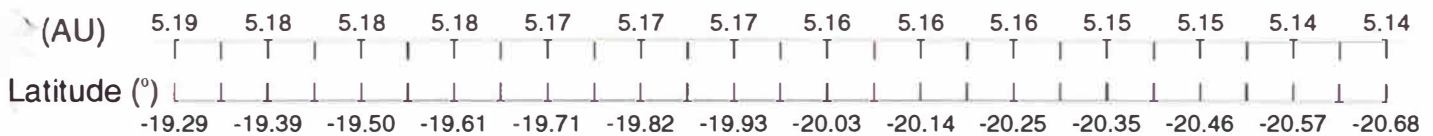
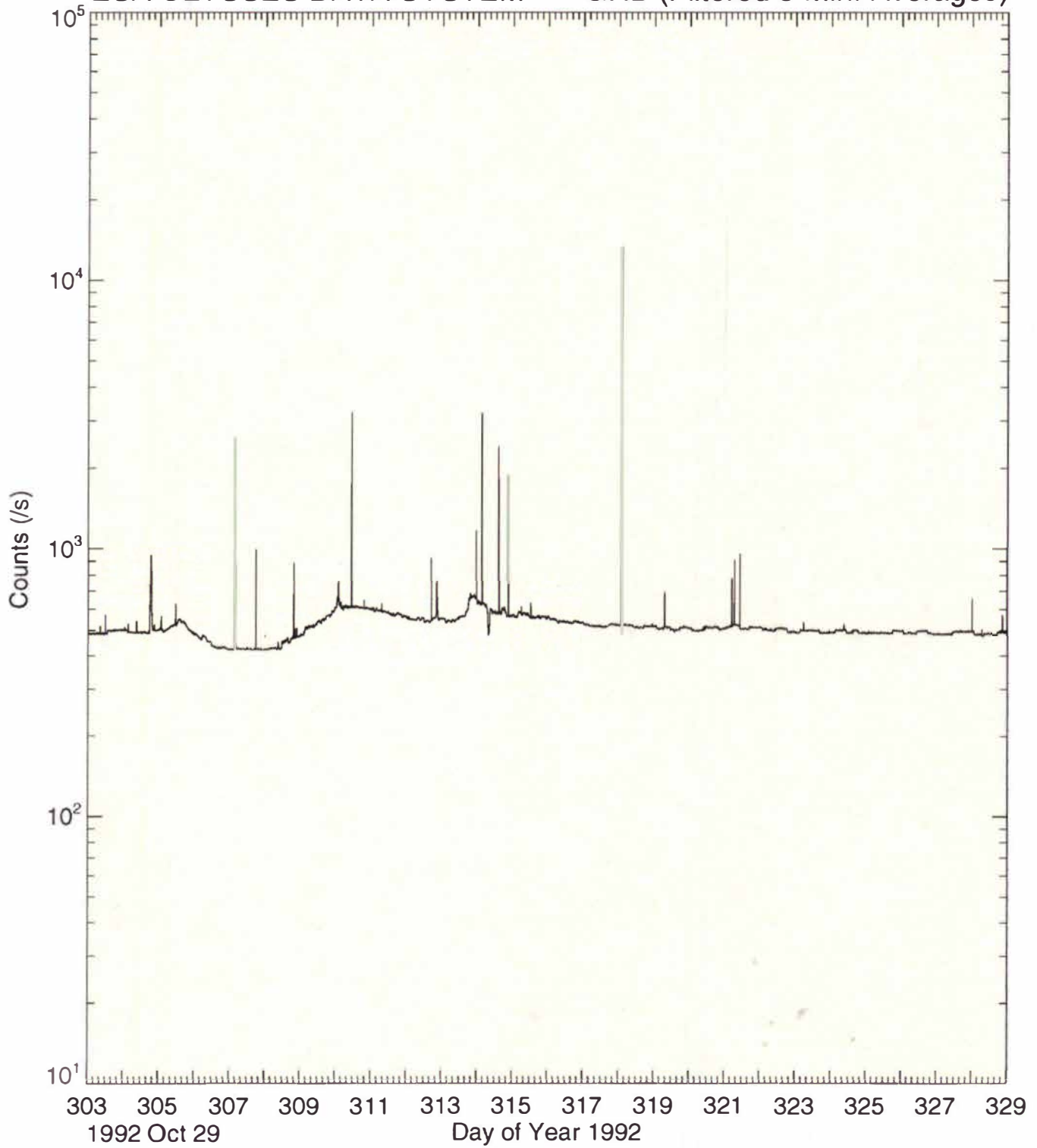


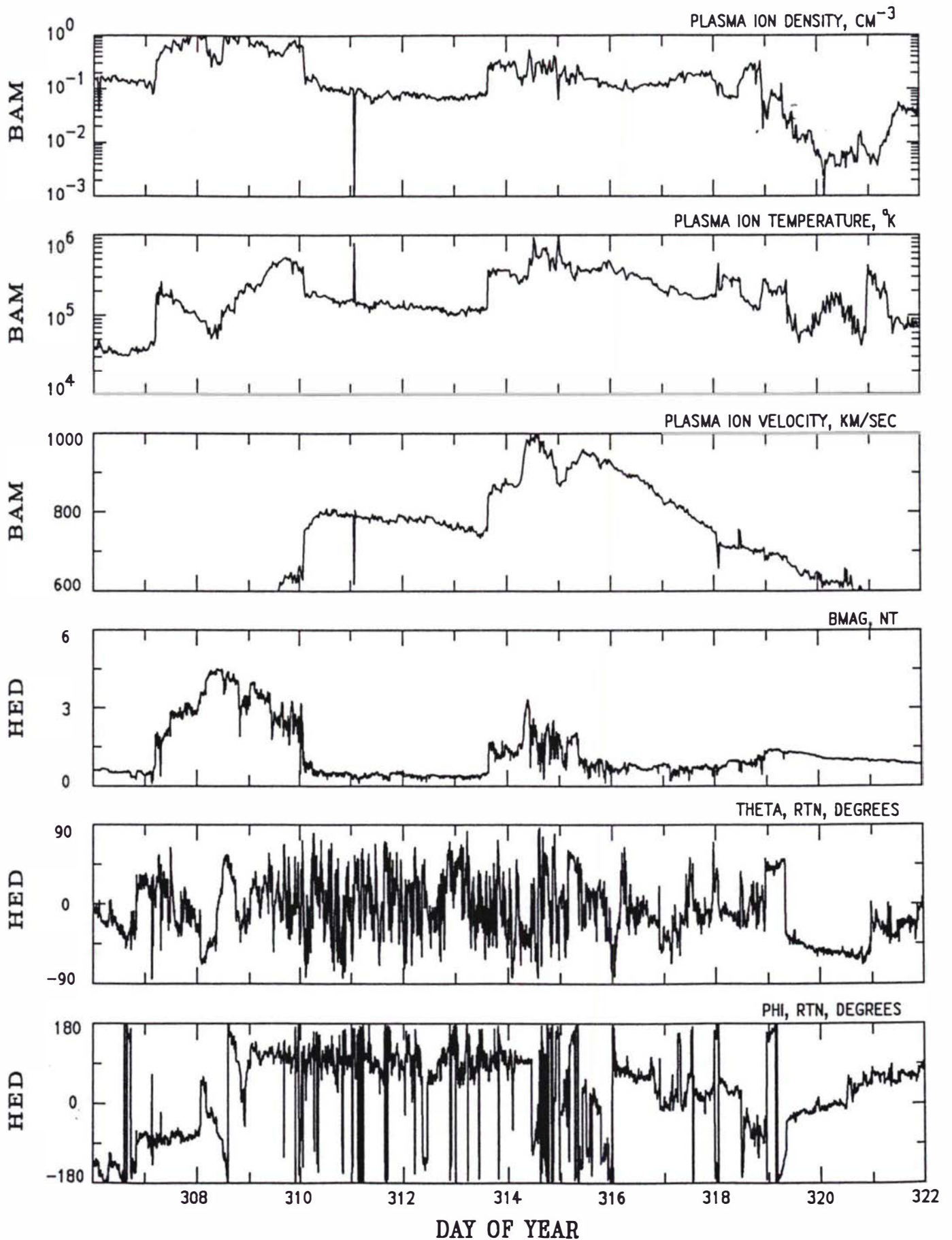
ESA ULYSSES DATA SYSTEM

GRB (Filtered 5 Min. Averages)



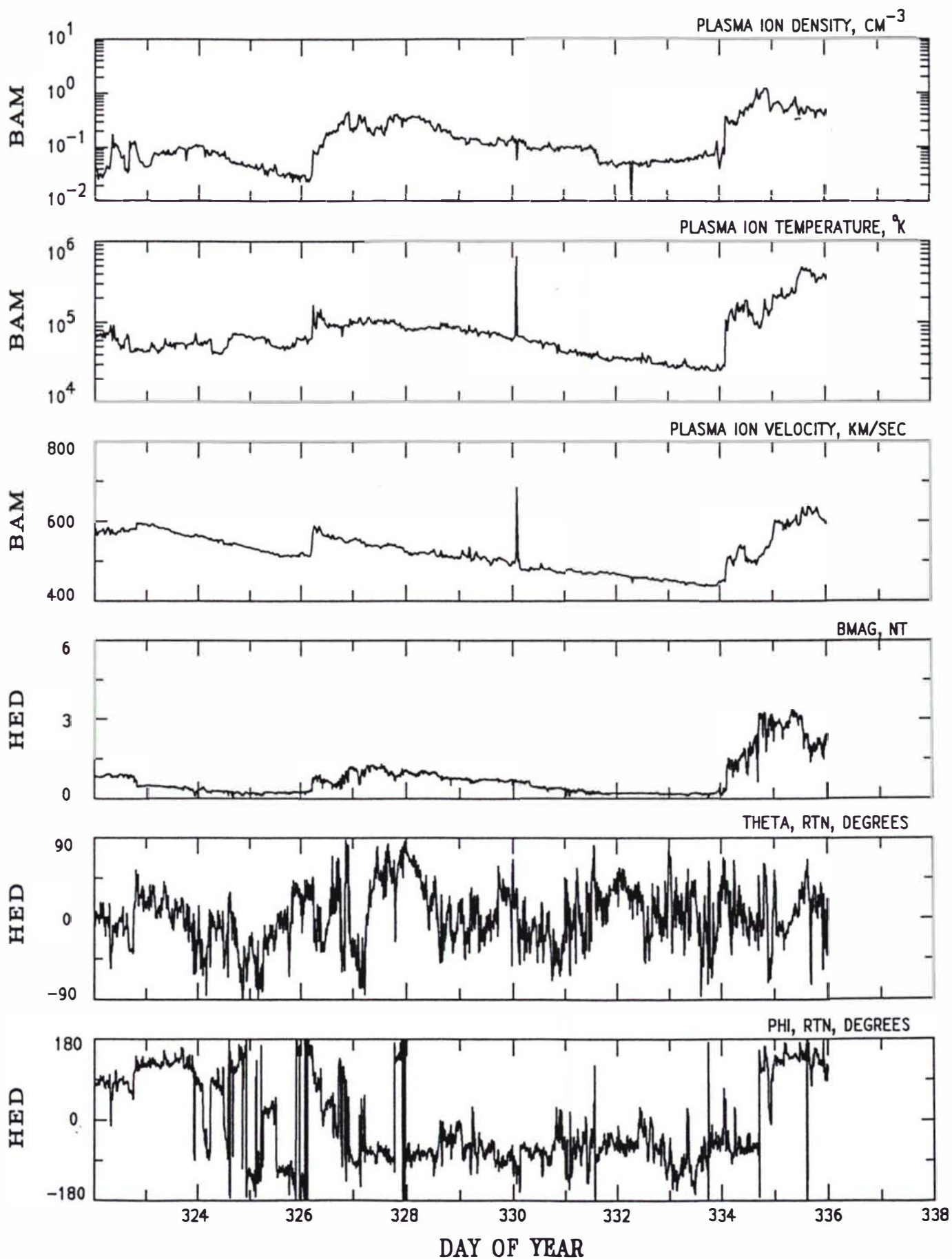
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

92 306 NOV 1 00:00:00.000 - 92 322 NOV 17 00:00:00.000



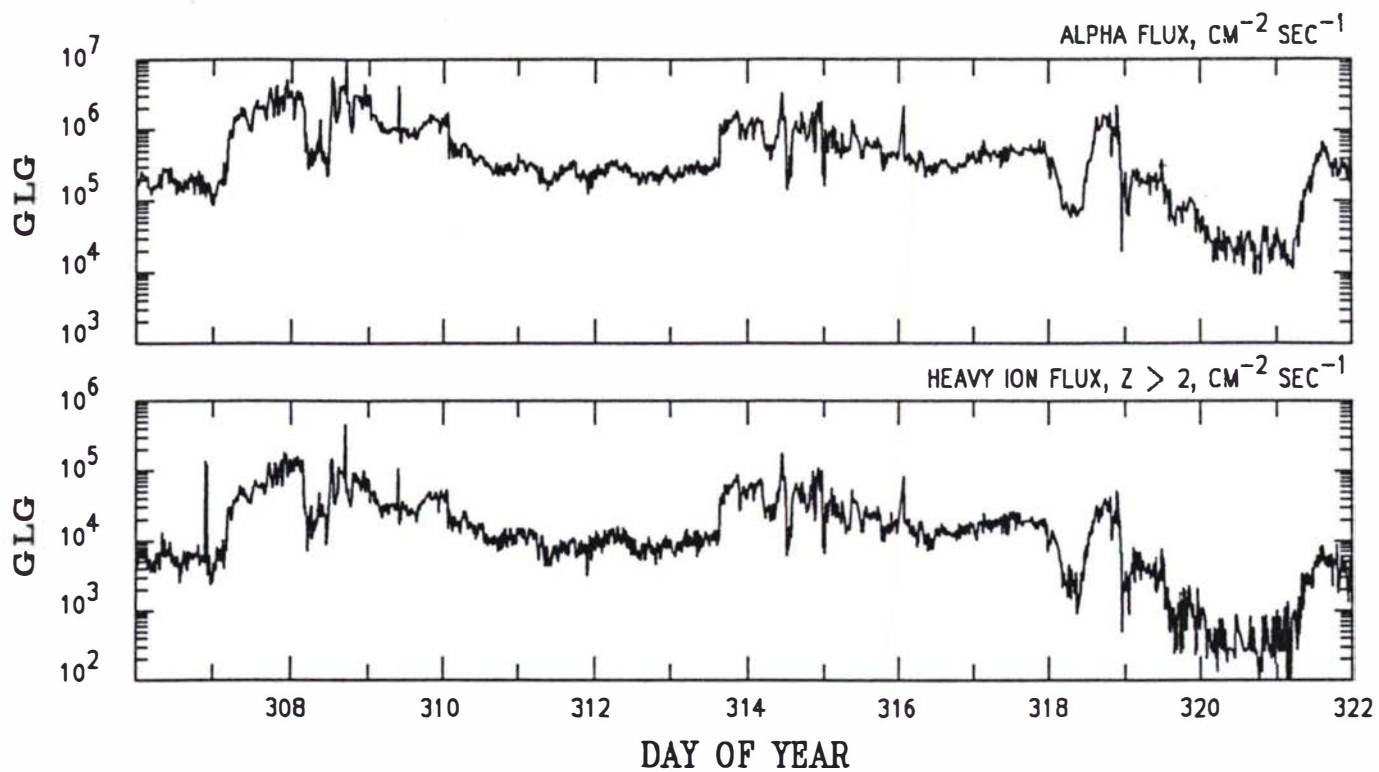
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

92 322 NOV 17 00:00:00.000 - 92 338 DEC 3 00:00:00.000



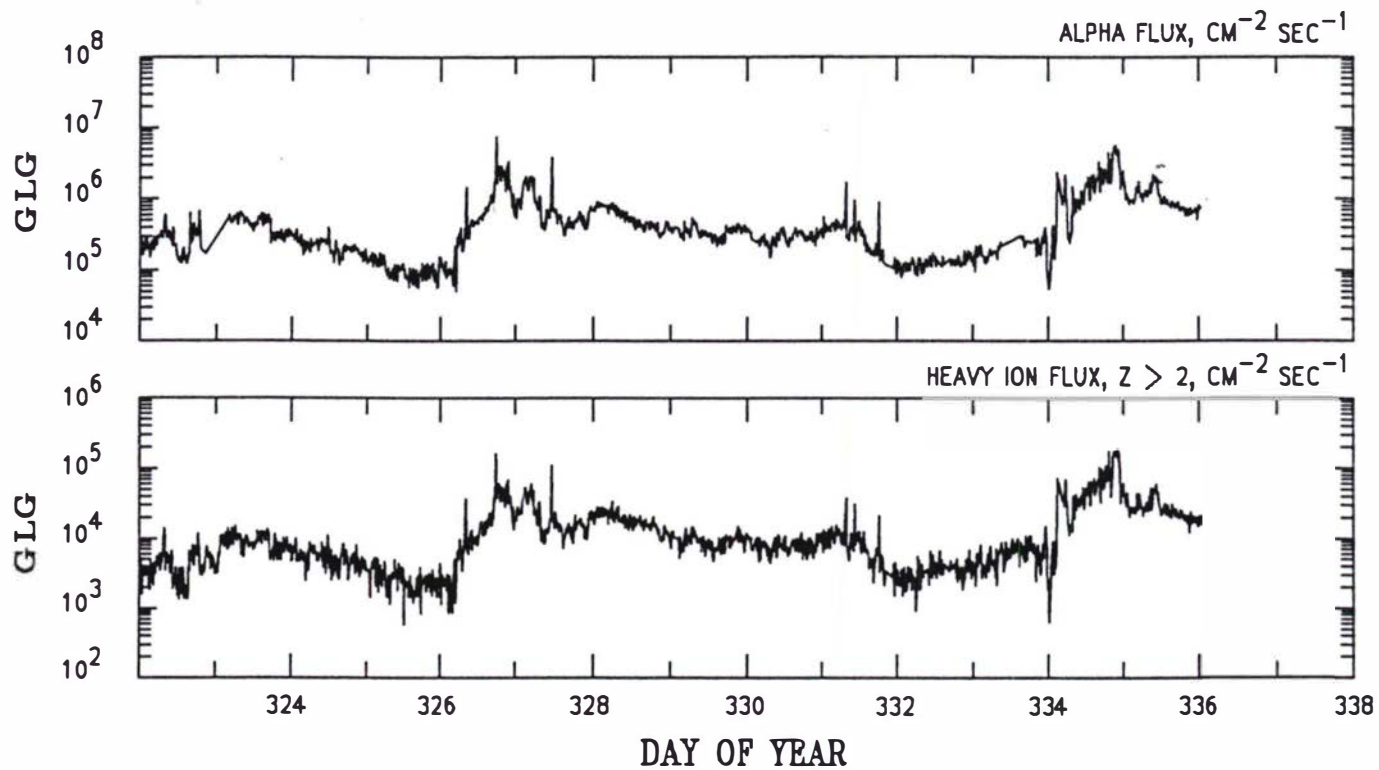
ULYSSES CDR - SOLAR WIND ION COMPOSITION

92 306 NOV 1 00:00:00.000 - 92 322 NOV 17 00:00:00.000



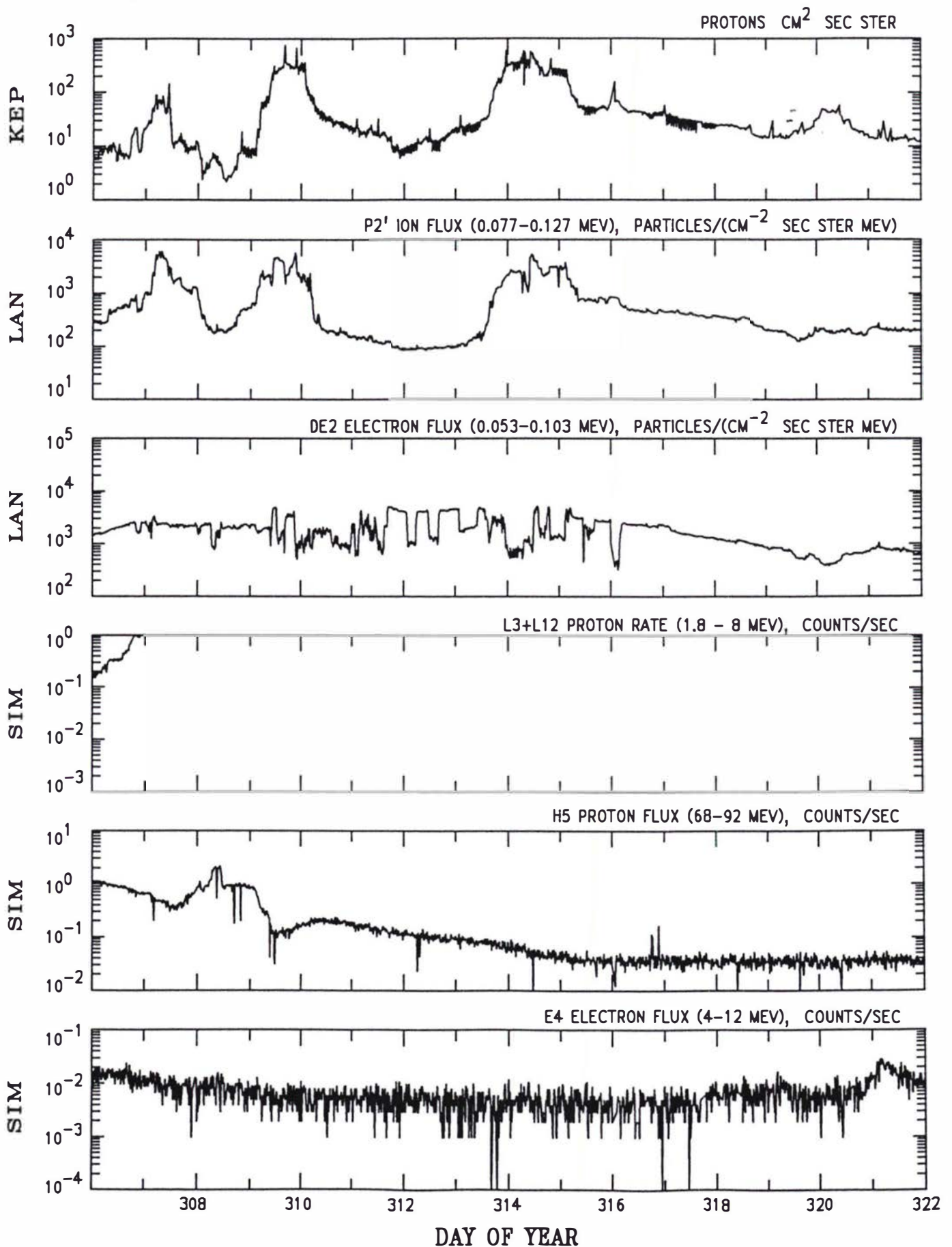
ULYSSES CDR - SOLAR WIND ION COMPOSITION

92 322 NOV 17 00:00:00.000 - 92 338 DEC 3 00:00:00.000



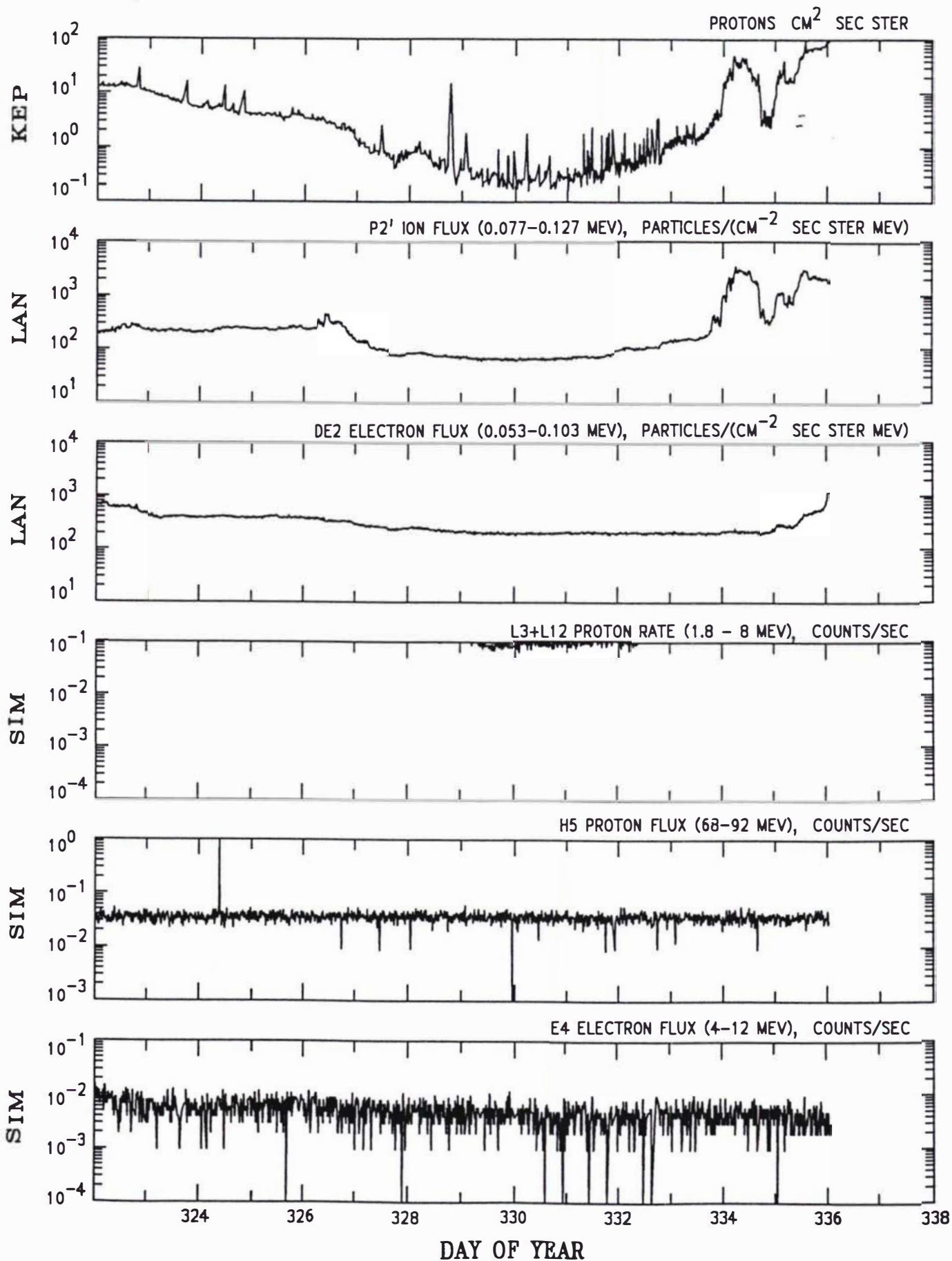
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

92 306 NOV 1 00:00:00.000 - 92 322 NOV 17 00:00:00.000



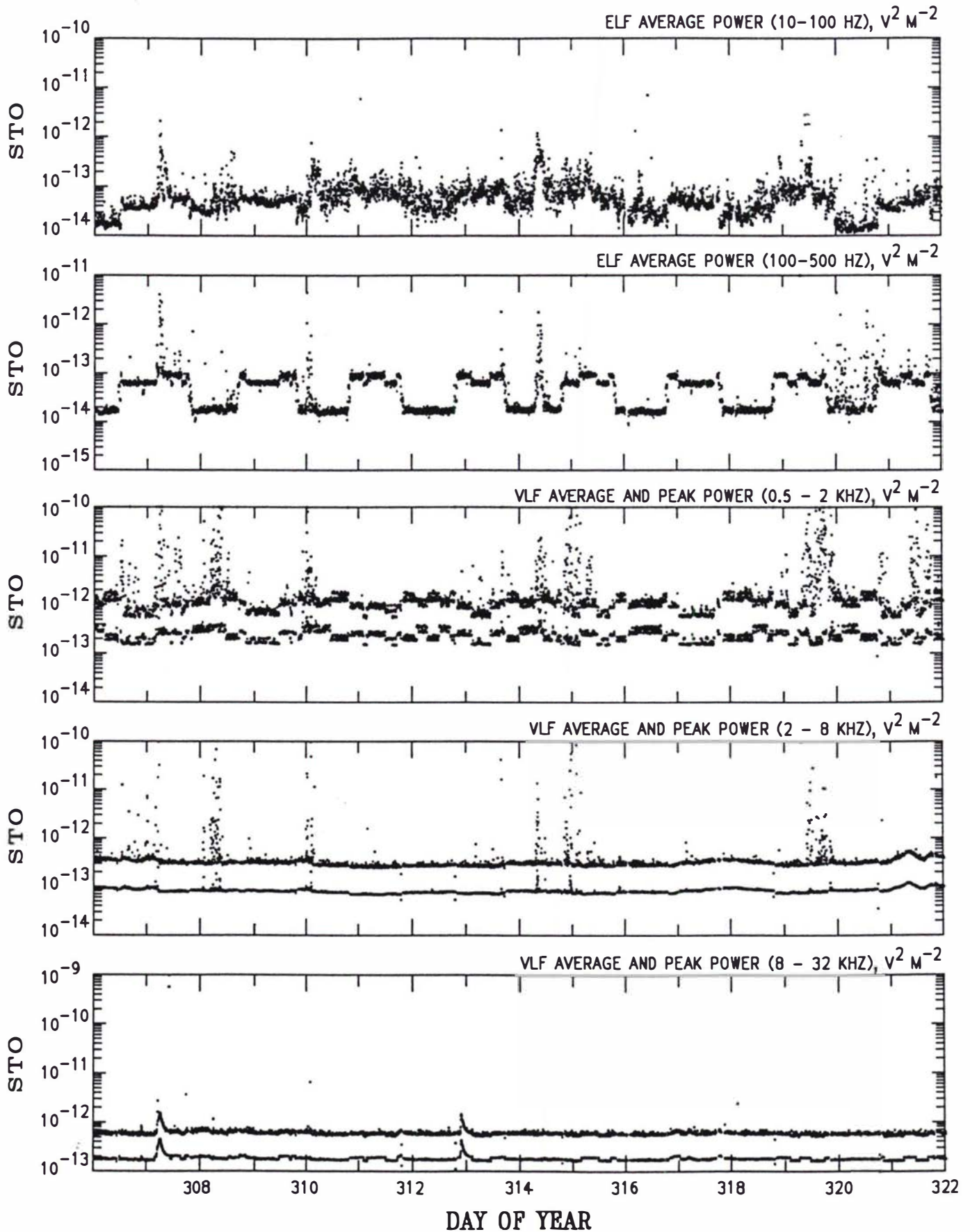
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

92 322 NOV 17 00:00:00.000 - 92 338 DEC 3 00:00:00.000



ULYSSES CDR - PLASMA WAVE

92 306 NOV 1 00:00:00.000 - 92 322 NOV 17 00:00:00.000



.92.306.00.10.55.119

HUS monthly long term thermal data

818

RET

E002 2ARADTMP S/C

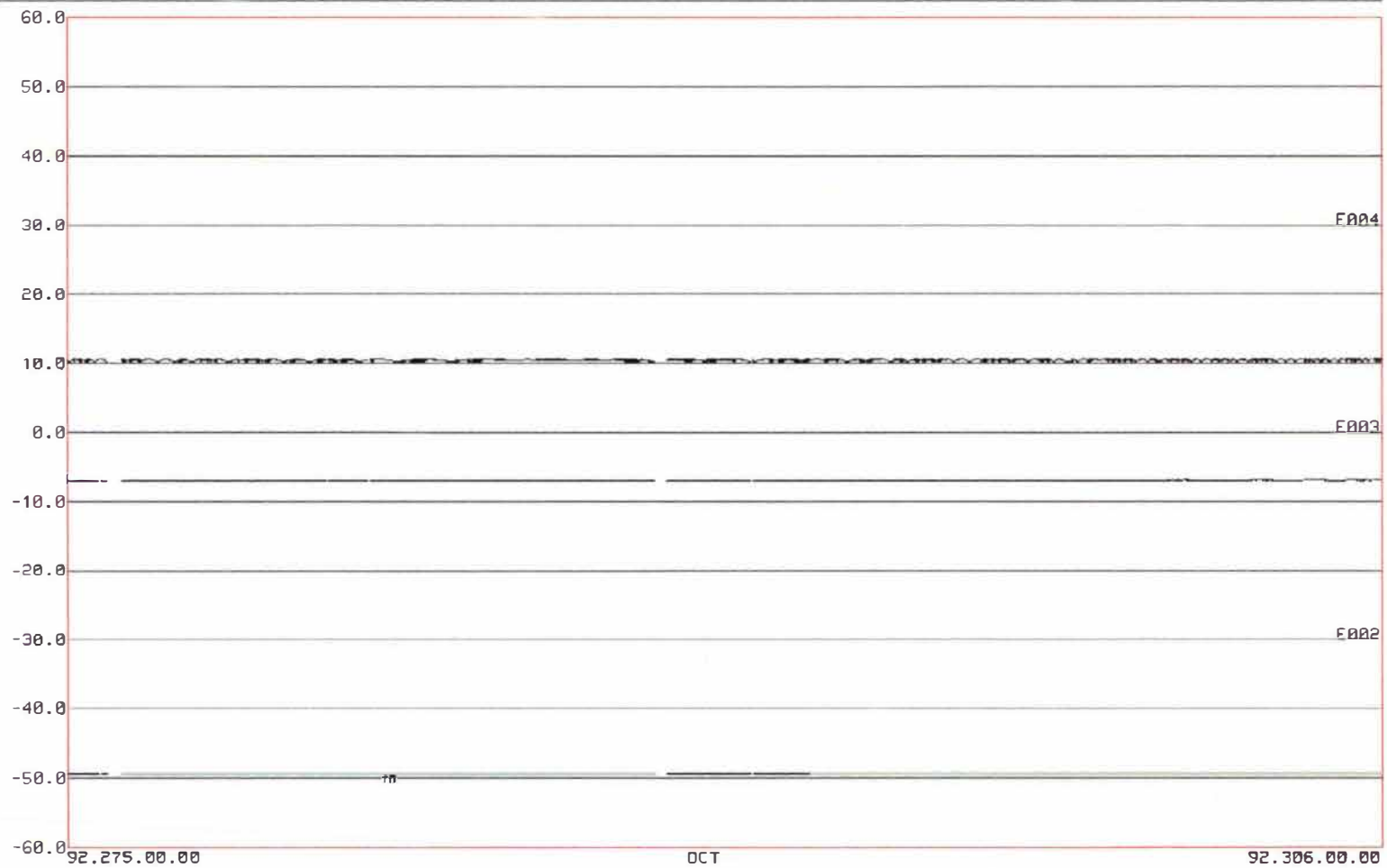
-6.8

E003 2BSENTMP S/C

-49.3

E004 2ASENSTMP EX

10.45



From MALLOZZI@ssl.msfc.nasa.gov Mon Nov 2 12:53:24 1992
Date: Mon, 2 Nov 1992 14:52:37 -0600 (CST)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 02036

Nw 1

TIME: TJD=8927 SECONDS=04635

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SINGLE MAIN PEAK WITH A LOT OF STRUCTURE. OBSERVED ABOVE 100 KEV, BUT
NOT ABOVE 300 KEV. TOTAL DURATION ~35 SEC.
EVENT WAS NOT CLASSIFIED IN GOES DATA.

BATSEARCH PROGRAM

BATSE BURST # *WATCH*

EVENT OF 1992 NOV 1 DAY OF YEAR=306
EVENT CROSSING TIME AT BATSE : 55438. S. OR 15:23:58.0
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 239.000 -8.000
BATSE PEAK COUNTING RATE: 0 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 1/11/ 92 IS:
RA= 165.150 DEC= -5.739 DIST= 5.744 AU
BATSE-ULYSSES DISTANCE = 859276071. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=106.74 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -825.41 SECS.
CROSSING TIME AT ULYSSES IS 54613. S. OR 15:10:12 +/- 514.01 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 1/11/ 92 IS:
RA= 114.983 DEC= 22.760 DIST= .926 AU
MARS-BATSE DISTANCE = 138502500. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 55.62 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 260.89 SECS.
CROSSING TIME AT MARS IS 55699. S. OR 15:28:18 +/- 70.16 SECONDS

No

From sb@dsri.dk Tue Oct 5 08:47:09 1993
Date: Tue, 5 Oct 93 16:48:49 +0100
From: Soeren Brandt <sb@dsri.dk>
To: khurley@sunspot.ssl.berkeley.edu
Subject: GRB 921022 rep?
Content-Length: 631

Hello again,

While we are at candidate repeaters.

I have been looking at events, which may be connected to the unusual GRB 921022. At least in the crude WATCH data it reminds me of the March 05 event.

The WATCH position is $\alpha = 15^h55^m22^s$, $\delta = -08.1^\circ$ (J2000).
 238.62°

} Trigger

I have two candidate events. They are both too short and weak for a position with WATCH. In both cases the GRB 921022 position is in the FOV.

11519°
The first is on Oct 17 1992 at 03:11:59. It is a weak, hard spike of less than 4 ms above the background.

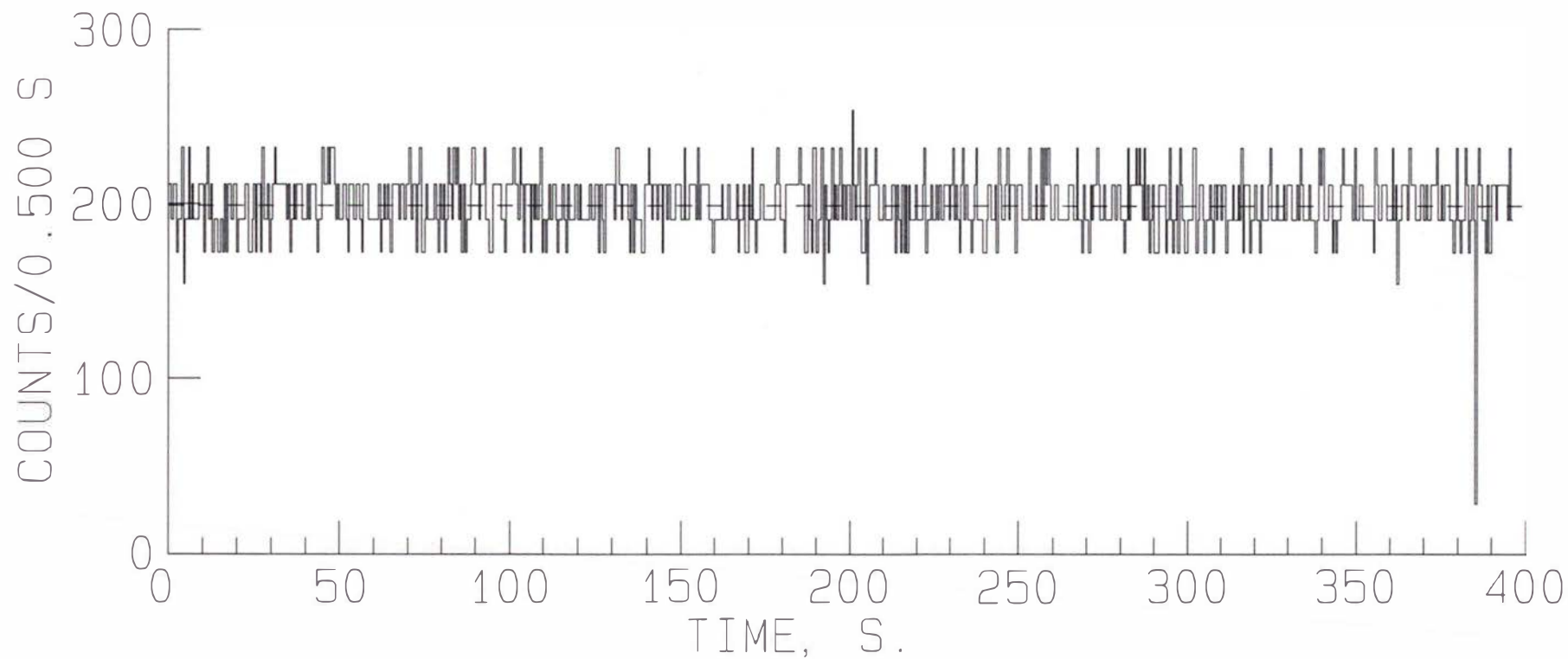
55938
The other one is on Nov 01 1992 at 15:23:58. It is stronger and lasts for about 100 ms.

Best regards,
Soren

6/10/93

ULYSSES RT
1/11/92 54540.270 s
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



CATSEARCH PROGRAM

BATSE BURST # 2037

EVENT OF 1992 NOV 1 DAY OF YEAR=306

EVENT CROSSING TIME AT BATSE : 65036. S. OR 18:03:55.7

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

BURST ARRIVAL DIRECTION: 330.900 48.200

BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND

POSITION OF ULYSSES ON 1/11/ 92 IS:

RA= 165.096 DEC= -5.665 DIST= 5.753 AU

BATSE-ULYSSES DISTANCE = 860699664. KM.

ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 44.22 DEG.

LIGHT TRAVEL TIME ALONG PROJECTED PATH= 2057.38 SECS.

CROSSING TIME AT ULYSSES IS 67093. S. OR 18:38:13.1 +/- 428.90 SECONDS

NO

From MALLOZZI@ssl.msfc.nasa.gov Mon Nov 2 13:02:08 1992

Date: Mon, 2 Nov 1992 15:01:19 -0600 (CST)

From: MALLOZZI@ssl.msfc.nasa.gov

Subject: Burst Trigger Message

To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu

X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS

Content-Length: 1539

BATSE BURST TRIGGER

NO.: 02037

TIME: TJD=8927 SECONDS=65035

TYPE: BURST

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=65.0 AZIMUTH=209.5 ERROR= DEGREES

COMMENTS:

STRONG BURST WITH TWO DISTINCT MAIN PULSES.

THE FIRST IS CLEARLY OBSERVED ABOVE 300 KEV; THE SECOND ABOVE 100 KEV.

COMPLETE RETURN TO BACKGROUND BETWEEN THE PEAKS WITH LOCATIONS

CONSISTENT WITH A SINGLE SOURCE.

DURATIONS: FIRST PEAK ~2 SEC; SECOND PEAK ~2.5 SEC

9 / 6 / 94

ULYSSES RT

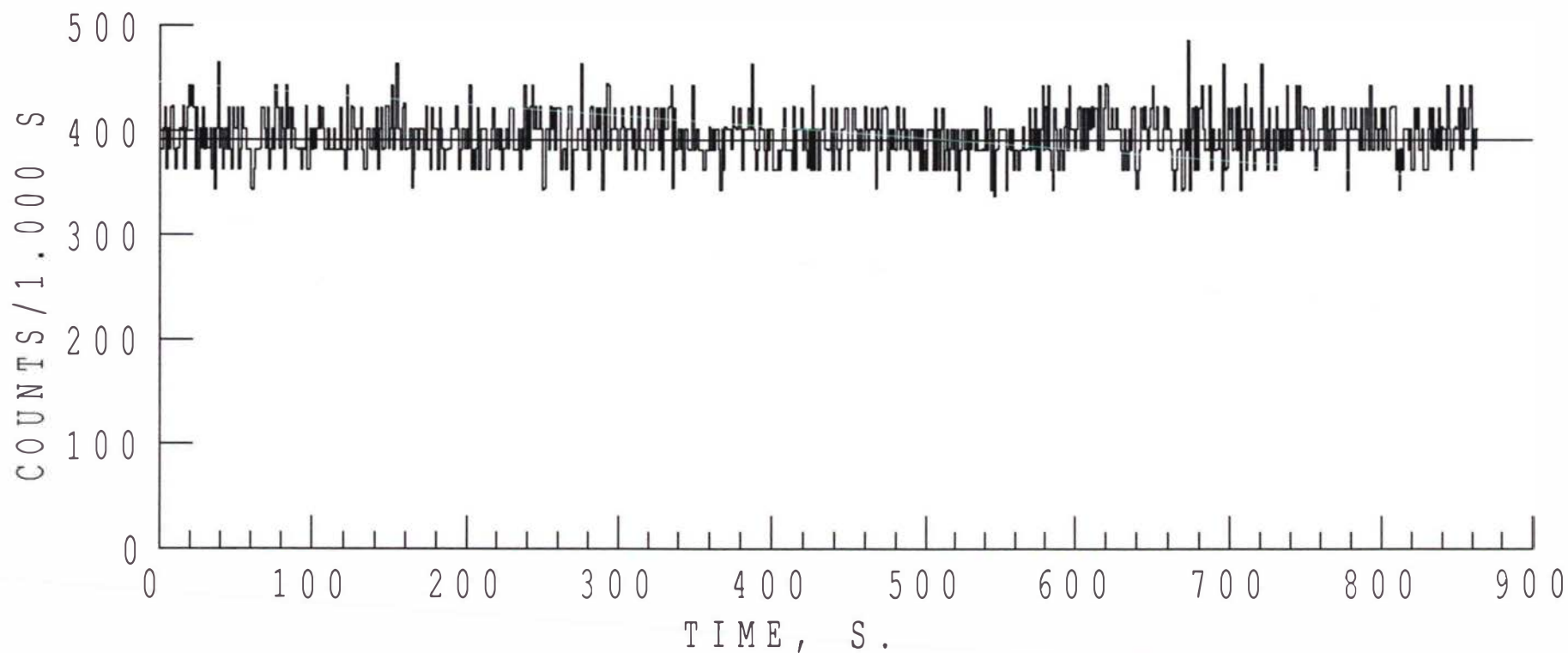
1 / 11 / 92 66672.453 s

0.500 S INTERVALS REGROUPED BY 2

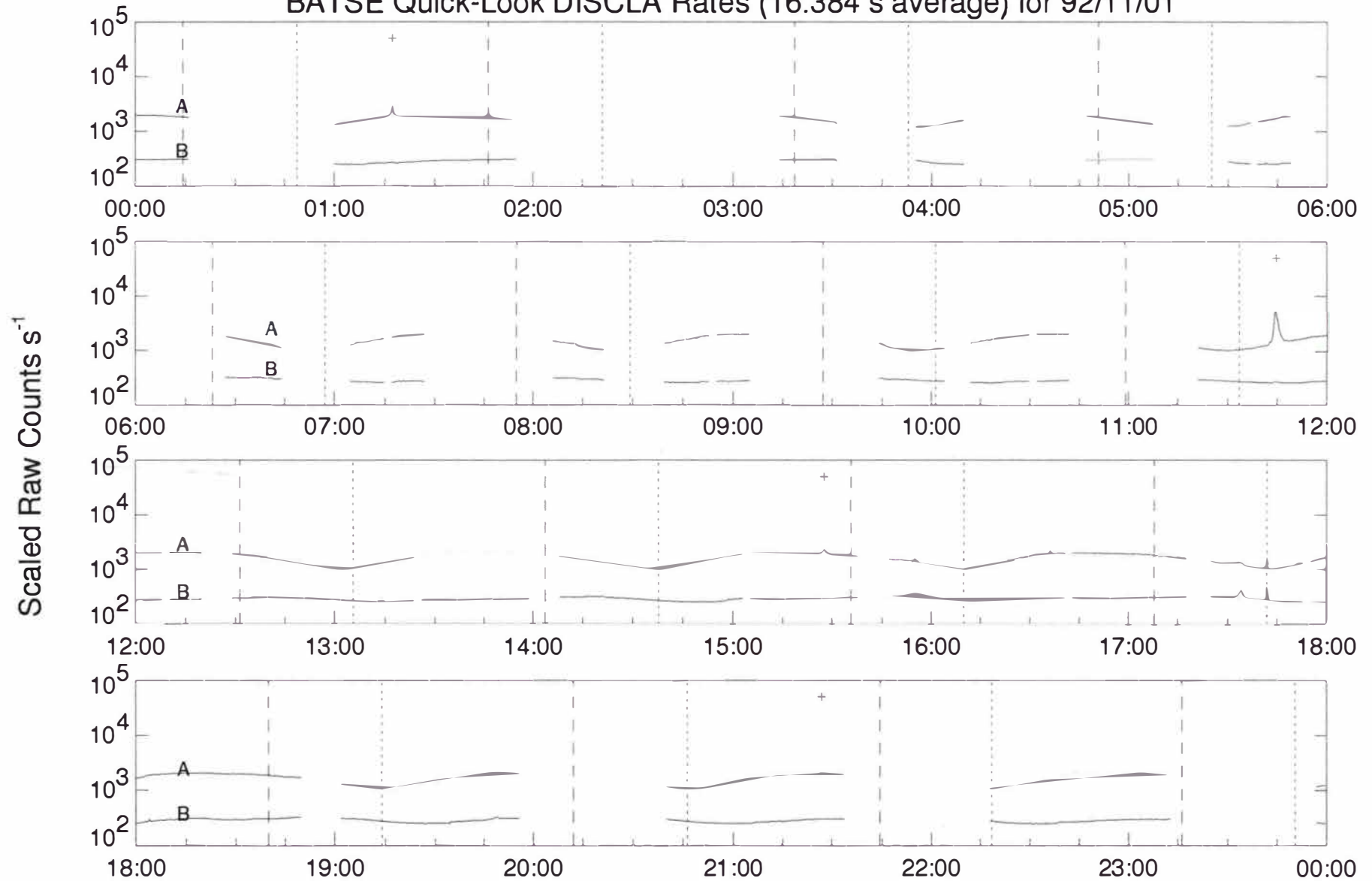
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



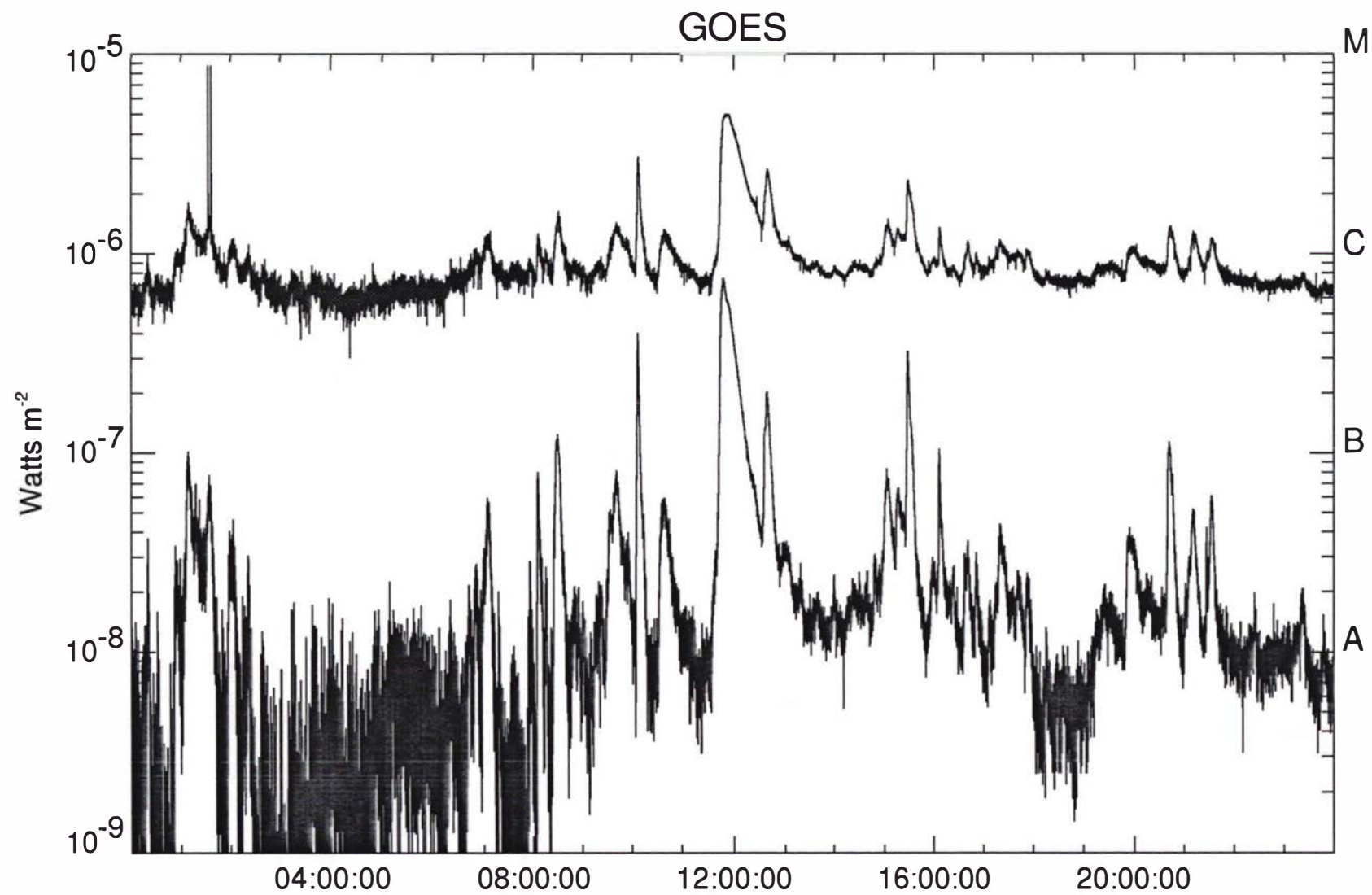
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/01



Current Time: 92/11/05, 2119 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

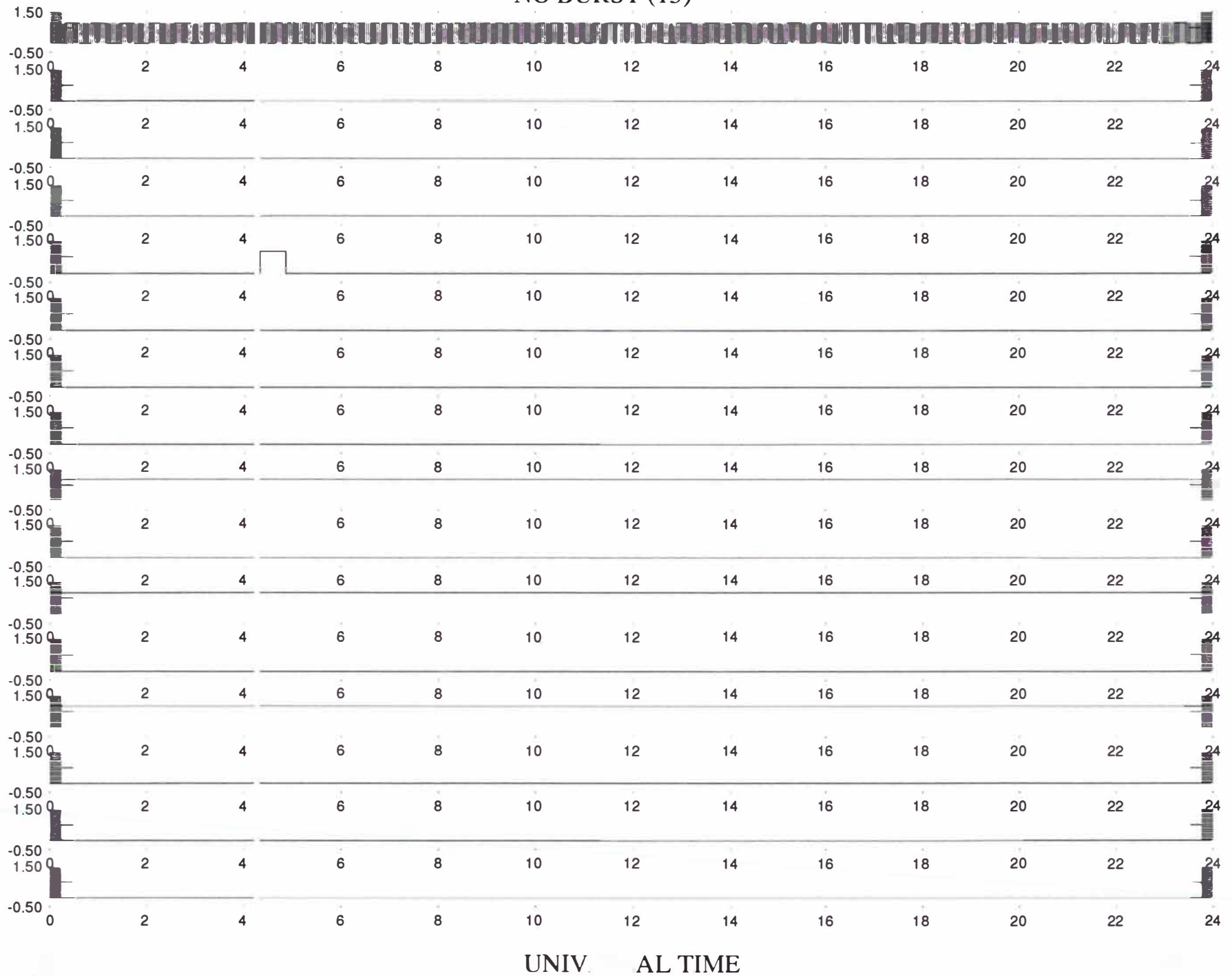


Data Start: 92/11/01, 0000:01

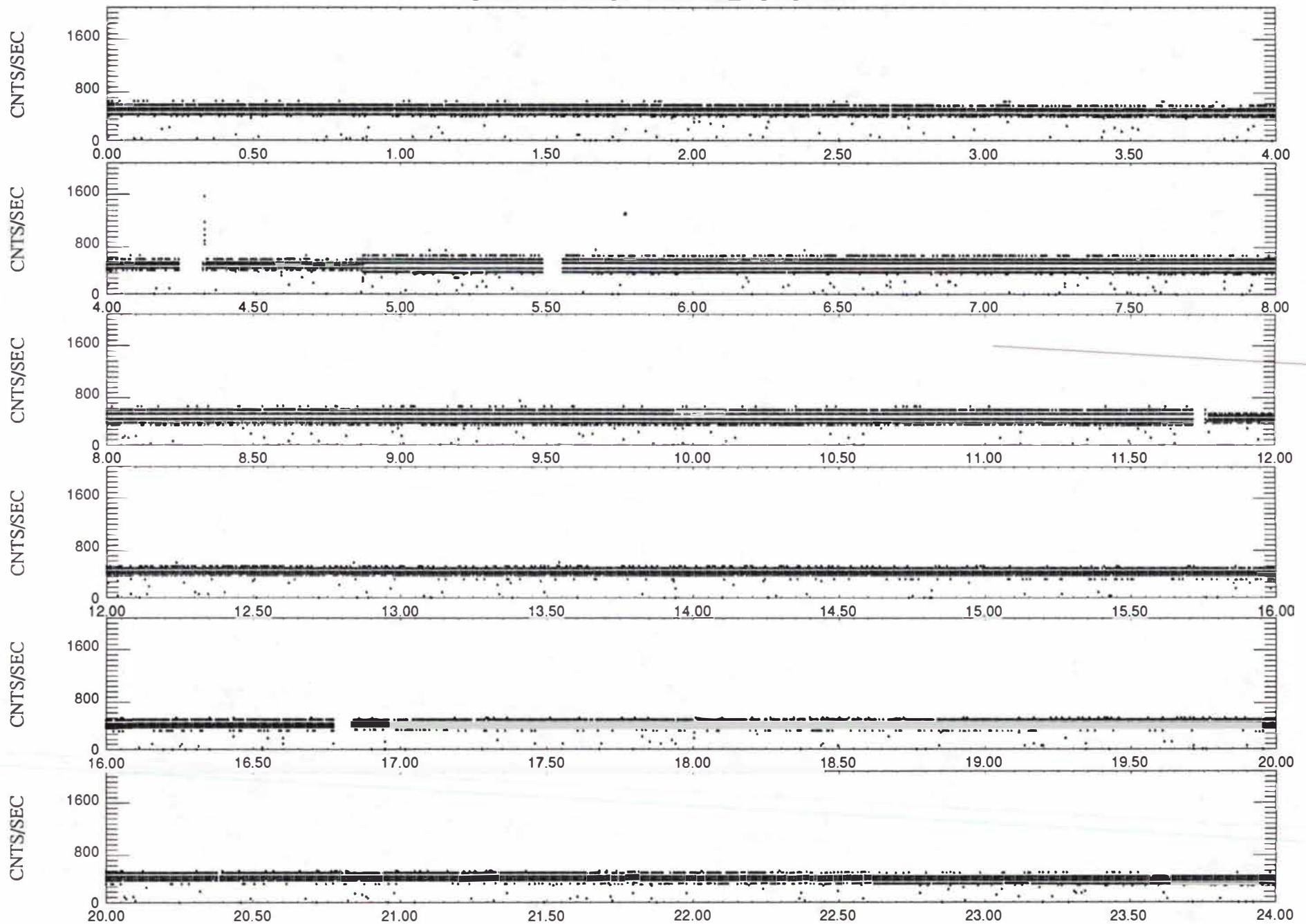
Plot created: 95/05/30, 1513

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

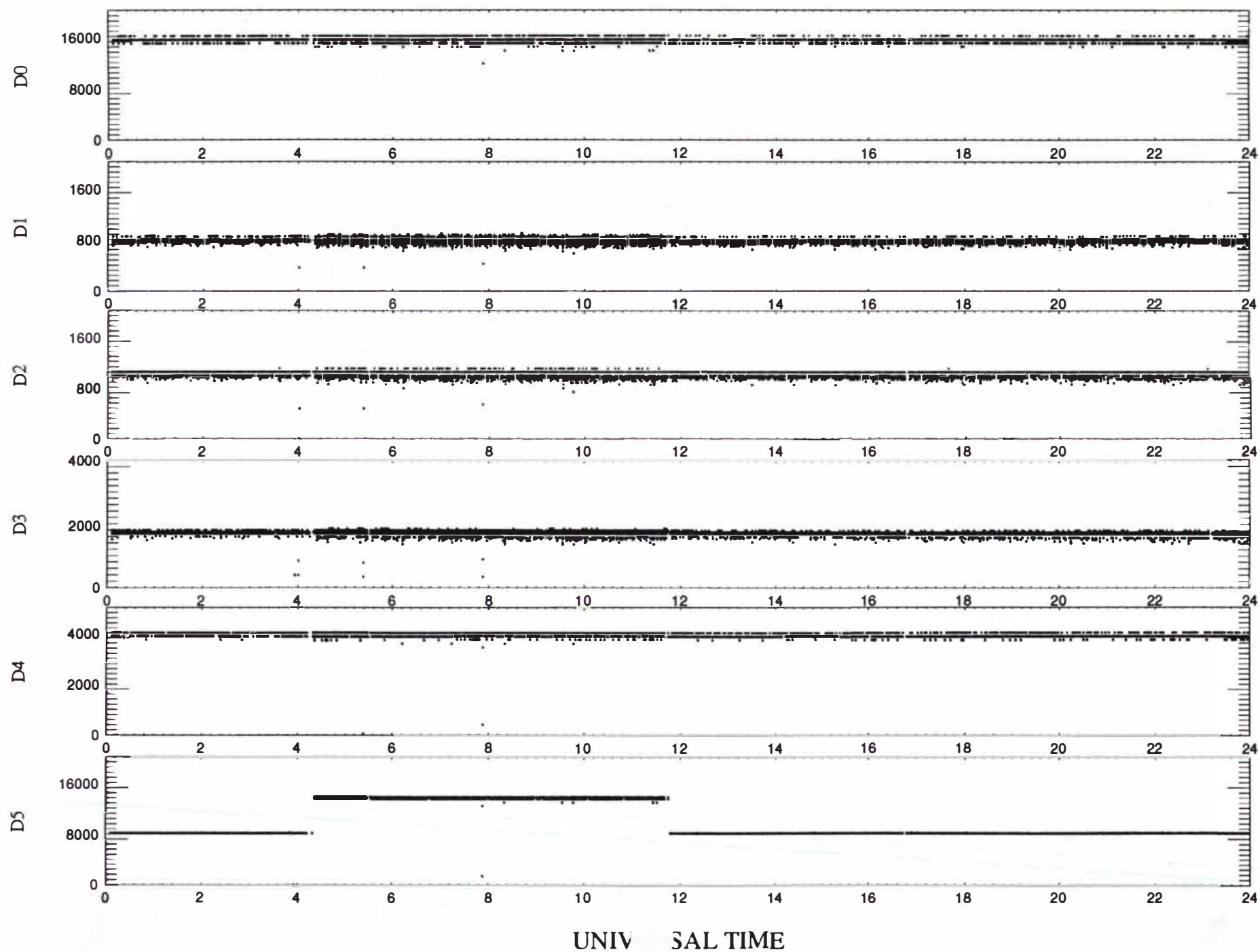
2 (0.5 - 4.0 Angstroms) Background not subtracted

[illegible]

CALIBRATION DATA INCLUDED



UNIVERSAL TIME



From BHAT@ssl.msfc.nasa.gov Tue Nov 3 14:38:53 1992
Date: Tue, 3 Nov 1992 16:38:27 -0600 (CST)
From: BHAT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 2038

Nw2

TIME: TJD=8928 SECONDS=10468

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=086.5 AZIMUTH=324.5 ERROR= DEGREES

COMMENTS:

THIS TRIGGER OCCURED SIMULTANEOUSLY WITH A X9.0 FLARE RECOREDED BY GOES.
LACK OF DATA PREVENTS US FROM GENERATING A TIME HISTORY, BUT IT LASTS MORE THAN
240 S. IT PROBABLY SHOWS STRONG SIGNAL ABOVE 300 KEV.

Yes

CATSEARCH PROGRAM

BATSE BURST # 2039
EVENT OF 1992 NOV 2 DAY OF YEAR=307
EVENT CROSSING TIME AT BATSE : 33797. S. OR 09:23:17.2
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 220.000 -9.400
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 2/11/ 92 IS:
RA= 165.180 DEC= -5.780 DIST= 5.739 AU
BATSE-ULYSSES DISTANCE = 858481096. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=125.59 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1666.51 SECS.
CROSSING TIME AT ULYSSES IS 32131. S. OR 08:55:30.7 +/- 428.99 SECONDS

ND

From BHAT@ssl.msfc.nasa.gov Tue Nov 3 14:47:41 1992
Date: Tue, 3 Nov 1992 16:47:08 -0600 (CST)
From: BHAT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 2039

TIME: TJD=8928 SECONDS=33797

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=085.8 AZIMUTH=314.1 ERROR= DEGREES

COMMENTS:

THIS IS A BURST LASTING FOR ABOUT 1.5 S. ITS TIME HISTORY CONSISTS OF ONE PULSE
WITH VERY SHORT RISE AND DECAY TIMES. SEVERAL NARROW PULSES ARE SUPERPOSED ON
THE SINGLE PEAK. SIGNIFICANT SIGNAL IS SEEN ABOVE 300 KEV.

9 / 6 / 94

ULYSSES RT

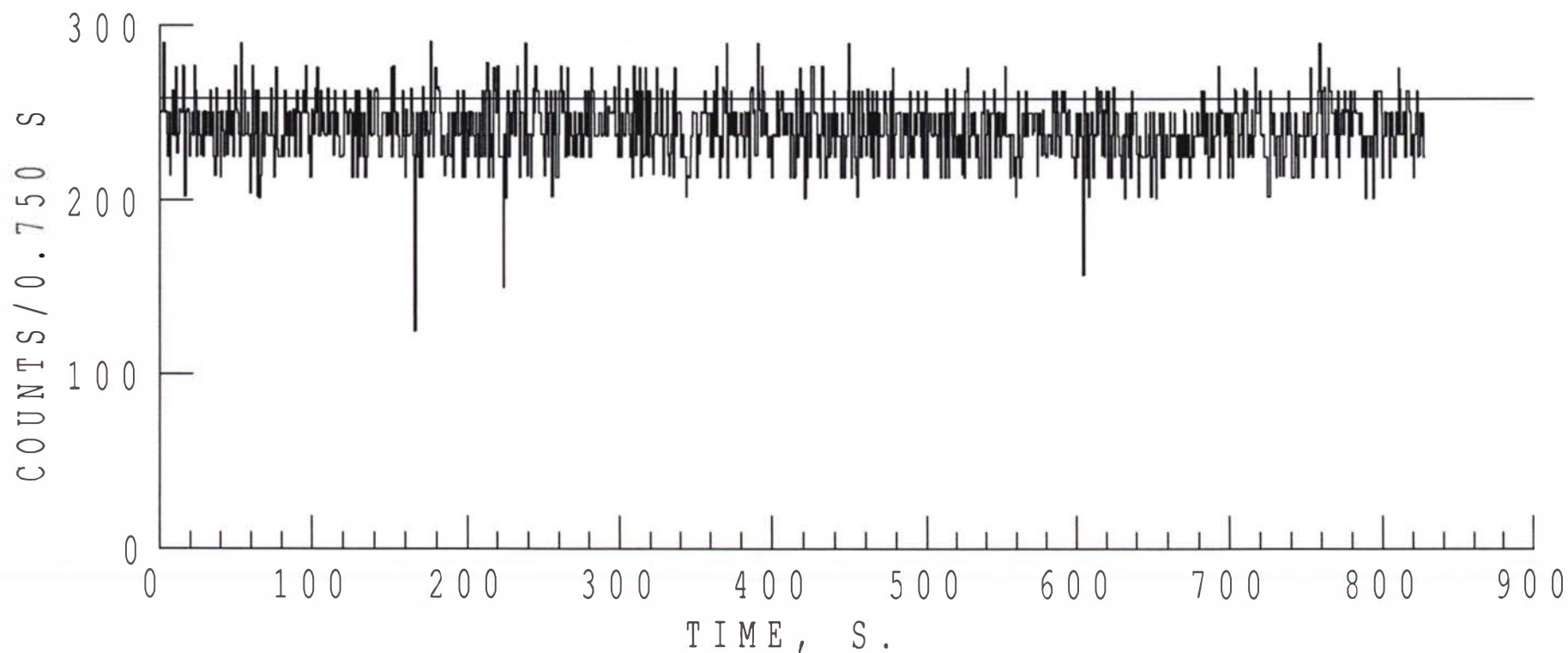
2 / 11 / 92 31716.010 s

0.250 S INTERVALS REGROUPED BY 3

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



CATSEARCH PROGRAM

BATSE BURST # 2040
EVENT OF 1992 NOV 2 DAY OF YEAR=307
EVENT CROSSING TIME AT BATSE : 56829. S. OR 15:47:08.5
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 233.500 -19.500
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 2/11/ 92 IS:
RA= 165.180 DEC= -5.780 DIST= 5.739 AU
BATSE-ULYSSES DISTANCE = 858481096. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=112.34 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1088.39 SECS.
CROSSING TIME AT ULYSSES IS 55740. S. OR 15:29:00.1 +/- 493.32 SECONDS

NO

From BHAT@ssl.msfc.nasa.gov Tue Nov 3 14:55:02 1992
Date: Tue, 3 Nov 1992 16:54:37 -0600 (CST)
From: BHAT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1458

BATSE BURST TRIGGER

NO.: 2040

TIME: TJD=8928 SECONDS=56828

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=082.7 AZIMUTH=340.8 ERROR= DEGREES

COMMENTS:

THIS IS ANOTHER BURST WITH VERY SIMILAR TIME HISTORY AS TRIGGER NO. 2039 AND FROM A LOCATION CLOSE TO THAT OF TRIG. NO. 2039! THE TIME HISTORY CONSISTS OF A SINGLE PULSE WITH SHORT RISE AND DECAY TIMES. 2-3 SHARP PEAKS ARE SUPERPOSED ON THE SINGLE PEAK PROFILE. IT SHOWS SIGNAL ABOVE 300 KEV.

CATSEARCH PROGRAM

ATSE BURST # 2040
EVENT OF 1992 NOV 2 DAY OF YEAR=307
EVENT CROSSING TIME AT BATSE : 56828. S. OR 15:47:08.4
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 218.080 -25.670
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 2/11/ 92 IS:
RA= 165.180 DEC= -5.780 DIST= 5.739 AU
BATSE-ULYSSES DISTANCE = 858481096. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=125.77 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1673.86 SECS.
CROSSING TIME AT ULYSSES IS 55155. S. OR 15:19:14.6 +/- 427.96 SECONDS

9 / 11 / 95

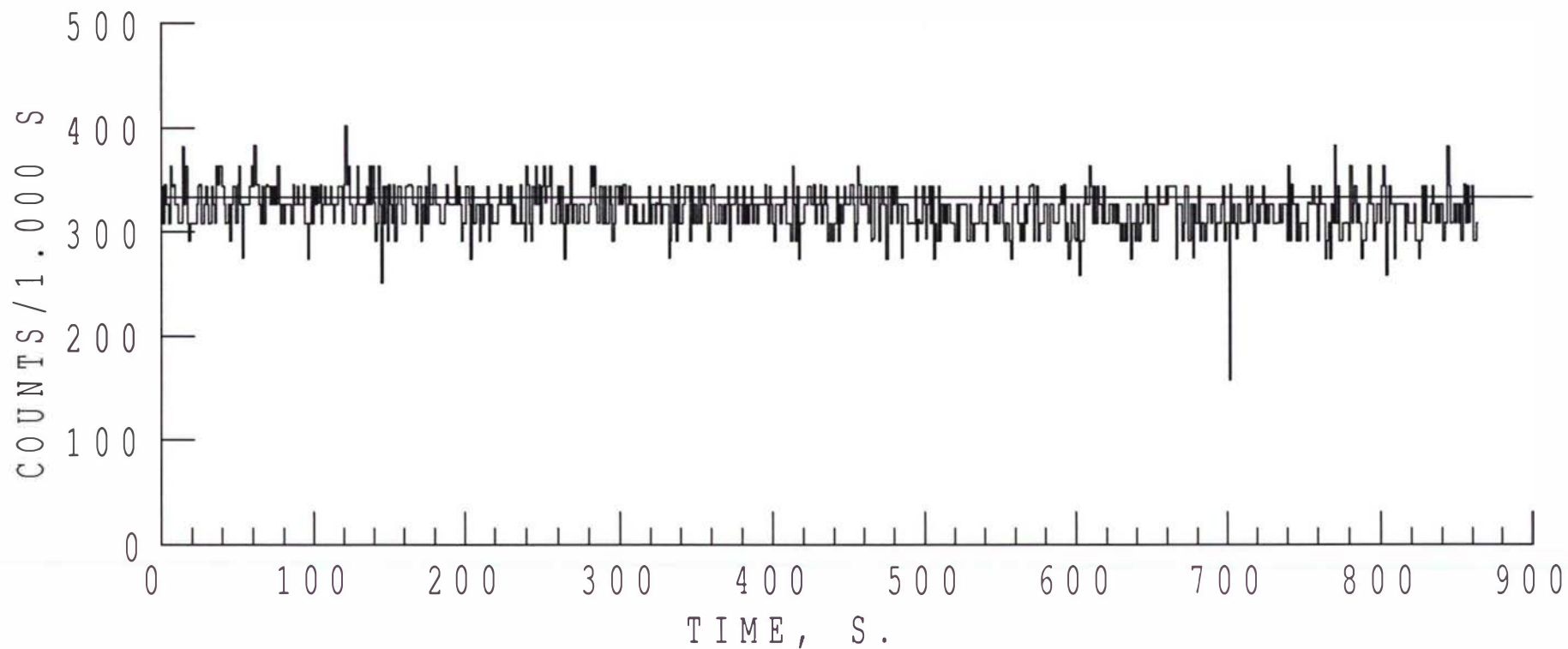
ULYSSES RT

2 / 11 / 92 54720.121 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



CATSEARCH PROGRAM

BATSE BURST # 2041
EVENT OF 1992 NOV 2 DAY OF YEAR=307
EVENT CROSSING TIME AT BATSE : 82808. S. OR 23:00:08.4
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 134.400 -30.400
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 2/11/ 92 IS:
RA= 165.180 DEC= -5.780 DIST= 5.739 AU
BATSE-ULYSSES DISTANCE = 858481096. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=142.02 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2257.11 SECS.
CROSSING TIME AT ULYSSES IS 80551. S. OR 22:22:31.3 +/- 321.68 SECONDS

ND

From BHAT@ssl.msfc.nasa.gov Tue Nov 3 15:06:48 1992
Date: Tue, 3 Nov 1992 17:06:06 -0600 (CST)
From: BHAT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1429

BATSE BURST TRIGGER

NO.: 2041

TIME: TJD=8928 SECONDS=82808

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=132.6 AZIMUTH=028.0 ERROR= DEGREES

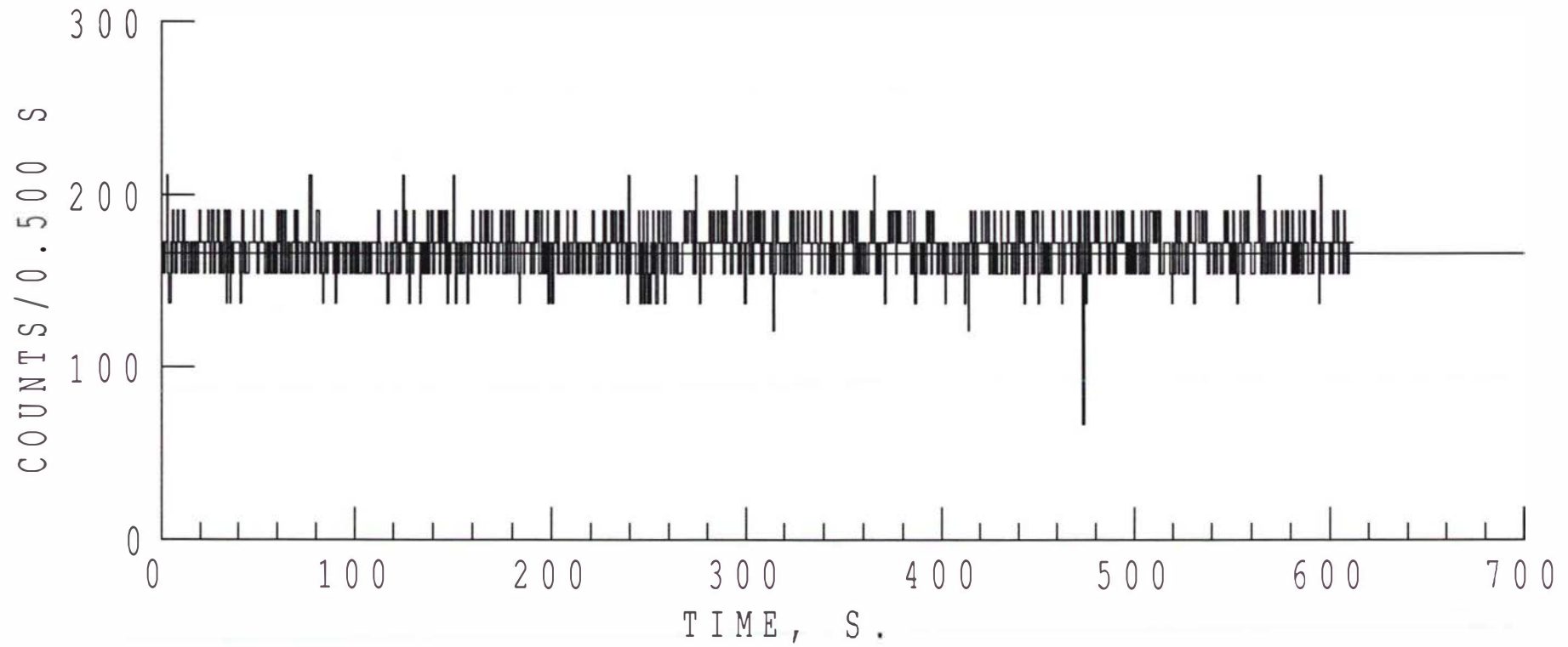
COMMENTS:

THIS BURST LASTS FOR ABOUT 5.5 S AND CONSISTS OF TWO SETS OF SHARP PEAKS
SEPARATED BY ABOUT 2.5 S WHILE THE SECOND SET IS MUCH WEAKER THAN THE FIRST.
THE FIRST SET CONSISTS OF ABOUT 4 SHARP PEAKS AND THE SECOND SET CONSISTS OF
ABOUT 2 PEAKS. SIGNIFICANT SIGNAL IS SEEN ABOVE 300 KEV.

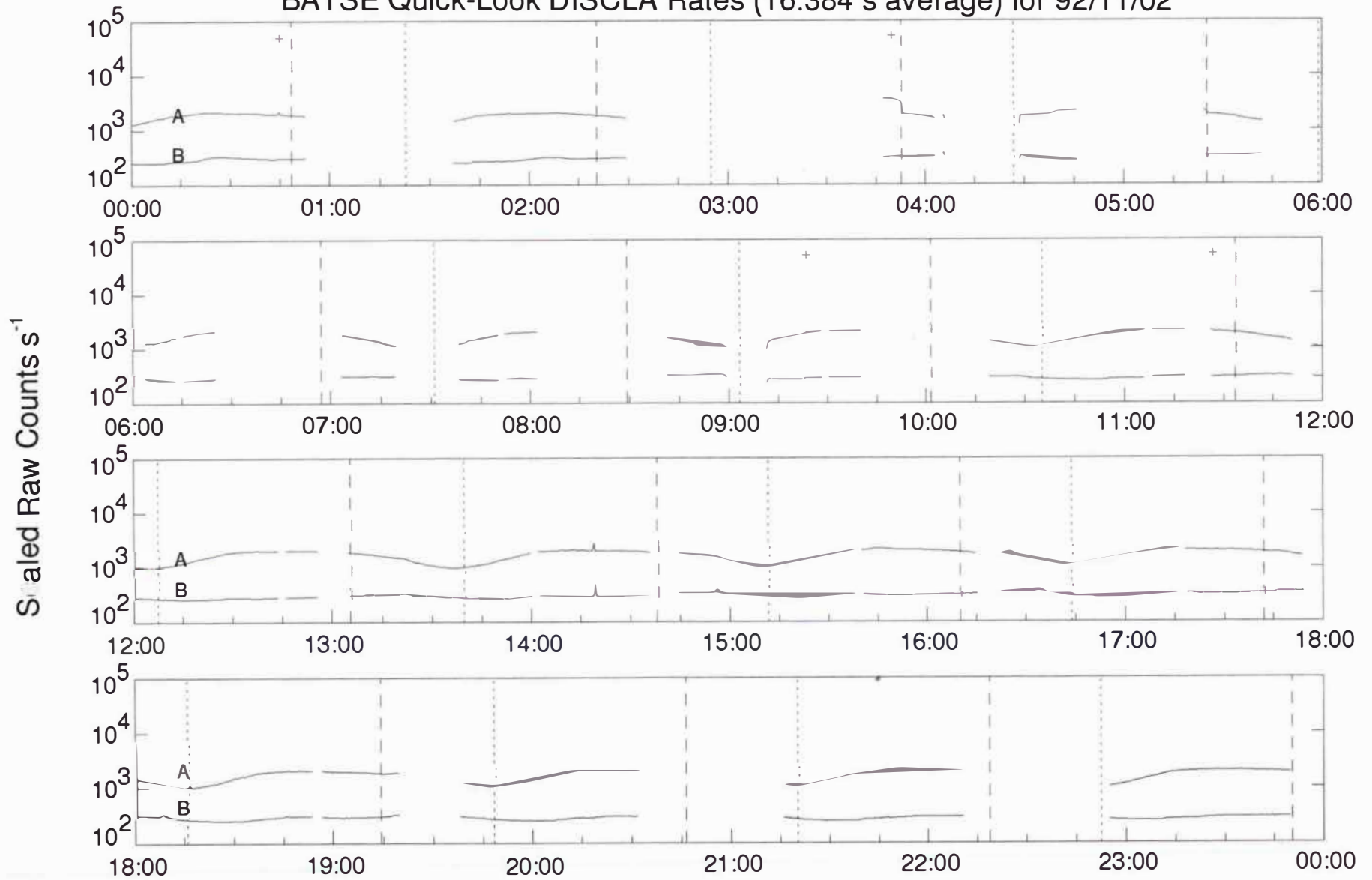
9 / 6 / 94

ULYSSES RT
2 / 11 / 92 80244.023 s
0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



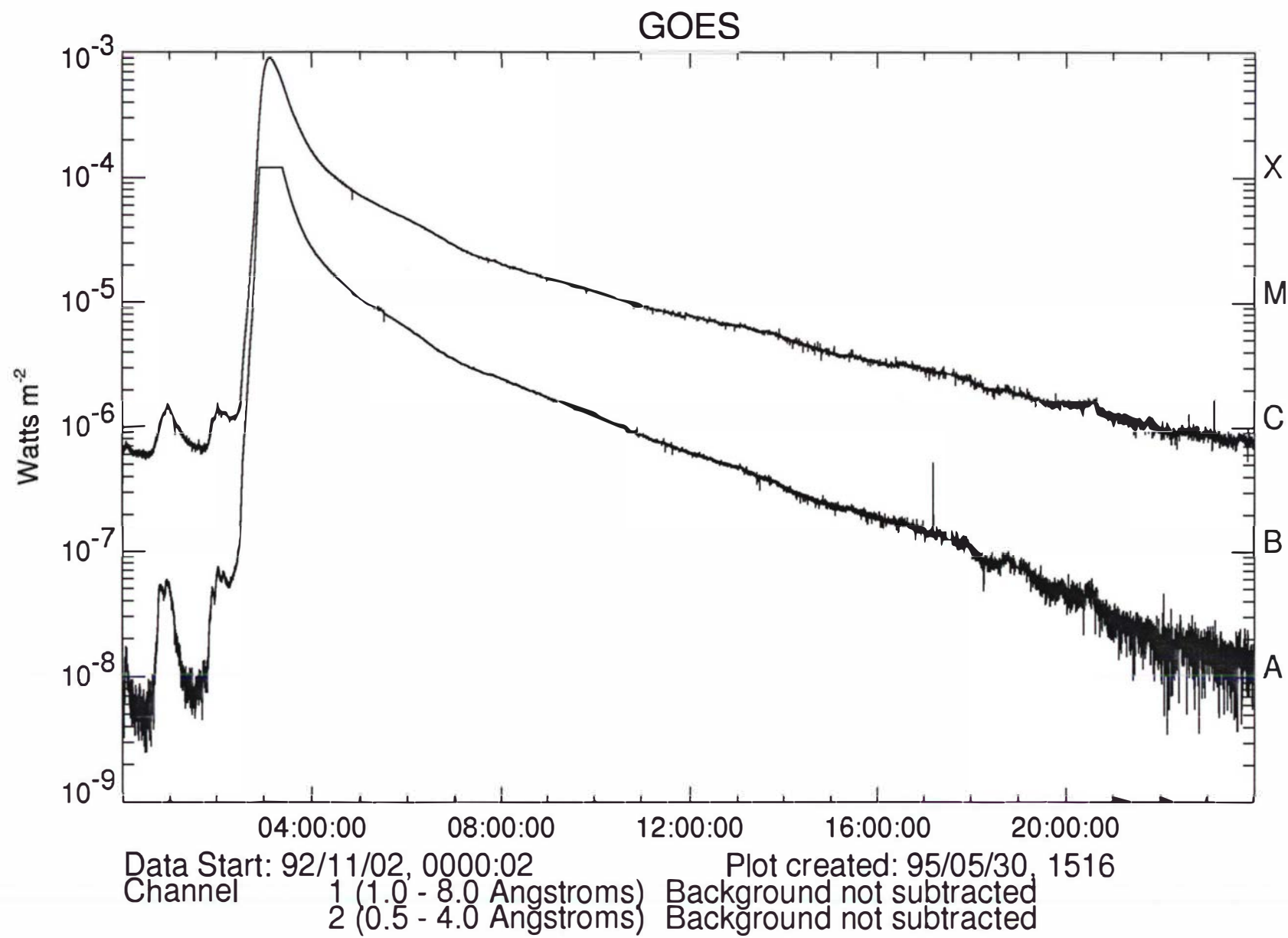
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/02



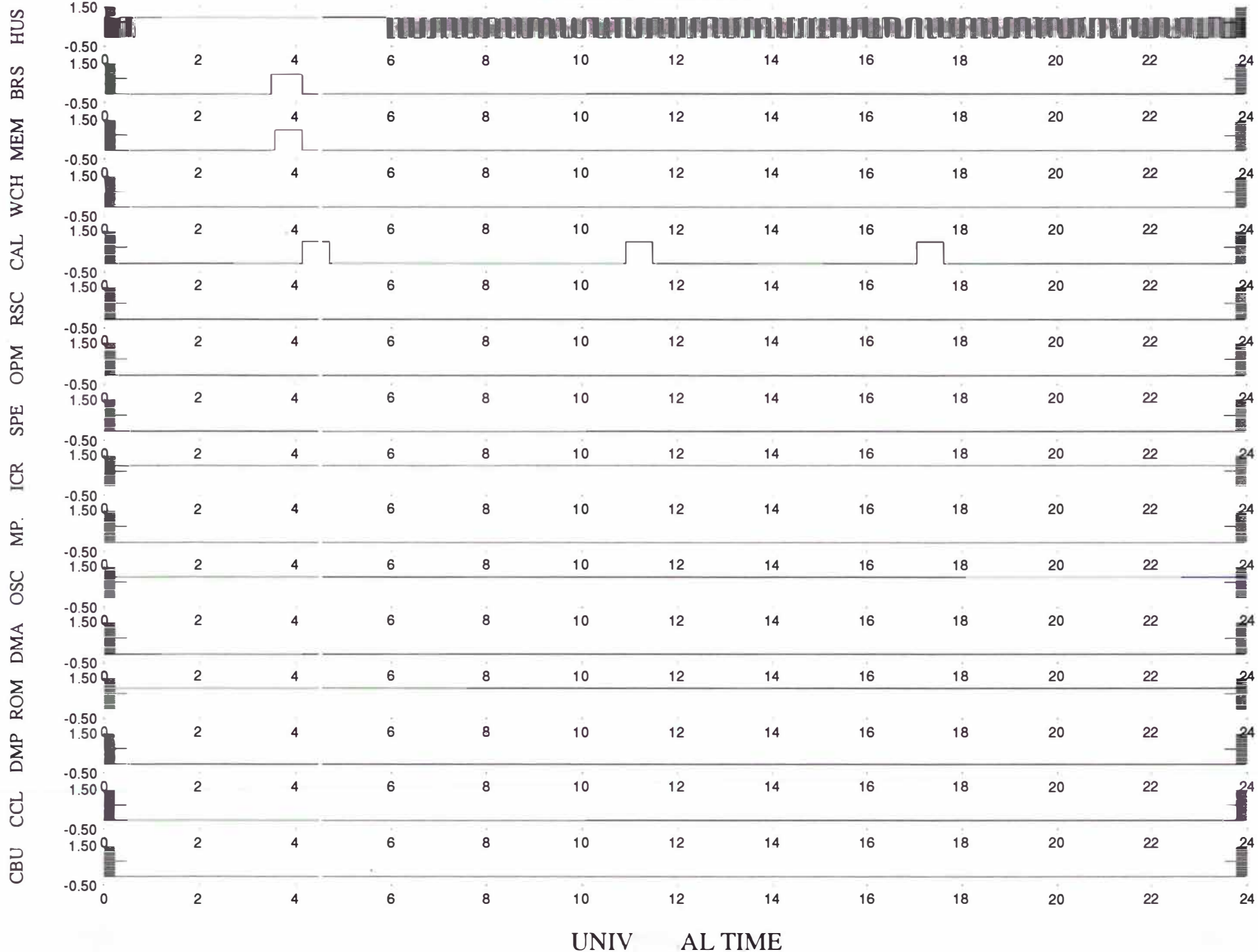
Current Time: 92/11/05, 2120 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

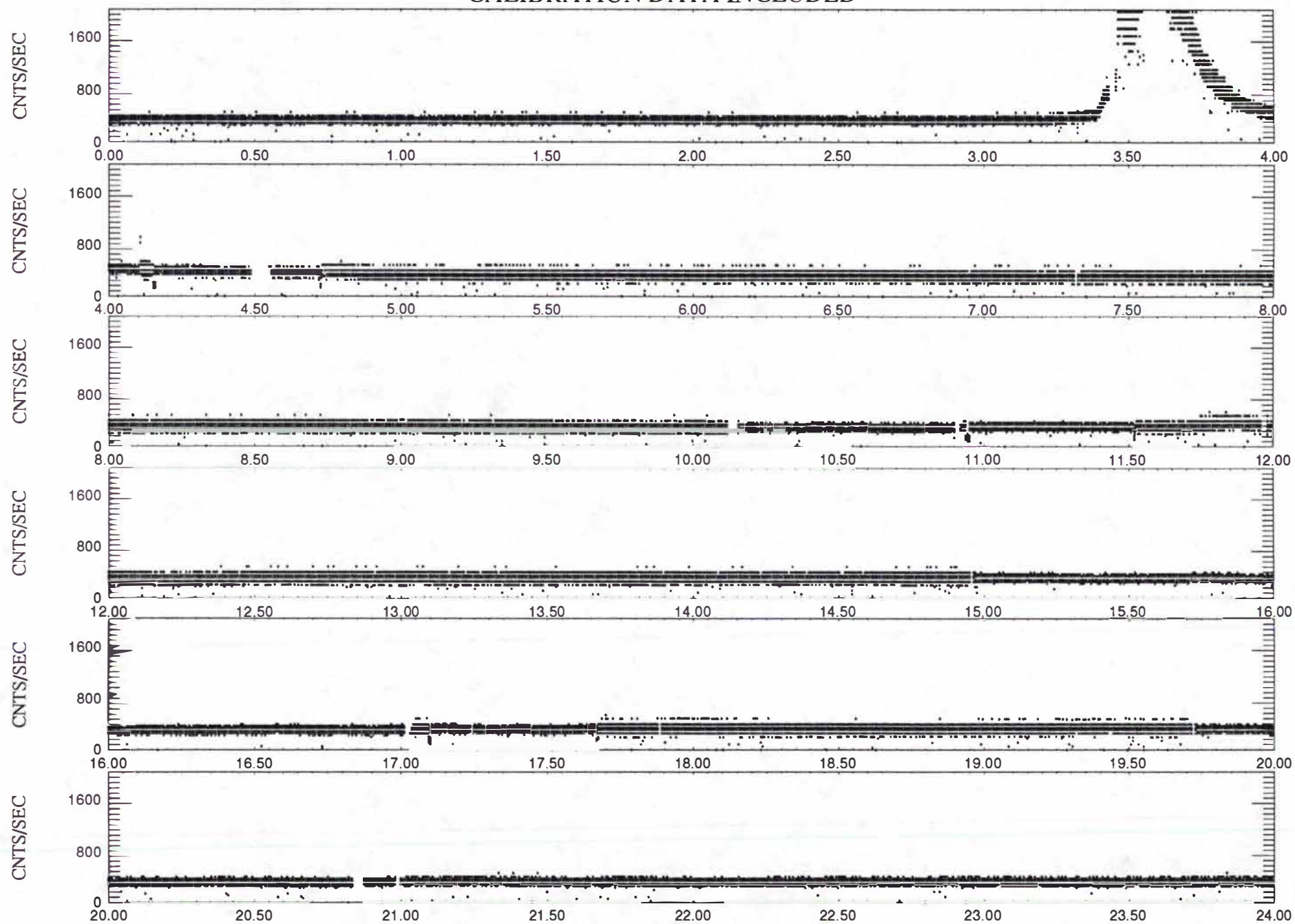
* Solar Burst Trigger
+ Solar Flare



BURST NUMBER 0

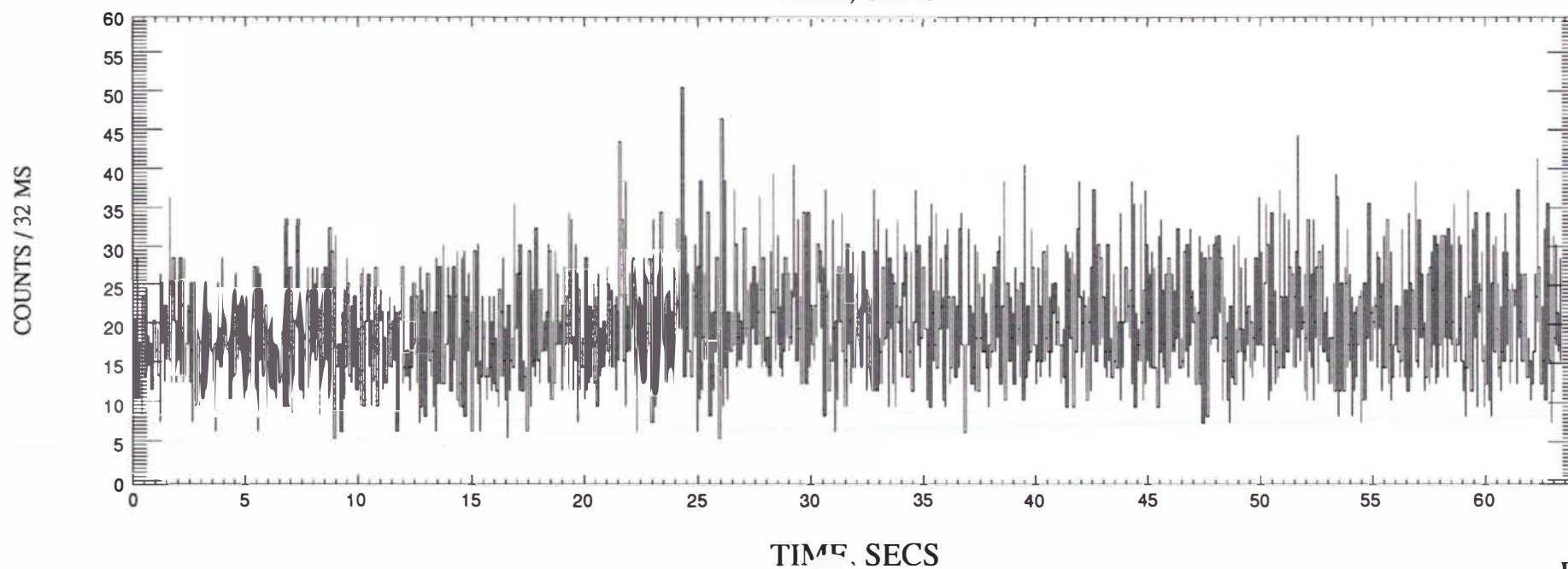
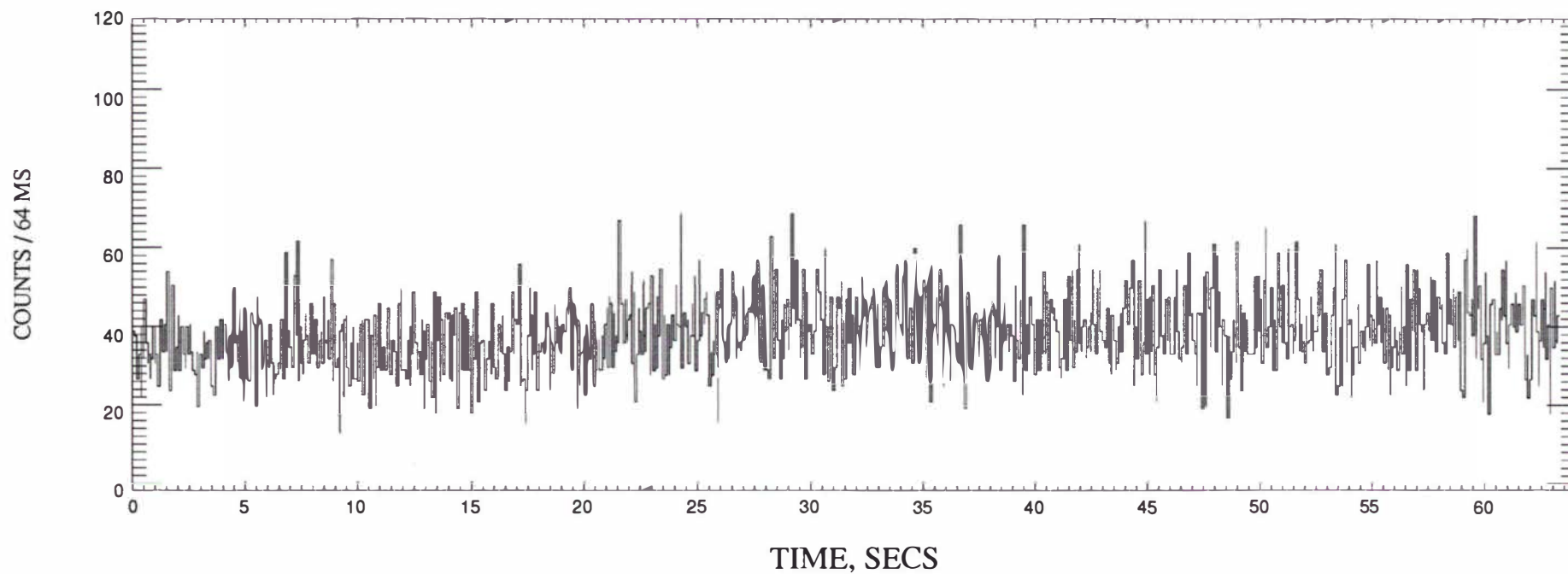


CALIBRATION DATA INCLUDED

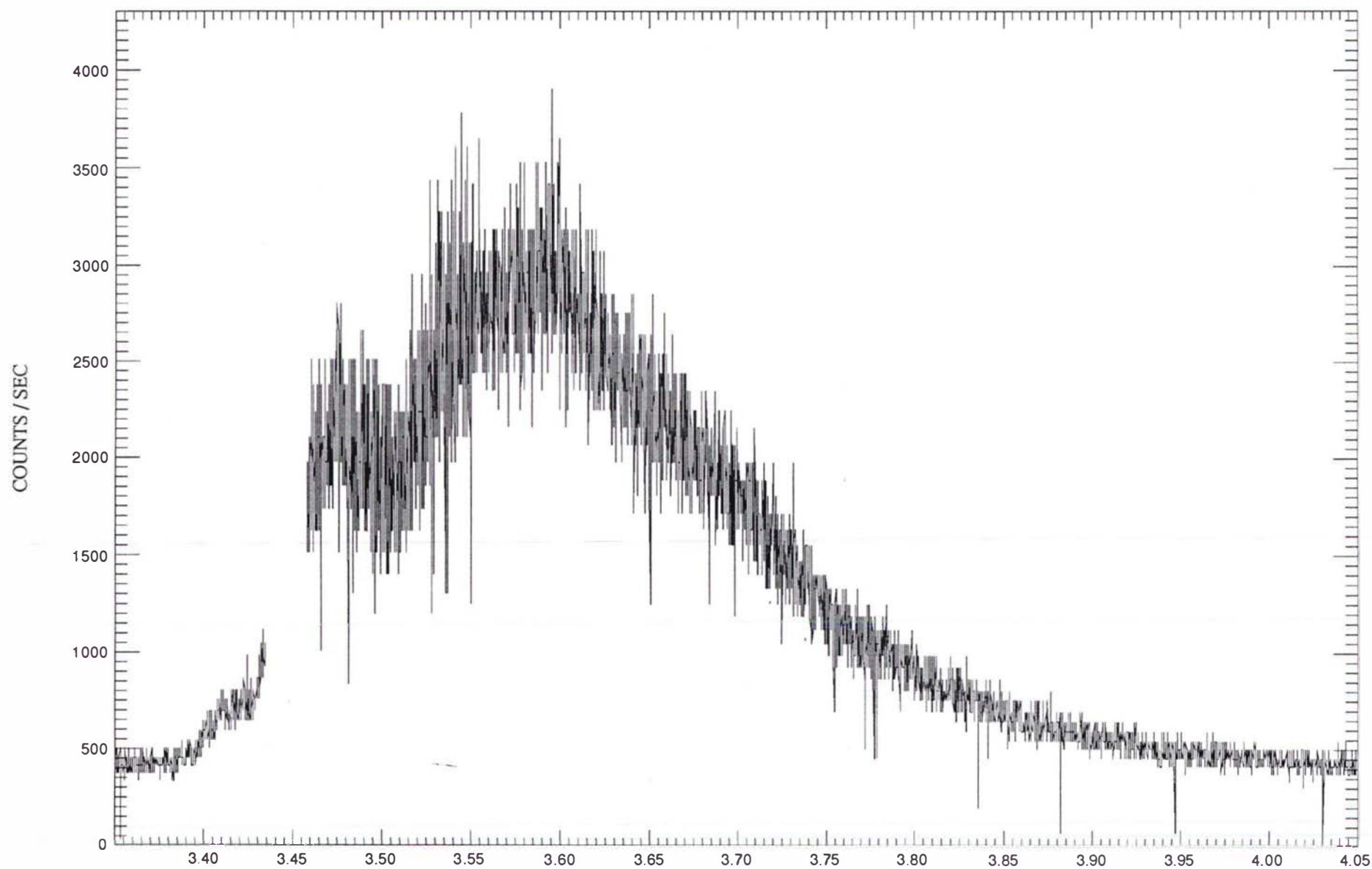


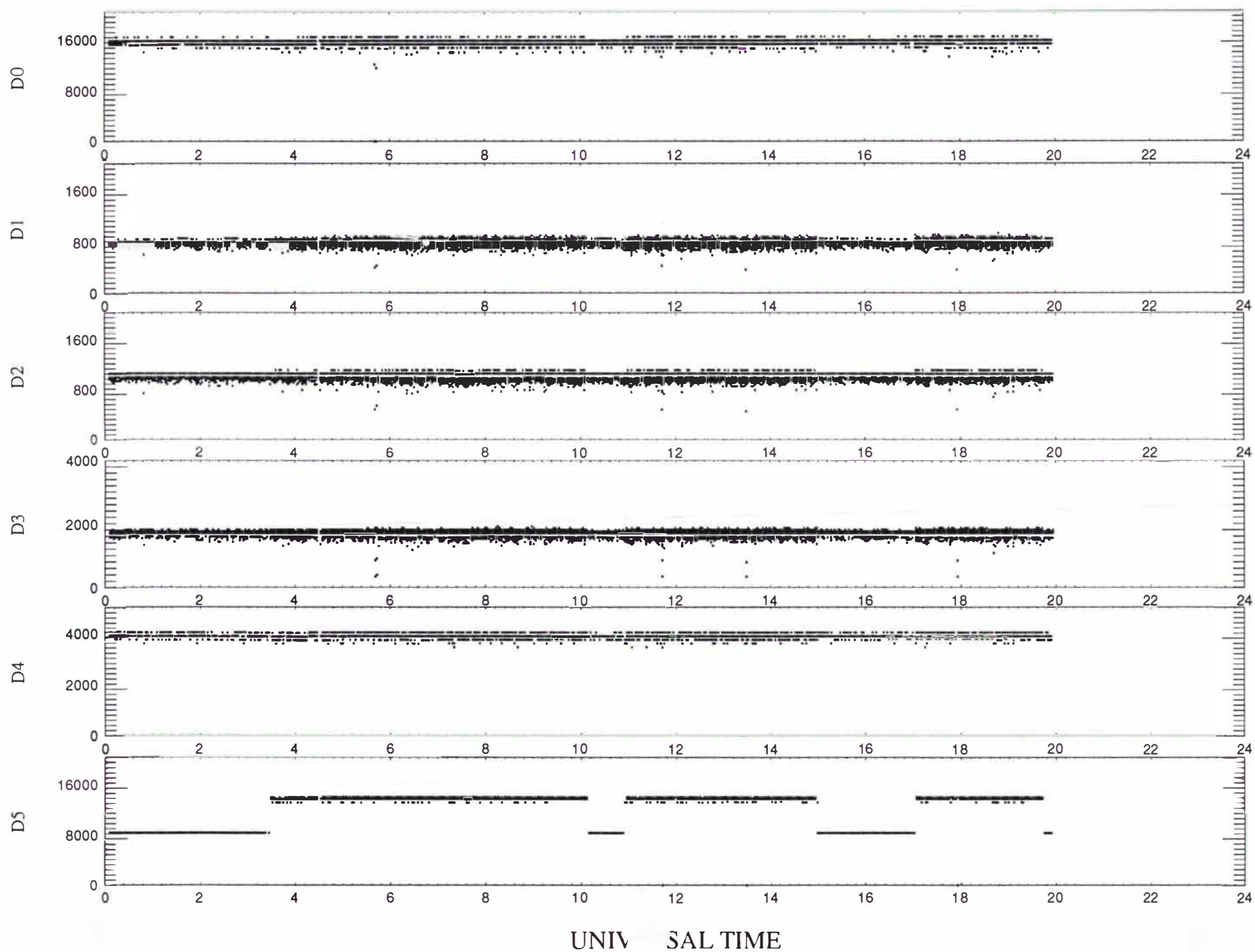
UNIVERSAL TIME

Burst Counter 0 at UT= 3.404185685052 h=12255.068 s

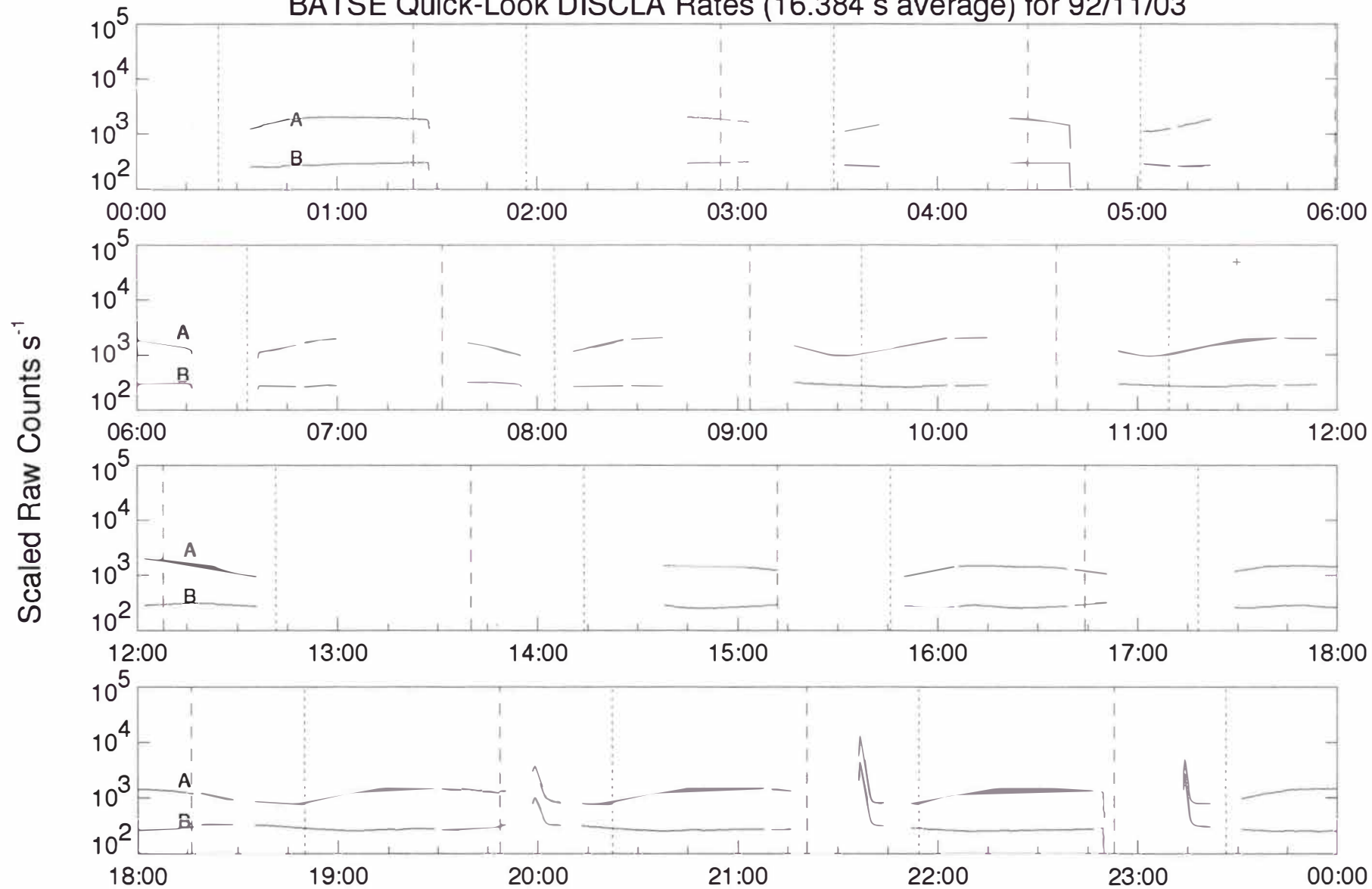


CALIBRATION DATA INCLUDED





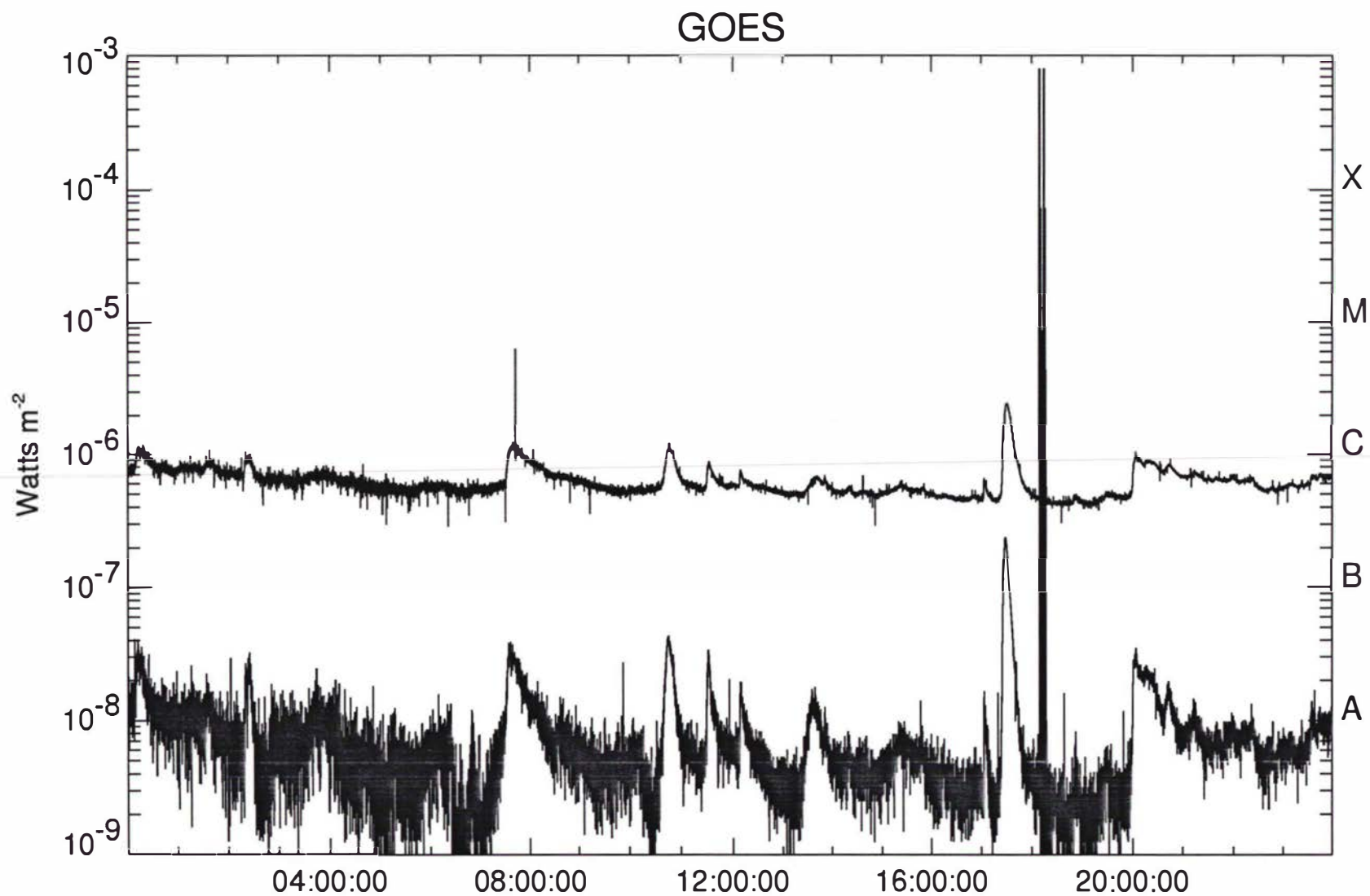
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/03



Current Time: 92/11/05, 2121 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

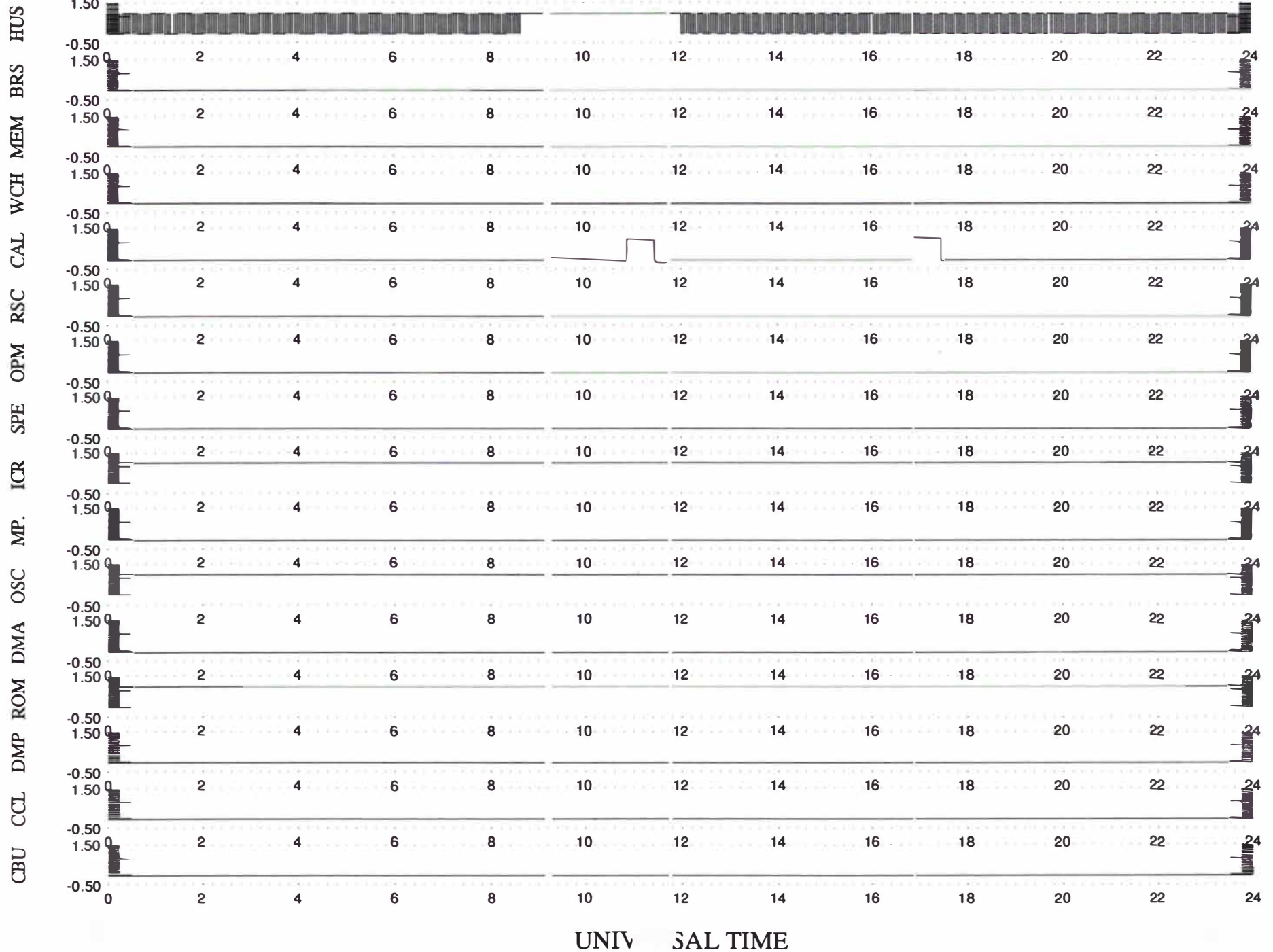
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

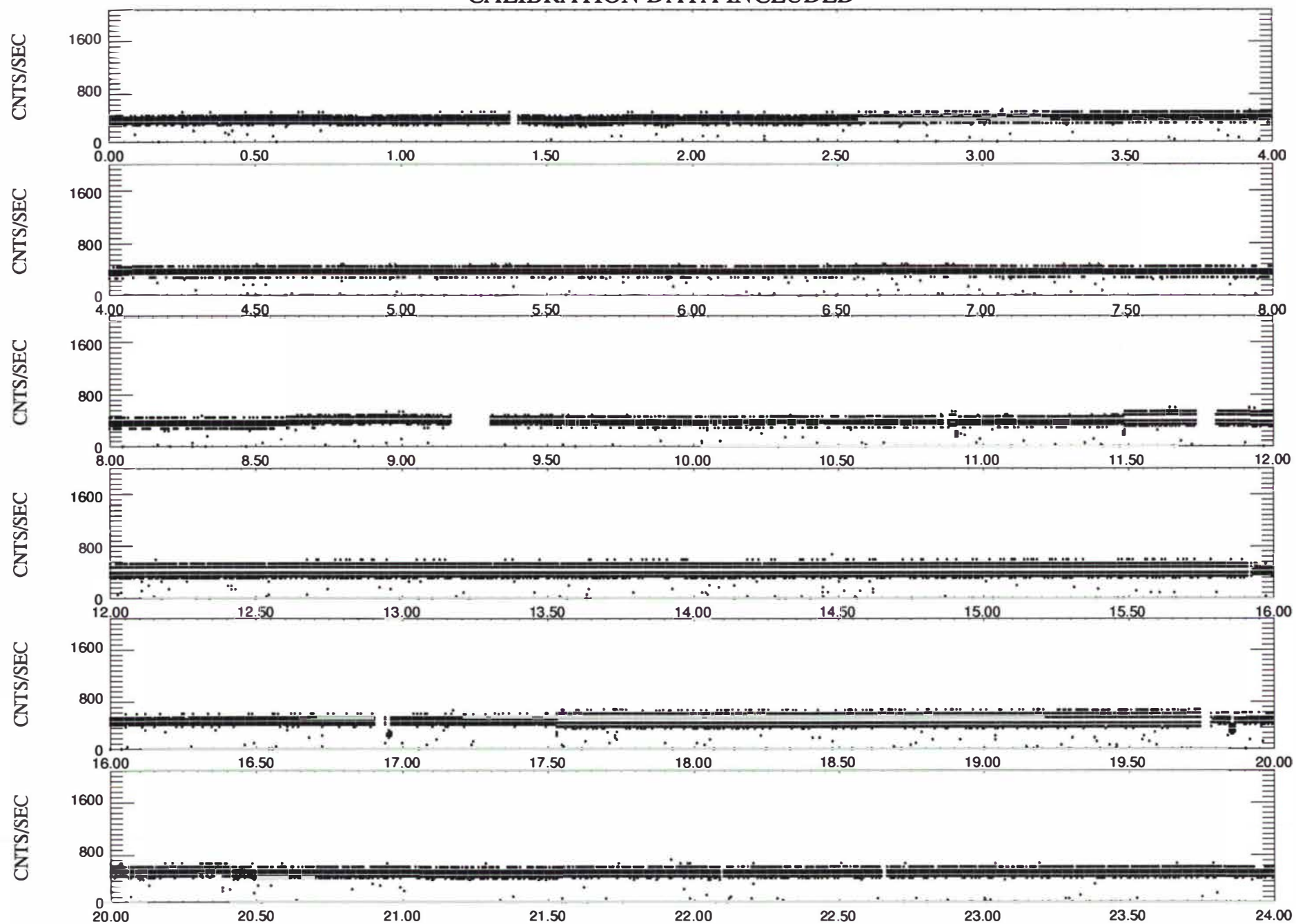


Data Start: 92/11/03, 0000:00 Plot created: 95/05/30, 1519
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
 2 (0.5 - 4.0 Angstroms) Background not subtracted

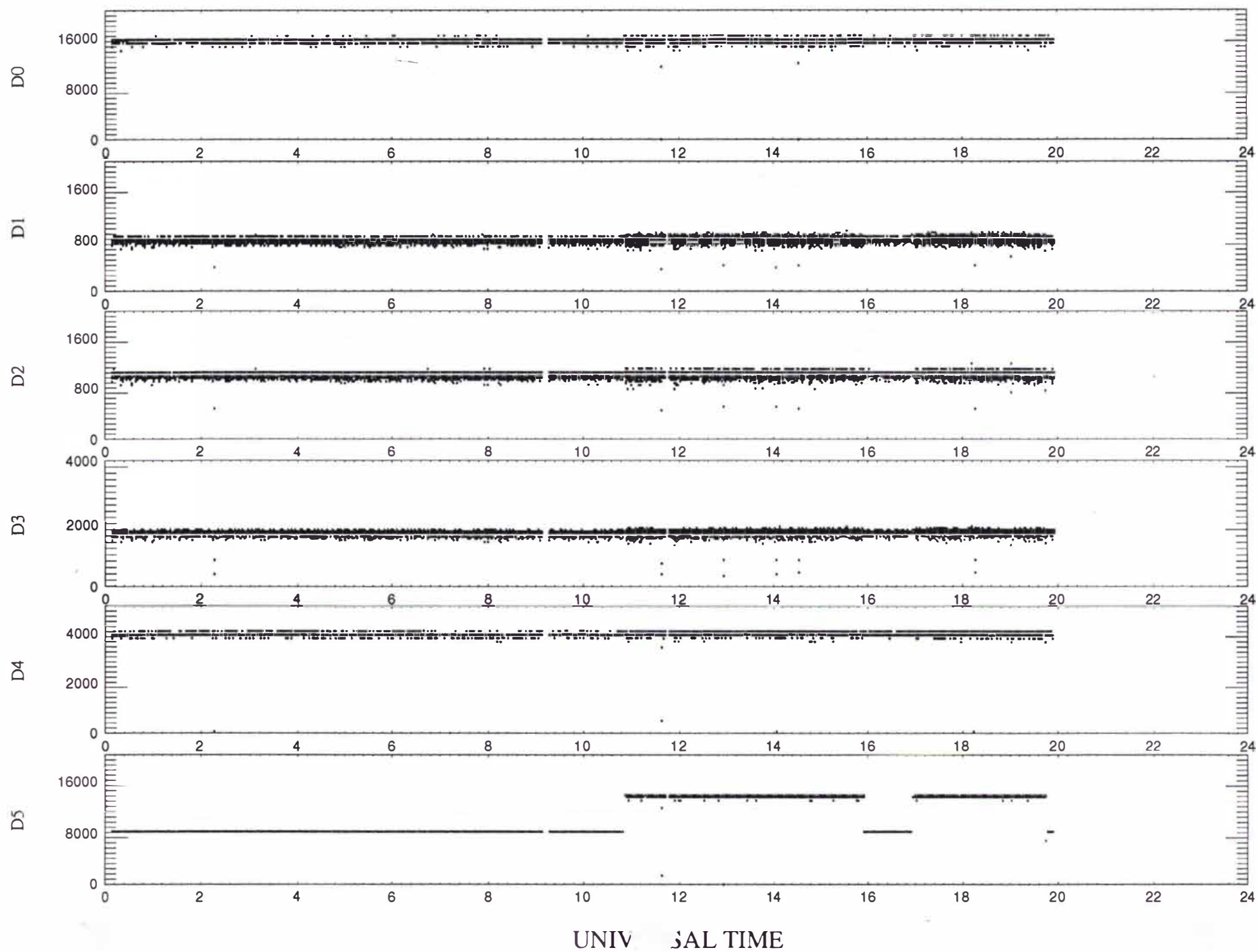
NO BURST (0)



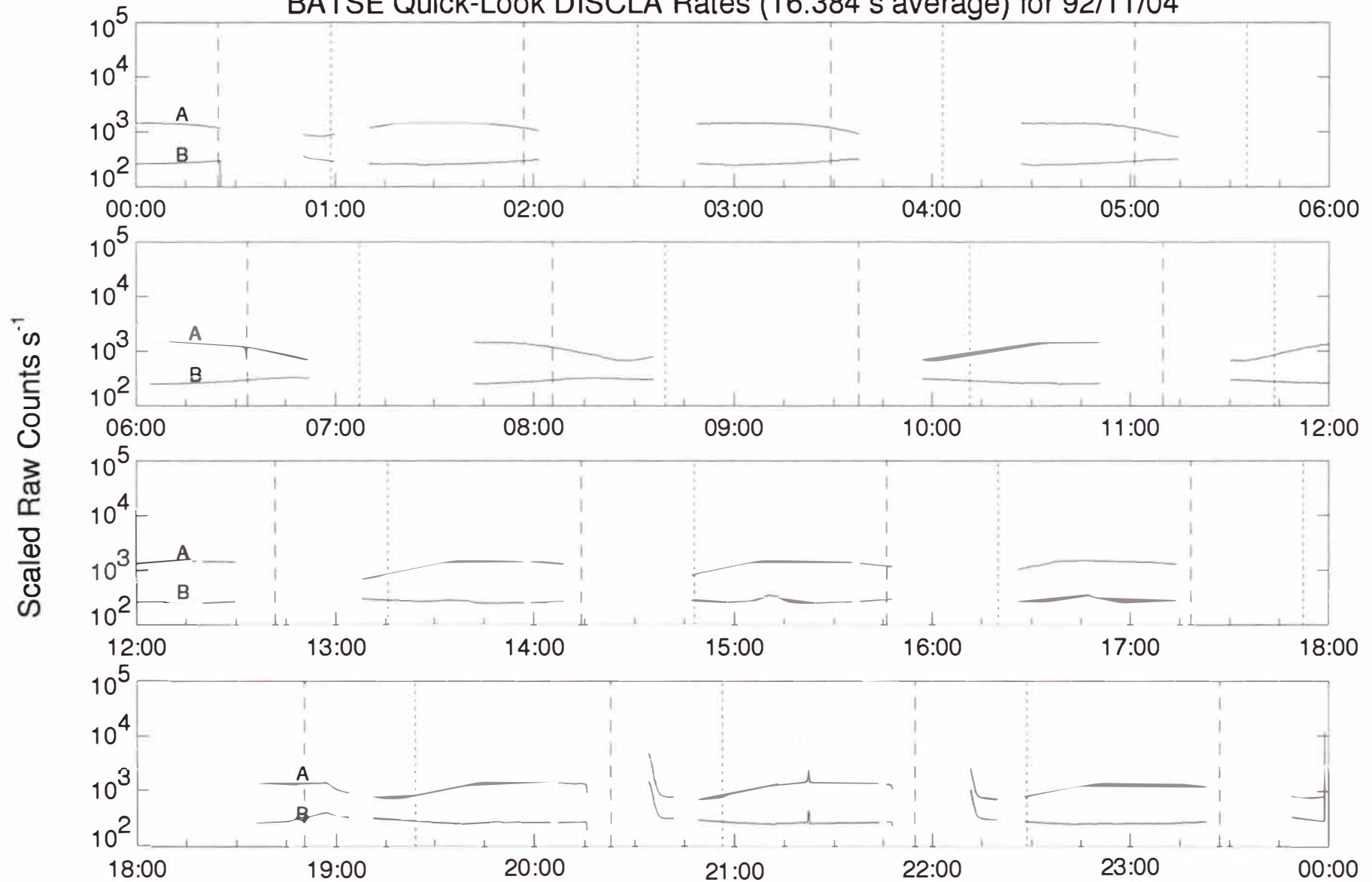
CALIBRATION DATA INCLUDED



UNIV 3AL TIME



BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/04



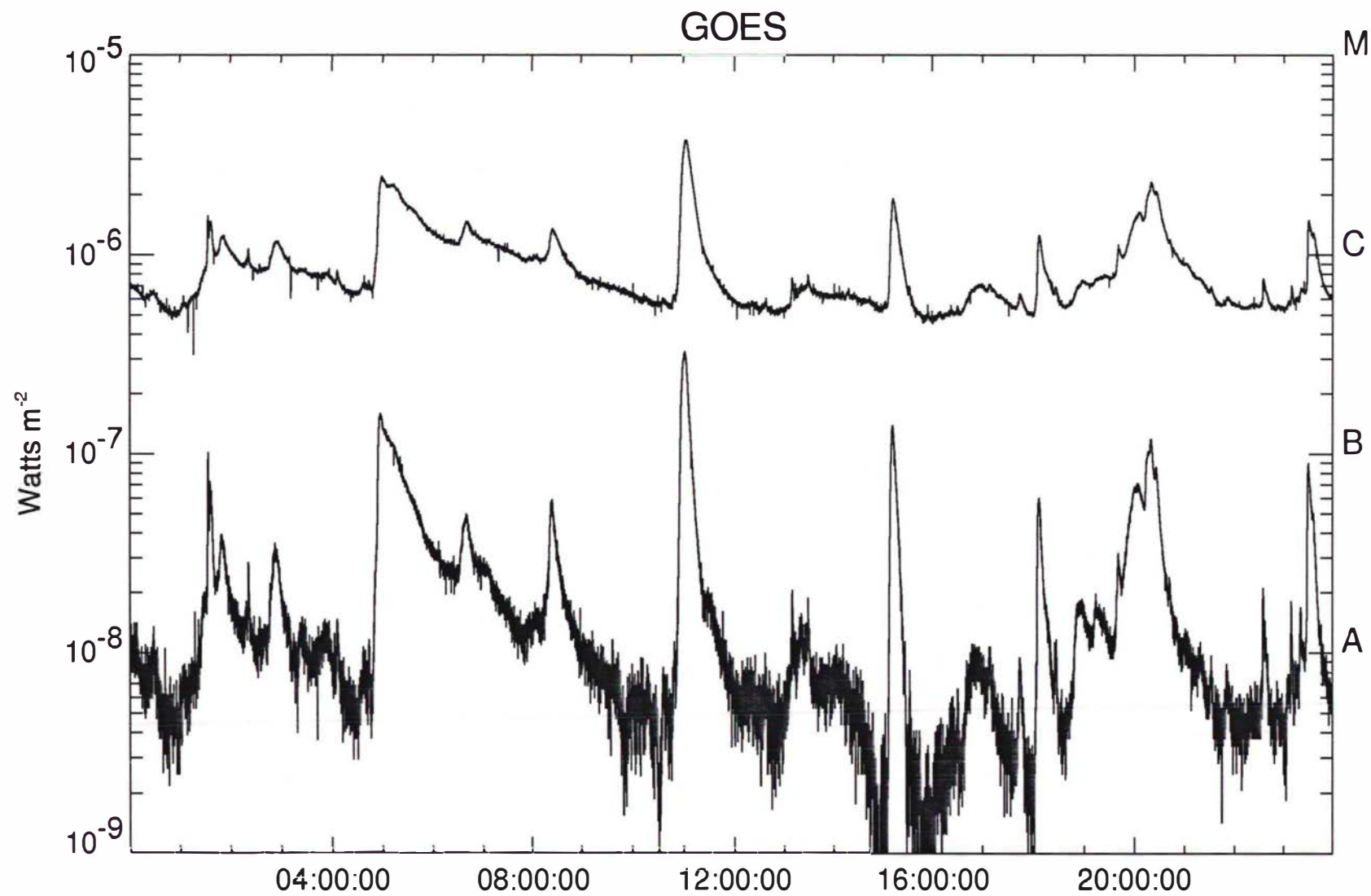
Current Time: 92/11/05, 2122 EDT

A: Channel 1 Most Sunward LAD

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

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare



Data Start: 92/11/04, 0000:01

Plot created: 95/05/30, 1523

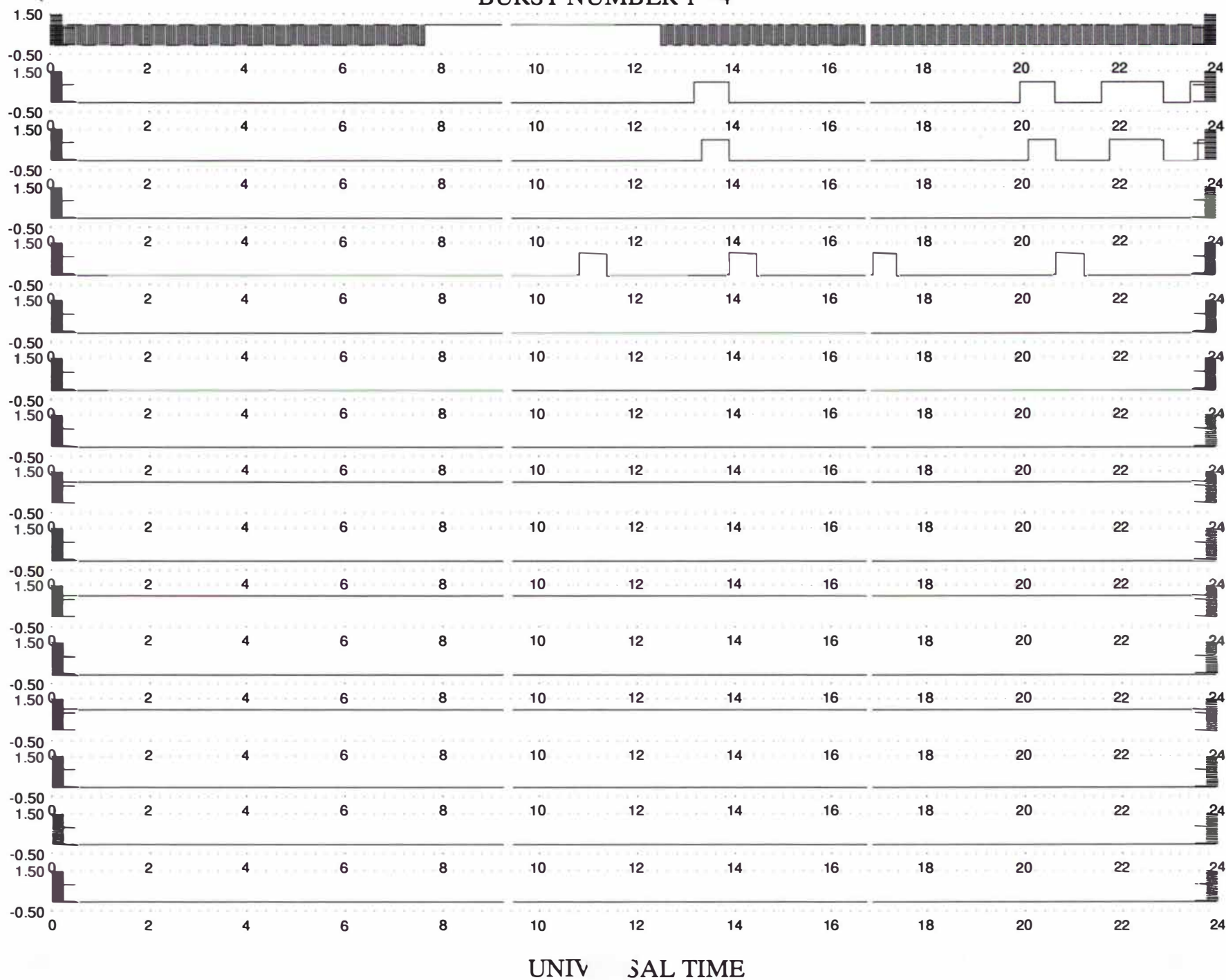
Channel 1 (1.0 - 8.0 Angstroms)

Channel 2 (0.5 - 4.0 Angstroms)

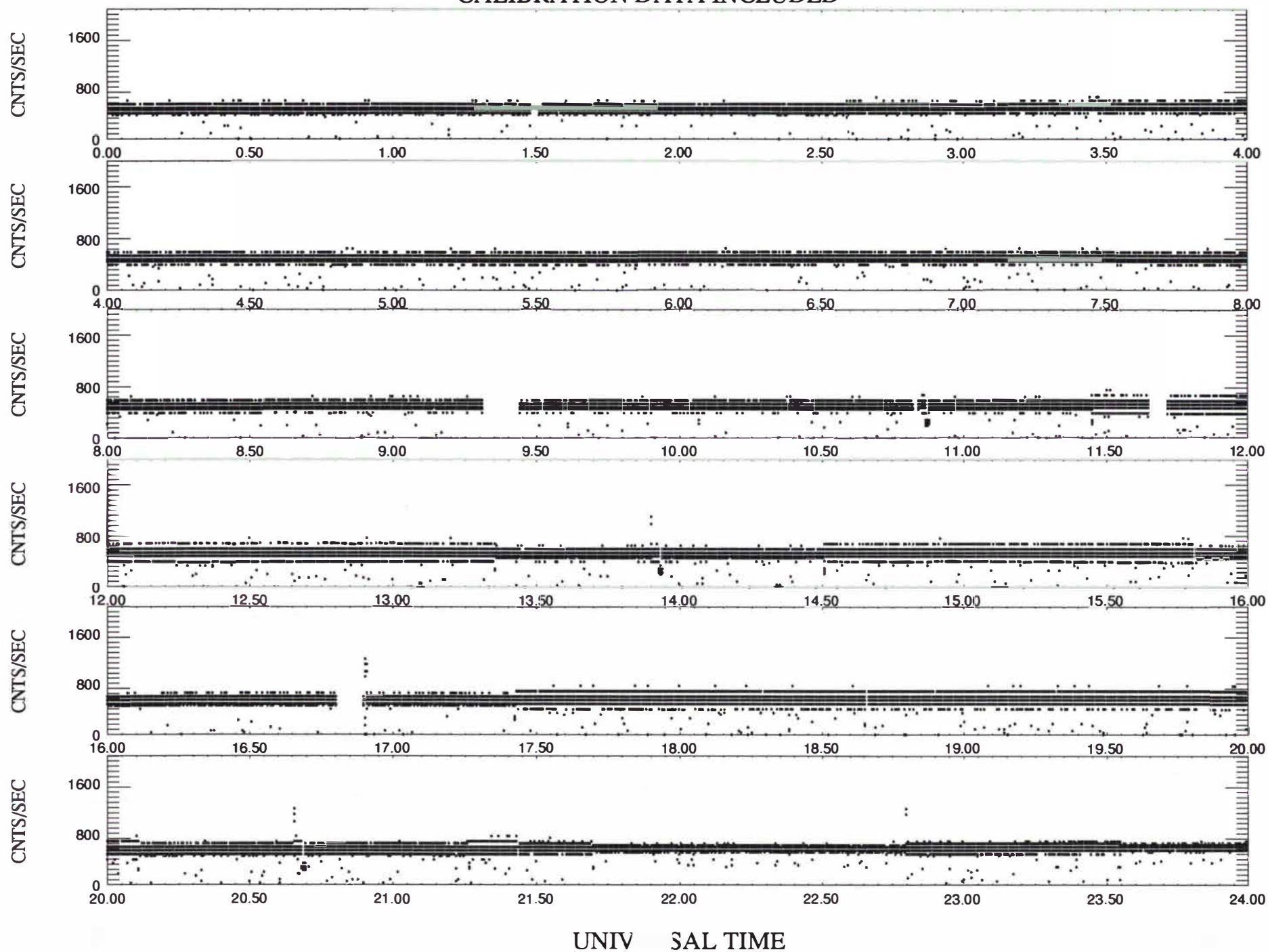
Background not subtracted

Background not subtracted

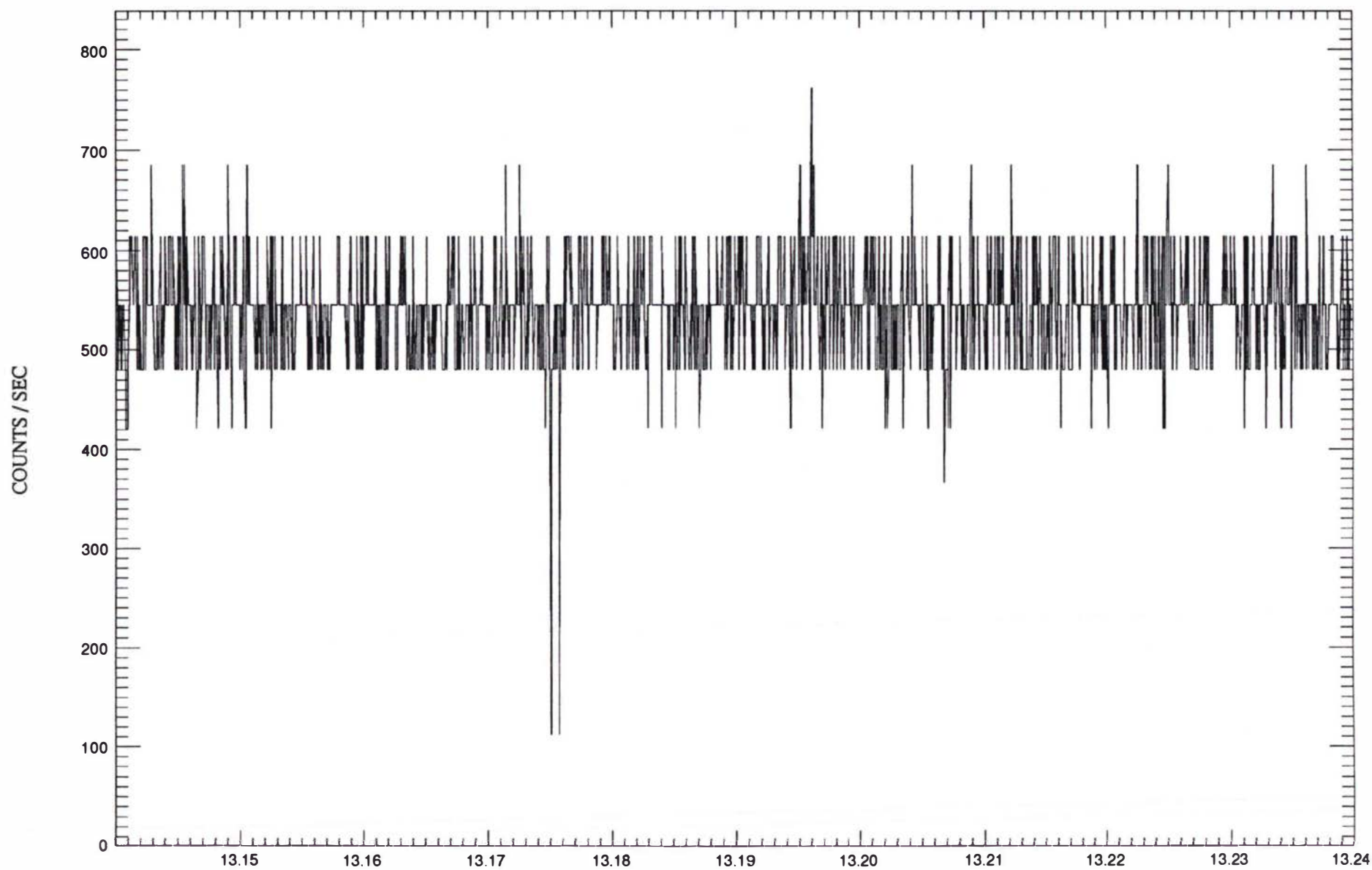
CBU	CCL	DMP	ROM	DMA	OSC	MP.	ICR	SPE	OPM	RSC	CAL	WCH	MEM	BRS	HUS
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



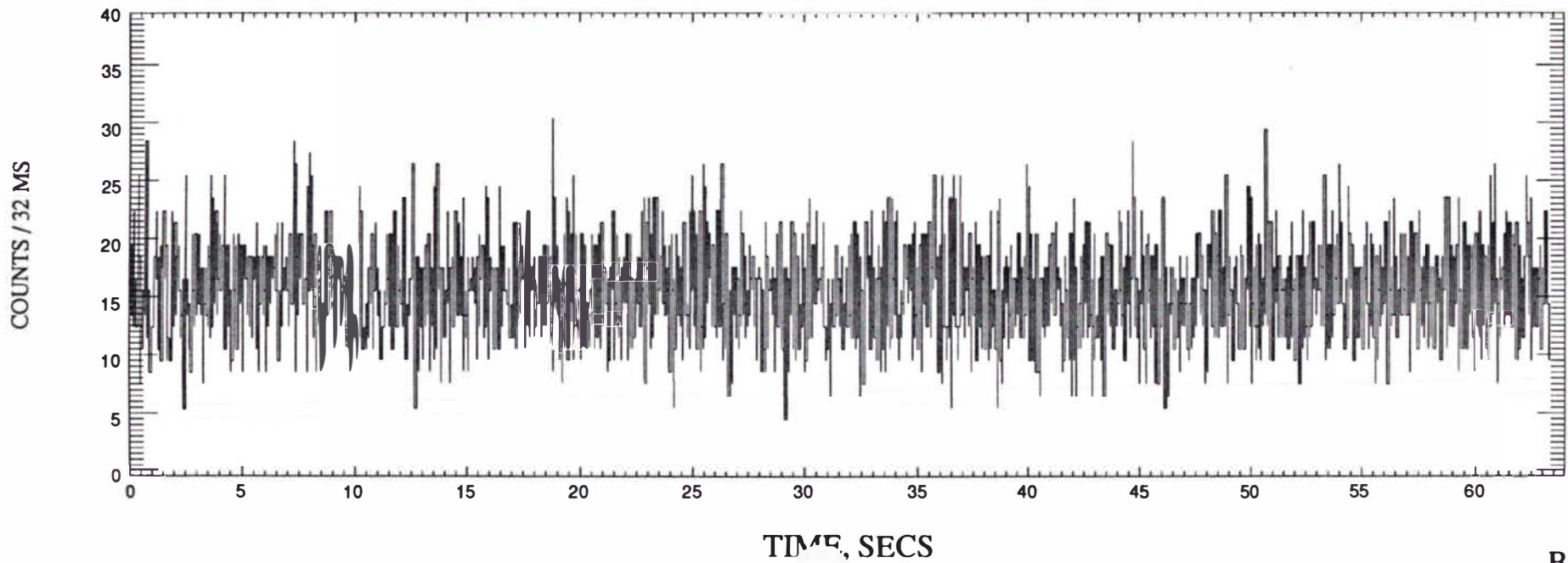
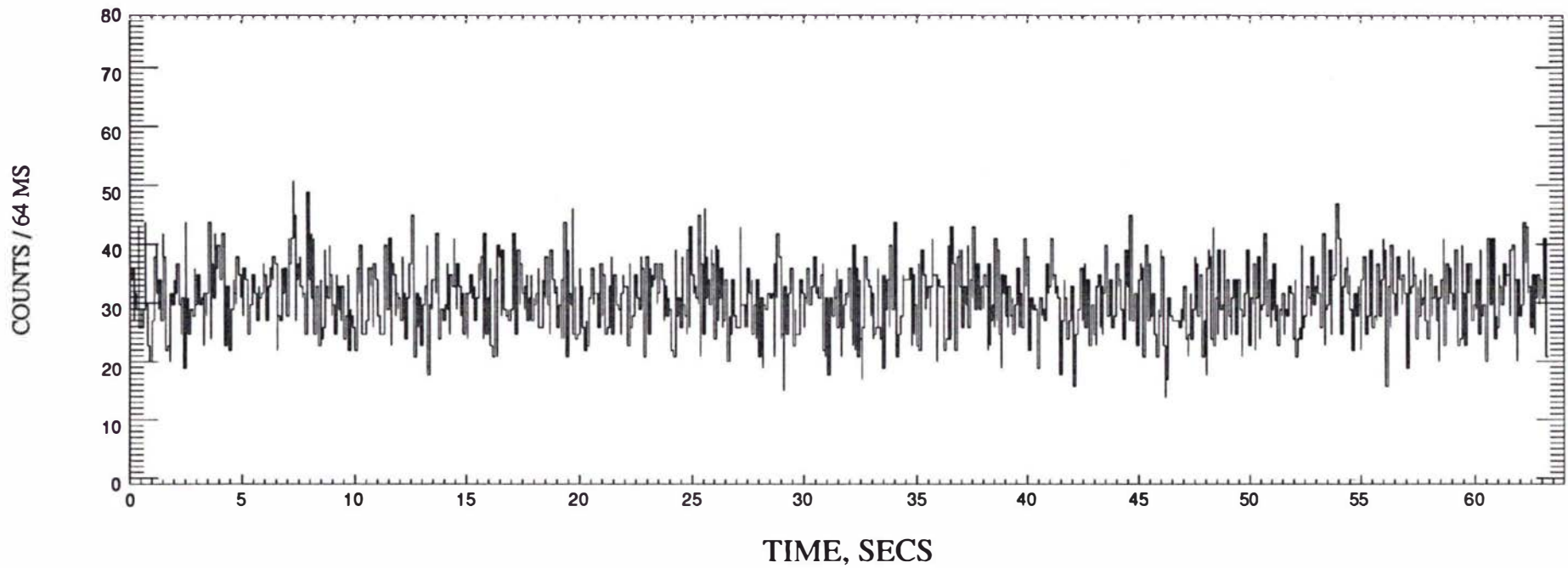
CALIBRATION DATA INCLUDED



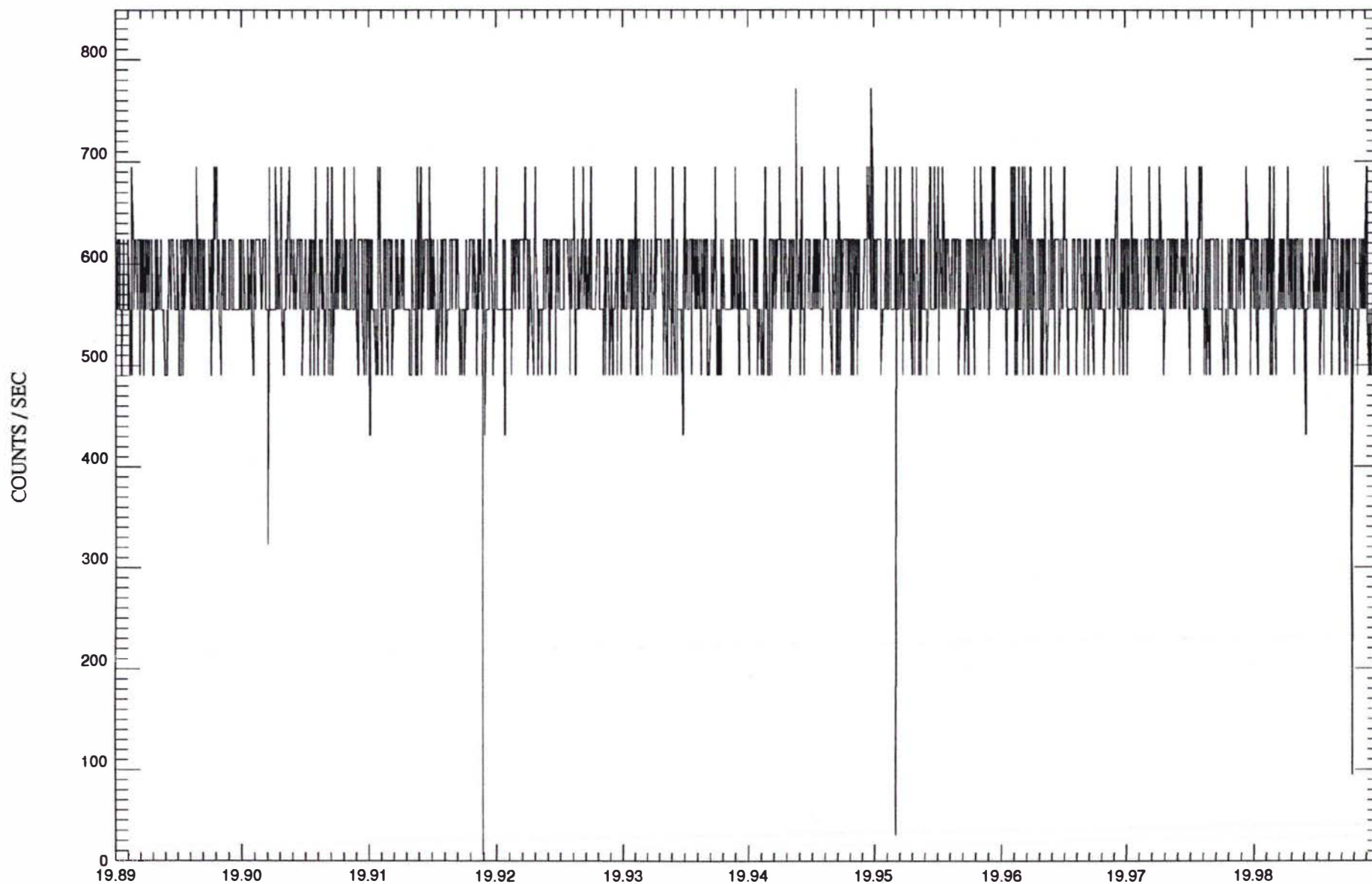
CALIBRATION DATA INCLUDED



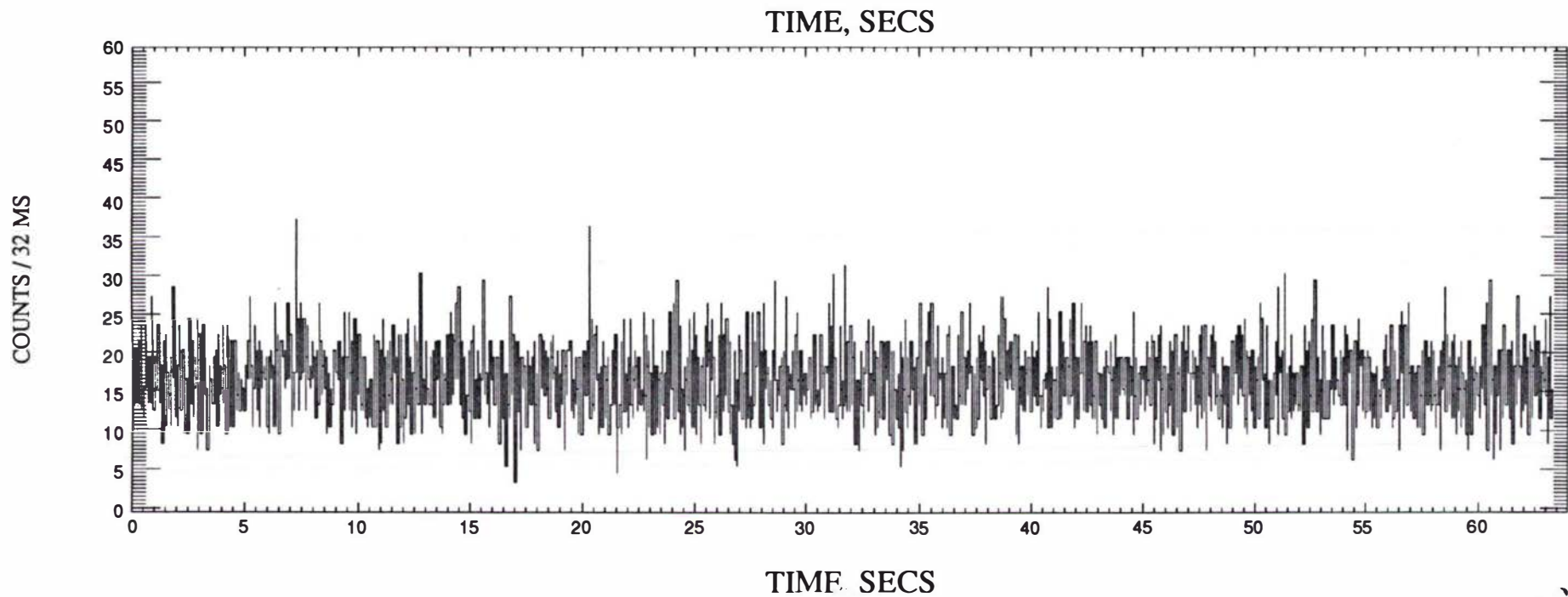
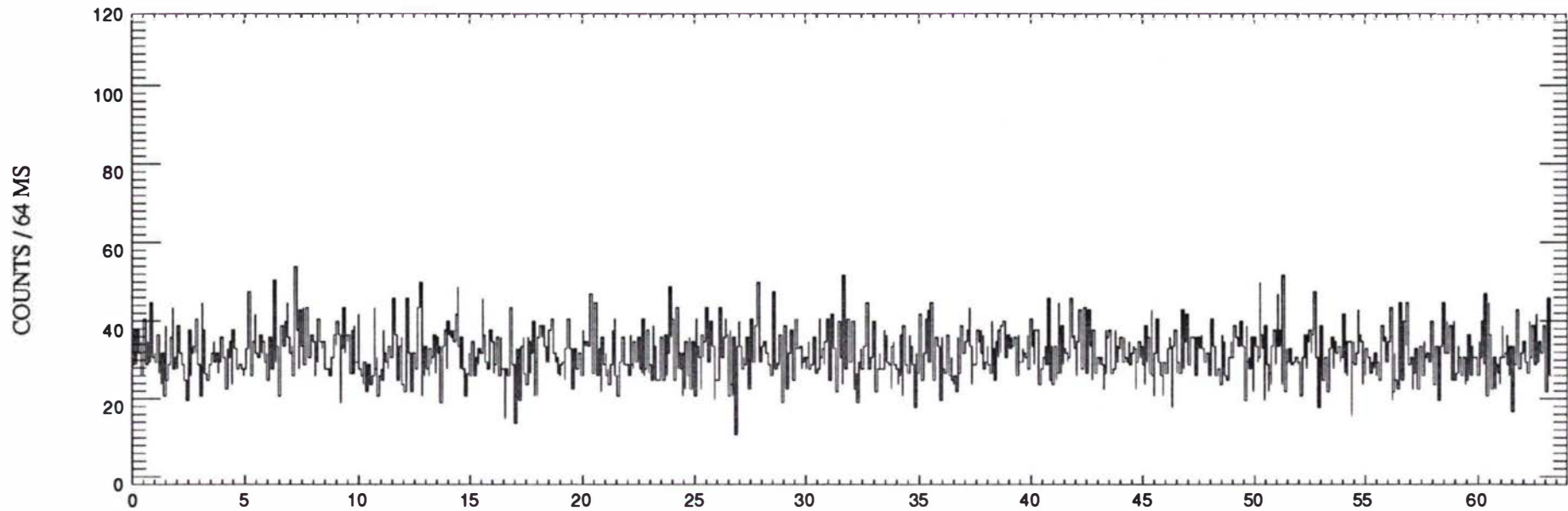
Burst Counter 1 at UT=13.196166403029 h=47506.199 s

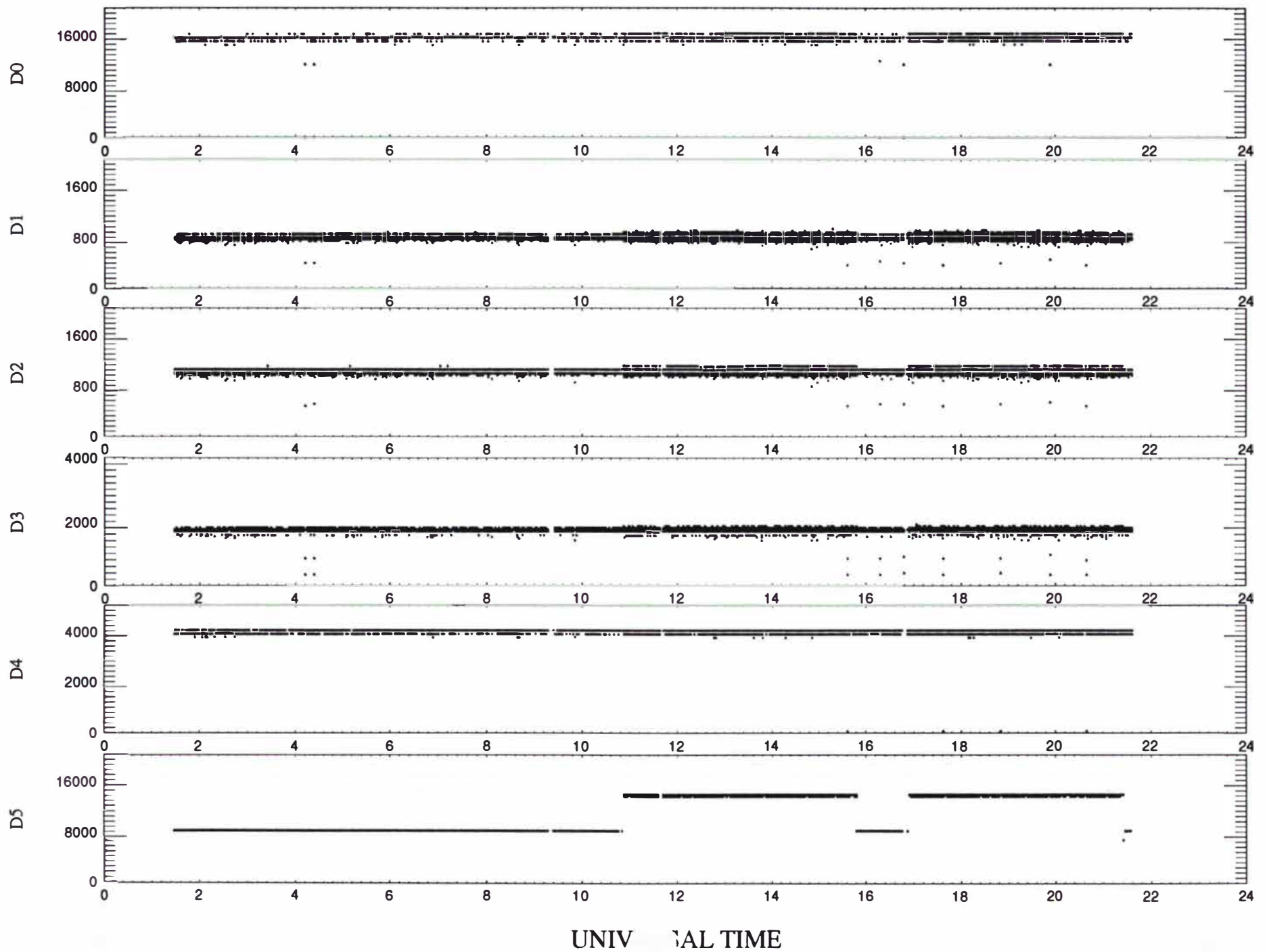


CALIBRATION DATA INCLUDED

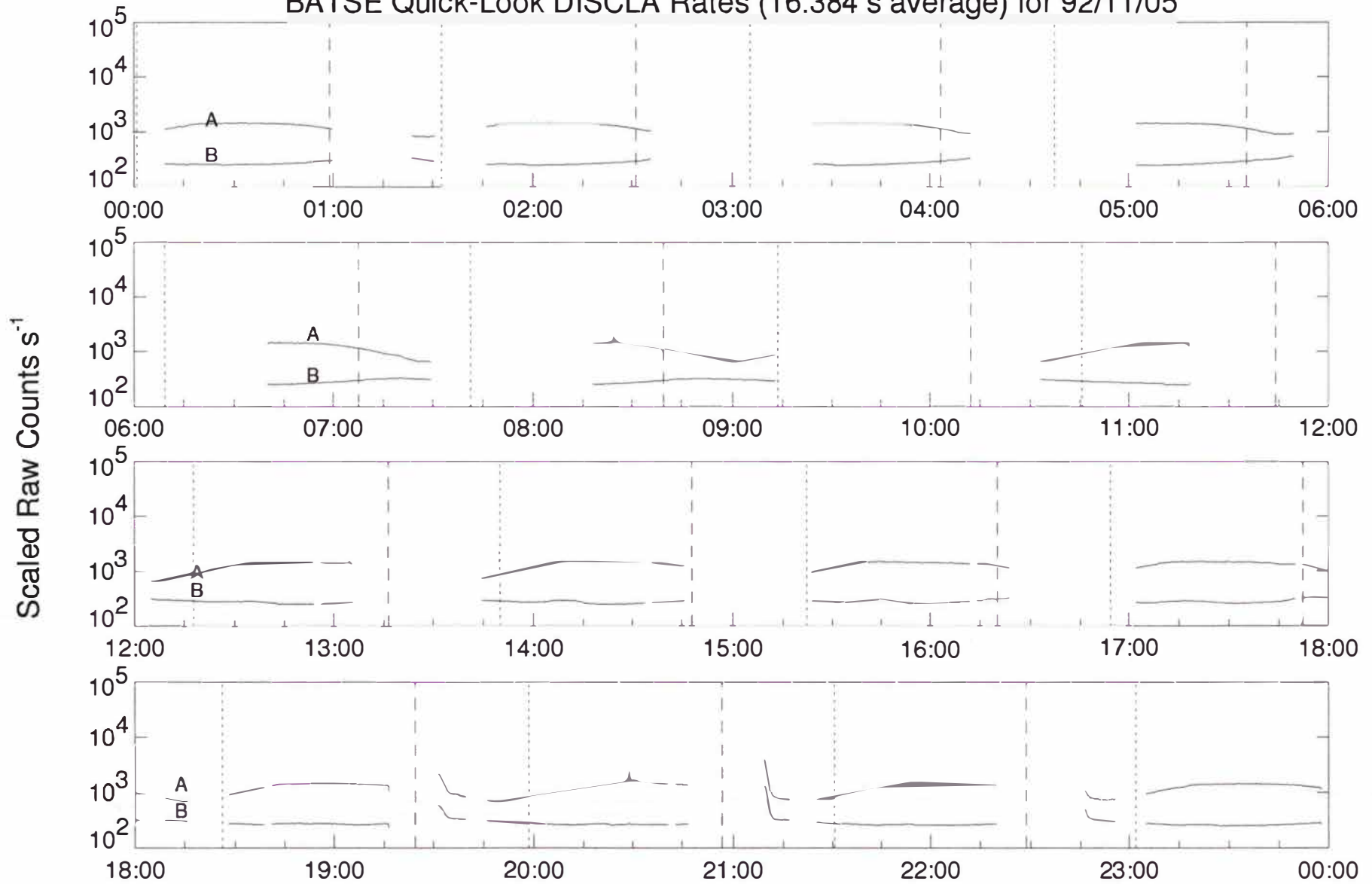


Burst Counter 2 at UT=19.949850480821 h=71819.462 s





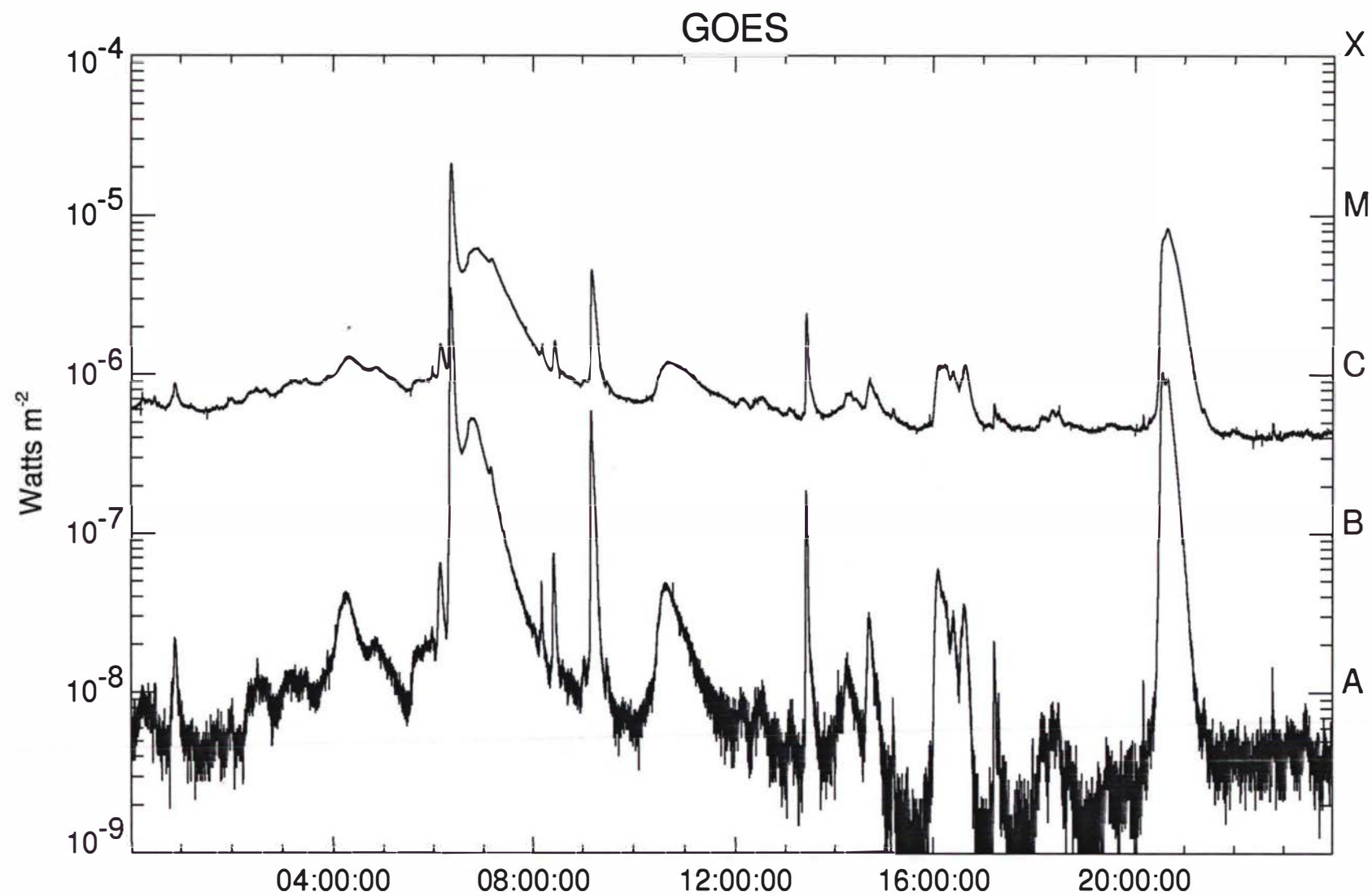
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/05



Current Time: 92/11/09, 0422 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



Data Start: 92/11/05, 0000:02

Plot created: 95/05/30, 1850

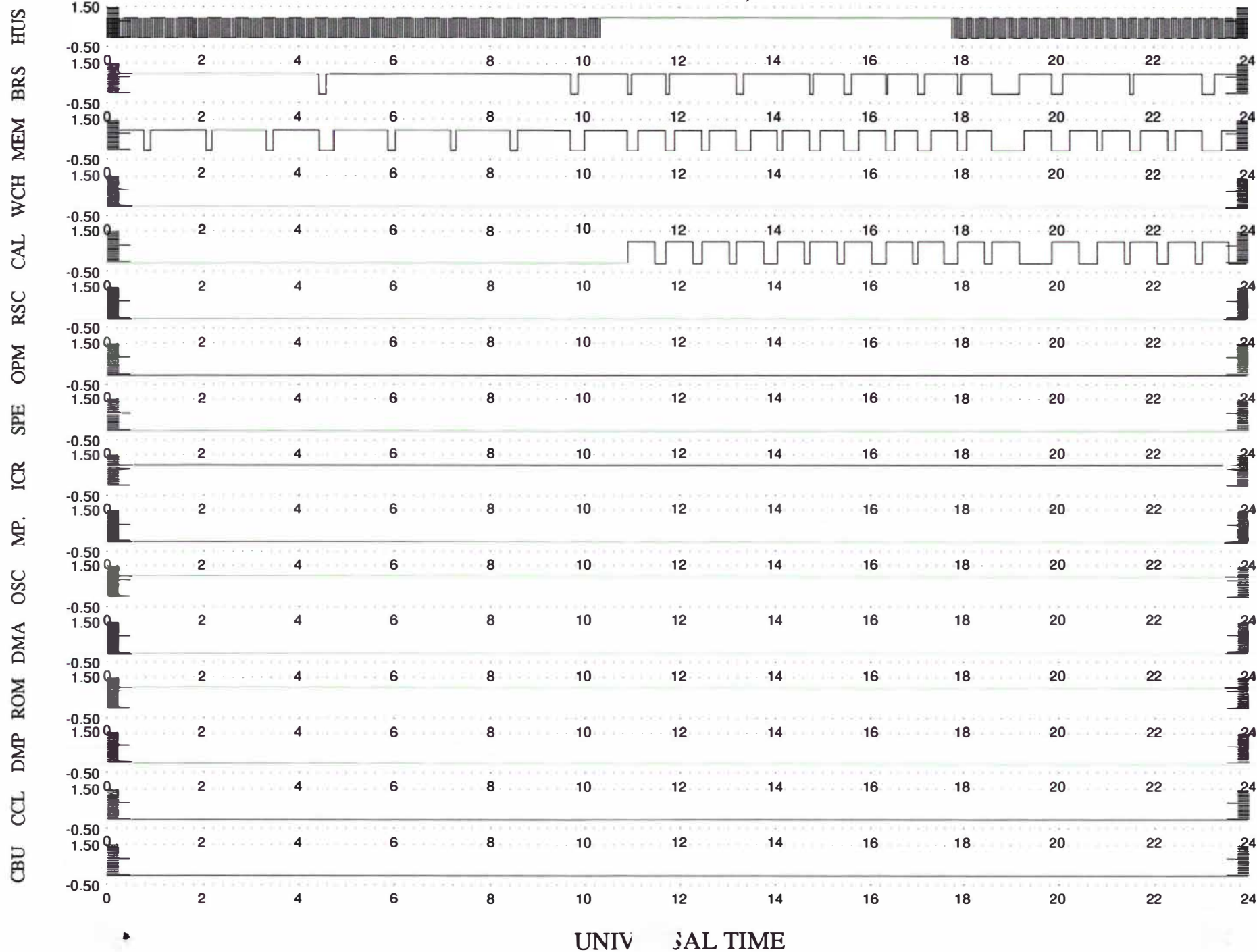
Channel 1 (1.0 - 8.0 Angstroms)

Background not subtracted

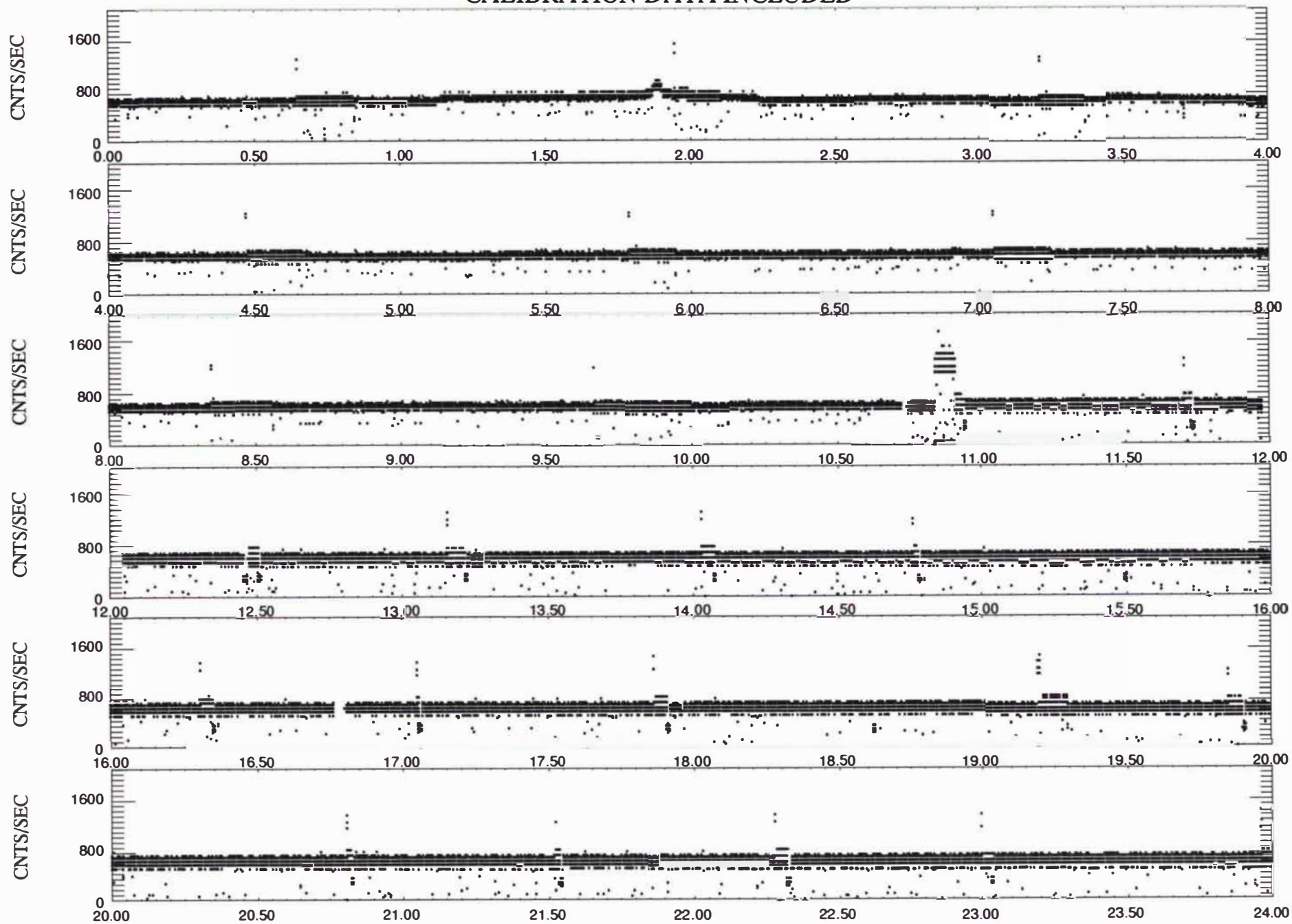
Channel 2 (0.5 - 4.0 Angstroms)

