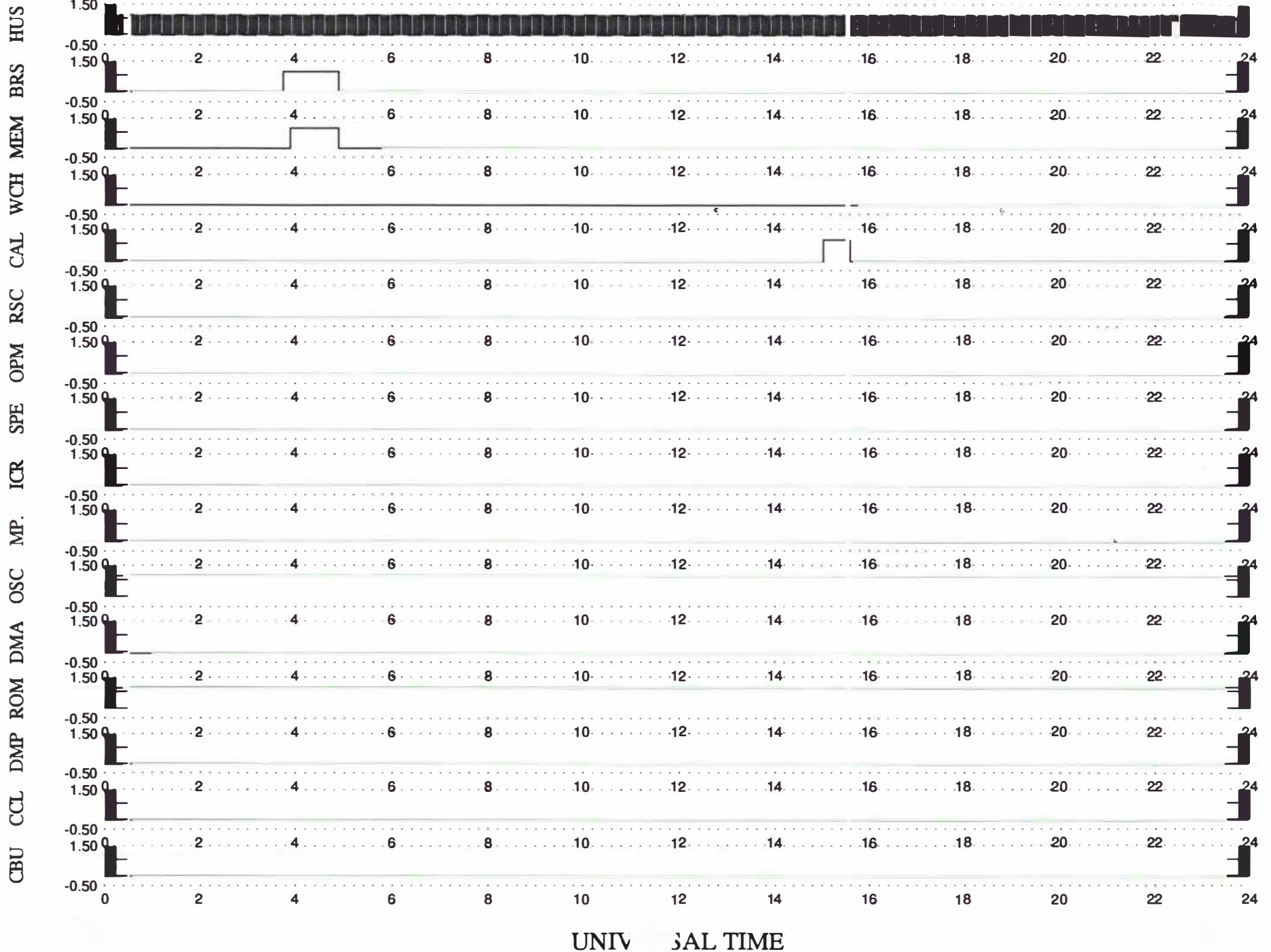


Current Time: 93/11/22, 1345 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

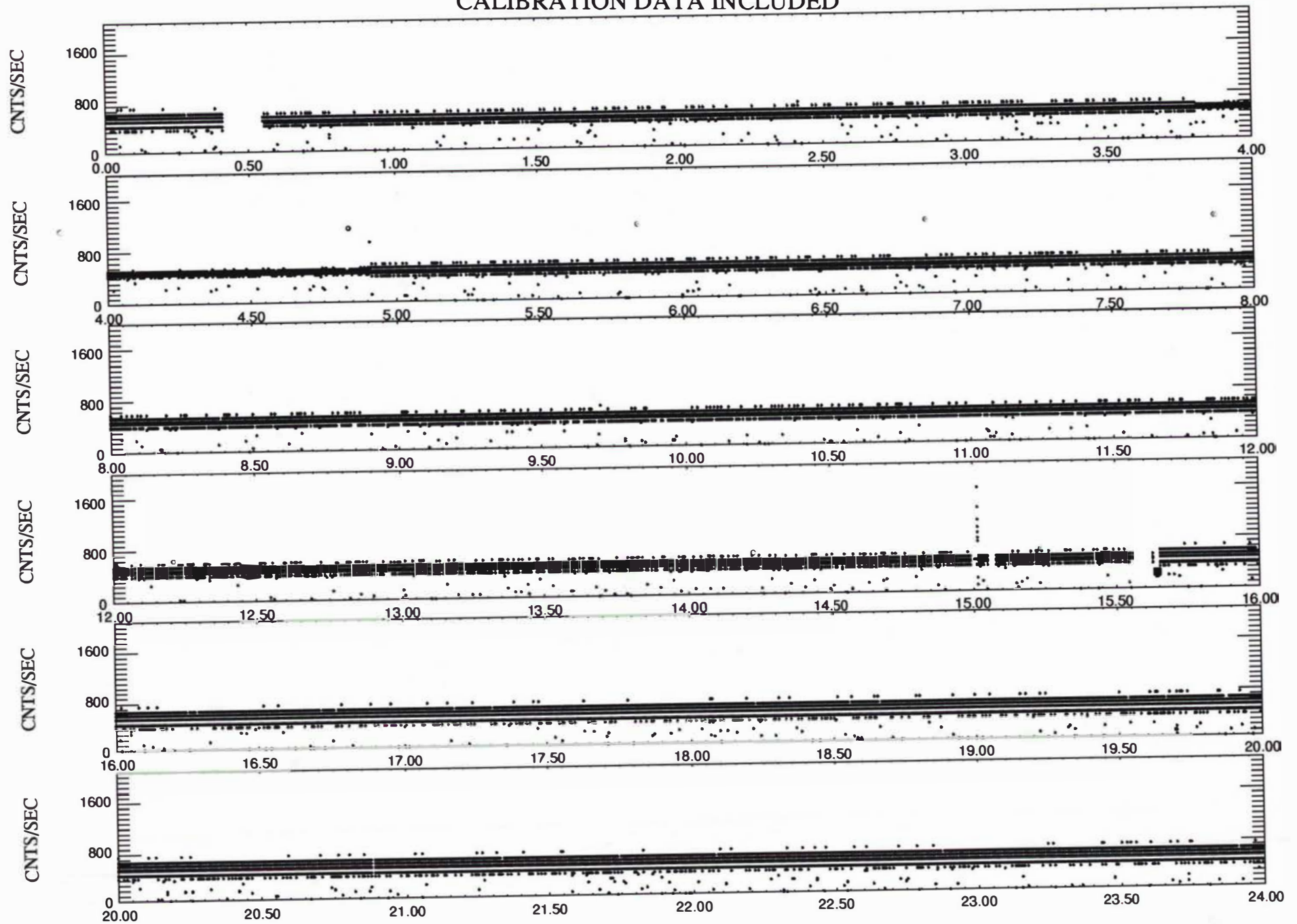
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

BURST NUMBER 4

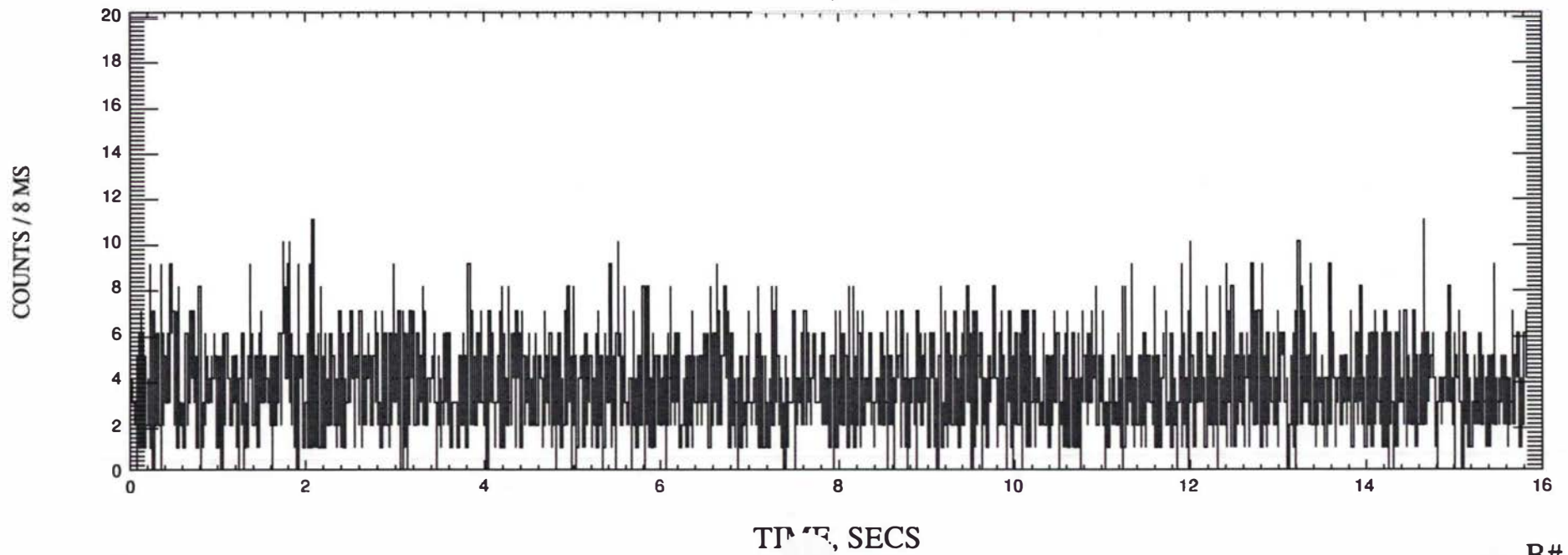
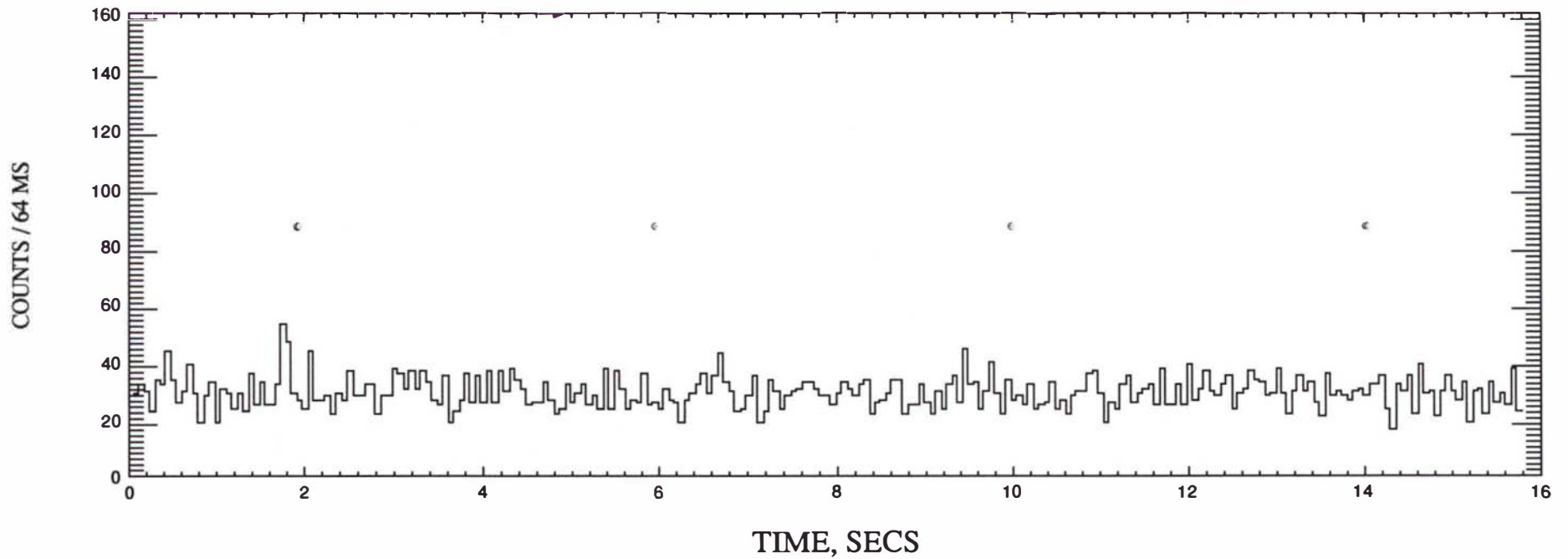


CALIBRATION DATA INCLUDED



UNIV TIME

Burst Counter 4 at UT= 3.653712192112 h=13153.364 s 03:39:13.364

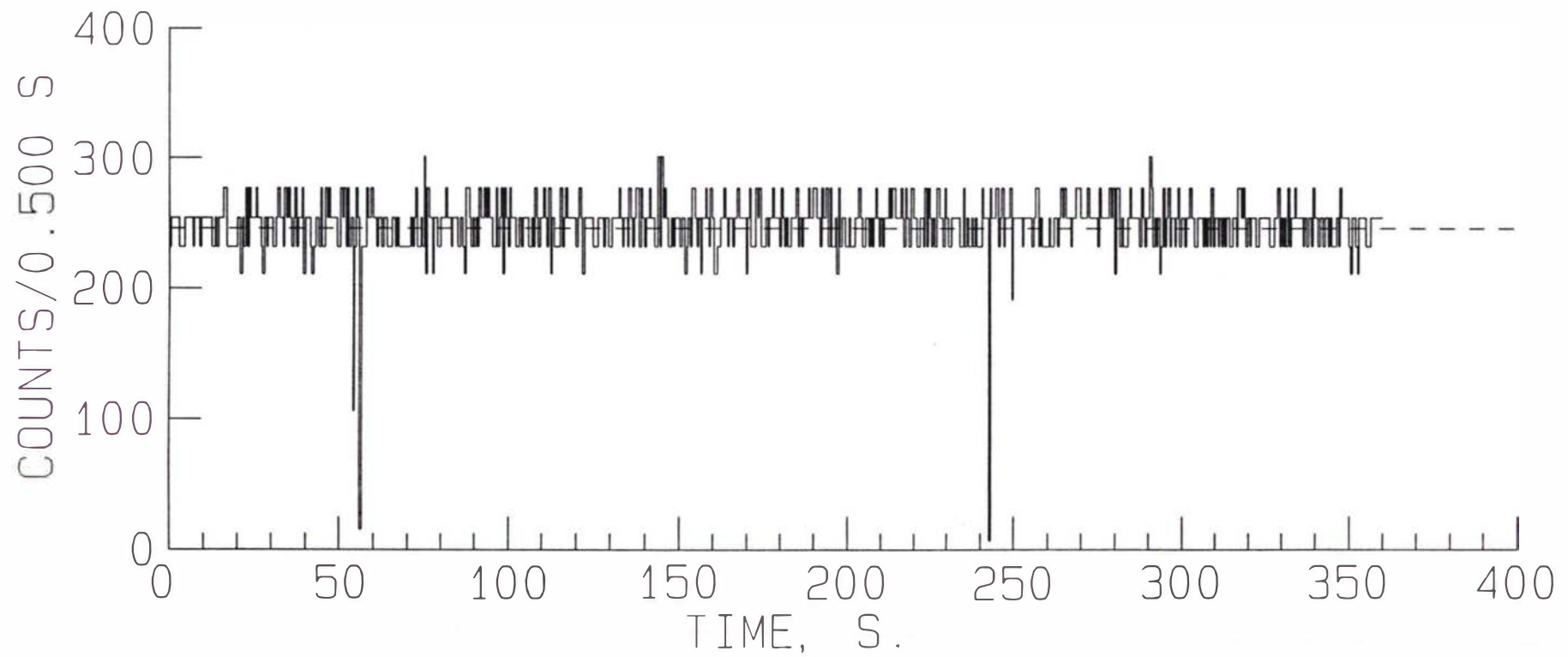


Hus Trigger

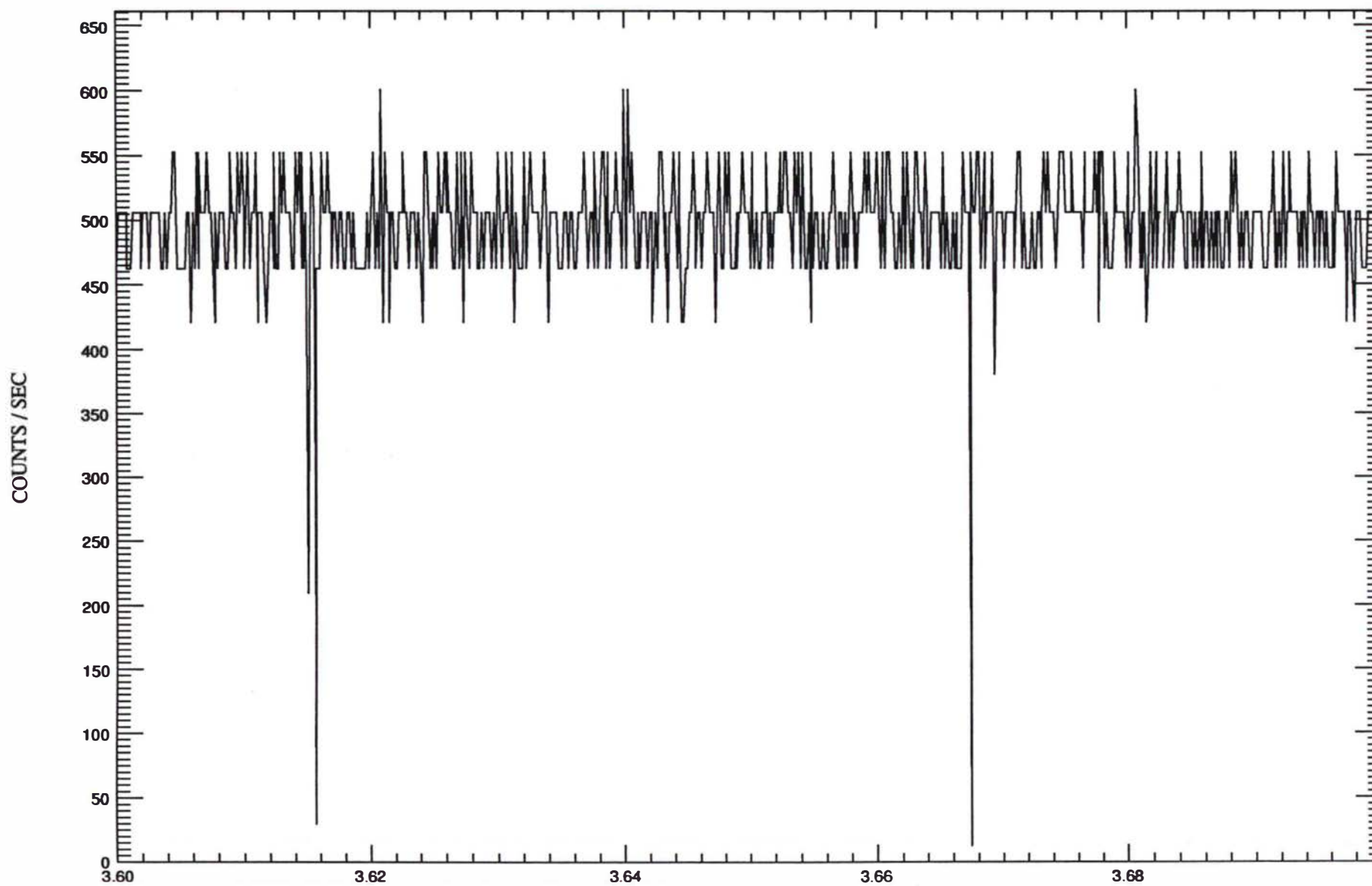
19/11/93

ULYSSES RT
18/11/93 12960.371 s
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



CALIBRATION DATA INCLUDED



BATSE BURST TRIGGER

NO.: 02643

TIME: TJD=9310 SECONDS=2242

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON PERCIPITATION EVENT

BATSE BURST TRIGGER

NO.: 02644

TIME: TJD=9310 SECONDS=12989

TYPE: SAAEXIT SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
EXIT FROM SAA, I.E., HV WAS TURNED ON AS SPACECRAFT EXITED SAA

BATSE BURST TRIGGER

NO.: 02645

TIME: TJD=9310 SECONDS=18894

TYPE: SAAEXIT SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ANOTHER TRIGGER ON EXIT-EDGE OF THE SAA.

BATSE BURST TRIGGER

NO.: 02646

TIME: TJD=9310 SECONDS=34781

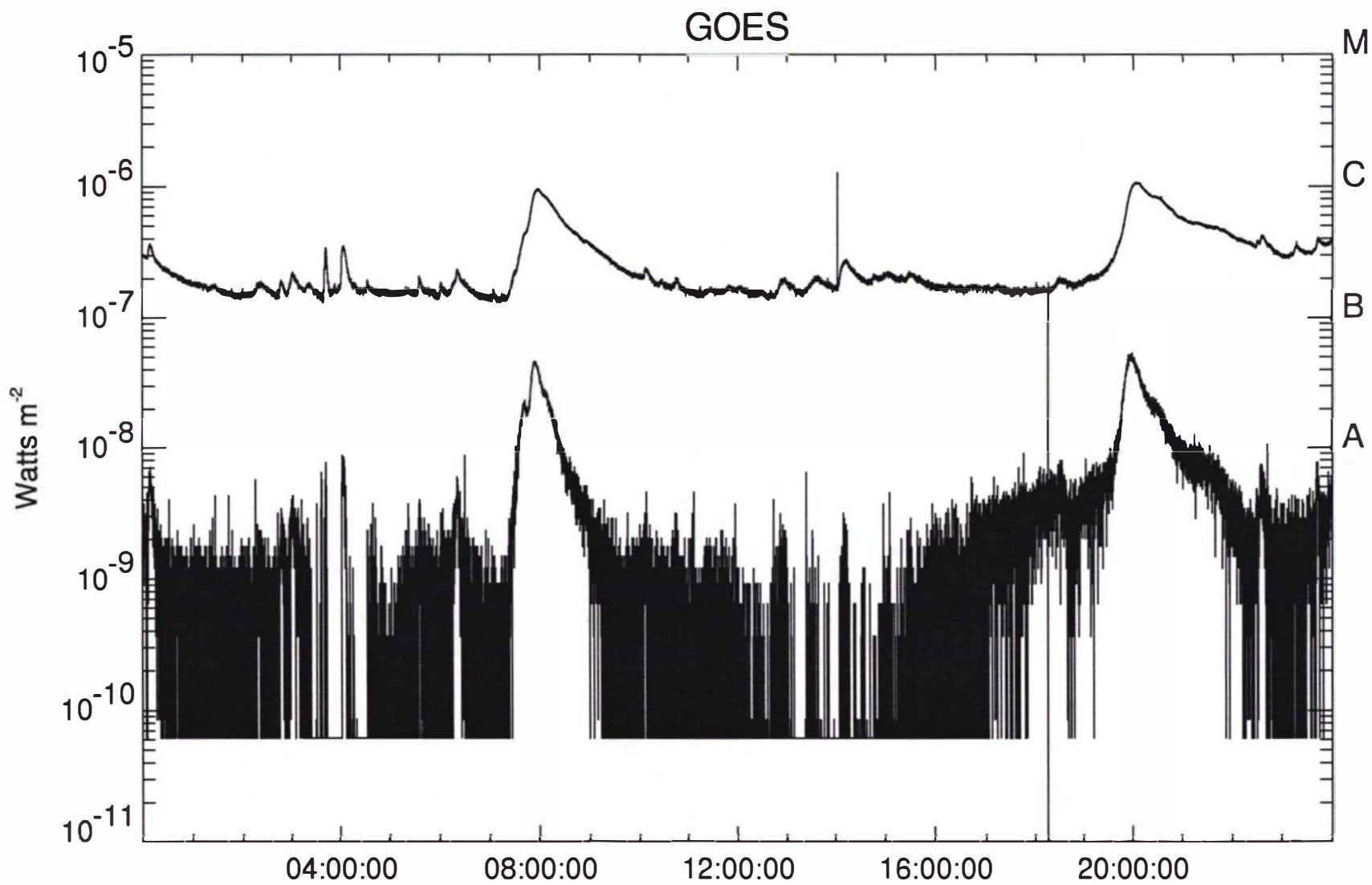
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON PERCIPITATION EVENT



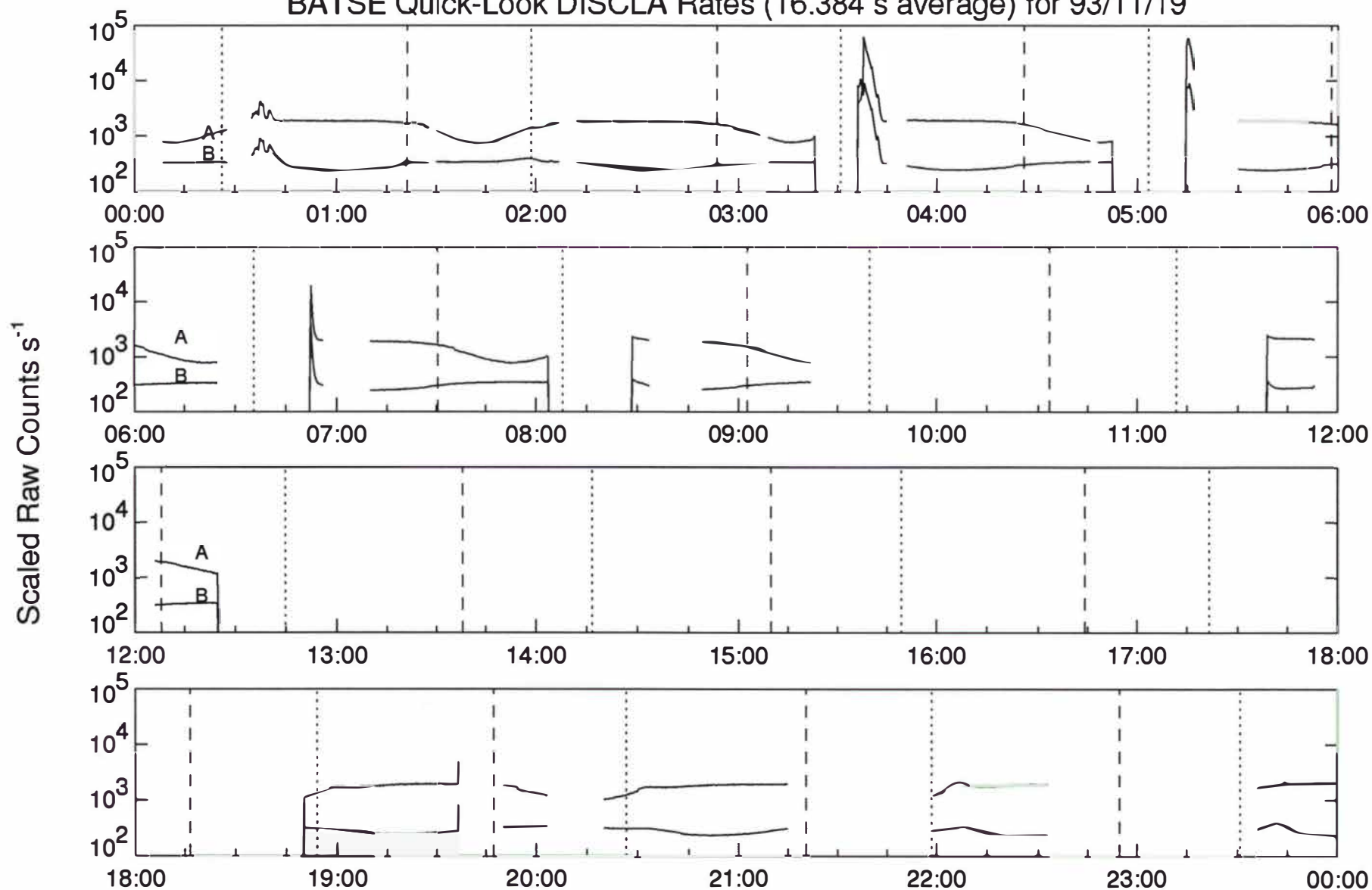
Data Start: 93/11/19, 0000:01

Plot created: 93/11/22, 1344

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/19



Current Time: 93/11/22, 1345 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

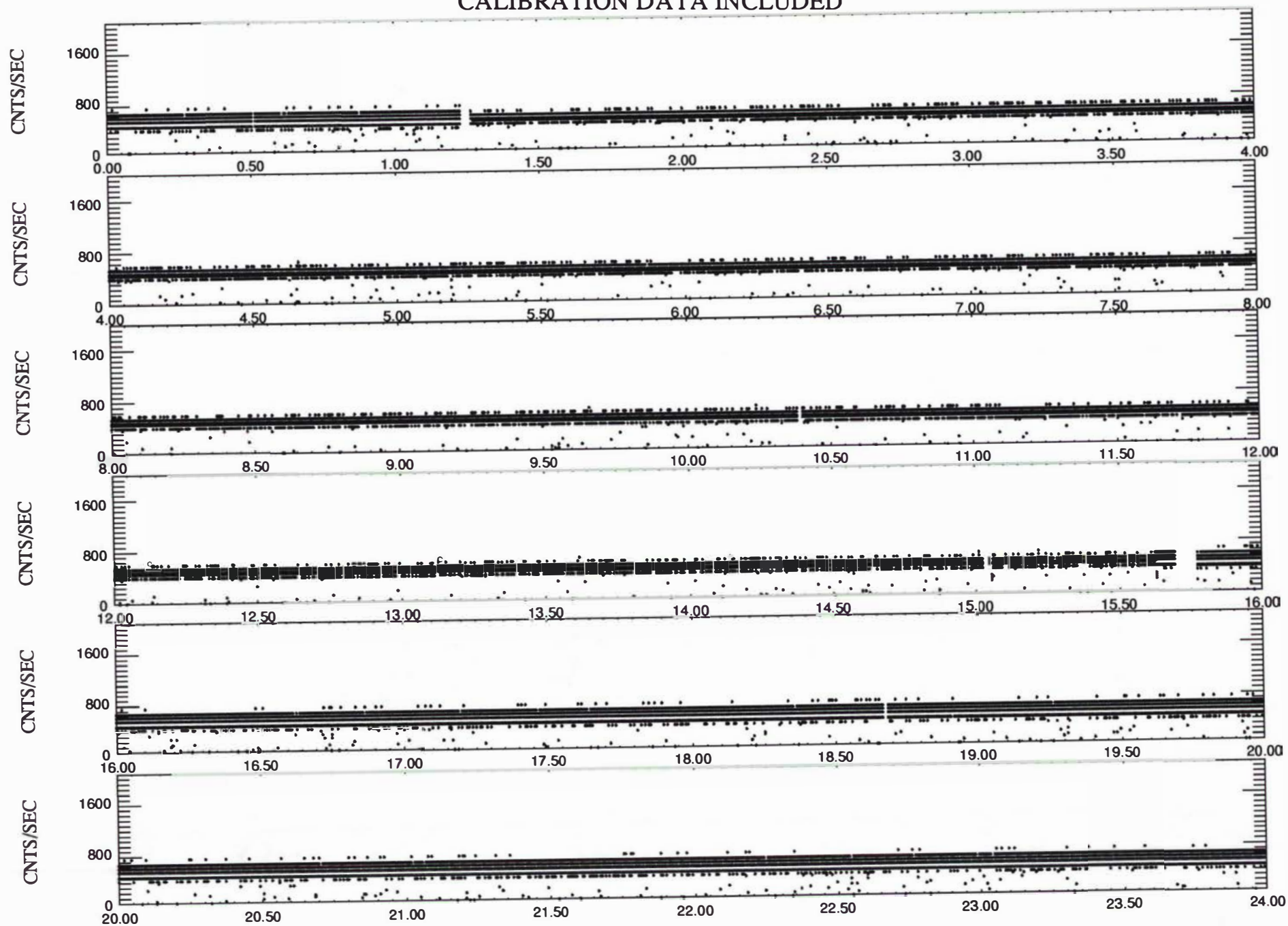
HUS
BRS
MEM
WCH
CAL
RSC
OPM
SPE
ICR
MP.
OSC
DMA
ROM
DMP
CCL
CBU

NO BURST (4)

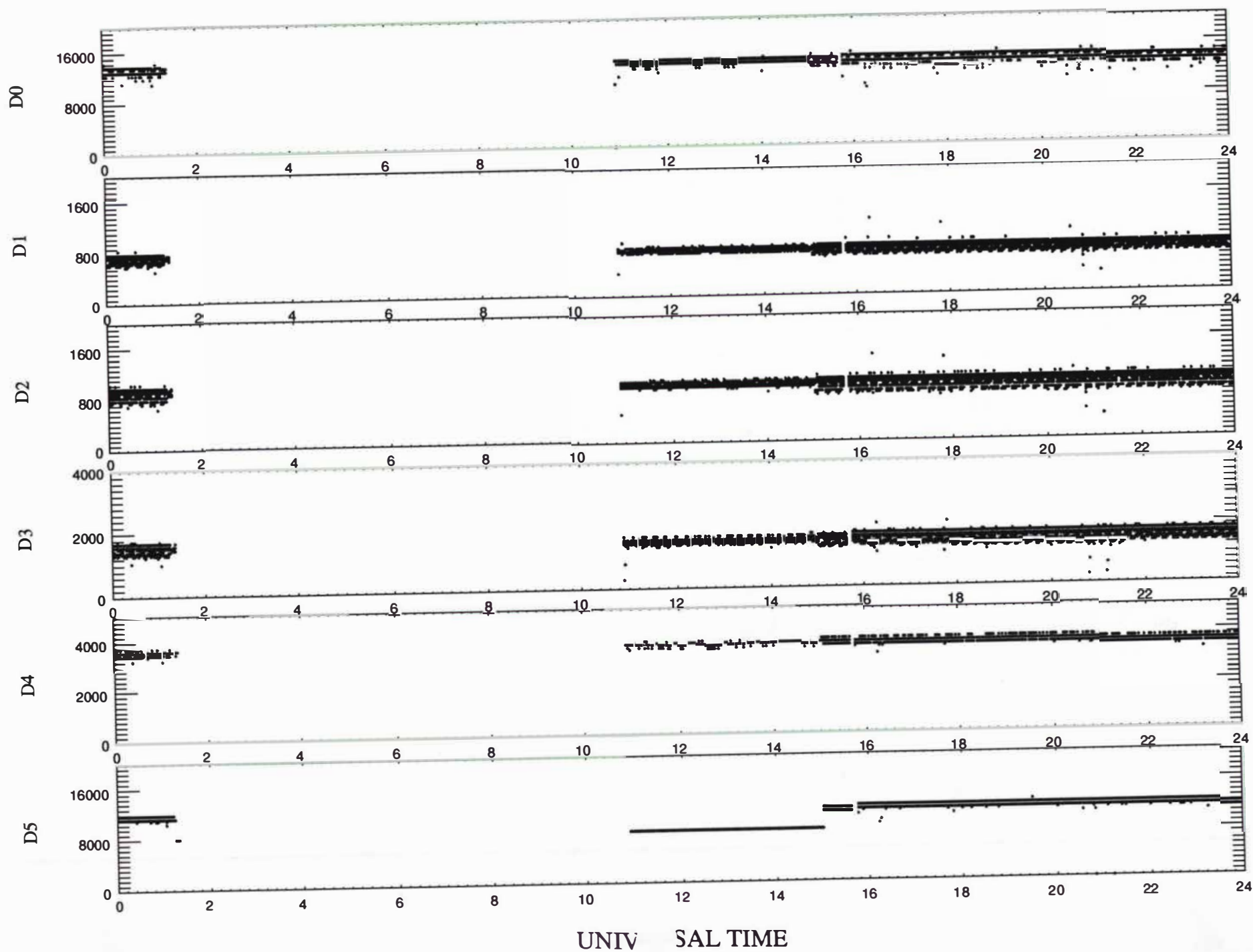


UNIVE AL TIME

CALIBRATION DATA INCLUDED



UNIV ;AL TIME



From MALLOZZI@ssl.msfc.nasa.gov Mon Nov 22 06:53:13 1993
Date: Mon, 22 Nov 1993 8:55:21 -0600 (CST)
From: "ROBERT S. MALLOZZI 205-544-6257" <MALLOZZI@ssl.msfc.nasa.gov>
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 2647

TIME: TJD=9311 SECONDS=09489

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT.

From MALLOZZI@ssl.msfc.nasa.gov Mon Nov 22 06:55:34 1993
Date: Mon, 22 Nov 1993 8:57:37 -0600 (CST)
From: "ROBERT S. MALLOZZI 205-544-6257" <MALLOZZI@ssl.msfc.nasa.gov>
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02648

TIME: TJD=9311 SECONDS=21303

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT.

From MALLOZZI@ssl.msfc.nasa.gov Sun Nov 21 16:27:47 1993
Date: Sun, 21 Nov 1993 18:30:17 -0600 (CST)
From: MALLOZZI@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2649
Content-Length: 1135

BATSEARCH PROGRAM

RI

BATSE BURST # 2649
EVENT OF 1993 NOV 20 DAY OF YEAR=324
EVENT CROSSING TIME AT BATSE : 67762. S. OR 18:49:22.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 325.000 24.000
BATSE PEAK COUNTING RATE: 9900 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 20/11/ 93 IS:
RA= 165.798 DEC= -31.229 DIST= 4.371 AU
BATSE-ULYSSES DISTANCE = 653862552. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 19.75 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 2052.69 SECS.
CROSSING TIME AT ULYSSES IS 69815. S. OR 19:23:34 +/- 209.16 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 20/11/ 93 IS:
RA= 245.913 DEC= -22.075 DIST= 2.452 AU
MARS-BATSE DISTANCE = 366885568. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 90.43 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -9.08 SECS.
CROSSING TIME AT MARS IS 67753. S. OR 18:49:12 +/- 212.33 SECONDS

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2649	931120	9311	67762	9900	325	+24

BATSE BURST TRIGGER

NO.: 02649

TIME: TJD=9311 SECONDS=67762

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=021.3 AZIMUTH=152.7 ERROR= DEGREES

COMMENTS:

SINGLE PEAK BURST OF DURATION APPROX. 0.5 SECONDS.
OBSERVED ABOVE 100 KEV, BUT NOT ABOVE 300.
LOCATES WITHIN COMPTEL'S FIELD-OF-VIEW.

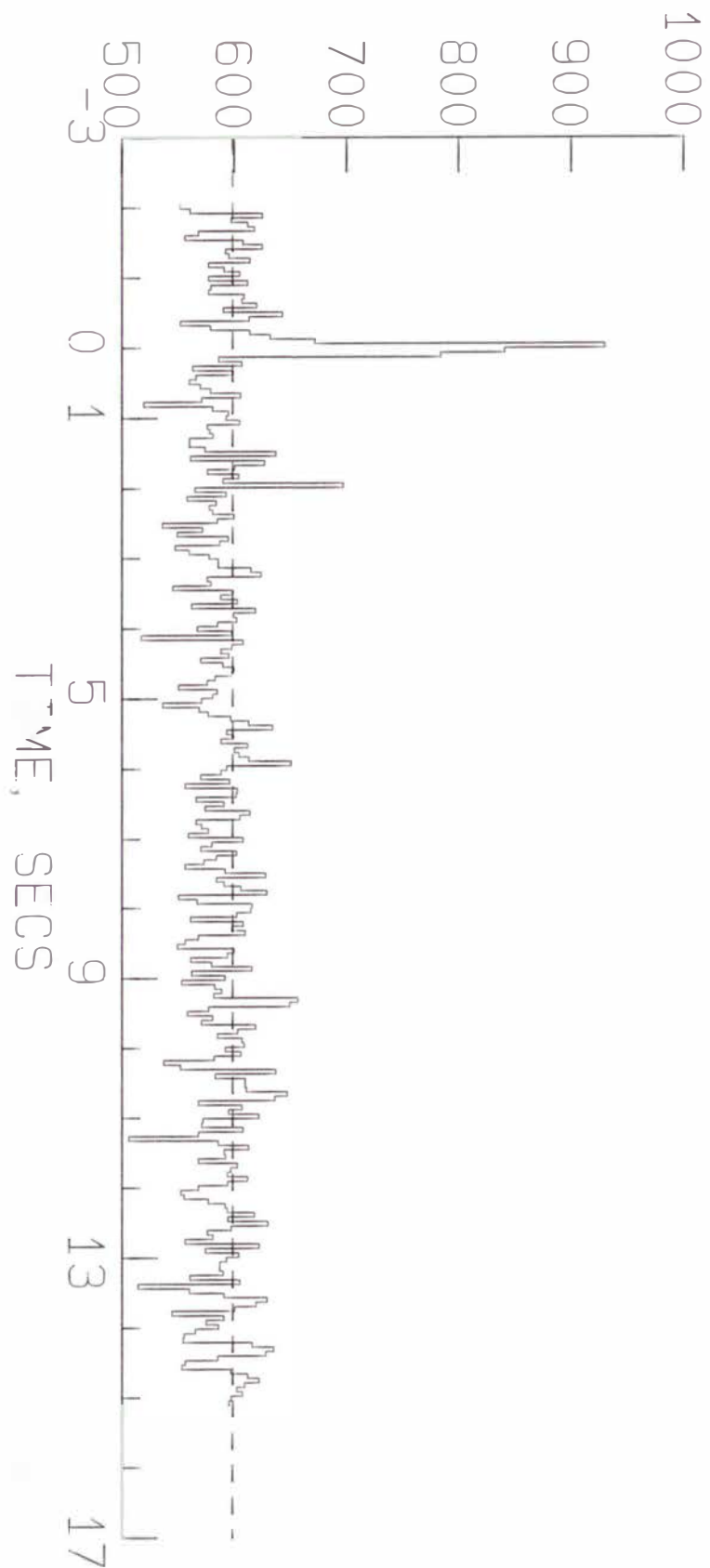
BATSE

20/11/93

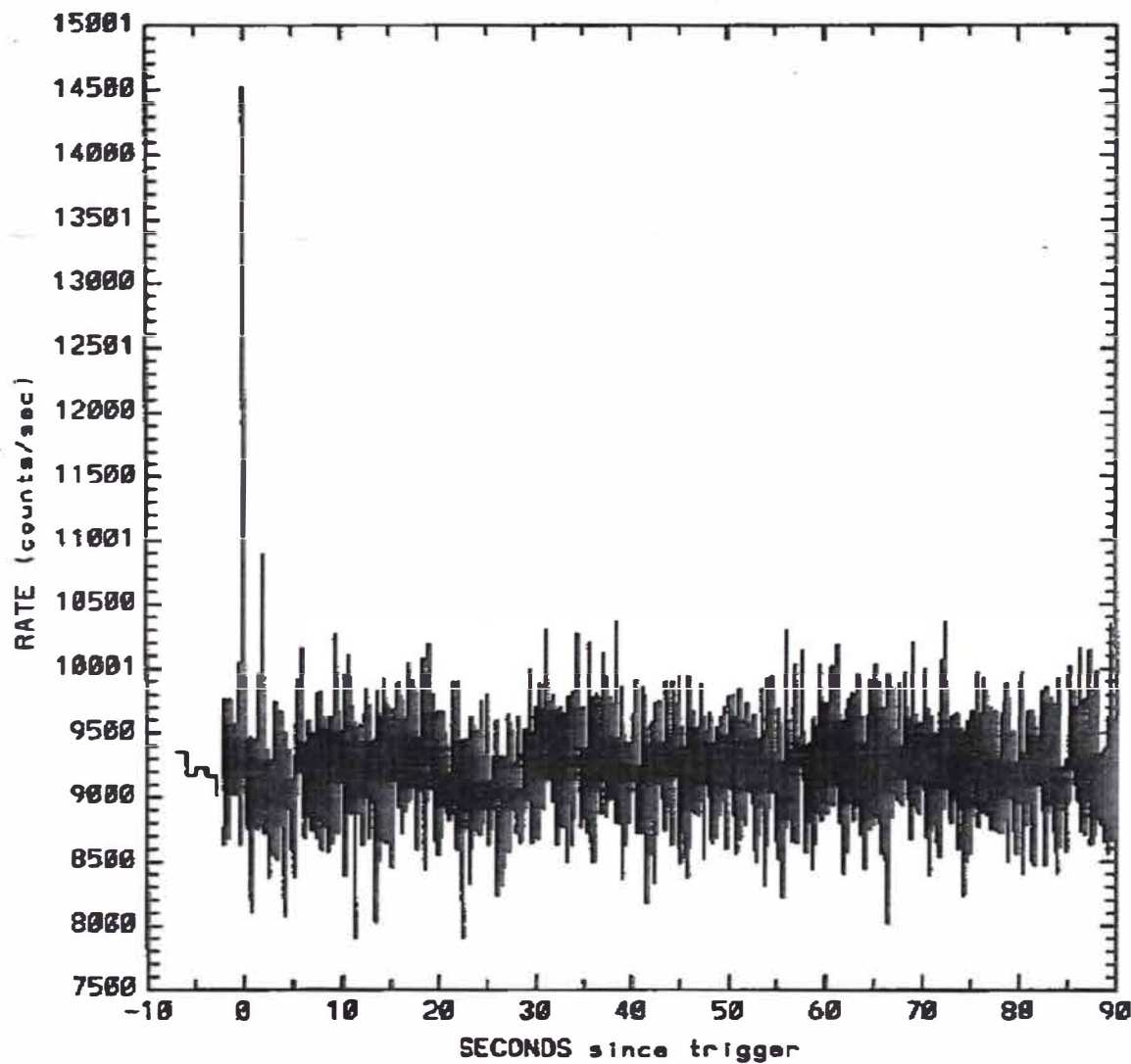
67762.586

25- 100 keV

COUNTS/ .064 S



DISCSC Data for K. Hurley, No. 2649



4-AUG-1995 10:10:54

Created by MOPS 80
(Burst Display)
Version 12.25

Trigger # : 2649

Trigger Time:
9311 / 67762.506Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: PREB + DISCLAMinimum Integ. Time:
0.064 secondsDetectors [7..0]:
-6-4---0Discriminators:
1 1 . 2 }Quality Mask:
BDISP1

ULYSSES RT

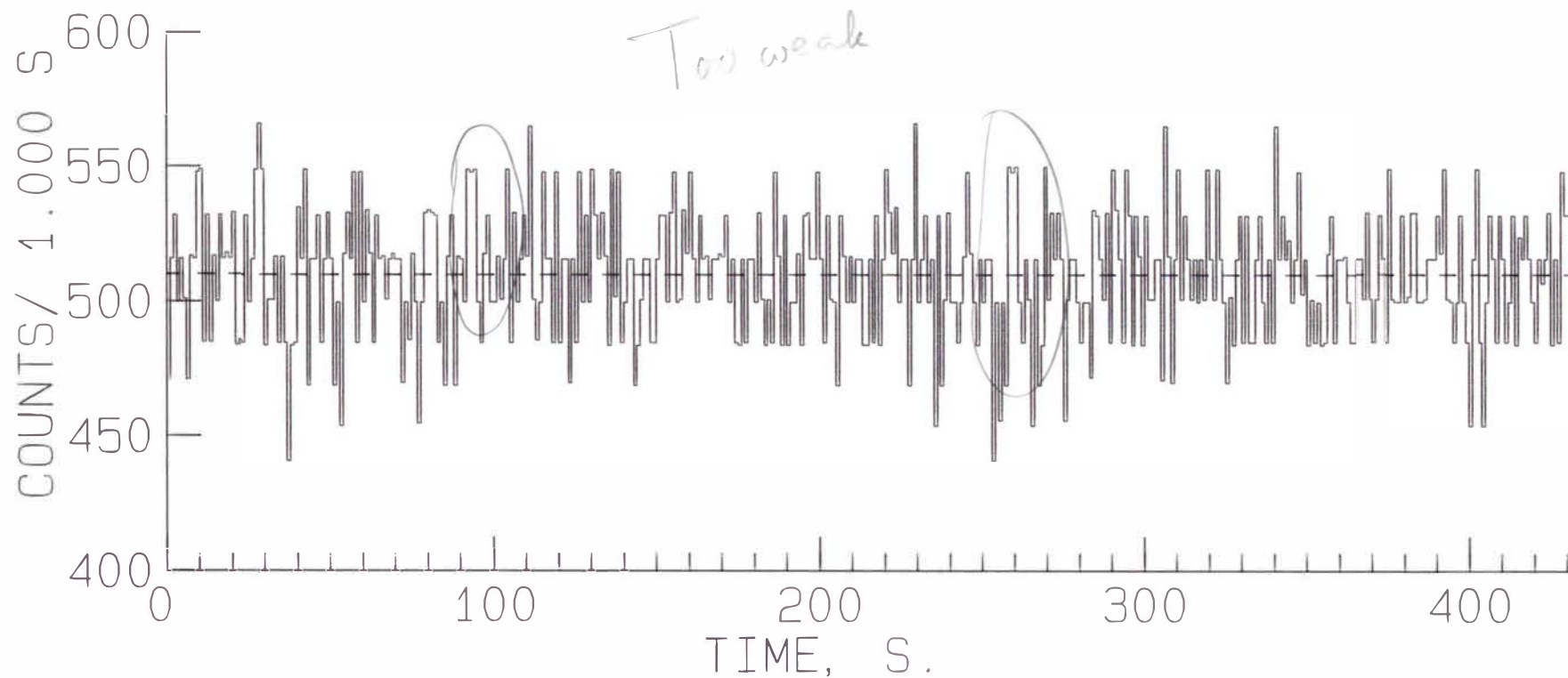
1 / 8 / 95

20/11/93 69588.148 s

.250 S INTERVALS REGROUPED BY 4

21- 141 keV

N= 10 M= 1
>3.0 SIGMA FLUCTUATIONS



From MALLOZZI@ssl.msfc.nasa.gov Mon Nov 22 07:02:27 1993
Date: Mon, 22 Nov 1993 9:04:29 -0600 (CST)
From: "ROBERT S. MALLOZZI 205-544-6257" <MALLOZZI@ssl.msfc.nasa.gov>
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02650

TIME: TJD=9311 SECONDS=76177

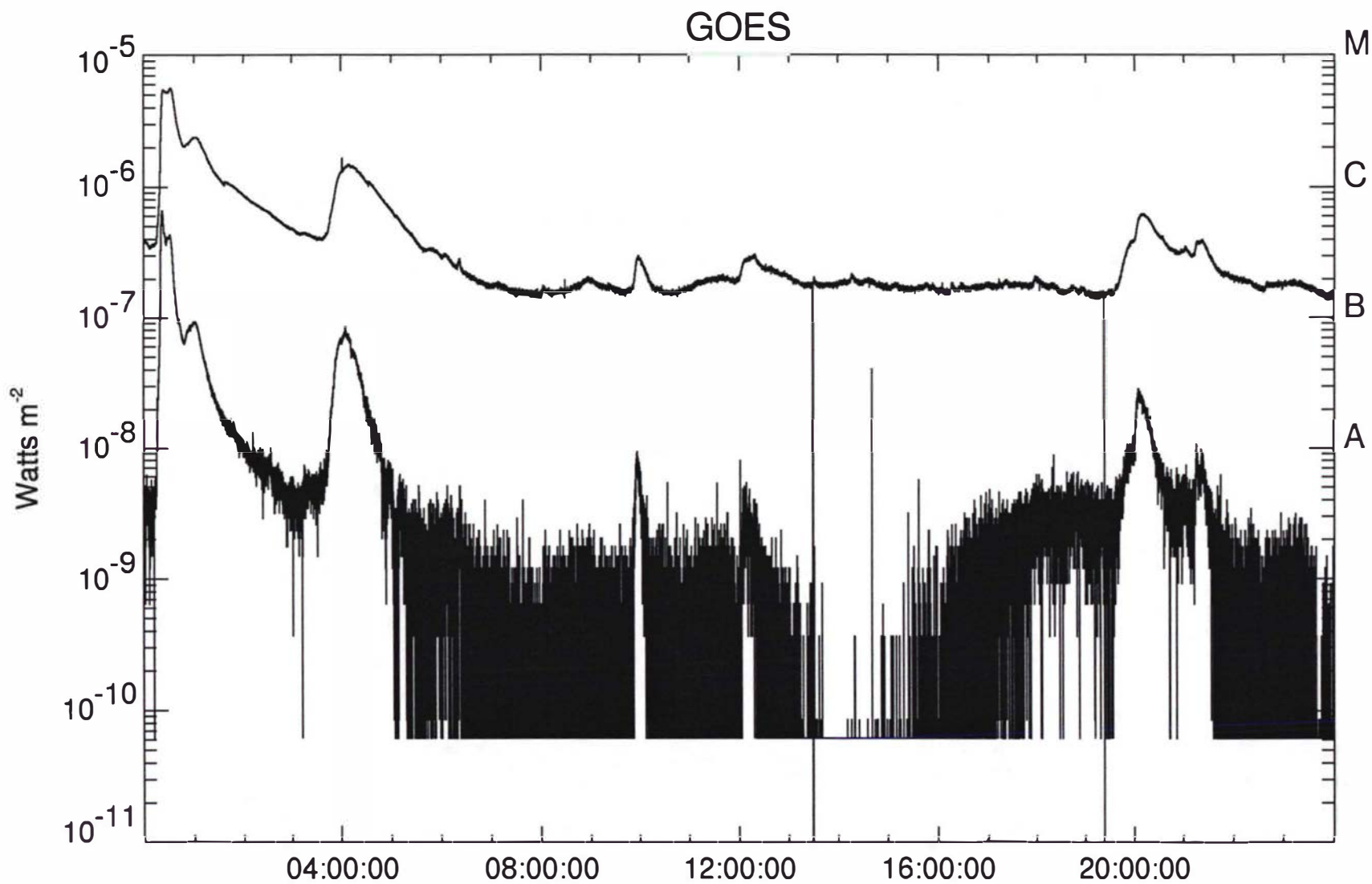
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT.



