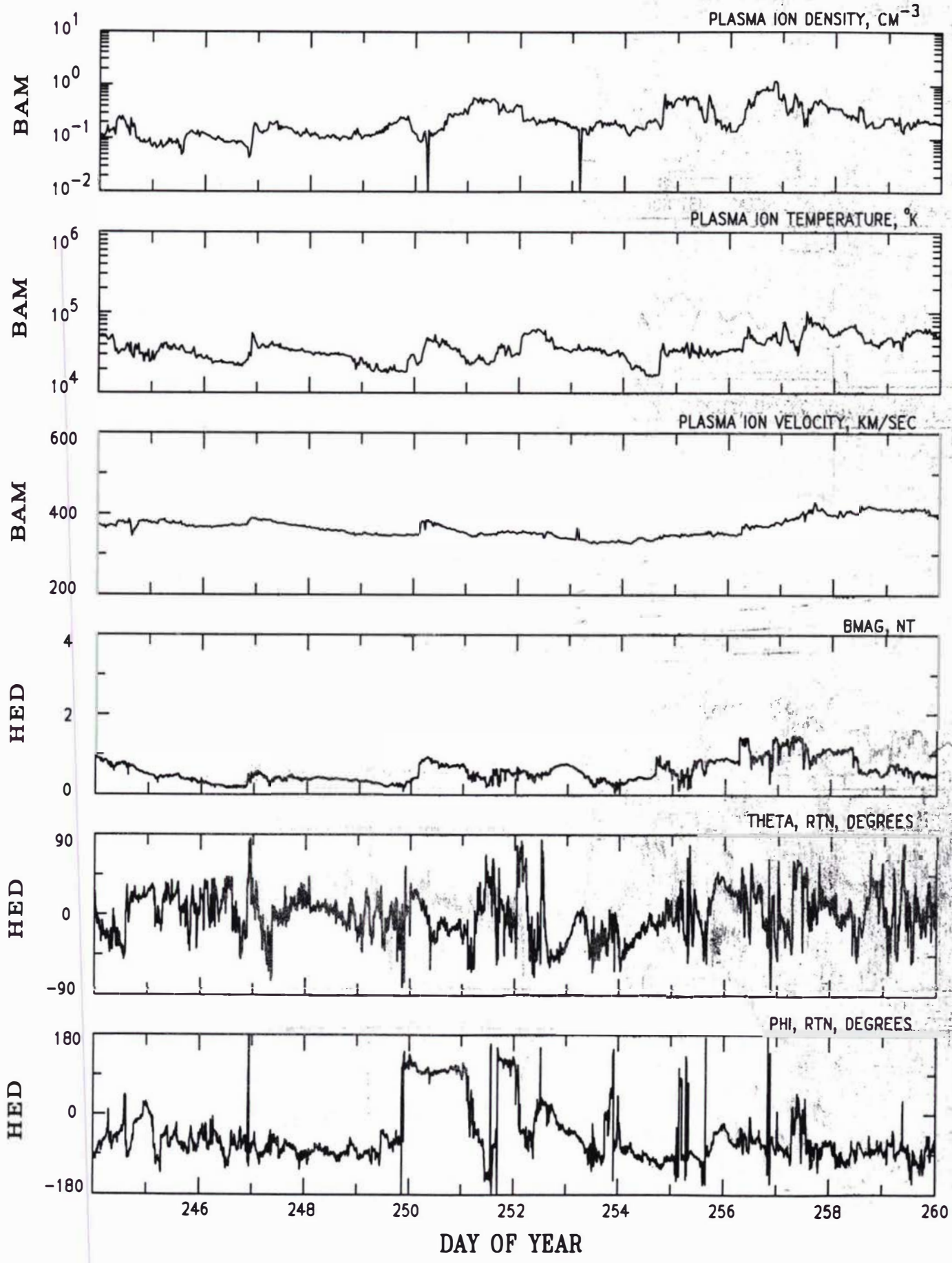
ULYSSES CDR – SOLAR WIND PLASMA AND MAGNETIC FIELD

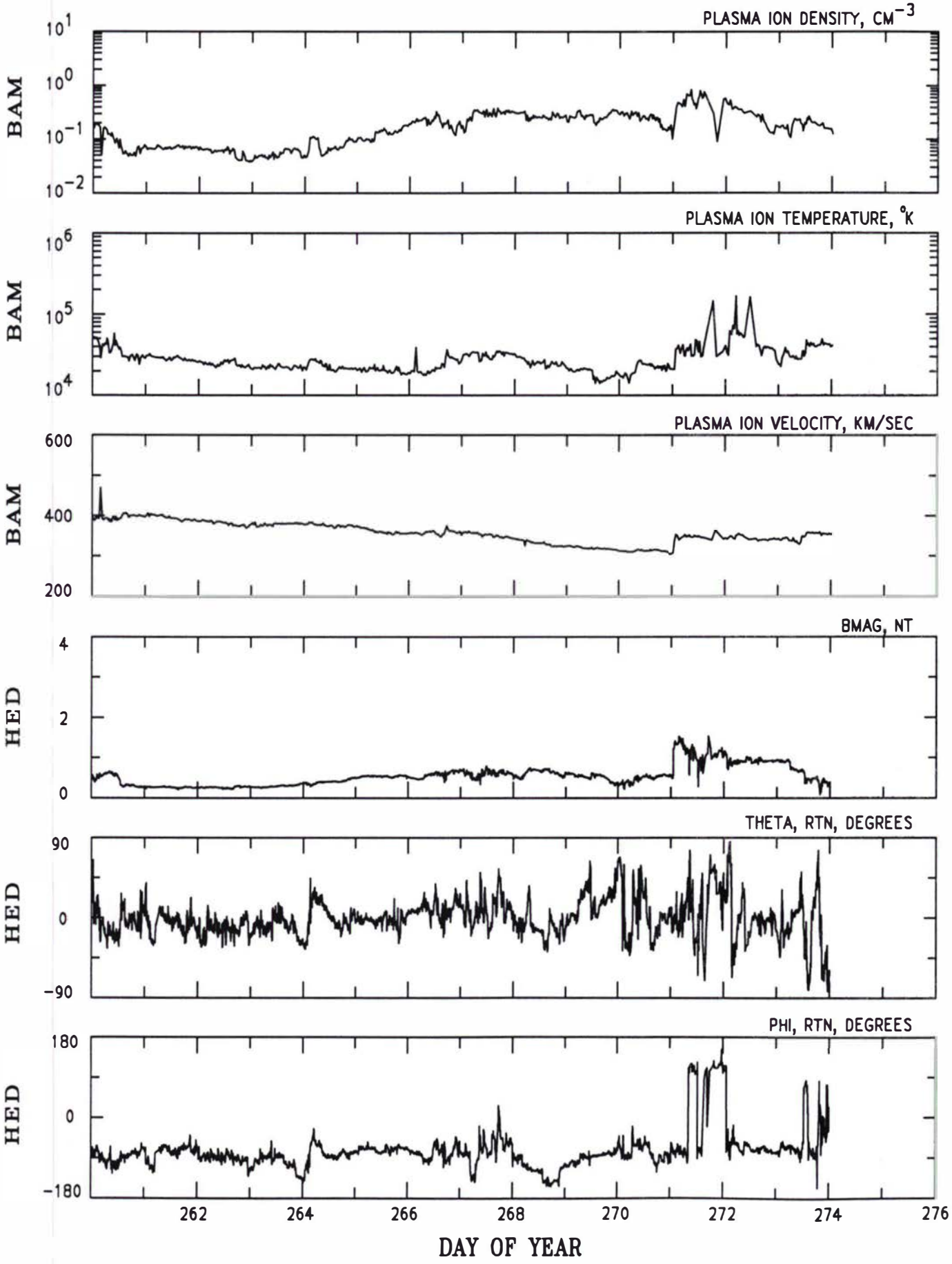
97 244 SEP 1 00:00:00.000 – 97 260 SEP 17 00:00:00.000

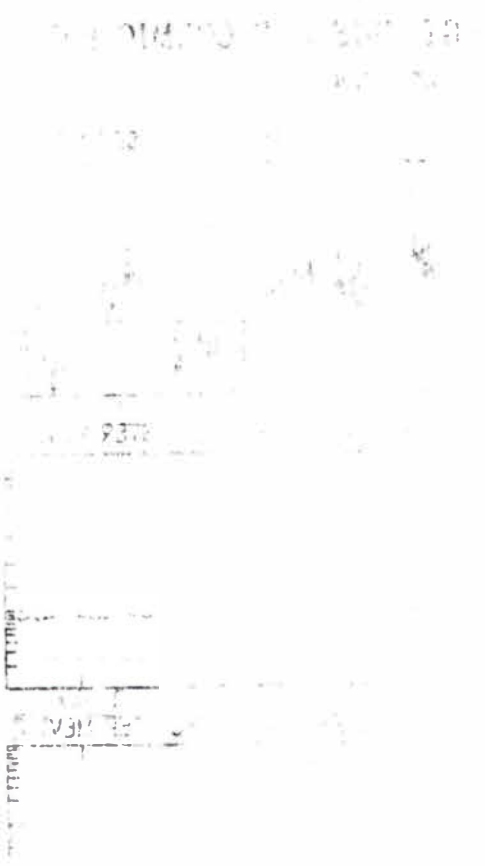


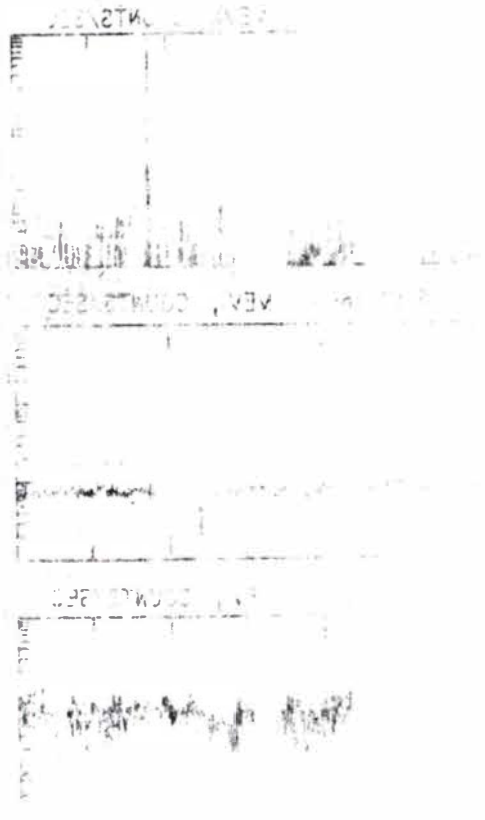


ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

97 260 SEP 17 00:00:00.000 - 97 276 OCT 3 00:00:00.000

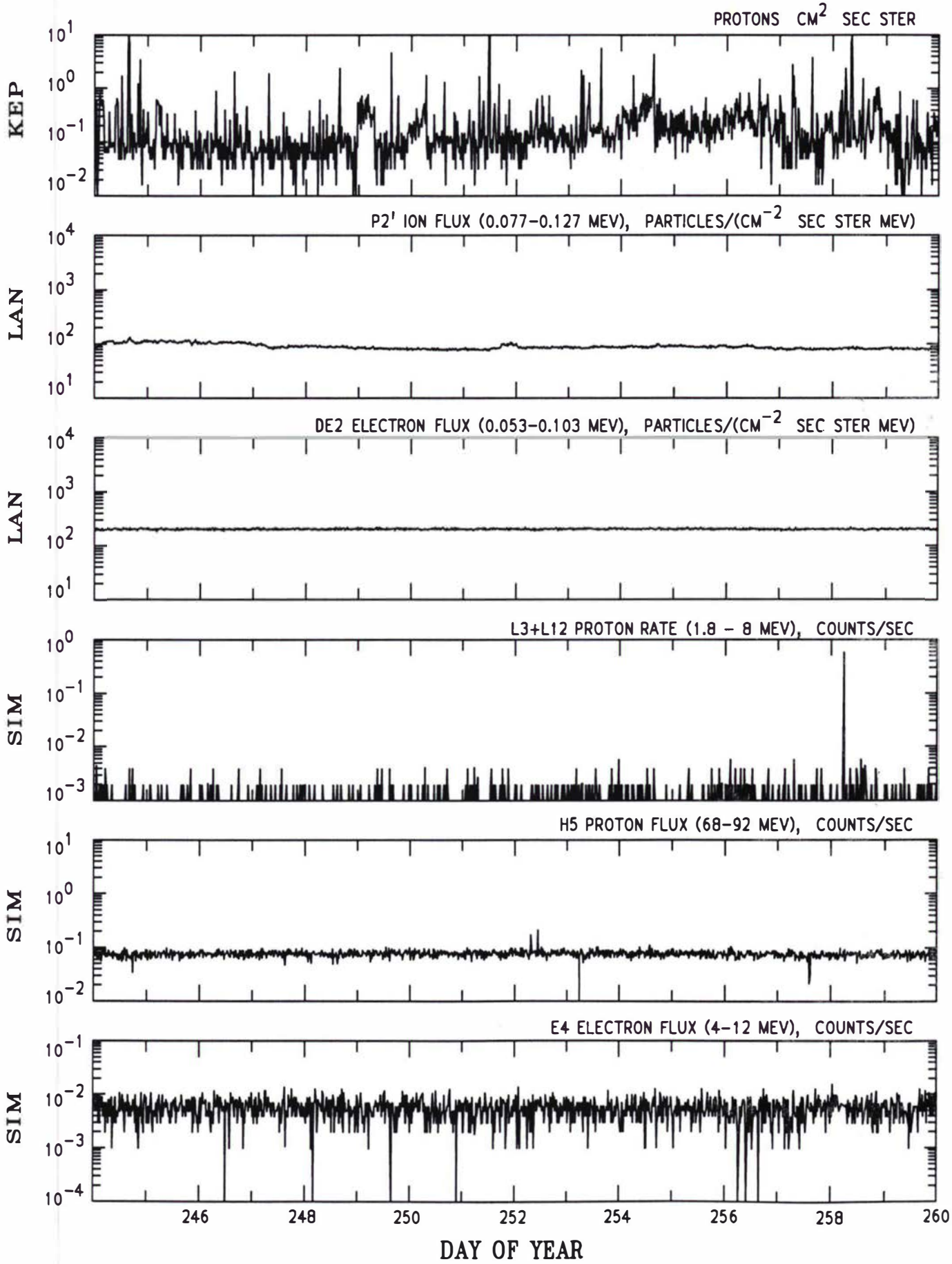






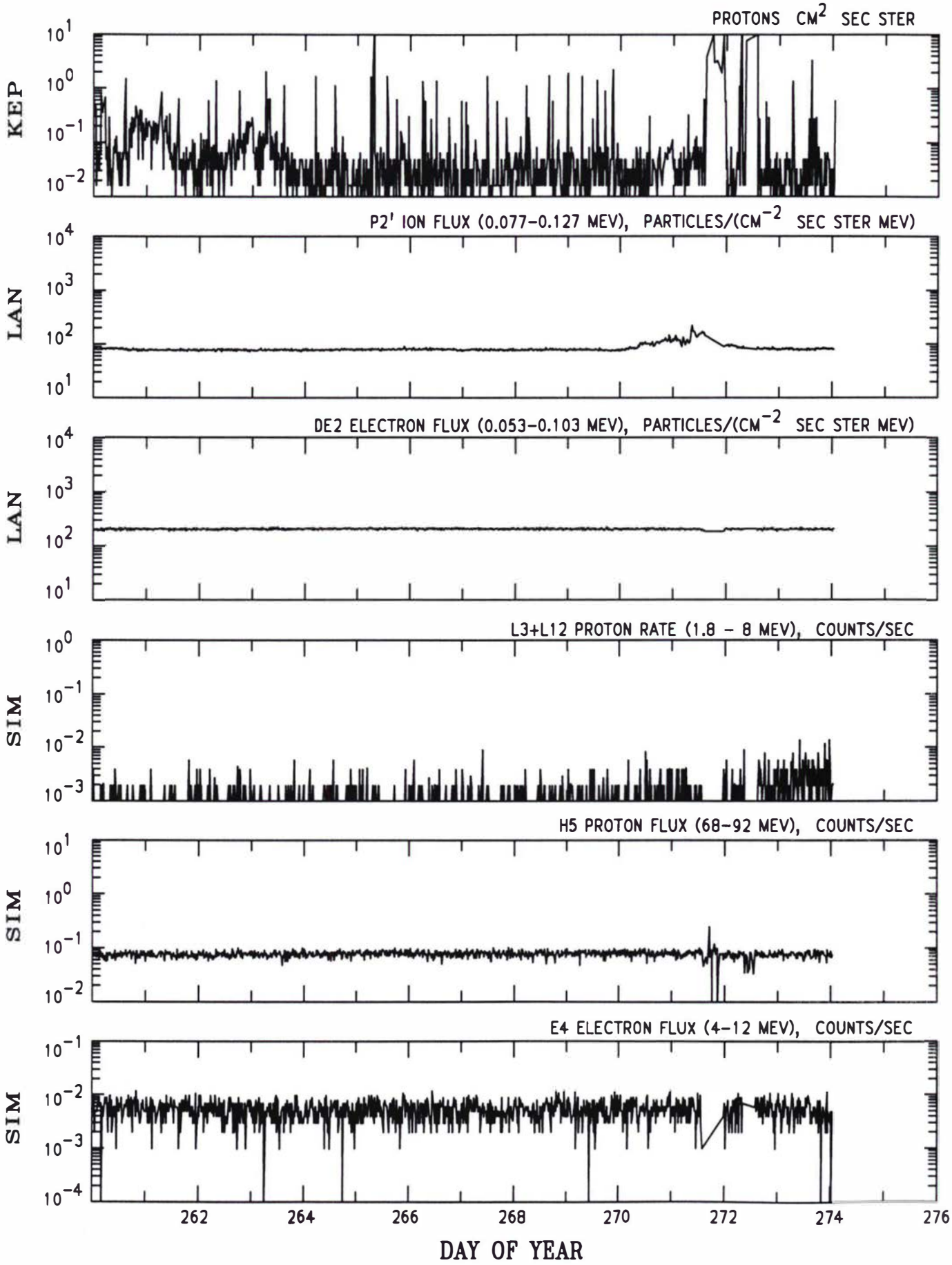
ULYSSES CDR – ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

97 244 SEP 1 00:00:00.000 – 97 260 SEP 17 00:00:00.000



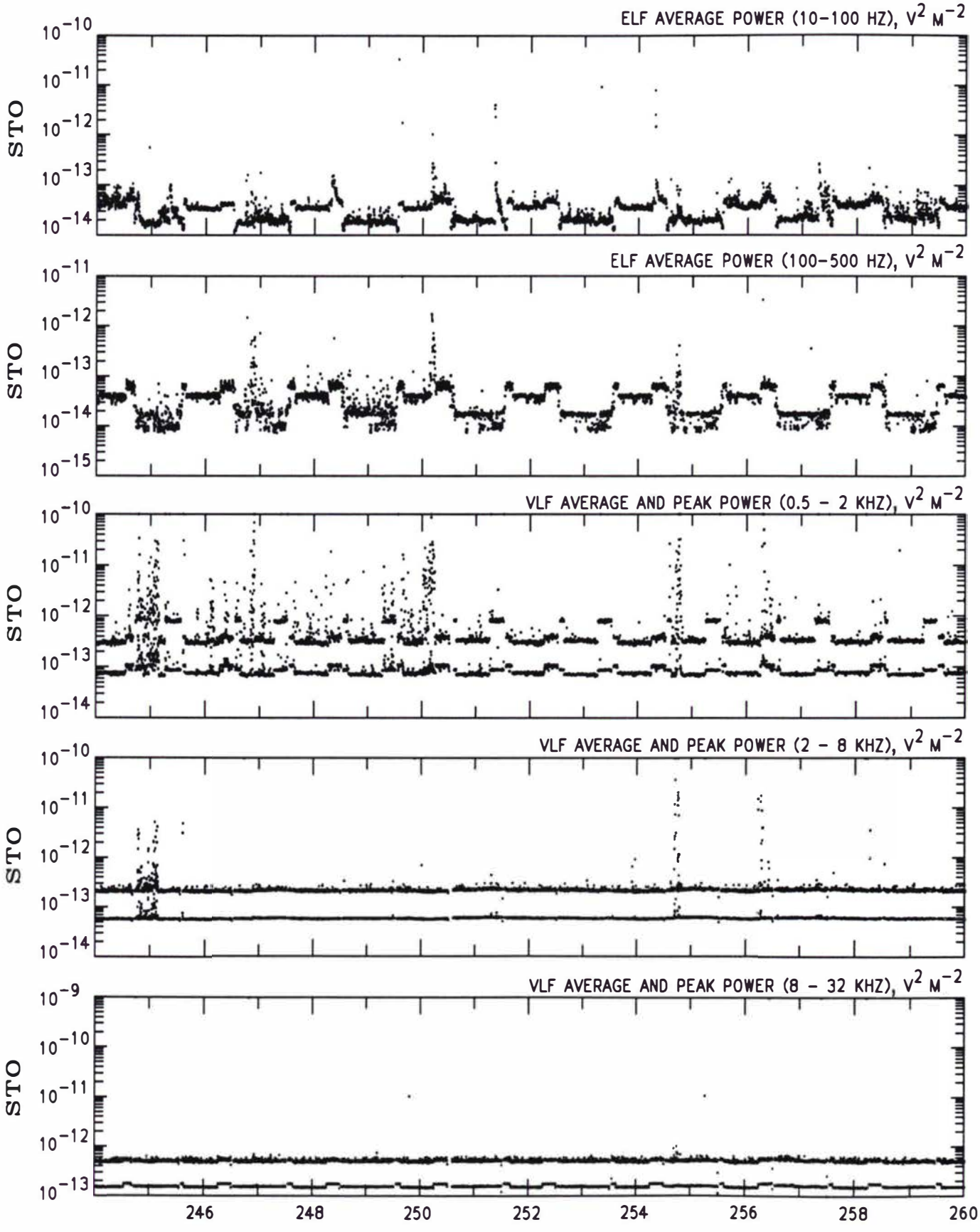
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

97 260 SEP 17 00:00:00.000 - 97 276 OCT 3 00:00:00.000



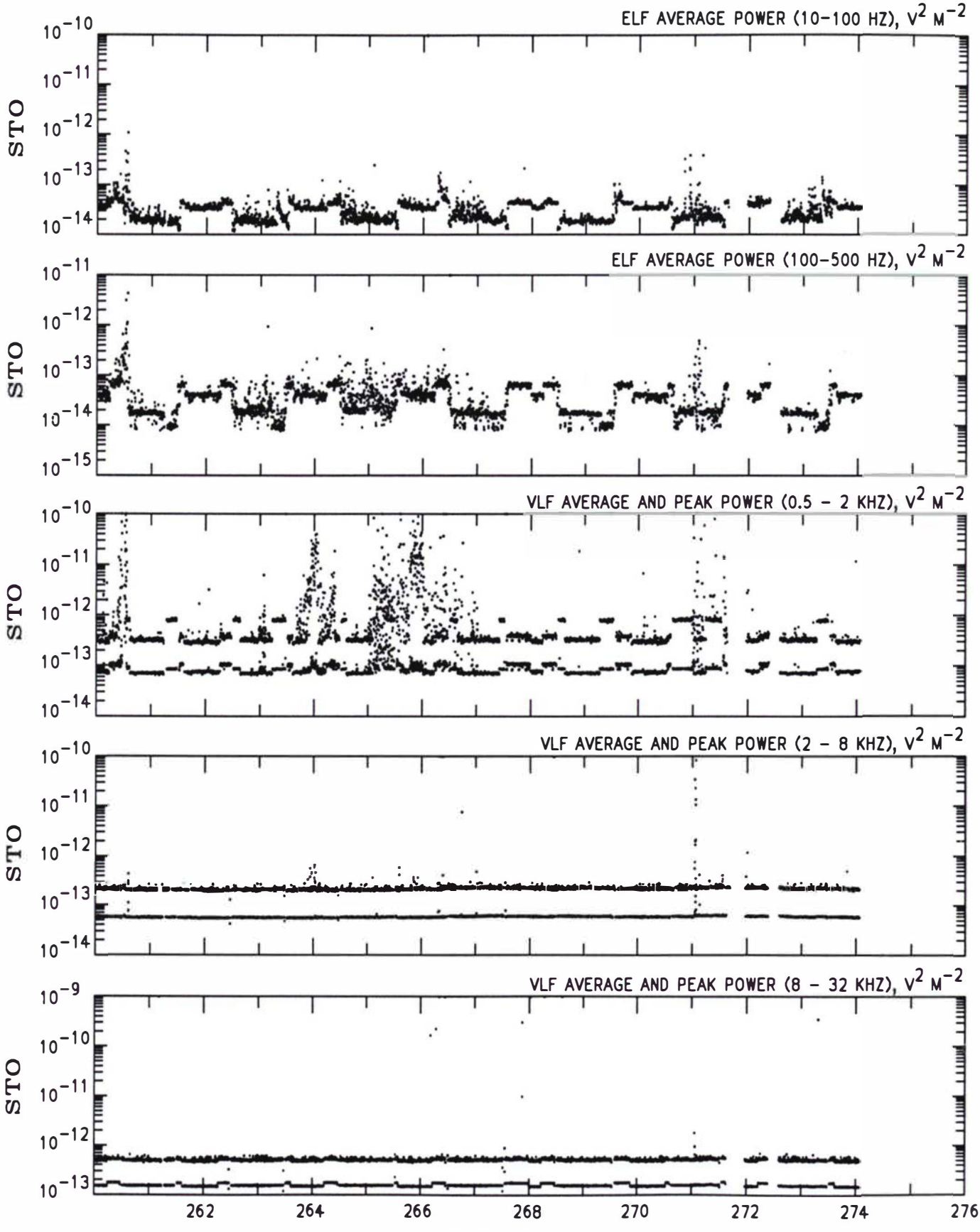
ULYSSES CDR - PLASMA WAVE

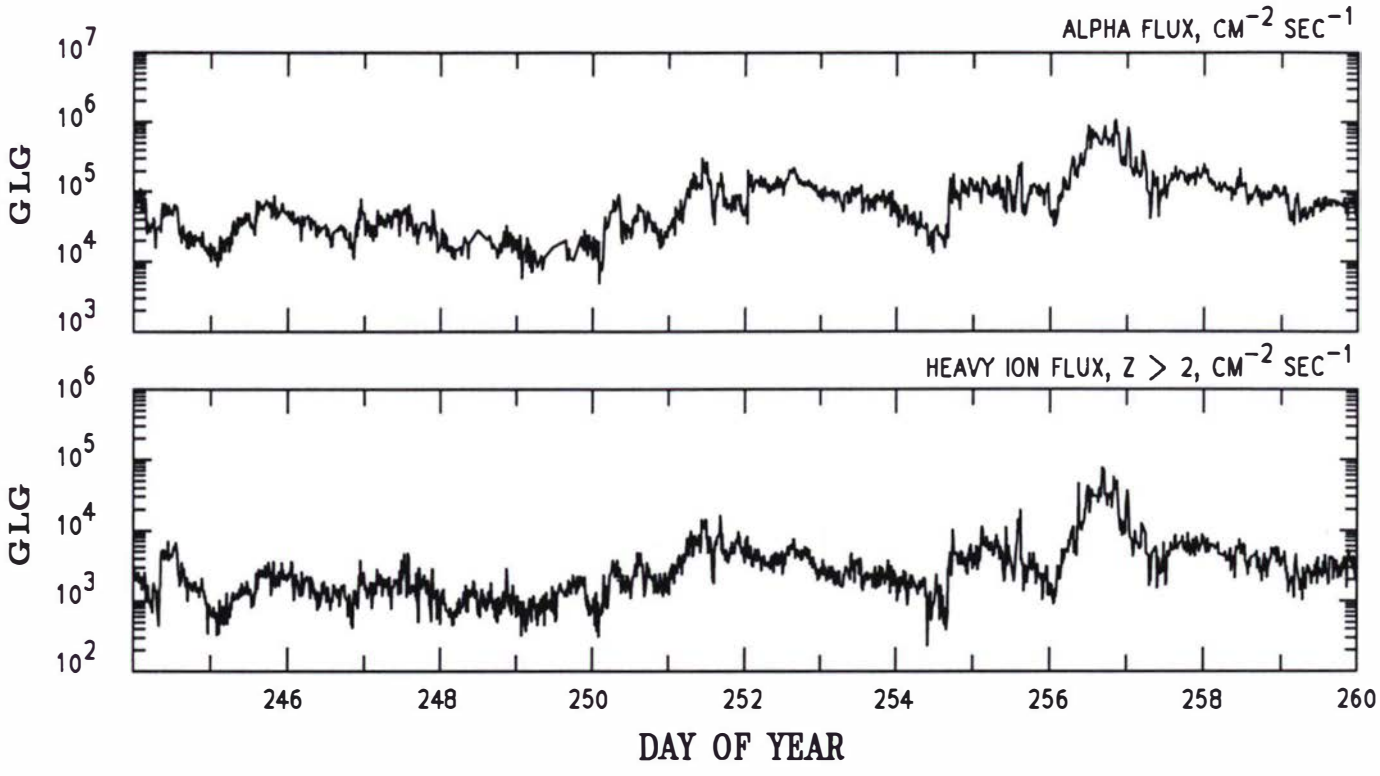
97 244 SEP 1 00:00:00.000 - 97 260 SEP 17 00:00:00.000

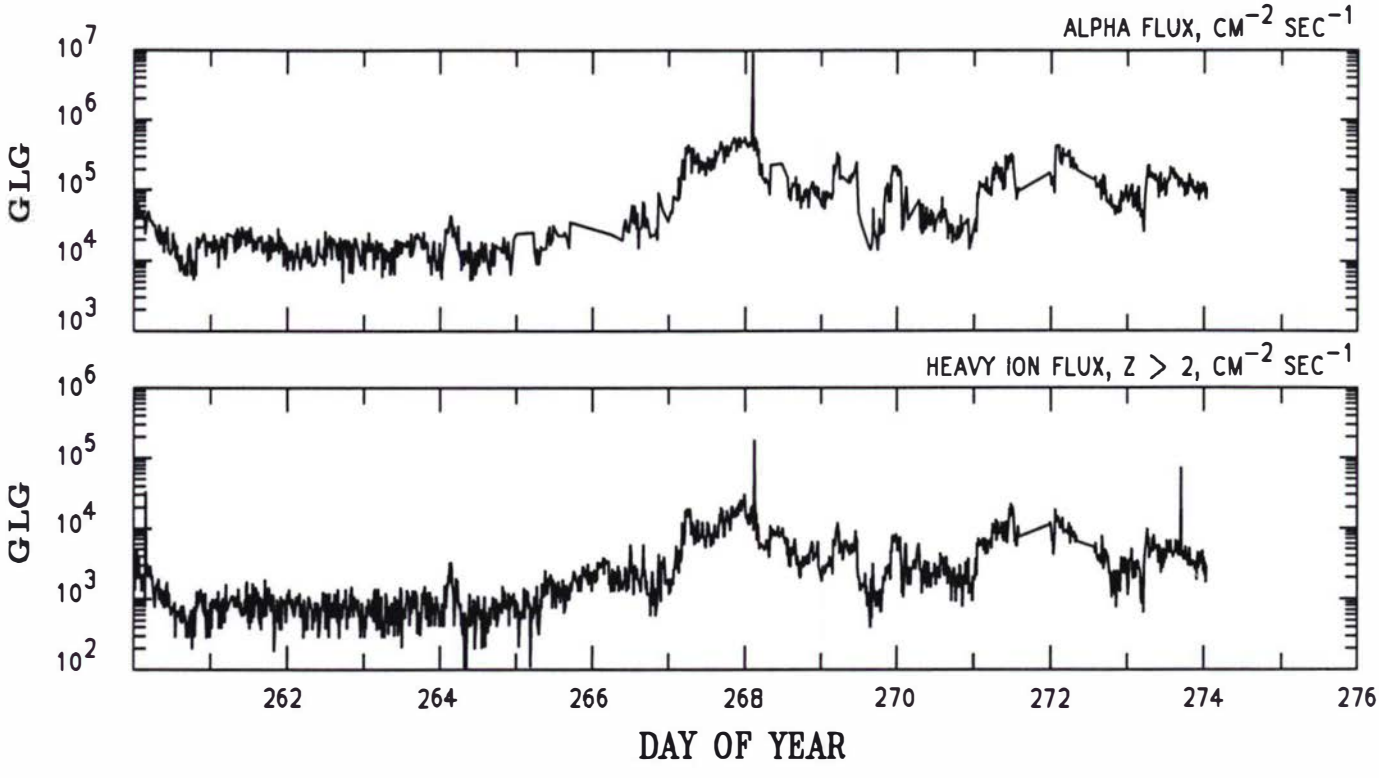


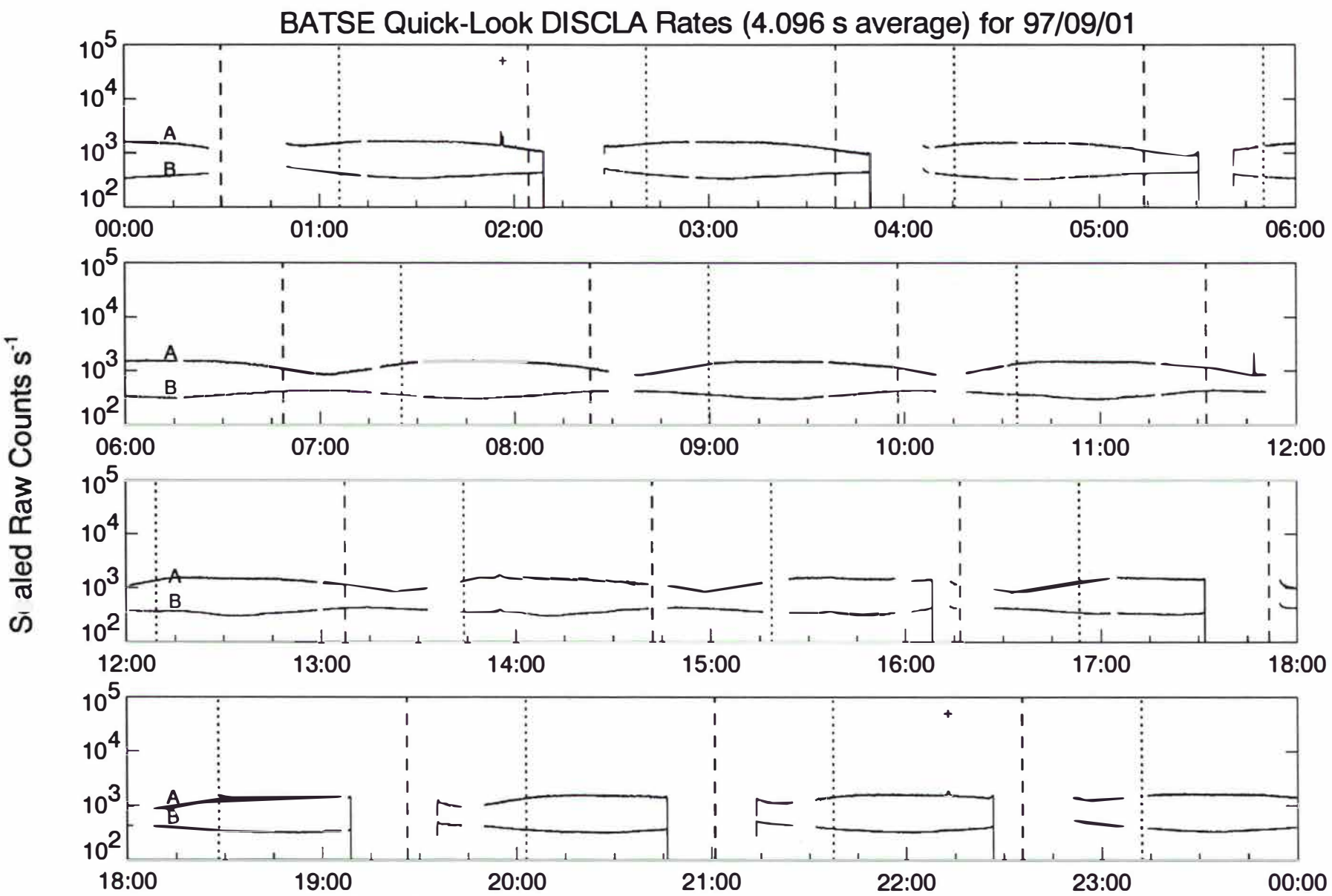
ULYSSES CDR - PLASMA WAVE

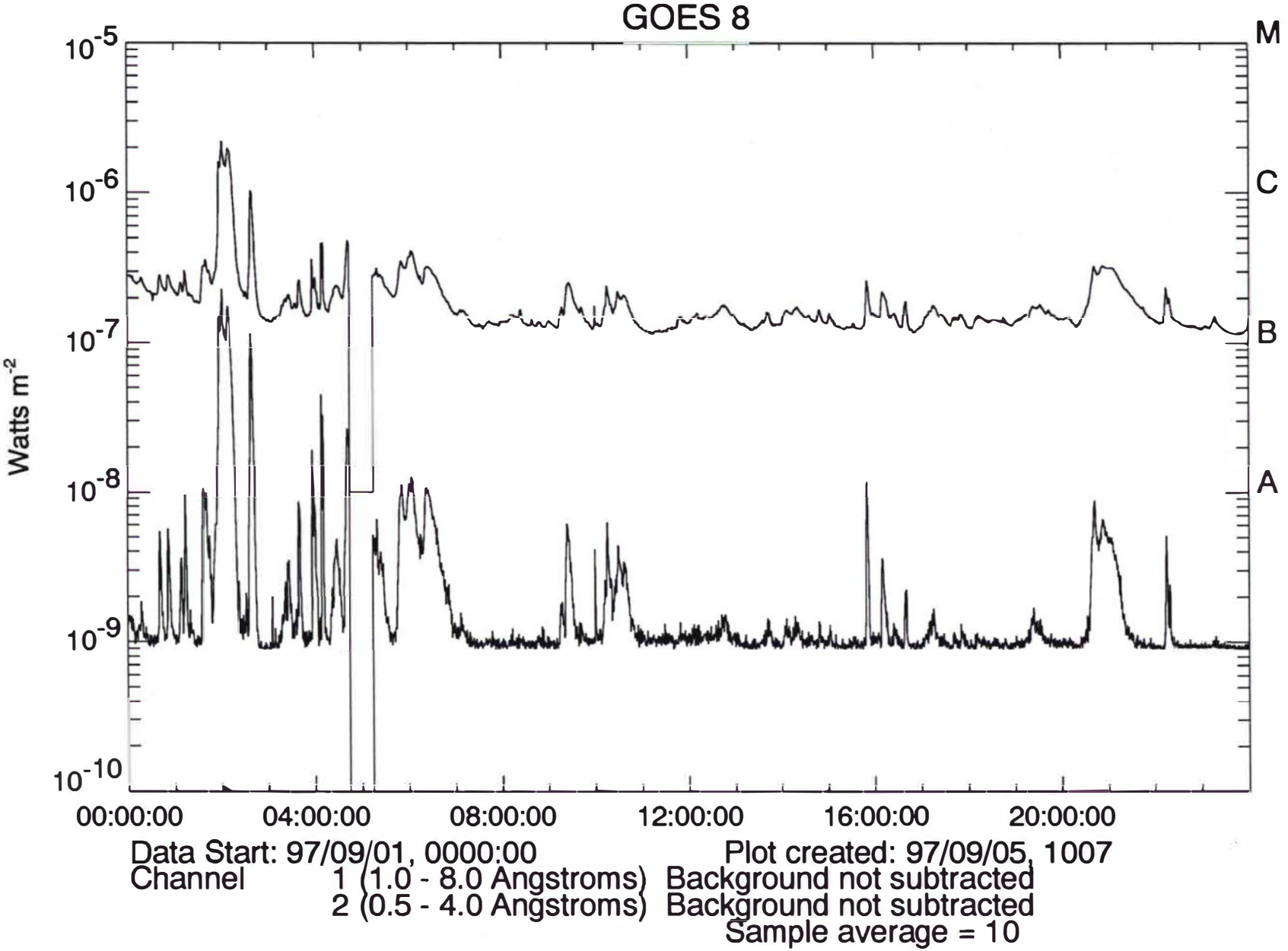
97 260 SEP 17 00:00:00.000 - 97 276 OCT 3 00:00:00.000



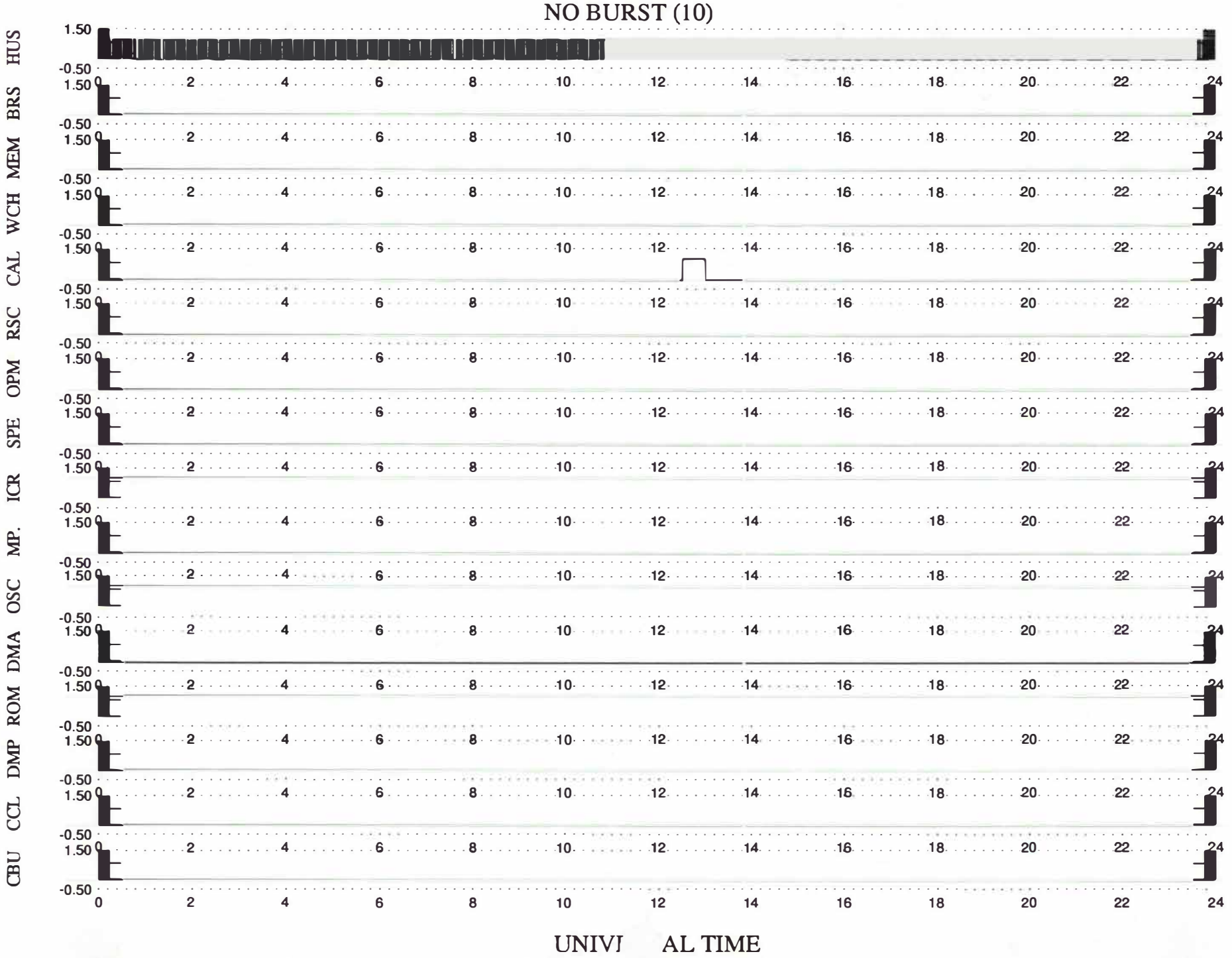

ULYSSES CDR – SOLAR WIND ION COMPOSITION
97 244 SEP 1 00:00:00.000 – 97 260 SEP 17 00:00:00.000
ALPHA FLUX, CM^{-2} SEC^{-1}
GLG
10^7
10^6
10^5
10^4
10^3
HEAVY ION FLUX, Z > 2, CM^{-2} SEC^{-1}
GLG
10^6
10^5
10^4
10^3
10^2
246
248
250
252
254
256
258
260
DAY OF YEAR


ULYSSES CDR – SOLAR WIND ION COMPOSITION
97 260 SEP 17 00:00:00.000 – 97 276 OCT 3 00:00:00.000
ALPHA FLUX, CM^{-2} SEC^{-1}
GLG
10^7
10^6
10^5
10^4
10^3
HEAVY ION FLUX, Z > 2, CM^{-2} SEC^{-1}
GLG
10^6
10^5
10^4
10^3
10^2
262
264
266
268
270
272
274
276
DAY OF YEAR


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/01
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/05, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare

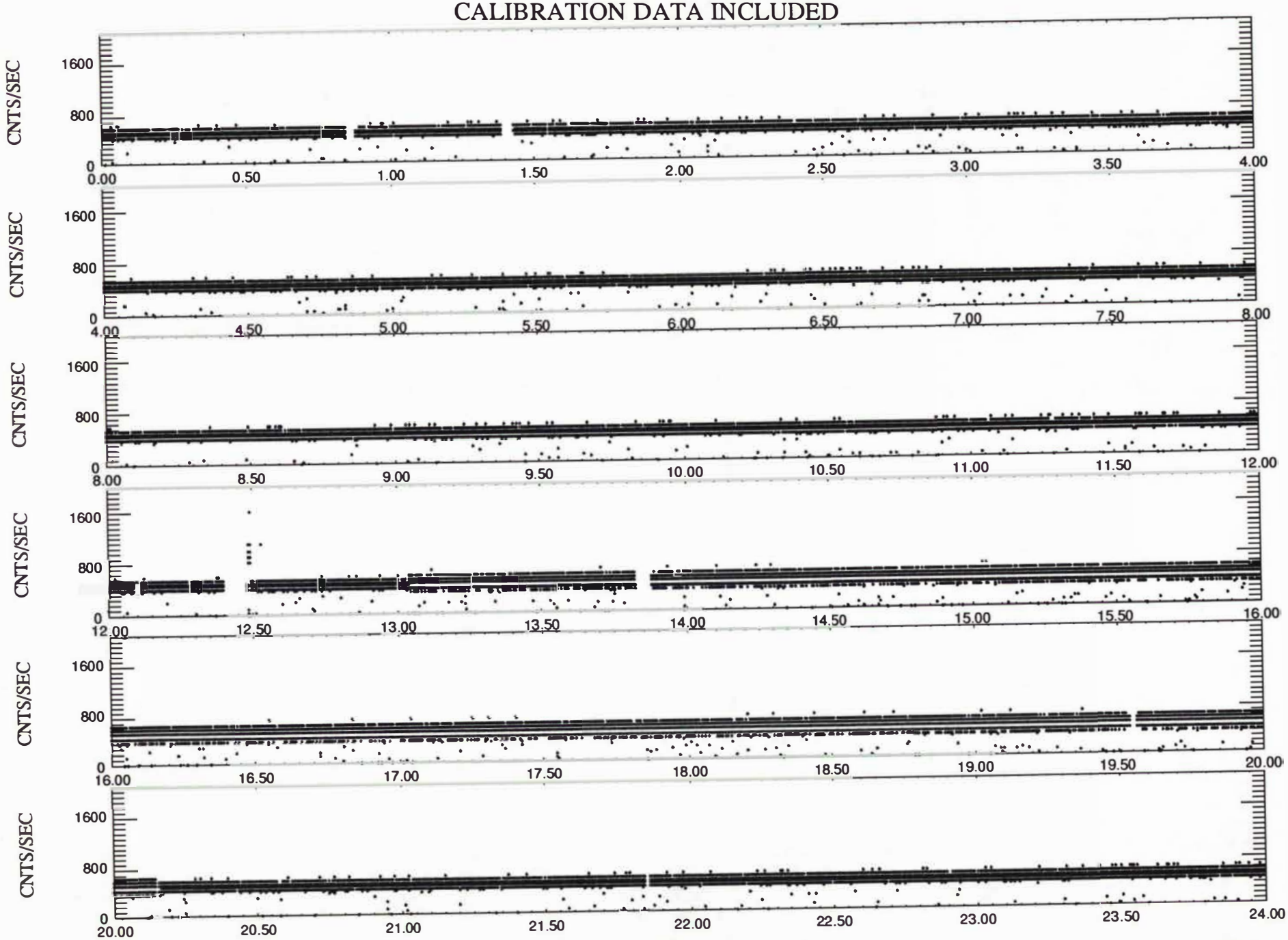

GOES 8
M
C
B
A
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
10^{-10}
Watts m^{-2}
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/01, 0000:00
Plot created: 97/09/05, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 244, year 1997 to day 244, year 1997 1/14/98



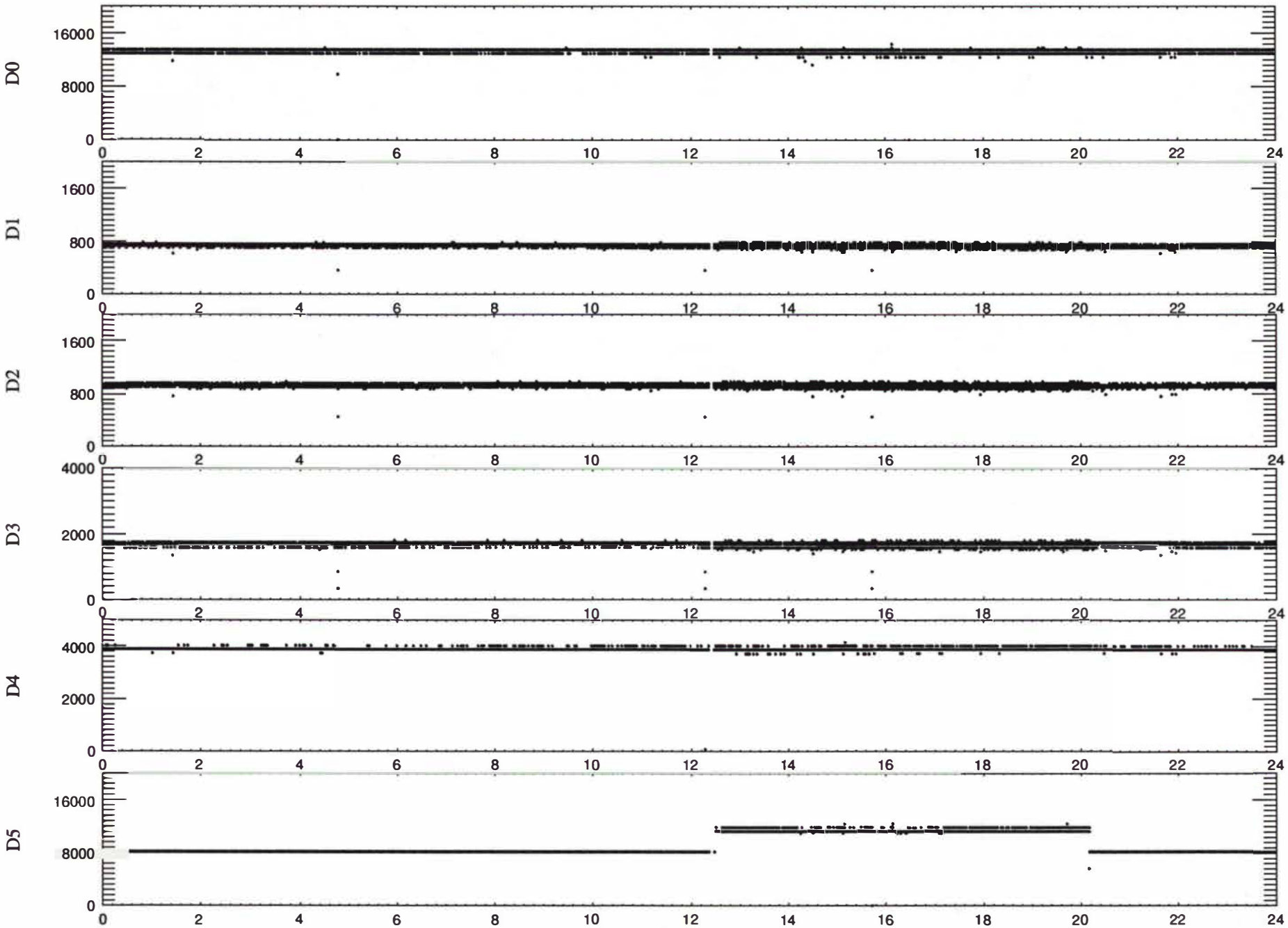
HUS 2A, MODE 1, NOT AVERAGED EDR day 244, year 1997 to day 244, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV `AL TIME

HUS 2B COUNTS / SEC EDR day 244, year 1997 to day 244, year 1997 1/14/98



From RICHARDSON@ssl.msfc.nasa.gov Thu Sep 4 12:30 PDT 1997
Return-Path: <RICHARDSON@ssl.msfc.nasa.gov>
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
id MAA26289; Thu, 4 Sep 1997 12:30:46 -0700
From: RICHARDSON@ssl.msfc.nasa.gov
Date: Thu, 4 Sep 1997 14:30:40 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970904143040.20409371@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6354
Content-Type: text
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6354
EVENT OF 1997 SEP 2 DAY OF YEAR=245
EVENT CROSSING TIME AT BATSE : 16488. S. OR 04:34:48.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 211.000 24.000
BATSE PEAK COUNTING RATE: 14000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 2/ 9/ 97 IS:
RA= 161.667 DEC= 18.882 DIST= 6.237 AU
BATSE-ULYSSES DISTANCE = 933078525. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=134.02 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2162.84 SECS.
CROSSING TIME AT ULYSSES IS 14325. S. OR 03:58:45 +/- 405.73 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 2/ 9/ 97 IS:
RA= 219.108 DEC= -16.151 DIST= 1.650 AU
MARS-BATSE DISTANCE = 246792048. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=139.08 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -622.00 SECS.
CROSSING TIME AT MARS IS 15866. S. OR 04:24:26 +/- 84.18 SECONDS

BATSE BURST TRIGGER

NO.: 6354

TIME: TJD=0693 SECONDS=16488

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

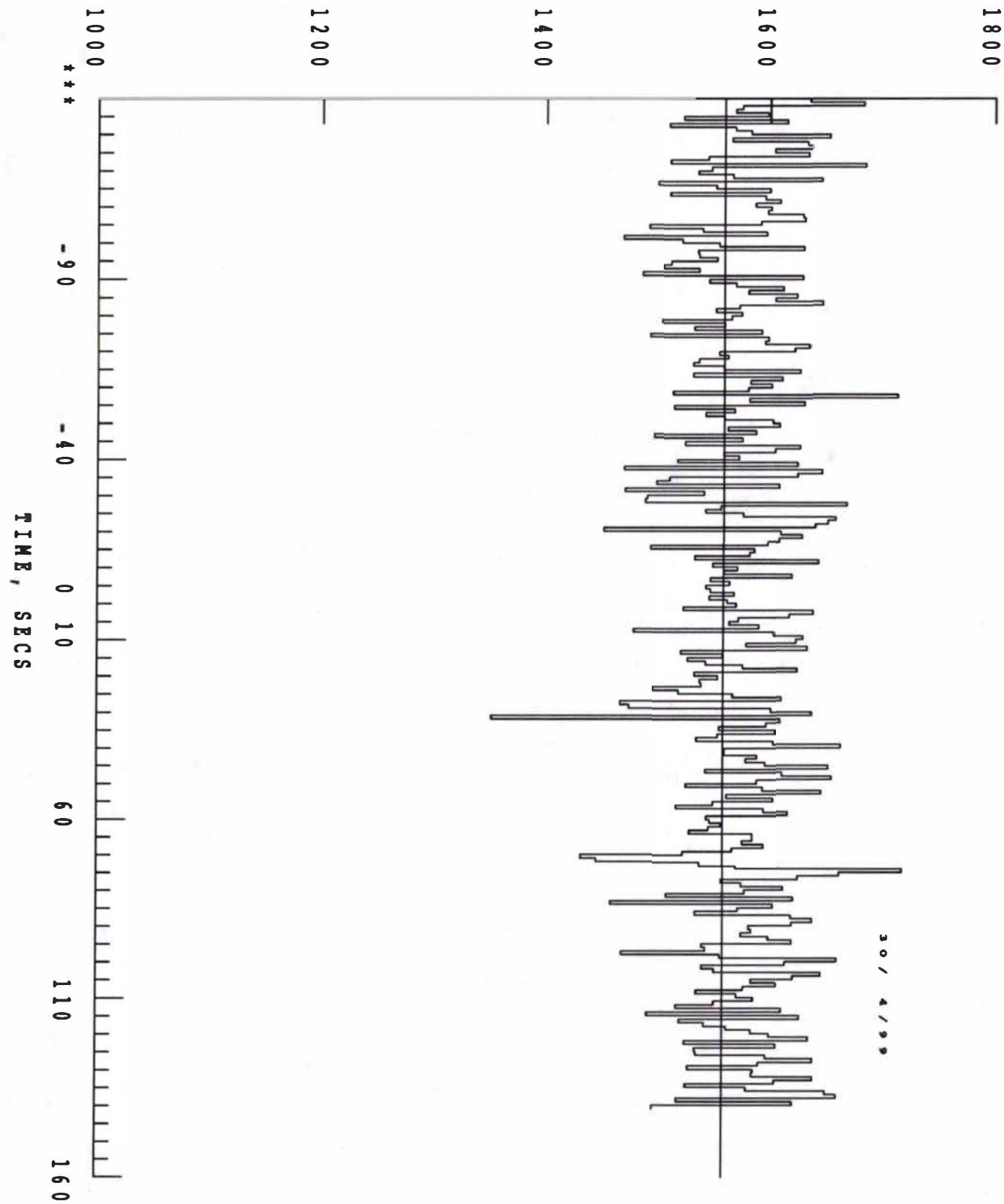
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=163.4 AZIMUTH=293.0 ERROR=4.2 DEGREES

COMMENTS:
GRB. SHORT SPIKE OCCURRING DURING A CRAB OCCULTATION SET.
DUR.~0.05SEC. VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6354	970902	10693	16488	14000	211	+24	.05


NEAR
02/09/97
16878.496
100-1000 keV
COUNTS/1.000 S
1000
1200
1400
1600
1800
***
-90
-40
0 10
60
110
160
TIME, SECS
30/4/99

BATSE BURST# 6354

ULYSSES RT 4/ 9/97

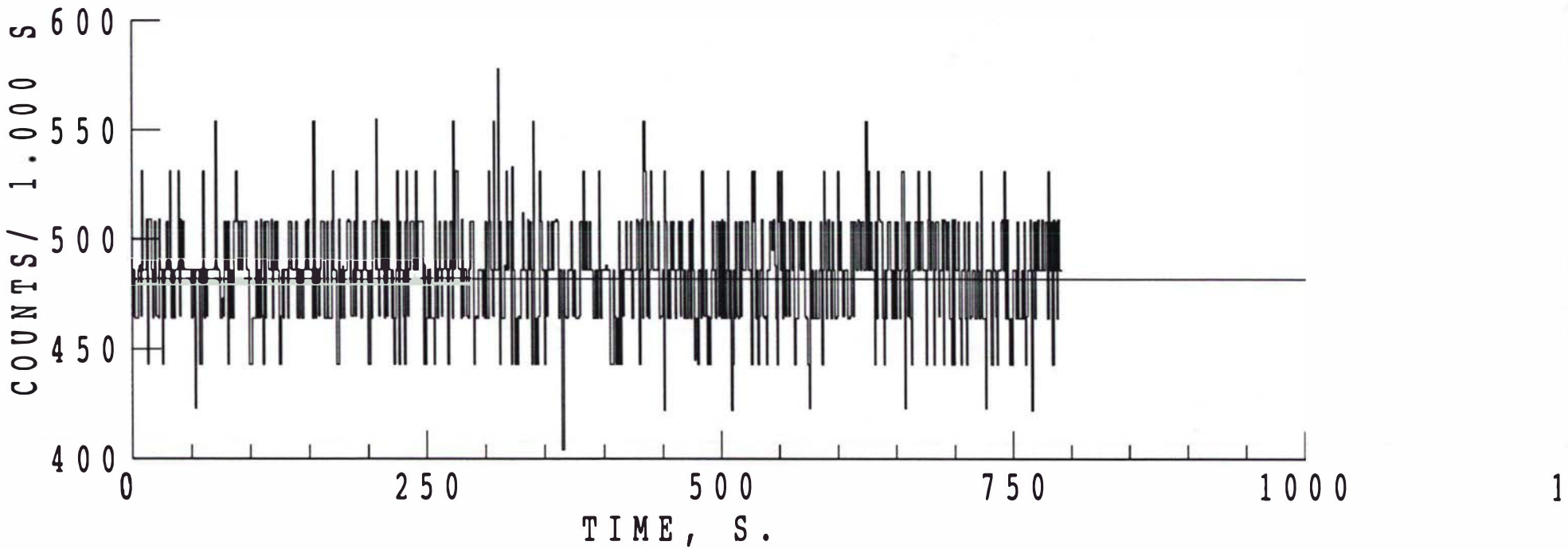
2/ 9/97 13932.026 s

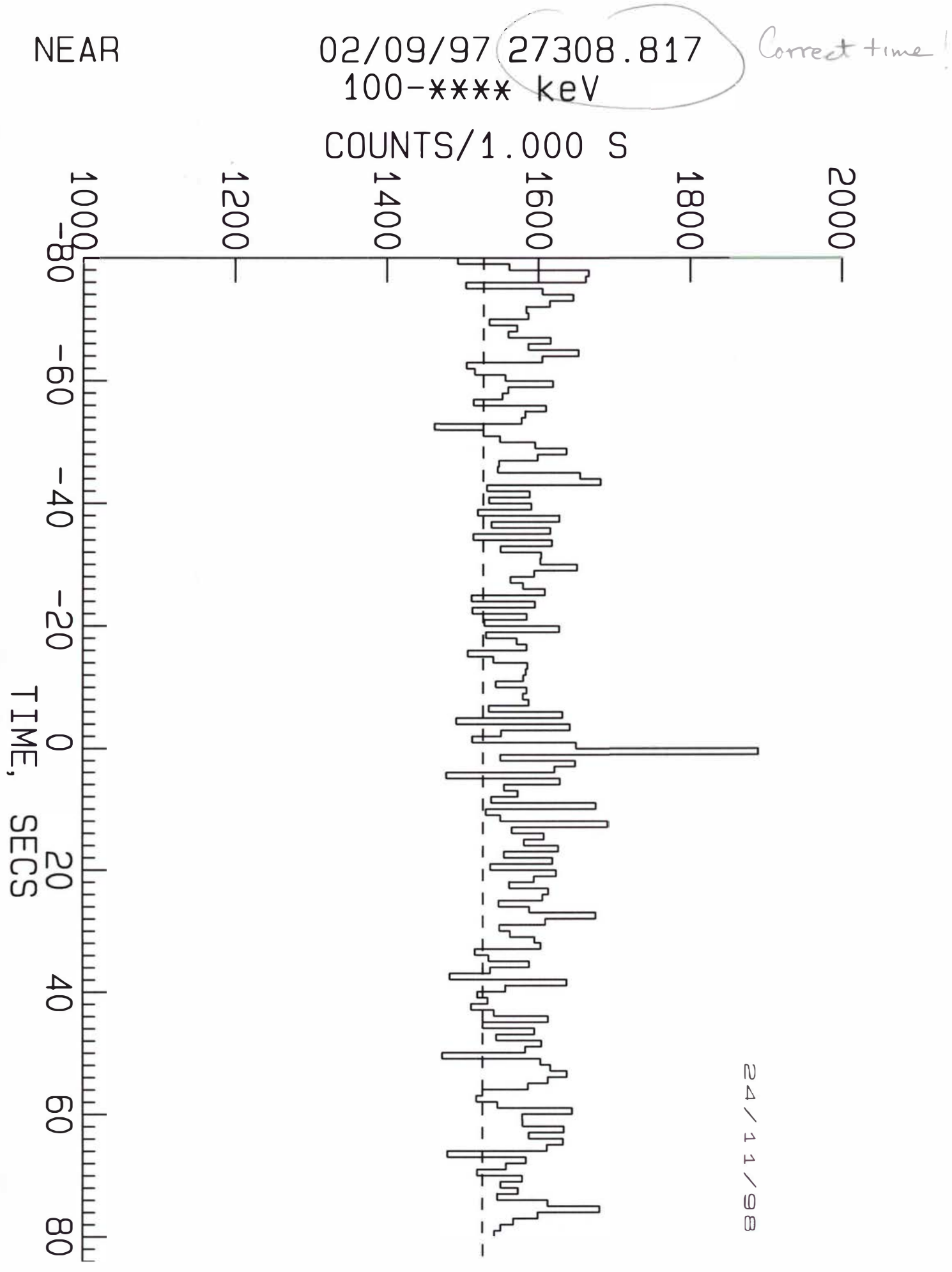
0.500 S INTERVALS REGROUPED BY 2

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS




NEAR
02/09/97 27308.817
100-**** keV
Correct time!
COUNTS/1.000 S
1000
1200
1400
1600
1800
2000
-80
-60
-40
-20
0
20
40
60
80
TIME, SECS
24/11/98

Date: 4 Feb 00

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

☑ 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 N/A

☐ BATSE ephemeris for T_0?

☐ Error circle position and radius from public catalog used?

☐ If MER data were used, is a 30 ms systematic error included?

3. NEAR Data

☑ Final, correct time used? (Files postmarked vwx@bocc1, or from Teresa Sheets, have the correct time; files on website have incorrect times)

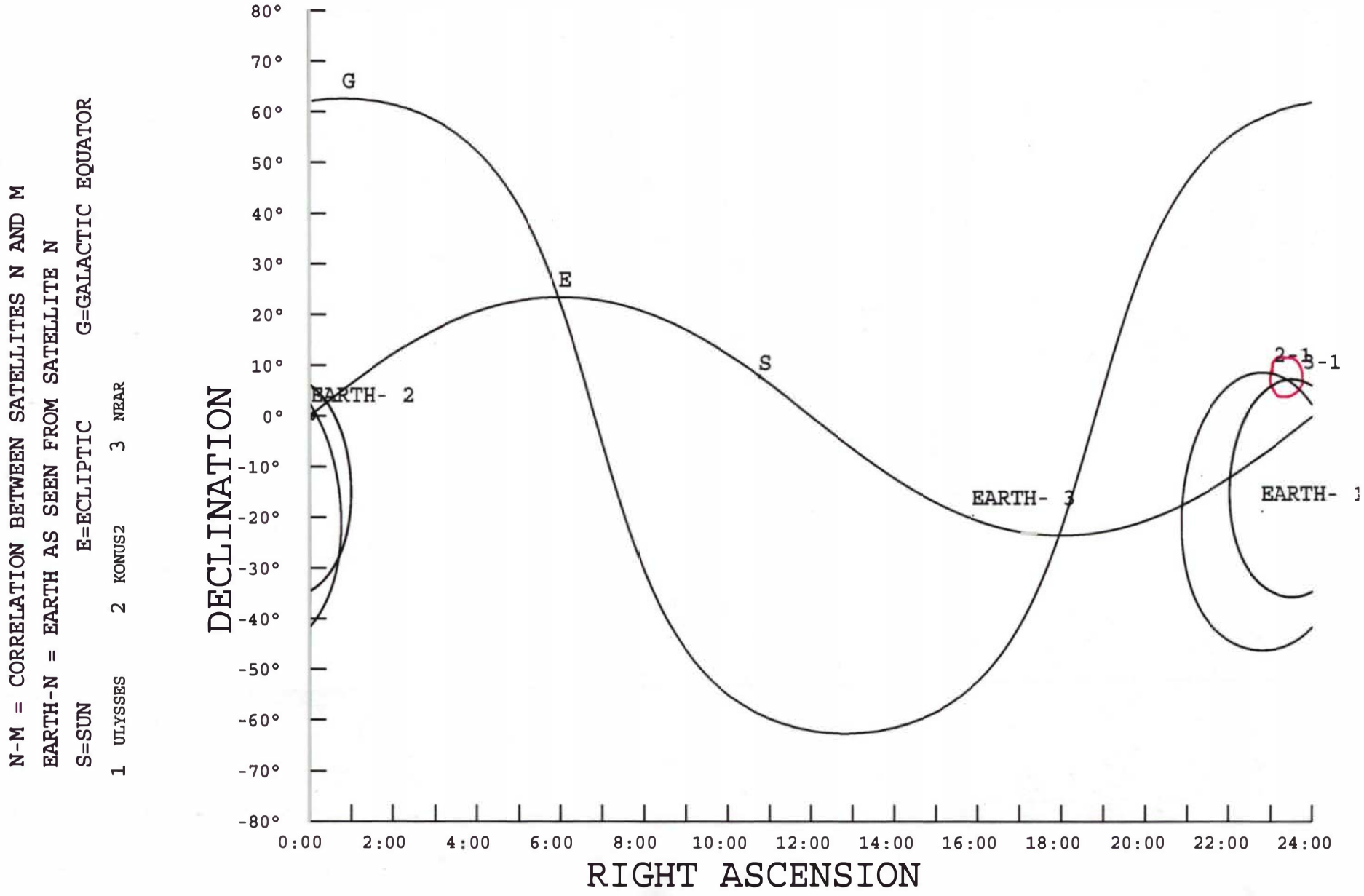
☐ BATSE >100 keV data used for NEAR correlation? N/A

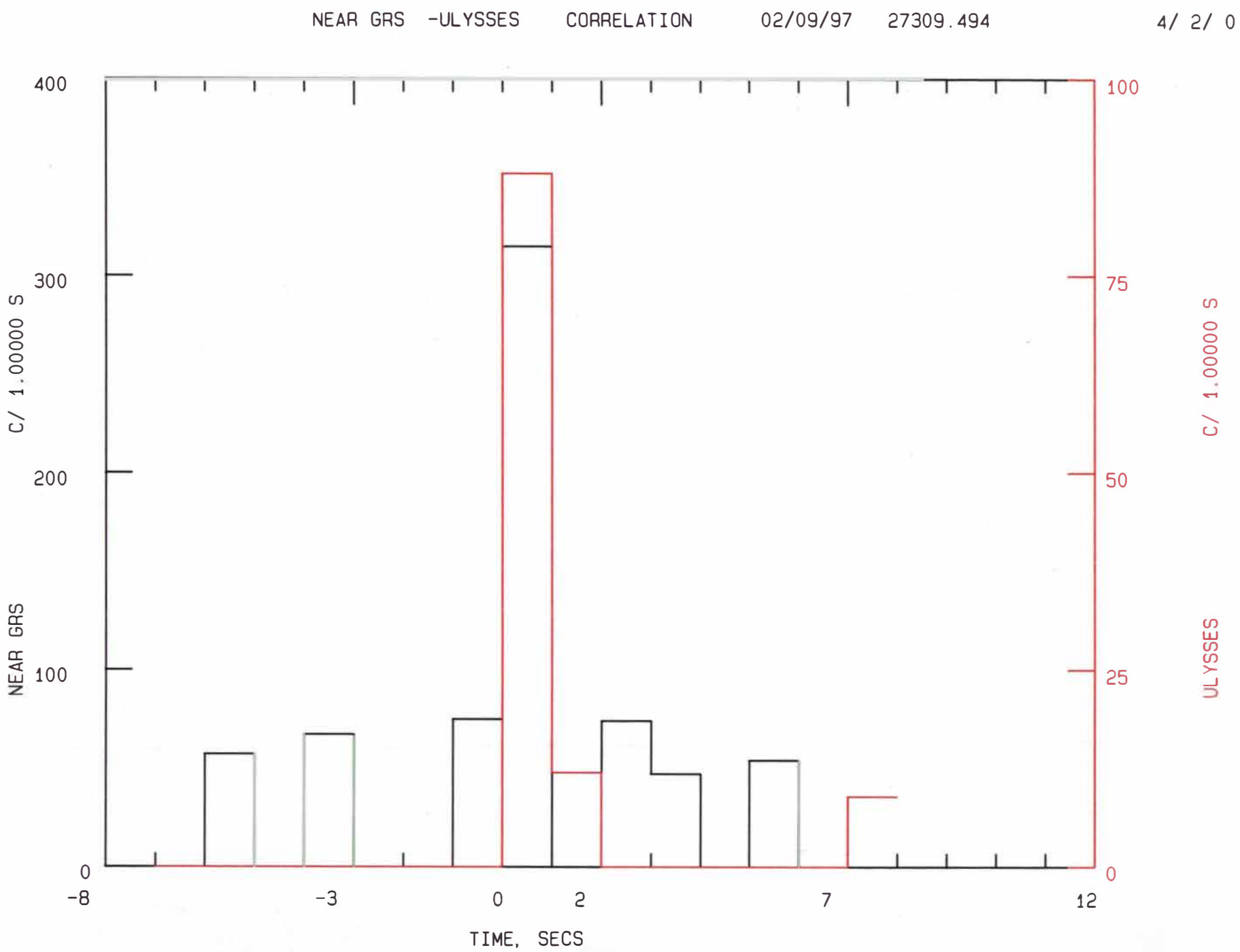
Added EL Oct 29 '08

☑ ACCESS database updated?

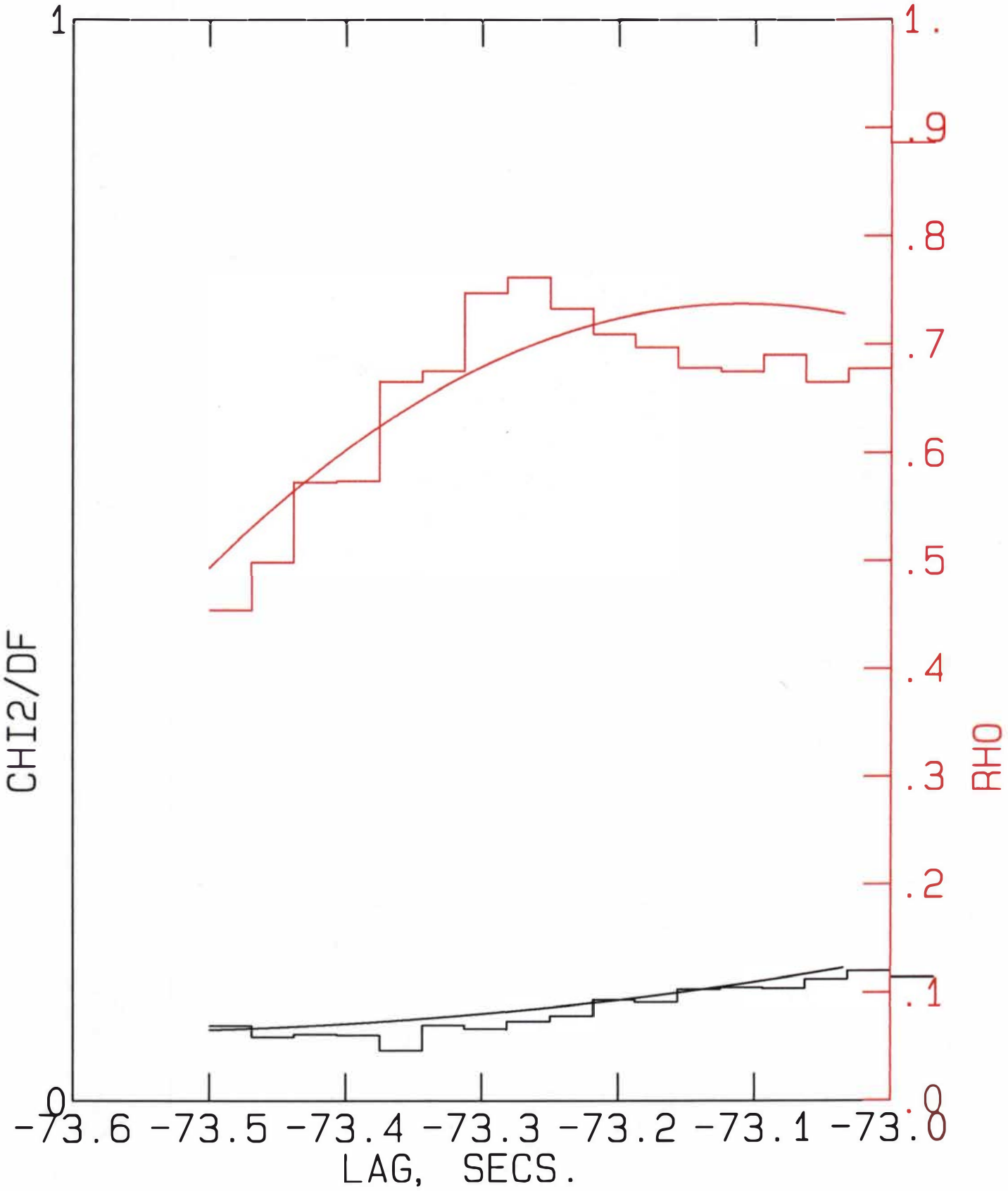
EVENT OF SEP 2, 1997 8:25

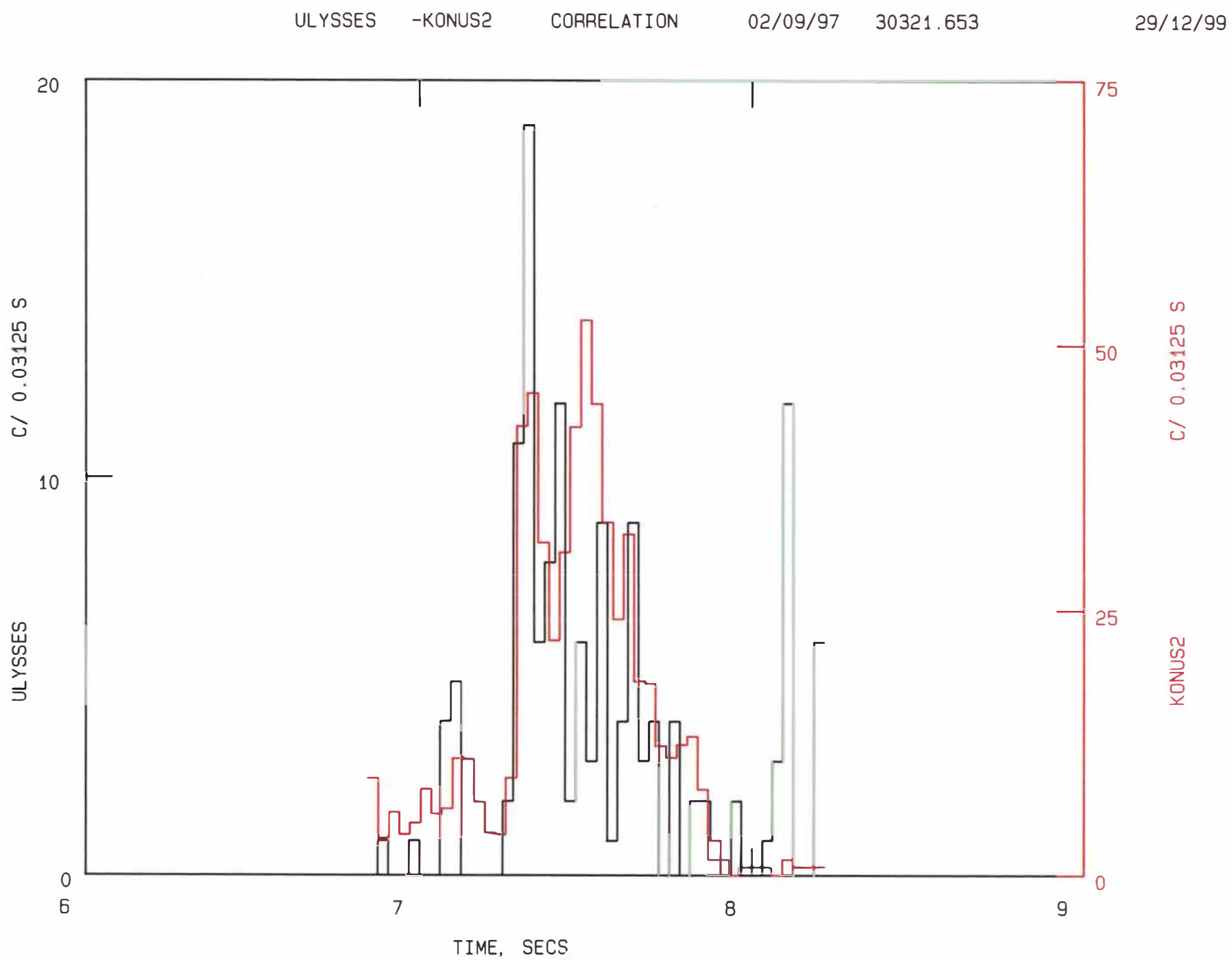
4/ 2/ 0




NEAR GRS -ULYSSES CORRELATION 02/09/97 27309.494
4/ 2/ 0
400
300
200
100
0
C/ 1.00000 S
NEAR GRS
100
75
50
25
0
C/ 1.00000 S
ULYSSES
-8
-3
0
2
7
12
TIME, SECS

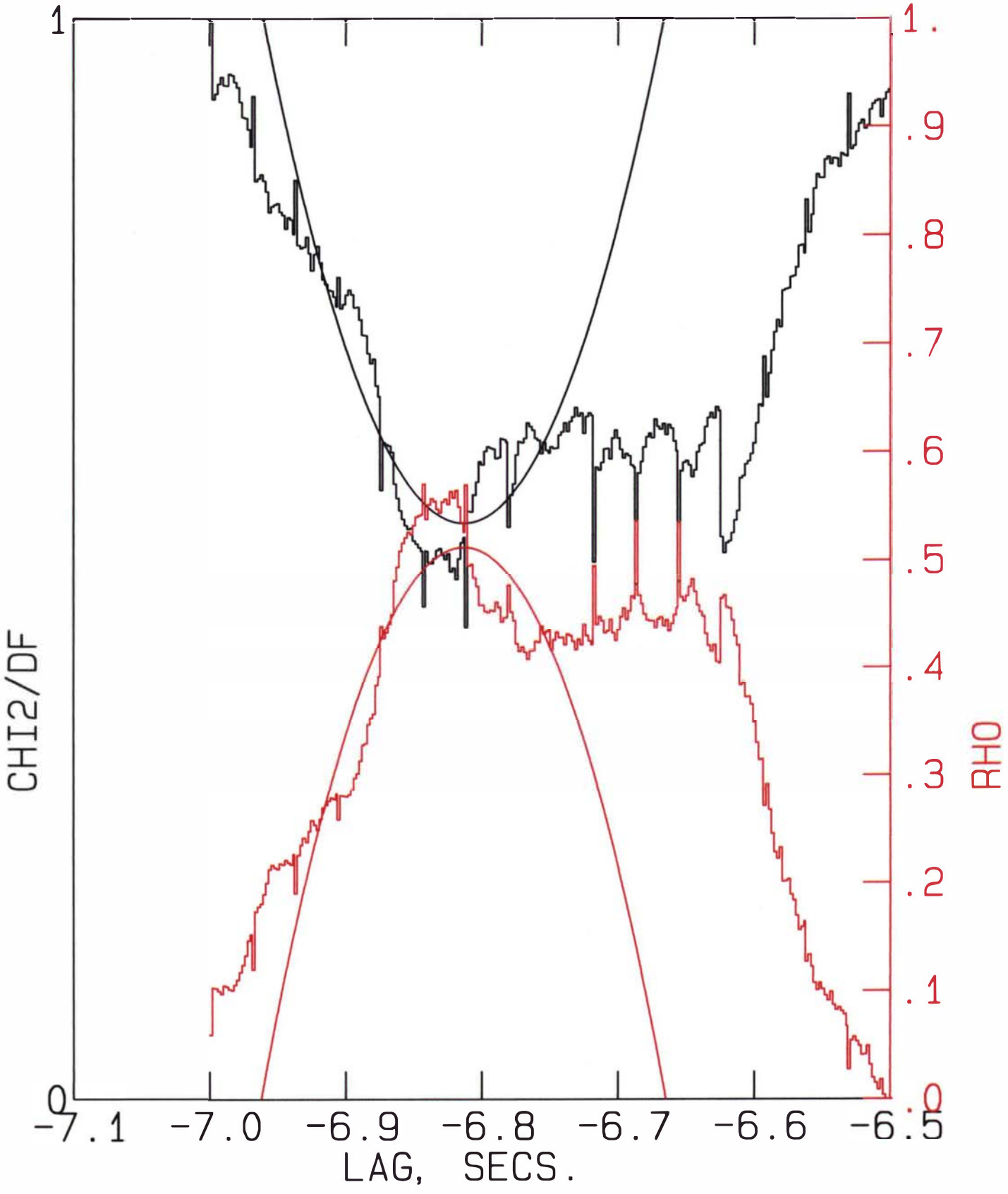
NEAR GRS -ULYSSES CORRELATION 02/09/97 27309.494

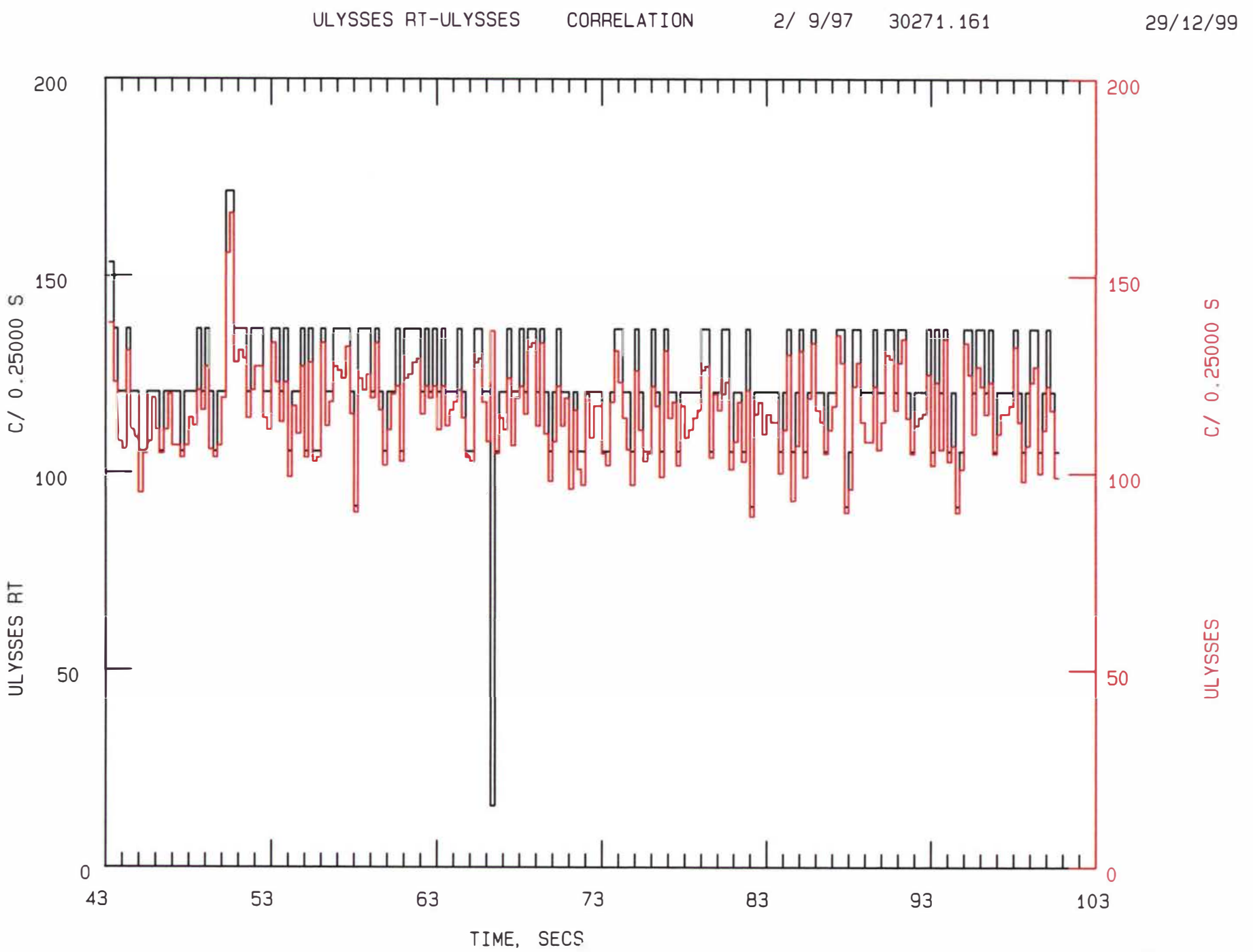



ULYSSES -KONUS2 CORRELATION 02/09/97 30321.653 29/12/99
20
10
0
75
50
25
0
C/ 0.03125 S
ULYSSES
C/ 0.03125 S
KONUS2
6
7
8
9
TIME, SECS

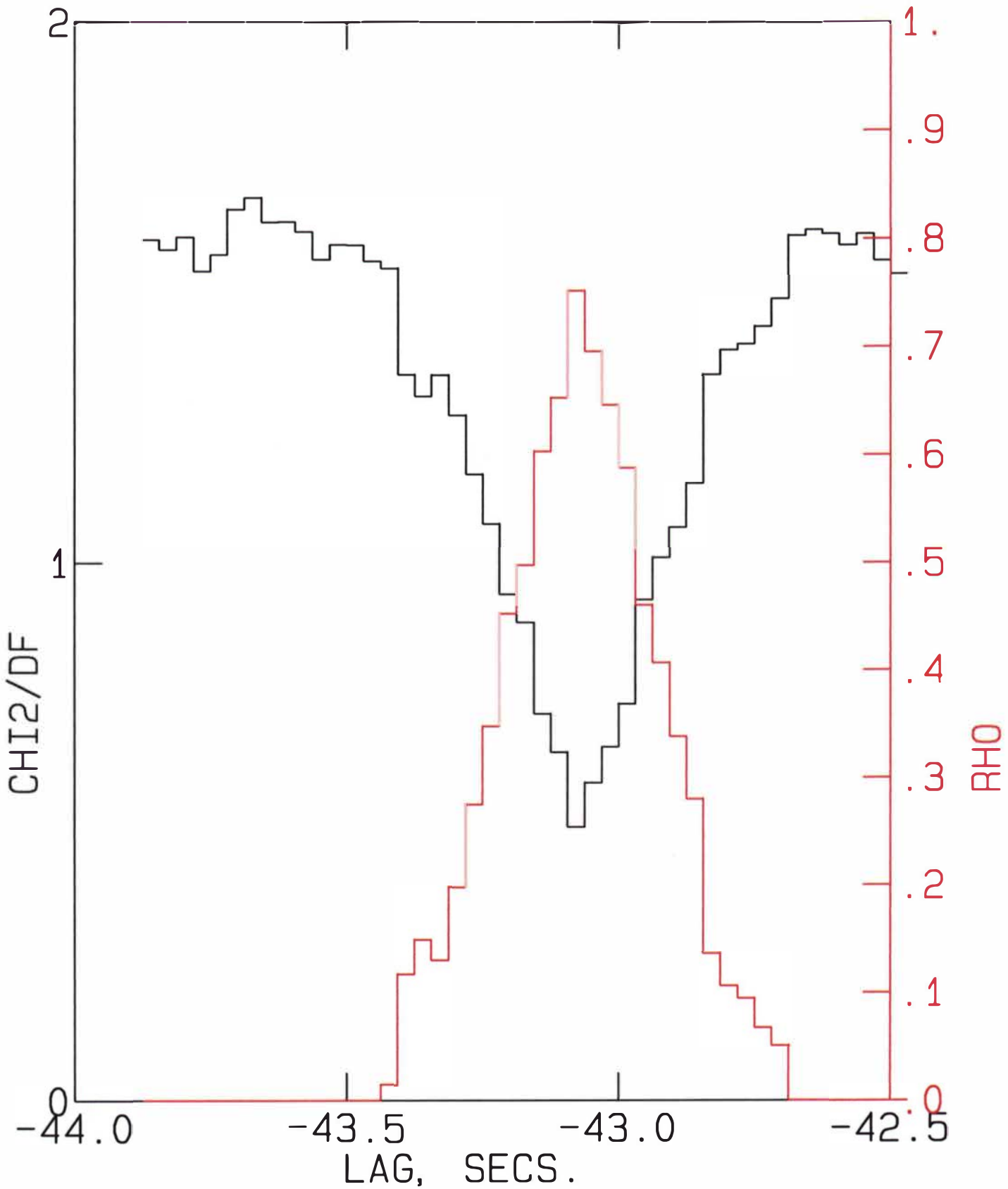
29/12/99

ULYSSES -KONUS2 CORRELATION 02/09/97 30321.653




ULYSSES RT-ULYSSES CORRELATION 2/ 9/97 30271.161 29/12/99
200
150
100
50
0
C/ 0.25000 S
ULYSSES RT
43
53
63
73
83
93
103
TIME, SECS
ULYSSES

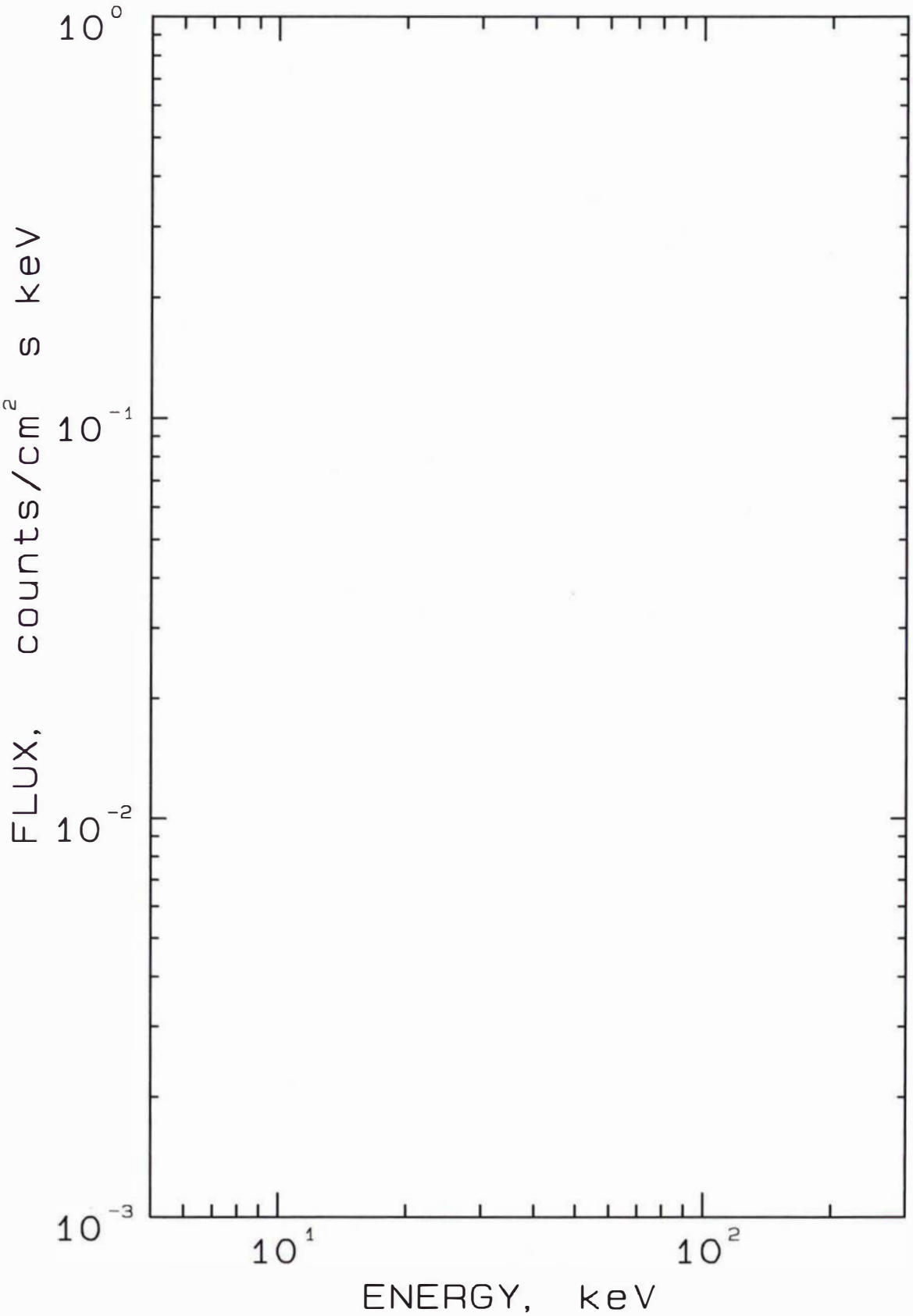
ULYSSES RT-ULYSSES CORRELATION 2/ 9/97 30271.161

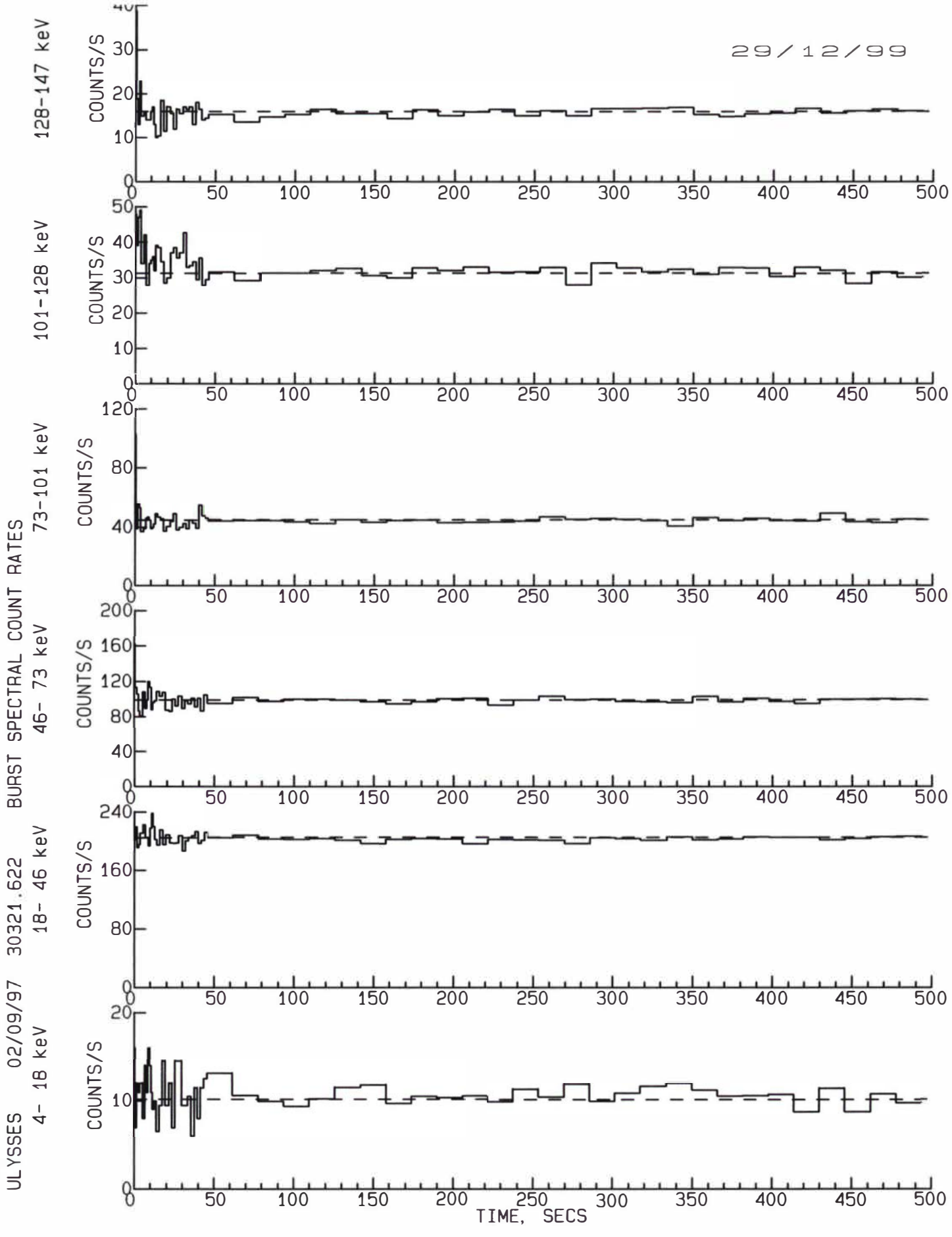


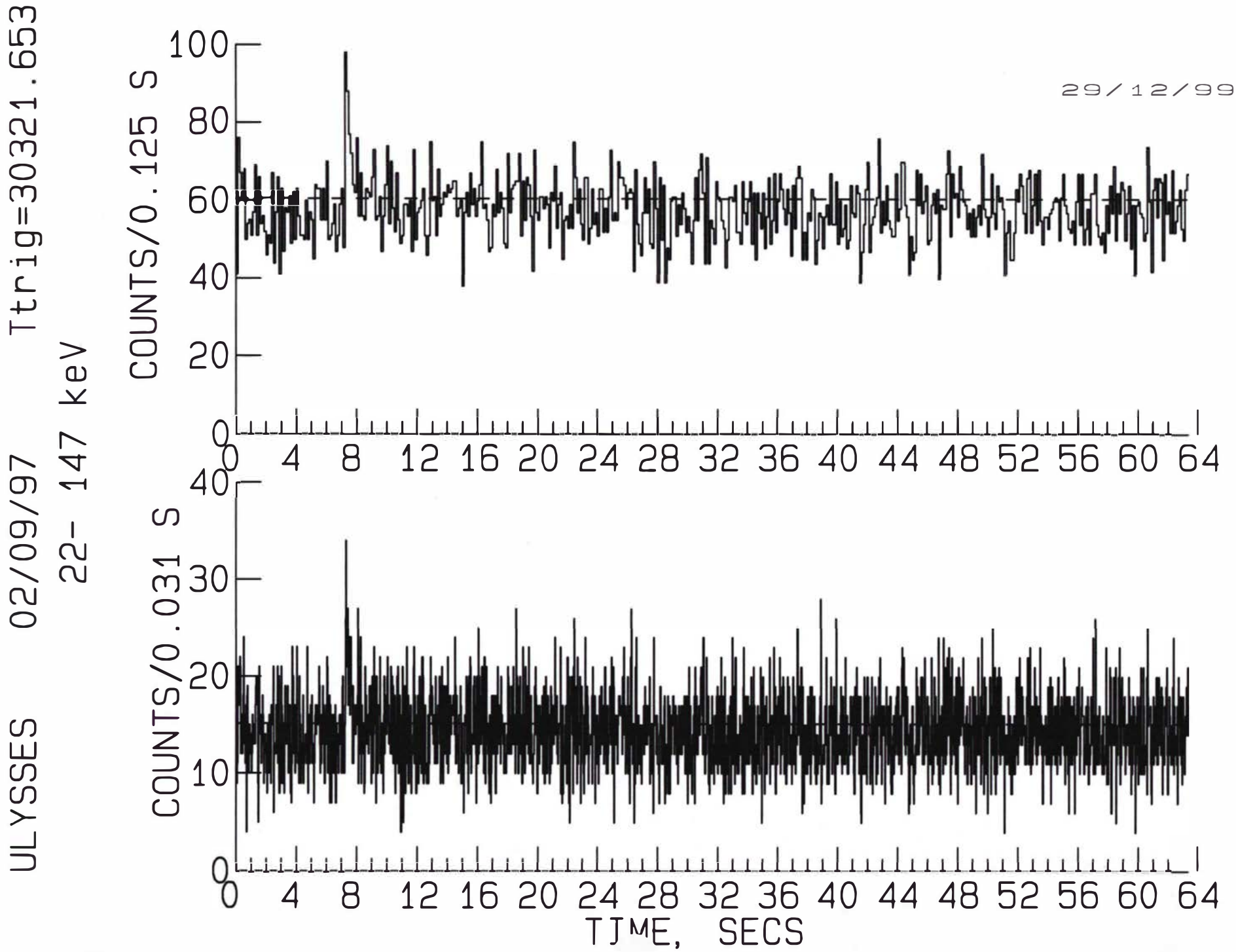
ULYSSES 02/09/97 30321.622

29/12/99

SPECTRUM INTEGRATED OVER ***** SECONDS, INTERVALS 1 TO 10




ULYSSES 02/09/97 30321.622 BURST SPECTRAL COUNT RATES
4- 18 keV
18- 46 keV
46- 73 keV
73-101 keV
101-128 keV
128-147 keV
COUNTS/S
TIME, SECS
29/12/99

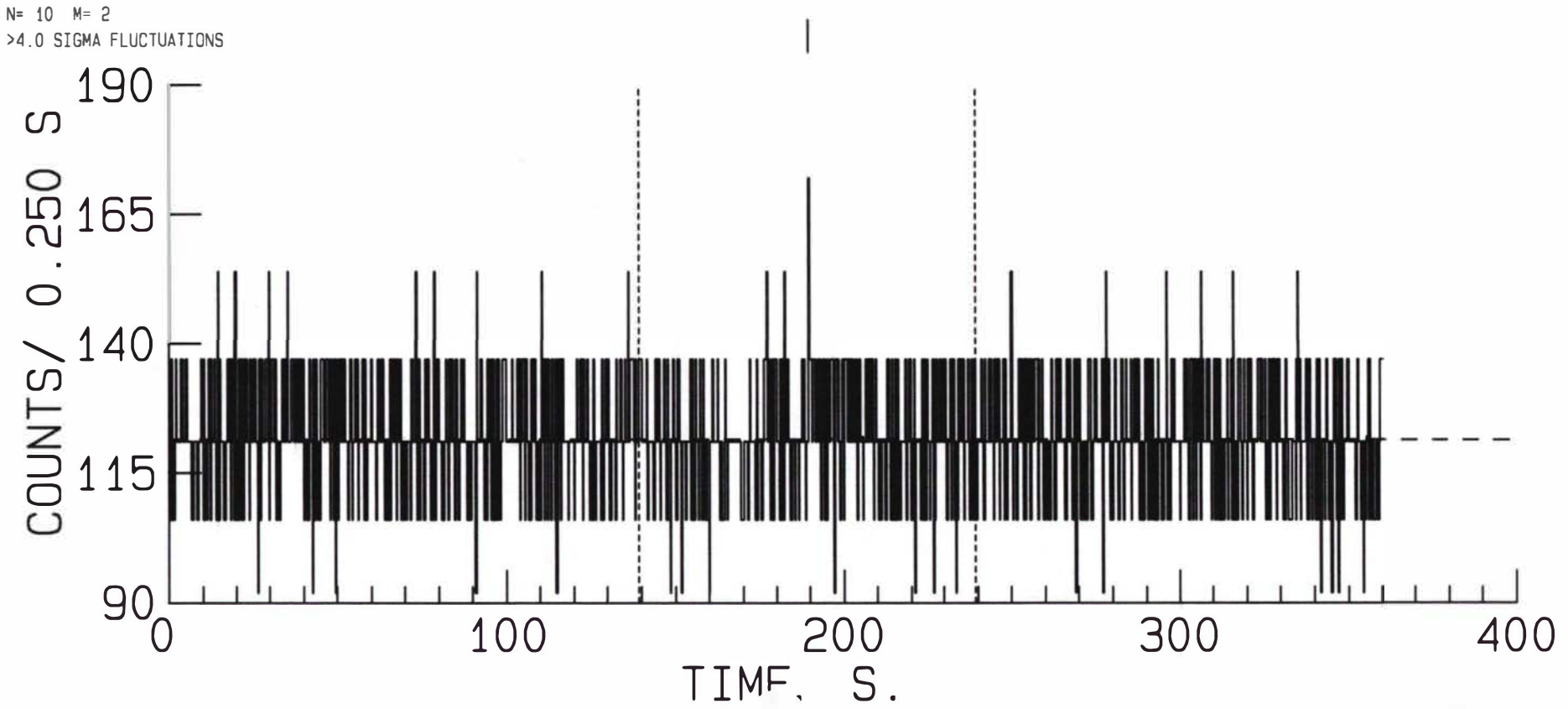

ULYSSES 02/09/97 Ttrig=30321.653
22- 147 keV
29/12/99
COUNTS/0.125 S
COUNTS/0.031 S
TIME, SECS

ULYSSES RT

29/12/99

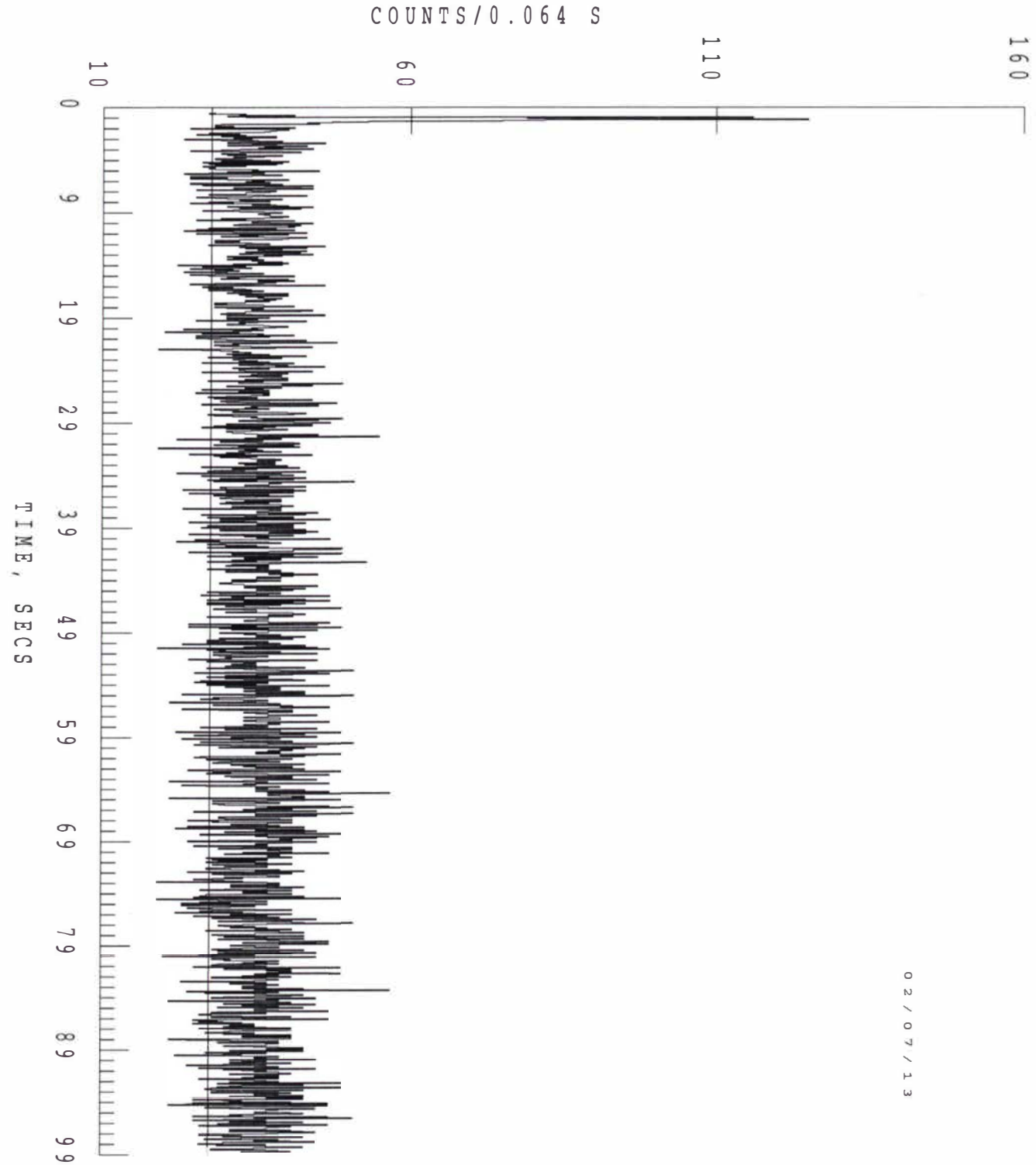
2/ 9/97 30132.135 s

22- 147 keV



KONUS2 02/09/97 27561.329

50- 200 keV



From BUTTERWORTH@tgrs2.gsfc.nasa.gov Mon Mar 16 07:33 PST 1998
Date: Mon, 16 Mar 1998 10:30:34 -0500 (EST)
From: BUTTERWORTH@tgrs3.gsfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
    BUTTERWORTH@tgrs3.gsfc.nasa.gov
Subject: follow-up message on 'possible KONUS SGR bursts' 970902-970908

Kevin,

As promised, here is my (much-delayed) more complete report for your 4 Ulysses events:

Ulysses event: September 2 1997 Ulysses time 08:25:22
The trigger at 07:39:21.329 in the North-facing detector is the only Konus event in the period of interest. The trigger was very hard, lasted 0.3 seconds and had a lot of energy-dependant time structure.

Ulysses event: September 2 1997 Ulysses time 20:52:59
Konus saw a solar flare near 21:10, which lasted about 90 seconds. The very weak single-bin event at 20:31:33 could be noise.

Ulysses event: September 7 1997 Ulysses time 04:44 55
No events are visible in Konus data.

Ulysses event: September 8 1997 Ulysses time 04:59:22
No events are visible in Konus data.

Paul.

From: TGRS3::BUTTERWORTH 6-MAR-1998 16:58:24.56
To: KEVIN
CC: TOM,BUTTERWORTH
Subj: Konus can't confirm any of the 4 Ulysses events as from SGR1806-20

Kevin,

So far I've only looked near the times that Konus would have seen these events if they were from 1806-20. ...

Konus was in read-out mode from 07:43-08:13 on Sep 2 97, so we have no relevant data for the first event in your list if it was from the SGR.

No corresponding events are obvious in the Konus data for the other three events either. (The best candidate I've found so far is near 20:31:33 on 2 Sep, when both the N and S 10-50 keV detectors saw a single high bin).

...

Paul.

Date: Fri, 6 Mar 1998 11:07:25 -0800
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <199803061907.LAA12994@scylla.>
To: butterworth@lheavx.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu

From BUTTERWORTH@tgrs2.gsfc.nasa.gov Fri Mar 6 14:01 PST 1998
Date: Fri, 6 Mar 1998 16:58:23 -0500 (EST)
From: BUTTERWORTH@tgrs3.gsfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
BUTTERWORTH@tgrs3.gsfc.nasa.gov, cline@apache.gsfc.nasa.gov
Subject: Konus can't confirm any of the 4 Ulysses events as from SGR1806-20

Kevin,

So far I've only looked near the times that Konus would have seen these events if they were from 1806-20. I'll send a more complete report on Monday.

Konus was in read-out mode from 07:43-08:13 on Sep 2 97, so we have no relevant data for the first event in your list if it was from the SGR.

No corresponding events are obvious in the Konus data for the other three events either. (The best candidate I've found so far is near 20:31:33 on 2 Sep, when both the N and S 10-50 keV detectors saw a single high bin).

More on Monday...

Paul.

Date: Fri, 6 Mar 1998 11:07:25 -0800
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <199803061907.LAA12994@scylla.>
To: butterworth@lheavx.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: possible KONUS SGR bursts
X-Sun-Charset: US-ASCII

Dear Paul,

Did KONUS detect any of the following Ulysses events? I suspect that they are from SGR1806-20, so they would be in the south-facing detector.

September 2 1997 Ulysses time 08:25:22 Distance from Earth 3100 light s
September 2 1997 Ulysses time 20:52:59
September 7 1997 Ulysses time 04:44 55
September 8 1997 Ulysses time 04:59:22

If they were from SGR1806, the KONUS times would have been about 1300 s earlier than the Ulysses times.

Kevin

From RICHARDSON@SSLLES.MSFC.NASA.GOV Thu Sep 4 12:34 PDT 1997
Return-Path: <RICHARDSON@SSLLES.MSFC.NASA.GOV>
Received: from SSLLES.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
id MAA26333; Thu, 4 Sep 1997 12:34:01 -0700
Date: Thu, 4 Sep 1997 14:33:57 -0500 (CDT)
From: RICHARDSON@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970904143357.20409371@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6355
Content-Type: text
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6355
EVENT OF 1997 SEP 2 DAY OF YEAR=245
EVENT CROSSING TIME AT BATSE : 36620. S. OR 10:10:20.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 75.000 -30.000
BATSE PEAK COUNTING RATE: 2400 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 2/ 9/ 97 IS:
RA= 161.700 DEC= 18.859 DIST= 6.237 AU
BATSE-ULYSSES DISTANCE = 933079595. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 83.43 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 356.19 SECS.
CROSSING TIME AT ULYSSES IS 36976. S. OR 10:16:16 +/- 592.22 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 2/ 9/ 97 IS:
RA= 219.108 DEC= -16.151 DIST= 1.650 AU
MARS-BATSE DISTANCE = 246792048. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 57.67 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 440.26 SECS.
CROSSING TIME AT MARS IS 37060. S. OR 10:17:40 +/- 127.45 SECONDS

BATSE BURST TRIGGER

NO.: 6355

TIME: TJD=0693 SECONDS=36620

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

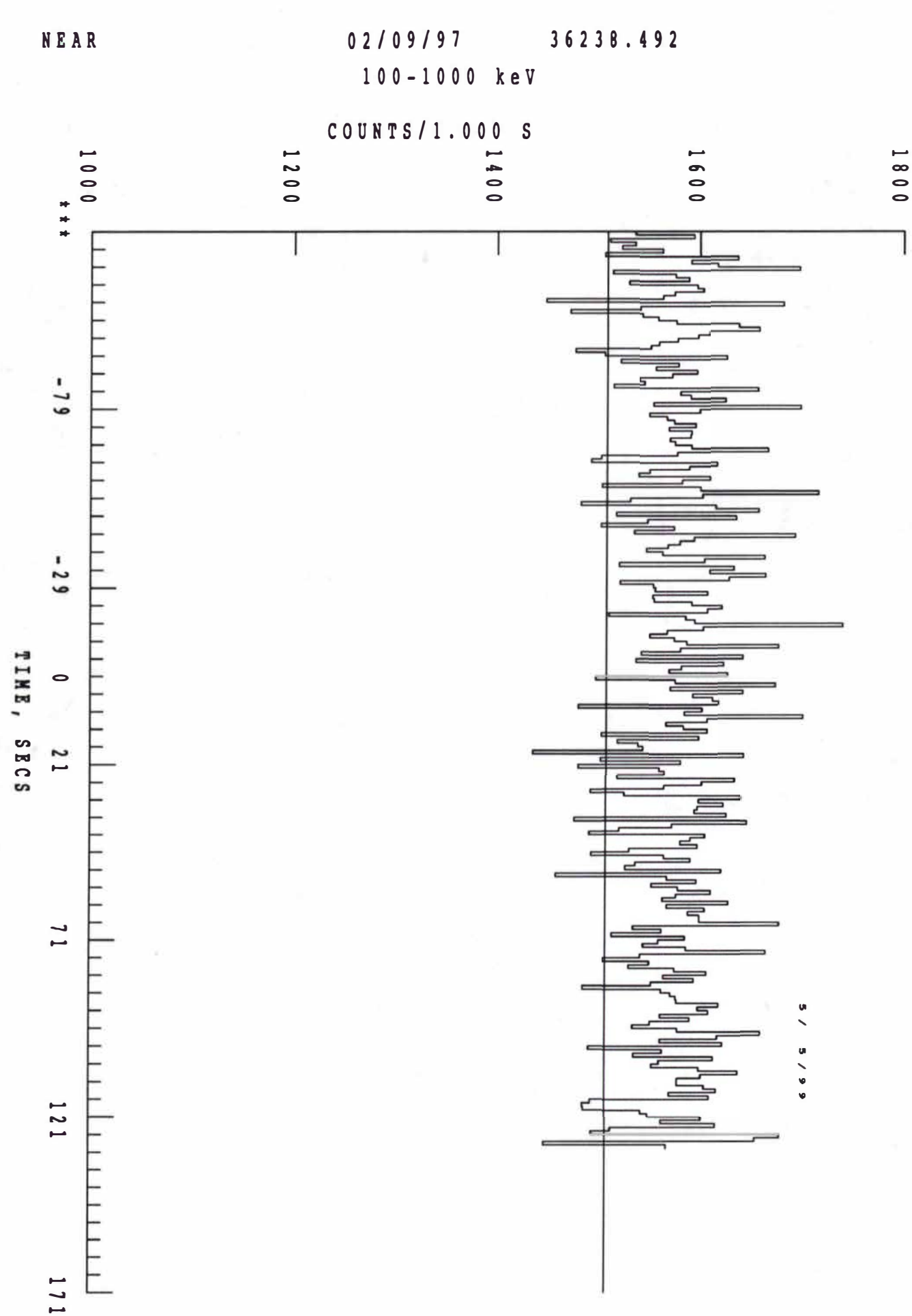
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=42.7 AZIMUTH=43.6 ERROR=2.6 DEGREES

COMMENTS:
GRB. FAST RISE, EXPONENTIAL DECAY. DUR.~60SEC.
NOT VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6355	970902	10693	36620	2400	075	-30	60


NEAR
02/09/97
36238.492
100-1000 keV
COUNTS/1.000 S
1000
1200
1400
1600
1800
***
-79
-29
0
21
71
121
171
TIME, SECS
5/ 5/99

BATSE BURST# 6355

ULYSSES RT 4/ 9/97

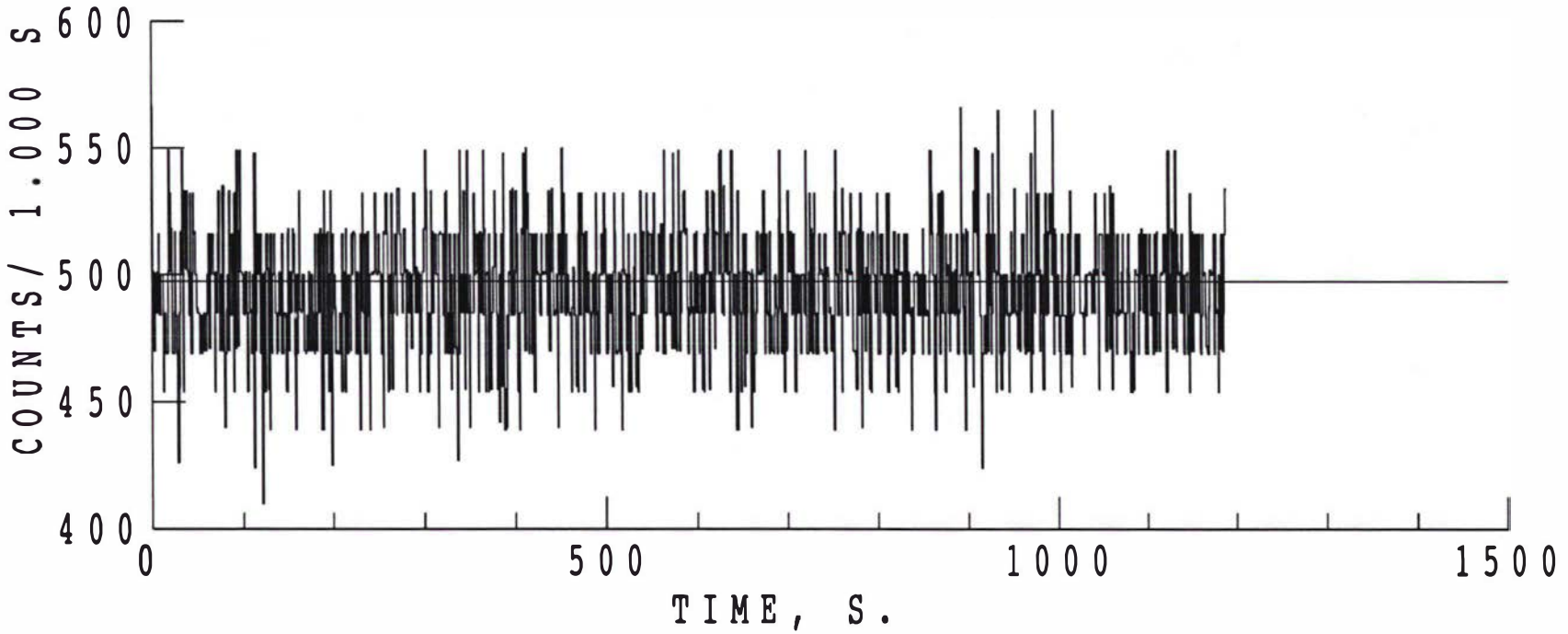
2/ 9/97 36396.031 s

0.250 S INTERVALS REGROUPED BY 4

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From RICHARDSON@ssl.msfc.nasa.gov Thu Sep 4 12:19 PDT 1997
From: RICHARDSON@ssl.msfc.nasa.gov
Date: Thu, 4 Sep 1997 14:18:13 -0500 (CDT)
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6356

TIME: TJD=0693 SECONDS=39346

TYPE: SGR SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=94.2 AZIMUTH=258.3 ERROR=0.4 DEGREES

COMMENTS:
SGR. SINGLE SPIKE WITH SUBSTRUCTURE. DUR.~0.2 SEC. VISIBLE ABOVE 100KEV.

KONUS saw it too.

From golen@mz.ioffe.rssi.ru Tue Nov 4 06:24 PST 1997
To: khurley@sunspot.ssl.berkeley.edu
Date: Tue, 4 Nov 1997 18:43:05 +0300 (MSK)
From: "Sergey V. Golenetskii" <golen@mz.ioffe.rssi.ru>
ect: SGR

Dear Kevin,

We are sending you our list of SGR events. We have 11 bursts in trigger mode with 2 ms resolution and 11 bursts in background mode with 1.472 s resolution. There are many coincidences with your events and it would be very interesting to triangulate them. We can send you all necessary time histories with high resolution and orbital data for Wind and Kosmos-2326. And we are interesting also in getting from you more accurate times and positions of spacecraft for some bursts, mainly 961118, 970629, 970902 and 970912. I have two questions. GRB 961118 05:01 from your list doesn't coincide with our strong event at 05:25:10 and there is disagreement also for 961122.
As for September 2 and 21, Konus-W detected two short GRB (not SGR!) at 04:39:21.329 on September 2 and at 23:17:08.200 on September 21.

Best regards
Sergei

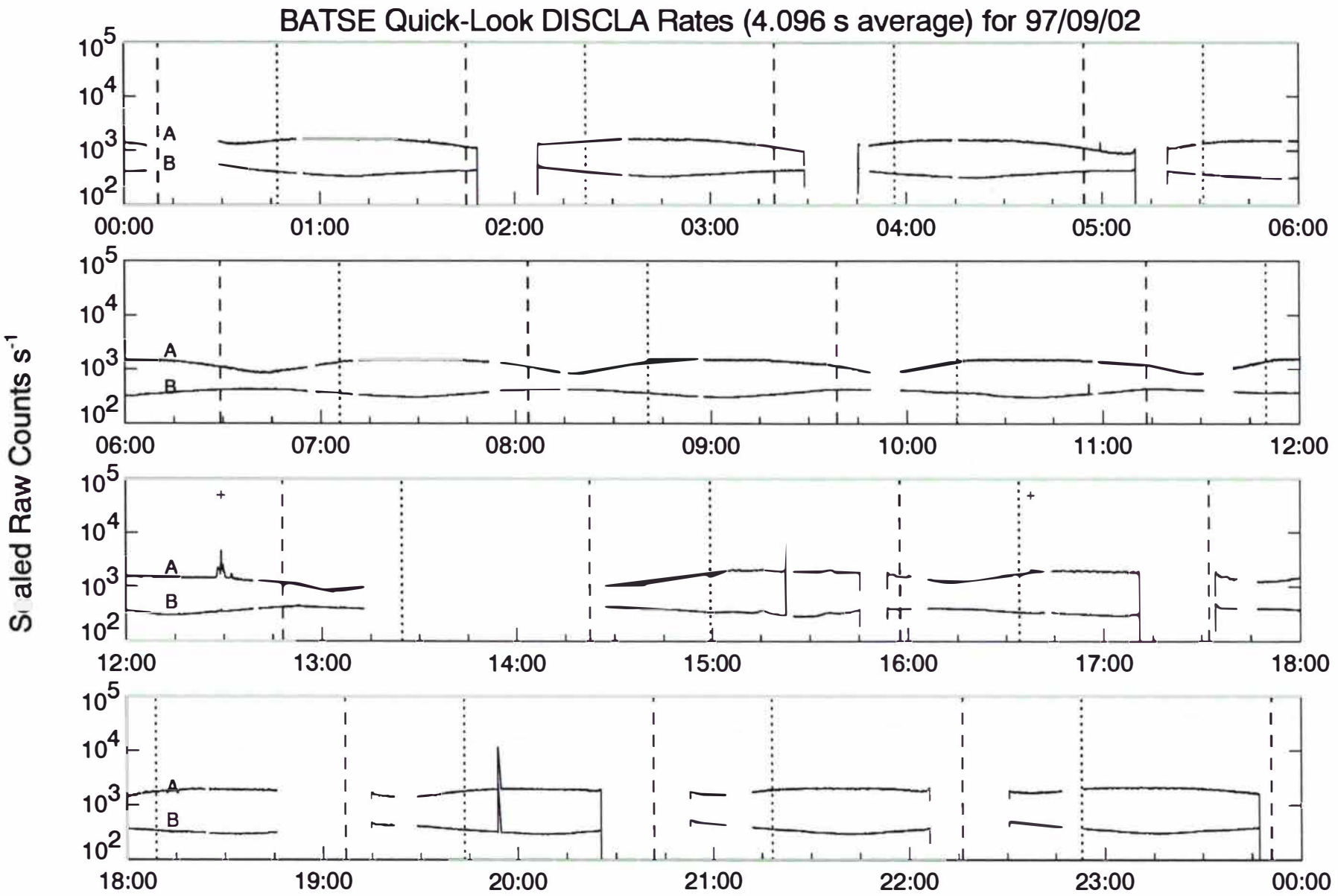
Date	Konus-Wind UT,s	Konus-A UT,s	Triangulation Alpha, deg	Delta, deg	Radius deg		Comments
961105	61338	-					
961105	63250	-					
961118	17555	-					
961118	19510.181	19510.160	184.250	2.707	88.8	0.25	SGR1806-20
961118	19556.133	19556.155	184.250	2.707	88.8	1	SGR1806-20
961118	-	22843					
961118	41172	41172					
961118	57897.506	57897.547	190.133	0.022	82.3	0.23	SGR1806-20
961119	11048	11048.608					
961119	-	16122					
961119	19825.966	-					
961119	-	21323					
961119	-	21537					
961119	22927.736	-					
961119	26644.152	26644					
961119	-	26961					
961121	25539	-					
961122	08258.596	08259					
970629	14424	-					
970629	23493.220	-					
970902	39346.778	-					
970912	22164.078	-					

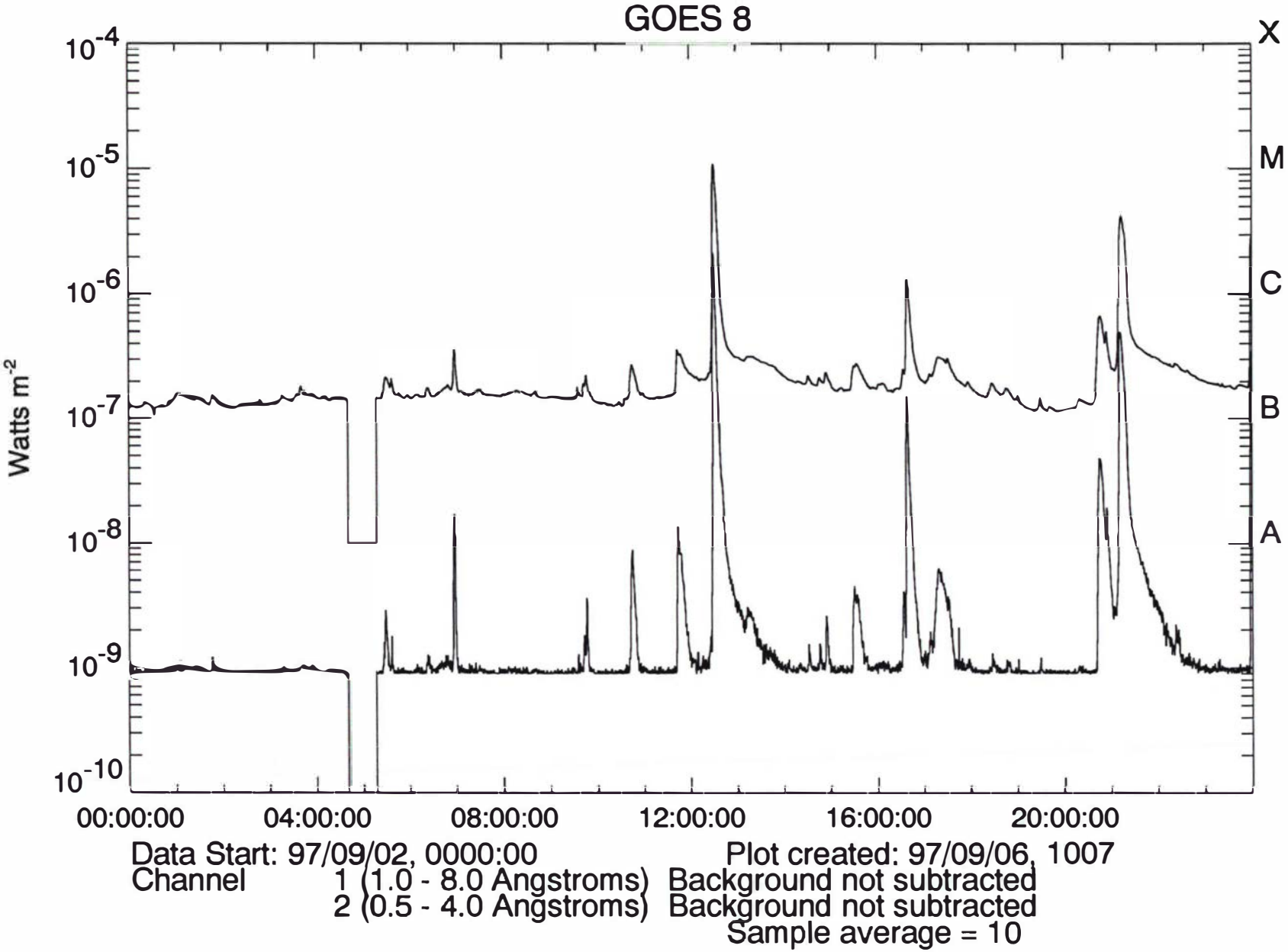
From connauv@eagles.msfc.nasa.gov Fri Sep 5 14:51 PDT 1997
Date: Fri, 5 Sep 1997 15:38:44 -0500
From: connauv@eagles.msfc.nasa.gov (Valerie Connaughton)
To: khurley@sunspot.ssl.berkeley.edu
ject: Re: BATSE 6356
,MS-To: SMTP%"khurley@sunspot.ssl.berkeley.edu"
X-VMS-Cc: KOUVELIOTOU,CONNAUV

Kevin and Chryssa:

Regarding the two Ulysses triggers on 970902 that might be from SGR 1806: the one at 73889 sod occurred in a gap, when high voltages were off, probably during SAA passage. The other is more puzzling: it is not visible in the DISCLA data in the appropriate detectors in Channels 1 and 2, but the source is not occulted at that time (29032 sod). The closest occultation steps occur when the source rises at 27298 sod and sets at 30794 sod.

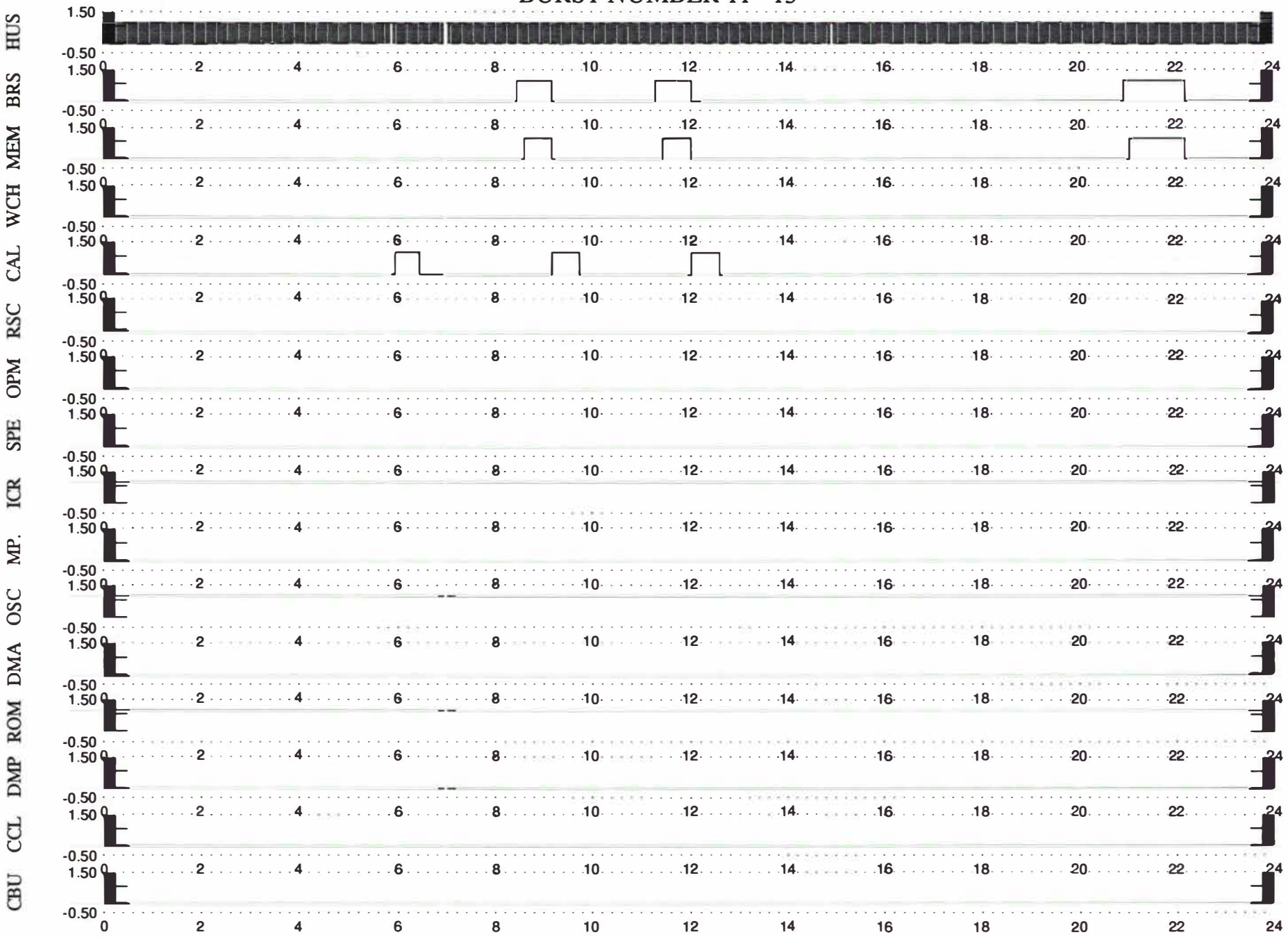
Valerie


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/02
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/06, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare


GOES 8
Watts m-2
10-4
10-5
10-6
10-7
10-8
10-9
10-10
X
M
C
B
A
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/02, 0000:00
Plot created: 97/09/06, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 245, year 1997 to day 245, year 1997 1/14/98

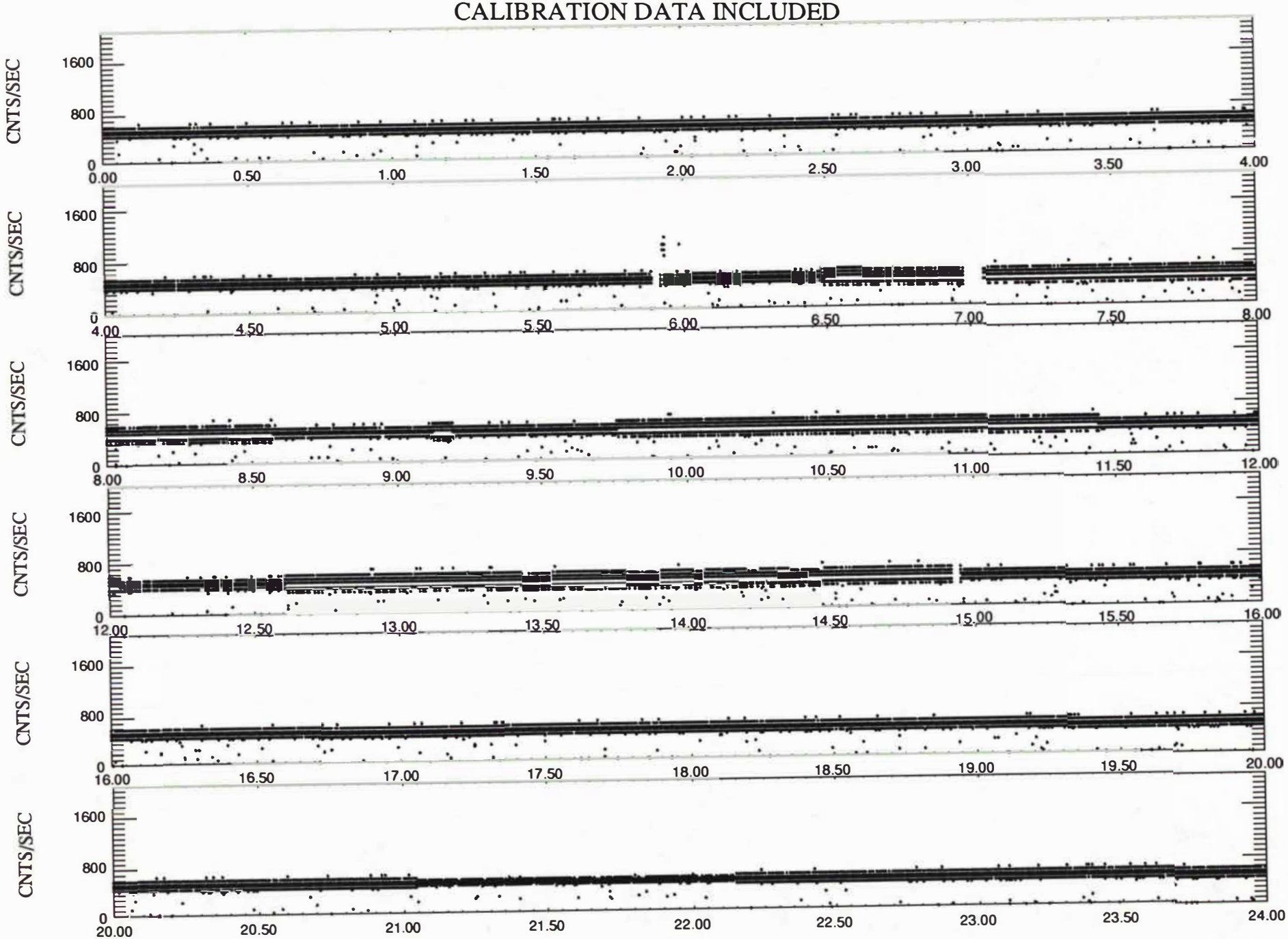
BURST NUMBER 11 - 13



UNIV AL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 245, year 1997 to day 245, year 1997 1/14/98

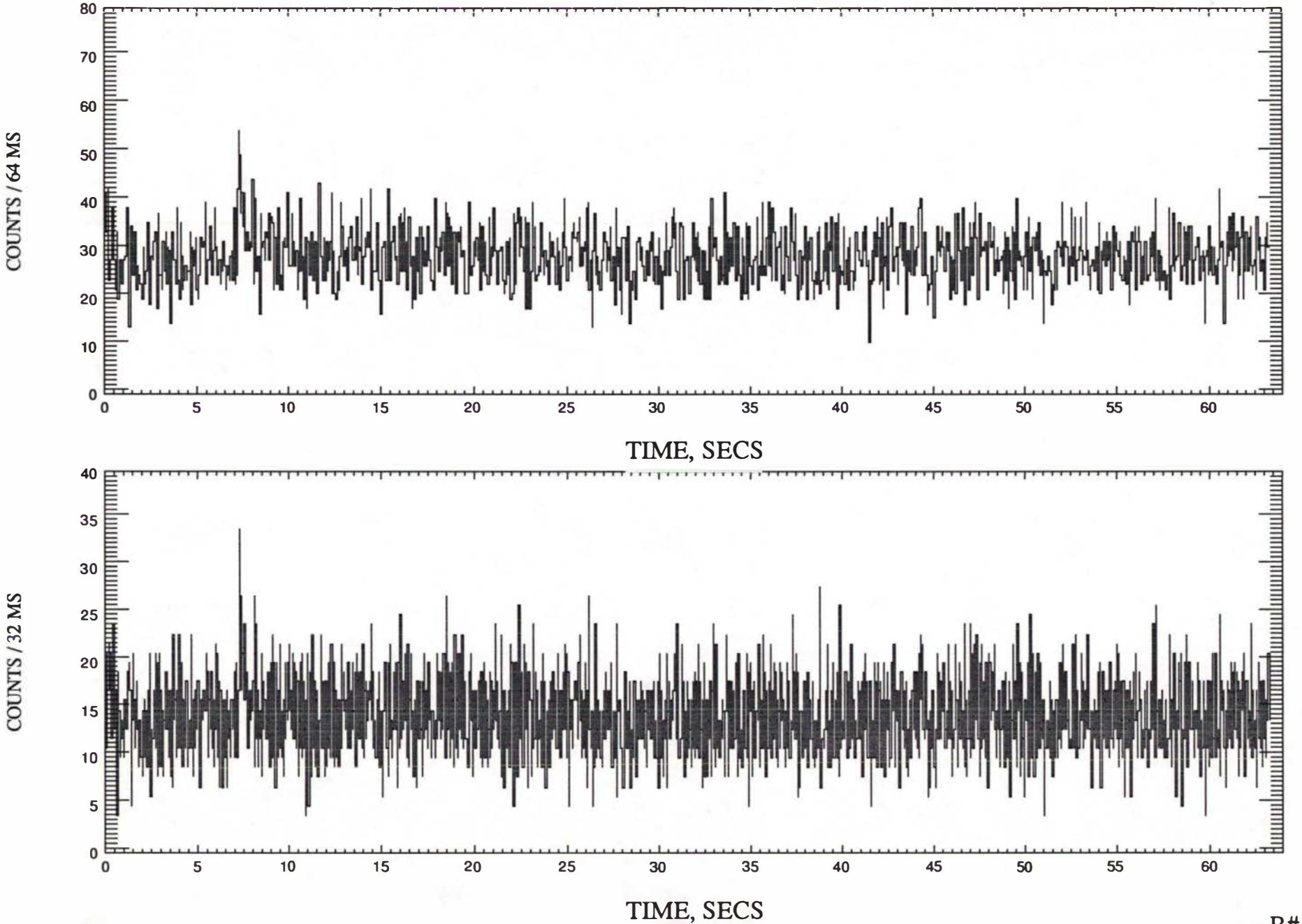
CALIBRATION DATA INCLUDED



UNIV! AL TIME

HUS 2A TRIGGERED DATA EDR day 245, year 1997 1/14/98

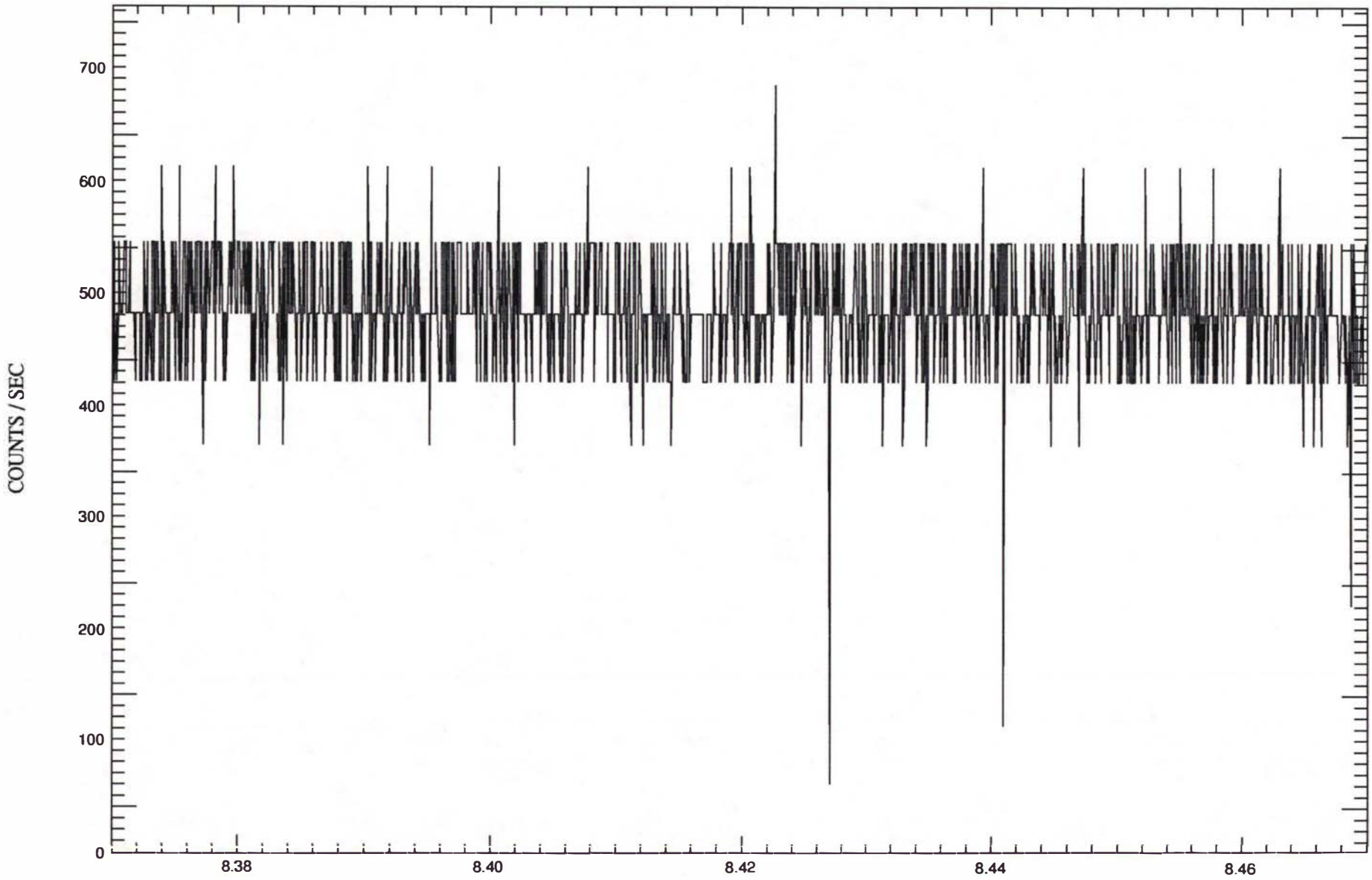
Burst Counter 11 at UT= 8.422672852410 h=30321.622 s 08:25:21.622



B# 1

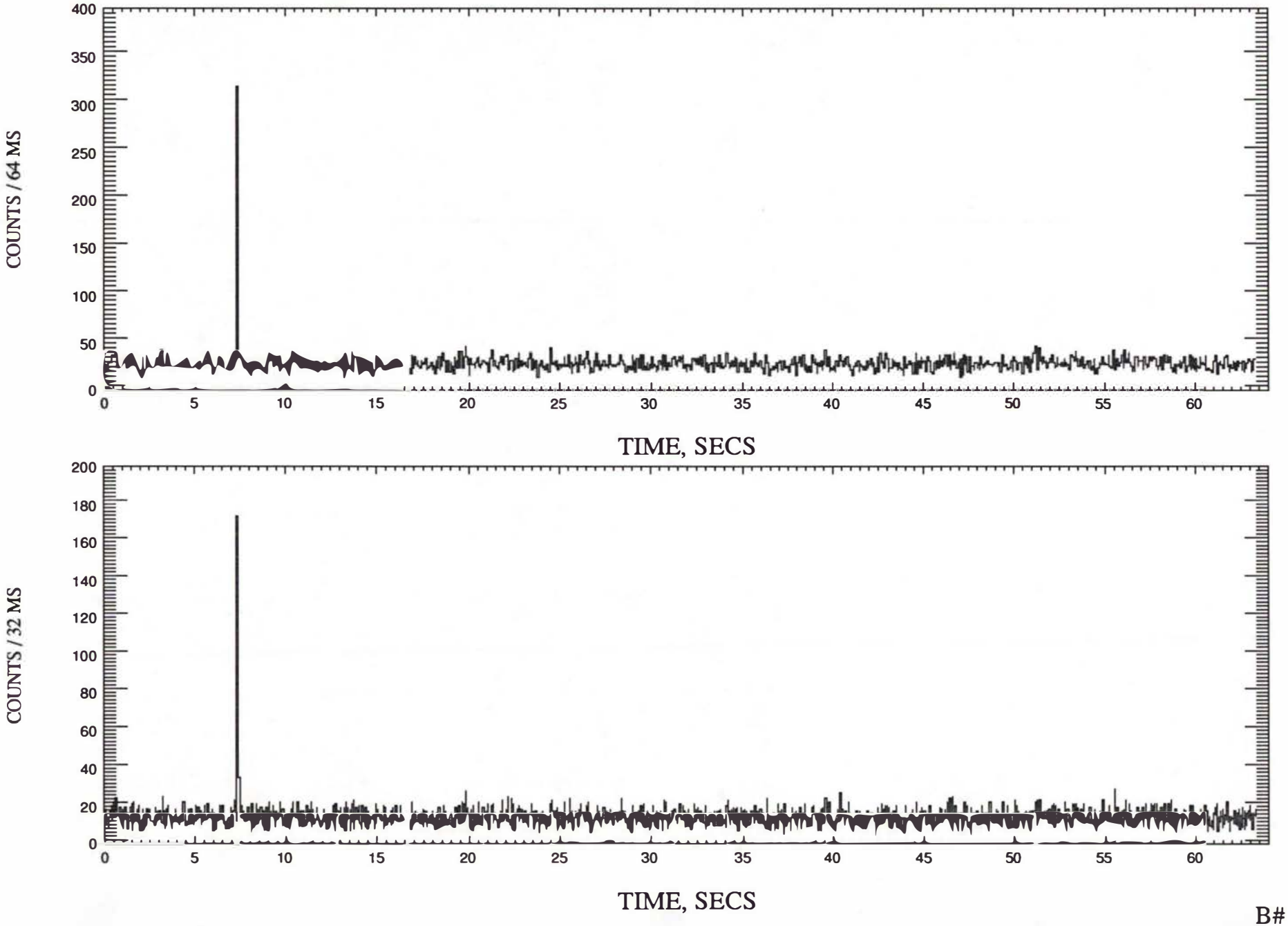
HUS 2A, MODE 1, NOT AVERAGED EDR day 245, year 1997 to day 245, year 1997 1/14/98

CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR day 245, year 1997 1/14/98

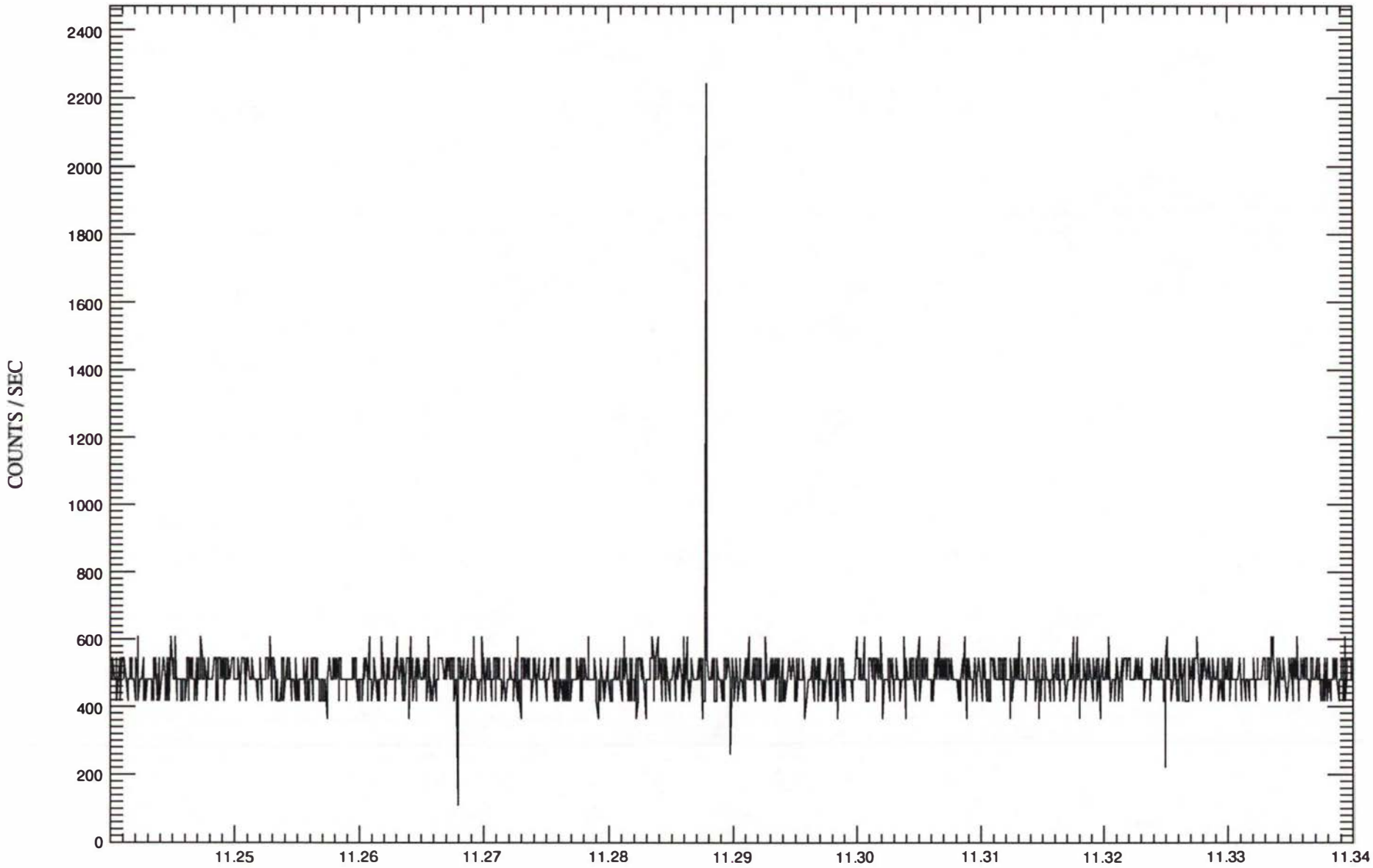
Burst Counter 12 at UT=11.287936986287 h=40636.573 s 11:17:16.573



B# 2

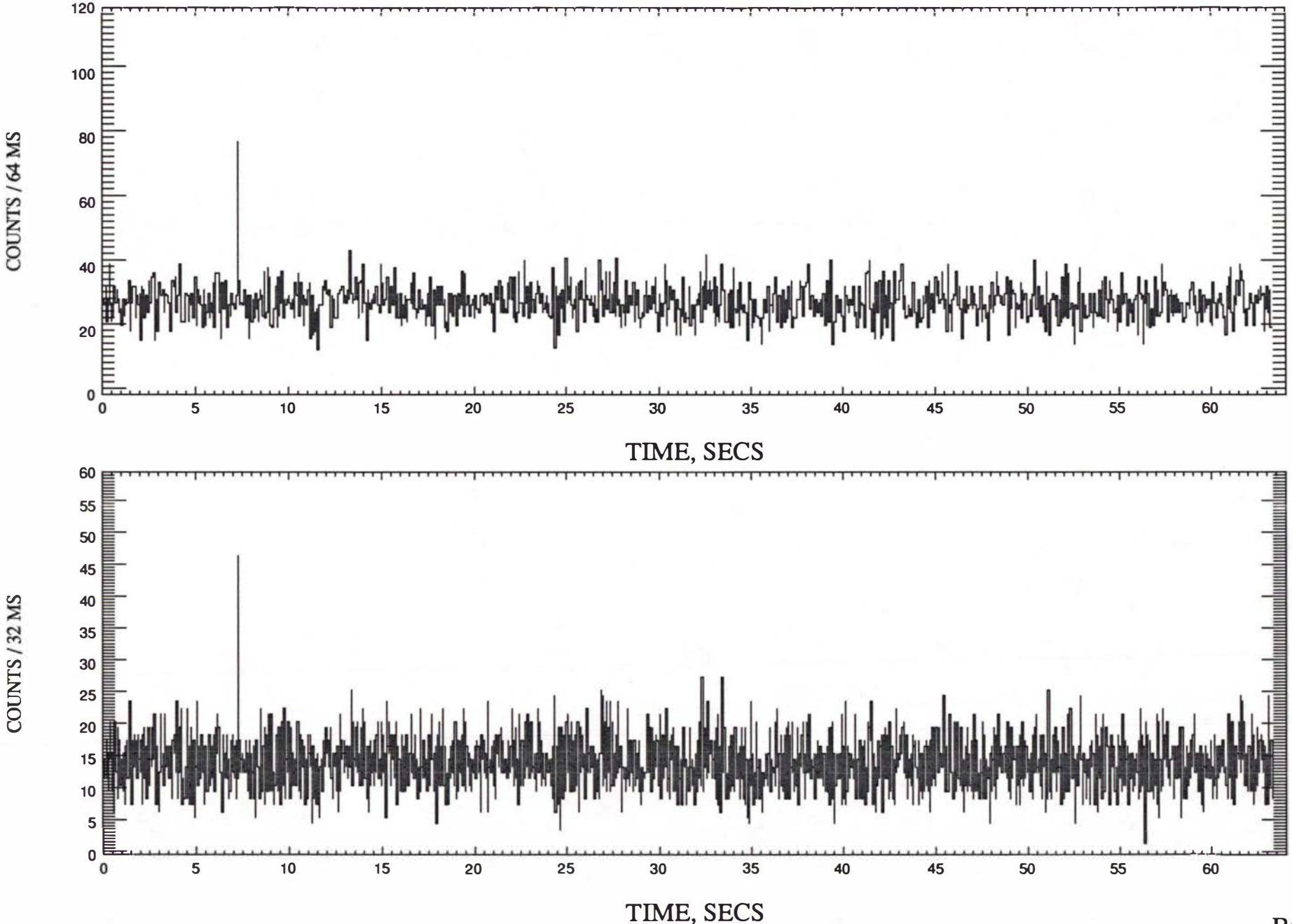
HUS 2A, MODE 1, NOT AVERAGED EDR day 245, year 1997 to day 245, year 1997 1/14/98

CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR day 245, year 1997 1/14/98

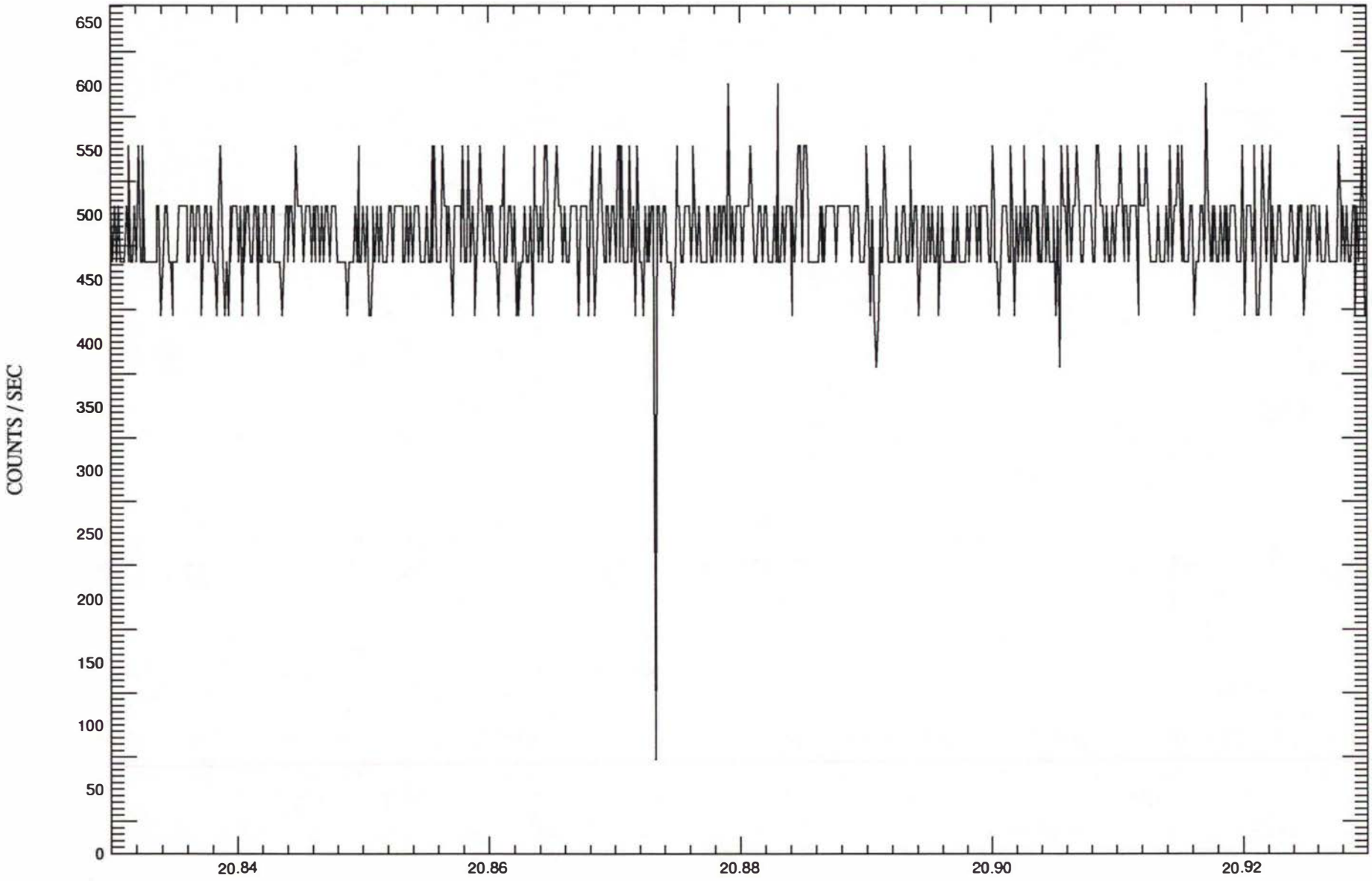
Burst Counter 13 at UT=20.883154623244 h=75179.357 s 20:52:59.357



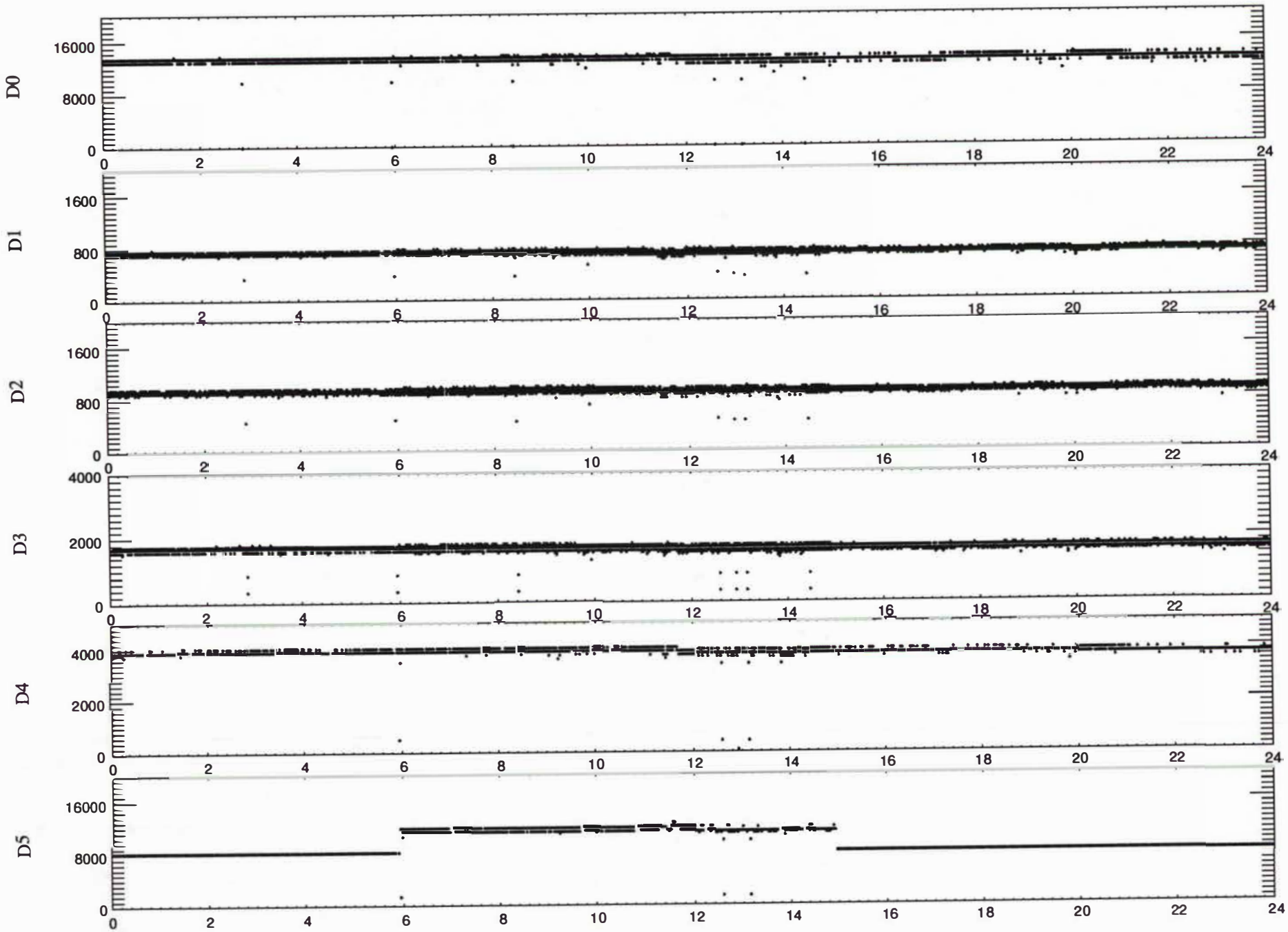
B# 3

HUS 2A, MODE 1, NOT AVERAGED EDR day 245, year 1997 to day 245, year 1997 1/14/98

CALIBRATION DATA INCLUDED



HUS 2B COUNTS / SEC EDR day 245, year 1997 to day 245, year 1997 1/14/98



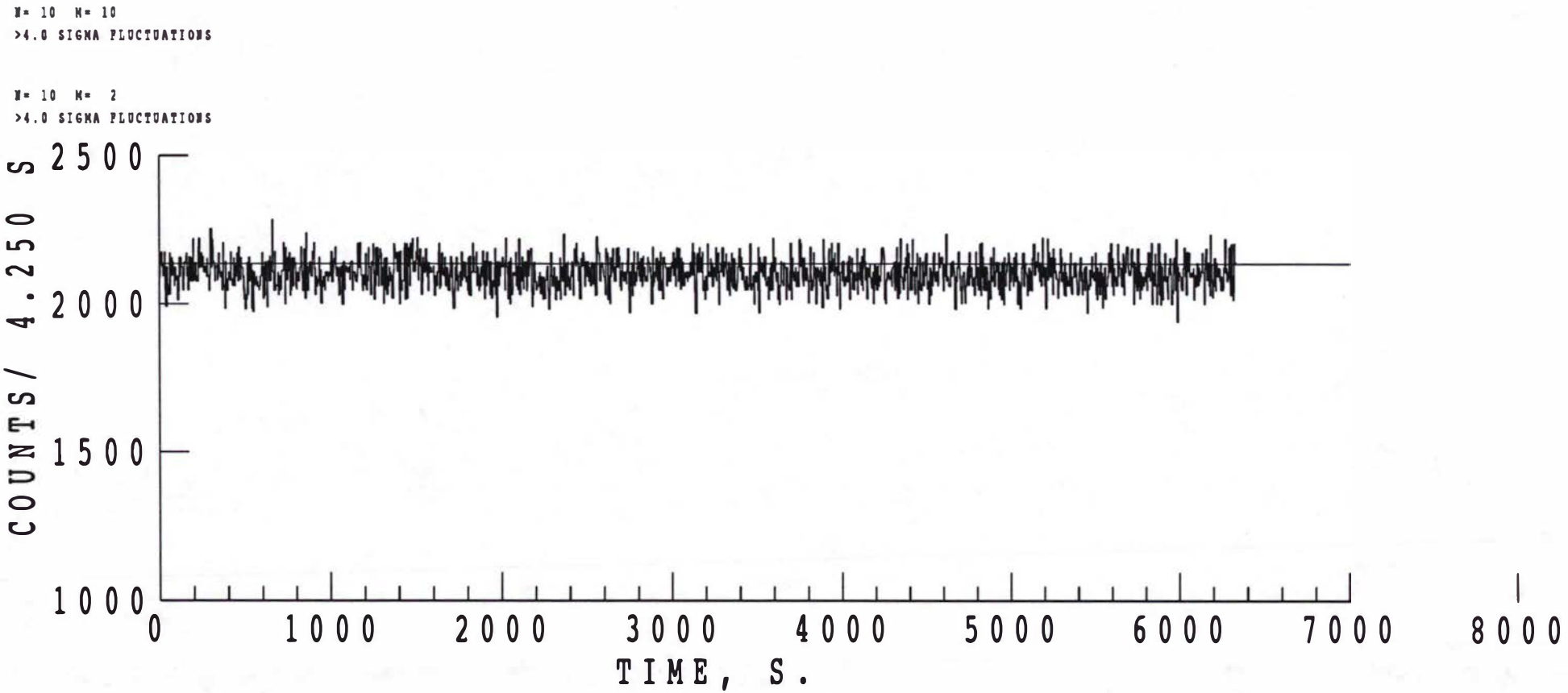
KONUS

ULYSSES RT 04/02/00

03/09/97 31680.121 s

0.250 S INTERVALS REGROUPED BY 17

0- 0 keV



From WOODSP@ssl.msfc.nasa.gov Tue Sep 9 11:46 PDT 1997
From: WOODSP@ssl.msfc.nasa.gov
Date: Tue, 9 Sep 1997 13:44:56 -0500 (CDT)
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6357

TIME: TJD=0694 SECONDS=39472

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT.

From WOODSP@ssl.msfc.nasa.gov Tue Sep 9 11:50 PDT 1997
Return-Path: <WOODSP@ssl.msfc.nasa.gov>
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
id LAA08375; Tue, 9 Sep 1997 11:50:16 -0700
From: WOODSP@ssl.msfc.nasa.gov
Date: Tue, 9 Sep 1997 13:49:55 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970909134955.2041326d@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6358
Content-Type: text
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6358
EVENT OF 1997 SEP 3 DAY OF YEAR=246
EVENT CROSSING TIME AT BATSE : 41929. S. OR 11:38:49.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 18.000 14.000
BATSE PEAK COUNTING RATE: 12000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 3/ 9/ 97 IS:
RA= 161.853 DEC= 18.752 DIST= 6.237 AU
BATSE-ULYSSES DISTANCE = 933067539. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 48.38 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 2067.12 SECS.
CROSSING TIME AT ULYSSES IS 43996. S. OR 12:13:16 +/- 485.36 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 3/ 9/ 97 IS:
RA= 219.751 DEC= -16.362 DIST= 1.655 AU
MARS-BATSE DISTANCE = 247588896. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 21.11 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 770.42 SECS.
CROSSING TIME AT MARS IS 42699. S. OR 11:51:39 +/- 63.35 SECONDS

BATSE BURST TRIGGER

NO.: 6358

TIME: TJD=0694 SECONDS=41929

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

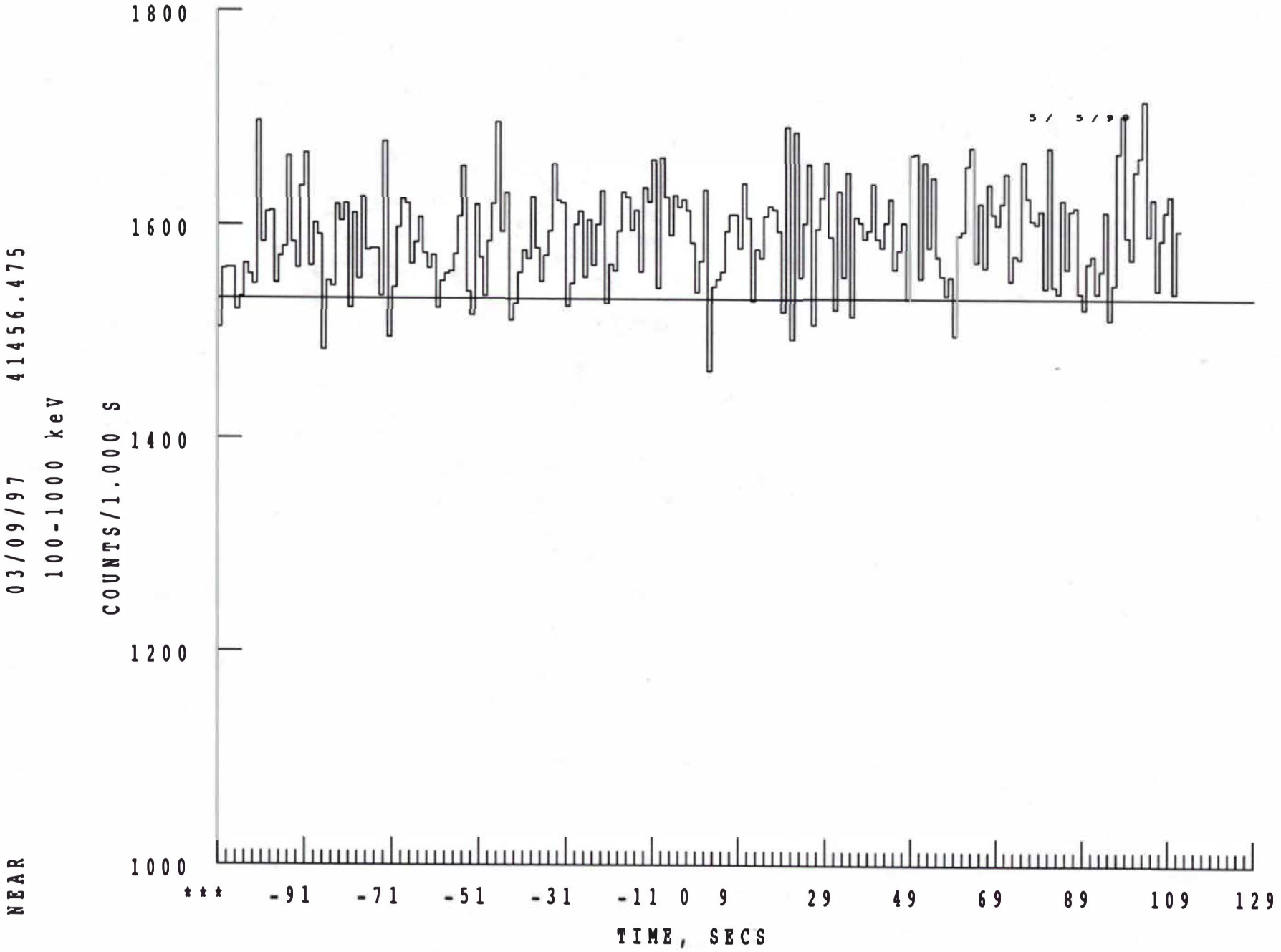
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=129.6 AZIMUTH=137.1 ERROR=8.6 DEGREES

COMMENTS:
GRB LASTING ~ 0.11 SEC. SINGLE PULSE WITH SUBSTRUCTURE.
NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6358	970903	10694	41929	12000	018	+14	.11


NEAR
03/09/97 41456.475
100-1000 keV
COUNTS/1.000 S
1800
1600
1400
1200
1000
*** -91 -71 -51 -31 -11 0 9 29 49 69 89 109 129
TIME, SECS

BATSE BURST# 6358

ULYSSES RT 12/ 9/97

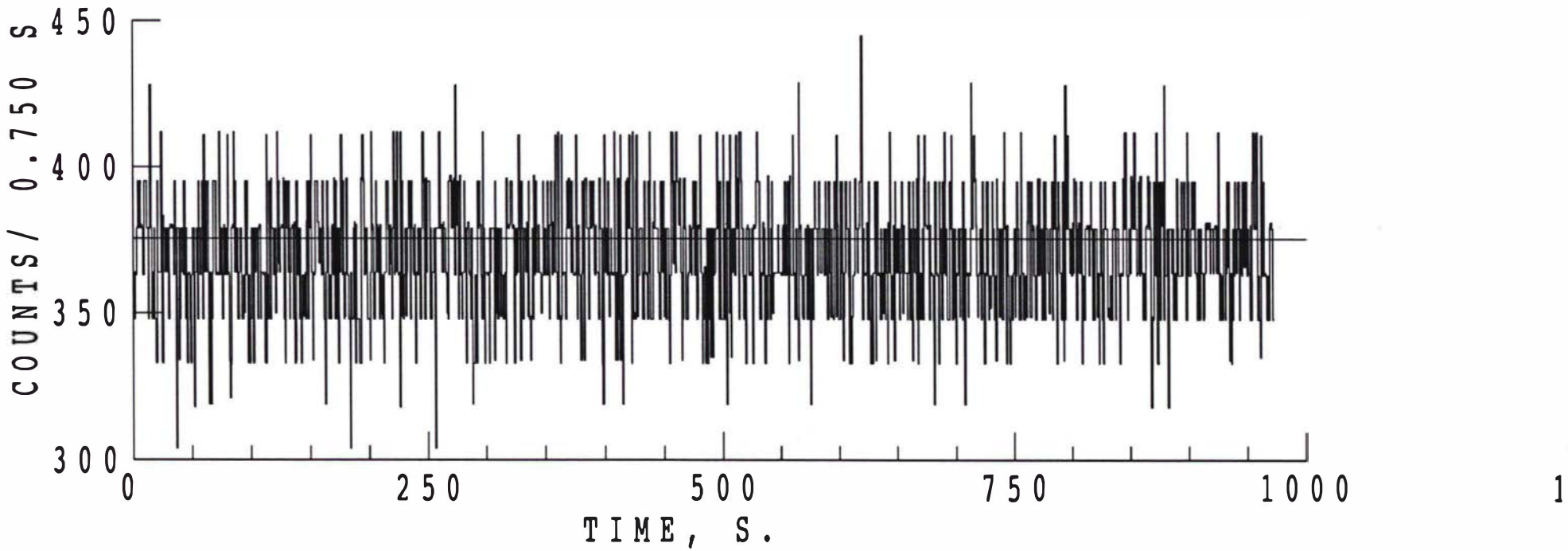
3/ 9/97 43524.004 s

0.250 S INTERVALS REGROUPED BY 3

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From WOODSP@SSLLES.MSFC.NASA.GOV Tue Sep 9 11:51 PDT 1997
Return-Path: <WOODSP@SSLLES.MSFC.NASA.GOV>
Received: from SSLLES.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
id LAA08405; Tue, 9 Sep 1997 11:51:40 -0700
Date: Tue, 9 Sep 1997 13:50:57 -0500 (CDT)
From: WOODSP@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970909135057.2041326d@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6359
Content-Type: text
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6359
EVENT OF 1997 SEP 3 DAY OF YEAR=246
EVENT CROSSING TIME AT BATSE : 62709. S. OR 17:25:09.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 238.000 -58.000
BATSE PEAK COUNTING RATE: 1900 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 3/ 9/ 97 IS:
RA= 161.888 DEC= 18.728 DIST= 6.237 AU
BATSE-ULYSSES DISTANCE = 933060406. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 81.27 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 472.57 SECS.
CROSSING TIME AT ULYSSES IS 63182. S. OR 17:33:01 +/- 591.27 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 3/ 9/ 97 IS:
RA= 219.751 DEC= -16.362 DIST= 1.655 AU
MARS-BATSE DISTANCE = 247588896. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=136.20 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -596.10 SECS.
CROSSING TIME AT MARS IS 62113. S. OR 17:15:12 +/- 90.19 SECONDS

BATSE BURST TRIGGER

NO.: 6359

TIME: TJD=0694 SECONDS=62709

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

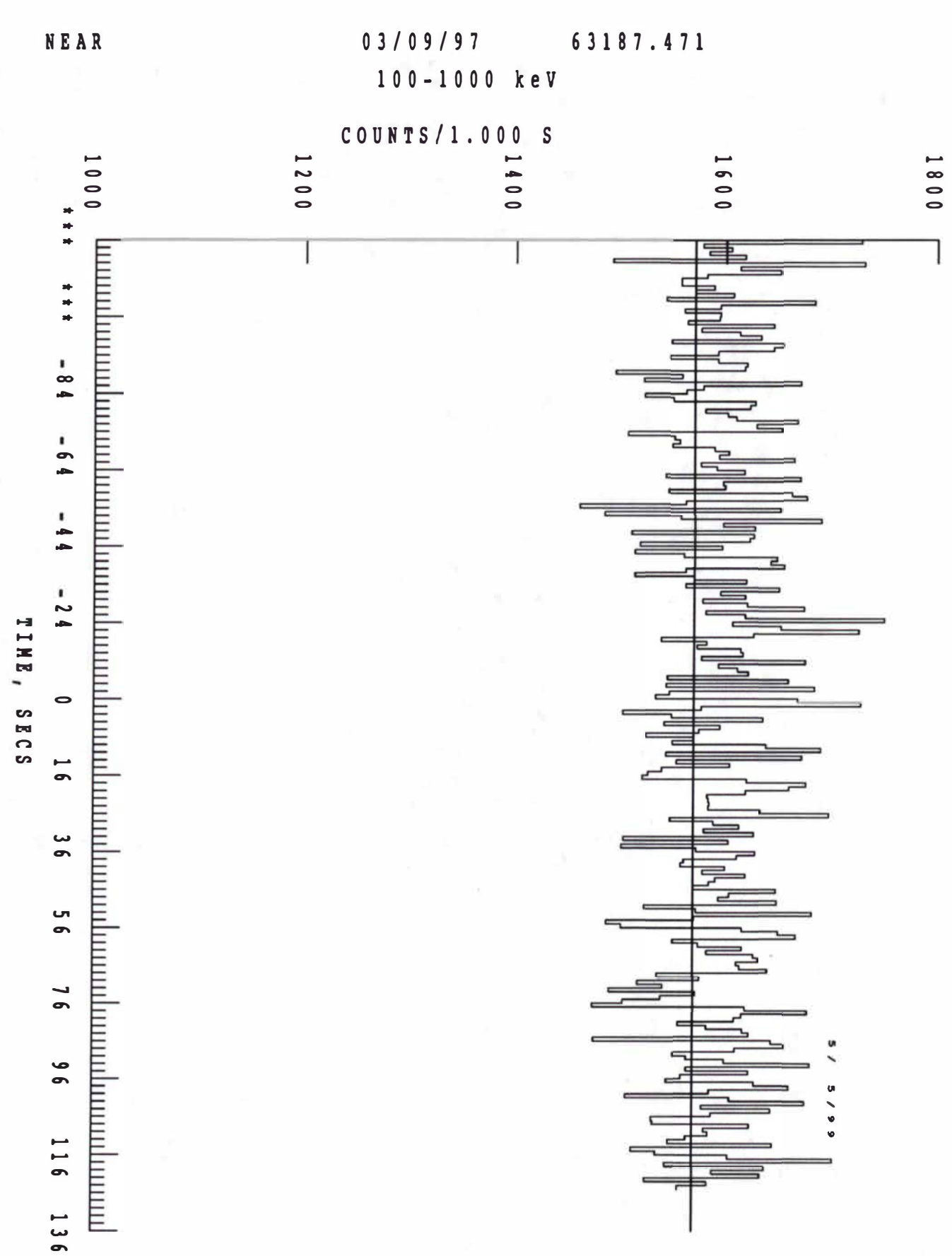
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=36.9 AZIMUTH=237.4 ERROR=4.7 DEGREES

COMMENTS:
GRB LASTING ~ 30 SEC. SINGLE PULSE WITH MULTIPLE PEAKS.
NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6359	970903	10694	62709	1900	238	-58	30


NEAR
03/09/97
63187.471
100-1000 keV
COUNTS/1.000 S
1000
1200
1400
1600
1800
*** *** -84 -64 -44 -24 0 16 36 56 76 96 116 136
TIME, SECS
5/ 5/99

BATSE BURST# 6359

ULYSSES RT 12/ 9/97

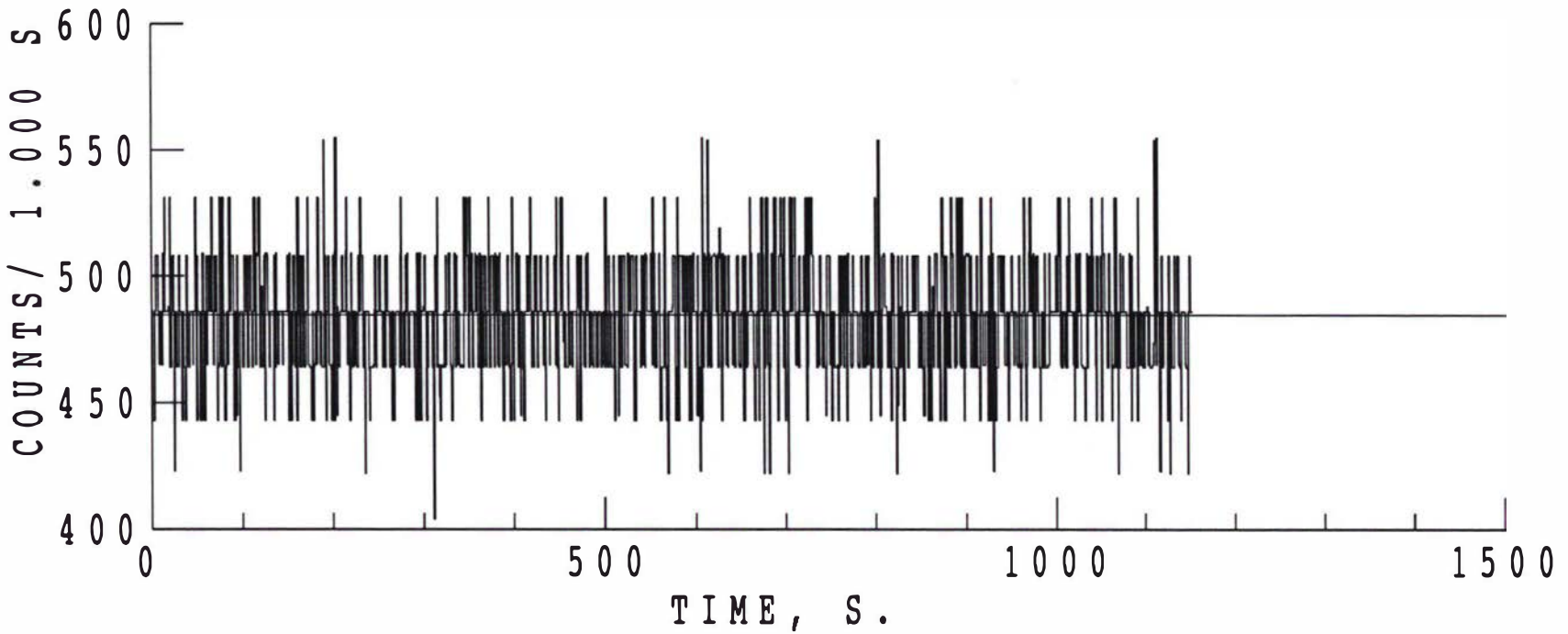
3/ 9/97 62604.469 s

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



From WOODSP@SSLLES.MSFC.NASA.GOV Tue Sep 9 11:49 PDT 1997
Date: Tue, 9 Sep 1997 13:48:20 -0500 (CDT)
From: WOODSP@ssl.msfc.nasa.gov
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6360

TIME: TJD=0694 SECONDS=84061

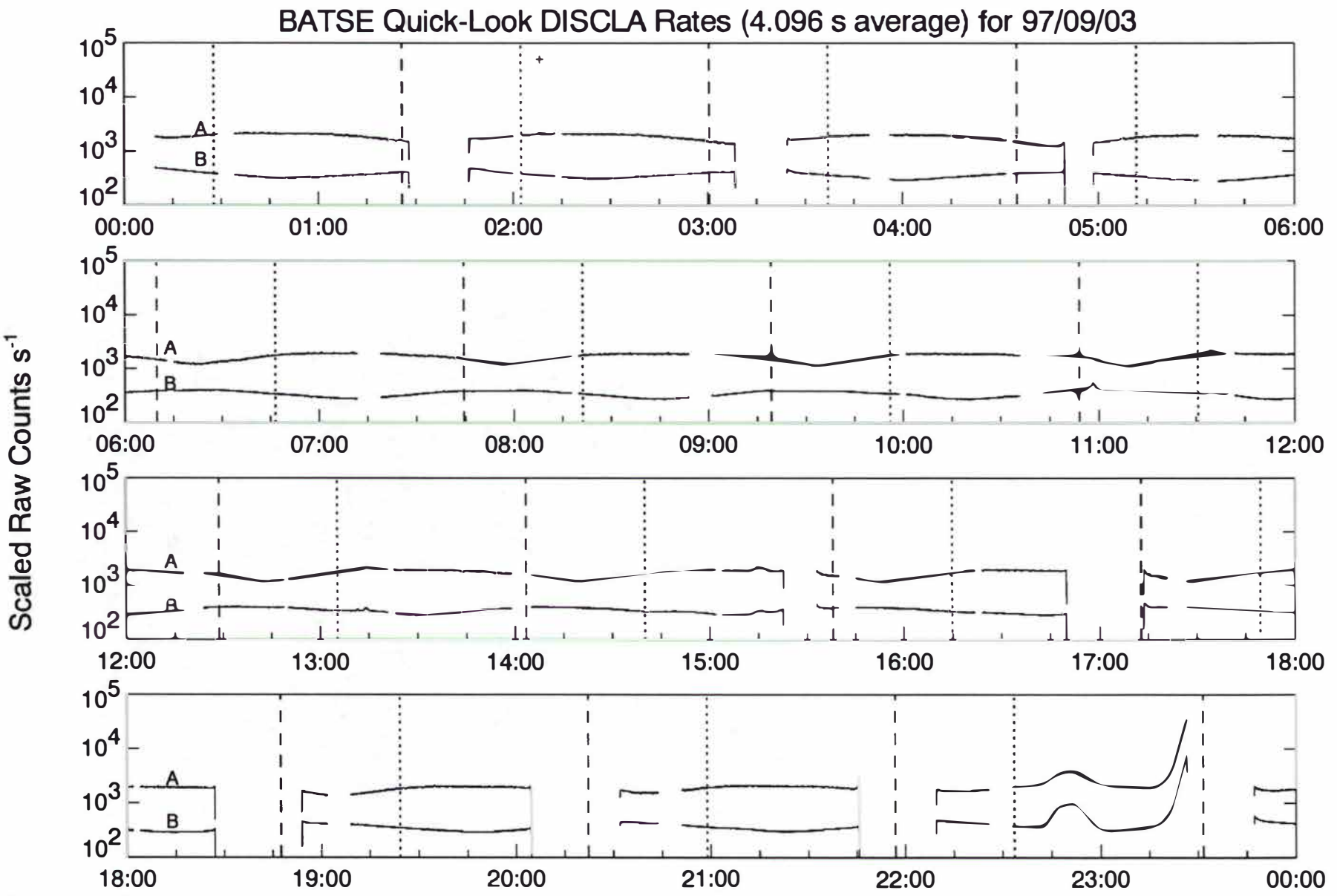
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

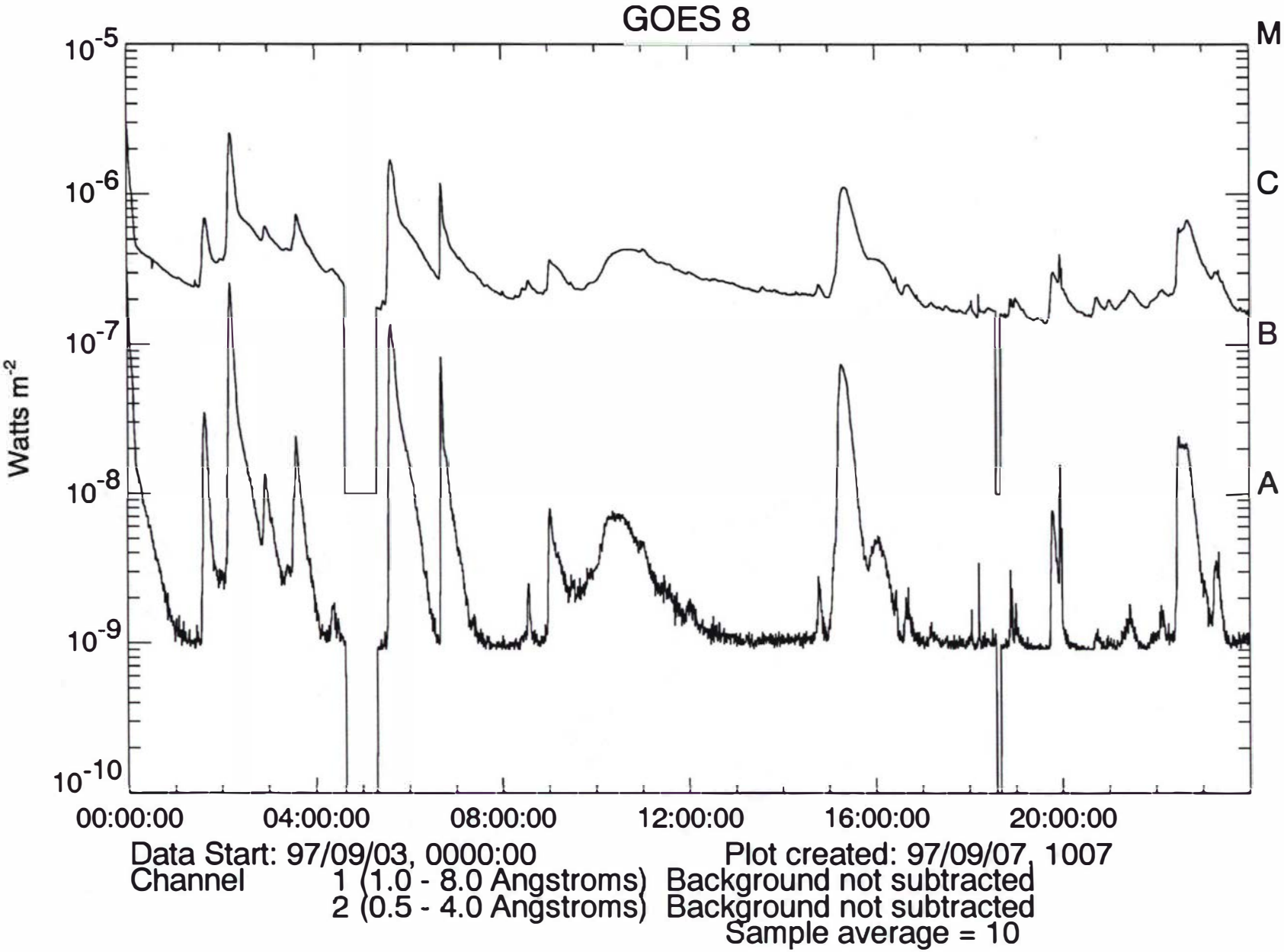
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

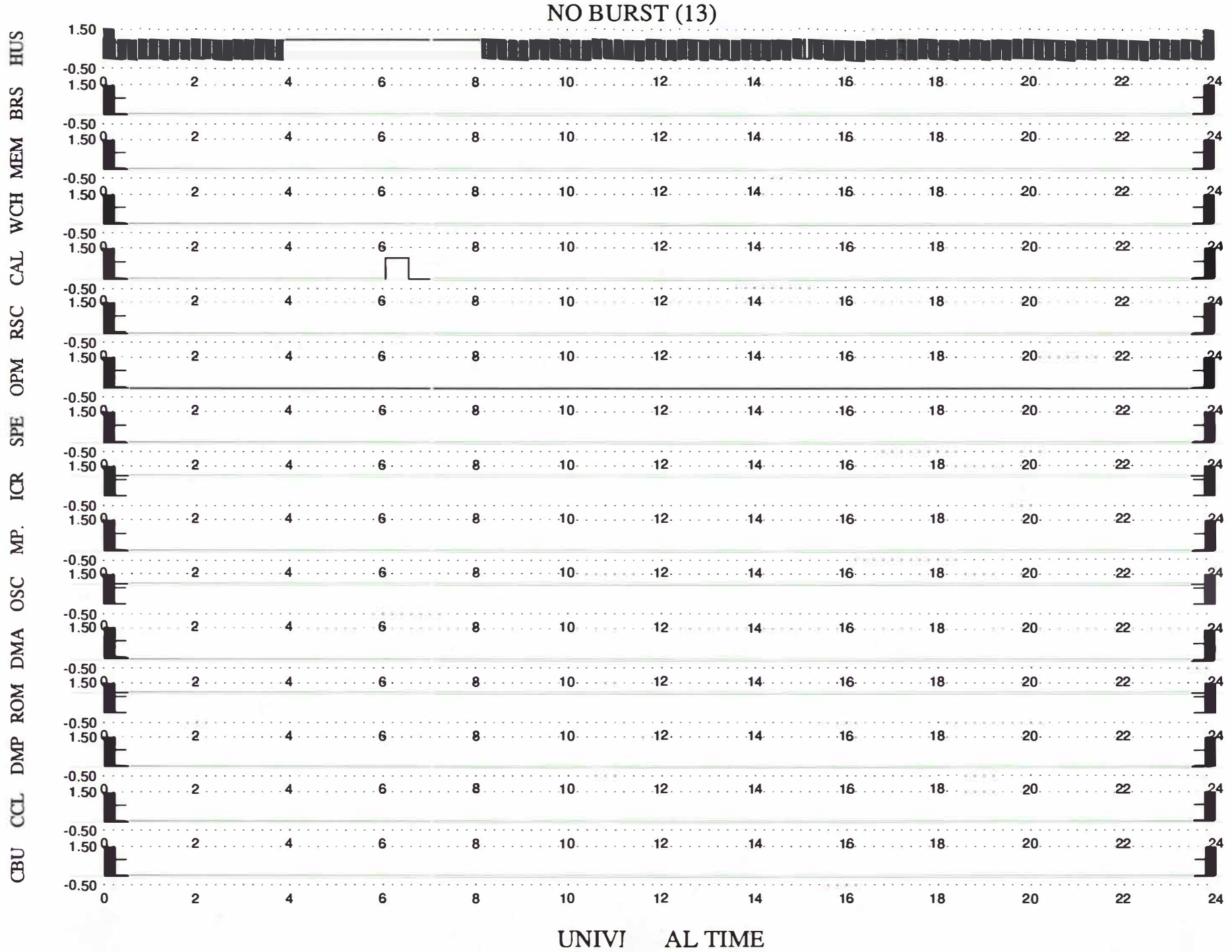
LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY.