Background not subtracted

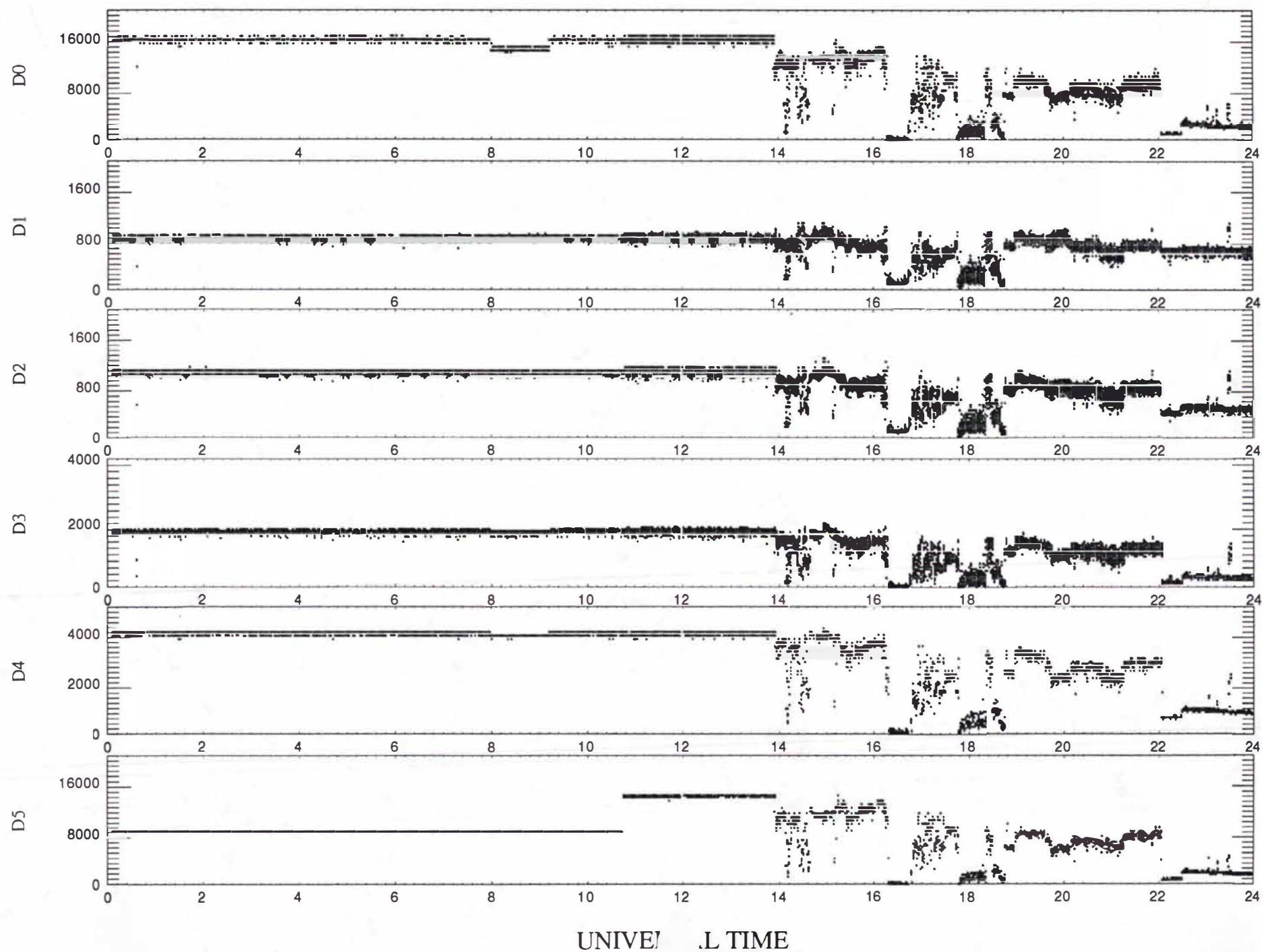
BURST NUMBER 5 - 15, 0 - 12



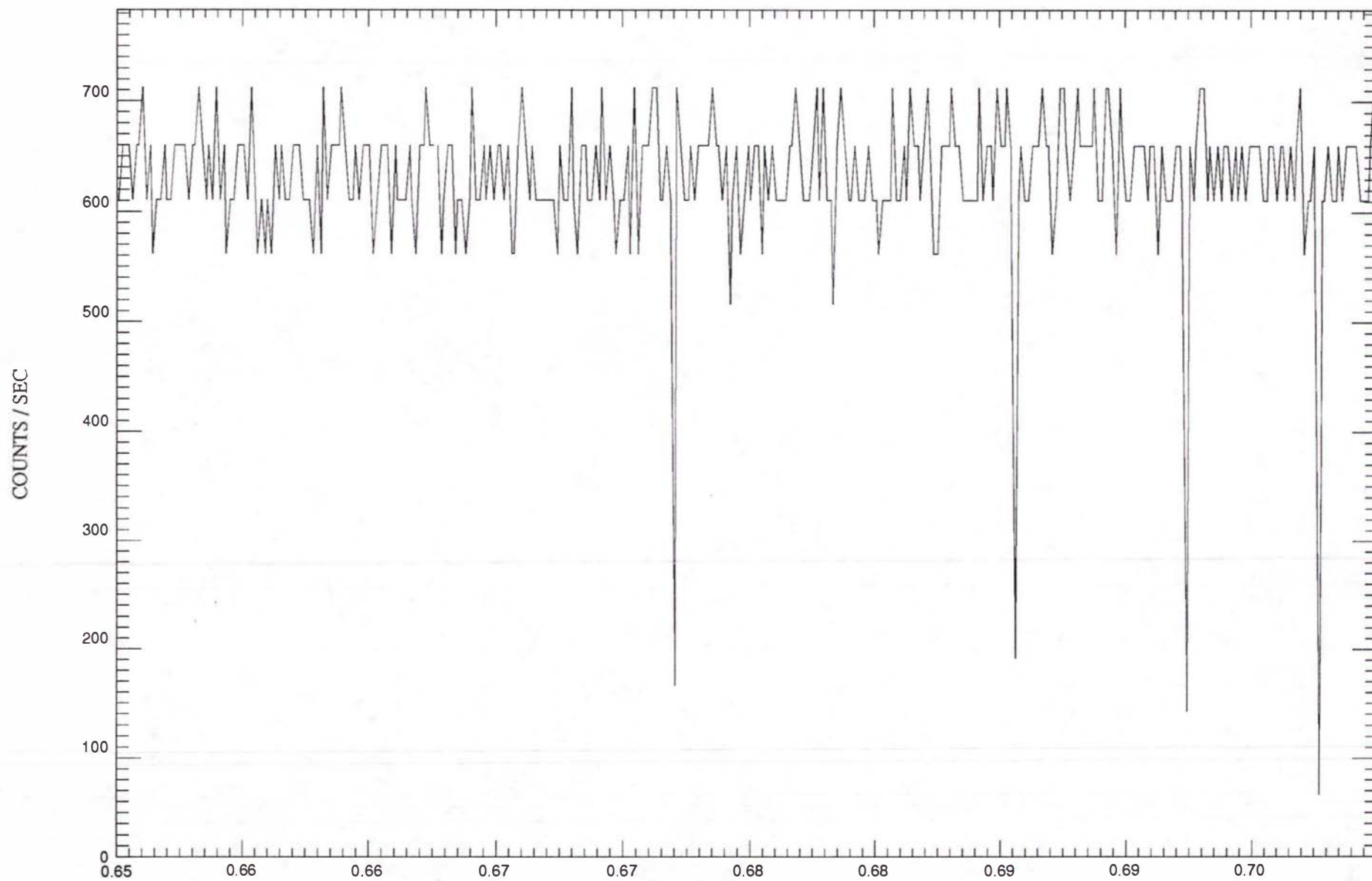
CALIBRATION DATA INCLUDED



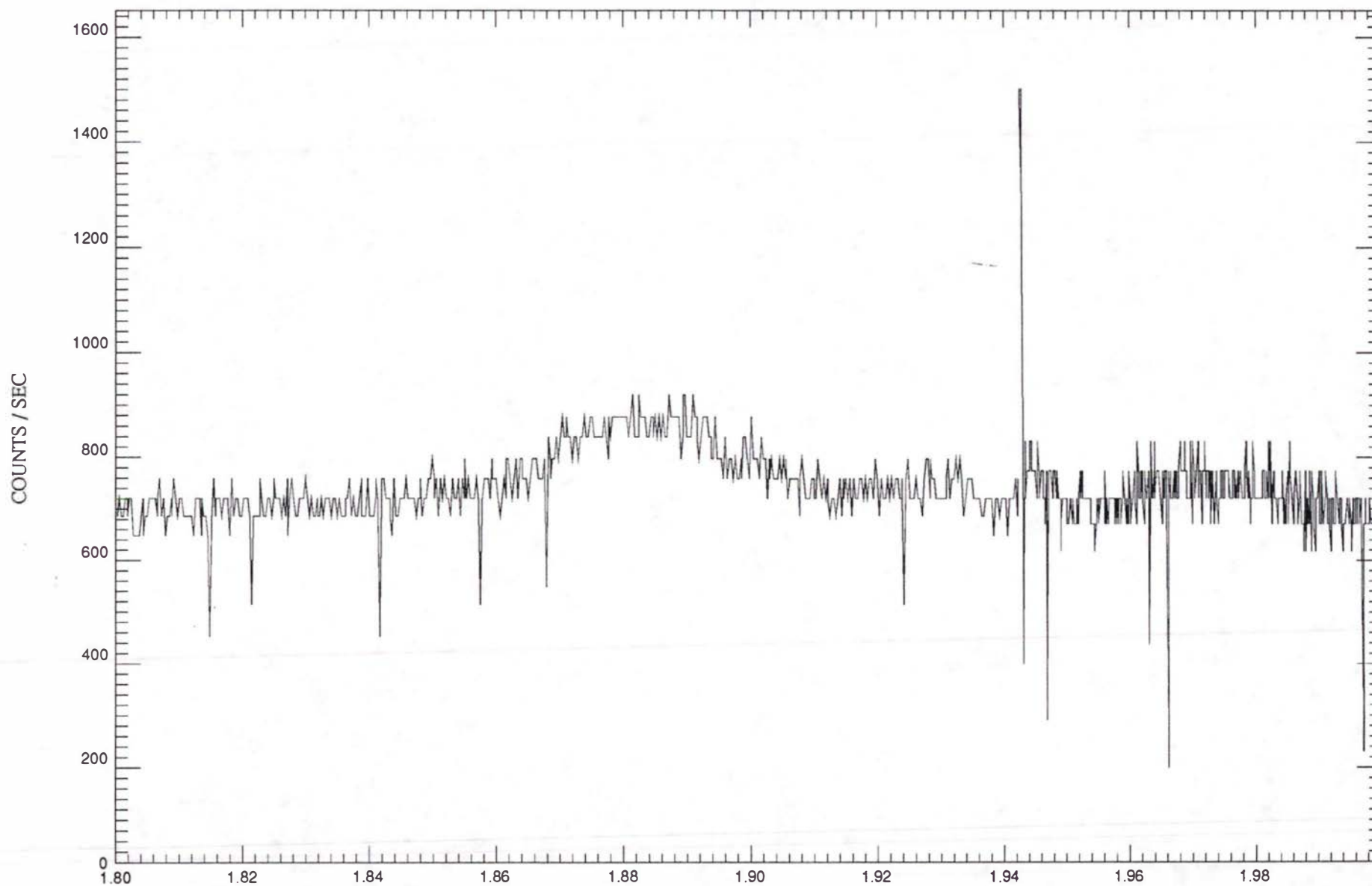




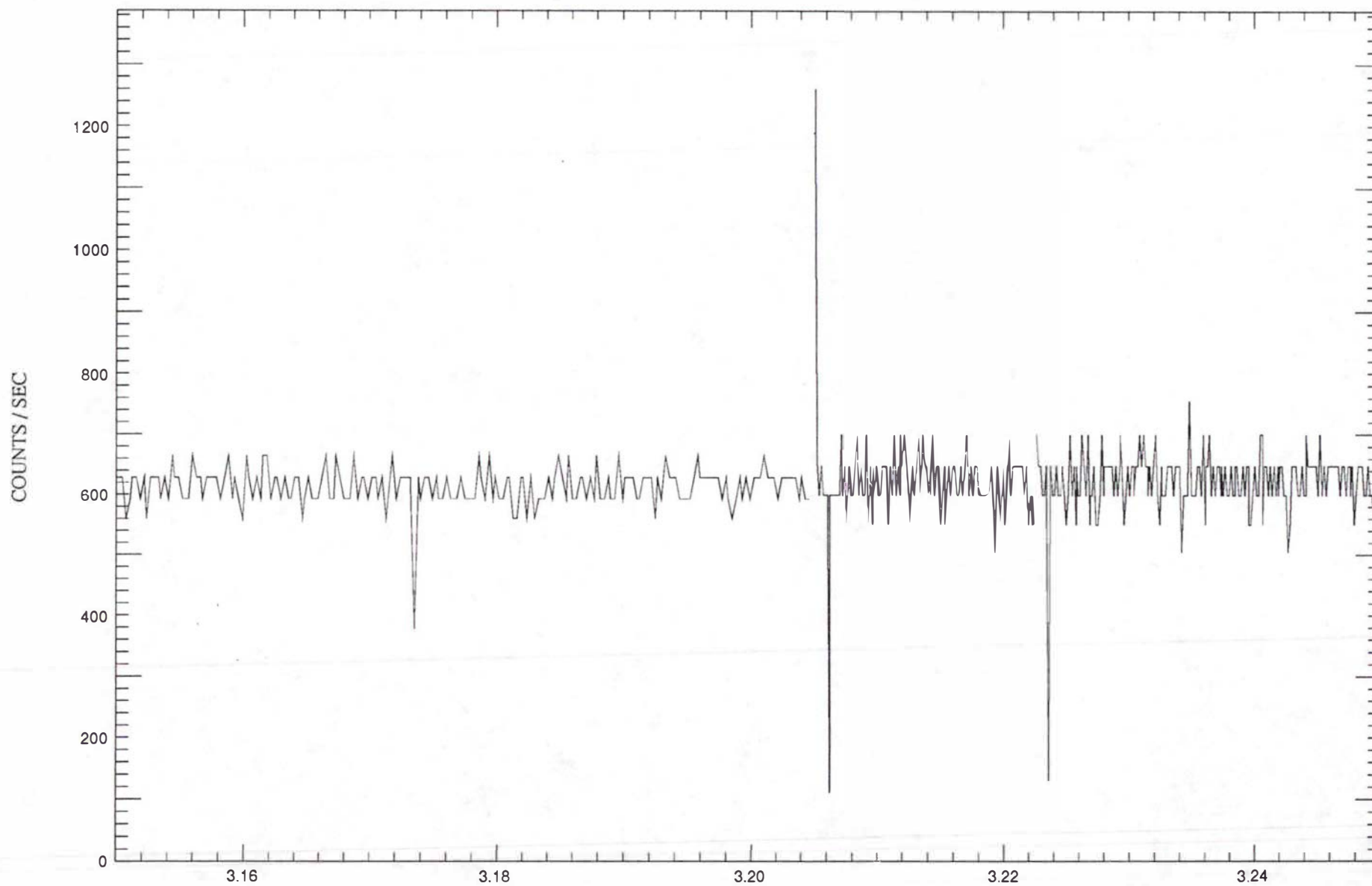
CALIBRATION DATA INCLUDED



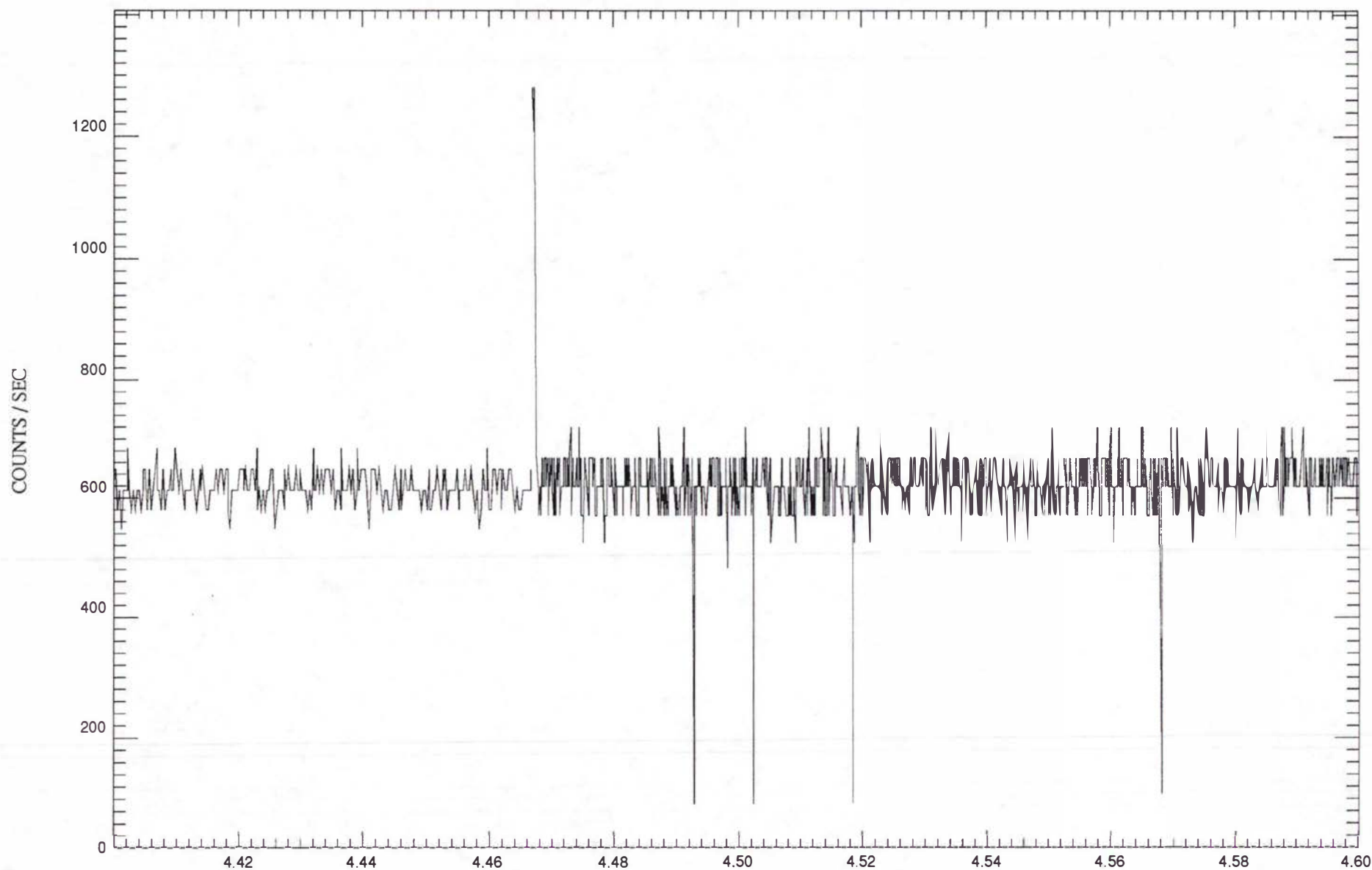
CALIBRATION DATA INCLUDED



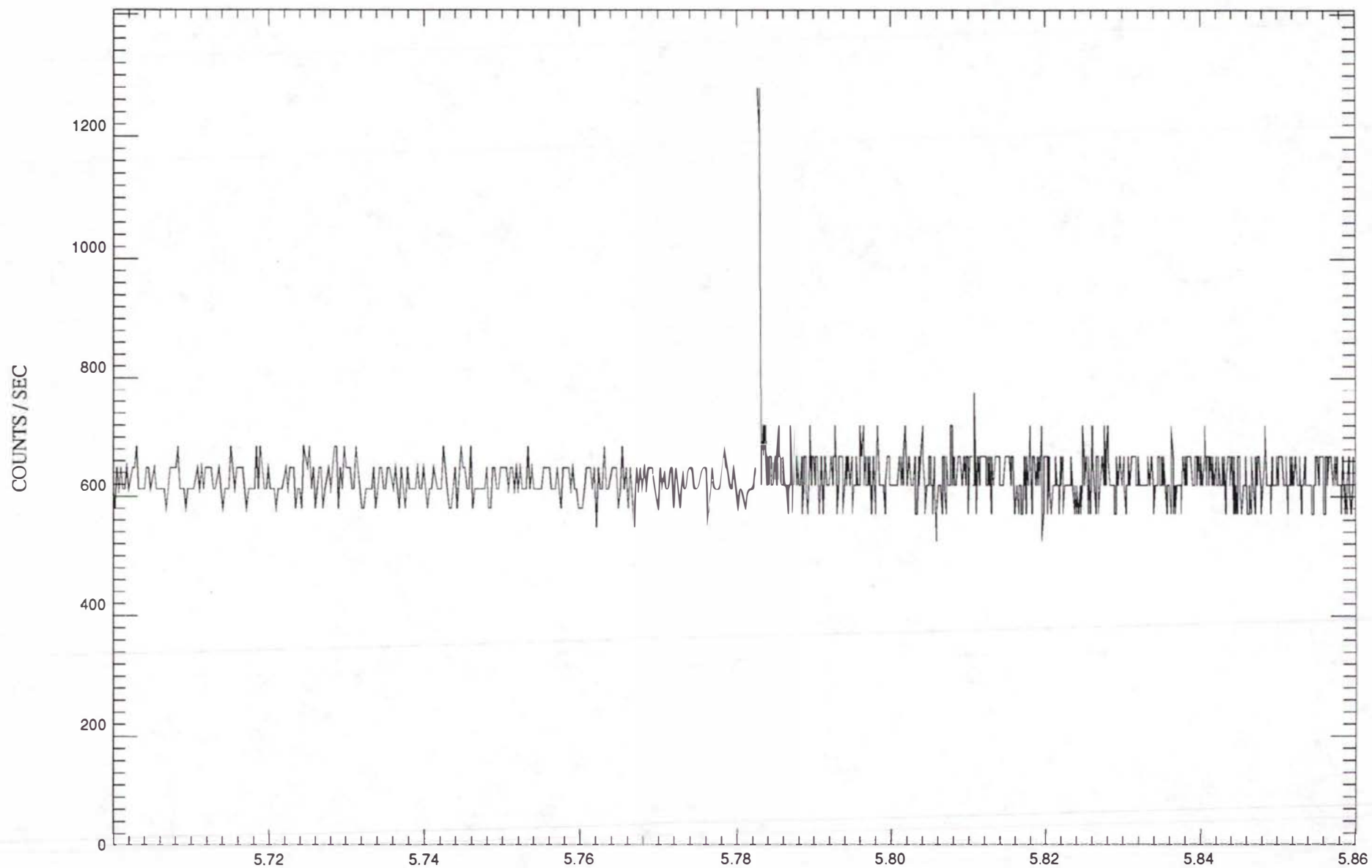
CALIBRATION DATA INCLUDED



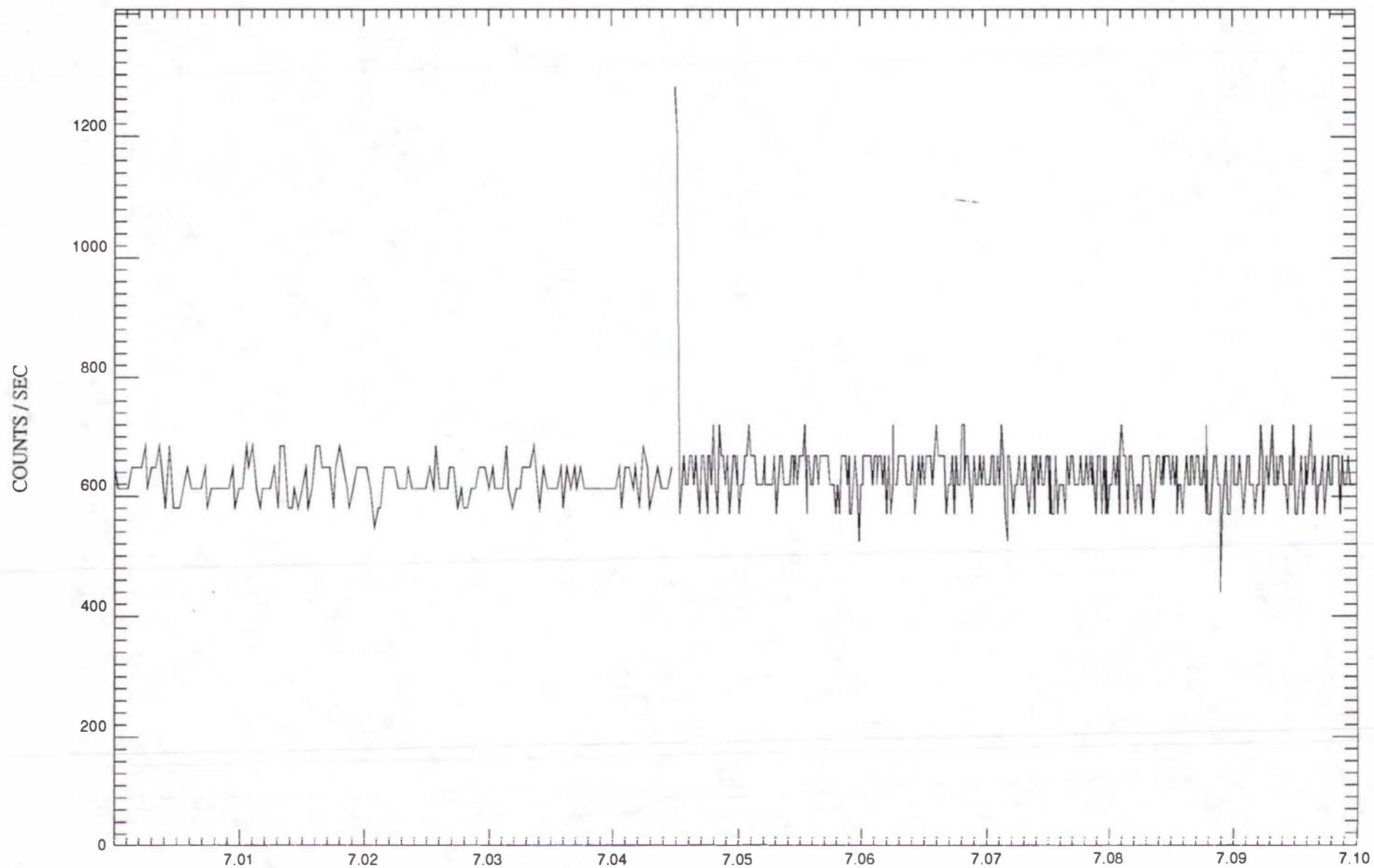
CALIBRATION DATA INCLUDED



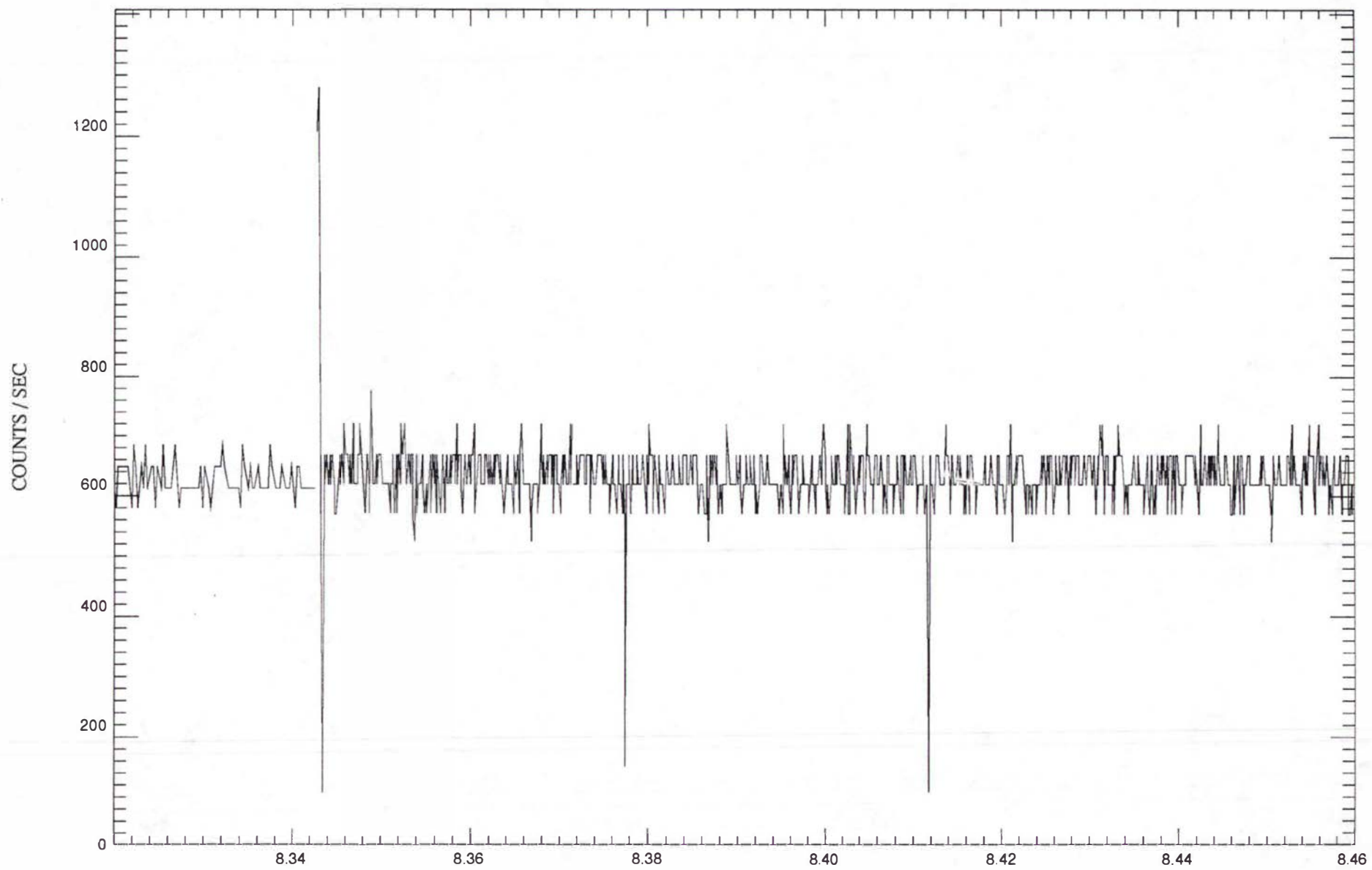
CALIBRATION DATA INCLUDED



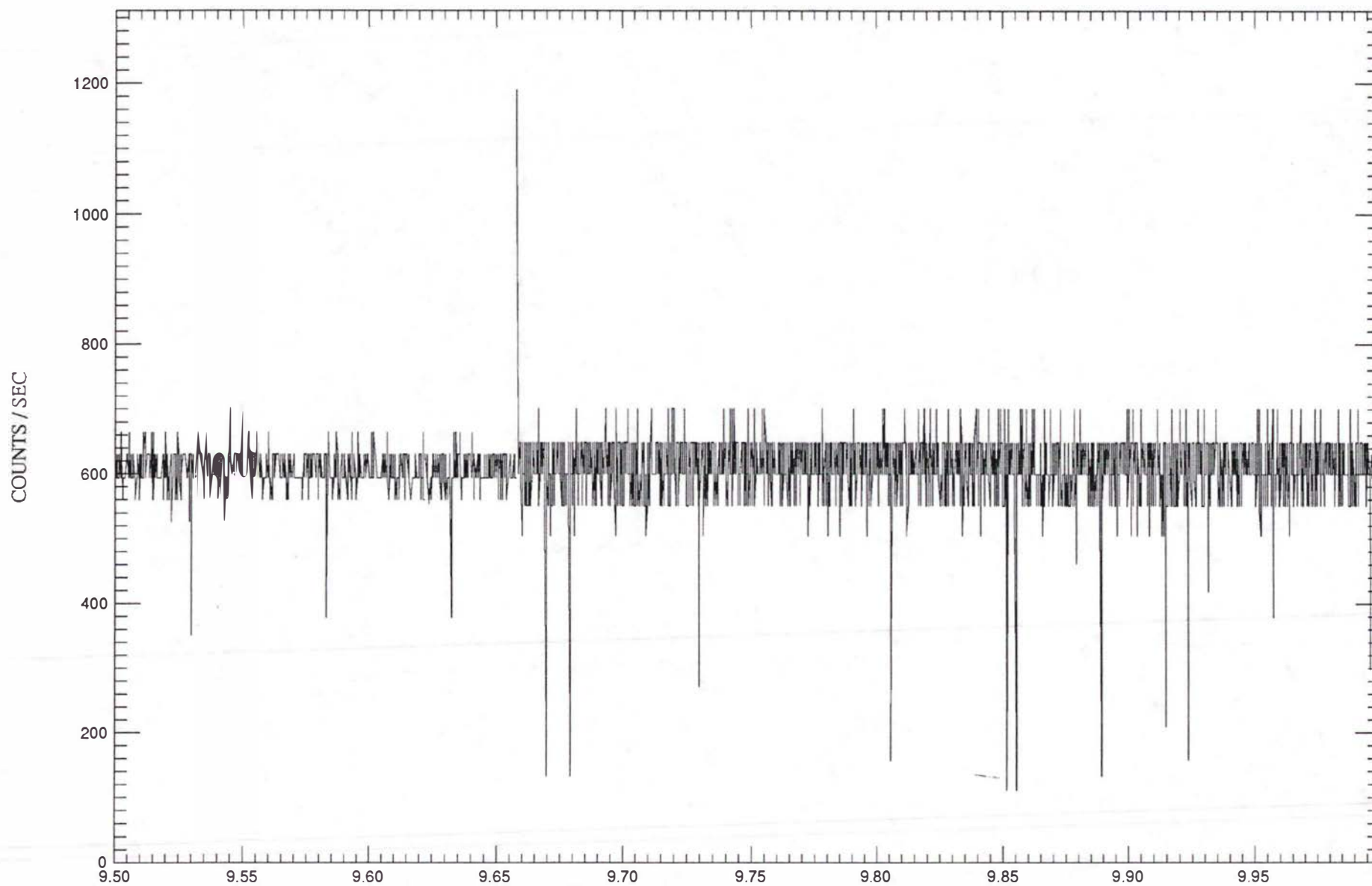
CALIBRATION DATA INCLUDED



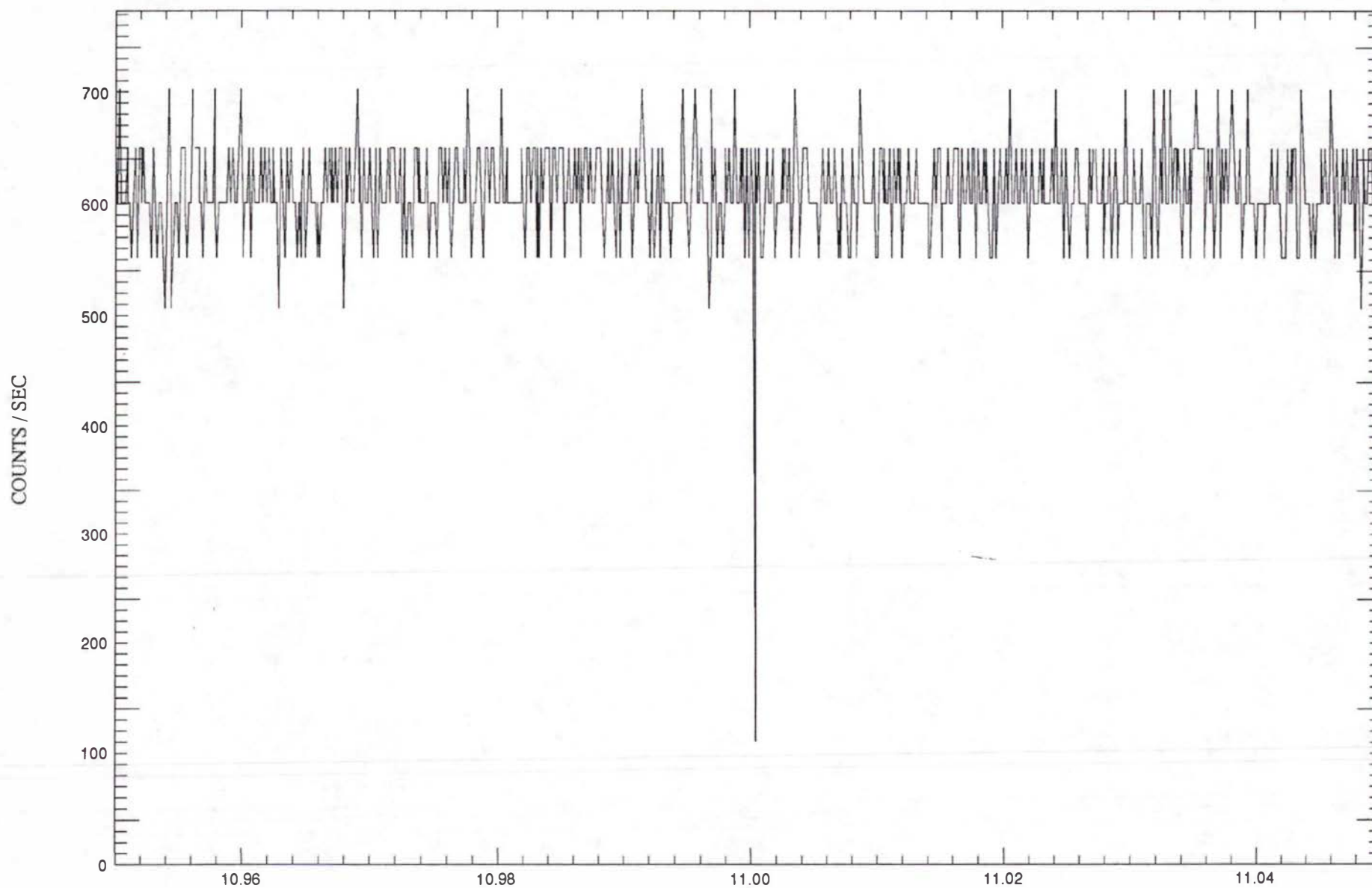
CALIBRATION DATA INCLUDED



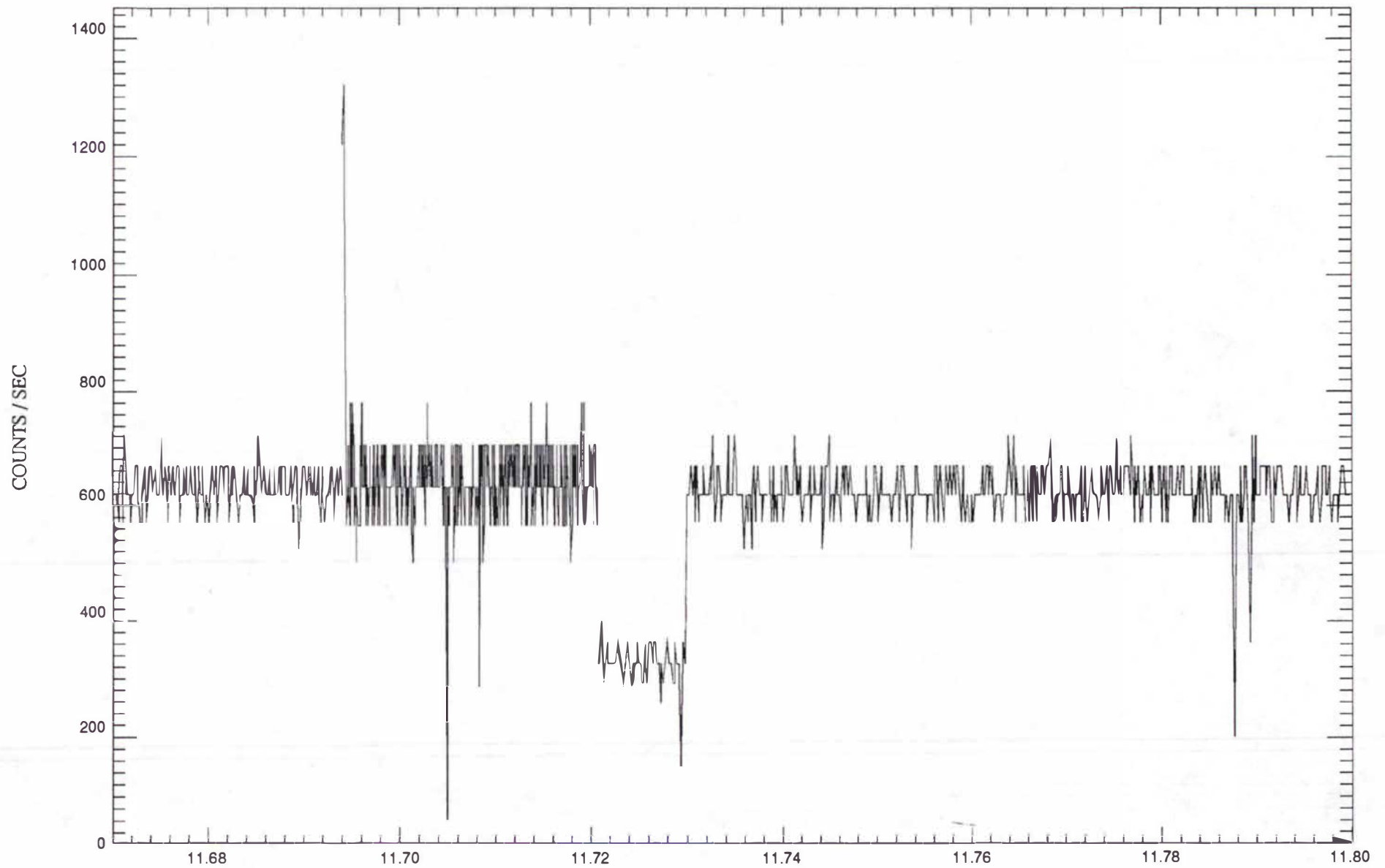
CALIBRATION DATA INCLUDED



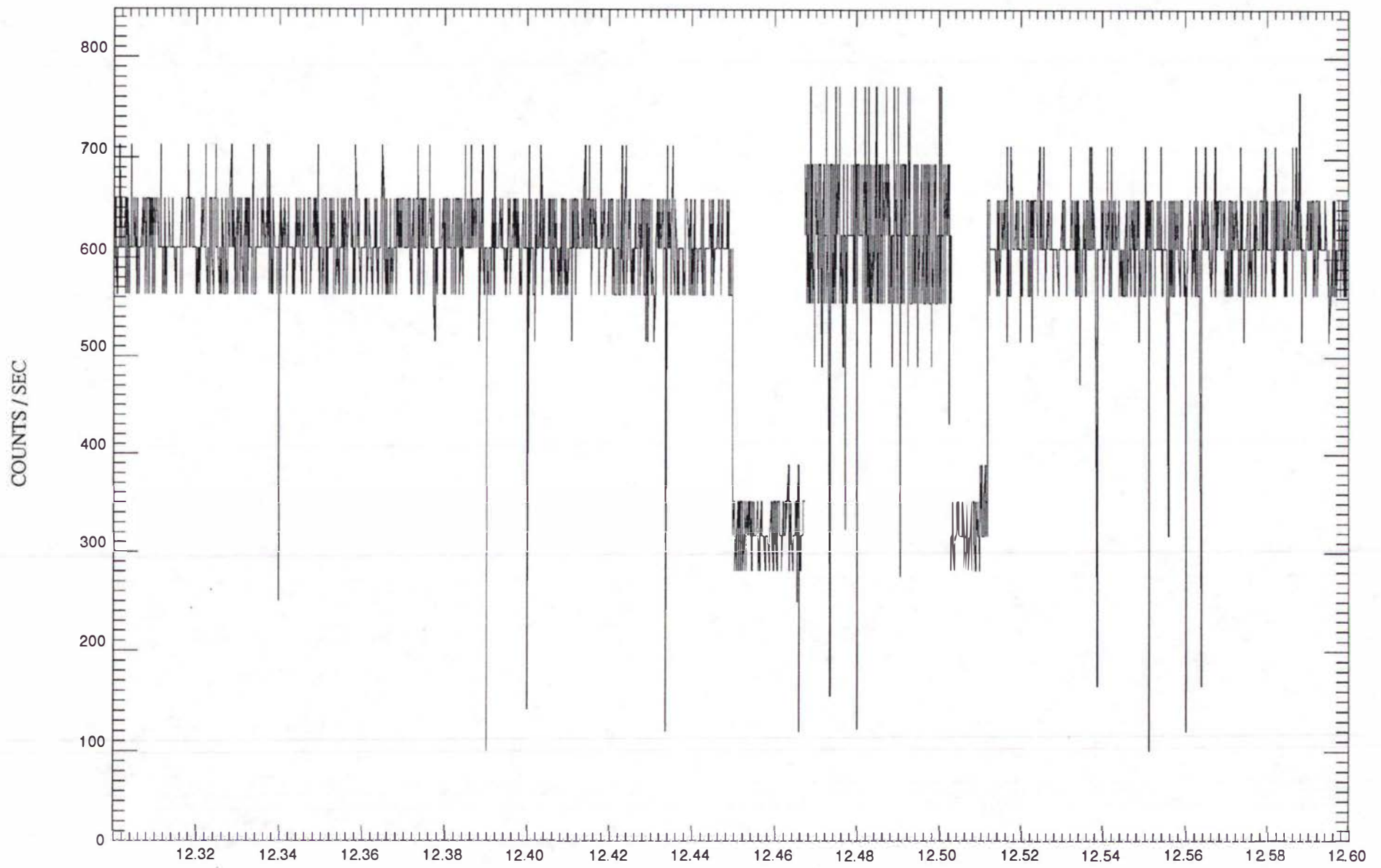
CALIBRATION DATA INCLUDED



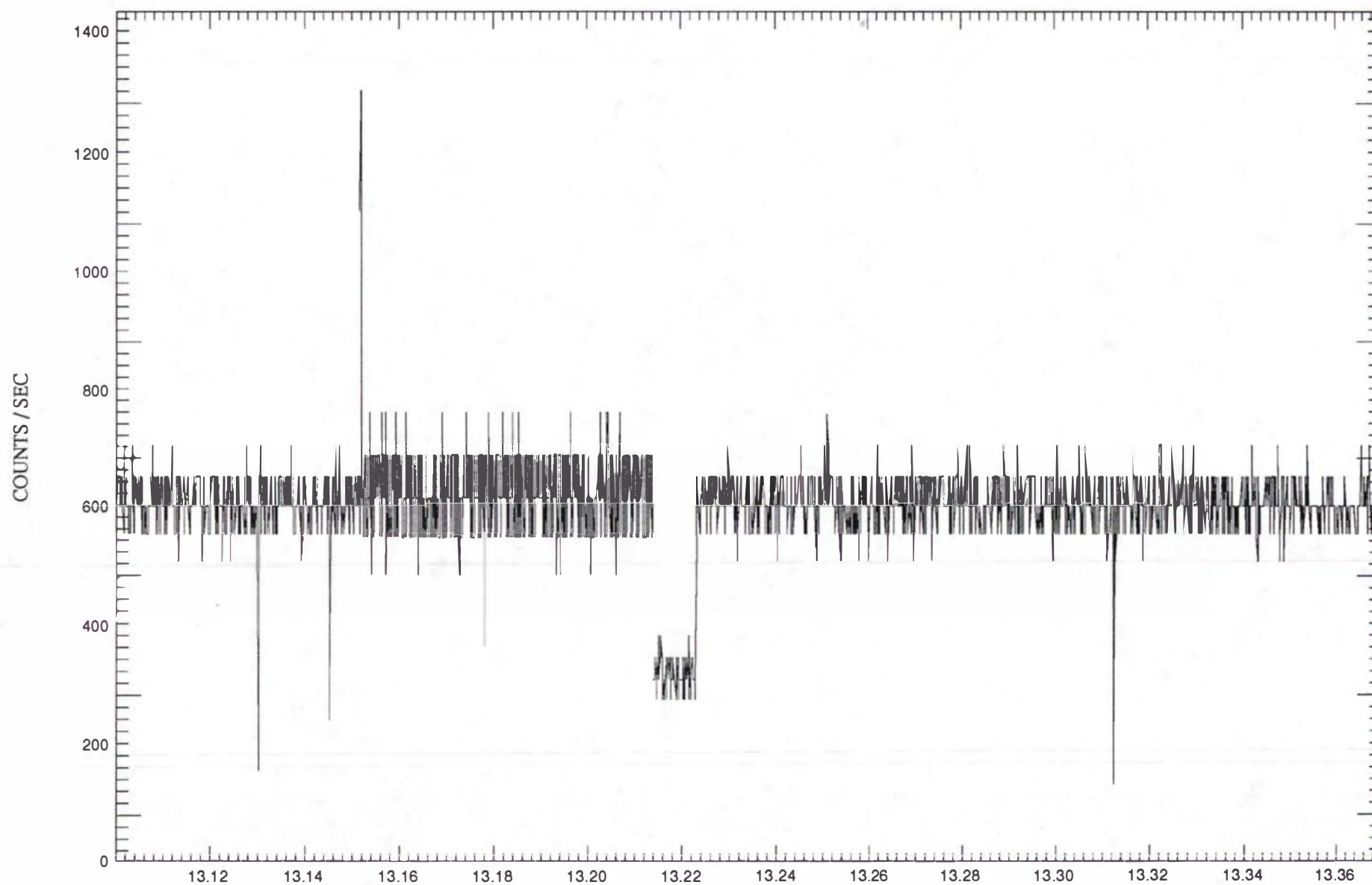
CALIBRATION DATA INCLUDED



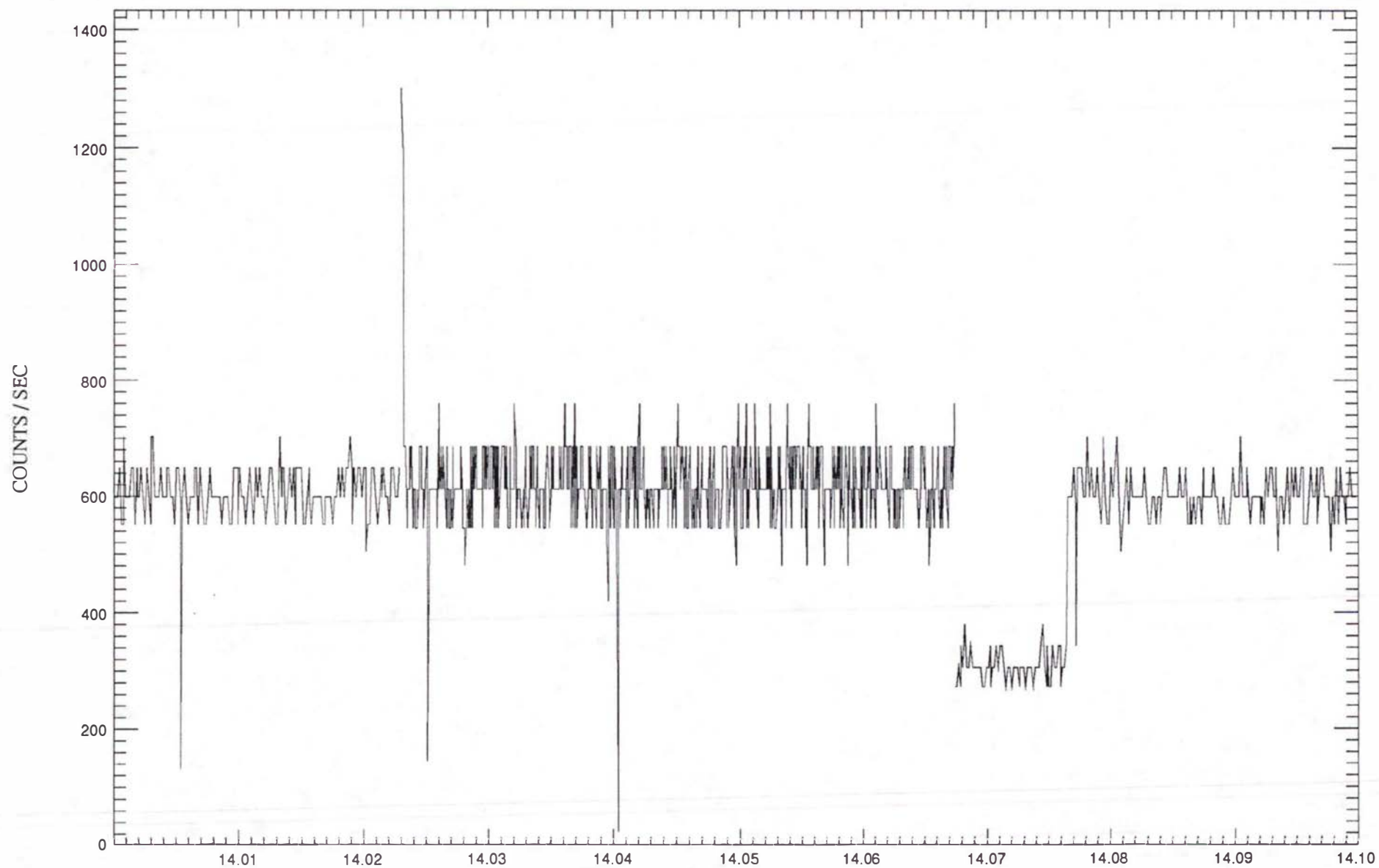
CALIBRATION DATA INCLUDED



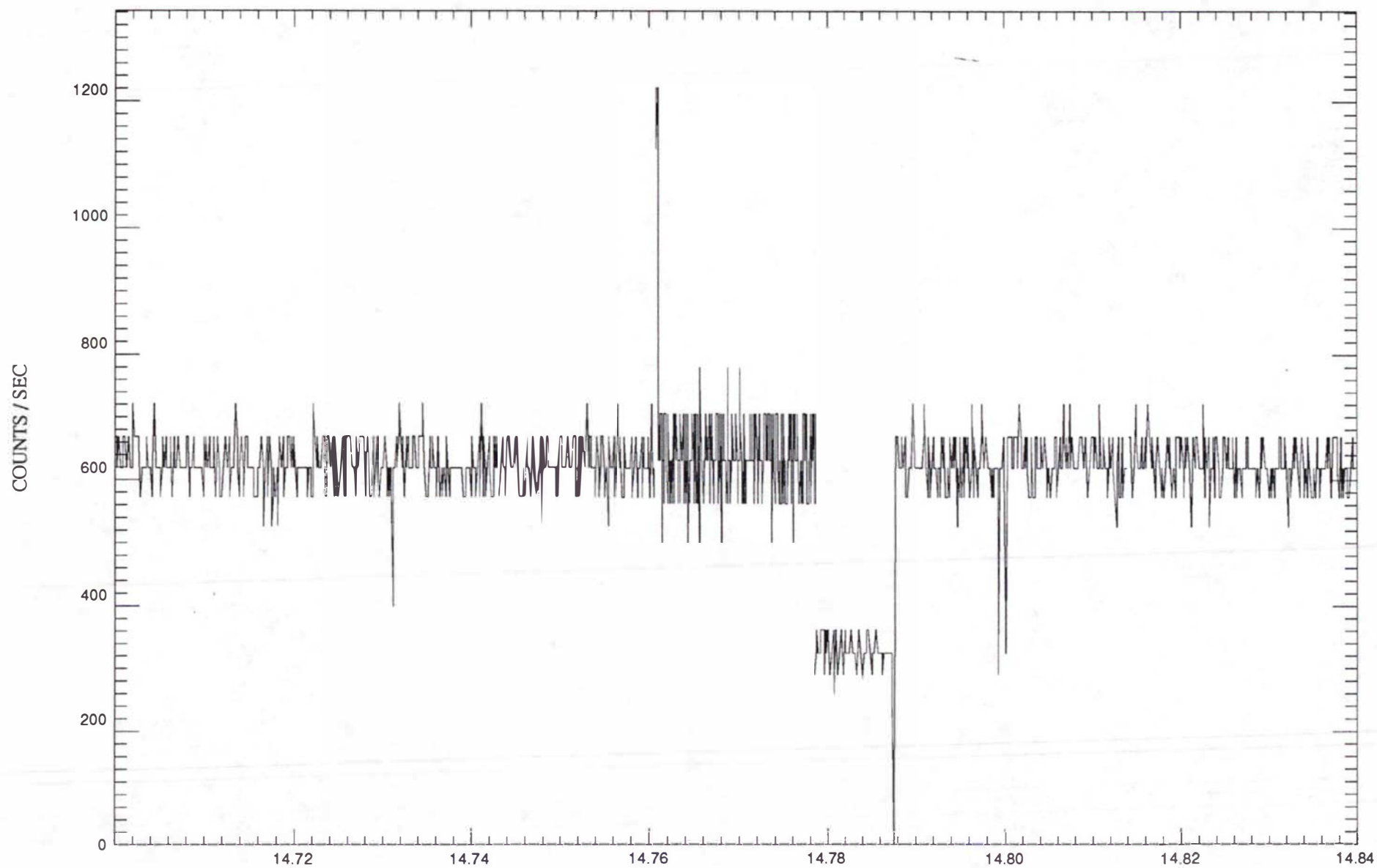
CALIBRATION DATA INCLUDED



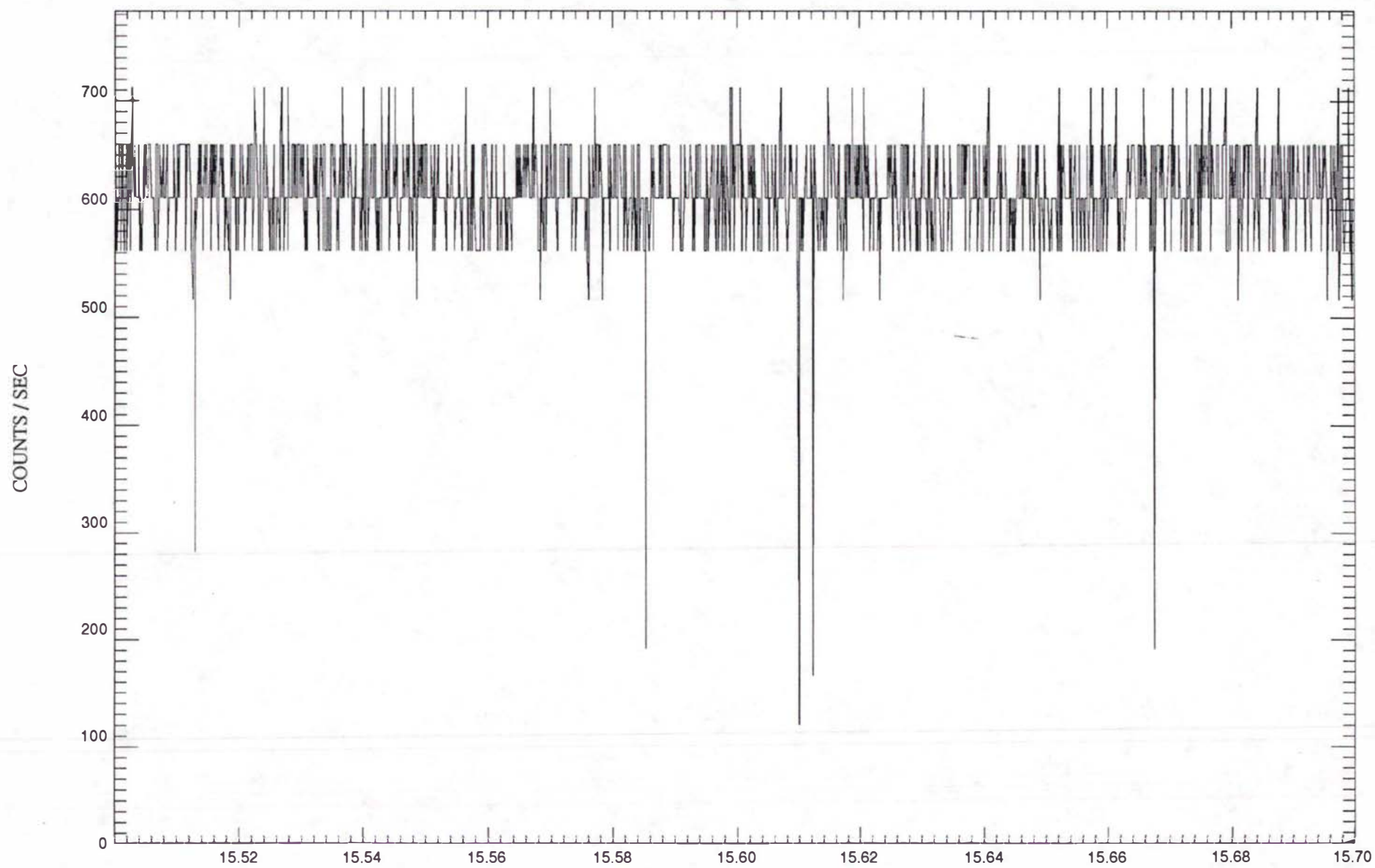
CALIBRATION DATA INCLUDED



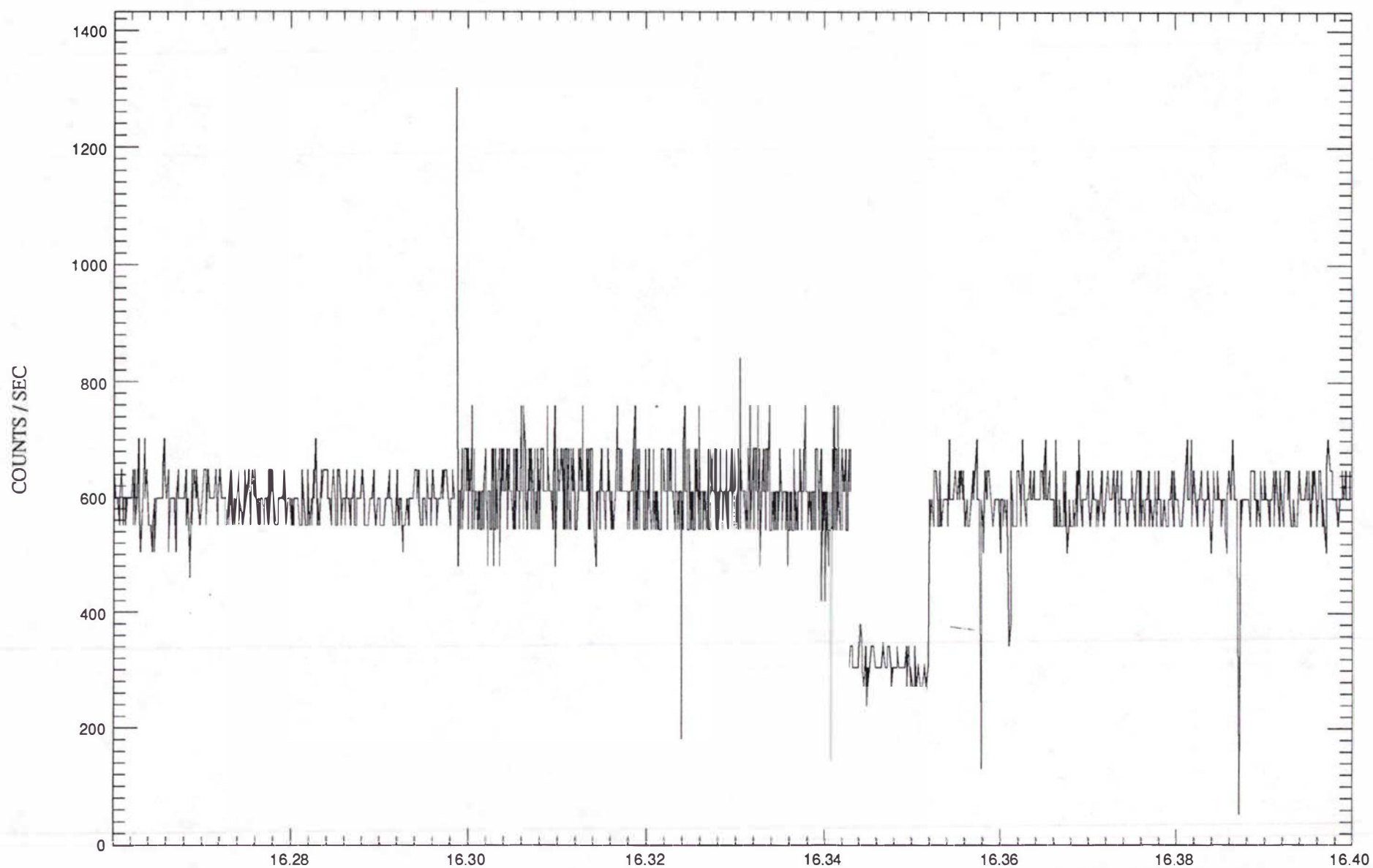
CALIBRATION DATA INCLUDED



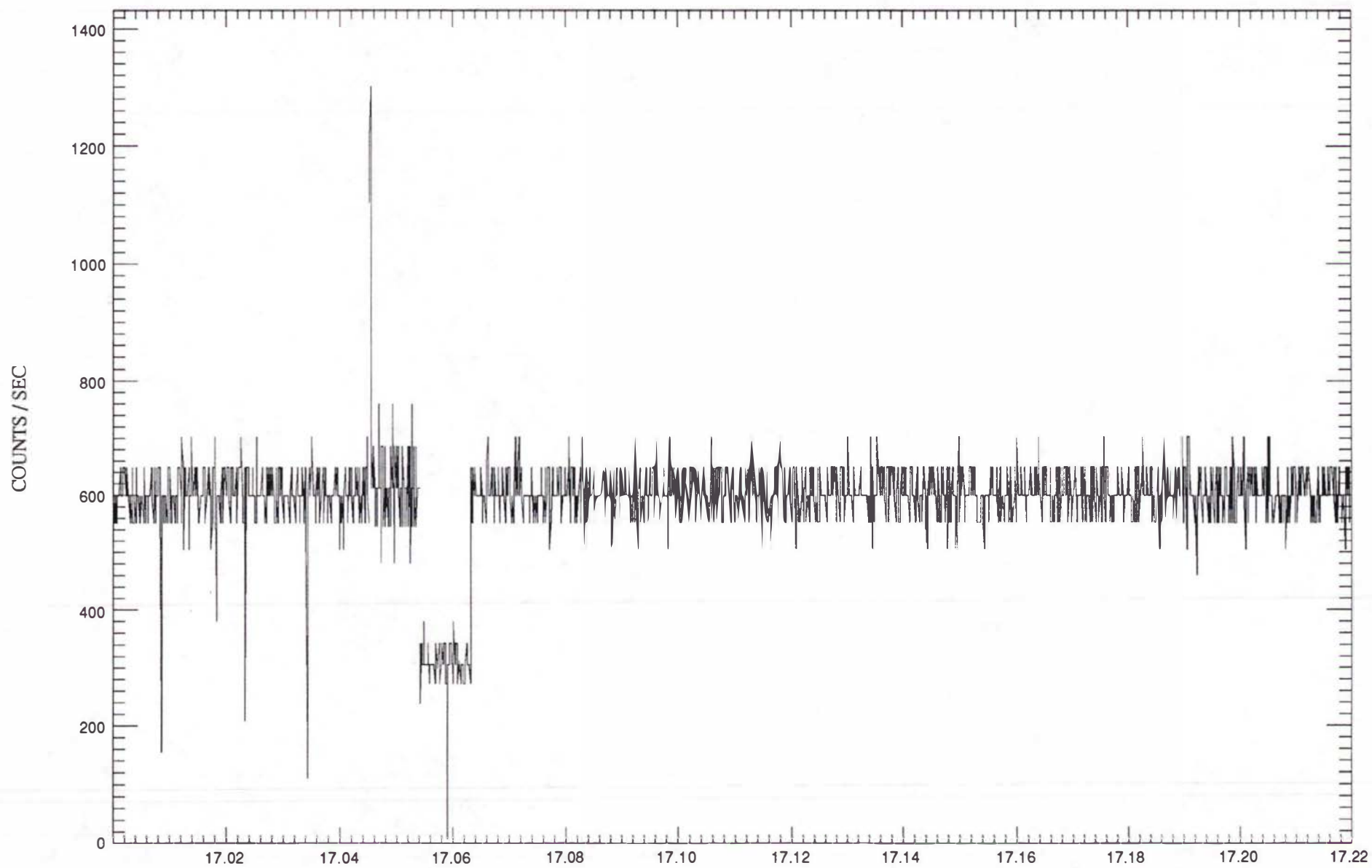
CALIBRATION DATA INCLUDED



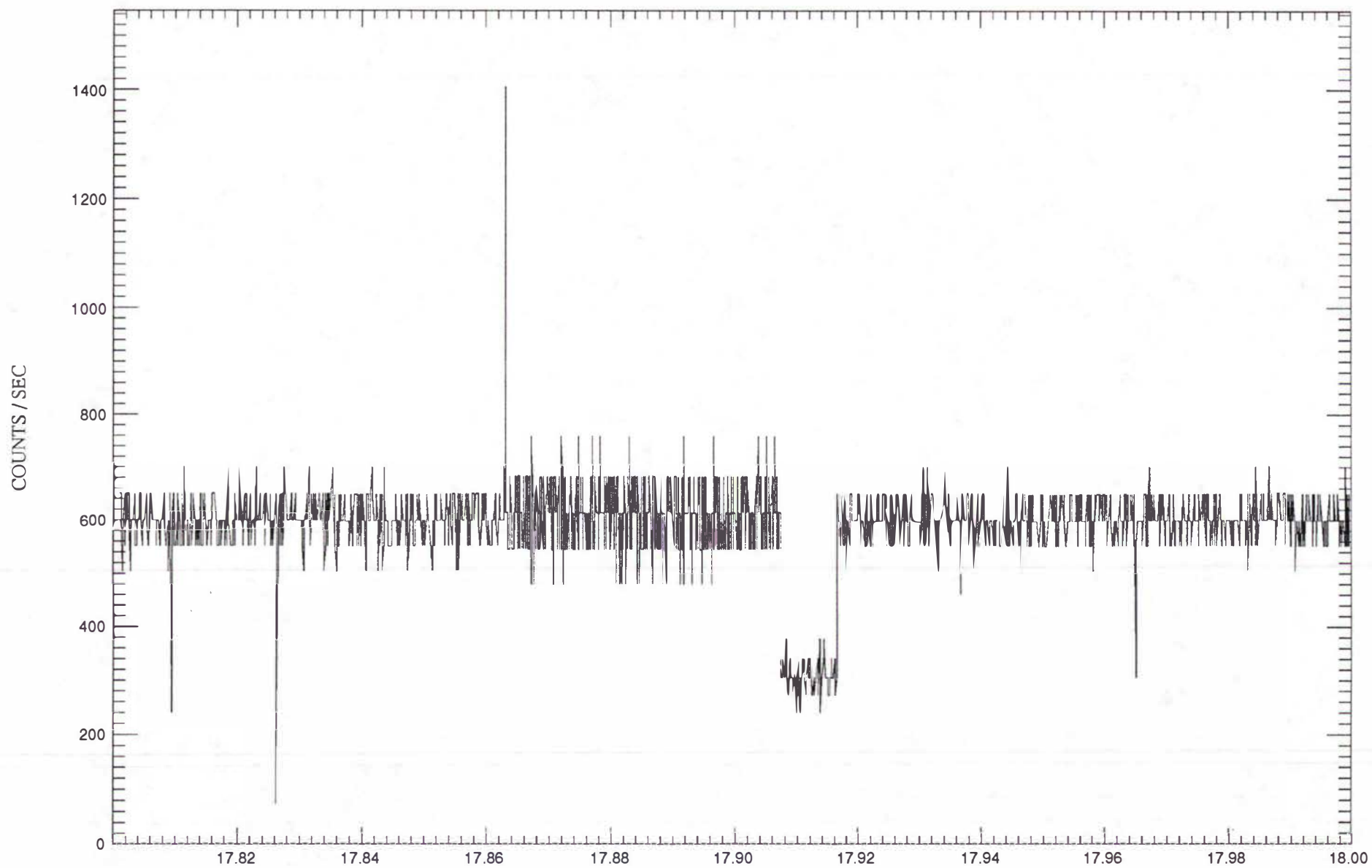
CALIBRATION DATA INCLUDED



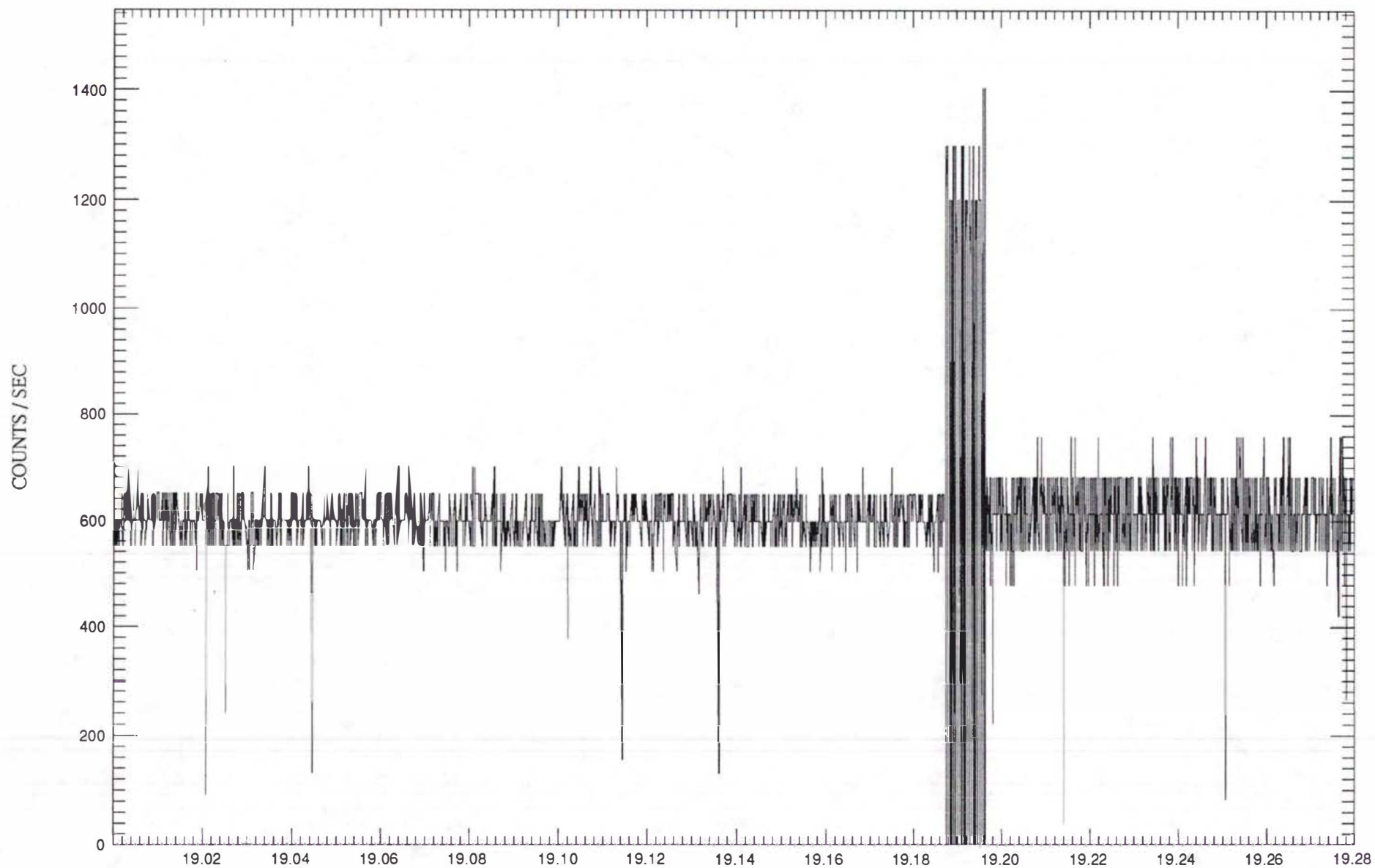
CALIBRATION DATA INCLUDED



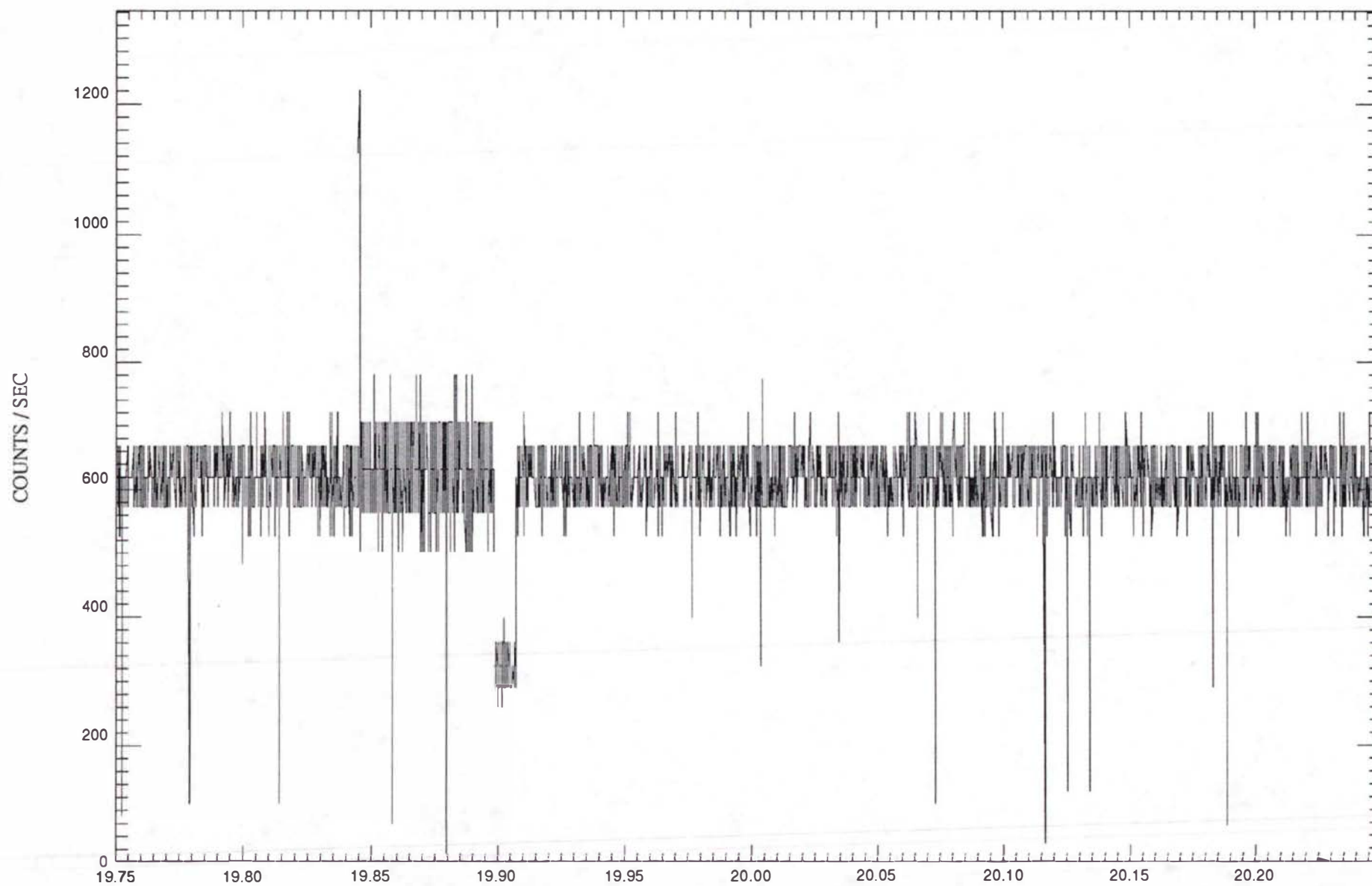
CALIBRATION DATA INCLUDED



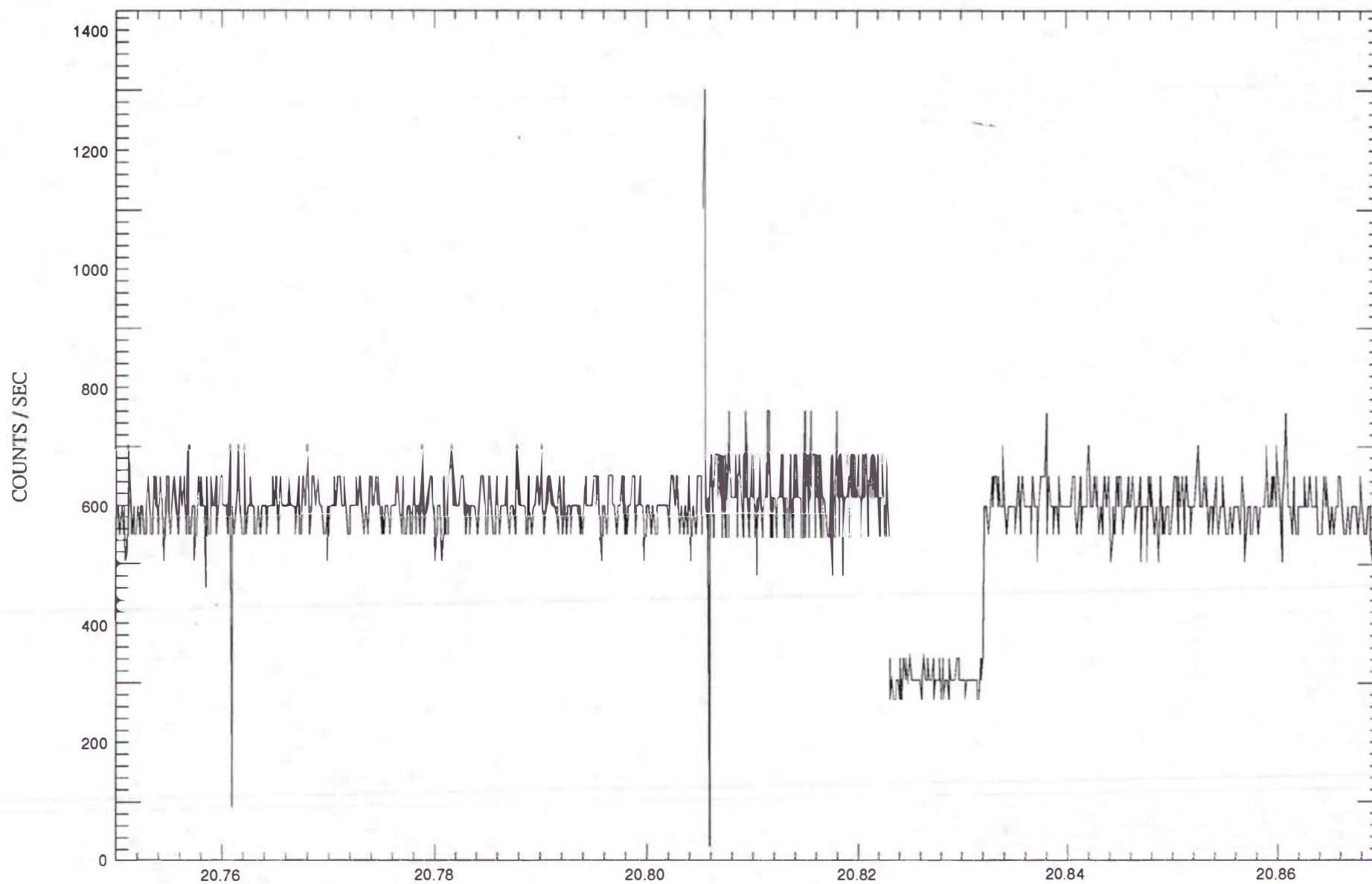
CALIBRATION DATA INCLUDED



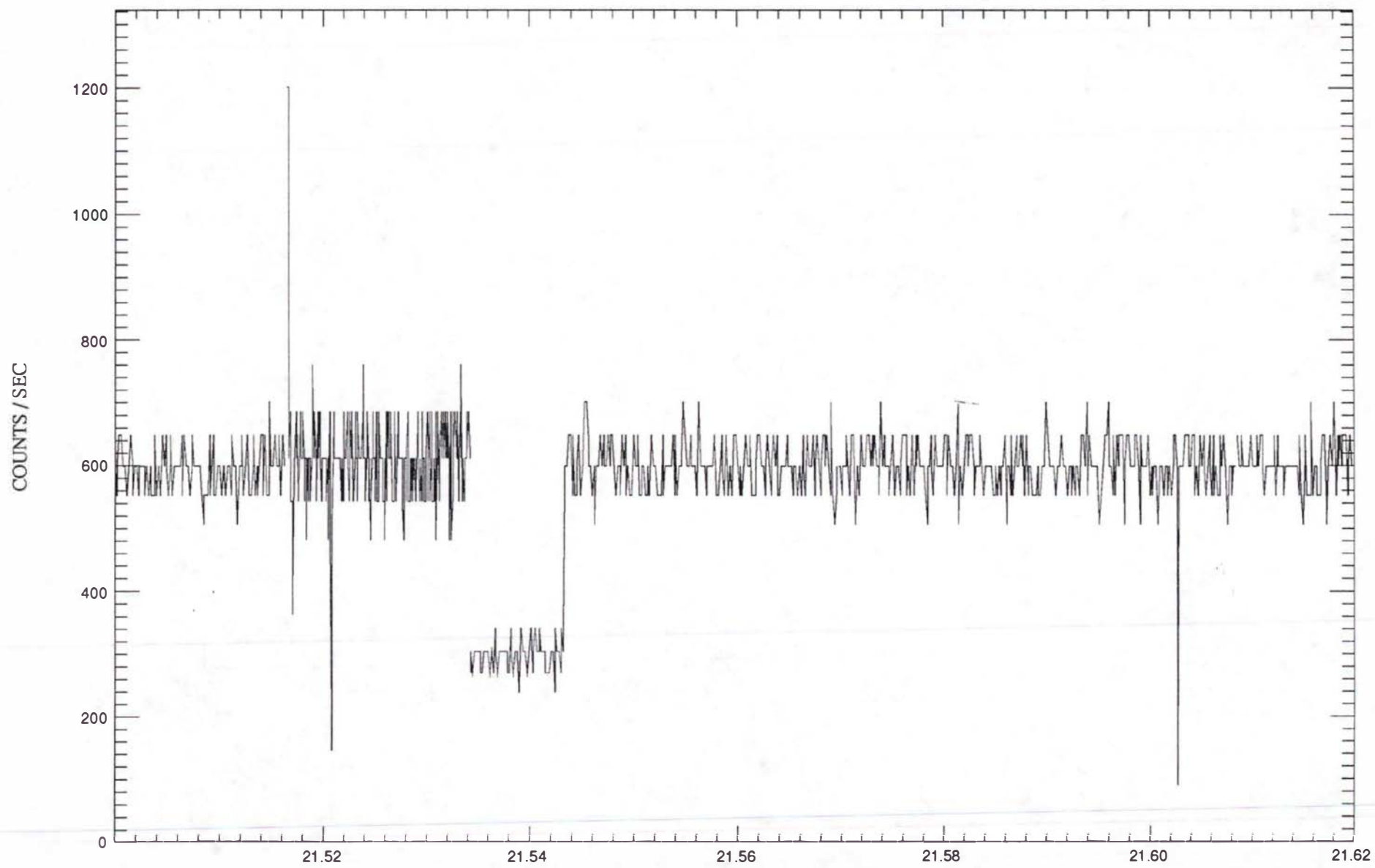
CALIBRATION DATA INCLUDED



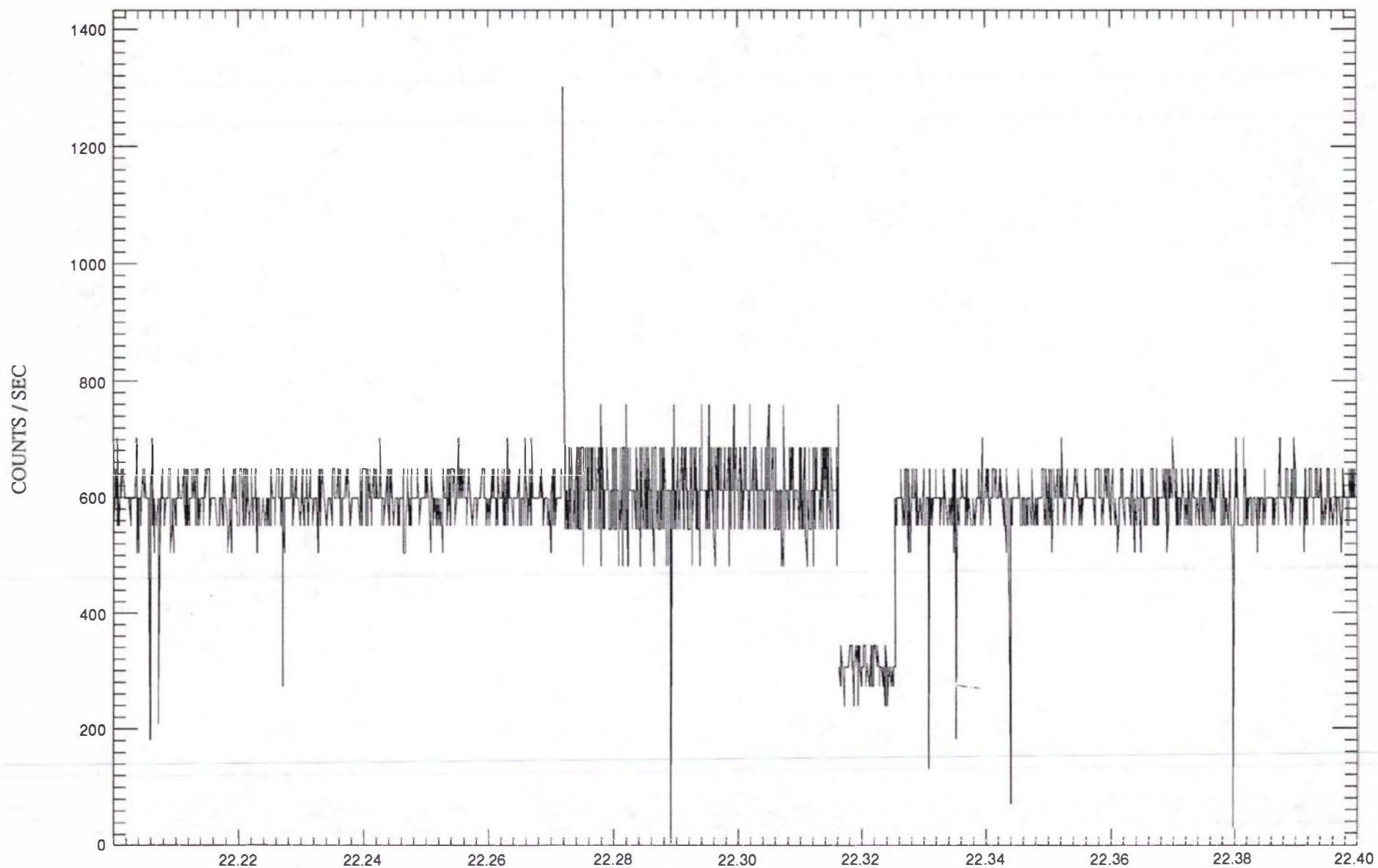
CALIBRATION DATA INCLUDED



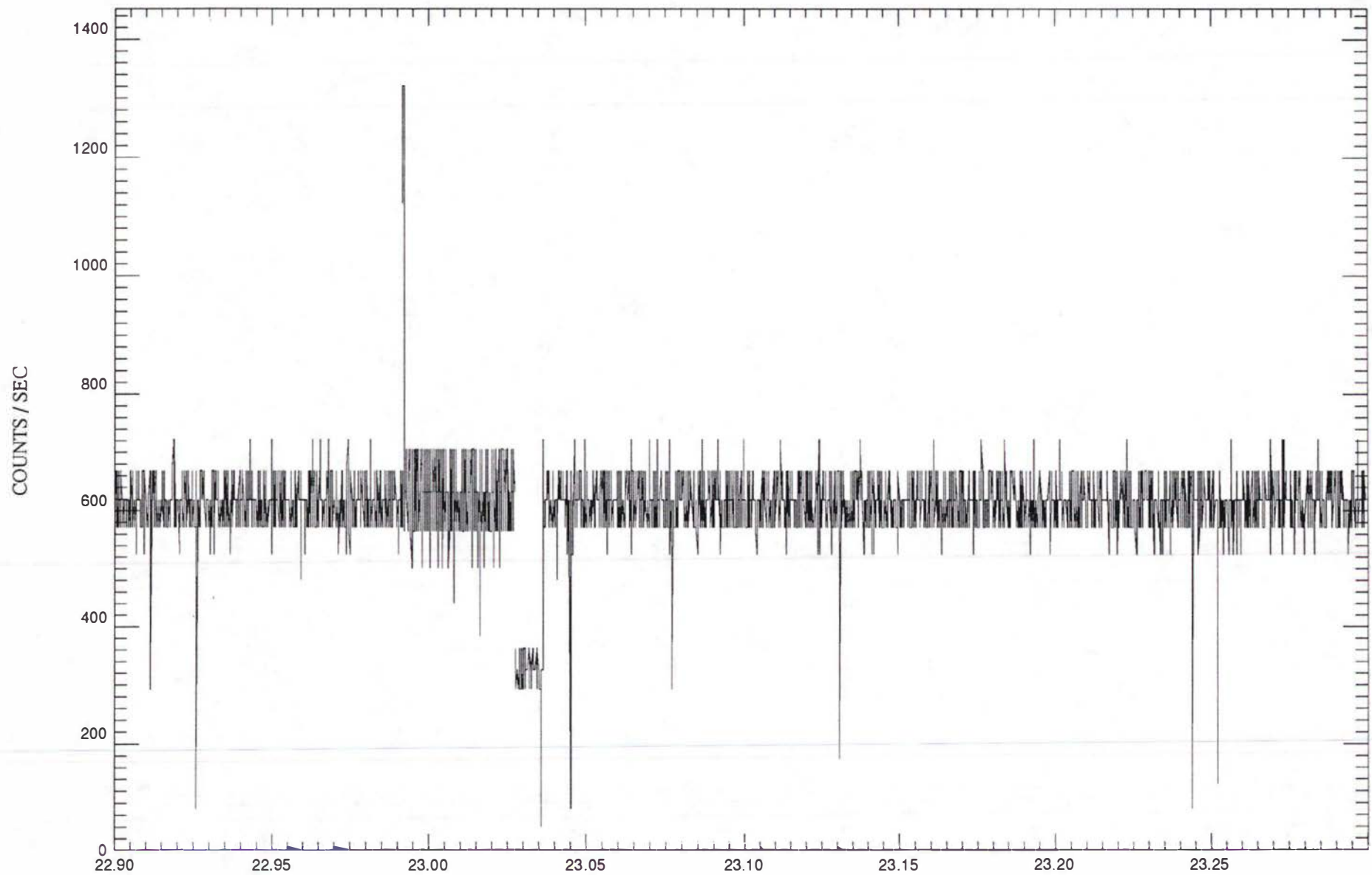
CALIBRATION DATA INCLUDED



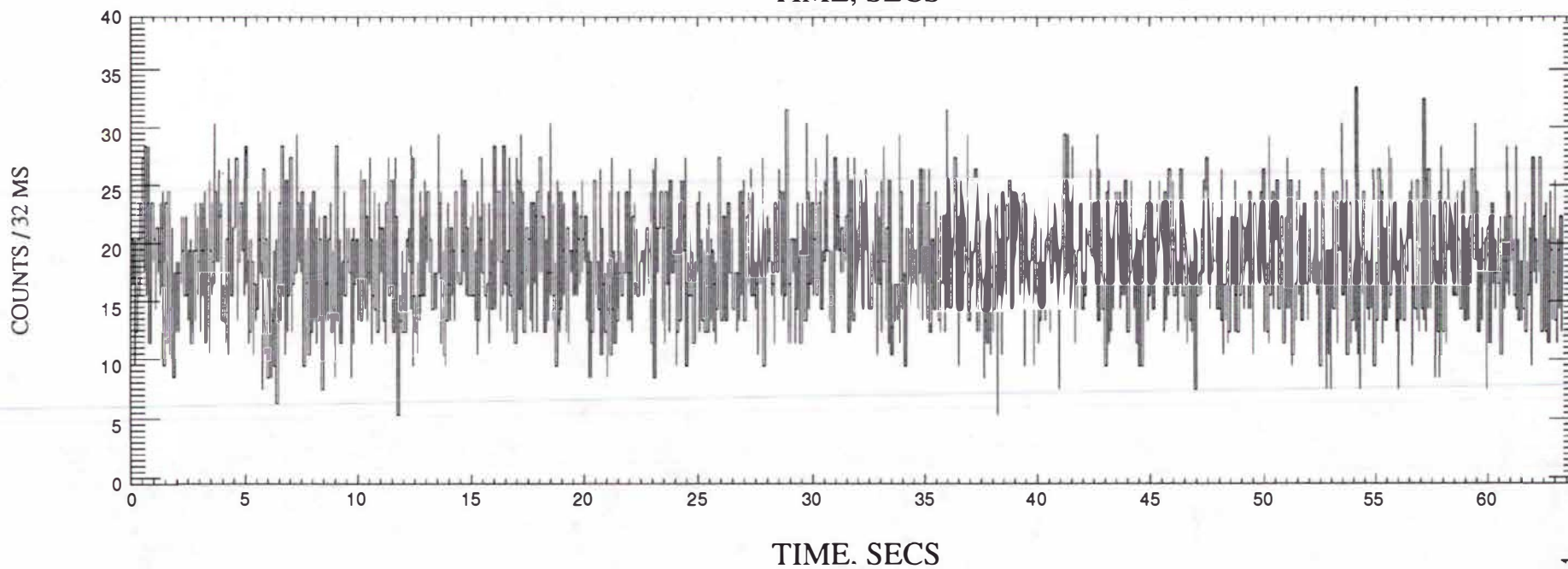
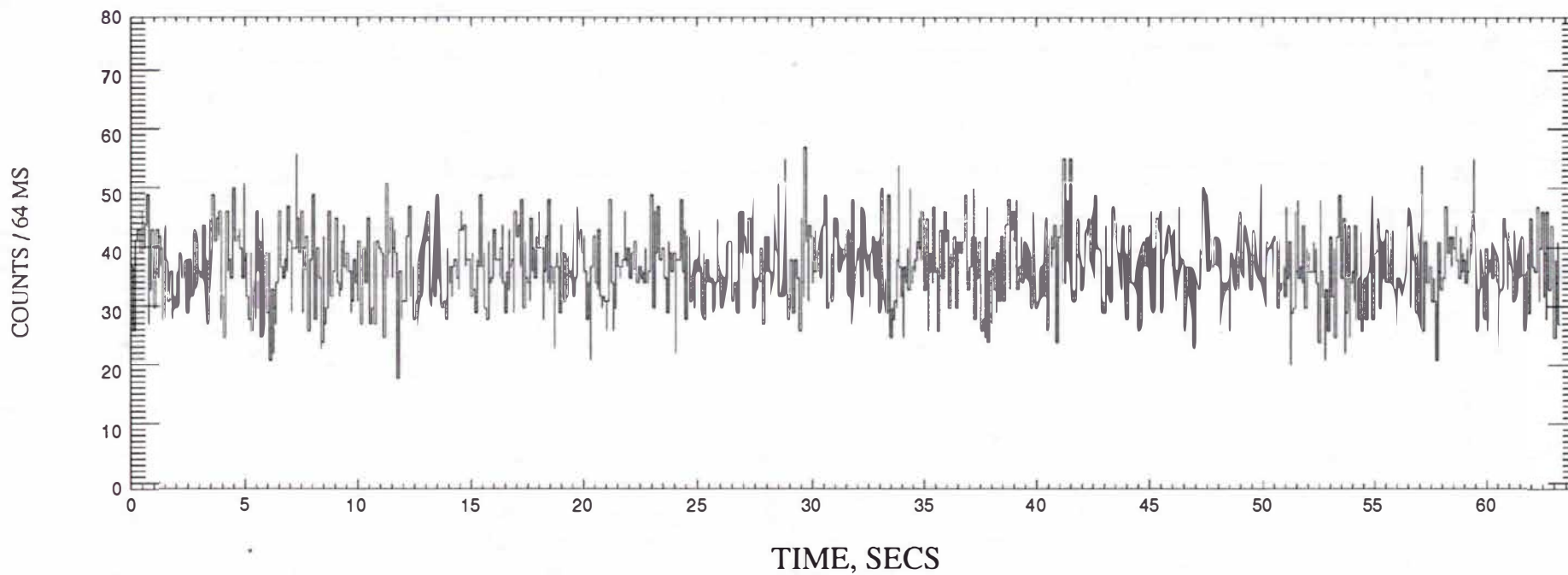
CALIBRATION DATA INCLUDED



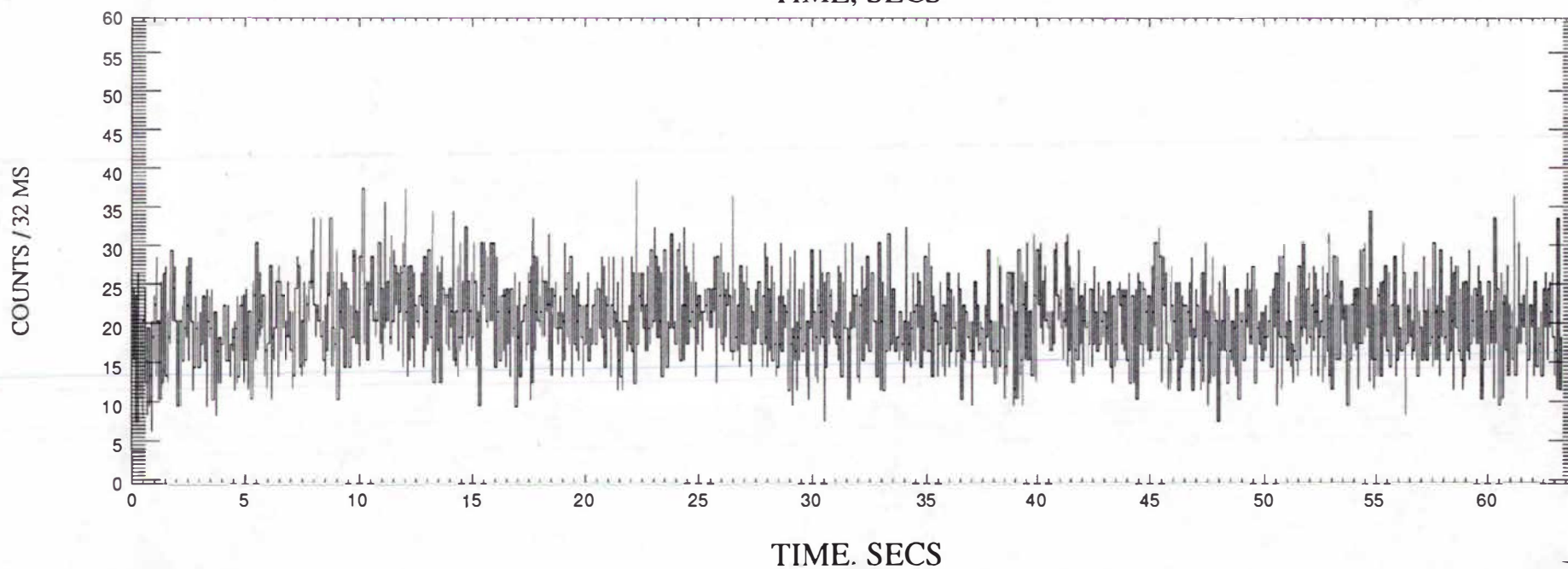
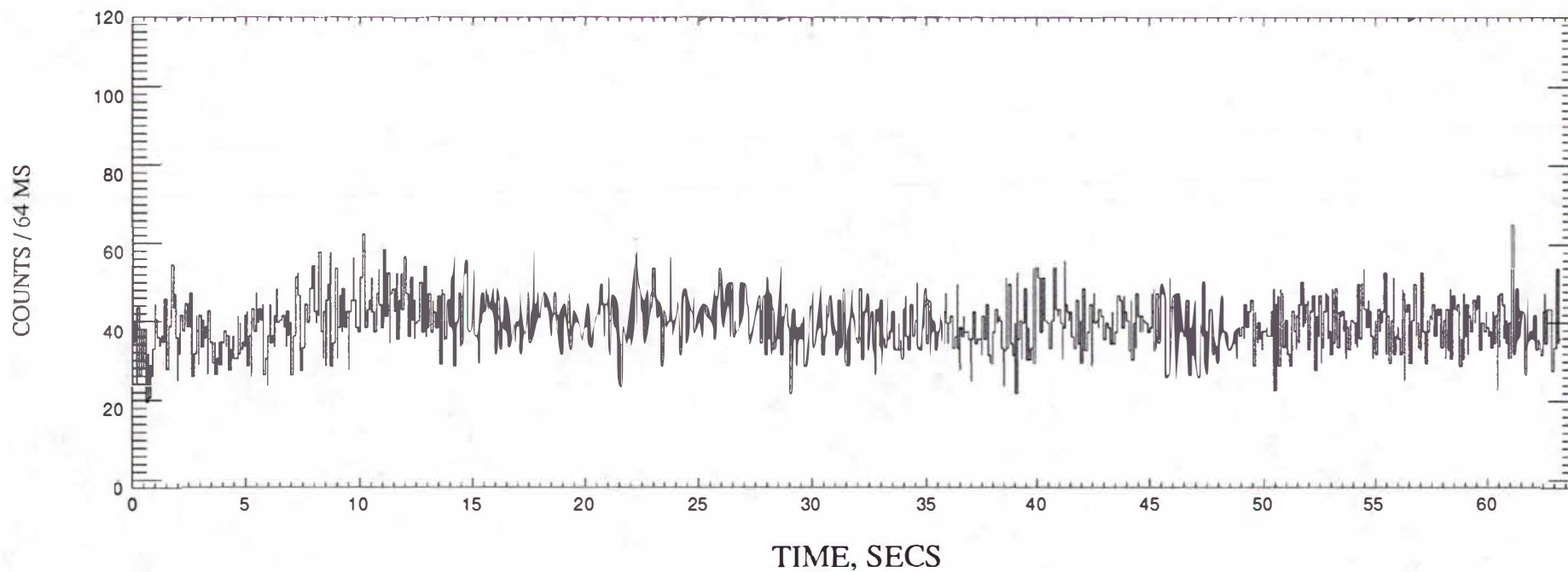
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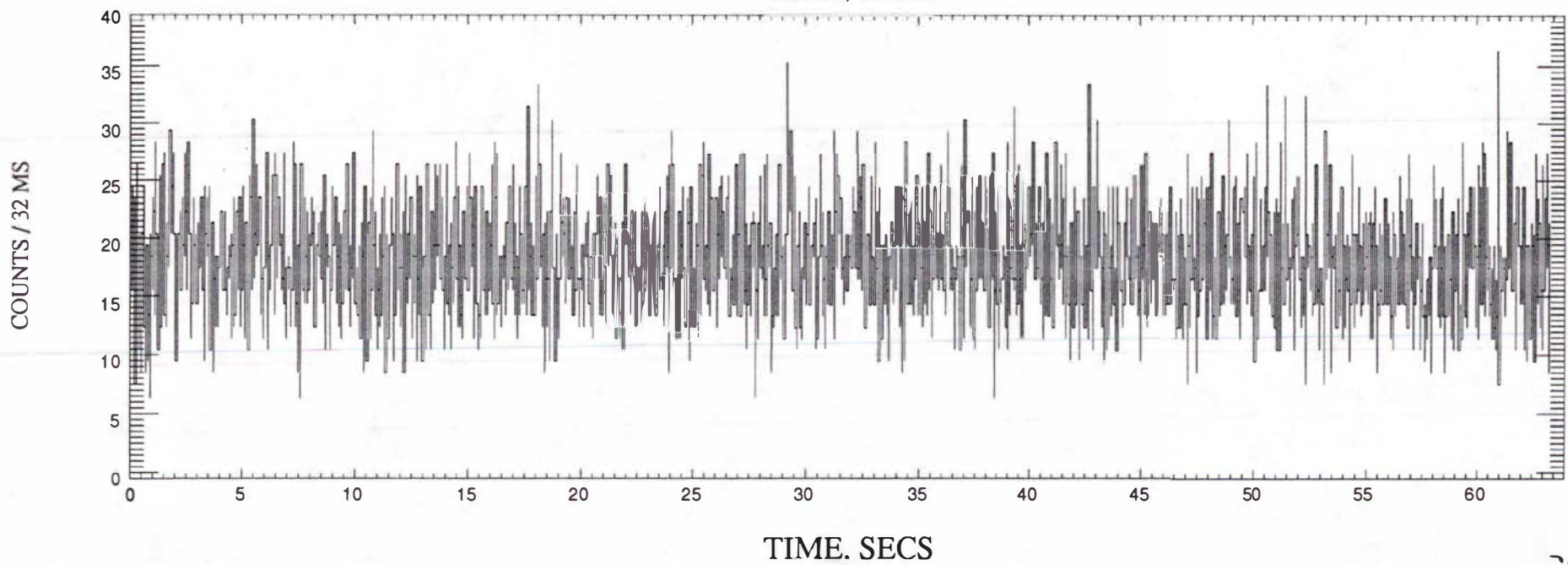
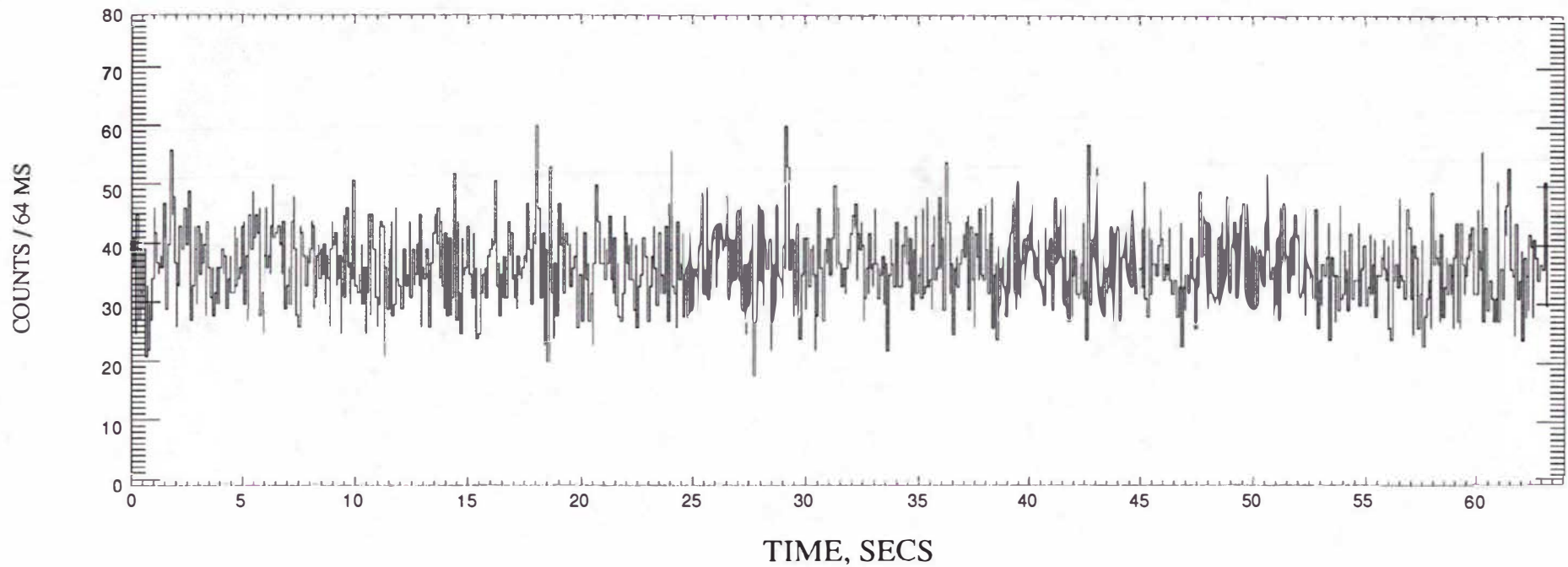
Burst Counter 5 at UT= 0.678812031216 h= 2443.723 s



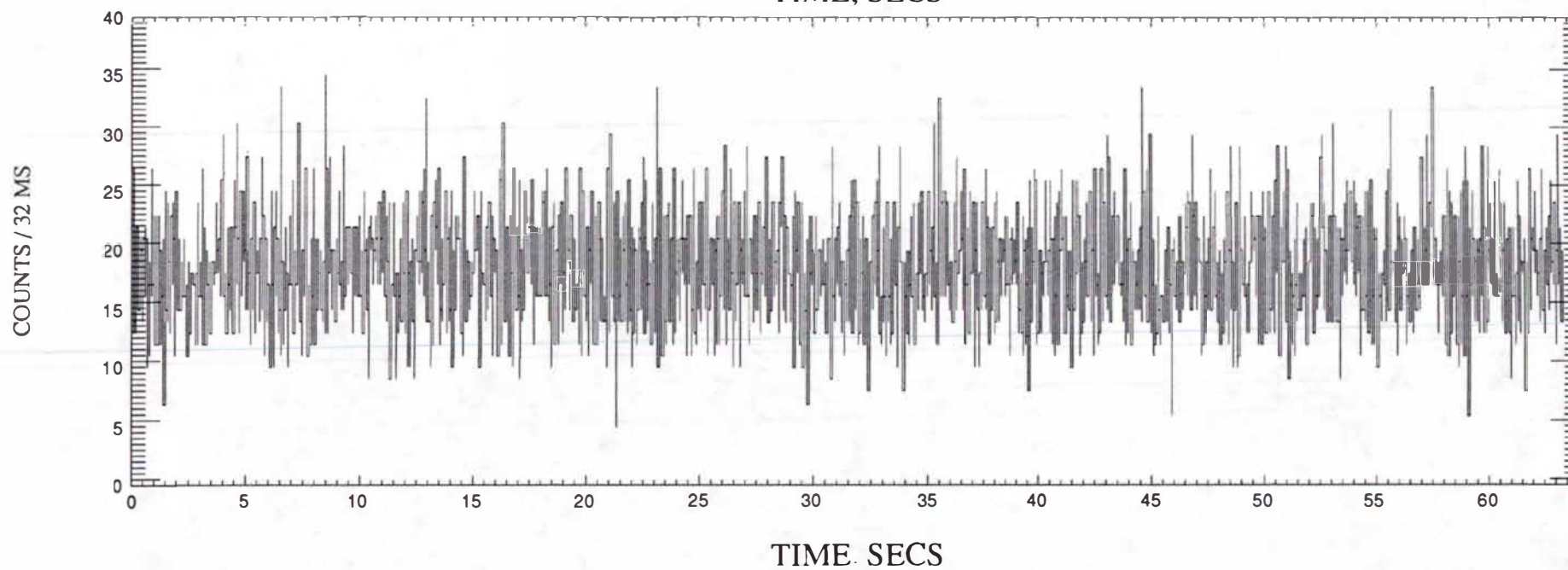
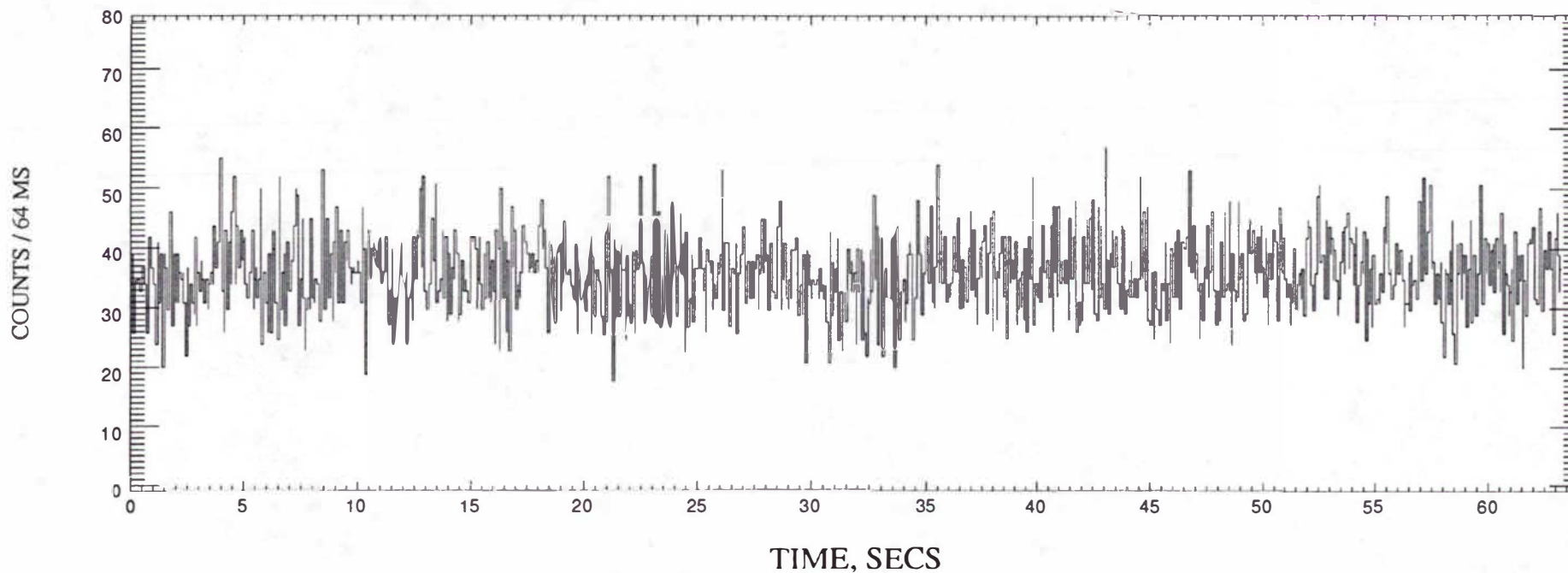
Burst Counter 6 at UT= 1.943306905958 h= 6995.905 s



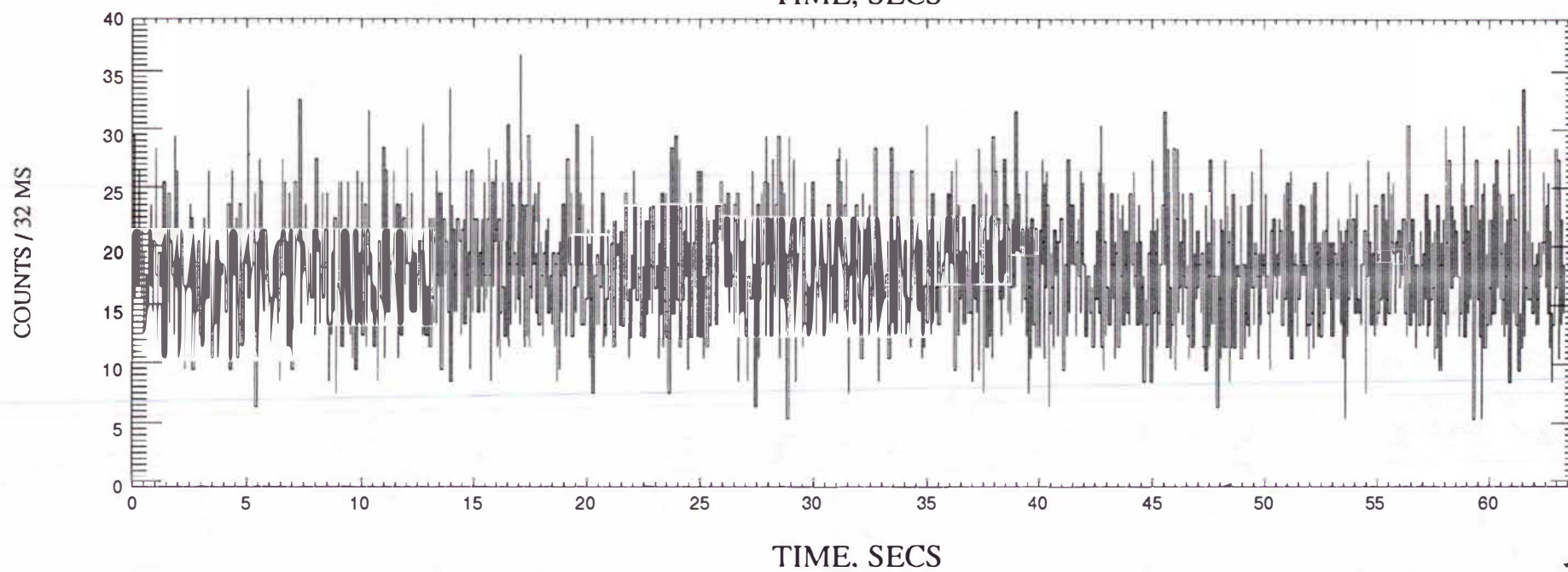
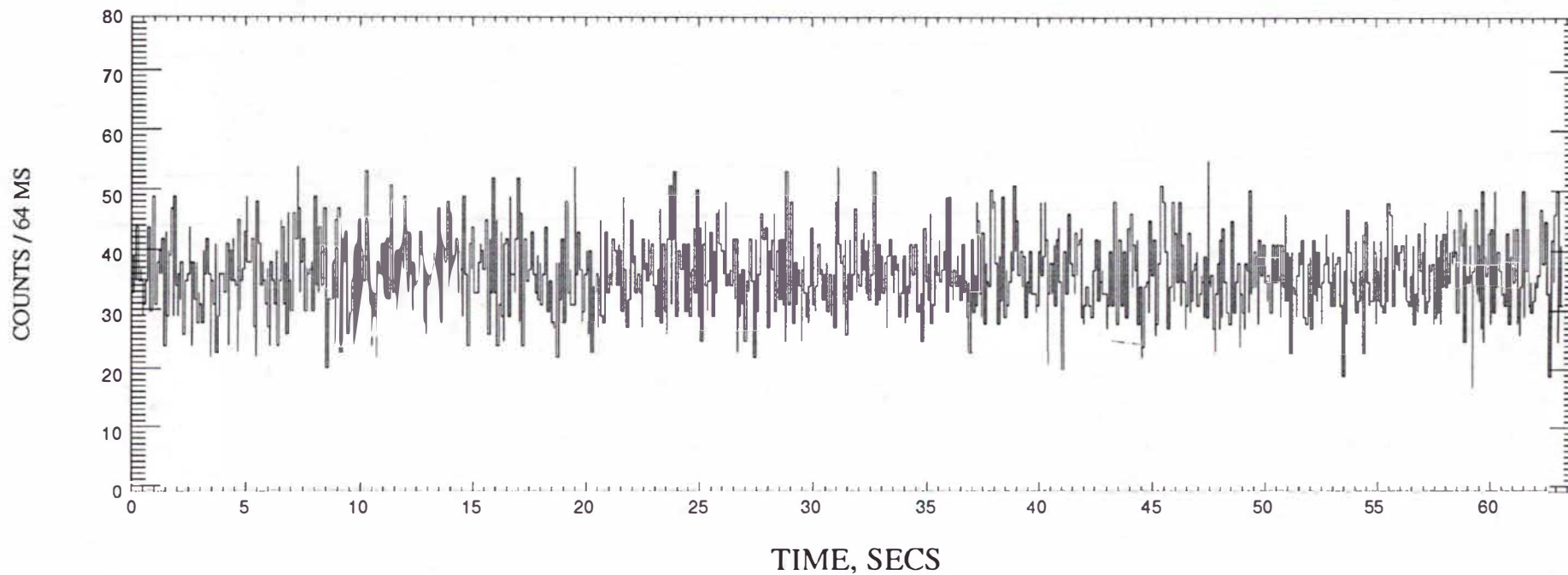
Burst Counter 7 at UT= 3.205553512573 h=11539.993 s



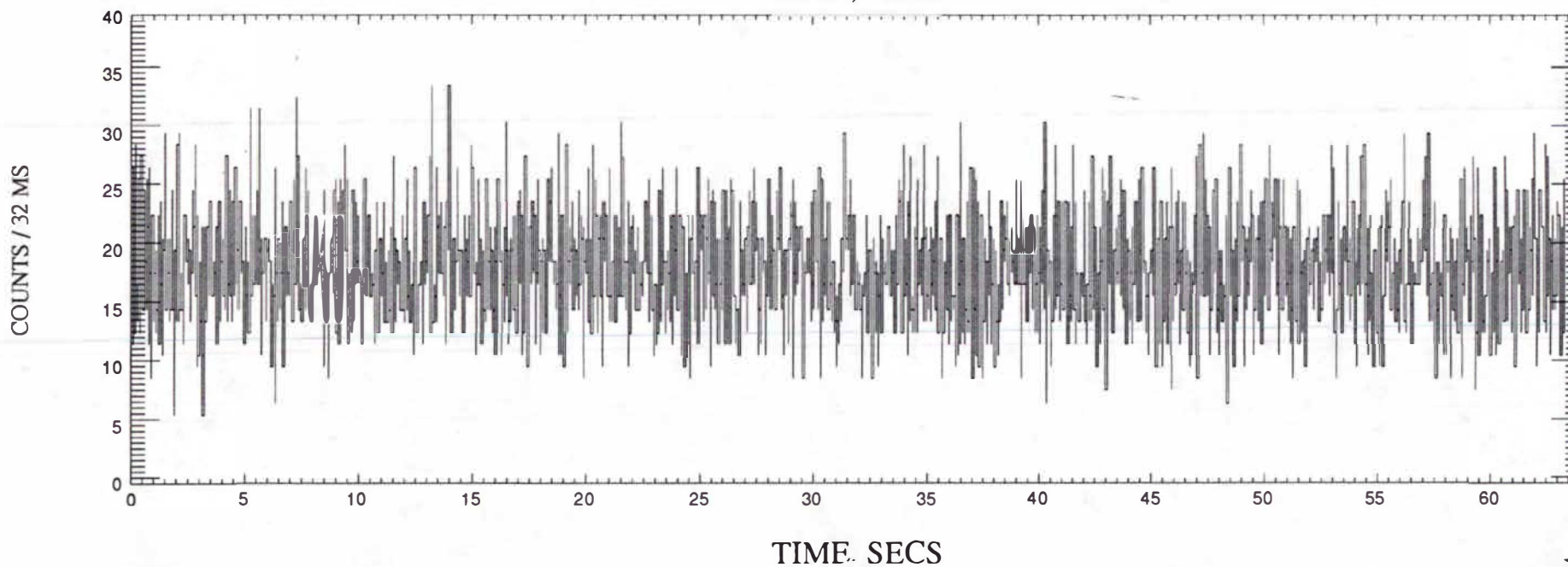
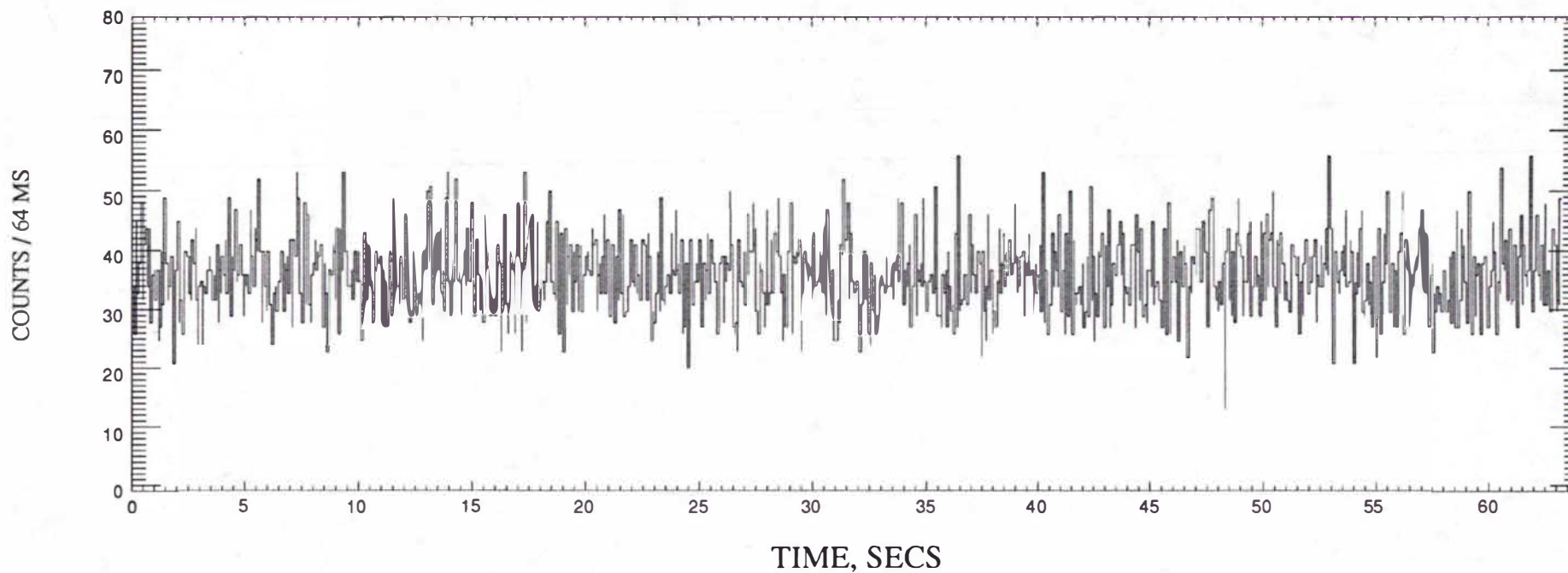
Burst Counter 8 at UT= 4.520295778910 h=16273.065 s



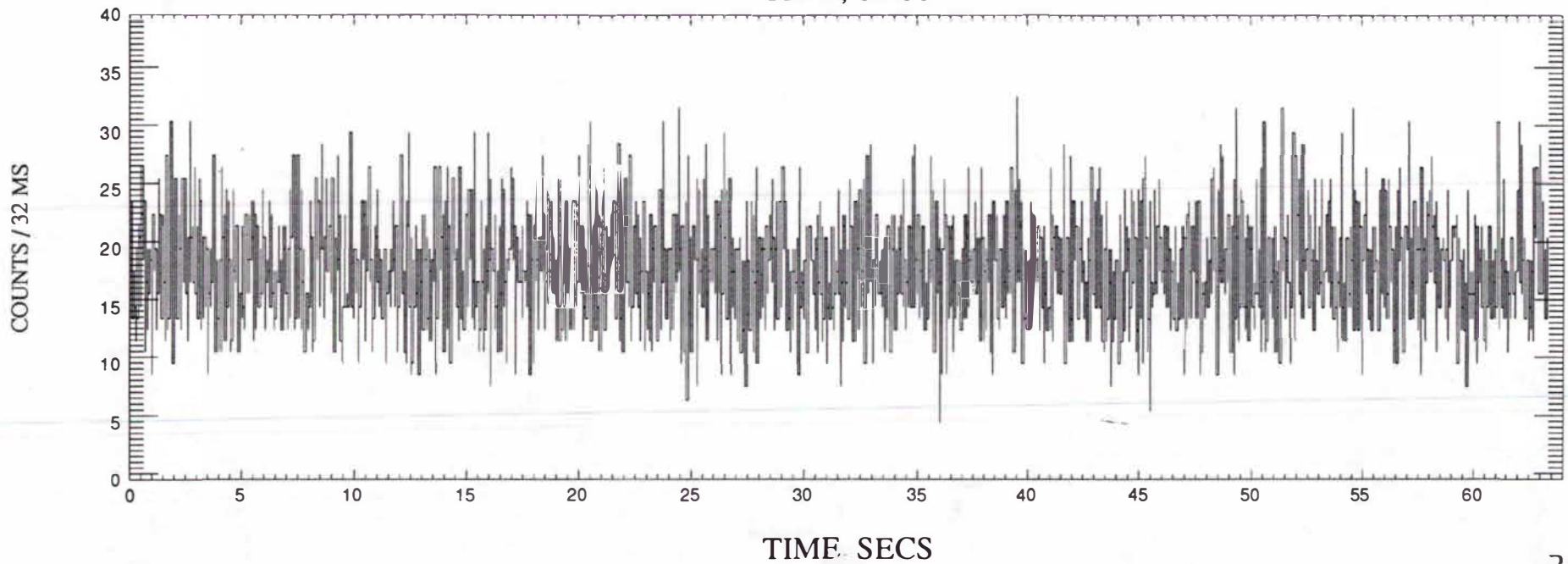
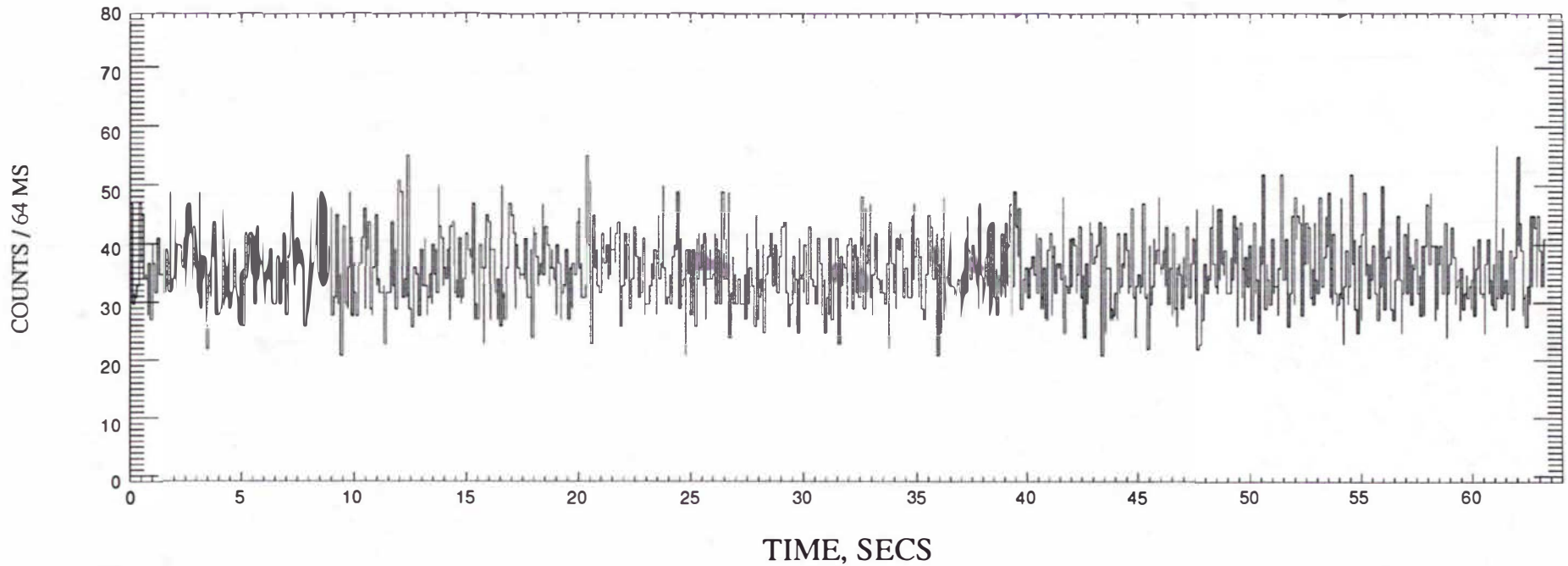
Burst Counter 9 at UT= 5.787815827264 h=20836.137 s



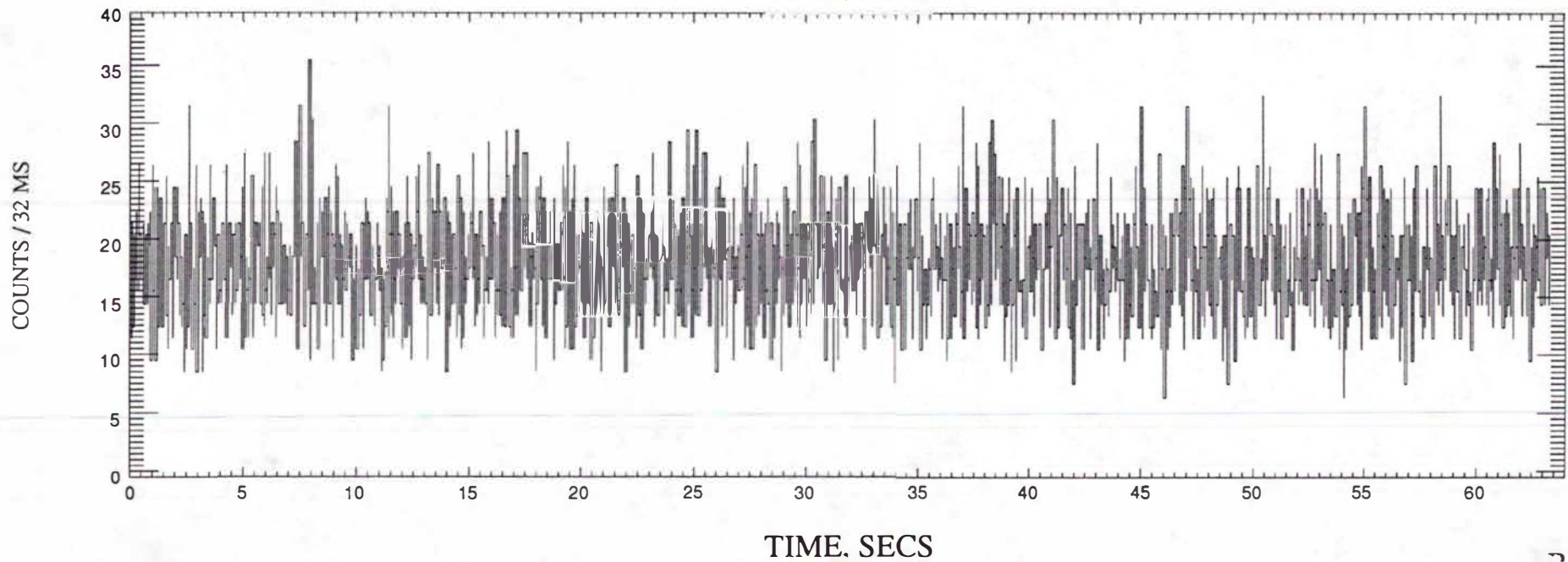
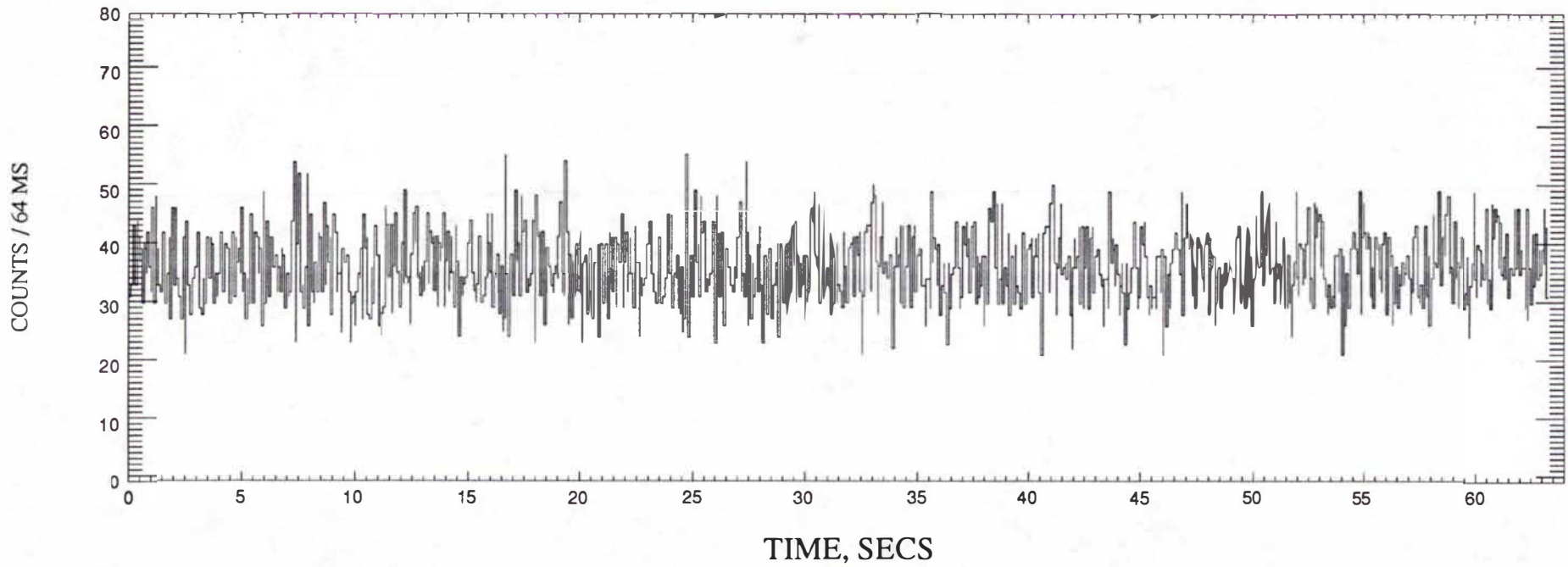
Burst Counter 10 at UT= 7.081308093601 h=25492.709 s



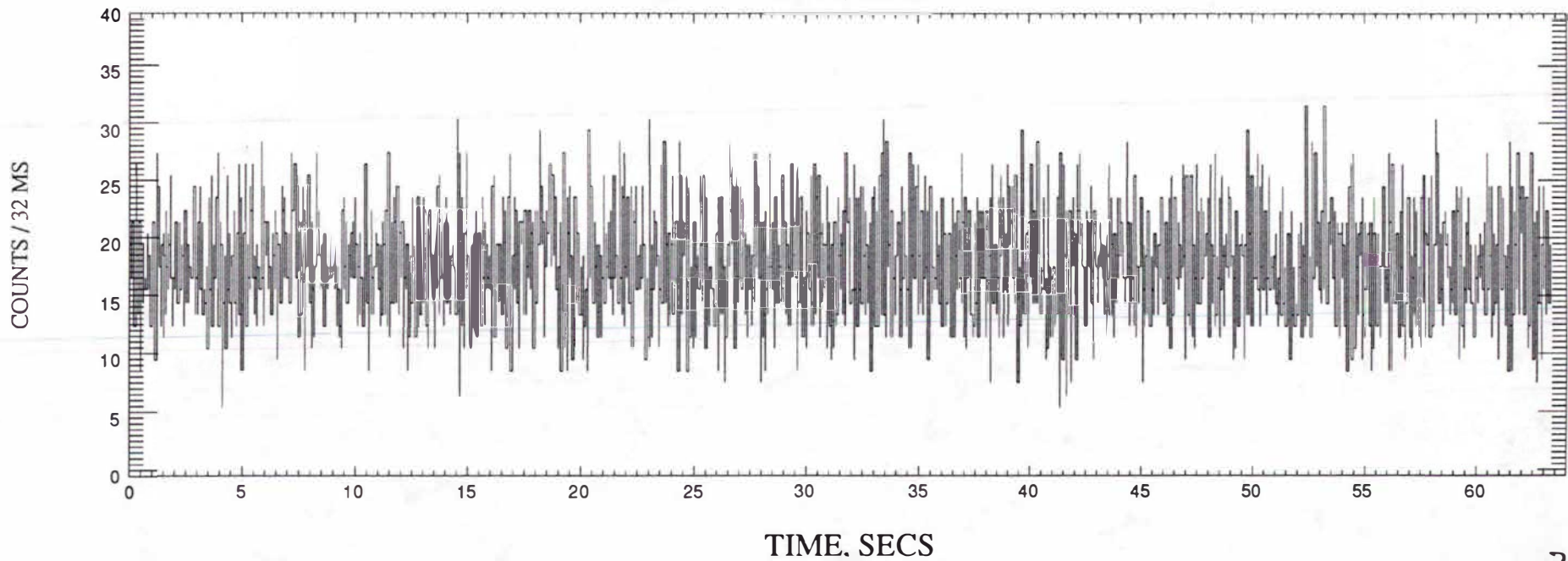
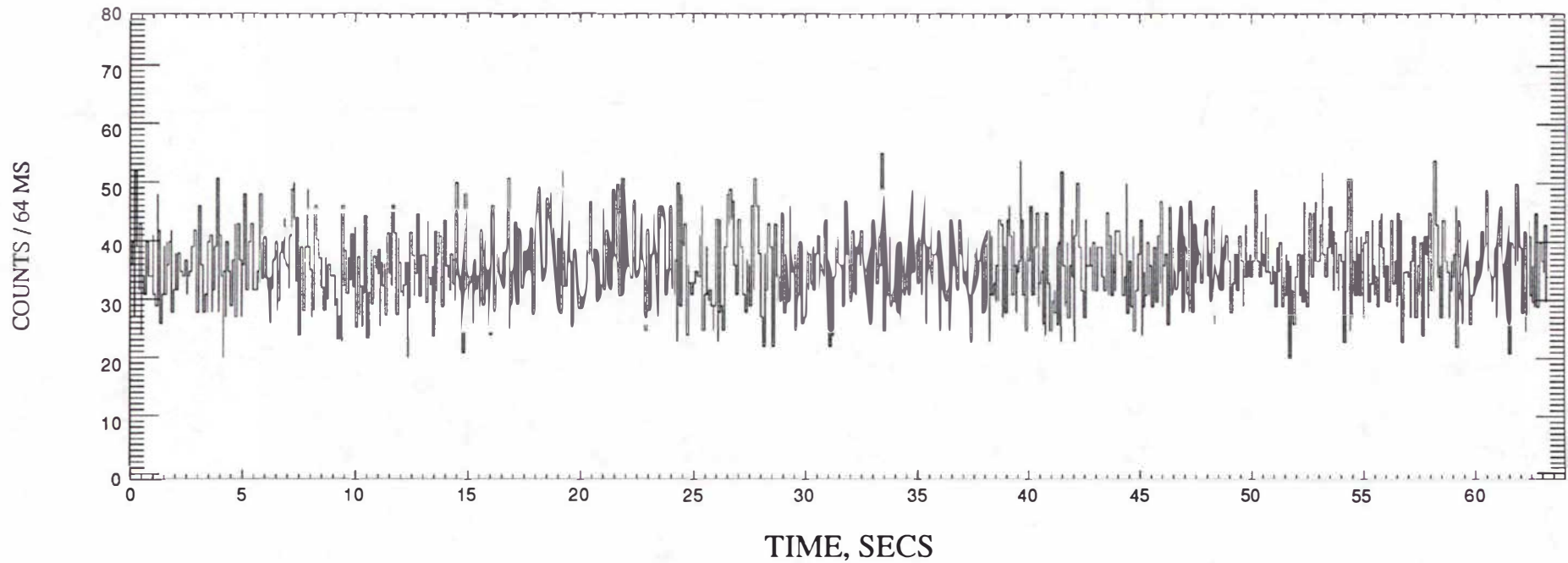
Burst Counter 11 at UT= 8.401434474521 h=30245.164 s



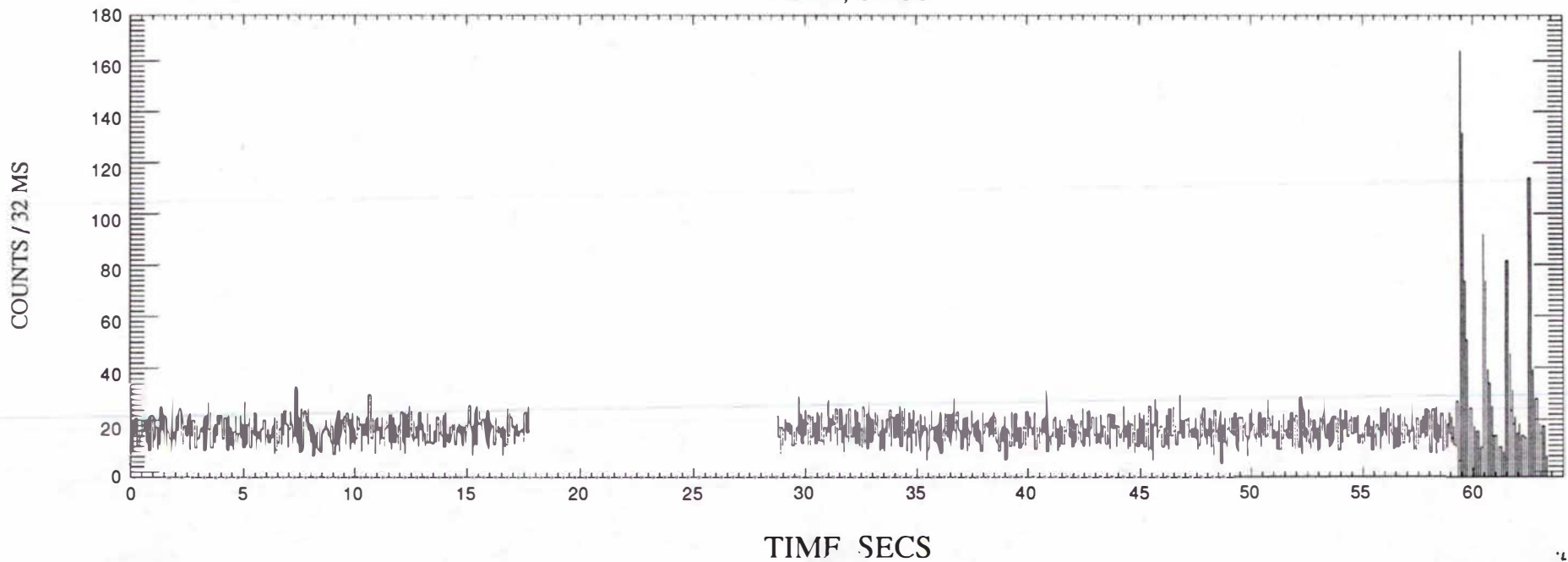
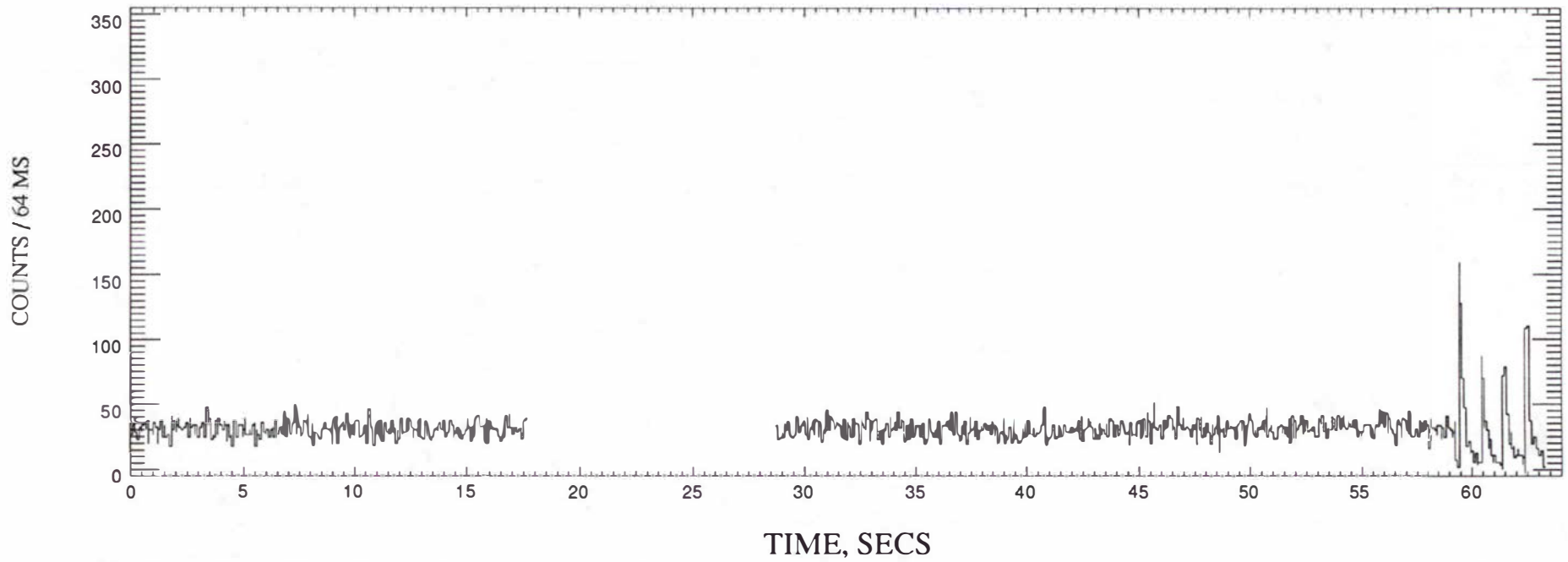
Burst Counter 12 at UT= 9.844579577976 h=35440.486 s



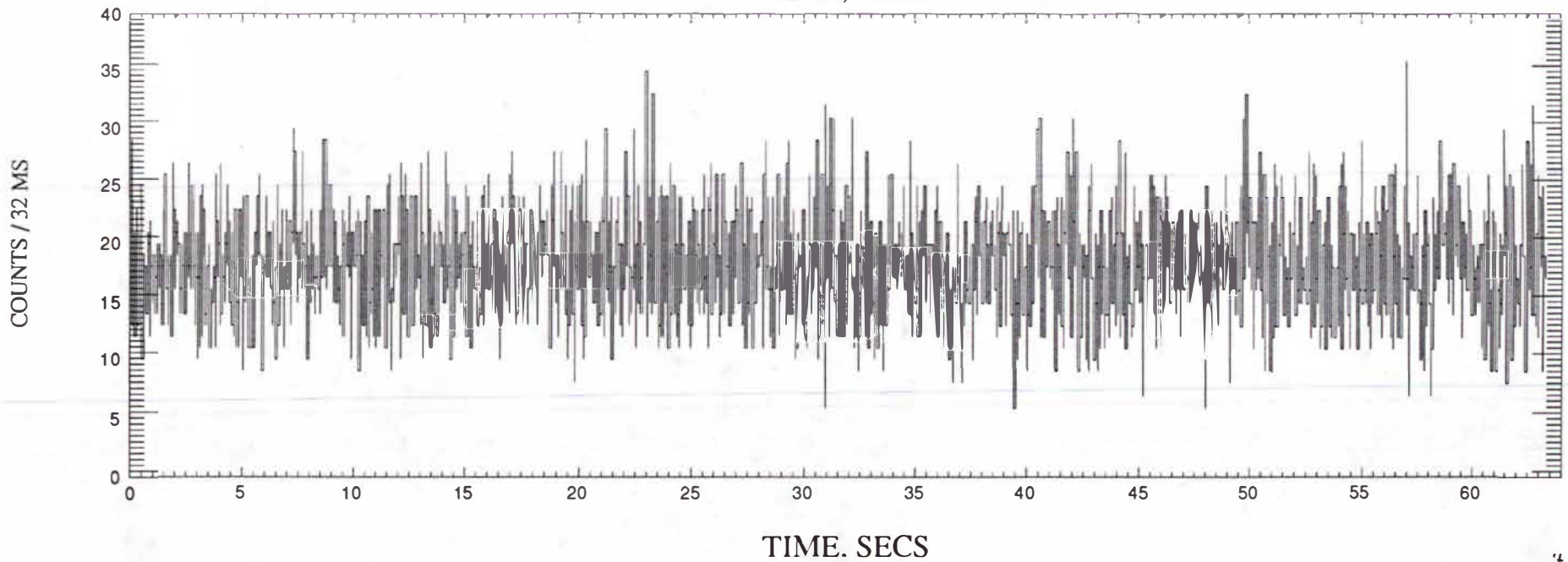
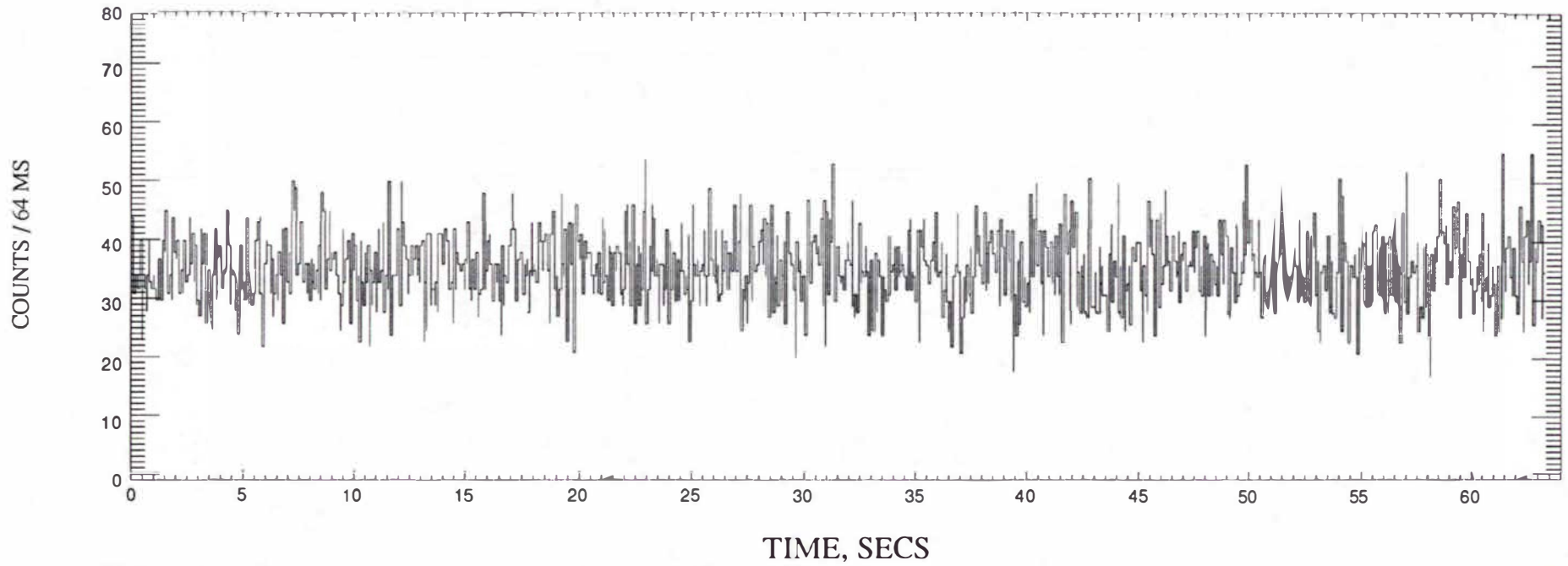
Burst Counter 13 at UT=10.991752124363 h=39570.308 s



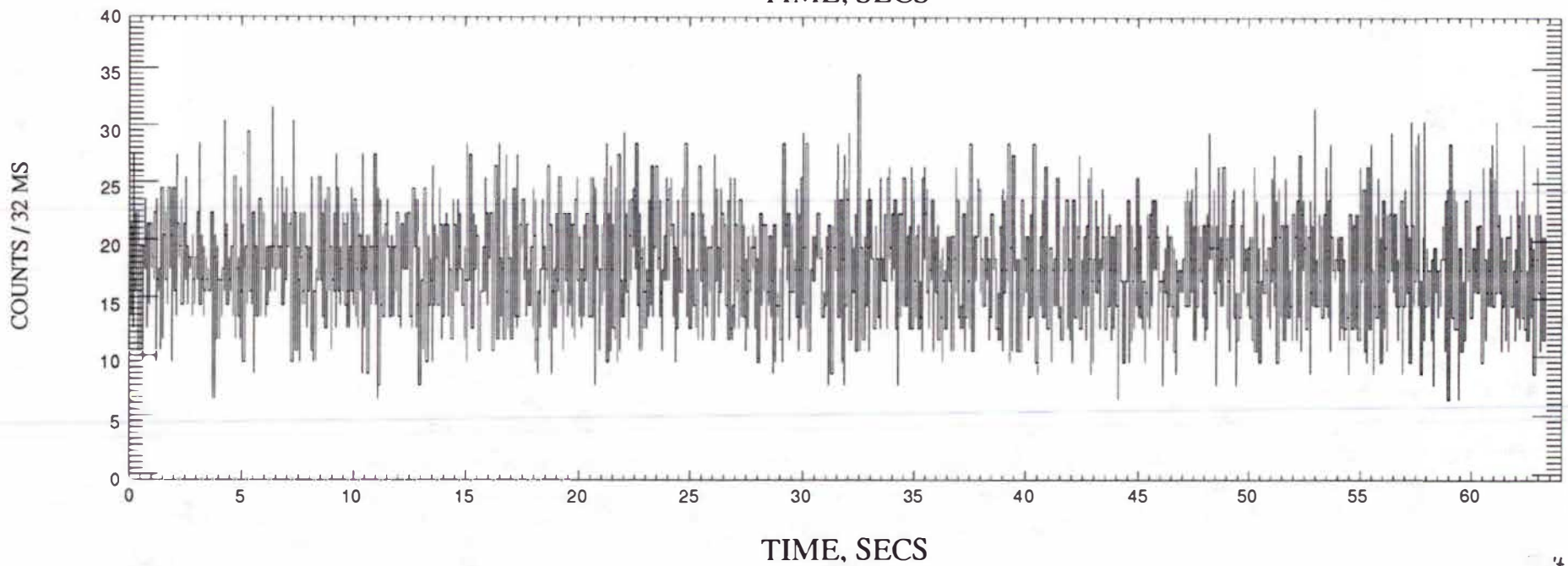
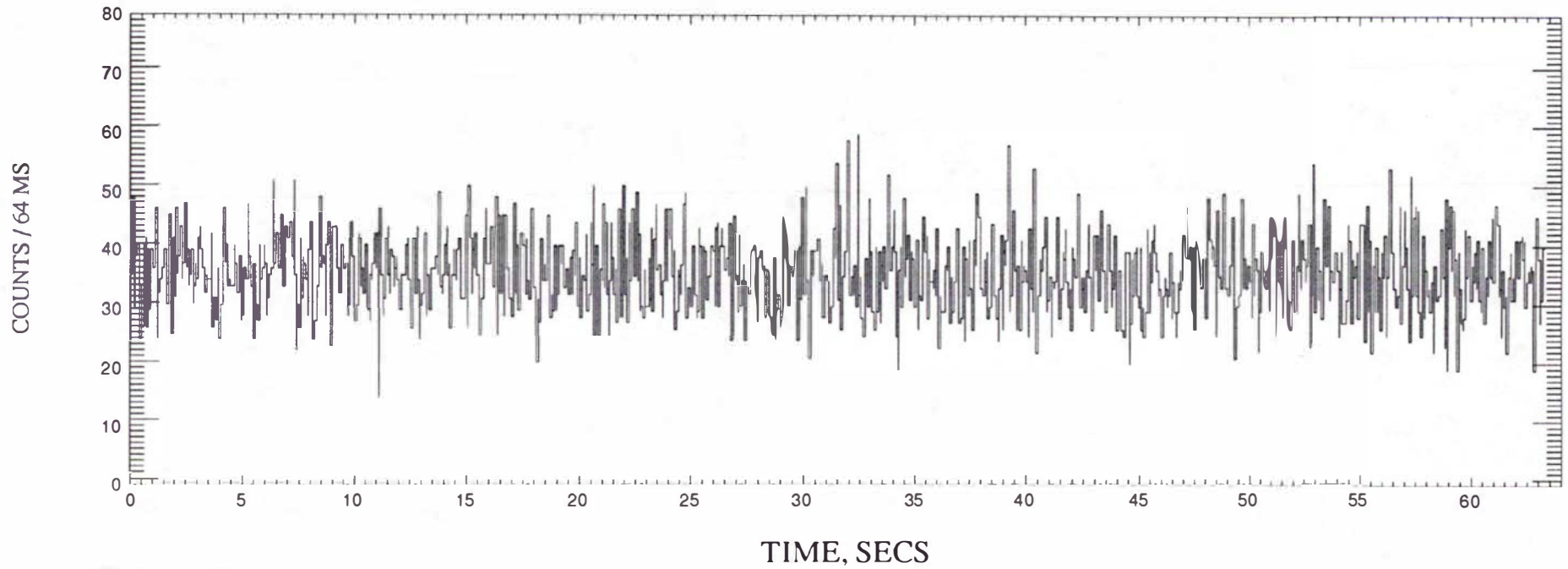
Burst Counter 14 at UT=11.750028262668 h=42300.102 s



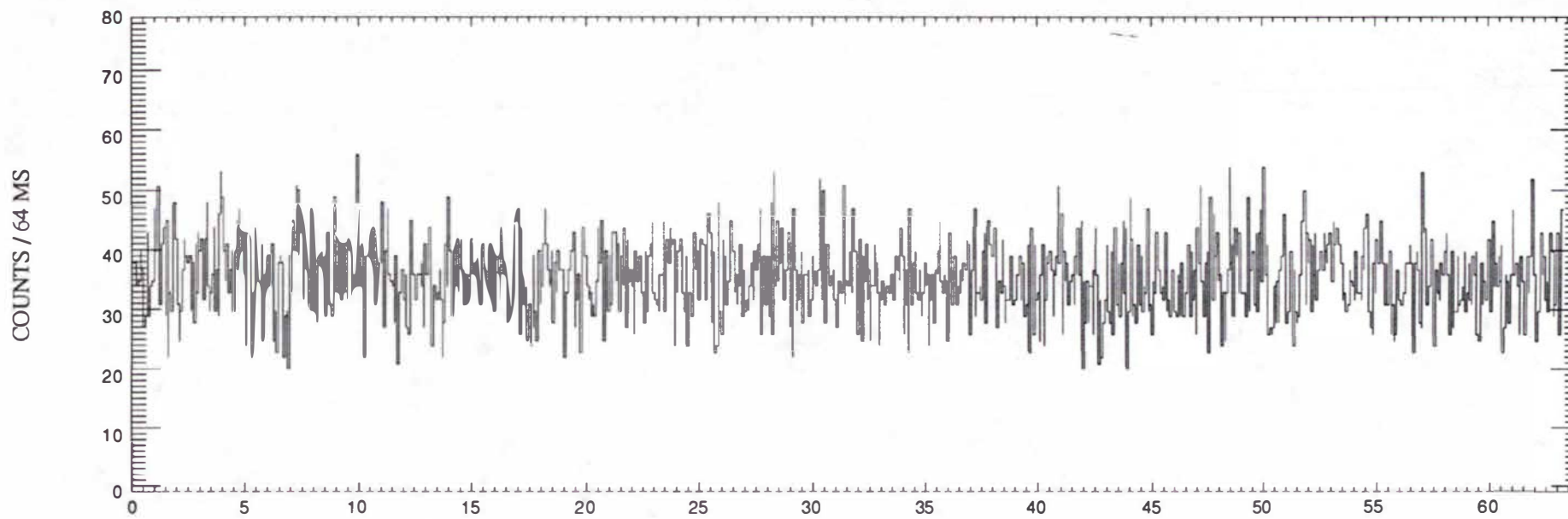
Burst Counter 15 at UT=12.451673791673 h=44826.026 s



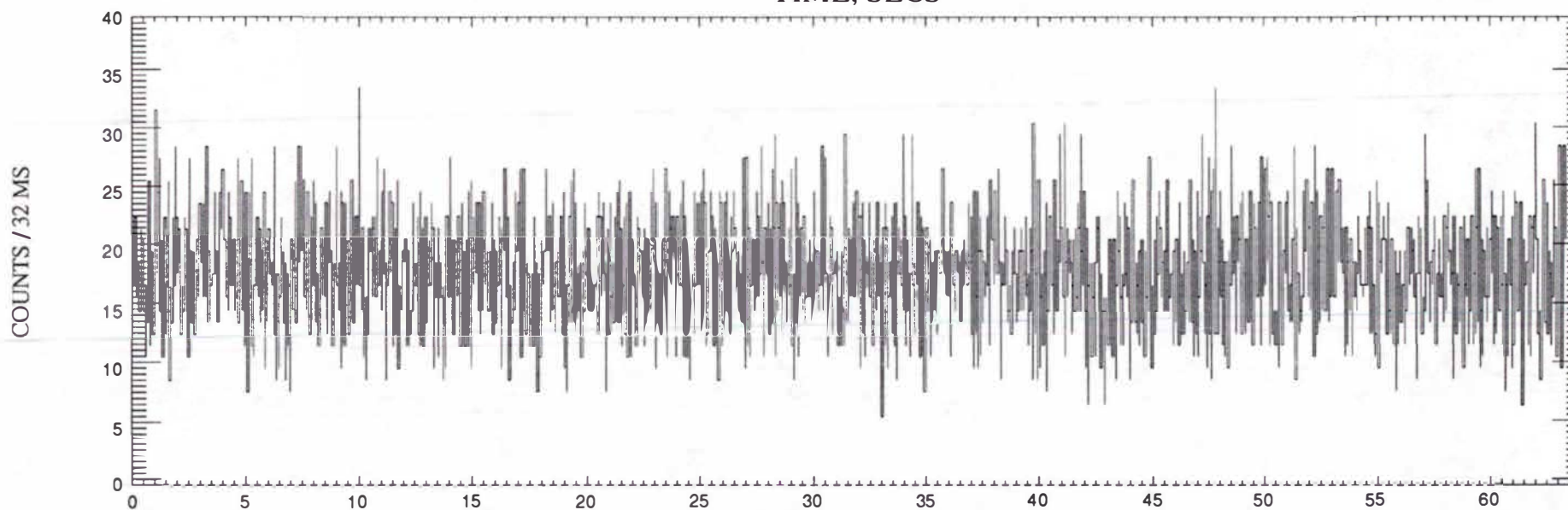
Burst Counter 0 at UT=13.322798266941 h=47962.074 s



Burst Counter 1 at UT=14.055689175924 h=50600.481 s

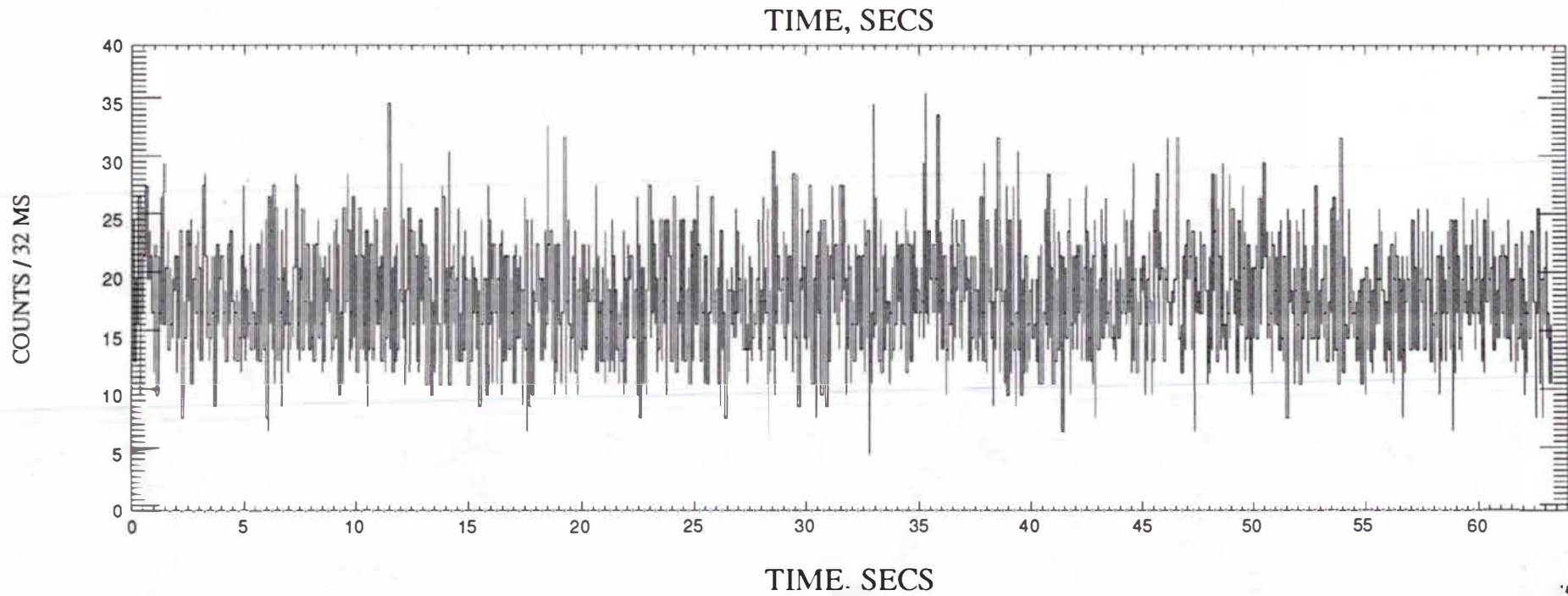
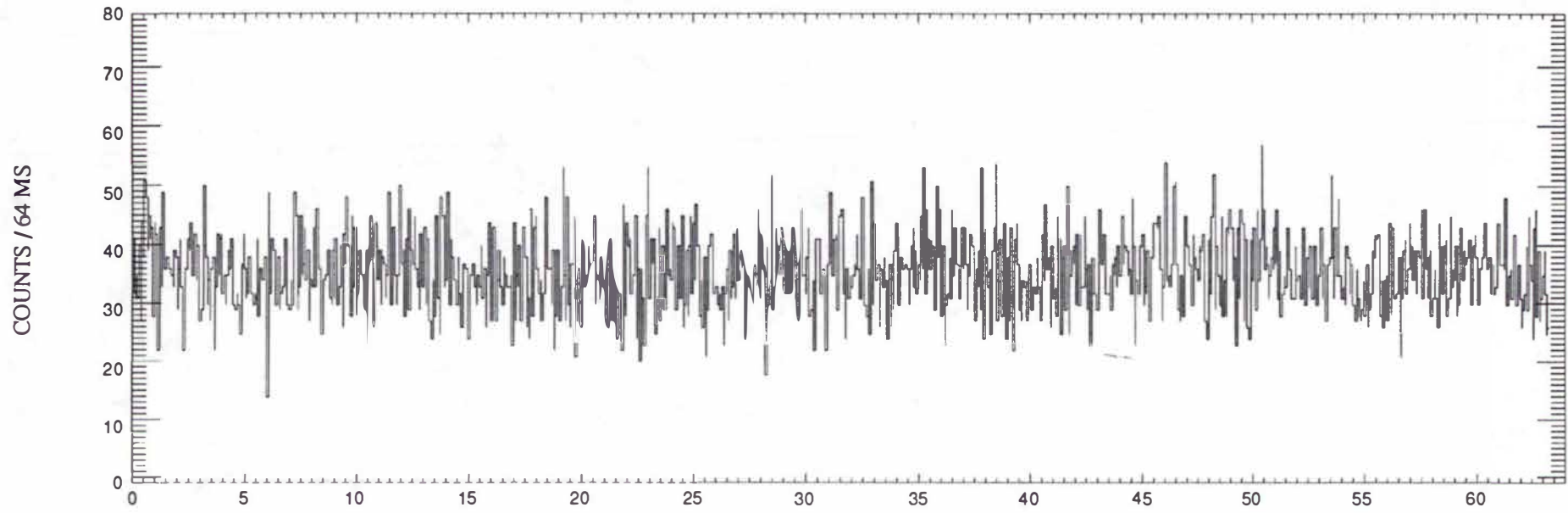


TIME, SECS

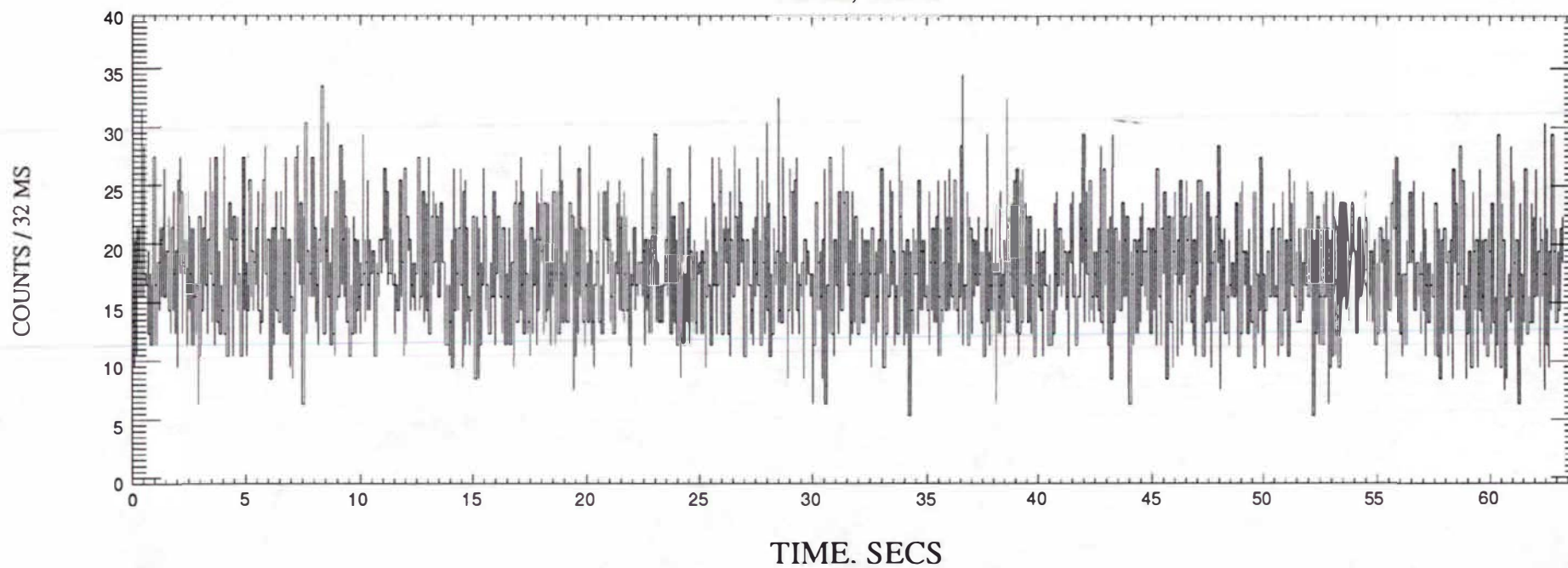
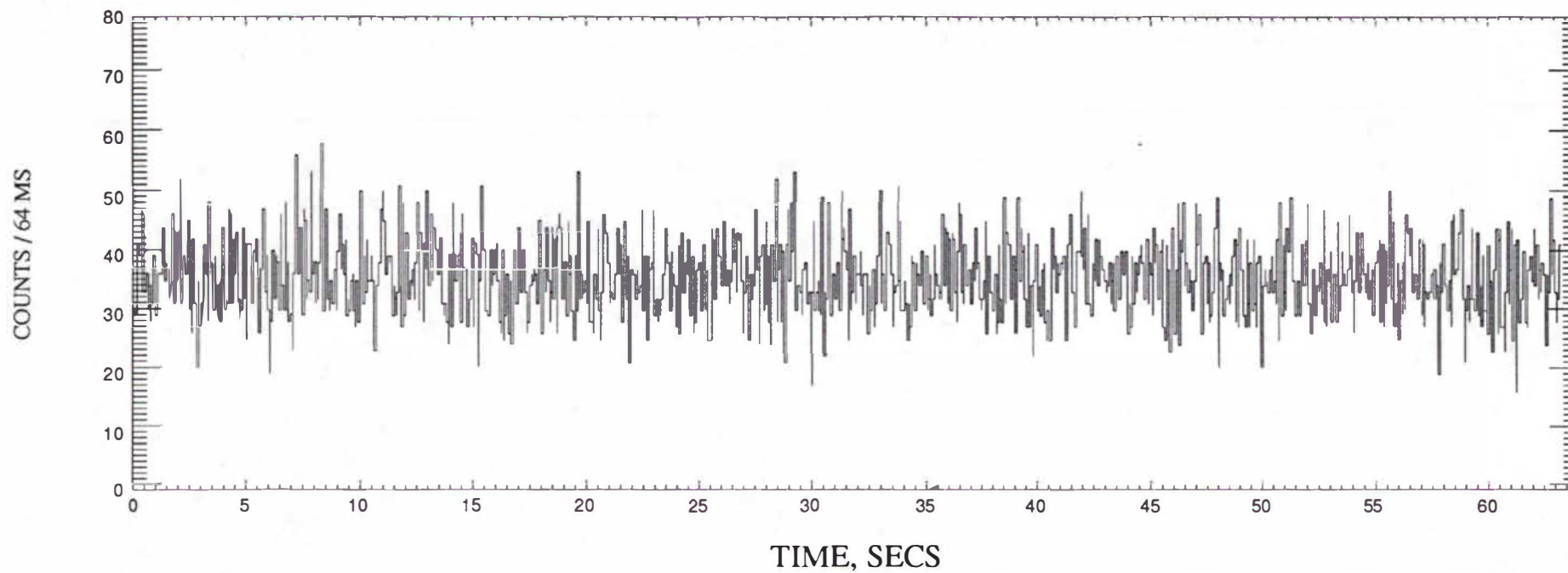