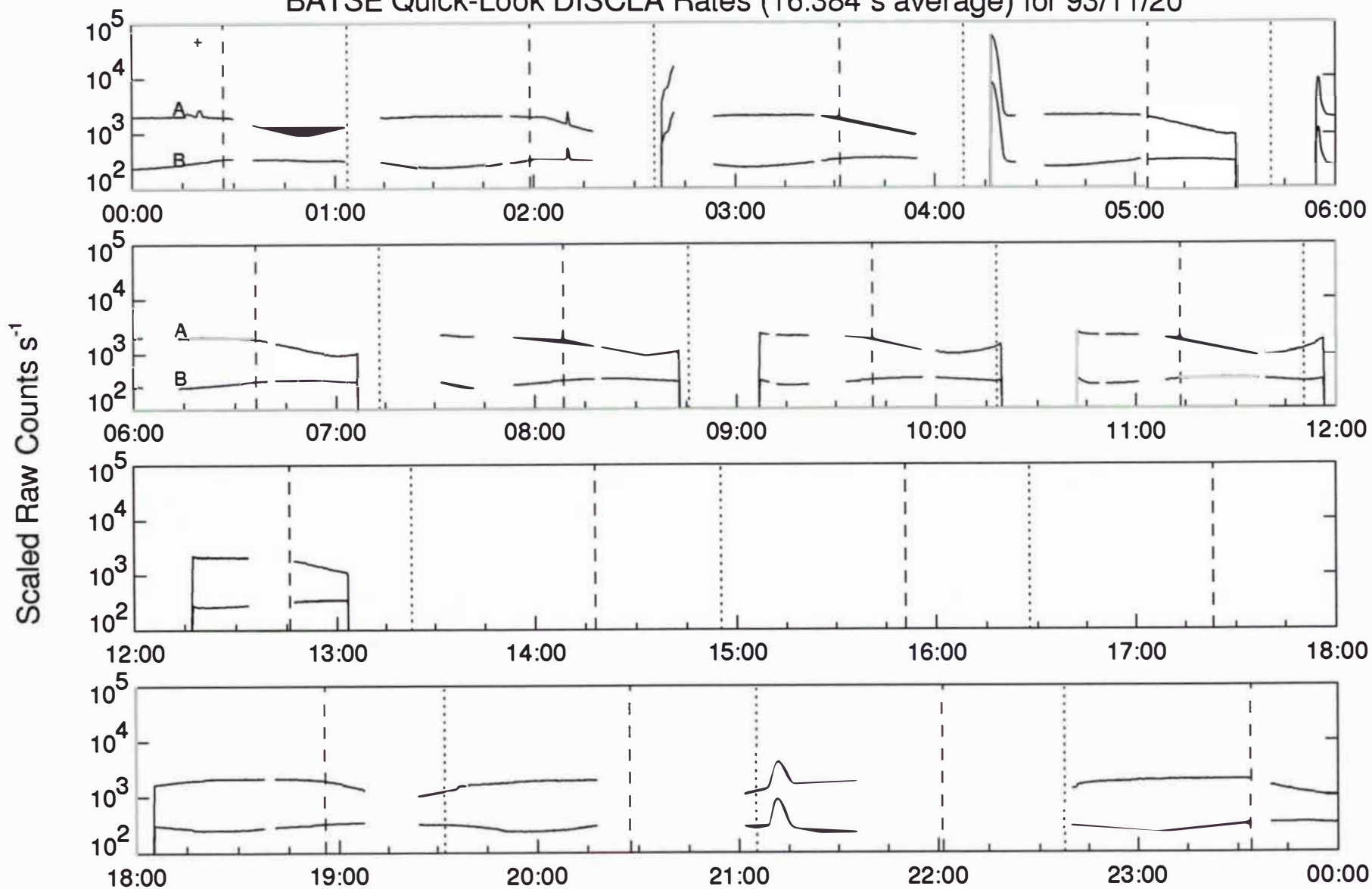
Data Start: 93/11/20, 0000:01

Plot created: 93/11/22, 1344

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 93/11/20

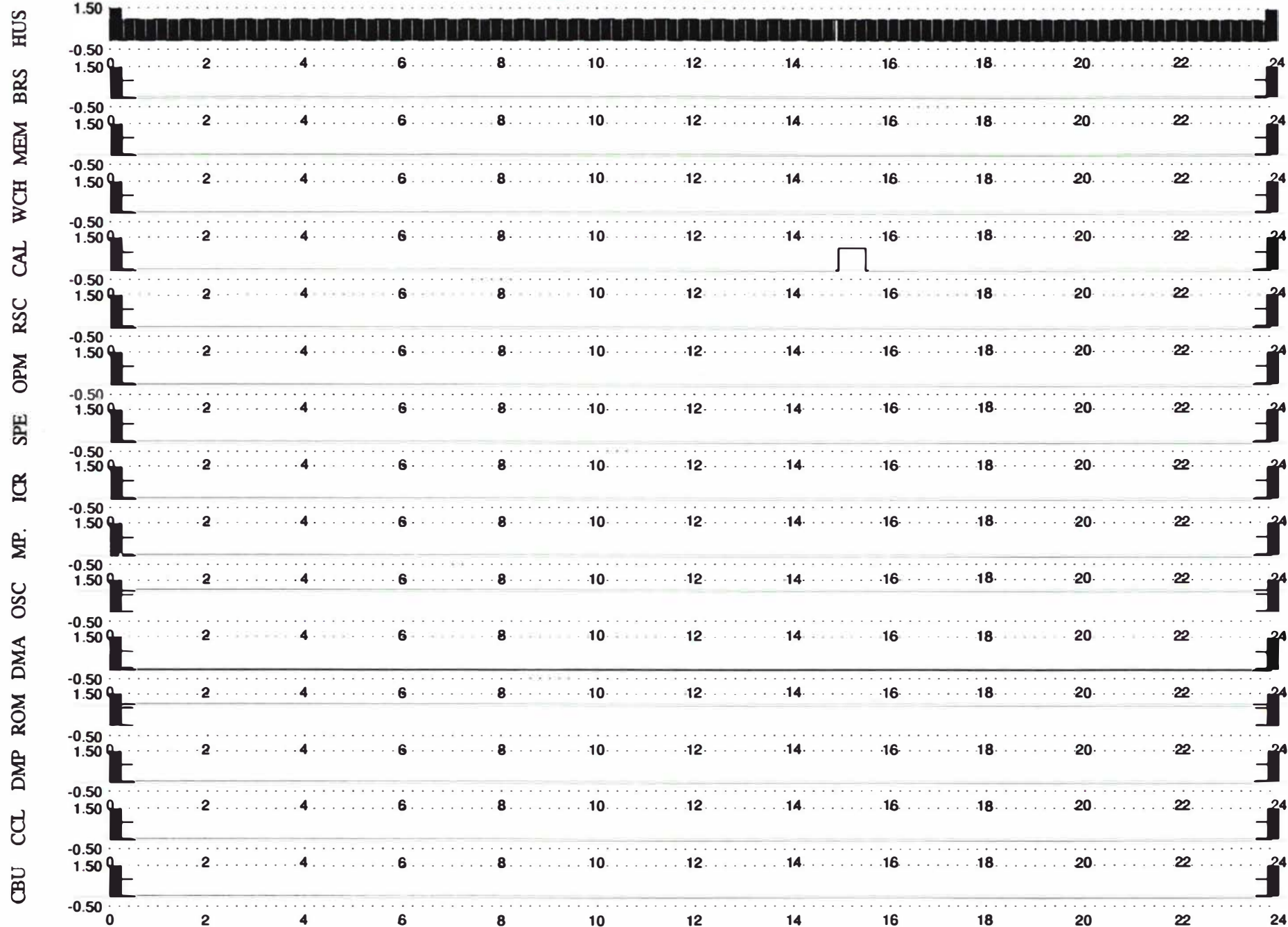


Current Time: 93/11/22, 1345 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05
 B

Dotted line: Day entry
 Dashed line: Night entry

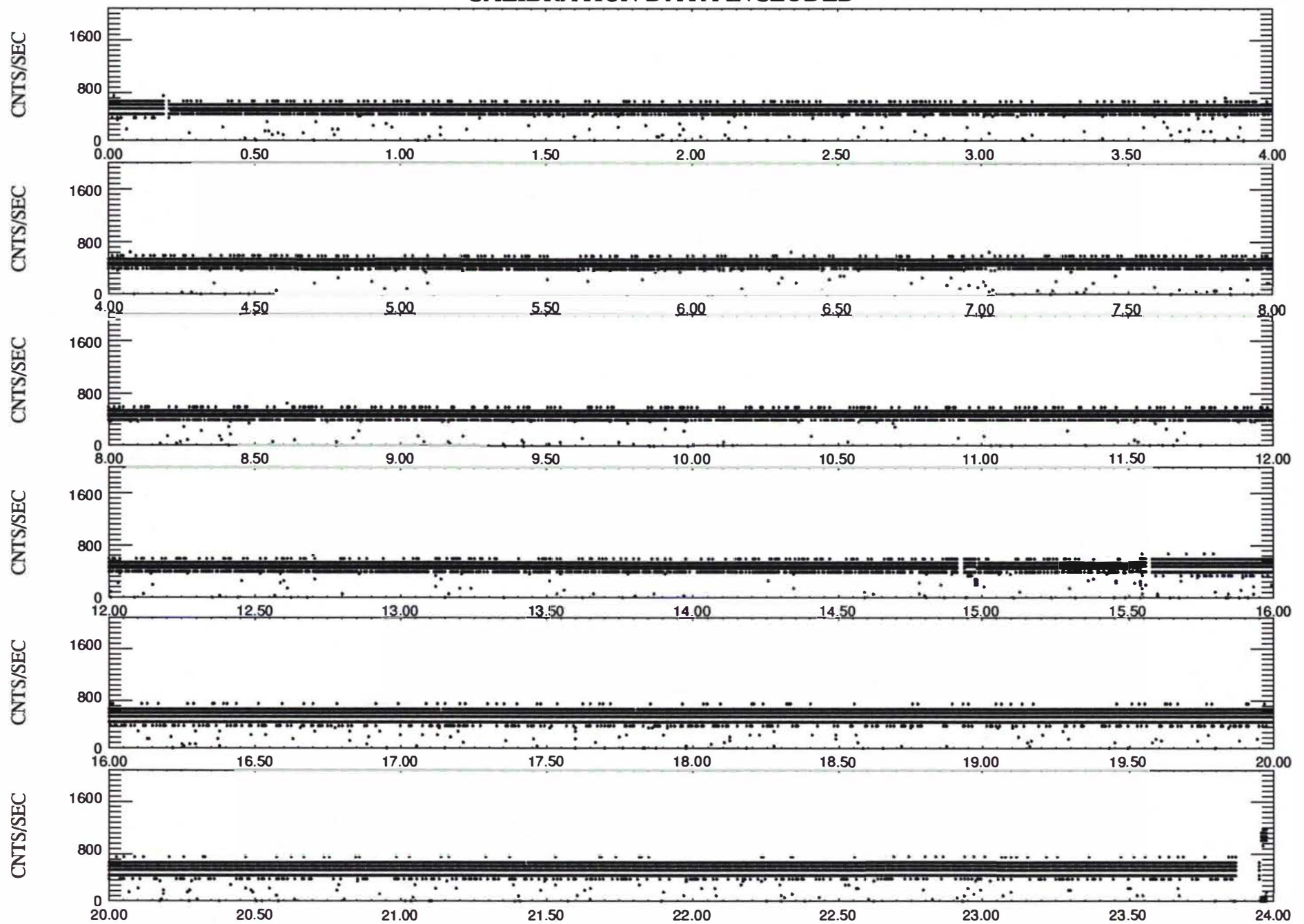
* Solar Burst Trigger
 + Solar Flare

BURST NUMBER 5

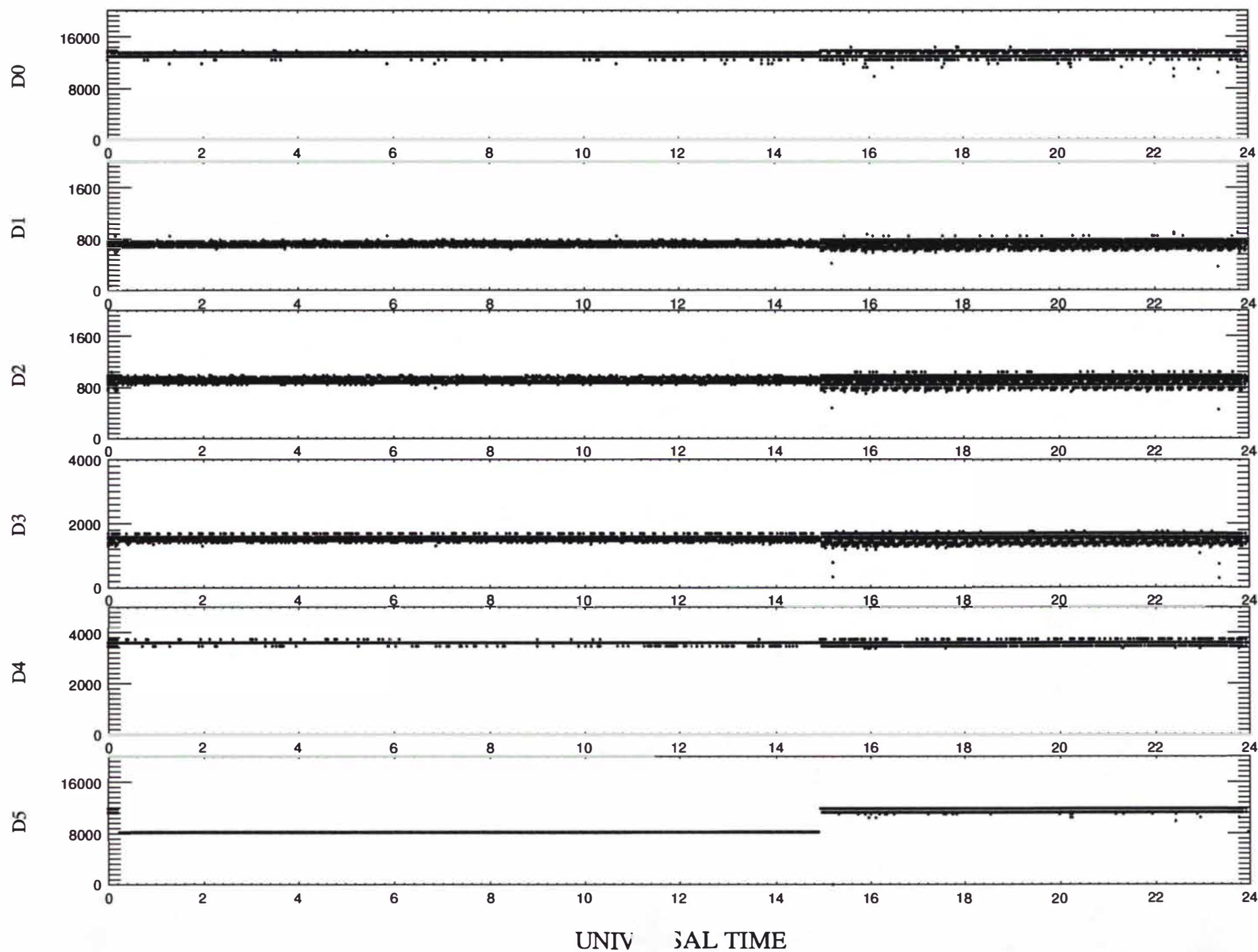


UNIVE AL TIME

CALIBRATION DATA INCLUDED



UNIV JAL TIME



From HAGEDON@ssl.msfc.nasa.gov Tue Nov 23 09:16:14 1993
Date: Tue, 23 Nov 1993 11:18:03 -0600 (CST)
From: HAGEDON@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02651

TIME: TJD=9312 SECONDS=06552

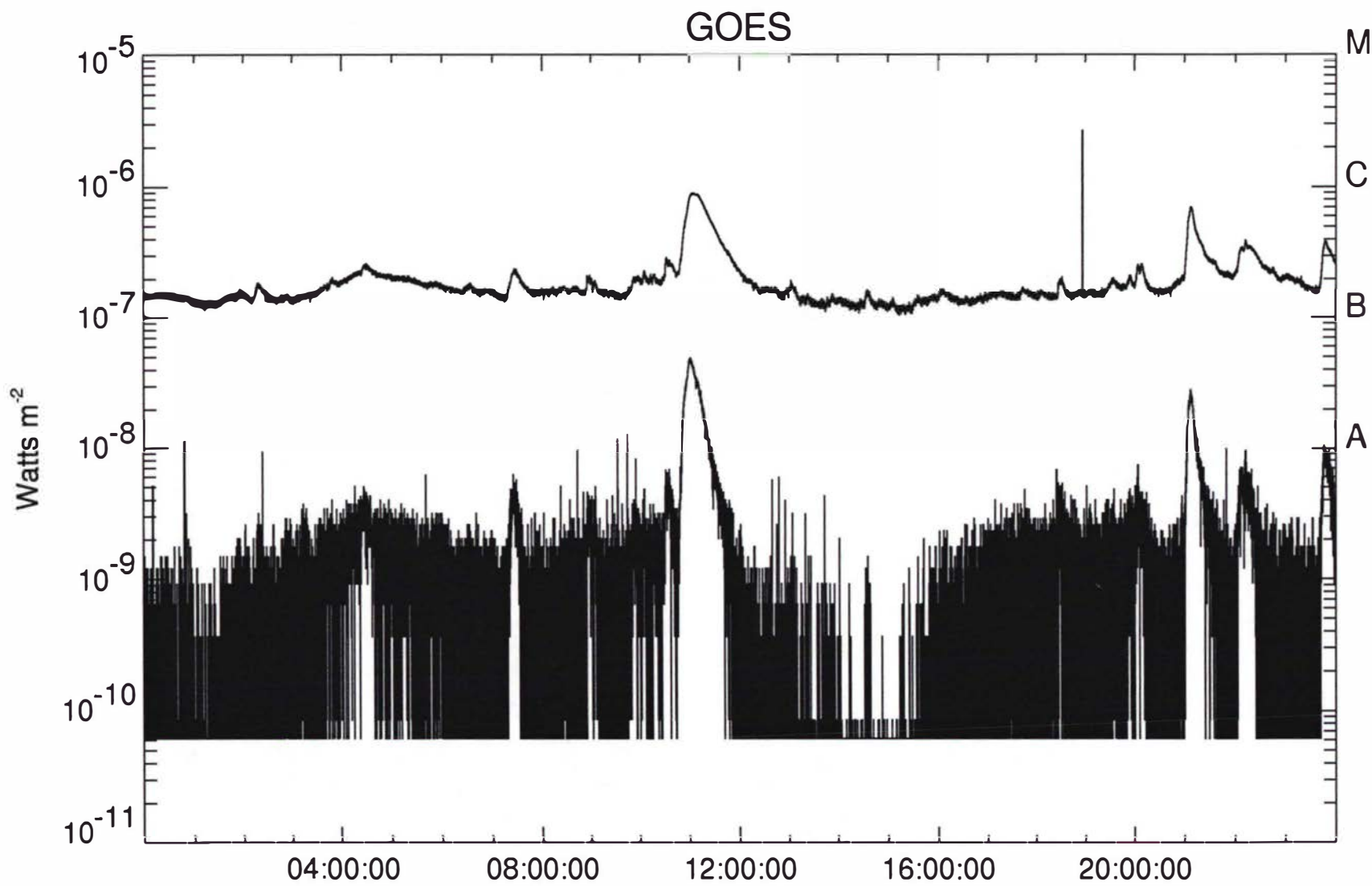
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.



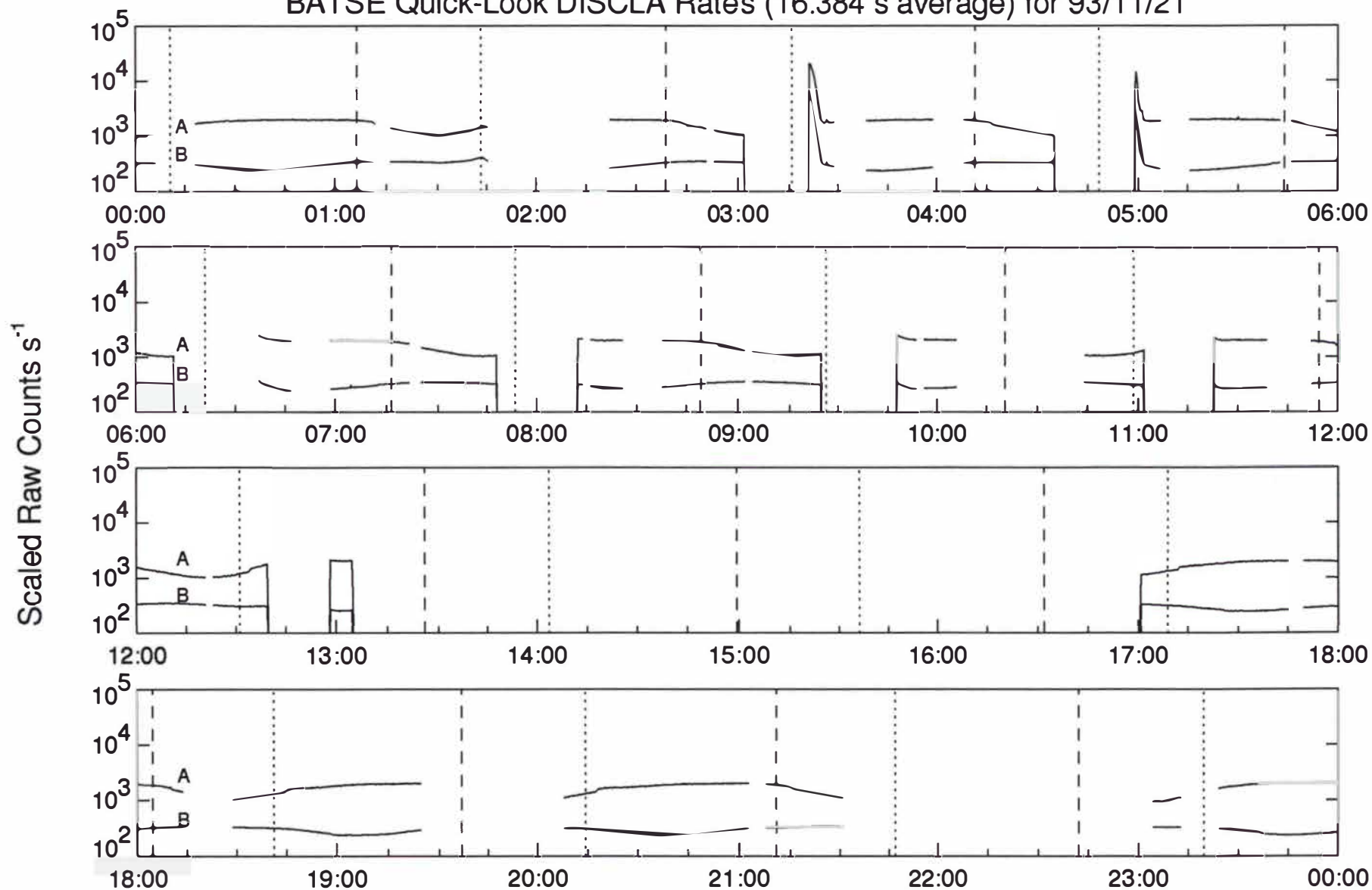
Data Start: 93/11/21, 0000:01

Plot created: 93/11/22, 1344

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/21



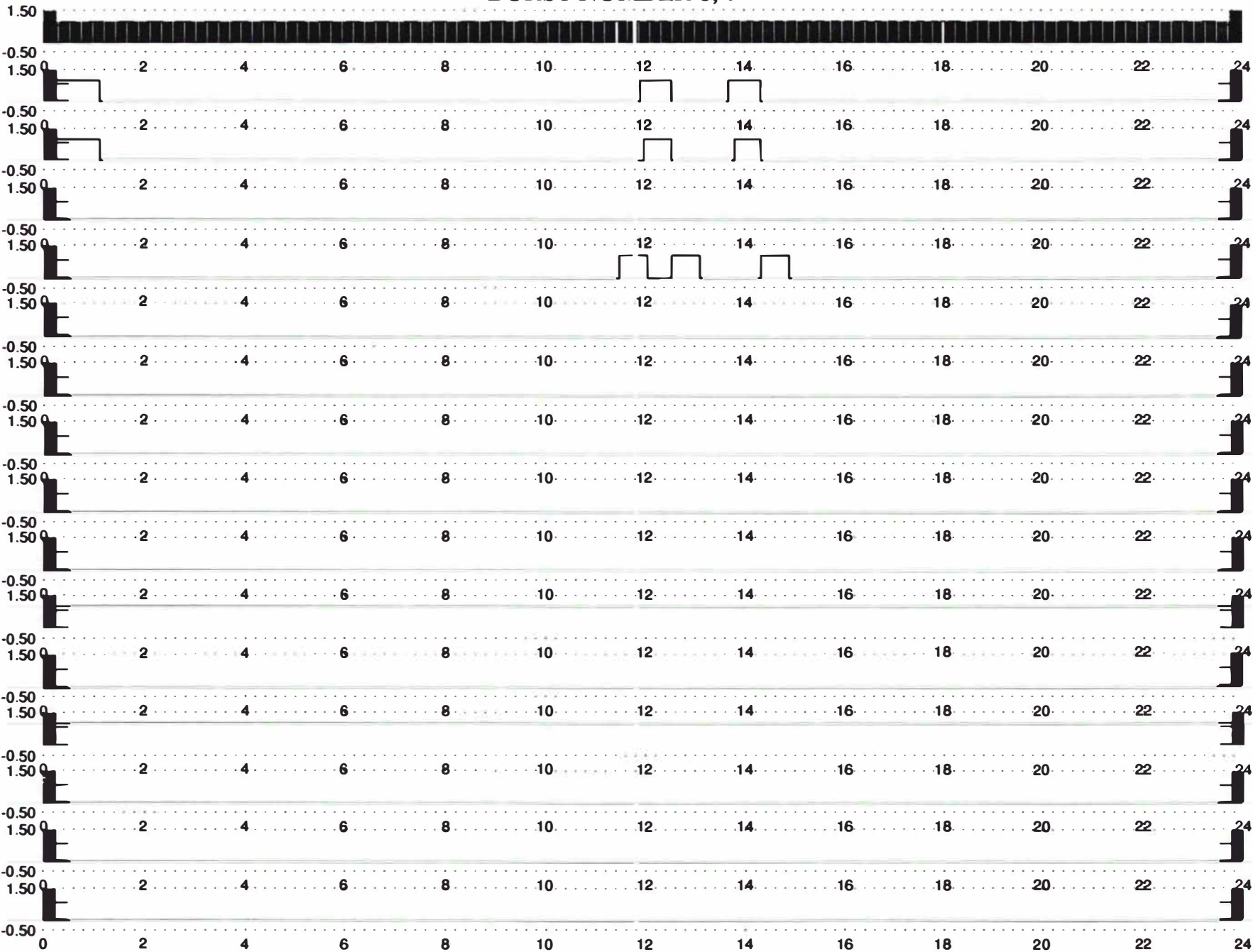
Current Time: 93/11/23, 1443 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

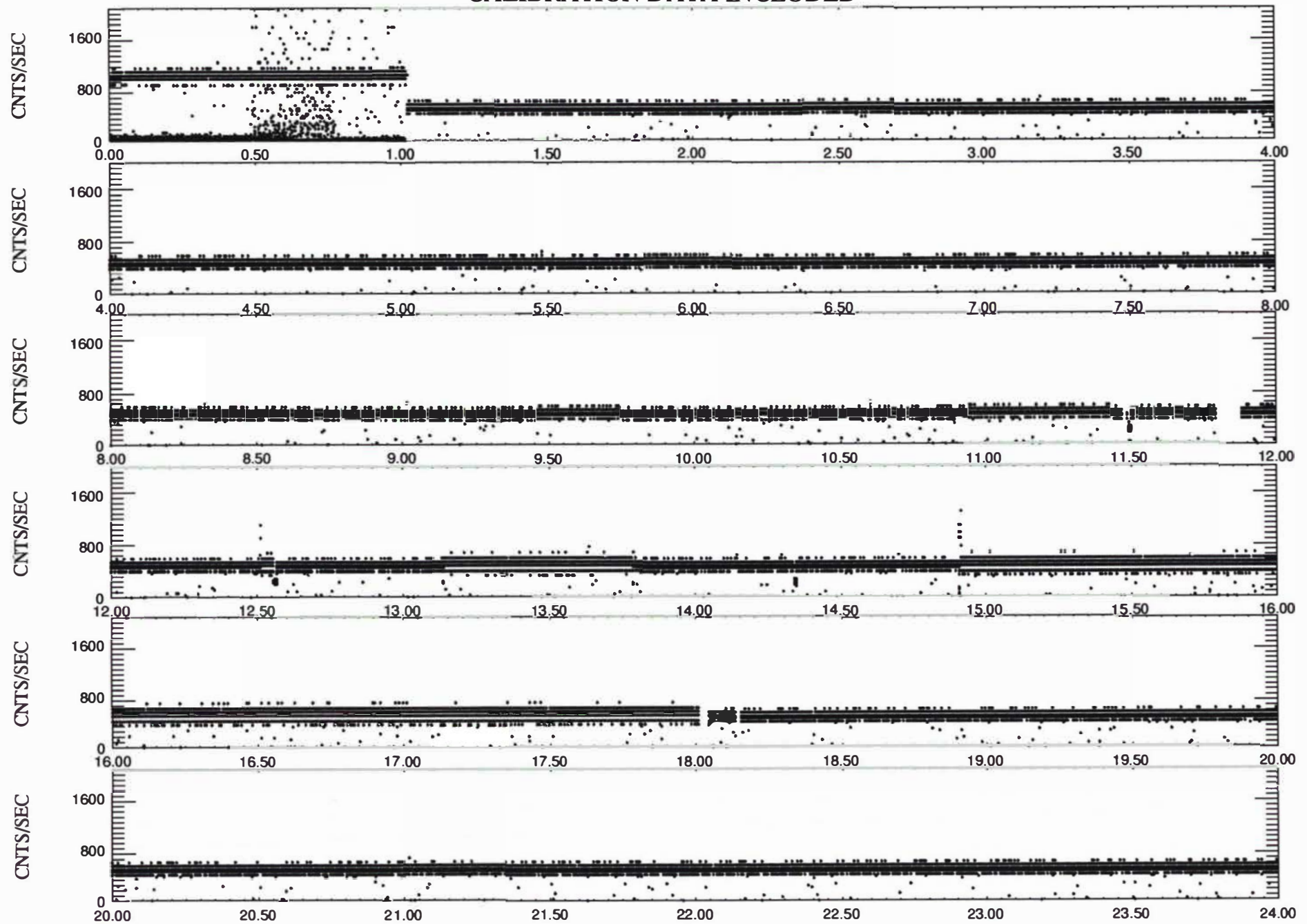
CBU CCL DMP ROM DMA OSC MP. ICR SPE OPM RSC CAL WCH MEM BRS HUS

BURST NUMBER 6, 7



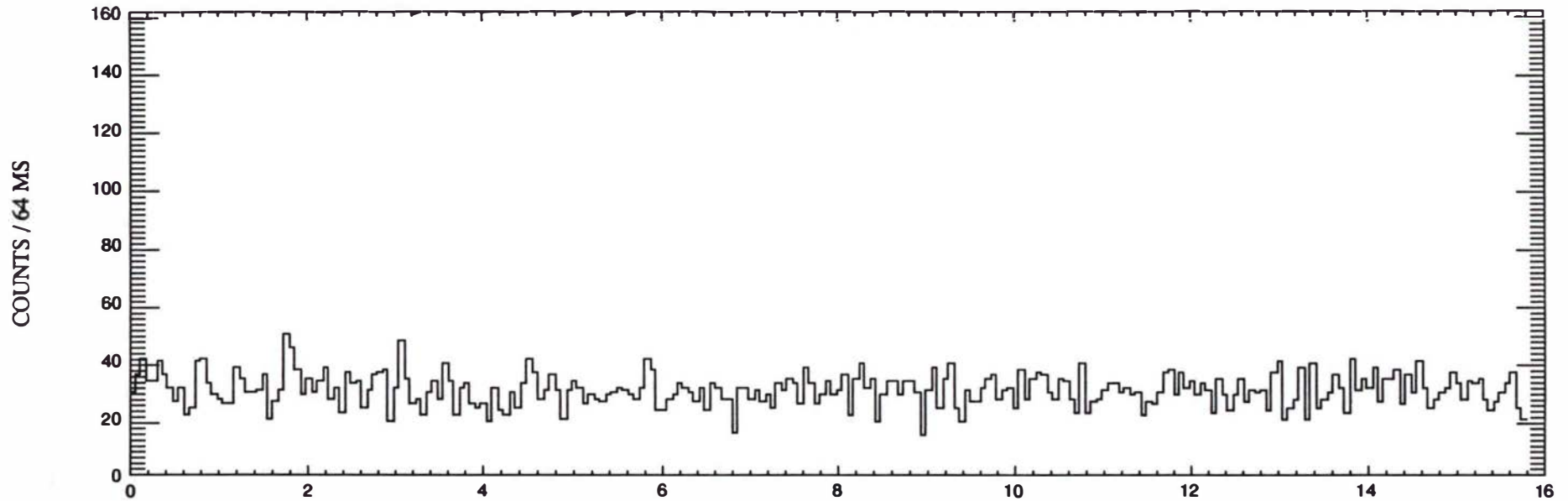
UNIVEI L TIME

CALIBRATION DATA INCLUDED

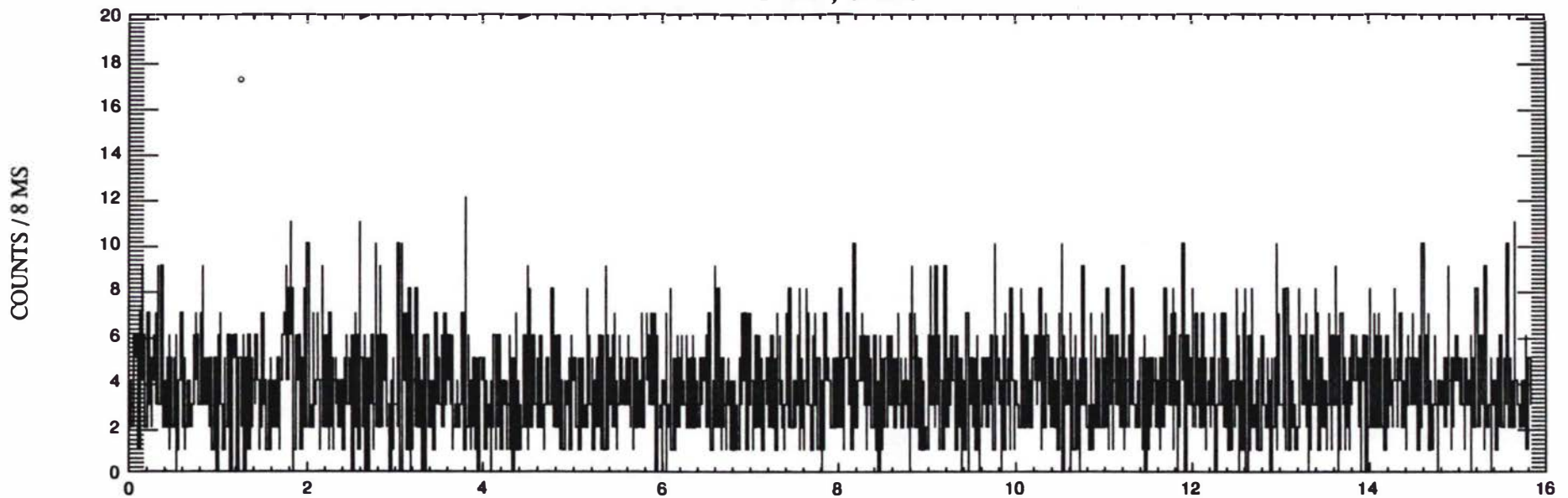


UNIV CAL TIME

Burst Counter 6 at UT=11.808071106805 h=42509.056 s 11:48:29.056

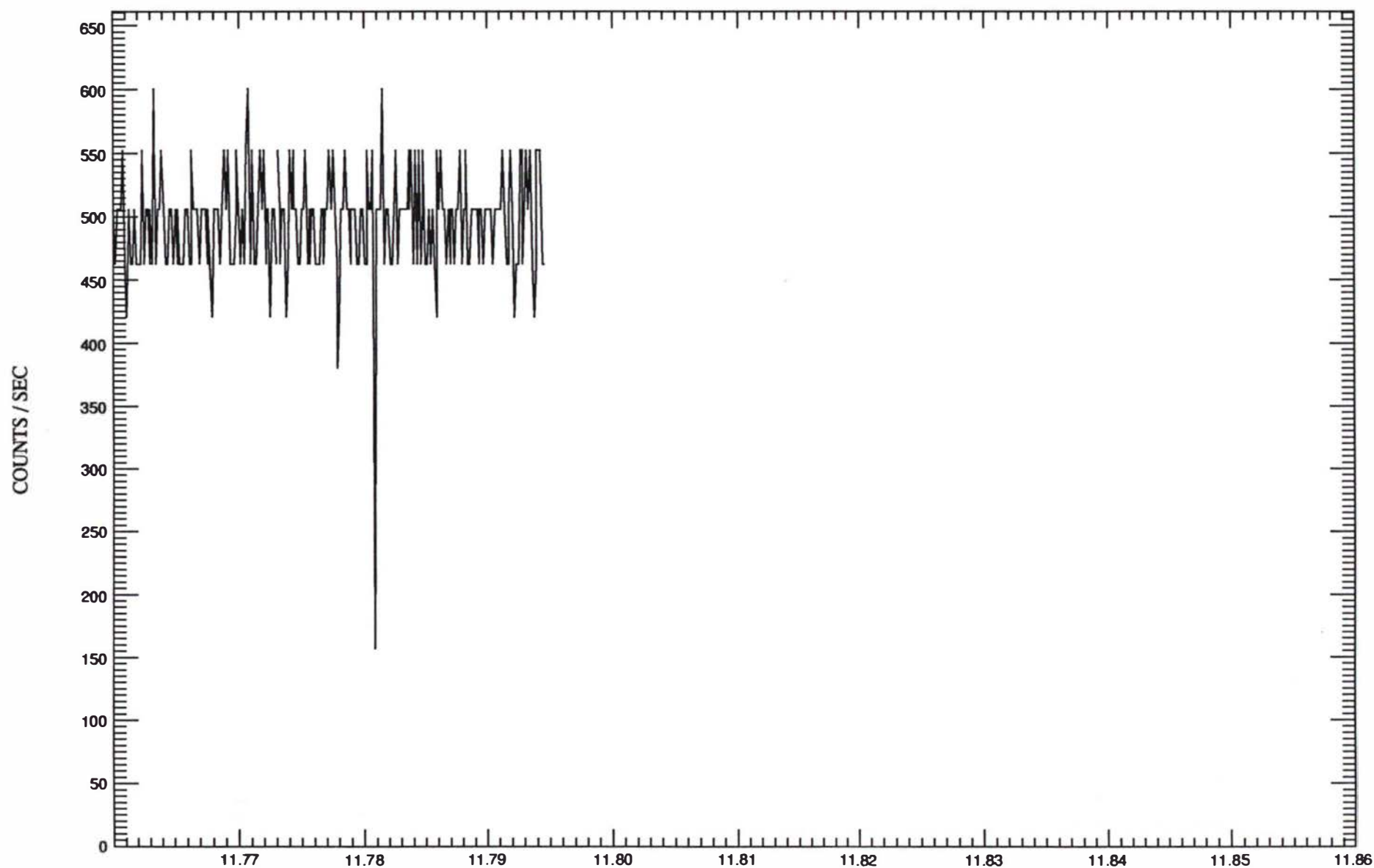


TIME, SECS

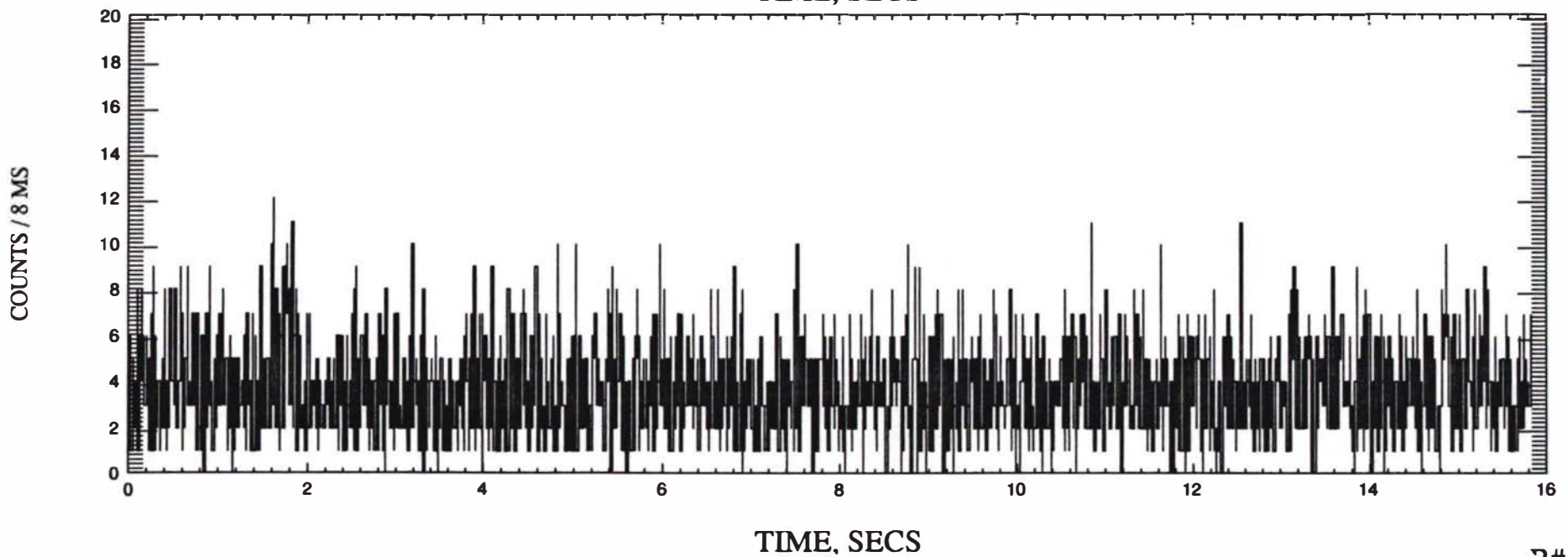
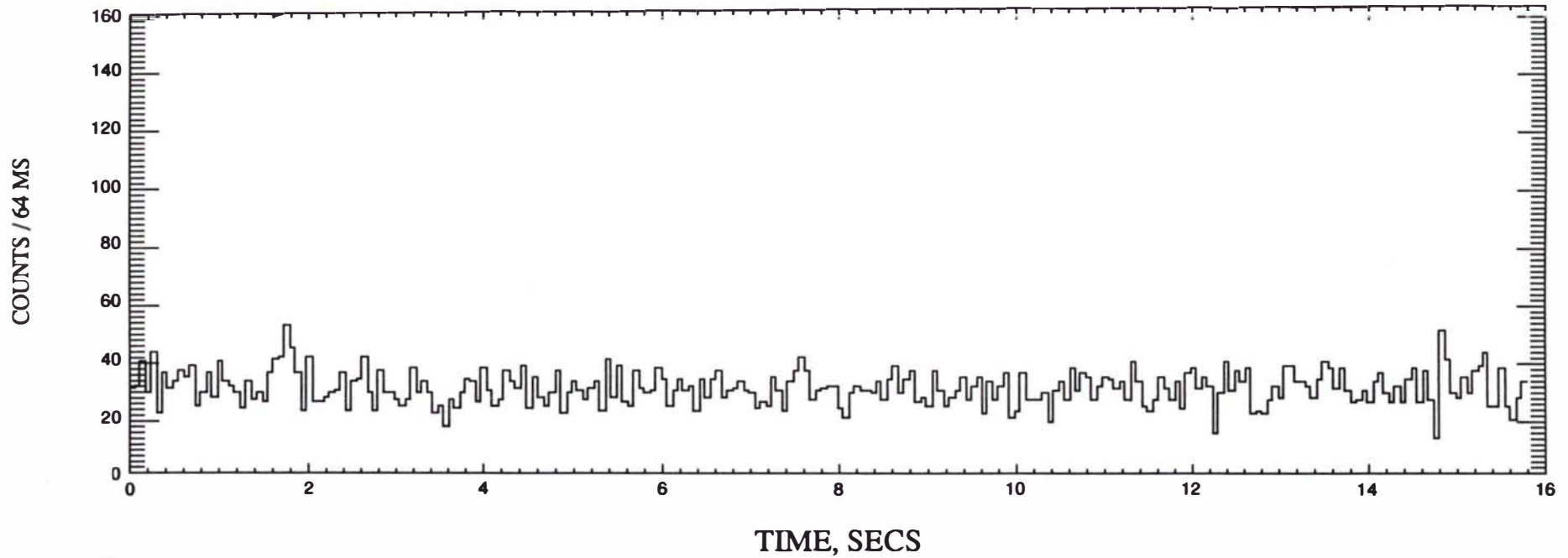