TIME, SECS

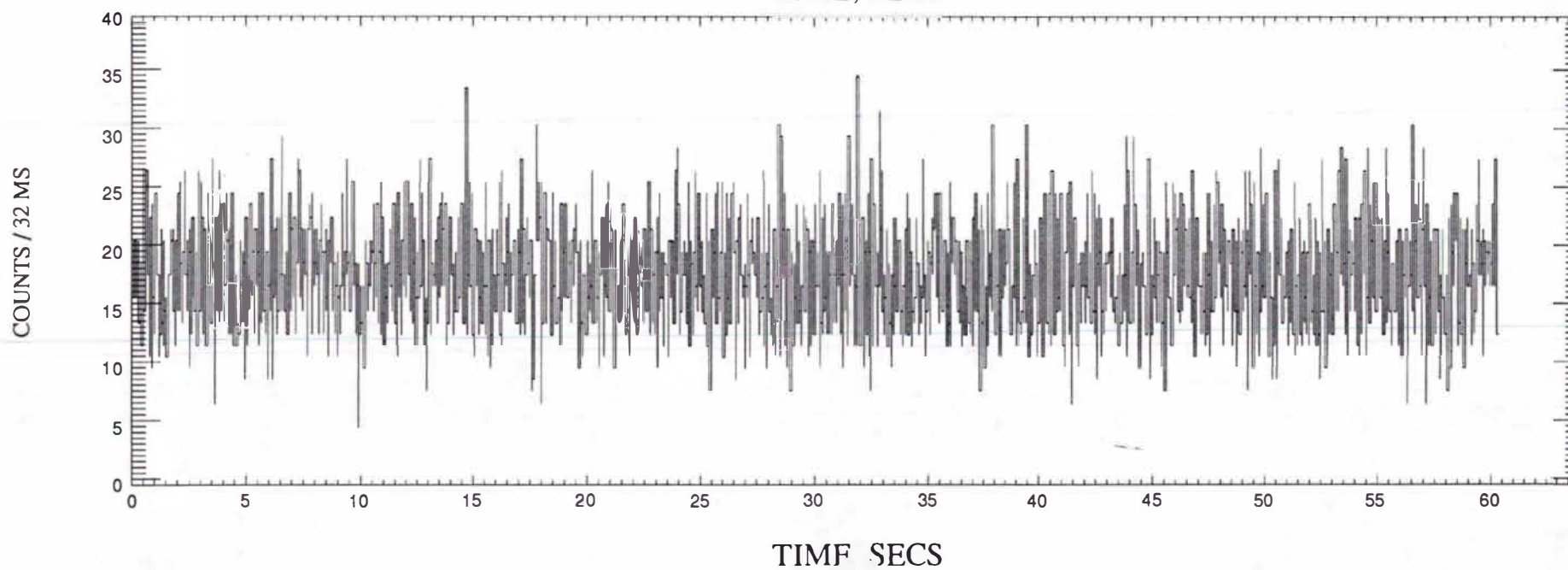
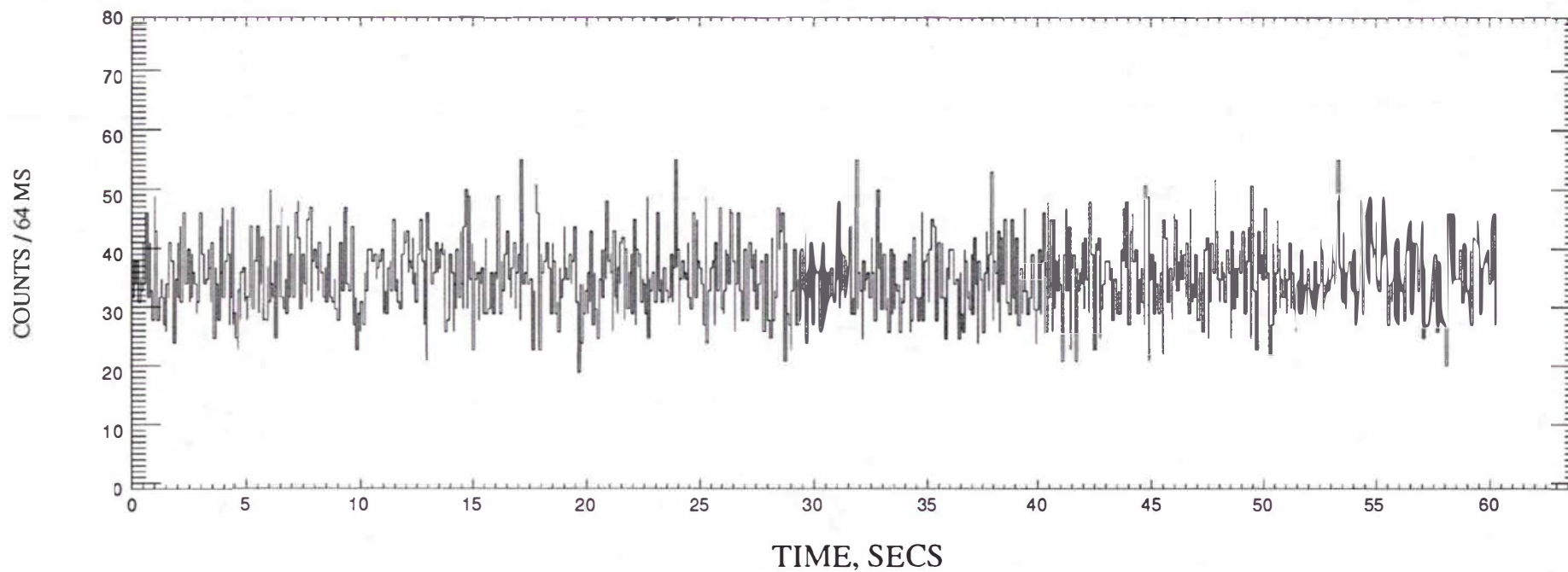
Burst Counter 2 at UT=14.789937536452 h=53243.775 s



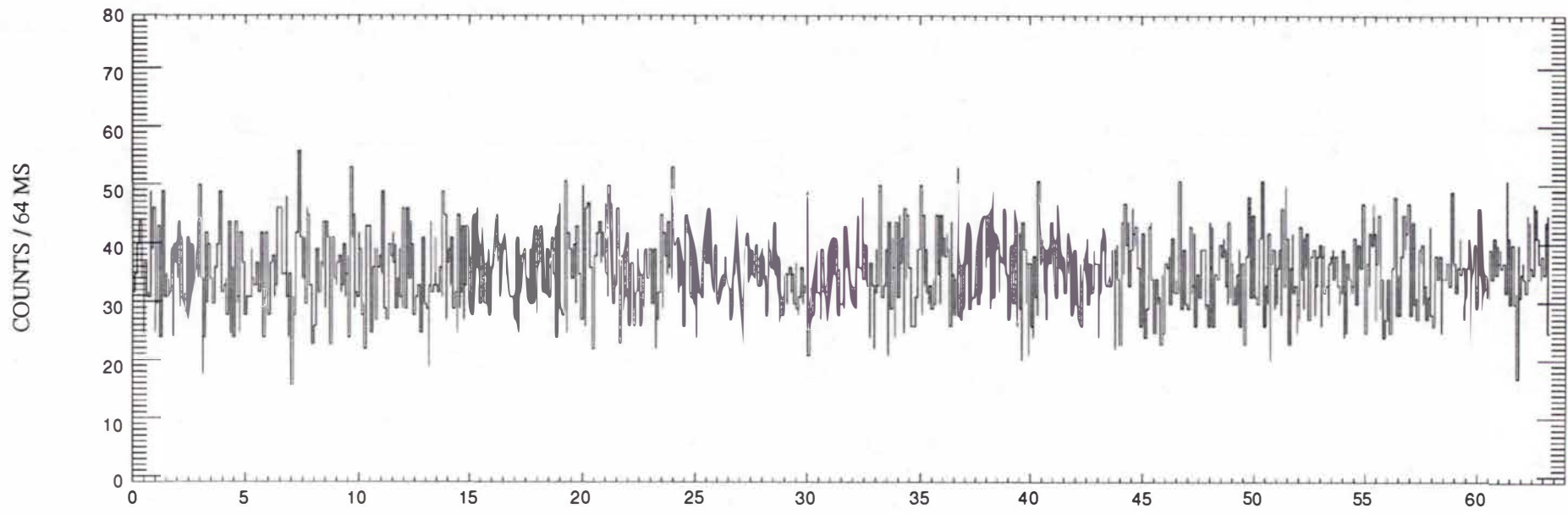
Burst Counter 3 at UT=15.599153344896 h=56156.952 s



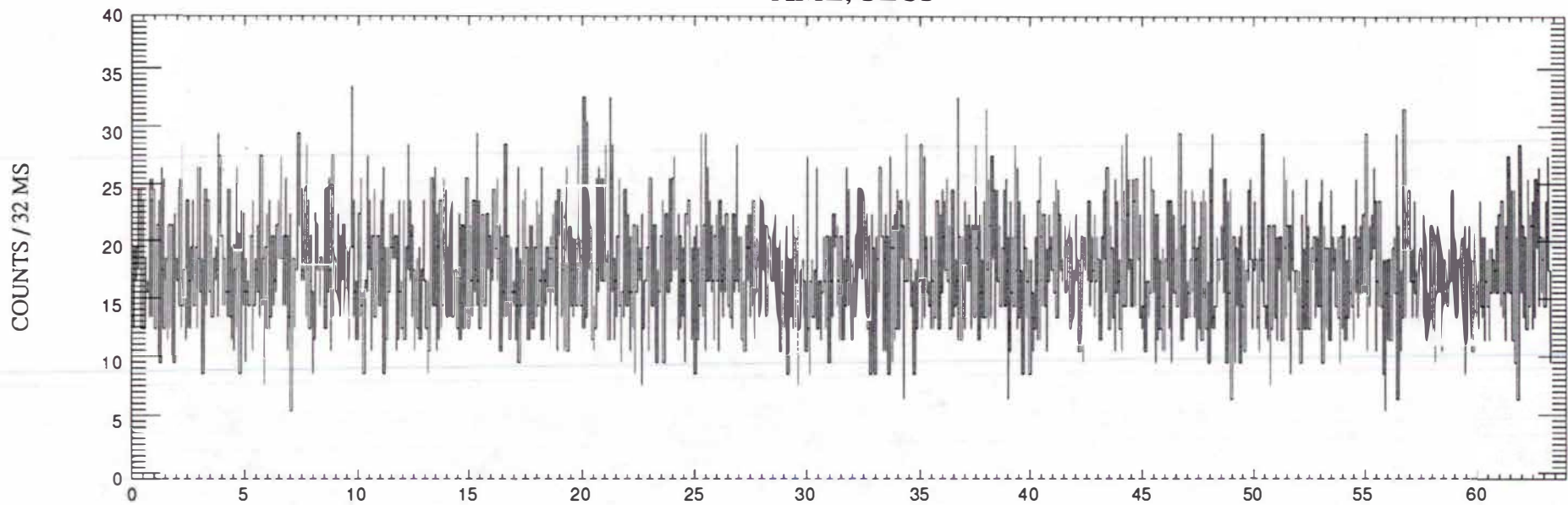
Burst Counter 4 at UT=16.344406483968 h=58839.863 s



Burst Counter 5 at UT=17.160564566718 h=61778.032 s

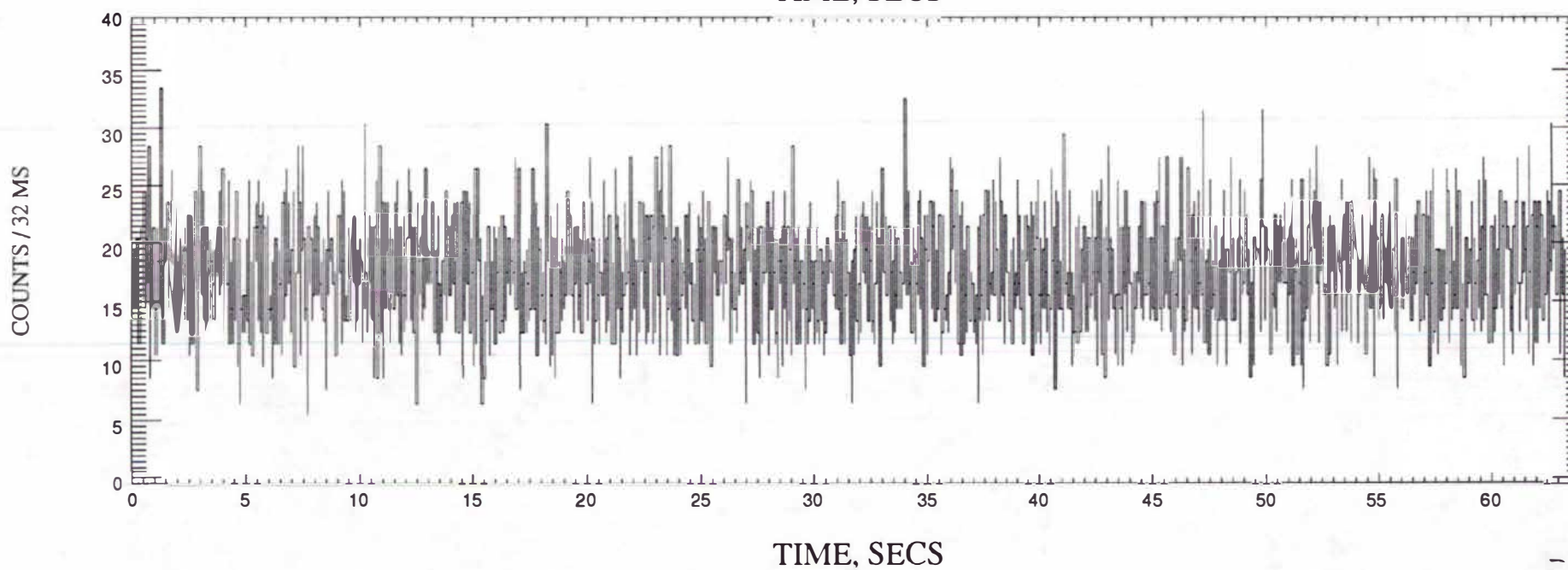
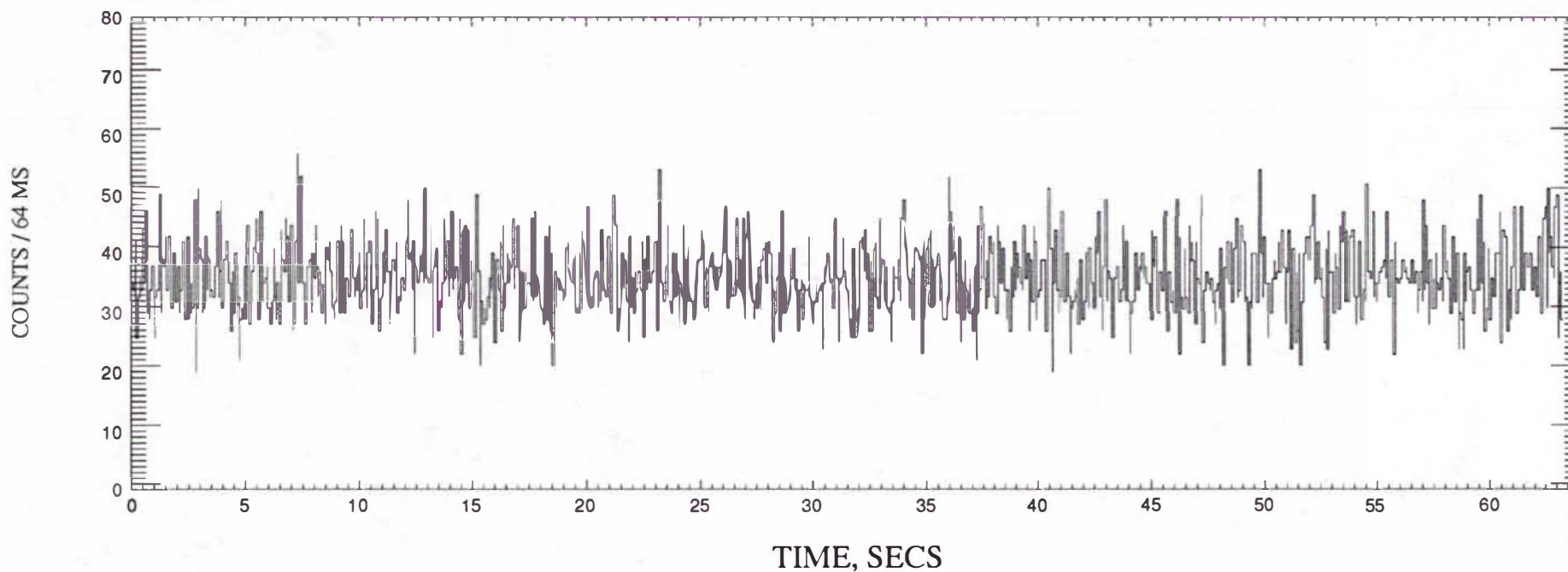


TIME, SECS

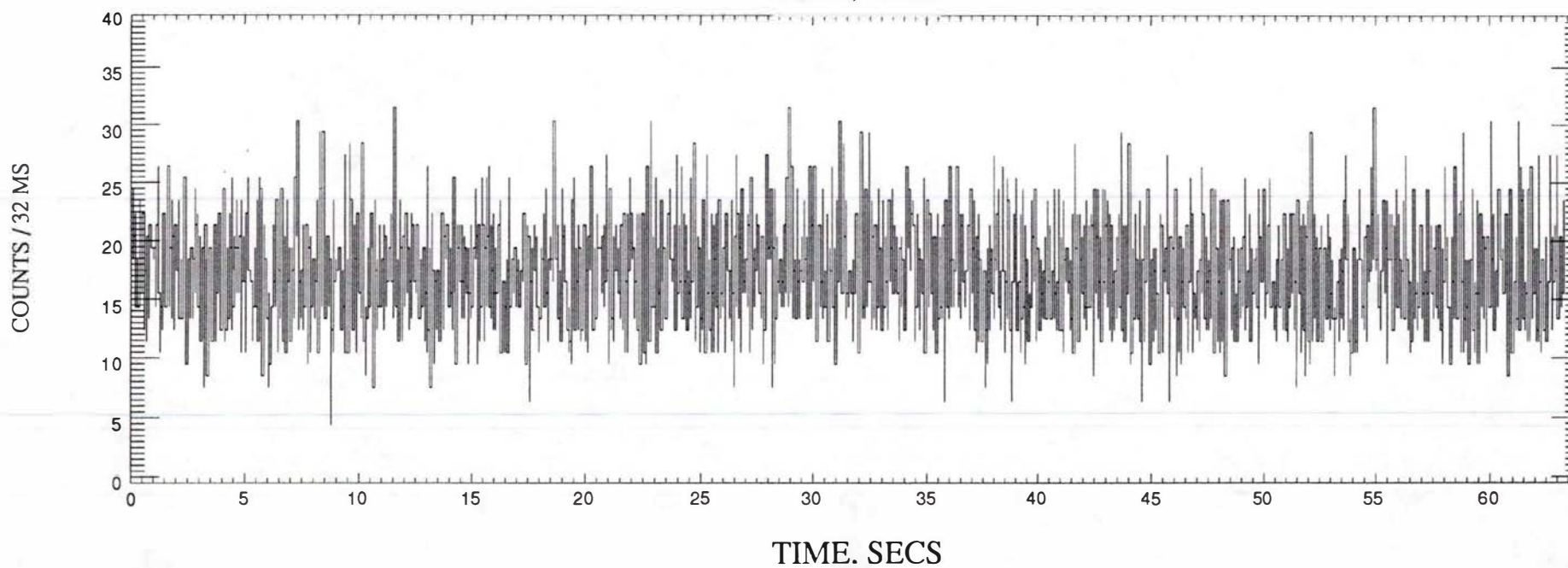
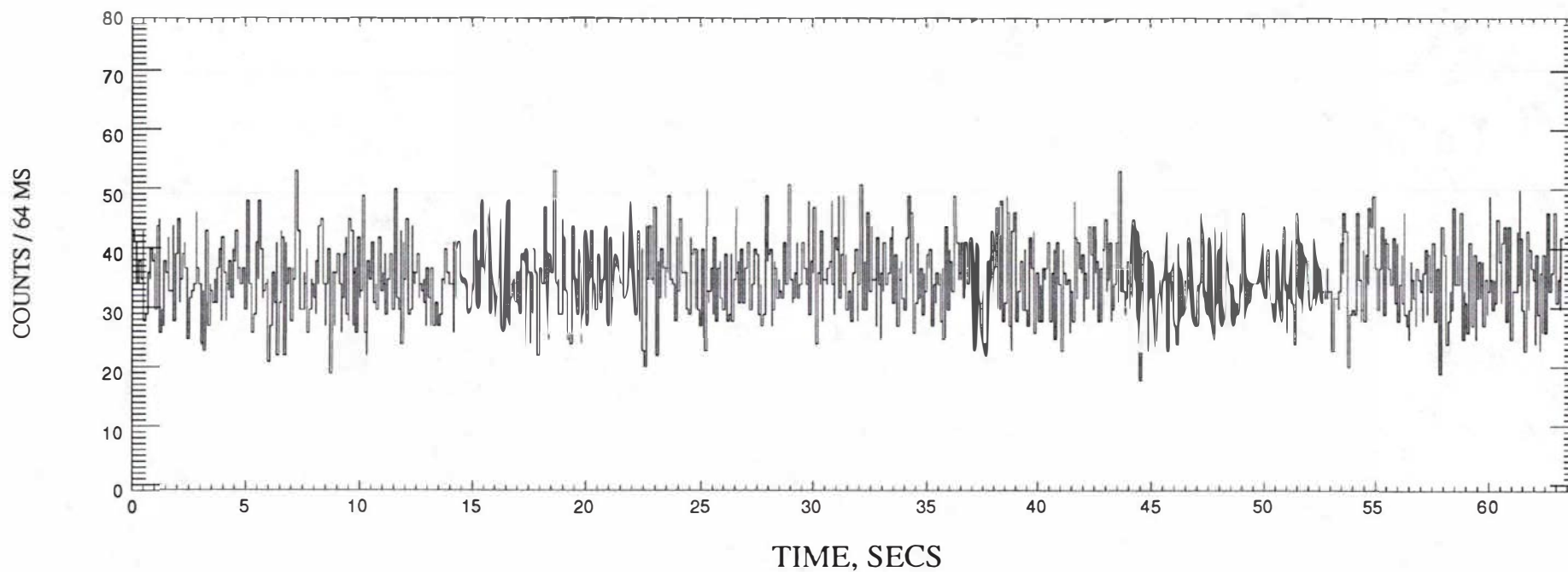


TIME. SECS

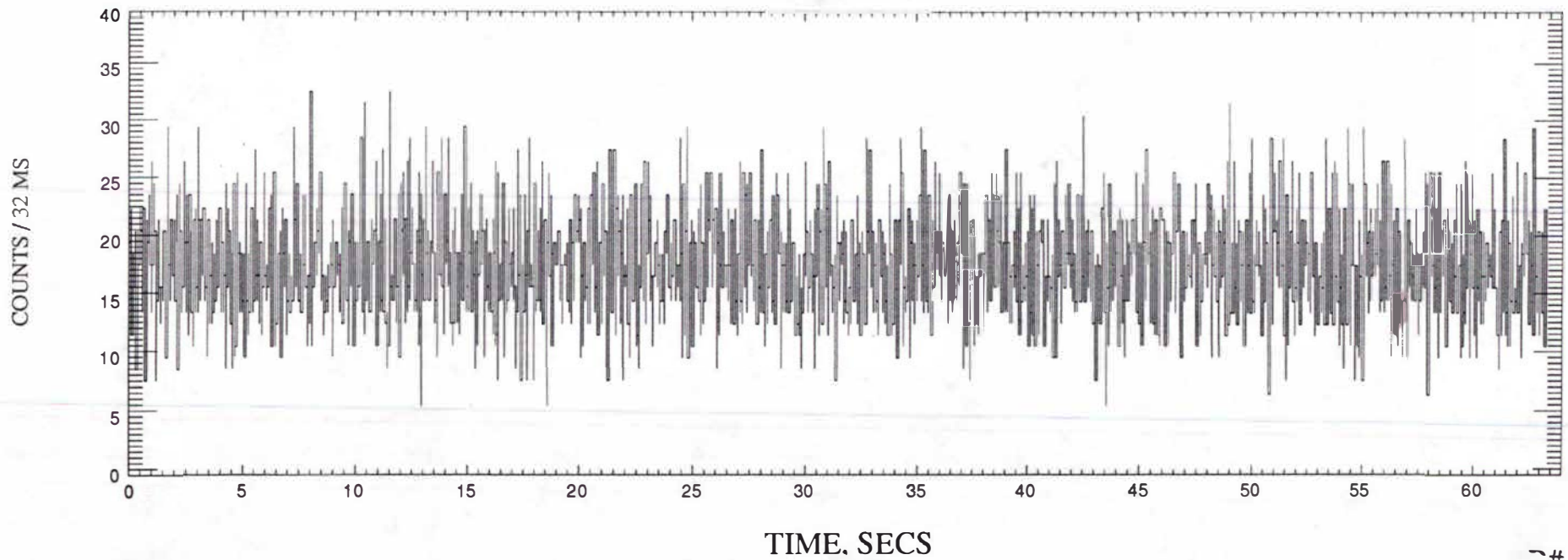
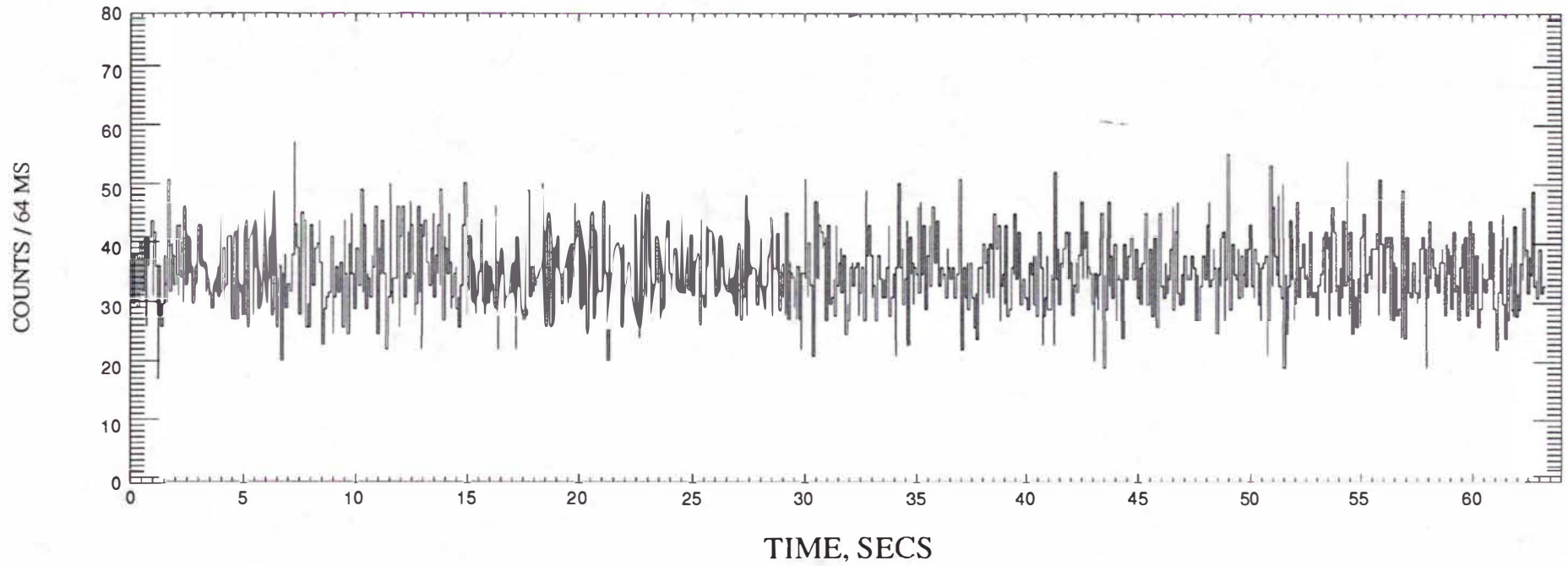
Burst Counter 6 at UT=17.919187927246 h=64509.077 s



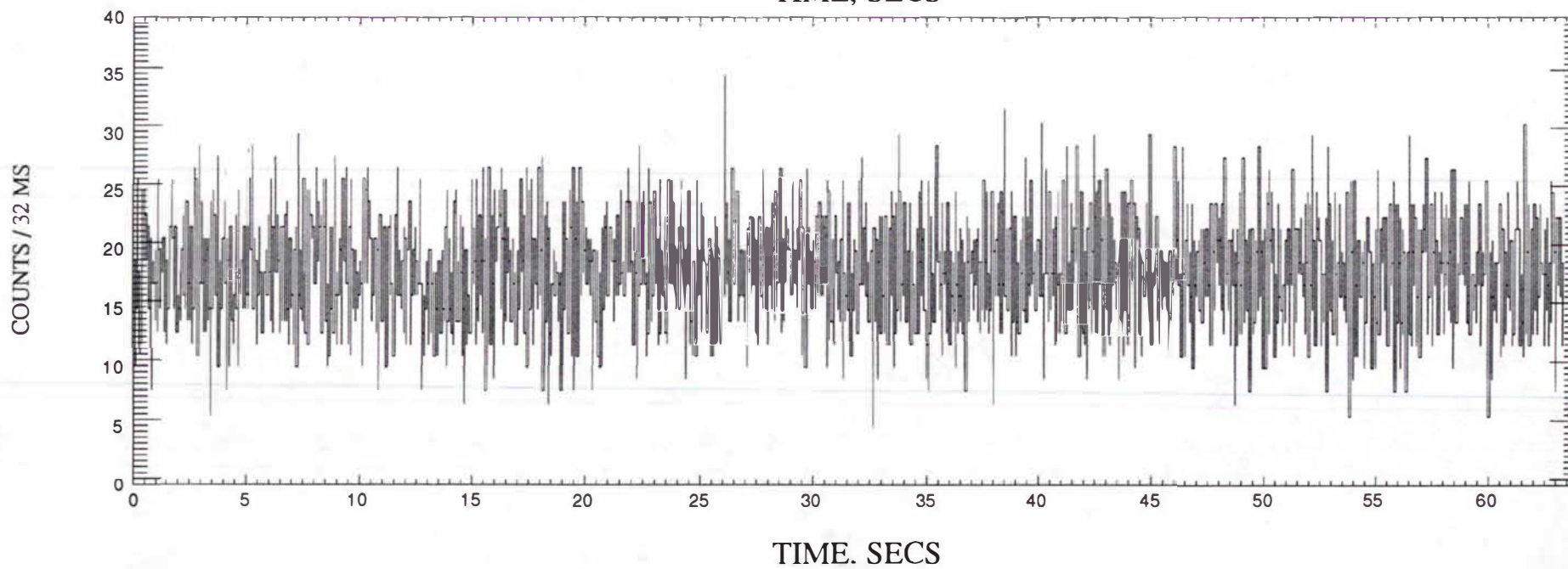
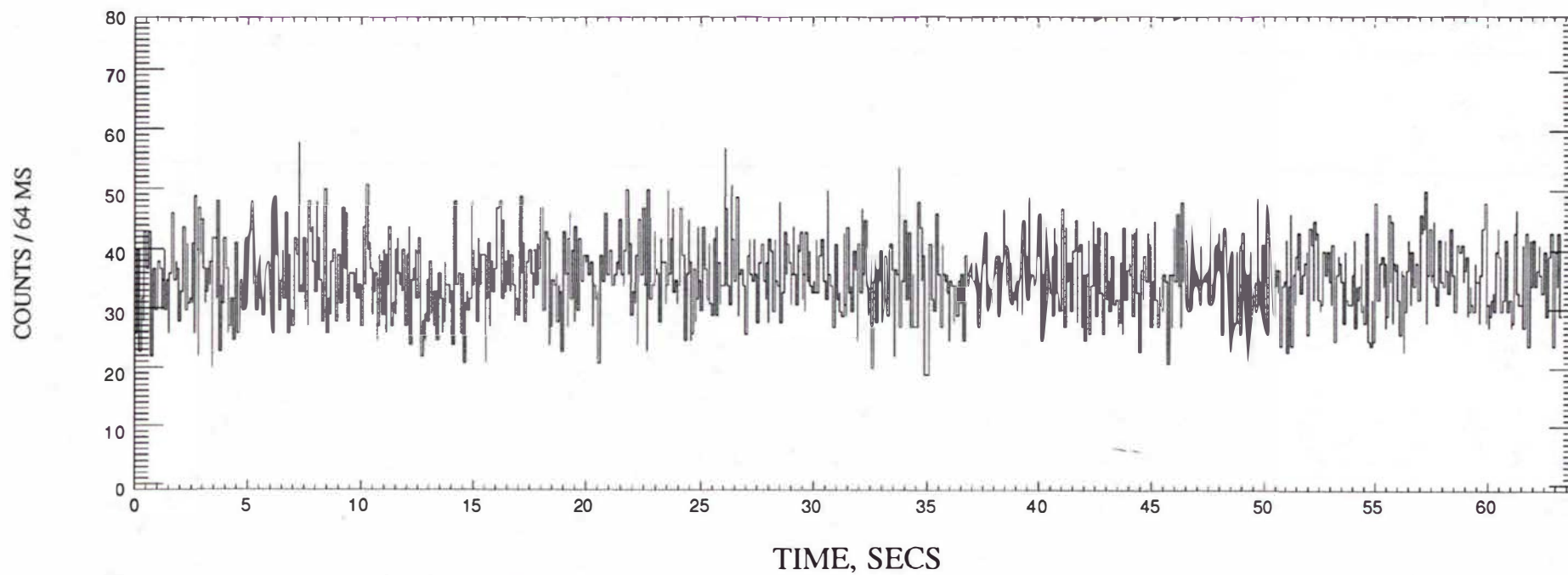
Burst Counter 7 at UT=19.146429078844 h=68927.145 s



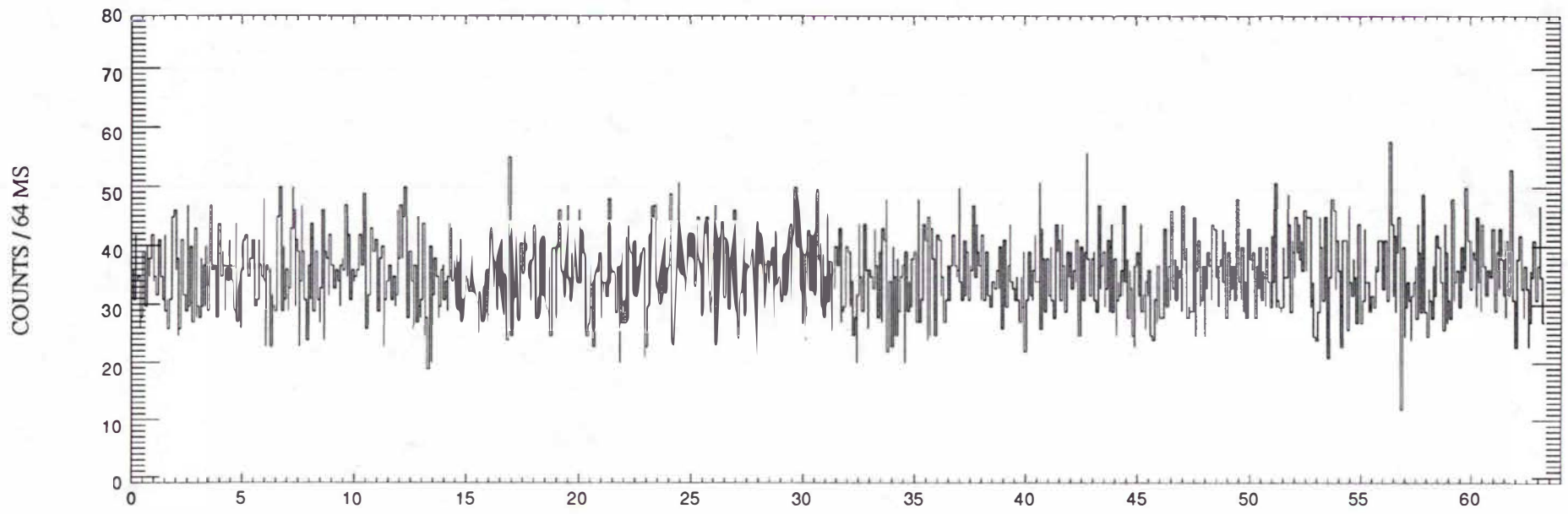
Burst Counter 8 at UT=20.107763002184 h=72387.947 s



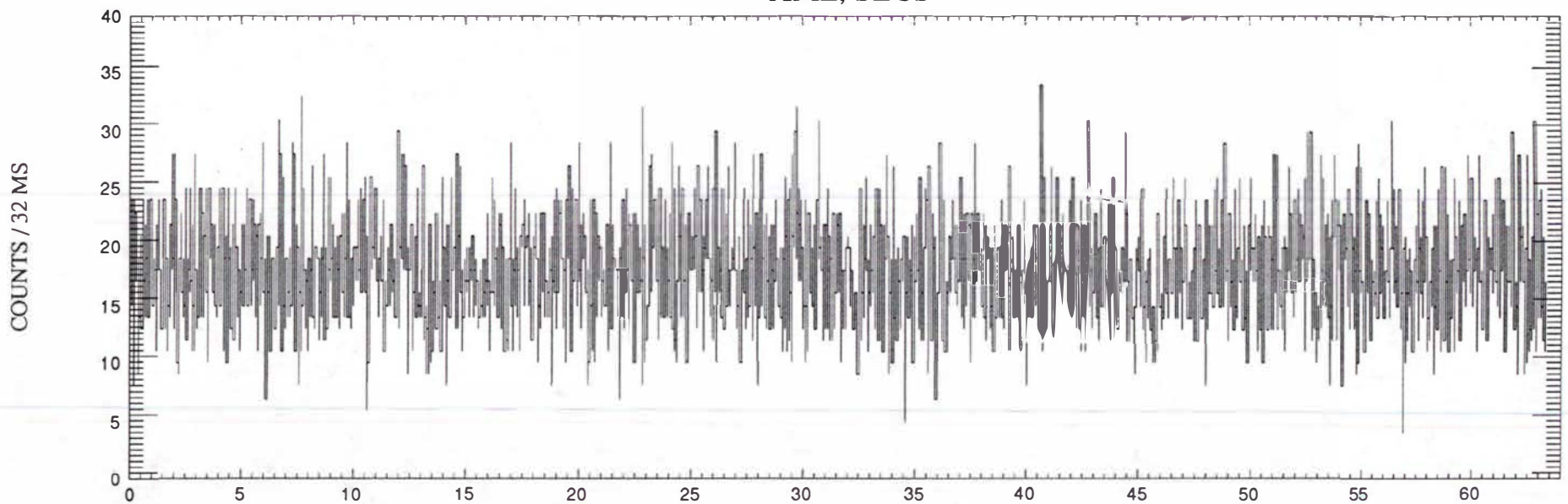
Burst Counter 9 at UT=20.815690803528 h=74936.487 s



Burst Counter 10 at UT=21.567925279405 h=77644.531 s

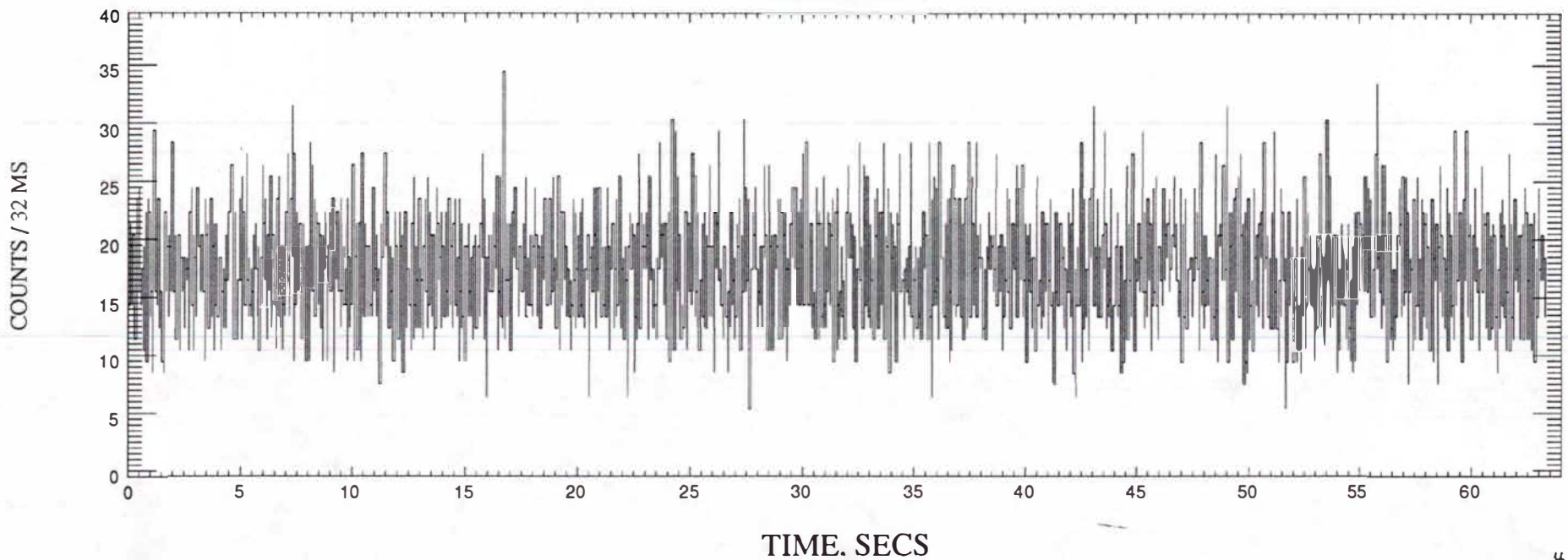
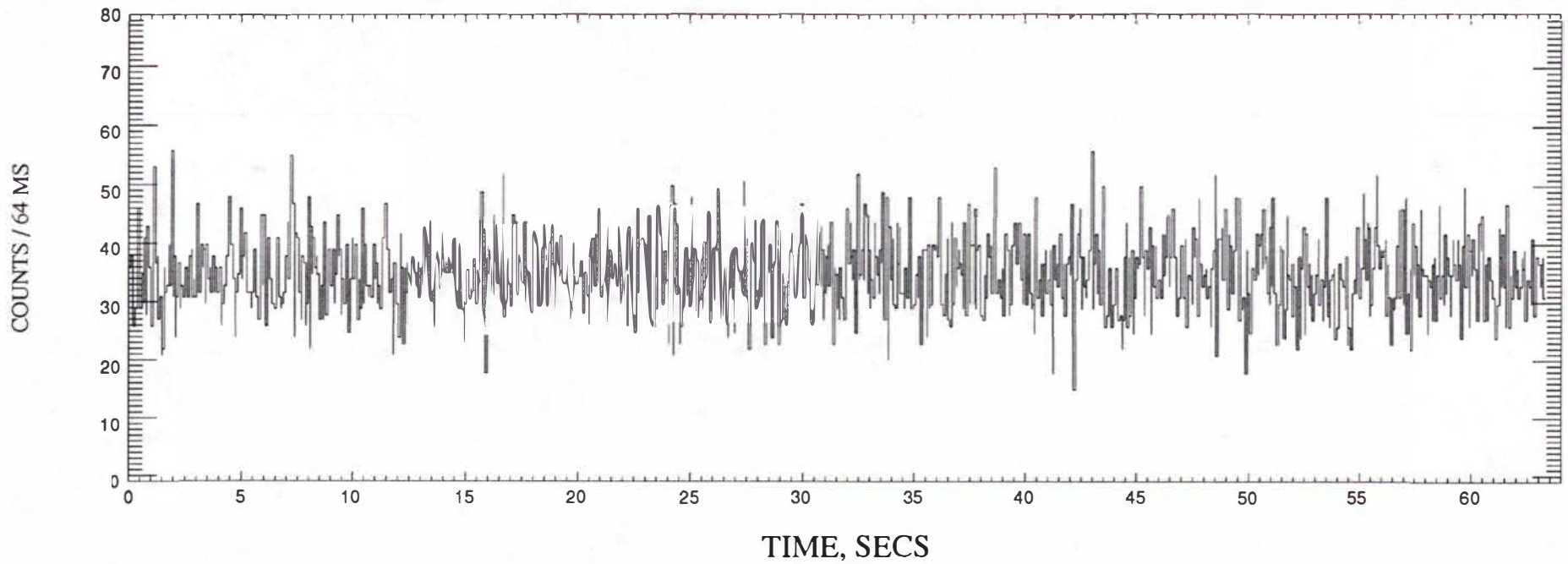


TIME, SECS

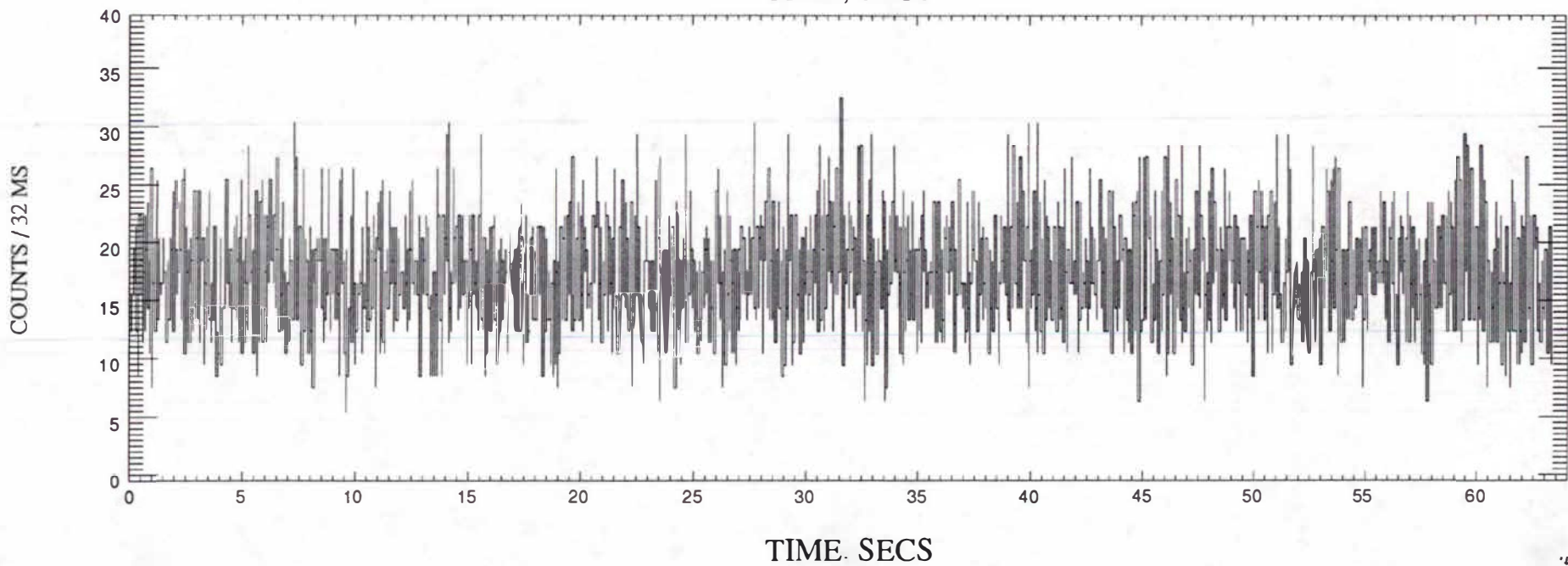
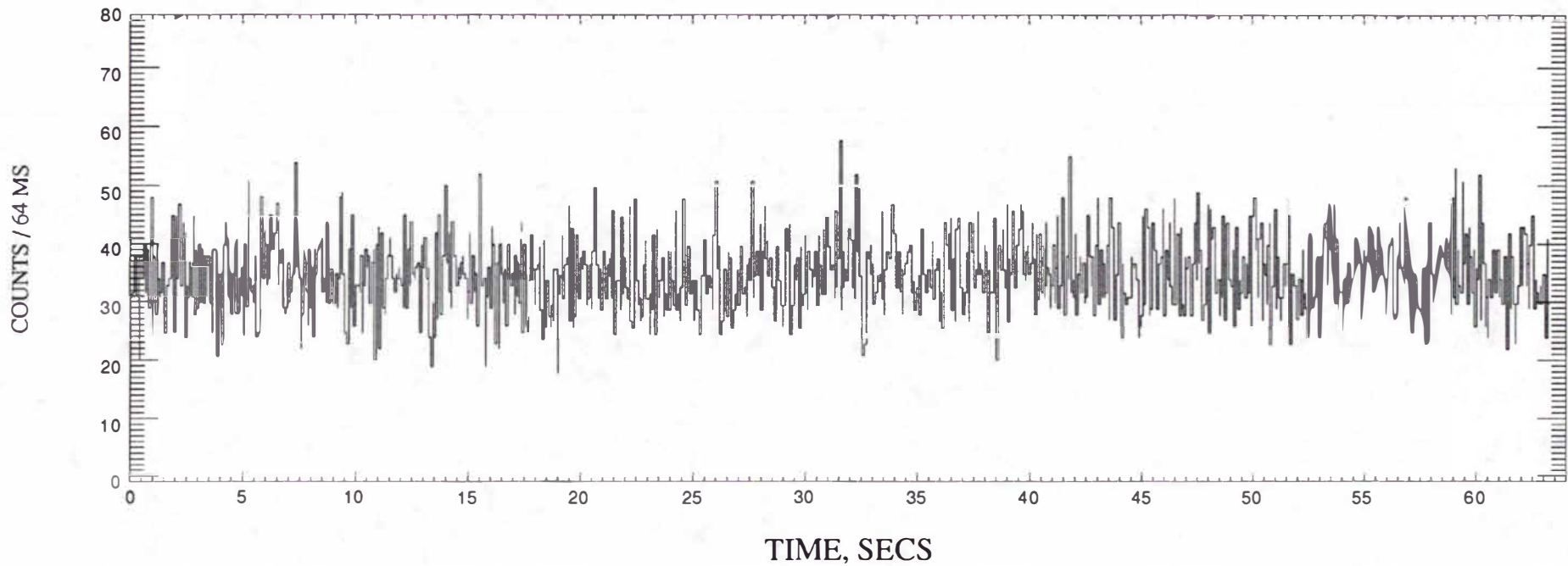


TIME, SECS

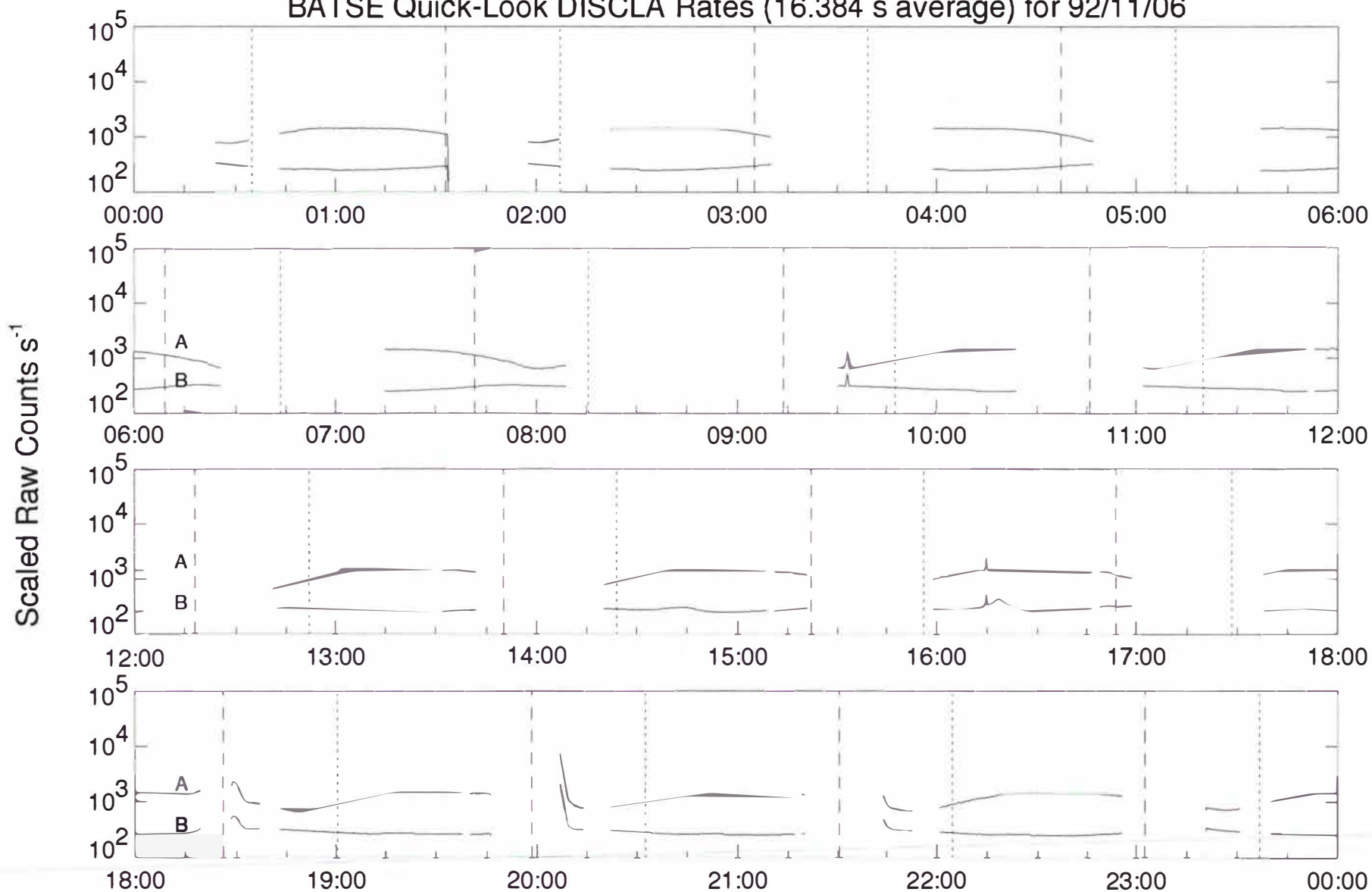
Burst Counter 11 at UT=22.294323132833 h=80259.563 s



Burst Counter 12 at UT=23.256910336812 h=83724.877 s



BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/06



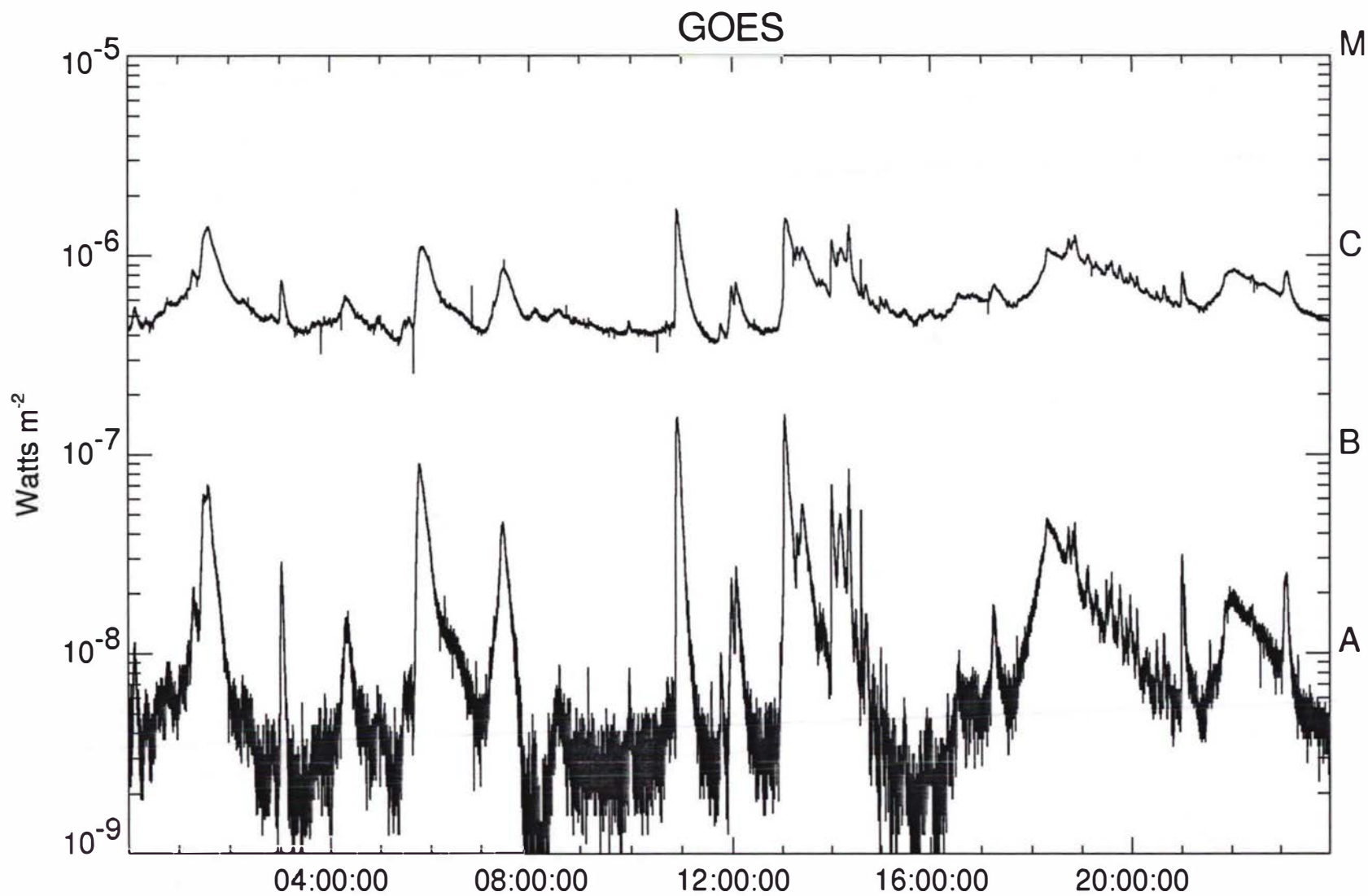
Current Time: 92/11/09, 0423 EDT

A: Channel 1 Most Sunward LAD

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

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare



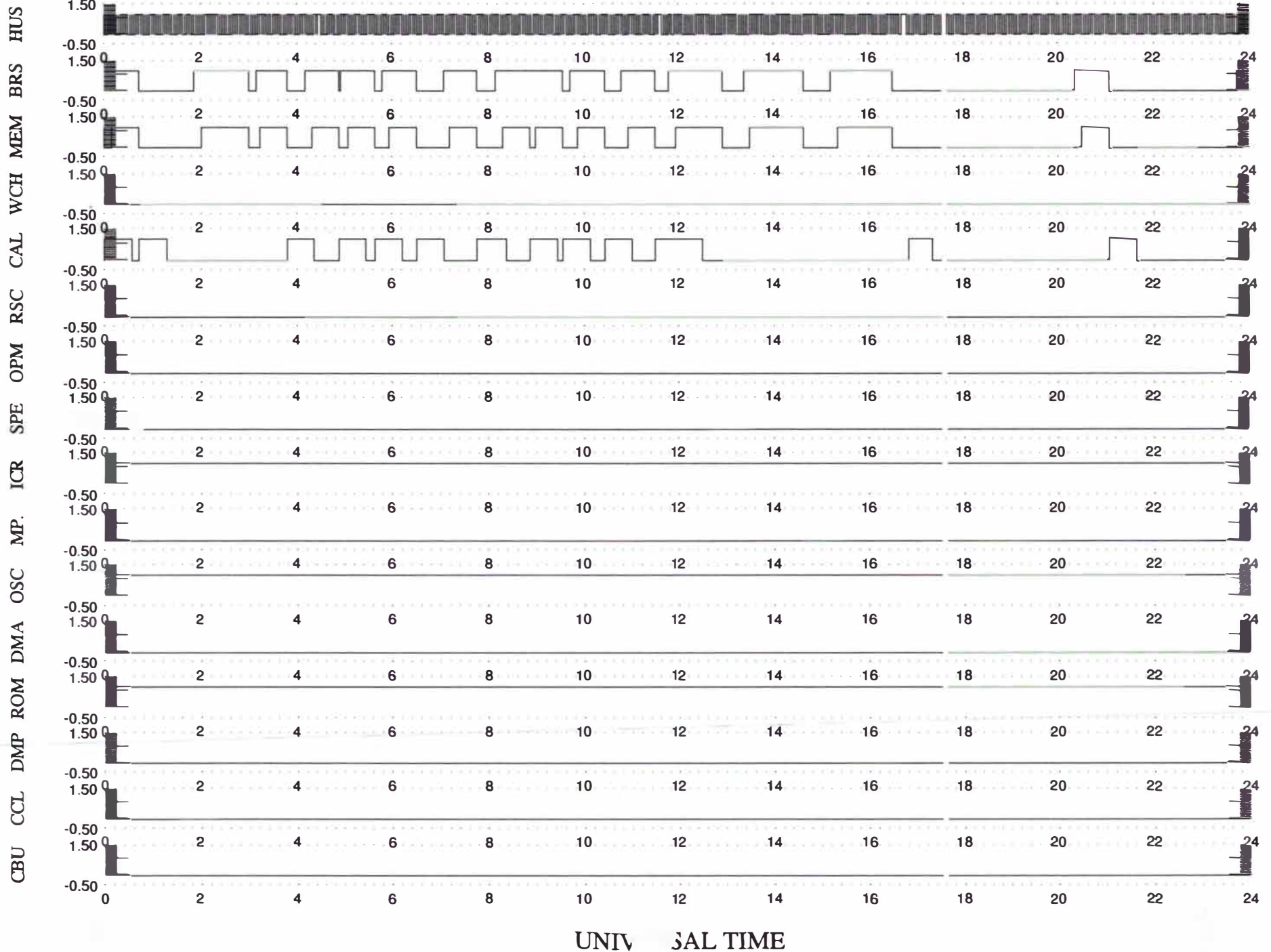
Data Start: 92/11/06, 0000:00

Plot created: 95/05/30, 1529

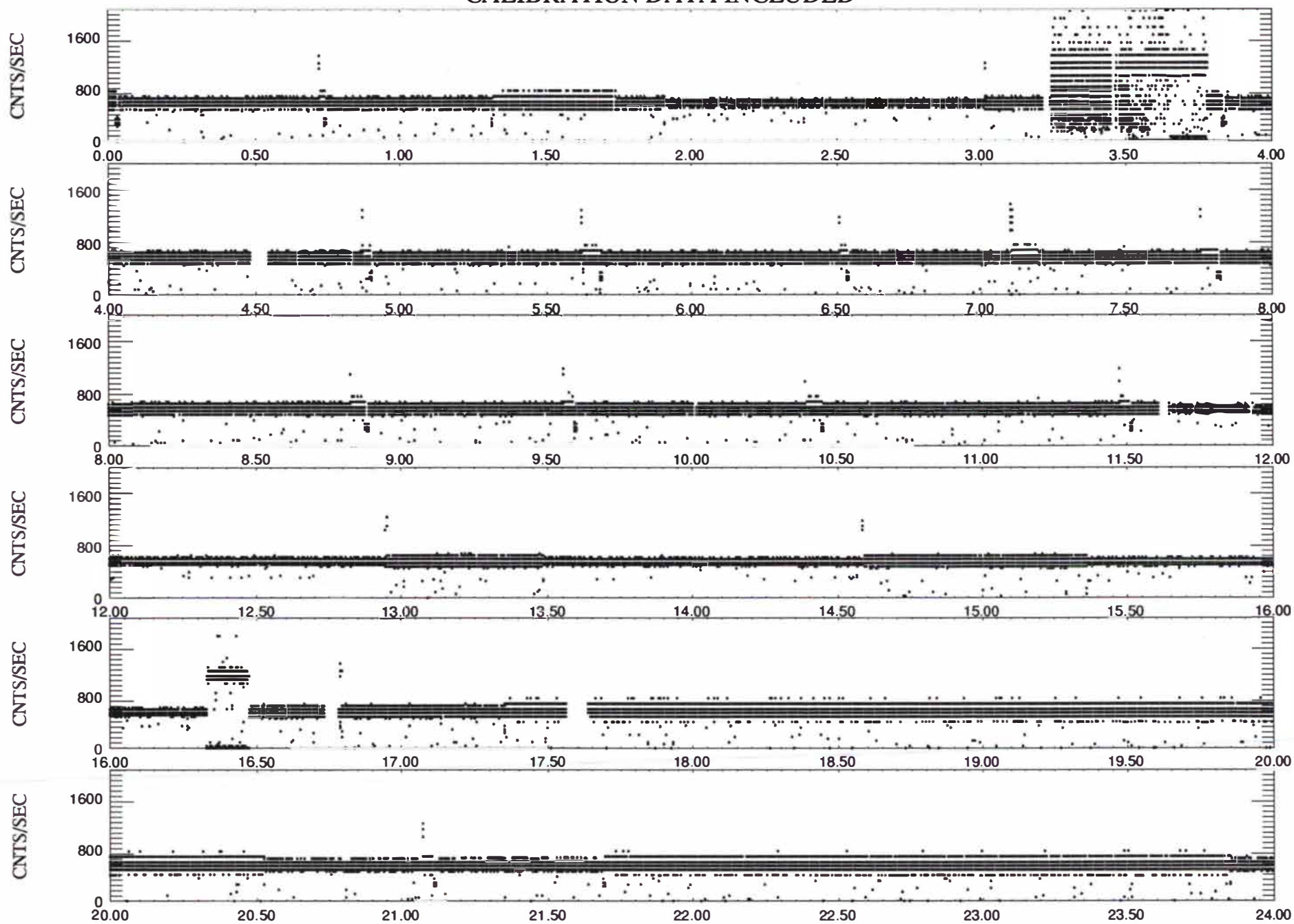
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BURST NUMBER 14 - 15, 0 - 12

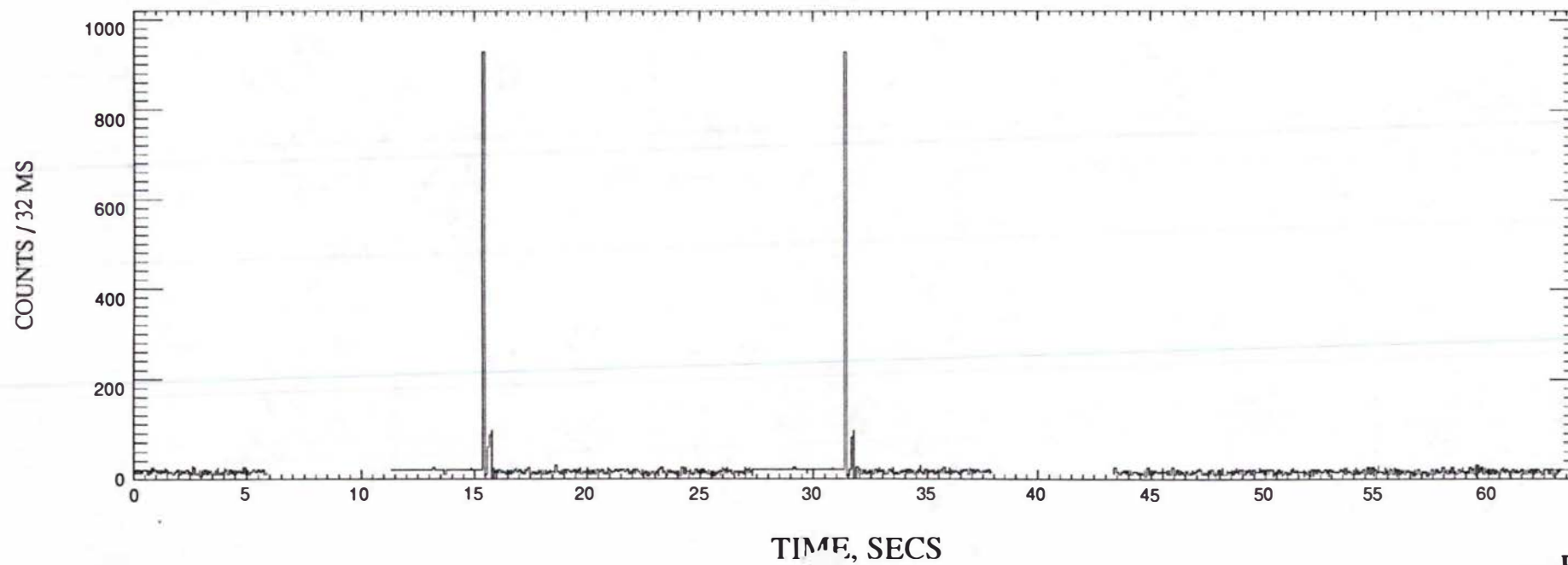
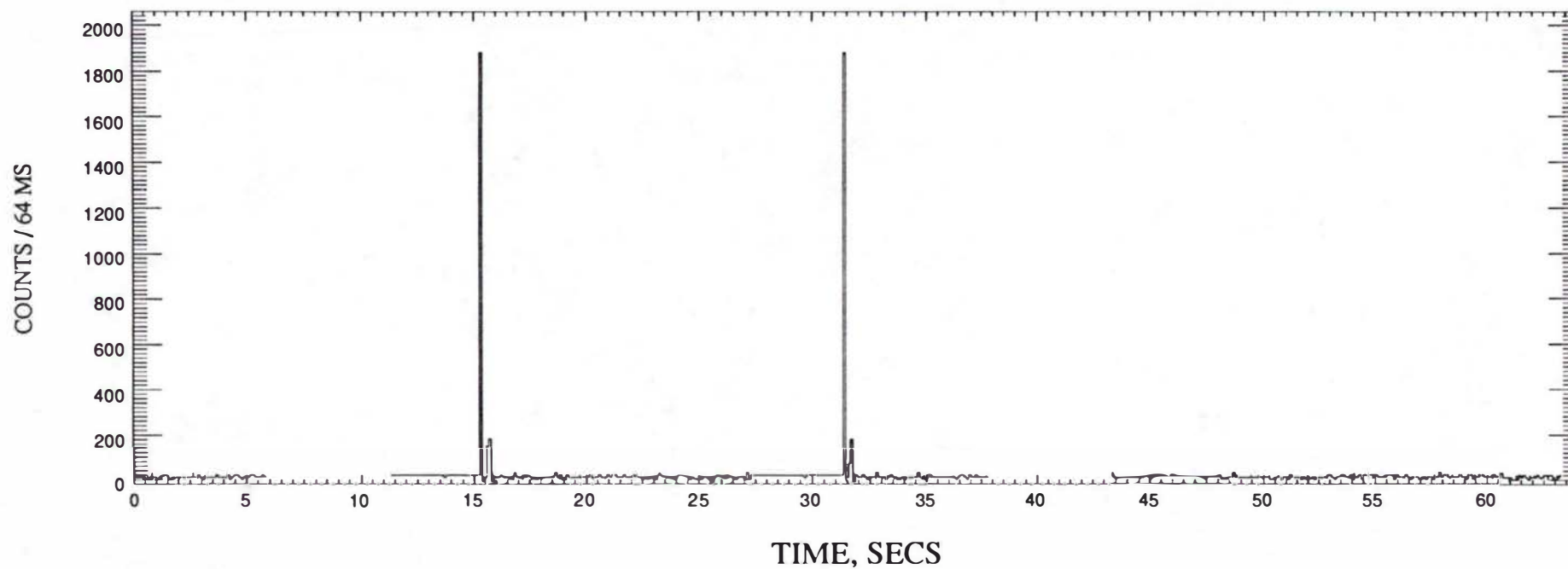


CALIBRATION DATA INCLUDED

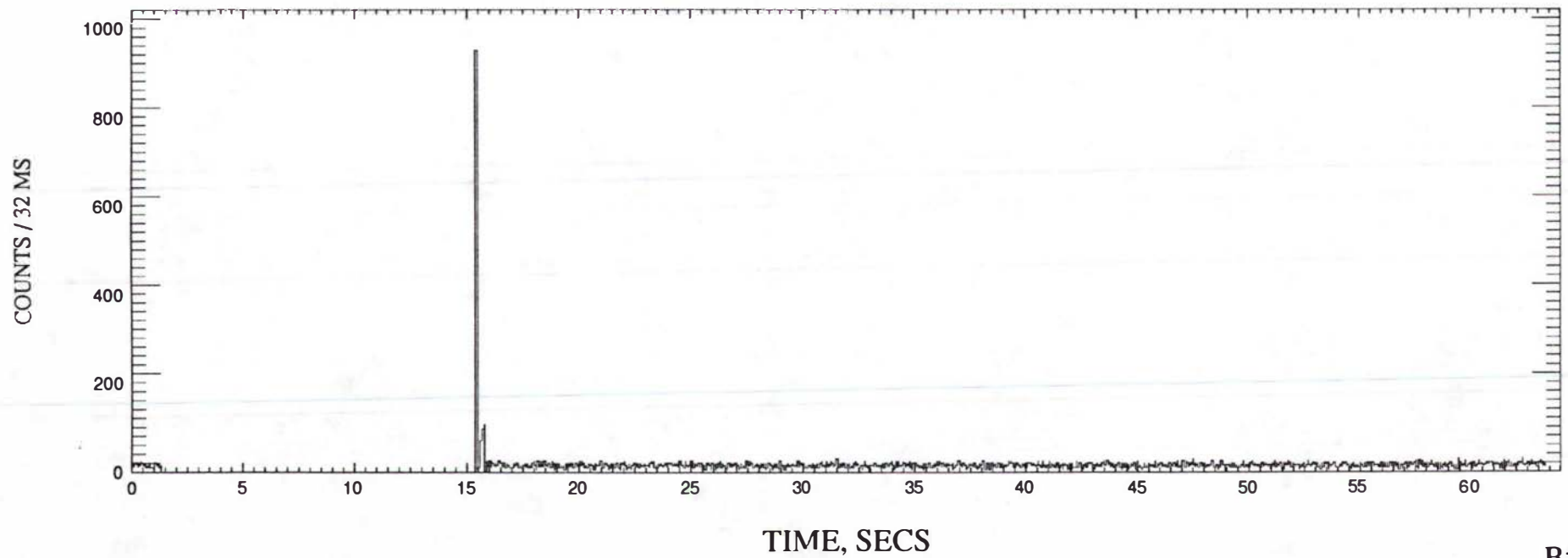
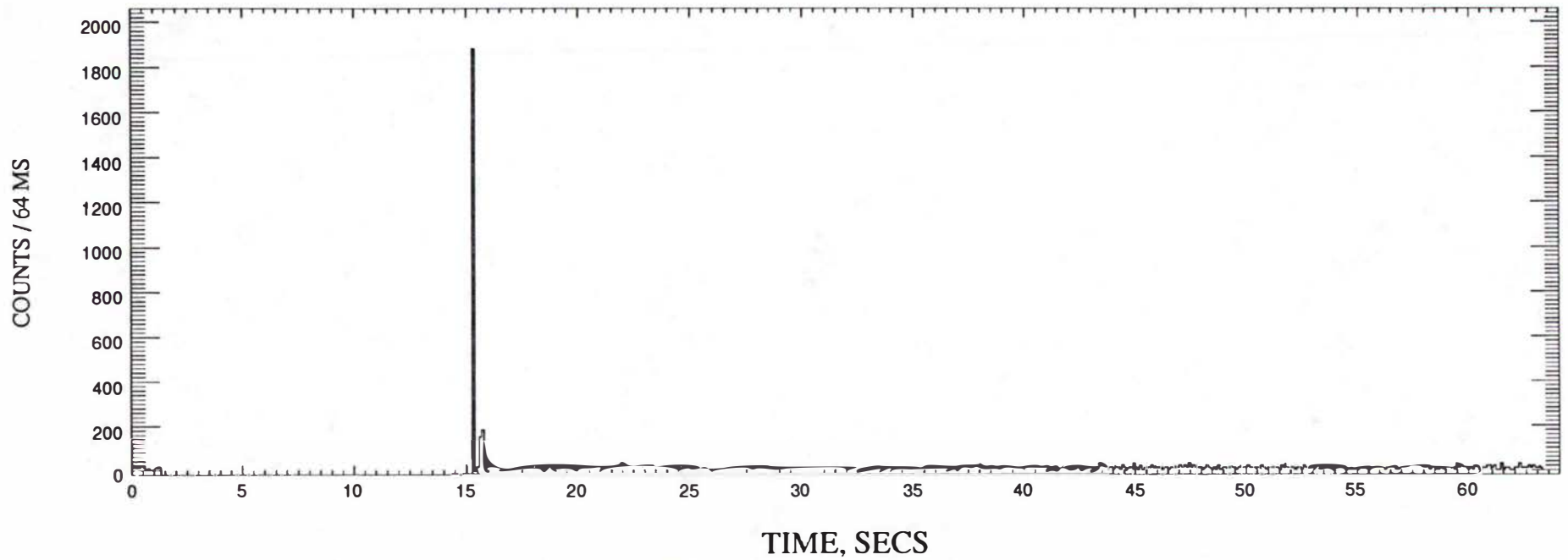


UNIV UNIV TIME

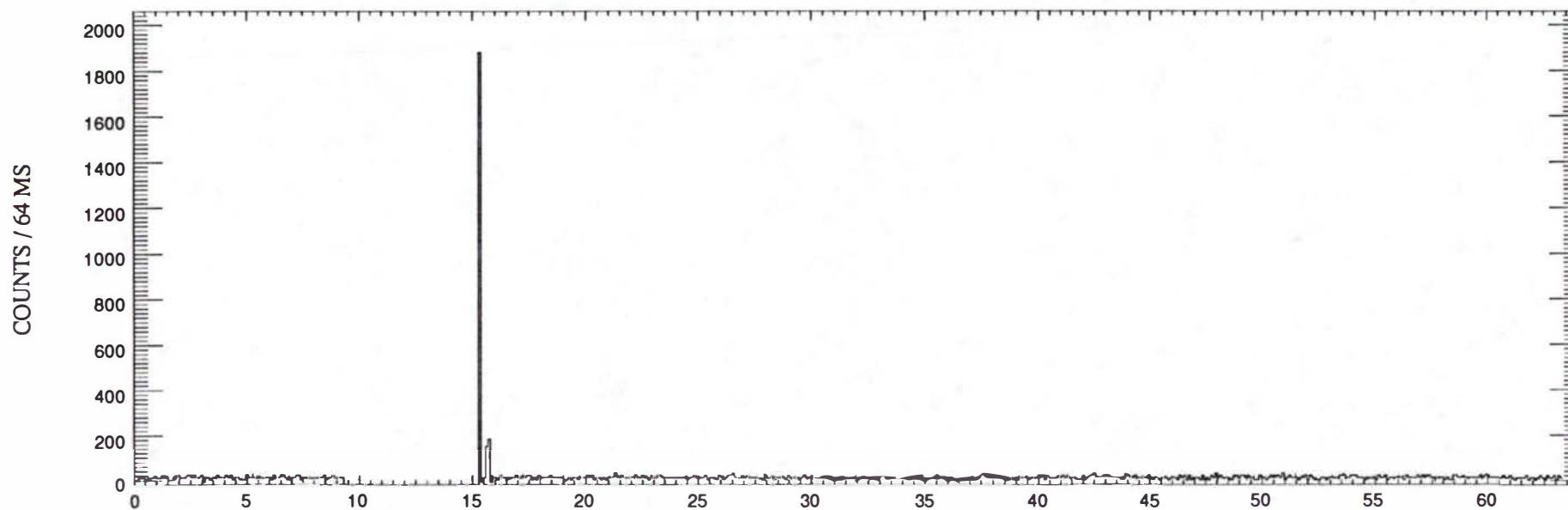
Burst Counter 14 at UT= 1.686948199802 h= 6073.014 s



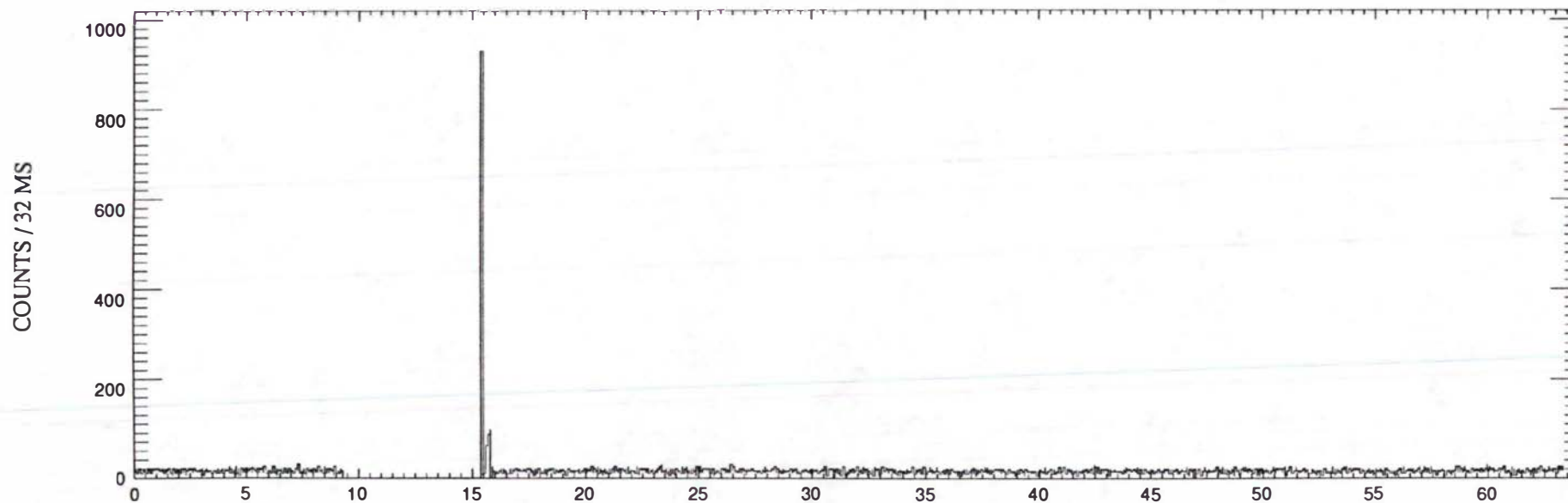
Burst Counter 0 at UT= 4.167554482354 h=15003.196 s



Burst Counter 1 at UT= 4.912393243578 h=17684.616 s

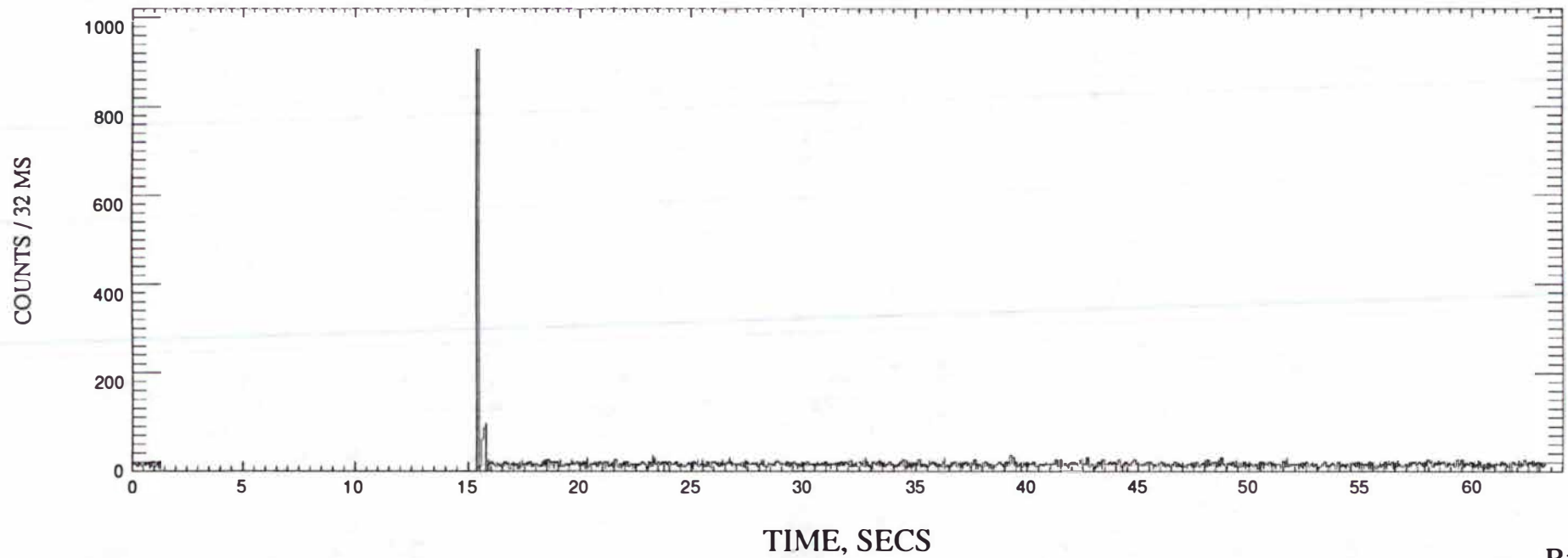
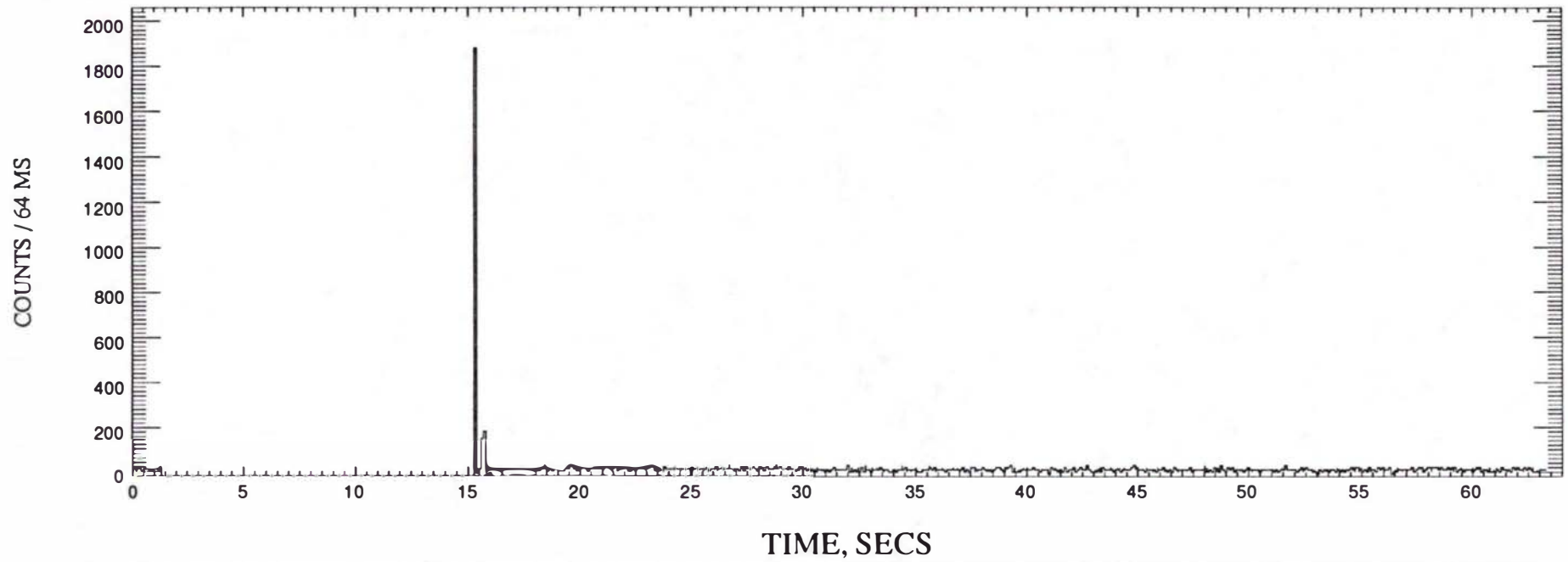


TIME, SECS

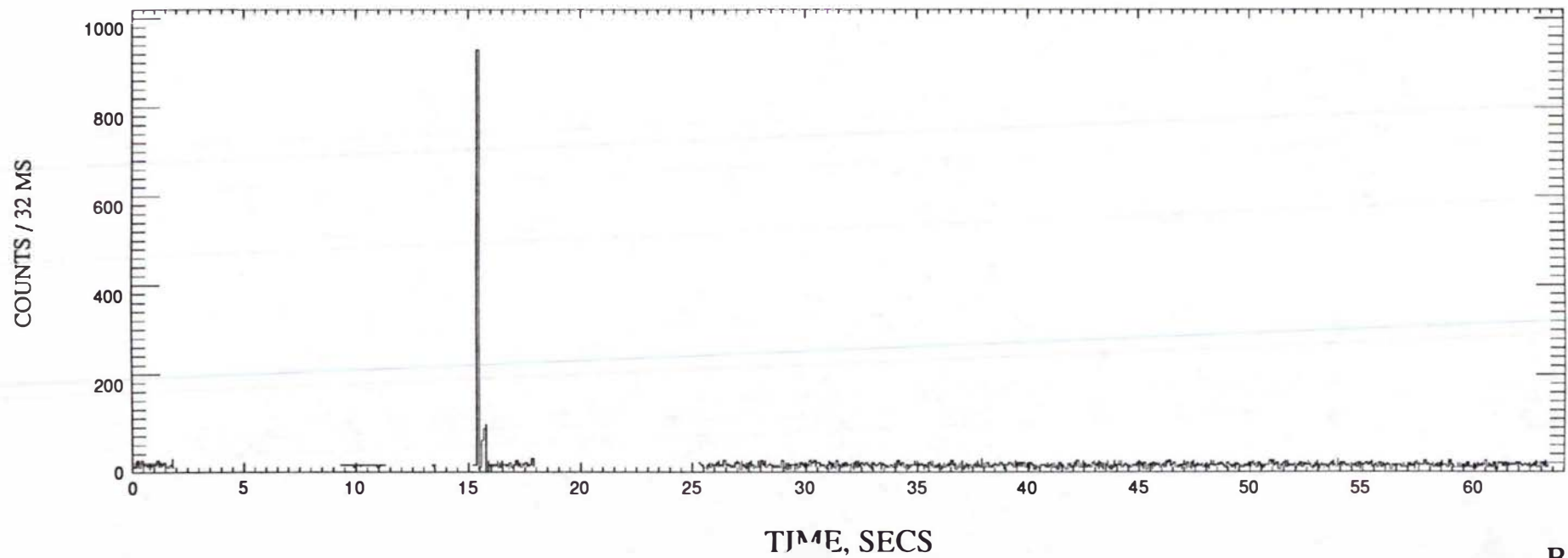
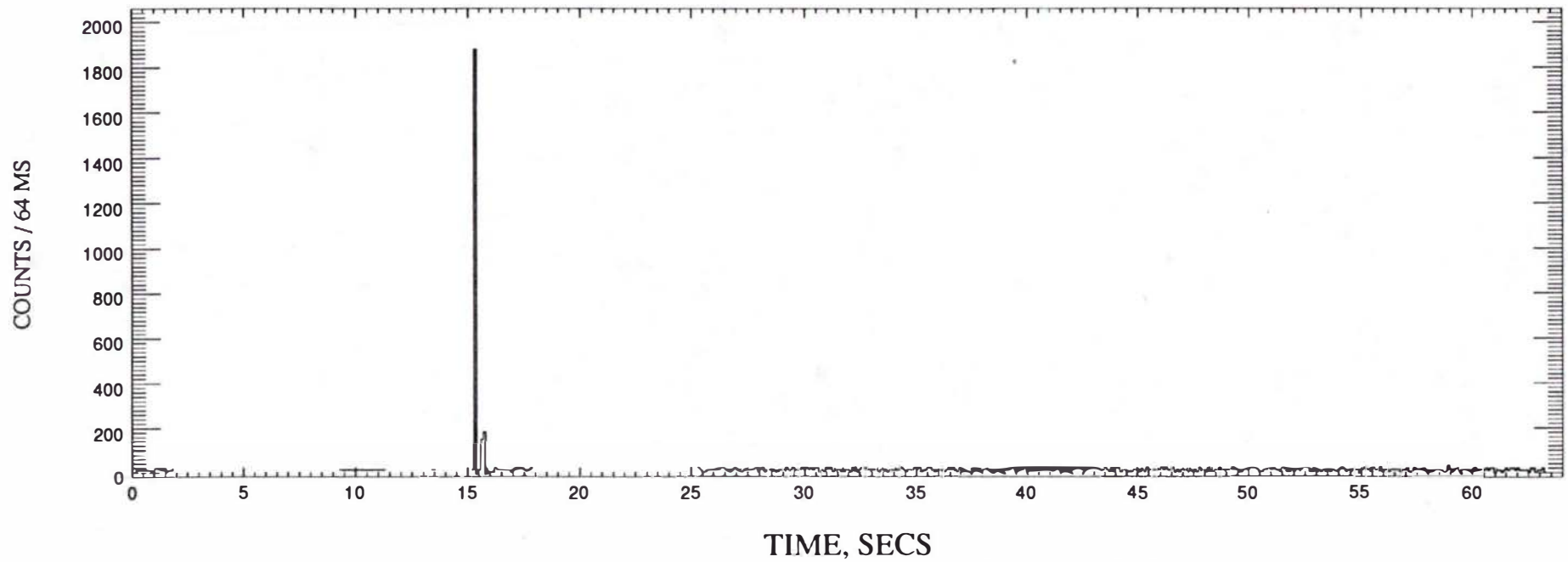


TIME, SECS

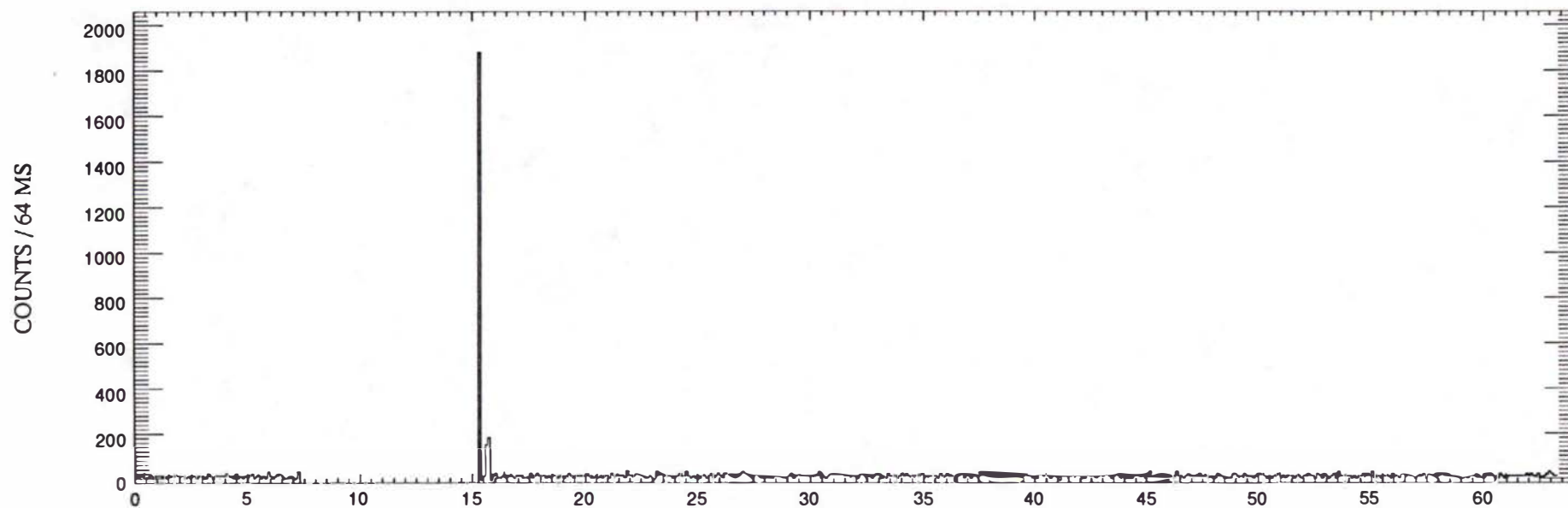
Burst Counter 2 at UT= 5.798552576701 h=20874.789 s



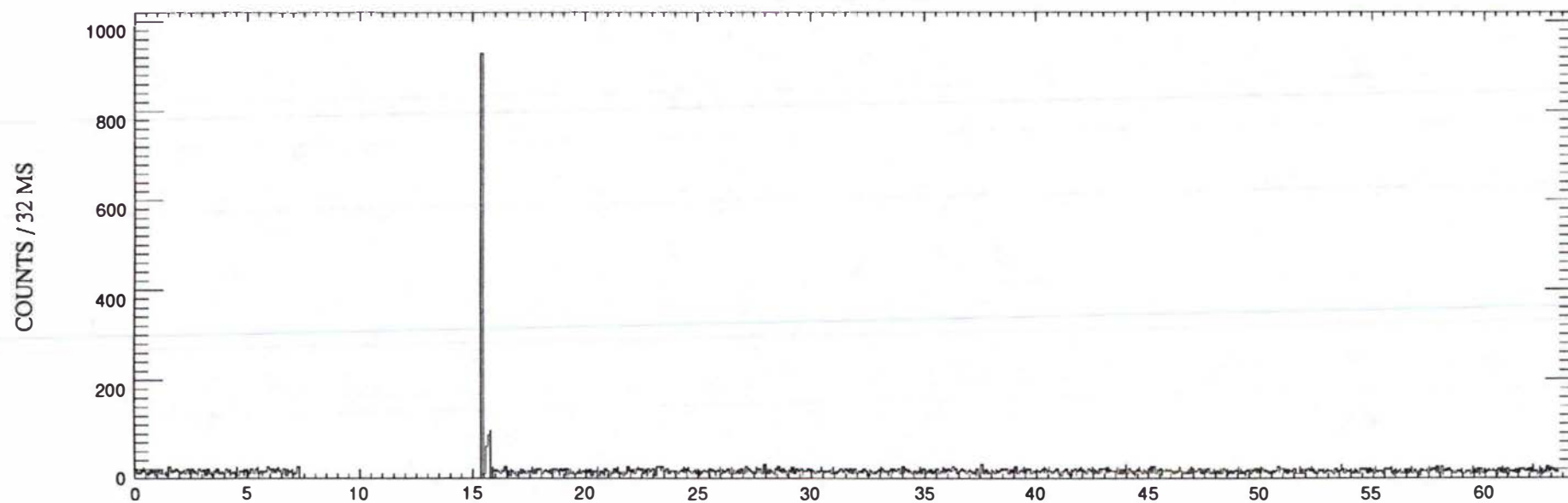
Burst Counter 3 at UT= 7.048086708917 h=25373.112 s



Burst Counter 4 at UT= 8.119321030511 h=29229.556 s

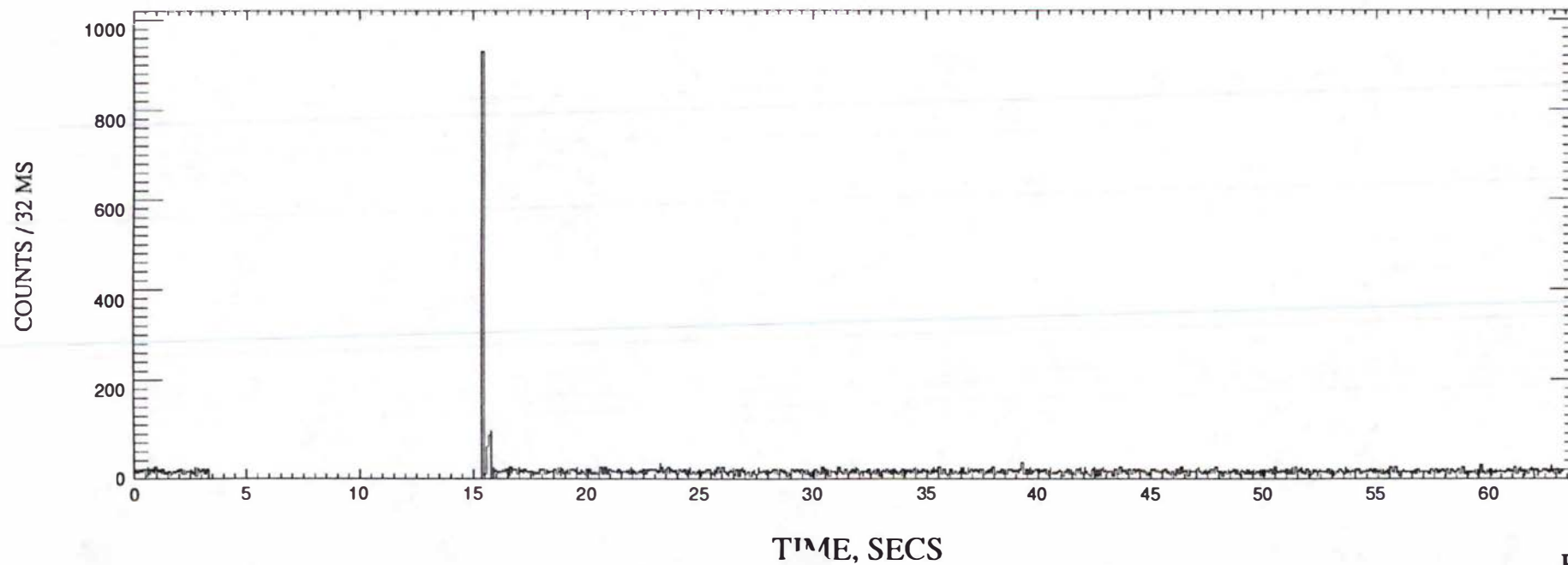
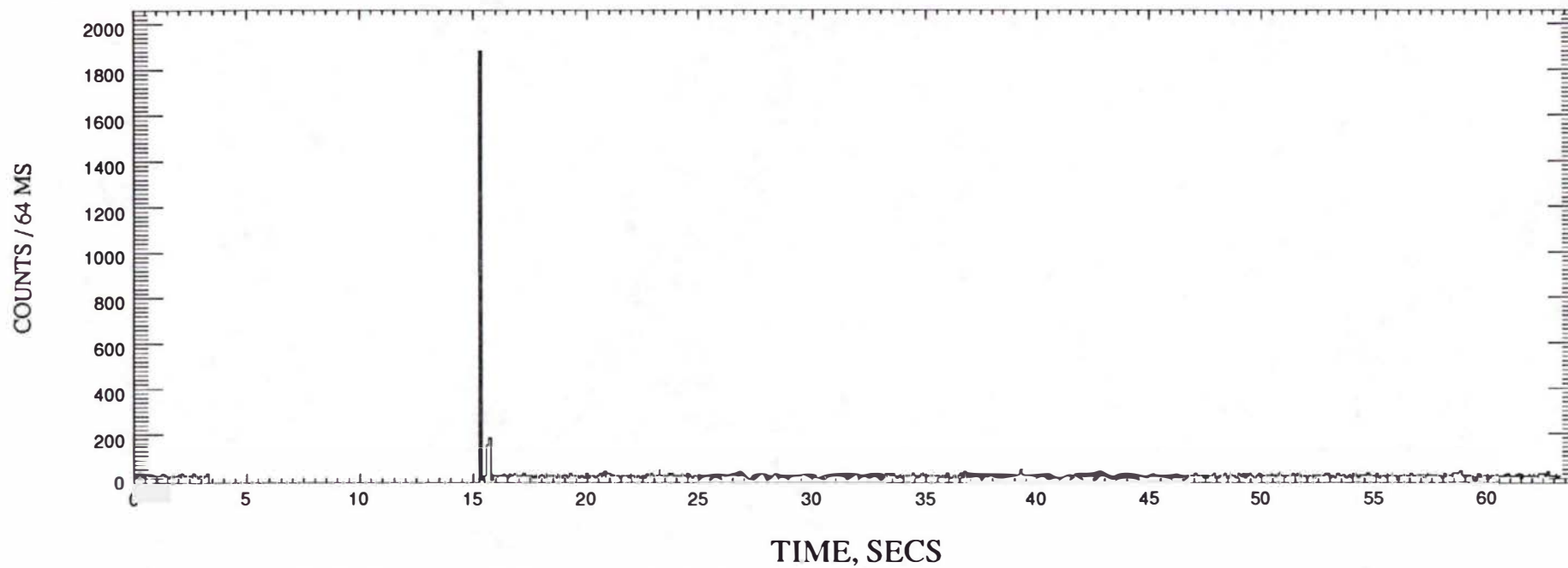


TIME, SECS

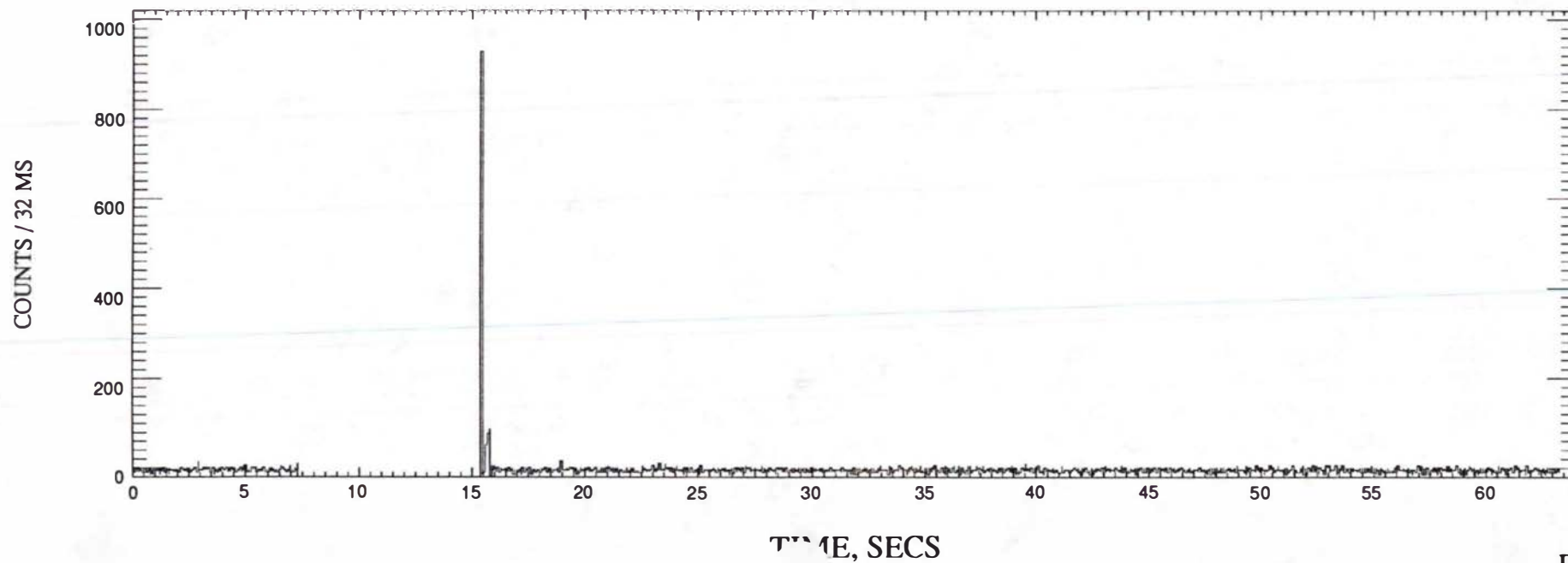
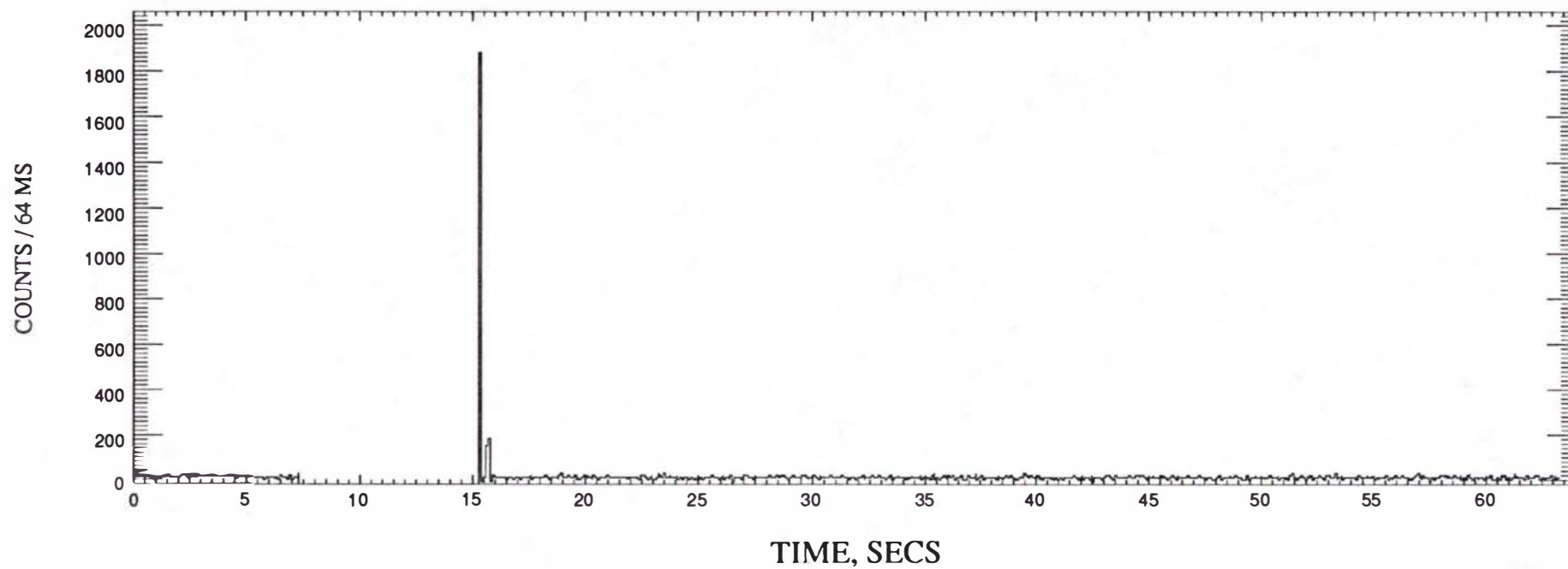


TIME, SECS

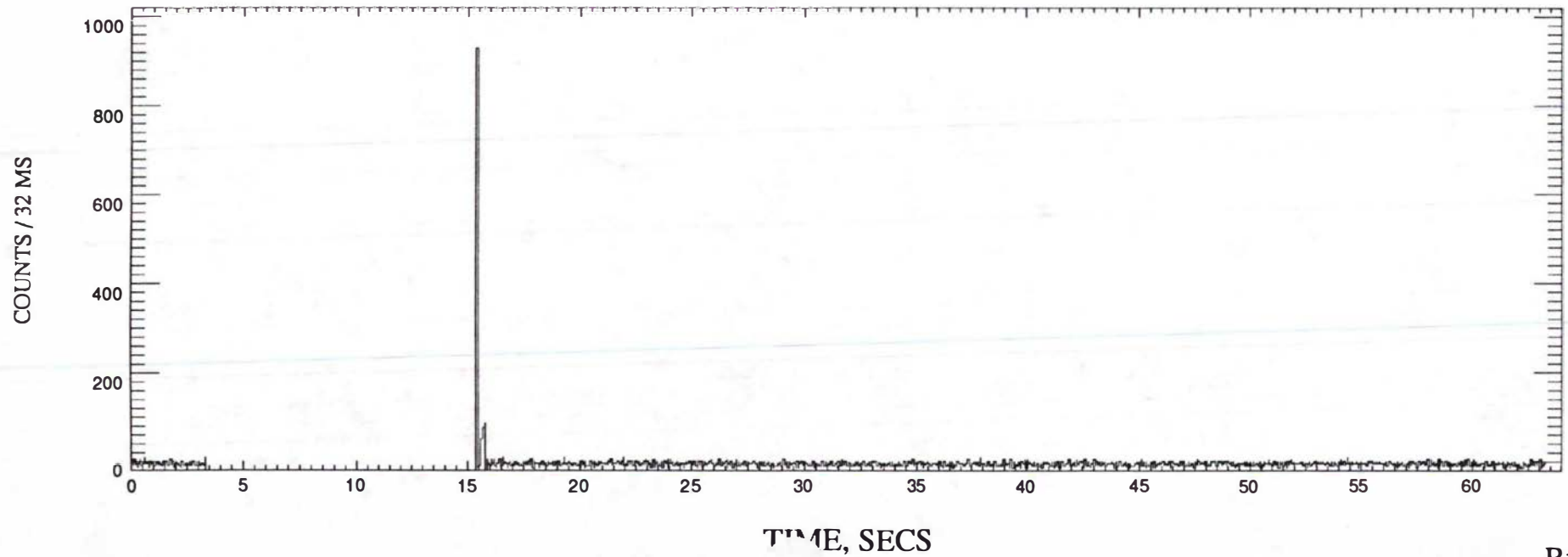
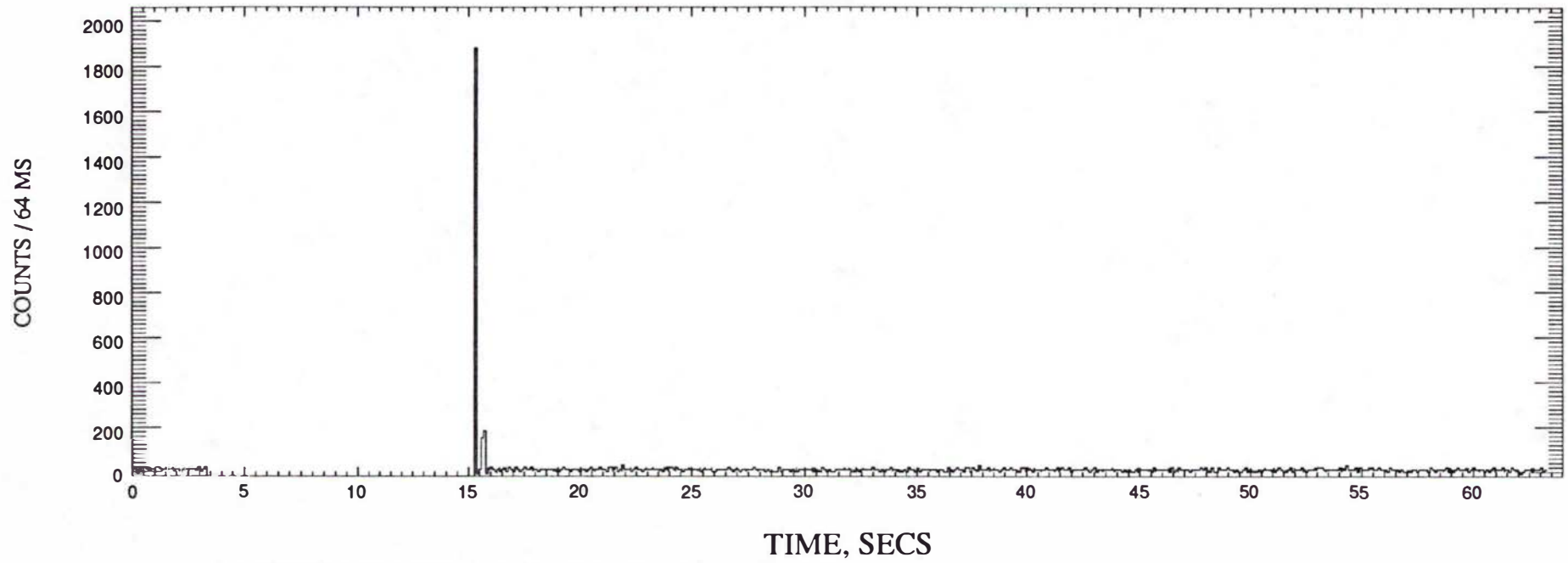
Burst Counter 5 at UT= 8.853114831713 h=31871.213 s



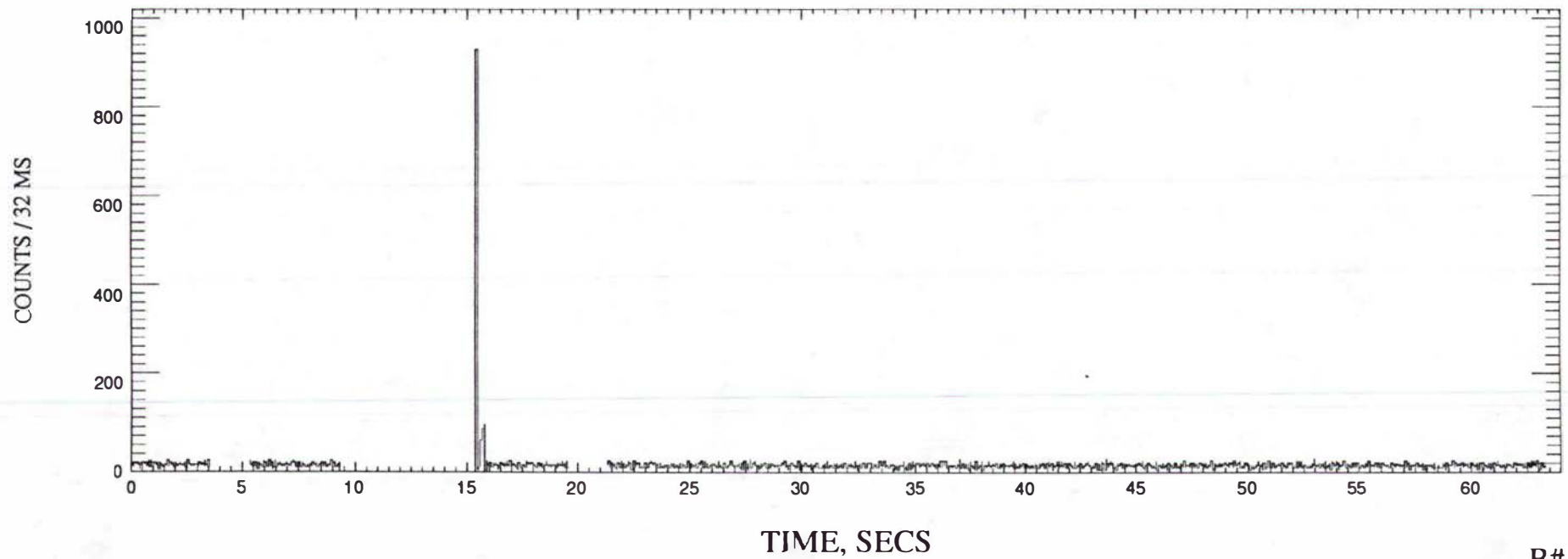
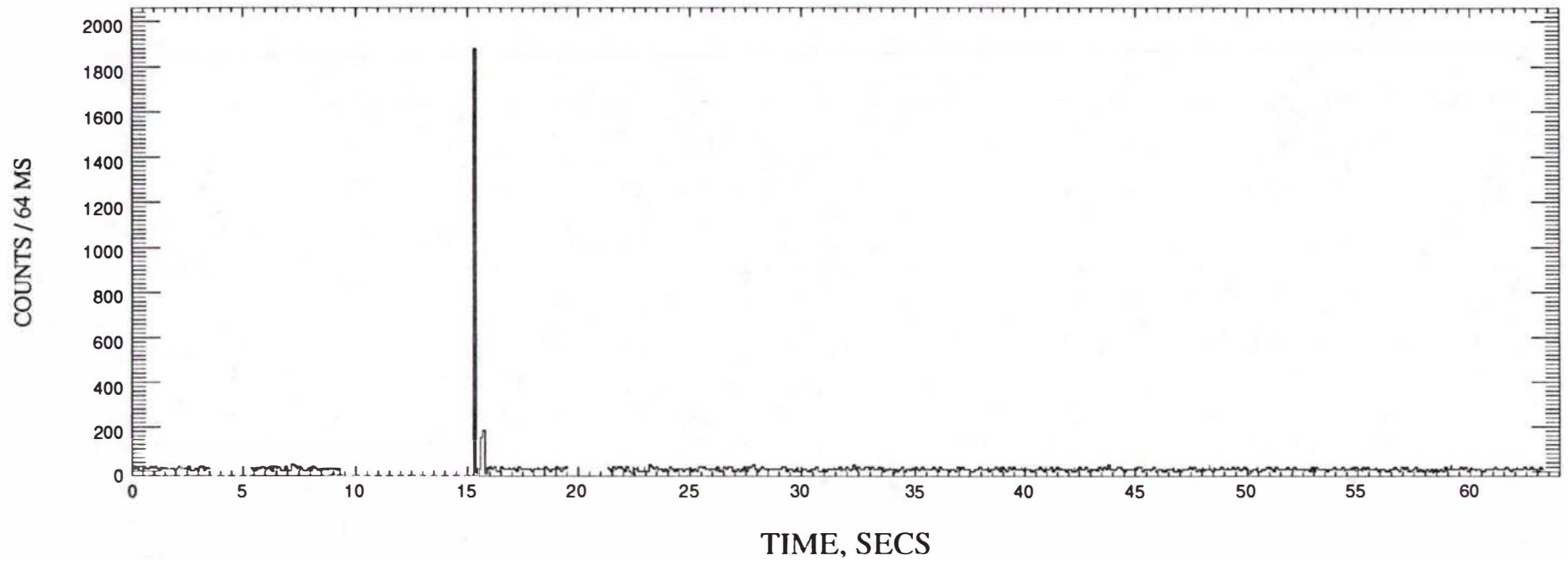
Burst Counter 6 at UT= 9.689519386292 h=34882.270 s



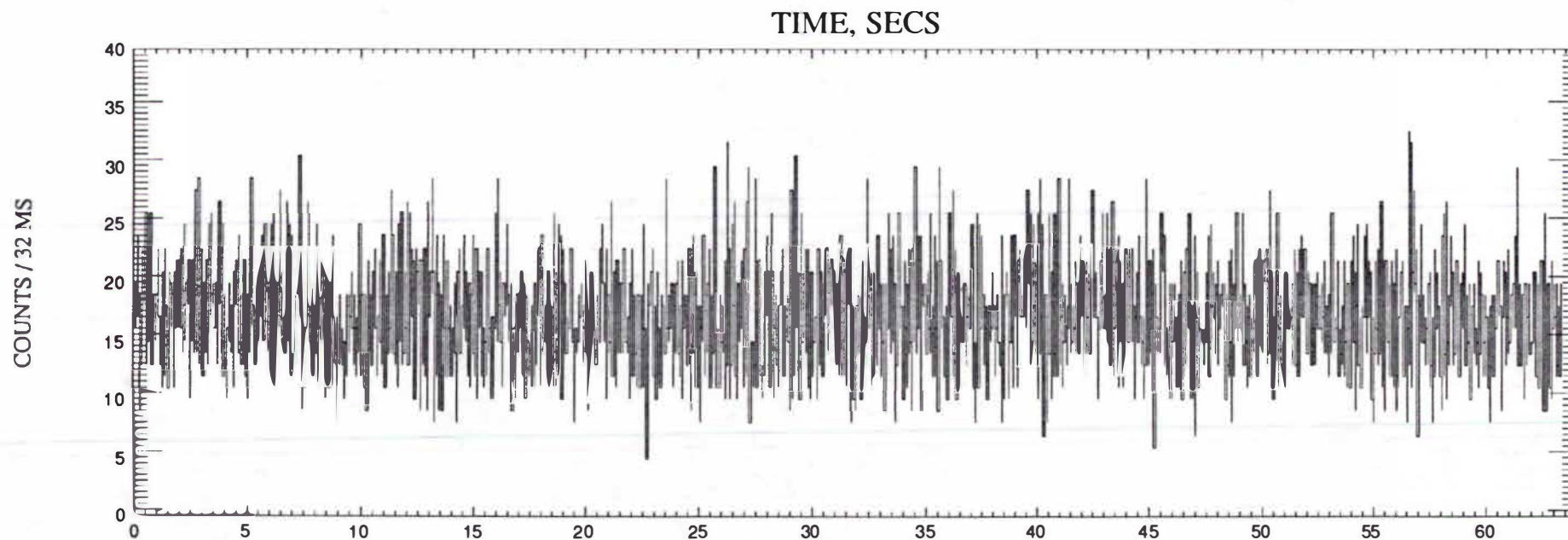
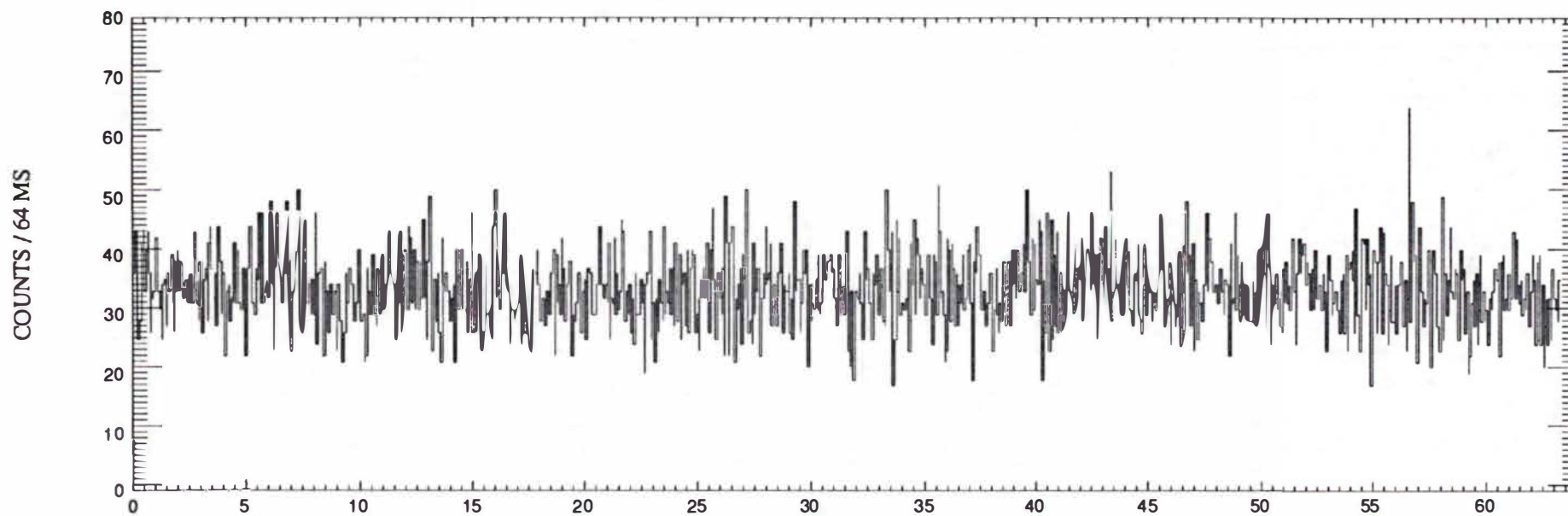
Burst Counter 7 at UT=10.769570982191 h=38770.456 s



Burst Counter 8 at UT=11.693543938531 h=42096.758 s

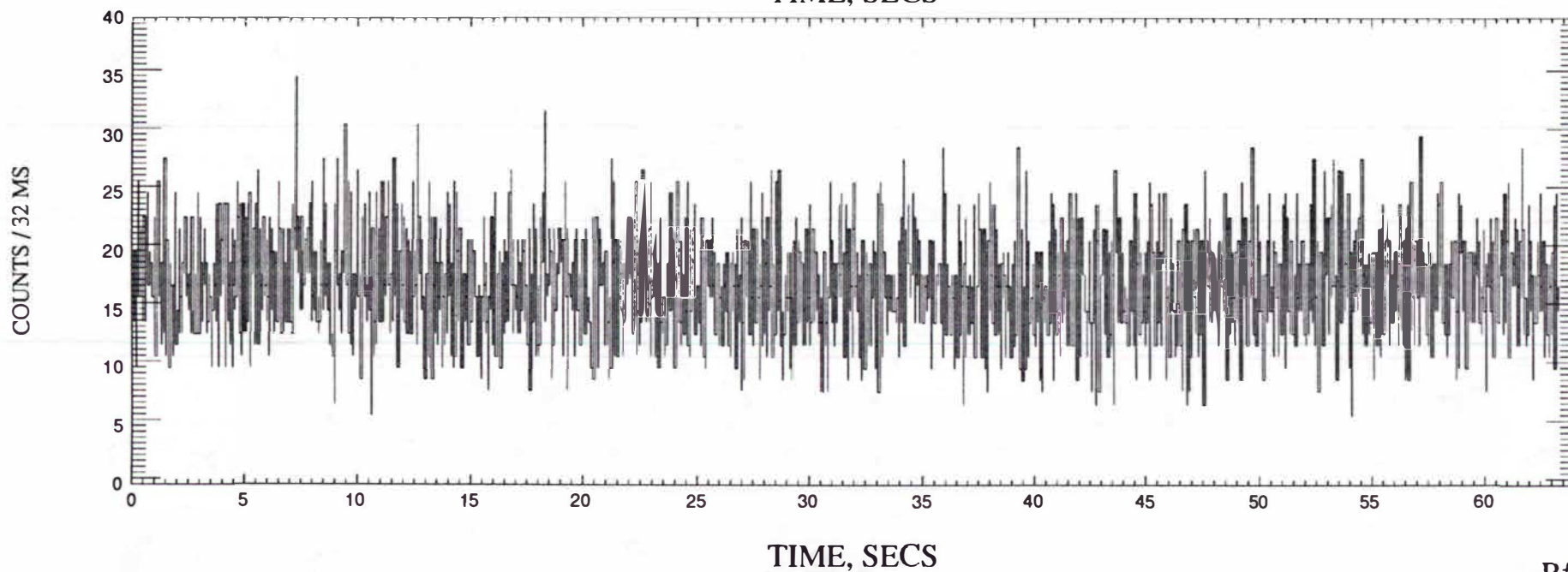
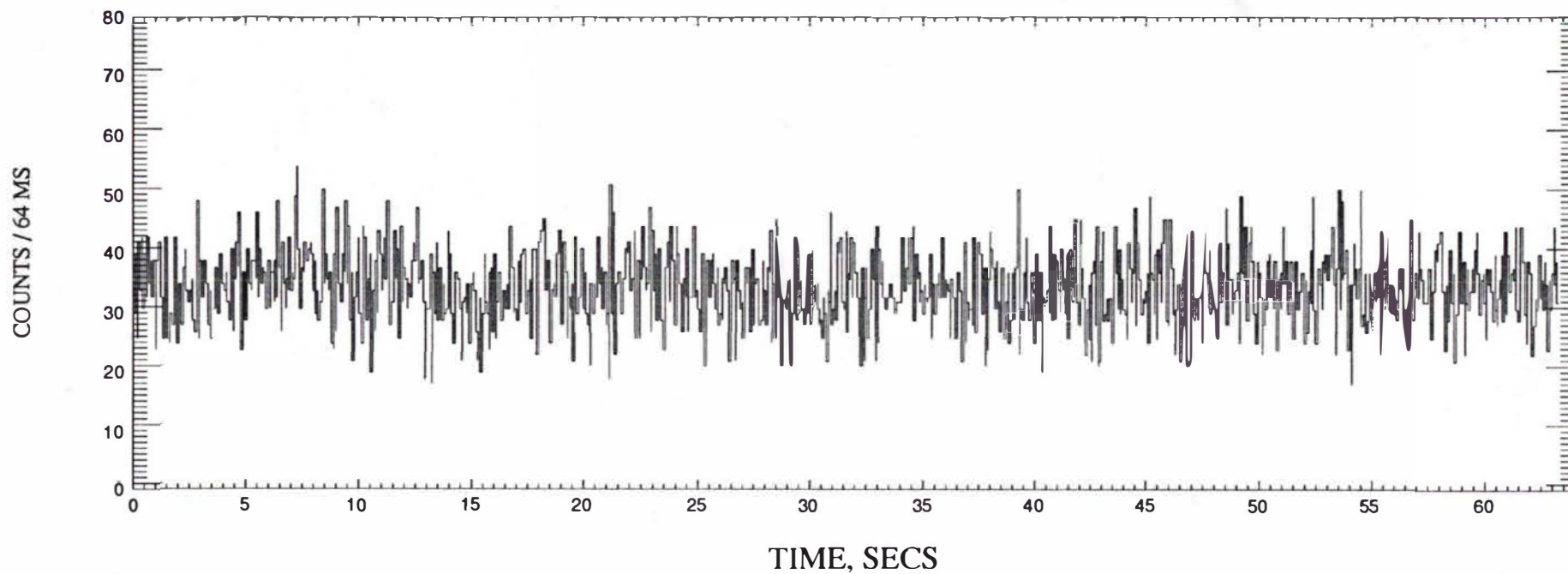


Burst Counter 9 at UT=13.326934568617 h=47976.964 s

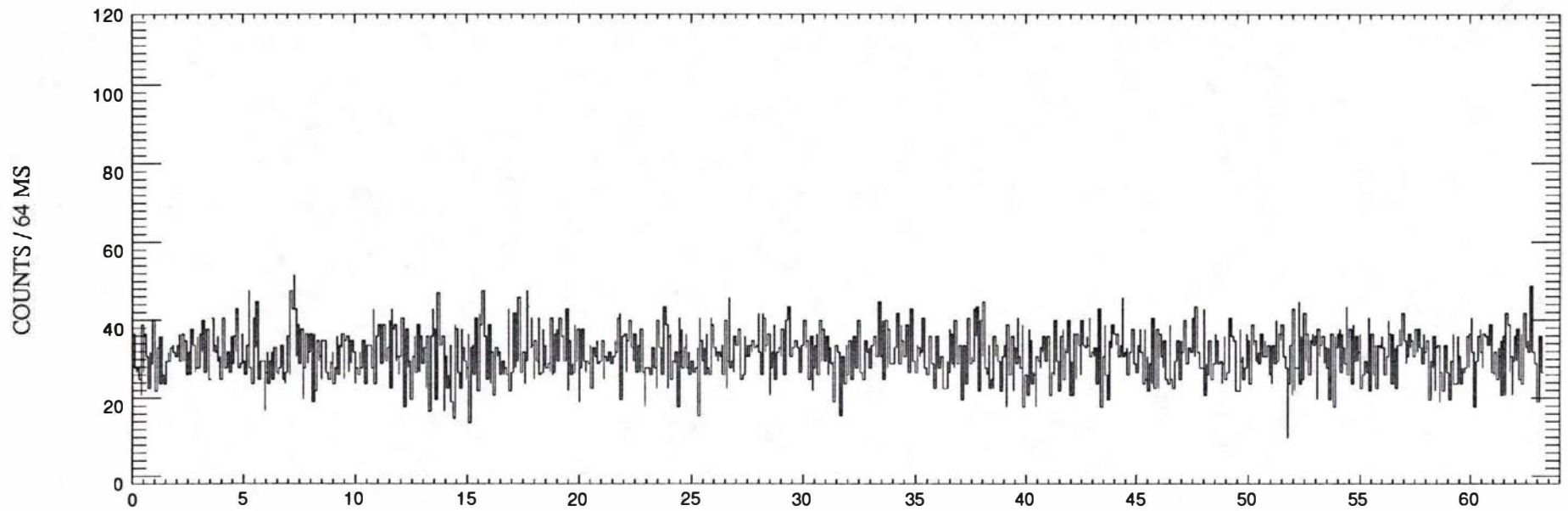


TIME, SECS

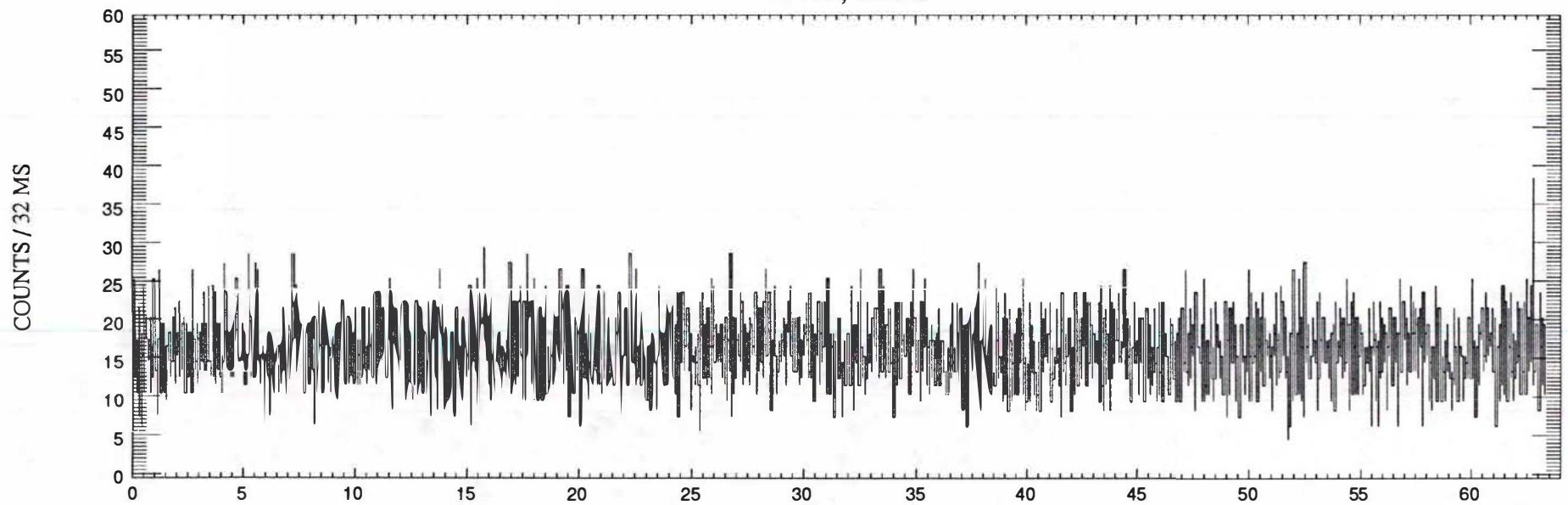
Burst Counter 10 at UT=15.208873532613 h=54751.945 s



Burst Counter 11 at UT=20.371351759169 h=73336.866 s

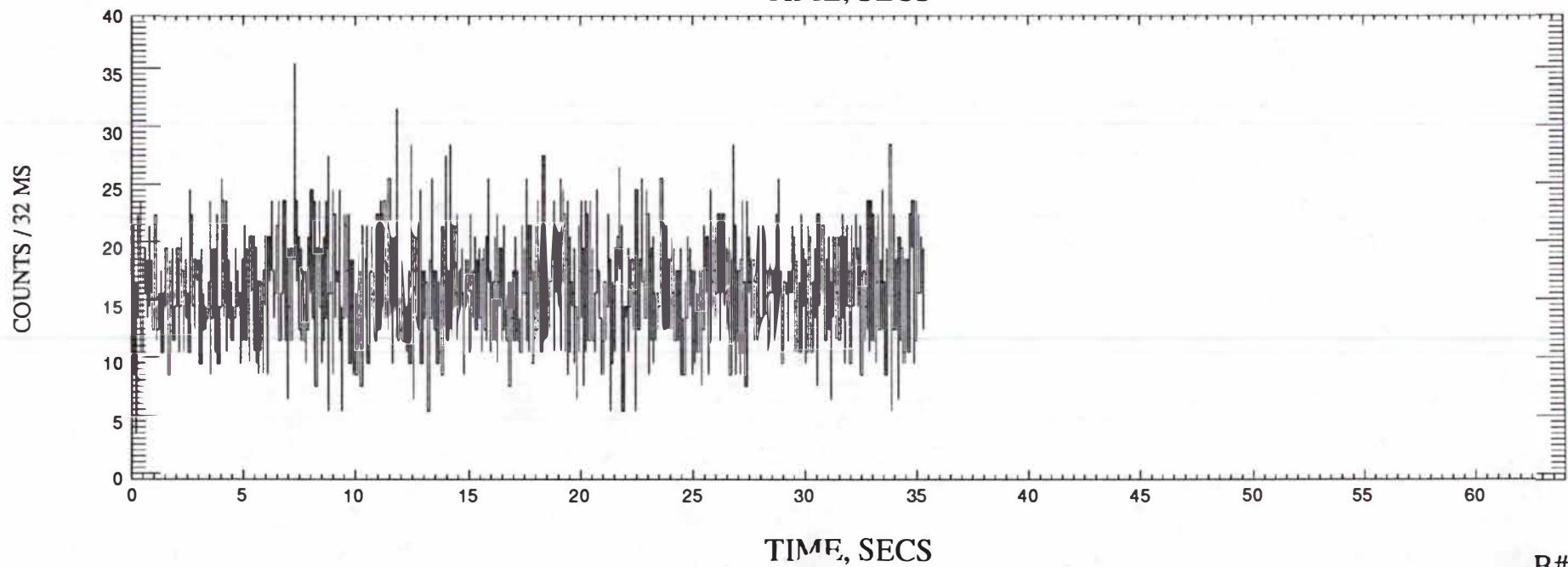
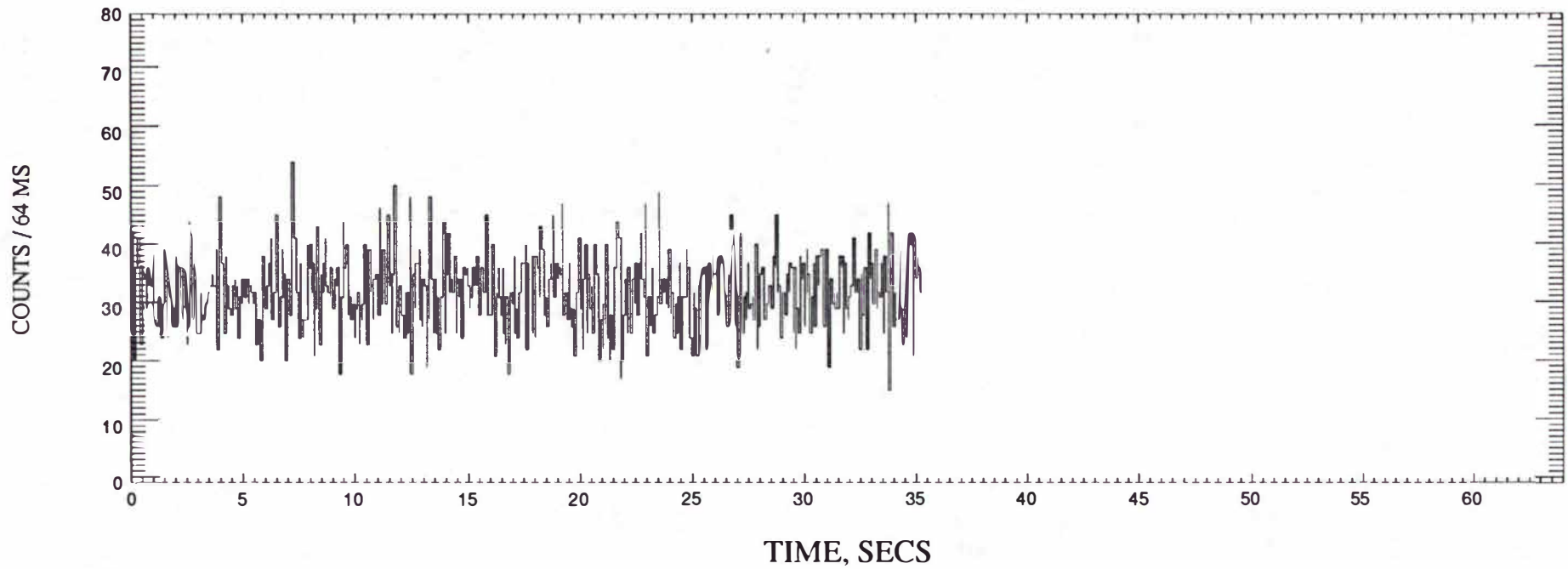


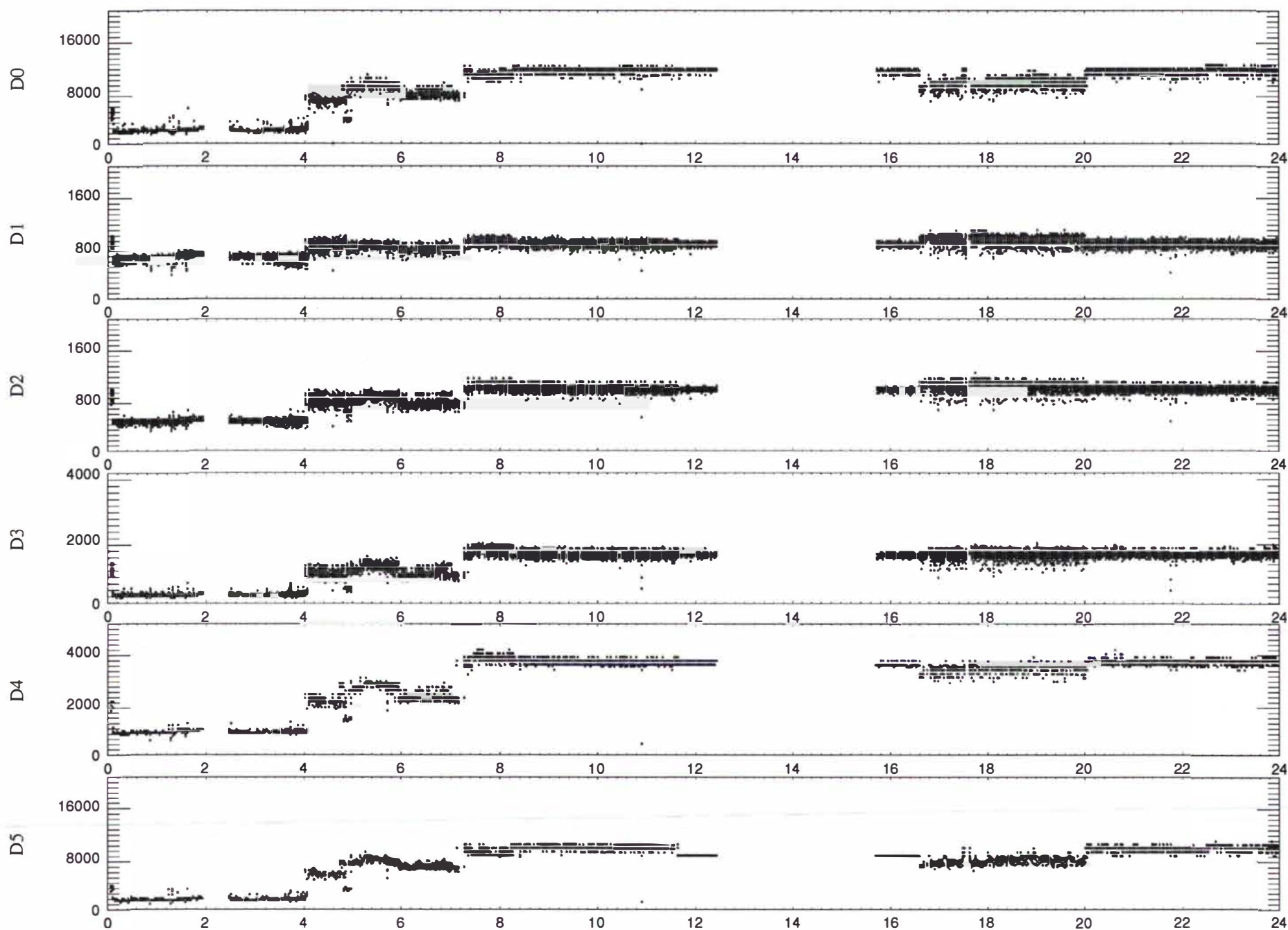
TIME, SECS



TIME, SECS

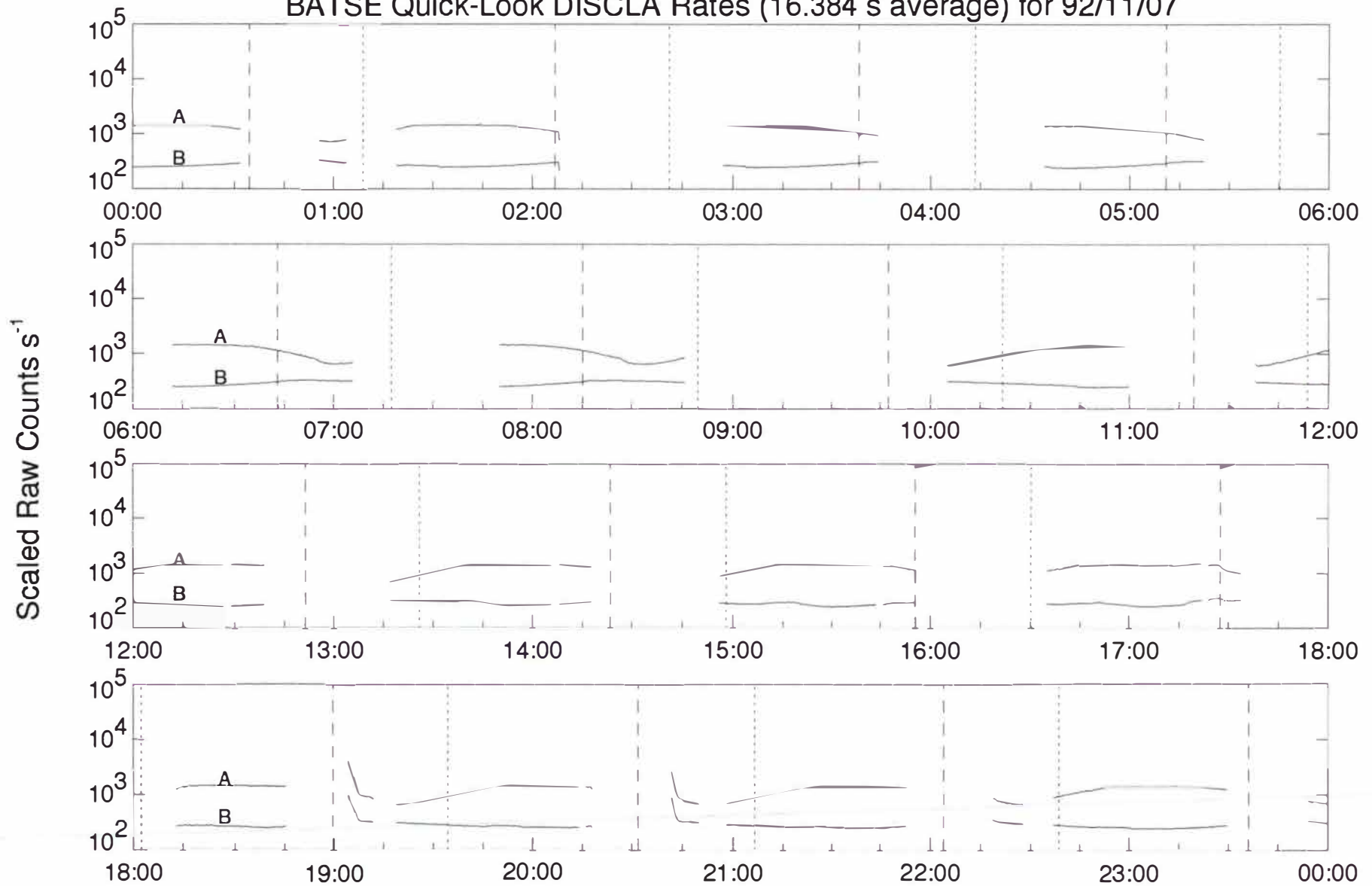
Burst Counter 12 at UT=23.692724071079 h=85293.807 s





UNIVERSAL TIME

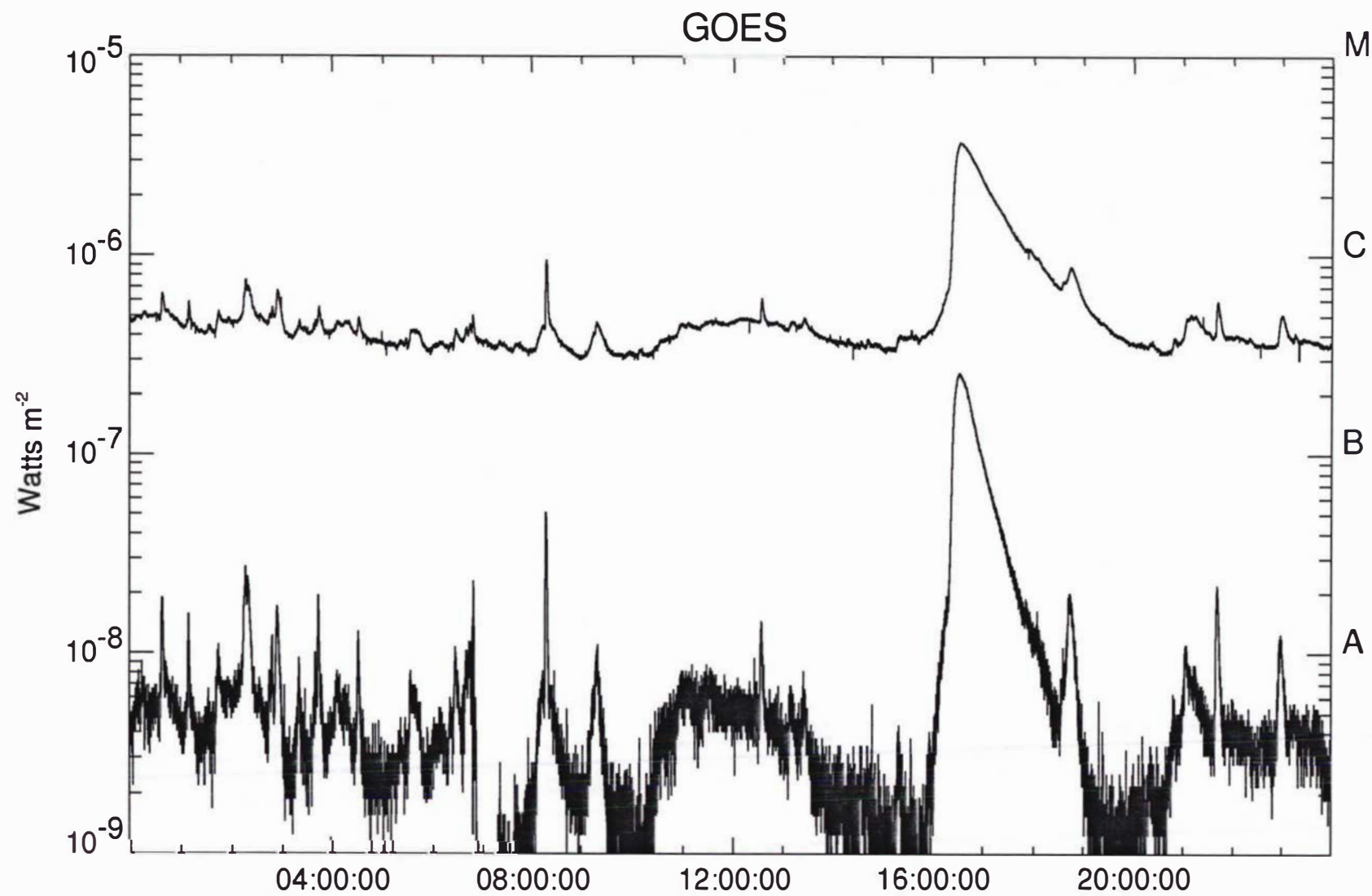
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/07



Current Time: 92/11/09, 0424 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



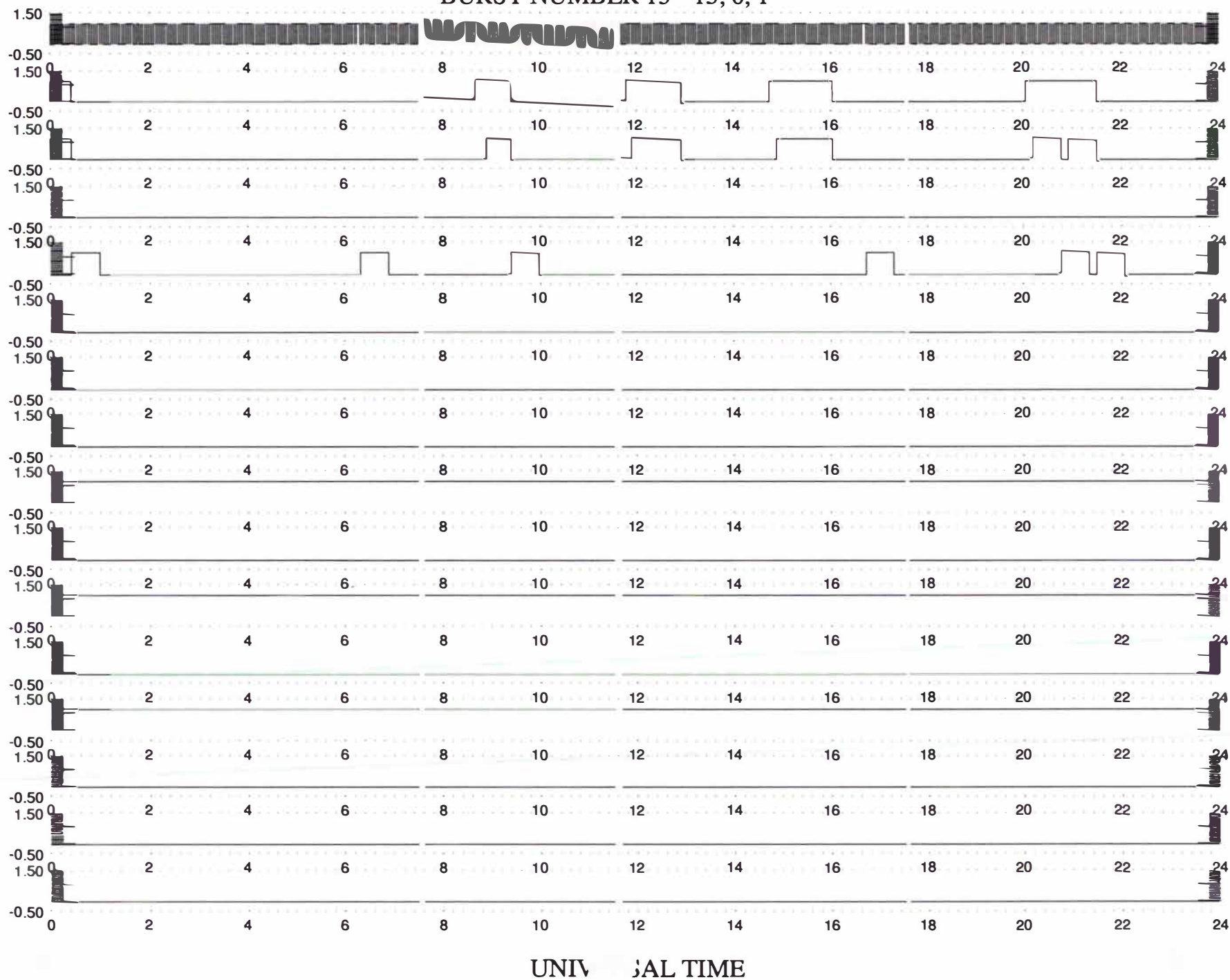
Data Start: 92/11/07, 0000:01

Plot created: 95/05/30, 1533

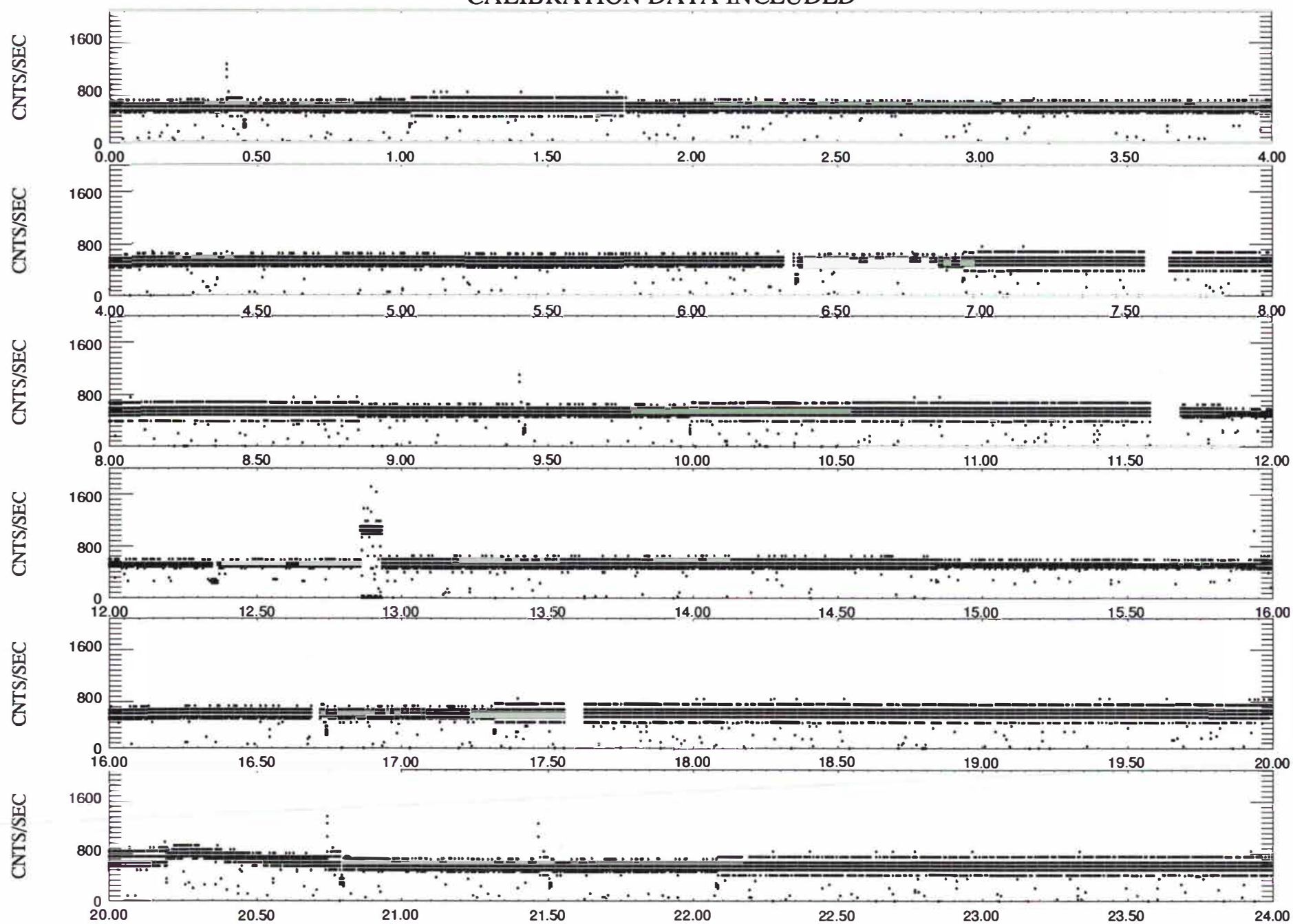
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

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

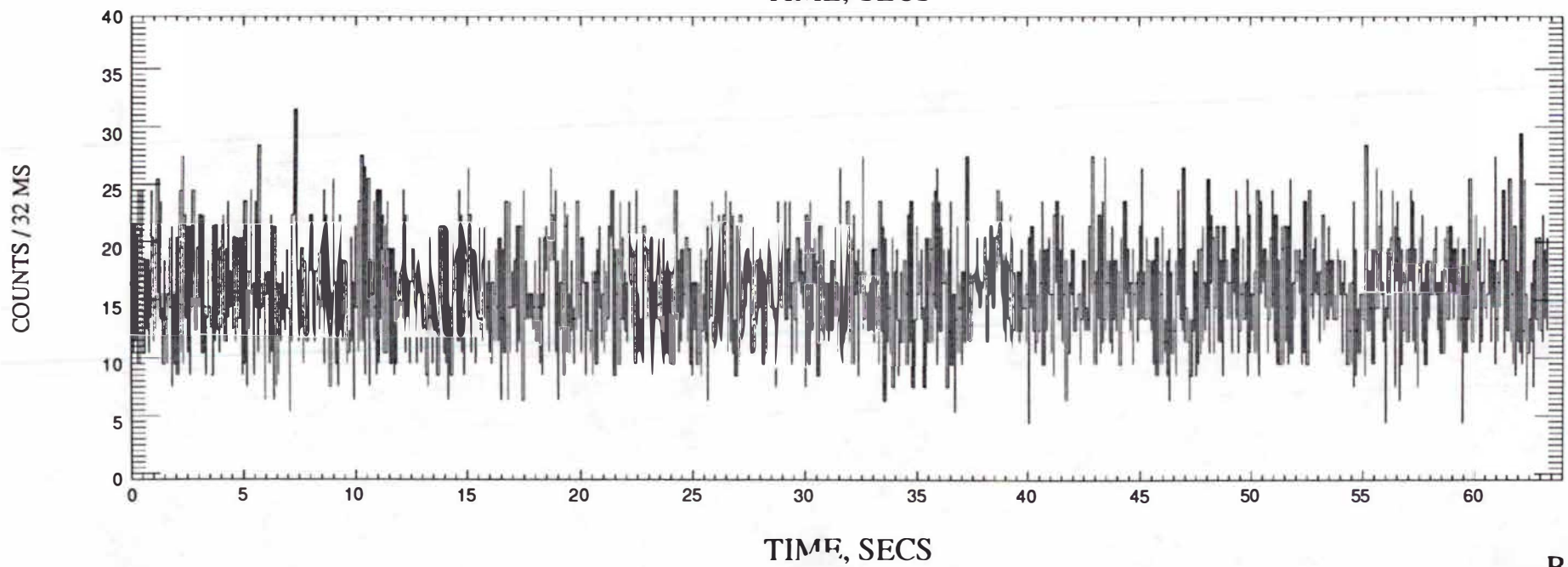
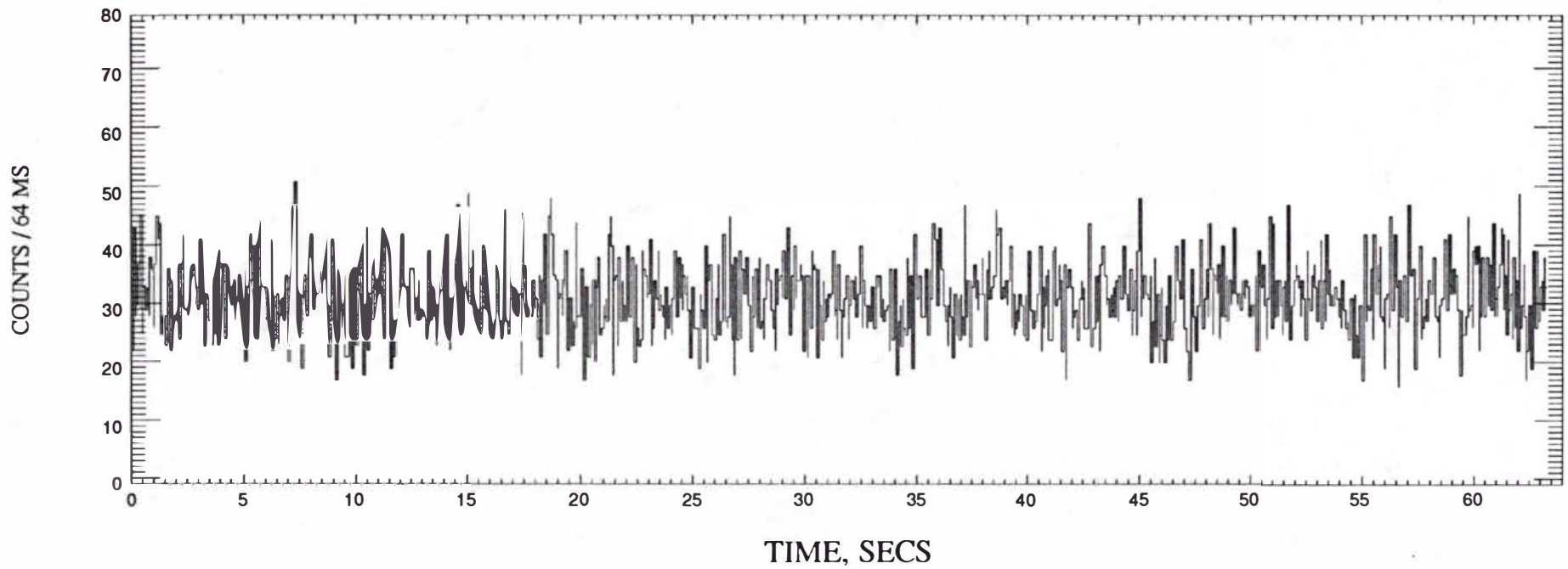


CALIBRATION DATA INCLUDED

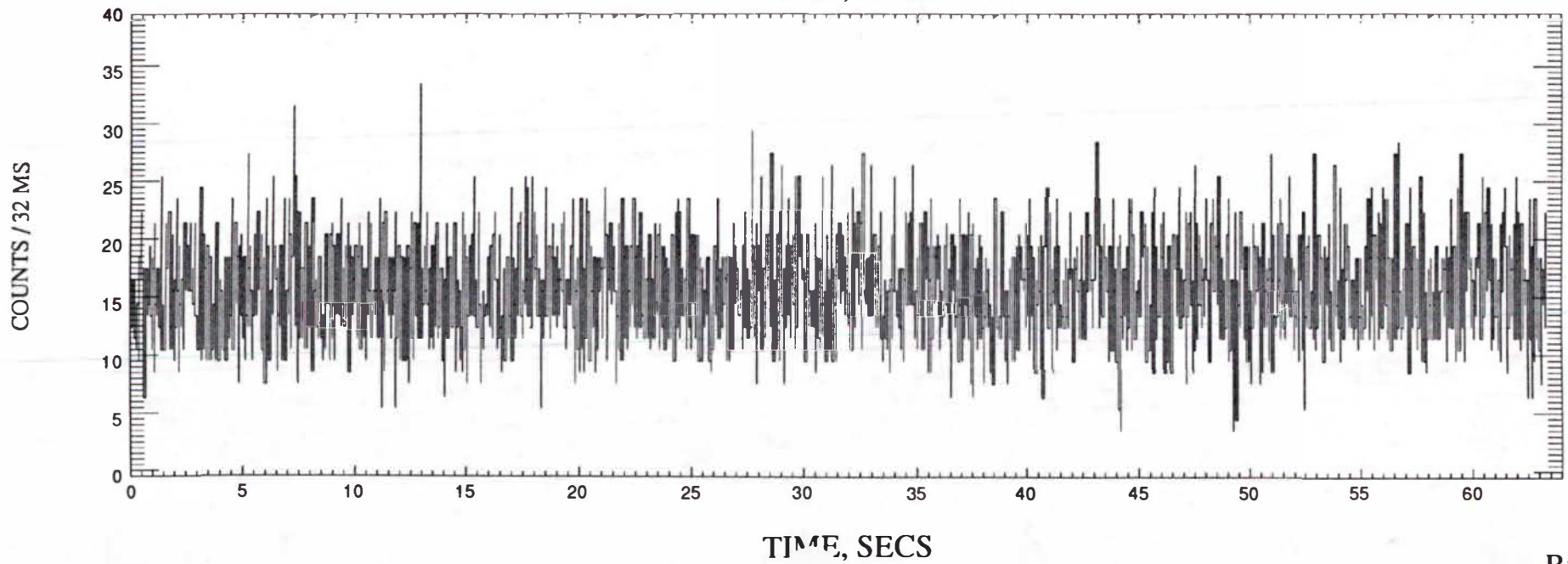
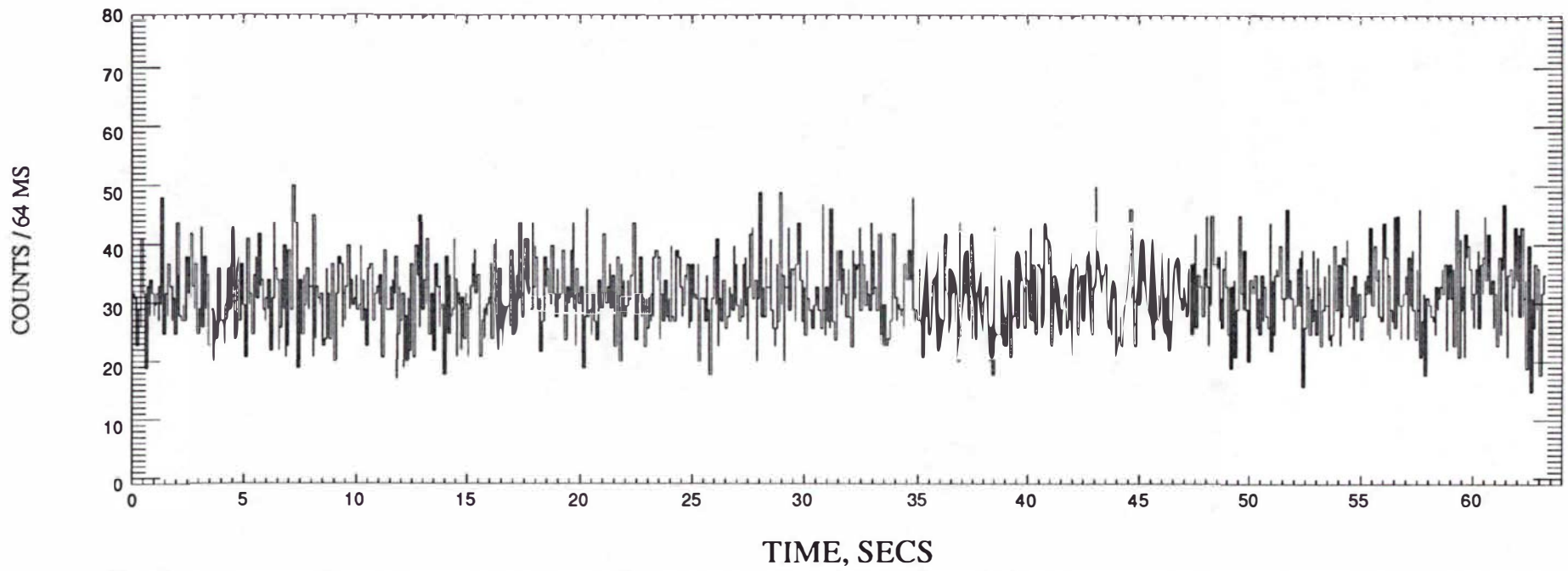


UNIV SAL TIME

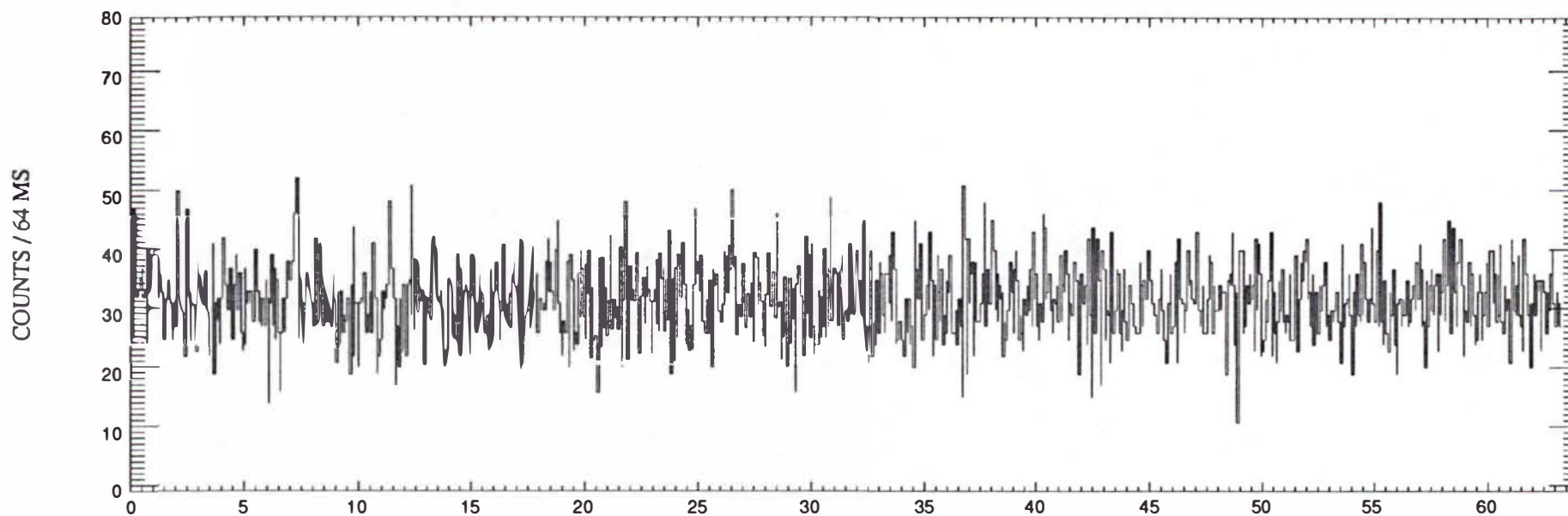
Burst Counter 13 at UT= 8.698213017782 h=31313.567 s



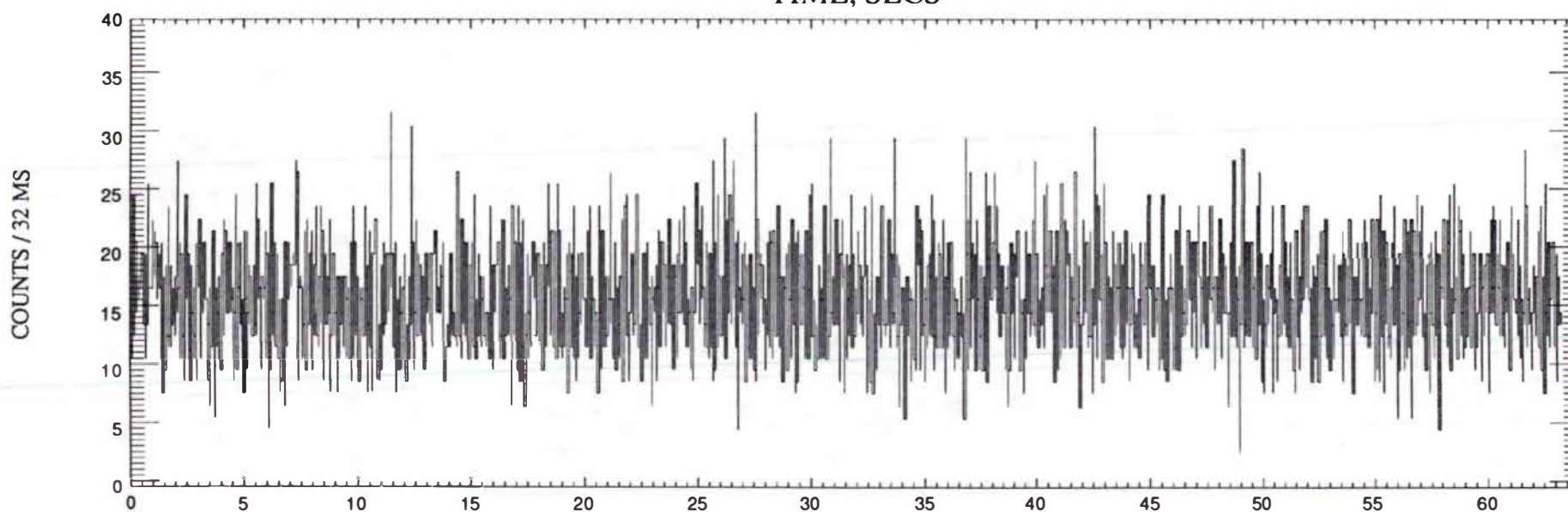
Burst Counter 14 at UT=11.572877188789 h=41662.358 s



Burst Counter 15 at UT=14.672926398383 h=52822.535 s

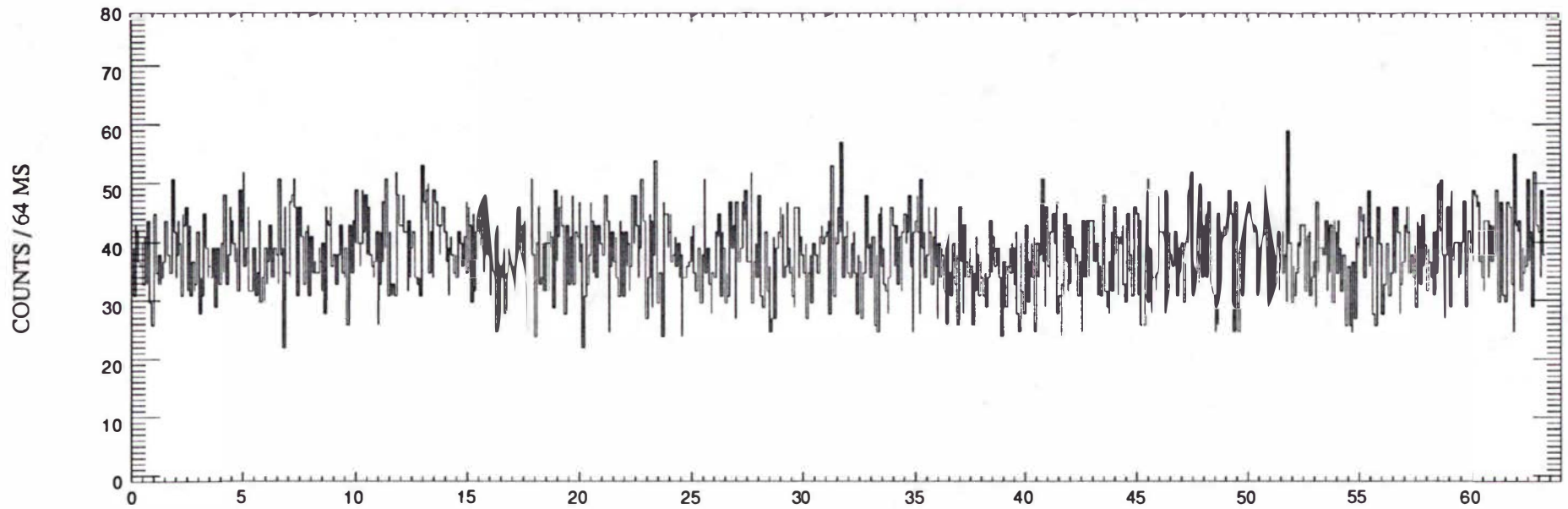


TIME, SECS

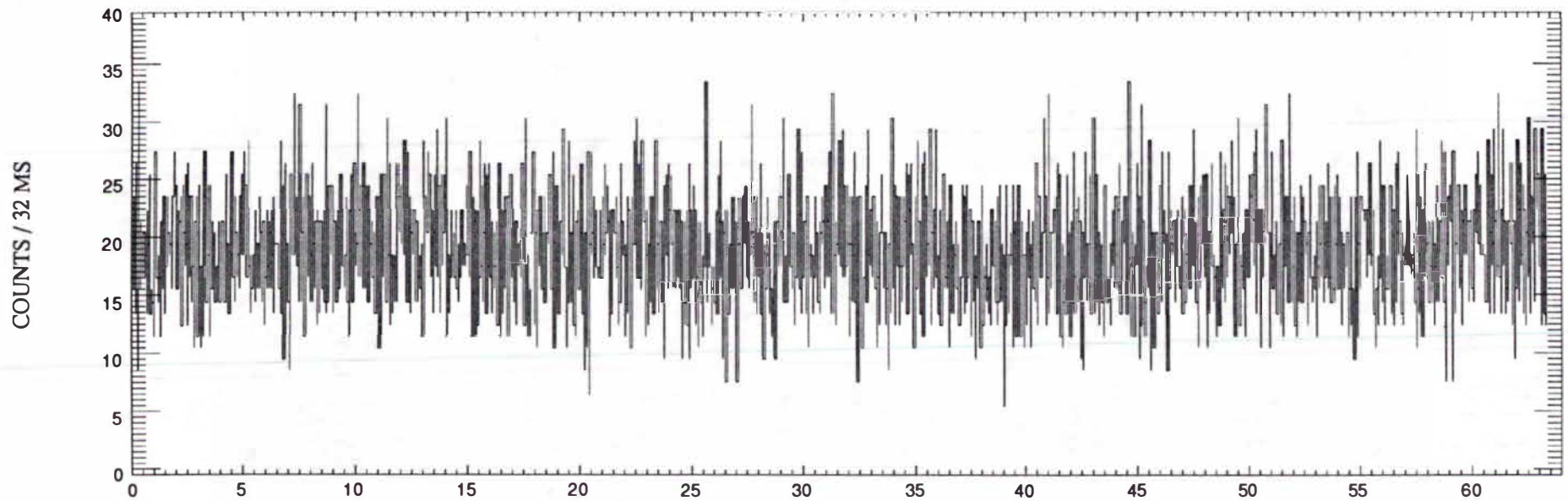


TIME, SECS

Burst Counter 0 at UT=20.040650210910 h=72146.341 s

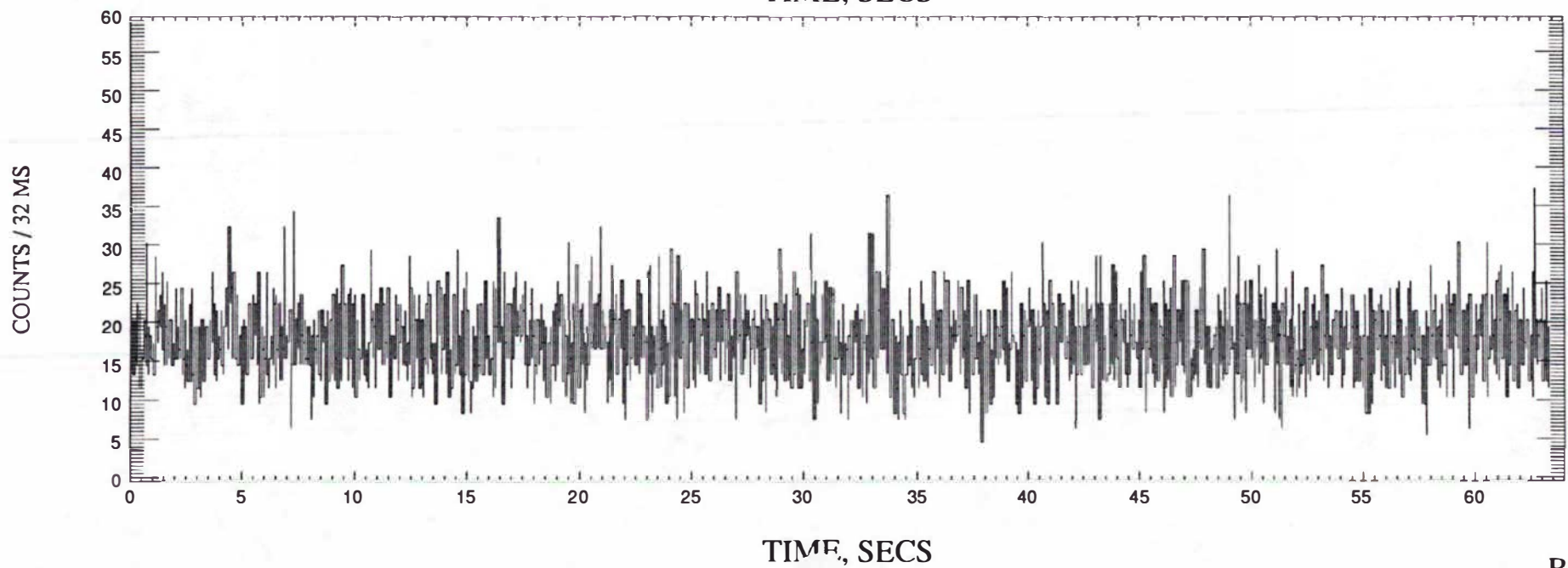
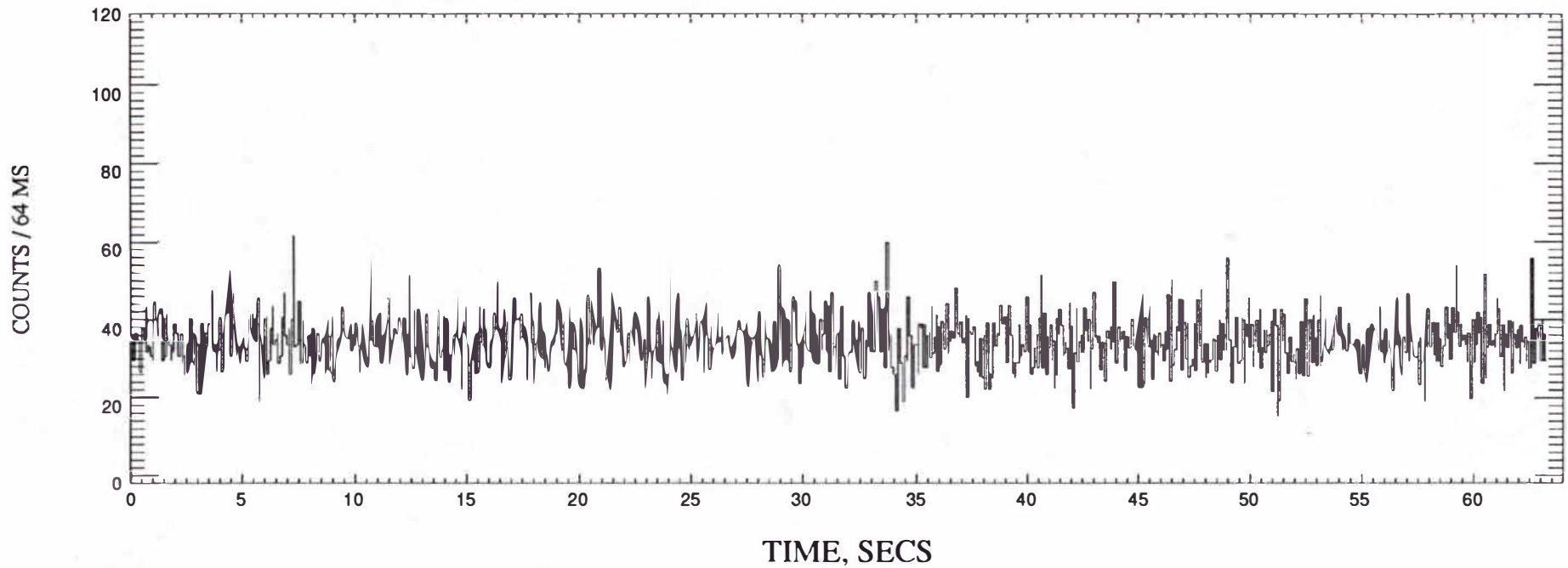


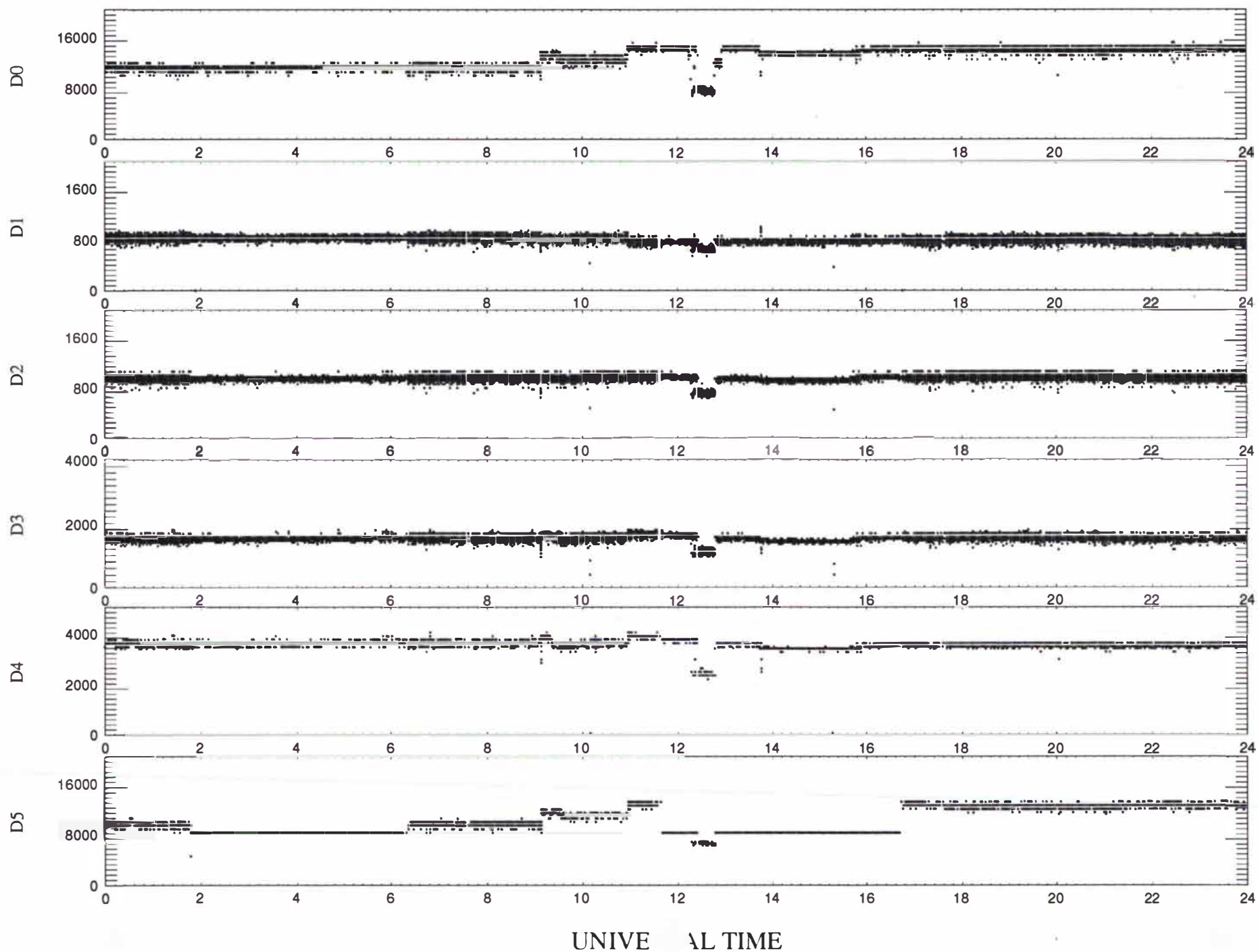
TIME, SECS



TIME, SECS

Burst Counter 1 at UT=20.760175348918 h=74736.631 s





From root Thu Sep 2 10:59 1993
 Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
 id AA21882; Thu, 2 Sep 93 10:59:08
 Received: from space.mit.edu by sunspot.ssl.berkeley.edu (4.1/1.30.1)
 id AA16055; Thu, 2 Sep 93 11:02:18 PDT
 Message-Id: <9309021802.AA16055@sunspot.ssl.berkeley.edu>
 Received: from kiir.mit.edu by space.mit.edu AA17329; Thu, 2 Sep 93 14:03:20 EDT
 Received: by kiir AA00376; Thu, 2 Sep 93 14:03:07 -0500
 Date: Thu, 2 Sep 93 14:03:07 -0500
 From: Hans Krimm <hansk@space.mit.edu>
 To: khurley@space6.ssl.berkeley.edu
 Subject: IPN burst localizations
 Cc: grr@space.mit.edu, hansk@space.mit.edu, roland@space.mit.edu
 Status: R

Dear Professor Hurley:

I will be presenting a paper at the Huntsville Gamma Ray Burst Workshop entitled "Searches for Optical Counterparts of BATSE Gamma-Ray Bursts." The searches were made by comparing BATSE GRB observations with the observations of the Explosive Transient Camera (ETC), a wide-field CCD camera system capable of detecting short (1-10 s) celestial optical flashes as faint as $m = 9$ over a field-of-view of 0.75 steradians between -15 degs and +45 degs declination. We have access to the published BATSE GRB catalog and, as guest investigators, to catalog supplements through May 1993.

It would be very helpful to supplement this search with burst localization information from the Third Interplanetary Network. There are so far been four BATSE GRBs which are temporally coincident and spatially consistent with ETC observations, designated here by their BATSE catalog numbers:

GRB 910616	38364.809 sec UT	RA = 301.3	dec = 4.9	NO - 50% p.s.t.
GRB 910702B	17195.660 sec UT	RA = 256.5	dec = 27.7	NO " "
GRB 921108	32977 sec UT	RA = 116	dec = 41	1.5D
GRB 930203	40948 sec UT	RA = 218.4	dec = 2.6	NO 220 8 7

None of these BATSE bursts showed up in the list of 18 IPN localizations in your paper from the St. Louis conference; I was wondering if any of these bursts were among the 30 events mentioned in that paper for which annular segment fields were determined or if either of the latter two events have since been localized with the CGRO/Ulysses/MO network.

Furthermore, I would be interested in a list of bursts (times and rough positions) which may have been detected by Ulysses, PVO or MO during 1991-1993, but which were not seen by BATSE (perhaps included in the "The Ulysses Supplement to the First BATSE Catalog of Gamma-Ray Bursts" which you will be presenting at the conference).

I thank you for your assistance with this work.

Sincerely,

Hans

[Dr. Hans Krimm
 Mass. Institute of Technology
 617-253-7396]

CATSEARCH PROGRAM

BATSE BURST # 2043
EVENT OF 1992 NOV 8 DAY OF YEAR=313
EVENT CROSSING TIME AT BATSE : 32977. S. OR 09:09:37.3
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 107.400 35.700
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 8/11/ 92 IS:
RA= 165.644 DEC= -6.469 DIST= 5.646 AU
BATSE-ULYSSES DISTANCE = 844671520. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=111.03 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1011.30 SECS.
CROSSING TIME AT ULYSSES IS 31966. S. OR 08:52:45.9 +/- 491.21 SECONDS

No

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2043	921108	8934	32977	3800	116	+41

NO

BATSE BURST TRIGGER

NO.: 02043

Nov 8

TIME: TJD=8934 SECONDS=32977

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=052.8 AZIMUTH=120.2 ERROR= DEGREES

COMMENTS:

A HARD SPIKE OF 0.4 SECONDS DURATION THAT DOES NOT APPEAR
ABOVE 300 KEV.

9 / 6 / 94

ULYSSES RT

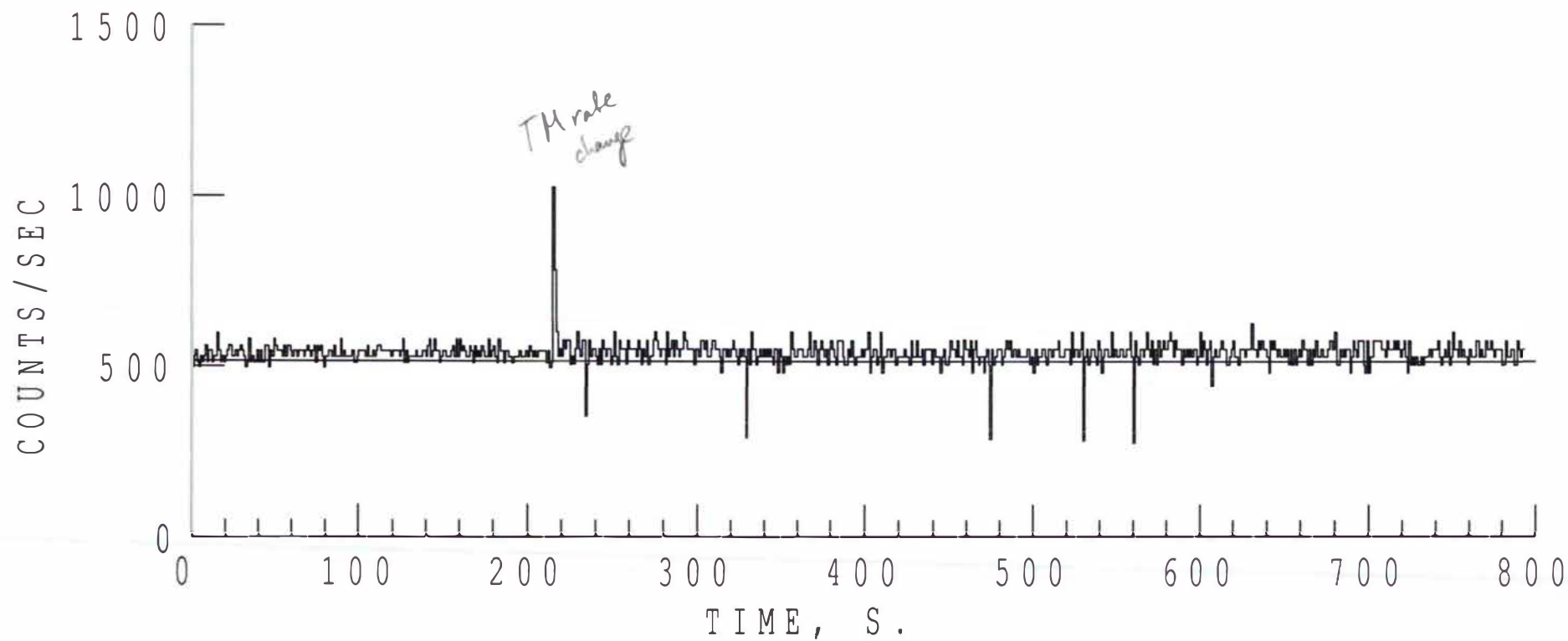
8/11/92 31464.449 s

0.500 S INTERVALS REGROUPED BY 2

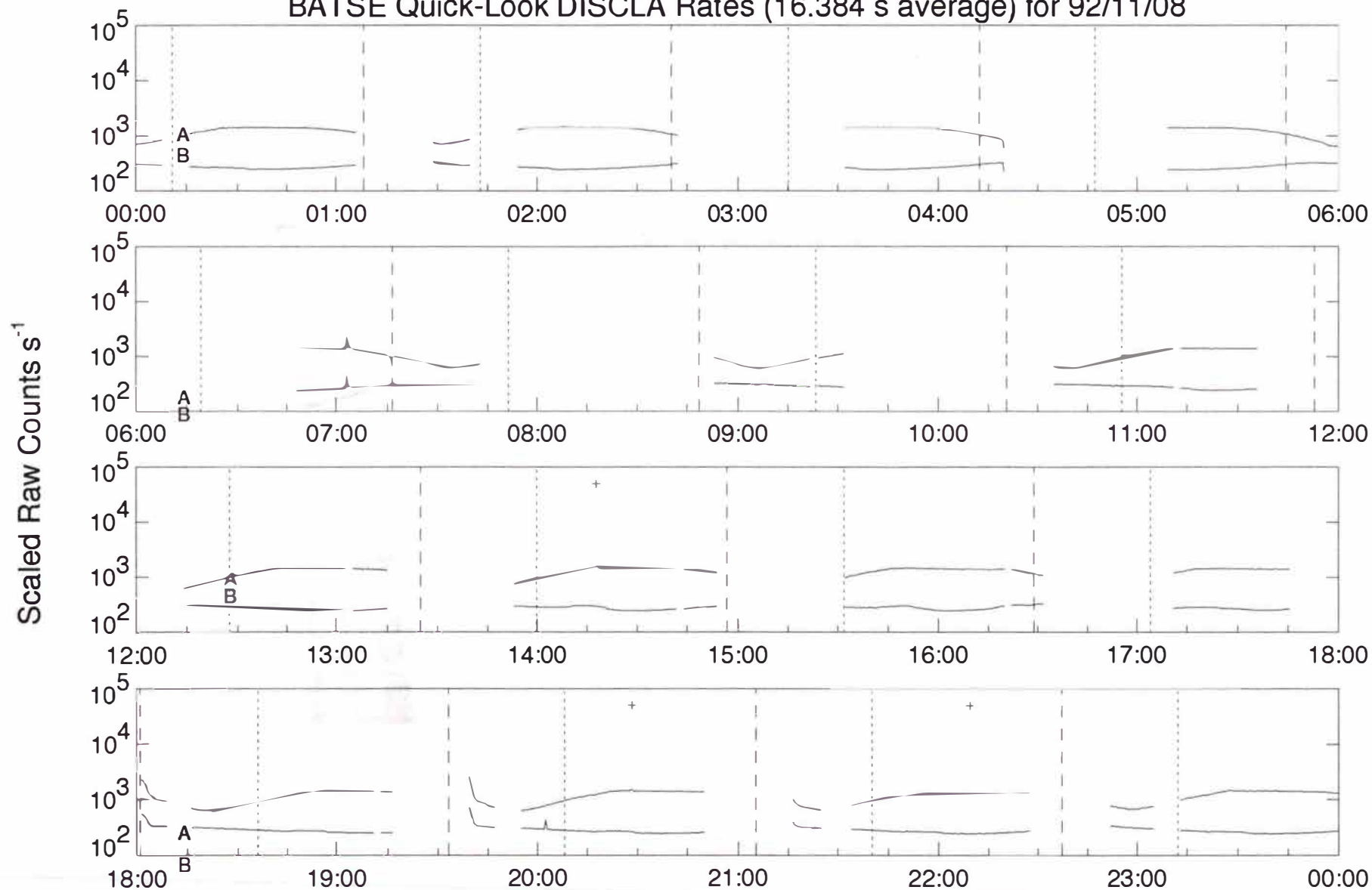
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



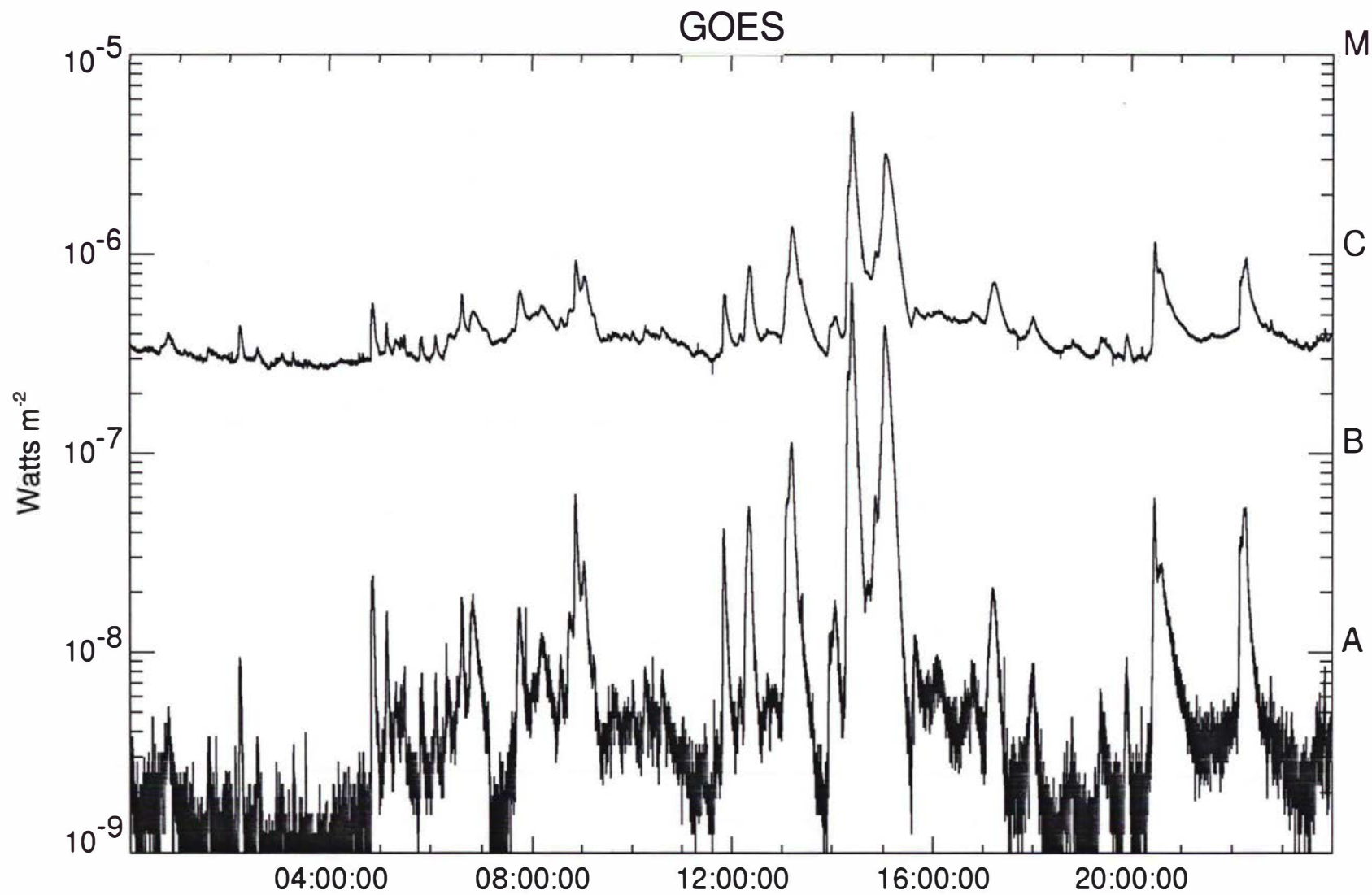
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/08



Current Time: 92/11/10, 1225 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



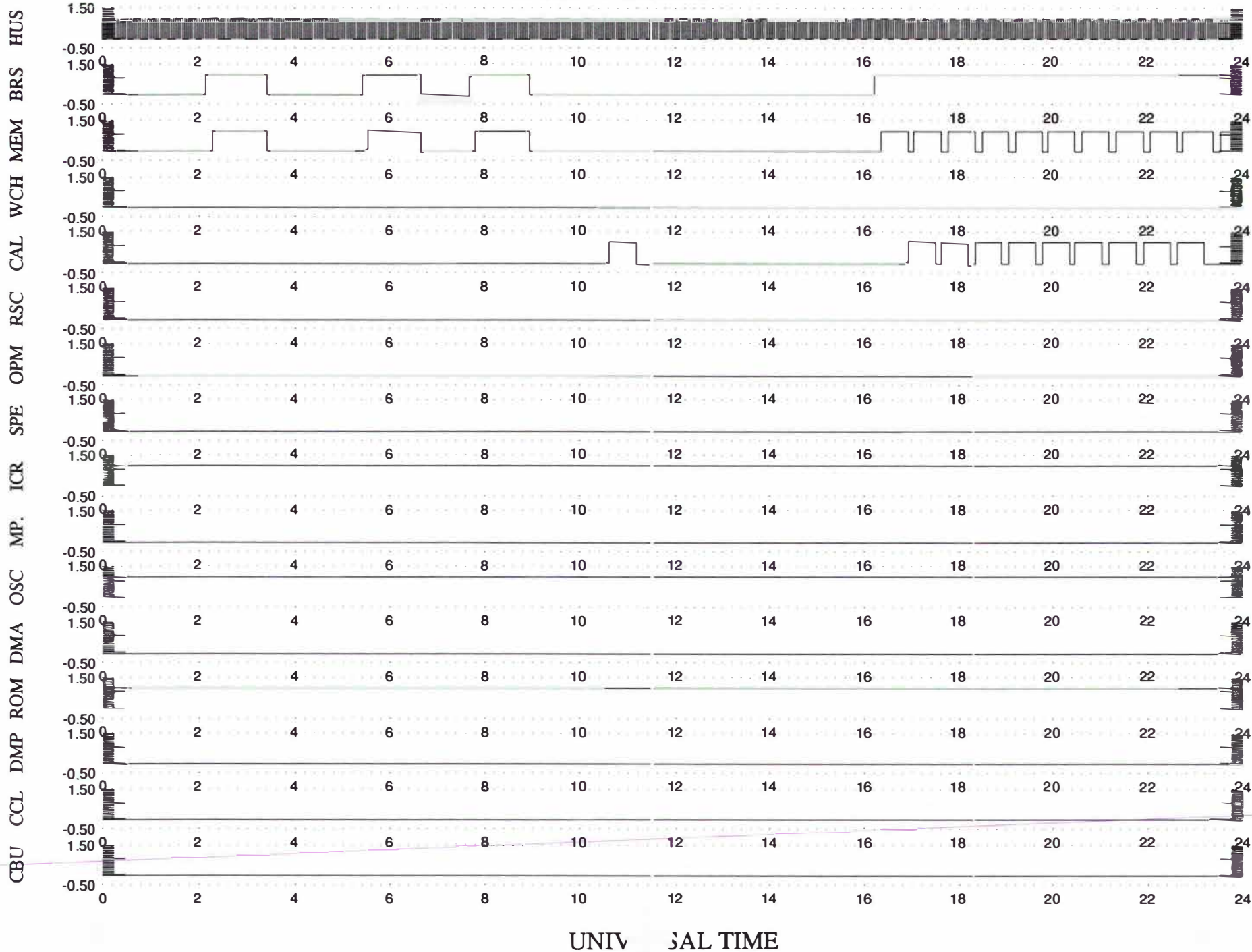
Data Start: 92/11/08, 0000:02

Plot created: 95/05/30, 1536

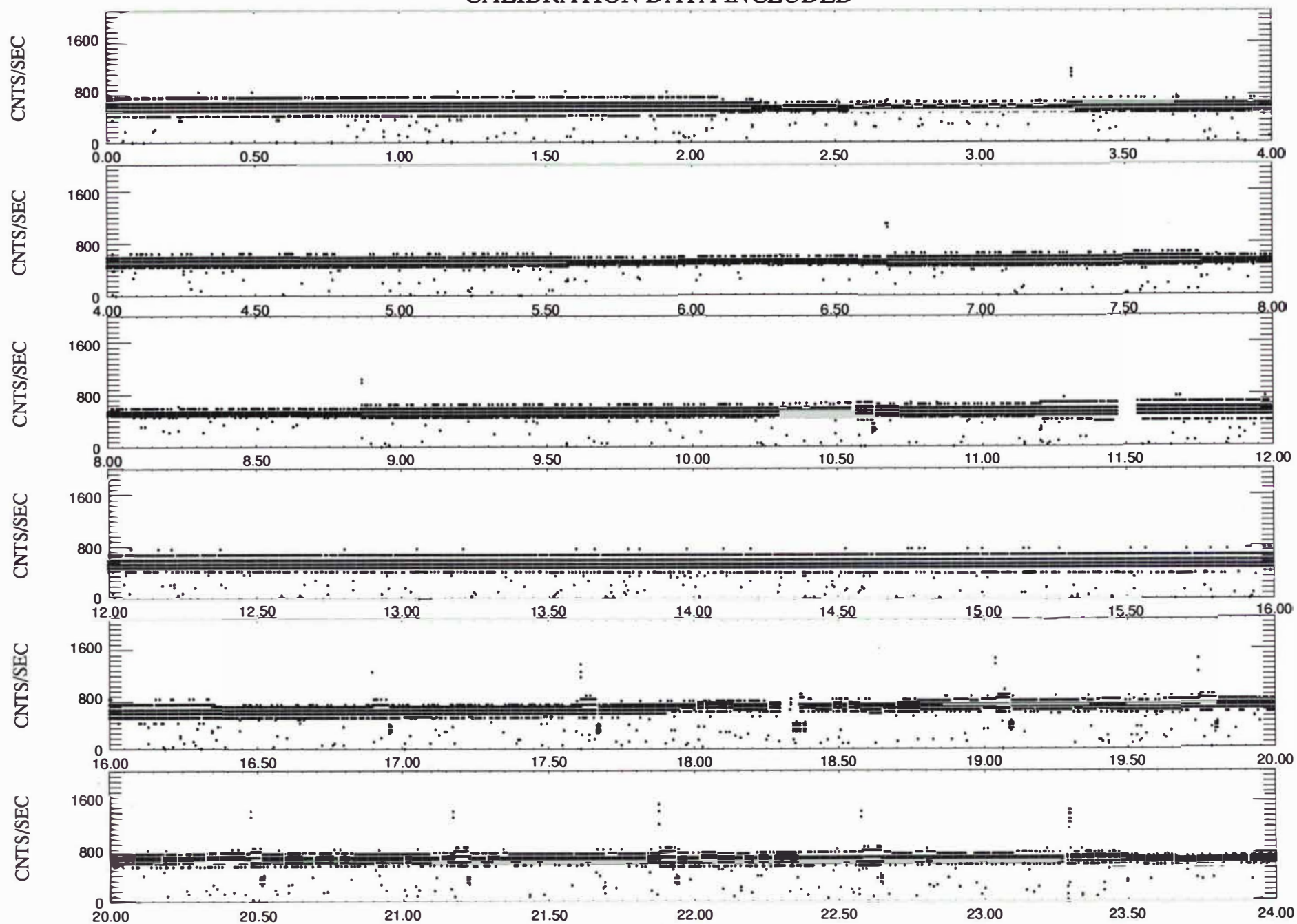
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BURST NUMBER 2 - 15

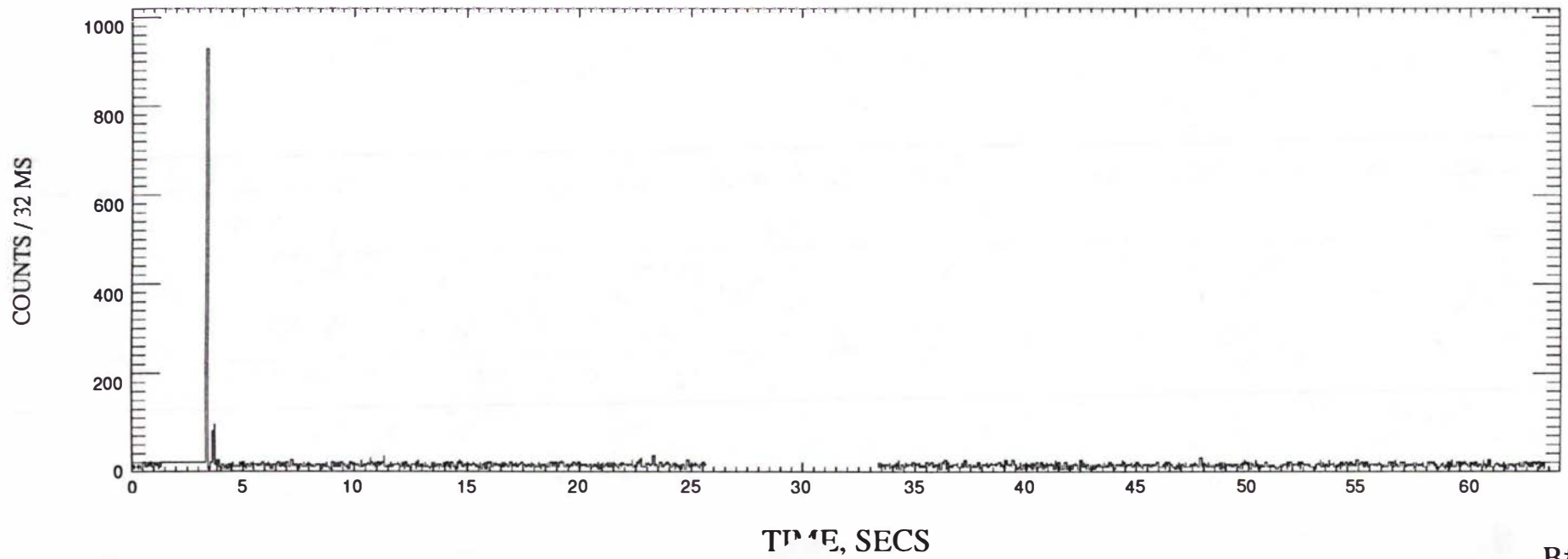
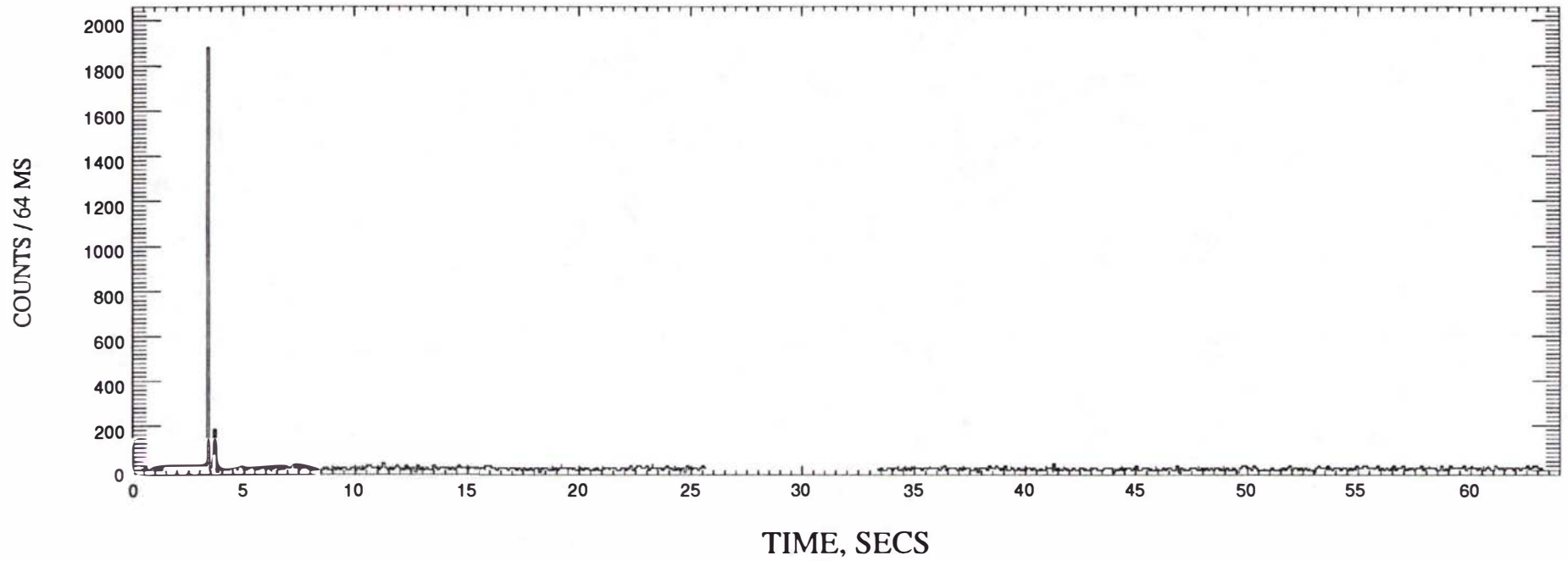


CALIBRATION DATA INCLUDED

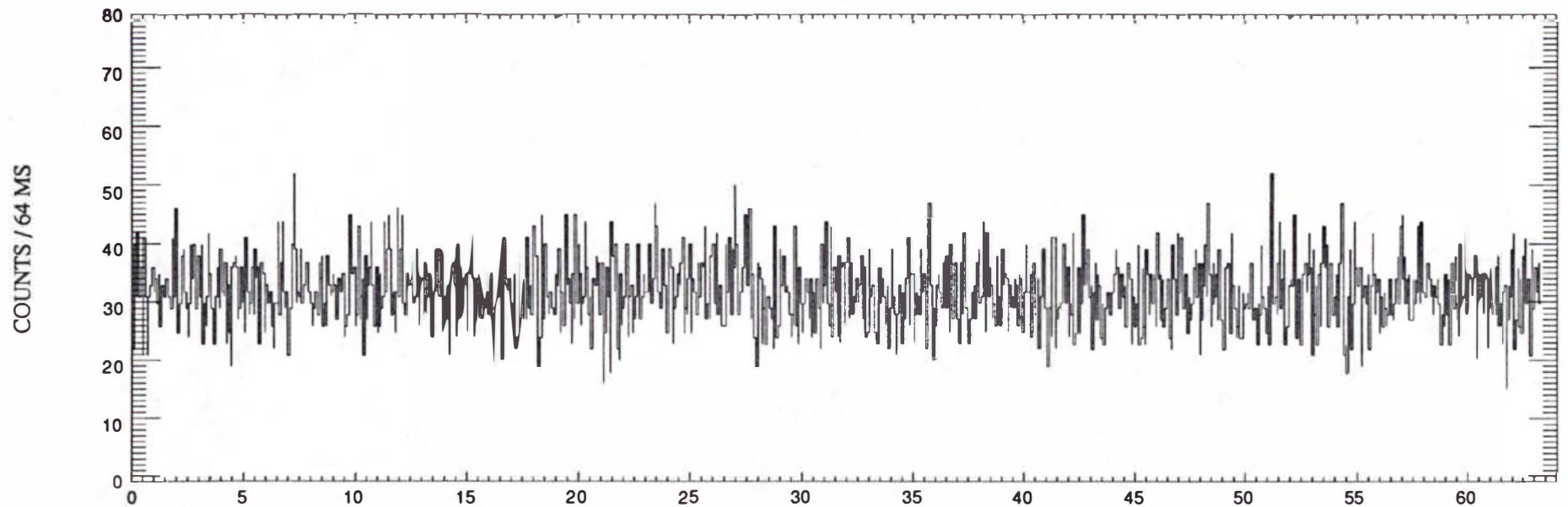


UNIV 3AL TIME

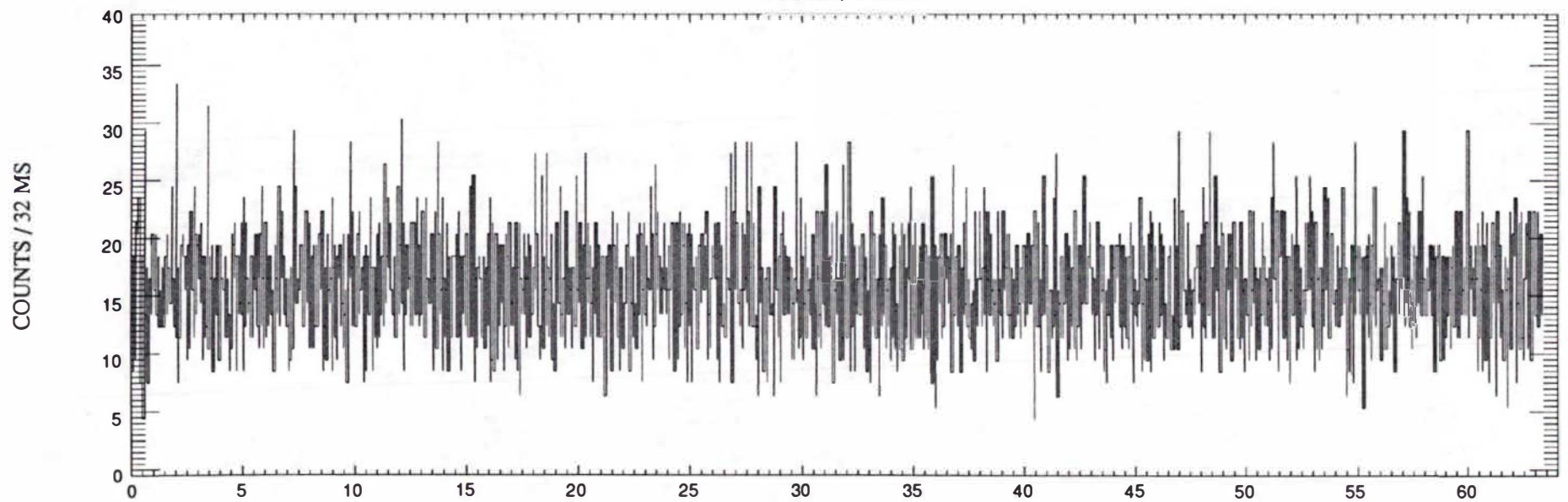
Burst Counter 2 at UT= 2.057690264384 h= 7407.685 s



Burst Counter 3 at UT= 5.415205595228 h=19494.740 s

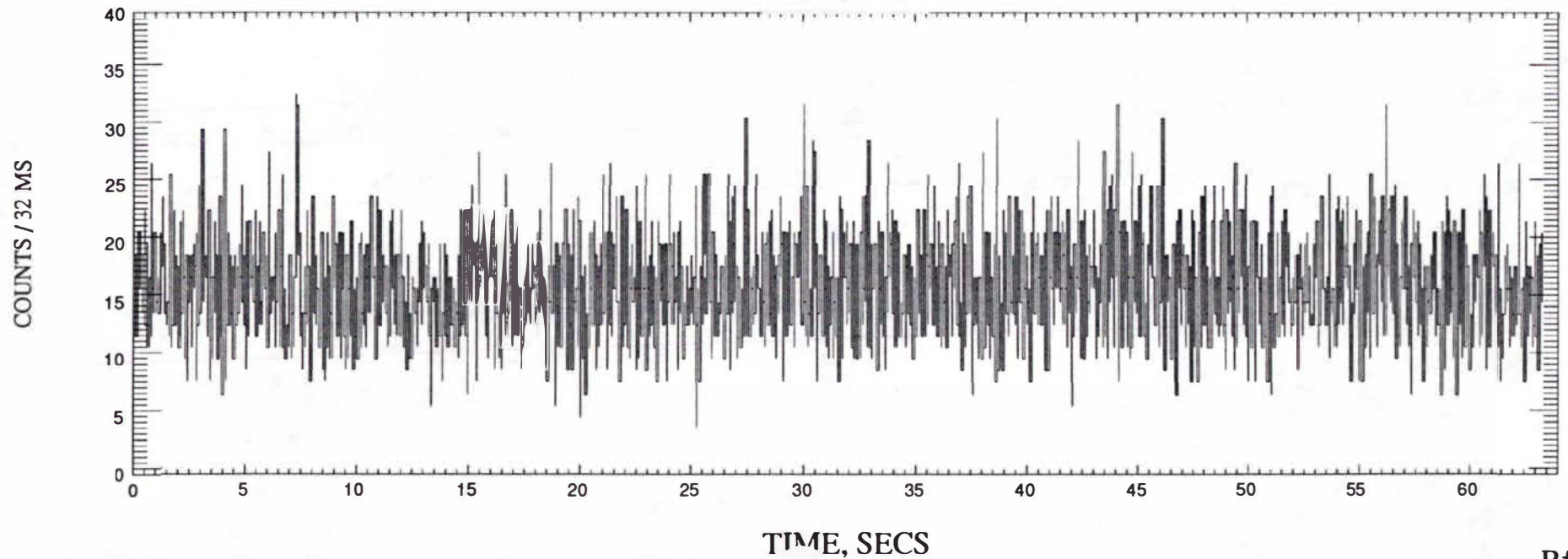
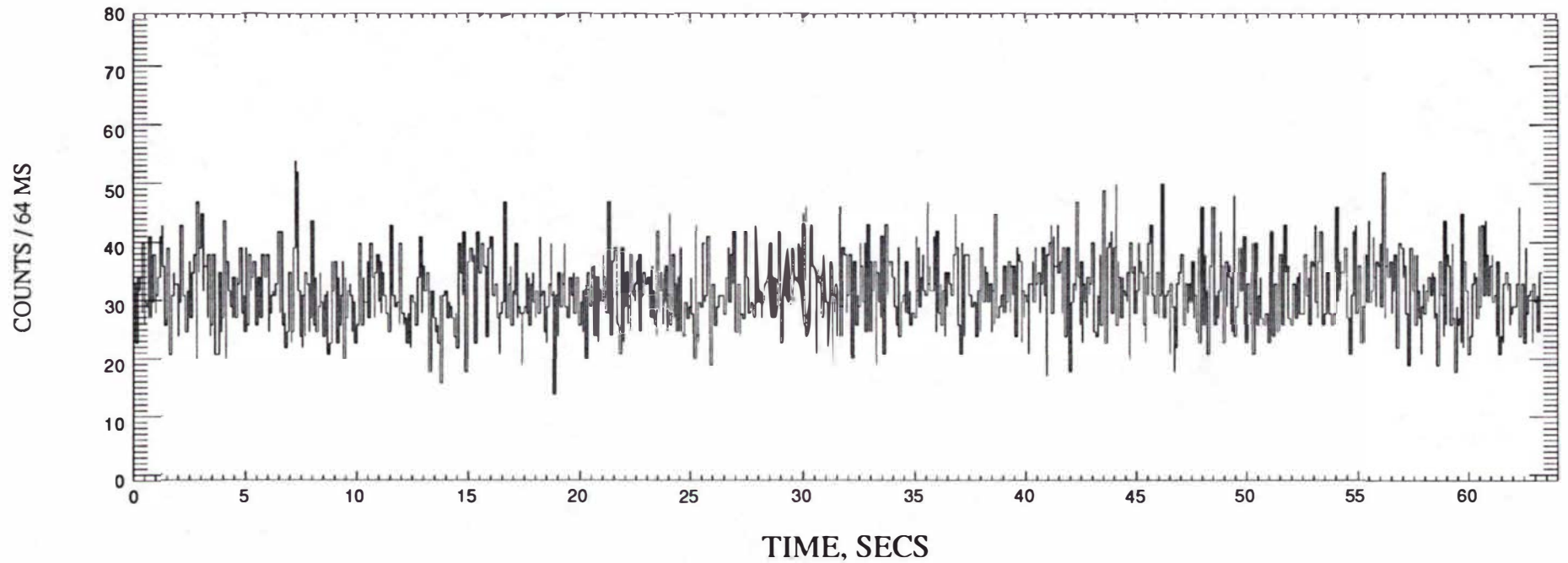


TIME, SECS

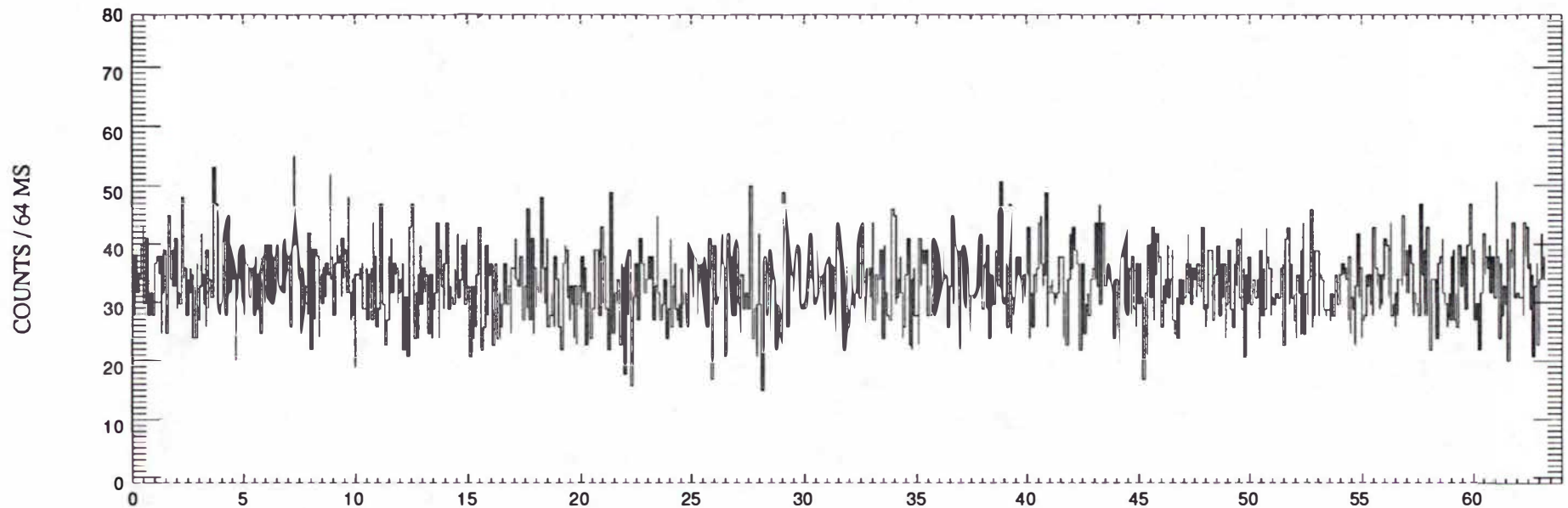


TIME, SECS

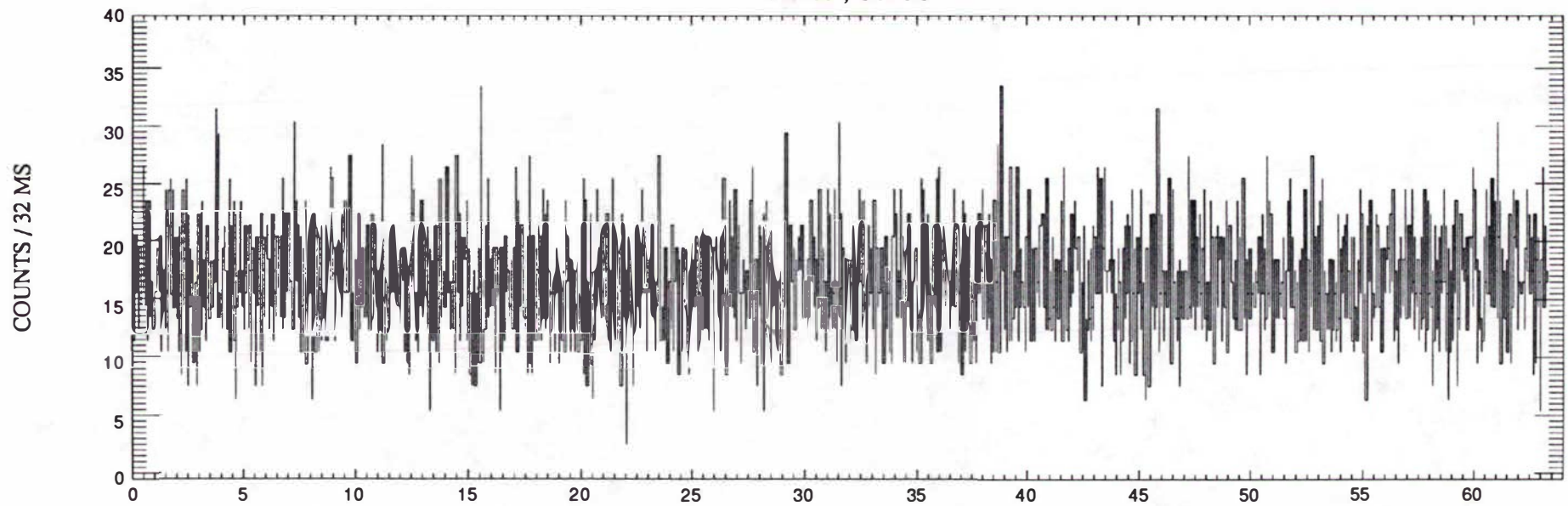
Burst Counter 4 at UT= 7.602739418877 h=27369.862 s



Burst Counter 5 at UT=16.189754375882 h=58283.116 s

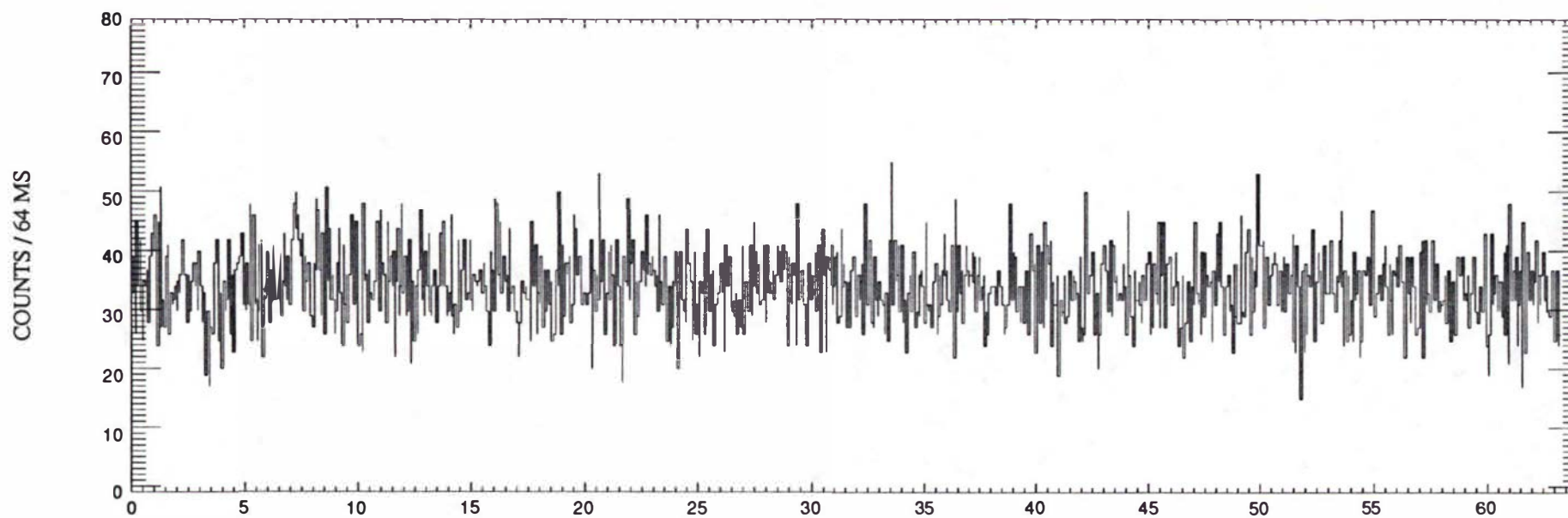


TIME, SECS

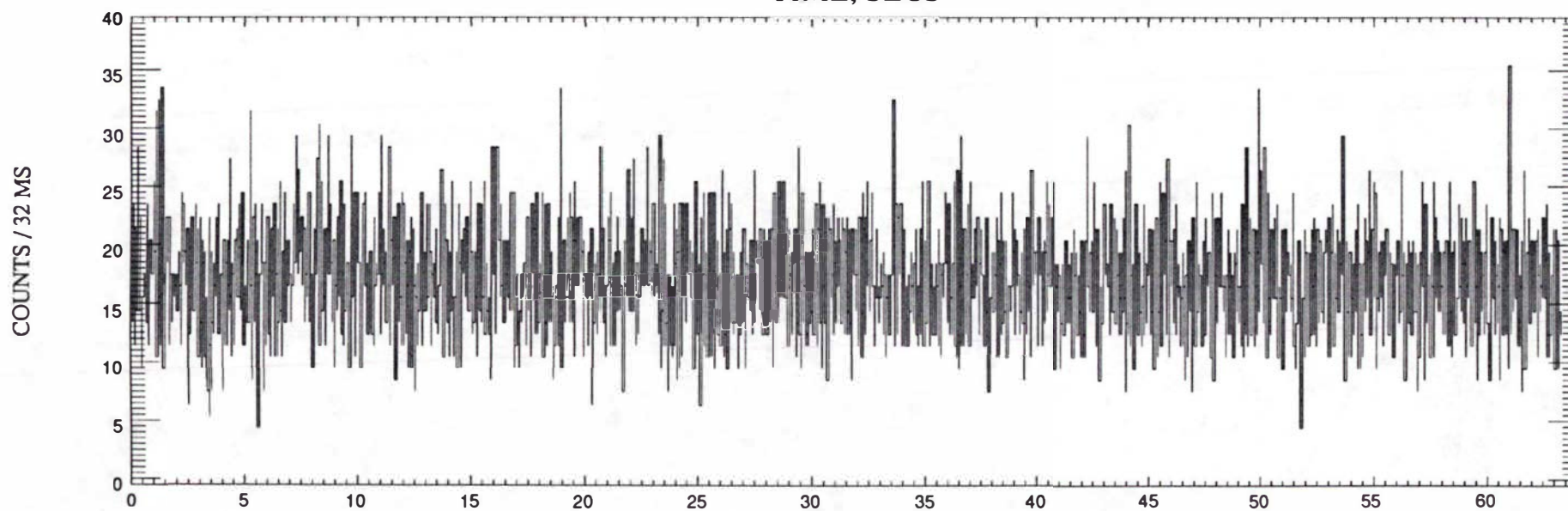


TIME, SECS

Burst Counter 6 at UT=16.901293402778 h=60844.656 s

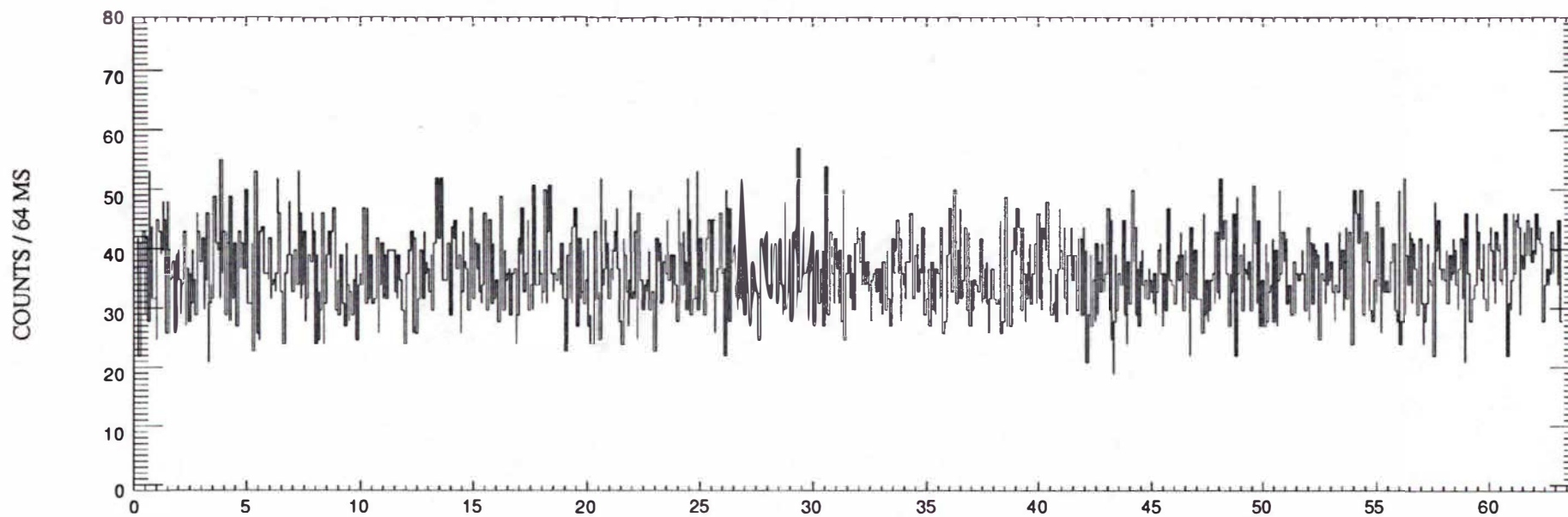


TIME, SECS

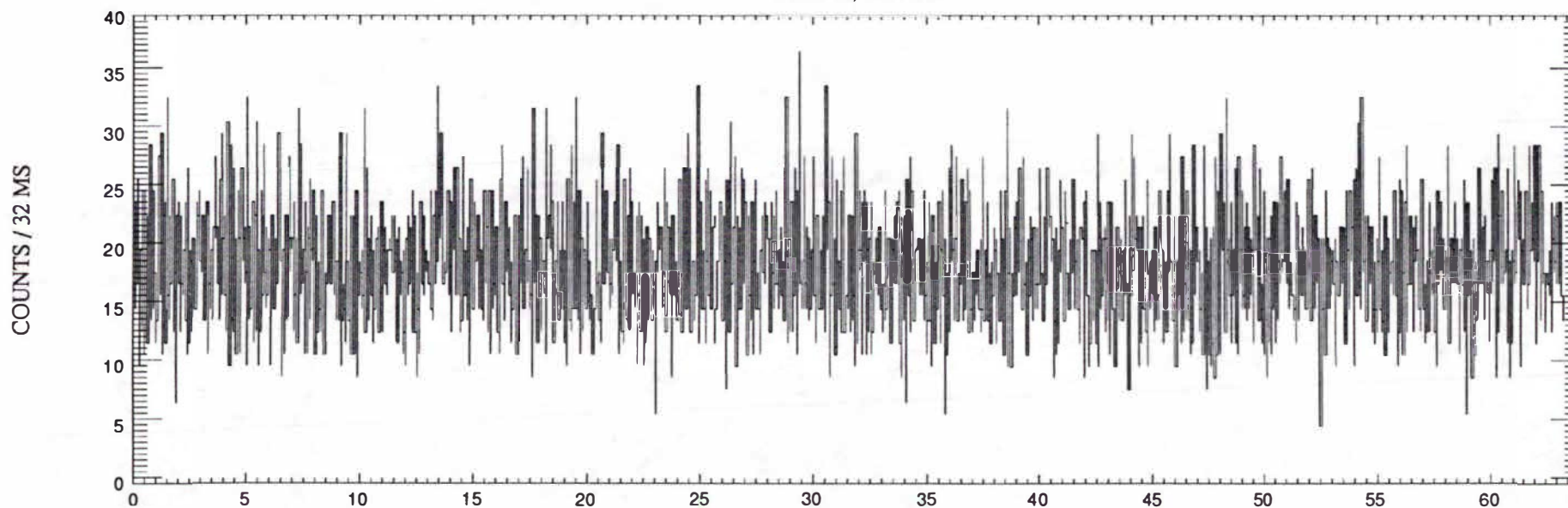


TIME, SECS

Burst Counter 7 at UT=17.625540758769 h=63451.947 s

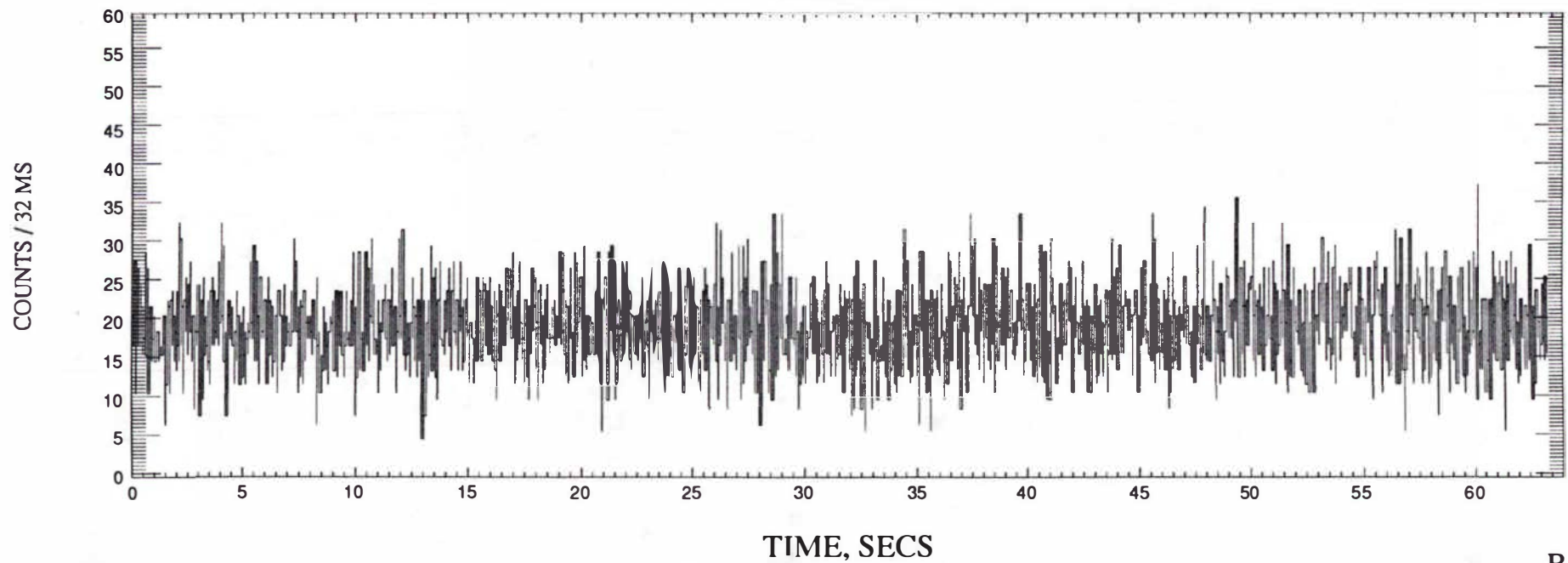
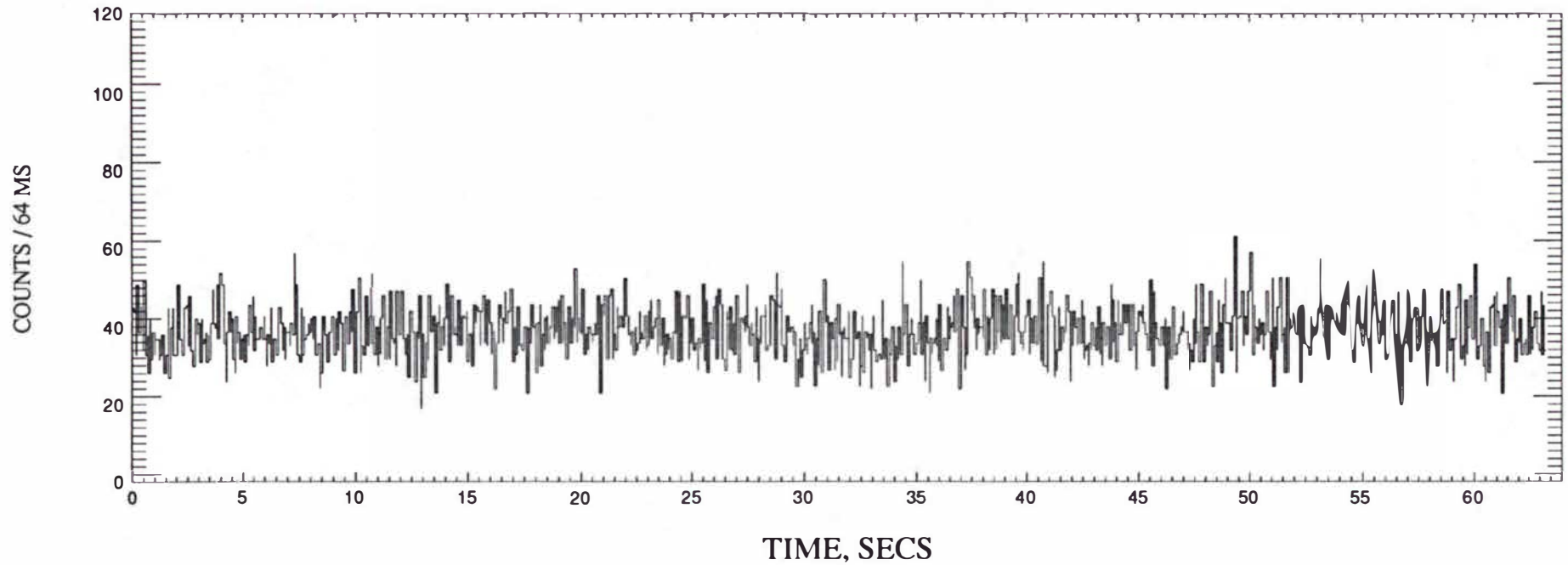


TIME, SECS

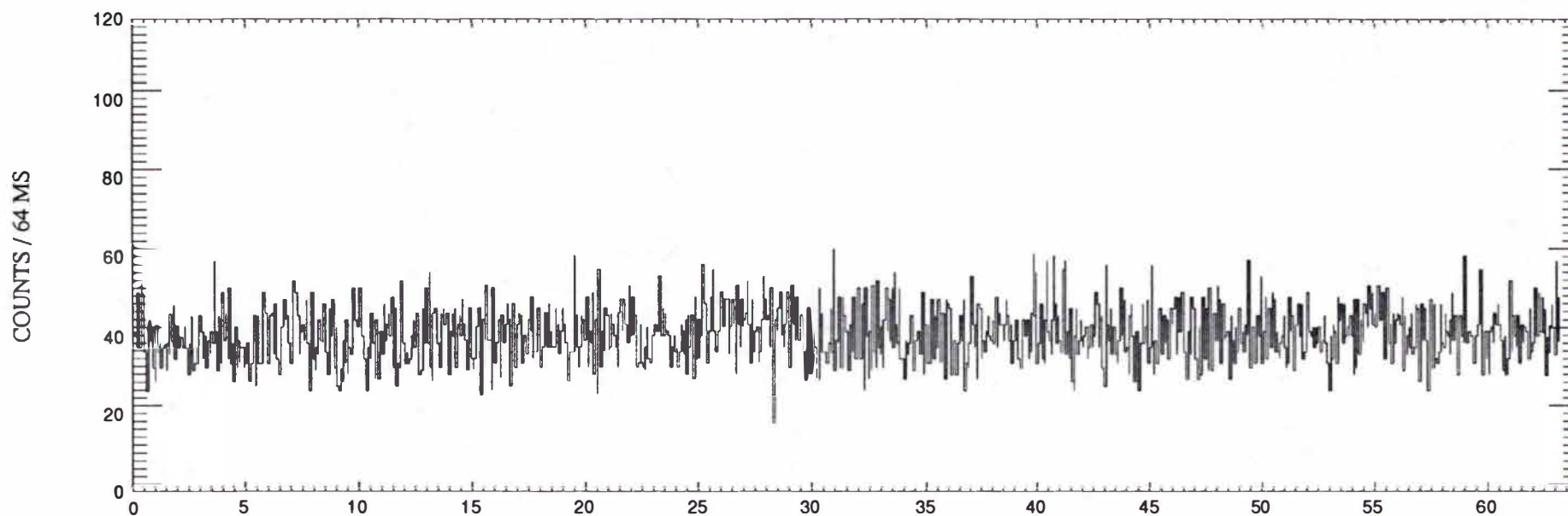


TIME, SECS

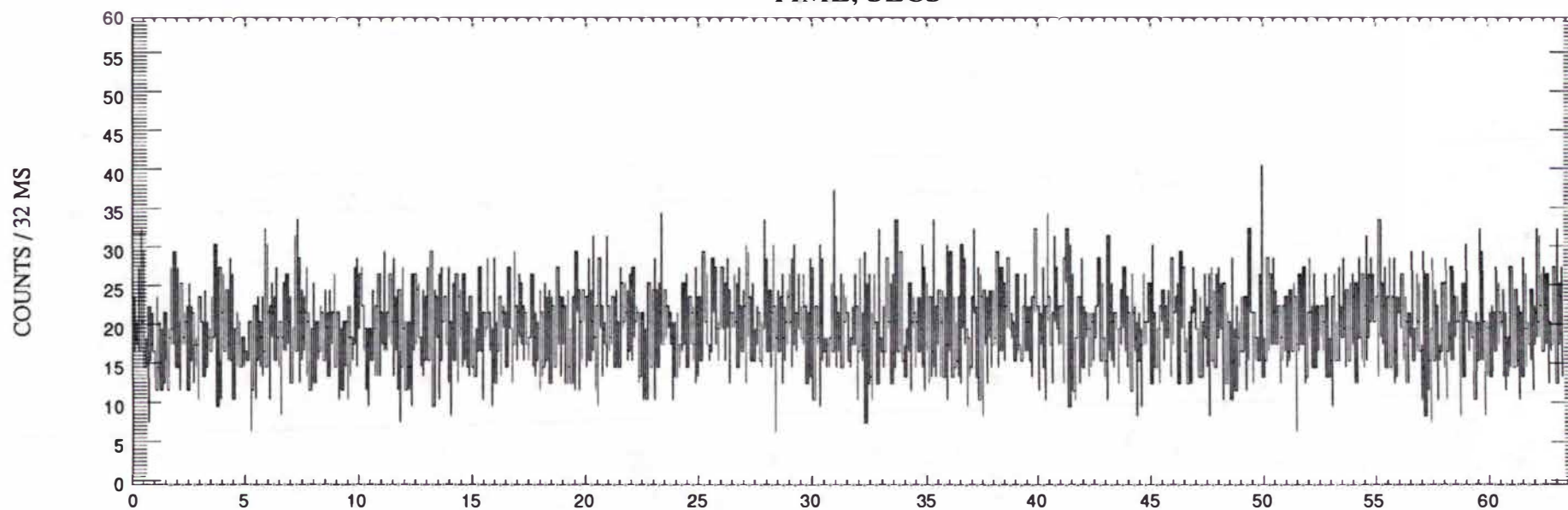
Burst Counter 8 at UT=18.261002273560 h=65739.608 s



Burst Counter 9 at UT=19.038095245361 h=68537.143 s

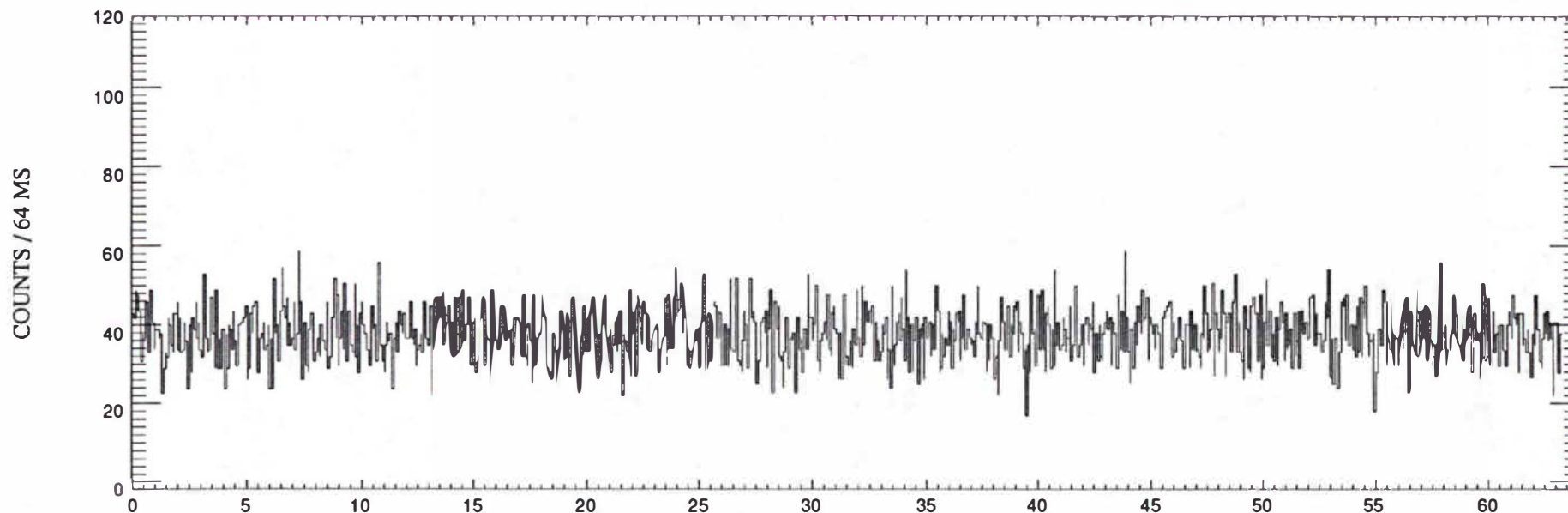


TIME, SECS

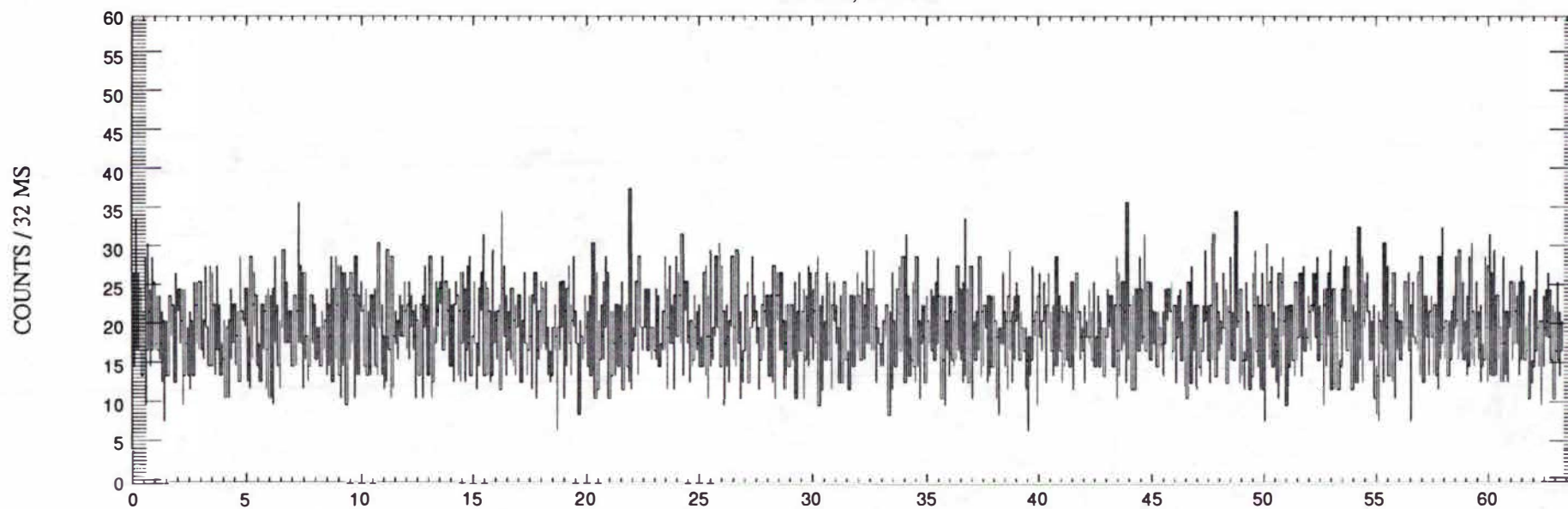


TIME, SECS

Burst Counter 10 at UT=19.764080886841 h=71150.691 s

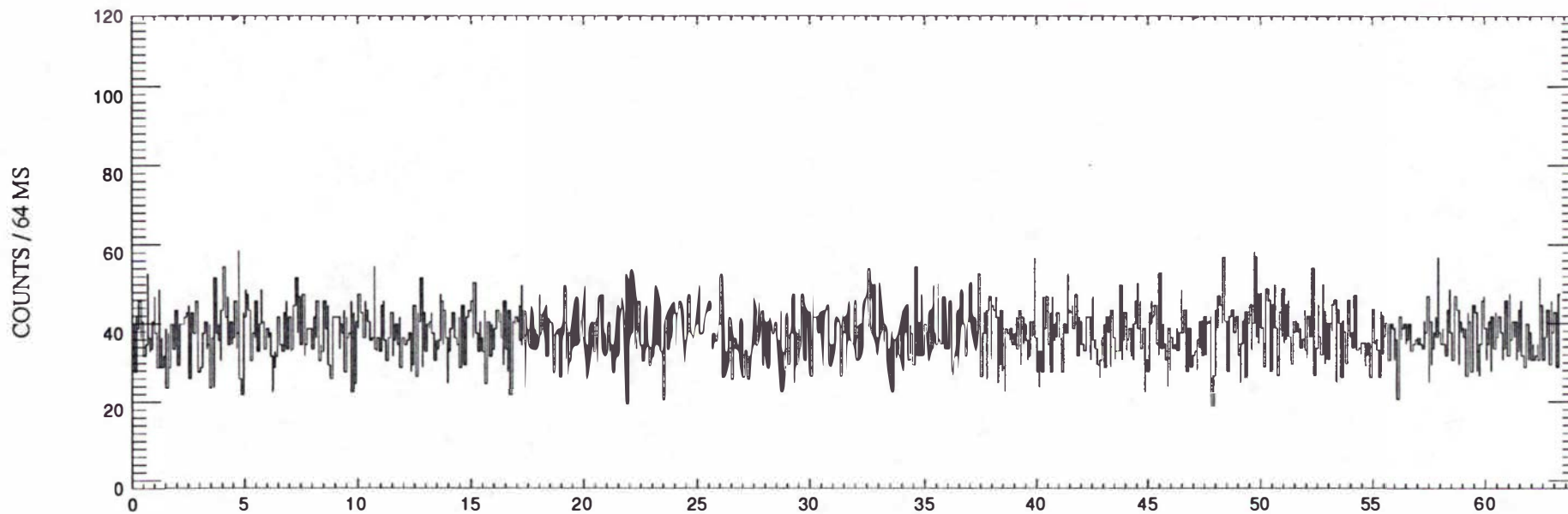


TIME, SECS

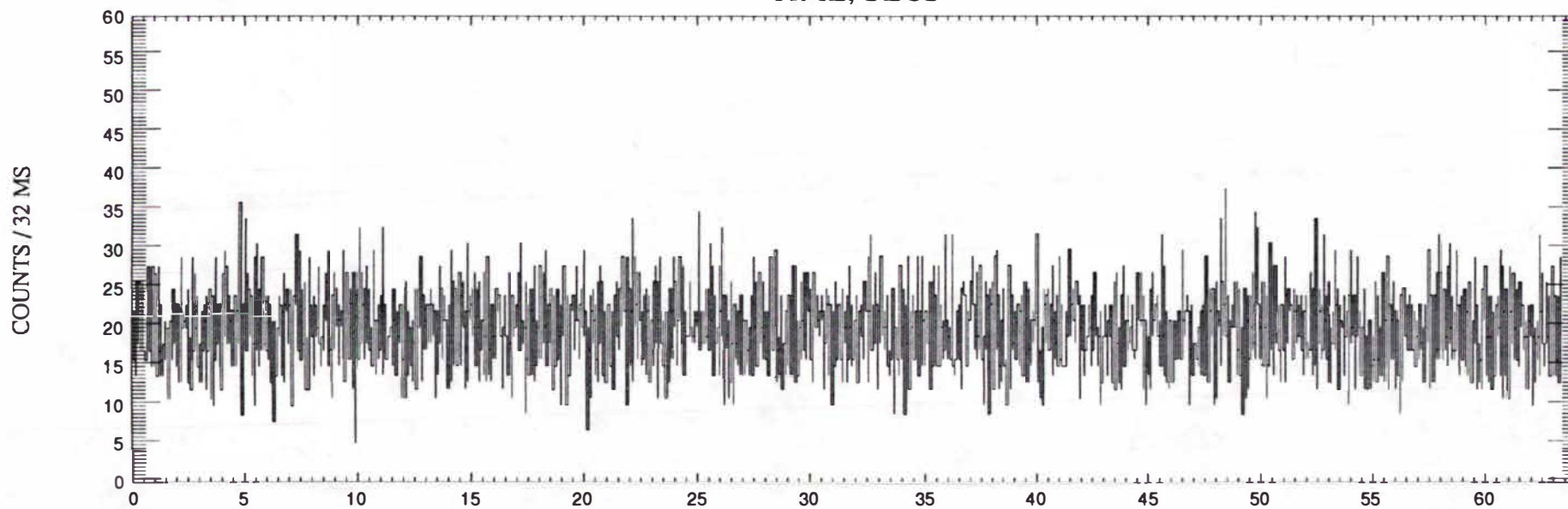


TIME, SECS

Burst Counter 11 at UT=20.469092135959 h=73688.732 s

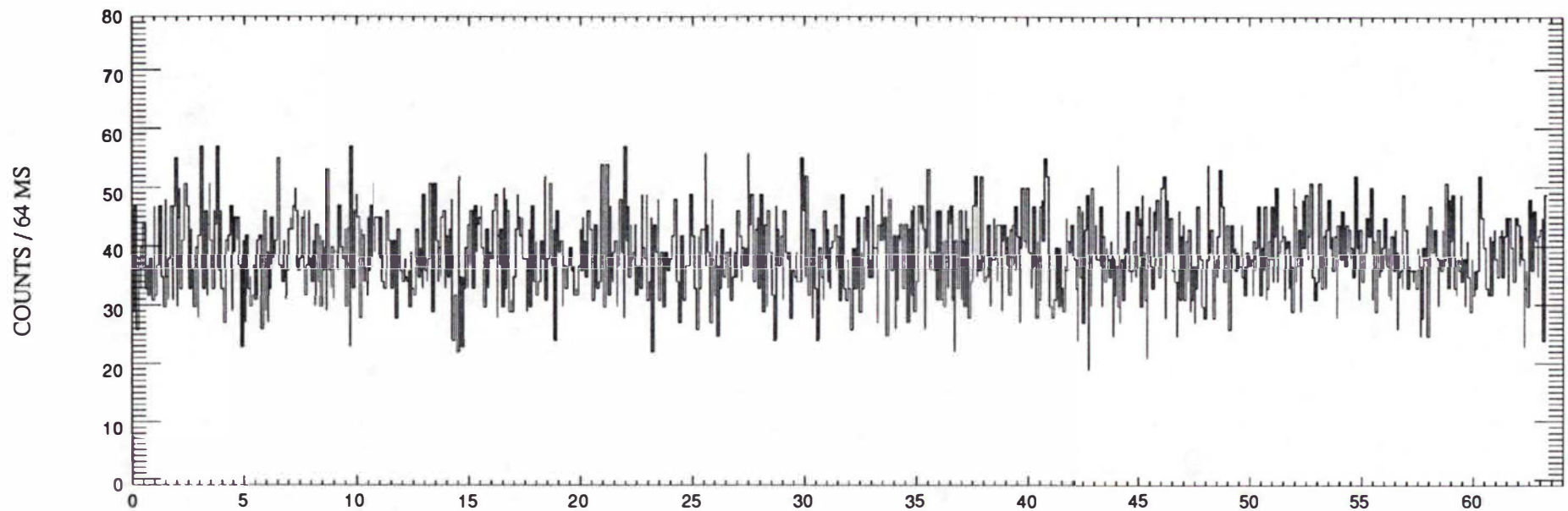


TIME, SECS

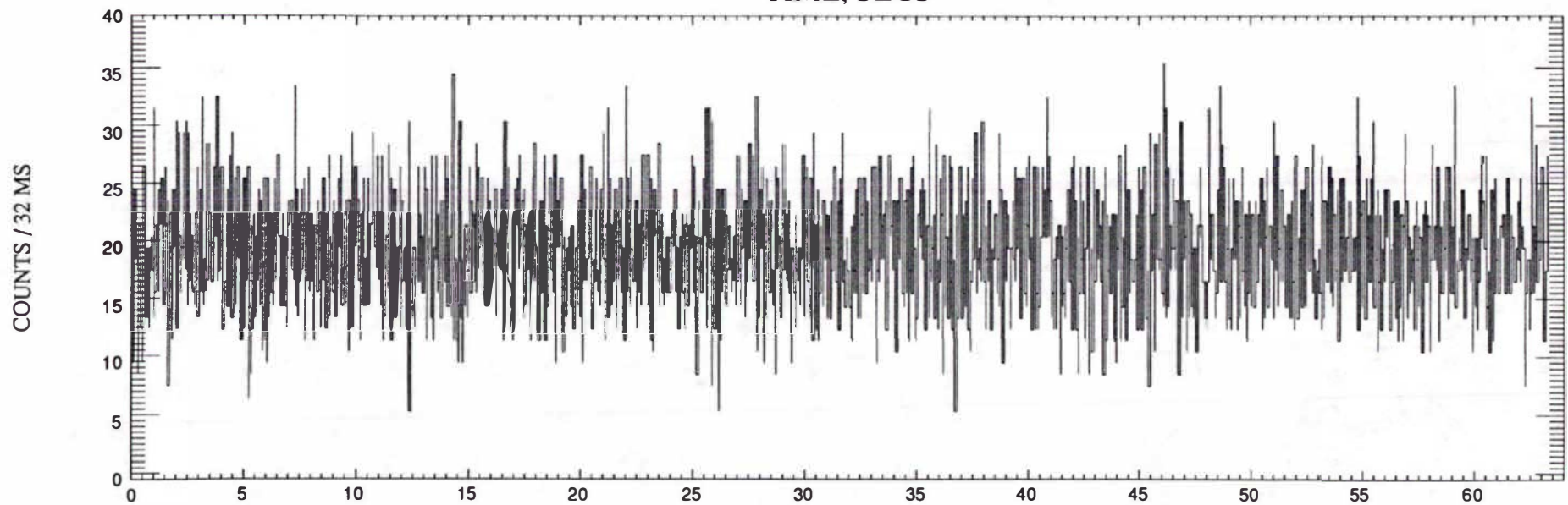


TIME, SECS

Burst Counter 12 at UT=21.175422825283 h=76231.522 s

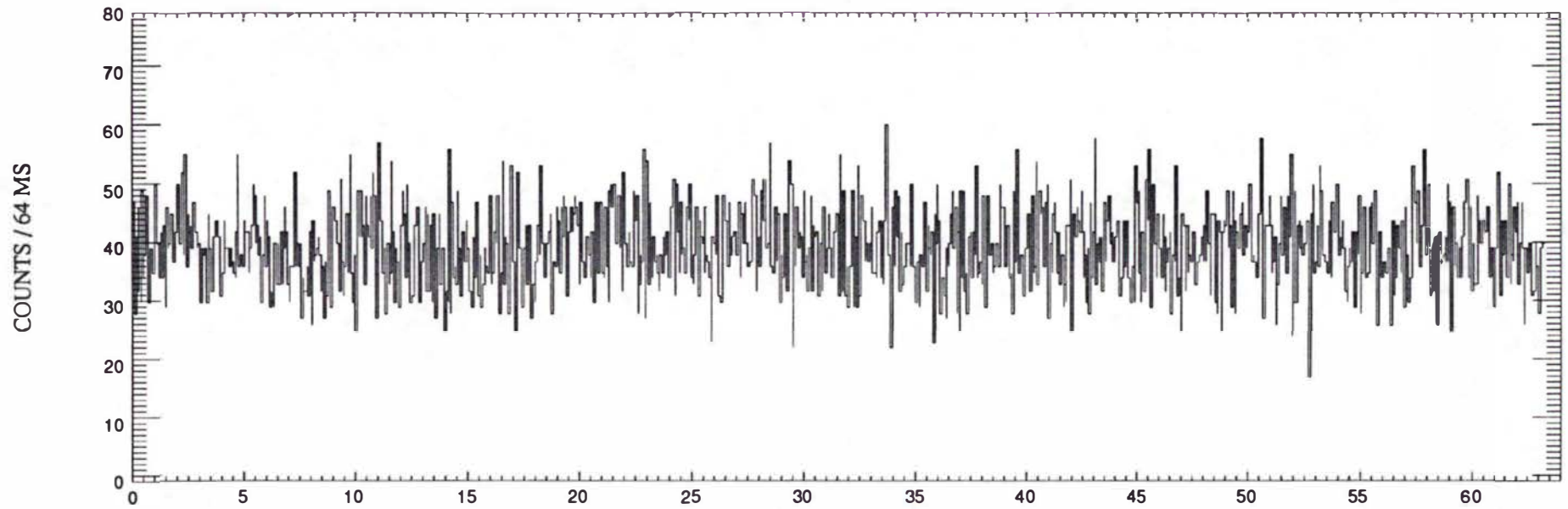


TIME, SECS

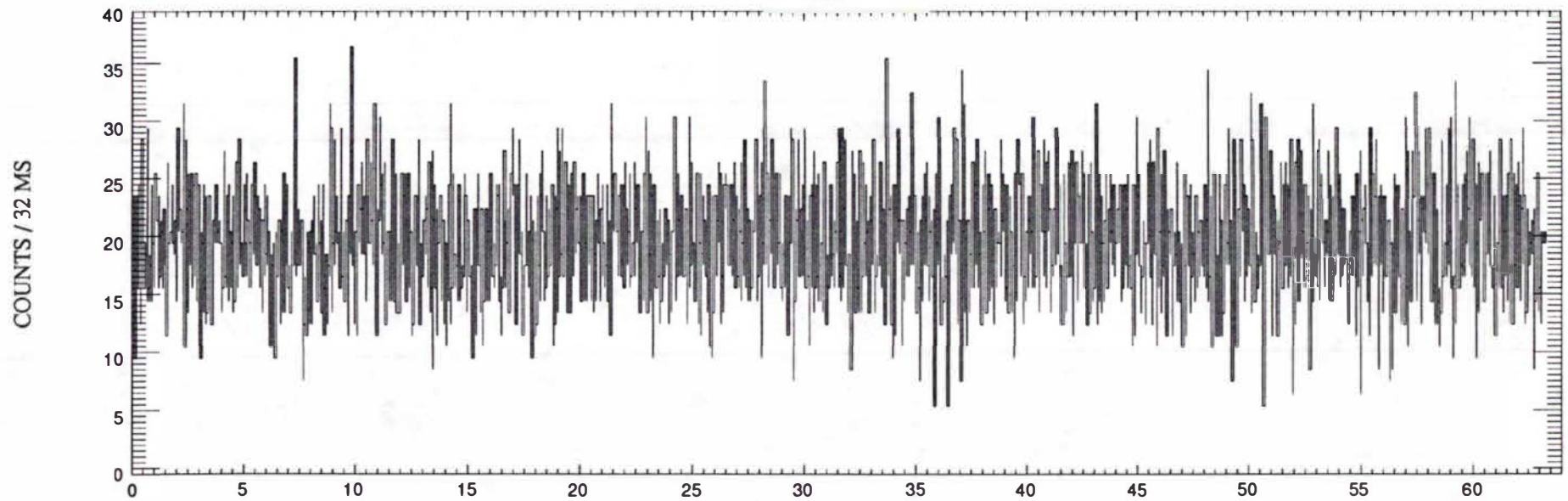


TIME, SECS

Burst Counter 13 at UT=21.875538241069 h=78751.938 s

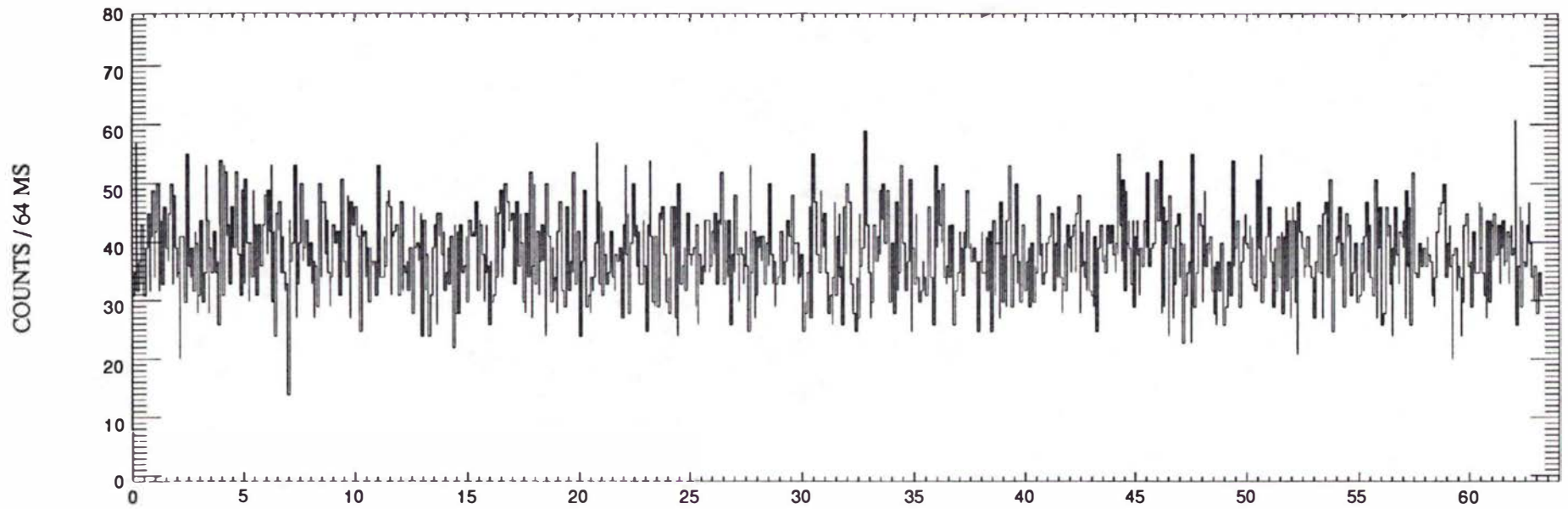


TIME, SECS

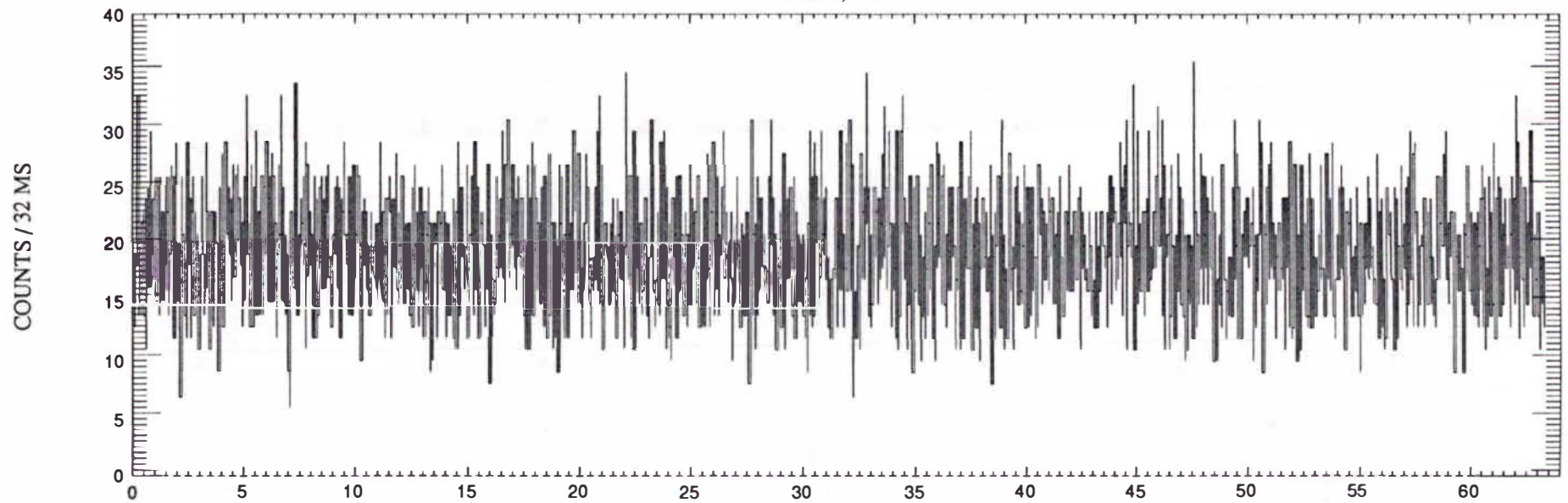


TIME, SECS

Burst Counter 14 at UT=22.580618934631 h=81290.228 s

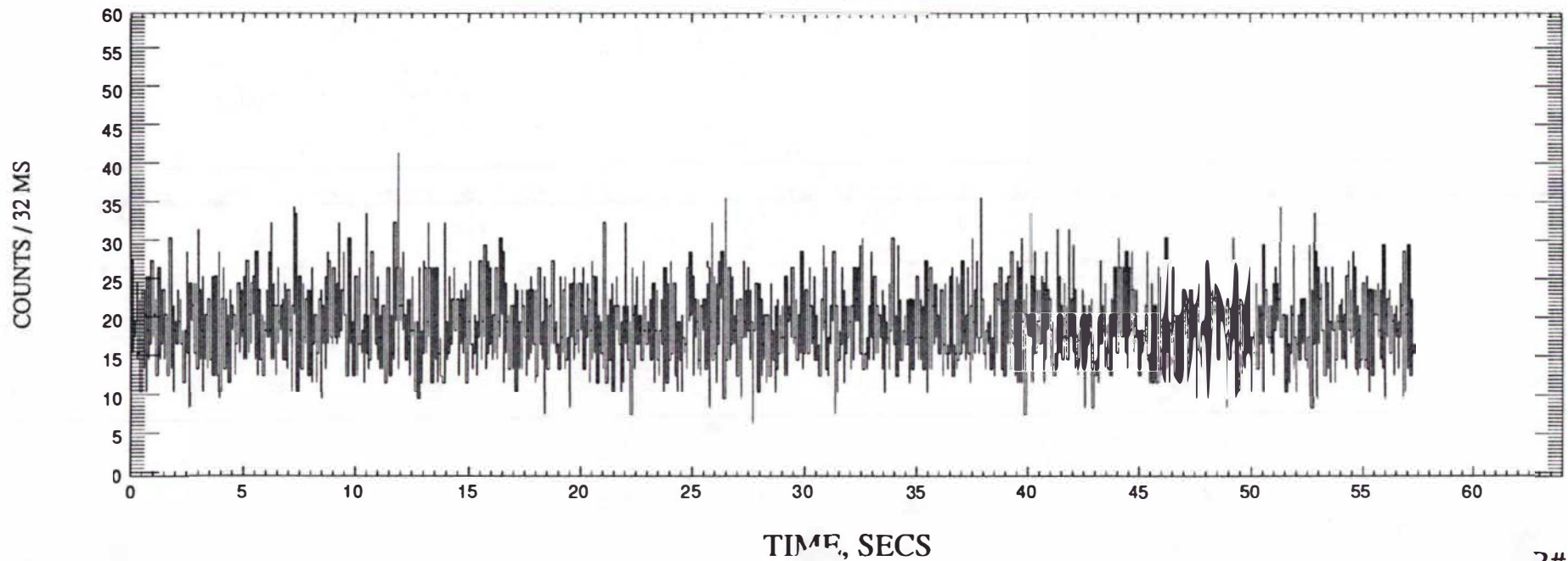
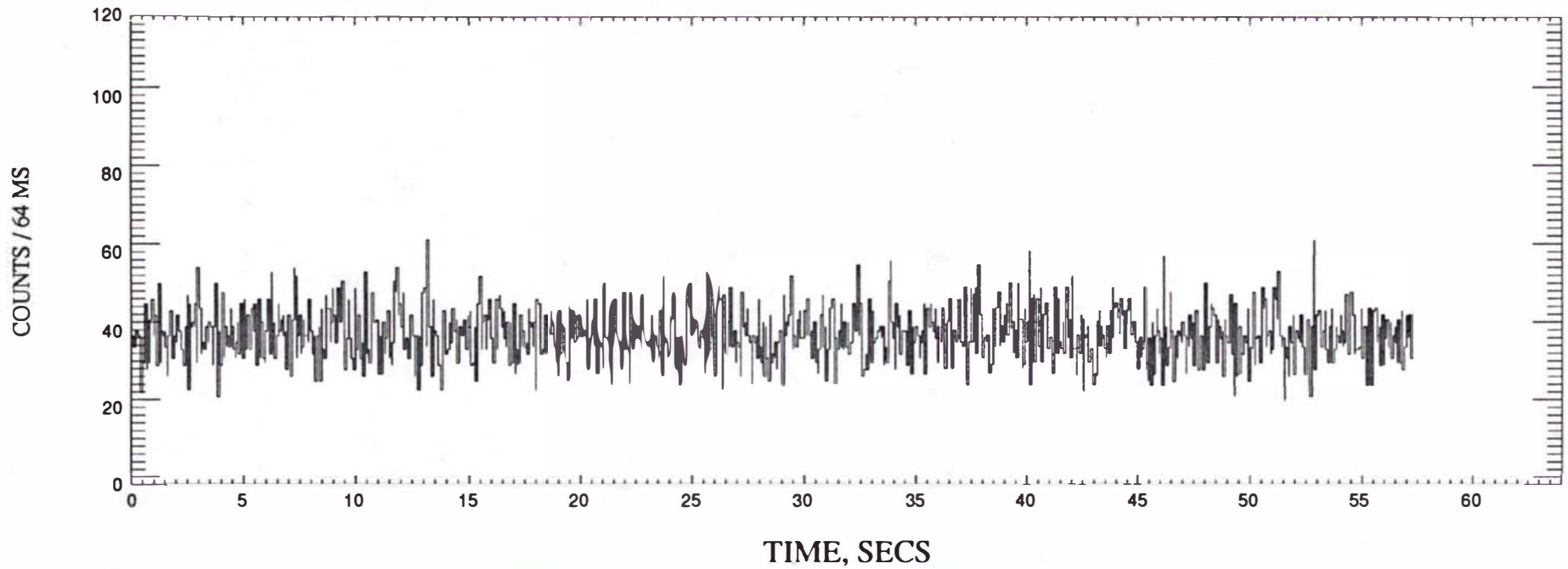


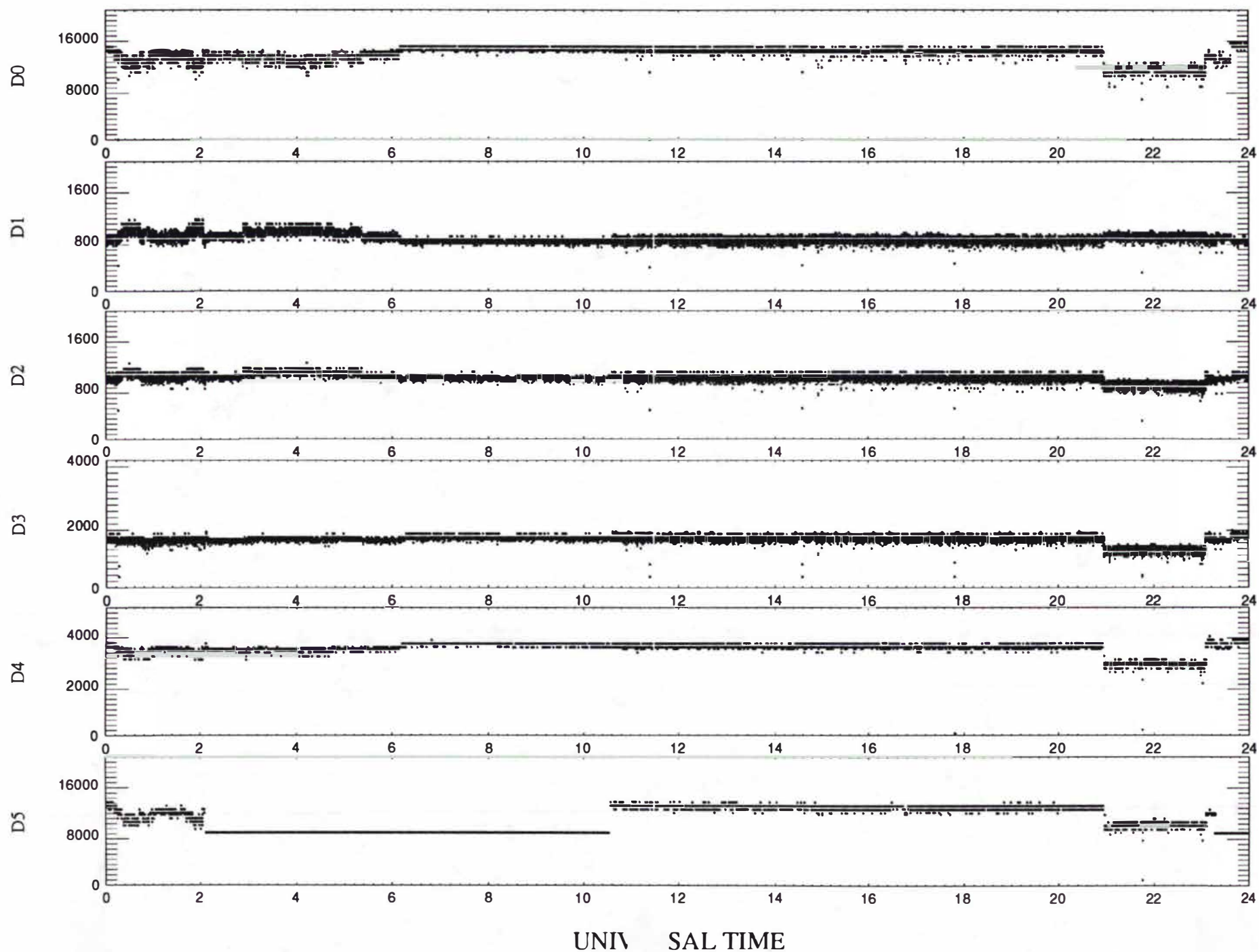
TIME, SECS



TIME, SECS

Burst Counter 15 at UT=23.262469334073 h=83744.890 s





 CATSEARCH PROGRAM

BATSE BURST # 2044
 EVENT OF 1992 NOV 9 DAY OF YEAR=314
 EVENT CROSSING TIME AT BATSE : 70809. S. OR 19:40:09.2
 COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 209.400 -40.500
 BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
 POSITION OF ULYSSES ON 9/11/ 92 IS:
 RA= 165.715 DEC= -6.584 DIST= 5.630 AU
 BATSE-ULYSSES DISTANCE = 842292880. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=128.37 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1743.98 SECS.
 CROSSING TIME AT ULYSSES IS 69065. S. OR 19:11:05.2 +/- 405.96 SECONDS

No

BATSE BURST TRIGGER

NO.: 02044

Nov 9
 TIME: TJD=8935 SECONDS=70809

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=93. AZIMUTH=358. ERROR= DEGREES

COMMENTS:
 WEAK SINGLE SPIKE. DUR.~4S. VISIBLE ABOVE 300KEV.

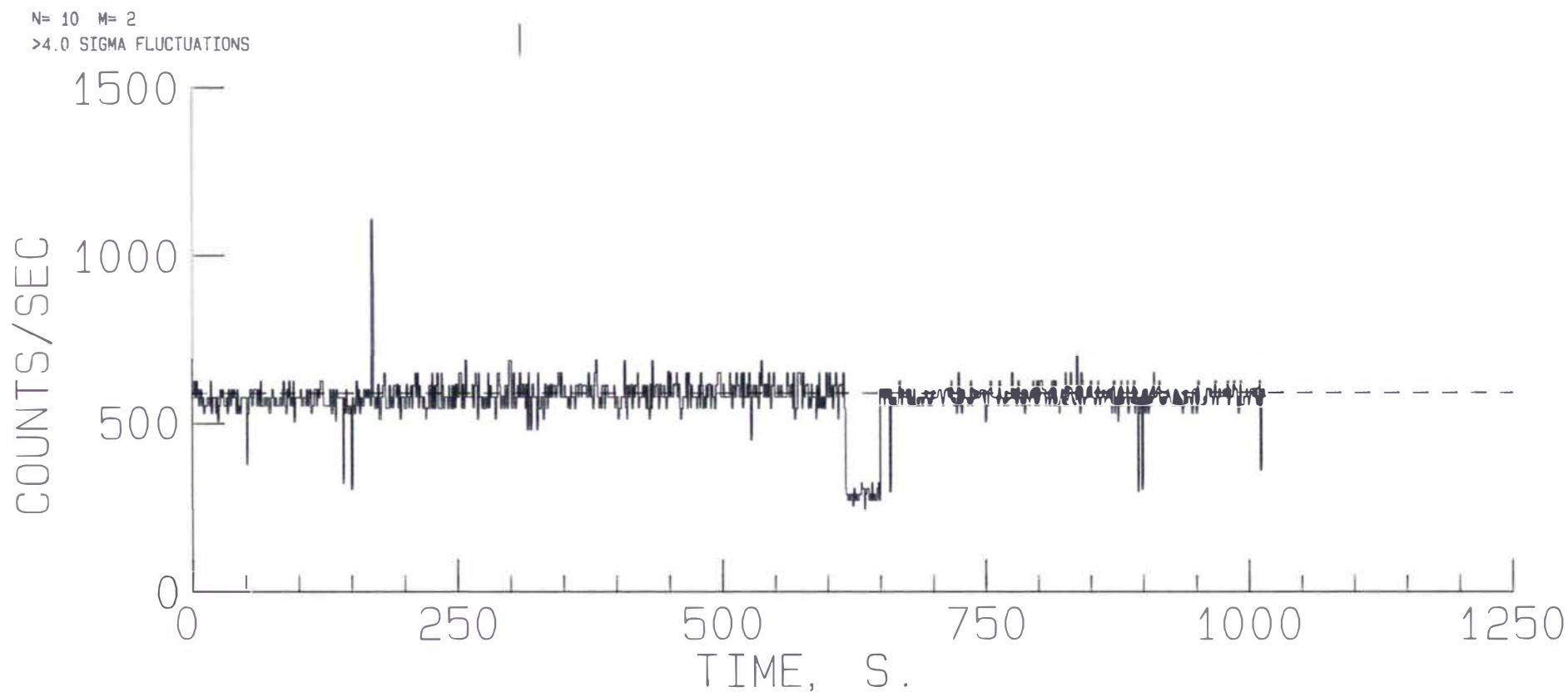
Too many solar triggers

BATSE #	Date	TJD	Sec	Max ct/s	RA	Dec
2044	921109	8935	70809	3500	212	-38

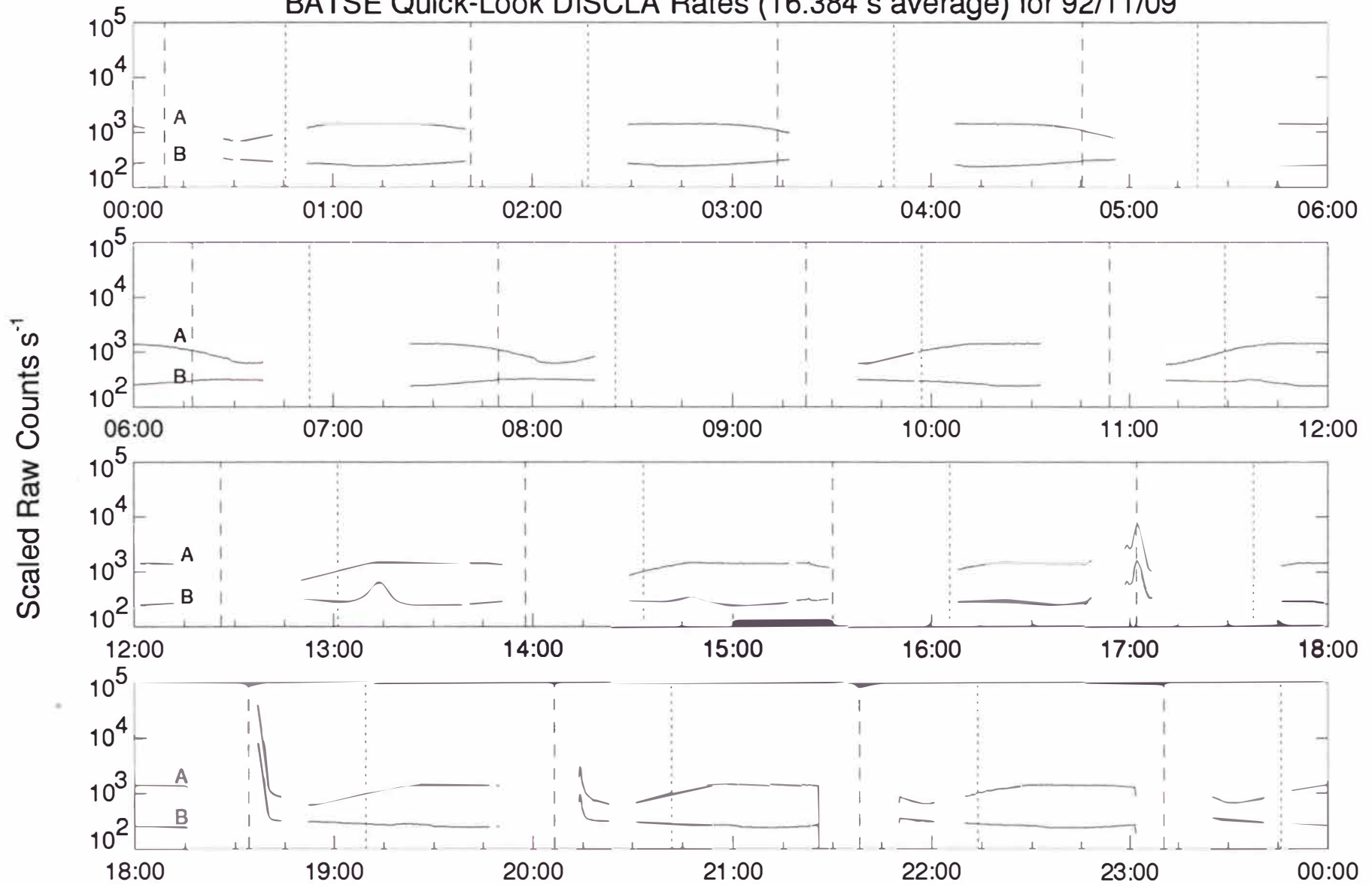
True

14/11/92

ULYSSES RT
9/11/92 68688.148 s
.500 S INTERVALS REGROUPED BY 2
0- 0 keV



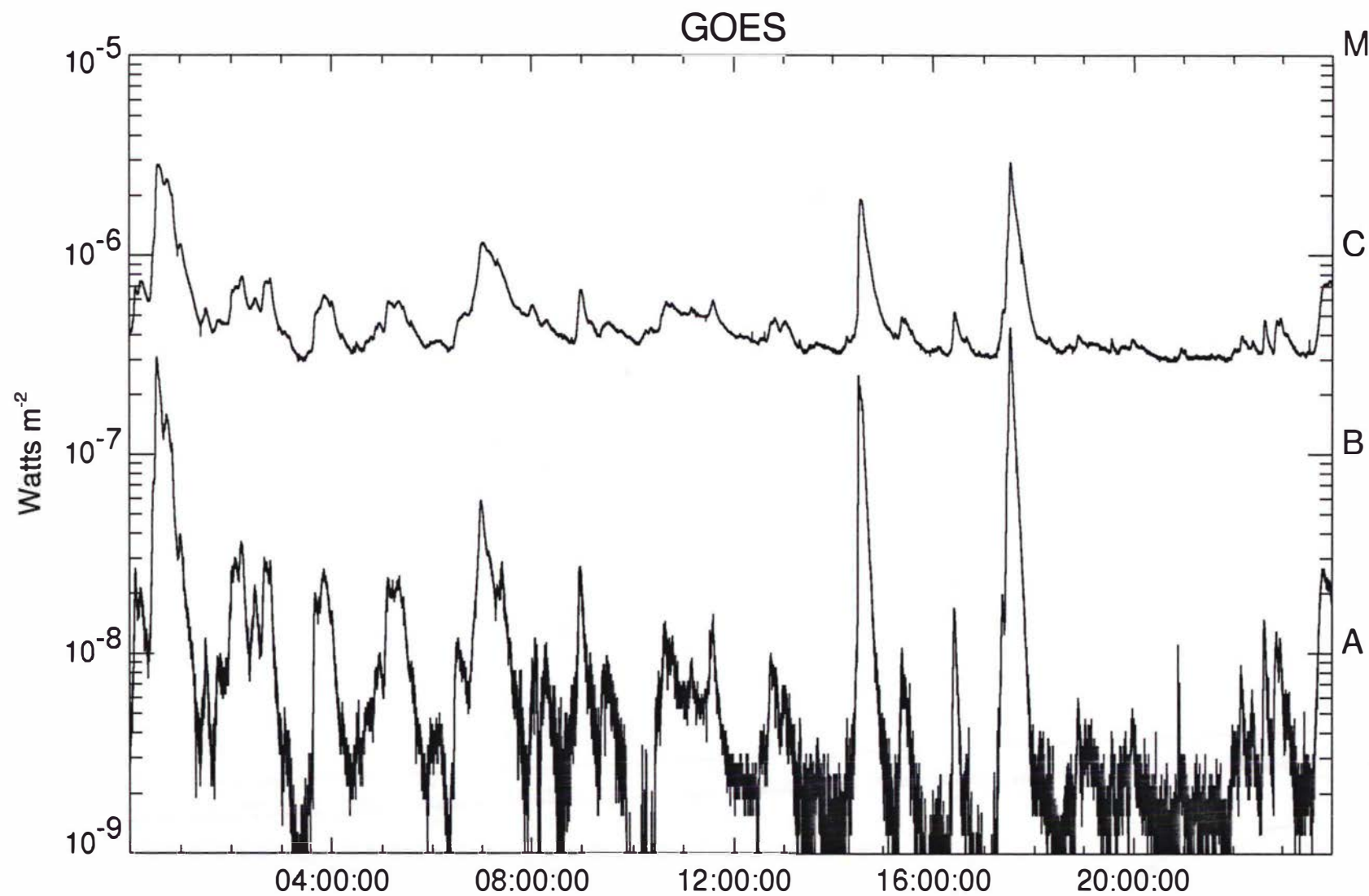
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/09



Current Time: 92/11/11, 0243 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



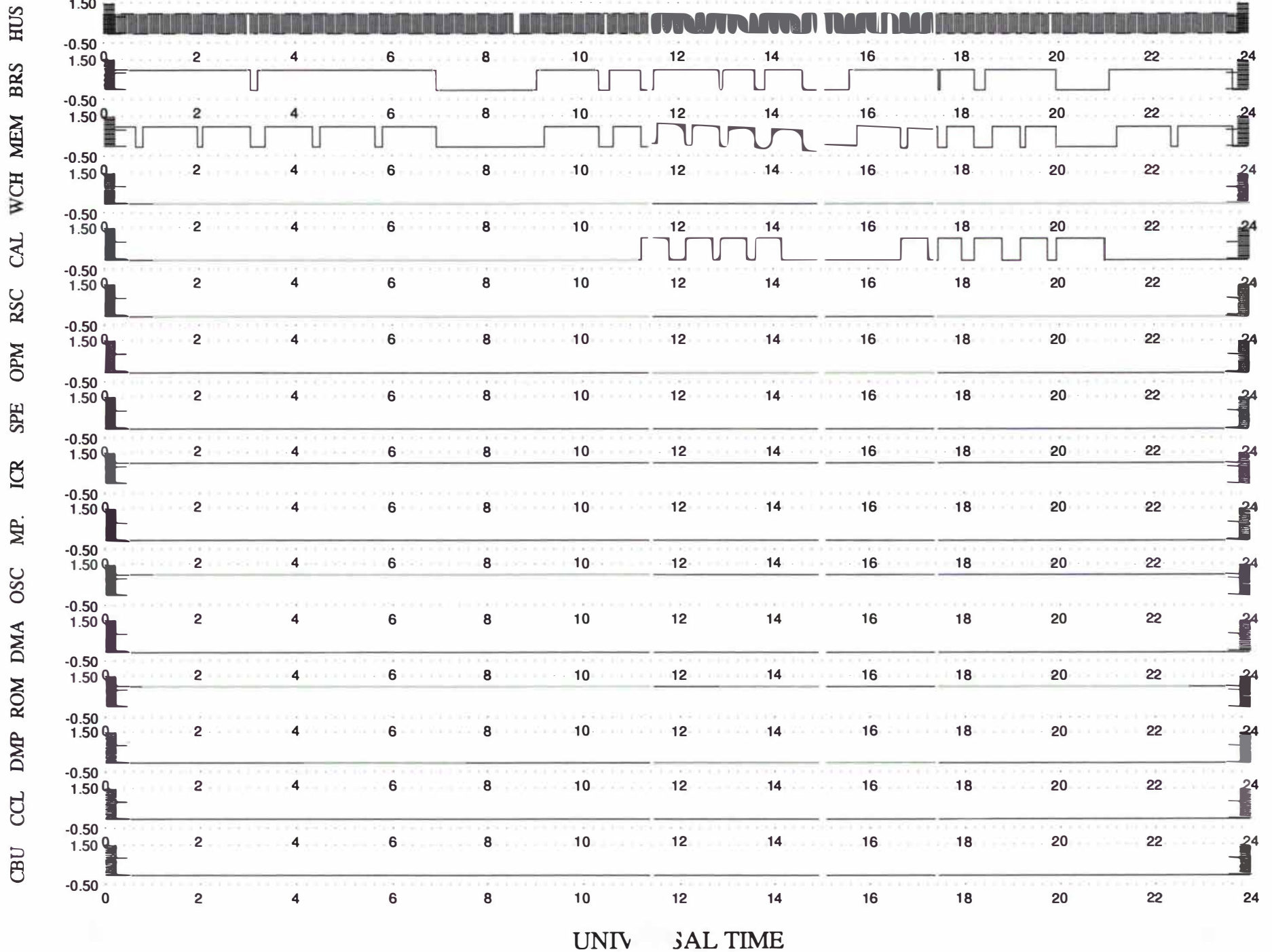
Data Start: 92/11/09, 0000:00

Plot created: 95/05/30, 1540

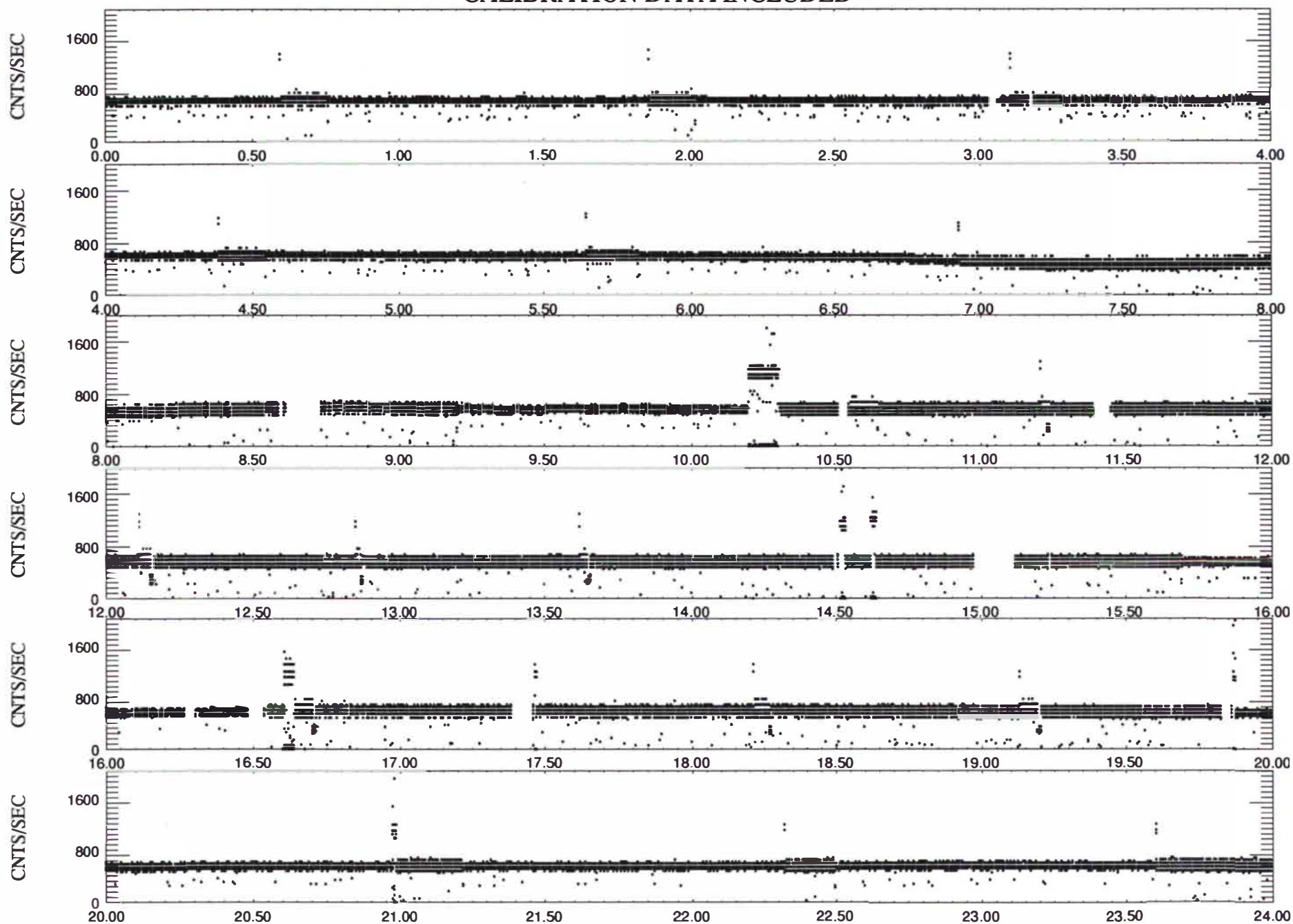
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BURST NUMBER 0 - 15, 0, 1

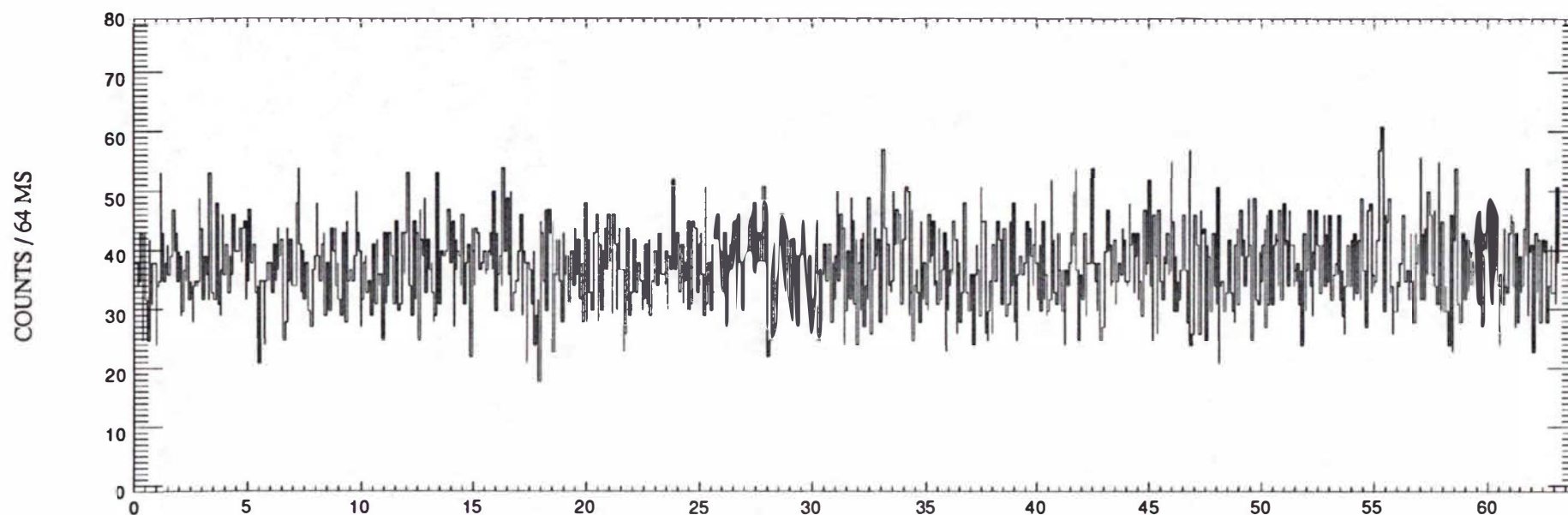


CALIBRATION DATA INCLUDED

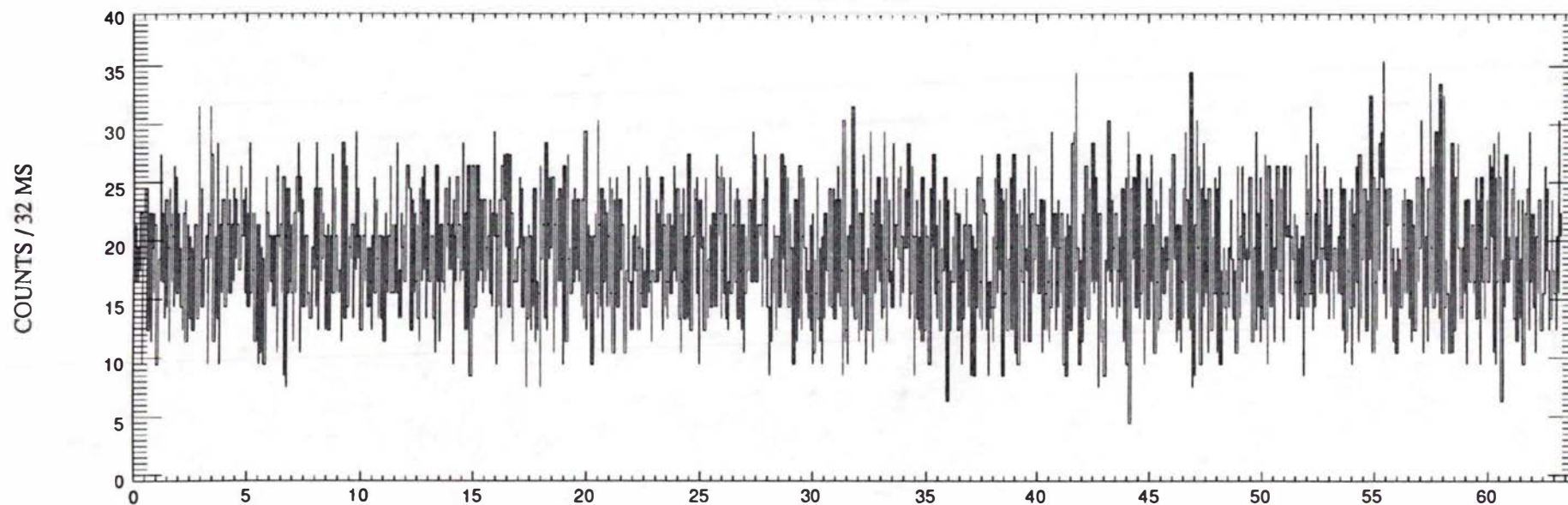


UNIV SAL TIME

Burst Counter 0 at UT= 0.595788756477 h= 2144.840 s

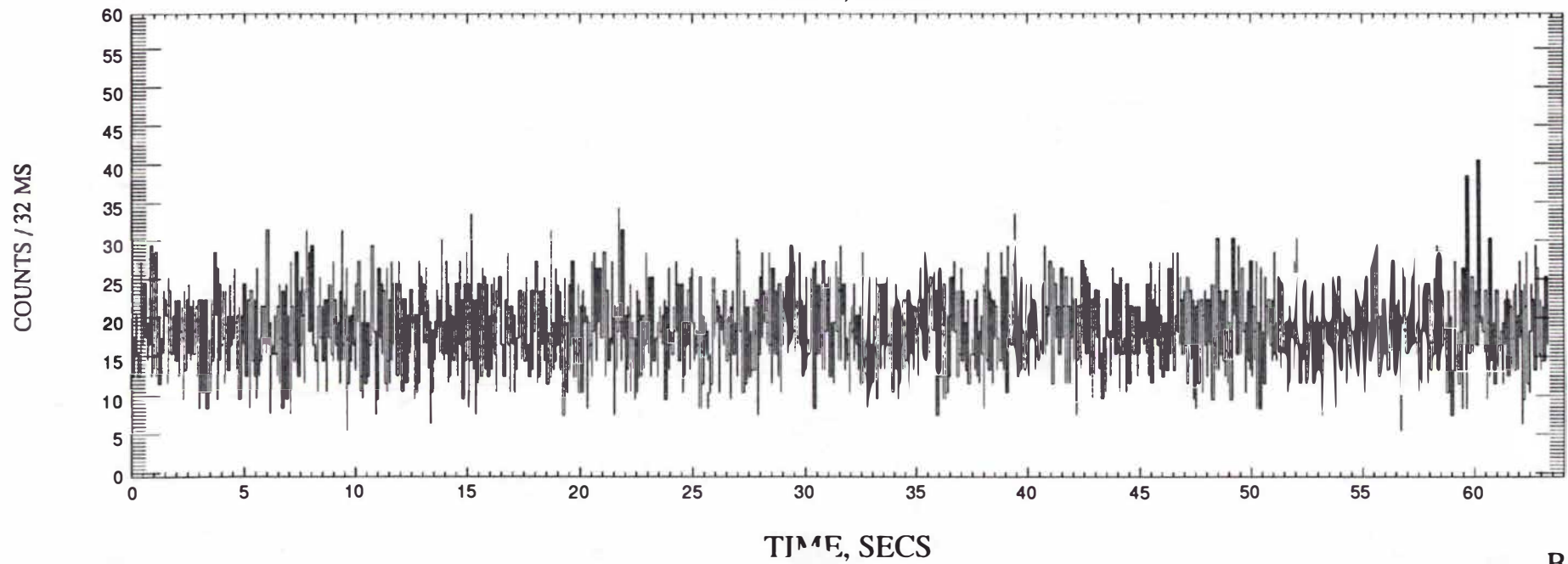
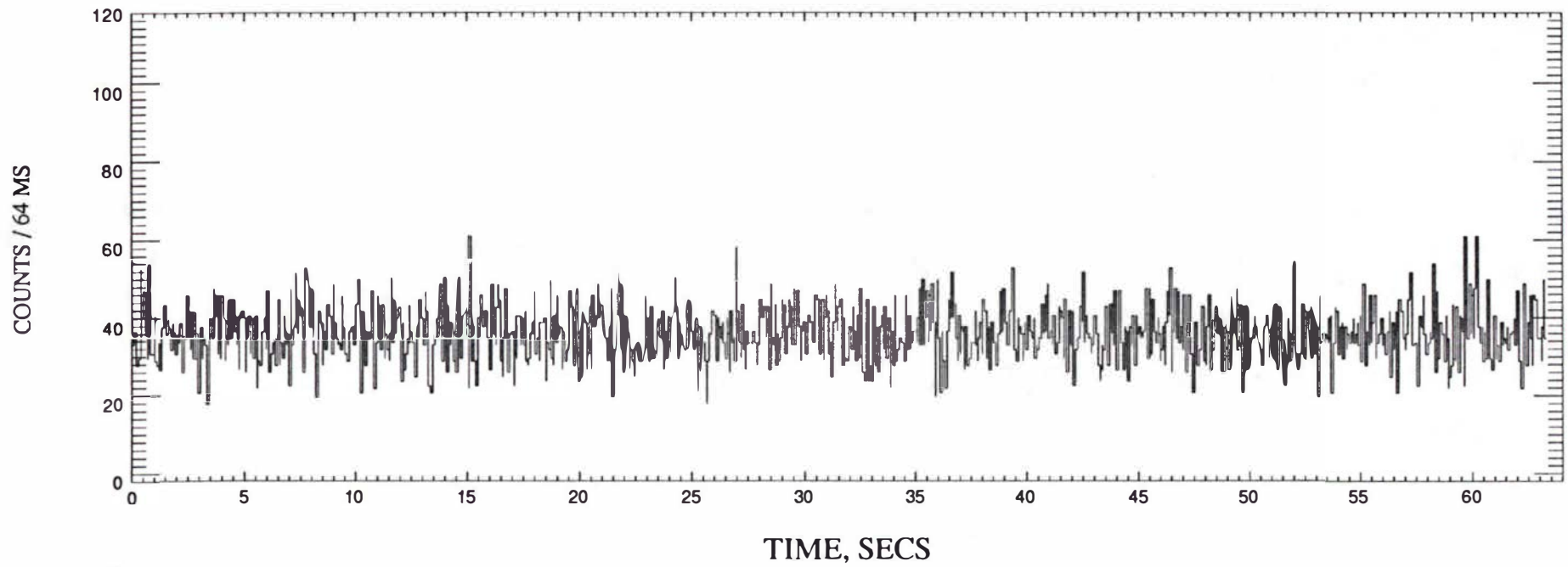


TIME, SECS

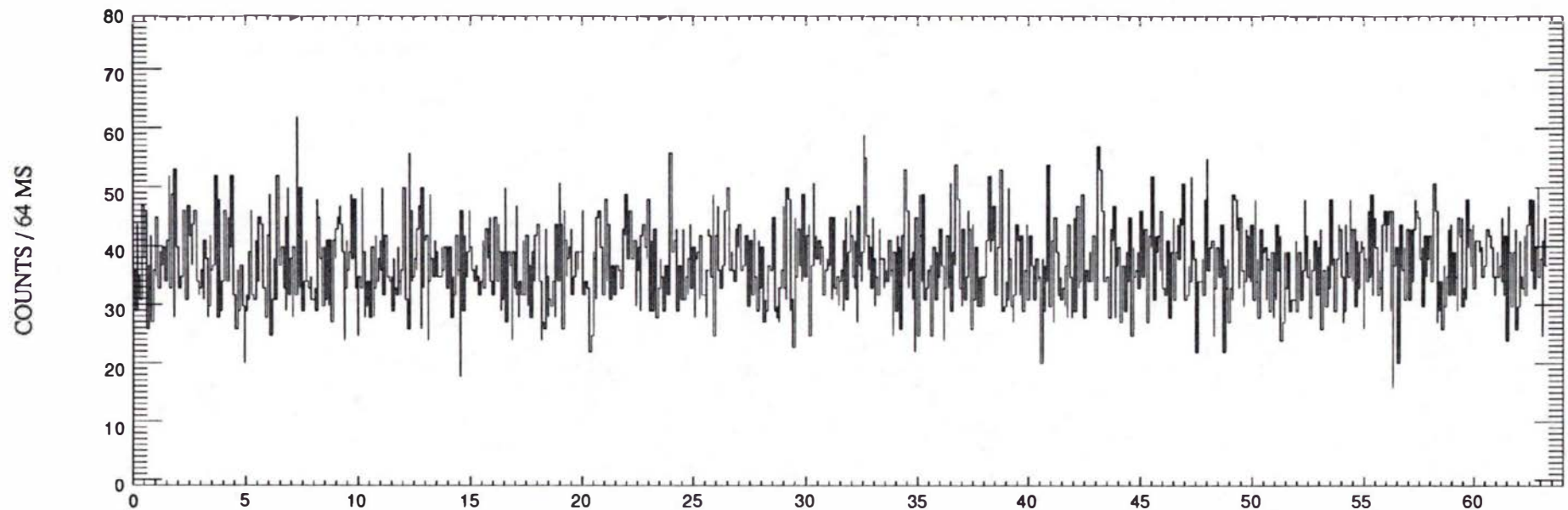


TIME, SECS

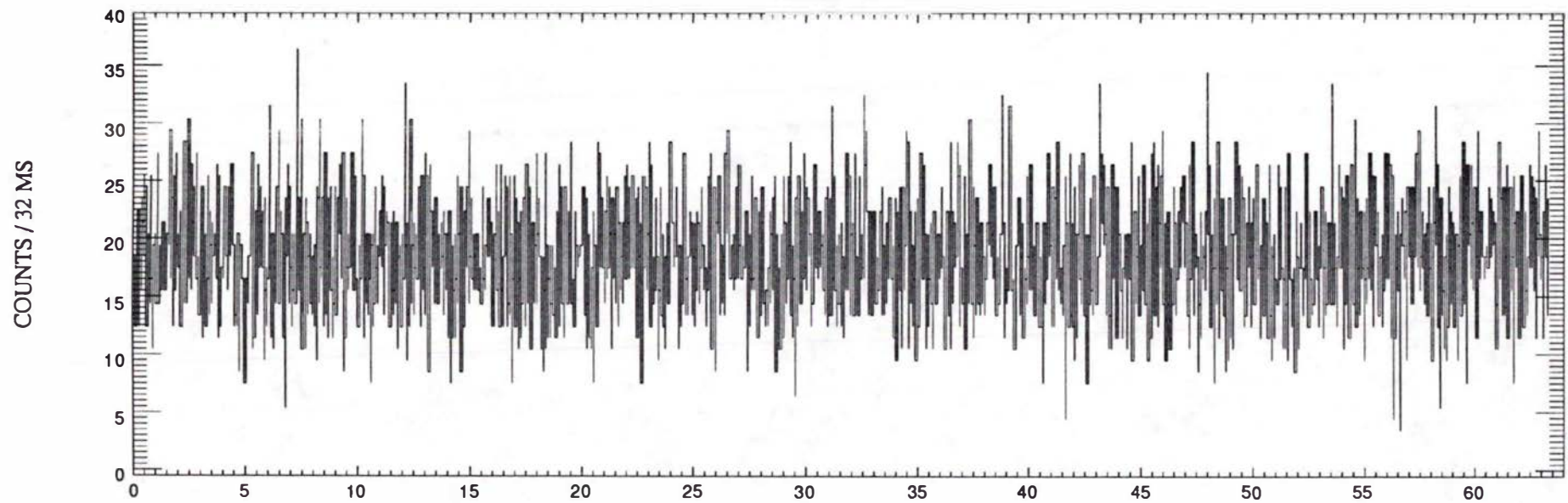
Burst Counter 1 at UT= 1.867163166470 h= 6721.787 s



Burst Counter 2 at UT= 3.112322582669 h=11204.361 s

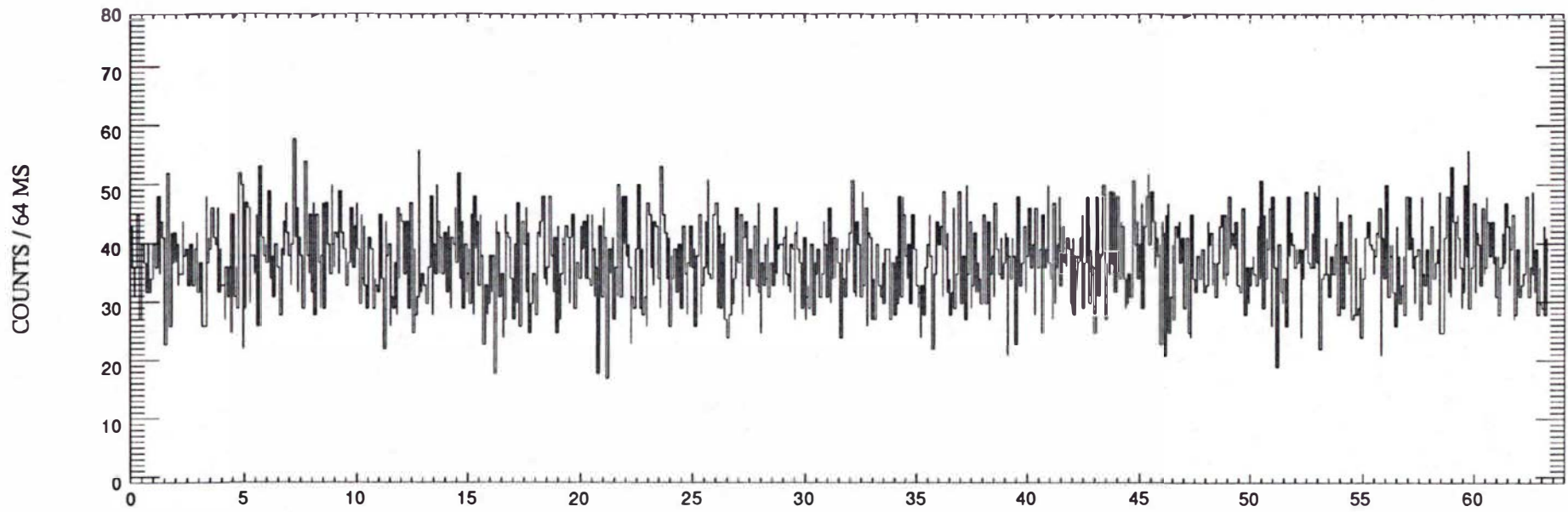


TIME, SECS

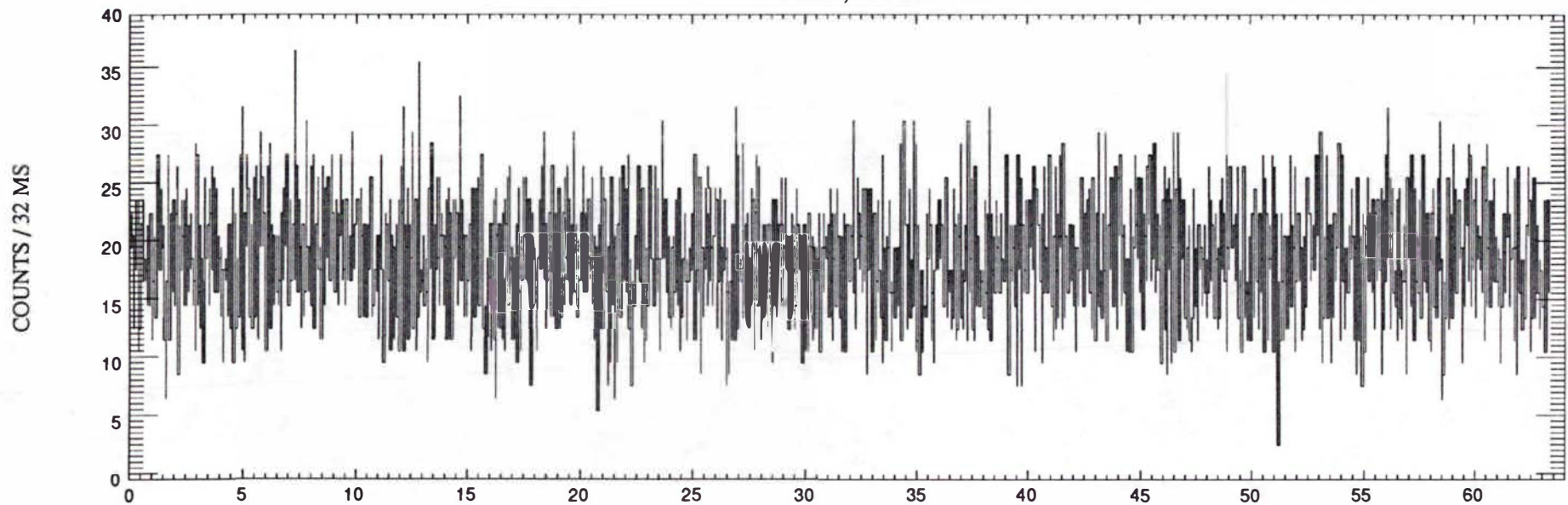


TIME, SECS

Burst Counter 3 at UT= 4.382305577596 h=15776.300 s

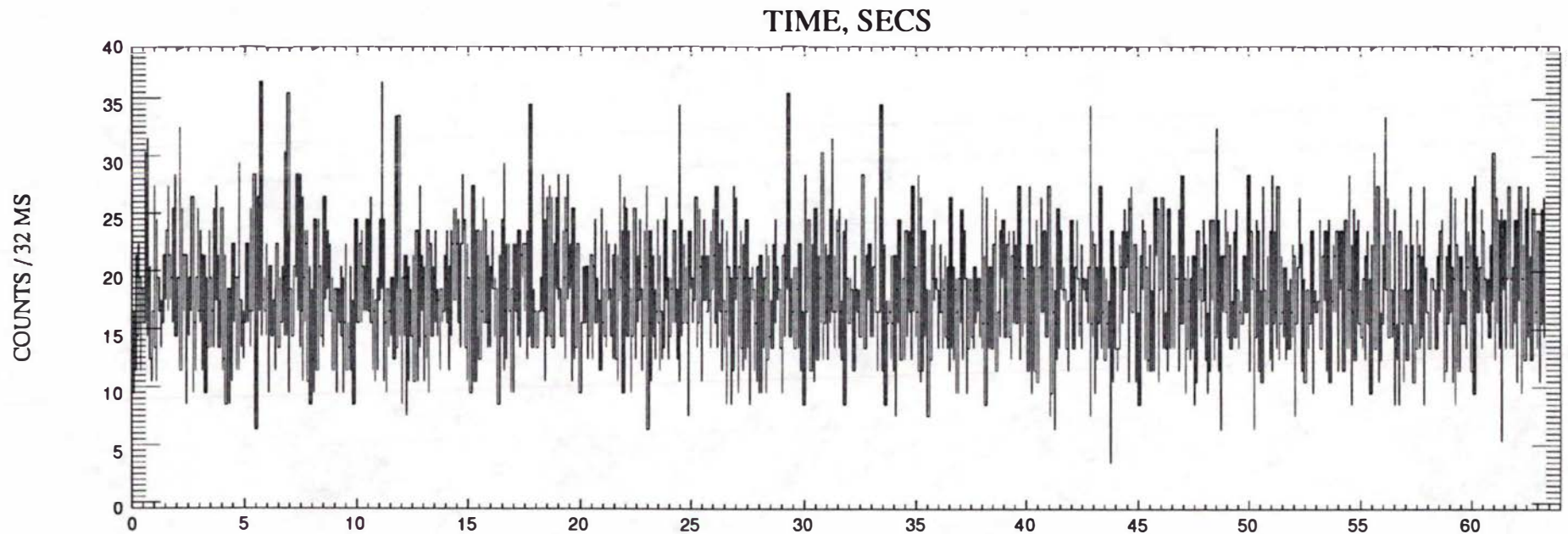
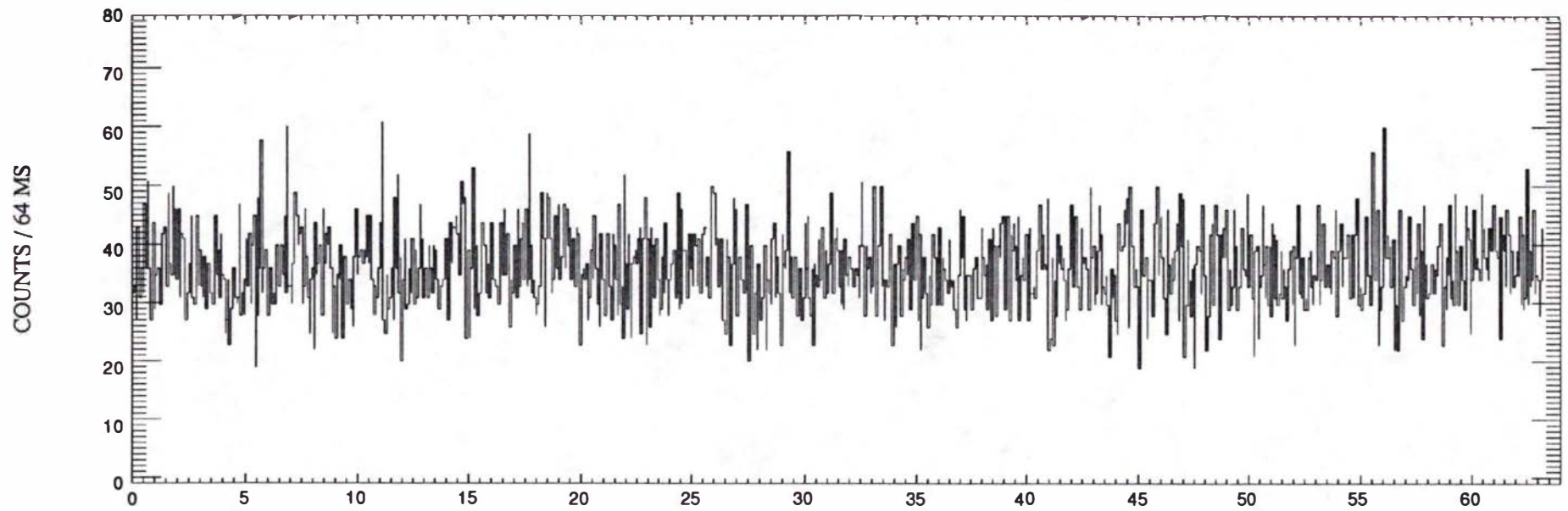


TIME, SECS

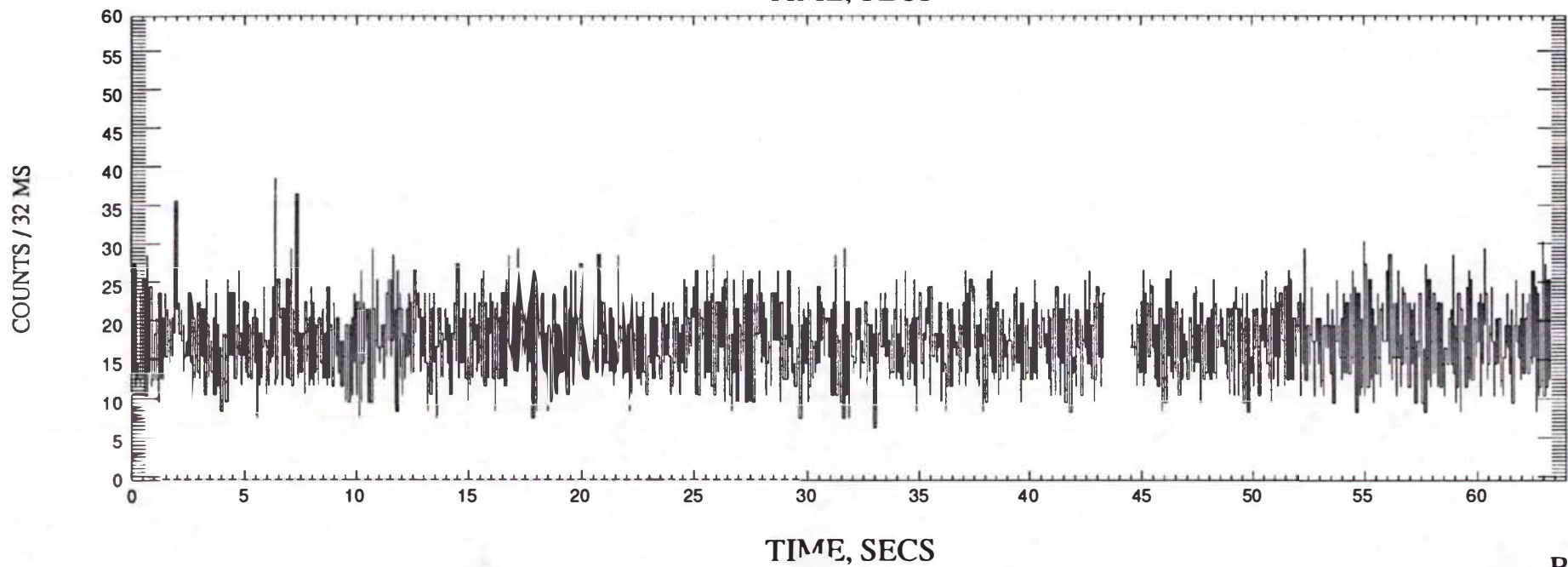
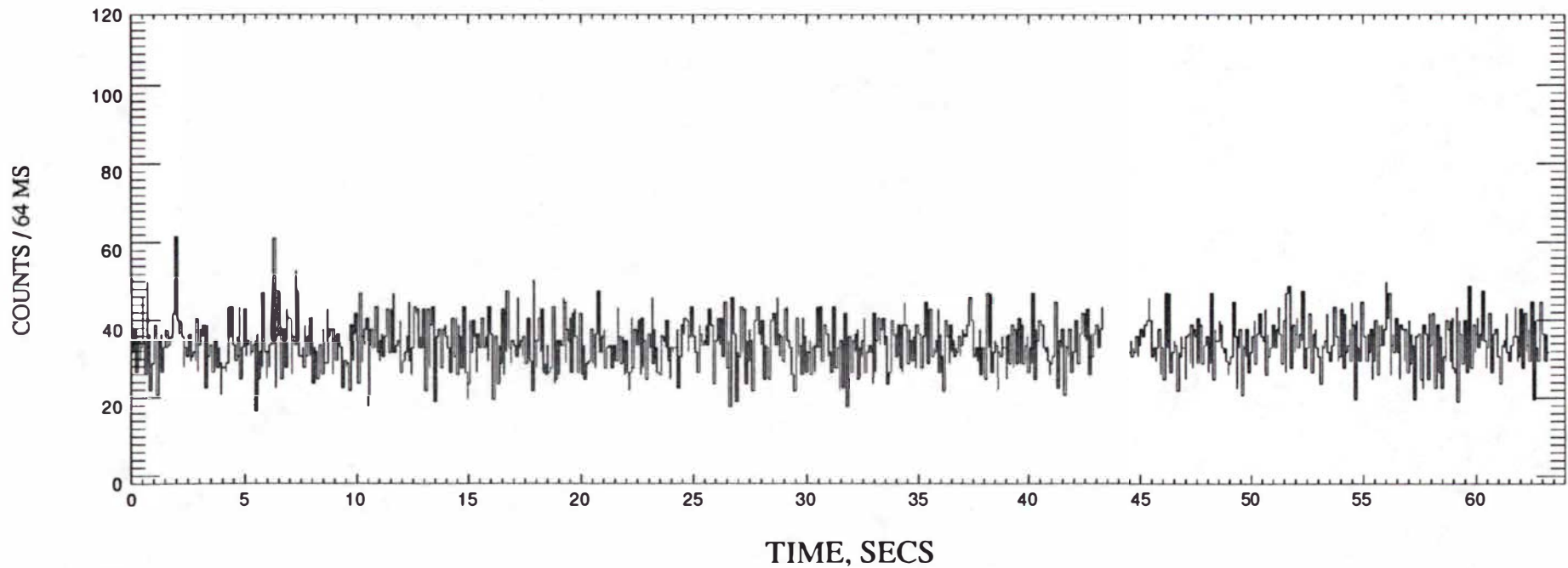


TIME, SECS

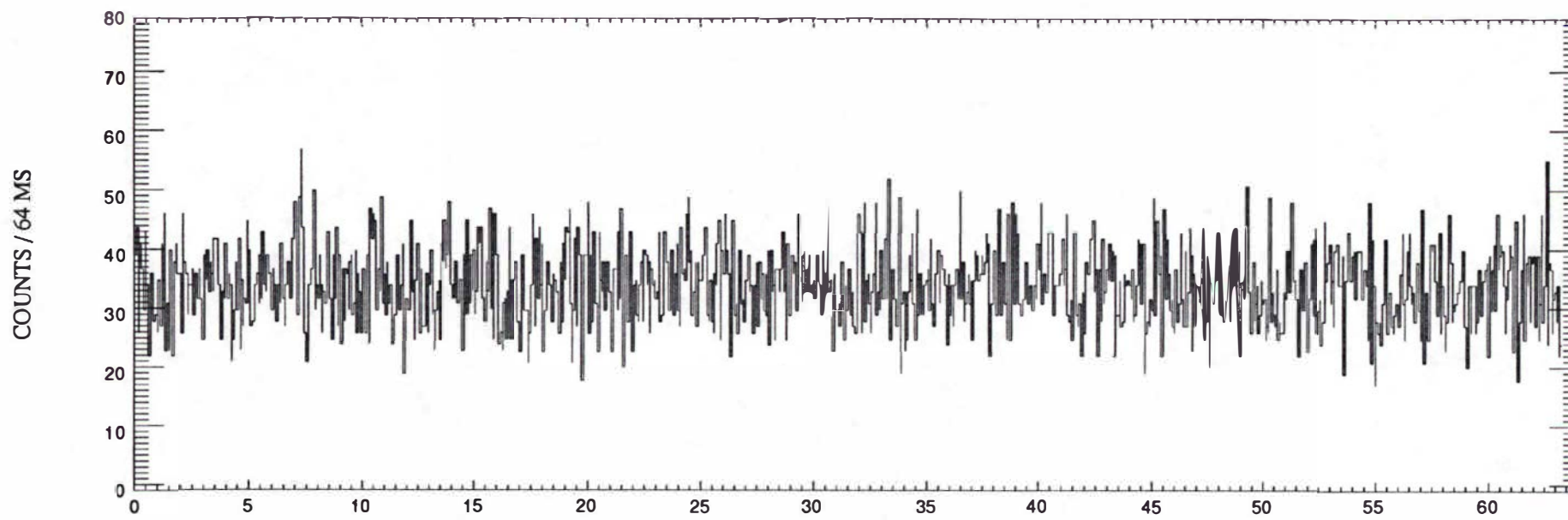
Burst Counter 4 at UT= 5.670242491828 h=20412.873 s



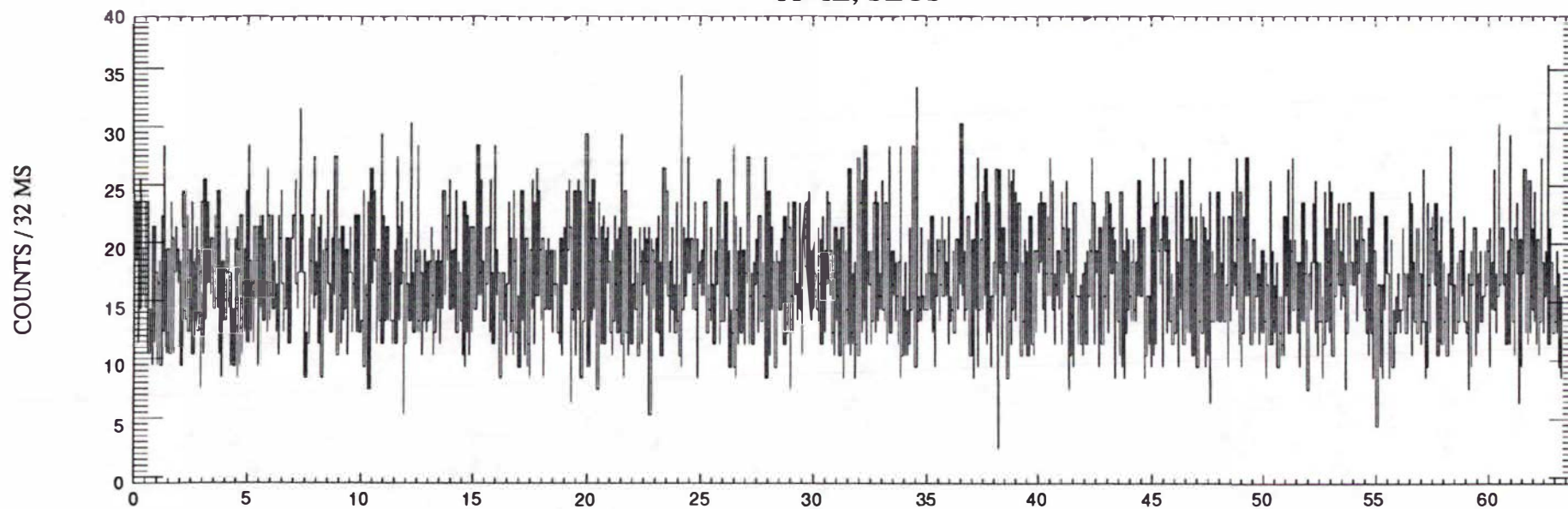
Burst Counter 5 at UT= 9.049115926954 h=32576.817 s