TIME, SECS

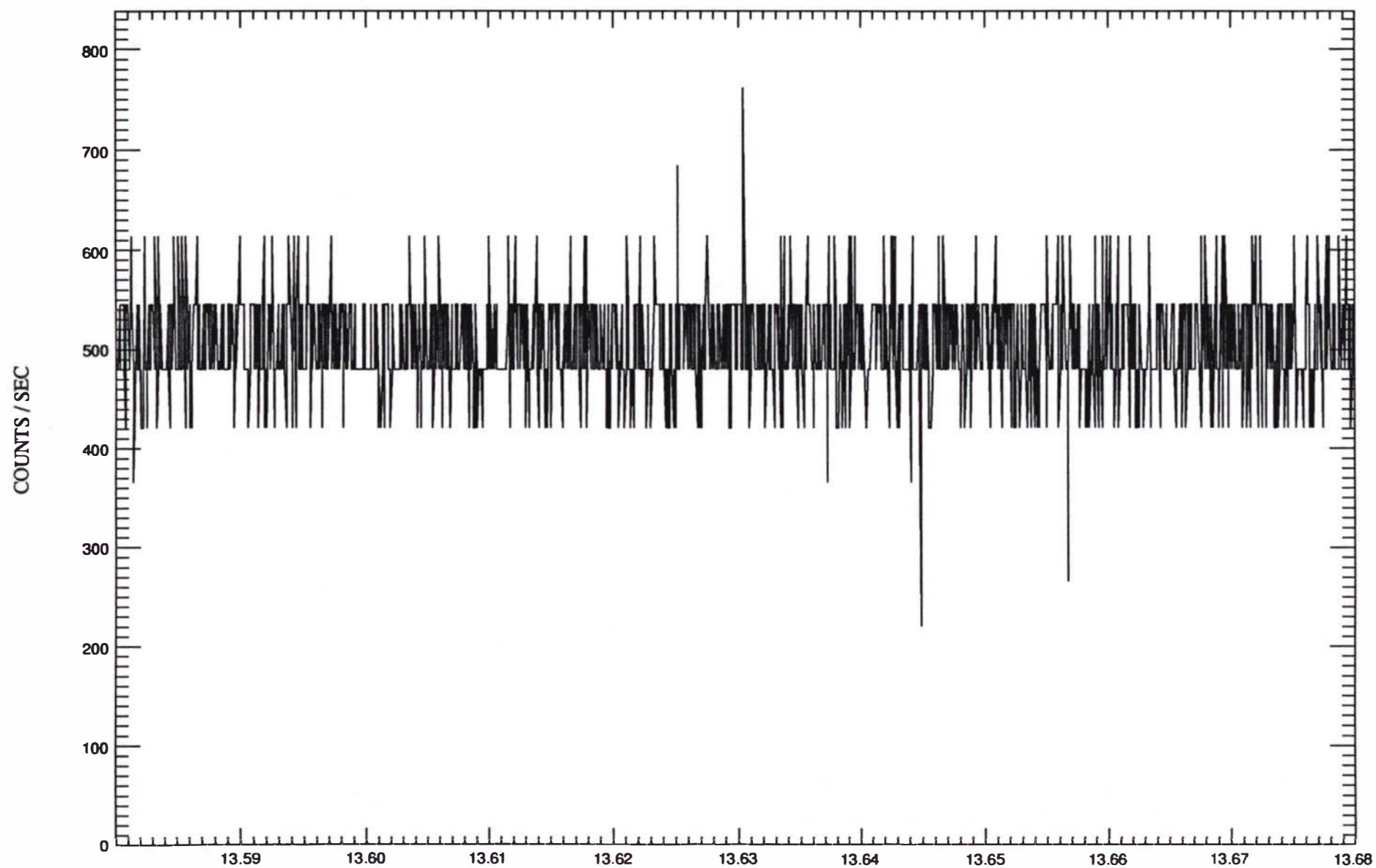
CALIBRATION DATA INCLUDED

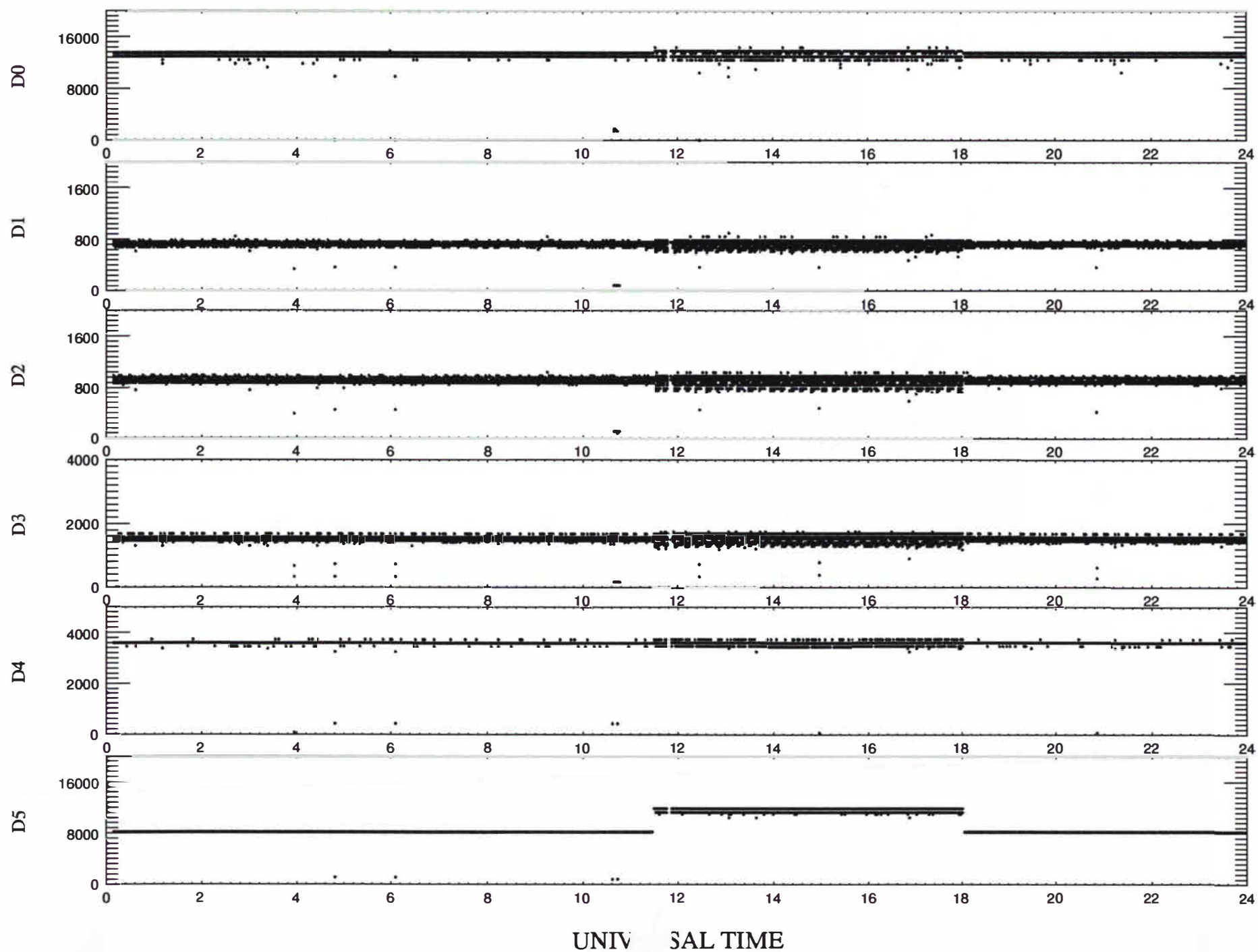


Burst Counter 7 at UT=13.630598996480 h=49070.156 s 13:37:50.156



CALIBRATION DATA INCLUDED





From ZMYEWSKI@ssl.msfc.nasa.gov Wed Nov 24 07:51:06 1993
Date: Wed, 24 Nov 1993 9:53:26 -0600 (CST)
From: ZMYEWSKI@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02652

TIME: TJD=9313 SECONDS=08871

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

ELECTRON EVENT. SAA EXIT.

From ZMYEWSKI@ssl.msfc.nasa.gov Wed Nov 24 07:53:33 1993
Date: Wed, 24 Nov 1993 9:55:49 -0600 (CST)
From: ZMYEWSKI@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02653

TIME: TJD=9313 SECONDS=69964

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

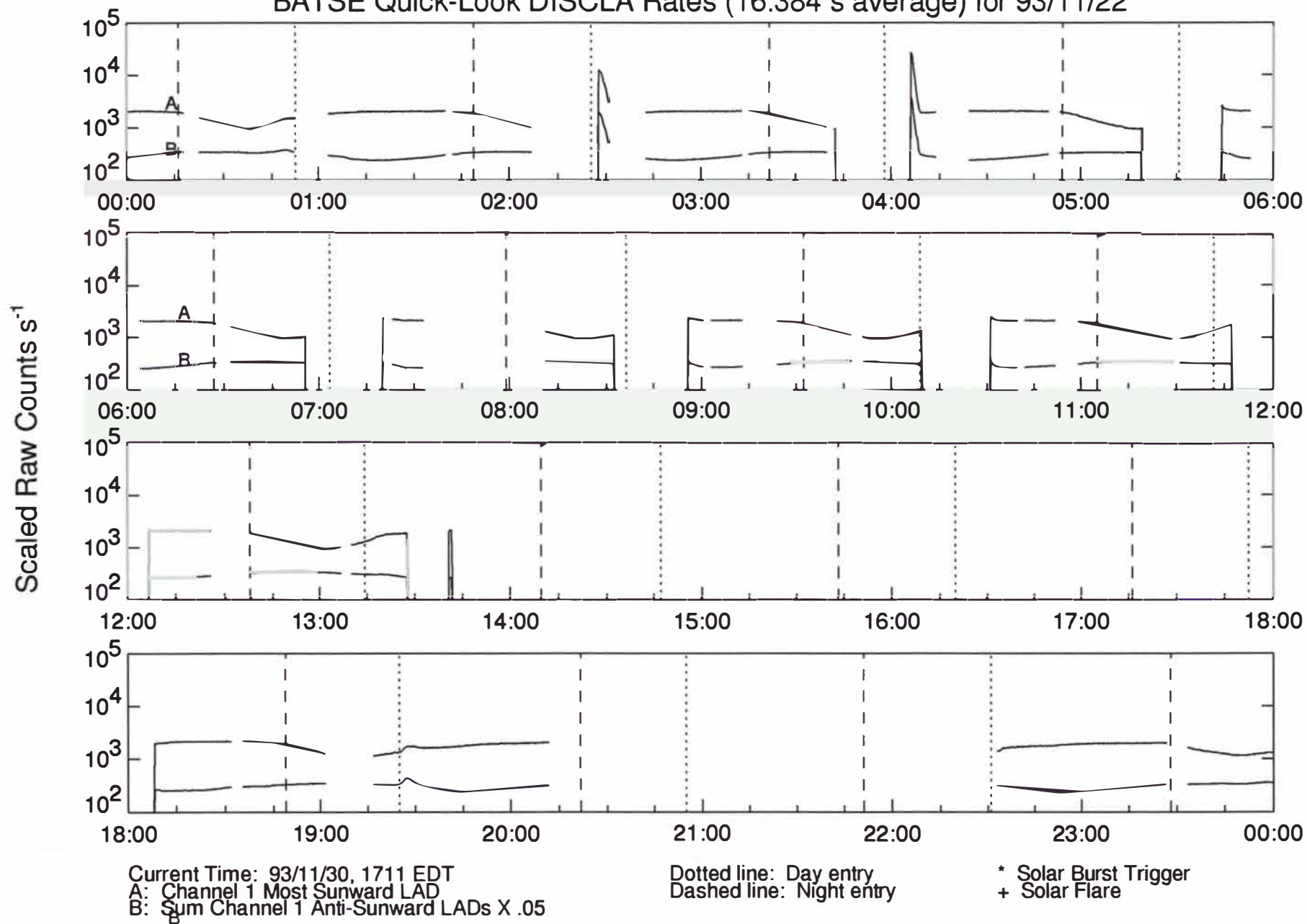
INTENSITY: COUNTS/CM2

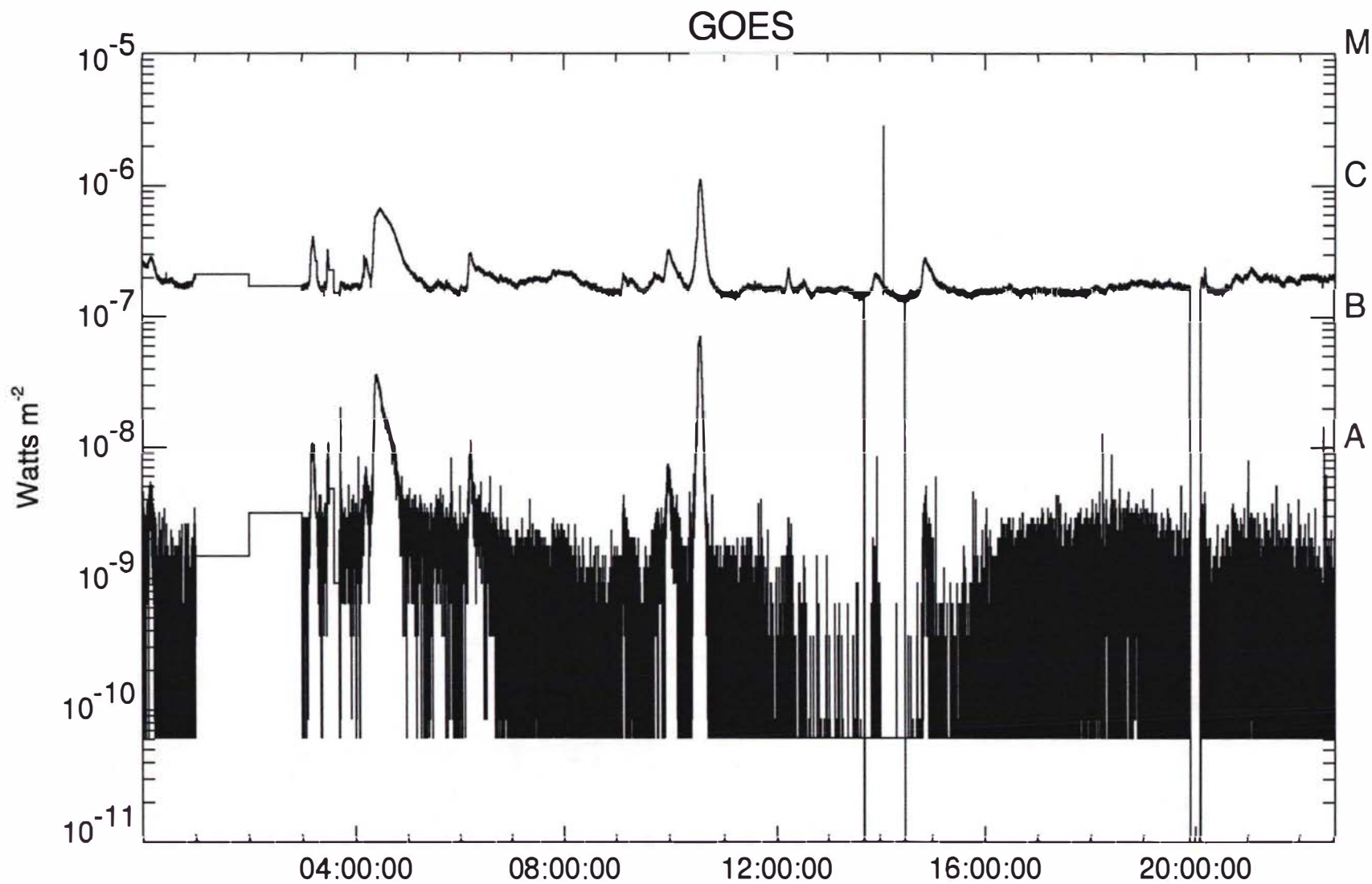
LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

ELECTRON EVENT.

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/22





Data Start: 93/11/22, 0000:00

Plot created: 93/11/23, 1442

Channel 1 (1.0 - 8.0 Angstroms)

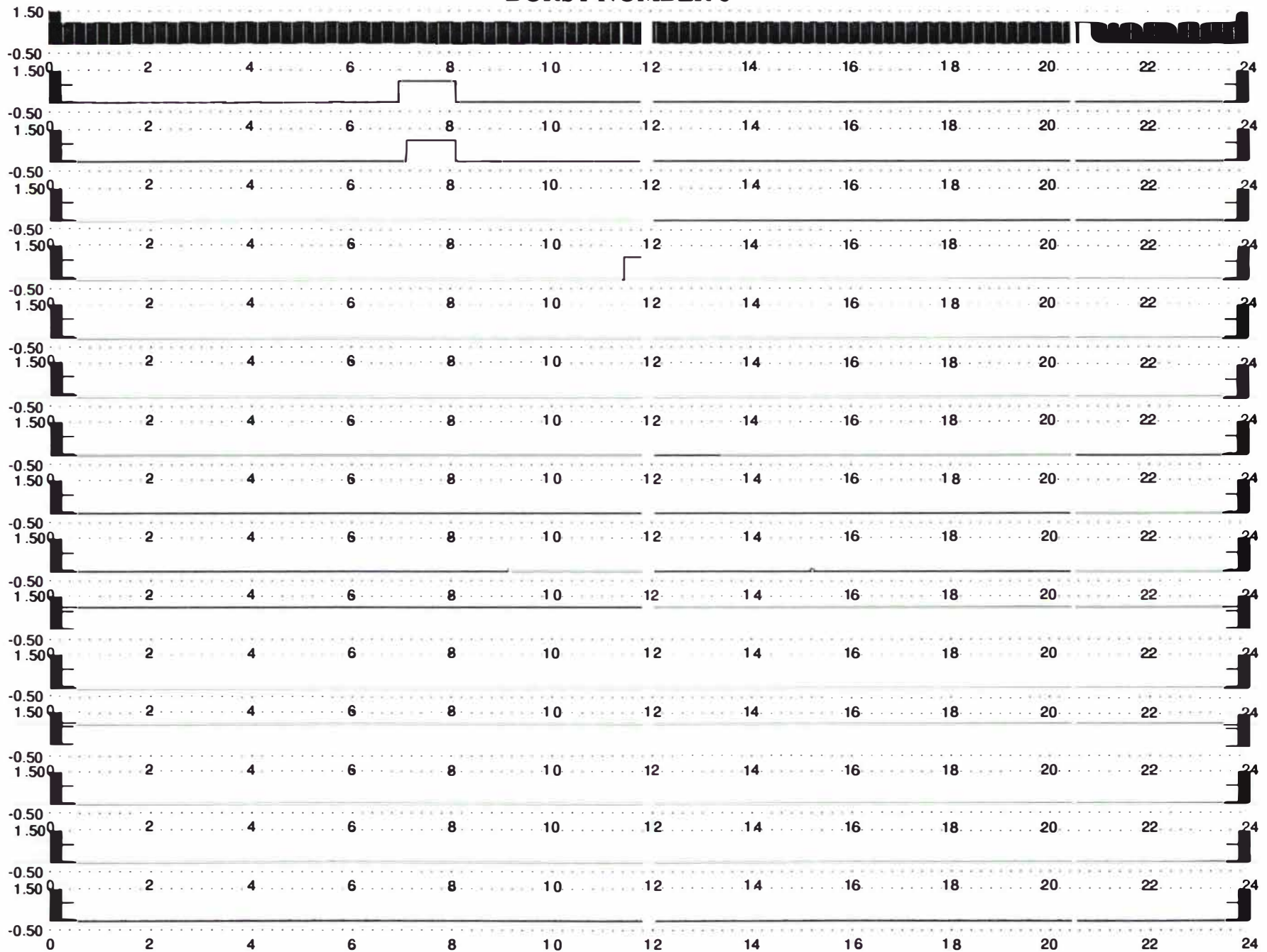
Channel 2 (0.5 - 4.0 Angstroms)

Background not subtracted

Background not subtracted

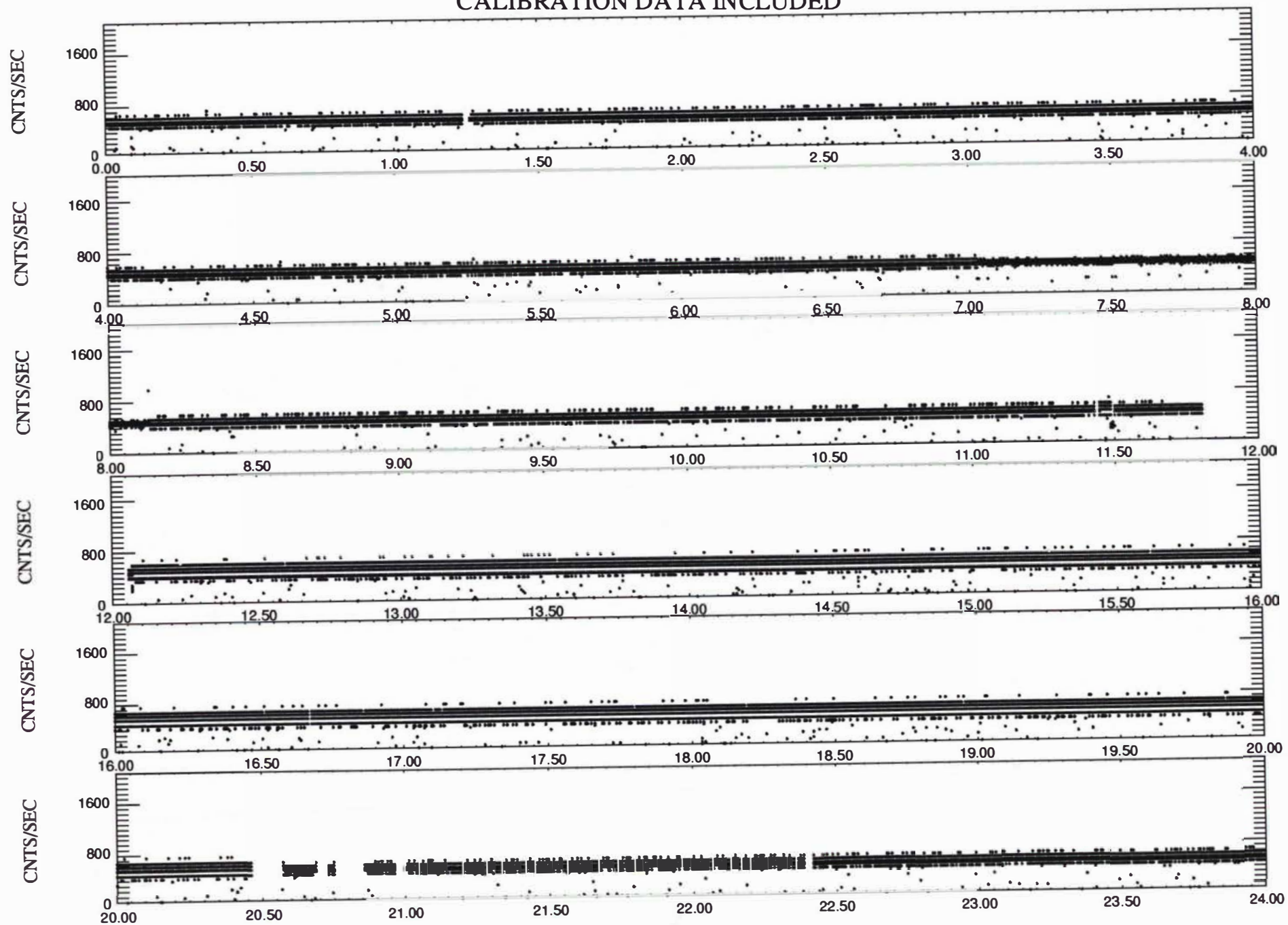
BURST NUMBER 8

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



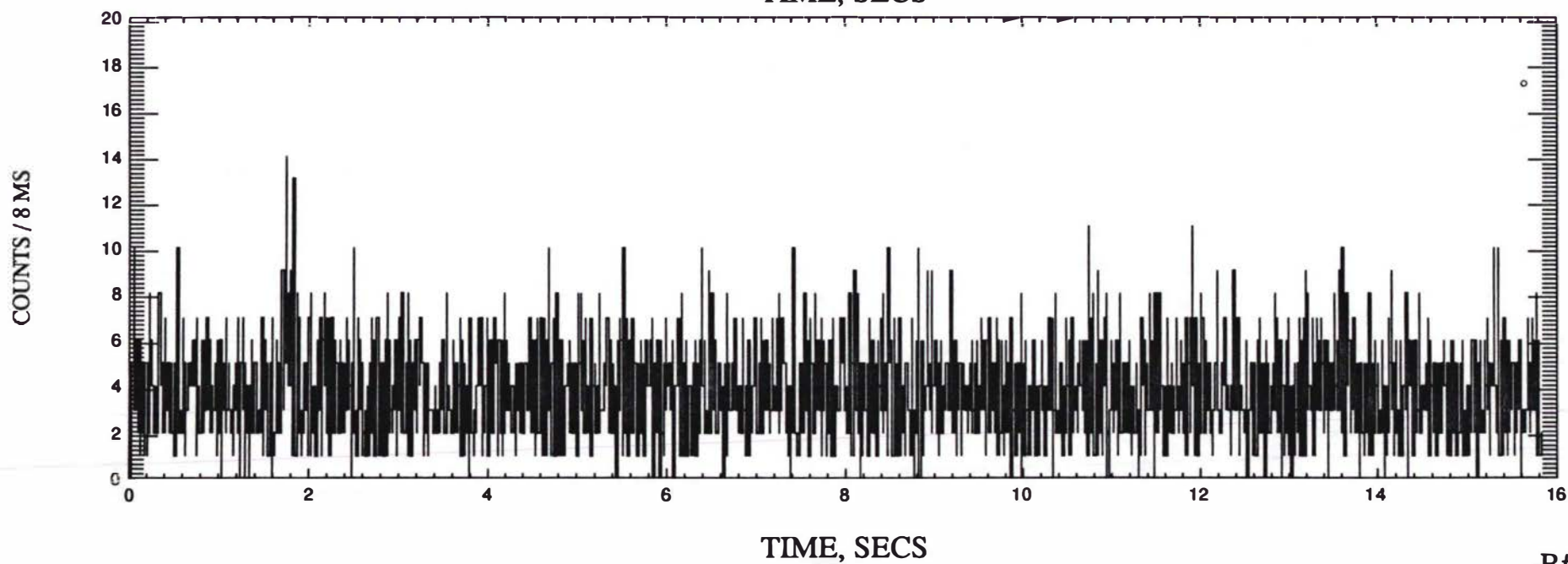
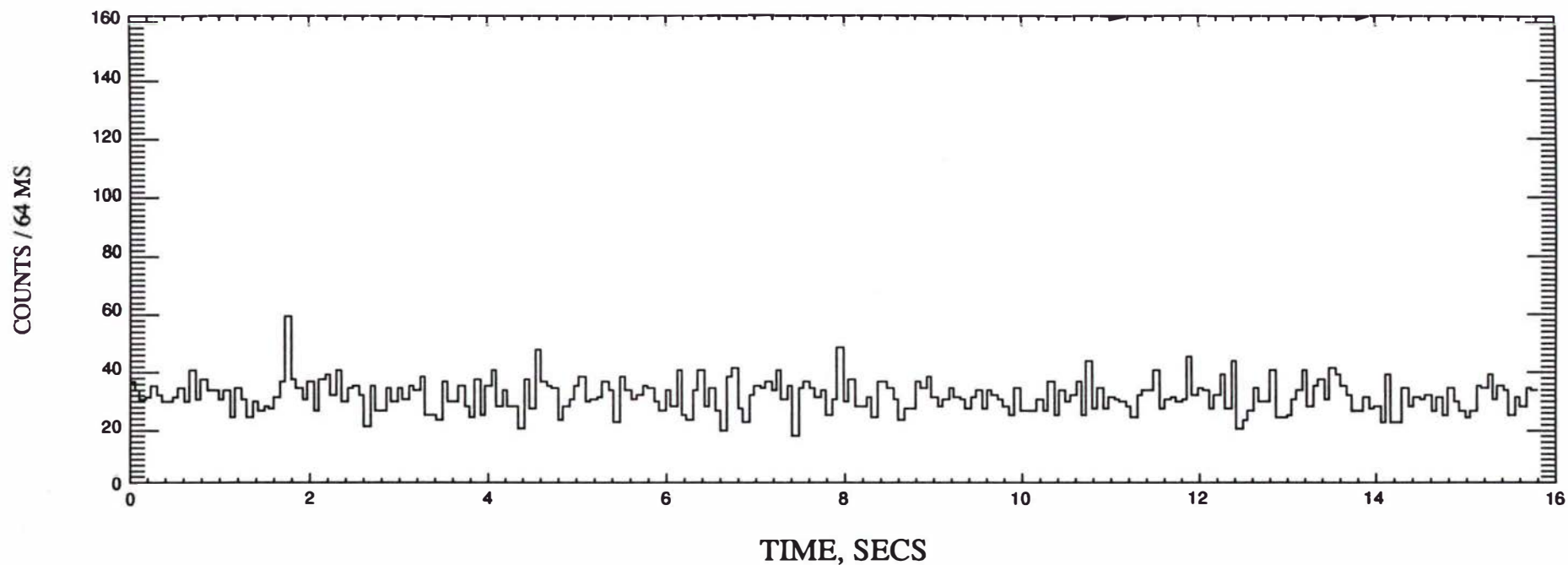
UNIVI AL TIME

CALIBRATION DATA INCLUDED

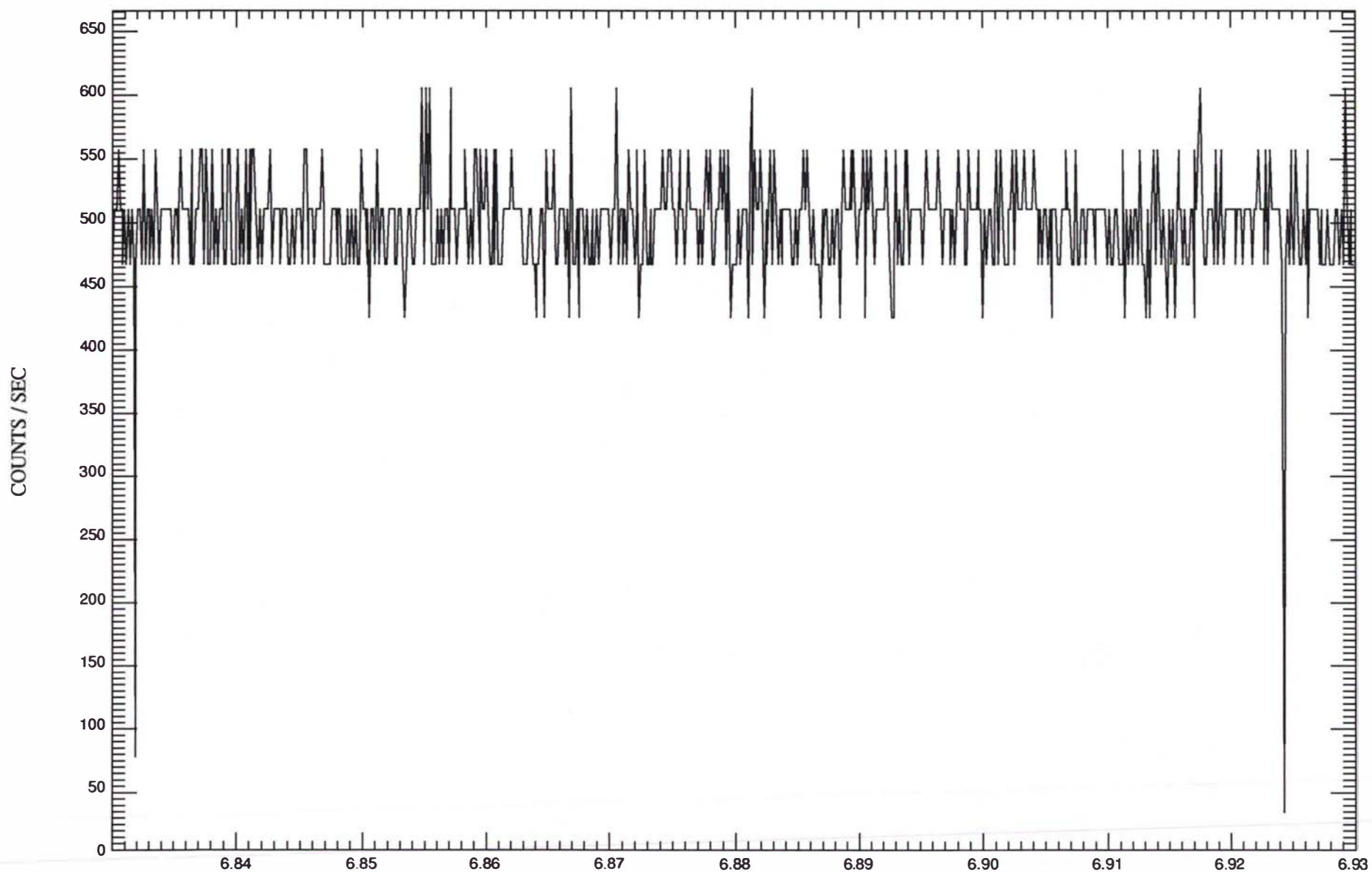


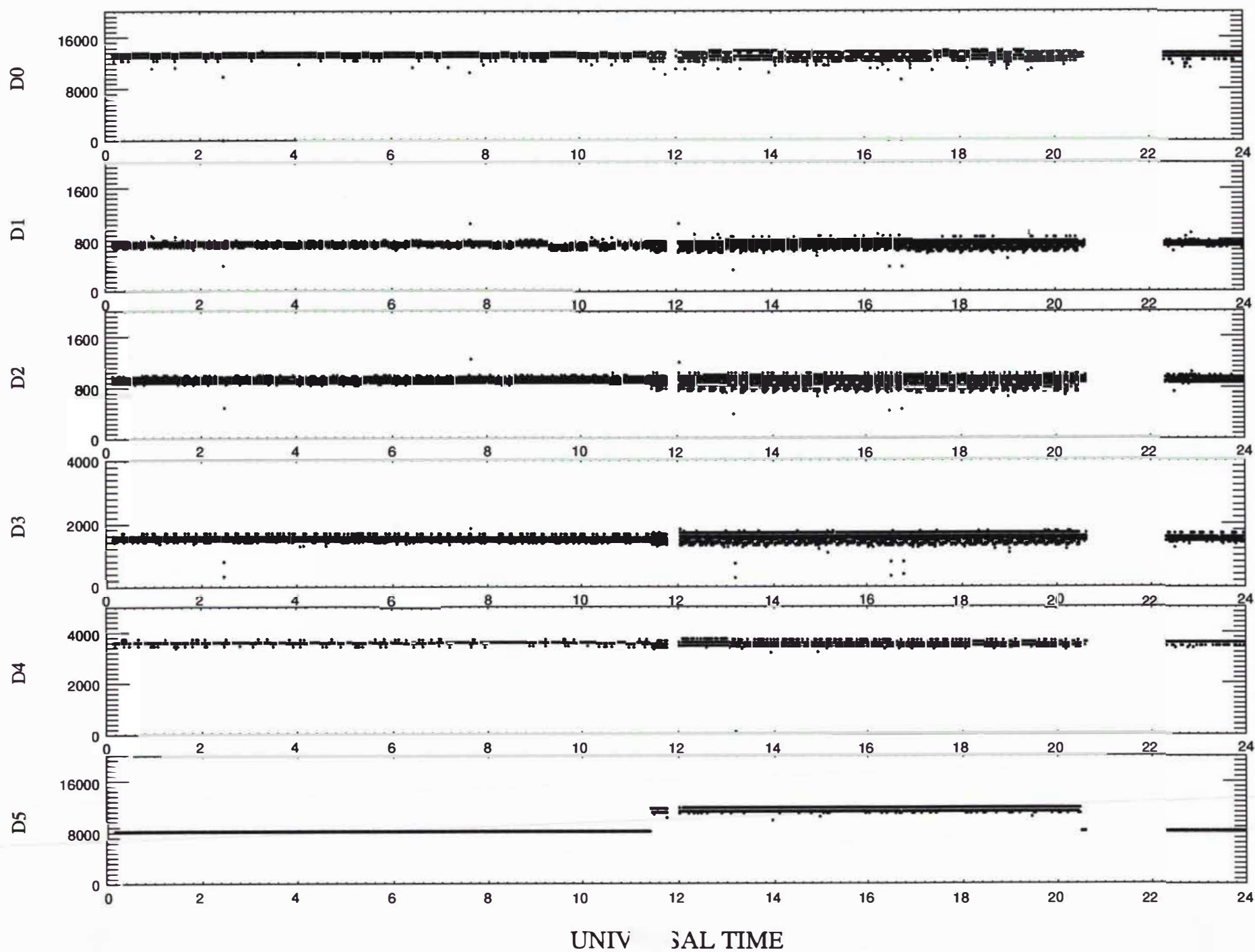
UNIV ;AL TIME

Burst Counter 8 at UT= 6.874961153666 h=24749.860 s 06:52:29.860



CALIBRATION DATA INCLUDED





From KOSHUT@ssl.msfc.nasa.gov Wed Nov 24 14:10:32 1993
Date: Wed, 24 Nov 1993 16:12:46 -0600 (CST)
From: KOSHUT@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02654

TIME: TJD=9314 SECONDS=05918

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

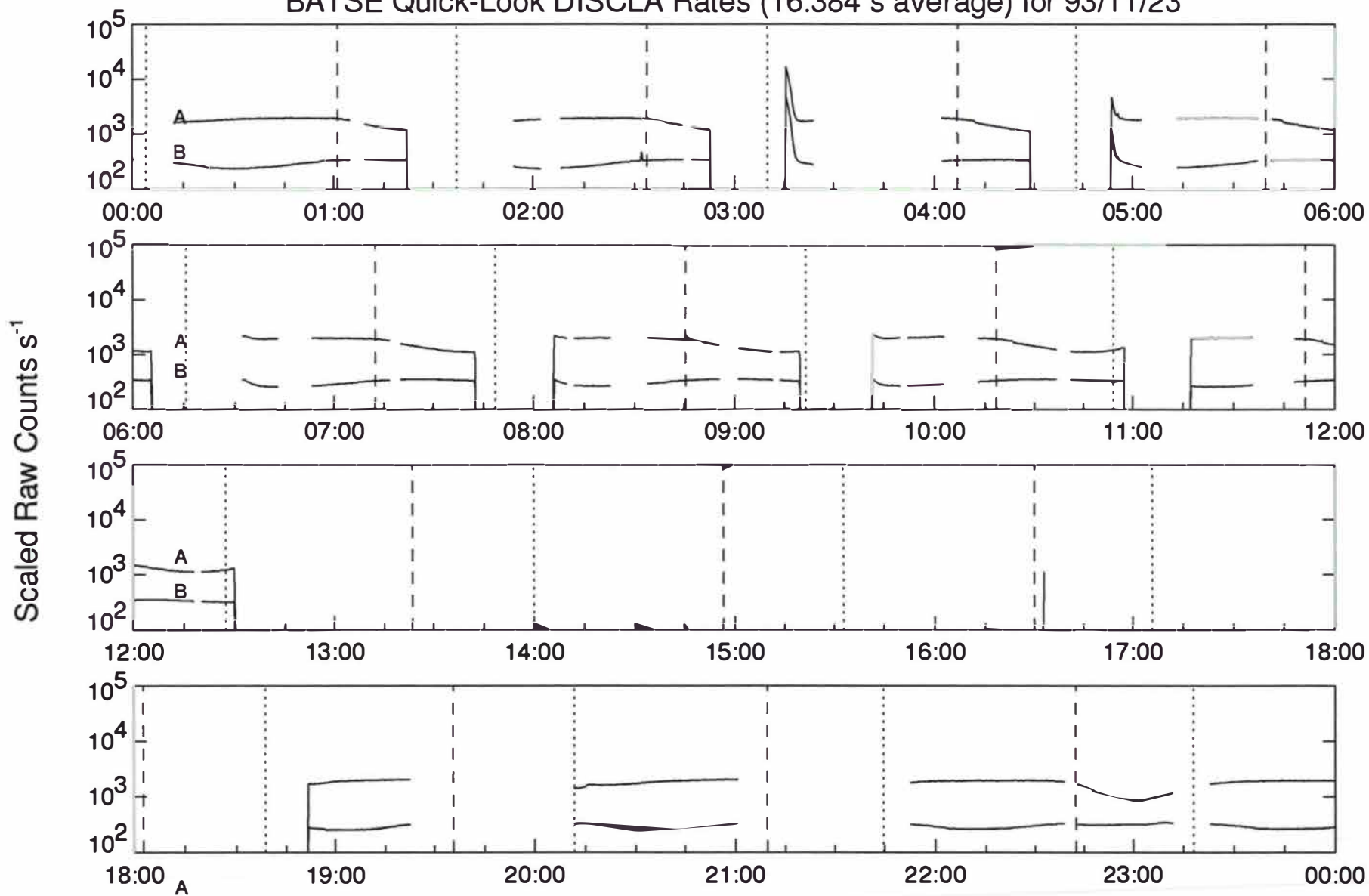
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE PRECIPITATION EVENT.

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/23



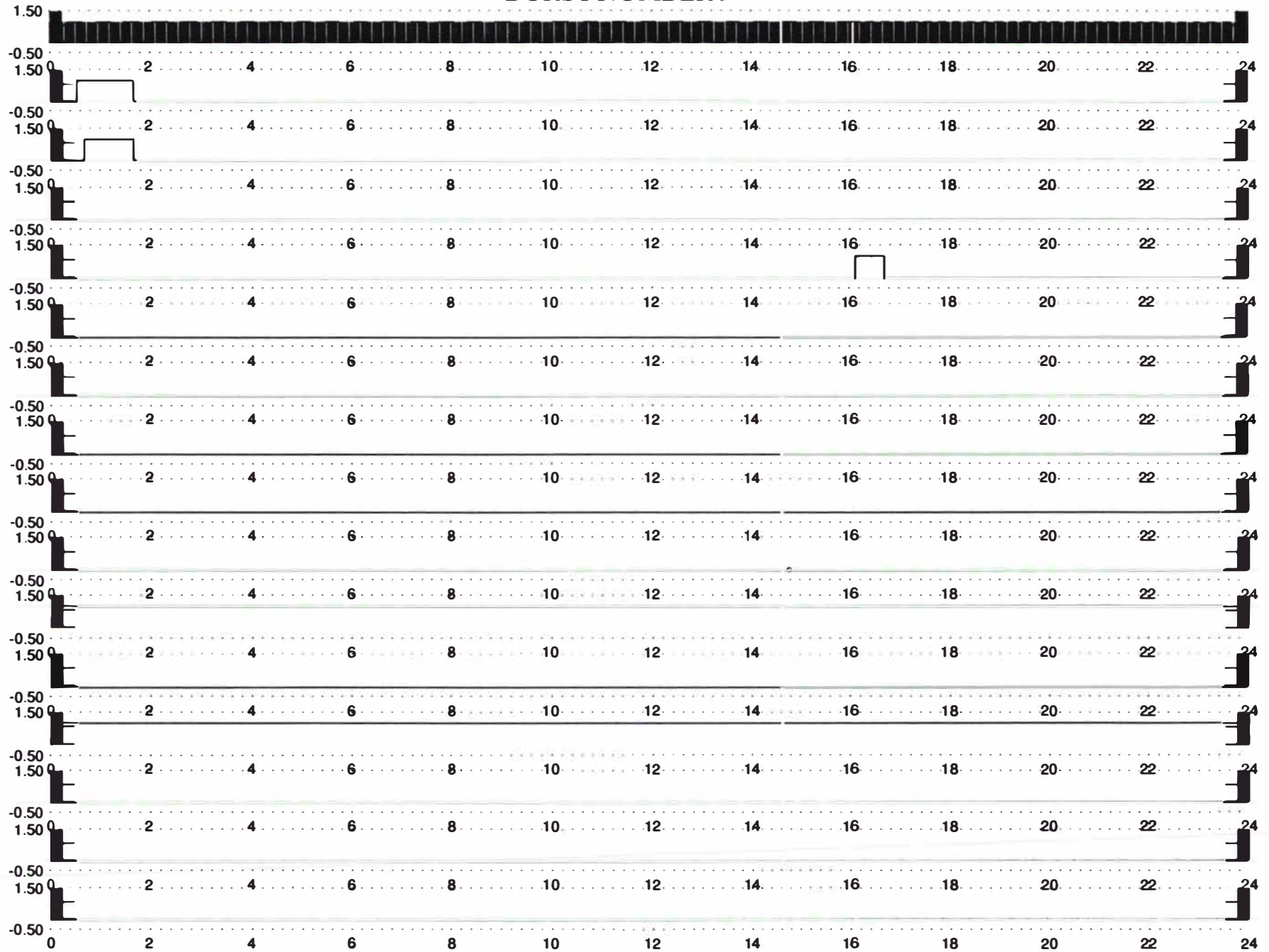
Current Time: 93/11/30, 1711 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

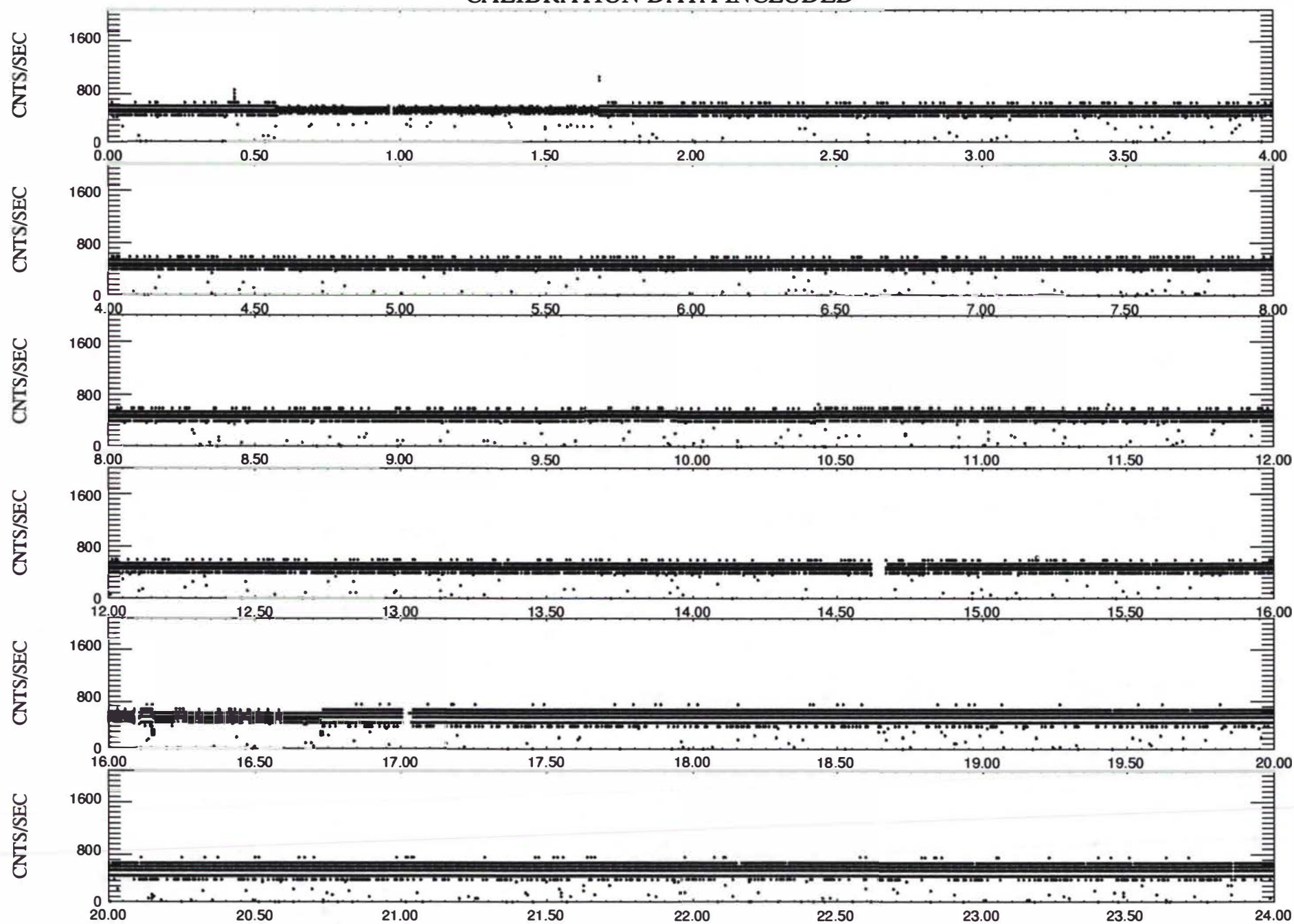
HUS
BRS
MEM
WCH
CAL
RSC
OPM
SPE
ICR
MP.
OSC
DMA
ROM
DMP
CCL
CBU

BURST NUMBER 9



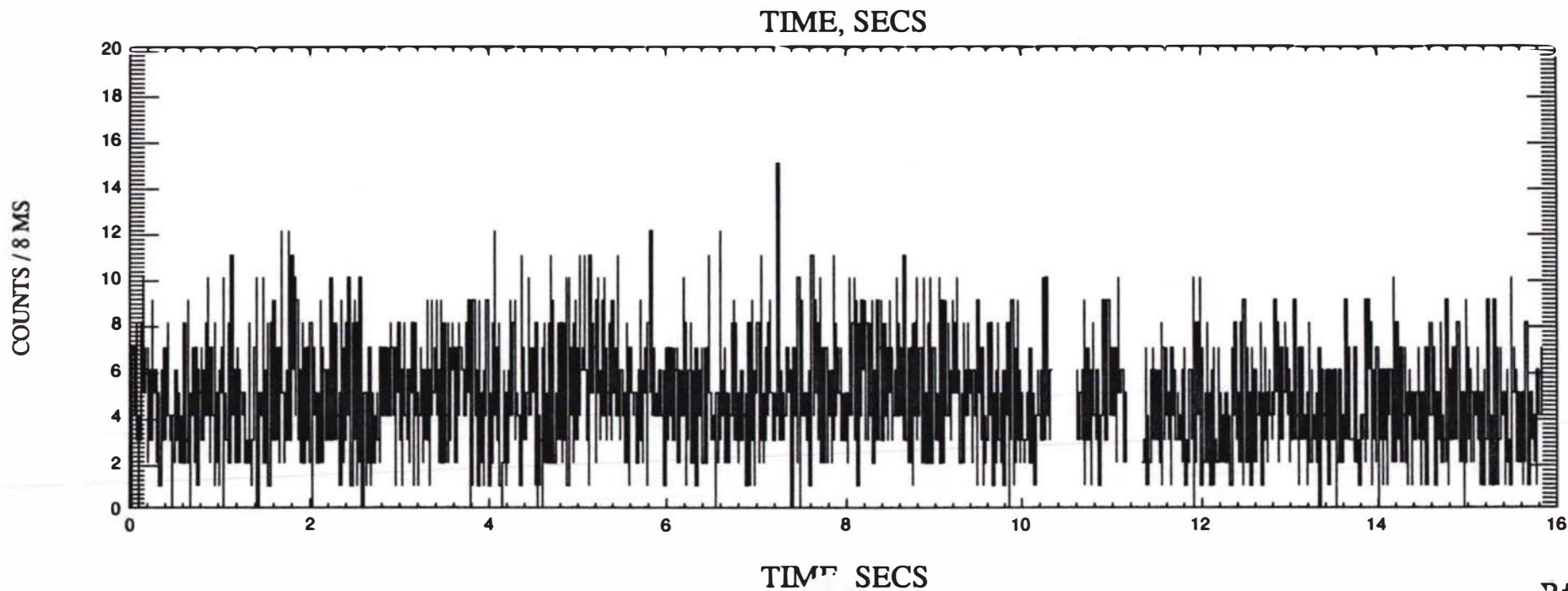
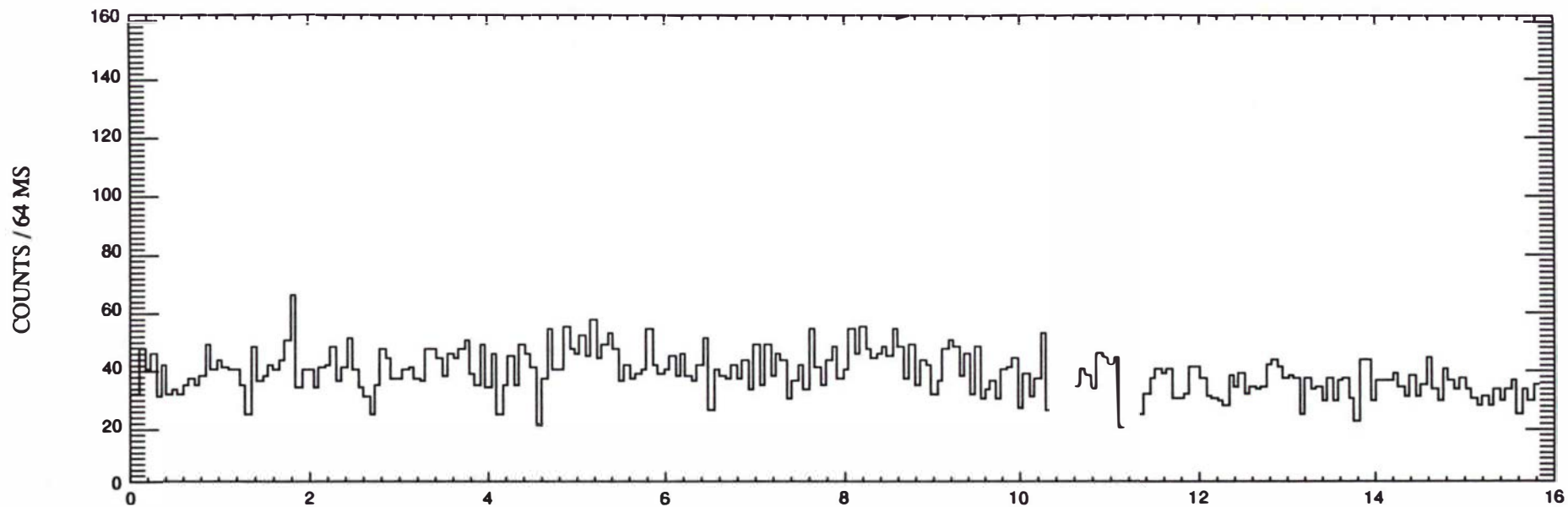
UNIVE AL TIME