Burst Counter 6 at UT=10.500282084147 h=37801.016 s

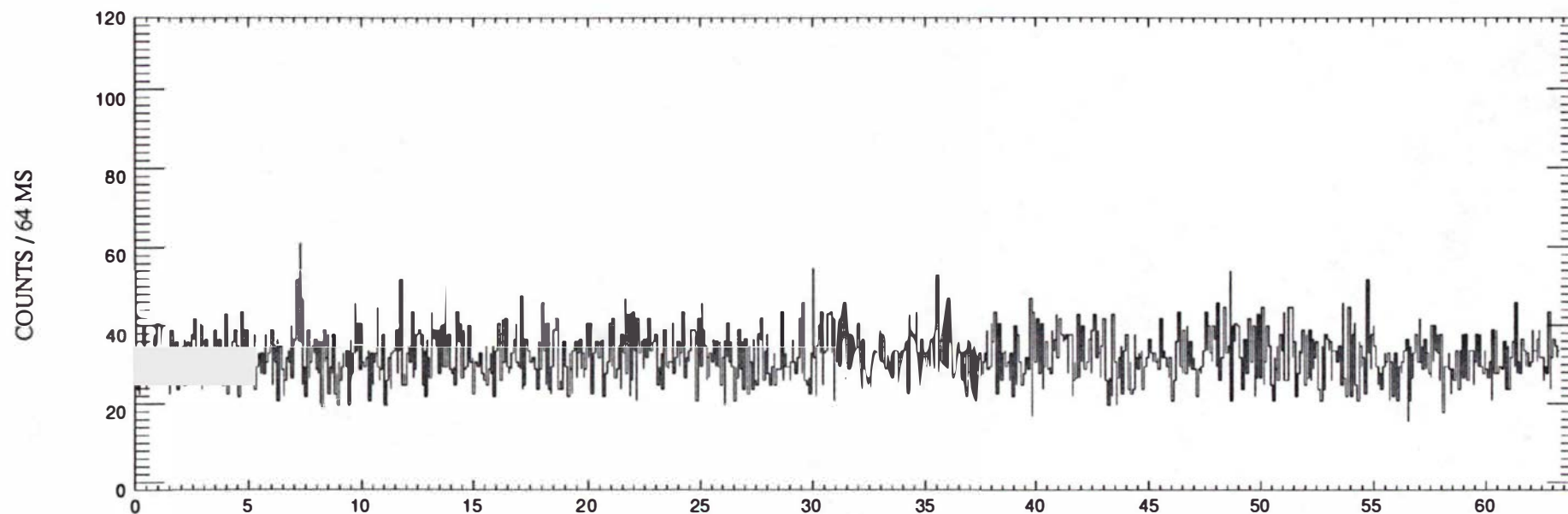


TIME, SECS

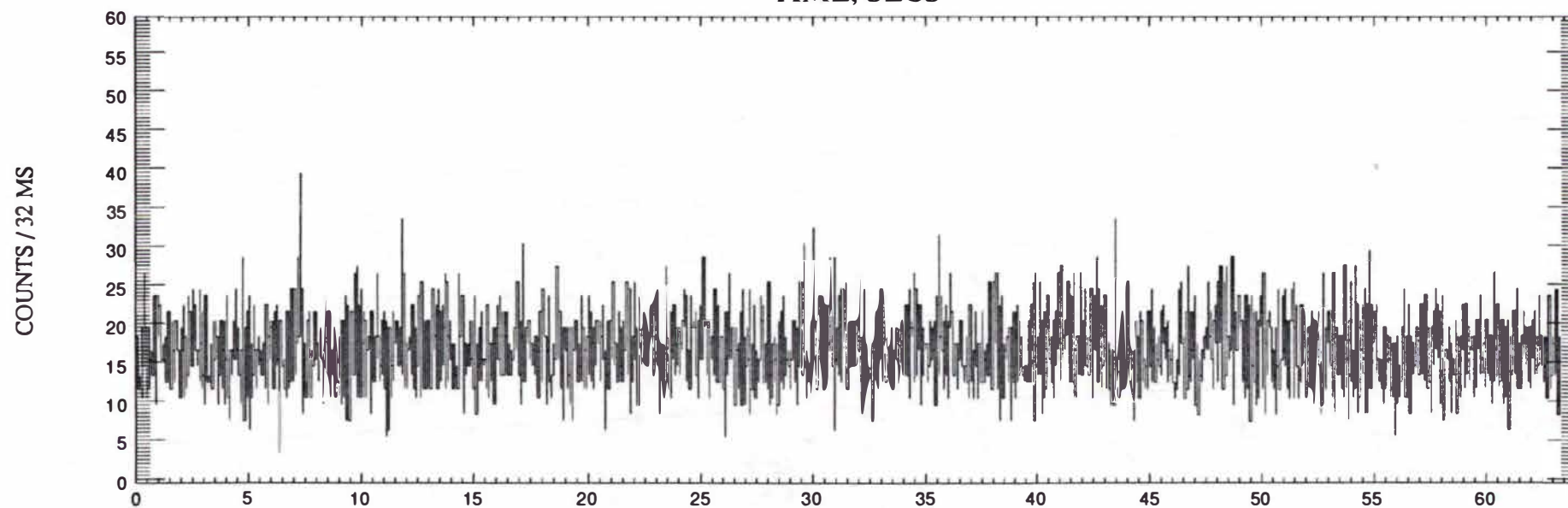


TIME, SECS

Burst Counter 7 at UT=11.410057508681 h=41076.207 s

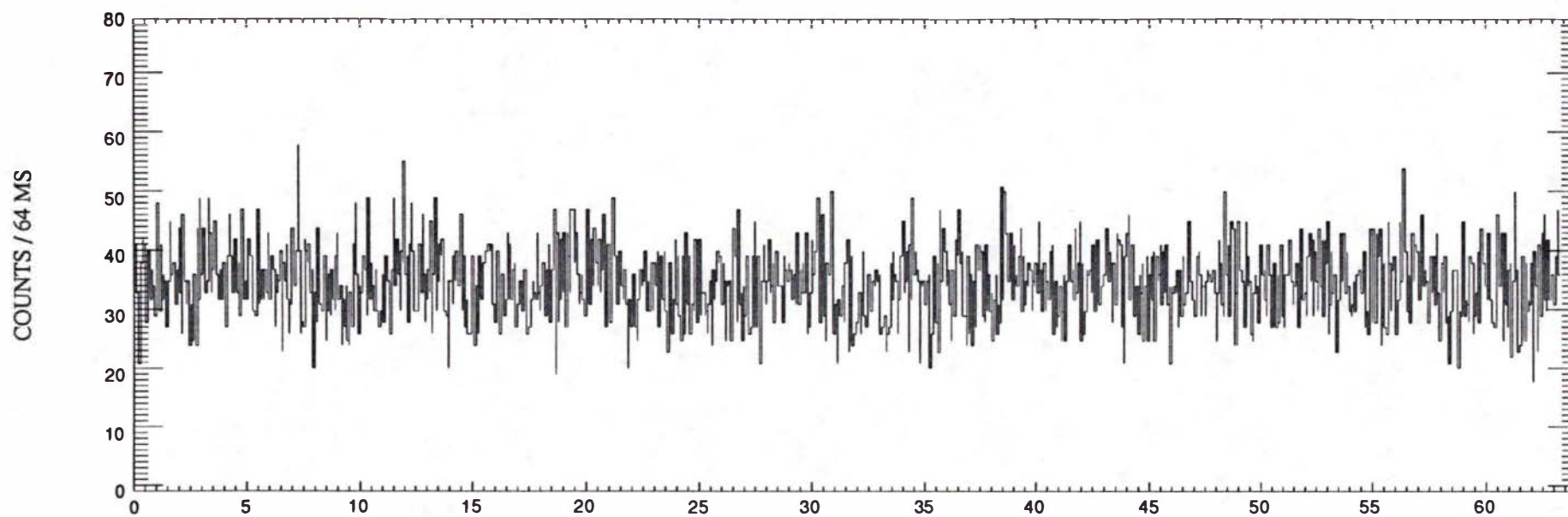


TIME, SECS

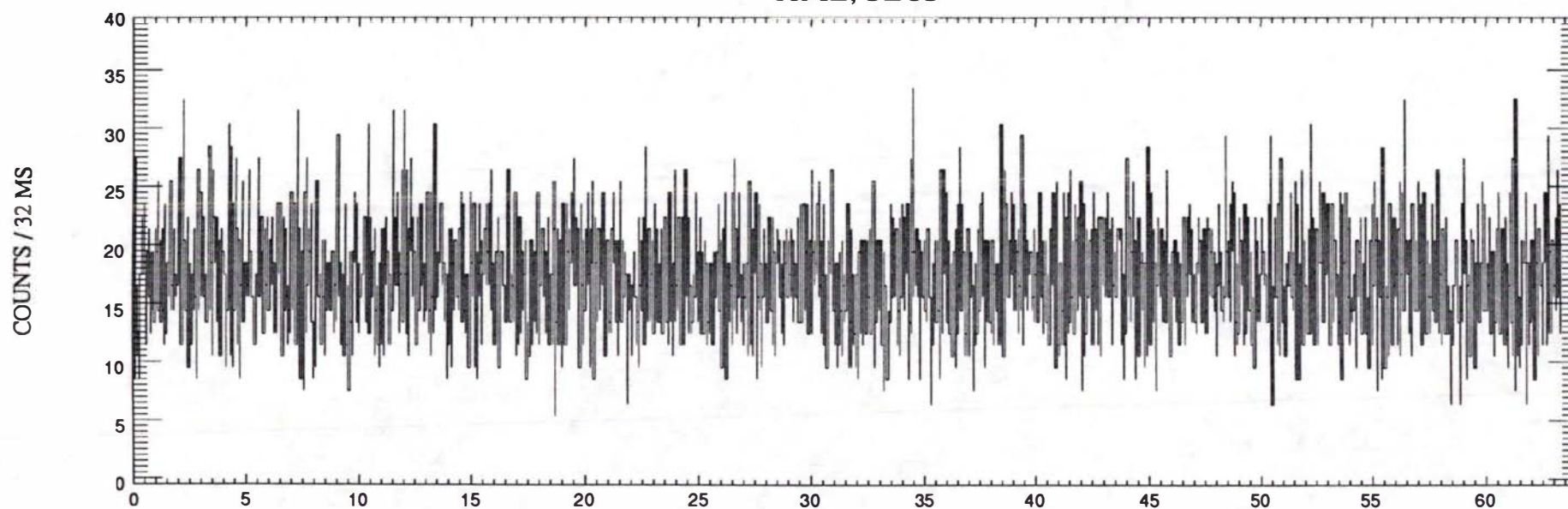


TIME, SECS

Burst Counter 8 at UT=12.137462141249 h=43694.864 s

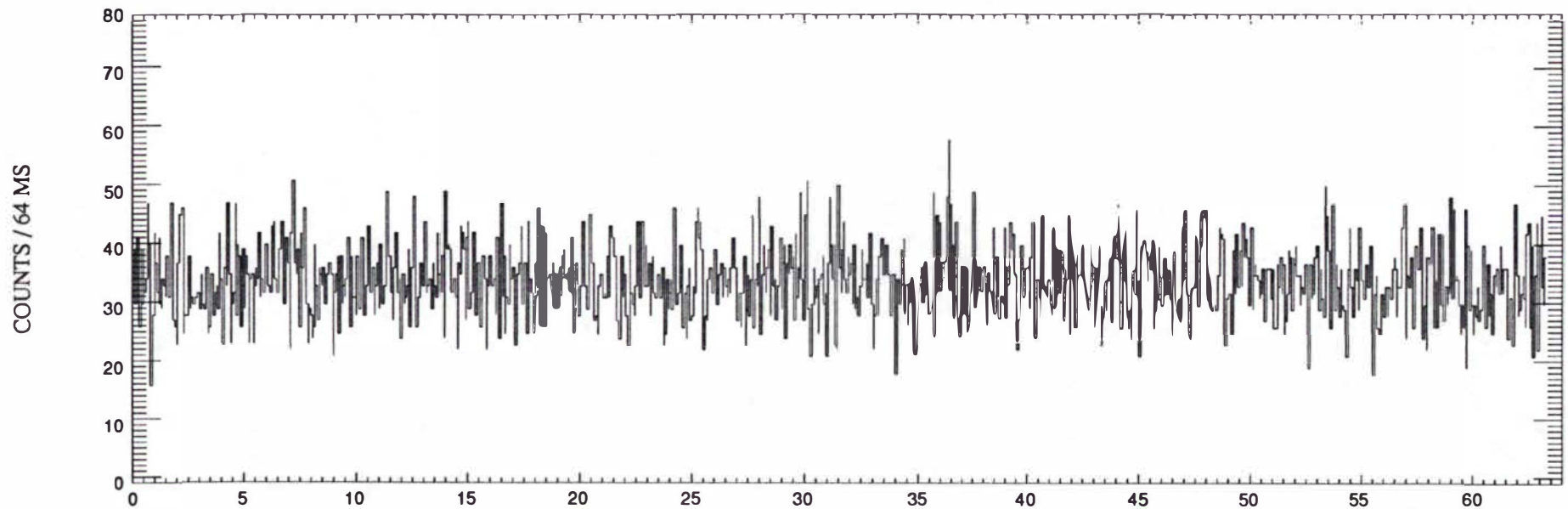


TIME, SECS

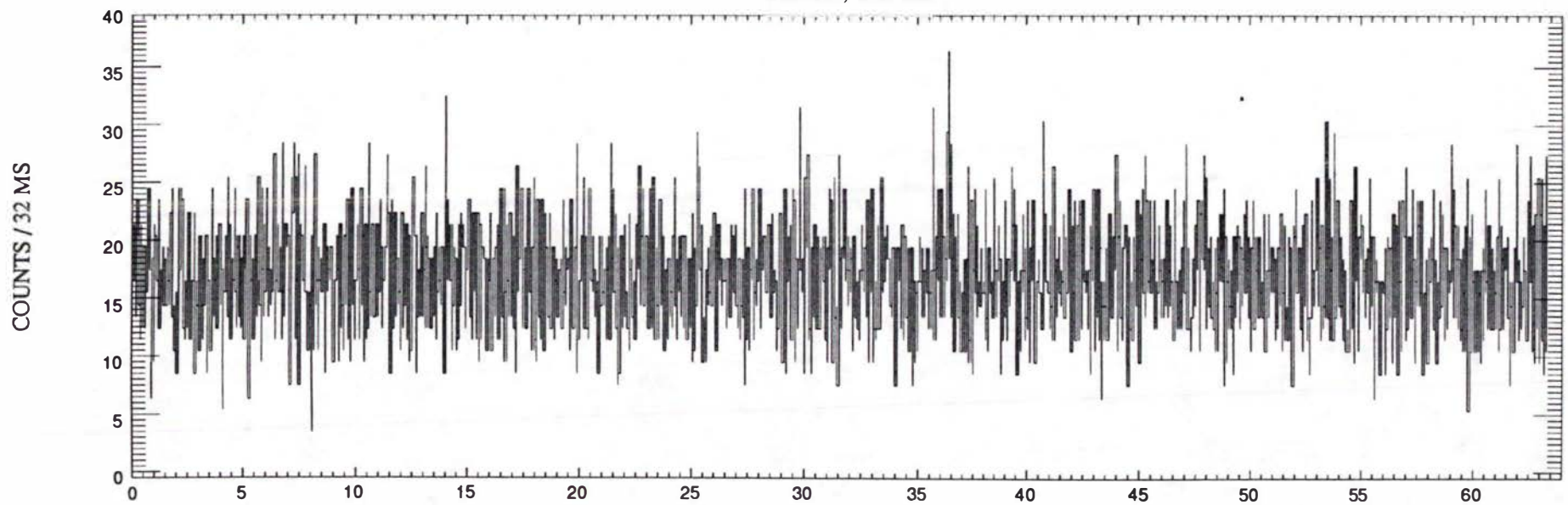


TIME, SECS

Burst Counter 9 at UT=12.917858628167 h=46504.291 s

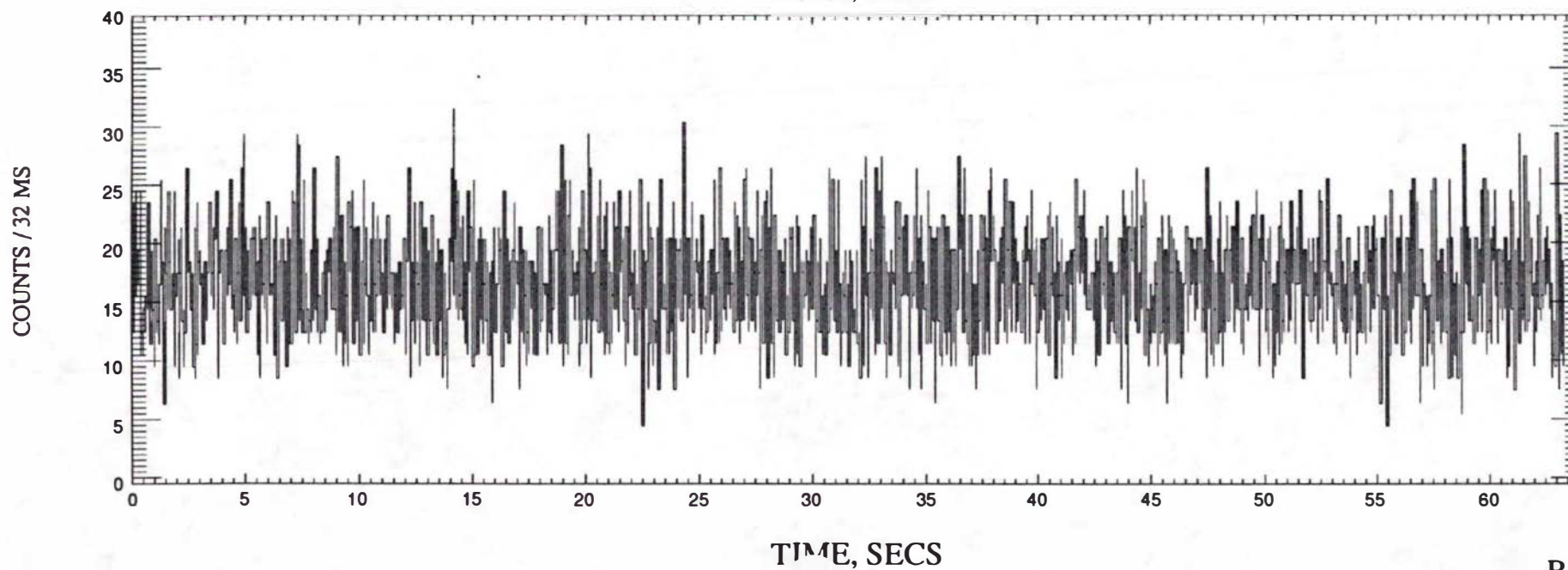
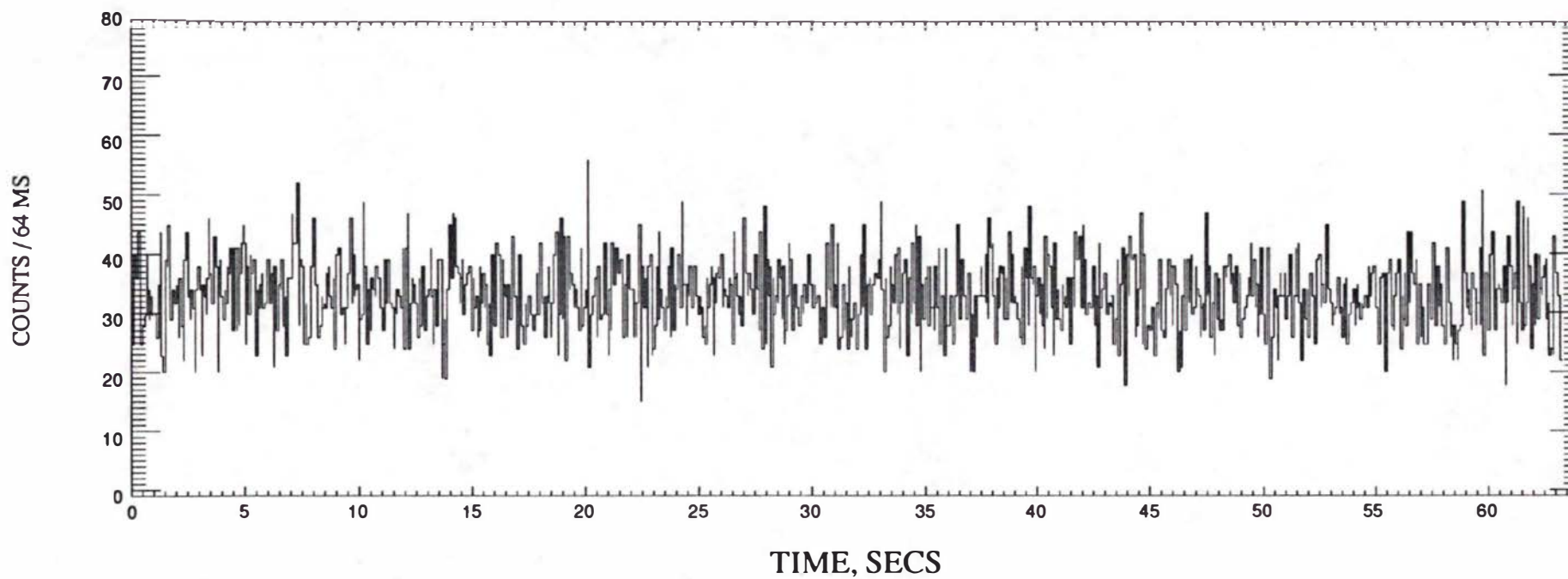


TIME, SECS

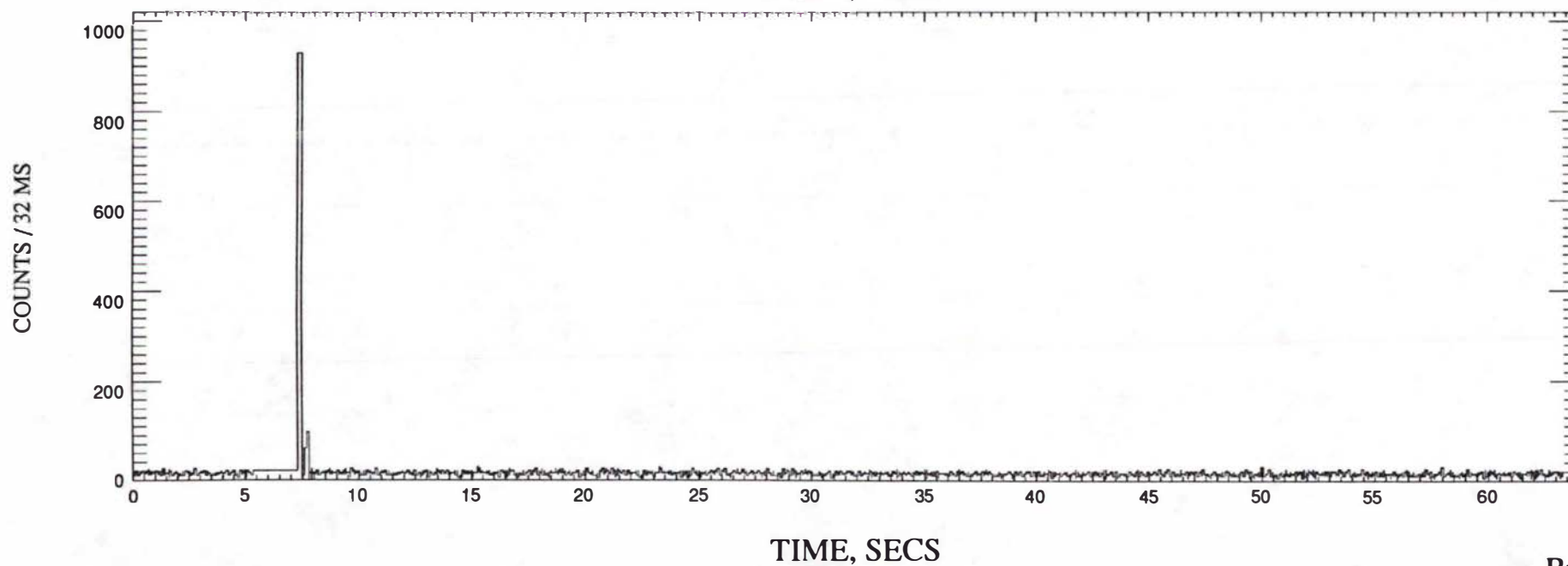
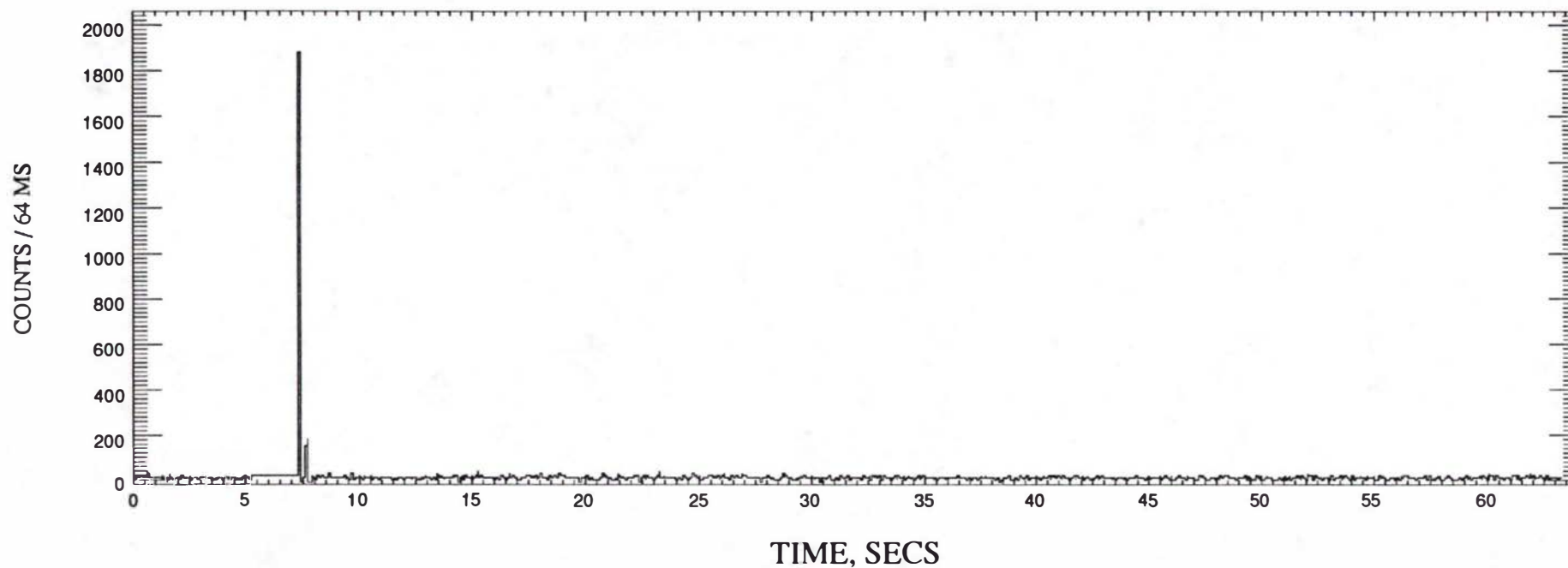


TIME, SECS

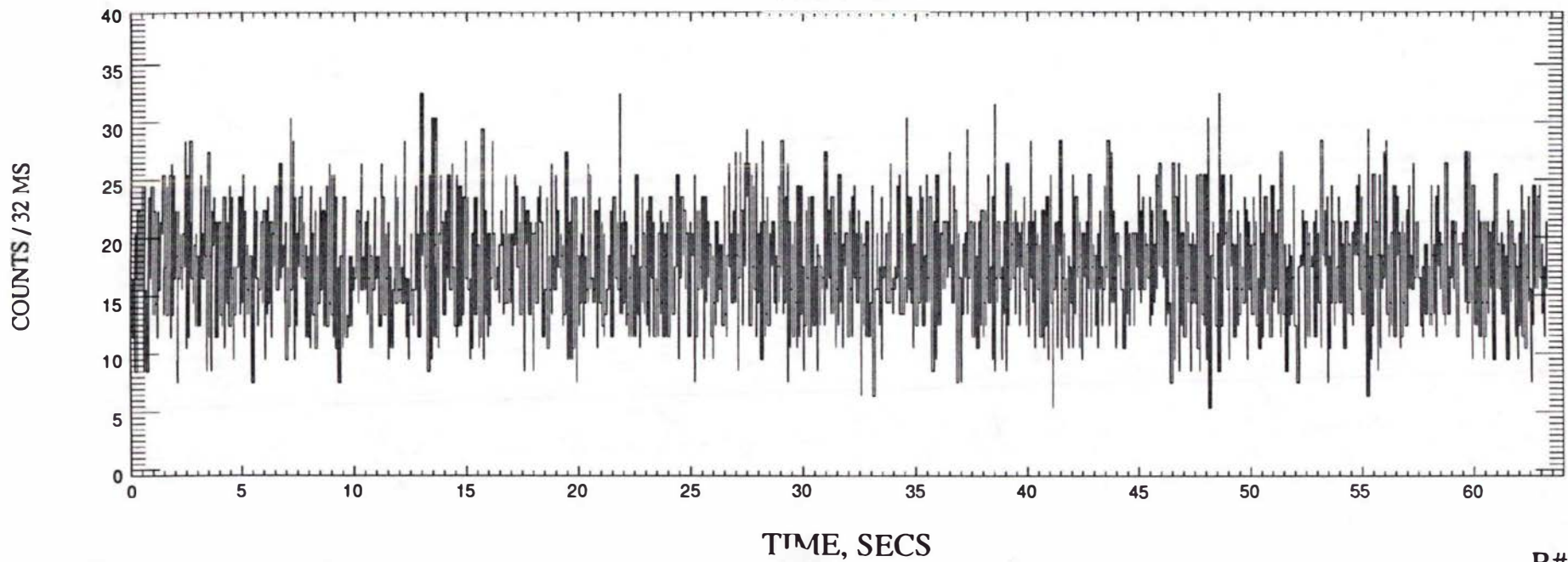
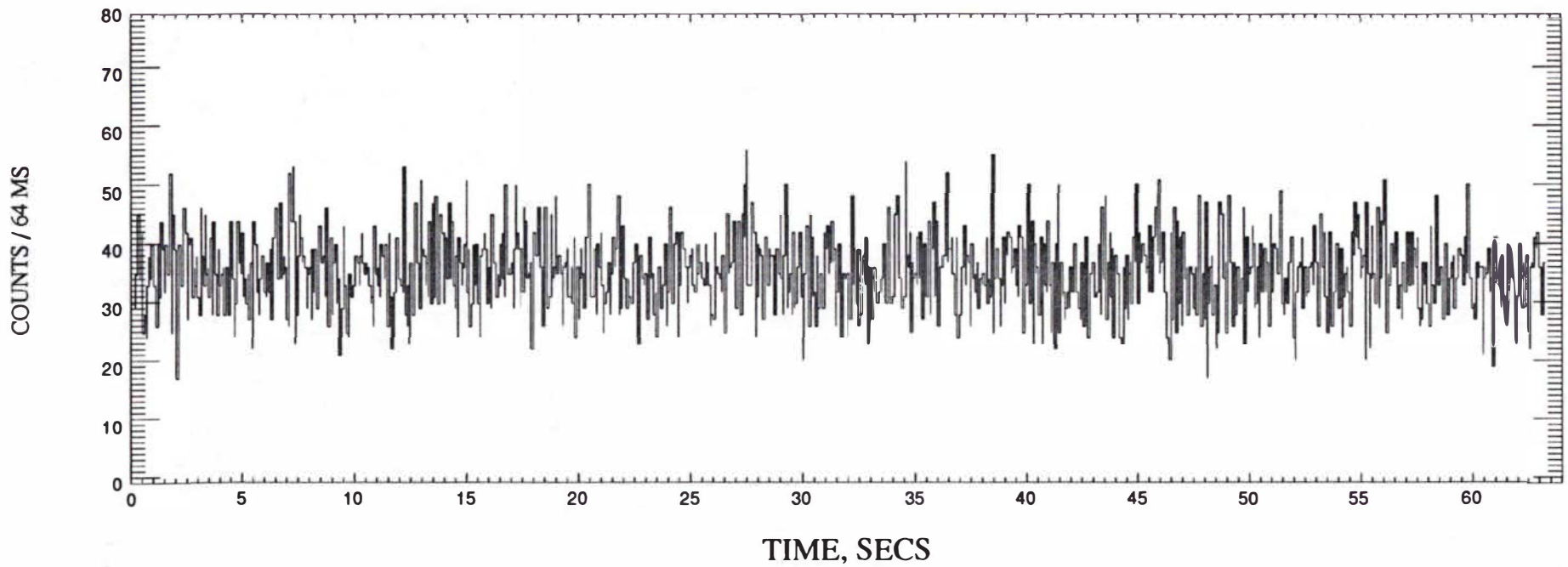
Burst Counter 10 at UT=13.809574640062 h=49714.469 s



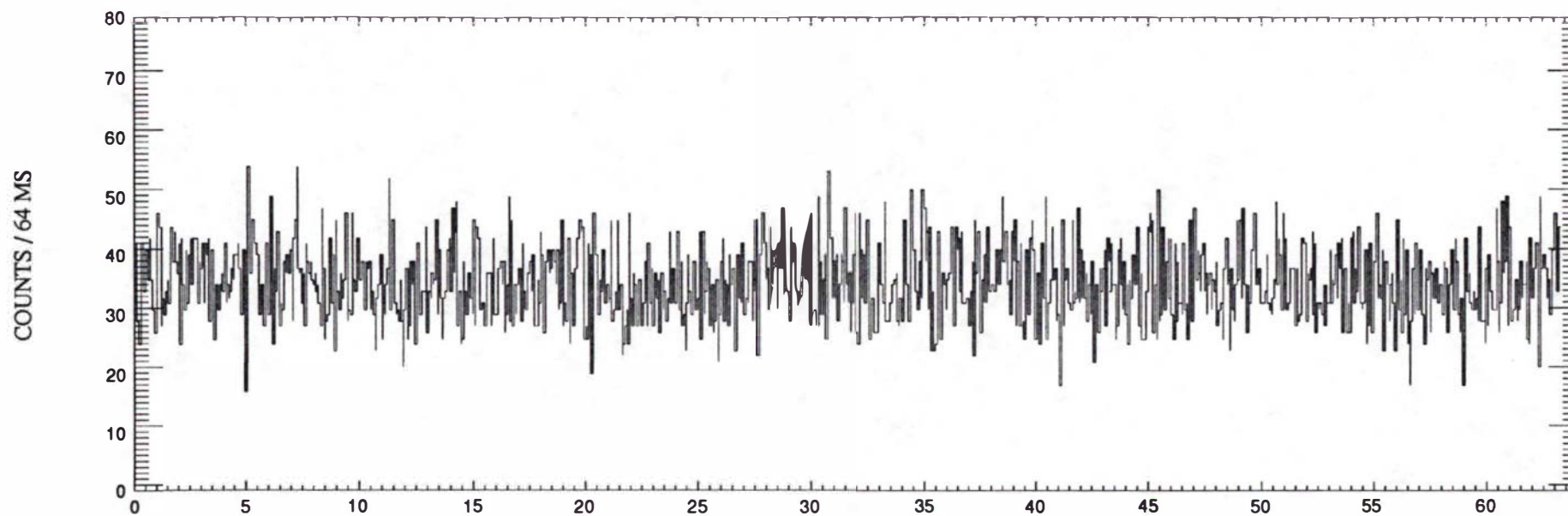
Burst Counter 11 at UT=15.528279173109 h=55901.805 s



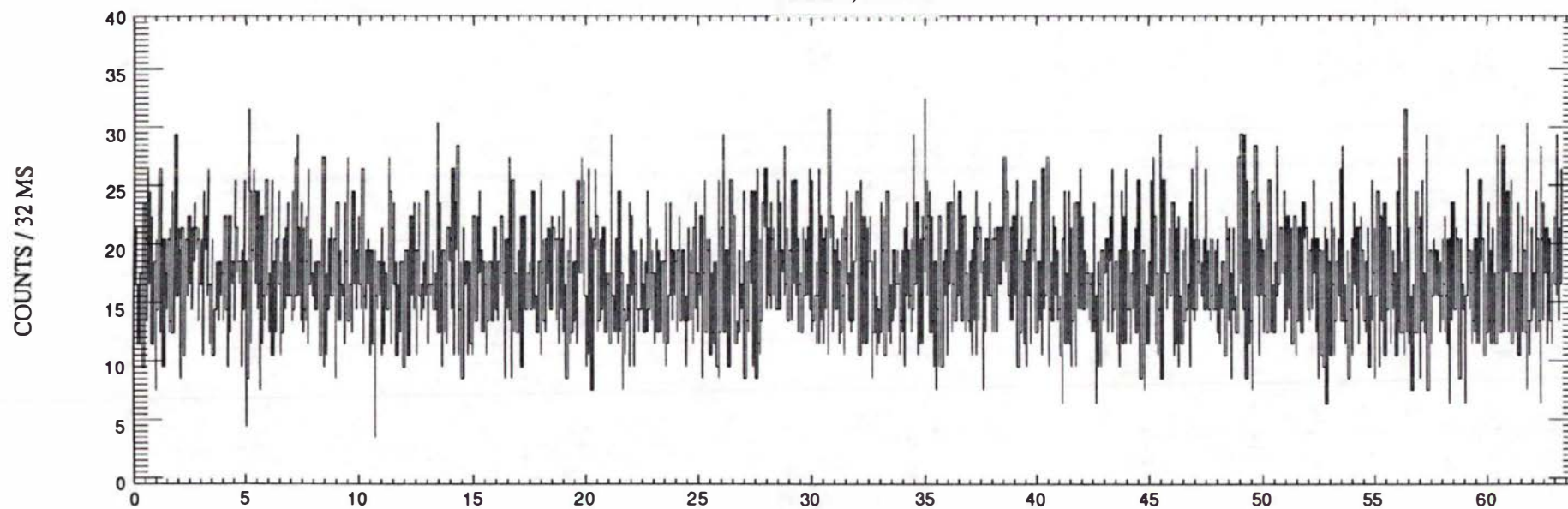
Burst Counter 12 at UT=16.692884080675 h=60094.383 s



Burst Counter 13 at UT=17.508730913798 h=63031.431 s

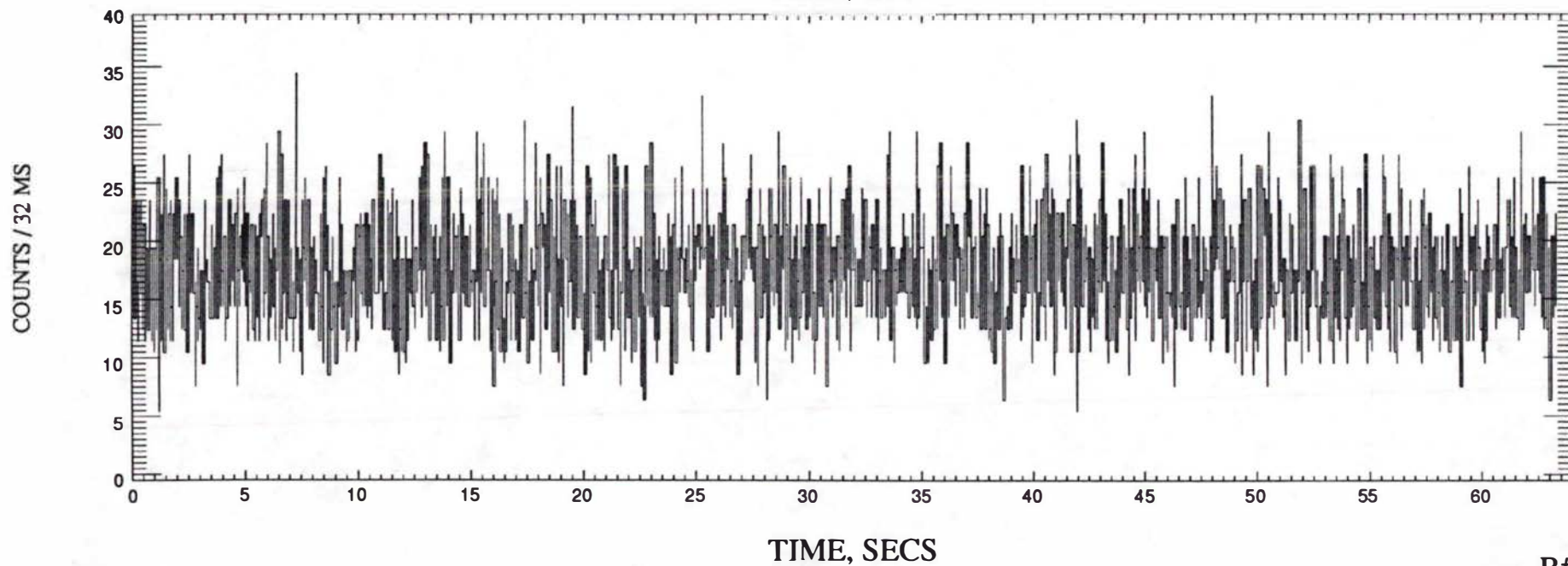
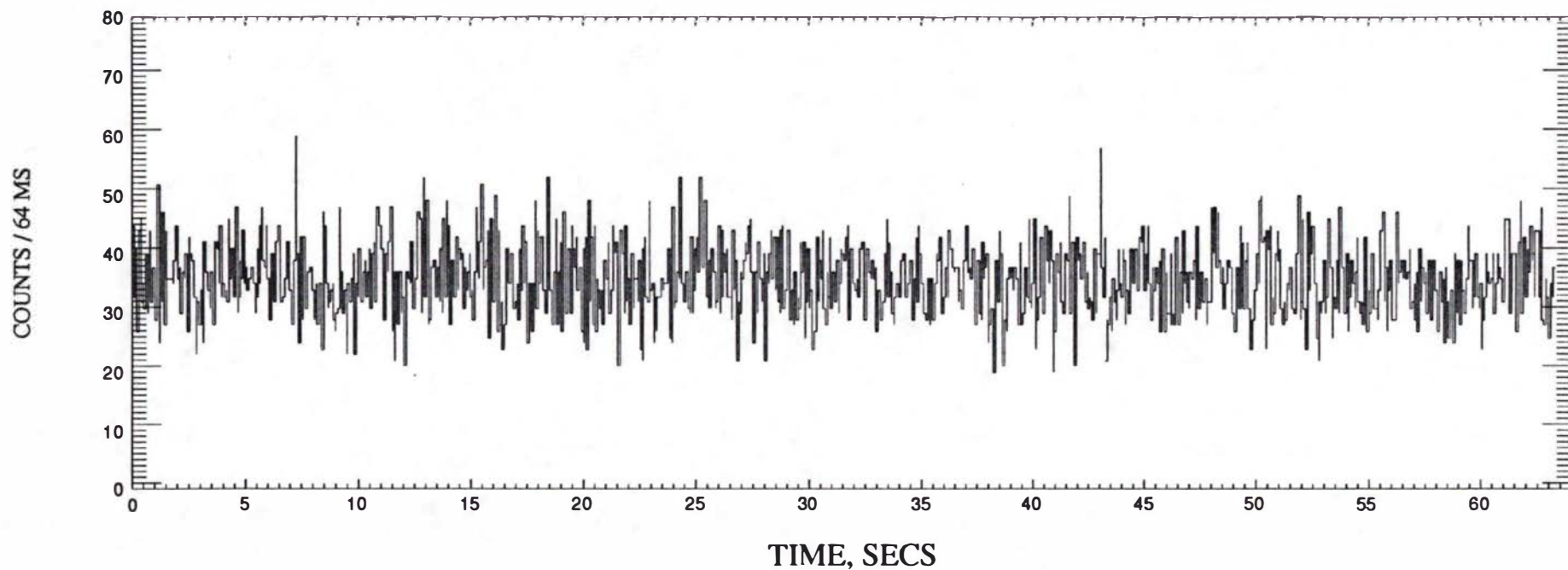


TIME, SECS

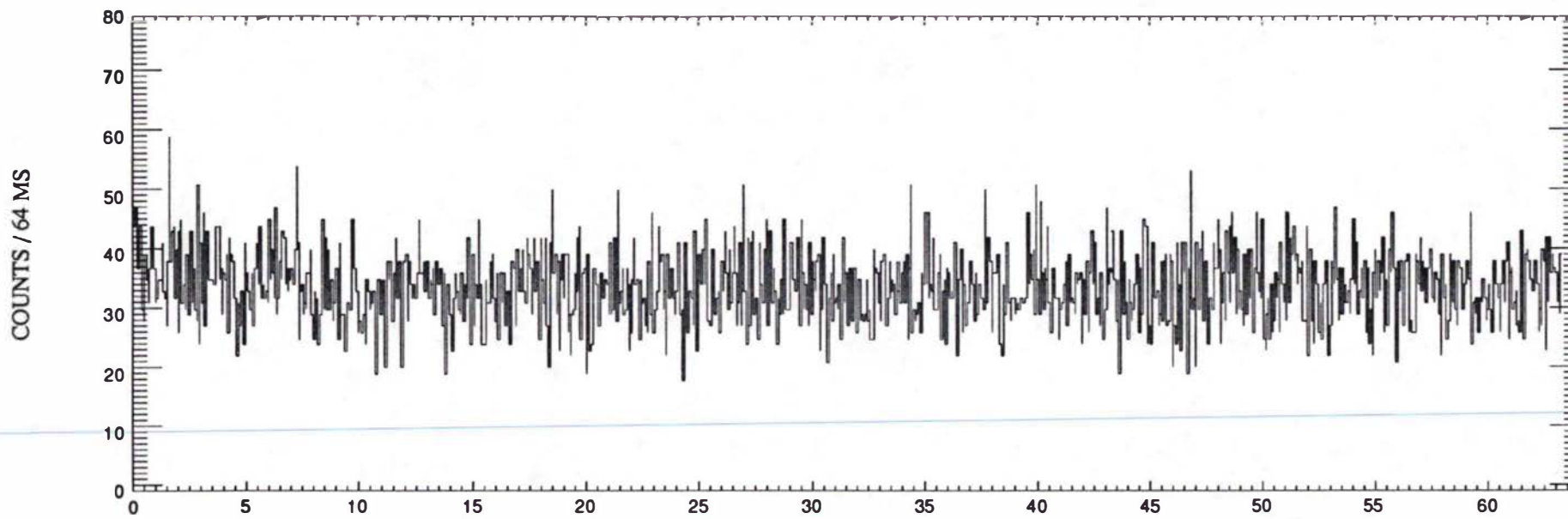


TIME, SECS

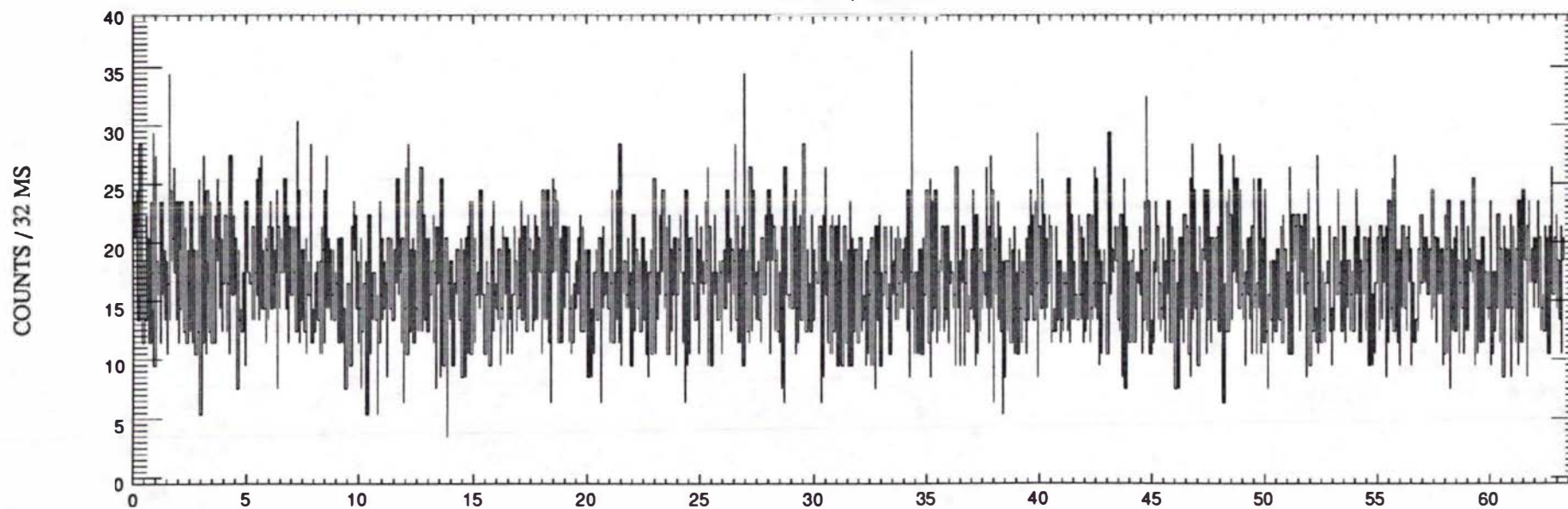
Burst Counter 14 at UT=18.427252477010 h=66338.109 s



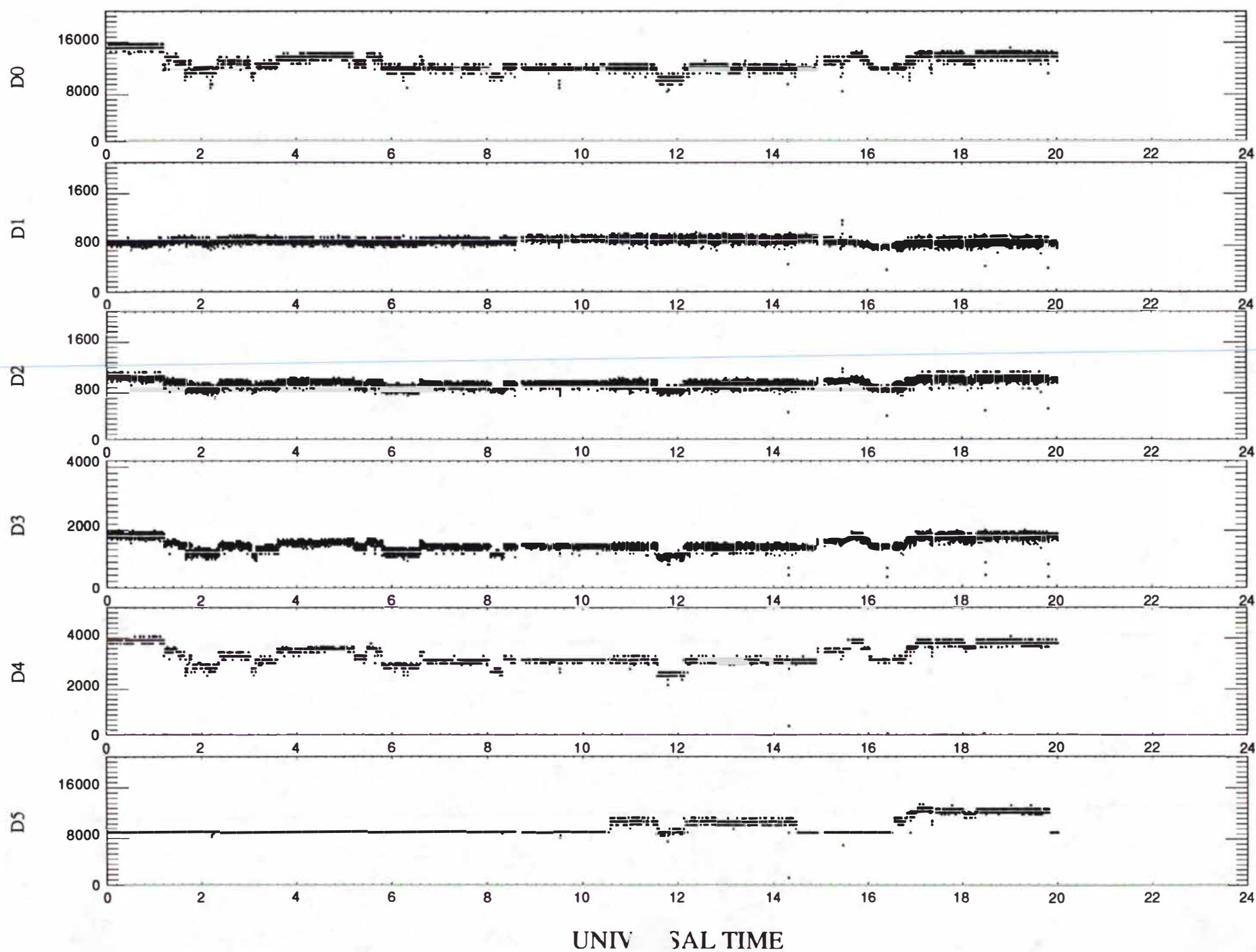
Burst Counter 15 at UT=19.127229003906 h=68858.024 s



TIME, SECS



TIME, SECS



 CATSEARCH PROGRAM

BATSE BURST # 2045
 EVENT OF 1992 NOV 10 DAY OF YEAR=315
 EVENT CROSSING TIME AT BATSE : 9989. S. OR 02:46:28.7
 COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 26.100 -32.300
 BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
 POSITION OF ULYSSES ON 10/11/ 92 IS:
 RA= 165.784 DEC= -6.698 DIST= 5.614 AU
 BATSE-ULYSSES DISTANCE = 839891800. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 54.71 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1618.69 SECS.
 CROSSING TIME AT ULYSSES IS 11607. S. OR 03:13:27.4 +/- 471.58 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2045	921110	8936	09988	1500	026	-32

Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02045

Nov 10

TIME: TJD=8936 SECONDS=09988

TYPE: BURST

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=80 AZIMUTH=245 ERROR= DEGREES

COMMENTS:

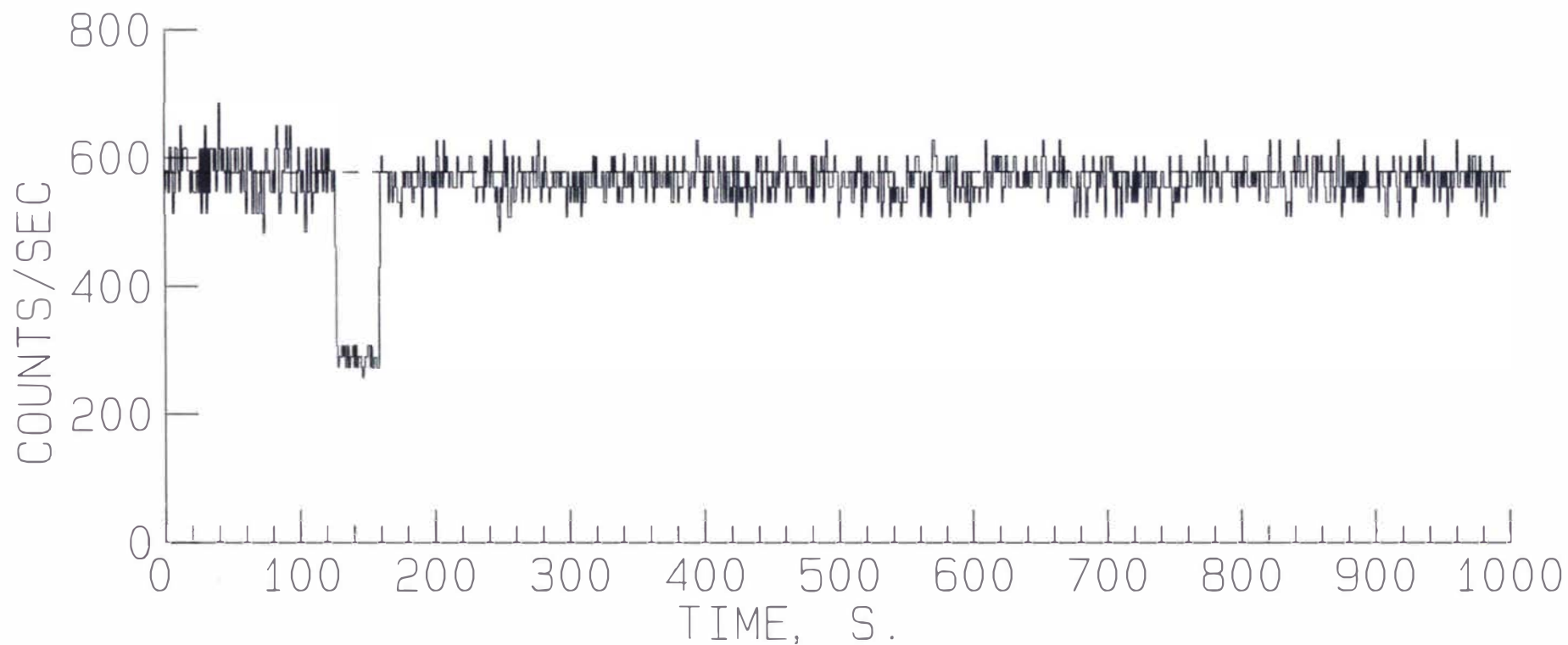
WEAK SINGLE SPIKE. DUR.~4S. NOT VISIBLE ABOVE 300KEV.

Too many solar triggers

18/11/92

ULYSSES RT
10/11/92 11162.360 s
.500 S INTERVALS REGROUPED BY 2
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



 CATSEARCH PROGRAM

BATSE BURST # 2046
 EVENT OF 1992 NOV 10 DAY OF YEAR=315
 EVENT CROSSING TIME AT BATSE : 34073. S. OR 09:27:53.2
 COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 150.400 17.700
 BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
 POSITION OF ULYSSES ON 10/11/ 92 IS:
 RA= 165.784 DEC= -6.698 DIST= 5.614 AU
 BATSE-ULYSSES DISTANCE = 839891800. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=151.26 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2456.41 SECS.
 CROSSING TIME AT ULYSSES IS 31617. S. OR 08:46:56.8 +/- 246.59 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2046	921110	8936	34073	6000	150	+18

Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02046

TIME: TJD=8936 SECONDS=34073

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=048. AZIMUTH=072. ERROR= DEGREES

COMMENTS:

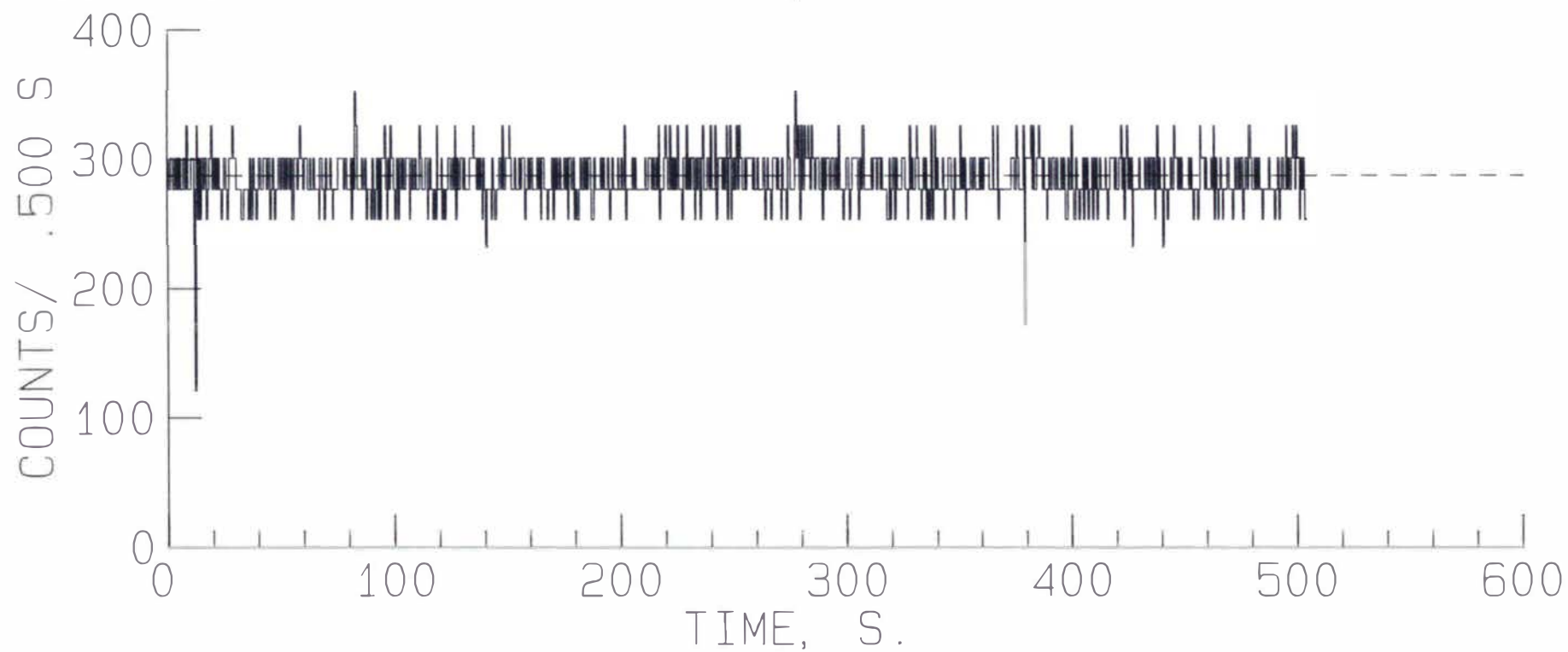
COMPLEX EVENT. DUR. ~33S. MAIN EPISODE FROM ~T+15 TO T+33S. SEEN ABOVE 300KEV.

Too many solar triggers

14/11/92

ULYSSES RT
10/11/92 31356.428 s
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



CATSEARCH PROGRAM

BATSE BURST # 2047
EVENT OF 1992 NOV 10 DAY OF YEAR=315
EVENT CROSSING TIME AT BATSE : 49139. S. OR 13:38:58.8
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 58.800 34.600
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 10/11/ 92 IS:
RA= 165.784 DEC= -6.698 DIST= 5.614 AU
BATSE-ULYSSES DISTANCE = 839891800. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 72.24 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 854.57 SECS.
CROSSING TIME AT ULYSSES IS 49993. S. OR 13:53:13.4 +/- 526.20 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2047	921110	8936	49138	8000	066	+31

NO

Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02047

TIME: TJD=8936 SECONDS=49138

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=061. AZIMUTH=168. ERROR= DEGREES

COMMENTS:

COMPLEX EVENT. DUR.~25S. MAXIMUM AT ~T+17S. MAX PEAK SEEN ABOVE 300KEV.

Too many solar triggers

9 / 6 / 94

ULYSSES RT

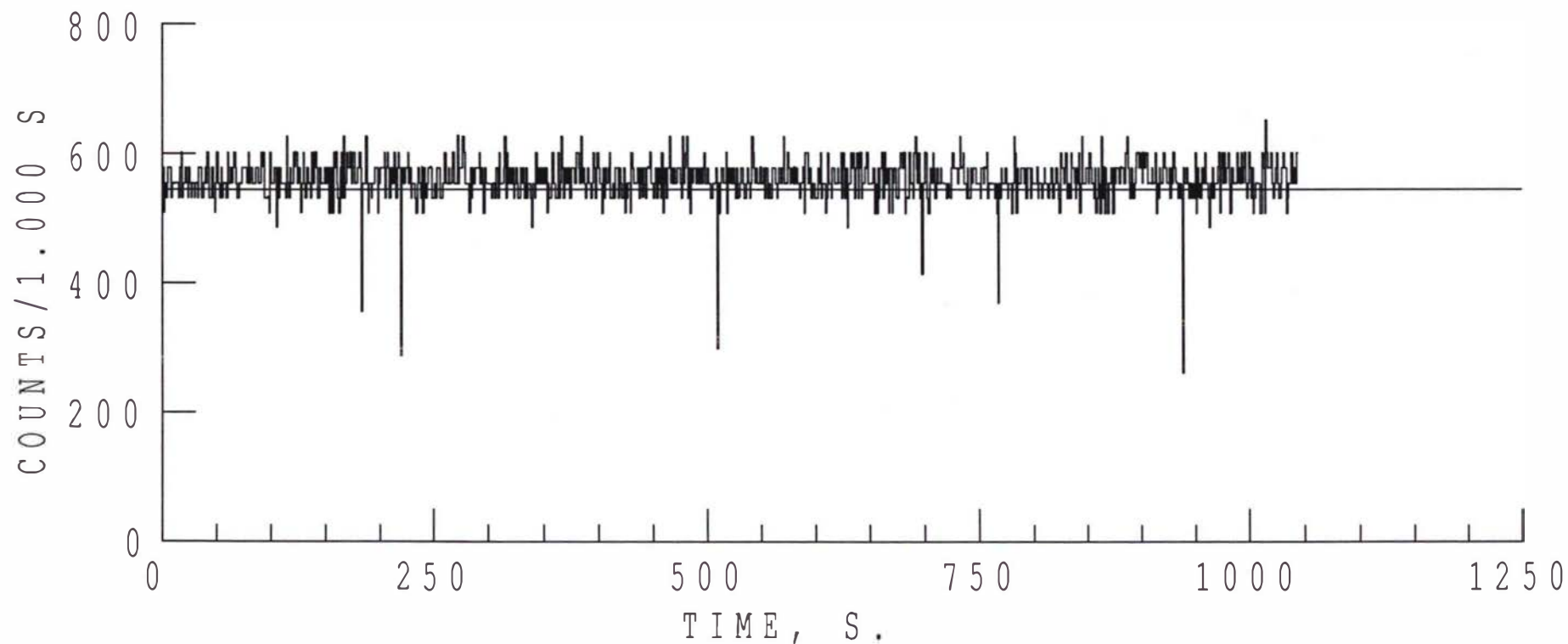
10/11/92 49464.465 s

0.500 S INTERVALS REGROUPED BY 2

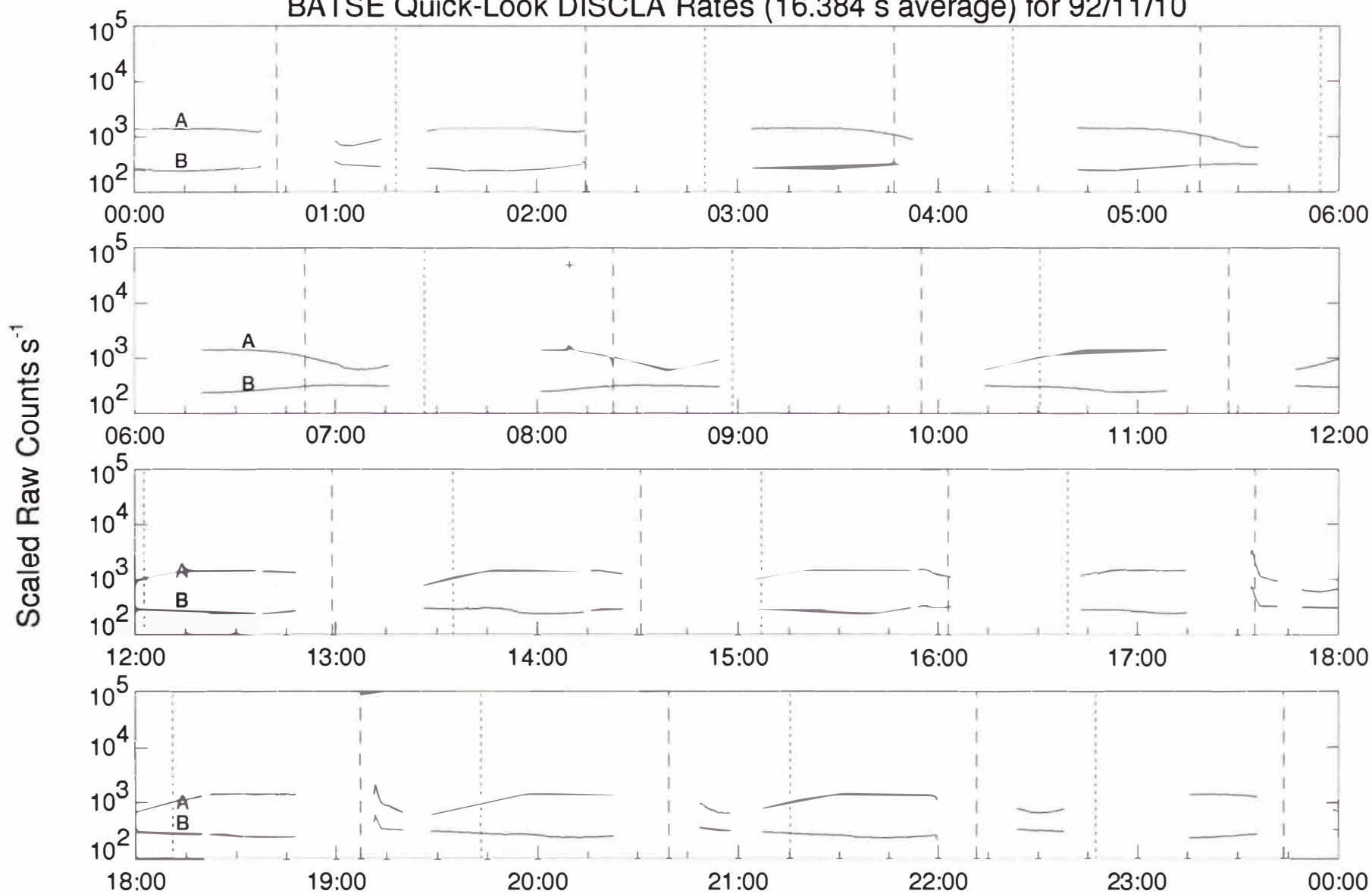
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



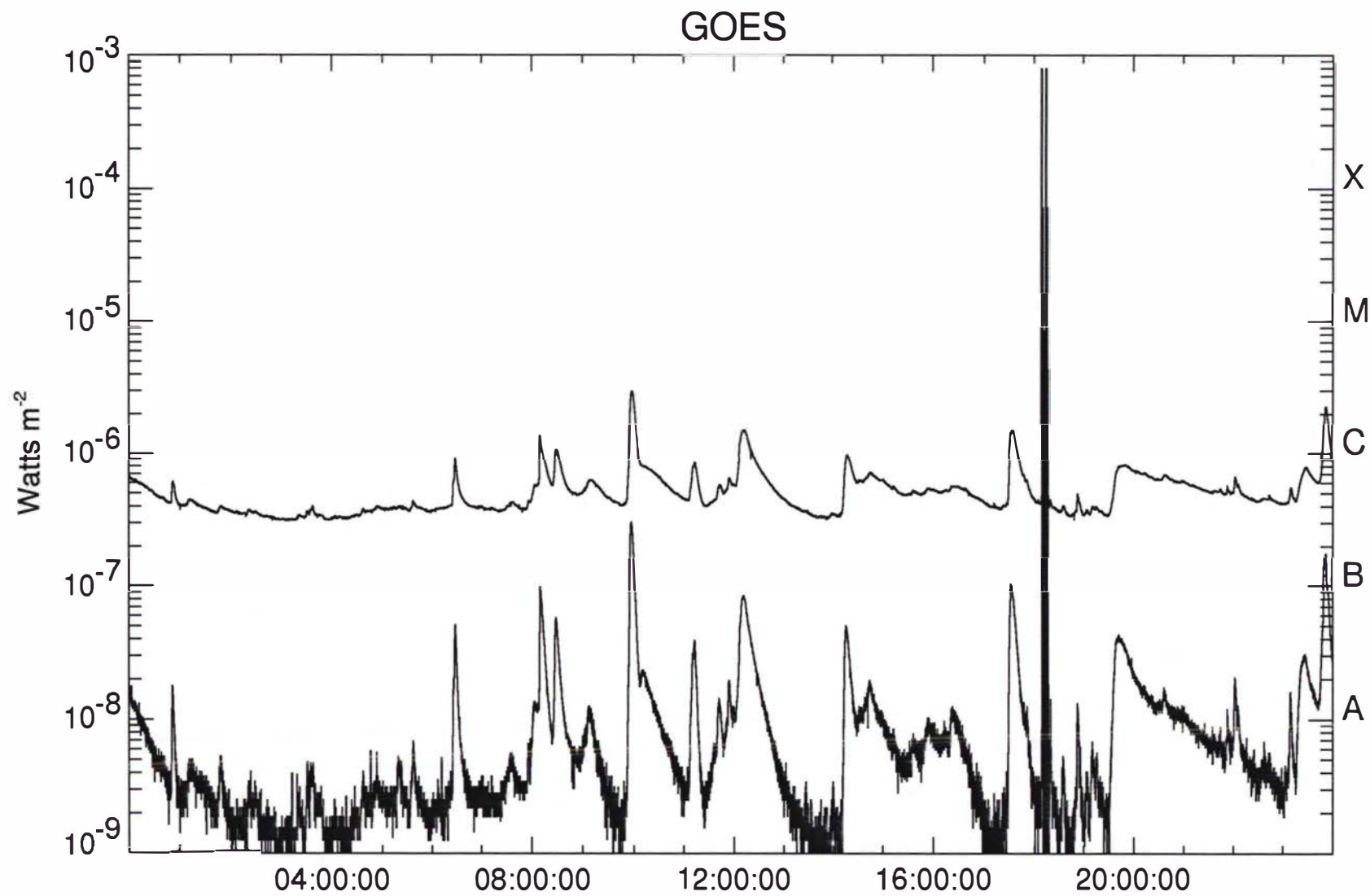
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/10



Current Time: 92/11/12, 1135 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



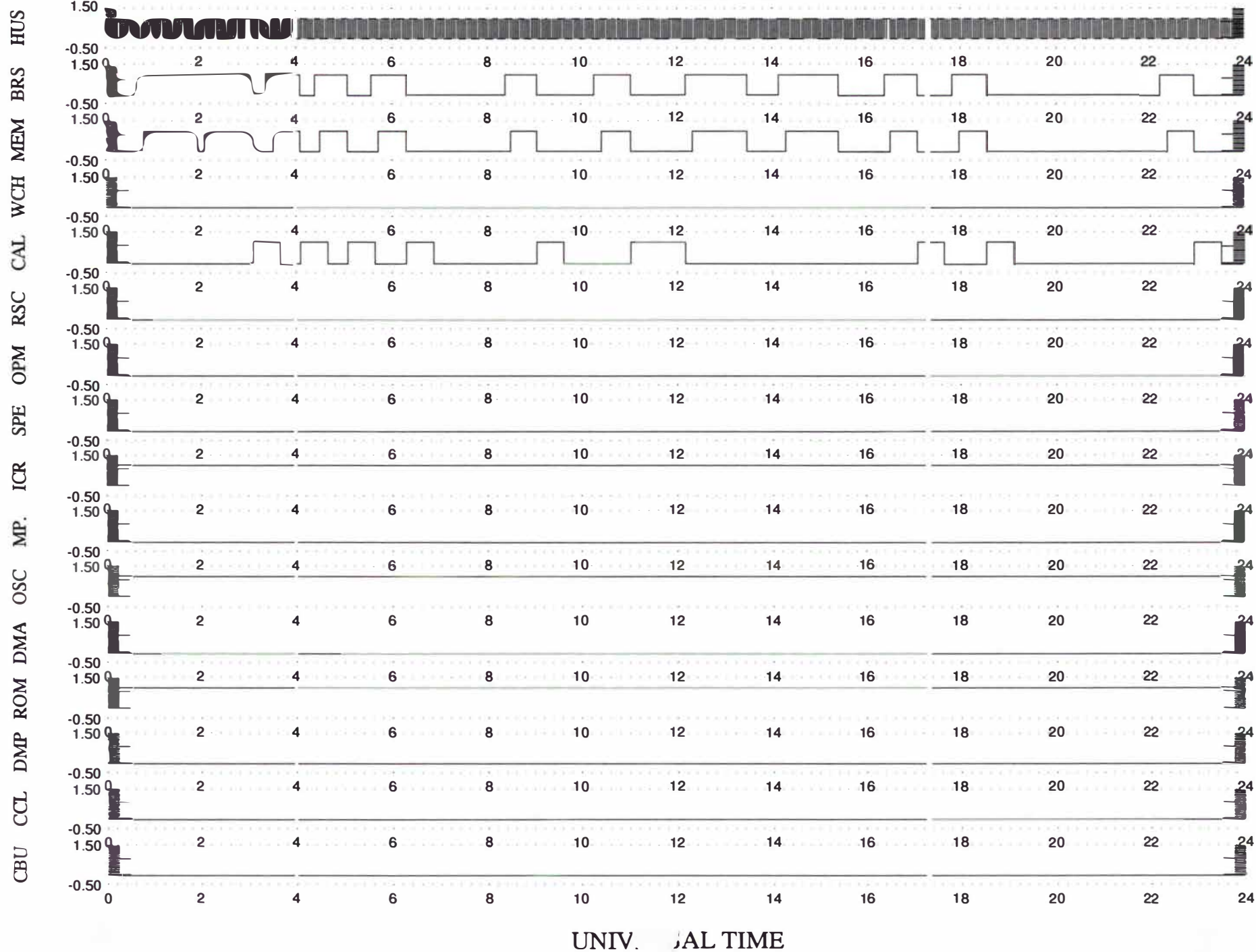
Data Start: 92/11/10, 0000:02

Plot created: 95/05/30, 1543

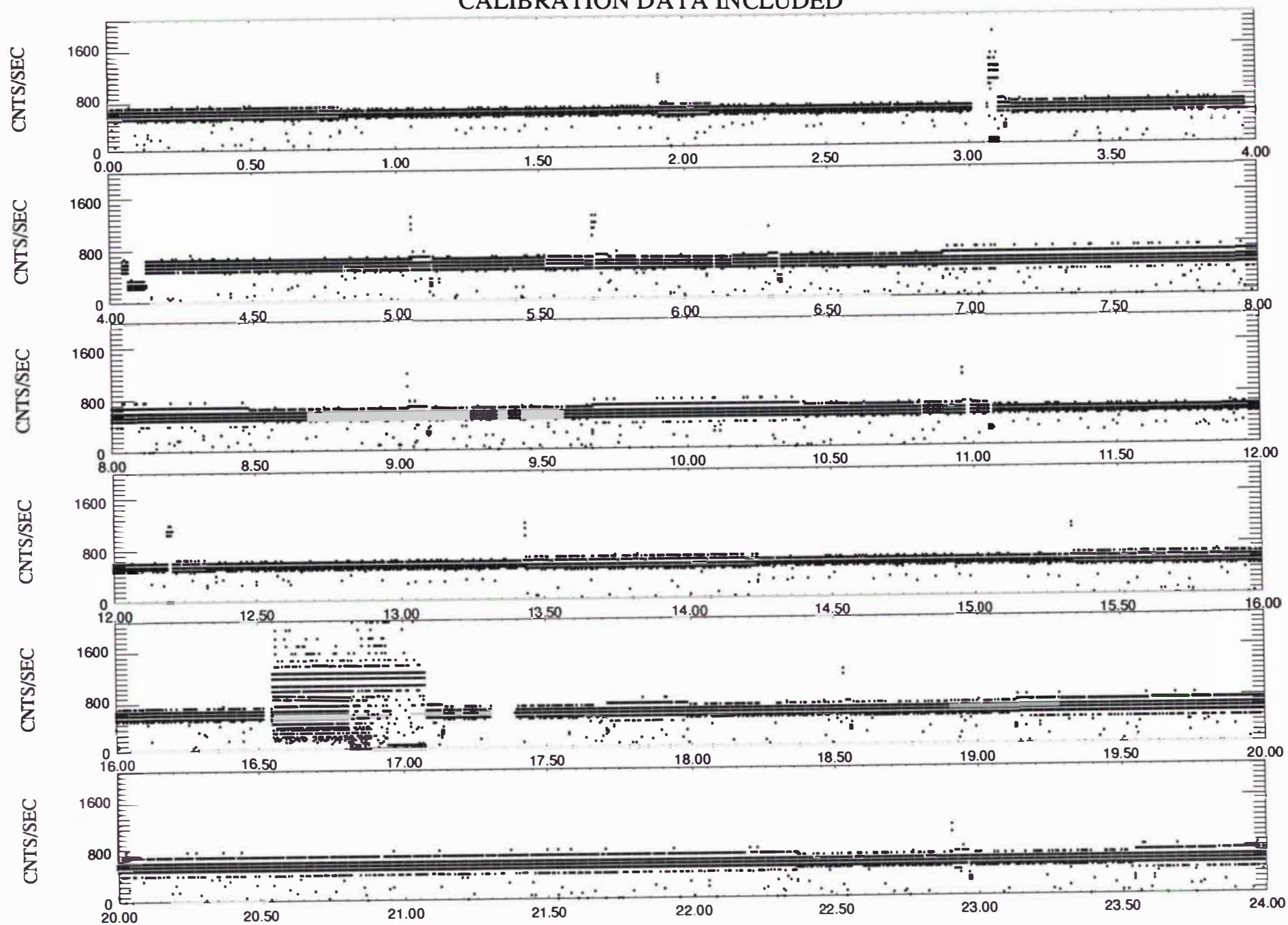
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BURST NUMBER 2 - 13

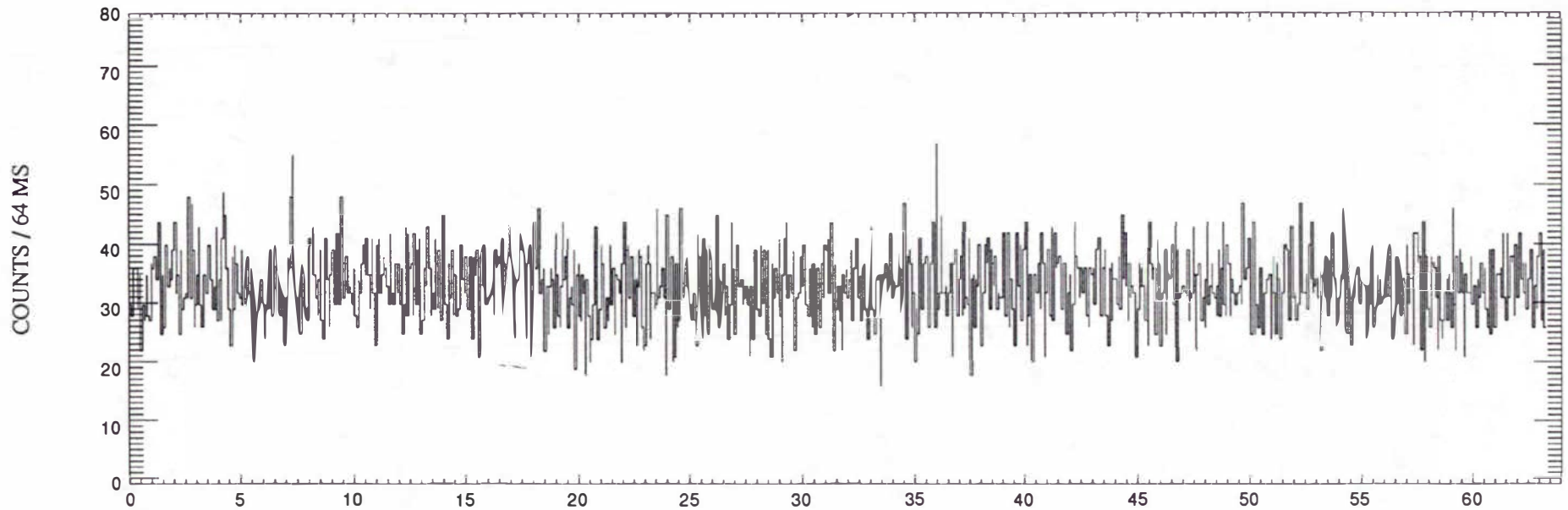


CALIBRATION DATA INCLUDED

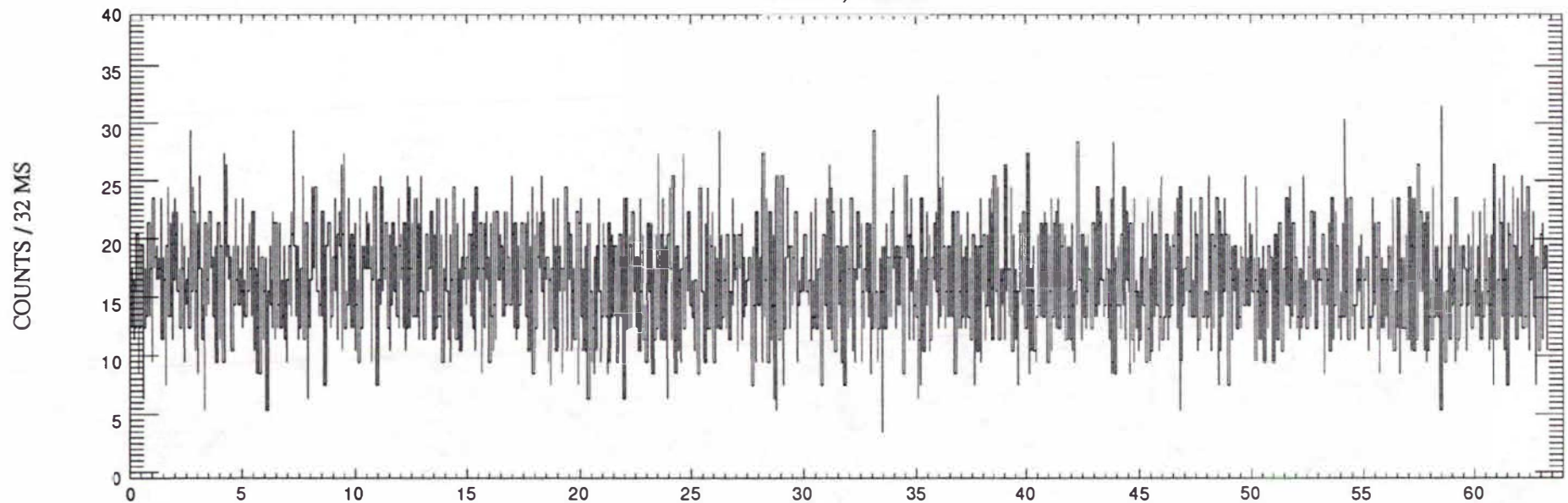


UNIV TIME

Burst Counter 2 at UT= 0.653253877428 h= 2351.714 s

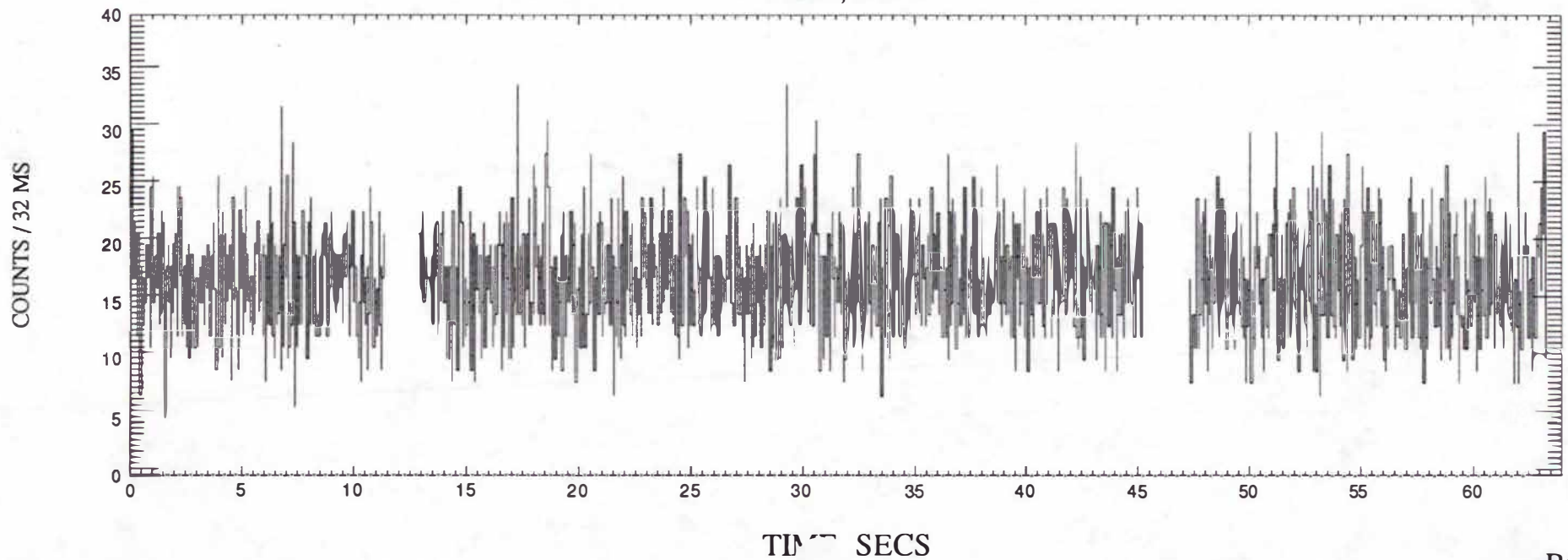
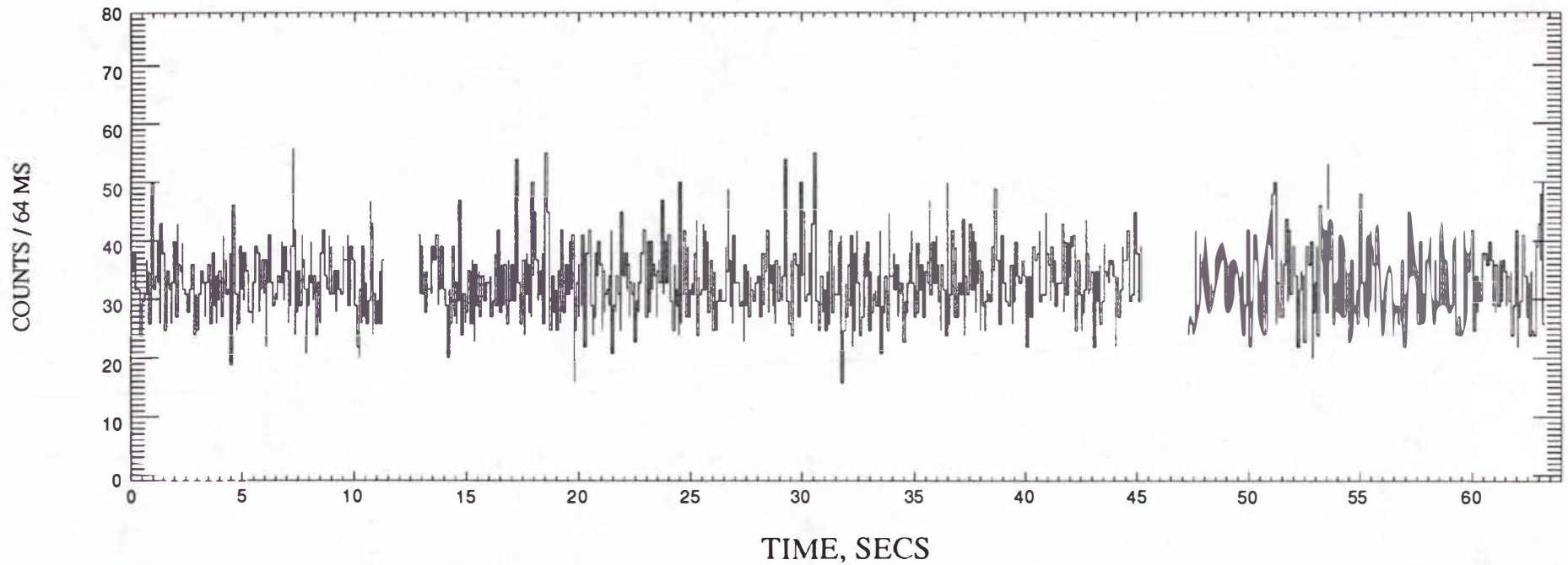


TIME, SECS

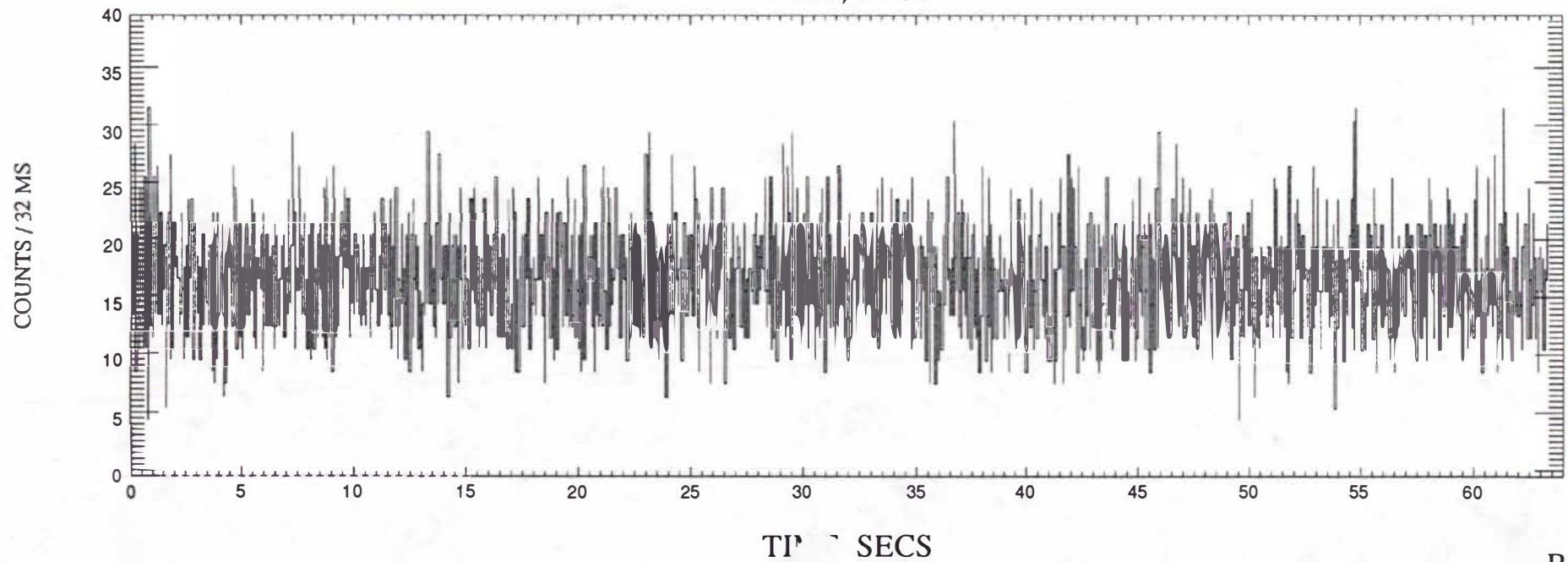
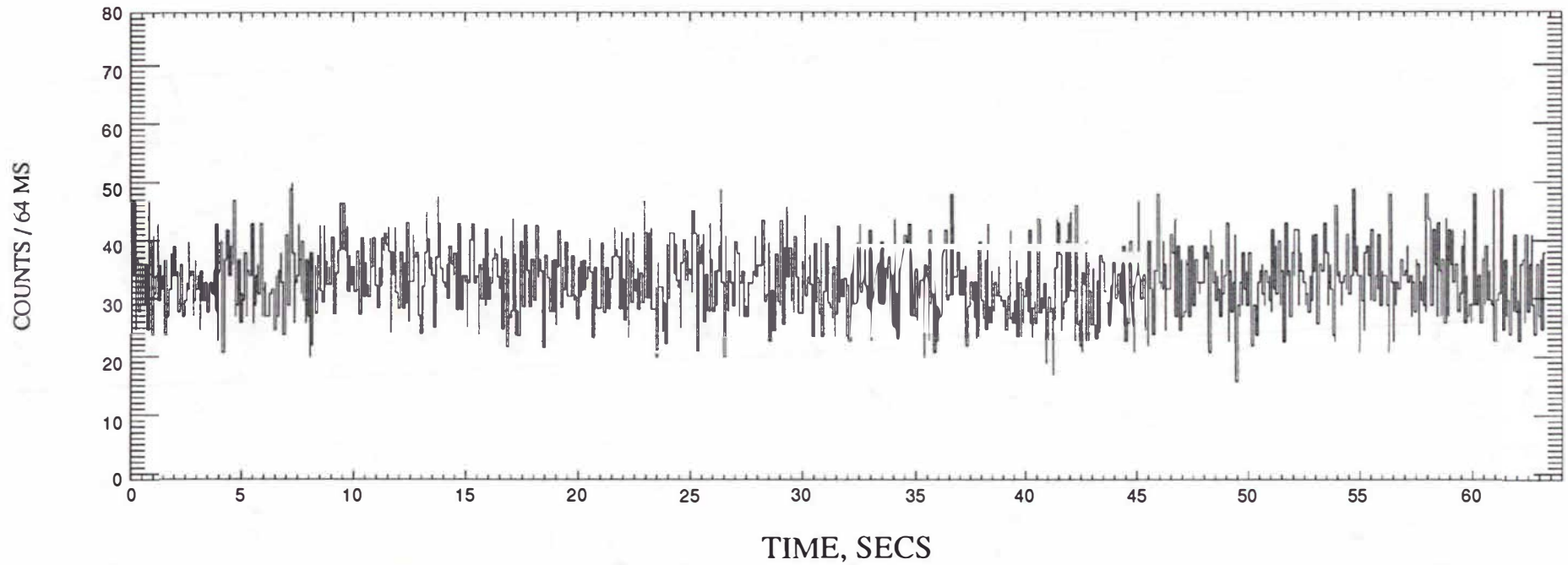


TIME, SECS

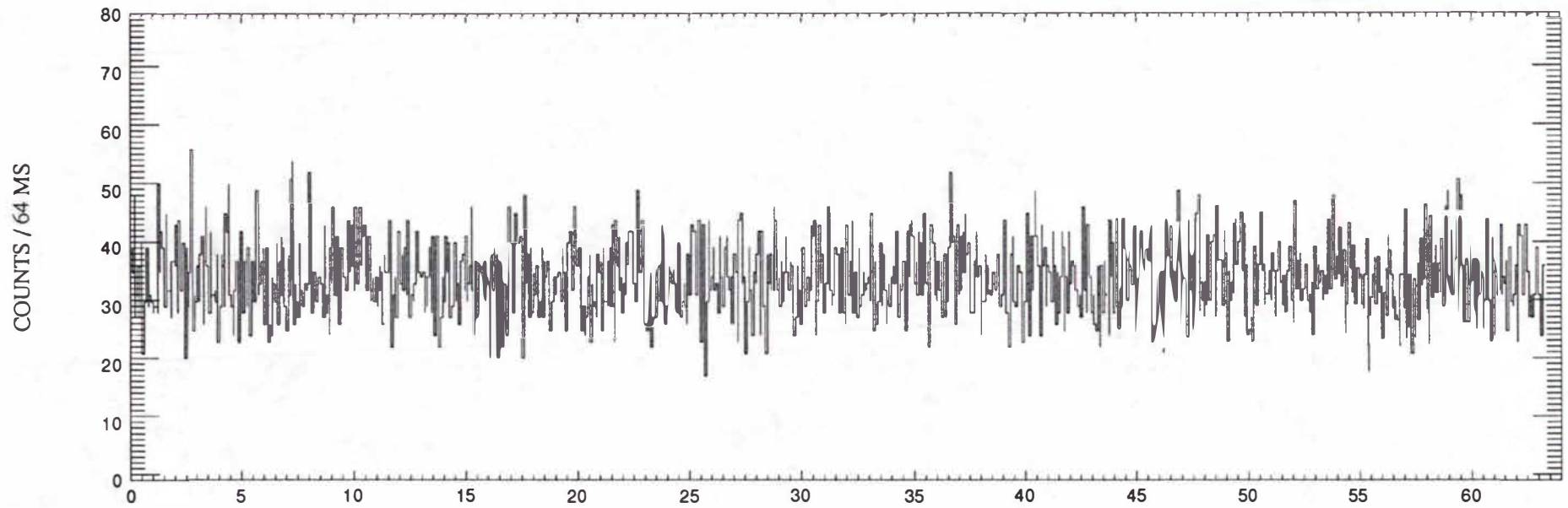
Burst Counter 3 at UT= 1.927890010410 h= 6940.404 s



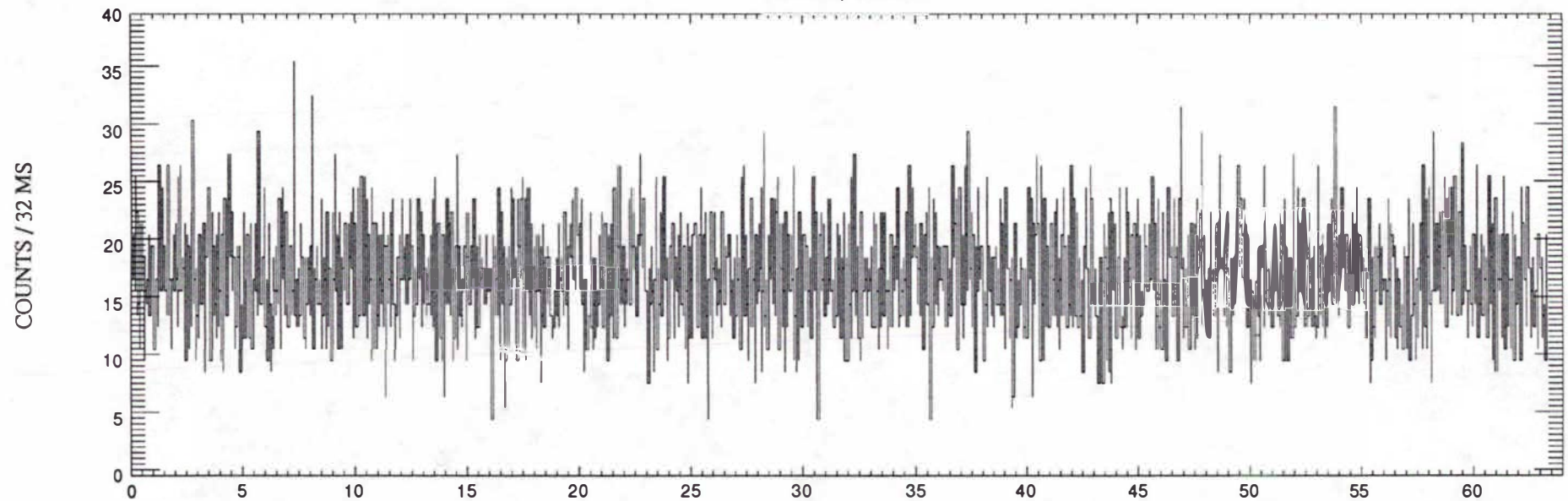
Burst Counter 4 at UT= 3.360031967163 h=12096.115 s



Burst Counter 5 at UT= 4.343173556858 h=15635.425 s

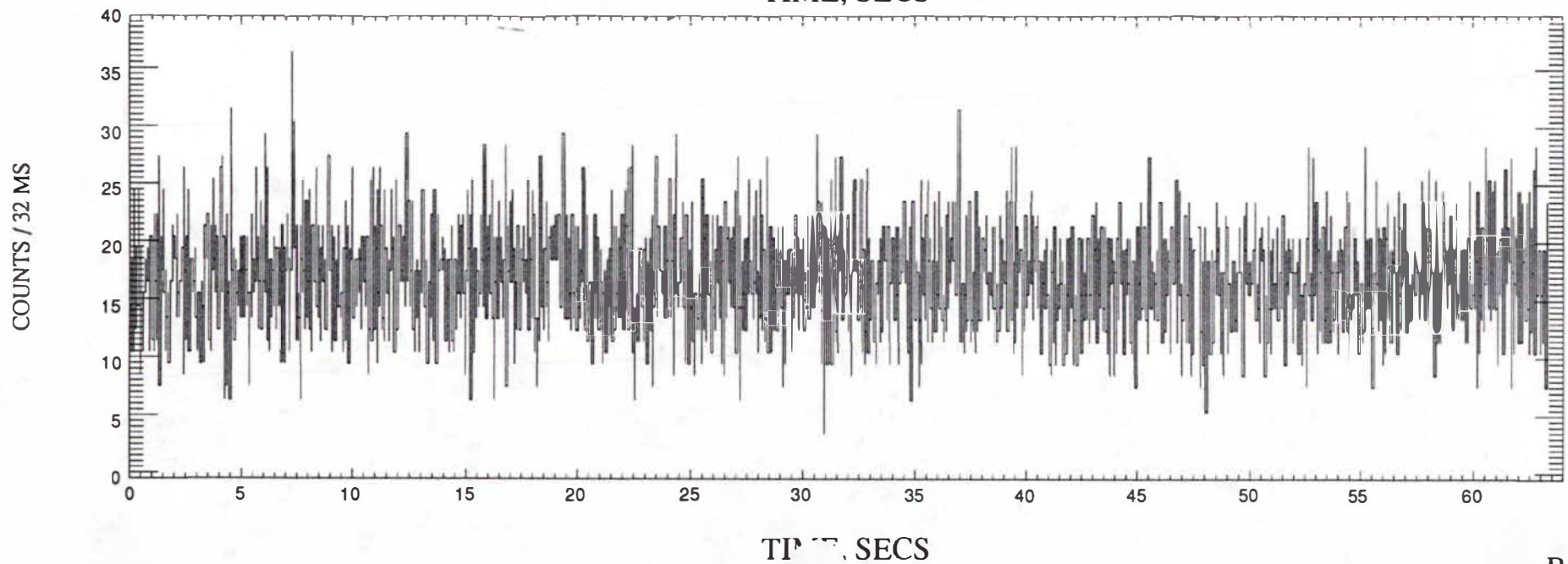
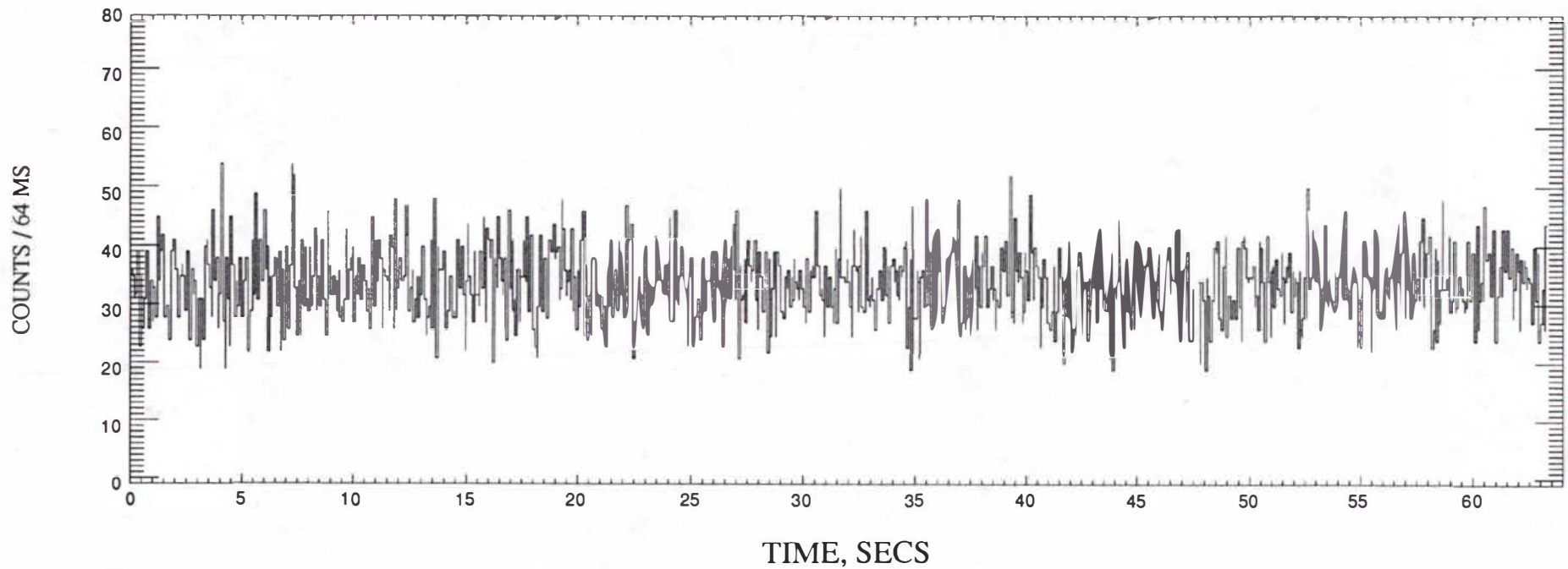


TIME, SECS

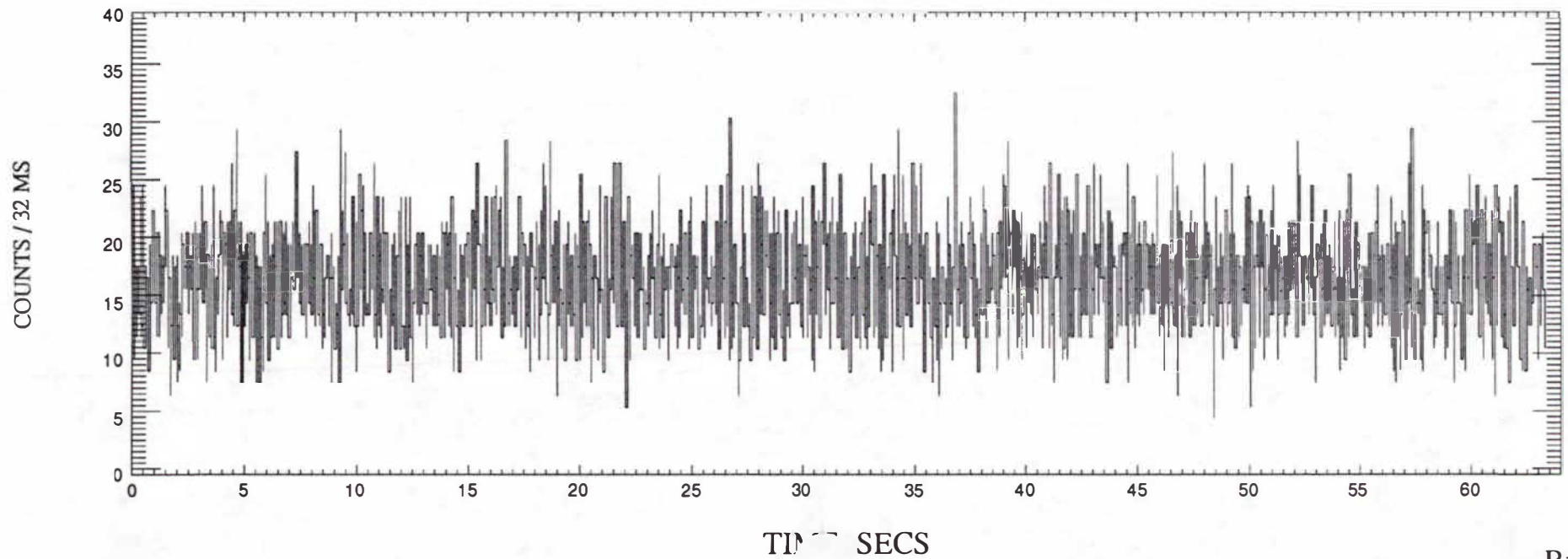
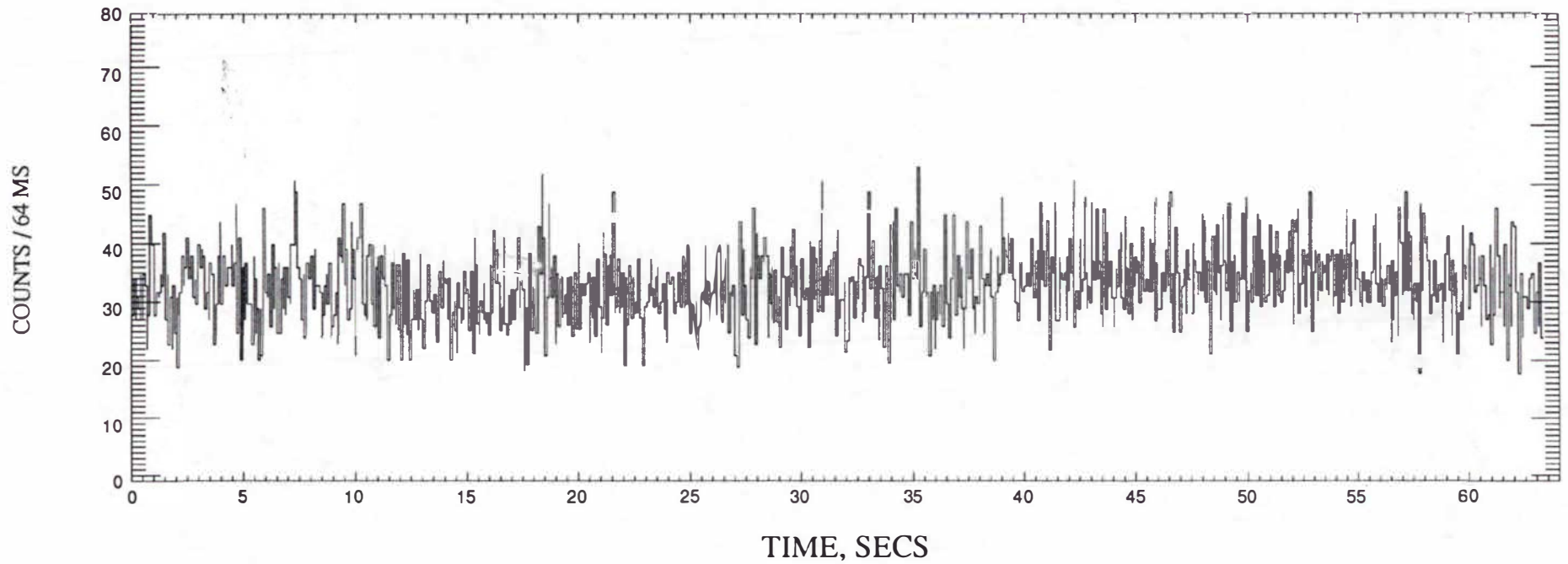


TIME, SECS

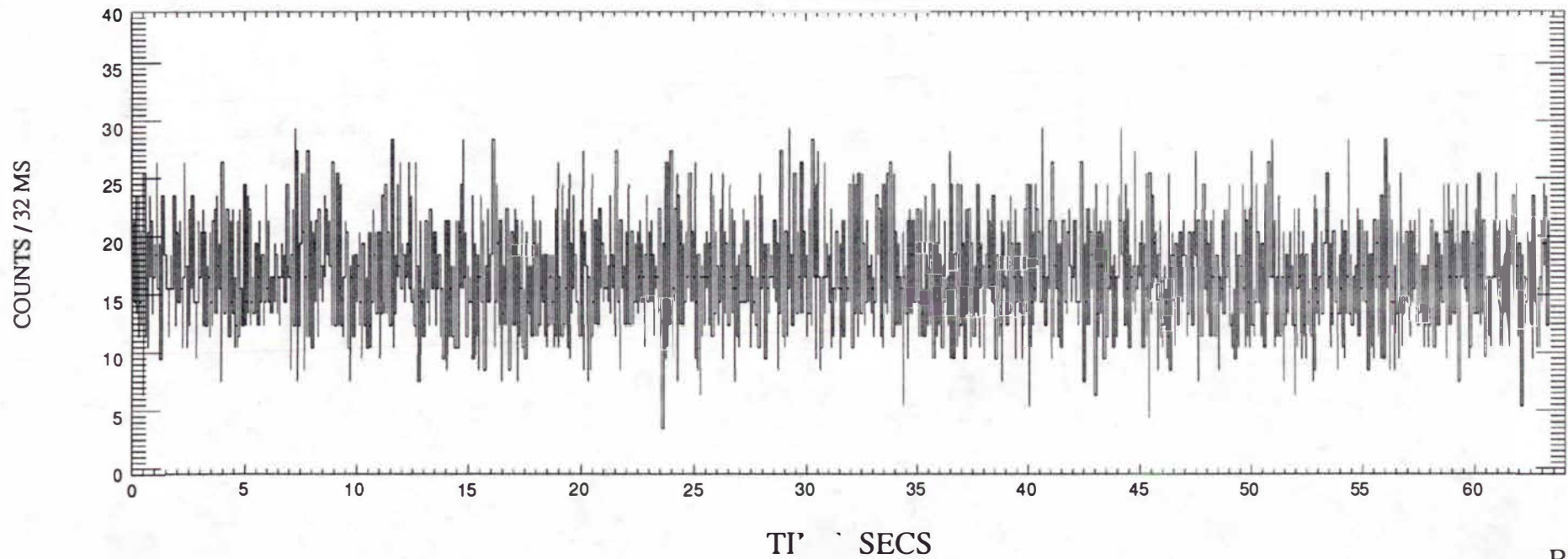
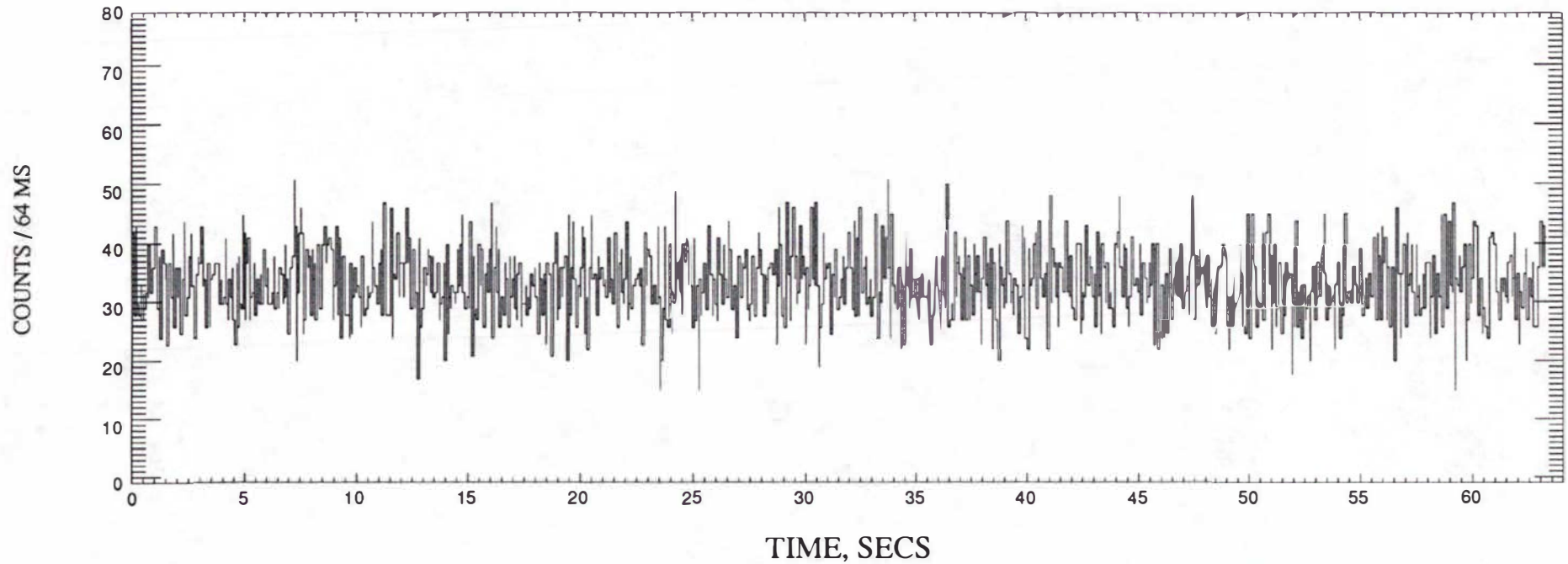
Burst Counter 6 at UT= 5.582637125651 h=20097.494 s



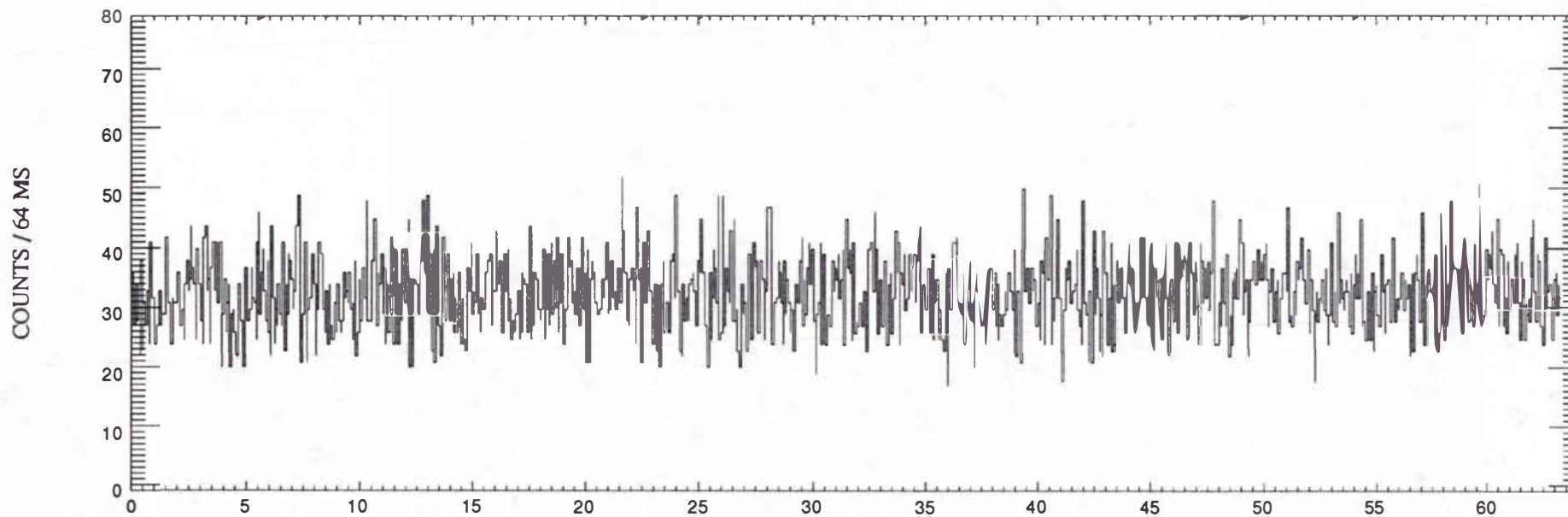
Burst Counter 7 at UT= 8.327611545987 h=29979.402 s



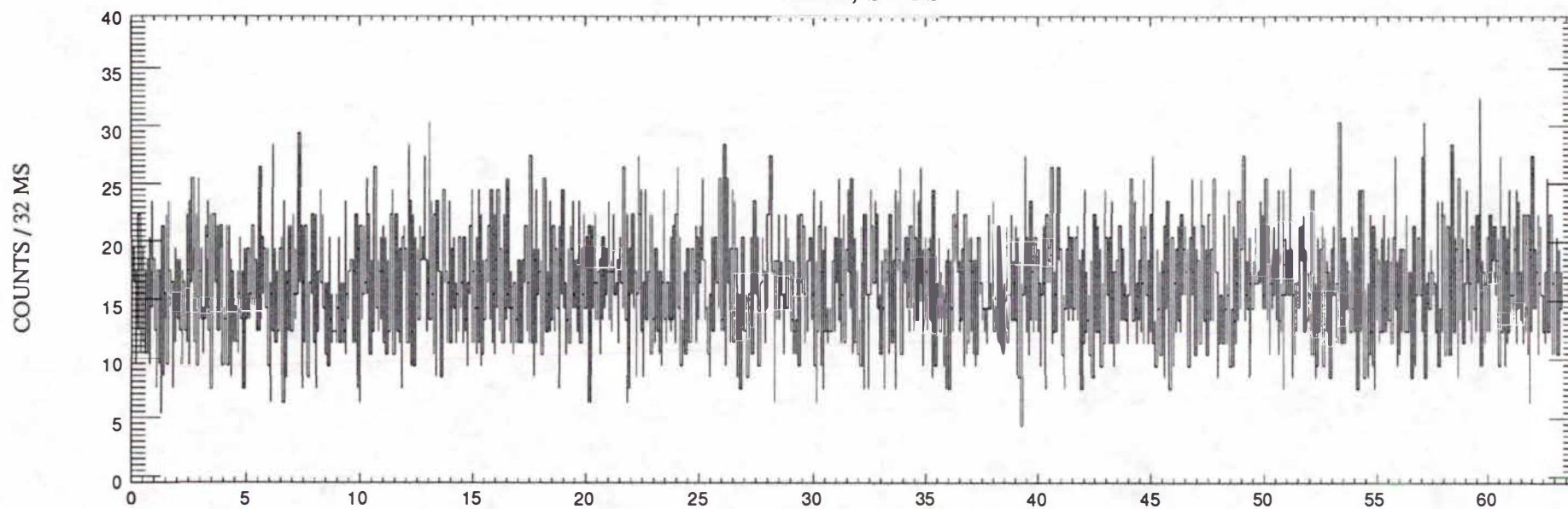
Burst Counter 8 at UT=10.255072470771 h=36918.261 s



Burst Counter 9 at UT=12.175586140951 h=43832.110 s

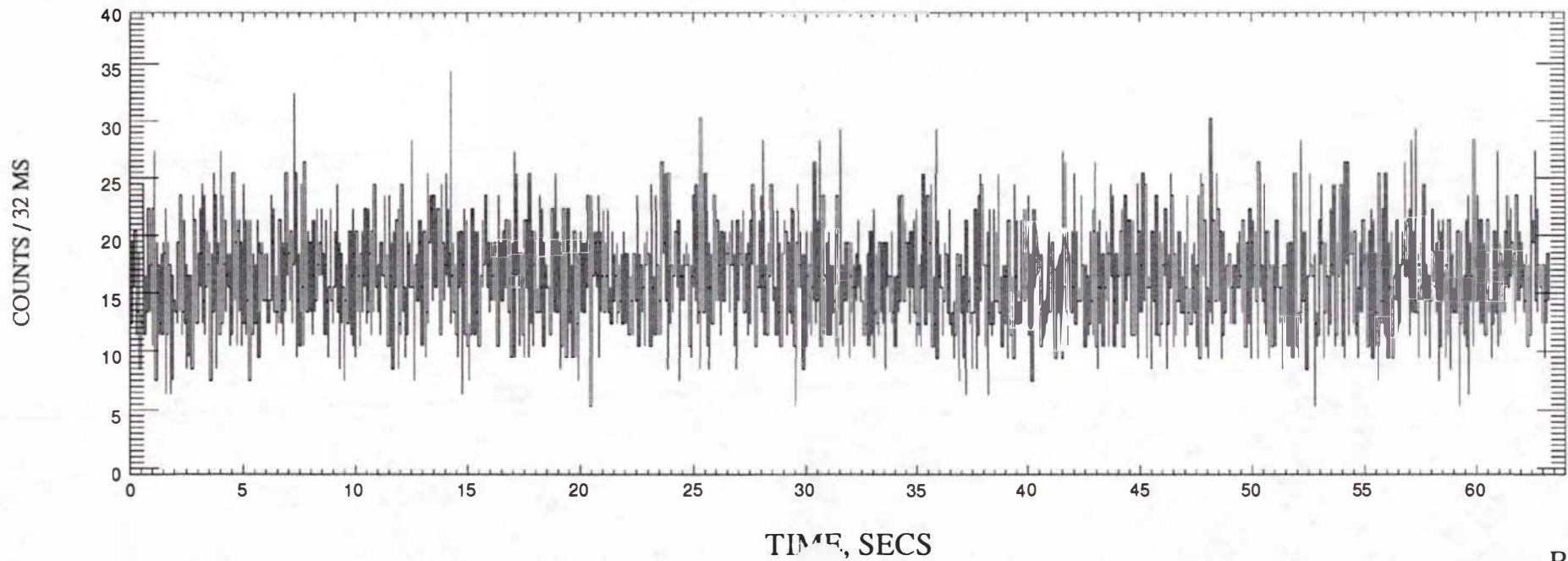
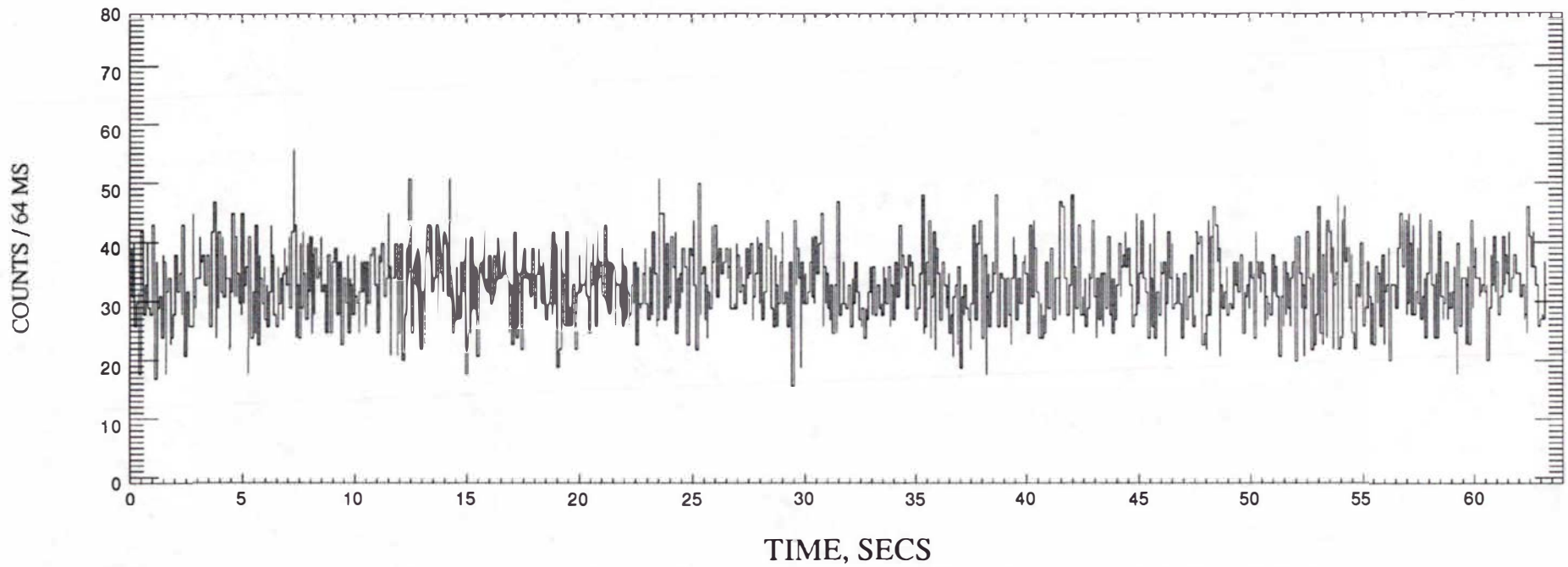


TIME, SECS

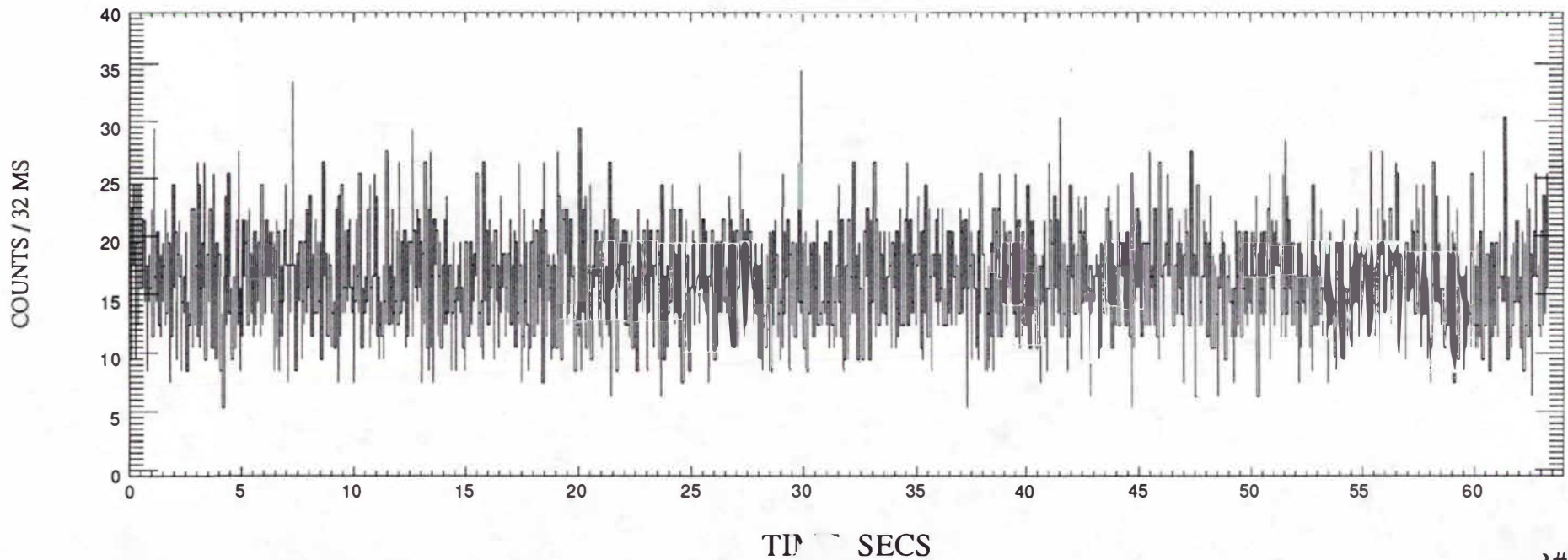
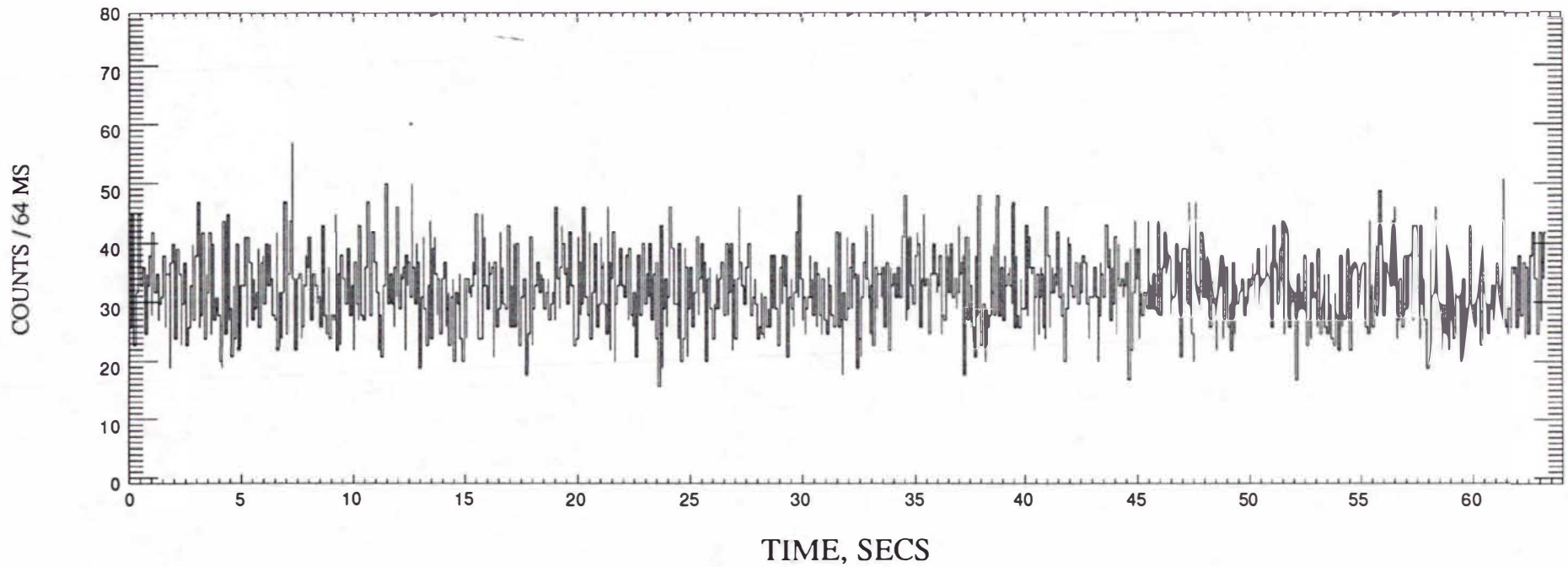


TIME, SECS

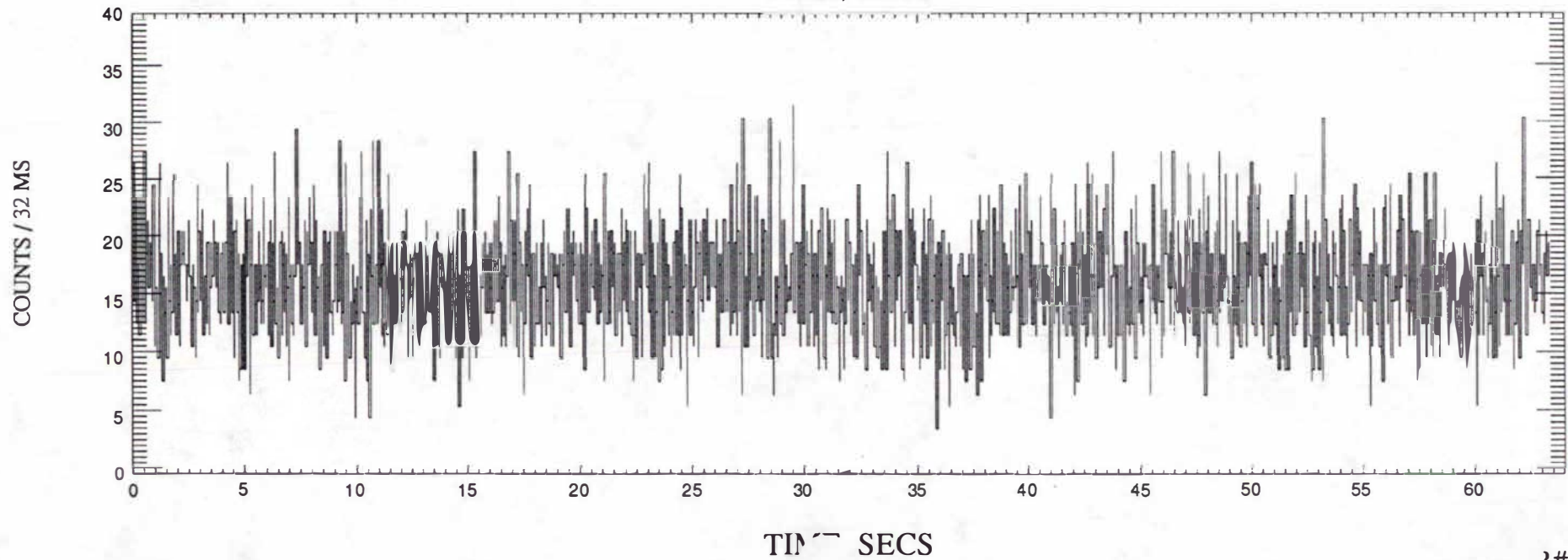
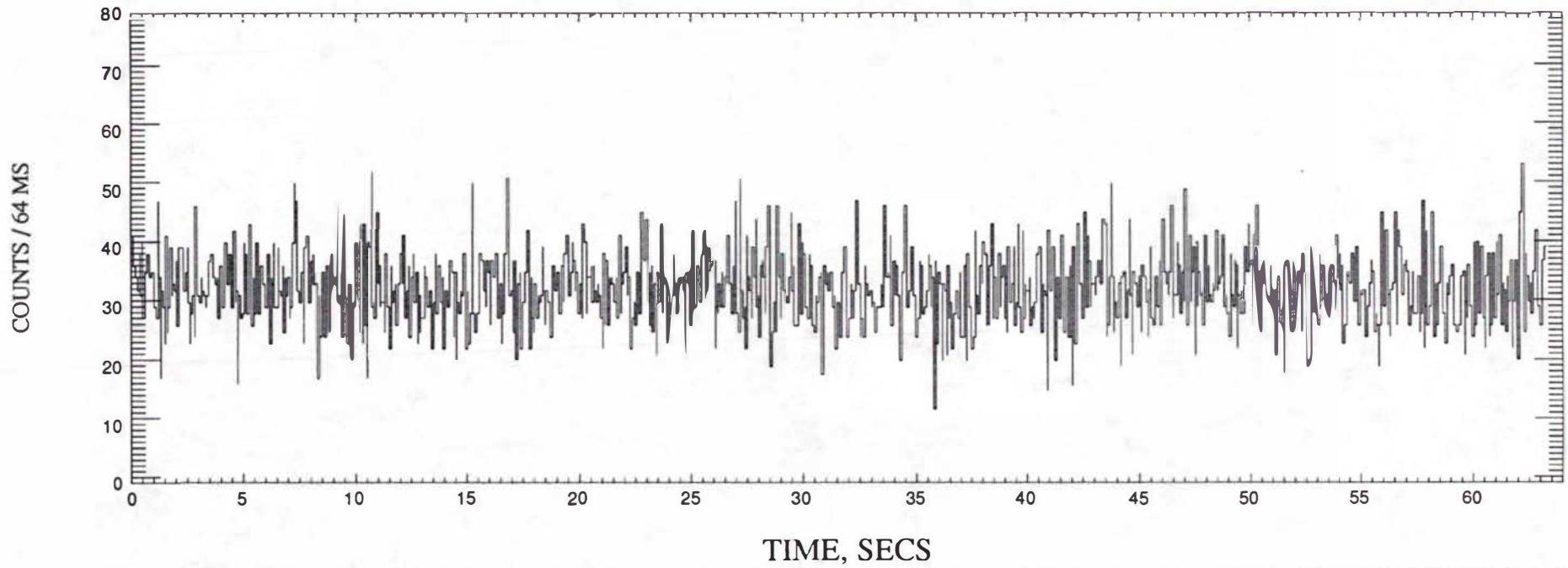
Burst Counter 10 at UT=14.072805137634 h=50662.098 s

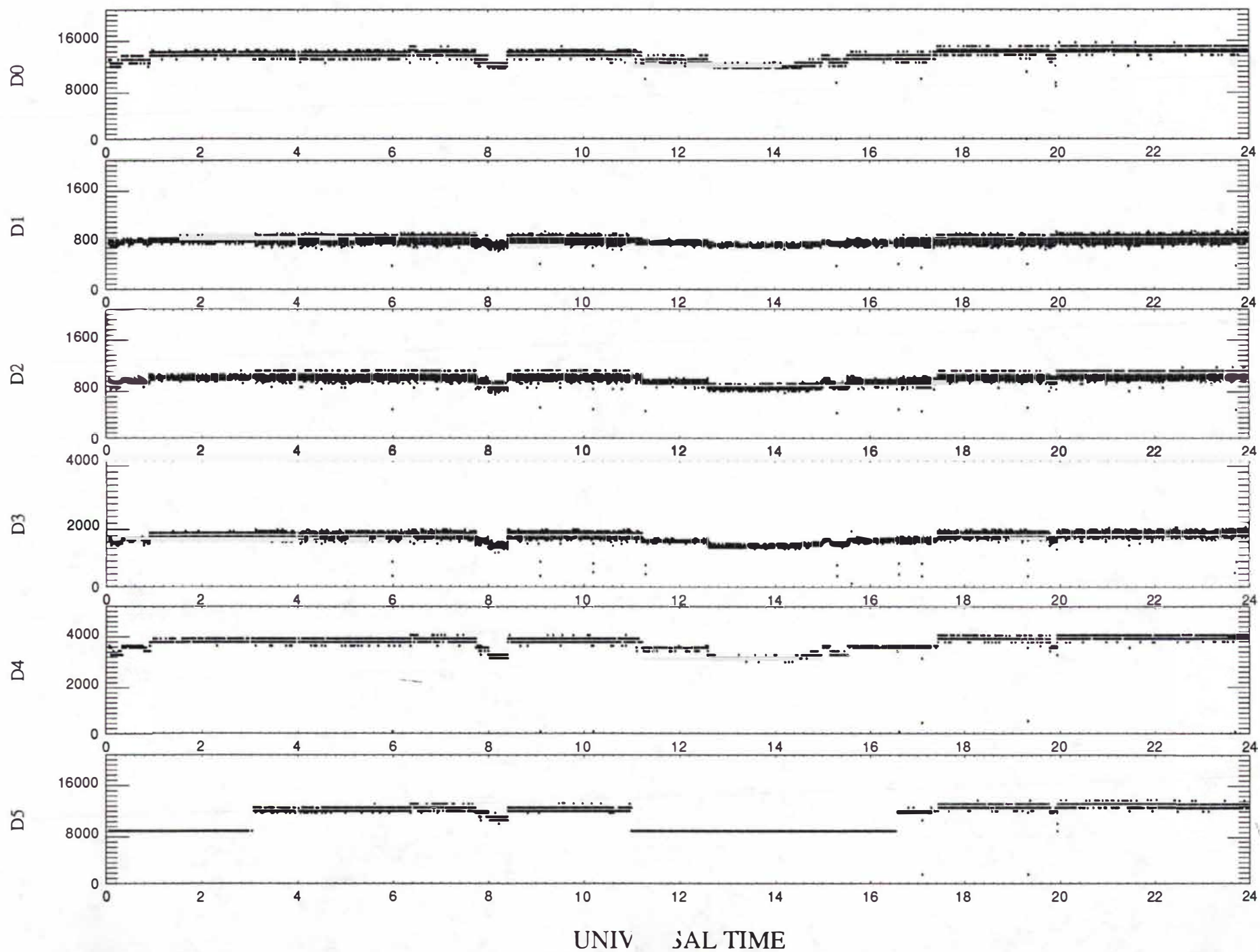


Burst Counter 12 at UT=17.828663643731 h=64183.189 s



Burst Counter 13 at UT=22.199082772997 h=79916.698 s





 CATSEARCH PROGRAM

BATSE BURST # 2048
 EVENT OF 1992 NOV 11 DAY OF YEAR=316
 EVENT CROSSING TIME AT BATSE : 23464. S. OR 06:31:03.5
 COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 302.700 57.200
 BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
 POSITION OF ULYSSES ON 11/11/ 92 IS:
 RA= 165.850 DEC= -6.813 DIST= 5.598 AU
 BATSE-ULYSSES DISTANCE = 837471272. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 60.52 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1374.79 SECS.
 CROSSING TIME AT ULYSSES IS 24838. S. OR 06:53:58.3 +/- 493.08 SECONDS

100

Content-Length: 108

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2048	921111	8937	23463	7000	303	+57

x-vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
 Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02048

Nr 11

TIME: TJD=8937 SECONDS=23463

TYPE: BURST

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=144.2 AZIMUTH=131.7 ERROR= DEGREES

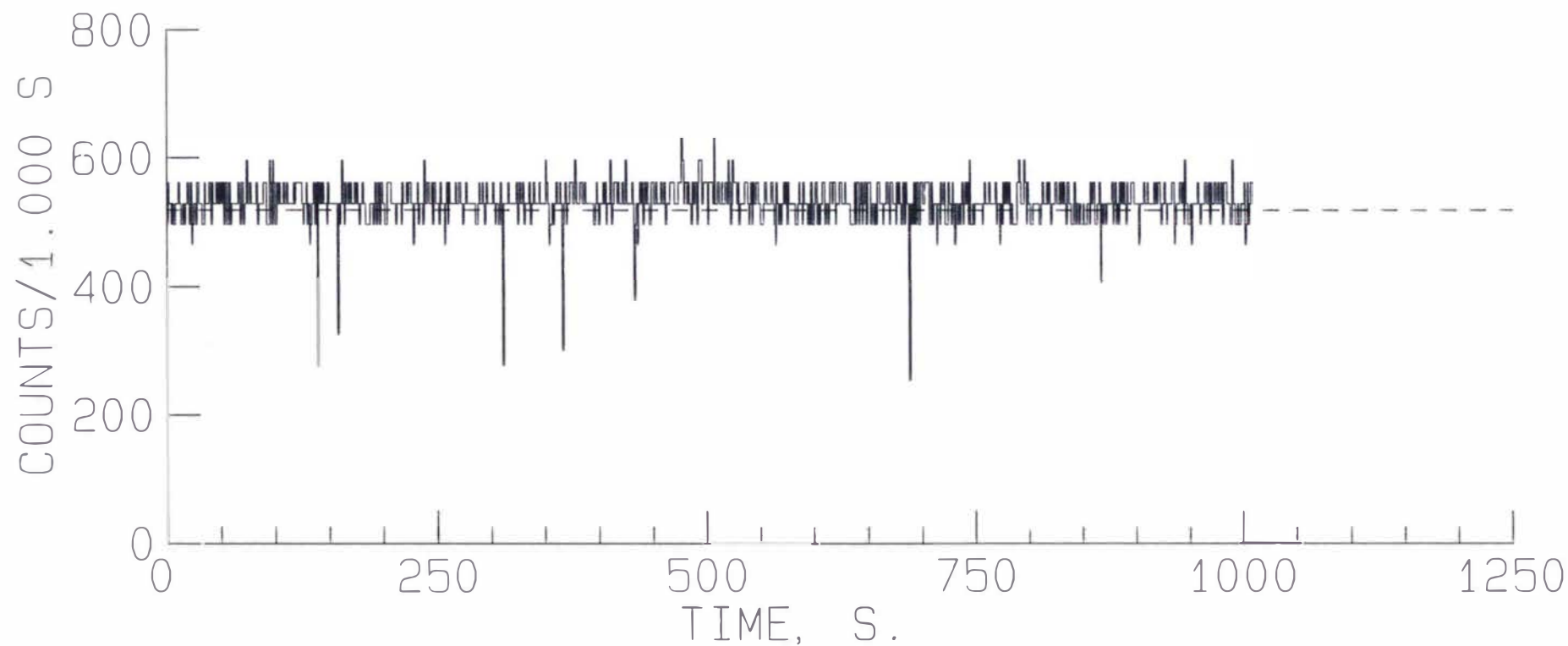
COMMENTS:

COMPLEX EVENT. DURATION APPROX. 30S. FIRST PEAK HARDER AND VISIBLE ABOVE 300KEV.

26/12/92

ULYSSES RT
11/11/92 24336.430 s
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



CATSEARCH PROGRAM

BATSE BURST # 2049
EVENT OF 1992 NOV 12 DAY OF YEAR=317
EVENT CROSSING TIME AT BATSE : 33789. S. OR 09:23:09.1
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 59.600 -37.600
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 12/11/ 92 IS:
RA= 165.914 DEC= -6.927 DIST= 5.582 AU
BATSE-ULYSSES DISTANCE = 835029800. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 81.53 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 410.41 SECS.
CROSSING TIME AT ULYSSES IS 34200. S. OR 09:29:59.5 +/- 534.54 SECONDS

NO

From MEEGAN@ssl.msfc.nasa.gov Tue Nov 17 13:53:32 1992
Date: Tue, 17 Nov 1992 15:54:09 -0600 (CST)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: BATSE burst
To: khurley@sunspot.ssl.berkeley.edu
X-Vmsmail-To: SMTP%"khurley@sunspot.ssl.berkeley.edu",BATSE::KOUVELIOTOU
Content-Length: 108

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2049	921111	8937	33789	11000	060	-38

From COLE@ssl.msfc.nasa.gov Mon Nov 16 13:39:29 1992
Date: Mon, 16 Nov 1992 15:40:27 -0600 (CST)
From: COLE@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02049

TIME: TJD=8937 SECONDS=33789

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=053.5 AZIMUTH=252.2 ERROR= DEGREES

COMMENTS:

SINGLE SPIKE EVENT. DUR. APPROX. .1S. NOT VISIBLE ABOVE 300KEV.

9 / 6 / 94

ULYSSES RT

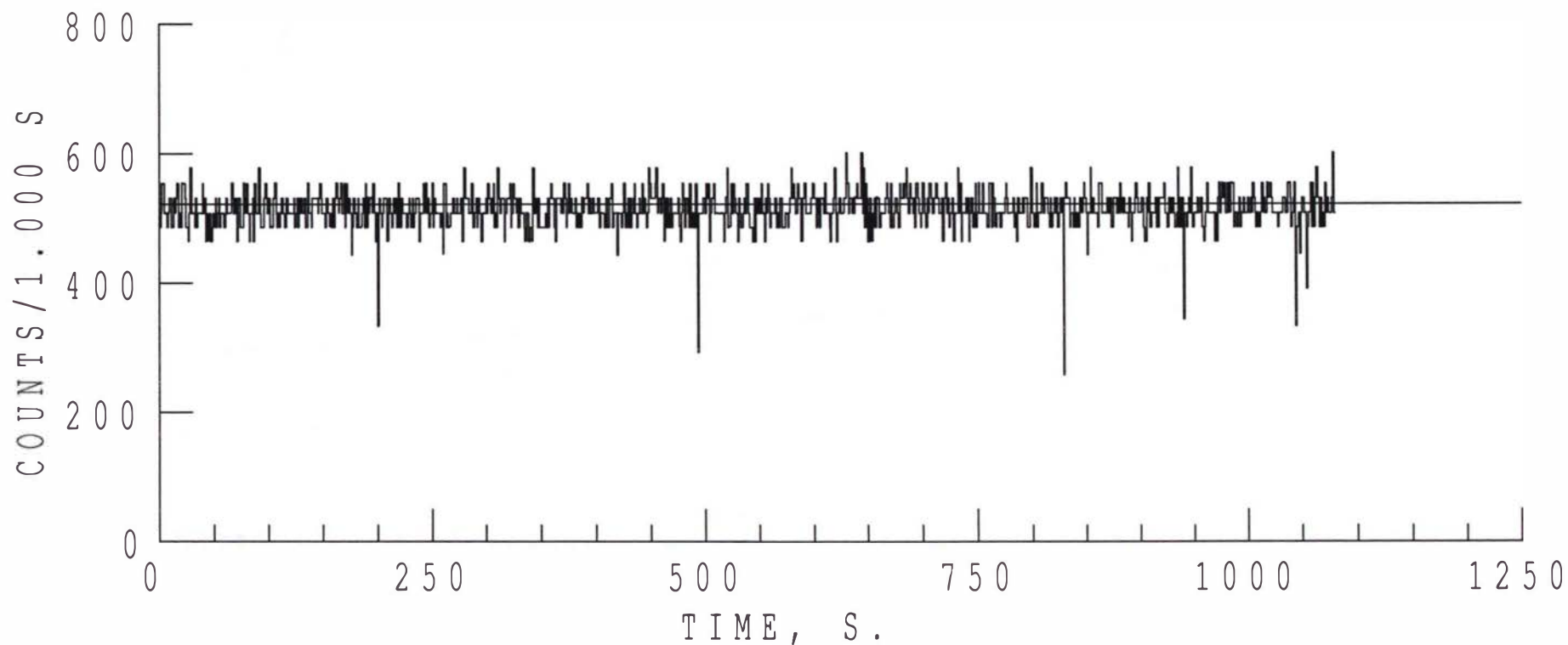
12/11/92 33660.445 s

0.500 S INTERVALS REGROUPED BY 2

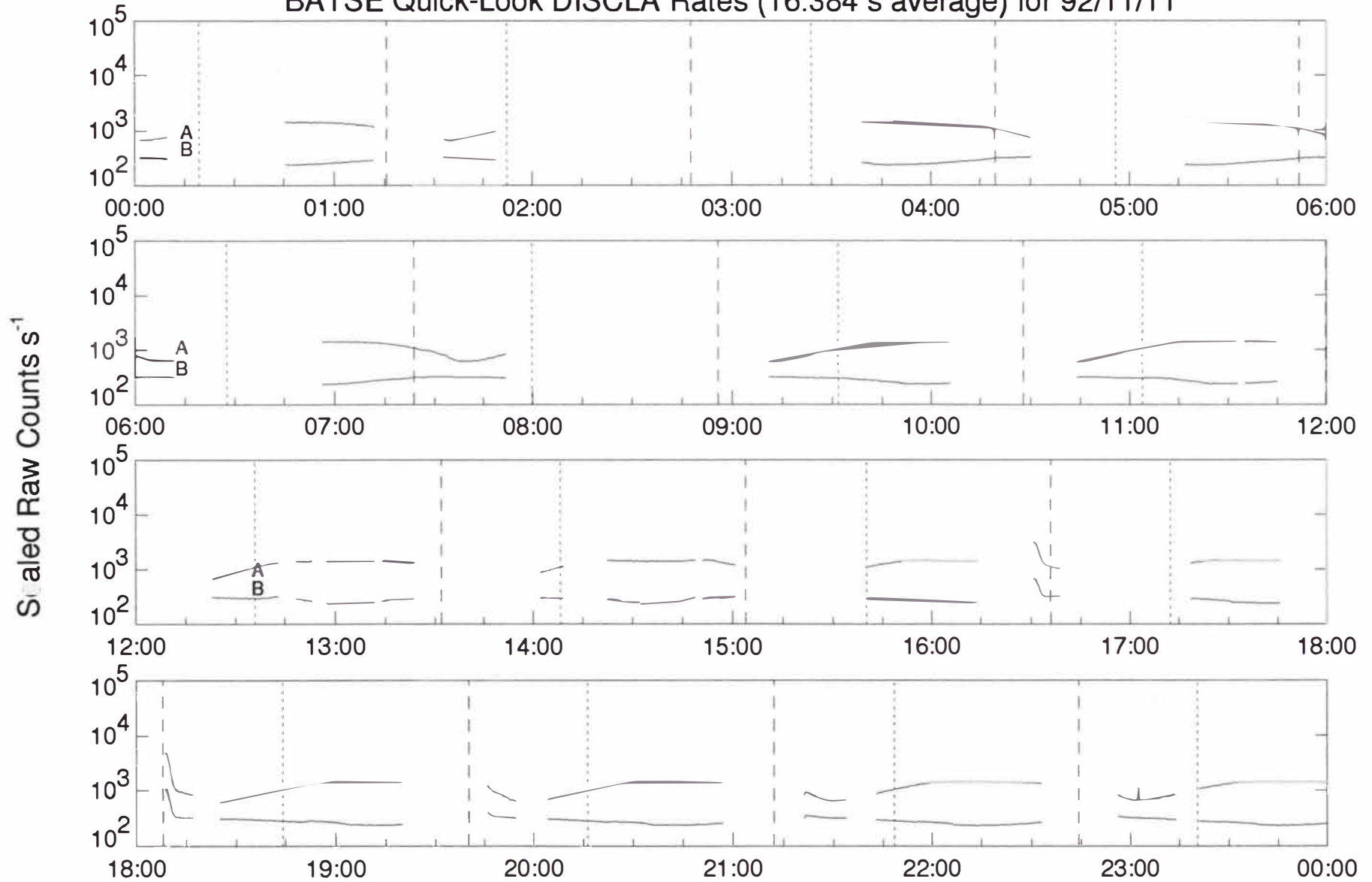
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



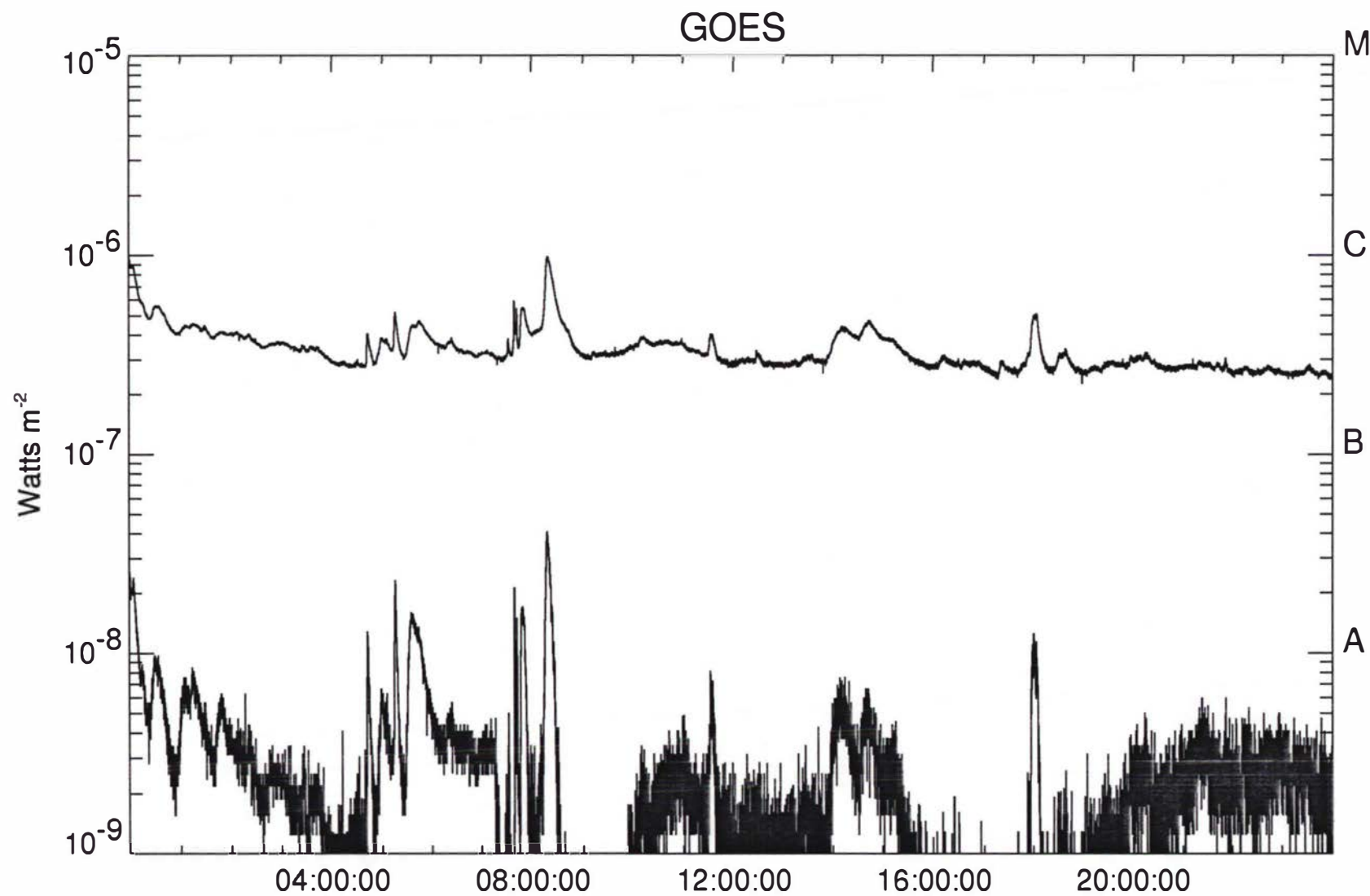
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/11



Current Time: 92/11/13, 0241 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



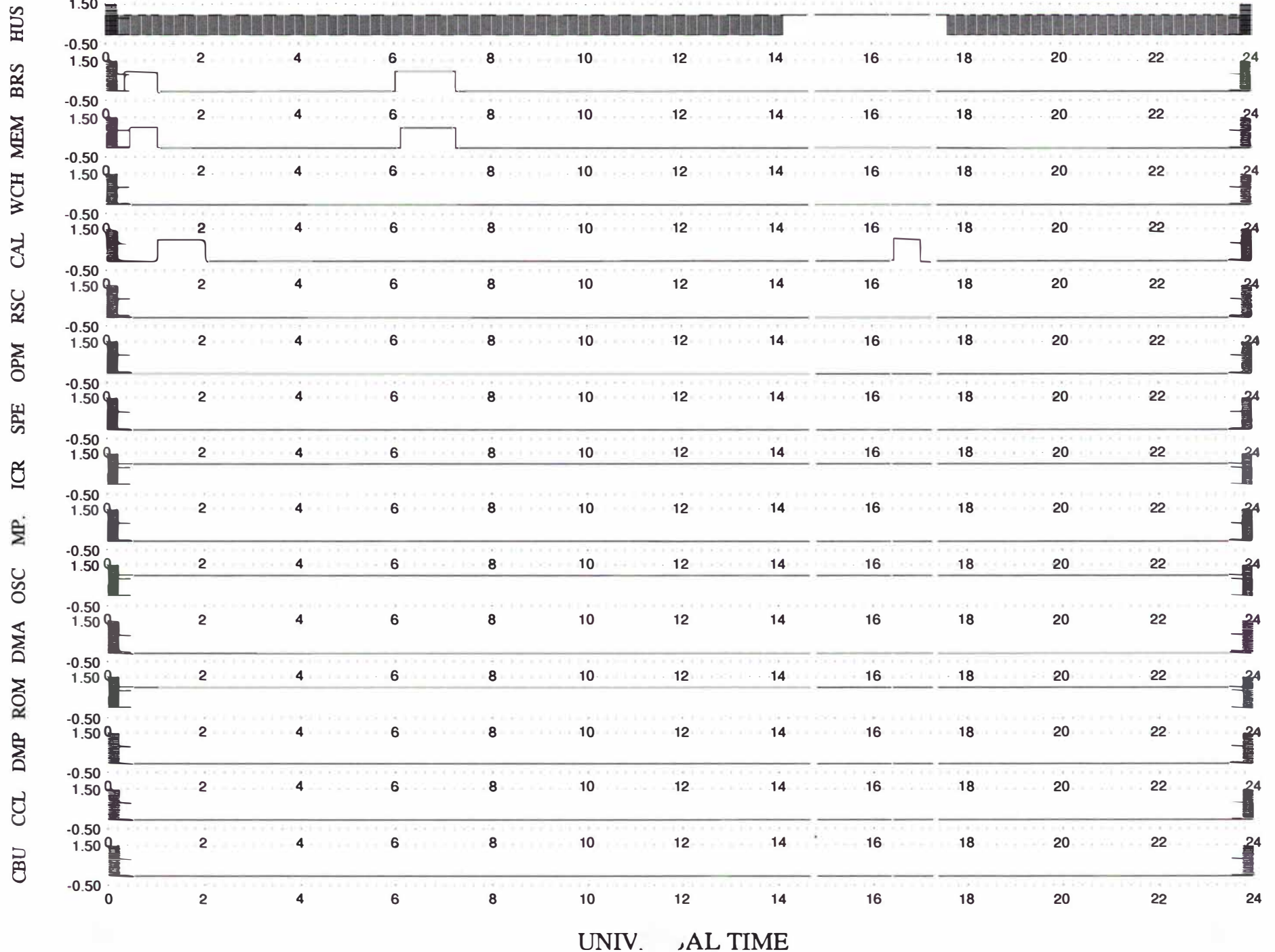
Data Start: 92/11/11, 0000:03

Plot created: 95/05/30, 1546

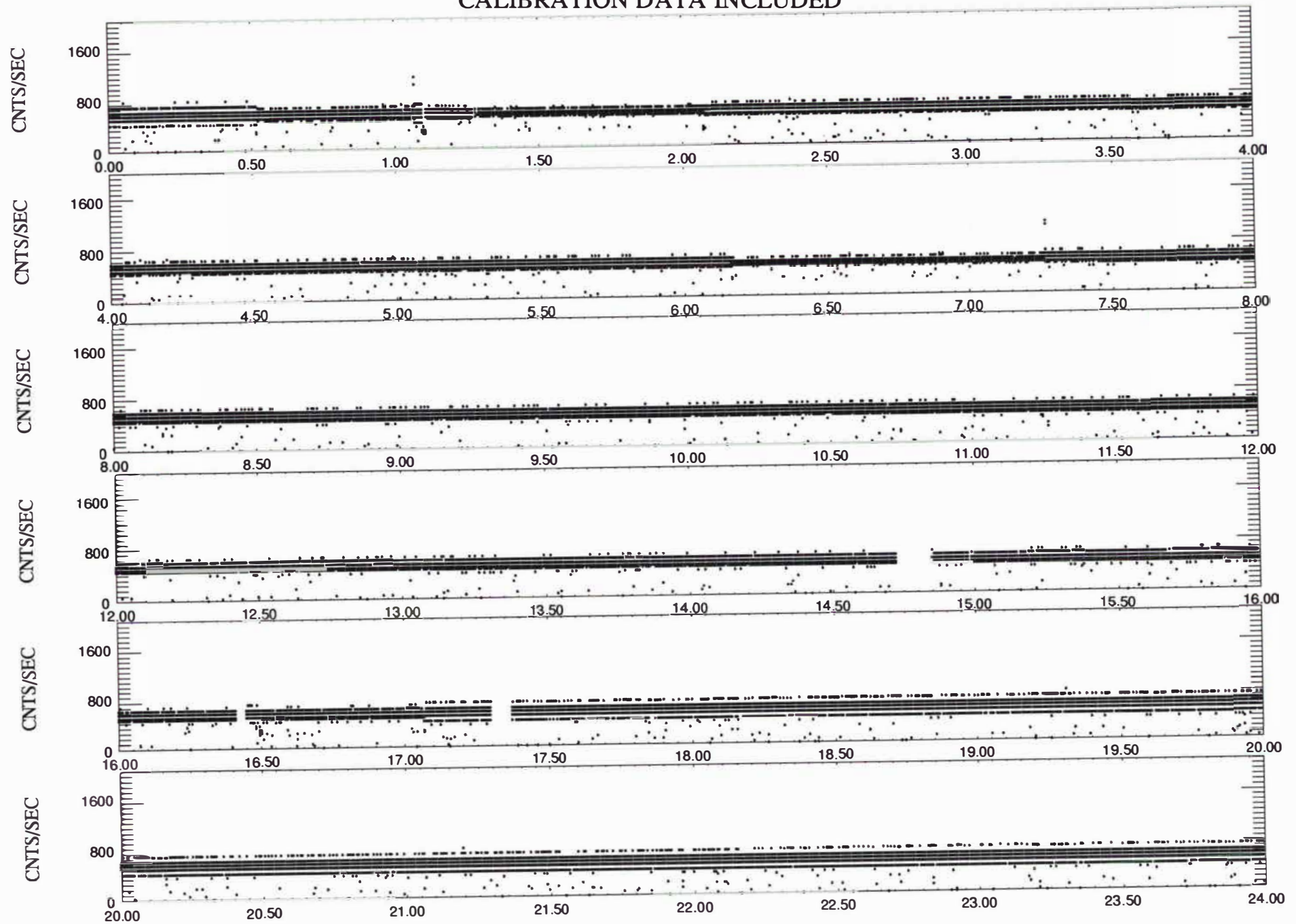
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BURST NUMBER 14, 15

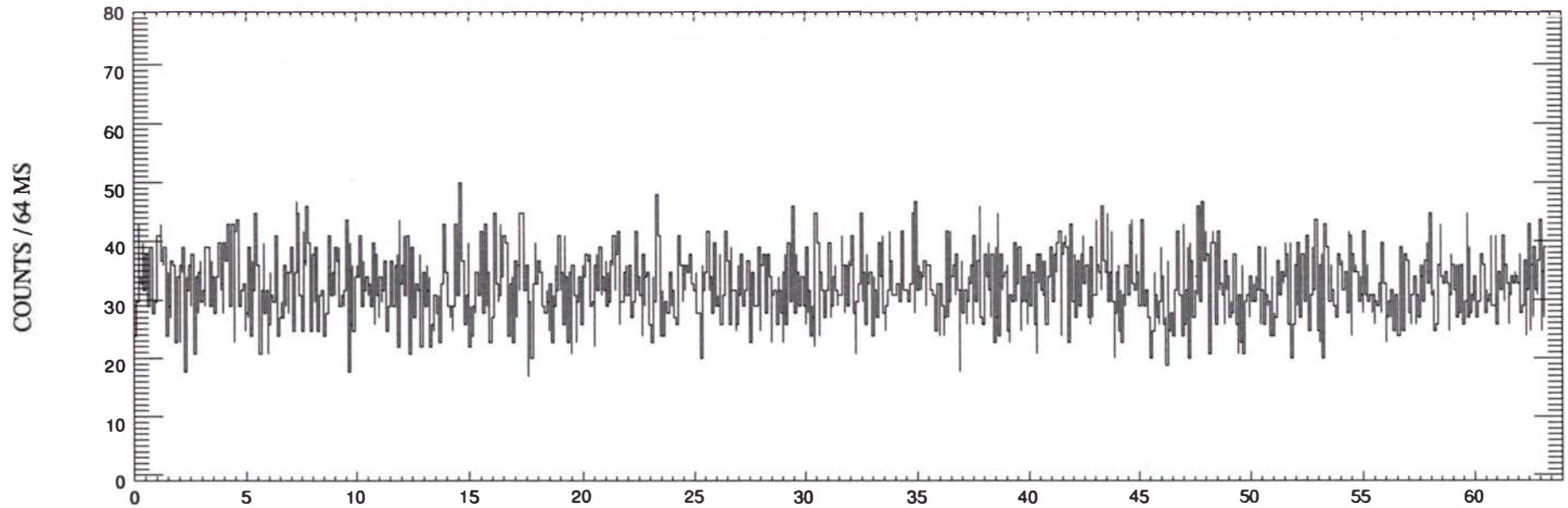


CALIBRATION DATA INCLUDED

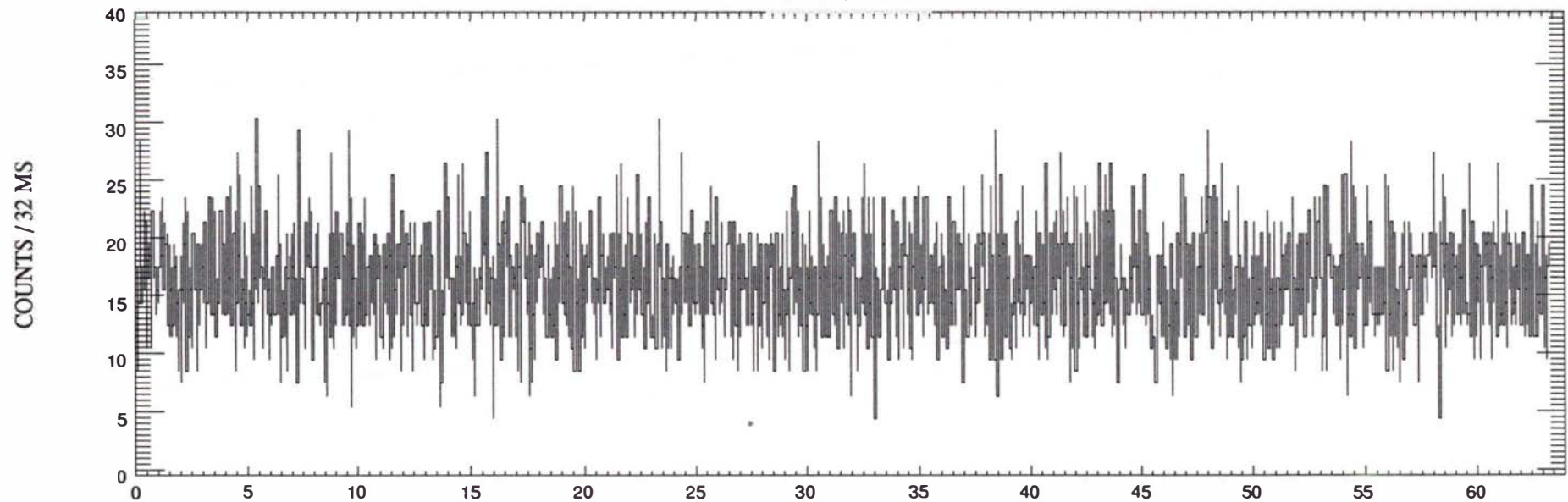


UNIV CAL TIME

Burst Counter 14 at UT= 0.364010179308 h= 1310.437 s

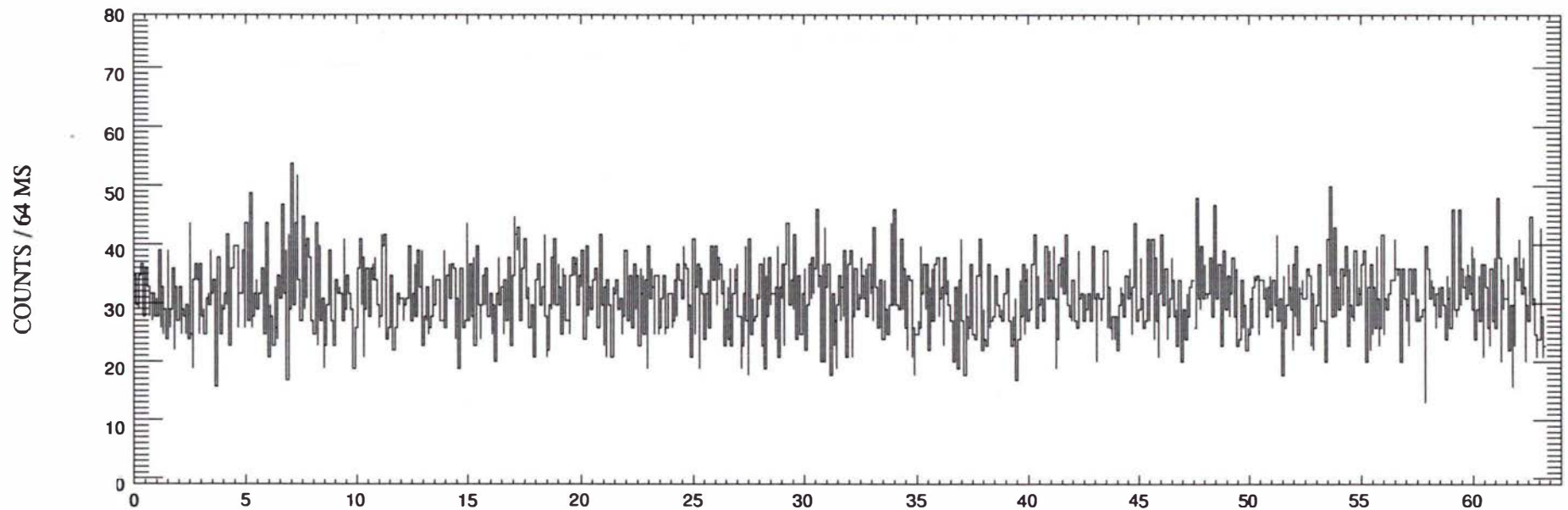


TIME, SECS

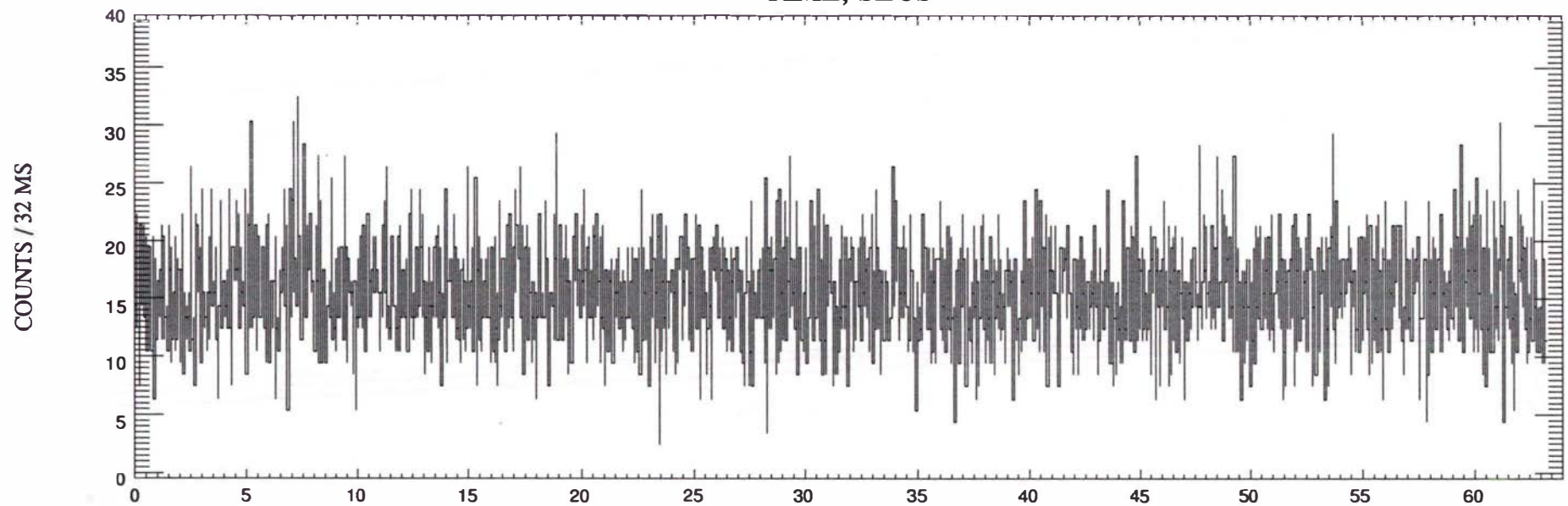


TIME, SECS

Burst Counter 15 at UT= 6.002432573107 h=21608.757 s

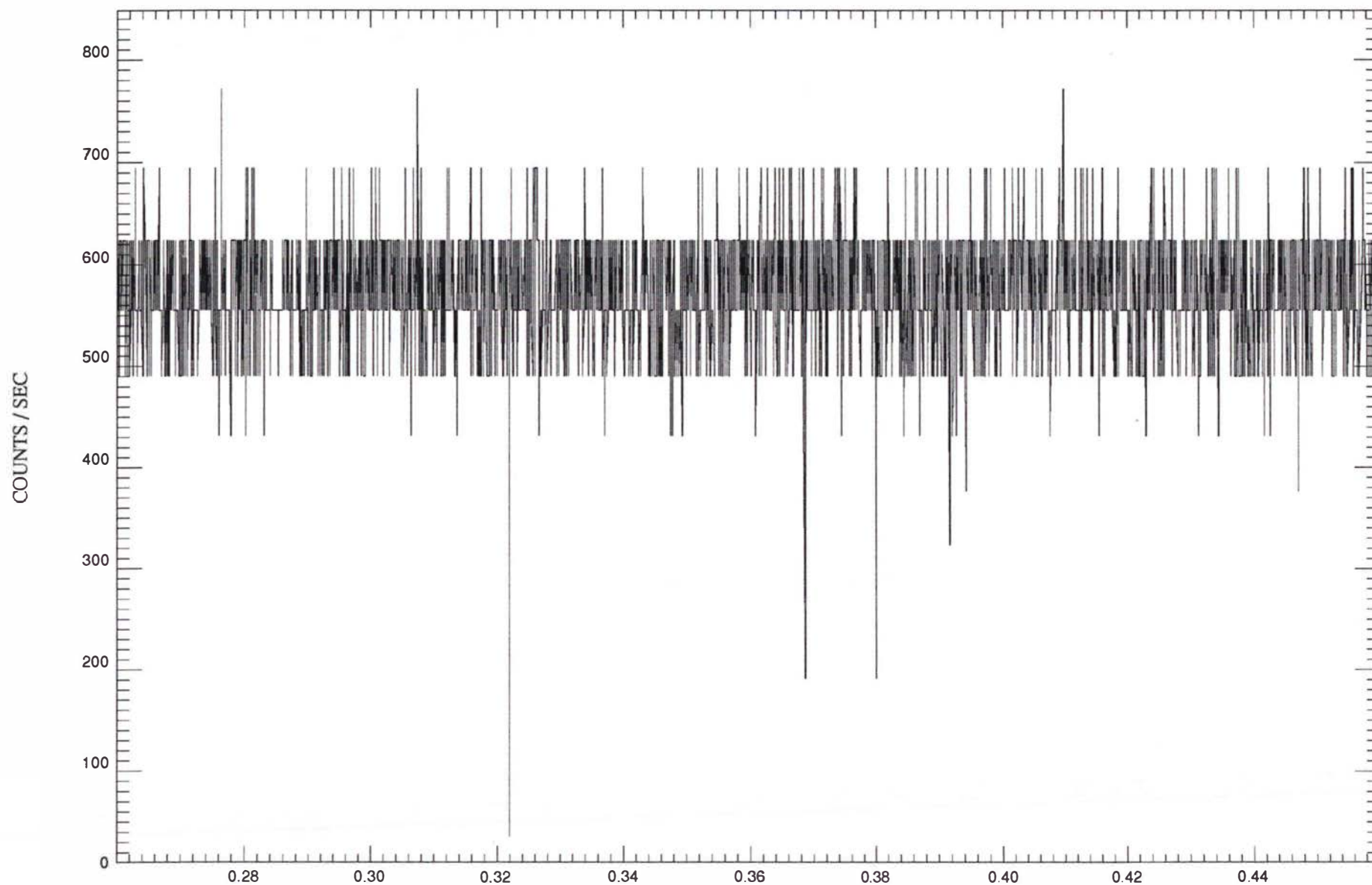


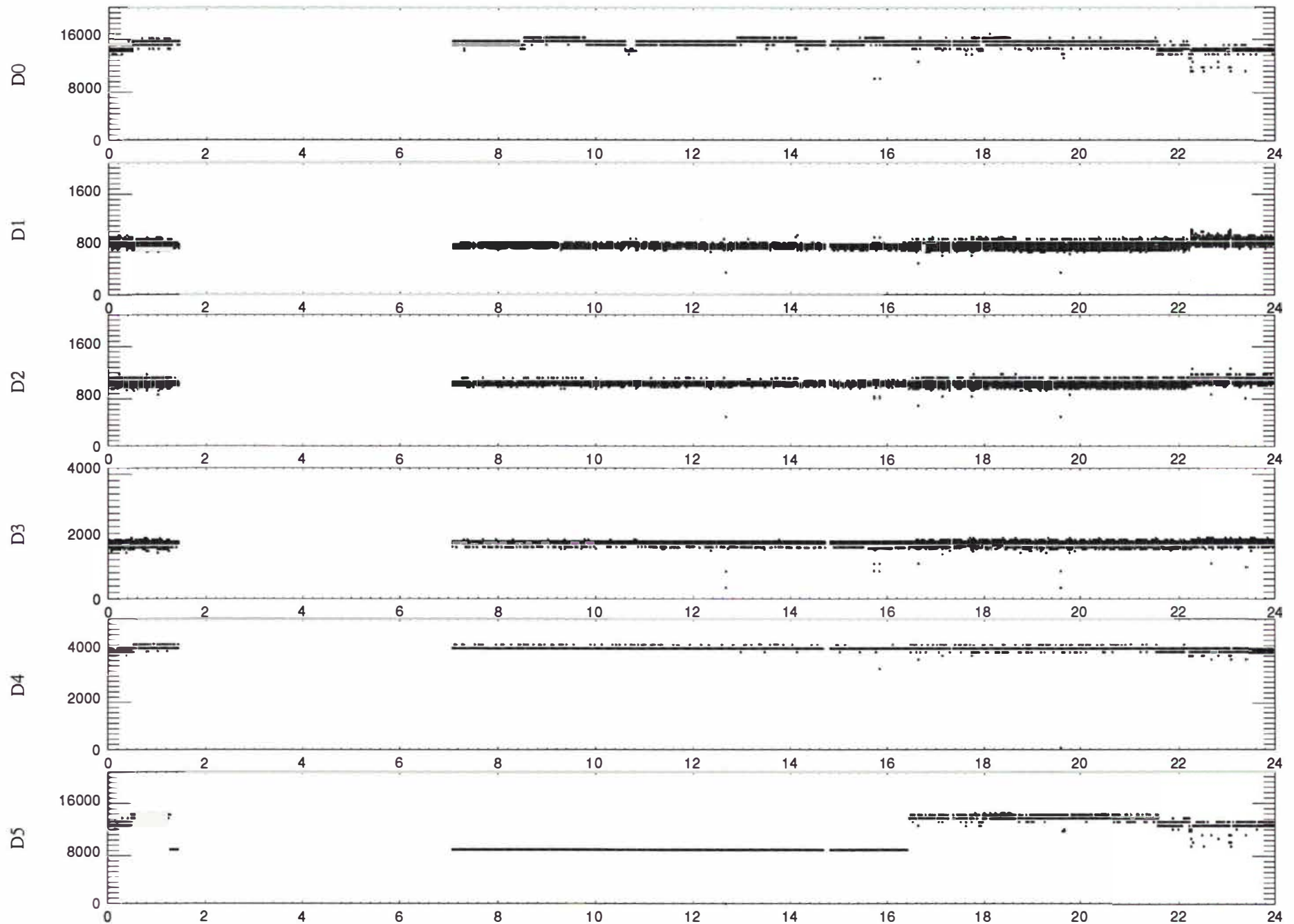
TIME, SECS



TIME, SECS

CALIBRATION DATA INCLUDED





UNIV. AL TIME

 CATSEARCH PROGRAM

BATSE BURST # 2050
 EVENT OF 1992 NOV 12 DAY OF YEAR=317
 EVENT CROSSING TIME AT BATSE : 19998. S. OR 05:33:18.3
 COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 173.500 -69.400
 BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
 POSITION OF ULYSSES ON 12/11/ 92 IS:
 RA= 165.914 DEC= -6.927 DIST= 5.582 AU
 BATSE-ULYSSES DISTANCE = 835029800. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=117.33 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1278.78 SECS.
 CROSSING TIME AT ULYSSES IS 18720. S. OR 05:11:59.5 +/- 460.18 SECONDS

10

From BRIGGS@ssl.msfc.nasa.gov Mon Nov 16 11:15:41 1992
 Date: Mon, 16 Nov 1992 13:16:59 -0600 (CST)
 From: BRIGGS@ssl.msfc.nasa.gov (Michael S. Briggs, 205-544-7716, Code ES-64, MSFC)
 Subject: Burst Trigger Message
 To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
 khurley@space6.ssl.berkeley.edu
 X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
 Content-Length: 1297

BATSE BURST TRIGGER

NO.: 02050

TIME: TJD=8938 SECONDS=19998

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=068.8 AZIMUTH=323.3 ERROR= DEGREES

COMMENTS:

WEAK, MULTI-PEAK EVENT LASTING AT LEAST 4 SECONDS AND POSSIBLY 10 SECONDS.
 SEEN ABOVE 300 KEV. STONGEST BETWEEN 50 AND 300 KEV.

From MEEGAN@ssl.msfc.nasa.gov Tue Nov 17 13:59:40 1992
 Date: Tue, 17 Nov 1992 15:57:09 -0600 (CST)
 From: MEEGAN@ssl.msfc.nasa.gov
 Subject: BATSE burst
 To: khurley@sunspot.ssl.berkeley.edu
 X-Vmsmail-To: SMTP%"khurley@sunspot.ssl.berkeley.edu",BATSE::KOUVELIOTOU
 Content-Length: 108

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2050	921112	8938	19998	3000	173	-69

19/11/92

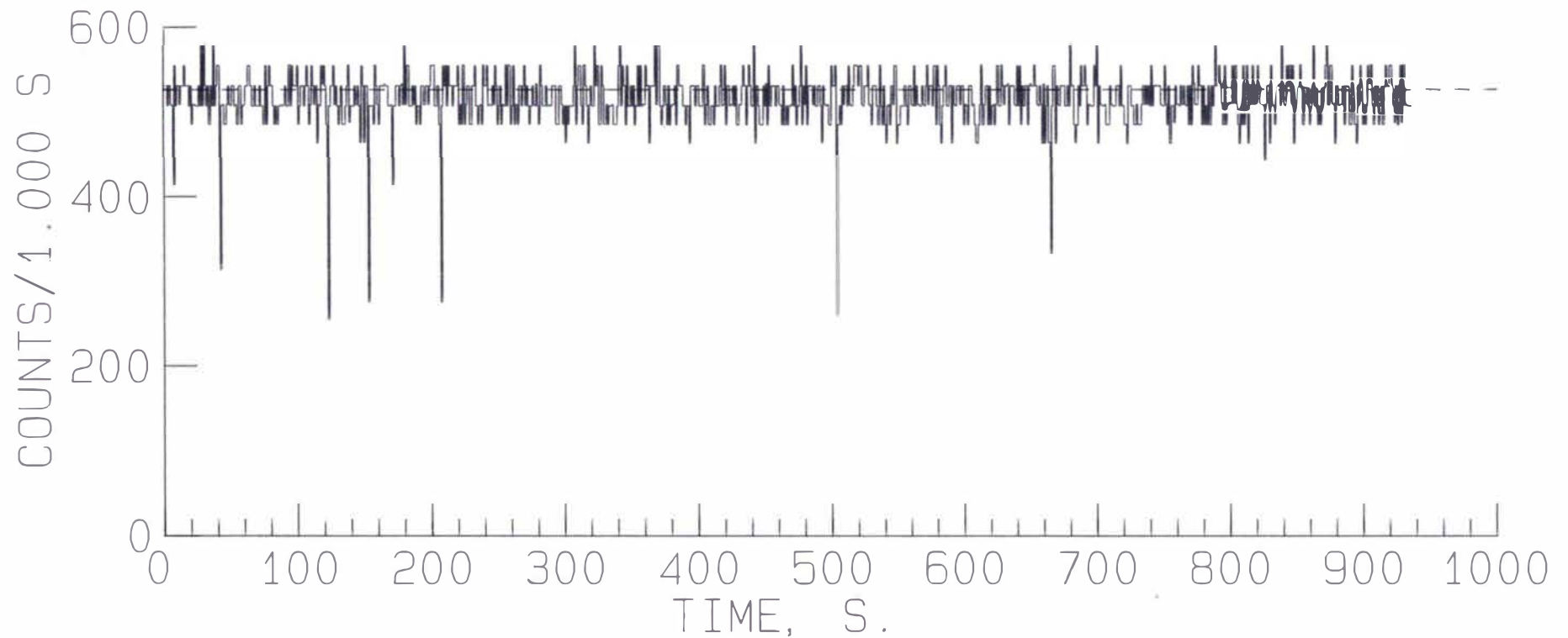
ULYSSES RT

12/11/92 18216.201 s

.500 S INTERVALS REGROUPED BY 2

0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



 CATSEARCH PROGRAM

BATSE BURST # 2051
 EVENT OF 1992 NOV 12 DAY OF YEAR=317
 EVENT CROSSING TIME AT BATSE : 33968. S. OR 09:26:08.2
 COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 290.100 -46.500
 BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
 POSITION OF ULYSSES ON 12/11/ 92 IS:
 RA= 165.914 DEC= -6.927 DIST= 5.582 AU
 BATSE-ULYSSES DISTANCE = 835029800. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 72.75 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= 825.77 SECS.
 CROSSING TIME AT ULYSSES IS 34794. S. OR 09:39:54.0 +/- 524.38 SECONDS

10

From BRIGGS@ssl.msfc.nasa.gov Mon Nov 16 11:50:00 1992
 Date: Mon, 16 Nov 1992 13:51:26 -0600 (CST)
 From: BRIGGS@ssl.msfc.nasa.gov (Michael S. Briggs, 205-544-7716, Code ES-64, MSFC)
 Subject: Burst Trigger Message
 To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
 khurley@space6.ssl.berkeley.edu
 X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
 Content-Length: 1458

BATSE BURST TRIGGER

NO.: 02051

TIME: TJD=8938 SECONDS=33968

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=121.4 AZIMUTH=305.8 ERROR= DEGREES

COMMENTS:

WEAK, MULTI-PEAK EVENT OF 10 SECOND DURATION. THERE ARE TWO SPIKES AT
 80 AND 120 SECONDS AFTER TRIGGER THAT ARE POSSIBLY PART OF THE BURST
 THE BURST IS NOT SEEN ABOVE 300 KEV. THE TWO LATE SPIKES ARE NOT SEEN
 ABOVE 100 KEV.

From MEEGAN@ssl.msfc.nasa.gov Tue Nov 17 13:59:46 1992
 Date: Tue, 17 Nov 1992 15:59:24 -0600 (CST)
 From: MEEGAN@ssl.msfc.nasa.gov
 Subject: BATSE burst
 To: khurley@sunspot.ssl.berkeley.edu
 .-Vmsmail-To: SMTP%"khurley@sunspot.ssl.berkeley.edu",BATSE::KOUVELIOTOU
 Content-Length: 108

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2051	921112	8938	33968	4600	290	-46

19/11/92

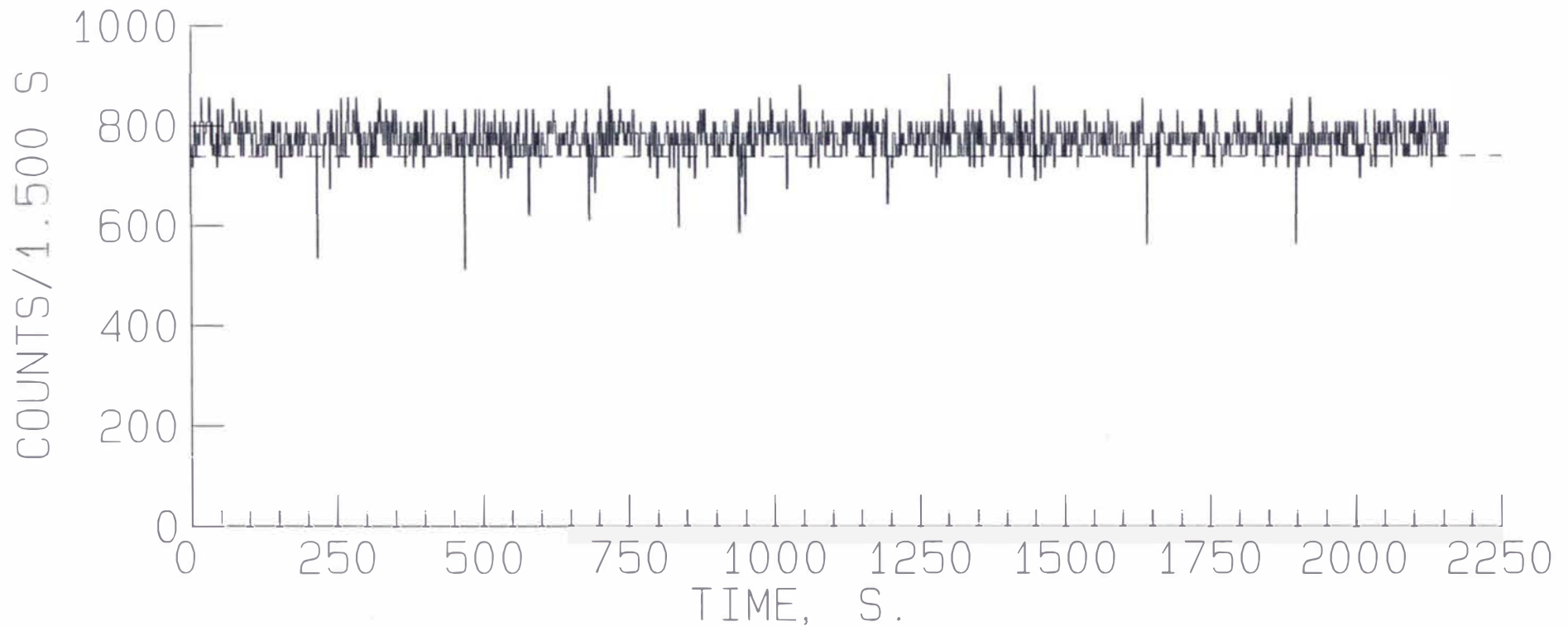
ULYSSES RT

12/11/92 34272.457 s

.500 S INTERVALS REGROUPED BY 3

0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



CATSEARCH PROGRAM

BATSE BURST # 2052

EVENT OF 1992 NOV 12 DAY OF YEAR=317

EVENT CROSSING TIME AT BATSE : 45969. S. OR 12:46:08.5

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

BURST ARRIVAL DIRECTION: 329.600 -77.400

BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND

POSITION OF ULYSSES ON 12/11/ 92 IS:

RA= 165.914 DEC= -6.927 DIST= 5.582 AU

BATSE-ULYSSES DISTANCE = 835029800. KM.

ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 84.83 DEG.

LIGHT TRAVEL TIME ALONG PROJECTED PATH= 251.06 SECS.

CROSSING TIME AT ULYSSES IS 46220. S. OR 12:50:19.5 +/- 535.43 SECONDS

N)

From BRIGGS@ssl.msfc.nasa.gov Mon Nov 16 11:55:41 1992
Date: Mon, 16 Nov 1992 13:56:48 -0600 (CST)
From: BRIGGS@ssl.msfc.nasa.gov (Michael S. Briggs, 205-544-7716, Code ES-64, MSFC)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02052

TIME: TJD=8938 SECONDS=45968

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=088.1 AZIMUTH=296.3 ERROR= DEGREES

COMMENTS:

WEAK BURST OF ABOUT 1.5 SECONDS DURATION. NOT SEEN ABOVE 300 KEV.

From MEEGAN@ssl.msfc.nasa.gov Tue Nov 17 13:59:52 1992
Date: Tue, 17 Nov 1992 16:00:56 -0600 (CST)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: BATSE burst
To: khurley@sunspot.ssl.berkeley.edu
X-Vmsmail-To: SMTP%"khurley@sunspot.ssl.berkeley.edu",BATSE::KOUVELIOTOU
Content-Length: 108

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2052	921112	8938	45968	4000	330	-77

BATSE BURST# 2052

ULYSSES RT

4 / 5 / 98

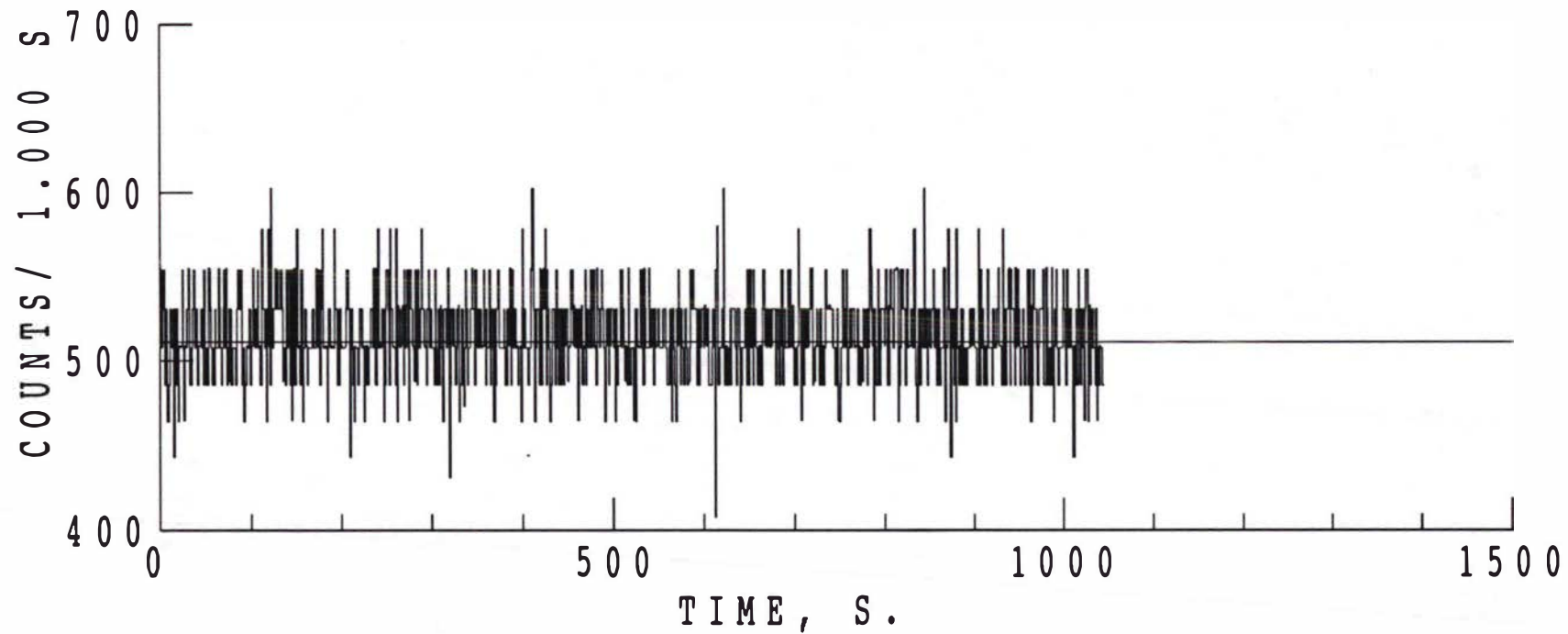
12/11/92 45108.129 s

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



CATSEARCH PROGRAM

- BATSE BURST # 2053

EVENT OF 1992 NOV 12 DAY OF YEAR=317

EVENT CROSSING TIME AT BATSE : 59294. S. OR 16:28:14.4

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

BURST ARRIVAL DIRECTION: 75.600 29.000

BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND

POSITION OF ULYSSES ON 12/11/ 92 IS:

RA= 165.914 DEC= -6.927 DIST= 5.582 AU

BATSE-ULYSSES DISTANCE = 835029800. KM.

ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 86.37 DEG.

LIGHT TRAVEL TIME ALONG PROJECTED PATH= 176.12 SECS.

CROSSING TIME AT ULYSSES IS 59471. S. OR 16:31:10.5 +/- 535.29 SECONDS

From BRIGGS@ssl.msfc.nasa.gov Mon Nov 16 12:05:51 1992

Date: Mon, 16 Nov 1992 14:04:04 -0600 (CST)

From: BRIGGS@ssl.msfc.nasa.gov (Michael S. Briggs, 205-544-7716, Code ES-64, MSFC)

Subject: Burst Trigger Message

To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,

khurley@space6.ssl.berkeley.edu

X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS

Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02053

TIME: TJD=8938 SECONDS=59294

TYPE: BURST

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=052.7 AZIMUTH=165.5 ERROR= DEGREES

COMMENTS:

SINGLE PEAK EVENT OF ABOUT 1 SEC DURATION. SEEN ABOVE 300 KEV.

From MEEGAN@ssl.msfc.nasa.gov Tue Nov 17 14:01:25 1992

Date: Tue, 17 Nov 1992 16:03:11 -0600 (CST)

From: MEEGAN@ssl.msfc.nasa.gov

Subject: BATSE burst

To: khurley@sunspot.ssl.berkeley.edu

X-Vmsmail-To: SMTP%"khurley@sunspot.ssl.berkeley.edu",BATSE::KOUVELIOTOU

Content-Length: 108

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2053	921112	8938	59294	14000	076	+27

19/11/92

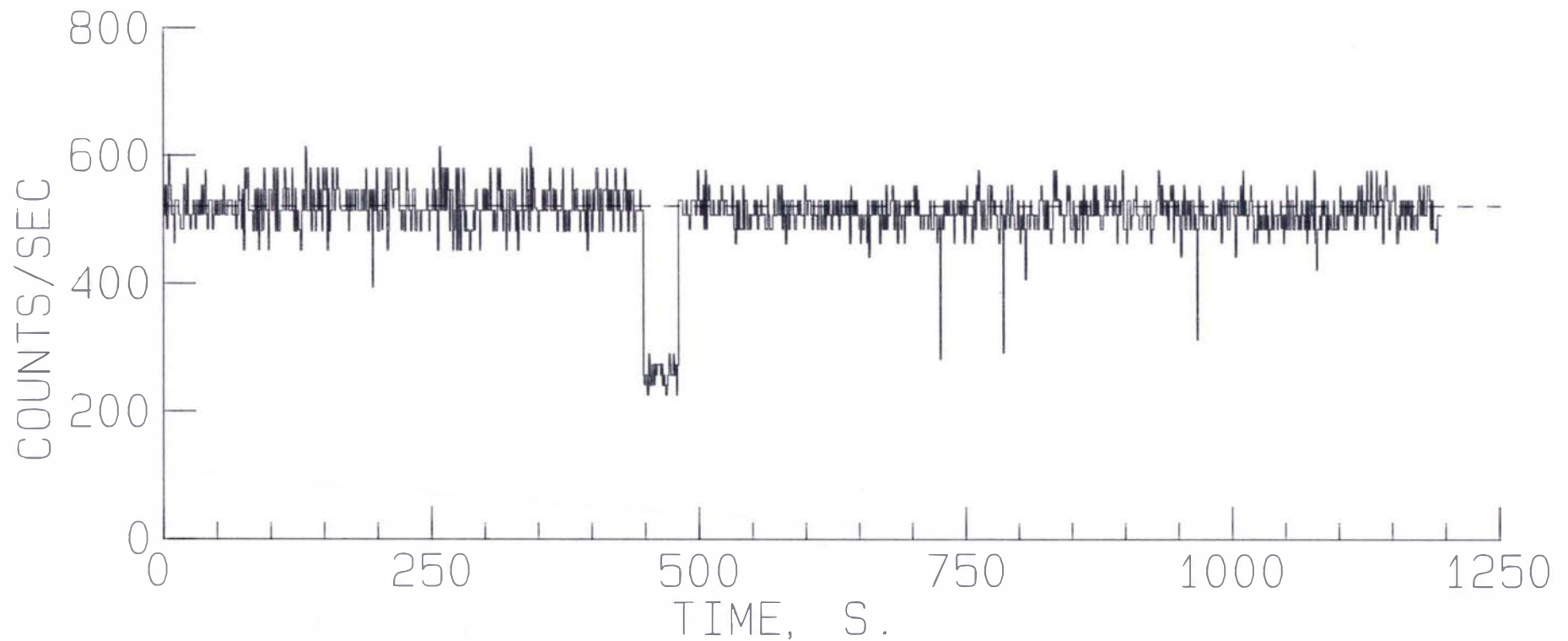
ULYSSES RT

12/11/92 58896.352 s

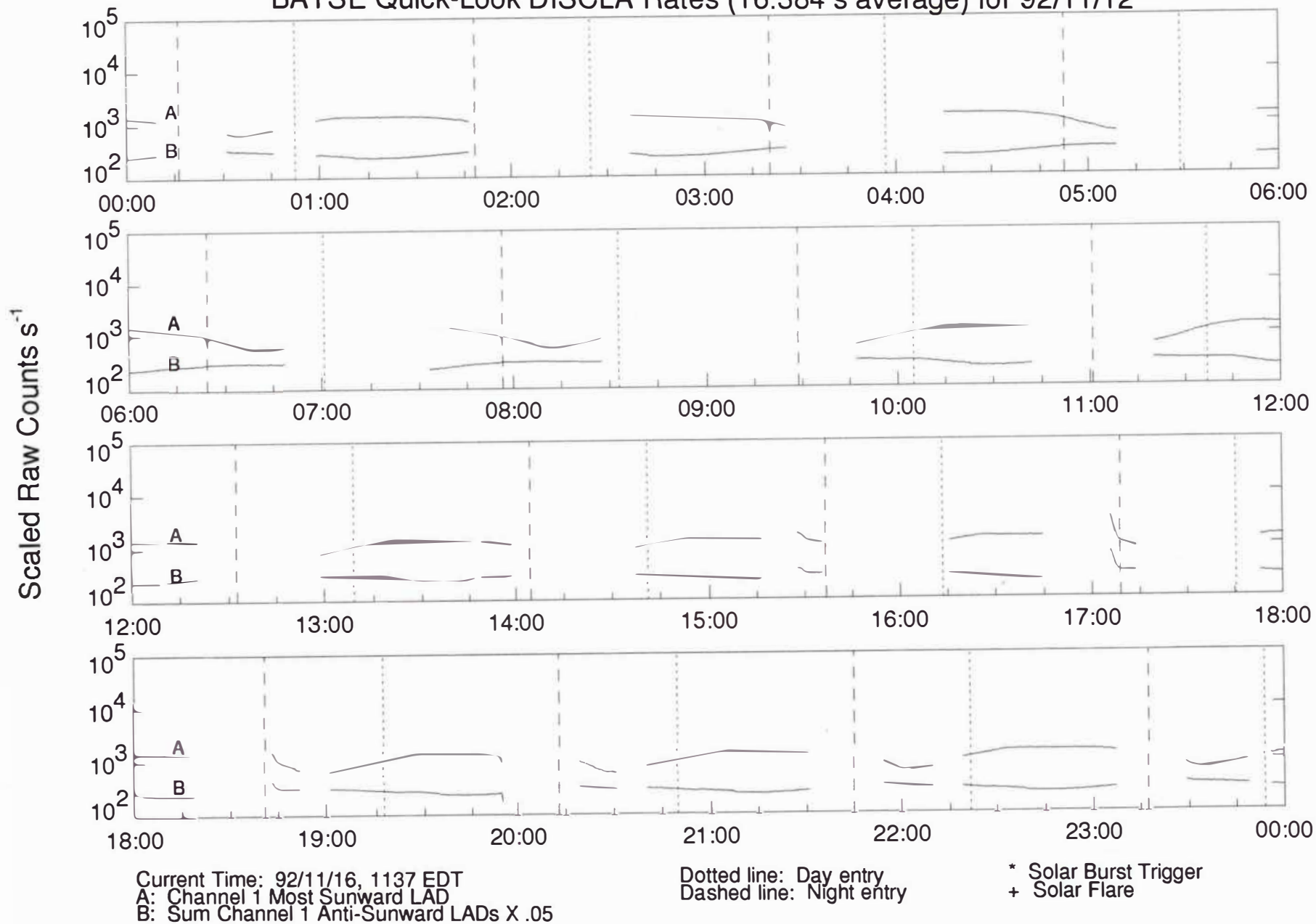
.500 S INTERVALS REGROUPED BY 2

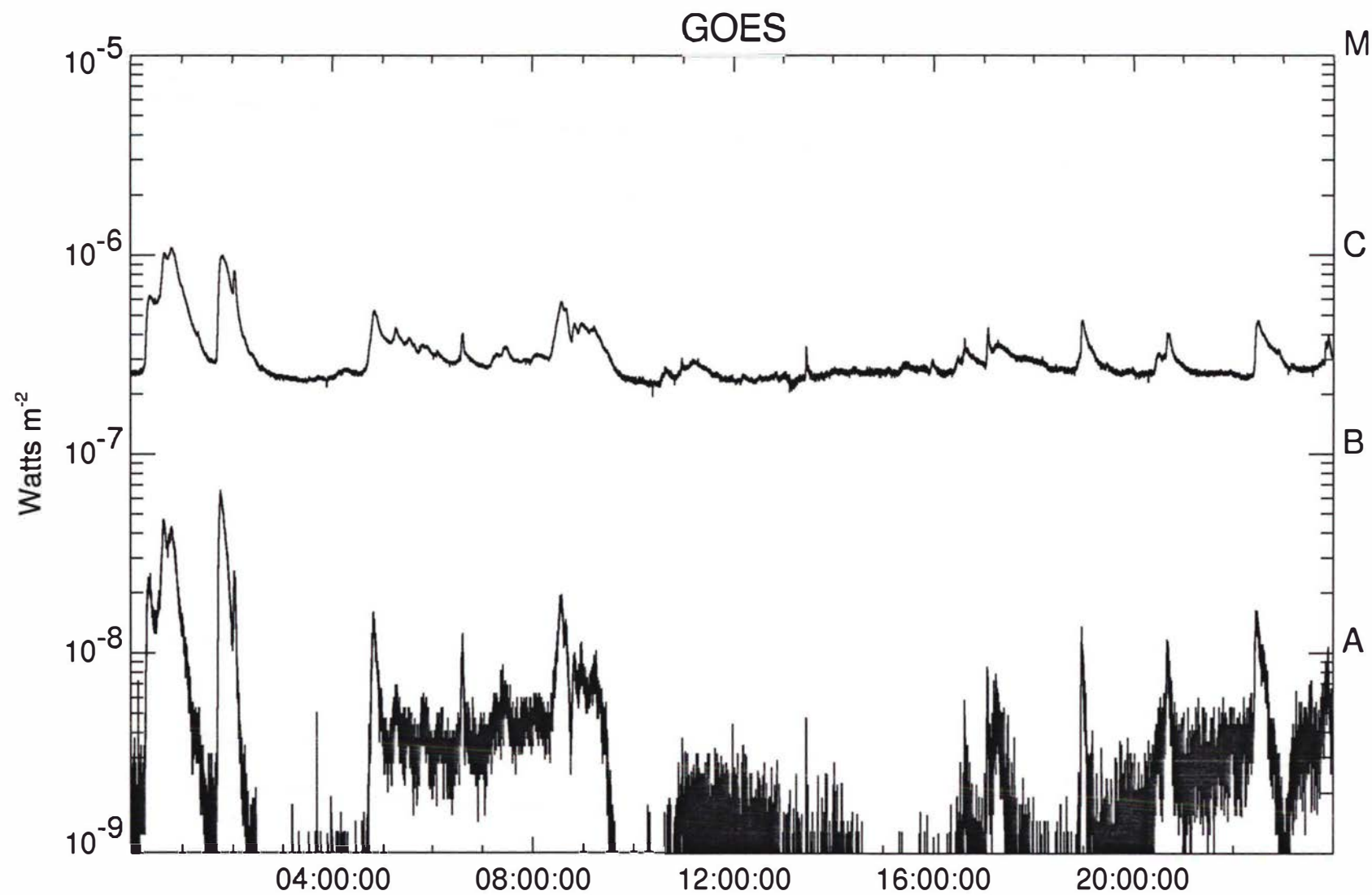
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/12





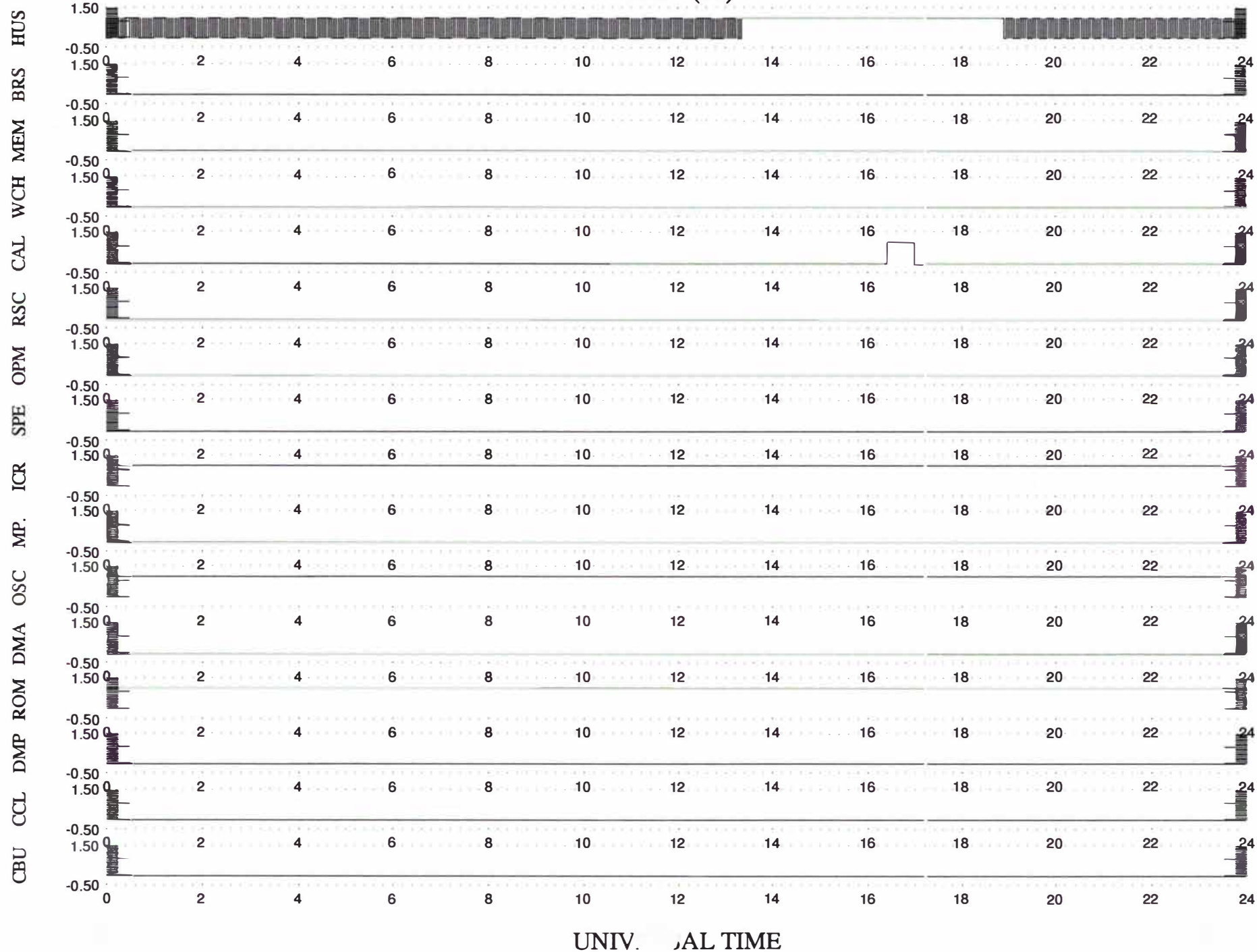
Data Start: 92/11/12, 0000:01

Plot created: 95/05/30, 1550

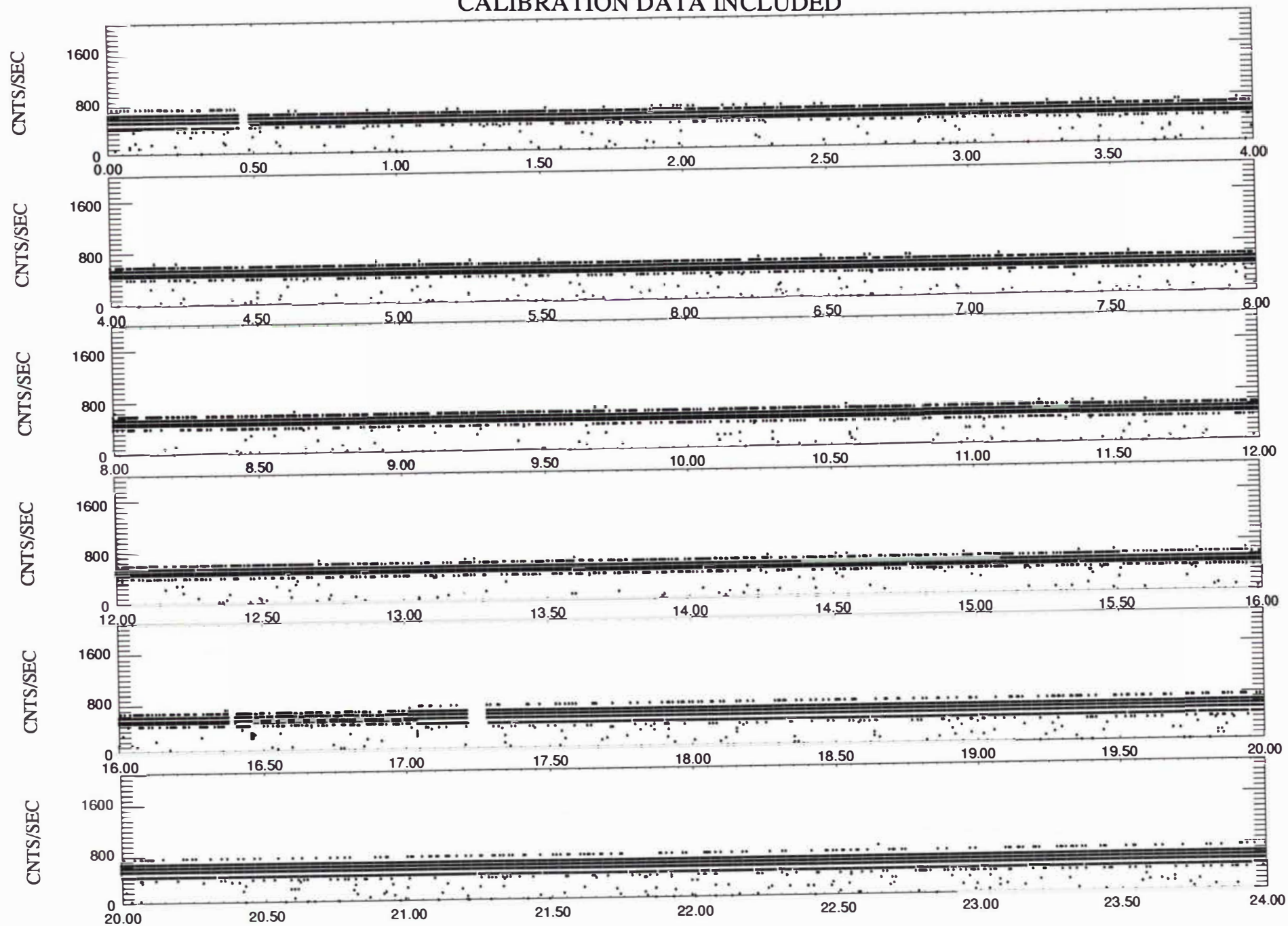
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

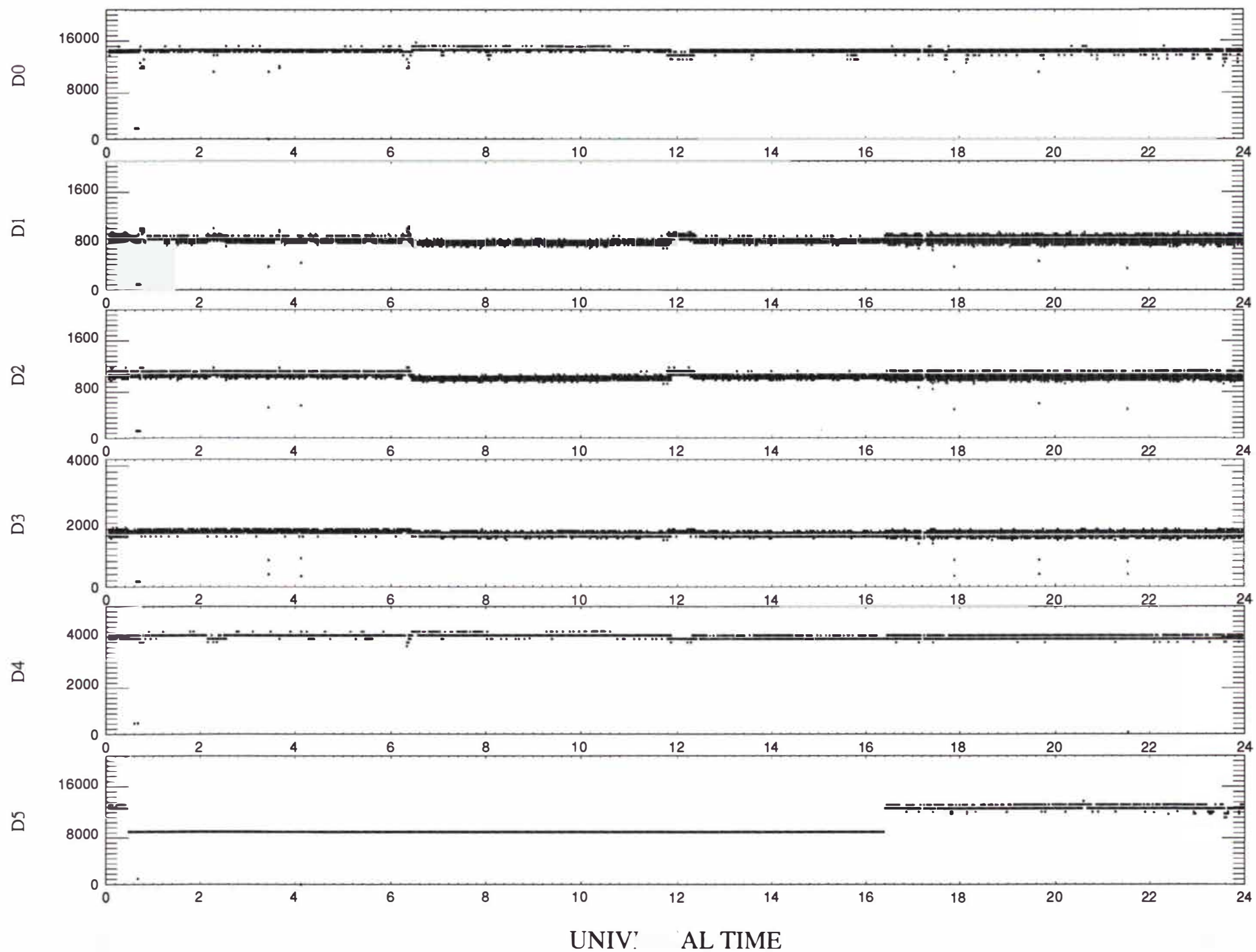
NO BURST (15)



CALIBRATION DATA INCLUDED



UNIV CAL TIME



 CATSEARCH PROGRAM

BATSE BURST # 2054
 EVENT OF 1992 NOV 13 DAY OF YEAR=318
 EVENT CROSSING TIME AT BATSE : 1527. S. OR 00:25:27.4
 COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 156.900 69.300
 BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
 POSITION OF ULYSSES ON 13/11/ 92 IS:
 RA= 165.976 DEC= -7.042 DIST= 5.565 AU
 BATSE-ULYSSES DISTANCE = 832568880. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=103.40 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= -643.56 SECS.
 CROSSING TIME AT ULYSSES IS 884. S. OR 00:14:43.9 +/- 509.26 SECONDS

No

Content-Length: 1296

BATSE BURST TRIGGER

NO.: 02054

TIME: TJD=8939 SECONDS=01527

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=20 AZIMUTH=110 ERROR= DEGREES

COMMENTS:

VERY WEAK EVENT, PRELIMINARILY CLASSIFIED AS A BURST. NO EMISSION
 DETECTED ABOVE 300 KEV.

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2054	921113	8939	01527	700	157	0

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2054	921113	8939	01527	500	157	+69

Which is correct?

BATSE BURST# 2054

ULYSSES RT

4 / 5 / 98

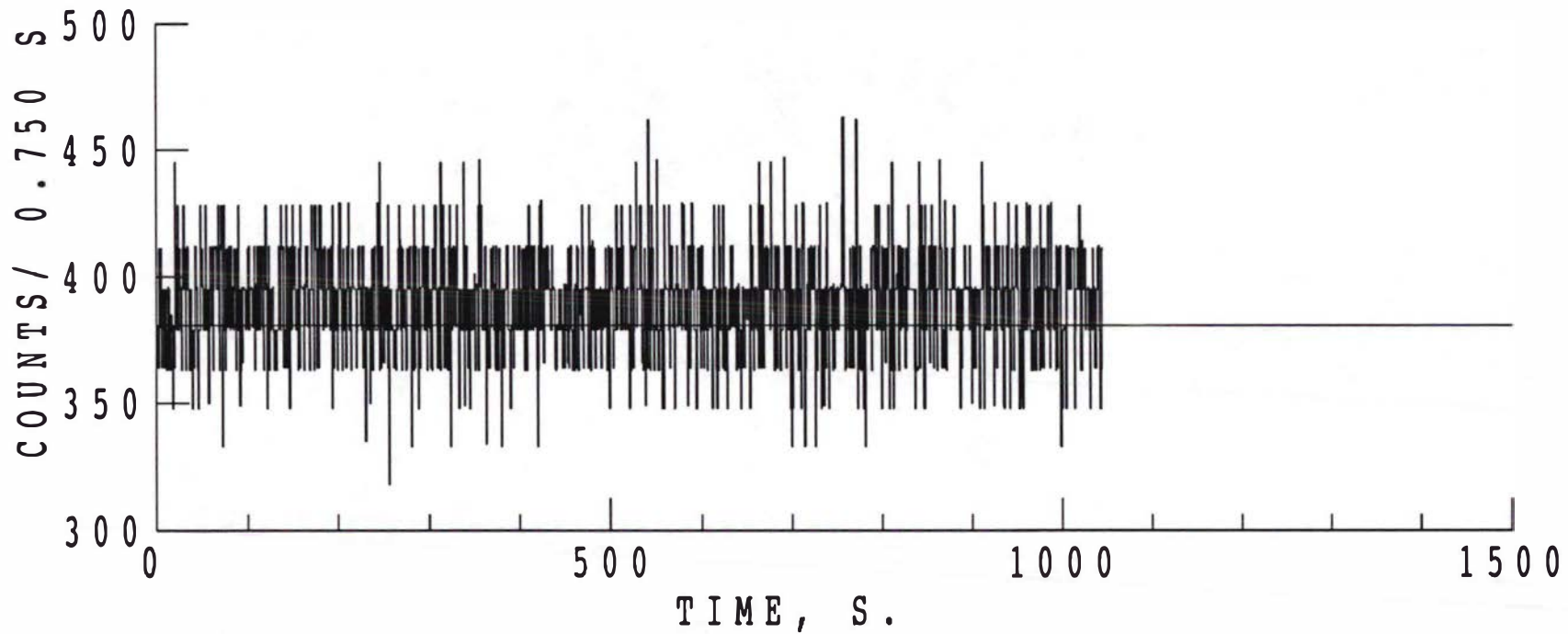
13 / 11 / 92 936.048 s

0.250 S INTERVALS REGROUPED BY 3

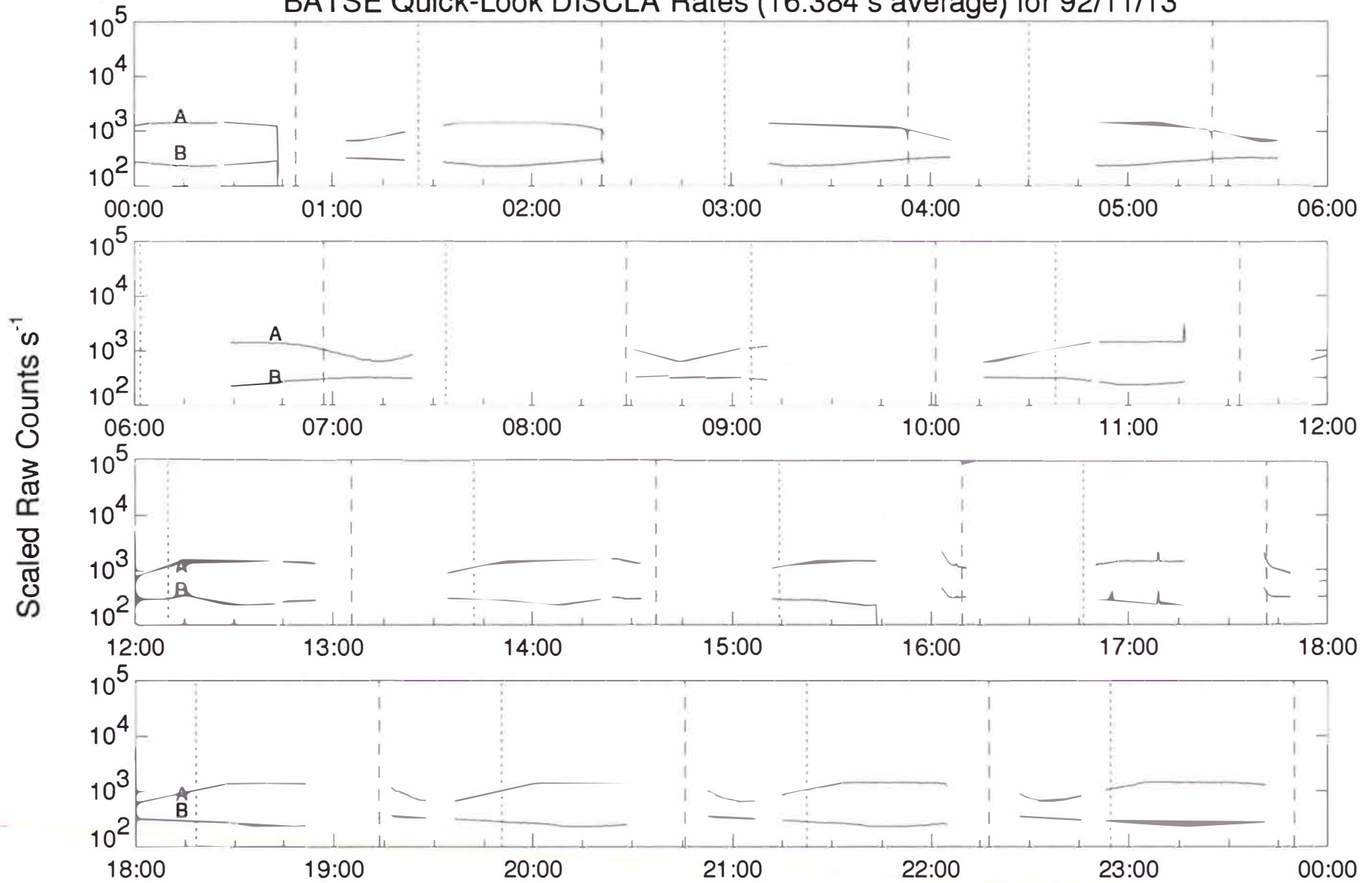
0 - 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



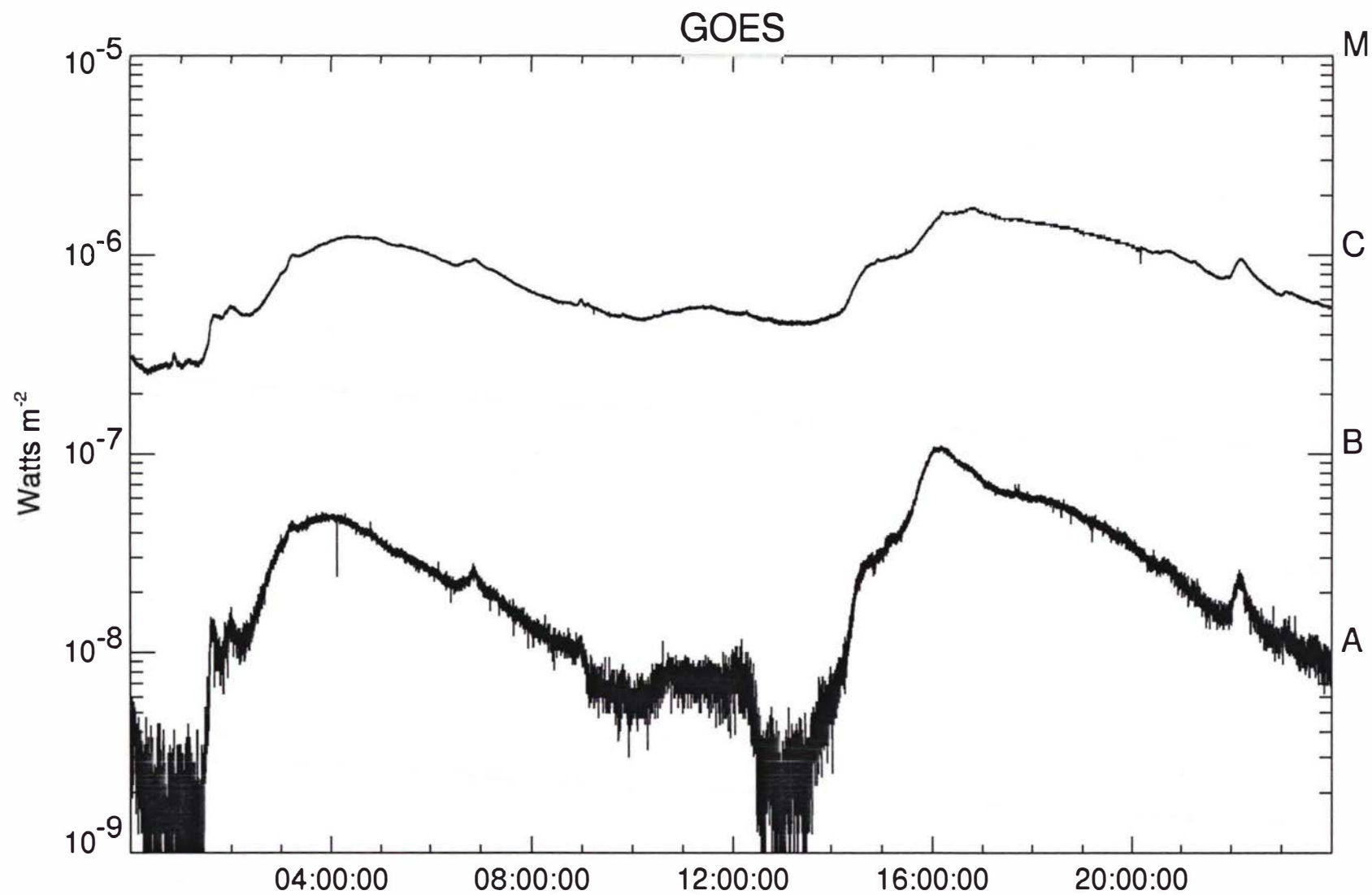
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/13



Current Time: 92/11/16, 1138 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



Data Start: 92/11/13, 0000:02

Plot created: 95/05/30, 1553

Channel

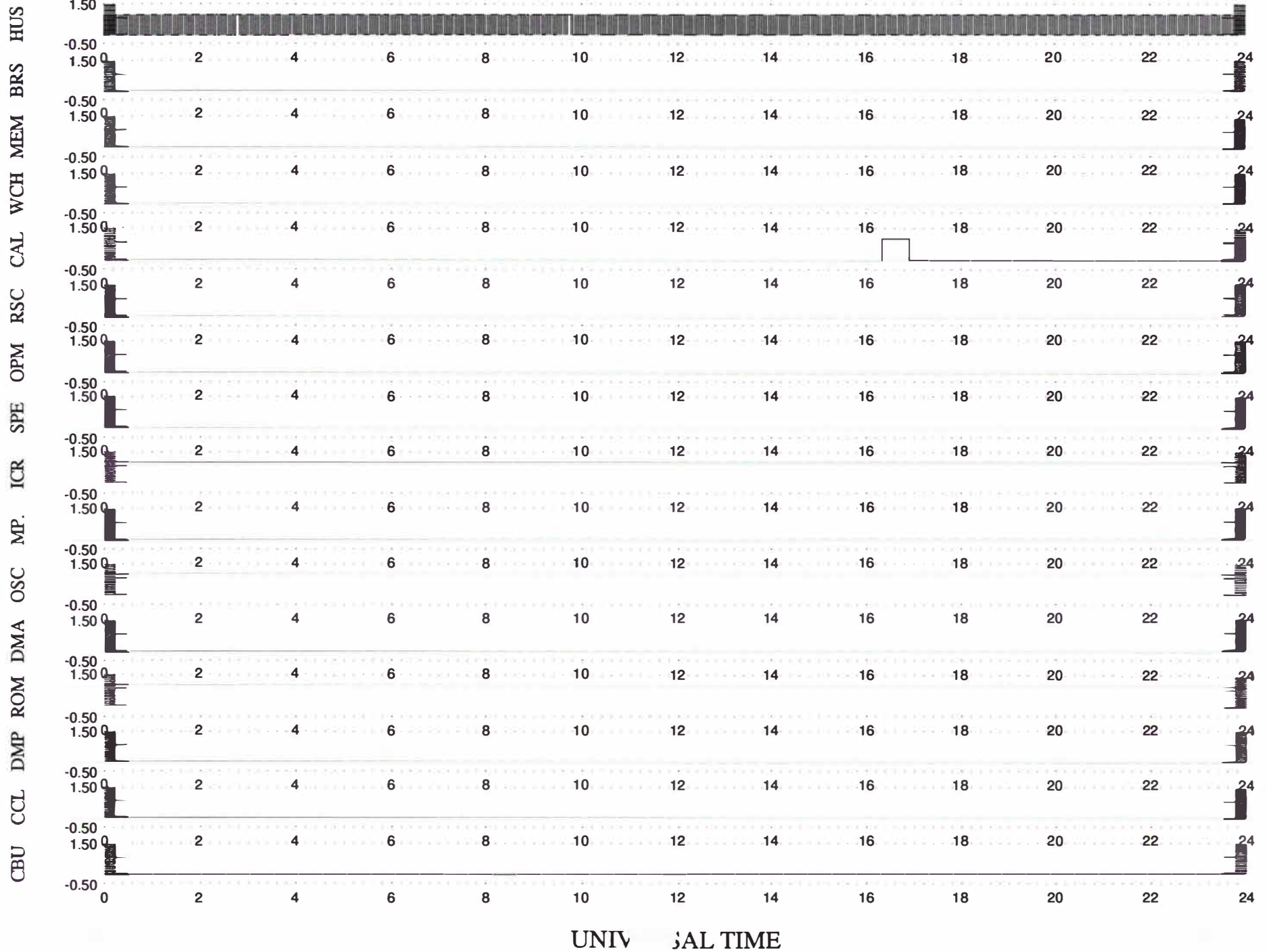
1 (1.0 - 8.0 Angstroms)

Background not subtracted

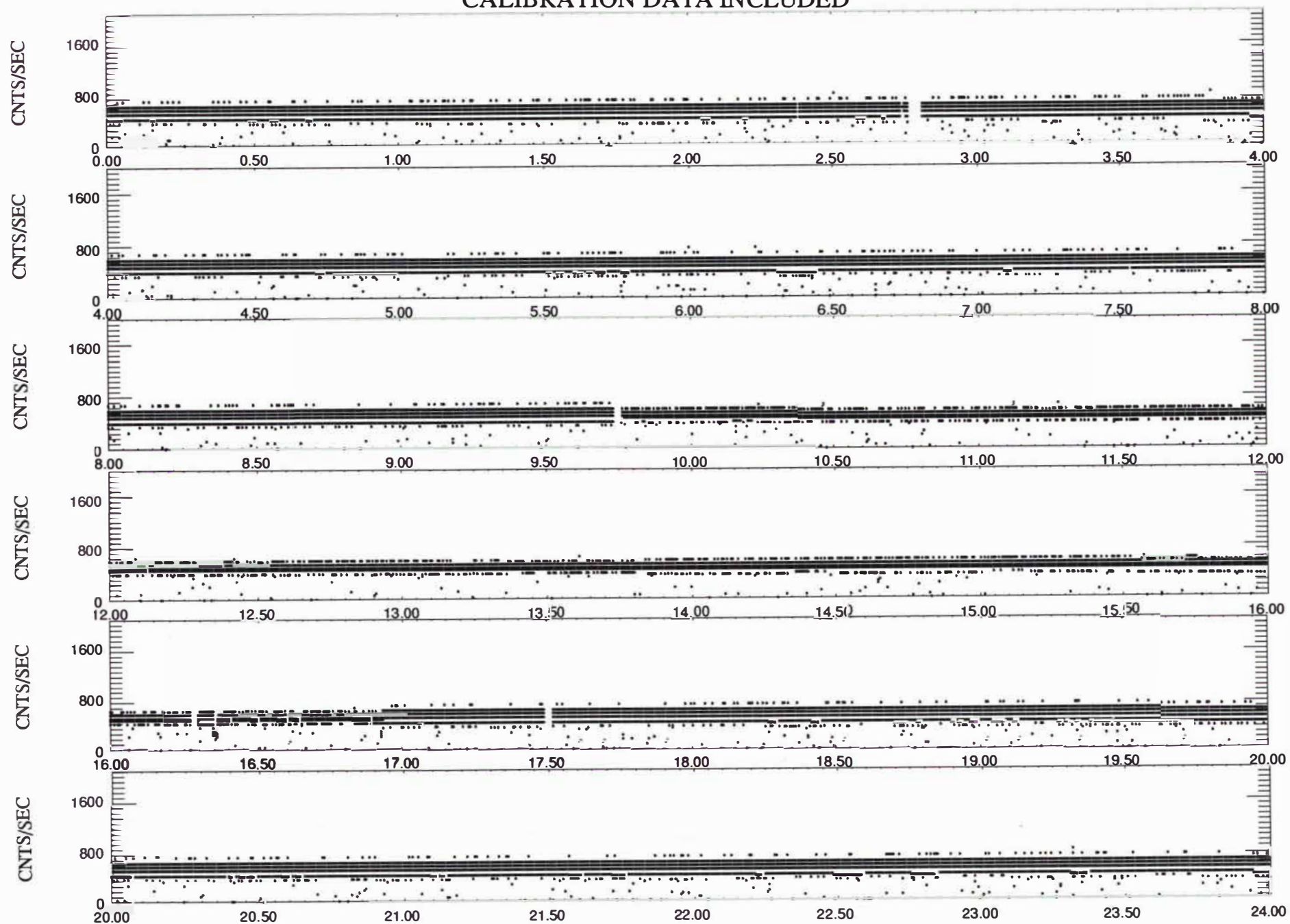
2 (0.5 - 4.0 Angstroms)

Background not subtracted

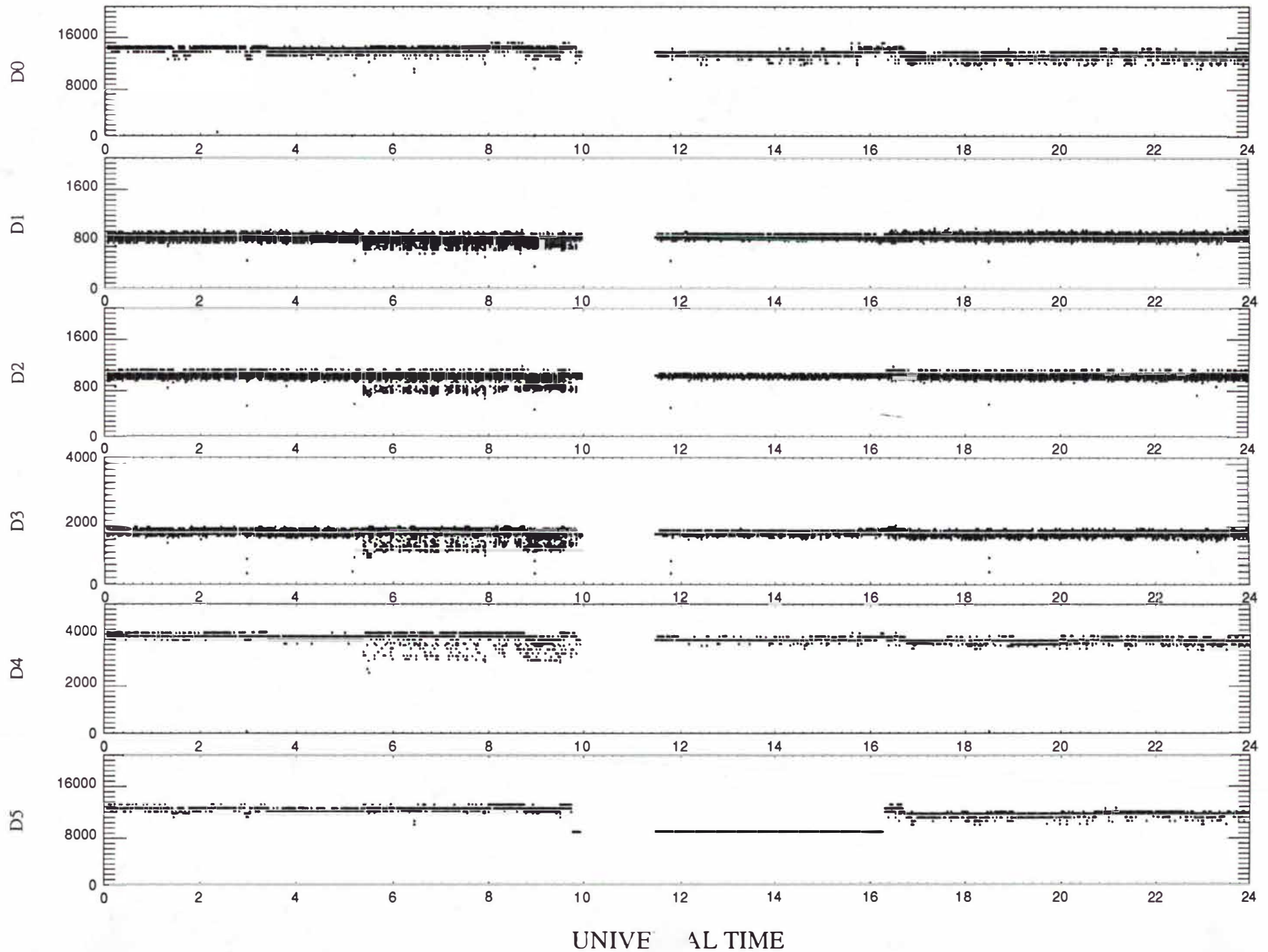
NO BURST (15)



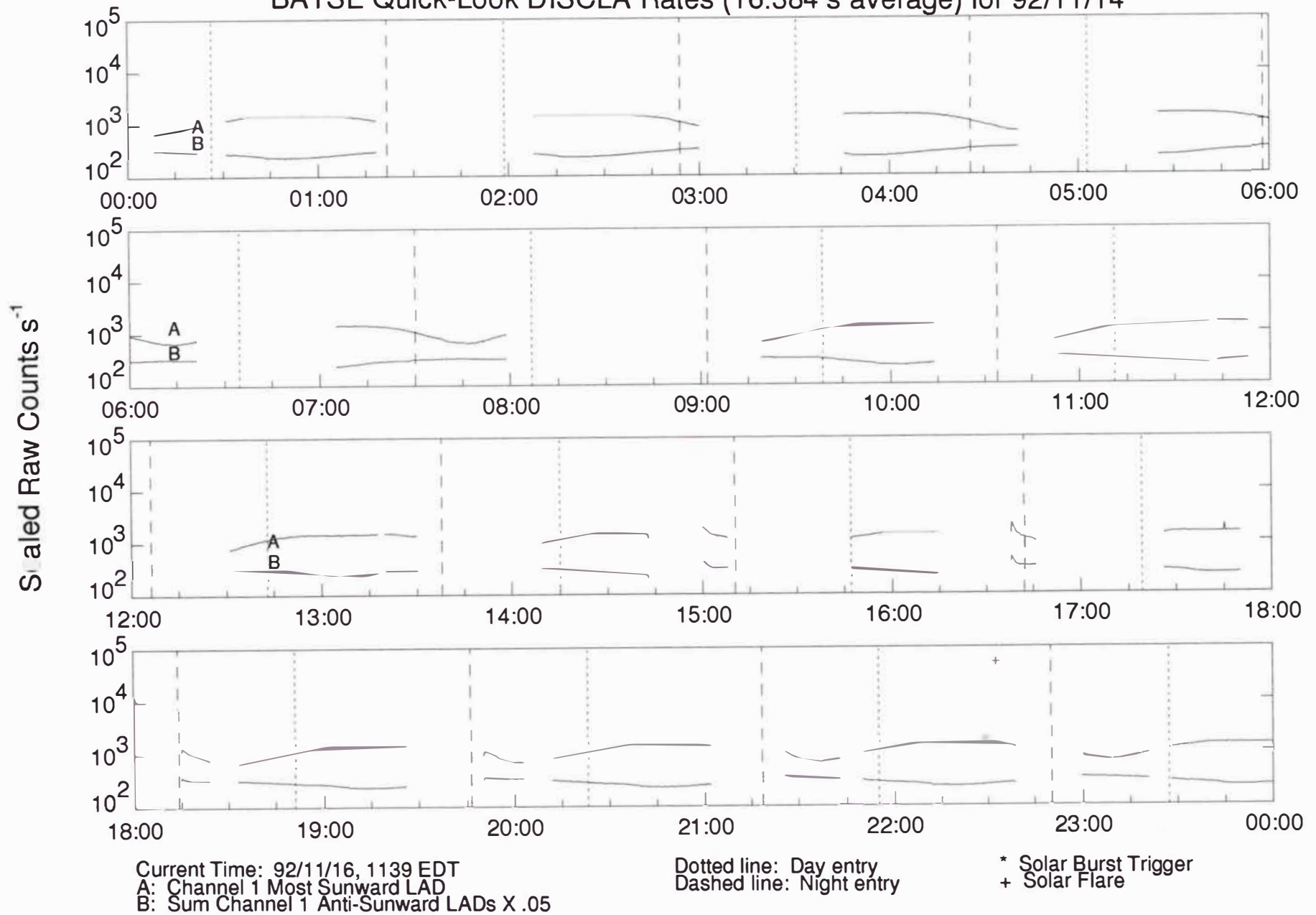
CALIBRATION DATA INCLUDED

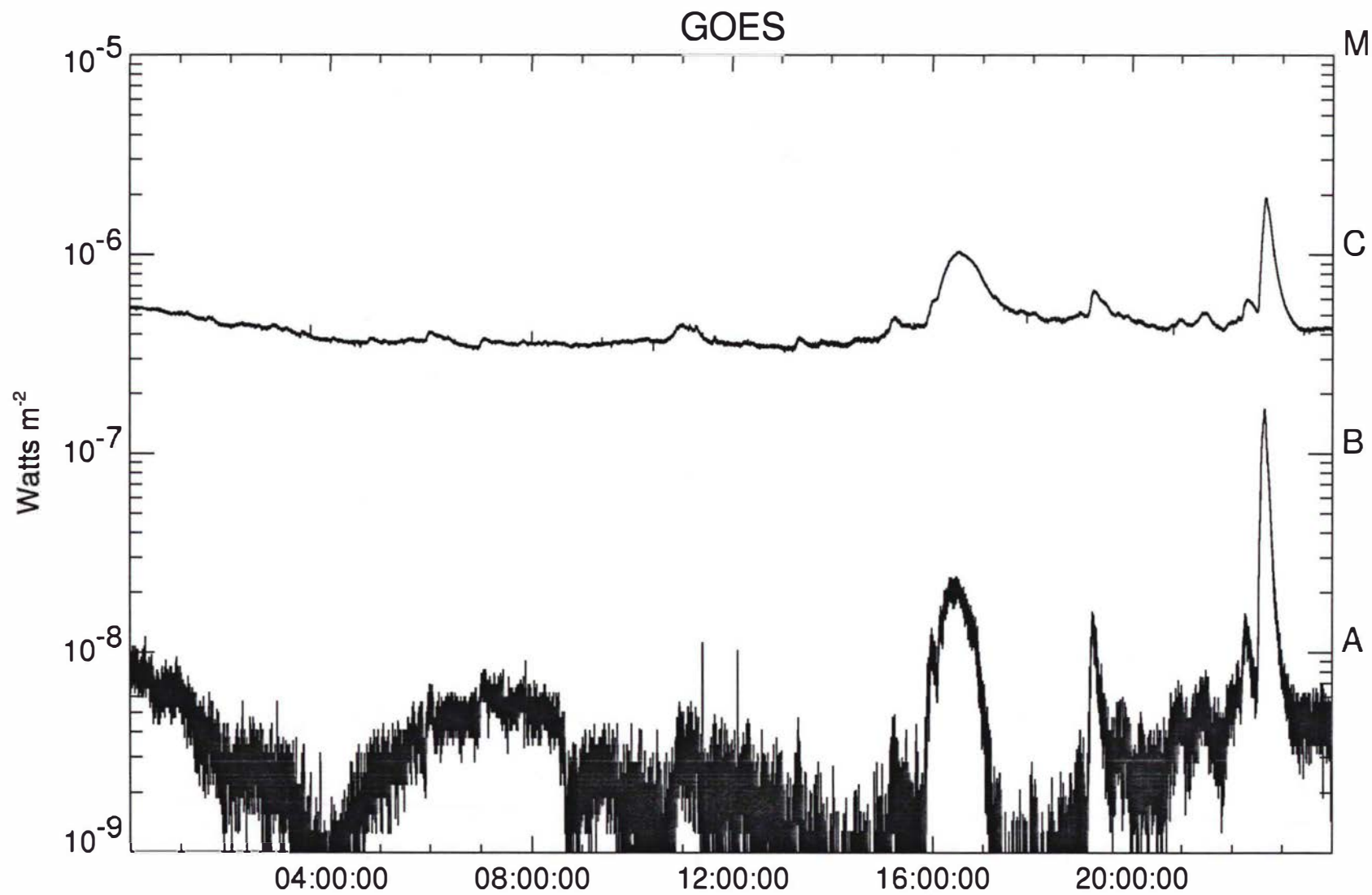


UNIV. TIME



BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/14





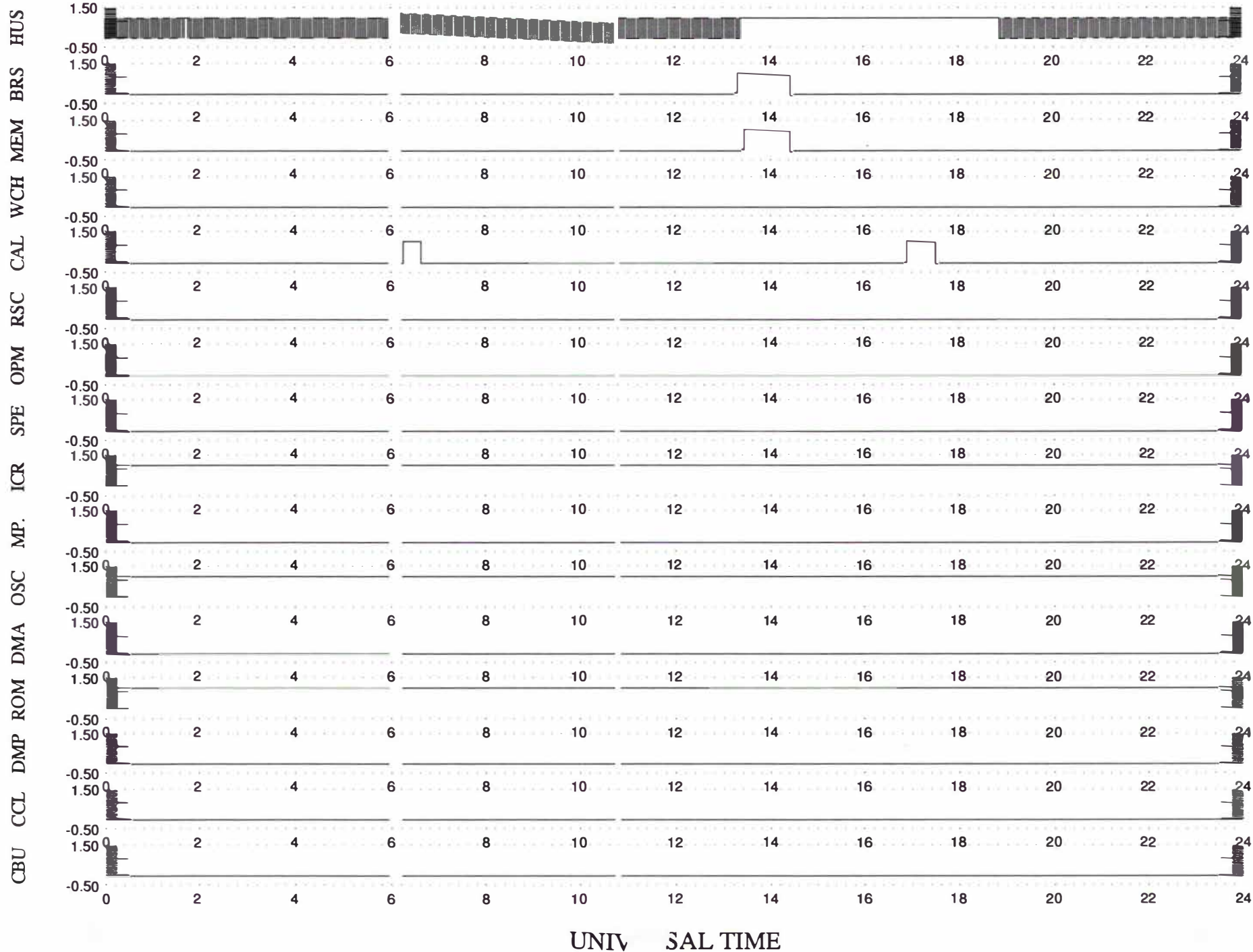
Data Start: 92/11/14, 0000:00

Plot created: 95/05/30, 1557

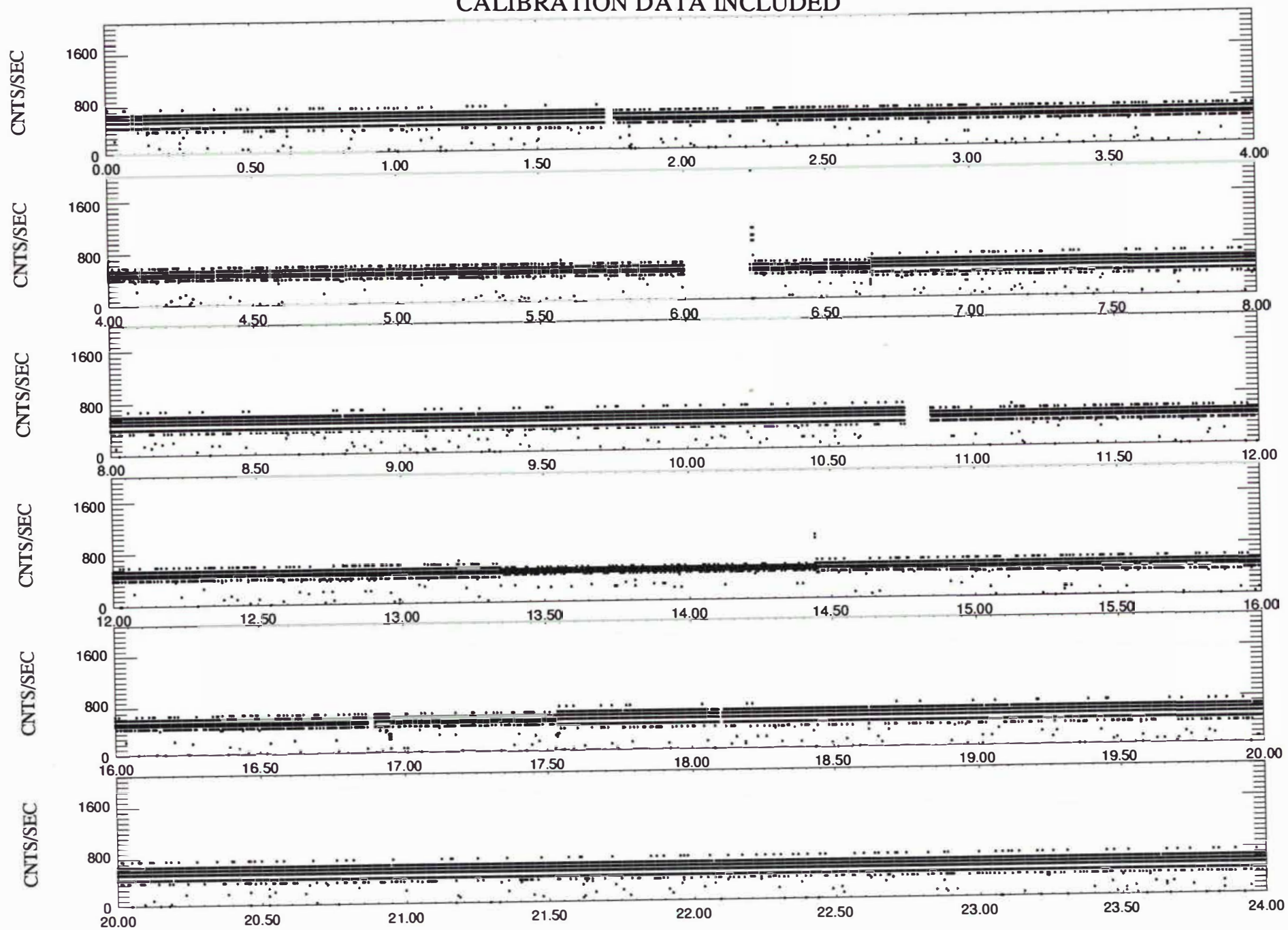
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BURST NUMBER 0

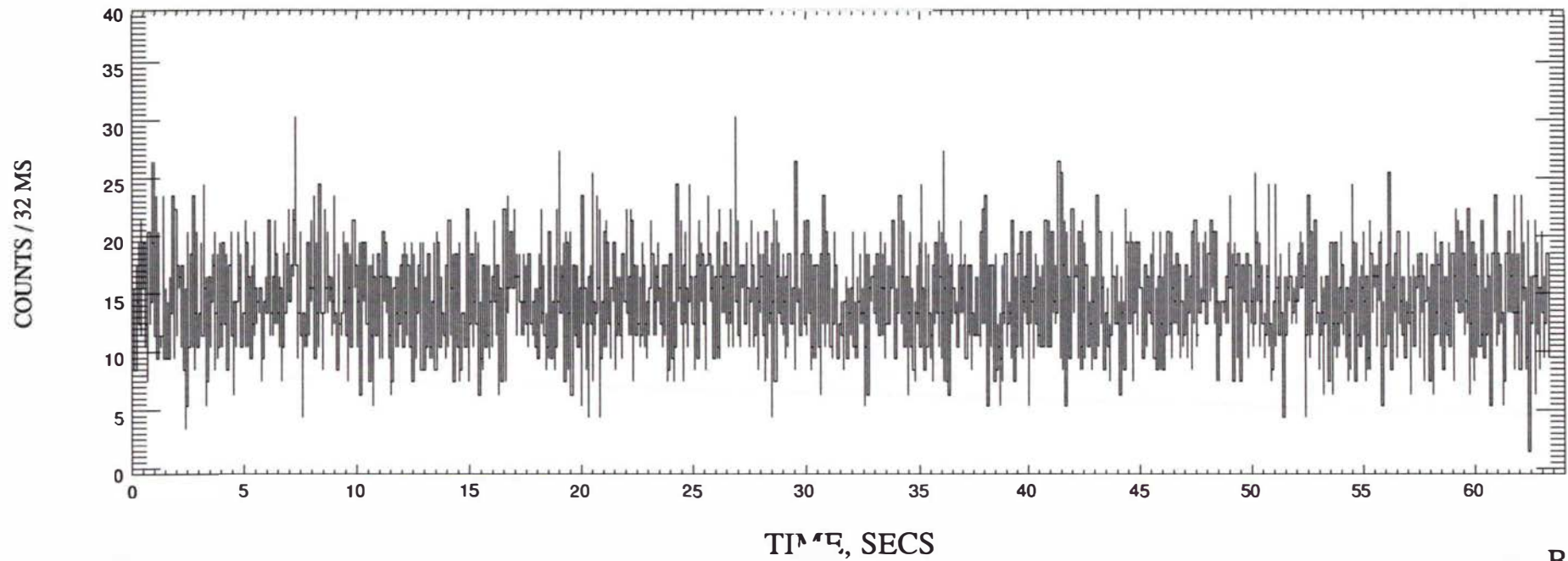
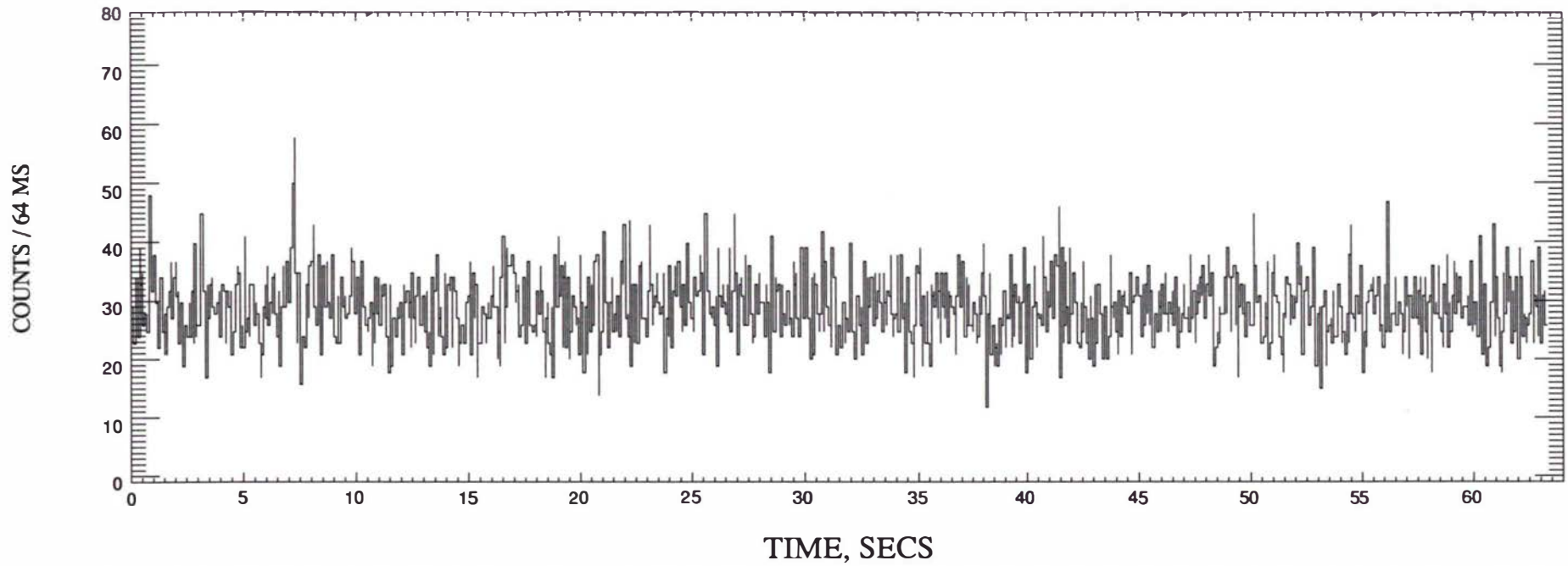


CALIBRATION DATA INCLUDED

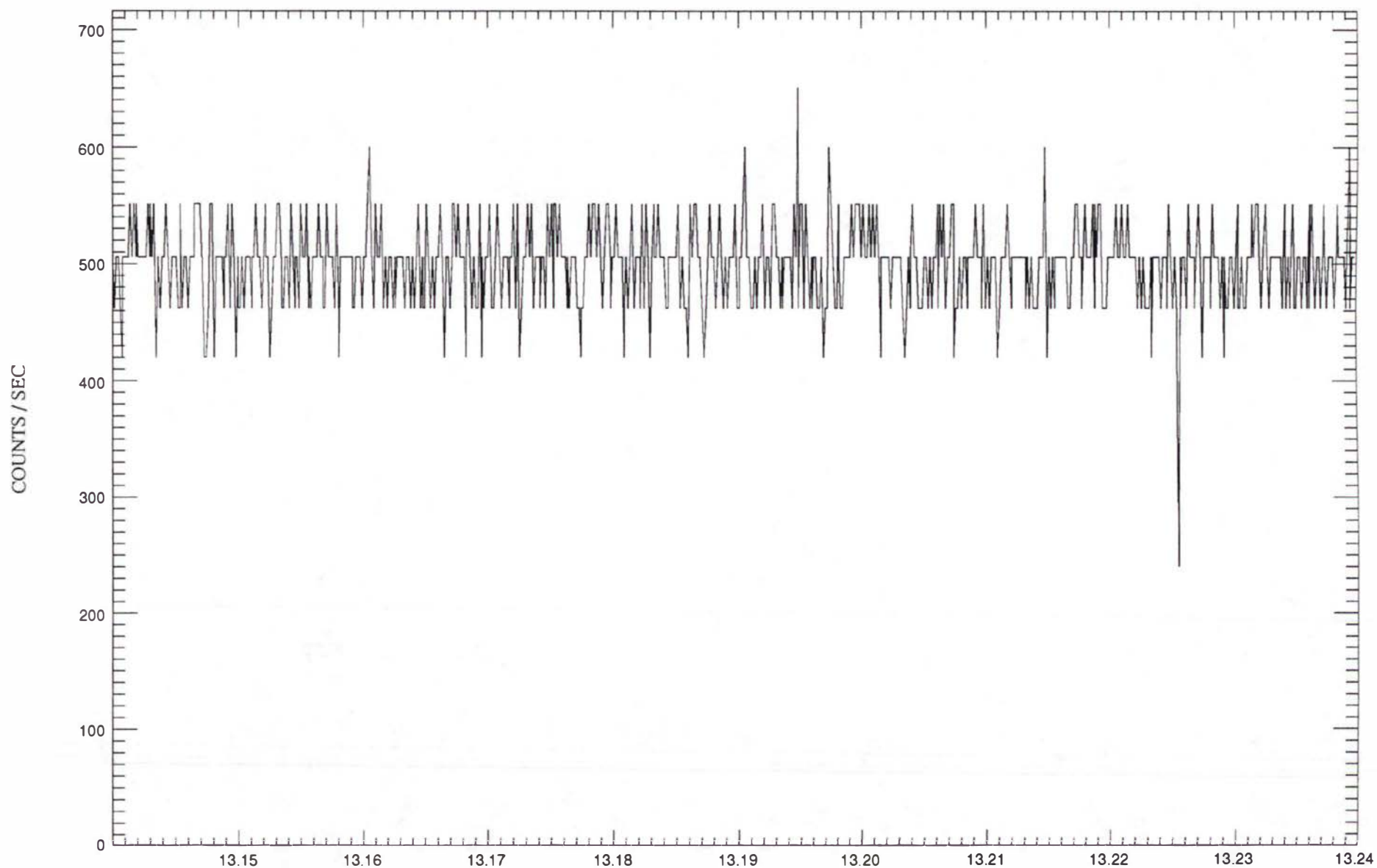


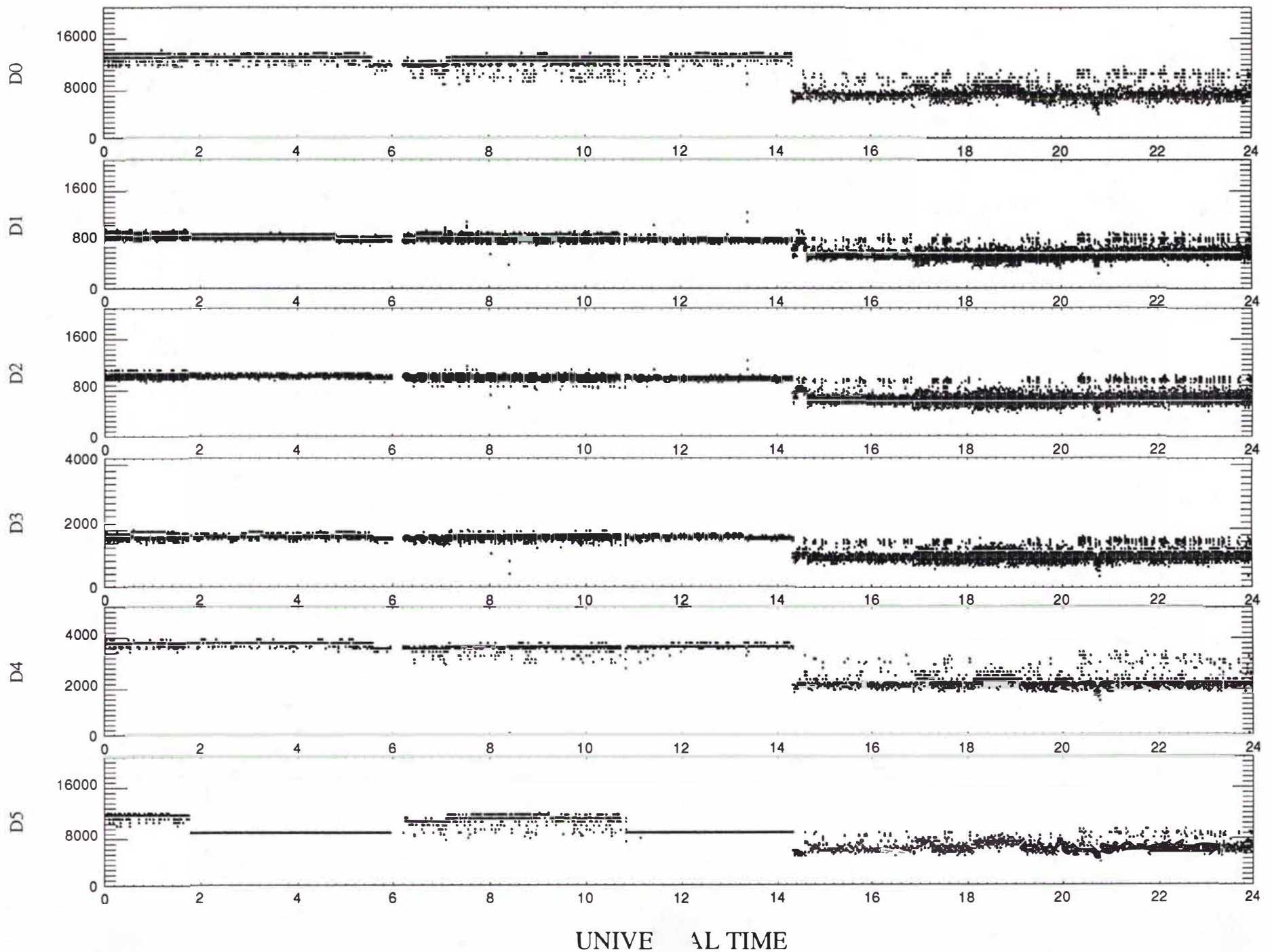
UNIV SAL TIME

Burst Counter 0 at UT=13.194922171699 h=47501.720 s



CALIBRATION DATA INCLUDED





From WILSONB@ssl.msfc.nasa.gov Tue Nov 17 10:54:38 1992
Date: Tue, 17 Nov 1992 12:56:05 -0600 (CST)
From: WILSONB@ssl.msfc.nasa.gov (Robert B. Wilson (205)-544-7695)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 02055

TIME: TJD=8941 SECONDS=42795

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=116.9 AZIMUTH=006.6 ERROR=10.0 DEGREES

COMMENTS:

GOES C2.1 FLARE. VERY SOFT (SPECTRAL INDEX ~5.5). DURATION ~70S, STARTING
25S BEFORE TRIGGER TIME. HIGHLY VARIABLE INTENSITY (~6 SPIKES)

CATSEARCH PROGRAM

BATSE BURST # 2056
EVENT OF 1992 NOV 15 DAY OF YEAR=320
EVENT CROSSING TIME AT BATSE : 71368. S. OR 19:49:27.7
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 306.000 -52.000
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 15/11/ 92 IS:
RA= 166.094 DEC= -7.271 DIST= 5.532 AU
BATSE-ULYSSES DISTANCE = 827590192. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 68.44 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1014.38 SECS.
CROSSING TIME AT ULYSSES IS 72382. S. OR 20:06:22.0 +/- 511.15 SECONDS

No

From WILSONB@ssl.msfc.nasa.gov Tue Nov 17 10:58:44 1992
Date: Tue, 17 Nov 1992 12:59:54 -0600 (CST)
From: WILSONB@ssl.msfc.nasa.gov (Robert B. Wilson (205)-544-7695)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 02056

Nov 15

TIME: TJD=8491 SECONDS=71367

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=117.4 AZIMUTH=295.9 ERROR=10.0 DEGREES

COMMENTS:

WEAK SPIKE, DURATION ~200MS. POSSIBLE PRECURSOR 1.5 S PRIOR TO TRIGGER,
ESPECIALLY IN 100-300 KEV.

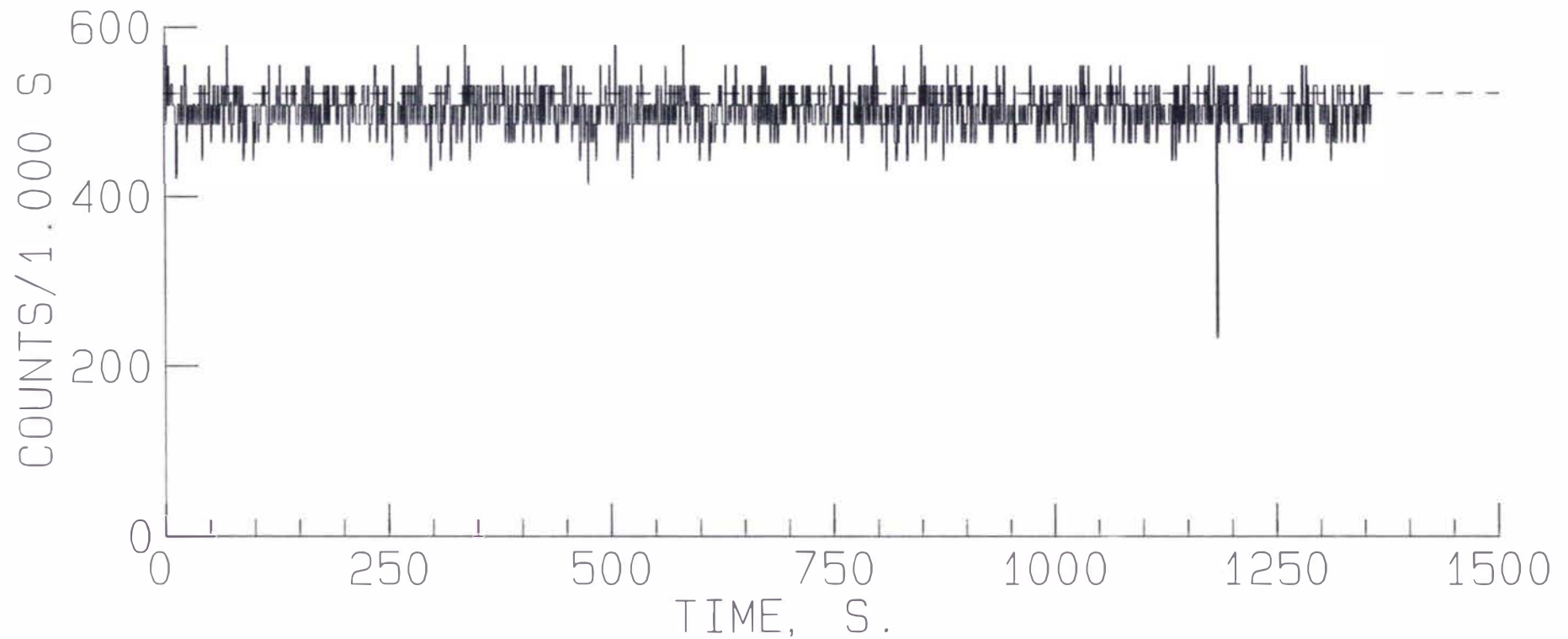
From MEEGAN@ssl.msfc.nasa.gov Tue Nov 17 14:06:36 1992
Date: Tue, 17 Nov 1992 16:08:21 -0600 (CST)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: BATSE burst
To: khurley@sunspot.ssl.berkeley.edu
X-Vmsmail-To: SMTP%"khurley@sunspot.ssl.berkeley.edu", BATSE::KOUVELIOTOU
Content-Length: 108

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2056	921115	8941	71367	3000	304	-50

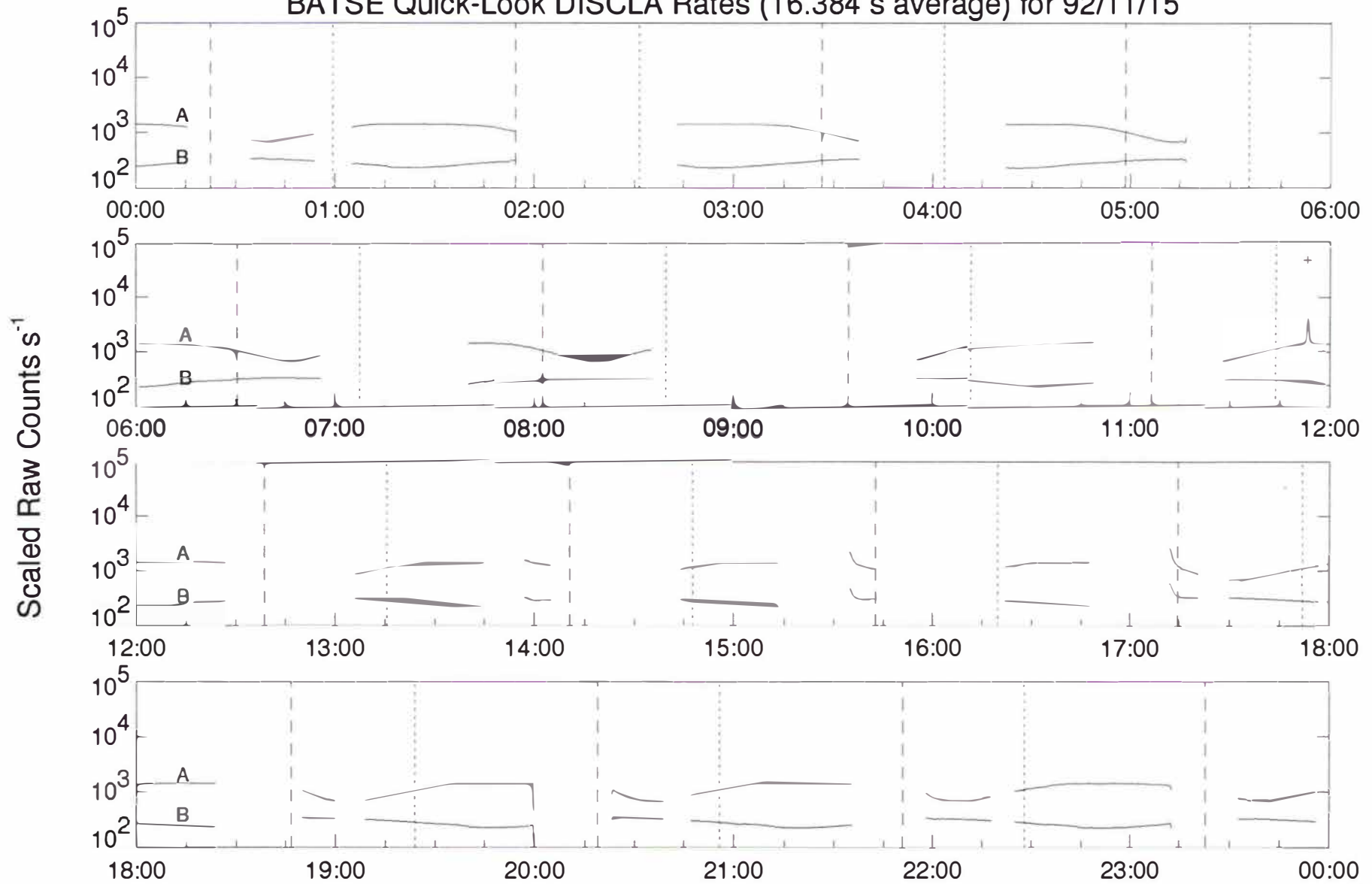
19/11/92

ULYSSES RT
15/11/92 71892.094 s
.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 92/11/15



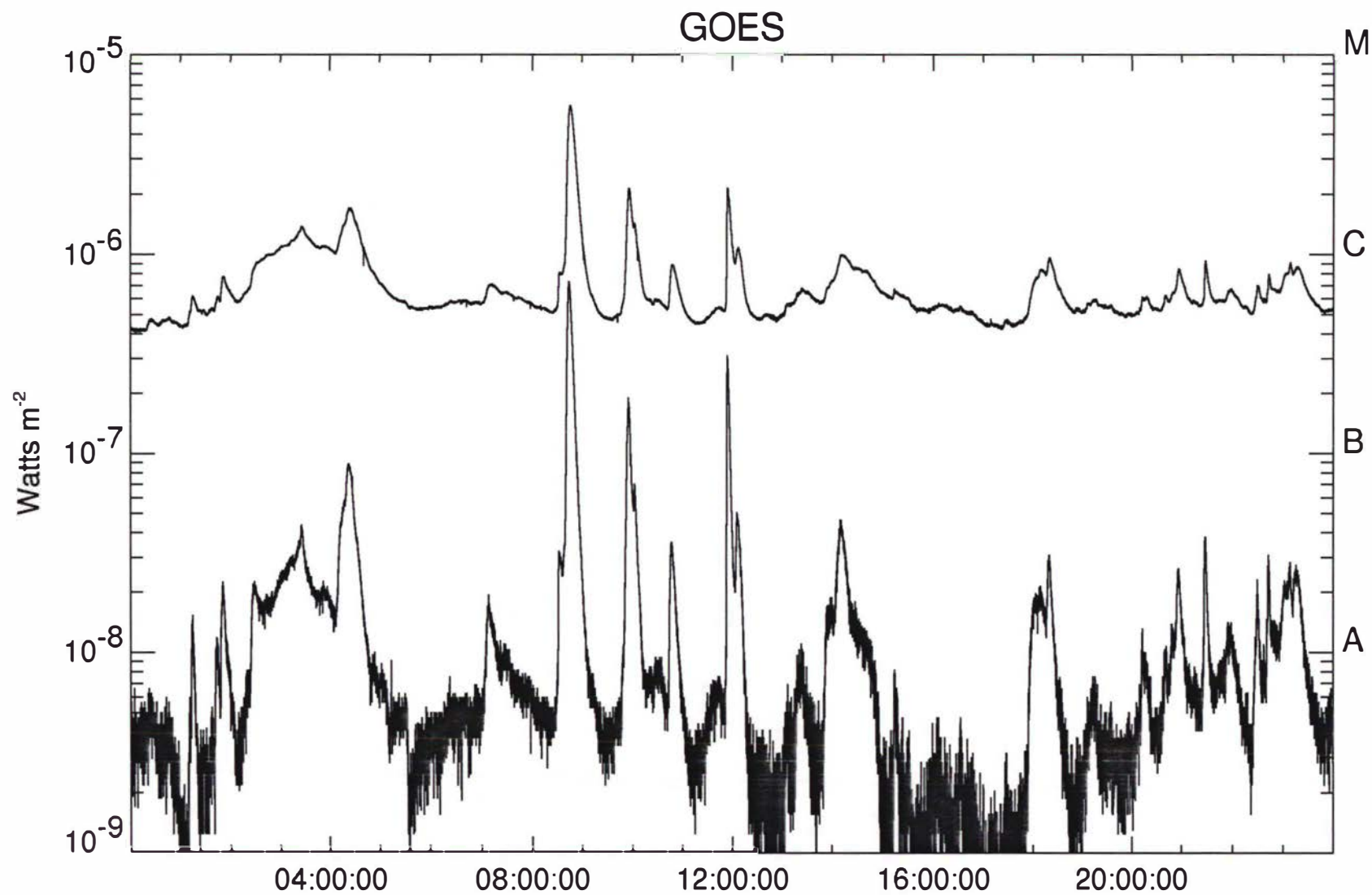
Current Time: 92/11/17, 1203 EDT

A: Channel 1 Most Sunward LAD

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

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare



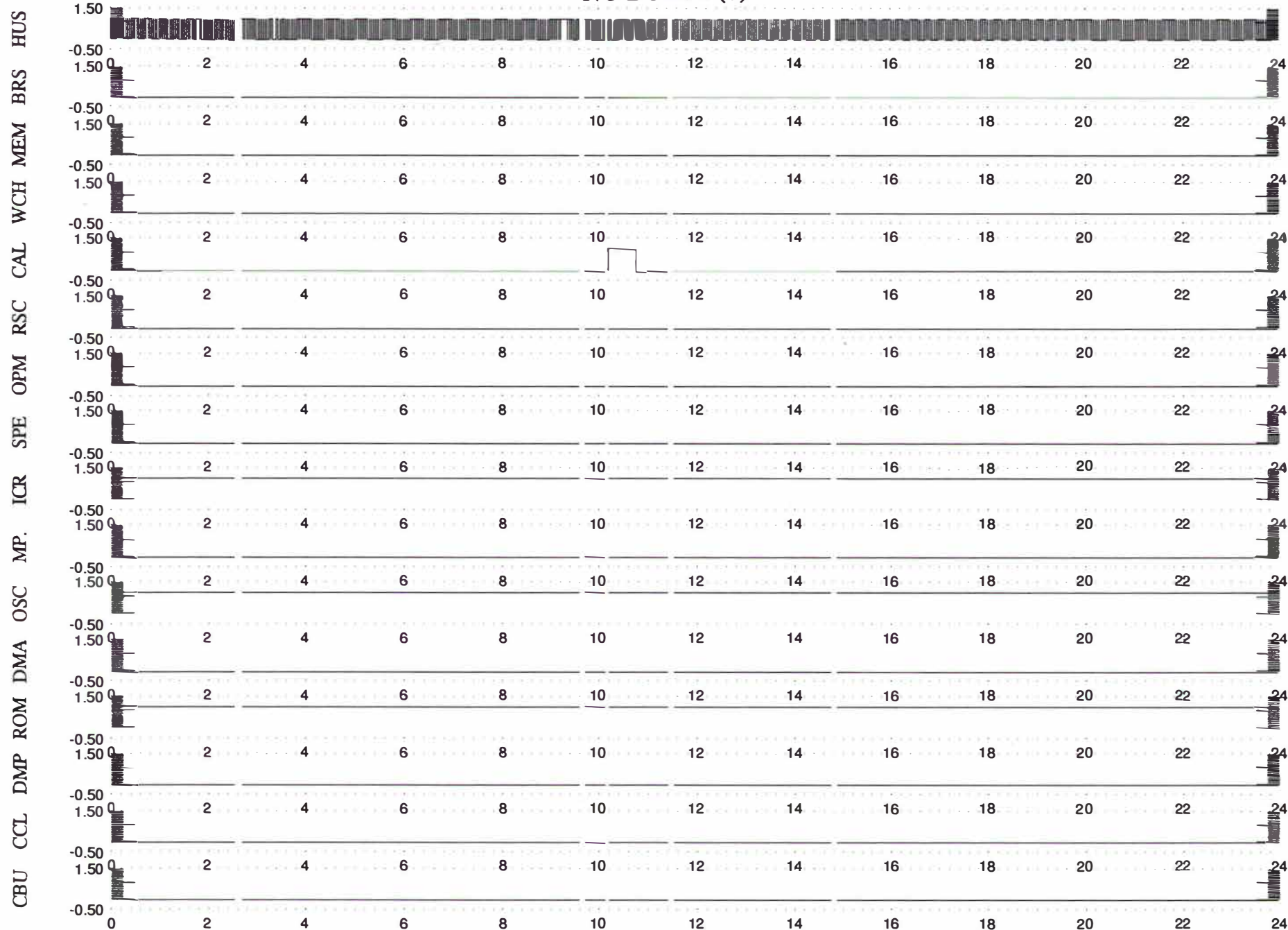
Data Start: 92/11/15, 0000:01

Plot created: 95/05/30, 1600

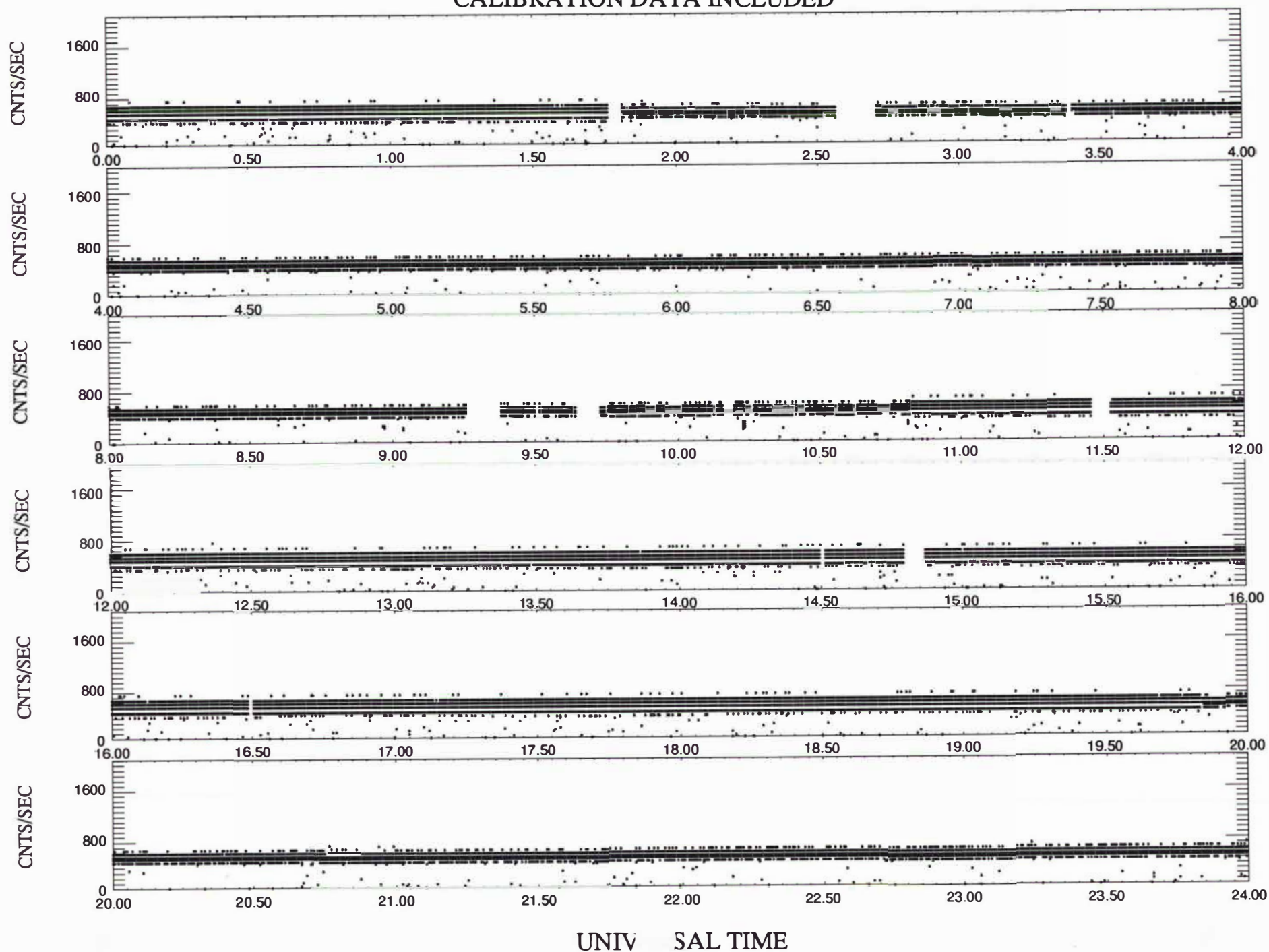
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

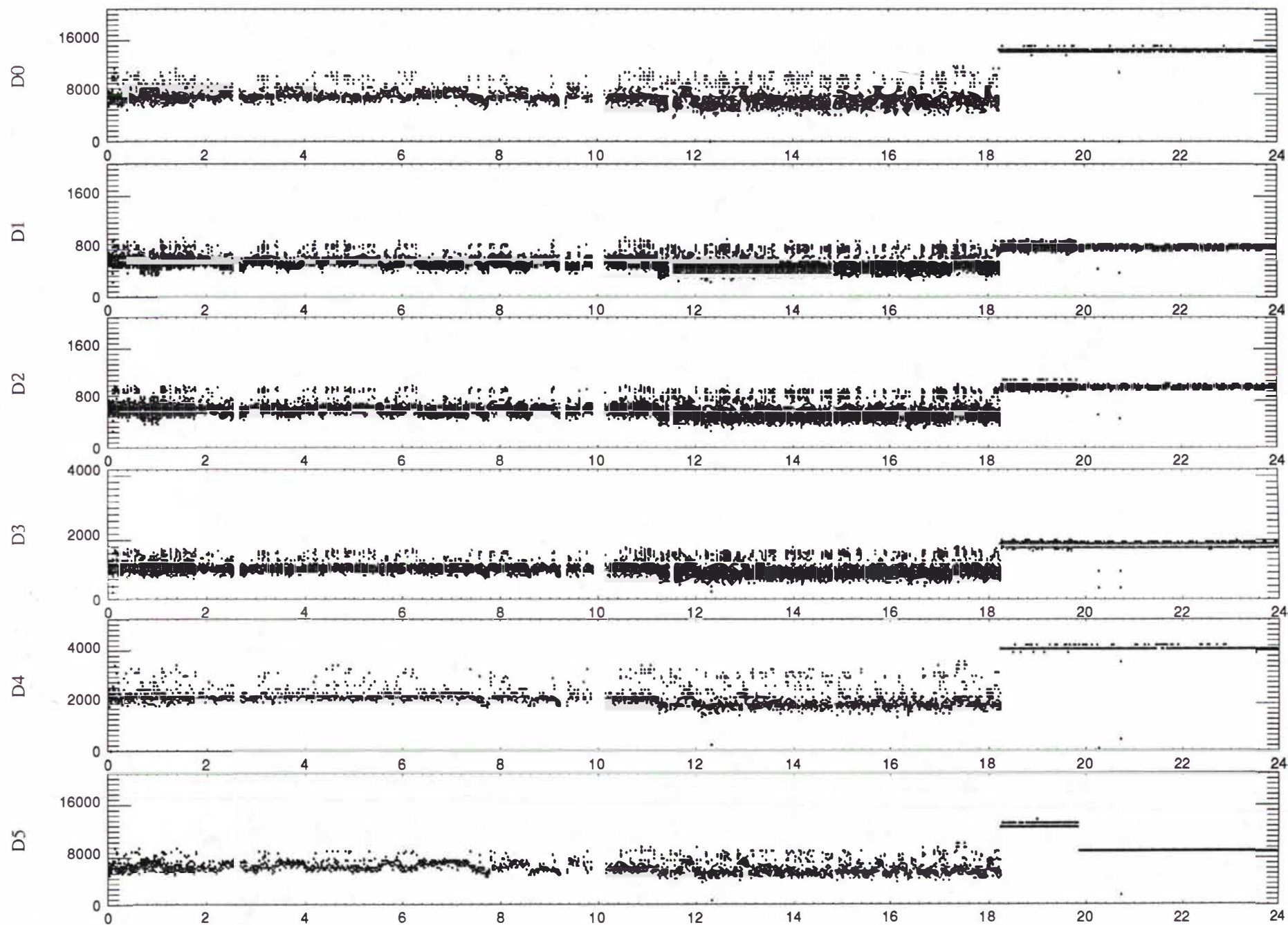
2 (0.5 - 4.0 Angstroms) Background not subtracted

UNIVERSAL TIME



CALIBRATION DATA INCLUDED





UNIVERSAL TIME

From MEEGAN@ssl.msfc.nasa.gov Thu Nov 19 11:58:11 1992
Date: Thu, 19 Nov 1992 13:56:44 -0600 (CST)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 02057

TIME: TJD=8942 SECONDS=48172

TYPE: UNKNOWN

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

THIS IS EITHER A WEAK BURST OR A FLUCTUATION OF CYGNUS X-1. IT LOCATES
WITHIN 5 DEGREES OF CYGNUS X-1, BUT LASTS FOR ABOUT A MINUTE - SOMETHING
WE HAVE NEVER SEEN FROM CYG X-1 FLUCTUATIONS.

*Reclassified as probably from
Cyg X 1 by Briggs
2001*

From BHAT@ssl.msfc.nasa.gov Wed Nov 18 09:26:58 1992
Date: Wed, 18 Nov 1992 11:28:38 -0600 (CST)
From: BHAT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1458

BATSE BURST TRIGGER

NO.: 2058

TIME: TJD=8942 SECONDS=73513

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

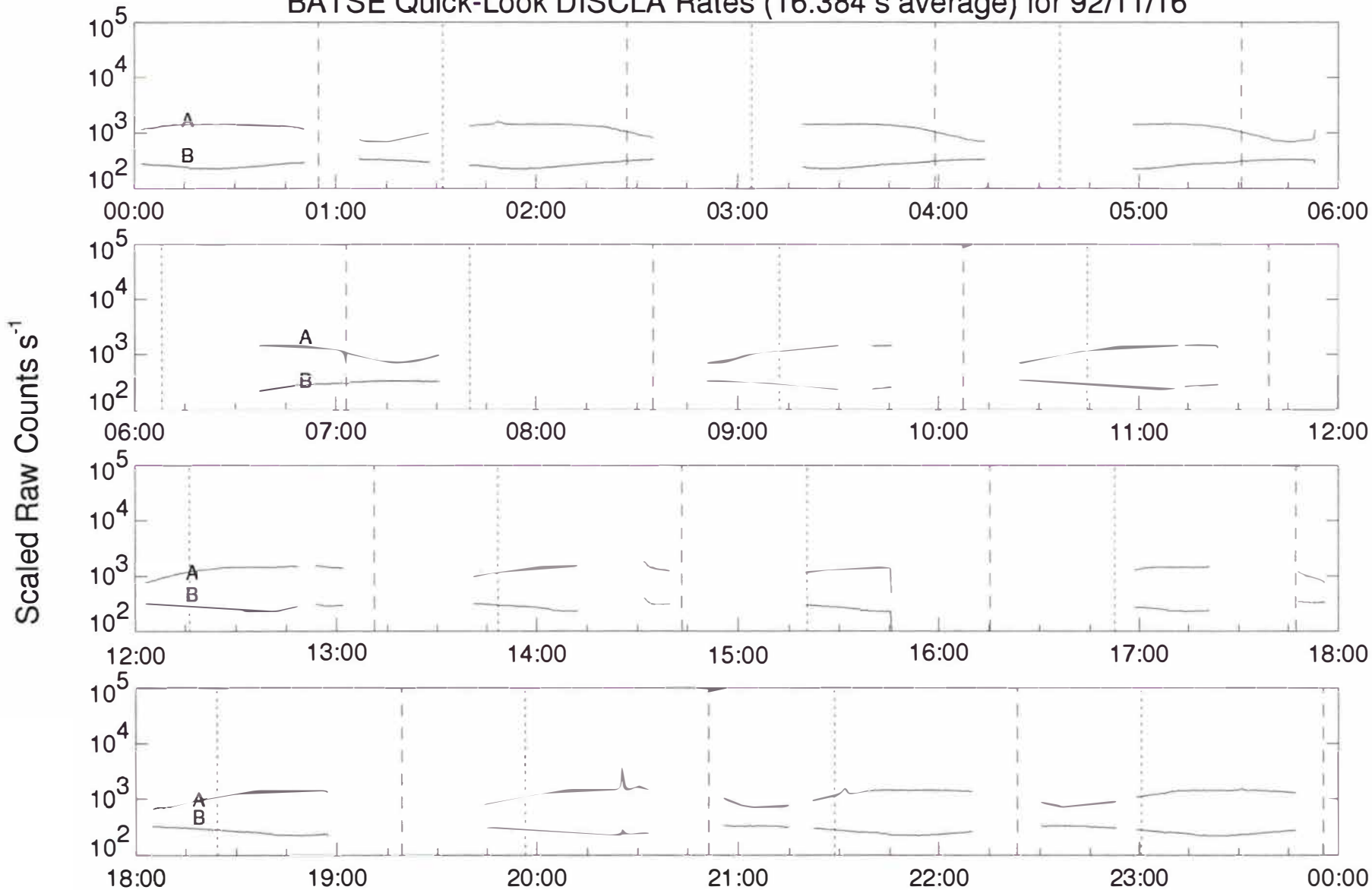
INTENSITY: COUNTS/CM2

LOCATION: ZENITH=116.1 AZIMUTH=007.1 ERROR= DEGREES

COMMENTS:

A C3.9 FLARE SEEN BY GOES. THE FLARE TIME HISTORY CONSISTS OF 2 PARTS. FIRST
PART CONSISTS OF MULTIPLE PEAKS AND LASTS FOR ABOUT 35 S. THE SECOND PART STARTS
185 S AFTER THE END OF THE FIRST PART AND LASTS FOR ABOUT 120 S WHICH ALSO
CONSISTS OF MULTIPLE PEAKS. NO SIGNAL IS SEEN ABOVE 320 KEV.

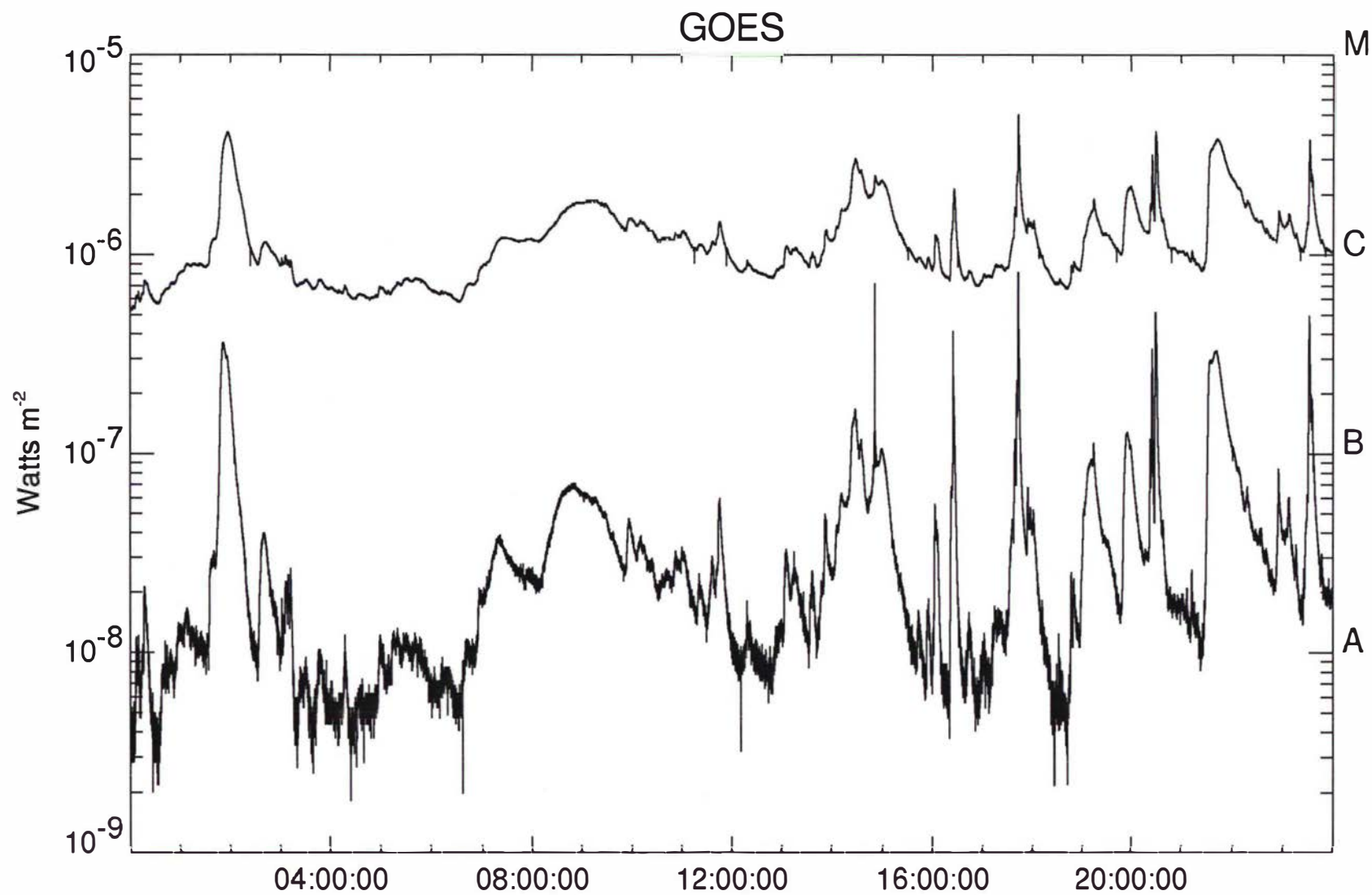
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/16



Current Time: 92/11/18, 0235 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



Data Start: 92/11/16, 0000:02

Plot created: 95/05/30, 1604

Channel

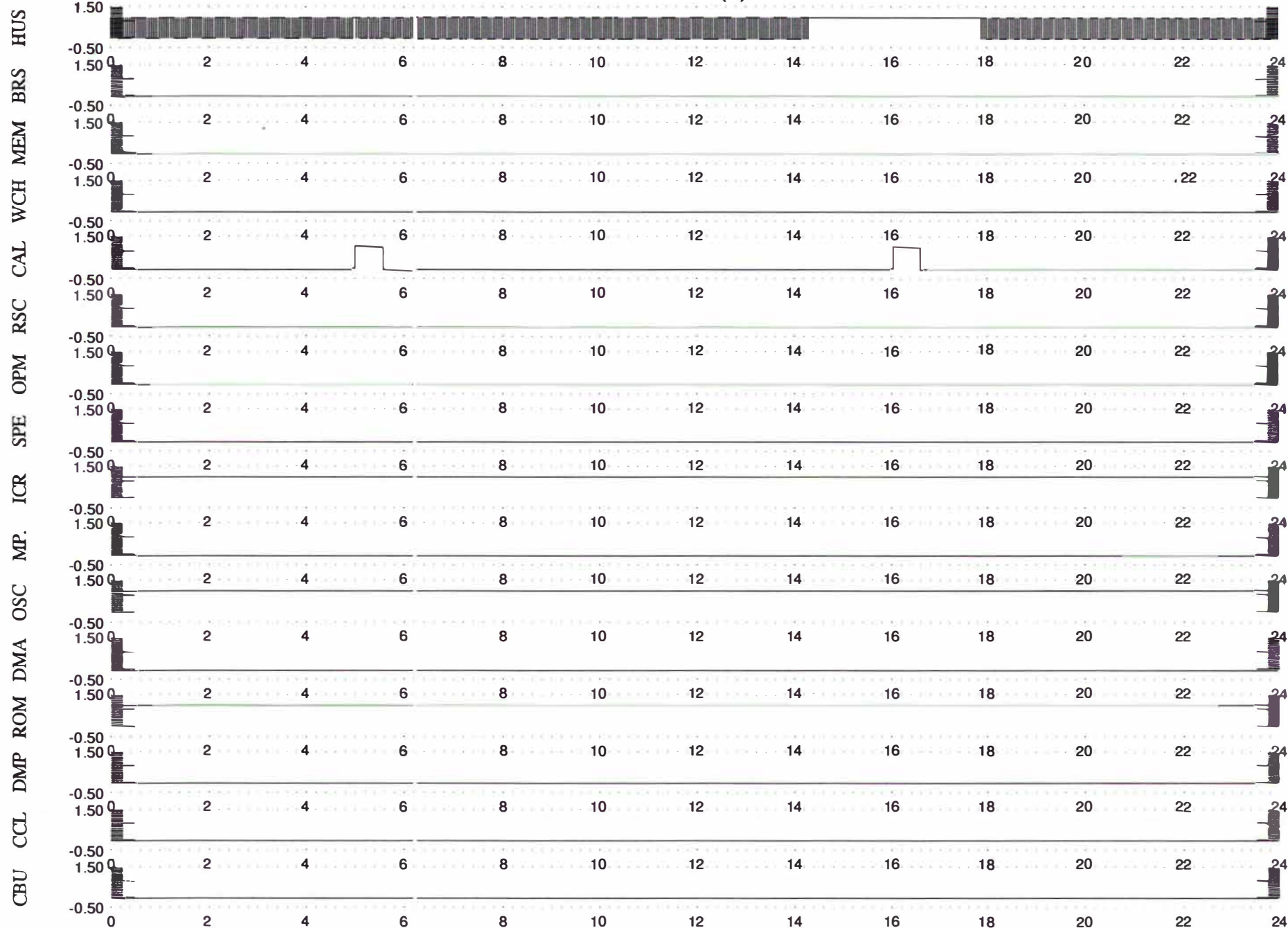
1 (1.0 - 8.0 Angstroms)

Background not subtracted

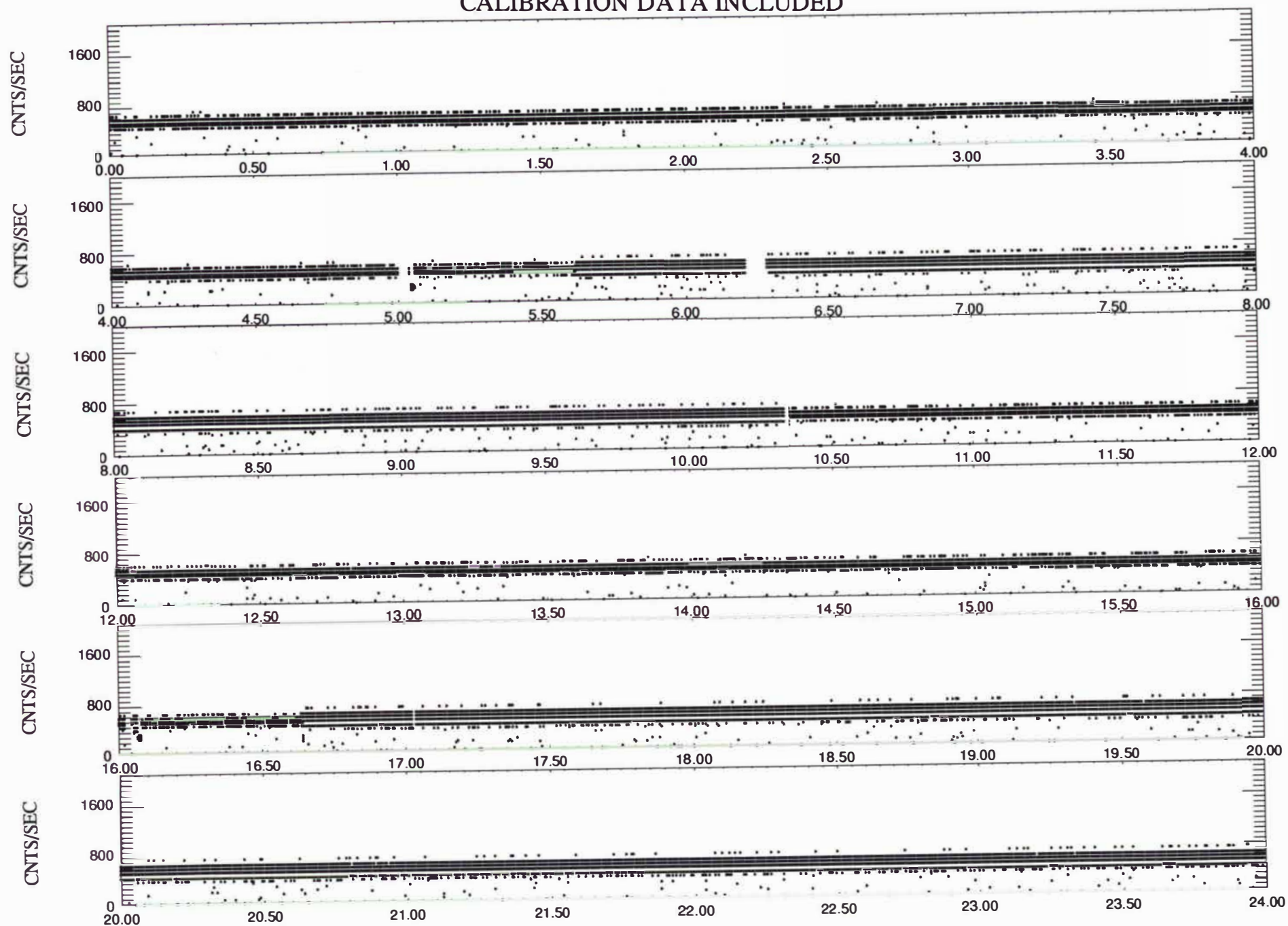
2 (0.5 - 4.0 Angstroms)

Background not subtracted

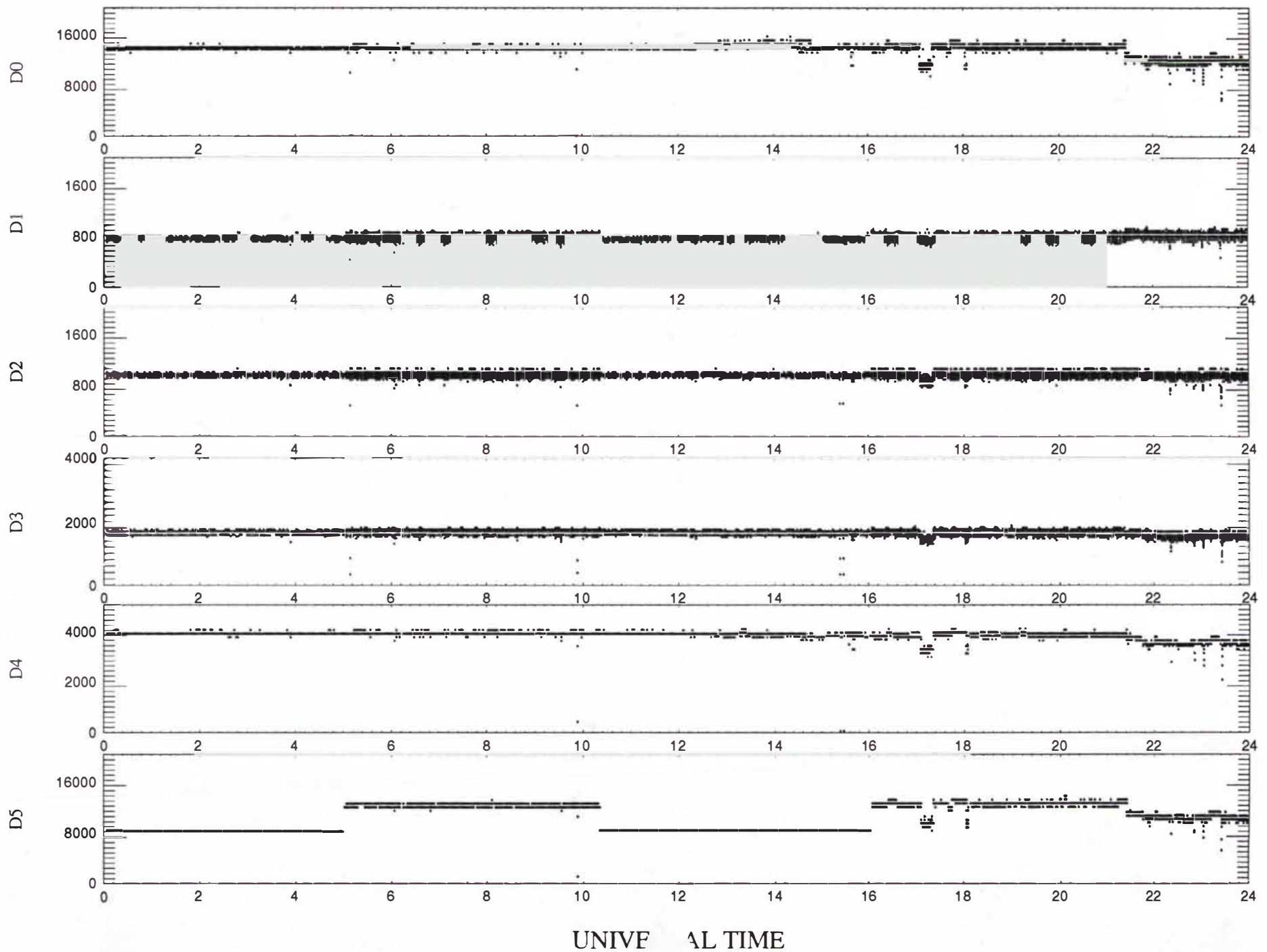
UNIVERSAL TIME



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From MEEGAN@ssl.msfc.nasa.gov Thu Nov 19 12:03:53 1992
Date: Thu, 19 Nov 1992 14:05:32 -0600 (CST)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 02059

Nov-17

TIME: TJD=8943 SECONDS=04016

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

GOES C1.2. ABOUT 30 SECONDS LONG. SINGLE PULSE WITH STRUCTURE,
NOT SEEN ABOVE 300 KEV.

 CATSEARCH PROGRAM

BATSE BURST # 2060
 EVENT OF 1992 NOV 17 DAY OF YEAR=322
 EVENT CROSSING TIME AT BATSE : 12258. S. OR 03:24:17.5
 COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 54.800 28.100
 BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
 POSITION OF ULYSSES ON 17/11/ 92 IS:
 RA= 166.203 DEC= -7.499 DIST= 5.498 AU
 BATSE-ULYSSES DISTANCE = 822536704. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 67.63 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1044.33 SECS.
 CROSSING TIME AT ULYSSES IS 13302. S. OR 03:41:41.8 +/- 506.35 SECONDS

From MEEGAN@ssl.msfc.nasa.gov Thu Nov 19 12:09:29 1992
 Date: Thu, 19 Nov 1992 14:11:13 -0600 (CST)
 From: MEEGAN@ssl.msfc.nasa.gov
 Subject: Burst Trigger Message
 To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
 khurley@space6.ssl.berkeley.edu
 X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
 Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02060

TIME: TJD=8943 SECONDS=12257

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= 69. AZIMUTH=177. ERROR= DEGREES

COMMENTS:

SINGLE PULSE LASTING ABOUT 0.5 SECONDS. VERY HARD SPECTRUM.

From MEEGAN@ssl.msfc.nasa.gov Thu Nov 19 12:20:10 1992
 Date: Thu, 19 Nov 1992 14:22:12 -0600 (CST)
 From: MEEGAN@ssl.msfc.nasa.gov
 Subject: BATSE burst
 To: khurley@sunspot.ssl.berkeley.edu
 X-Vmsmail-To: SMTP%"khurley@sunspot.ssl.berkeley.edu", BATSE::KOUVELIOTOU
 Content-Length: 108

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2060	921117	8943	12257	13000	056	+27

9 / 6 / 94

ULYSSES RT

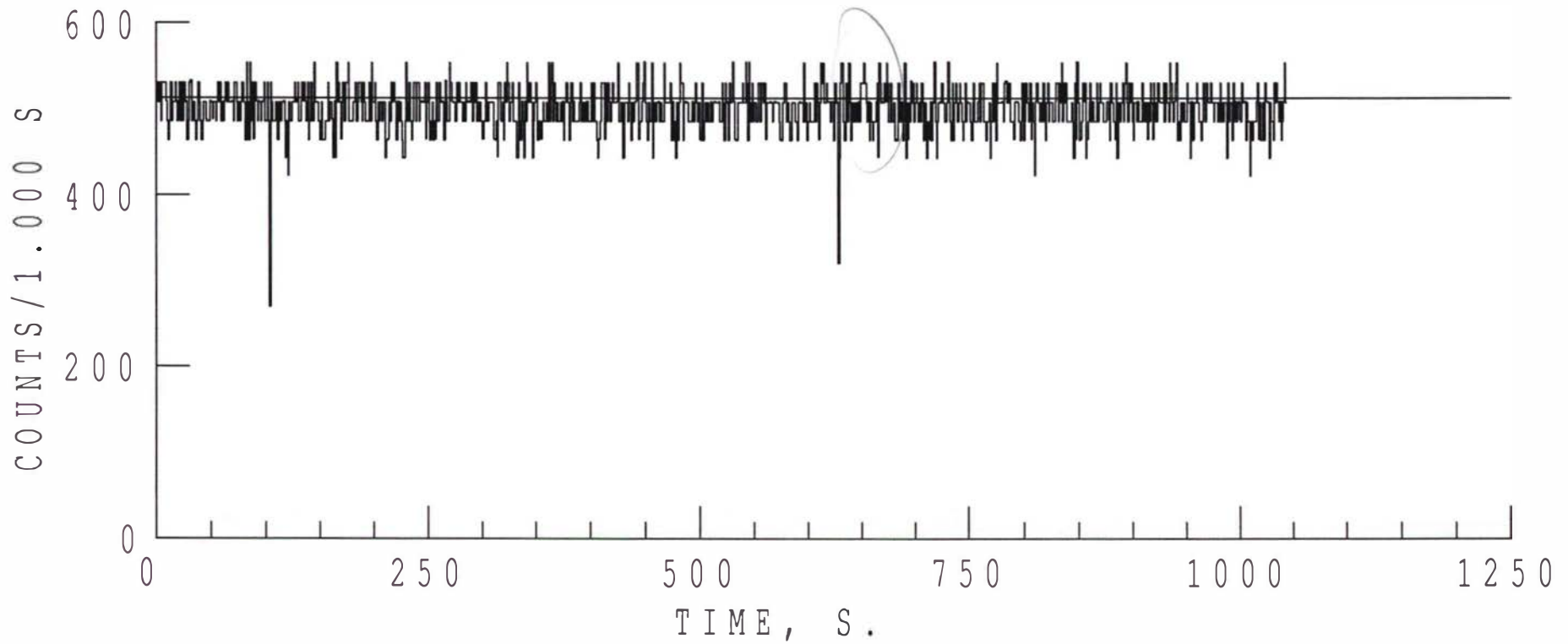
17/11/92 12780.402 s

0.500 S INTERVALS REGROUPED BY 2

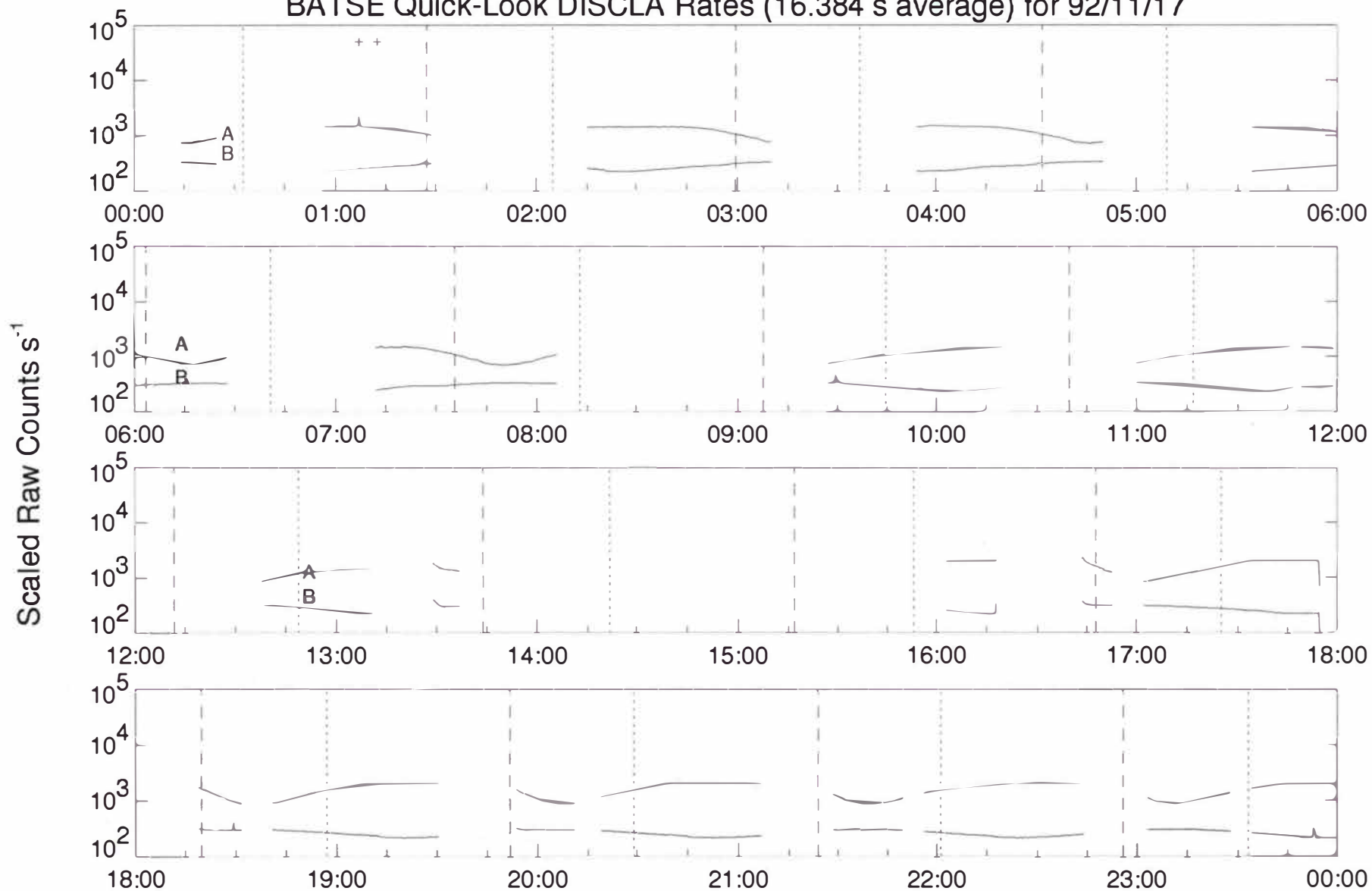
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



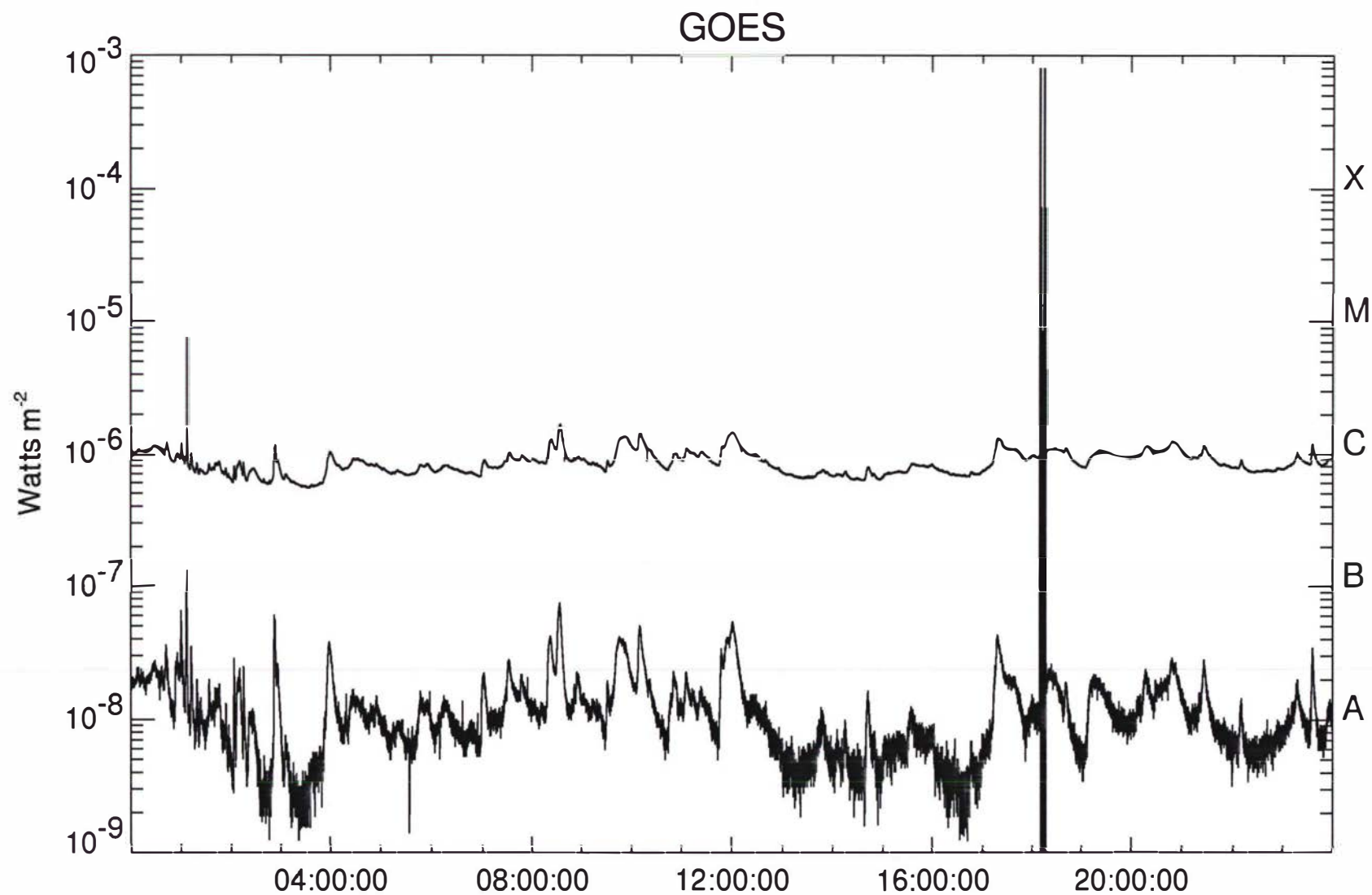
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/17



Current Time: 92/11/19, 1157 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



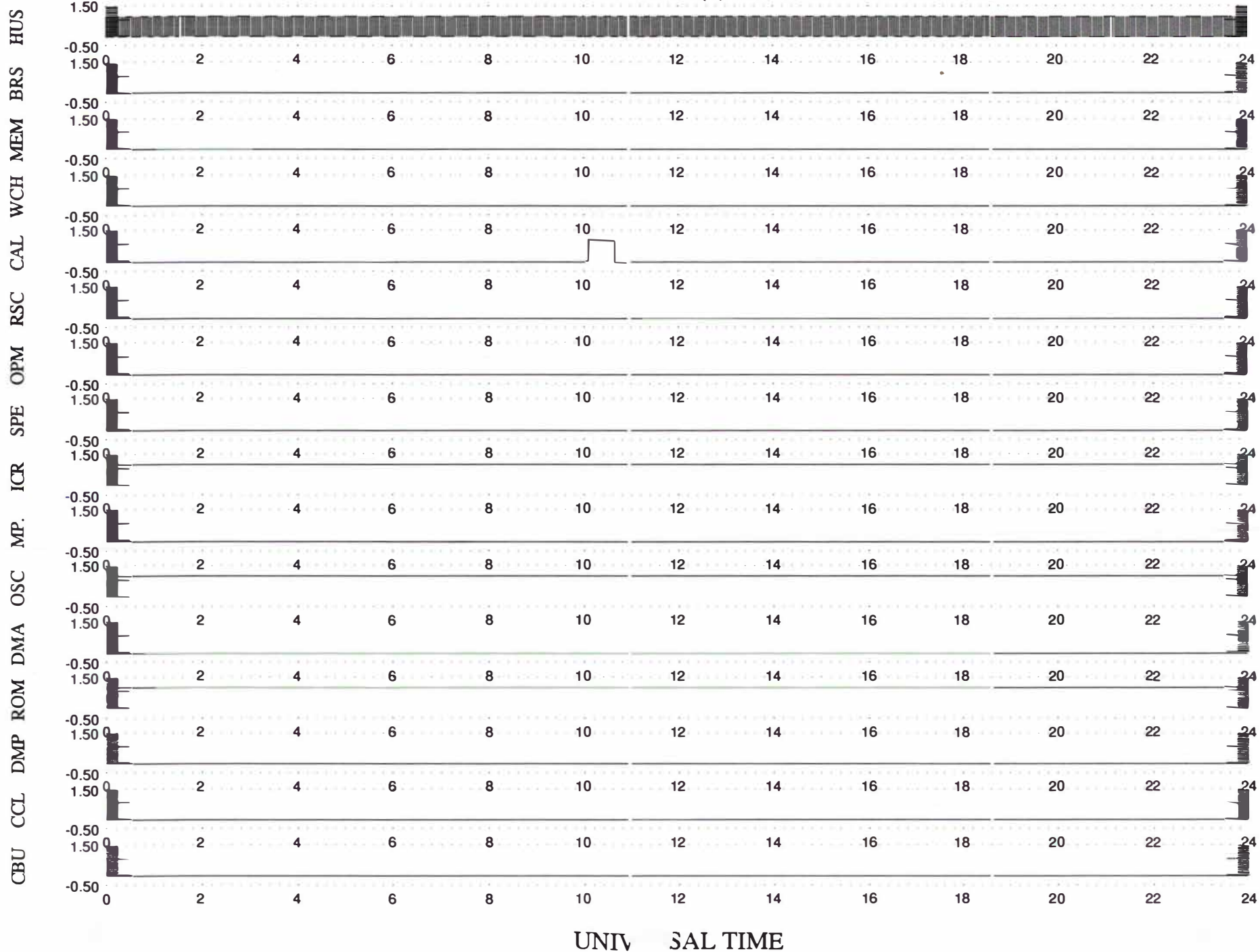
Data Start: 92/11/17, 0000:00

Plot created: 95/05/30, 1608

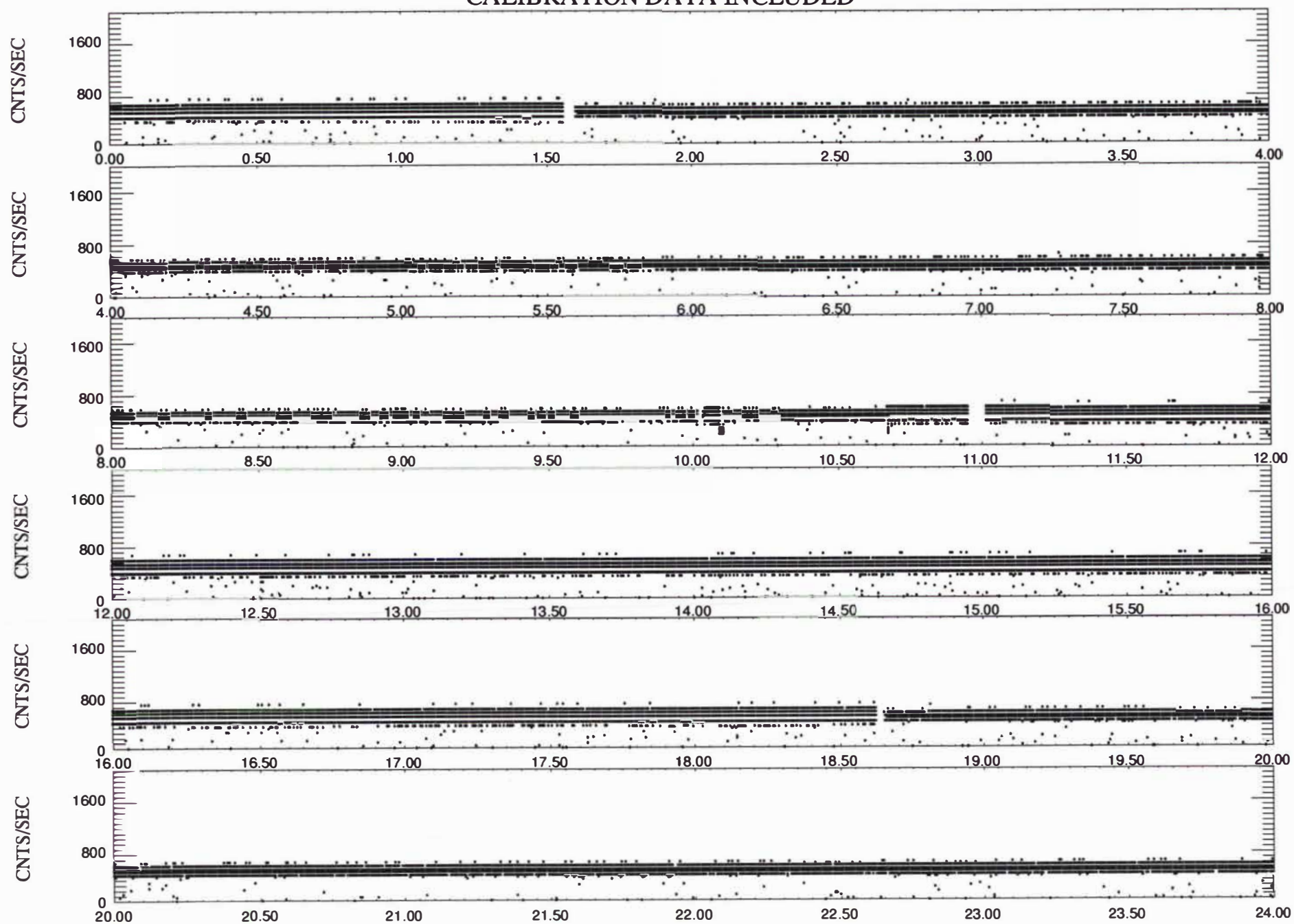
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

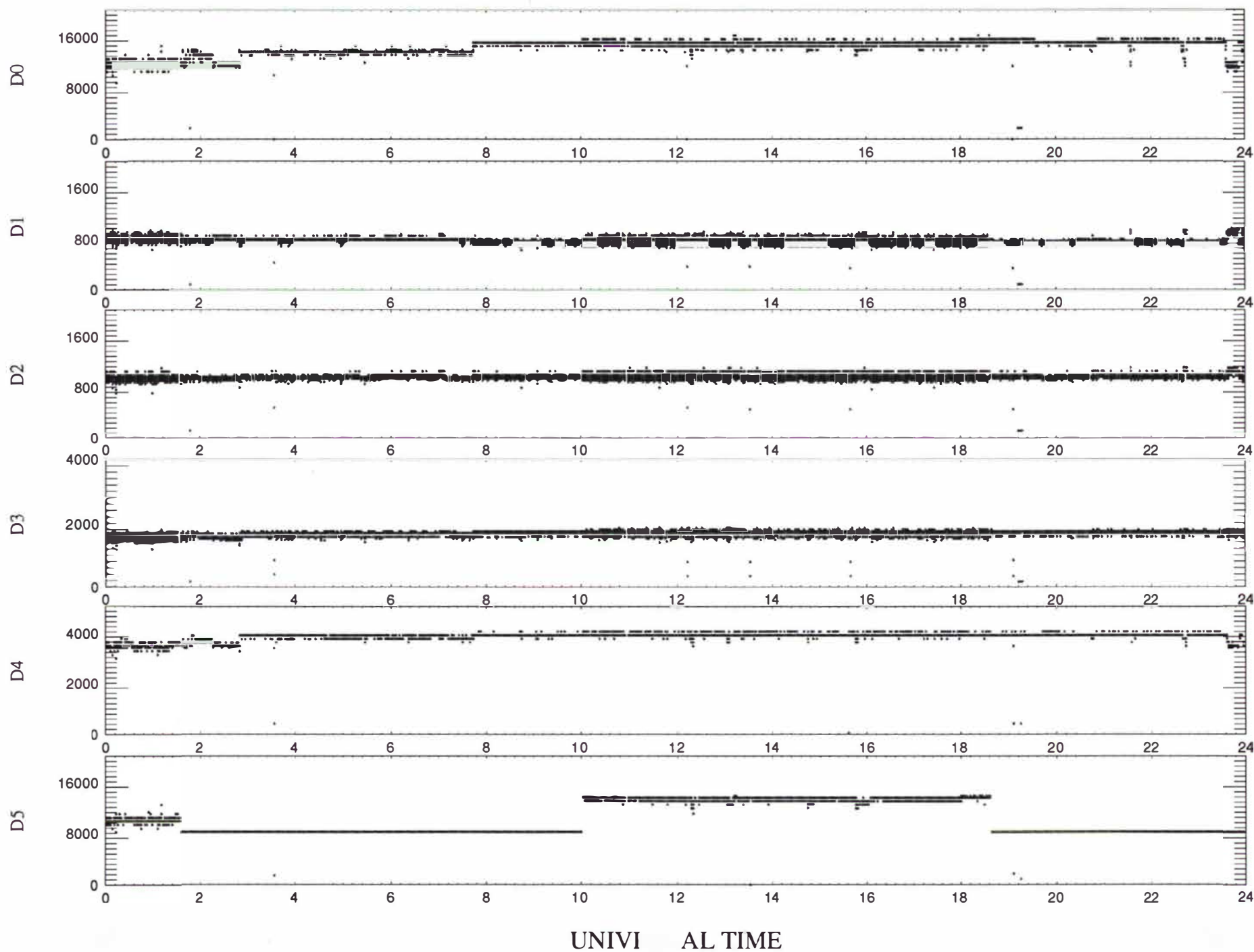
NO BURST (0)



CALIBRATION DATA INCLUDED



UNIV 3AL TIME



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

Version 1.0 Aug. 9. 1993.

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

#	date	UT-time	sd	l(s)	m(s)	m/l	position(J2000)	t	comments	#Wm	sdp	theta	phi
1	920824	10:53						2	Weak (BATSE)				
2	921004	14:00:21		?	15	>5	14h37.5m 34.1d	1	Two peaks			63.2	222.1
3	921022	15:20:57		60	55	>5	16h56.7m -09.5d	2	Two peaks				
4	921118	22:11						2	Weak (BATSE)				
5	921207	16:00:48		?	16	>5	20h36.1m -41.8d	1	Two peaks			65.9	136.3
6	921218	02:30						2	Weak (BATSE)				
7	930106	15:37						2	Weak (BATSE)				
8	930201	16:42:12						2	Weak (BATSE?)				
7	930217	14:44						2	Weak (BATSE)				
8	930318	12:31:28		?	30	>5	10h03.3m* -20.0d*	2	BATSE trig 95s early?				
9	930410	14:19						1					
10	930426	12:40:35		?	18	>5		1					
11	930502	13:52						2	Weak (BATSE)				
12	930610							1					
13	930614	03:40:32		11	9	2	11h20.7m +23.1d	1					

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

comments:

UT-time: Time for peak count rate in Med CsI band. Note time resolution!

*) Times marked with an asterisk are not yet well calibrated to UT.

sd: Standard deviations above background (in count rates).

l(s): Duration in 6-10 keV band (Low NaI channel)

m(s): Duration in 10-180 keV band (Med CsI channel)

m/l: Hardness: (sd(Med NaI)+sd(Med CsI)) / sd(Low NaI) (NOTE: EURECA energy bands)

Positions marked with asterisk can not be determined more than once from the WATCH data!

t: Best time resolution available: 1, 4, 8, 16 motor rotations (approx. 0.9 s)

m: 1 motor rotation in 4 ms steps

r: raw memory (4 ms steps)

#Wm: Telemetry session and WATCH unit identifier

sdp: Standard deviations above background in final modulation pattern used for source localization. As a rough guide, the statistical uncertainty in the source position is 240/sdp arcminutes. In most cases the systematic errors dominates the error budget.

theta and phi: Source position in WATCH instrument coordinates.

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

~~Version 2.0 Aug. 9. 1993.~~

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

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

Hello Kevin,

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

GRB 920814 06:10:31.2 17h20m22s -46d10'

GRB 920918 09:41:20 16h23m30s -04d18'

GRB 921118 22:12:12 23h23m26s 49d34'
350.856 49.566

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

Best regards,
Soren

CATSEARCH PROGRAM

BATSE BURST # 2061
EVENT OF 1992 NOV 18 DAY OF YEAR=323
EVENT CROSSING TIME AT BATSE : 79904. S. OR 22:11:44.4
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 349.600 49.600
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 18/11/ 92 IS:
RA= 166.253 DEC= -7.613 DIST= 5.481 AU
BATSE-ULYSSES DISTANCE = 819984528. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 42.08 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 2030.05 SECS.
CROSSING TIME AT ULYSSES IS 81934. S. OR 22:45:34.4 +/- 399.07 SECONDS

RT

From BRAINERD@ssl.msfc.nasa.gov Thu Nov 19 15:37:21 1992
Date: Thu, 19 Nov 1992 17:39:06 -0600 (CST)
From: BRAINERD@ssl.msfc.nasa.gov (Jim Brainerd, (205) 544-4970)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 02061

Nov 18

TIME: TJD=8944 SECONDS=79904

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

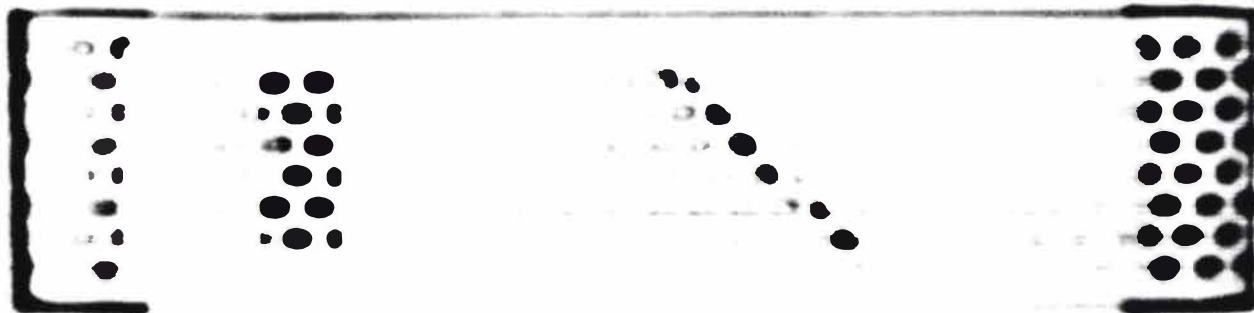
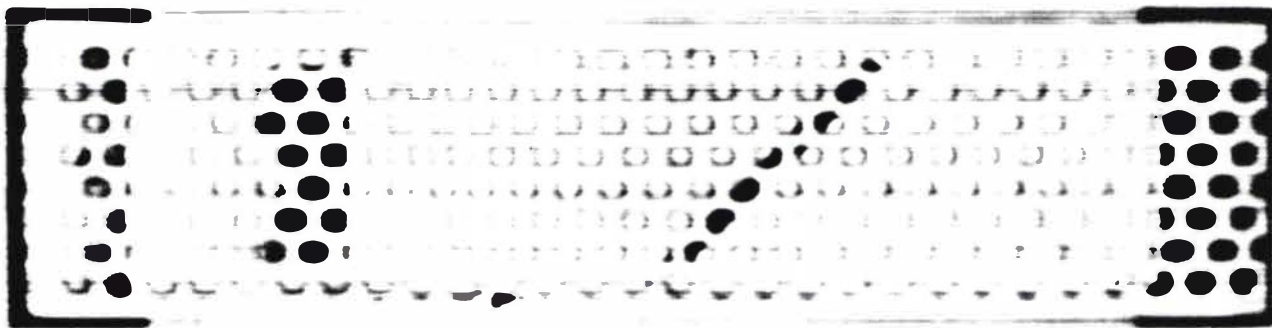
LOCATION: ZENITH=065.7 AZIMUTH=126.4 ERROR= DEGREES

COMMENTS:

VERY HARD GAMMA-RAY BURST SEEN ABOVE 300KEV. DURATION OF APPROXIMATELY
300S. THREE MAIN PEAKS WITH 1S STRUCTURE. PREBURST FLAIR OF 50S DURATION.