CALIBRATION DATA INCLUDED

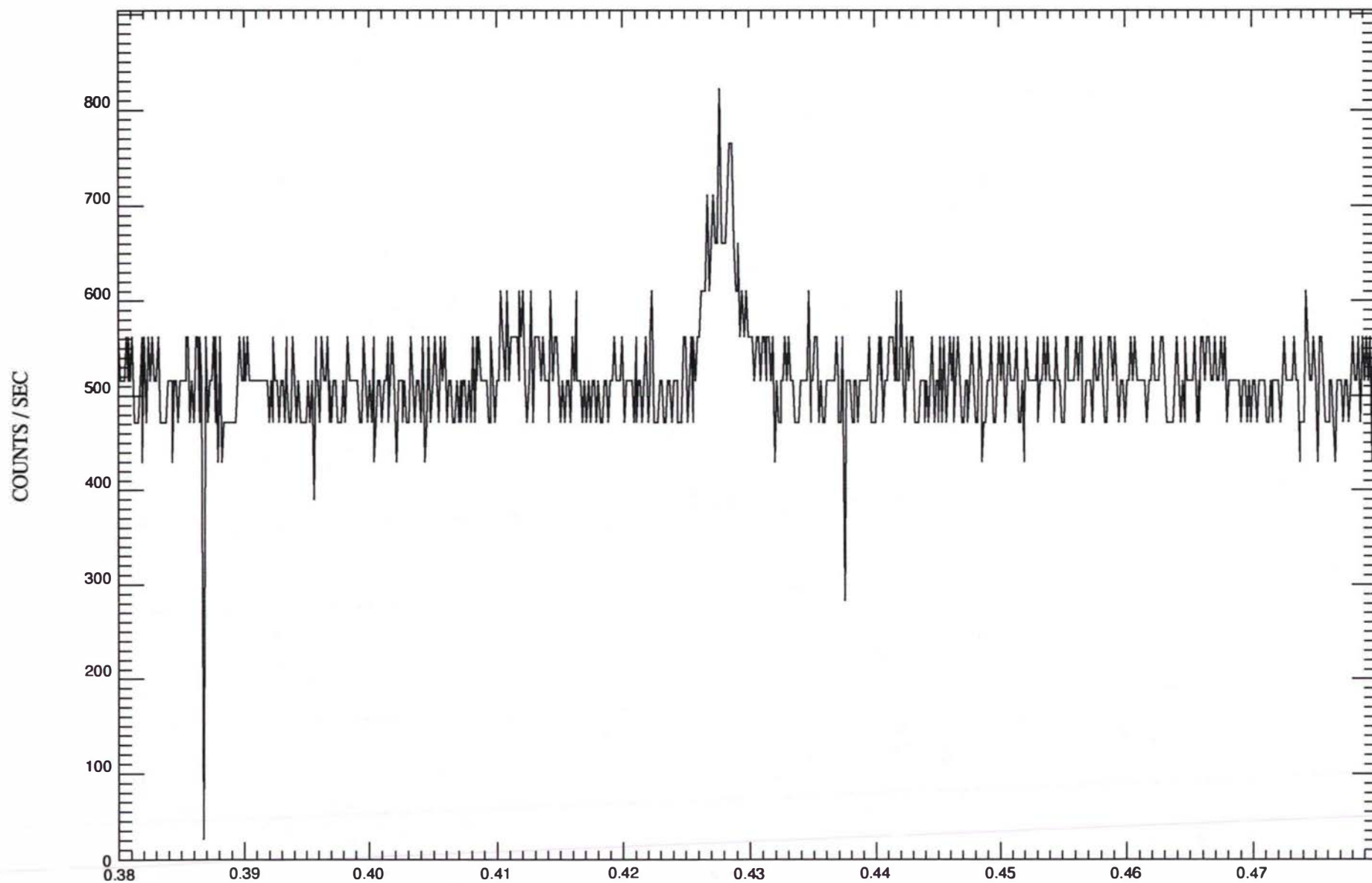


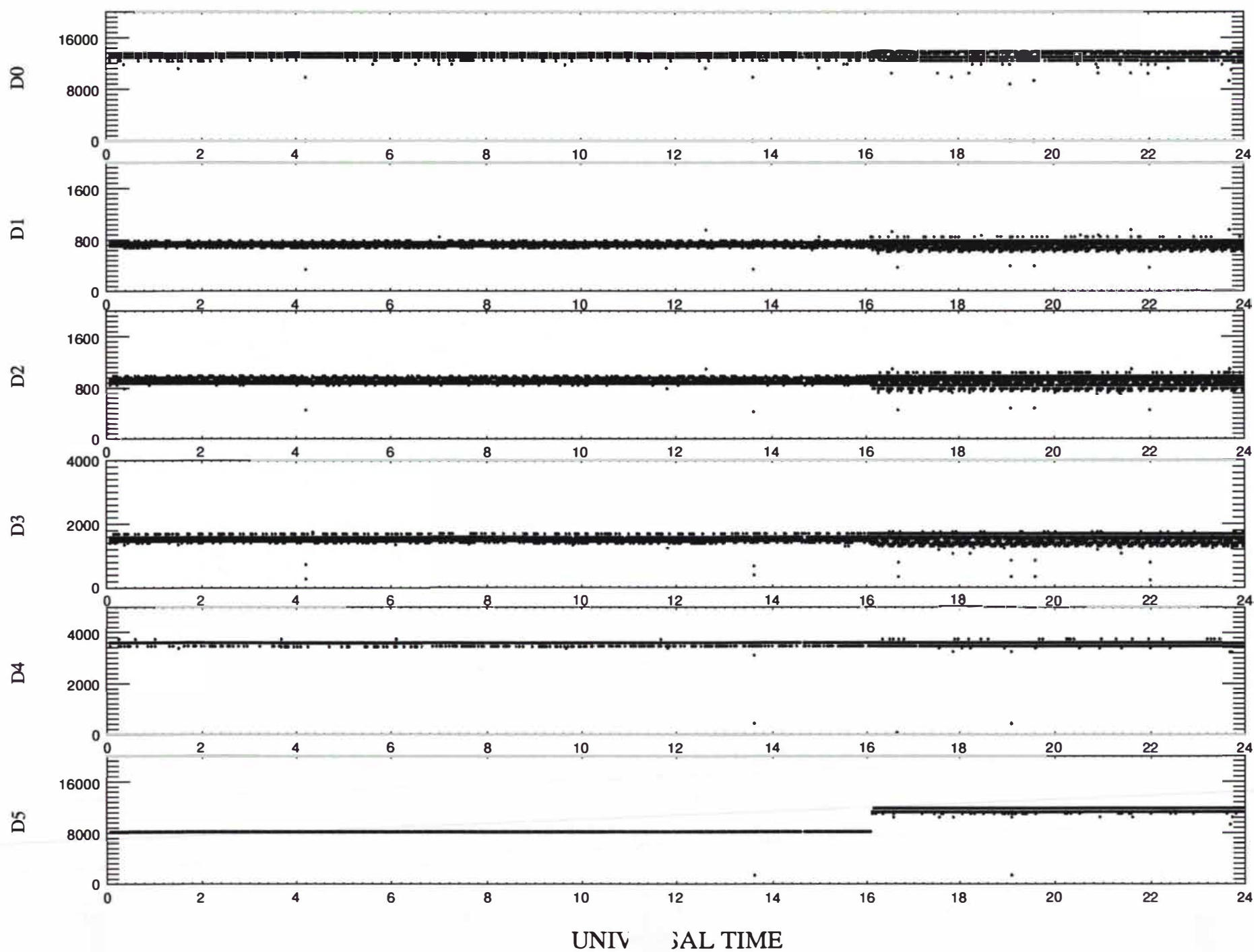
UNIV JAL TIME

Burst Counter 9 at UT= 0.426873529222 h= 1536.745 s 00:25:36.745



CALIBRATION DATA INCLUDED





From KOUVELIOTOU@ssl.msfc.nasa.gov Thu Nov 25 11:43:03 1993
Date: Thu, 25 Nov 1993 13:45:27 -0600 (CST)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02655

TIME: TJD=9315 SECONDS=02886

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT

From KOUVELIOTOU@ssl.msfc.nasa.gov Thu Nov 25 11:45:13 1993
Date: Thu, 25 Nov 1993 13:47:34 -0600 (CST)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02656

TIME: TJD=9315 SECONDS=14740

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

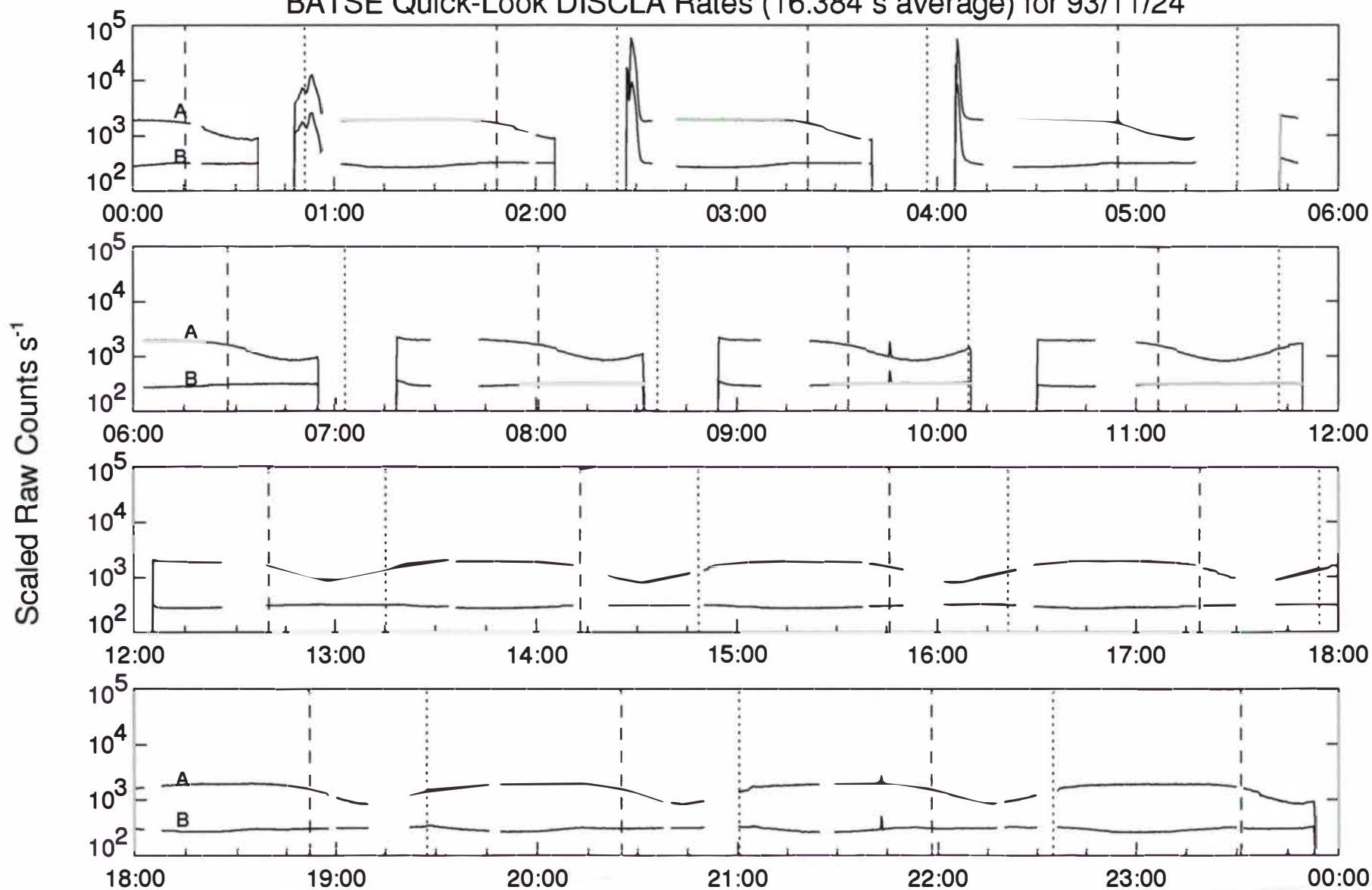
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/24



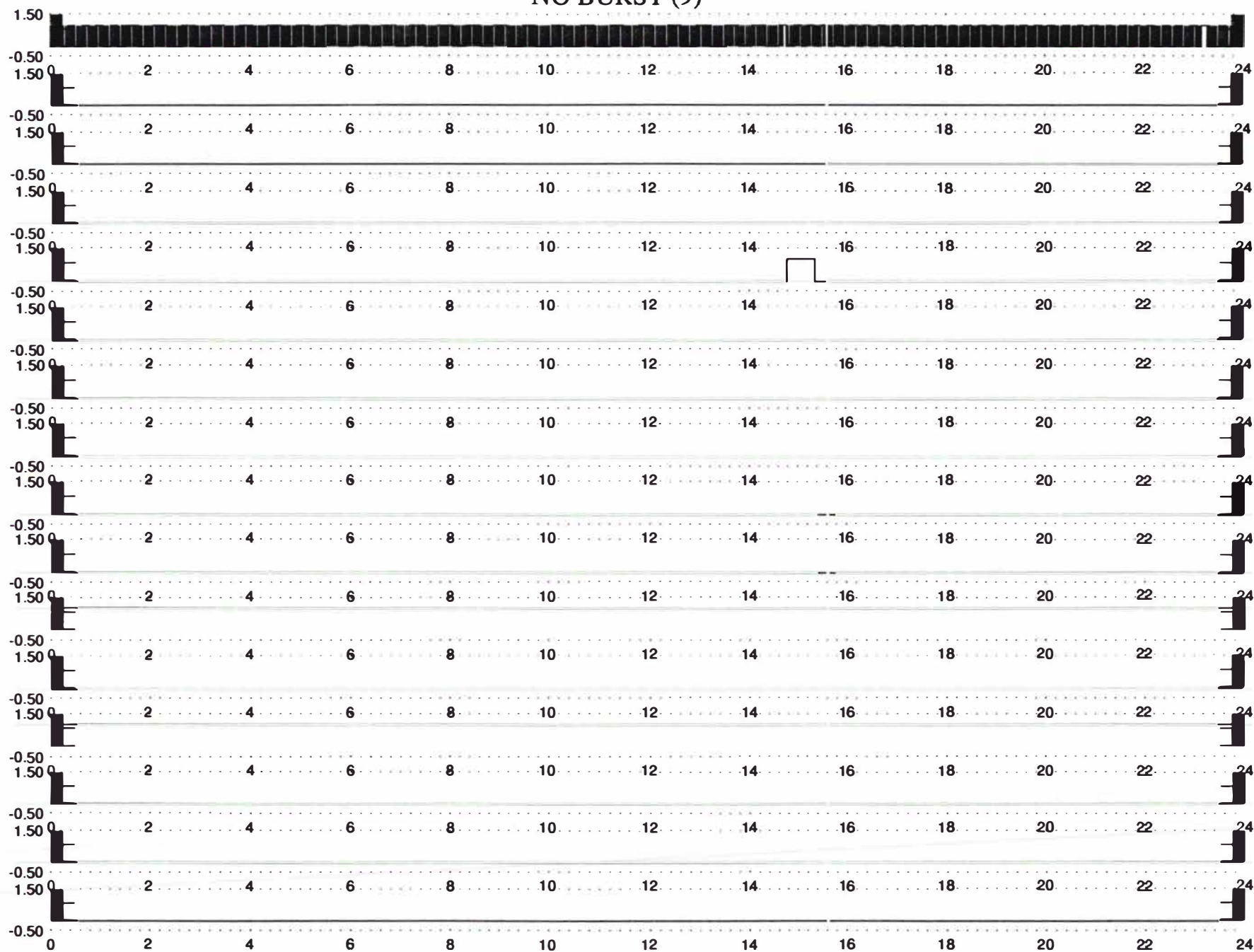
Current Time: 93/11/30, 1712 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

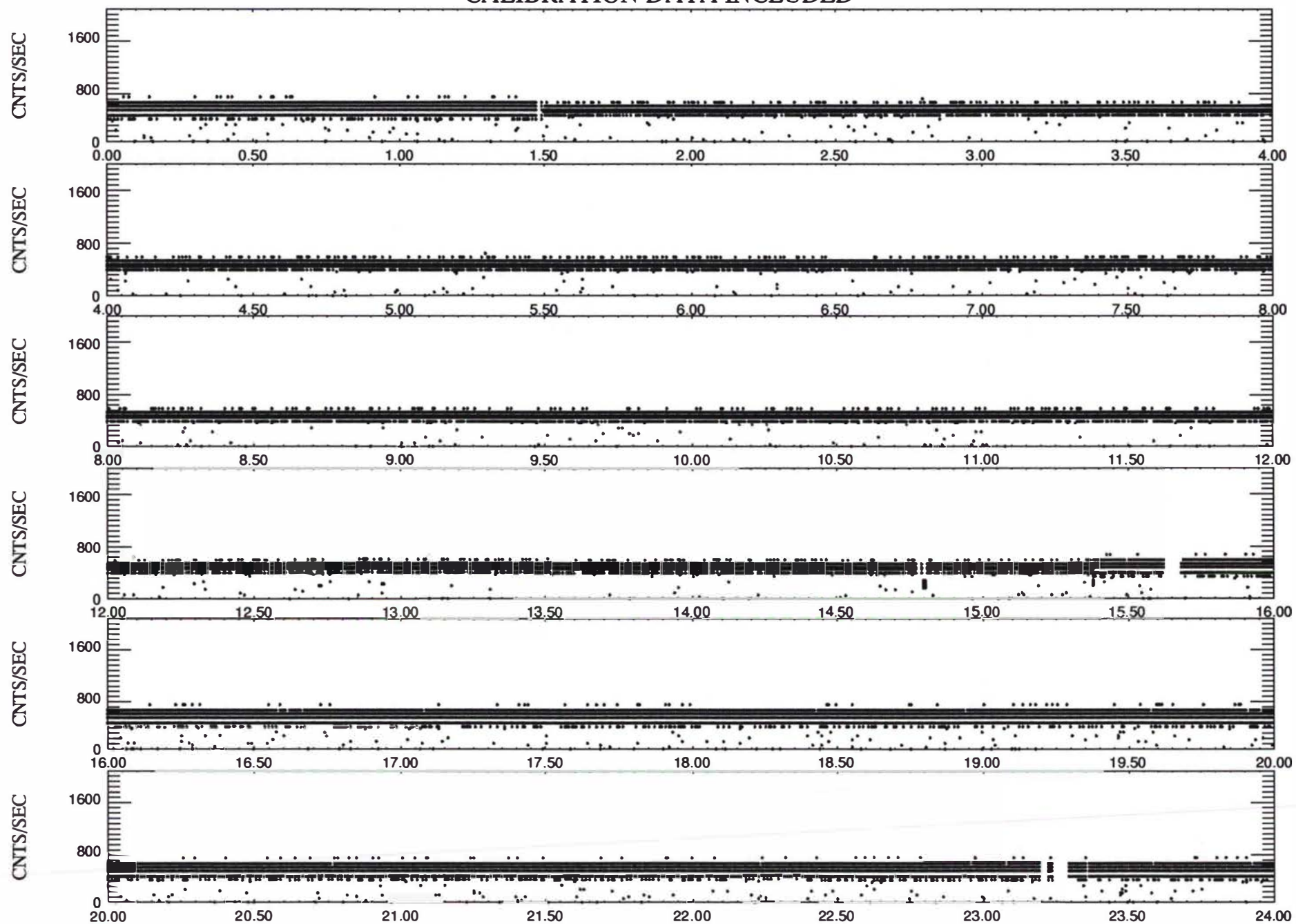
HUS
BRS
MEM
WCH
CAL
RSC
OPM
SPE
ICR
MP.
OSC
DMA
ROM
DMP
CCL
CBU

NO BURST (9)

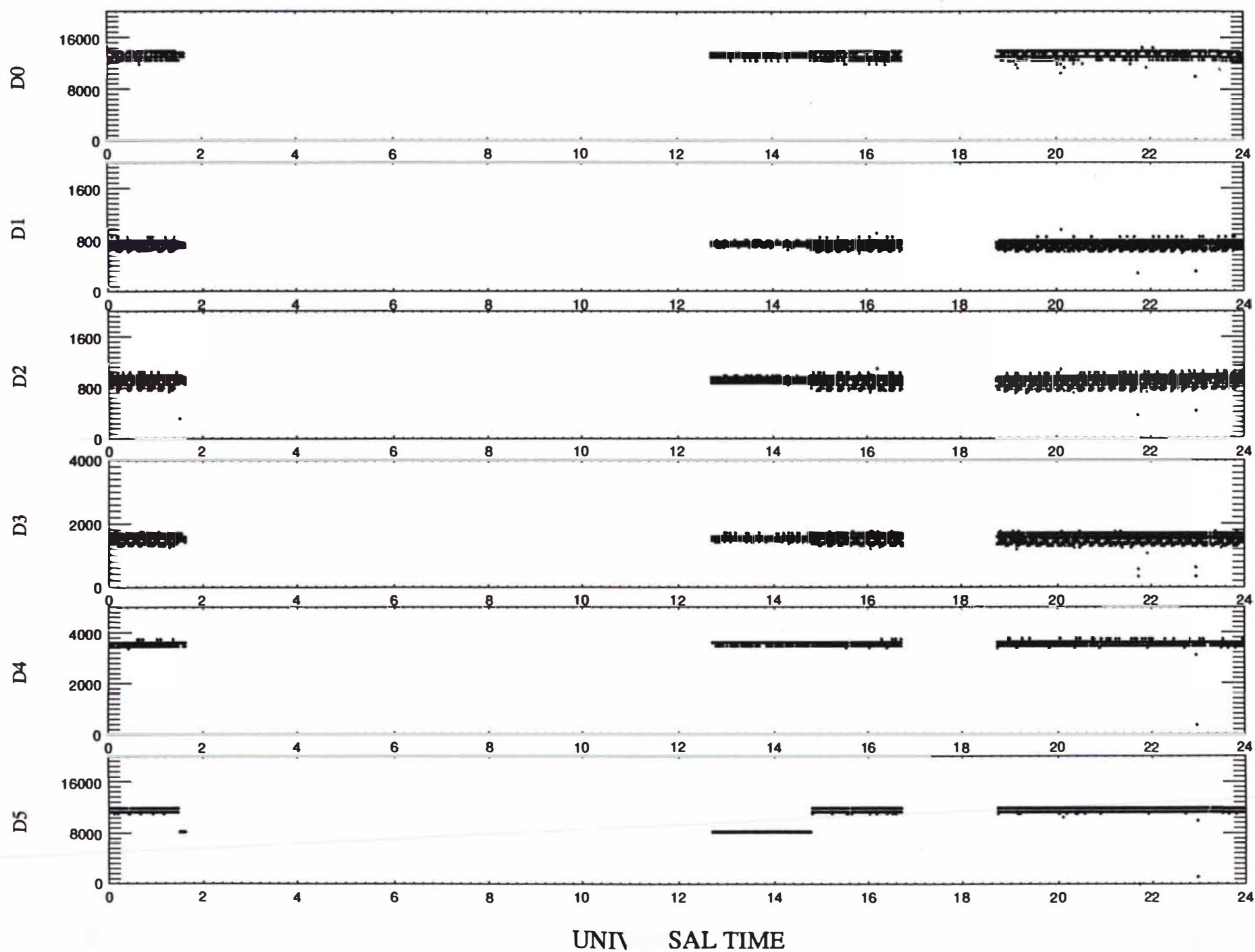


UNIVE AL TIME

CALIBRATION DATA INCLUDED



UNIV UNIV TIME



Kommers

UNTRIGGERED

ULYSSES RT

22 / 5 / 97

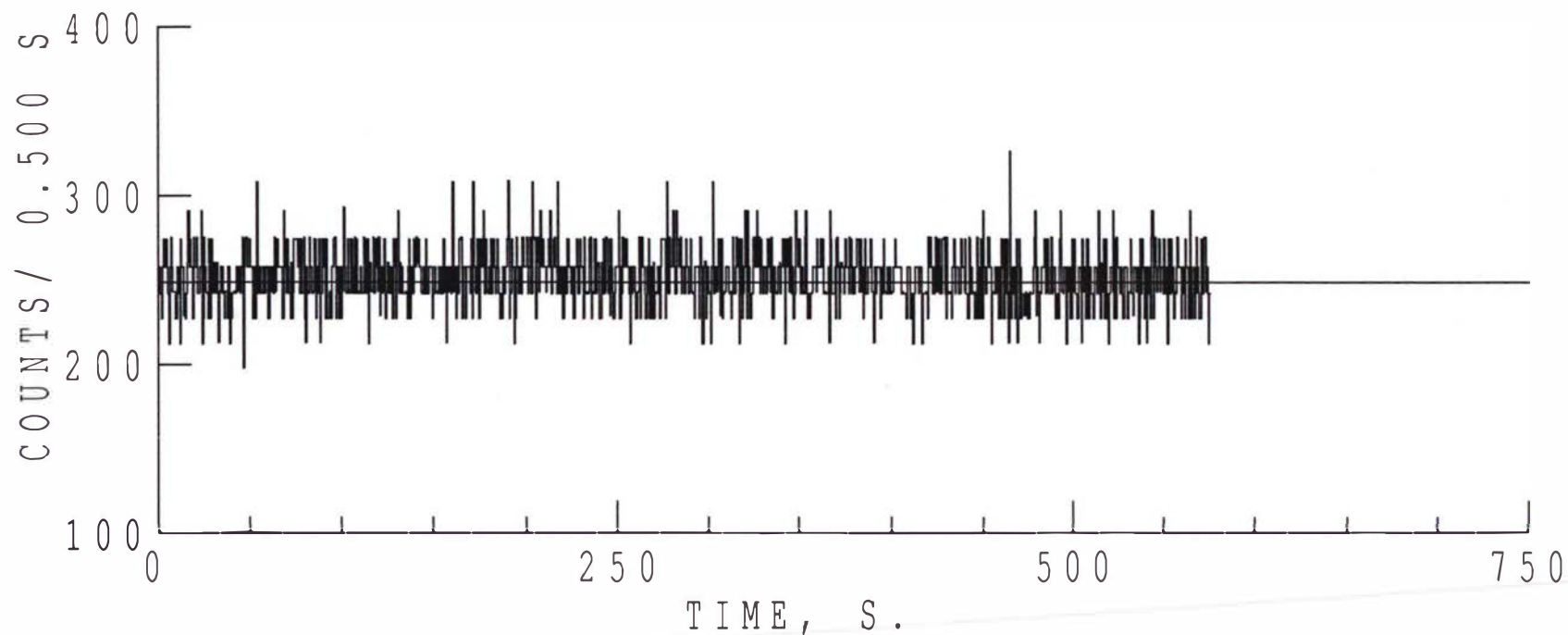
25/11/93 73044.133 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



NO.: 02657

TIME: TJD=9316 SECONDS=00071

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

BATSE BURST TRIGGER

NO.: 02658

TIME: TJD=9316 SECONDS=11926

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA EXIT.

BATSE BURST TRIGGER

NO.: 02659

TIME: TJD=9316 SECONDS=67161

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

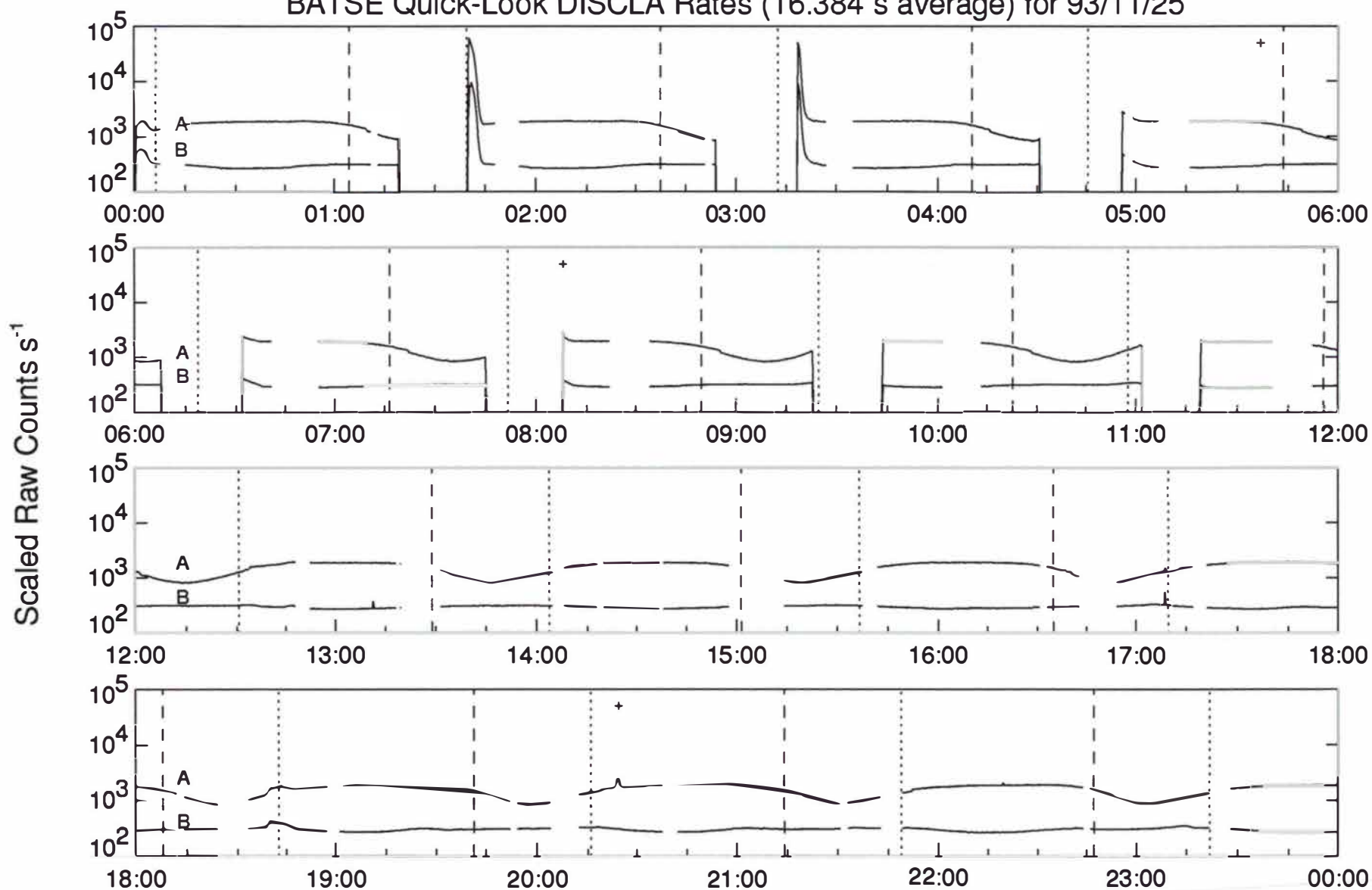
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/25



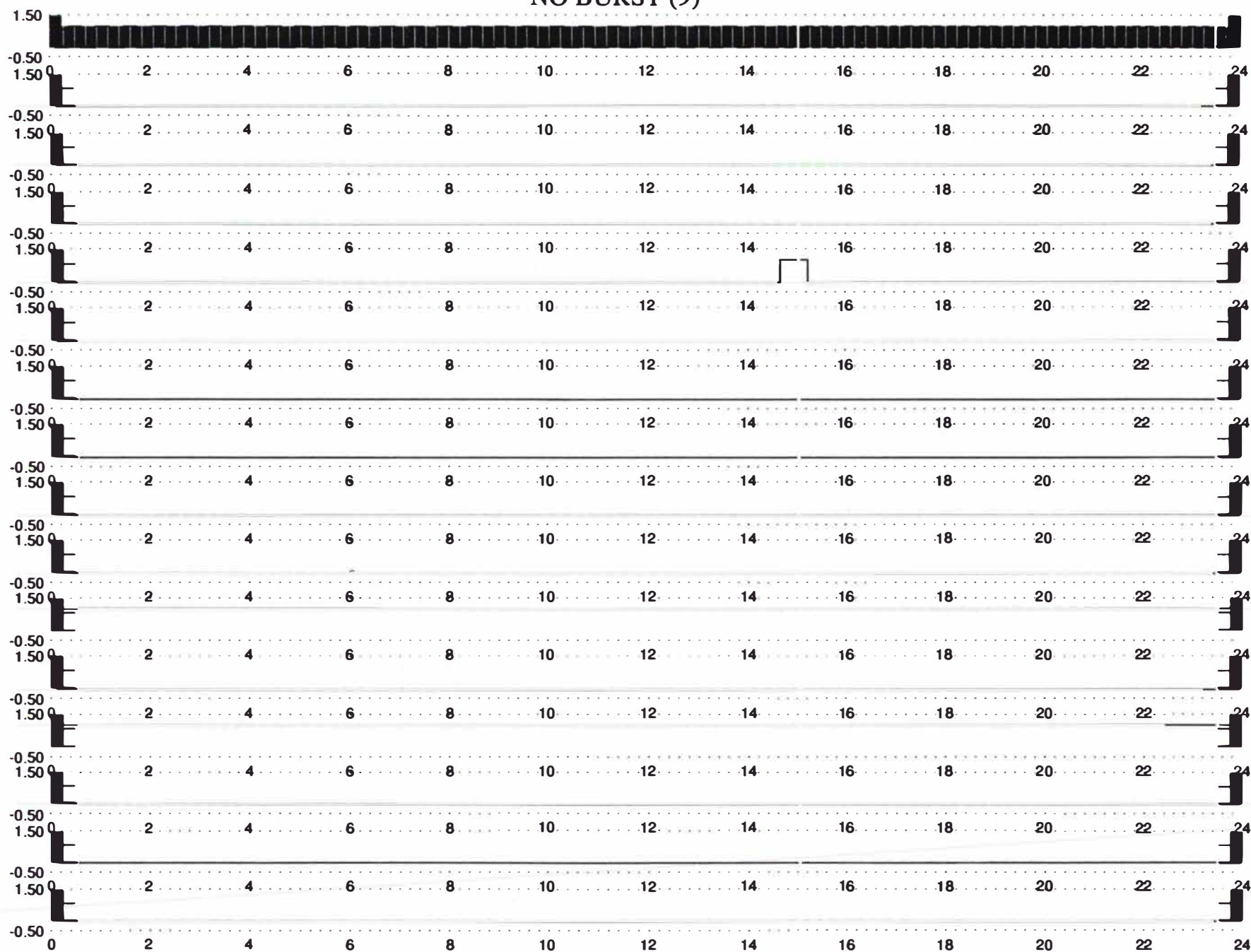
Current Time: 93/11/30, 1712 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

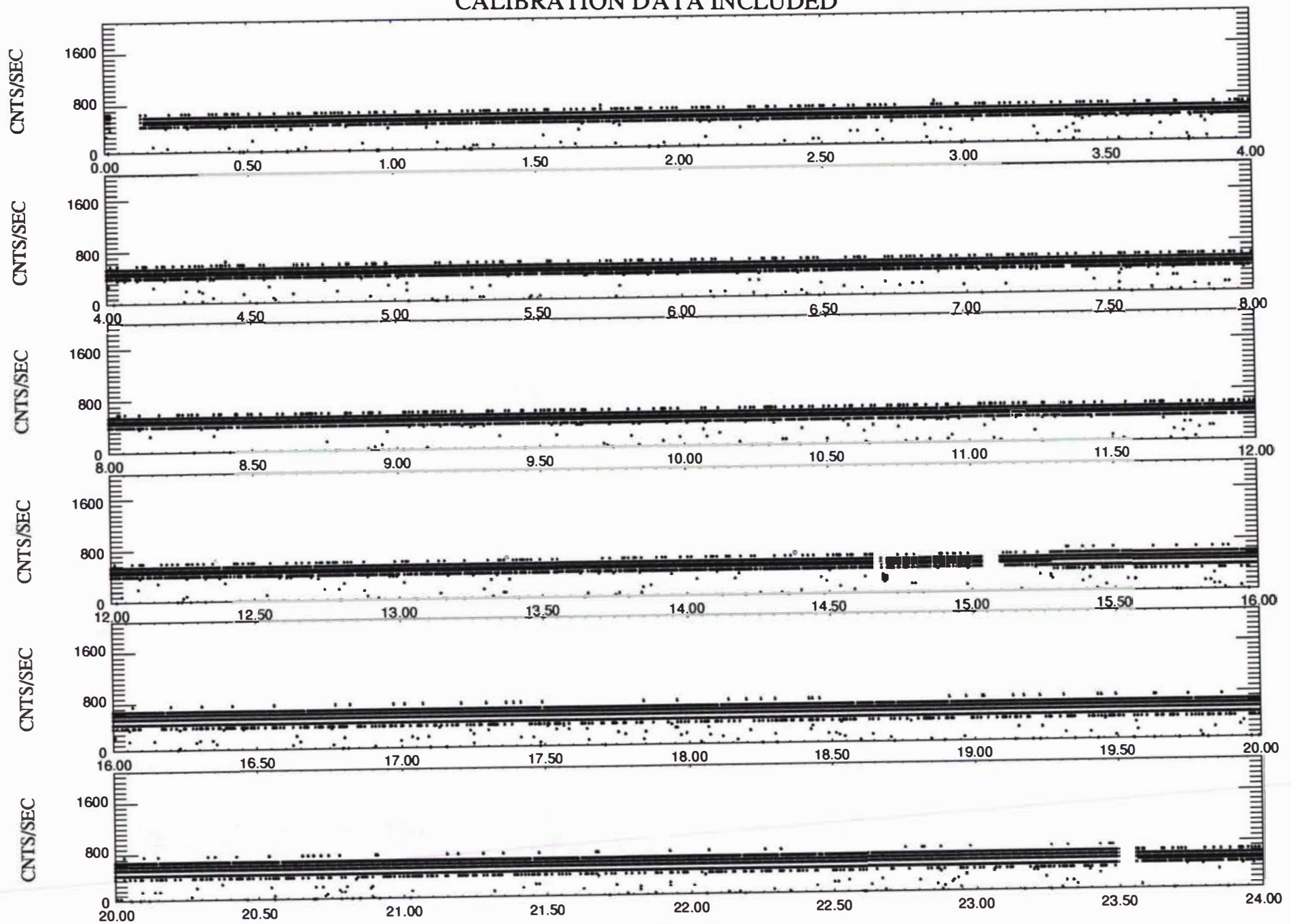
HUS
BRS
MEM
WCH
CAL
RSC
OPM
SPE
ICR
MP.
OSC
DMA
ROM
DMP
CCL
CBU

NO BURST (9)

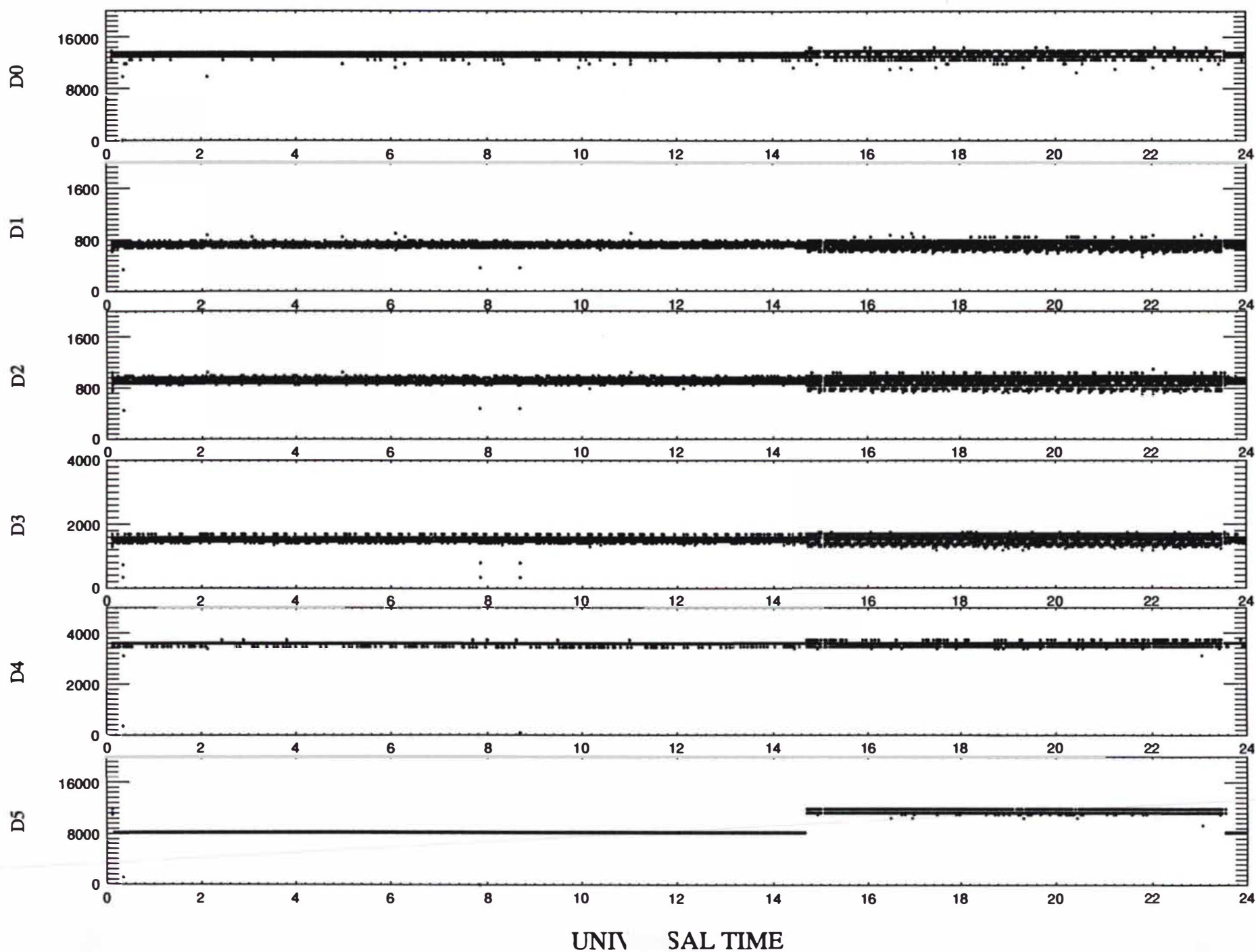


UNIVE AL TIME

CALIBRATION DATA INCLUDED



UNIV CAL TIME



From HAGEDON@ssl.msfc.nasa.gov Mon Nov 29 10:03:01 1993
Date: Mon, 29 Nov 1993 12:05:44 -0600 (CST)
From: HAGEDON@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2660
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2660
EVENT OF 1993 NOV 26 DAY OF YEAR=330
EVENT CROSSING TIME AT BATSE : 17206. S. OR 04:46:46.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 157.000 68.000
BATSE PEAK COUNTING RATE: 3200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 26/11/ 93 IS:
RA= 166.152 DEC= -32.523 DIST= 4.280 AU
BATSE-ULYSSES DISTANCE = 640341533. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 79.24 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 398.68 SECS.
CROSSING TIME AT ULYSSES IS 17605. S. OR 04:53:24 +/- 420.37 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 26/11/ 93 IS:
RA= 250.589 DEC= -22.775 DIST= 2.451 AU
MARS-BATSE DISTANCE = 366710688. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 67.63 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 465.48 SECS.
CROSSING TIME AT MARS IS 17671. S. OR 04:54:31 +/- 203.46 SECONDS

RI

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2660	931126	9317	17206	3200	157	+68

NO.: 02660 BATSE BURST TRIGGER

TIME: TJD=9317 SECONDS=17206

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=059. AZIMUTH=156. ERROR= DEGREES

COMMENTS:
BURST. SINGLE SPIKE. FASTER RISE THAN DECAY WITH SUBSTRUCTURE.
DUR.~20 SEC. NOT VISIBLE ABOVE 300 KEV.

Helio corr removed

Date: Jan 20 '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? *NO - bad stats*

2. BATSE Data

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

3. PVO Data

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

- ☒ ACCESS database updated?