From BRAINERD@ssl.msfc.nasa.gov Thu Nov 19 15:42:03 1992
Date: Thu, 19 Nov 1992 17:44:06 -0600 (CST)
From: BRAINERD@ssl.msfc.nasa.gov
Subject: BATSE burst
To: khurley@sunspot.ssl.berkeley.edu
X-Vmsmail-To: SMTP%"khurley@sunspot.ssl.berkeley.edu",BATSE::KOUVELIOTOU
Content-Length: 108

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2061	921118	8944	79904	7000	355	+49



Helio corr removed

Date: Dec 11 '97

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

- ☐ 2.042 s subtracted for bursts prior to June 25 1992 and DISCSC programs prior to Version 2.16 (August 28 1992)? *N/A*
- ☒ BATSE ephemeris for T_0 ?
- ☒ Error circle position and radius from public catalog used? *N/A*
- ☐ 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

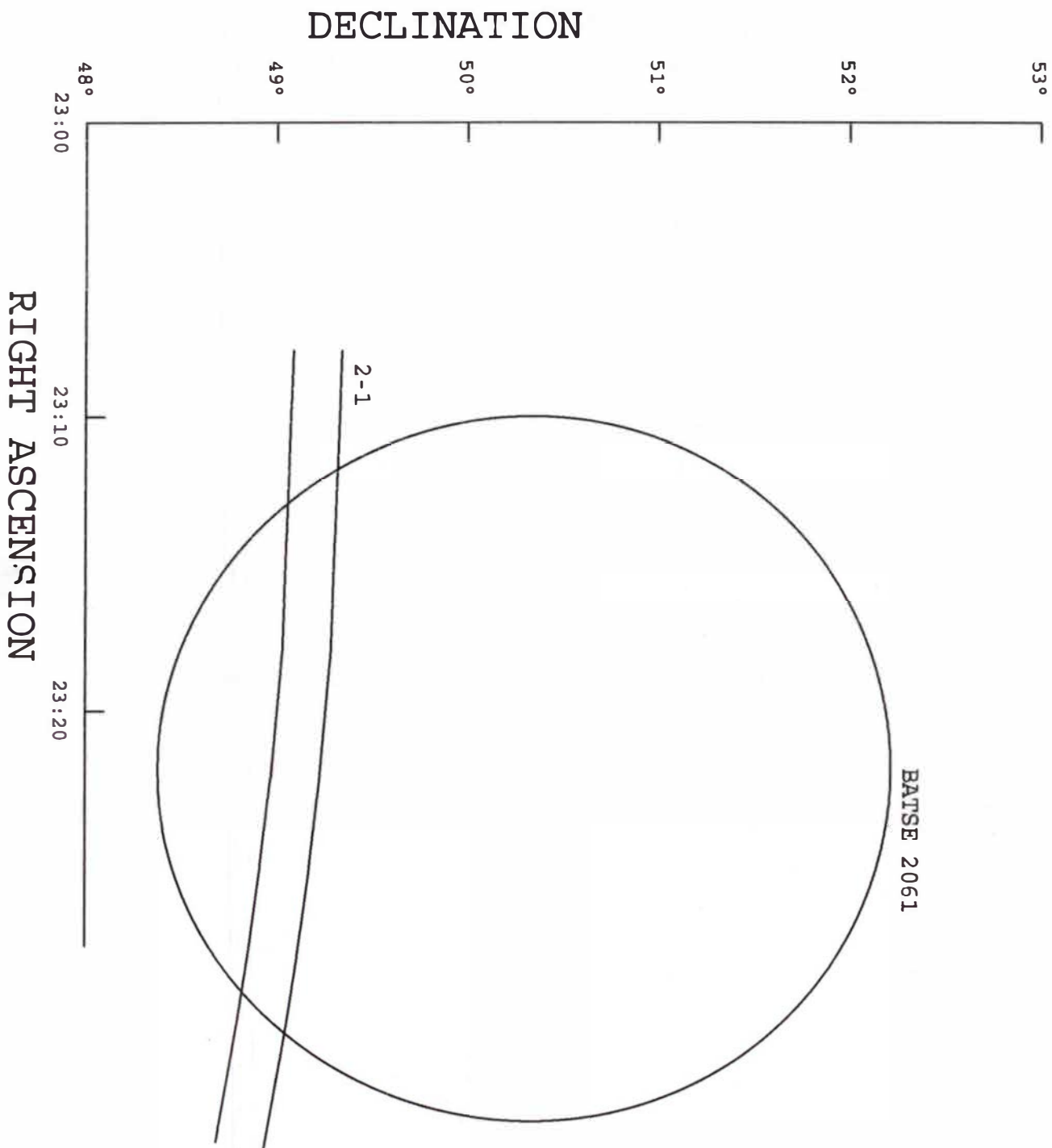
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF NOV 18, 1992 22:44

11/12/97



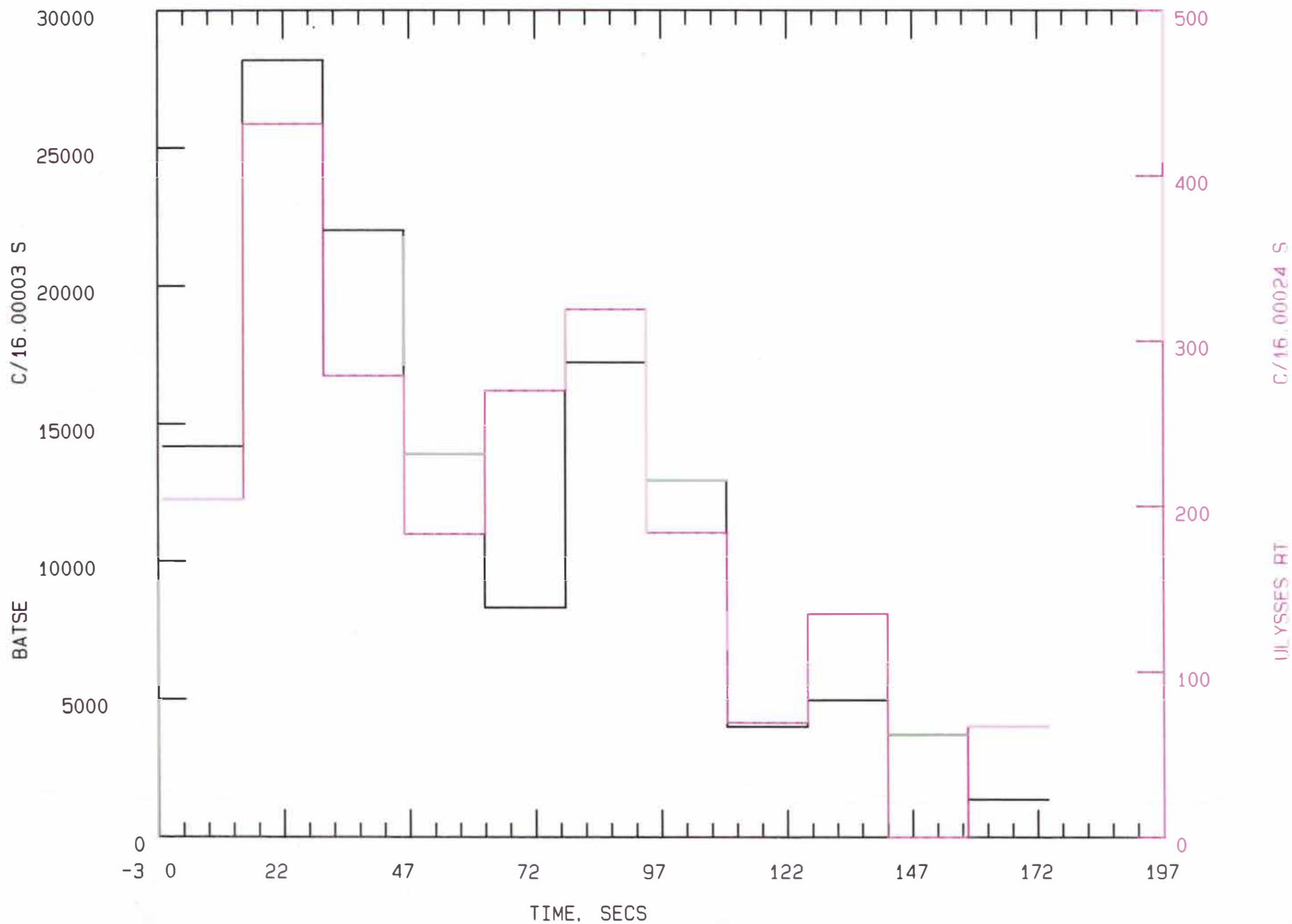
BATSE

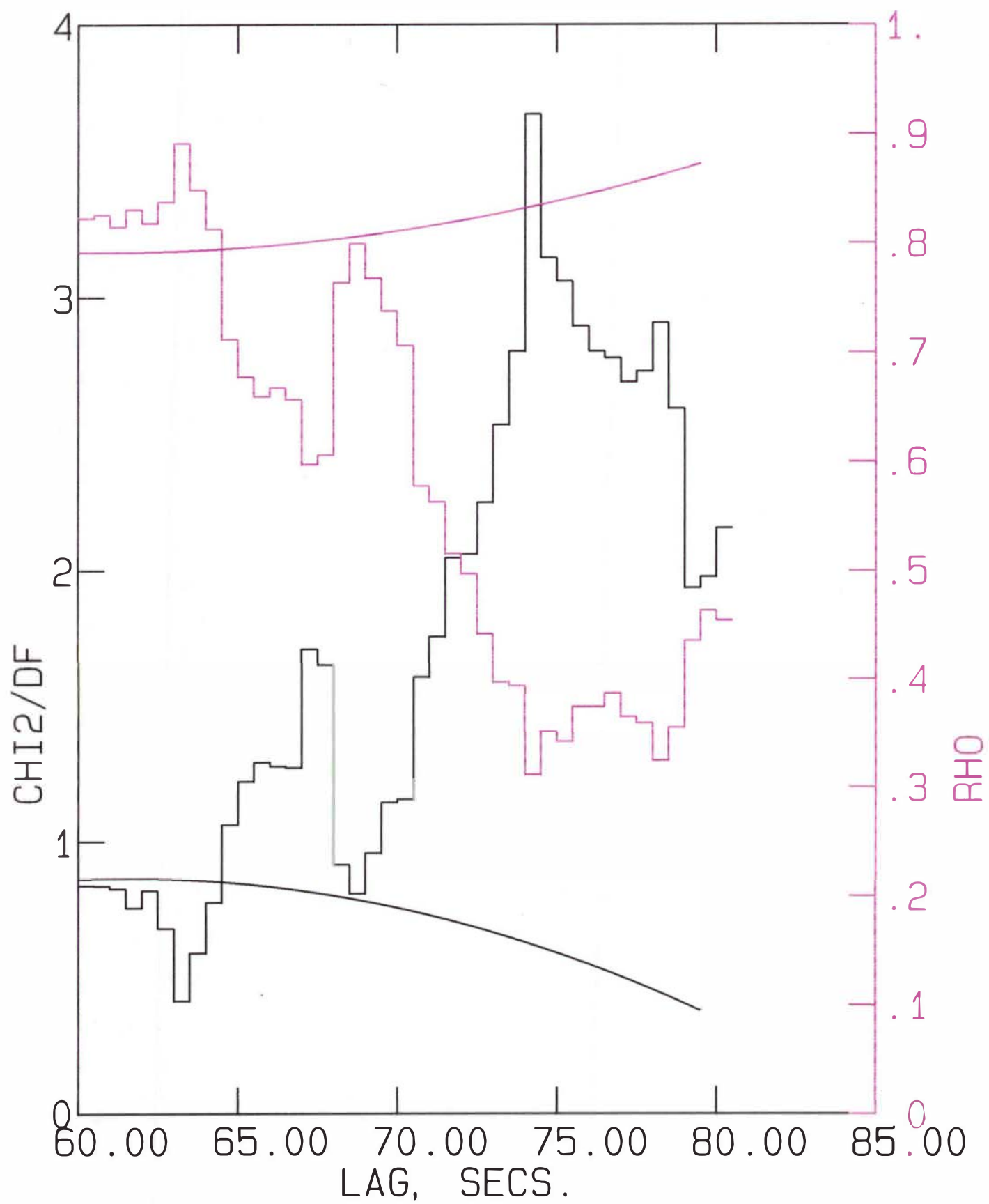
-ULYSSES RT CORRELATION

18/11/92

79904.386

11/12/97





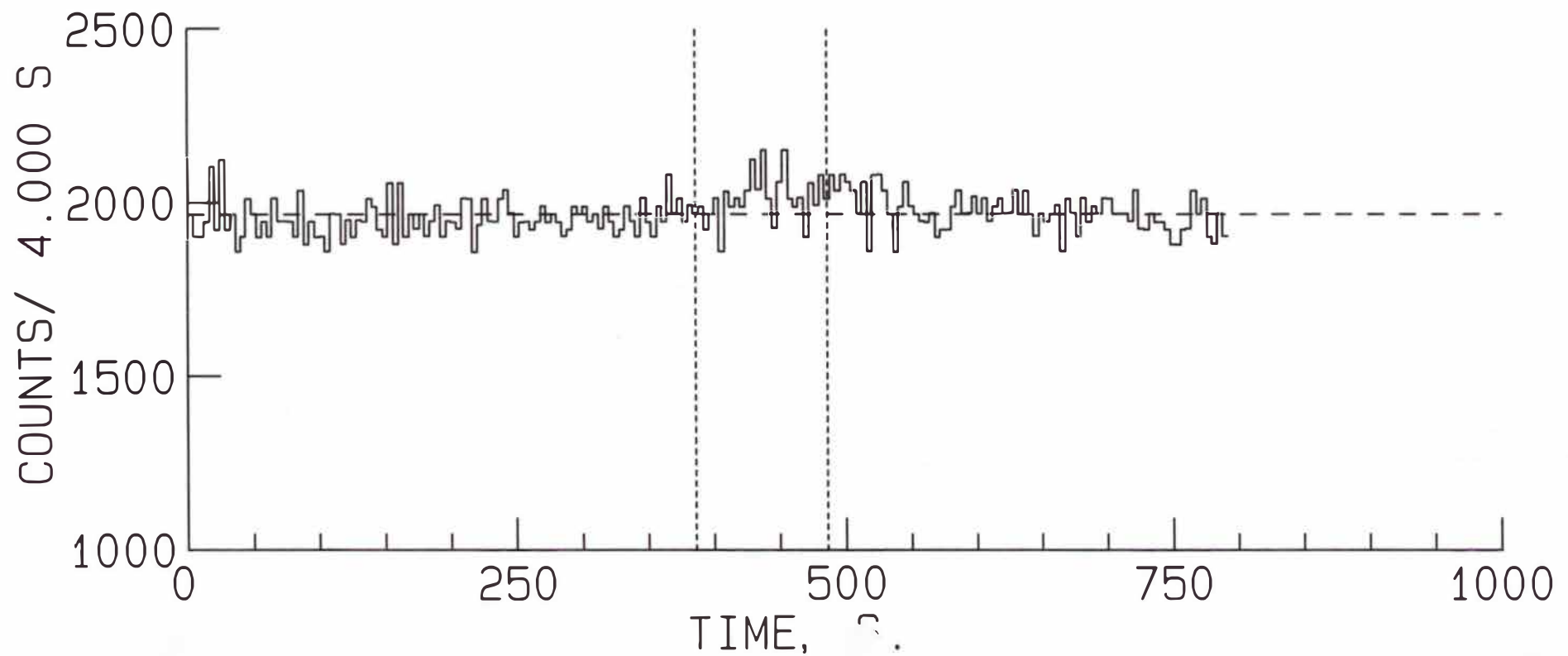
ULYSSES RT

11/12/97

18/11/92 81540.322 s

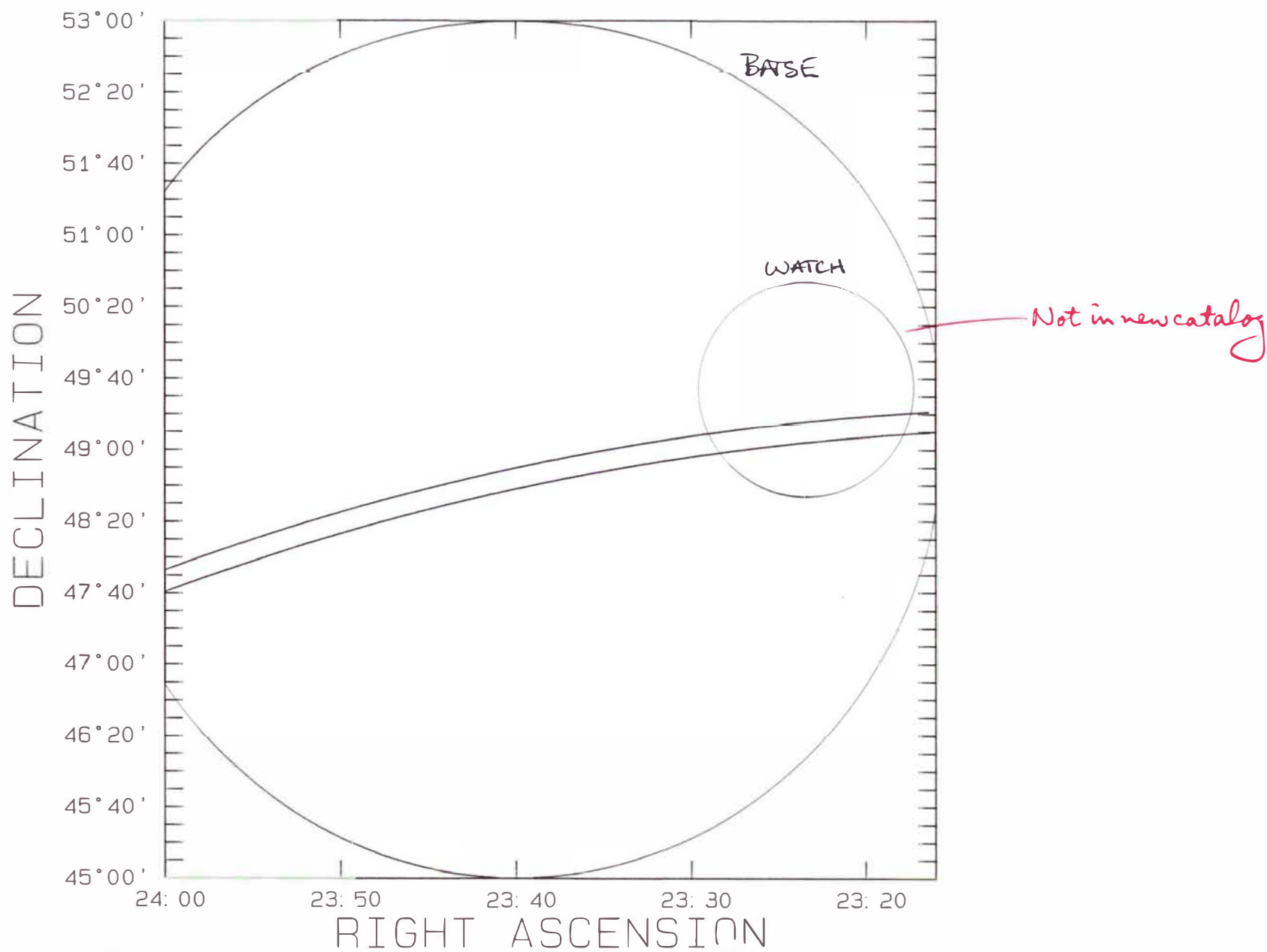
0.500 S INTERVALS REGROUPED BY 8

22- 151 keV

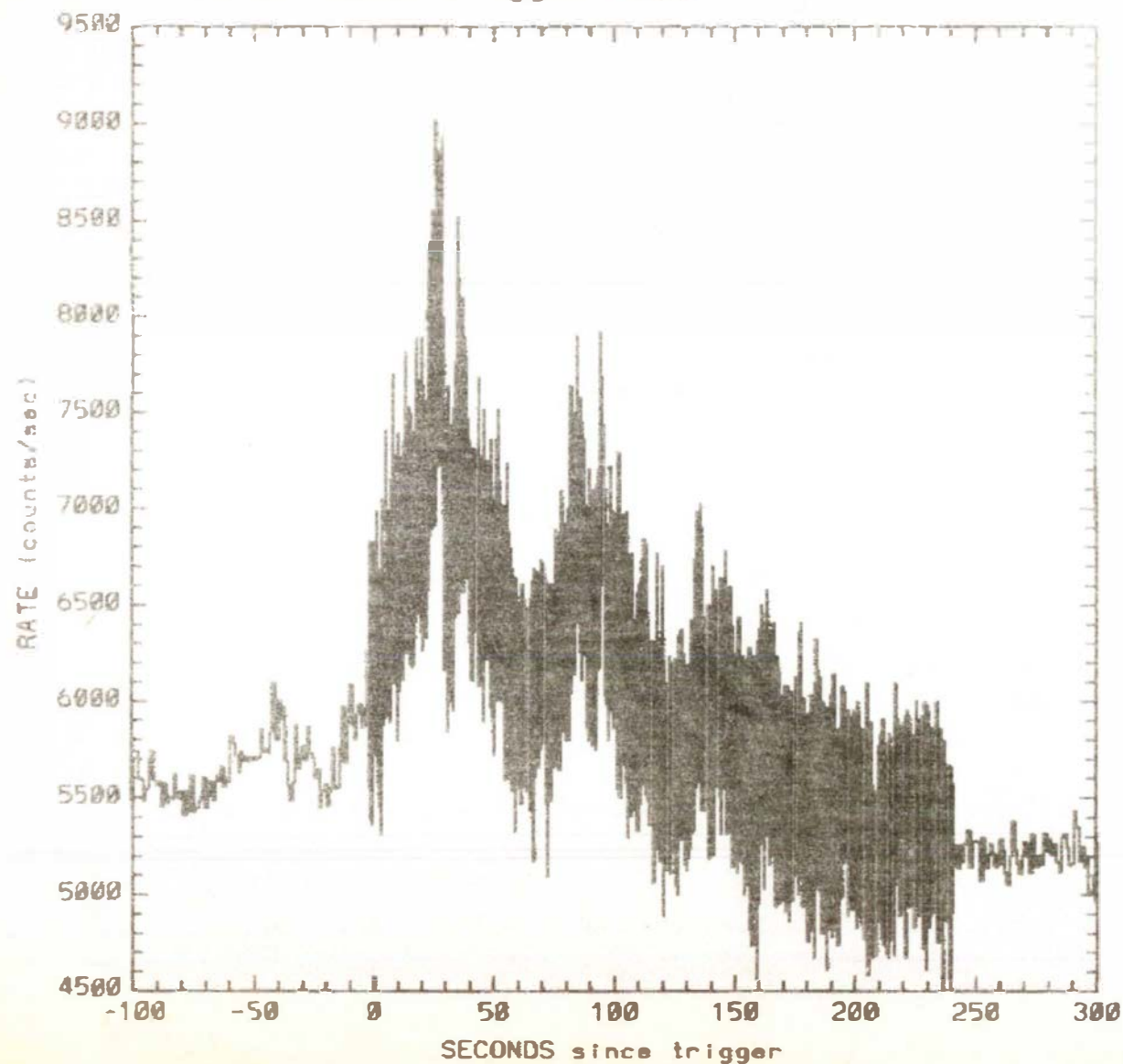


27/10/93

NOV 18, 1992 22: 45



BATSE burst trigger #2061



18-DEC-1992 20:28:00

Created by NGPS 80
(Burst Display)
Version 2.15

Trigger # = 2061

Trigger Time:
8964 / 79984.386

OK

Burst Data Type:
DISCSC

Deadtime
Corrected: N

Background Data
Type: PREB + DISCLA

Minimum Integ. Time:
0.064 second(s)

Detectors [7..8]:
89010001

Discriminators:
(1..2)

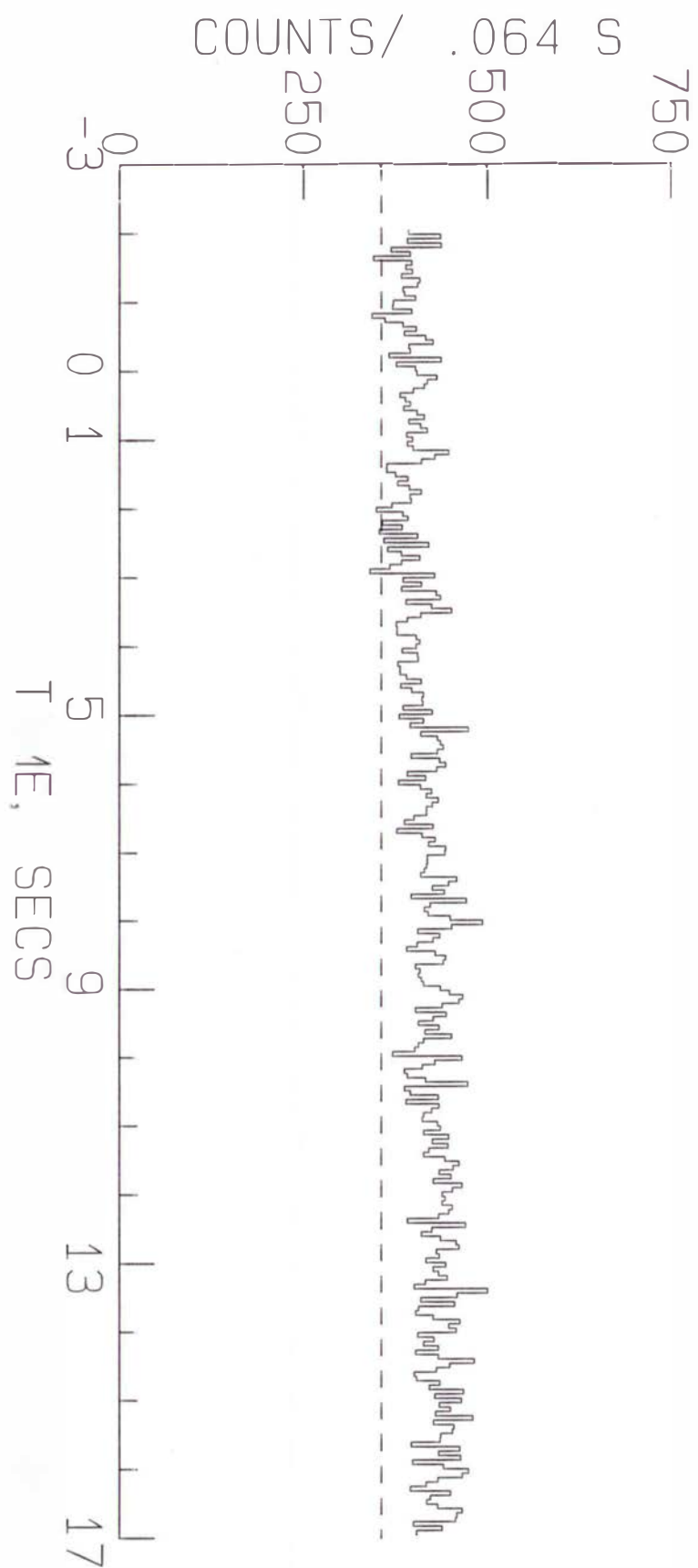
Quality Mask:
801SP0

BATSE

18/11/92

79904.386

25- 100 keV



BATSE

18/11/92

79904.386

25- 100 keV

COUNTS/ .064 S

750
500
250

17

21

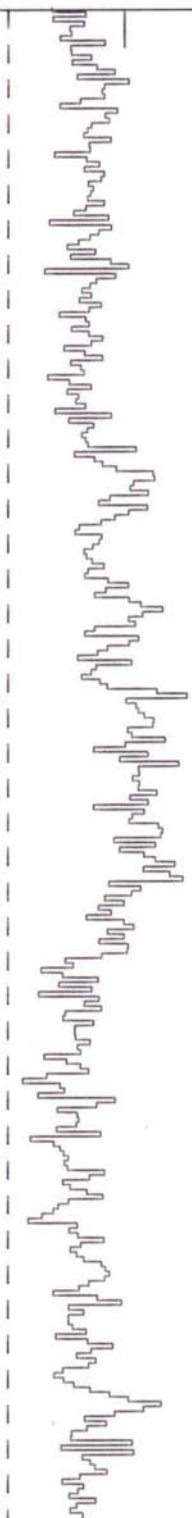
25

29

33

37

T IE, SECS



BATSE

18/11/92

79904.386

25- 100 keV

COUNTS/ .064 S

750
500
250

37

41

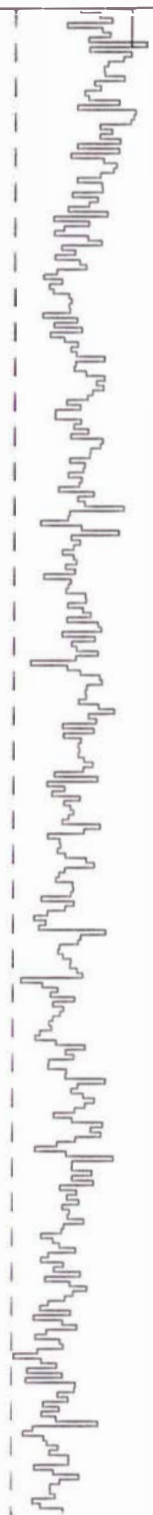
45

49

53

57

T IE, SECS



BATSE

18/11/92

79904.386

25- 100 keV

COUNTS/ .064 S

750
500
250

57

61

65

69

73

77

T
1E, SECS

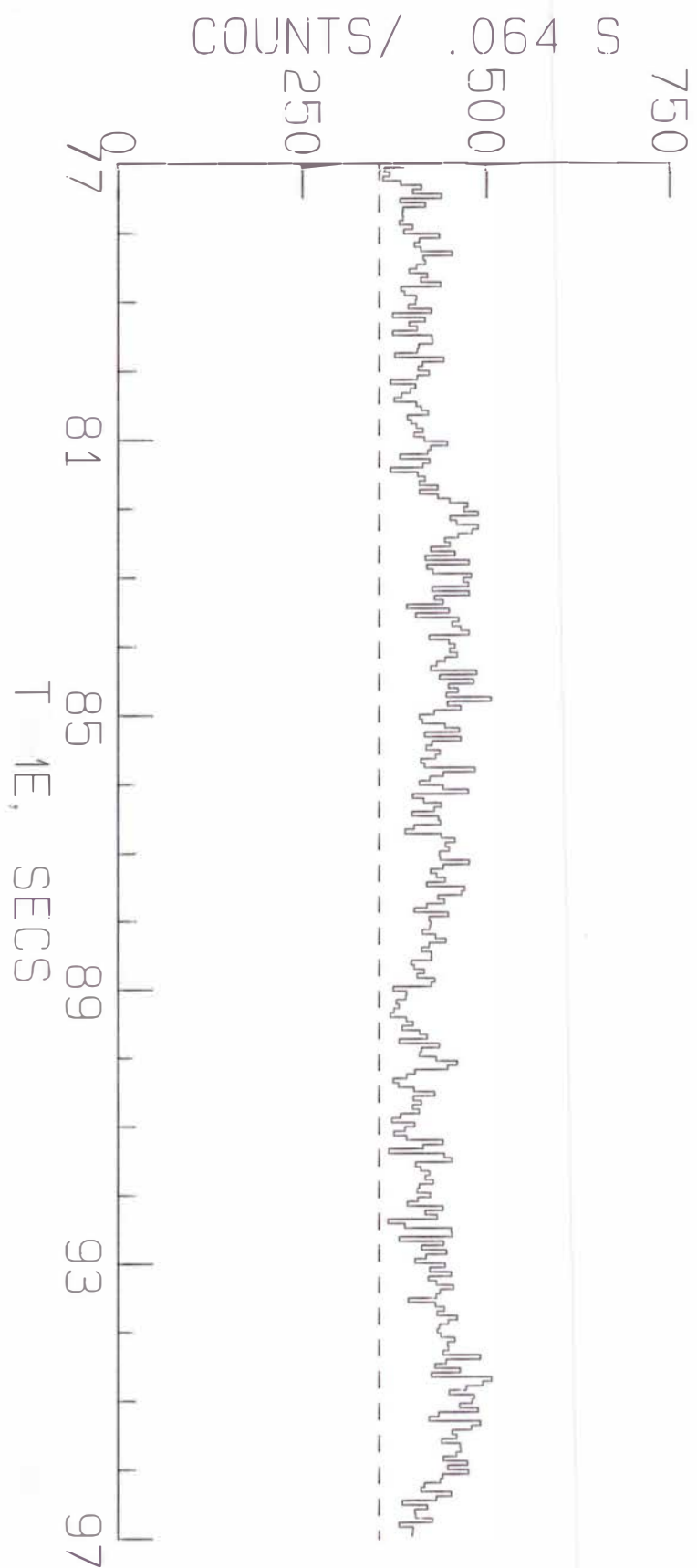


BATSE

18/11/92

79904.386

25- 100 keV



BATSE

18/11/92

79904.386

25- 100 keV

COUNTS/ .064 S

750
500
250

97

101

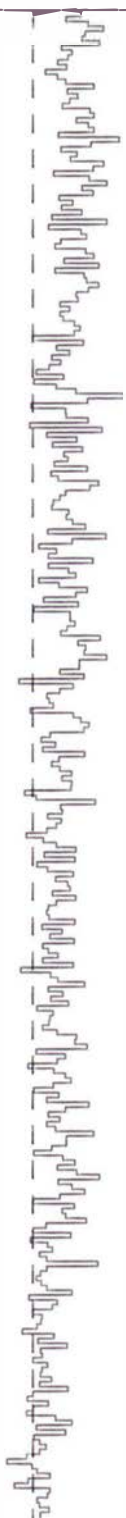
105

109

113

117

T 1E, SECS



BATSE

18/11/92

79904.386

25- 100 keV

COUNTS/ .064 S

750
500
250
0

117

121

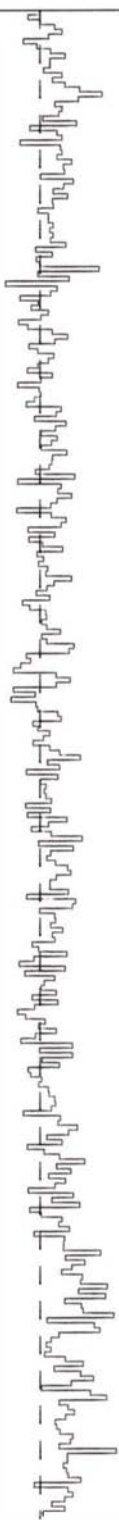
125

129

133

137

T 1E, SECS



BATSE

18/11/92

79904.386

25- 100 keV

COUNTS/ .064 S

750
500
250
0

137

141

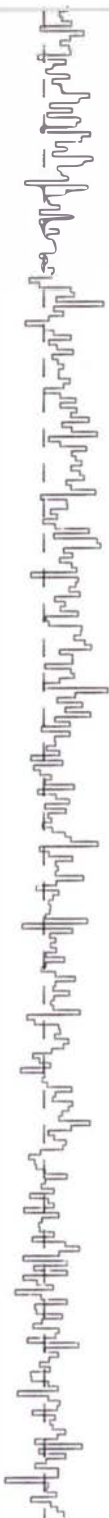
145

149

153

157

T 1E, SECS

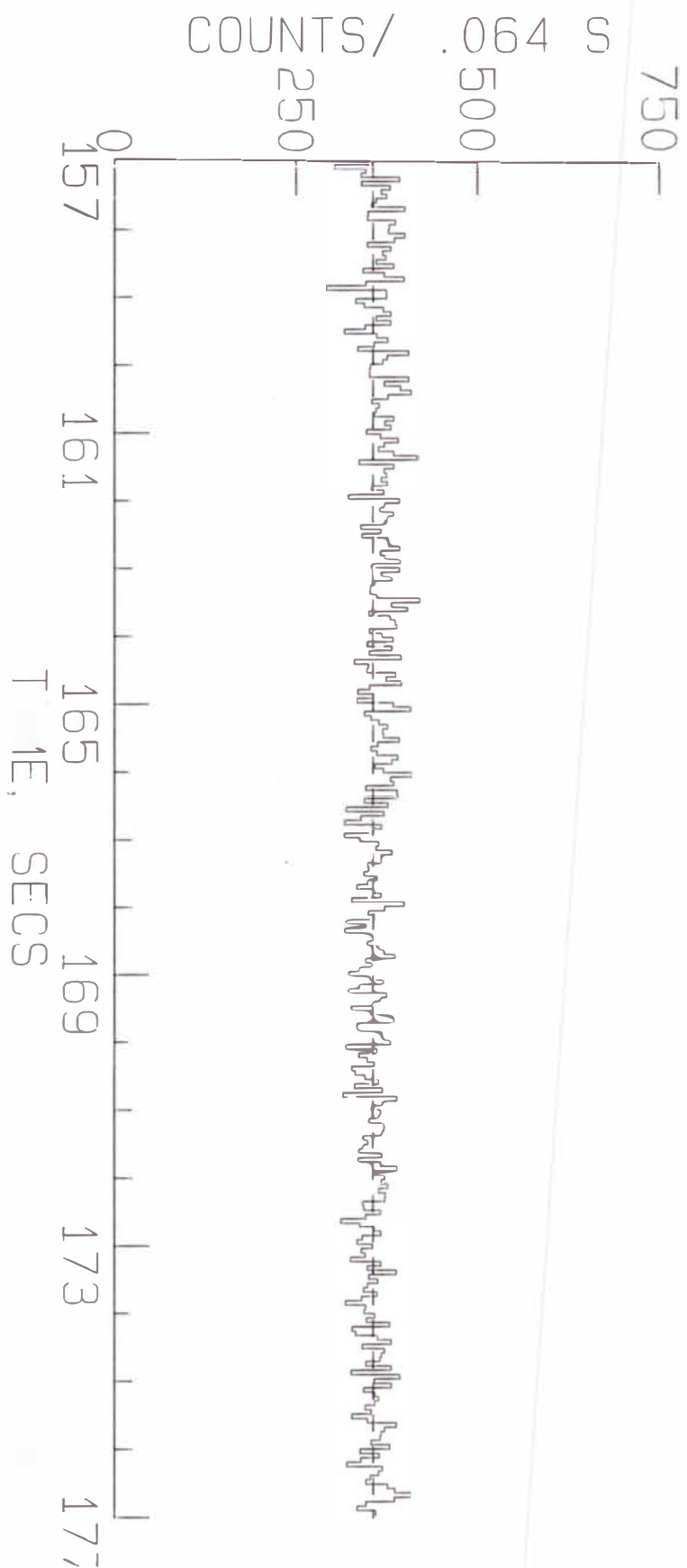


BATSE

18/11/92

79904.386

25- 100 keV



BATSE

18/11/92

79904.386

25- 100 keV

COUNTS/ .064 S

750
500
250
0

177

181

185

189

193

197

T
1E, SECS



BATSE

18/11/92

79904.386

25- 100 keV

COUNTS/ .064 S

750
500
250
0

197

201

205

209

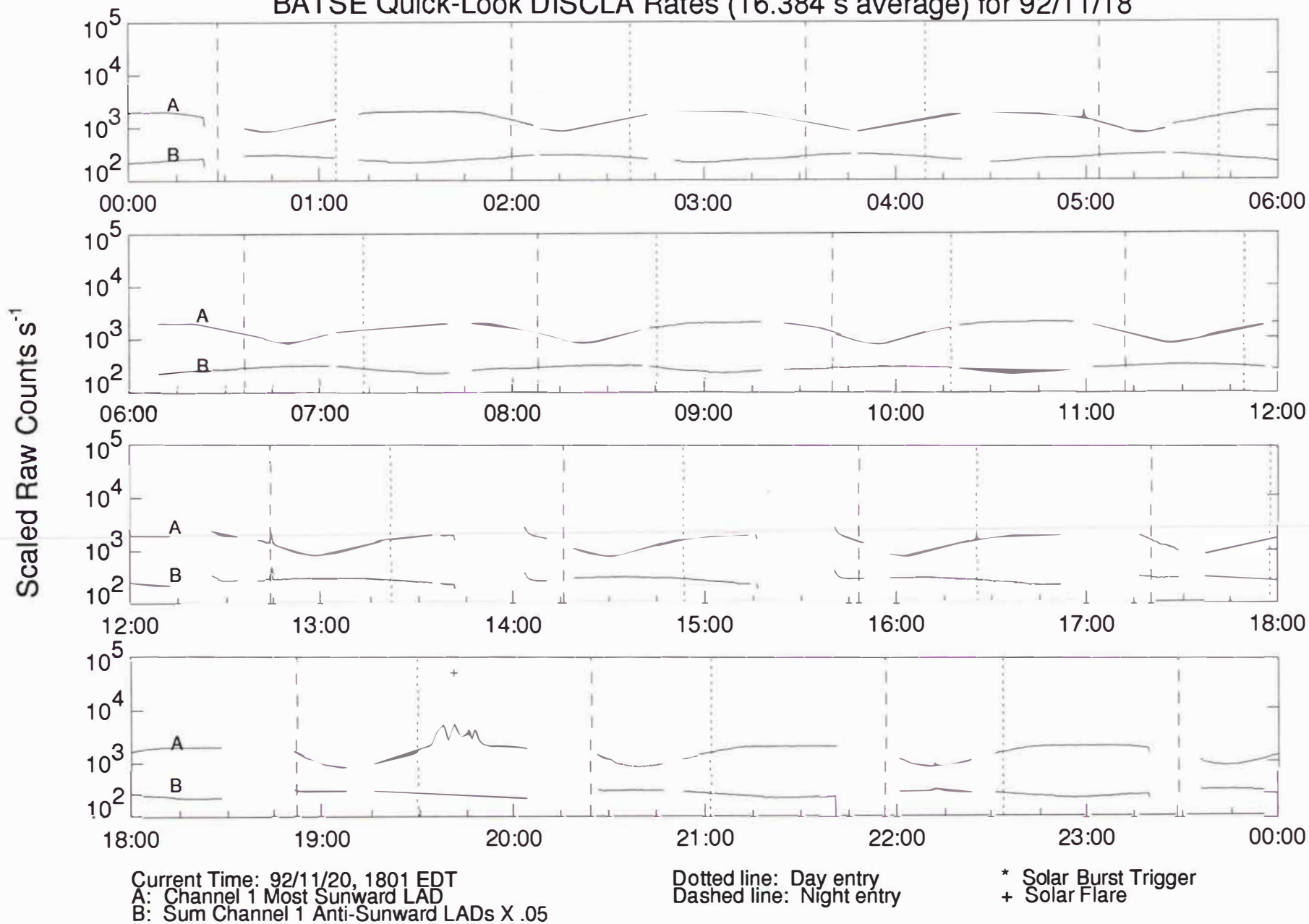
213

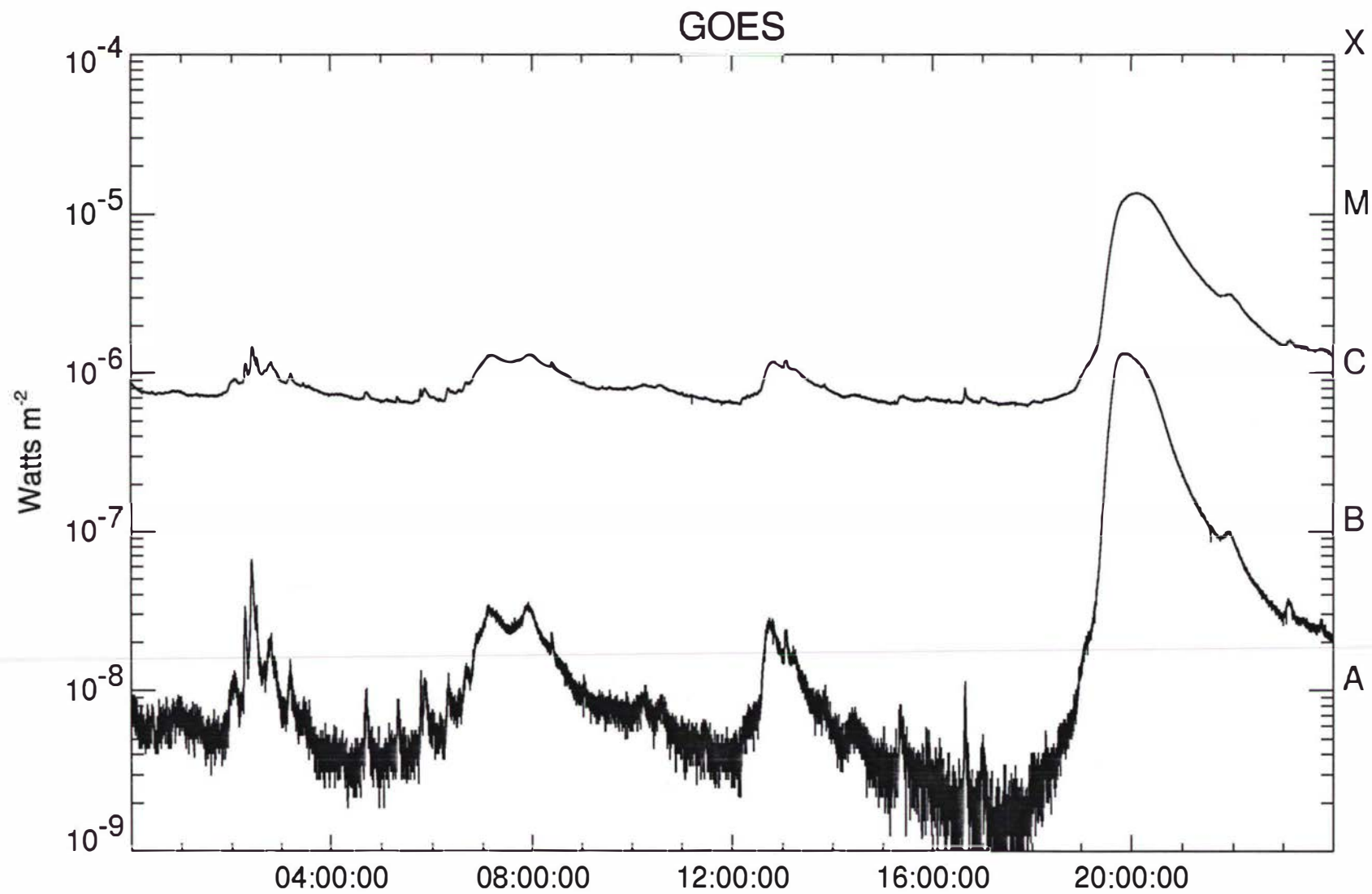
217

T IE, SECS

22 / 5 / 93

BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/18





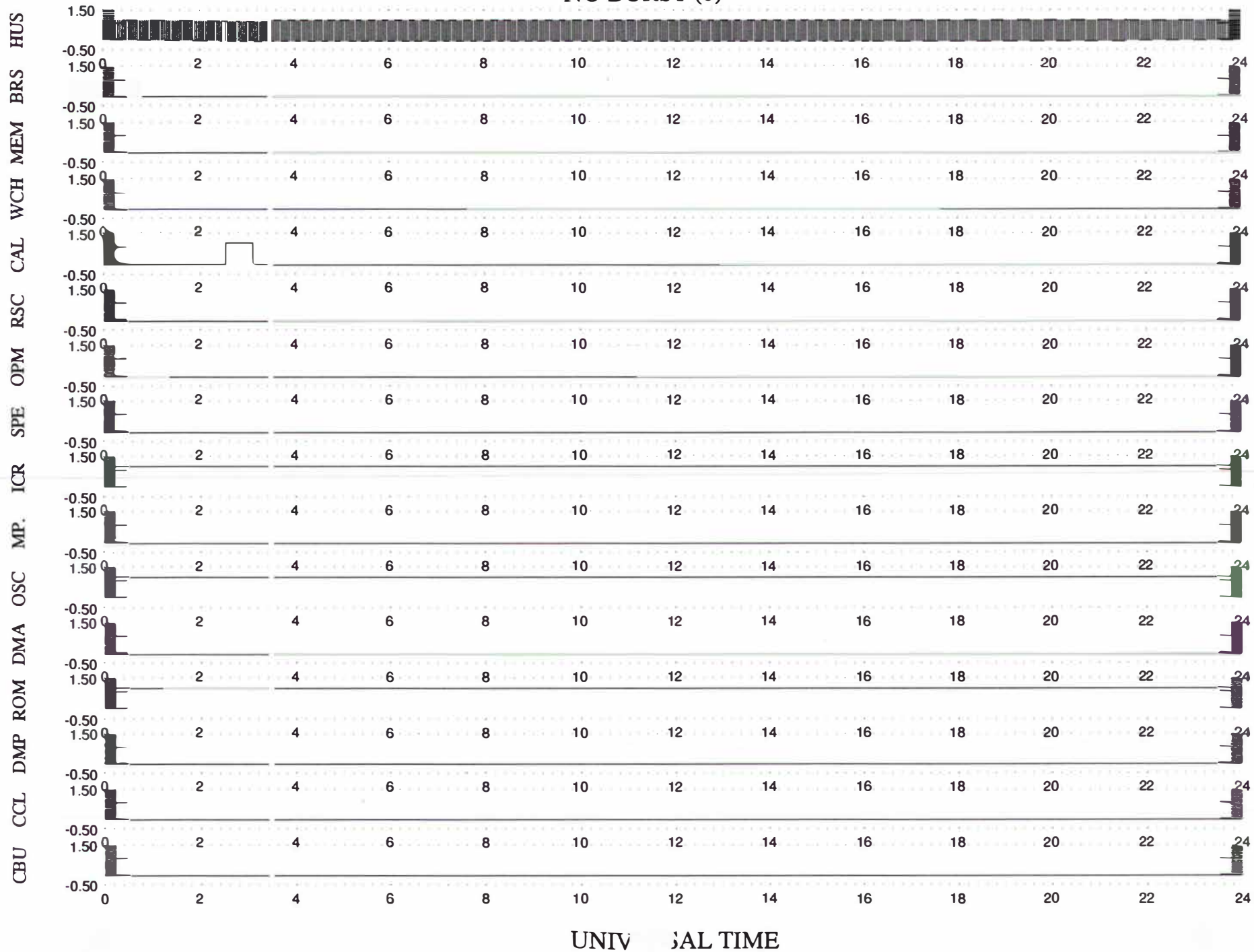
Data Start: 92/11/18, 0000:01

Plot created: 95/05/30, 1612

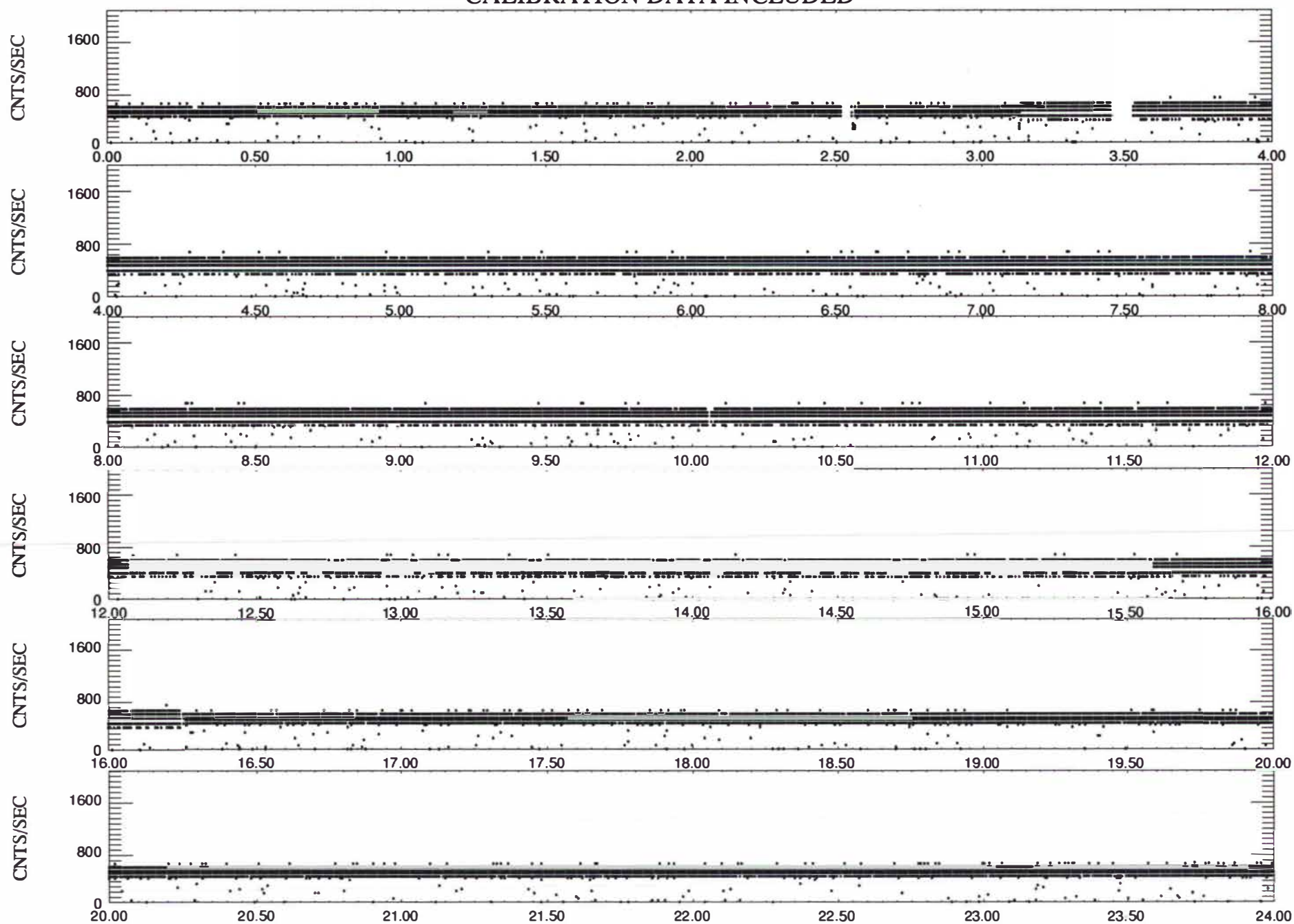
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

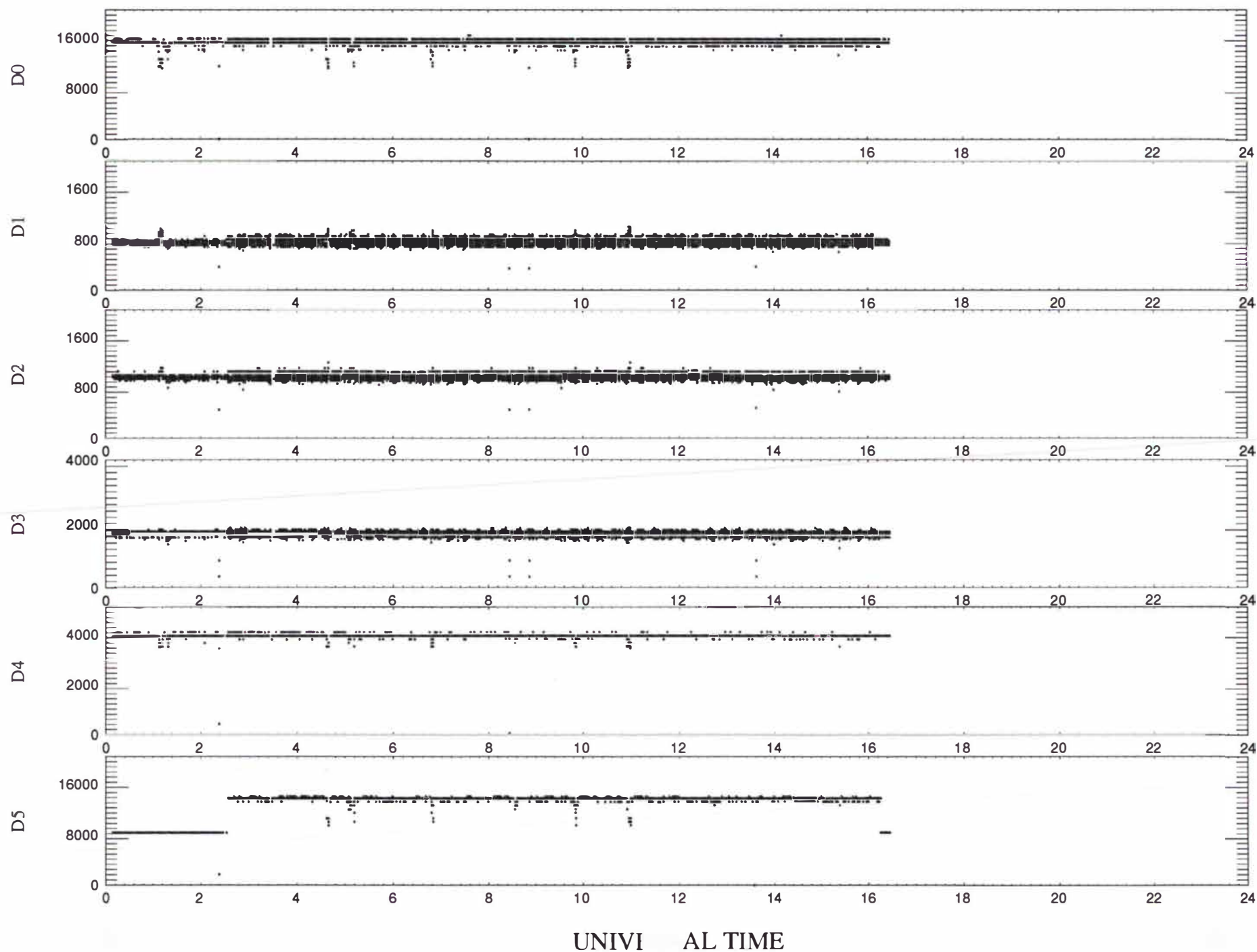
NO BURST (0)



CALIBRATION DATA INCLUDED



UNIV UNIV TIME



From BRAINERD@ssl.msfc.nasa.gov Fri Nov 20 13:17:53 1992
Date: Fri, 20 Nov 1992 15:19:18 -0600 (CST)
From: BRAINERD@ssl.msfc.nasa.gov (Jim Brainerd, (205) 544-4970)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02062

Nov 19

TIME: TJD=8945 SECONDS=73254

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

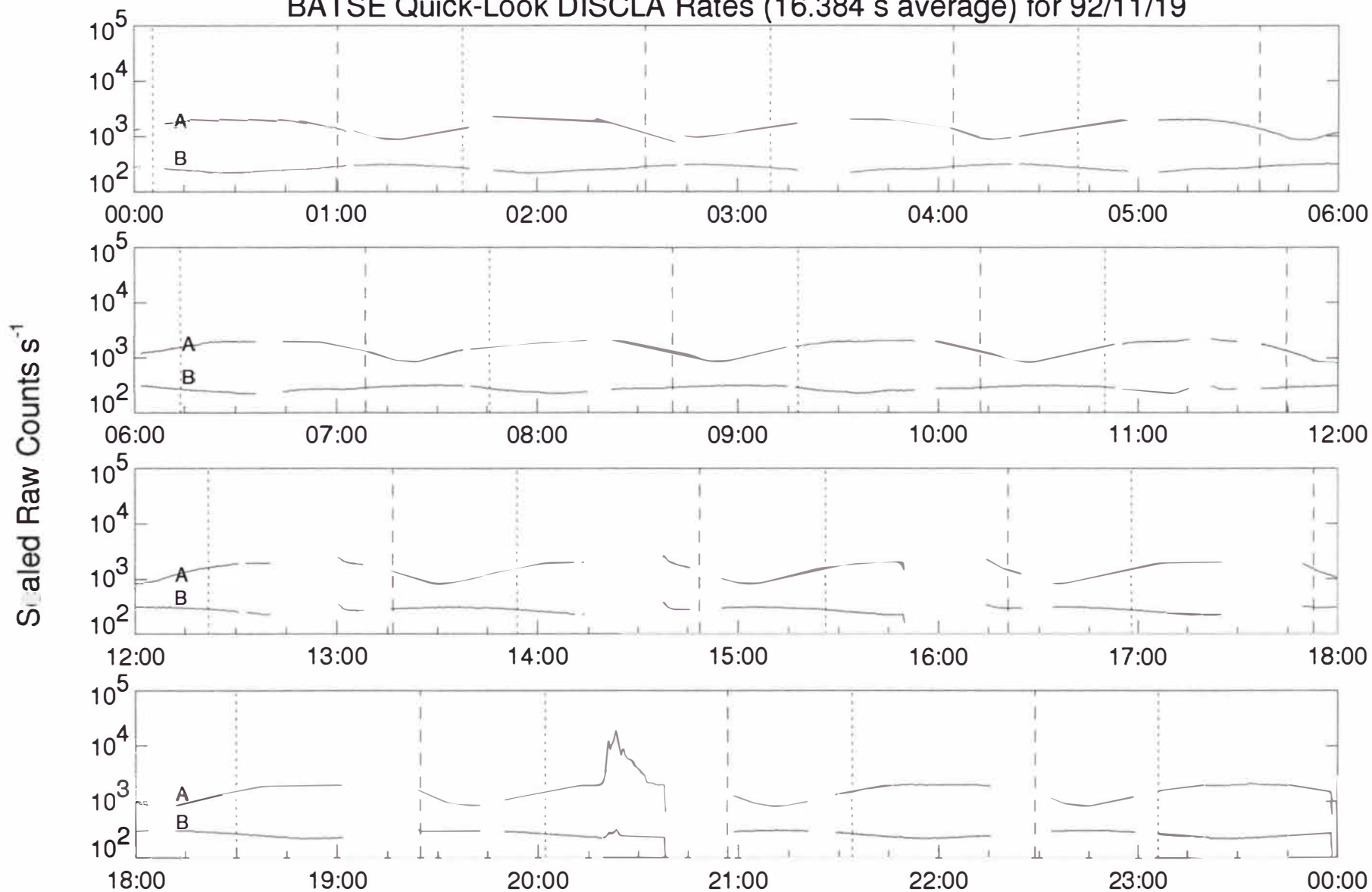
INTENSITY: COUNTS/CM2

LOCATION: ZENITH=67.7 AZIMUTH=337.4 ERROR= DEGREES

COMMENTS:

SOLAR FLARE, GOES EVENT C 9.9, THAT DOES NOT APPEAR ABOVE 100KEV.

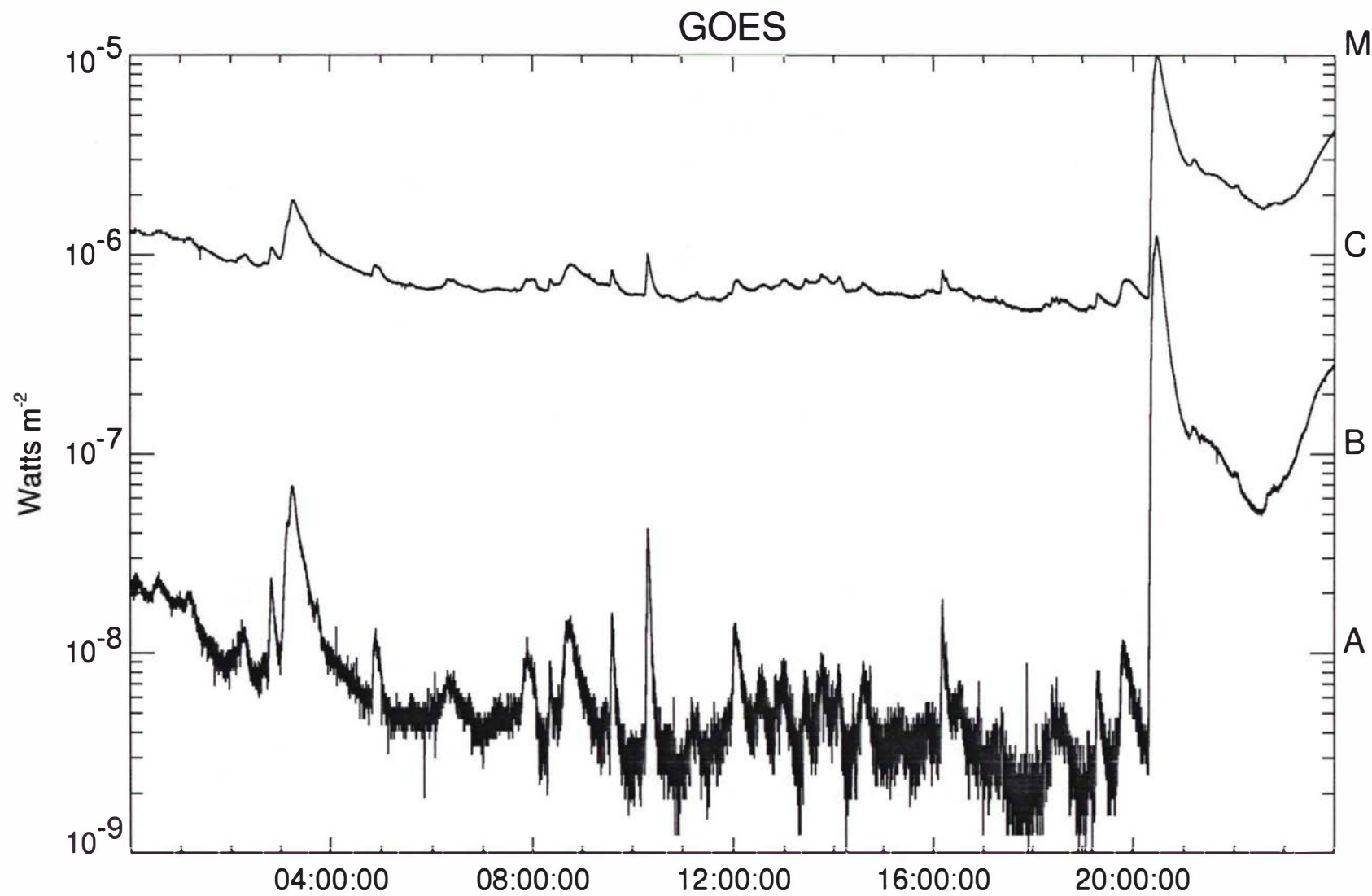
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/19



Current Time: 92/11/23, 1223 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



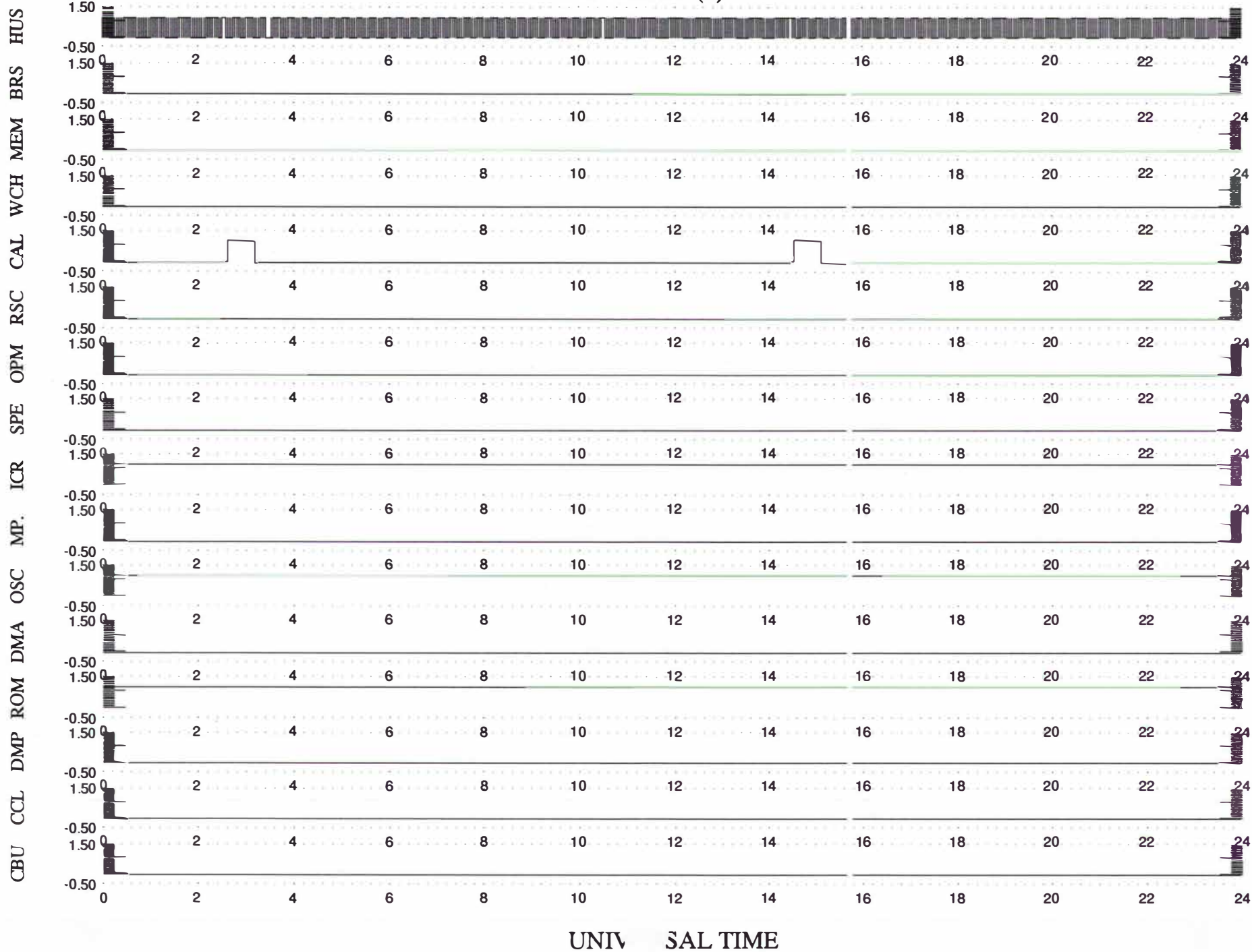
Data Start: 92/11/19, 0000:02

Plot created: 95/05/30, 1615

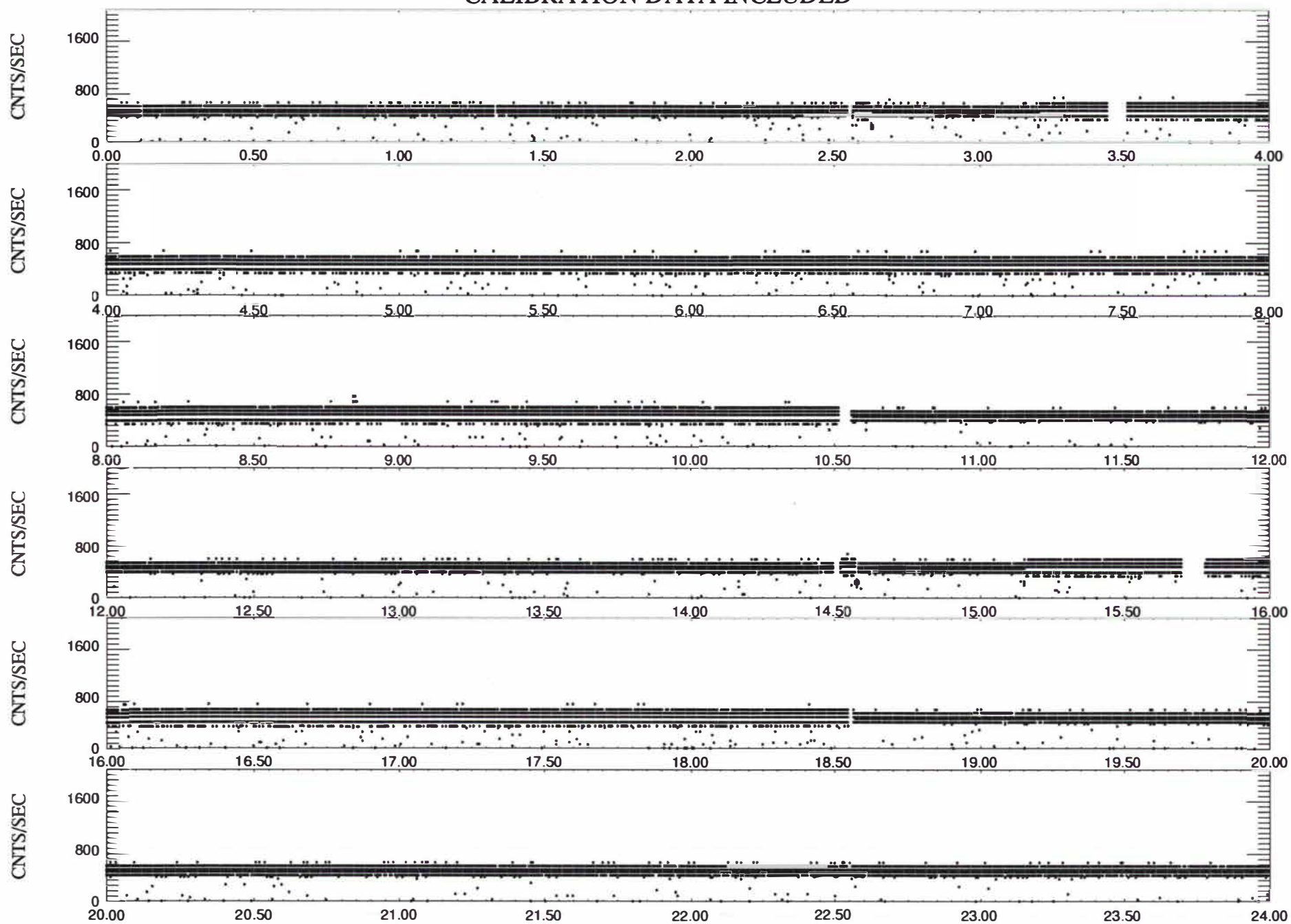
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

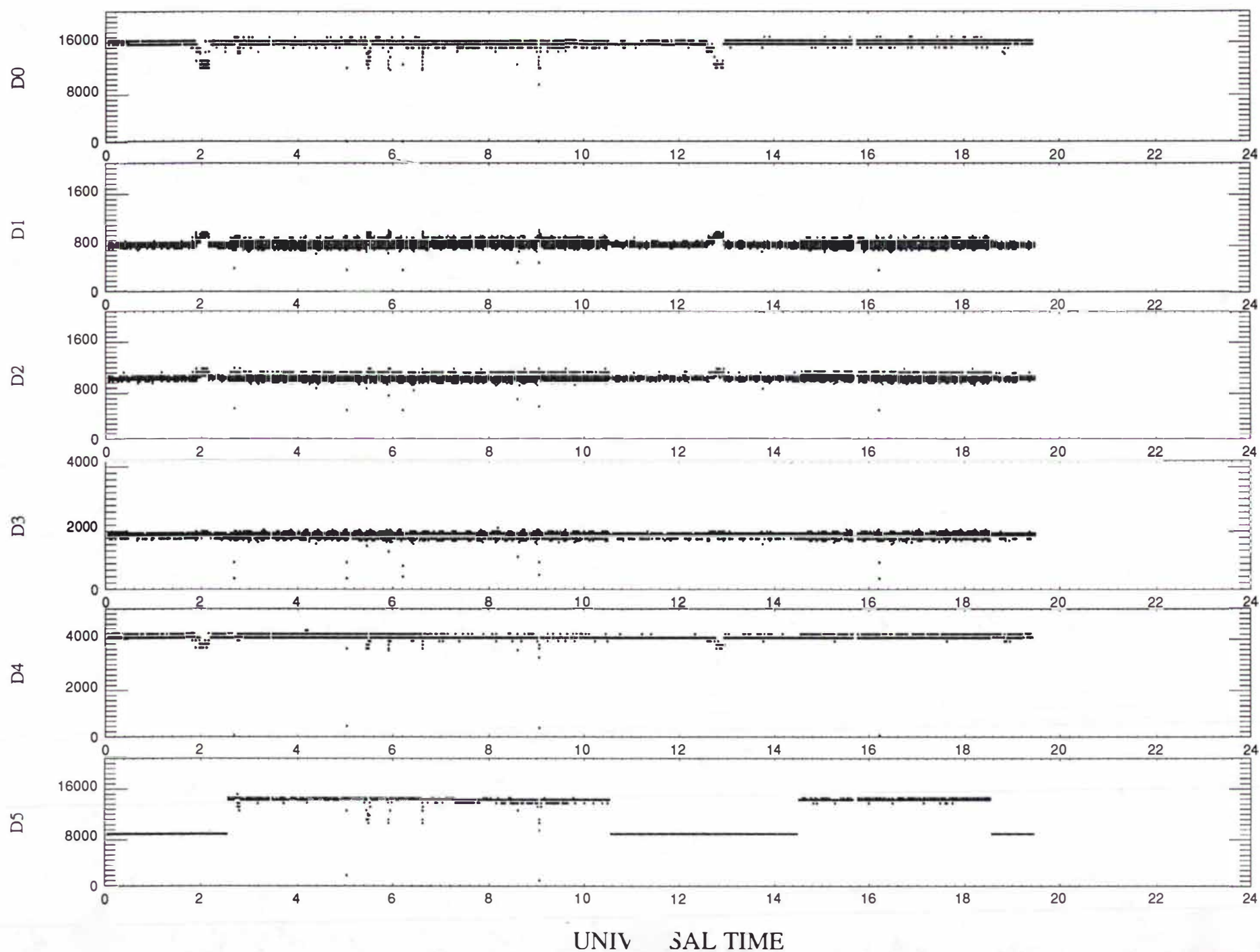
NO BURST (0)



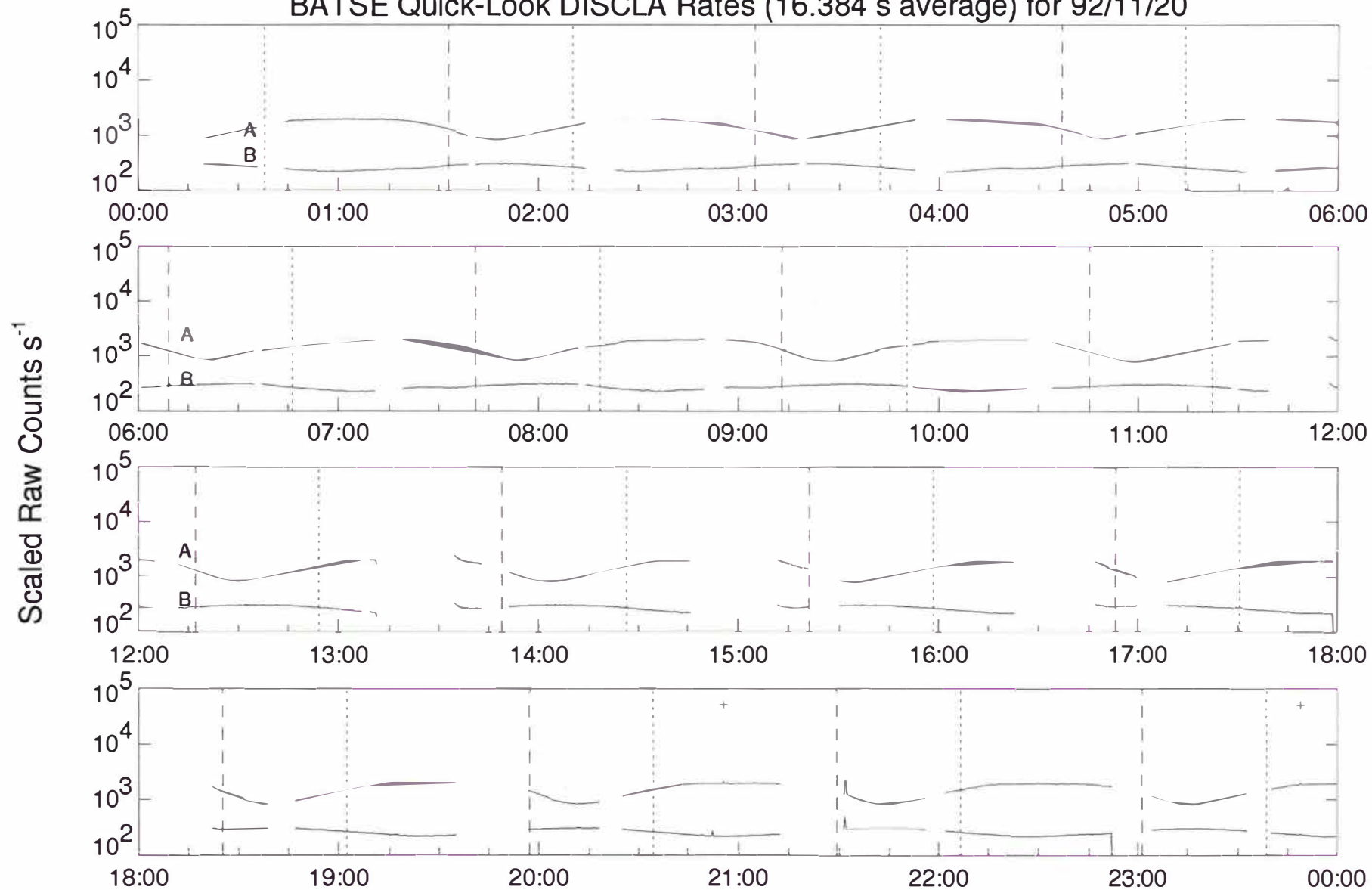
CALIBRATION DATA INCLUDED



UNIV SAL TIME



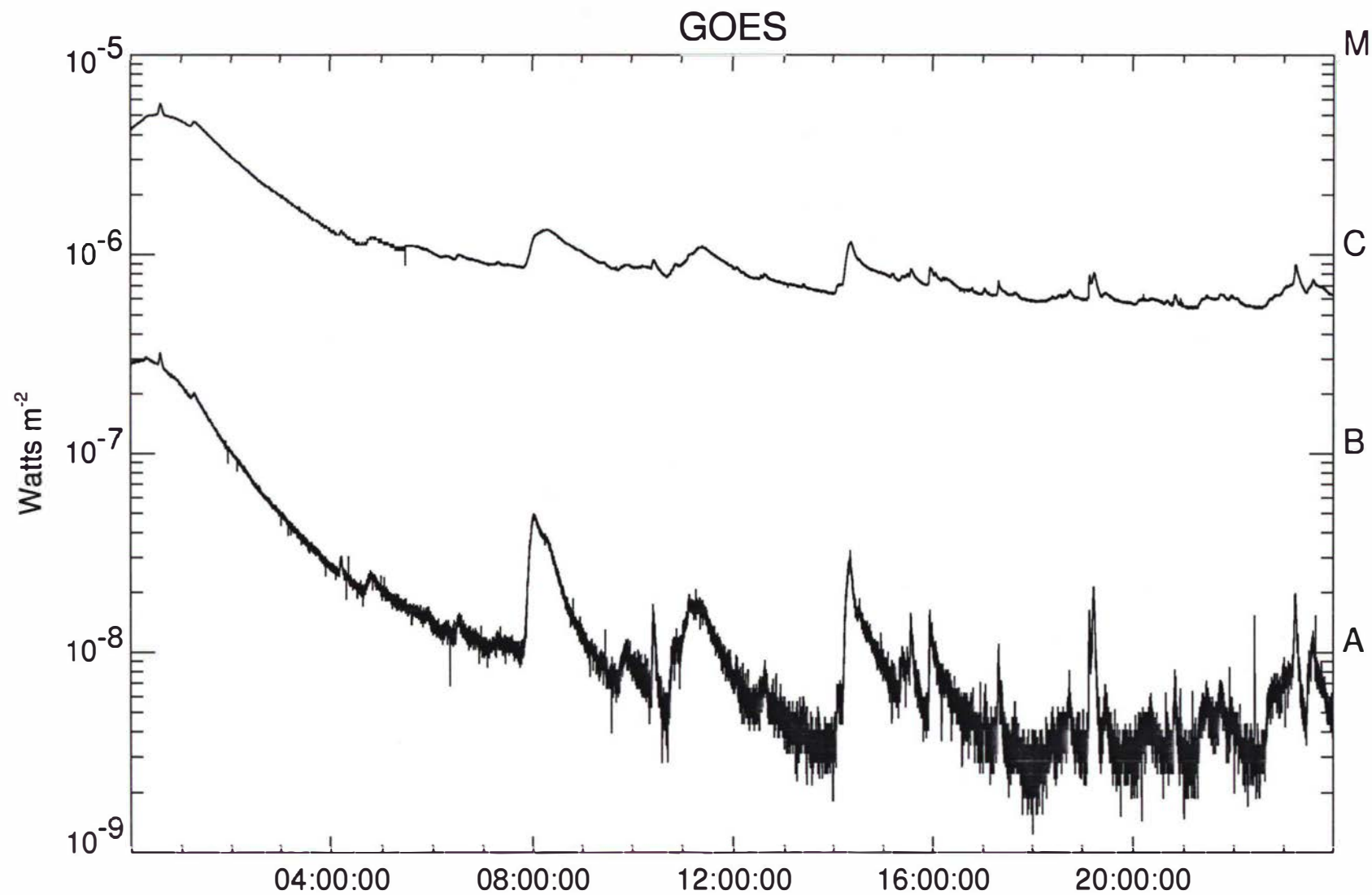
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/20



Current Time: 92/11/24, 1110 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare



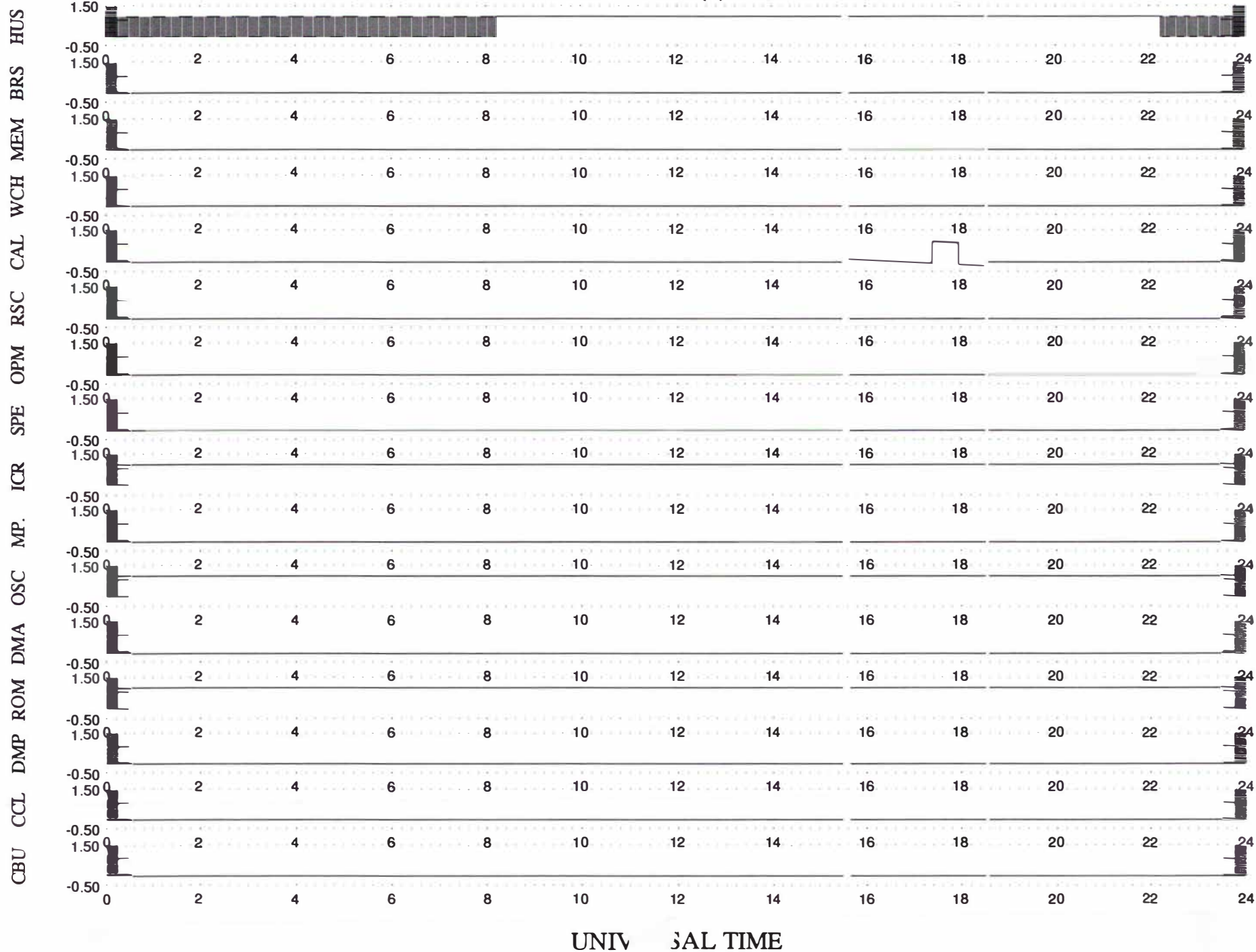
Data Start: 92/11/20, 0000:00

Plot created: 95/05/30, 1619

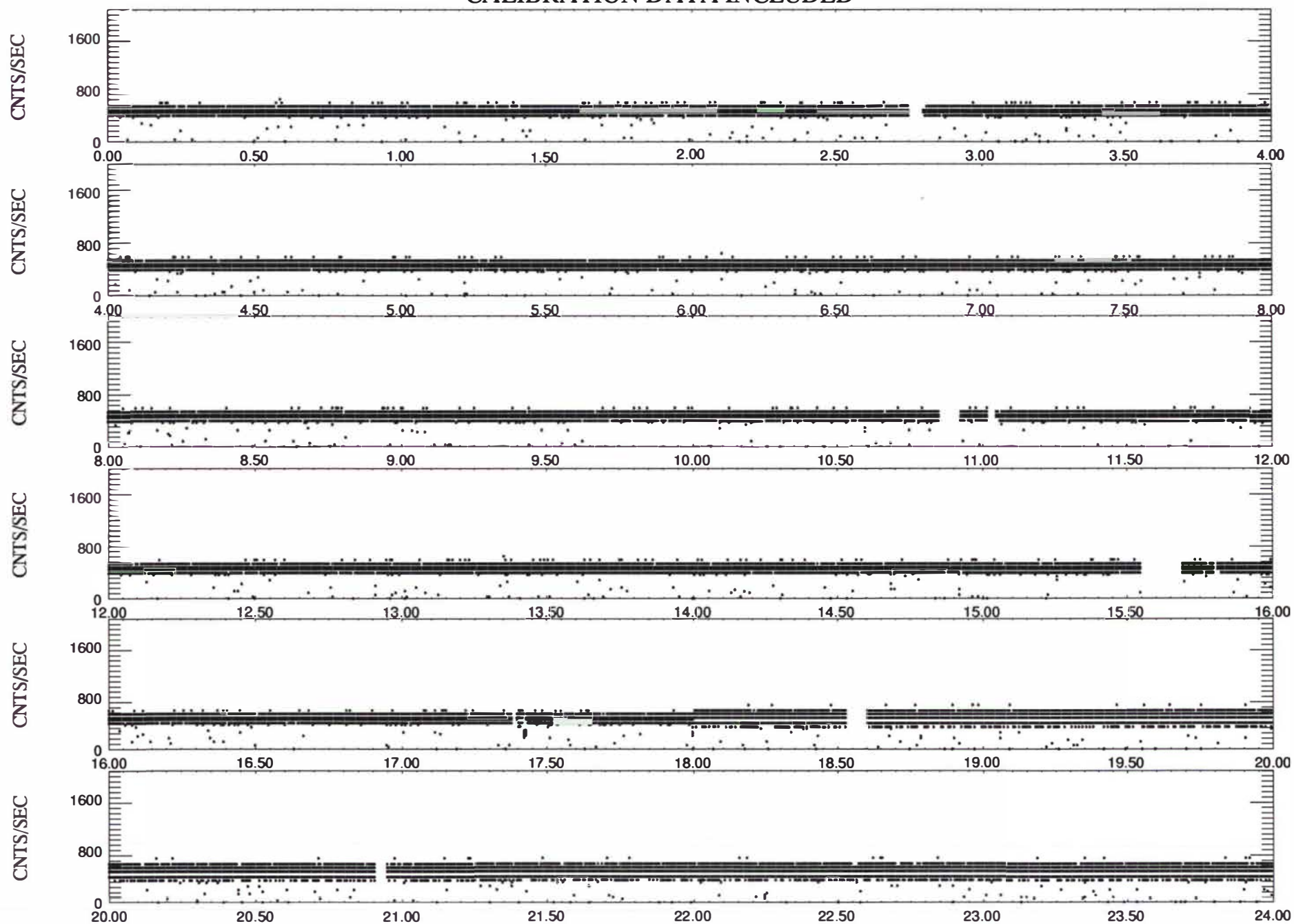
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

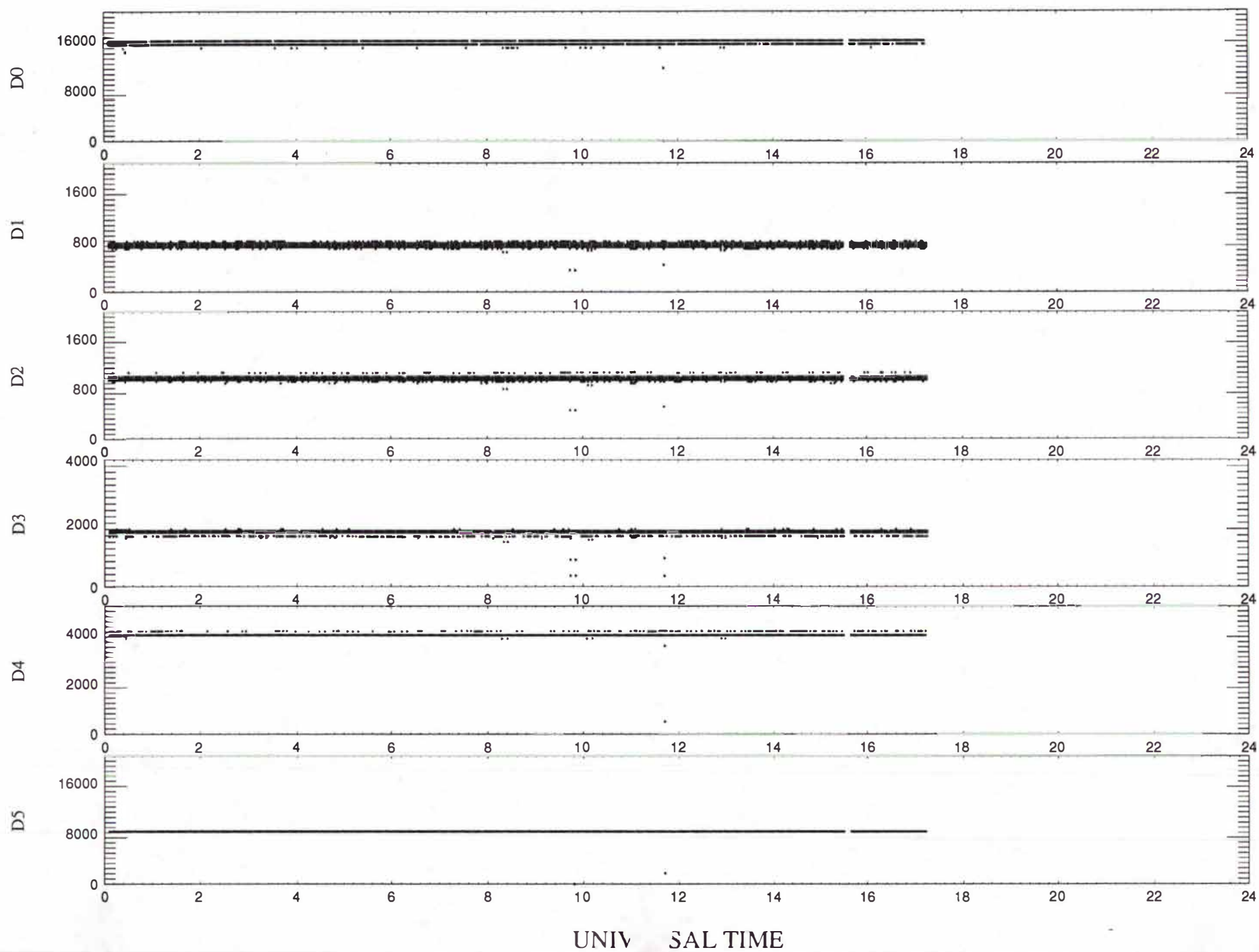
NO BURST (0)



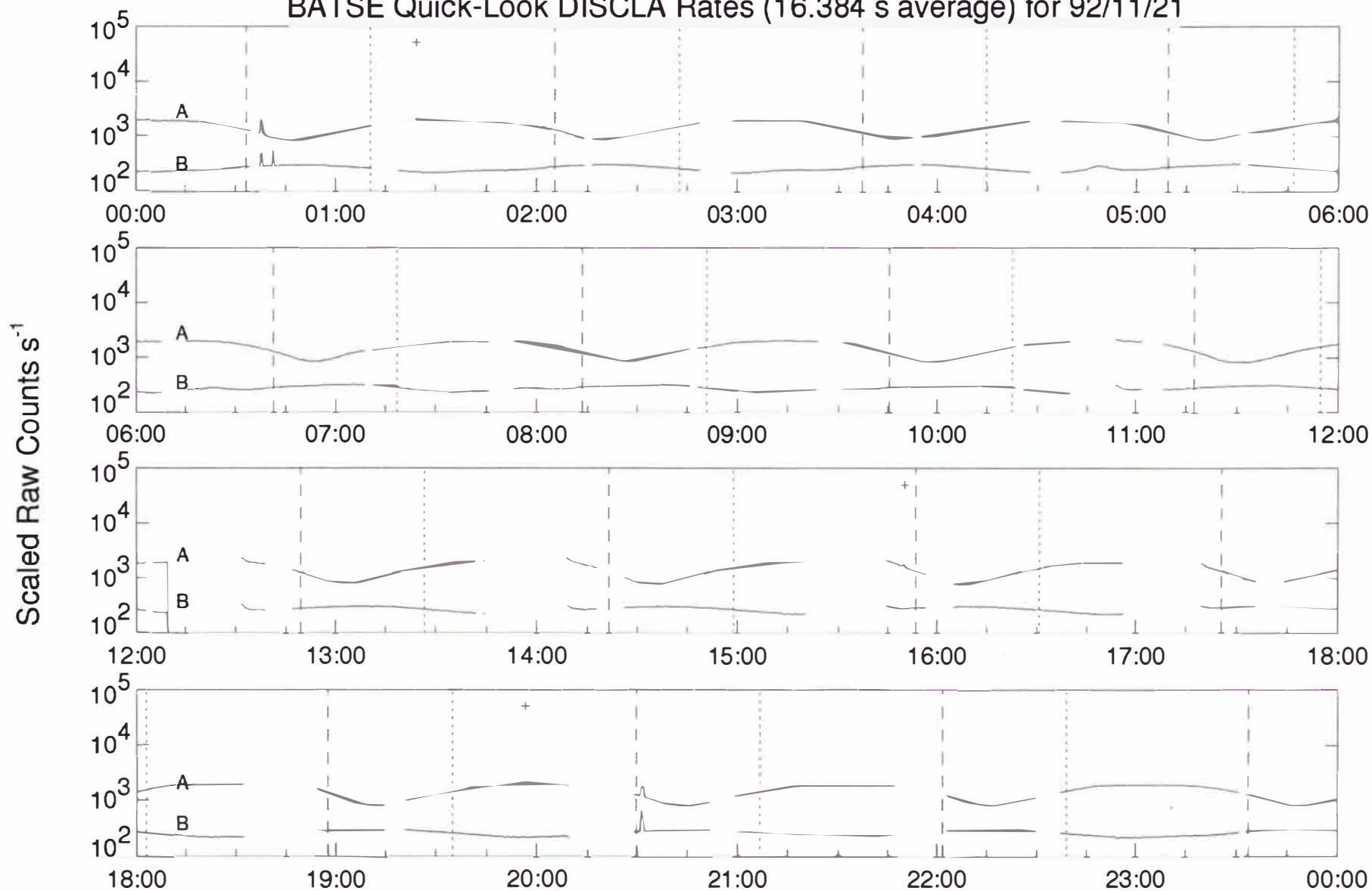
CALIBRATION DATA INCLUDED



UNIV 3AL TIME



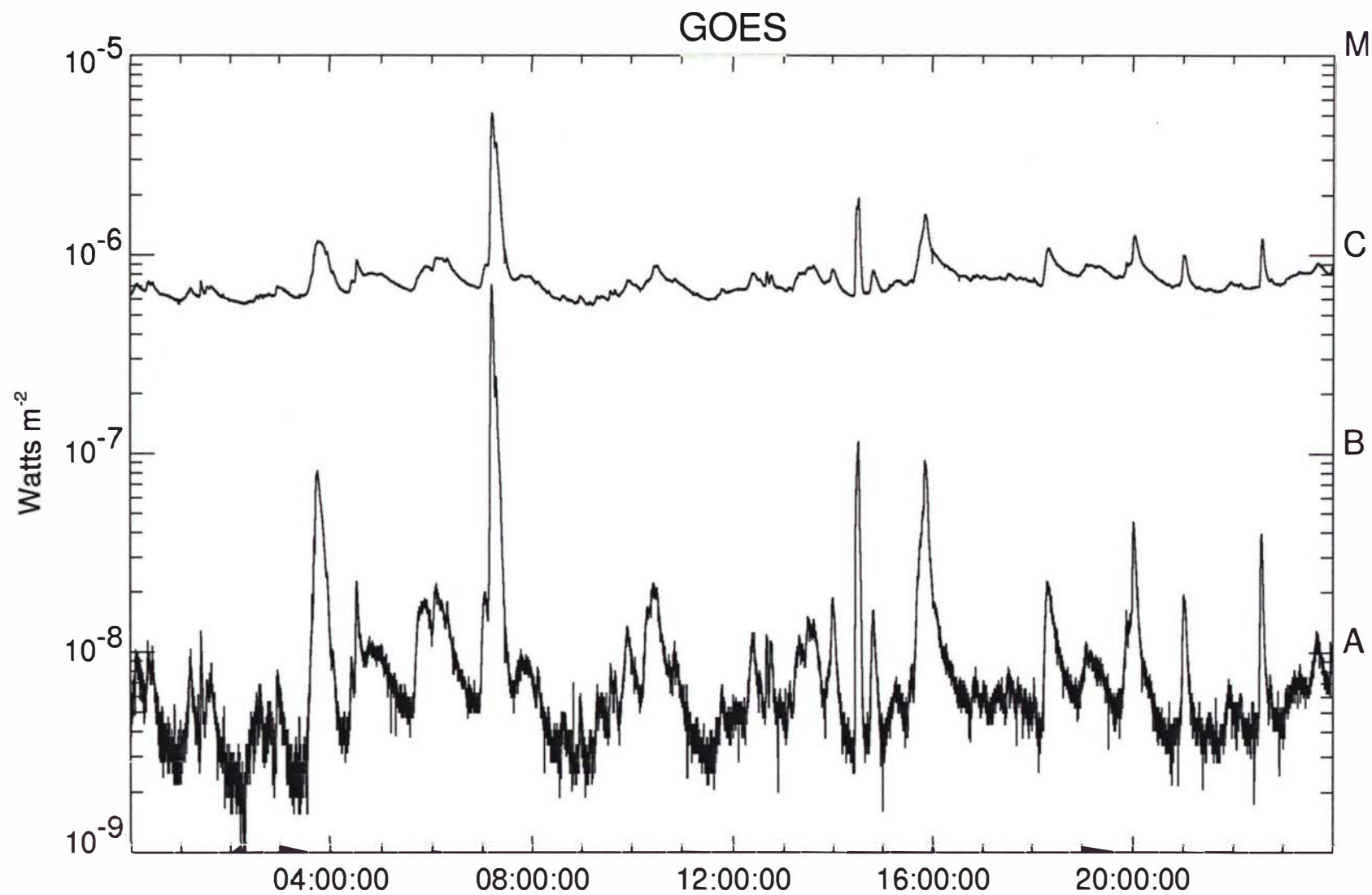
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/21



Current Time: 92/11/24, 1111 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



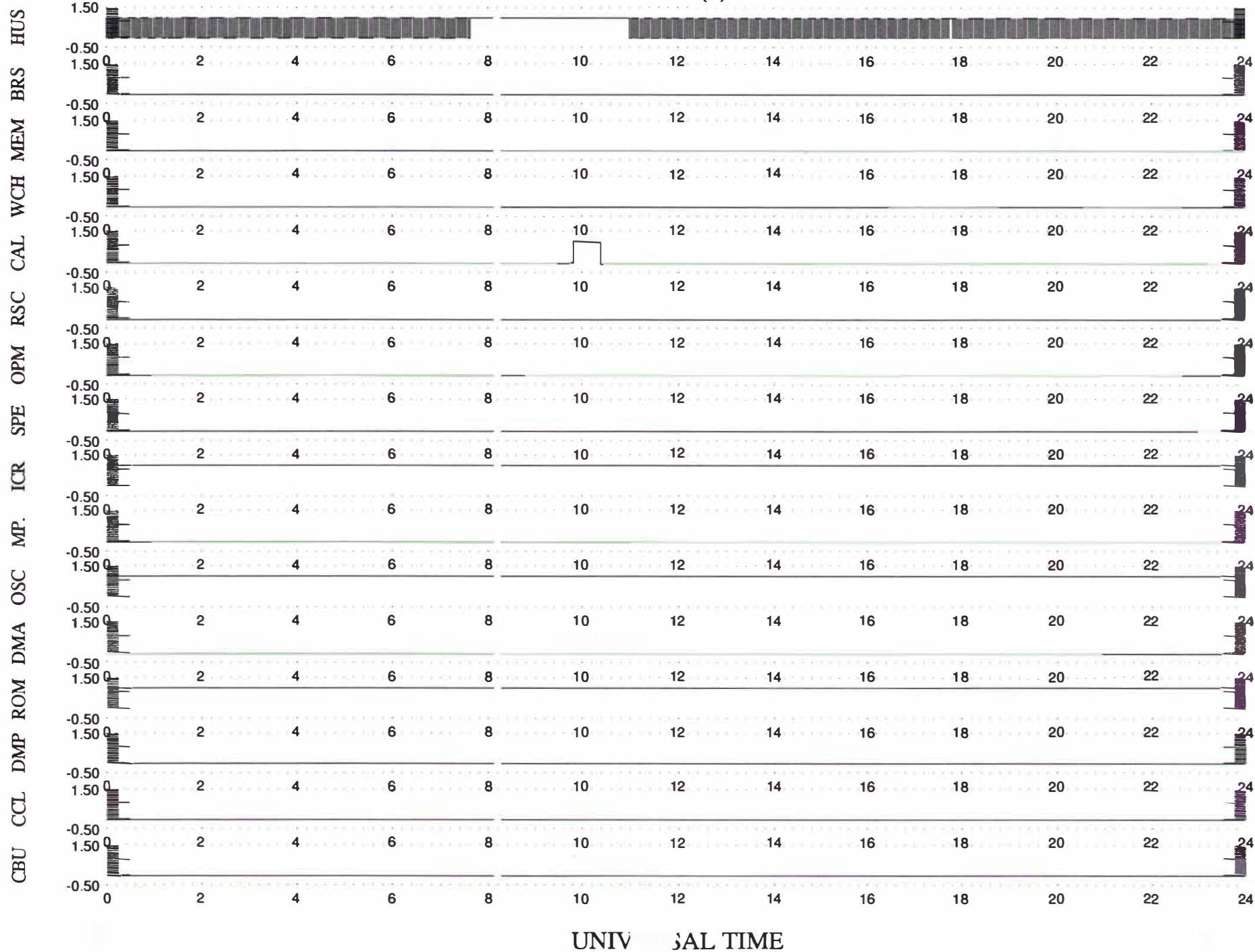
Data Start: 92/11/21, 0000:01

Plot created: 95/05/30, 1623

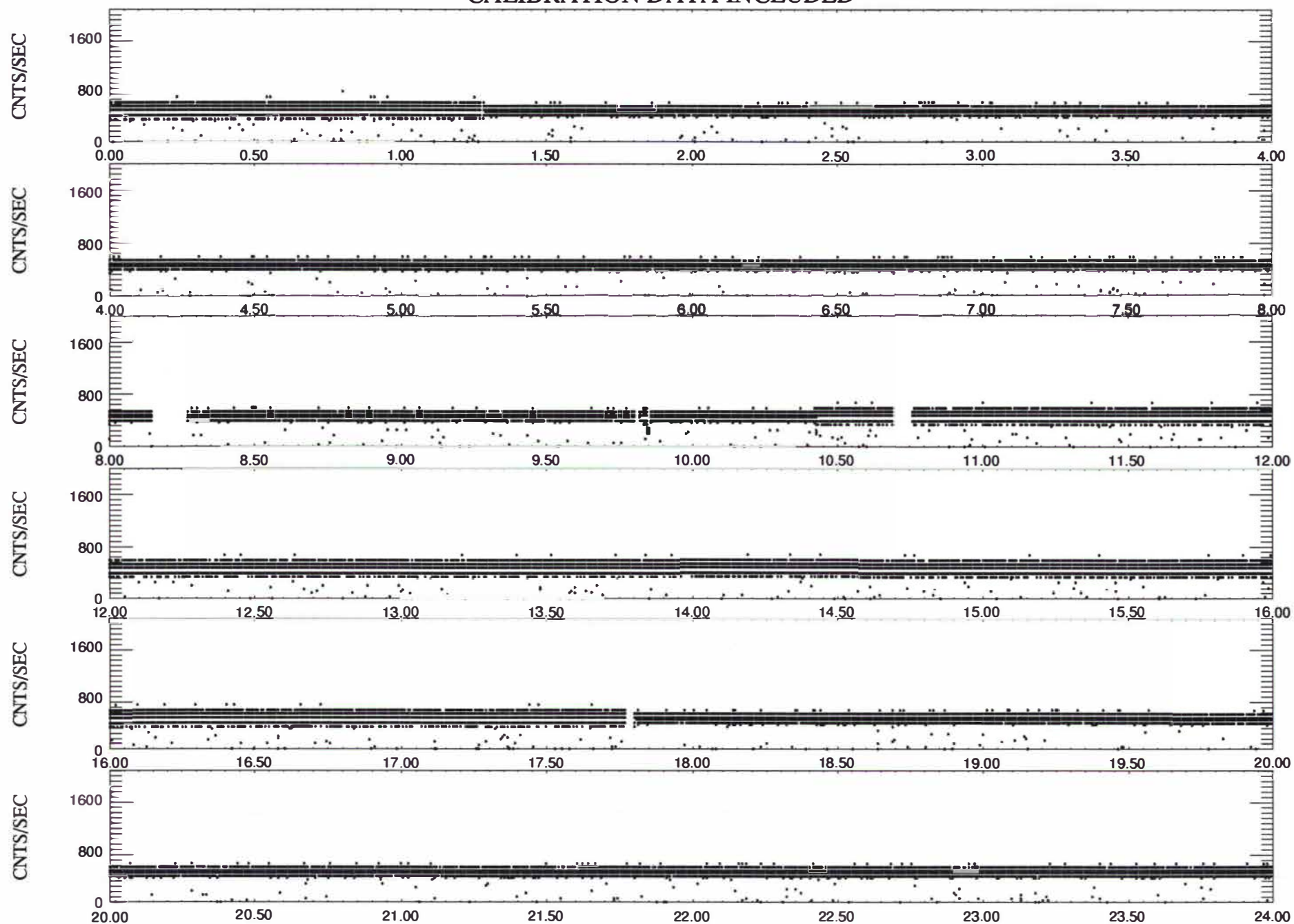
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

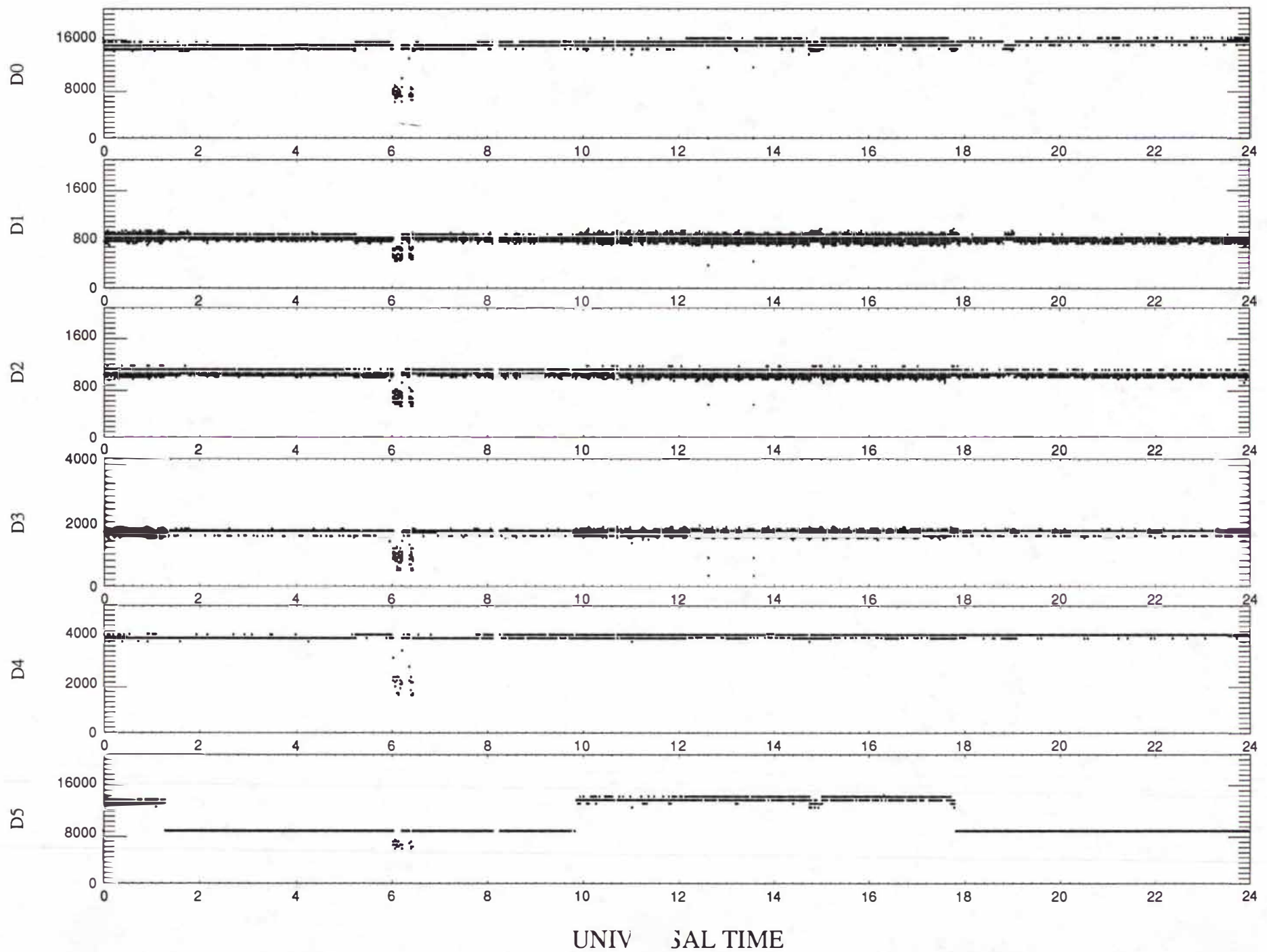
NO BURST (0)



CALIBRATION DATA INCLUDED



UNIV JAL TIME



From KOSHUT@ssl.msfc.nasa.gov Mon Nov 23 11:27:58 1992
Date: Mon, 23 Nov 1992 13:29:22 -0600 (CST)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 02063

over 22

TIME: TJD=8948 SECONDS=41973

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SOLAR FLARE WITH NO EMISSION OBSERVED ABOVE 300 KEV. DUE TO LACK OF DATA
COVERAGE, ONLY A LOWER LIMIT OF 160 SECONDS CAN BE GIVEN FOR DURATION.
CLASSIFIED AS C3.3 FLARE IN GOES X-RAY DATA.

From KOSHUT@ssl.msfc.nasa.gov Tue Nov 24 06:57:10 1992
Date: Tue, 24 Nov 1992 8:59:03 -0600 (CST)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1458

BATSE BURST TRIGGER

NO.: 02064

TIME: TJD=8948 SECONDS=64659

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:N

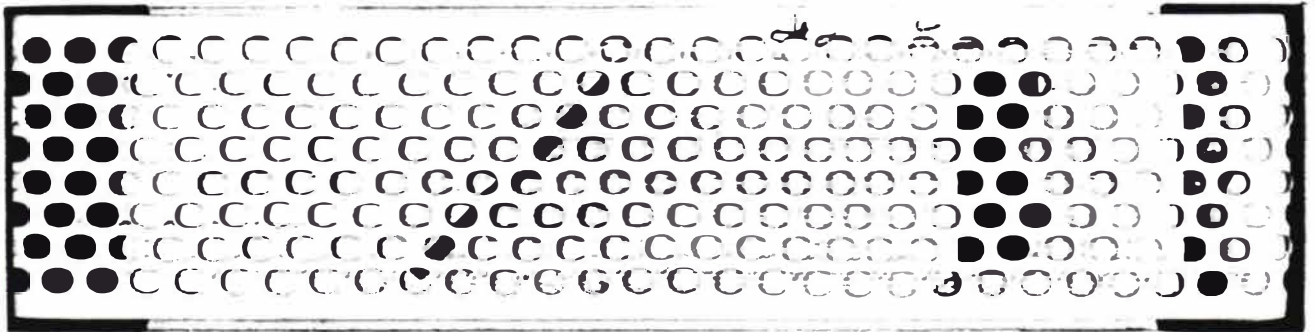
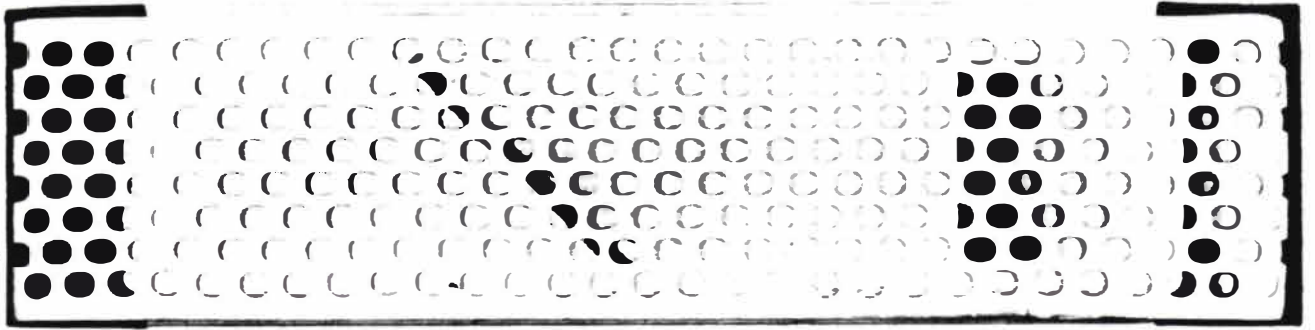
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

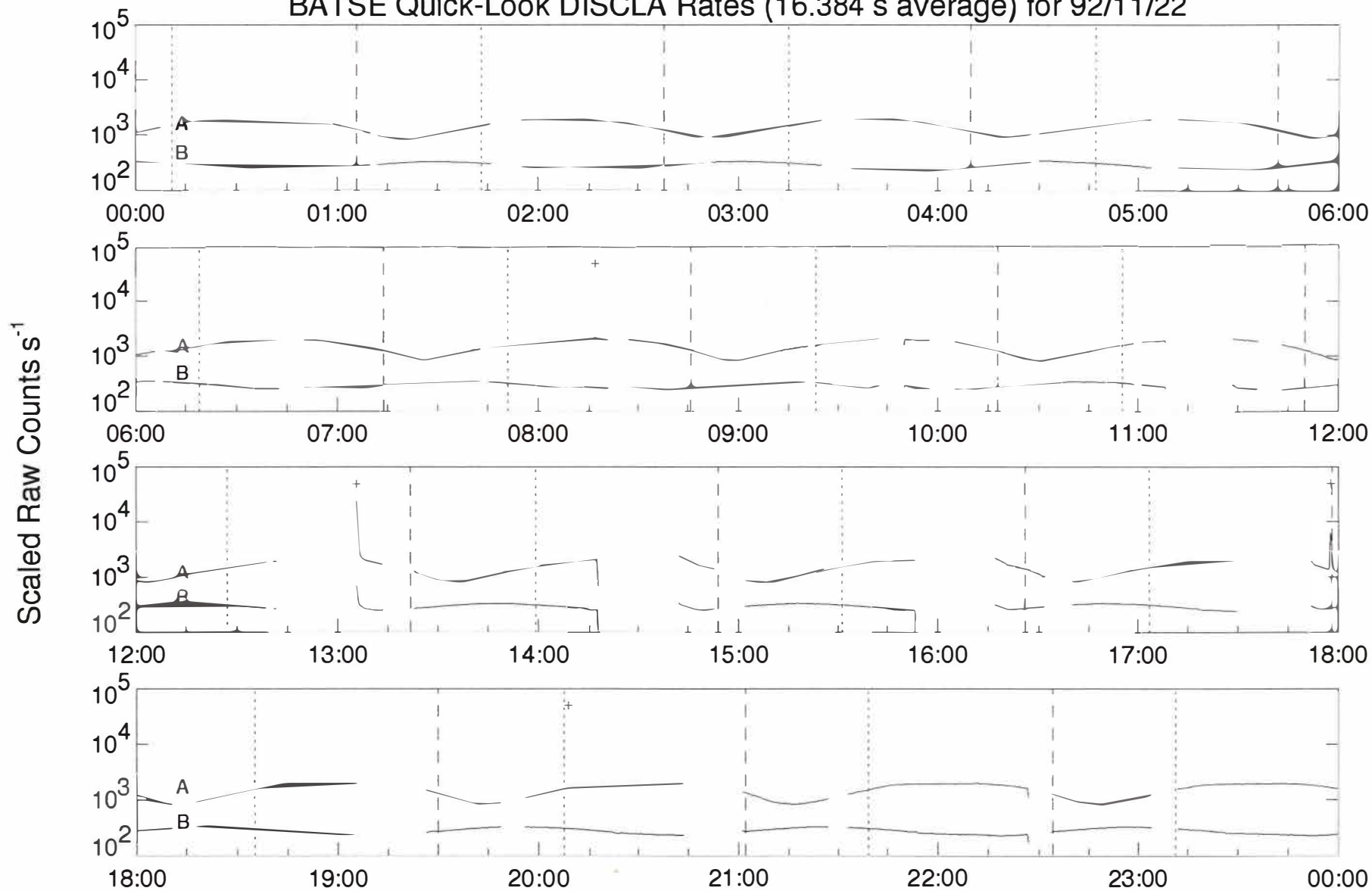
LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SOLAR FLARE OF ~ 45 SECOND DURATION. NO EMISSION OBSERVED ABOVE 300 KEV.
THE FLARE BEGINS AT ~ TRIGGER - 10 SECONDS, PEAKS AT ~ TRIGGER + 8 SECONDS
(BACKGROUND SUBTRACTED PEAK RATE ~ 14000 CPS), AND THEN DROPS TO BACKGROUND
BY TRIGGER + 35 SECONDS. CLASSIFIED AS A C3.0 FLARE IN GOES X-RAY DATA.



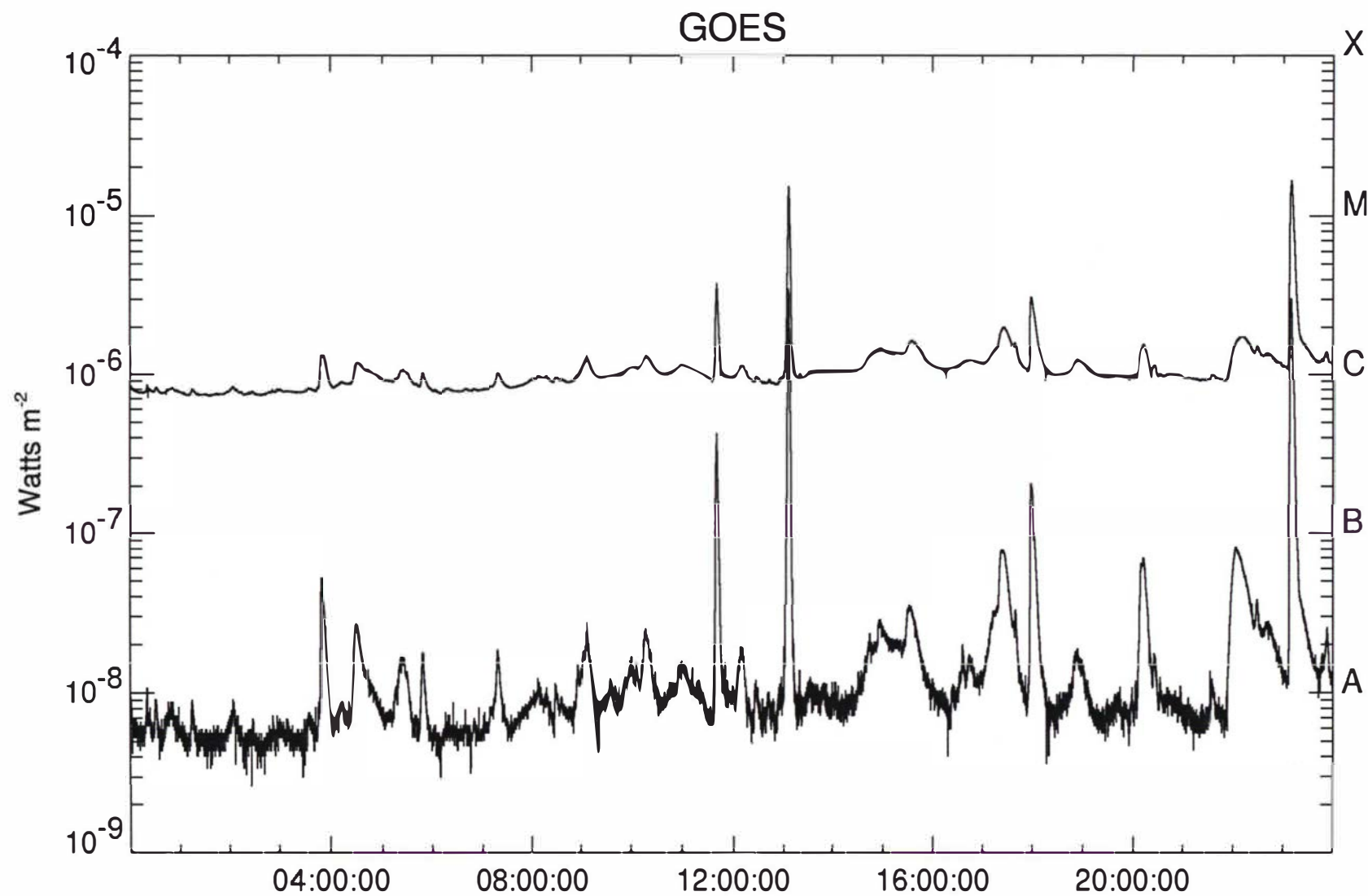
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/22



Current Time: 92/11/24, 1113 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

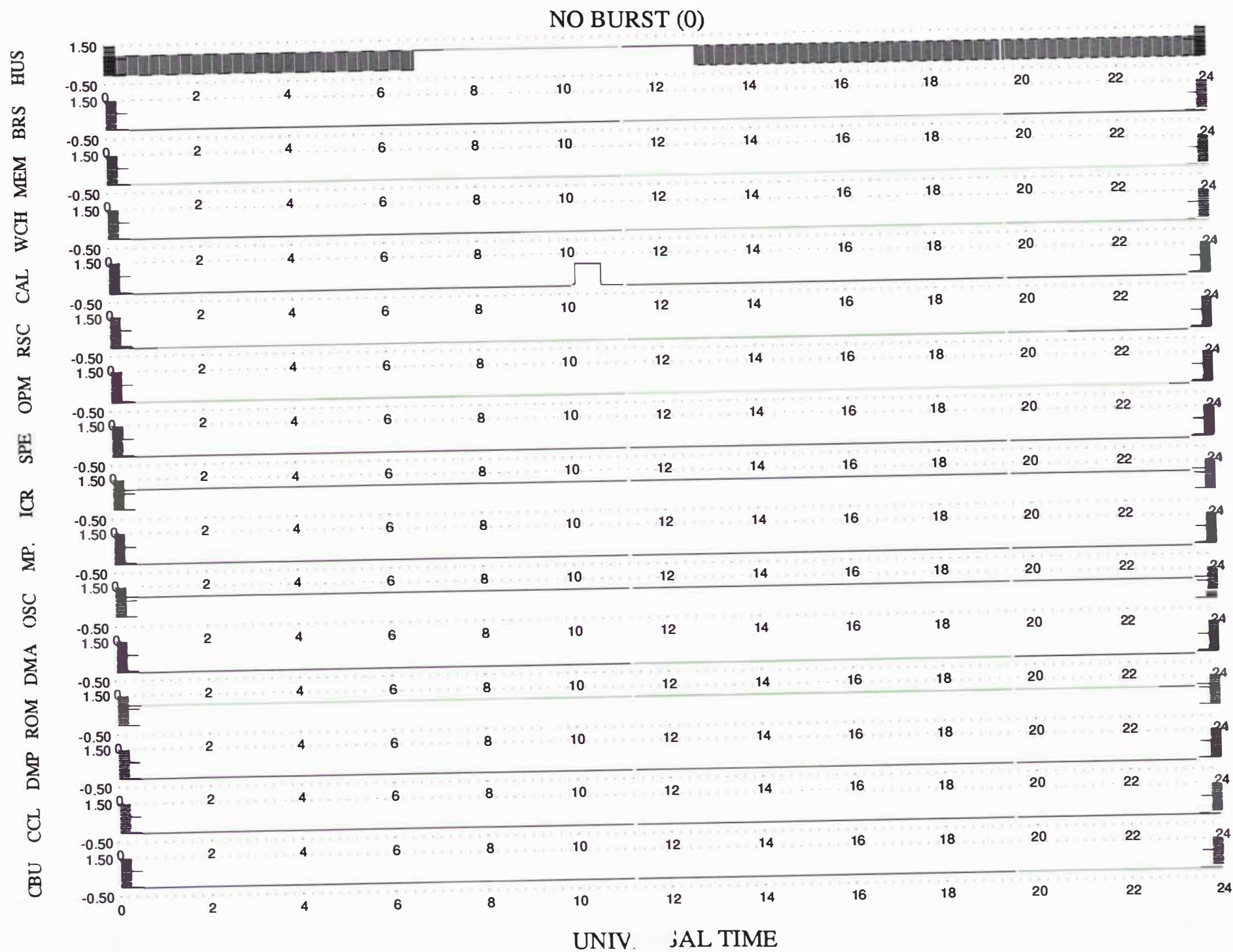


Data Start: 92/11/22, 0000:02

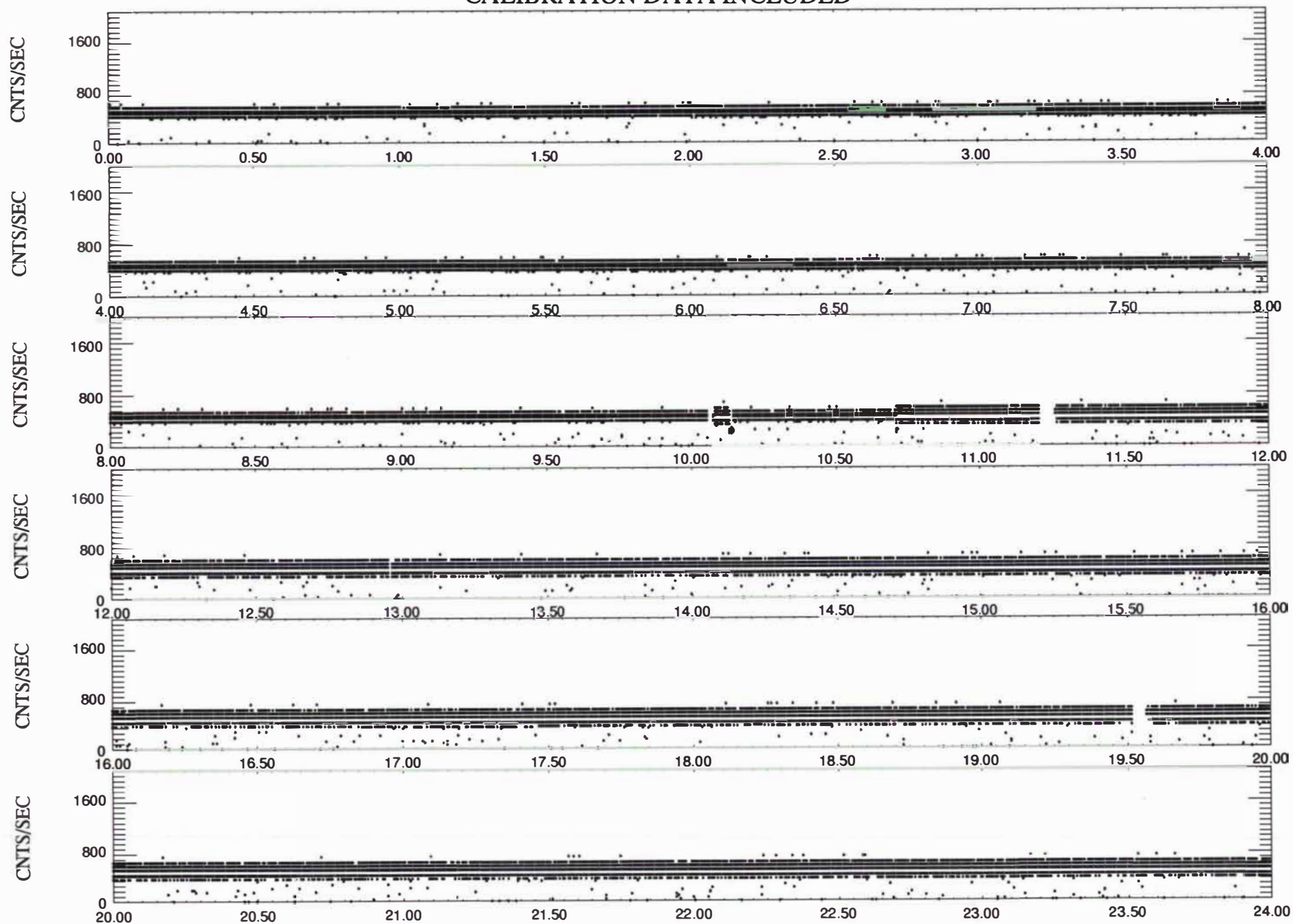
Plot created: 95/05/30, 1627

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

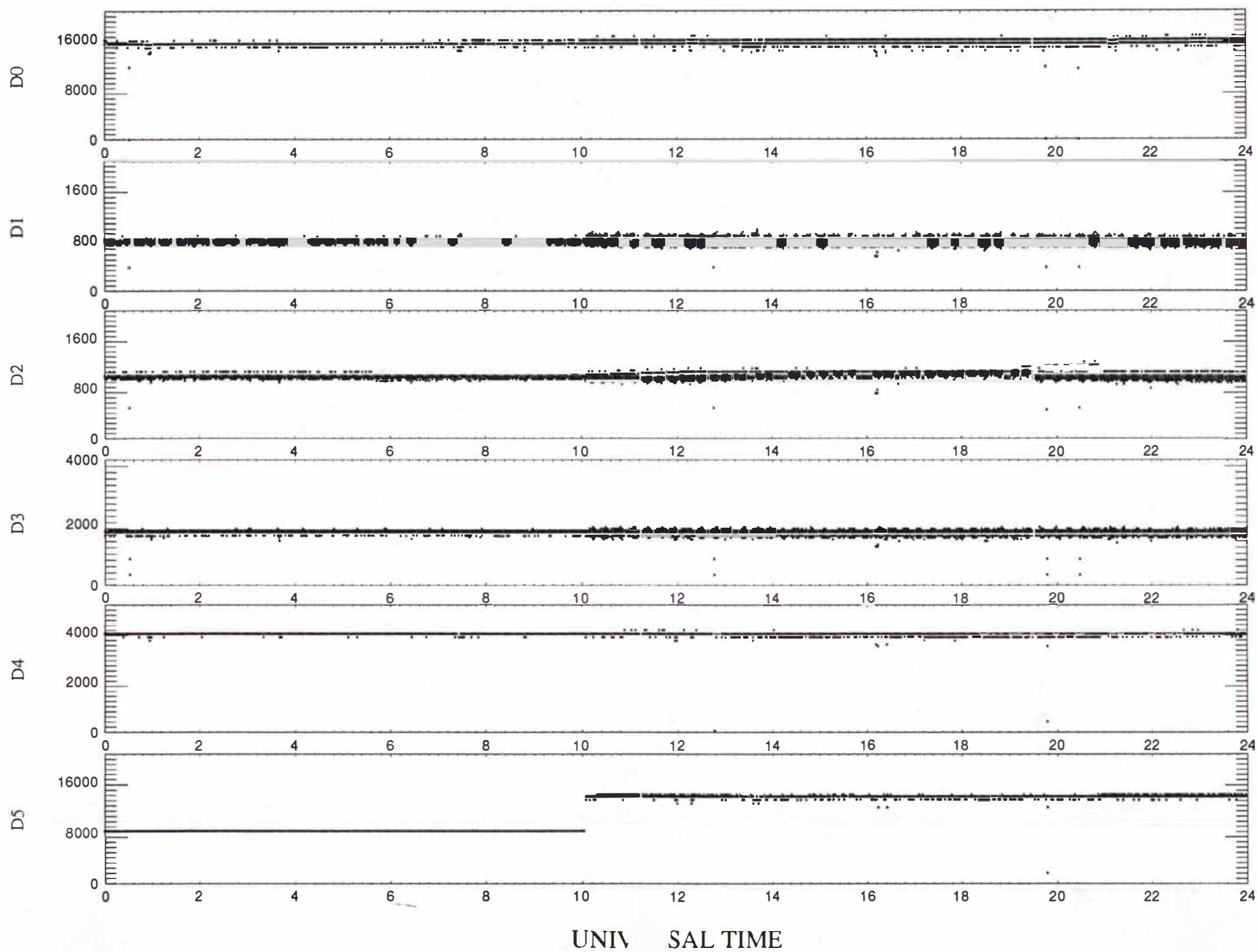
Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted



CALIBRATION DATA INCLUDED



UNIV 3AL TIME



CATSEARCH PROGRAM

BATSE BURST # 2067
EVENT OF 1992 NOV 23 DAY OF YEAR=328
EVENT CROSSING TIME AT BATSE : 22712. S. OR 06:18:31.7
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 332.200 -54.100
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 23/11/ 92 IS:
RA= 166.470 DEC= -8.180 DIST= 5.394 AU
BATSE-ULYSSES DISTANCE = 806981296. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 63.43 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1203.89 SECS.
CROSSING TIME AT ULYSSES IS 23916. S. OR 06:38:35.6 +/- 486.28 SECONDS

Trigger

From BRIGGS@ssl.msfc.nasa.gov Tue Nov 24 13:21:04 1992
Date: Tue, 24 Nov 1992 15:21:57 -0600 (CST)
From: BRIGGS@ssl.msfc.nasa.gov (Michael S. Briggs, 205-544-7716, Code ES-64, MSFC)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1458

BATSE BURST TRIGGER

NO.: 02067

TIME: TJD=8949 SECONDS=22712

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=116.0 AZIMUTH=30.3 ERROR= DEGREES

COMMENTS:

A STRONG BURST! TOTAL DURATION ABOUT 50 SECONDS. IT CONSISTS OF 3 MAIN
PEAKS, AT 0 TO 8 SEC, 11 TO 27 SEC, AND 33 TO 45 SECONDS.
THE MIDDLE PEAK IS THE STRONGEST AND CONTAINS MANY SPIKES.
THE EVENT IS SEEN ABOVE 300 KEV.

From BRIGGS@ssl.msfc.nasa.gov Tue Nov 24 12:10:47 1992
Date: Tue, 24 Nov 1992 14:13:06 -0600 (CST)
From: BRIGGS@ssl.msfc.nasa.gov
Subject: BATSE burst
To: khurley@sunspot.ssl.berkeley.edu
X-Vmsmail-To: SMTP%"khurley@sunspot.ssl.berkeley.edu",BATSE::KOUVELIOTOU
Content-Length: 108

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2067	921123	8949	22712	25000	330	-54

920622	25504	8SA 10NR 11SA
920627	46956	NA
920711	53140	YES--58157
920718	77563	8NA 10SA 11NA
920720	11524	8NA/OBSC 10NA/OBSC 11SR
920824	39183	YES--39186
920902	1736	YES--1743
921009	24070	YES--24073
921022	55259	8ND 10NA 11NA
921123	22711	YES--22727
921123	46583	YES--46542
921207	57647	YES--57649
921209	41738	8NR 10NA 11NR
930106	56259	YES--56260
930110	6698	8NA 10NR 11NA
930120	84700	YES--84779
930131	68231	YES--68231
930201	60115	YES--60129
930309	11269	NA
930329	11365	8NA 10SR 11NA
930405	32089	YES--32105
930406	26185	8NA 10NR 11NA
930428	04032	8NA 10NA 11SR
930506	53571	YES--53578
930506	65631	NA

From root Thu Feb 3 13:55 1994
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA00852; Thu, 3 Feb 94 13:55:12
Received: from SSTDP2.LANL.GOV by sunspot.ssl.berkeley.edu (5.0/SMI-SVR4)
id AA13978; Thu, 3 Feb 1994 12:59:12 +0800
Date: Thu, 3 Feb 1994 14:00:37 -0700 (MST)
From: 046369@SSTDP2.LANL.GOV
To: KHURLEY@space6.ssl.berkeley.edu
Message-Id: <940203140037.23c05074@SSTDP2.LANL.GOV>
Subject: DMSP OBSERVATIONS OF GRO GRB
Content-Length: 2739
Status: R

FROM: SMTP%"TERRELL@ESSDP2.LANL.GOV" (ESSDP2::TERRELL) (JAMES TERRELL 94/02/03)
TO: SSL::KOUVELIOTOU AND GIBSON::COLE (CHRYSSA KOUVELIOTOU AND STAYCE COLE)
CC: SMTP%"KHURLEY@SPACE6.SSL.BERKELEY.EDU" (KEVIN HURLEY)
SUBJ: DMSP OBSERVATIONS OF GRO GRB

Chryssa and Stayce:

Thanks very much for the listing of strong Batse bursts sent to me 11/1/93.
I have now managed to check all of them against DMSP data, and find that
many of them were also detected by DMSP8,9,10, or 11. Probably the higher percent
of detections in recent data is due to more extraction of full data. In many
cases such added effort would not be necessary if source direction
(and consequent obscuration of some DMSP satellites) were known to me.
I would appreciate data on more strong events. Here is the present list:

NOTES:

NA: Not apparent in 20-second averaged data (extracting the 2-sec data is
a more time-consuming task, not undertaken in every case).
NA?: Some slight indication of a peak in 20-second averaged data.
SA: South Atlantic Anomaly, obscuring data with high background rates.
SR: South Radiation Belt background.
NR: North Radiation Belt background.
ND: No data for this time.
YES: Burst definitely detected by one or more DMSP satellites (8,9,10,11).
NO: No evidence of a peak in 2-sec data. (NO/OBSC: Obscured by Earth)

DATE	UT	DMSP
910421	33245	8NO 9SR 10NR
910627	16159	8NA 9NR 10ND
910629	71750	8NA 9SR 10NA
910703	18225	8NA 9NA? 10SR
910717	16386	8NA 9SA 10SR
910718	76051	8NA 9SA 10SA
910802	2718	ND
910814	69275	ND
911024	76208	ND
911104	54283	YES--54286 PEAK
911109	12459	8NO 9NR 10NO
911118	68260	ND
911119	23343	YES--23342
911126	46129	8SR 9SR 10NO
911127	15730	YES--15739
911202	73731	YES--73733
911209	66959	8SR 9SR 10NR 11ND
920226	29730	8SA 9NA? 10SA 11SA
920229	69769	8SR 9ND 10NA 11NA
920311	8246	YES--8431
920315	15569	8NA 9NR 10NA 11NA
920325	62258	YES--62256
920404	47506	8NA 10NA? 11NR
920406	9855	8NO/OBSC 10SR 11SR/OBSC
920414	84163	NA
920517	11877	YES--11883
920525	12423	YES--12427

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

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

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

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

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

Date:

Dec 11 '97

Helio corr removed

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

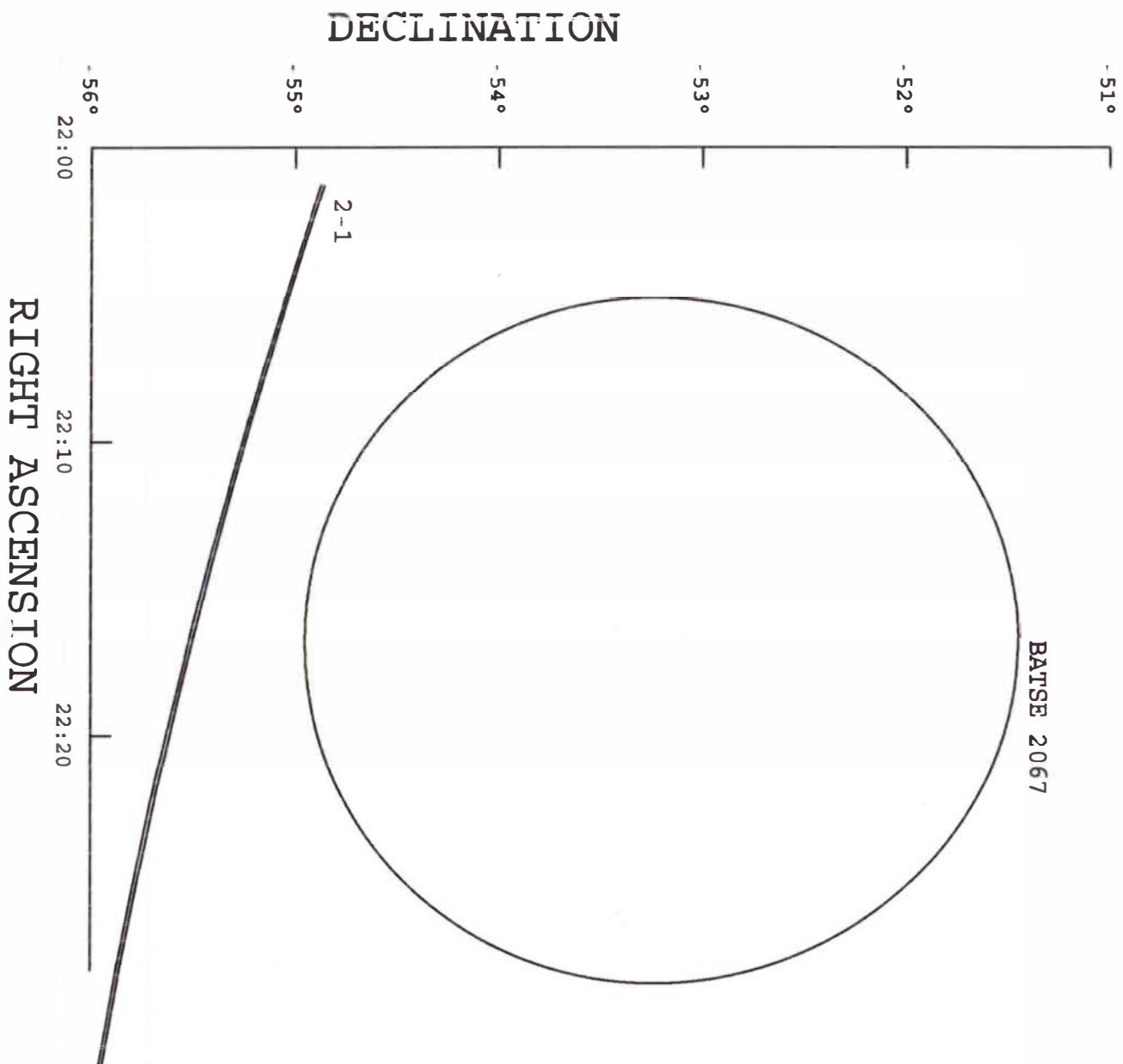
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF NOV 23, 1992 6:37

11/12/97



BATSE

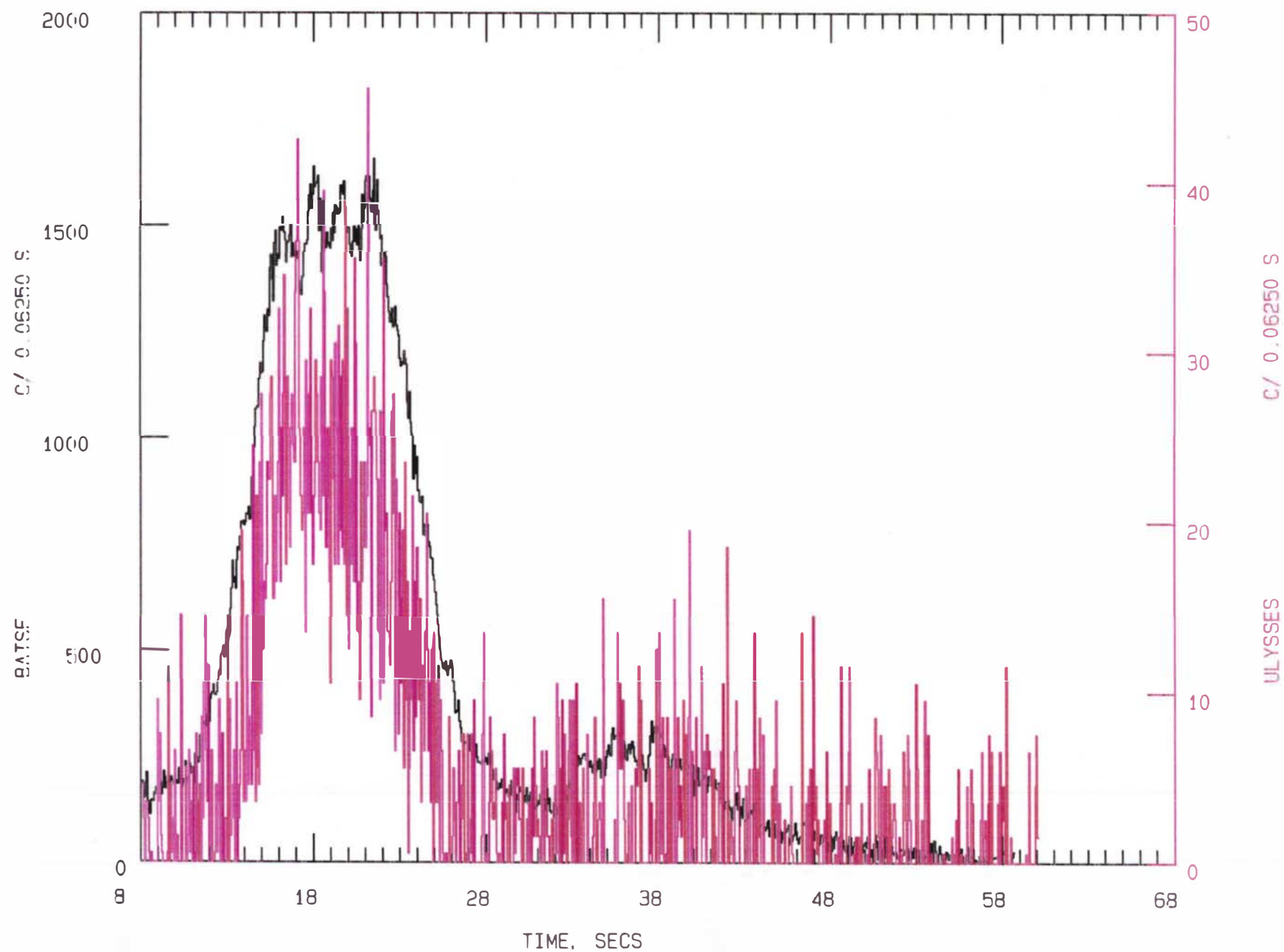
-ULYSSES

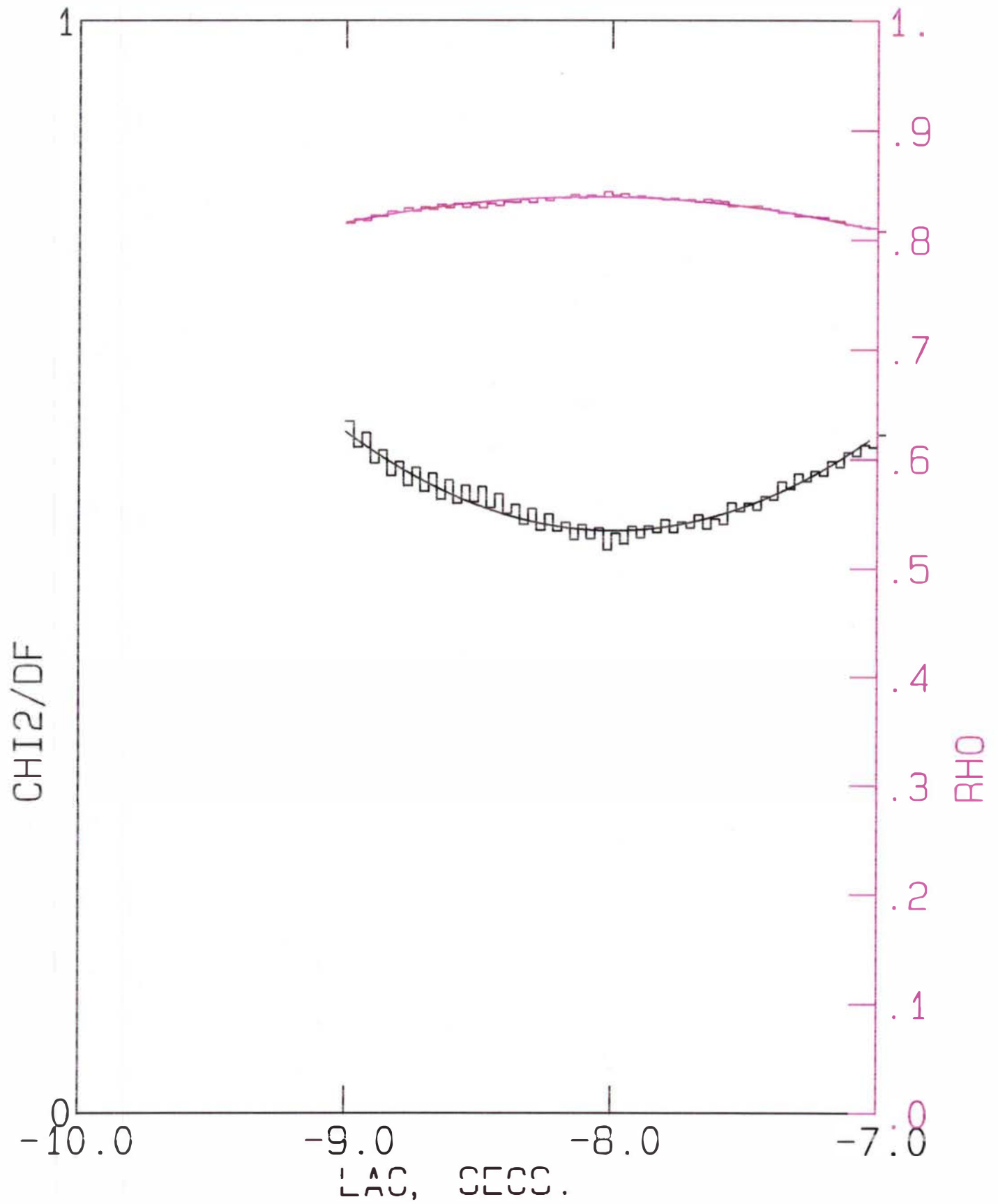
CORRELATION

23/11/92

22711.682

11/12/97





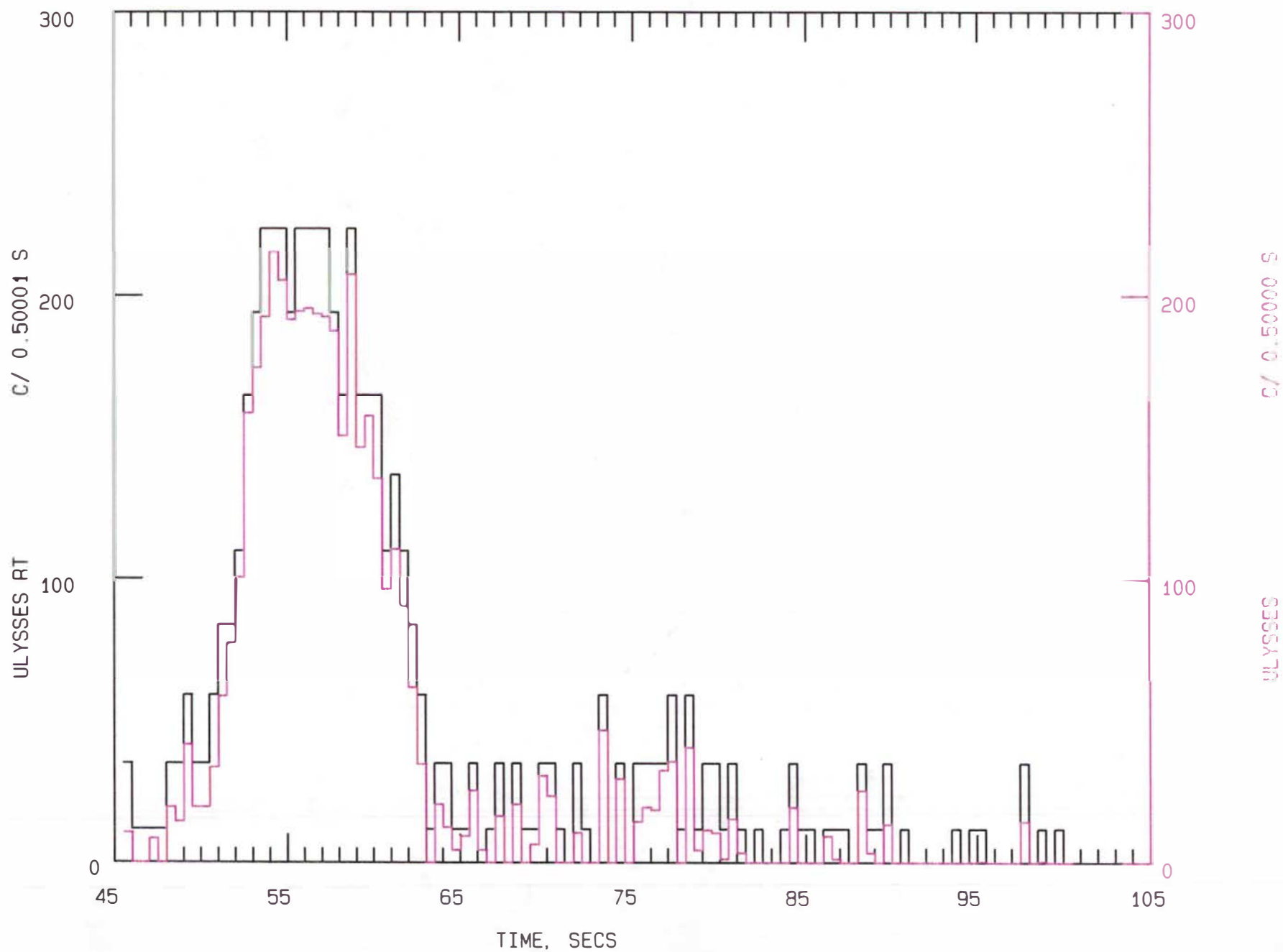
ULYSSES RT-ULYSSES

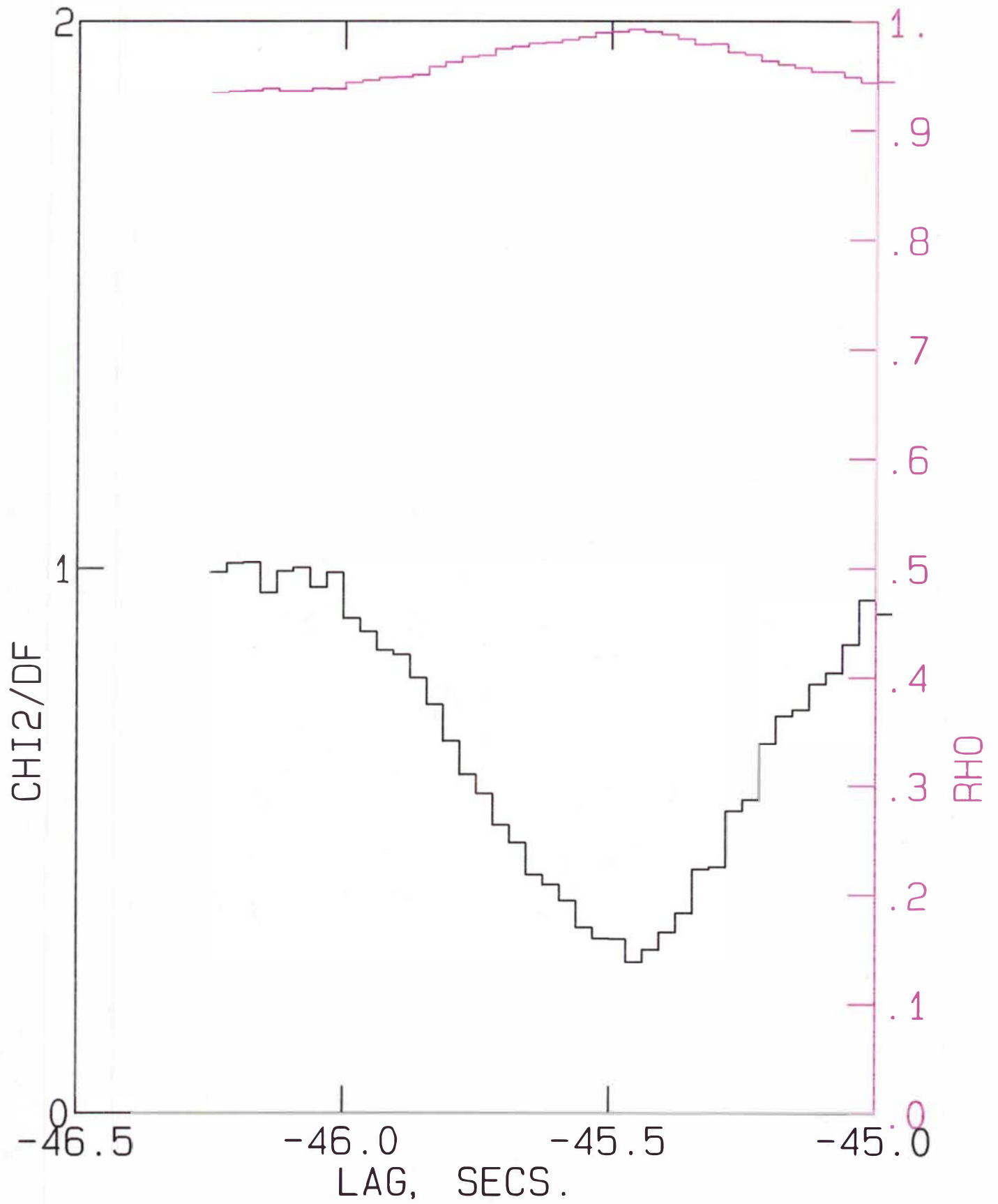
CORRELATION

23/11/92

23815.435

11/12/97

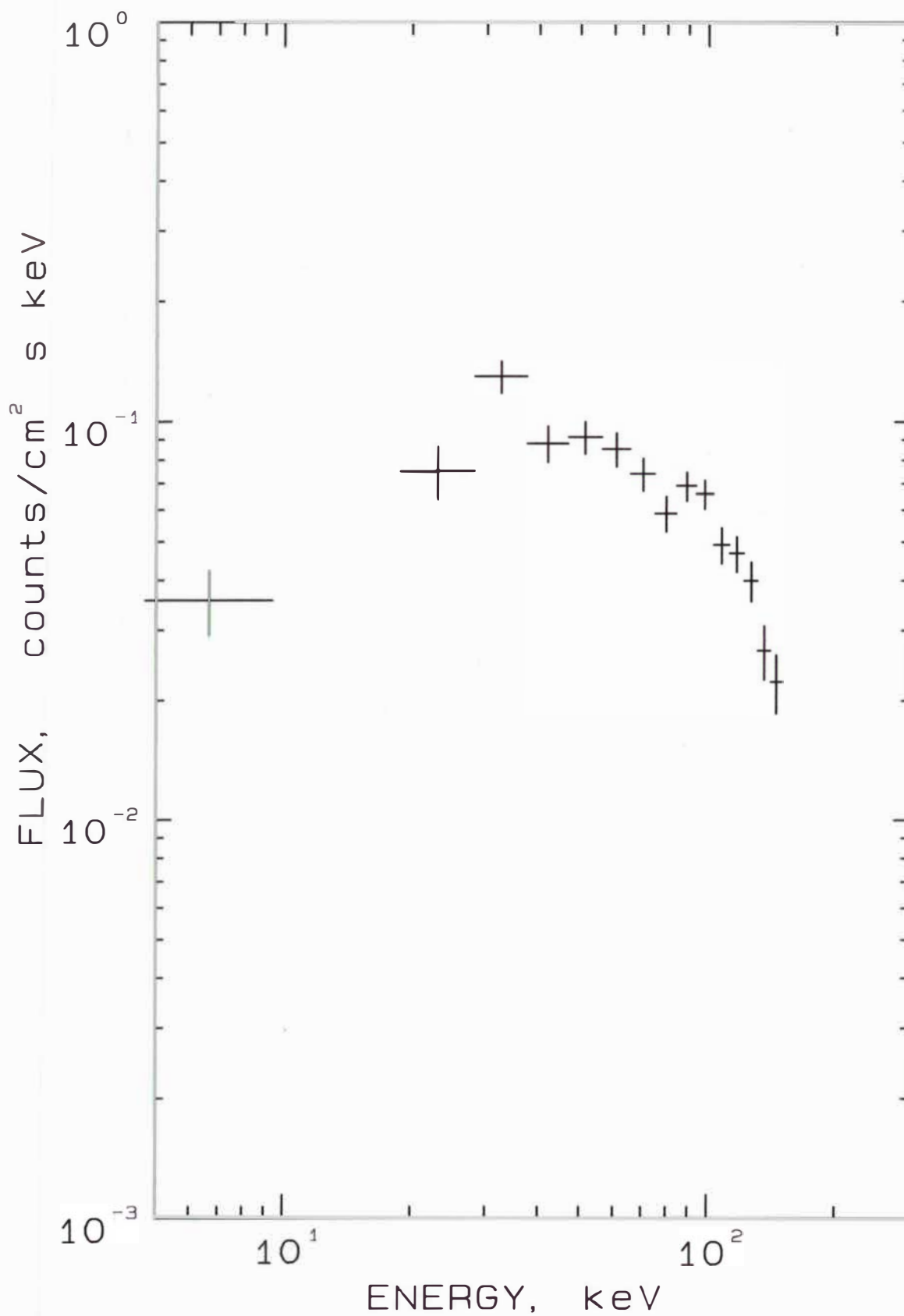




ULYSSES 23/11/92 23868.075

11/12/97

SPECTRUM INTEGRATED OVER 31.2 SECONDS, INTERVALS 2 TO 25



ULYSSES 23/11/92 23868.075 BURST SPECTRAL COUNT RATES

4- 18 keV

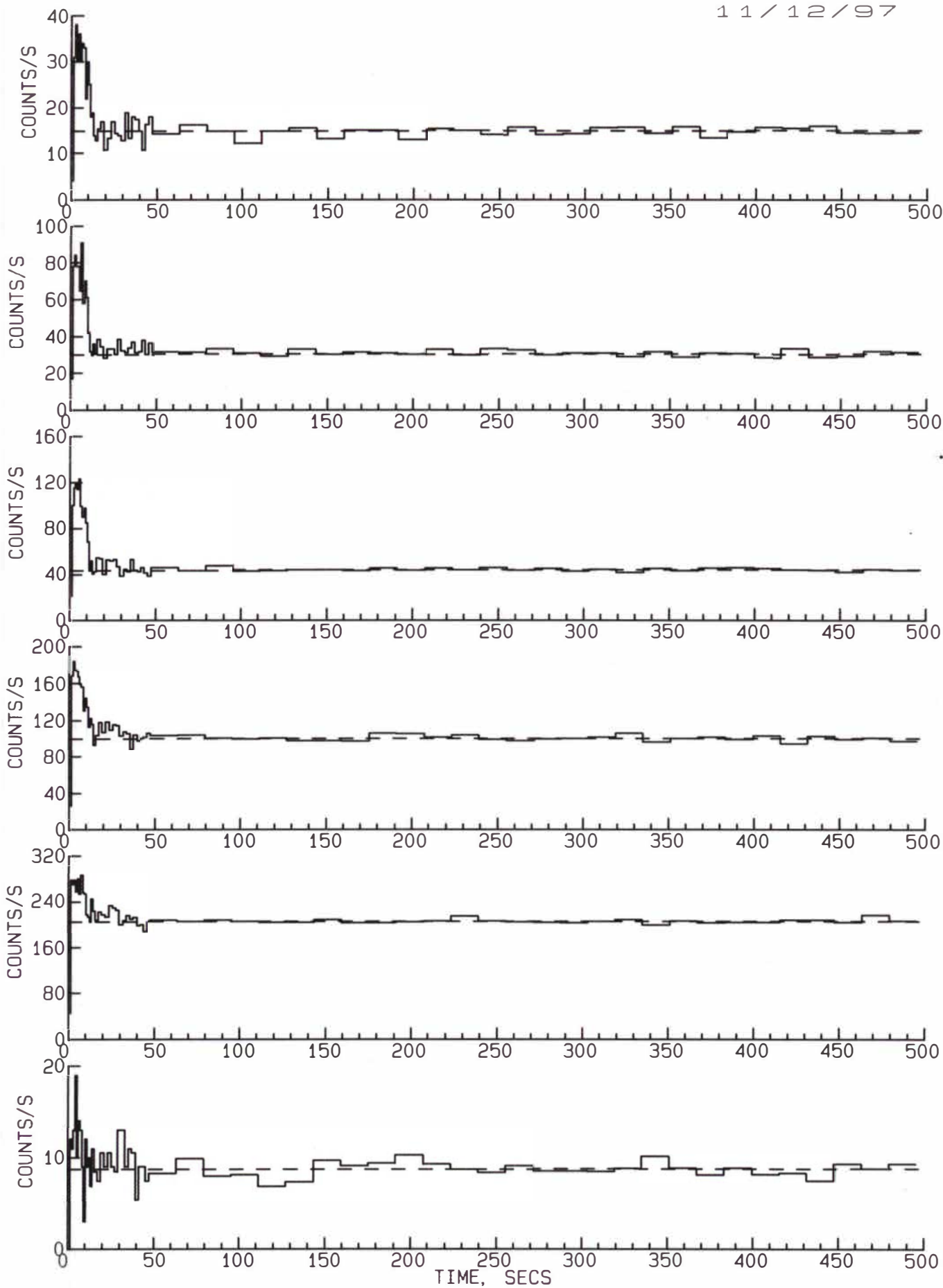
18- 47 keV

47- 75 keV

75-103 keV

103-131 keV

131-150 keV



11/12/97

ULYSSES

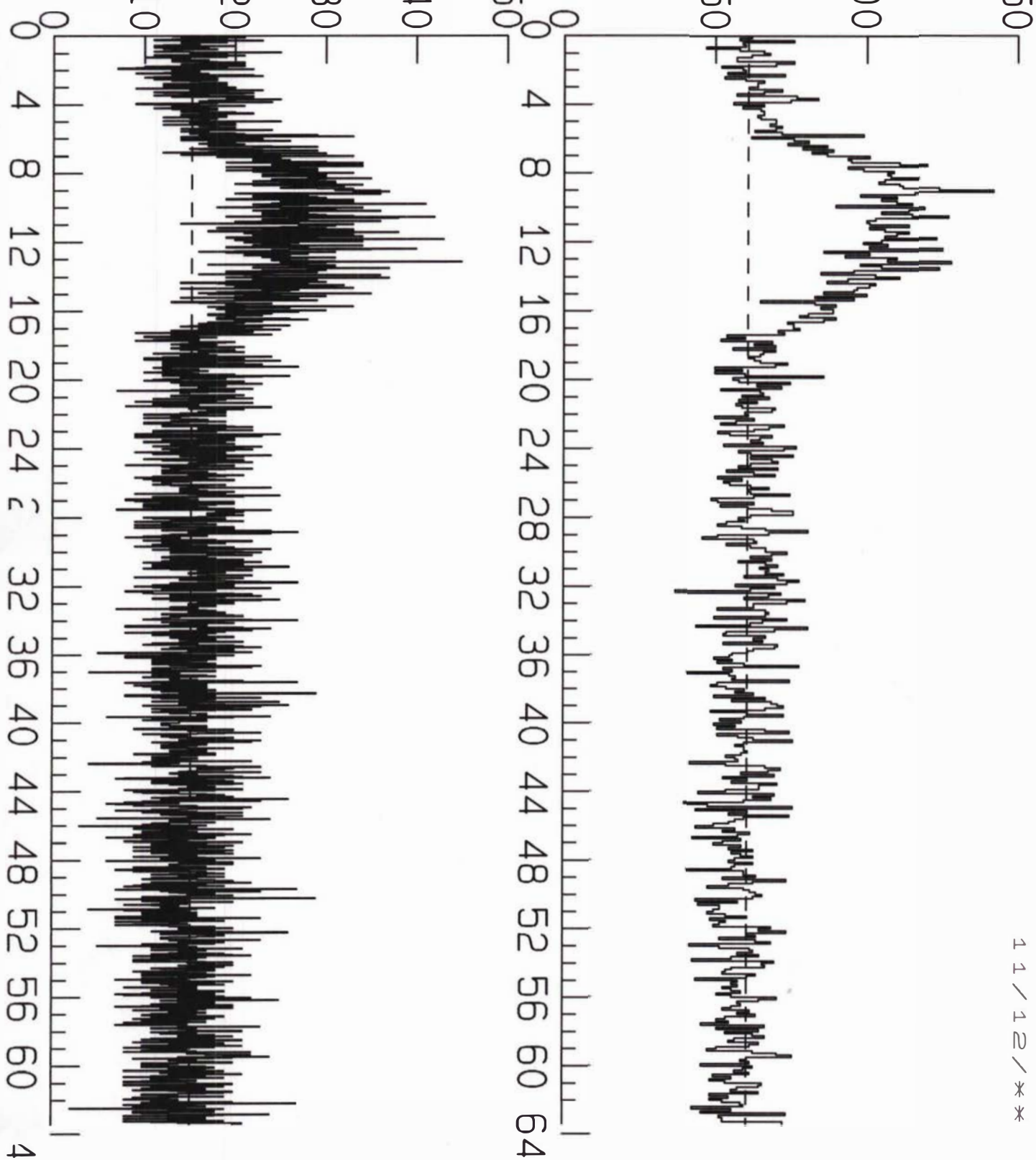
23/11/92

Ttrig=23868.308

22- 151 keV

COUNTS/0.031 S

COUNTS/0.125 S

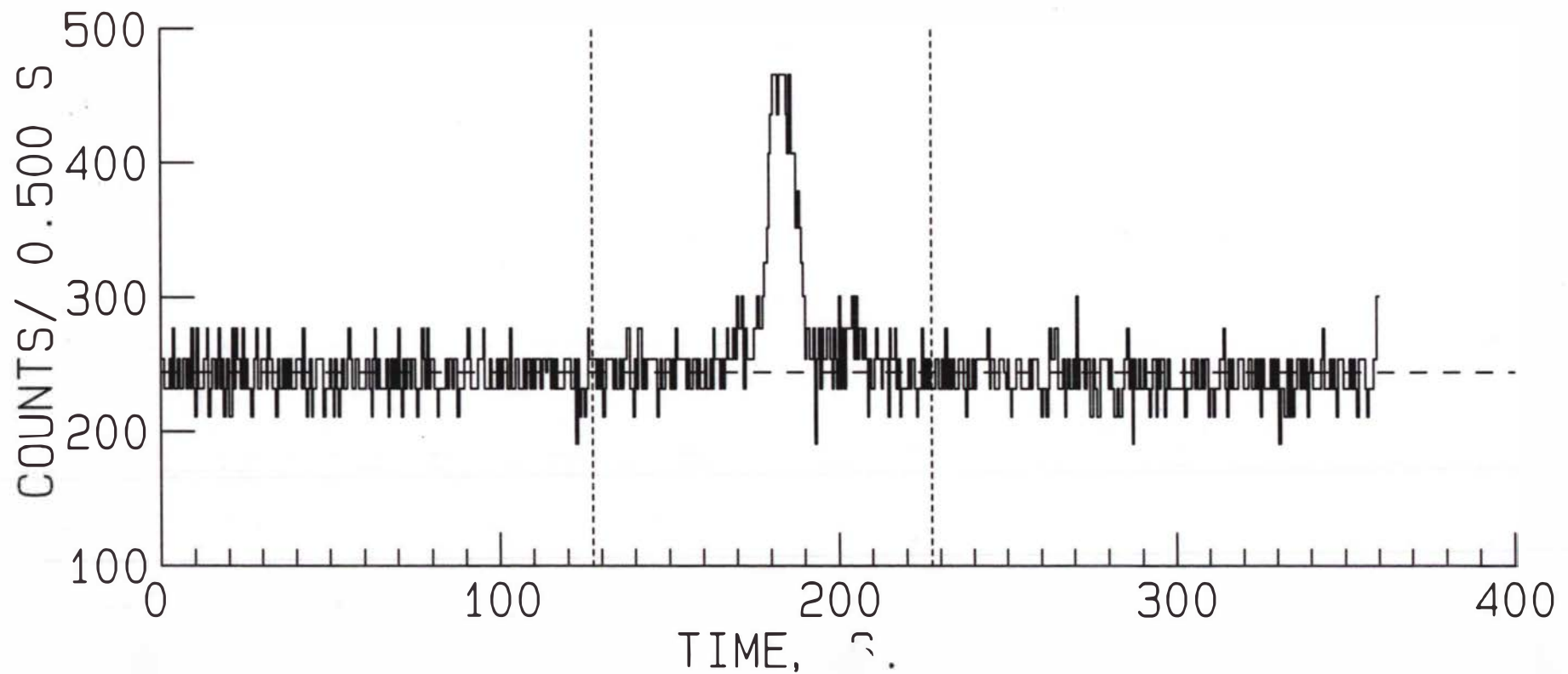


11/12/88

ULYSSES RT
23/11/92 23688.199 s
22- 151 keV

11/12/97

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



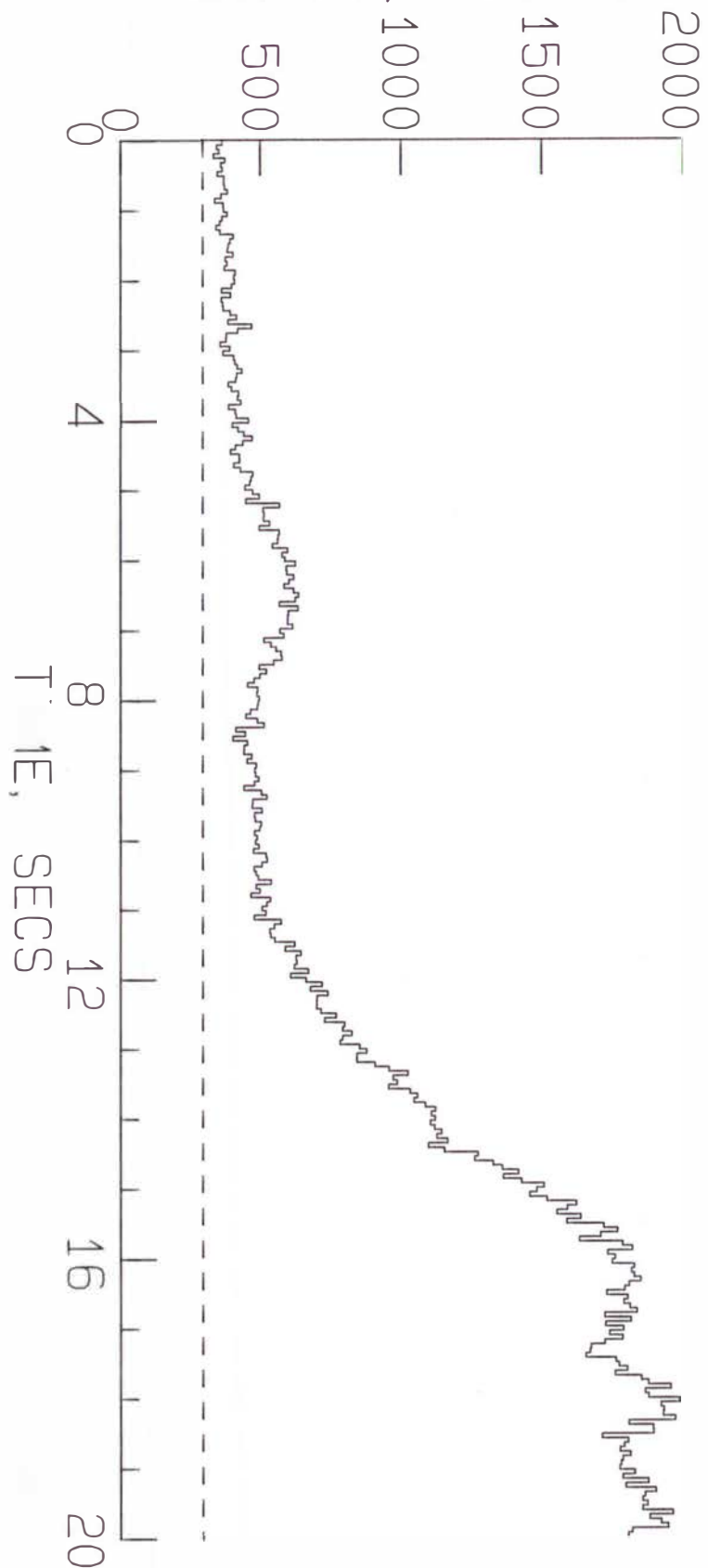
BATSE

23/11/92

22711.682

25- 100 keV

COUNTS/ .064 S



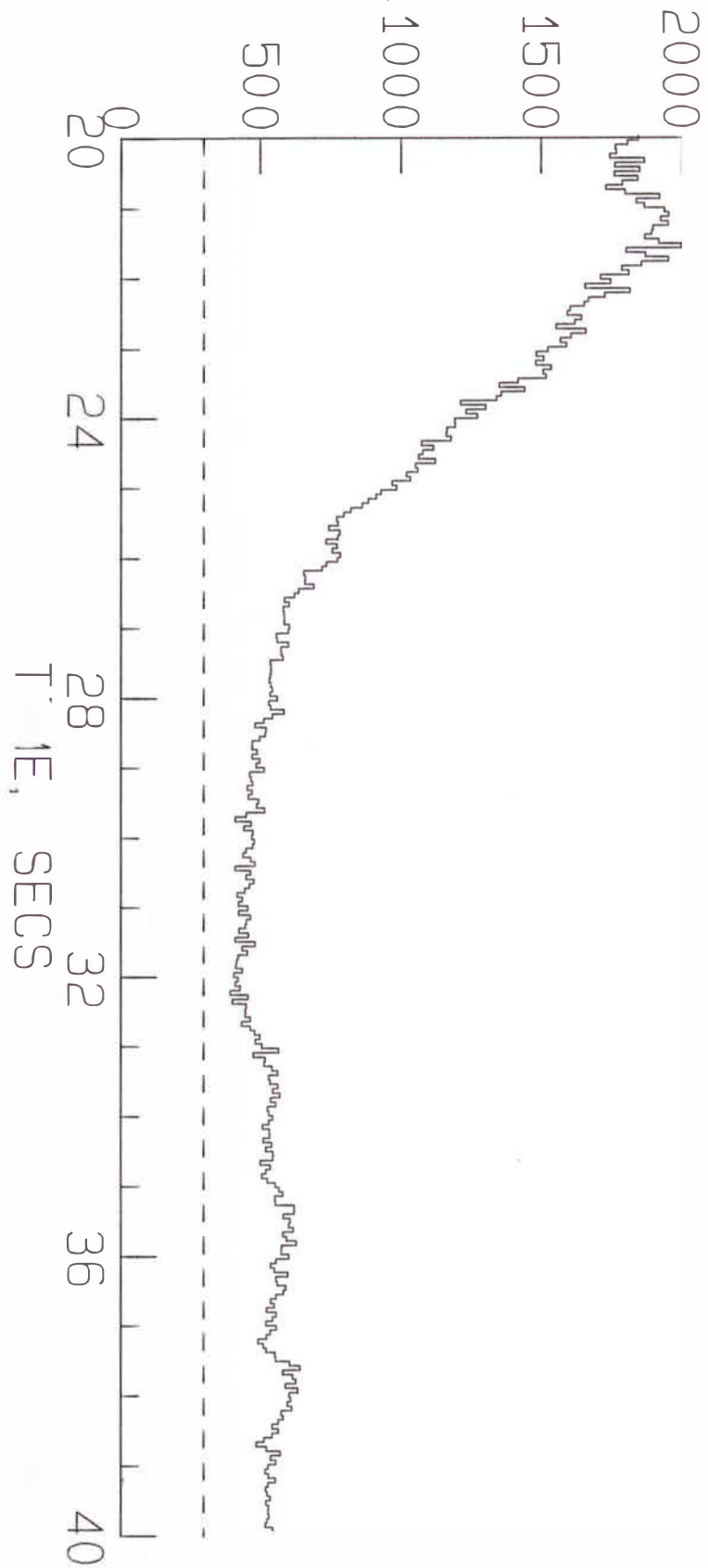
BATSE

23/11/92

22711.682

25- 100 keV

COUNTS/ .064 S



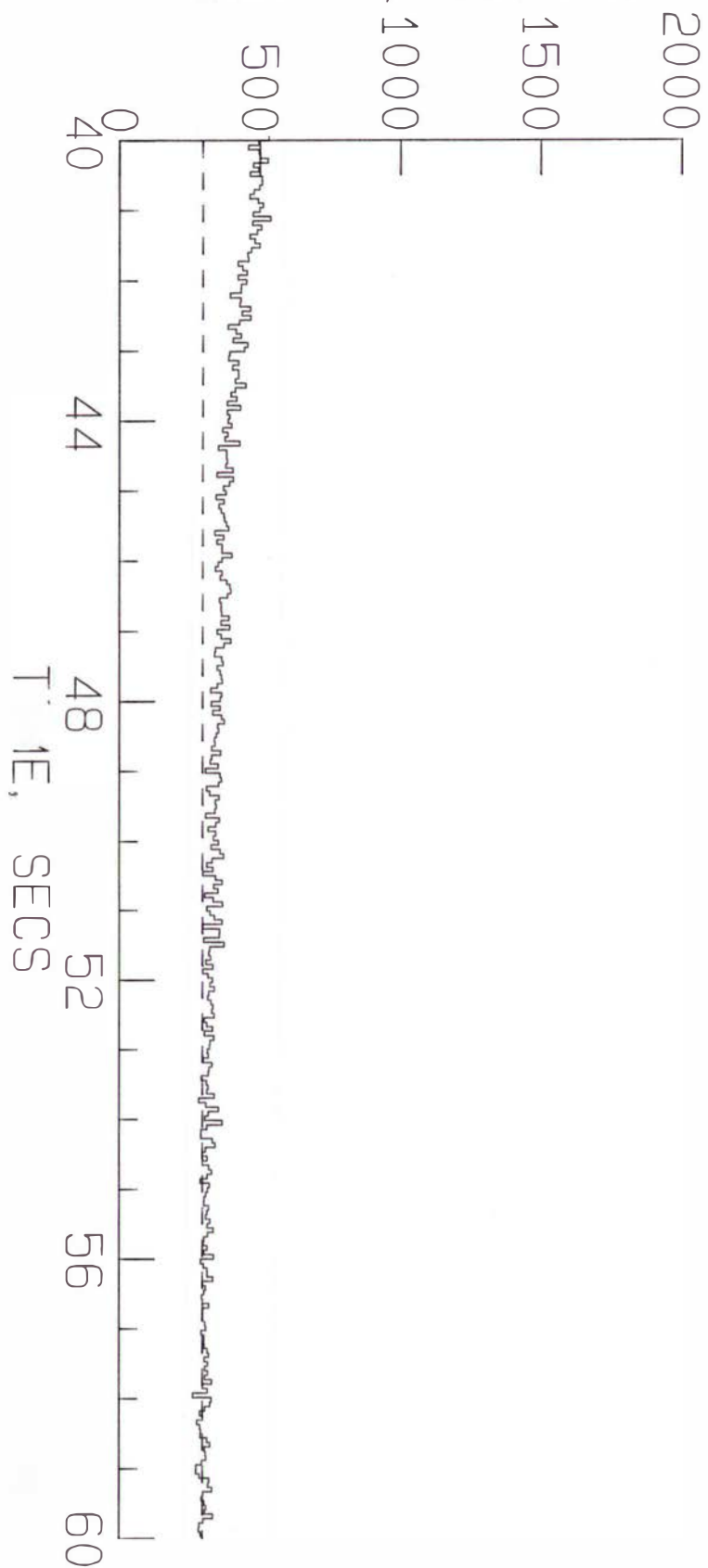
BATSE

23/11/92

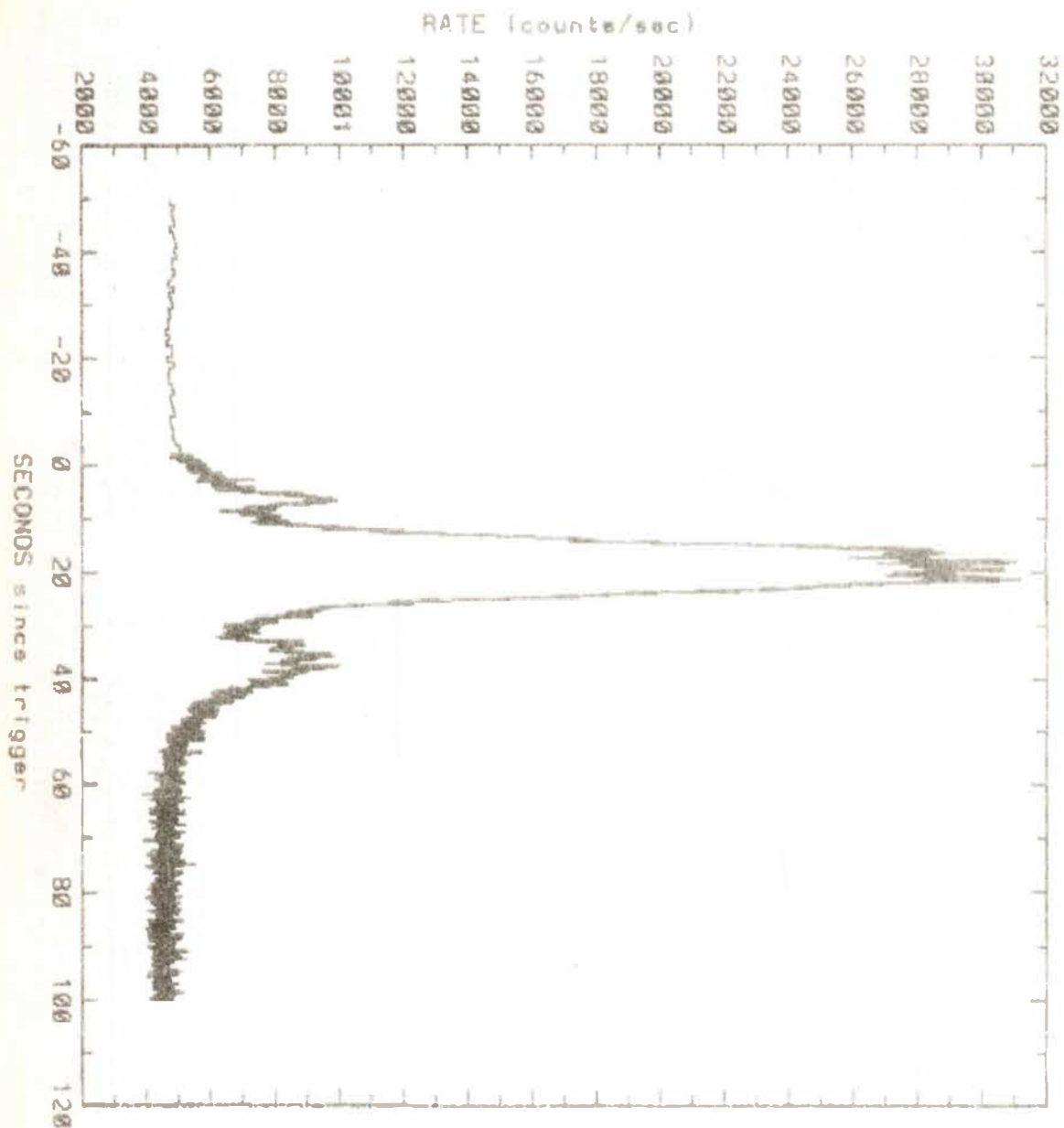
22711.682

25- 100 keV

COUNTS/ .064 S



BATSE burst trigger #2067



18-DEC-1992 20:22:38

Created by MOPS 80
(Burst Display)
Version 2.15

Trigger # 2067

Trigger Time:

0949 / 22711.682

Burst Data Type:

DISCSC

Deadtime
Corrected: NBackground Data
Type: PREB + DISCLAMinimum Integ. Time:
(0.004 seconds)Detectors (7..0),
00001010Discriminators:
(1..2)Quality Mask:
EDTSP8

NASA
TELEFAX**BATSE****MARSHALL SPACE FLIGHT CENTER**
HUNTSVILLE, ALABAMA 35812
SPACE SCIENCE LABORATORY**From:**Name: G. J. Fishman Mail Code: ES62Phone: 205/544-7691 FAX No.: 205-544-5800
(or -7754)**DATE**This is page 1 of 3 pages**To:**Name: Dr. K. Hurley FAX No: ⁵¹⁰~~415~~/643-7629Address: U.S.R.

5-3527-9-127

Jedwin - We should try to get a
quick, good location for this one ..
+ notify some SO. Mem. observers.
Jine already notified A. Smitte/ESO
for a Schmidt plate for tonight.

Jerry

CATSEARCH PROGRAM

BATSE BURST # 2068

EVENT OF 1992 NOV 23 DAY OF YEAR=328

EVENT CROSSING TIME AT BATSE : 46584. S. OR 12:56:23.7

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

BURST ARRIVAL DIRECTION: 166.200 -27.500

BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND

POSITION OF ULYSSES ON 23/11/ 92 IS:

RA= 166.470 DEC= -8.180 DIST= 5.394 AU

BATSE-ULYSSES DISTANCE = 806981296. KM.

ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=160.68 DEG.

LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2540.18 SECS.

CROSSING TIME AT ULYSSES IS 44044. S. OR 12:14:03.5 +/- 166.05 SECONDS

100

From BRIGGS@fender.msfc.nasa.gov Tue Nov 24 16:17:30 1992

Date: Tue, 24 Nov 1992 18:19:31 -0600 (CST)

From: BRIGGS@fender.msfc.nasa.gov

Subject: Burst Trigger Message

To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu

X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS

Content-Length: 1377

BATSE BURST TRIGGER

NO.: 02068

TIME: TJD=8949 SECONDS=46584

TYPE: BURST

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=111.5 AZIMUTH=287.5 ERROR= DEGREES

COMMENTS:

SHORT BURST OF 0.20 SECONDS DURATION.

EVENT IS RESOLVED INTO 2 PEAKS WITH POSSIBLE ADDITIONAL STRUCTURE.

SEEN ABOVE 300 KEV

From BRIGGS@FENDER.MSFC.NASA.GOV Tue Nov 24 16:21:08 1992

Date: Tue, 24 Nov 1992 18:23:32 -0600 (CST)

From: BRIGGS@FENDER.MSFC.NASA.GOV

Subject: BATSE burst

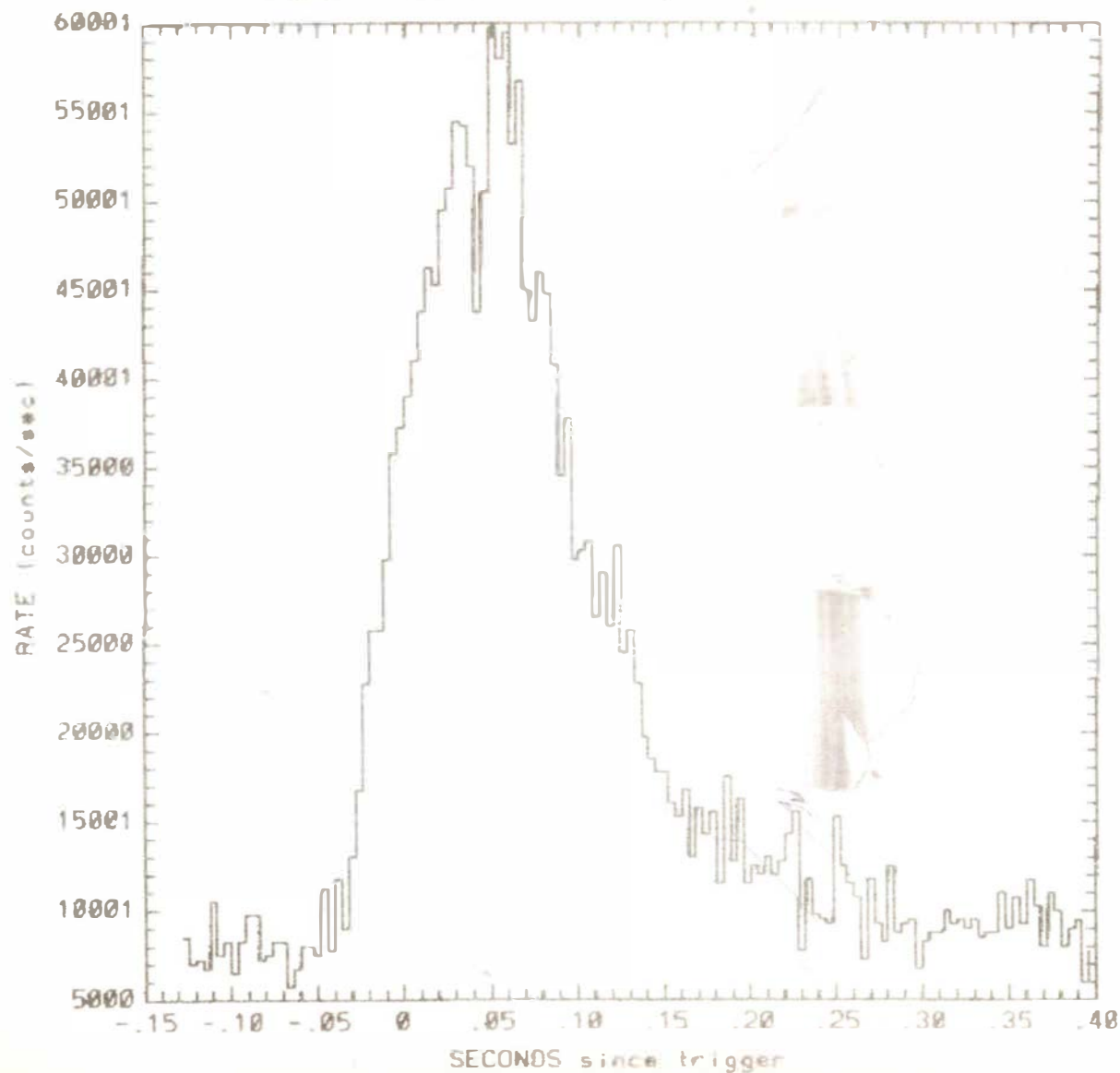
To: khurley@sunspot.ssl.berkeley.edu

X-Vmsmail-To: SMTP%"khurley@sunspot.ssl.berkeley.edu",BATSE::KOUVELIOTOU

Content-Length: 108

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2068	921123	8949	46584	50000	164	-33

Trigger # 2068 -8949/46583.709



24-NOV-1992 17:53:41

Created by MOPS BD
(Burst Display)
Version 12.16

Trigger # = 2068

Trigger Time:
8949 / 46583.709Burst Data Type:
TTEMultiple Events
Ignored: 28Deadtime
Corrected: NBackground Data
Type: DISCLAMinimum (integ. Time:
0.004000 seconds)Detectors [7, 8]:
10001000Discriminators:
(1, 4)Quality Mask:
BDSP0

9 / 6 / 94

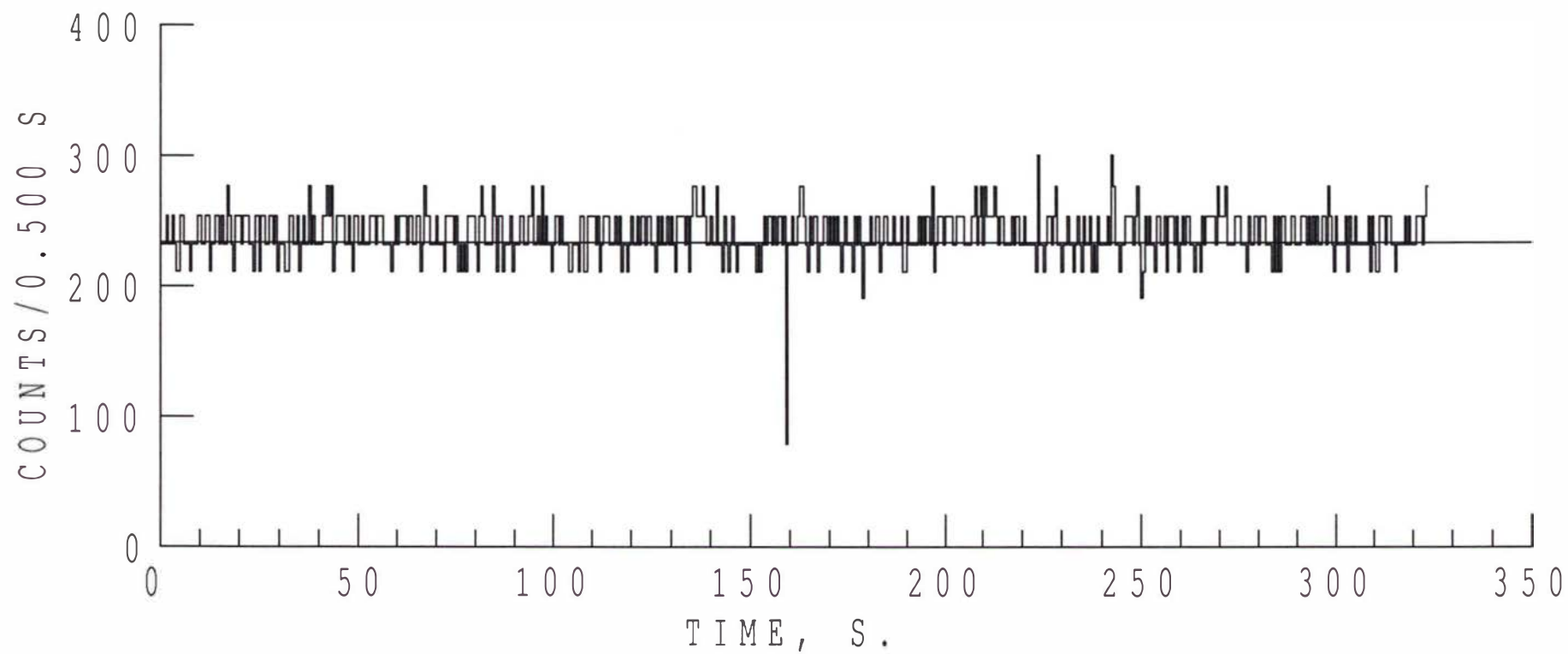
ULYSSES RT

23 / 11 / 92 43884.016 s

0 - 0 keV

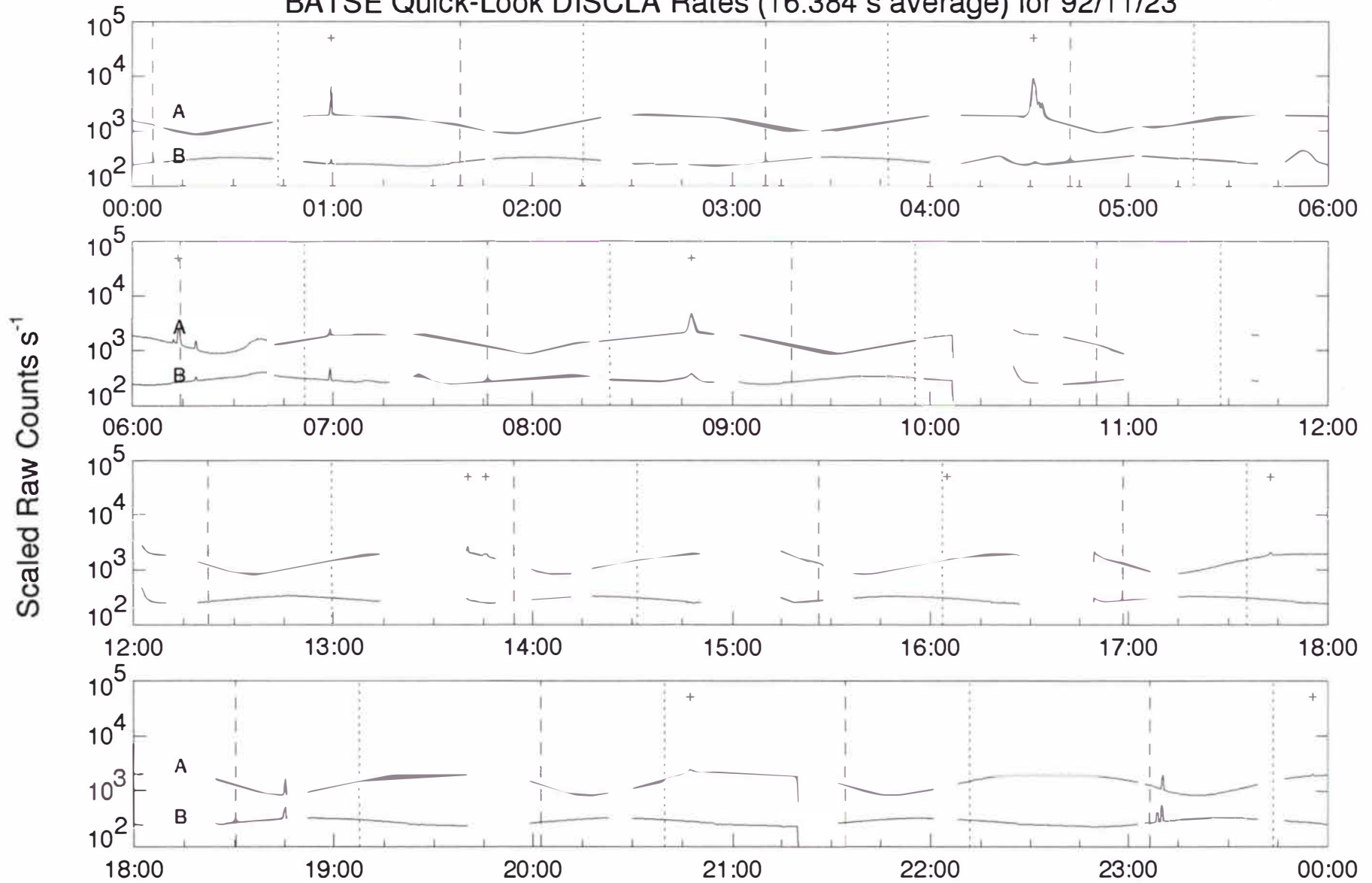
N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



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

BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/23



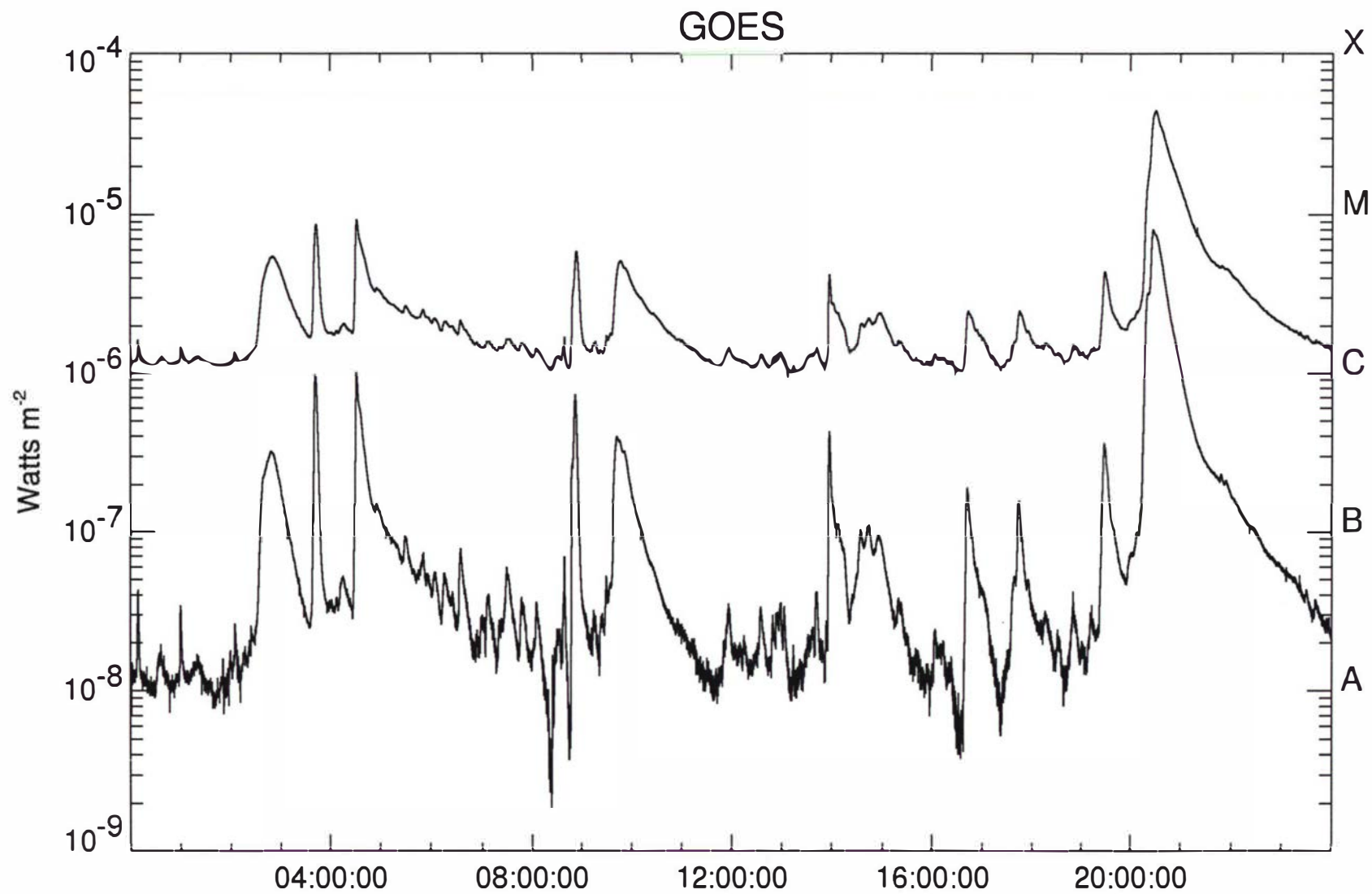
Current Time: 92/11/25, 0202 EDT

A: Channel 1 Most Sunward LAD

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

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare



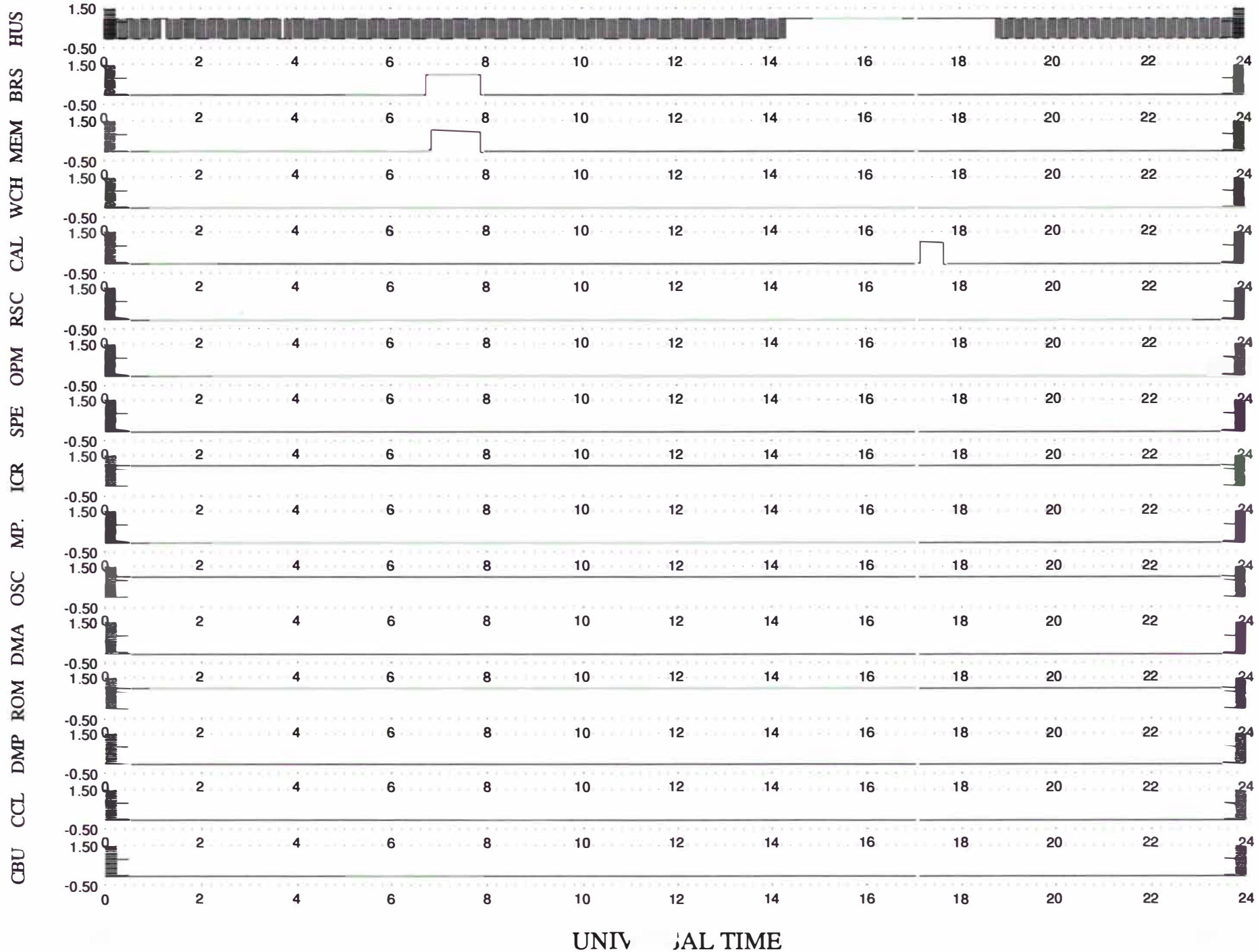
Data Start: 92/11/23, 0000:00

Plot created: 95/05/30, 1631

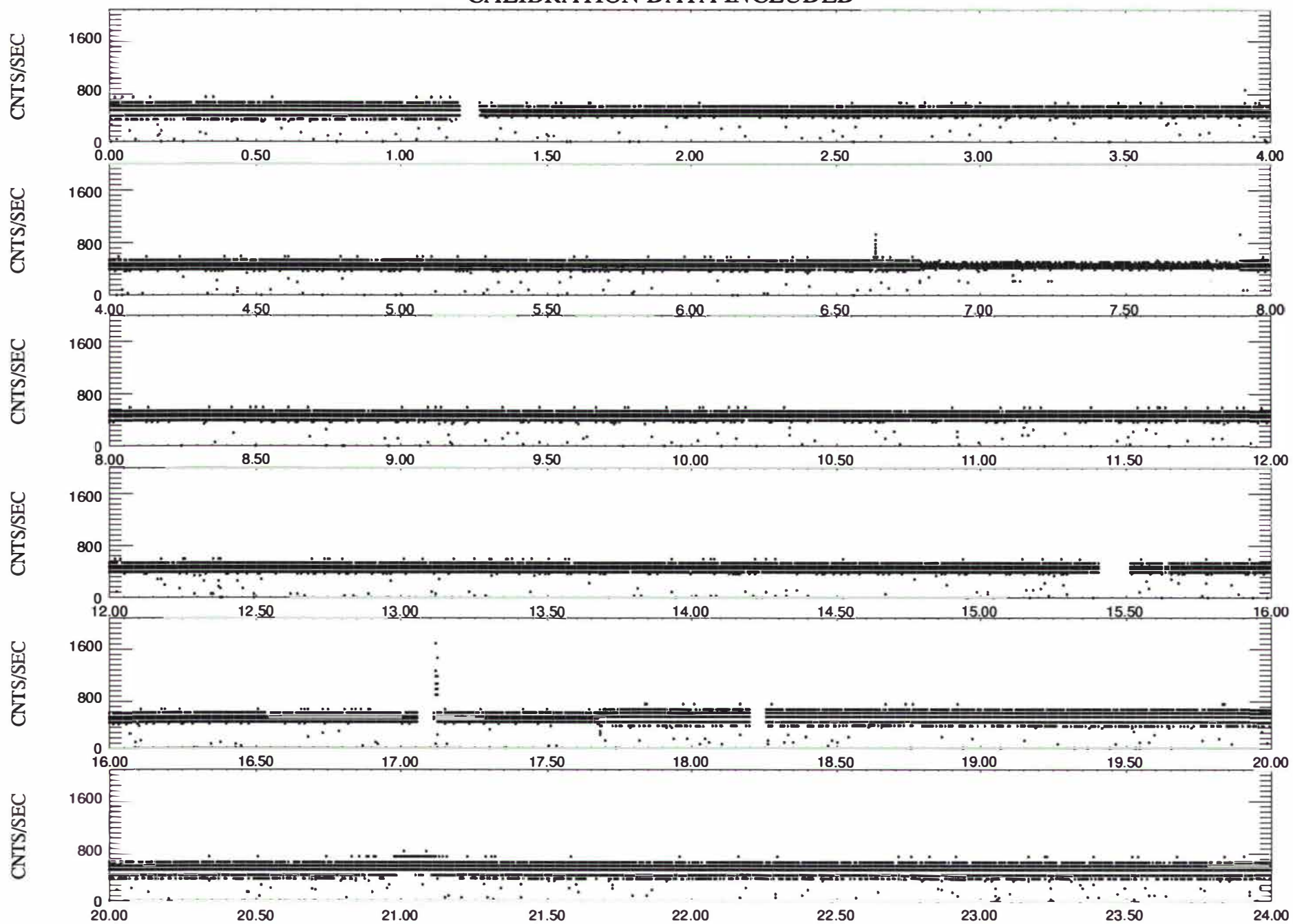
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BURST NUMBER 1

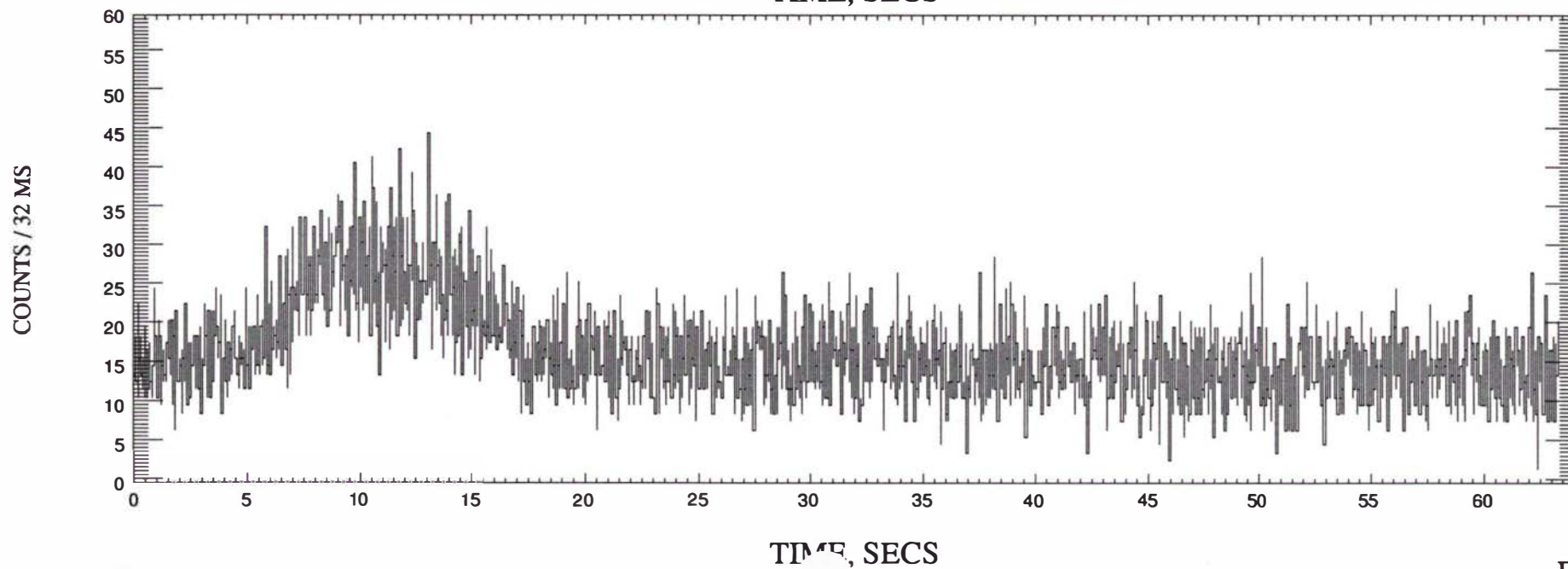
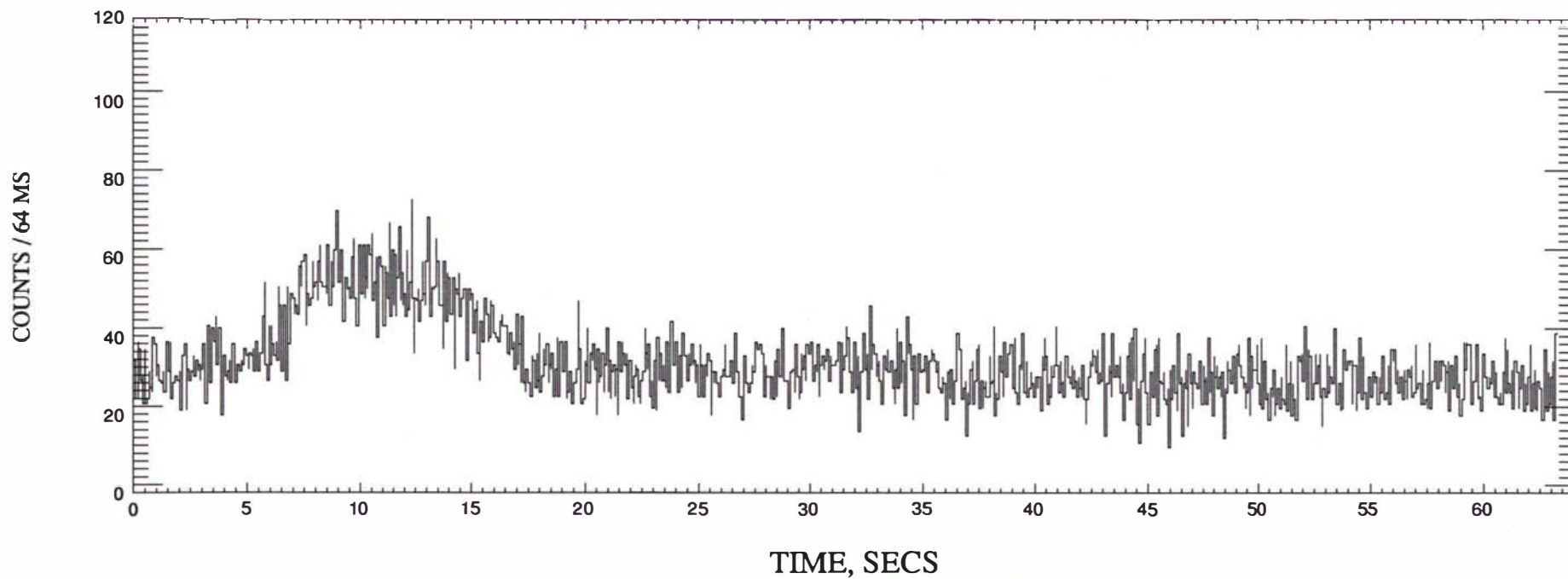


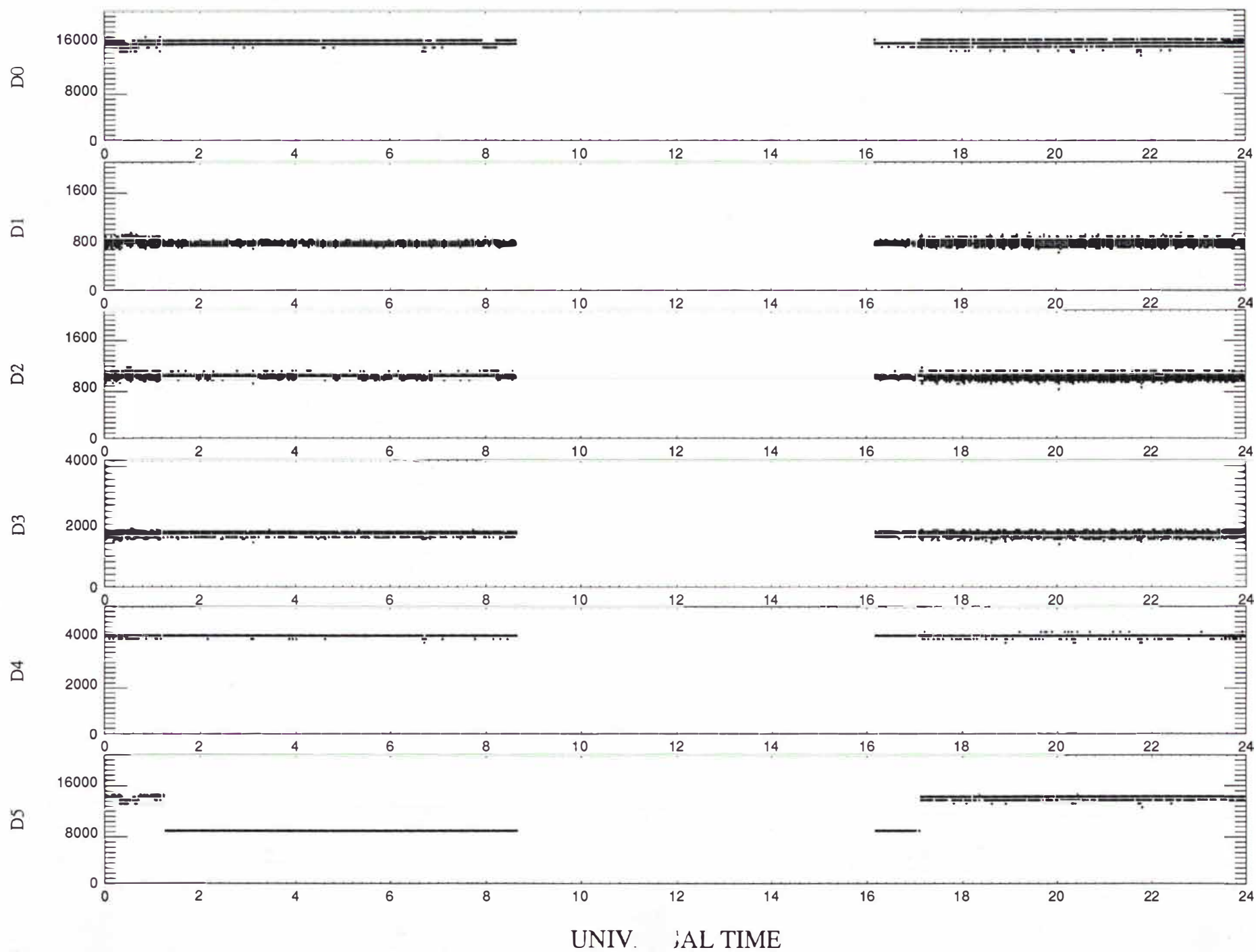
CALIBRATION DATA INCLUDED



UNIV CAL TIME

Burst Counter 1 at UT= 6.630019616021 h=23868.071 s





From BRIGGS@fender.msfc.nasa.gov Tue Nov 24 16:01:10 1992
Date: Tue, 24 Nov 1992 18:03:25 -0600 (CST)
From: BRIGGS@fender.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 02066

Nov 23

TIME: TJD=8949 SECONDS=16242

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

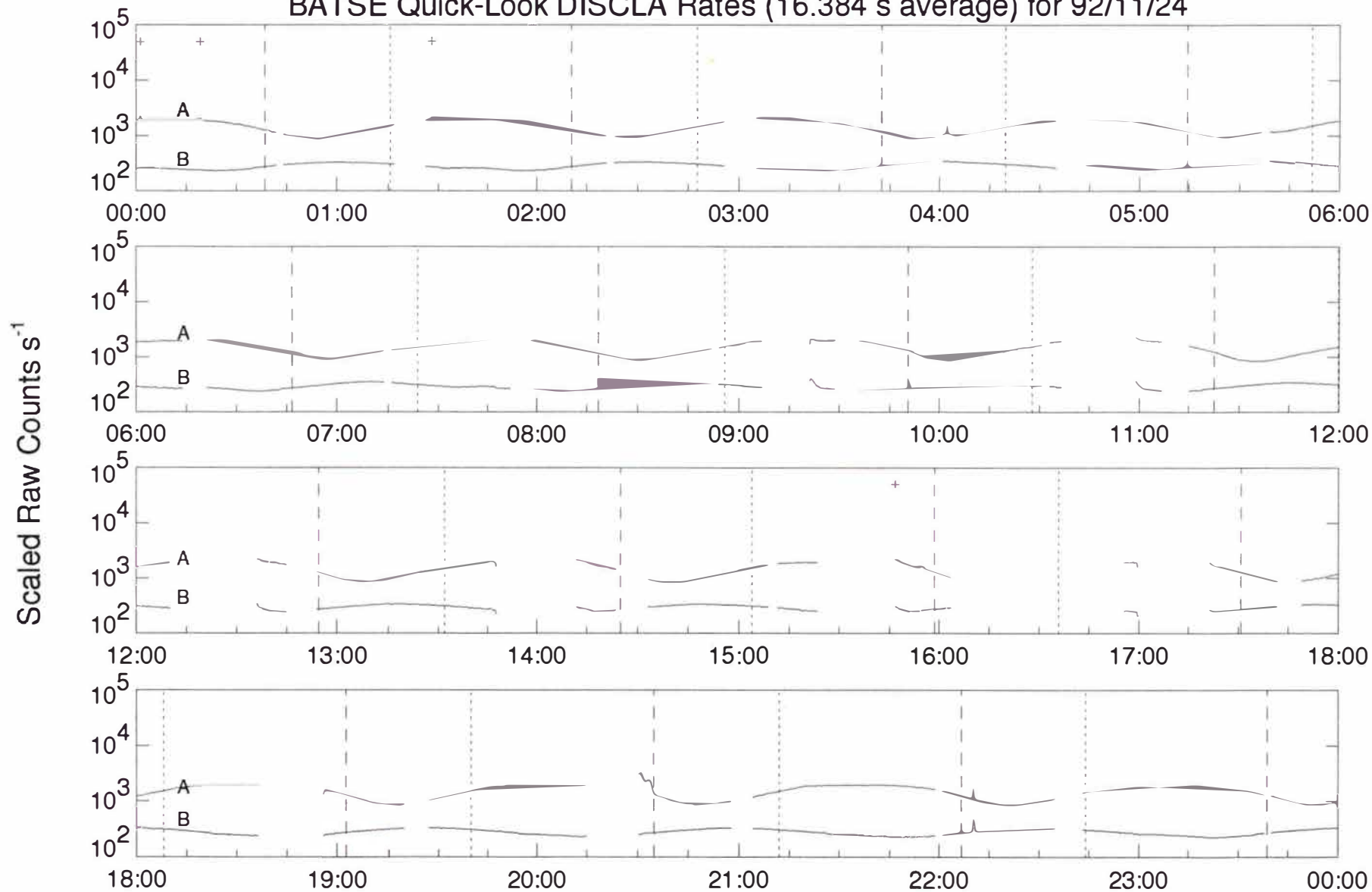
INTENSITY: COUNTS/CM2

LOCATION: ZENITH=61.0 AZIMUTH=330.6 ERROR= DEGREES

COMMENTS:

GOES C9.1 SOLAR FLARE

BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/24



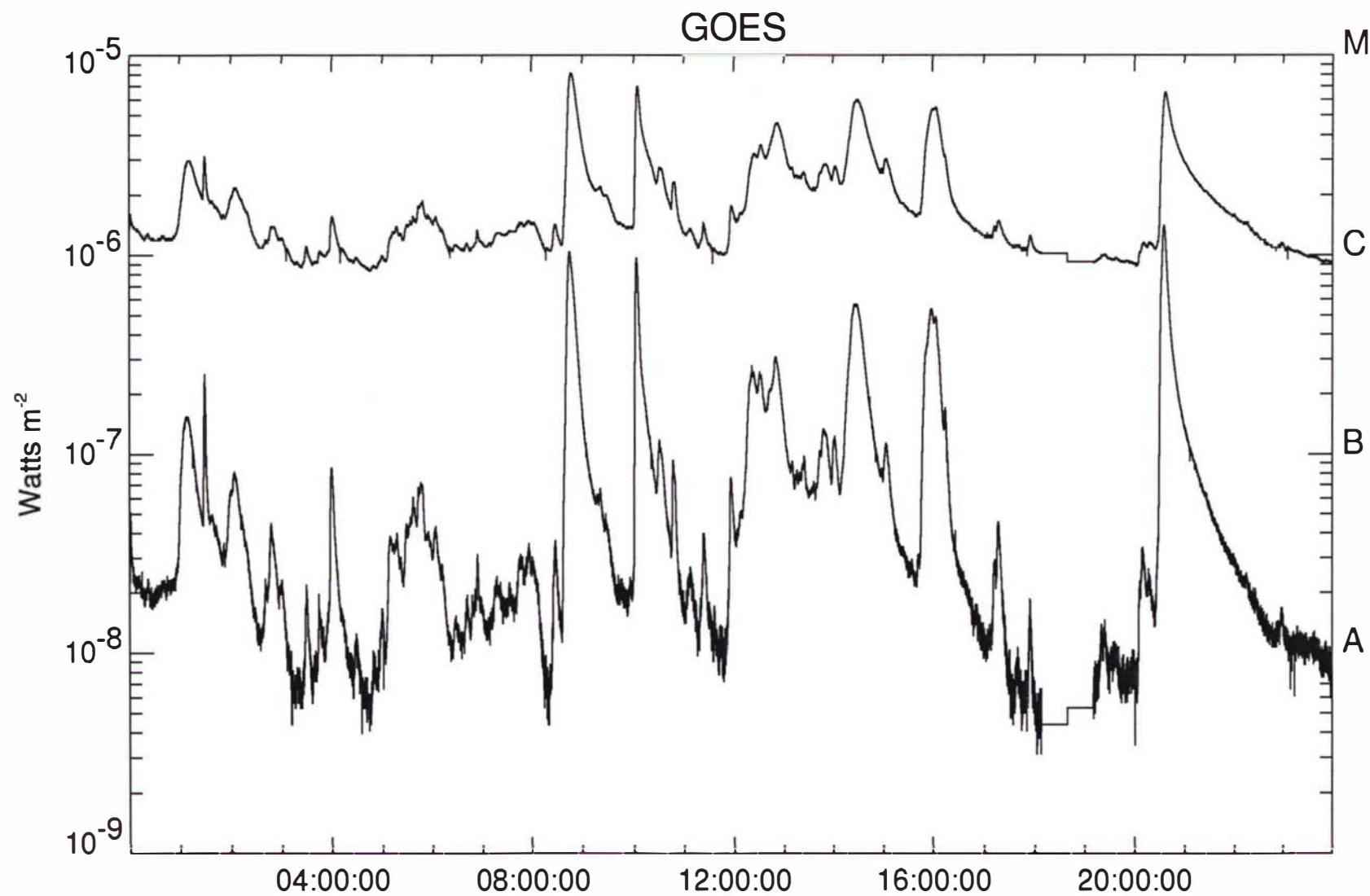
Current Time: 92/11/30, 1212 EDT

A: Channel 1 Most Sunward LAD

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

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare



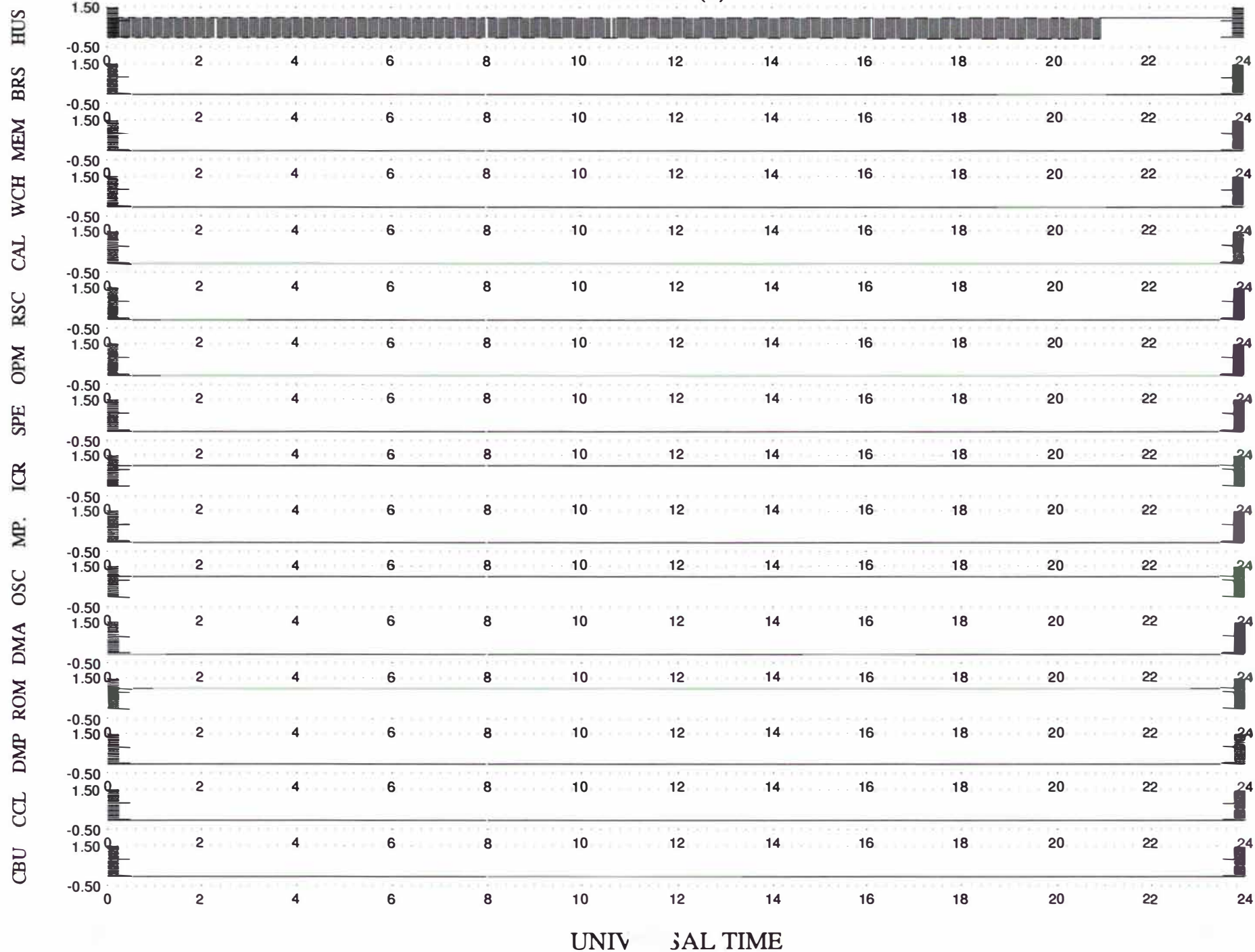
Data Start: 92/11/24, 0000:01

Plot created: 95/05/30, 1635

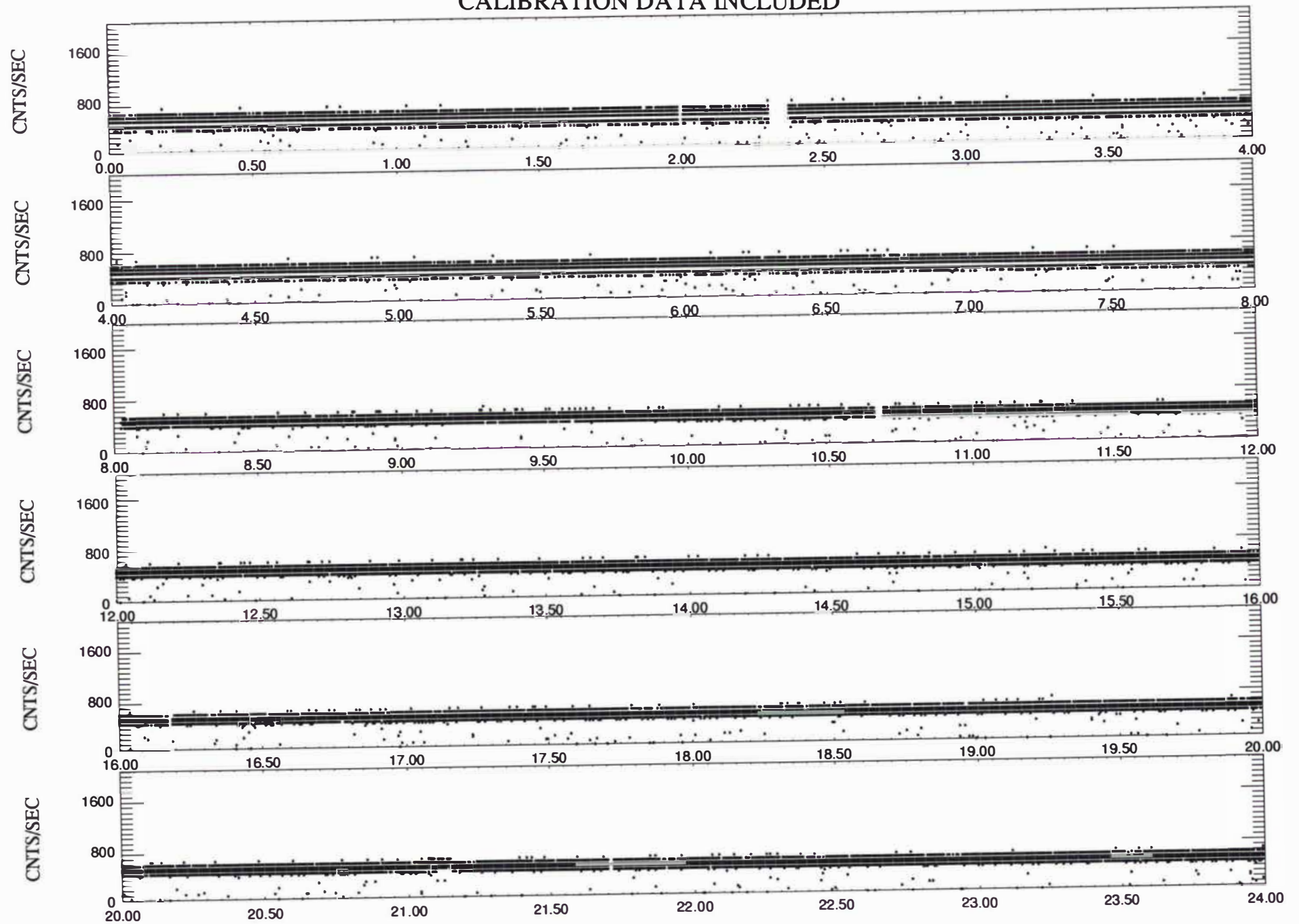
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

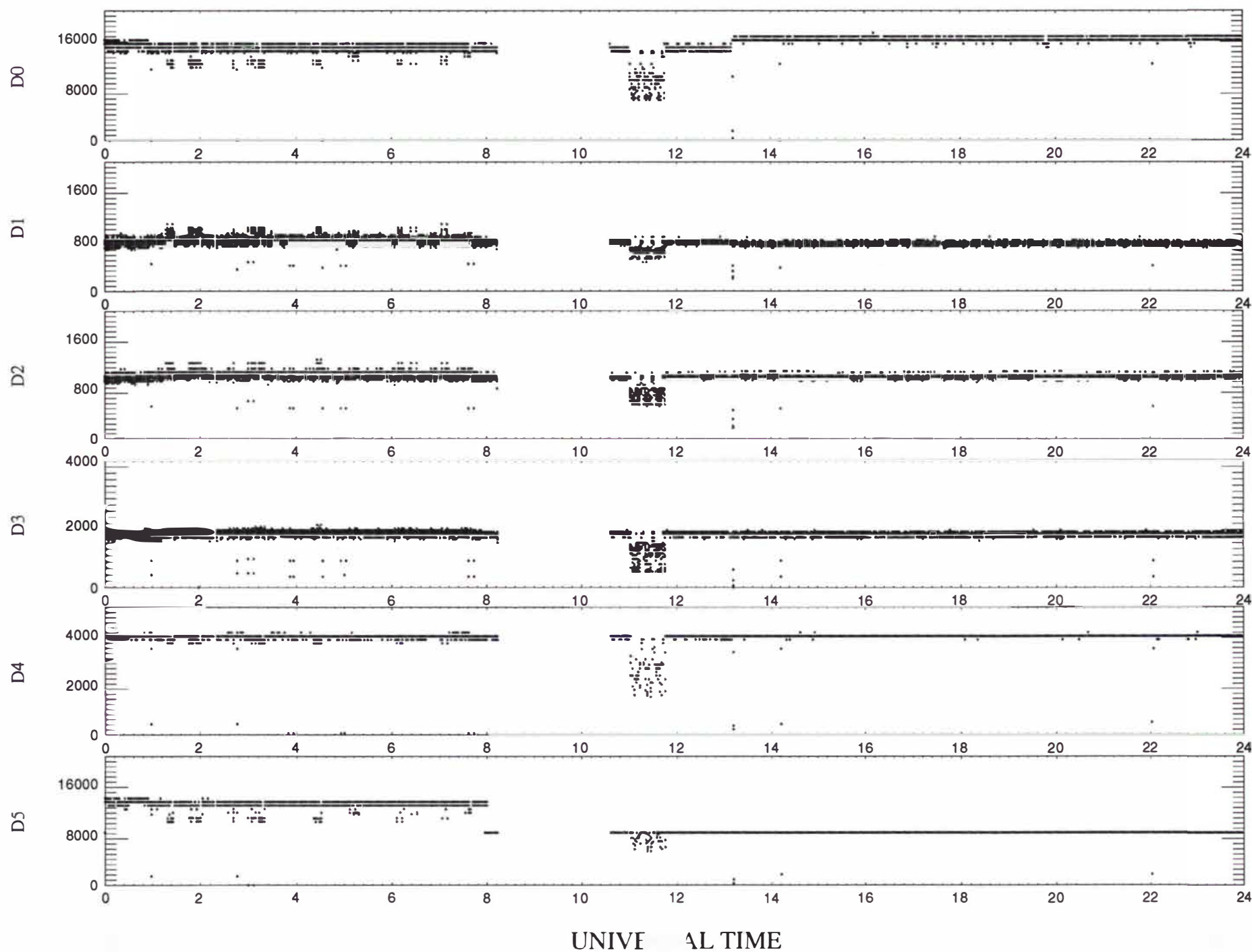
NO BURST (1)



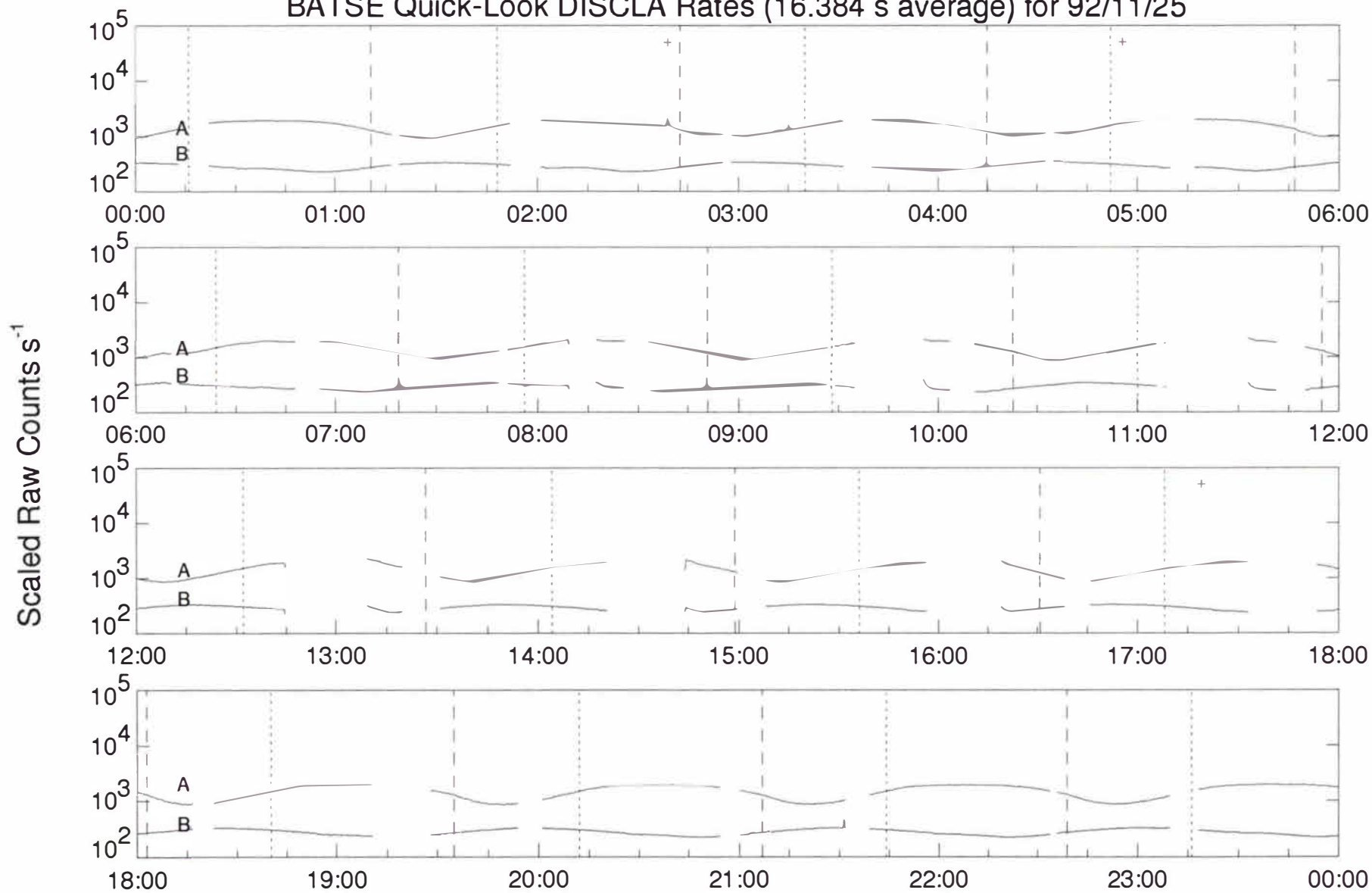
CALIBRATION DATA INCLUDED



UNIV. TIME



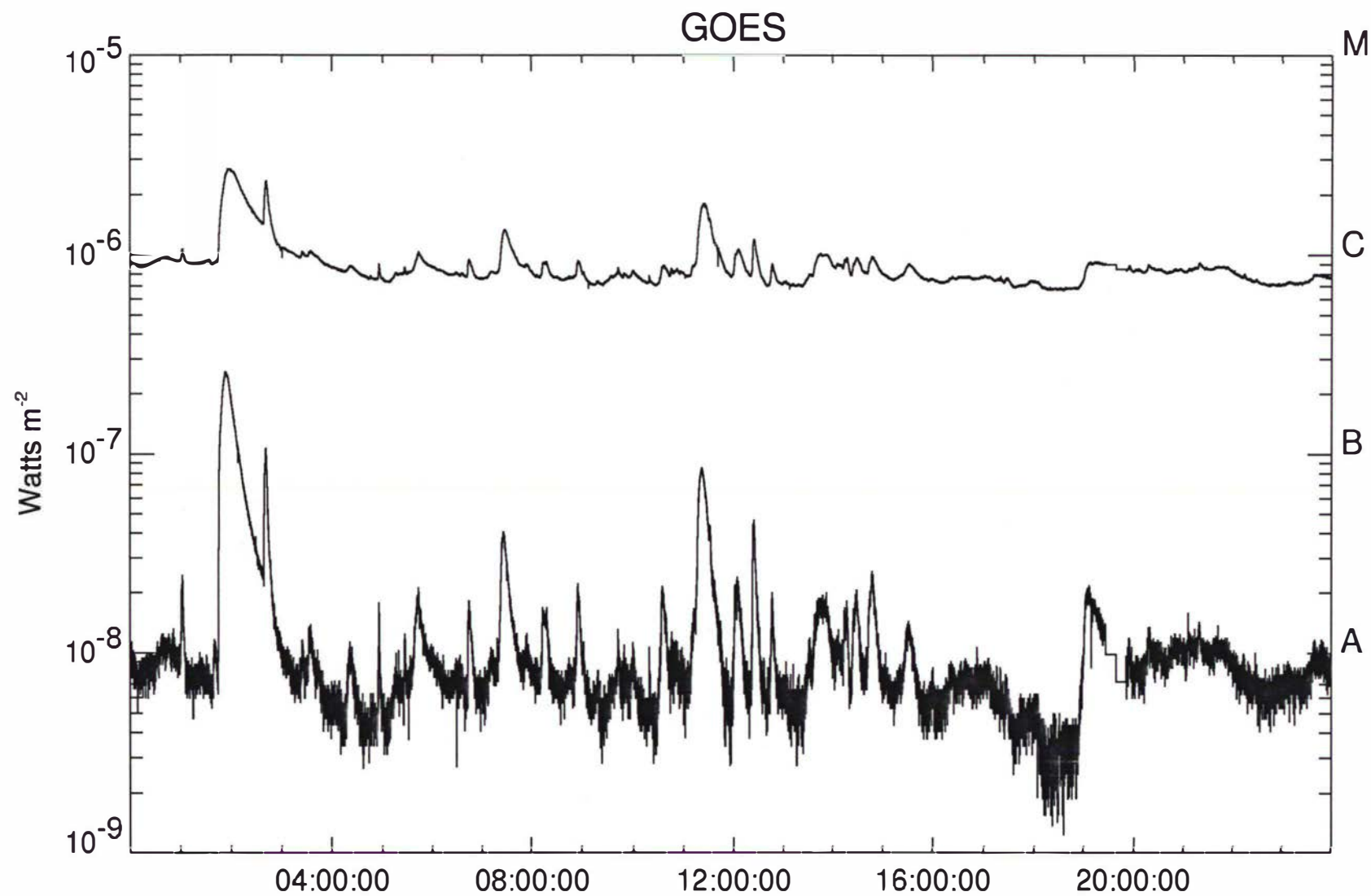
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/25



Current Time: 92/11/30, 1214 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

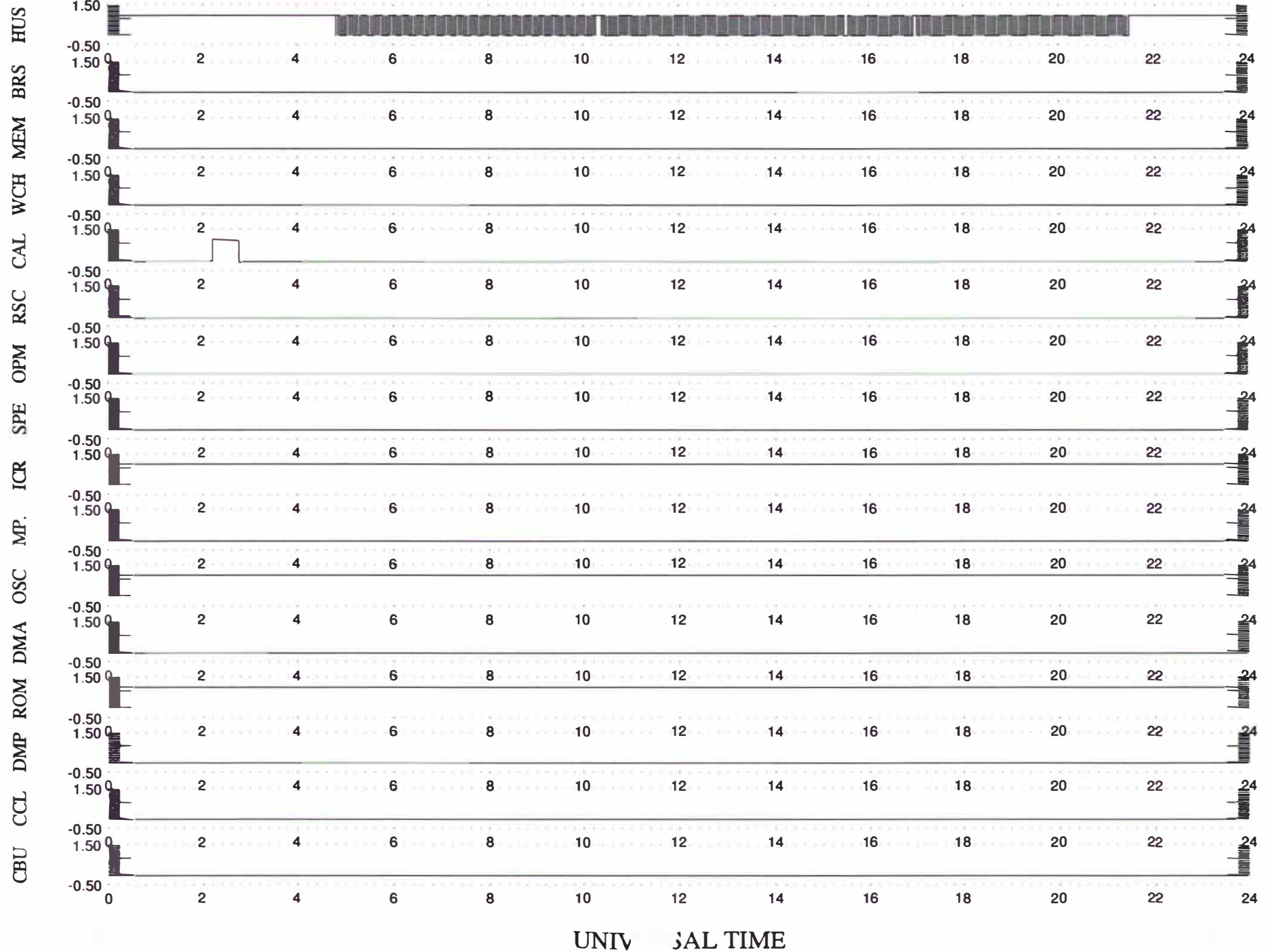


Data Start: 92/11/25, 0000:02

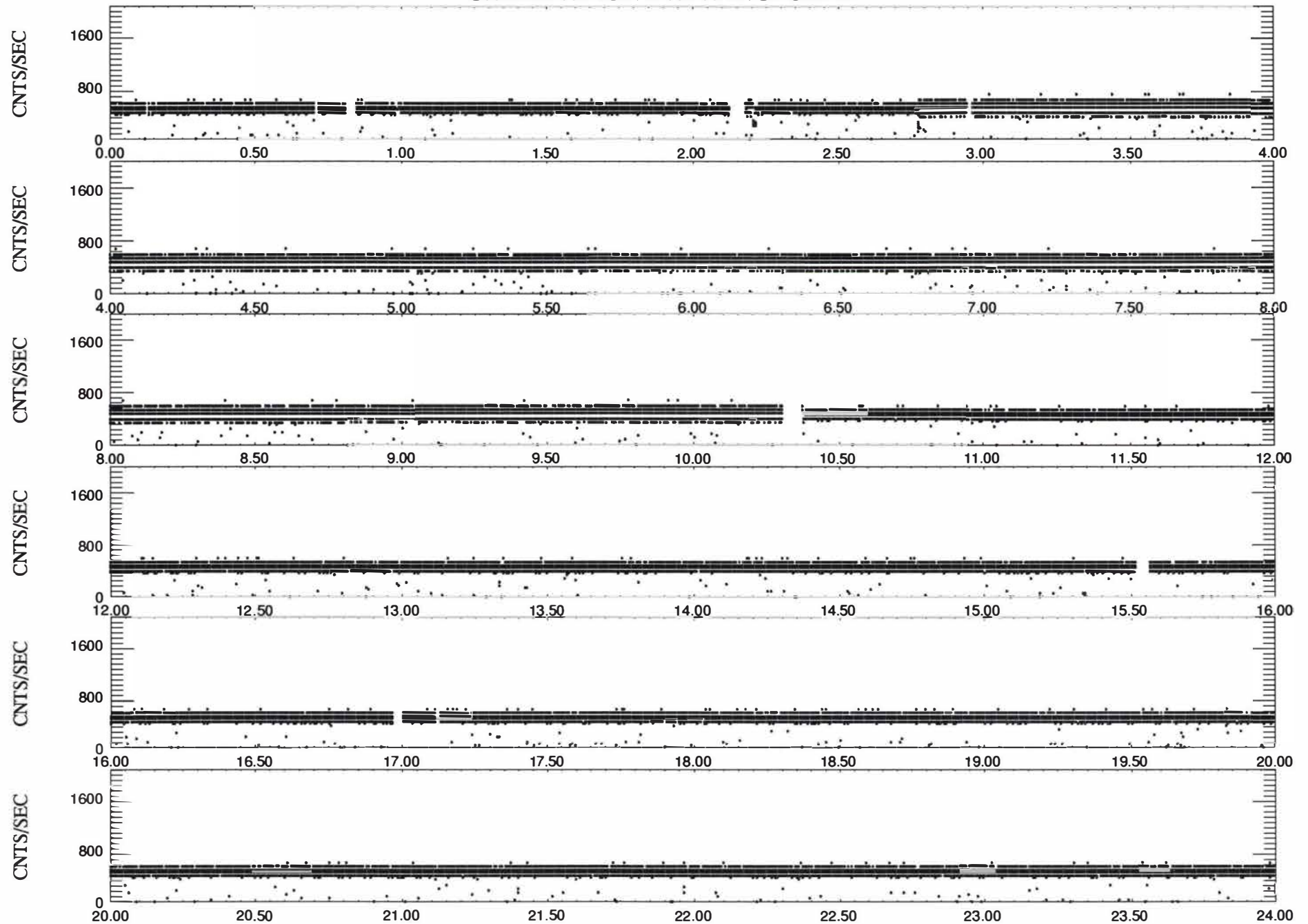
Plot created: 95/05/30, 1639

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

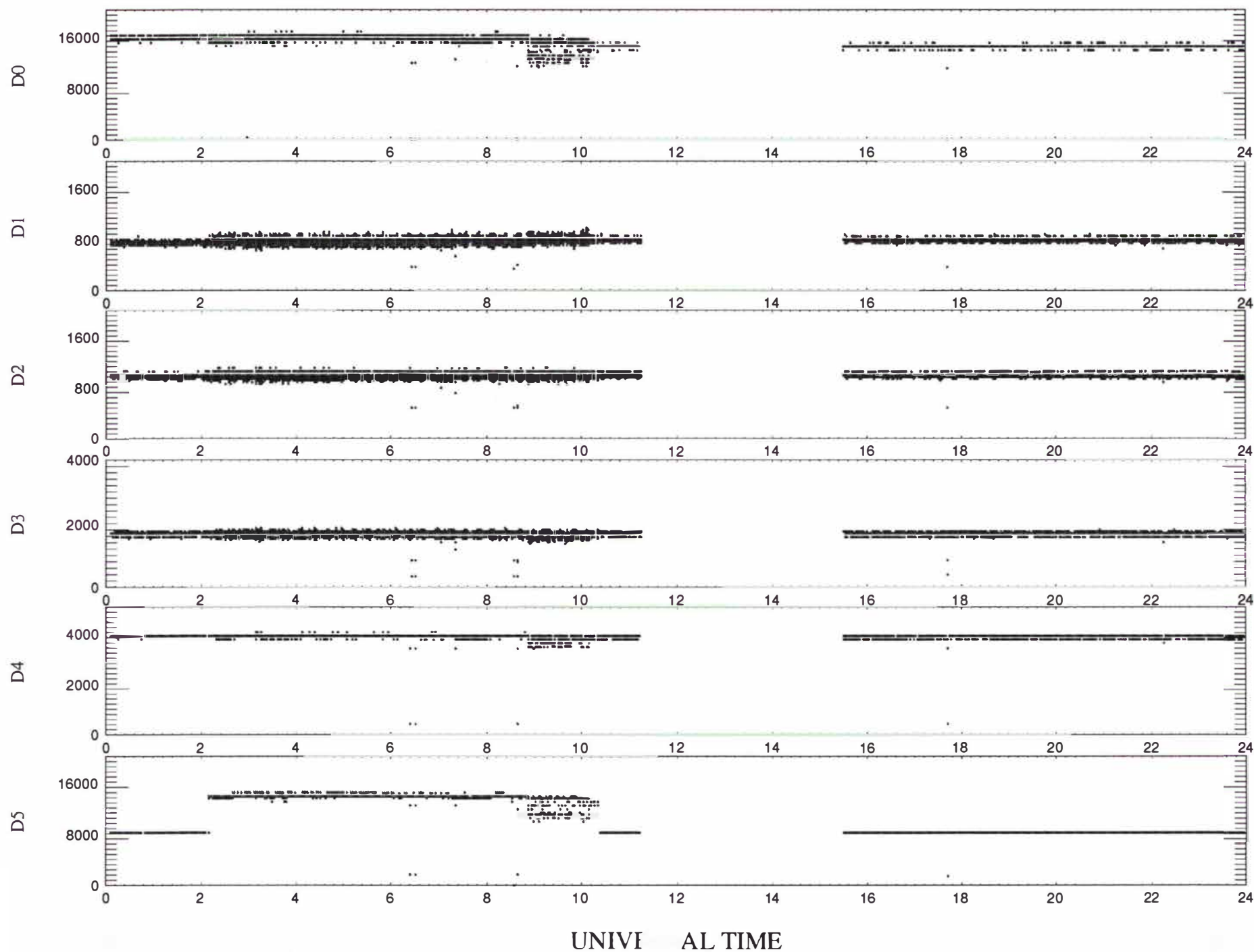
2 (0.5 - 4.0 Angstroms) Background not subtracted



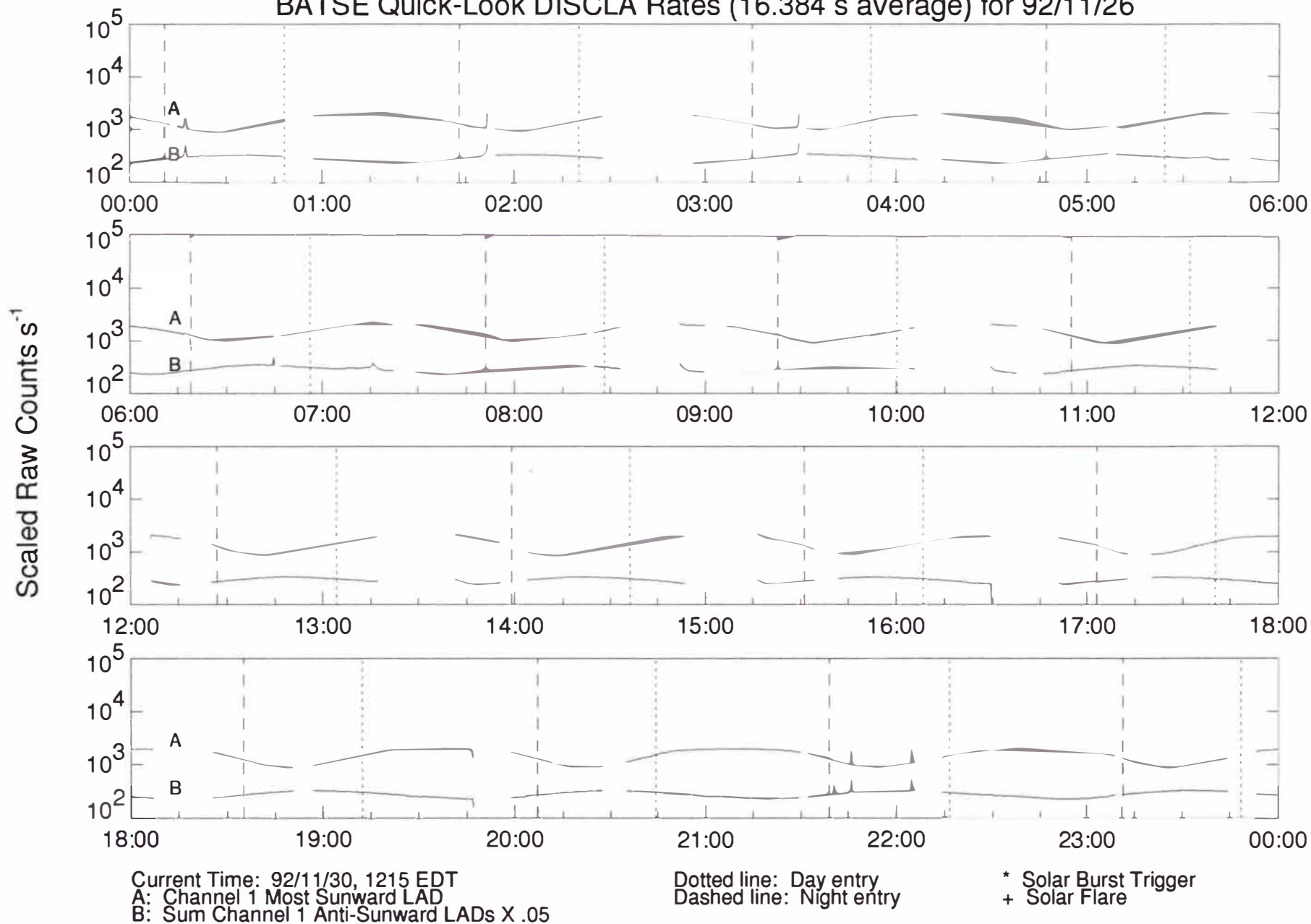
CALIBRATION DATA INCLUDED

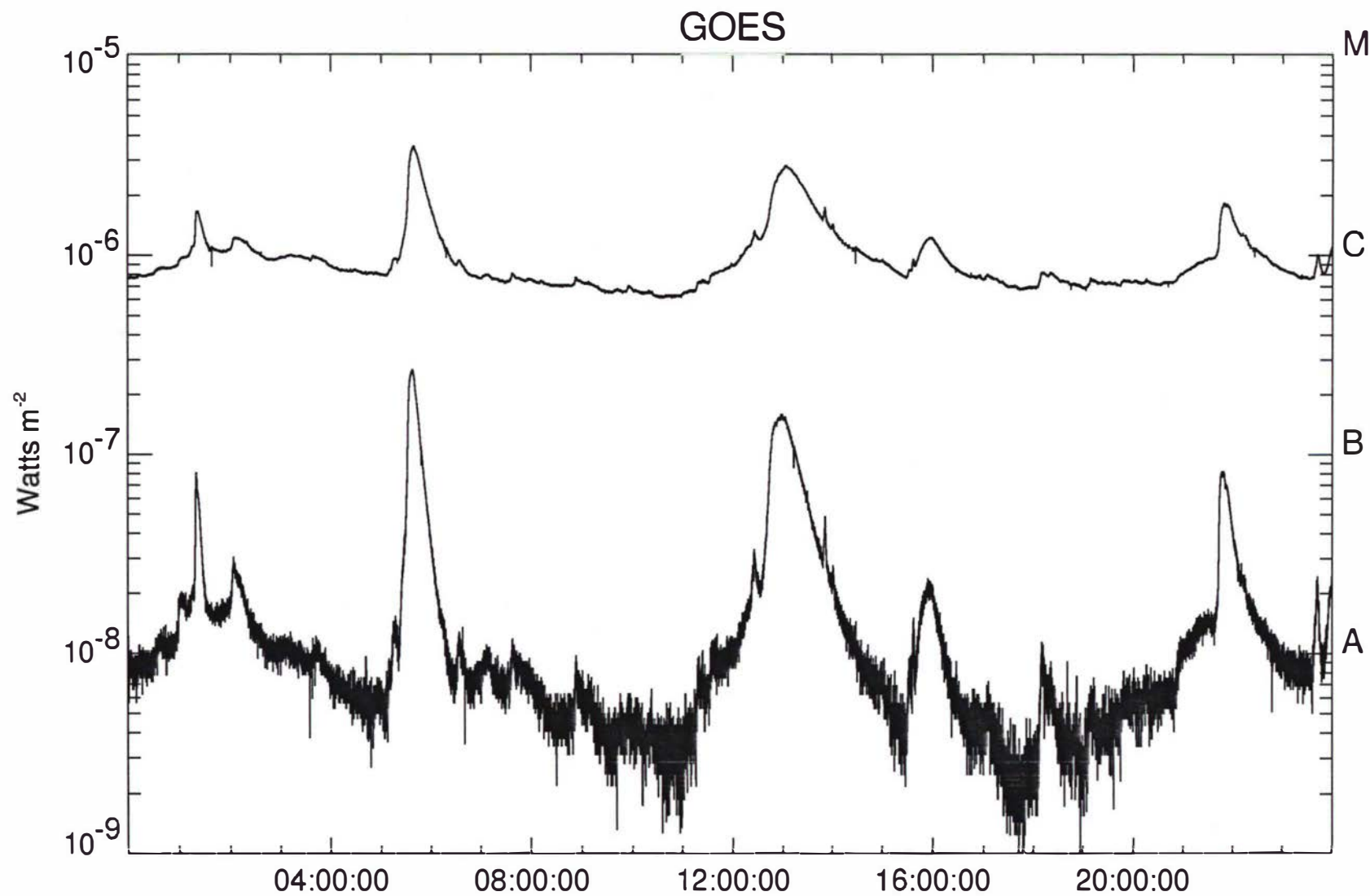


UNIV CAL TIME



BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/26





Data Start: 92/11/26, 0000:00

Plot created: 95/05/30, 1643

Channel

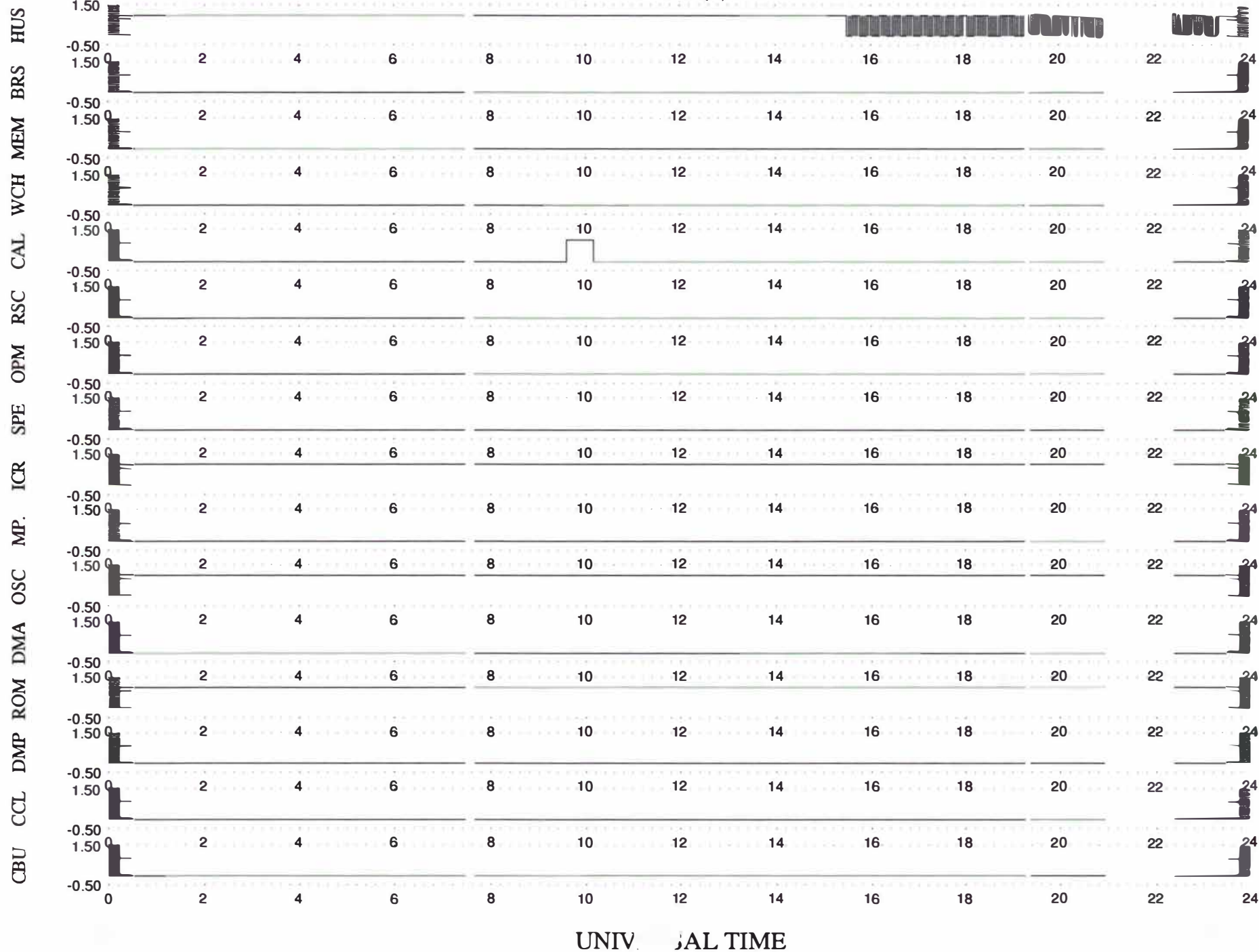
1 (1.0 - 8.0 Angstroms)

Background not subtracted

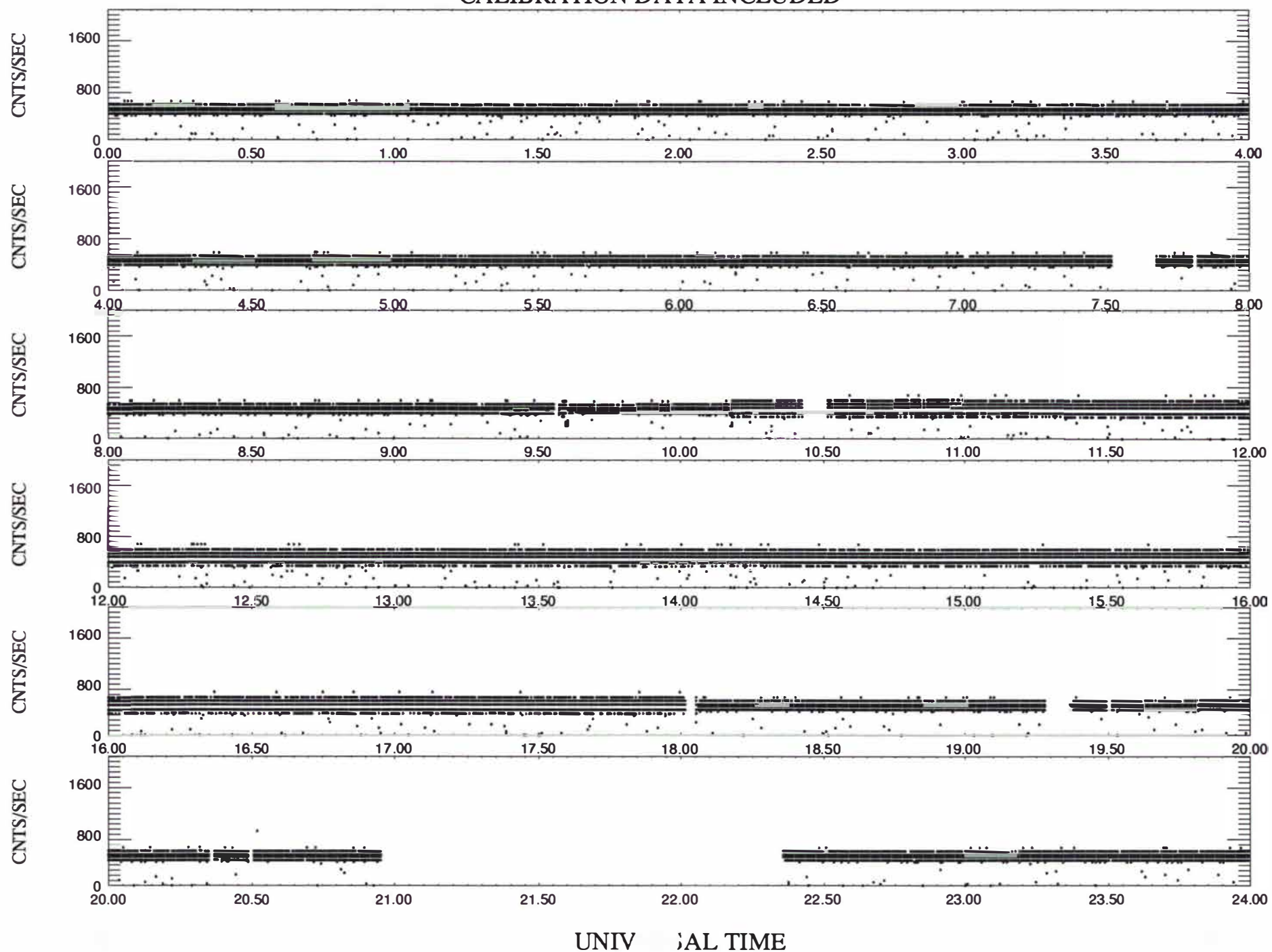
2 (0.5 - 4.0 Angstroms)

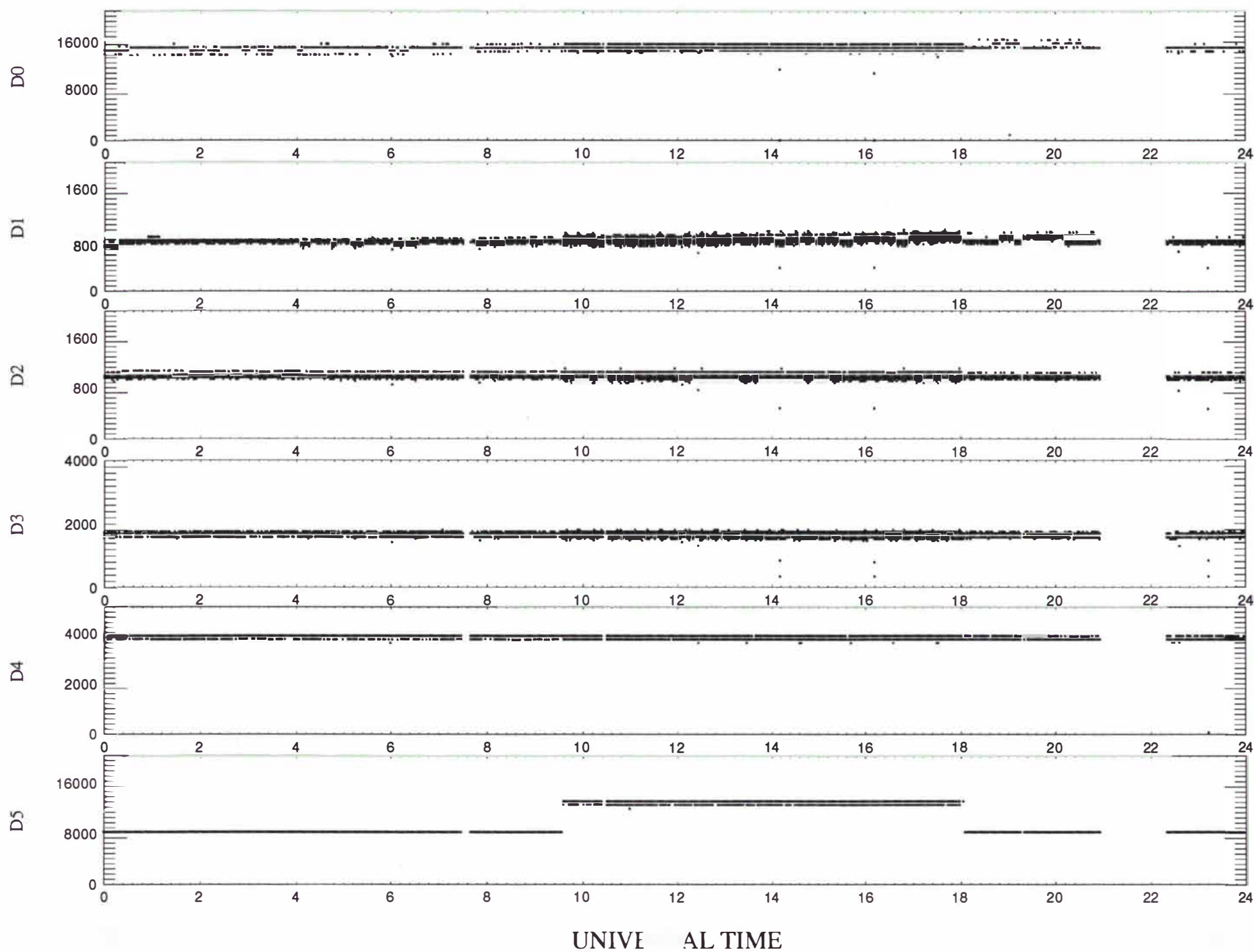
Background not subtracted

NO BURST (1)



CALIBRATION DATA INCLUDED





CATSEARCH PROGRAM

BATSE BURST # 2069
EVENT OF 1992 NOV 27 DAY OF YEAR=332
EVENT CROSSING TIME AT BATSE : 487. S. OR 00:08:07.0
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 117.100 -64.100
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 27/11/ 92 IS:
RA= 166.596 DEC= -8.629 DIST= 5.323 AU
BATSE-ULYSSES DISTANCE = 796328280. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=114.55 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1103.56 SECS.
CROSSING TIME AT ULYSSES IS 85784. S. OR 23:49:43.5 +/- 452.73 SECONDS

NO

From KOSHUT@ssl.msfc.nasa.gov Mon Nov 30 12:09:10 1992
Date: Mon, 30 Nov 1992 9:13:51 -0600 (CST)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 02069

Nov 27

TIME: TJD=8953 SECONDS=00487

TYPE: BURST

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=143. AZIMUTH=295. ERROR= DEGREES

COMMENTS:

WEAK BURST (~ 2300 CPS ABOVE BACKGROUND) OF ~ 50 SECONDS DURATION.
NO EMISSION OBSERVED ABOVE 300 KEV.

9 / 6 / 94

ULYSSES RT

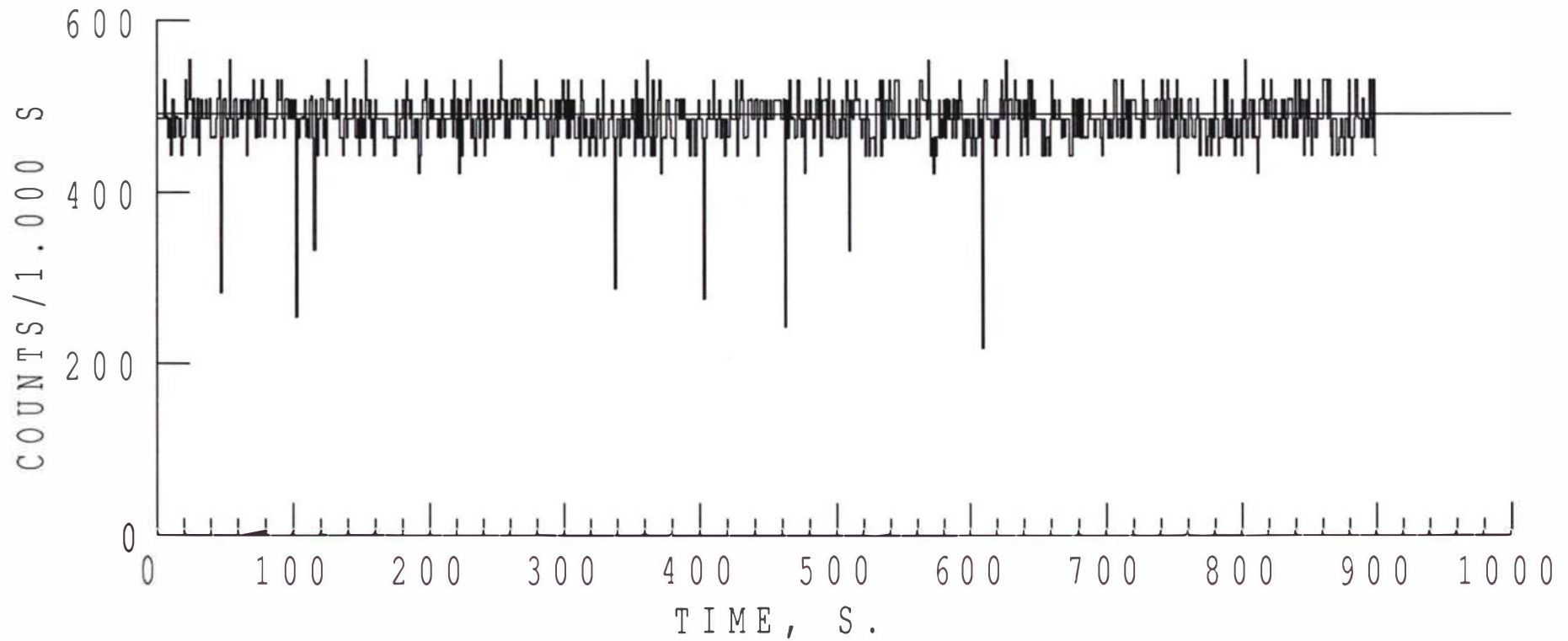
27/11/92 85320.047 s

0.500 S INTERVALS REGROUPED BY 2

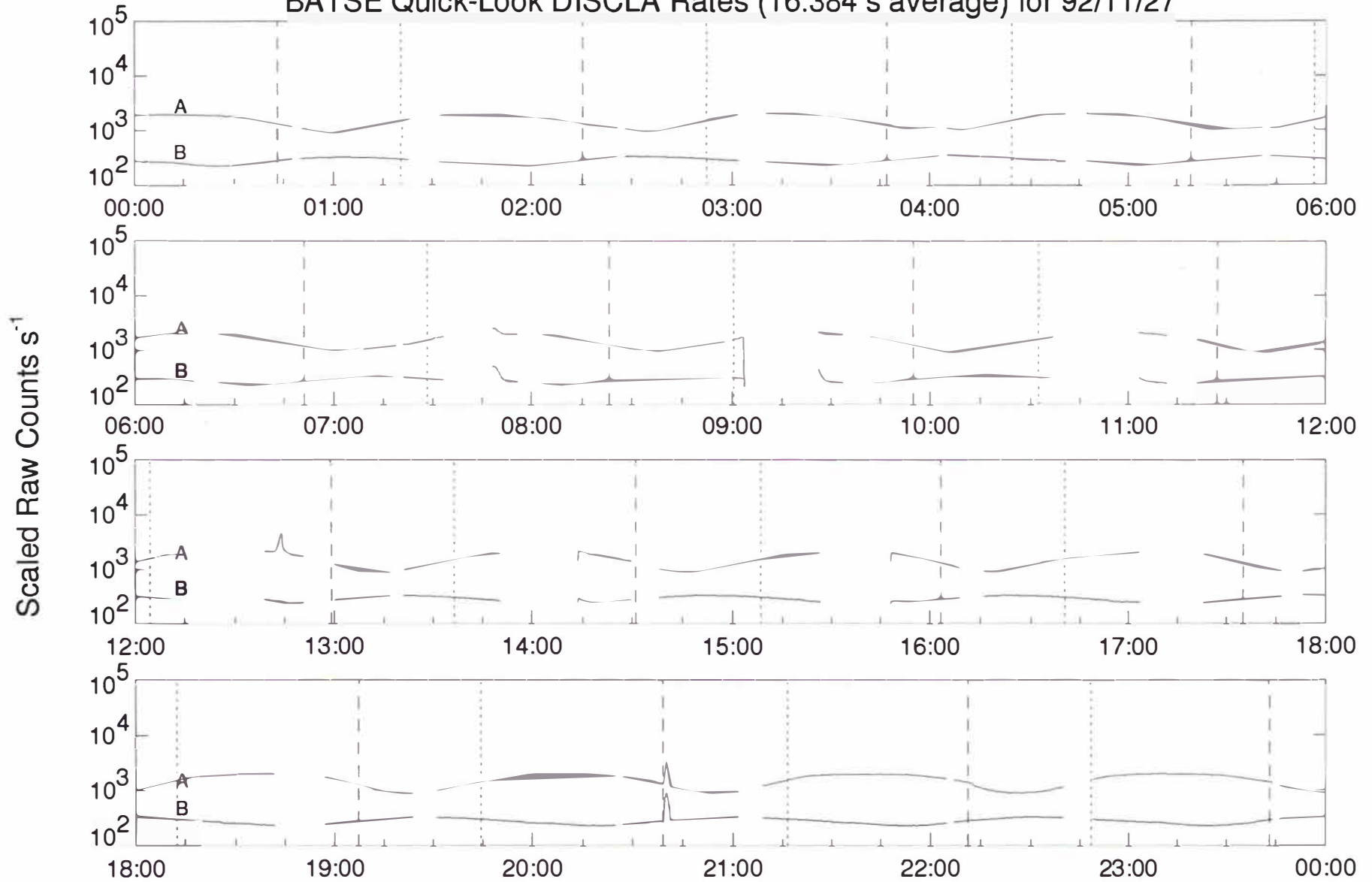
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



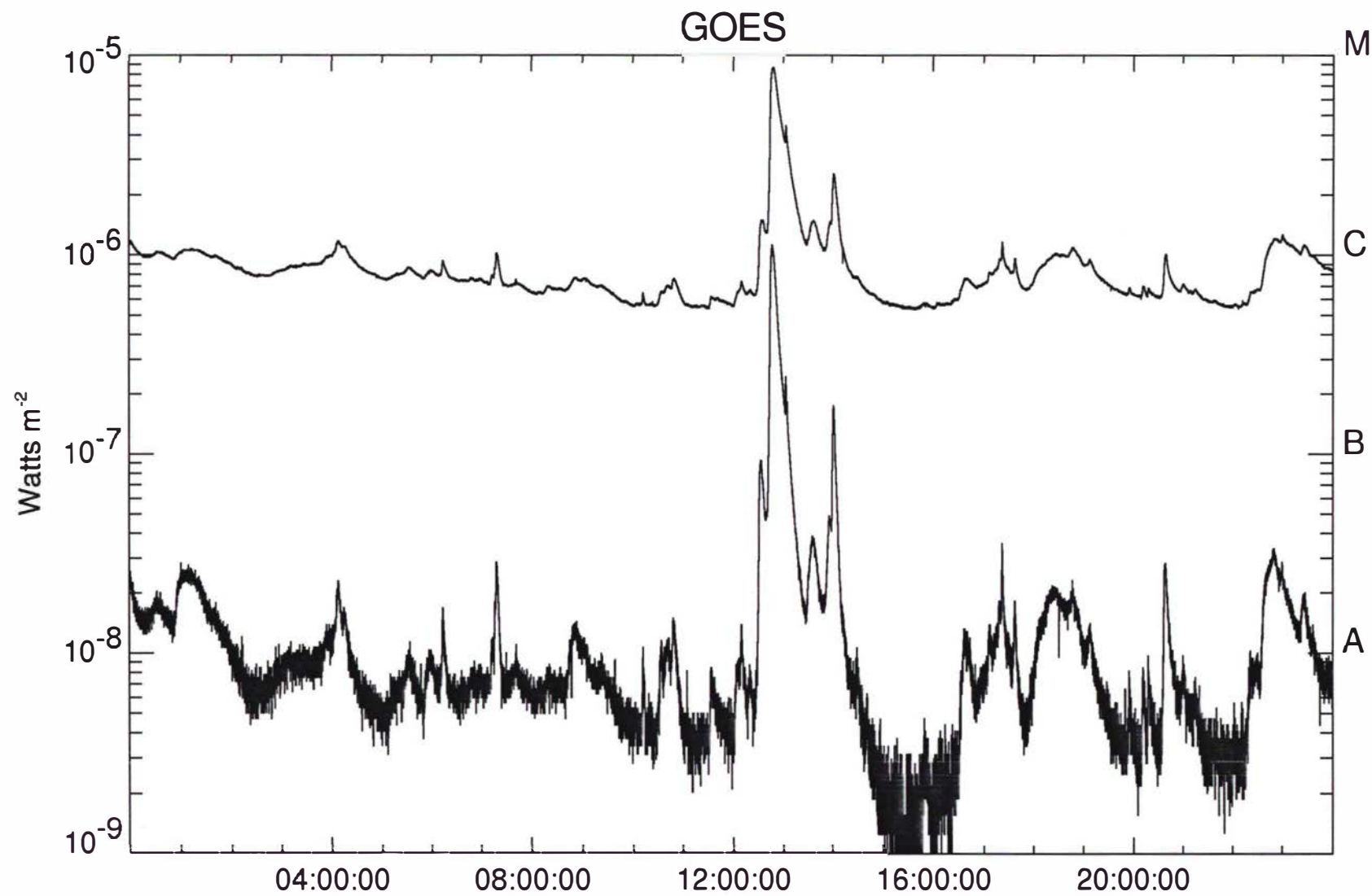
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/27



Current Time: 92/11/30, 1216 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



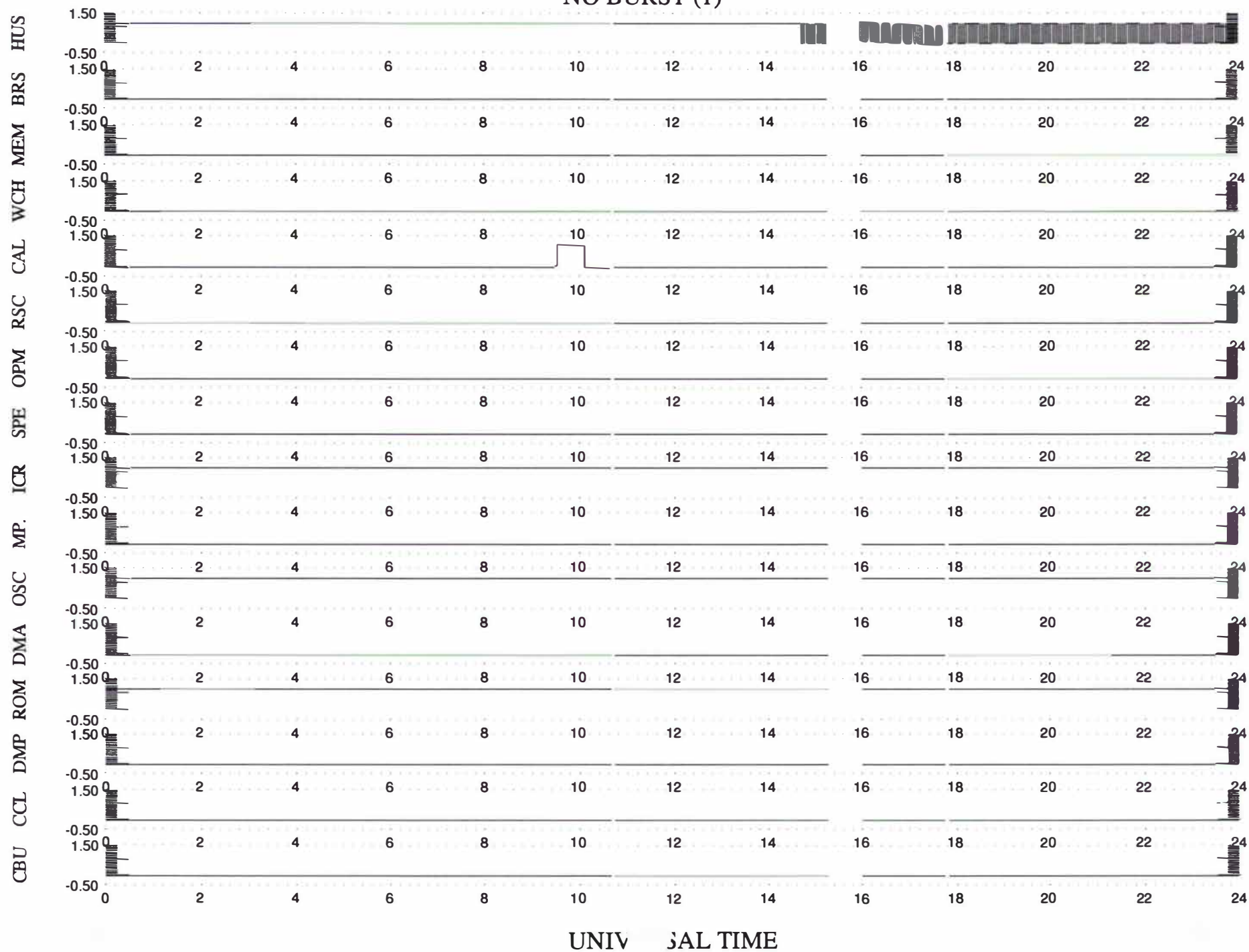
Data Start: 92/11/27, 0000:01

Plot created: 95/05/30, 1647

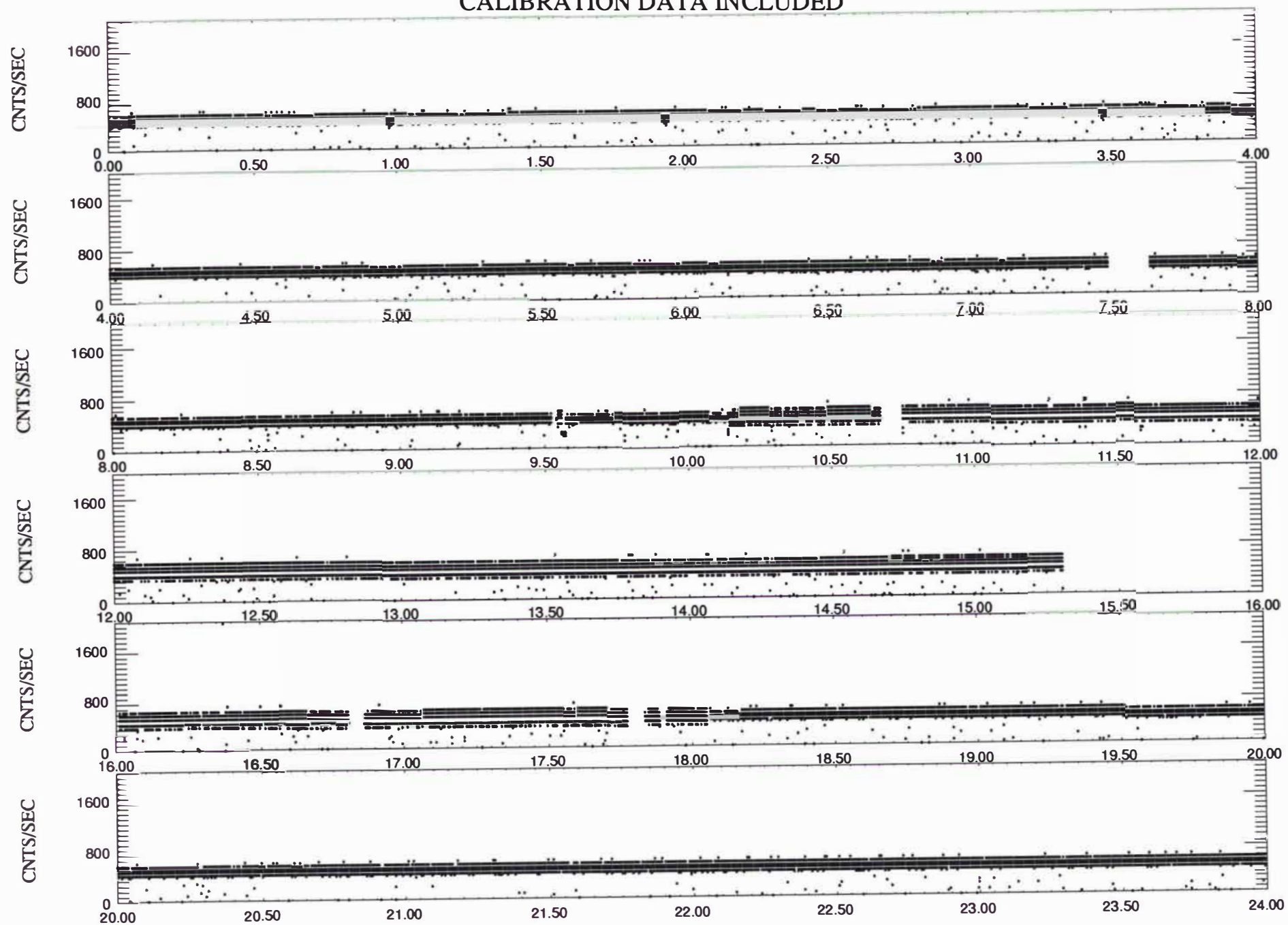
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

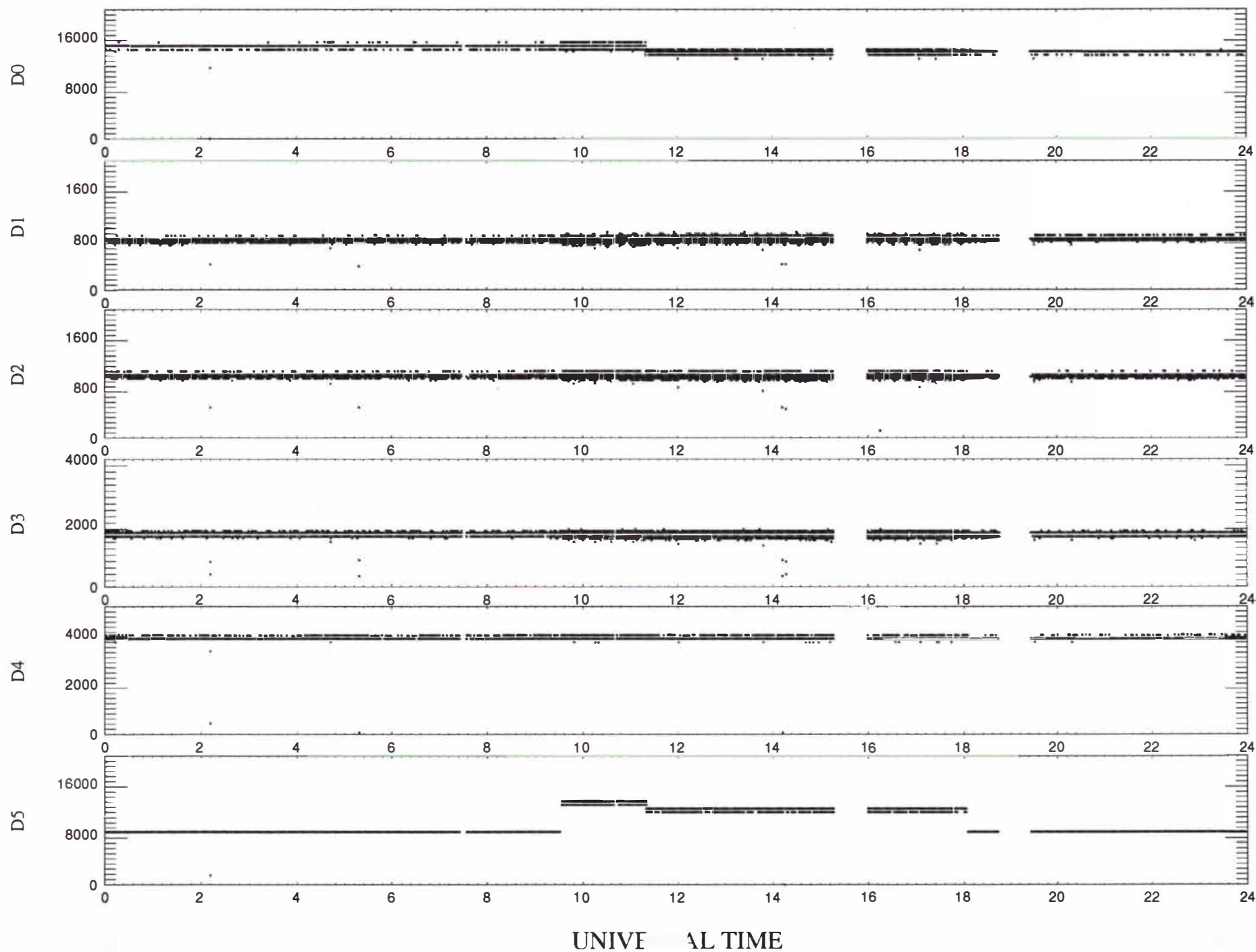
NO BURST (1)



CALIBRATION DATA INCLUDED



UNIV TIME



CATSEARCH PROGRAM

BATSE BURST # 2070
EVENT OF 1992 NOV 28 DAY OF YEAR=333
EVENT CROSSING TIME AT BATSE : 37492. S. OR 10:24:52.1
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 284.900 -39.200
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 28/11/ 92 IS:
RA= 166.621 DEC= -8.741 DIST= 5.305 AU
BATSE-ULYSSES DISTANCE = 793633984. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 74.52 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 706.38 SECS.
CROSSING TIME AT ULYSSES IS 38198. S. OR 10:36:38.4 +/- 503.67 SECONDS

From MALLOZZI@ssl.msfc.nasa.gov Sun Nov 29 13:27:10 1992
Date: Sun, 29 Nov 1992 15:29:32 -0600 (CST)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 02070

TIME: TJD=8954 SECONDS=37492

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=091.5 AZIMUTH=018.4 ERROR= DEGREES

COMMENTS:

SINGLE PEAK BURST WITH A SHARP RISE AND SLOWER DECAY
DURATION APPROXIMATELY 30 SECONDS.
PEAK NARROWS AS ENERGY INCREASES; NOT OBSERVED ABOVE ~300 KEV.

From MALLOZZI@ssl.msfc.nasa.gov Tue Dec 1 07:09:04 1992
Date: Tue, 1 Dec 1992 9:11:44 -0600 (CST)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: BATSE burst
To: khurley@sunspot.ssl.berkeley.edu
X-Vmsmail-To: SMTP%"khurley@sunspot.ssl.berkeley.edu",BATSE::KOUVELIOTOU
Content-Length: 108

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
2070	921128	8954	37492	2200	294	-38

9 / 6 / 94

ULYSSES RT

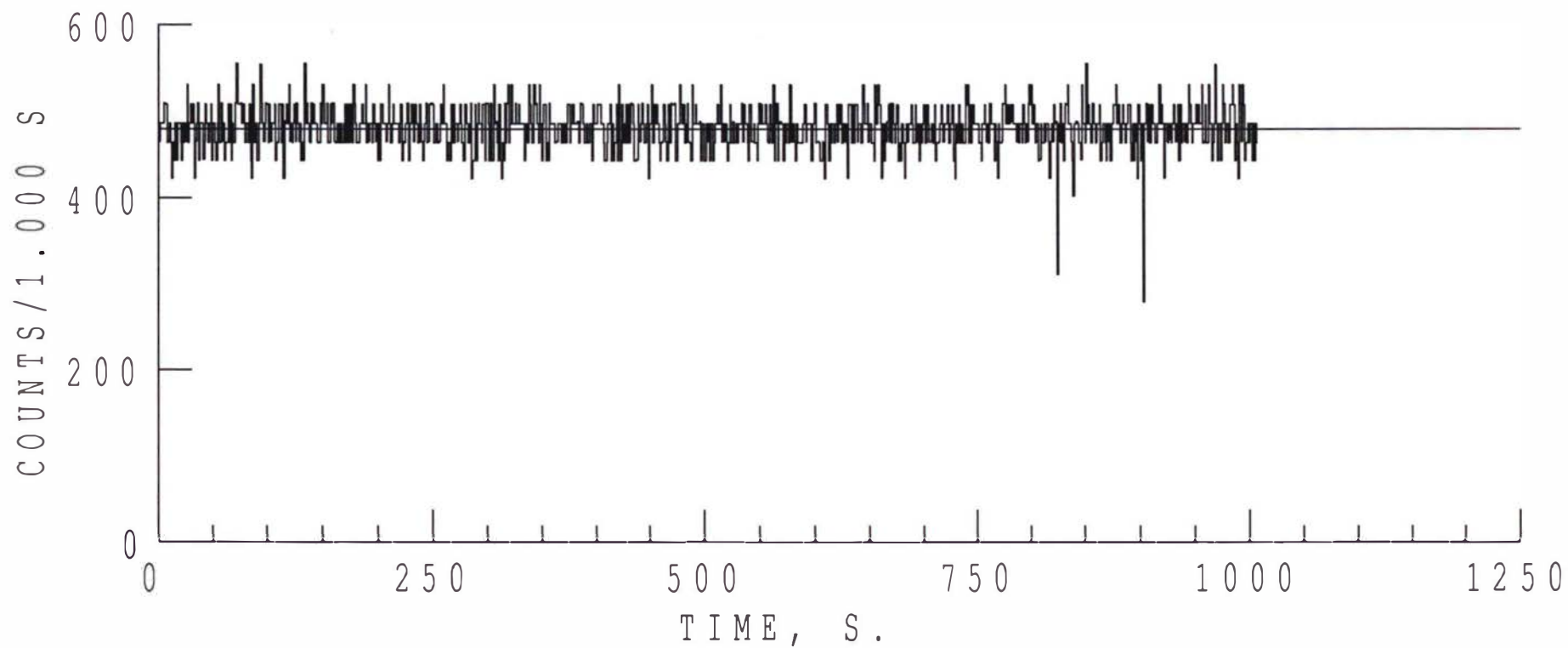
28/11/92 37692.156 s

0.500 S INTERVALS REGROUPED BY 2

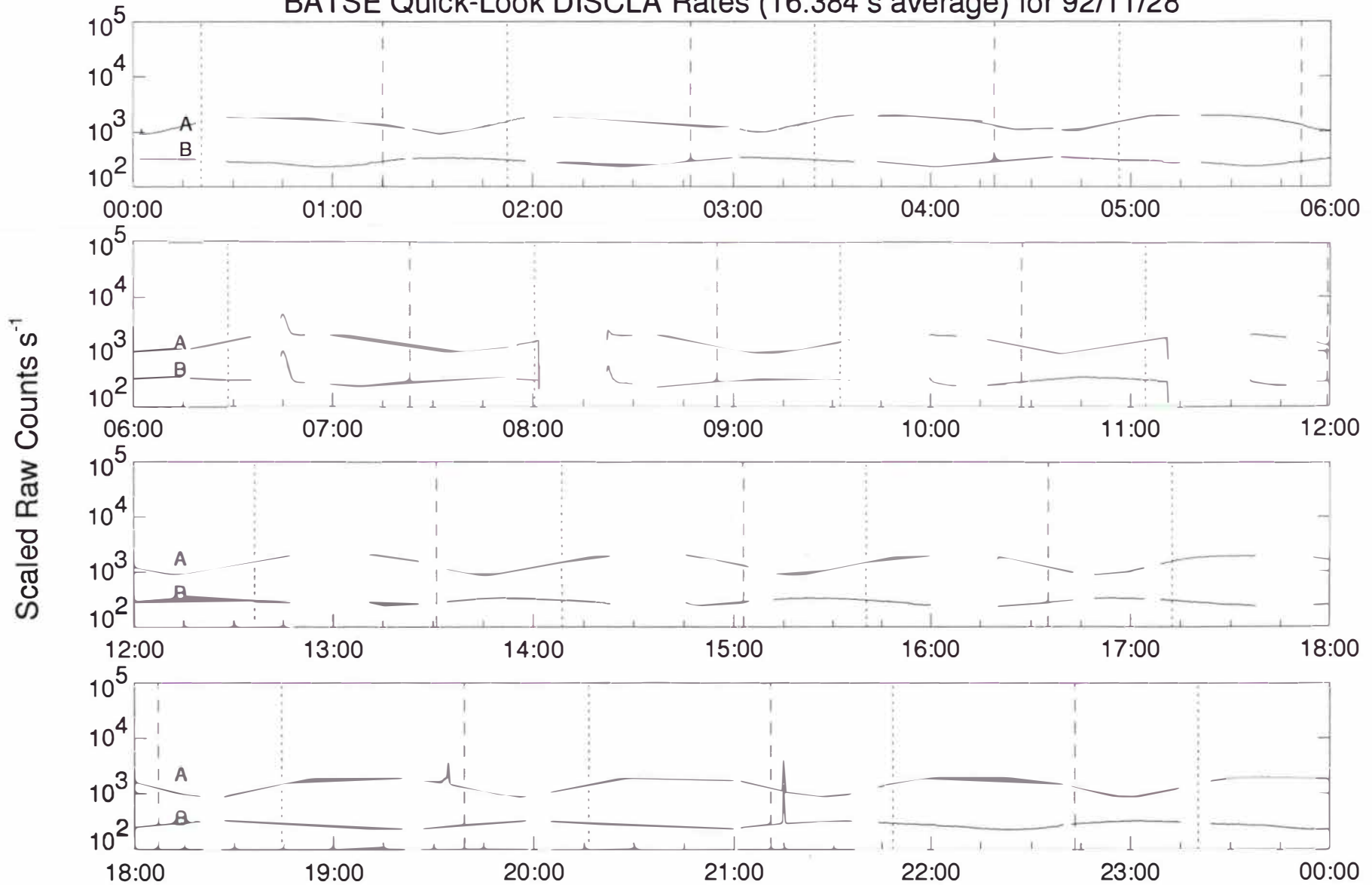
0 - 0 keV

M= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



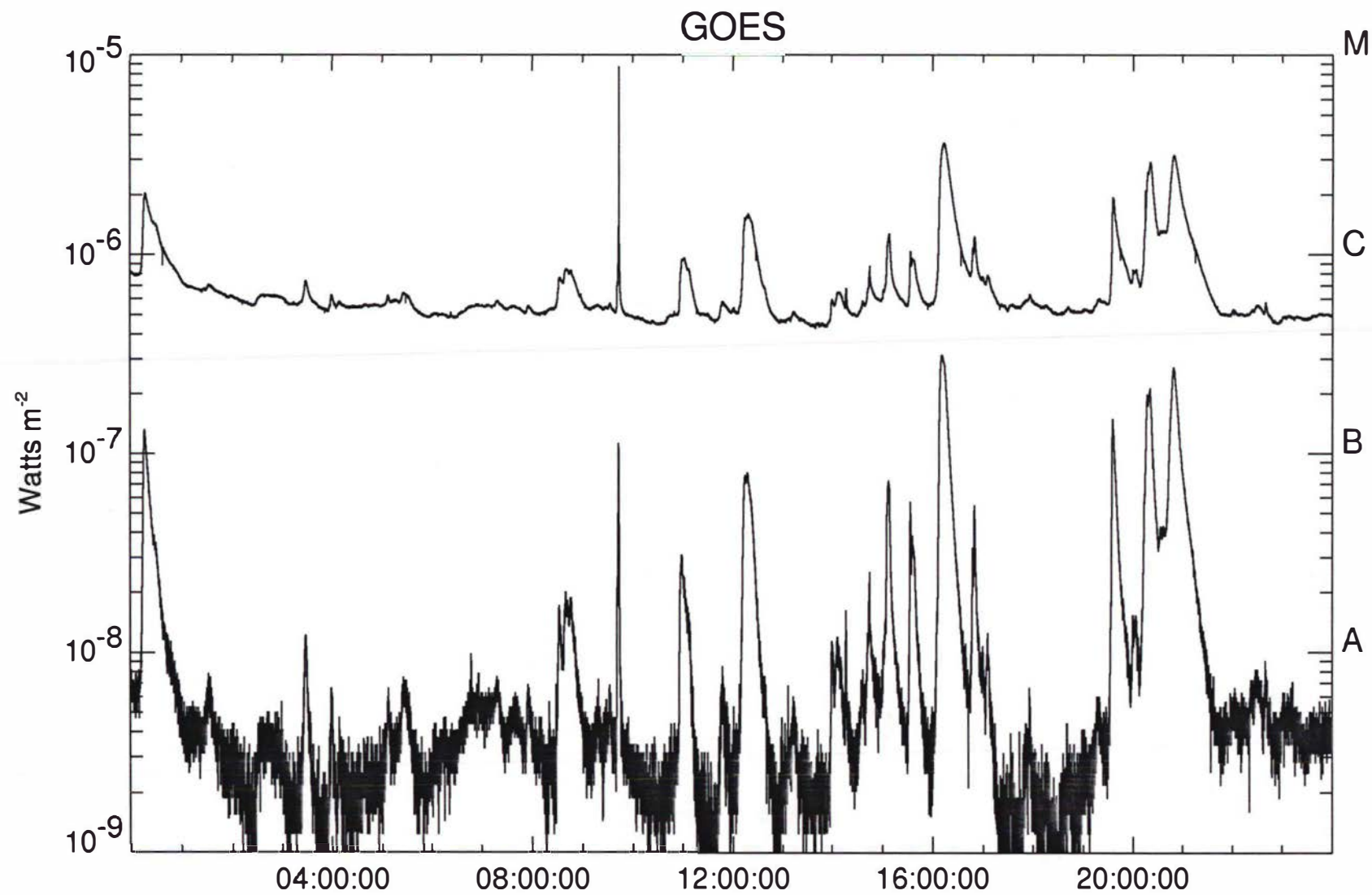
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/28



Current Time: 92/11/30, 1217 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare



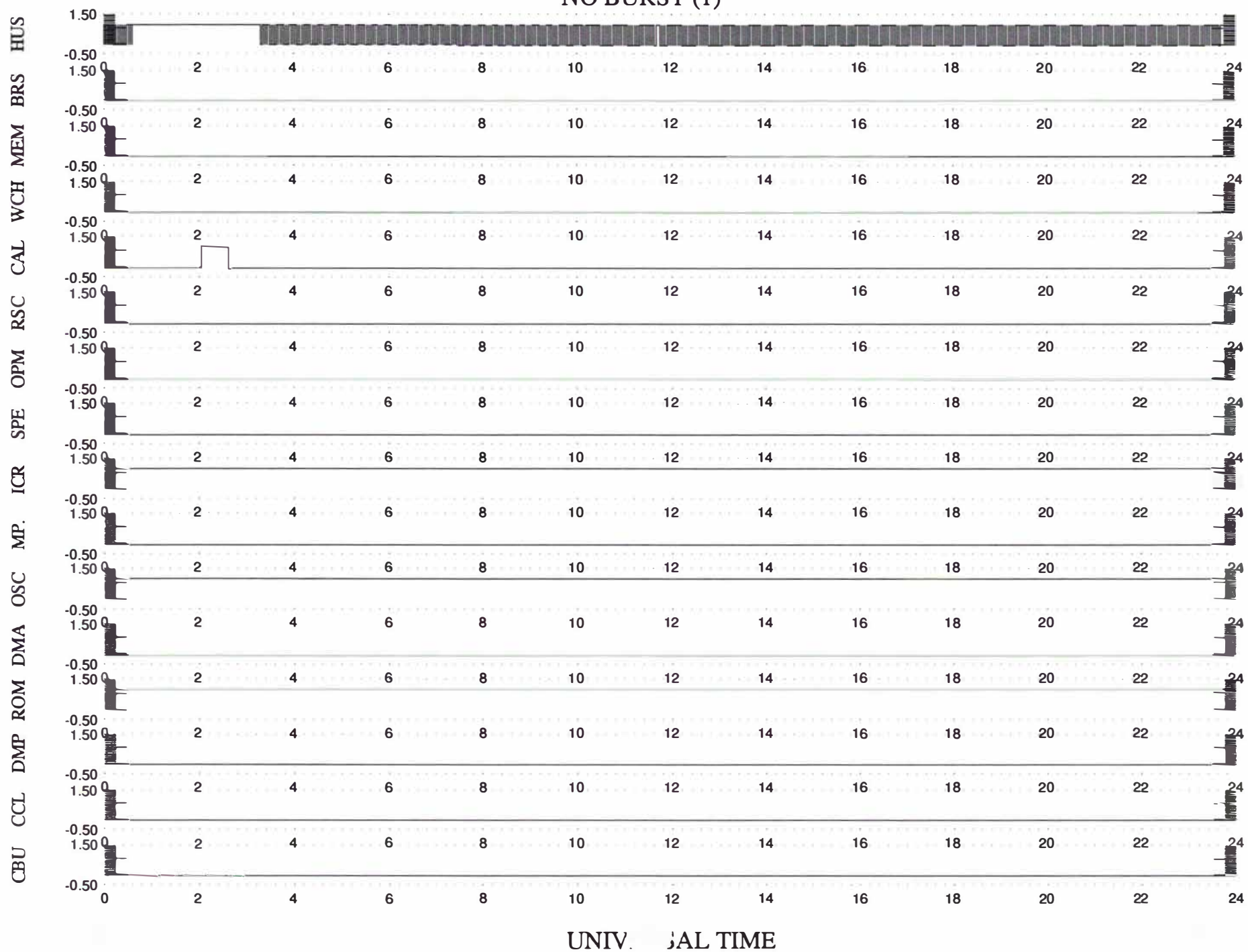
Data Start: 92/11/28, 0000:02

Plot created: 95/05/30, 1652

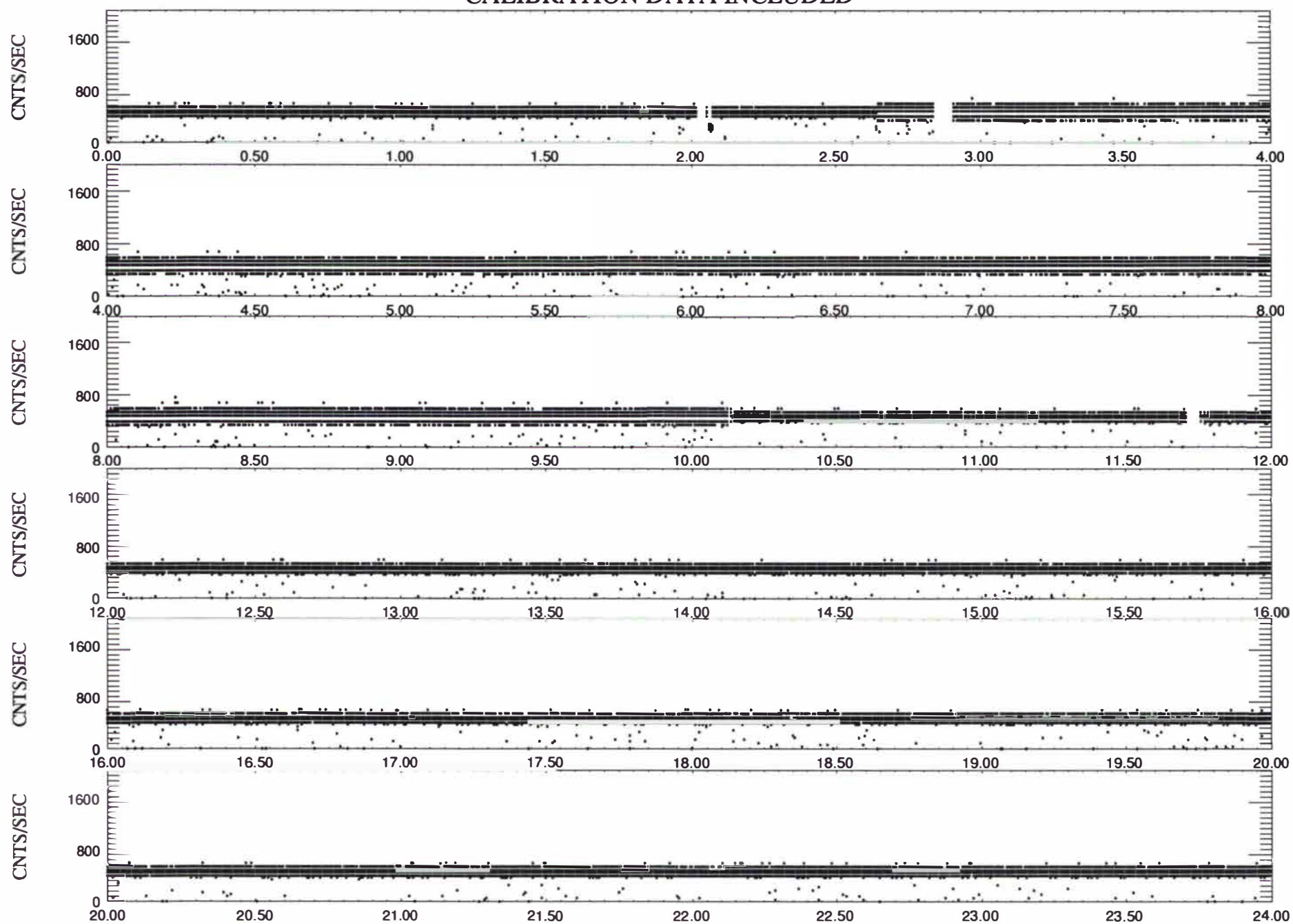
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

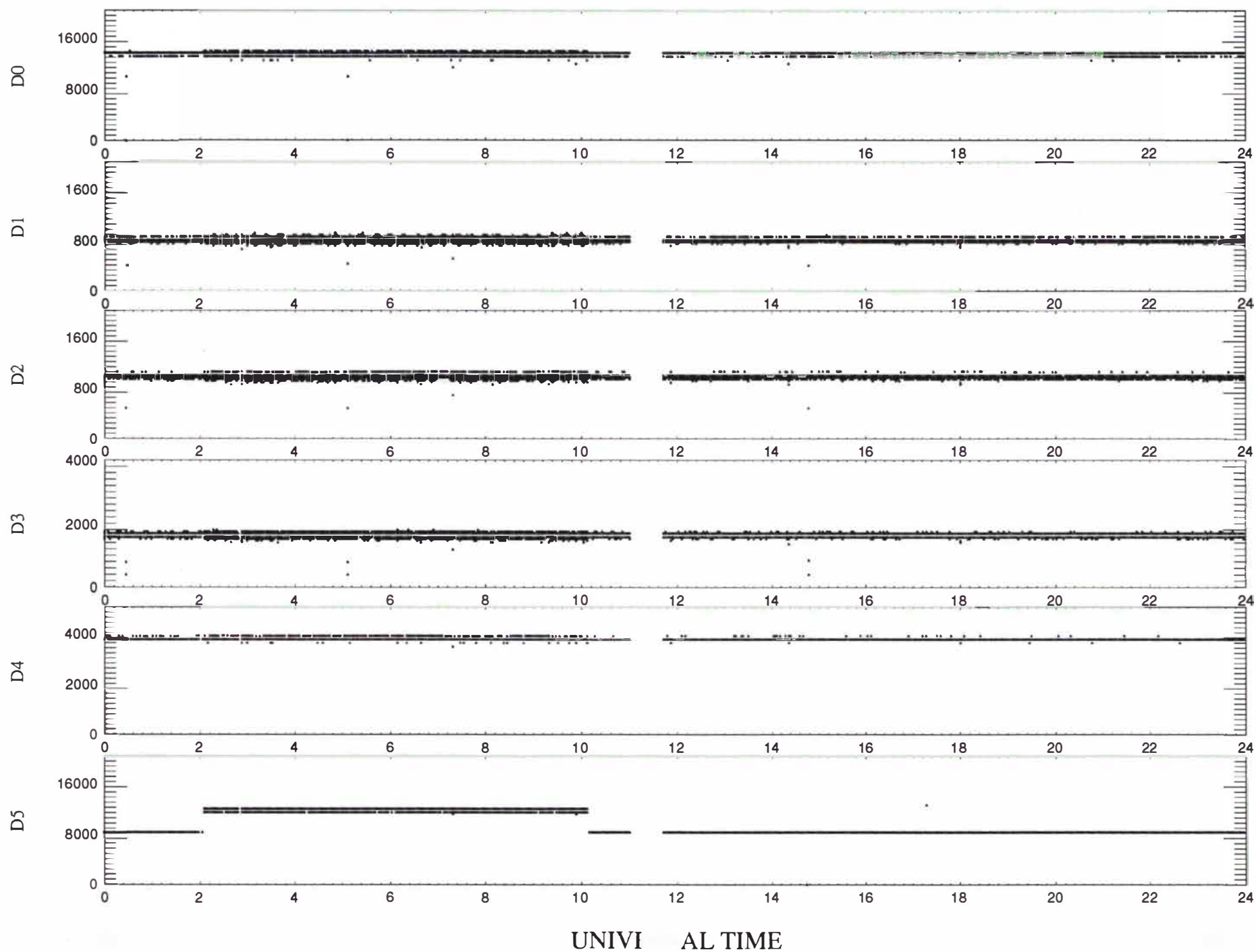
NO BURST (1)



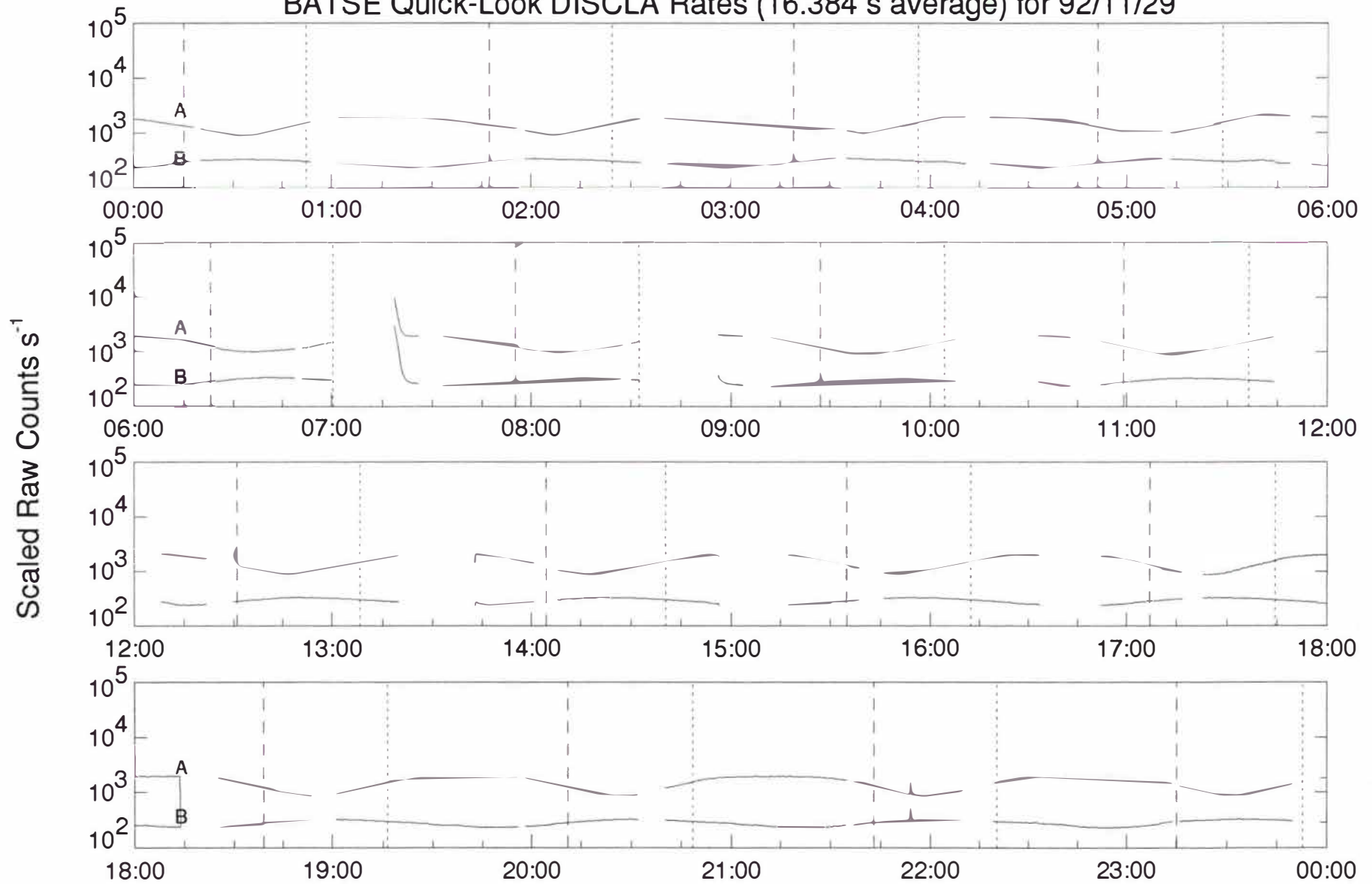
CALIBRATION DATA INCLUDED



UNIV TIME



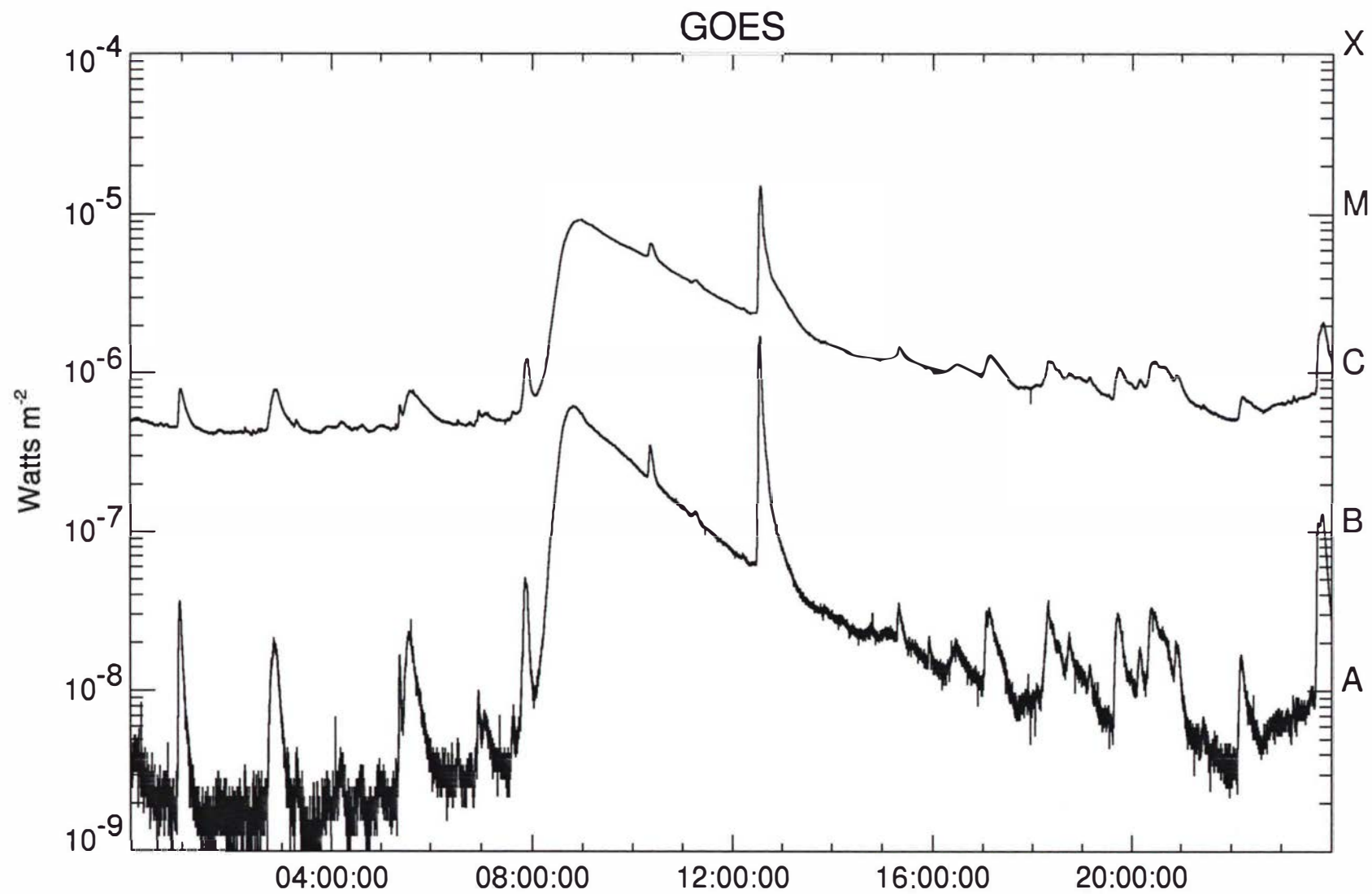
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/29



Current Time: 92/12/01, 1119 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare



Data Start: 92/11/29, 0000:00

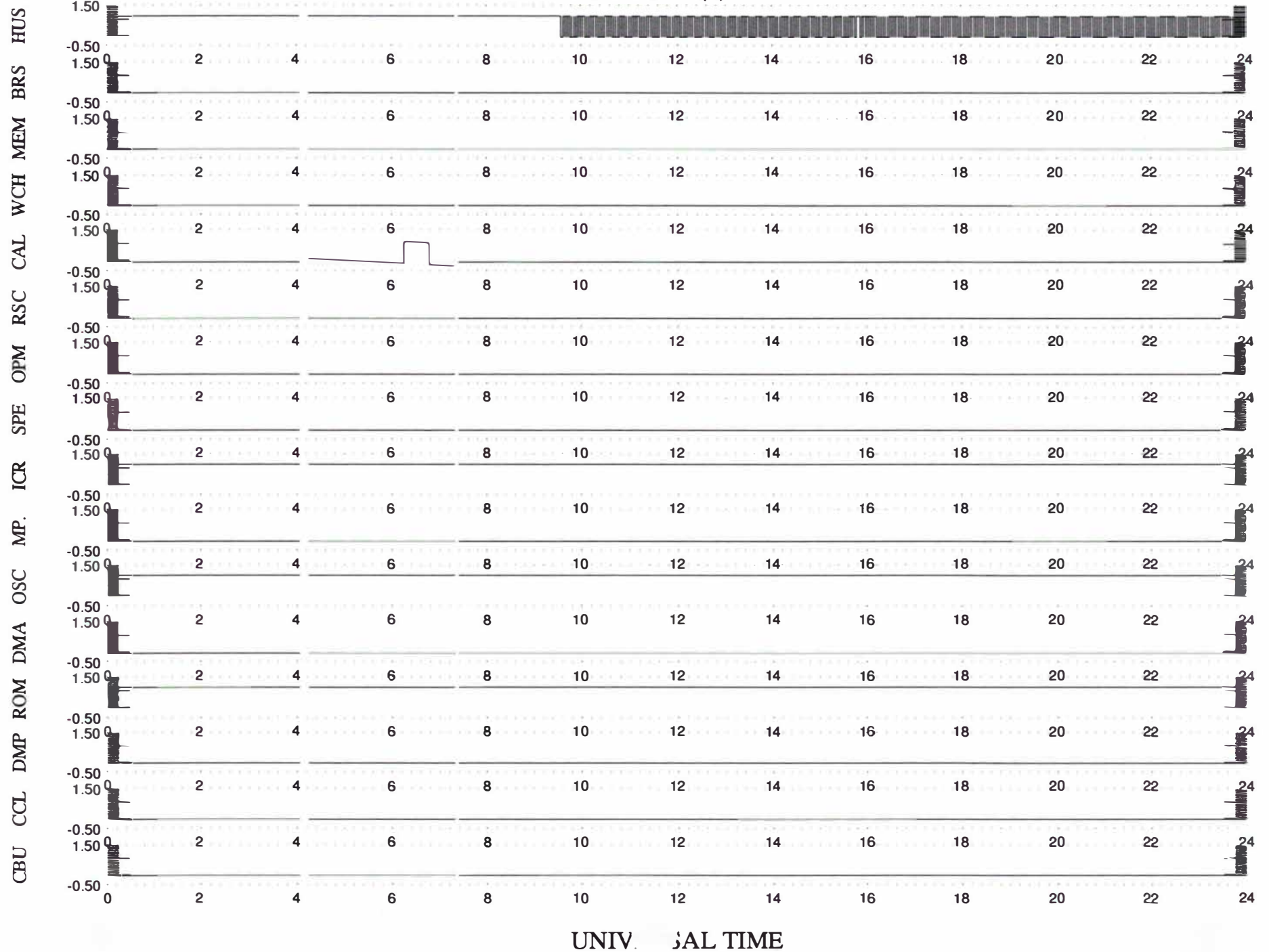
Plot created: 95/05/30, 1657

Channel 1 (1.0 - 8.0 Angstroms)

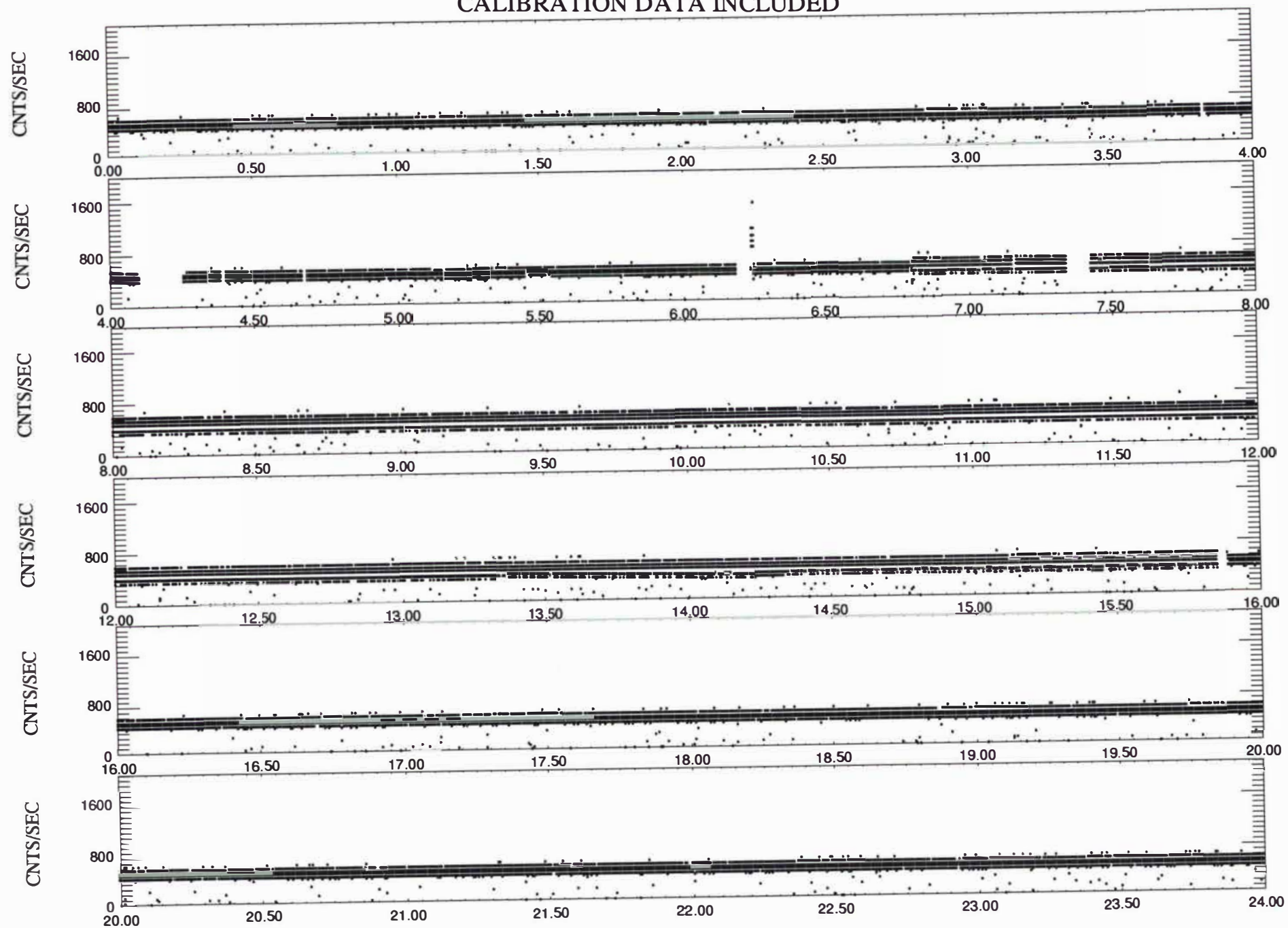
Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms)

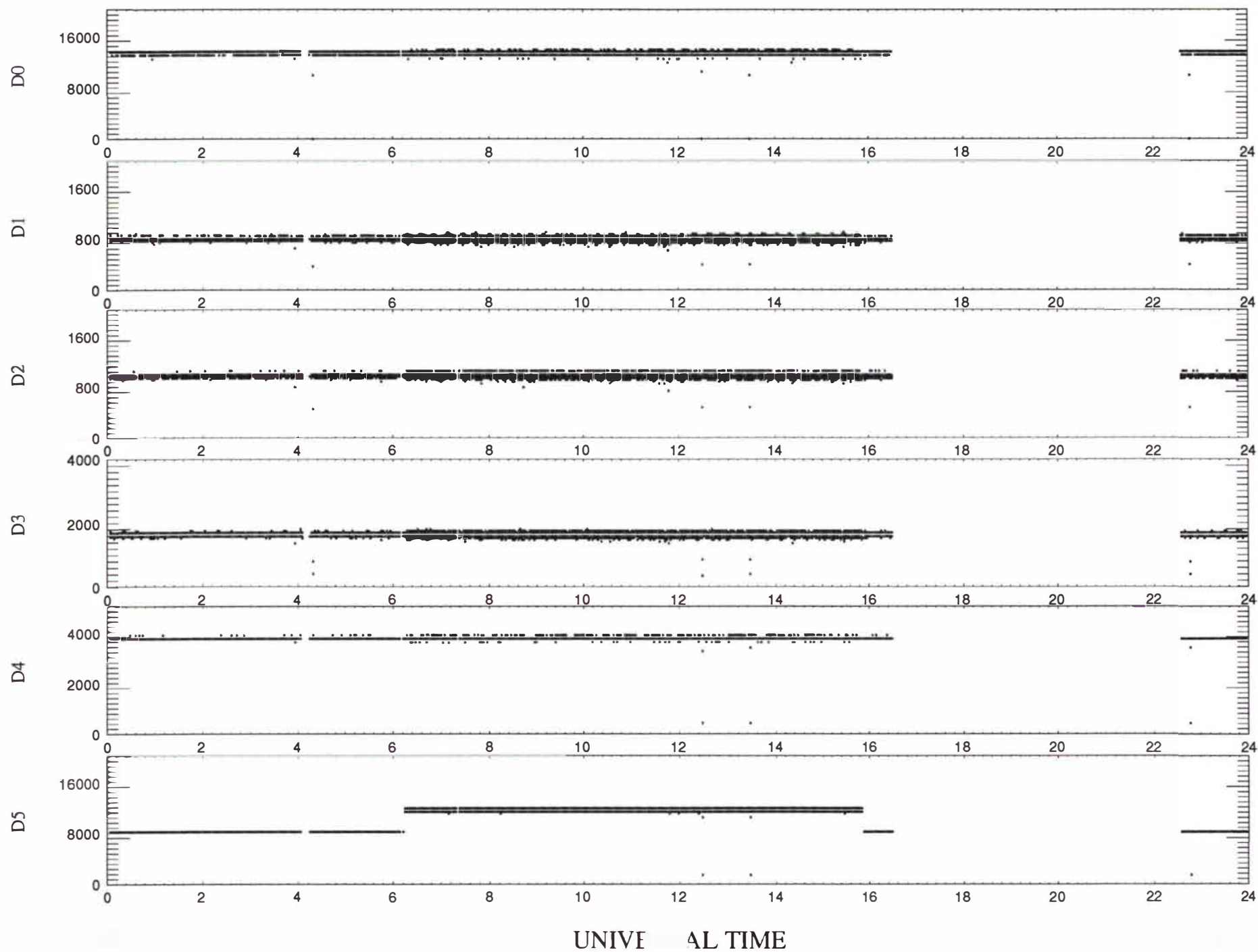
Background not subtracted



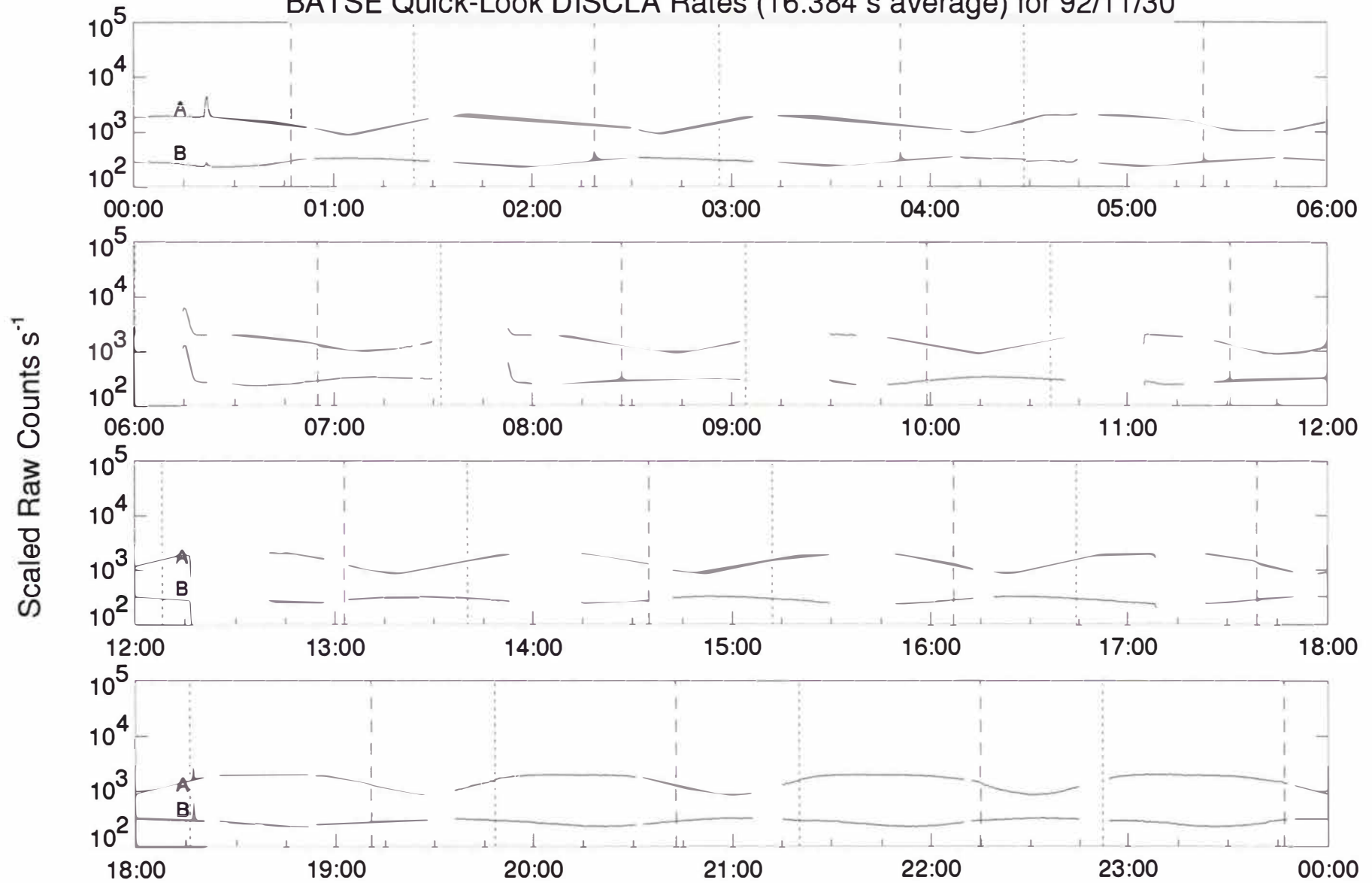
CALIBRATION DATA INCLUDED



UNIV ;AL TIME



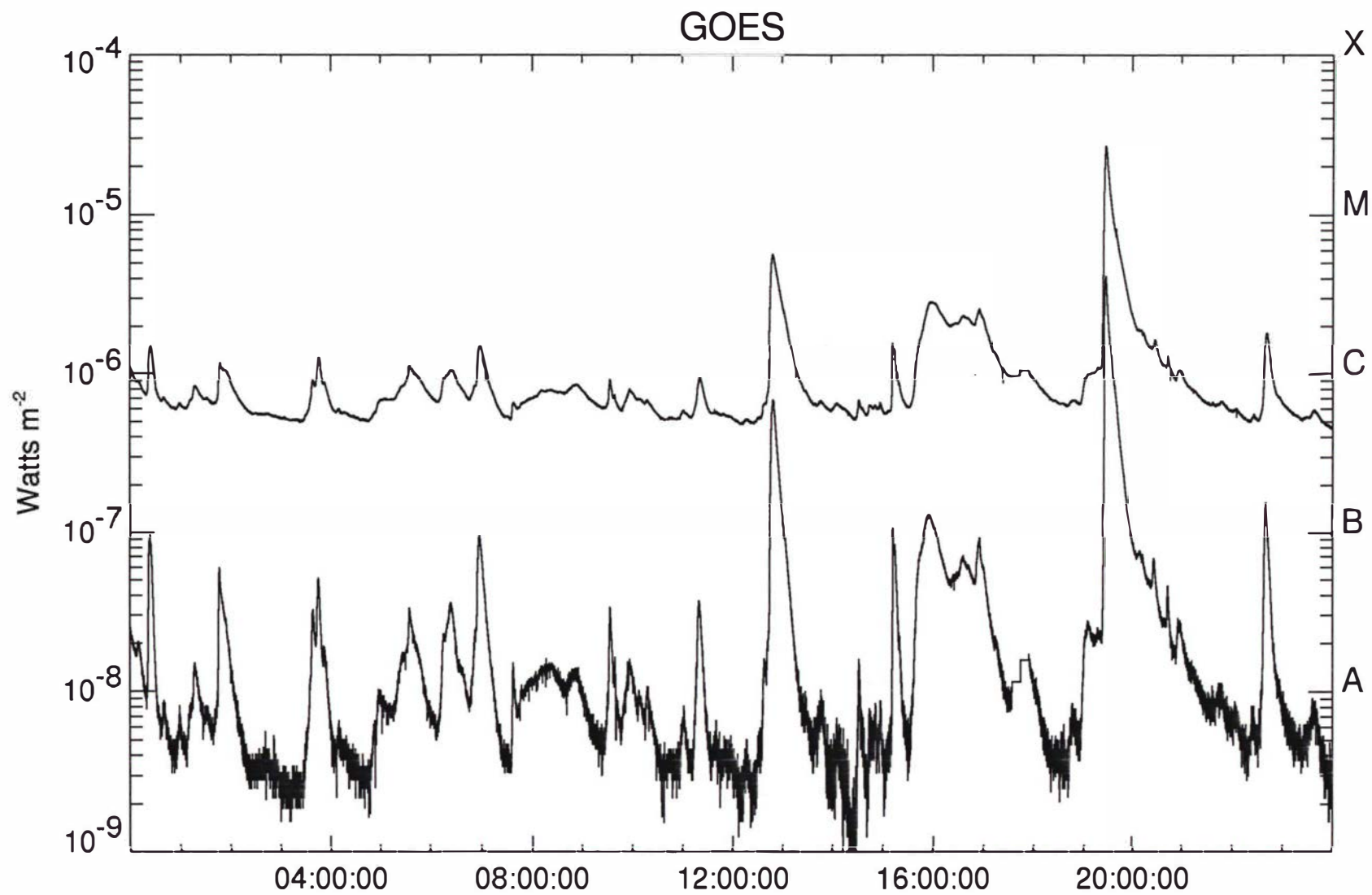
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/11/30



Current Time: 92/12/02, 0217 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



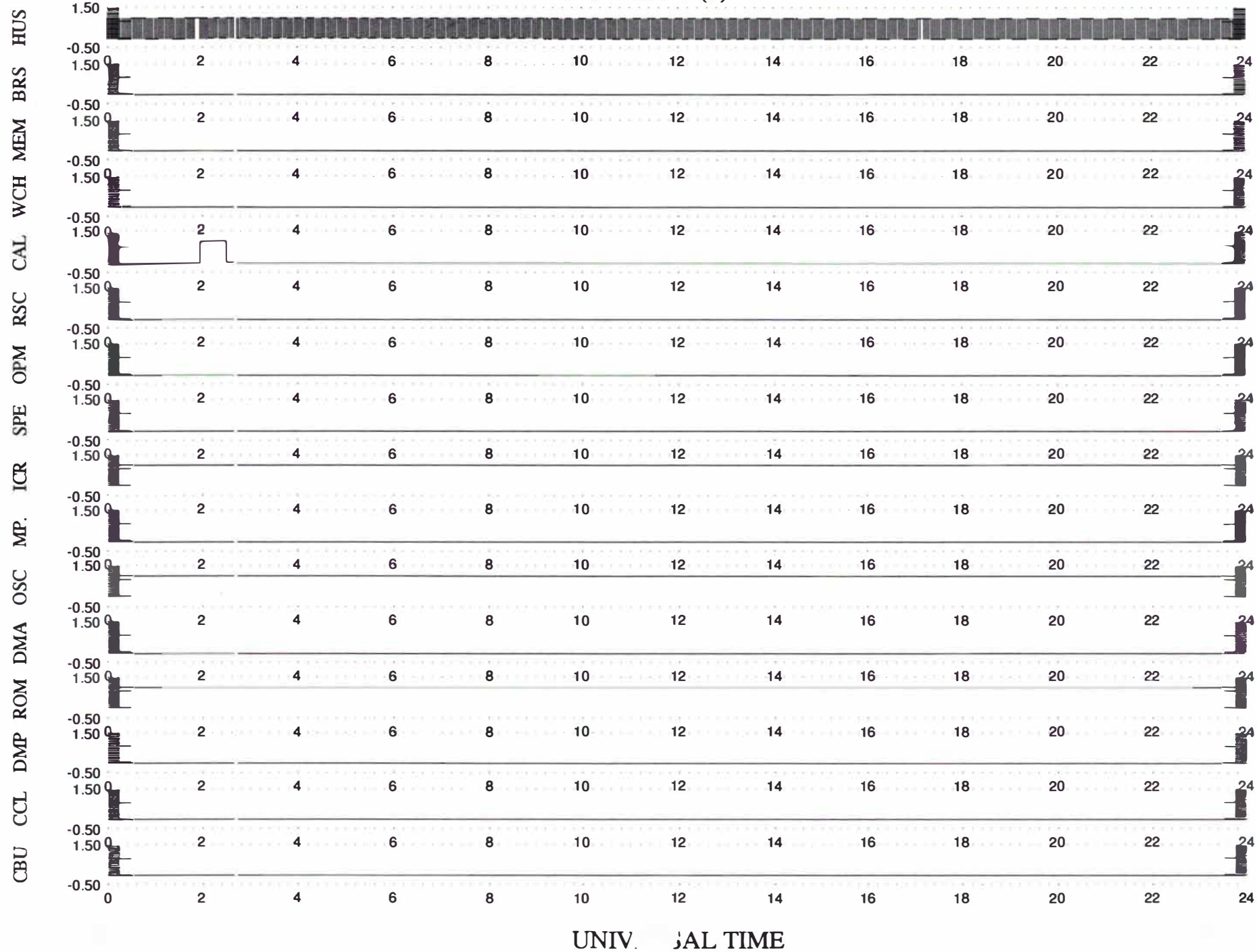
Data Start: 92/11/30, 0000:02

Plot created: 95/05/30, 1702

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (1)



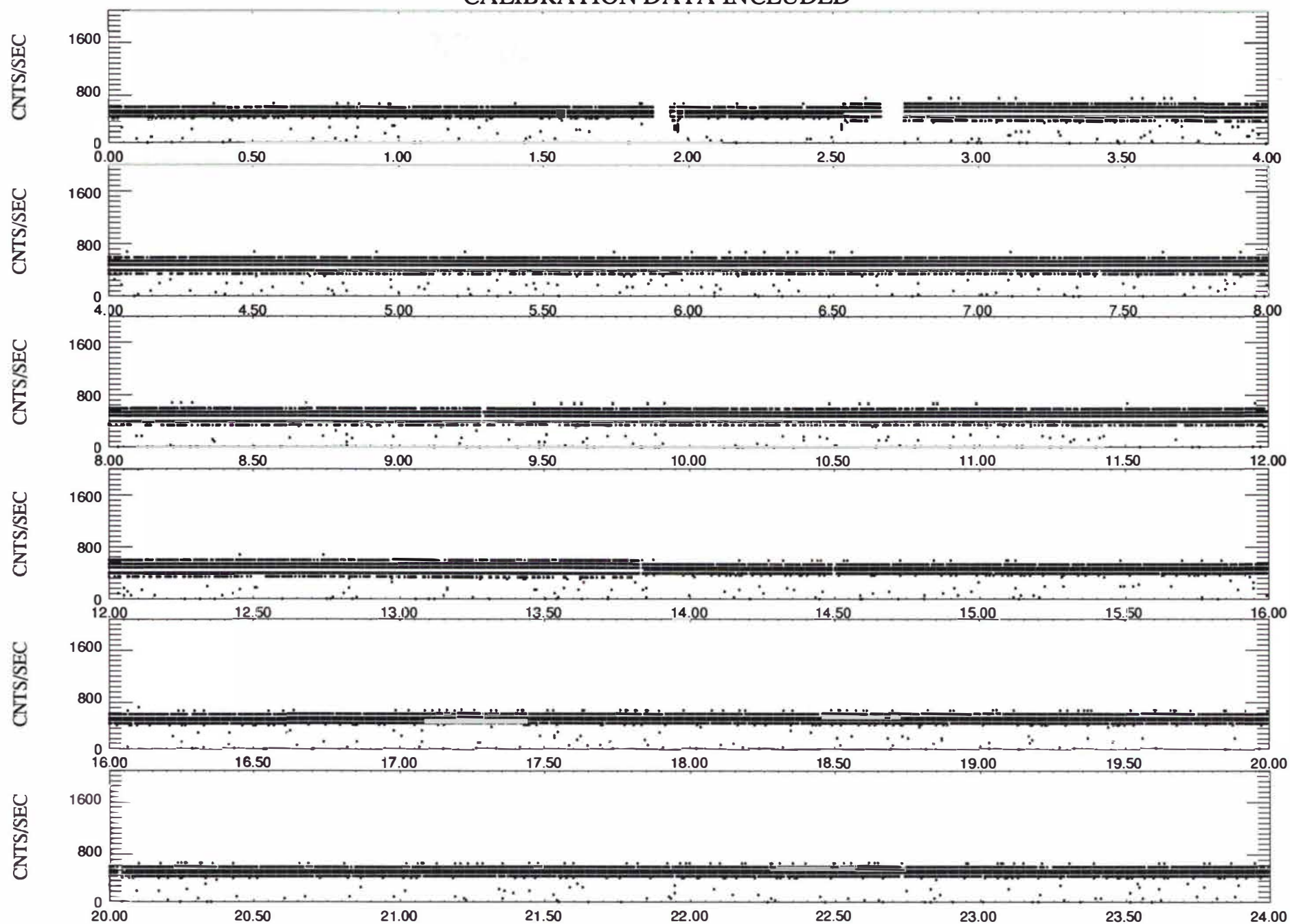
THE UNIVERSITY OF CHICAGO PRESS

CHICAGO, ILL.

1900

1900

CALIBRATION DATA INCLUDED



UNIV CAL TIME