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

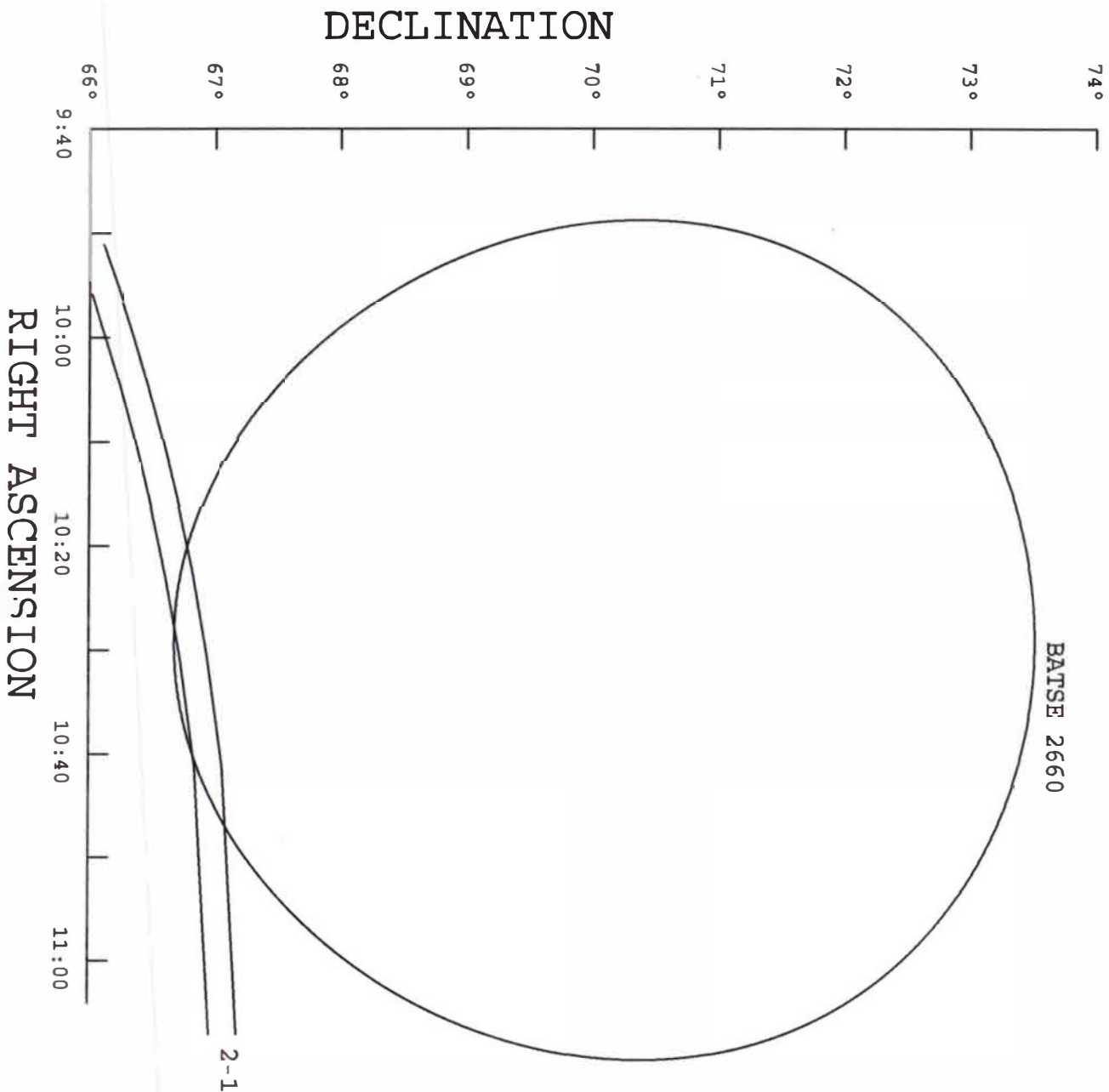
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF NOV 26, 1993 4:52

20 / 1/98



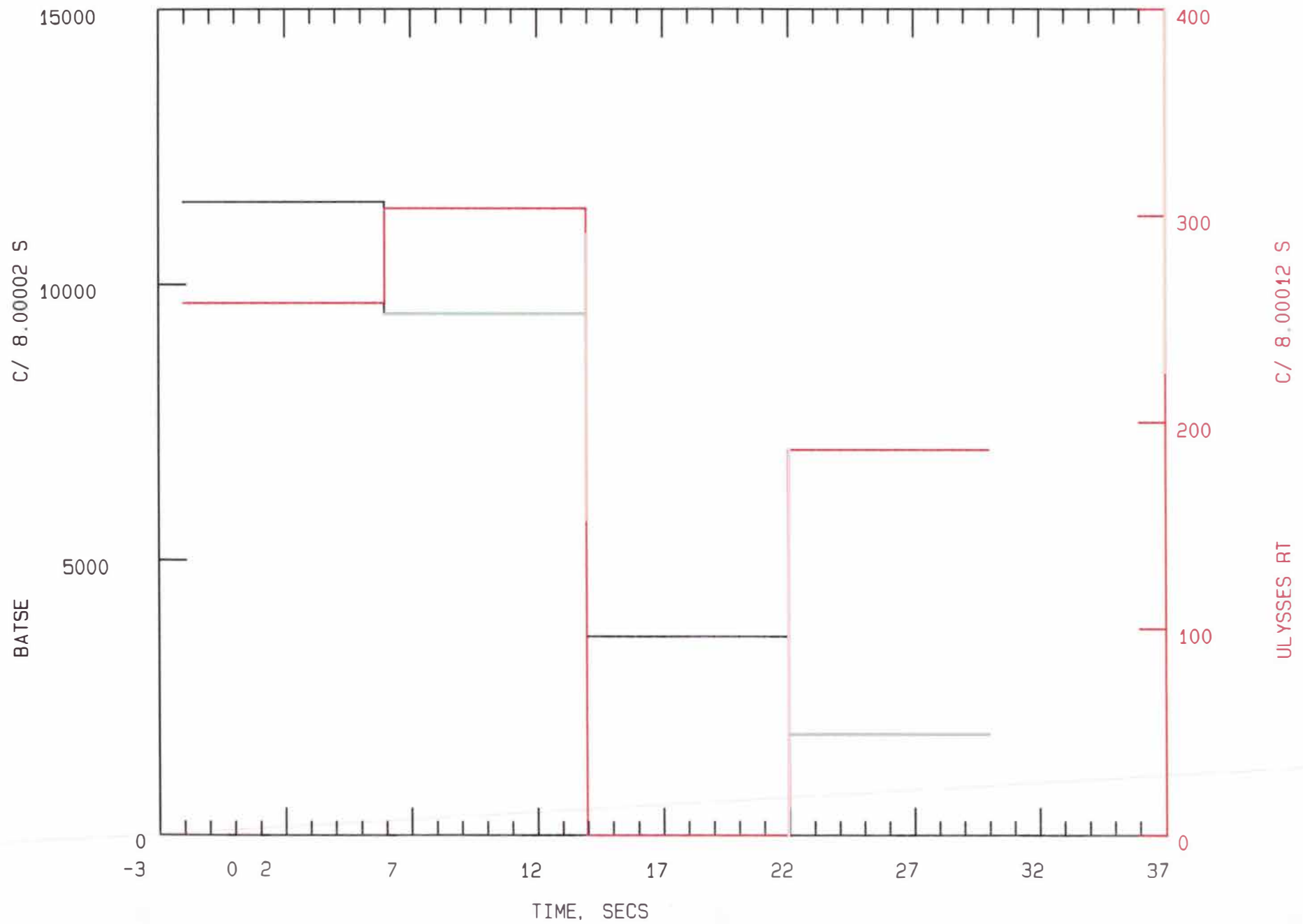
BATSE

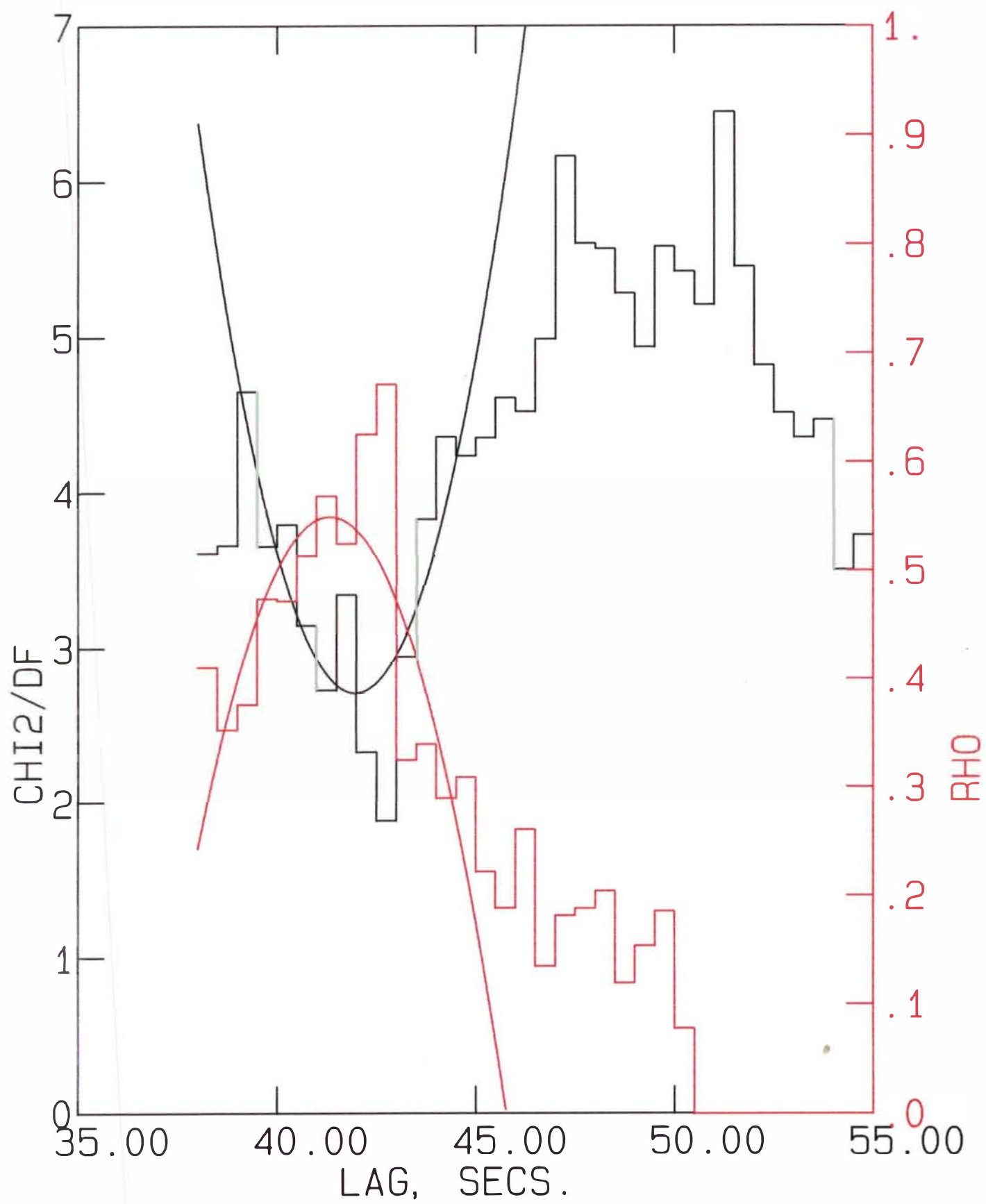
-ULYSSES RT CORRELATION

26/11/93

17206.682

20/ 1/98





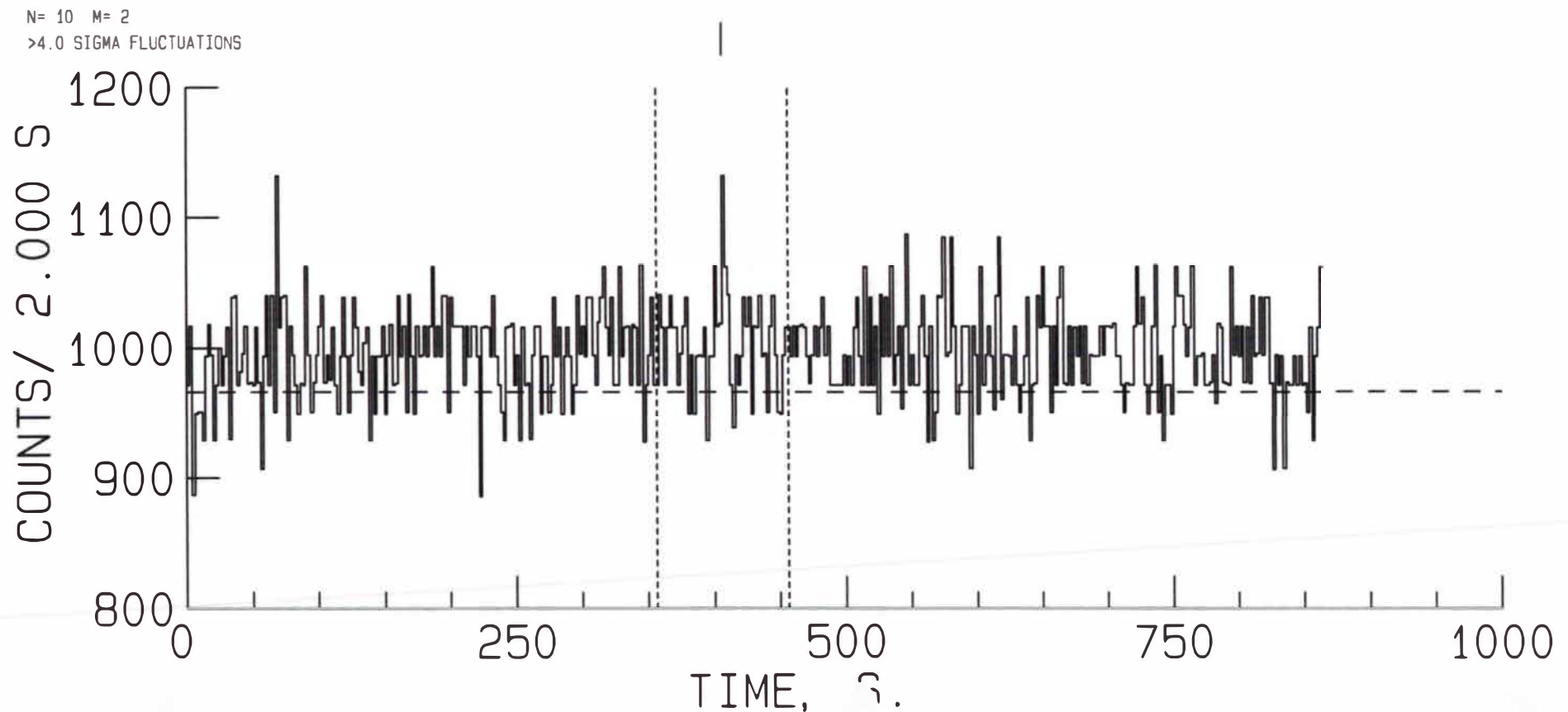
ULYSSES RT

20 / 1 / 98

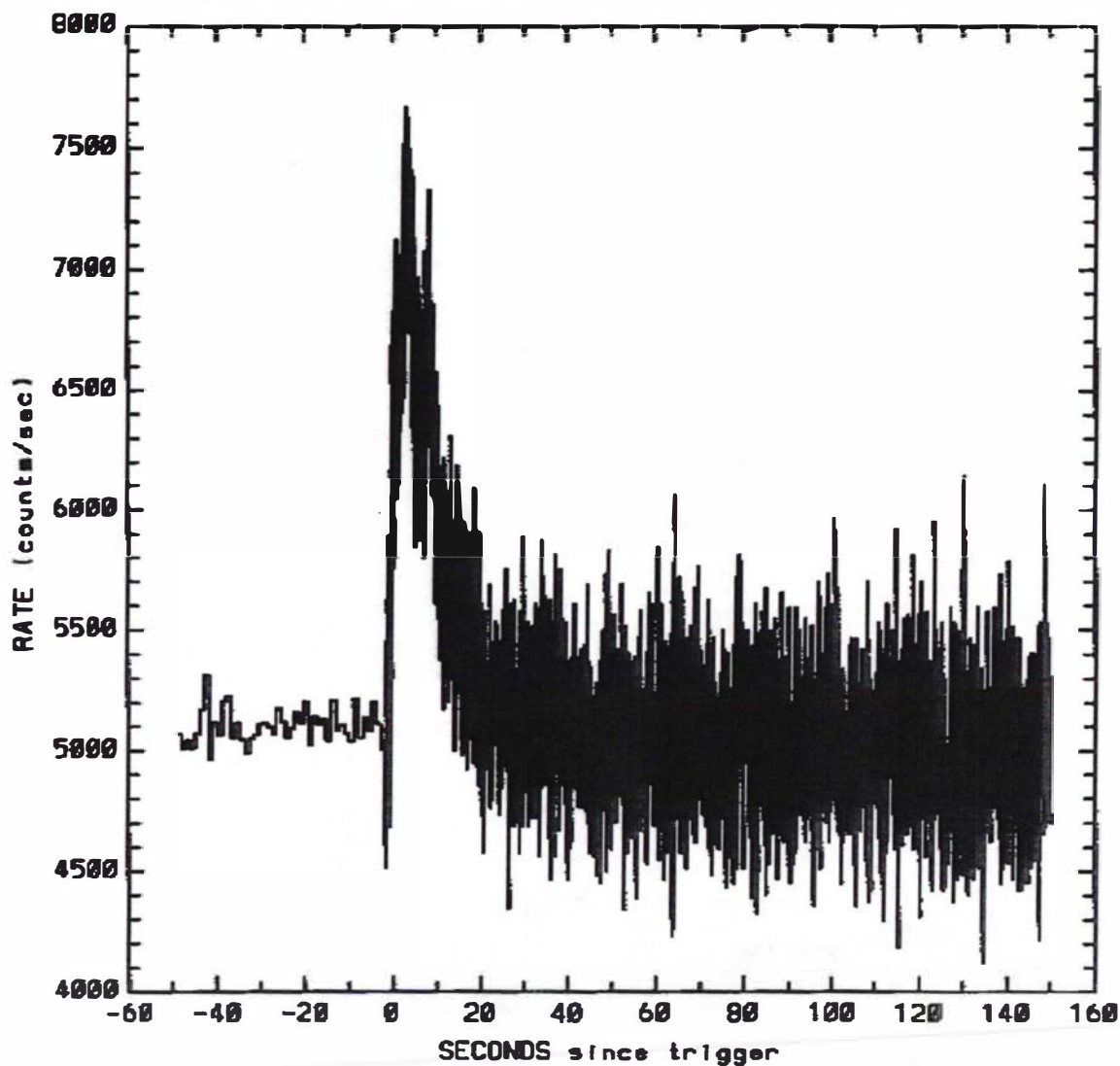
26/11/93 17172.106 s

0.500 S INTERVALS REGROUPED BY 4

20- 140 keV



DATA FOR K. HURLEY



2-DEC-1993 14:41:03

 Created by NOPS 80
 (Burst Display)
 Version 2.20

Trigger = 2660

 Trigger Time:
 9317 / 17206.662

 Burst Data Type:
 DISCSC

 Deadtime
 Corrected: N

 Background Data
 Type: PREB + DISCLA

 Minimum Integ. Time:
 0.064 seconds

 Detectors [7..8]:
 01010000

 Discriminators:
 (1, 2)

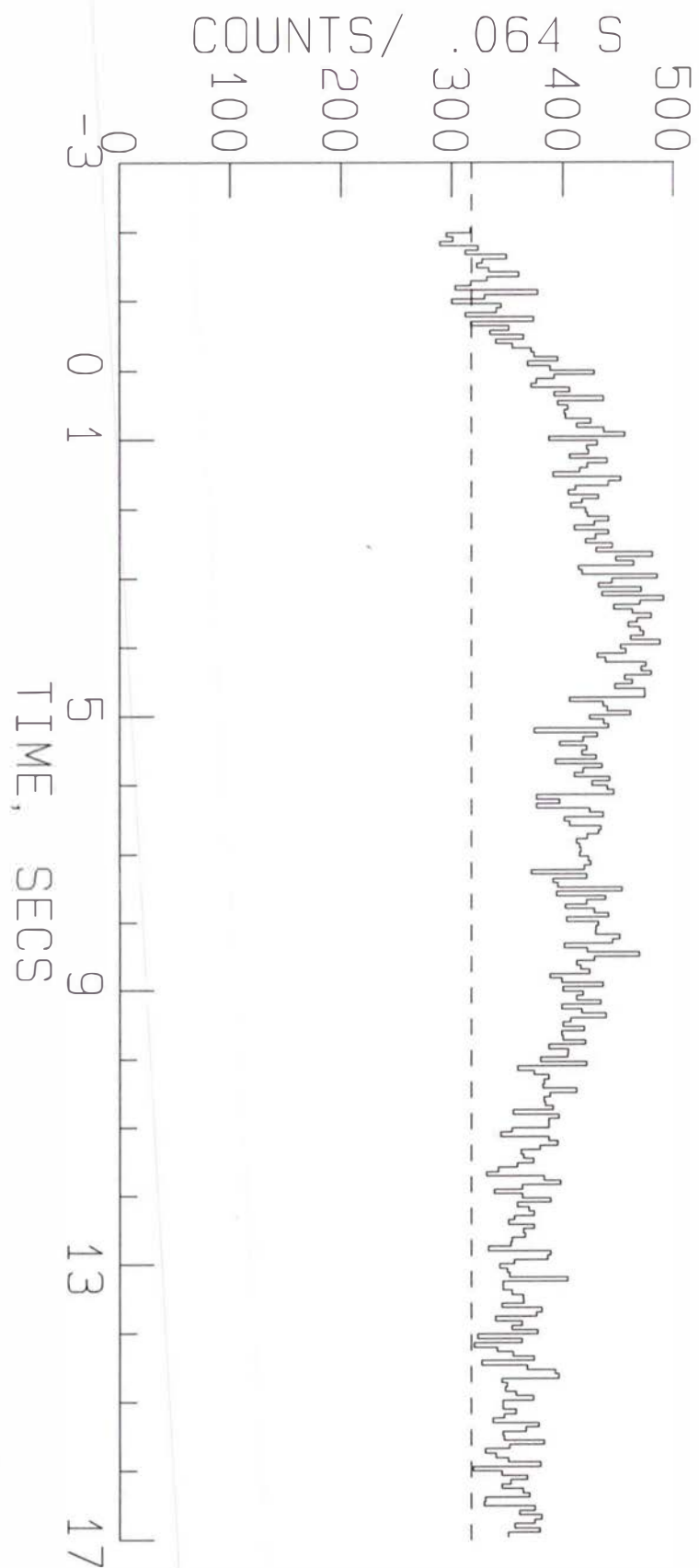
 Quality Mask:
 0DISP1

BATSE

26/11/93

17206.682

25- 100 keV

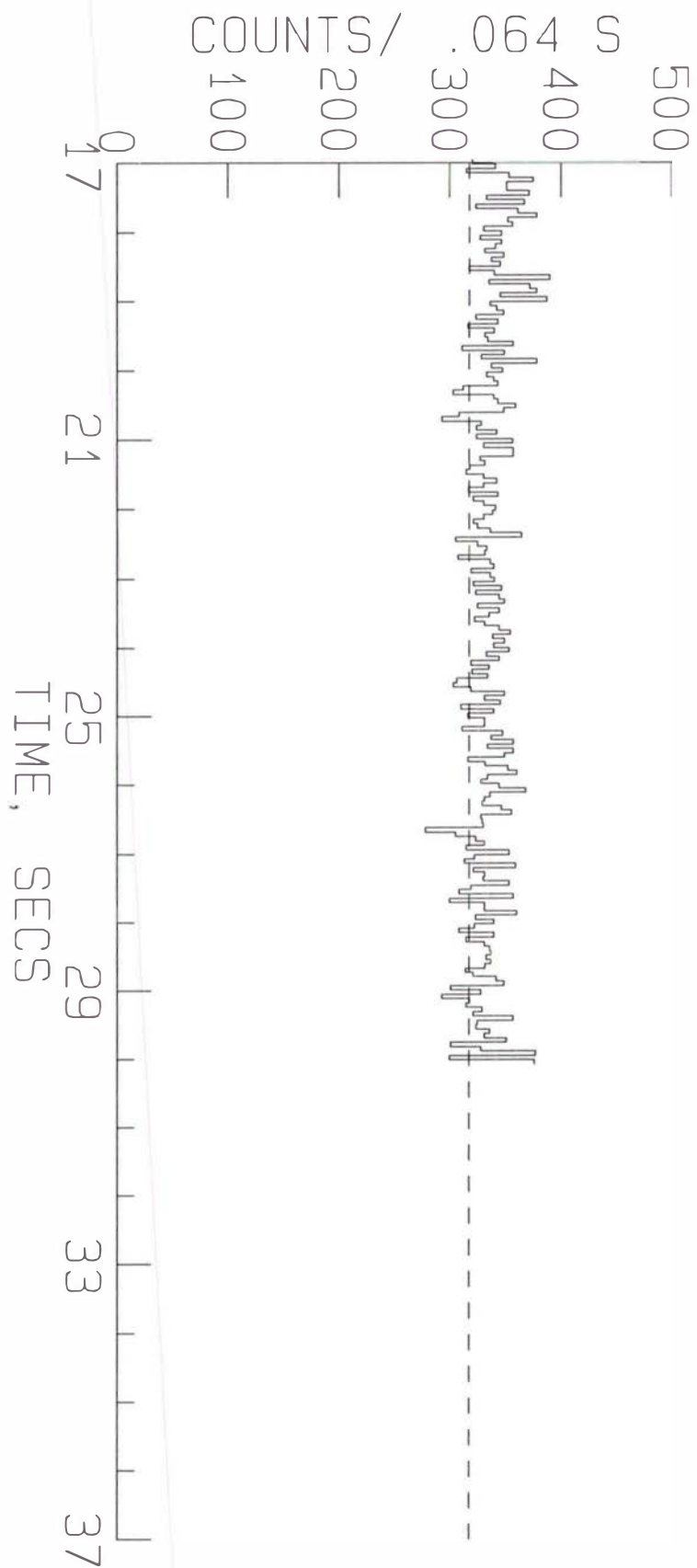


BATSE

26/11/93

17206.682

25- 100 keV



From HAGEDON@ssl.msfc.nasa.gov Tue Nov 30 07:58:09 1993
Date: Tue, 30 Nov 1993 10:00:50 -0600 (CST)
From: HAGEDON@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2661
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2661
EVENT OF 1993 NOV 26 DAY OF YEAR=330
EVENT CROSSING TIME AT BATSE : 70299. S. OR 19:31:39.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 2.000 -17.000
BATSE PEAK COUNTING RATE: 49000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 26/11/ 93 IS:
RA= 166.186 DEC= -32.673 DIST= 4.270 AU
BATSE-ULYSSES DISTANCE = 638785149. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 51.93 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1314.01 SECS.
CROSSING TIME AT ULYSSES IS 71613. S. OR 19:53:33 +/- 361.17 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 26/11/ 93 IS:
RA= 250.589 DEC= -22.775 DIST= 2.451 AU
MARS-BATSE DISTANCE = 366710688. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 77.95 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 255.31 SECS.
CROSSING TIME AT MARS IS 70554. S. OR 19:35:54 +/- 211.57 SECONDS

Trigger

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2661	931126	9317	70299	49000	002	-17

BATSE BURST TRIGGER

NO.: 02661

TIME: TJD=9317 SECONDS=70299

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=173. AZIMUTH=018. ERROR= DEGREES

COMMENTS:

BURST. STRONG, DOUBLE PEAKED EVENT. EACH PEAK HAS SUBSTRUCTURE.
TOTAL DUR.~16 SEC. VISIBLE ABOVE 300 KEV.

Helio corr removed
Date: Nov 14 '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?

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

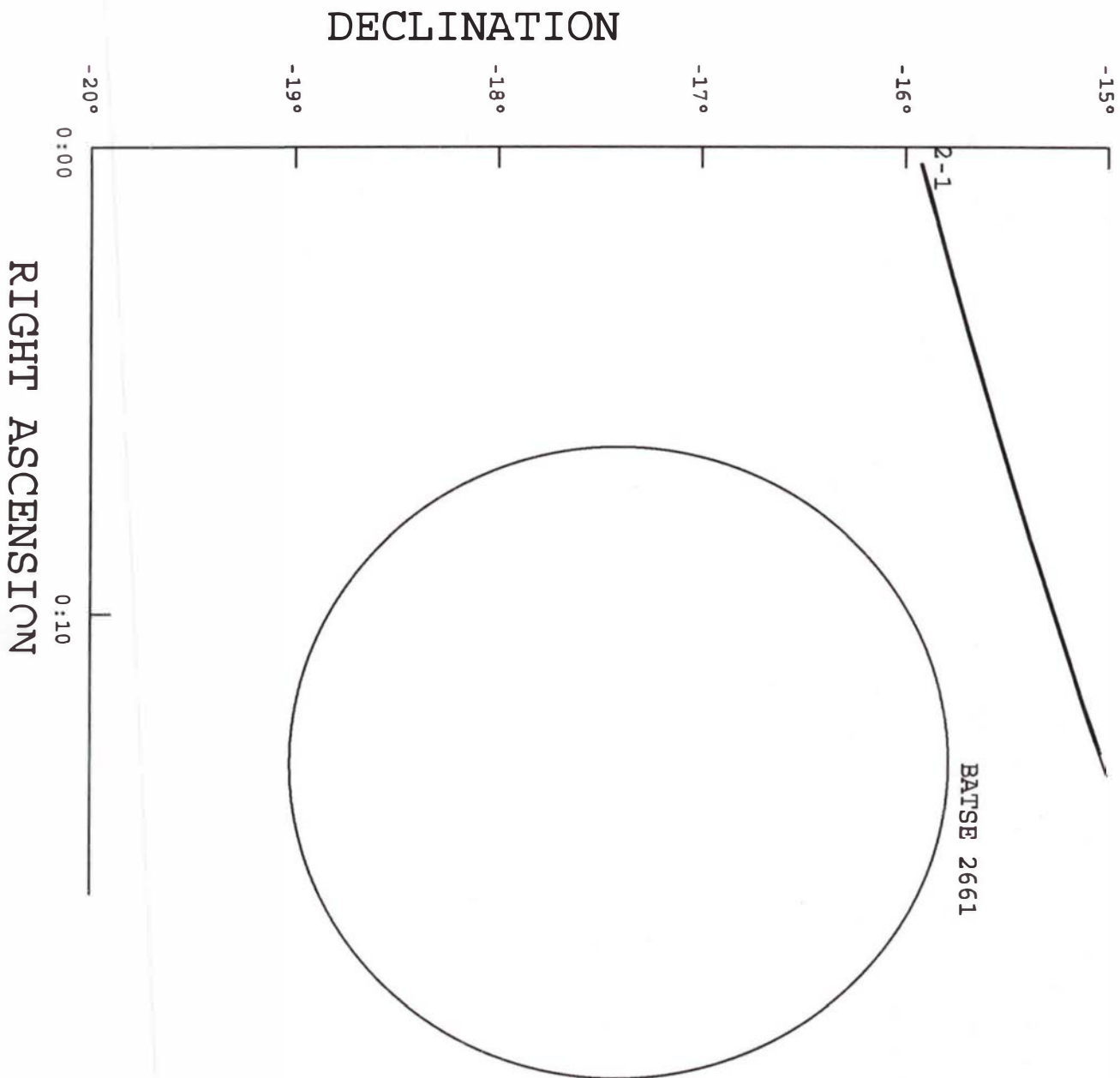
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF NOV 26, 1993 19:54

14/11/97



BATSE

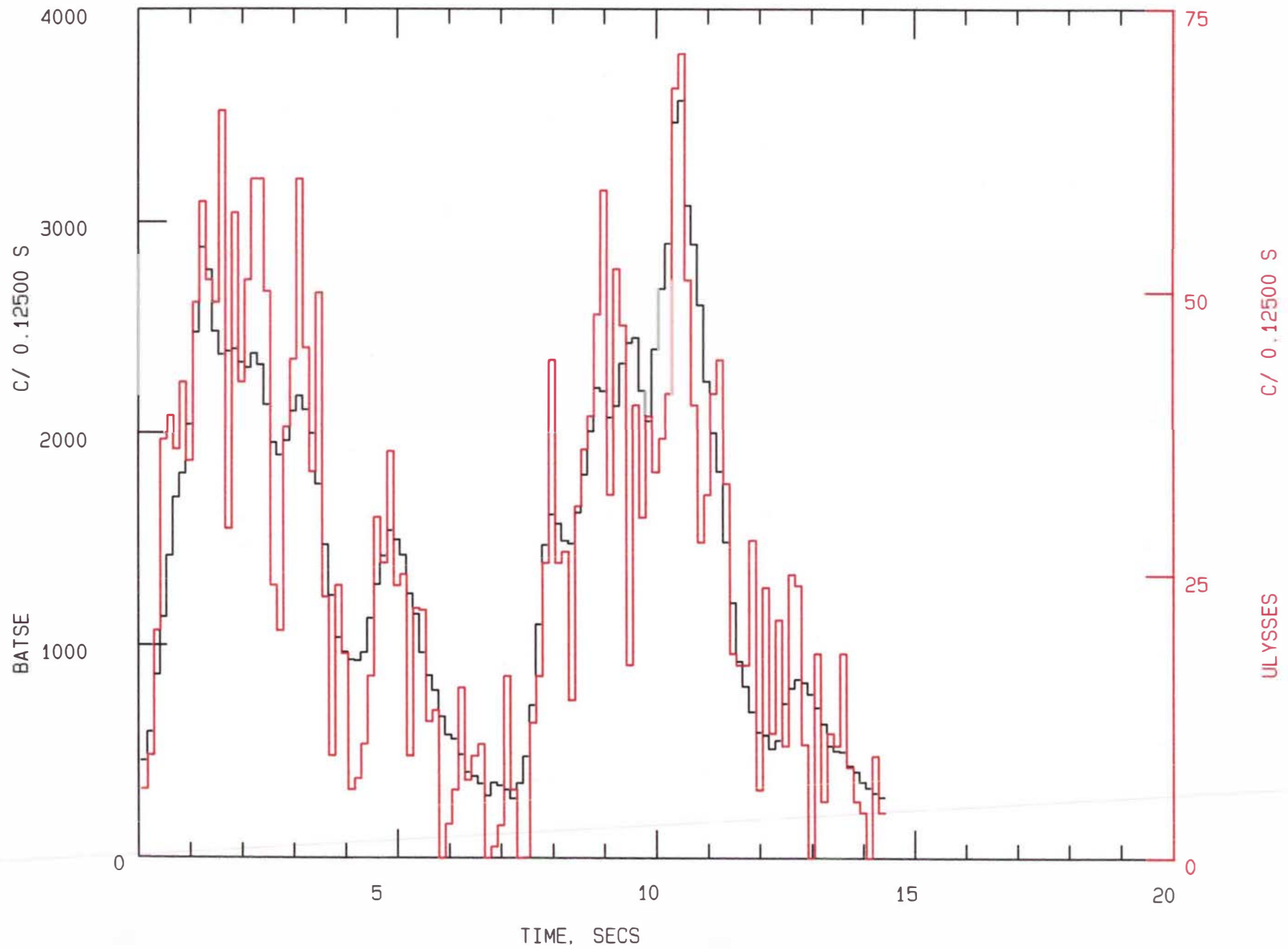
-ULYSSES

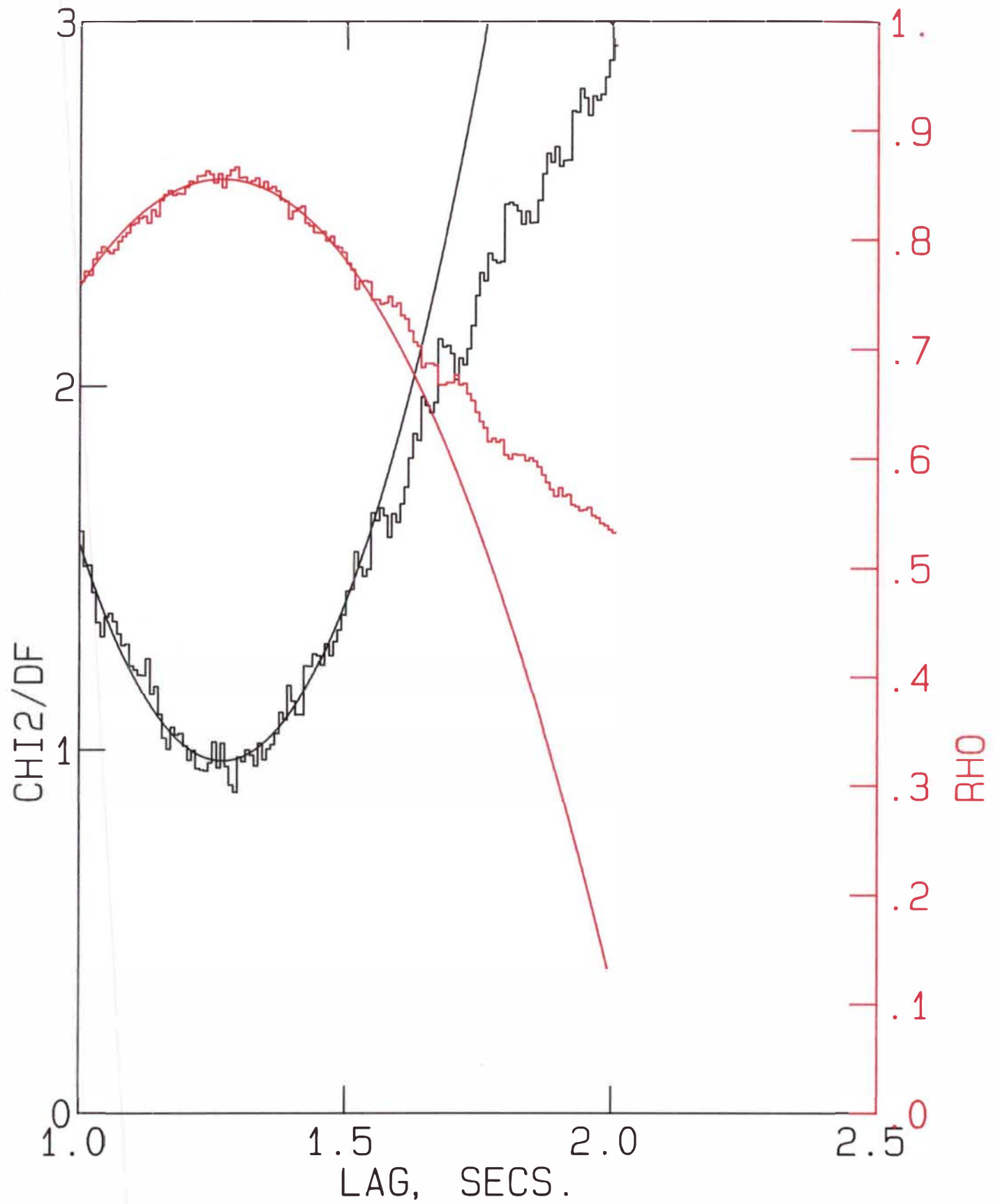
CORRELATION

26/11/93

70299.738

14/11/97





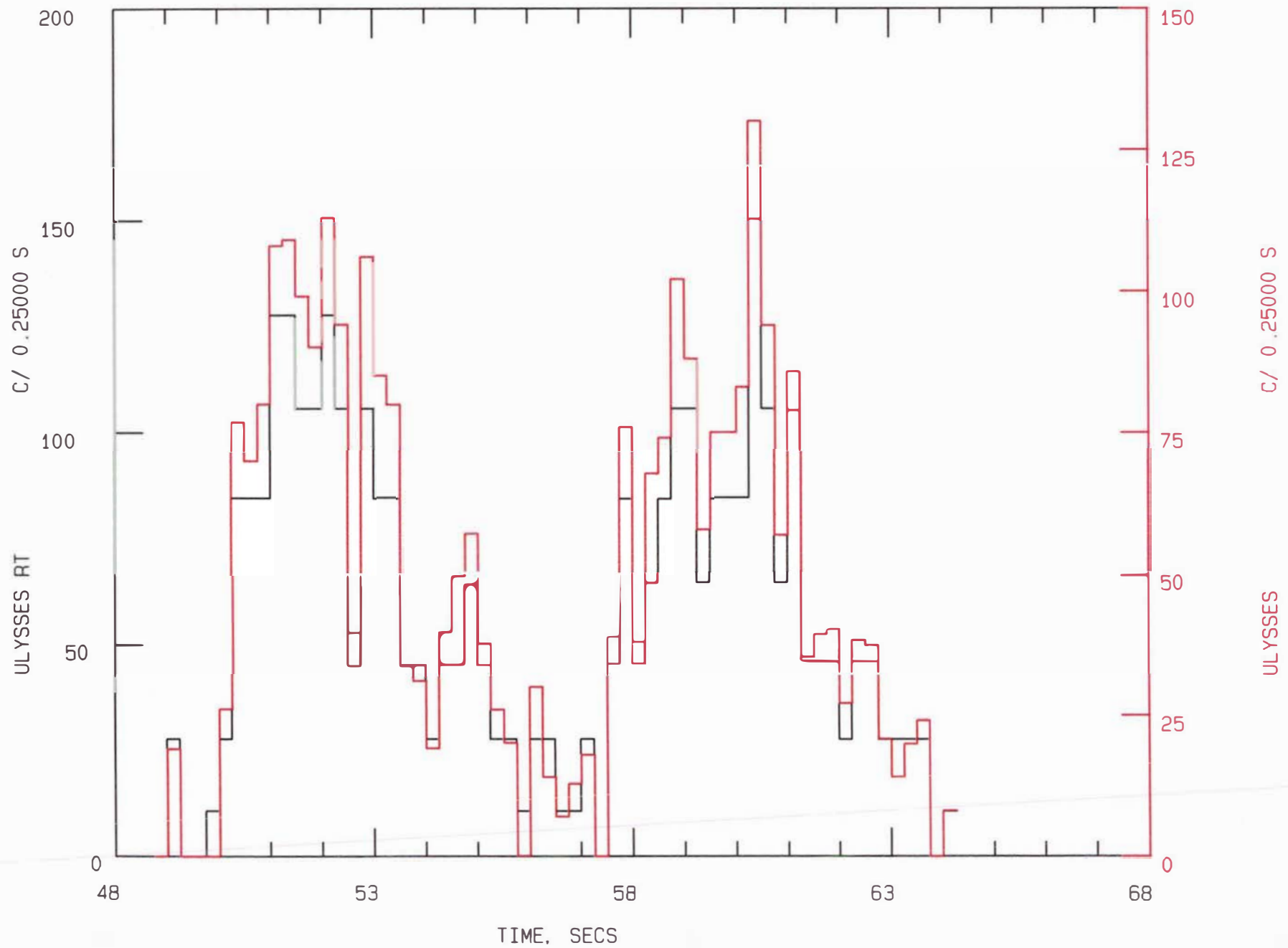
ULYSSES RT-ULYSSES

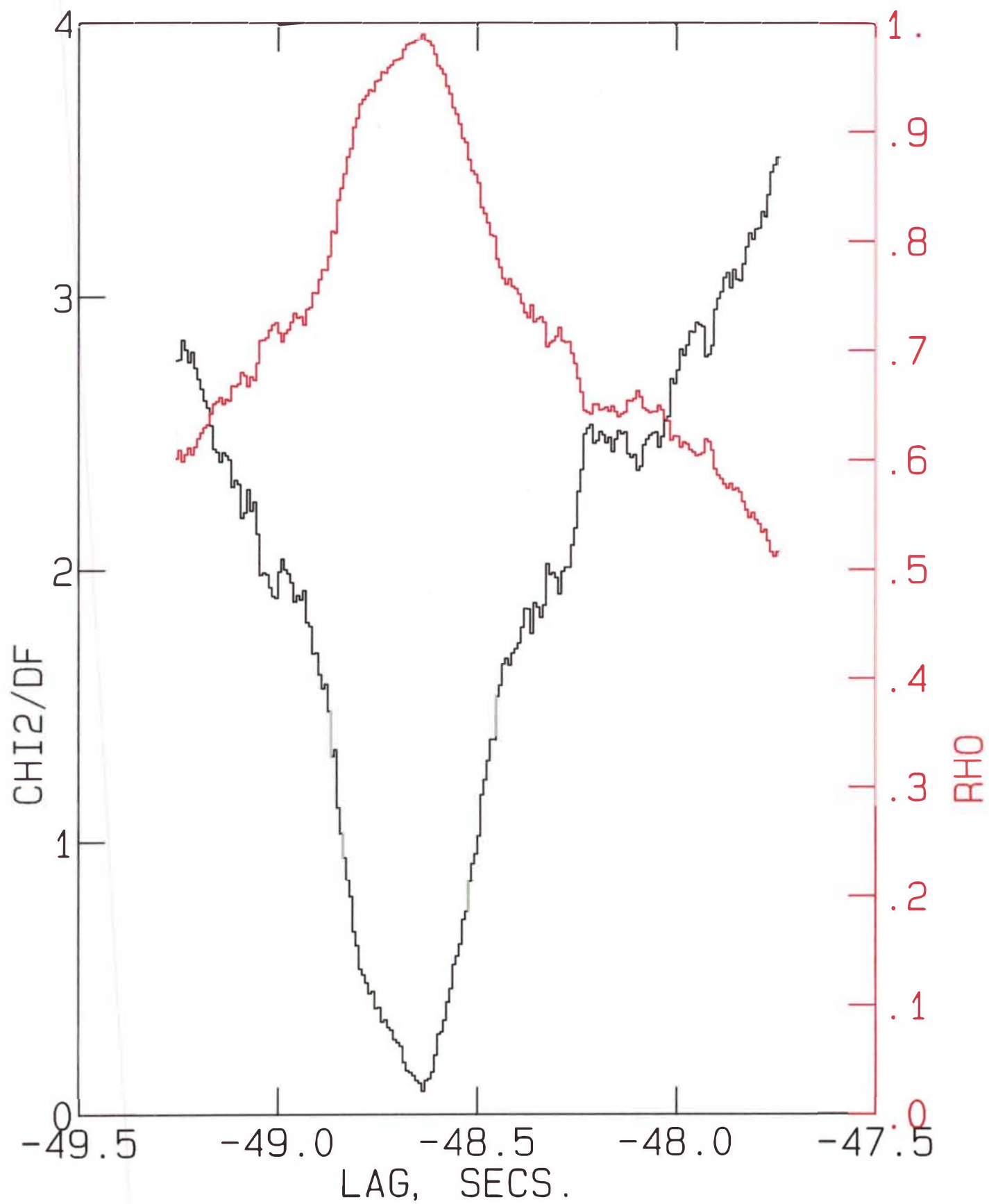
CORRELATION

26/11/93

71605.361

14/11/97

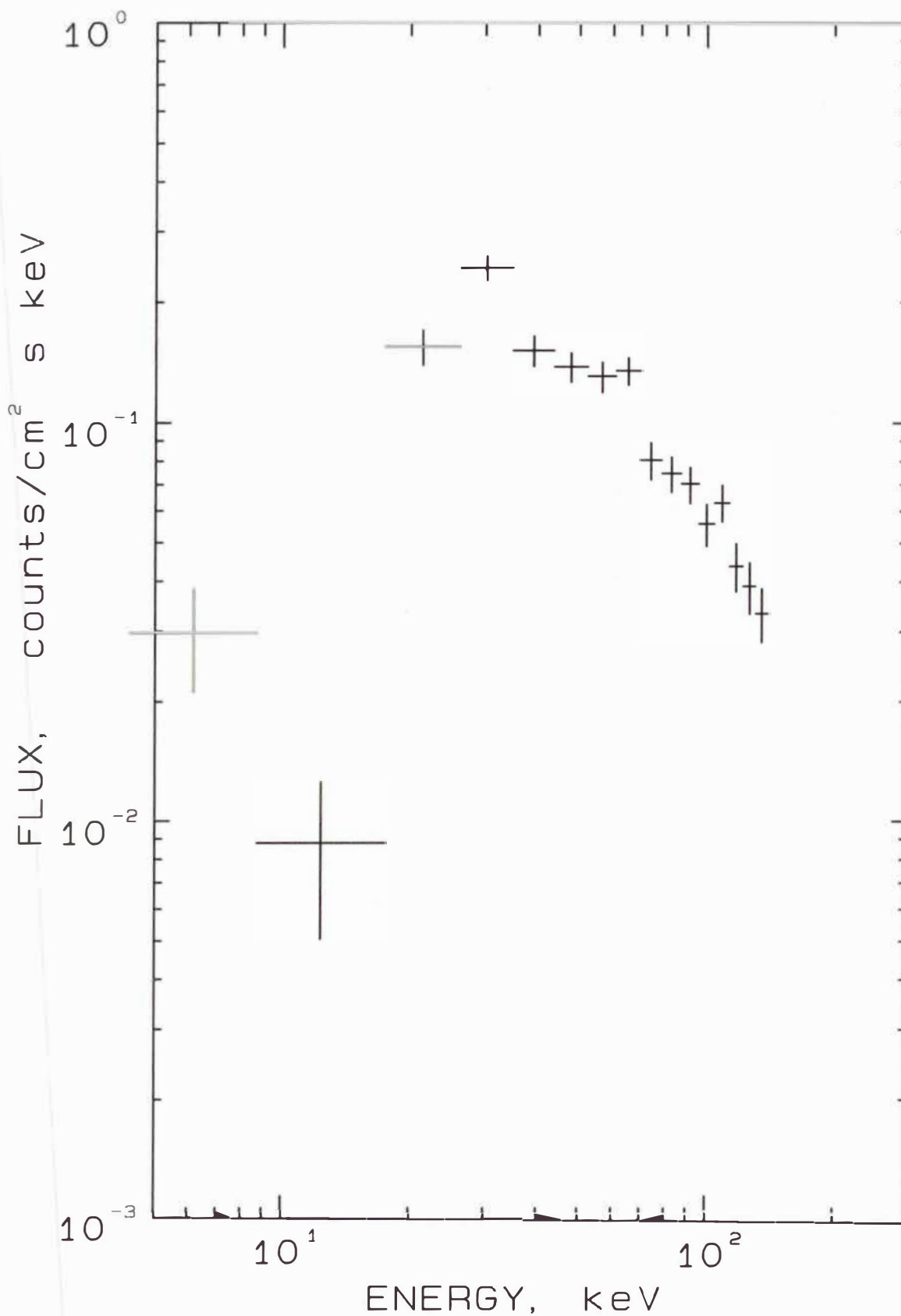




ULYSSES 26/11/93 71655.684

14/11/97

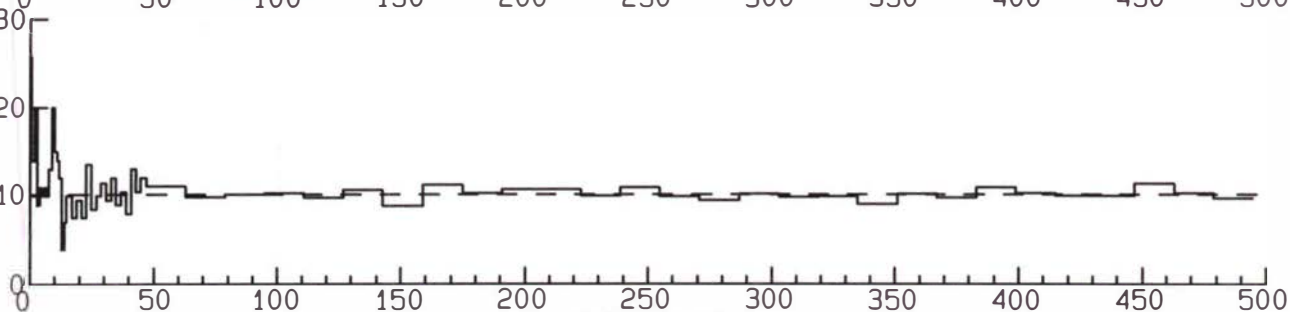
SPECTRUM INTEGRATED OVER 20.8 SECONDS, INTERVALS 2 TO 20



ULYSSES 26/11/93 71655.684 BURST SPECTRAL COUNT RATES

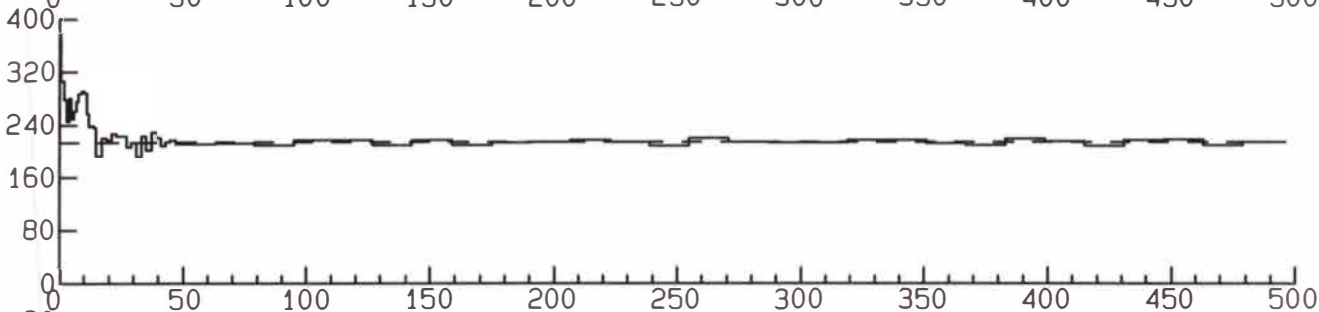
4- 17 keV

COUNTS/S



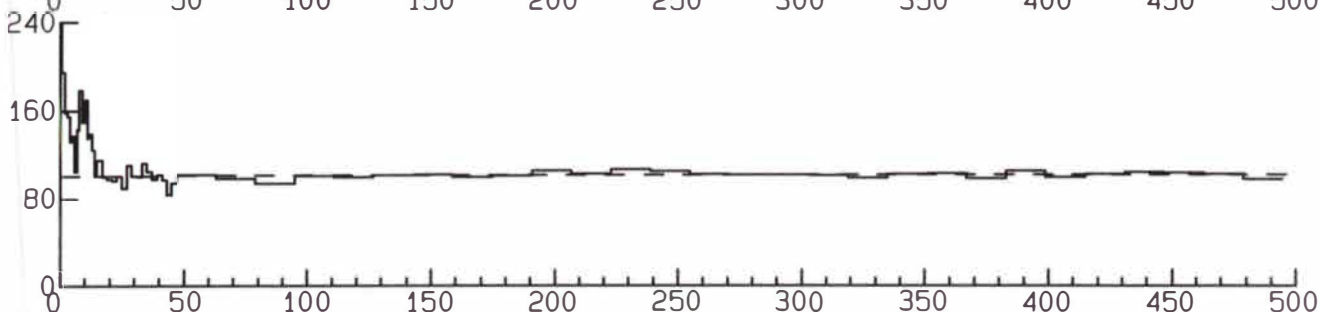
17- 43 keV

COUNTS/S



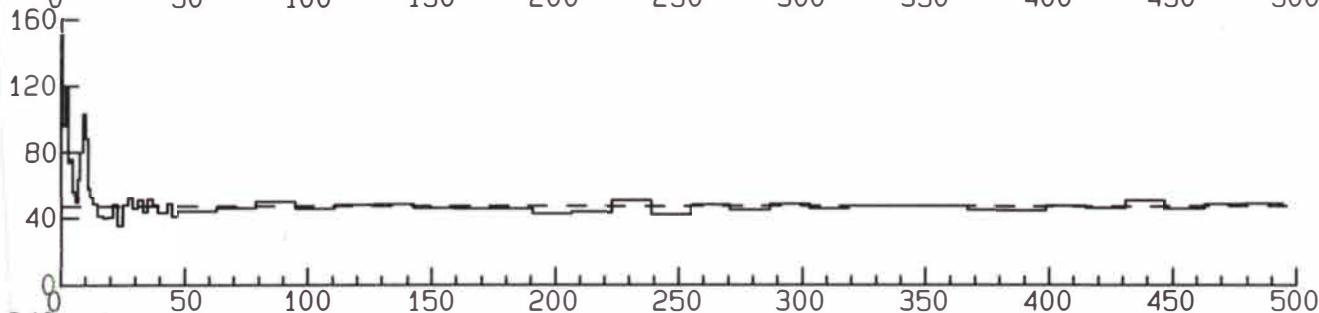
43- 69 keV

COUNTS/S



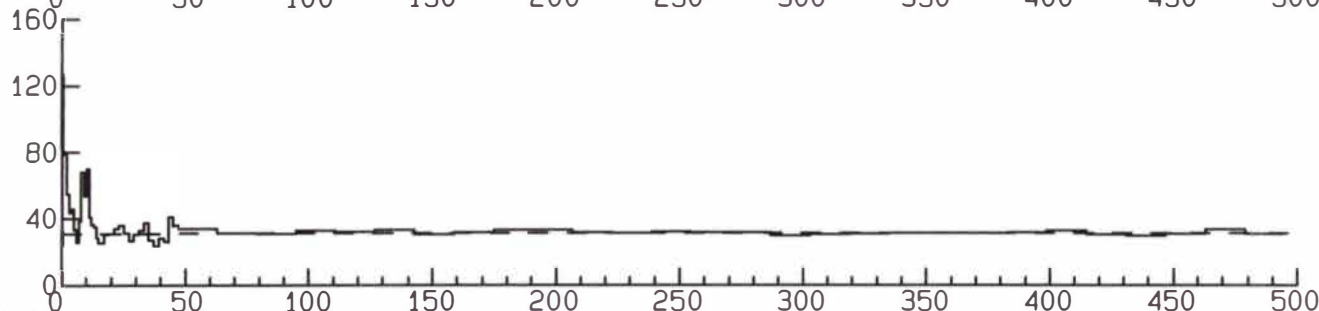
69- 96 keV

COUNTS/S



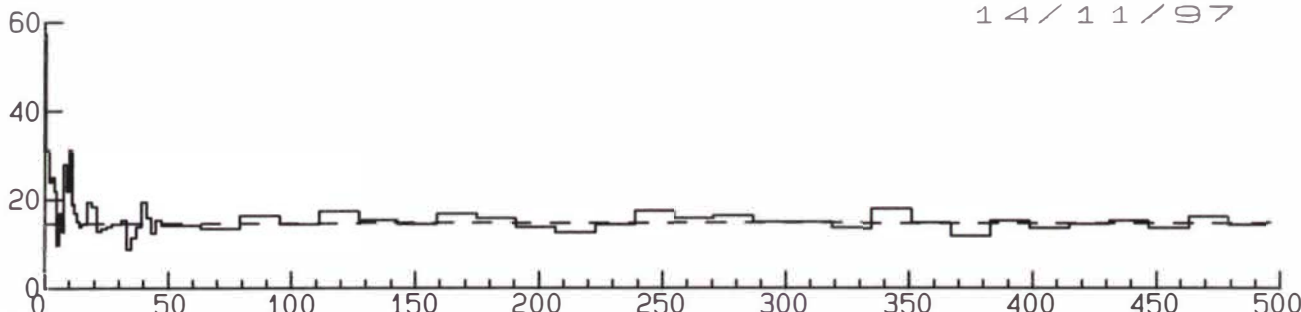
96-122 keV

COUNTS/S



122-139 keV

COUNTS/S



14/11/97

ULYSSES

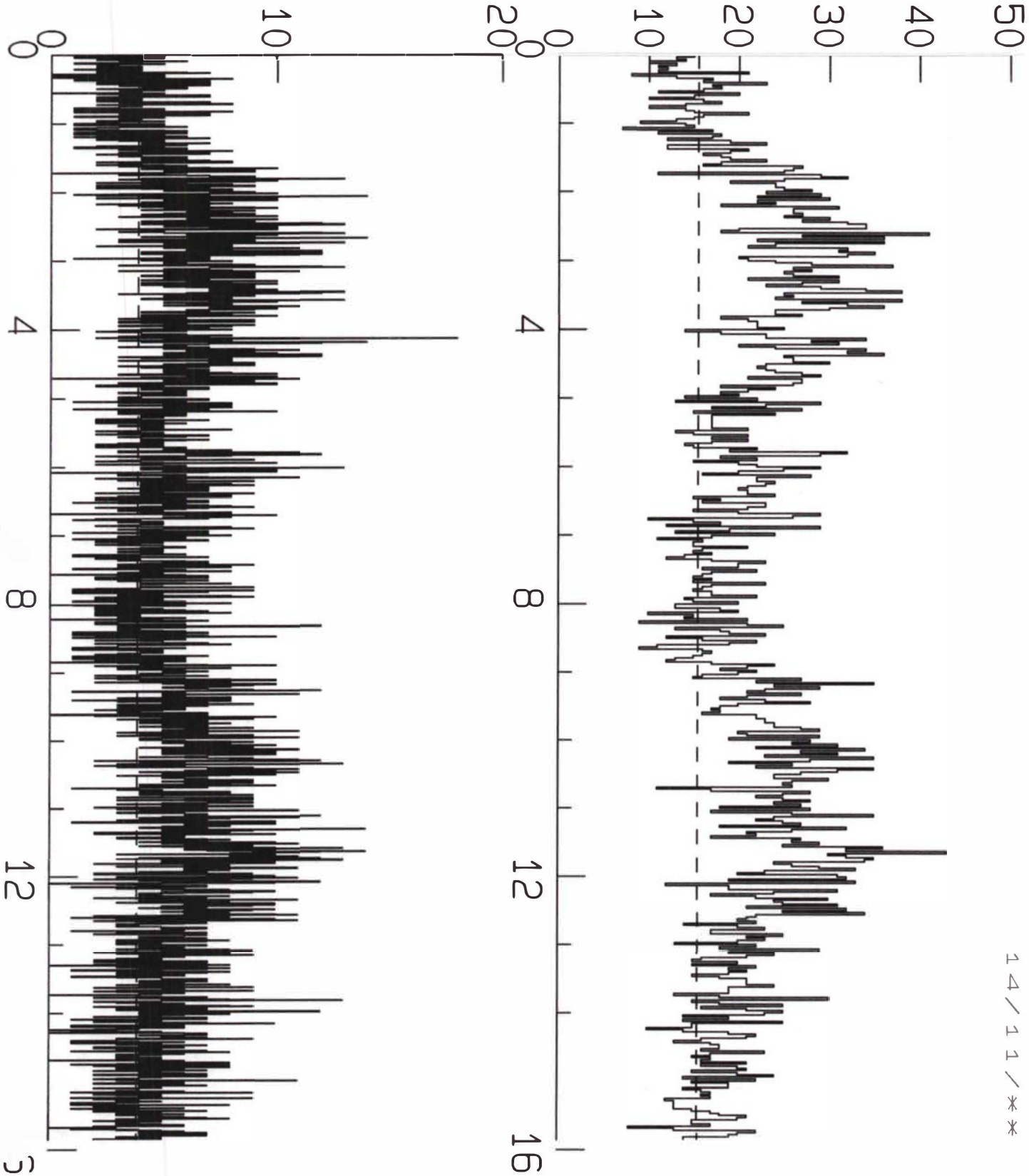
26/11/93

Ttrig=71655.853

20- 140 keV

COUNTS/0.008 S

COUNTS/0.031 S

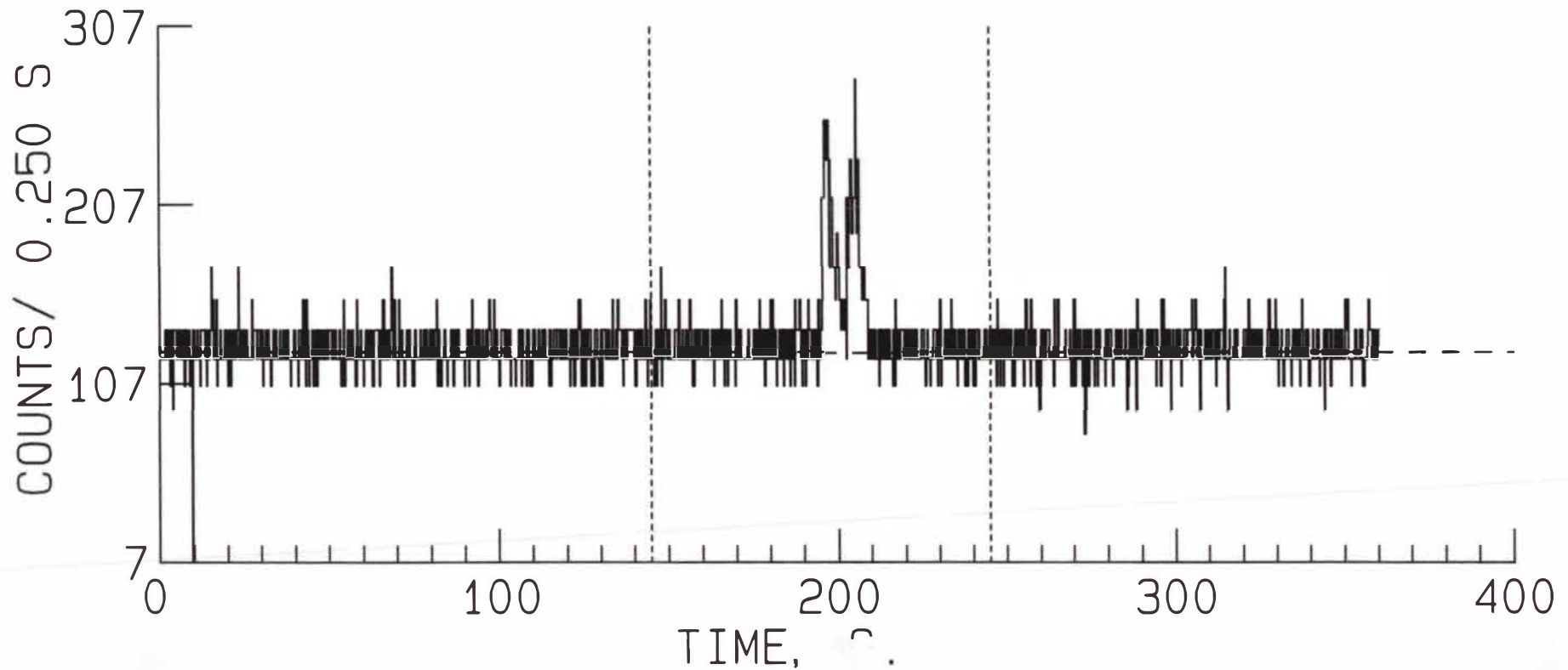


14/11/88

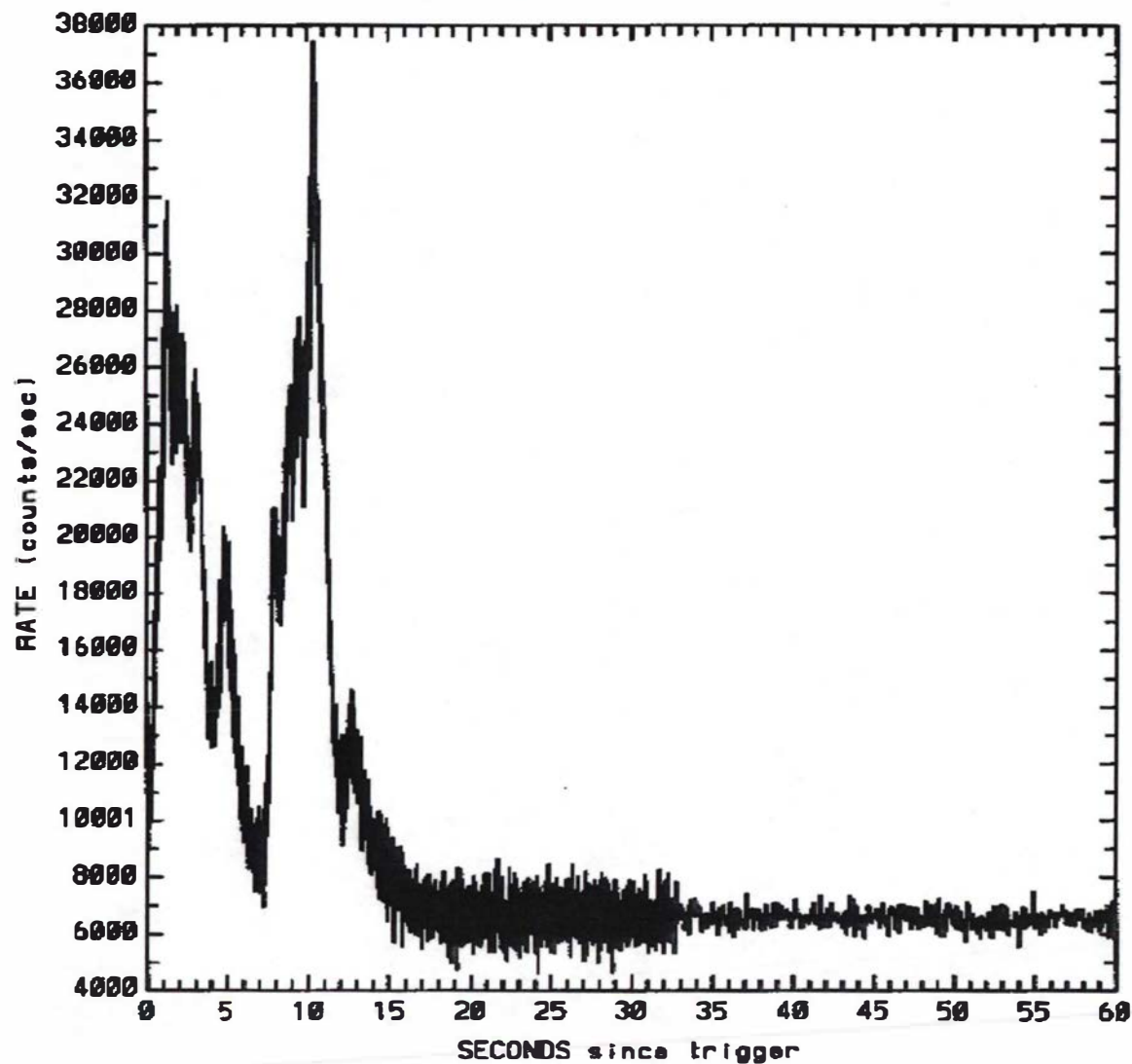
ULYSSES RT
26/11/93 71460.199 s
20- 140 keV

14/11/97

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



DATA FOR K. HURLEY

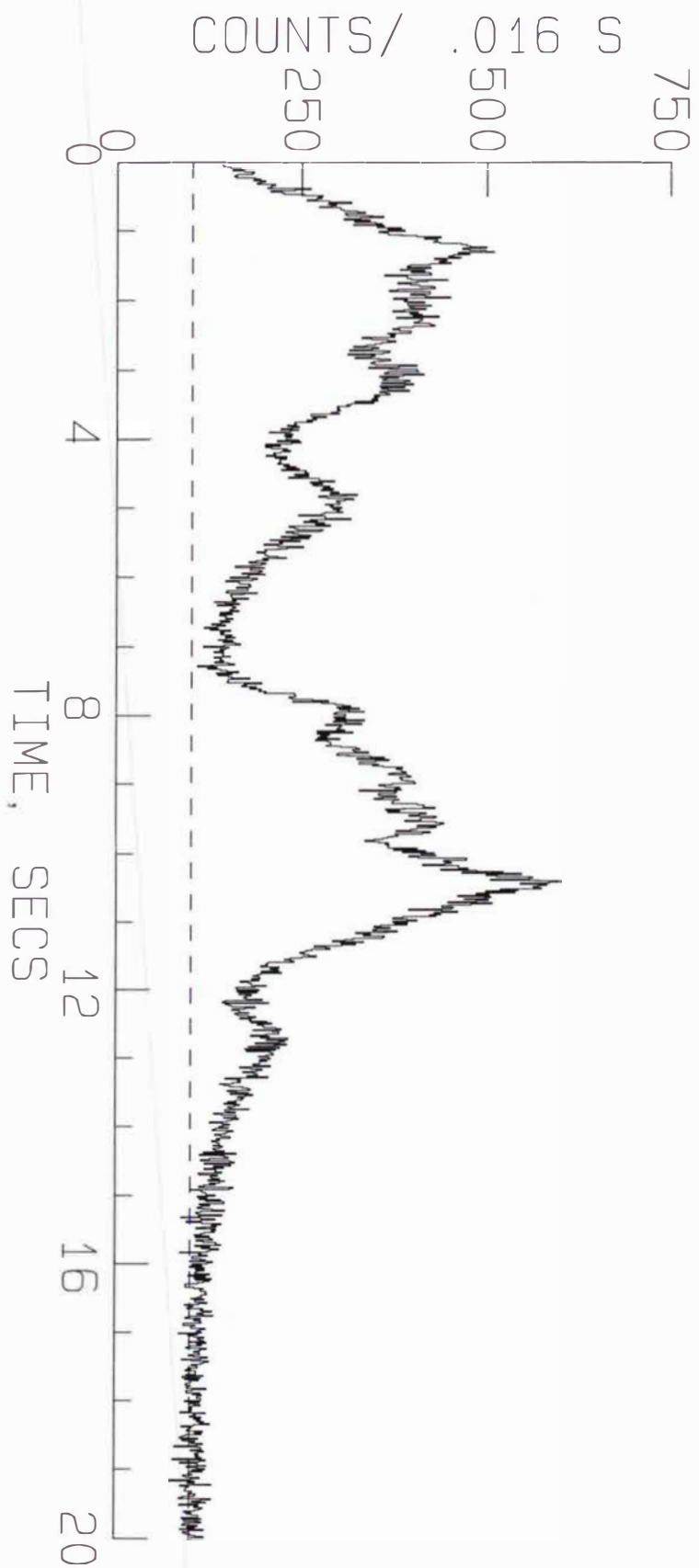


BATSE

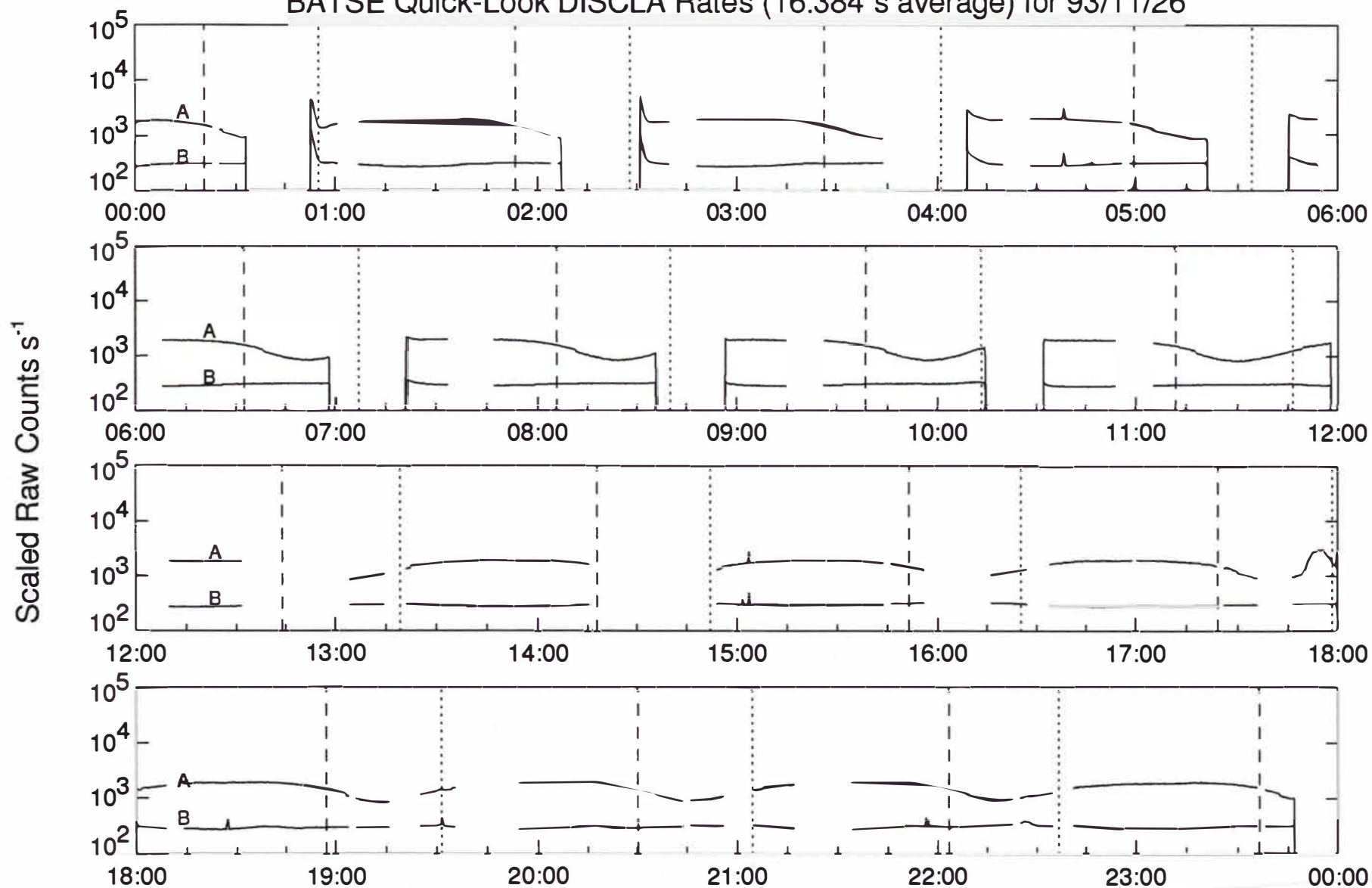
26/11/93

70299.738

25- 100 keV



BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/26



Current Time: 93/11/30, 1712 EDT

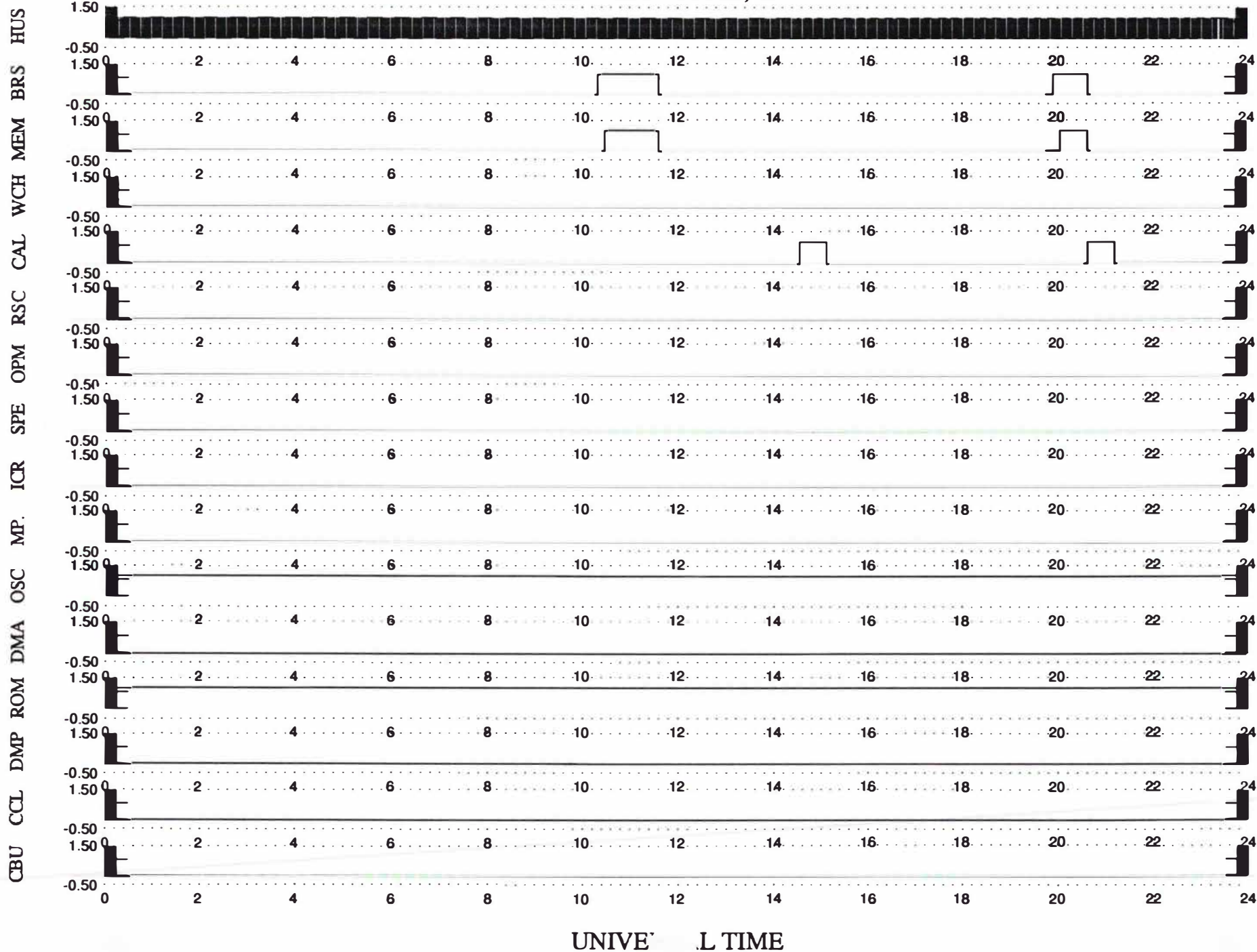
A: Channel 1 Most Sunward LAD

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

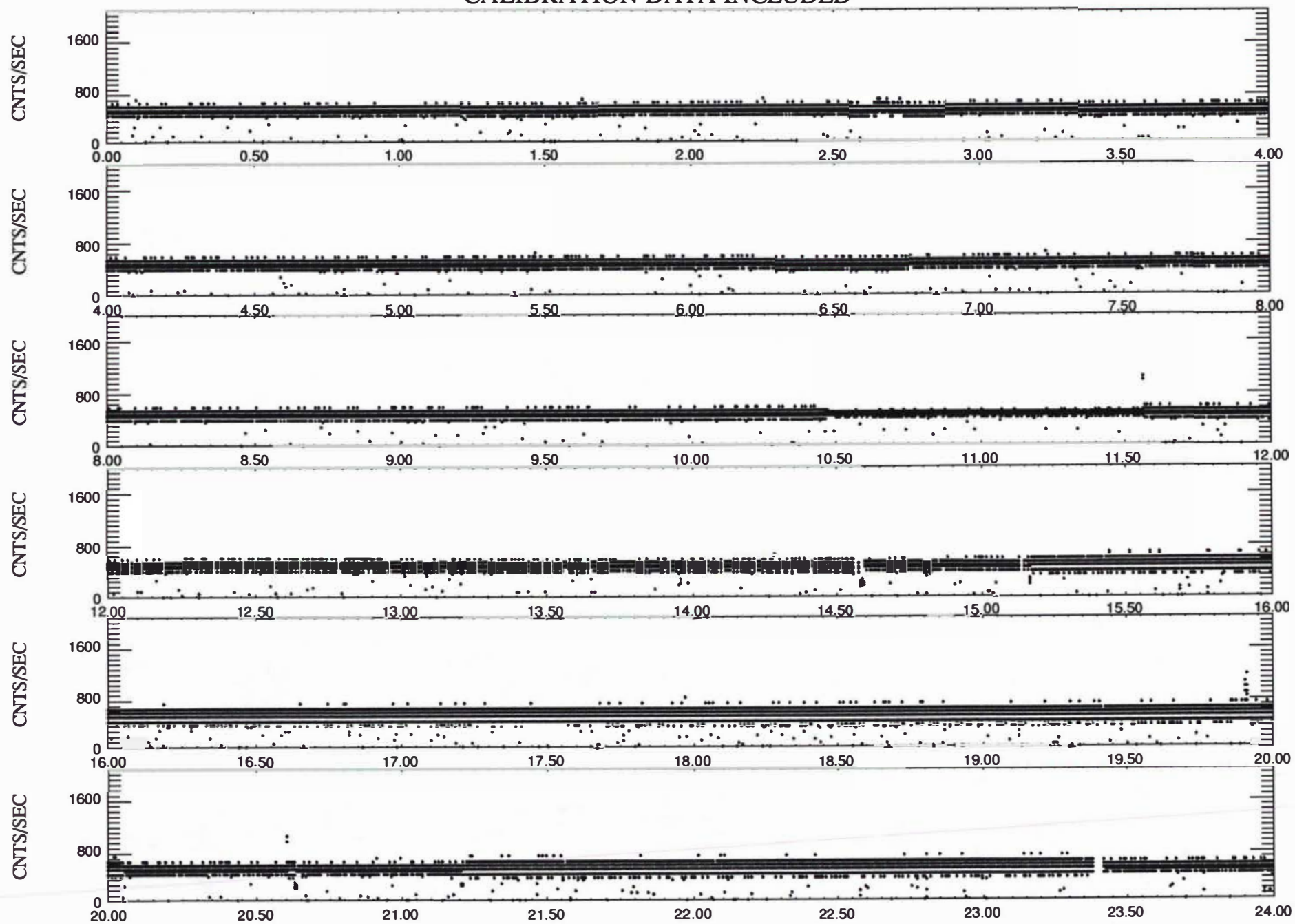
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

BURST NUMBER 10, 11

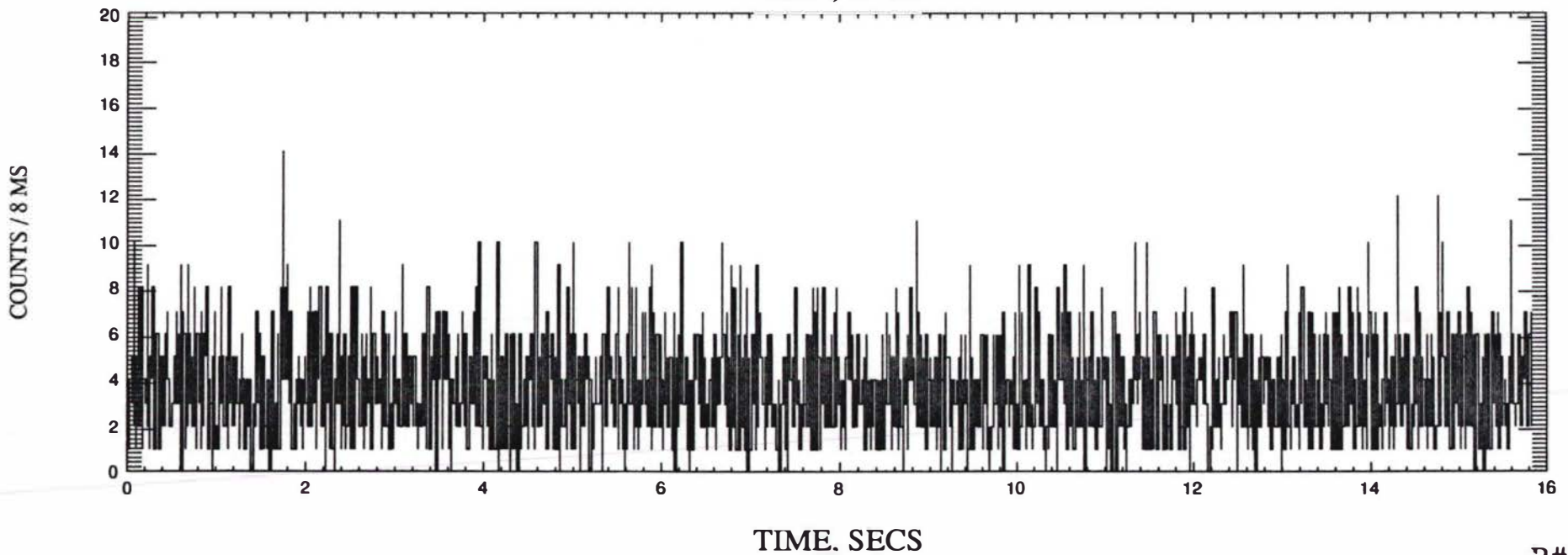
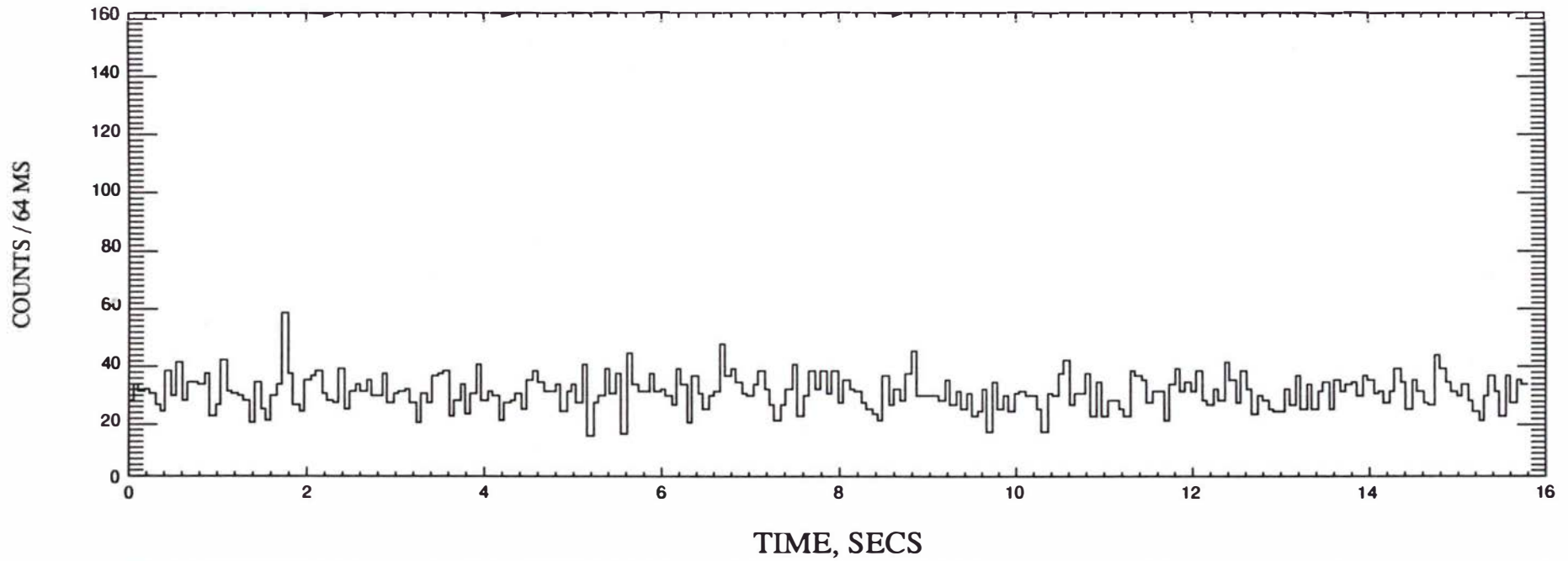


CALIBRATION DATA INCLUDED

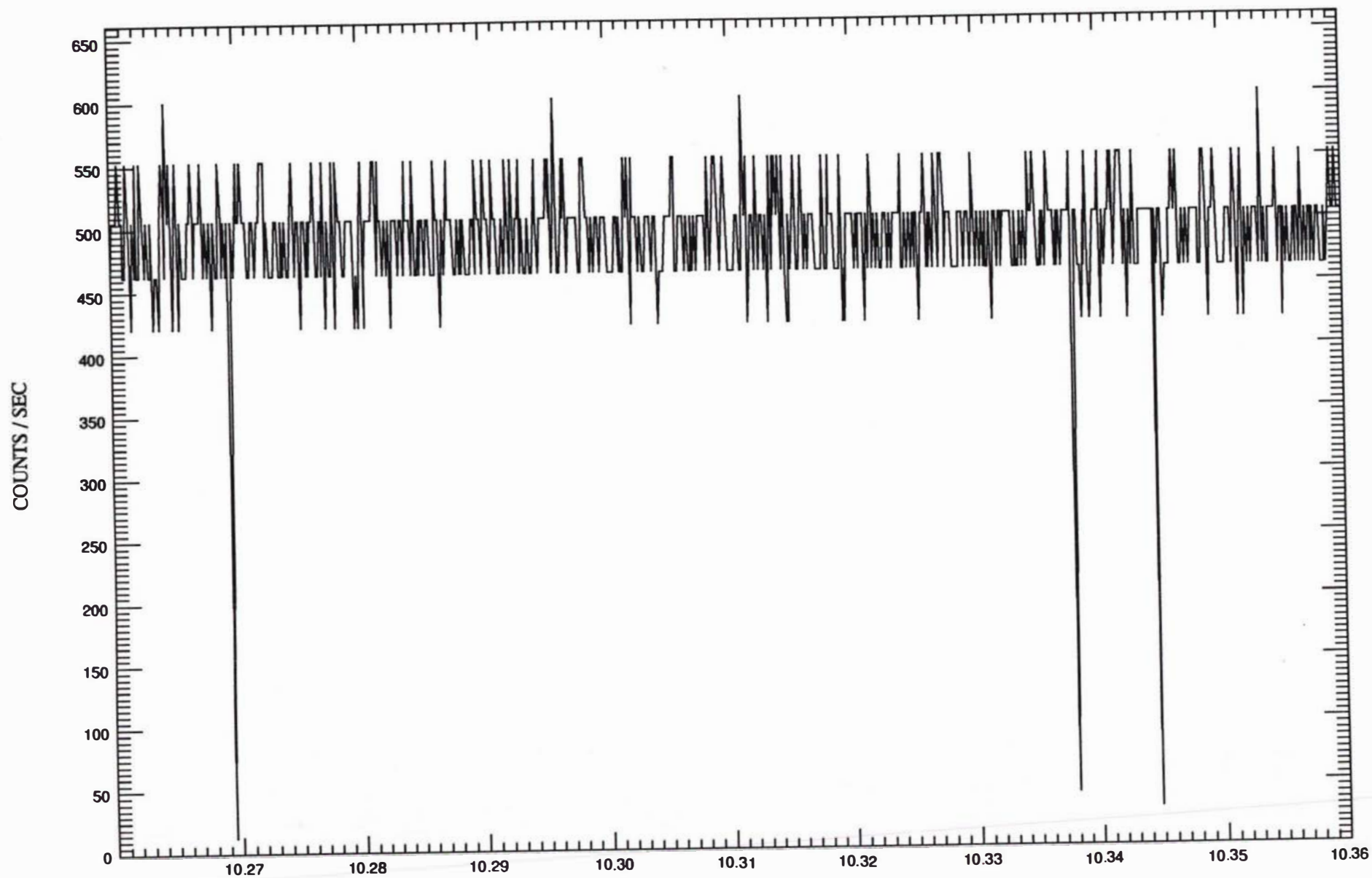


UNIV 'AL TIME

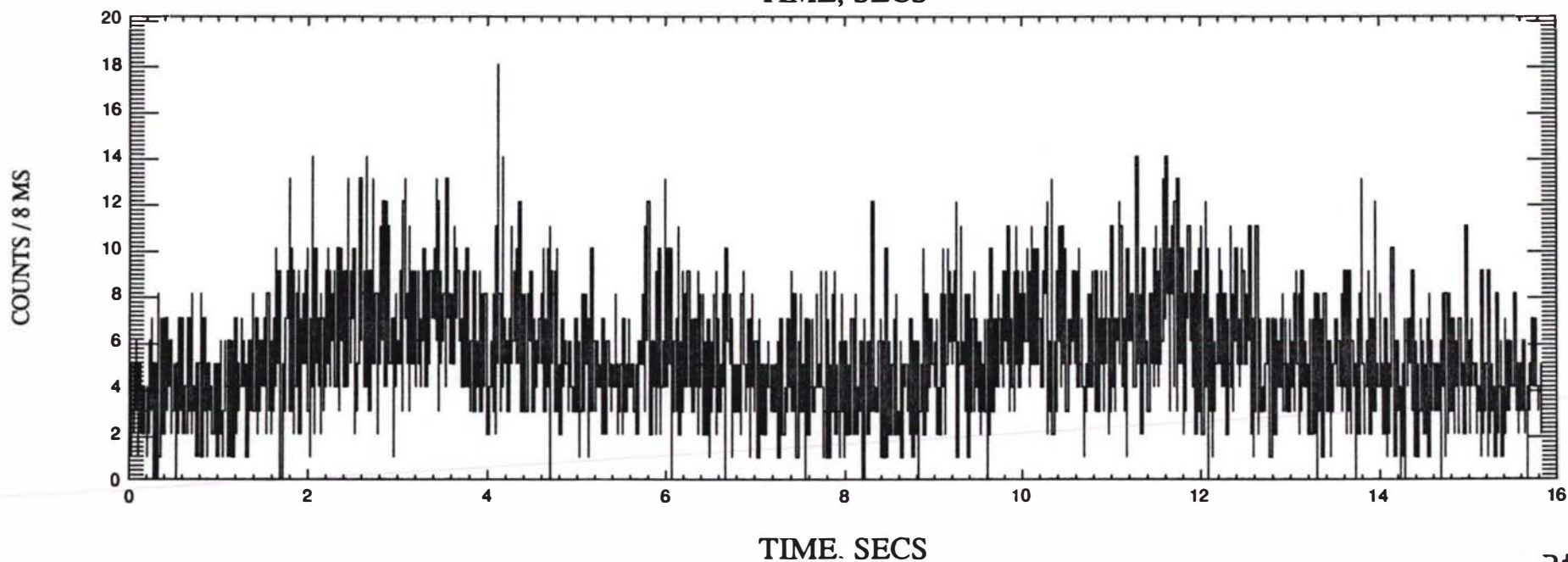
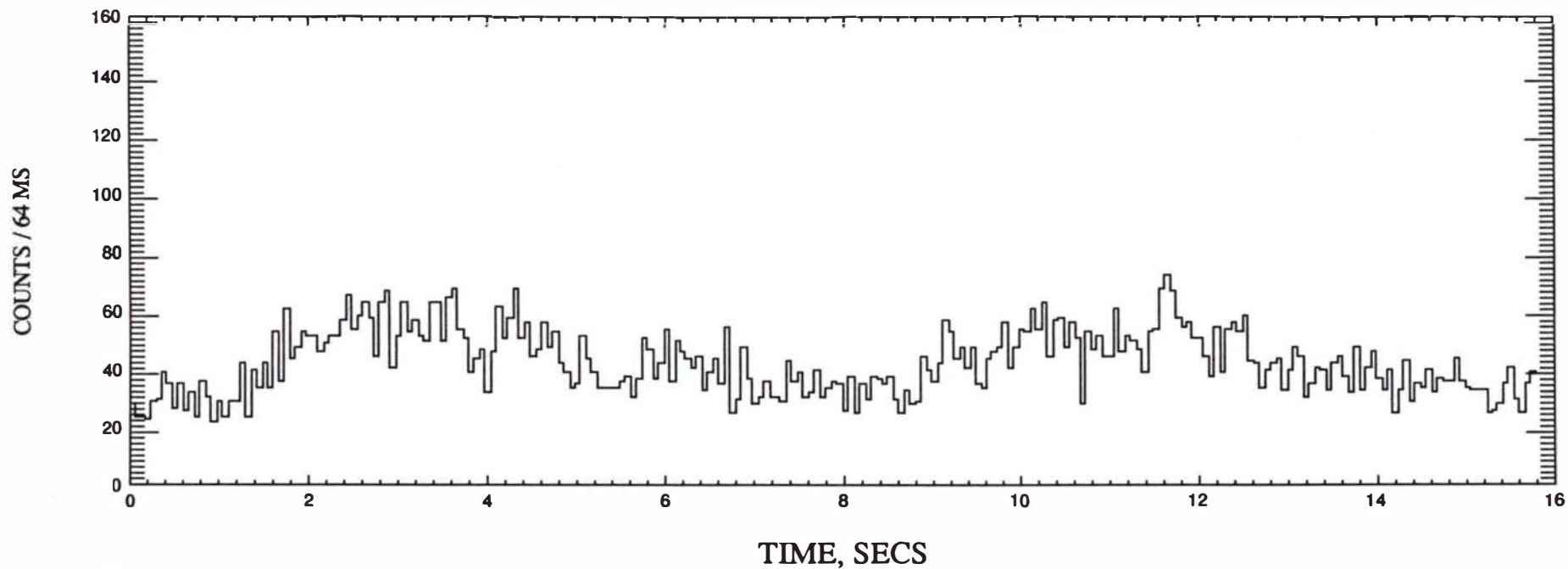
Burst Counter 10 at UT=10.312717581855 h=37125.783 s 10:18:45.783

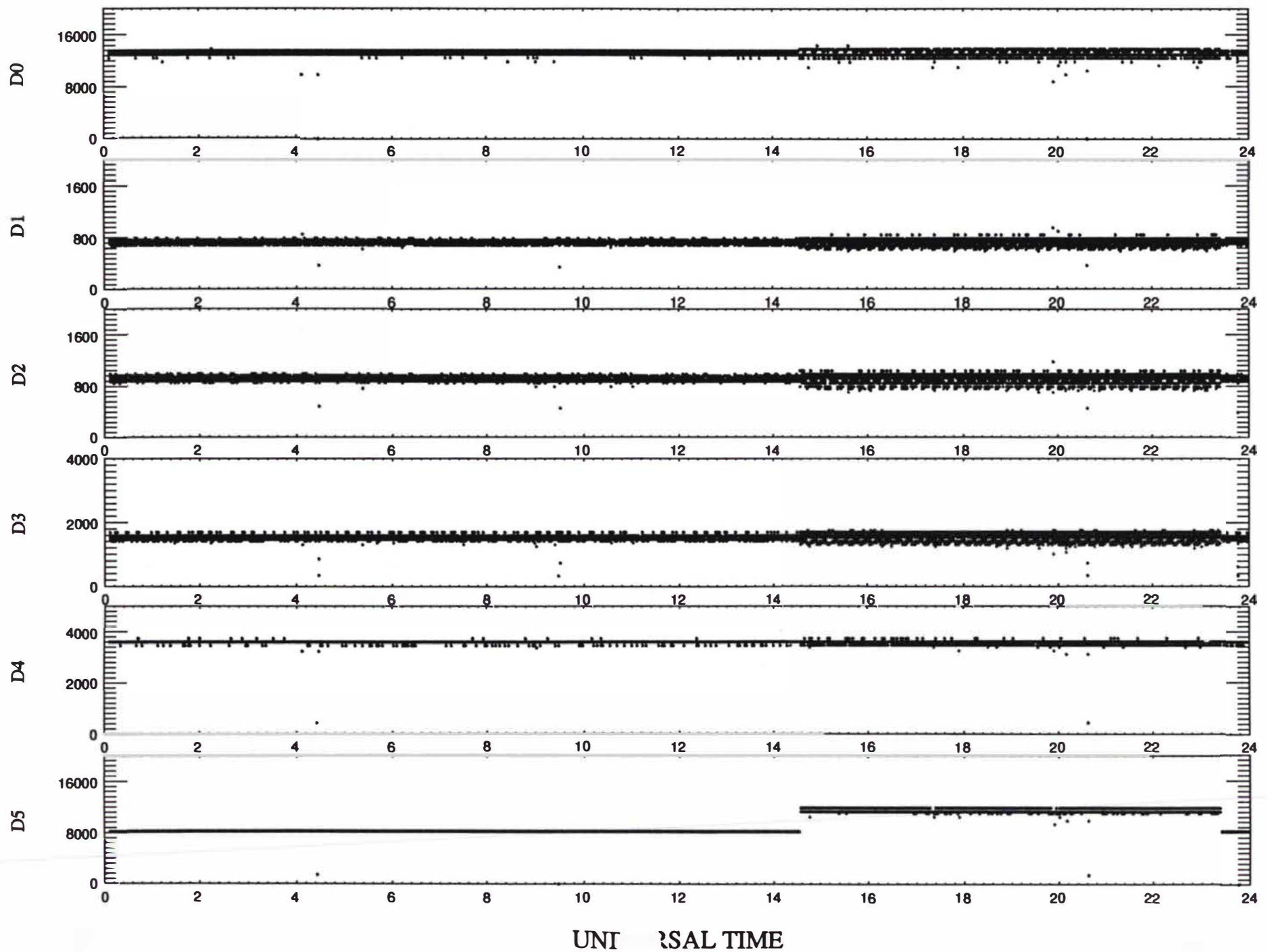


CALIBRATION DATA INCLUDED



Burst Counter 11 at UT=19.904356697930 h=71655.684 s 19:54:15.684





From ULSRG@jplsp.jpl.nasa.gov Sat Nov 27 23:17:10 1993
Date: Sat, 27 Nov 1993 23:19:42 -0800 (PST)
From: Raul Garcia (reply to ULSSCI) <ULSRG@jplsp.jpl.nasa.gov>
To: ESMITH@jplsp.jpl.nasa.gov, DUSTYGRUEN@jplsp.jpl.nasa.gov,
28874DLINKERT@jplsp.jpl.nasa.gov, 28955MATT@jplsp.jpl.nasa.gov,
19773RJF@jplsp.jpl.nasa.gov, KHURLEY@sunspot.ssl.berkeley.edu,
MPEHUS@jplsp.jpl.nasa.gov, "28673LINMPI::KEPPLER"@jplsp.jpl.nasa.gov,
"28673LINMPI::WITTE"@jplsp.jpl.nasa.gov,
DIRAC2MAZUK@jplsp.jpl.nasa.gov
Cc: ULSRG@jplsp.jpl.nasa.gov
Subject: *** WE ARE RECOVERING FROM A DNEI ***
Content-Length: 546

We just had a DNEI during the "Thanks Giving" (USA holliday/ long weekend).

The SCET of the DNEI telemetry format is 331.18.16.58.

We are right now switching the experiment converters back ON.

The Payload reconfiguration should proceed at a good pace. The operations will continue over the weekend.

We will use the last available reconfiguration sequences and, of course, you can send us any addition to them.

Thanks to your previous help this recovery should be very smooth.

We will keep you informed.

Best Regards Raul Garcia-Perez

From MALLOZZI@ssl.msfc.nasa.gov Mon Nov 29 06:34:45 1993
Date: Mon, 29 Nov 1993 8:37:16 -0600 (CST)
From: MALLOZZI@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2662
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2662
EVENT OF 1993 NOV 27 DAY OF YEAR=331
EVENT CROSSING TIME AT BATSE : 3009. S. OR 00:50:09.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 252.000 -20.000
BATSE PEAK COUNTING RATE: 5200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 27/11/ 93 IS:
RA= 166.198 DEC= -32.727 DIST= 4.266 AU
BATSE-ULYSSES DISTANCE = 638221746. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=104.05 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -516.84 SECS.
CROSSING TIME AT ULYSSES IS 2492. S. OR 00:41:32 +/- 400.70 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 27/11/ 93 IS:
RA= 251.376 DEC= -22.879 DIST= 2.451 AU
MARS-BATSE DISTANCE = 366663712. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=177.06 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1221.45 SECS.
CROSSING TIME AT MARS IS 1788. S. OR 00:29:47 +/- 7.67 SECONDS

no

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2662	931127	9318	03009	5200	252	-20

BATSE BURST TRIGGER

NO.: 02662

TIME: TJD=9318 SECONDS=03009

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=070.7 AZIMUTH=026.8 ERROR= DEGREES

COMMENTS:

BURST OF DURATION APPROX. 25 SEC. OBSERVED ABOVE 300 KEV
FAST RISE, EXPONENTIAL DECAY.

29 / 11 / 93

ULYSSES RT

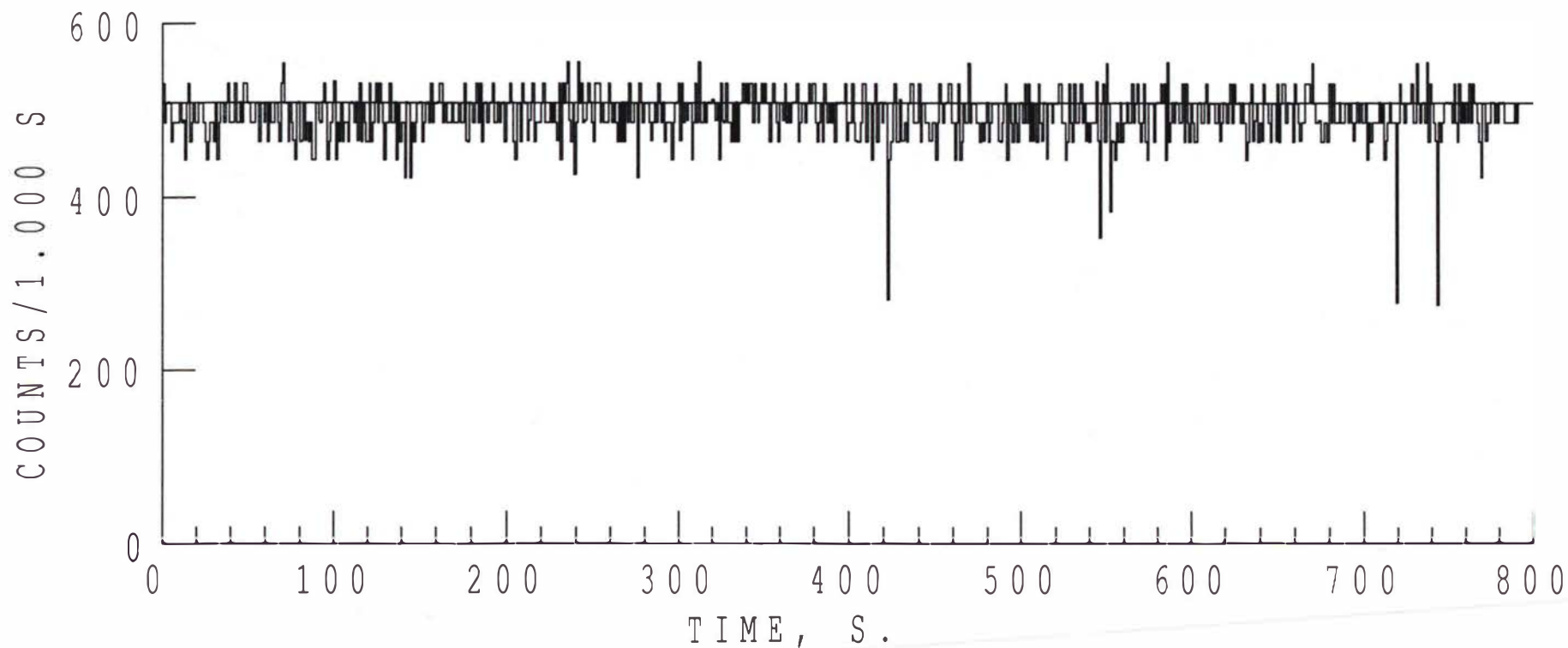
27 / 11 / 93 2088.207 s

0.500 S INTERVALS REGROUPED BY 2

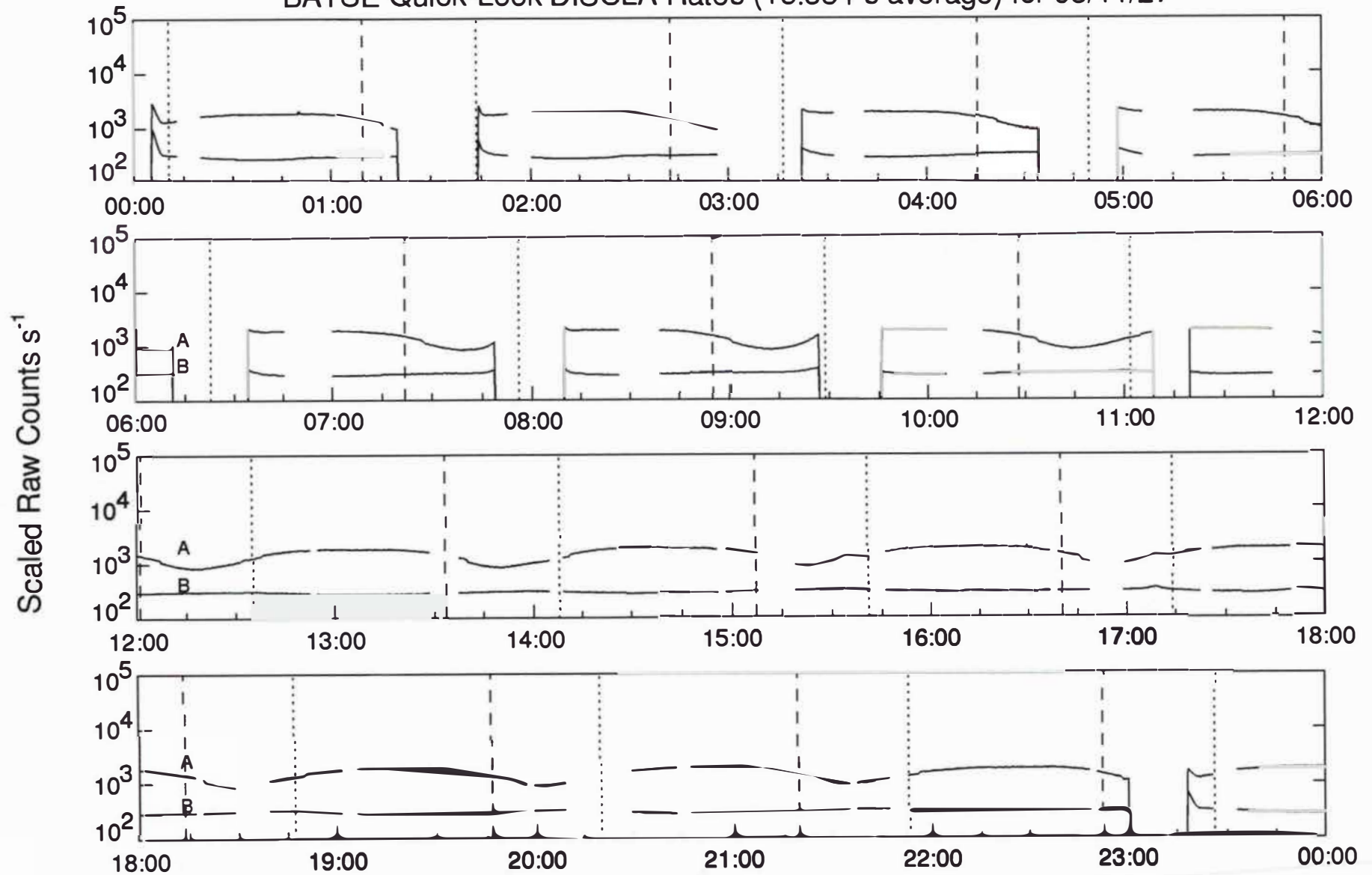
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/27



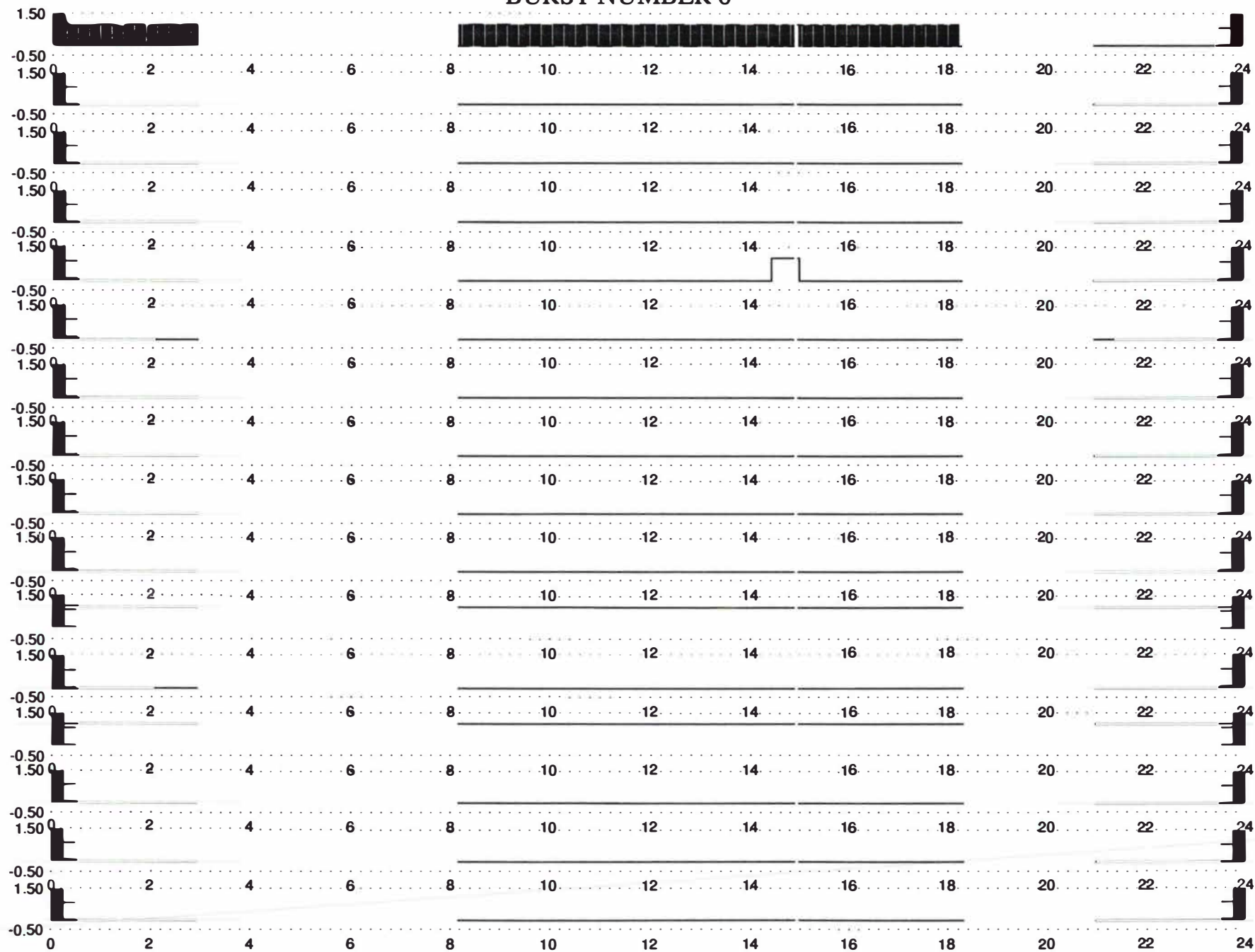
Current Time: 93/11/30, 1712 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

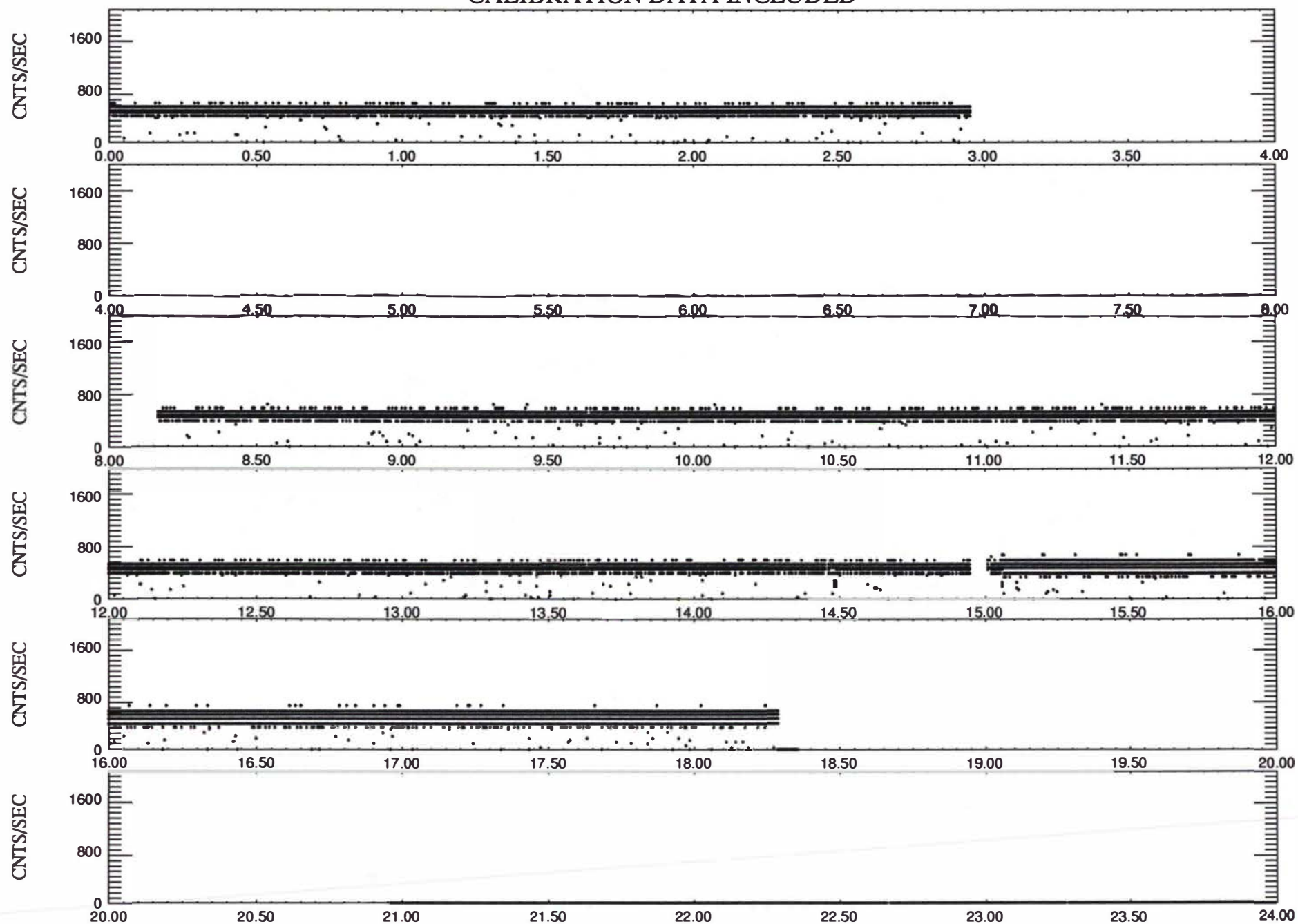
HUS
BRS
MEM
WCH
CAL
RSC
OPM
SPE
ICR
MP.
OSC
DMA
ROM
DMP
CCL
CBU

BURST NUMBER 0

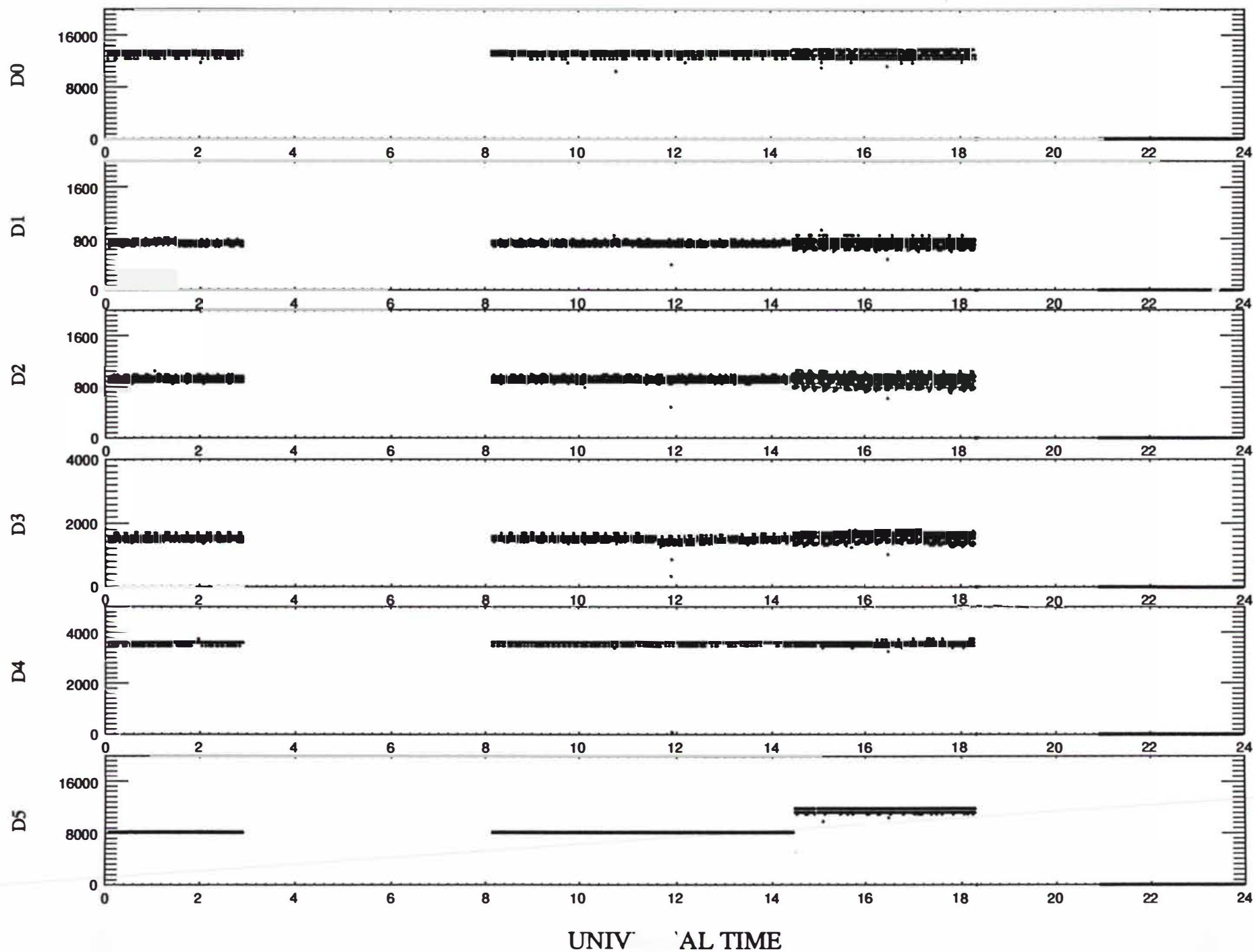


UNIVERSAL TIME

CALIBRATION DATA INCLUDED



UNIV 'AL TIME



From ZMYEWSKI@fender.msfc.nasa.gov Tue Nov 30 12:13:13 1993
Date: Tue, 30 Nov 1993 14:15:53 -0600 (CST)
From: ZMYEWSKI@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2663
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2663
EVENT OF 1993 NOV 28 DAY OF YEAR=332
EVENT CROSSING TIME AT BATSE : 18471. S. OR 05:07:51.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 112.000 -51.000
BATSE PEAK COUNTING RATE: 1700 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 28/11/ 93 IS:
RA= 166.258 DEC= -33.015 DIST= 4.246 AU
BATSE-ULYSSES DISTANCE = 635239522. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=137.03 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1550.38 SECS.
CROSSING TIME AT ULYSSES IS 16921. S. OR 04:42:00 +/- 277.22 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 28/11/ 93 IS:
RA= 252.165 DEC= -22.979 DIST= 2.451 AU
MARS-BATSE DISTANCE = 366611872. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 81.86 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 173.05 SECS.
CROSSING TIME AT MARS IS 18644. S. OR 05:10:44 +/- 212.80 SECONDS

N/O

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2663	931128	9319	18471	1700	112	-51

BATSE BURST TRIGGER

NO.: 02663

TIME: TJD=9319 SECONDS=18471

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=91.1 AZIMUTH=285.9 ERROR= DEGREES

COMMENTS:

GRB LASTING APPROX. 30 SECONDS. NOT VISIBLE ABOVE 300KEV.

No EDR Data
(all zeroes in time range)

3 / 2 / 94

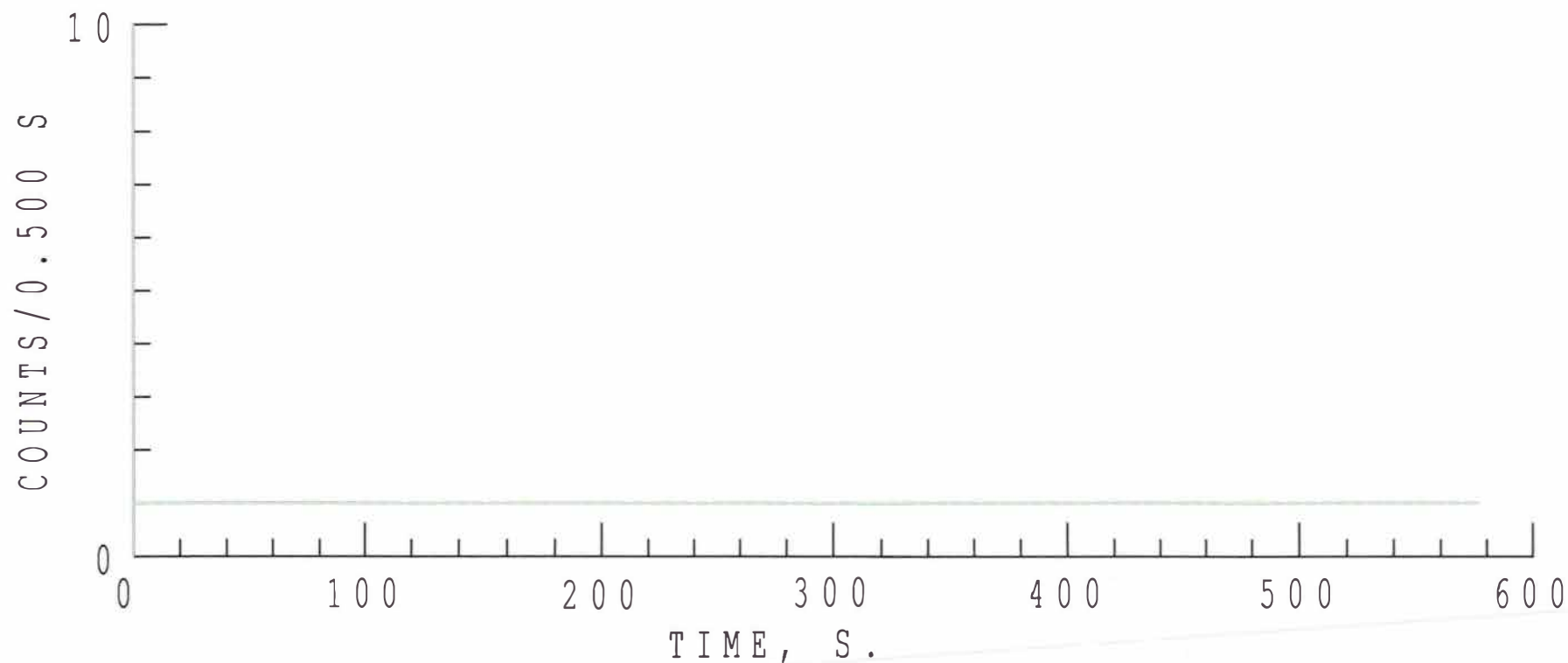
ULYSSES RT

28 / 11 / 93 16632.264 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From ZMYEWSKI@ssl.msfc.nasa.gov Tue Nov 30 11:42:35 1993
Date: Tue, 30 Nov 1993 13:45:22 -0600 (CST)
From: ZMYEWSKI@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2664
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2664
EVENT OF 1993 NOV 28 DAY OF YEAR=332
EVENT CROSSING TIME AT BATSE : 28360. S. OR 07:52:40.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 135.000 7.000
BATSE PEAK COUNTING RATE: 2100 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 28/11/ 93 IS:
RA= 166.263 DEC= -33.043 DIST= 4.244 AU
BATSE-ULYSSES DISTANCE = 634949118. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=130.15 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1365.55 SECS.
CROSSING TIME AT ULYSSES IS 26994. S. OR 07:29:54 +/- 310.34 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 28/11/ 93 IS:
RA= 252.165 DEC= -22.979 DIST= 2.451 AU
MARS-BATSE DISTANCE = 366611872. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 62.30 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 568.36 SECS.
CROSSING TIME AT MARS IS 28928. S. OR 08:02:08 +/- 196.62 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2664	931128	9319	28360	2100	135	+07

BATSE BURST TRIGGER

NO.: 02664

TIME: TJD=9319 SECONDS=28360

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=83.2 AZIMUTH=134.8 ERROR= DEGREES

COMMENTS:

GRB LASTING APPROX. 20 SECONDS. NOT VISIBLE ABOVE 300KEV.

CATSEARCH PROGRAM

BTSE BURST # 2664
EVENT OF 1993 NOV 28 DAY OF YEAR=332
EVENT CROSSING TIME AT BATSE : 28360. S. OR 07:52:40.3
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 293.330 80.880
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 28/11/ 93 IS:
RA= 166.248 DEC= -32.962 DIST= 4.250 AU
BATSE-ULYSSES DISTANCE = 635791024. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 51.87 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1309.35 SECS.
CROSSING TIME AT ULYSSES IS 29670. S. OR 08:14:29.6 +/- 359.53 SECONDS

9 / 11 / 95

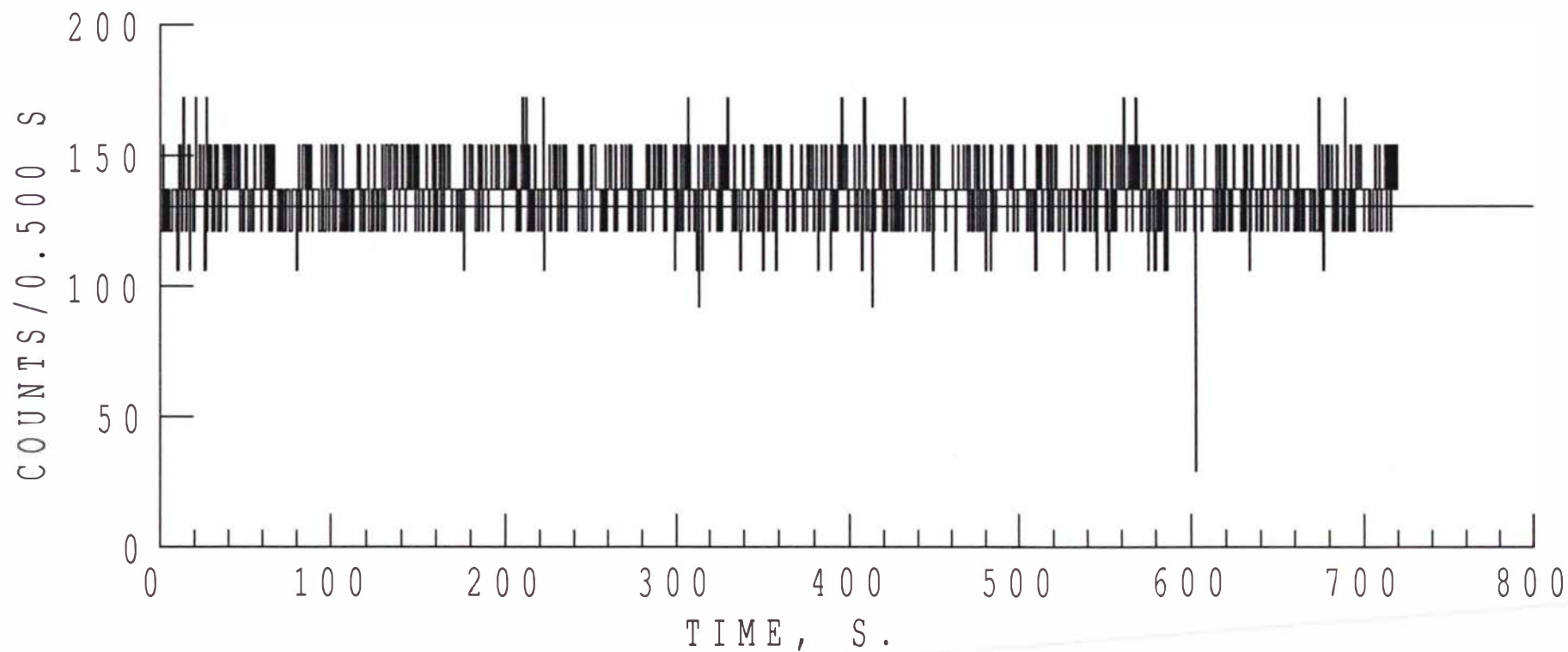
ULYSSES RT

28 / 11 / 93 29304.461 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From ZMYEWSKI@ssl.msfc.nasa.gov Tue Nov 30 11:44:14 1993
Date: Tue, 30 Nov 1993 13:46:56 -0600 (CST)
From: ZMYEWSKI@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 2665
Content-Length: 1135

BATSEARCH PROGRAM

BATSE BURST # 2665
EVENT OF 1993 NOV 28 DAY OF YEAR=332
EVENT CROSSING TIME AT BATSE : 61452. S. OR 17:04:12.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 143.000 19.000
BATSE PEAK COUNTING RATE: 5300 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 28/11/ 93 IS:
RA= 166.282 DEC= -33.137 DIST= 4.238 AU
BATSE-ULYSSES DISTANCE = 633971545. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=123.32 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1161.62 SECS.
CROSSING TIME AT ULYSSES IS 60290. S. OR 16:44:50 +/- 339.15 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 28/11/ 93 IS:
RA= 252.165 DEC= -22.979 DIST= 2.451 AU
MARS-BATSE DISTANCE = 366611872. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 65.61 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 504.89 SECS.
CROSSING TIME AT MARS IS 61957. S. OR 17:12:36 +/- 201.04 SECONDS

RI

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2665	931128	9319	61452	5300	143	+19

BATSE BURST TRIGGER

NO.: 02665

TIME: TJD=9319 SECONDS=61452

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=43.8 AZIMUTH=218.6 ERROR= DEGREES

COMMENTS:

GRB. YELLOW LIMIT IN MAXBC6. DURATION APPROX. 10 SECONDS.
NOT VISIBLE ABOVE 300KEV.

30 / 11 / 93

ULYSSES RT

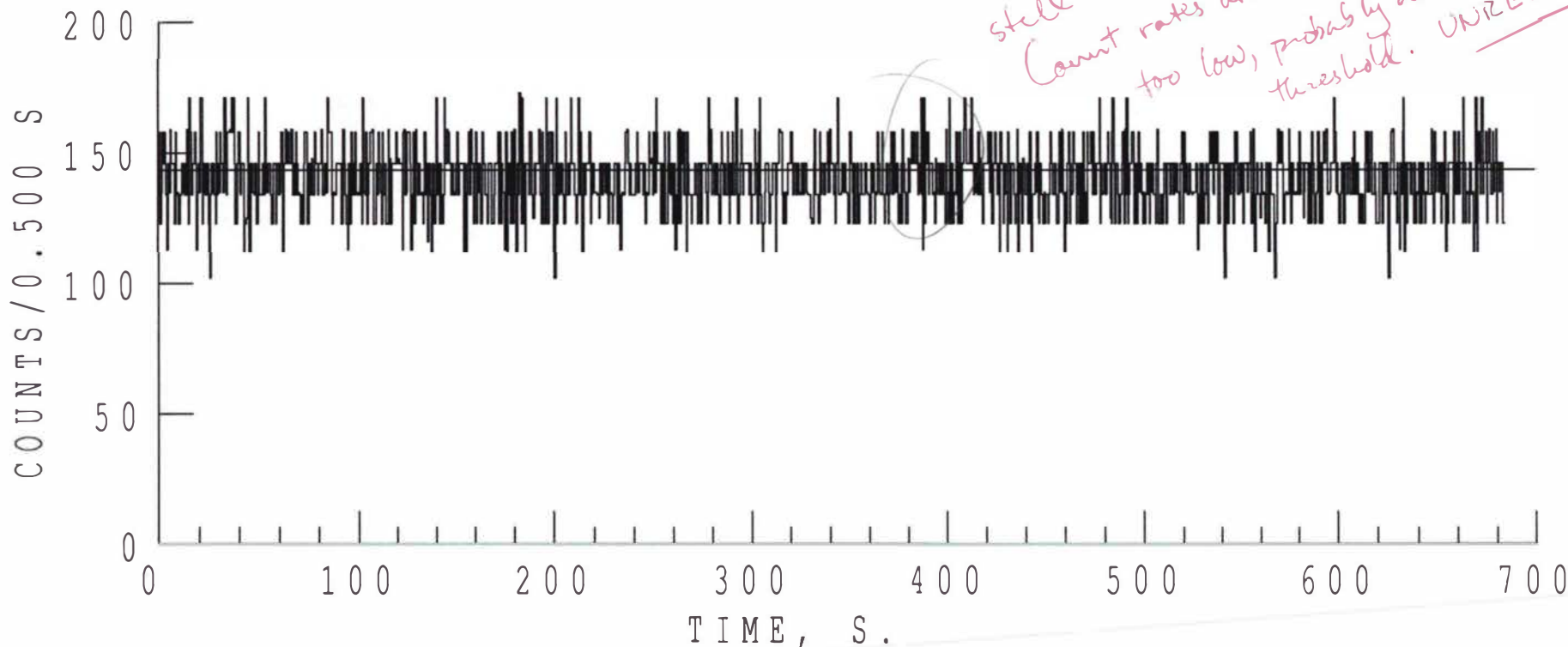
28 / 11 / 93 59940.184 s

0.250 S INTERVALS REGROUPED BY 2

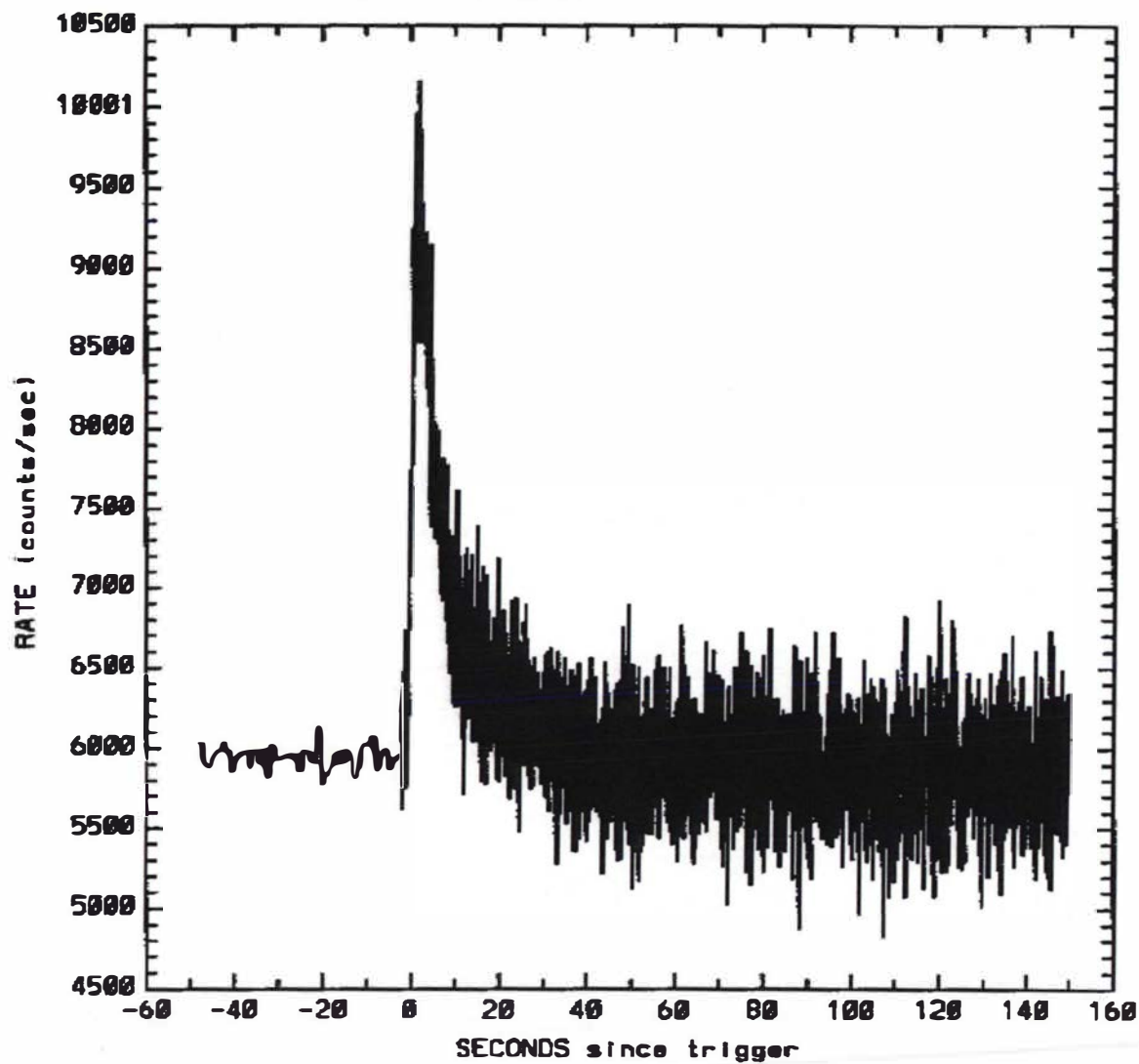
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



DATA FOR K. HURLEY



3-DEC-1993 14:57:00

Created by MDPS BD
(Burst Display)
Version 2.20

Trigger # = 2665

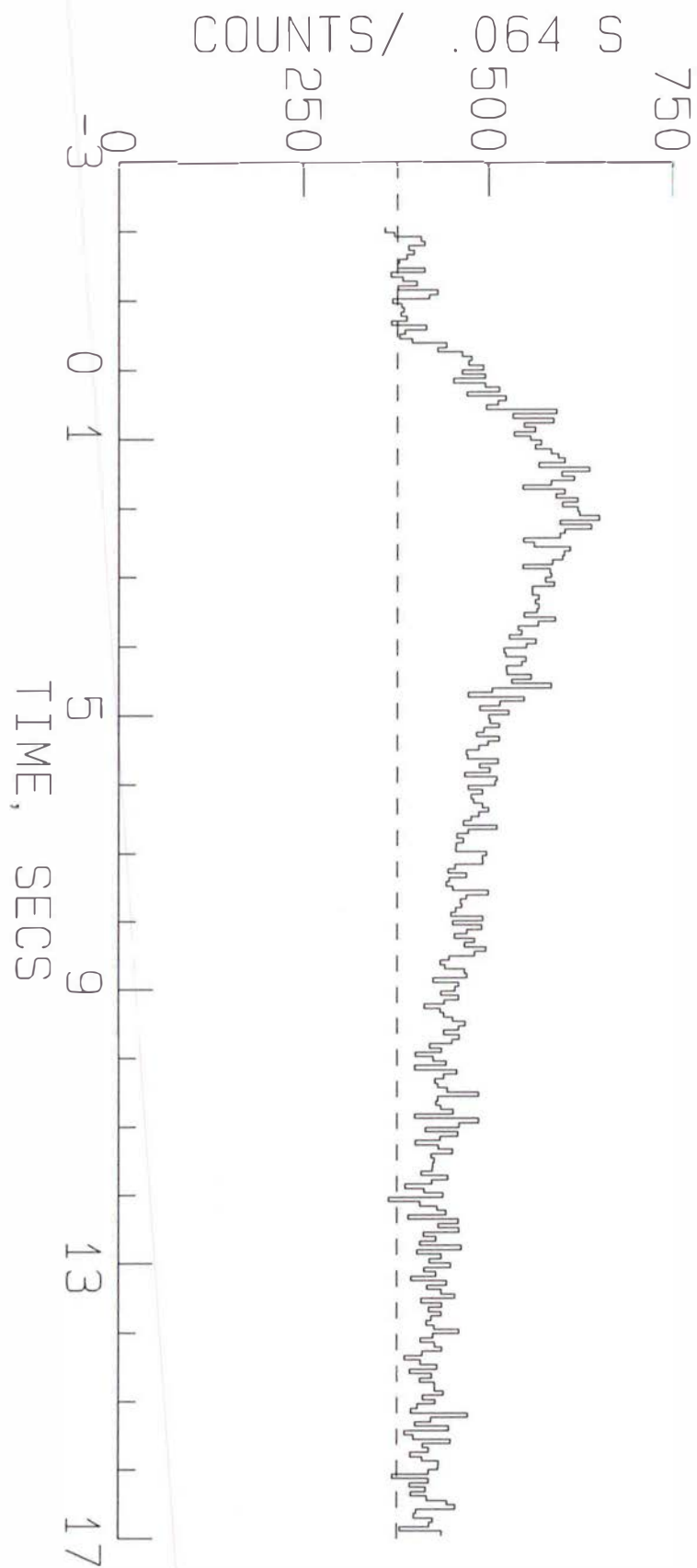
Trigger Time:
9319 / 61452.090Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: PREB + DISCLAMinimum Integ. Time:
0.064 secondsDetectors [7..8]:
01010000Discriminators:
[1. 2]Quality Mask:
BDISP1

BATSE

28/11/93

61452.890

25- 100 keV



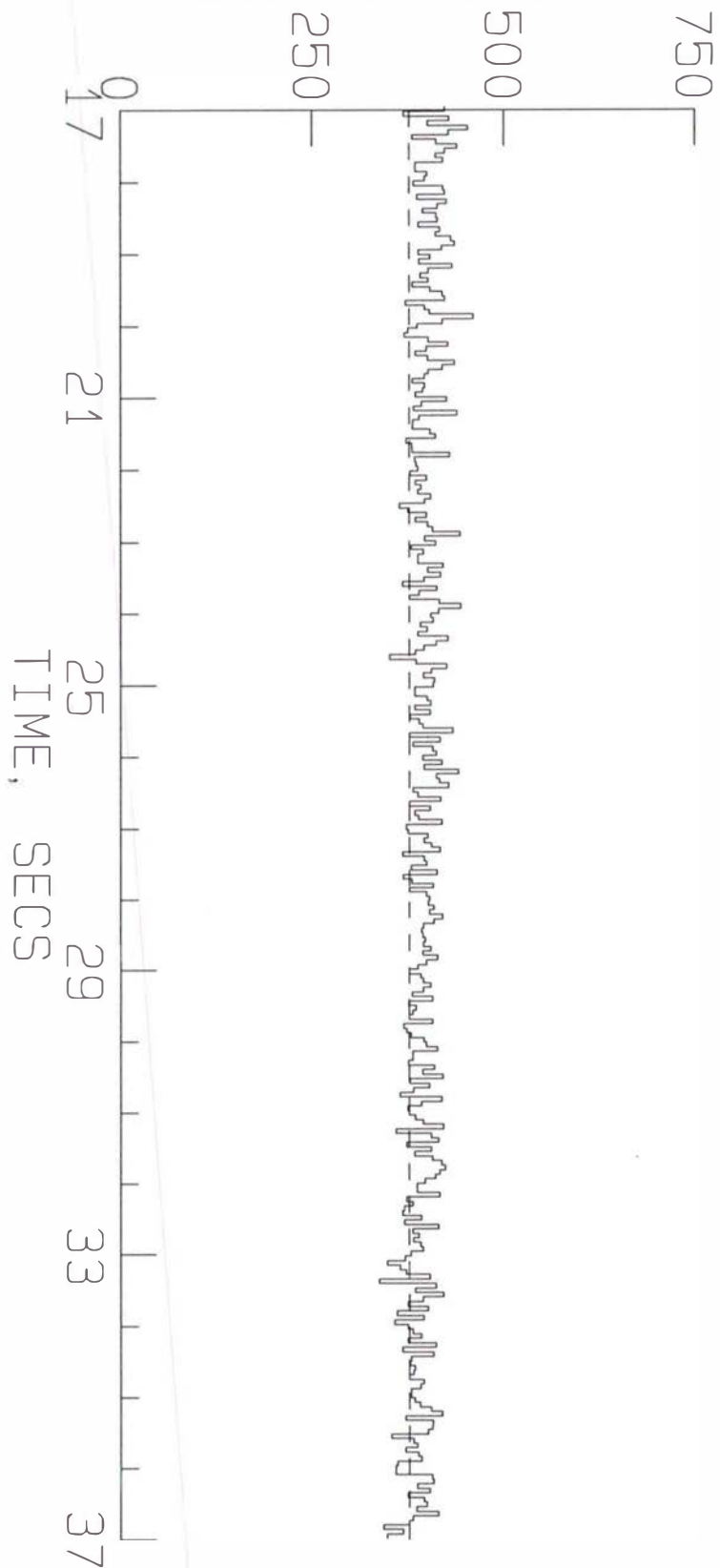
BATSE

28/11/93

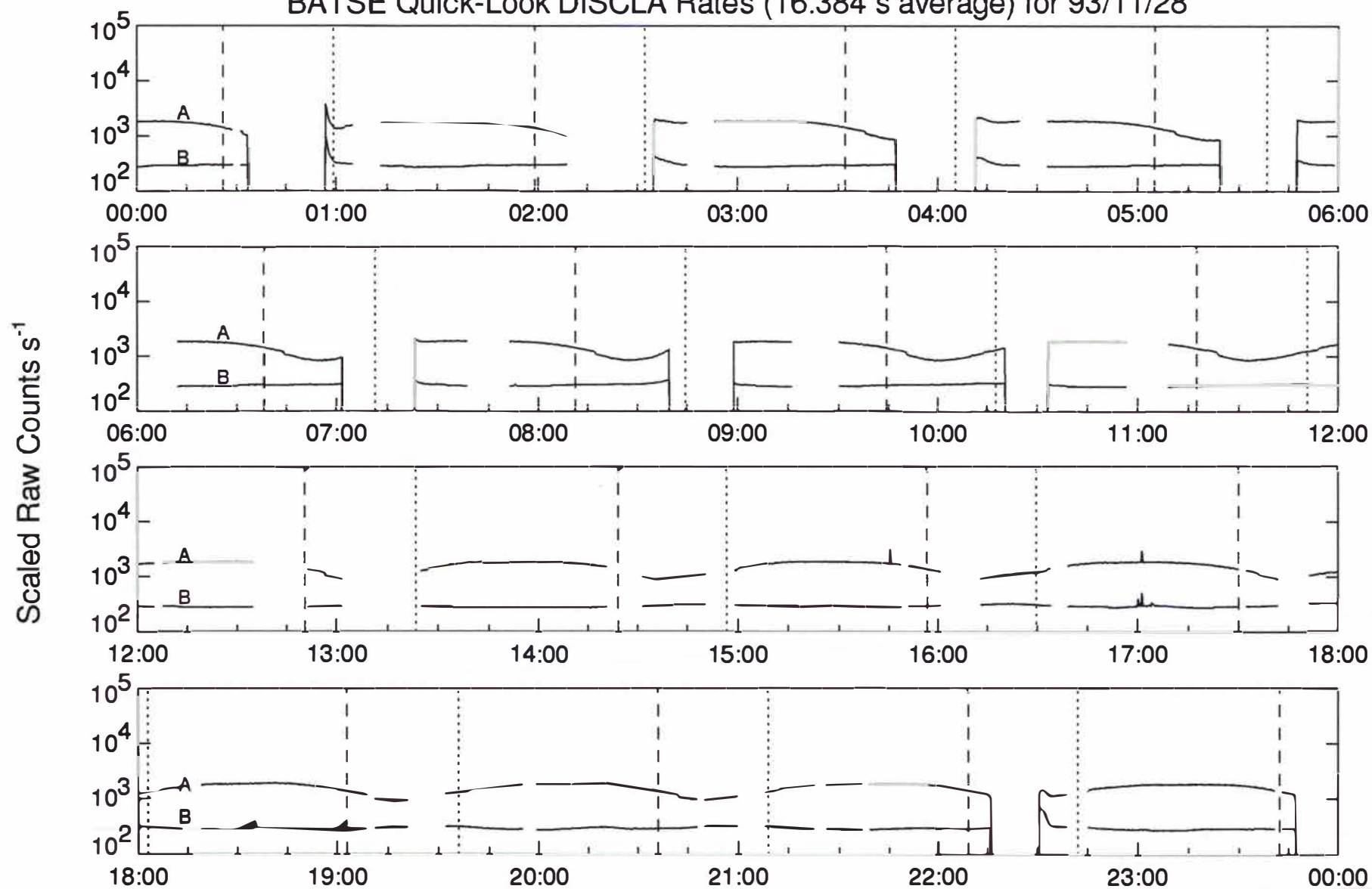
61452.890

25- 100 keV

COUNTS/ .064 S



BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/28



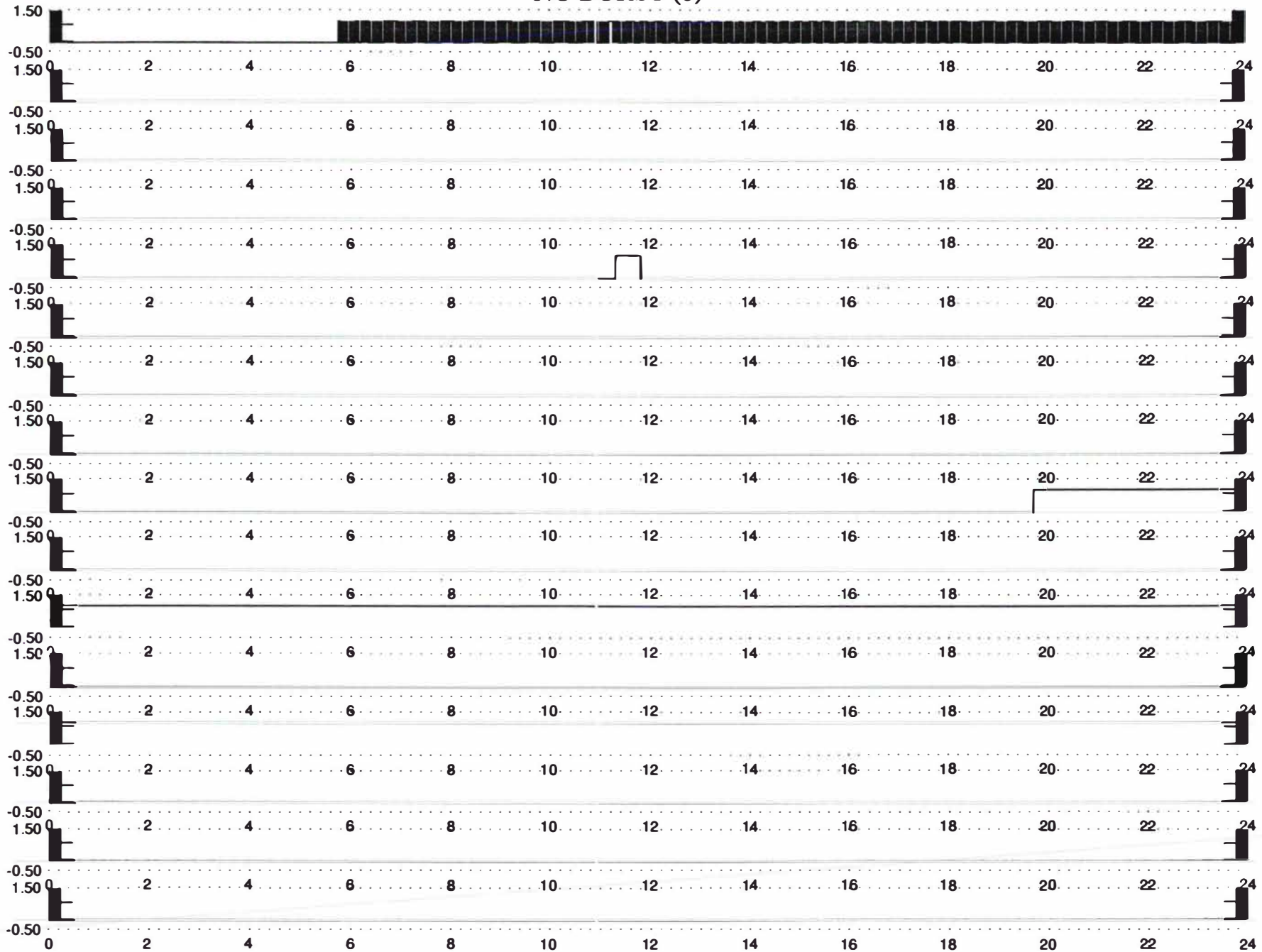
Current Time: 93/11/30, 1712 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

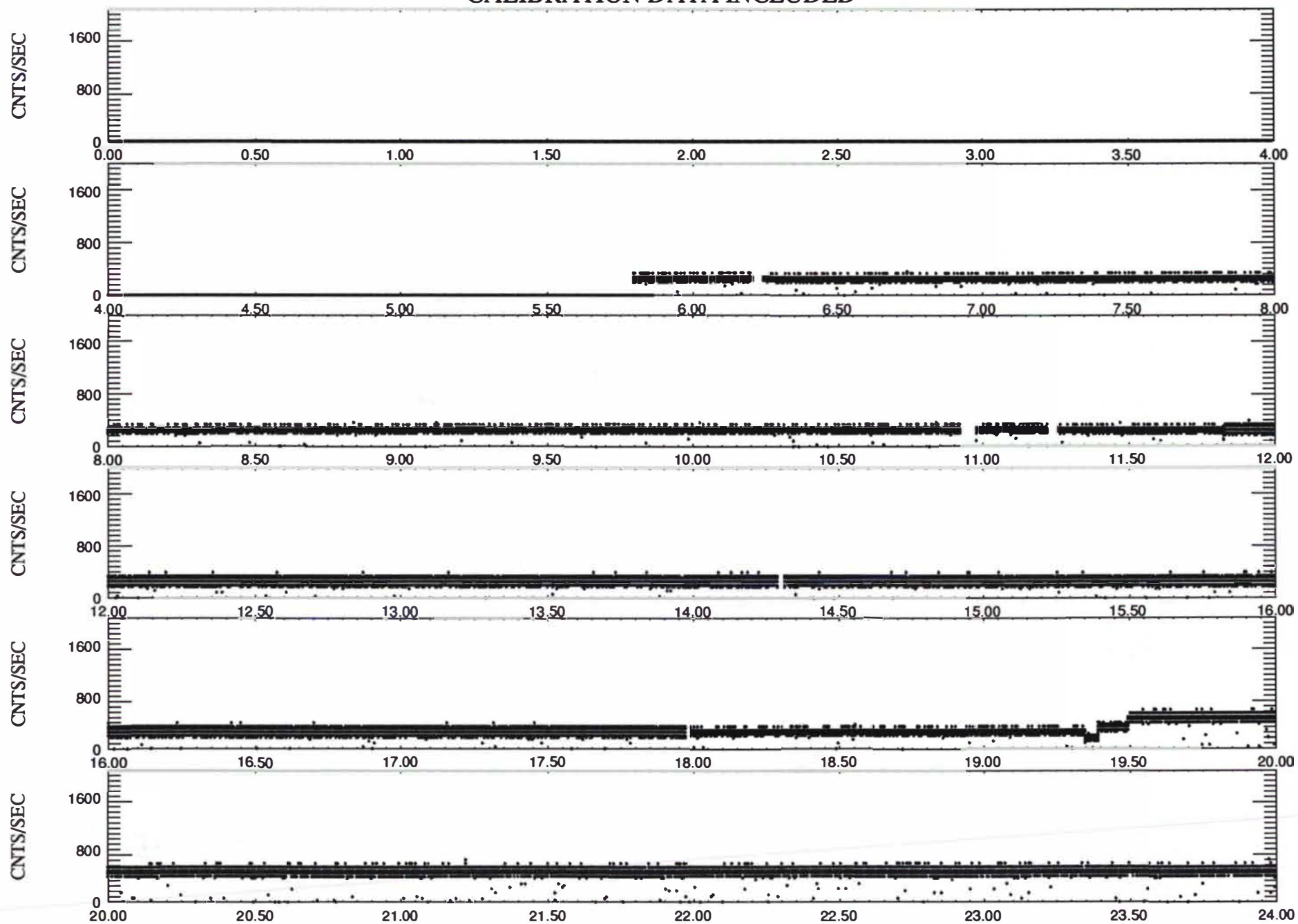
CBU CCL DMP ROM DMA OSC MP. ICR SPE OPM RSC CAL WCH MEM BRS HUS

NO BURST (0)

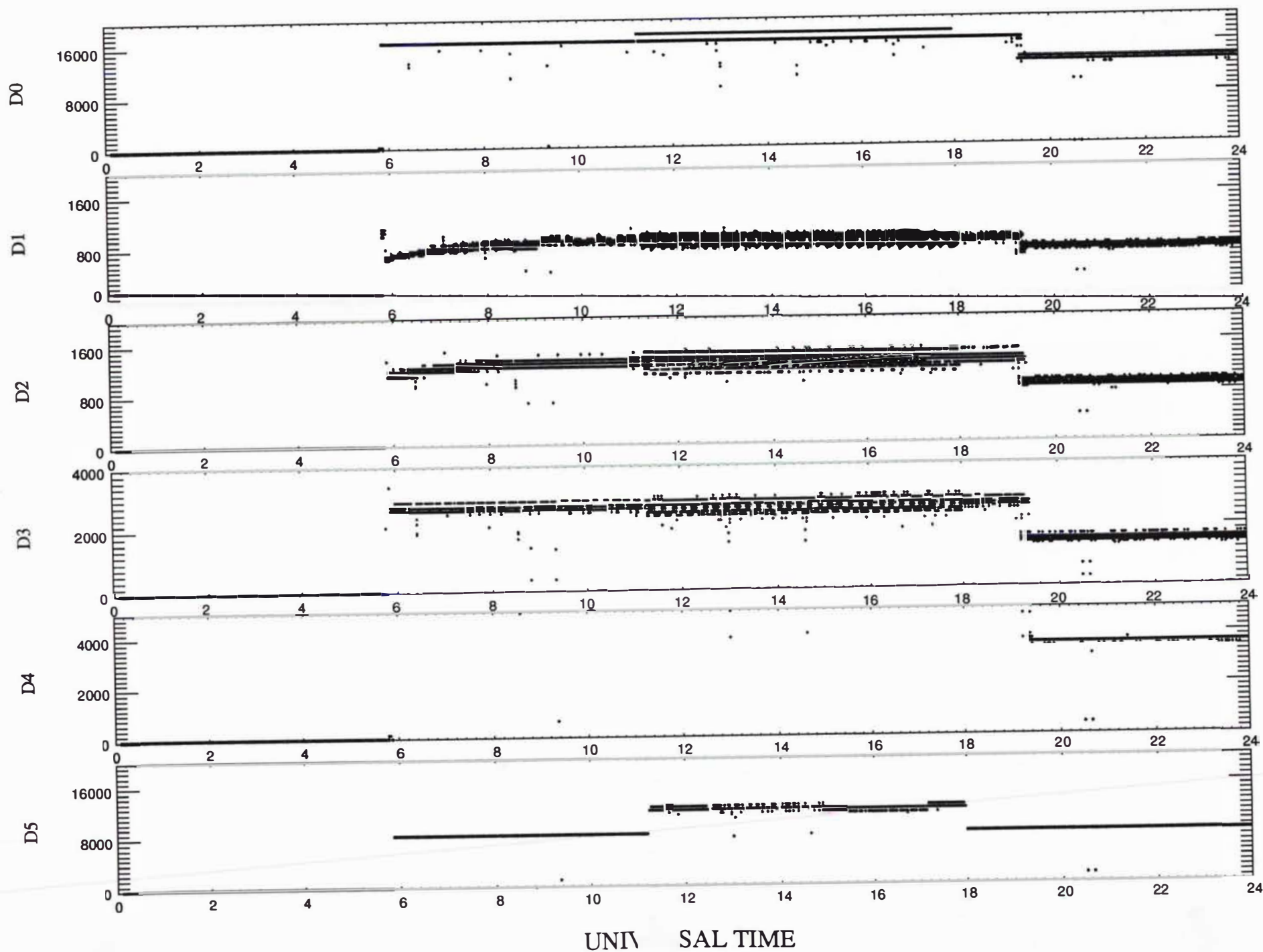


UNIVER L TIME

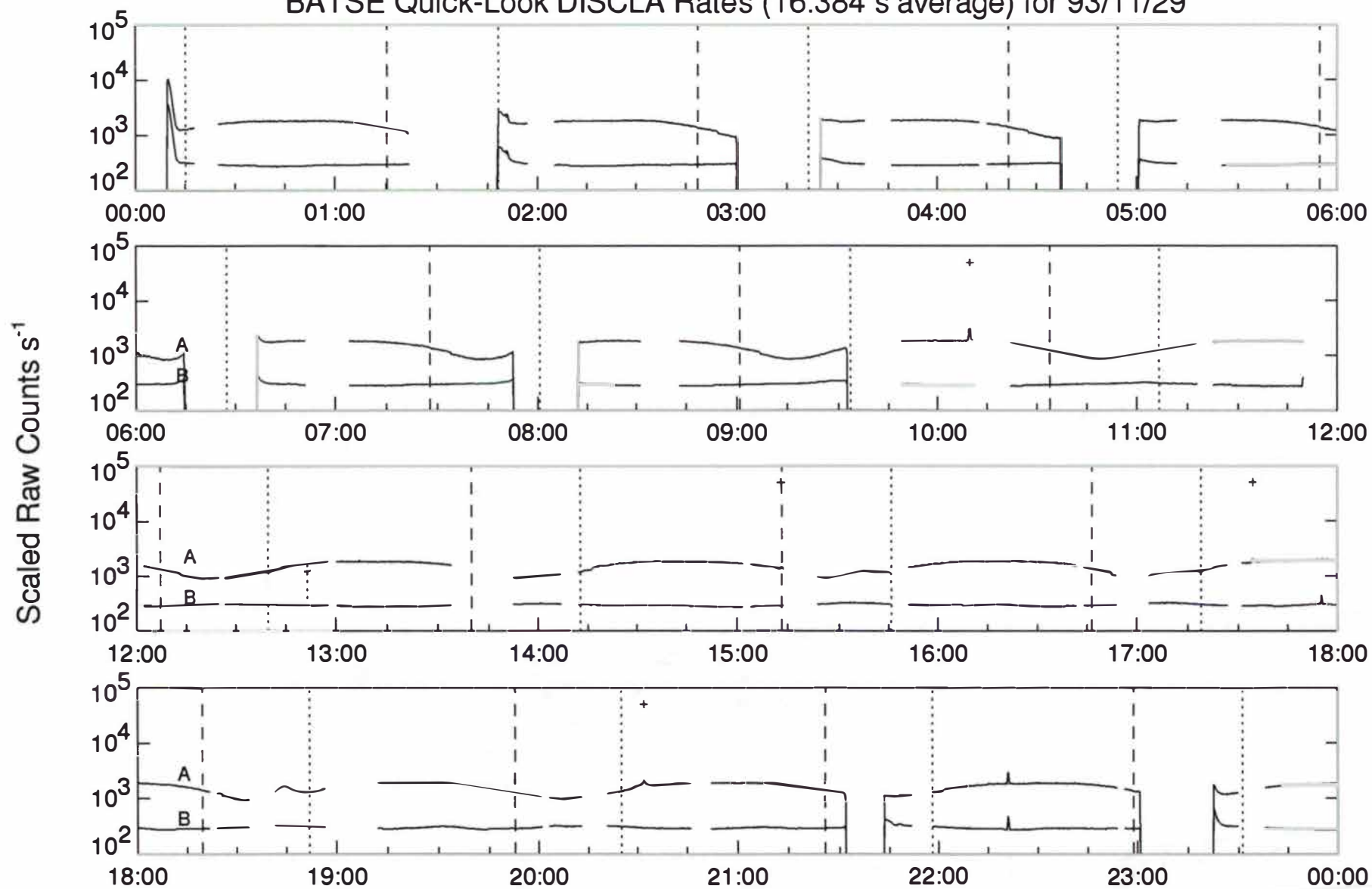
CALIBRATION DATA INCLUDED



UNIV AL TIME



BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/29



Current Time: 93/12/02, 1416 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

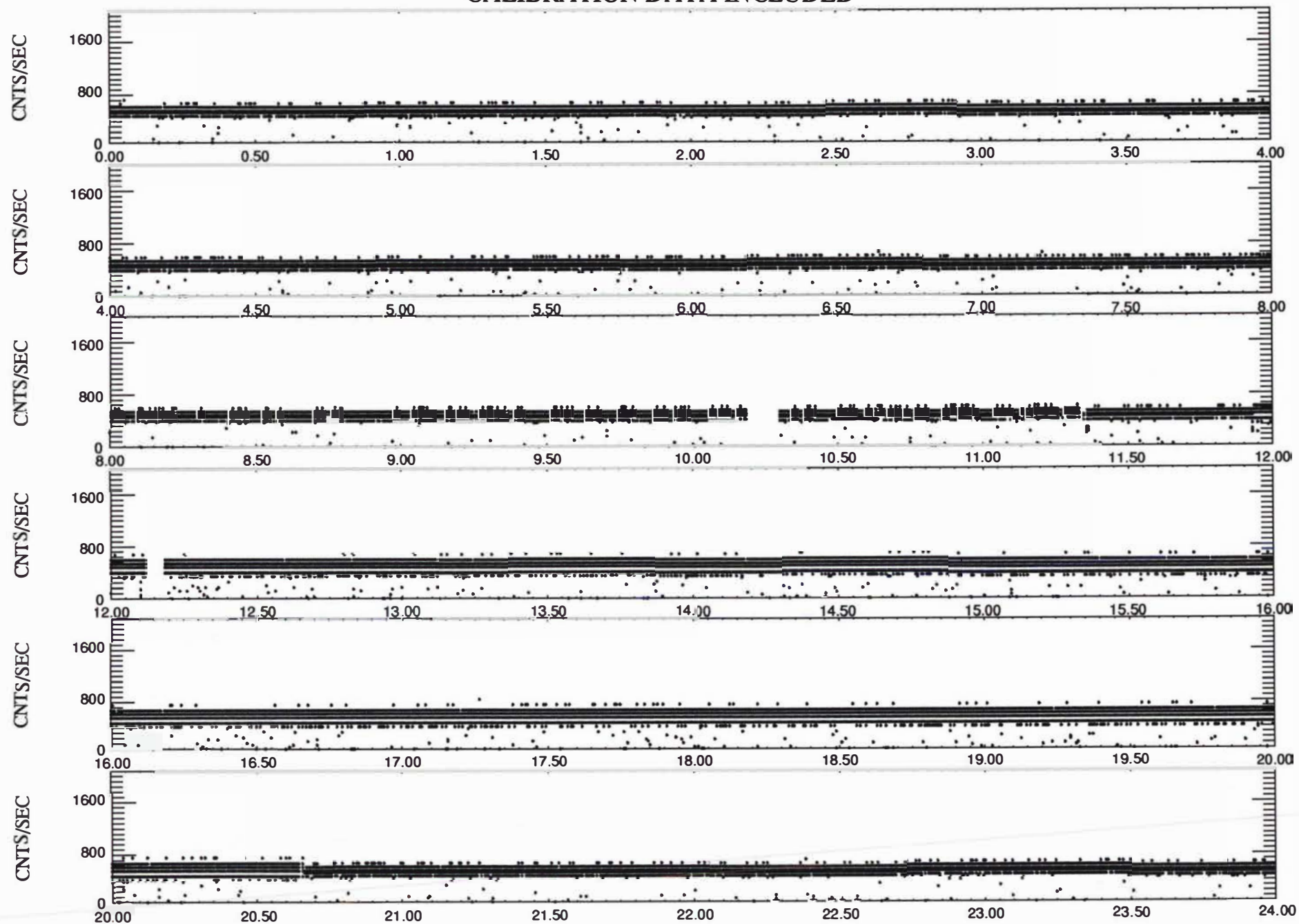
HUS
BRS
MEM
WCH
CAL
RSC
OPM
SPE
ICR
MP.
OSC
DMA
ROM
DMP
CCL
CBU

NO BURST (0)

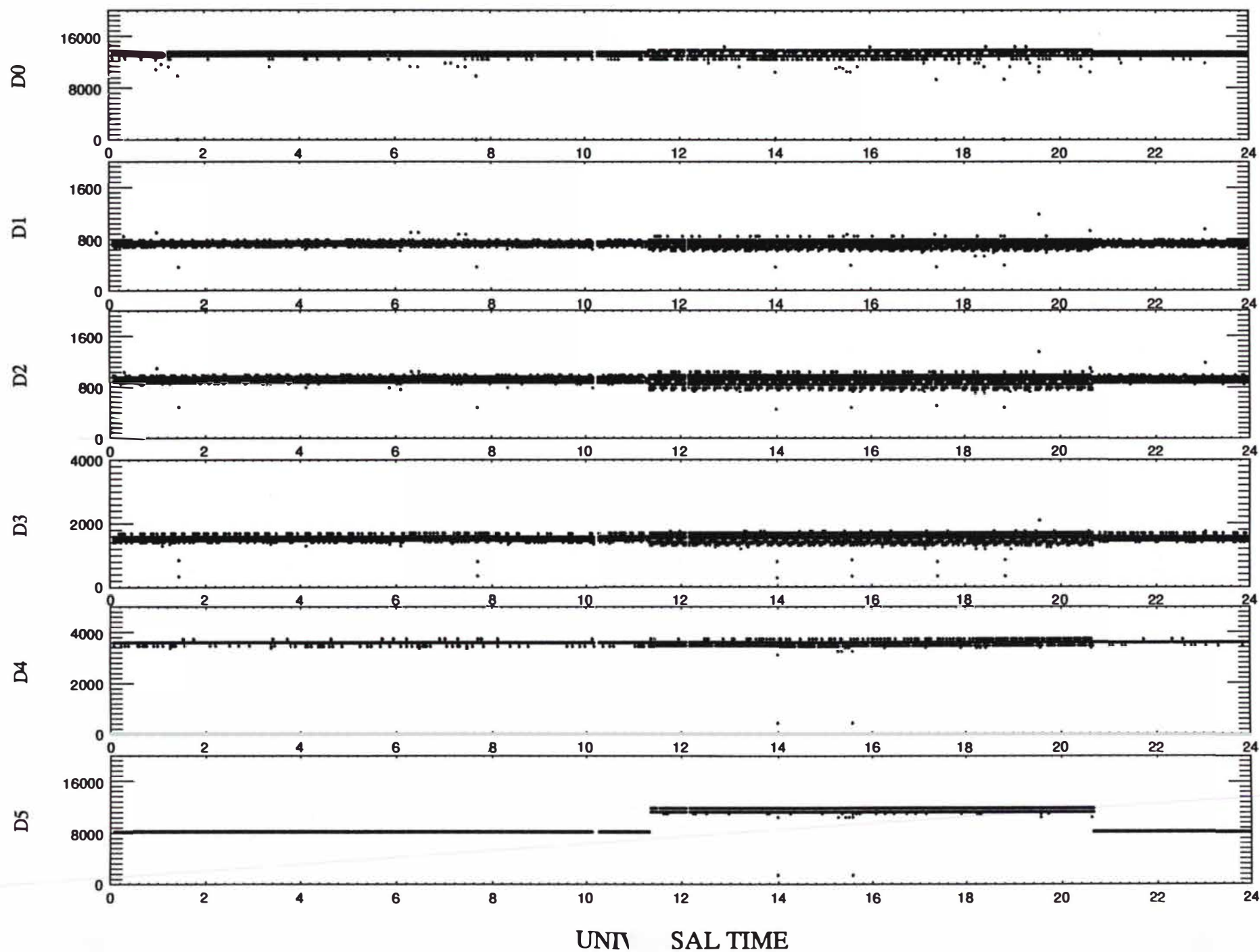


UNIVE \L TIME

CALIBRATION DATA INCLUDED



UNIV. TIME



From root Thu Mar 10 14:22 1994
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA05865; Thu, 10 Mar 94 14:22:44
Received: from SSTDP2.LANL.GOV by sunspot.ssl.berkeley.edu (5.0/SMI-SVR4)
id AA23477; Thu, 10 Mar 1994 13:30:14 +0800
Date: Thu, 10 Mar 1994 14:30:44 -0700 (MST)
From: 046369@SSTDP2.LANL.GOV
To: khurley@space6.ssl.berkeley.edu
Message-Id: <940310143044.25e02930@SSTDP2.LANL.GOV>
Subject: dmsp observations
Content-Length: 2472
Status: R

FROM: SMTP%"JTERRELL.LANL.GOV" (JAMES TERRELL) 3/10/04
TO: SMTP%"KHURLEY@SPACE6.SSL.BERKELEY.EDU"
SUBJ: DMSP OBSERVATIONS

Kevin:

Here are more additions, questions, or corrections for your GRB list of 930217.
Some of the errors for DMSP data seem to be the matter of interpreting
"NA" as used by me. It means, unless otherwise specified, no peak
apparent in the 20-sec averaged data, but 2-sec data not obtained
and examined. Thus it is not an absolute NO (or N/O unless it is known
that the spacecraft view was obscured by the earth).
Thus NA means that any peak which might show up in full data is
pretty weak, anyway. In your list NA should be left blank, I believe.
We now have data processed through 930128! Thus we will be needing
more events to look for in the DMSP data.--Jim

DATE	UT	DMSP
910208	32238U	DMSP8YES AT 32415.7, 9YES AT 32415.5, 10SAA
910421	33245	DMSP NA (NOT NO) (I.E., SHOULD BE BLANK IN YOUR LIST)
910627	16159	DMSP NA (NOT NO)
910717	16386	DMSP N/O (NOT NO)
911118	68260	DMSP N/O (NO DATA)
920110	33478	DMSP NA (NOT NO)
920229	69677	DMSP NA (NOT N/O)
920404	47506	DMSP NA (NOT N/O)
920414	84166	DMSP NA (NOT N/O) (GRO GRB AT 84163!)
920714	47069	DMSP NA (NOT NO)
920718	77563	DMSP NA (NOT N/O)
920727	43145U	(ULYSSES TIME) BATSE YES AT ? (DMSP NA)
921022	55259	DMSP NA (NOT N/O)
921209	41738	DMSP NA (NOT N/O)
930106	56259	WHY LISTED TWICE (56260)?
930106	56260	DMSP10YES AT 55260.4 (8SAA,11SR)
930309	11269	DMSP NA (NOT NO)
930318	44993U	DMSP NA (BATSE YES! ULYSSES TIME?)
930329	11365	DMSP NA (NOT N/O)
930406	26185	DMSP NA (NOT N/O)
930428	4032	DMSP NA (NOT N/O)
930506	65631	DMSP NA (NOT NO)
930511	892U	(ULYSSES TIME) DMSP NO
930825	31643U	DMSP8YES AT 33477.4(100/S),11YES AT 33477.0(500/S), 10SR
930922	12830U	DMSP NA (NOT NO)
930922	23086U	(BATSE YES AT ?) DMSP10YES AT 23088.1(270/S),8?,11YES AT 22085.1
930925	73995U	DMSP NA (NOT NO)
930929	31751	(CORRECTED ULYSSES TIME) DMSP NO
931006	18161	(CORRECTED ULYSSES TIME) TO 931111 34178, NUMEROUS: DMSP NA
931006	69587U	DMSP NA (NOT NO)
931006	77510U	(ULYSSES TIME?)(BATSE YES AT ?) DMSP NA (NOT NO)
931031	14795	DMSP11YES AT 14796.8,14810.8 (8SAA,10SAA)
931103	59142	DMSP10YES AT 59152.4,158.4,11YES AT 59151.0,155.0 (8SR)
931131	60360	IS THIS DATE FOR SURE? (DMSP NA, 93/11/30)
931204	35290	DMSP8YES AT 35301.3,10NO AT 156DEG, 11NR
931217	65953U	10YES AT 64188.0,192.0,232.0, 11NO AT 64188 (8SR AT 64188)

From MEEGAN@ssl.msfc.nasa.gov Wed Dec 1 14:40:49 1993
Date: Wed, 1 Dec 1993 16:43:32 -0600 (CST)
From: MEEGAN@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, GROBAD@ESTEC.BITNET, LHEAVXCLINE@ssl.msfc.nasa.gov,
LHEAVXBARTHELMY@ssl.msfc.nasa.gov, LHEAVXKWOK@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 02666

TIME: TJD=9321 SECONDS=21785 06:03:05

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

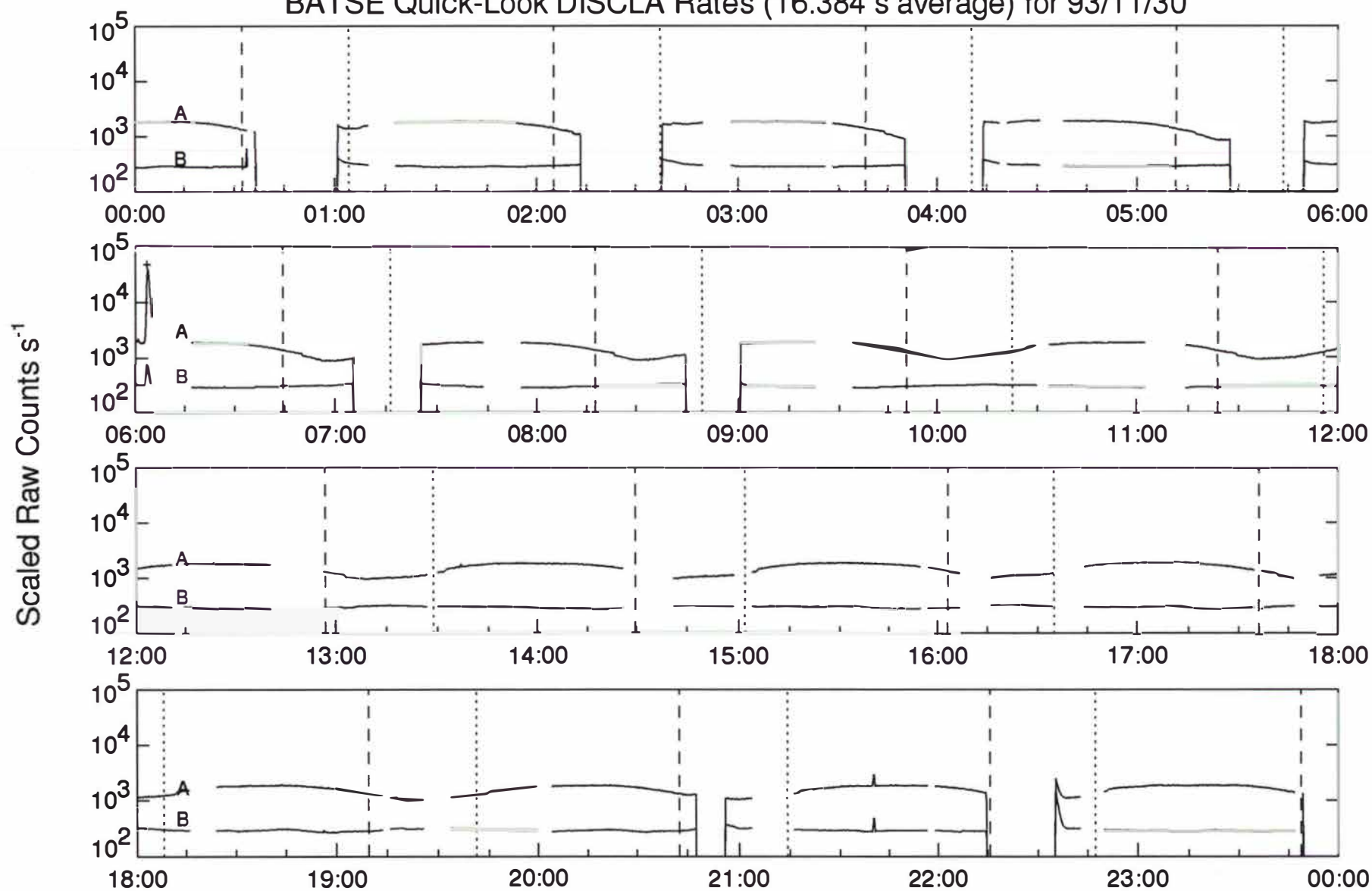
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= 70. AZIMUTH= 19. ERROR= DEGREES

COMMENTS:

INTENSE 100 S LONG FLARE. GOES C9.2. PEAK AT T+28 S. SEEN ABOVE
100 KEV BUT NOT ABOVE 300 KEV.

BATSE Quick-Look DISCLA Rates (16.384 s average) for 93/11/30

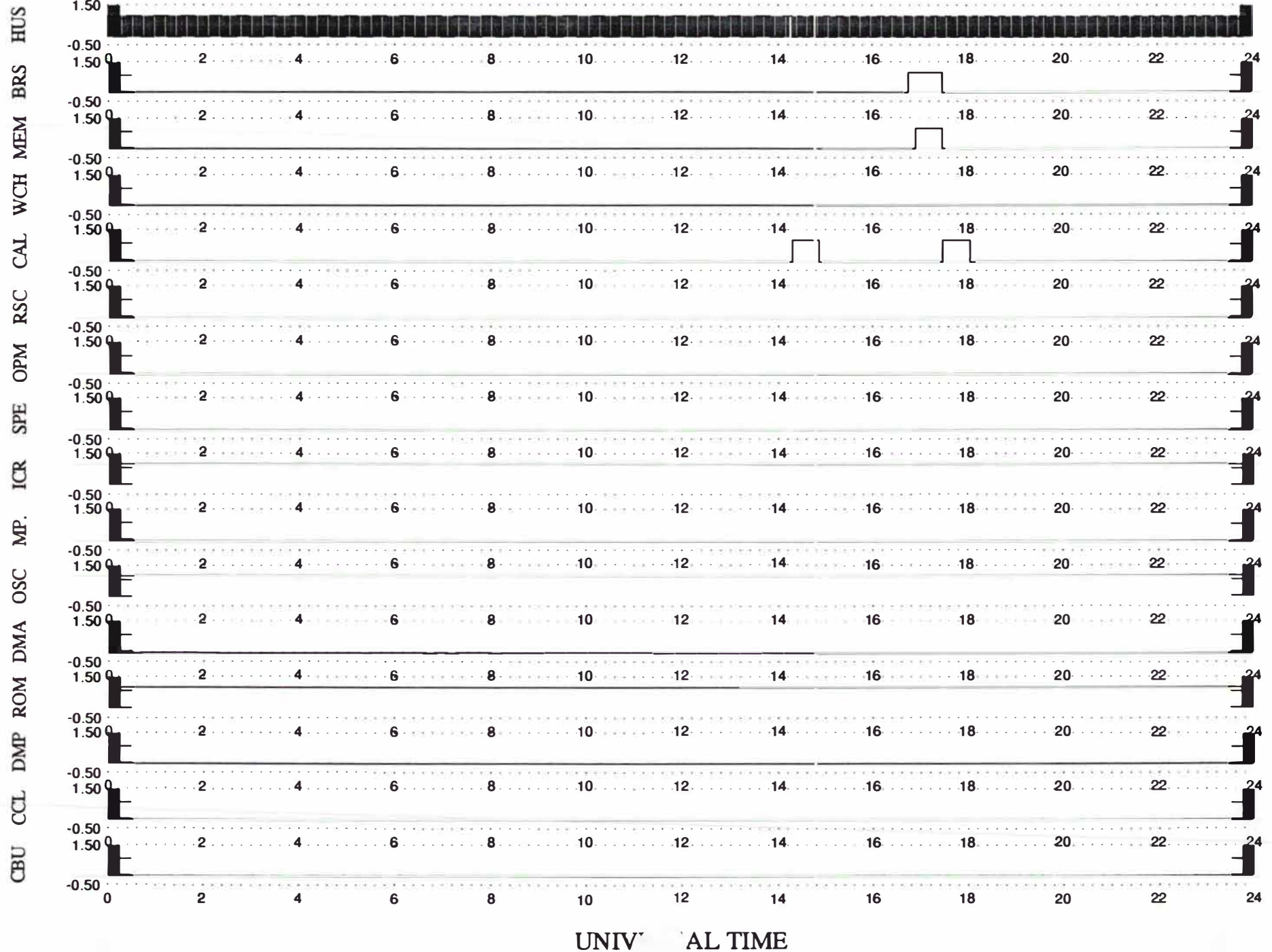


Current Time: 93/12/02, 1416 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

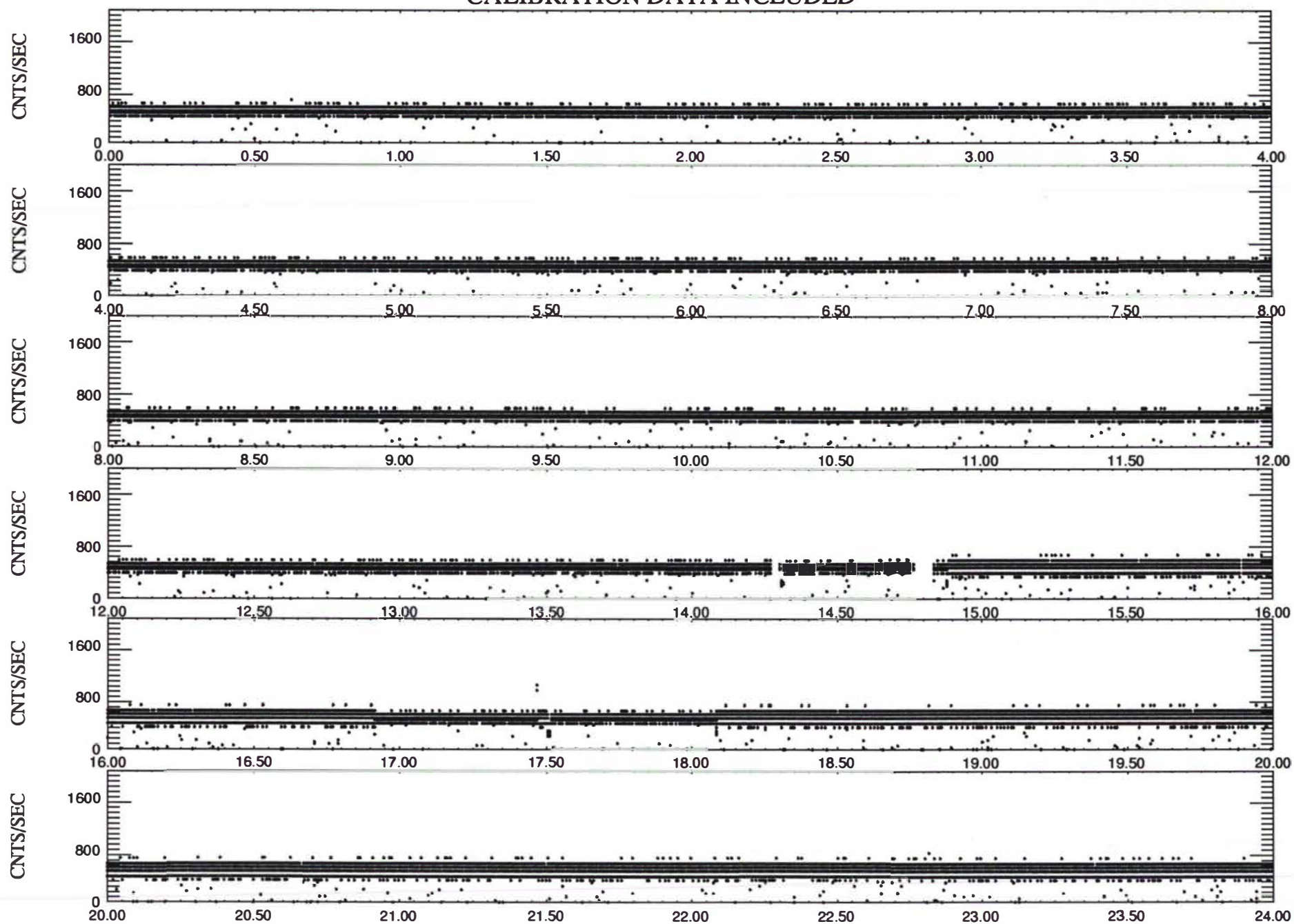
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

BURST NUMBER 1

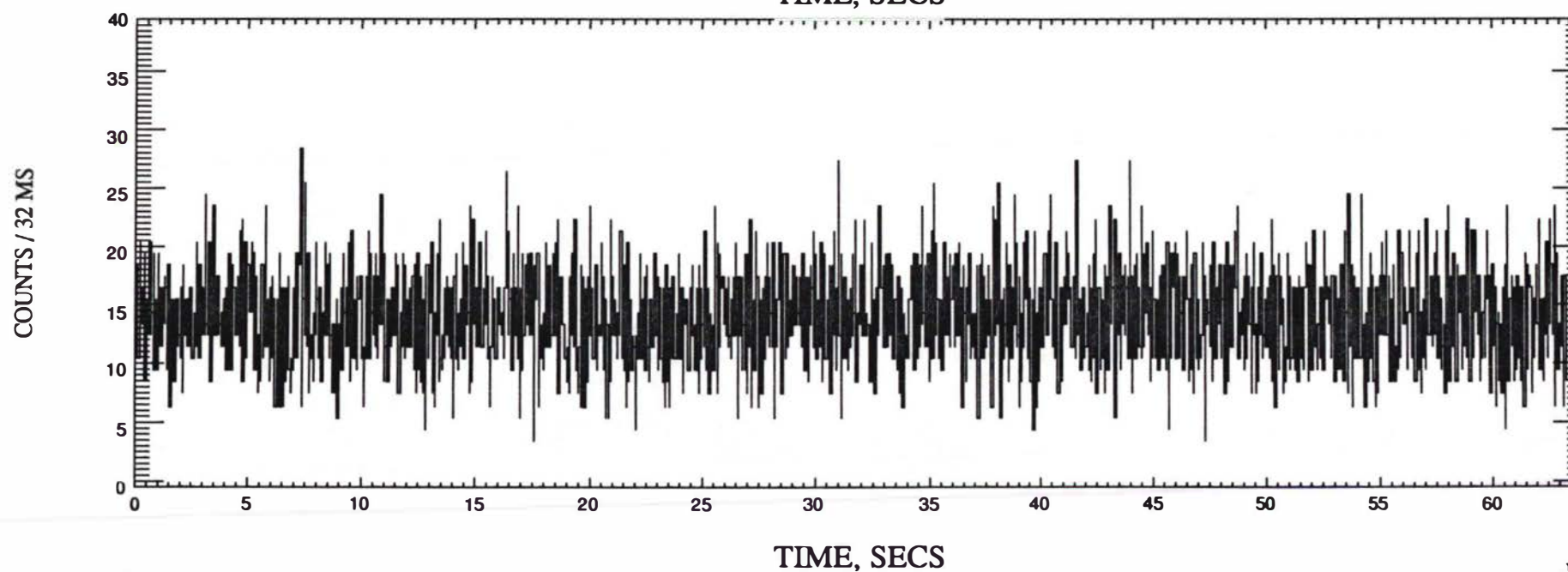
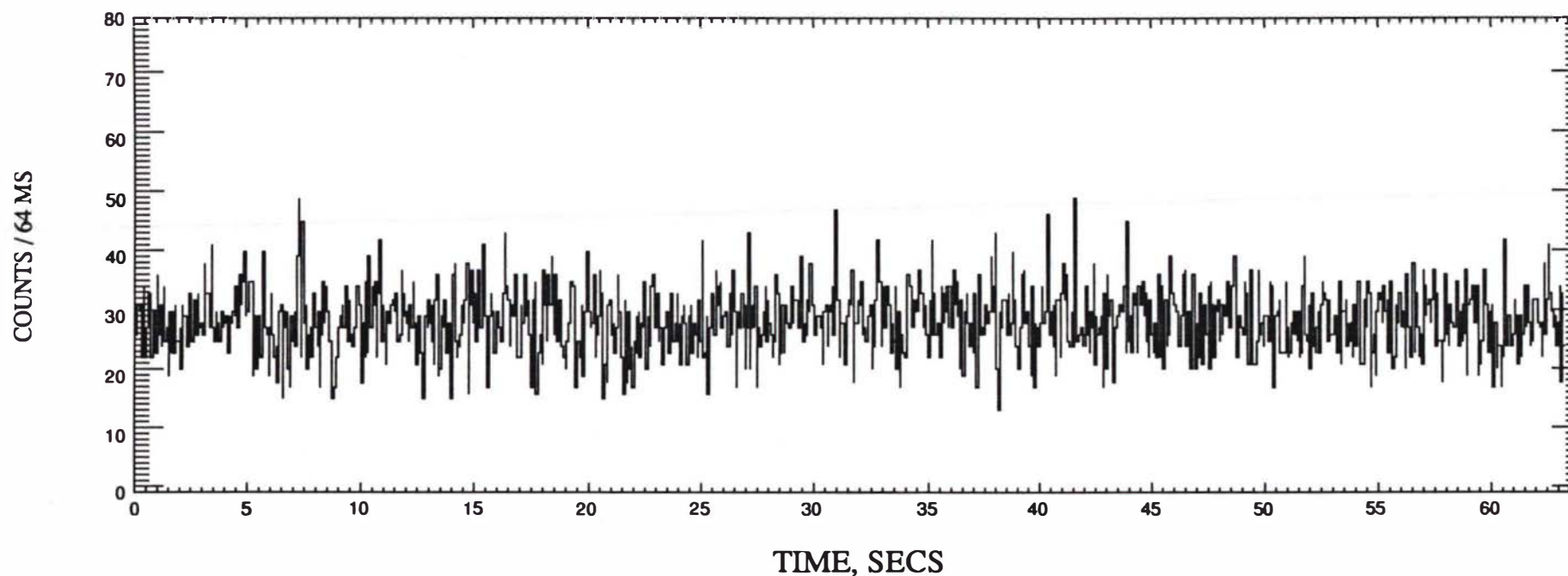


CALIBRATION DATA INCLUDED



UNIV 'AL TIME

Burst Counter 1 at UT=16.766726964315 h=60360.217 s 16:46:00.217



1 / 1 2 / 9 3

ULYSSES RT
30 / 11 / 93 60192.102 s
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS