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/03
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/07, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare

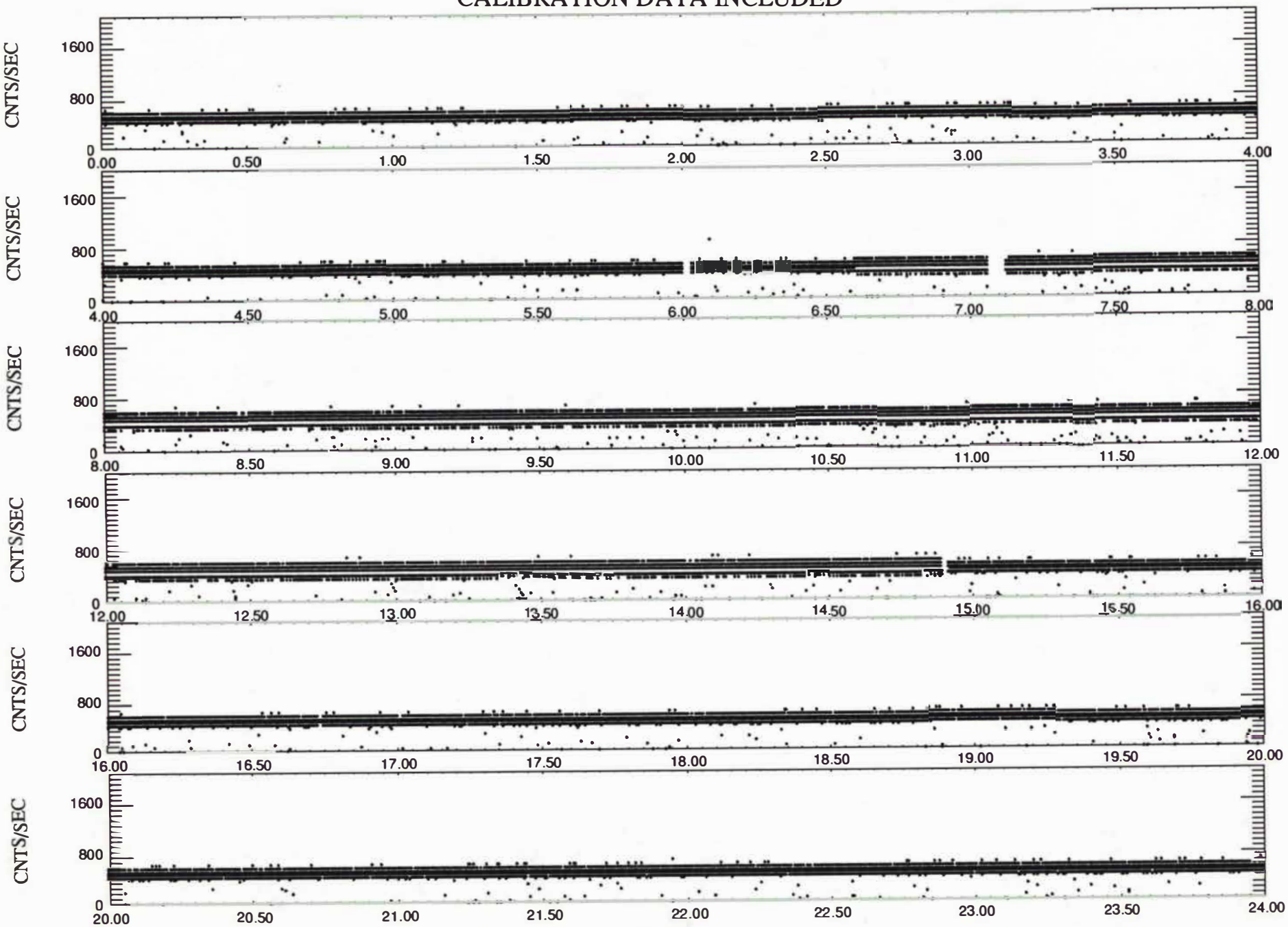

GOES 8
M
C
B
A
Watts m-2
10-5
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/03, 0000:00
Plot created: 97/09/07, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 246, year 1997 to day 246, year 1997 1/14/98



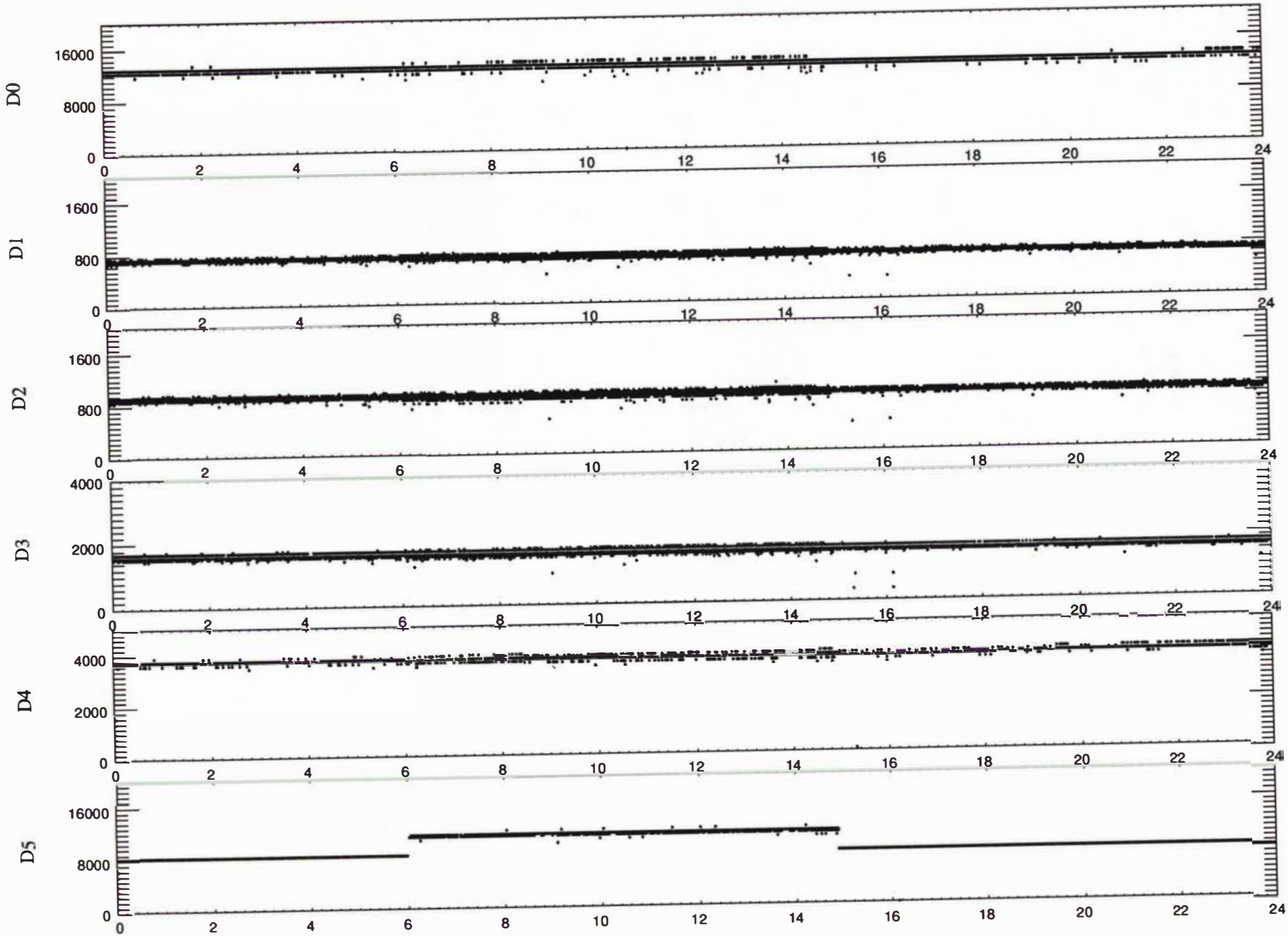
HUS 2A, MODE 1, NOT AVERAGED EDR day 246, year 1997 to day 246, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV' 'AL TIME

HUS 2B COUNTS / SEC EDR day 246, year 1997 to day 246, year 1997 1/14/98



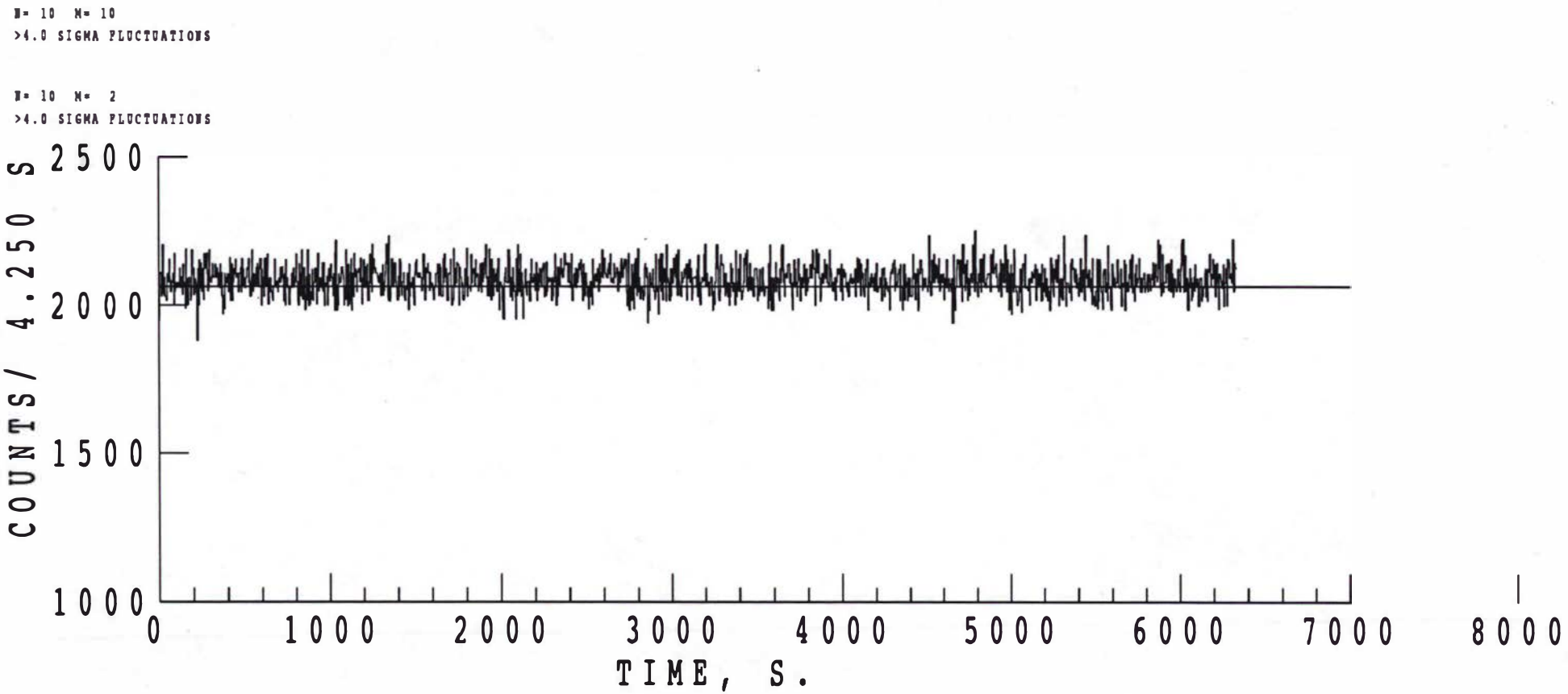
KONUS

ULYSSES RT 04/02/00

04/09/97 36576.148 s

0.250 S INTERVALS REGROUPED BY 17

0- 0 keV



From RICHARDSON@ssl.msfc.nasa.gov Fri Sep 5 10:40 PDT 1997
Return-Path: <RICHARDSON@ssl.msfc.nasa.gov>
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
id KAA05971; Fri, 5 Sep 1997 10:40:17 -0700
Date: Fri, 5 Sep 1997 12:40:11 -0500 (CDT)
From: RICHARDSON@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970905124011.20208a87@SSLLES.MSFC.NASA.GOV>
Subject: Crossing Windows for BATSE Burst 6361
Content-Type: text
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6361
EVENT OF 1997 SEP 4 DAY OF YEAR=247
EVENT CROSSING TIME AT BATSE : 39425. S. OR 10:57:05.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 95.000 -55.000
BATSE PEAK COUNTING RATE: 9000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 4/ 9/ 97 IS:
RA= 161.993 DEC= 18.656 DIST= 6.237 AU
BATSE-ULYSSES DISTANCE = 933021528. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 87.16 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 154.47 SECS.
CROSSING TIME AT ULYSSES IS 39579. S. OR 10:59:39 +/- 592.01 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 4/ 9/ 97 IS:
RA= 220.399 DEC= -16.571 DIST= 1.660 AU
MARS-BATSE DISTANCE = 248381200. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 85.13 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 70.28 SECS.
CROSSING TIME AT MARS IS 39495. S. OR 10:58:15 +/- 144.39 SECONDS

BATSE BURST TRIGGER

NO.: 6361

TIME: TJD=0695 SECONDS=39425

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

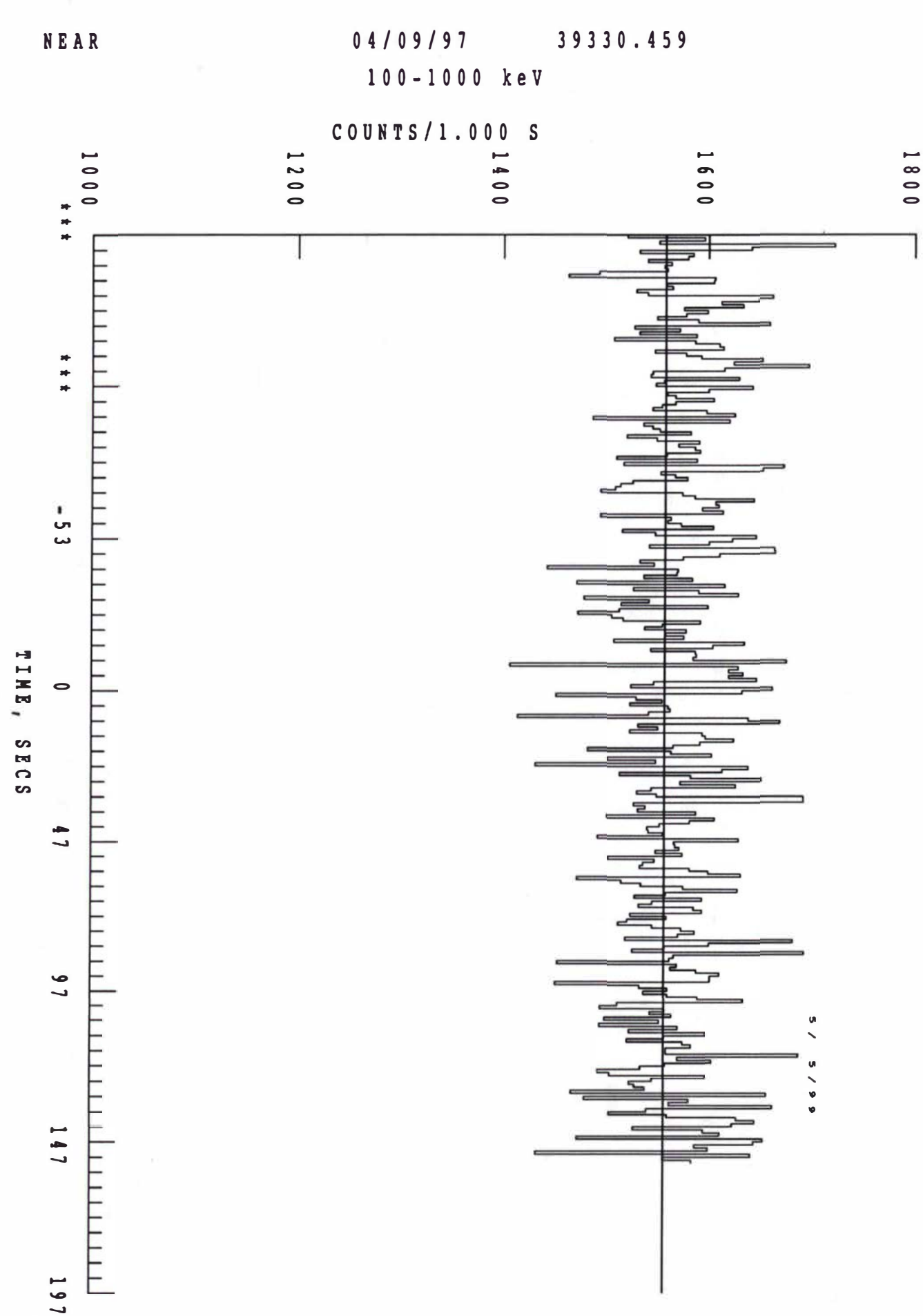
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=36.5 AZIMUTH=117.7 ERROR=7.4 DEGREES

COMMENTS:
GRB SHORT SPIKE DUR.~0.13 SEC. VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6361	970904	10695	39425	9000	095	-55	.13


NEAR
04/09/97
39330.459
100-1000 keV
COUNTS/1.000 S
1000
1200
1400
1600
1800
***
***
-53
0
47
97
147
197
TIME, SECS
5/ 5/99

BATSE BURST# 6361

ULYSSES RT 5/ 9/97

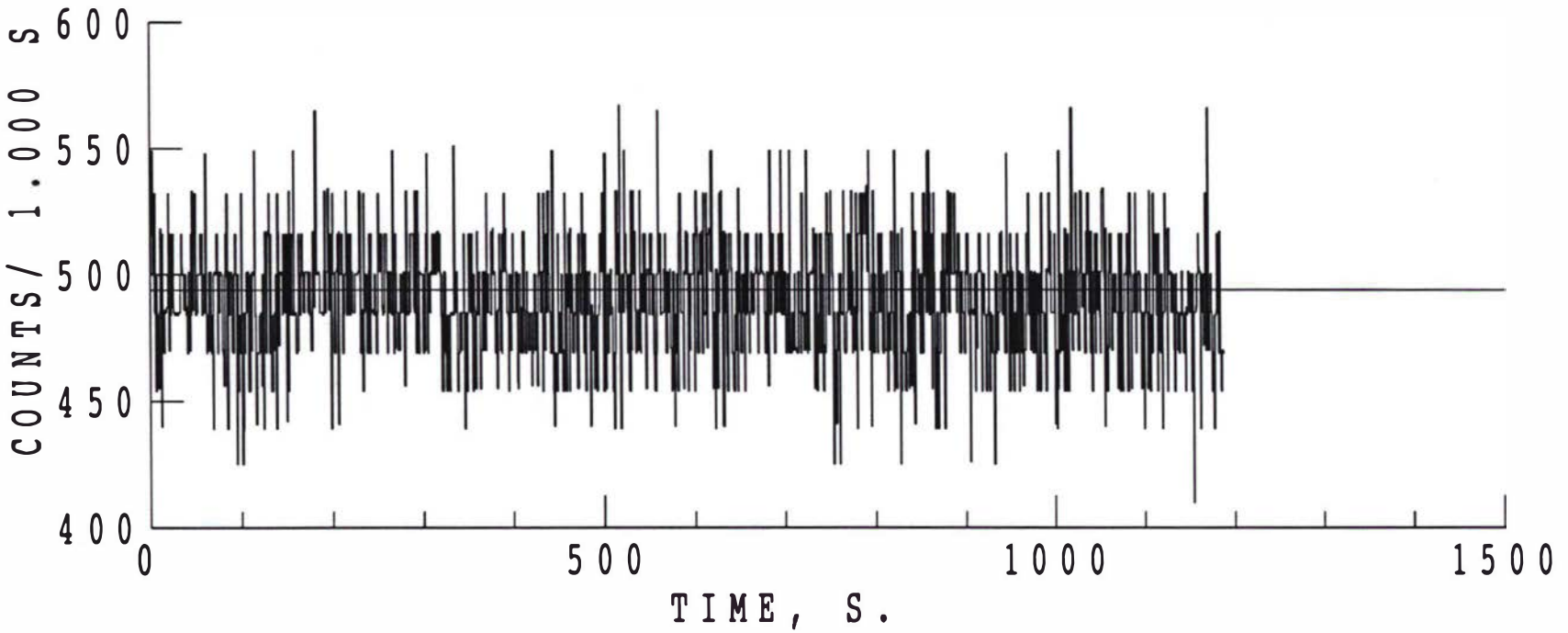
4/ 9/97 38988.172 s

0.250 S INTERVALS REGROUPED BY 4

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From RICHARDSON@ssl.msfc.nasa.gov Fri Sep 5 10:38 PDT 1997
Date: Fri, 5 Sep 1997 12:38:07 -0500 (CDT)
From: RICHARDSON@SSLLES.MSFC.NASA.GOV
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6362

TIME: TJD=0695 SECONDS=68006

TYPE: SGR SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=82.7 AZIMUTH=250.3 ERROR=5.0 DEGREES

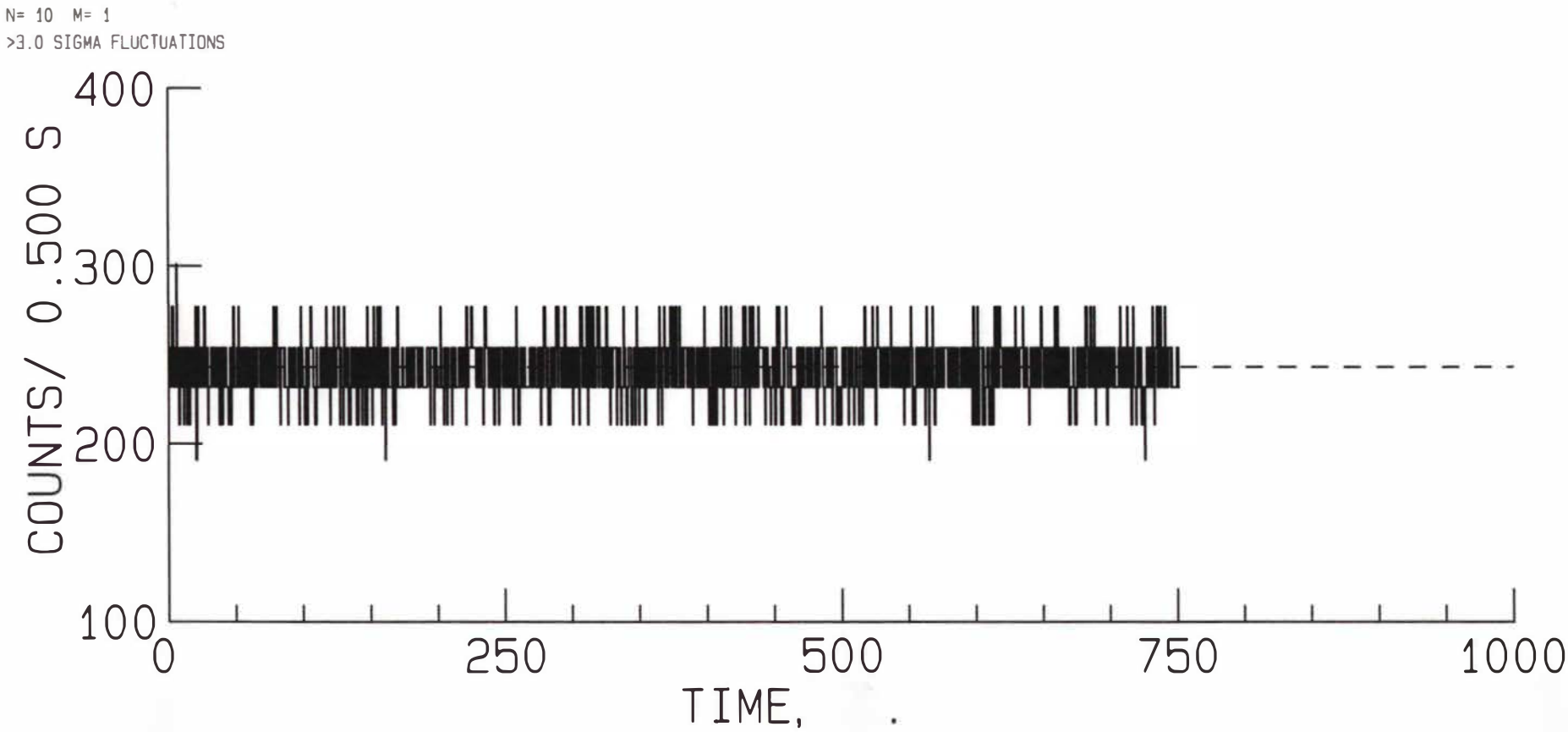
COMMENTS:
SGR SINGLE SPIKE DUR.~0.06 SEC. VISIBLE ABOVE 100KEV.

ULYSSES RT

27/ 9/97

4/ 9/97 68760.008 s

22- 147 keV

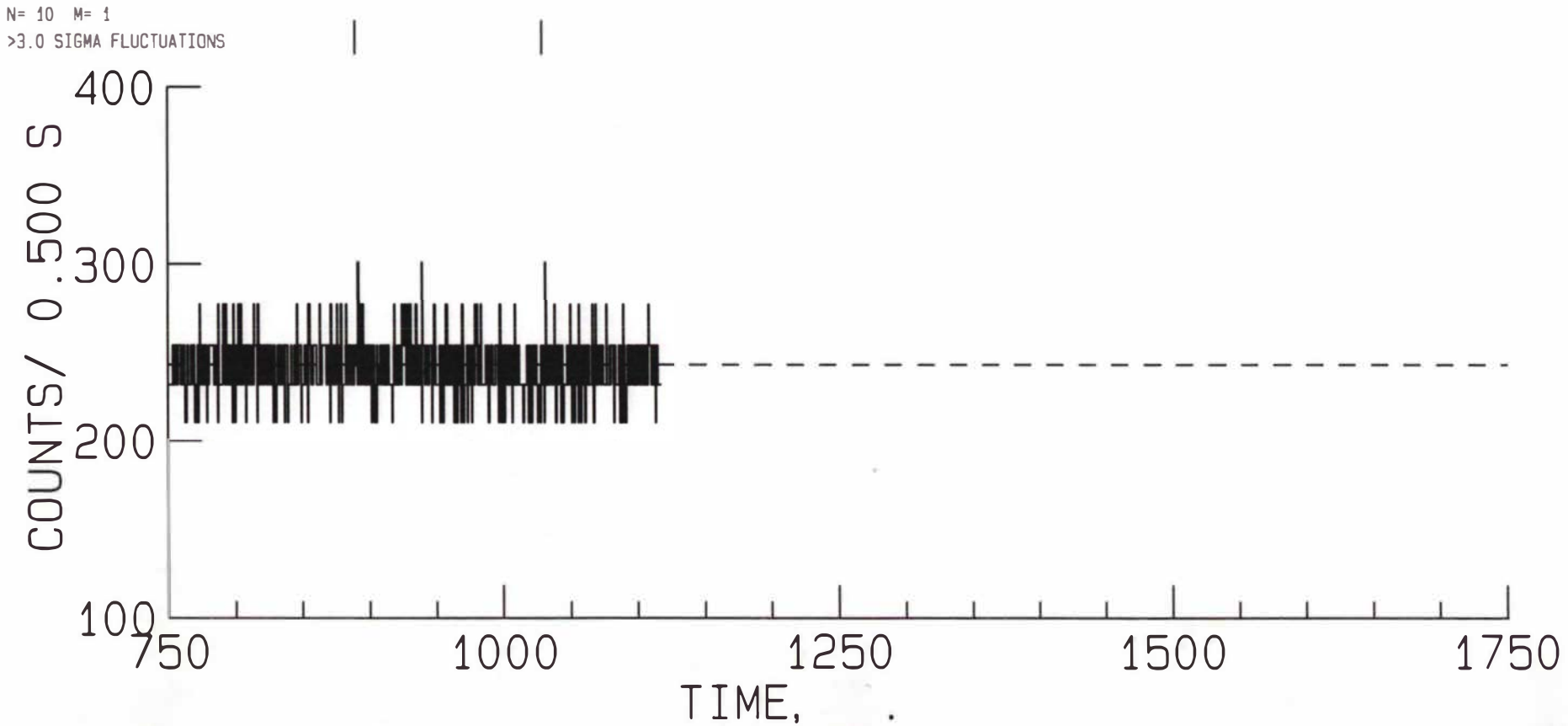


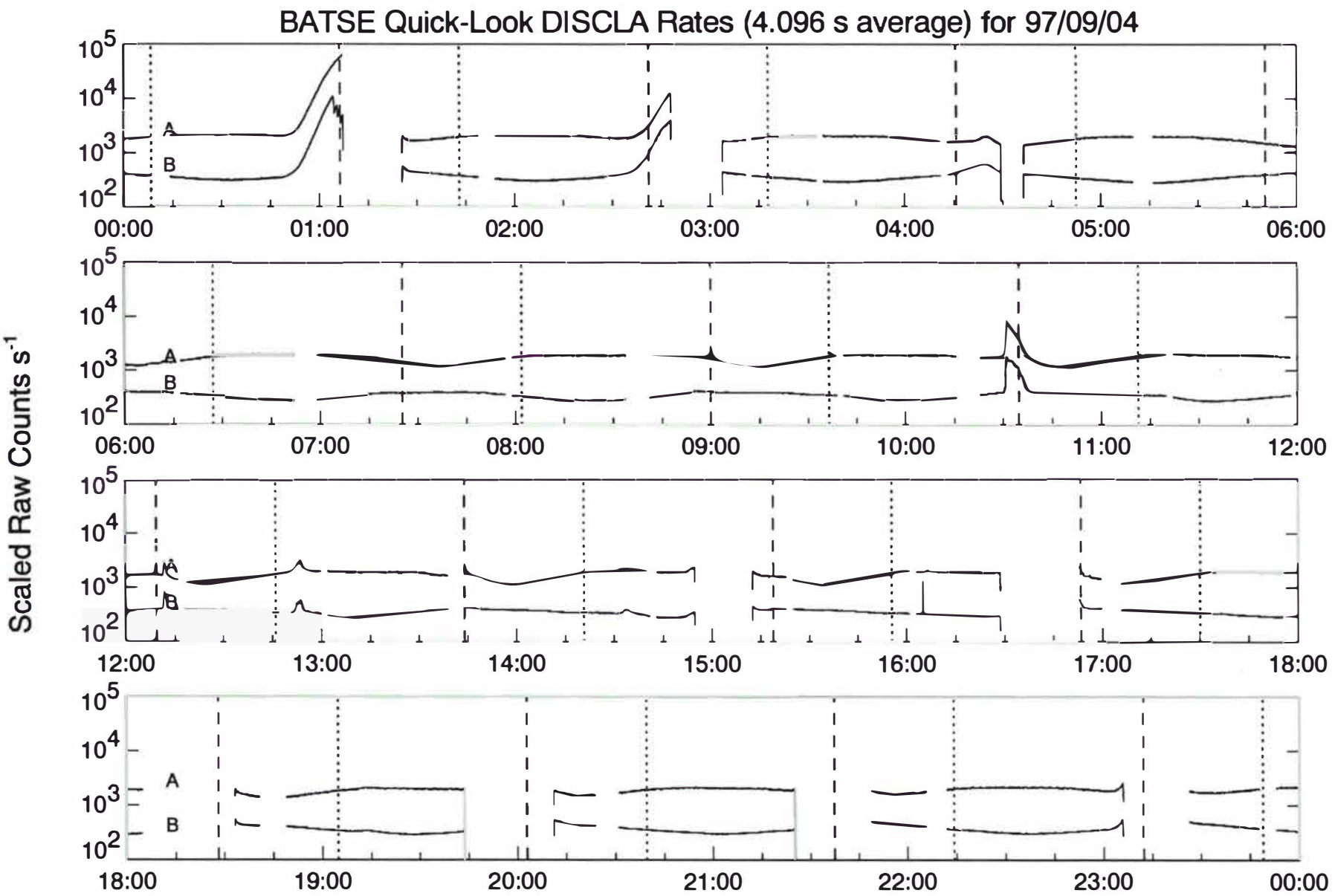
ULYSSES RT

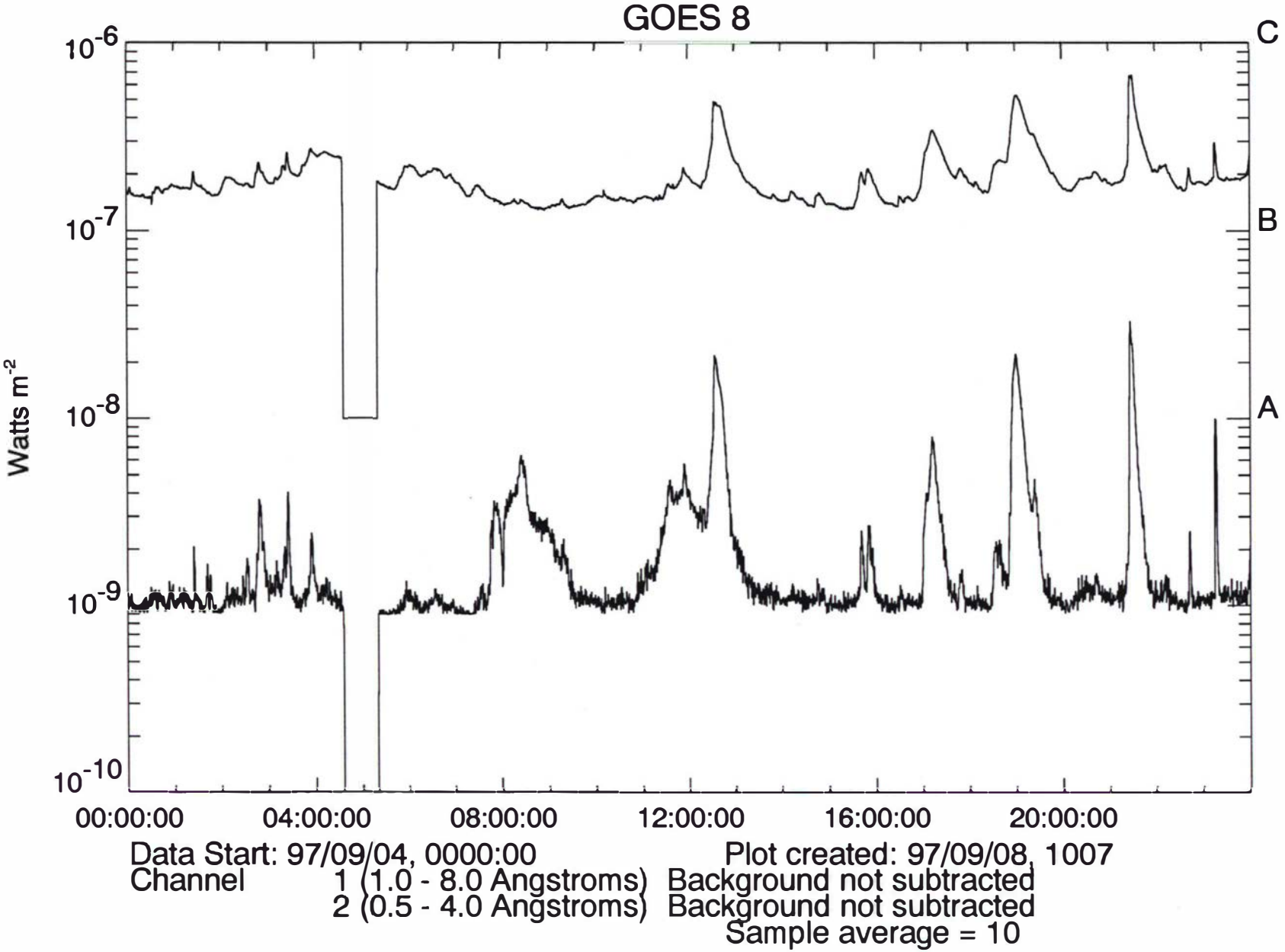
27/ 9/97

4/ 9/97 68760.008 s

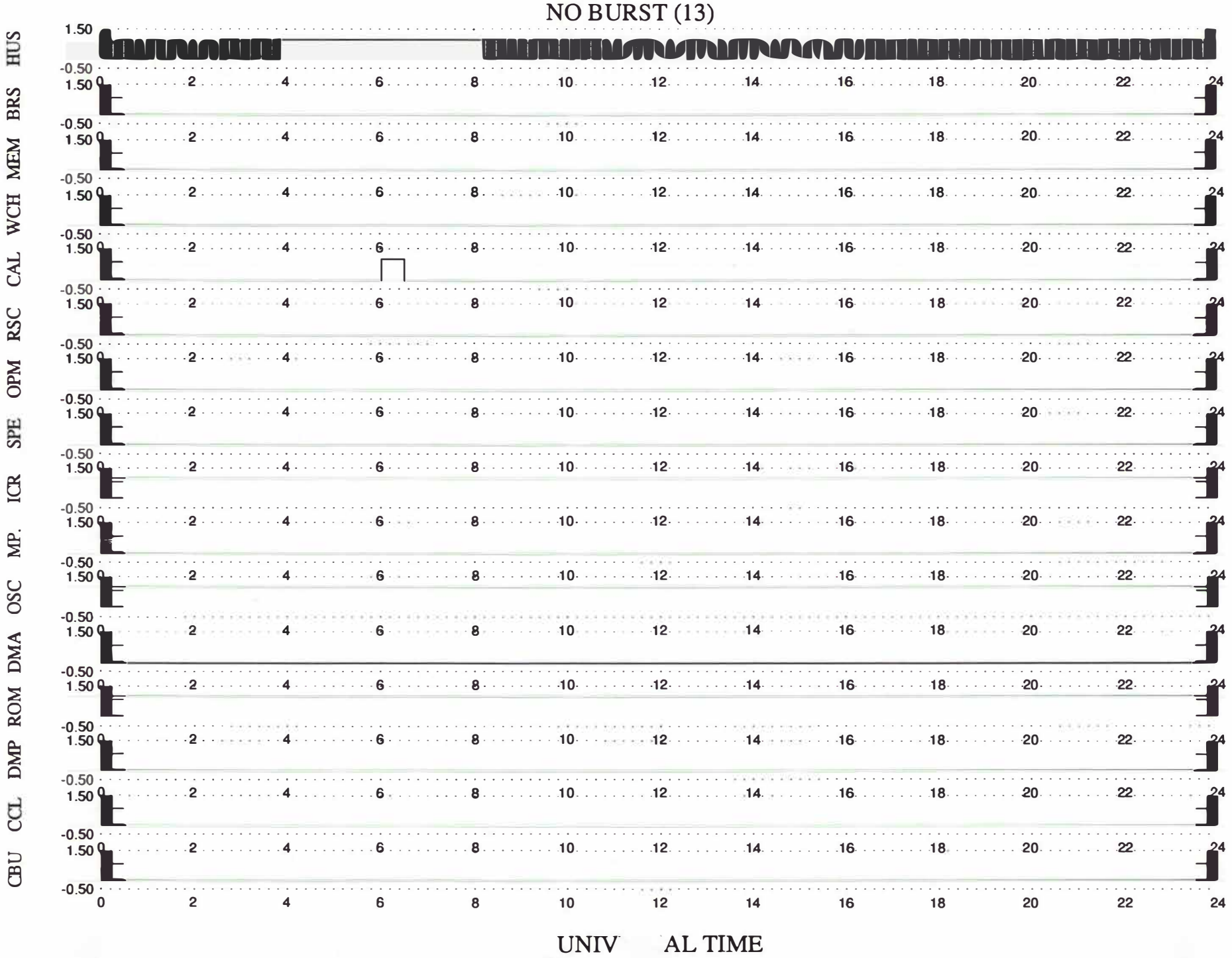
22- 147 keV




BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/04
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/08, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare

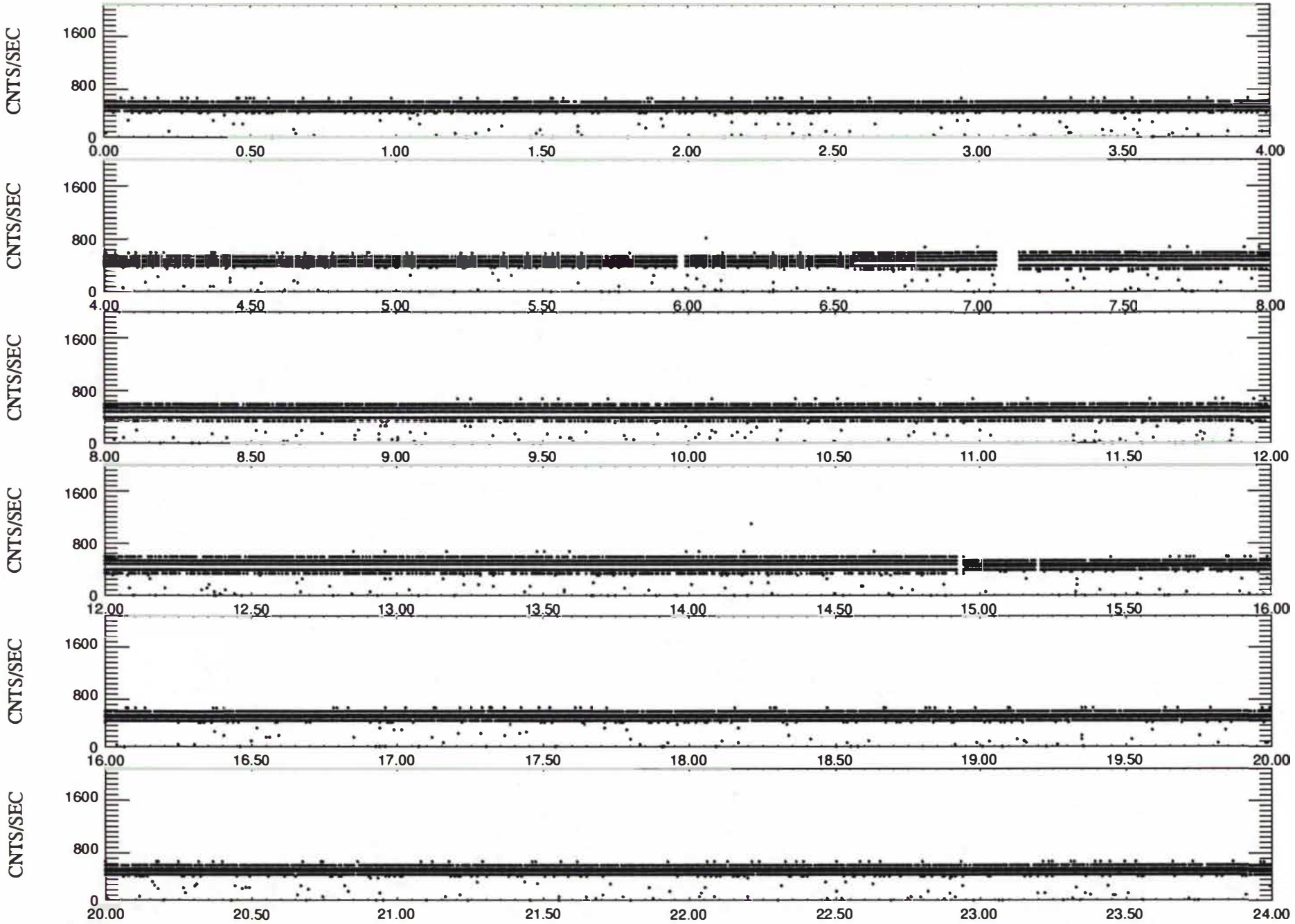

GOES 8
C
B
A
10^{-6}
10^{-7}
10^{-8}
10^{-9}
10^{-10}
Watts m^{-2}
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/04, 0000:00
Plot created: 97/09/08, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 247, year 1997 to day 247, year 1997 1/14/98



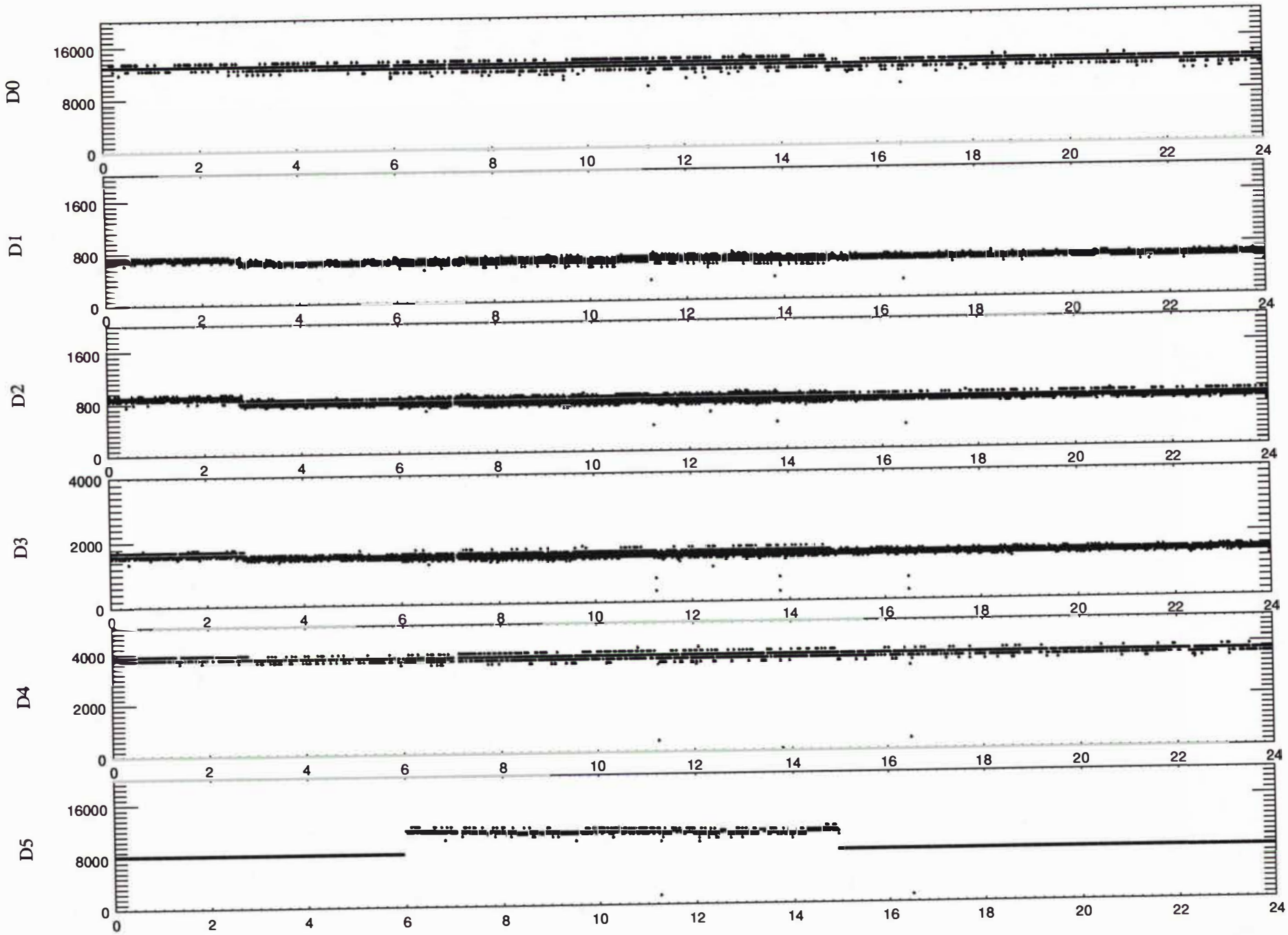
HUS 2A, MODE 1, NOT AVERAGED EDR day 247, year 1997 to day 247, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV' 'AL TIME

HUS 2B COUNTS / SEC EDR day 247, year 1997 to day 247, year 1997 1/14/98



From SAHI@fender.msfc.nasa.gov Sat Sep 6 11:25 PDT 1997
From: SAHI@fender.msfc.nasa.gov
Date: Sat, 6 Sep 1997 13:25:18 -0500 (CDT)
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu,
gruber@cass09.ucsd.edu, matteson@cass09.ucsd.edu,
PACIESAS@fender.msfc.nasa.gov, HORACK@fender.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu, lmm@egret.gsfc.nasa.gov,
mops@osse.nrl.navy.mil, grove@osse.nrl.navy.mil,
matz@osse.nrl.navy.mil, share@osse.nrl.navy.mil,
messina@osse.nrl.navy.mil, sandora@osse.nrl.navy.mil
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6363

TIME: TJD=0696 SECONDS=37049

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

From SAHI@fender.msfc.nasa.gov Sat Sep 6 11:28 PDT 1997
From: SAHI@fender.msfc.nasa.gov
Date: Sat, 6 Sep 1997 13:27:56 -0500 (CDT)
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu,
gruber@cass09.ucsd.edu, matteson@cass09.ucsd.edu,
PACIESAS@fender.msfc.nasa.gov, HORACK@fender.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu, lmm@egret.gsfc.nasa.gov,
mops@osse.nrl.navy.mil, grove@osse.nrl.navy.mil,
matz@osse.nrl.navy.mil, share@osse.nrl.navy.mil,
messina@osse.nrl.navy.mil, sandora@osse.nrl.navy.mil
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6364

TIME: TJD=0696 SECONDS=42888

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

From SAHI@fender.msfc.nasa.gov Sat Sep 6 11:30 PDT 1997
From: SAHI@fender.msfc.nasa.gov
Date: Sat, 6 Sep 1997 13:29:38 -0500 (CDT)
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu,
gruber@cass09.ucsd.edu, matteson@cass09.ucsd.edu,
PACIESAS@fender.msfc.nasa.gov, HORACK@fender.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu, lmm@egret.gsfc.nasa.gov,
mops@osse.nrl.navy.mil, grove@osse.nrl.navy.mil,
matz@osse.nrl.navy.mil, share@osse.nrl.navy.mil,
messina@osse.nrl.navy.mil, sandora@osse.nrl.navy.mil
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6365

TIME: TJD=0696 SECONDS=44865

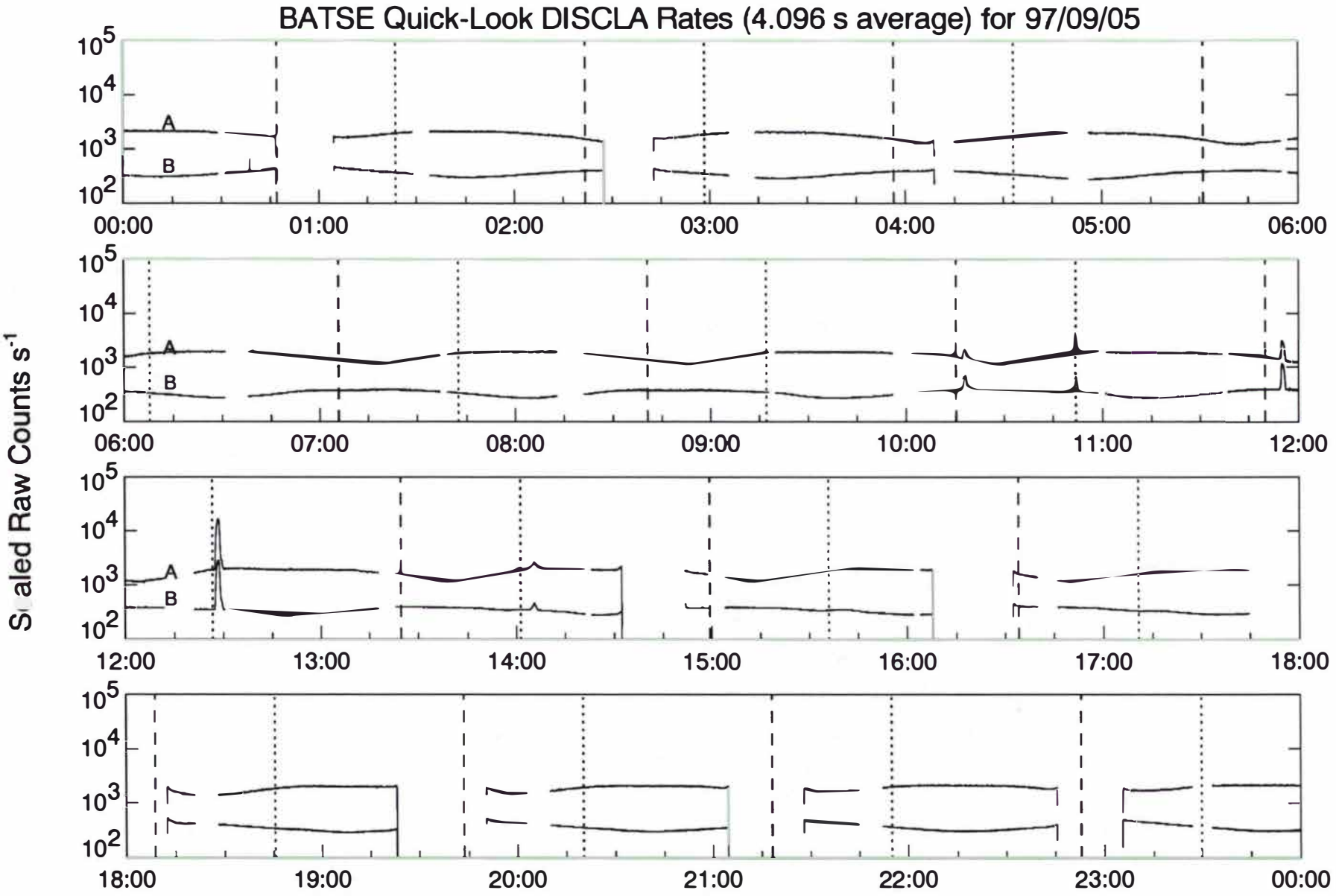
TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

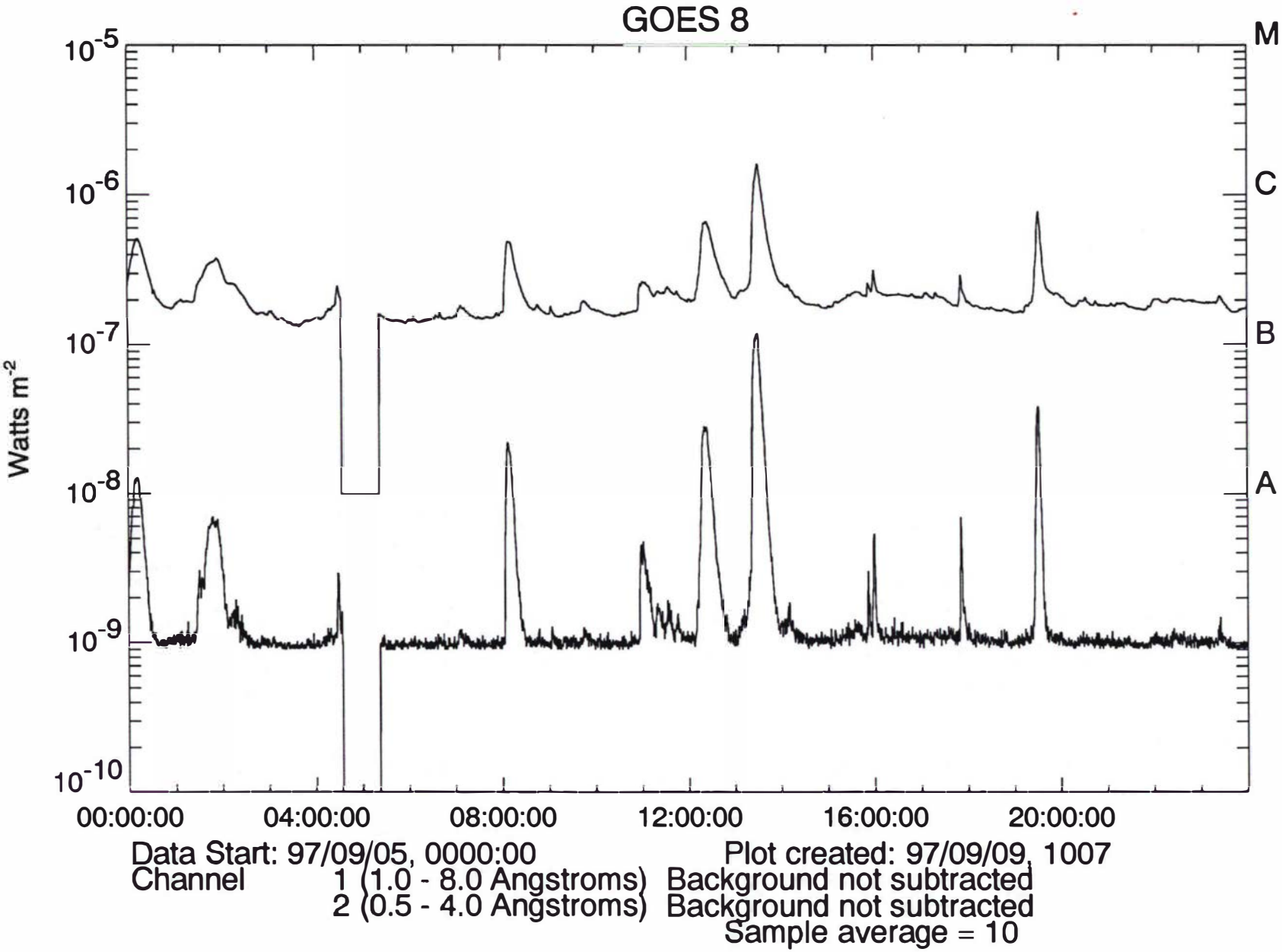
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

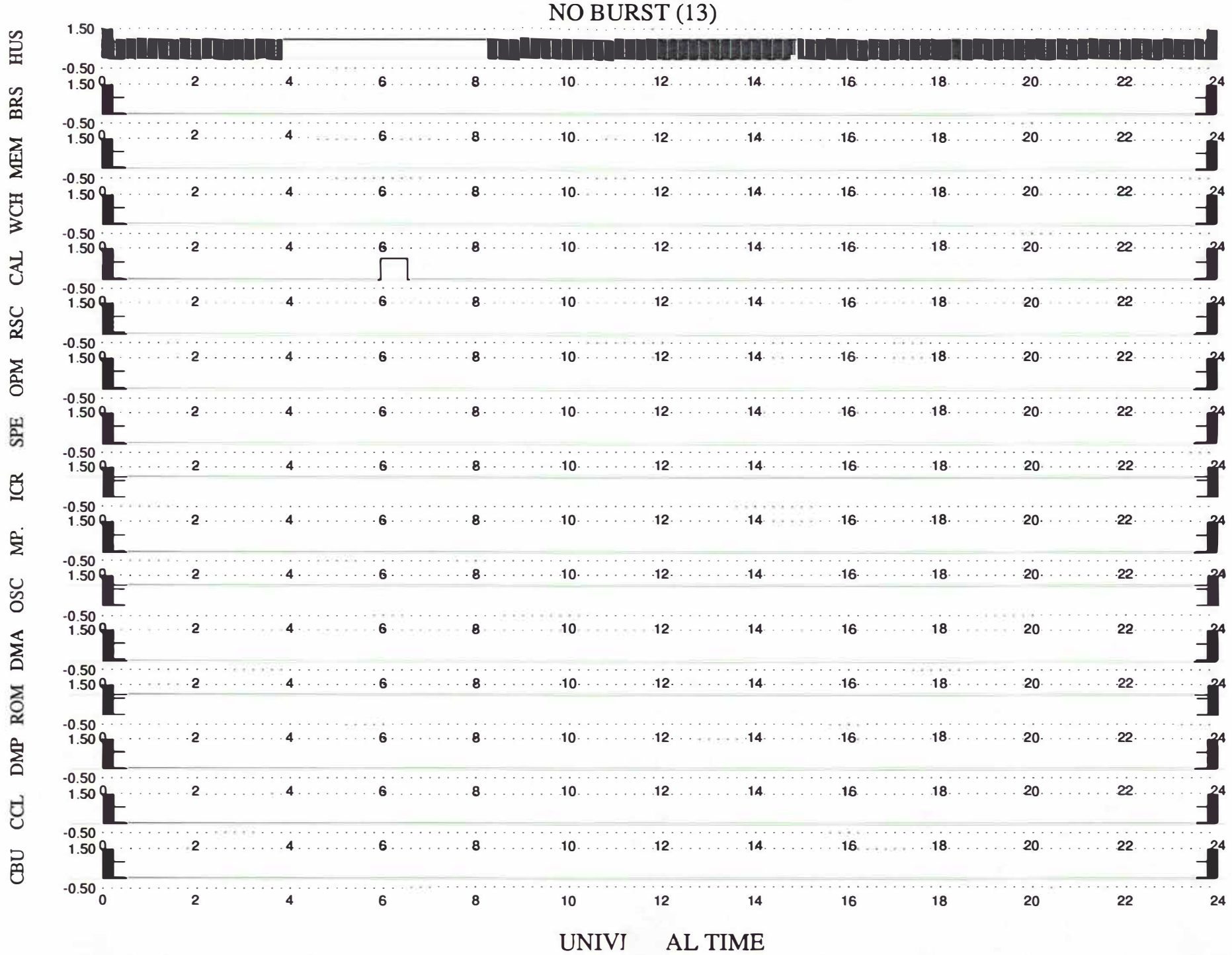
LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/05
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/09, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare

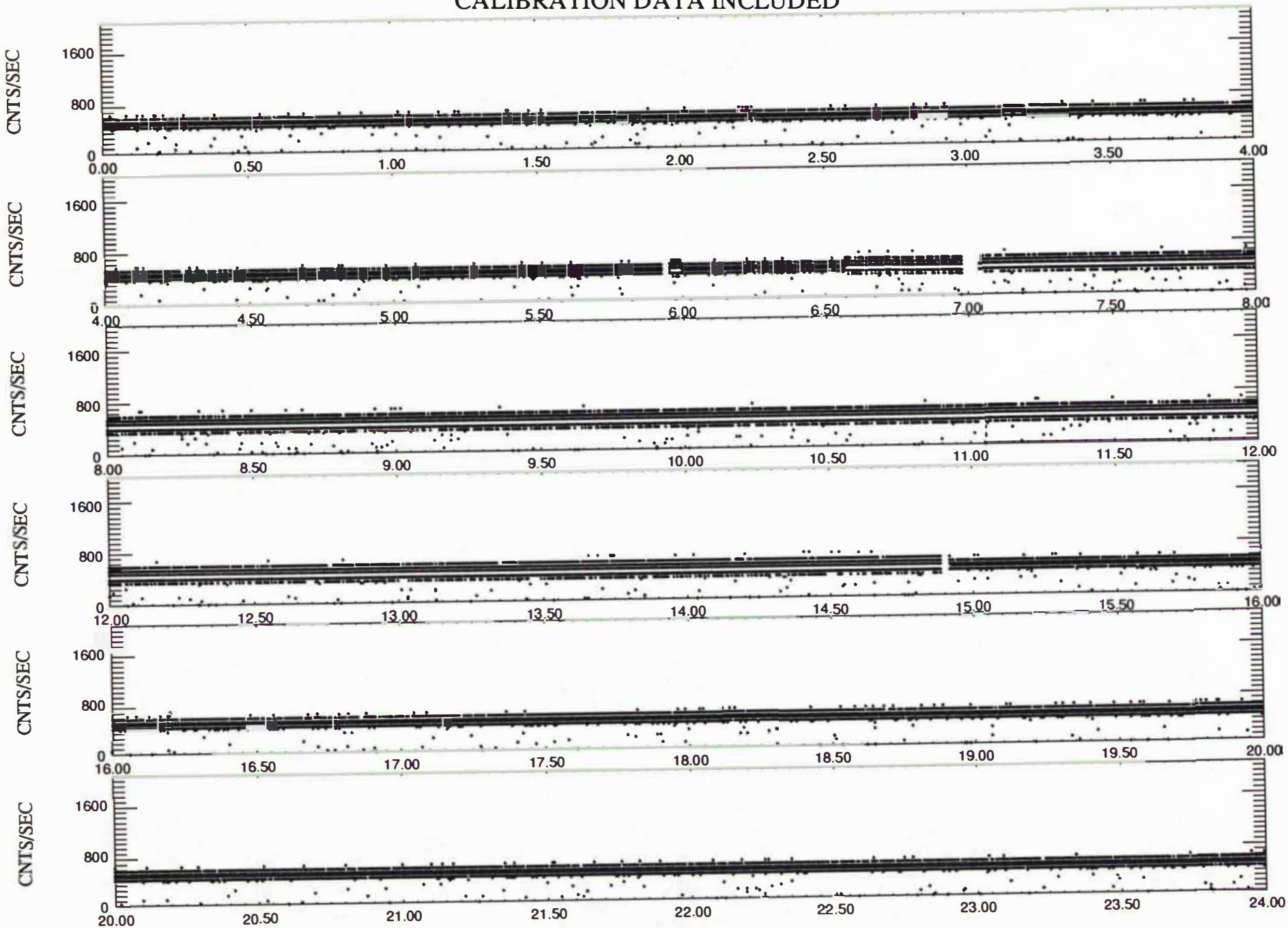

GOES 8
M
C
B
A
Watts m-2
10-5
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/05, 0000:00
Plot created: 97/09/09, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 248, year 1997 to day 248, year 1997 1/14/98



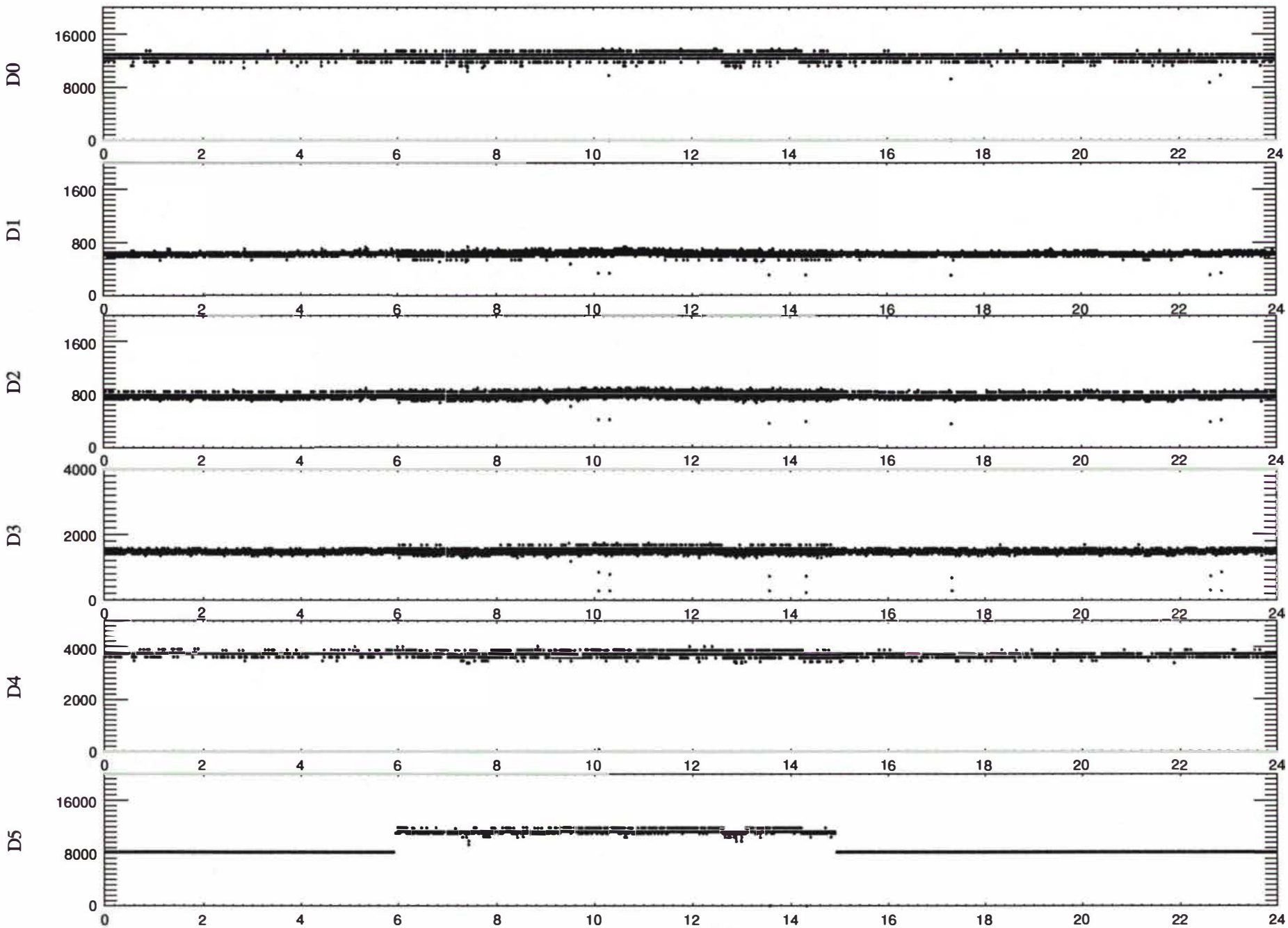
HUS 2A, MODE 1, NOT AVERAGED EDR day 248, year 1997 to day 248, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV[illegible]AL TIME

HUS 2B COUNTS / SEC EDR day 248, year 1997 to day 248, year 1997 1/14/98



From SURASAK@ssl.msfc.nasa.gov Mon Sep 8 11:40 PDT 1997
Return-Path: <SURASAK@ssl.msfc.nasa.gov>
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
id LAA27573; Mon, 8 Sep 1997 11:40:05 -0700
e: Mon, 8 Sep 1997 13:39:18 -0500 (CDT)
om: SURASAK@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970908133918.20208c90@SSLLES.MSFC.NASA.GOV>
Subject: Crossing Windows for BATSE Burst 6366
Content-Type: text
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6366
EVENT OF 1997 SEP 6 DAY OF YEAR=249
EVENT CROSSING TIME AT BATSE : 9999. S. OR 02:46:39.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 220.000 58.000
BATSE PEAK COUNTING RATE: 2400 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 6/ 9/ 97 IS:
RA= 162.230 DEC= 18.492 DIST= 6.236 AU
BATSE-ULYSSES DISTANCE = 932865590. KM.
NGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=122.48 DEG.
HT TRAVEL TIME ALONG PROJECTED PATH=-1670.98 SECS.
ROSSING TIME AT ULYSSES IS 8328. S. OR 02:18:48 +/- 480.36 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 6/ 9/ 97 IS:
RA= 221.703 DEC= -16.985 DIST= 1.671 AU
MARS-BATSE DISTANCE = 249952128. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=105.00 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -215.81 SECS.
CROSSING TIME AT MARS IS 9783. S. OR 02:43:03 +/- 136.54 SECONDS

BATSE BURST TRIGGER
NO.: 6366

TIME: TJD=0697 SECONDS=9999

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

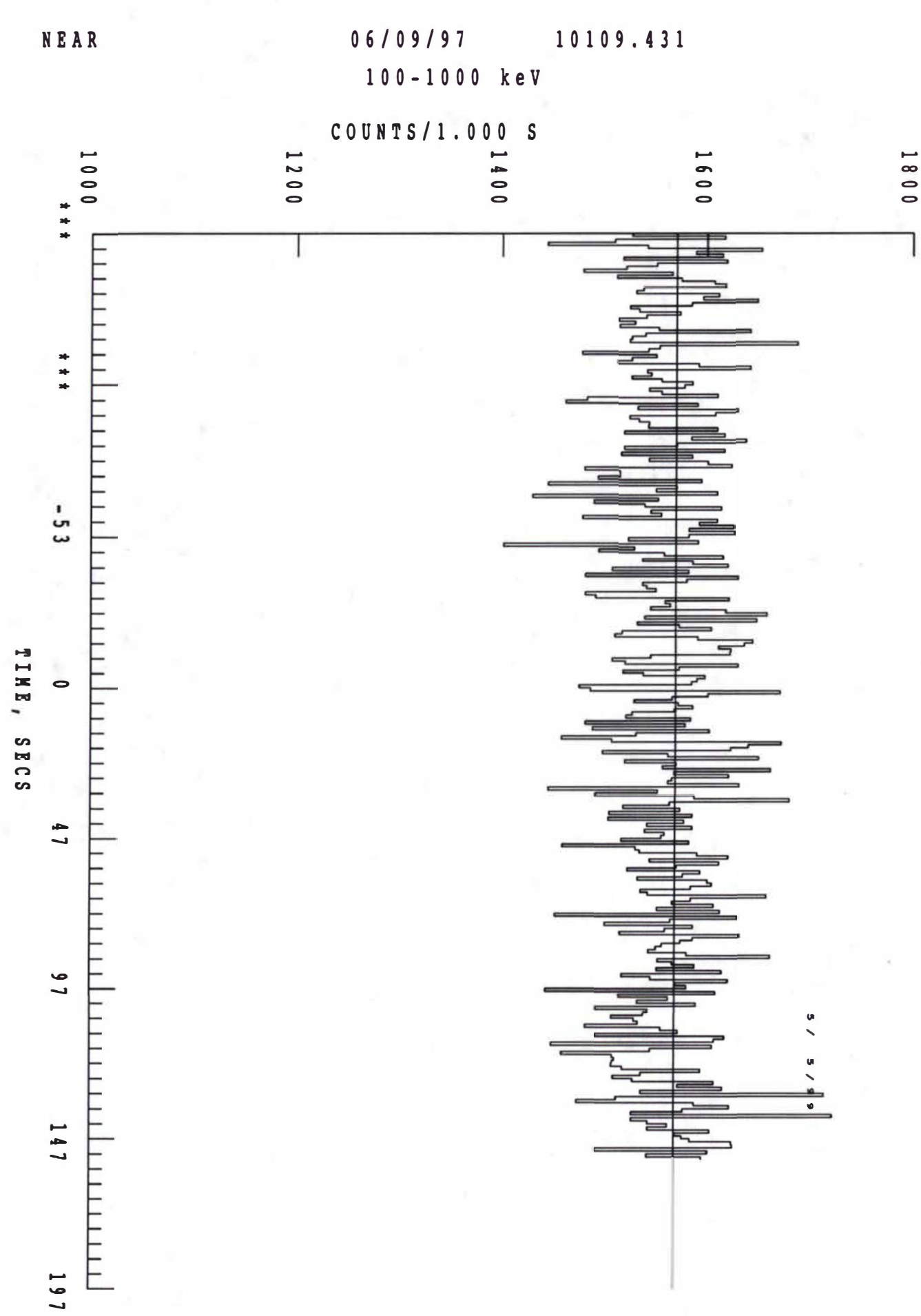
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=123.5 AZIMUTH=328.6 ERROR=2.583 DEGREES

COMMENTS:
G AT TRIGGER TIME WE HAVE DOUBLE PEAKS. DUR~50S. AT ~ T-200S, WE HAVE
S E PULSE. DUR~50S. BOTH FROM THE SAME SOURCE. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6366	970906	10697	09999	2400	220	+58	250


NEAR
06/09/97 10109.431
100-1000 keV
COUNTS/1.000 S
1000
1200
1400
1600
1800
***
***
-53
0
47
97
147
197
TIME, SECS

BATSE BURST# 6366

ULYSSES RT 10/ 9/97

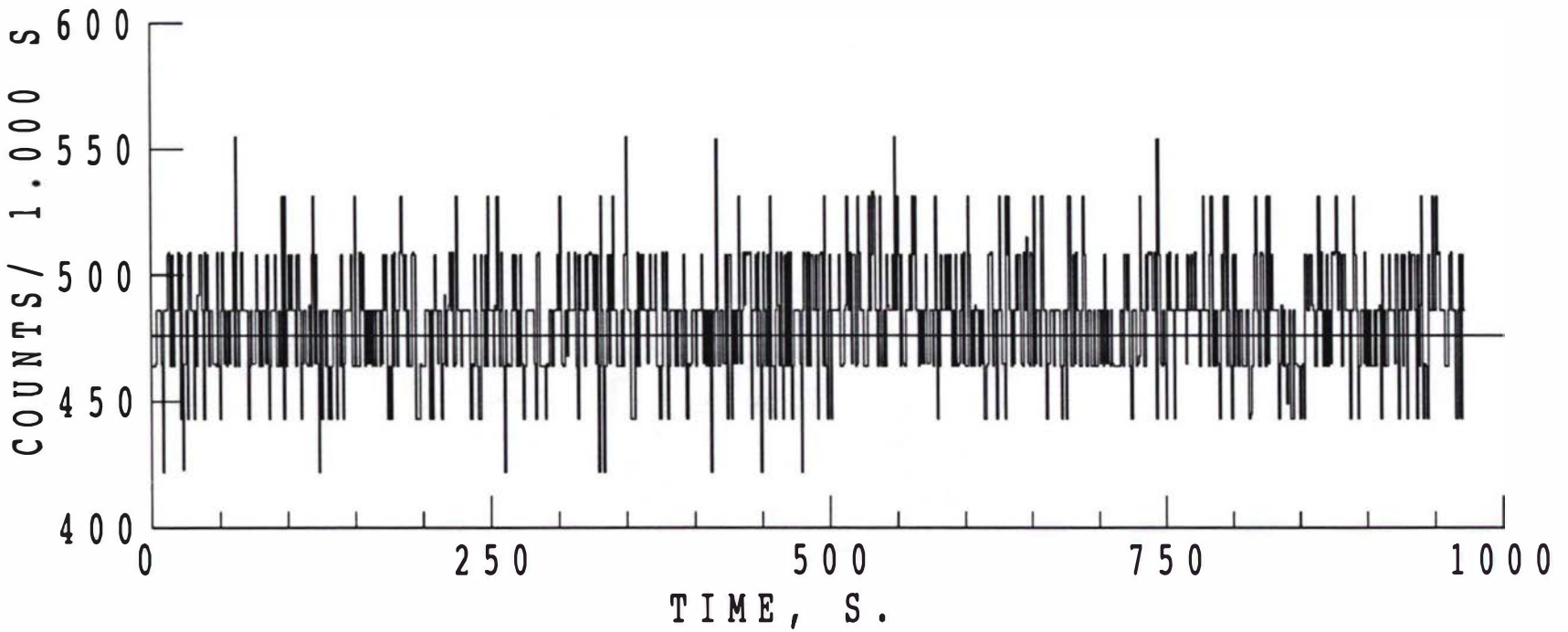
6/ 9/97 7848.264 s

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



From SURASAK@SSLLES.MSFC.NASA.GOV Mon Sep 8 11:35 PDT 1997
From: SURASAK@SSLLES.MSFC.NASA.GOV
Date: Mon, 8 Sep 1997 13:34:58 -0500 (CDT)
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6367

TIME: TJD=0697 SECONDS=43672

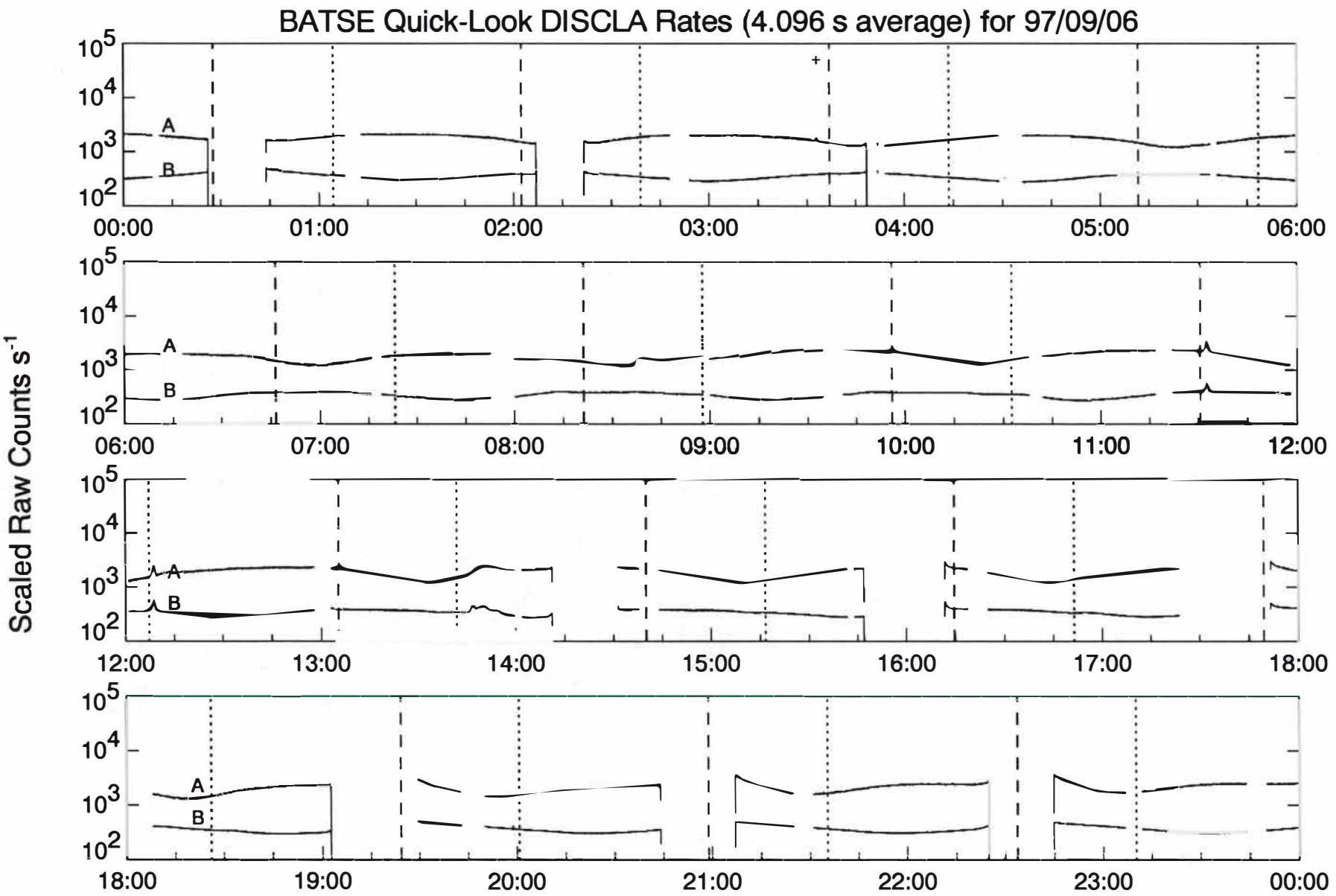
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

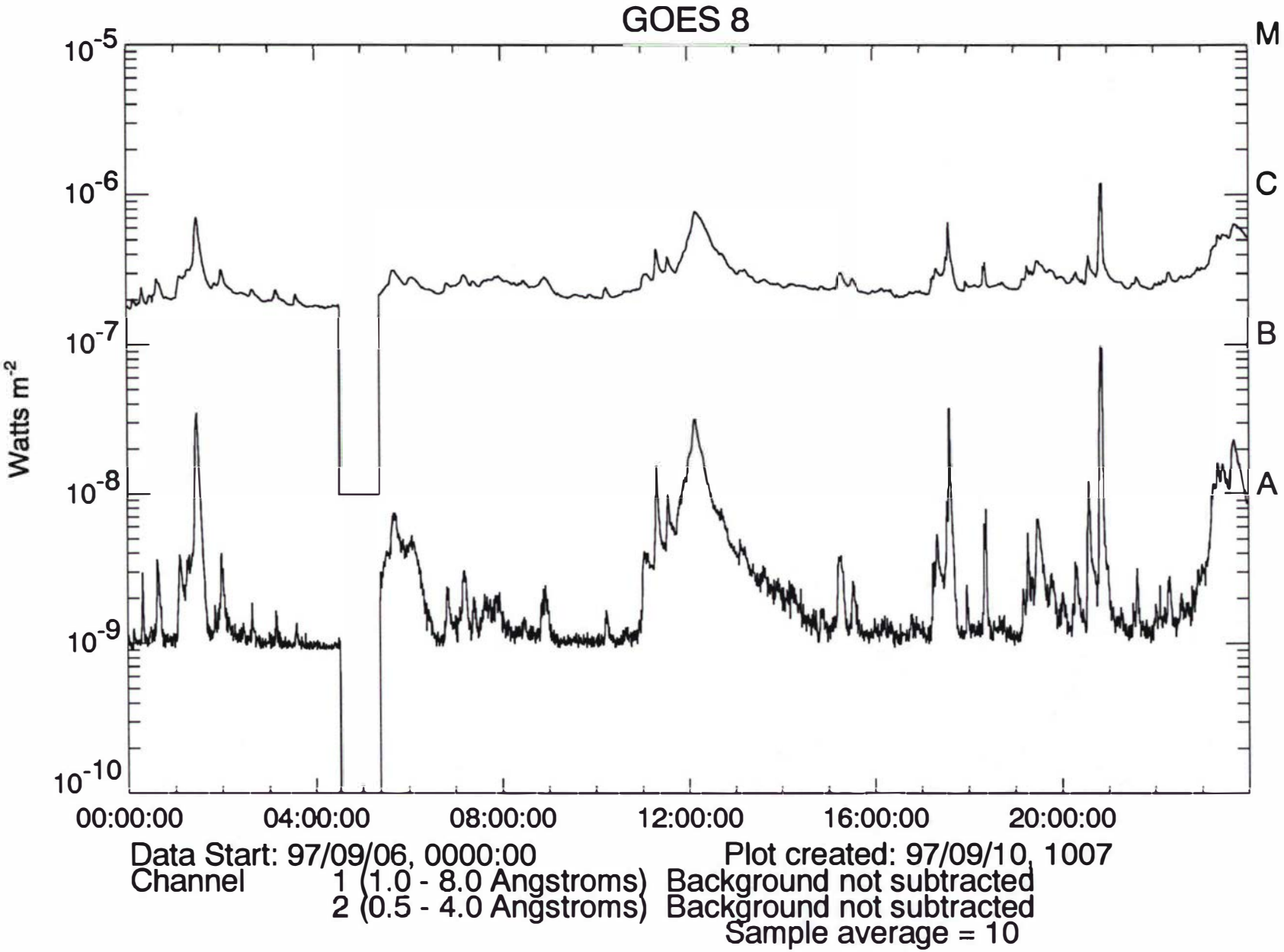
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

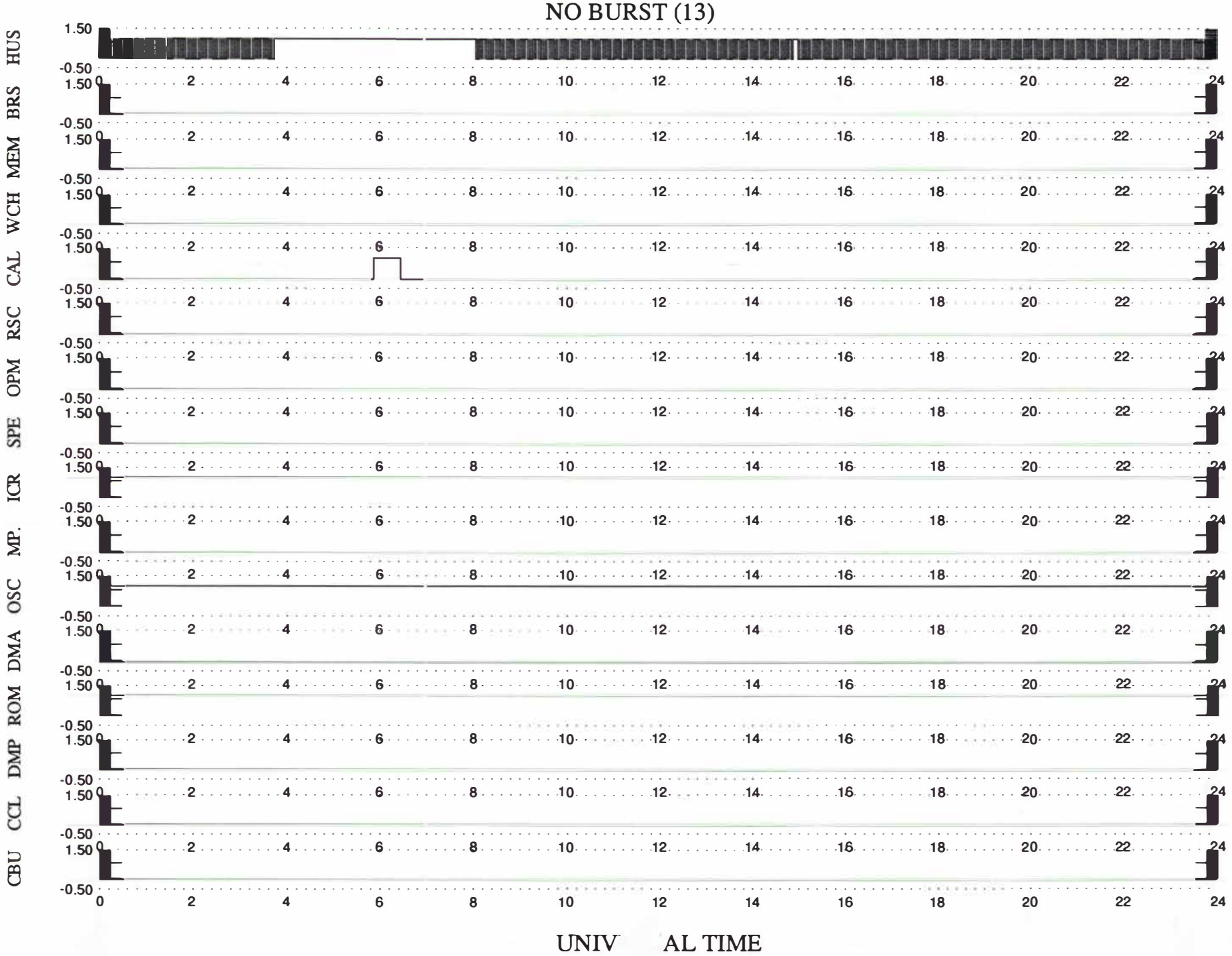
LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT!


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/06
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/10, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare

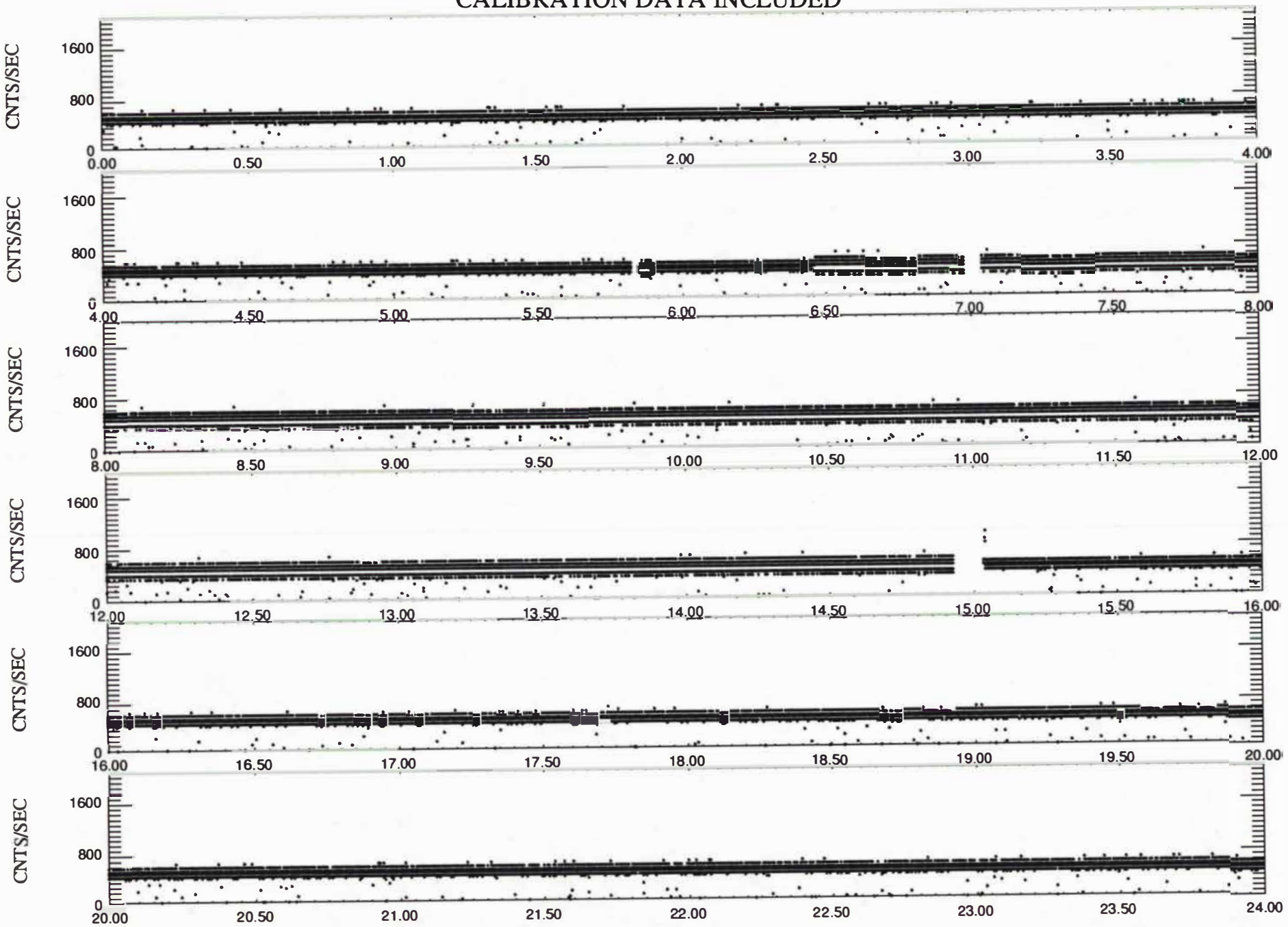

GOES 8
M
C
B
A
Watts m-2
10-5
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/06, 0000:00
Plot created: 97/09/10, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 249, year 1997 to day 249, year 1997 1/14/98



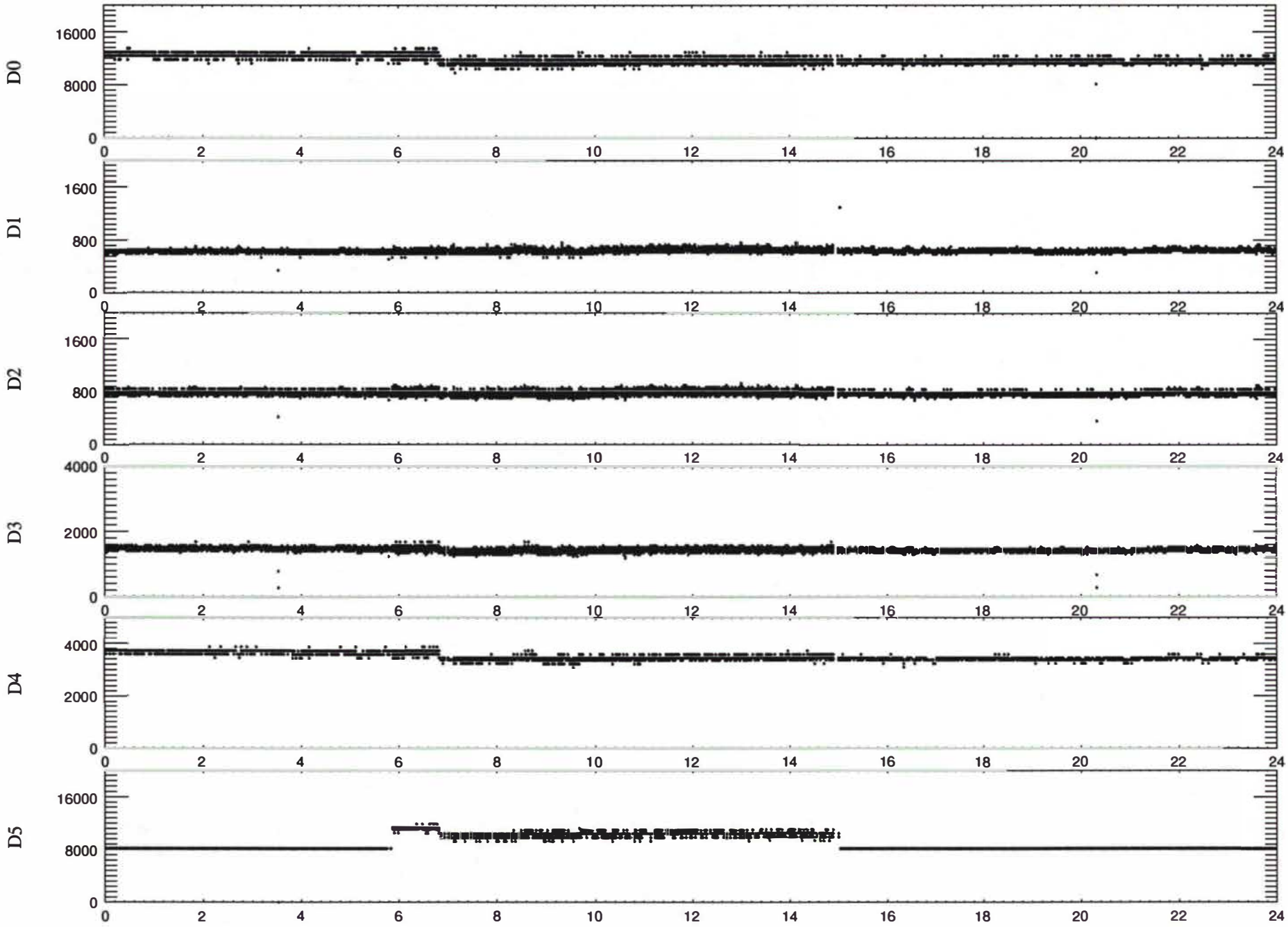
HUS 2A, MODE 1, NOT AVERAGED EDR day 249, year 1997 to day 249, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV AL TIME

HUS 2B COUNTS / SEC EDR day 249, year 1997 to day 249, year 1997 1/14/98



From WOODSP@ssl.msfc.nasa.gov Thu Sep 11 12:09 PDT 1997
Return-Path: <WOODSP@ssl.msfc.nasa.gov>
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id MAA29301; Thu, 11 Sep 1997 12:08:59 -0700
From: WOODSP@ssl.msfc.nasa.gov
Date: Thu, 11 Sep 1997 14:08:50 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970911140850.214010ce@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6368
Content-Type: text
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6368
EVENT OF 1997 SEP 7 DAY OF YEAR=250
EVENT CROSSING TIME AT BATSE : 11738. S. OR 03:15:38.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 347.000 11.000
BATSE PEAK COUNTING RATE: 30000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 7/ 9/ 97 IS:
RA= 162.376 DEC= 18.391 DIST= 6.235 AU
BATSE-ULYSSES DISTANCE = 932717642. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 29.74 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 2701.35 SECS.
CROSSING TIME AT ULYSSES IS 14439. S. OR 04:00:39 +/- 359.00 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 7/ 9/ 97 IS:
RA= 222.360 DEC= -17.190 DIST= 1.676 AU
MARS-BATSE DISTANCE = 250730736. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 53.88 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 492.98 SECS.
CROSSING TIME AT MARS IS 12231. S. OR 03:23:50 +/- 124.78 SECONDS

BATSE BURST TRIGGER

NO.: 6368

TIME: TJD=0698 SECONDS=11738

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

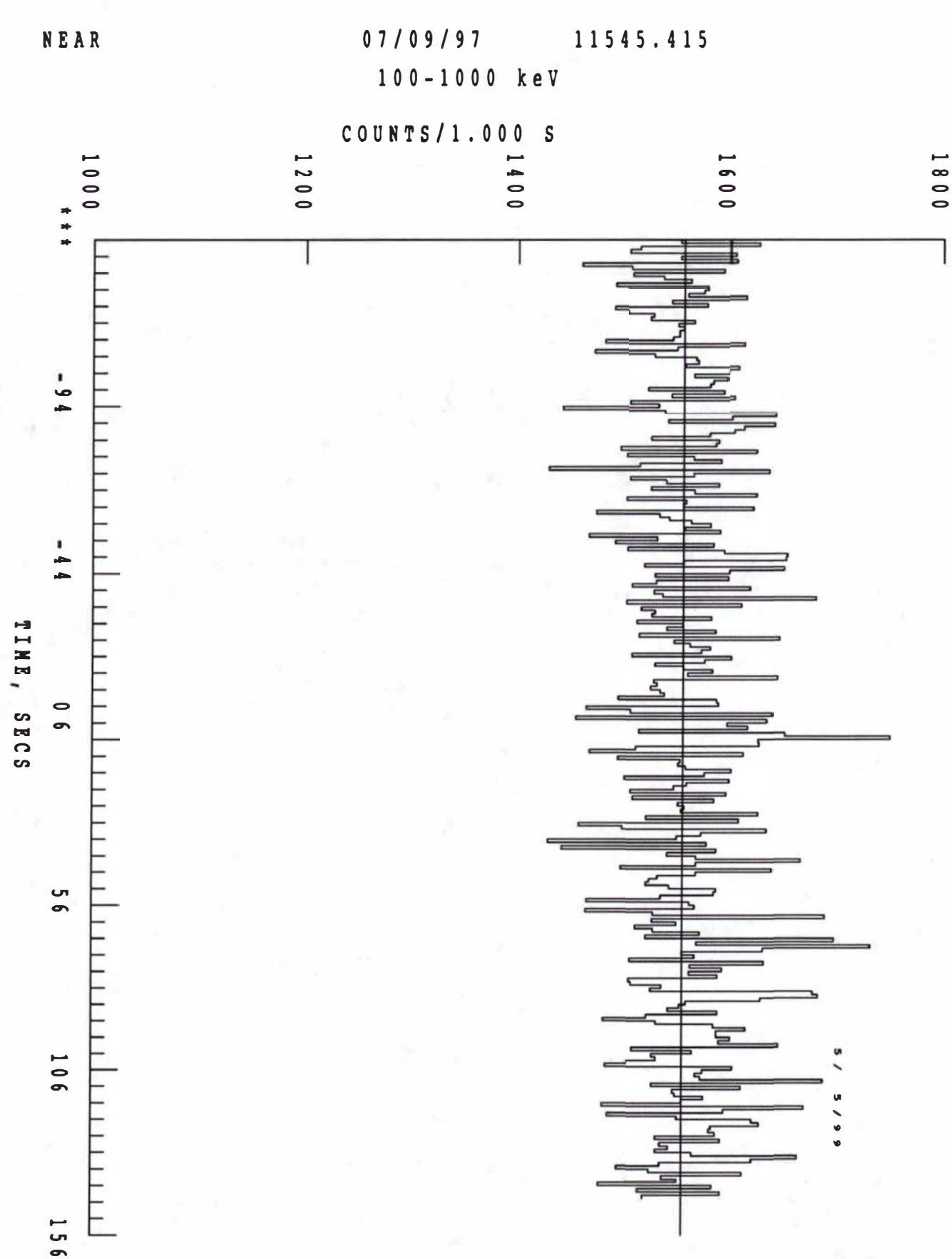
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=133.7 AZIMUTH=177.4 ERROR=8.4 DEGREES

COMMENTS:
GRB LASTING ~ 0.25 SEC. SINGLE SPIKE WITH SUBSTRUCTURE. VISIBLE
ABOVE 300 KEV. UNRELATED SOFT EVENT IN MODULES 6/7 AT TIME OF
BURST LASTING ~ 6 SEC.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6368	970907	10698	11738	30000	347	+11	.25


NEAR
07/09/97
11545.415
100-1000 keV
COUNTS/1.000 S
1000
1200
1400
1600
1800
***
-94
-44
0
56
106
156
TIME, SECS
5/ 5/99

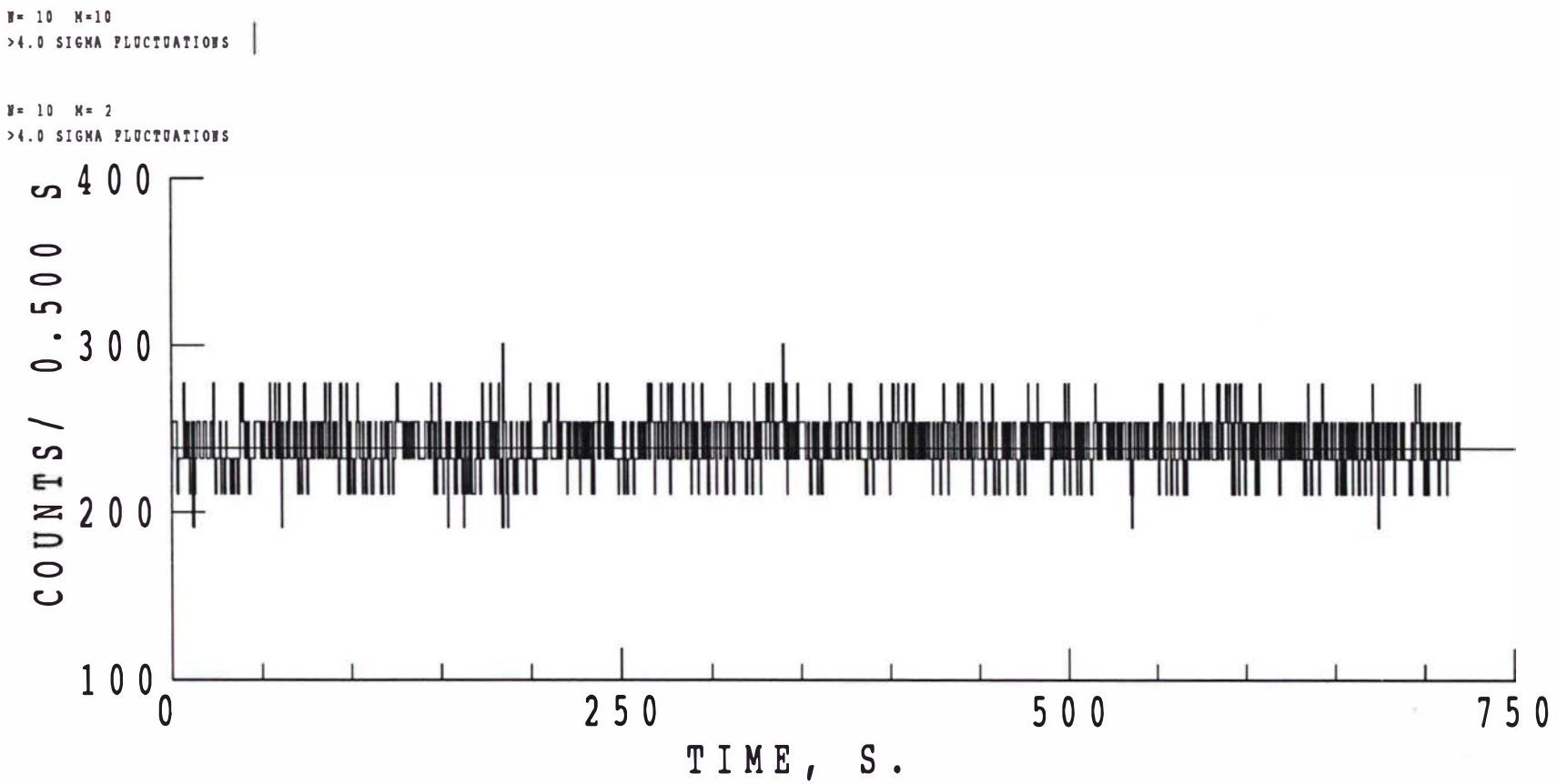
BATSE BURST# 6368

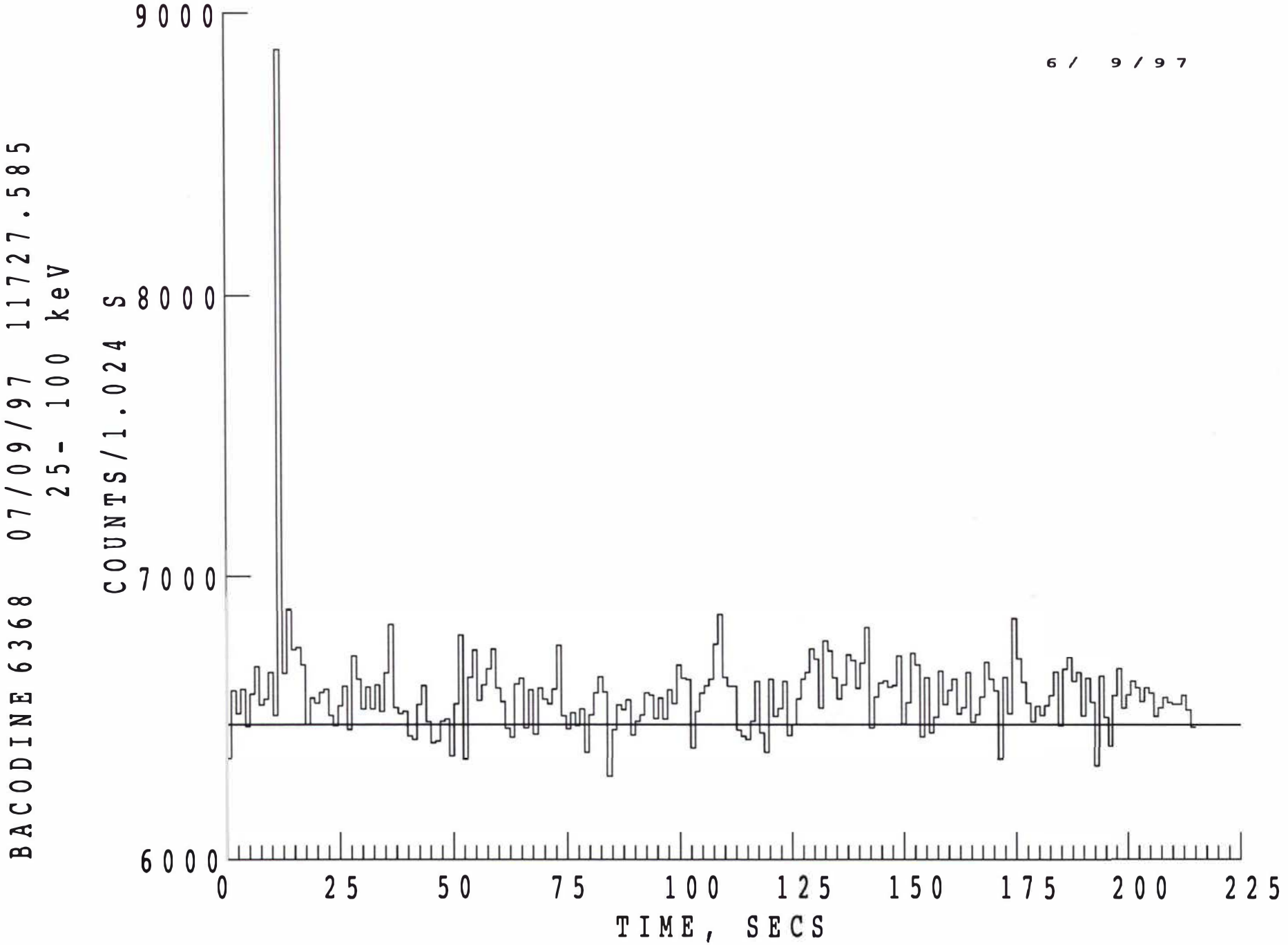
ULYSSES RT

12/ 9/97

7/ 9/97 14076.303 s

0- 0 keV




BACODINE 6368 07/09/97 11727.585
25- 100 keV
COUNTS/1.024 S
9000
8000
7000
6000
6/ 9/97
0
25
50
75
100
125
150
175
200
225
TIME, SECS

From BUTTERWORTH@tgrs2.gsfc.nasa.gov Mon Mar 16 07:33 PST 1998
Date: Mon, 16 Mar 1998 10:30:34 -0500 (EST)
From: BUTTERWORTH@tgrs3.gsfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
    BUTTERWORTH@tgrs3.gsfc.nasa.gov
Subject: follow-up message on 'possible KONUS SGR bursts' 970902-970908

Kevin,

As promised, here is my (much-delayed) more complete report for your 4 Ulysses events:

Ulysses event: September 2 1997 Ulysses time 08:25:22
The trigger at 07:39:21.329 in the North-facing detector is the only Konus event in the period of interest. The trigger was very hard, lasted 0.3 seconds and had a lot of energy-dependant time structure.

Ulysses event: September 2 1997 Ulysses time 20:52:59
Konus saw a solar flare near 21:10, which lasted about 90 seconds. The very weak single-bin event at 20:31:33 could be noise.

Ulysses event: September 7 1997 Ulysses time 04:44 55
No events are visible in Konus data.

Ulysses event: September 8 1997 Ulysses time 04:59:22
No events are visible in Konus data.

Paul.

From: TGRS3::BUTTERWORTH 6-MAR-1998 16:58:24.56
To: KEVIN
CC: TOM,BUTTERWORTH
Subj: Konus can't confirm any of the 4 Ulysses events as from SGR1806-20

Kevin,

So far I've only looked near the times that Konus would have seen these events if they were from 1806-20. ...

Konus was in read-out mode from 07:43-08:13 on Sep 2 97, so we have no relevant data for the first event in your list if it was from the SGR.

No corresponding events are obvious in the Konus data for the other three events either. (The best candidate I've found so far is near 20:31:33 on 2 Sep, when both the N and S 10-50 keV detectors saw a single high bin).

...

Paul.

---

ce: Fri, 6 Mar 1998 11:07:25 -0800
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <199803061907.LAA12994@scylla.>
To: butterworth@lheavx.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu

From BUTTERWORTH@tgrs2.gsfc.nasa.gov Fri Mar 6 14:01 PST 1998
Date: Fri, 6 Mar 1998 16:58:23 -0500 (EST)
From: BUTTERWORTH@tgrs3.gsfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
BUTTERWORTH@tgrs3.gsfc.nasa.gov, cline@apache.gsfc.nasa.gov
Subject: Konus can't confirm any of the 4 Ulysses events as from SGR1806-20

Kevin,

So far I've only looked near the times that Konus would have seen these events if they were from 1806-20. I'll send a more complete report on Monday.

Konus was in read-out mode from 07:43-08:13 on Sep 2 97, so we have no relevant data for the first event in your list if it was from the SGR.

No corresponding events are obvious in the Konus data for the other three events either. (The best candidate I've found so far is near 20:31:33 on 2 Sep, when both the N and S 10-50 keV detectors saw a single high bin).

More on Monday...

Paul.

Date: Fri, 6 Mar 1998 11:07:25 -0800
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <199803061907.LAA12994@scylla.>
To: butterworth@lheavx.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: possible KONUS SGR bursts
X-Sun-Charset: US-ASCII

Dear Paul,

Did KONUS detect any of the following Ulysses events? I suspect that they are from SGR1806-20, so they would be in the south-facing detector.

September 2 1997 Ulysses time 08:25:22 Distance from Earth 3100 light s
September 2 1997 Ulysses time 20:52:59
September 7 1997 Ulysses time 04:44 55
September 8 1997 Ulysses time 04:59:22

If they were from SGR1806, the KONUS times would have been about 1300 s earlier than the Ulysses times.

Kevin

From WOODSP@ssl.msfc.nasa.gov Thu Sep 11 12:10 PDT 1997
Return-Path: <WOODSP@ssl.msfc.nasa.gov>
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id MAA29325; Thu, 11 Sep 1997 12:09:58 -0700
From: WOODSP@ssl.msfc.nasa.gov
Date: Thu, 11 Sep 1997 14:09:47 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970911140947.214010ce@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6369
Content-Type: text
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6369
EVENT OF 1997 SEP 7 DAY OF YEAR=250
EVENT CROSSING TIME AT BATSE : 23361. S. OR 06:29:21.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 176.000 -17.000
BATSE PEAK COUNTING RATE: 3000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 7/ 9/ 97 IS:
RA= 162.395 DEC= 18.378 DIST= 6.235 AU
BATSE-ULYSSES DISTANCE = 932693745. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=142.18 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2457.45 SECS.
CROSSING TIME AT ULYSSES IS 20904. S. OR 05:48:23 +/- 343.92 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 7/ 9/ 97 IS:
RA= 222.360 DEC= -17.190 DIST= 1.676 AU
MARS-BATSE DISTANCE = 250730736. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=135.80 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -599.58 SECS.
CROSSING TIME AT MARS IS 22761. S. OR 06:19:21 +/- 92.13 SECONDS

BATSE BURST TRIGGER

NO.: 6369

TIME: TJD=0698 SECONDS=23361

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

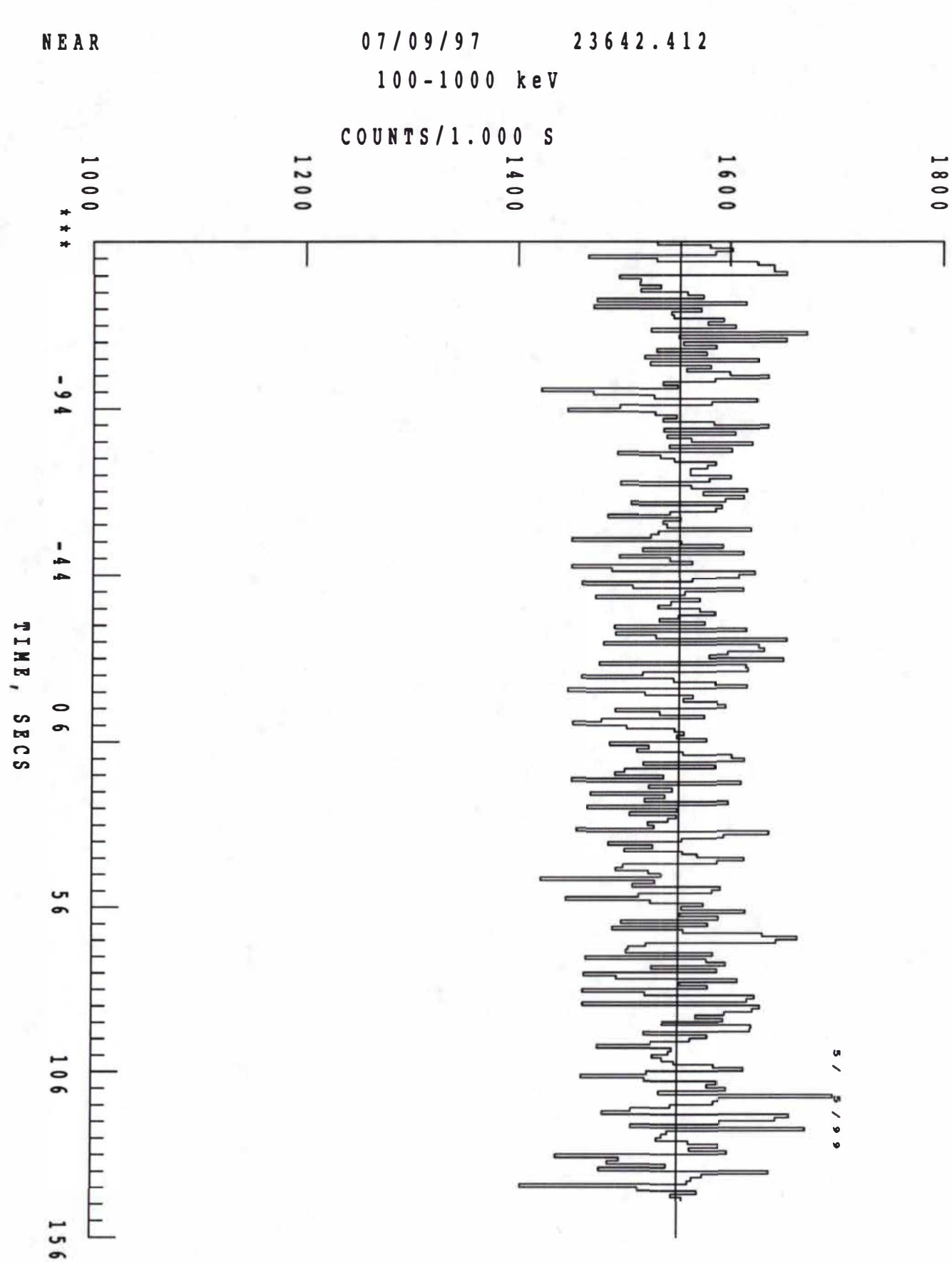
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=41.1 AZIMUTH=344.5 ERROR=3.5 DEGREES

COMMENTS:
GRB LASTING ~ 35 SEC. TWO PULSES SEPARATED BY ABOUT 18 SEC.
NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6369	970907	10698	23361	3000	176	-17	35


NEAR
07/09/97
23642.412
100-1000 keV
COUNTS/1.000 S
1000
1200
1400
1600
1800
***
-94
-44
06
56
106
156
TIME, SECS
5/ 5/99

BACODINE# 6369

ULYSSES RT

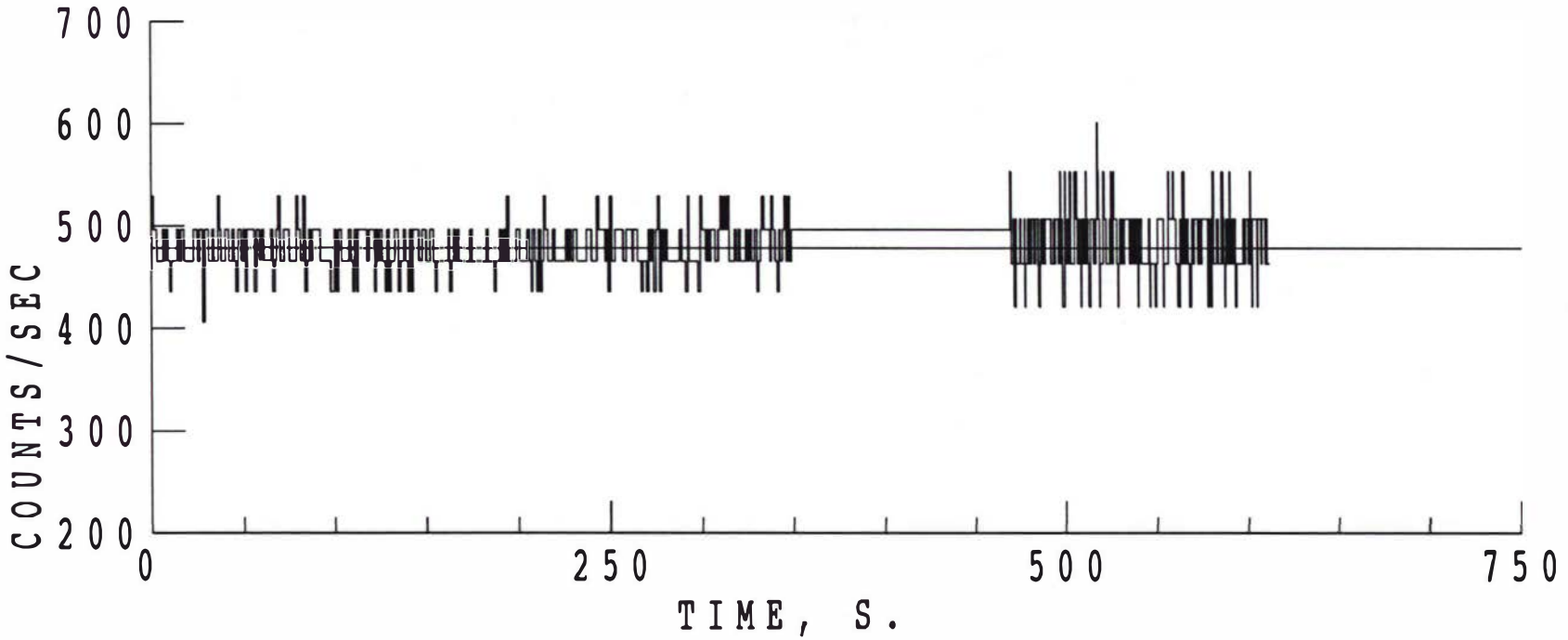
8/ 9/97

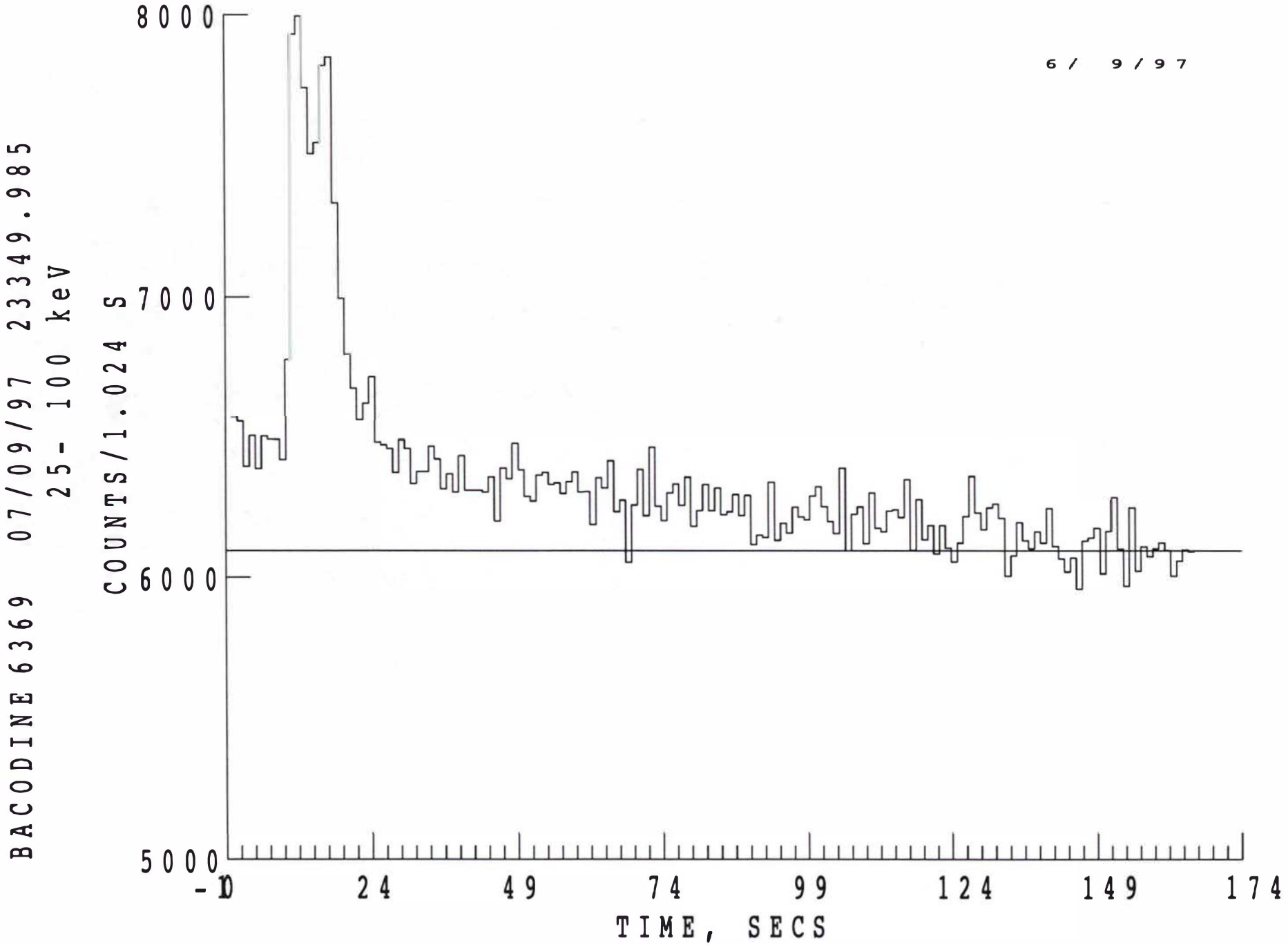
7/ 9/97 20484.871 s

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS




BACODINE 6369 07/09/97 23349.985
25- 100 keV
COUNTS/1.024 S
8000
7000
6000
5000
6/ 9/97
-10
24
49
74
99
124
149
174
TIME, SECS

From WOODSP@ssl.msfc.nasa.gov Thu Sep 11 12:11 PDT 1997
Return-Path: <WOODSP@ssl.msfc.nasa.gov>
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id MAA29348; Thu, 11 Sep 1997 12:11:26 -0700
From: WOODSP@ssl.msfc.nasa.gov
Date: Thu, 11 Sep 1997 14:11:17 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970911141117.214010ce@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6370
Content-Type: text
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6370
EVENT OF 1997 SEP 7 DAY OF YEAR=250
EVENT CROSSING TIME AT BATSE : 40781. S. OR 11:19:41.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 274.000 39.000
BATSE PEAK COUNTING RATE: 1600 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 7/ 9/ 97 IS:
RA= 162.424 DEC= 18.358 DIST= 6.234 AU
BATSE-ULYSSES DISTANCE = 932658648. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 85.81 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 227.22 SECS.
CROSSING TIME AT ULYSSES IS 41008. S. OR 11:23:28 +/- 592.13 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 7/ 9/ 97 IS:
RA= 222.360 DEC= -17.190 DIST= 1.676 AU
MARS-BATSE DISTANCE = 250730736. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=105.95 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -229.79 SECS.
CROSSING TIME AT MARS IS 40551. S. OR 11:15:51 +/- 136.13 SECONDS

BATSE BURST TRIGGER

NO.: 6370

TIME: TJD=0698 SECONDS=40781

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

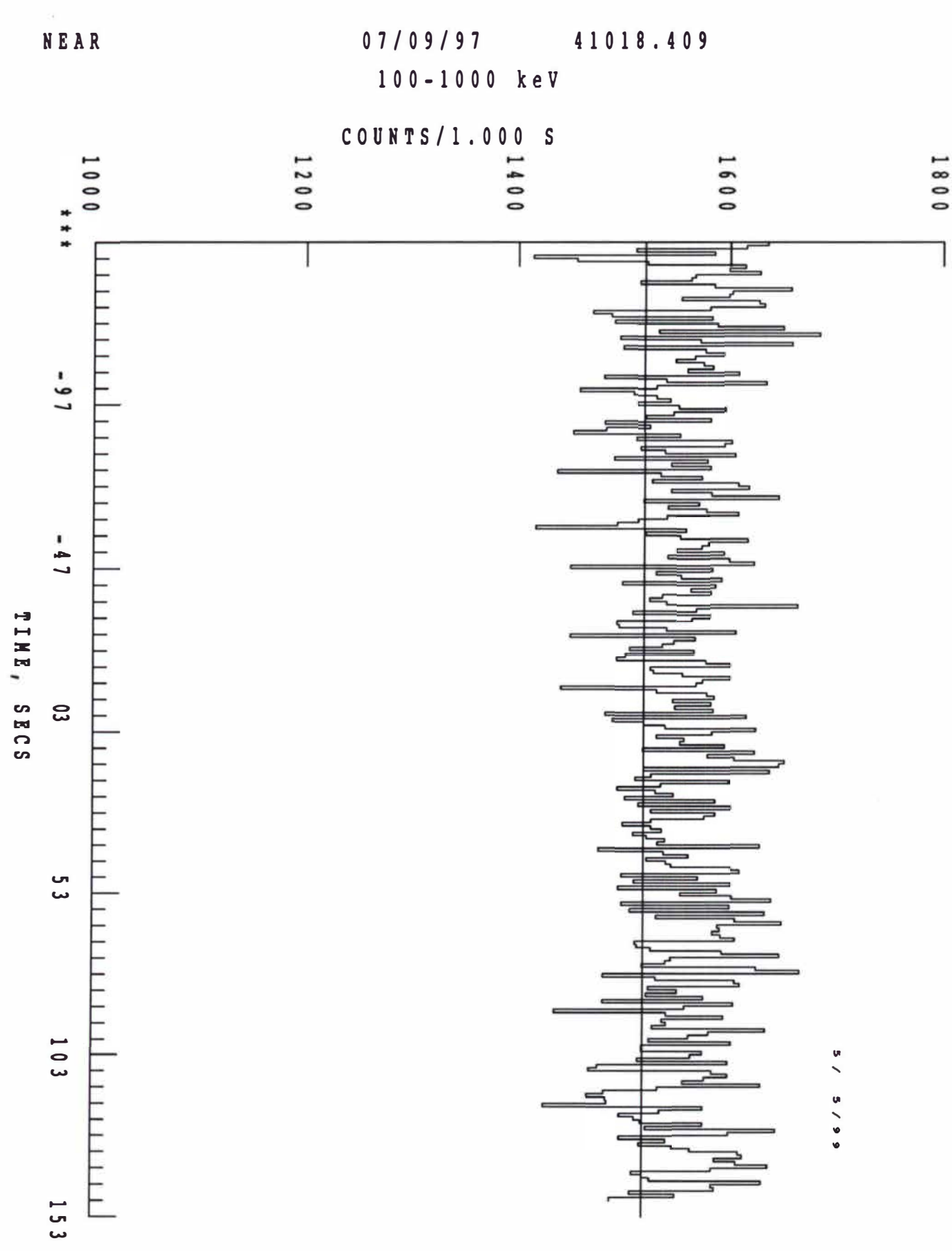
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=131.6 AZIMUTH=280.0 ERROR=16 DEGREES

COMMENTS:
GRB LASTING ~ 80 SEC. WEAK, SPIKEY EVENT. NOT VISIBLE ABOVE
300 KEV. COULD POSSIBLY BE CYG X-1 EVENT.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6370	970907	10698	40781	1600	274	+39	80


NEAR
07/09/97
41018.409
100-1000 keV
COUNTS/1.000 S
1000
1200
1400
1600
1800
***
-97
-47
03
53
103
153
TIME, SECS
5/ 5/99

BACODINE# 6370

ULYSSES RT 8/ 9/97

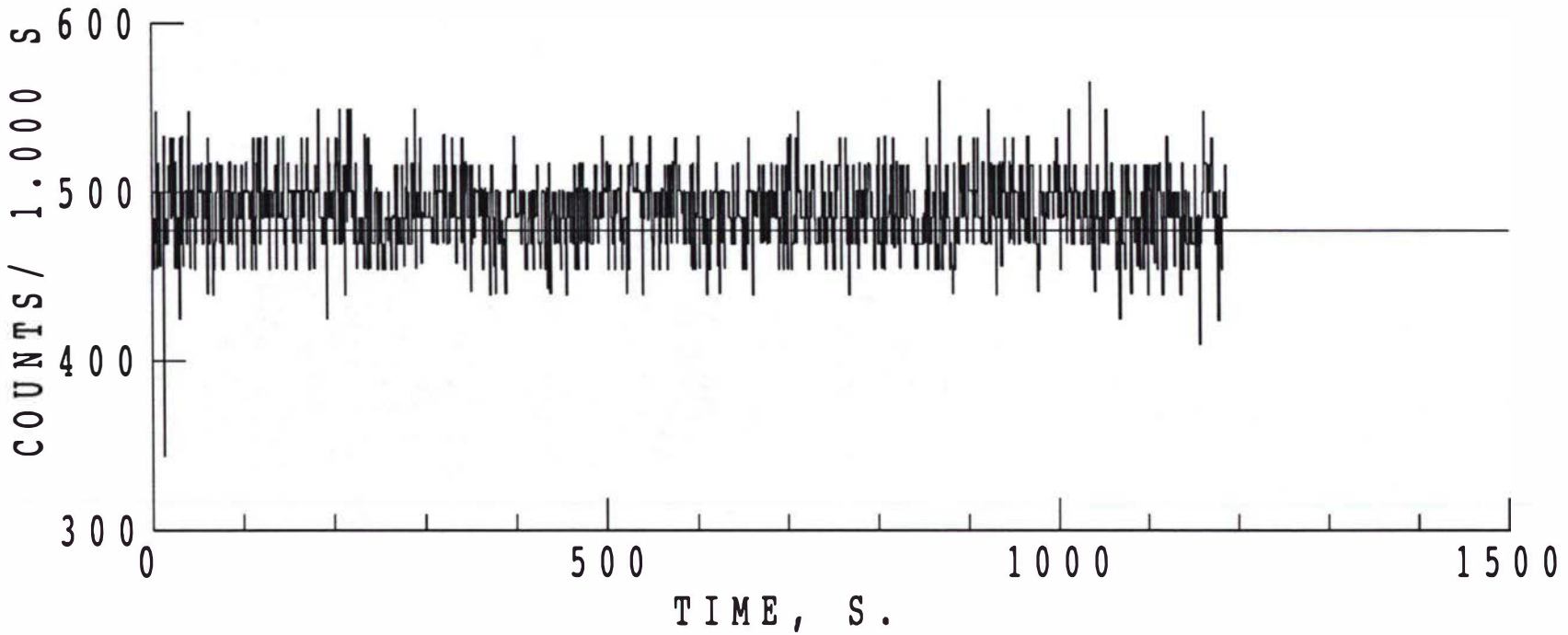
7/ 9/97 40608.102 s

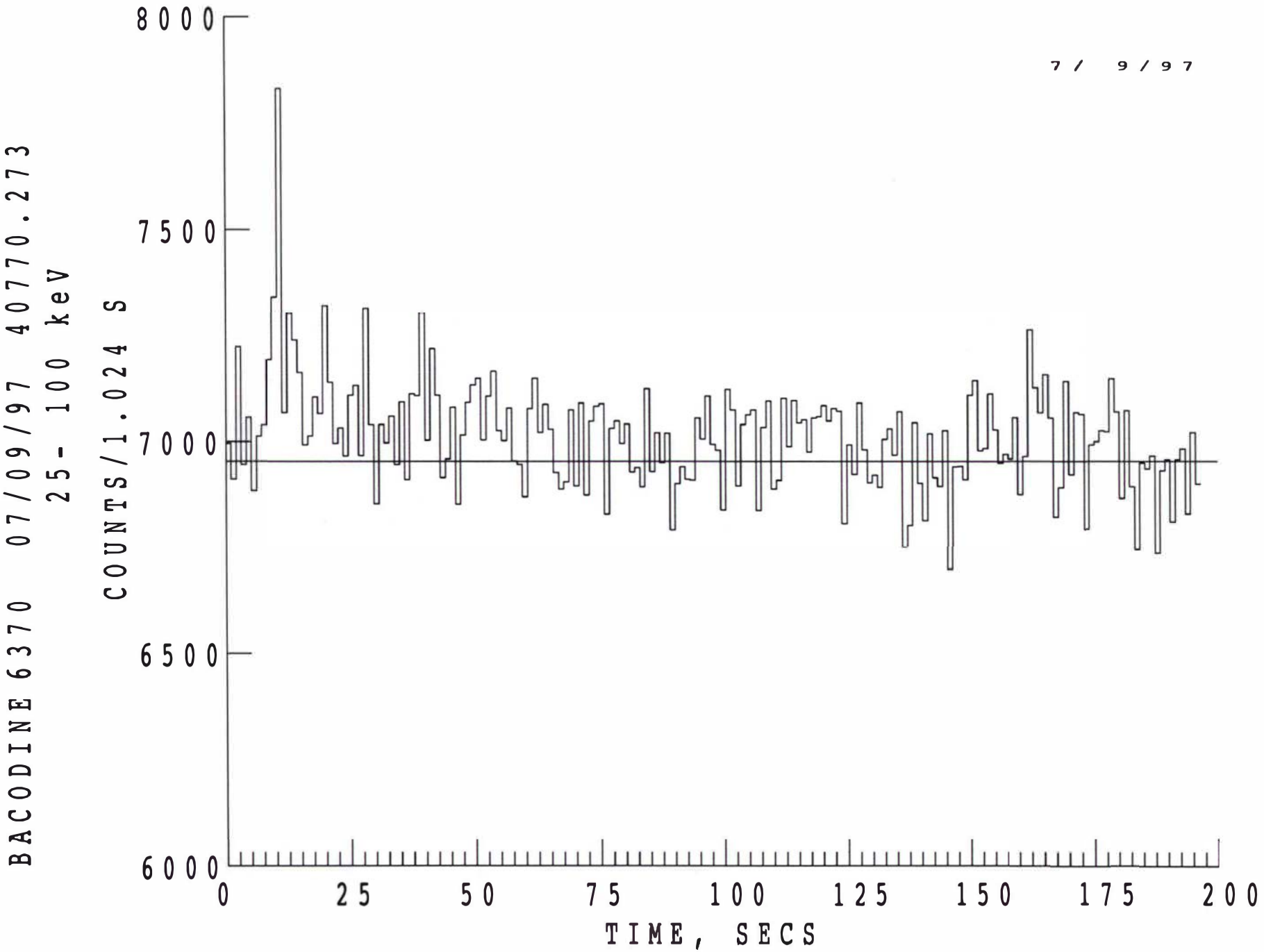
0.250 S INTERVALS REGROUPED BY 4

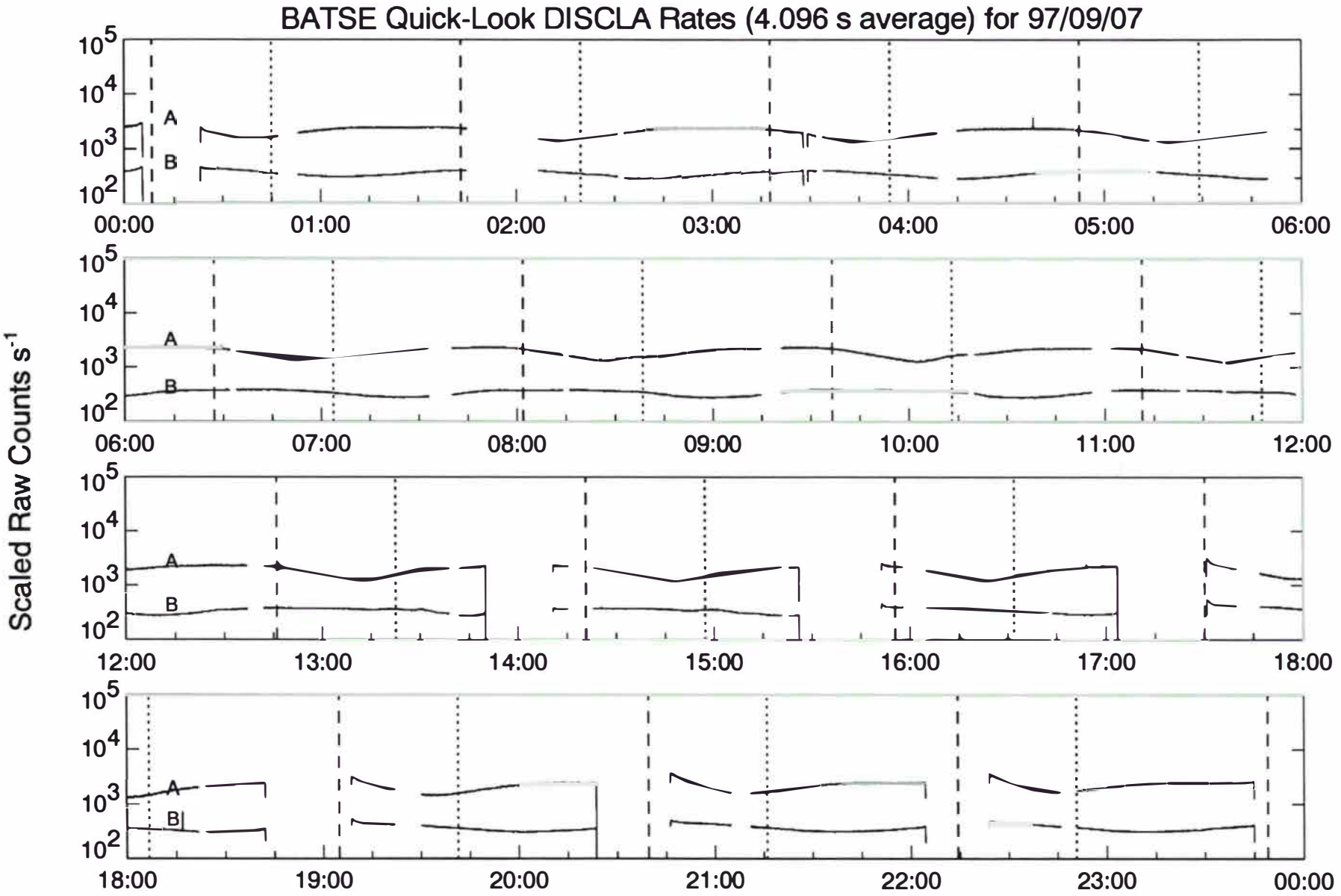
0- 0 keV

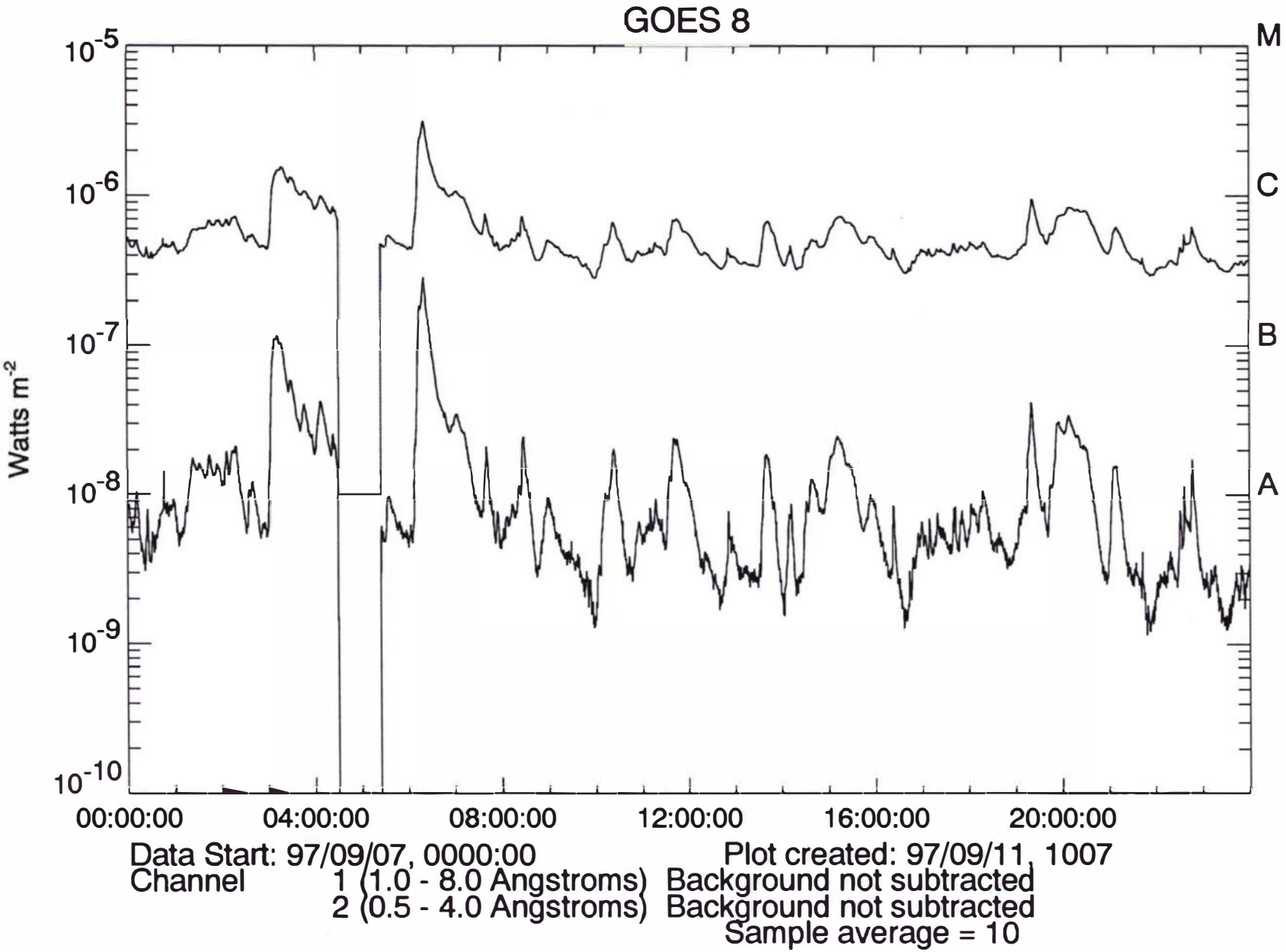
N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

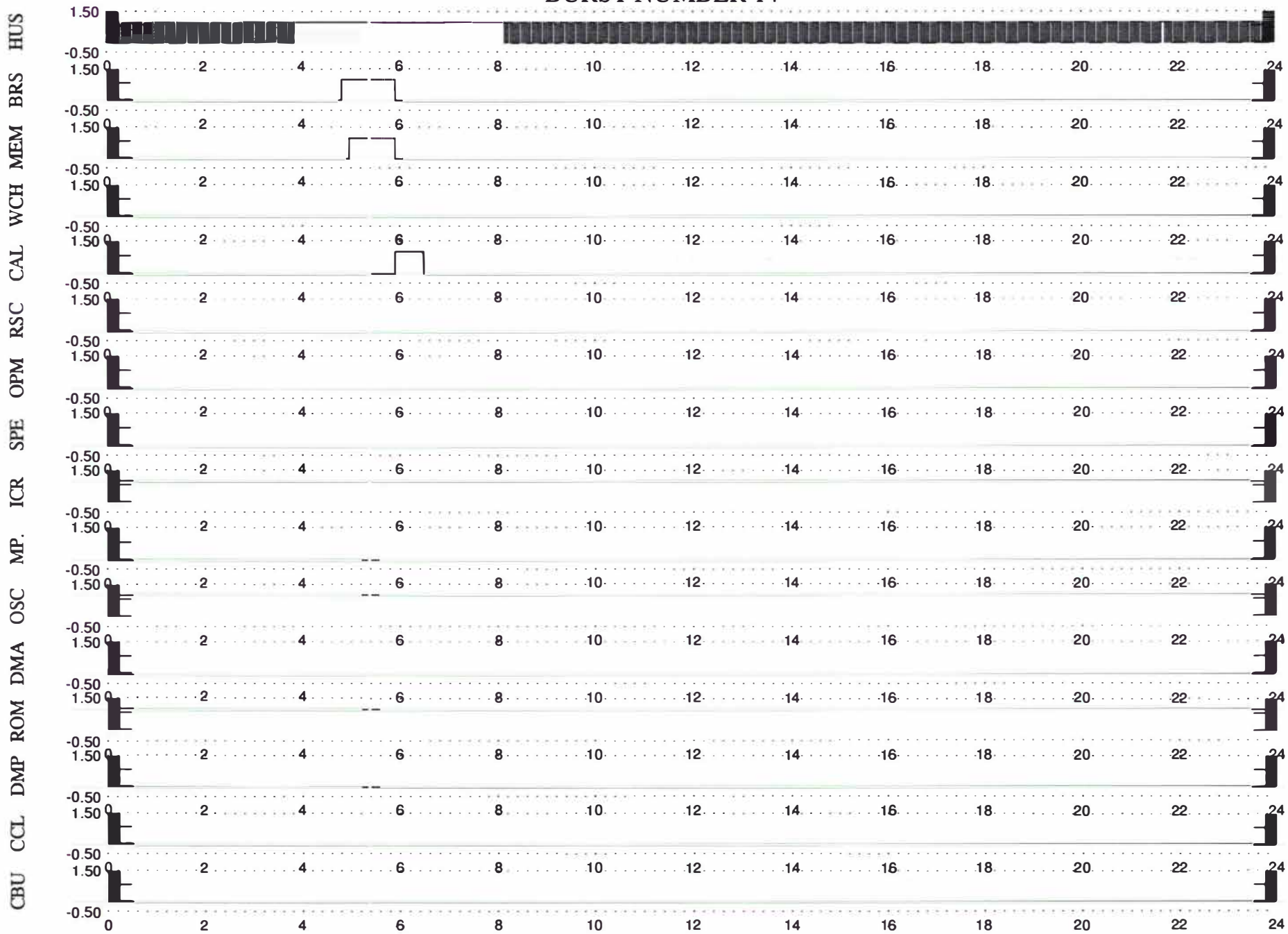



BACODINE 6370 07/09/97 40770.273
25- 100 keV
COUNTS/1.024 S
8000
7500
7000
6500
6000
0
25
50
75
100
125
150
175
200
TIME, SECS
7/ 9/97


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/07
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/11, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare


GOES 8
M
C
B
A
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
10^{-10}
Watts m^{-2}
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/07, 0000:00
Plot created: 97/09/11, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

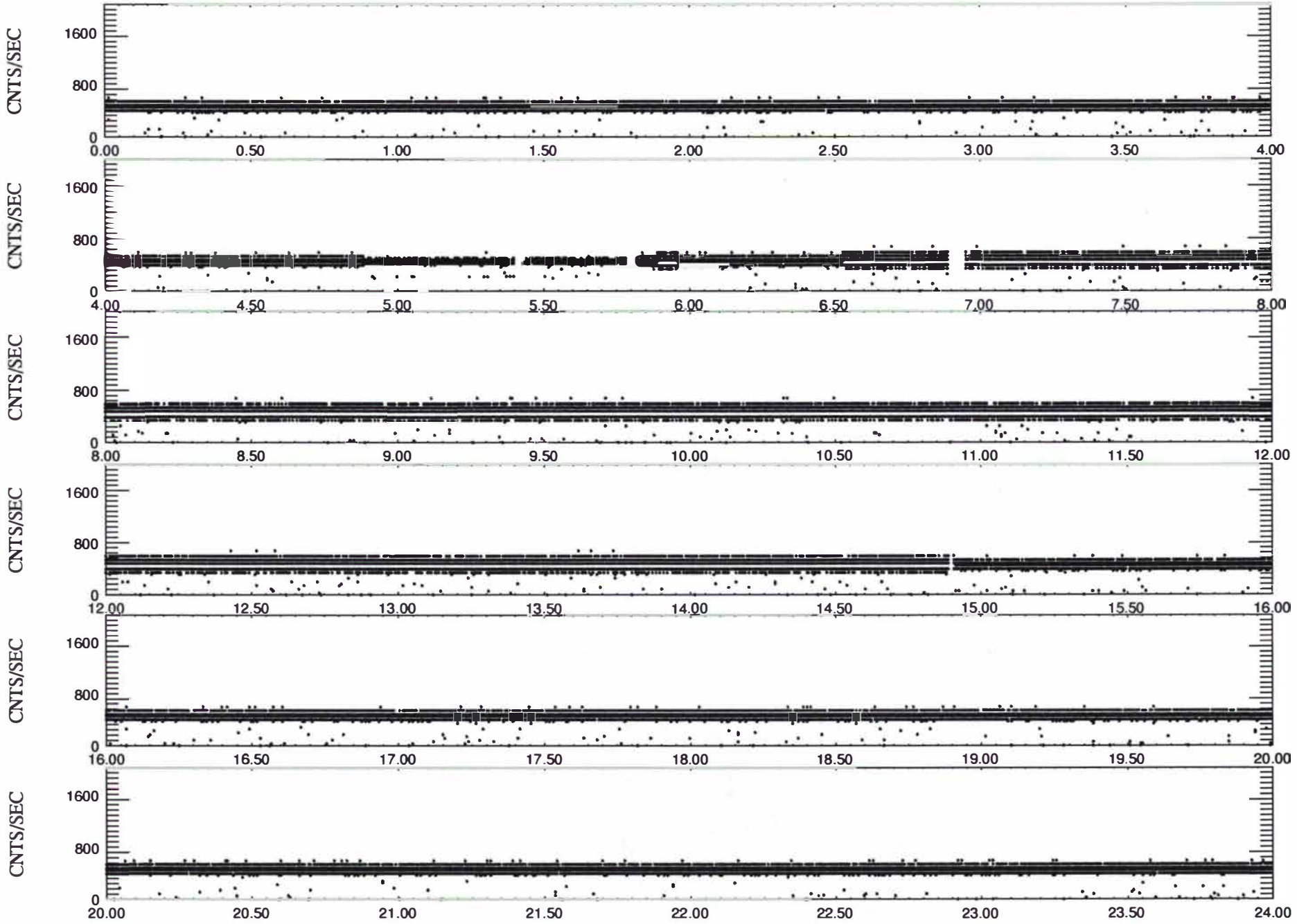
BURST NUMBER 14



UNIV! AL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 250, year 1997 to day 250, year 1997 1/14/98

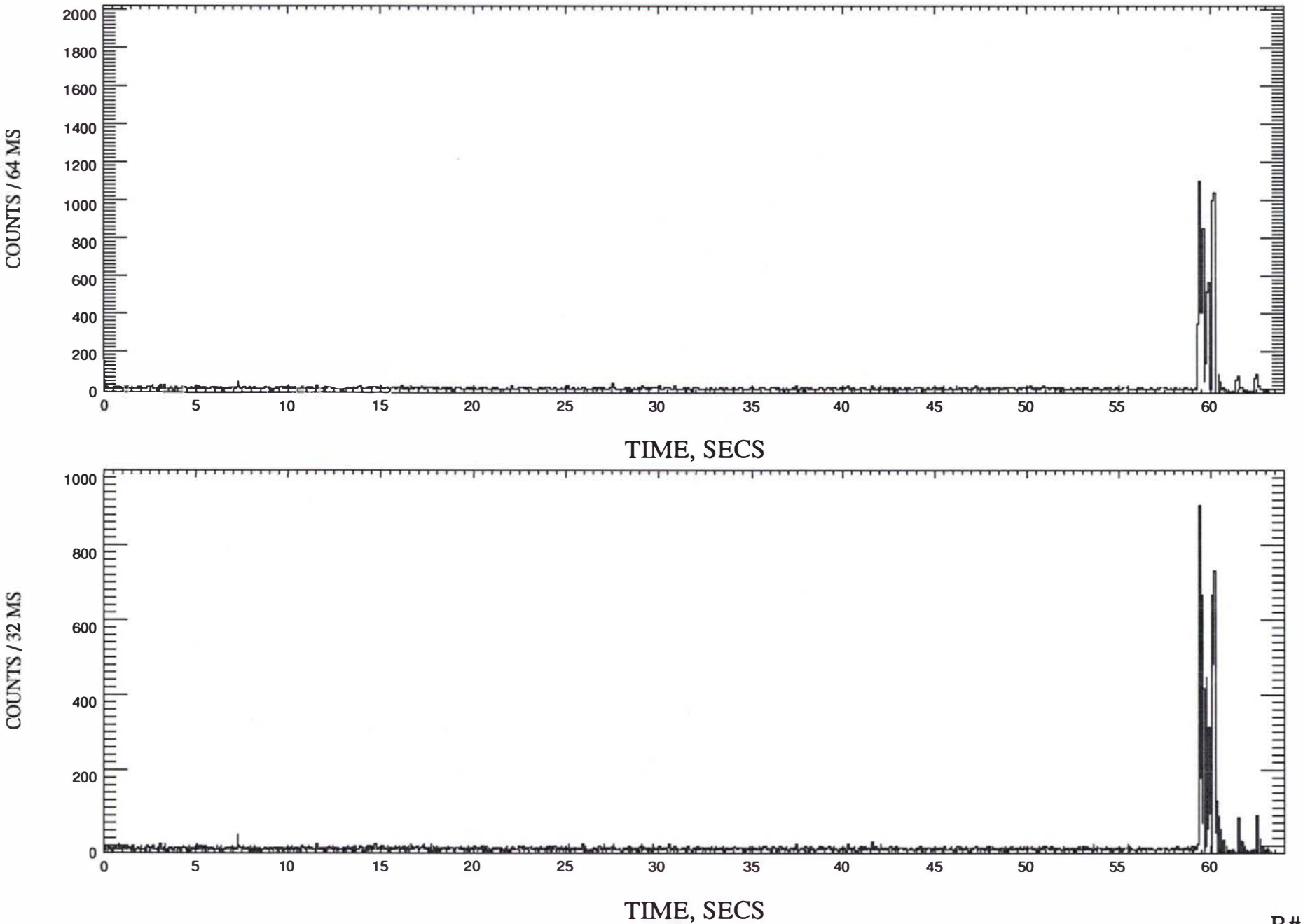
CALIBRATION DATA INCLUDED



UNIV' 'AL TIME

HUS 2A TRIGGERED DATA EDR day 250, year 1997 1/14/98

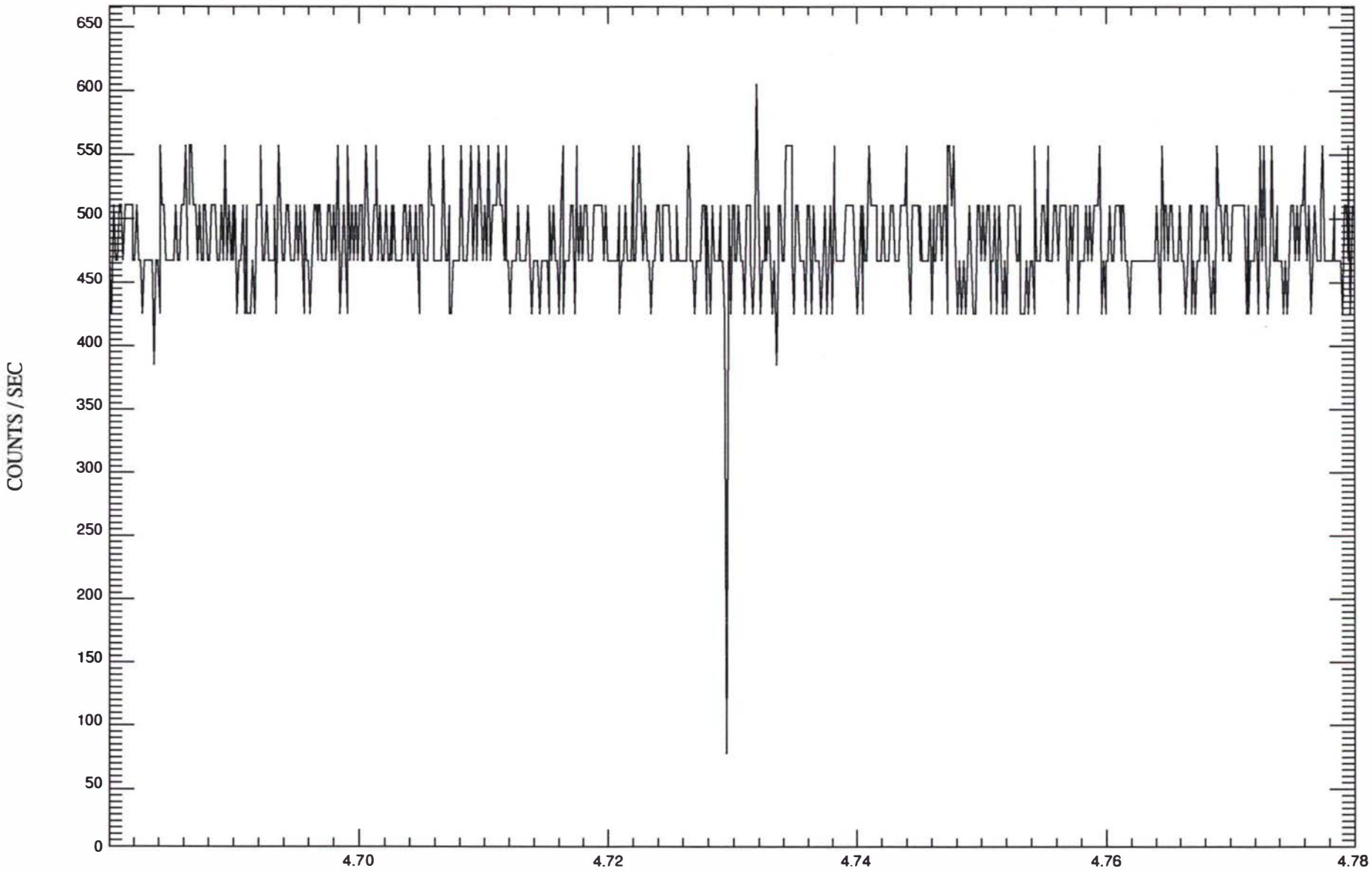
Burst Counter 14 at UT= 4.731929732429 h=17034.947 s 04:43:54.947



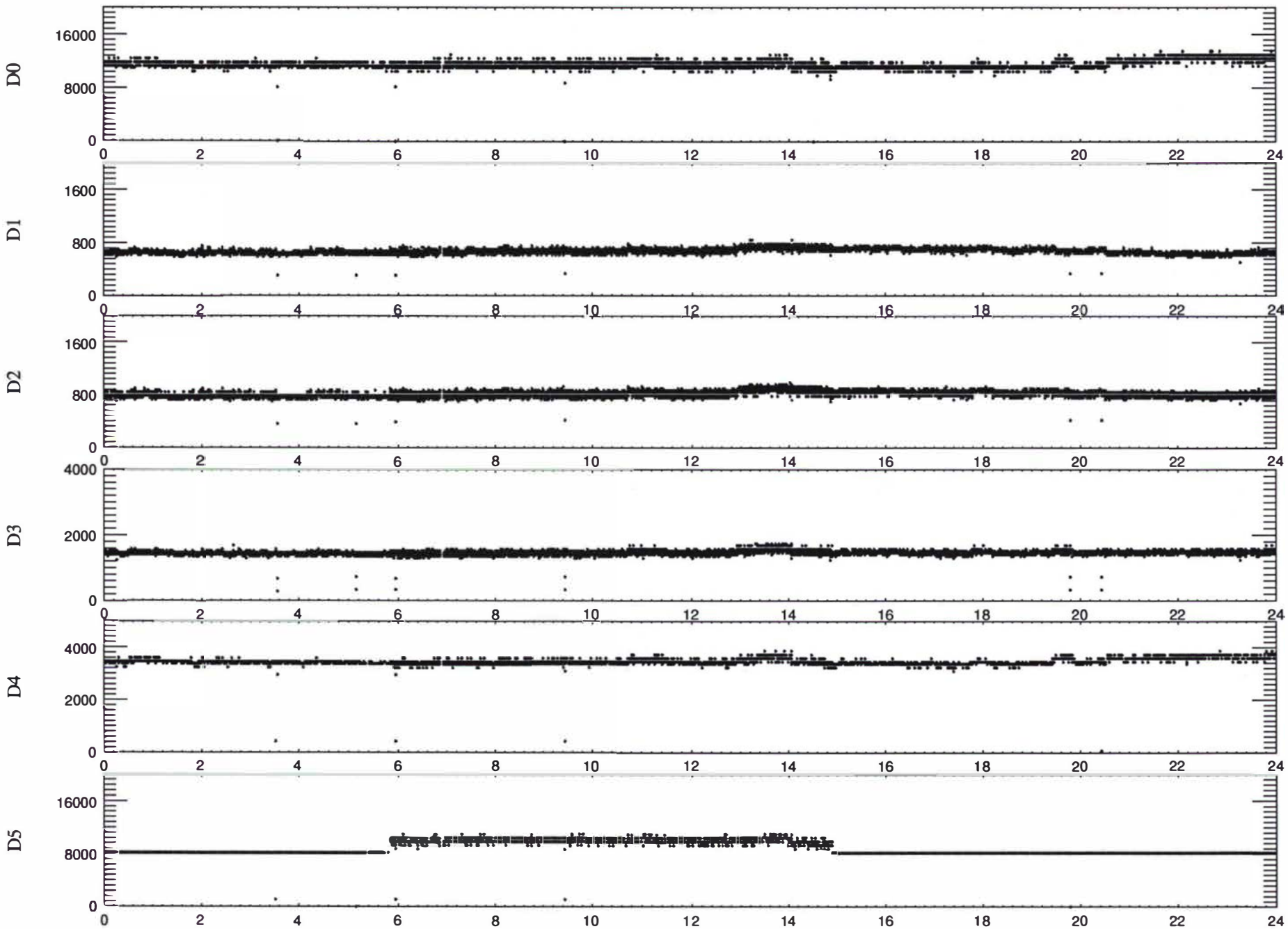
B# 1

HUS 2A, MODE 1, NOT AVERAGED EDR day 250, year 1997 to day 250, year 1997 1/14/98

CALIBRATION DATA INCLUDED



HUS 2B COUNTS / SEC EDR day 250, year 1997 to day 250, year 1997 1/14/98



From BUTTERWORTH@tgrs2.gsfc.nasa.gov Mon Mar 16 07:33 PST 1998
Date: Mon, 16 Mar 1998 10:30:34 -0500 (EST)
From: BUTTERWORTH@tgrs3.gsfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
    BUTTERWORTH@tgrs3.gsfc.nasa.gov
Subject: follow-up message on 'possible KONUS SGR bursts' 970902-970908

Kevin,

As promised, here is my (much-delayed) more complete report for your 4 Ulysses events:

Ulysses event: September 2 1997 Ulysses time 08:25:22
The trigger at 07:39:21.329 in the North-facing detector is the only Konus event in the period of interest. The trigger was very hard, lasted 0.3 seconds and had a lot of energy-dependant time structure.

Ulysses event: September 2 1997 Ulysses time 20:52:59
Konus saw a solar flare near 21:10, which lasted about 90 seconds. The very weak single-bin event at 20:31:33 could be noise.

Ulysses event: September 7 1997 Ulysses time 04:44 55
No events are visible in Konus data.

Ulysses event: September 8 1997 Ulysses time 04:59:22
No events are visible in Konus data.

Paul.

From: TGRS3::BUTTERWORTH 6-MAR-1998 16:58:24.56
To: KEVIN
CC: TOM,BUTTERWORTH
Subj: Konus can't confirm any of the 4 Ulysses events as from SGR1806-20

Kevin,

So far I've only looked near the times that Konus would have seen these events if they were from 1806-20. ...

Konus was in read-out mode from 07:43-08:13 on Sep 2 97, so we have no relevant data for the first event in your list if it was from the SGR.

No corresponding events are obvious in the Konus data for the other three events either. (The best candidate I've found so far is near 20:31:33 on 2 Sep, when both the N and S 10-50 keV detectors saw a single high bin).

...

Paul.

---

ce: Fri, 6 Mar 1998 11:07:25 -0800
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <199803061907.LAA12994@scylla.>
To: butterworth@lheavx.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu

From BUTTERWORTH@tgrs2.gsfc.nasa.gov Fri Mar 6 14:01 PST 1998
Date: Fri, 6 Mar 1998 16:58:23 -0500 (EST)
From: BUTTERWORTH@tgrs3.gsfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
BUTTERWORTH@tgrs3.gsfc.nasa.gov, cline@apache.gsfc.nasa.gov
Subject: Konus can't confirm any of the 4 Ulysses events as from SGR1806-20

Kevin,

So far I've only looked near the times that Konus would have seen these events if they were from 1806-20. I'll send a more complete report on Monday.

Konus was in read-out mode from 07:43-08:13 on Sep 2 97, so we have no relevant data for the first event in your list if it was from the SGR.

No corresponding events are obvious in the Konus data for the other three events either. (The best candidate I've found so far is near 20:31:33 on 2 Sep, when both the N and S 10-50 keV detectors saw a single high bin).

More on Monday...

Paul.

Date: Fri, 6 Mar 1998 11:07:25 -0800
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <199803061907.LAA12994@scylla.>
To: butterworth@lheavx.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
Subject: possible KONUS SGR bursts
X-Sun-Charset: US-ASCII

Dear Paul,

Did KONUS detect any of the following Ulysses events? I suspect that they are from SGR1806-20, so they would be in the south-facing detector.

September 2 1997 Ulysses time 08:25:22 Distance from Earth 3100 light s
September 2 1997 Ulysses time 20:52:59
September 7 1997 Ulysses time 04:44 55
September 8 1997 Ulysses time 04:59:22

If they were from SGR1806, the KONUS times would have been about 1300 s earlier than the Ulysses times.

Kevin

From HENZE@ssl.msfc.nasa.gov Thu Sep 11 12:43 PDT 1997
Return-Path: <HENZE@ssl.msfc.nasa.gov>
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id MAA29716; Thu, 11 Sep 1997 12:43:03 -0700
From: HENZE@ssl.msfc.nasa.gov
Date: Thu, 11 Sep 1997 14:42:53 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970911144253.21400f54@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6371
Content-Type: text
Content-Length: 1135
X-Lines: 26
Status: RO

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

 BATSE BURST #     6371
 EVENT OF 1997 SEP  8 DAY OF YEAR=251
 EVENT CROSSING TIME AT BATSE      : 25971. S. OR 07:12:51.0
 COORDINATES ARE   0.000   0.000       6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 112.000   24.000
 BATSE PEAK COUNTING RATE:   5000    C/S

 EVENT CROSSING TIME AT ULYSSES    WILL BE FOUND
 INTERPOLATED POSITION OF ULYSSES ON  8/ 9/  97 IS:
 RA=  162.542 DEC=   18.277 DIST=    6.233 AU
 BATSE-ULYSSES DISTANCE =  932502068. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=132.75 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2111.51 SECS.
 CROSSING TIME AT ULYSSES    IS 23859. S. OR   06:37:39 +/-  414.47 SECONDS

 EVENT CROSSING TIME AT MARS       WILL BE FOUND
 POSITION OF MARS ON  8/ 9/  97 IS:
 RA=  223.020 DEC=  -17.393 DIST=    1.681 AU
 MARS-BATSE DISTANCE =  251504784. KM.
 ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 64.26 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH=  364.33 SECS.
 CROSSING TIME AT MARS       IS 26335. S. OR   07:18:55 +/-  136.73 SECONDS

                BATSE BURST TRIGGER
NO.: 6371

TIME: TJD=0699 SECONDS=25971

TYPE: BURST                     SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:       SIGMA

INTENSITY:          COUNTS/CM2

LOCATION: ZENITH=093.0  AZIMUTH=047.2  ERROR=011.7 DEGREES

COMMENTS:
SINGLE SPIKE, DUR.~0.4 S.  NOT VISIBLE ABOVE 300 KEV.


 BATSE #   Date     TJD     SoD   Max ct/s   RA   Dec  Dur (s)
   6371   970908   10699   25971     5000   112   +24    .4
```

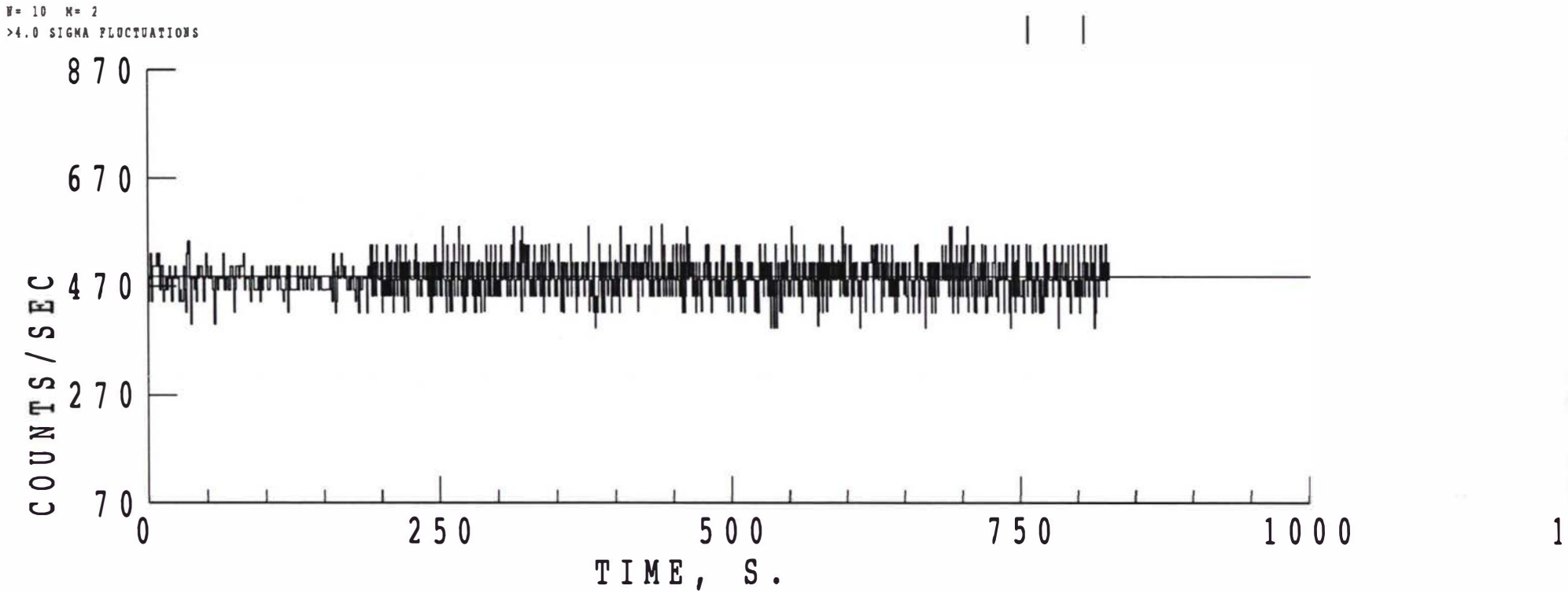
BATSE BURST# 6371

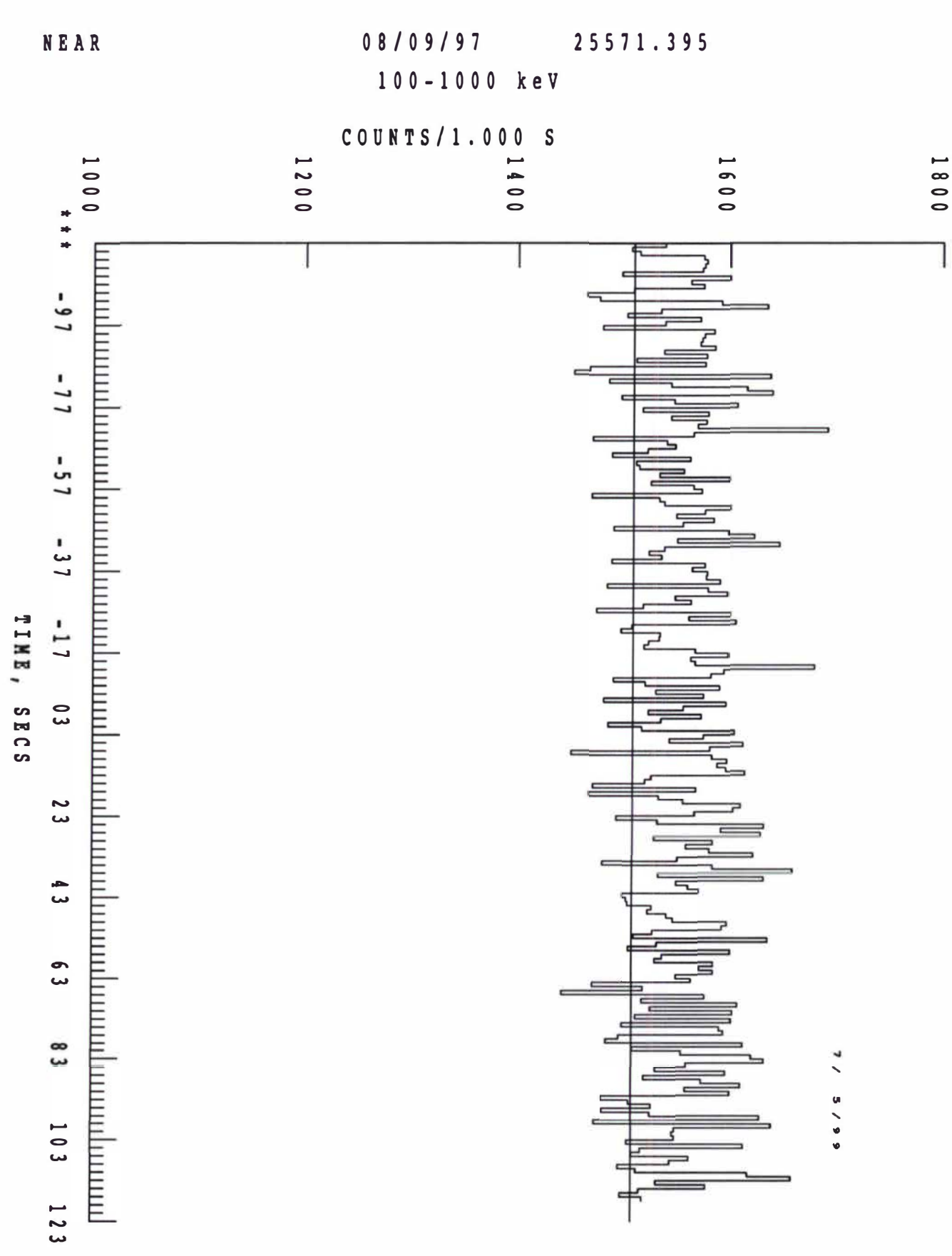
ULYSSES RT 12/ 9/97

8/ 9/97 23436.381 s

INTERVALS REGROUPED BY 2

0- 0 keV




NEAR
08/09/97
25571.395
100-1000 keV
COUNTS/1.000 S
1000
1200
1400
1600
1800
***
-97
-77
-57
-37
-17
03
23
43
63
83
103
123
TIME, SECS
7/ 5/99

From HENZE@SSLLES.MSFC.NASA.GOV Wed Sep 10 11:31 PDT 1997
Return-Path: <HENZE@SSLLES.MSFC.NASA.GOV>
Received: from SSLLES.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id LAA18770; Wed, 10 Sep 1997 11:31:03 -0700
Date: Wed, 10 Sep 1997 13:30:48 -0500 (CDT)
From: HENZE@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970910133048.21400761@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6372
Content-Type: text
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6372
EVENT OF 1997 SEP 8 DAY OF YEAR=251
EVENT CROSSING TIME AT BATSE : 44825. S. OR 12:27:05.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 342.000 -36.000
BATSE PEAK COUNTING RATE: 8000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 8/ 9/ 97 IS:
RA= 162.573 DEC= 18.255 DIST= 6.233 AU
BATSE-ULYSSES DISTANCE = 932455914. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 17.75 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 2962.24 SECS.
CROSSING TIME AT ULYSSES IS 47787. S. OR 13:16:27 +/- 259.63 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 8/ 9/ 97 IS:
RA= 223.020 DEC= -17.393 DIST= 1.681 AU
MARS-BATSE DISTANCE = 251504784. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 78.56 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 166.40 SECS.
CROSSING TIME AT MARS IS 44991. S. OR 12:29:51 +/- 145.28 SECONDS

BATSE BURST TRIGGER

NO.: 6372

TIME: TJD=0699 SECONDS=44825

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=086.9 AZIMUTH=182.4 ERROR=007.7 DEGREES

COMMENTS:
DOUBLE SPIKE, TOTAL DUR. ~0.55 S. FIRST IS STRONGER, MAX AT ~T, DUR. ~0.25 S.
SECOND HAS MAX AT ~T+0.41 S, DUR. ~0.1 S. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6372	970908	10699	44825	8000	342	-36	.55

BACODINE# 6372

ULYSSES RT 9/ 9/97

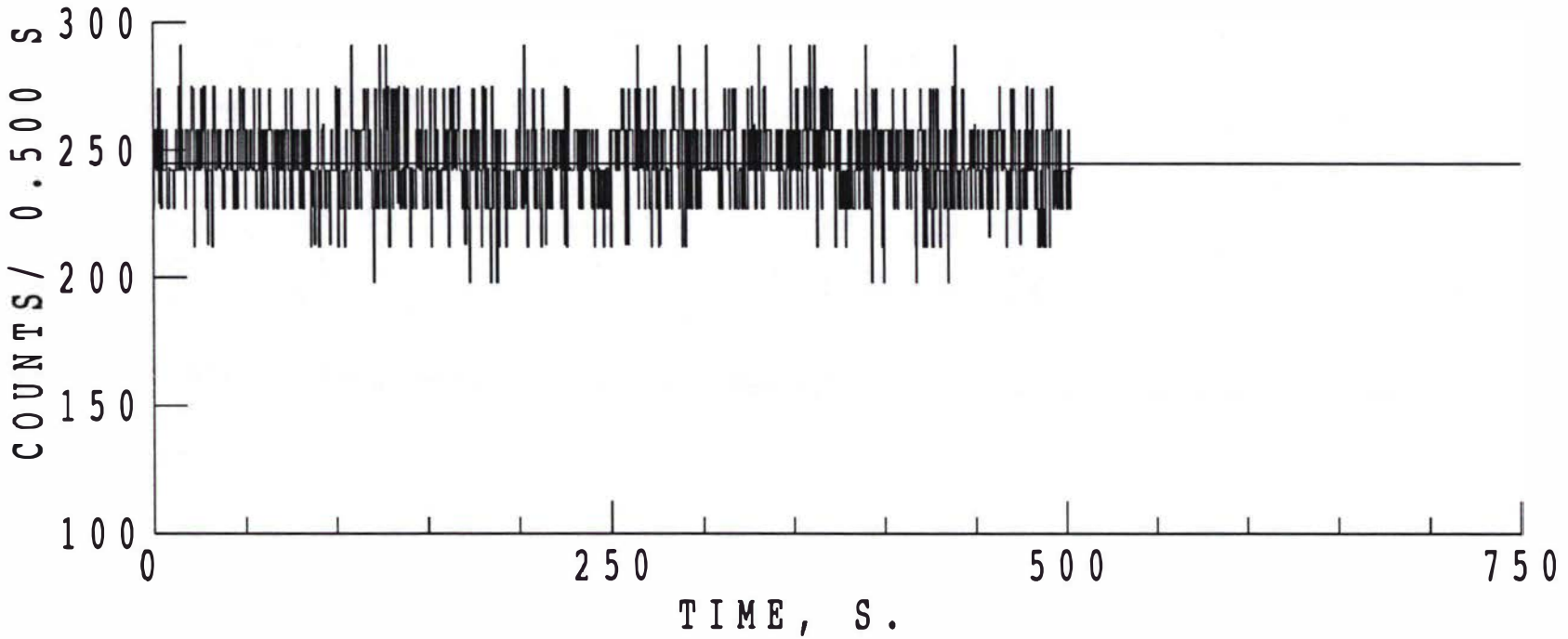
8/ 9/97 47556.152 s

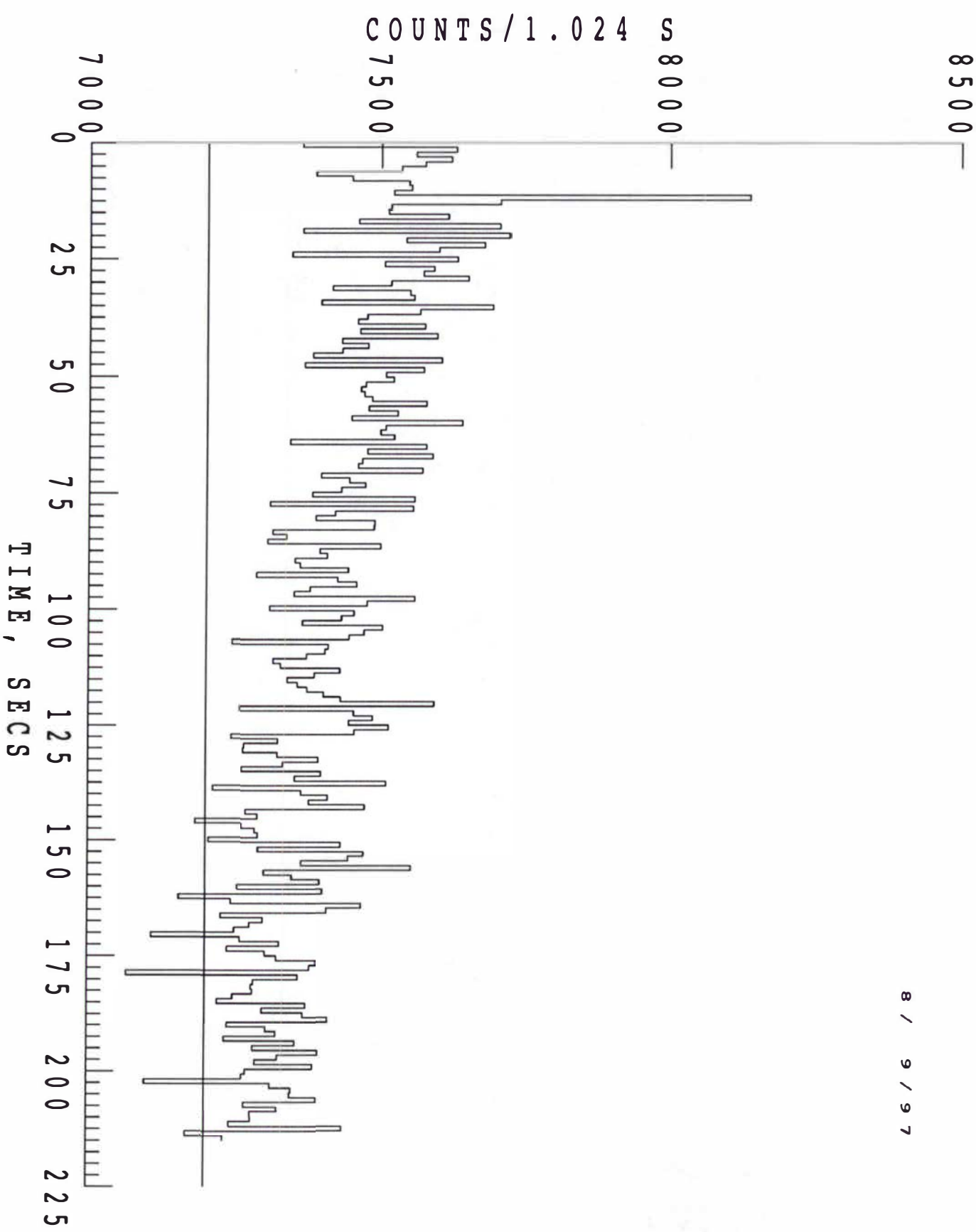
0.250 S INTERVALS REGROUPED BY 2

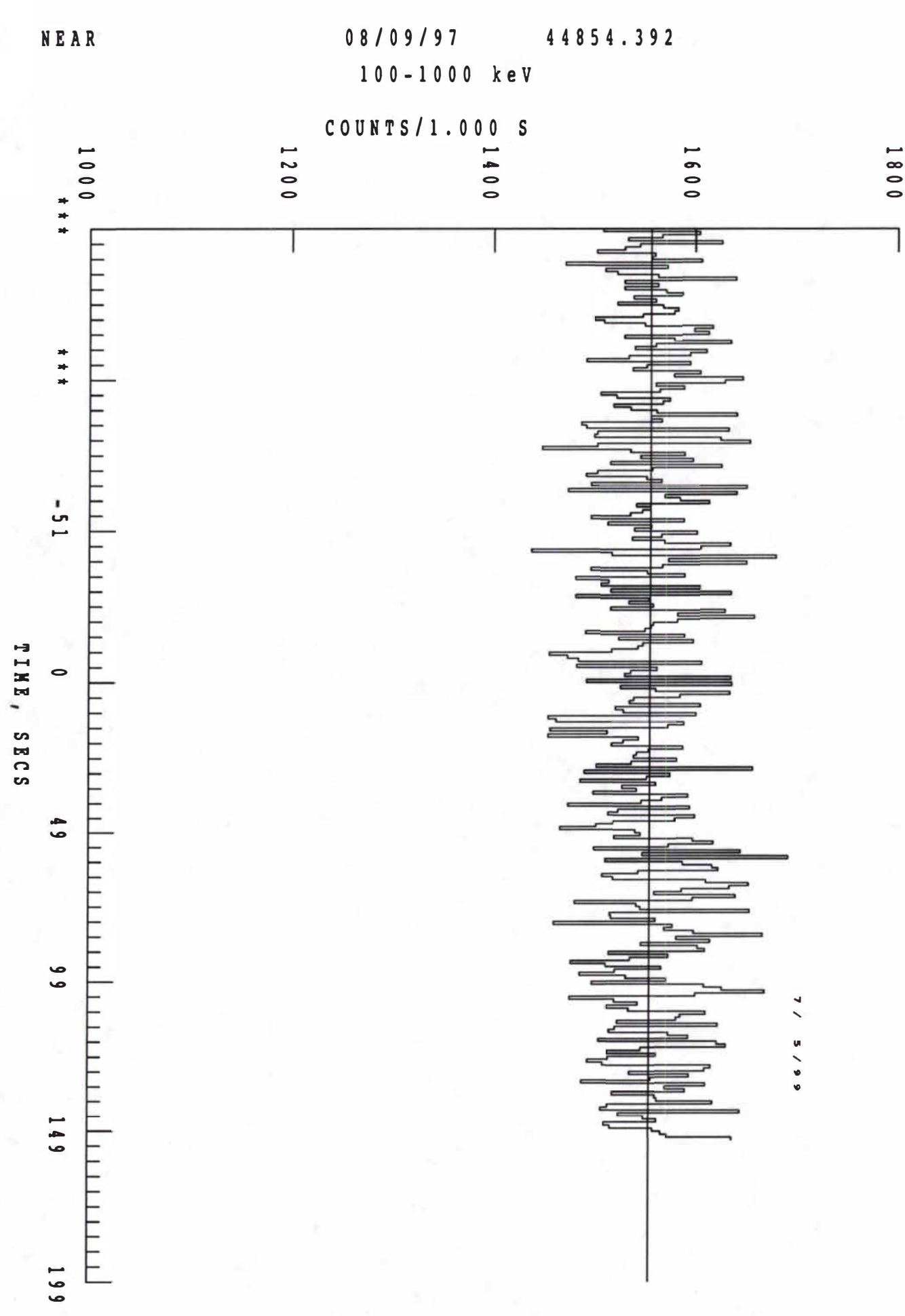
0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS




BACODINE 6372 08/09/97 44814.049
25- 100 keV
COUNTS/1.024 S
7000
7500
8000
8500
0
25
50
75
100
125
150
175
200
225
TIME, SECS
8/ 9/97


NEAR
08/09/97
44854.392
100-1000 keV
COUNTS/1.000 S
1000
1200
1400
1600
1800
***
***
-51
0
49
99
149
199
TIME, SECS
7/ 5/99

From HENZE@fender.msfc.nasa.gov Wed Sep 10 11:27 PDT 1997
Date: Wed, 10 Sep 1997 13:26:58 -0500 (CDT)
From: Bill Henze (205-544-7616) <HENZE@fender.msfc.nasa.gov>
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu,
gruber@cass09.ucsd.edu, matteson@cass09.ucsd.edu,
PACIESAS@fender.msfc.nasa.gov, HORACK@fender.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu, lmm@egret.gsfc.nasa.gov,
mops@osse.nrl.navy.mil, grove@osse.nrl.navy.mil,
matz@osse.nrl.navy.mil, share@osse.nrl.navy.mil,
messina@osse.nrl.navy.mil, sandora@osse.nrl.navy.mil,
park@kabul.llnl.gov
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6373

TIME: TJD=0699 SECONDS=70247

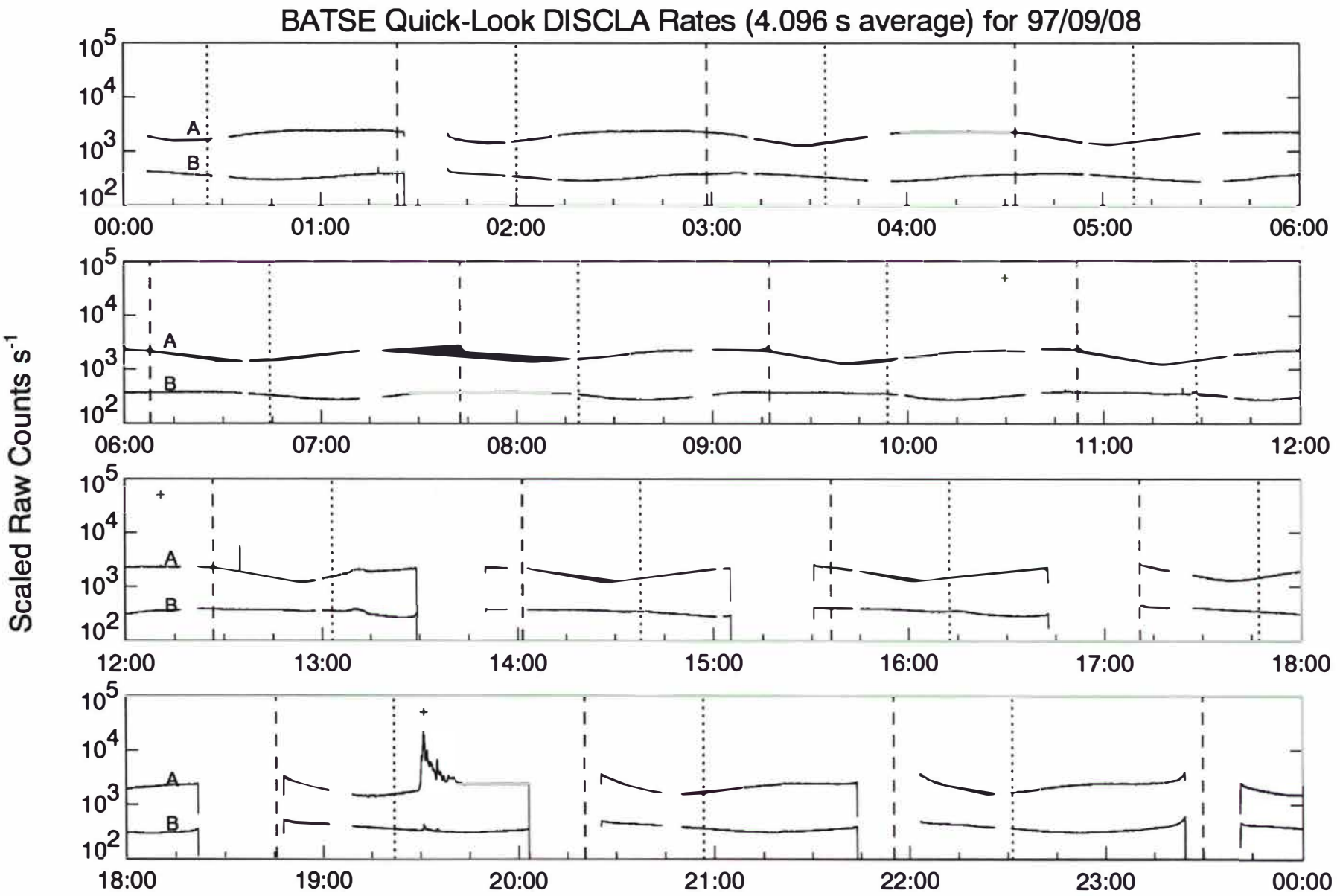
TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

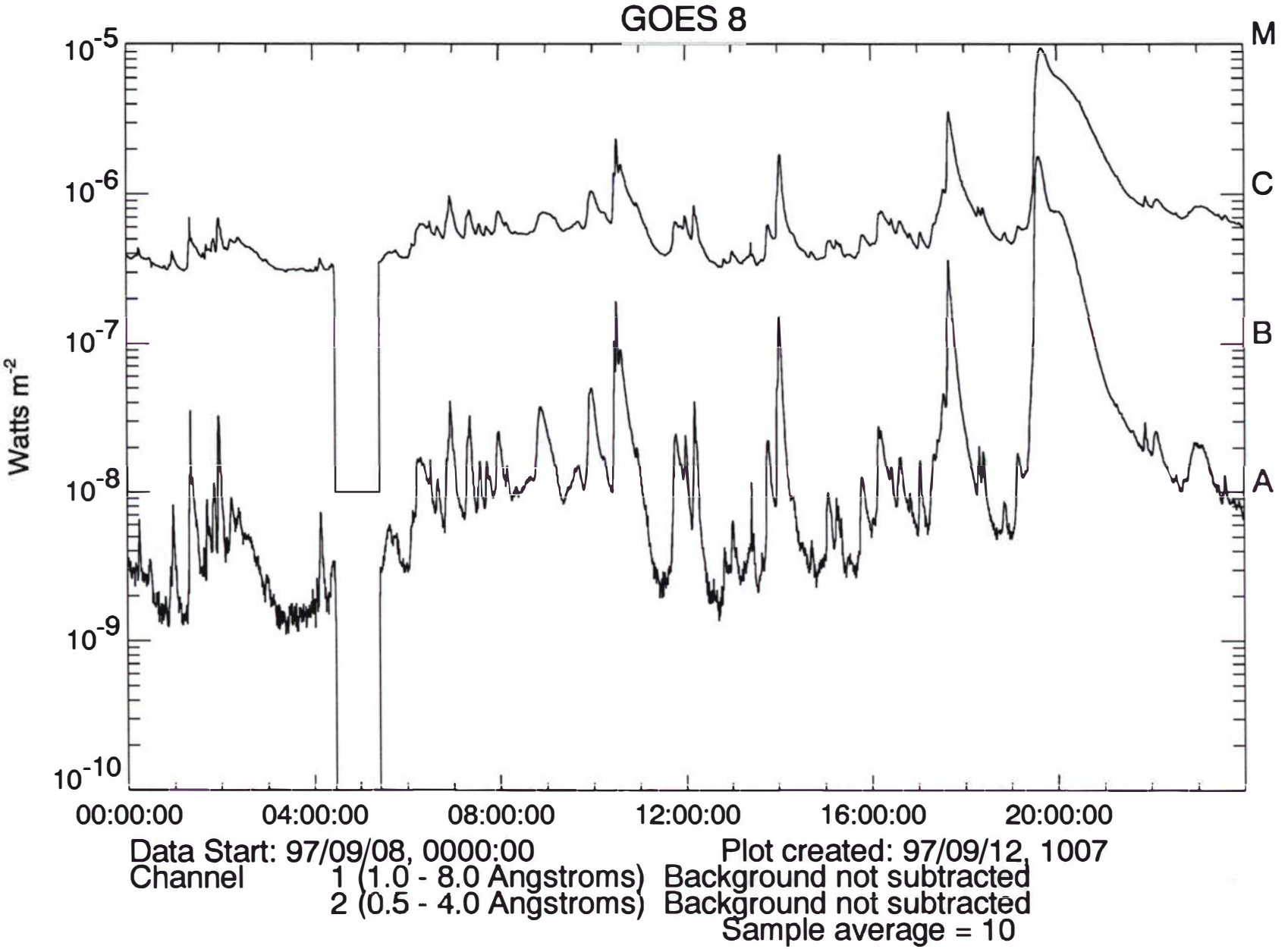
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=058.3 AZIMUTH=354.1 ERROR=000.1 DEGREES

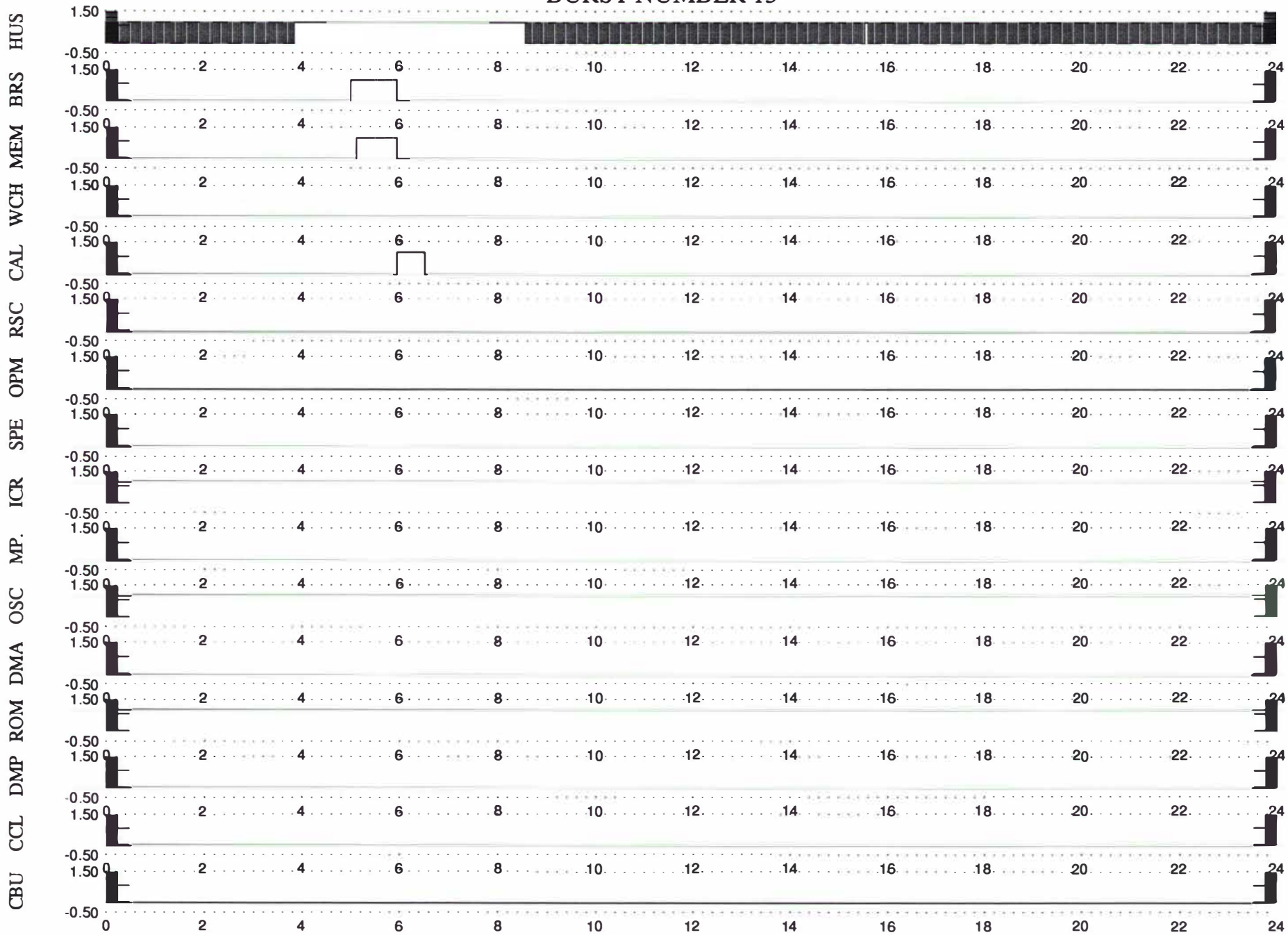
COMMENTS:
GOES M1.0, OPTICAL SF FLARE. COMPLEX, STARTS AT ~T-80 S, DUR. ~560 S, MAX AT
~T+10 S. WEAKLY VISIBLE ABOVE 100 KEV.


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/08
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/12, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare


GOES 8
M
C
B
A
Watts m-2
10-5
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/08, 0000:00
Plot created: 97/09/12, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 251, year 1997 to day 251, year 1997 1/14/98

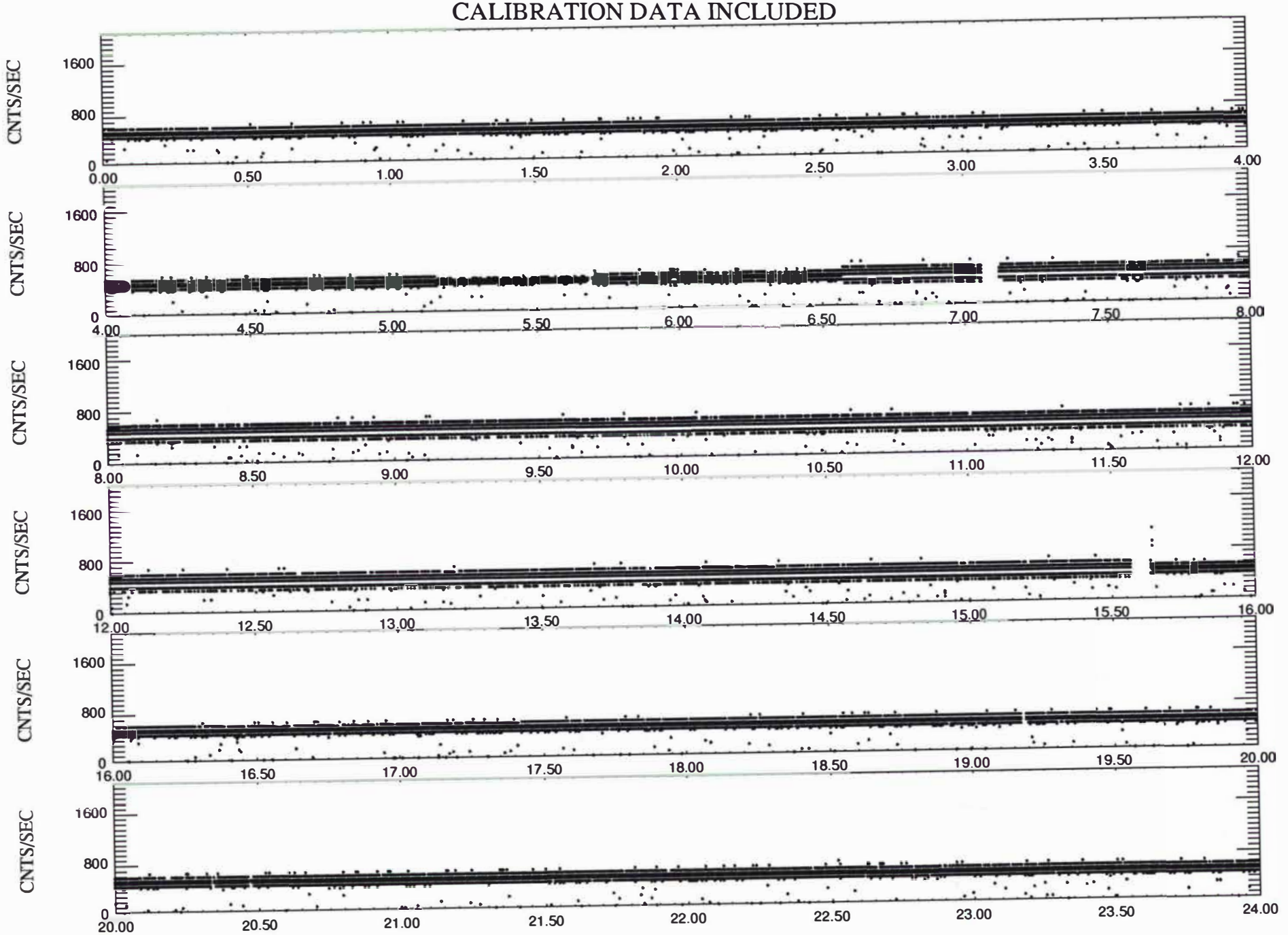
BURST NUMBER 15



UNIV! AL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 251, year 1997 to day 251, year 1997 1/14/98

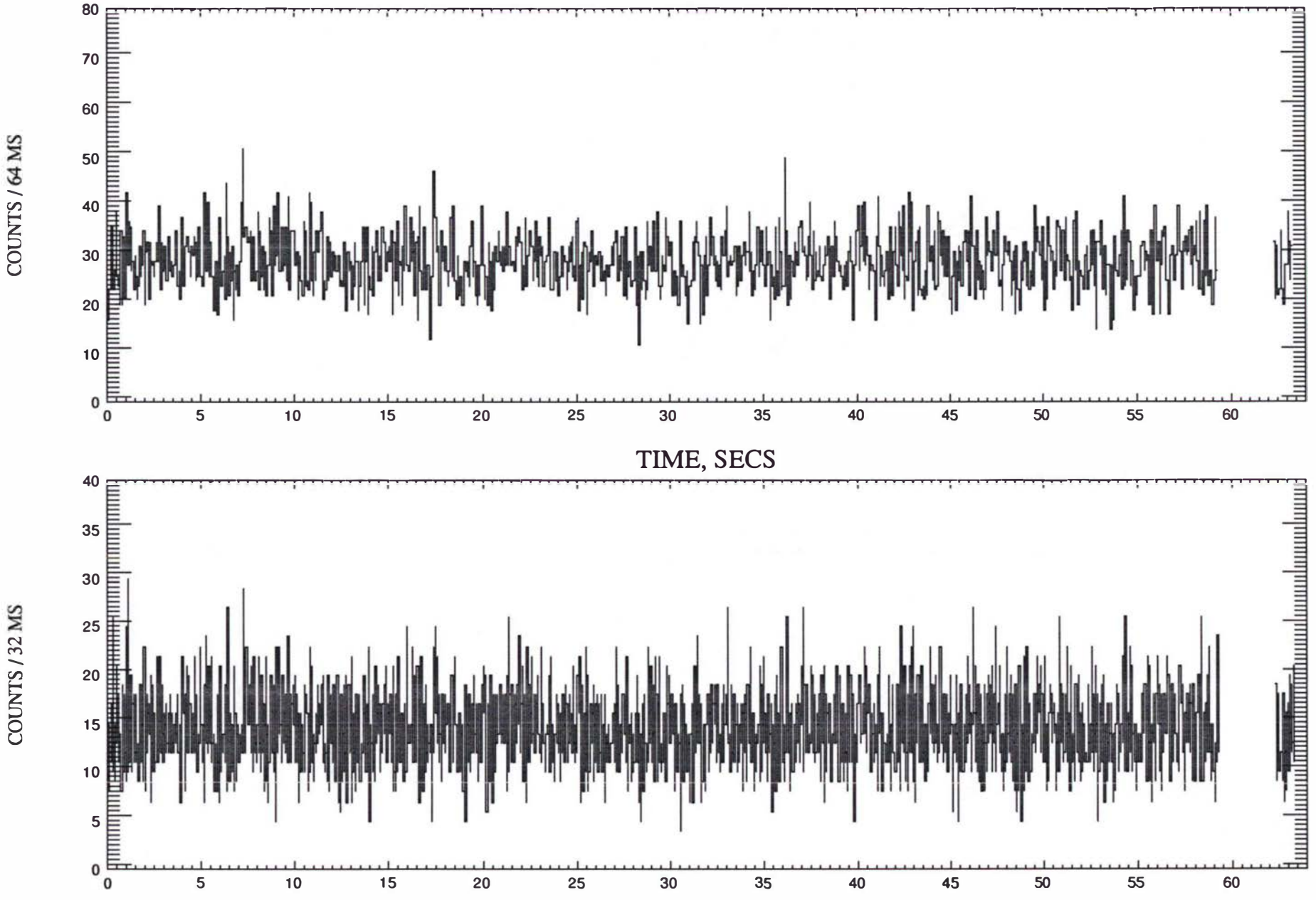
CALIBRATION DATA INCLUDED



UNIV[illegible]AL TIME

HUS 2A TRIGGERED DATA EDR day 251, year 1997 1/14/98

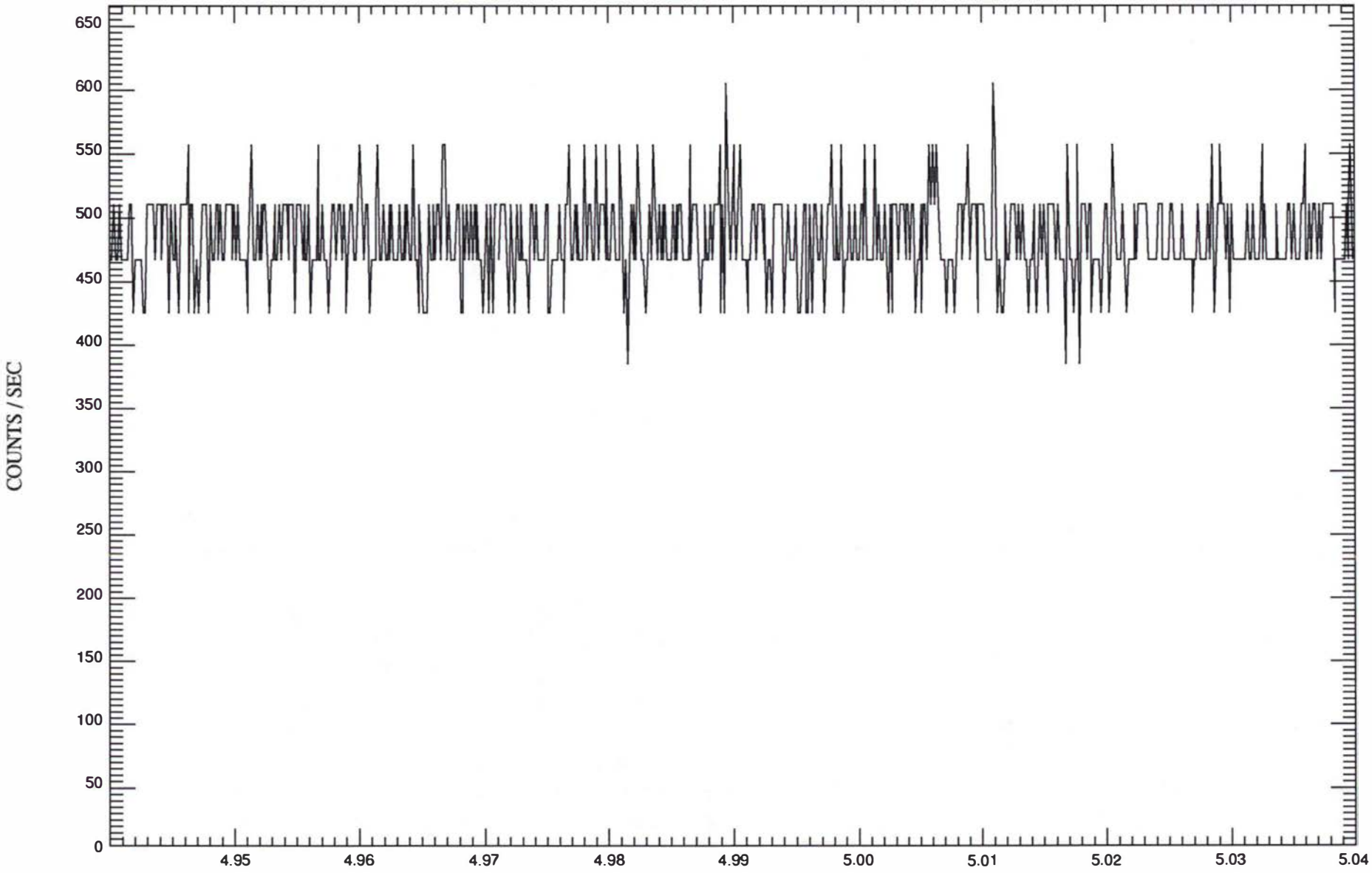
Burst Counter 15 at UT= 4.989598731995 h=17962.555 s 04:59:22.555



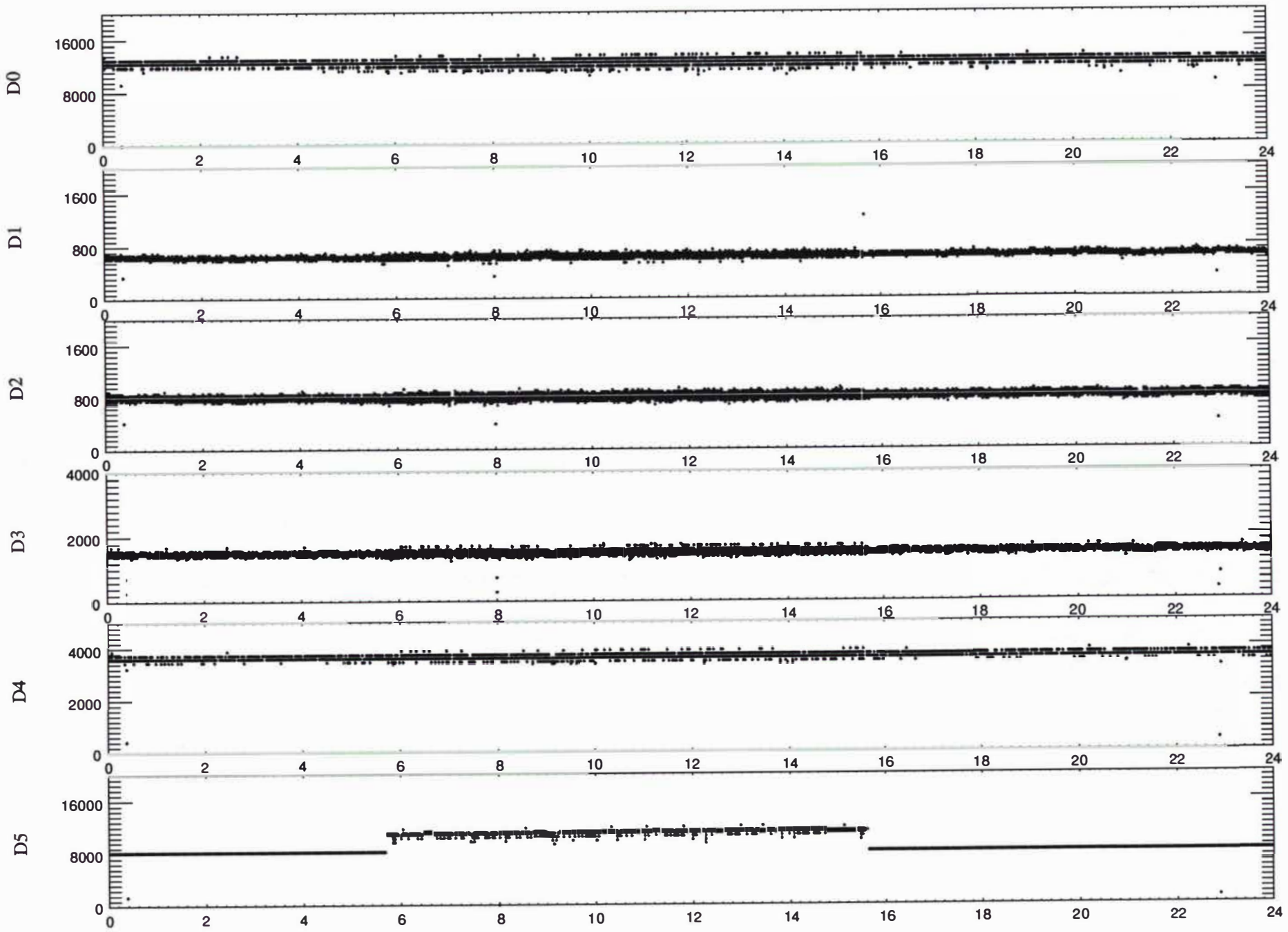
B# 1

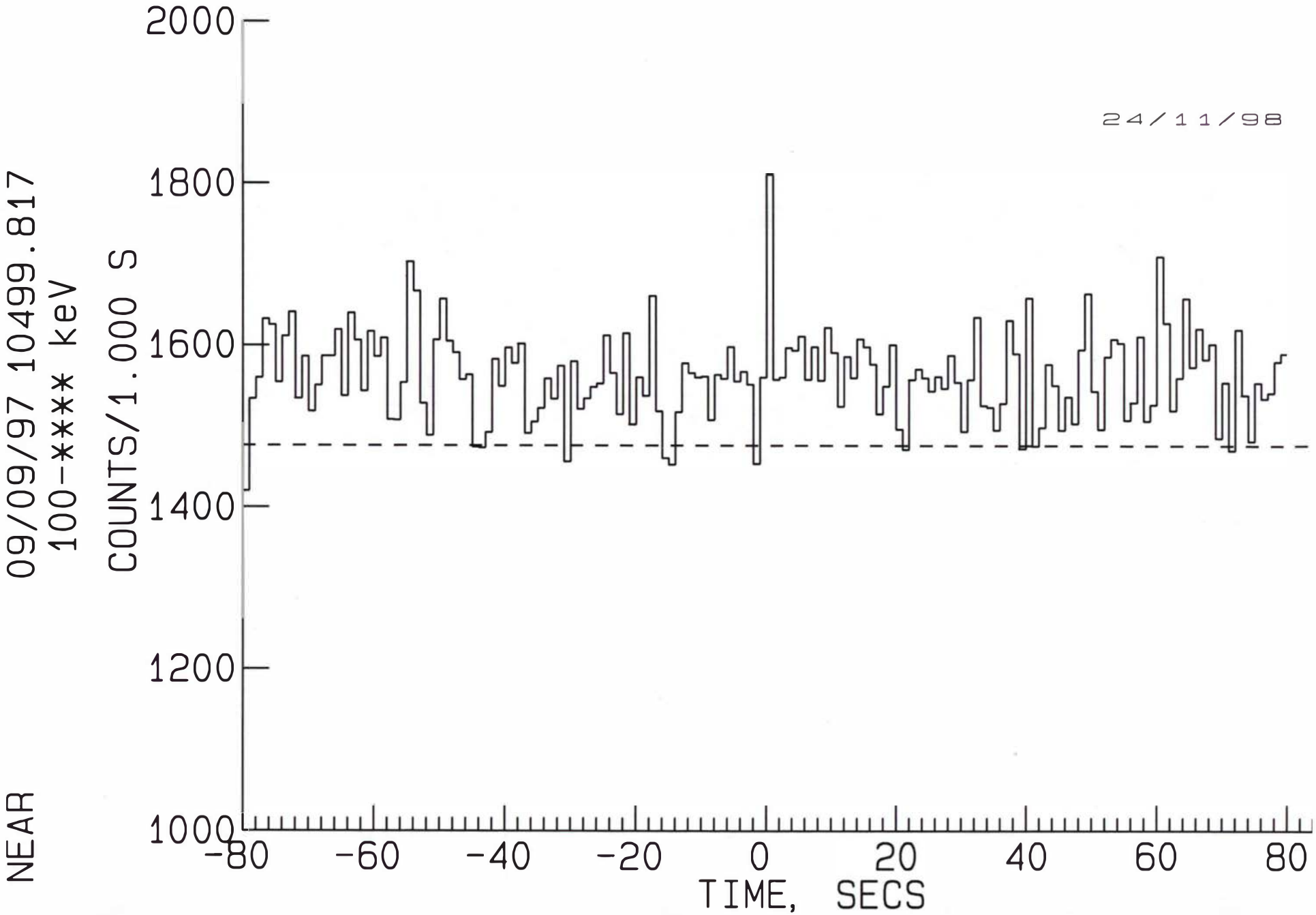
HUS 2A, MODE 1, NOT AVERAGED EDR day 251, year 1997 to day 251, year 1997 1/14/98

CALIBRATION DATA INCLUDED



HUS 2B COUNTS / SEC EDR day 251, year 1997 to day 251, year 1997 1/14/98




24/11/98
09/09/97 10499.817
100-**** keV
COUNTS/1.000 S
NEAR
2000
1800
1600
1400
1200
1000
-80
-60
-40
-20
0
20
40
60
80
TIME, SECS

NEAR

ULYSSES RT 20/11/97

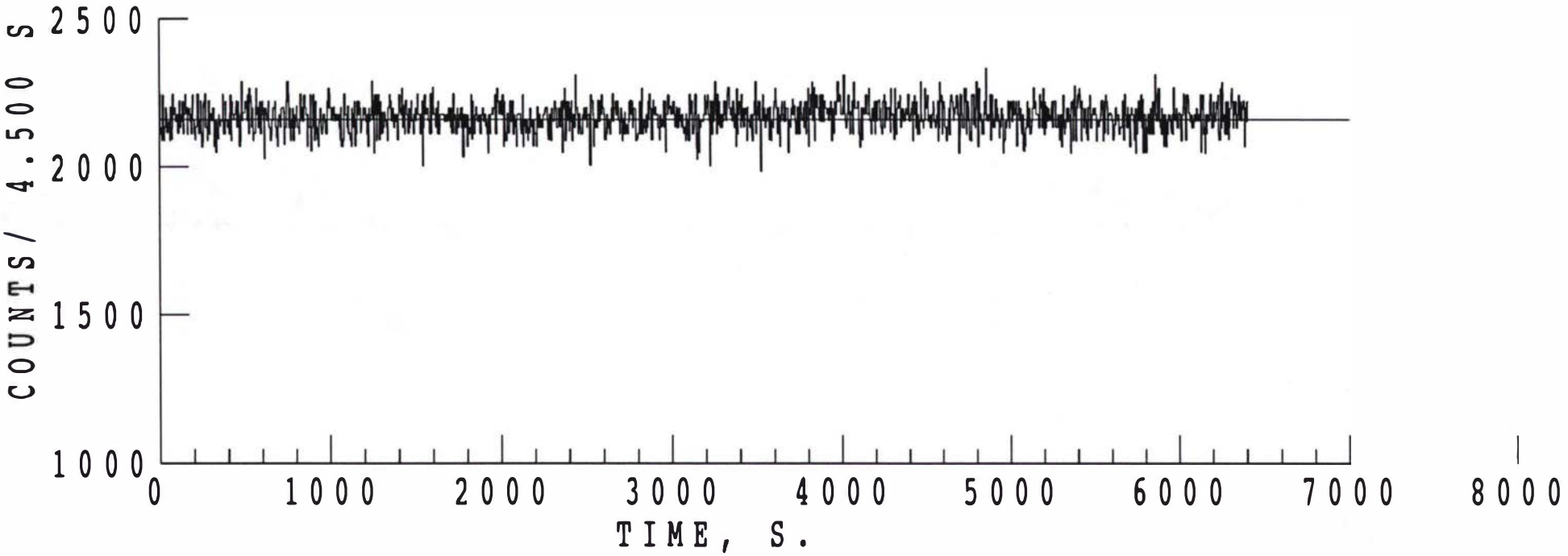
9/ 9/97 7308.166 s

0.500 S INTERVALS REGROUPED BY 9

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From HENZE@BATSE.MSFC.NASA.GOV Thu Sep 11 14:18 PDT 1997
Date: Thu, 11 Sep 1997 16:17:51 -0500 (CDT)
From: Bill Henze (205-544-7616) <HENZE@BATSE.MSFC.NASA.GOV>
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu,
gruber@cass09.ucsd.edu, matteson@cass09.ucsd.edu,
PACIESAS@BATSE.MSFC.NASA.GOV, HORACK@BATSE.MSFC.NASA.GOV,
khurley@sunspot.ssl.berkeley.edu, lmm@egret.gsfc.nasa.gov,
mops@osse.nrl.navy.mil, grove@osse.nrl.navy.mil,
matz@osse.nrl.navy.mil, share@osse.nrl.navy.mil,
messina@osse.nrl.navy.mil, sandora@osse.nrl.navy.mil,
park@kabul.llnl.gov
Subject: Burst Trigger Message

BATSE BURST TRIGGER
NO.: 6374

TIME: TJD=0700 SECONDS=35251

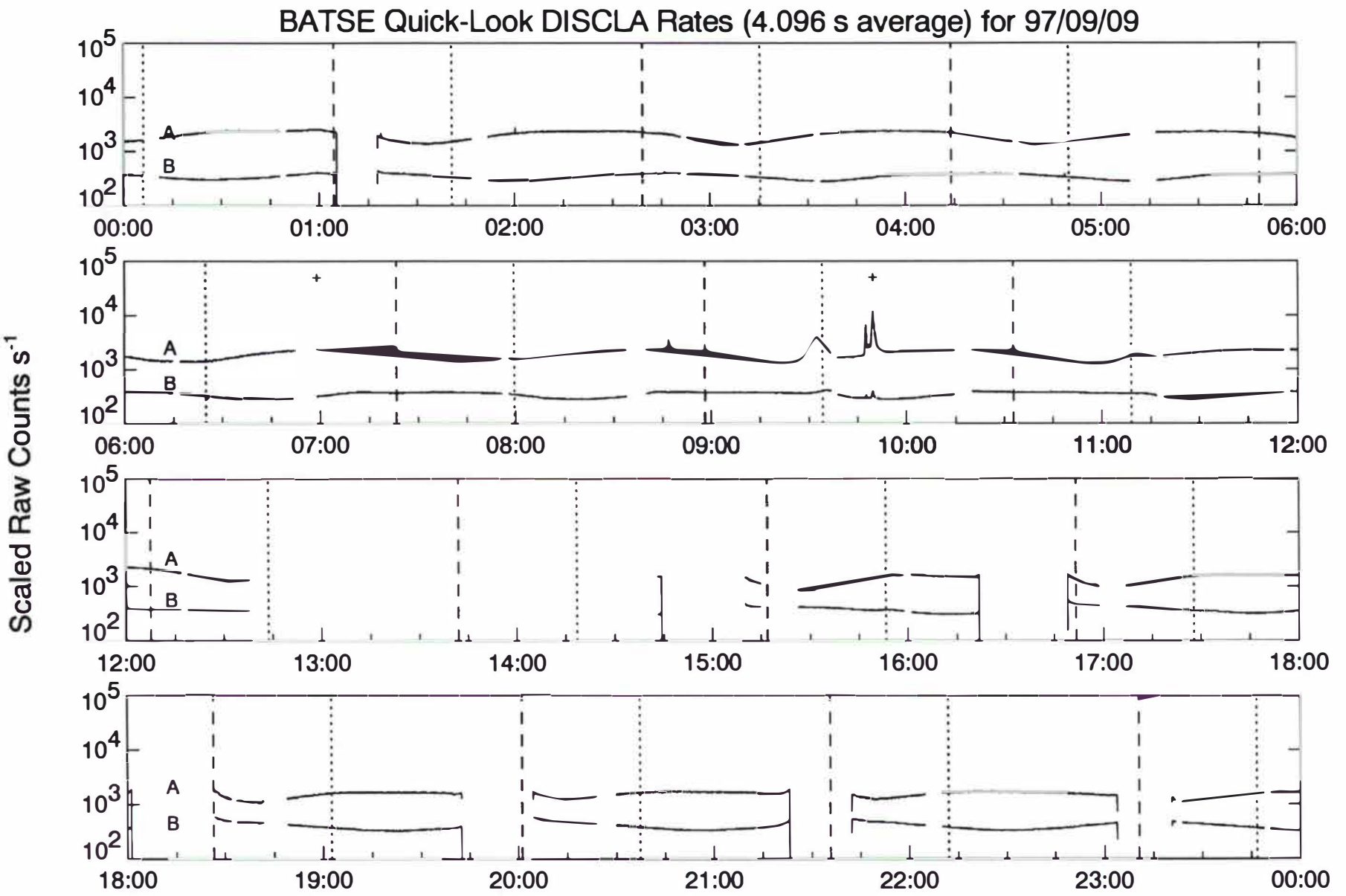
TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

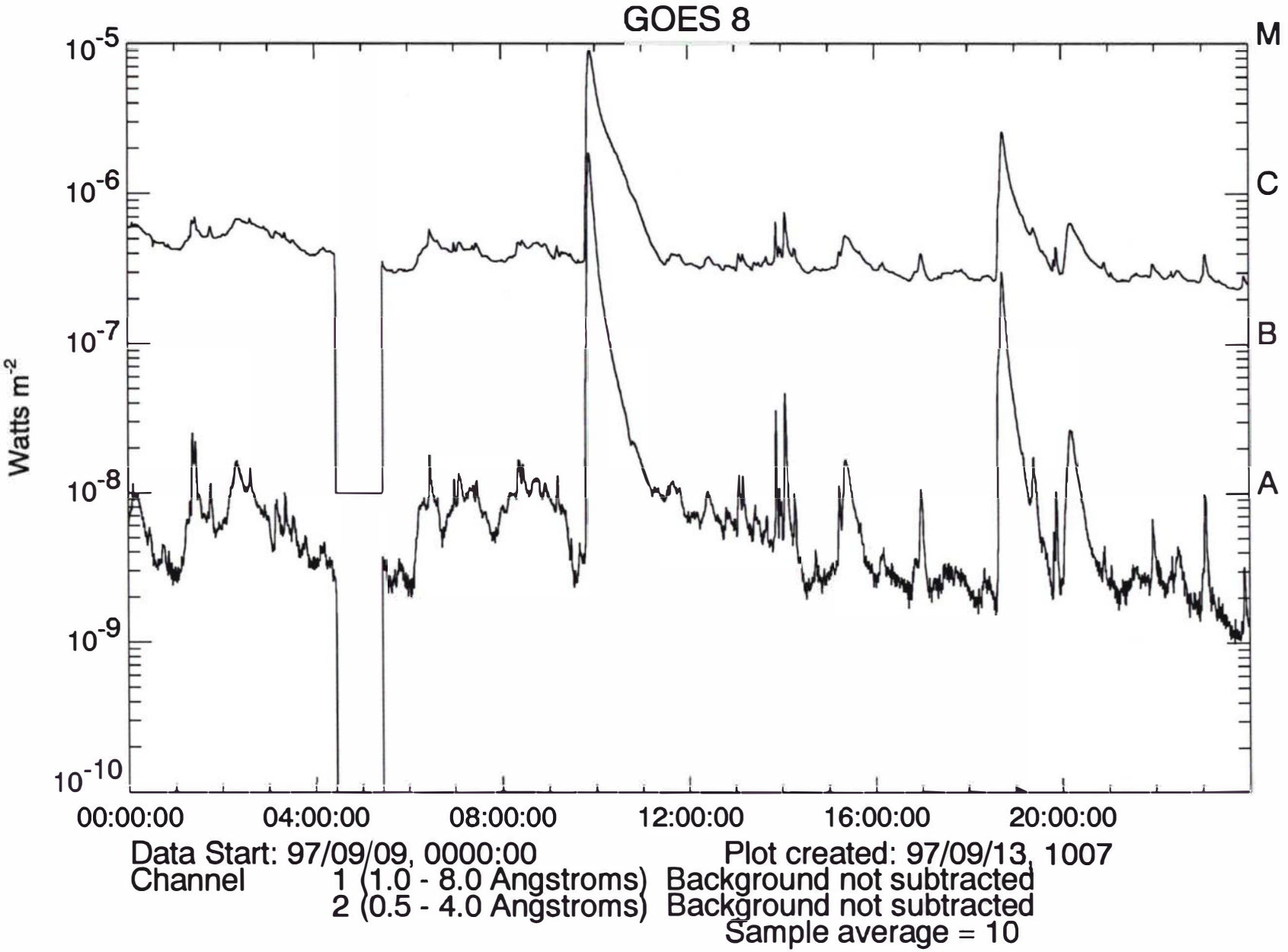
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

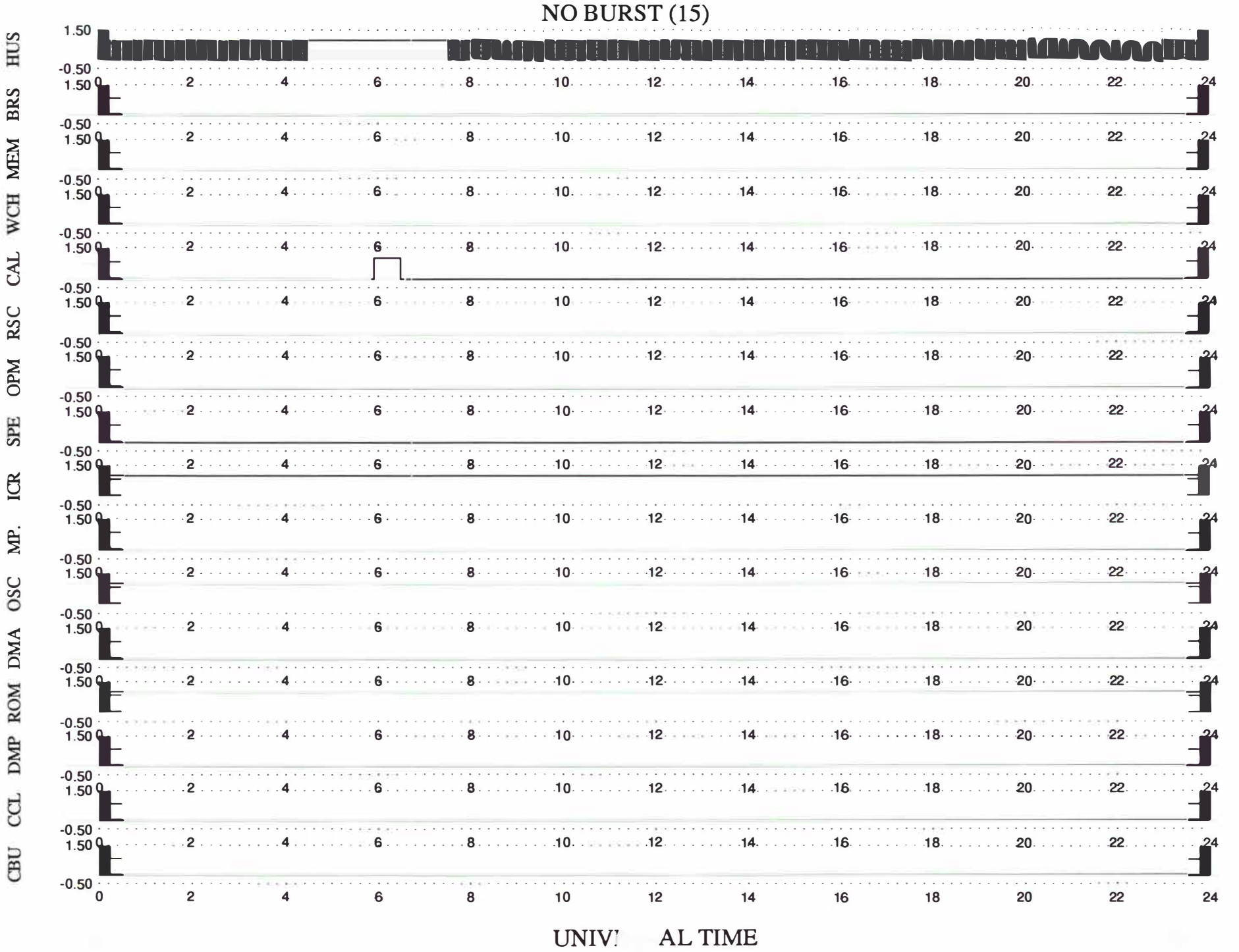
LOCATION: ZENITH=058.0 AZIMUTH=354.0 ERROR=000.1 DEGREES

COMMENTS:
GOES C9.7, OPTICAL 1N FLARE. DOUBLE PULSE, SECOND STRONGER.
MAX AT ~T+135 S, TOTAL DUR. ~400 S. NOT VISIBLE ABOVE 300 KEV.


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/09
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/13, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare

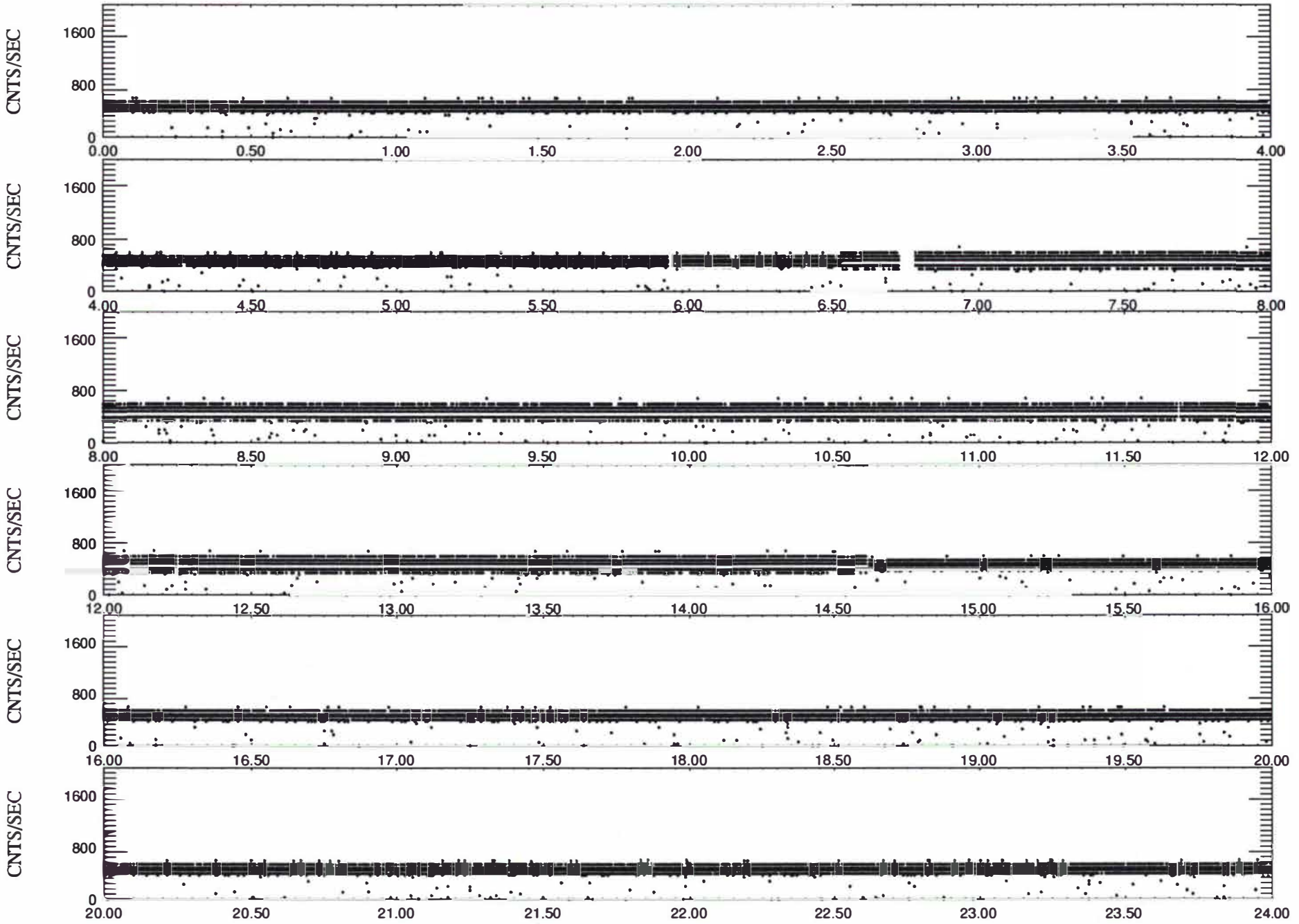

GOES 8
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
10^{-10}
Watts m^{-2}
M
C
B
A
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/09, 0000:00
Plot created: 97/09/13, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 252, year 1997 to day 252, year 1997 1/14/98



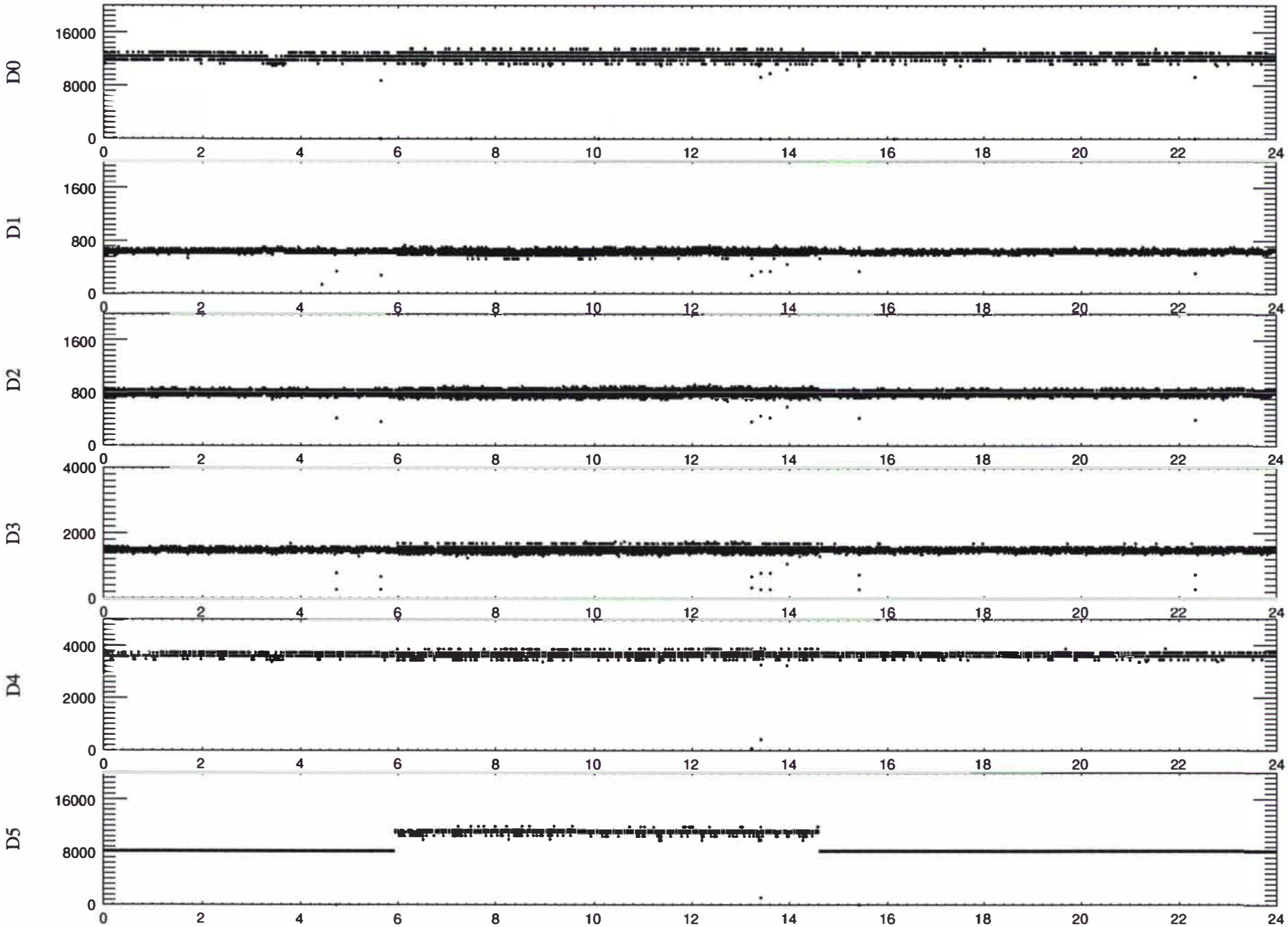
HUS 2A, MODE 1, NOT AVERAGED EDR day 252, year 1997 to day 252, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV' 'AL TIME

HUS 2B COUNTS / SEC EDR day 252, year 1997 to day 252, year 1997 1/14/98



From RICHARDSON@ssl.msfc.nasa.gov Fri Sep 12 11:39 PDT 1997
Return-Path: <RICHARDSON@ssl.msfc.nasa.gov>
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id LAA09765; Fri, 12 Sep 1997 11:39:08 -0700
From: RICHARDSON@ssl.msfc.nasa.gov
Date: Fri, 12 Sep 1997 13:38:56 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970912133856.21401c7f@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6375
Content-Type: text
Content-Length: 1135
X-Lines: 26
Status: RO

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

 BATSE BURST #    6375
 EVENT OF 1997 SEP 10 DAY OF YEAR=253
 EVENT CROSSING TIME AT BATSE     :  4415. S. OR 01:13:35.0
 COORDINATES ARE   0.000   0.000       6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 317.000  -45.000
 BATSE PEAK COUNTING RATE:   3000    C/S

 EVENT CROSSING TIME AT ULYSSES    WILL BE FOUND
 INTERPOLATED POSITION OF ULYSSES ON 10/ 9/  97 IS:
 RA=  162.791 DEC=   18.106 DIST=    6.231 AU
 BATSE-ULYSSES DISTANCE =  932090965. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 34.42 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= 2564.71 SECS.
 CROSSING TIME AT ULYSSES    IS  6980. S. OR   01:56:19 +/-  394.08 SECONDS

 EVENT CROSSING TIME AT MARS       WILL BE FOUND
 POSITION OF MARS ON 10/ 9/  97 IS:
 RA=  224.350 DEC=  -17.794 DIST=    1.691 AU
 MARS-BATSE DISTANCE =  253039360. KM.
 ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=100.66 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= -156.12 SECS.
 CROSSING TIME AT MARS       IS  4259. S. OR   01:10:58 +/-  141.64 SECONDS


                BATSE BURST TRIGGER
NO.: 6375

TIME: TJD=0701 SECONDS=4415

TYPE: BURST                     SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE:       SIGMA

INTENSITY:          COUNTS/CM2

LOCATION: ZENITH=40.3   AZIMUTH=258.0  ERROR=4.6   DEGREES

COMMENTS:
GRB FAST RISE WITH AN EXPONENTIAL DECAY. MAIN PULSE DUR.~35 SEC.
SLIGHTLY VISIBLE ABOVE 300KEV.


 BATSE #   Date     TJD     SoD   Max ct/s   RA   Dec  Dur (s)
   6375   970910   10701   04415     3000   317   -45     80
```

BACODINE# 6375

ULYSSES RT 10/ 9/97

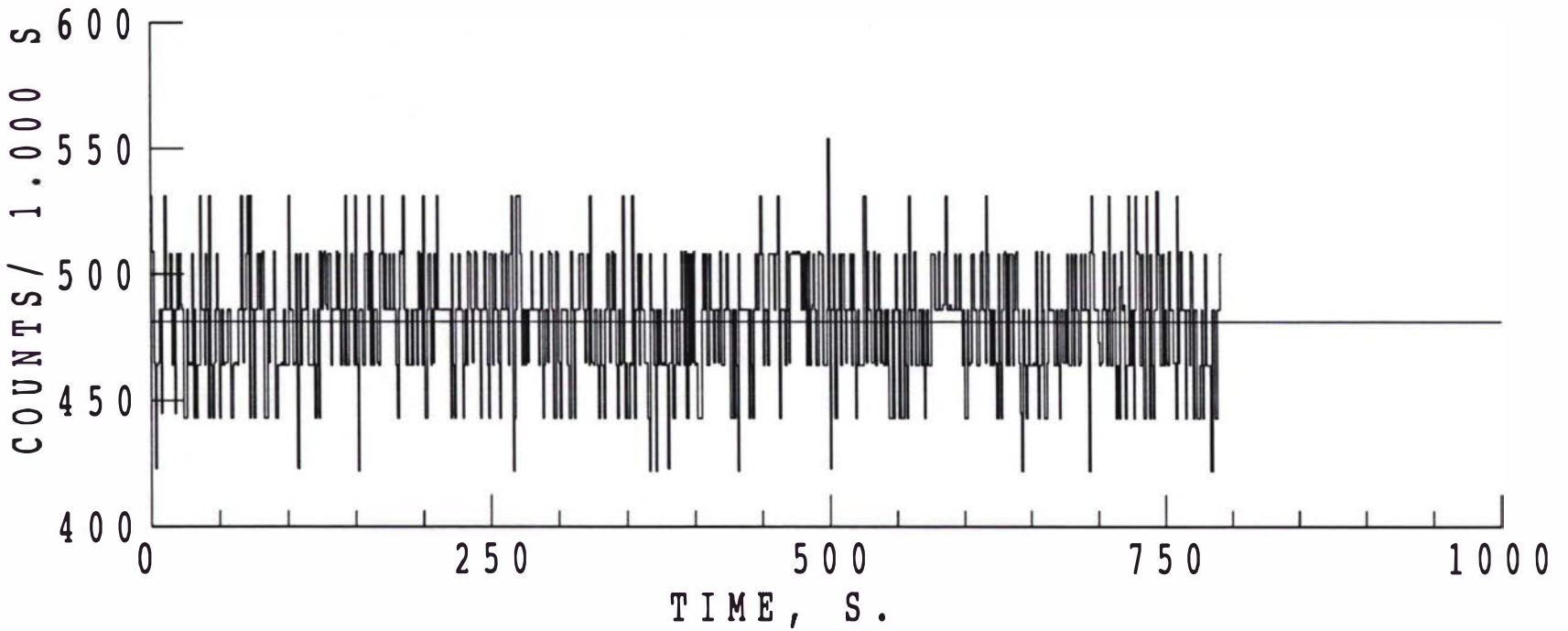
10/ 9/97 6588.126 s

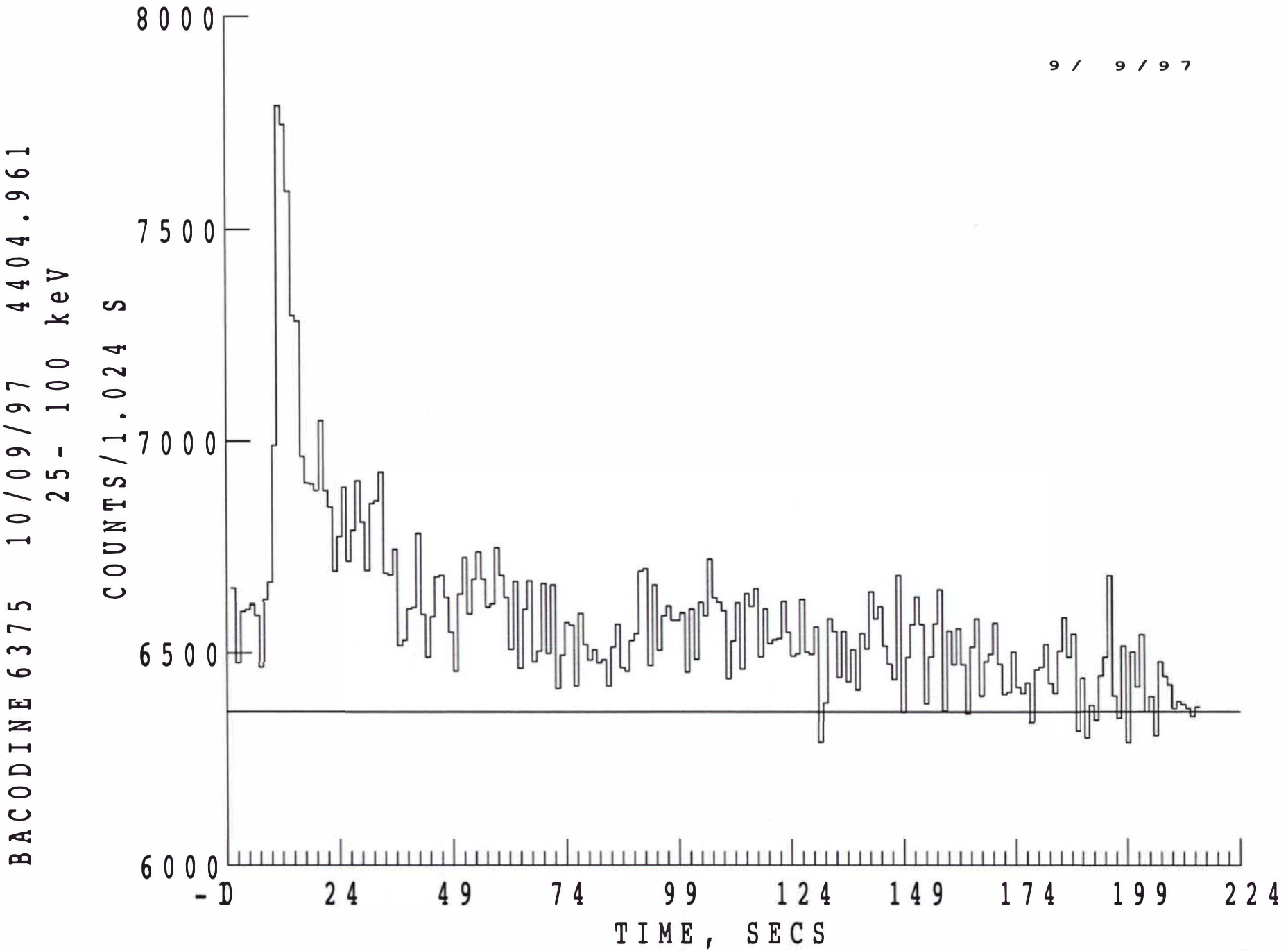
0.500 S INTERVALS REGROUPED BY 2

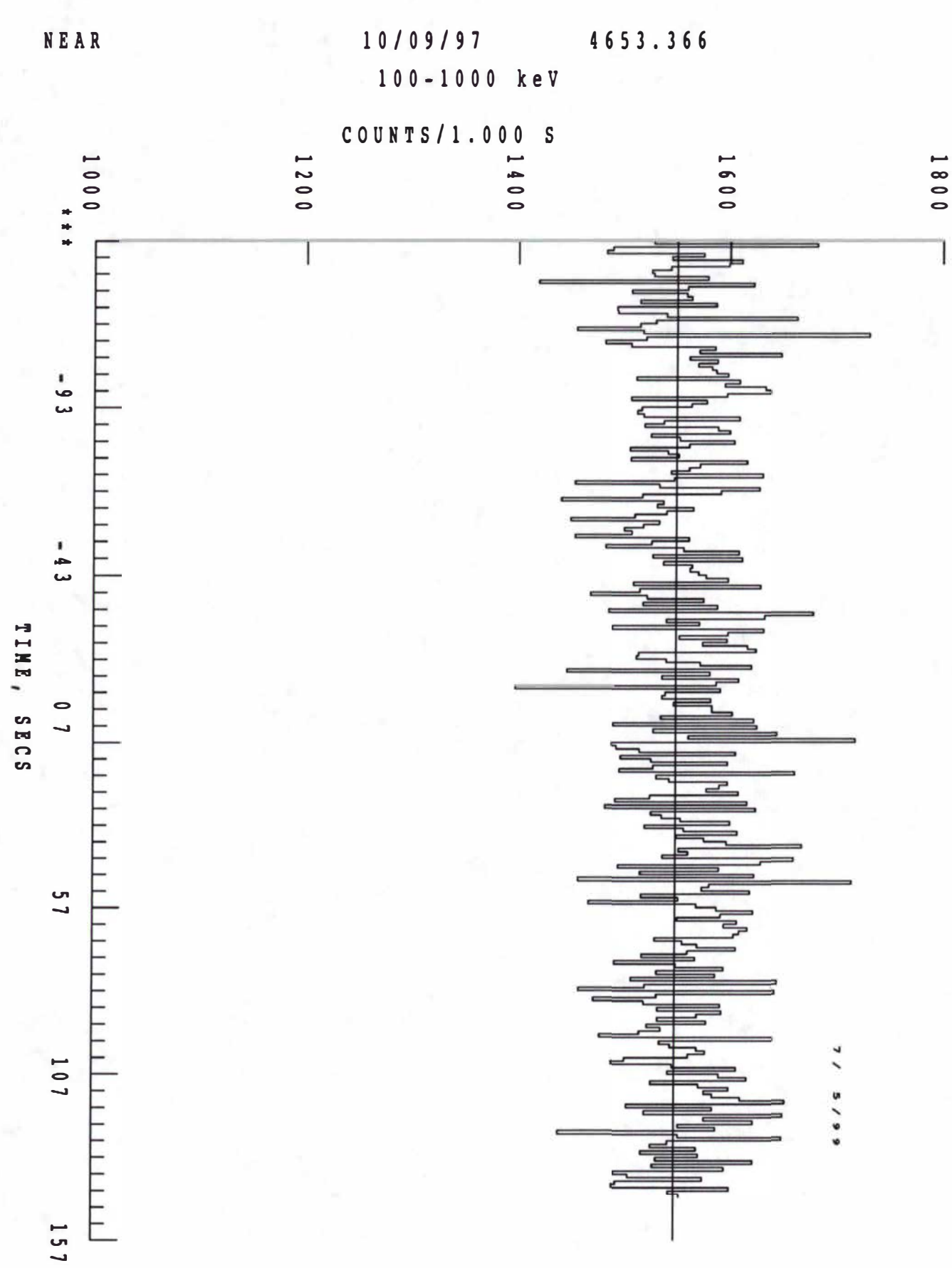
0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS




BACODINE 6375 10/09/97 4404.961
25- 100 keV
COUNTS/1.024 S
8000
7500
7000
6500
6000
9/ 9/97
-D
24
49
74
99
124
149
174
199
224
TIME, SECS


NEAR
10/09/97
4653.366
100-1000 keV
COUNTS/1.000 S
1000
1200
1400
1600
1800
***
-93
-43
07
57
107
157
TIME, SECS
7/ 5/99

From RICHARDSON@ssl.msfc.nasa.gov Fri Sep 12 11:41 PDT 1997
Return-Path: <RICHARDSON@ssl.msfc.nasa.gov>
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id LAA09880; Fri, 12 Sep 1997 11:41:12 -0700
From: RICHARDSON@ssl.msfc.nasa.gov
Date: Fri, 12 Sep 1997 13:40:58 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970912134058.21401c7f@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6376
Content-Type: text
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6376
EVENT OF 1997 SEP 10 DAY OF YEAR=253
EVENT CROSSING TIME AT BATSE : 41169. S. OR 11:26:09.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 101.000 32.000
BATSE PEAK COUNTING RATE: 9500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 10/ 9/ 97 IS:
RA= 162.851 DEC= 18.065 DIST= 6.230 AU
BATSE-ULYSSES DISTANCE = 931969839. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=123.00 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1693.25 SECS.
CROSSING TIME AT ULYSSES IS 39476. S. OR 10:57:55 +/- 476.92 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 10/ 9/ 97 IS:
RA= 224.350 DEC= -17.794 DIST= 1.691 AU
MARS-BATSE DISTANCE = 253039360. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 52.71 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 511.37 SECS.
CROSSING TIME AT MARS IS 41680. S. OR 11:34:40 +/- 124.35 SECONDS

BATSE BURST TRIGGER

NO.: 6376

TIME: TJD=0701 SECONDS=41169

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=109.0 AZIMUTH=80.5 ERROR=5.8 DEGREES

COMMENTS:
GRB SHORT SPIKE. DUR.~0.13 SEC. VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6376	970910	10701	41169	9500	101	+32	.13

BATSE BURST# 6376

ULYSSES RT 12/ 9/97

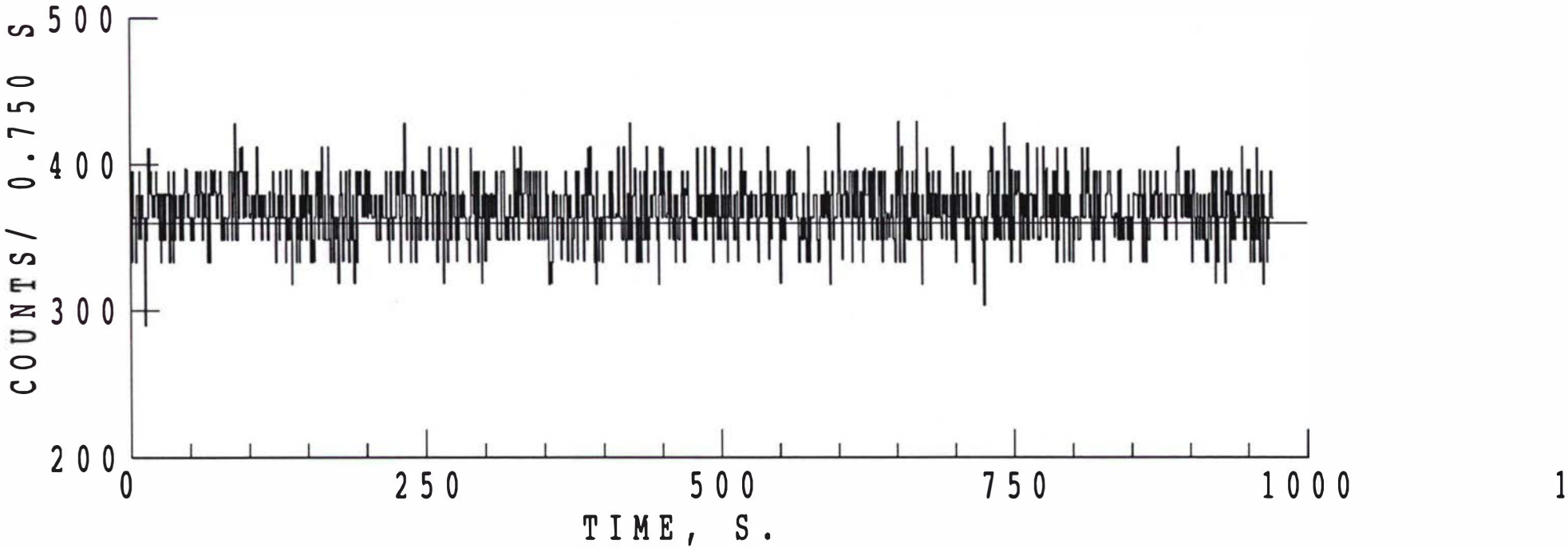
10/ 9/97 38988.242 s

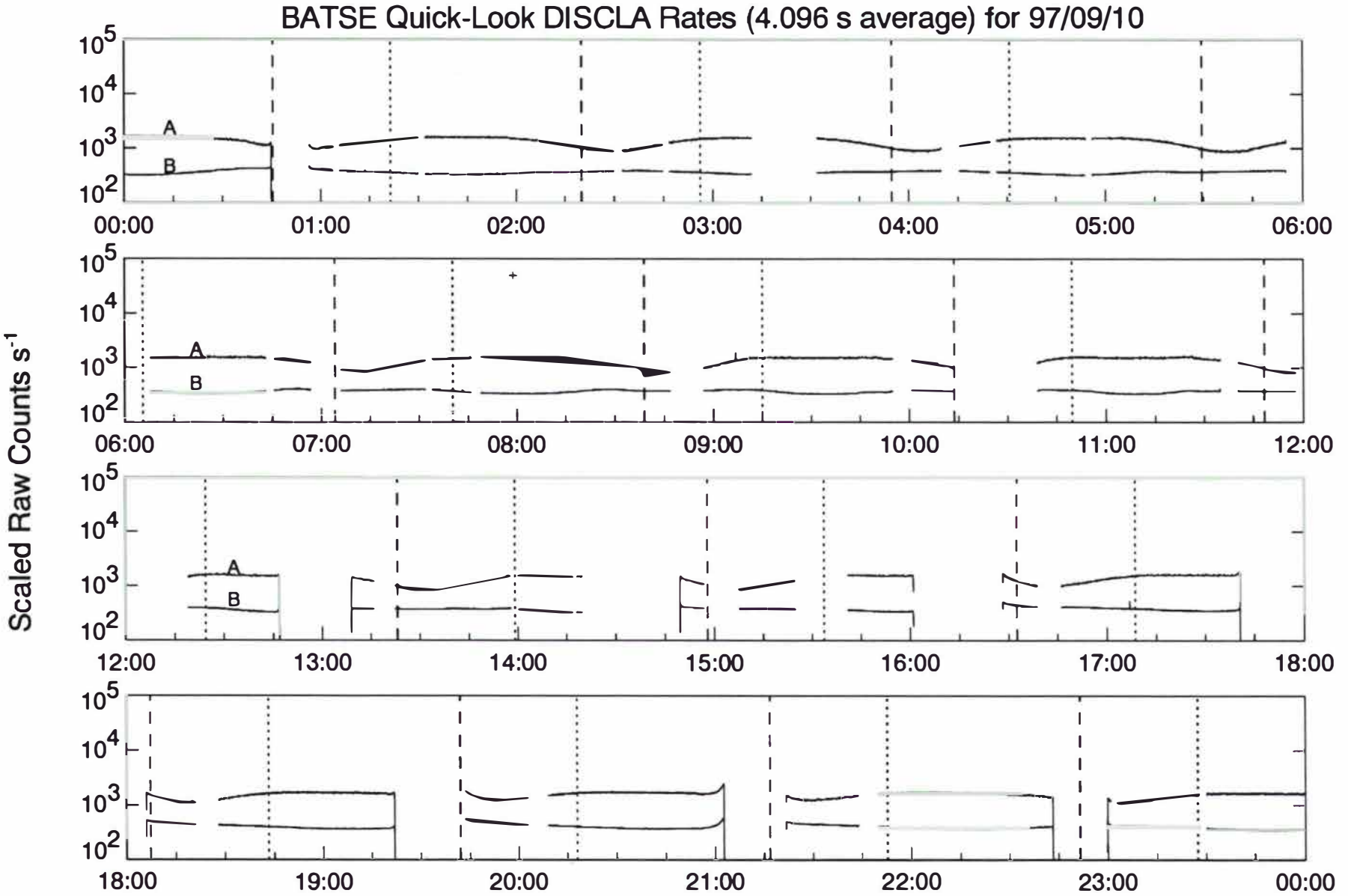
0.250 S INTERVALS REGROUPED BY 3

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

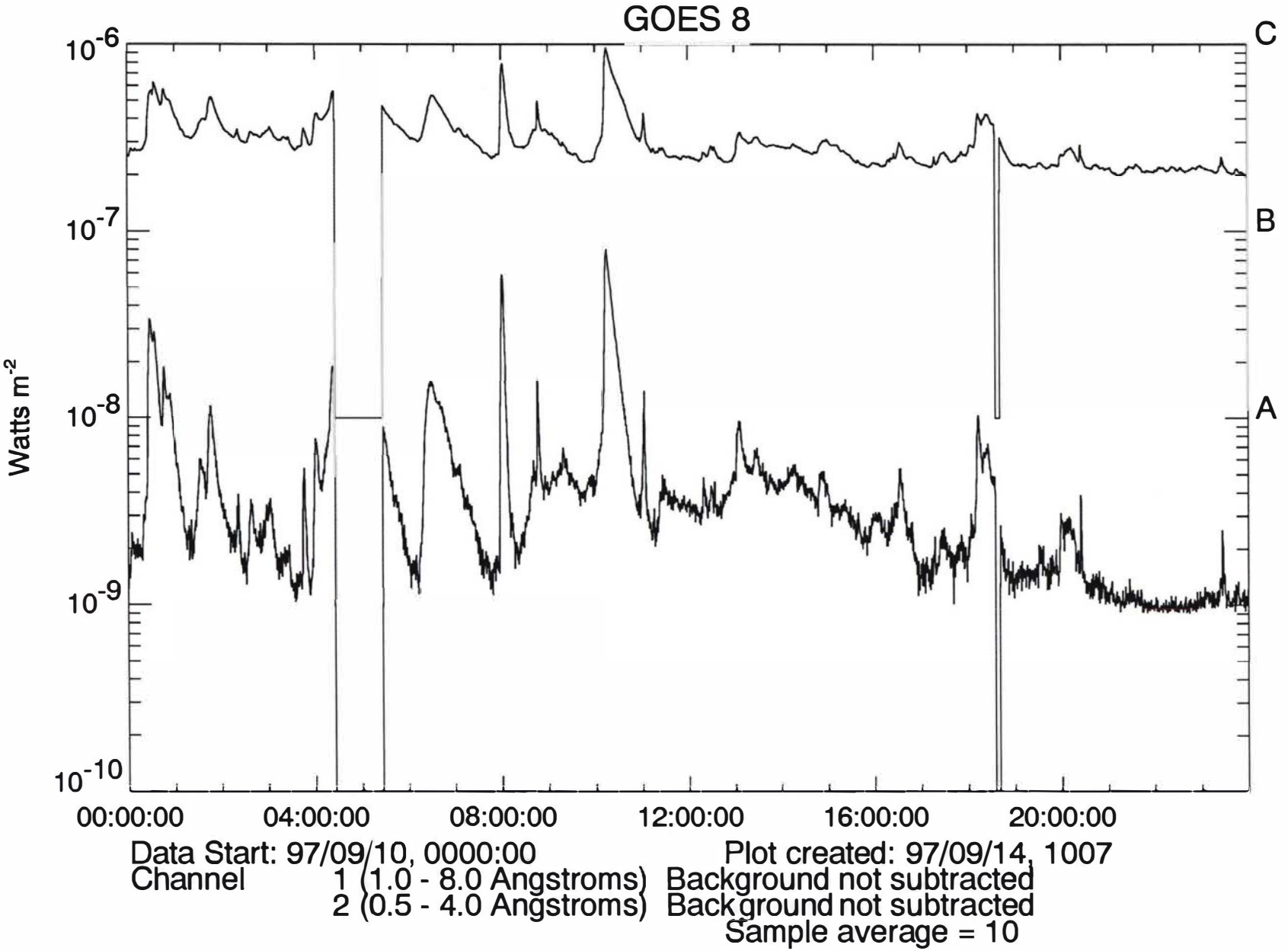




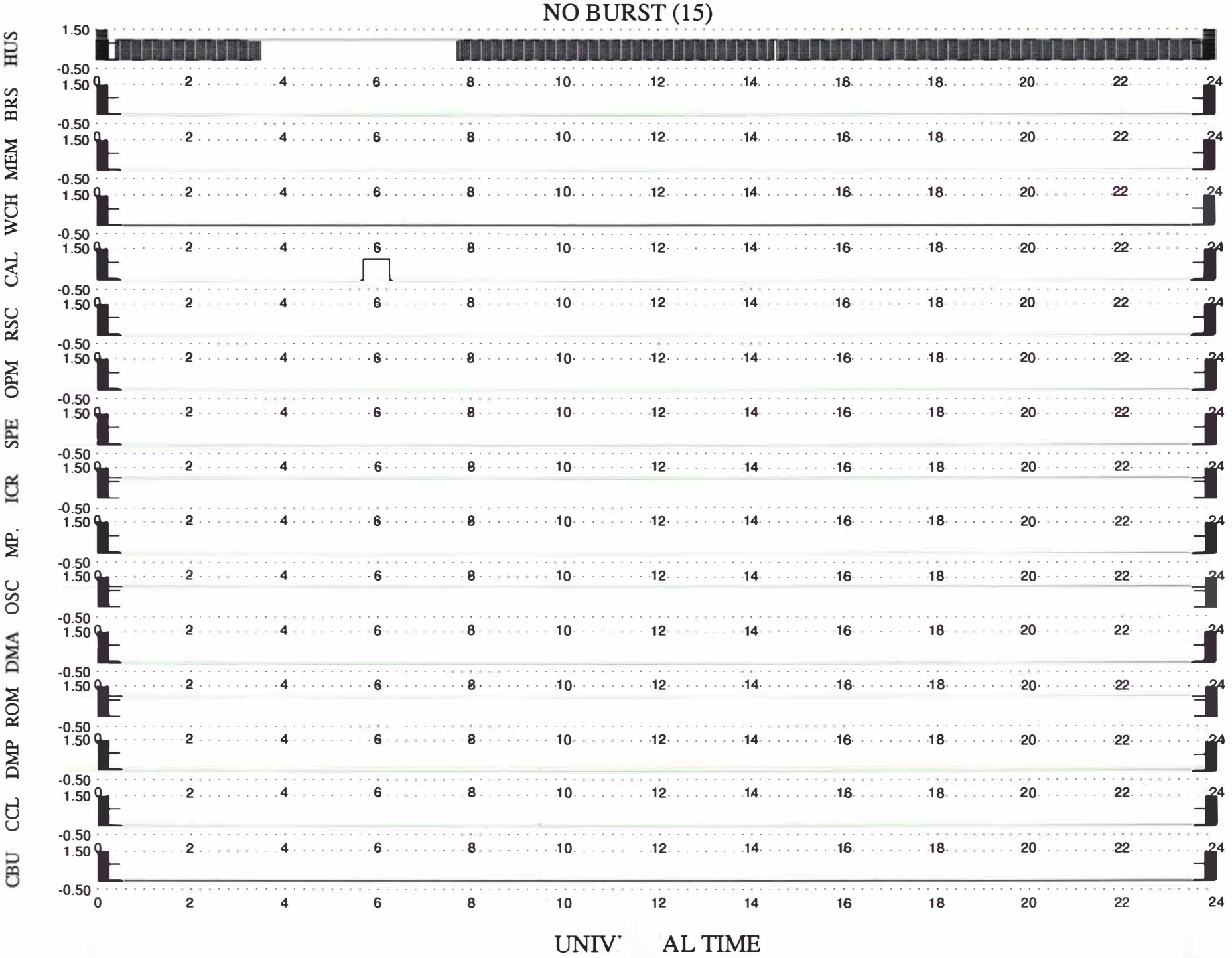
Current Time: 97/09/14, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
\+ Solar Flare

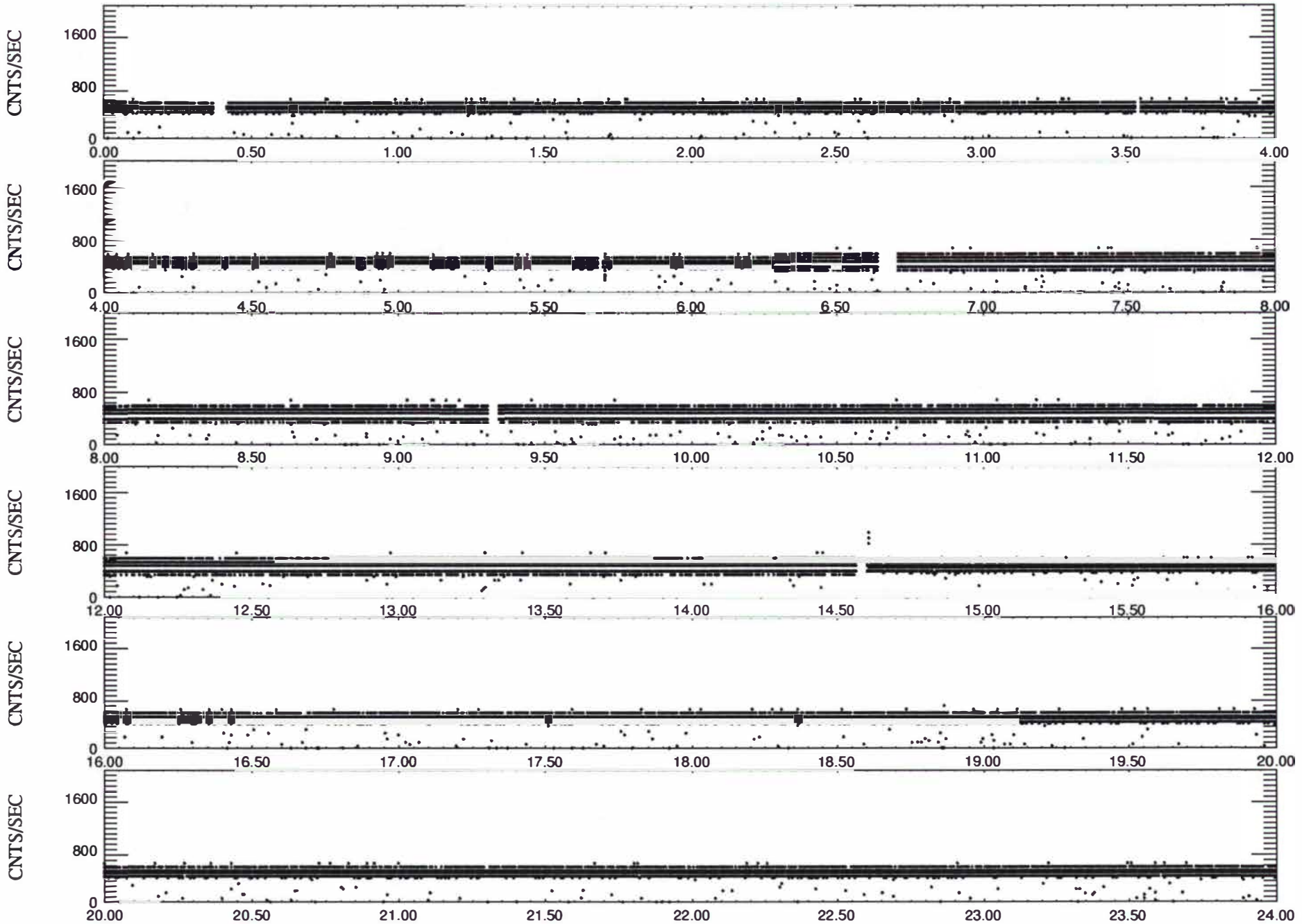

GOES 8
C
B
A
10^{-6}
10^{-7}
10^{-8}
10^{-9}
10^{-10}
Watts m^{-2}
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/10, 0000:00
Plot created: 97/09/14, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 253, year 1997 to day 253, year 1997 1/14/98



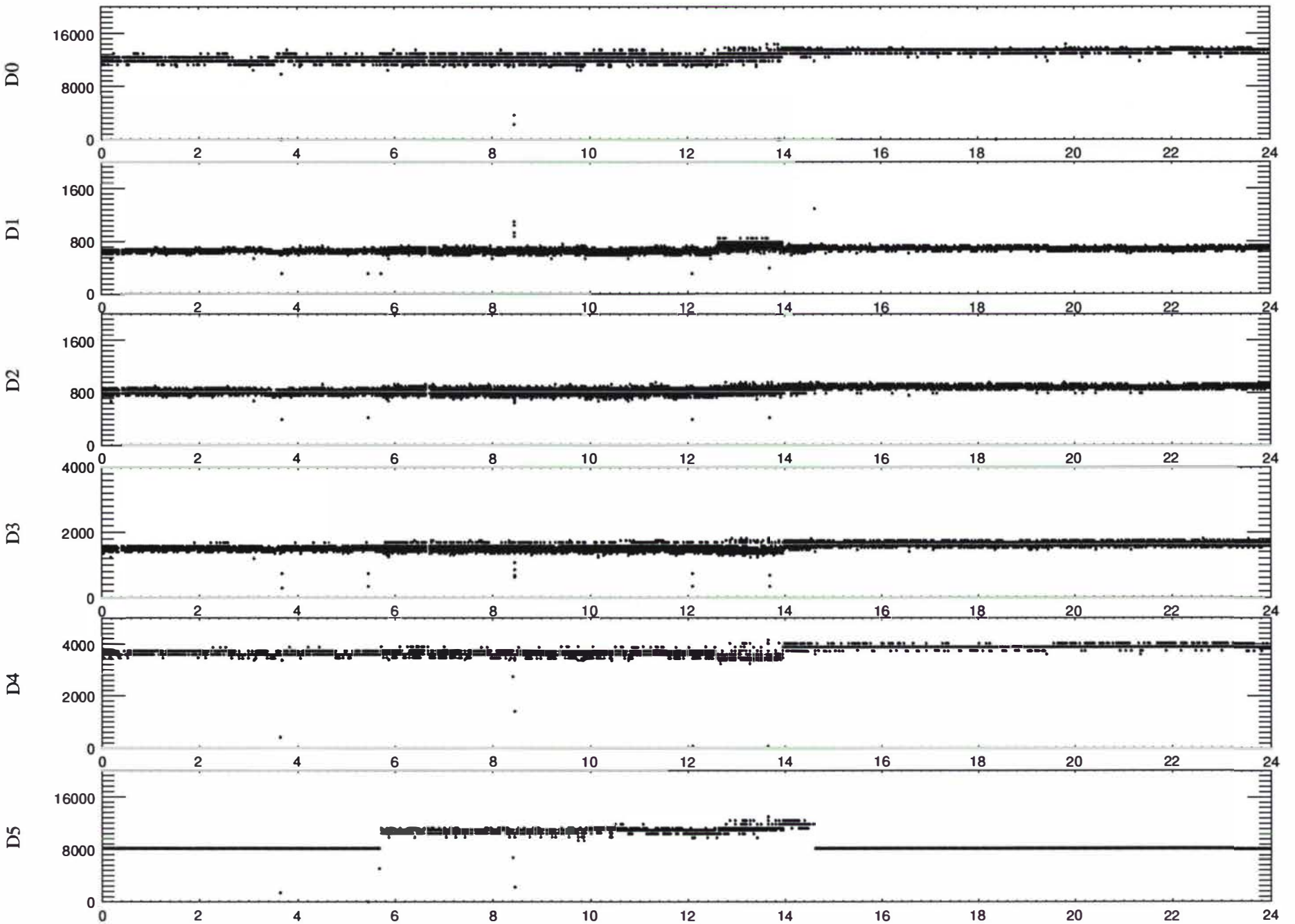
HUS 2A, MODE 1, NOT AVERAGED EDR day 253, year 1997 to day 253, year 1997 1/14/98

CALIBRATION DATA INCLUDED

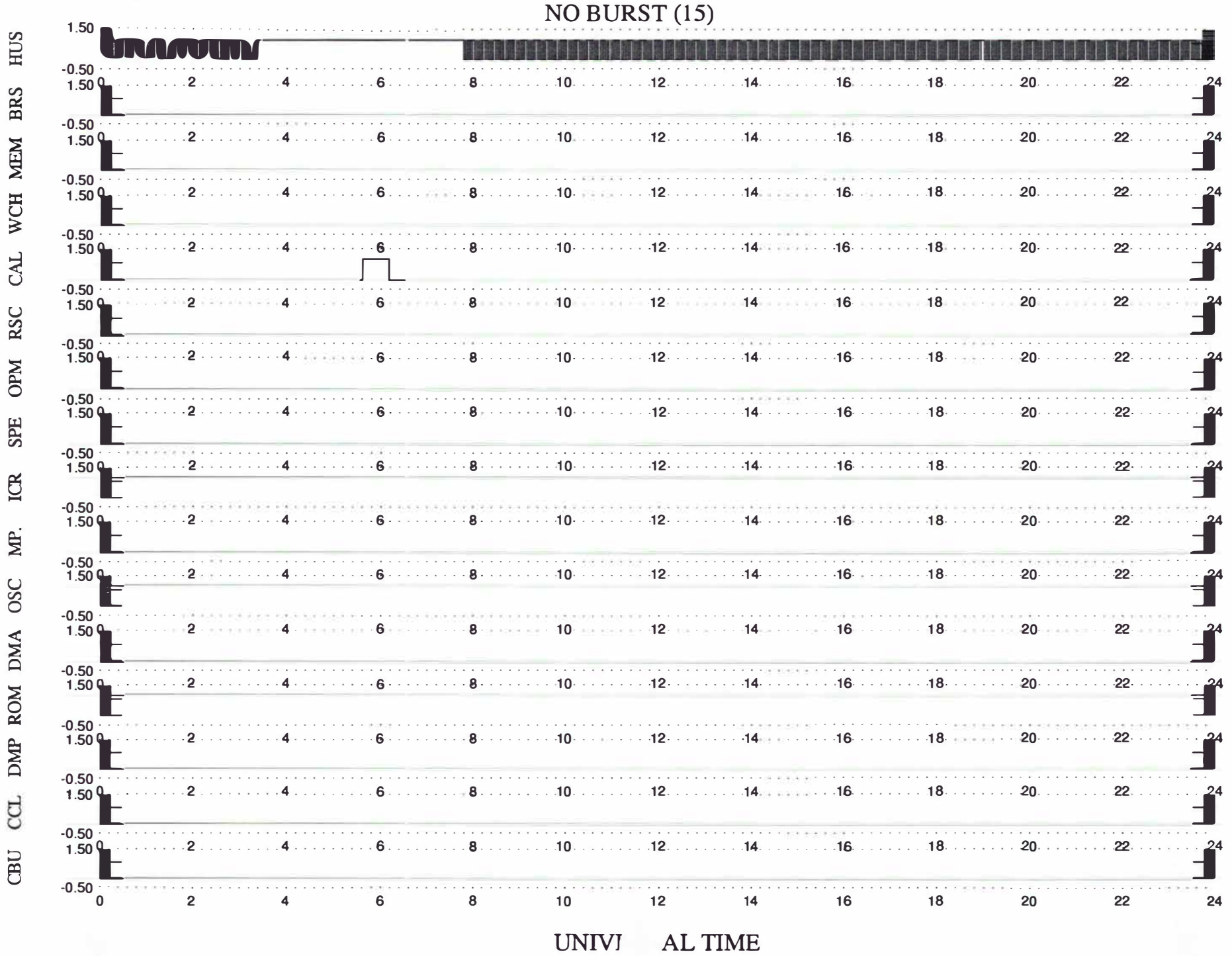


UNIV' 'AL TIME

HUS 2B COUNTS / SEC EDR day 253, year 1997 to day 253, year 1997 1/14/98

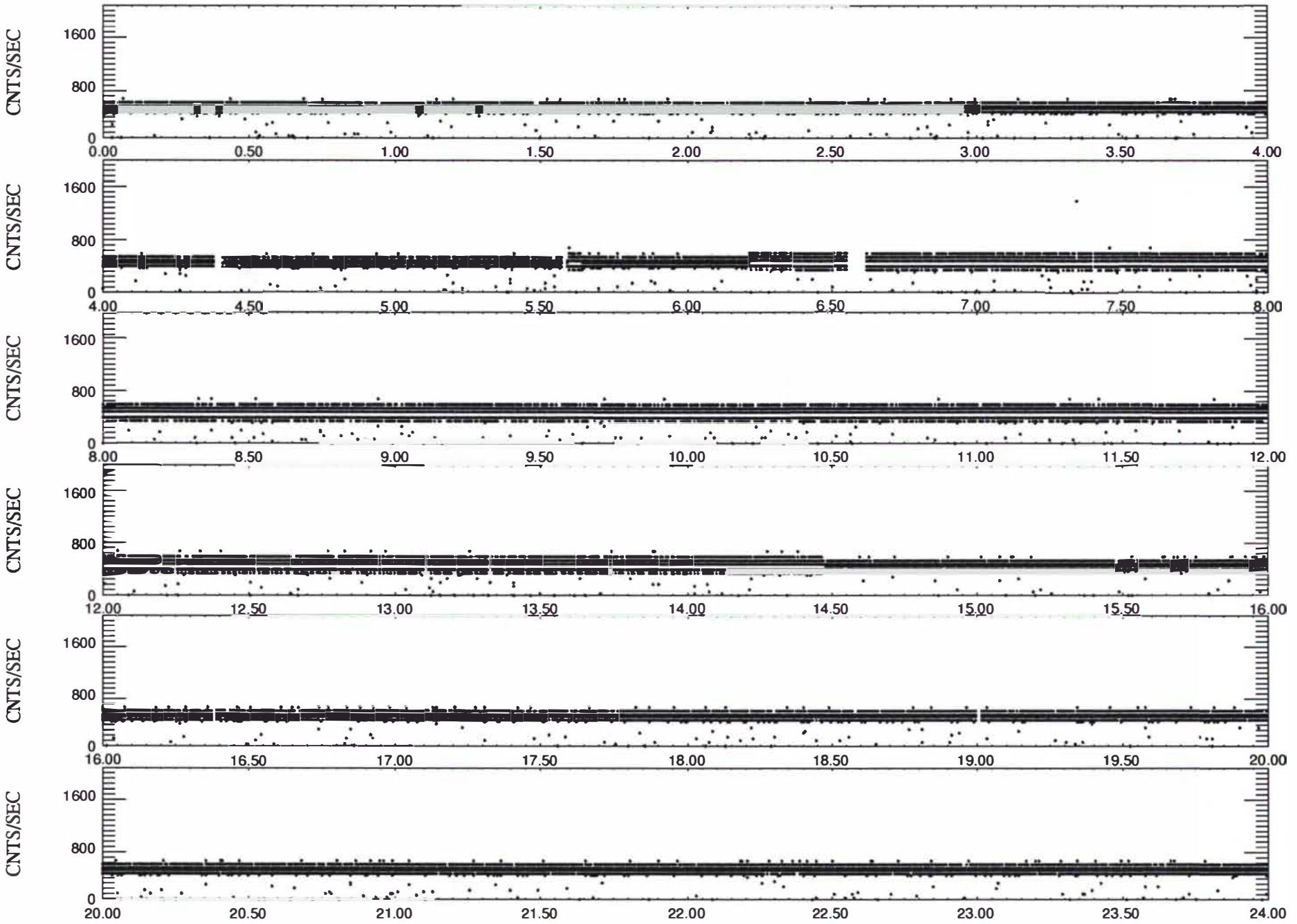


HUS MODES EDR day 254, year 1997 to day 254, year 1997 1/14/98



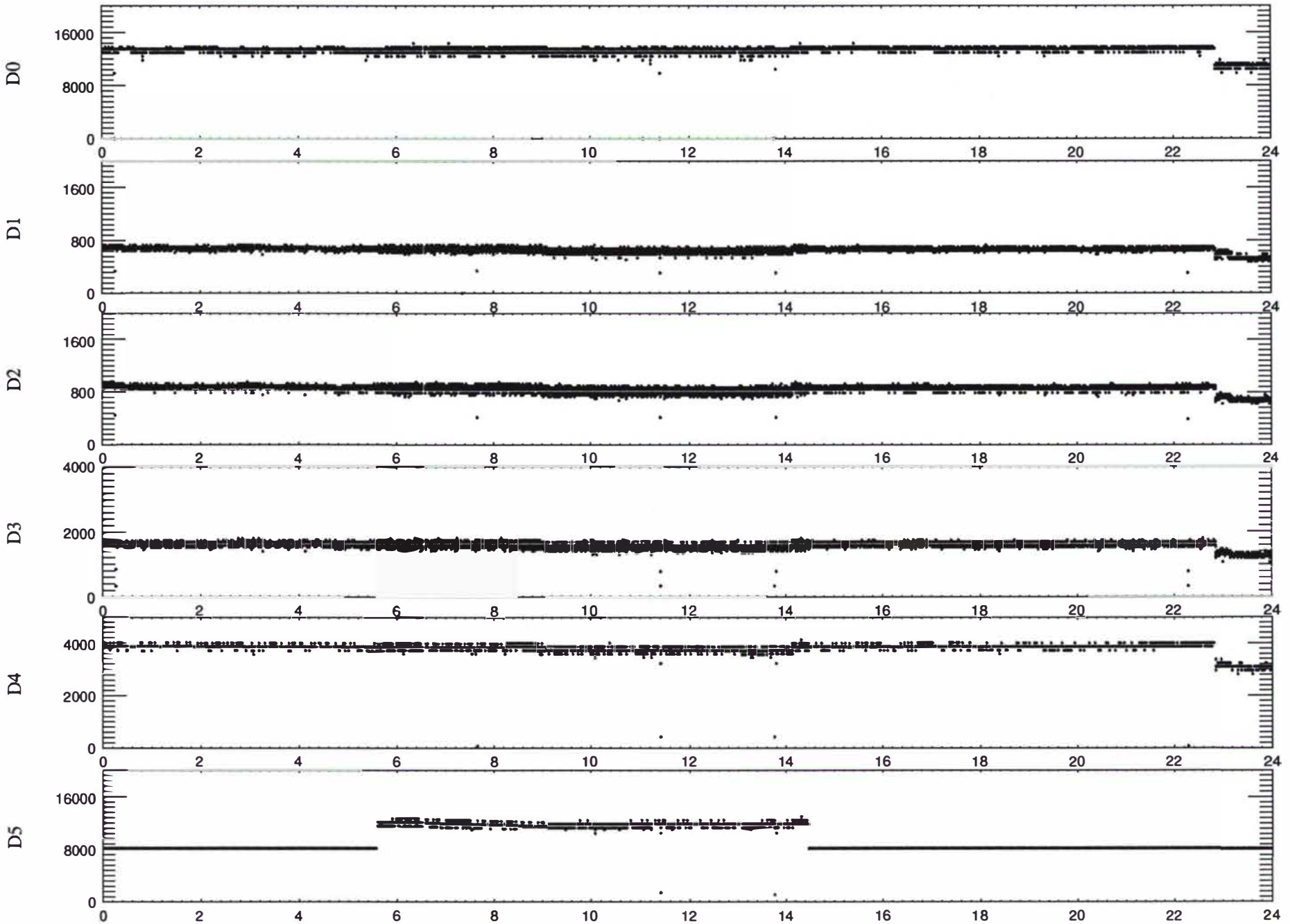
HUS 2A, MODE 1, NOT AVERAGED EDR day 254, year 1997 to day 254, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV' 'AL TIME

HUS 2B COUNTS / SEC EDR day 254, year 1997 to day 254, year 1997 1/14/98



From SAHI@fender.msfc.nasa.gov Mon Sep 15 14:01:00 1997
Return-Path: <SAHI@fender.msfc.nasa.gov>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id OAA23860; Mon, 15 Sep 1997 14:00:58 -0700
From: SAHI@fender.msfc.nasa.gov
Received: from FENDER.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id OAA03884; Mon, 15 Sep 1997 14:00:51 -0700
Date: Mon, 15 Sep 1997 16:00:25 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970915160025.21804920@fender.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6377
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6377
EVENT OF 1997 SEP 12 DAY OF YEAR=255
EVENT CROSSING TIME AT BATSE : 22163. S. OR 06:09:23.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 270.000 -22.000
BATSE PEAK COUNTING RATE: 320000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 12/ 9/ 97 IS:
RA= 163.102 DEC= 17.893 DIST= 6.226 AU
BATSE-ULYSSES DISTANCE = 931409646. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 68.19 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1154.39 SECS.
CROSSING TIME AT ULYSSES IS 23317. S. OR 06:28:37 +/- 568.31 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 12/ 9/ 97 IS:
RA= 225.693 DEC= -18.188 DIST= 1.702 AU
MARS-BATSE DISTANCE = 254556144. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=138.36 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -634.52 SECS.
CROSSING TIME AT MARS IS 21528. S. OR 05:58:48 +/- 88.32 SECONDS

BATSE BURST TRIGGER
NO.: 6377

TIME: TJD=0703 SECONDS=22163

TYPE: SGR SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=84.4 AZIMUTH=259.0 ERROR=1.1 DEGREES

COMMENTS:
SGR. PROBABLE NEW SGR, SINGLE SPIKE DUR. APPROX. 0.7 SECS. NOT VISIBLE ABOVE
300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6377	970912	10703	22163	320000	270	-22	.7

From kouveliotou@eagles.msfc.nasa.gov Wed Sep 24 09:19 PDT 1997
From: kouveliotou@eagles.msfc.nasa.gov
Date: Wed, 24 Sep 1997 08:51:12 -0500
To: khurley@sunspot.ssl.berkeley.edu
ject: on the sept 12 event from konus
MS-To: HURLEY

From: SMTP%"golen@mz.ioffe.rssi.ru" 24-SEP-1997 08:22:07.31
To: KOUVELIOTOU
CC:
Subj: SGR

To: Chryssa.Kouveliotou@msfc.nasa.gov
Message-Id: <ABOFHAqSTC@mz.ioffe.rssi.ru>
Organization: Physical Technical Institute, Space Research Department
Date: Wed, 24 Sep 1997 17:21:28 +0400 (MSD)
From: "Sergey V. Golenetskii" <golen@mz.ioffe.rssi.ru>
X-Mailer: dMail [Demos Mail for DOS v1.23]
Subject: SGR
Lines: 8

Dear Chryssa,

Konus-Wind detected SGR 970912 at 22164.078s UT. The flare was seen in two energy intervals 14 - 49 keV and 49 - 230 keV. Its duration was 690 msec (60 ms before trigger and 630 ms after trigger).

Best wishes
Sergei

From golen@mz.ioffe.rssi.ru Wed Sep 24 09:31 PDT 1997
To: khurley@sunspot.ssl.berkeley.edu
Date: Wed, 24 Sep 1997 17:33:07 +0400 (MSD)
From: "Sergey V. Golenetskii" <golen@mz.ioffe.rssi.ru>
ject: SGR 970912

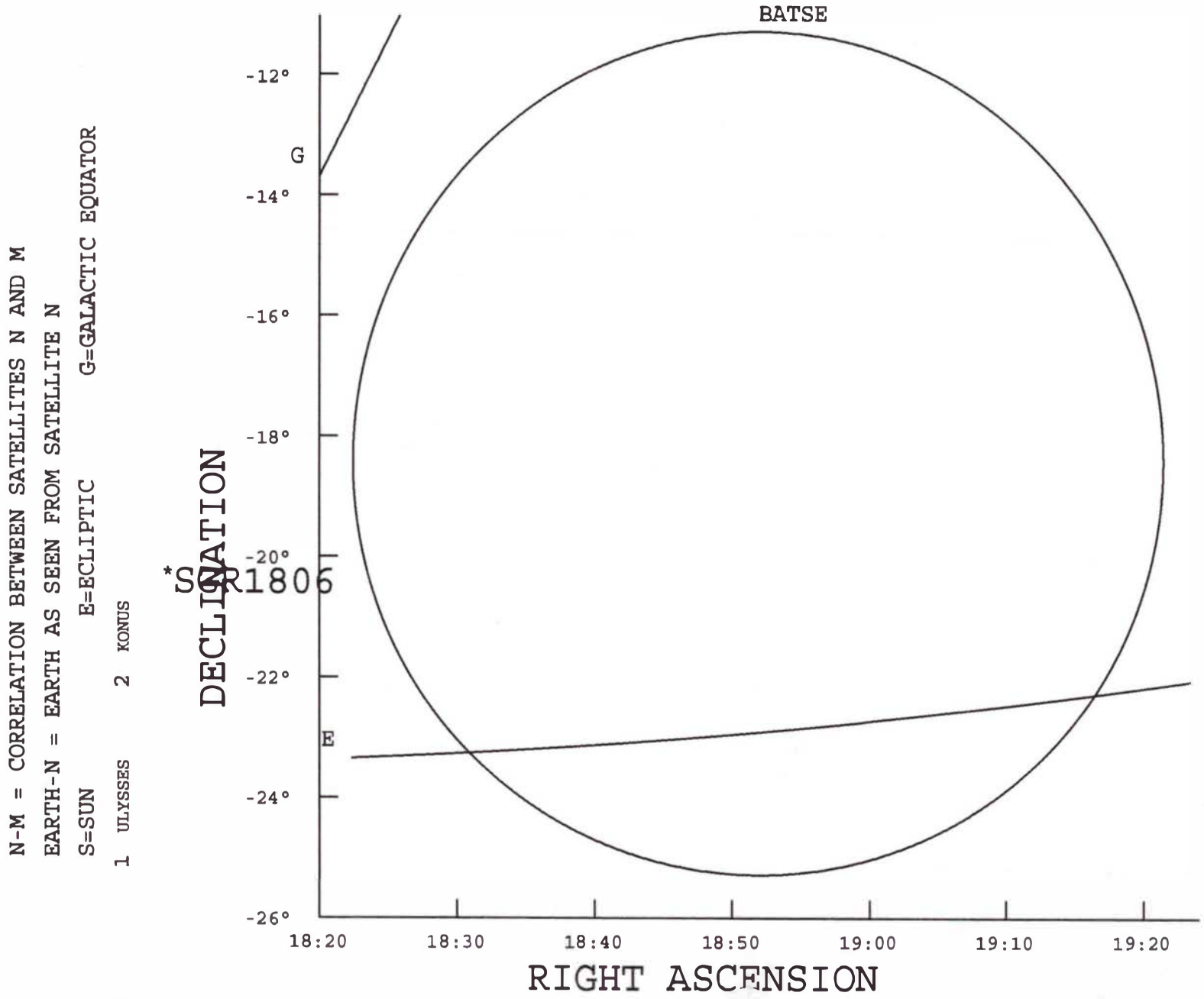
Dear Kevin,

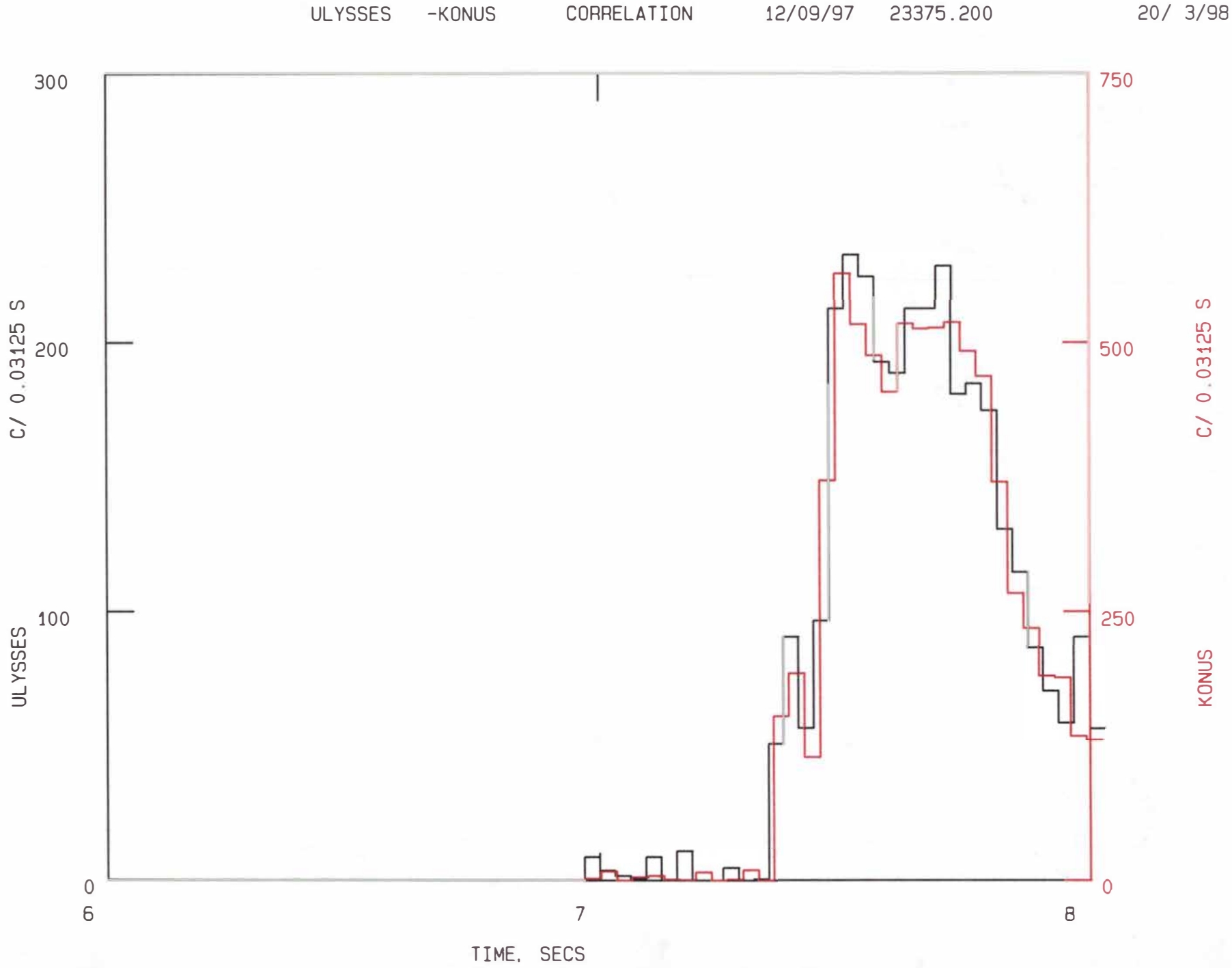
Konus-Wind detected SGR 970912 at 22164.078s UT. We have time history of this event with 2 ms resolution. The flare's duration was 690 ms (60 ms before trigger and 630 ms after trigger).

Best wishes
Sergei

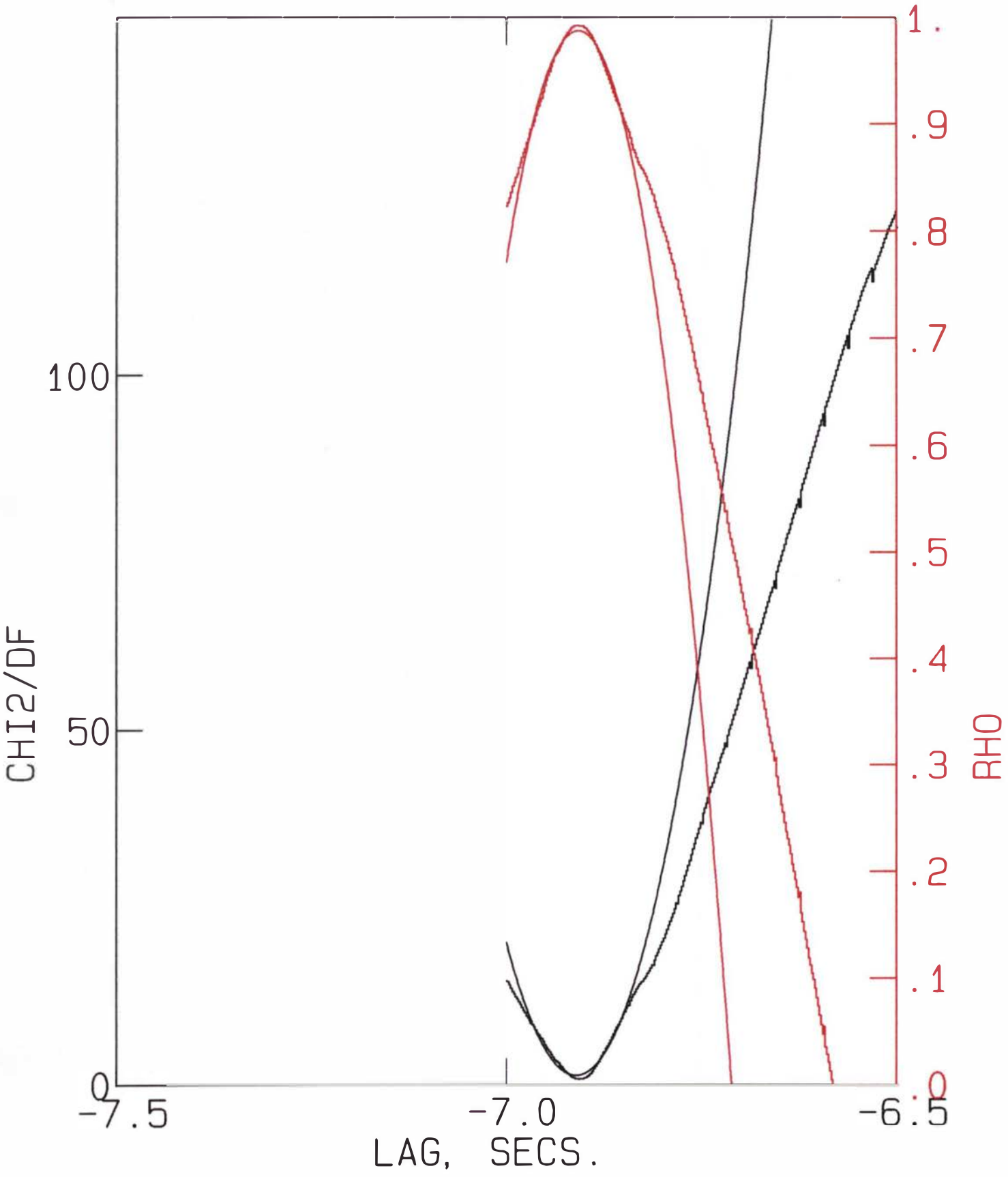
EVENT OF SEP 12, 1997 6:29

20/ 3/98




ULYSSES -KONUS CORRELATION 12/09/97 23375.200 20/ 3/98
300
200
100
0
750
500
250
0
C/ 0.03125 S
ULYSSES
C/ 0.03125 S
KONUS
6
7
8
TIME, SECS

ULYSSES -KONUS CORRELATION 12/09/97 23375.200

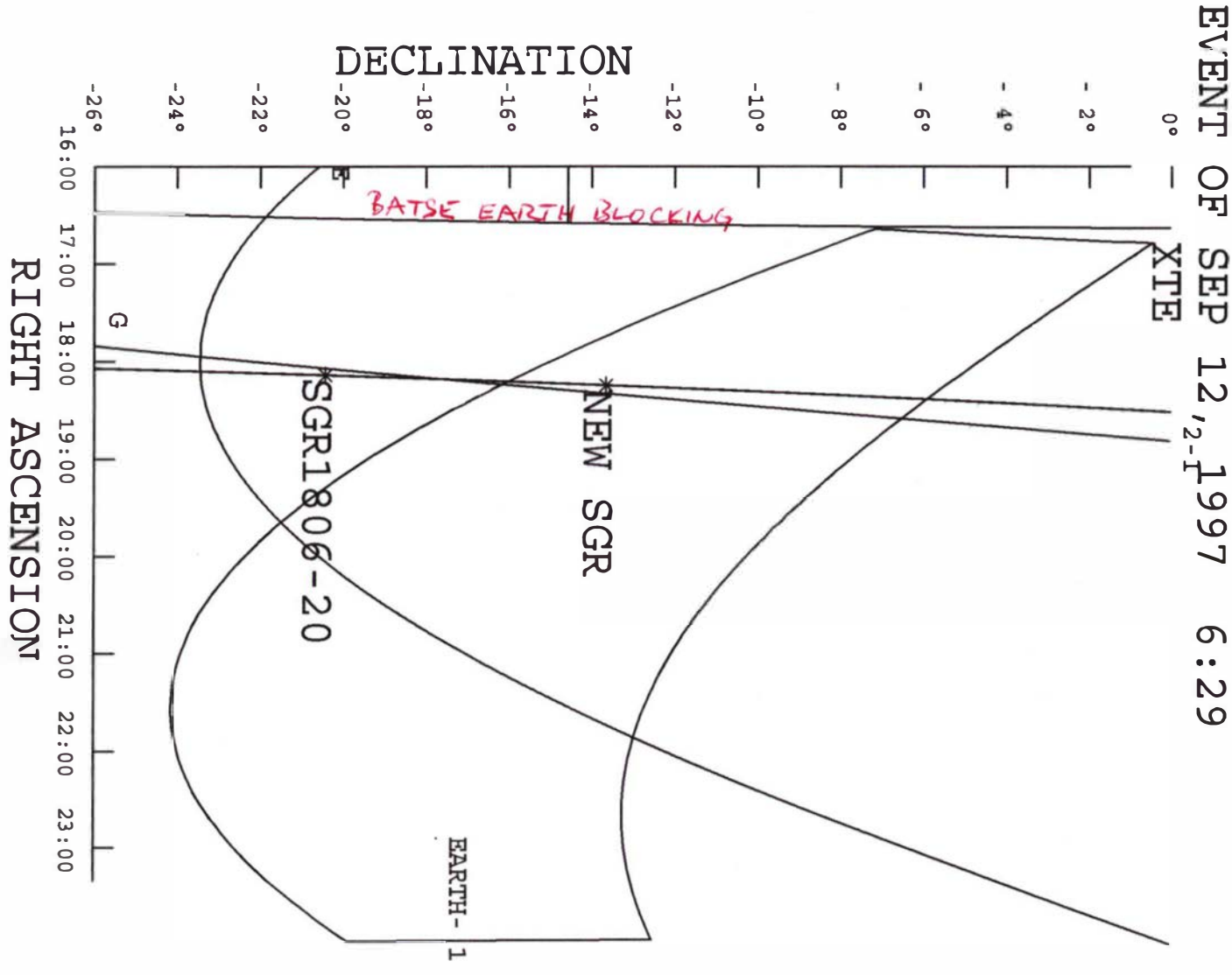


N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN E=ECLIPTIC G=GALACTIC EQUATOR

1 ULYSSES 2 BATSE

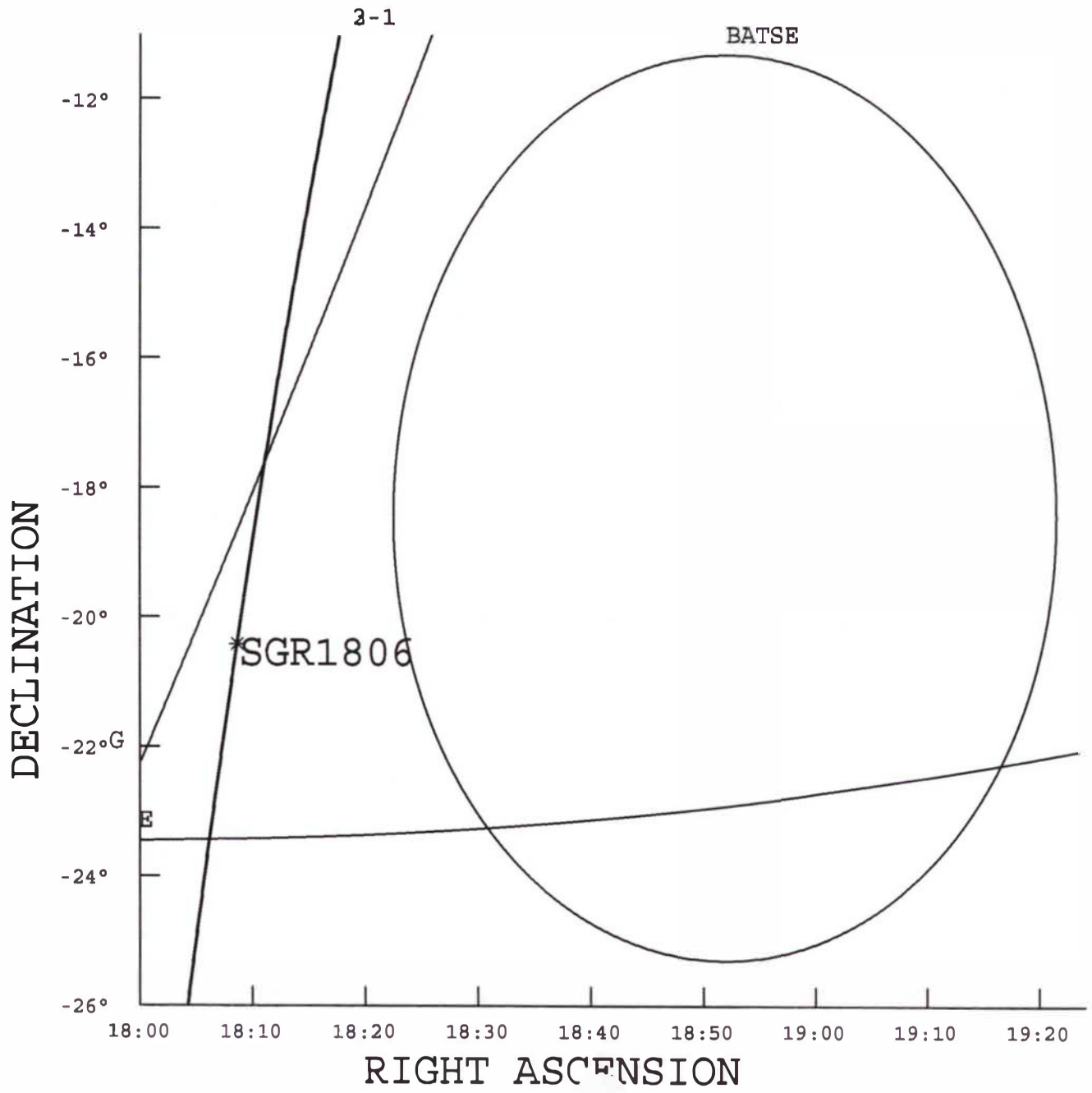


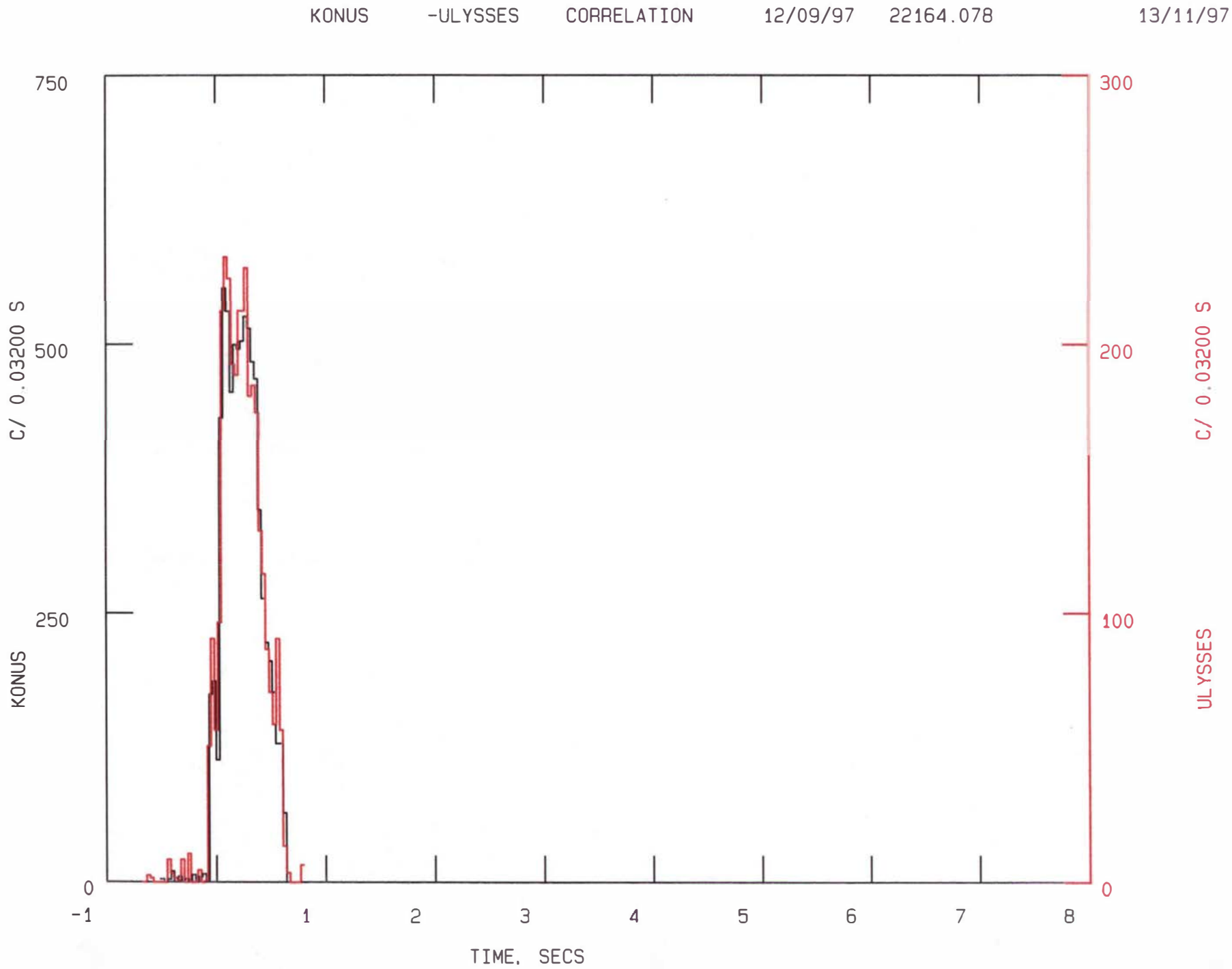
11/12/97

EVENT OF SEP 12, 1997 6:29

13/11/97

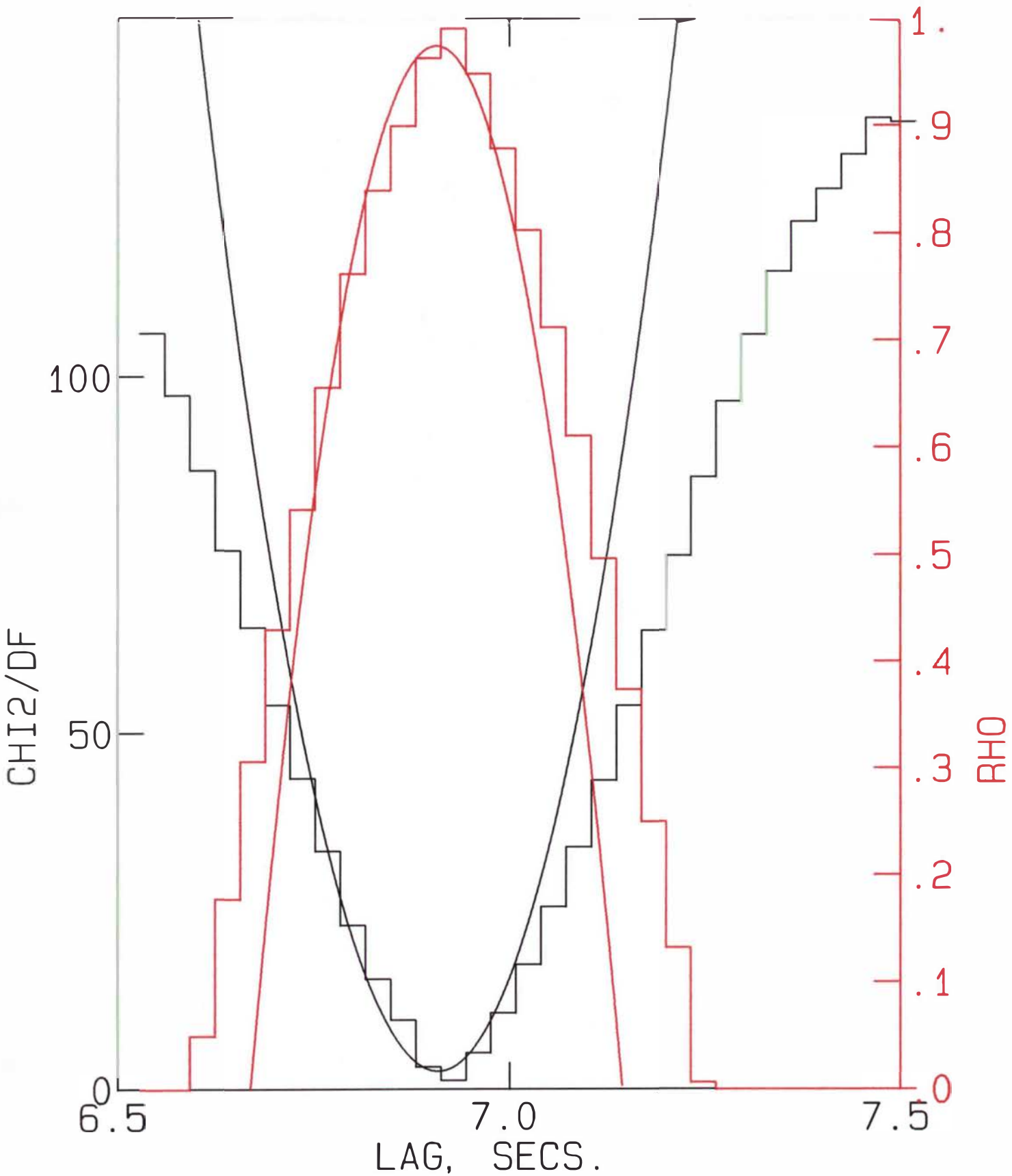
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 BATSE 3 KONUS




KONUS -ULYSSES CORRELATION 12/09/97 22164.078 13/11/97
750
500
250
0
C/ 0.03200 S
KONUS
300
200
100
0
C/ 0.03200 S
ULYSSES
-1
1
2
3
4
5
6
7
8
TIME, SECS

13/11/97

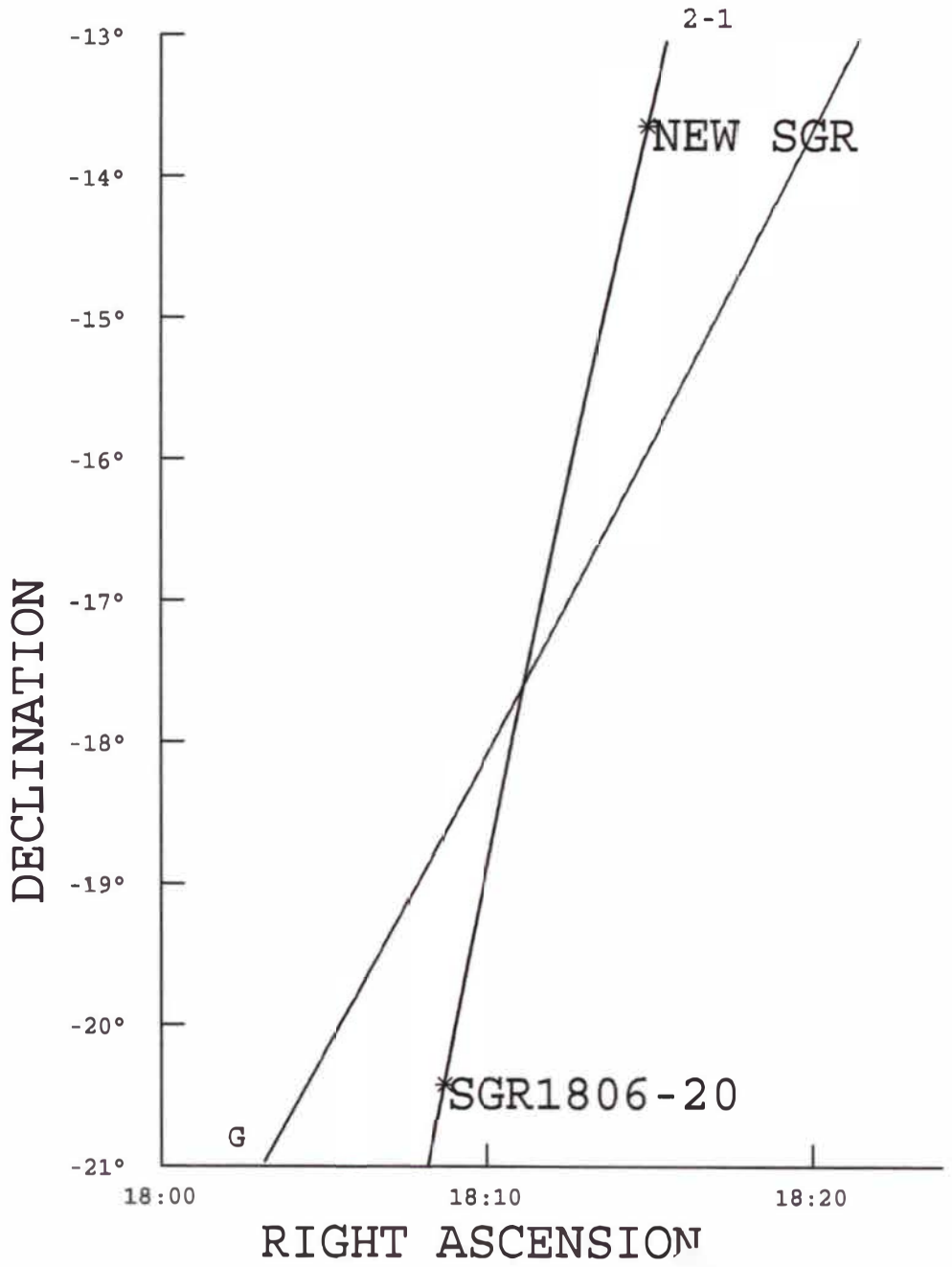
KONUS -ULYSSES CORRELATION 12/09/97 22164.078

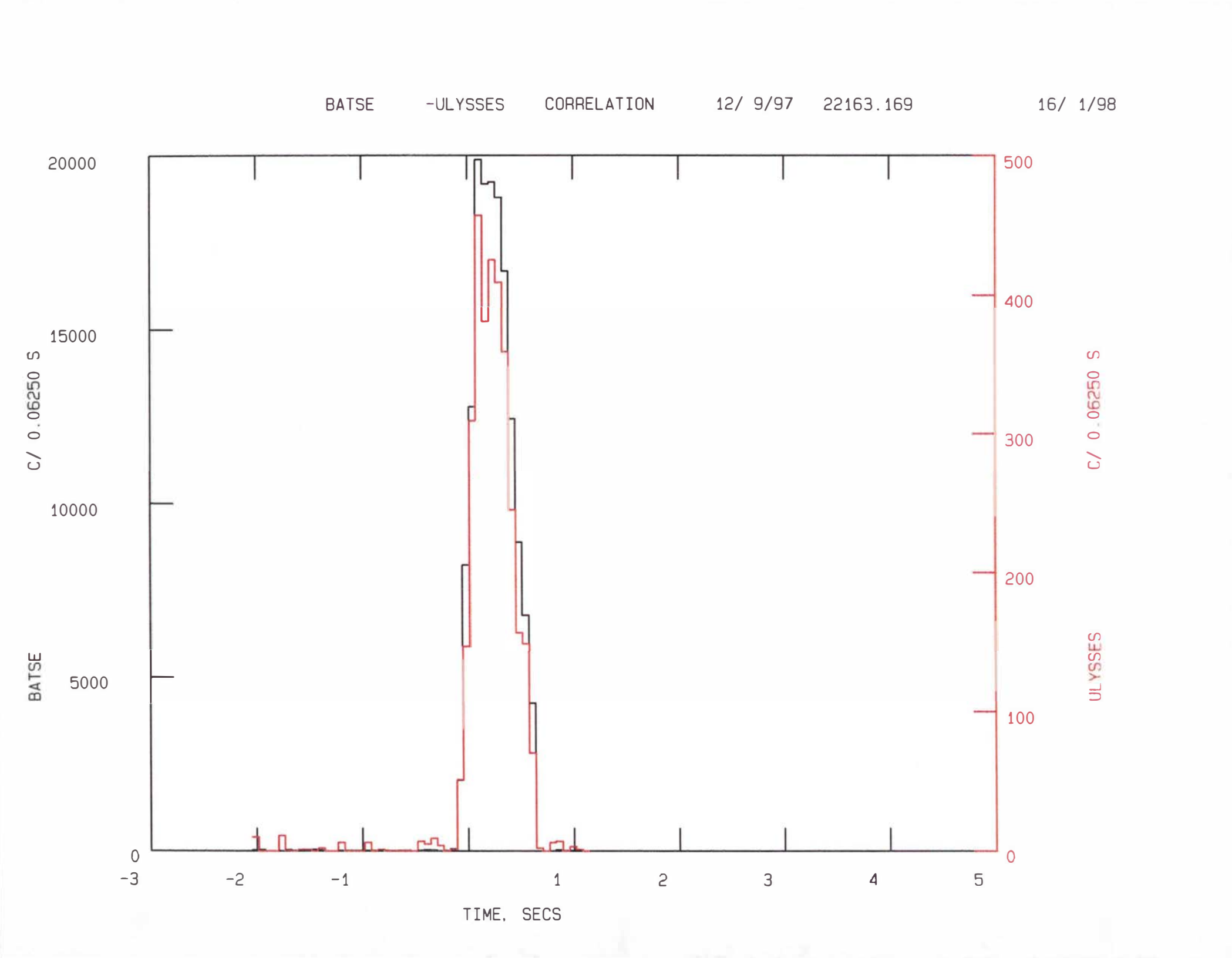


EVENT OF SEP 12, 1997 6:29

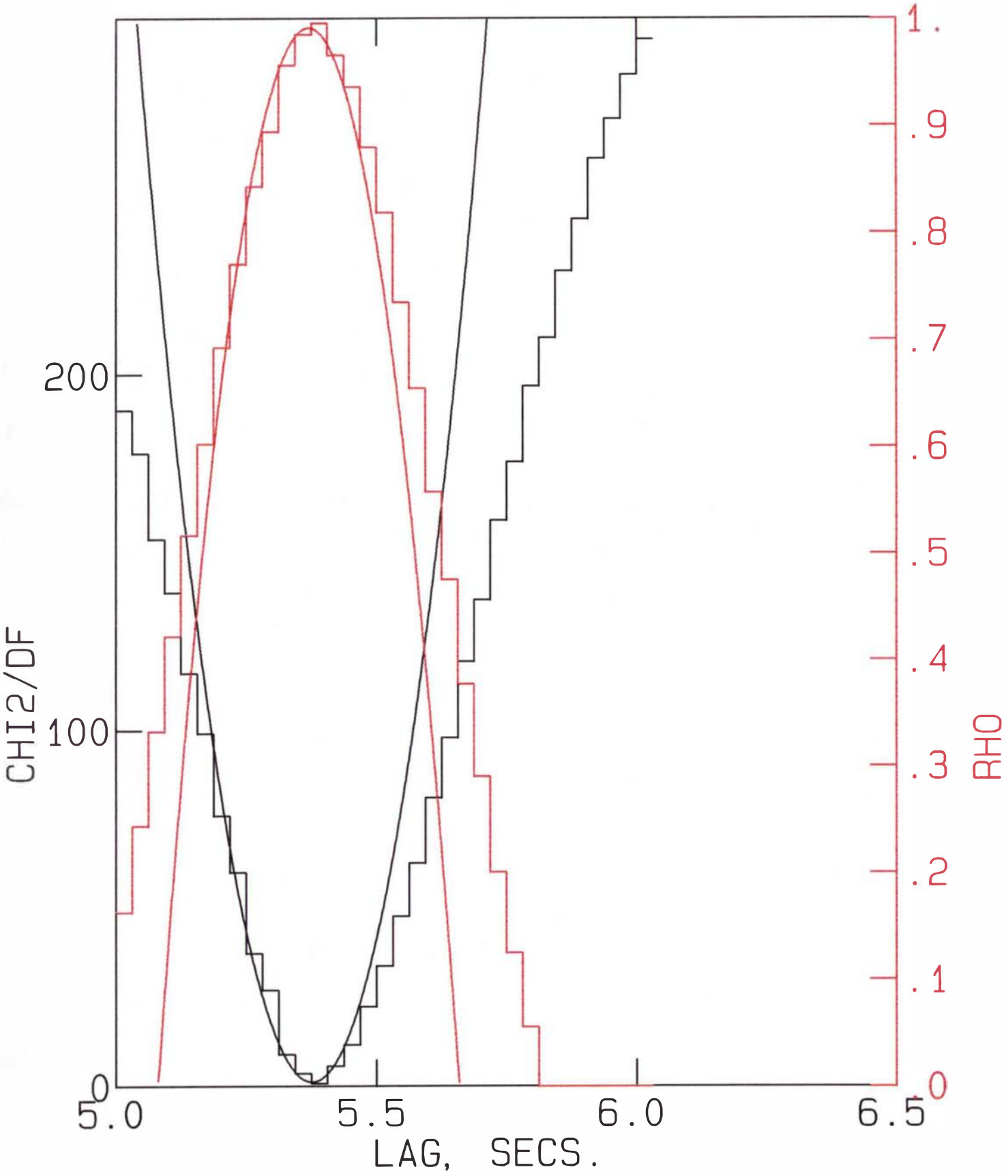
16/ 1/98

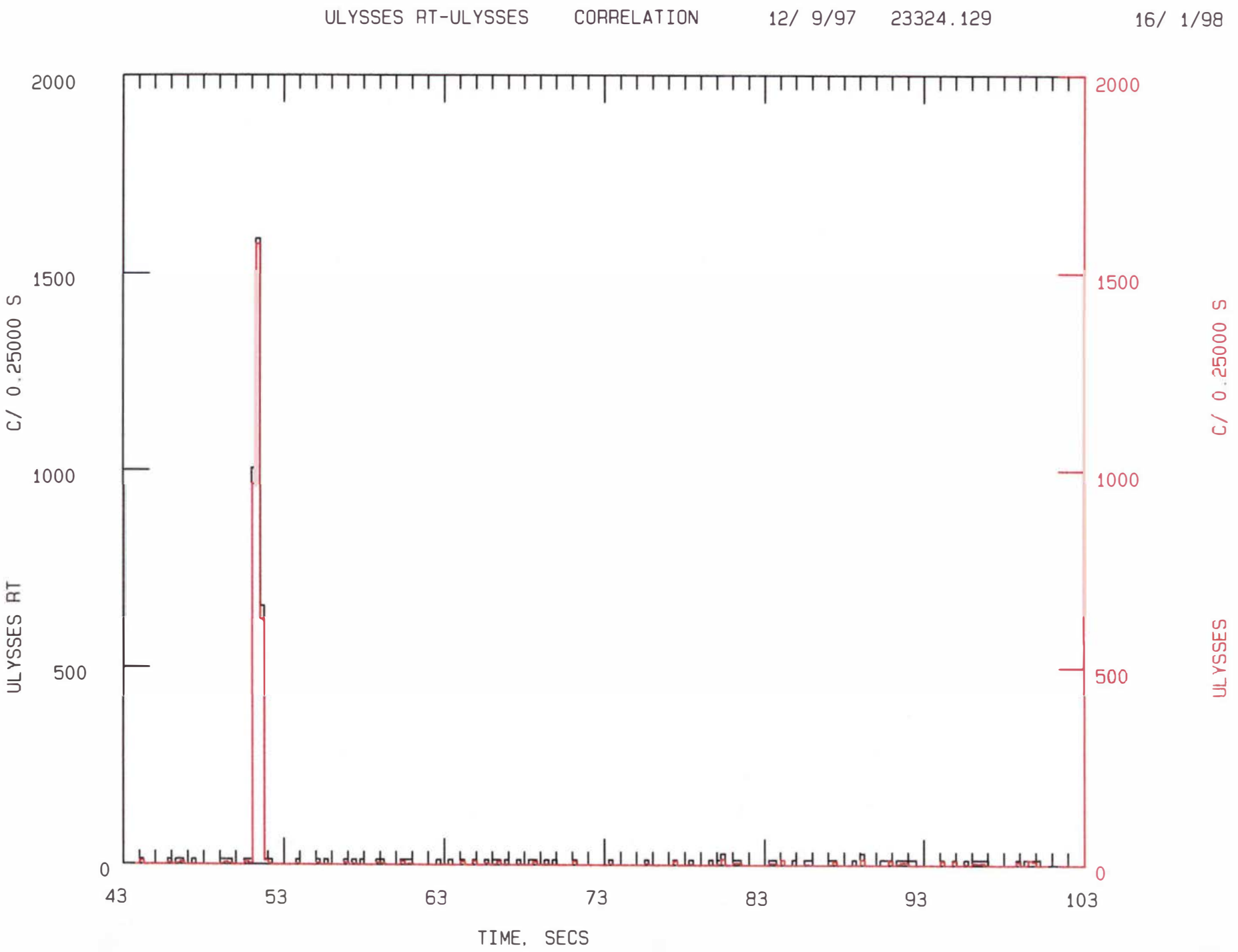
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 BATSE




BATSE -ULYSSES CORRELATION 12/ 9/97 22163.169 16/ 1/98
20000
15000
10000
5000
0
C/ 0.06250 S
BATSE
500
400
300
200
100
0
C/ 0.06250 S
ULYSSES
-3
-2
-1
1
2
3
4
5
TIME, SECS

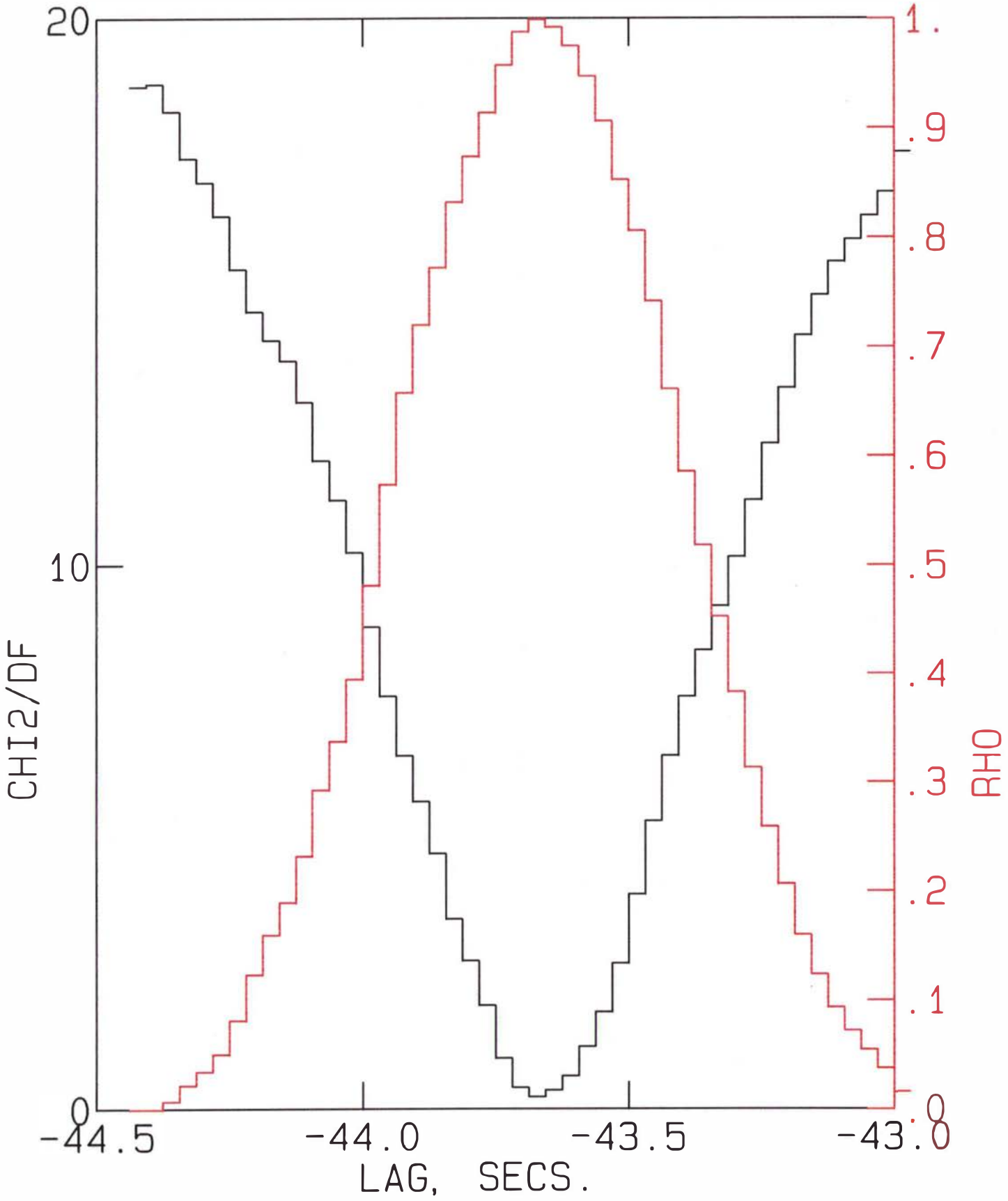
BATSE -ULYSSES CORRELATION 12/ 9/97 22163.169




ULYSSES RT-ULYSSES CORRELATION 12/ 9/97 23324.129 16/ 1/98
2000
1500
1000
500
0
C/ 0.25000 S
ULYSSES RT
2000
1500
1000
500
0
C/ 0.25000 S
ULYSSES
43
53
63
73
83
93
103
TIME, SECS

16/ 1/98

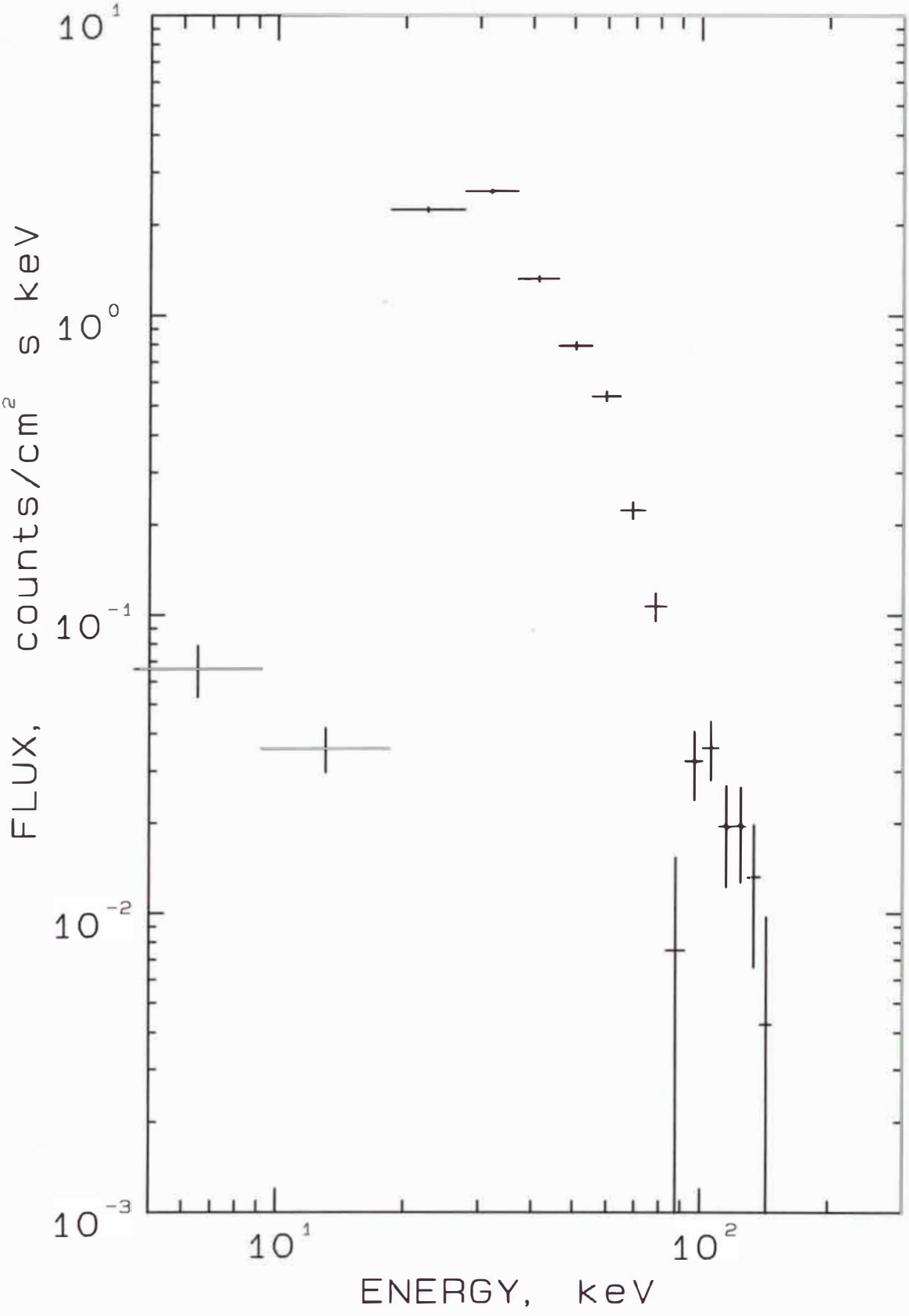
ULYSSES RT-ULYSSES CORRELATION 12/ 9/97 23324.129

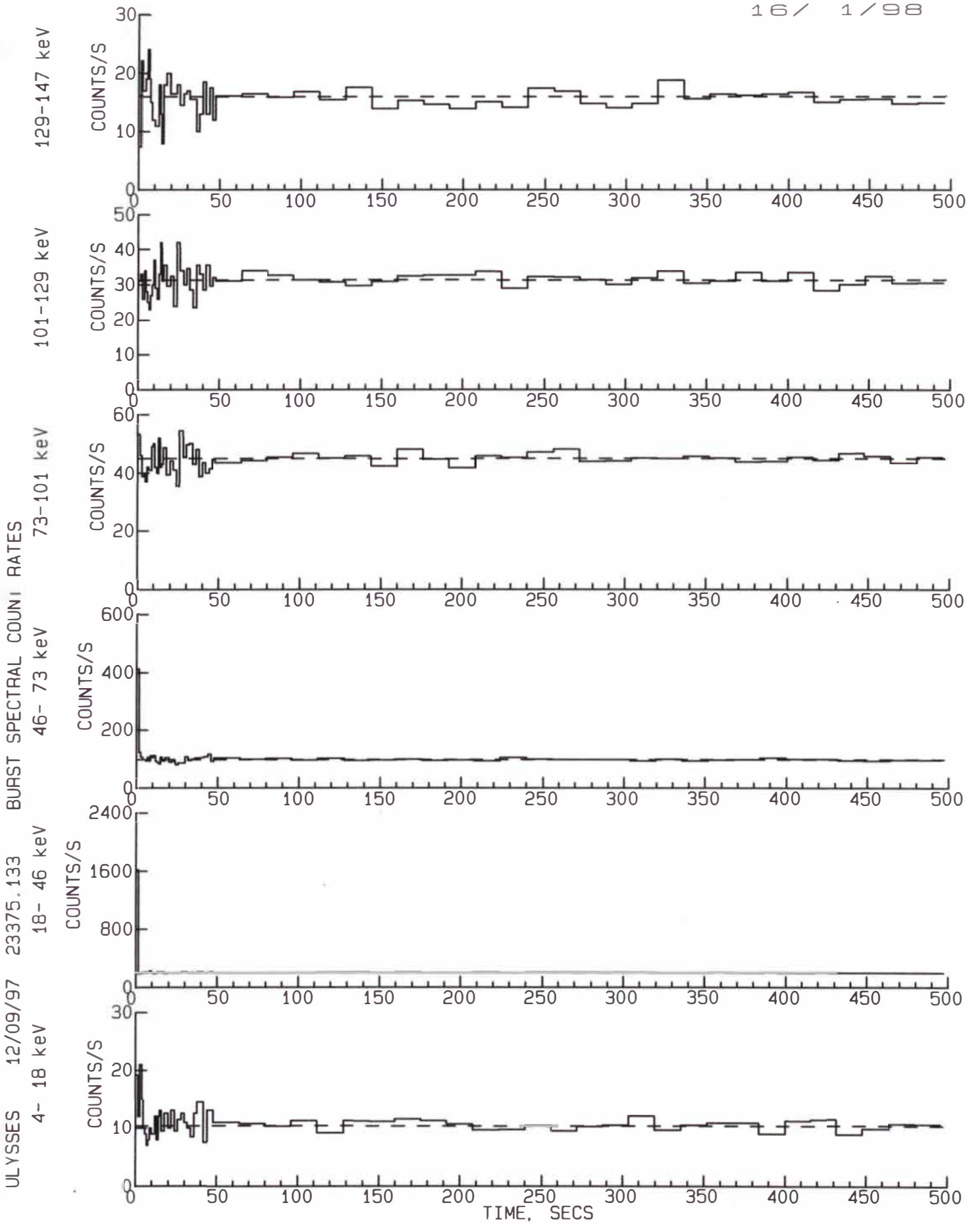


ULYSSES 12/09/97 23375.133

16/ 1/98

SPECTRUM INTEGRATED OVER 10.7 SECONDS, INTERVALS 2 TO 12




16/ 1/98
ULYSSES 12/09/97 23375.133 BURST SPECTRAL COUNT RATES
4- 18 keV
18- 46 keV
46- 73 keV
73-101 keV
101-129 keV
129-147 keV
COUNTS/S
TIME, SECS

ULYSSES 12/09/97 Ttrig=23375.200

0- 0 keV

COUNTS/0.031 S

COUNTS/0.125 S

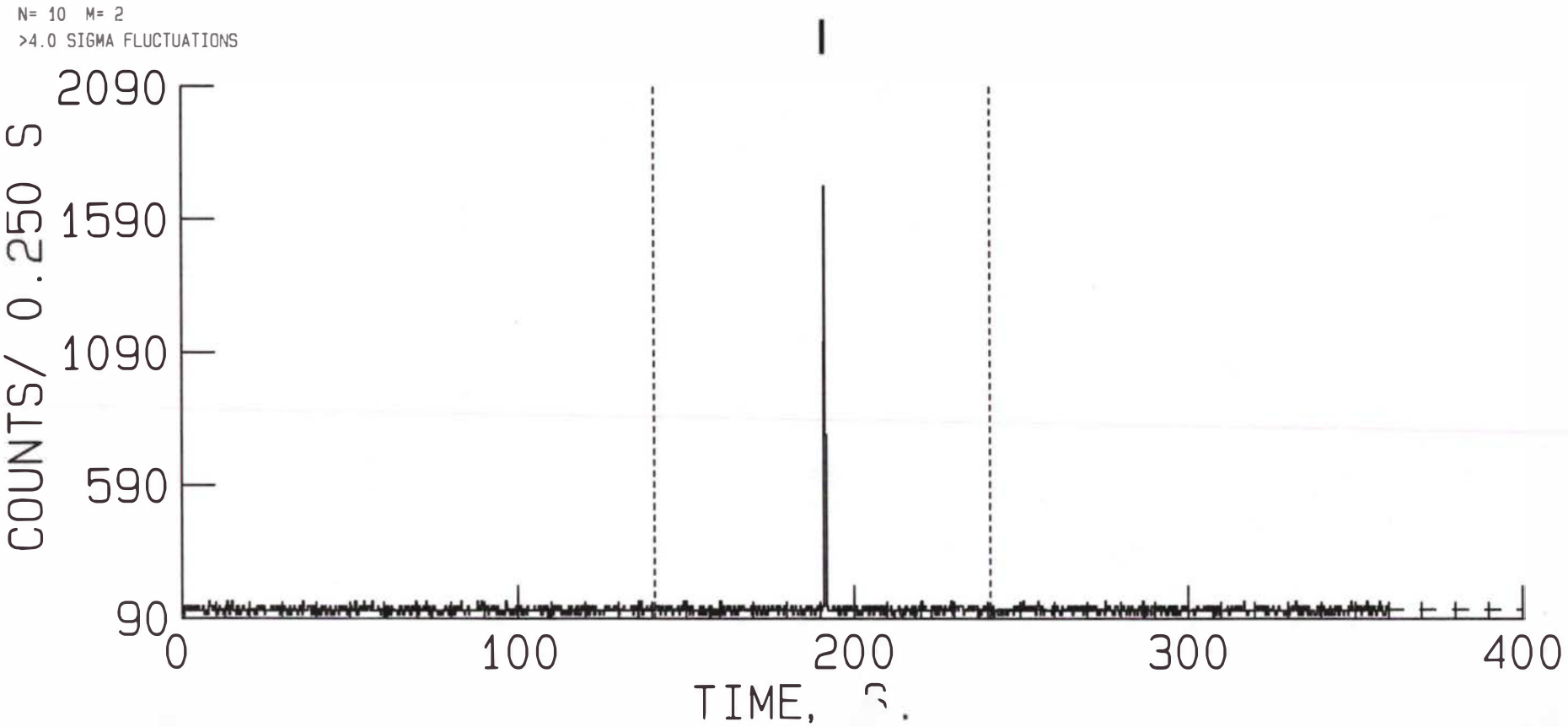
16/ 1/**

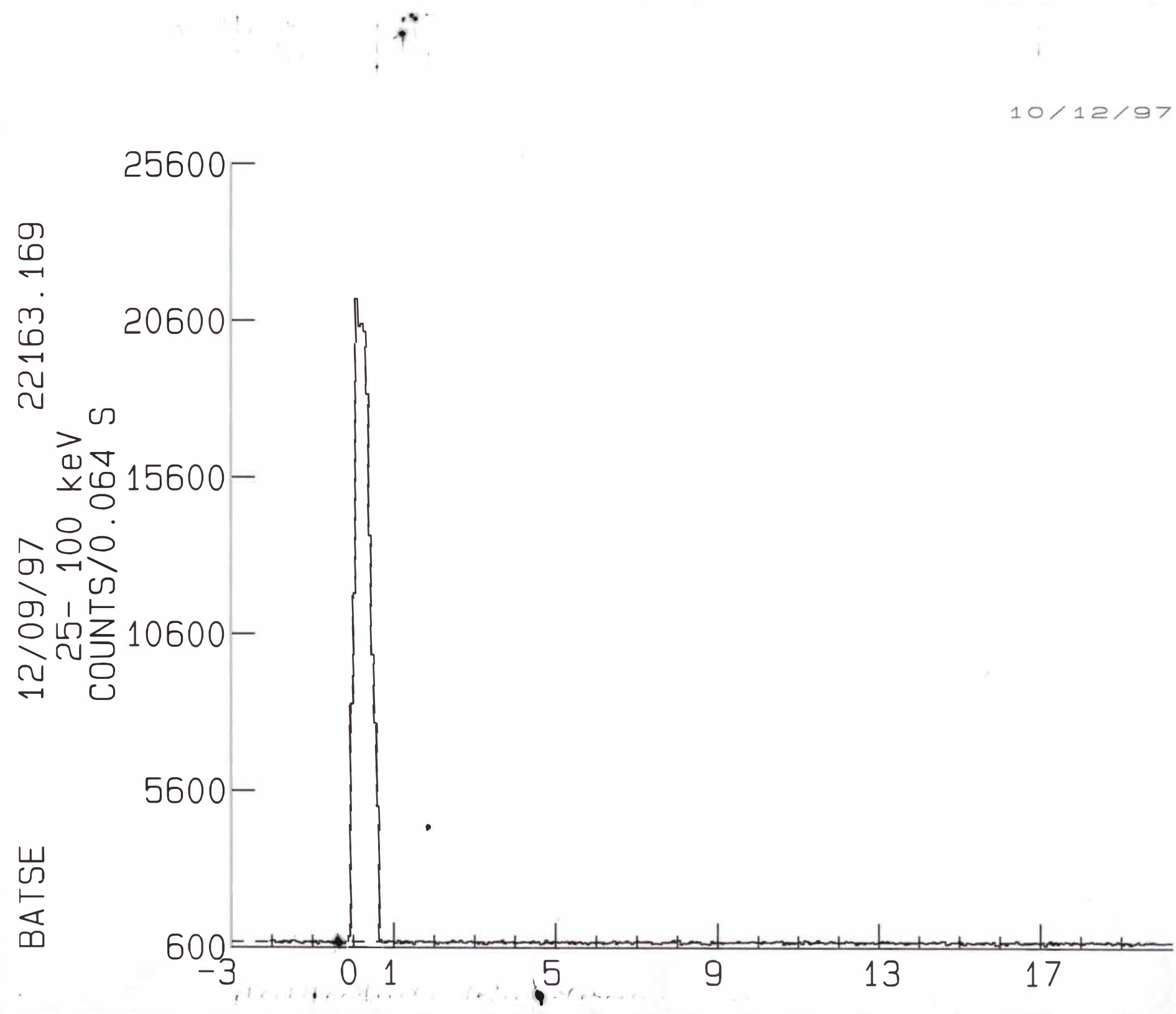
ULYSSES RT

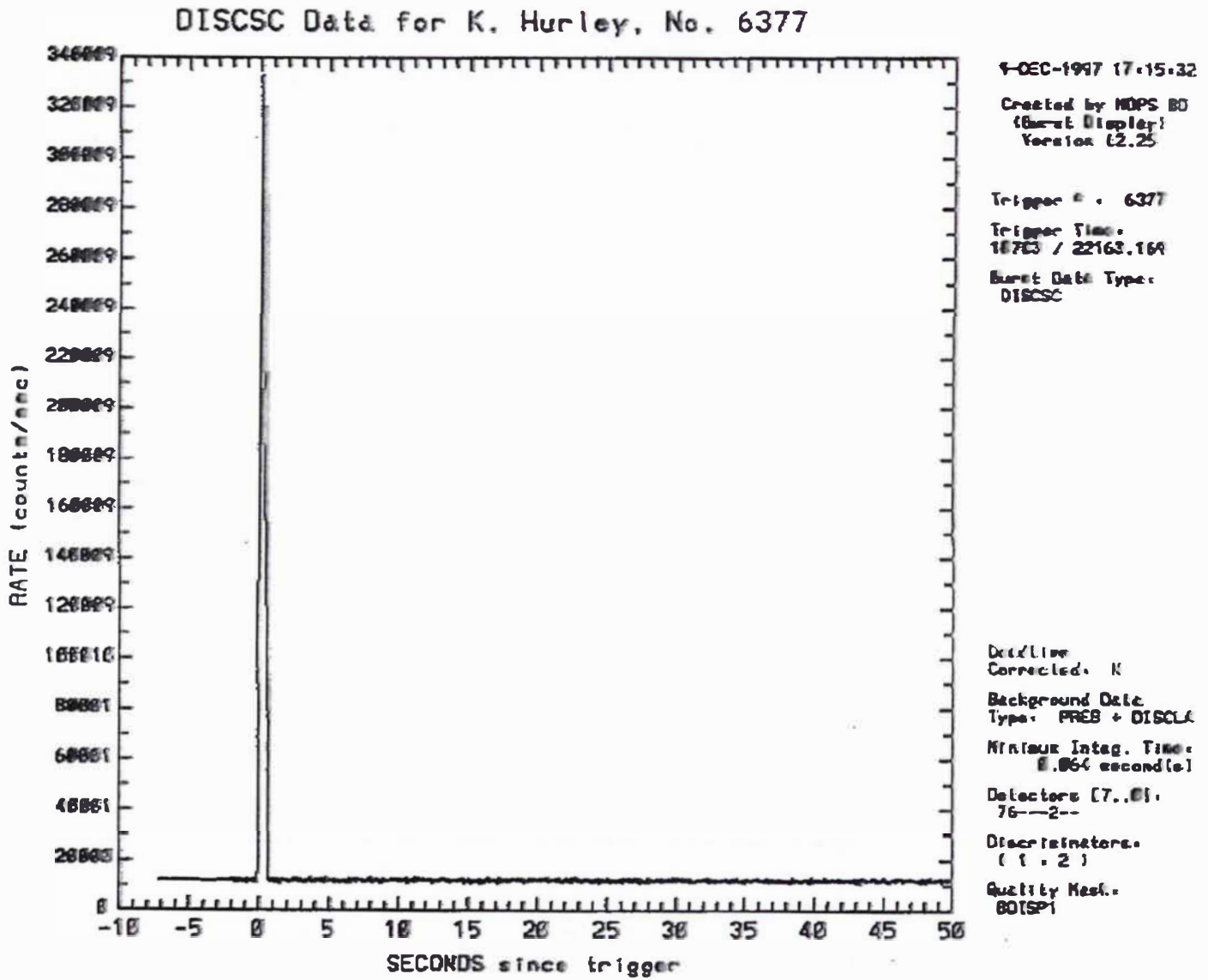
16/ 1/98

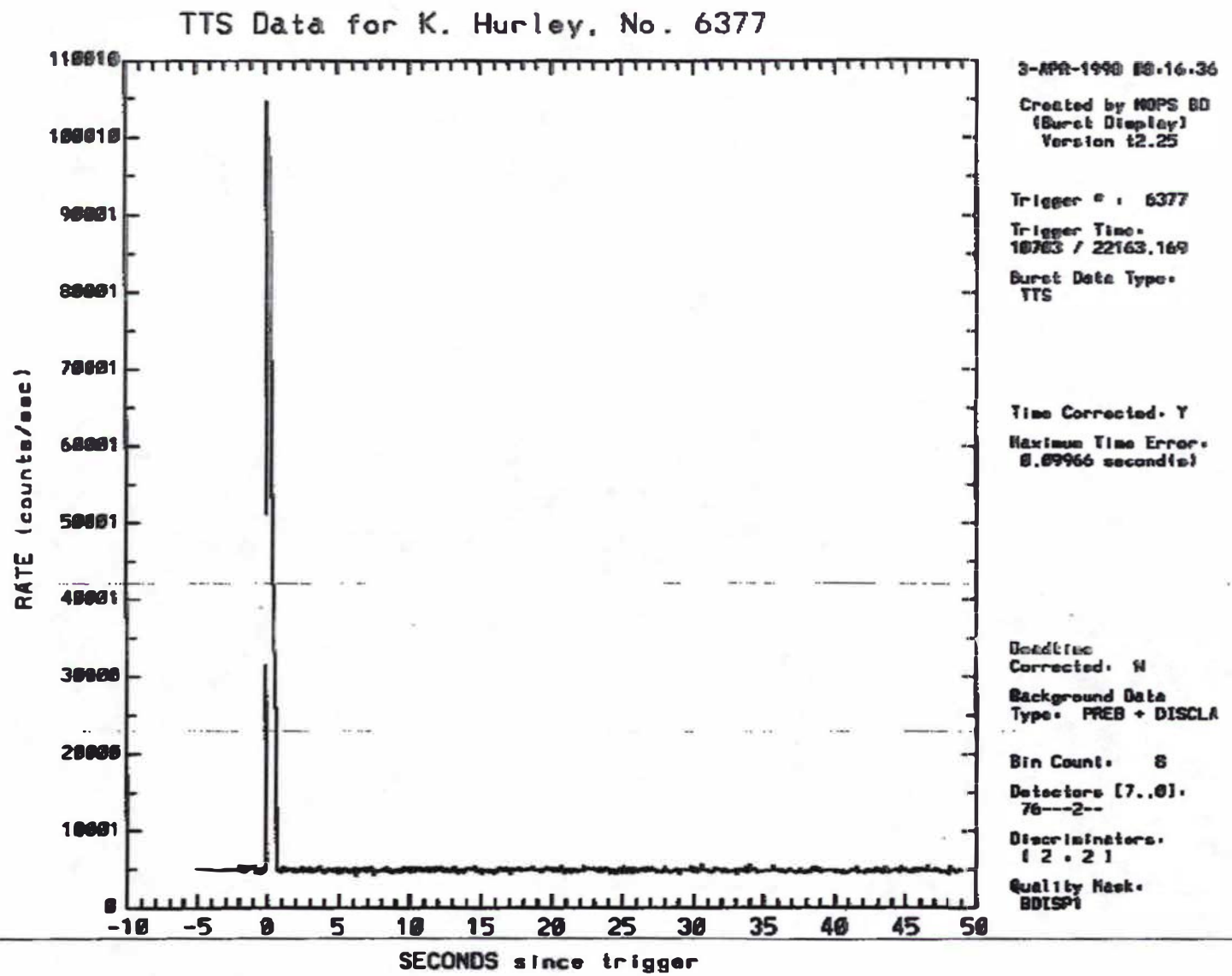
12/ 9/97 23184.070 s

22- 147 keV




10/12/97
BATSE 12/09/97 22163.169
25- 100 keV
COUNTS/0.064 S
25600
20600
15600
10600
5600
600
-3
0
1
5
9
13
17


DISCSC Data for K. Hurley, No. 6377
RATE (counts/sec)
SECONDS since trigger
-10
-5
0
5
10
15
20
25
30
35
40
45
50
9-DEC-1997 17:15:32
Created by MOPS BD
(Burst Display)
Version 02.25
Trigger # : 6377
Trigger Time:
18763 / 22163.169
Burst Data Type:
DISCSC
Data Flow
Corrected: N
Background Data
Type: PREB + DISCLA
Minimum Integ. Time:
0.064 second(s)
Detectors [7..0]:
76------2--
Discriminators:
(1 , 2)
Quality Mask:
BDISP1


TTS Data for K. Hurley, No. 6377
RATE (counts/sec)
SECONDS since trigger
-10
-5
0
5
10
15
20
25
30
35
40
45
50
3-APR-1998 08:16:36
Created by MOPS BD
(Burst Display)
Version 2.25
Trigger # : 6377
Trigger Time:
10763 / 22163.169
Burst Data Type:
TTS
Time Corrected: Y
Maximum Time Error:
0.09966 second(s)
Deadtime
Corrected: N
Background Data
Type: PREB + DISCLA
Bin Count: 8
Detectors [7..0]:
76---2--
Discriminators:
[2 , 2]
Quality Mask:
BDISP1

Konus
SGR
1997 September 12

=22164.078

Konus
SGR
1997 September 12
(level 2)
25
20
15
10
5
0
- 5
counts
-200 -100 0 100 200 300 400 500 600
time (ms after T-zero)

=22164.078

From SAHI@fender.msfc.nasa.gov Mon Sep 15 10:53 PDT 1997
Return-Path: <SAHI@fender.msfc.nasa.gov>
Received: from FENDER.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id KAA00644; Mon, 15 Sep 1997 10:53:21 -0700
   n: SAHI@fender.msfc.nasa.gov
  e: Mon, 15 Sep 1997 12:53:02 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970915125302.21800a2c@fender.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6378
Content-Type: text
Content-Length: 1135
Status: R

****
BATSEARCH PROGRAM
****

BATSE BURST #   6378
EVENT OF 1997 SEP 12 DAY OF YEAR=255
EVENT CROSSING TIME AT BATSE   : 53889. S. OR 14:58:09.0
COORDINATES ARE   0.000   0.000   6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 341.000   45.000
BATSE PEAK COUNTING RATE: 1500   C/S

EVENT CROSSING TIME AT ULYSSES   WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 12/ 9/ 97 IS:
RA= 163.154 DEC=   17.858 DIST=   6.225 AU
BATSE-ULYSSES DISTANCE = 931278675. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 62.89 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1415.66 SECS.
  OSSING TIME AT ULYSSES   IS 55305. S. OR   15:21:44 +/- 551.56 SECONDS

EVENT CROSSING TIME AT MARS   WILL BE FOUND
POSITION OF MARS ON 12/ 9/ 97 IS:
RA= 225.693 DEC= -18.188 DIST=   1.702 AU
MARS-BATSE DISTANCE = 254556144. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 59.48 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 431.24 SECS.
CROSSING TIME AT MARS   IS 54320. S. OR   15:05:20 +/- 133.54 SECONDS

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6378	970912	10703	53889	1500	341	+45	45

BATSE BURST TRIGGER

NO.: 6378

TIME: TJD=0703 SECONDS=53889

TYPE: BURST   SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=92.8   AZIMUTH=166.2 ERROR=6.2   DEGREES

COMMENTS:
BURST, DOUBLE PULSE, DUR. APPROX. 45 SECS, FIRST PEAK IS APPROX. AT TRIGGER
SECOND PEAK AT APPROX. T+31 SECS. NOT VISIBLE ABOVE 300 KEV.

BATSE BURST# 6378

ULYSSES RT 15/ 9/97

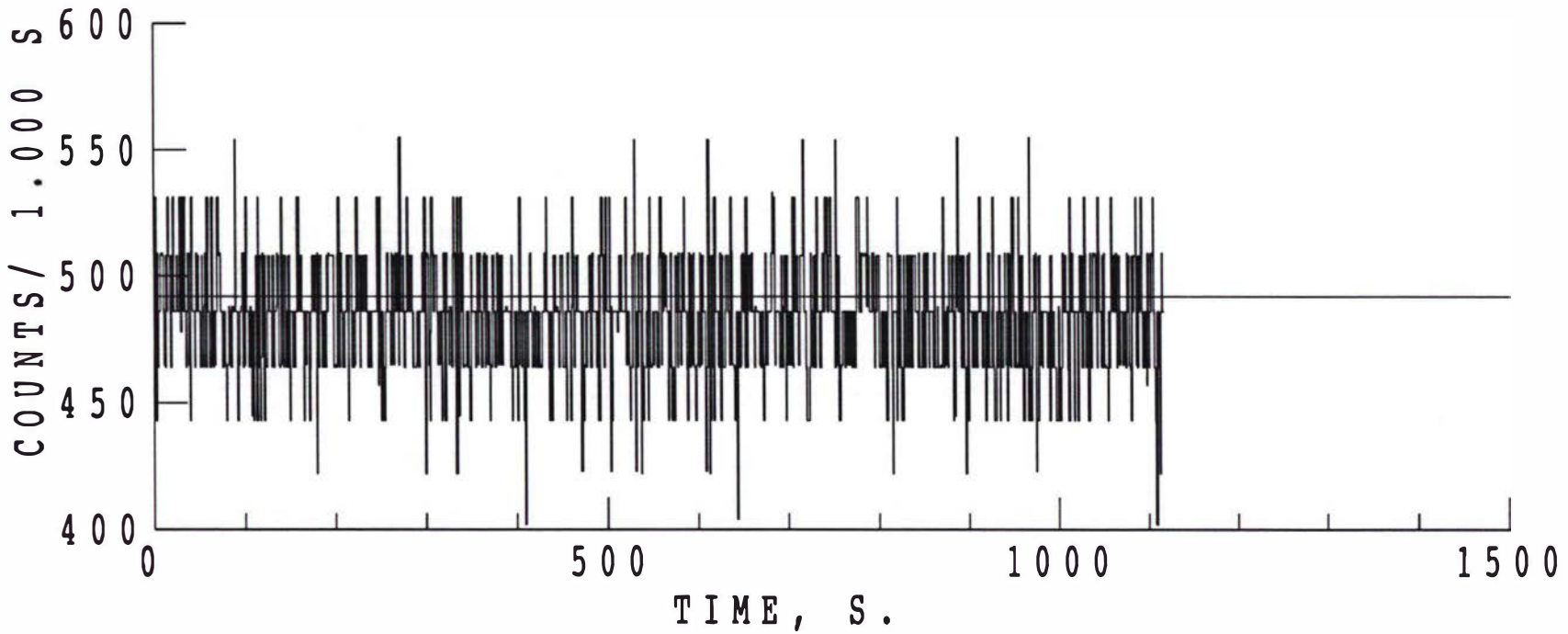
12/ 9/97 54756.172 s

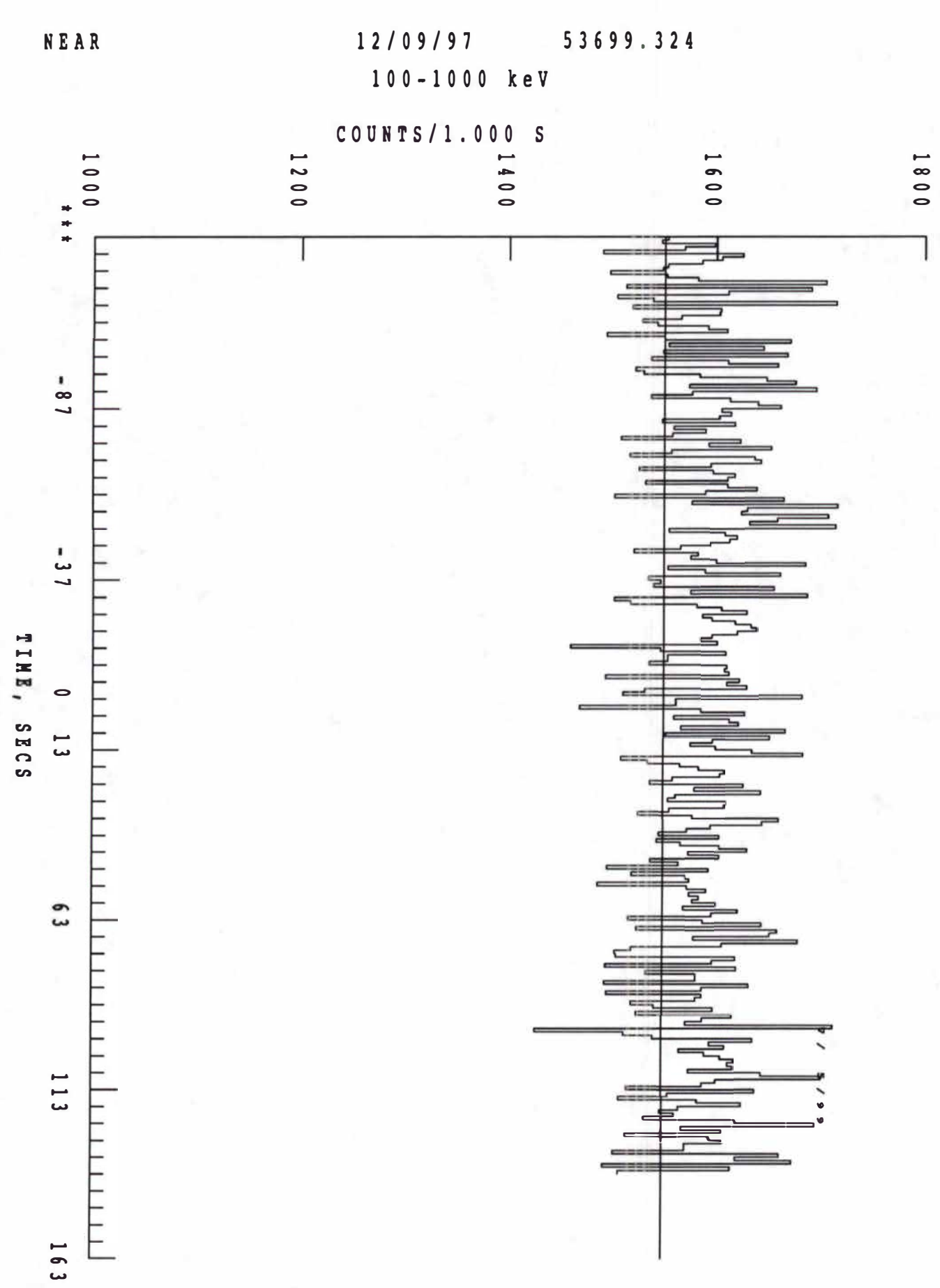
0.500 S INTERVALS REGROUPED BY 2

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS




NEAR
12/09/97
53699.324
100-1000 keV
COUNTS/1.000 S
1000
1200
1400
1600
1800
***
-87
-37
0
13
63
113
163
TIME, SECS

BATSE BURST TRIGGER

NO.: 6379

TIME: TJD=0703 SECONDS=72441

. .E: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=133.1 AZIMUTH=354.1 ERROR=0.6 DEGREES

COMMENTS:
SOLAR FLARE. OPTICAL SF. GOES C1.0 LOTS OF STRUCTURE. DURATION APPROX. =
90SEC. SLIGHTLY VISIBLE ABOVE 100KEV.

From RICHARDSON@SSLLES.MSFC.NASA.GOV Mon Sep 15 11:33 PDT 1997
Return-Path: <RICHARDSON@SSLLES.MSFC.NASA.GOV>
Received: from SSLLES.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
id LAA01839; Mon, 15 Sep 1997 11:33:33 -0700
e: Mon, 15 Sep 1997 13:33:17 -0500 (CDT)
om: RICHARDSON@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970915133317.21402ecc@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6380
Content-Type: text
Content-Length: 1135
Status: R

****
BATSEARCH PROGRAM
****

BATSE BURST # 6380
EVENT OF 1997 SEP 12 DAY OF YEAR=255
EVENT CROSSING TIME AT BATSE : 78744. S. OR 21:52:24.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 181.000 -24.000
BATSE PEAK COUNTING RATE: 6250 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 12/ 9/ 97 IS:
RA= 163.194 DEC= 17.831 DIST= 6.224 AU
BATSE-ULYSSES DISTANCE = 931176524. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=134.71 DEG.
TGHT TRAVEL TIME ALONG PROJECTED PATH=-2185.00 SECS.
SSING TIME AT ULYSSES IS 76559. S. OR 21:15:58 +/- 400.09 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 12/ 9/ 97 IS:
RA= 225.693 DEC= -18.188 DIST= 1.702 AU
MARS-BATSE DISTANCE = 254556144. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=138.07 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -631.68 SECS.
CROSSING TIME AT MARS IS 78112. S. OR 21:41:52 +/- 88.92 SECONDS
BATSE BURST TRIGGER
NO.: 6380

TIME: TJD=0703 SECONDS=78744

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=112.7 AZIMUTH=336.4 ERROR=0.9 DEGREES

COMMENTS:
GRB. LONG AND SPIKEY. MAIN PULSE DURATION APPROX. 110SEC. VISIBLE
ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6380	970912	10703	78744	6250	181	-24	110

Date: Apr 8 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

☐ Were data checked by Joe Springer for 0.5 s errors? N/A

☑ 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?

Date: Feb 1 '00

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

☑ 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

☑ BATSE ephemeris for T_0?

☑ Error circle position and radius from public catalog used?

☐ If MER data were used, is a 30 ms systematic error included?

3. NEAR Data

☑ Final, correct time used? (Files postmarked vwx@bocc1, or from Teresa Sheets, have the correct time; files on website have incorrect times)

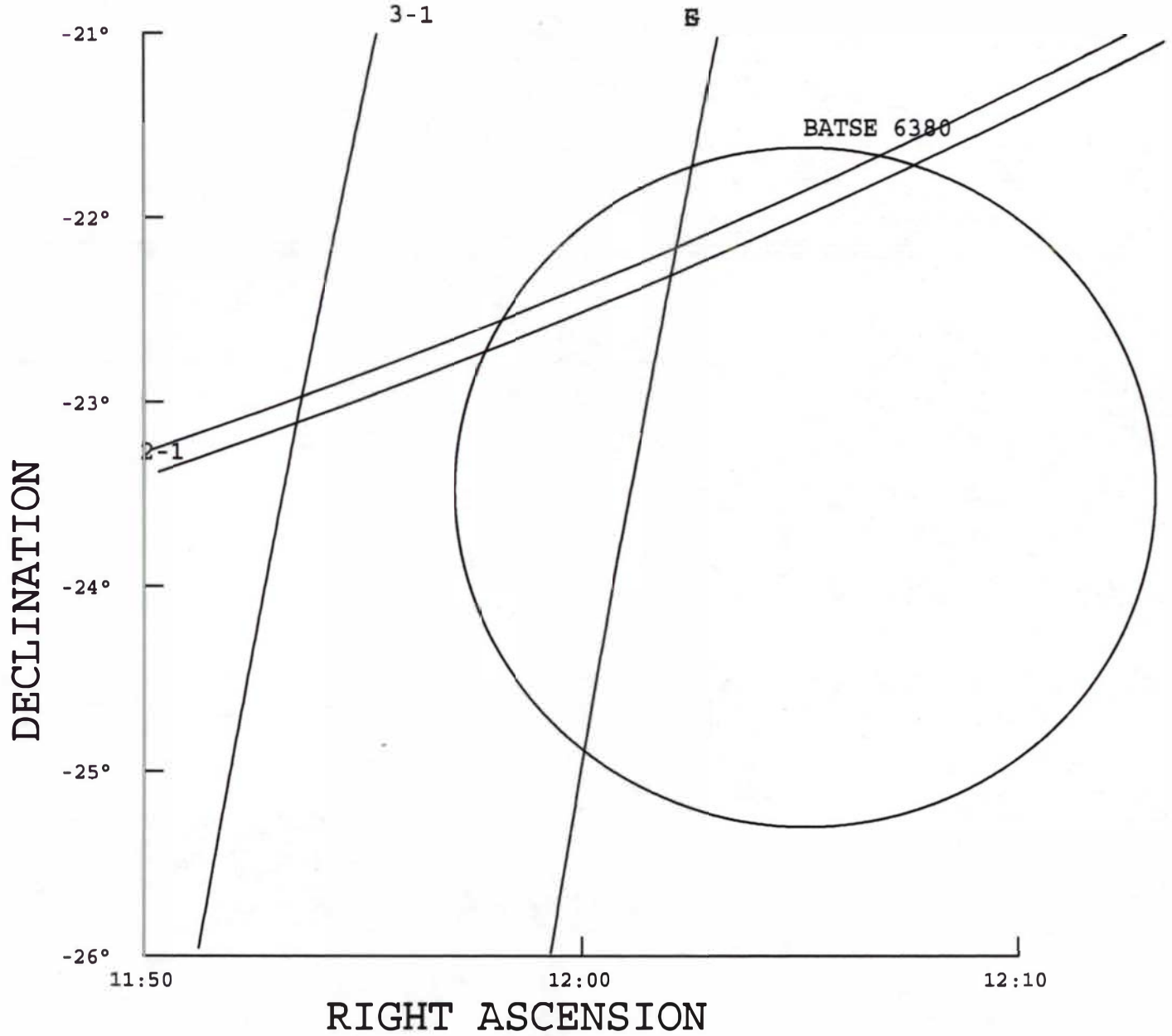
☑ BATSE >100 keV data used for NEAR correlation?

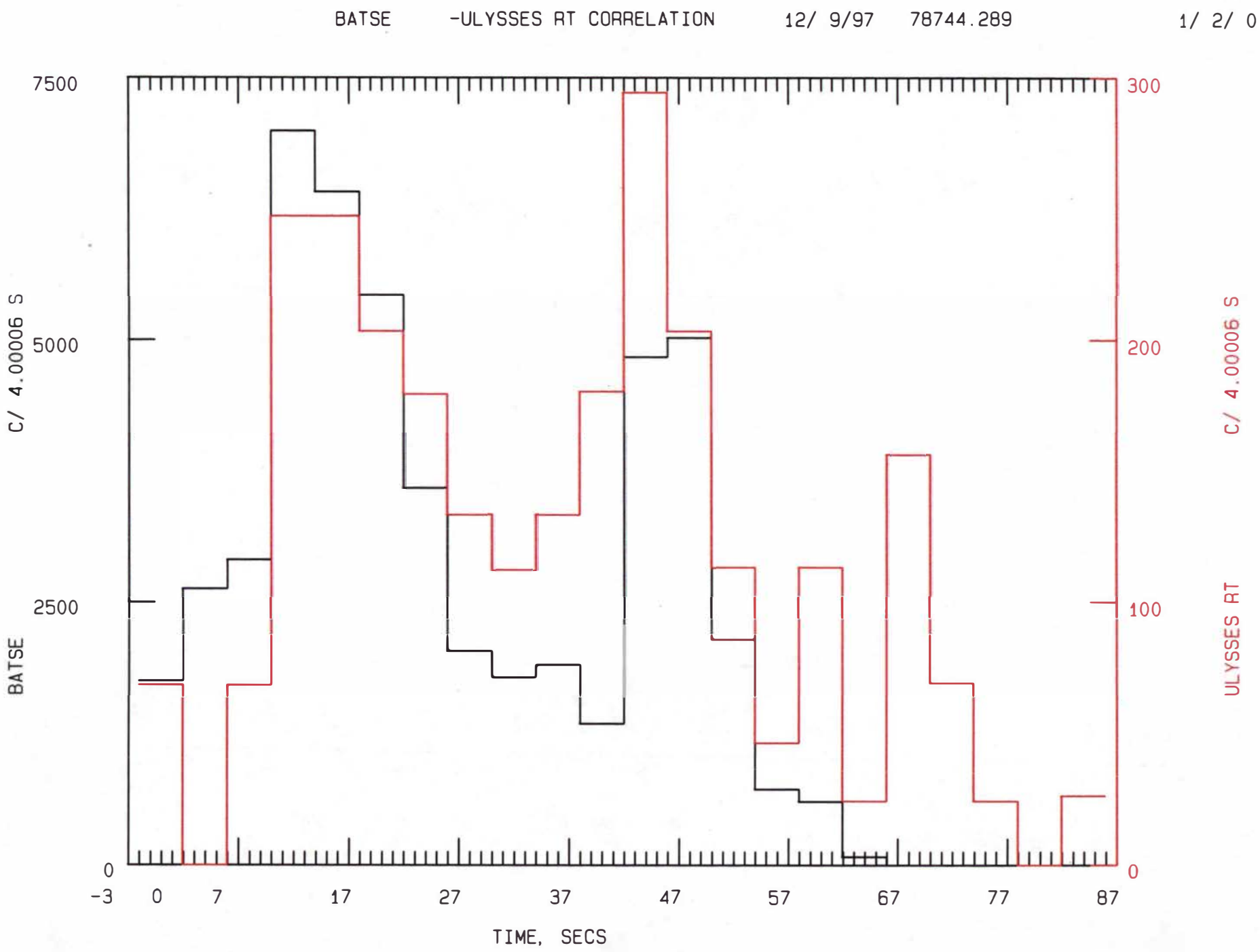
☑ ACCESS database updated?

EVENT OF SEP 12, 1997 21:52

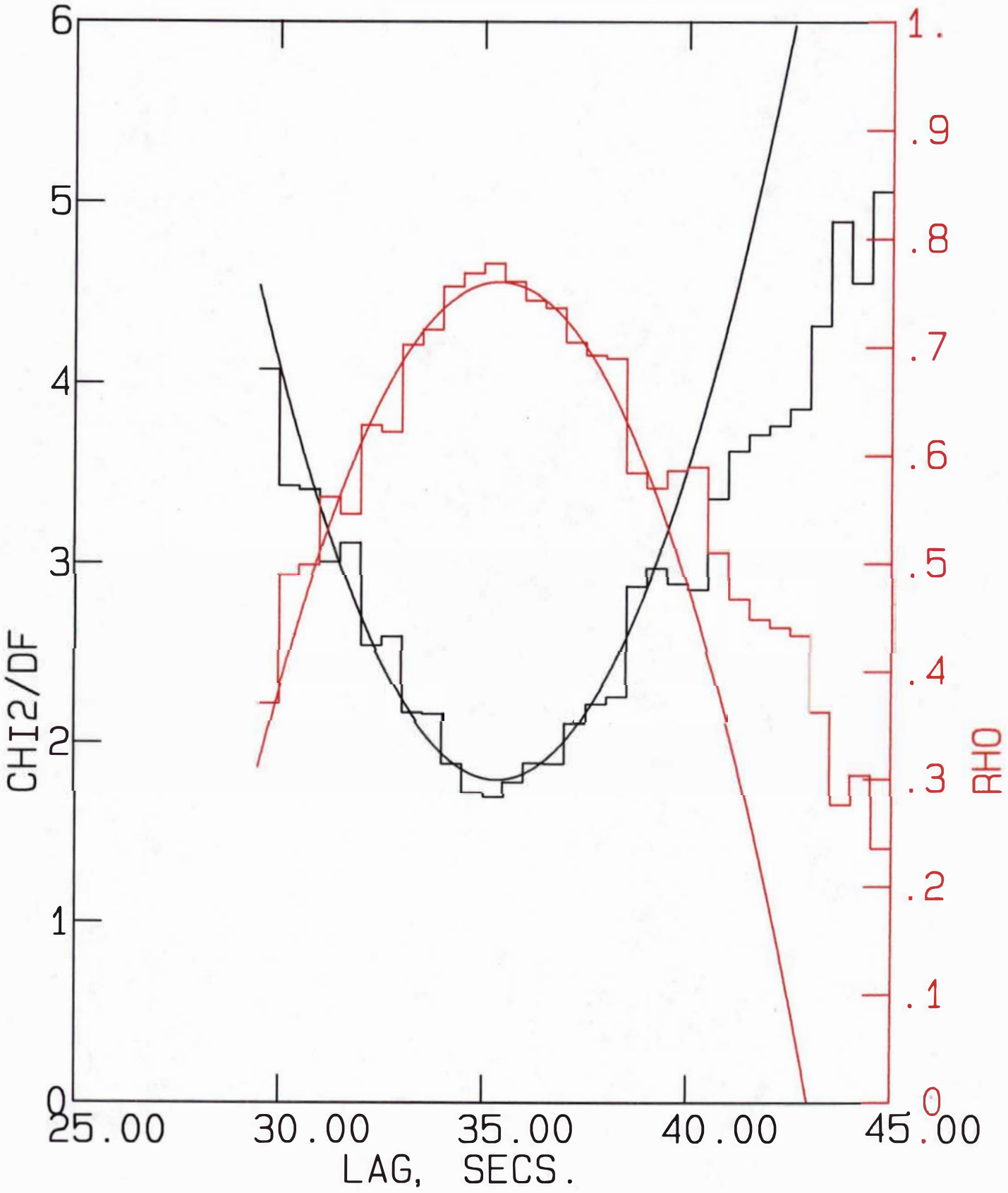
1/ 2/ 0

N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 BATSE 2 ULYSSES 3 NEAR




BATSE -ULYSSES RT CORRELATION 12/ 9/97 78744.289 1/ 2/ 0
7500
5000
2500
0
BATSE
C/ 4.00006 S
300
200
100
0
ULYSSES RT
C/ 4.00006 S
-3
0
7
17
27
37
47
57
67
77
87
TIME, SECS

BATSE -ULYSSES RT CORRELATION 12/ 9/97 78744.289



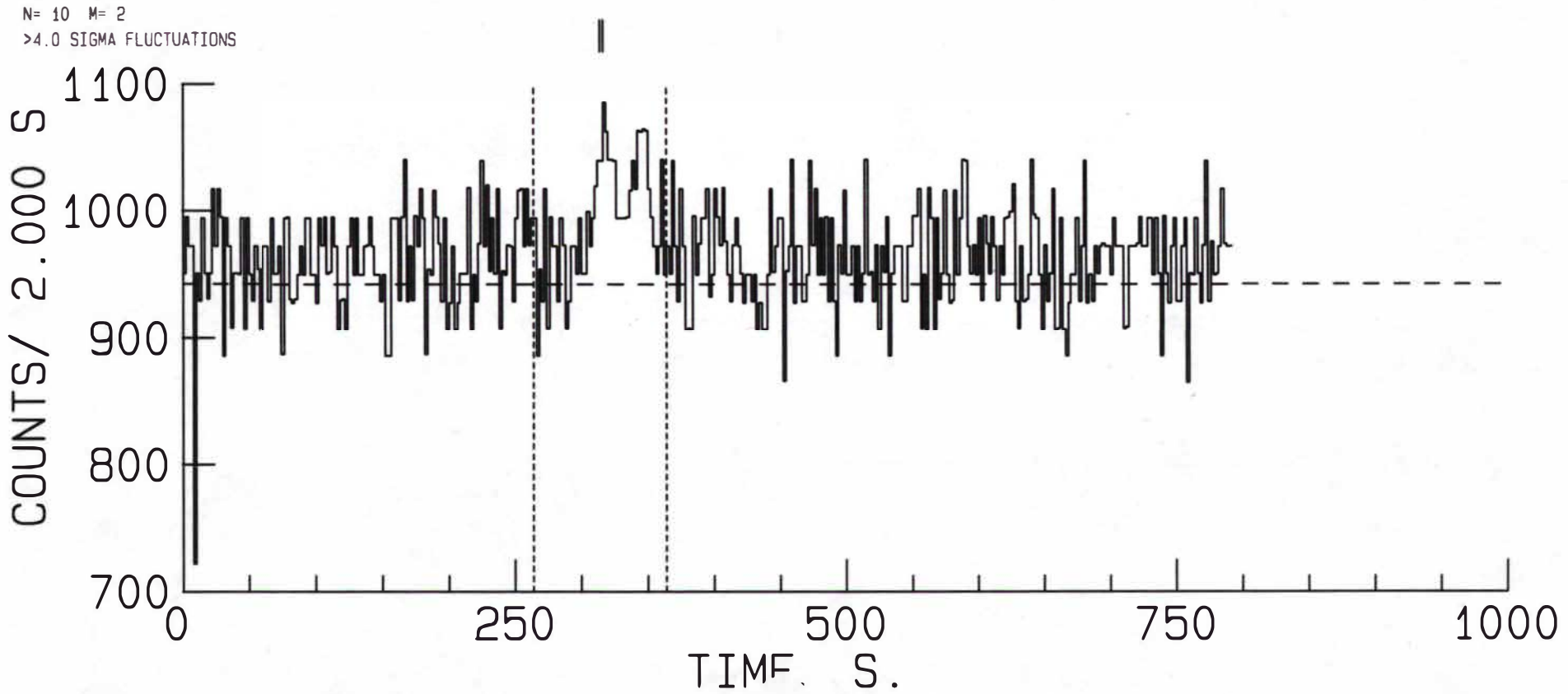
ULYSSES RT

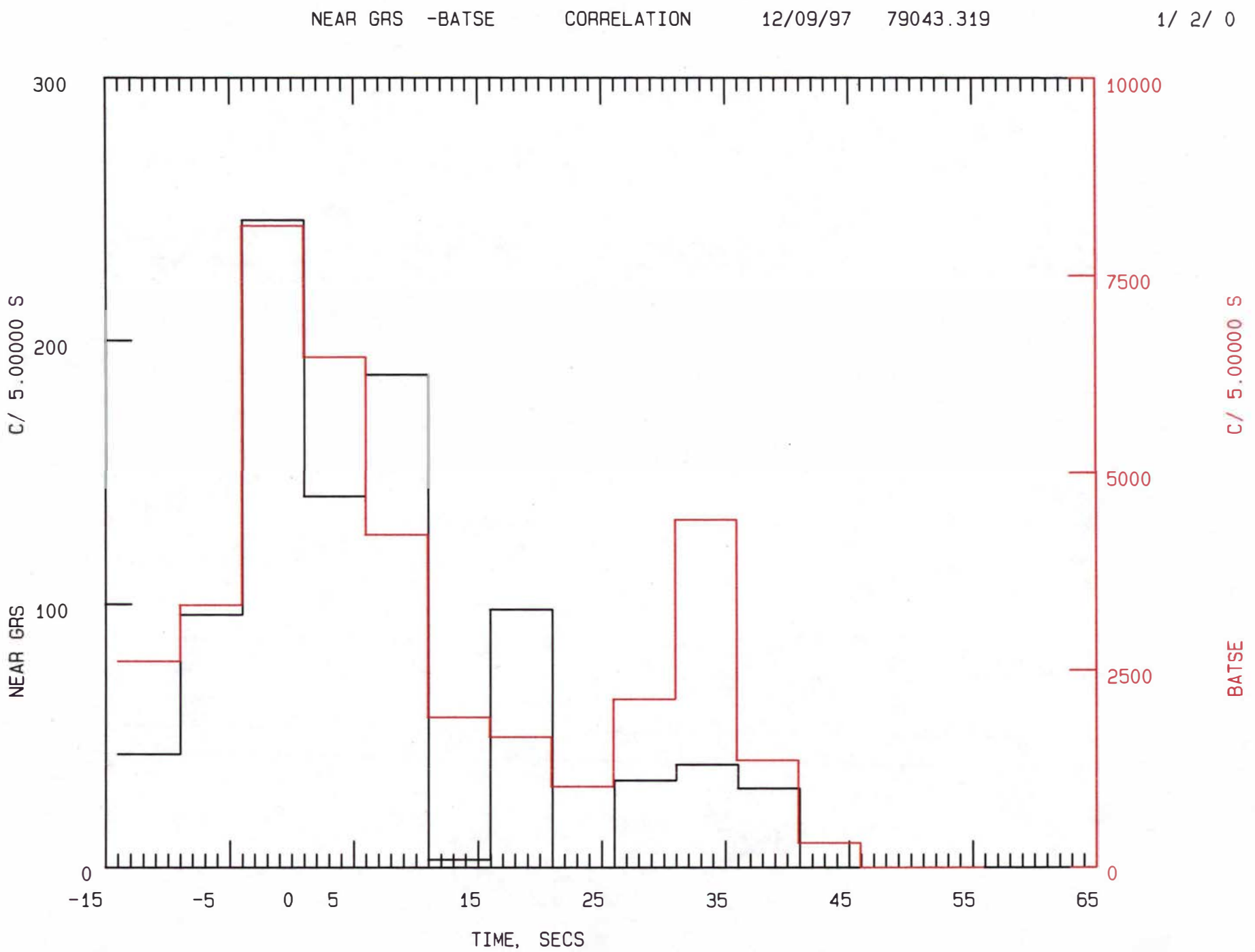
1/ 2/ 0

12/ 9/97 76176.413 s

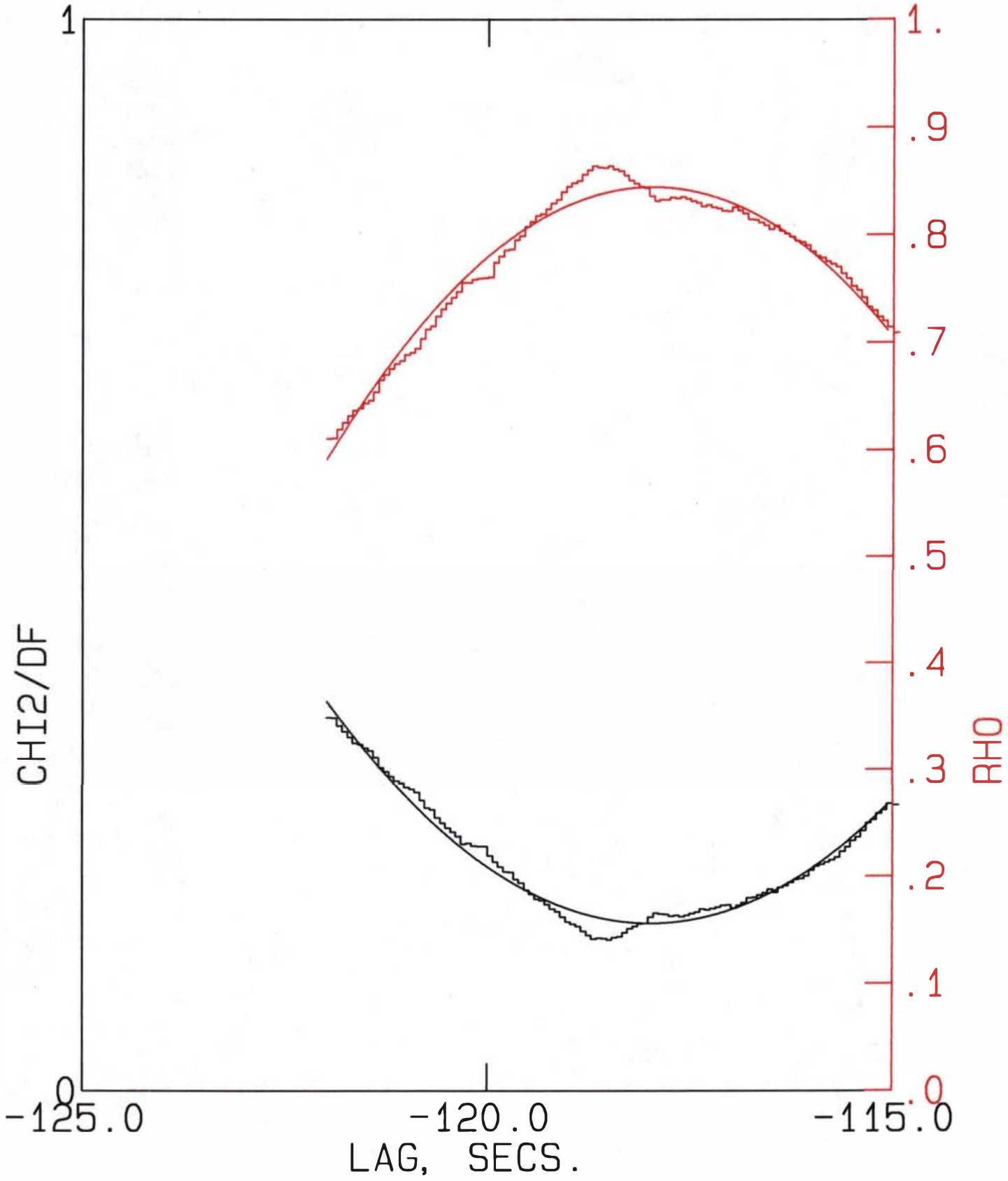
0.500 S INTERVALS REGROUPED BY 4

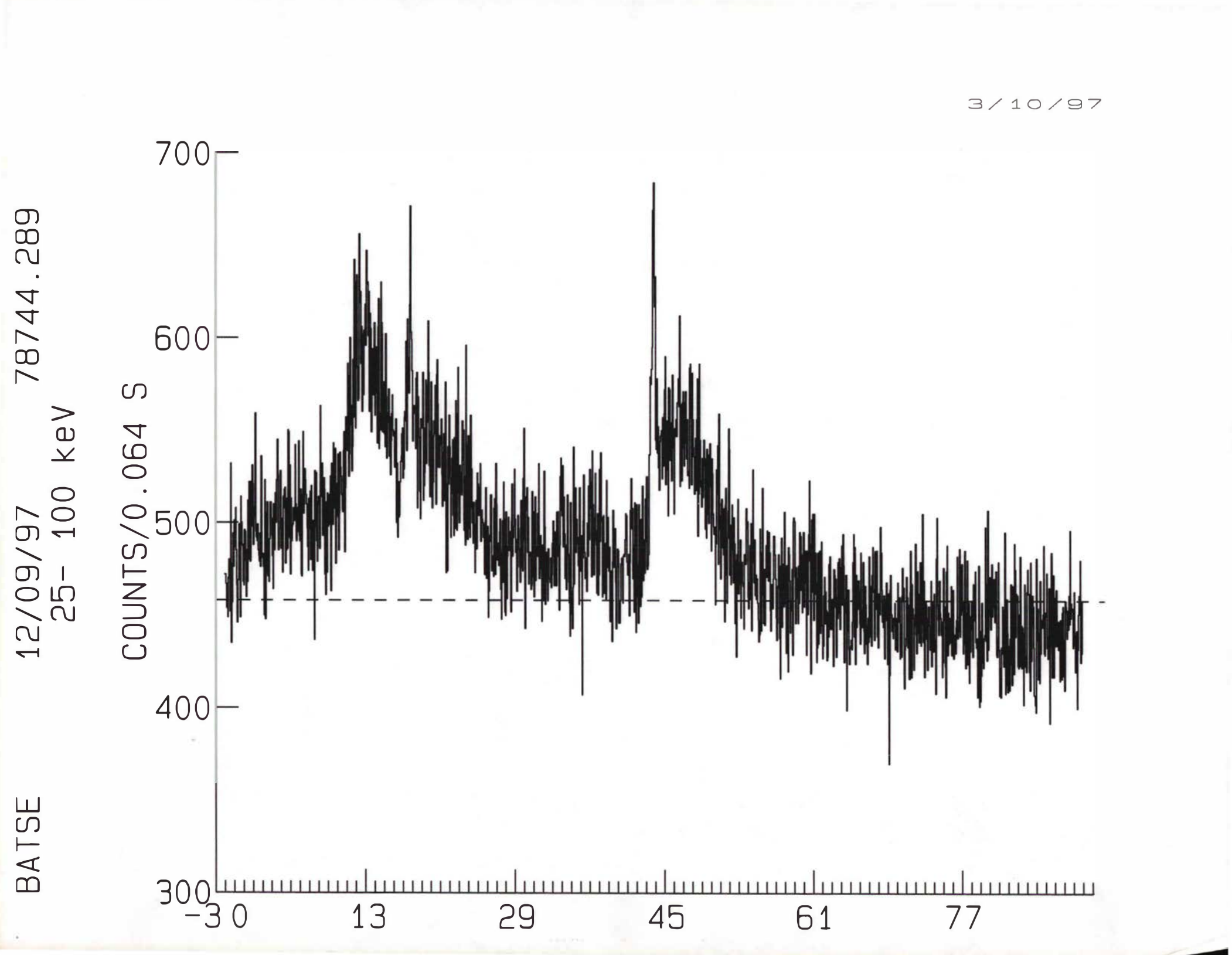
22- 147 keV

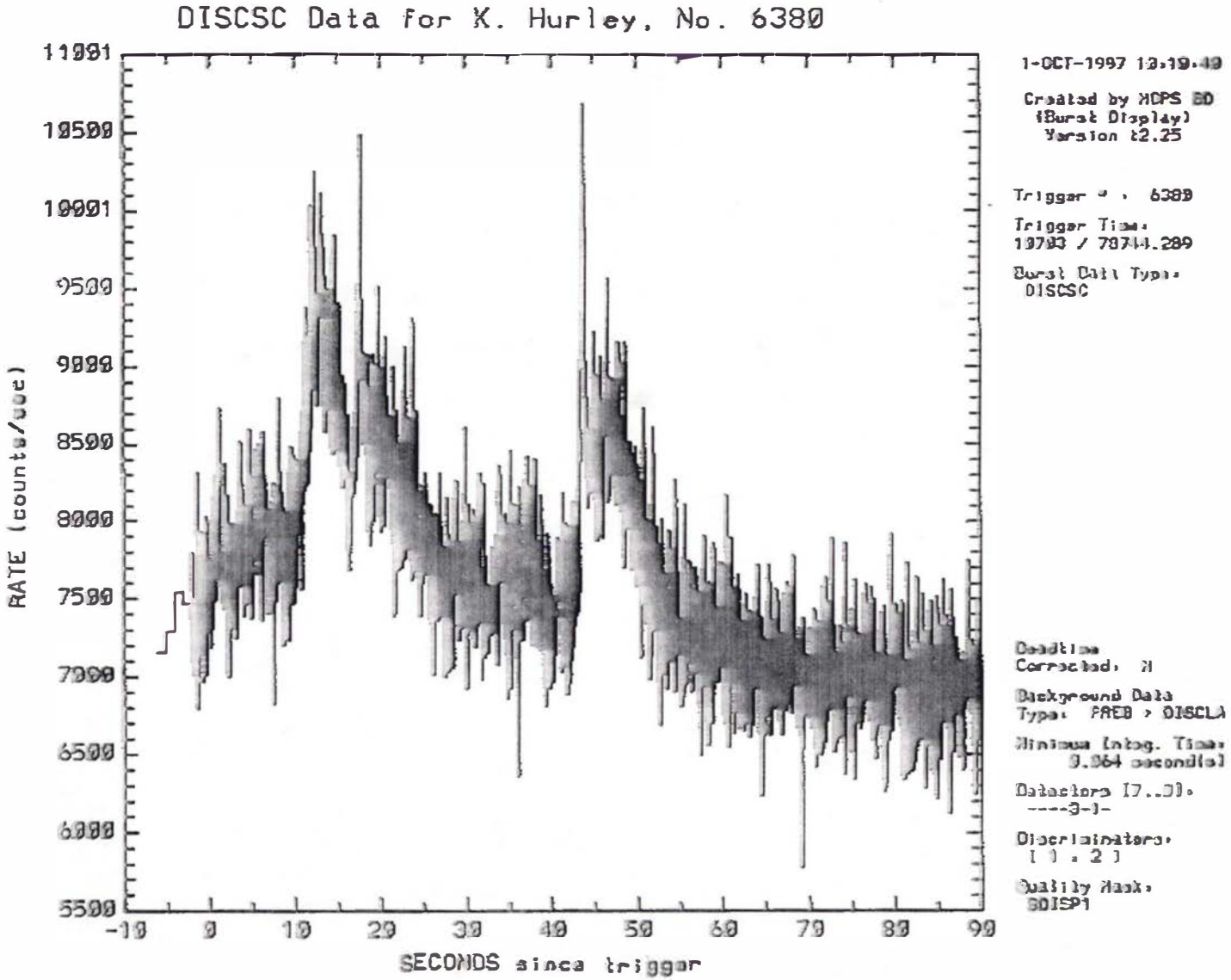


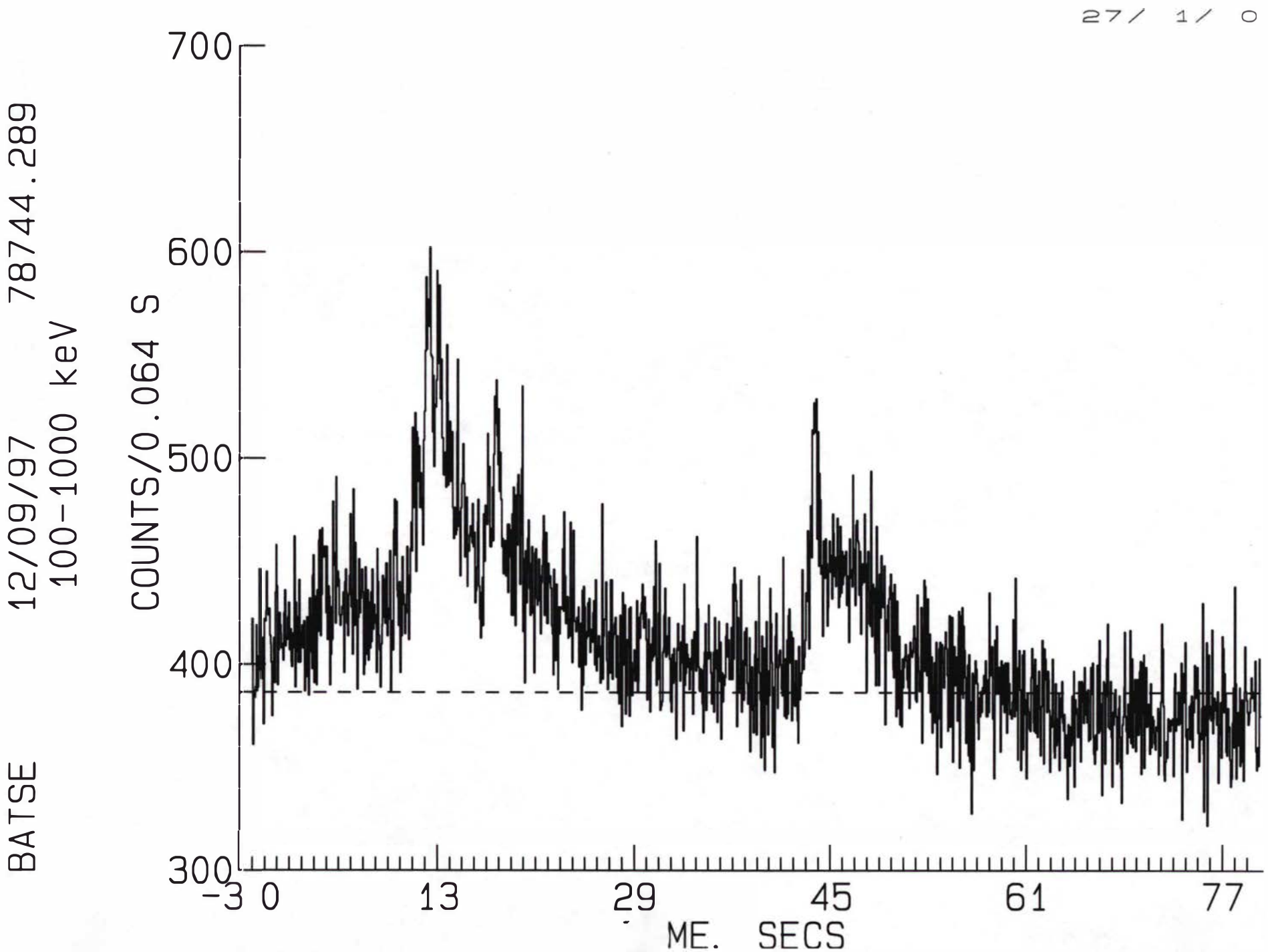

NEAR GRS -BATSE CORRELATION 12/09/97 79043.319 1/ 2/ 0
300
200
100
0
C/ 5.00000 S
NEAR GRS
10000
7500
5000
2500
0
C/ 5.00000 S
BATSE
-15
-5
0
5
15
25
35
45
55
65
TIME, SECS

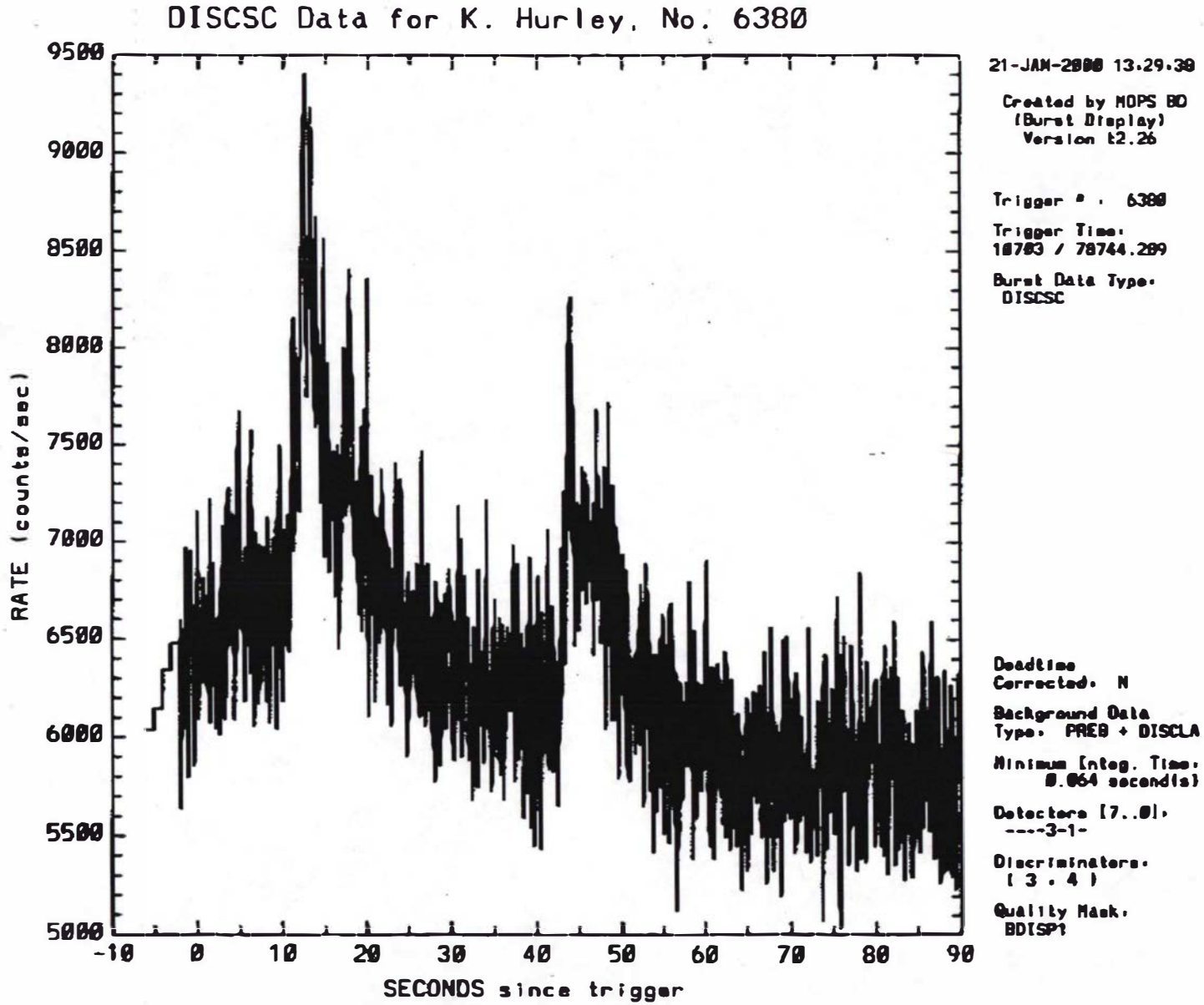
NEAR GRS -BATSE CORRELATION 12/09/97 79043.319




3/10/97
BATSE
12/09/97
25- 100 keV
78744.289
COUNTS/0.064 S
700
600
500
400
300
-30
13
29
45
61
77

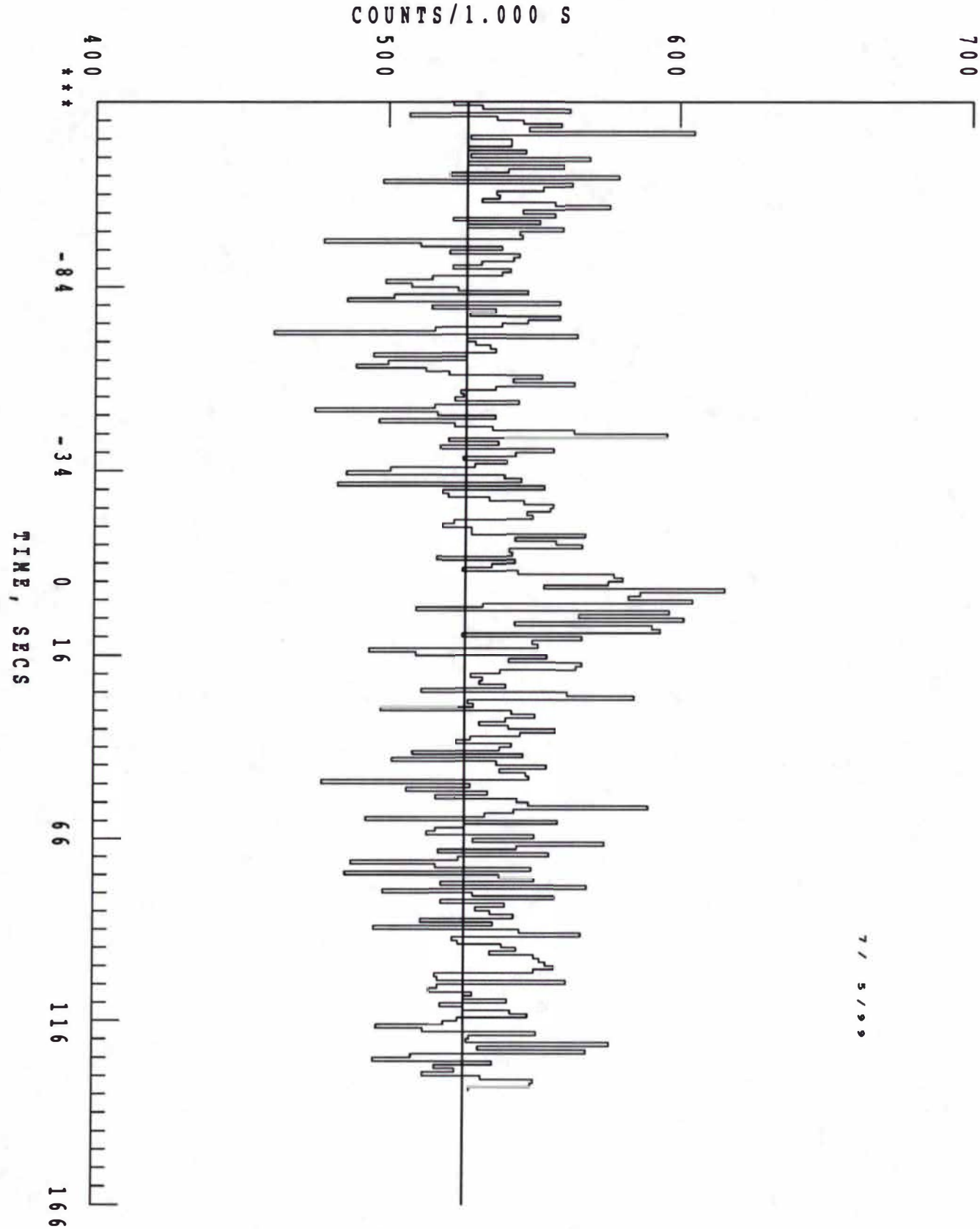

DISCSC Data for K. Hurley, No. 6380
RATE (counts/sec)
11000
10500
10000
9500
9000
8500
8000
7500
7000
6500
6000
5500
-10
0
10
20
30
40
50
60
70
80
90
SECONDS since trigger
1-OCT-1997 12:19:49
Created by MDPS BD
(Burst Display)
Version 2.25
Trigger # : 6380
Trigger Time:
19793 / 78744.289
Burst Data Type:
DISCSC
Deadtime
Corrected: N
Background Data
Type: PREB > DISCLA
Minimum Integ. Time:
0.064 second(s)
Detectors [7..0]:
----3-1-
Discriminators:
[ ] , 2]
Quality Mask:
BDISP1

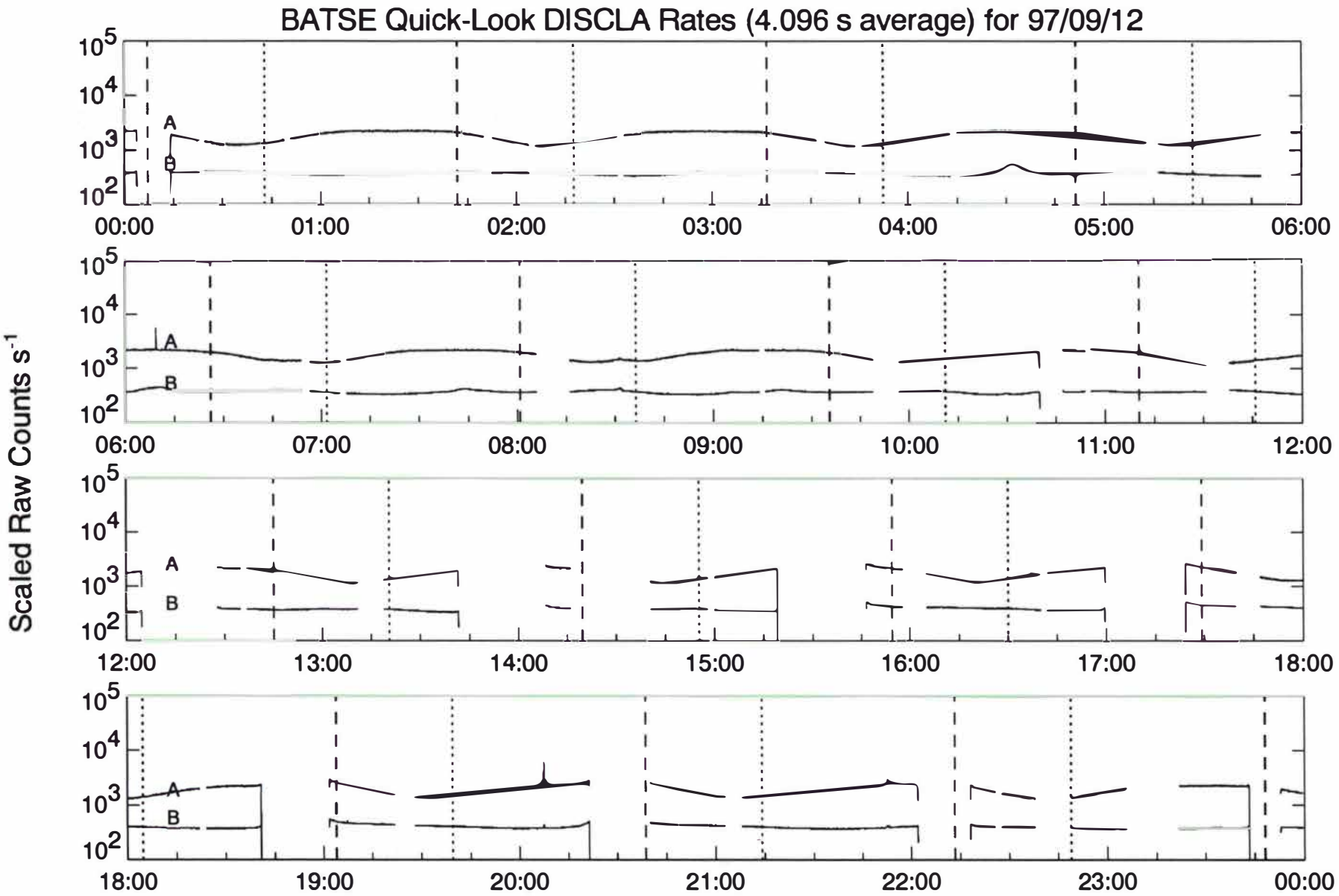

27/ 1/ 0
BATSE
12/09/97 787744.289
100-1000 keV
COUNTS/0.064 S
700
600
500
400
300
-3 0
13
29
45
61
77
ME. SECS


DISCSC Data for K. Hurley, No. 6380
RATE (counts/sec)
9500
9000
8500
8000
7500
7000
6500
6000
5500
5000
-10
0
10
20
30
40
50
60
70
80
90
SECONDS since trigger
21-JAN-2000 13:29:39
Created by MOPS BD
(Burst Display)
Version t2.26
Trigger # : 6380
Trigger Time:
10703 / 78744.289
Burst Data Type:
DISCSC
Deadtime
Corrected: N
Background Data
Type: PREB + DISCLA
Minimum Integ. Time:
0.064 second(s)
Detectors [7..0]:
----3-1-
Discriminators:
[3 , 4]
Quality Mask:
BDISP1

NEAR 12/09/97 79043.319

100-1000 keV

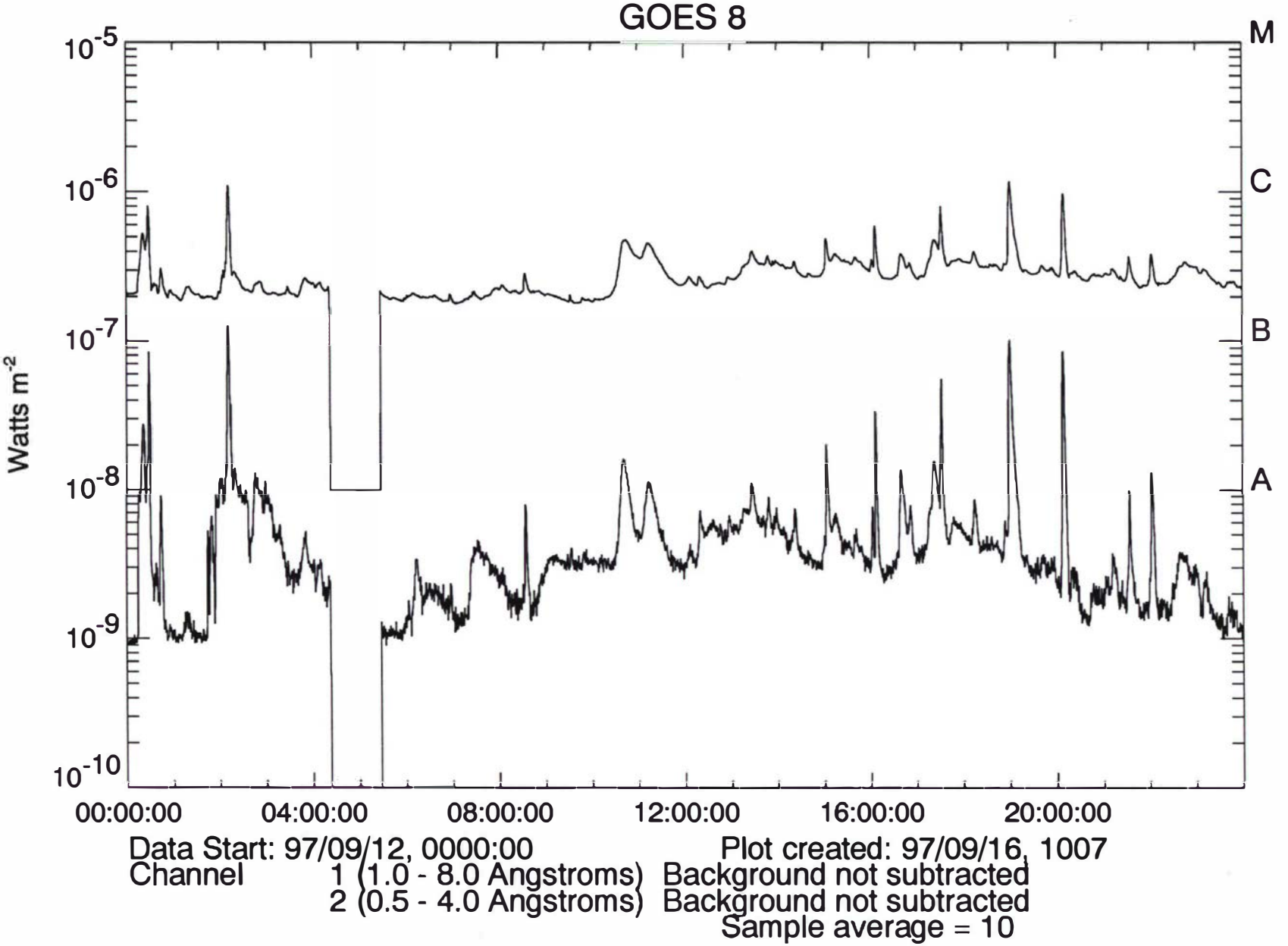




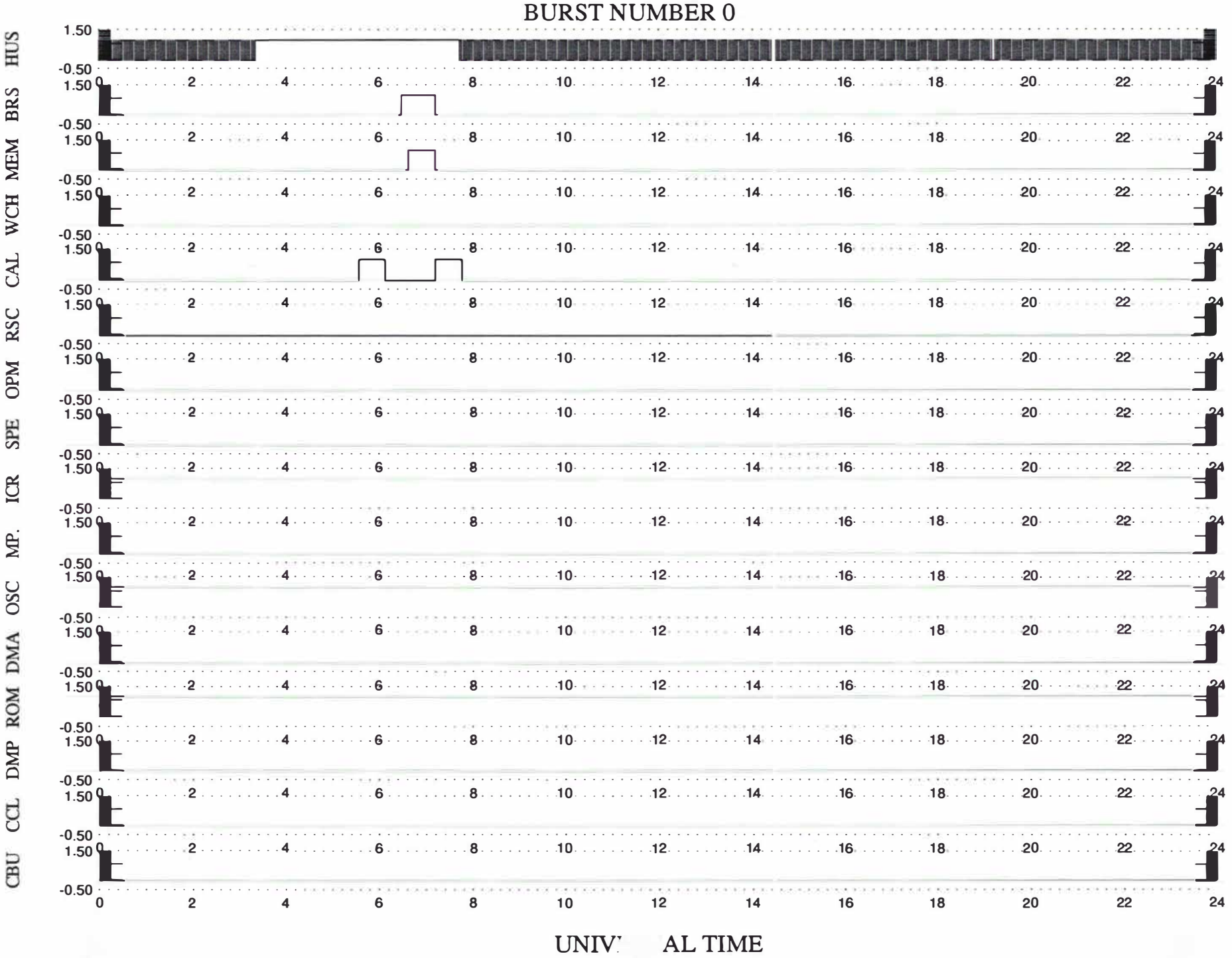
Current Time: 97/09/16, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
\+ Solar Flare

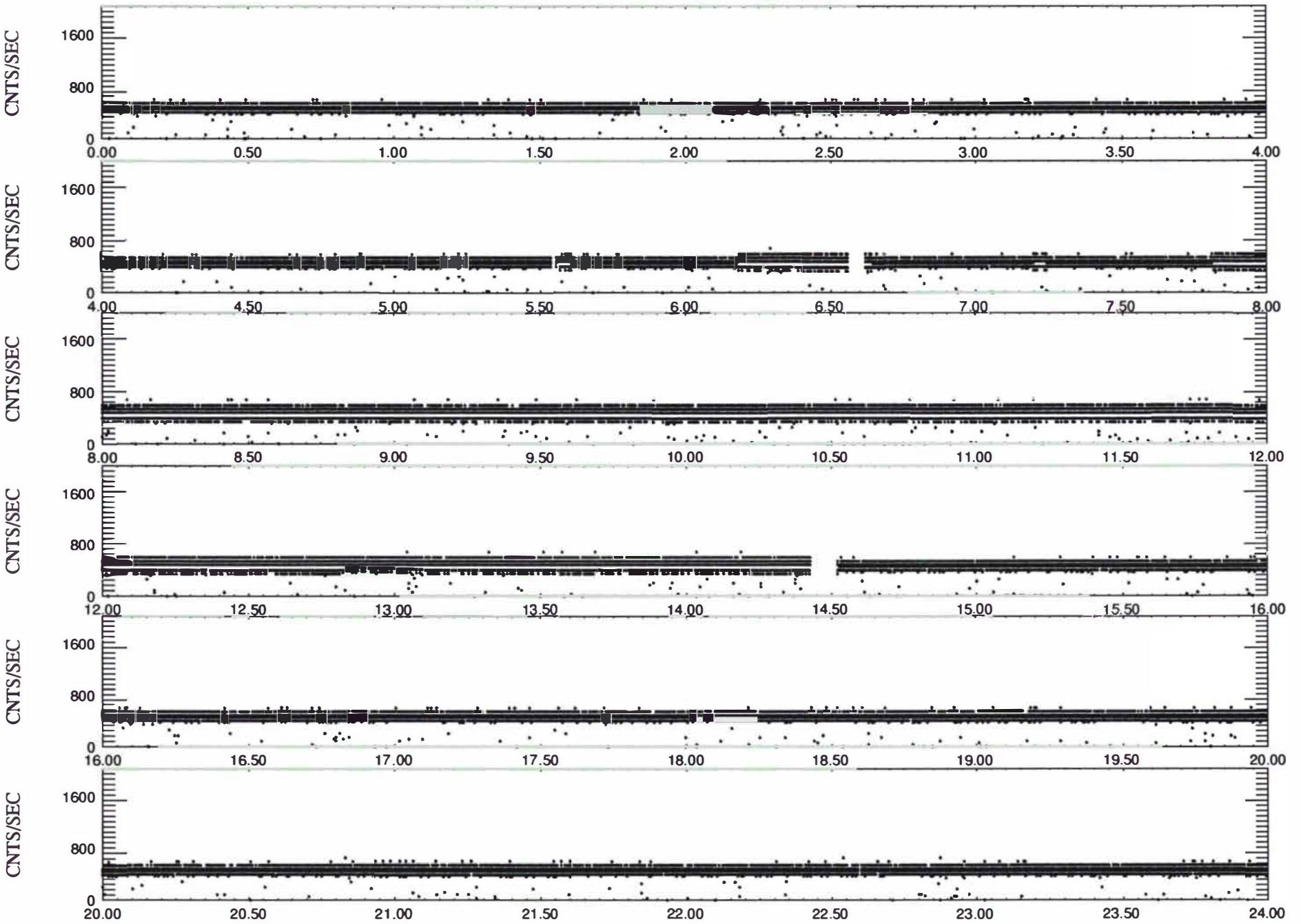

GOES 8
M
C
B
A
Watts m-2
10-5
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/12, 0000:00
Plot created: 97/09/16, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 255, year 1997 to day 255, year 1997 1/14/98



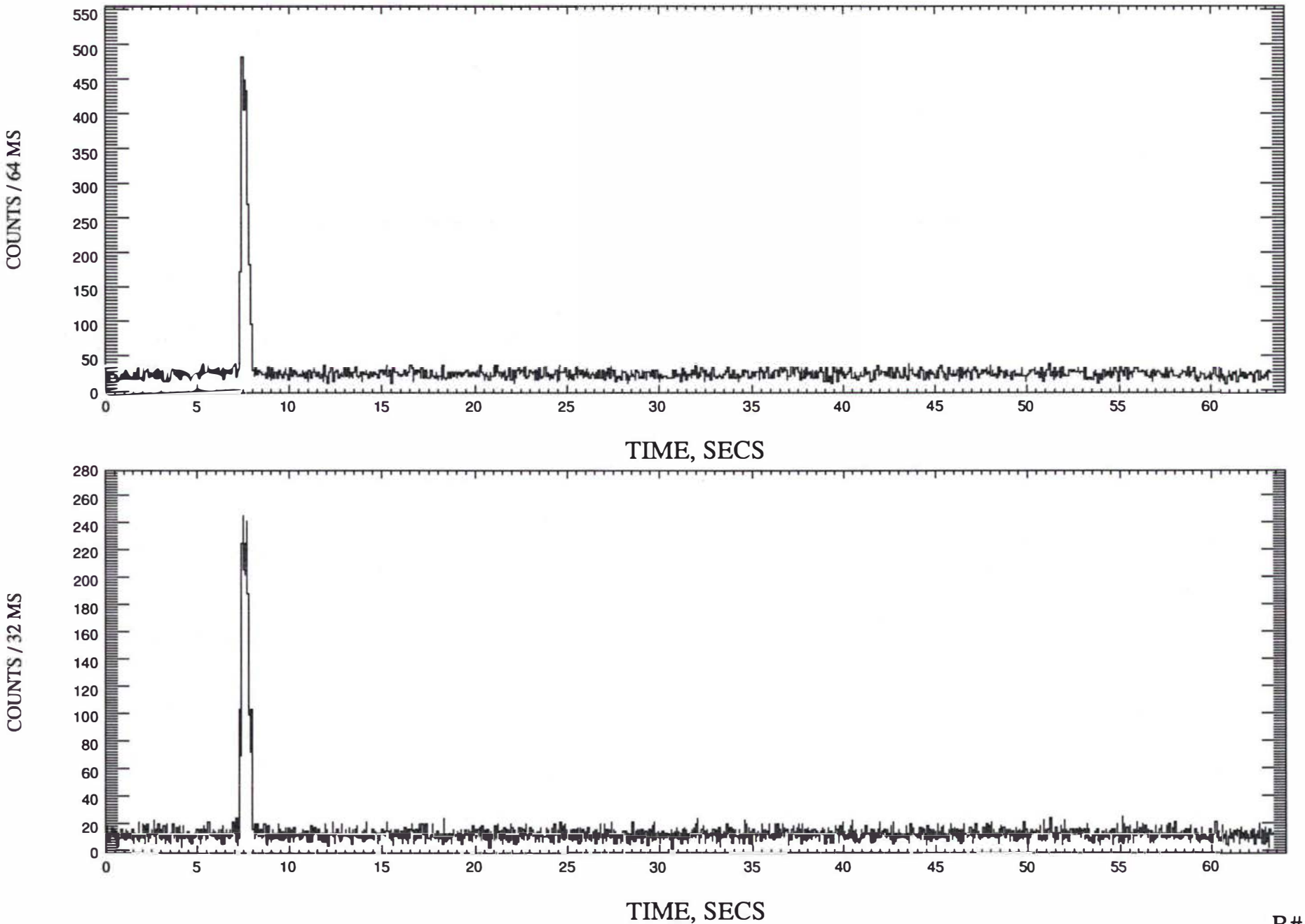
HUS 2A, MODE 1, NOT AVERAGED EDR day 255, year 1997 to day 255, year 1997 1/14/98

CALIBRATION DATA INCLUDED



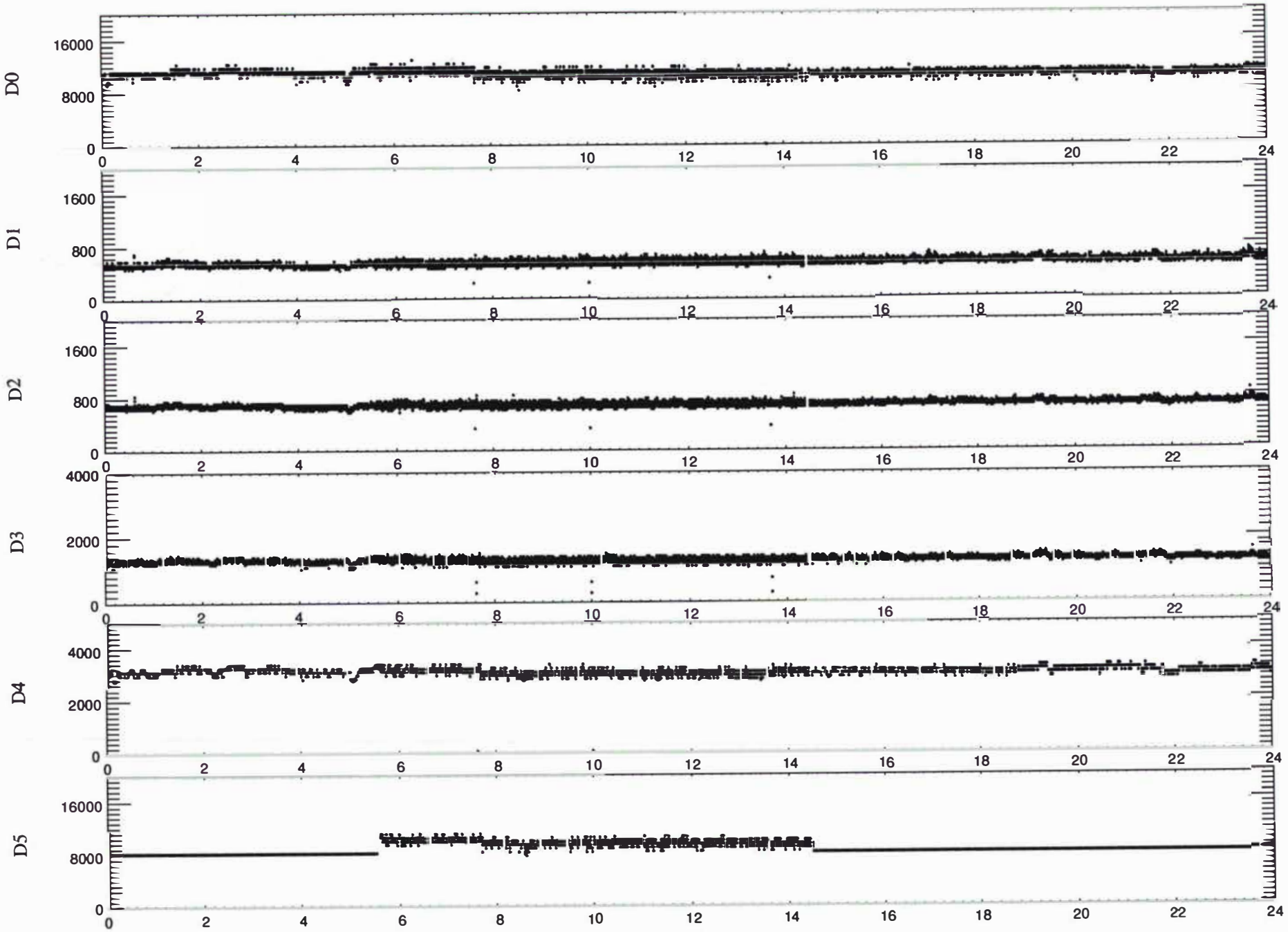
UNIV[illegible]AL TIME

Burst Counter 0 at UT= 6.493092435201 h=23375.133 s 06:29:35.133



B# 1

HUS 2B COUNTS / SEC EDR day 255, year 1997 to day 255, year 1997 1/14/98



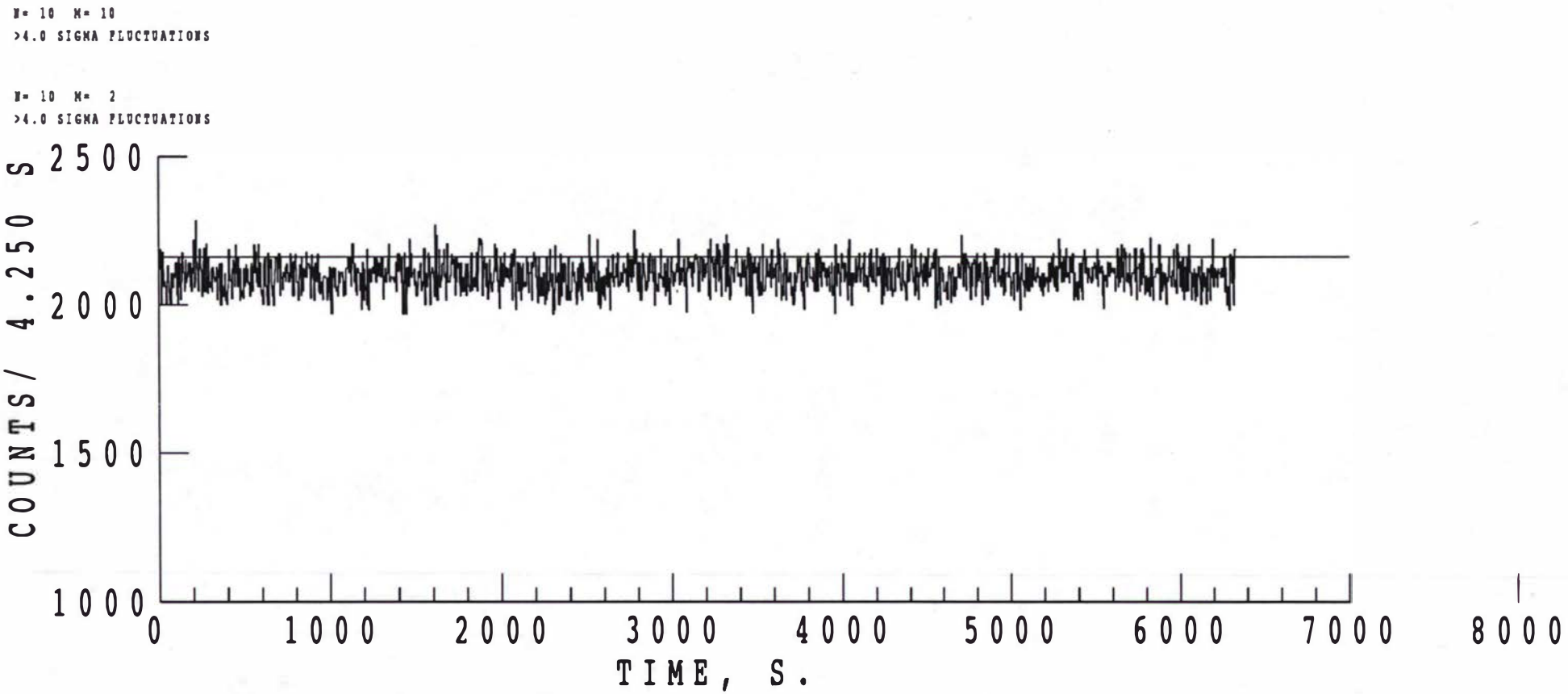
KONUS

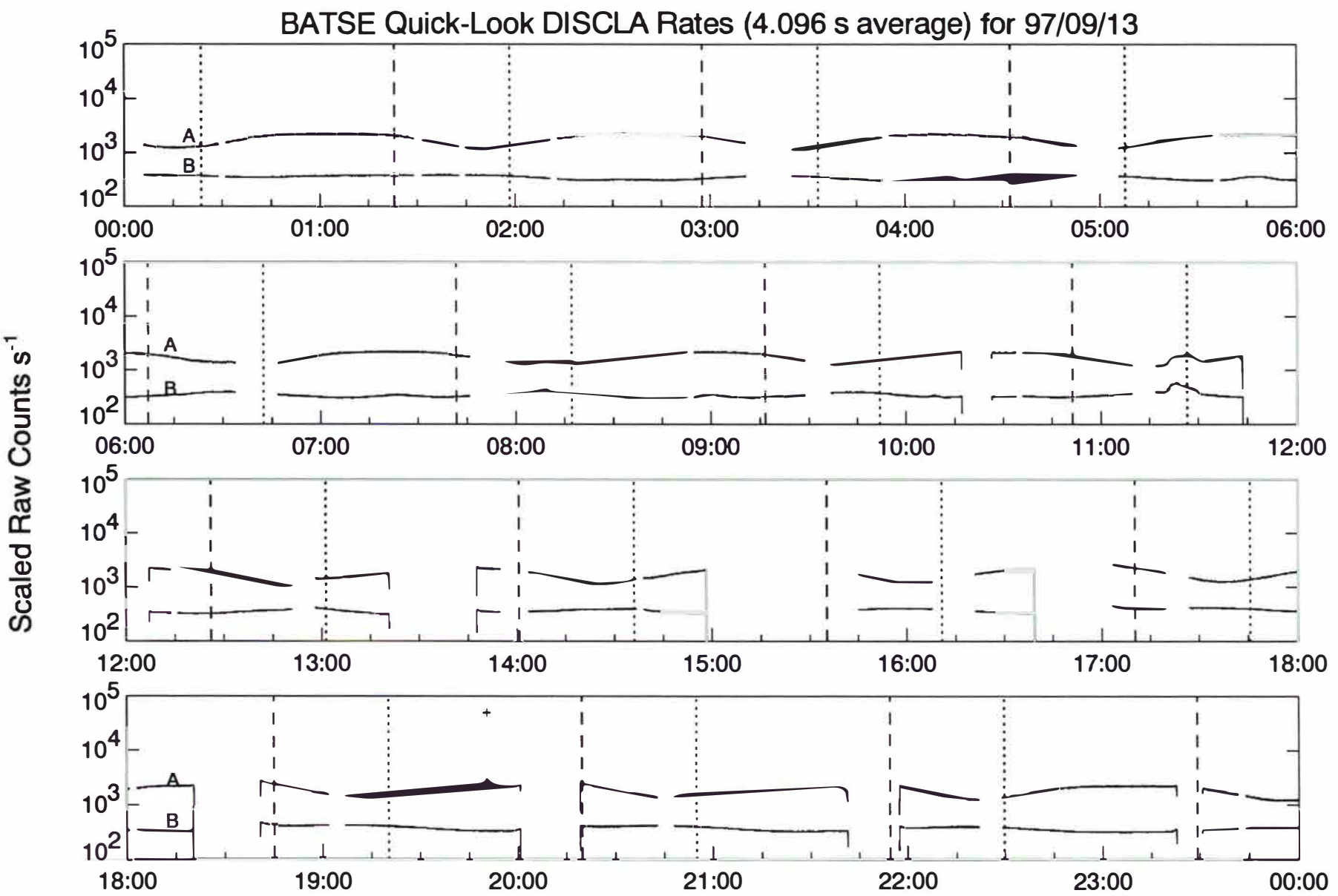
ULYSSES RT 04/02/00

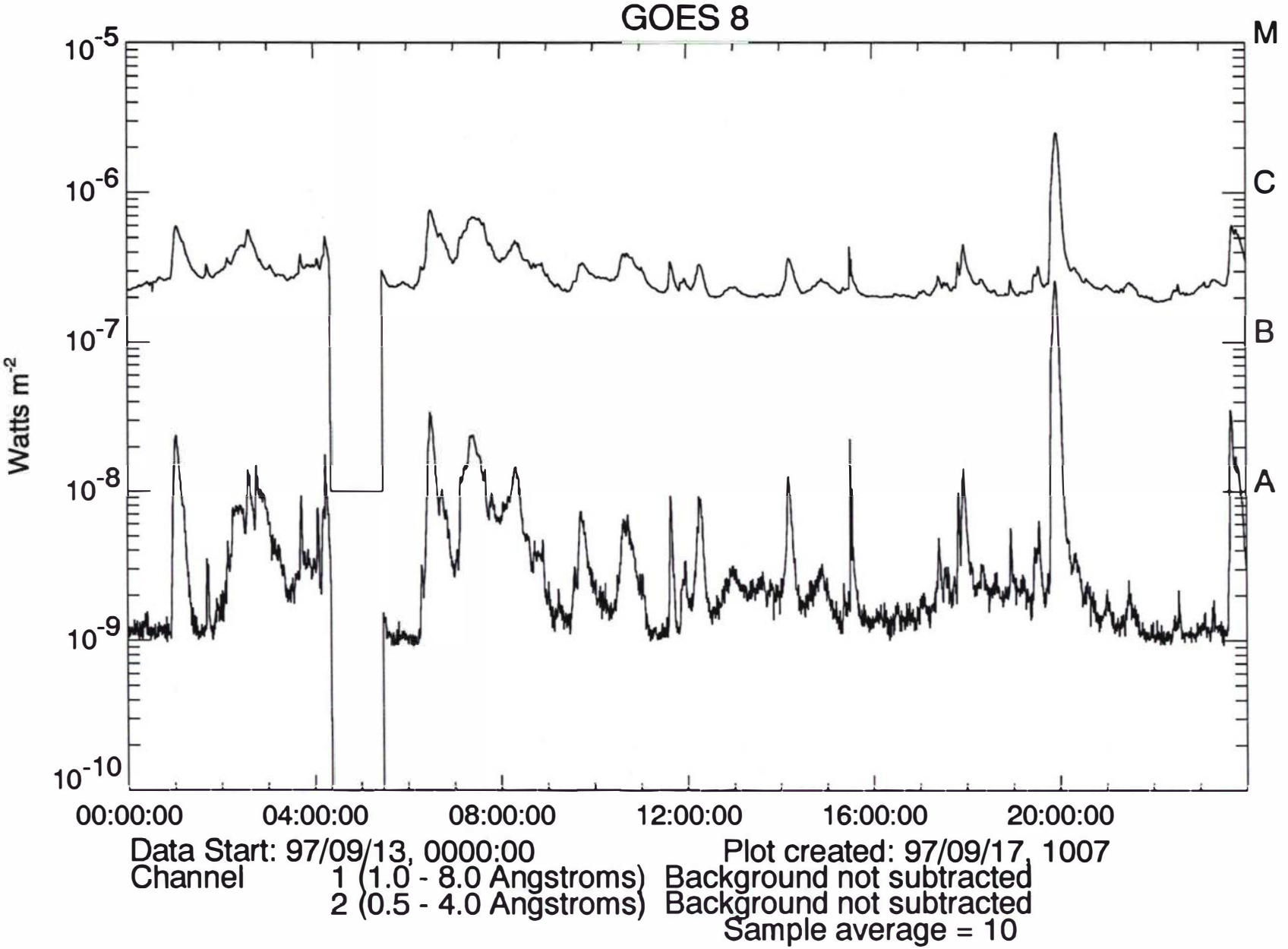
13/09/97 38916.219 s

0.250 S INTERVALS REGROUPED BY 17

0- 0 keV




BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/13
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/17, 1009 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare


GOES 8
M
C
B
A
Watts m-2
10-5
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/13, 0000:00
Plot created: 97/09/17, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

From kraken@rosserv.gsfc.nasa.gov Mon Sep 29 13:47 PDT 1997
X-Sender: kraken@lheapop.gsfc.nasa.gov (Unverified)
Mime-Version: 1.0
Date: Mon, 29 Sep 1997 16:48:19 -0400
    khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
. om: Peter Kurczynski <kraken@rosserv.gsfc.nasa.gov>
Subject: Ulysses bursts seen by TGRS
Cc: TEEGARDEN@tgrs2.gsfc.nasa.gov, kraken@rosserv.gsfc.nasa.gov

Hi Kevin,

Here are the results of a search through TGRS data for some recent
bursts that Ulysses detected.

Take care,

Pete

September 13 1997 09:05 Ulysses time; weak burst, 100 ms long

TGRS did not see this one in either waiting mode or burst mode data

September 15 1997 08:35 " " ; moderate burst, 10 s long

TGRS DID see this one: TGRS #621 at 32872s.

energy range	duration	peak count rate
100-300 keV	~25s	150 cts/s
35-100 keV	~40s	70 cts/s

since the count rates were very low in each energy band, the duration
is difficult to estimate, and these numbers should be considered upper limits.

September 19 1997 17:32 Ulysses time; moderate burst, 20 s long

TGRS ALSO saw this one: TGRS #622 at 65665s

energy range	duration	peak count rate
100-300 keV	30s	200 cts/s
35-100 keV	30s	150 cts/s

From BUTTERWORTH@lheavx.gsfc.nasa.gov Wed Sep 24 13:49 PDT 1997
From: BUTTERWORTH@lheavx.gsfc.nasa.gov
Date: Wed, 24 Sep 1997 16:45:11 -0400 (EDT)
To: khurley@sunspot.ssl.berkeley.edu, kmarar@isac.ernet.in, vnp@isac.ernet.in,
        jterrell@lanl.gov, yosimori@rikkyo.ac.jp,
        filippo@botes1.tesre.bo.cnr.it, henze@fender.msfc.nasa.gov,
        kraken@rosserv.gsfc.nasa.gov
CC: BUTTERWORTH@lheavx.gsfc.nasa.gov
X-Vmsmail-To: @ULYSSES
X-Vmsmail-Cc: BUTTERWORTH
Subject: Konus report for Ulysses events on 970913, 970915 and 970919

Hi Everyone,

Konus did not detect the Ulysses event reported for 970913.

On 970915, Konus triggered at 09:07:50.908 in the North-facing detector.
The event lasted 25 seconds, with lots of structure. It was hard - barely
visible below 50 keV.

On 970919, Konus triggered at 18:14:23.862 in the South-facing detector.
The event was hard, lasted 30 seconds, and consisted of two broad peaks.
(This was also seen by BATSE - trig# 6389).

in reply to:

Date: Sat, 20 Sep 1997 09:28:05 -0700
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <199709201628.JAA10533@scylla.berkeley.edu>
To: scott@lheamail.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu,
        butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
        kmarar@isac.ernet.in, vnp@isac.ernet.in,
        bonnard@lheamail.gsfc.nasa.gov, jterrell@lanl.gov,
        yosimori@rikkyo.ac.jp, filippo@botes1.tesre.bo.cnr.it,
        henze@fender.msfc.nasa.gov, kraken@rosserv.gsfc.nasa.gov
Subject: GRB970913, 970915
X-Sun-Charset: US-ASCII

ULYSSES GAMMA-RAY BURSTS NOT REPORTED BY BATSE:

Ulysses observed the following bursts:

September 13 1997 09:05 Ulysses time; weak burst, 100 ms long

September 15 1997 08:35   "   " ; moderate burst, 10 s long

The spacecraft was about 3100 light-seconds from Earth.

Were these events detected by anyone else?

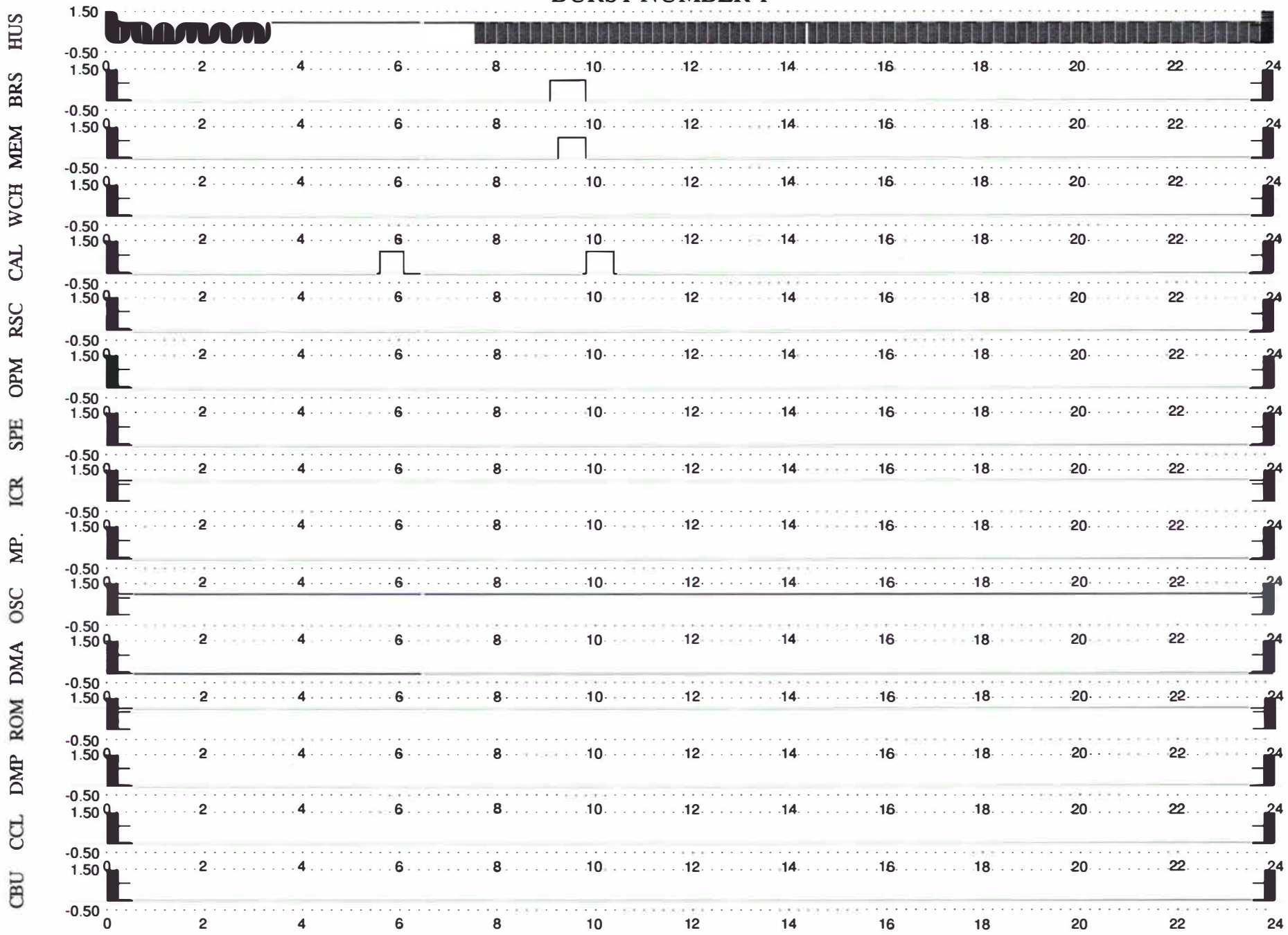
CC: ulyssesbursts alias list
    (barthelmy, butterworth, cline, frontera, kouveliotou, kurczyski, marar, teegarden, terrell,

ar

Date: Tue, 23 Sep 1997 08:07:03 -0700
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <199709231507.IAA14478@scylla.berkeley.edu>

HUS MODES EDR day 256, year 1997 to day 256, year 1997 1/14/98

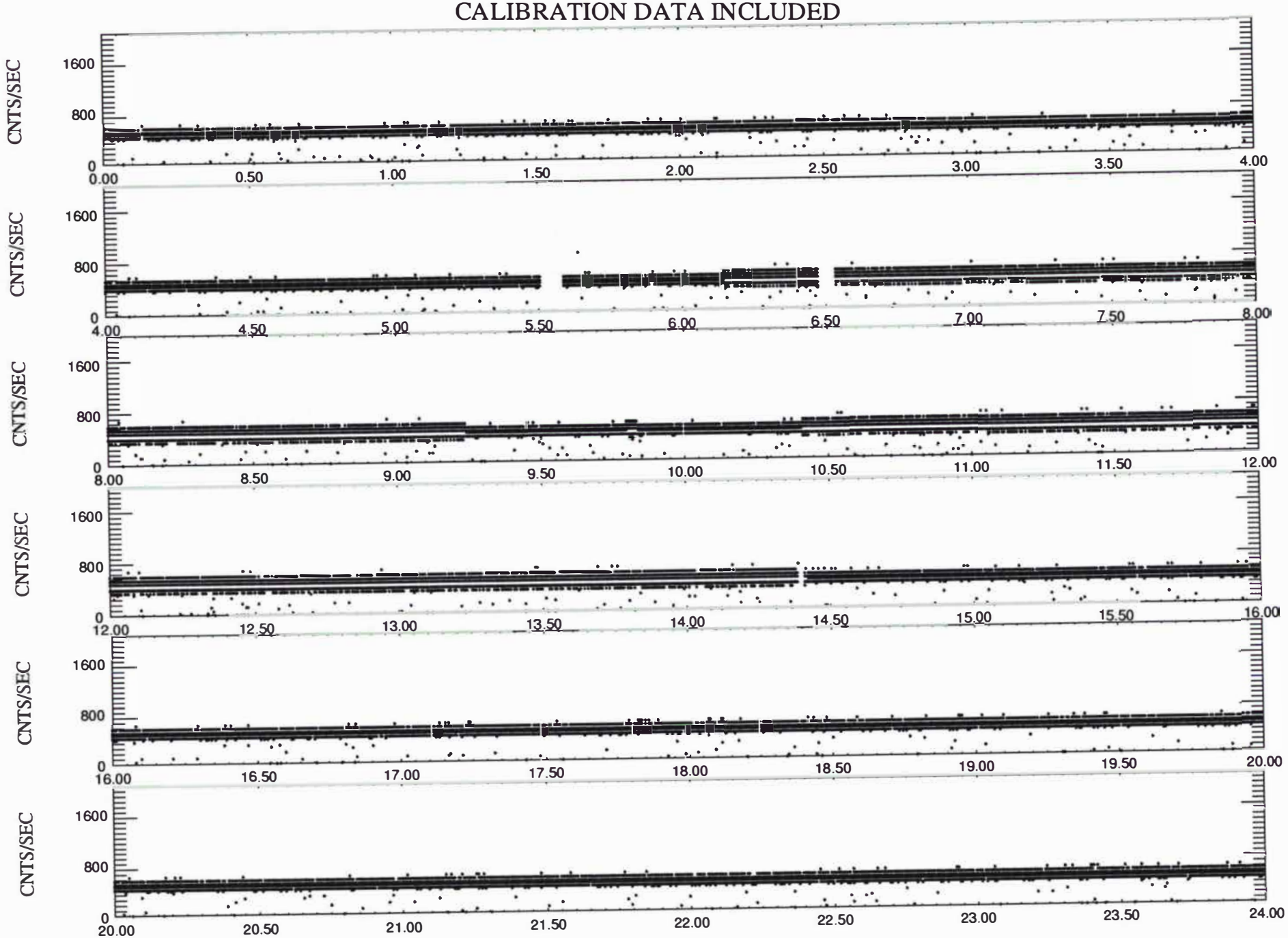
BURST NUMBER 1



UNIV AL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 256, year 1997 to day 256, year 1997 1/14/98

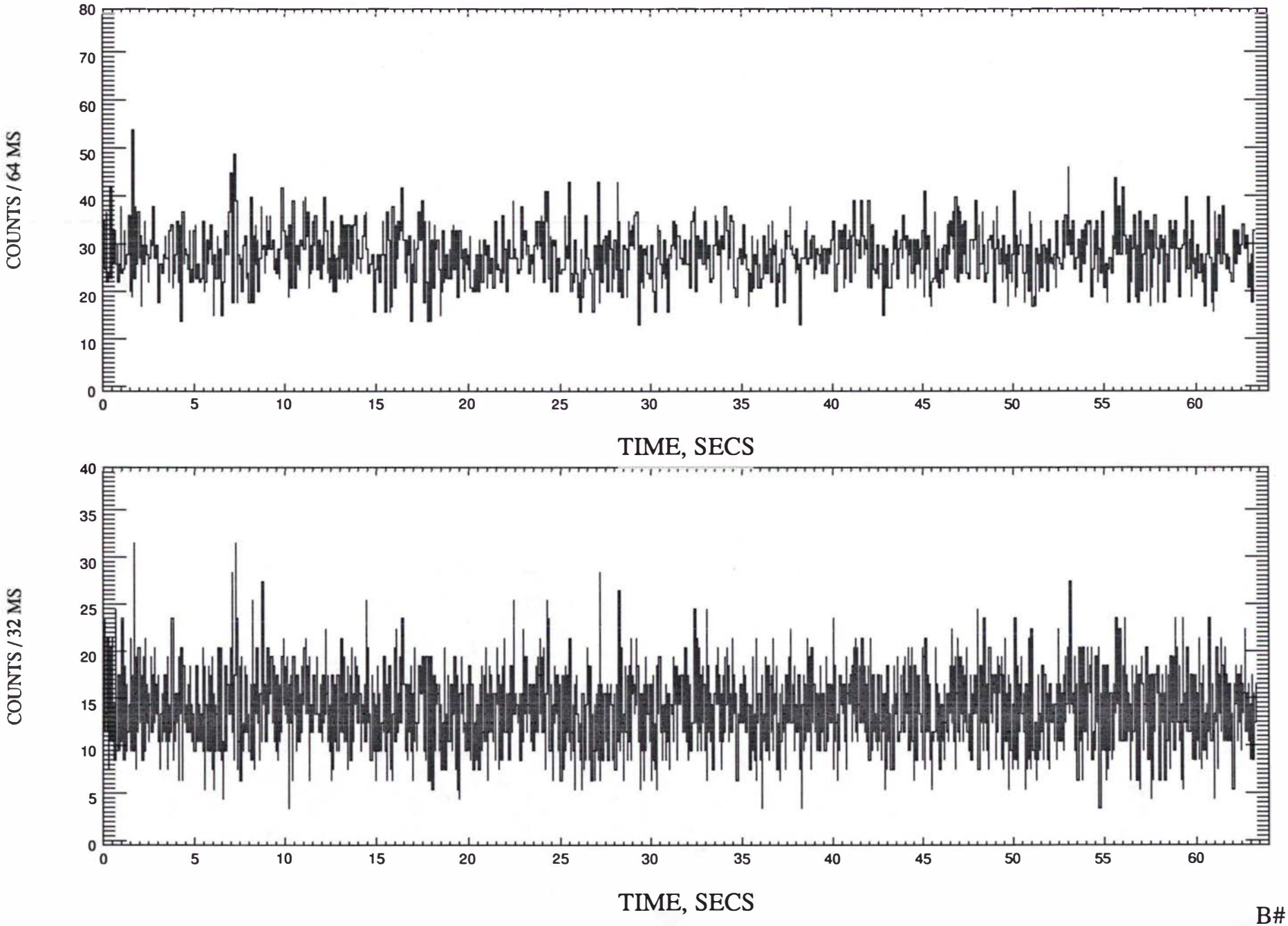
CALIBRATION DATA INCLUDED



UNIV[illegible]AL TIME

HUS 2A TRIGGERED DATA EDR day 256, year 1997 1/14/98

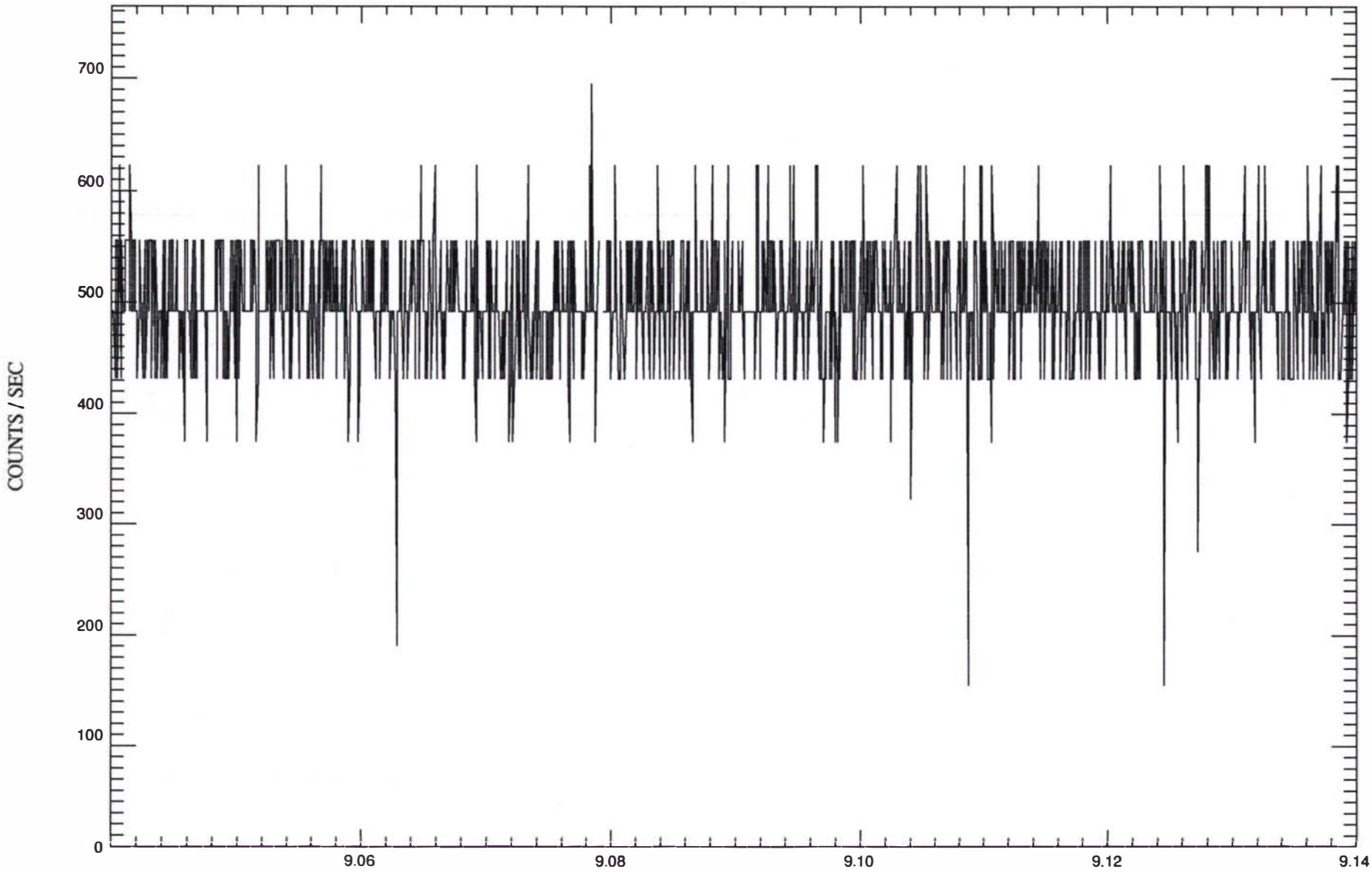
Burst Counter 1 at UT= 9.091914100647 h=32730.891 s 09:05:30.891



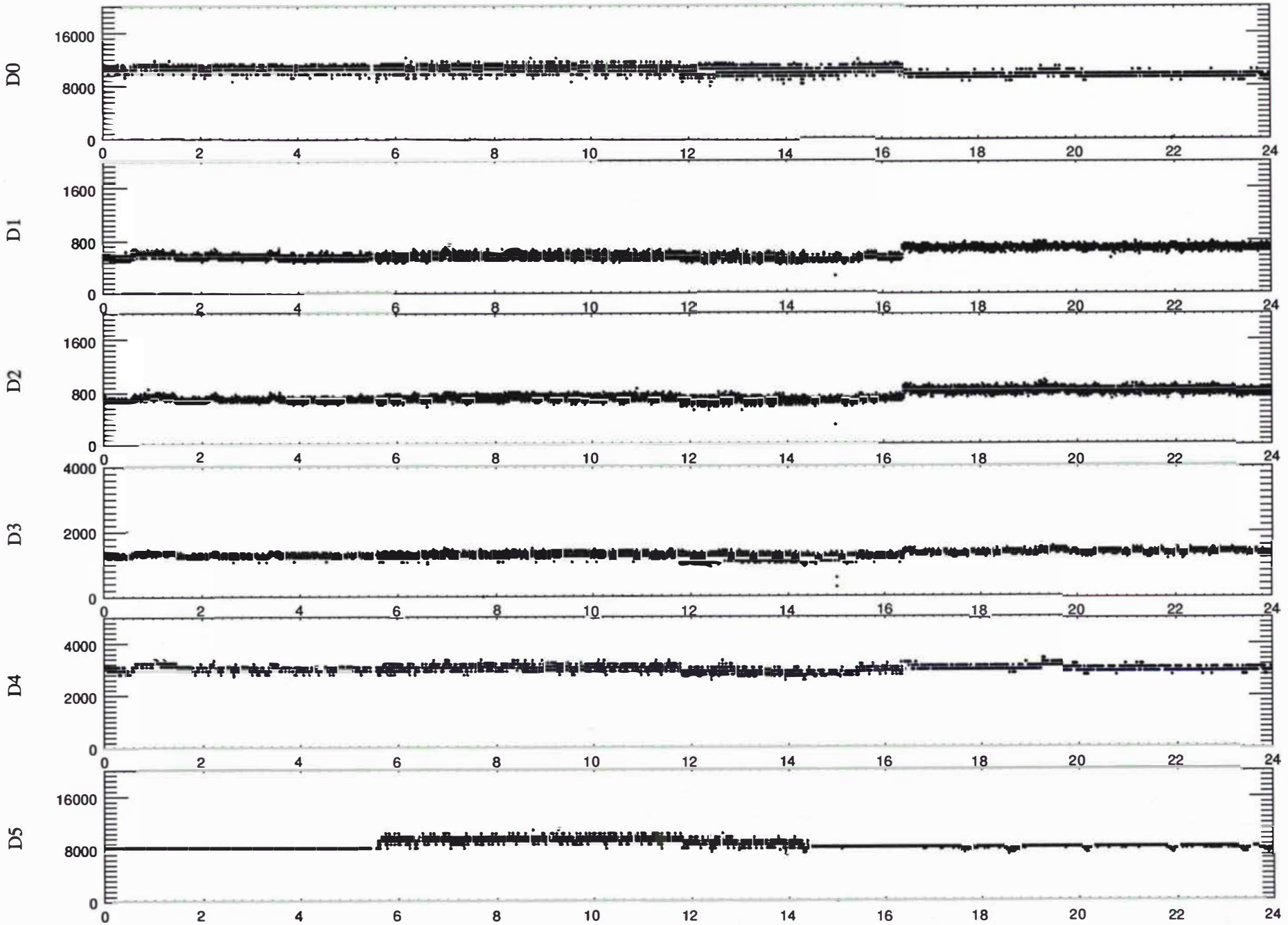
B# 1

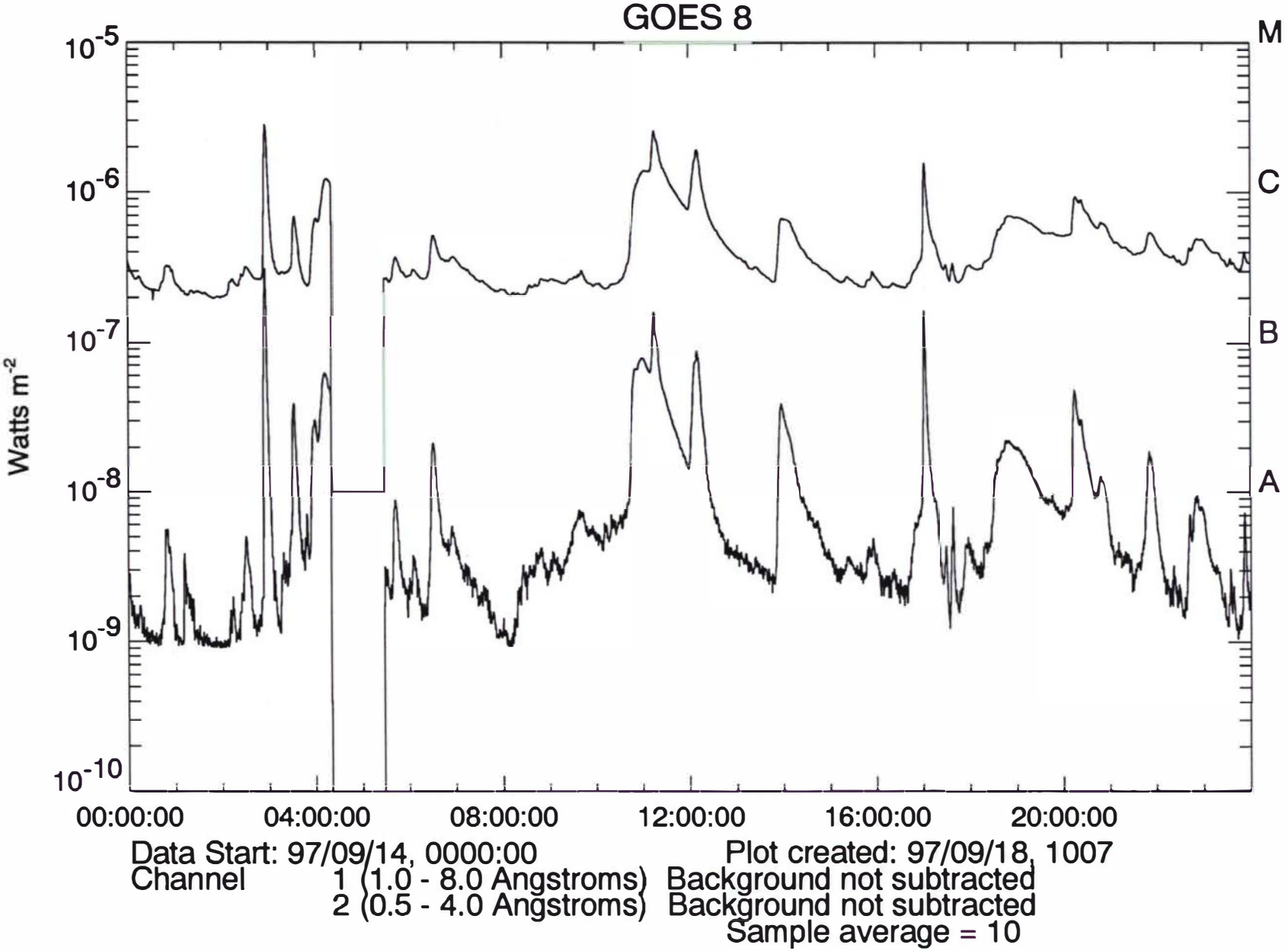
HUS 2A, MODE 1, NOT AVERAGED EDR day 256, year 1997 to day 256, year 1997 1/14/98

CALIBRATION DATA INCLUDED

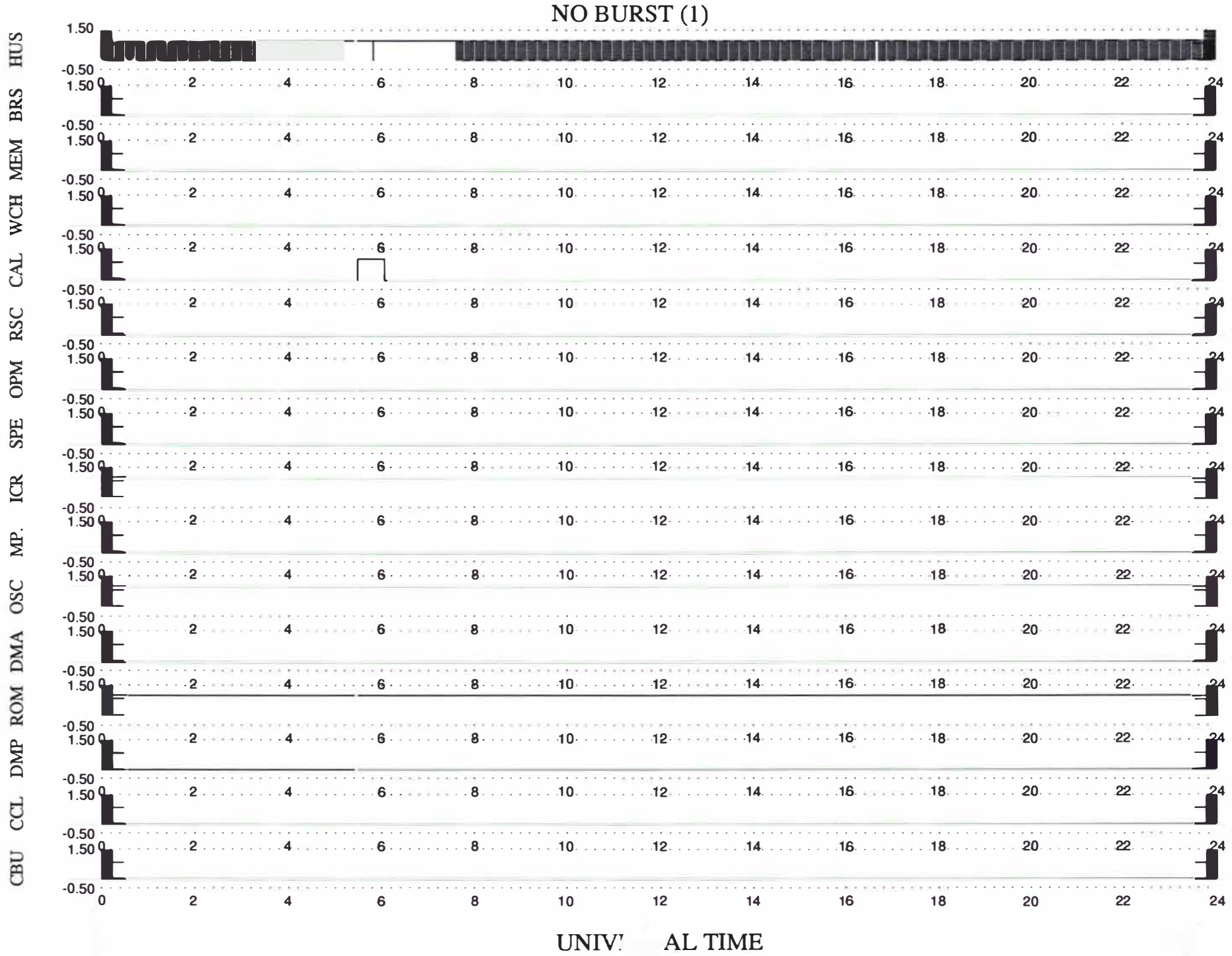


HUS 2B COUNTS / SEC EDR day 256, year 1997 to day 256, year 1997 1/14/98



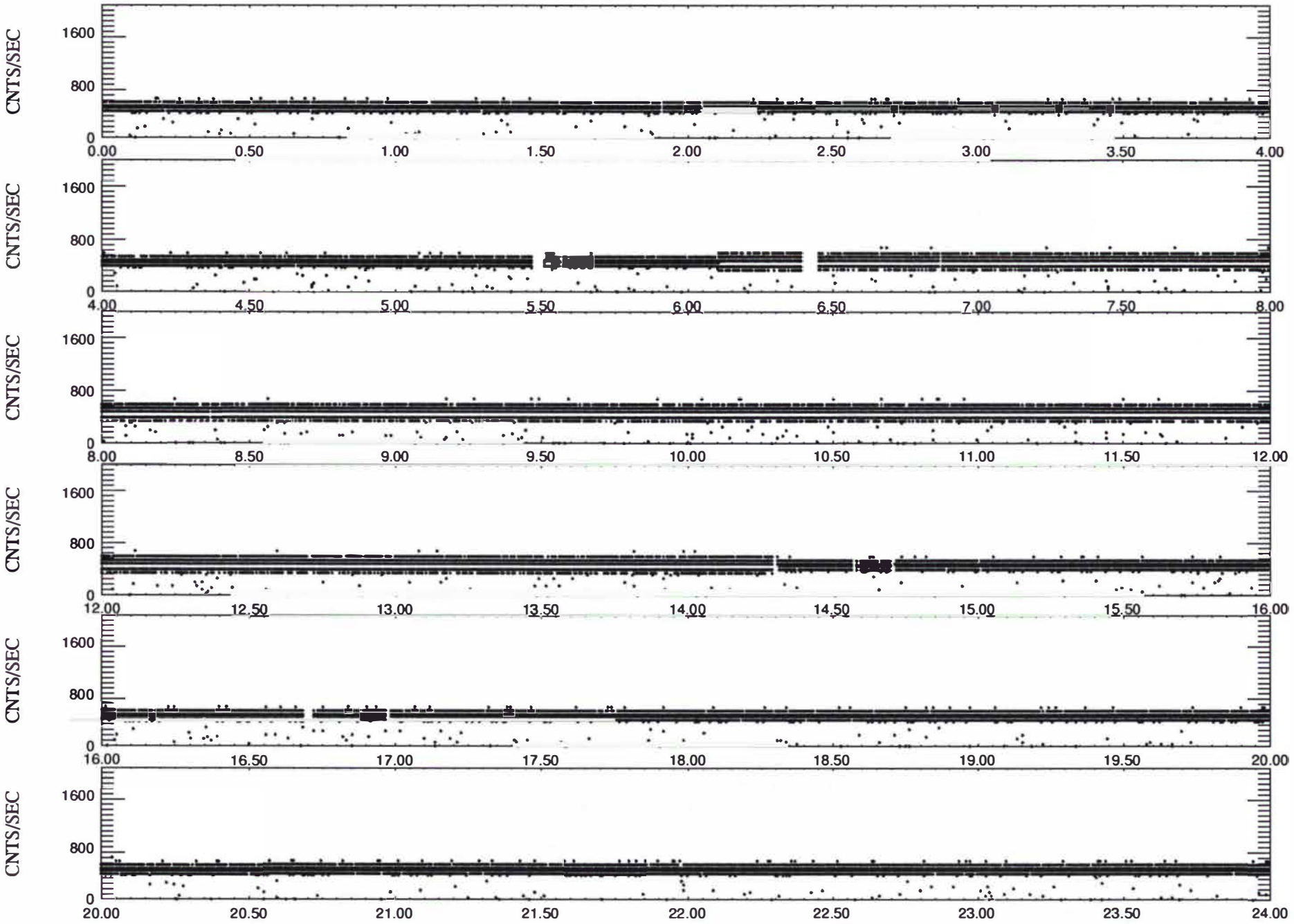

GOES 8
Watts m-2
10-5
10-6
10-7
10-8
10-9
10-10
M
C
B
A
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/14, 0000:00
Plot created: 97/09/18, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 257, year 1997 to day 257, year 1997 1/14/98



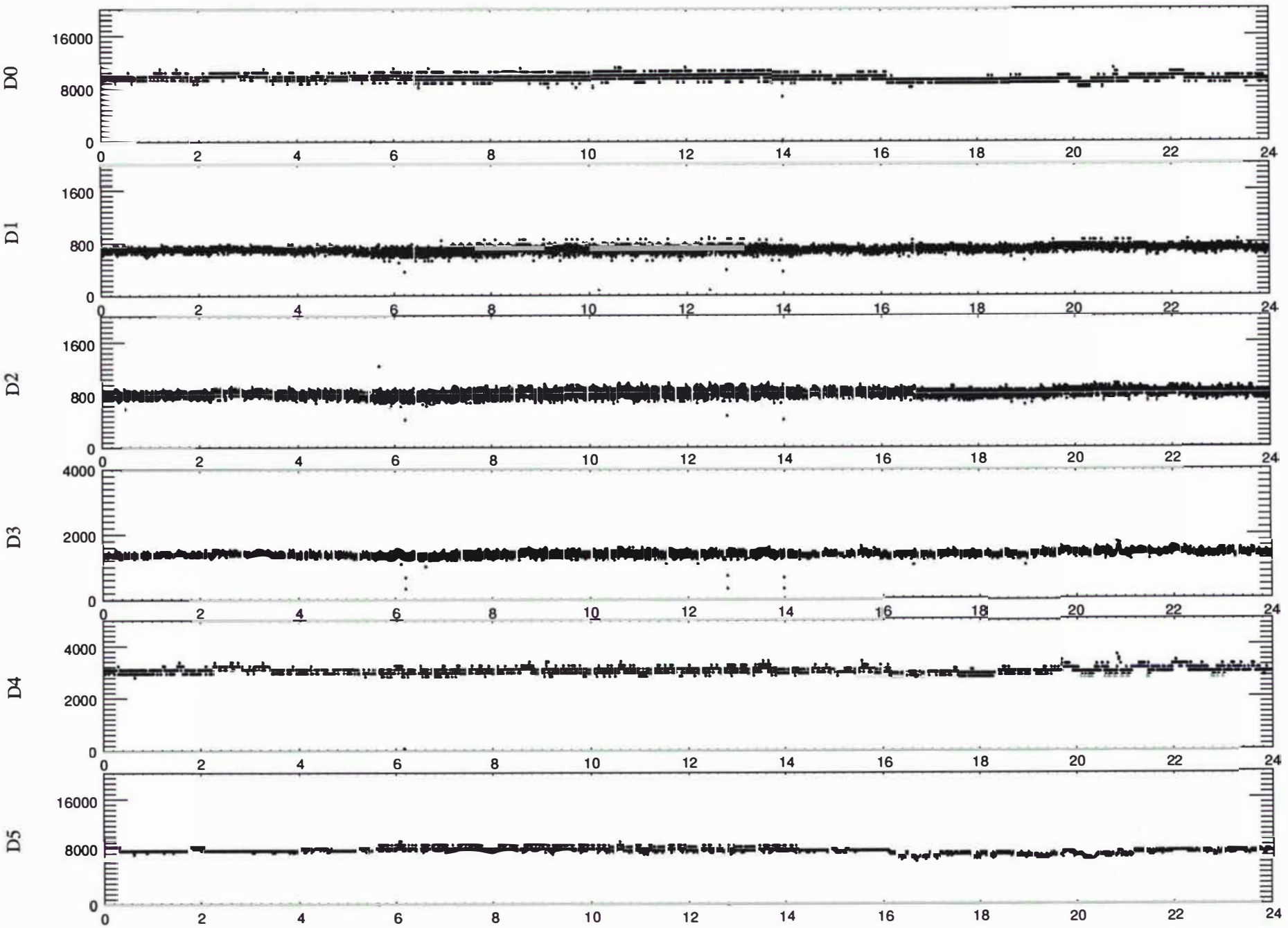
HUS 2A, MODE 1, NOT AVERAGED EDR day 257, year 1997 to day 257, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV' 'AL TIME

HUS 2B COUNTS / SEC EDR day 257, year 1997 to day 257, year 1997 1/14/98



Date: 4 Feb 00

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

☑ 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 N/A

☐ BATSE ephemeris for T_0?

☐ Error circle position and radius from public catalog used?

☐ If MER data were used, is a 30 ms systematic error included?

3. NEAR Data

☑ Final, correct time used? (Files postmarked vwx@bocc1, or from Teresa Sheets, have the correct time; files on website have incorrect times)

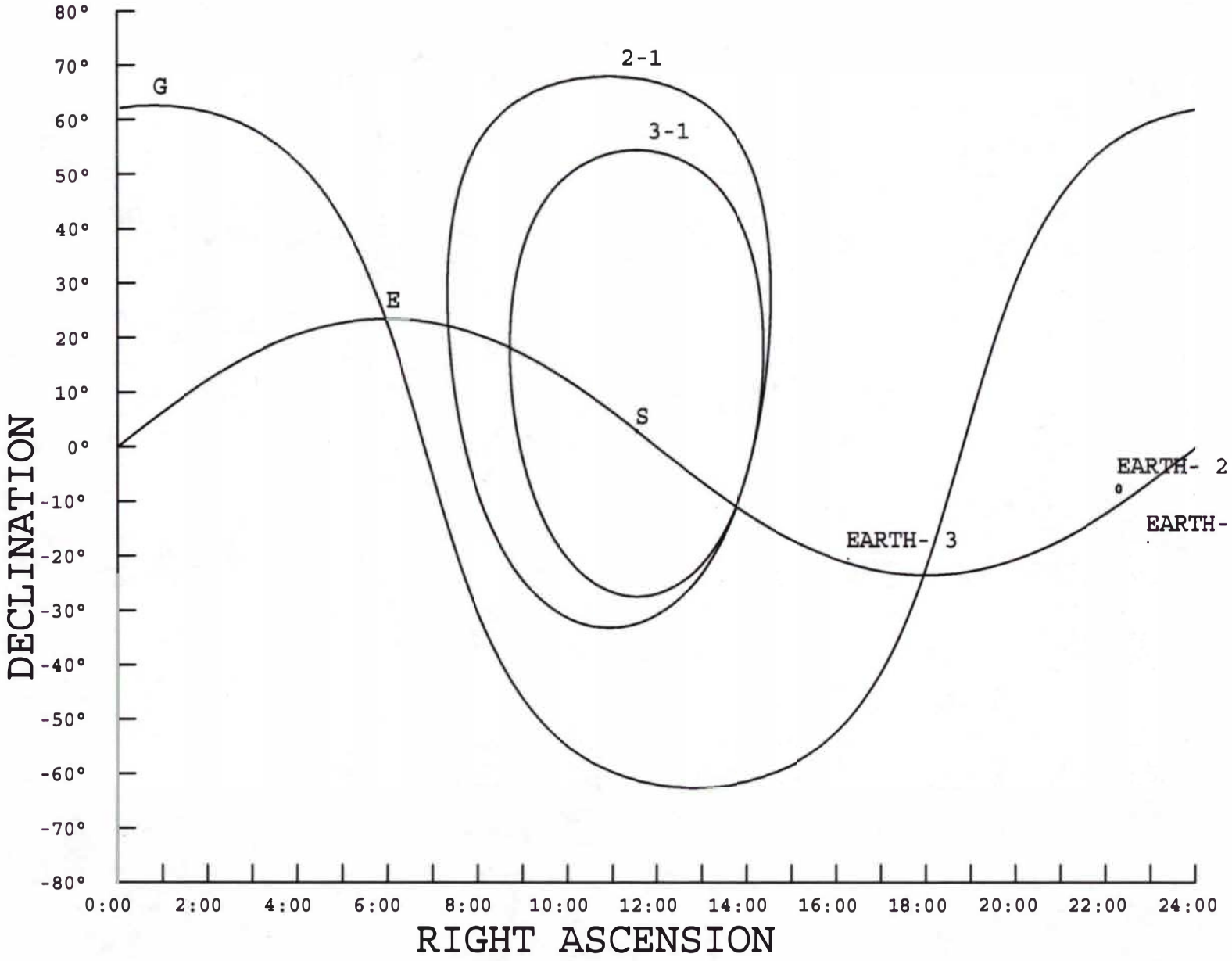
☐ BATSE >100 keV data used for NEAR correlation? N/A

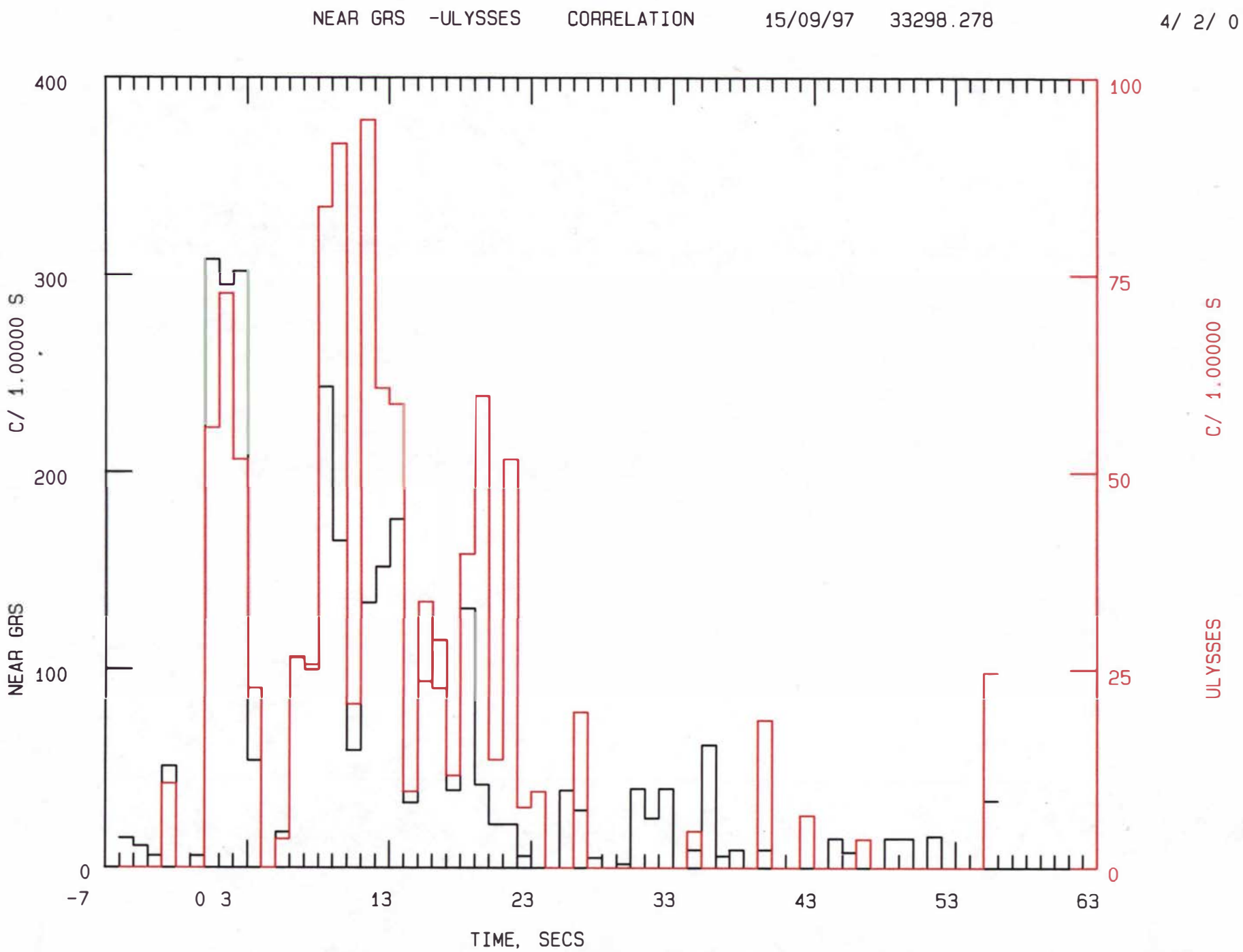
☑ ACCESS database updated?

EVENT OF SEP 15, 1997 8:35

4/ 2/ 0

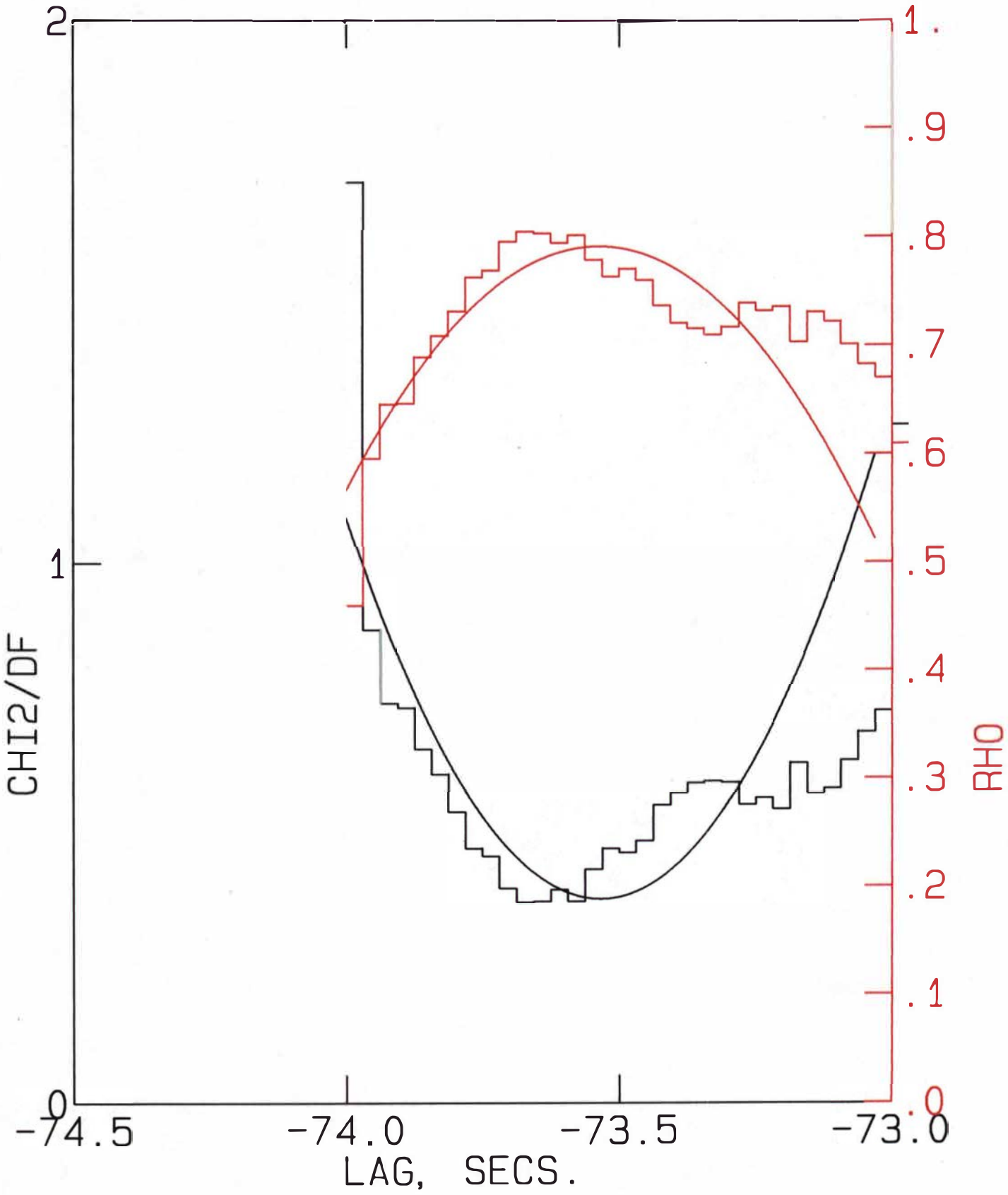
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 KONUS2 3 NEAR

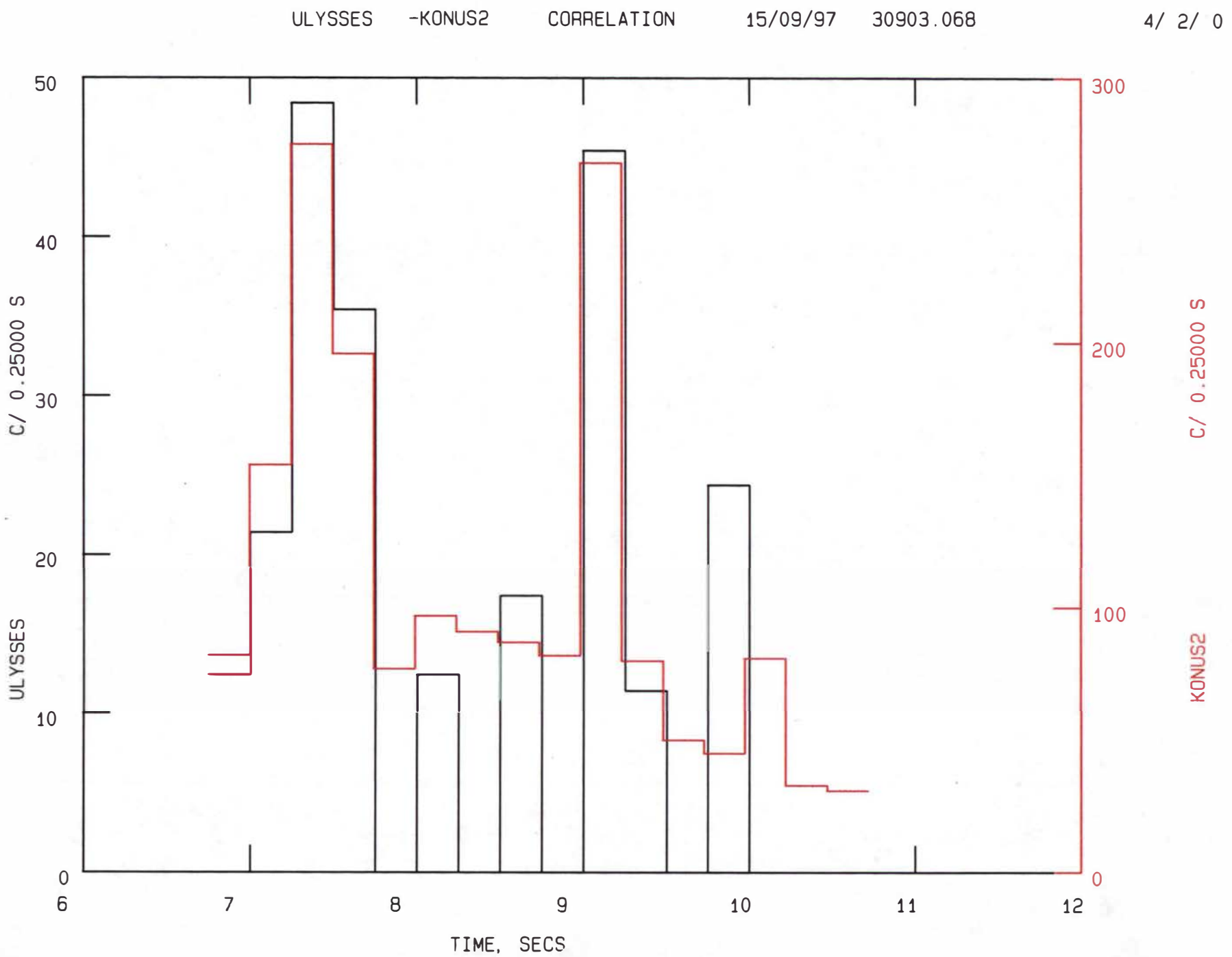



NEAR GRS -ULYSSES CORRELATION 15/09/97 33298.278
4/ 2/ 0
400
300
200
100
0
C/ 1.00000 S
NEAR GRS
100
75
50
25
0
C/ 1.00000 S
ULYSSES
-7
0 3
13
23
33
43
53
63
TIME, SECS

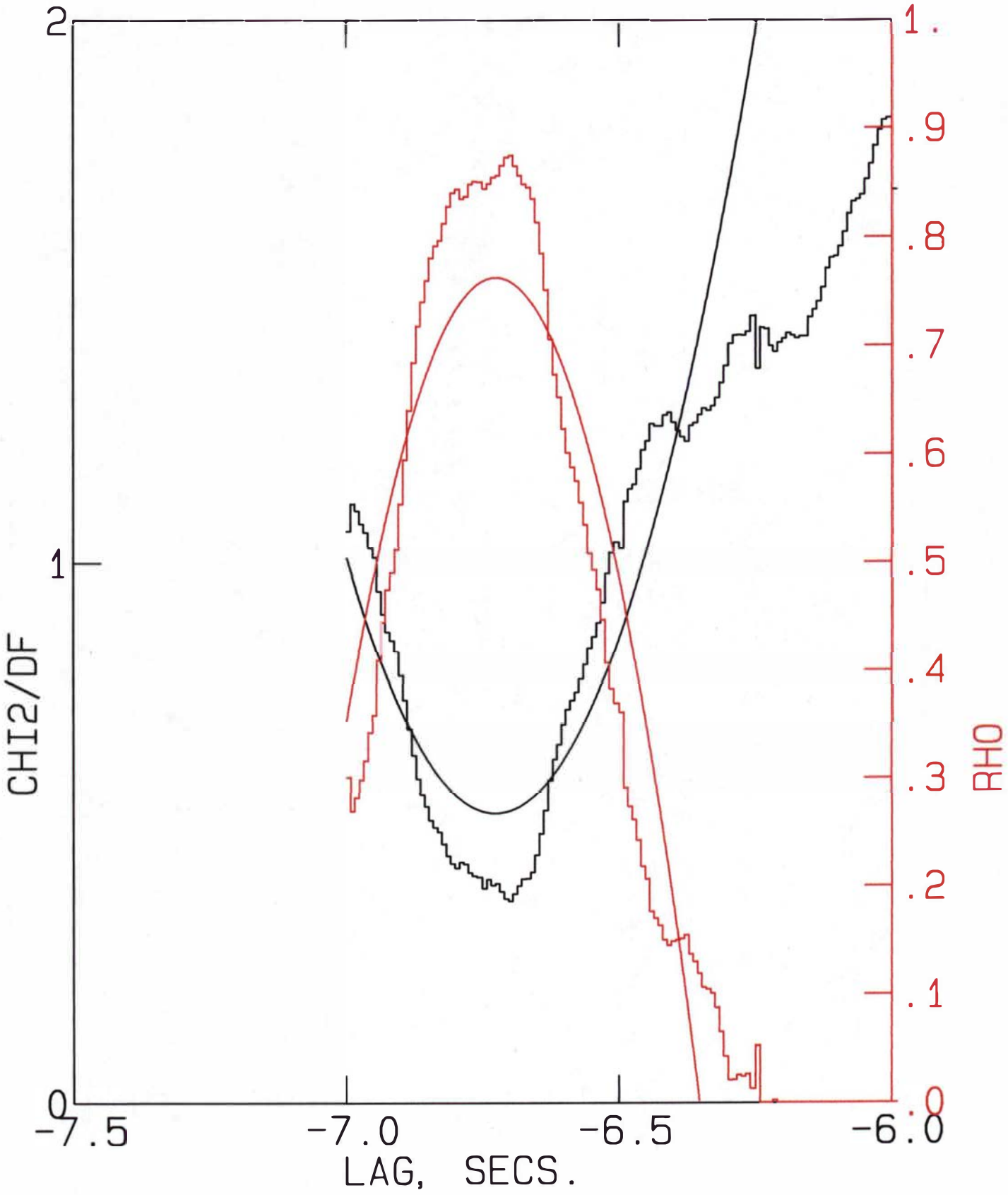
4/ 2/ 0

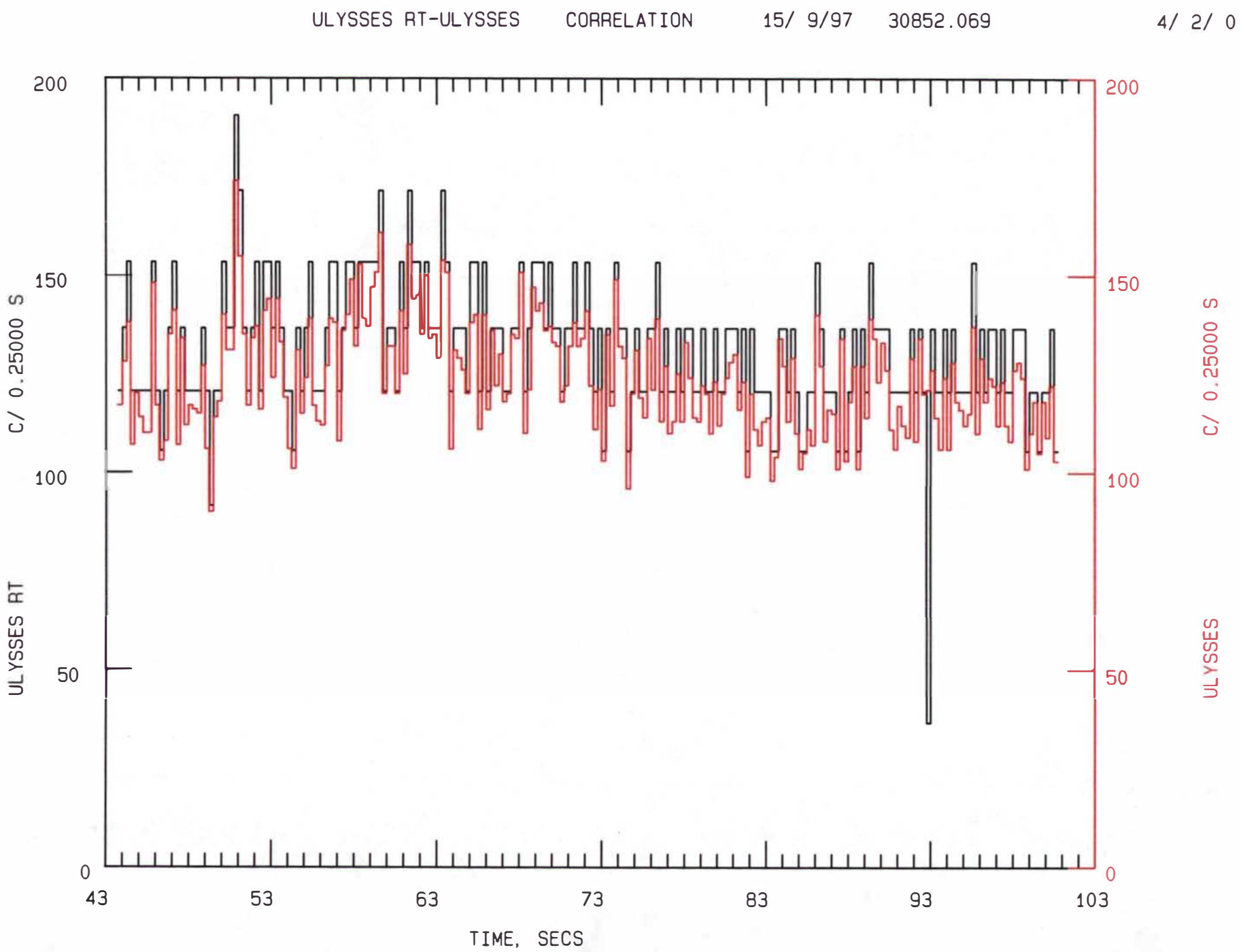
NEAR GRS -ULYSSES CORRELATION 15/09/97 33298.278



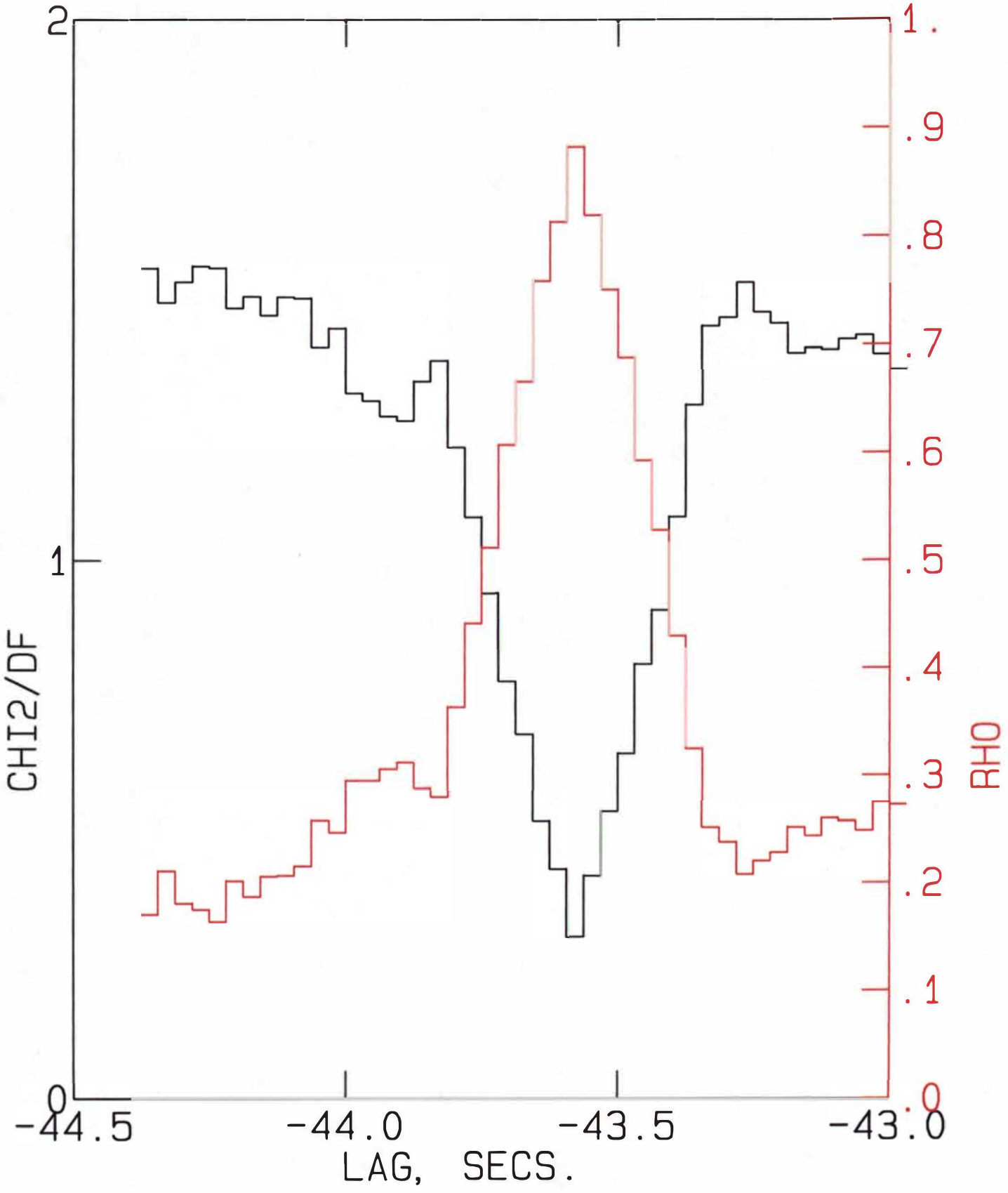

ULYSSES -KONUS2 CORRELATION 15/09/97 30903.068
4/ 2/ 0
50
40
30
20
10
0
C/ 0.25000 S
ULYSSES
300
200
100
0
C/ 0.25000 S
KONUS2
6
7
8
9
10
11
12
TIME, SECS

ULYSSES -KONUS2 CORRELATION 15/09/97 30903.068



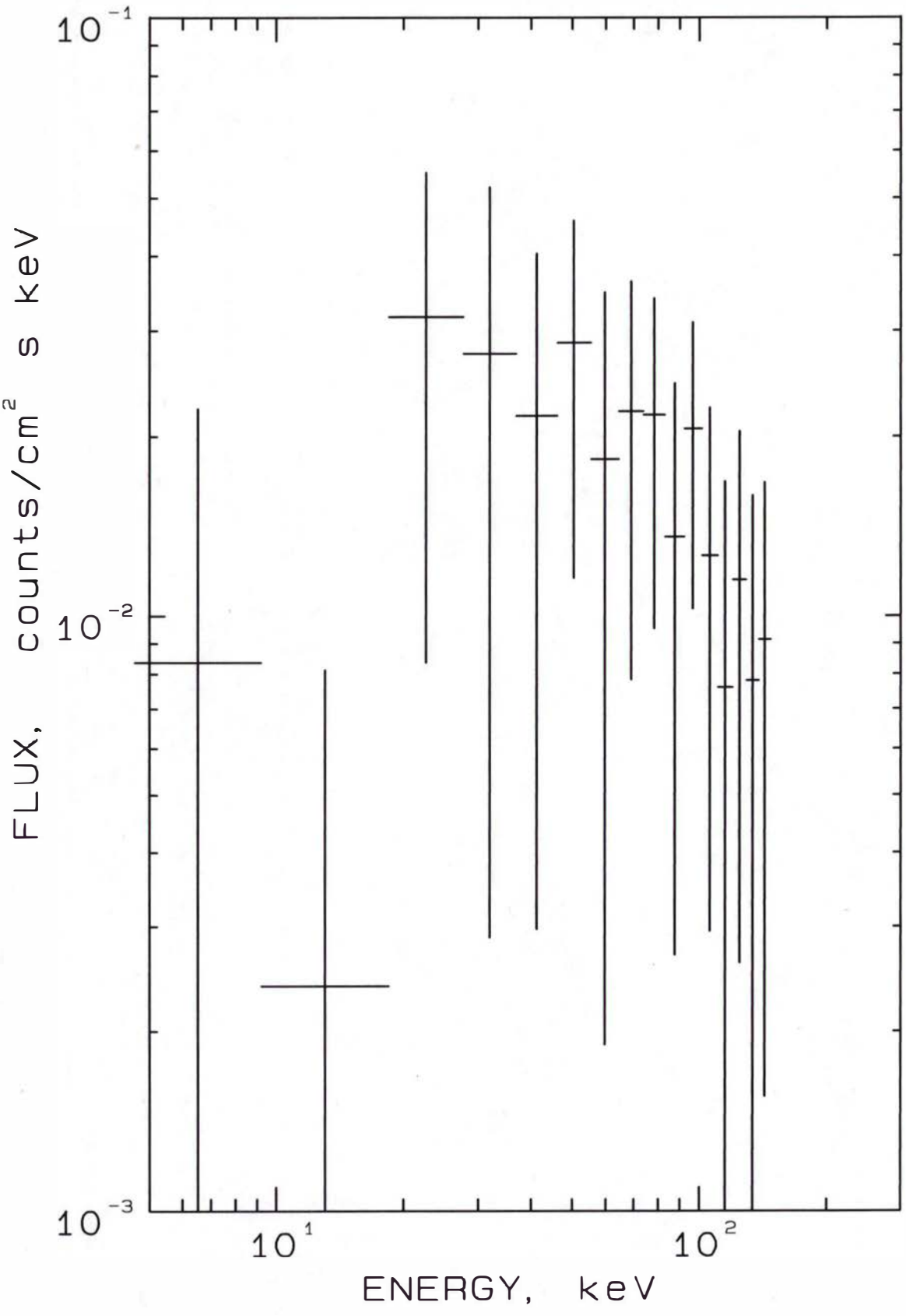

ULYSSES RT-ULYSSES CORRELATION 15/ 9/97 30852.069 4/ 2/ 0
200
150
100
50
0
C/ 0.25000 S
ULYSSES RT
43
53
63
73
83
93
103
TIME, SECS
ULYSSES

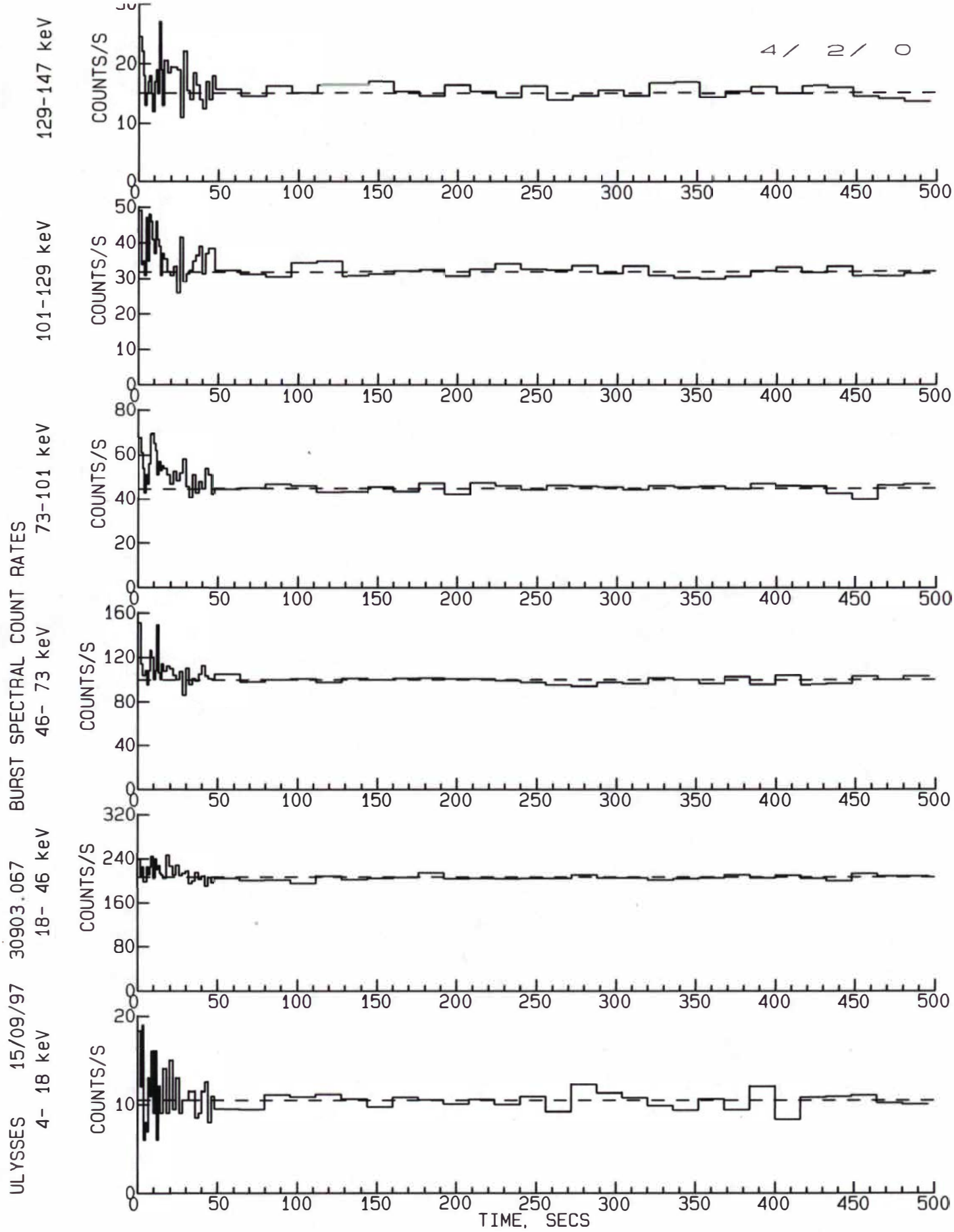
ULYSSES RT-ULYSSES CORRELATION 15/ 9/97 30852.069

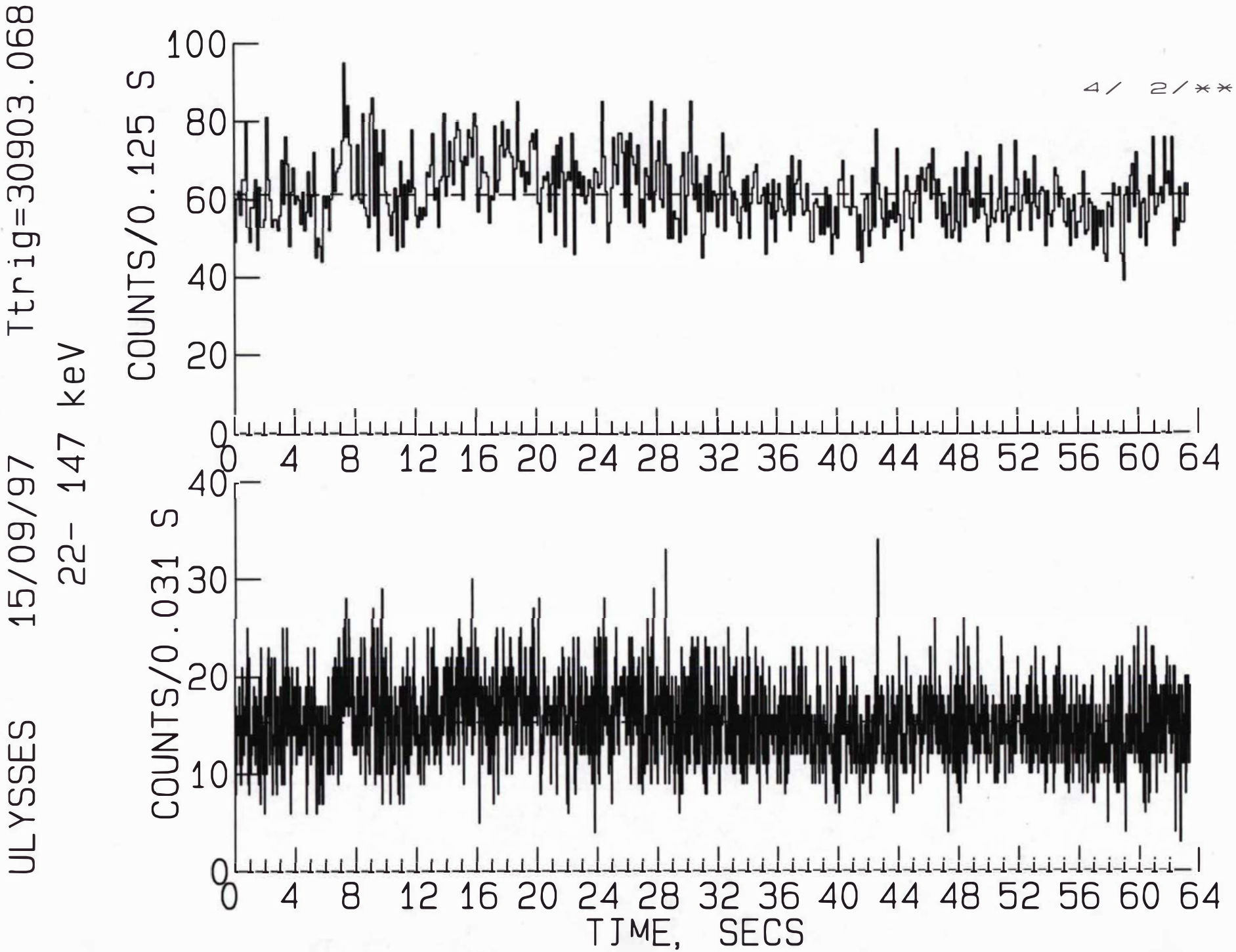


ULYSSES 15/09/97 30903.067

SPECTRUM INTEGRATED OVER 43.8 SECONDS, INTERVALS 2 TO 30




ULYSSES 15/09/97 30903.067 BURST SPECTRAL COUNT RATES
4- 18 keV
18- 46 keV
46- 73 keV
73-101 keV
101-129 keV
129-147 keV
COUNTS/S
TIME, SECS
4/ 2/ 0

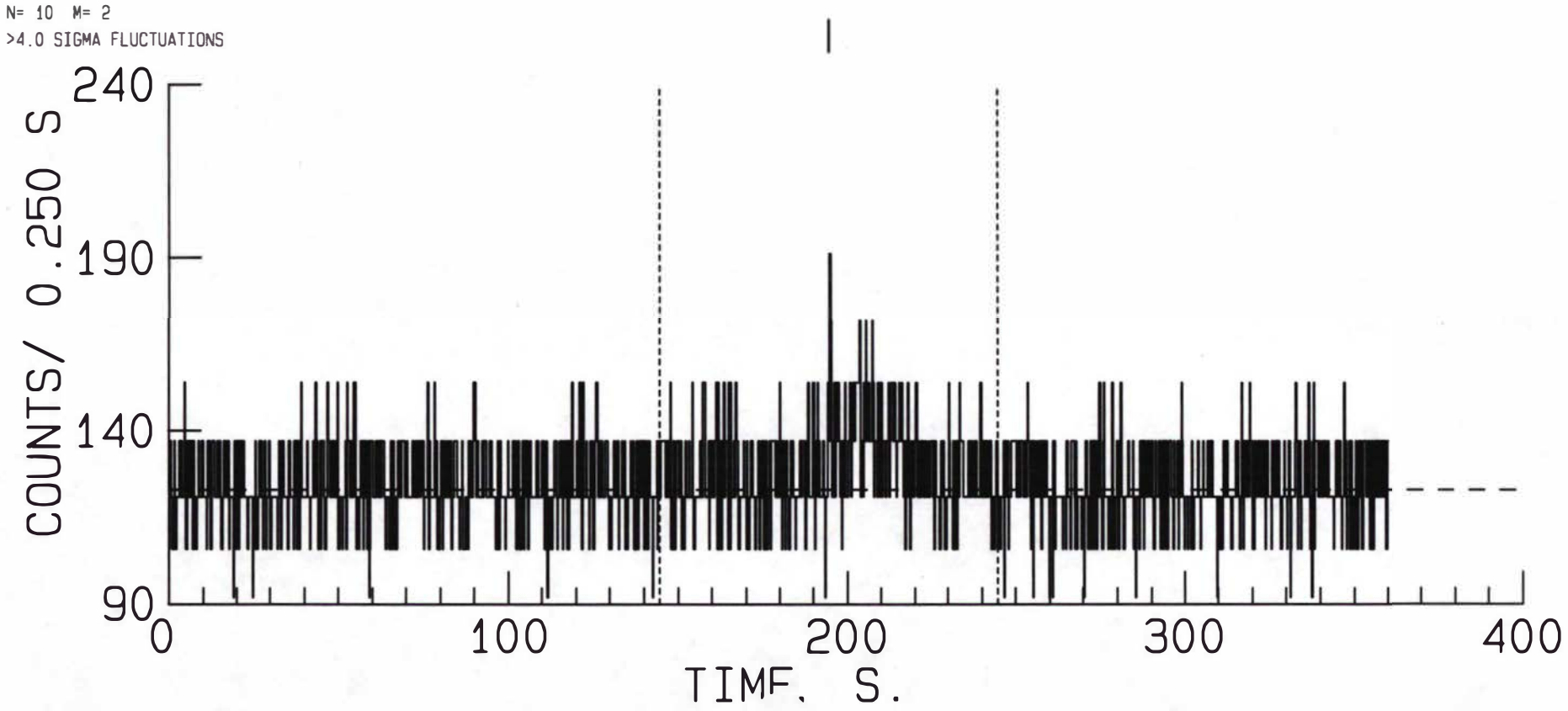

ULYSSES 15/09/97 Ttrig=30903.068
22- 147 keV
COUNTS/0.125 S
100
80
60
40
20
0
4/ 2/**
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64
COUNTS/0.031 S
40
30
20
10
0
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64
TIME, SECS

ULYSSES RT

4/ 2/ 0

15/ 9/97 30708.074 s

22- 147 keV



```
970315    074 56454.2 BATSE GRB#6124 (4264/S)  (5.69,62.18J)  (+UL)
       13 074 56454.9 PKS,462.9(50/S,90/S,<16S) (@85DEG)

970325    084 63382.8 KONUS(+UL@64176,MOD,15S),2 PEAKS(UL REPORT 8/9/97) (13SR)

970405    095U85440   UL@23:44@2200LS,MOD BURST, 5SEC (SEE NEXT LINE)
970406    096  1060.9 KONUS (MOD.STRONG,MULT.PKS,15S) (13:NR, SECONDARY PEAKS?)

970411    101 35565.2 KONUS(25SEC,35556?)+UL@35040,2200LS(MOD,10S) +TGR (13NR)

970420    110 72842.2 BATSE GRB#6198 (7316/S) (209.08,-21.09J) (+UL)
       13 110 72847.8 PEAK (740/S,<12S,HARD) @85 DEG

970421    111U24420   UL@06:47@2250LS INT BURST, 20SEC
       13 111 25691.6 PEAKS (60/S),711.6(60),721.6(40),<30SEC                  REP0624

970428 14 118           FIRST DATA, DMSP14 (LAUNCHED 970404;DELAY CORR=5.87S)

970506    126 56503.3 KONUS (+UL@57300,2400LS,MOD,10S) (13NO,14NO,NOTRIG)

970506A14 126 45619.1 STRONGPKS45619.1(7700/S,<6S,SOFT),633.1,655.1,NOTRIG;13NO    ??

970602    153 58855.7 KONUS>150S,COMPLEX,PK58953(+UL@56580,MOD,60S)(+TGRS/WIND)
       14 153 58917.0 PK(150/S),953.0(950,>58S,VERY HARD, INTENSE (13 NO)       REP0624
       14 153 58916.7 TRIGGER PK, +58944.3,58952.0

970607    158 33384.7 KONUS, HARD PEAK FOR 7SEC (+UL@33360,MOD,10S)
       13 158 33388.6 PEAK(180/S,<6S)                                          REP0723
       14 158 33388.7 PEAK(200/S,<6S, NOTRIG)                                  REP0723

 0616     167 65390.3 BATSE#6274 STRONG,MULTIPEAK.X-RAY AFTER,IAU6683(13NO@127)
          167 65390.3 BATSE(20.46,-7.16J),X-RAY(19.72,-5.50J) (14NO@112,NOTRIG)
          167 65390.3 BATSE (X-RAY DUBIOUS,IAU6722. NO OPT VARIABLE, IAU6723)

970625    176 43993.7 KONUS (UL@46200,2900LS,MOD,15SEC,REPORTED 10/30/97)
       13 178 44002.0 PEAK(80/S,<4S) (14SA)

970627    178 79608.8 KONUS STRONG, MULTIPEAK, 20SEC (+UL@77340,STRONG,20S)
          178 79610   BEPPOSAX (13SR,14NO,NO TRIG)

970629    180 14424.  KONUS VERY SOFT(+UL@15960,STRONG. NEW SGR (SEE 970912)
       13 180 14429.0 PEAK(50/S,<2S,SOFT) (14NR)                               REP0903

970715    196 51674.3 KONUS STRONG,HARD PK@+20(+UL@54060,MOD,5S)
       13 196 51693.6 PEAK(190/S,<4S)  (14NR,NOTRIG)                           REP0903

970721    202 84667.1 KONUS(+UL@81720,MOD,10S,@3000LS)
       13 202 84671.9 PEAKS(HARD,1-SIDE,200/S,<8S),691.9(1-SIDE,240/S,<10S)    REP0903
       14 202 84672.1 PEAK (HARD,1-SIDE,470/S,<10S),692.1(1-SIDE,240/S,<10S)   REP0903
       14 202 84671.5 TRIGGER PEAK (EVT14)(84671.46)                           REP0903

970802    214 12328.2 BATSE GRB#6322,5750/2S    (13NO@32,14NO@40,GAP,NOTRIG)

970815    227 43624.4 BATSE GRB#6335,10395/2S (IAU6718 XRAYS;6721+NOOPT)
          227 43624.4 CONTINUED: 13NO@160DEG, 14NO@146DEG

 0915     258 32870.9 KONUS 25S,HARD (+UL@30900,3100LS,MOD,10S)
       14 258 32873.2 PEAK (200/S,<2S,NO TRIG) (13NO)

970919    262 65669.5 BATSE#6389 (8048/S)
```

From TERRELL@nisdp0.lanl.gov Fri Feb 27 15:11 PST 1998
From: TERRELL@nisdp0.lanl.gov
Date: Fri, 27 Feb 1998 16:11:55 -0700
To: khurley@sunspot.ssl.berkeley.edu, bonnard@milkyway.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
henze@fender.msfc.nasa.gov, filippo@botes1.tesre.bo.cnr.it,
kmarar@isac.ernet.in
X-Vmsmail-To: @MAILOUTUL.DIS
Subject: DMSP GRB: 1997(many),980109,980113,980119,980124,980125,980202,980203

From: jterrell@lanl.gov (James Terrell) 980227
To: khurley@sunspot.ssl.berkeley.edu, bonnard@milkyway.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
filippo@botes1.tesre.bo.cnr.it, henze@fender.msfc.nasa.gov,
kmarar@isac.ernet.in, kraken@rosserv.gsfc.nasa.gov,
scott@milkyway.gsfc.nasa.gov, teegarden@lheavx.gsfc.nasa.gov,
vnp@isac.ernet.in, yosimori@rikkyo.ac.jp
Subj: DMSP GRB detections: 1997(many),980109,980113,980119,980124,980125,980202,980203

The following GRB were detected by DMSP13 or DMSP14 (or NOT detected, if indicated).
No detection can occur for bursts more than 118 degrees from spacecraft zenith,
or if in the presence of very high counting rates (SAA,SR,NR).
Data are normally in 2-sec counts, except when the DMSP14 trigger circuit is
tripped, giving 12.8ms data, usually reported here as 102.4ms counts.
Numerous other BATSE GRB were also detected, but not reported here; numerous
weak detections by Ulysses have not been checked because of low counting
rates expected at an indefinite time.

DATE	FL	DAY	TIME	NOTES---(ND=NO DATA,NA=NOT APPARENT & NOT ANALYZED)------REPORTED (NO=DATA CHECKED--SHOWS NO DETECTION)(SR=S. RADIATION BELT) (NR=NORTH RADIATION BELT)(SAA=SOUTH ATLANTIC ANOMALY)	
970111		011	35040.2	BATSE GRB#5773 (8727CTS/2S) (SEE IAU6569,6571,6574,6598)	
		011	35040.2	BEPPO SAX TRIG,INTENSE,50S,3 PEAKS(232.10,19.67J) IAU6533	
	13	011	35040.0	PEAKS(40/S),48.0(50/S),58.0(60/S),@24DEG,@848KM,SOFT	REP0313
970111		011	85744.6	KONUS (HARD,SLOW RISE) +TGR (UL:NO) (DMSP13:NO)	
970117		017	53211	TGR+SAX GRB (KONUS INOP)+UL@54420(STRONG,20S) (13:NO)	
970124		024	44343.4	KONUS(MULT PKS)+UL@46253@2100LS,STRONG+TGR (13SAA)	
970201		032	57250.7	BATSE GRB#5989 (53612/SEC) +UL	
	13	032	57222.1	PEAK (100/S,~30S,SOFT,BROAD) (@111DEG) UNCONVINCING	
970218		049	50996.1	KONUS (STRONG,5SEC) +UL@51274,2000LS (STRONG,8SEC)	
	13	049	51001.0	PEAK (320/S,<6S)	REP0624
970222		053	86006.6	KONUS (MOD.STRONG,SEV.SEC) +UL@85873,2000LS,MOD,2S(13NO)	
970226		057	31585.9	KONUS (STRONG,SOFT PK@+39) +UL@30547,2000LS(V.INT,40S)	
	13	057	31595.8	PEAK (270/S,10SEC) (MODERATELY STRONG)	REP0313
970228		059	10680.8	BEPPOSAX(IAU6572)MOD.INT.,80S,4 PKS (75.46,11.75J)IAU6578	
		059	10680.8	INT.X-RAY,RADIO(IAU6576,6577),OPTICAL(6584),MOTION(6629)	OPTICAL
	13	059	10659.1	PKS,667.1(60/S,ONE-SIDED,SOFT,@74DEG) DOUBTFUL (+UL,WIND)	
970313		072	30096.5	KONUS(MOD.STRONG,PK@+11,40S)+UL@28380,2000LS(MOD.INT,10S)	
	13	072	28355.8	PEAK (180/S,<2S,SOFT) (NO PEAK AT 30096!) (CONFLICT)	REP0501

From kraken@rosserv.gsfc.nasa.gov Mon Sep 29 13:47 PDT 1997
X-Sender: kraken@lheapop.gsfc.nasa.gov (Unverified)
Mime-Version: 1.0
Date: Mon, 29 Sep 1997 16:48:19 -0400
    khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
From: Peter Kurczynski <kraken@rosserv.gsfc.nasa.gov>
Subject: Ulysses bursts seen by TGRS
Cc: TEEGARDEN@tgrs2.gsfc.nasa.gov, kraken@rosserv.gsfc.nasa.gov

Hi Kevin,

Here are the results of a search through TGRS data for some recent
bursts that Ulysses detected.

Take care,

Pete

September 13 1997 09:05 Ulysses time; weak burst, 100 ms long

TGRS did not see this one in either waiting mode or burst mode data

September 15 1997 08:35 " " ; moderate burst, 10 s long

TGRS DID see this one: TGRS #621 at 32872s.

energy range	duration	peak count rate
100-300 keV	~25s	150 cts/s
35-100 keV	~40s	70 cts/s

since the count rates were very low in each energy band, the duration
is difficult to estimate, and these numbers should be considered upper limits.

September 19 1997 17:32 Ulysses time; moderate burst, 20 s long

TGRS ALSO saw this one: TGRS #622 at 65665s

energy range	duration	peak count rate
100-300 keV	30s	200 cts/s
35-100 keV	30s	150 cts/s

From cline@apache.gsfc.nasa.gov Mon Sep 22 07:59 PDT 1997
Mime-Version: 1.0
Date: Mon, 22 Sep 1997 11:03:04 -0400
To: KHURLEY@sunspot.ssl.berkeley.edu, helmut.seifert.1@gsfc.nasa.gov,
palmer@lheamail.gsfc.nasa.gov, Butterworth@lheavx.gsfc.nasa.gov
From: cline@apache.gsfc.nasa.gov (T L Cline)
Subject: EVENT QUERY - Please

TGRS, KONUS and ULYSSES Persons:

NEAR (Asteroid Rendezvous) saw a GRB candidate that did not trigger BATSE
on year-day 258 (Sept. 15th) at 0.3855 dayfraction (33300 seconds UT).
It's maybe 20 seconds long. The Earth time could be +/- 750 seconds or so,
for a 1.5 AU NEAR location.

Did TGRS or Ulysses see this one ??
We have yet to see evidence that NEAR is operating as a GRB detector.

Thanks.

TLC

-- Thomas L. Cline ----- cline@apache.gsfc.nasa.gov

From cline@apache.gsfc.nasa.gov Mon Sep 22 11:02 PDT 1997
Mime-Version: 1.0
Date: Mon, 22 Sep 1997 14:05:59 -0400
To: KHURLEY@sunspot.ssl.berkeley.edu
   m: cline@apache.gsfc.nasa.gov (T L Cline)
 . bject: Konus got it too!

>Date: Mon, 22 Sep 1997 12:15:53 -0400 (EDT)
>From: BUTTERWORTH@TGRS.GSFC.NASA.GOV
>Subject: Konus got it too!
>To: cline@apache.gsfc.nasa.gov
>
>Tom,
>
>We triggered at 09:07:50.908 in the North-facing detector! The event
>lasted 25 seconds, with lots of structure. It was hard - barely visible
>below 50 keV. So there's a good 3-point IPN in existence again. CONGRATS!
>
>Paul.
>
>
>
>PS I'll have all the numbers for you by mid-afternoon.
>
>
>
>--
>From: LHEAVX::SMTP%"cline@apache.gsfc.nasa.gov" 22-SEP-1997 12:07:27.42
>To: BUTTERWORTH
>CC:
    j: event
>
>Mime-Version: 1.0
>Content-Type: text/plain; charset="us-ascii"
>Date: Mon, 22 Sep 1997 12:08:41 -0400
>To: Butterworth@lheavx.gsfc.nasa.gov
>From: cline@apache.gsfc.nasa.gov (T L Cline)
>Subject: event
>
>Paul
>
>is there a way we can find out early this PM whether Konus saw the
>event (of 08:30 on Sep 15th)? The NEAR people are going bananas.
>
>TLC
>
>-- Thomas L. Cline ----- cline@apache.gsfc.nasa.gov
>
>

-- Thomas L. Cline ----- cline@apache.gsfc.nasa.gov

From SURASAK@SSLLES.MSFC.NASA.GOV Tue Sep 23 11:17:24 1997
Return-Path: <SURASAK@SSLMOR.msfc.nasa.gov>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id LAA29852; Tue, 23 Sep 1997 11:17:19 -0700
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id LAA27575; Tue, 23 Sep 1997 11:17:16 -0700
Date: Tue, 23 Sep 1997 13:17:10 -0500 (CDT)
From: SURASAK@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970923131710.2020cd00@SSLLES.MSFC.NASA.GOV>
Subject: Crossing Windows for BATSE Burst 6382
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6382
EVENT OF 1997 SEP 15 DAY OF YEAR=258
EVENT CROSSING TIME AT BATSE : 56356. S. OR 15:39:16.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 239.000 62.000
BATSE PEAK COUNTING RATE: 6500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 15/ 9/ 97 IS:
RA= 163.578 DEC= 17.570 DIST= 6.217 AU
BATSE-ULYSSES DISTANCE = 930024252. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=112.28 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1176.33 SECS.
CROSSING TIME AT ULYSSES IS 55180. S. OR 15:19:39 +/- 530.51 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 15/ 9/ 97 IS:
RA= 227.733 DEC= -18.765 DIST= 1.717 AU
MARS-BATSE DISTANCE = 256799008. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 98.74 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -130.12 SECS.
CROSSING TIME AT MARS IS 56226. S. OR 15:37:05 +/- 145.02 SECONDS

BATSE BURST TRIGGER

NO.: 6382

TIME: TJD=0706 SECONDS=56356

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=147.5 AZIMUTH=182.5 ERROR=6.23 DEGREES

COMMENTS:
GRB. IN GAP DATA. DUR<0.064S. SINGLE PULSE. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6382	970915	10706	56356	6500	239	+62	.064

BATSE BURST# 6382

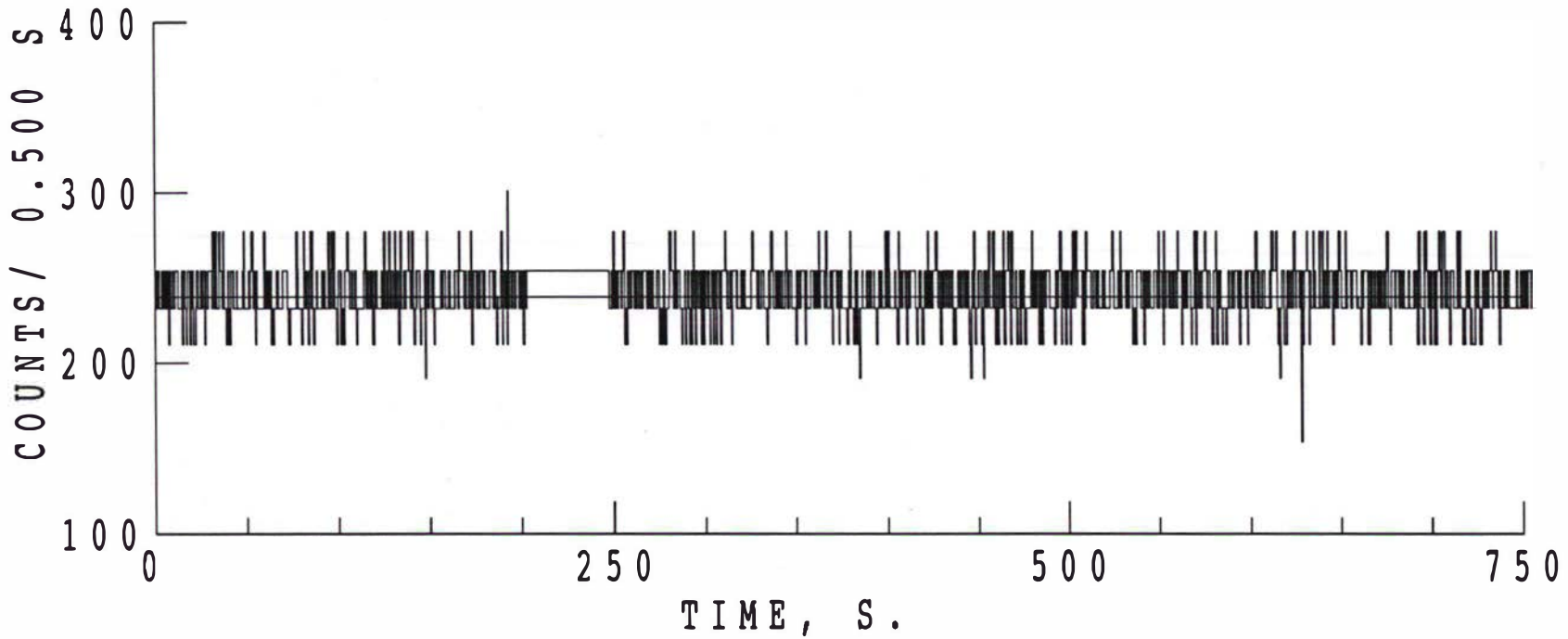
ULYSSES RT 15/ 1/98

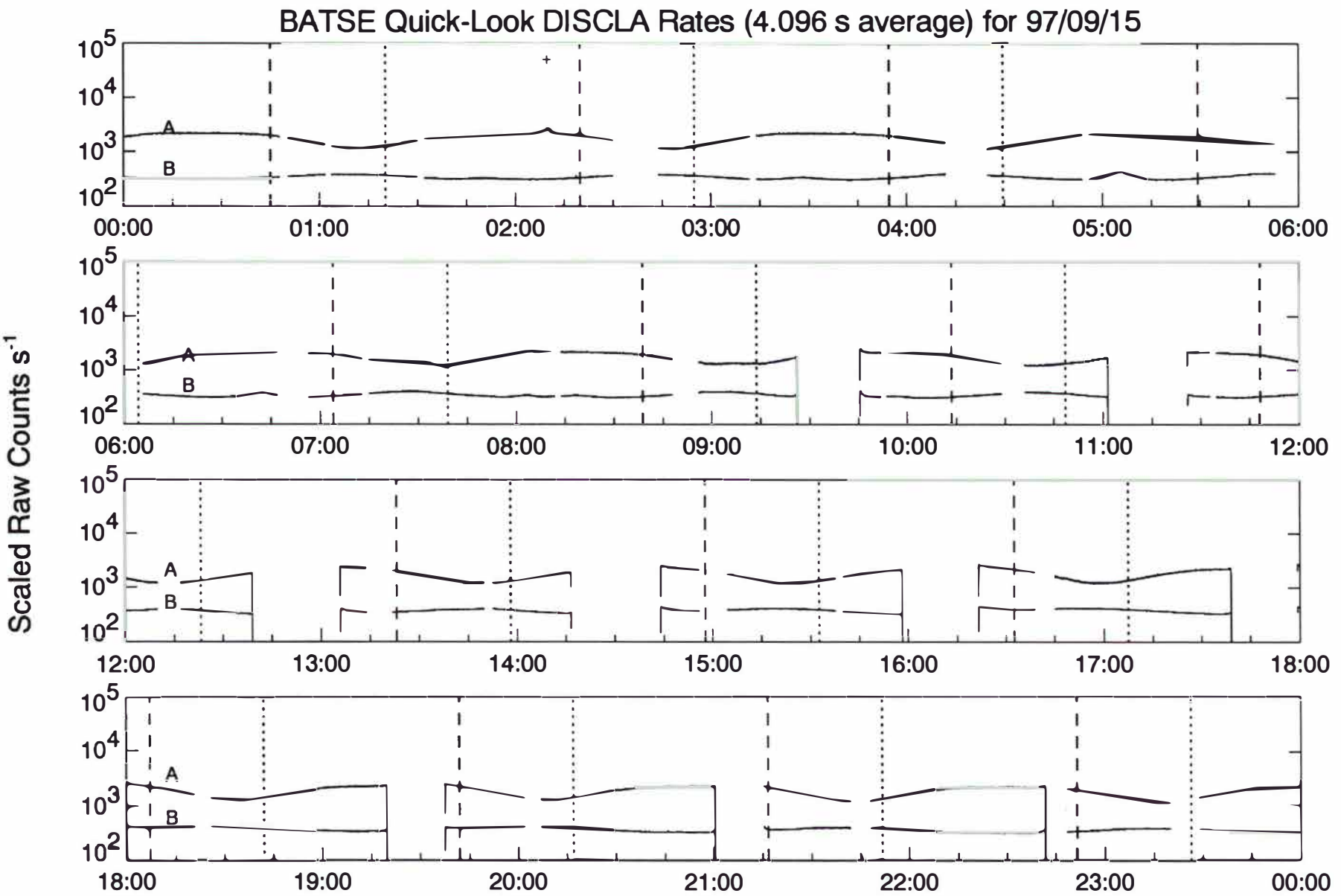
15/ 9/97 54648.094 s

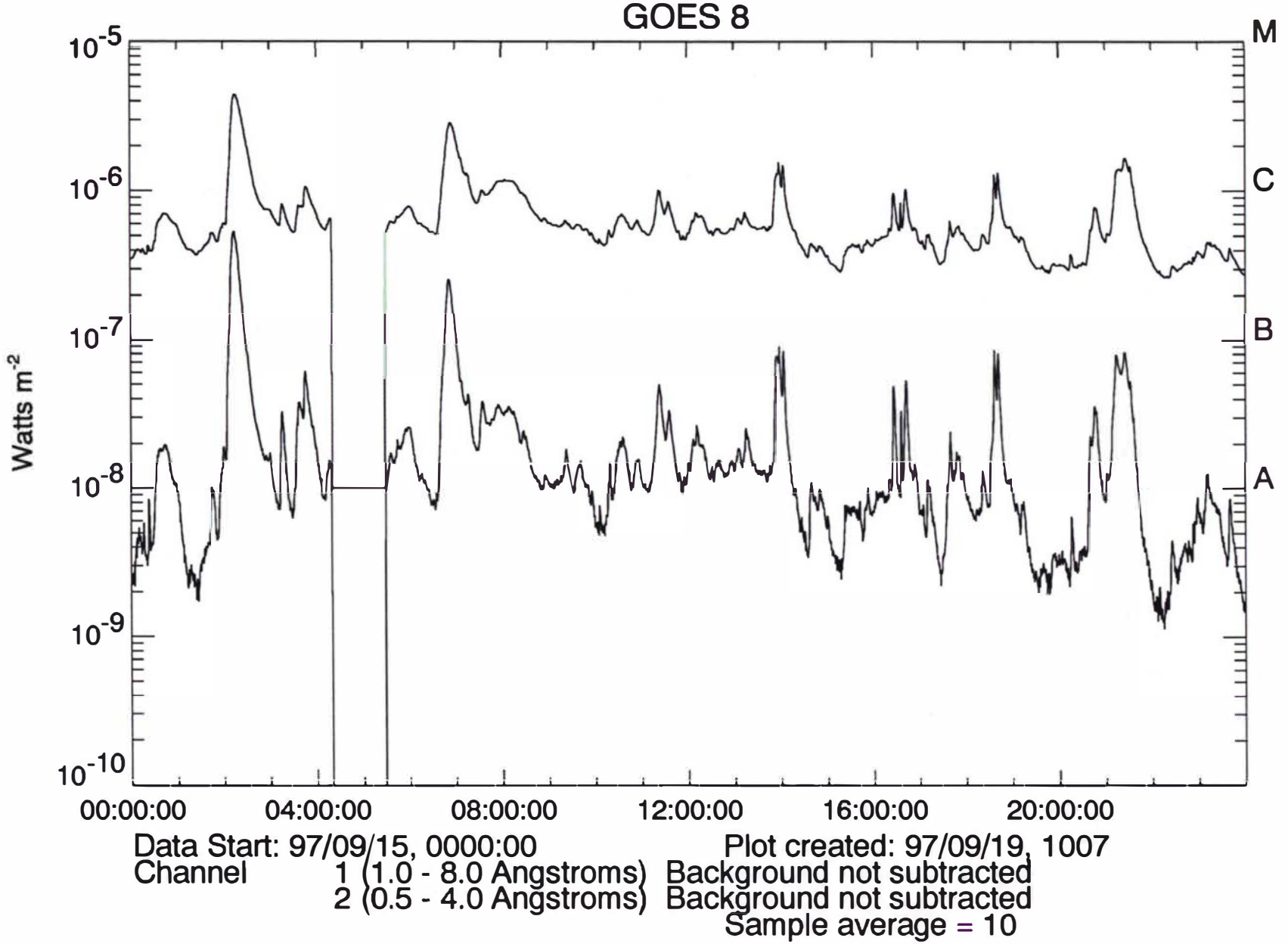
0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

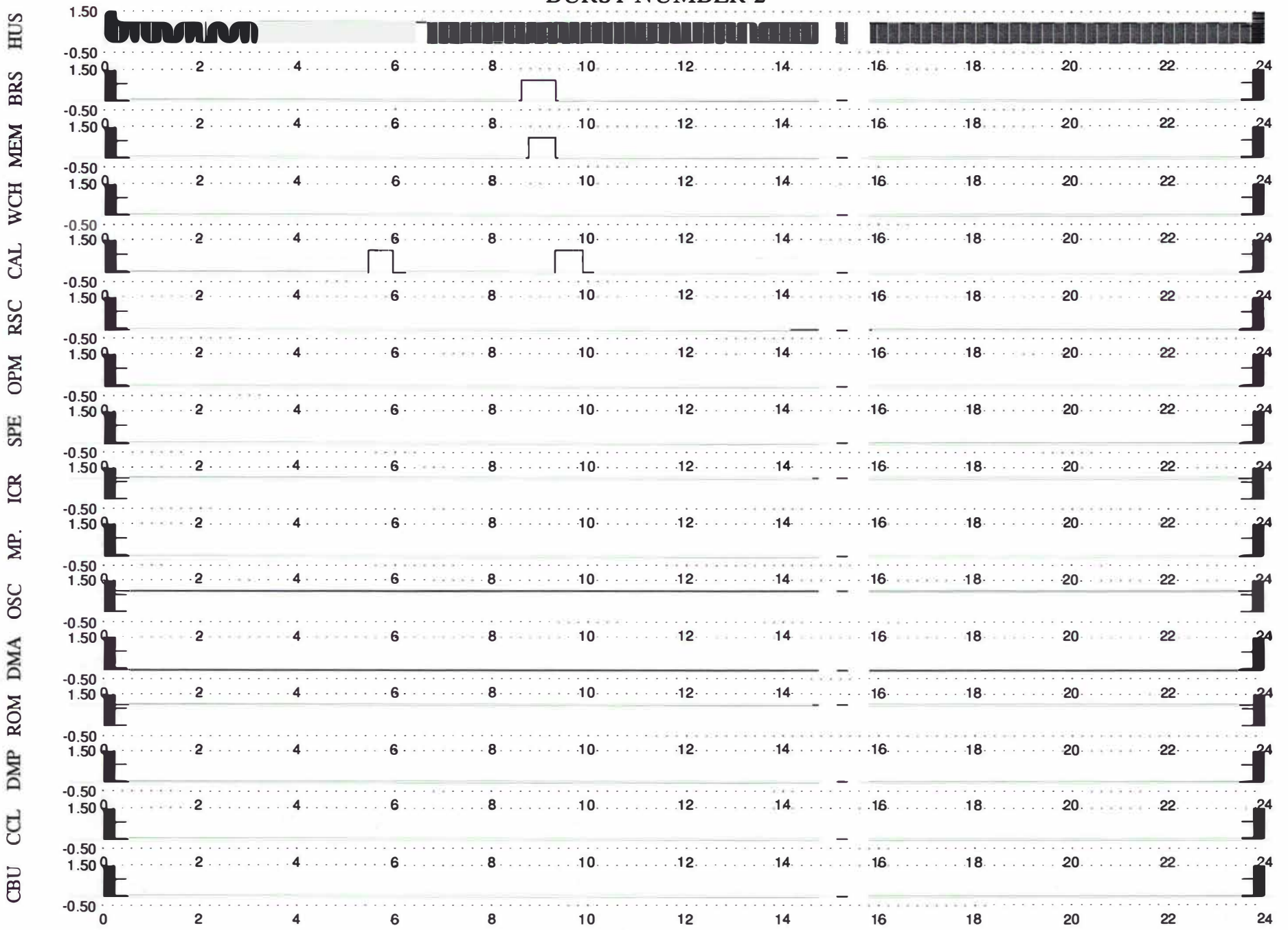
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS




BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/15
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
19:00
20:00
21:00
22:00
23:00
Current Time: 97/09/19, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare


GOES 8
M
C
B
A
Watts m-2
10-5
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/15, 0000:00
Plot created: 97/09/19, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

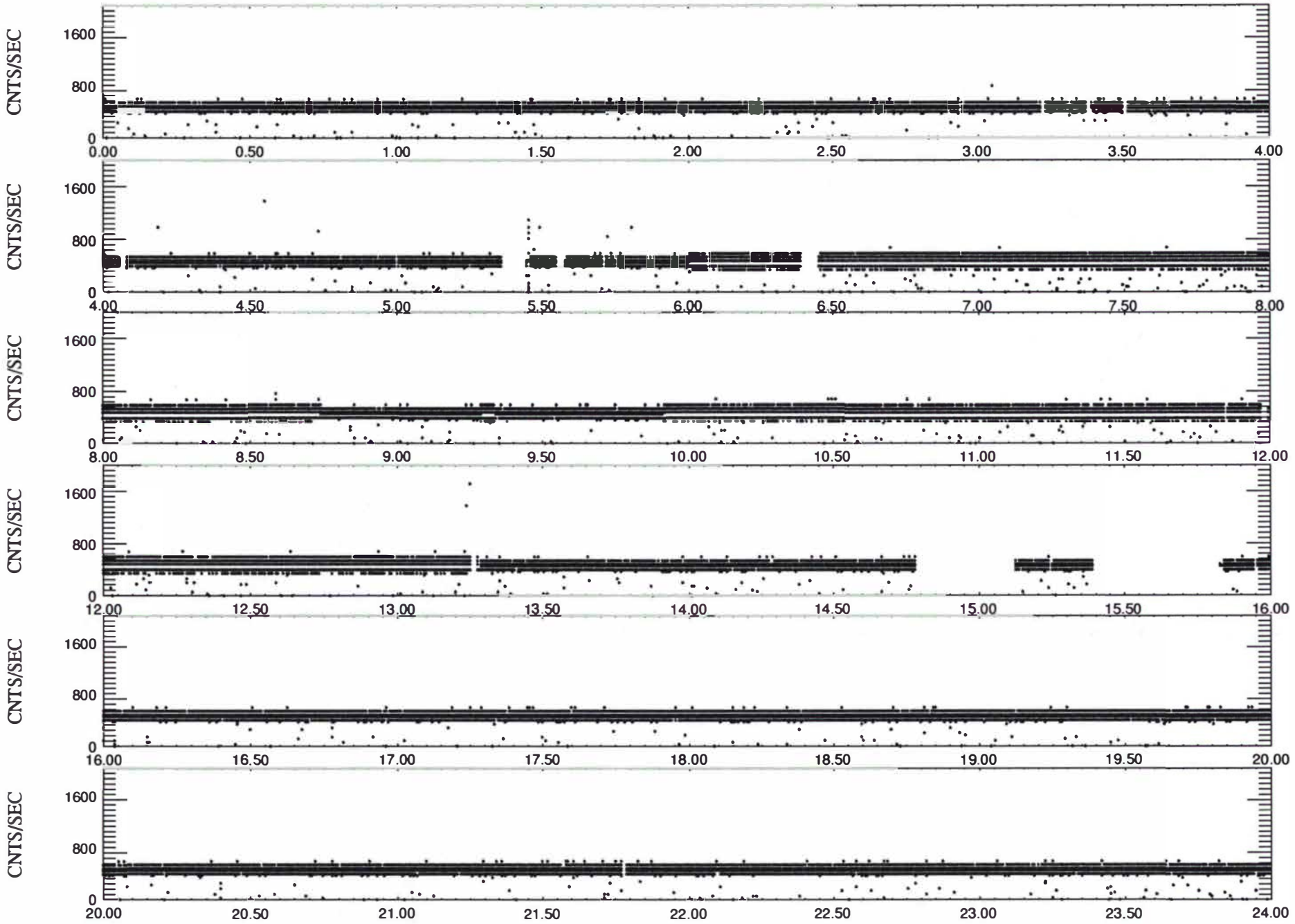
BURST NUMBER 2



UNIVI AL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 258, year 1997 to day 258, year 1997 1/14/98

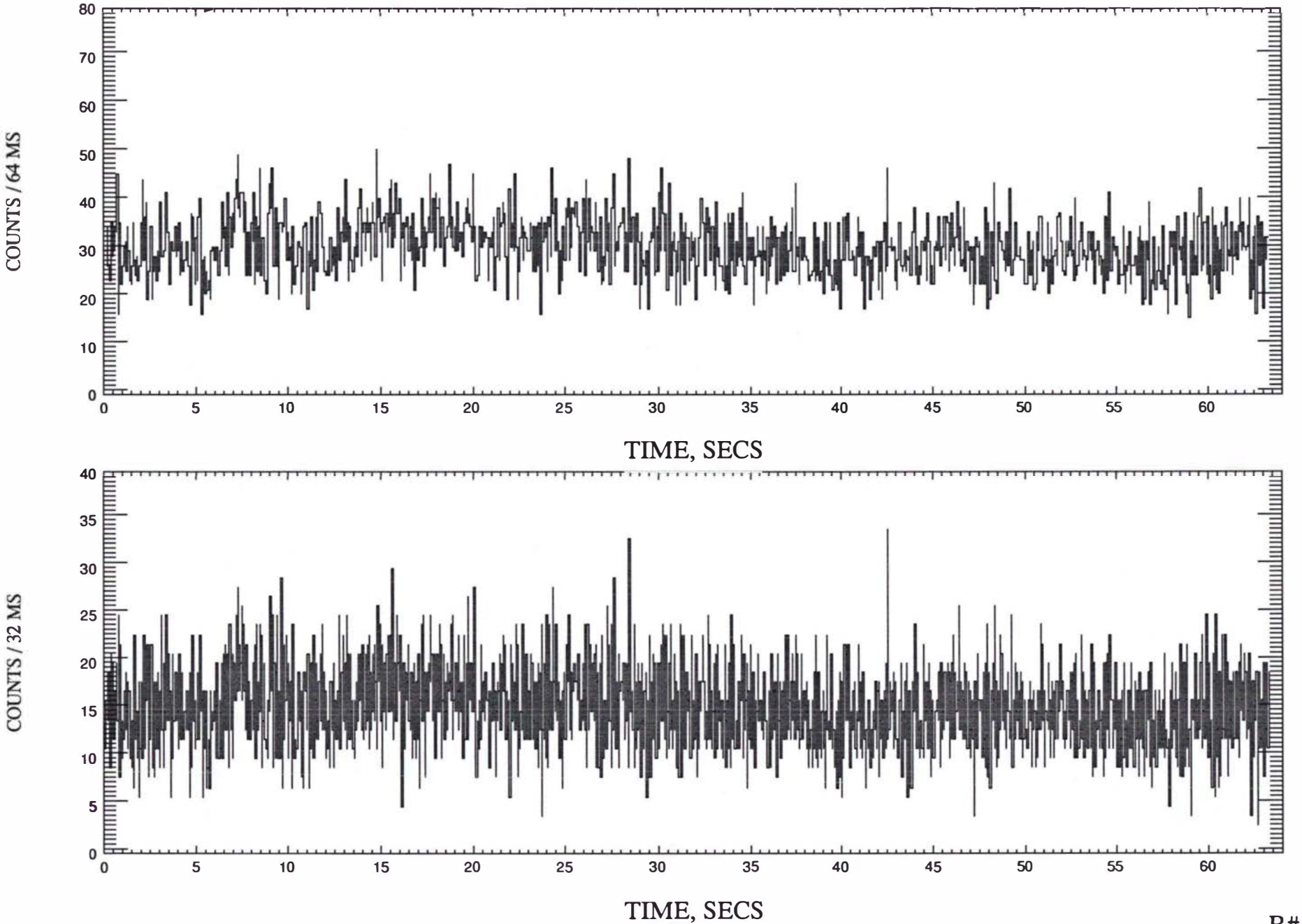
CALIBRATION DATA INCLUDED



UNIV' 'AL TIME

HUS 2A TRIGGERED DATA EDR day 258, year 1997 1/14/98

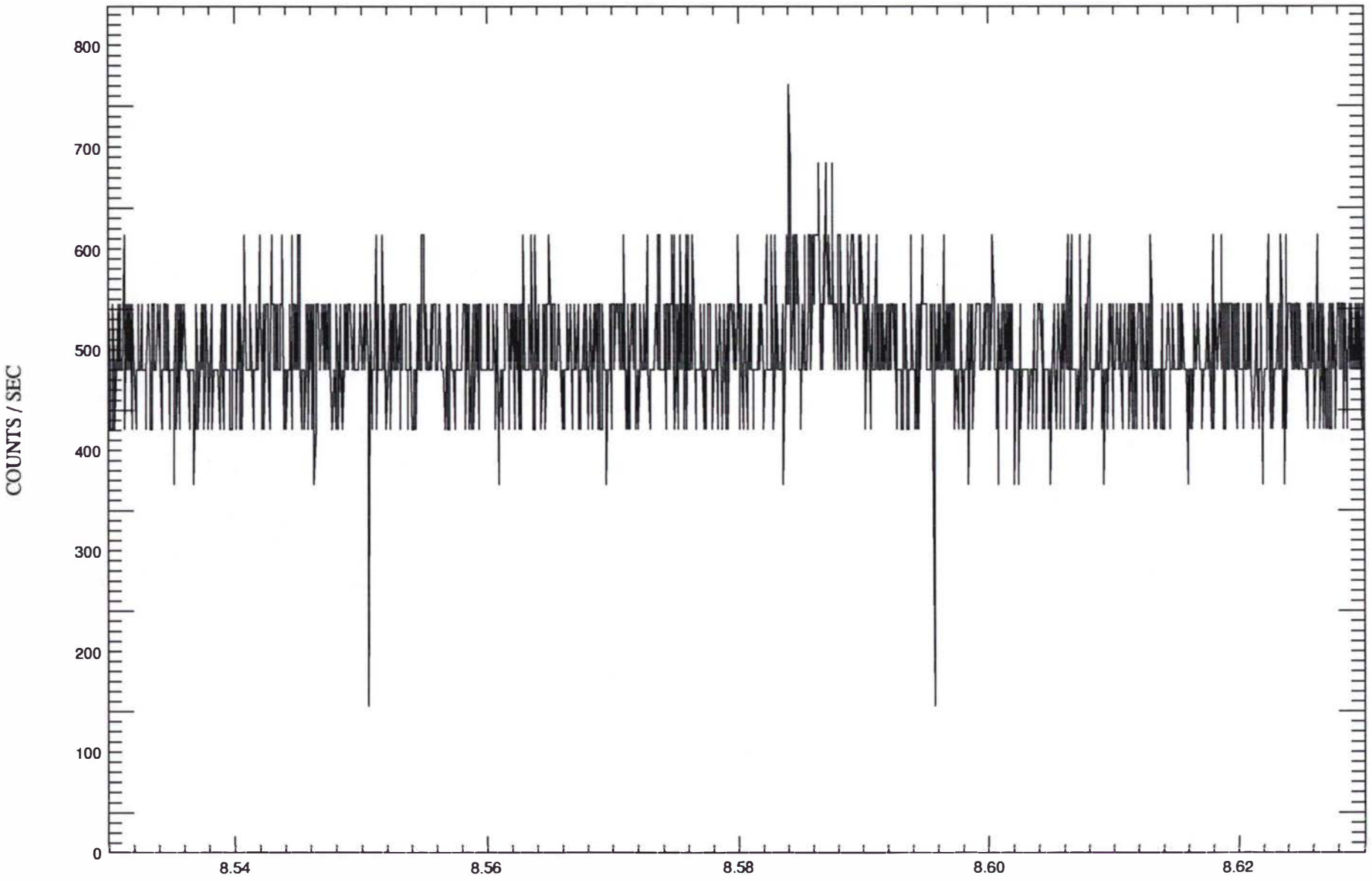
Burst Counter 2 at UT= 8.584185206095 h=30903.067 s 08:35:03.067



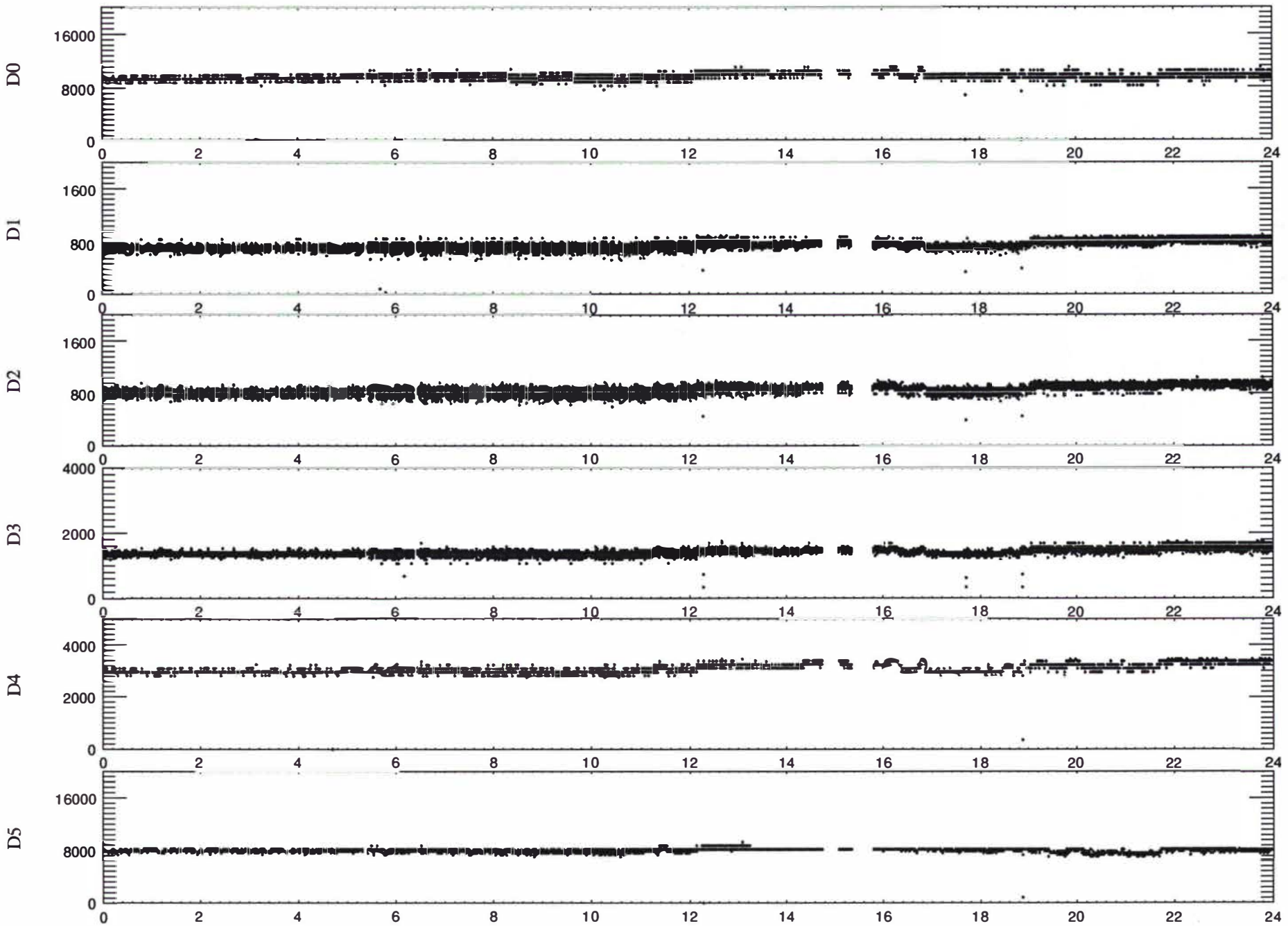
B# 1

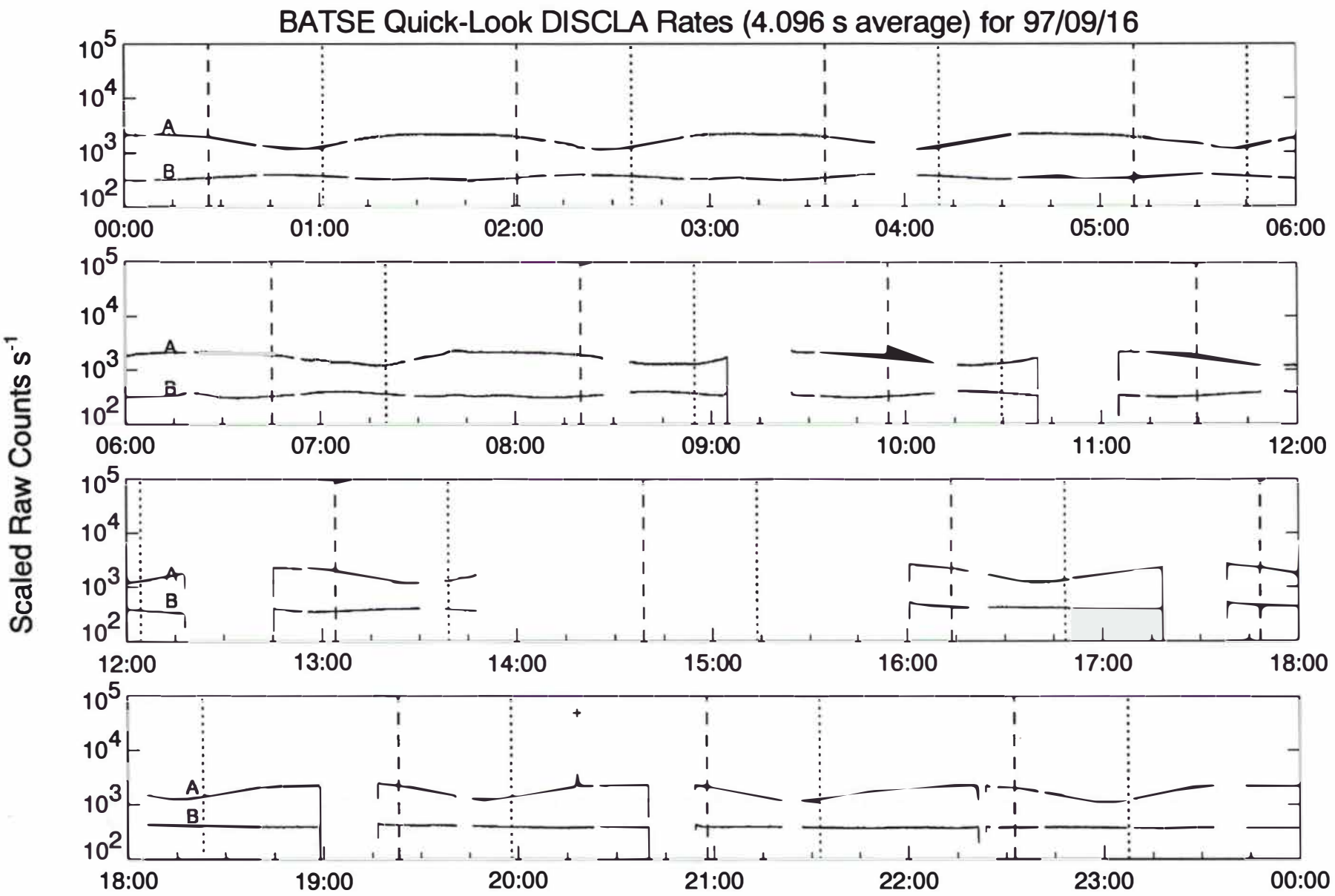
HUS 2A, MODE 1, NOT AVERAGED EDR day 258, year 1997 to day 258, year 1997 1/14/98

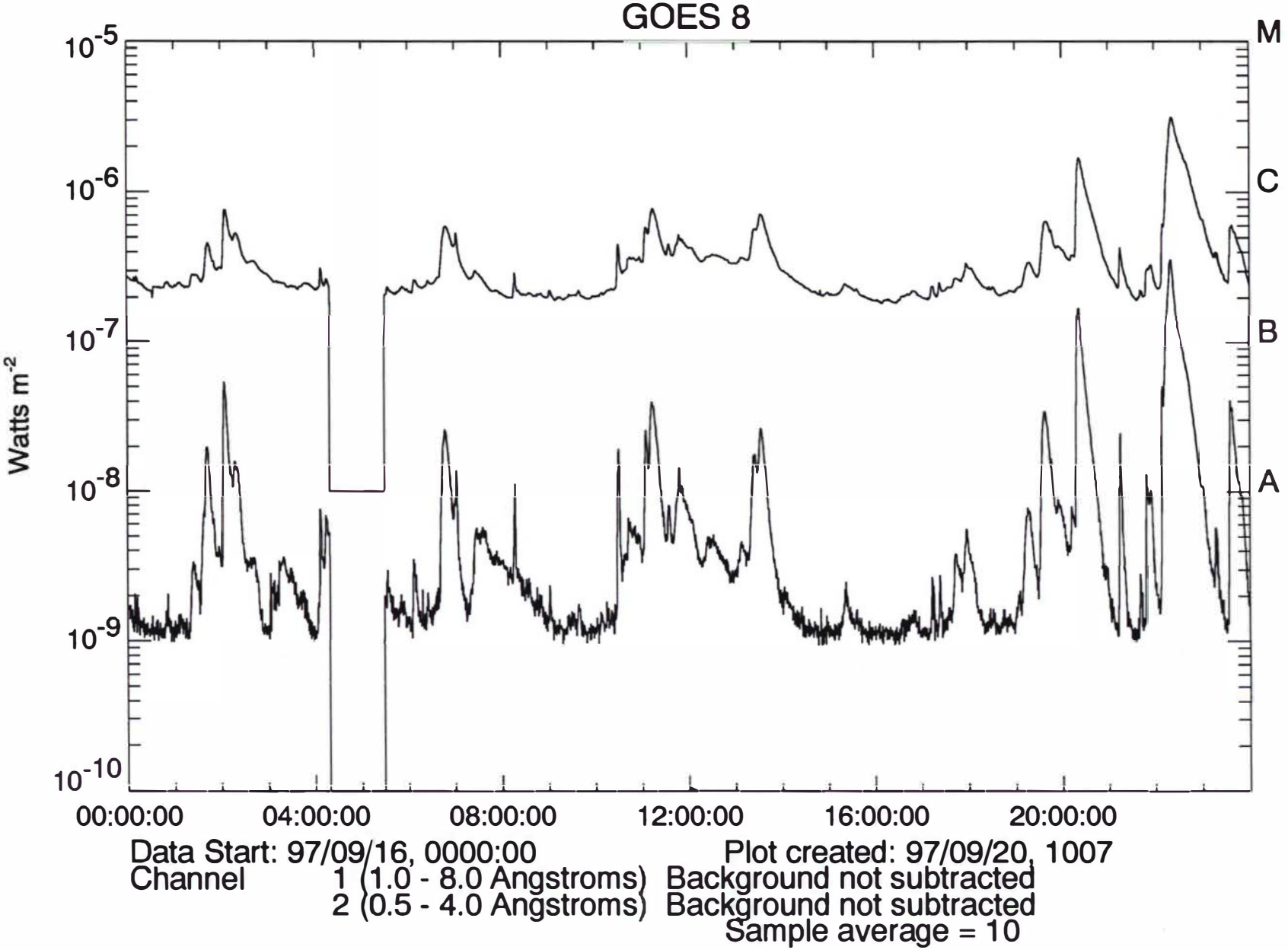
CALIBRATION DATA INCLUDED



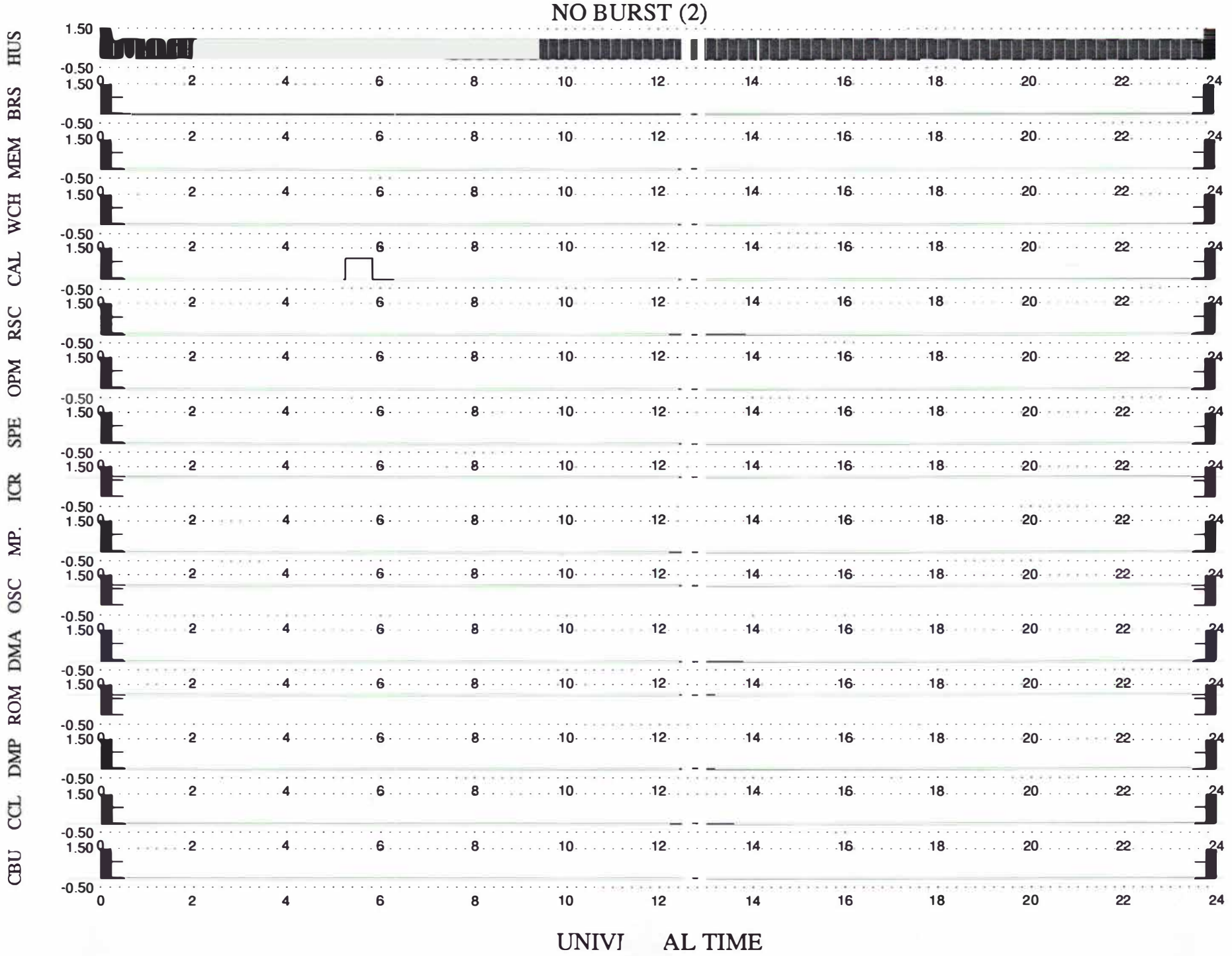
HUS 2B COUNTS / SEC EDR day 258, year 1997 to day 258, year 1997 1/14/98




BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/16
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/20, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare

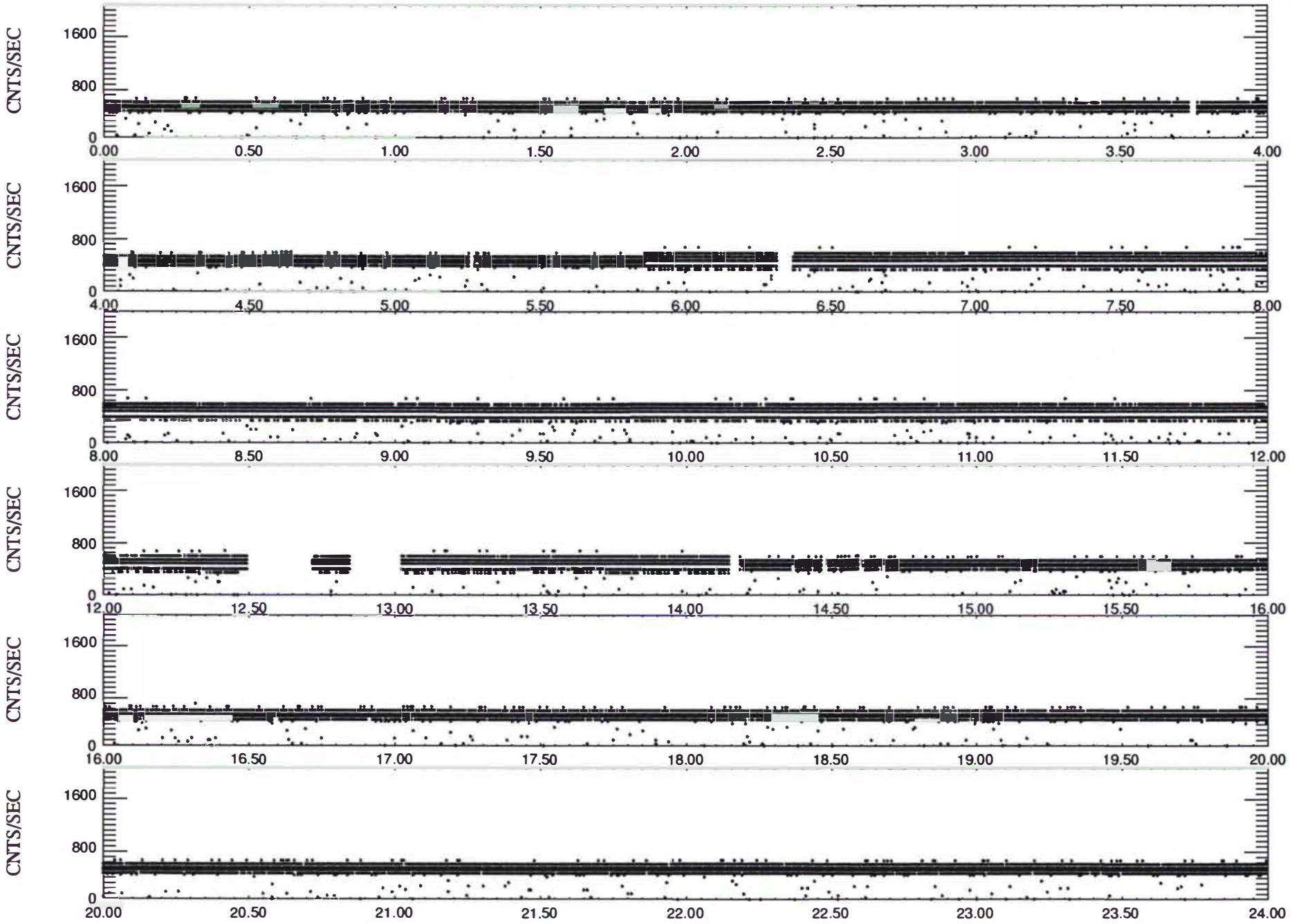

GOES 8
M
C
B
A
Watts m-2
10-5
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/16, 0000:00
Plot created: 97/09/20, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 259, year 1997 to day 259, year 1997 1/14/98



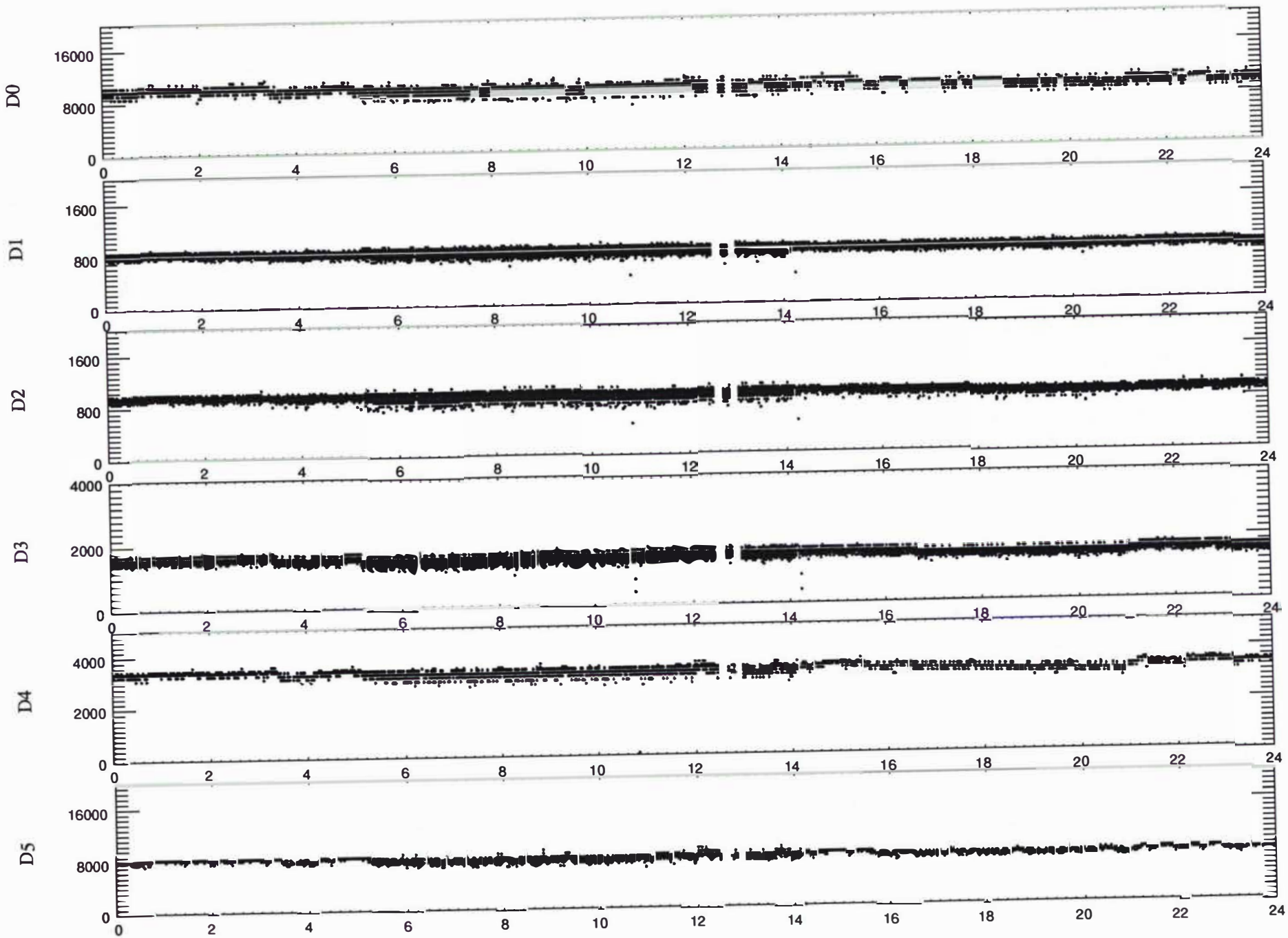
HUS 2A, MODE 1, NOT AVERAGED EDR day 259, year 1997 to day 259, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV[illegible]AL TIME

HUS 2B COUNTS / SEC EDR day 259, year 1997 to day 259, year 1997 1/14/98



From RICHARDSON@SSLLES.MSFC.NASA.GOV Mon Sep 22 16:55:46 1997
From: RICHARDSON@SSLLES.MSFC.NASA.GOV
Date: Mon, 22 Sep 1997 18:54:31 -0500 (CDT)
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6383 Sep 17

TIME: TJD=0708 SECONDS=1485

TYPE: SGR SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=84.7 AZIMUTH=264.5 ERROR=1.4 DEGREES

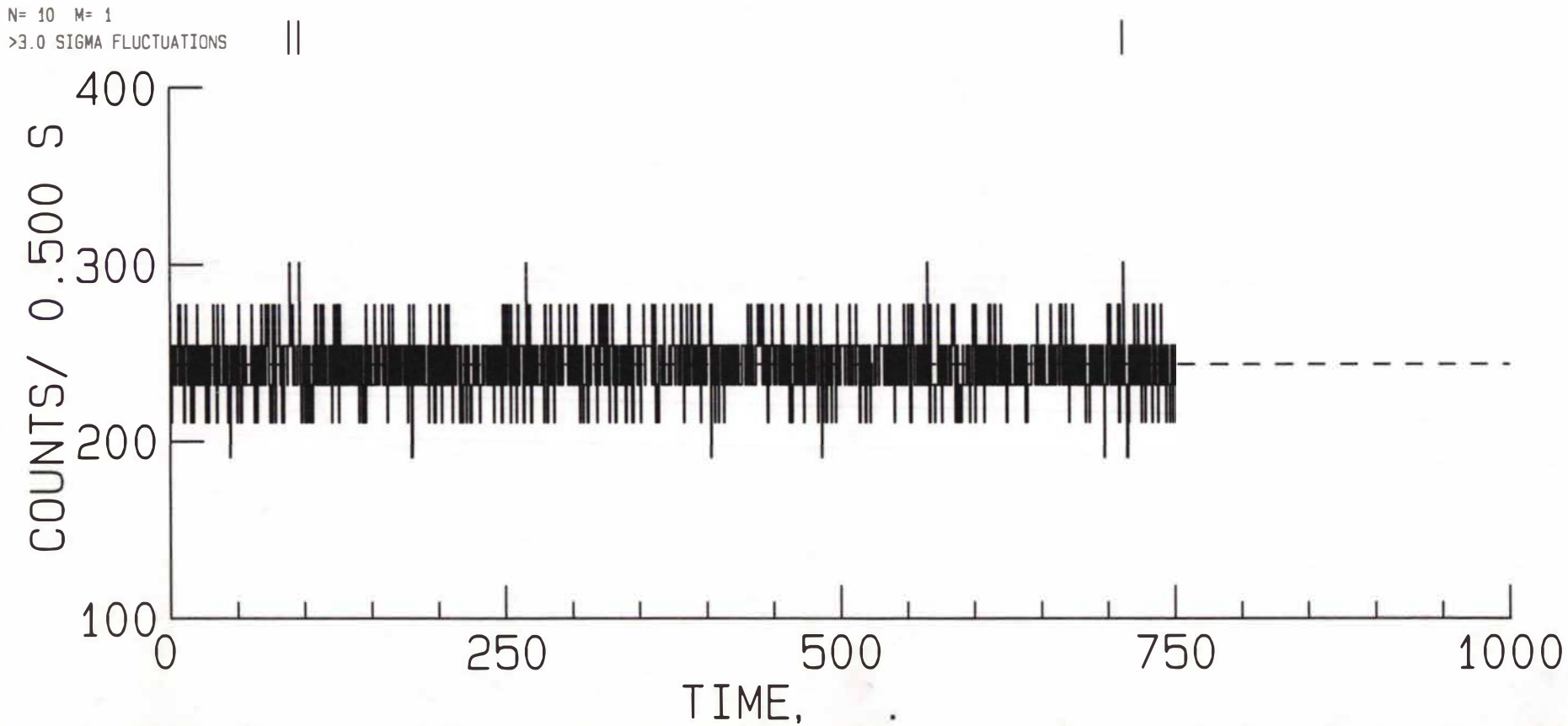
COMMENTS:
SGR. SINGLE SPIKE. DURATION APPROX. = 0.5 SEC. SLIGHTLY VISIBLE ABOVE 100KEV.

ULYSSES RT

27/ 9/97

17/ 9/97 2124.448 s

22- 147 keV

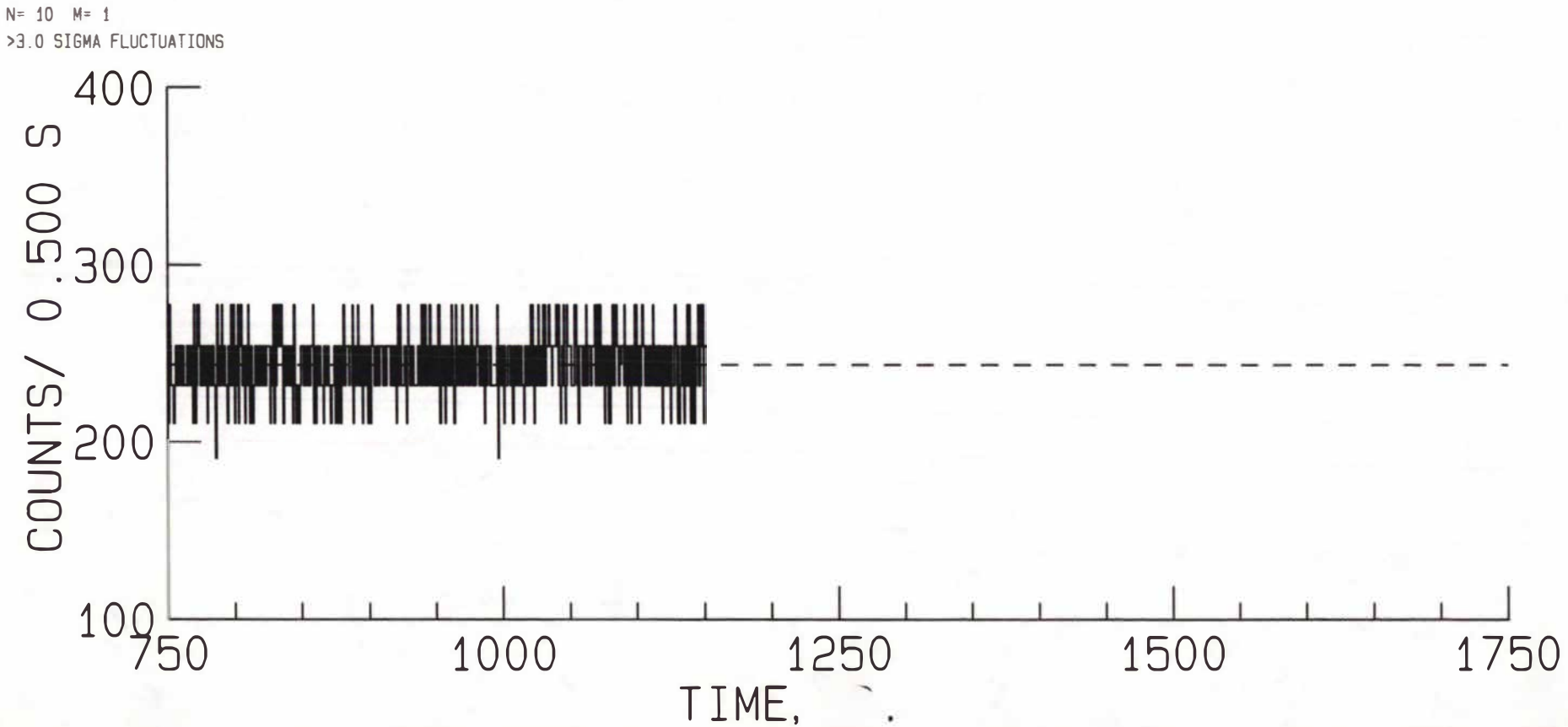


ULYSSES RT

27/ 9/97

17/ 9/97 2124.448 s

22- 147 keV

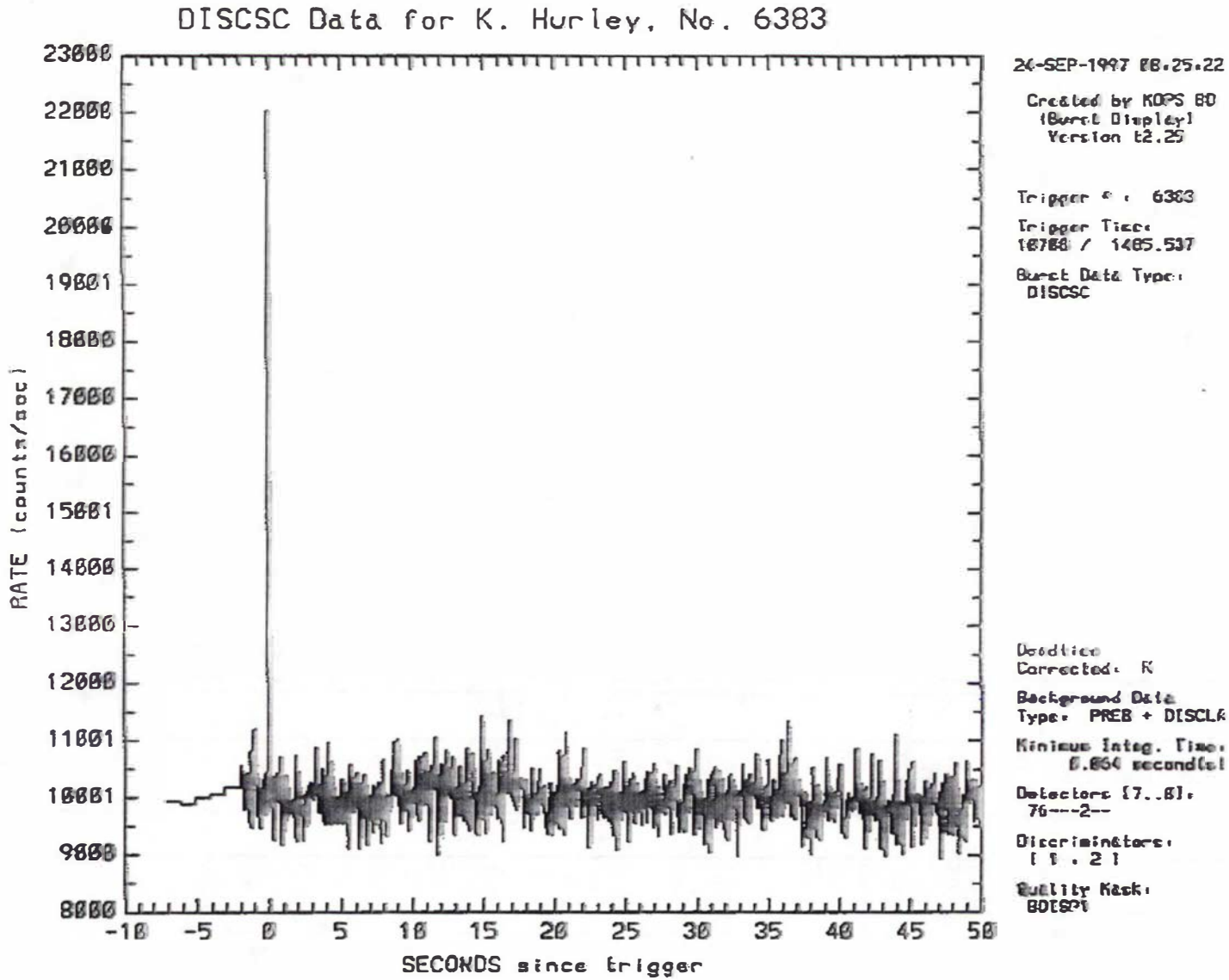


BATSE 17/09/97 1485.537

25- 100 keV

COUNTS/0.064 S

27/ 9/97


DISCSC Data for K. Hurley, No. 6383
RATE (counts/sec)
23000
22000
21000
20000
19001
18000
17000
16000
15001
14000
13000
12000
11001
10001
9000
8000
-10
-5
0
5
10
15
20
25
30
35
40
45
50
SECONDS since trigger
24-SEP-1997 08:25:22
Created by KONUS BD
(Burst Display)
Version 12.25
Trigger #: 6383
Trigger Time:
18768 / 1485.537
Burst Data Type:
DISCSC
Deadtime
Corrected: N
Background Data
Type: PREB + DISCLA
Minimum Integ. Time:
0.064 second(s)
Detectors [7..0]:
76---2--
Discriminators:
[1 , 2]
Quality Mask:
BDISC1

From kouveliotou@eagles.msfc.nasa.gov Wed Sep 24 09:14 PDT 1997
From: kouveliotou@eagles.msfc.nasa.gov
Date: Wed, 24 Sep 1997 09:46:04 -0500
To: khurley@sunspot.ssl.berkeley.edu
ject: KONUS response on Sept 17 event
MS-To: HURLEY

From: SMTP%"golen@mz.ioffe.rssi.ru" 24-SEP-1997 09:24:18.74
To: kouveliotou@eagles.msfc.nasa.gov
CC:
Subj: Re: SGR

Dear Chrissa,

Konus-Wind didn't see any event on September 17 near 1485s UT.

Best regards
Sergei

================== RFC 822 Headers ==================
Return-Path: golen@mz.ioffe.rssi.ru
Received: by eagles.msfc.nasa.gov (UCX V4.0 AXP);
Wed, 24 Sep 1997 09:23:44 -0500
Received: from uucp@localhost by relay.ioffe.rssi.ru (8.8.5/Serv-2.12-AS) with UUCP
id SAA27786 for kouveliotou@eagles.msfc.nasa.gov; Wed, 24 Sep 1997 18:19:36 +0400 (MSD
Received: by mz.ioffe.rssi.ru (dMail for DOS v1.23, 15Jun94);
Wed, 24 Sep 1997 18:34:47 +0400
To: kouveliotou@eagles.msfc.nasa.gov
References: <97092408514043@eagles.msfc.nasa.gov>
sage-Id: <AB7KIAquES@mz.ioffe.rssi.ru>
Organization: Physical Technical Institute, Space Research Department
Date: Wed, 24 Sep 1997 18:34:47 +0400 (MSD)
From: "Sergey V. Golenetskii" <golen@mz.ioffe.rssi.ru>
X-Mailer: dMail [Demos Mail for DOS v1.23]
Subject: Re: SGR
Lines: 7

From RICHARDSON@SSLLES.MSFC.NASA.GOV Mon Sep 22 17:07:12 1997
Date: Mon, 22 Sep 1997 19:06:41 -0500 (CDT)
From: RICHARDSON@SSLLES.MSFC.NASA.GOV
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6384

TIME: TJD=0708 SECONDS=62926

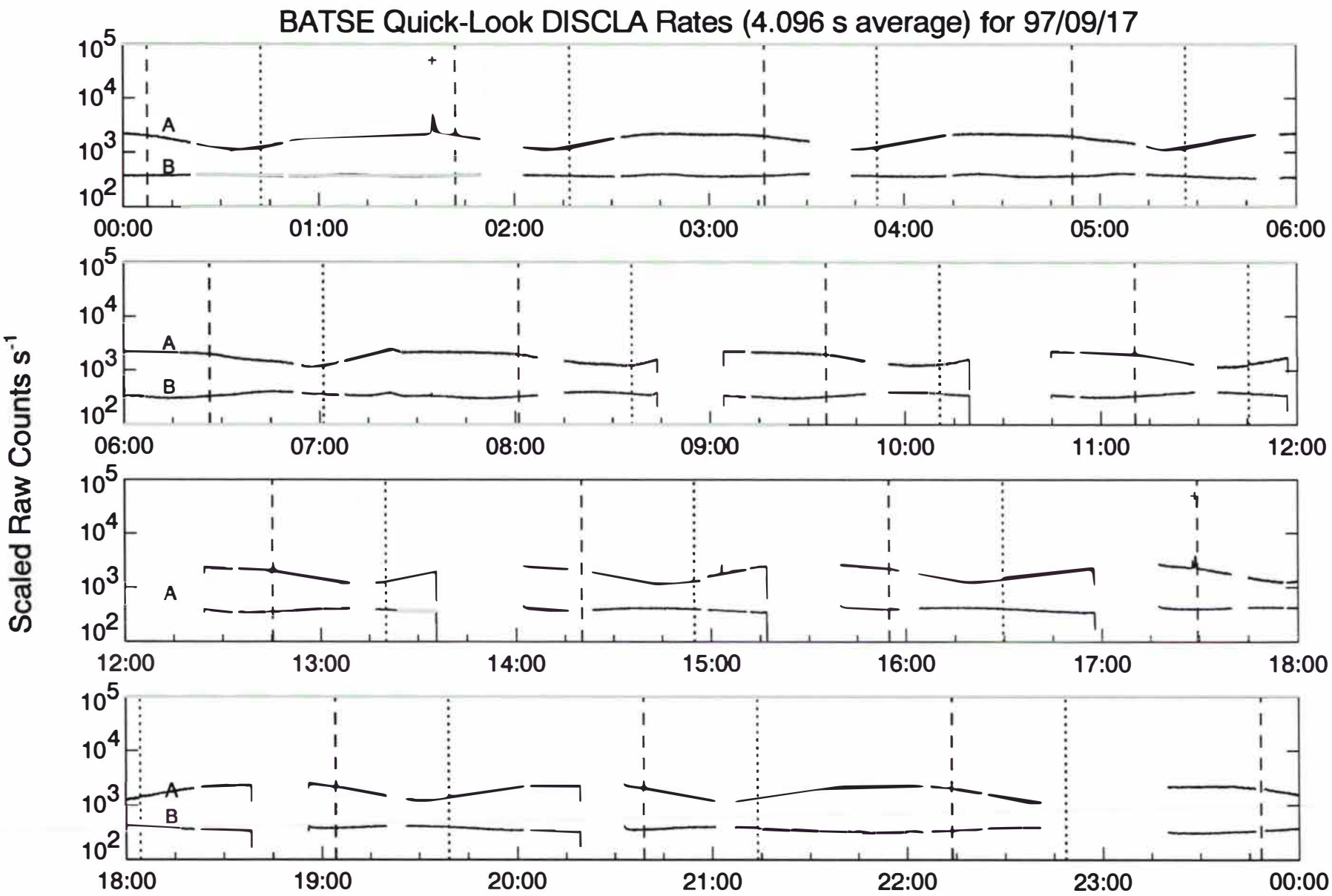
TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

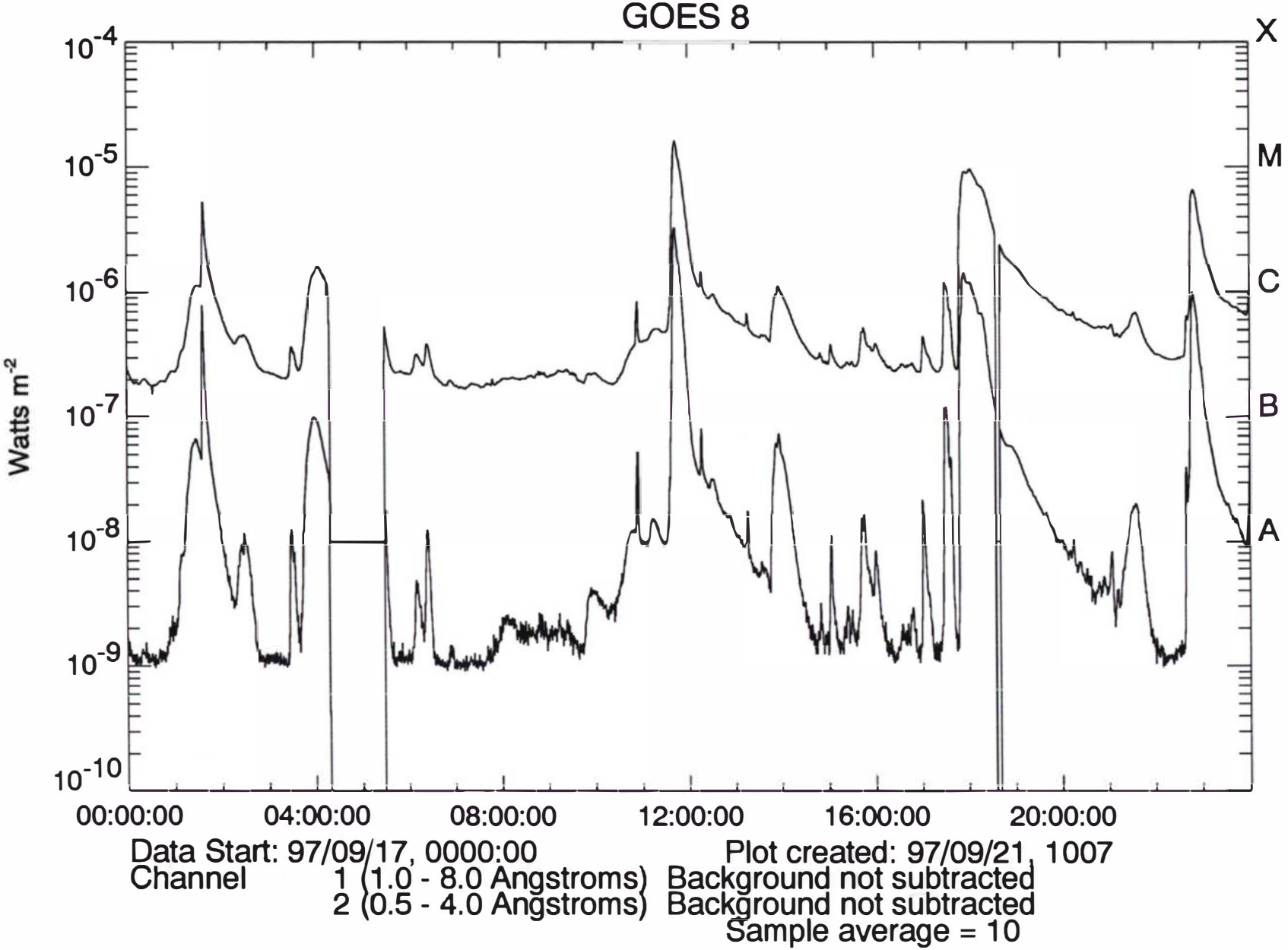
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=138.1 AZIMUTH=349.7 ERROR=1.5 DEGREES

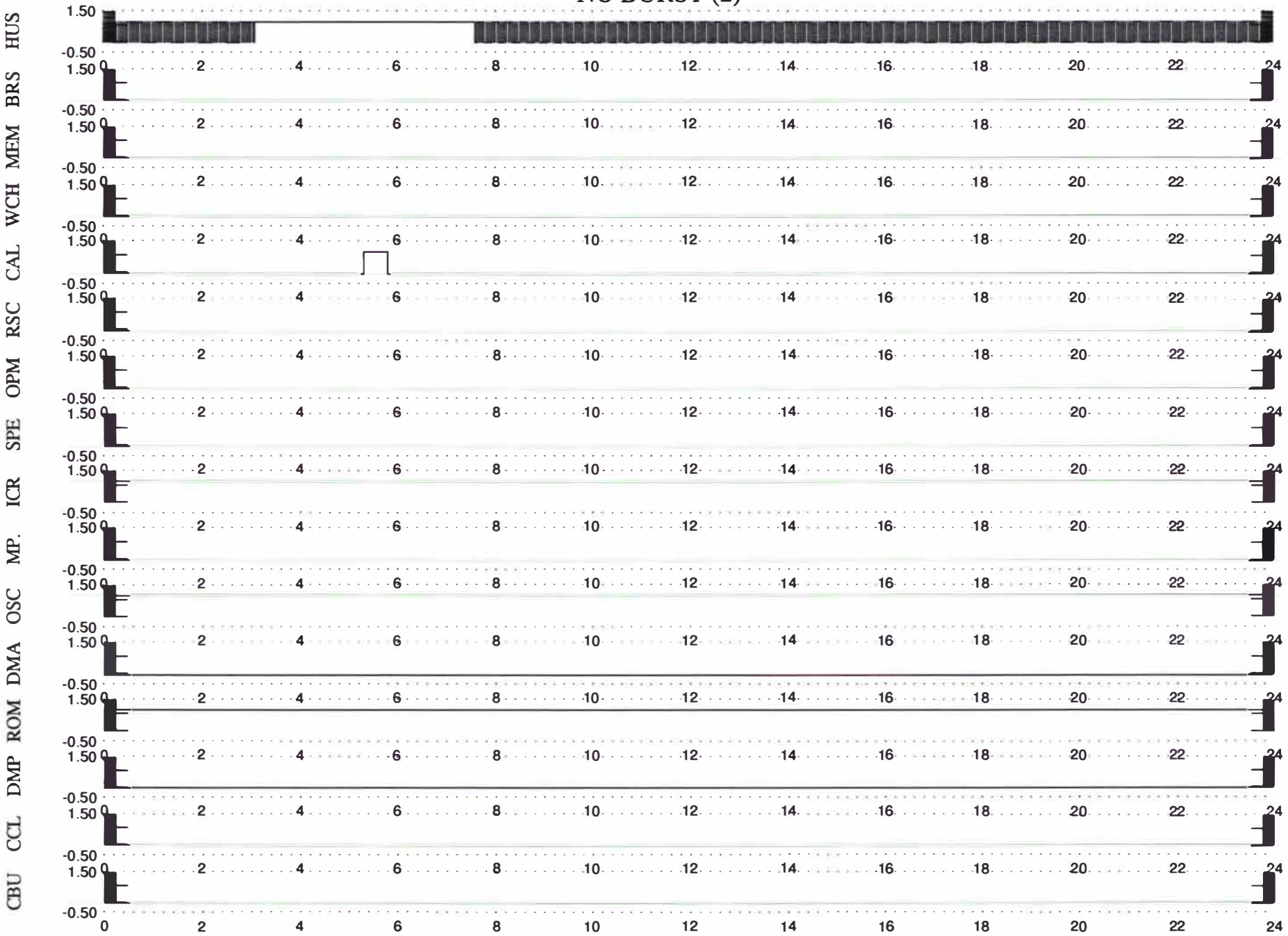
COMMENTS:
SOLAR FLARE. GOES C1.2, OPTICAL SF. MULTIPLE PULSES, STARTS AT APPROX. T-60 SEC., ENDS AT APPROX. T + 40SEC. BRIGHTEST MAX AT APPROX. T+18 SEC.
NOT VISIBLE ABOVE 100KEV.


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/17
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/21, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare


GOES 8
X
M
C
B
A
Watts m-2
10-4
10-5
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/17, 0000:00
Plot created: 97/09/21, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 260, year 1997 to day 260, year 1997 1/14/98

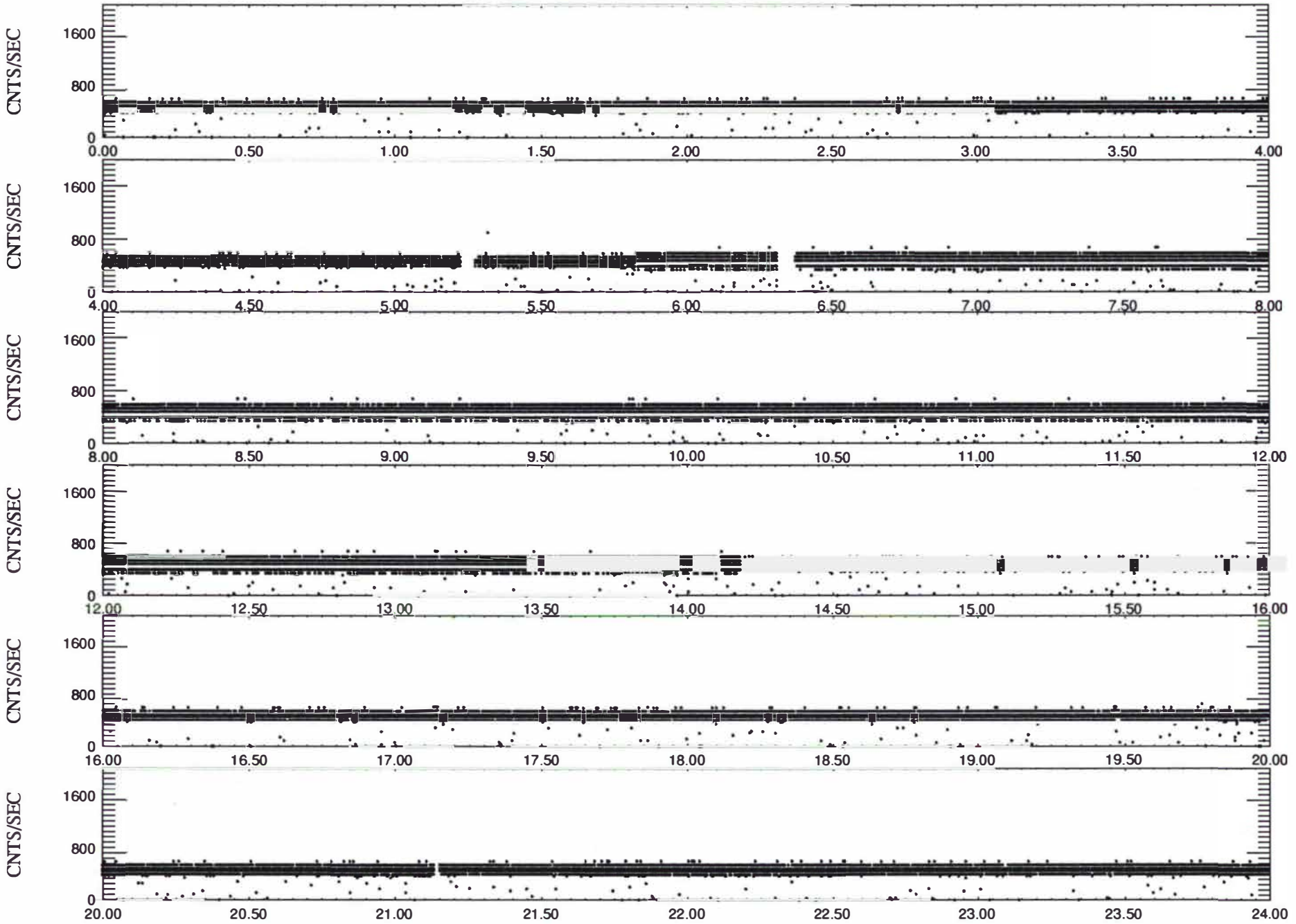
NO BURST (2)



UNIVI AL TIME

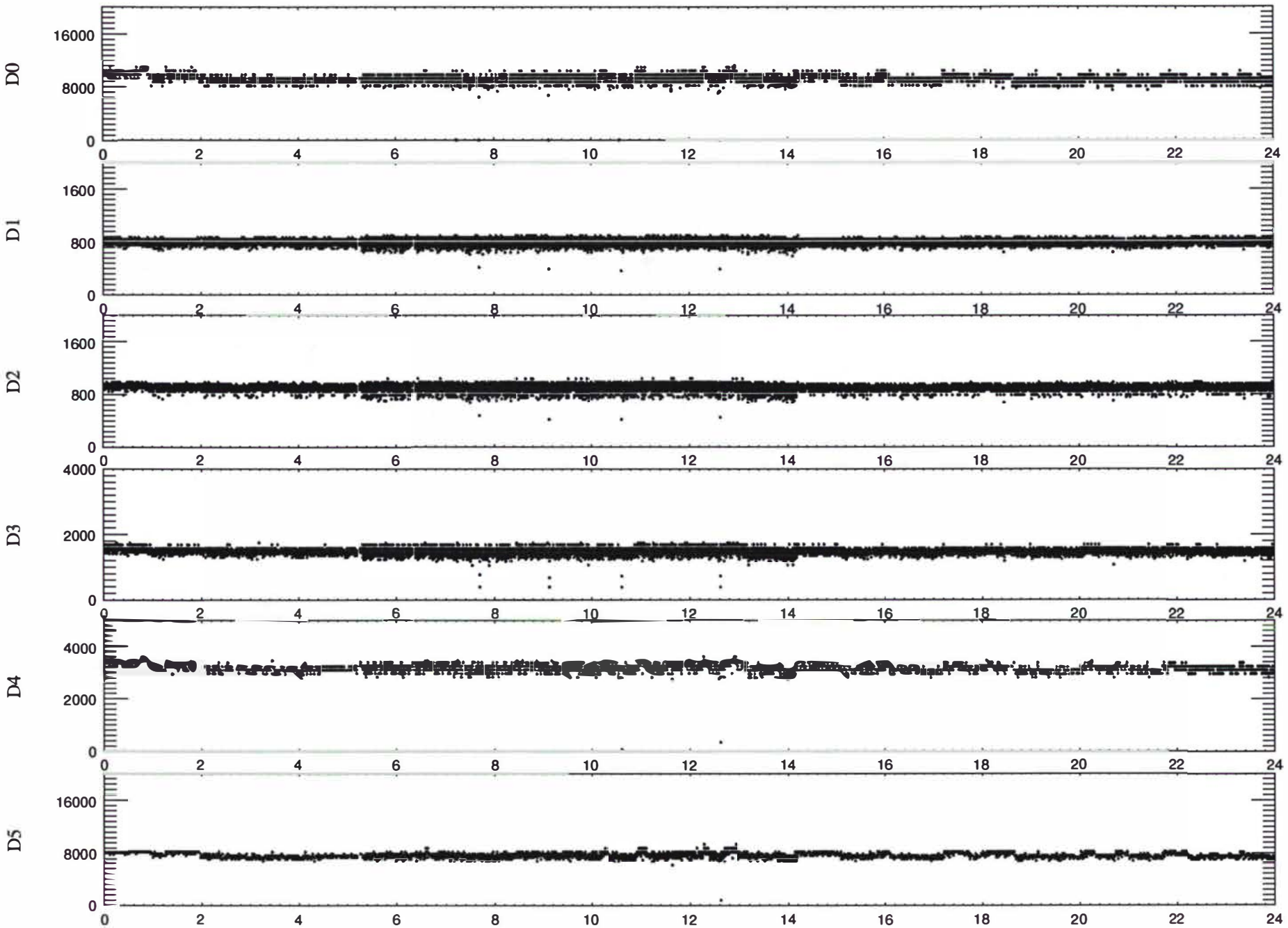
HUS 2A, MODE 1, NOT AVERAGED EDR day 260, year 1997 to day 260, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV[illegible]AL TIME

HUS 2B COUNTS / SEC EDR day 260, year 1997 to day 260, year 1997 1/14/98



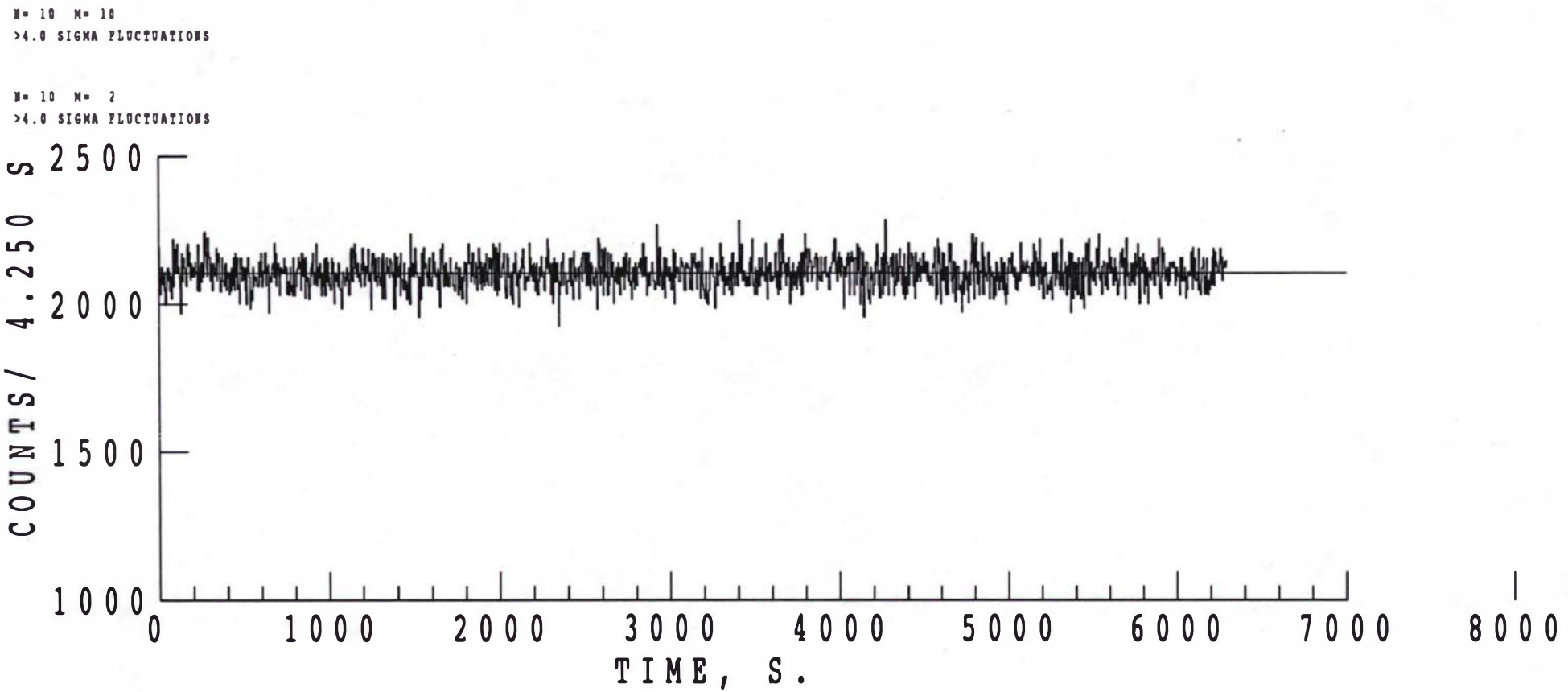
KONUS

ULYSSES RT 04/02/00

18/09/97 25236.180 s

0.250 S INTERVALS REGROUPED BY 17

0- 0 keV



From RICHARDSON@SSLMOR.msfc.nasa.gov Thu Sep 25 07:35:21 1997
Return-Path: <RICHARDSON@SSLMOR.msfc.nasa.gov>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id HAA13367; Thu, 25 Sep 1997 07:35:20 -0700
From: RICHARDSON@SSLMOR.msfc.nasa.gov
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id HAA08703; Thu, 25 Sep 1997 07:35:15 -0700
Date: Thu, 25 Sep 1997 9:34:58 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970925093458.21406f5b@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6385
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6385
EVENT OF 1997 SEP 18 DAY OF YEAR=261
EVENT CROSSING TIME AT BATSE : 34886. S. OR 09:41:26.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 32.000 40.000
BATSE PEAK COUNTING RATE: 6500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 18/ 9/ 97 IS:
RA= 163.960 DEC= 17.312 DIST= 6.207 AU
BATSE-ULYSSES DISTANCE = 928601764. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 72.68 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 922.12 SECS.
CROSSING TIME AT ULYSSES IS 35808. S. OR 09:56:48 +/- 577.39 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 18/ 9/ 97 IS:
RA= 229.801 DEC= -19.324 DIST= 1.731 AU
MARS-BATSE DISTANCE = 259004784. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 25.71 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 778.40 SECS.
CROSSING TIME AT MARS IS 35664. S. OR 09:54:24 +/- 76.90 SECONDS

BATSE BURST TRIGGER

NO.: 6385

TIME: TJD=0709 SECONDS=34886

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

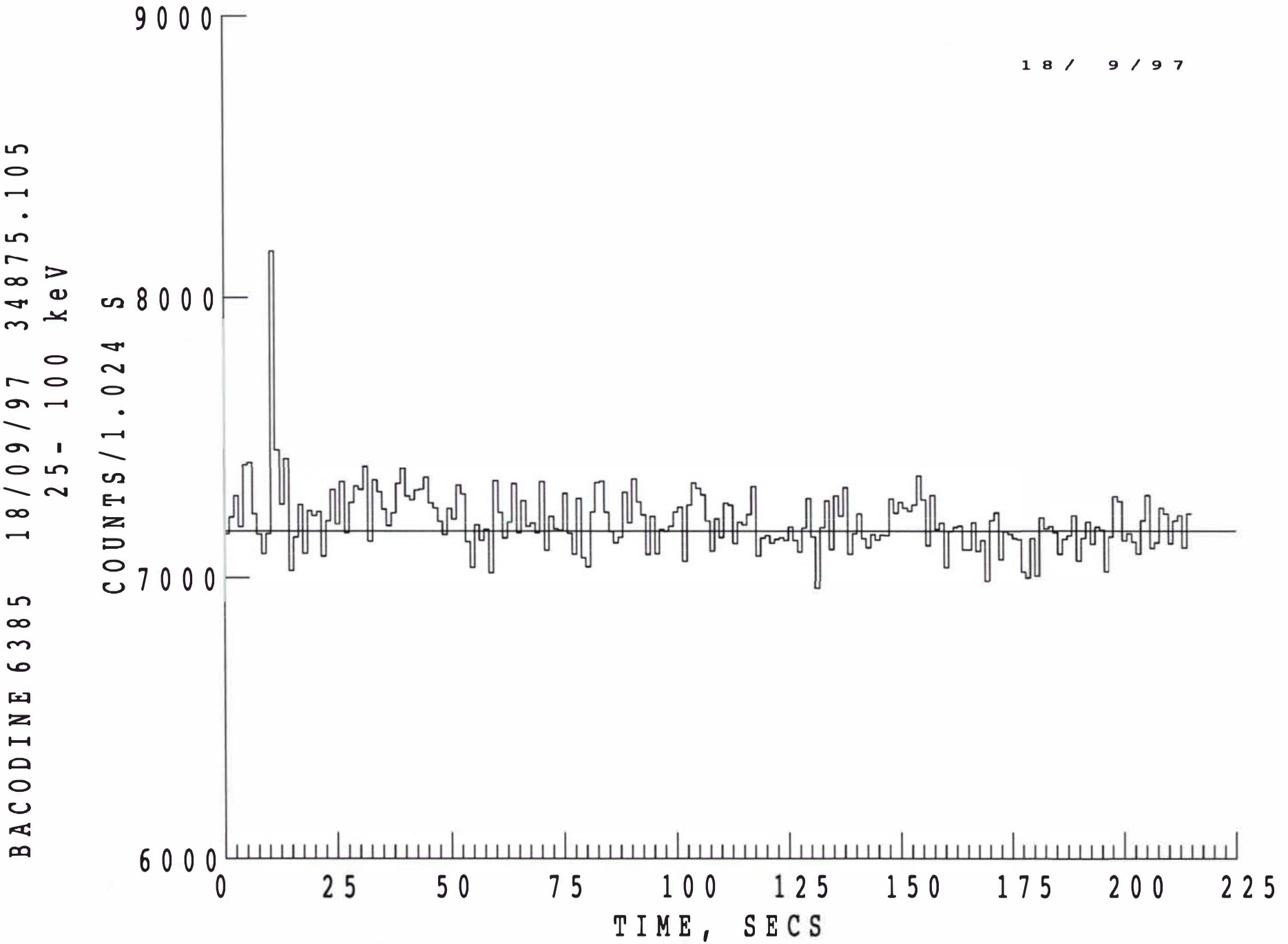
SIGNIFICANCE: SIGMA

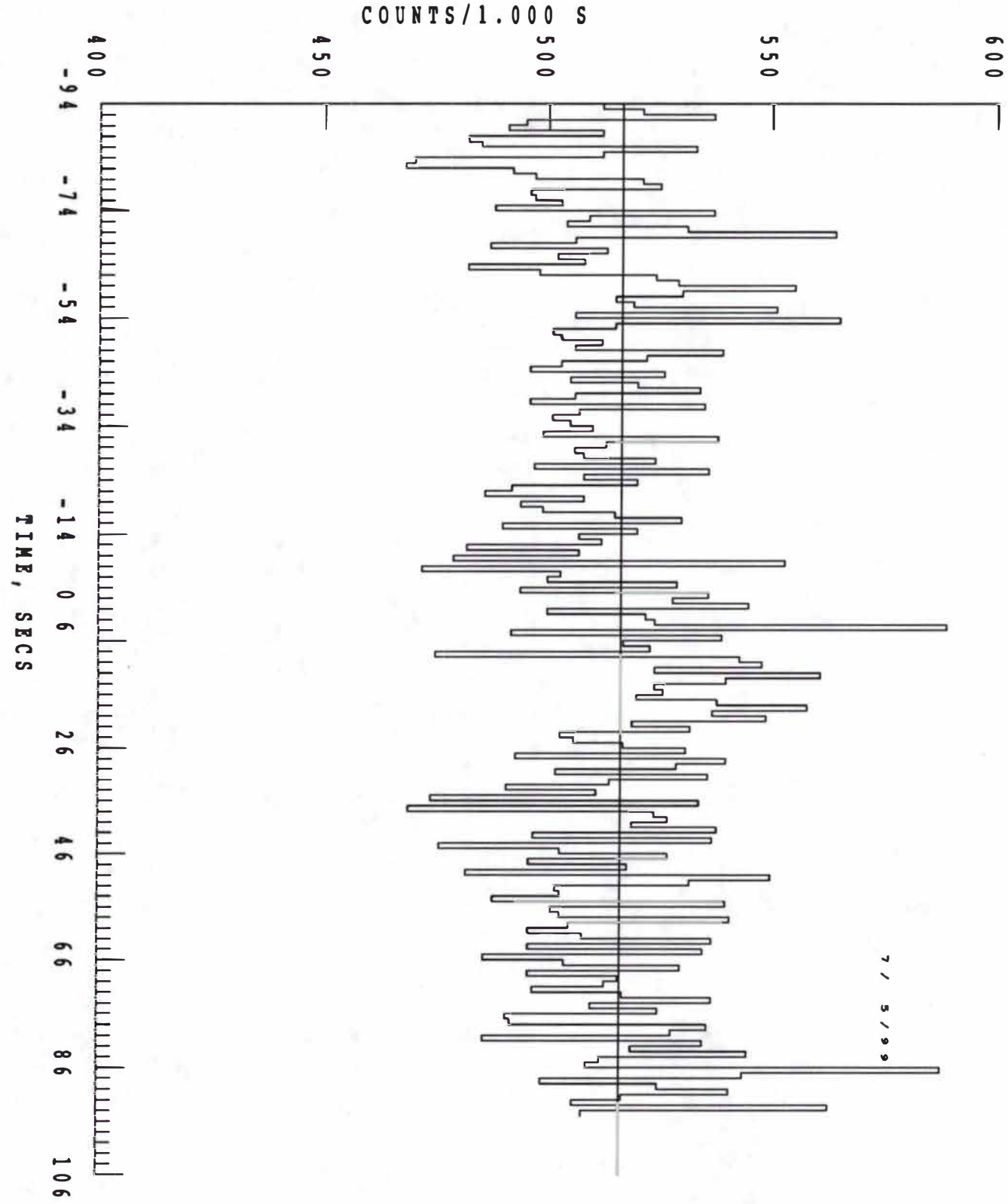
INTENSITY: COUNTS/CM2

LOCATION: ZENITH=84.5 AZIMUTH=136.4 ERROR=6.4 DEGREES

COMMENTS:
GRB TWO SHORT SPIKES. TOTAL DUR.~0.8 SEC. NOT VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6385	970918	10709	34886	6500	032	+40	.8


BACODINE 6385 18/09/97 34875.105
25- 100 keV
COUNTS/1.024 S
9000
8000
7000
6000
0
25
50
75
100
125
150
175
200
225
TIME, SECS
18/ 9/97


NEAR
18/09/97
34463.229
100-1000 keV
COUNTS/1.000 S
400
450
500
550
600
-94
-74
-54
-34
-14
0
6
26
46
66
86
106
TIME, SECS
7/ 5/99

BATSE BURST# 6385

ULYSSES RT 25/ 9/97

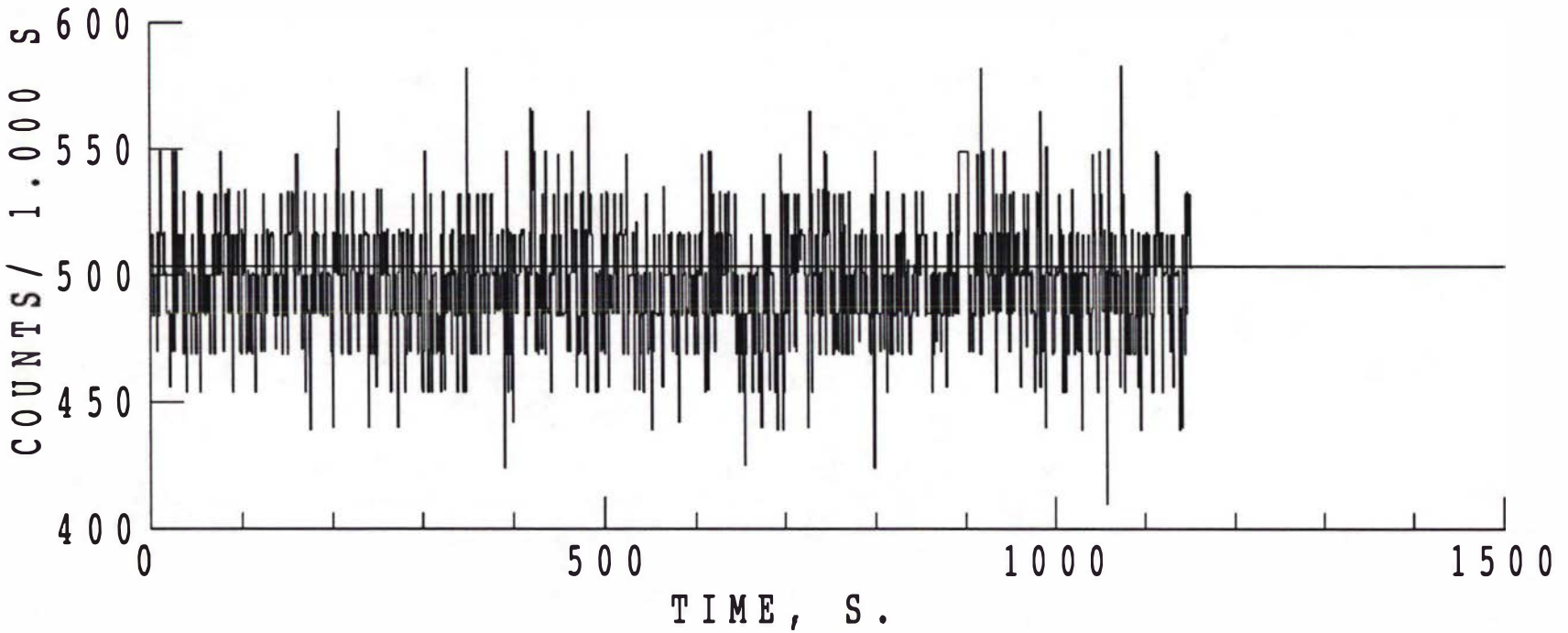
18/ 9/97 35244.043 s

0.250 S INTERVALS REGROUPED BY 4

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From RICHARDSON@SSLLES.MSFC.NASA.GOV Mon Sep 22 17:48:16 1997
Return-Path: <RICHARDSON@SSLMOR.msfc.nasa.gov>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id RAA22891; Mon, 22 Sep 1997 17:48:15 -0700
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id RAA22879; Mon, 22 Sep 1997 17:48:13 -0700
Date: Mon, 22 Sep 1997 19:48:10 -0500 (CDT)
From: RICHARDSON@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970922194810.2020c89d@SSLLES.MSFC.NASA.GOV>
Subject: Crossing Windows for BATSE Burst 6386
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6386
EVENT OF 1997 SEP 18 DAY OF YEAR=261
EVENT CROSSING TIME AT BATSE : 57863. S. OR 16:04:23.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 29.000 -68.000
BATSE PEAK COUNTING RATE: 5000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 18/ 9/ 97 IS:
RA= 163.996 DEC= 17.288 DIST= 6.206 AU
BATSE-ULYSSES DISTANCE = 928450891. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 58.10 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1636.56 SECS.
CROSSING TIME AT ULYSSES IS 59500. S. OR 16:31:39 +/- 531.33 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 18/ 9/ 97 IS:
RA= 229.801 DEC= -19.324 DIST= 1.731 AU
MARS-BATSE DISTANCE = 259004784. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 88.64 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 20.44 SECS.
CROSSING TIME AT MARS IS 57883. S. OR 16:04:43 +/- 150.26 SECONDS

BATSE BURST TRIGGER

NO.: 6386

TIME: TJD=0709 SECONDS=57863

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

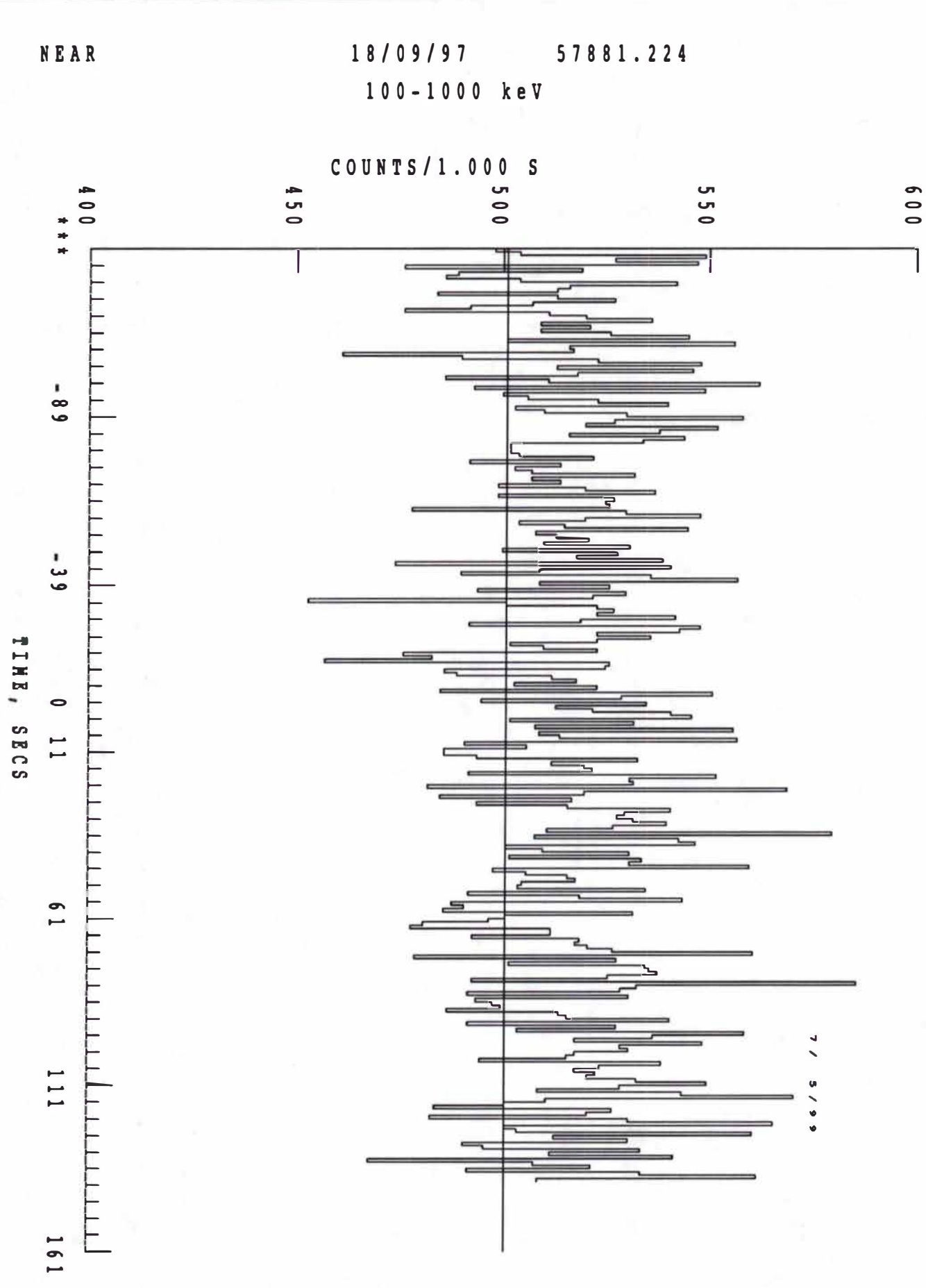
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=26.1 AZIMUTH=343.2 ERROR=4.0 DEGREES

COMMENTS:
GRB. SINGLE PULSE. DURATION APPROX. = 1 SEC. SLIGHTLY VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6386	970918	10709	57863	5000	029	-68	1


NEAR
18/09/97
57881.224
100-1000 keV
COUNTS/1.000 S
400
450
500
550
600
***
-89
-39
0
11
61
111
161
TIME, SECS
7/ 5/99

BATSE BURST# 6386

ULYSSES RT 22/ 9/97

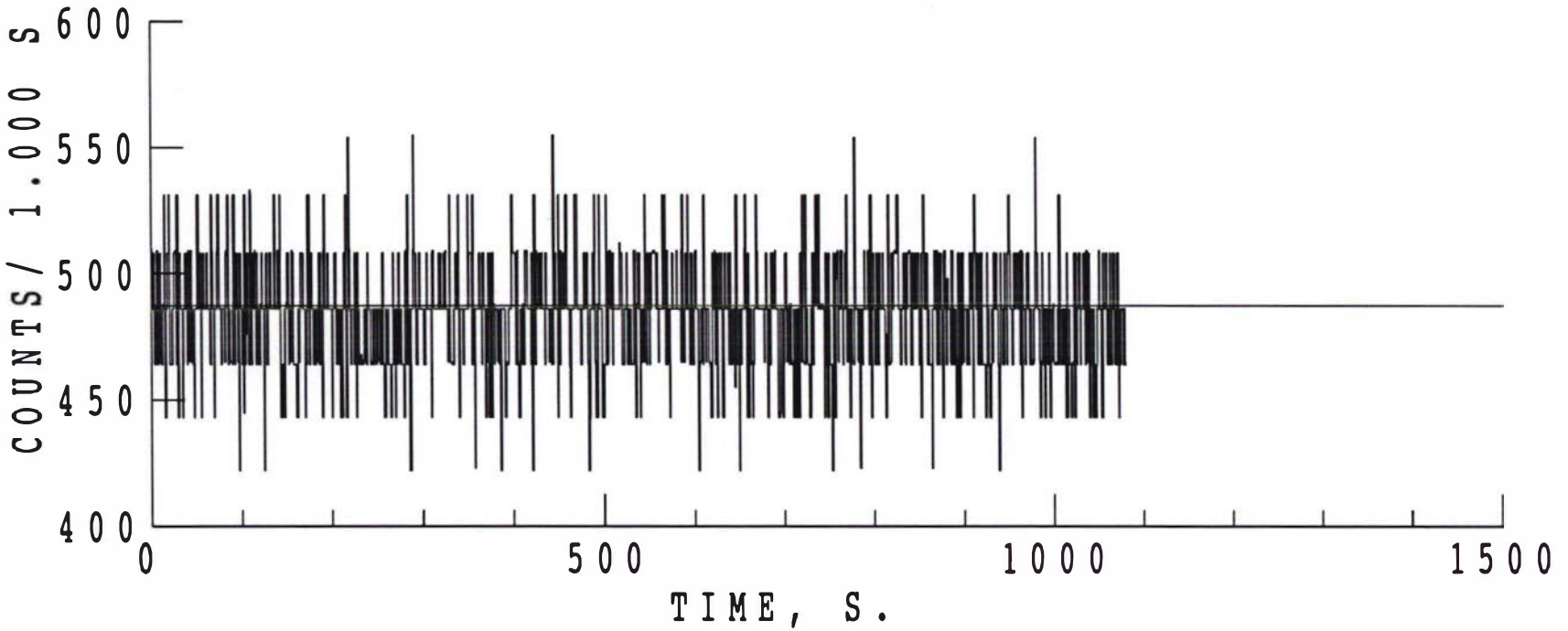
18/ 9/97 58968.059 s

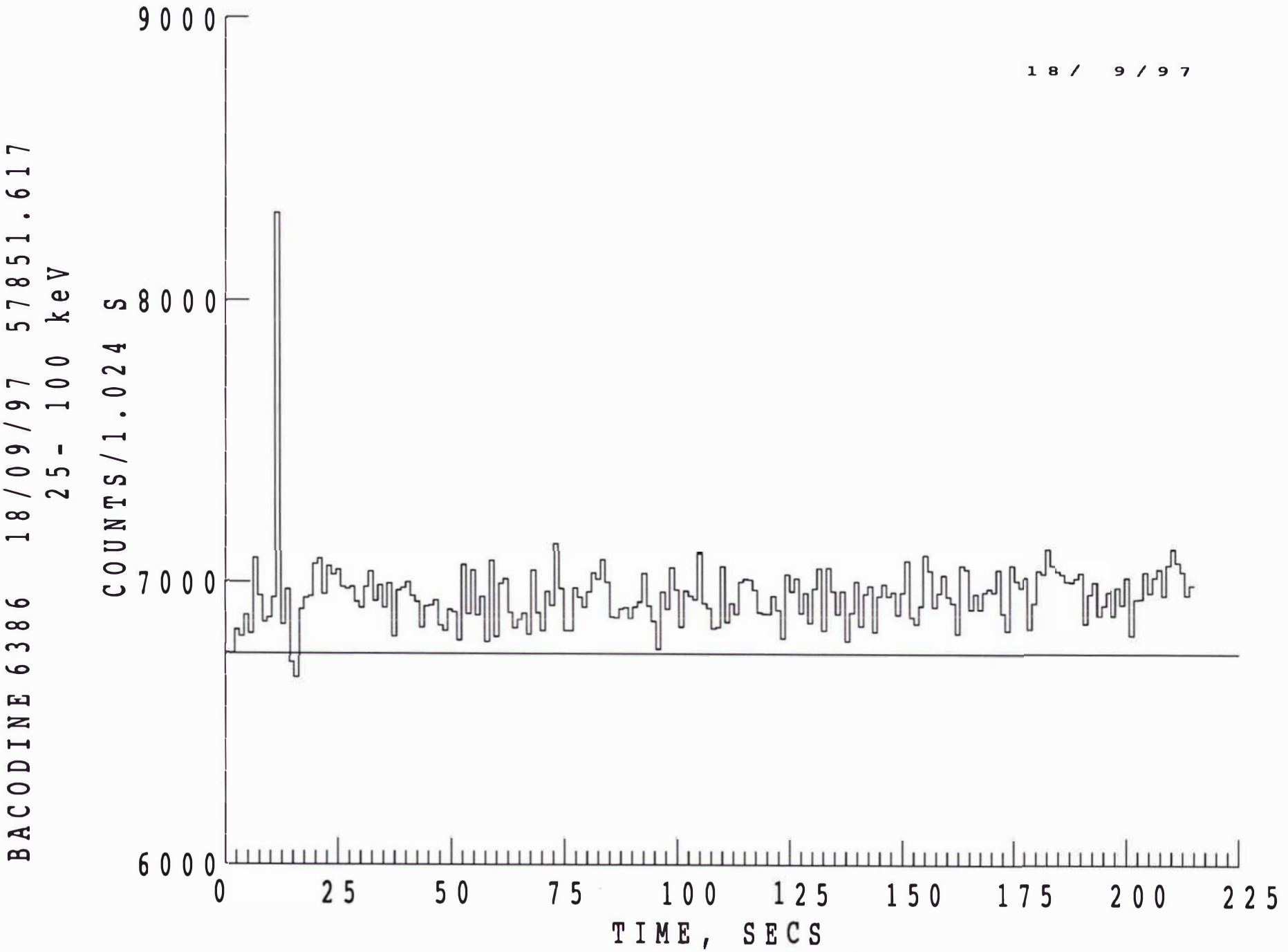
0.500 S INTERVALS REGROUPED BY 2

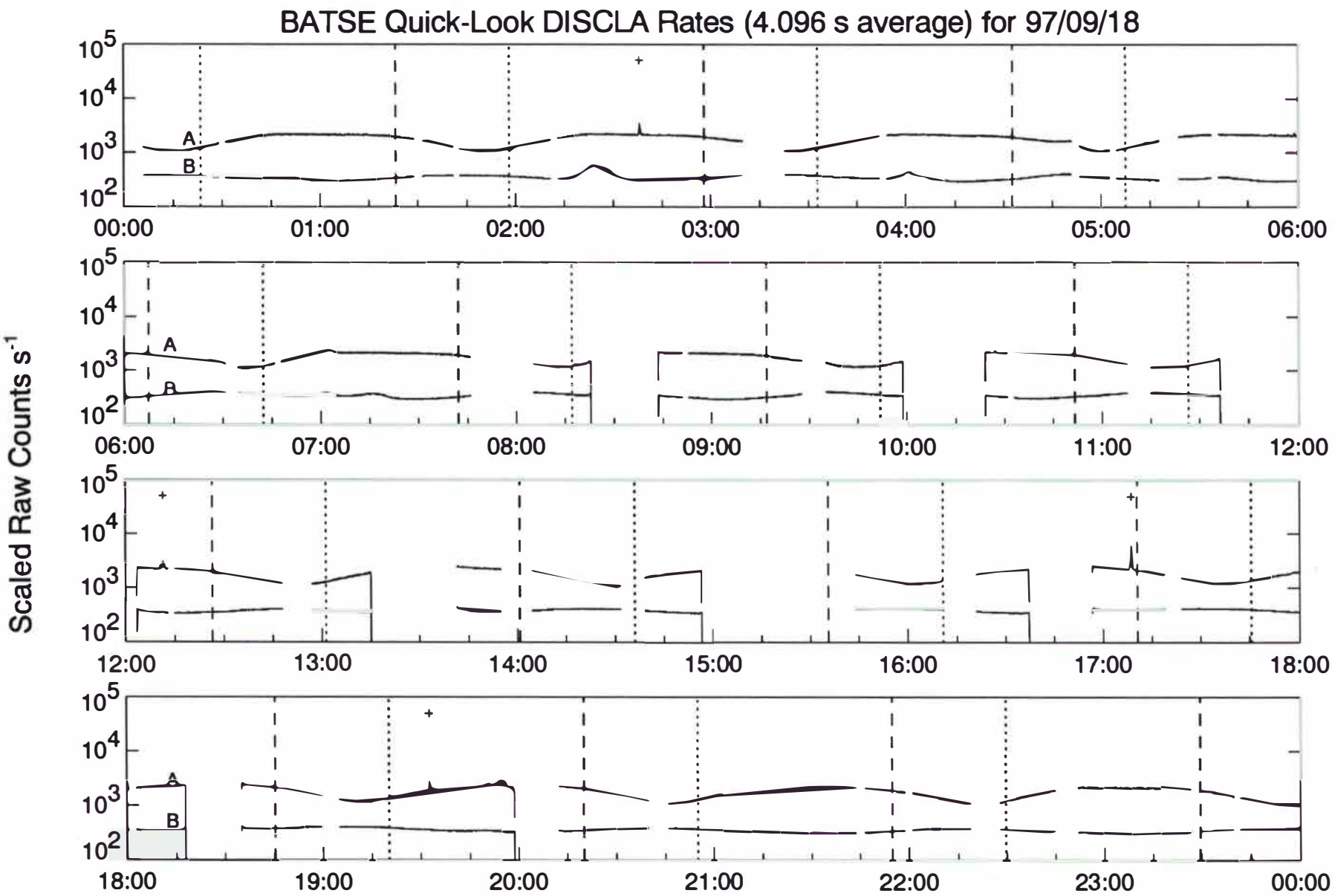
0- 0 keV

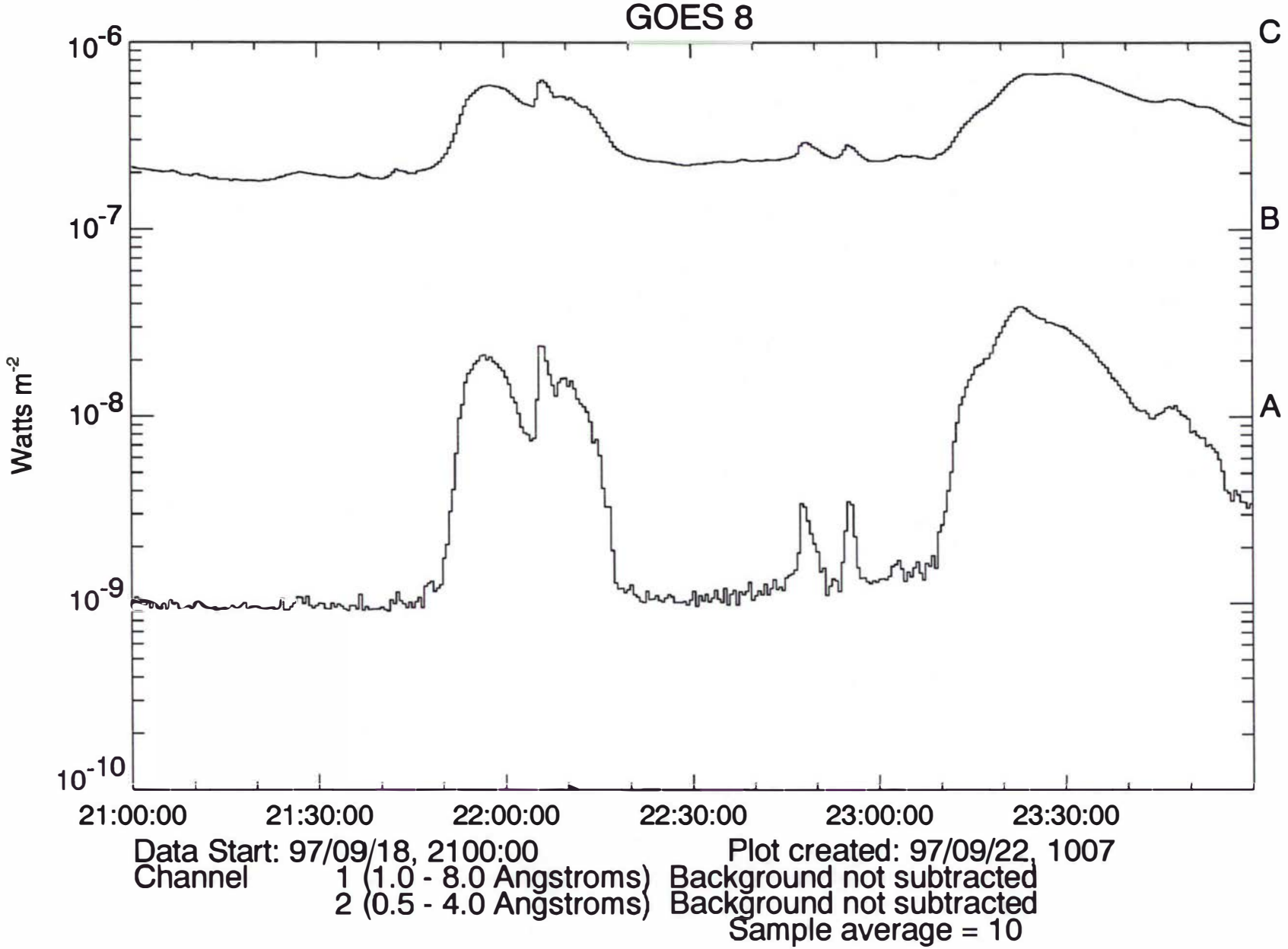
N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



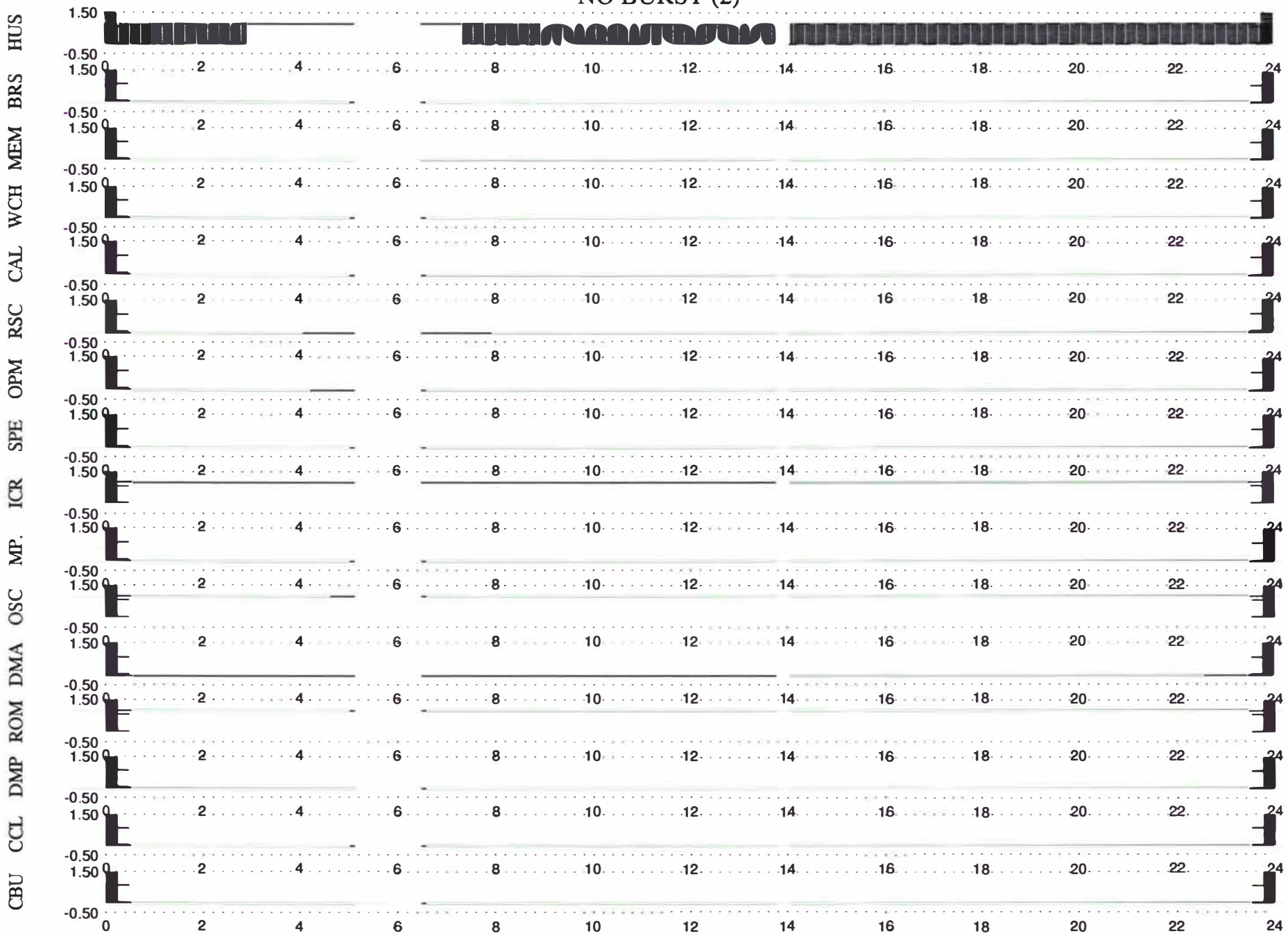

BACODINE 6386 18/09/97 57851.617
25- 100 keV
COUNTS/1.024 S
9000
8000
7000
6000
18/ 9/97
0
25
50
75
100
125
150
175
200
225
TIME, SECS


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/18
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/22, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare


GOES 8
C
B
A
10^{-6}
10^{-7}
10^{-8}
10^{-9}
10^{-10}
Watts m^{-2}
21:00:00
21:30:00
22:00:00
22:30:00
23:00:00
23:30:00
Data Start: 97/09/18, 2100:00
Plot created: 97/09/22, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 261, year 1997 to day 261, year 1997 1/14/98

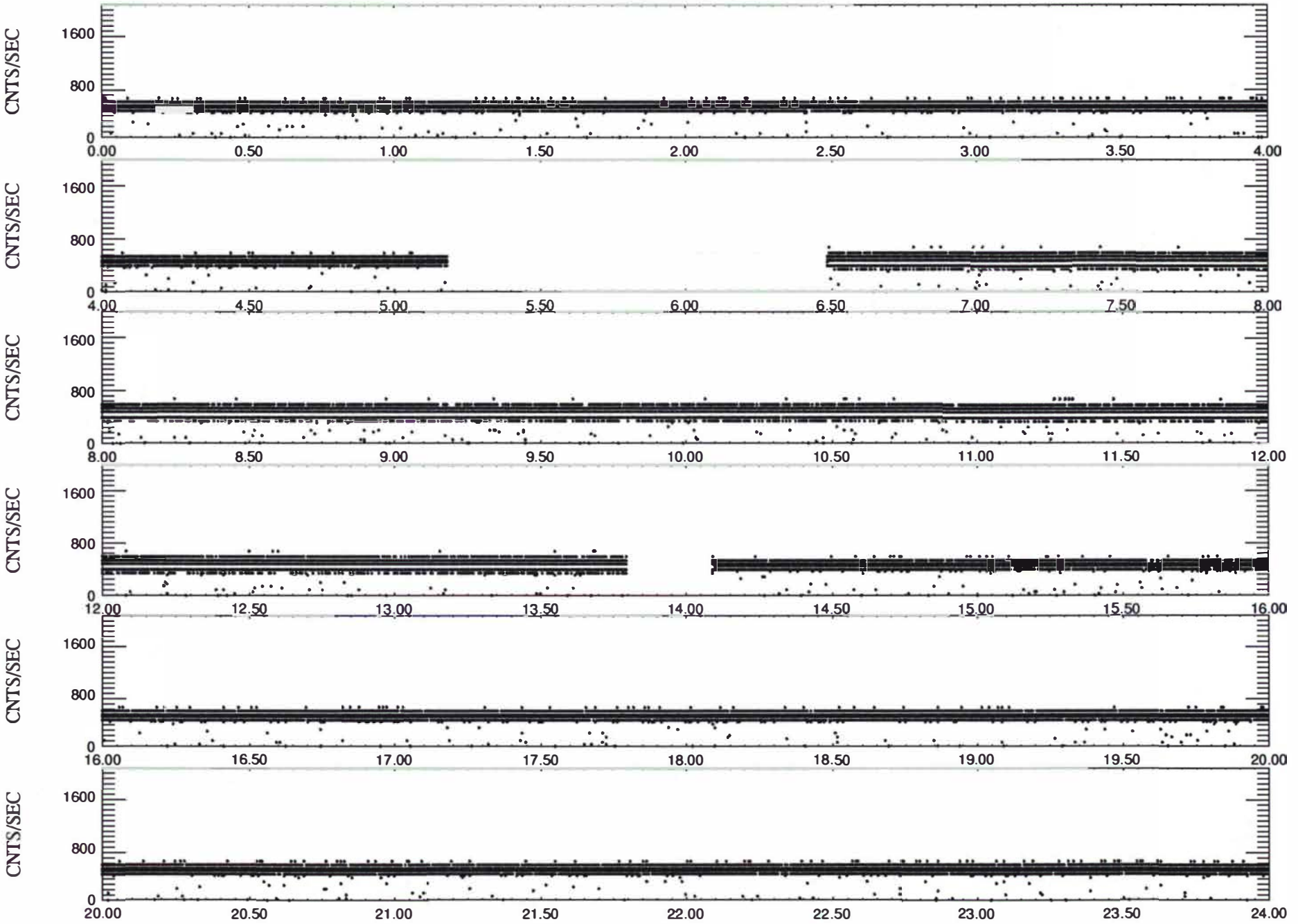
NO BURST (2)



UNIV! AL TIME

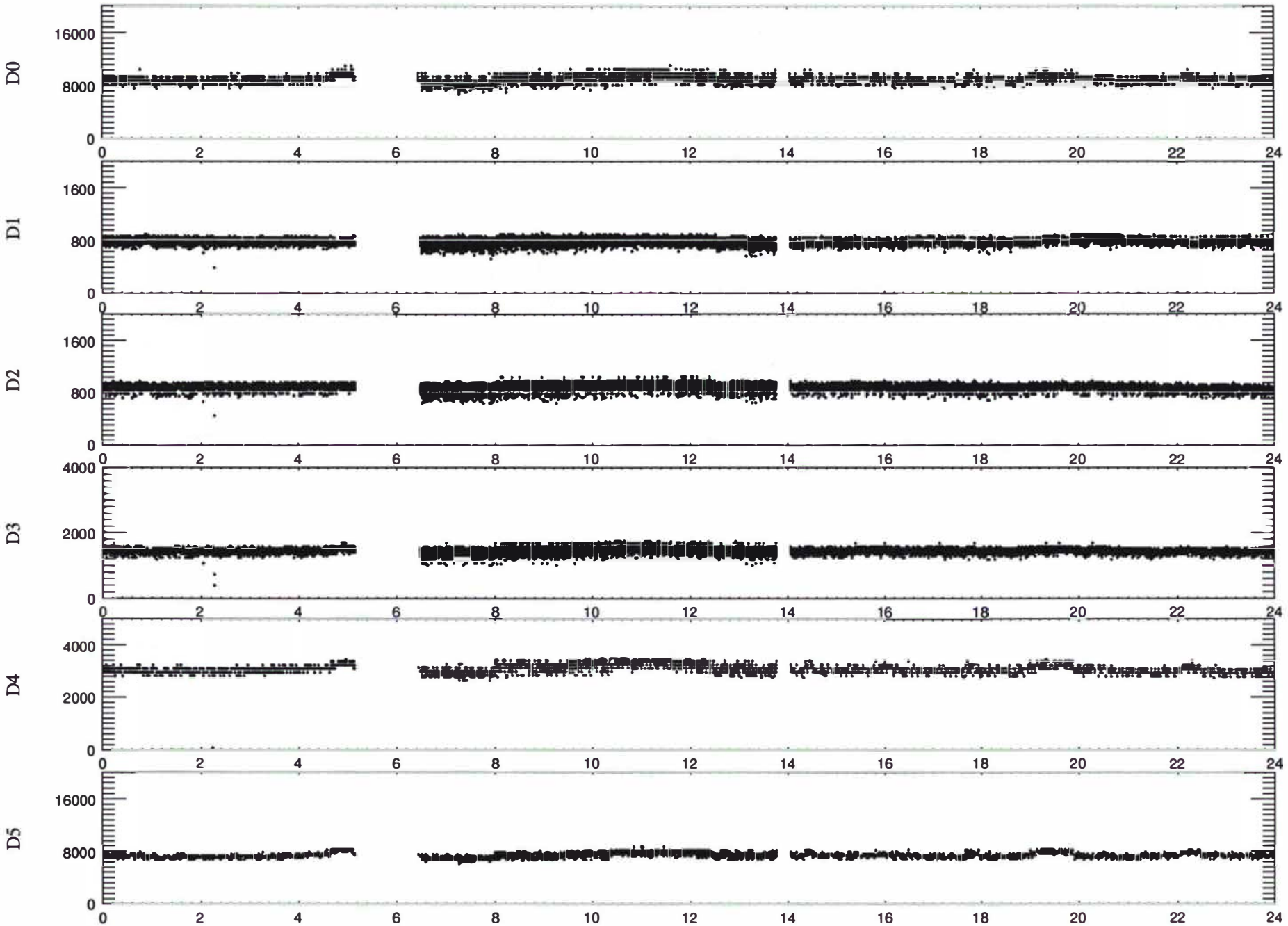
HUS 2A, MODE 1, NOT AVERAGED EDR day 261, year 1997 to day 261, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIVERSAL TIME

HUS 2B COUNTS / SEC EDR day 261, year 1997 to day 261, year 1997 1/14/98



From SURASAK@SSLLES.MSFC.NASA.GOV Tue Sep 23 08:07:59 1997
Date: Tue, 23 Sep 1997 10:07:15 -0500 (CDT)
From: SURASAK@SSLLES.MSFC.NASA.GOV
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6387

TIME: TJD=0710 SECONDS=6275

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=131.4 AZIMUTH=348.2 ERROR=.6509 DEGREES

COMMENTS:
SOLARE FLARE. GOES C8.6,OPTICAL SF. DUR > 450S.,STARTS AT ~ T-130S
MAX AT ~T. NOT VISIBLE ABOVE 100 KEV.

From SURASAK@SSLLES.MSFC.NASA.GOV Tue Sep 23 11:19:35 1997
Return-Path: <SURASAK@SSLLES.MSFC.NASA.GOV>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id LAA29873; Tue, 23 Sep 1997 11:19:34 -0700
From: SURASAK@SSLLES.MSFC.NASA.GOV
Received: from SSLLES.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id LAA27621; Tue, 23 Sep 1997 11:19:32 -0700
Date: Tue, 23 Sep 1997 13:19:20 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970923131920.2020cd00@SSLLES.MSFC.NASA.GOV>
Subject: Crossing Windows for BATSE Burst 6388
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6388
EVENT OF 1997 SEP 19 DAY OF YEAR=262
EVENT CROSSING TIME AT BATSE : 13502. S. OR 03:45:02.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 195.000 45.000
BATSE PEAK COUNTING RATE: 3750 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 19/ 9/ 97 IS:
RA= 164.063 DEC= 17.242 DIST= 6.204 AU
BATSE-ULYSSES DISTANCE = 928167692. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=142.08 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2442.31 SECS.
CROSSING TIME AT ULYSSES IS 11060. S. OR 03:04:19 +/- 343.26 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 19/ 9/ 97 IS:
RA= 230.496 DEC= -19.506 DIST= 1.736 AU
MARS-BATSE DISTANCE = 259732144. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=107.85 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -265.58 SECS.
CROSSING TIME AT MARS IS 13236. S. OR 03:40:36 +/- 139.14 SECONDS

BATSE BURST TRIGGER

NO.: 6388

TIME: TJD=0710 SECONDS=13502

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

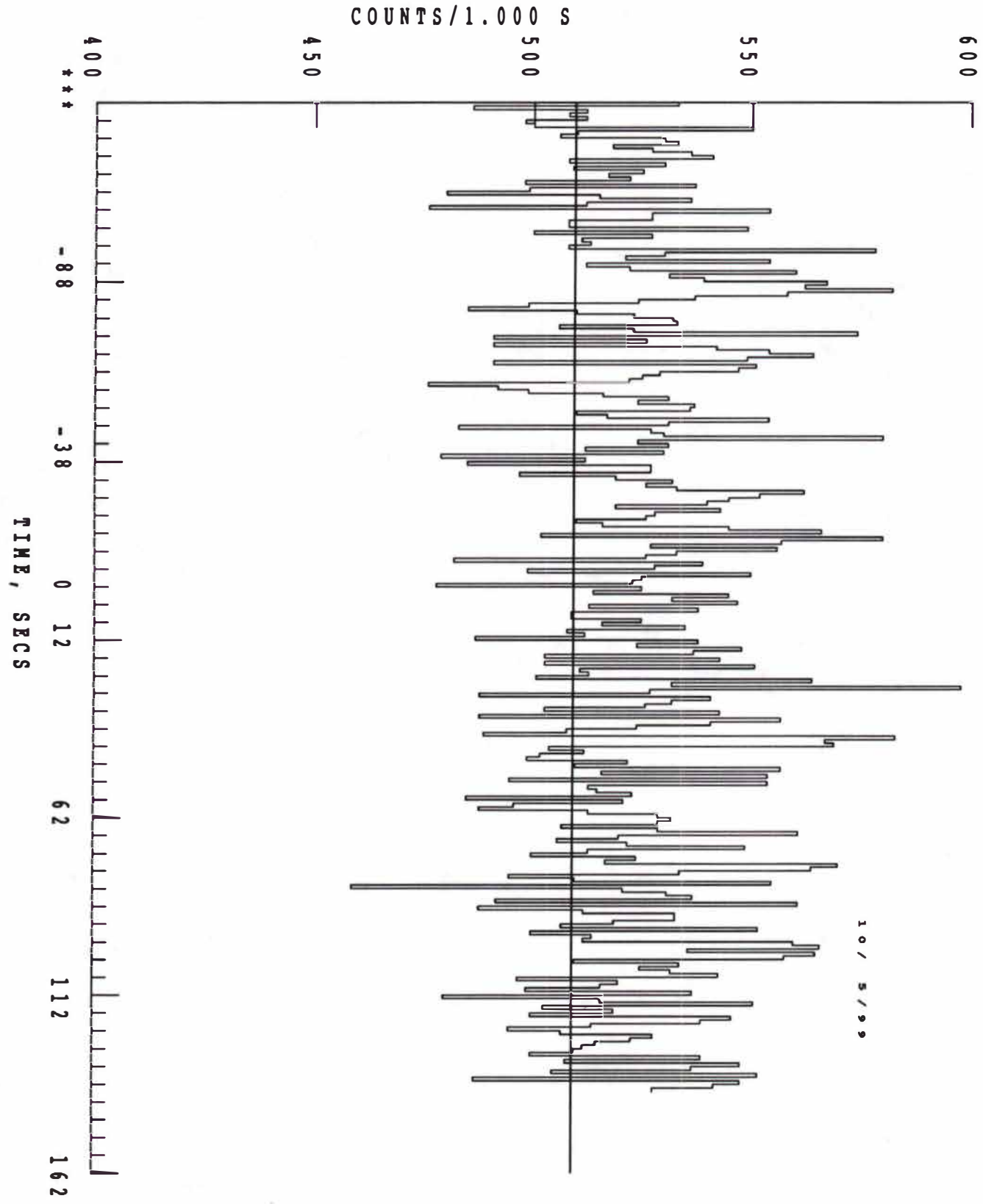
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=177.2 AZIMUTH=166.9 ERROR=3.012 DEGREES

COMMENTS:
GRB. SINGLE PULSE. FRED. DUR~20S. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6388	970919	10710	13502	3750	195	+45	20


NEAR
19/09/97
13584.216
100-1000 keV
COUNTS/1.000 S
400
450
500
550
600
***
-88
-38
0
12
62
112
162
TIME, SECS
10/ 5/99

BATSE BURST# 6388

ULYSSES RT

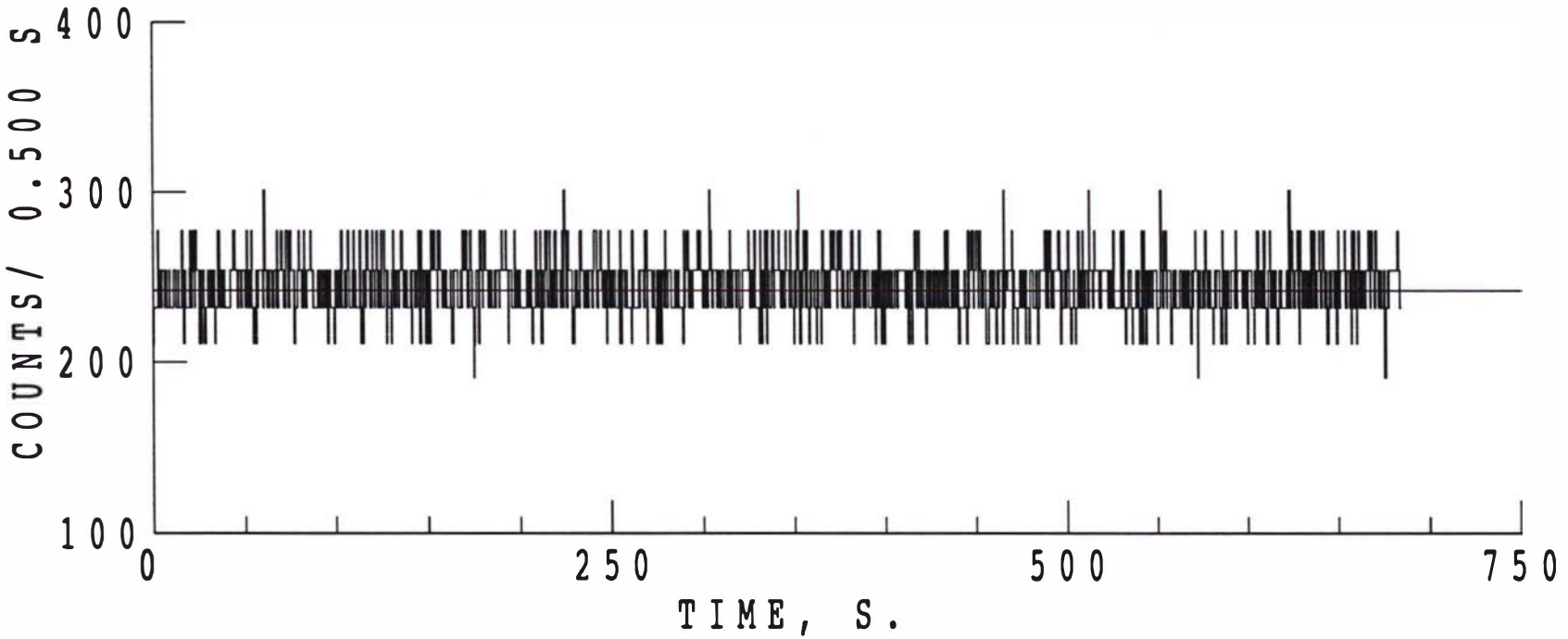
23/ 9/97

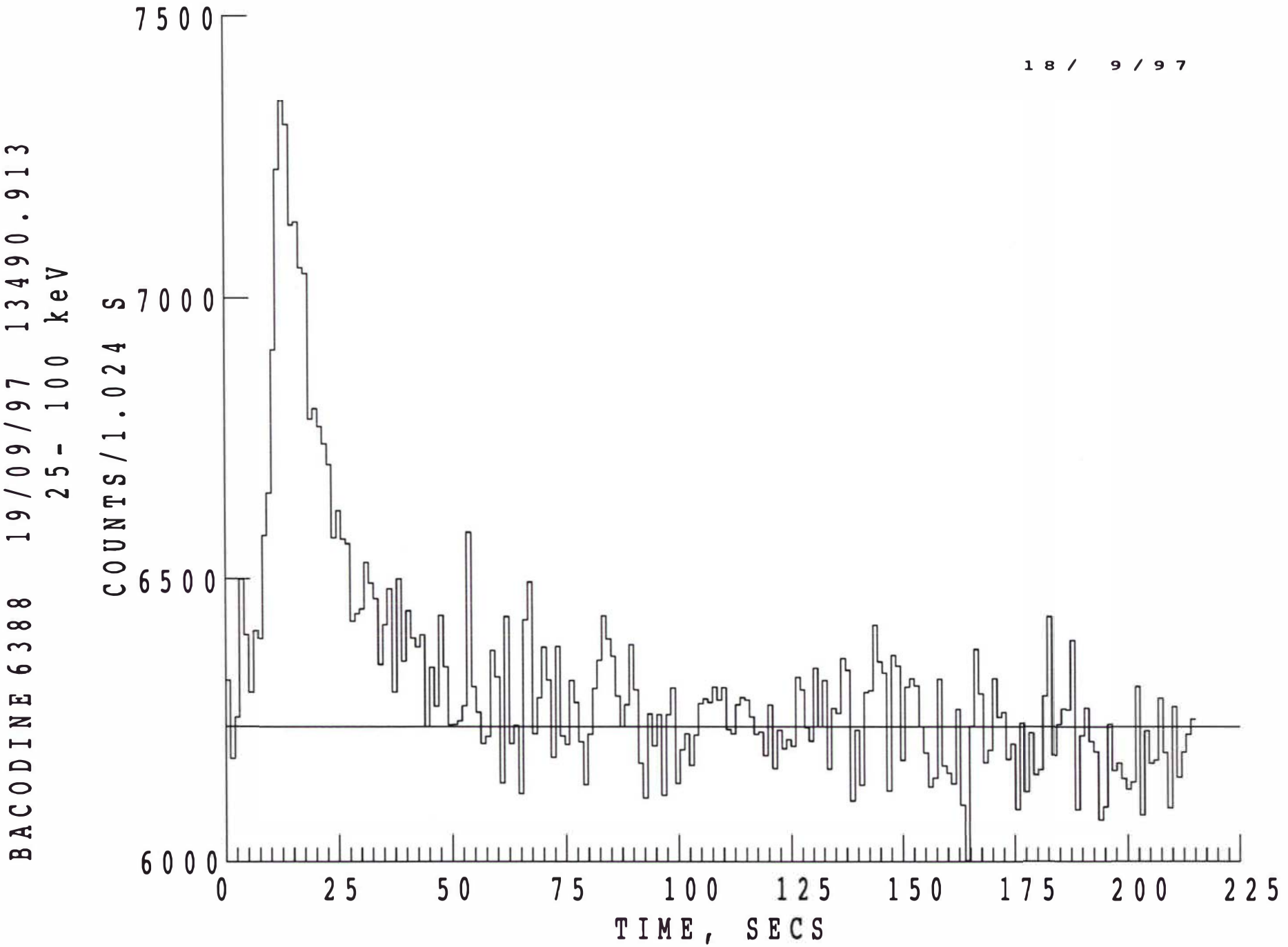
19/ 9/97 10728.488 s

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS




BACODINE 6388 19/09/97 13490.913
25- 100 keV
COUNTS/1.024 S
7500
7000
6500
6000
0
25
50
75
100
125
150
175
200
225
TIME, SECS
18/ 9/97

From SURASAK@SSLLES.MSFC.NASA.GOV Tue Sep 23 11:23:00 1997
Return-Path: <SURASAK@SSLMOR.msfc.nasa.gov>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id LAA29915; Tue, 23 Sep 1997 11:22:59 -0700
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id LAA27675; Tue, 23 Sep 1997 11:22:57 -0700
Date: Tue, 23 Sep 1997 13:22:53 -0500 (CDT)
From: SURASAK@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970923132253.2020cd00@SSLLES.MSFC.NASA.GOV>
Subject: Crossing Windows for BATSE Burst 6389
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6389
EVENT OF 1997 SEP 19 DAY OF YEAR=262
EVENT CROSSING TIME AT BATSE : 65669. S. OR 18:14:29.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 140.000 -5.000
BATSE PEAK COUNTING RATE: 25000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 19/ 9/ 97 IS:
RA= 164.146 DEC= 17.186 DIST= 6.202 AU
BATSE-ULYSSES DISTANCE = 927802457. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=147.43 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2607.97 SECS.
CROSSING TIME AT ULYSSES IS 63061. S. OR 17:31:01 +/- 299.68 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 19/ 9/ 97 IS:
RA= 230.496 DEC= -19.506 DIST= 1.736 AU
MARS-BATSE DISTANCE = 259732144. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 91.20 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -18.16 SECS.
CROSSING TIME AT MARS IS 65651. S. OR 18:14:10 +/- 150.11 SECONDS

BATSE BURST TRIGGER

NO.: 6389

TIME: TJD=0710 SECONDS=65669

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=112.3 AZIMUTH=29.7 ERROR=0.715 DEGREES

COMMENTS:
GRB. DOUBLE PULSES. DUR ABOUT 32S. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6389	970919	10710	65669	25000	140	-05	32

```
970315    074 56454.2 BATSE GRB#6124 (4264/S)  (5.69,62.18J)  (+UL)
       13 074 56454.9 PKS,462.9(50/S,90/S,<16S) (@85DEG)

970325    084 63382.8 KONUS(+UL@64176,MOD,15S),2 PEAKS(UL REPORT 8/9/97) (13SR)

970405    095U85440   UL@23:44@2200LS,MOD BURST, 5SEC (SEE NEXT LINE)
970406    096  1060.9 KONUS (MOD.STRONG,MULT.PKS,15S) (13:NR, SECONDARY PEAKS?)

970411    101 35565.2 KONUS(25SEC,35556?)+UL@35040,2200LS(MOD,10S) +TGR (13NR)

970420    110 72842.2 BATSE GRB#6198 (7316/S) (209.08,-21.09J) (+UL)
       13 110 72847.8 PEAK (740/S,<12S,HARD) @85 DEG

970421    111U24420   UL@06:47@2250LS INT BURST, 20SEC
       13 111 25691.6 PEAKS (60/S),711.6(60),721.6(40),<30SEC                  REP0624

970428 14 118           FIRST DATA, DMSP14 (LAUNCHED 970404;DELAY CORR=5.87S)

970506    126 56503.3 KONUS (+UL@57300,2400LS,MOD,10S) (13NO,14NO,NOTRIG)

970506A14 126 45619.1 STRONGPKS45619.1(7700/S,<6S,SOFT),633.1,655.1,NOTRIG;13NO    ??

970602    153 58855.7 KONUS>150S,COMPLEX,PK58953(+UL@56580,MOD,60S)(+TGRS/WIND)
       14 153 58917.0 PK(150/S),953.0(950,>58S,VERY HARD, INTENSE (13 NO)       REP0624
       14 153 58916.7 TRIGGER PK, +58944.3,58952.0

970607    158 33384.7 KONUS, HARD PEAK FOR 7SEC (+UL@33360,MOD,10S)
       13 158 33388.6 PEAK(180/S,<6S)                                          REP0723
       14 158 33388.7 PEAK(200/S,<6S, NOTRIG)                                  REP0723

970616    167 65390.3 BATSE#6274 STRONG,MULTIPEAK.X-RAY AFTER,IAU6683(13NO@127)
          167 65390.3 BATSE(20.46,-7.16J),X-RAY(19.72,-5.50J) (14NO@112,NOTRIG)
          167 65390.3 BATSE (X-RAY DUBIOUS,IAU6722. NO OPT VARIABLE, IAU6723)

970625    176 43993.7 KONUS (UL@46200,2900LS,MOD,15SEC,REPORTED 10/30/97)
       13 178 44002.0 PEAK(80/S,<4S) (14SA)

970627    178 79608.8 KONUS STRONG, MULTIPEAK, 20SEC (+UL@77340,STRONG,20S)
          178 79610   BEPPOSAX (13SR,14NO,NO TRIG)

970629    180 14424.  KONUS VERY SOFT(+UL@15960,STRONG. NEW SGR (SEE 970912)
       13 180 14429.0 PEAK(50/S,<2S,SOFT) (14NR)                               REP0903

970715    196 51674.3 KONUS STRONG,HARD PK@+20(+UL@54060,MOD,5S)
       13 196 51693.6 PEAK(190/S,<4S)  (14NR,NOTRIG)                           REP0903

970721    202 84667.1 KONUS(+UL@81720,MOD,10S,@3000LS)
       13 202 84671.9 PEAKS(HARD,1-SIDE,200/S,<8S),691.9(1-SIDE,240/S,<10S)    REP0903
       14 202 84672.1 PEAK (HARD,1-SIDE,470/S,<10S),692.1(1-SIDE,240/S,<10S)   REP0903
       14 202 84671.5 TRIGGER PEAK (EVT14)(84671.46)                           REP0903

970802    214 12328.2 BATSE GRB#6322,5750/2S    (13NO@32,14NO@40,GAP,NOTRIG)

970815    227 43624.4 BATSE GRB#6335,10395/2S (IAU6718 XRAYS;6721+NOOPT)
          227 43624.4 CONTINUED: 13NO@160DEG, 14NO@146DEG

970915    258 32870.9 KONUS 25S,HARD (+UL@30900,3100LS,MOD,10S)
       14 258 32873.2 PEAK (200/S,<2S,NO TRIG) (13NO)

970919    262 65669.5 BATSE#6389 (8048/S)
```

From TERRELL@nisdp0.lanl.gov Fri Feb 27 15:11 PST 1998
From: TERRELL@nisdp0.lanl.gov
Date: Fri, 27 Feb 1998 16:11:55 -0700
To: khurley@sunspot.ssl.berkeley.edu, bonnard@milkyway.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
henze@fender.msfc.nasa.gov, filippo@botes1.tesre.bo.cnr.it,
kmarar@isac.ernet.in
X-Vmsmail-To: @MAILOUTUL.DIS
Subject: DMSP GRB: 1997(many),980109,980113,980119,980124,980125,980202,980203

From: jterrell@lanl.gov (James Terrell) 980227
To: khurley@sunspot.ssl.berkeley.edu, bonnard@milkyway.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
filippo@botes1.tesre.bo.cnr.it, henze@fender.msfc.nasa.gov,
kmarar@isac.ernet.in, kraken@rosserv.gsfc.nasa.gov,
scott@milkyway.gsfc.nasa.gov, teegarden@lheavx.gsfc.nasa.gov,
vnp@isac.ernet.in, yosimori@rikkyo.ac.jp
Subj: DMSP GRB detections: 1997(many),980109,980113,980119,980124,980125,980202,980203

The following GRB were detected by DMSP13 or DMSP14 (or NOT detected, if indicated).
No detection can occur for bursts more than 118 degrees from spacecraft zenith,
or if in the presence of very high counting rates (SAA,SR,NR).
Data are normally in 2-sec counts, except when the DMSP14 trigger circuit is
tripped, giving 12.8ms data, usually reported here as 102.4ms counts.
Numerous other BATSE GRB were also detected, but not reported here; numerous
weak detections by Ulysses have not been checked because of low counting
rates expected at an indefinite time.

DATE	FL	DAY	TIME	NOTES---(ND=NO DATA,NA=NOT APPARENT & NOT ANALYZED)------REPORTED (NO=DATA CHECKED--SHOWS NO DETECTION)(SR=S. RADIATION BELT) (NR=NORTH RADIATION BELT)(SAA=SOUTH ATLANTIC ANOMALY)	
970111		011	35040.2	BATSE GRB#5773 (8727CTS/2S) (SEE IAU6569,6571,6574,6598)	
		011	35040.2	BEPPO SAX TRIG,INTENSE,50S,3 PEAKS(232.10,19.67J) IAU6533	
	13	011	35040.0	PEAKS(40/S),48.0(50/S),58.0(60/S),@24DEG,@848KM,SOFT	REP0313
970111		011	85744.6	KONUS (HARD,SLOW RISE) +TGR (UL:NO) (DMSP13:NO)	
970117		017	53211	TGR+SAX GRB (KONUS INOP)+UL@54420(STRONG,20S) (13:NO)	
970124		024	44343.4	KONUS(MULT PKS)+UL@46253@2100LS,STRONG+TGR (13SAA)	
970201		032	57250.7	BATSE GRB#5989 (53612/SEC) +UL	
	13	032	57222.1	PEAK (100/S,~30S,SOFT,BROAD) (@111DEG) UNCONVINCING	
970218		049	50996.1	KONUS (STRONG,5SEC) +UL@51274,2000LS (STRONG,8SEC)	
	13	049	51001.0	PEAK (320/S,<6S)	REP0624
970222		053	86006.6	KONUS (MOD.STRONG,SEV.SEC) +UL@85873,2000LS,MOD,2S(13NO)	
970226		057	31585.9	KONUS (STRONG,SOFT PK@+39) +UL@30547,2000LS(V.INT,40S)	
	13	057	31595.8	PEAK (270/S,10SEC) (MODERATELY STRONG)	REP0313
970228		059	10680.8	BEPPOSAX(IAU6572)MOD.INT.,80S,4 PKS (75.46,11.75J)IAU6578	
		059	10680.8	INT.X-RAY,RADIO(IAU6576,6577),OPTICAL(6584),MOTION(6629)	OPTICAL
	13	059	10659.1	PKS,667.1(60/S,ONE-SIDED,SOFT,@74DEG) DOUBTFUL (+UL,WIND)	
970313		072	30096.5	KONUS(MOD.STRONG,PK@+11,40S)+UL@28380,2000LS(MOD.INT,10S)	
	13	072	28355.8	PEAK (180/S,<2S,SOFT) (NO PEAK AT 30096!) (CONFLICT)	REP0501

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          262 65663.9 KONUS 30S,HARD,2PKS (+UL@63120,3100LS,MOD,20S)(13NO,14NO)

970922    265  2888.4 BATSE#6392,32880/SEC
       13 265  2894.4 PEAK(50/S),2910.5(110),@97DEG,ONE-SIDED,EDGE SR. DUBIOUS
       14 265  2894.6 PKS(200/S),2910.6(500/S),@109,ONE-SIDED,EDGE SAA.DUBIOUS

970925    268 81795.8 BATSE#6397,9551/SEC
       14 268 81798.3 PEAK (70/S,<10S) @ 42DEG (13SAA)

971009    282 68215.8 BATSE#6422,10861/S@1.8S+UL@69240,3050LS,MOD+KONUS@68215.0
       14 282 68217.2 PEAK(180/S,<2S)@83 (TRIGGER PEAK 68215.64) (13NO@145)

971019    292 53754.2 KONUS,10S (+UL@51000,2950LS,MOD,10S)
       14 292 53752.6 RISE,~50SEC,SOFT,NO TRIG (13 NO)

971029    302  5318.4 BATSE#6453,4717/S@35.8S (KONUS@5351.8,120S)(UL WEAK@2820)
       14 302  5326.0 PKS, 44.0,66.0,NO TRIG,@102DEG (13NO@49DEG)

971101    305 23484.5 KONUS (10SEC,FRED)(UL@26040,MOD,10S@2950LS)
       14 305 23483.8 PEAK (200/S,<2S) (13SR) TRIGGER PEAK 23483.0

971110    314 68141.3 KONUS,100SEC (UL@67080 @2950LS,MOD)(13 SR)
       14 314 68161.3 PEAKS, 213.3, MULT PEAKS,HARD,TRIGGER PKS 68213.19,213.91

971127    331 47595.8 BATSE#6509 (139968/S)
       13 331 47595.8 PKS,613.8,759.8(240),767.8(140)
       14 331 47760.5 PKS(3000/S),47768.5(2000), INTENSE, NOTRIG

971201    335  9295.6 BATSE#6515 (8768/S)
       14 335  9306.4 PK(SOFT)+9310.4(160)+9316.4(220)+9328.4(150),NOTRIG(13NR)

>,1207    341 72232.9 BATSE#6525 (7892/S@12.0)
       14 341 72244.2 PK(270),268.2,284.2 (@80DEG),TRIG PK 72244.28 (13NR)

971218    352 52499.9 BATSE#6535 (9181/S@+2.3S)
       13 352 52500.2 PK(70),52536.2(?)(SOFT,@38DEG)    (14SAA)

971219    353 79974.5 KONUS,10S,SPIKE@+4 (UL 77580,15SEC,MOD) (13SAA,14NR)

980109    009  4345.6 BATSE#6564(1401/S)+SAX,25S(IAU6805)(13NO@74,14NA@144)

980113    013 14845.7 BATSE#6570 (9376/S,COMPLEX,DUR60S)
       13 013 14869.2 PKS(50),879.2(50),883.2(50) (ONE-SIDED,@119DEG)
       14 013 14848.3 PEAK(60/S,<4S), NO TRIGGER

980119    019U 5100   ULYSSES MOD(32MS) @2350LS
       14 019  5375.9 PEAK (900/S,<8S,SOFT) (TRIG PEAKS 5372.9,5374.6)(13NO)

980124    024 23673.0 BATSE#6576, 16971/S @7.7S,SPIKY,MAX@+42.5,DUR100S)
       13 024 23679.1 PEAK(90/S,<8S),23707.1,23717.1 (LAST 2 WEAK,ONE-SIDED)
       14 024 23679.6 PEAK(300/S,<10S),707.6WEAK,715.6WEAK
       14 024 23679.1 TRIGGER PKS 679.07,679.99 (.1024S); 12.8MS PEAK 23678.43

980125    025 74368.7 BATSE#6581, 34996/S,MULT PKS,MAIN PK@+40,270S
       13 025 74416.4 PEAK @108DEG(220/S,<8S) (14NO@125)

  ,202    033U37380   ULYSSES MODERATE, 10SEC@2265LS
       13 033 35713.6 PEAK(80/S),35717.6(70),<8SEC OVERALL
       14 033 35712.9 PEAK(200/S),35718.9(400/S),<10SEC OVERALL, NO TRIGGER
```

From TERRELL@nisdp0.lanl.gov Fri Feb 27 15:11 PST 1998
From: TERRELL@nisdp0.lanl.gov
Date: Fri, 27 Feb 1998 16:11:55 -0700
To: khurley@sunspot.ssl.berkeley.edu, bonnard@milkyway.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
henze@fender.msfc.nasa.gov, filippo@botes1.tesre.bo.cnr.it,
kmarar@isac.ernet.in
X-Vmsmail-To: @MAILOUTUL.DIS
Subject: DMSP GRB: 1997(many),980109,980113,980119,980124,980125,980202,980203

From: jterrell@lanl.gov (James Terrell) 980227
To: khurley@sunspot.ssl.berkeley.edu, bonnard@milkyway.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
filippo@botes1.tesre.bo.cnr.it, henze@fender.msfc.nasa.gov,
kmarar@isac.ernet.in, kraken@rosserv.gsfc.nasa.gov,
scott@milkyway.gsfc.nasa.gov, teegarden@lheavx.gsfc.nasa.gov,
vnp@isac.ernet.in, yosimori@rikkyo.ac.jp
Subj: DMSP GRB detections: 1997(many),980109,980113,980119,980124,980125,980202,980203

The following GRB were detected by DMSP13 or DMSP14 (or NOT detected, if indicated).
No detection can occur for bursts more than 118 degrees from spacecraft zenith,
or if in the presence of very high counting rates (SAA,SR,NR).
Data are normally in 2-sec counts, except when the DMSP14 trigger circuit is
tripped, giving 12.8ms data, usually reported here as 102.4ms counts.
Numerous other BATSE GRB were also detected, but not reported here; numerous
weak detections by Ulysses have not been checked because of low counting
rates expected at an indefinite time.

DATE	FL	DAY	TIME	NOTES---(ND=NO DATA,NA=NOT APPARENT & NOT ANALYZED)------(NO=DATA CHECKED--SHOWS NO DETECTION)(SR=S. RADIATION BELT)(NR=NORTH RADIATION BELT)(SAA=SOUTH ATLANTIC ANOMALY)	REPORTED
970111		011	35040.2	BATSE GRB#5773 (8727CTS/2S) (SEE IAU6569,6571,6574,6598)	
		011	35040.2	BEPPO SAX TRIG,INTENSE,50S,3 PEAKS(232.10,19.67J) IAU6533	
	13	011	35040.0	PEAKS(40/S),48.0(50/S),58.0(60/S),@24DEG,@848KM,SOFT	REP0313
970111		011	85744.6	KONUS (HARD,SLOW RISE) +TGR (UL:NO) (DMSP13:NO)	
970117		017	53211	TGR+SAX GRB (KONUS INOP)+UL@54420(STRONG,20S) (13:NO)	
970124		024	44343.4	KONUS(MULT PKS)+UL@46253@2100LS,STRONG+TGR (13SAA)	
970201		032	57250.7	BATSE GRB#5989 (53612/SEC) +UL	
	13	032	57222.1	PEAK (100/S,~30S,SOFT,BROAD) (@111DEG) UNCONVINCING	
970218		049	50996.1	KONUS (STRONG,5SEC) +UL@51274,2000LS (STRONG,8SEC)	
	13	049	51001.0	PEAK (320/S,<6S)	REP0624
970222		053	86006.6	KONUS (MOD.STRONG,SEV.SEC) +UL@85873,2000LS,MOD,2S(13NO)	
970226		057	31585.9	KONUS (STRONG,SOFT PK@+39) +UL@30547,2000LS(V.INT,40S)	
	13	057	31595.8	PEAK (270/S,10SEC) (MODERATELY STRONG)	REP0313
970228		059	10680.8	BEPPOSAX(IAU6572)MOD.INT.,80S,4 PKS (75.46,11.75J)IAU6578	
		059	10680.8	INT.X-RAY,RADIO(IAU6576,6577),OPTICAL(6584),MOTION(6629)	OPTICAL
	13	059	10659.1	PKS,667.1(60/S,ONE-SIDED,SOFT,@74DEG) DOUBTFUL (+UL,WIND)	
970313		072	30096.5	KONUS(MOD.STRONG,PK@+11,40S)+UL@28380,2000LS(MOD.INT,10S)	
	13	072	28355.8	PEAK (180/S,<2S,SOFT) (NO PEAK AT 30096!) (CONFLICT)	REP0501

From kraken@rosserv.gsfc.nasa.gov Mon Sep 29 13:47 PDT 1997
X-Sender: kraken@lheapop.gsfc.nasa.gov (Unverified)
Mime-Version: 1.0
Date: Mon, 29 Sep 1997 16:48:19 -0400
    khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
From: Peter Kurczynski <kraken@rosserv.gsfc.nasa.gov>
Subject: Ulysses bursts seen by TGRS
Cc: TEEGARDEN@tgrs2.gsfc.nasa.gov, kraken@rosserv.gsfc.nasa.gov

Hi Kevin,

Here are the results of a search through TGRS data for some recent
bursts that Ulysses detected.

Take care,

Pete

September 13 1997 09:05 Ulysses time; weak burst, 100 ms long

TGRS did not see this one in either waiting mode or burst mode data

September 15 1997 08:35 " " ; moderate burst, 10 s long

TGRS DID see this one: TGRS #621 at 32872s.

energy range	duration	peak count rate
100-300 keV	~25s	150 cts/s
35-100 keV	~40s	70 cts/s

since the count rates were very low in each energy band, the duration
is difficult to estimate, and these numbers should be considered upper limits.

September 19 1997 17:32 Ulysses time; moderate burst, 20 s long

TGRS ALSO saw this one: TGRS #622 at 65665s

energy range	duration	peak count rate
100-300 keV	30s	200 cts/s
35-100 keV	30s	150 cts/s

From cline@apache.gsfc.nasa.gov Wed Sep 24 12:15 PDT 1997
Mime-Version: 1.0
Date: Wed, 24 Sep 1997 15:19:15 -0400
To: KHURLEY@sunspot.ssl.berkeley.edu
   m: cline@apache.gsfc.nasa.gov (T L Cline)
bject: Konus saw both the NEAR events of 970919!

>Date: Wed, 24 Sep 1997 13:46:15 -0400 (EDT)
>From: BUTTERWORTH@PIZZA.GSFC.NASA.GOV
>Subject: Konus saw both the NEAR events of 970919!
>To: cline@apache.gsfc.nasa.gov, xrtpm@leptpm.gsfc.nasa.gov
>
>Tim, Tom,
>
>Konus saw both these events. The first triggered in the South-facing
>detector at 18:14:23.862 - it was hard, lasted 30 seconds and consisted of
>two broad peaks. The second is only visible in waiting-mode data - it was
>very hard, and lasted about 4.5 seconds starting near 22:10:16.
>
>These observations correspond to BATSE triggers 6389 and 6390. Given the
>existence of good near-Earth data from BATSE, I won't automatically extract
>Konus lightcurves and ephemerides for these events, but will await requests.
>
>NEAR seems to have very impressive sensitivity for the kinds of hard GRB we
>have confirmed on 970915, 970919 (the two here) and 970921! (I still don't
>have the Konus data for 970922, so I can't yet check that last pair of NEAR
>events).
>
>Paul.
>

>--
>Date: Tue, 23 Sep 1997 14:21:22 -0400 (EDT)
>From: Tim McClanahan <xrtpm@leptpm.gsfc.nasa.gov>
>Message-Id: <199709231821.OAA06671@leptpm.gsfc.nasa.gov>
>To: BUTTERWORTH@PIZZA.GSFC.NASA.GOV, u1jit@lepvax.gsfc.nasa.gov
>Subject: Re: Tim - Here's the predicted NEAR ephemeris till Jan98 - Paul
>Mime-Version: 1.0
>Content-Type: text/plain; charset=us-ascii
>Content-Transfer-Encoding: 7bit
>Content-MD5: n7TArGG2uwUQTARFkYq+Tw==
>
>Paul and Tom,
>   A repost of the NEAR GRS data products filled in a gap in coverage for
>   1997: 262 September 19. With it another 2 events.
>
>   1. 1997: 262: 18: 12: 37
>   2. 1997: 262: 22: 10: 32
>
>   1. Intensity 864: Background 554
>   2. Intensity 653: Background 534
>
>   I just checked BATSE and has very close correlation .
>   Tim McClanahan
>

- homas L. Cline ----- cline@apache.gsfc.nasa.gov

From BUTTERWORTH@lheavx.gsfc.nasa.gov Wed Sep 24 13:49 PDT 1997
From: BUTTERWORTH@lheavx.gsfc.nasa.gov
Date: Wed, 24 Sep 1997 16:45:11 -0400 (EDT)
To: khurley@sunspot.ssl.berkeley.edu, kmarar@isac.ernet.in, vnp@isac.ernet.in,
        jterrell@lanl.gov, yosimori@rikkyo.ac.jp,
        filippo@botes1.tesre.bo.cnr.it, henze@fender.msfc.nasa.gov,
        kraken@rosserv.gsfc.nasa.gov
CC: BUTTERWORTH@lheavx.gsfc.nasa.gov
X-Vmsmail-To: @ULYSSES
X-Vmsmail-Cc: BUTTERWORTH
Subject: Konus report for Ulysses events on 970913, 970915 and 970919

Hi Everyone,

Konus did not detect the Ulysses event reported for 970913.

On 970915, Konus triggered at 09:07:50.908 in the North-facing detector.
The event lasted 25 seconds, with lots of structure. It was hard - barely
visible below 50 keV.

On 970919, Konus triggered at 18:14:23.862 in the South-facing detector.
The event was hard, lasted 30 seconds, and consisted of two broad peaks.
(This was also seen by BATSE - trig# 6389).

in reply to:

Date: Sat, 20 Sep 1997 09:28:05 -0700
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <199709201628.JAA10533@scylla.berkeley.edu>
To: scott@lheamail.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu,
        butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
        kmarar@isac.ernet.in, vnp@isac.ernet.in,
        bonnard@lheamail.gsfc.nasa.gov, jterrell@lanl.gov,
        yosimori@rikkyo.ac.jp, filippo@botes1.tesre.bo.cnr.it,
        henze@fender.msfc.nasa.gov, kraken@rosserv.gsfc.nasa.gov
Subject: GRB970913, 970915
X-Sun-Charset: US-ASCII

ULYSSES GAMMA-RAY BURSTS NOT REPORTED BY BATSE:

Ulysses observed the following bursts:

September 13 1997 09:05 Ulysses time; weak burst, 100 ms long

September 15 1997 08:35   "   " ; moderate burst, 10 s long

The spacecraft was about 3100 light-seconds from Earth.

Were these events detected by anyone else?

CC: ulyssesbursts alias list
    (barthelmy, butterworth, cline, frontera, kouveliotou, kurczyski, marar, teegarden, terrell,

---
Date: Tue, 23 Sep 1997 08:07:03 -0700
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <199709231507.IAA14478@scylla.berkeley.edu>

Date: Feb 1 '00

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

☑ 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

☑ BATSE ephemeris for T_0?

☑ Error circle position and radius from public catalog used?

☐ If MER data were used, is a 30 ms systematic error included?

3. NEAR Data

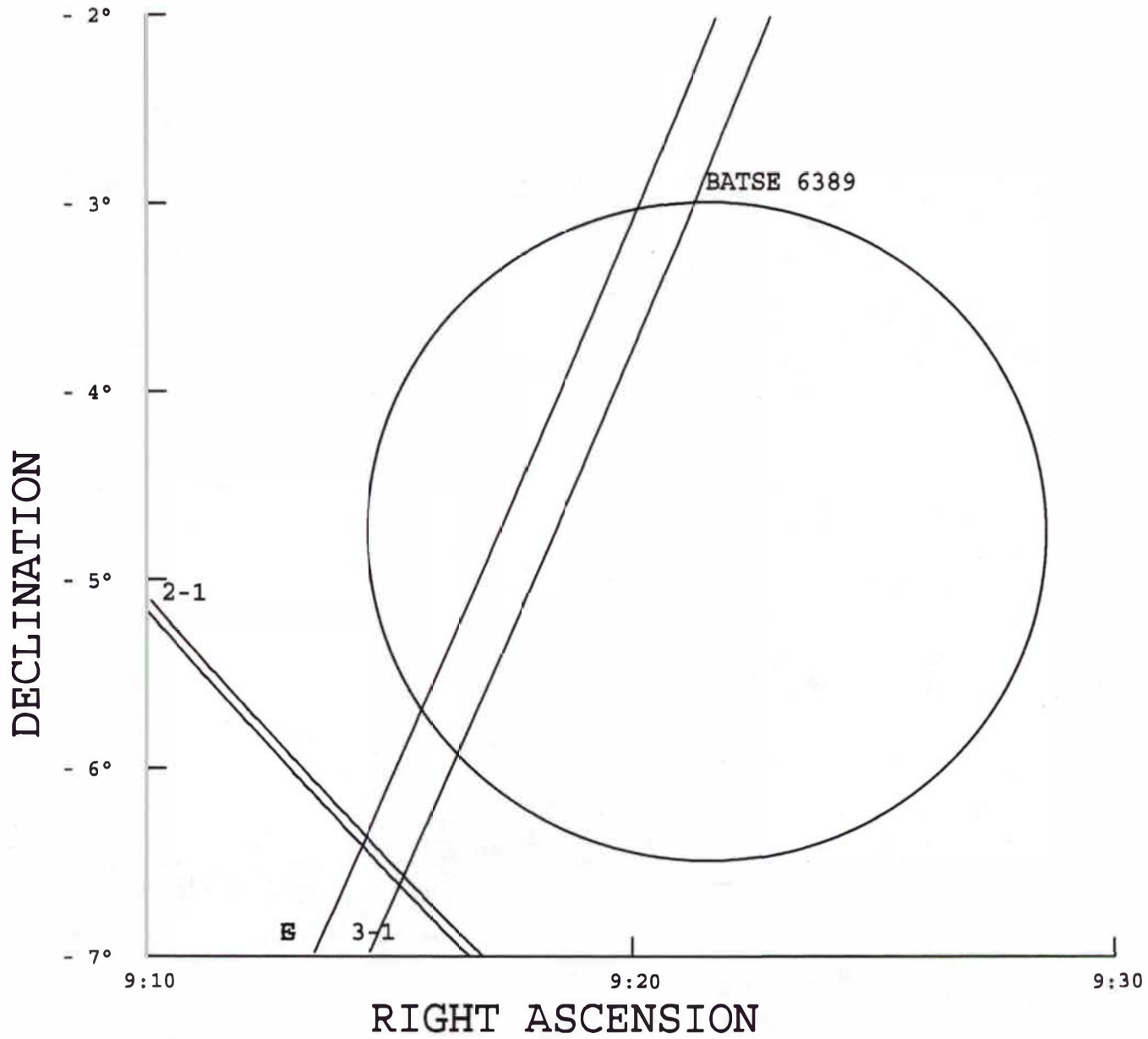
☑ Final, correct time used? (Files postmarked vwx@bocc1, or from Teresa Sheets, have the correct time; files on website have incorrect times)

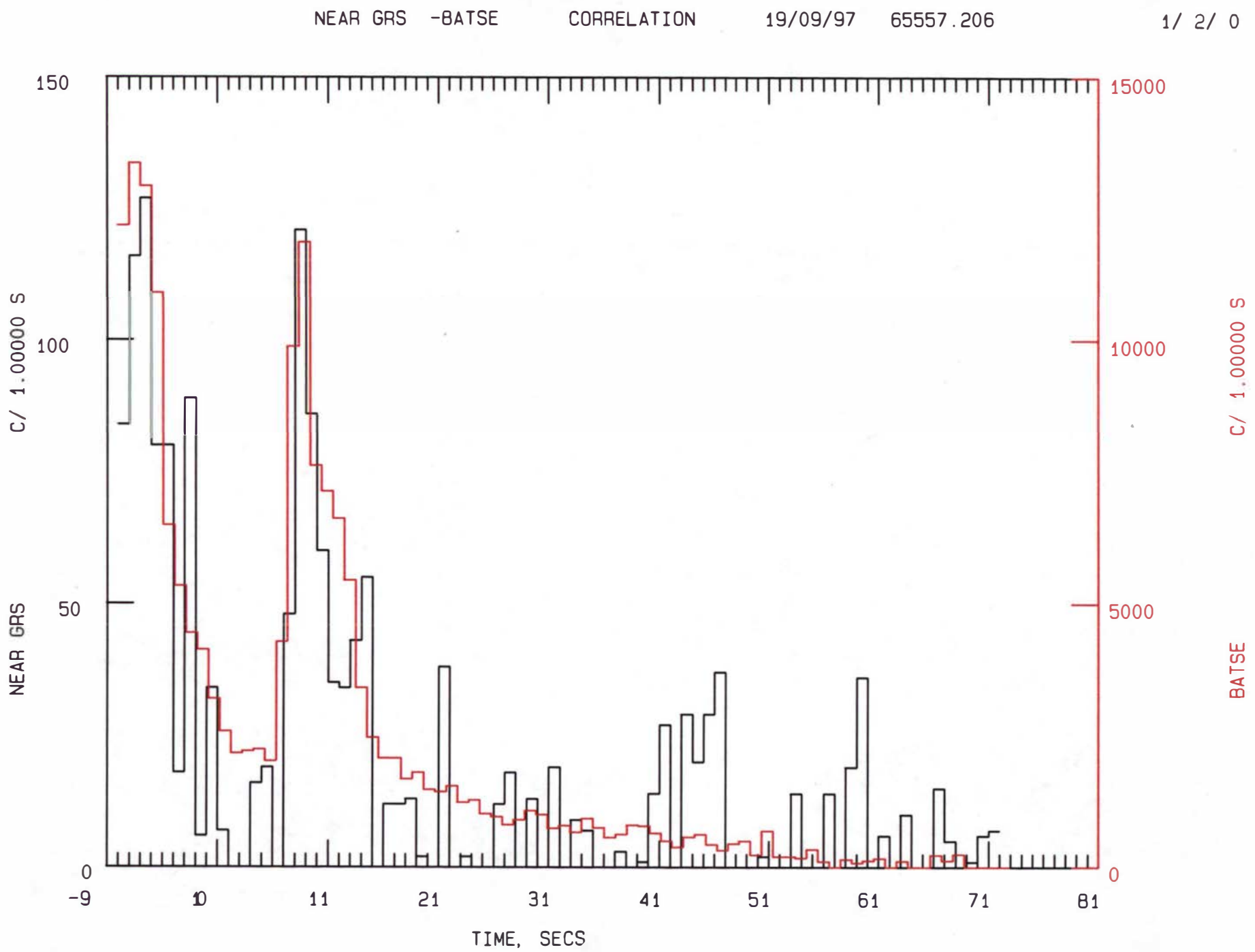
☑ BATSE >100 keV data used for NEAR correlation?

☑ ACCESS database updated?

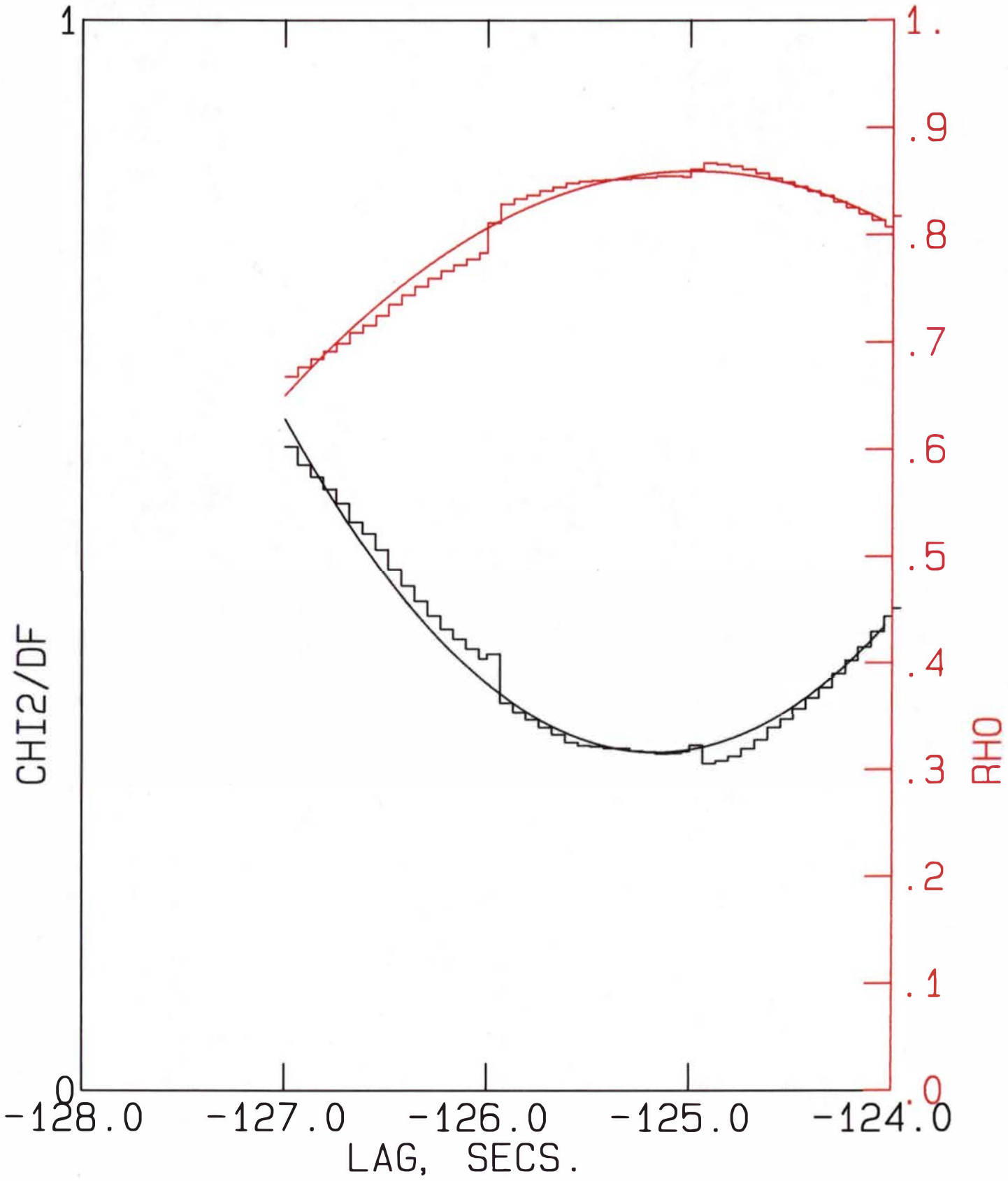
EVENT OF SEP 19, 1997 18:14

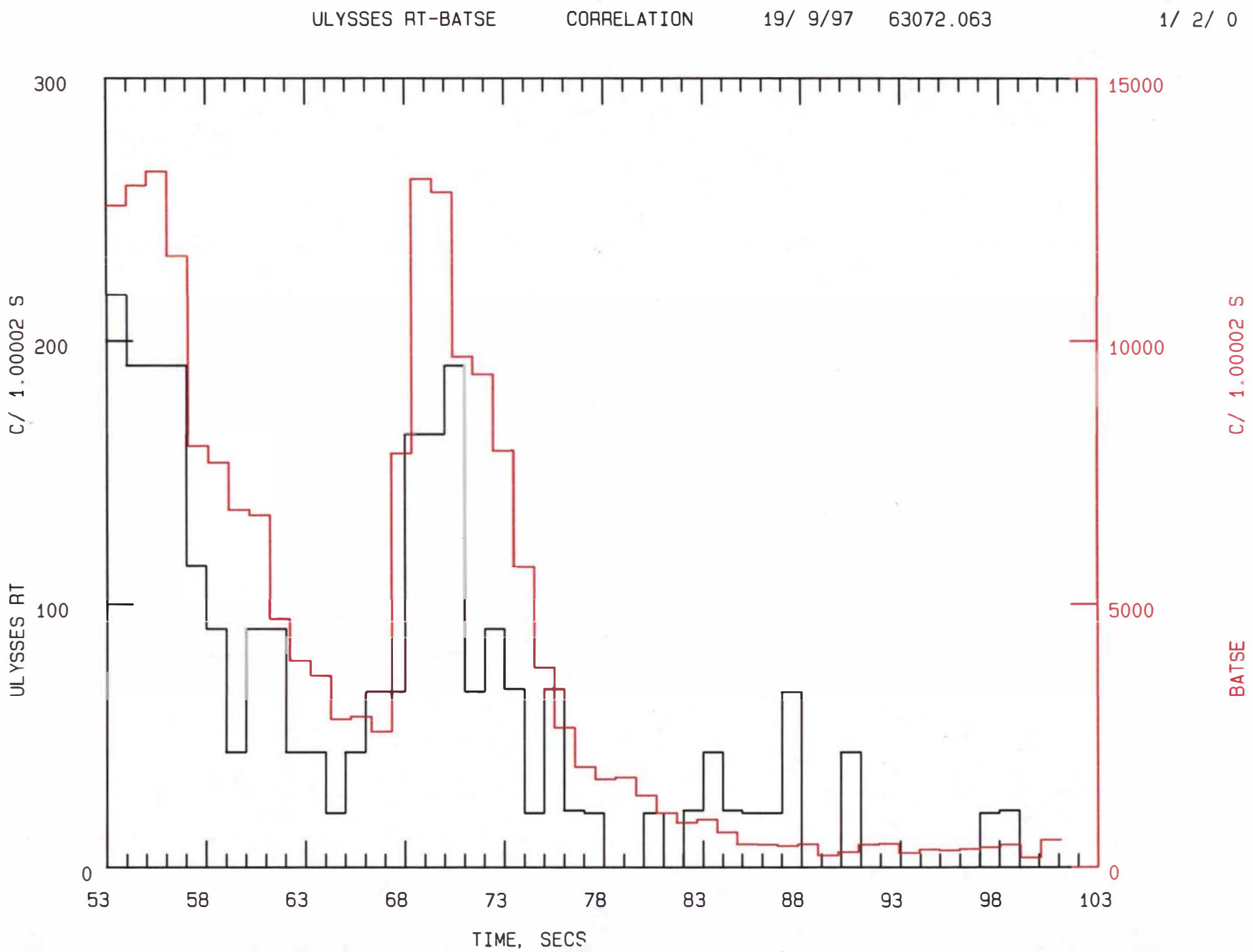
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 BATSE 2 ULYSSES 3 NEAR



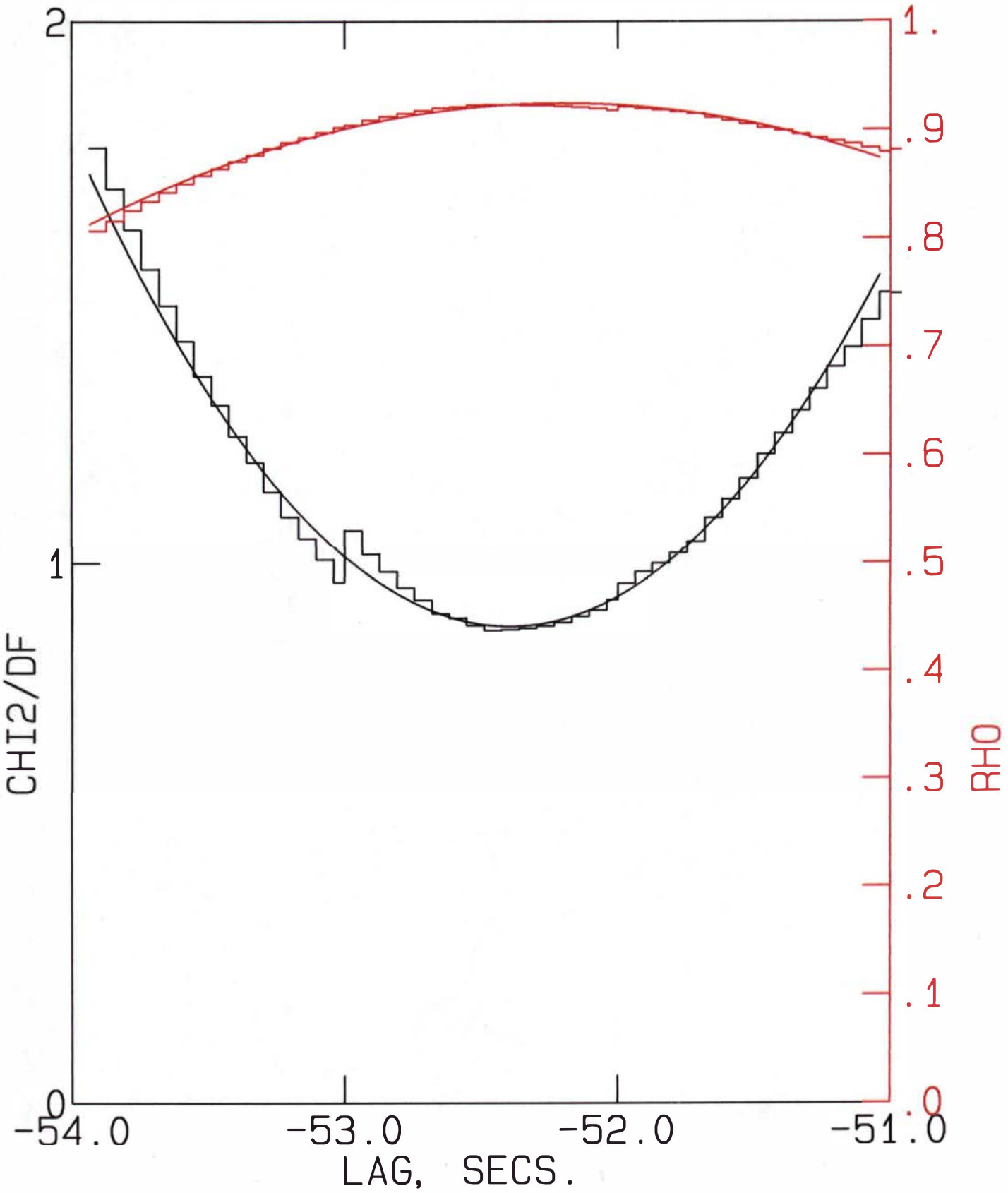

NEAR GRS -BATSE CORRELATION 19/09/97 65557.206 1/ 2/ 0
150
100
50
0
-9
10
11
21
31
41
51
61
71
81
15000
10000
5000
0
C/ 1.00000 S
NEAR GRS
C/ 1.00000 S
BATSE
TIME, SECS

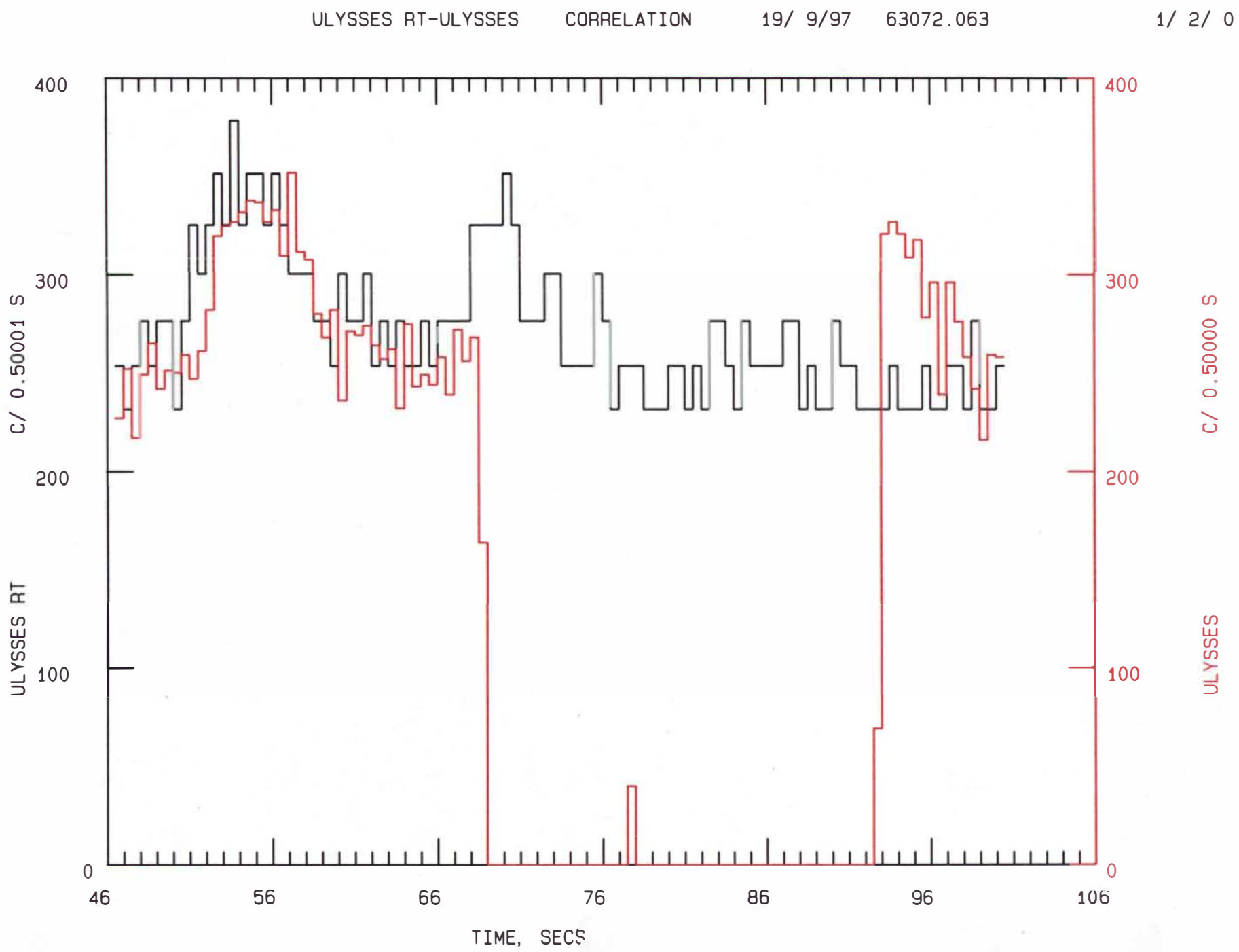
NEAR GRS -BATSE CORRELATION 19/09/97 65557.206

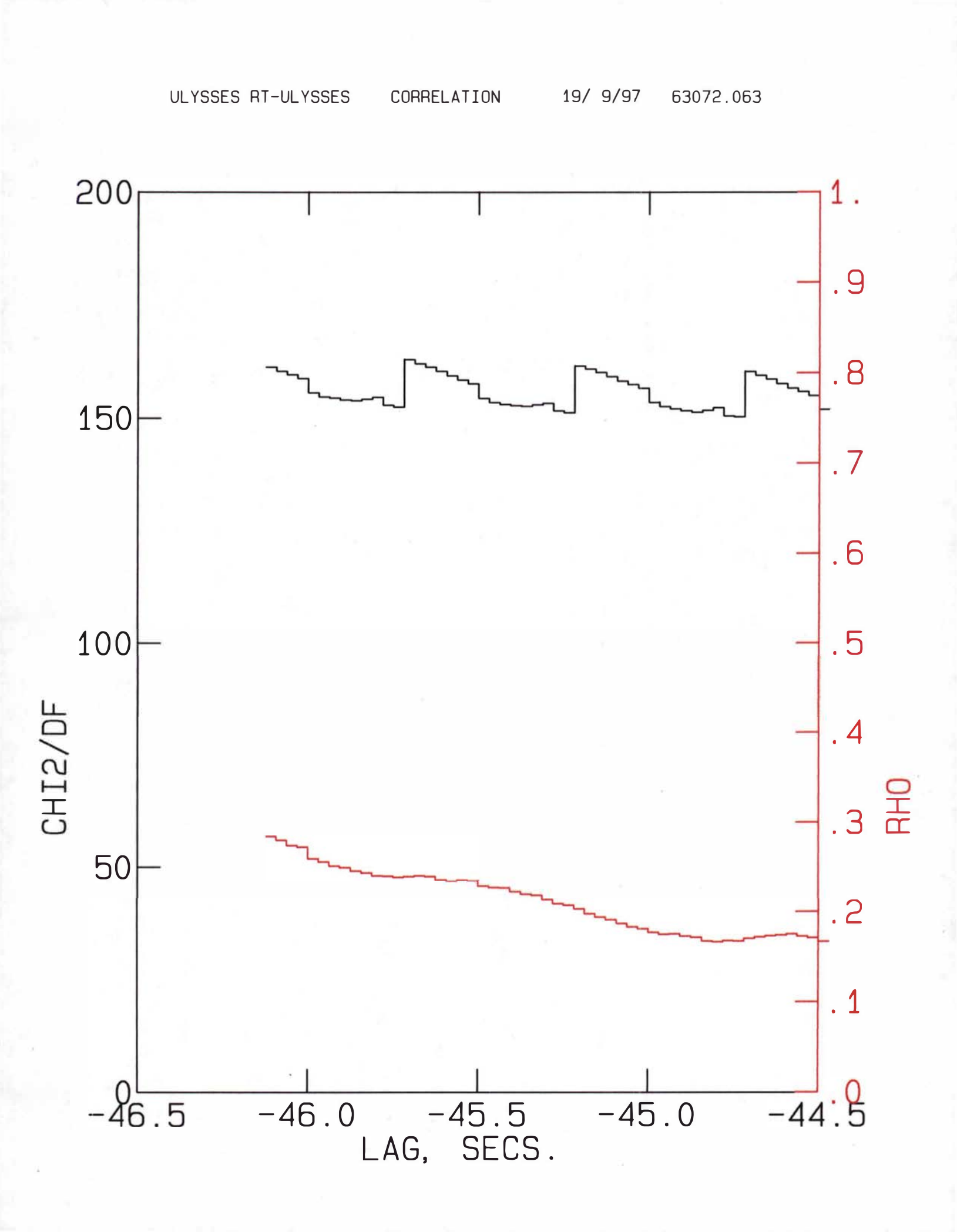



ULYSSES RT-BATSE CORRELATION 19/ 9/97 63072.063 1/ 2/ 0
300
200
100
0
C/ 1.00002 S
ULYSSES RT
15000
10000
5000
0
C/ 1.00002 S
BATSE
53
58
63
68
73
78
83
88
93
98
103
TIME, SECS

ULYSSES RT-BATSE CORRELATION 19/ 9/97 63072.063

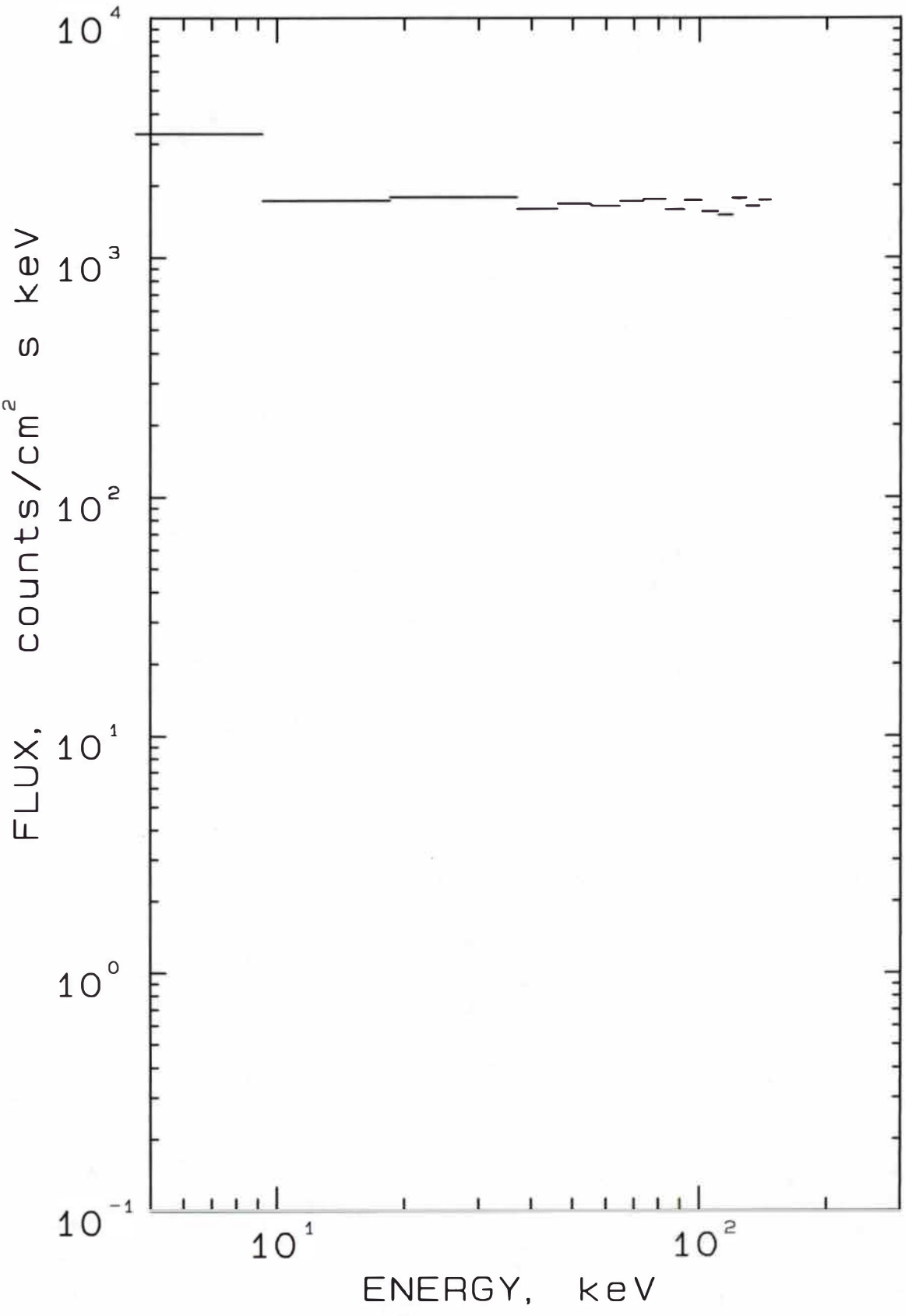


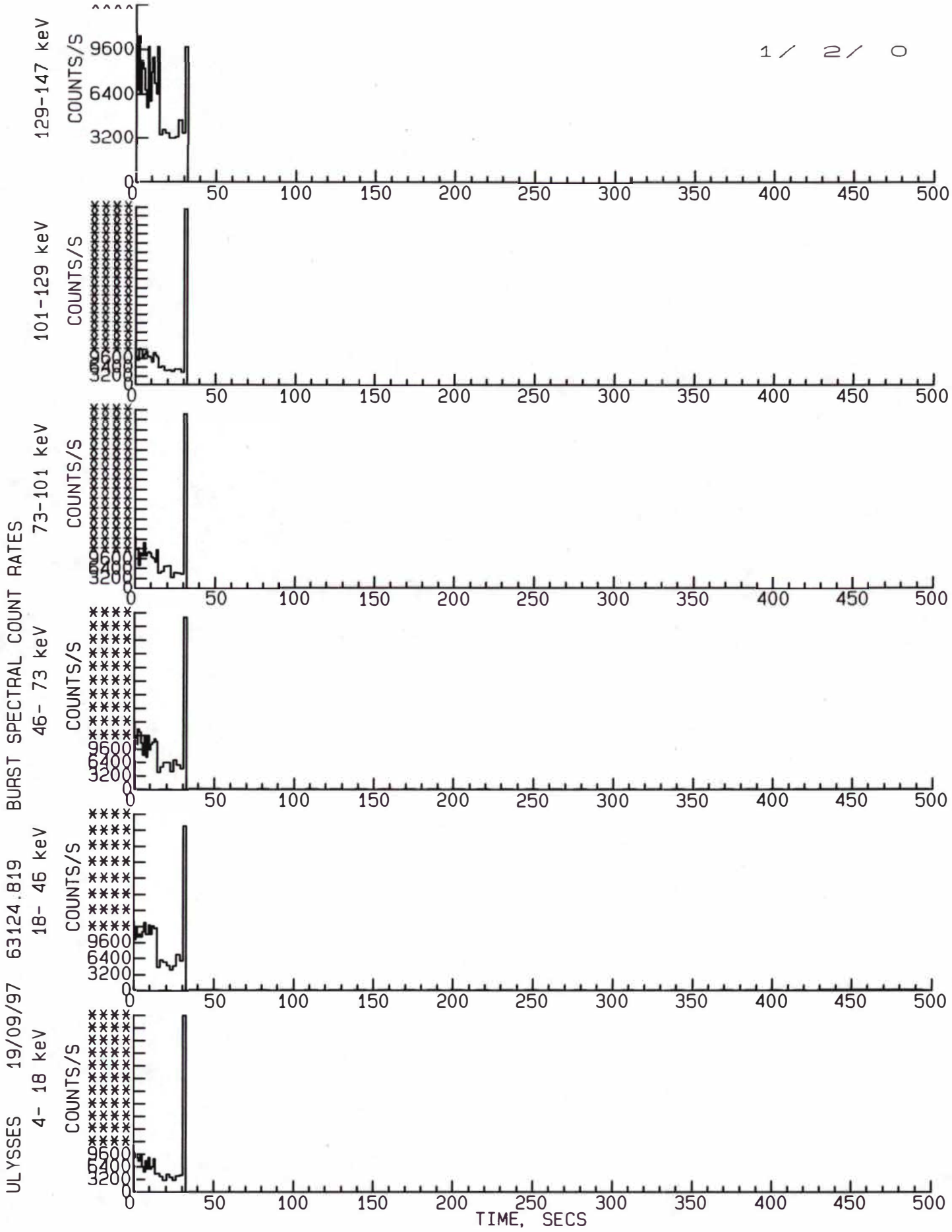

ULYSSES RT-ULYSSES CORRELATION 19/ 9/97 63072.063 1/ 2/ 0
400
300
200
100
0
C/ 0.50001 S
ULYSSES RT
400
300
200
100
0
C/ 0.50000 S
ULYSSES
46
56
66
76
86
96
106
TIME, SECS

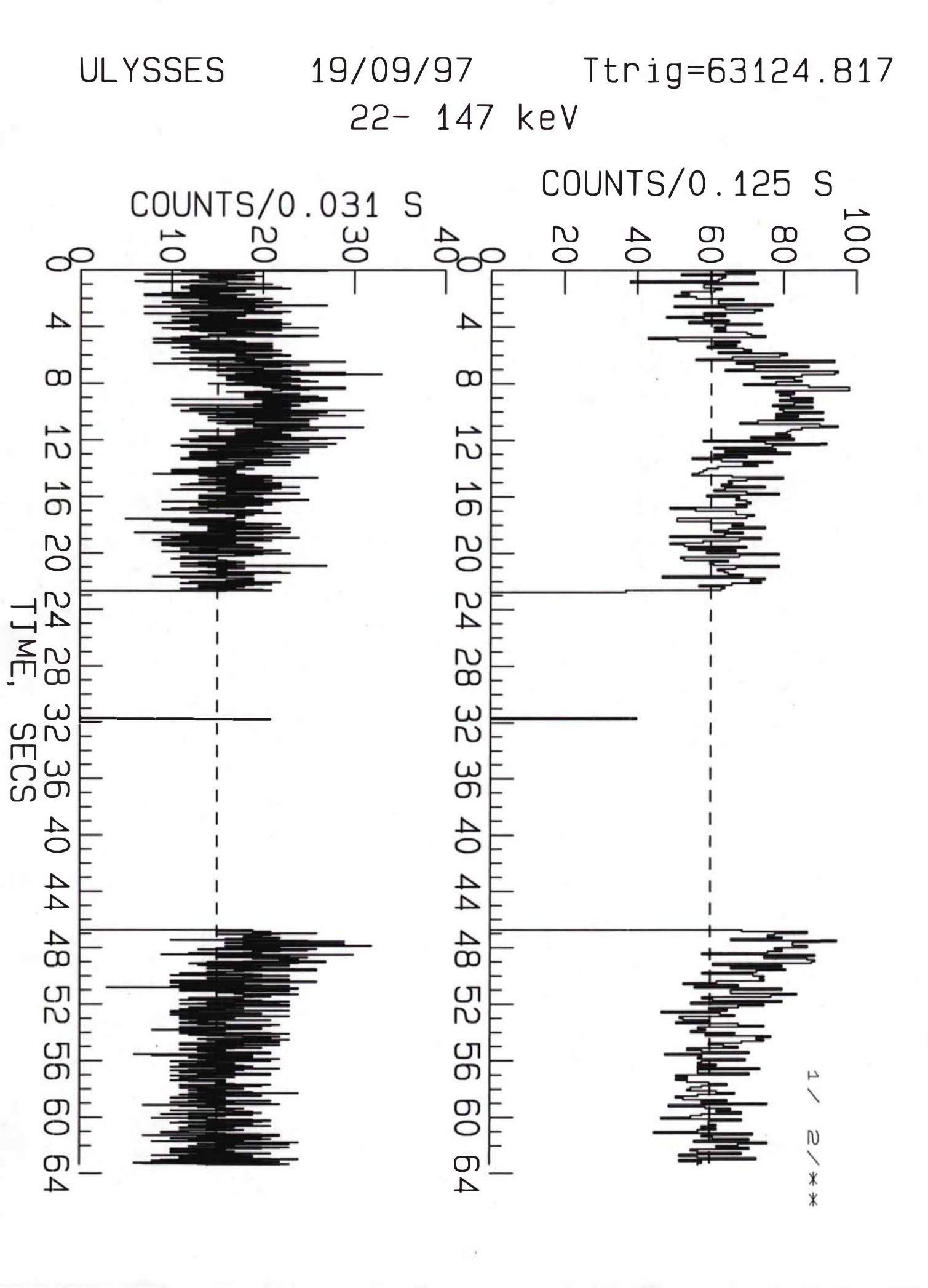

ULYSSES RT-ULYSSES CORRELATION 19/ 9/97 63072.063
200
150
100
50
0
CHI2/DF
1.
.9
.8
.7
.6
.5
.4
.3
.2
.1
.0
RHO
-46.5
-46.0
-45.5
-45.0
-44.5
LAG, SECS.

ULYSSES 19/09/97 63124.819

SPECTRUM INTEGRATED OVER 22.3 SECONDS, INTERVALS 2 TO 20




ULYSSES 19/09/97 63124.819 BURST SPECTRAL COUNT RATES
1/ 2/ 0
129-147 keV
101-129 keV
73-101 keV
46- 73 keV
18- 46 keV
4- 18 keV
COUNTS/S
9600
6400
3200
0
50
100
150
200
250
300
350
400
450
500
TIME, SECS

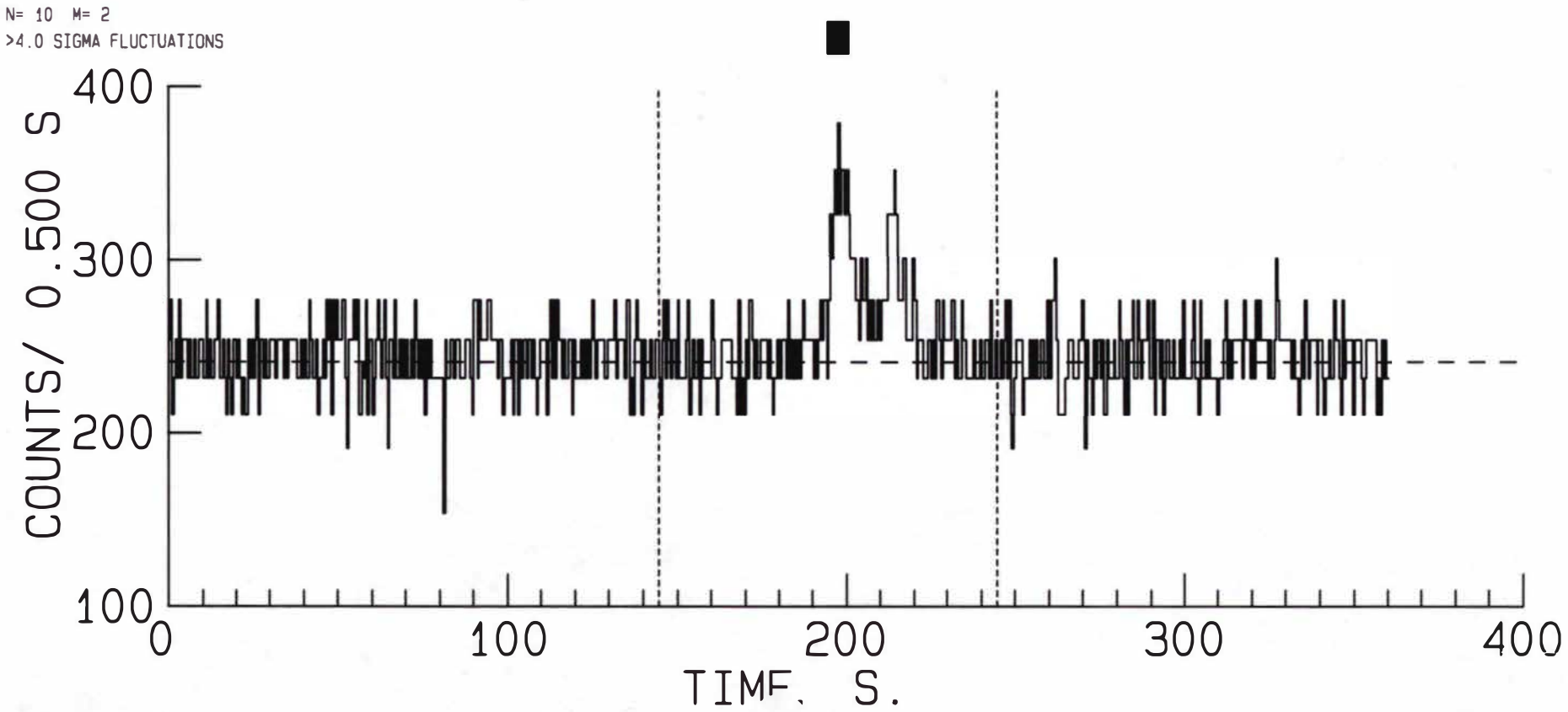

ULYSSES 19/09/97 Ttrig=63124.817
22- 147 keV
COUNTS/0.031 S
COUNTS/0.125 S
TIME, SECS
1/ 2/**

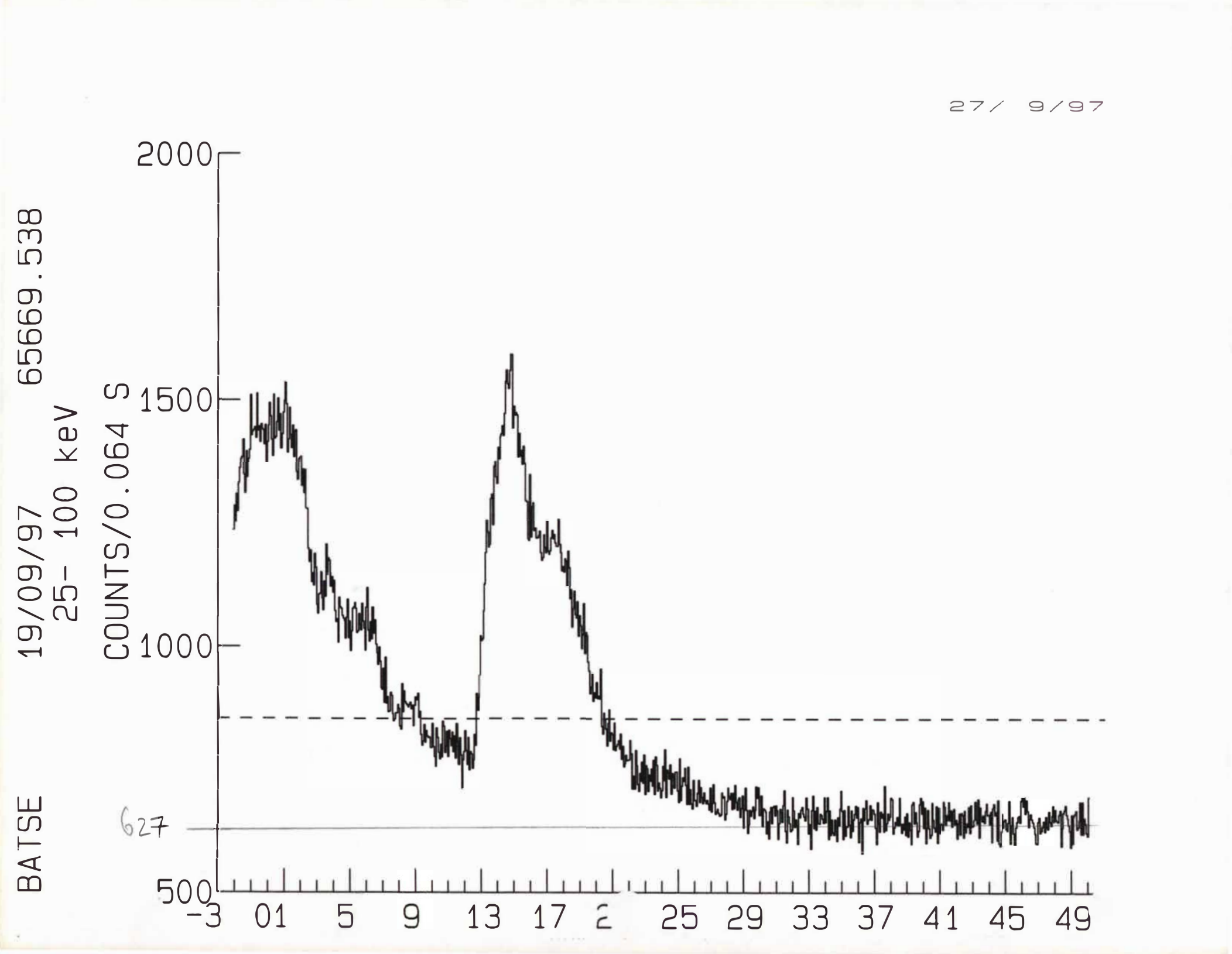
ULYSSES RT

19/ 9/97 62928.076 s

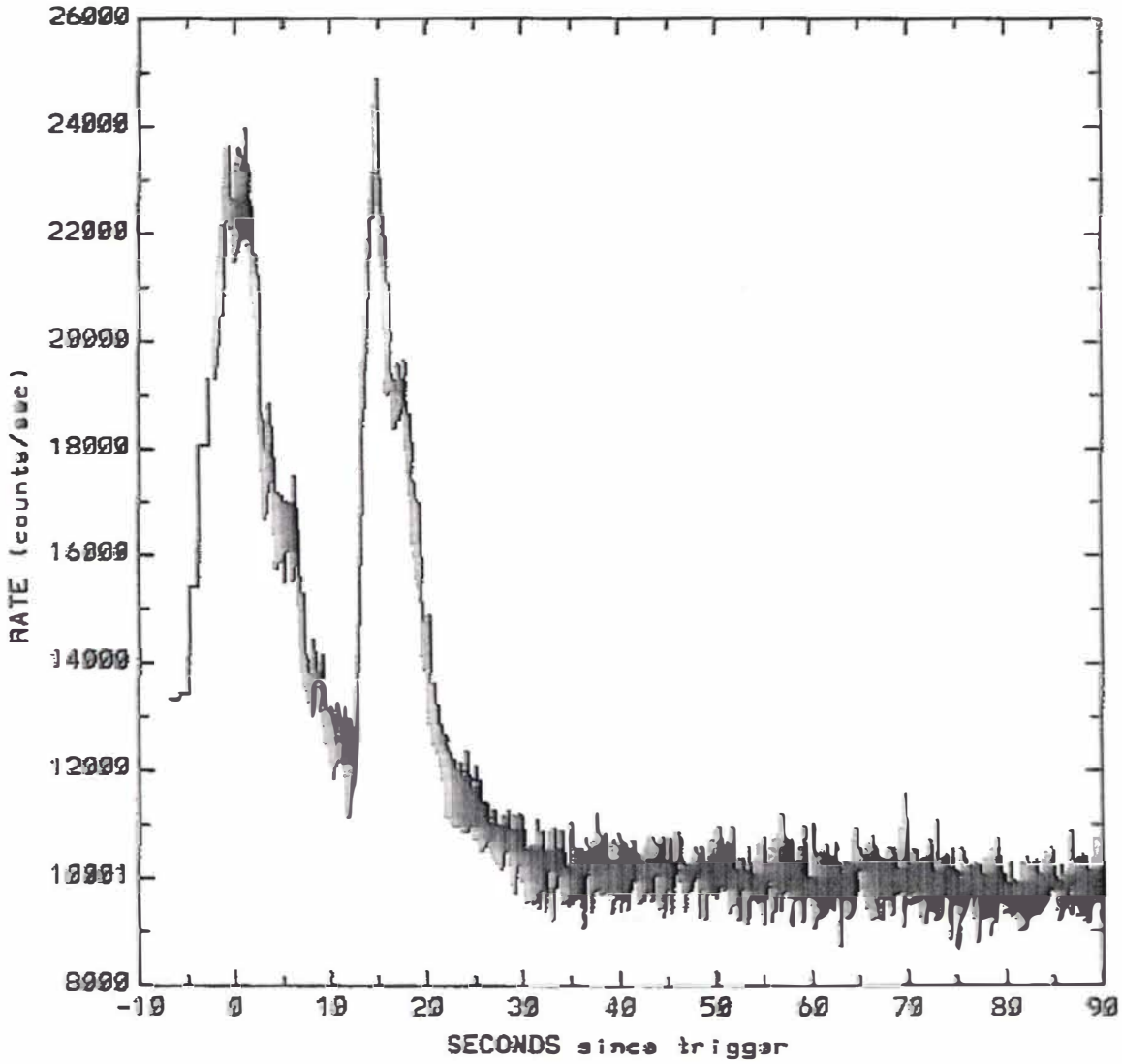
22- 147 keV

1/ 2/ 0




27/ 9/97
BATSE 19/09/97 65669.538
25- 100 keV
COUNTS/0.064 S
2000
1500
1000
627
500
-3
01
5
9
13
17
25
29
33
37
41
45
49

DISCSC Data for K. Hurley, No. 6389



25-SEP-1997 09:42:44

Created by MOPS BD
(Burst Display)
Version 12.25

Trigger # : 6389

Trigger Time:
19719 / 65869.537

Burst Data Type:
DISCSC

Deadtime
Corrected: N

Background Data
Type: PREB + DISCLA

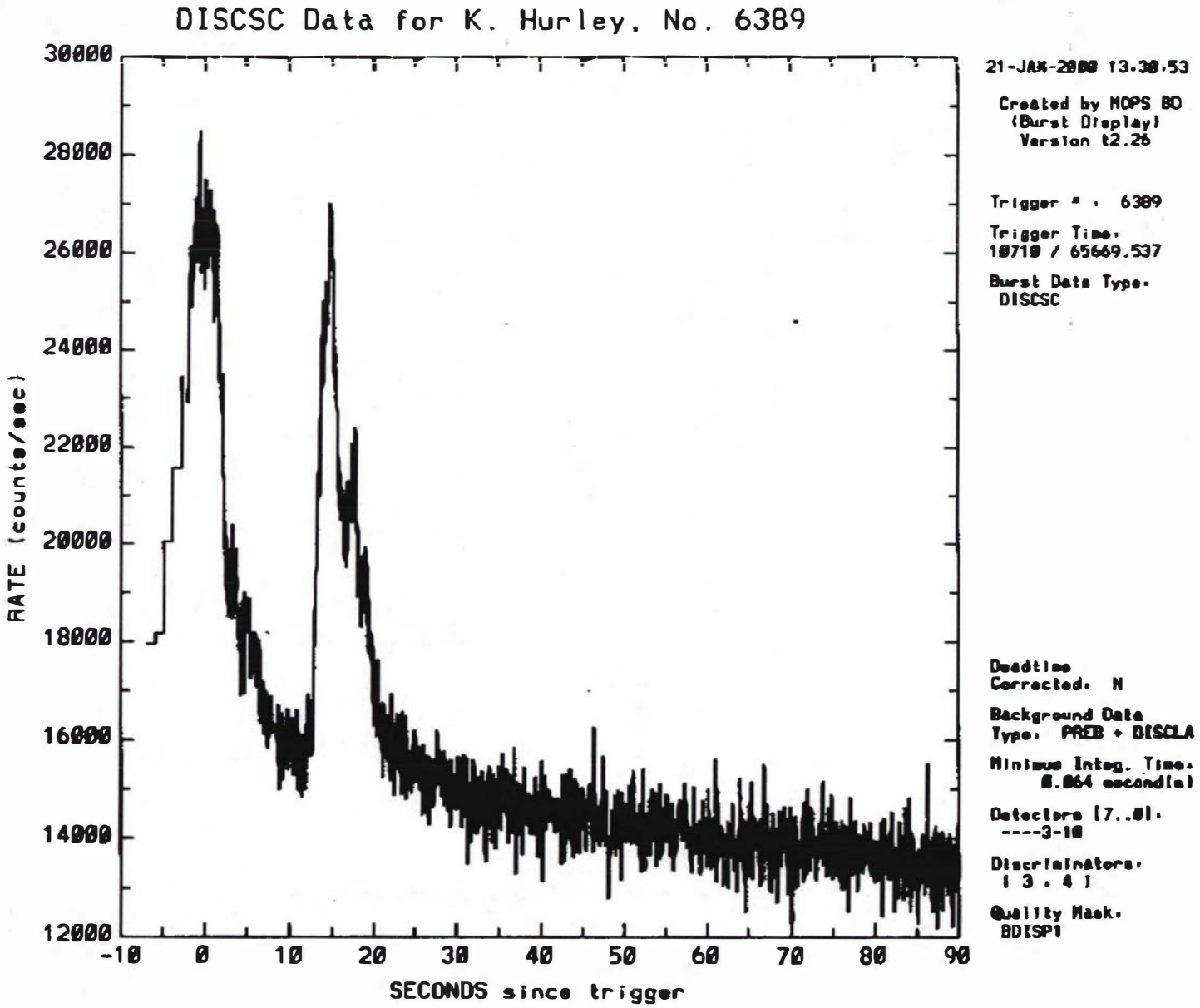
Minimum Integ. Time:
0.064 second(s)

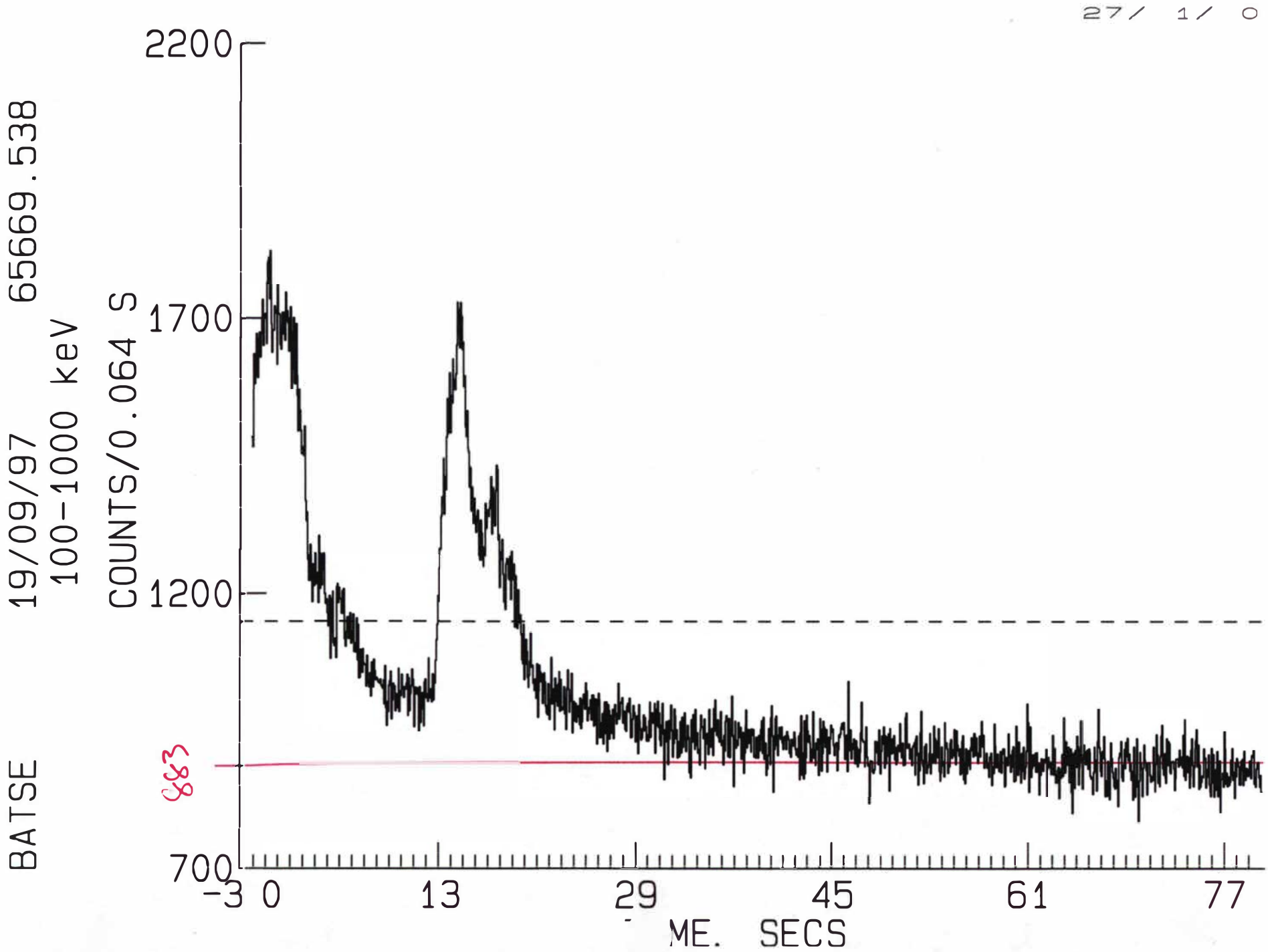
Detectors (7..0):
----3-10

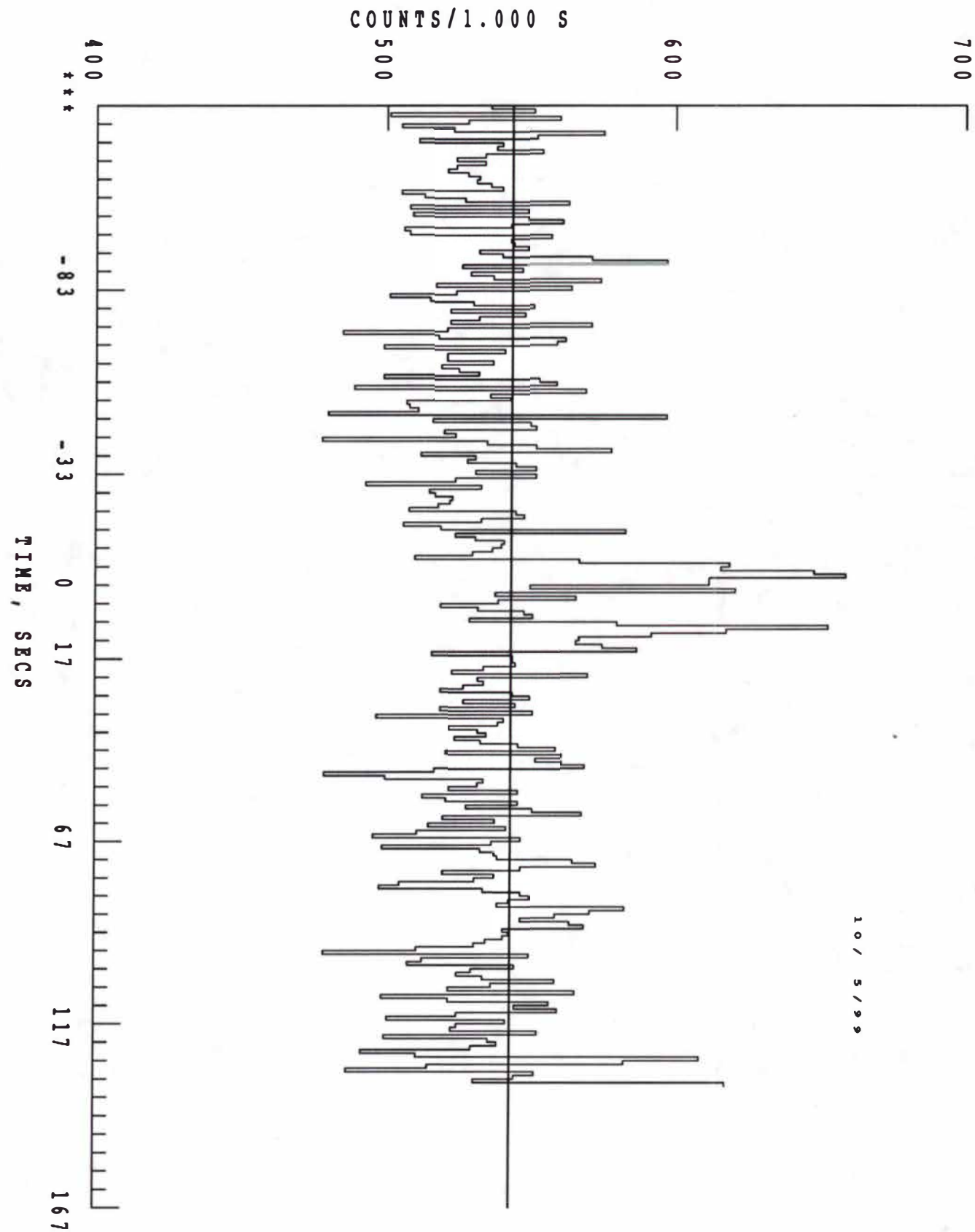
Discriminators:
(1 . 2)

Quality Mask:
EDISP1

P.03
BATSE
2565445800
01-21-2000 15:44




27/ 1/ 0
BATSE 19/09/97 65669.538
100-1000 keV
COUNTS/0.064 S
2200
1700
1200
700
883
-3 0
13
29
45
61
77
ME. SECS


NEAR
19/09/97
65557.206
100-1000 keV
COUNTS/1.000 S
400
500
600
700
***
-83
-33
0
17
67
117
167
TIME, SECS
10/ 5/99

From SURASAK@SSLLES.MSFC.NASA.GOV Tue Sep 23 11:25:33 1997
Return-Path: <SURASAK@SSLMOR.msfc.nasa.gov>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id LAA29963; Tue, 23 Sep 1997 11:25:32 -0700
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id LAA27751; Tue, 23 Sep 1997 11:25:30 -0700
Date: Tue, 23 Sep 1997 13:25:26 -0500 (CDT)
From: SURASAK@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970923132526.2020cd00@SSLLES.MSFC.NASA.GOV>
Subject: Crossing Windows for BATSE Burst 6390
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6390
EVENT OF 1997 SEP 19 DAY OF YEAR=262
EVENT CROSSING TIME AT BATSE : 79816. S. OR 22:10:16.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 298.000 60.000
BATSE PEAK COUNTING RATE: 12300 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 19/ 9/ 97 IS:
RA= 164.169 DEC= 17.171 DIST= 6.201 AU
BATSE-ULYSSES DISTANCE = 927703088. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 85.69 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 232.60 SECS.
CROSSING TIME AT ULYSSES IS 80049. S. OR 22:14:08 +/- 589.26 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 19/ 9/ 97 IS:
RA= 230.496 DEC= -19.506 DIST= 1.736 AU
MARS-BATSE DISTANCE = 259732144. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 83.75 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 94.29 SECS.
CROSSING TIME AT MARS IS 79910. S. OR 22:11:50 +/- 150.95 SECONDS

BATSE BURST TRIGGER

NO.: 6390

TIME: TJD=0710 SECONDS=79816

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=119.4 AZIMUTH=184 ERROR=2.685 DEGREES

COMMENTS:
GRB. SINGLE PULSE. DUR ABOUT 5S. STRONGLY VISIBLE ABOVE 300 KEV. AT T+20S LATER,
THERE EXITS ANOTHER WEAKER PULSE WITH MORE COMPLEX STRUCTURE. DUR ABOUT 10S.
NOT VISIBLE ABOVE 300 KEV. THE OTHER PULSE PROBABLY FROM THE SAME SOURCE.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6390	970919	10710	79816	12300	298	+60	5

Date: Feb 1 00

BURST TRIANGULATION CHECKLIST

1. Ulysses Data N/A

☐ Jim Schmidling's stat file correction applied?

☐ Final ephemeris used?

☐ Final, CDROM data used?

☐ 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

☑ BATSE ephemeris for T_0?

☑ Error circle position and radius from public catalog used?

☐ If MER data were used, is a 30 ms systematic error included?

3. NEAR Data

☑ Final, correct time used? (Files postmarked vwx@bocc1, or from Teresa Sheets, have the correct time; files on website have incorrect times)

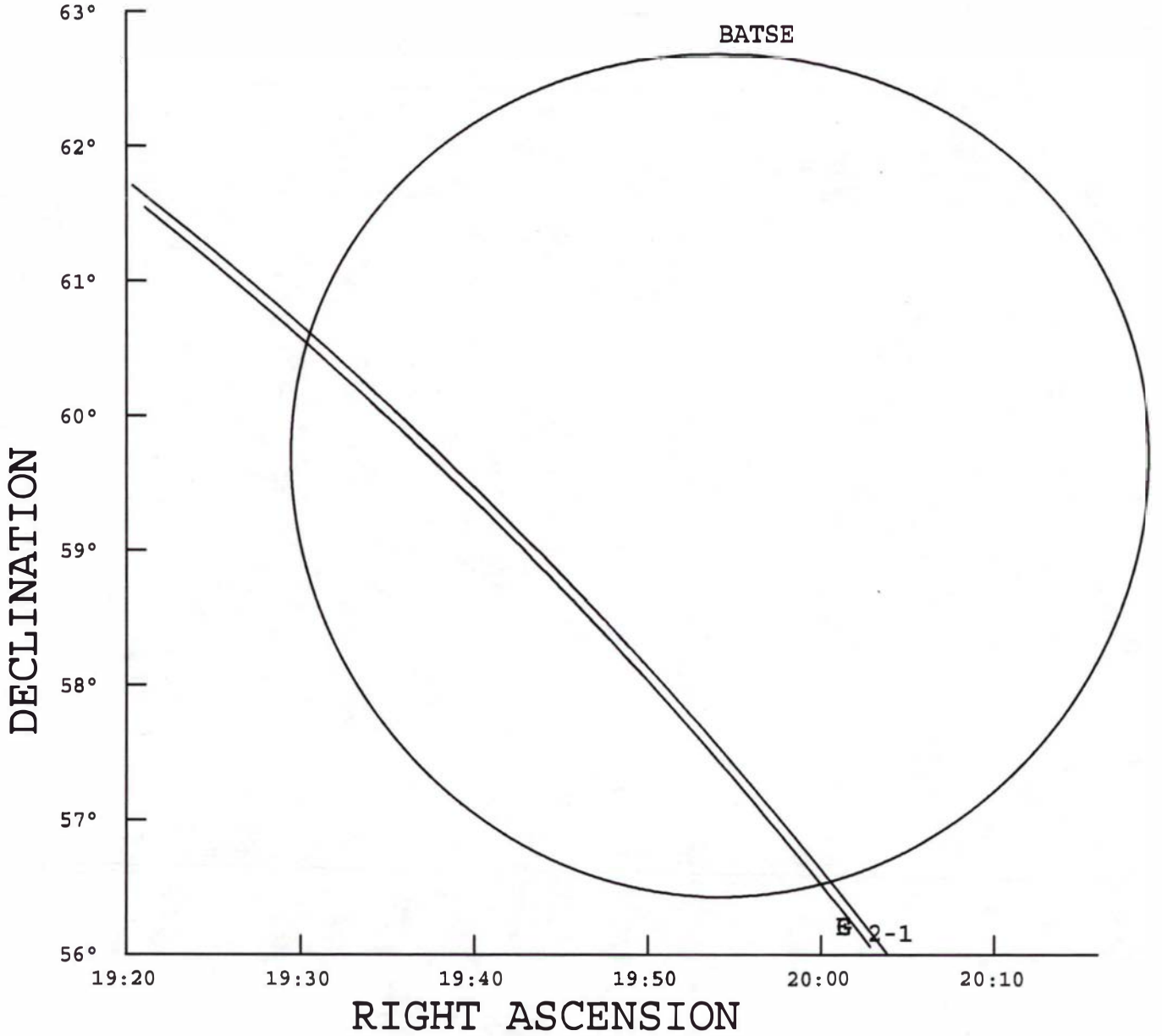
☑ BATSE >100 keV data used for NEAR correlation?

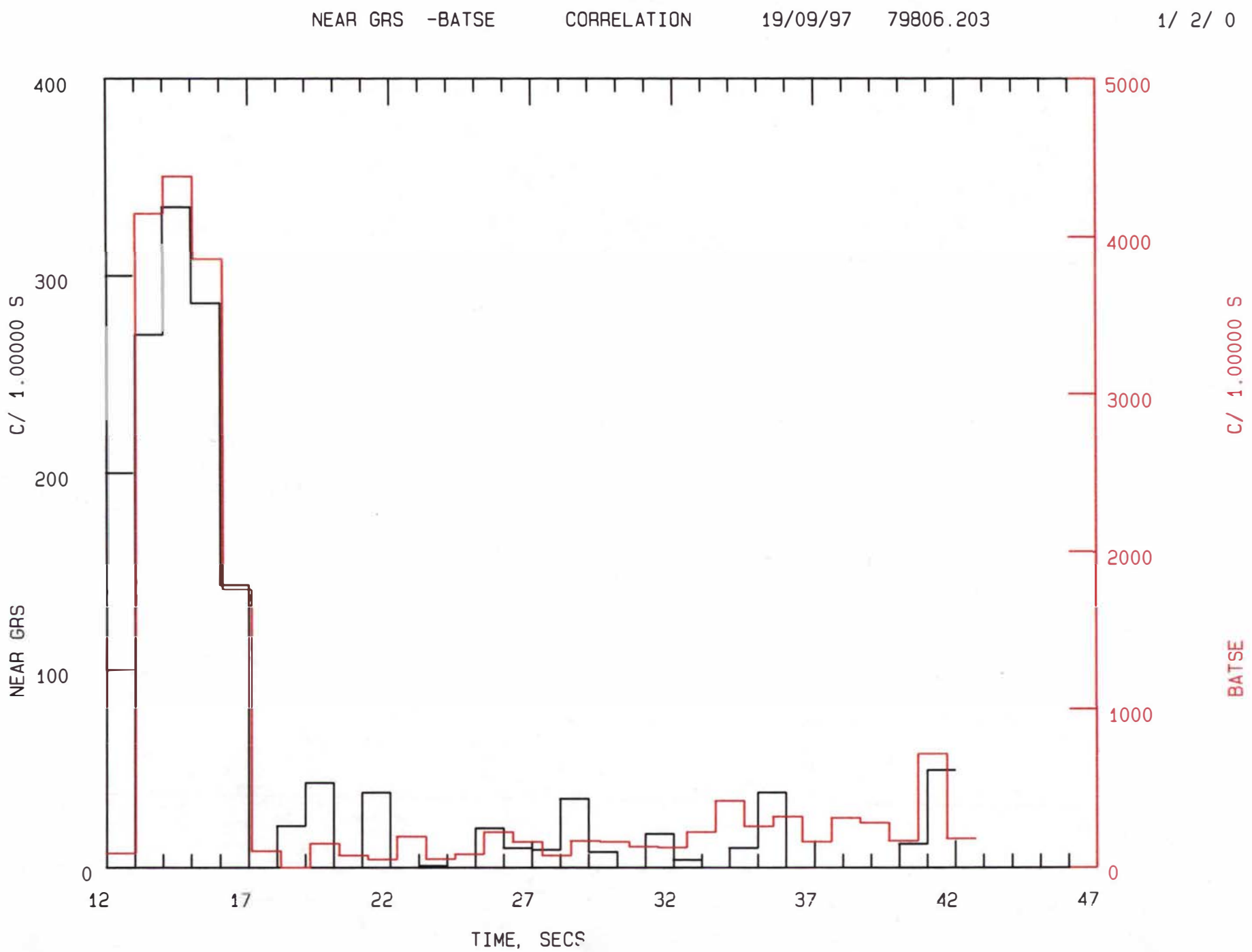
☑ ACCESS database updated?

EVENT OF SEP 19, 1997 22:10

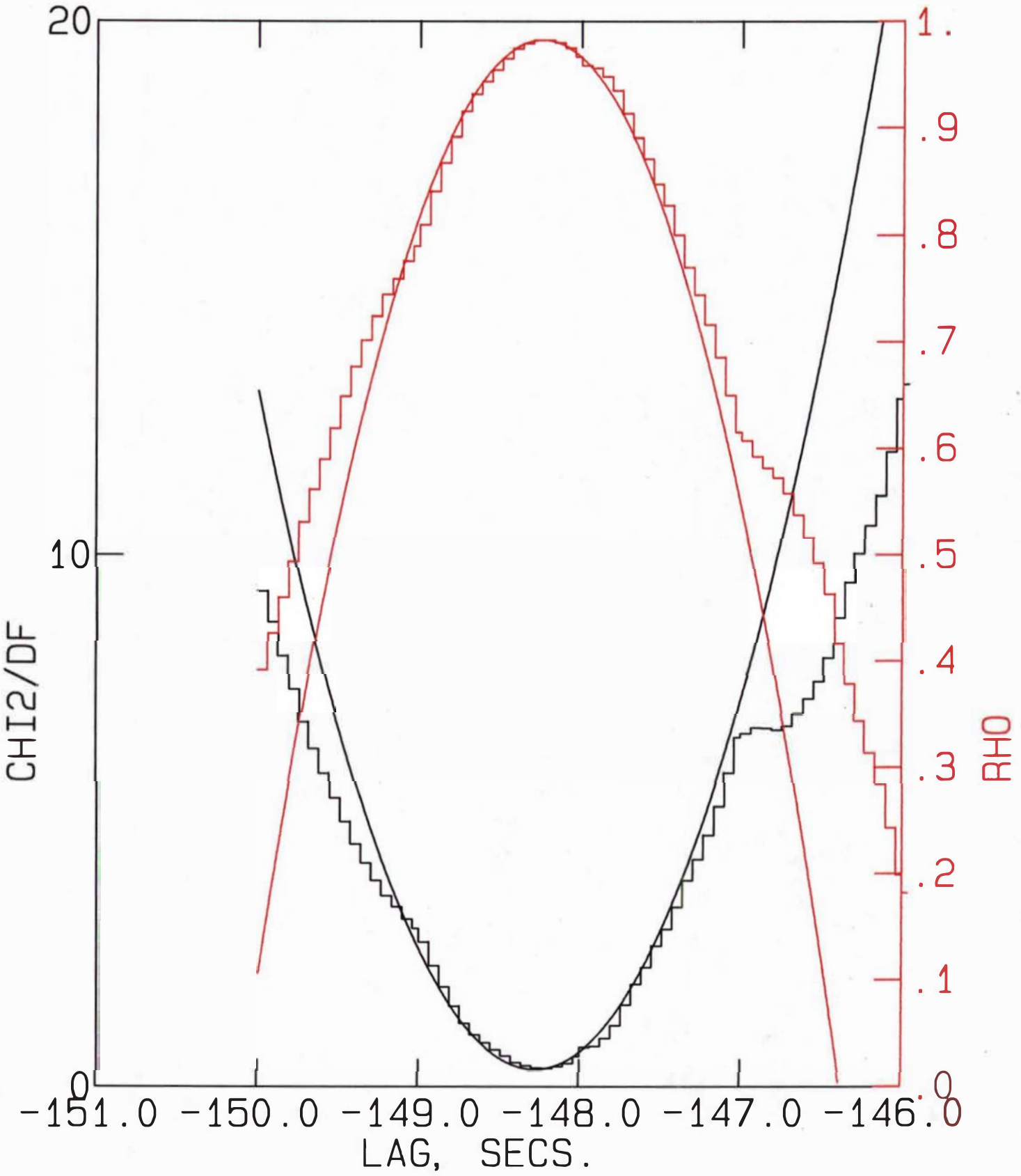
1/ 2/ 0

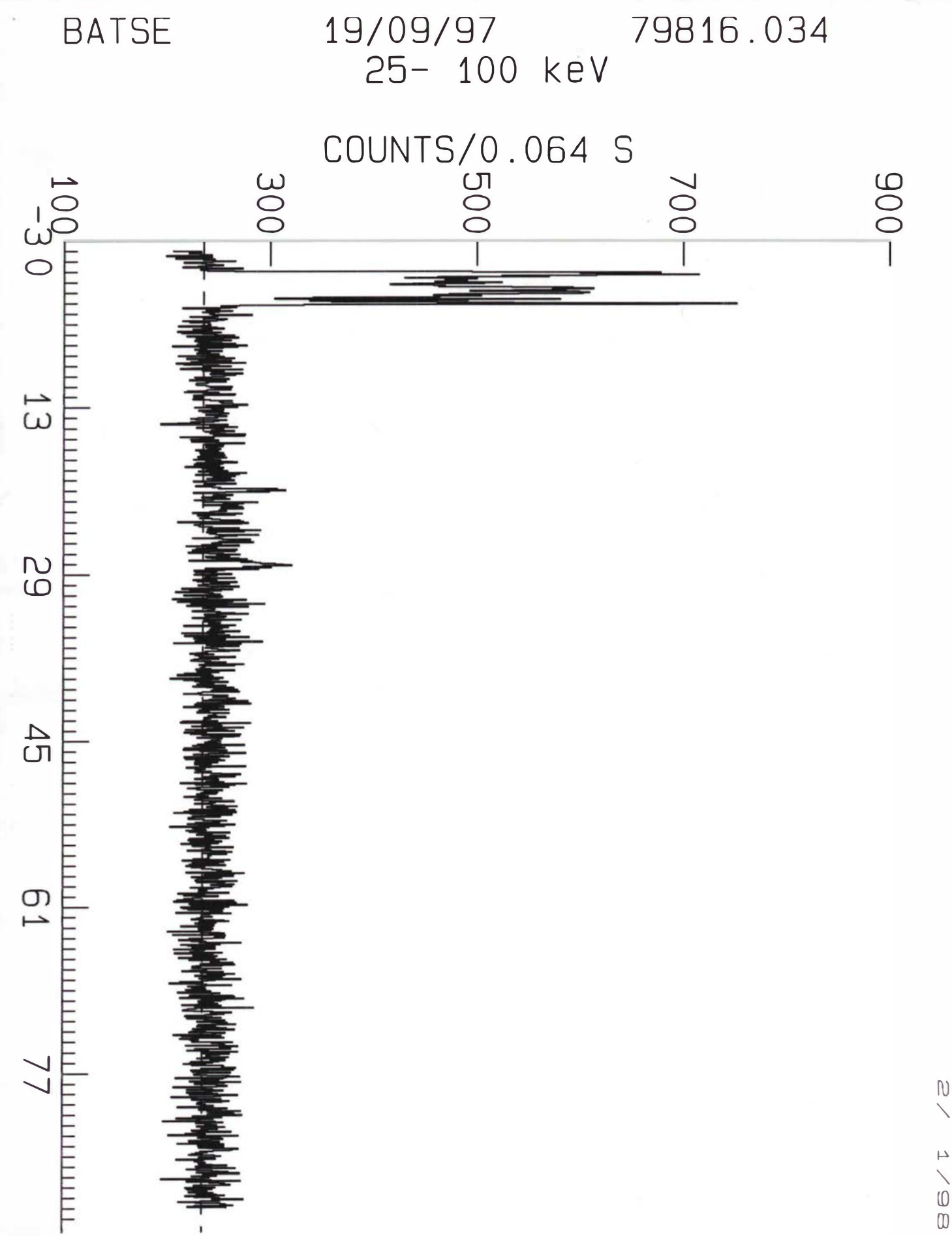
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 BATSE 2 NEAR




NEAR GRS -BATSE CORRELATION 19/09/97 79806.203 1/ 2/ 0
400
300
200
100
0
C/ 1.00000 S
NEAR GRS
5000
4000
3000
2000
1000
0
C/ 1.00000 S
BATSE
12
17
22
27
32
37
42
47
TIME, SECS

NEAR GRS -BATSE CORRELATION 19/09/97 79806.203




BATSE 19/09/97 79816.034
25- 100 keV
COUNTS/0.064 S
100
300
500
700
900
-30
0
13
29
45
61
77

2/ 1/98

DISCSC Data for K. Hurley, No. 6390
RATE (counts/sec)
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
-10 -5 0 5 10 15 20 25 30 35 40 45 50
SECONDS since trigger
22-DEC-1997 07:32:48
Created by NOPS BD
(Burst Display)
Version 12.25
Trigger # : 6390
Trigger Time:
18718 / 70816.033
Burst Data Type:
DISCSC
Deadtime
Corrected: N
Background Data
Type: PREB + DISCLA
Minimum Integ. Time:
0.064 seconds
Detectors [7..0]:
7-5-----
Discriminators:
(3 , 4)
Quality Mask:
0010F1

BATSE BURST# 6390

ULYSSES RT 23/ 9/97

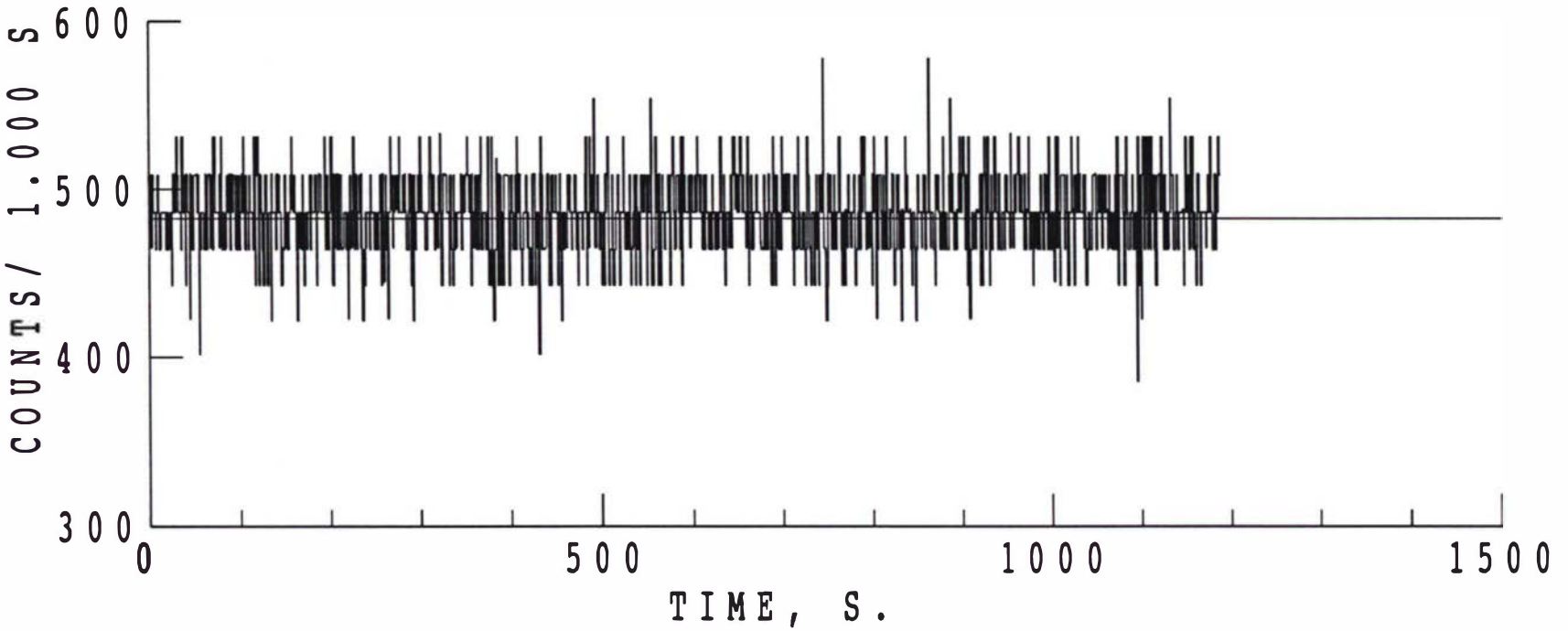
19/ 9/97 79452.266 s

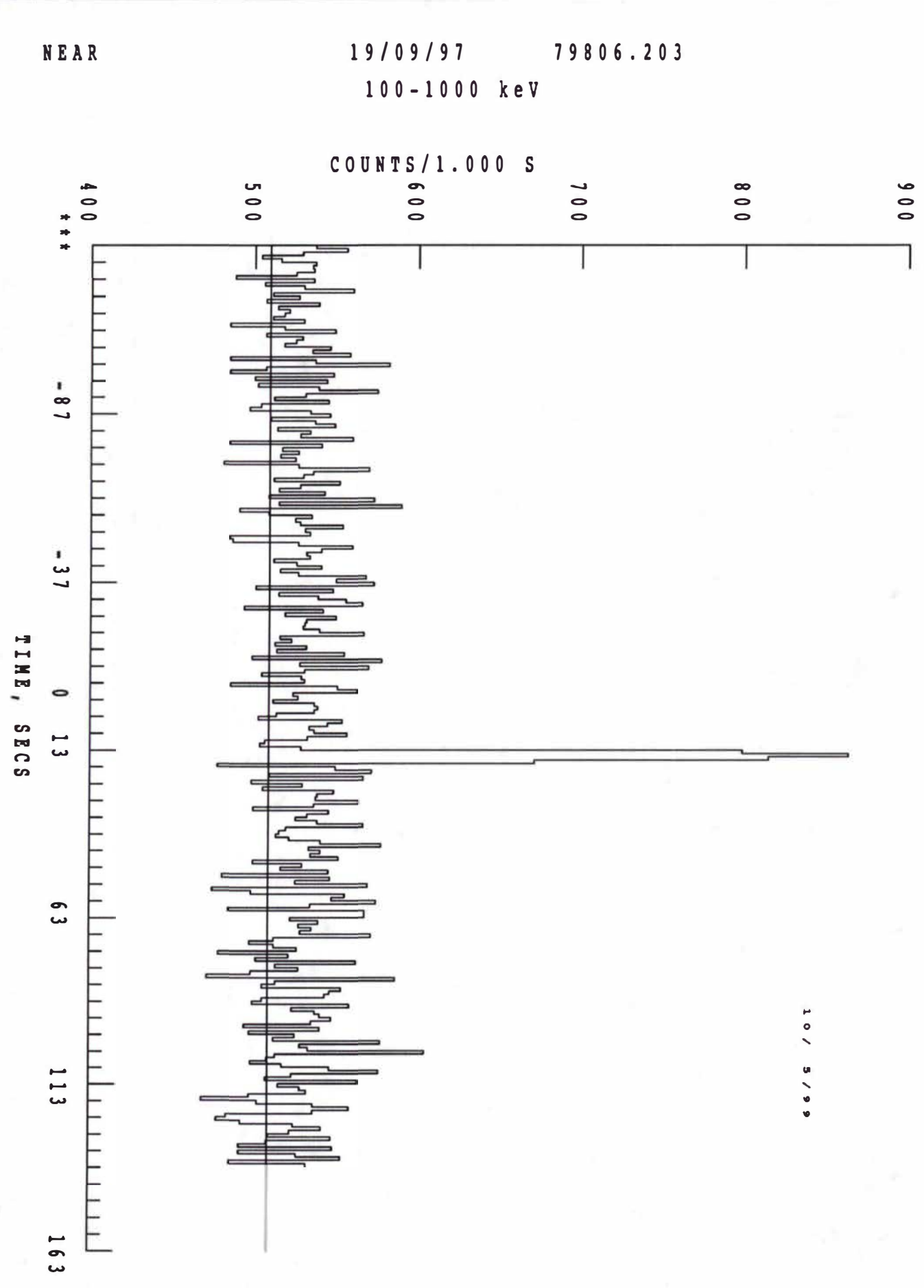
0.500 S INTERVALS REGROUPED BY 2

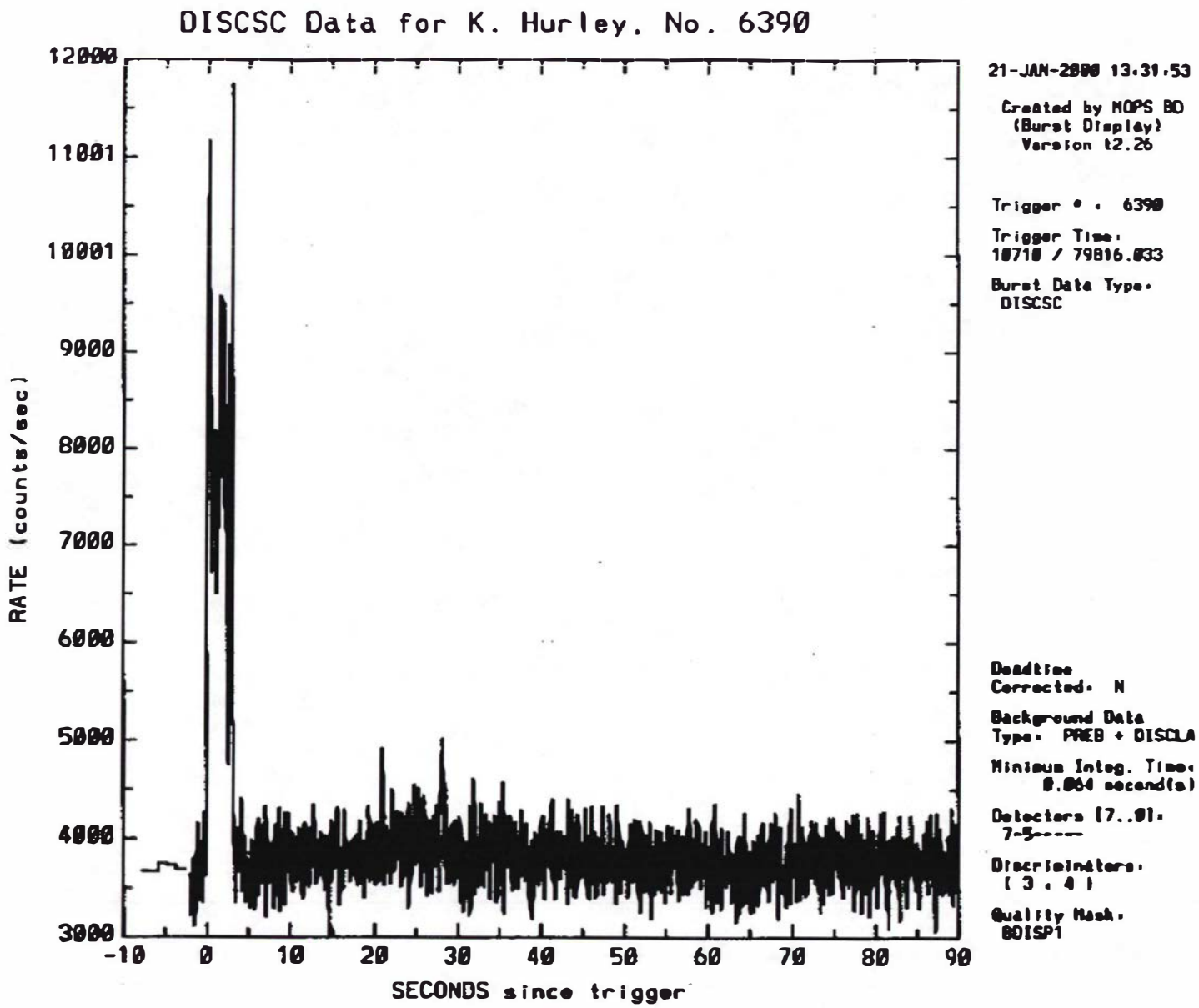
0- 0 keV

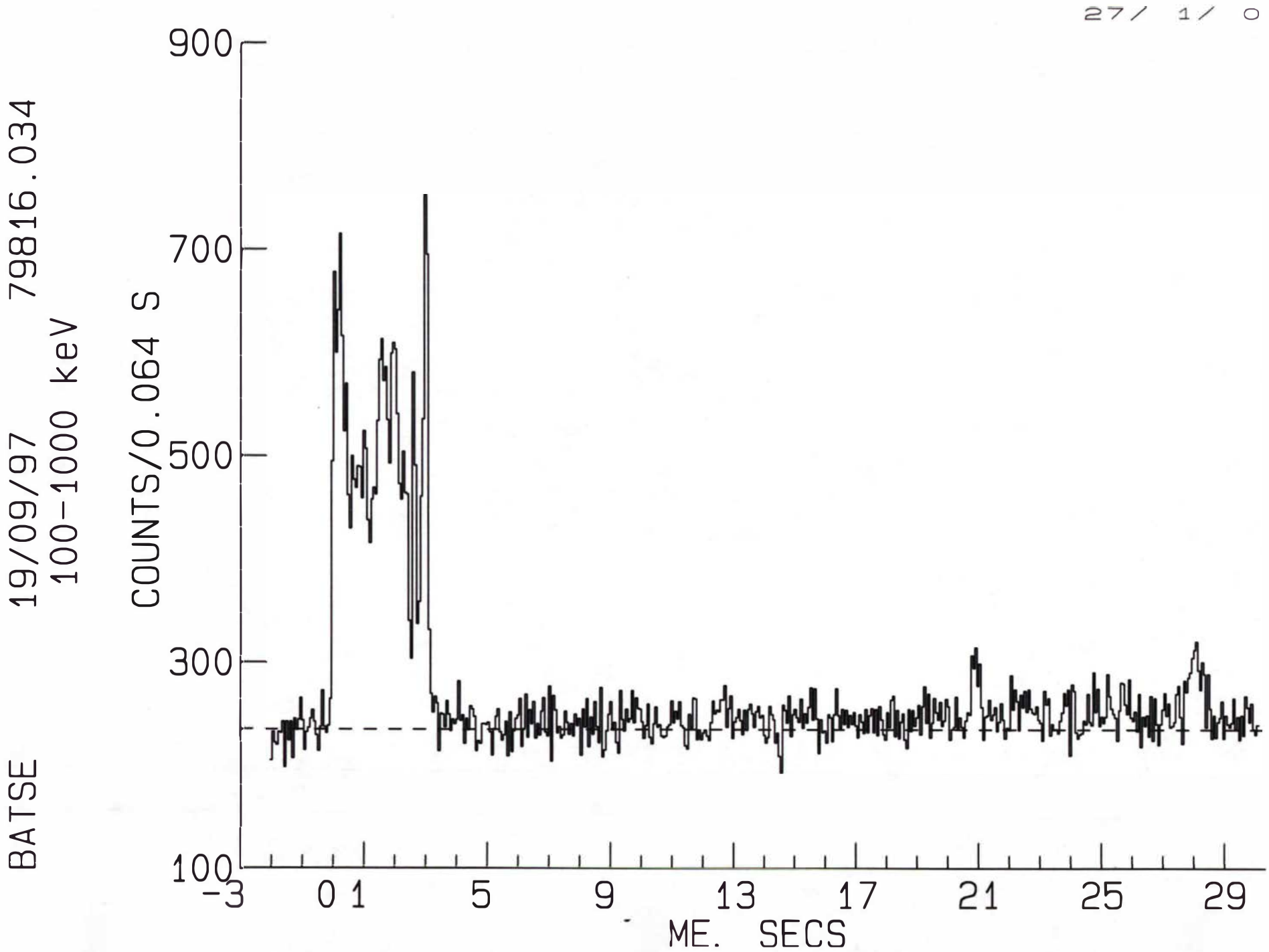
N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

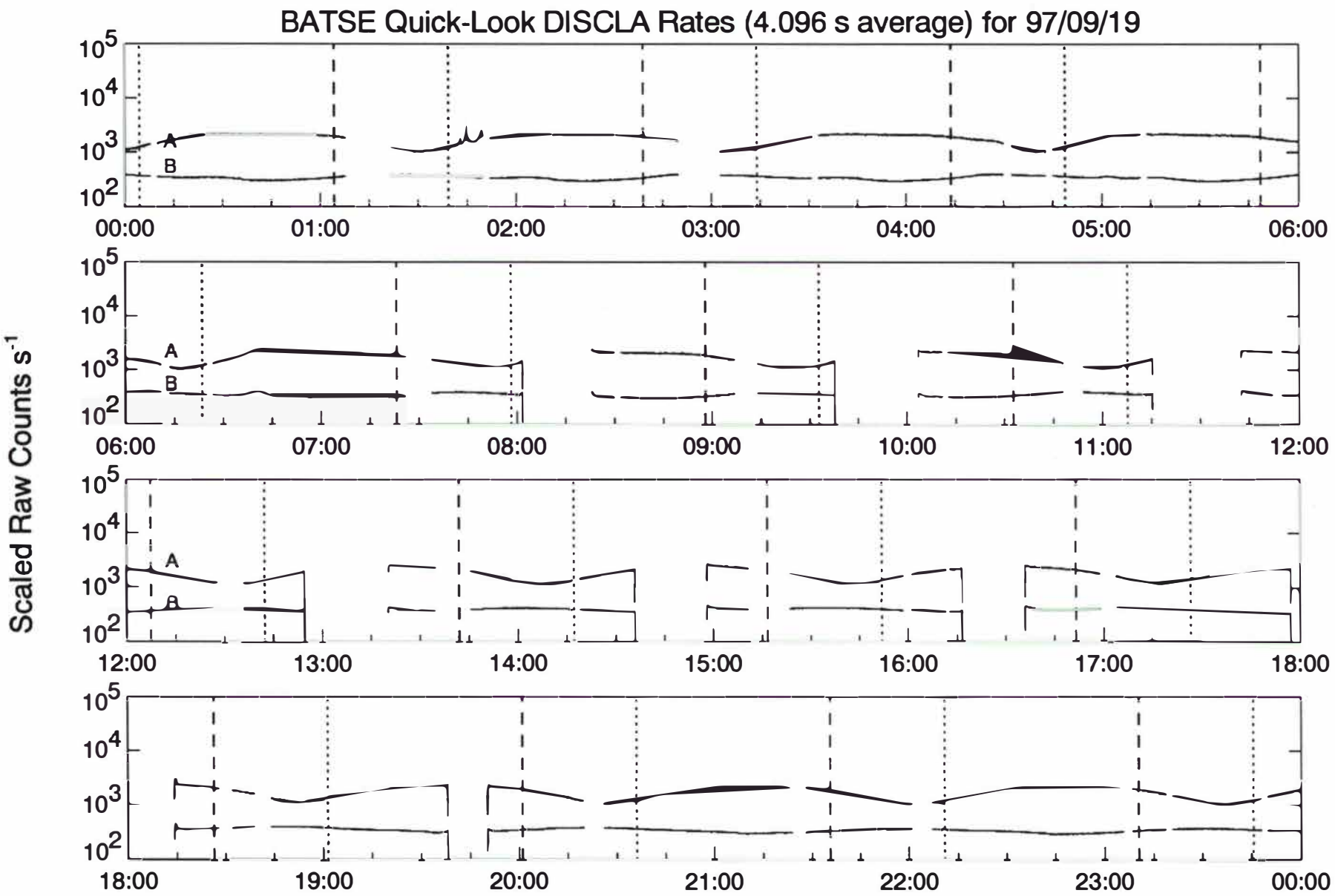
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

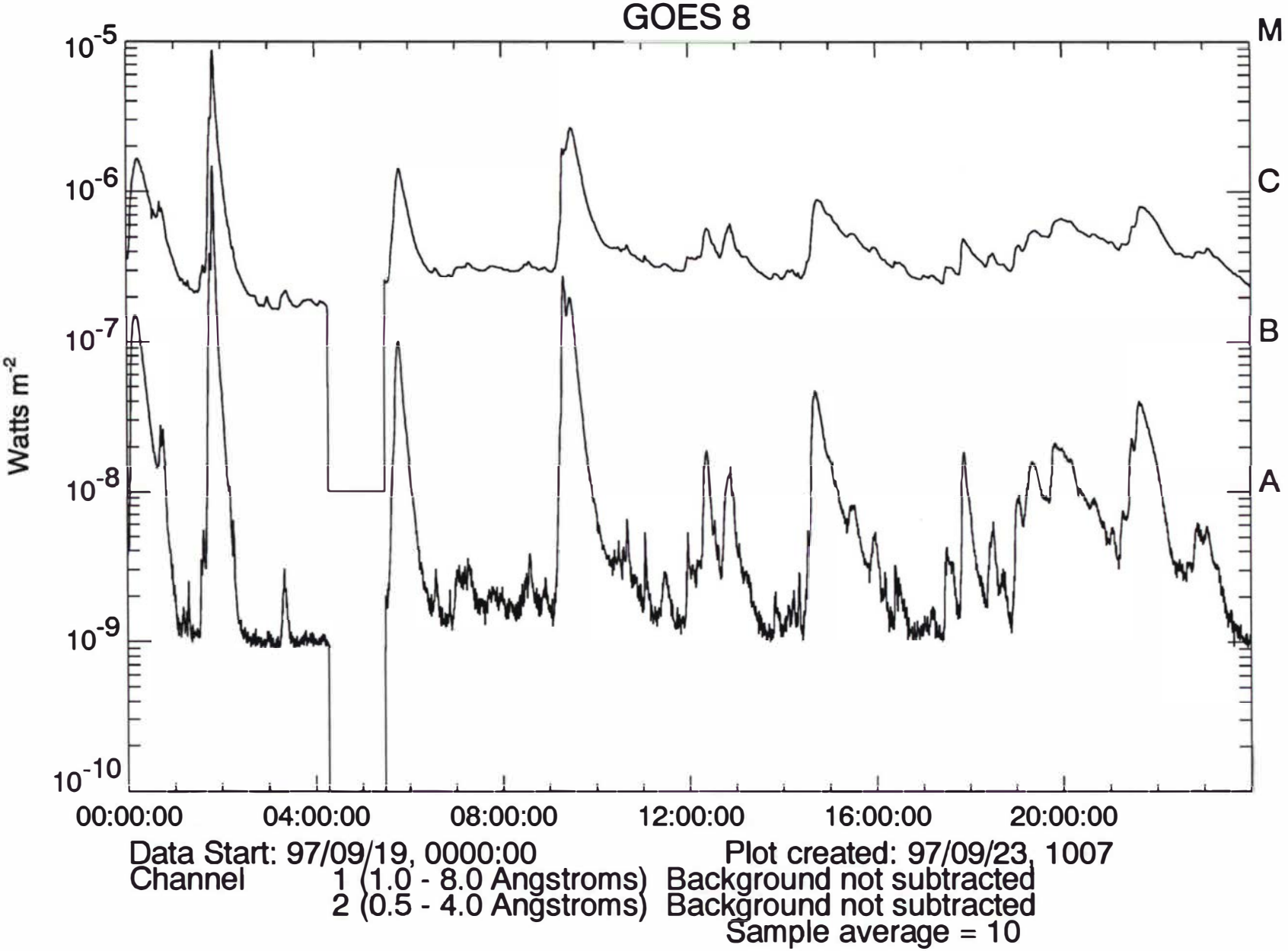



NEAR
19/09/97
79806.203
100-1000 keV
COUNTS/1.000 S
400
500
600
700
800
900
***
-87
-37
0
13
63
113
163
TIME, SECS
10/ 5/99


DISCSC Data for K. Hurley, No. 6390
RATE (counts/sec)
12000
11001
10001
9000
8000
7000
6000
5000
4000
3000
-10
0
10
20
30
40
50
60
70
80
90
SECONDS since trigger
21-JAN-2000 13:31:53
Created by MOPS BD
(Burst Display)
Version t2.26
Trigger # : 6390
Trigger Time:
10710 / 79816.833
Burst Data Type:
DISCSC
Deadtime
Corrected: N
Background Data
Type: PREB + DISCLA
Minimum Integ. Time:
0.064 second(s)
Detectors [7..0]:
7-5-----
Discriminators:
[3 , 4]
Quality Mask:
BDISP1

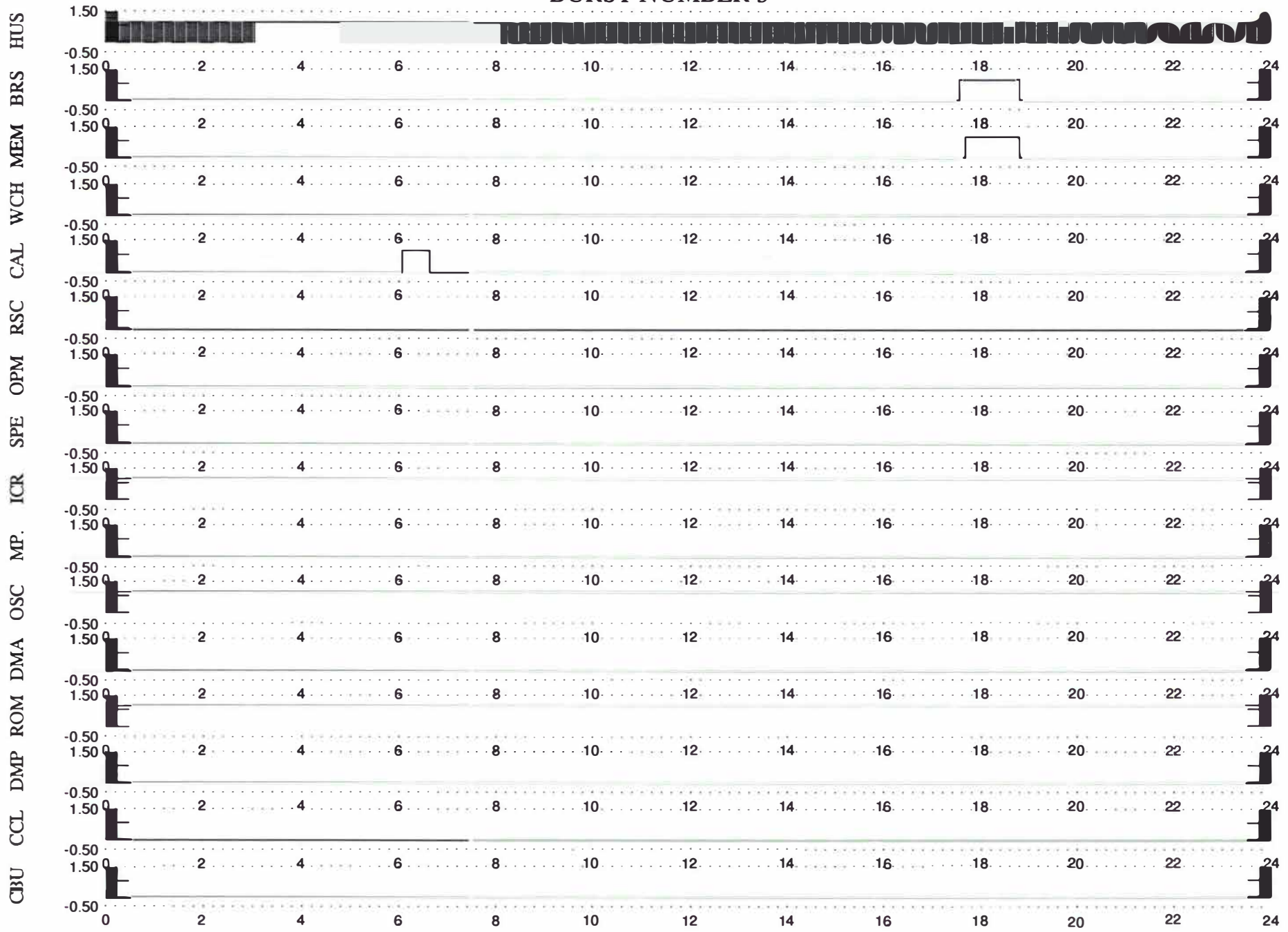

27/ 1/ 0
BATSE
19/09/97
100-1000 keV
79816.034
COUNTS/0.064 S
900
700
500
300
100
-3
0 1
5
9
13
17
21
25
29
ME. SECS


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/19
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/23, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare


GOES 8
M
C
B
A
Watts m-2
10-5
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/19, 0000:00
Plot created: 97/09/23, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 262, year 1997 to day 262, year 1997 1/14/98

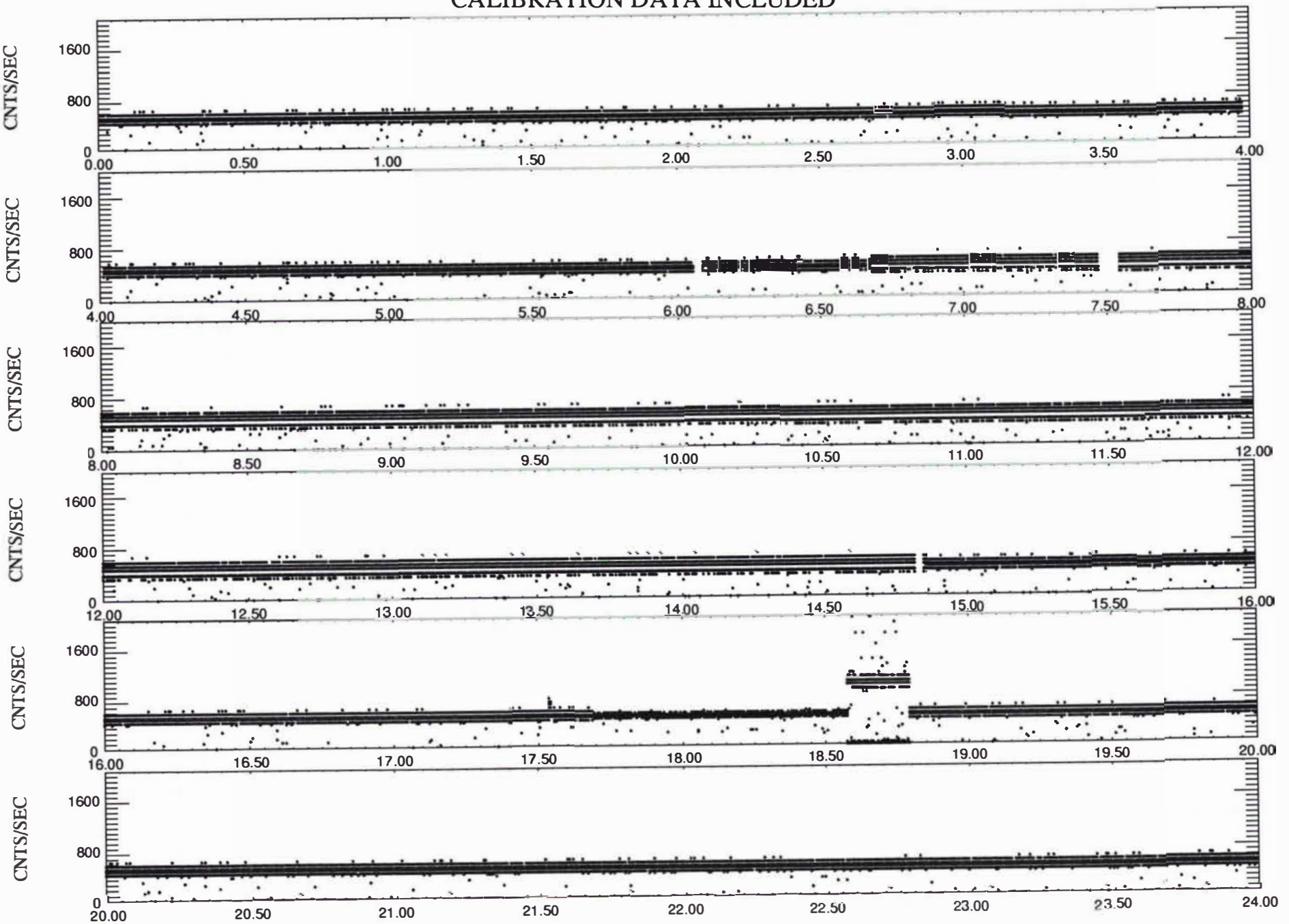
BURST NUMBER 3



UNIV! AL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 262, year 1997 to day 262, year 1997 1/14/98

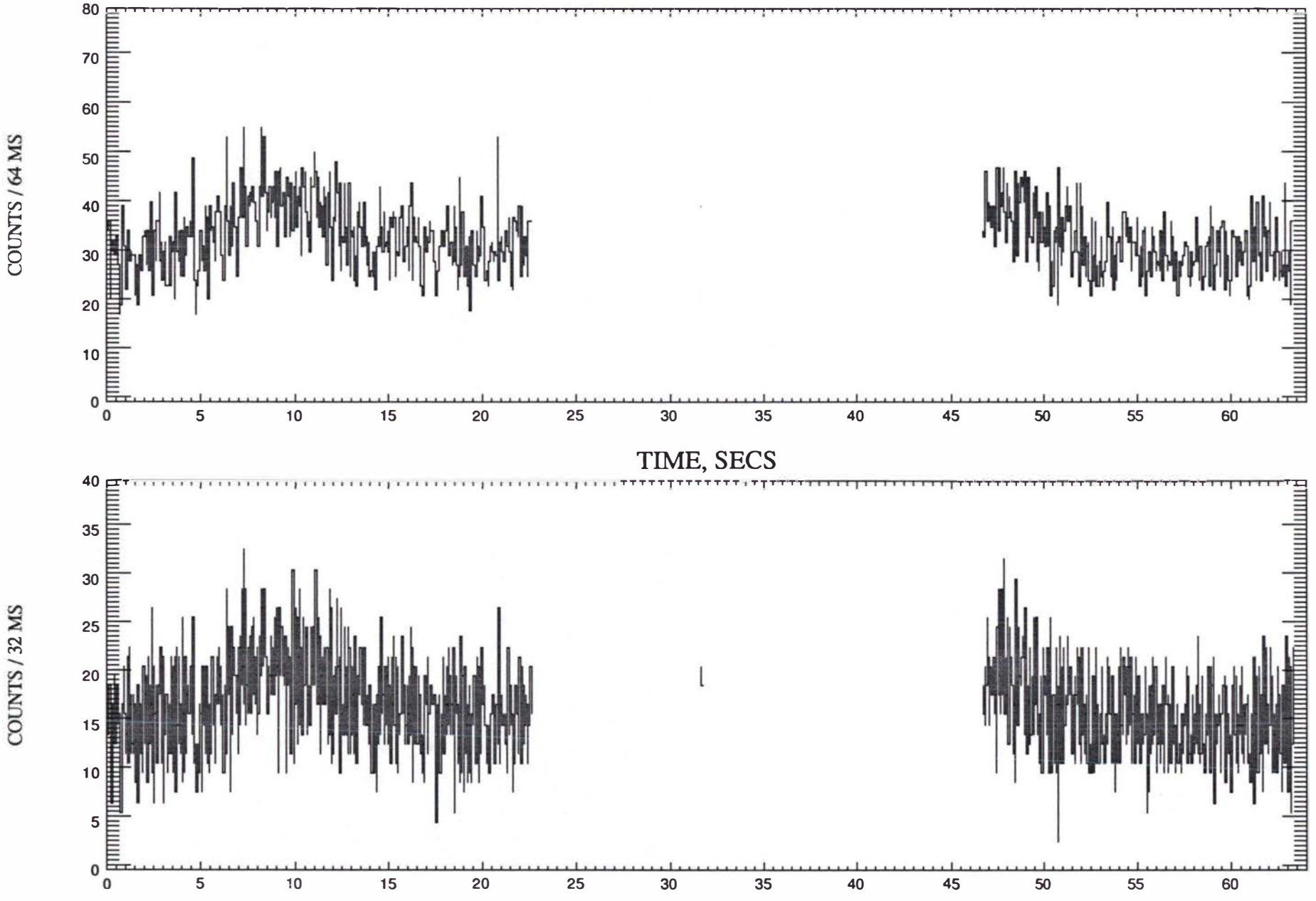
CALIBRATION DATA INCLUDED



UNIV[illegible]AL TIME

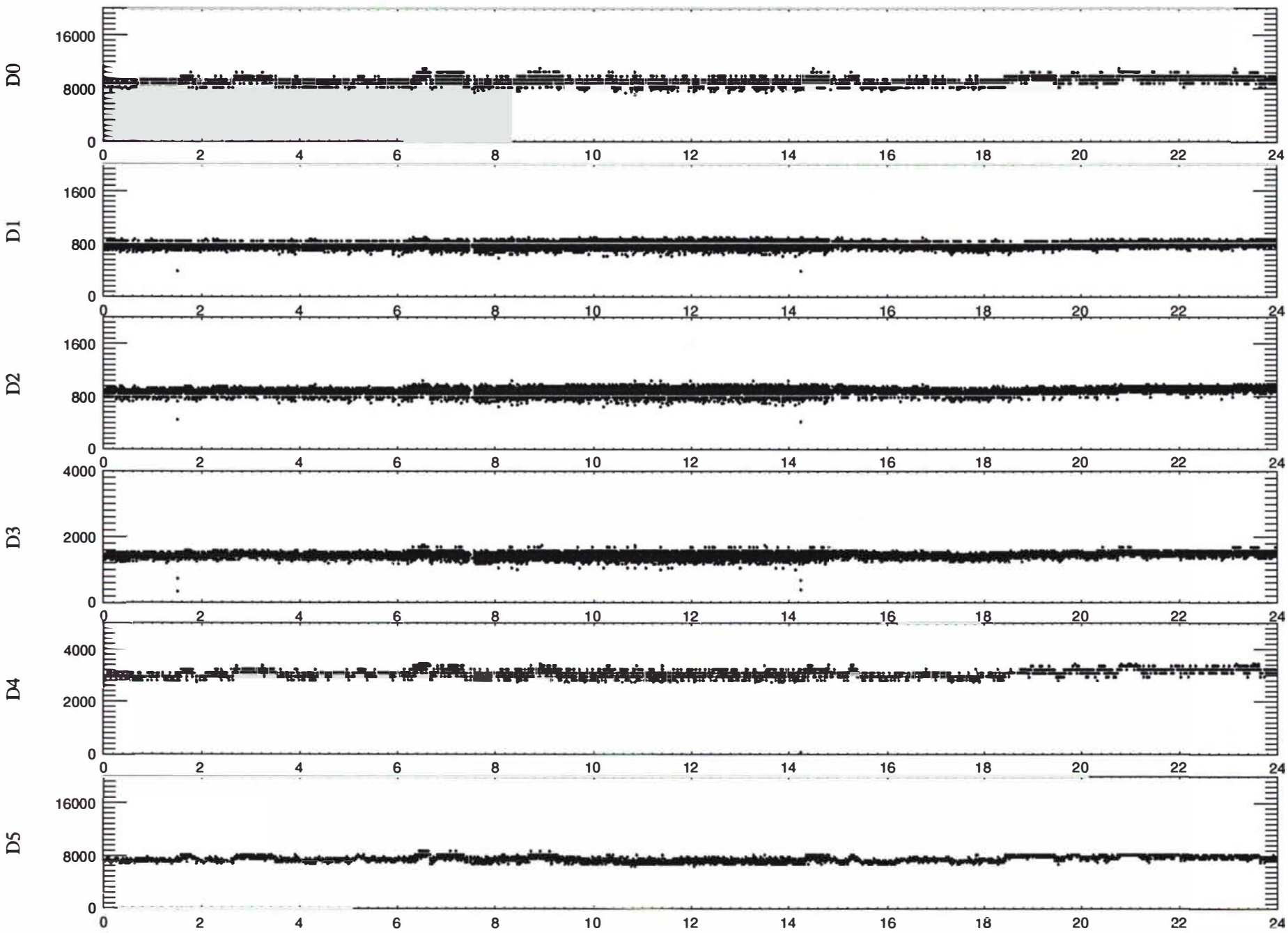
HUS 2A TRIGGERED DATA EDR day 262, year 1997 1/14/98

Burst Counter 3 at UT=17.534671872457 h=63124.819 s 17:32:04.819

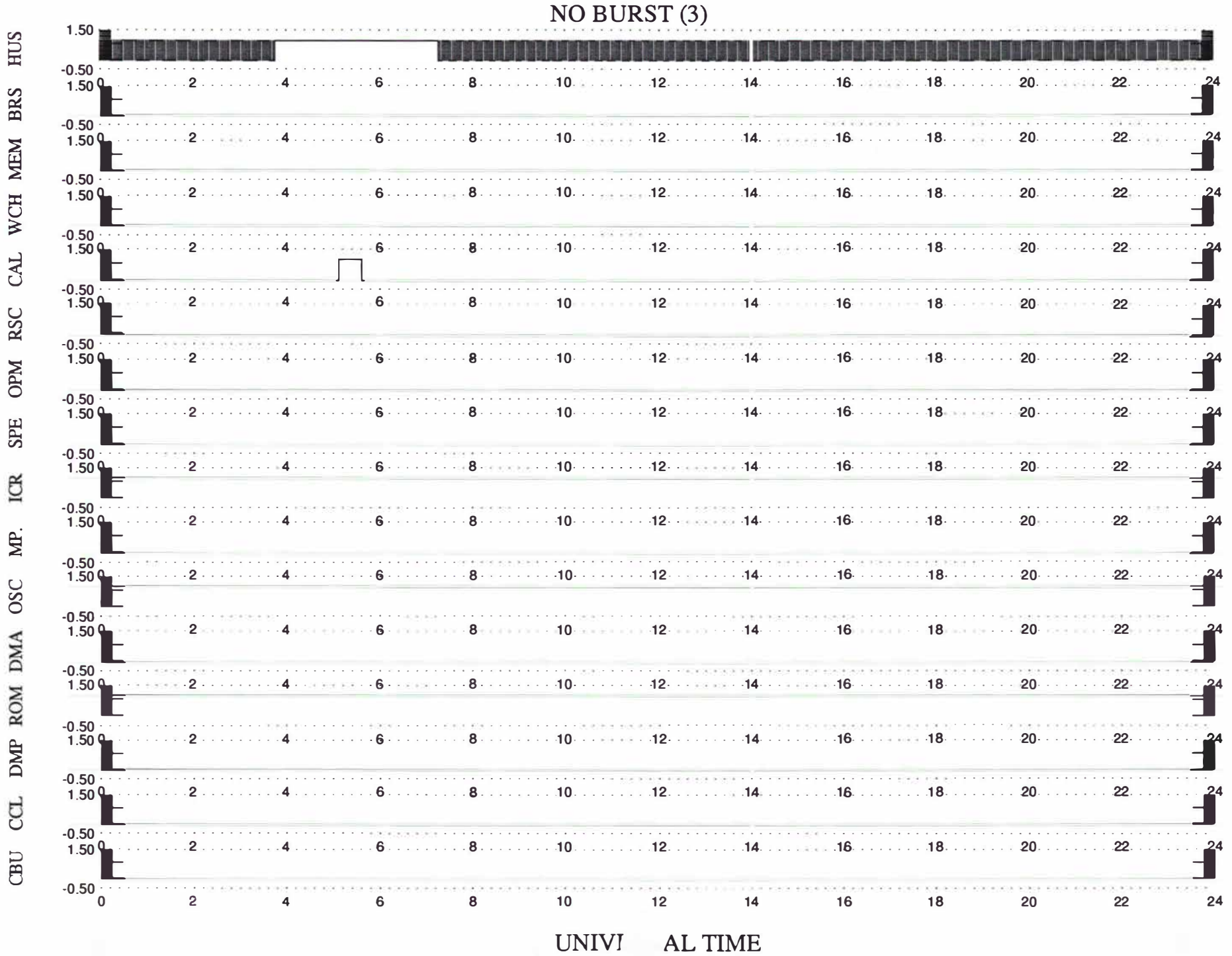


B# 1

HUS 2B COUNTS / SEC EDR day 262, year 1997 to day 262, year 1997 1/14/98

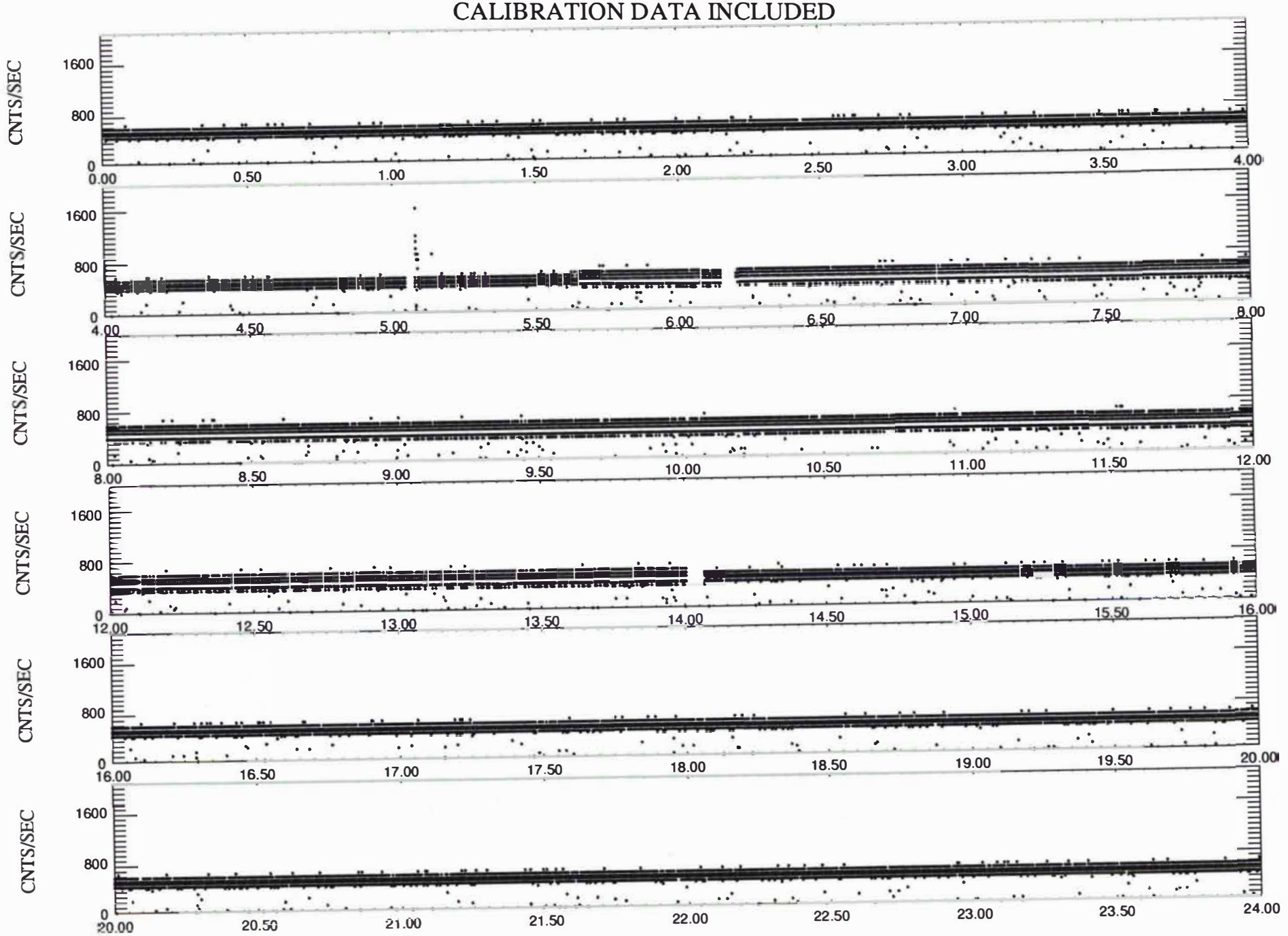


HUS MODES EDR day 263, year 1997 to day 263, year 1997 1/14/98



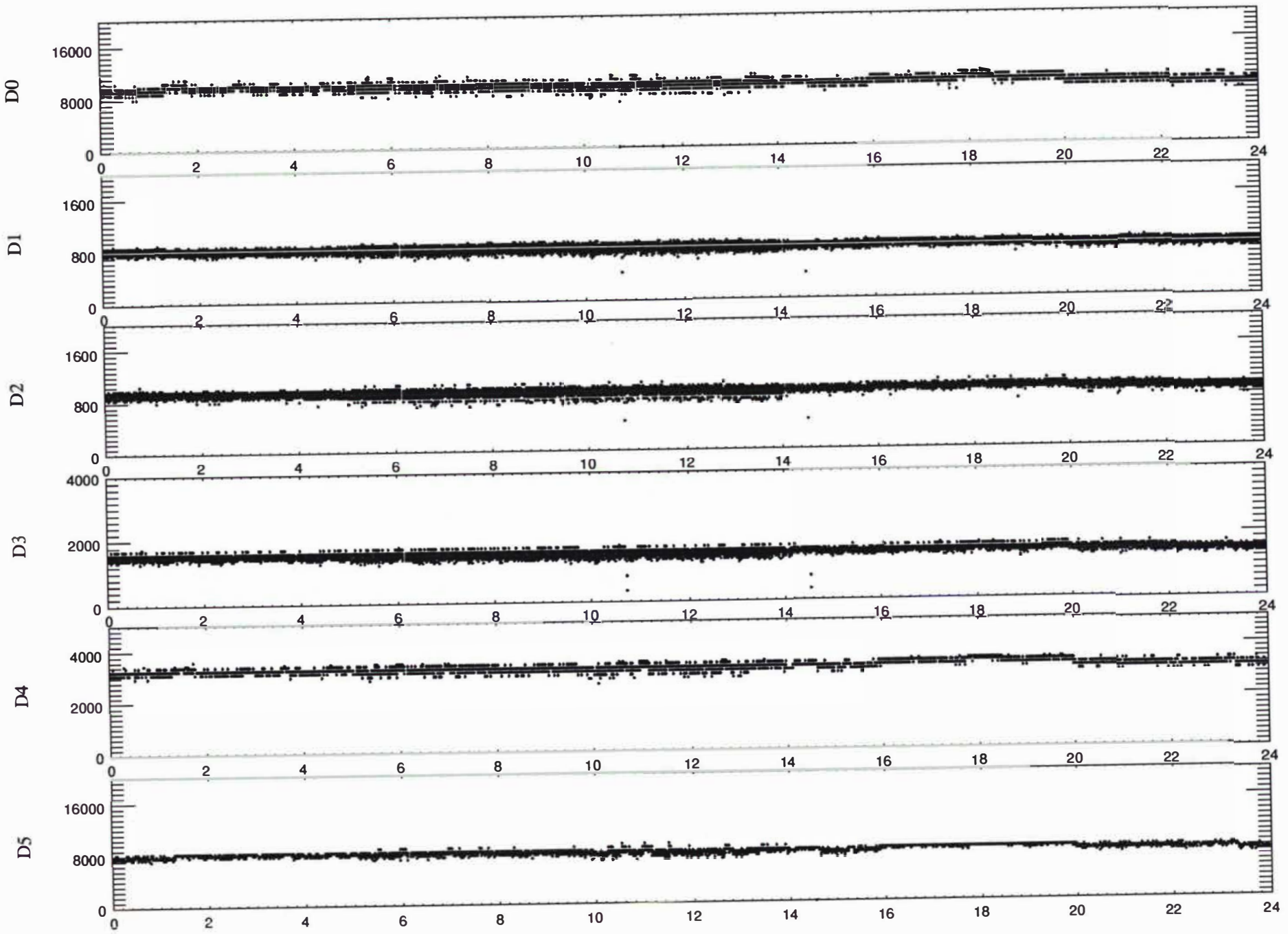
HUS 2A, MODE 1, NOT AVERAGED EDR day 263, year 1997 to day 263, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV' 'AL TIME

HUS 2B COUNTS / SEC EDR day 263, year 1997 to day 263, year 1997 1/14/98



From RICHARDSON@SSLMOR.msfc.nasa.gov Thu Sep 25 07:33:55 1997
From: RICHARDSON@SSLMOR.msfc.nasa.gov
Date: Thu, 25 Sep 1997 9:33:26 -0500 (CDT)
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6391

TIME: TJD=0712 SECONDS=15404

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=133.2 AZIMUTH=347.1 ERROR=1.1 DEGREES

COMMENTS:
SOLAR FLARE. GOES C2.6 LOTS OF STRUCTURE. DUR.~105SEC.
NOT VISIBLE ABOVE 300KEV.

Date: May 4 '04

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

☑ Is the order of the data in CORREL such that a vernier is done on the data with the best time resolution?

2. For Konus events

☑ Konus ecliptic latitude used with latest calibration?

2. For Odyssey events

☐ Was CHECKMO run to eliminate data gaps?

☐ Did the Odyssey ephemeris correspond to the event time? (When there is data in the database, the ephemeris is for the start of record; when there is no data in the database, the ephemeris is for the time requested.)

☐ Was Mars-blocking used?

☐ For cruise phase data (April – October 2001), was the updated data used? (Old data has timing errors)

2. For 3 Spacecraft events

☐ Σ 3Δt's calculated?

3. For INTEGRAL events

☐ 125 ms added to INTEGRAL SPI-ACS time for bursts prior to April 2 2004 11:00 UT?

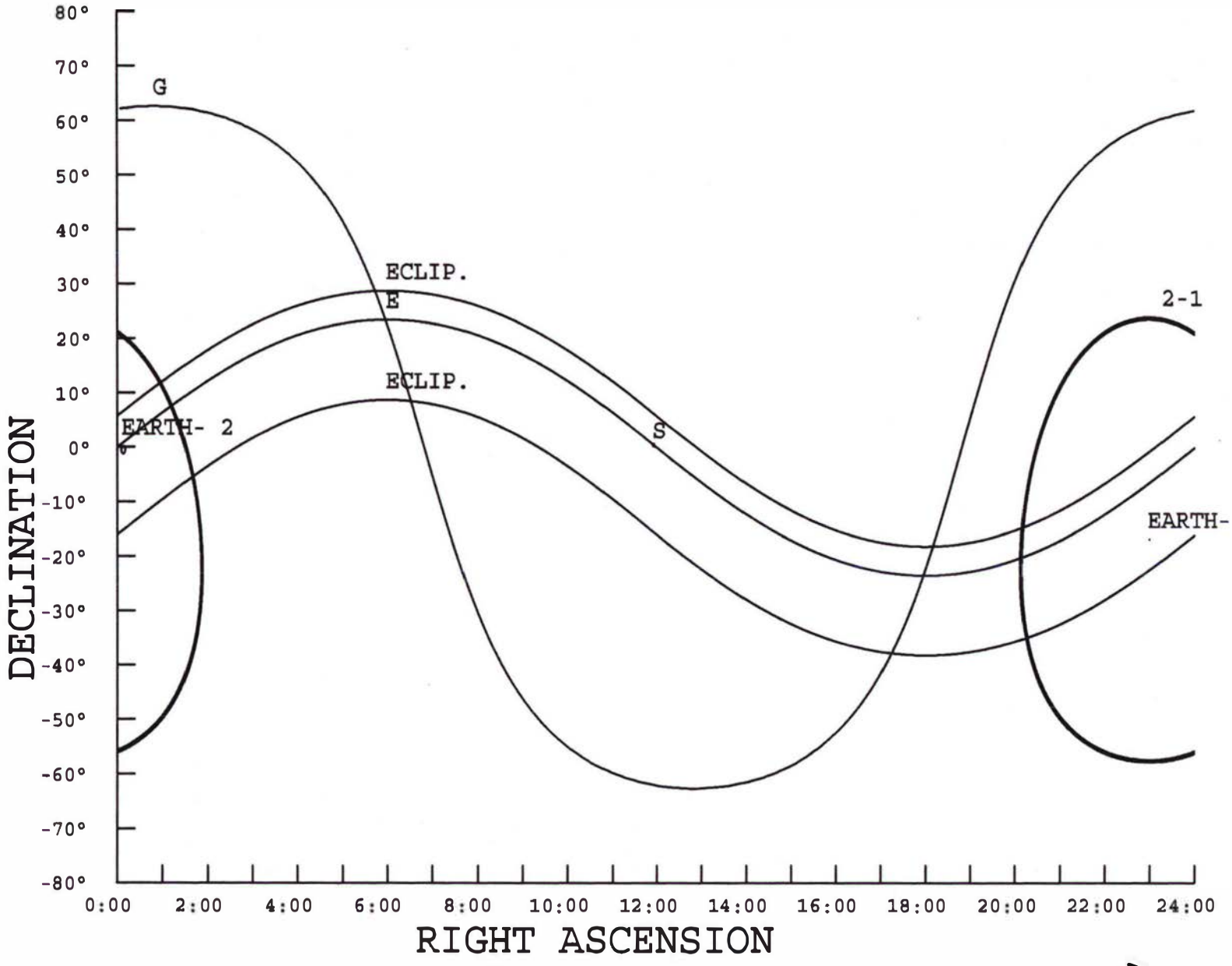
☐ Updated ephemeris used for bursts prior to September 30, 2003?

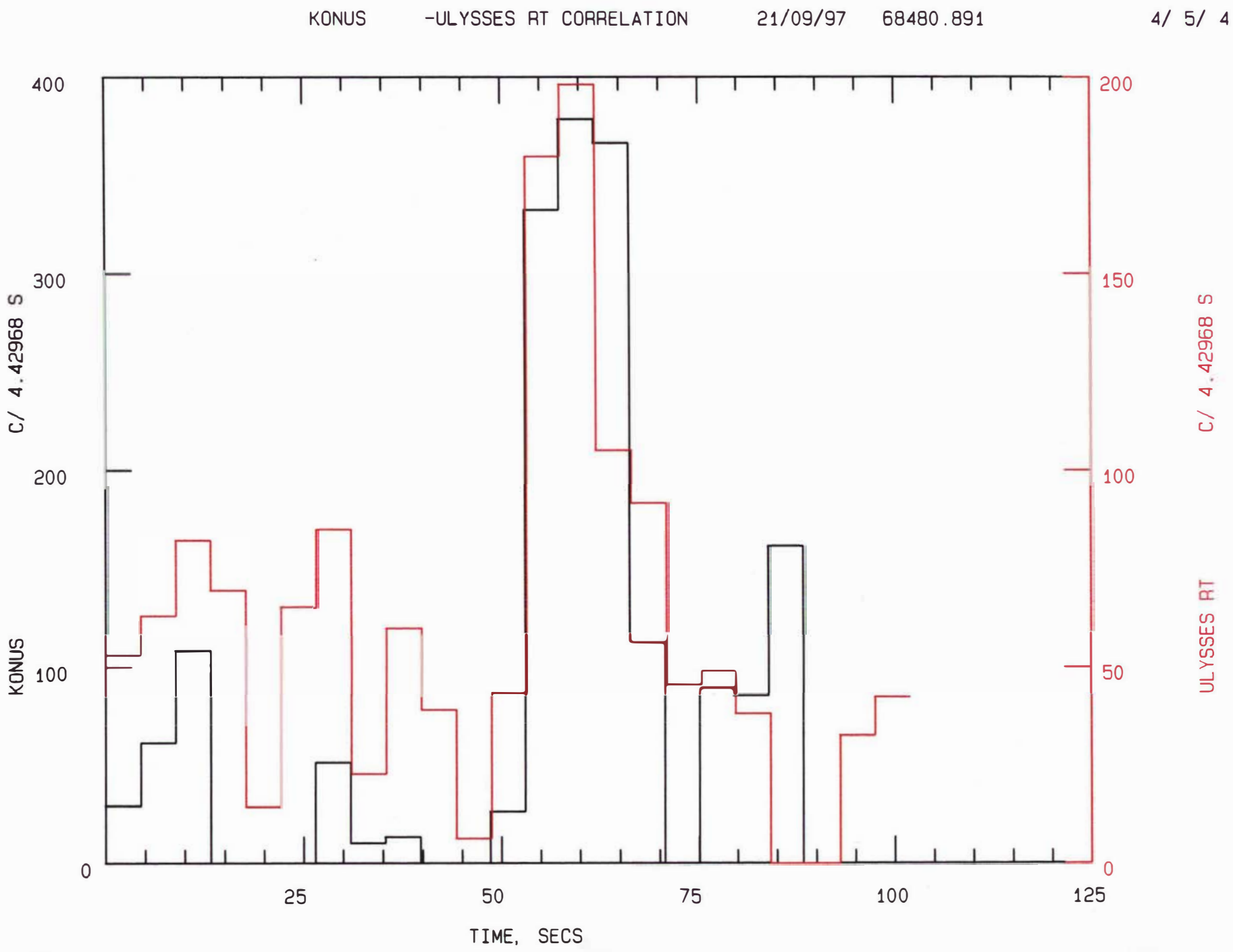
☑ ACCESS database updated?

EVENT OF SEP 21, 1997 19:39

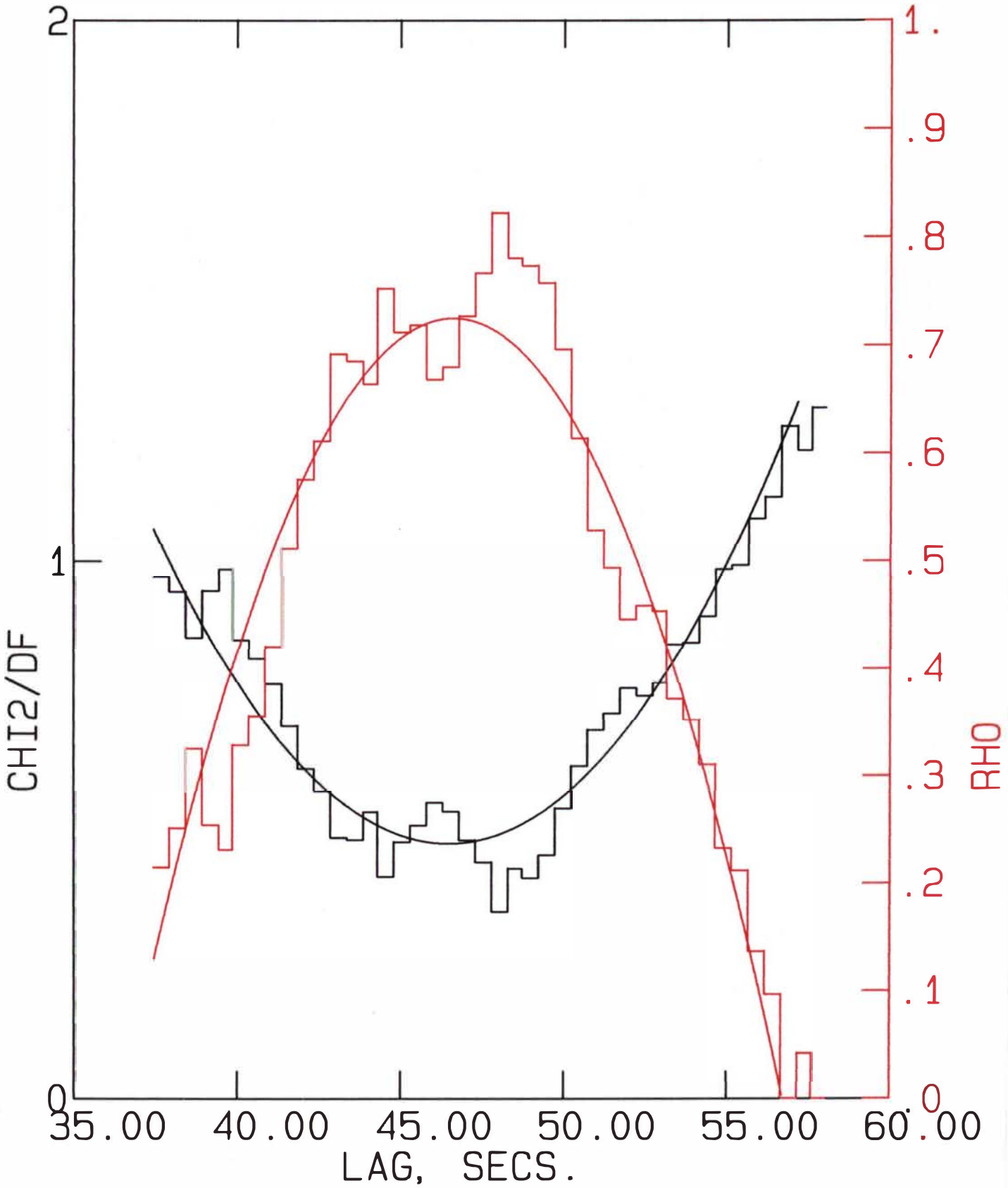
4/ 5/ 4

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 KONUS




KONUS -ULYSSES RT CORRELATION 21/09/97 68480.891 4/ 5/ 4
400
300
200
100
0
C/ 4.42968 S
KONUS
200
150
100
50
0
C/ 4.42968 S
ULYSSES RT
25
50
75
100
125
TIME, SECS

KONUS -ULYSSES RT CORRELATION 21/09/97 68480.891



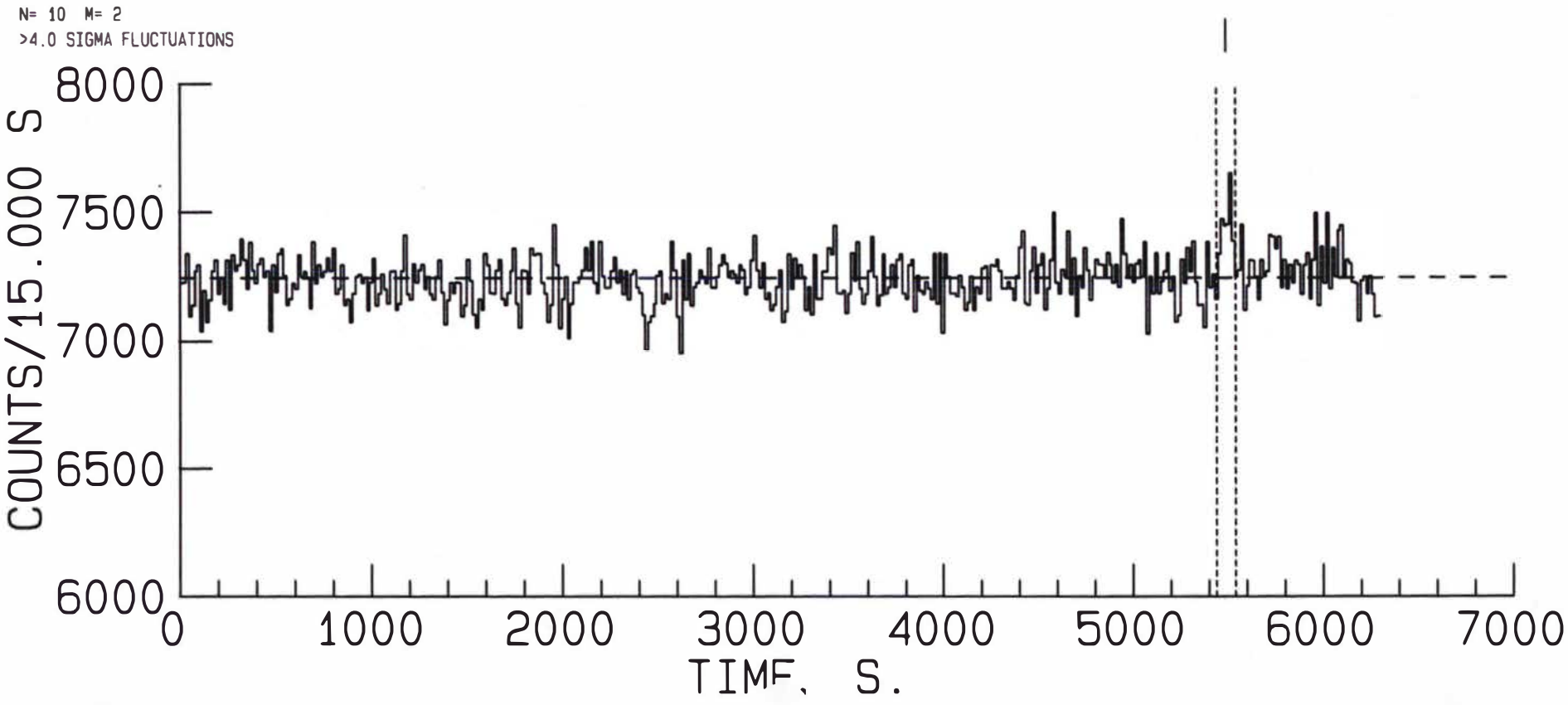
ULYSSES RT

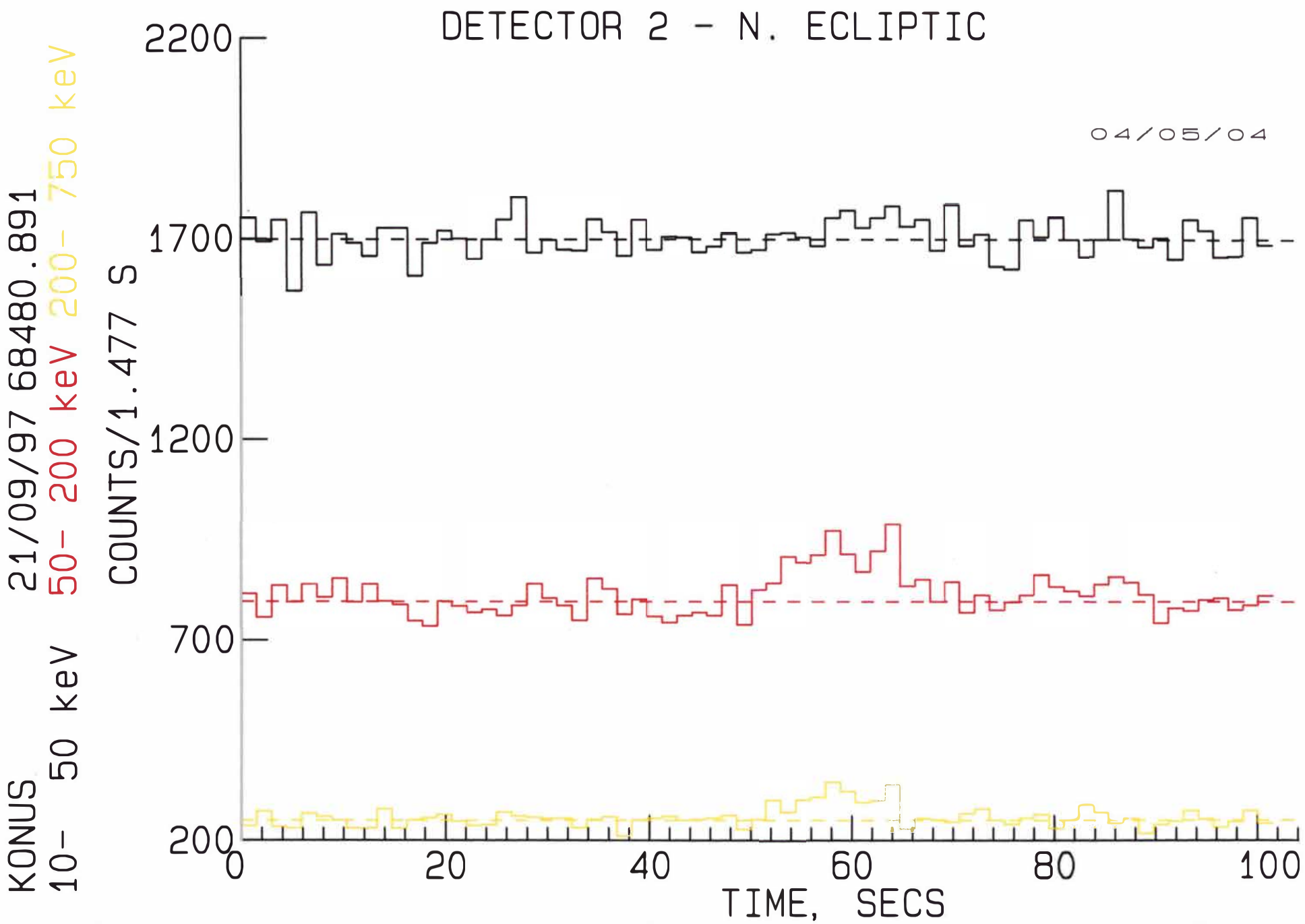
4/ 5/ 4

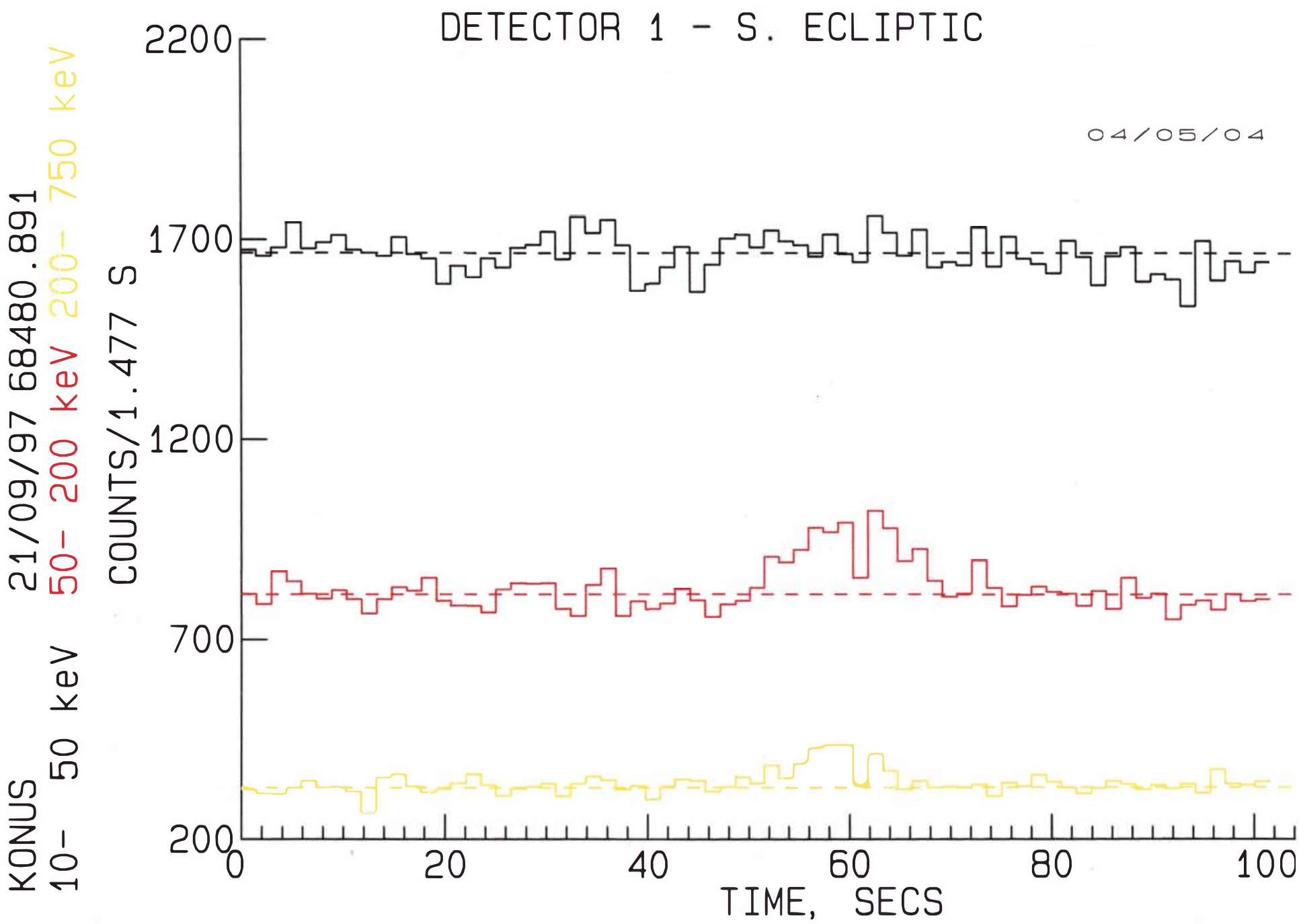
21/ 9/97 65376.047 s

0.500 S INTERVALS REGROUPED BY 30

22- 149 keV




DETECTOR 2 - N. ECLIPTIC
04/05/04
KONUS
21/09/97 68480.891
10- 50 keV
50- 200 keV
200- 750 keV
COUNTS/1.477 S
2200
1700
1200
700
200
0
20
40
60
80
100
TIME, SECS


DETECTOR 1 - S. ECLIPTIC
04/05/04
KONUS
21/09/97 68480.891
10- 50 keV
50- 200 keV
200- 750 keV
COUNTS/1.477 S
2200
1700
1200
700
200
0
20
40
60
80
100
TIME, SECS

Date: 4 Feb 00

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

☑ 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 N/A

☐ BATSE ephemeris for T_0?

☐ Error circle position and radius from public catalog used?

☐ If MER data were used, is a 30 ms systematic error included?

3. NEAR Data

☑ Final, correct time used? (Files postmarked vwx@bocc1, or from Teresa Sheets, have the correct time; files on website have incorrect times)

☐ BATSE >100 keV data used for NEAR correlation? N/A

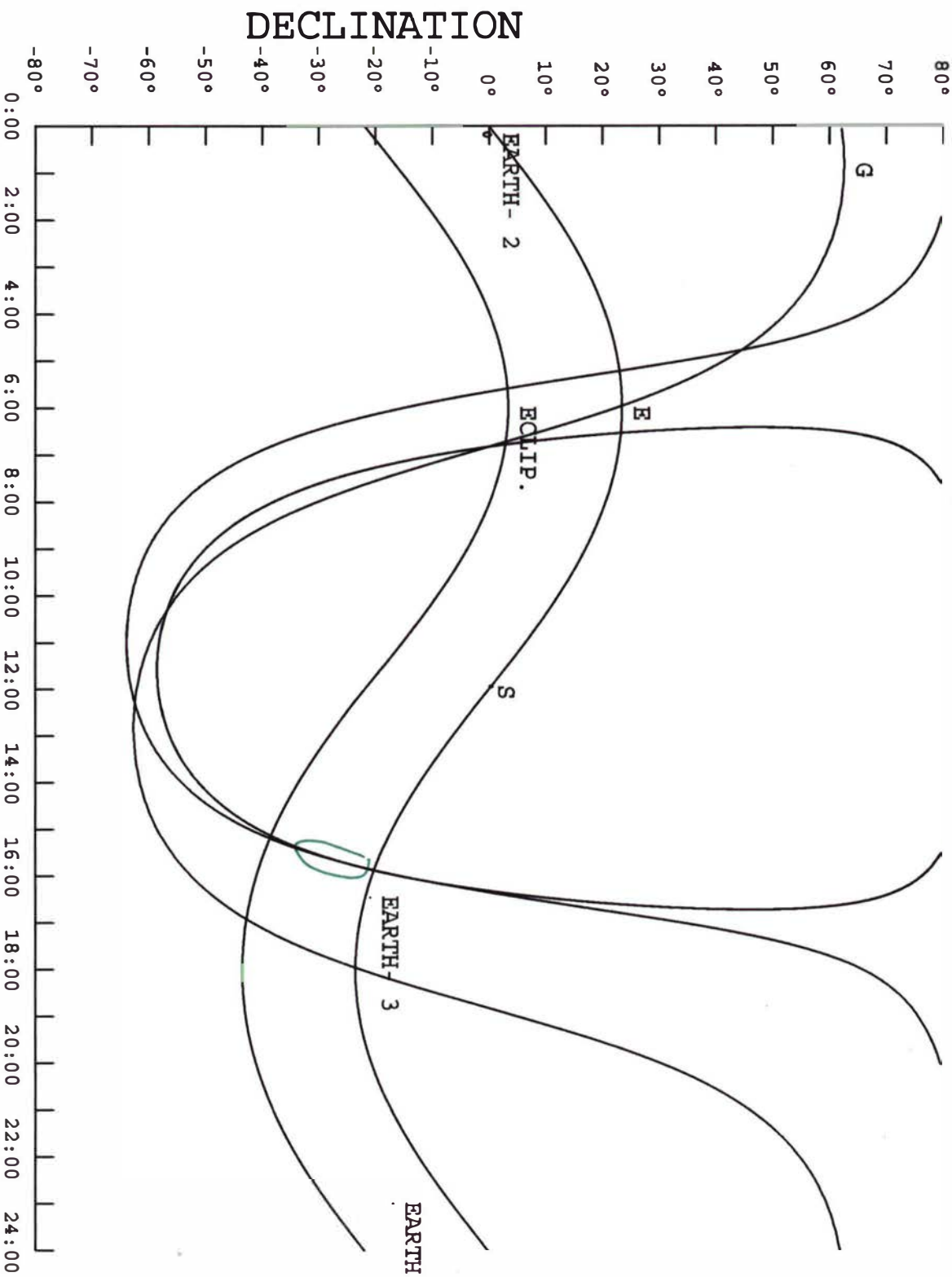
☑ ACCESS database updated? Added EL Oct 29 '08

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

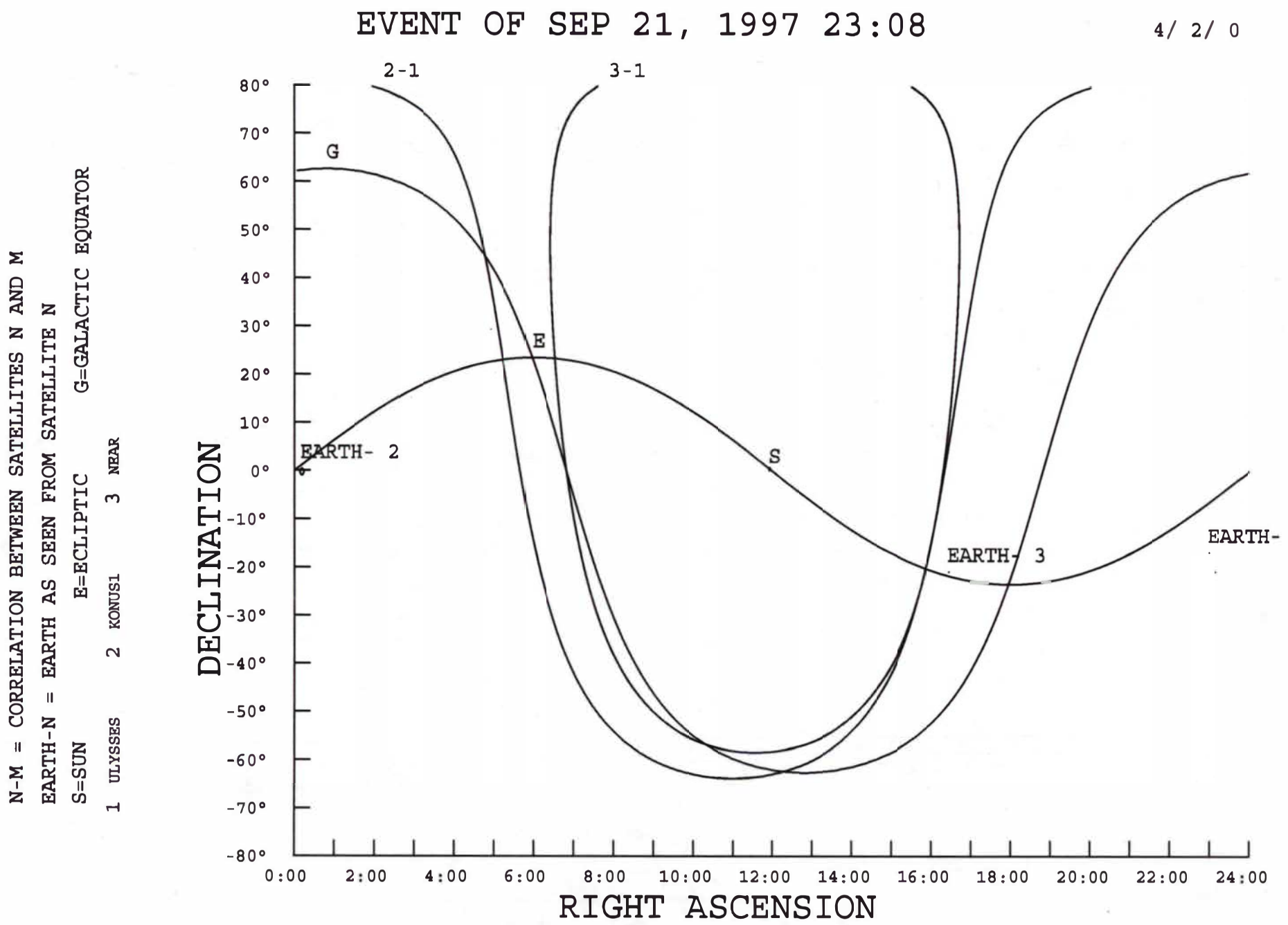
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR

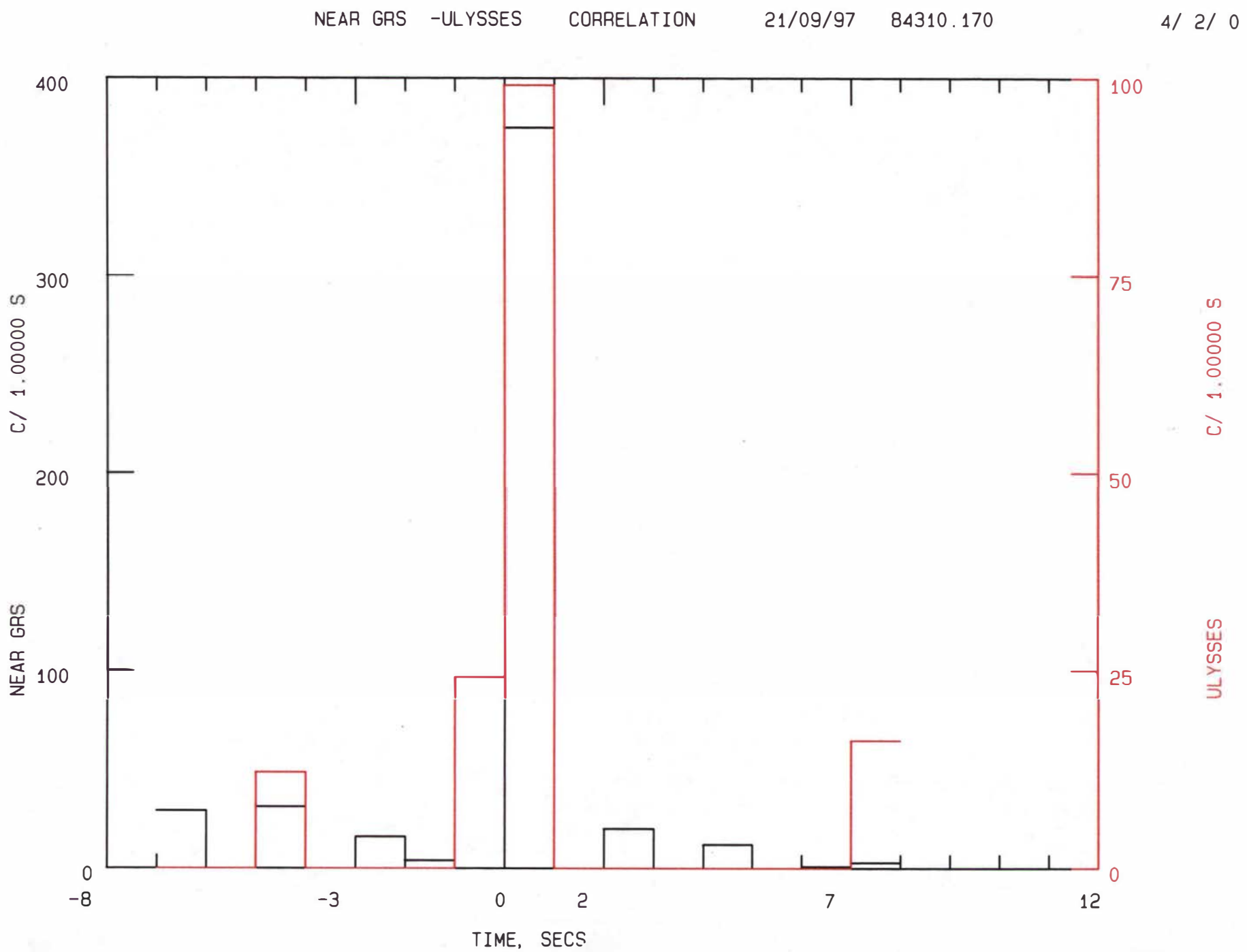
1 ULYSSES 2 KONUS1 3 NEAR



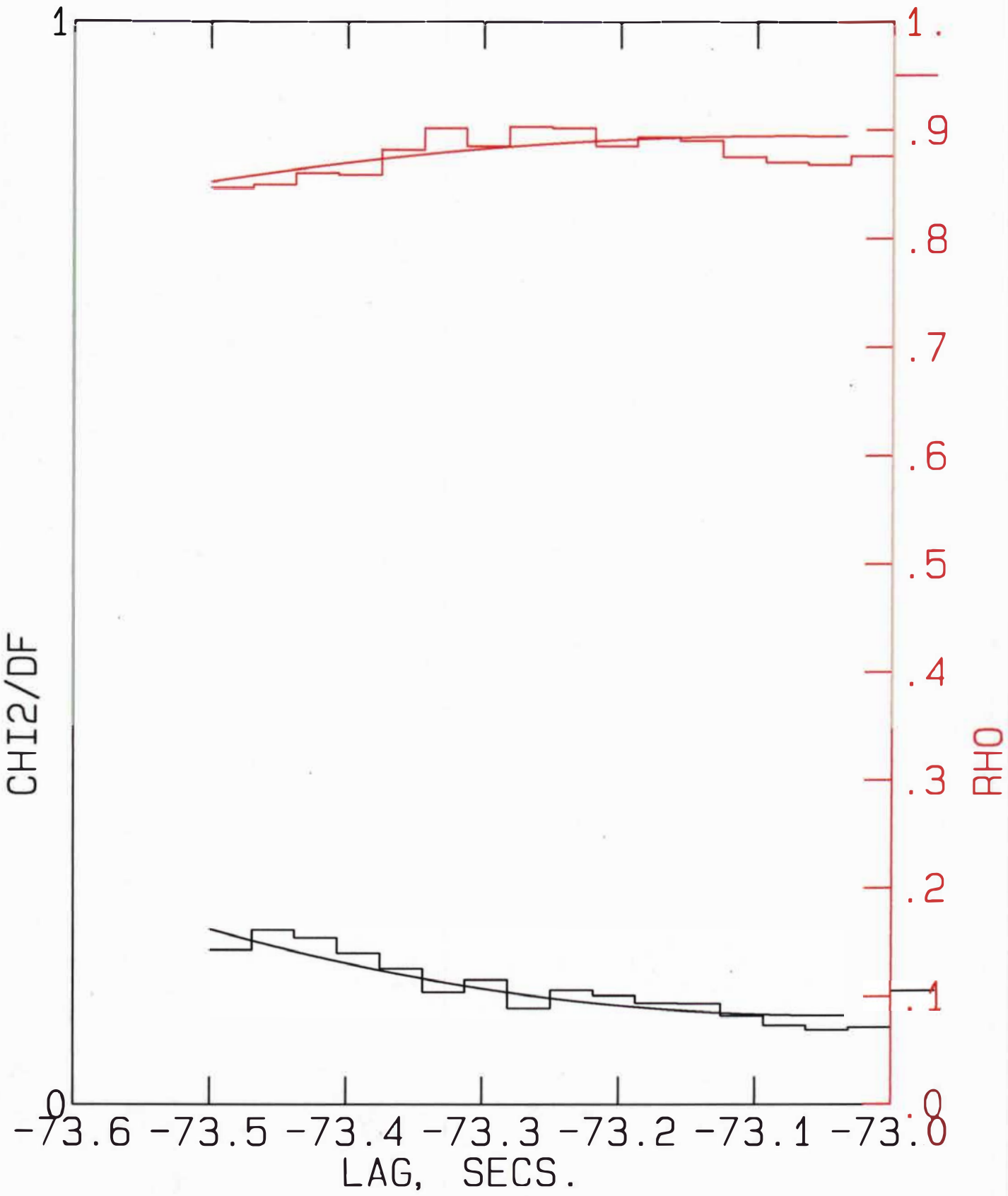
EVENT OF SEP 21, 1997 23:08

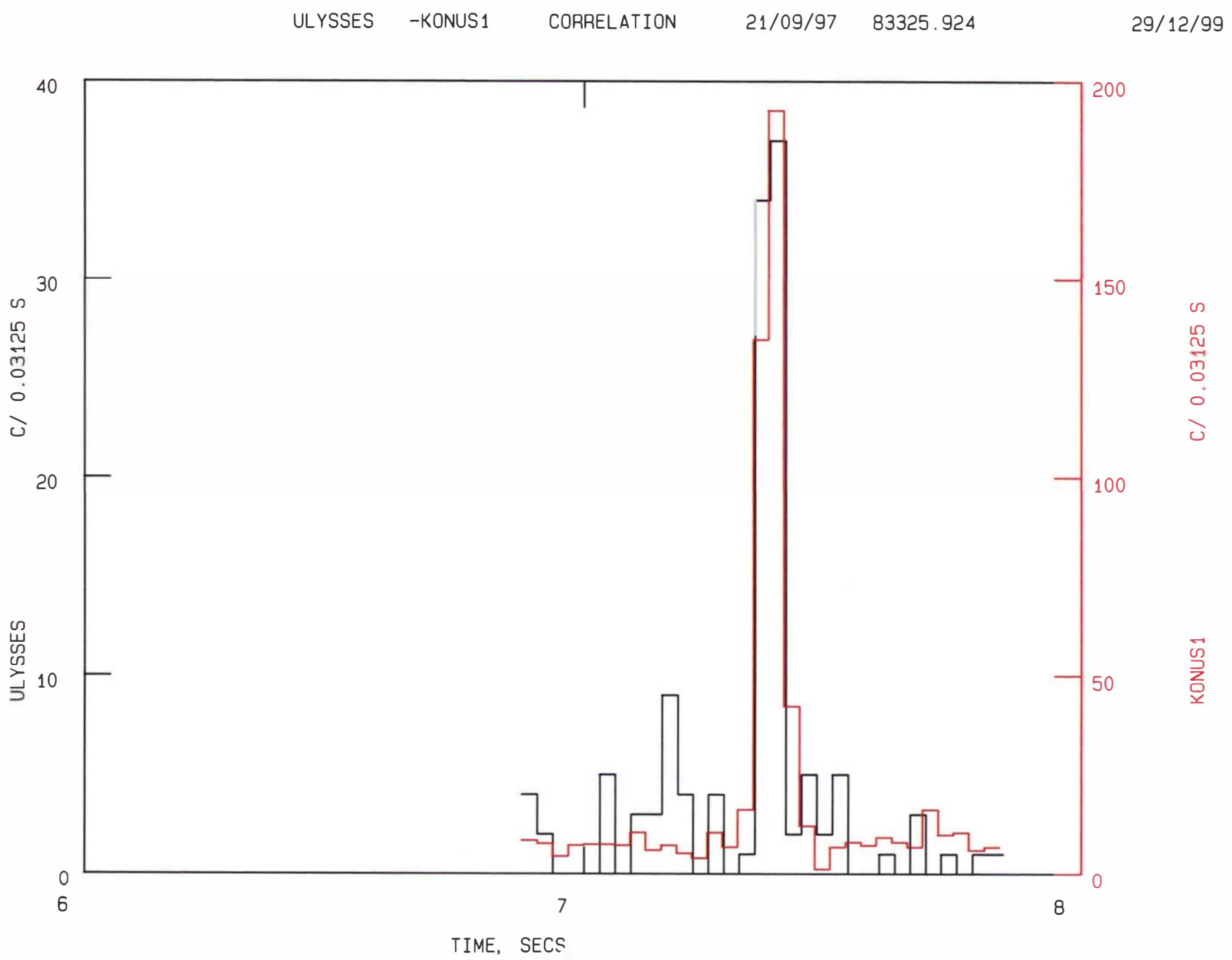
29/10/ 8


EVENT OF SEP 21, 1997 23:08
4/ 2/ 0
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 KONUS1 3 NEAR
2-1
3-1
G
E
S
EARTH- 2
EARTH- 3
EARTH-
DECLINATION
80°
70°
60°
50°
40°
30°
20°
10°
0°
-10°
-20°
-30°
-40°
-50°
-60°
-70°
-80°
0:00
2:00
4:00
6:00
8:00
10:00
12:00
14:00
16:00
18:00
20:00
22:00
24:00
RIGHT ASCENSION


NEAR GRS -ULYSSES CORRELATION 21/09/97 84310.170
4/ 2/ 0
400
300
200
100
0
C/ 1.00000 S
NEAR GRS
100
75
50
25
0
C/ 1.00000 S
ULYSSES
-8
-3
0
2
7
12
TIME, SECS

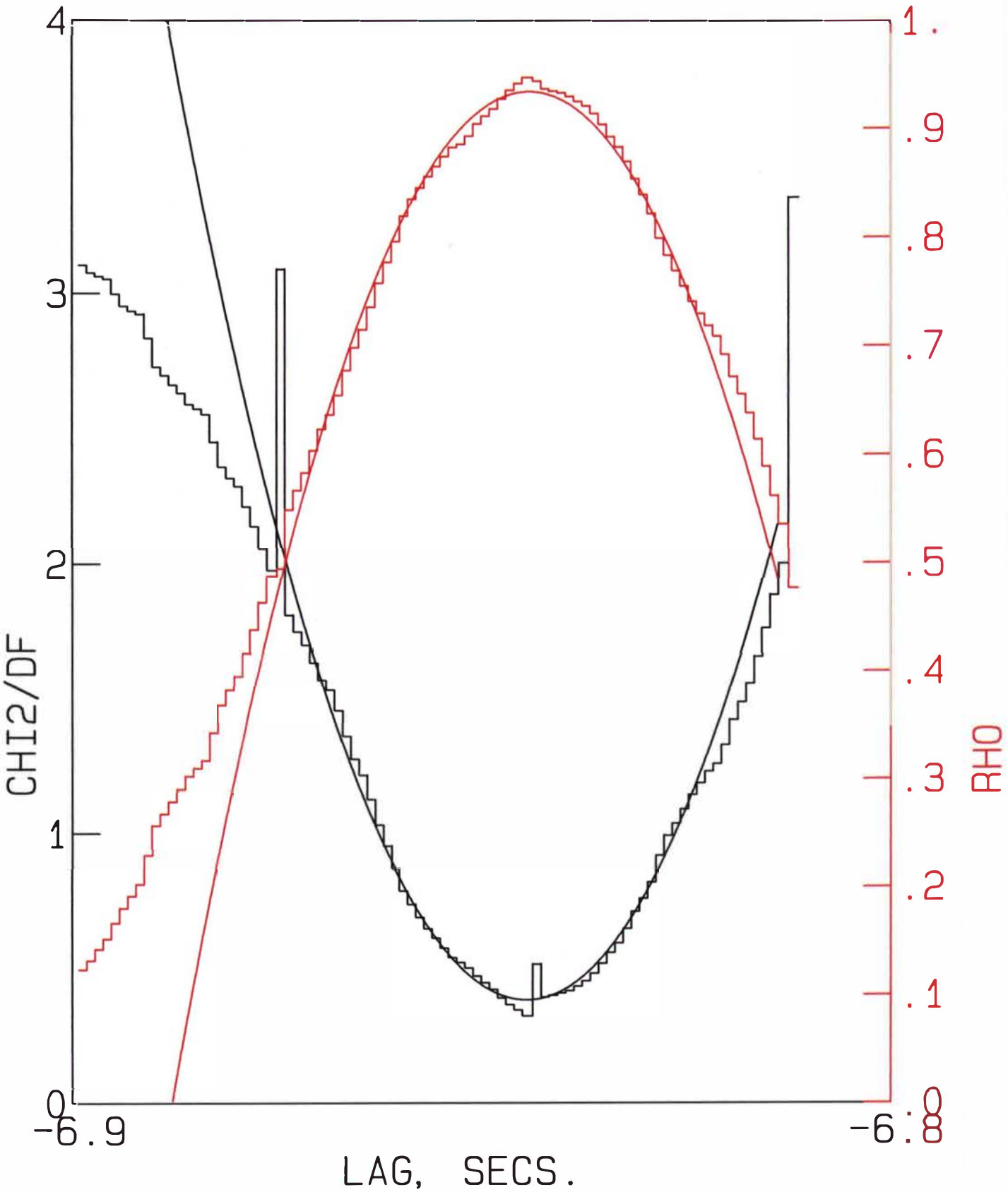
NEAR GRS -ULYSSES CORRELATION 21/09/97 84310.170

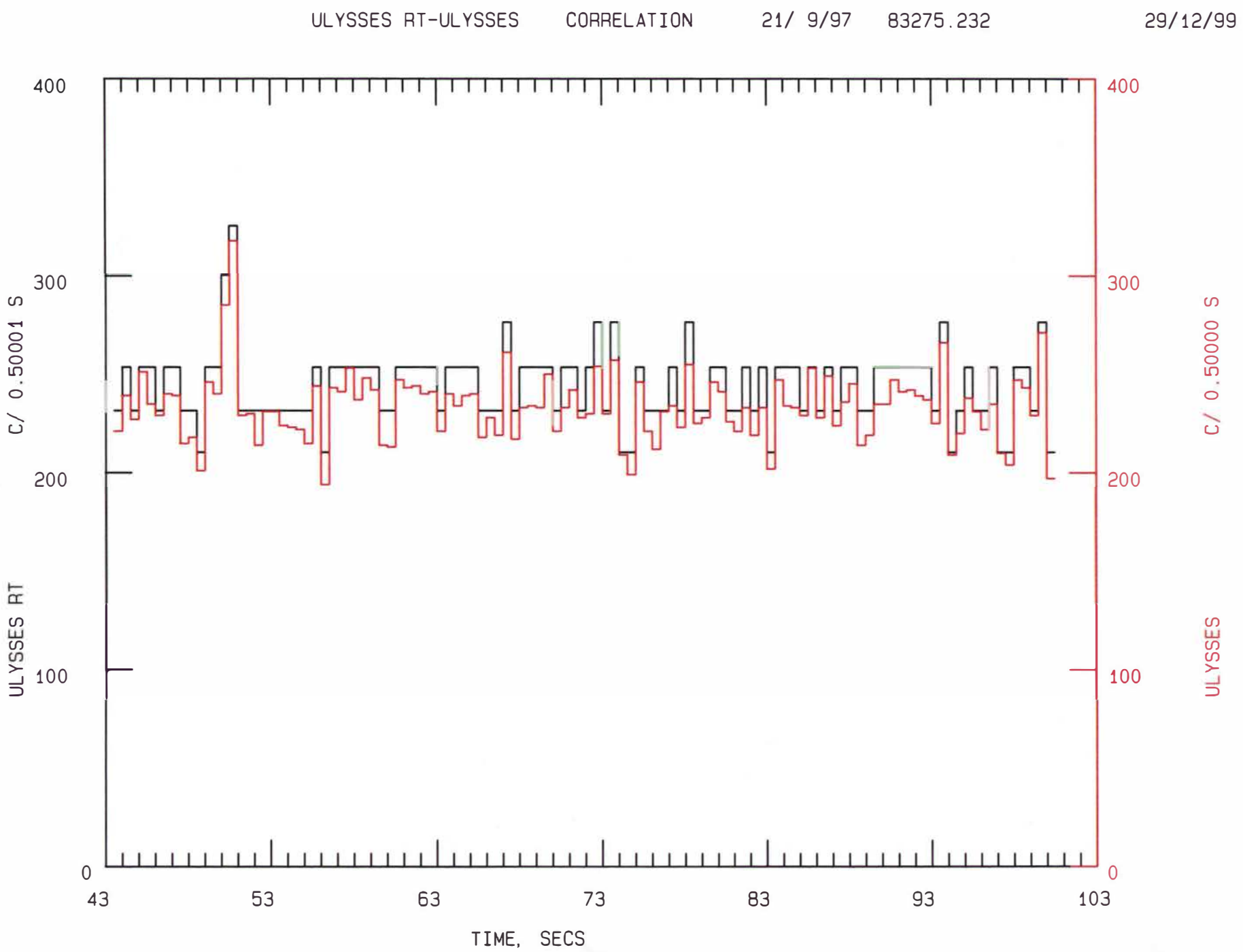



ULYSSES -KONUS1 CORRELATION 21/09/97 83325.924 29/12/99
40
30
20
10
0
C/ 0.03125 S
ULYSSES
200
150
100
50
0
C/ 0.03125 S
KONUS1
6
7
8
TIME, SECS

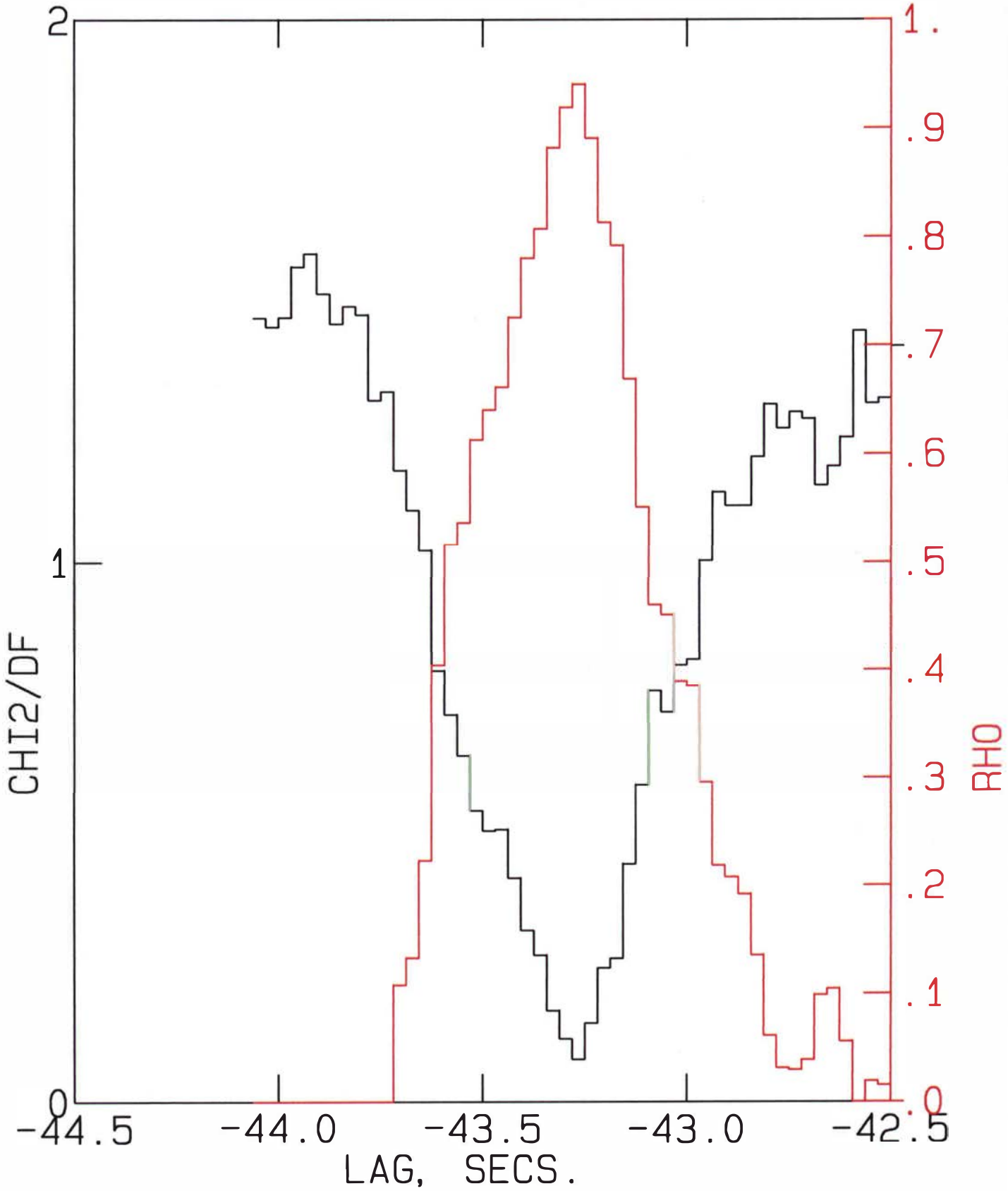
29/12/99

ULYSSES -KONUS1 CORRELATION 21/09/97 83325.924




ULYSSES RT-ULYSSES CORRELATION 21/ 9/97 83275.232 29/12/99
400
300
200
100
0
C/ 0.50001 S
ULYSSES RT
400
300
200
100
0
C/ 0.50000 S
ULYSSES
43
53
63
73
83
93
103
TIME, SECS

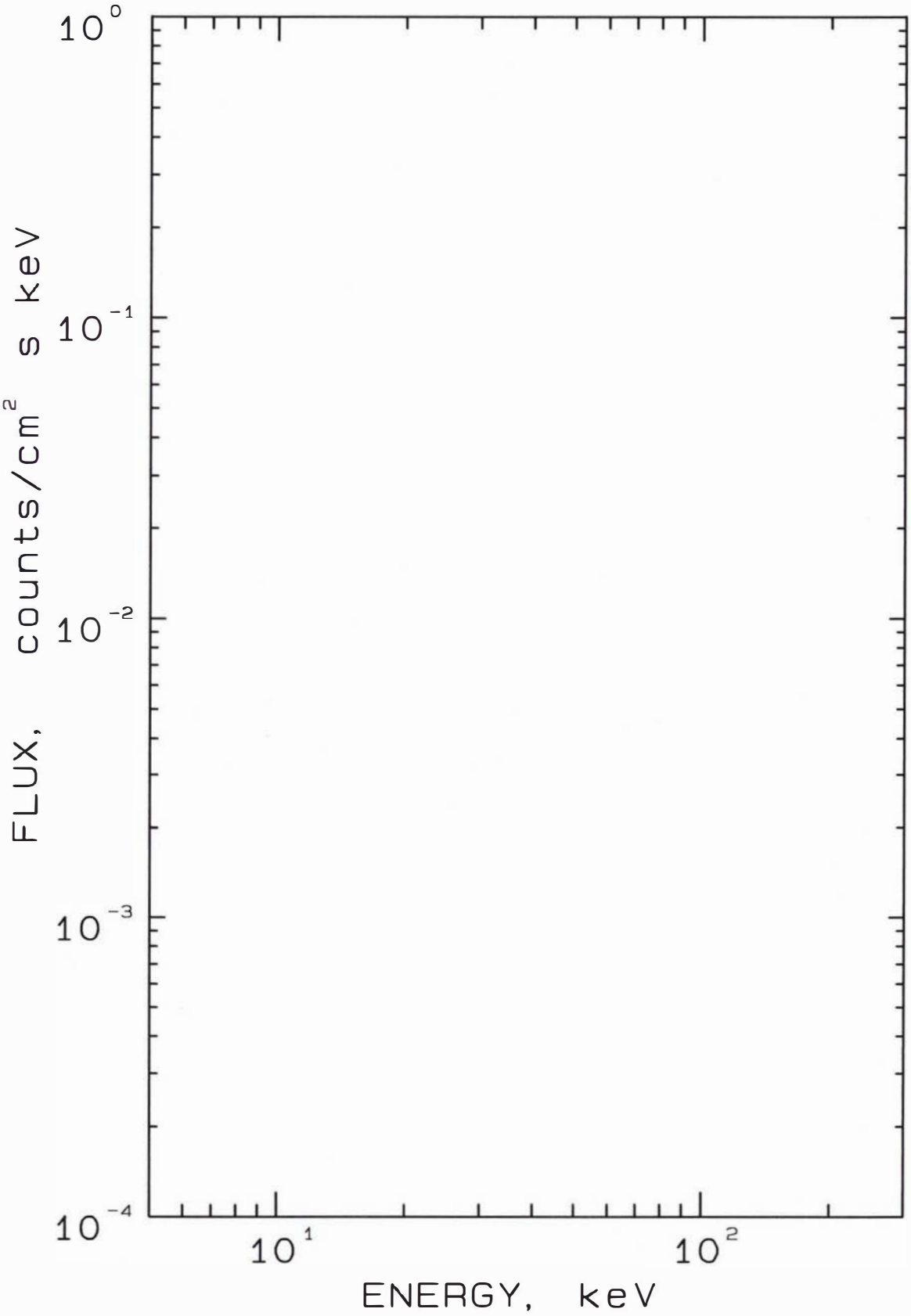
ULYSSES RT-ULYSSES CORRELATION 21/ 9/97 83275.232

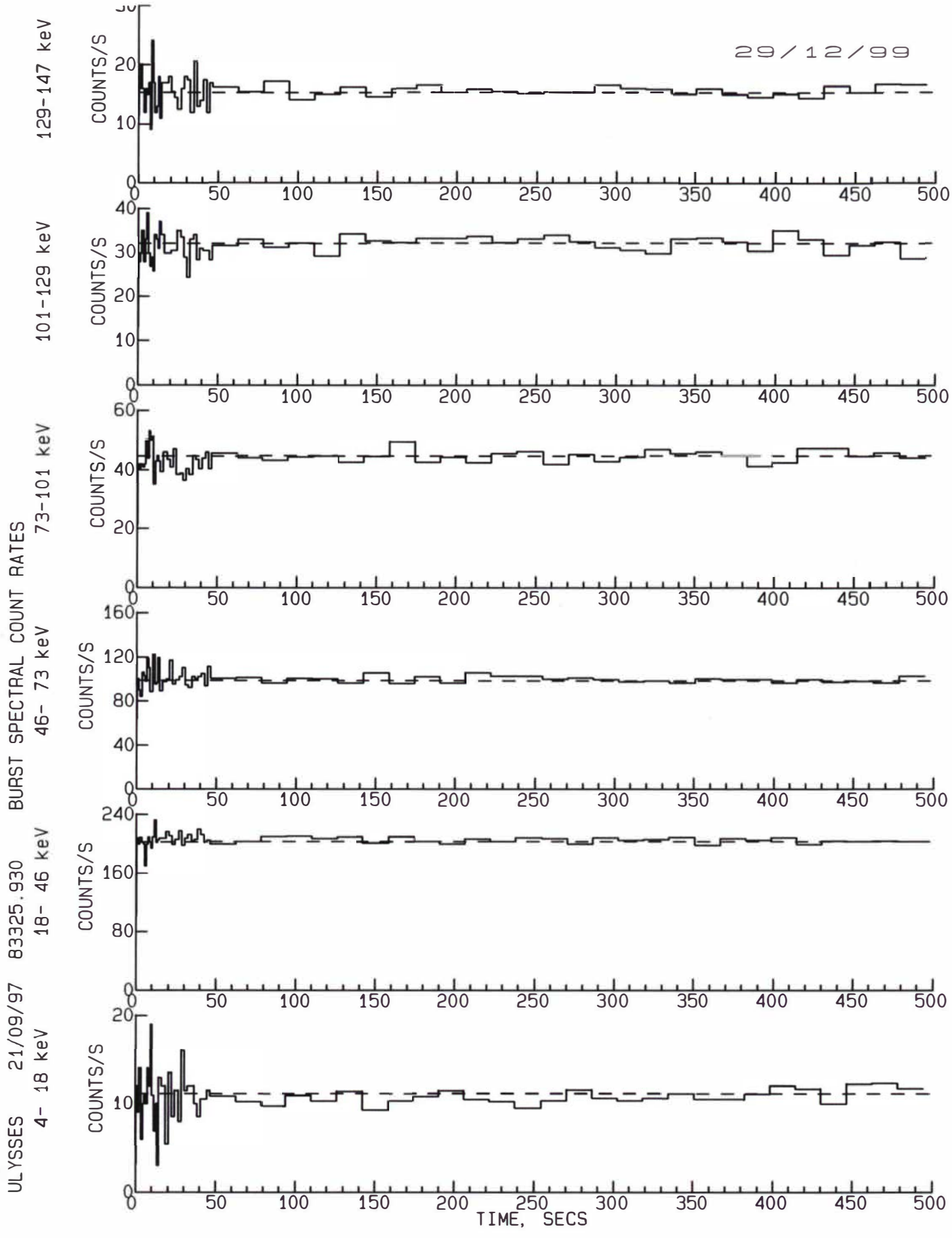


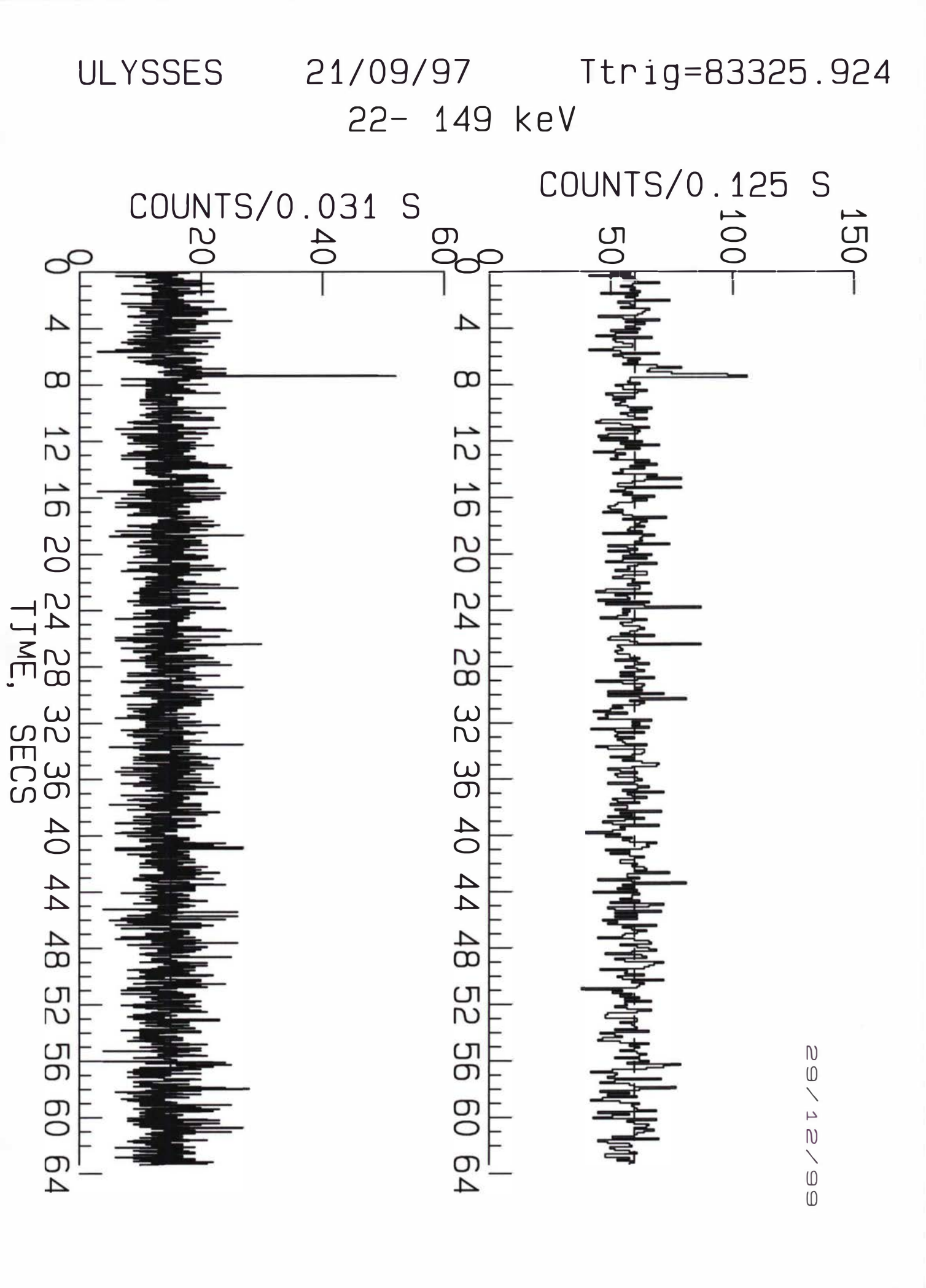
ULYSSES 21/09/97 83325.930

29/12/99

SPECTRUM INTEGRATED OVER ***** SECONDS, INTERVALS 1 TO 9




ULYSSES 21/09/97 83325.930 BURST SPECTRAL COUNT RATES
4- 18 keV
18- 46 keV
46- 73 keV
73-101 keV
101-129 keV
129-147 keV
COUNTS/S
29/12/99
TIME, SECS

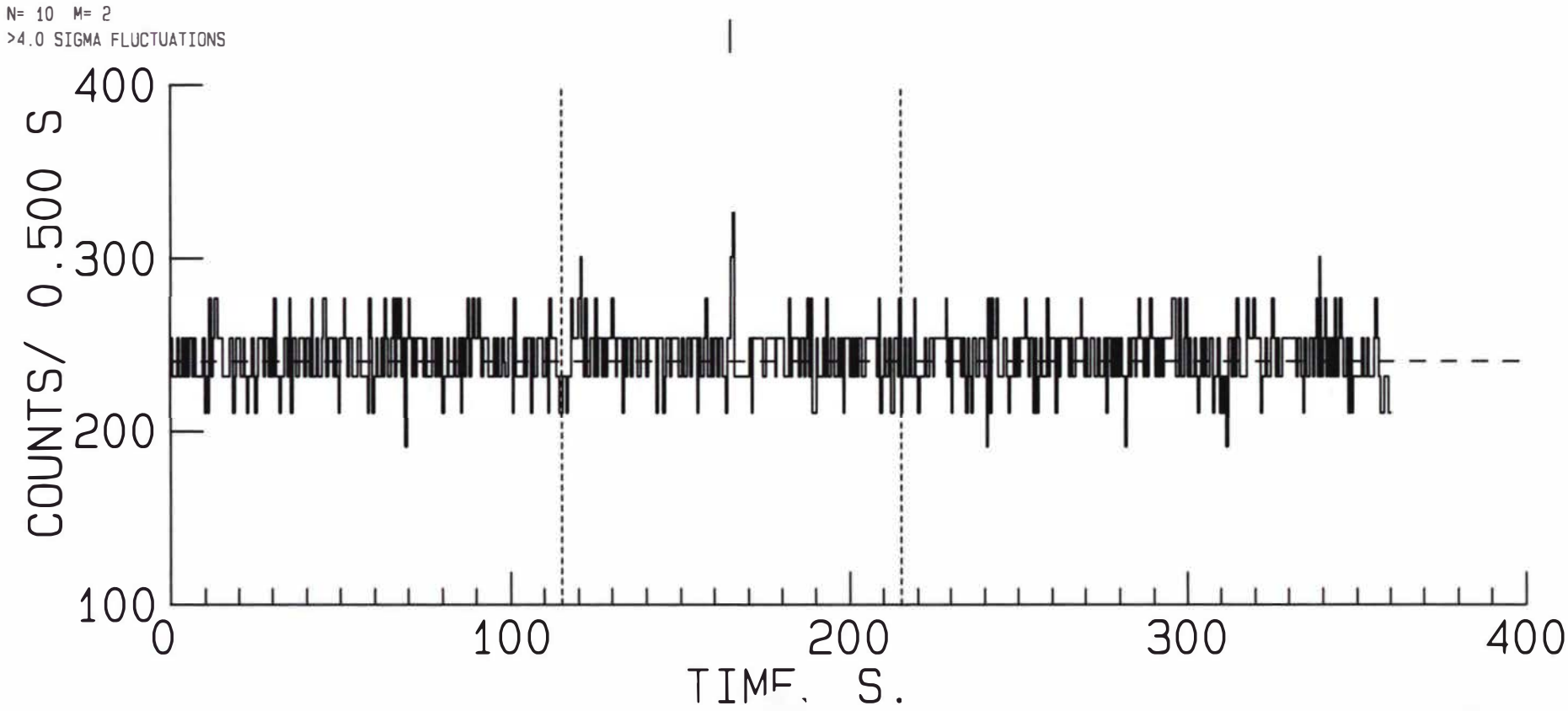

ULYSSES 21/09/97 Ttrig=83325.924
22- 149 keV
COUNTS/0.031 S
COUNTS/0.125 S
TIME, SECS
29/12/99

ULYSSES RT

29/12/99

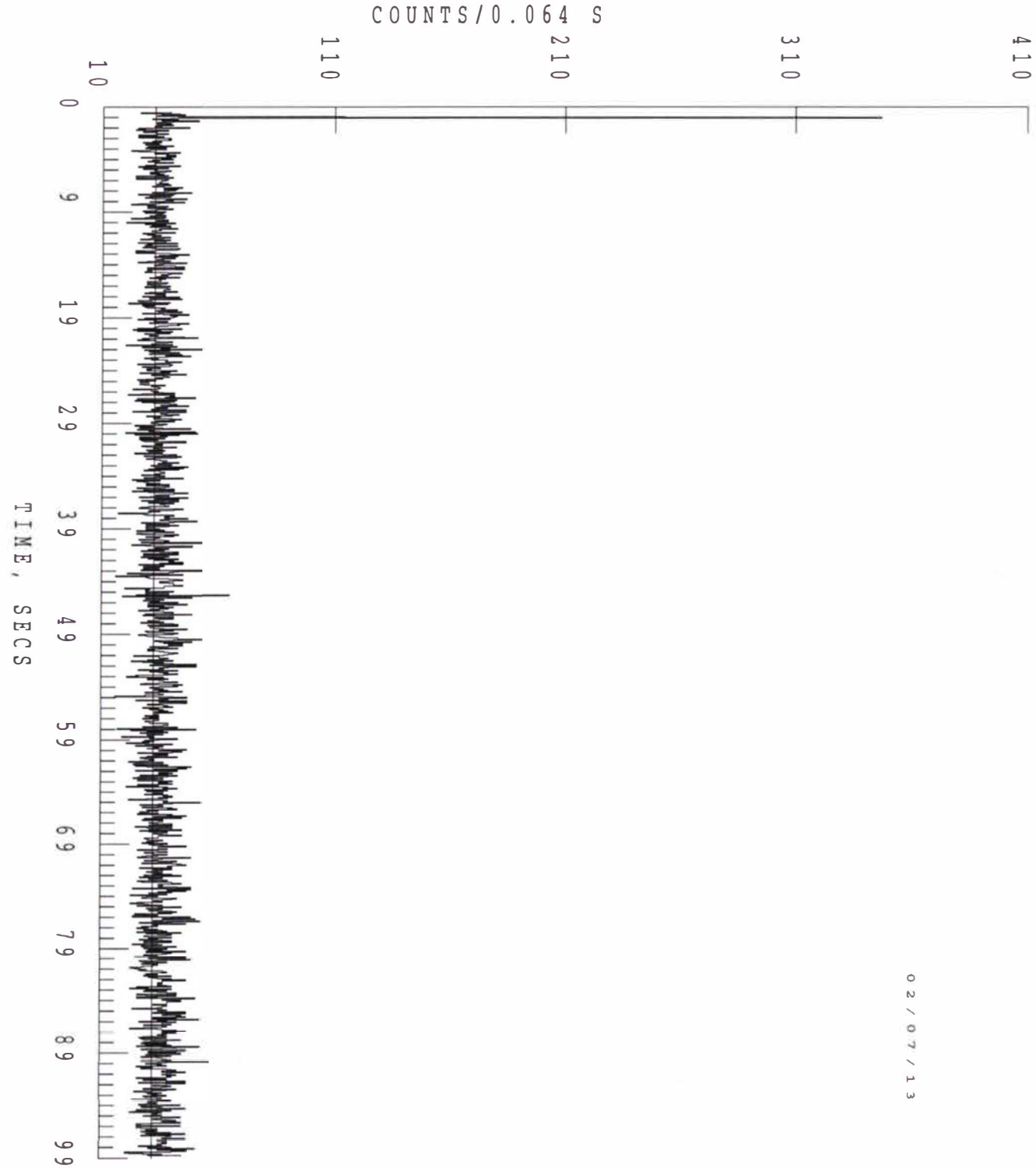
21/ 9/97 83160.250 s

22- 149 keV



KONUS1 21/09/97 83828.200

50- 200 keV



02/07/13

From cline@apache.gsfc.nasa.gov Mon Sep 22 14:12 PDT 1997
Mime-Version: 1.0
Date: Mon, 22 Sep 1997 17:16:18 -0400
To: KHURLEY@sunspot.ssl.berkeley.edu
From: cline@apache.gsfc.nasa.gov (T L Cline)
Subject: any new Ulysses/NEAR candidates?
Cc: palmer@lheamail.gsfc.nasa.gov

Dear Kevin,

Does Ulysses have any candidate events since the famous one of 09-15 ?
The NEAR guy has a set of counting rate increases of unknown origin, see below:
These are too recent to be able to check yet in the GGS-Wind data.
David Palmer says that so far he has nothing beyond the 09-15 event.

Date: Mon, 22 Sep 1997 13:46:32 -0400 (EDT)
From: Tim McClanahan <xrtpm@leptpm.gsfc.nasa.gov>
To: cline@apache.gsfc.nasa.gov
Subject: Re: confused event times
Mime-Version: 1.0

Tom,
Just downloaded several the newest NEAR XGRS data. I have 3 events of
approximately 10 sigma deviation from background.

97: 264: 23: 25: 22 Not obs by BATSE
97: 265: 02: 24: 07
97: 265: 23: 25: 22

Does not seem to be reflected in the BATSE listings.
Have plots if needed.
Tim

TLC

-- Thomas L. Cline ----- cline@apache.gsfc.nasa.gov

From David.M.Palmer.1@gsfc.nasa.gov Tue Sep 30 08:25 PDT 1997
X-Sender: palmer@lheapop.gsfc.nasa.gov
Mime-Version: 1.0
Date: Tue, 30 Sep 1997 11:26:16 -0400
    xrtpm@leptpm.gsfc.nasa.gov, Jacob.I.Trombka.1@gsfc.nasa.gov,
        u1srf@lepvax.gsfc.nasa.gov, butterworth@pizza.gsfc.nasa.gov,
        cline@apache.gsfc.nasa.gov, KHURLEY@sunspot.ssl.berkeley.edu
From: David Palmer <David.M.Palmer.1@gsfc.nasa.gov>
Subject: TGRS triggers matching NEAR
Cc: palmer@rosserv.gsfc.nasa.gov

In addition to
970921_83828 corresp. to 264:23:25:22   (time difference larger than dist.)
TGRS also triggered at
970922_02698 = 265:00:49:28 no NEAR excess
970923_41961 = 266:11:39:21 cf NEAR 266:11:34:51
970924_10027 = 267:02:47:07 probably solar, NEAR sees things at 2:36 and 2:52
970925_81799 = 268:22:43:19 cf NEAR 268:22:45:08

No other triggers through day 271.

I have not actually looked at the data.

I have not checked for rate increases.

David Palmer
palmer@lheamail.gsfc.nasa.gov
USA (301) 286-2739 Voice
USA (301) 286-1684 Fax

From BUTTERWORTH@PIZZA.GSFC.NASA.GOV Tue Sep 23 07:23 PDT 1997
Date: Tue, 23 Sep 1997 10:19:35 -0400 (EDT)
From: BUTTERWORTH@PIZZA.GSFC.NASA.GOV
Subject: Konus saw the NEAR 970921 23:25:22 event
cline@apache.gsfc.nasa.gov, palmer@rosserv.gsfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu, scott@rosserv.gsfc.nasa.gov,
xrtpm@leptpm.gsfc.nasa.gov
X-Vmsmail-To: TOM,DAVIDP,KEVIN,SCOTT,SMTP%"xrtpm@leptpm.gsfc.nasa.gov"

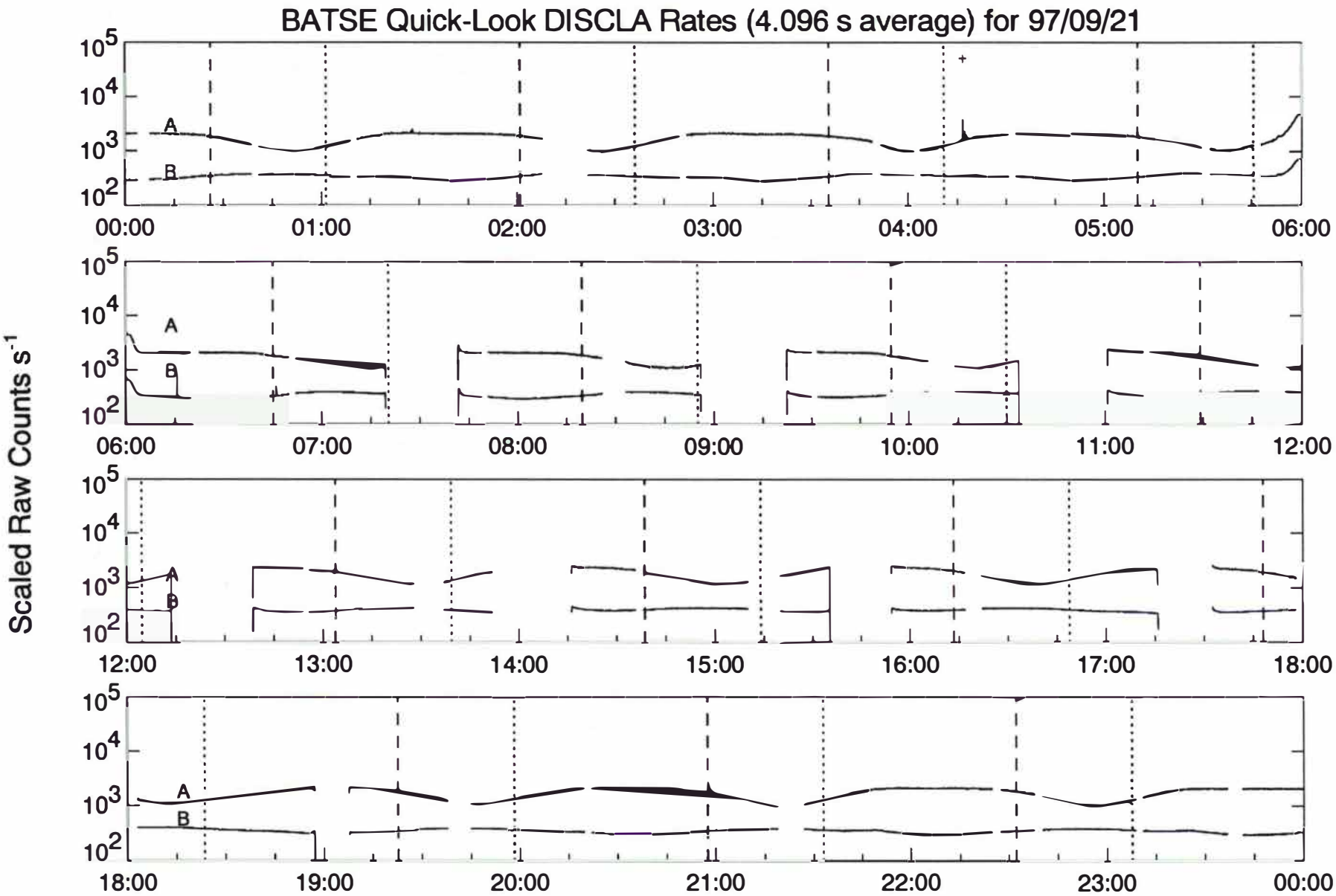
Konus triggered at 23:17:08.200 on 970921 in the S-facing detector. Like the 970915 event seen by NEAR it was unusually hard - barely visible below 50keV. It lasted about 70 ms and had strong hard to soft spectral evolution. I'll be sending Tom a lightcurve and ephemeris with the hour.

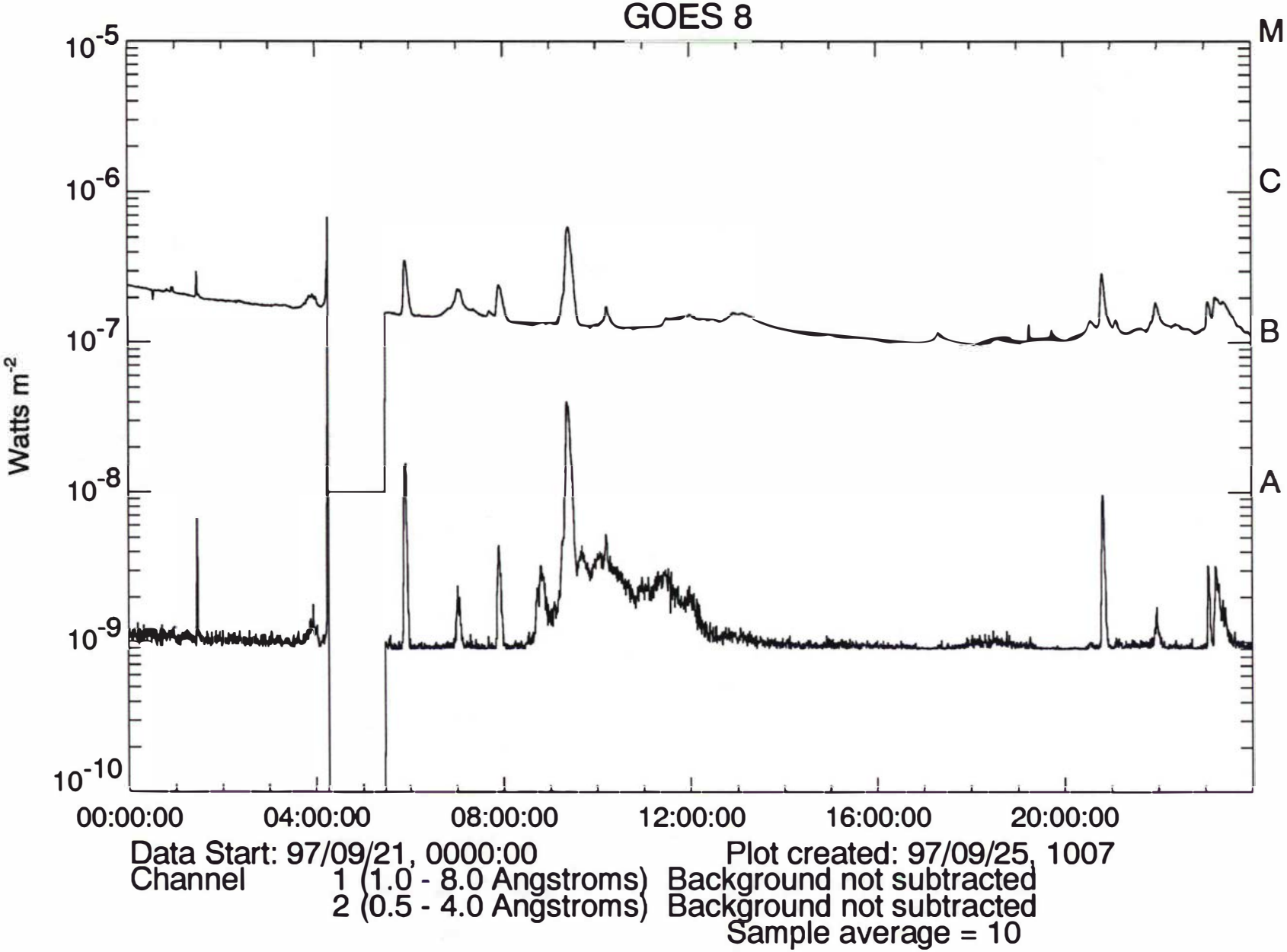
We don't have the Konus data for 970922 yet. BTW, I'm struck by the first and third events in the list below having exactly the same times. Is that just coincidence or could it be an error of some kind?

Paul.

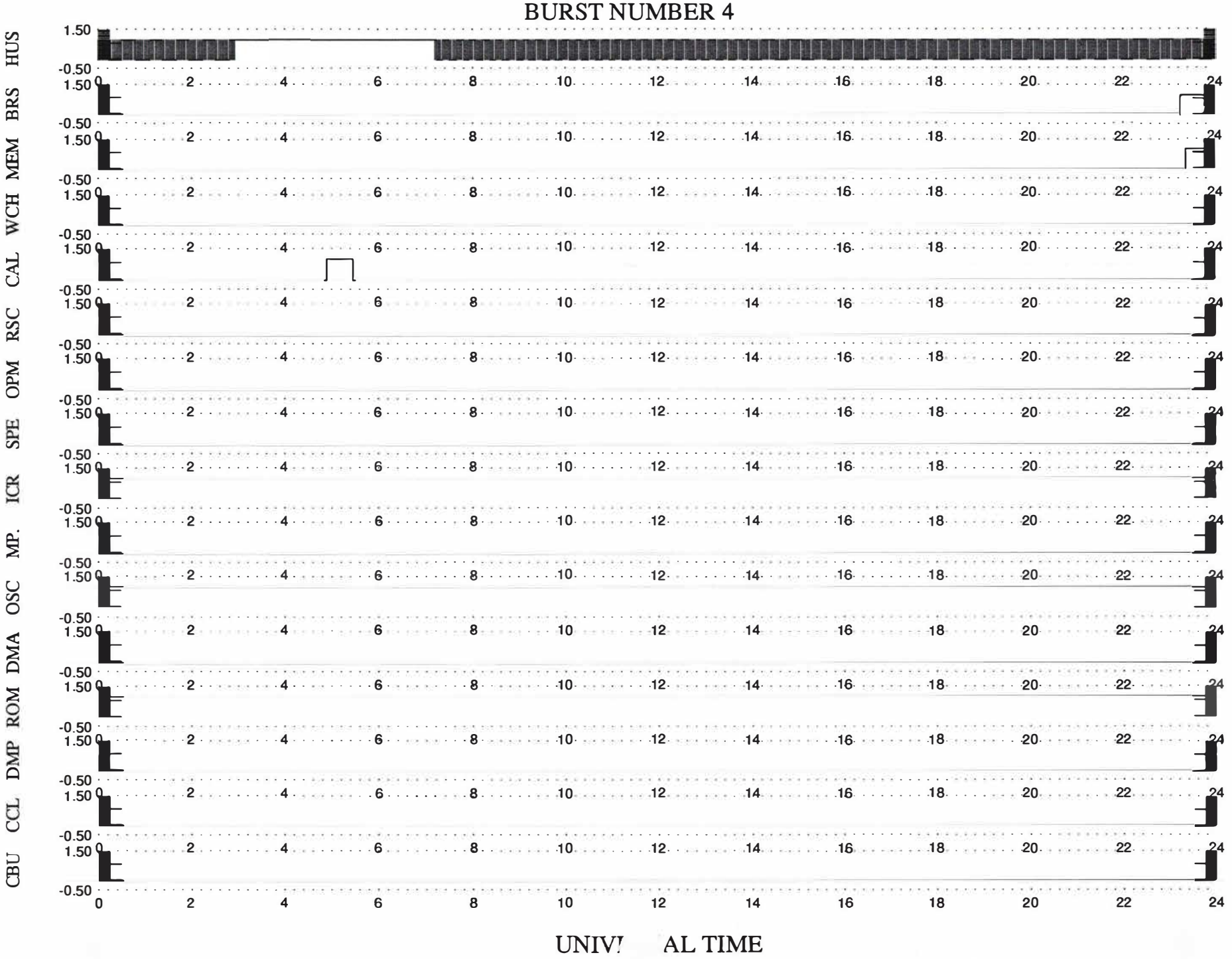
in reply to info. from Tom

>The candidate events are on Sept. 21 and 22 -
>
>97/09/21: 23:25:22
>97/09/22: 02:24:07
>97/09/22: 23:25:22


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/21
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/25, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare

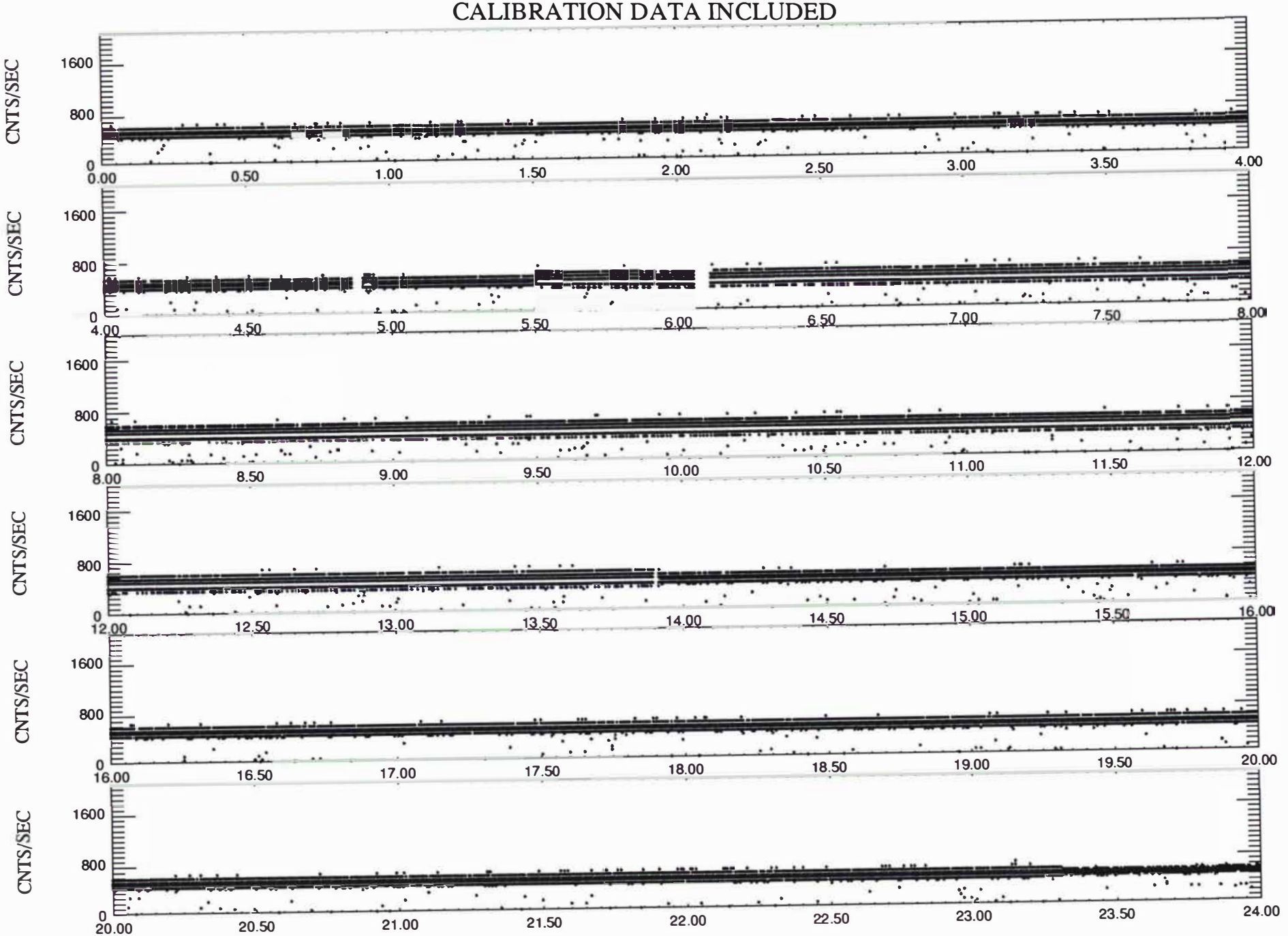

GOES 8
M
C
B
A
Watts m-2
10-5
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/21, 0000:00
Plot created: 97/09/25, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 264, year 1997 to day 264, year 1997 1/14/98



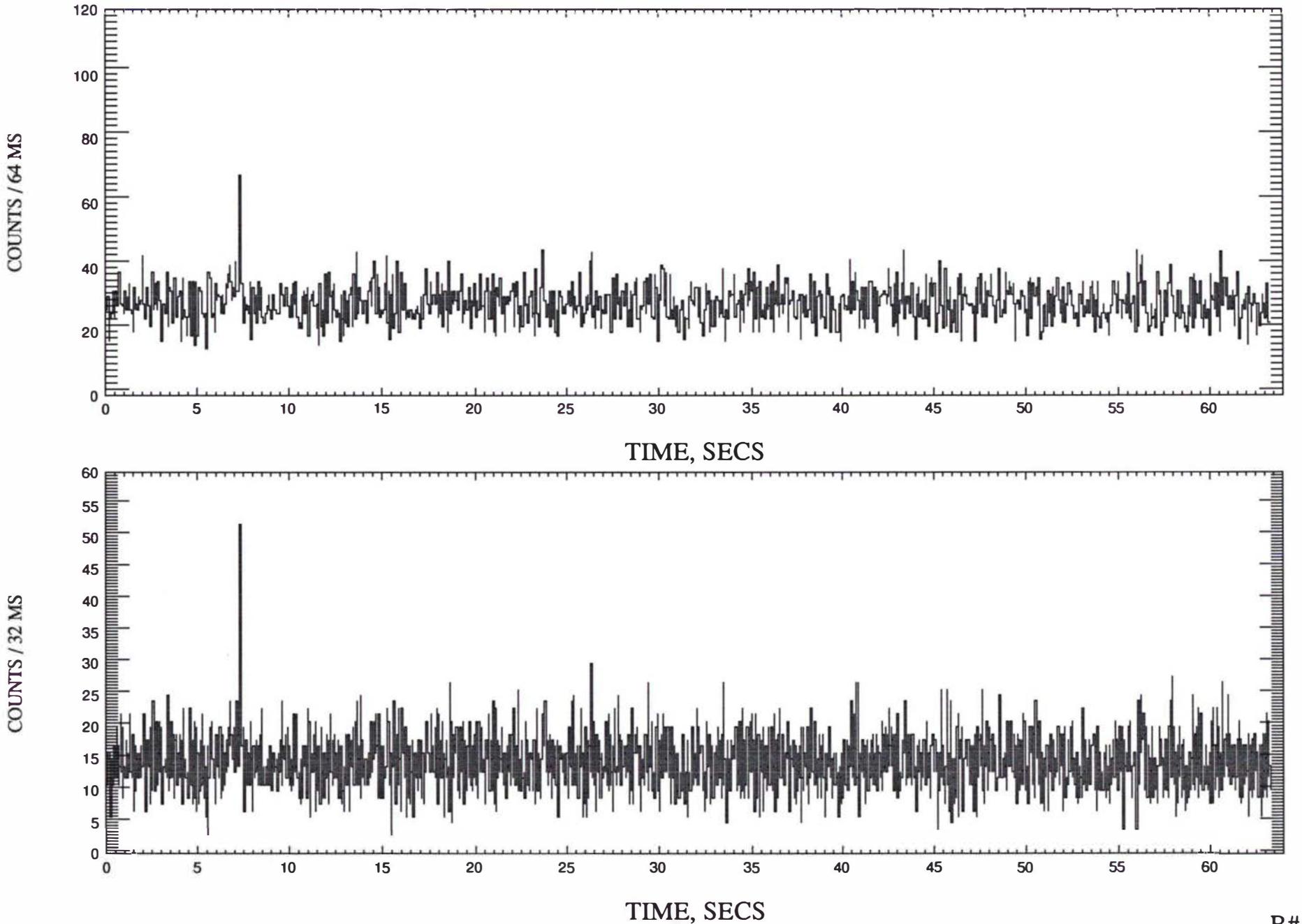
HUS 2A, MODE 1, NOT AVERAGED EDR day 264, year 1997 to day 264, year 1997 1/14/98

CALIBRATION DATA INCLUDED



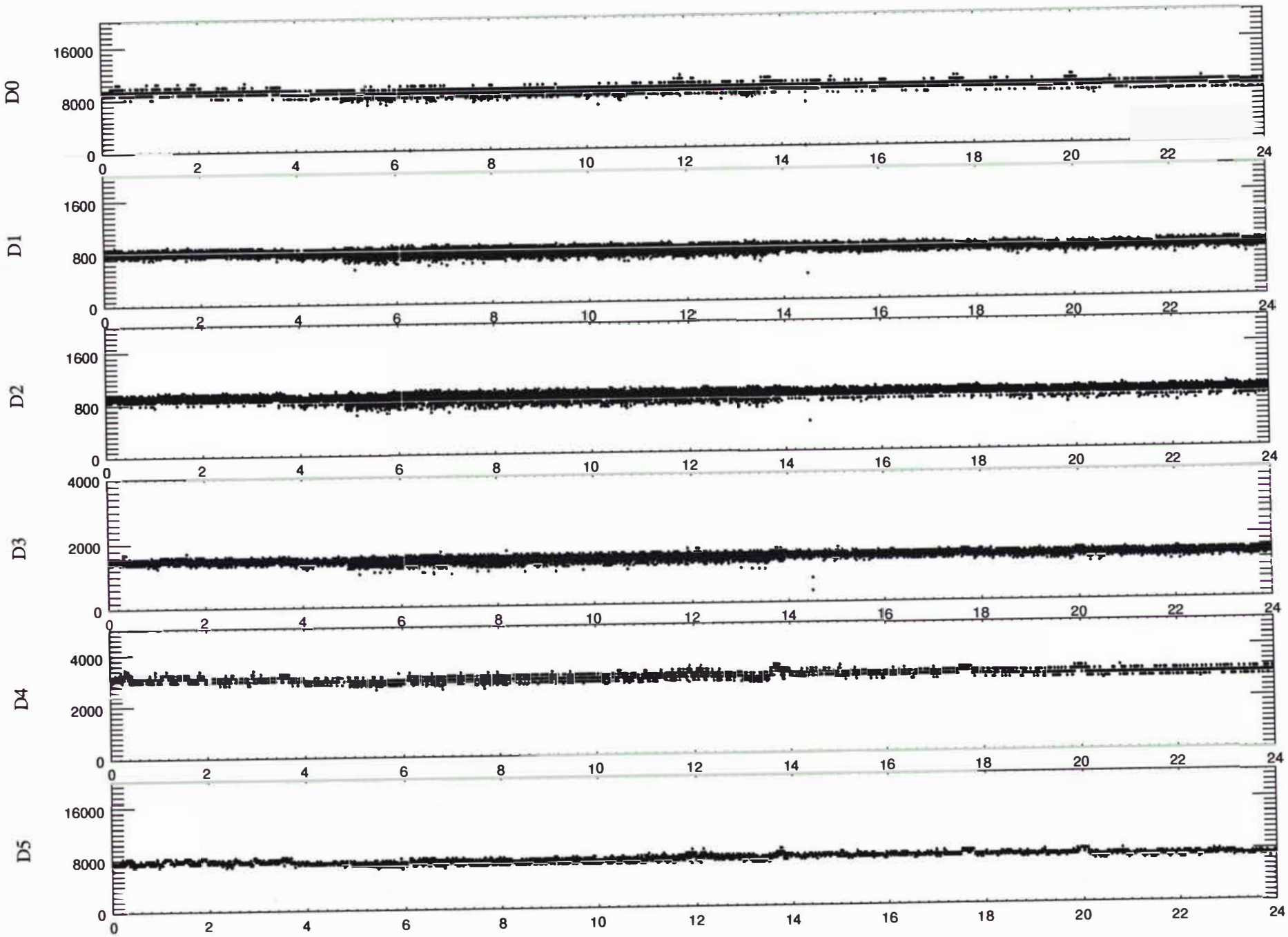
UNIV[illegible]AL TIME

Burst Counter 4 at UT=23.146091715495 h=83325.930 s 23:08:45.930



B# 1

HUS 2B COUNTS / SEC EDR day 264, year 1997 to day 264, year 1997 1/14/98



From David.M.Palmer.1@gsfc.nasa.gov Tue Sep 30 08:25 PDT 1997
X-Sender: palmer@lheapop.gsfc.nasa.gov
Mime-Version: 1.0
Date: Tue, 30 Sep 1997 11:26:16 -0400
    xrtpm@leptpm.gsfc.nasa.gov, Jacob.I.Trombka.1@gsfc.nasa.gov,
        u1srf@lepvax.gsfc.nasa.gov, butterworth@pizza.gsfc.nasa.gov,
        cline@apache.gsfc.nasa.gov, KHURLEY@sunspot.ssl.berkeley.edu
From: David Palmer <David.M.Palmer.1@gsfc.nasa.gov>
Subject: TGRS triggers matching NEAR
Cc: palmer@rosserv.gsfc.nasa.gov

In addition to
970921_83828 corresp. to 264:23:25:22   (time difference larger than dist.)
TGRS also triggered at
970922_02698 = 265:00:49:28 no NEAR excess
970923_41961 = 266:11:39:21 cf NEAR 266:11:34:51
970924_10027 = 267:02:47:07 probably solar, NEAR sees things at 2:36 and 2:52
970925_81799 = 268:22:43:19 cf NEAR 268:22:45:08

No other triggers through day 271.

I have not actually looked at the data.

I have not checked for rate increases.

David Palmer
palmer@lheamail.gsfc.nasa.gov
USA (301) 286-2739 Voice
USA (301) 286-1684 Fax

From SURASAK@SSLLES.MSFC.NASA.GOV Tue Sep 23 09:43:10 1997
Date: Tue, 23 Sep 1997 11:42:23 -0500 (CDT)
From: SURASAK@SSLLES.MSFC.NASA.GOV
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6392

TIME: TJD=0713 SECONDS=2888

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=133.8 AZIMUTH=348.3 ERROR=0.27 DEGREES

COMMENTS:
SOLARE FLARE. GOES C1.7,OPTICAL SF. TRIPPLE PEAKS. DUR~40S. VISIBLE
ABOVE 300 KEV.

```
          262 65663.9 KONUS 30S,HARD,2PKS (+UL@63120,3100LS,MOD,20S)(13NO,14NO)

970922    265  2888.4 BATSE#6392,32880/SEC
       13 265  2894.4 PEAK(50/S),2910.5(110),@97DEG,ONE-SIDED,EDGE SR. DUBIOUS
       14 265  2894.6 PKS(200/S),2910.6(500/S),@109,ONE-SIDED,EDGE SAA.DUBIOUS

970925    268 81795.8 BATSE#6397,9551/SEC
       14 268 81798.3 PEAK (70/S,<10S) @ 42DEG (13SAA)

971009    282 68215.8 BATSE#6422,10861/S@1.8S+UL@69240,3050LS,MOD+KONUS@68215.0
       14 282 68217.2 PEAK(180/S,<2S)@83 (TRIGGER PEAK 68215.64) (13NO@145)

971019    292 53754.2 KONUS,10S (+UL@51000,2950LS,MOD,10S)
       14 292 53752.6 RISE,~50SEC,SOFT,NO TRIG (13 NO)

971029    302  5318.4 BATSE#6453,4717/S@35.8S (KONUS@5351.8,120S)(UL WEAK@2820)
       14 302  5326.0 PKS, 44.0,66.0,NO TRIG,@102DEG (13NO@49DEG)

971101    305 23484.5 KONUS (10SEC,FRED)(UL@26040,MOD,10S@2950LS)
       14 305 23483.8 PEAK (200/S,<2S) (13SR) TRIGGER PEAK 23483.0

971110    314 68141.3 KONUS,100SEC (UL@67080 @2950LS,MOD)(13 SR)
       14 314 68161.3 PEAKS, 213.3, MULT PEAKS,HARD,TRIGGER PKS 68213.19,213.91

971127    331 47595.8 BATSE#6509 (139968/S)
       13 331 47595.8 PKS,613.8,759.8(240),767.8(140)
       14 331 47760.5 PKS(3000/S),47768.5(2000), INTENSE, NOTRIG

971201    335  9295.6 BATSE#6515 (8768/S)
       14 335  9306.4 PK(SOFT)+9310.4(160)+9316.4(220)+9328.4(150),NOTRIG(13NR)

971207    341 72232.9 BATSE#6525 (7892/S@12.0)
       14 341 72244.2 PK(270),268.2,284.2 (@80DEG),TRIG PK 72244.28 (13NR)

971218    352 52499.9 BATSE#6535 (9181/S@+2.3S)
       13 352 52500.2 PK(70),52536.2(?)(SOFT,@38DEG)    (14SAA)

971219    353 79974.5 KONUS,10S,SPIKE@+4 (UL 77580,15SEC,MOD) (13SAA,14NR)

980109    009  4345.6 BATSE#6564(1401/S)+SAX,25S(IAU6805)(13NO@74,14NA@144)

980113    013 14845.7 BATSE#6570 (9376/S,COMPLEX,DUR60S)
       13 013 14869.2 PKS(50),879.2(50),883.2(50) (ONE-SIDED,@119DEG)
       14 013 14848.3 PEAK(60/S,<4S), NO TRIGGER

980119    019U 5100   ULYSSES MOD(32MS) @2350LS
       14 019  5375.9 PEAK (900/S,<8S,SOFT) (TRIG PEAKS 5372.9,5374.6)(13NO)

980124    024 23673.0 BATSE#6576, 16971/S @7.7S,SPIKY,MAX@+42.5,DUR100S)
       13 024 23679.1 PEAK(90/S,<8S),23707.1,23717.1 (LAST 2 WEAK,ONE-SIDED)
       14 024 23679.6 PEAK(300/S,<10S),707.6WEAK,715.6WEAK
       14 024 23679.1 TRIGGER PKS 679.07,679.99 (.1024S); 12.8MS PEAK 23678.43

980125    025 74368.7 BATSE#6581, 34996/S,MULT PKS,MAIN PK@+40,270S
       13 025 74416.4 PEAK @108DEG(220/S,<8S) (14NO@125)

  202     033U37380   ULYSSES MODERATE, 10SEC@2265LS
       13 033 35713.6 PEAK(80/S),35717.6(70),<8SEC OVERALL
       14 033 35712.9 PEAK(200/S),35718.9(400/S),<10SEC OVERALL, NO TRIGGER
```

From TERRELL@nisdp0.lanl.gov Fri Feb 27 15:11 PST 1998
From: TERRELL@nisdp0.lanl.gov
Date: Fri, 27 Feb 1998 16:11:55 -0700
To: khurley@sunspot.ssl.berkeley.edu, bonnard@milkyway.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
henze@fender.msfc.nasa.gov, filippo@botes1.tesre.bo.cnr.it,
kmarar@isac.ernet.in
X-Vmsmail-To: @MAILOUTUL.DIS
Subject: DMSP GRB: 1997(many),980109,980113,980119,980124,980125,980202,980203

From: jterrell@lanl.gov (James Terrell) 980227
To: khurley@sunspot.ssl.berkeley.edu, bonnard@milkyway.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
filippo@botes1.tesre.bo.cnr.it, henze@fender.msfc.nasa.gov,
kmarar@isac.ernet.in, kraken@rosserv.gsfc.nasa.gov,
scott@milkyway.gsfc.nasa.gov, teegarden@lheavx.gsfc.nasa.gov,
vnp@isac.ernet.in, yosimori@rikkyo.ac.jp
Subj: DMSP GRB detections: 1997(many),980109,980113,980119,980124,980125,980202,980203

The following GRB were detected by DMSP13 or DMSP14 (or NOT detected, if indicated).
No detection can occur for bursts more than 118 degrees from spacecraft zenith,
or if in the presence of very high counting rates (SAA,SR,NR).
Data are normally in 2-sec counts, except when the DMSP14 trigger circuit is
tripped, giving 12.8ms data, usually reported here as 102.4ms counts.
Numerous other BATSE GRB were also detected, but not reported here; numerous
weak detections by Ulysses have not been checked because of low counting
rates expected at an indefinite time.

DATE	FL	DAY	TIME	NOTES---(ND=NO DATA,NA=NOT APPARENT & NOT ANALYZED)------REPORTED (NO=DATA CHECKED--SHOWS NO DETECTION)(SR=S. RADIATION BELT) (NR=NORTH RADIATION BELT)(SAA=SOUTH ATLANTIC ANOMALY)	
970111		011	35040.2	BATSE GRB#5773 (8727CTS/2S) (SEE IAU6569,6571,6574,6598)	
		011	35040.2	BEPPO SAX TRIG,INTENSE,50S,3 PEAKS(232.10,19.67J) IAU6533	
	13	011	35040.0	PEAKS(40/S),48.0(50/S),58.0(60/S),@24DEG,@848KM,SOFT	REP0313
970111		011	85744.6	KONUS (HARD,SLOW RISE) +TGR (UL:NO) (DMSP13:NO)	
970117		017	53211	TGR+SAX GRB (KONUS INOP)+UL@54420(STRONG,20S) (13:NO)	
970124		024	44343.4	KONUS(MULT PKS)+UL@46253@2100LS,STRONG+TGR (13SAA)	
970201		032	57250.7	BATSE GRB#5989 (53612/SEC) +UL	
	13	032	57222.1	PEAK (100/S,~30S,SOFT,BROAD) (@111DEG) UNCONVINCING	
970218		049	50996.1	KONUS (STRONG,5SEC) +UL@51274,2000LS (STRONG,8SEC)	
	13	049	51001.0	PEAK (320/S,<6S)	REP0624
970222		053	86006.6	KONUS (MOD.STRONG,SEV.SEC) +UL@85873,2000LS,MOD,2S(13NO)	
970226		057	31585.9	KONUS (STRONG,SOFT PK@+39) +UL@30547,2000LS(V.INT,40S)	
	13	057	31595.8	PEAK (270/S,10SEC) (MODERATELY STRONG)	REP0313
970228		059	10680.8	BEPPOSAX(IAU6572)MOD.INT.,80S,4 PKS (75.46,11.75J)IAU6578	
		059	10680.8	INT.X-RAY,RADIO(IAU6576,6577),OPTICAL(6584),MOTION(6629)	OPTICAL
	13	059	10659.1	PKS,667.1(60/S,ONE-SIDED,SOFT,@74DEG) DOUBTFUL (+UL,WIND)	
970313		072	30096.5	KONUS(MOD.STRONG,PK@+11,40S)+UL@28380,2000LS(MOD.INT,10S)	
	13	072	28355.8	PEAK (180/S,<2S,SOFT) (NO PEAK AT 30096!) (CONFLICT)	REP0501

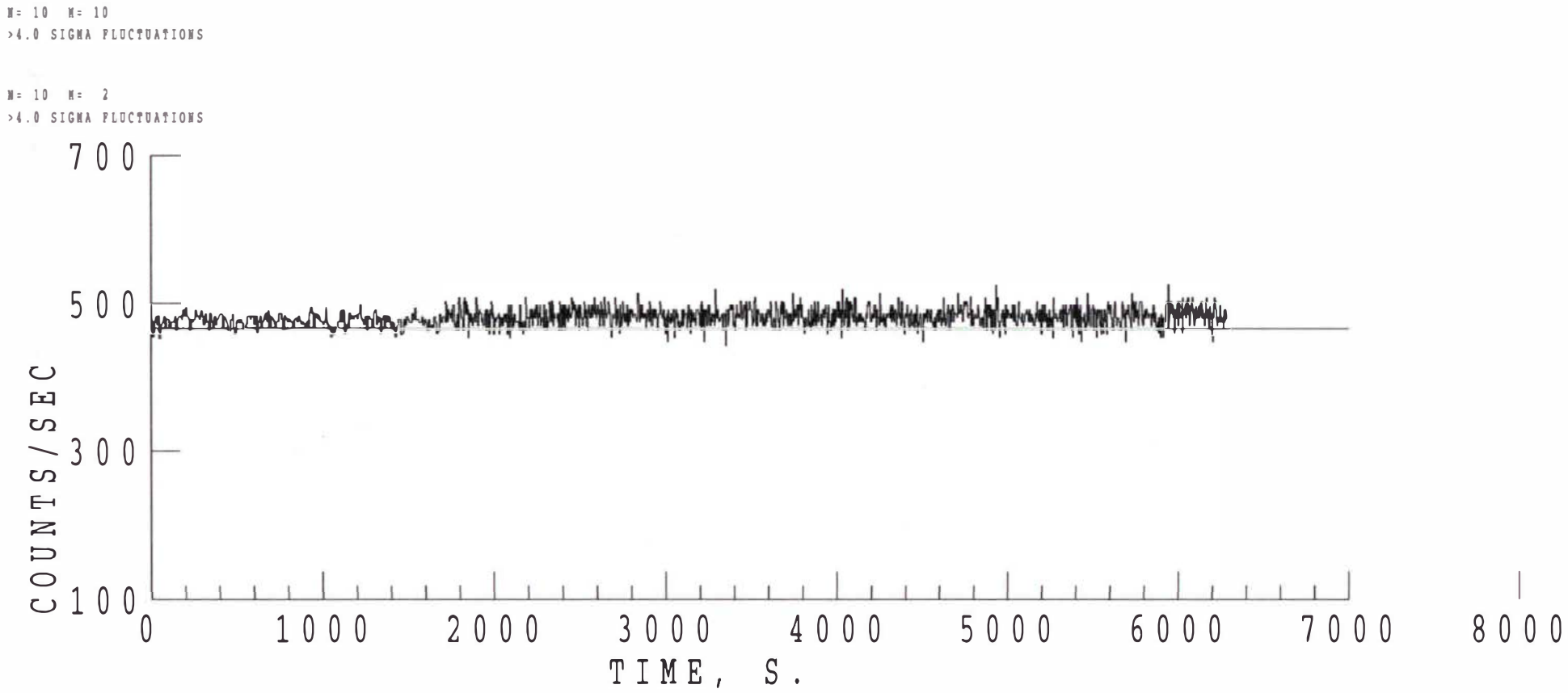
GRBM 19970922 02897

ULYSSES RT 03/05/04

21/09/97 86148.289 s

INTERVALS REGROUPED BY 8

0- 0 keV



Date: 4 Feb 00

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

☑ 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 N/A

☐ BATSE ephemeris for T_0?

☐ Error circle position and radius from public catalog used?

☐ If MER data were used, is a 30 ms systematic error included?

3. NEAR Data

☑ Final, correct time used? (Files postmarked vwx@bocc1, or from Teresa Sheets, have the correct time; files on website have incorrect times)

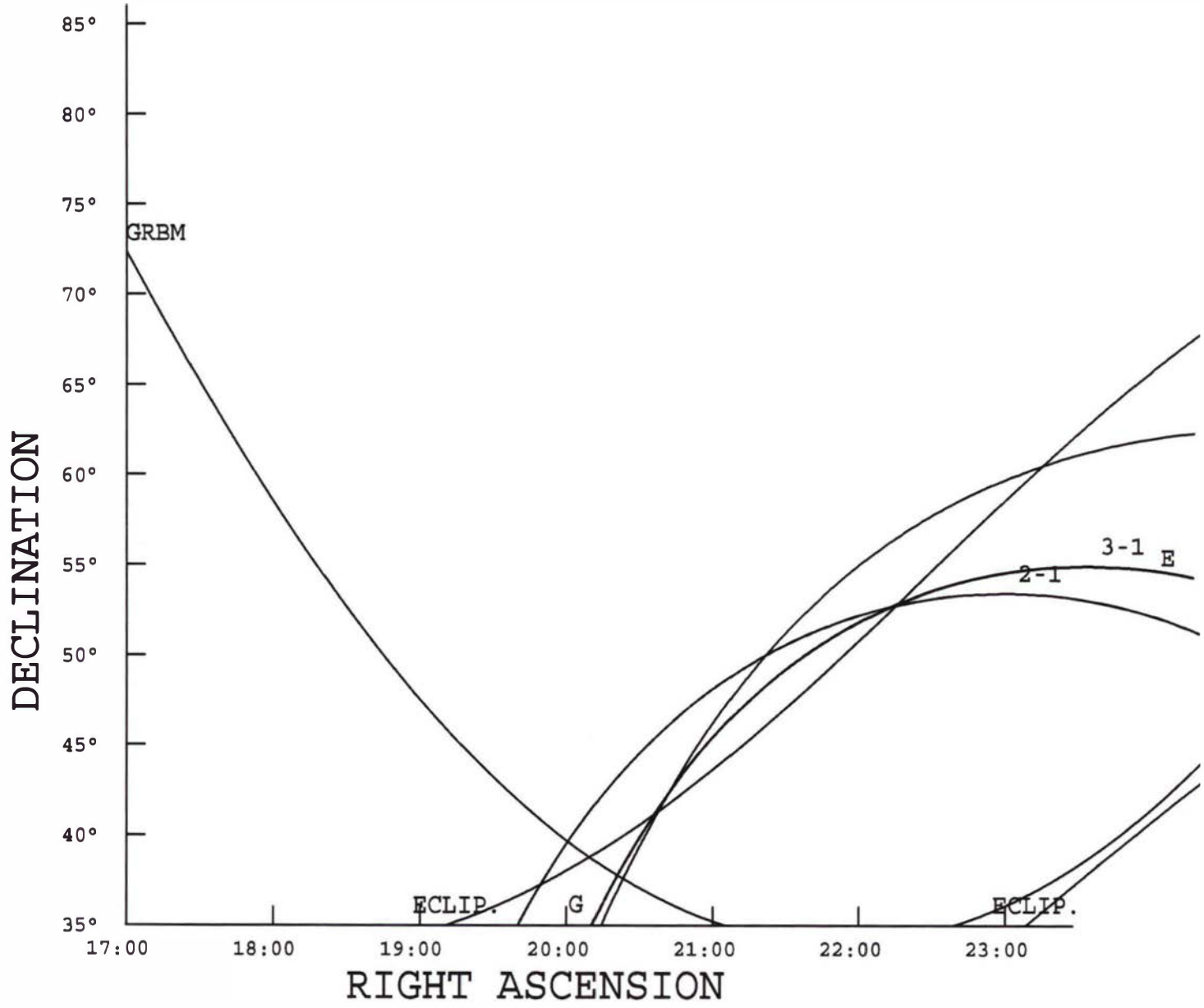
☐ BATSE >100 keV data used for NEAR correlation? N/A

☑ ACCESS database updated?

EVENT OF SEP 22, 1997 2:42

29/ 3/ 7

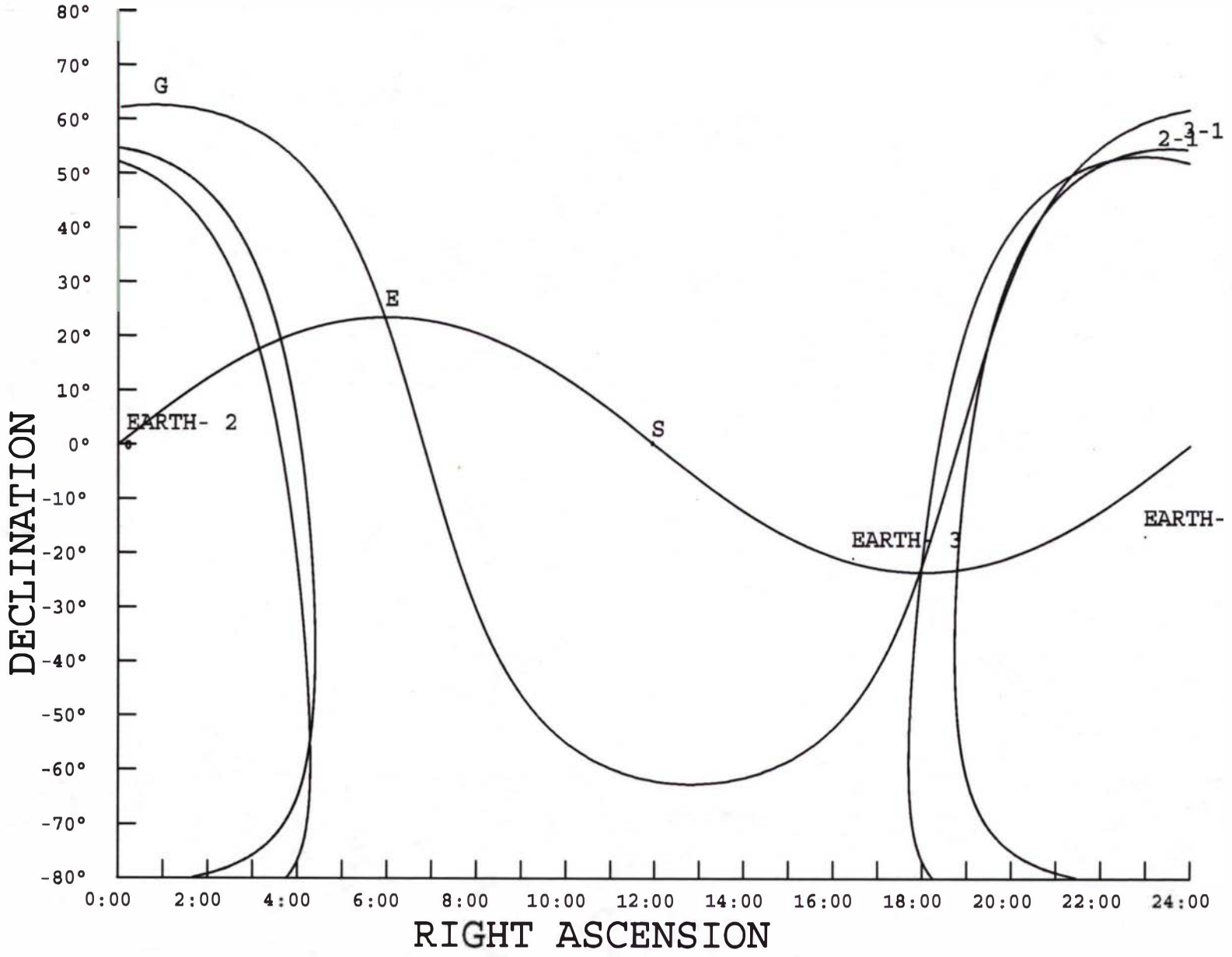
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 KONUS2 3 NEAR

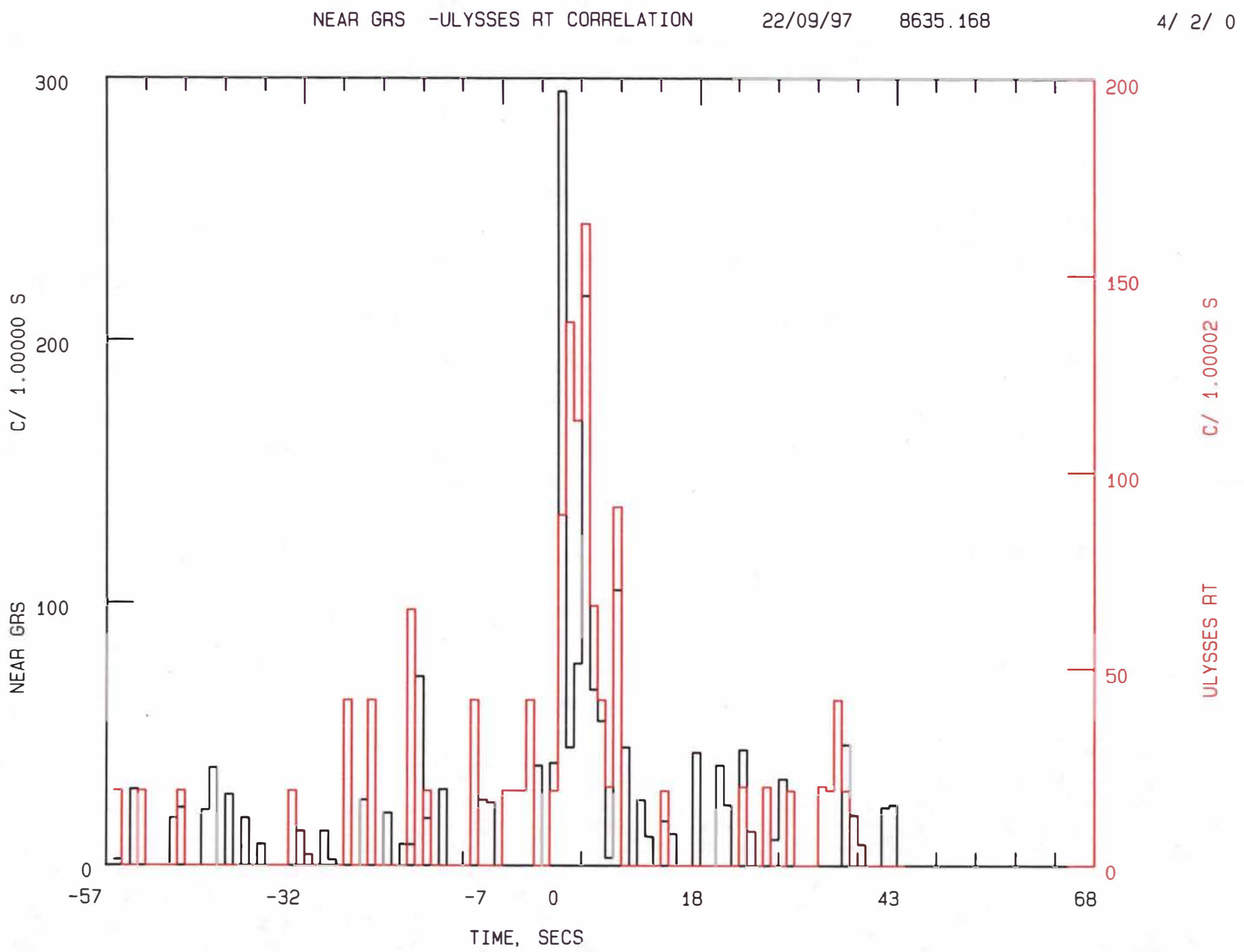


EVENT OF SEP 22, 1997 2:42

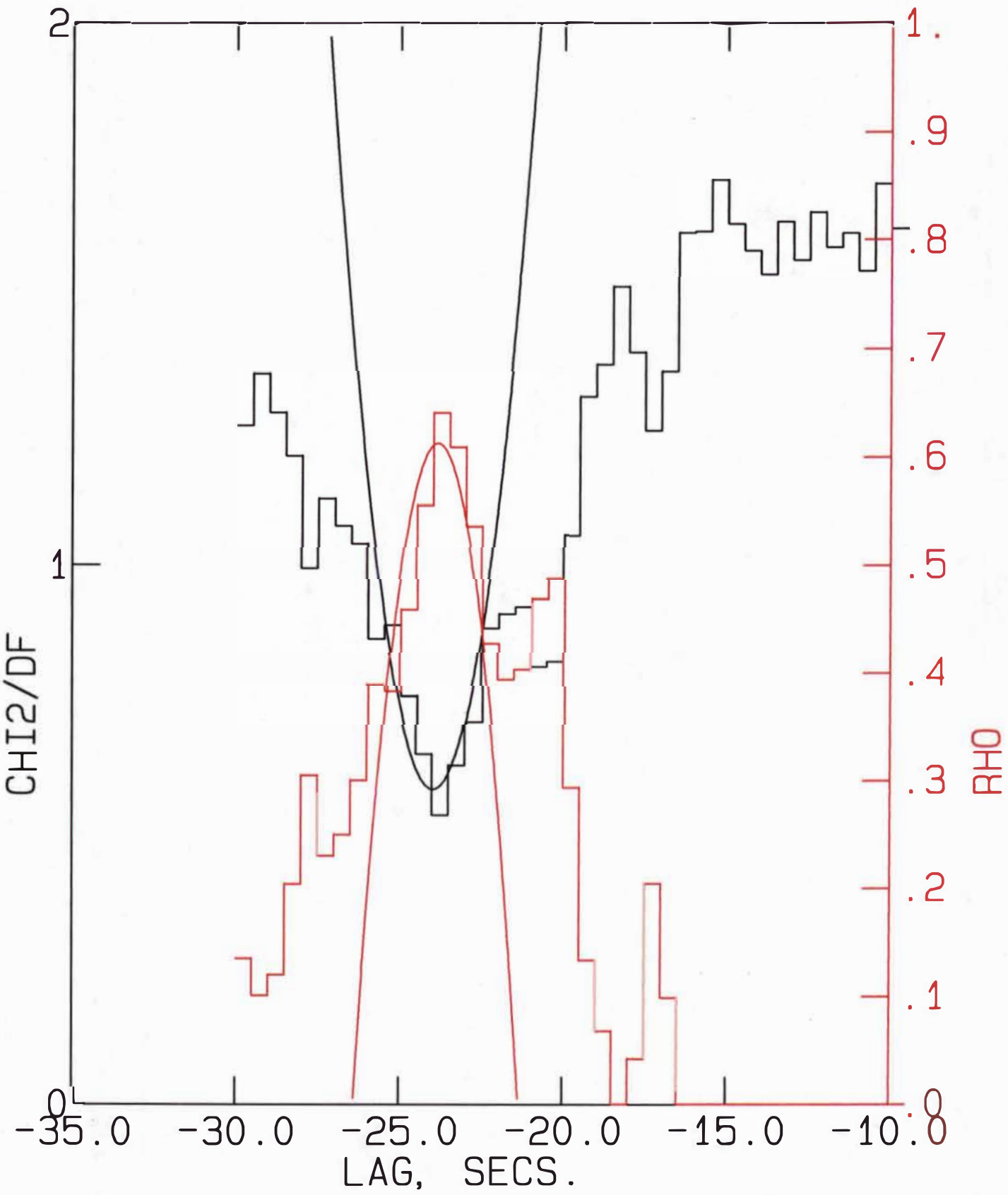
4/ 2/ 0

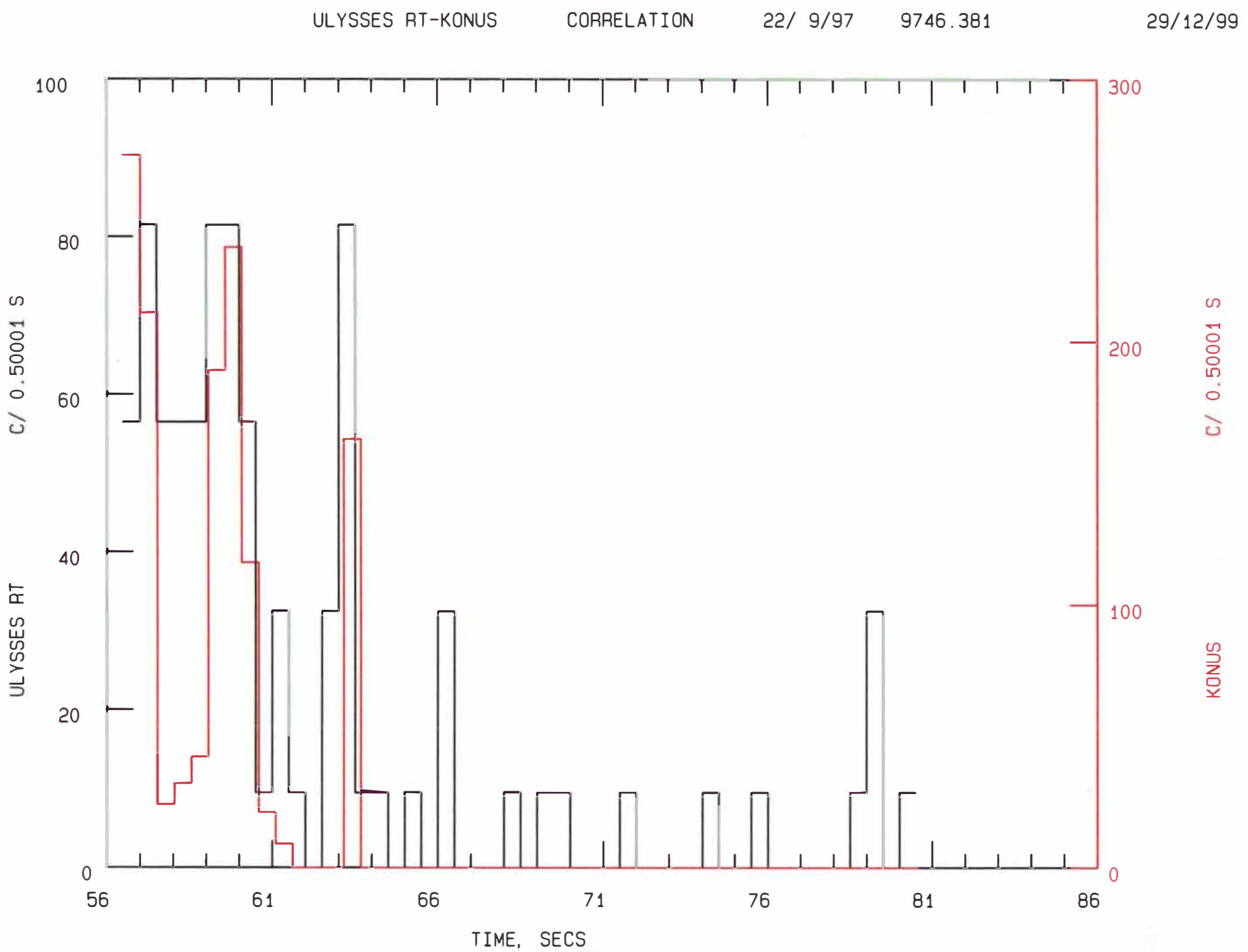
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 KONUS2 3 NEAR




NEAR GRS -ULYSSES RT CORRELATION 22/09/97 8635.168 4/ 2/ 0
300
200
100
0
C/ 1.00000 S
NEAR GRS
200
150
100
50
0
C/ 1.00002 S
ULYSSES RT
-57
-32
-7
0
18
43
68
TIME, SECS

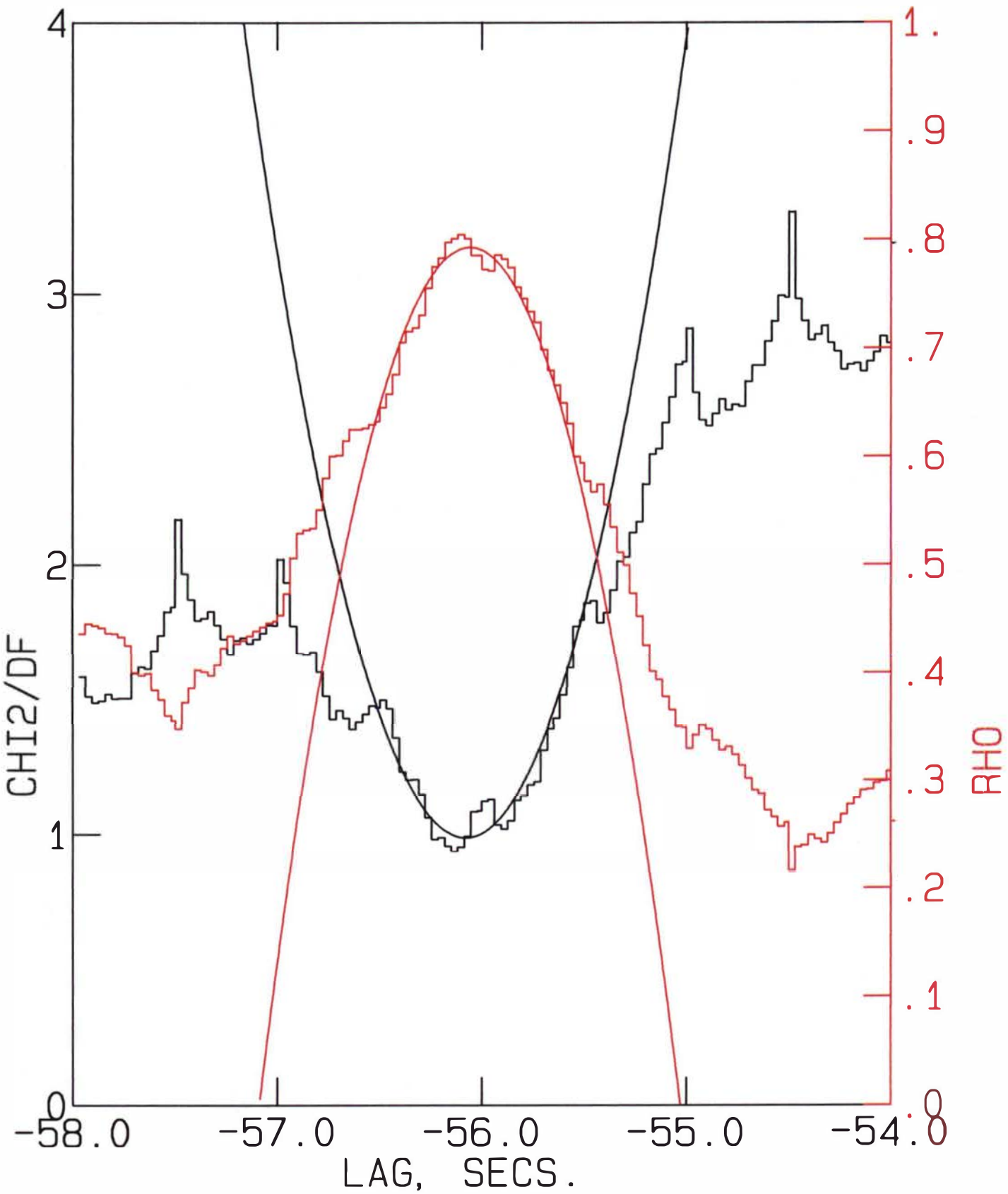
NEAR GRS -ULYSSES RT CORRELATION 22/09/97 8635.168




ULYSSES RT-KONUS CORRELATION 22/ 9/97 9746.381 29/12/99
100
80
60
40
20
0
C/ 0.50001 S
ULYSSES RT
300
200
100
0
C/ 0.50001 S
KONUS
56
61
66
71
76
81
86
TIME, SECS

29/12/99

ULYSSES RT-KONUS CORRELATION 22/ 9/97 9746.381



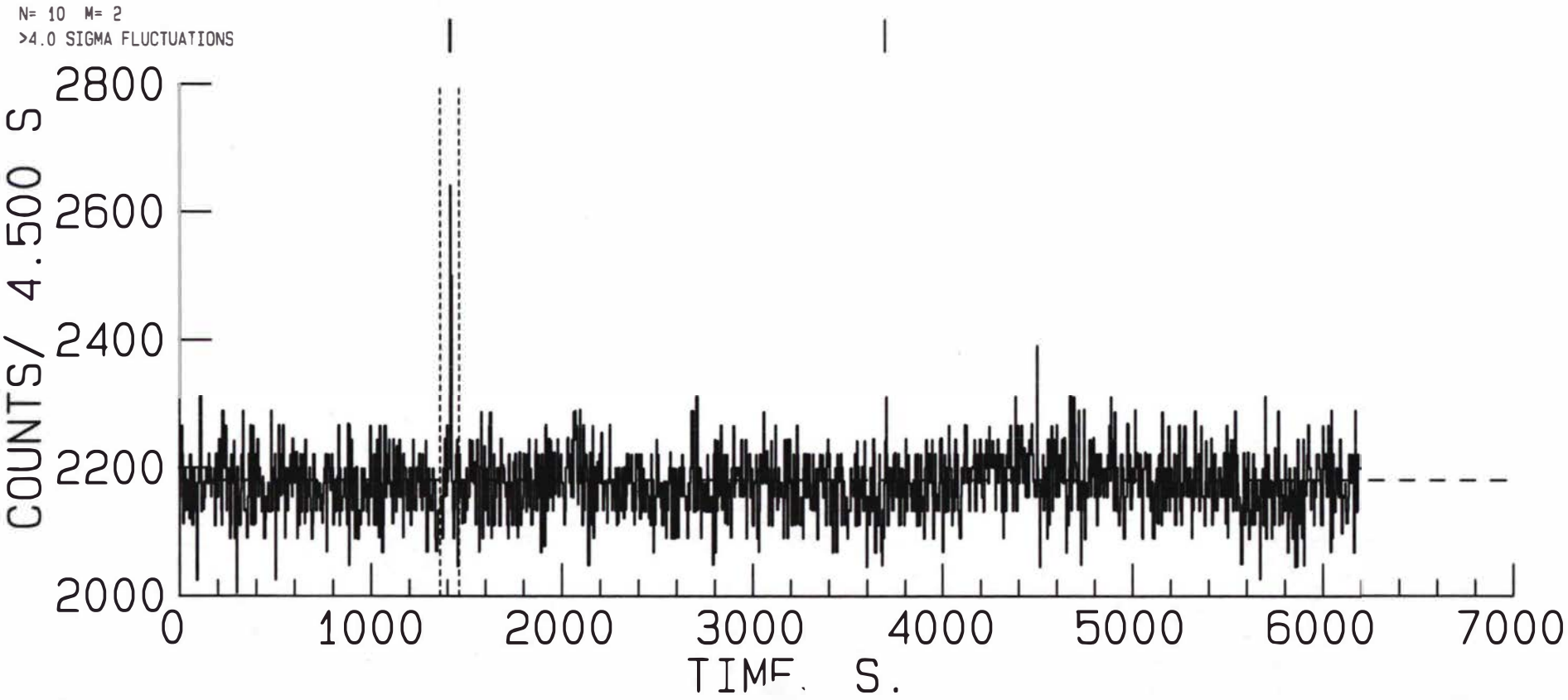
ULYSSES RT

29/12/99

22/ 9/97 8388.383 s

0.500 S INTERVALS REGROUPED BY 9

22- 147 keV



From BUTTERWORTH@PIZZA.GSFC.NASA.GOV Thu Sep 25 11:52 PDT 1997
Date: Thu, 25 Sep 1997 14:48:34 -0400 (EDT)
From: BUTTERWORTH@PIZZA.GSFC.NASA.GOV
Subject: Konus confirms the three NEAR events listed for 970922 and 970923
cline@apache.gsfc.nasa.gov, xrtpm@leptpm.gsfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
X-Vmsmail-To: TOM

I just checked these three events from Tim's list:

	UTC	Mean	Max	Duration Sec
#1	265:02:24:06	536	816	8
#2	265:08:51:58	524	868	1
#3	266:11:34:51	548	1250	3

#1 was seen by Konus as a North-facing trigger at 02:25:58.181. It was soft, far to the North of the ecliptic, lasted 10 seconds, and consisted of several 1-2 second peaks.

#2 was seen by Konus as a very hard Northern event in the waiting-mode data near 08:56:47, lasting less than 1.5 seconds.

#3 was seen by Konus as a South-facing trigger at 11:39:21.412. It was hard and consisted of a single peak lasting 1 second.

(Konus had one other trigger during these two days, at 00:48:09.663 on 970922 in the South facing detector. It was a strong soft event lasting 30 seconds with several broad peaks. It was close enough to the ecliptic to be occulted by TGRS during WIND's rotation, so perhaps it was a solar flare.)
: added: yes, this was BATSE 6392, a solar flare.

Paul.

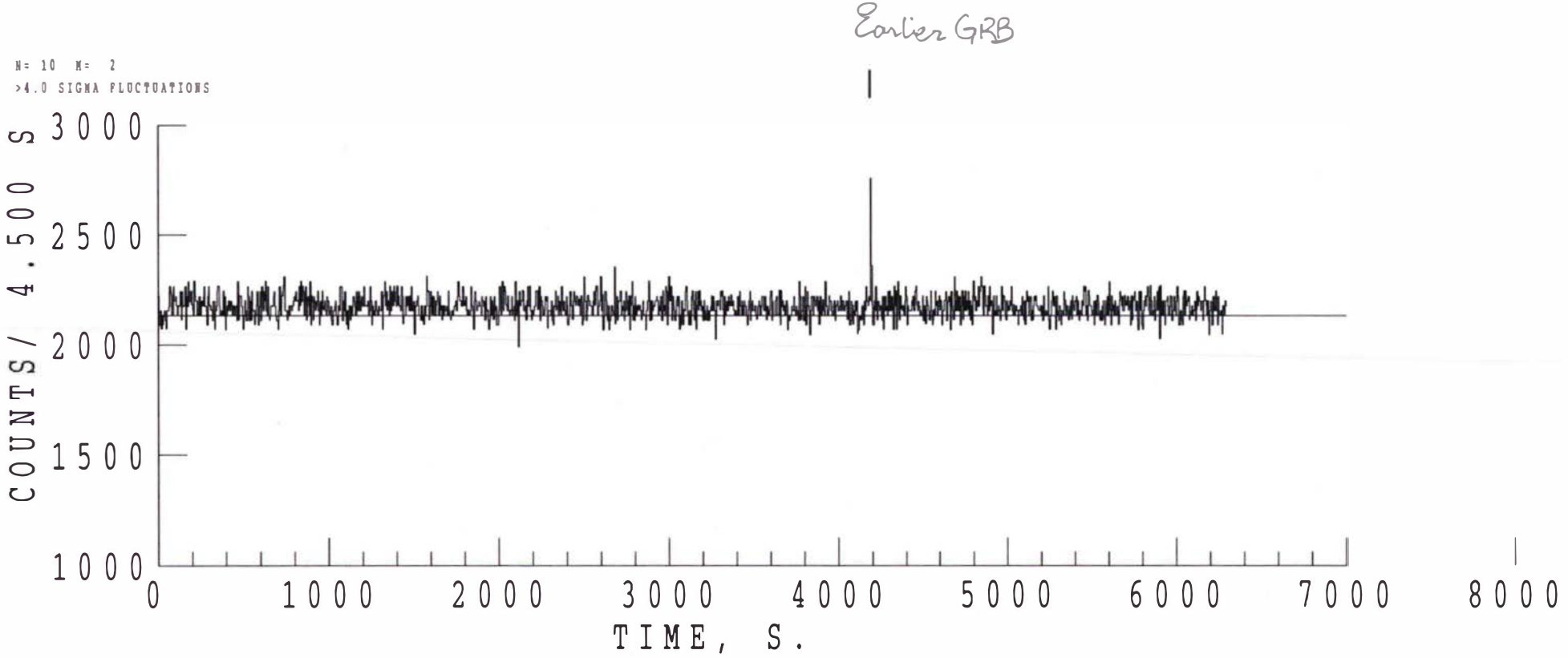
GRBM 19970922 08757

ULYSSES RT 04/05/04

22/09/97 5616.348 s

0.500 S INTERVALS REGROUPED BY 9

0- 0 keV



From cline@apache.gsfc.nasa.gov Mon Sep 22 14:12 PDT 1997
Mime-Version: 1.0
Date: Mon, 22 Sep 1997 17:16:18 -0400
To: KHURLEY@sunspot.ssl.berkeley.edu
From: cline@apache.gsfc.nasa.gov (T L Cline)
Subject: any new Ulysses/NEAR candidates?
Cc: palmer@lheamail.gsfc.nasa.gov

Dear Kevin,

Does Ulysses have any candidate events since the famous one of 09-15 ?
The NEAR guy has a set of counting rate increases of unknown origin, see below:
These are too recent to be able to check yet in the GGS-Wind data.
David Palmer says that so far he has nothing beyond the 09-15 event.

Date: Mon, 22 Sep 1997 13:46:32 -0400 (EDT)
From: Tim McClanahan <xrtpm@leptpm.gsfc.nasa.gov>
To: cline@apache.gsfc.nasa.gov
Subject: Re: confused event times
Mime-Version: 1.0

Tom,
Just downloaded several the newest NEAR XGRS data. I have 3 events of
approximately 10 sigma deviation from background.

97: 264: 23: 25: 22
97: 265: 02: 24: 07
97: 265: ~~23: 25: 22~~ 08:51:58

Not obs by BATSE

Does not seem to be reflected in the BATSE listings.
Have plots if needed.
Tim

TLC

-- Thomas L. Cline ----- cline@apache.gsfc.nasa.gov

NEAR

ULYSSES RT 20/11/97

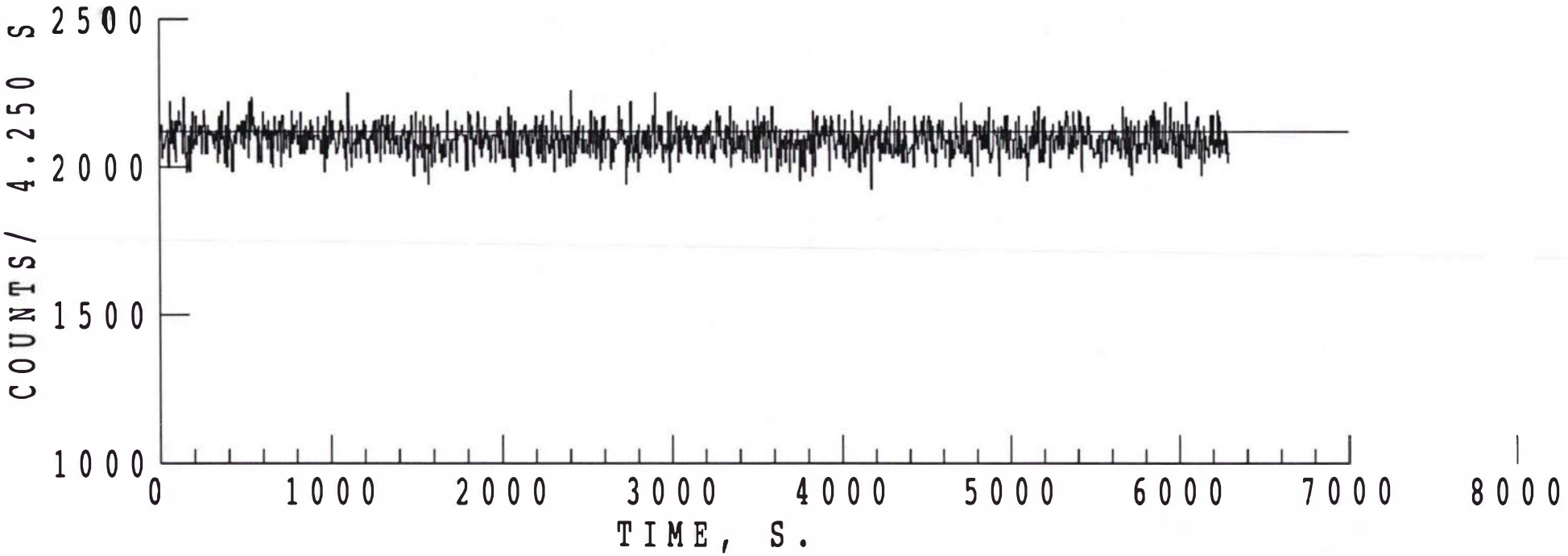
22/ 9/97 28764.111 s

0.250 S INTERVALS REGROUPED BY 17

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



Date: May 5 '04

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☐ Jim Schmidling's stat file correction applied?

☐ Final ephemeris used?

☐ Final, CDROM data used?

☐ 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

☐ BATSE ephemeris for T_0?

☐ Error circle position and radius from public catalog used?

☐ If MER data were used, is a 30 ms systematic error included?

3. NEAR Data

☑ Final, correct time used? (Files postmarked vwx@bocc1, from from Teresa Sheets, postmarked May 2 1999 or later have the correct time; files on website have incorrect times)

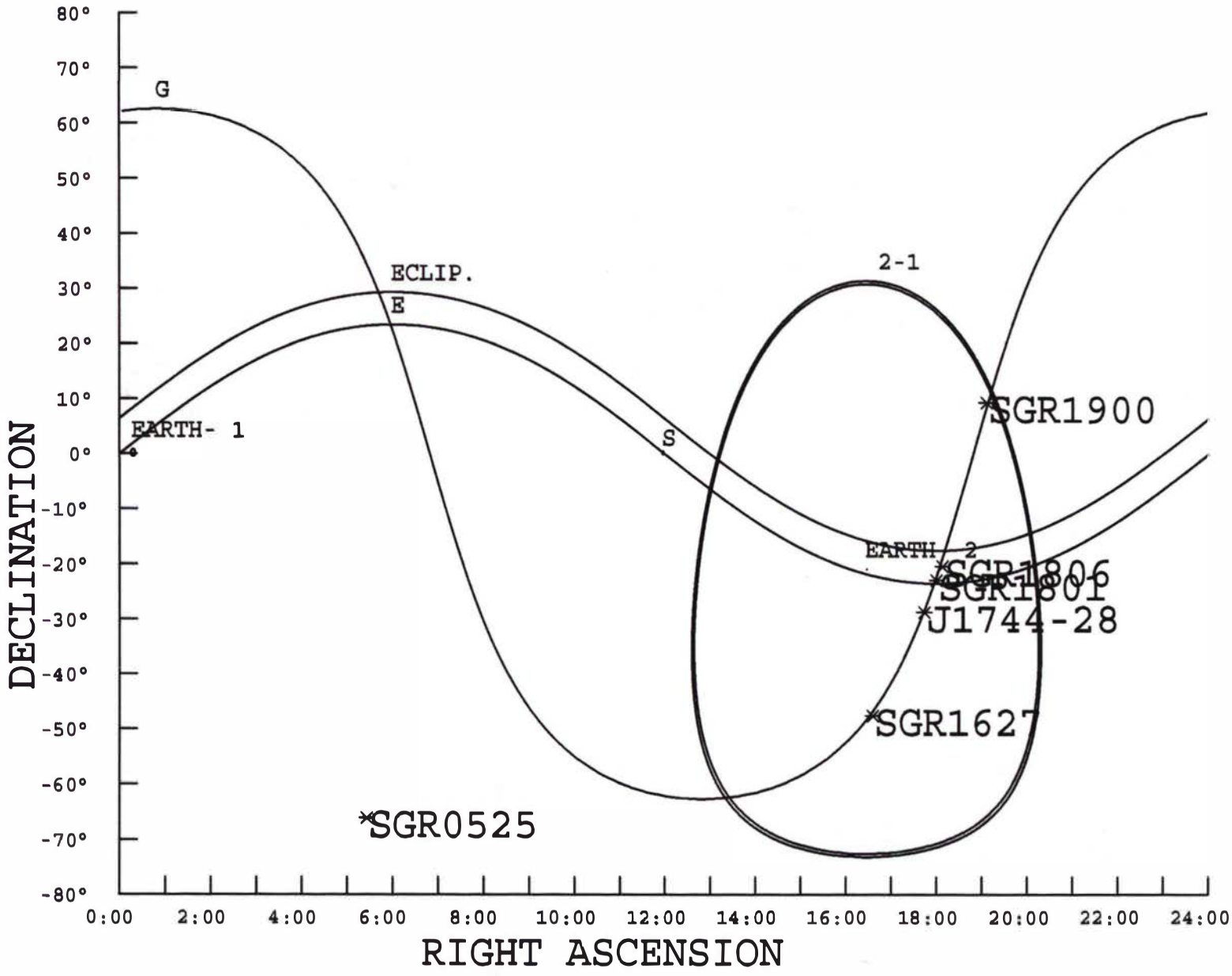
☐ BATSE >100 keV data used for NEAR correlation? N/A

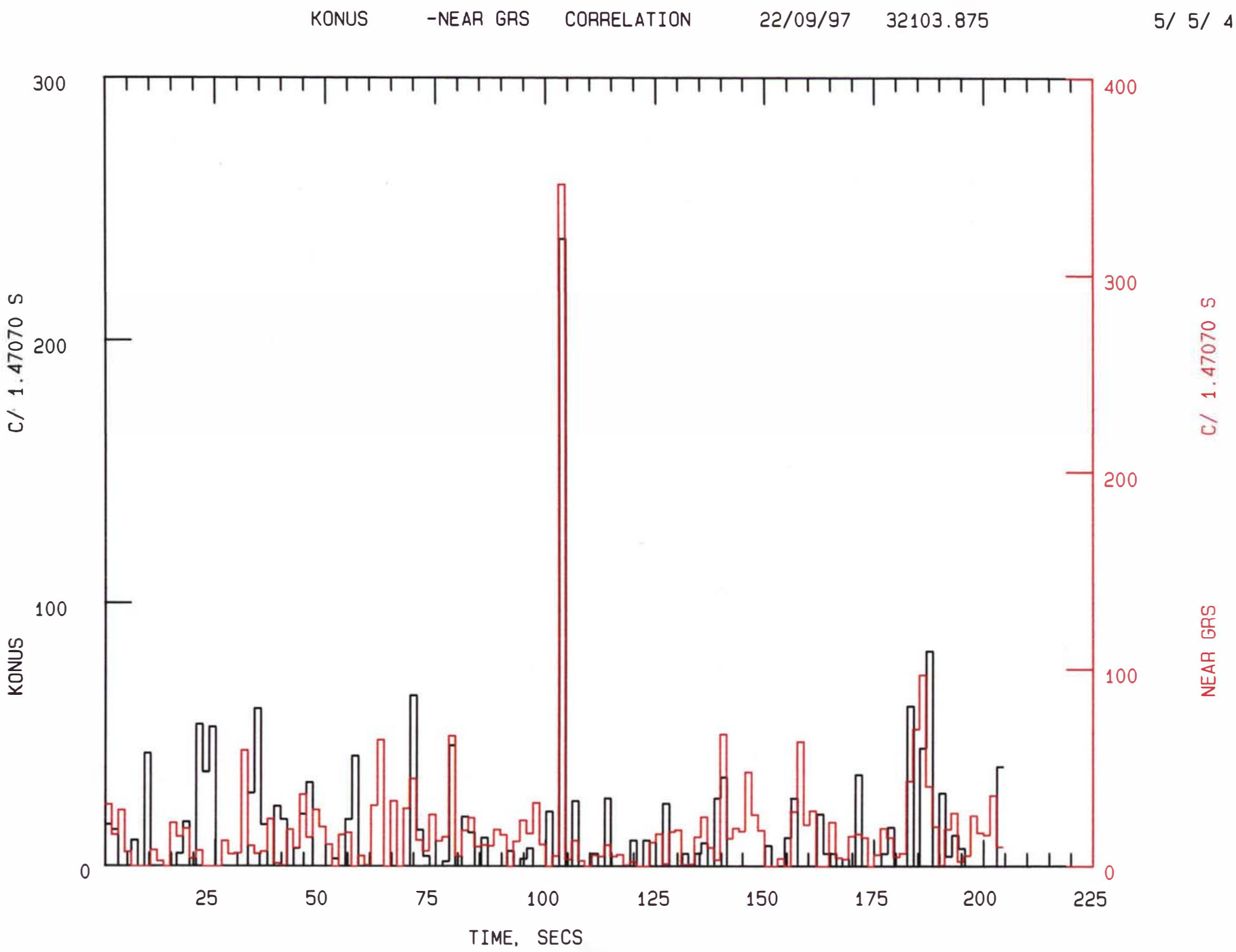
☑ ACCESS database updated?

EVENT OF SEP 22, 1997 8:55

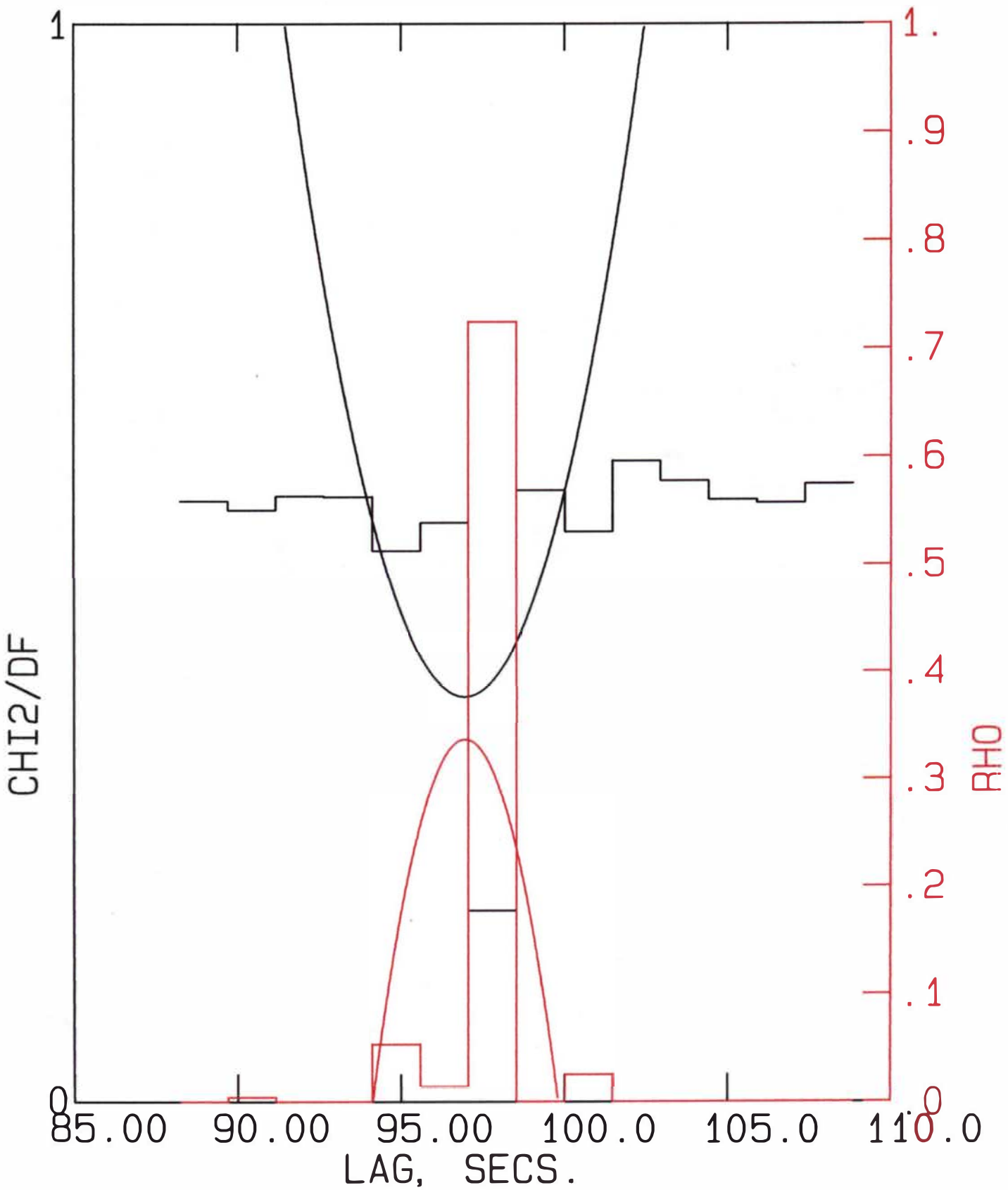
5/ 5/ 4

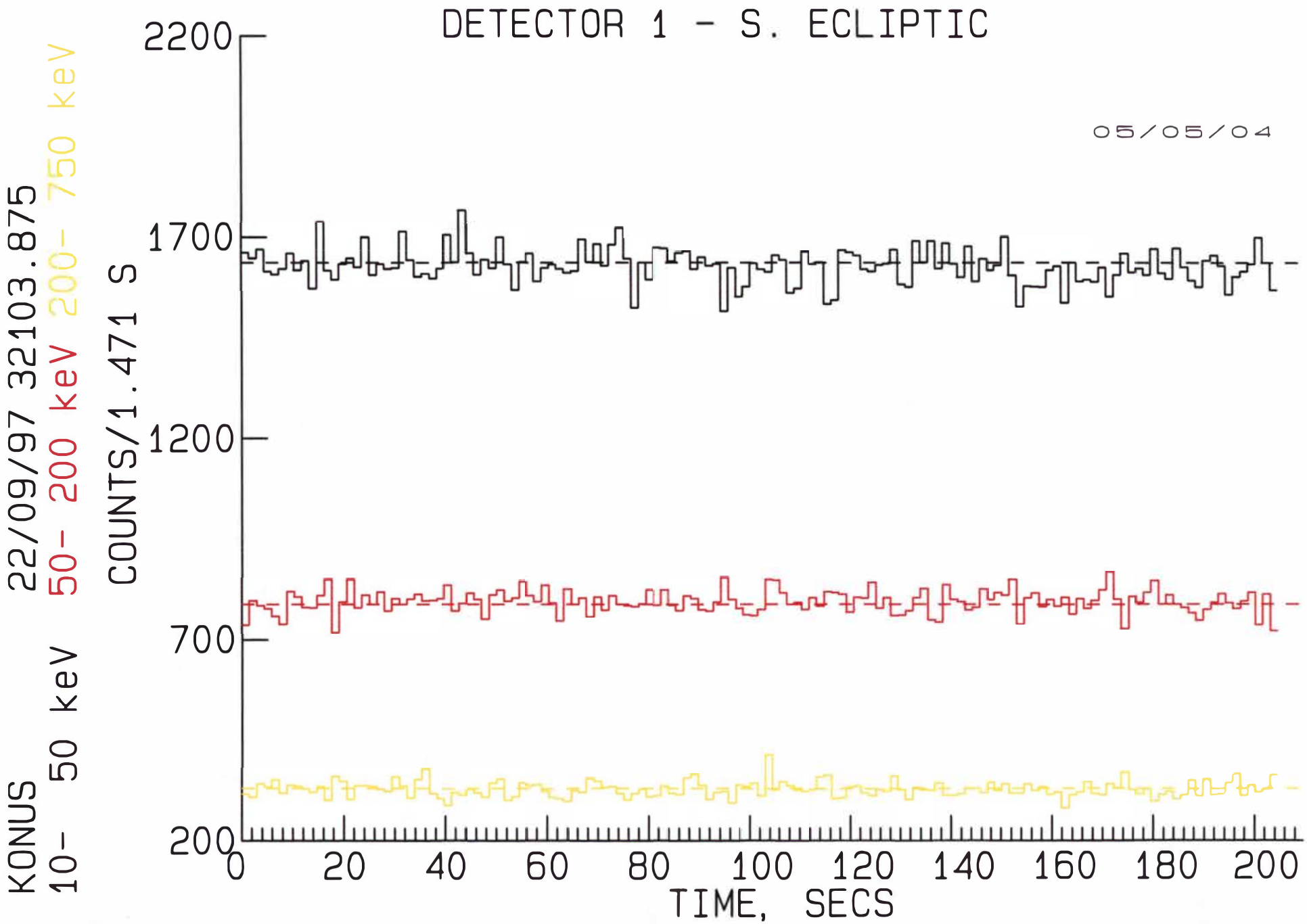
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 KONUS 2 NEAR

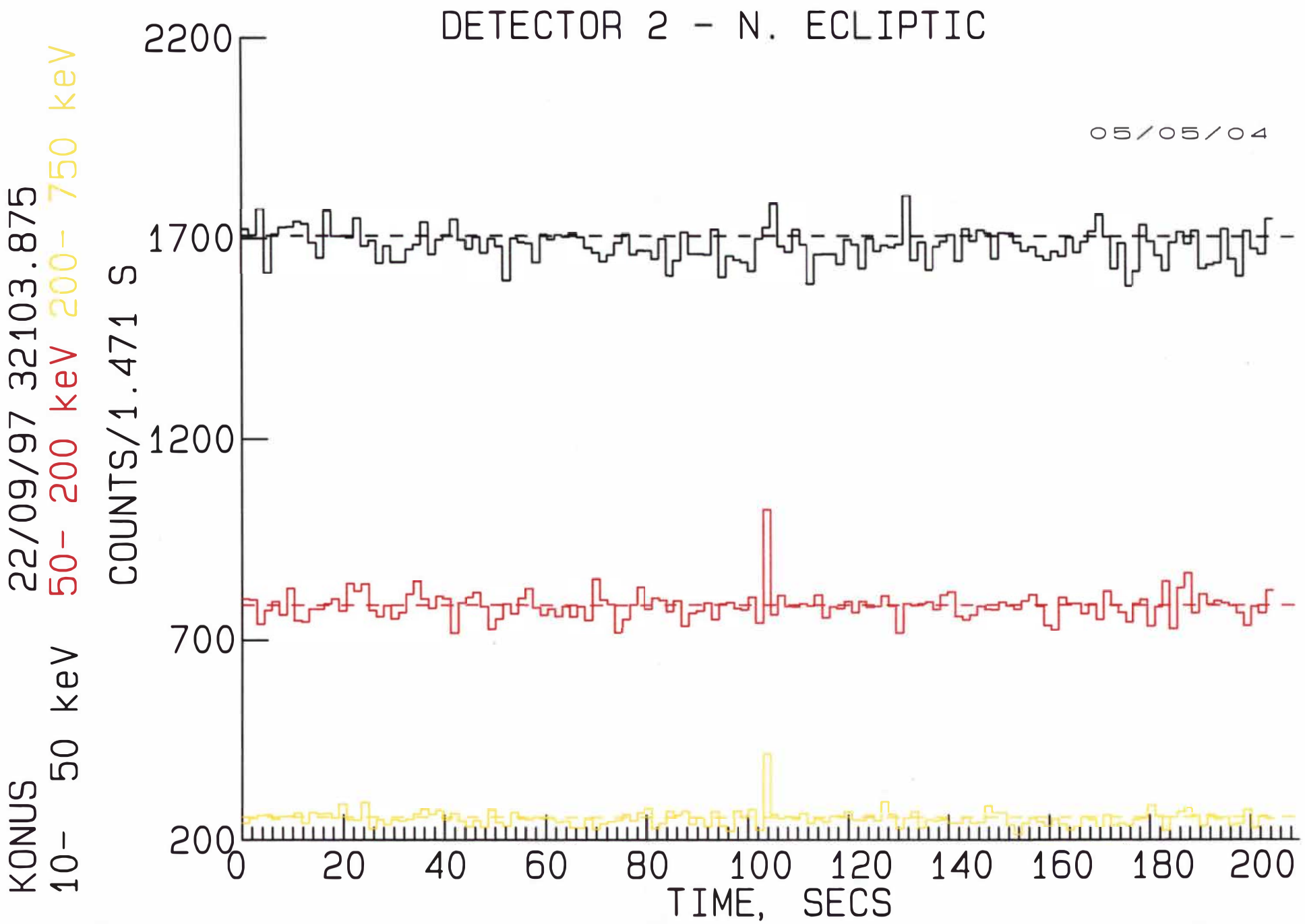


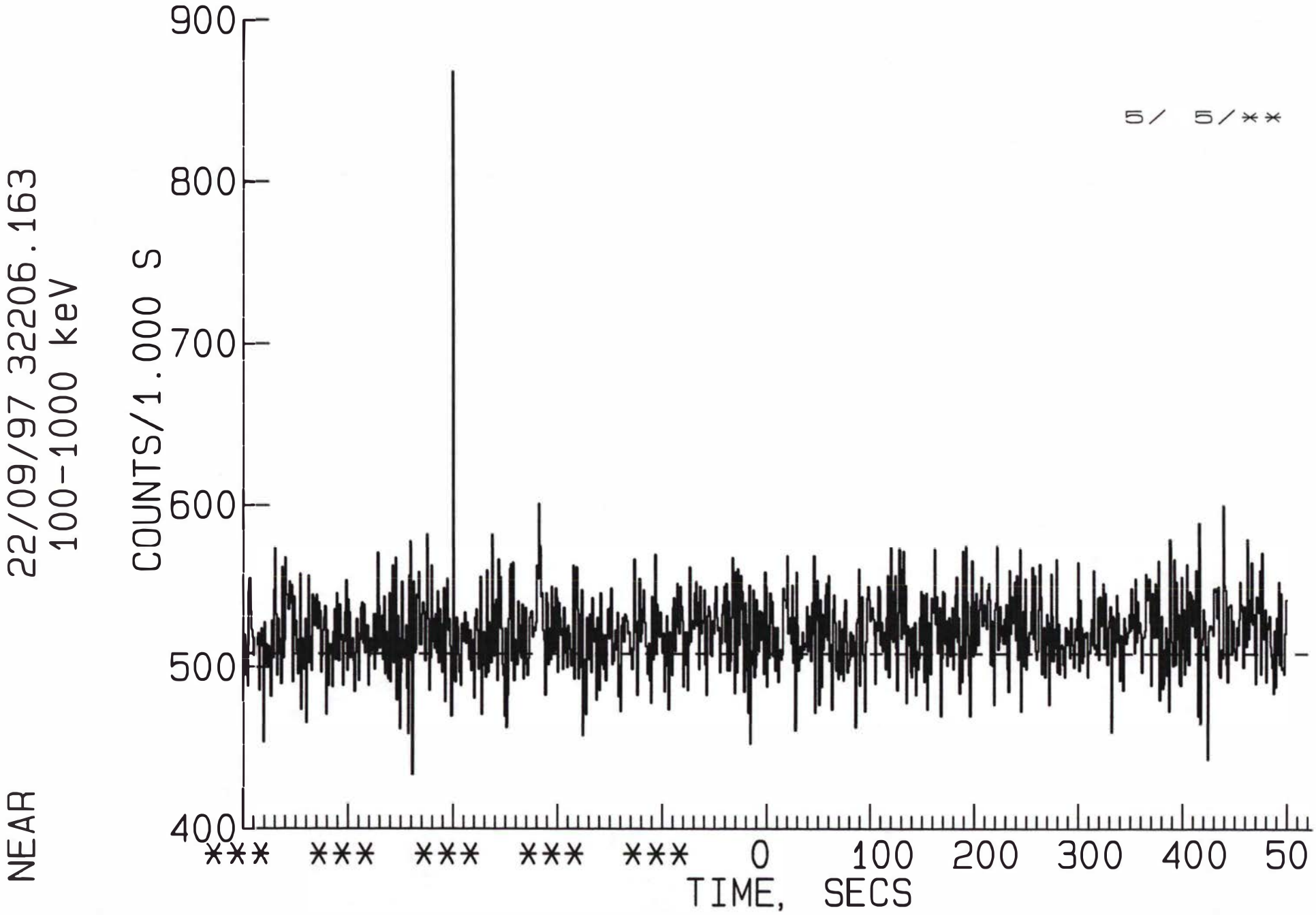

KONUS -NEAR GRS CORRELATION 22/09/97 32103.875 5/ 5/ 4
300
200
100
0
C/ 1.47070 S
KONUS
400
300
200
100
0
C/ 1.47070 S
NEAR GRS
25
50
75
100
125
150
175
200
225
TIME, SECS

KONUS -NEAR GRS CORRELATION 22/09/97 32103.875




DETECTOR 1 - S. ECLIPTIC
05/05/04
KONUS
22/09/97 32103.875
10- 50 keV 50- 200 keV 200- 750 keV
COUNTS/1.471 S
2200
1700
1200
700
200
0
20
40
60
80
100
120
140
160
180
200
TIME, SECS


DETECTOR 2 - N. ECLIPTIC
05/05/04
KONUS
22/09/97 32103.875
10- 50 keV
50- 200 keV
200- 750 keV
COUNTS/1.471 S
2200
1700
1200
700
200
0
20
40
60
80
100
120
140
160
180
200
TIME, SECS

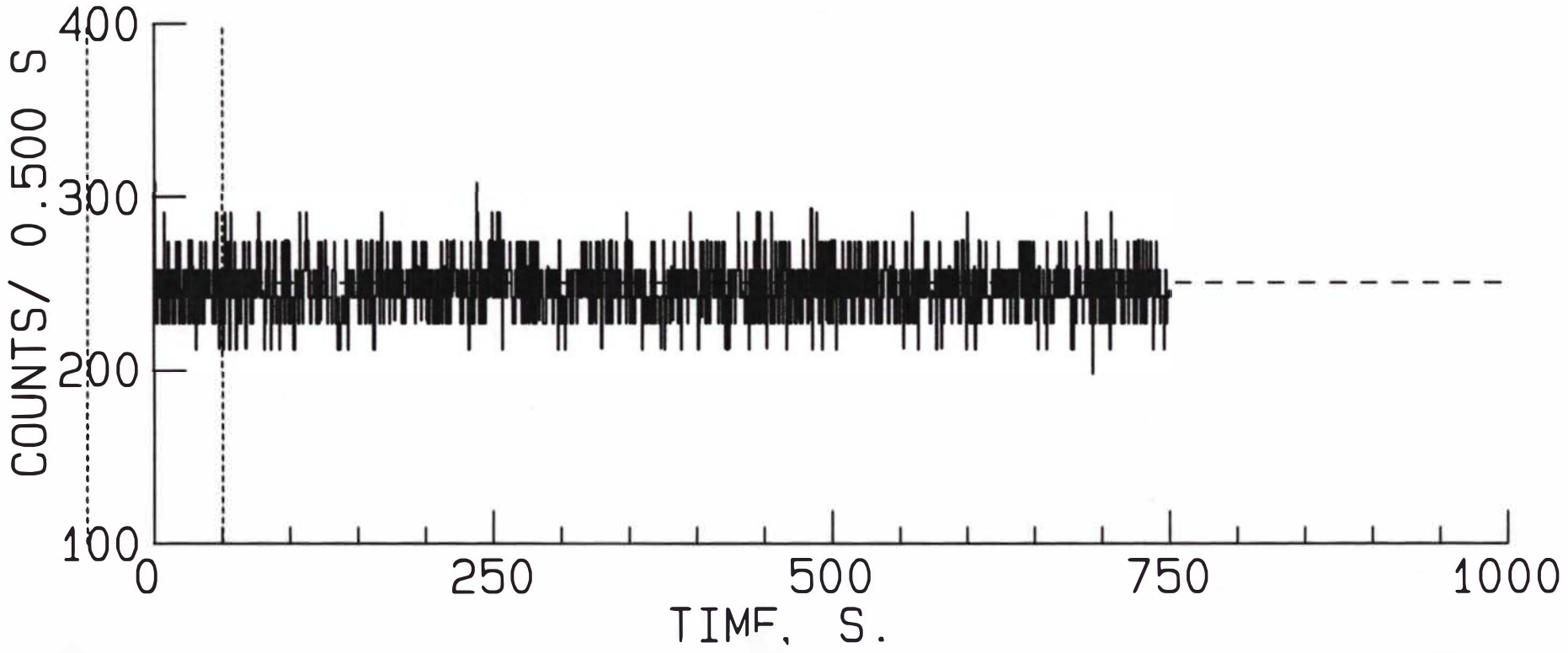

NEAR
22/09/97 32206.163
100-1000 keV
COUNTS/1.000 S
900
800
700
600
500
400
5/ 5/**
*** *** *** *** *** 0 100 200 300 400 50
TIME, SECS

ULYSSES RT 5/ 5/ 4

22/ 9/97 29052.115 s

0.250 S INTERVALS REGROUPED BY 2

22- 147 keV

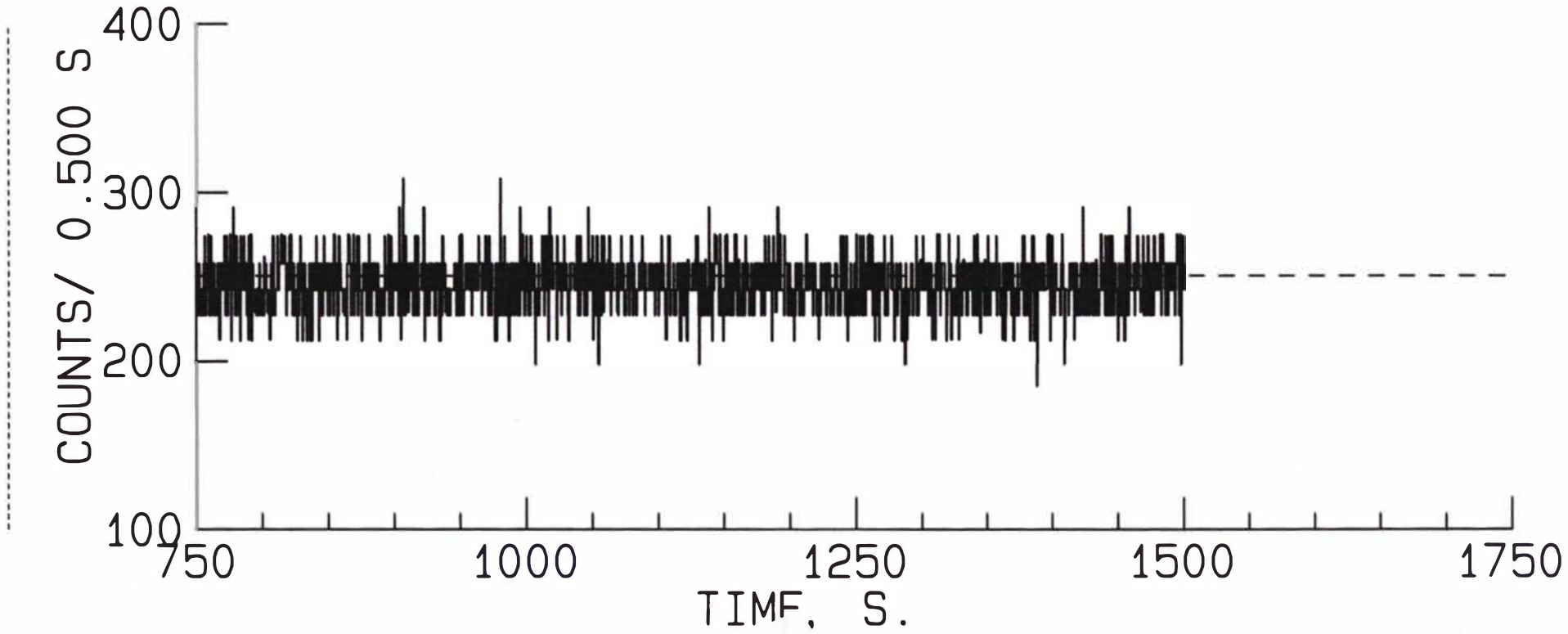


ULYSSES RT 5/ 5/ 4

22/ 9/97 29052.115 s

0.250 S INTERVALS REGROUPED BY 2

22- 147 keV

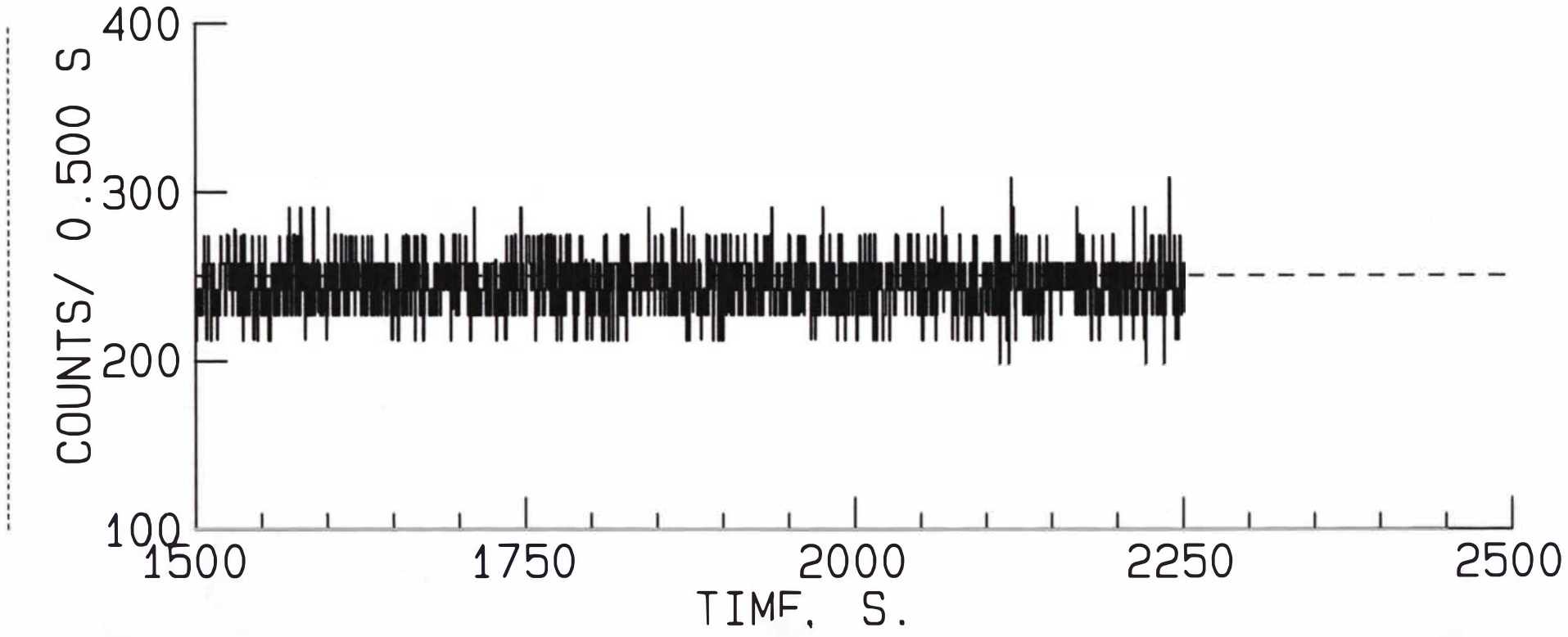


ULYSSES RT 5/ 5/ 4

22/ 9/97 29052.115 s

0.250 S INTERVALS REGROUPED BY 2

22- 147 keV

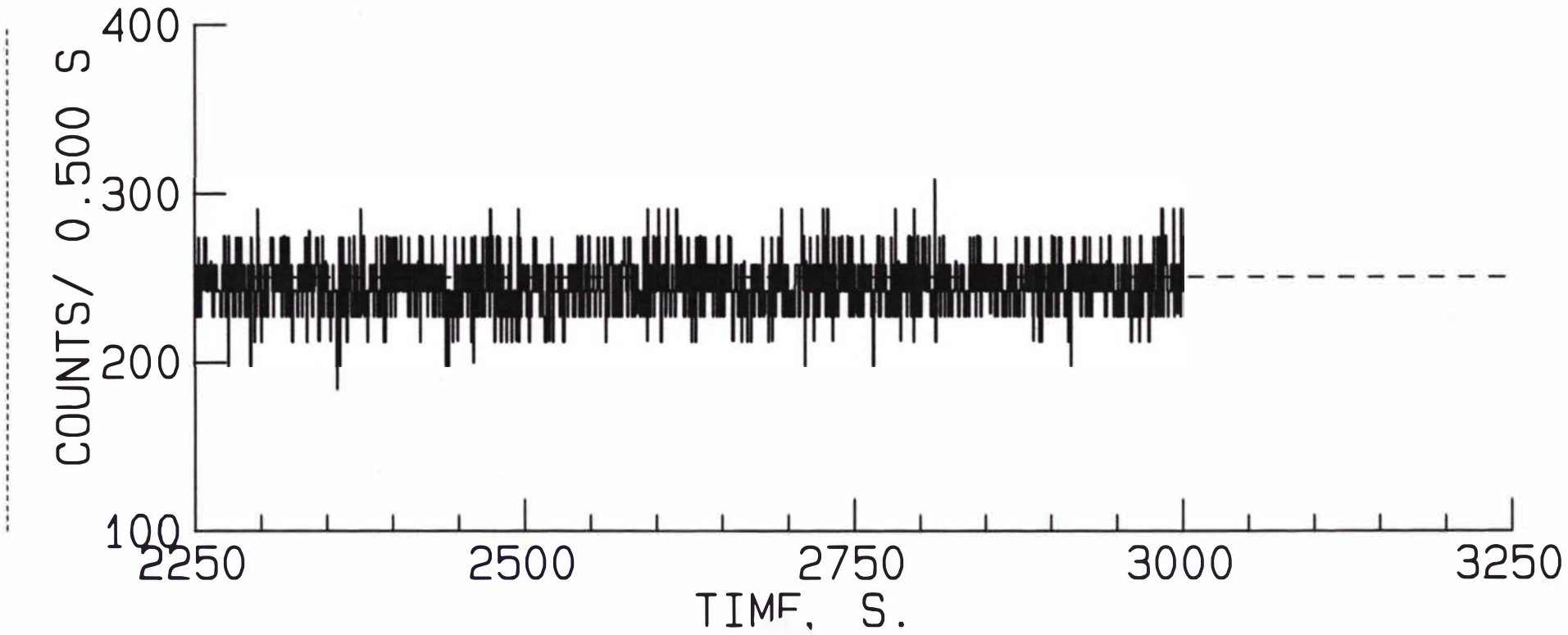


ULYSSES RT 5/ 5/ 4

22/ 9/97 29052.115 s

0.250 S INTERVALS REGROUPED BY 2

22- 147 keV

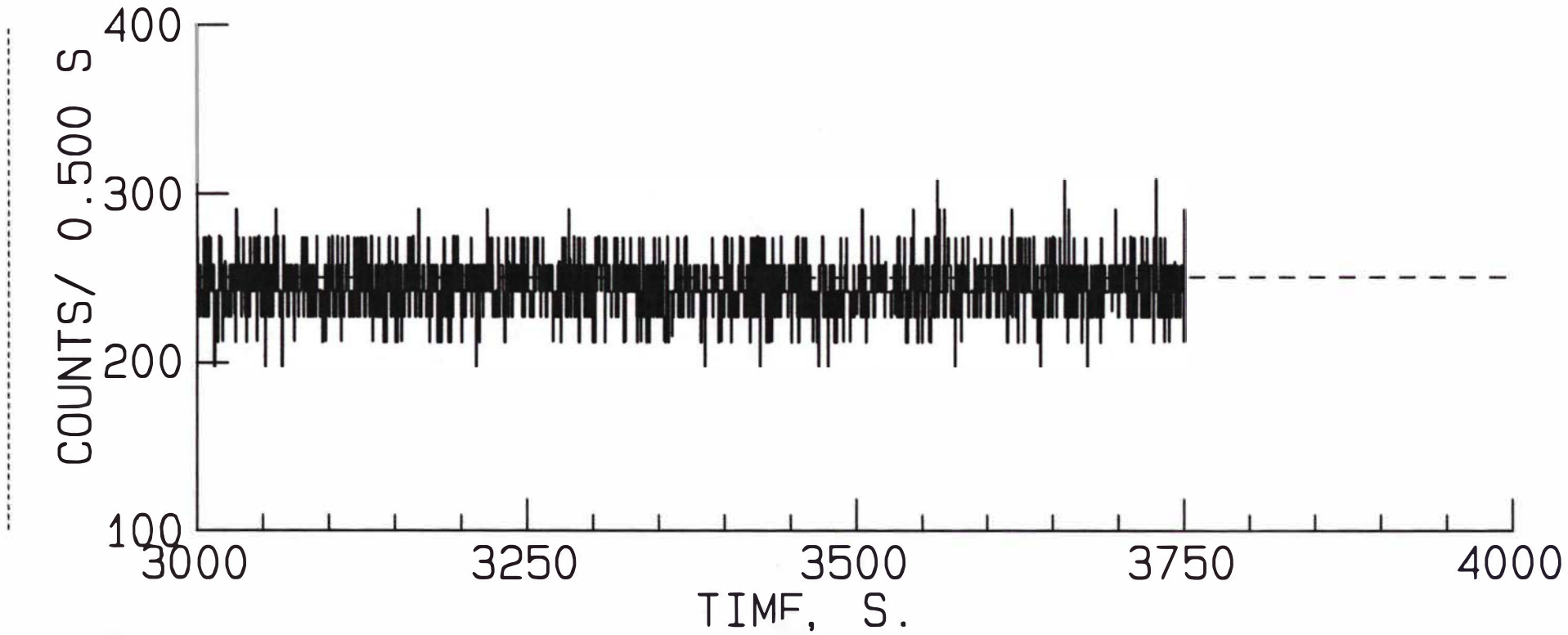


ULYSSES RT 5/ 5/ 4

22/ 9/97 29052.115 s

0.250 S INTERVALS REGROUPED BY 2

22- 147 keV

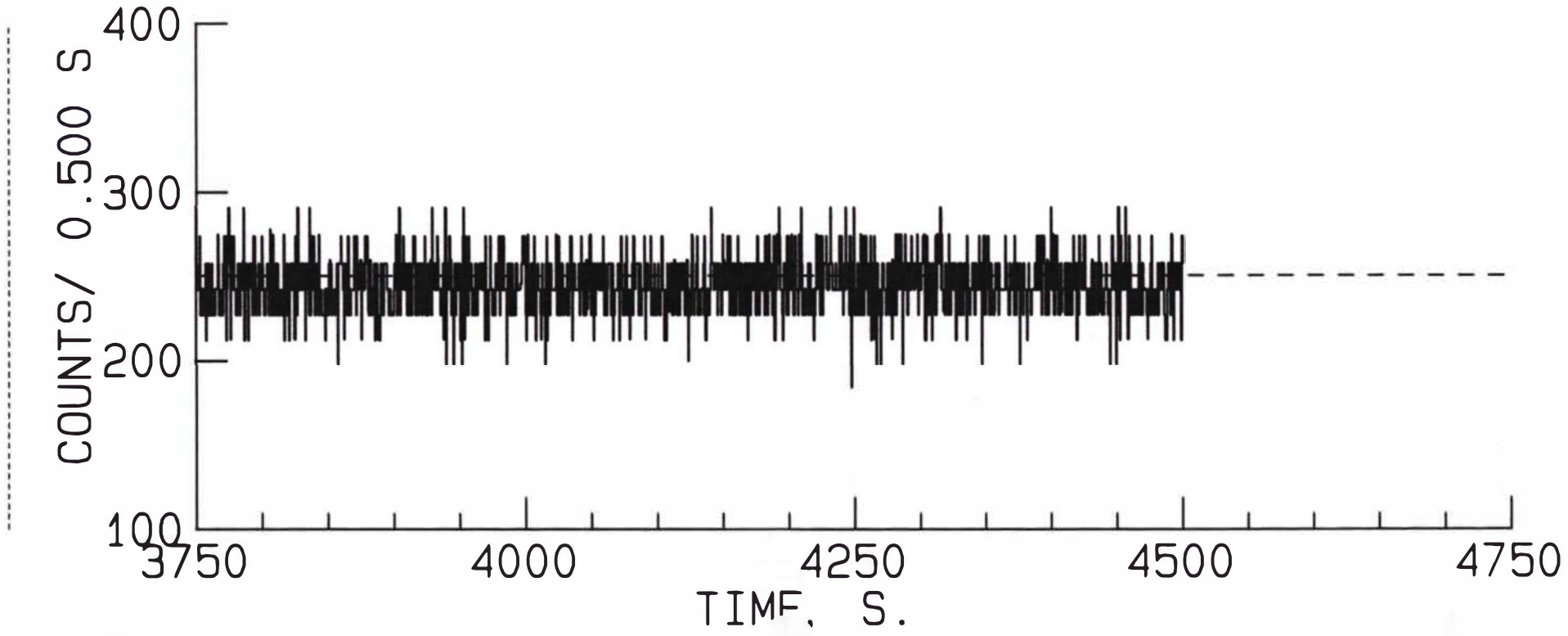


ULYSSES RT 5/ 5/ 4

22/ 9/97 29052.115 s

0.250 S INTERVALS REGROUPED BY 2

22- 147 keV

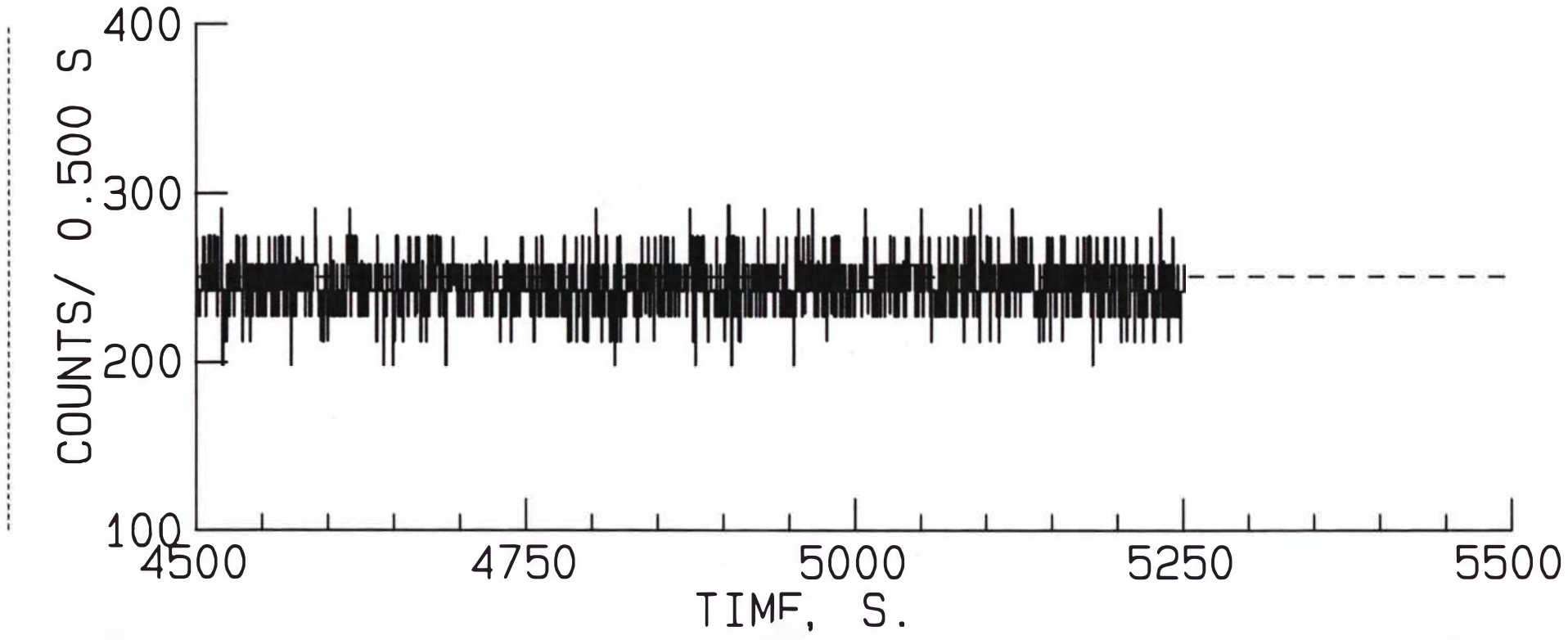


ULYSSES RT 5/ 5/ 4

22/ 9/97 29052.115 s

0.250 S INTERVALS REGROUPED BY 2

22- 147 keV



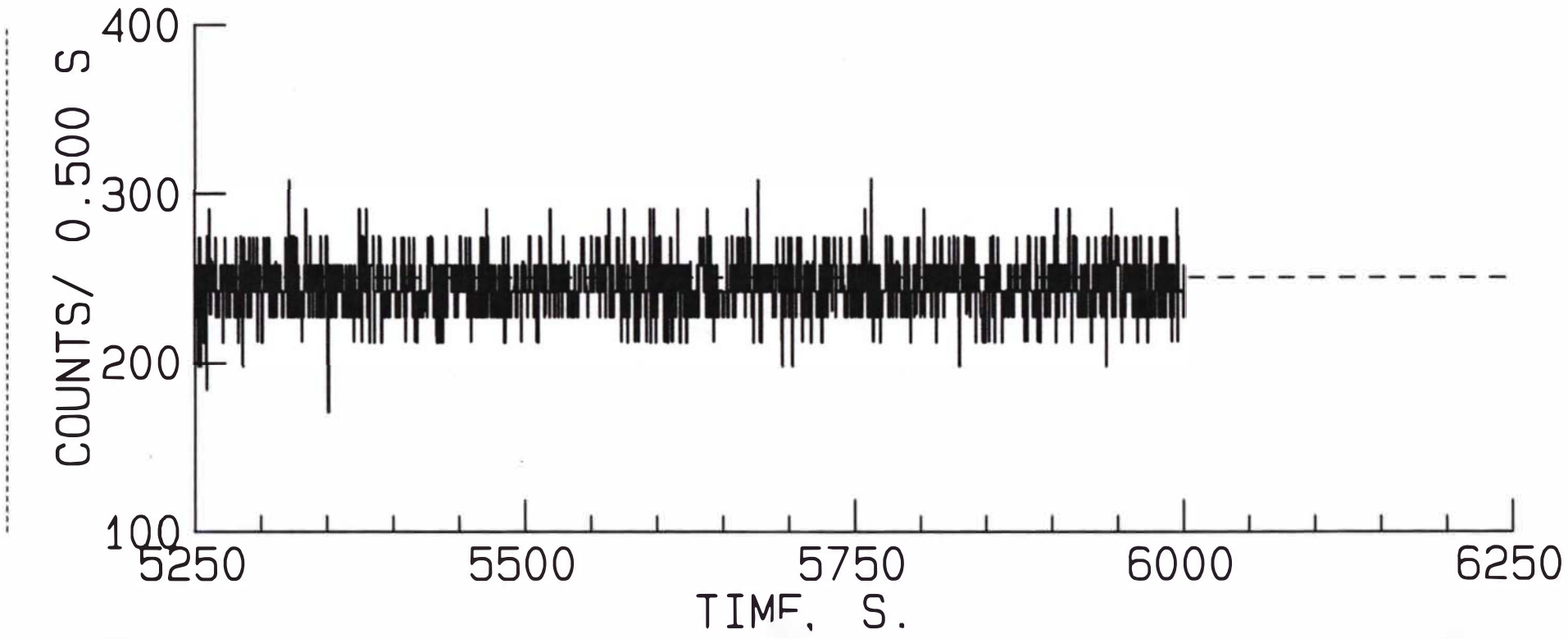
ULYSSES RT

5/ 5/ 4

22/ 9/97 29052.115 s

0.250 S INTERVALS REGROUPED BY 2

22- 147 keV

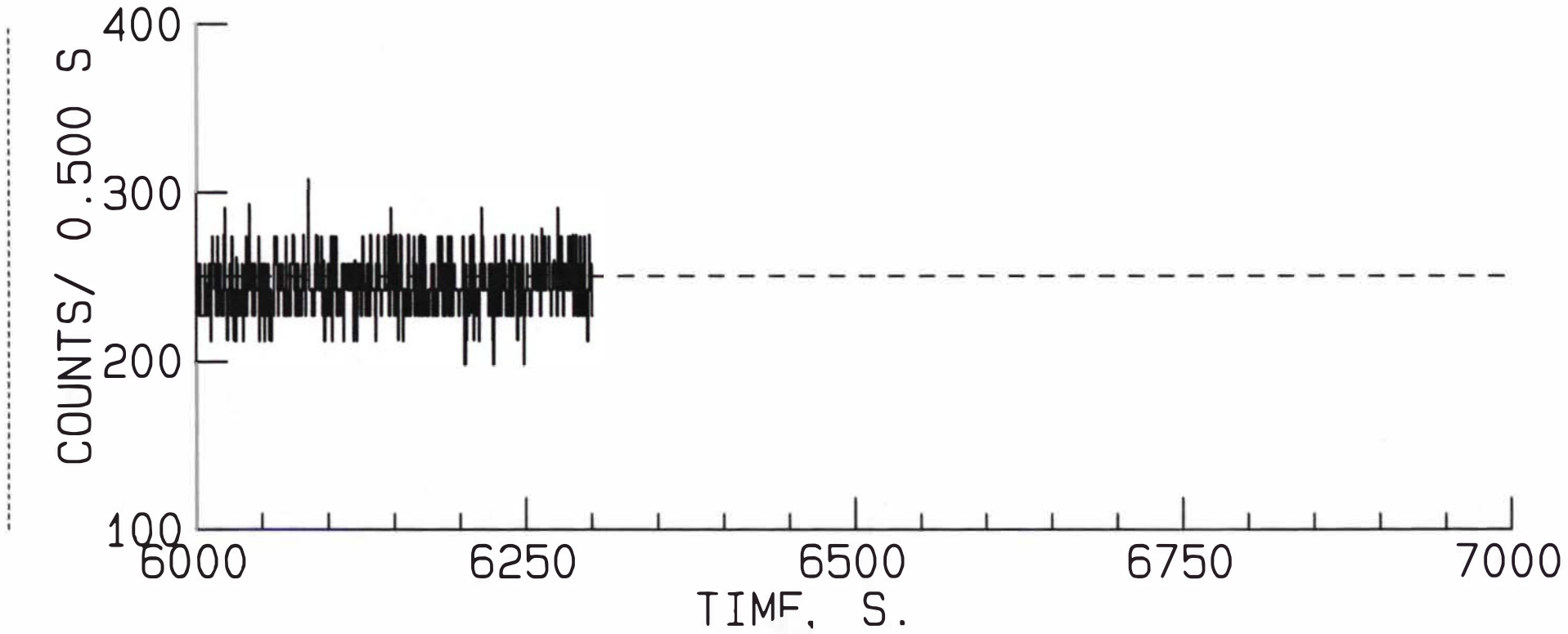


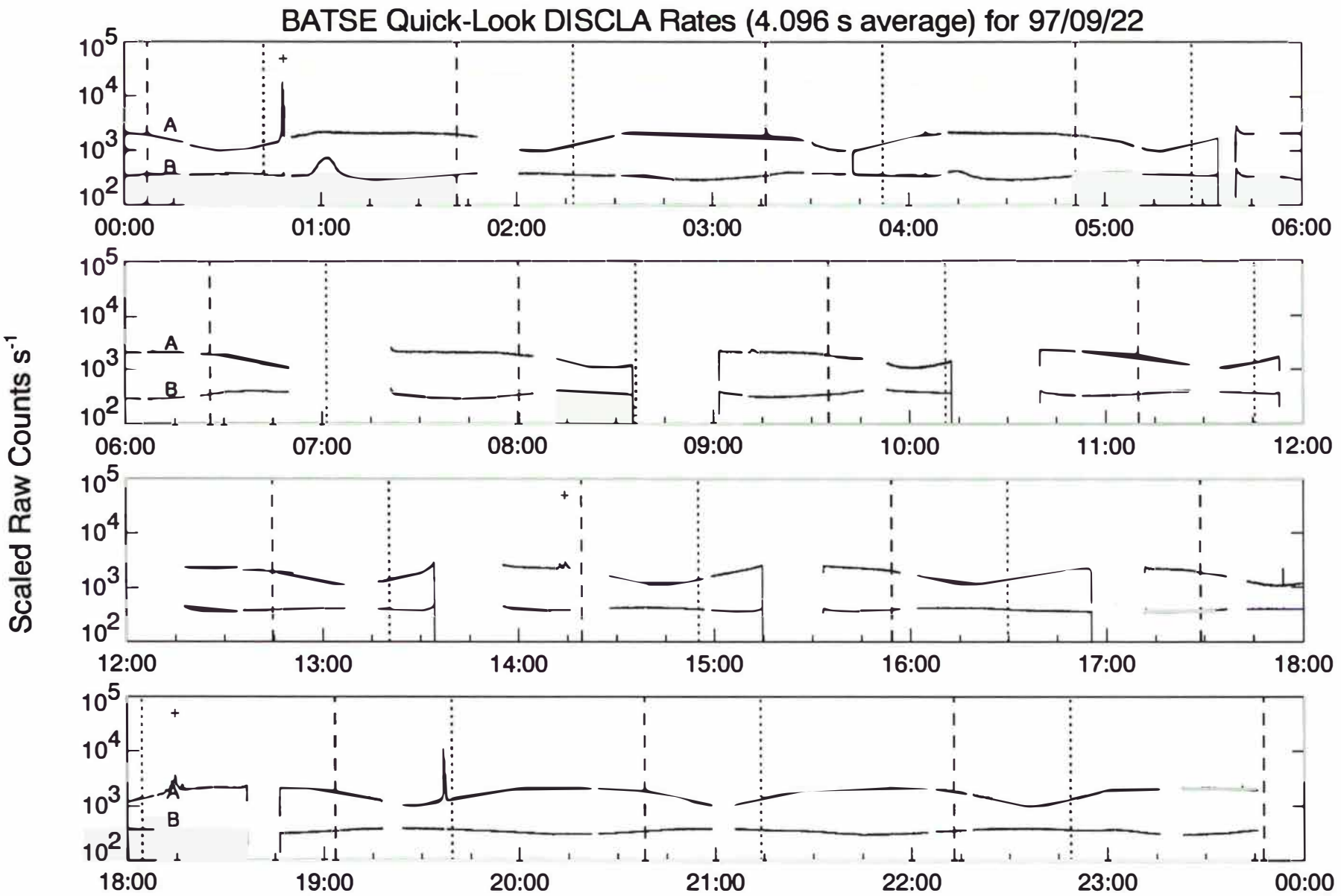
ULYSSES RT 5/ 5/ 4

22/ 9/97 29052.115 s

0.250 S INTERVALS REGROUPED BY 2

22- 147 keV

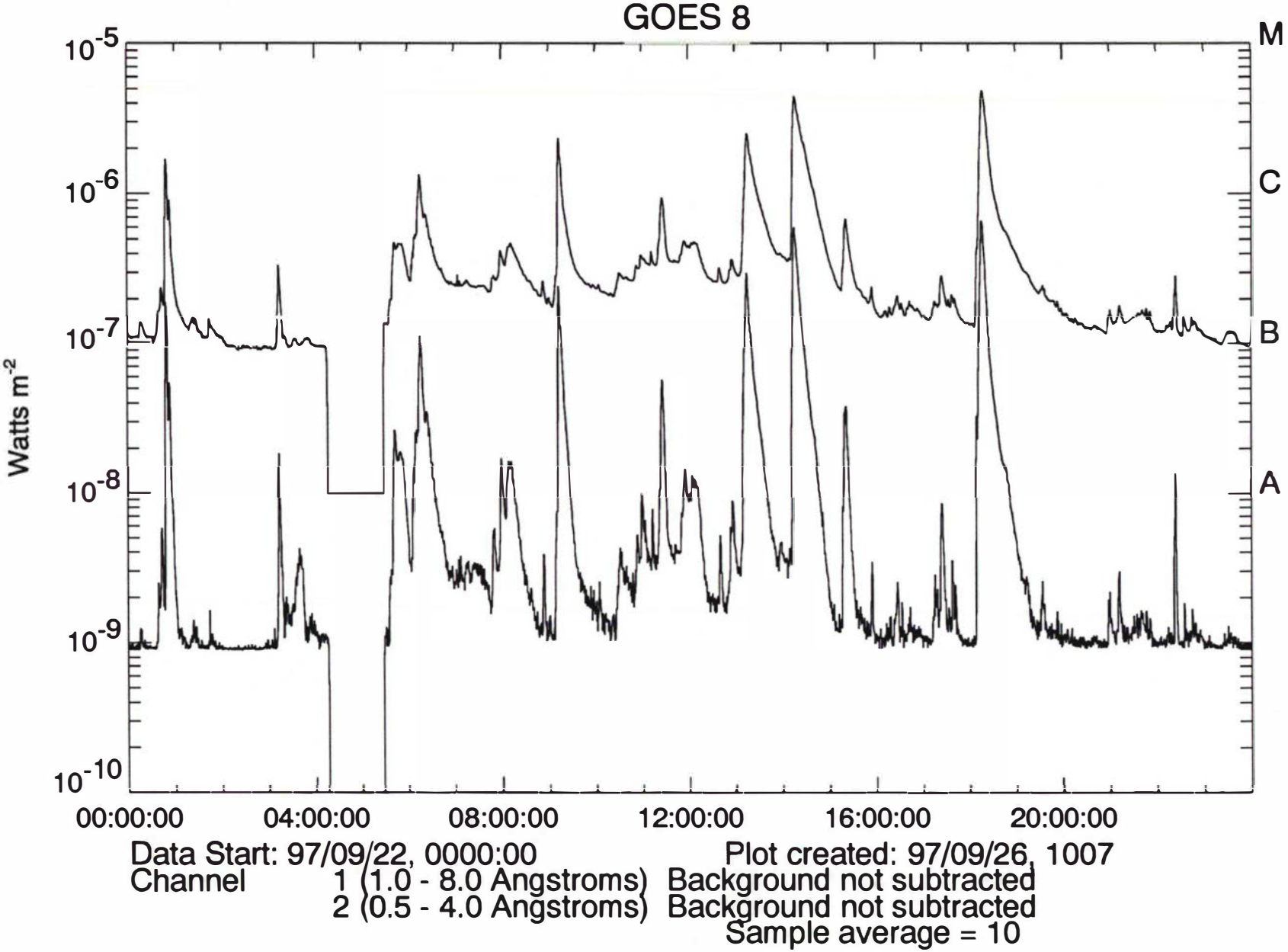




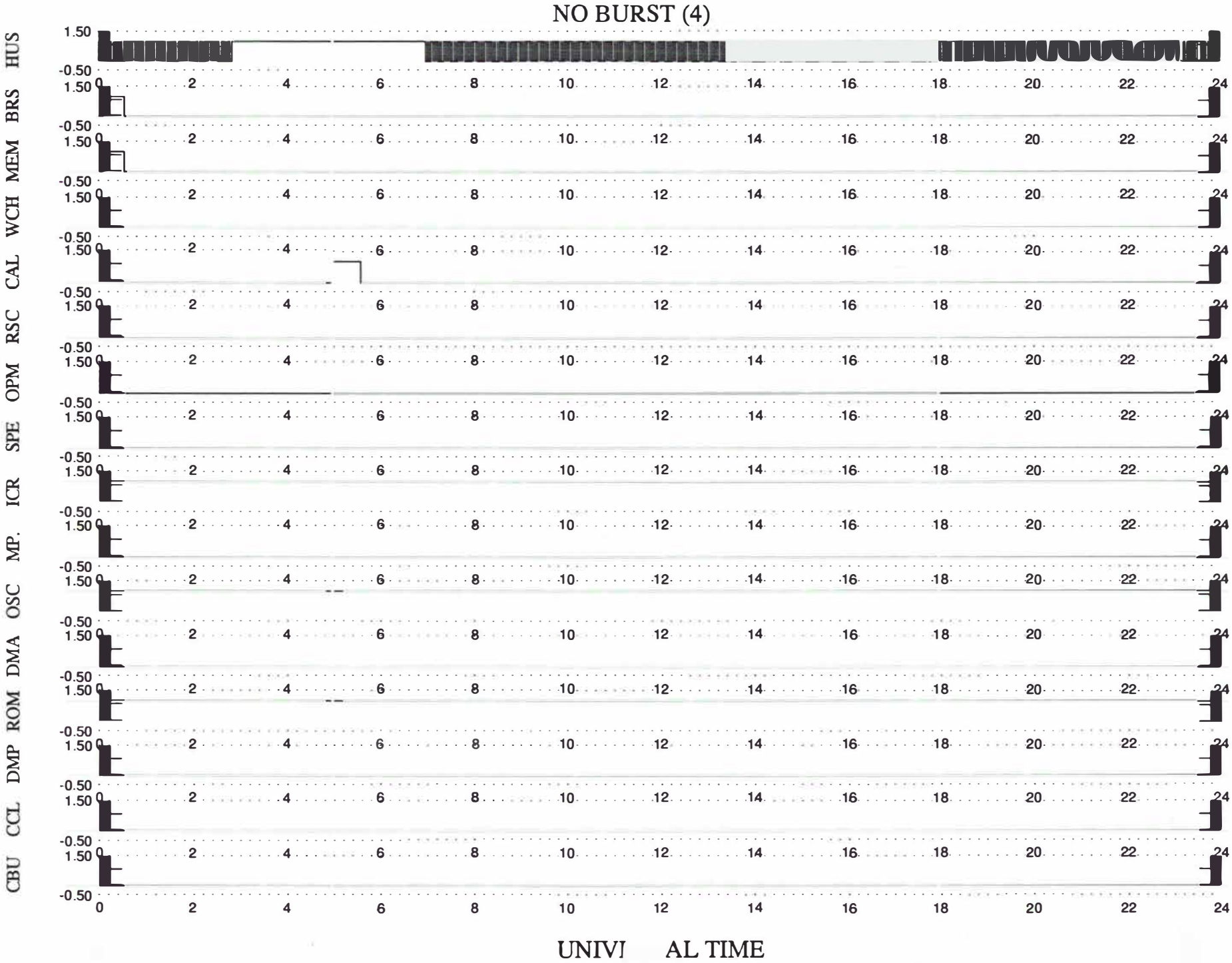
Current Time: 97/09/26, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
\+ Solar Flare

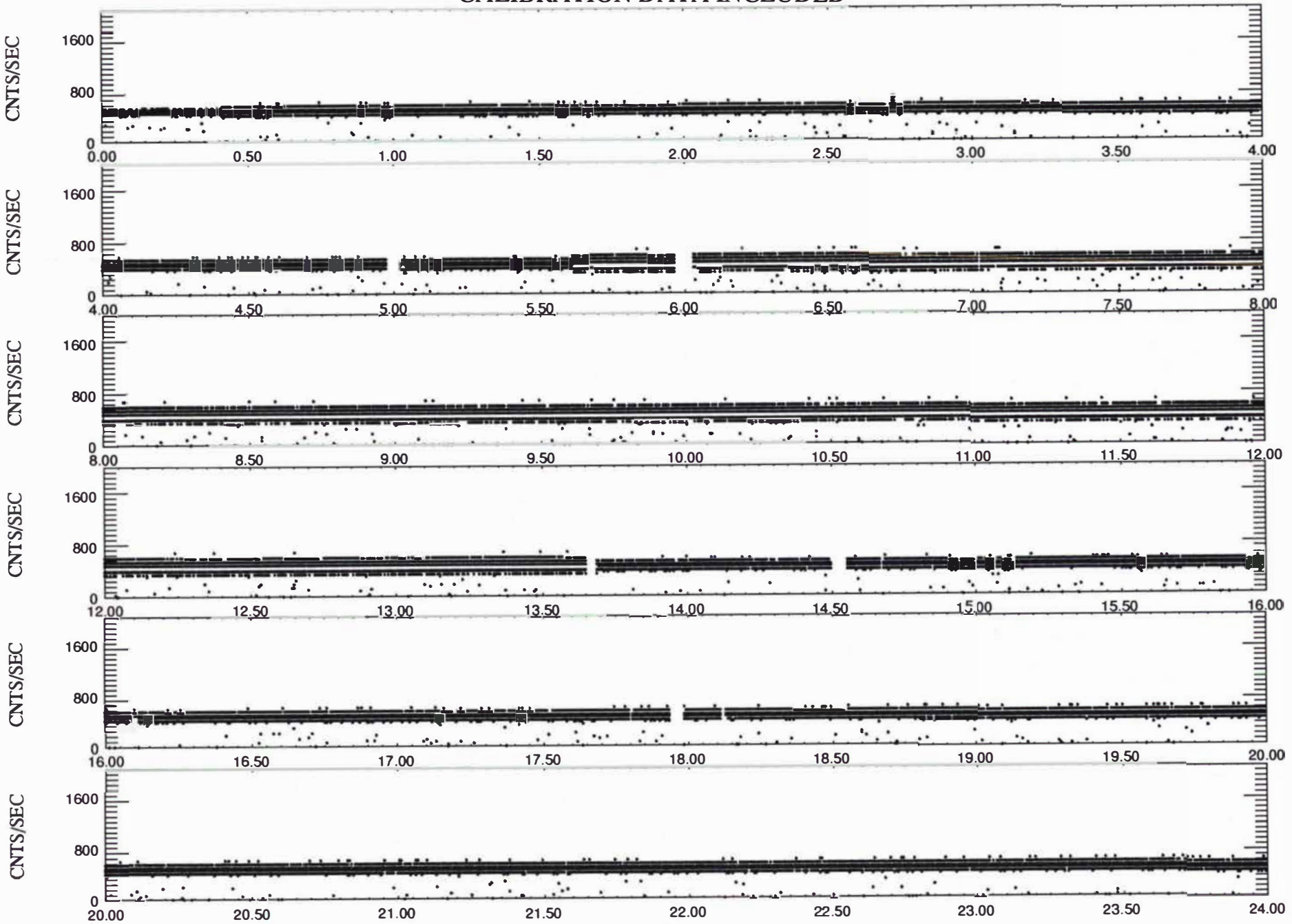

GOES 8
M
C
B
A
Watts m-2
10-5
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/22, 0000:00
Plot created: 97/09/26, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 265, year 1997 to day 265, year 1997 1/14/98



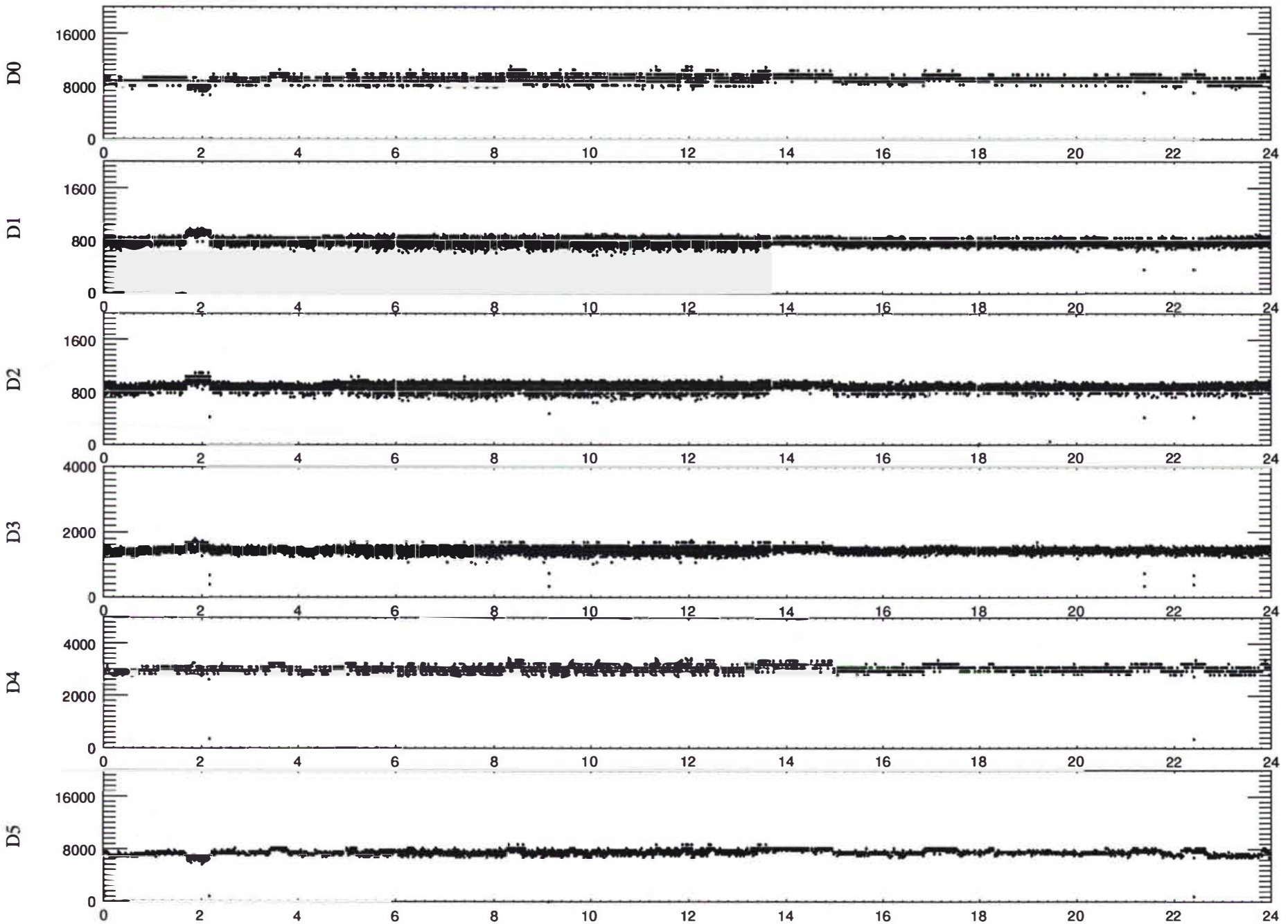
HUS 2A, MODE 1, NOT AVERAGED EDR day 265, year 1997 to day 265, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV[illegible]AL TIME

HUS 2B COUNTS / SEC EDR day 265, year 1997 to day 265, year 1997 1/14/98



From WOODSP@SSLMOR.msfc.nasa.gov Thu Sep 25 13:27:23 1997
Return-Path: <WOODSP@SSLMOR.msfc.nasa.gov>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id NAA17773; Thu, 25 Sep 1997 13:27:22 -0700
From: WOODSP@SSLMOR.msfc.nasa.gov
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id NAA11925; Thu, 25 Sep 1997 13:27:19 -0700
Date: Thu, 25 Sep 1997 15:27:12 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970925152712.21407759@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6393
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6393
EVENT OF 1997 SEP 23 DAY OF YEAR=266
EVENT CROSSING TIME AT BATSE : 33623. S. OR 09:20:23.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 231.000 50.000
BATSE PEAK COUNTING RATE: 3100 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 23/ 9/ 97 IS:
RA= 164.640 DEC= 16.855 DIST= 6.185 AU
BATSE-ULYSSES DISTANCE = 925342975. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=117.96 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1446.95 SECS.
CROSSING TIME AT ULYSSES IS 32176. S. OR 08:56:16 +/- 501.38 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 23/ 9/ 97 IS:
RA= 233.312 DEC= -20.210 DIST= 1.755 AU
MARS-BATSE DISTANCE = 262603424. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=109.76 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -296.14 SECS.
CROSSING TIME AT MARS IS 33327. S. OR 09:15:26 +/- 138.63 SECONDS

BATSE BURST TRIGGER

NO.: 6393

TIME: TJD=0714 SECONDS=33623

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=153.9 AZIMUTH=212.1 ERROR=4.7 DEGREES

COMMENTS:
GRB LASTING ABOUT 6 SEC. SINGLE, WEAK PULSE. NOT VISIBLE ABOVE
300 KEV. CRAB OCCULTATION RISE AT T + 20 (MODULES 0,1,4,5).
PROBABLE CYG X-1 FLICKERING DIRECTLY AFTER BURST, LASTING FOR
ABOUT 100 SEC.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6393	970923	10714	33623	3100	231	+50	6

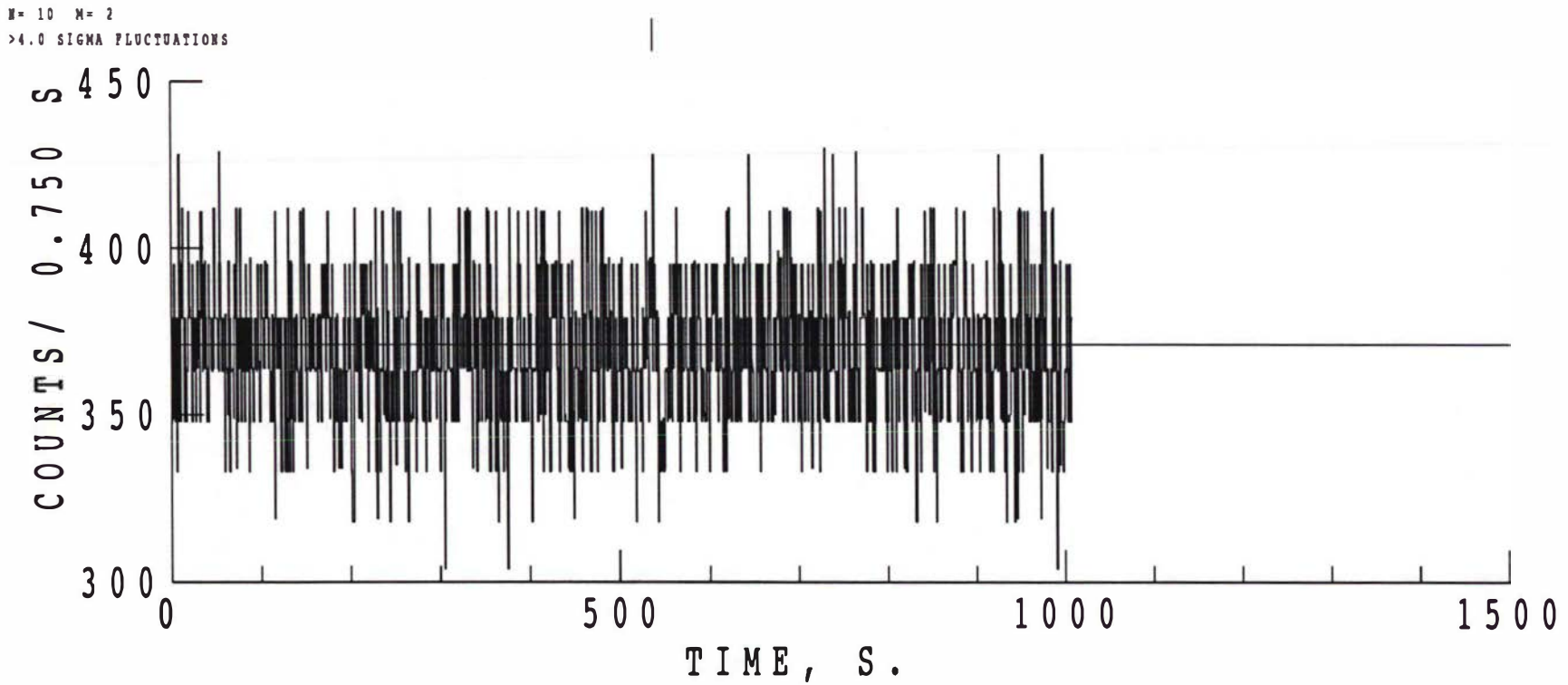
BATSE BURST# 6393

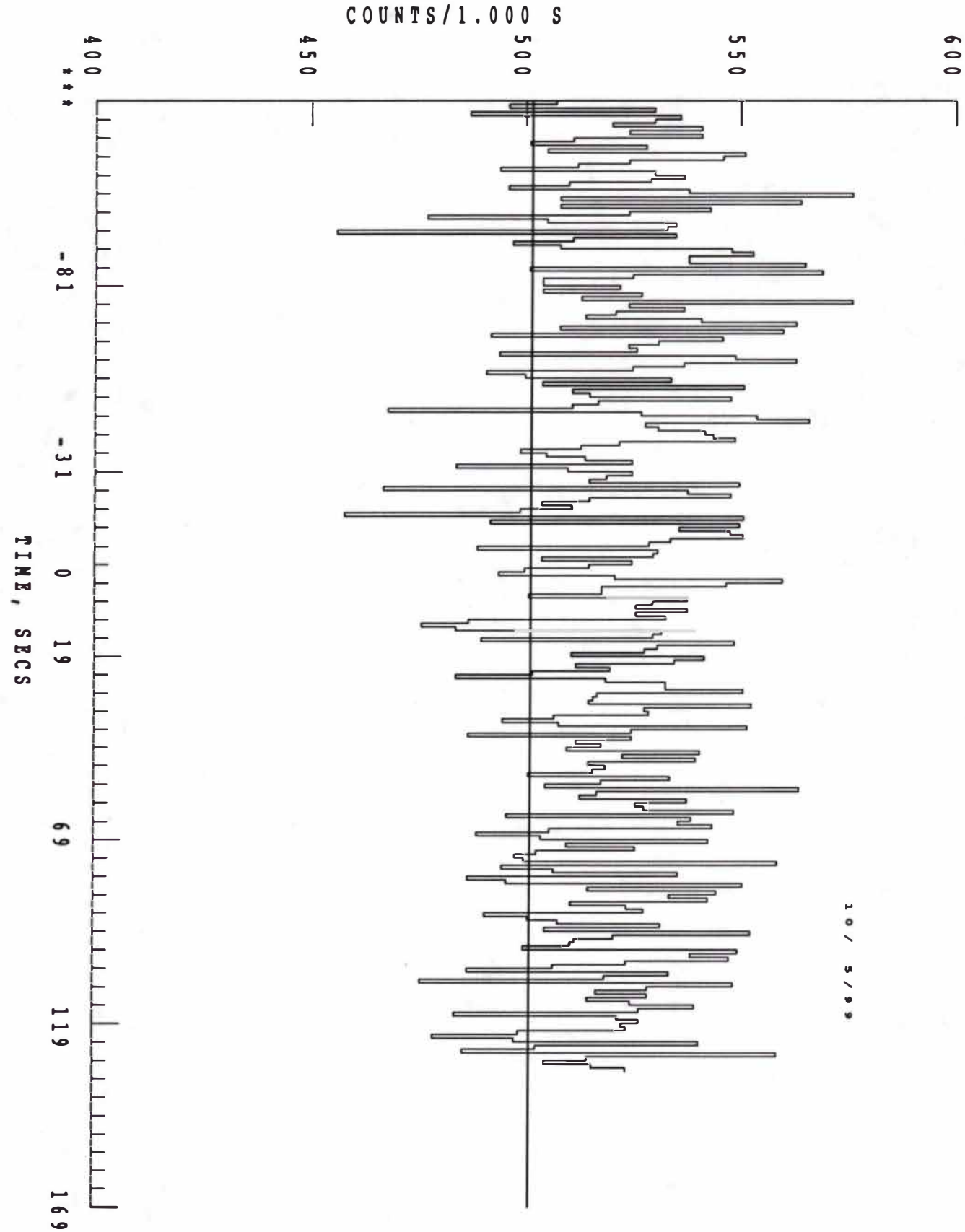
ULYSSES RT 25/ 9/97

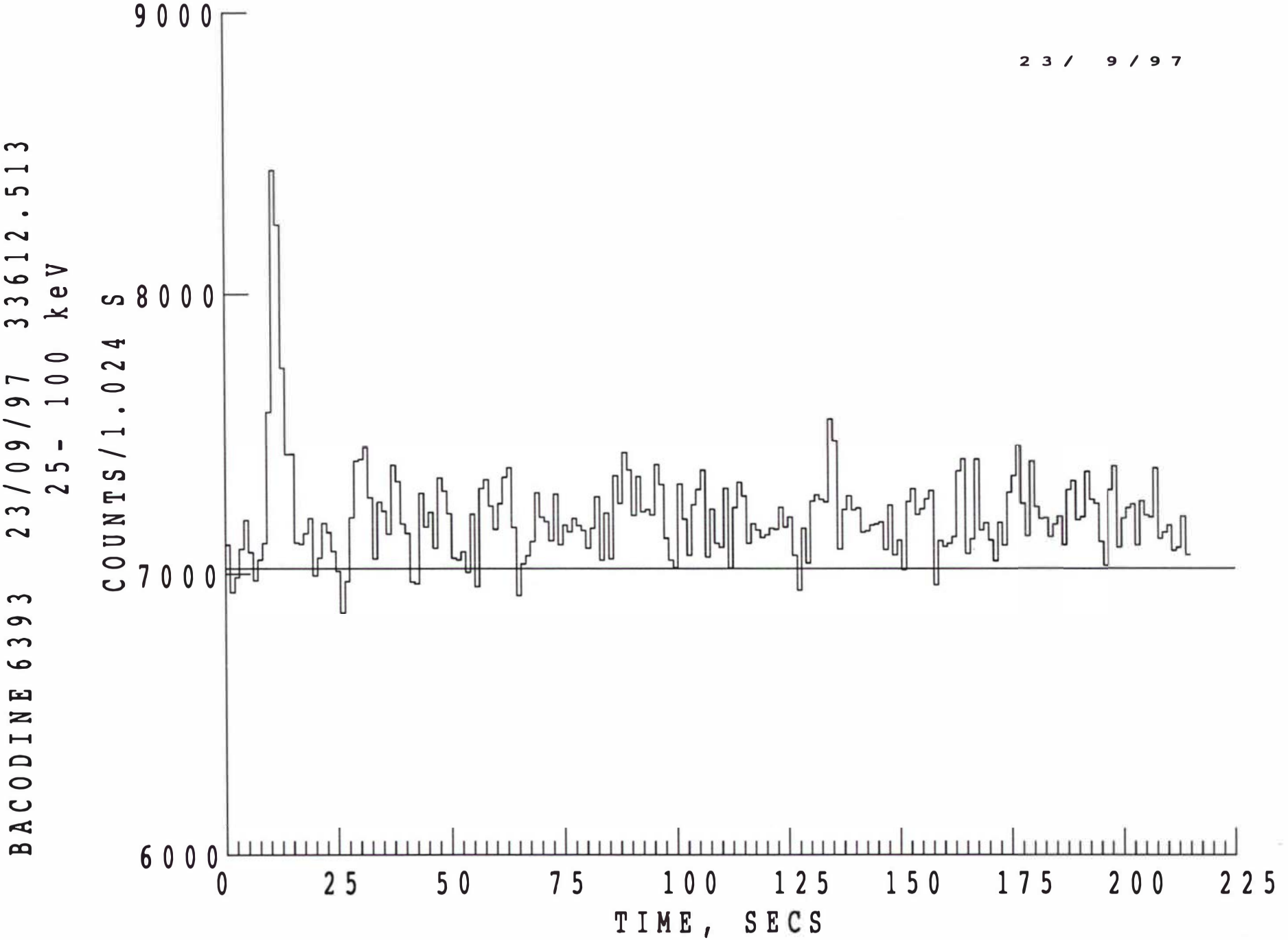
23/ 9/97 31680.119 s

0.250 S INTERVALS REGROUPED BY 3

0- 0 keV




NEAR
23/09/97
33771.146
100-1000 keV
COUNTS/1.000 S
400
450
500
550
600
***
-81
-31
0
19
69
119
169
TIME, SECS
10/ 5/99


BACODINE 6393 23/09/97 33612.513
25- 100 keV
COUNTS/1.024 S
9000
8000
7000
6000
23/ 9/97
0
25
50
75
100
125
150
175
200
225
TIME, SECS

Date: 4 Feb 00

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

Bad Ulysses RT data
Trigger time uncertain

☑ 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 N/A

☐ BATSE ephemeris for T_0?

☐ Error circle position and radius from public catalog used?

☐ If MER data were used, is a 30 ms systematic error included?

3. NEAR Data

☑ Final, correct time used? (Files postmarked vwx@bocc1, or from Teresa Sheets, have the correct time; files on website have incorrect times)

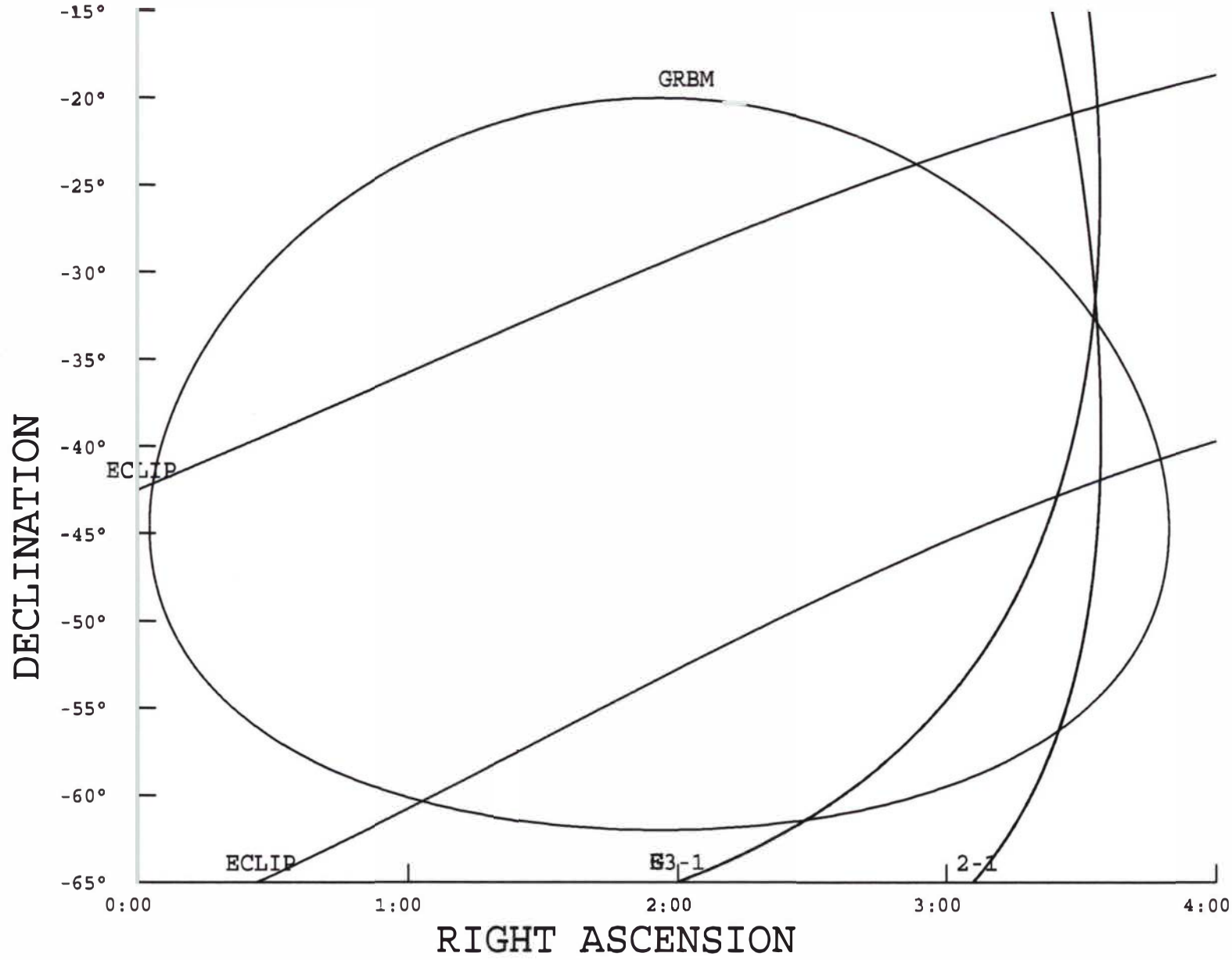
☐ BATSE >100 keV data used for NEAR correlation? N/A

☑ ACCESS database updated?

EVENT OF SEP 23, 1997 12:02

29/ 3/ 7

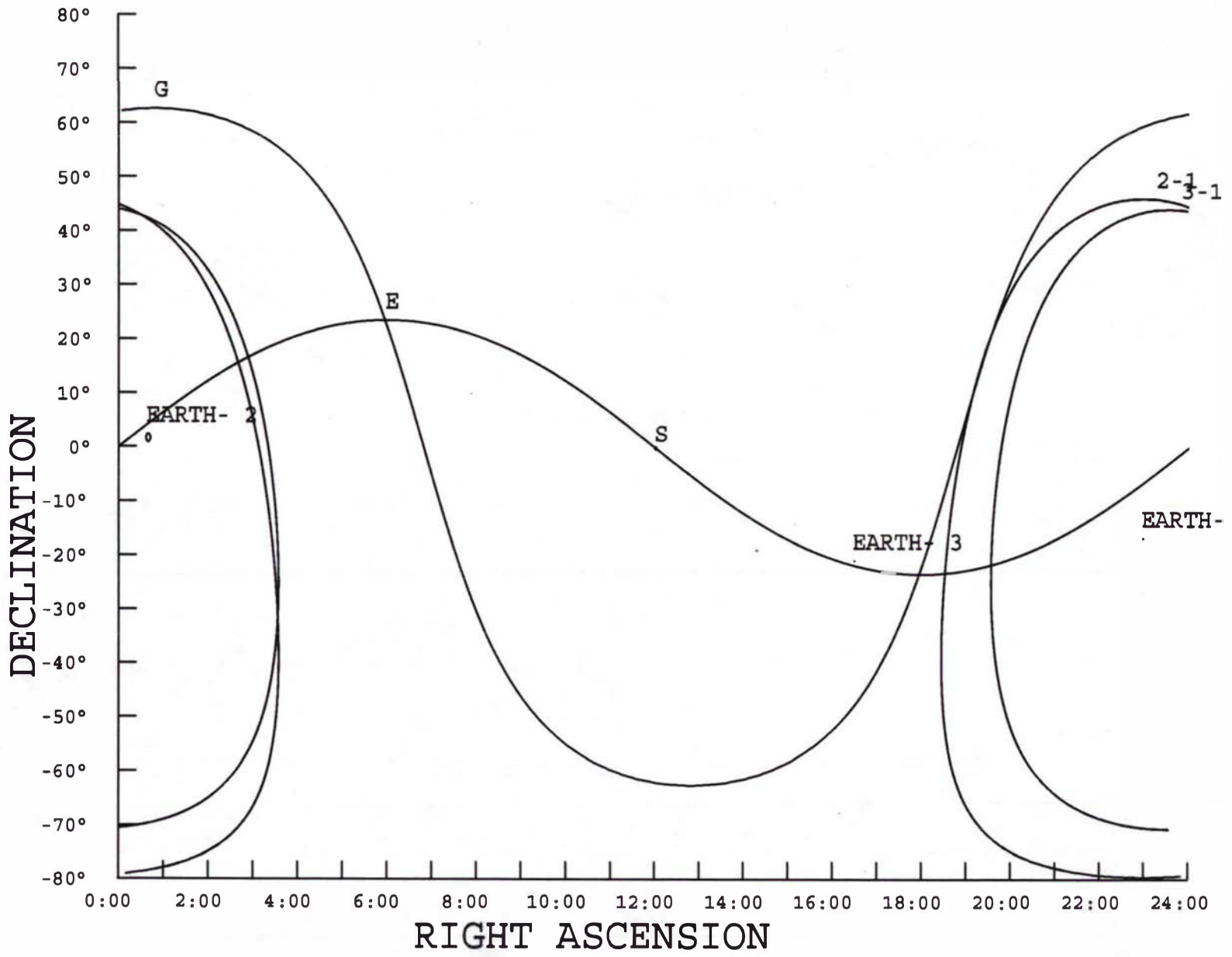
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 KONUS1 3 NEAR

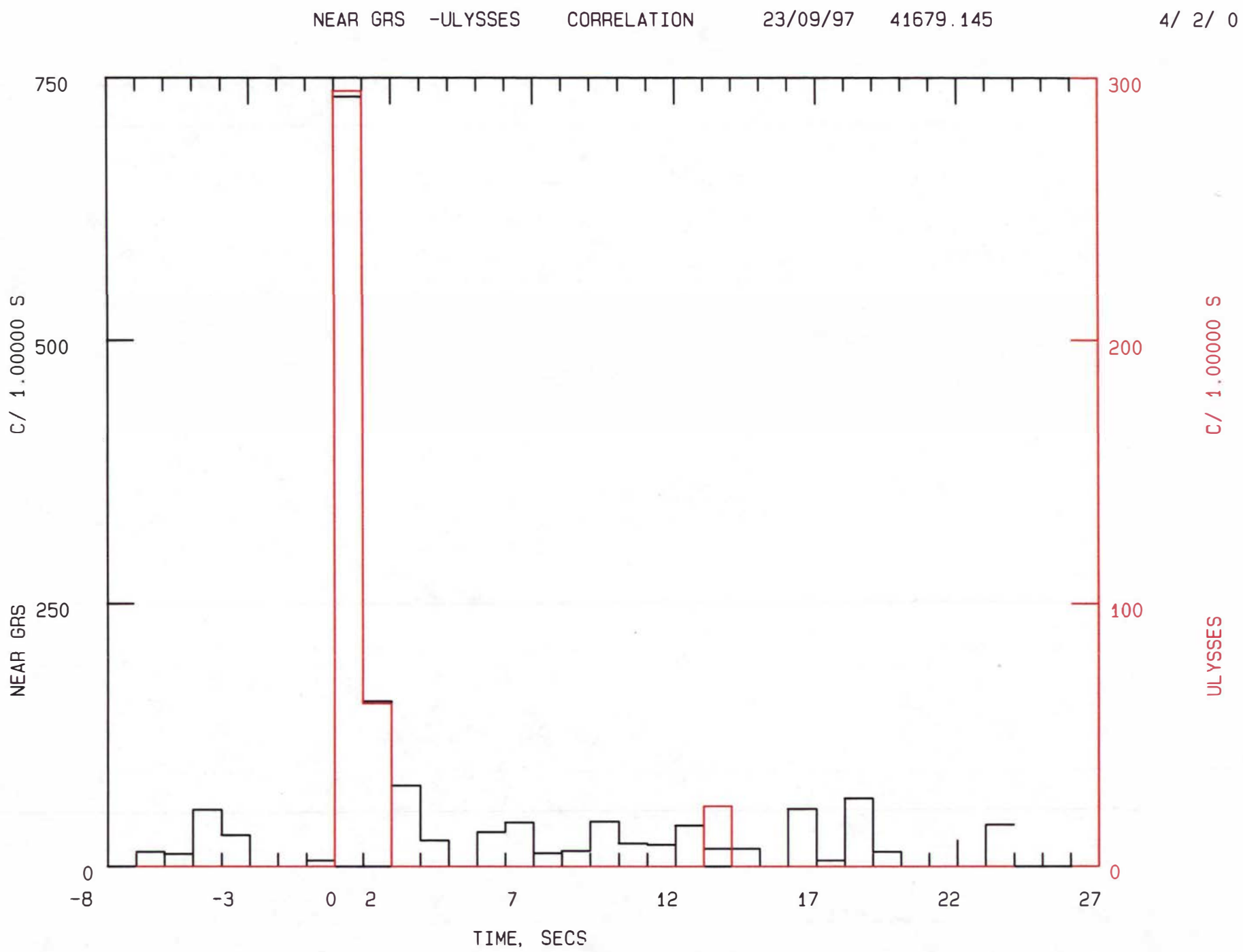


EVENT OF SEP 23, 1997 12:02

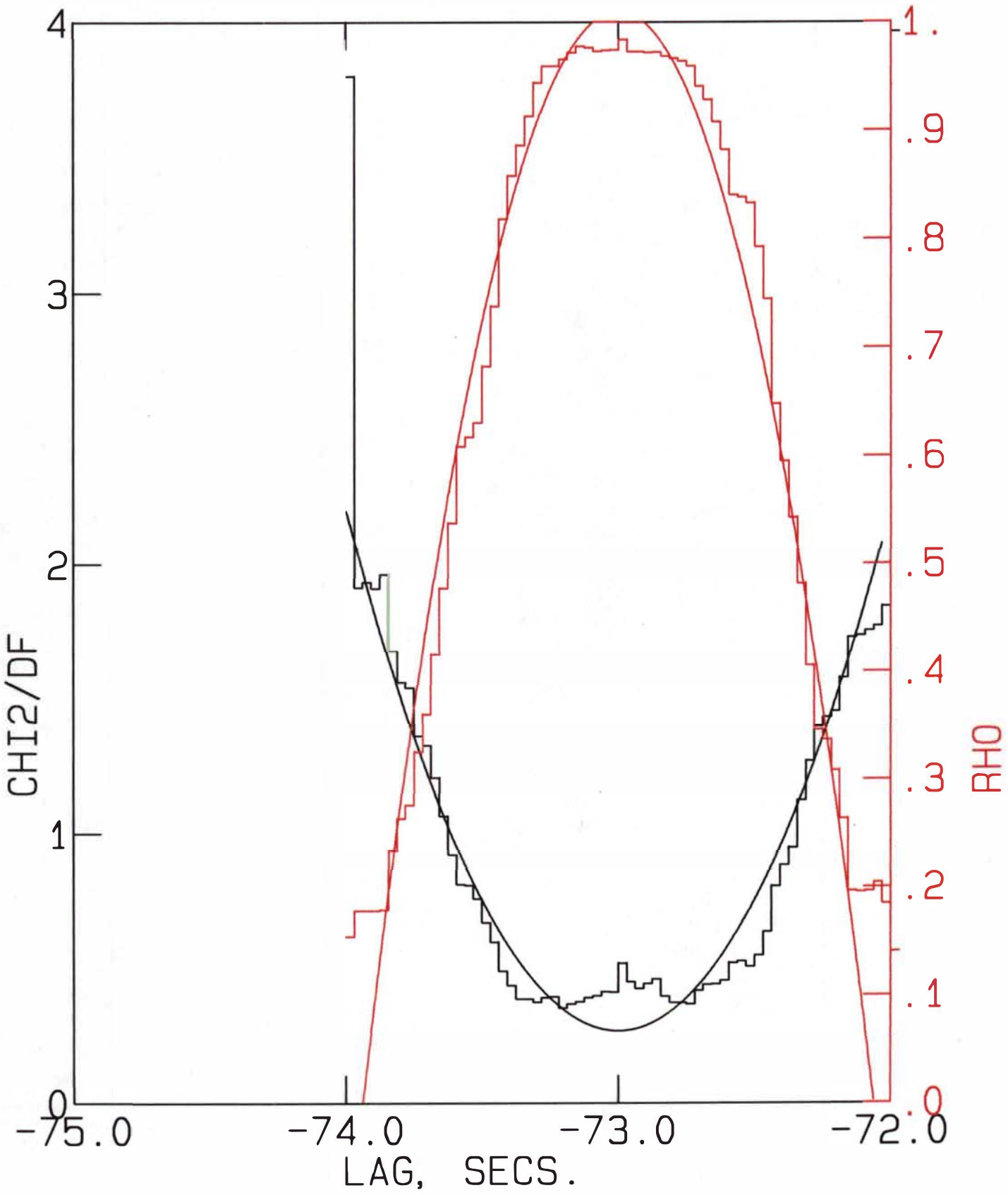
4/ 2/ 0

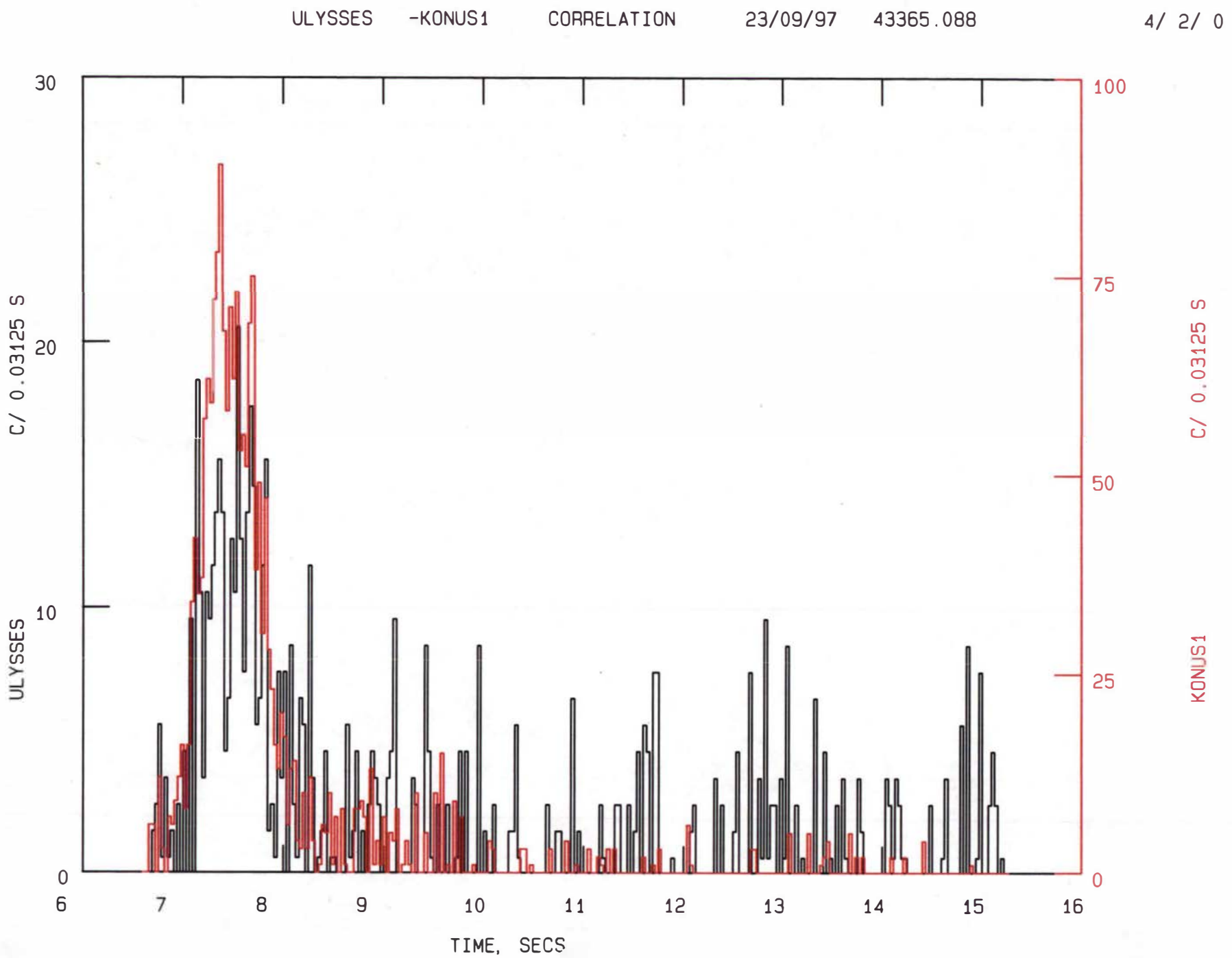
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 KONUS1 3 NEAR



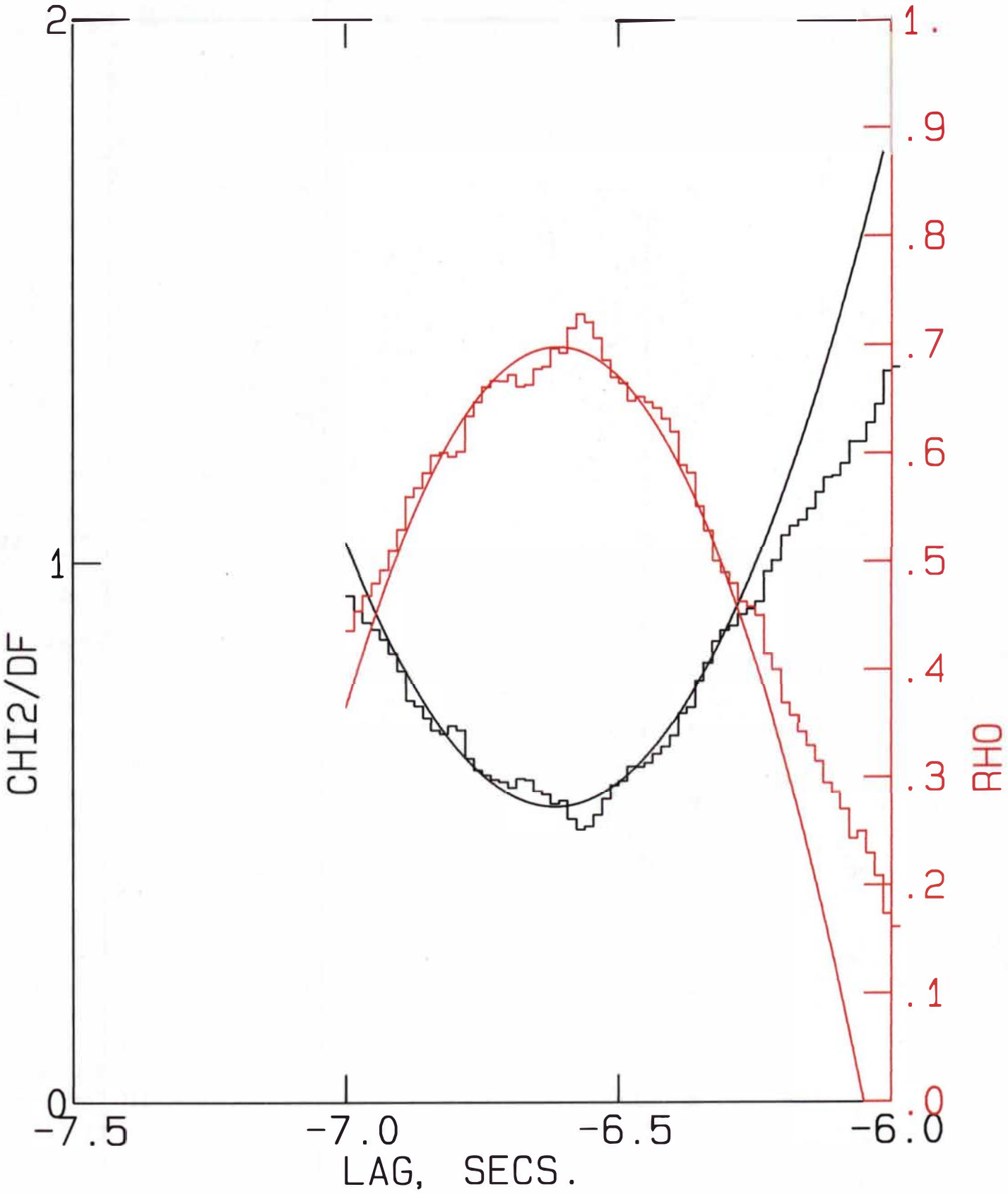

NEAR GRS -ULYSSES CORRELATION 23/09/97 41679.145 4/ 2/ 0
750
500
250
0
C/ 1.00000 S
NEAR GRS
300
200
100
0
C/ 1.00000 S
ULYSSES
-8
-3
0
2
7
12
17
22
27
TIME, SECS

NEAR GRS -ULYSSES CORRELATION 23/09/97 41679.145



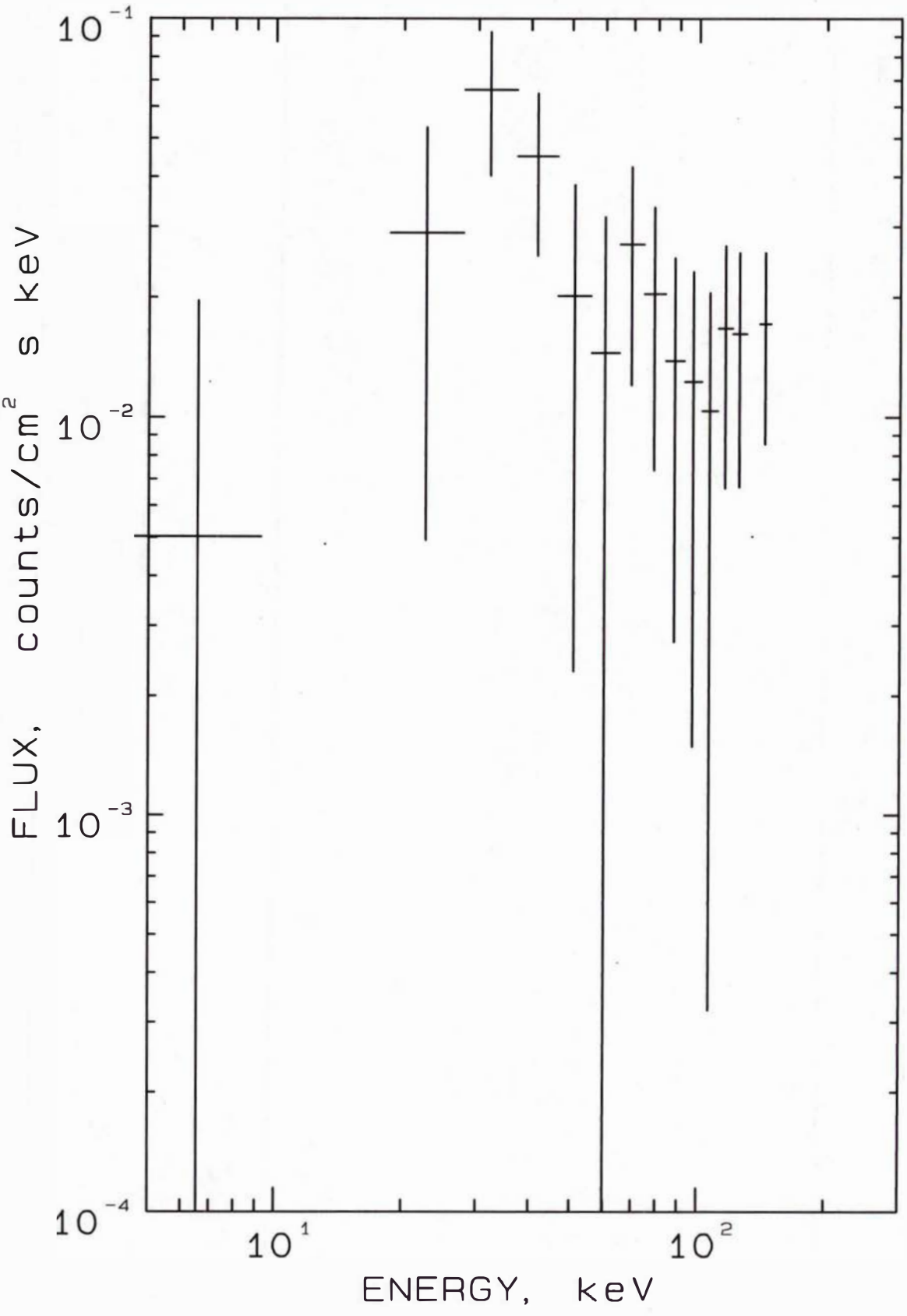

ULYSSES -KONUS1 CORRELATION 23/09/97 43365.088
4/ 2/ 0
30
20
10
0
100
75
50
25
0
C/ 0.03125 S
ULYSSES
C/ 0.03125 S
KONUS1
6
7
8
9
10
11
12
13
14
15
16
TIME, SECS

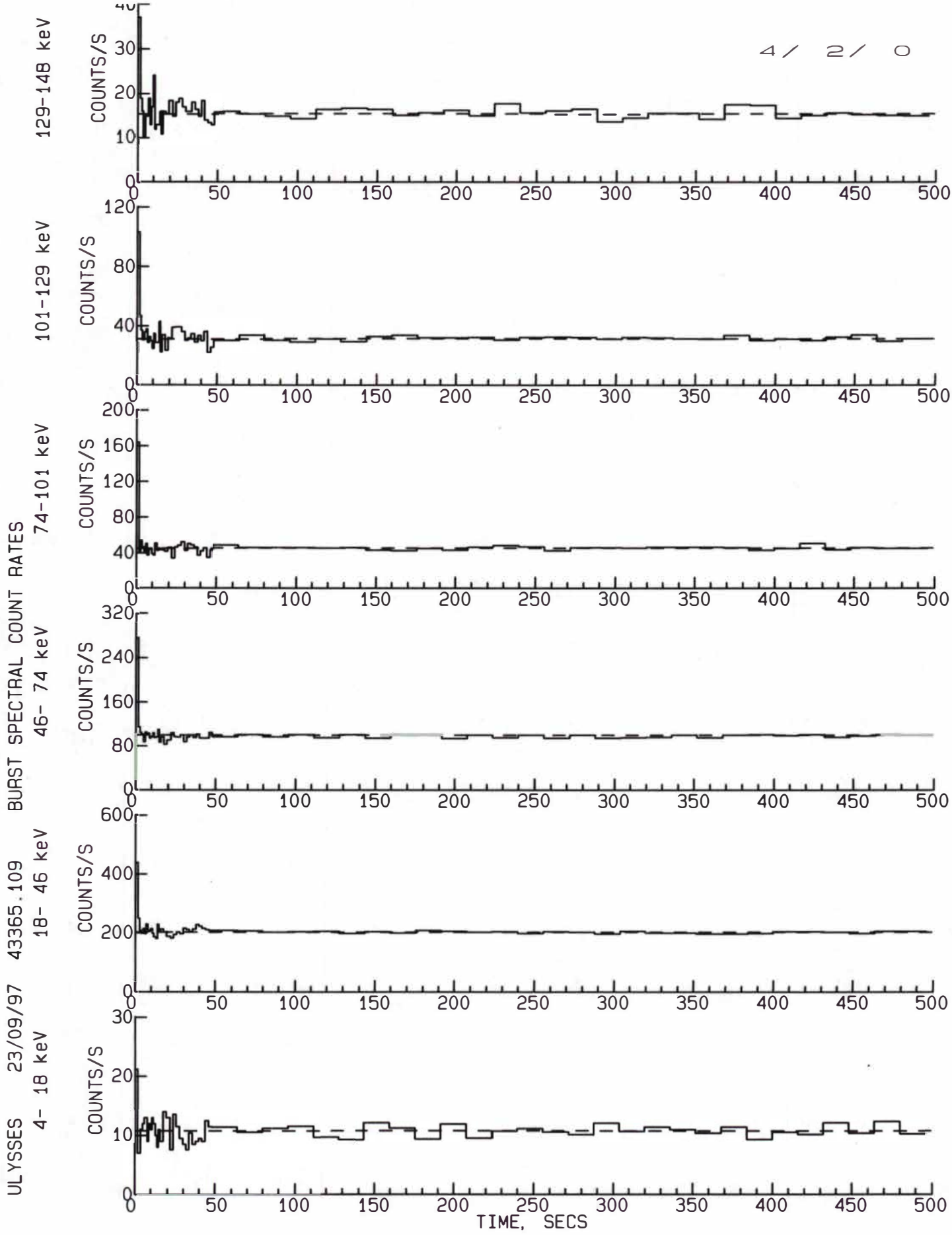
ULYSSES -KONUS1 CORRELATION 23/09/97 43365.088



ULYSSES 23/09/97 43365.109

SPECTRUM INTEGRATED OVER 43.7 SECONDS, INTERVALS 2 TO 30




ULYSSES 23/09/97 43365.109 BURST SPECTRAL COUNT RATES
4/ 2/ 0
129-148 keV
101-129 keV
74-101 keV
46- 74 keV
18- 46 keV
4- 18 keV
COUNTS/S
TIME, SECS

ULYSSES 23/09/97 Ttrig=43365.088

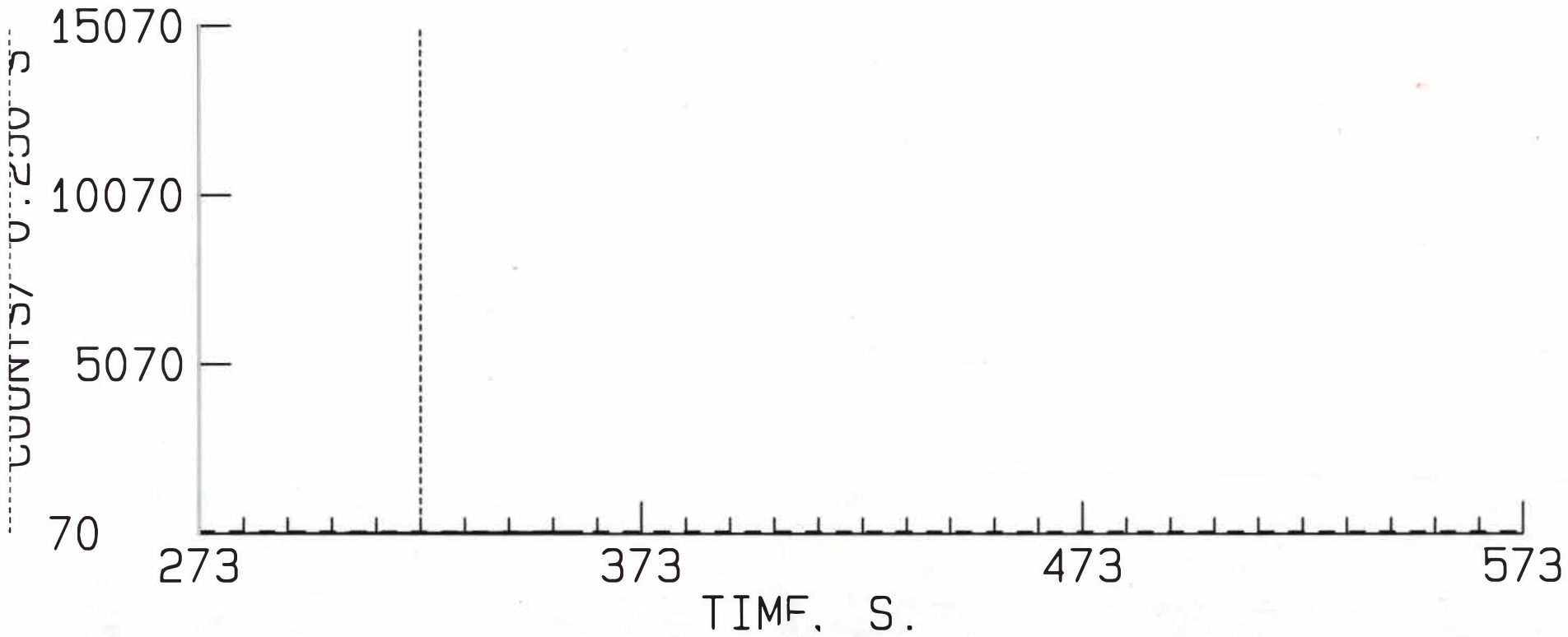
22- 148 keV

ULYSSES RT

4/ 2/ 0

23/ 9/97 43200.249 s

22- 148 keV

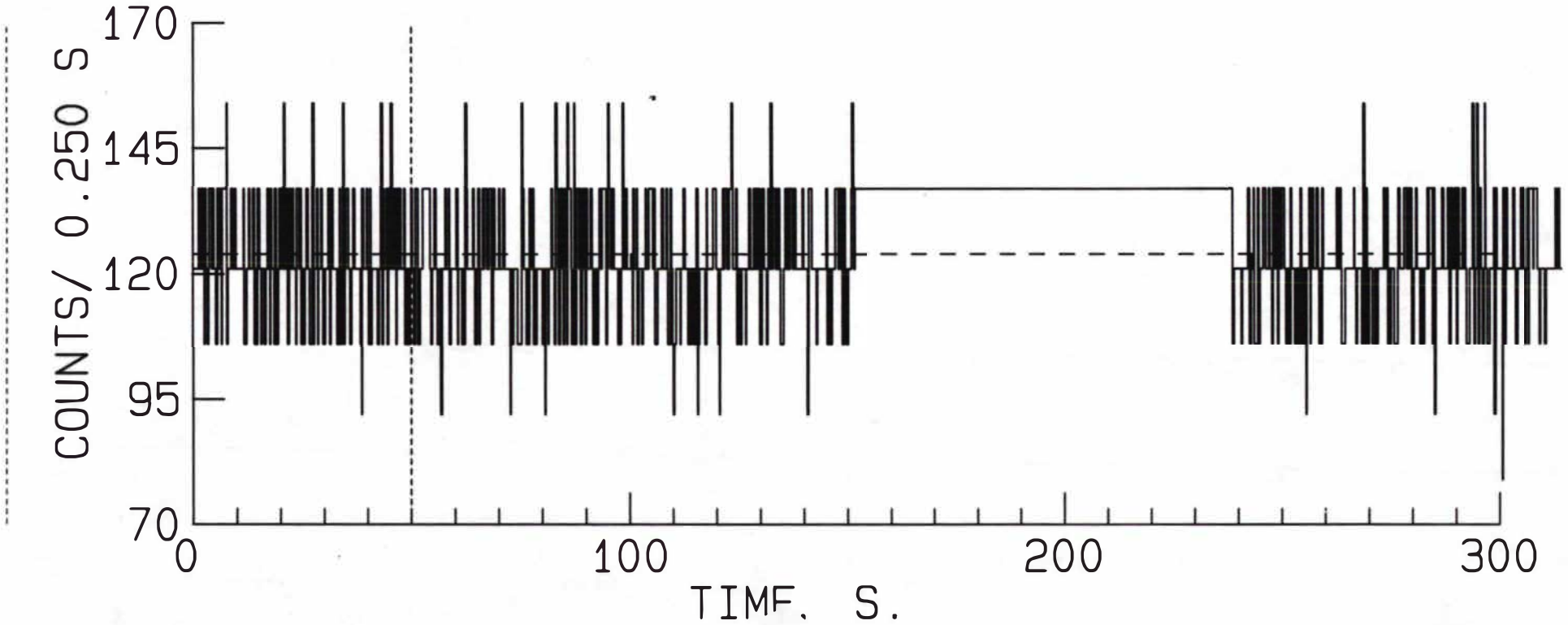


ULYSSES RT

4/ 2/ 0

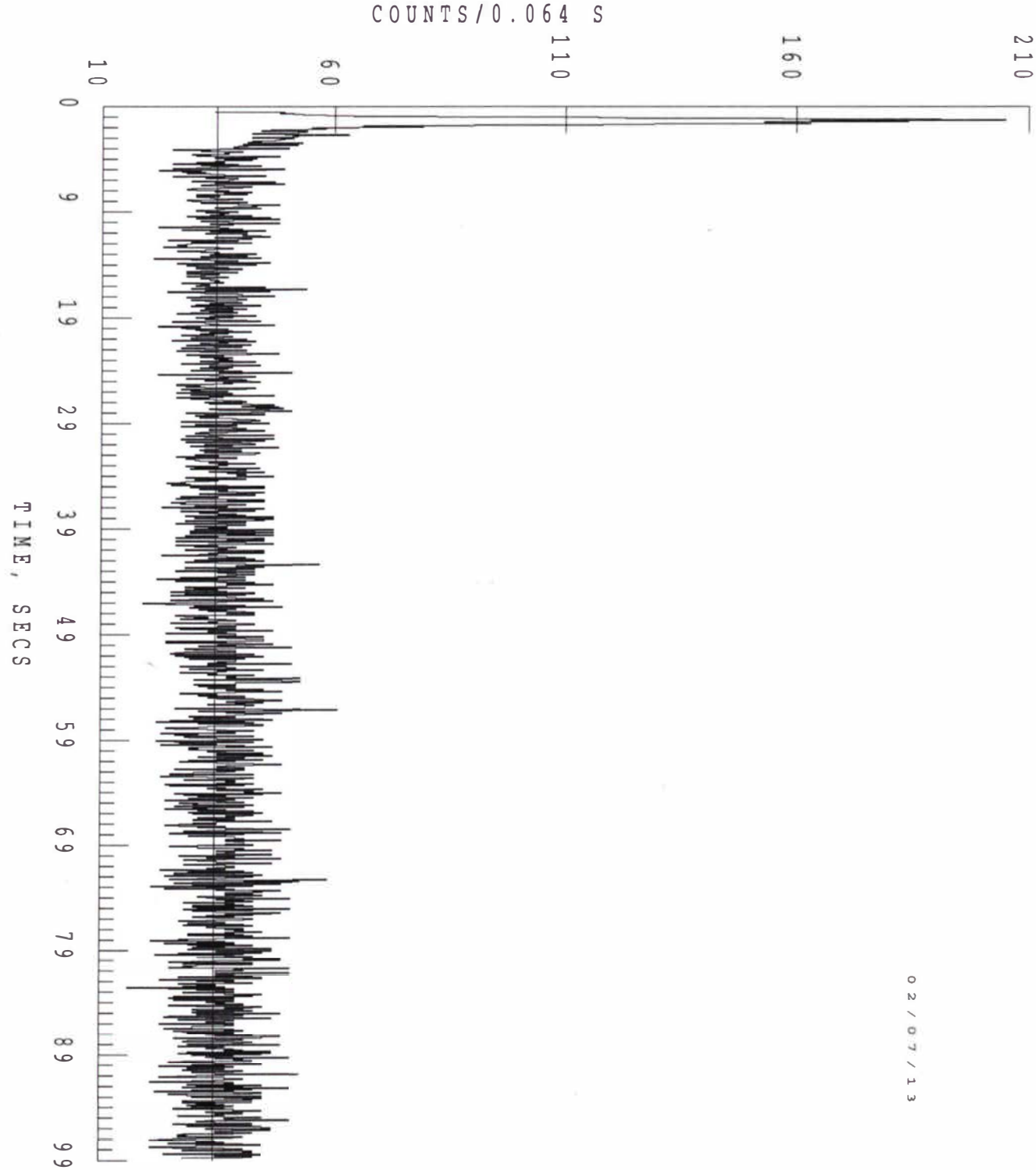
23/ 9/97 43200.249 s

22- 148 keV



KONUS1 23/09/97 41961.412

50- 200 keV



02/07/13

From David.M.Palmer.1@gsfc.nasa.gov Tue Sep 30 08:25 PDT 1997
X-Sender: palmer@lheapop.gsfc.nasa.gov
Mime-Version: 1.0
Date: Tue, 30 Sep 1997 11:26:16 -0400
    xrtpm@leptpm.gsfc.nasa.gov, Jacob.I.Trombka.1@gsfc.nasa.gov,
        u1srf@lepvax.gsfc.nasa.gov, butterworth@pizza.gsfc.nasa.gov,
        cline@apache.gsfc.nasa.gov, KHURLEY@sunspot.ssl.berkeley.edu
From: David Palmer <David.M.Palmer.1@gsfc.nasa.gov>
Subject: TGRS triggers matching NEAR
Cc: palmer@rosserv.gsfc.nasa.gov

In addition to
970921_83828 corresp. to 264:23:25:22   (time difference larger than dist.)
TGRS also triggered at
970922_02698 = 265:00:49:28 no NEAR excess
970923_41961 = 266:11:39:21 cf NEAR 266:11:34:51
970924_10027 = 267:02:47:07 probably solar, NEAR sees things at 2:36 and 2:52
970925_81799 = 268:22:43:19 cf NEAR 268:22:45:08

No other triggers through day 271.

I have not actually looked at the data.

I have not checked for rate increases.

David Palmer
palmer@lheamail.gsfc.nasa.gov
USA (301) 286-2739 Voice
USA (301) 286-1684 Fax

From BUTTERWORTH@PIZZA.GSFC.NASA.GOV Thu Sep 25 11:52 PDT 1997
Date: Thu, 25 Sep 1997 14:48:34 -0400 (EDT)
From: BUTTERWORTH@PIZZA.GSFC.NASA.GOV
Subject: Konus confirms the three NEAR events listed for 970922 and 970923
cline@apache.gsfc.nasa.gov, xrtpm@leptpm.gsfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
X-Vmsmail-To: TOM

I just checked these three events from Tim's list:

	UTC	Mean	Max	Duration Sec
#1	265:02:24:06	536	816	8
#2	265:08:51:58	524	868	1
#3	266:11:34:51	548	1250	3

#1 was seen by Konus as a North-facing trigger at 02:25:58.181. It was soft, far to the North of the ecliptic, lasted 10 seconds, and consisted of several 1-2 second peaks.

#2 was seen by Konus as a very hard Northern event in the waiting-mode data near 08:56:47, lasting less than 1.5 seconds.

#3 was seen by Konus as a South-facing trigger at 11:39:21.412. It was hard and consisted of a single peak lasting 1 second.

(Konus had one other trigger during these two days, at 00:48:09.663 on 970922 in the South facing detector. It was a strong soft event lasting 30 seconds with several broad peaks. It was close enough to the ecliptic to be occulted by TGRS during WIND's rotation, so perhaps it was a solar flare.)
: added: yes, this was BATSE 6392, a solar flare.

Paul.

From cline@apache.gsfc.nasa.gov Fri Sep 26 04:49 PDT 1997
Mime-Version: 1.0
Date: Fri, 26 Sep 1997 07:52:43 -0400
To: KHURLEY@sunspot.ssl.berkeley.edu, palmer@lheamail.gsfc.nasa.gov,
        Butterworth@lheavx.gsfc.nasa.gov
. om: cline@apache.gsfc.nasa.gov (T L Cline)
Subject: Solar activity

>Resent-Date: Thu, 25 Sep 1997 18:23:10 -0400 (EDT)
>Resent-From: cline@lheavx.gsfc.nasa.gov
>Resent-To: CLINE@APACHE.GSFC.NASA.GOV
>X-Sender: nfox@pop600.gsfc.nasa.gov
>X-Mailer: Windows Eudora Pro Version 3.0.1 (32)
>Date: Thu, 25 Sep 1997 18:21:24 -0400
>To: DIRAC2::BLAKE@eldyn2.gsfc.nasa.gov, chenette@agena.space.lockheed.com,
>   FRITZ@buasta.bu.edu, frank@iowasp.physics.uiowa.edu,
>   gurnett@space.physics.uiowa.edu, temoore@pop600.gsfc.nasa.gov,
>   FMozer@sunspot.SSL.berkeley.edu, parks@geophys.washington.edu,
>   ctrussell@igpp.ucla.edu, jack-scudder@uiowa.edu,
>   shelley@agena.space.lockheed.com, hoffman@eldyn2.gsfc.nasa.gov,
>   baker@orion.colorado.edu, jim.spann@msfc.nasa.gov,
>   sigwarth@iowasp.physics.uiowa.edu, cak@hydra.physics.uiowa.edu,
>   paul.craven@msfc.nasa.gov, britt@geophys.washington.edu,
>   mobilia@agena.space.lockheed.com, rsheldon@ceppad.bu.edu,
>   persoon@iowave.physics.uiowa.edu, FMozer@sunspot.SSL.berkeley.edu,
>   jmeans@igpp.ucla.edu, pete@agena.space.lockheed.com,
>   joe_fennell@qmail2.aero.org, mle@ion.le.ac.uk, opg@irfu.se,
>   SANCHEZ@chaos.sri.com, jcf@hyperion.haystack.edu,
>   ray_greenwald@jhuapl.edu, tony@eiscat.uit.no,
>   HUGHES@DAN030.dnet.sp-agency.ca, swhc1@ion.le.ac.uk,
        M.LOCKWOOD@RL.AC.UK, jgosling@lanl.gov, REIFF@ALFVEN.RICE.EDU,
>   MARY.K.HUDSON@DARTMOUTH.EDU, SPENCE@buasta.bu.edu,
>   dave_rust@jhuapl.edu, nelson@nelson.mrcnh.com, ajl@space.mit.edu,
>   boblin@sunspot.SSL.berkeley.edu, u2kwo@lepvax.gsfc.nasa.gov,
>   u3mlk@lepvax.gsfc.nasa.gov, bougeret@obspm.fr,
>   rosenvinge@lheavx.gsfc.nasa.gov, gloeckler@umdsp.dnet.nasa.gov,
>   u5rpl@lepvax.gsfc.nasa.gov, teegarden@lheavx.gsfc.nasa.gov,
>   mazets@mz.ioffe.rssi.ru, cline@lheavx.gsfc.nasa.gov,
>   tsuruda@fujitubo.gtl.isas.ac.jp, frank@iowasp.physics.uiowa.edu,
>   don.williams@jhuapl.edu, jkikuchi@cfi.waseda.ac.jp,
>   mukai@fujitubo.gtl.isas.ac.jp, kokubun@stelab.nagoya-u.ac.jp,
>   matsumoto@kurasc.kyoto-u.ac.jp, william.d.worrall.1@gsfc.nasa.gov,
>   MCGUIRE@nssdcx.gsfc.nasa.gov, green@nssdcx.gsfc.nasa.gov,
>   hesse@gsfc.nasa.gov, ysmdd@lepmdd.gsfc.nasa.gov,
>   hoffman@eldyn2.gsfc.nasa.gov, u5sac@lepvax.gsfc.nasa.gov,
>   u2dhf@lepvax.gsfc.nasa.gov, u2whm@lepvax.gsfc.nasa.gov,
>   mha@lepmom.gsfc.nasa.gov, xr2mp@lepvax.gsfc.nasa.gov,
>   U2MLG@lepvax.gsfc.nasa.gov, Robert.carovillano@hq.nasa.gov,
>   larry.zannetti@hq.nasa.gov, vondrak@lepvax.gsfc.nasa.gov,
>   u0gmm@lepvax.gsfc.nasa.gov, michael.a.calabrese.1@gsfc.nasa.gov
>From: Nicky Fox <nfox@pop600.gsfc.nasa.gov>
>Subject: Solar activity
>Mime-Version: 1.0
>
>Greetings
>
>   am writing to inform you about a solar event which occurred on Sept
>23/24. SOHO, YOHKOH and GOES have all reported flare and CME activity and
>the current prediction is that the CME - infact there were 2 CME's - are
>heading our way. The NOAA estimate for the storm activity is "major" and

>should occur tomorrow afternoon and Saturday.
>
> I have begun a webpage for this event and you can see all the current
>images and also the NASA/NOAA press release there. The URL is -

   http://www-istp.gsfc.nasa.gov/istp/events/sept97
>
> You may wish to turn on ground-based instruments, or simply keep your eye
>out for auroral activity. If anyone has data or web links which they would
>like added to the ISTP website then please let me know
>
> Thanks
>
>Nicky
>
>

-- Thomas L. Cline ----- cline@apache.gsfc.nasa.gov

From khurley@sunspot Thu Sep 25 12:50 PDT 1997
Date: Thu, 25 Sep 1997 12:51:55 -0700
From: khurley@sunspot (Kevin Hurley)
To: cline@apache.gsfc.nasa.gov
   ject: Ulysses responses to NEAR candidates
  : khurley@sunspot

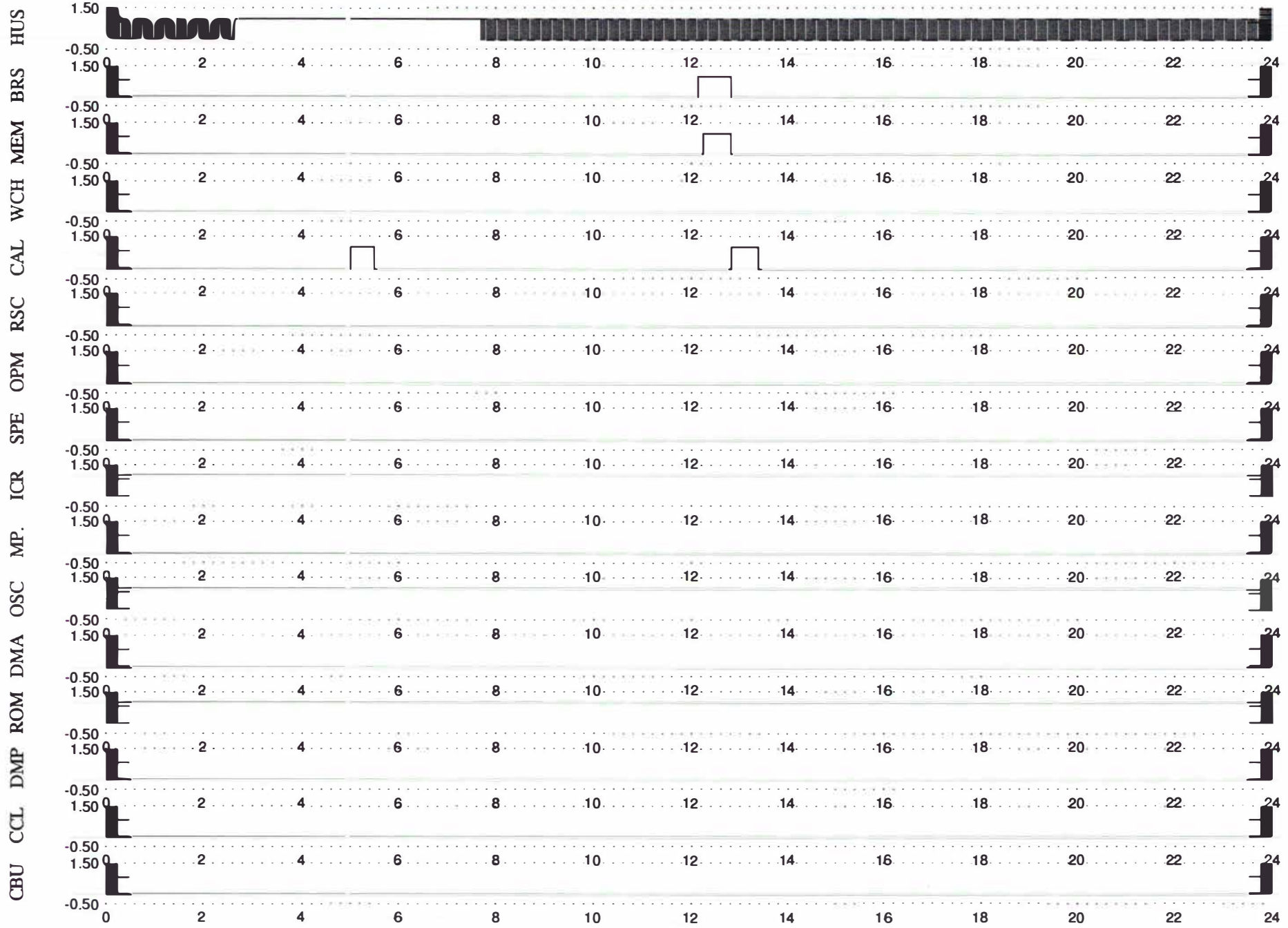
> From cline@apache.gsfc.nasa.gov Wed Sep 24 12:34 PDT 1997
> Mime-Version: 1.0
> Date: Wed, 24 Sep 1997 15:37:46 -0400
> To: KHURLEY@sunspot.ssl.berkeley.edu, palmer@lheamail.gsfc.nasa.gov,
>   Butterworth@lheavx.gsfc.nasa.gov, scott@rosserv.gsfc.nasa.gov
> From: cline@apache.gsfc.nasa.gov (T L Cline)
> Subject: CORRECTED NEAR CANDIDATE EVENT LIST
>
> OK YOU GUYS - SCOTT FOUND THIS TO BE THE CORRECT LIST.
> TLC
> --
> Date: Wed, 24 Sep 1997 13:15:23 -0400 (EDT)
> From: Tim McClanahan <xrtpm@leptpm.gsfc.nasa.gov>
> To: cline@apache.gsfc.nasa.gov
> Subject: Re: Giant event at Sept 24 02:46:43
> Mime-Version: 1.0
>
> Tom,
>   Latest events from NEAR

UTC	Mean	Max	Duration Sec	Ulysses
264:23:25:22	524	890	6	trigger
265:02:24:06	536	816	8	RI
265:08:51:58	524	868	1	No
266:11:34:51	548	1250	3	trigger
267:02:36:43	526	661	20	No - but SAX reports a very
267:02:52:15	532	619	51	strong event at 02:46. It's probably solar

>   Tim
>
> -- Thomas L. Cline ----- cline@apache.gsfc.nasa.gov
>
>
>

HUS MODES EDR day 266, year 1997 to day 266, year 1997 1/14/98

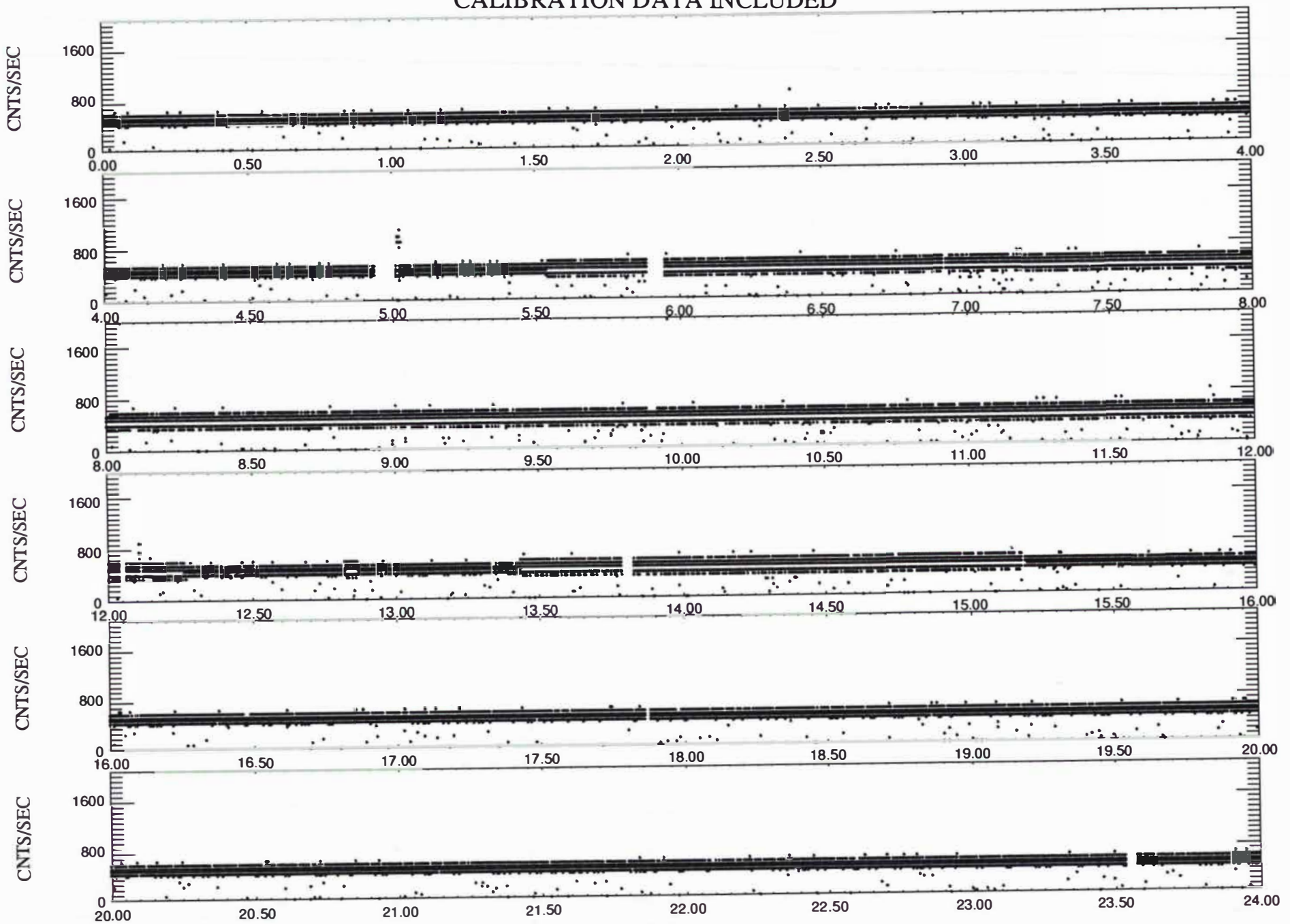
BURST NUMBER 5



UNIV AL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 266, year 1997 to day 266, year 1997 1/14/98

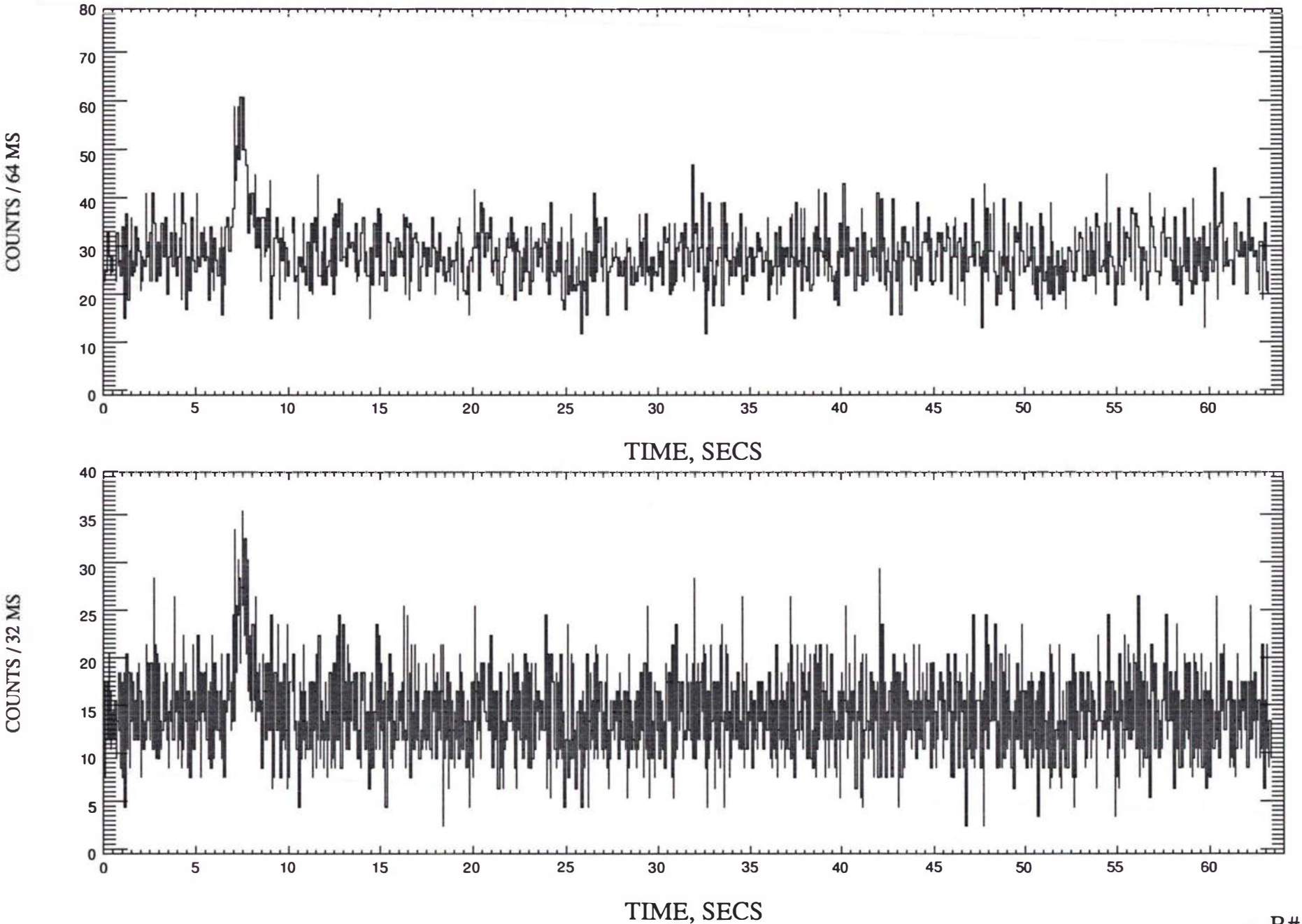
CALIBRATION DATA INCLUDED



UNIV AL TIME

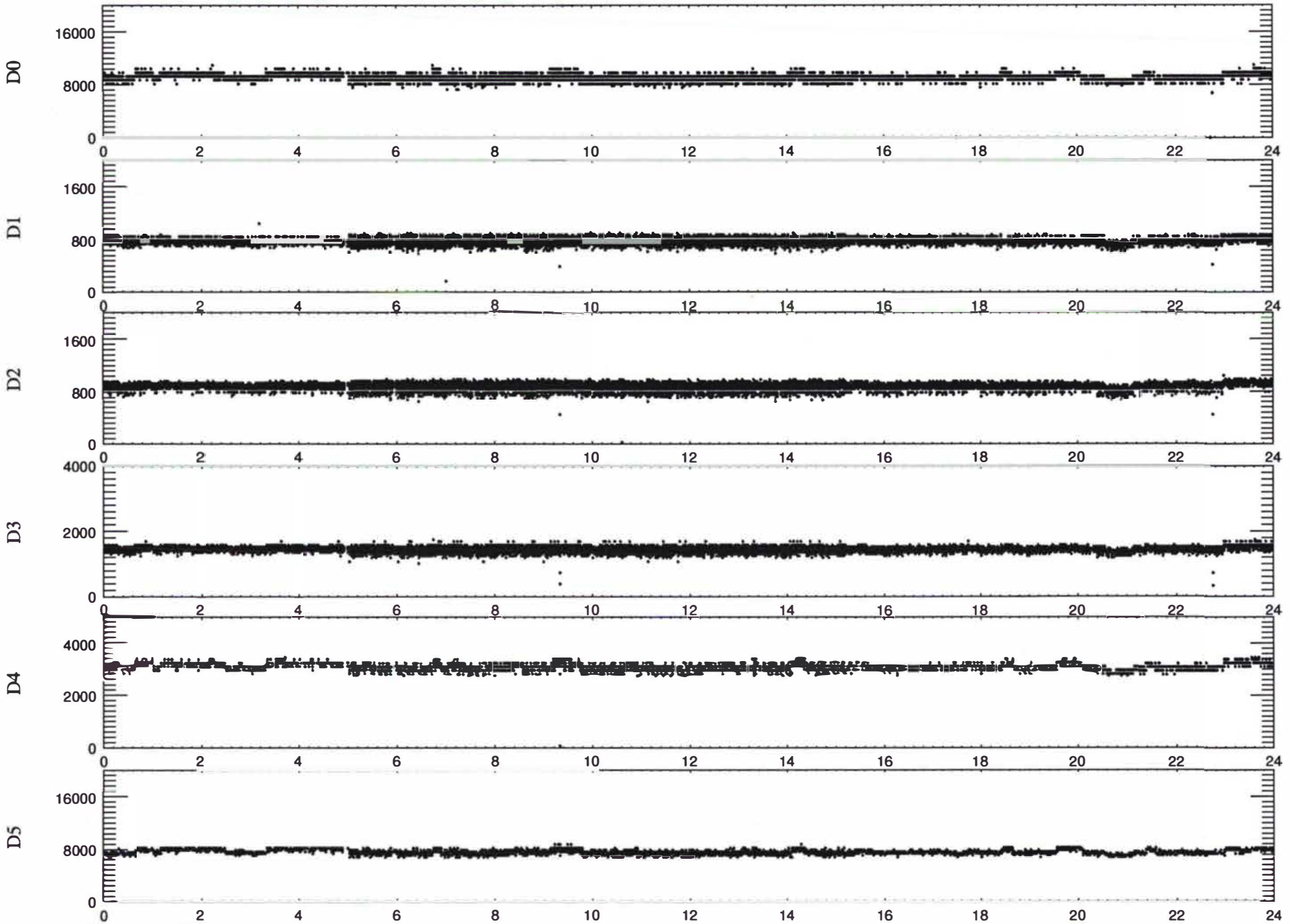
HUS 2A TRIGGERED DATA EDR day 266, year 1997 1/14/98

Burst Counter 5 at UT=12.045863647461 h=43365.109 s 12:02:45.109



B# 1

HUS 2B COUNTS / SEC EDR day 266, year 1997 to day 266, year 1997 1/14/98



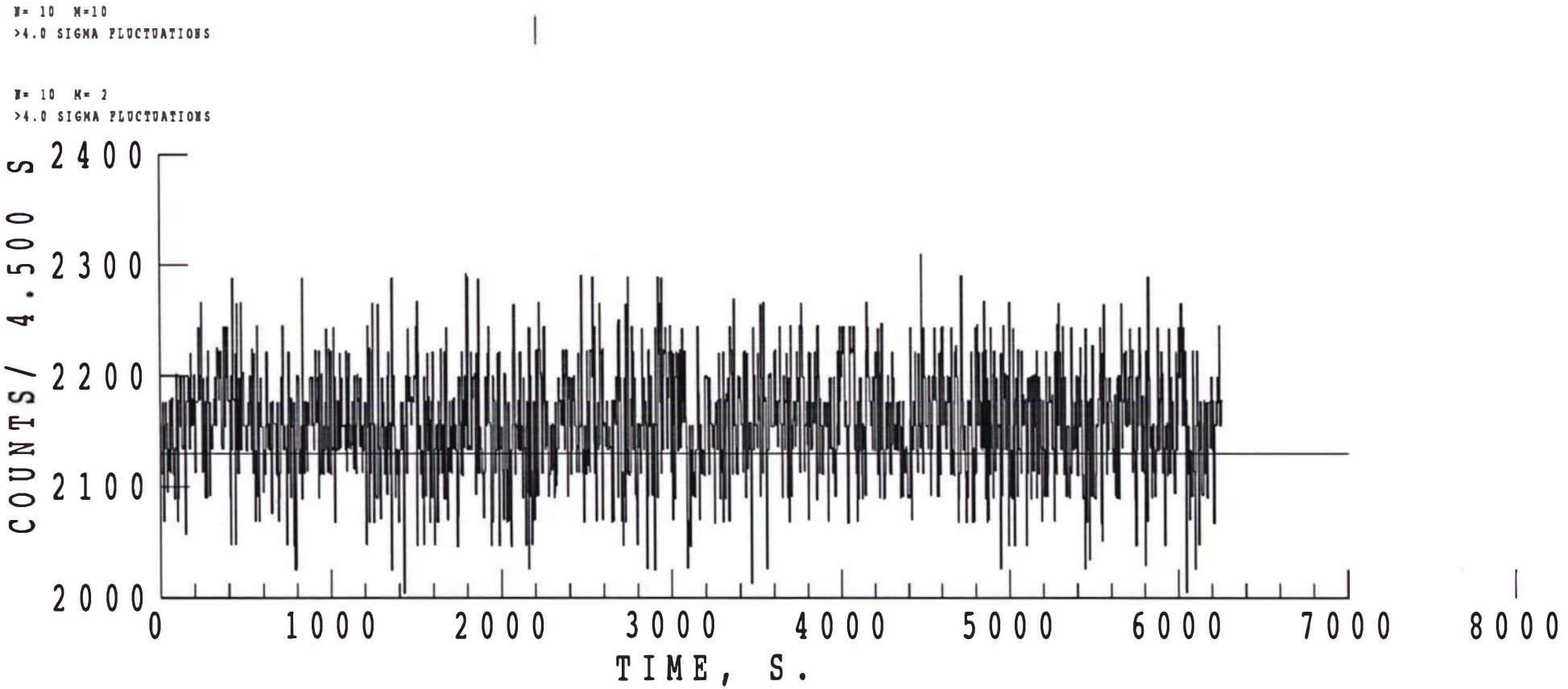
NEAR

ULYSSES RT 15/ 1/98

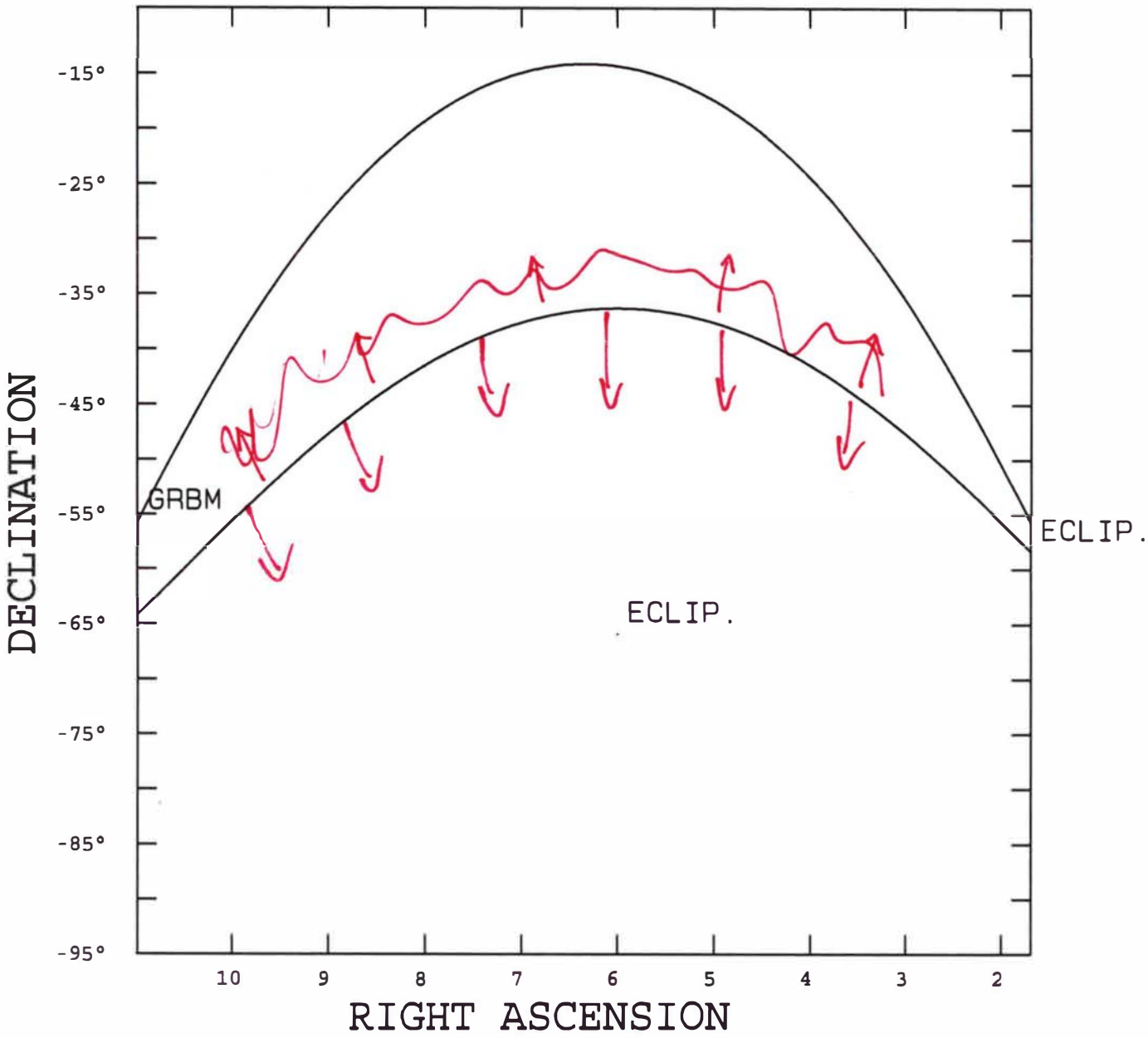
24/ 9/97 6264.306 s

0.500 S INTERVALS REGROUPED BY 9

0- 0 keV



09536 s


-15°
-25°
-35°
-45°
-55°
-65°
-75°
-85°
-95°
DECLINATION
GRBM
ECLIP.
ECLIP.
10
9
8
7
6
5
4
3
2
RIGHT ASCENSION

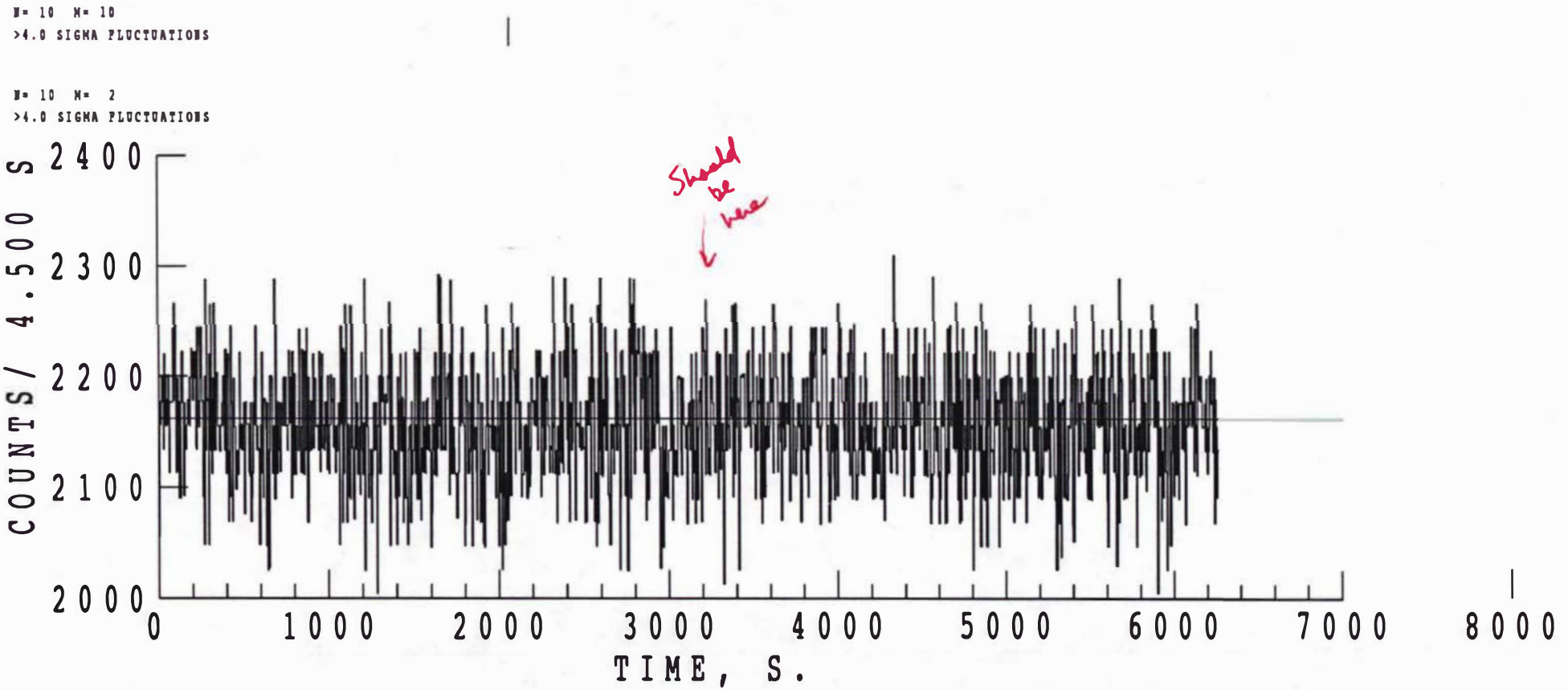
KONUS

ULYSSES RT 04/02/00

24/09/97 6408.306 s

0.500 S INTERVALS REGROUPED BY 9

0- 0 keV



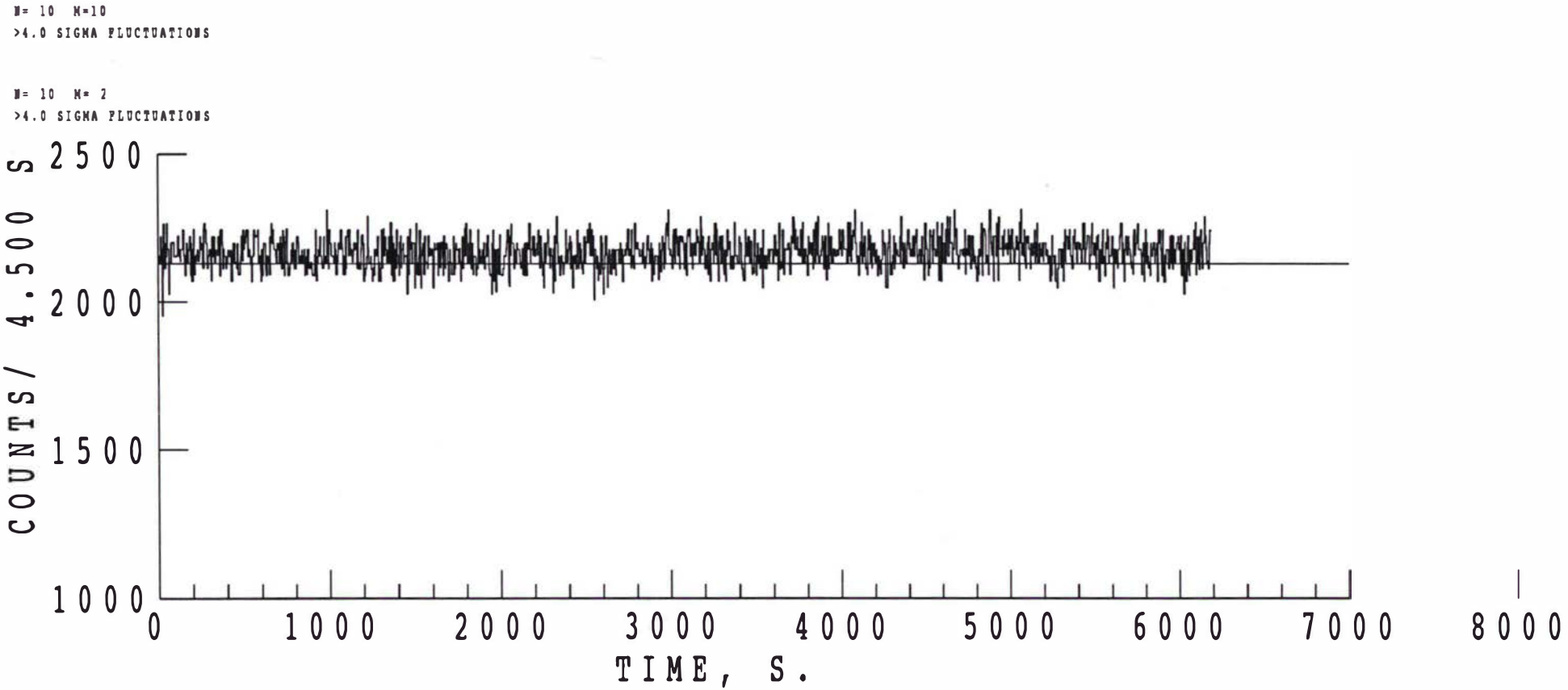
SAX

ULYSSES RT 15/ 1/98

24/ 9/97 9756.346 s

0.500 S INTERVALS REGROUPED BY 9

0- 0 keV



NEAR

HUS DATA

21/11/97

ULYSSES RT

24/ 9/97 11381.863 s

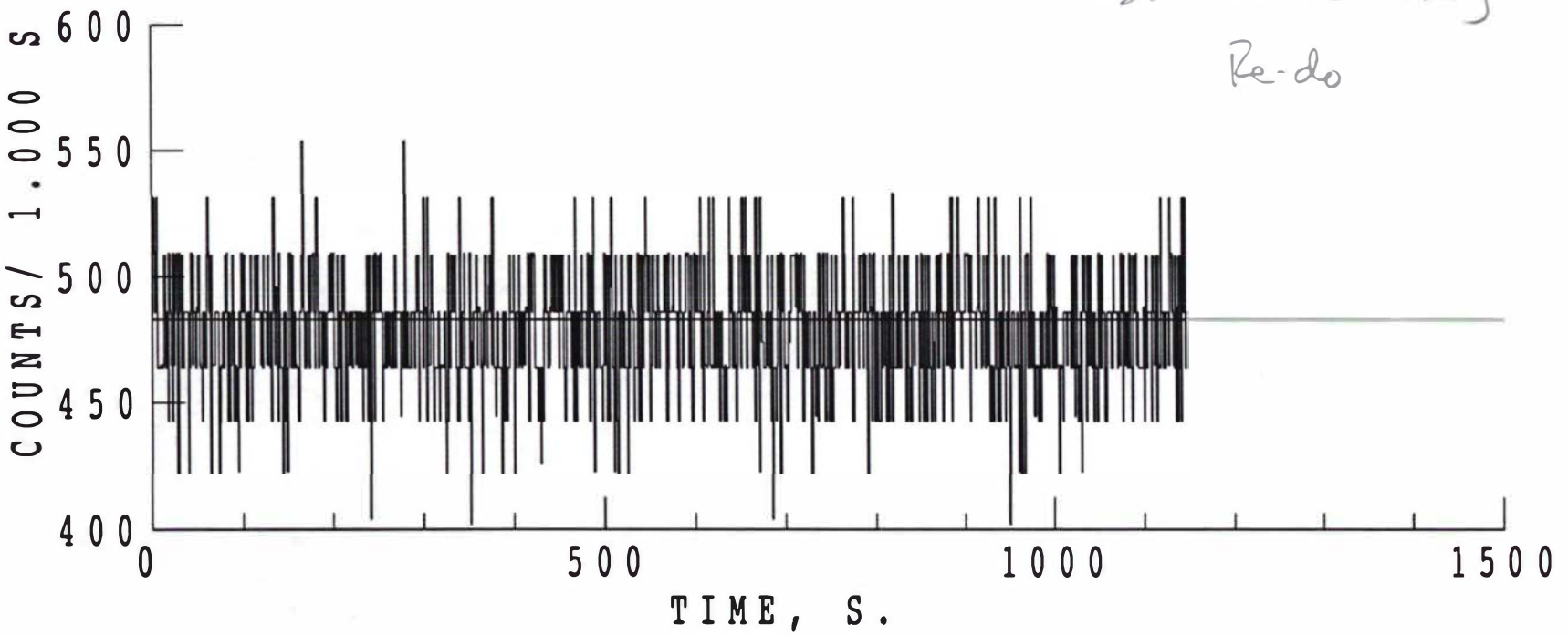
0.500 S INTERVALS REGROUPED BY 2

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

Some data missing
Re-do



From SURASAK@SSLLES.MSFC.NASA.GOV Fri Sep 26 12:27:01 1997
Date: Fri, 26 Sep 1997 14:26:15 -0500 (CDT)
From: SURASAK@SSLLES.MSFC.NASA.GOV
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6394

TIME: TJD=0715 SECONDS=20037

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=185.2 AZIMUTH=-3.0 ERROR=0.225 DEGREES

COMMENTS:
SOLARE FLARE. GOES C4.5, OPTICAL SF. SINGLE PULSE WITH SUBSTRUCTURE.
DUR ABOUT 110S. START AT ABOUT T-40S. THE STRONG PULSE IS BETWEEN
T-5 TO T+30. NOT VISIBLE ABOVE 300 KEV.

From BUTTERWORTH@PIZZA.GSFC.NASA.GOV Tue Sep 30 08:18 PDT 1997
Date: Tue, 30 Sep 1997 11:13:56 -0400 (EDT)
From: BUTTERWORTH@PIZZA.GSFC.NASA.GOV
Subject: Konus report on recent NEAR events
boland@snad.ncsl.nist.gov, cline@apache.gsfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu, scott@rosserv.gsfc.nasa.gov
X-Vmsmail-To: TIM,TOM

Konus report on the latest events from NEAR

NEAR: UTC	Mean	Max	Dur.(s)	Konus:
970924:02:36:43	526	661	20	These two NEAR events are close to the Konus trigger at 02:46:41.465 due to a solar flare. Konus also triggered on solar flares at 05:34:12.140 and 11:01:17.294 on this day and many other indications of solar activity are present in the waiting-mode data.
:02:52:15	532	619	51	
970925:22:45:08	539	790	15	Trigger in the S-facing detector at 22:43:18.047. Hard FRED, with a slow decline; lasting 30 seconds in total.
970926:22:57:43	519	658	28	Trigger in the N-facing detector at 22:56:19.756. Weak, hard event lasting 2 seconds.

From cline@apache.gsfc.nasa.gov Fri Sep 26 04:49 PDT 1997
Mime-Version: 1.0
Date: Fri, 26 Sep 1997 07:52:43 -0400
To: KHURLEY@sunspot.ssl.berkeley.edu, palmer@lheamail.gsfc.nasa.gov,
        Butterworth@lheavx.gsfc.nasa.gov
. om: cline@apache.gsfc.nasa.gov (T L Cline)
Subject: Solar activity

>Resent-Date: Thu, 25 Sep 1997 18:23:10 -0400 (EDT)
>Resent-From: cline@lheavx.gsfc.nasa.gov
>Resent-To: CLINE@APACHE.GSFC.NASA.GOV
>X-Sender: nfox@pop600.gsfc.nasa.gov
>X-Mailer: Windows Eudora Pro Version 3.0.1 (32)
>Date: Thu, 25 Sep 1997 18:21:24 -0400
>To: DIRAC2::BLAKE@eldyn2.gsfc.nasa.gov, chenette@agena.space.lockheed.com,
>   FRITZ@buasta.bu.edu, frank@iowasp.physics.uiowa.edu,
>   gurnett@space.physics.uiowa.edu, temoore@pop600.gsfc.nasa.gov,
>   FMozer@sunspot.SSL.berkeley.edu, parks@geophys.washington.edu,
>   ctrussell@igpp.ucla.edu, jack-scudder@uiowa.edu,
>   shelley@agena.space.lockheed.com, hoffman@eldyn2.gsfc.nasa.gov,
>   baker@orion.colorado.edu, jim.spann@msfc.nasa.gov,
>   sigwarth@iowasp.physics.uiowa.edu, cak@hydra.physics.uiowa.edu,
>   paul.craven@msfc.nasa.gov, britt@geophys.washington.edu,
>   mobilia@agena.space.lockheed.com, rsheldon@ceppad.bu.edu,
>   persoon@iowave.physics.uiowa.edu, FMozer@sunspot.SSL.berkeley.edu,
>   jmeans@igpp.ucla.edu, pete@agena.space.lockheed.com,
>   joe_fennell@qmail2.aero.org, mle@ion.le.ac.uk, opg@irfu.se,
>   SANCHEZ@chaos.sri.com, jcf@hyperion.haystack.edu,
>   ray_greenwald@jhuapl.edu, tony@eiscat.uit.no,
>   HUGHES@DAN030.dnet.sp-agency.ca, swhc1@ion.le.ac.uk,
        M.LOCKWOOD@RL.AC.UK, jgosling@lanl.gov, REIFF@ALFVEN.RICE.EDU,
>   MARY.K.HUDSON@DARTMOUTH.EDU, SPENCE@buasta.bu.edu,
>   dave_rust@jhuapl.edu, nelson@nelson.mrcnh.com, ajl@space.mit.edu,
>   boblin@sunspot.SSL.berkeley.edu, u2kwo@lepvax.gsfc.nasa.gov,
>   u3mlk@lepvax.gsfc.nasa.gov, bougeret@obspm.fr,
>   rosenvinge@lheavx.gsfc.nasa.gov, gloeckler@umdsp.dnet.nasa.gov,
>   u5rpl@lepvax.gsfc.nasa.gov, teegarden@lheavx.gsfc.nasa.gov,
>   mazets@mz.ioffe.rssi.ru, cline@lheavx.gsfc.nasa.gov,
>   tsuruda@fujitubo.gtl.isas.ac.jp, frank@iowasp.physics.uiowa.edu,
>   don.williams@jhuapl.edu, jkikuchi@cfi.waseda.ac.jp,
>   mukai@fujitubo.gtl.isas.ac.jp, kokubun@stelab.nagoya-u.ac.jp,
>   matsumoto@kurasc.kyoto-u.ac.jp, william.d.worrall.1@gsfc.nasa.gov,
>   MCGUIRE@nssdcx.gsfc.nasa.gov, green@nssdcx.gsfc.nasa.gov,
>   hesse@gsfc.nasa.gov, ysmdd@lepmdd.gsfc.nasa.gov,
>   hoffman@eldyn2.gsfc.nasa.gov, u5sac@lepvax.gsfc.nasa.gov,
>   u2dhf@lepvax.gsfc.nasa.gov, u2whm@lepvax.gsfc.nasa.gov,
>   mha@lepmom.gsfc.nasa.gov, xr2mp@lepvax.gsfc.nasa.gov,
>   U2MLG@lepvax.gsfc.nasa.gov, Robert.carovillano@hq.nasa.gov,
>   larry.zannetti@hq.nasa.gov, vondrak@lepvax.gsfc.nasa.gov,
>   u0gmm@lepvax.gsfc.nasa.gov, michael.a.calabrese.1@gsfc.nasa.gov
>From: Nicky Fox <nfox@pop600.gsfc.nasa.gov>
>Subject: Solar activity
>Mime-Version: 1.0
>
>Greetings
>
>   am writing to inform you about a solar event which occurred on Sept
>23/24. SOHO, YOHKOH and GOES have all reported flare and CME activity and
>the current prediction is that the CME - infact there were 2 CME's - are
>heading our way. The NOAA estimate for the storm activity is "major" and

>should occur tomorrow afternoon and Saturday.
>
> I have begun a webpage for this event and you can see all the current
>images and also the NASA/NOAA press release there. The URL is -

  http://www-istp.gsfc.nasa.gov/istp/events/sept97
>
> You may wish to turn on ground-based instruments, or simply keep your eye
>out for auroral activity. If anyone has data or web links which they would
>like added to the ISTP website then please let me know
>
> Thanks
>
>Nicky
>
>

-- Thomas L. Cline ----- cline@apache.gsfc.nasa.gov

From David.M.Palmer.1@gsfc.nasa.gov Tue Sep 30 08:25 PDT 1997
X-Sender: palmer@lheapop.gsfc.nasa.gov
Mime-Version: 1.0
Date: Tue, 30 Sep 1997 11:26:16 -0400
    xrtpm@leptpm.gsfc.nasa.gov, Jacob.I.Trombka.1@gsfc.nasa.gov,
        u1srf@lepvax.gsfc.nasa.gov, butterworth@pizza.gsfc.nasa.gov,
        cline@apache.gsfc.nasa.gov, KHURLEY@sunspot.ssl.berkeley.edu
From: David Palmer <David.M.Palmer.1@gsfc.nasa.gov>
Subject: TGRS triggers matching NEAR
Cc: palmer@rosserv.gsfc.nasa.gov

In addition to
970921_83828 corresp. to 264:23:25:22   (time difference larger than dist.)
TGRS also triggered at
970922_02698 = 265:00:49:28 no NEAR excess
970923_41961 = 266:11:39:21 cf NEAR 266:11:34:51
970924_10027 = 267:02:47:07 probably solar, NEAR sees things at 2:36 and 2:52
970925_81799 = 268:22:43:19 cf NEAR 268:22:45:08

No other triggers through day 271.

I have not actually looked at the data.

I have not checked for rate increases.

David Palmer
palmer@lheamail.gsfc.nasa.gov
USA (301) 286-2739 Voice
USA (301) 286-1684 Fax

From khurley@sunspot Thu Sep 25 12:50 PDT 1997
Date: Thu, 25 Sep 1997 12:51:55 -0700
From: khurley@sunspot (Kevin Hurley)
To: cline@apache.gsfc.nasa.gov
ject: Ulysses responses to NEAR candidates
. khurley@sunspot

> From cline@apache.gsfc.nasa.gov Wed Sep 24 12:34 PDT 1997
> Mime-Version: 1.0
> Date: Wed, 24 Sep 1997 15:37:46 -0400
> To: KHURLEY@sunspot.ssl.berkeley.edu, palmer@lheamail.gsfc.nasa.gov,
> Butterworth@lheavx.gsfc.nasa.gov, scott@rosserv.gsfc.nasa.gov
> From: cline@apache.gsfc.nasa.gov (T L Cline)
> Subject: CORRECTED NEAR CANDIDATE EVENT LIST
>
> OK YOU GUYS - SCOTT FOUND THIS TO BE THE CORRECT LIST.
> TLC
> --
> Date: Wed, 24 Sep 1997 13:15:23 -0400 (EDT)
> From: Tim McClanahan <xrtpm@leptpm.gsfc.nasa.gov>
> To: cline@apache.gsfc.nasa.gov
> Subject: Re: Giant event at Sept 24 02:46:43
> Mime-Version: 1.0
>
> Tom,
> Latest events from NEAR

UTC	Mean	Max	Duration Sec	Ulysses
264:23:25:22	524	890	6	trigger
265:02:24:06	536	816	8	RI
265:08:51:58	524	868	1	No
266:11:34:51	548	1250	3	trigger
267:02:36:43	526	661	20	No - but SAX reports a very
267:02:52:15	532	619	51	strong event at 02:46. It's probably solar

> Tim
>
> -- Thomas L. Cline ----- cline@apache.gsfc.nasa.gov
>
>
>

From feroci@saturn.ias.fra.cnr.it Wed Sep 24 04:47 PDT 1997
Date: Wed, 24 Sep 1997 13:42:42 +0200 (DFT)
From: Marco Feroci <feroci@ias.fra.cnr.it>
To: Kevin Hurley <khurley@sunspot.ssl.berkeley.edu>
ject: Possible intense GRB
. E-Version: 1.0

Day 267

Dear Kevin
tonight we have detected a very intense event on the GRBM, that has been seen also from the other instruments onboard SAX. It has not been reported by BATSE. We see a complex, long event (~100s) with a peak intensity of 10000 cts/s (Jan 11 was 4500 cts/s) and we detected it mainly on the shield facing the Sun, therefore I suspect it could be a solar flare, but neither BATSE and GOES report on it.
Our trigger time is 24/Sept/1997 02:46:43 UT.
Did you see it on your detector onboard Ulysses?

Ciao
Marco

Marco Feroci

Istituto di Astrofisica Spaziale - C.N.R.
Phone: +39-6-9424589 Via E. Fermi 21, I-00044 Frascati, ITALY
Fax : +39-6-9416847 E-mail: feroci@saturn.ias.fra.cnr.it

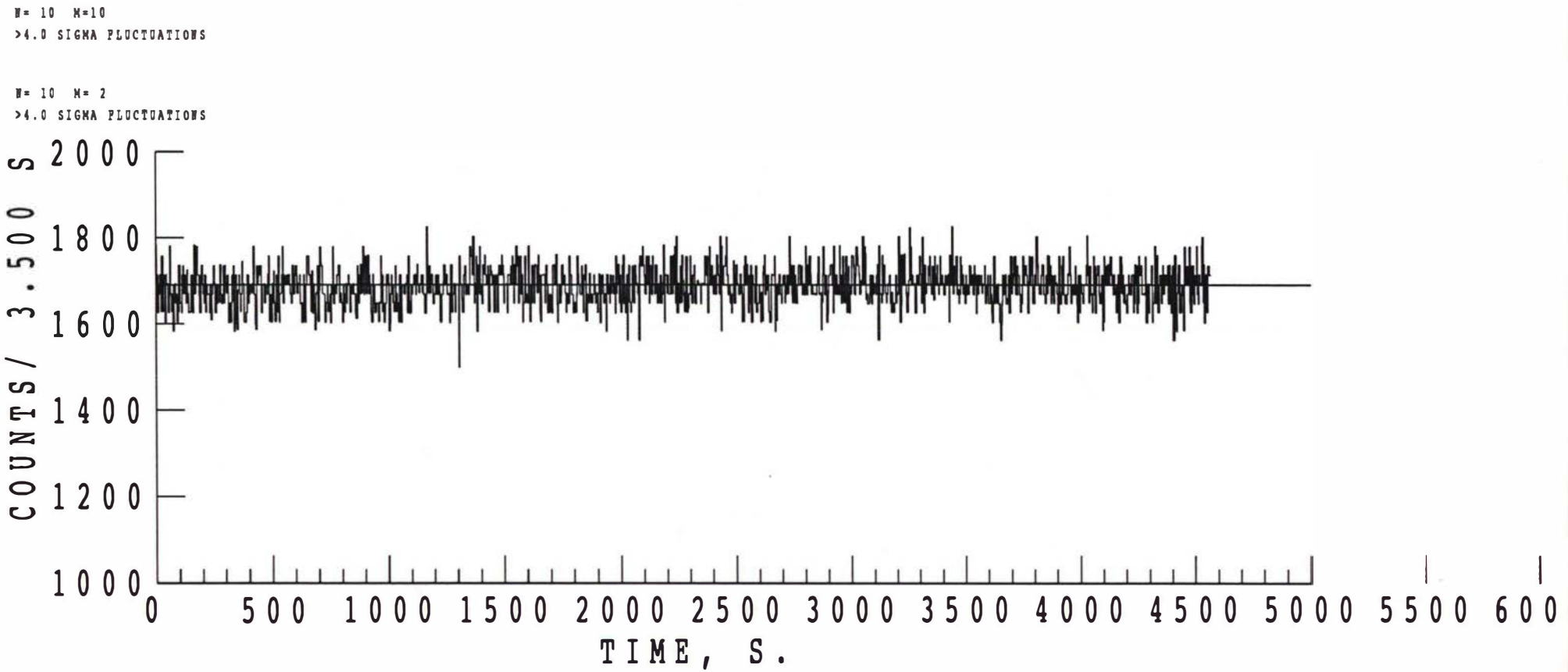
SAX

ULYSSES RT 24/ 9/97

24/ 9/97 11381.863 s

0.500 S INTERVALS REGROUPED BY 7

0- 0 keV



From SURASAK@SSLLES.MSFC.NASA.GOV Fri Sep 26 12:35:31 1997
Return-Path: <SURASAK@SSLMOR.msfc.nasa.gov>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id MAA27319; Fri, 26 Sep 1997 12:35:25 -0700
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id MAA19301; Fri, 26 Sep 1997 12:35:18 -0700
Date: Fri, 26 Sep 1997 14:35:12 -0500 (CDT)
From: SURASAK@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970926143512.2020d6a9@SSLLES.MSFC.NASA.GOV>
Subject: Crossing Windows for BATSE Burst 6395
Content-Length: 1135
X-Lines: 26
Status: RO

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

 BATSE BURST #     6395
 EVENT OF 1997 SEP 24 DAY OF YEAR=267
 EVENT CROSSING TIME AT BATSE      : 49823. S. OR 13:50:23.0
 COORDINATES ARE    0.000    0.000       6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 288.000     0.000
 BATSE PEAK COUNTING RATE:    2750     C/S

 EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
 INTERPOLATED POSITION OF ULYSSES ON 24/ 9/  97 IS:
 RA=  164.799 DEC=    16.747 DIST=     6.179 AU
 BATSE-ULYSSES DISTANCE =  924437308. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 58.38 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1616.88 SECS.
 CROSSING TIME AT ULYSSES     IS 51440. S. OR   14:17:19 +/-  530.42 SECONDS

 EVENT CROSSING TIME AT MARS       WILL BE FOUND
 POSITION OF MARS ON 24/ 9/  97 IS:
 RA=  234.024 DEC=  -20.380 DIST=     1.760 AU
 MARS-BATSE DISTANCE =  263311904. KM.
 ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=123.46 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= -484.22 SECS.
 CROSSING TIME AT MARS       IS 49339. S. OR   13:42:18 +/-  119.87 SECONDS


                BATSE BURST TRIGGER
NO.: 6395

TIME: TJD=0715 SECONDS=49823

TYPE: BURST                     SOLAR FLARE TRIGGER SIGNAL:N

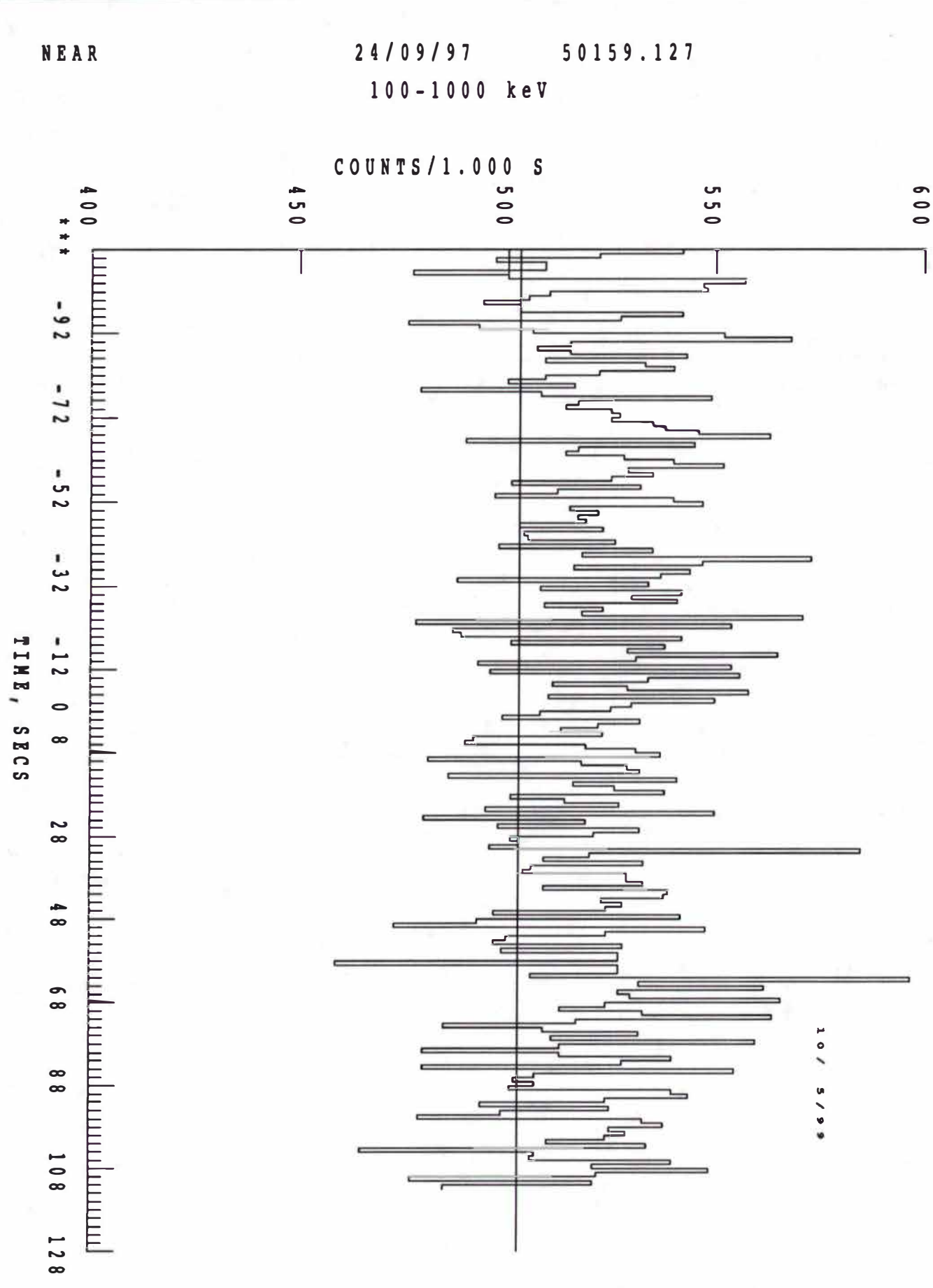
SIGNIFICANCE:       SIGMA

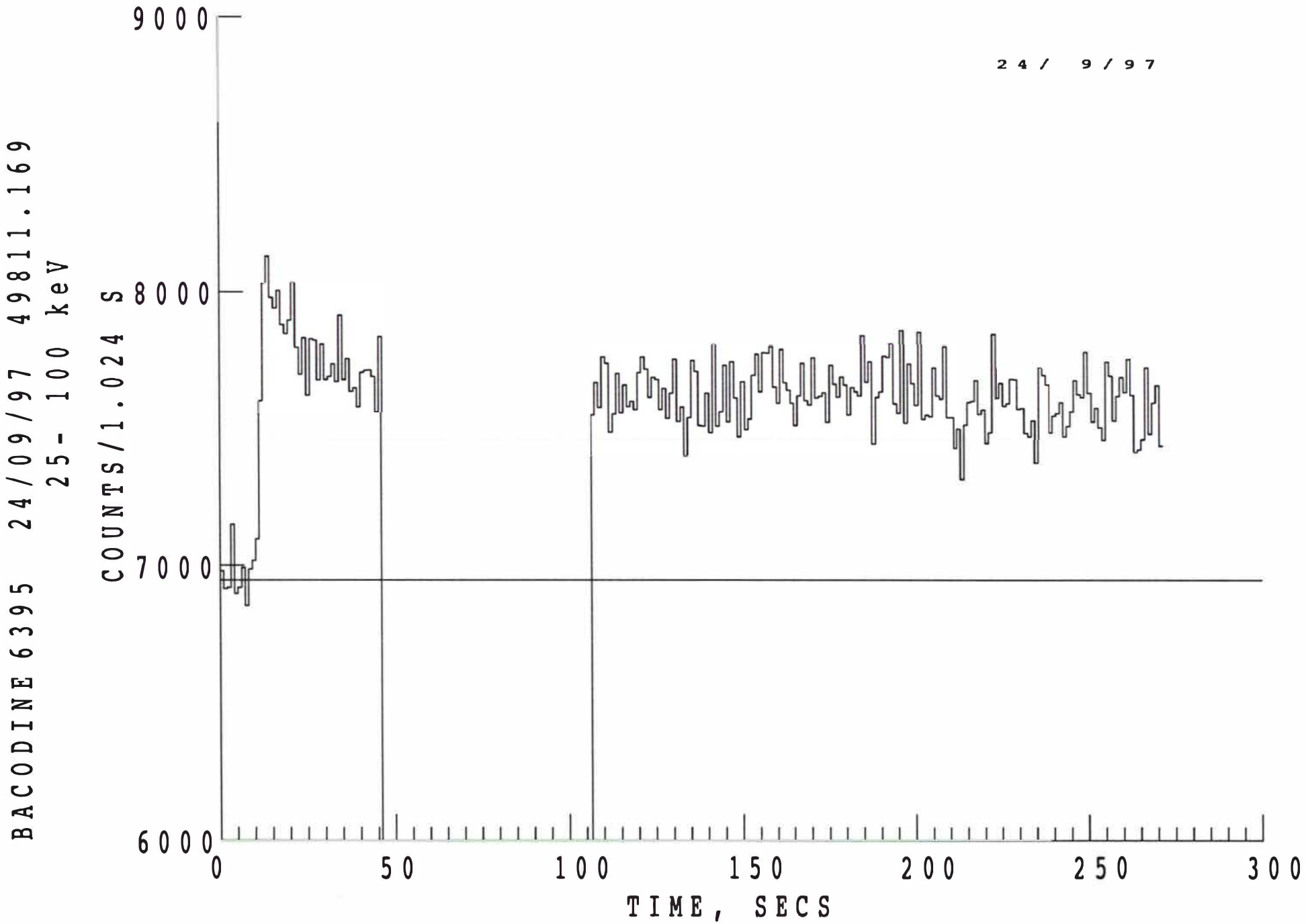
INTENSITY:          COUNTS/CM2

LOCATION: ZENITH=107.7  AZIMUTH=242.2  ERROR=8.692 DEGREES

COMMENTS:
GRB. DUR ABOUT 13S. SINGLE PULSE. VISIBLE ABOVE 300 KEV.


 BATSE #   Date      TJD      SoD   Max ct/s   RA   Dec  Dur (s)
   6395    970924    10715    49823     2750   288     0     13
```


NEAR
24/09/97 50159.127
100-1000 keV
COUNTS/1.000 S
400
450
500
550
600
***
-92
-72
-52
-32
-12
0
8
28
48
68
88
108
128
TIME, SECS
10/ 5/99


BACODINE 6395 24/09/97 49811.169
25- 100 keV
COUNTS/1.024 S
9000
8000
7000
6000
24/ 9/97
0
50
100
150
200
250
300
TIME, SECS

BATSE BURST# 6395

ULYSSES RT 26/ 9/97

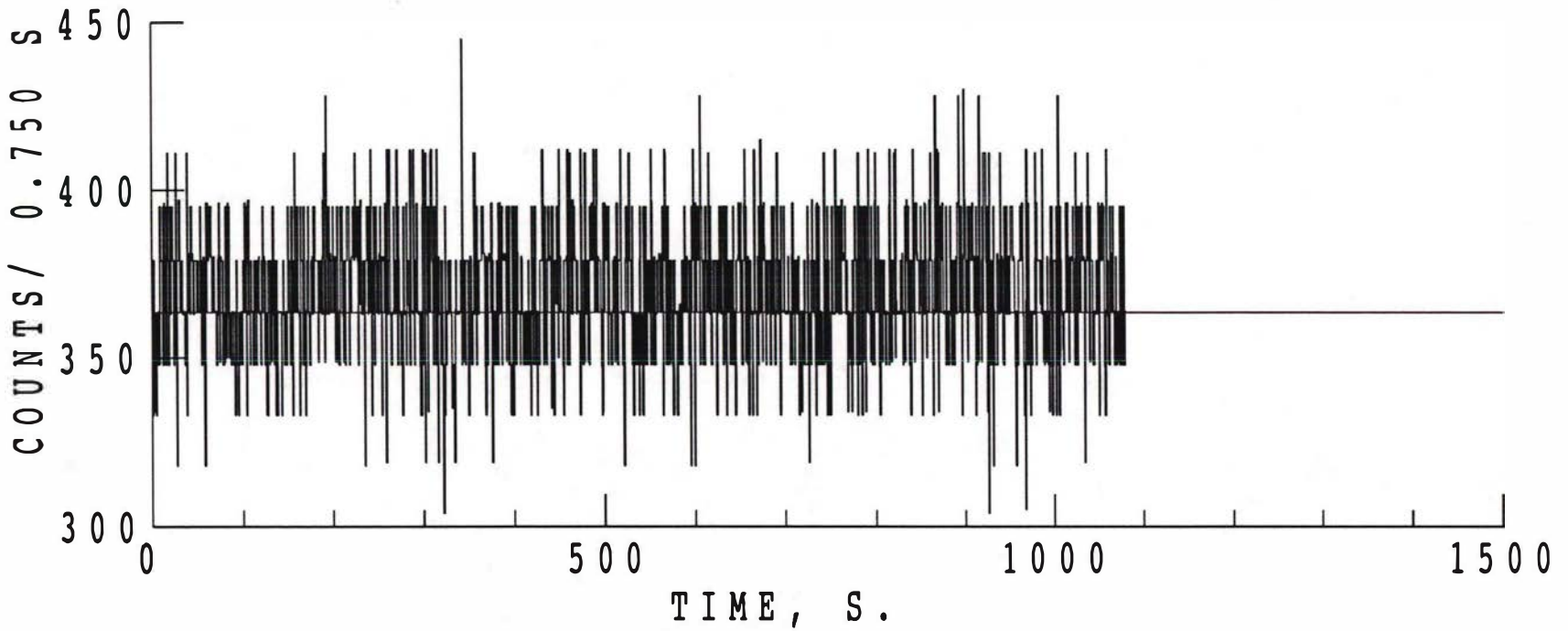
24/ 9/97 50904.055 s

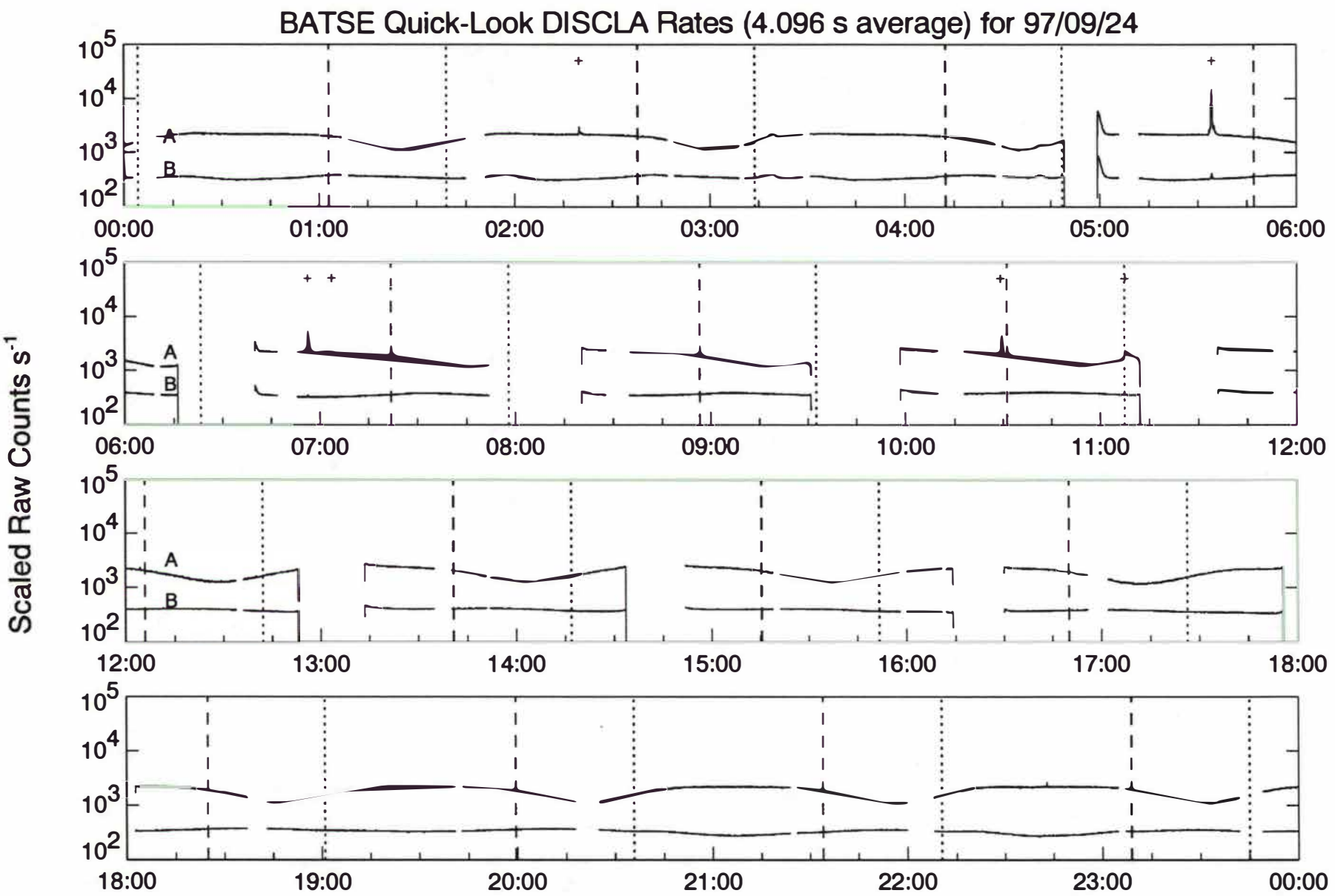
0.250 S INTERVALS REGROUPED BY 3

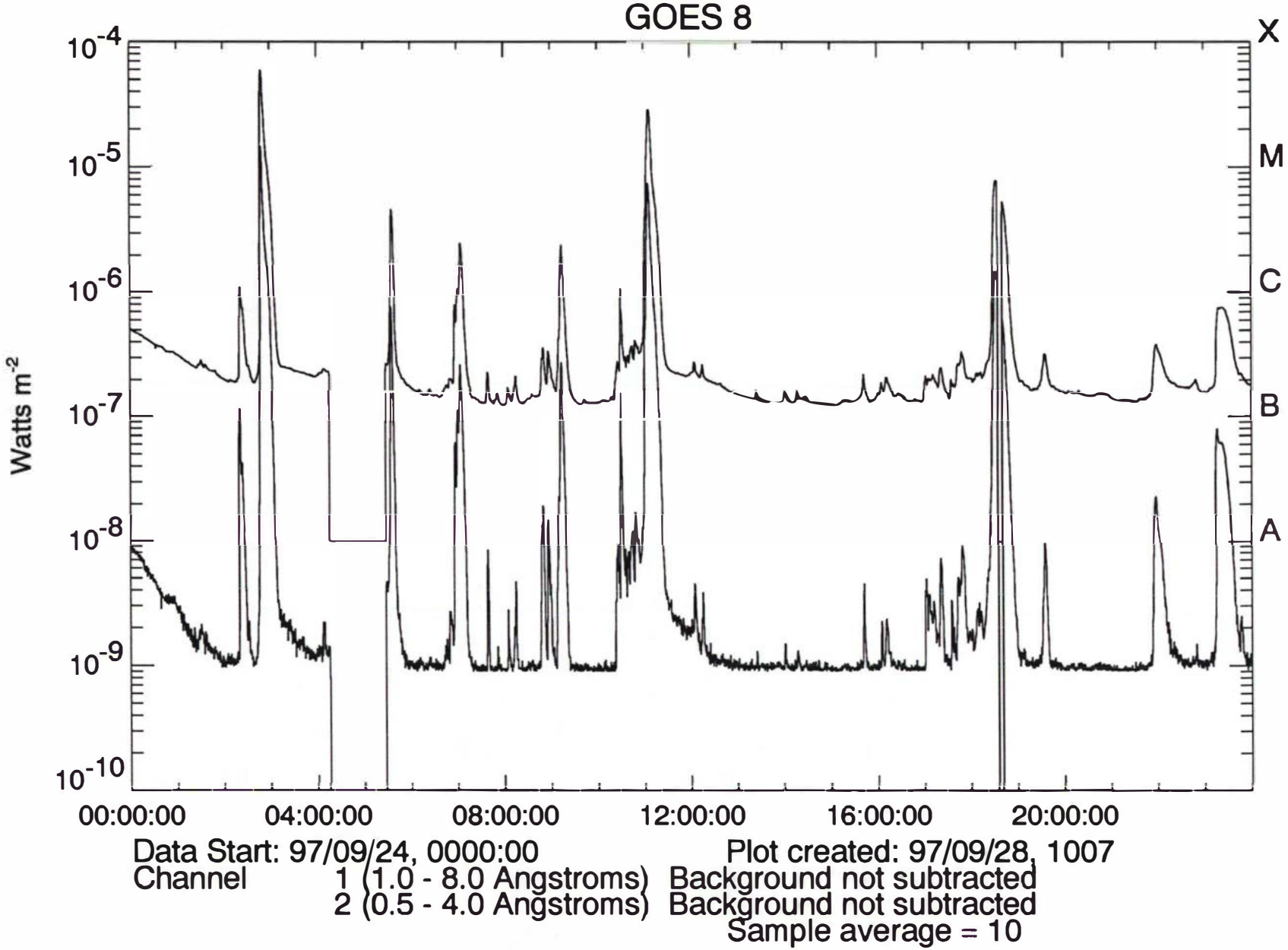
0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

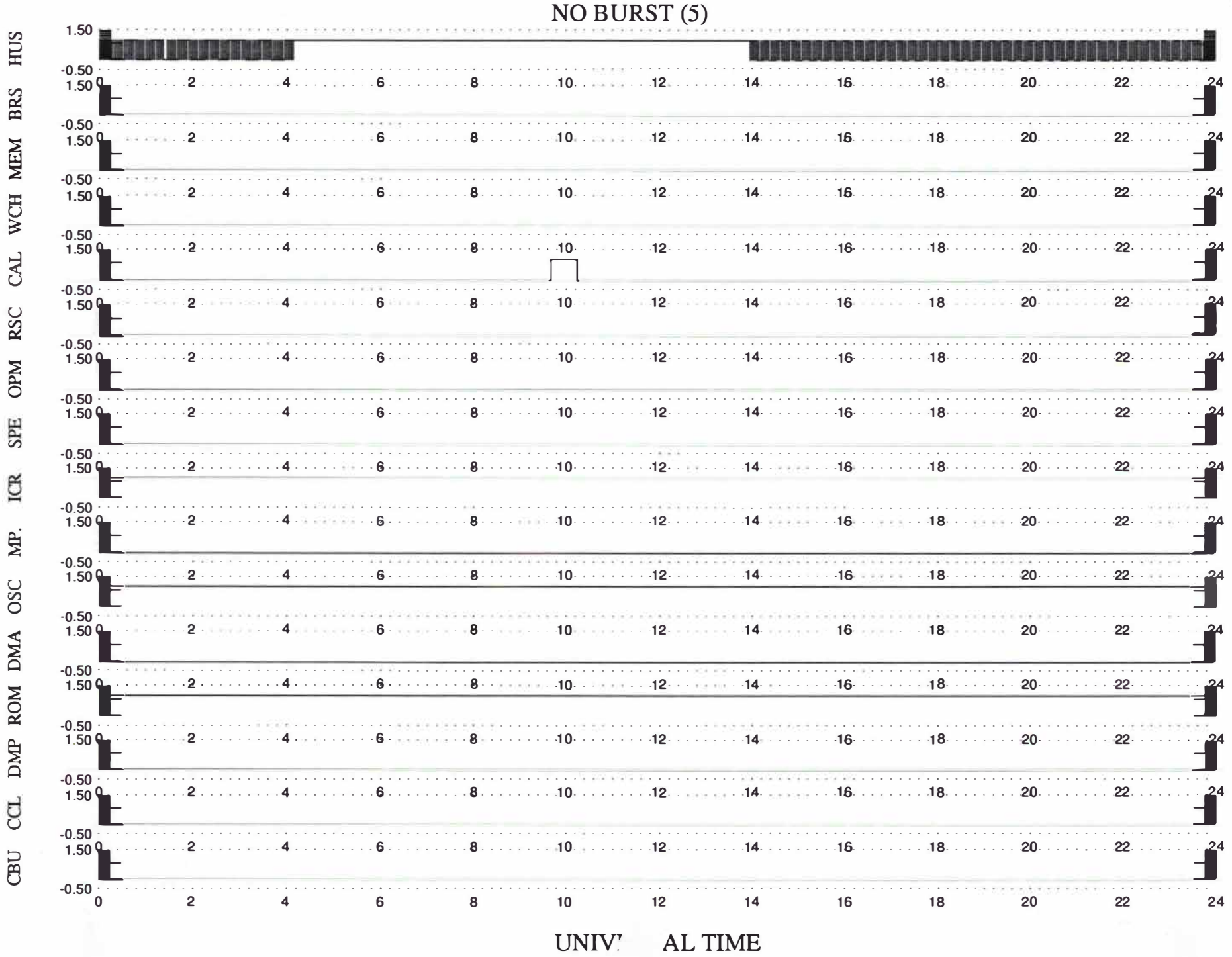
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS




BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/24
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/28, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare

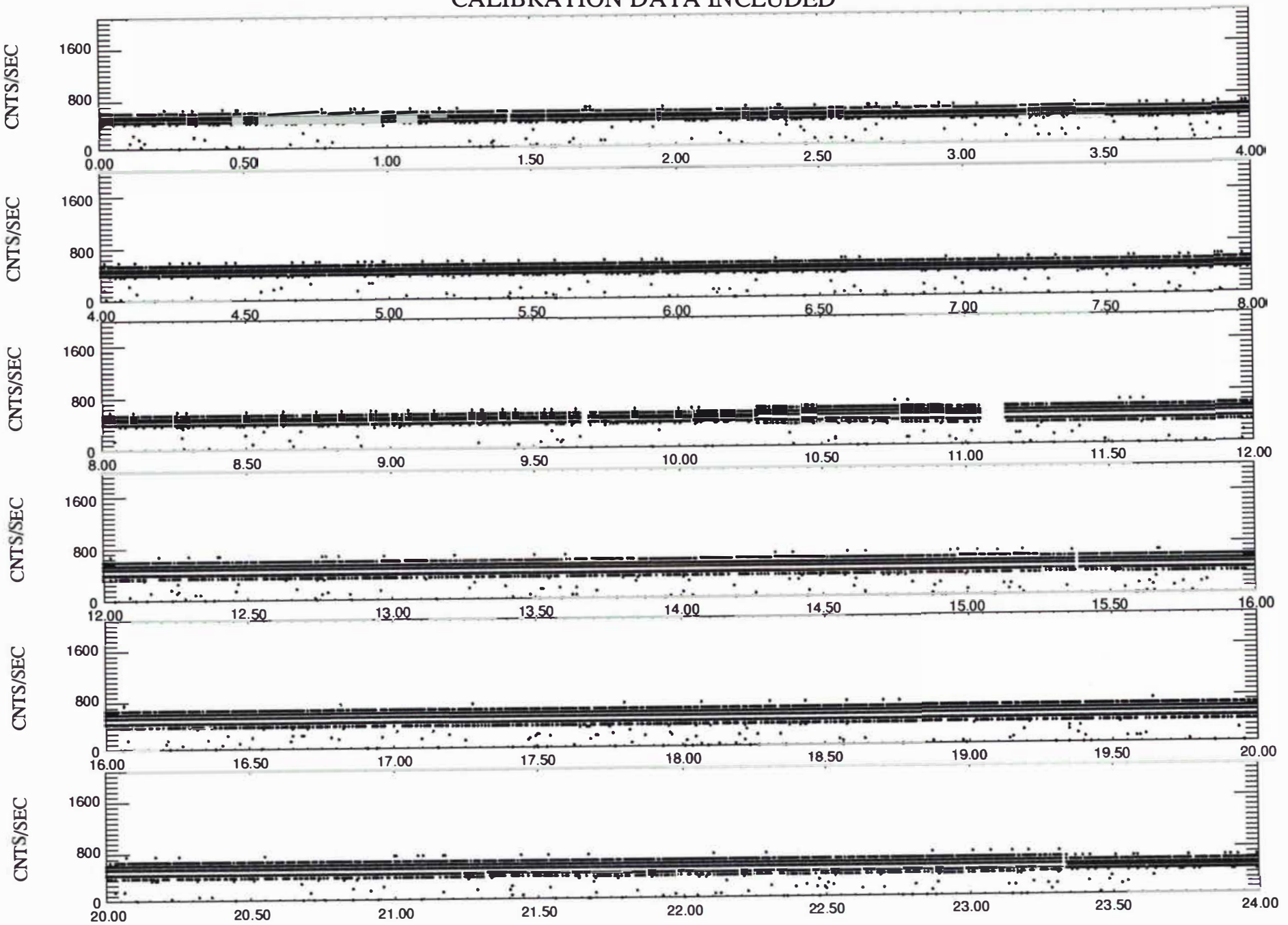

GOES 8
X
M
C
B
A
Watts m-2
10-4
10-5
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/24, 0000:00
Plot created: 97/09/28, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 267, year 1997 to day 267, year 1997 1/14/98



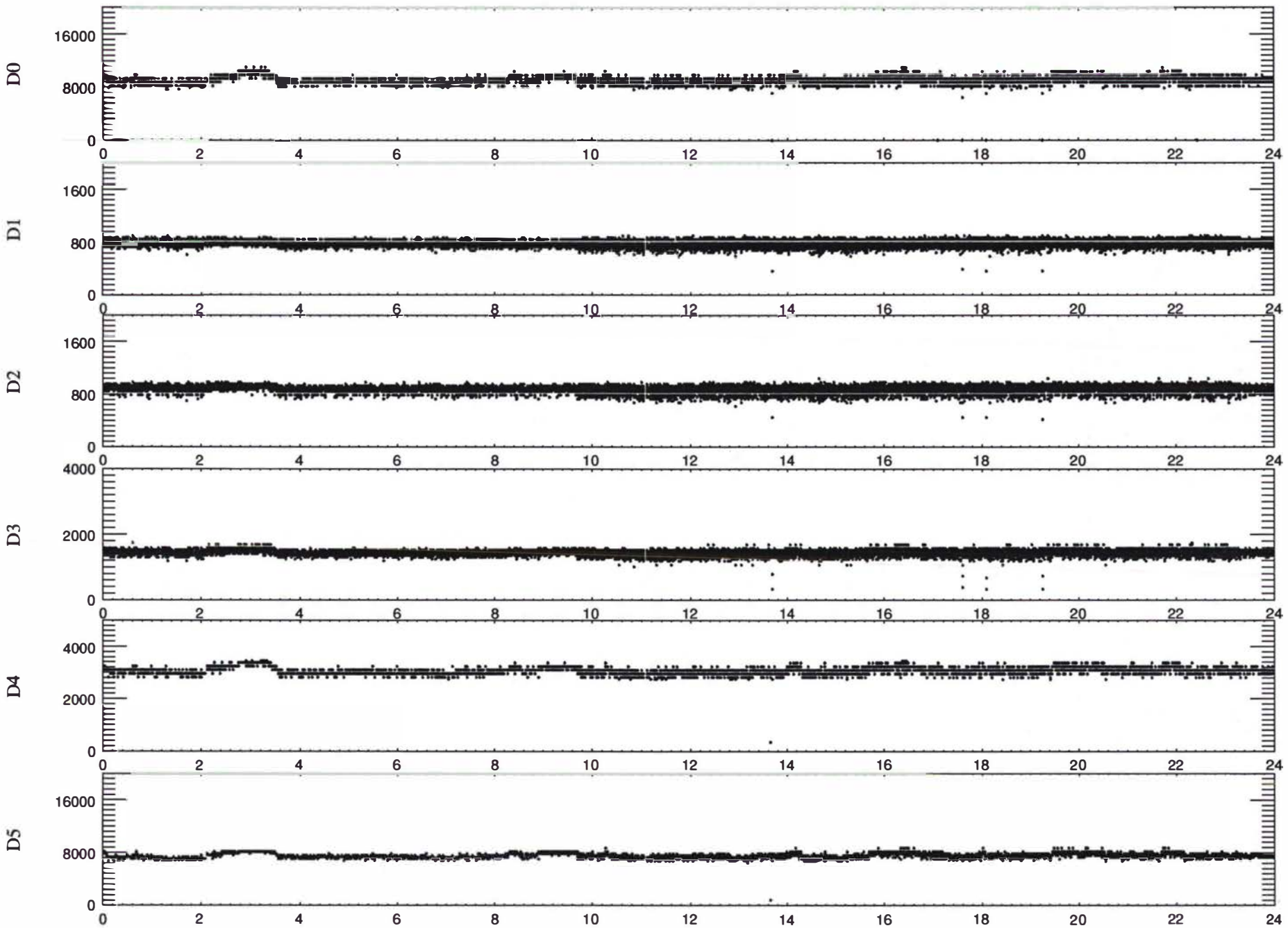
HUS 2A, MODE 1, NOT AVERAGED EDR day 267, year 1997 to day 267, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV `AL TIME

HUS 2B COUNTS / SEC EDR day 267, year 1997 to day 267, year 1997 1/14/98



From RICHARDSON@SSLLES.MSFC.NASA.GOV Mon Sep 29 10:50:05 1997
Return-Path: <RICHARDSON@SSLLES.MSFC.NASA.GOV>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id KAA15051; Mon, 29 Sep 1997 10:49:52 -0700
From: RICHARDSON@SSLLES.MSFC.NASA.GOV
Received: from SSLLES.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id KAA01230; Mon, 29 Sep 1997 10:49:39 -0700
Date: Mon, 29 Sep 1997 12:49:29 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970929124929.2020e4ec@SSLLES.MSFC.NASA.GOV>
Subject: Crossing Windows for BATSE Burst 6396
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6396
EVENT OF 1997 SEP 25 DAY OF YEAR=268
EVENT CROSSING TIME AT BATSE : 25445. S. OR 07:04:05.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 347.000 55.000
BATSE PEAK COUNTING RATE: 4500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 25/ 9/ 97 IS:
RA= 164.895 DEC= 16.683 DIST= 6.176 AU
BATSE-ULYSSES DISTANCE = 923869126. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 71.71 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 967.37 SECS.
CROSSING TIME AT ULYSSES IS 26412. S. OR 07:20:12 +/- 572.68 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 25/ 9/ 97 IS:
RA= 234.739 DEC= -20.548 DIST= 1.765 AU
MARS-BATSE DISTANCE = 264016656. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 60.60 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 432.38 SECS.
CROSSING TIME AT MARS IS 25877. S. OR 07:11:17 +/- 139.77 SECONDS

BATSE BURST TRIGGER

NO.: 6396

TIME: TJD=0716 SECONDS=25445

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=176.7 AZIMUTH=154.0 ERROR=2.3 DEGREES

COMMENTS:
GRB PULSE WITH STRUCTURE. DURATION APPROX. = 70SEC. NOT VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6396	970925	10716	25445	4500	347	+55	70

Helio. corr. removed Feb 2 '00

Date: Apr 8 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

☐ Were data checked by Joe Springer for 0.5 s errors? N/A

☑ 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 $T_\bullet$?

☑ Error circle position and radius from public catalog used?

☐ If MER data were used, is a 30 ms systematic error included? N/A

3. PVO Data

☐ Ephemeris of PVO used (not Venus)?

☐ 2000 coordinates used?

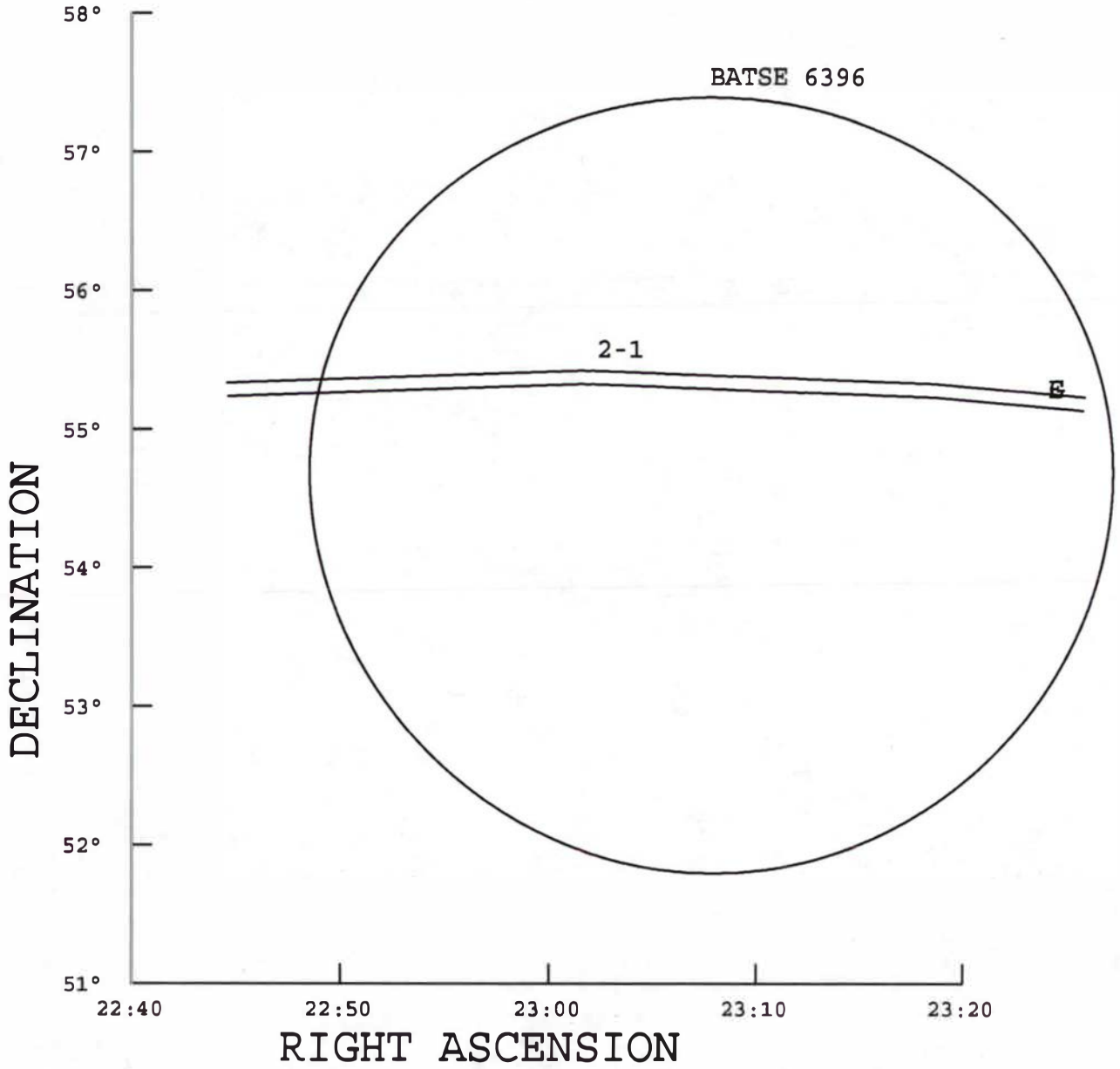
☐ Geocentric time used?

☑ ACCESS database updated?

EVENT OF SEP 25, 1997 7:19

2/ 2/ 0

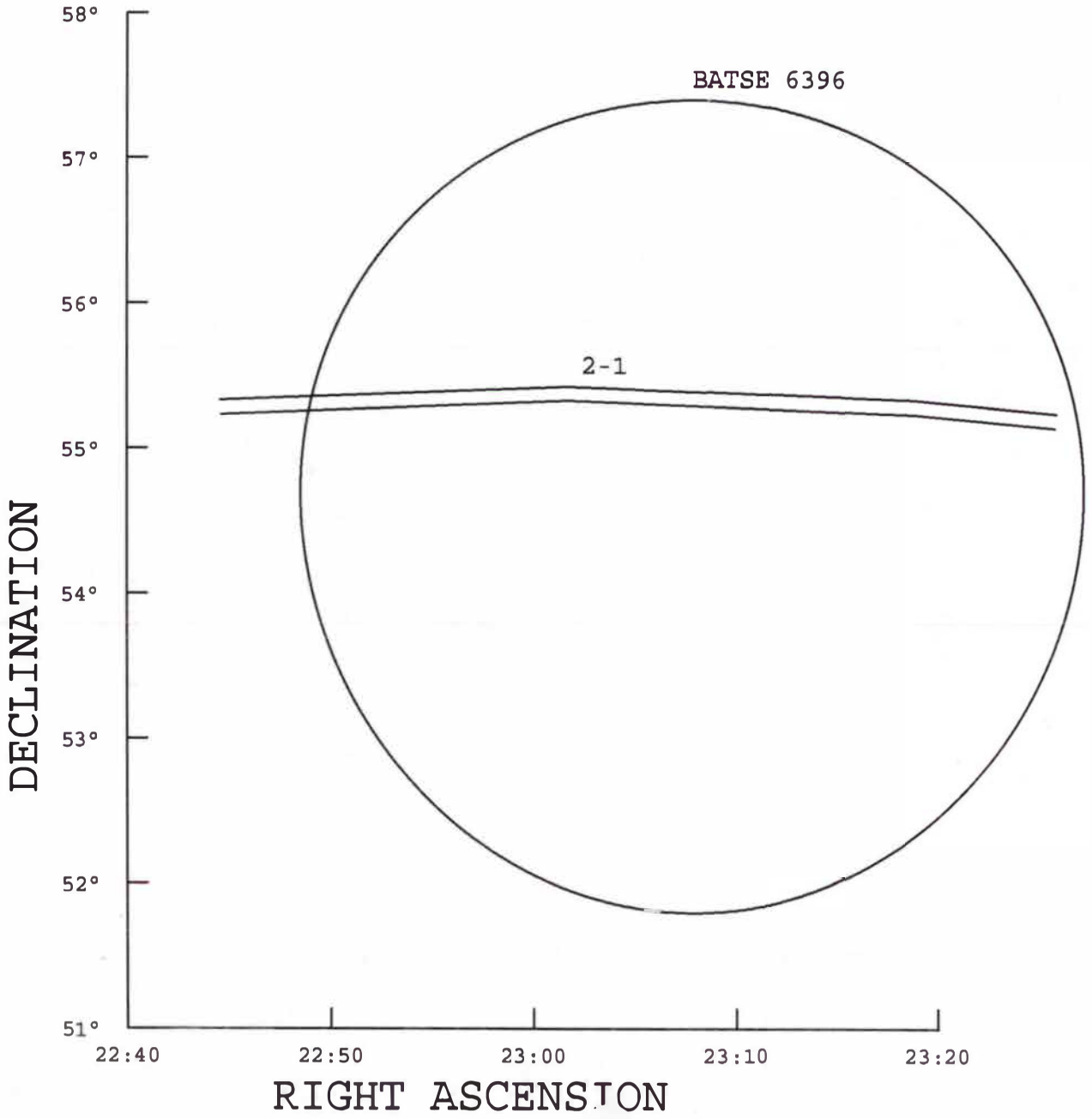
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 BATSE

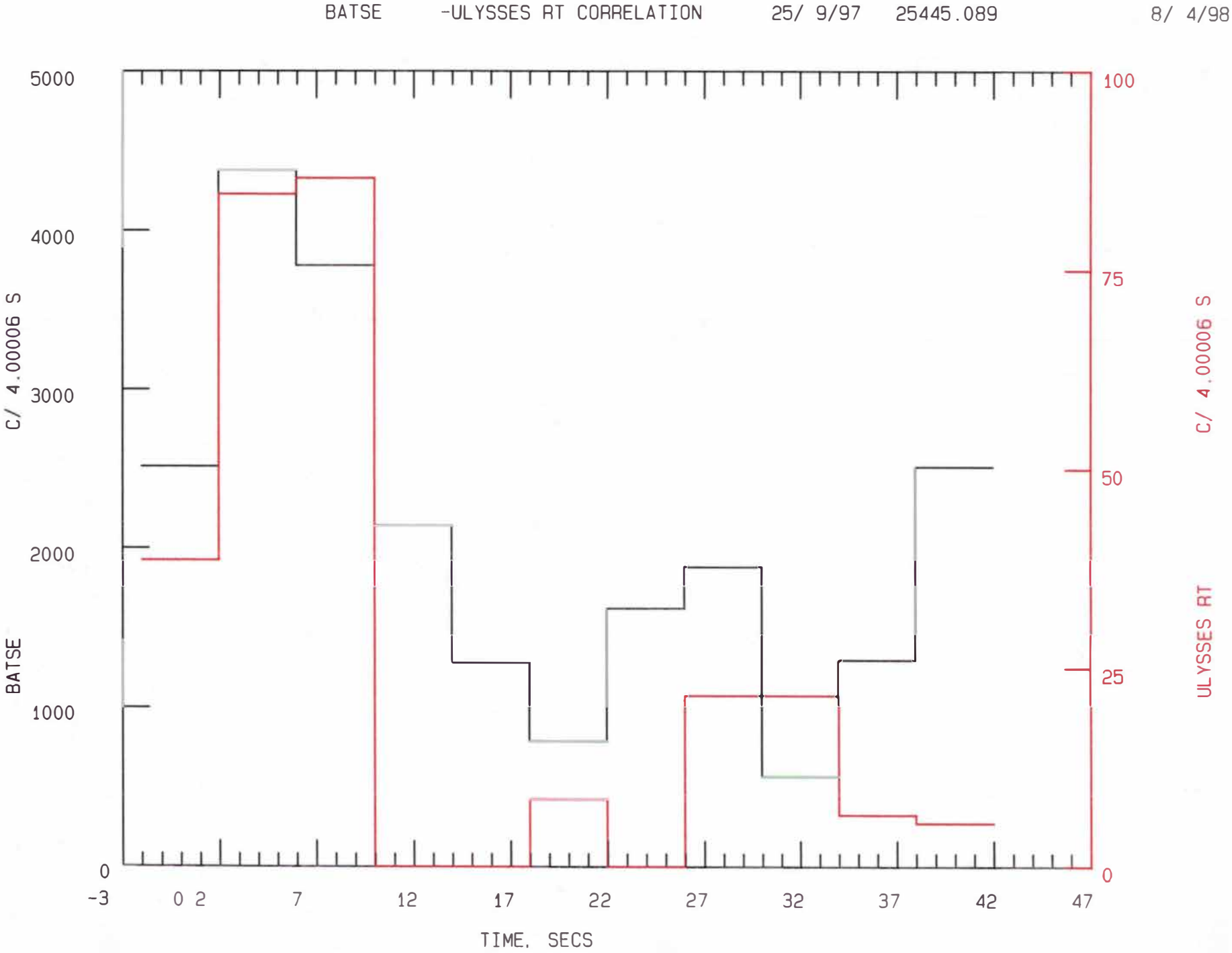


EVENT OF SEP 25, 1997 7:19

8/ 4/98

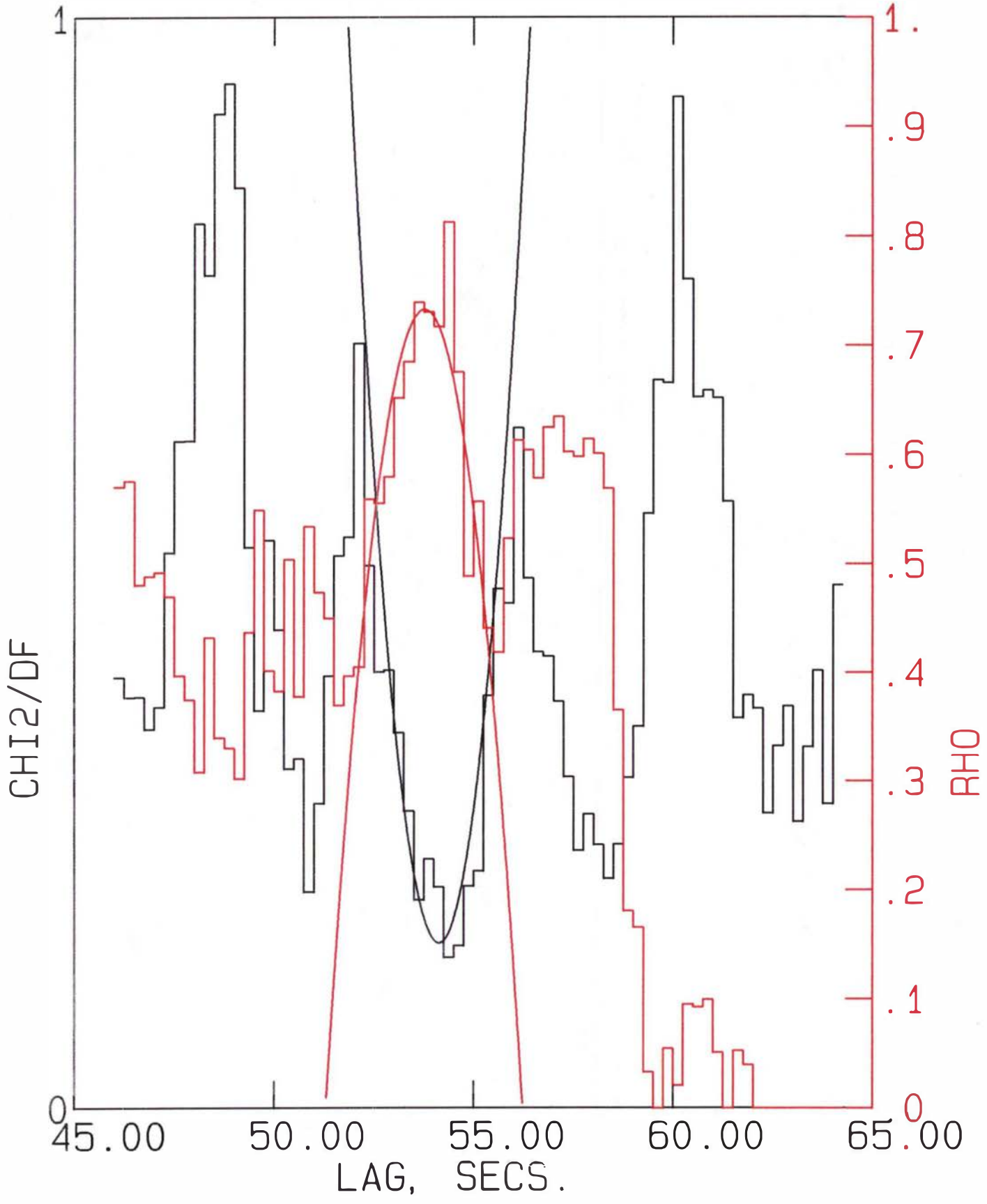
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 BATSE




BATSE -ULYSSES RT CORRELATION 25/ 9/97 25445.089 8/ 4/98
5000
4000
3000
2000
1000
0
C/ 4.00006 S
BATSE
100
75
50
25
0
C/ 4.00006 S
ULYSSES RT
-3
0 2
7
12
17
22
27
32
37
42
47
TIME, SECS

8/ 4/98

BATSE -ULYSSES RT CORRELATION 25/ 9/97 25445.089



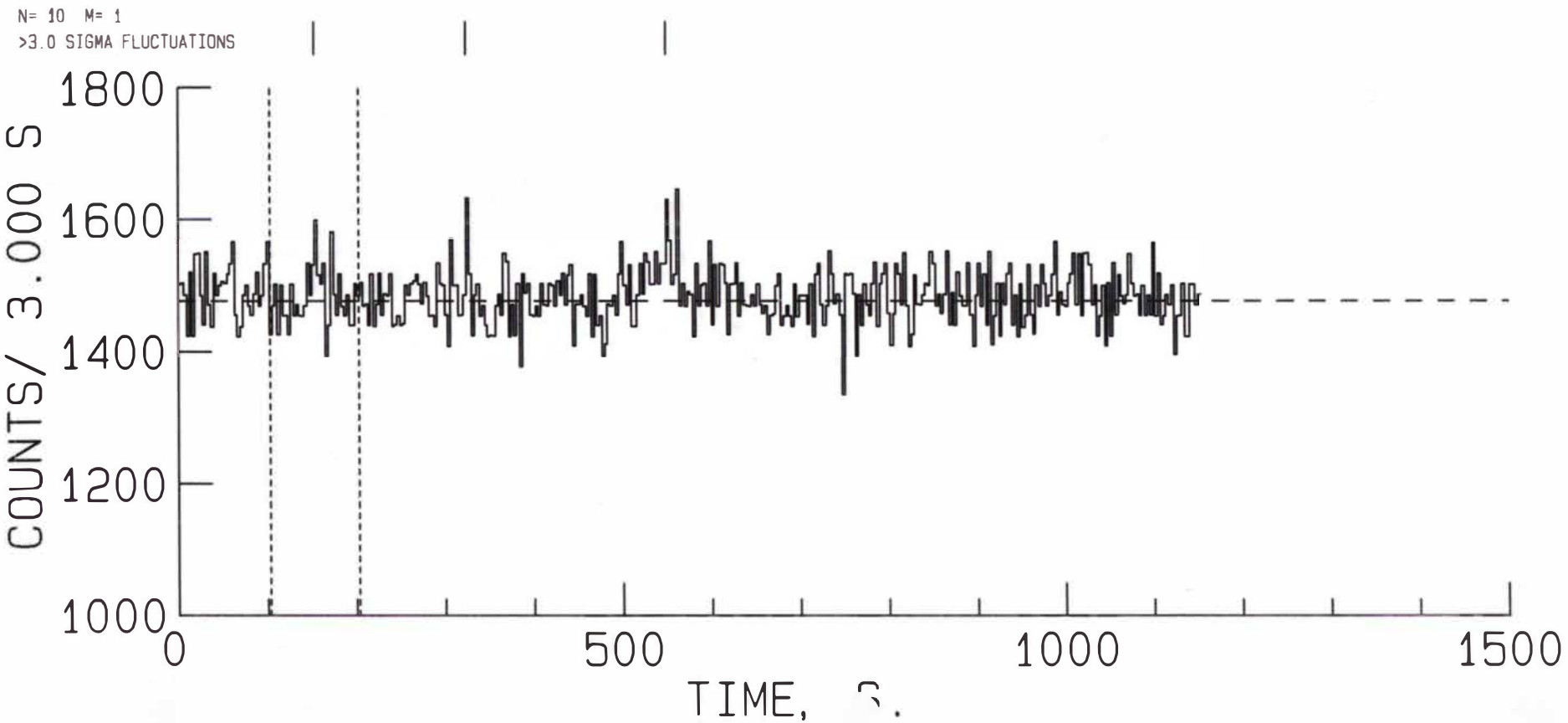
ULYSSES RT

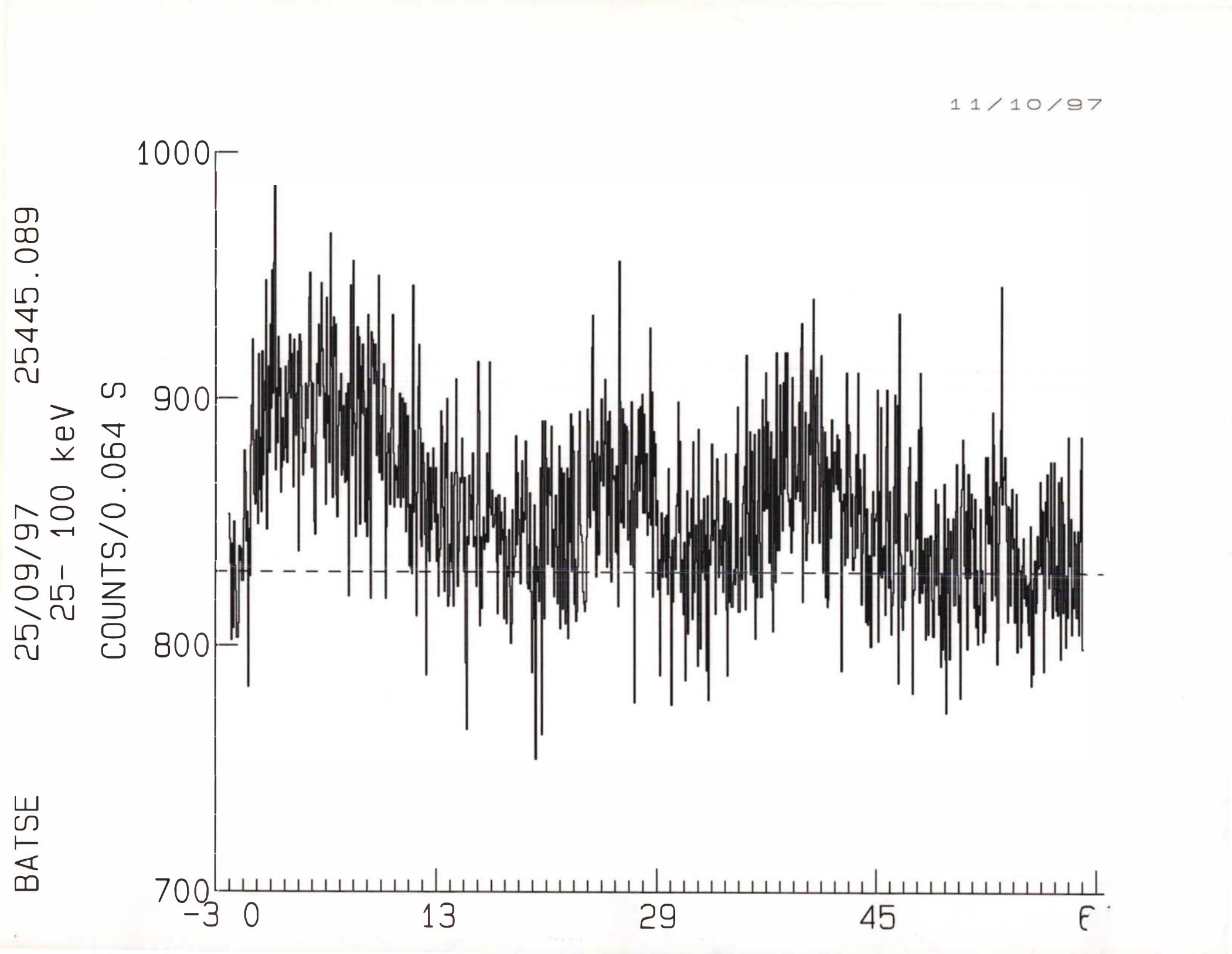
8/ 4/98

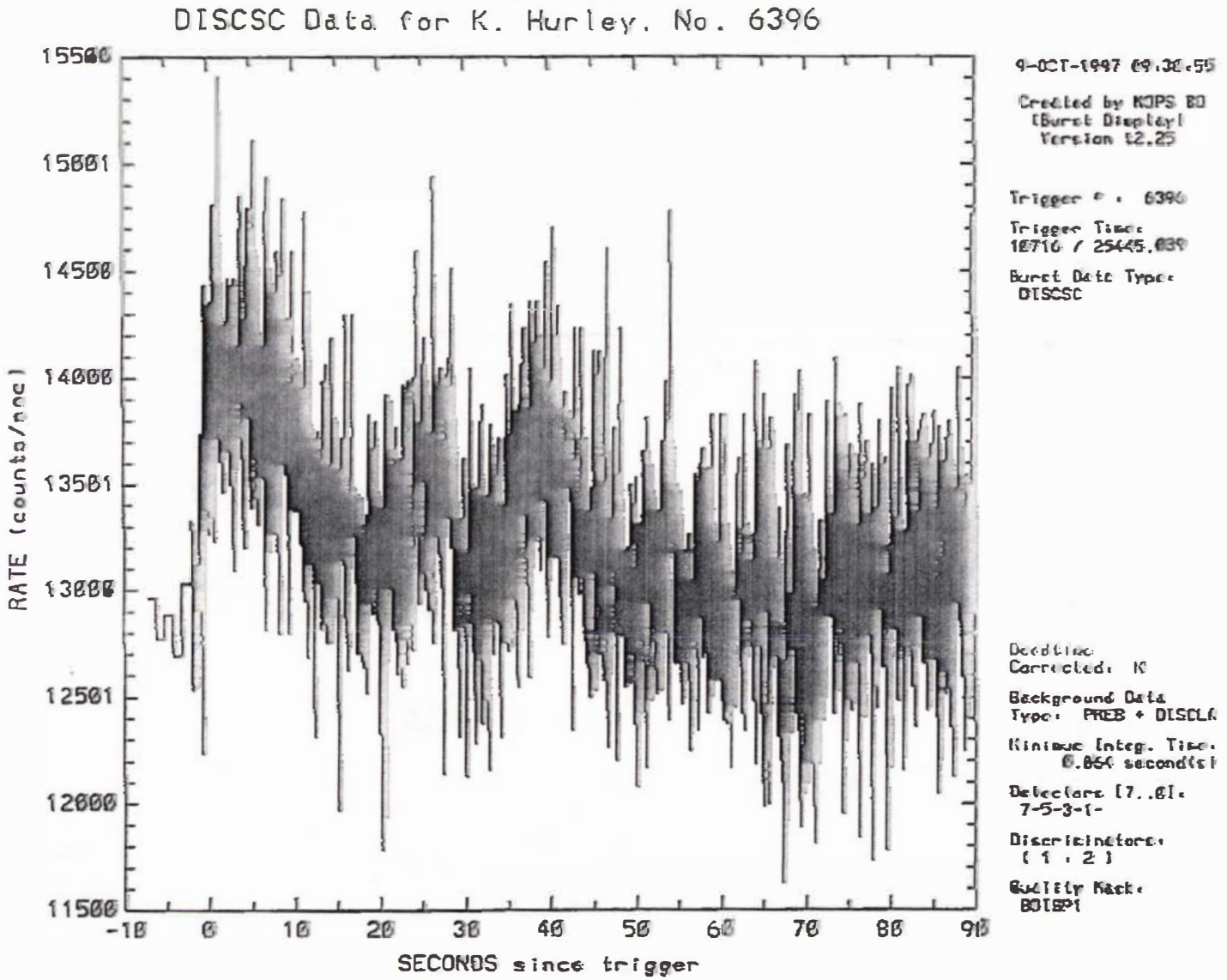
25/ 9/97 25848.000 s

0.250 S INTERVALS REGROUPED BY 12

22- 148 keV

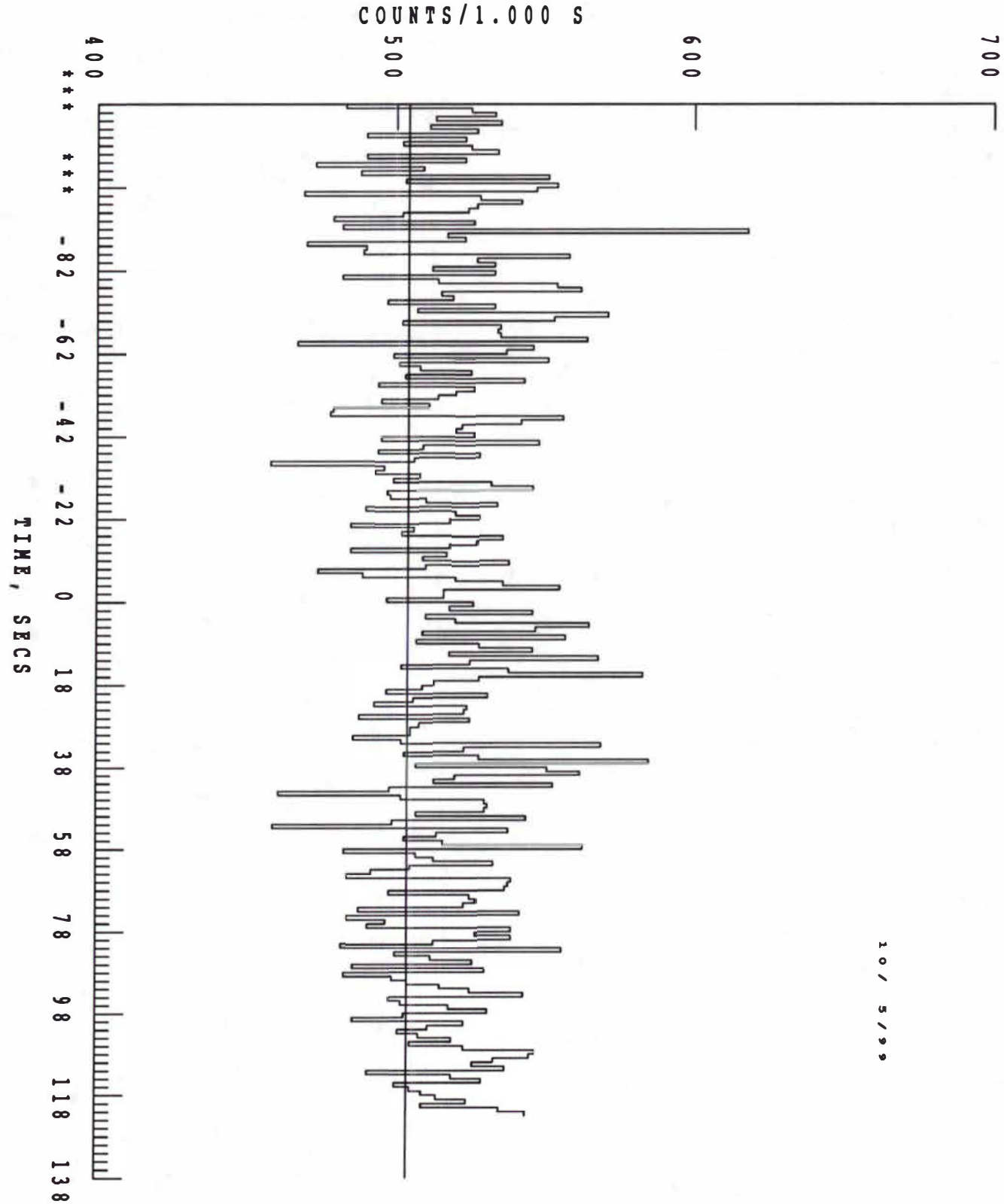



11/10/97
1000
900
800
700
-3
0
13
29
45
BATSE
25/09/97
25445.089
25- 100 keV
COUNTS/0.064 S


DISCSC Data for K. Hurley. No. 6396
RATE (counts/sec)
15500
15001
14500
14000
13501
13000
12501
12000
11500
-10
0
10
20
30
40
50
60
70
80
90
SECONDS since trigger
9-OCT-1997 09:30:55
Created by KONUS BD
(Burst Display)
Version 12.25
Trigger # : 6396
Trigger Time:
18716 / 25445.039
Burst Data Type:
DISCSC
Deadtime
Corrected: N
Background Data
Type: PREB + DISCLA
Kinimum Integ. Time:
0.064 second(s)
Detectors [7..0]:
7-5-3-1-
Discriminators:
[1 : 2]
Quality Mask:
BOIBP1

NEAR 25/09/97 25268.115

100-1000 keV



From RICHARDSON@SSLLES.MSFC.NASA.GOV Mon Sep 29 10:35:41 1997
Return-Path: <RICHARDSON@SSLMOR.msfc.nasa.gov>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id KAA14789; Mon, 29 Sep 1997 10:35:35 -0700
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id KAA01074; Mon, 29 Sep 1997 10:35:26 -0700
Date: Mon, 29 Sep 1997 12:35:15 -0500 (CDT)
From: RICHARDSON@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970929123515.2020e4ec@SSLLES.MSFC.NASA.GOV>
Subject: Crossing Windows for BATSE Burst 6397
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6397
EVENT OF 1997 SEP 25 DAY OF YEAR=268
EVENT CROSSING TIME AT BATSE : 81795. S. OR 22:43:15.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 326.000 -7.000
BATSE PEAK COUNTING RATE: 23000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 25/ 9/ 97 IS:
RA= 164.982 DEC= 16.625 DIST= 6.172 AU
BATSE-ULYSSES DISTANCE = 923337753. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 20.90 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 2877.29 SECS.
CROSSING TIME AT ULYSSES IS 84672. S. OR 23:31:12 +/- 284.45 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 25/ 9/ 97 IS:
RA= 234.739 DEC= -20.548 DIST= 1.765 AU
MARS-BATSE DISTANCE = 264016656. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 91.28 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -19.66 SECS.
CROSSING TIME AT MARS IS 81775. S. OR 22:42:55 +/- 152.56 SECONDS

BATSE BURST TRIGGER
NO.: 6397

TIME: TJD=0716 SECONDS=81795

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=113.8 AZIMUTH=201.6 ERROR=0.6 DEGREES

COMMENTS:
GRB RISE FASTER THAN DECAY. PULSE DURATION APPROX. = 25 SEC.
VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6397	970925	10716	81795	23000	326	-07	25

Date: Feb 2 00

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

☑ 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

☑ BATSE ephemeris for T_0?

☑ Error circle position and radius from public catalog used?

☐ If MER data were used, is a 30 ms systematic error included?

3. NEAR Data

☑ Final, correct time used? (Files postmarked vwx@bocc1, or from Teresa Sheets, have the correct time; files on website have incorrect times)

☑ BATSE >100 keV data used for NEAR correlation?

☑ ACCESS database updated?

Date: Apr 9 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

☐ Were data checked by Joe Springer for 0.5 s errors? N/A

☑ 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?

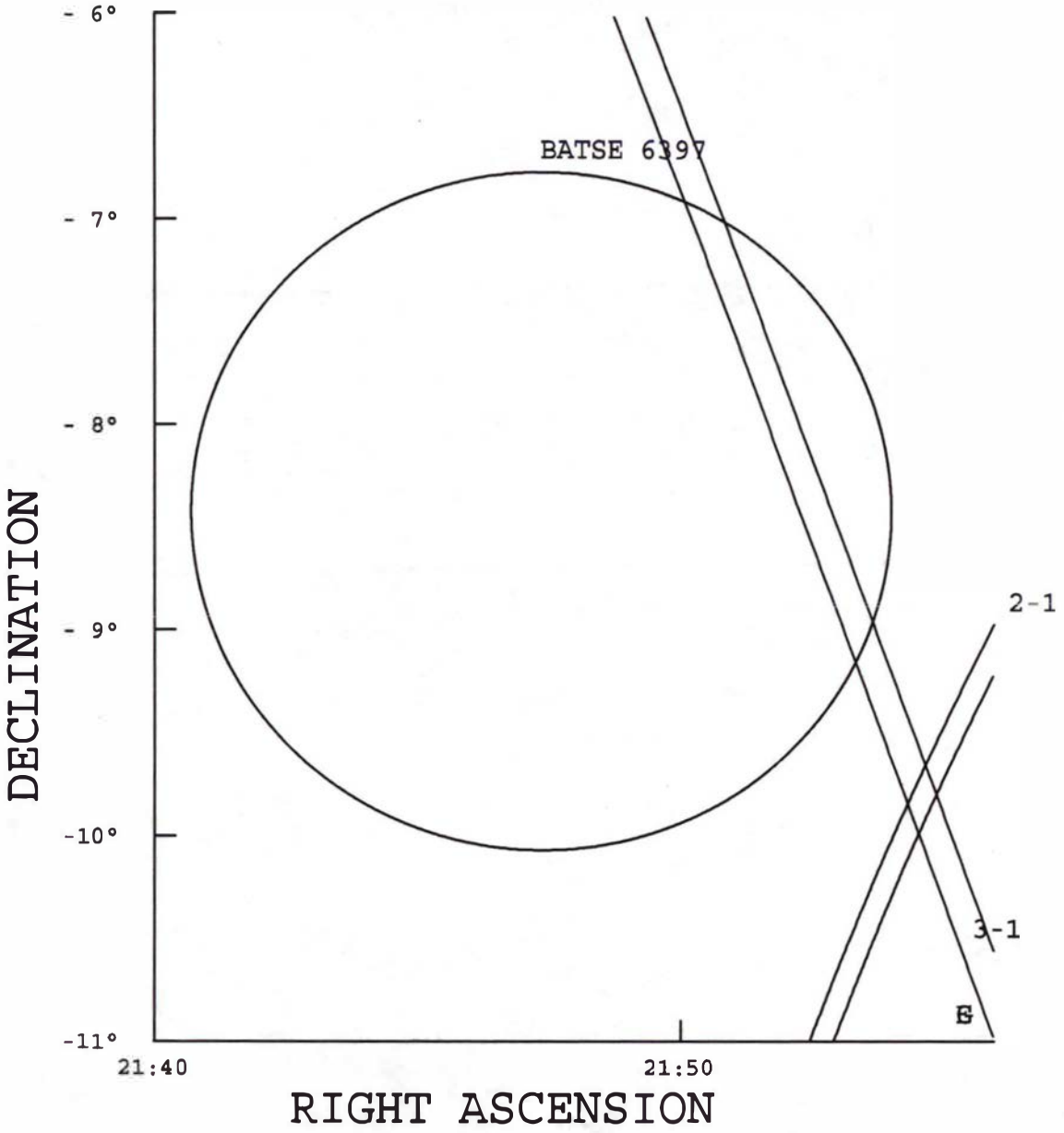
☐ Geocentric time used?

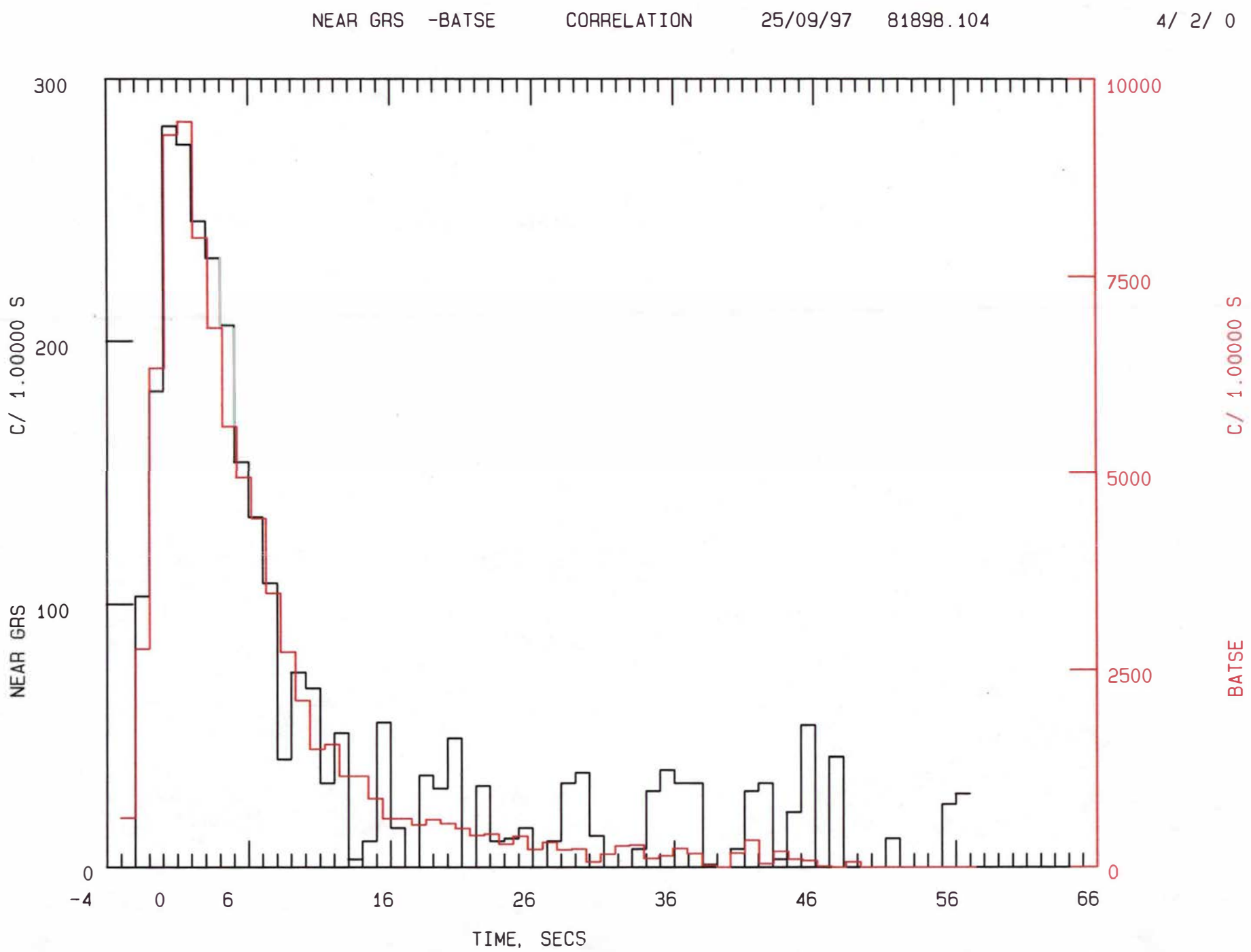
☑ ACCESS database updated?

~10 ms differences between predict + final Ulysses time history data! Apparently due to data gap

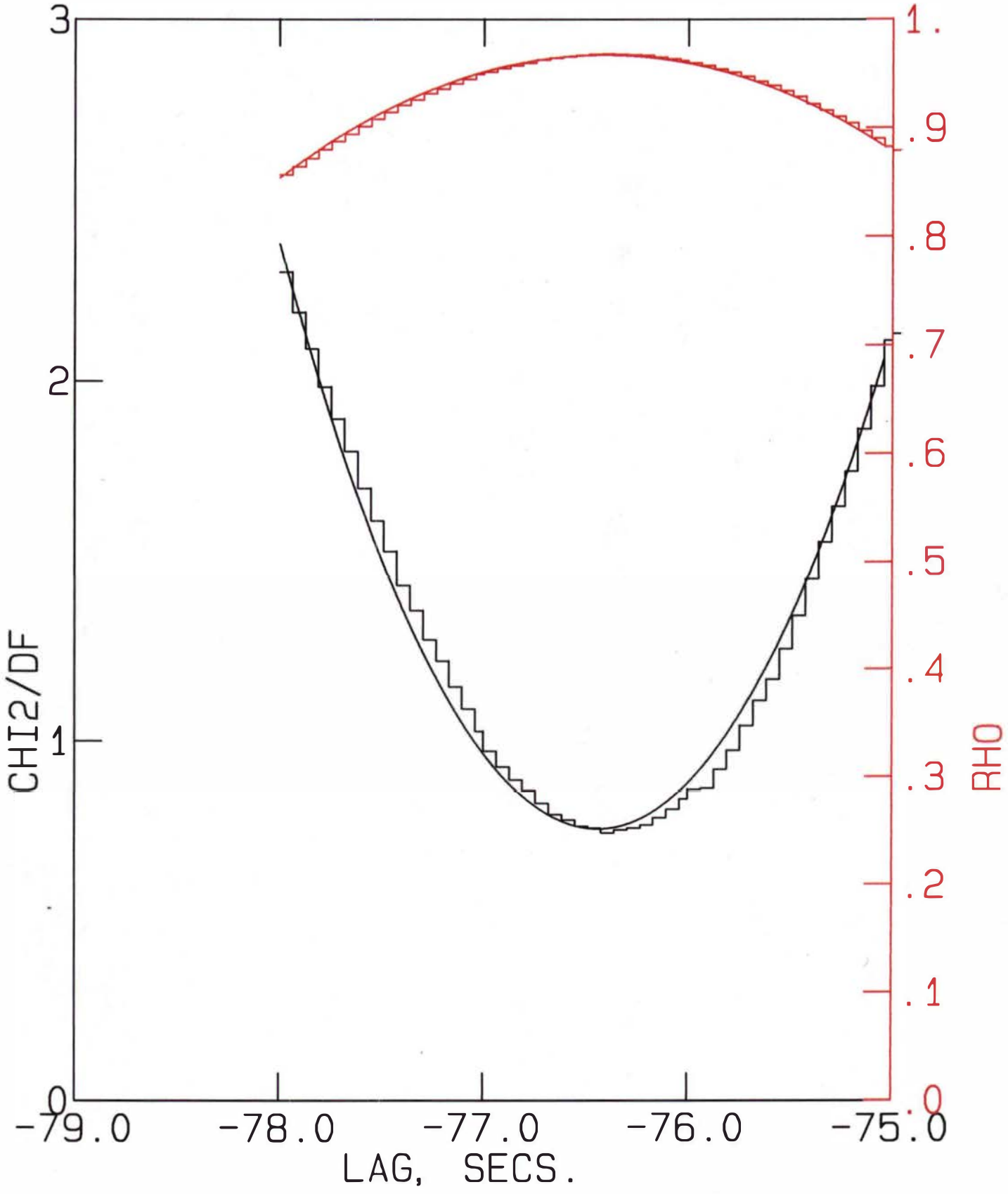
EVENT OF SEP 25, 1997 22:43

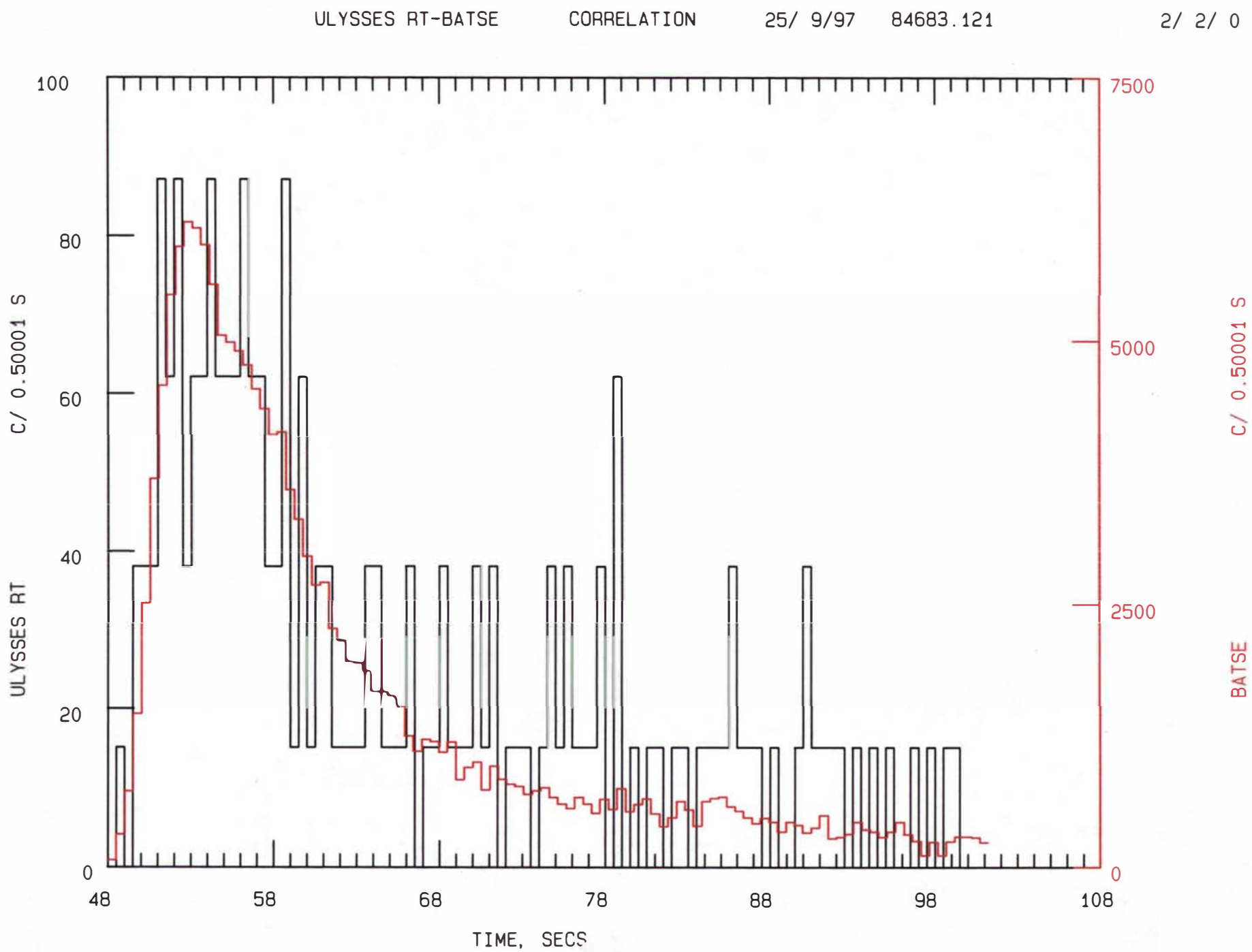
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 BATSE 2 ULYSSES 3 NEAR



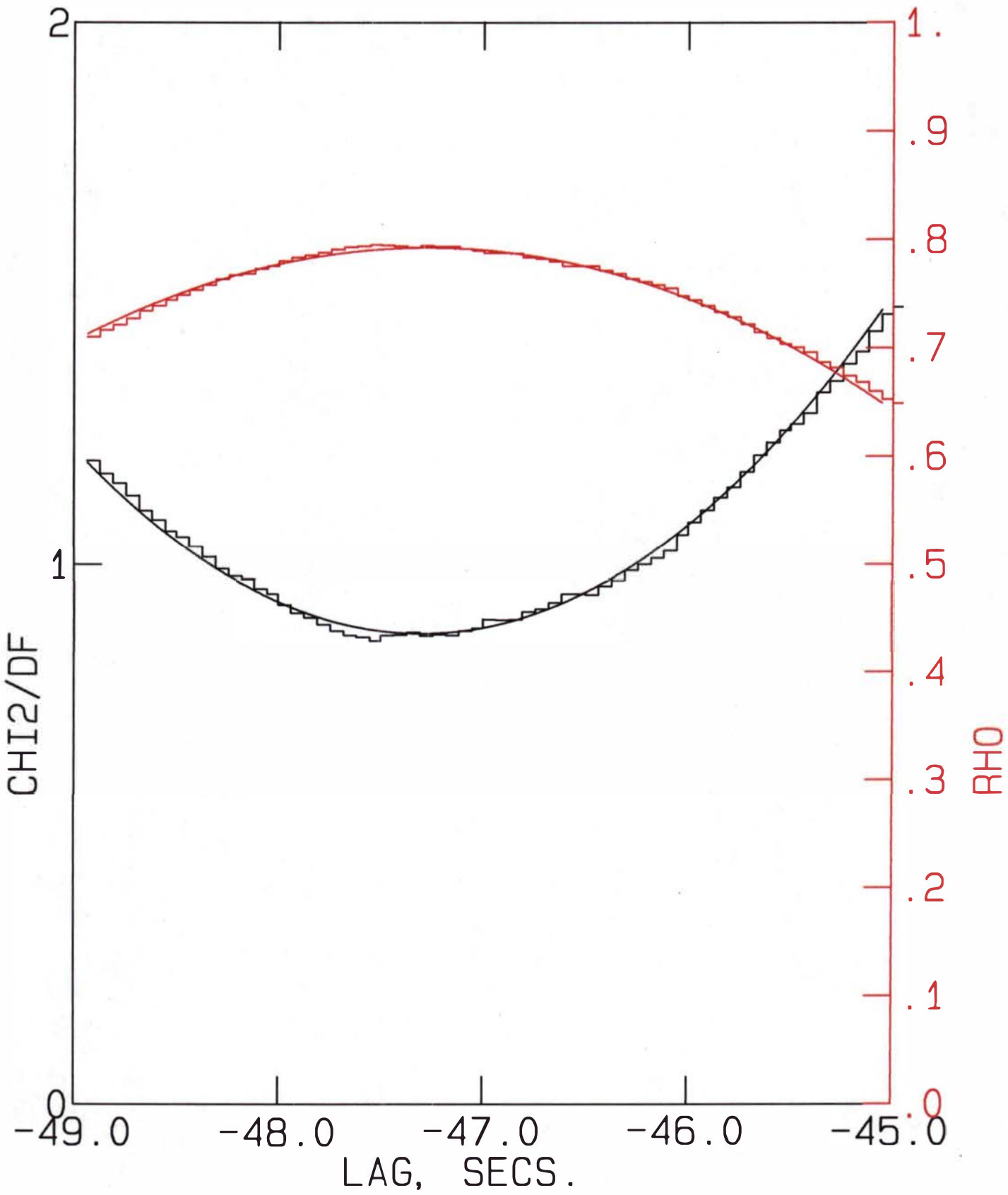

NEAR GRS -BATSE CORRELATION 25/09/97 81898.104 4/ 2/ 0
300
200
100
0
C/ 1.00000 S
NEAR GRS
10000
7500
5000
2500
0
C/ 1.00000 S
BATSE
-4
0
6
16
26
36
46
56
66
TIME, SECS

NEAR GRS -BATSE CORRELATION 25/09/97 81898.104




ULYSSES RT-BATSE CORRELATION 25/ 9/97 84683.121 2/ 2/ 0
100
80
60
40
20
0
ULYSSES RT
C/ 0.50001 S
7500
5000
2500
0
BATSE
C/ 0.50001 S
48
58
68
78
88
98
108
TIME, SECS

ULYSSES RT-BATSE CORRELATION 25/ 9/97 84683.121

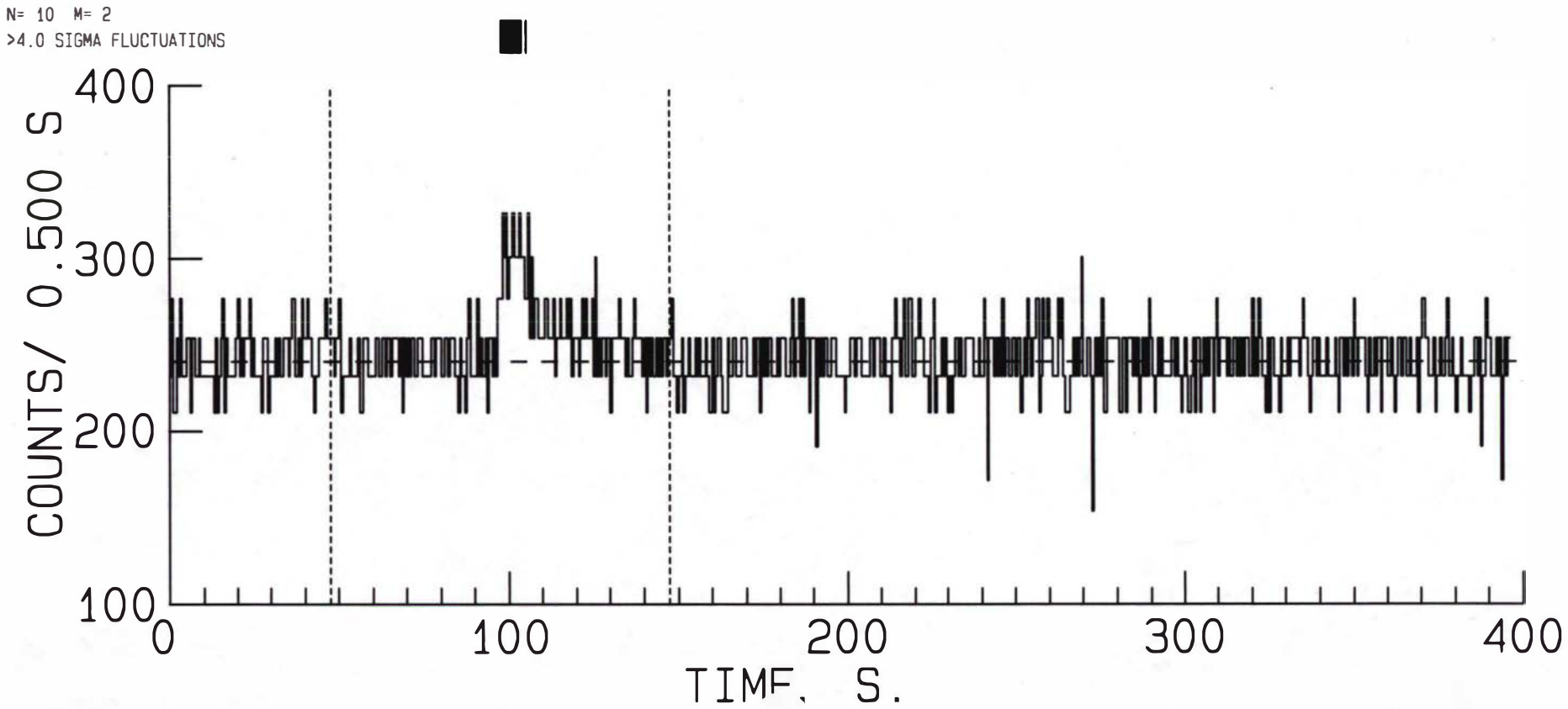


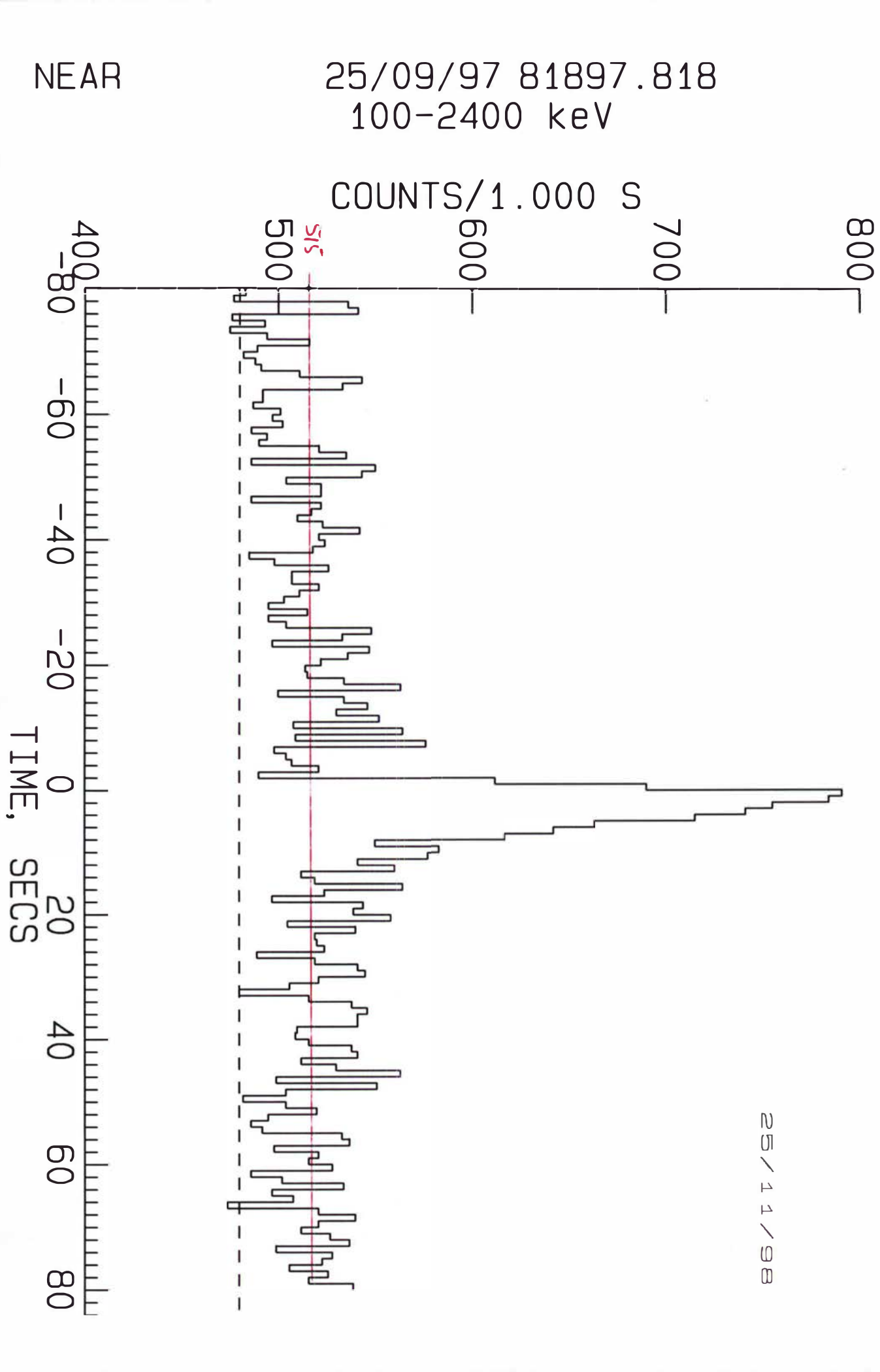
ULYSSES RT

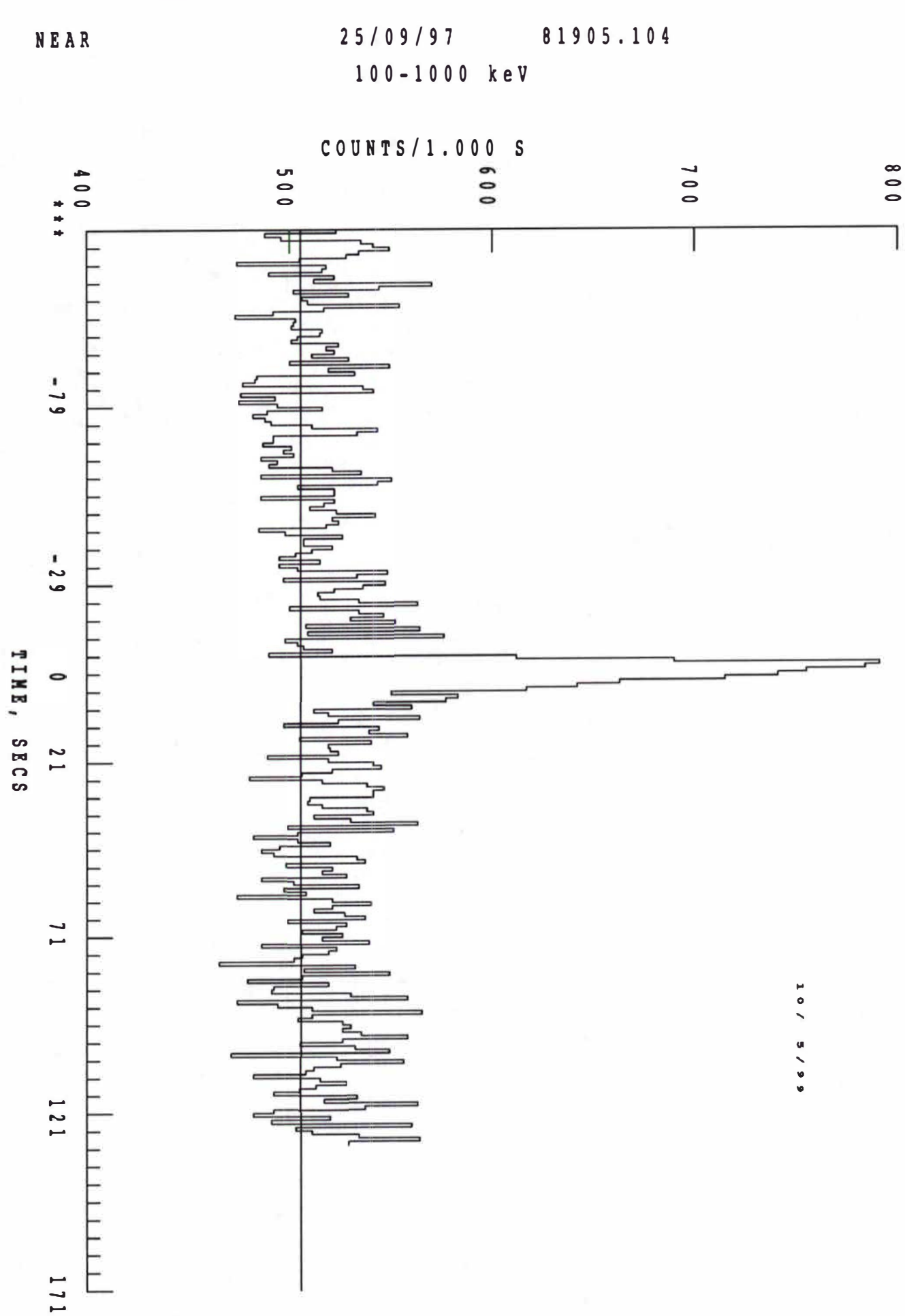
2/ 2/ 0

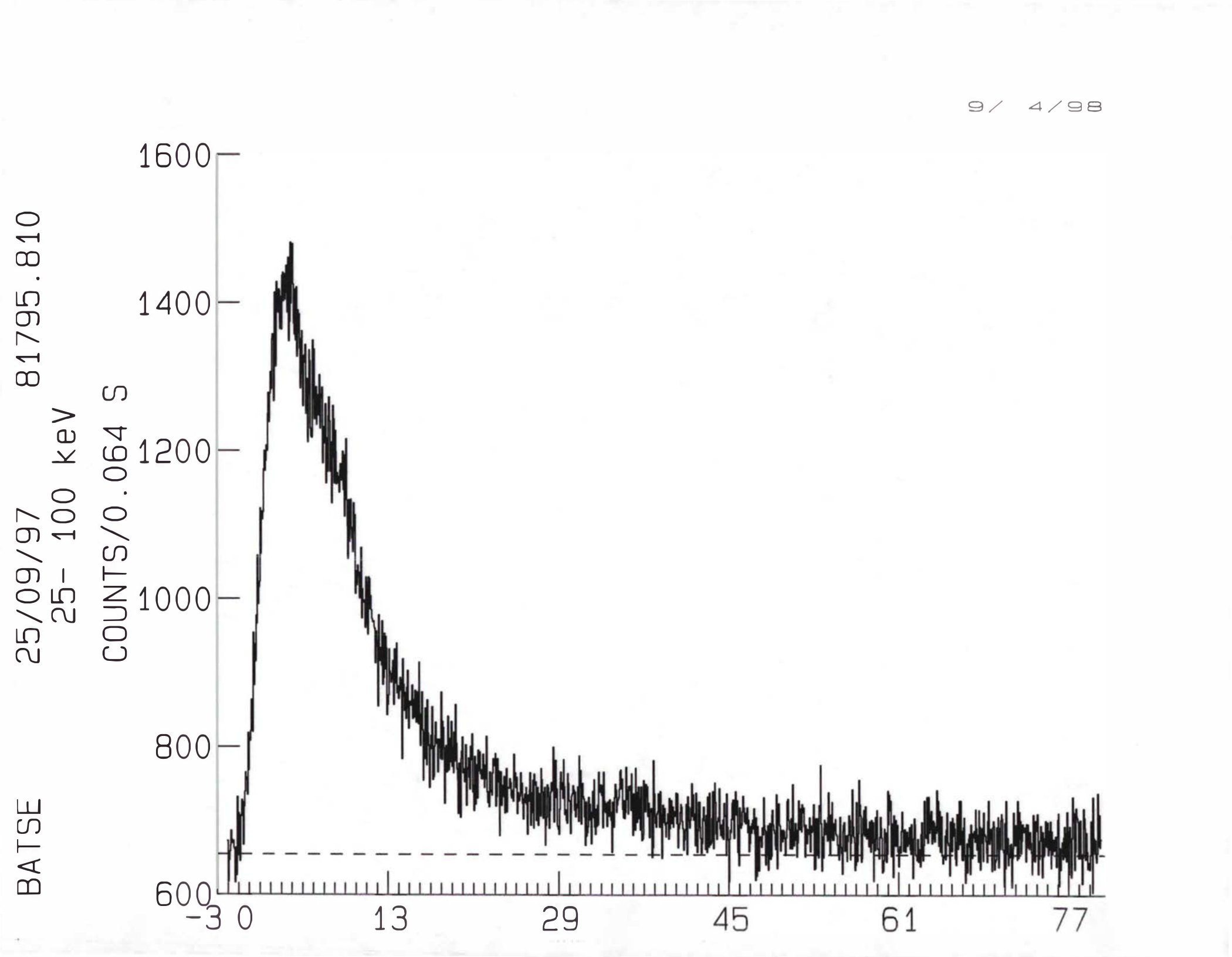
25/ 9/97 84636.132 s

22- 148 keV

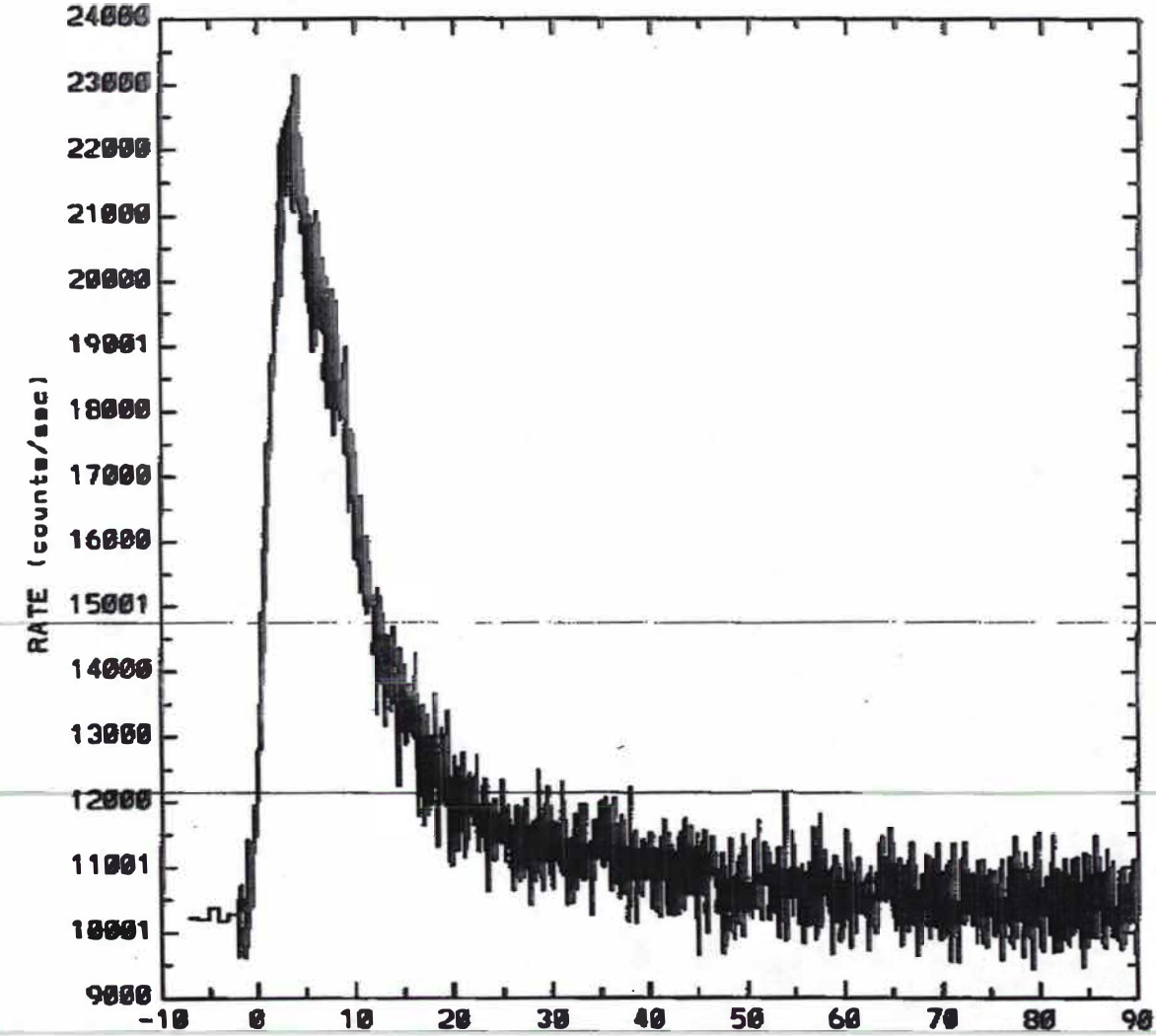


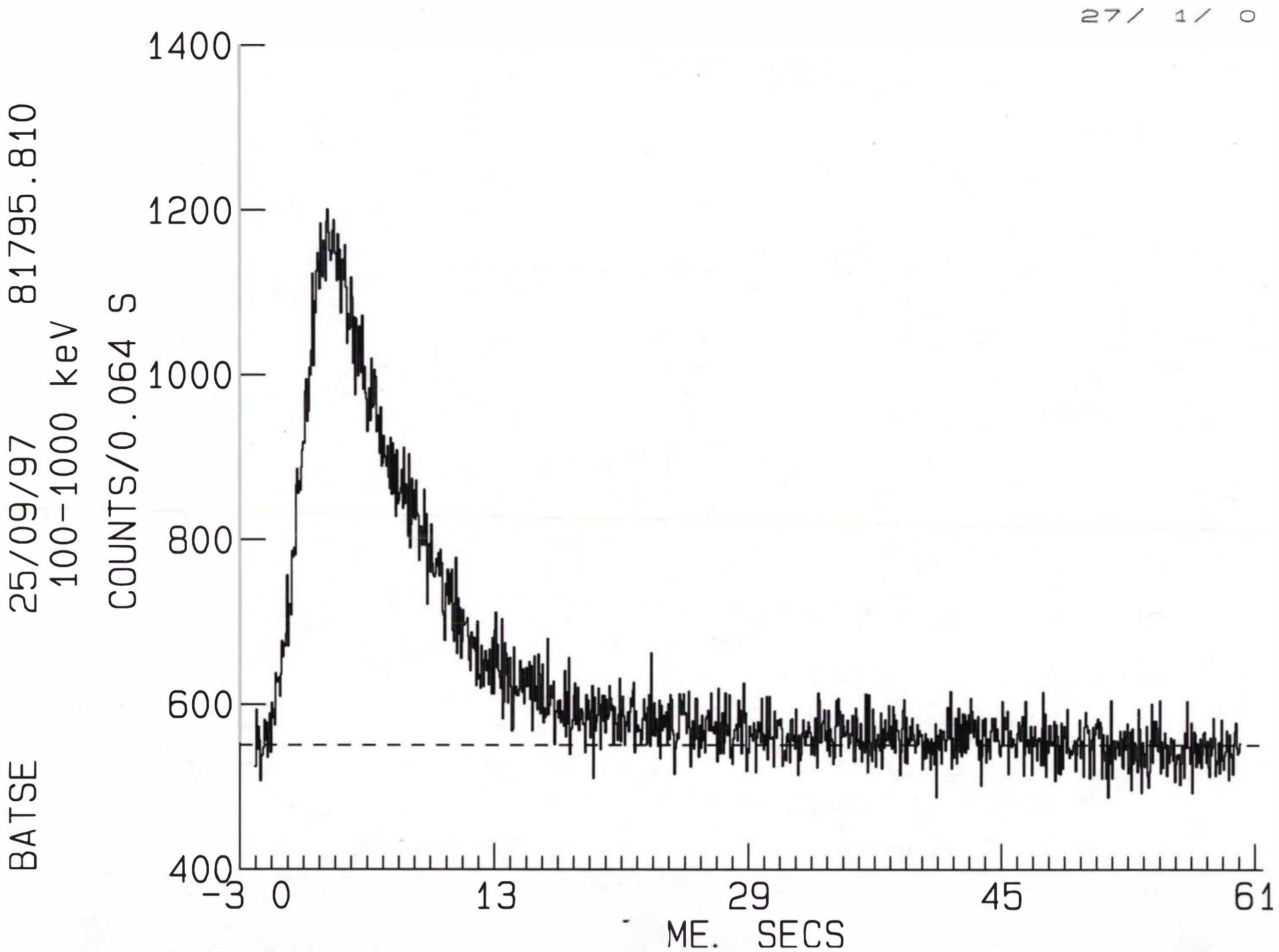

NEAR
25/09/97 81897.818
100-2400 keV
COUNTS/1.000 S
400
500
600
700
800
SIS
-80
-60
-40
-20
0
20
40
60
80
TIME, SECS
25/11/98

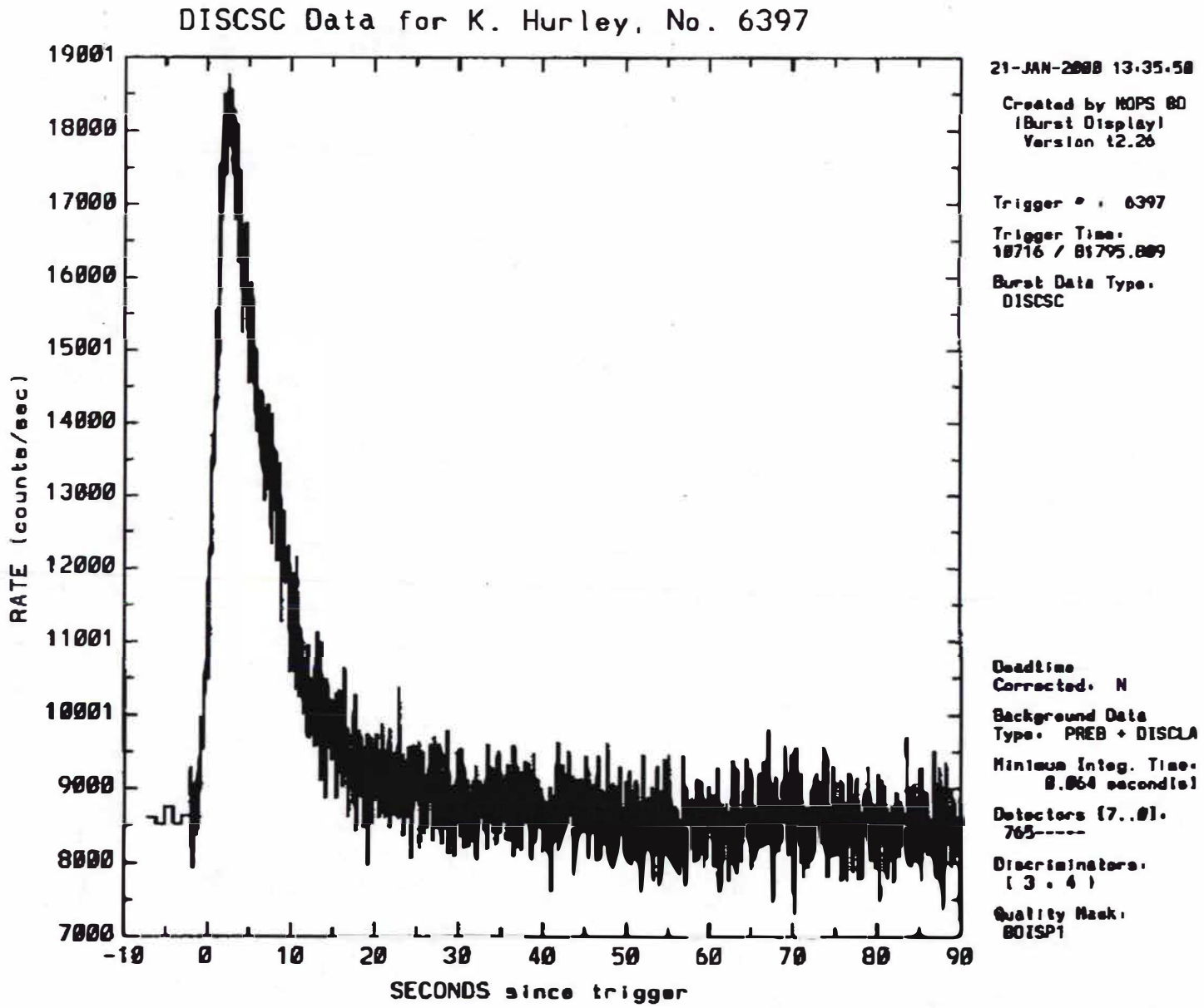

NEAR
25/09/97 81905.104
100-1000 keV
COUNTS/1.000 S
400
500
600
700
800
***
-79
-29
0
21
71
121
171
TIME, SECS
10/ 5/99

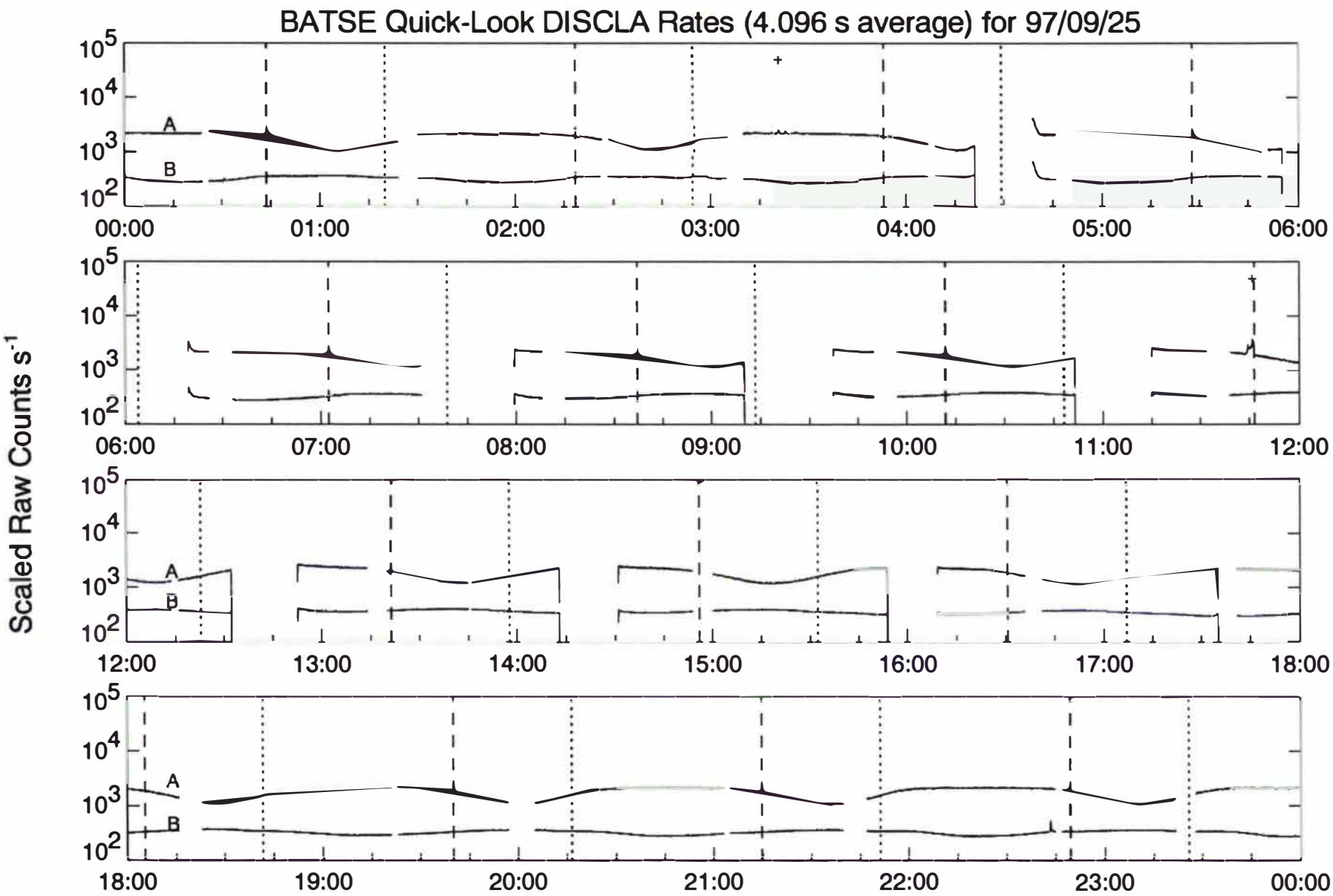

9/ 4/98
BATSE 25/09/97 81795.810
25- 100 keV
COUNTS/0.064 S
1600
1400
1200
1000
800
600
-3 0
13
29
45
61
77

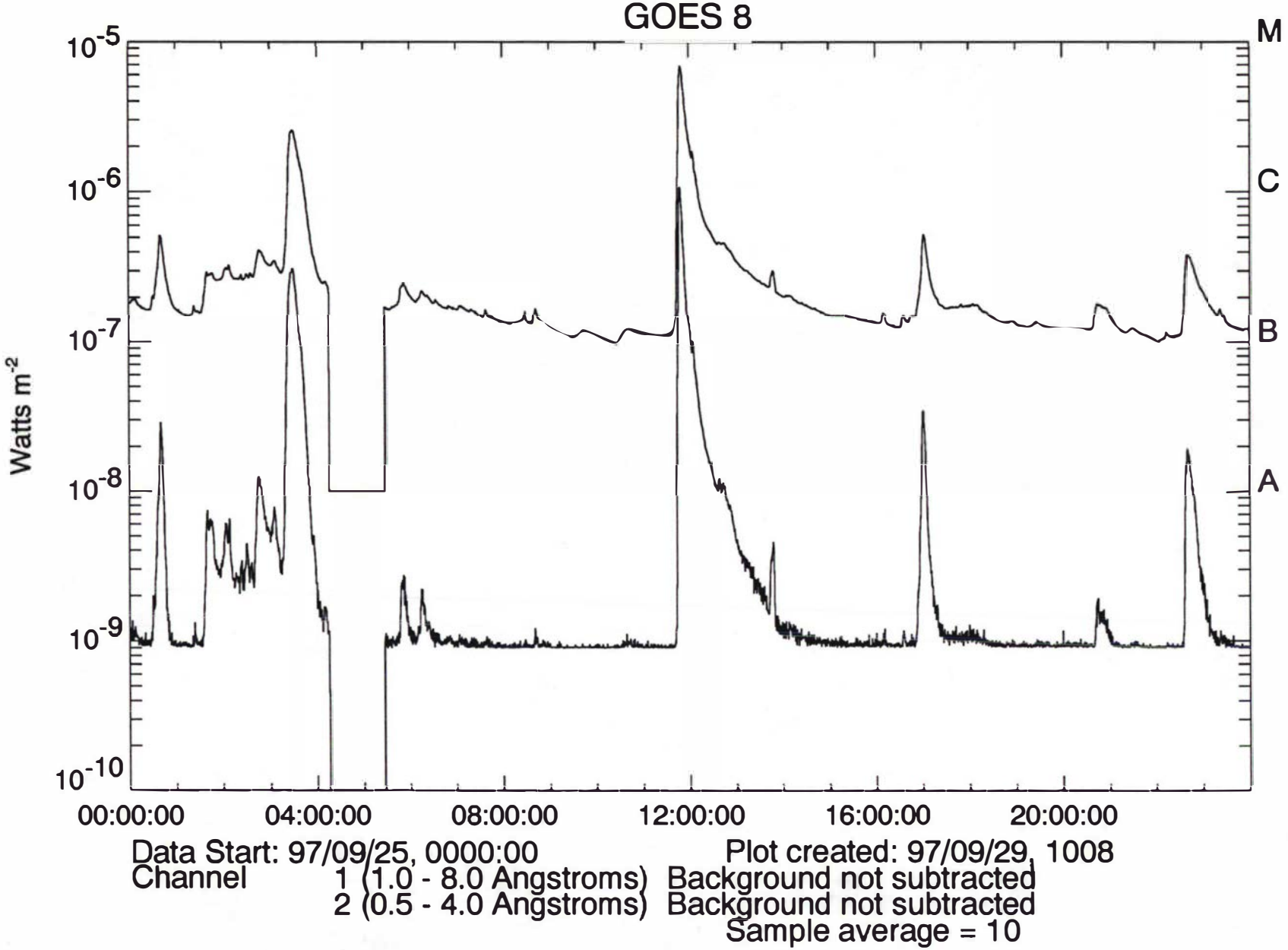
K=95%
04-09-1998 10:32 205 544 5800 BATSE
205 544 5800 04-09-98 08:32AM P006 #49
P.06



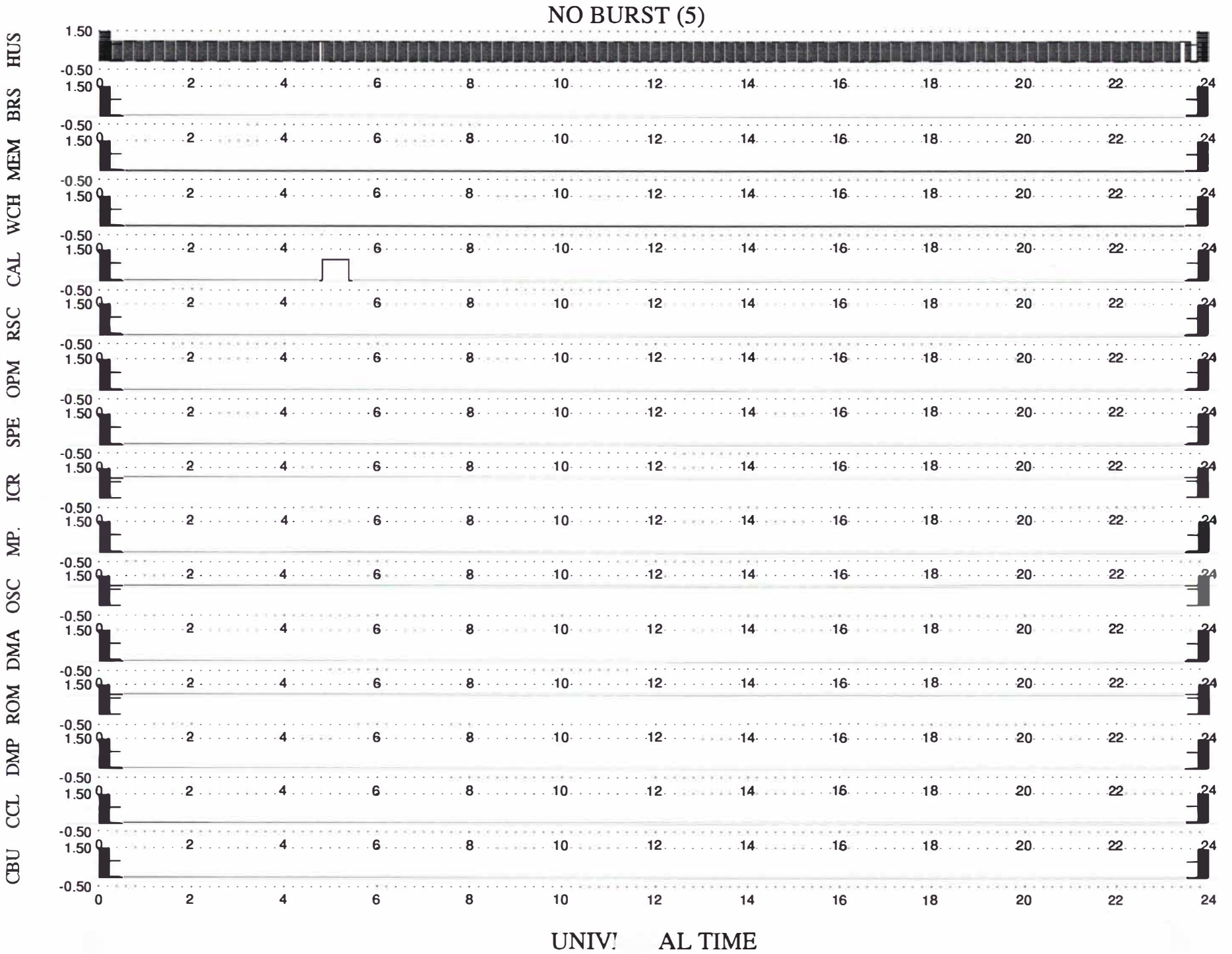

27/ 1/ 0
BATSE 25/09/97 81795.810
100-1000 keV
COUNTS/0.064 S
1400
1200
1000
800
600
400
-3
0
13
29
45
61
ME. SECS


DISCSC Data for K. Hurley, No. 6397
RATE (counts/sec)
19001
18000
17000
16000
15001
14000
13000
12000
11001
10001
9000
8000
7000
-10
0
10
20
30
40
50
60
70
80
90
SECONDS since trigger
21-JAN-2000 13:35:58
Created by MOPS 80
(Burst Display)
Version t2.26
Trigger # : 6397
Trigger Time:
10716 / 81795.809
Burst Data Type:
DISCSC
Deadtime
Corrected: N
Background Data
Type: PREB + DISCLA
Minimum Integ. Time:
0.064 seconds
Detectors (7..0):
765-----
Discriminators:
(3 , 4)
Quality Mask:
80ISP1


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/25
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/29, 1009 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare

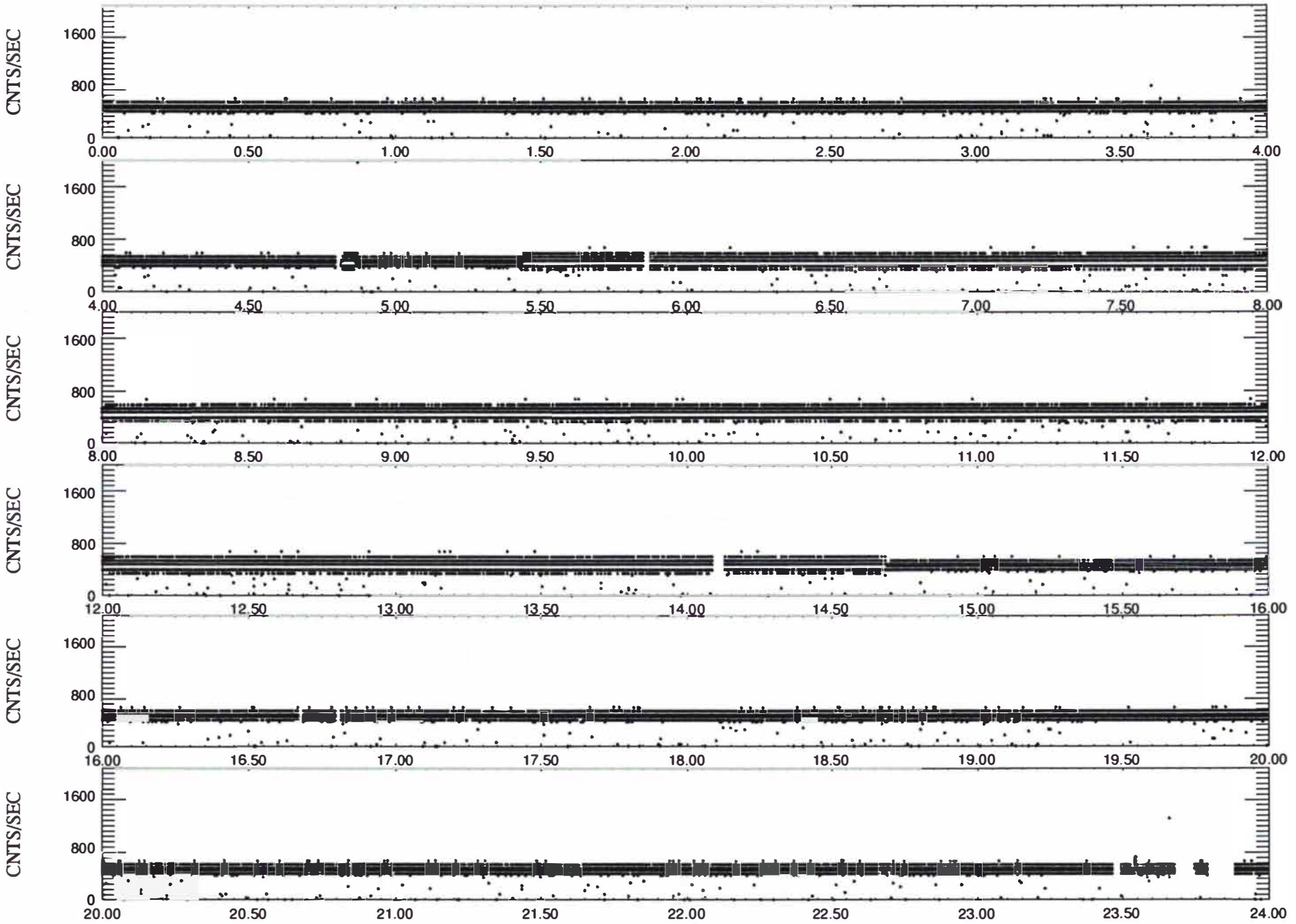

GOES 8
M
C
B
A
Watts m-2
10-5
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/25, 0000:00
Plot created: 97/09/29, 1008
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 268, year 1997 to day 268, year 1997 1/14/98



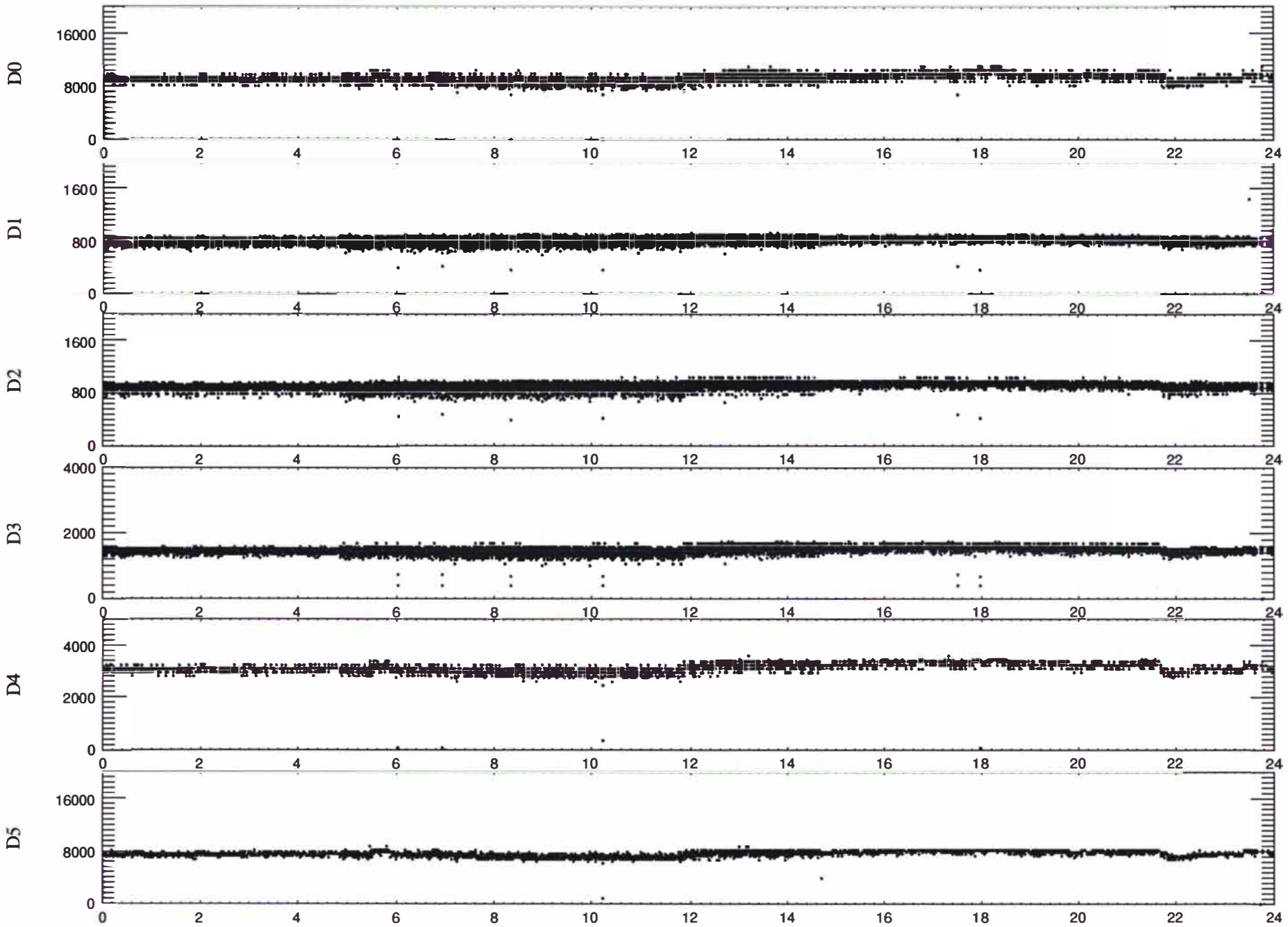
HUS 2A, MODE 1, NOT AVERAGED EDR day 268, year 1997 to day 268, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV' 'AL TIME

HUS 2B COUNTS / SEC EDR day 268, year 1997 to day 268, year 1997 1/14/98



From RICHARDSON@SSLLES.MSFC.NASA.GOV Mon Sep 29 10:48:35 1997
Return-Path: <RICHARDSON@SSLLES.MSFC.NASA.GOV>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id KAA15022; Mon, 29 Sep 1997 10:48:28 -0700
From: RICHARDSON@SSLLES.MSFC.NASA.GOV
Received: from SSLLES.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id KAA01199; Mon, 29 Sep 1997 10:48:13 -0700
Date: Mon, 29 Sep 1997 12:47:55 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970929124755.2020e4ec@SSLLES.MSFC.NASA.GOV>
Subject: Crossing Windows for BATSE Burst 6398
Content-Length: 1135
X-Lines: 26
Status: RO

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

 BATSE BURST #     6398
 EVENT OF 1997 SEP 26 DAY OF YEAR=269
 EVENT CROSSING TIME AT BATSE      : 37482. S. OR 10:24:42.0
 COORDINATES ARE    0.000    0.000        6800. (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 345.000    -4.000
 BATSE PEAK COUNTING RATE:    2500     C/S

 EVENT CROSSING TIME AT ULYSSES     WILL BE FOUND
 INTERPOLATED POSITION OF ULYSSES ON 26/ 9/  97 IS:
 RA=  165.046 DEC=    16.582 DIST=     6.169 AU
 BATSE-ULYSSES DISTANCE =  922925437. KM.
 ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 12.58 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= 3004.62 SECS.
 CROSSING TIME AT ULYSSES     IS 40487. S. OR   11:14:46 +/-  212.06 SECONDS

 EVENT CROSSING TIME AT MARS        WILL BE FOUND
 POSITION OF MARS ON 26/ 9/  97 IS:
 RA=  235.458 DEC=  -20.713 DIST=     1.770 AU
 MARS-BATSE DISTANCE =  264717712. KM.
 ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 73.29 DEG.
 LIGHT TRAVEL TIME ALONG PROJECTED PATH=  253.82 SECS.
 CROSSING TIME AT MARS        IS 37736. S. OR   10:28:55 +/-  150.69 SECONDS


                BATSE BURST TRIGGER
NO.: 6398

TIME: TJD=0717 SECONDS=37482

TYPE: BURST                     SOLAR FLARE TRIGGER SIGNAL:N

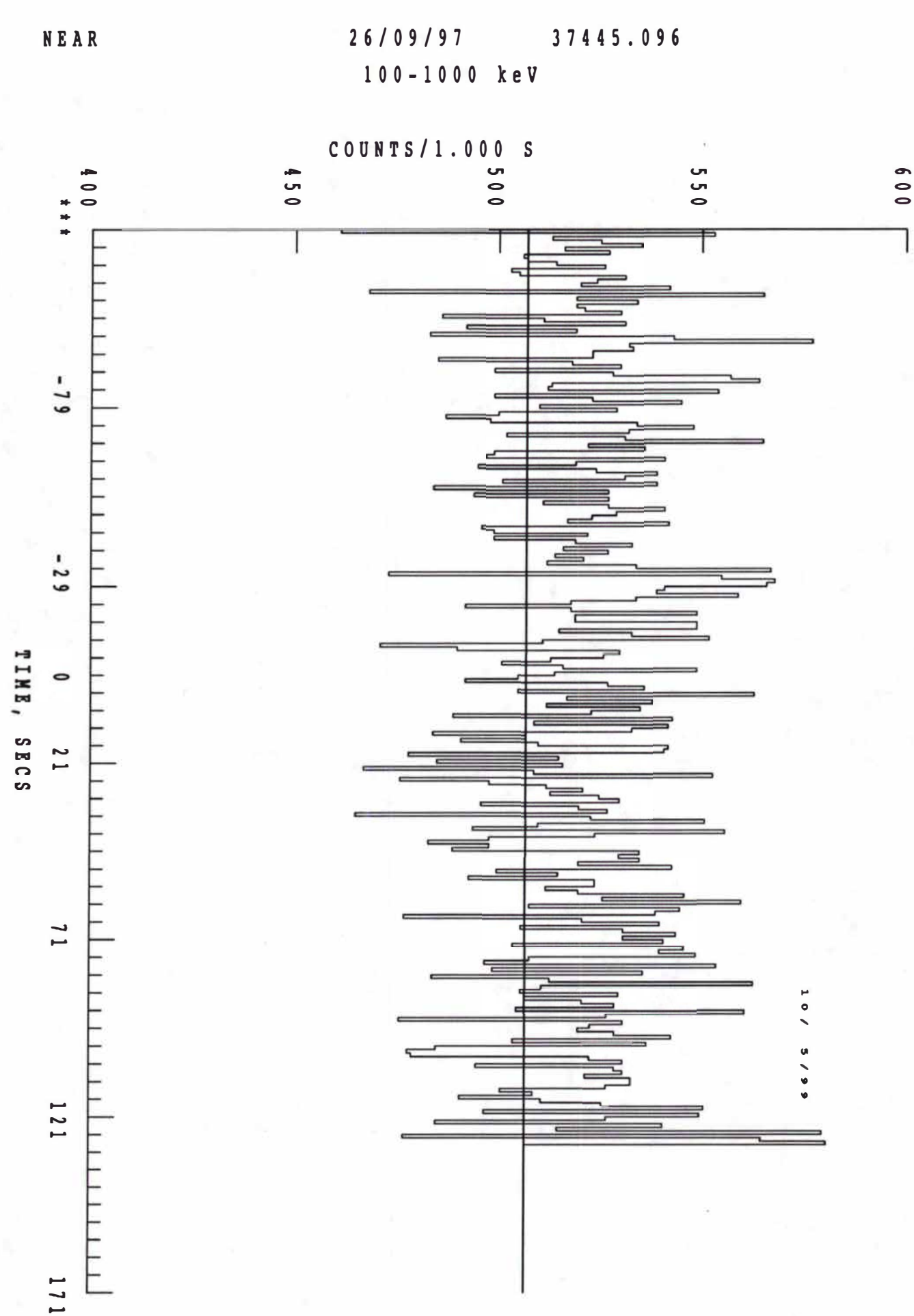
SIGNIFICANCE:        SIGMA

INTENSITY:           COUNTS/CM2

LOCATION: ZENITH=118.1  AZIMUTH=180.2  ERROR=12.5  DEGREES

COMMENTS:
GRB WEAK SINGLE PULSE. DURATION APPROX. = 1 SEC.
VISIBLE ABOVE 300KEV.


 BATSE #   Date      TJD      SoD    Max ct/s   RA   Dec  Dur (s)
   6398   970926   10717    37482      2500   345   -04       1
```


NEAR
26/09/97
37445.096
100-1000 keV
COUNTS/1.000 S
400
450
500
550
600
***
-79
-29
0
21
71
121
171
TIME, SECS
10/ 5/99

BATSE BURST# 6398

ULYSSES RT 29/ 9/97

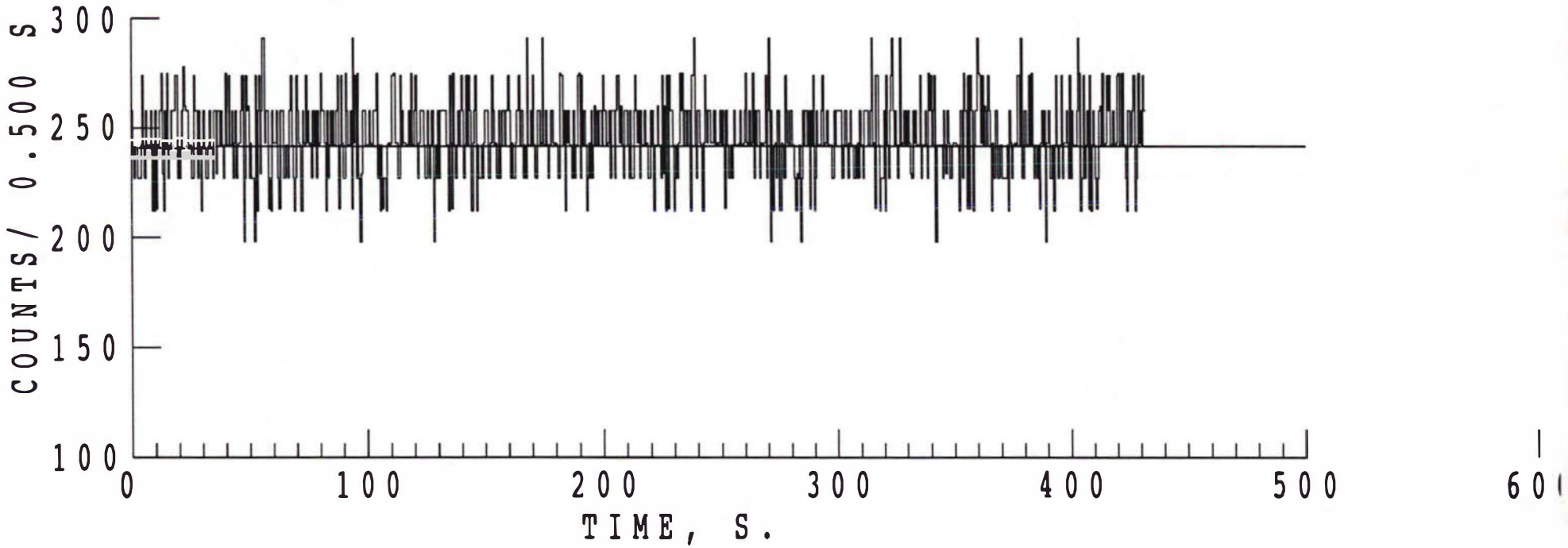
26/ 9/97 40284.137 s

0.250 S INTERVALS REGROUPED BY 2

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From SAHI@fender.msfc.nasa.gov Mon Sep 29 12:41:01 1997
Return-Path: <SAHI@fender.msfc.nasa.gov>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id MAA16206; Mon, 29 Sep 1997 12:41:00 -0700
From: SAHI@fender.msfc.nasa.gov
Received: from FENDER.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id MAA02239; Mon, 29 Sep 1997 12:40:52 -0700
Date: Mon, 29 Sep 1997 14:40:28 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970929144028.2180cdc4@fender.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6399
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6399
EVENT OF 1997 SEP 26 DAY OF YEAR=269
EVENT CROSSING TIME AT BATSE : 73305. S. OR 20:21:45.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 139.000 18.000
BATSE PEAK COUNTING RATE: 6500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 26/ 9/ 97 IS:
RA= 165.102 DEC= 16.545 DIST= 6.167 AU
BATSE-ULYSSES DISTANCE = 922572758. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=155.05 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2790.25 SECS.
CROSSING TIME AT ULYSSES IS 70515. S. OR 19:35:14 +/- 232.97 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 26/ 9/ 97 IS:
RA= 235.458 DEC= -20.713 DIST= 1.770 AU
MARS-BATSE DISTANCE = 264717712. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 77.92 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 184.85 SECS.
CROSSING TIME AT MARS IS 73490. S. OR 20:24:49 +/- 152.71 SECONDS

BATSE BURST TRIGGER

NO.: 6399

TIME: TJD=0717 SECONDS=73305

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

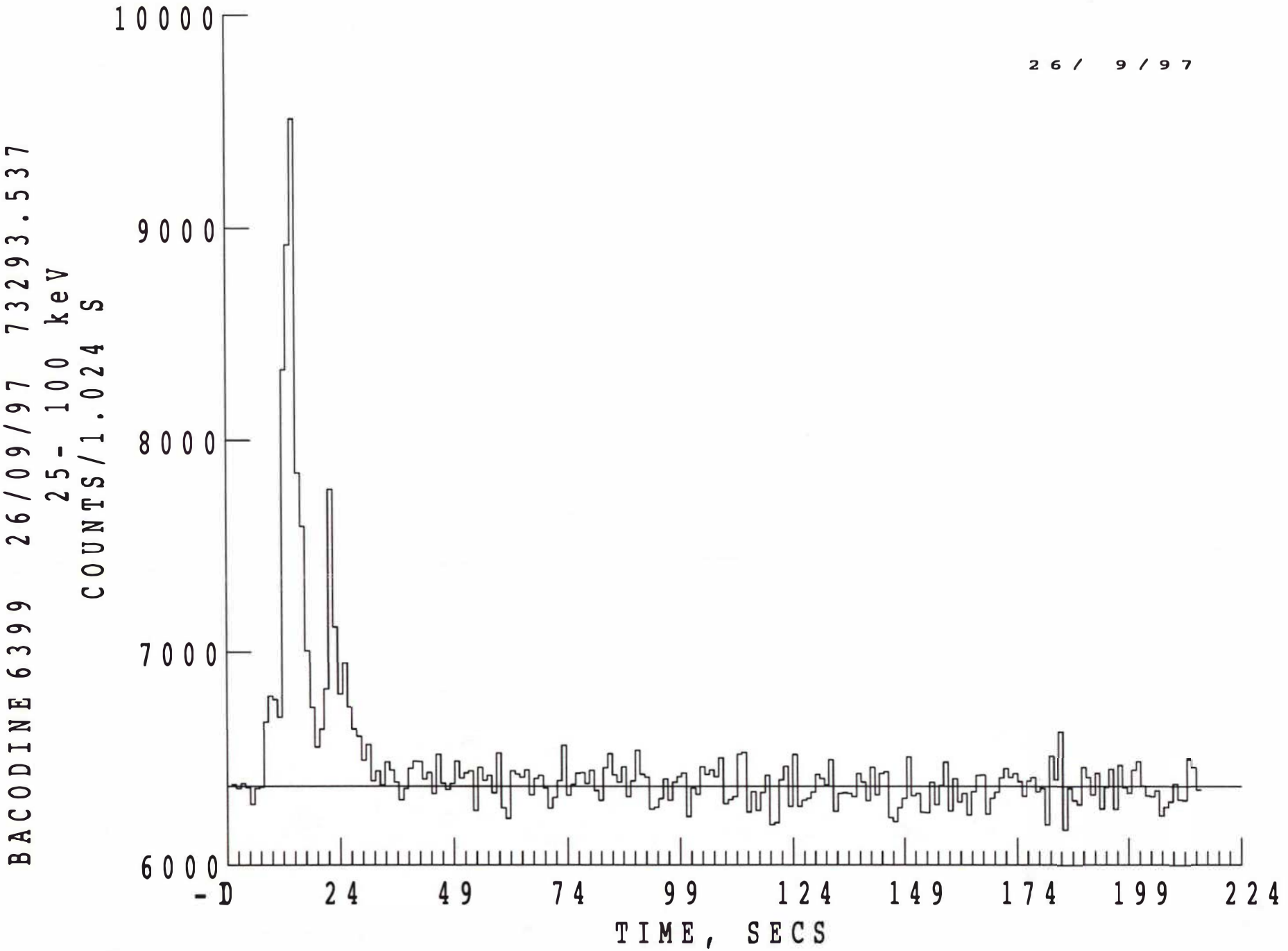
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=78.6 AZIMUTH=25.2 ERROR=2.45 DEGREES

COMMENTS:
NOTE: CORRECTION IN AZIMUTH VALUE, WAS WRONG IN THE PREVIOUS MESSAGE.
BURST. SINGLE PULSE WITH SUBSTRUCTURE, DUR. APPROX. 30 SECS, MAX. AT APPROX.
T+2 SECS. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6399	970926	10717	73305	6500	139	+18	30


BACODINE 6399 26/09/97 73293.537
25- 100 keV
COUNTS/1.024 S
10000
9000
8000
7000
6000
26/ 9/97
-D
24
49
74
99
124
149
174
199
224
TIME, SECS

BATSE BURST# 6399

ULYSSES RT 29/ 9/97

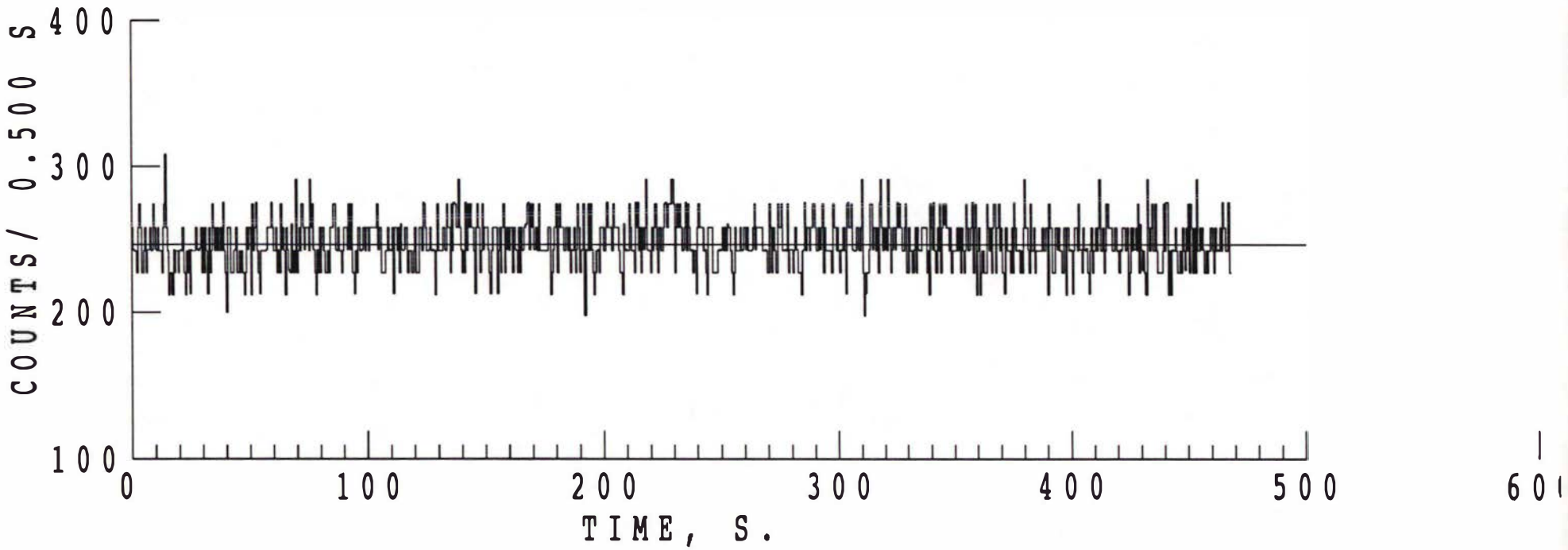
26/ 9/97 70272.195 s

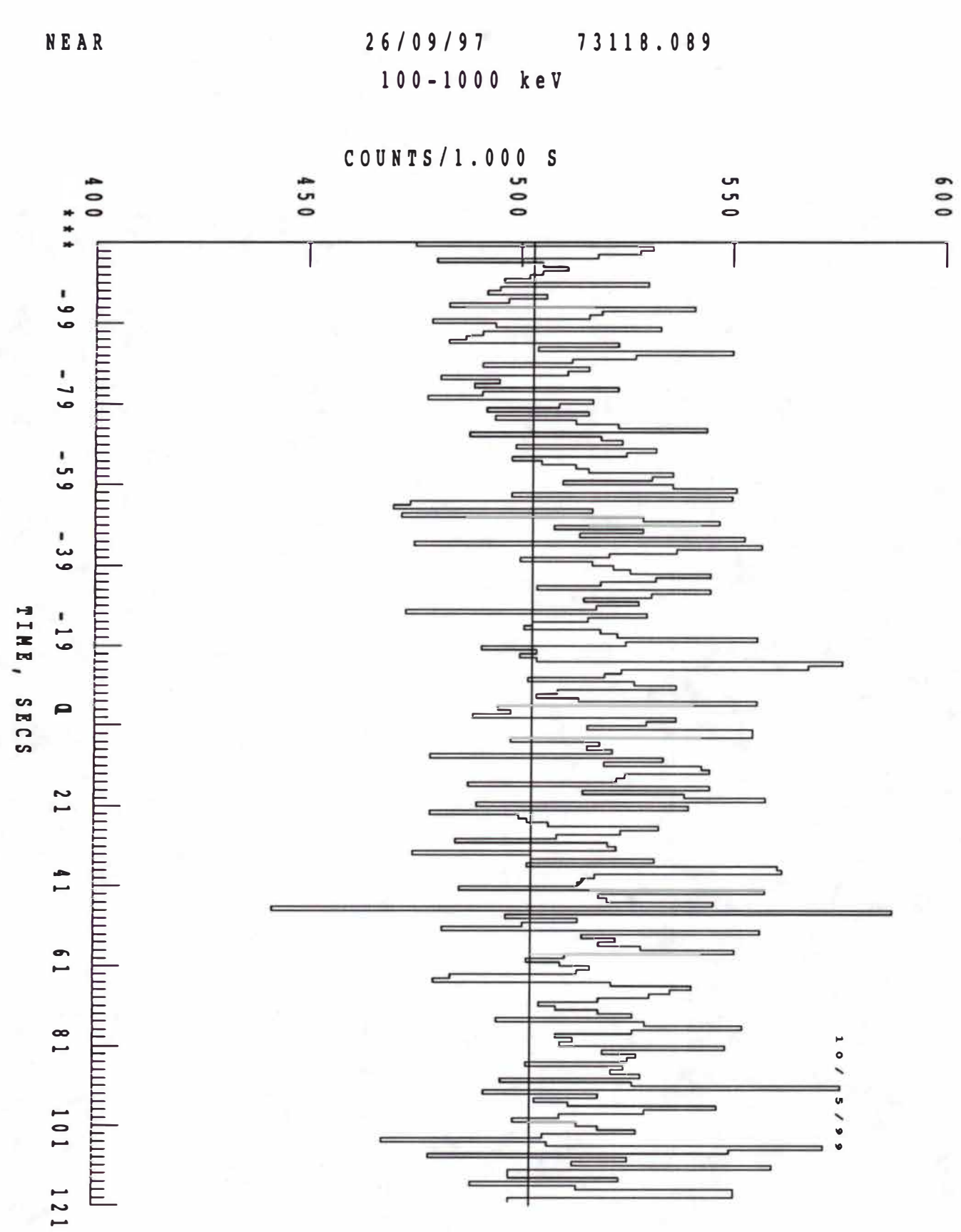
0.250 S INTERVALS REGROUPED BY 2

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS




NEAR
26/09/97
73118.089
100-1000 keV
COUNTS/1.000 S
400
450
500
550
600
***
-99
-79
-59
-39
-19
01
21
41
61
81
101
121
TIME, SECS
10/5/99

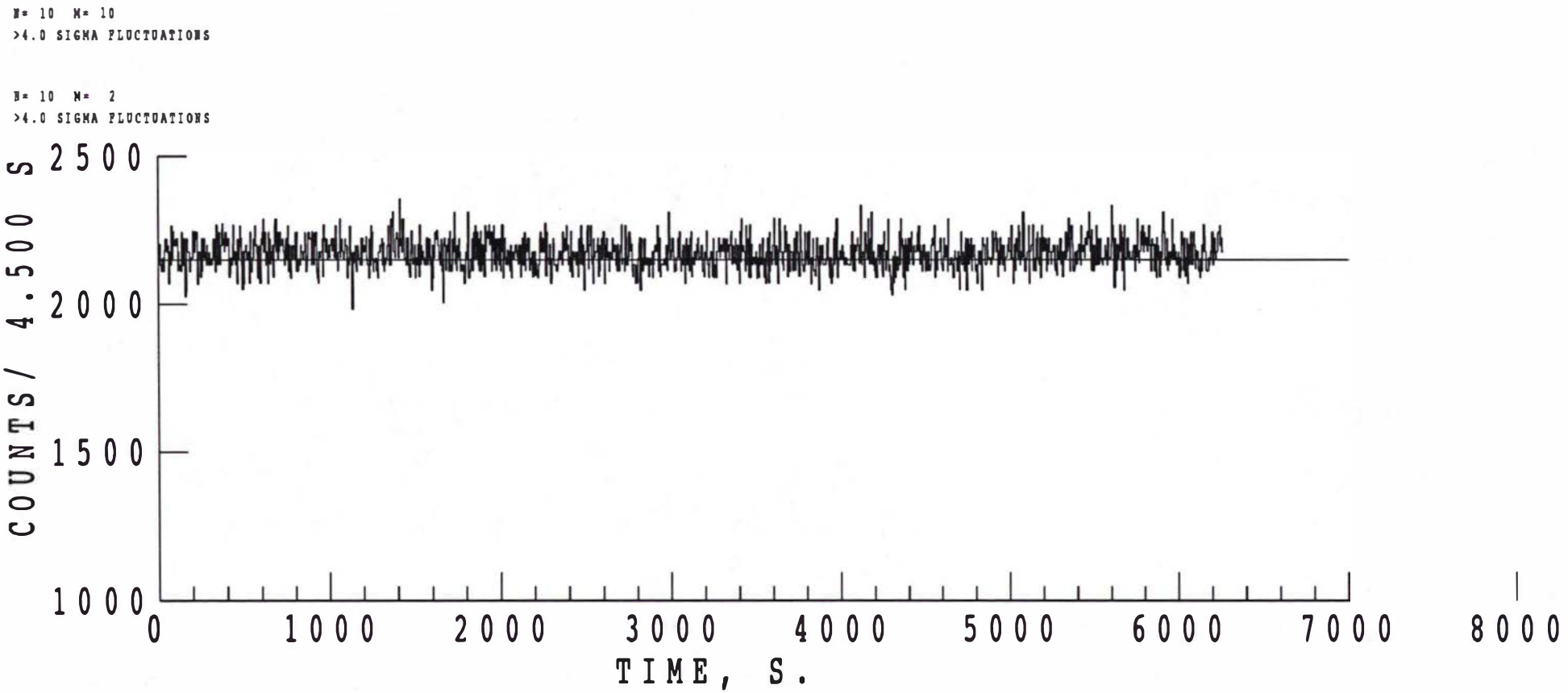
KONUS

ULYSSES RT 15/02/00

26/09/97 76536.000 s

0.500 S INTERVALS REGROUPED BY 9

0- 0 keV



From SAHI@fender.msfc.nasa.gov Mon Sep 29 12:42:43 1997
Return-Path: <SAHI@fender.msfc.nasa.gov>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id MAA16214; Mon, 29 Sep 1997 12:42:42 -0700
From: SAHI@fender.msfc.nasa.gov
Received: from FENDER.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id MAA02268; Mon, 29 Sep 1997 12:42:40 -0700
Date: Mon, 29 Sep 1997 14:42:27 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970929144227.2180cdc4@fender.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6400
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6400
EVENT OF 1997 SEP 26 DAY OF YEAR=269
EVENT CROSSING TIME AT BATSE : 82579. S. OR 22:56:19.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 314.000 40.000
BATSE PEAK COUNTING RATE: 12000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 26/ 9/ 97 IS:
RA= 165.116 DEC= 16.535 DIST= 6.166 AU
BATSE-ULYSSES DISTANCE = 922480450. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 63.53 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1371.67 SECS.
CROSSING TIME AT ULYSSES IS 83951. S. OR 23:19:10 +/- 549.04 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 26/ 9/ 97 IS:
RA= 235.458 DEC= -20.713 DIST= 1.770 AU
MARS-BATSE DISTANCE = 264717712. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 85.12 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 75.07 SECS.
CROSSING TIME AT MARS IS 82654. S. OR 22:57:34 +/- 153.89 SECONDS

BATSE BURST TRIGGER

NO.: 6400

TIME: TJD=0717 SECONDS=82579

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=153.9 AZIMUTH=243.3 ERROR=1.8 DEGREES

COMMENTS:
BURST. MUTLI-PEAKED, DUR. APPROX. 15 SECS. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6400	970926	10717	82579	12000	314	+40	15

Date: 3 Feb 00

BURST TRIANGULATION CHECKLIST

1. Ulysses Data N/A

☐ Jim Schmidling's stat file correction applied?

☐ Final ephemeris used?

☐ Final, CDROM data used?

☐ 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

☑ BATSE ephemeris for T_0?

☑ Error circle position and radius from public catalog used?

☐ If MER data were used, is a 30 ms systematic error included?

3. NEAR Data

☑ Final, correct time used? (Files postmarked vwx@bocc1, or from Teresa Sheets, have the correct time; files on website have incorrect times)

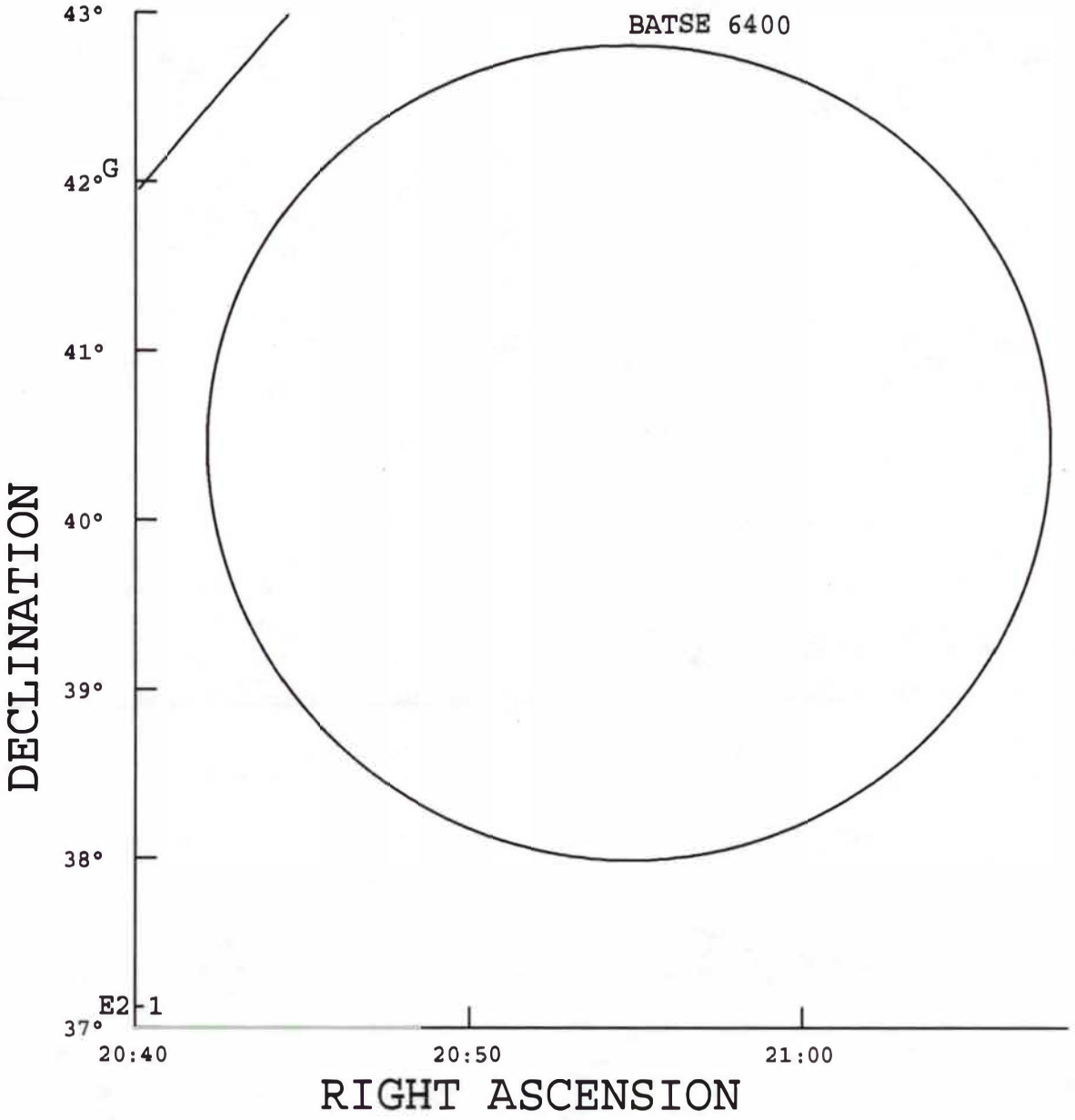
☑ BATSE >100 keV data used for NEAR correlation?

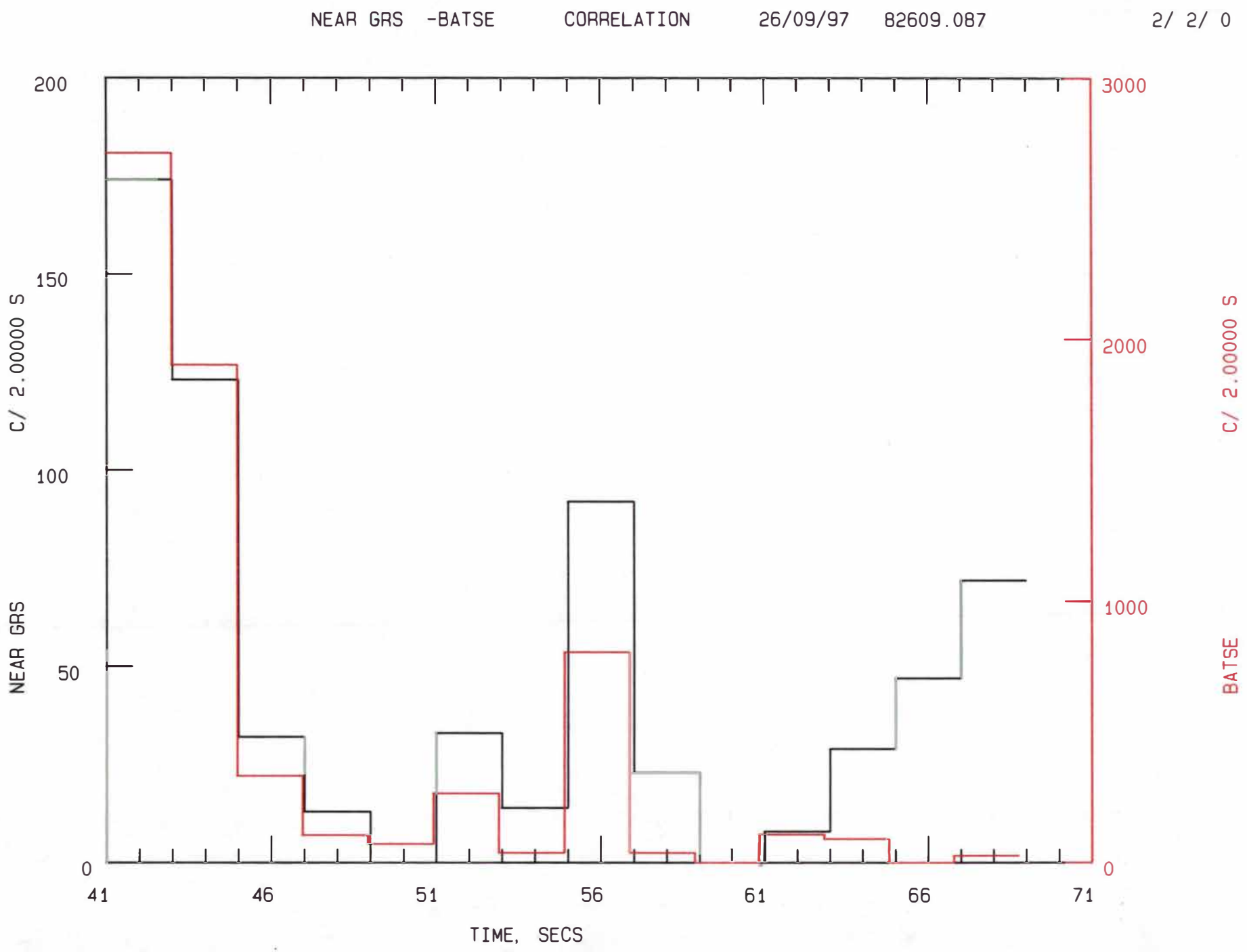
☑ ACCESS database updated? Added EL Oct 29 '08

EVENT OF SEP 26, 1997 22:56

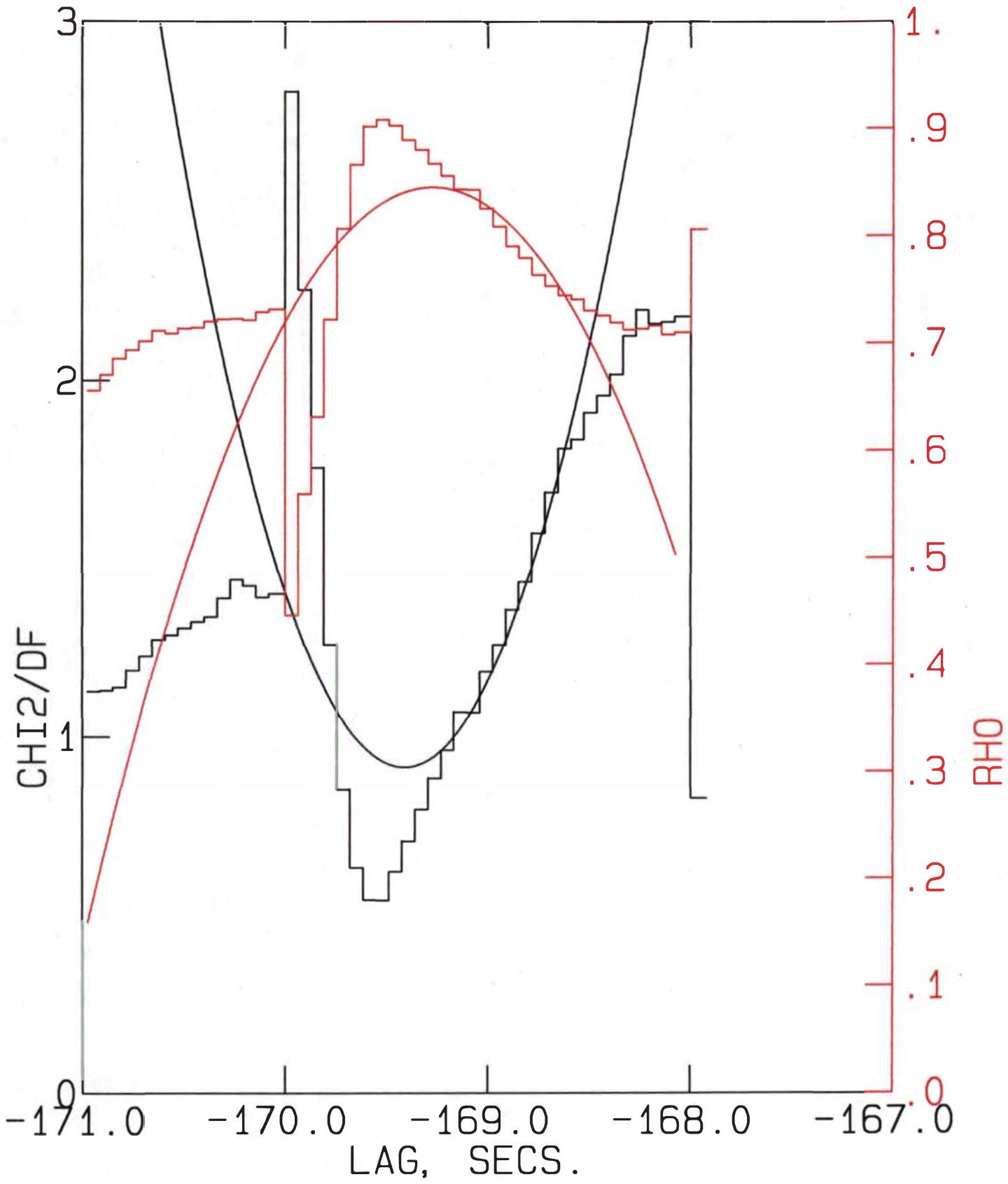
3/ 2/ 0

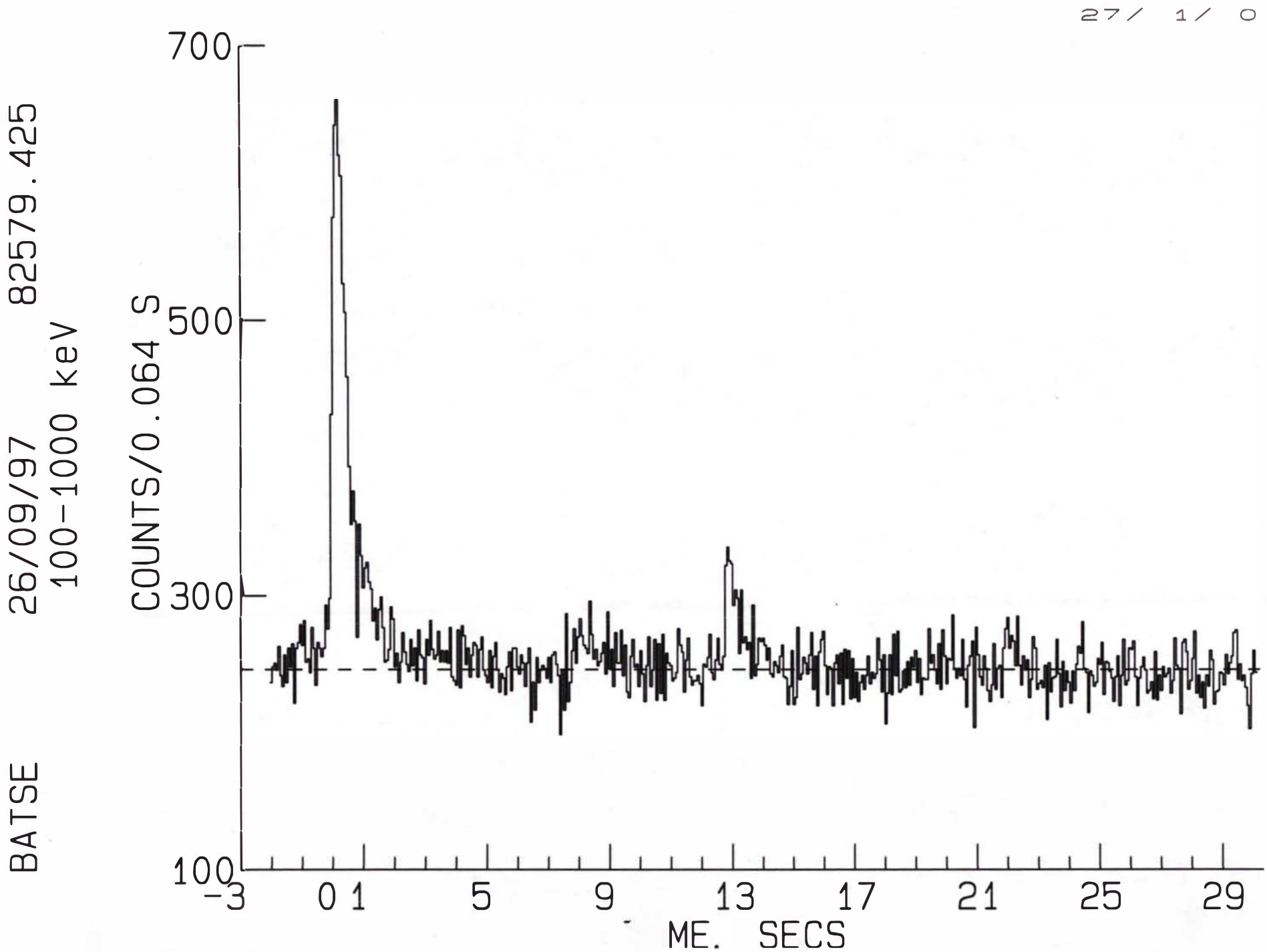
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 BATSE 2 NEAR

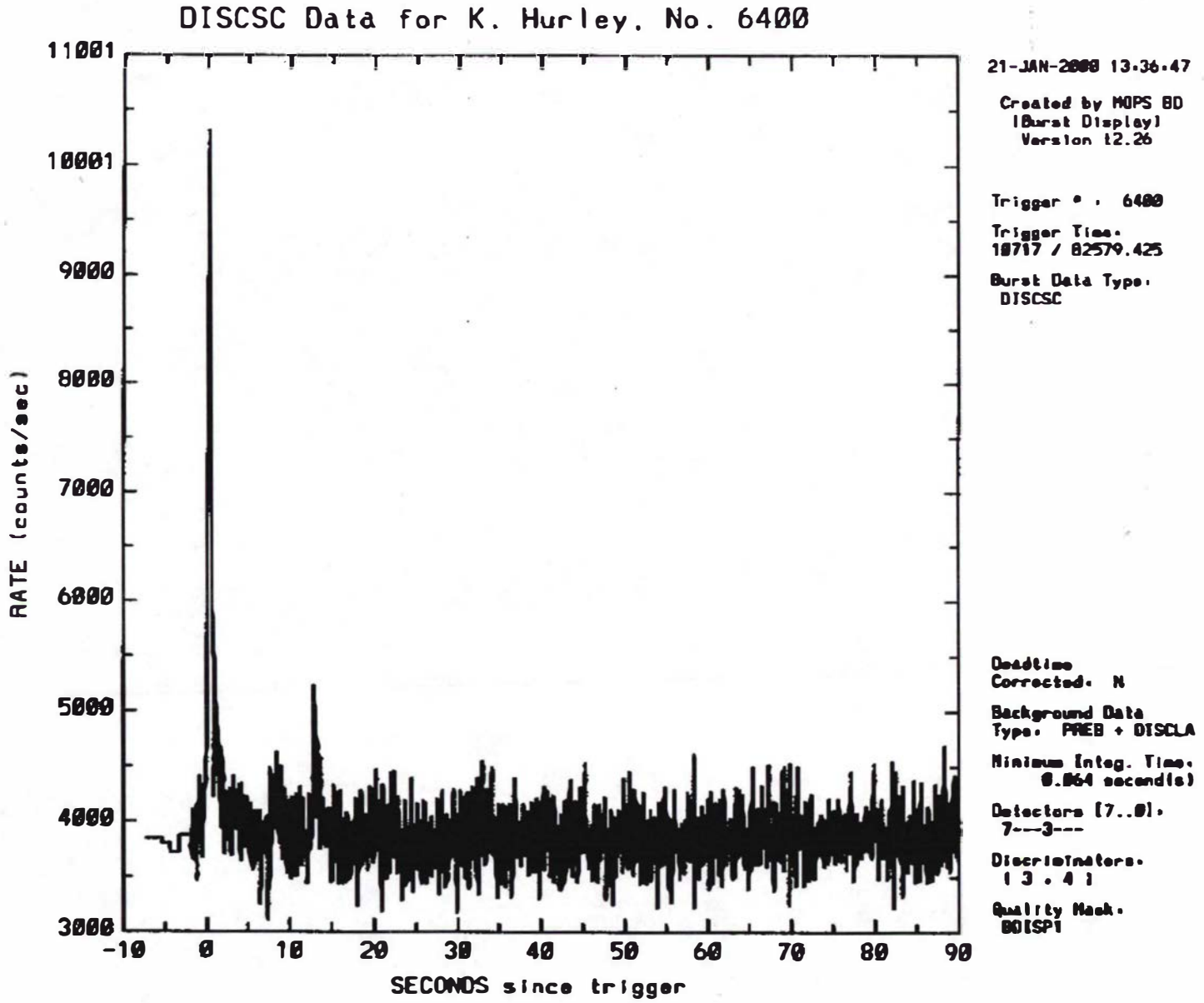


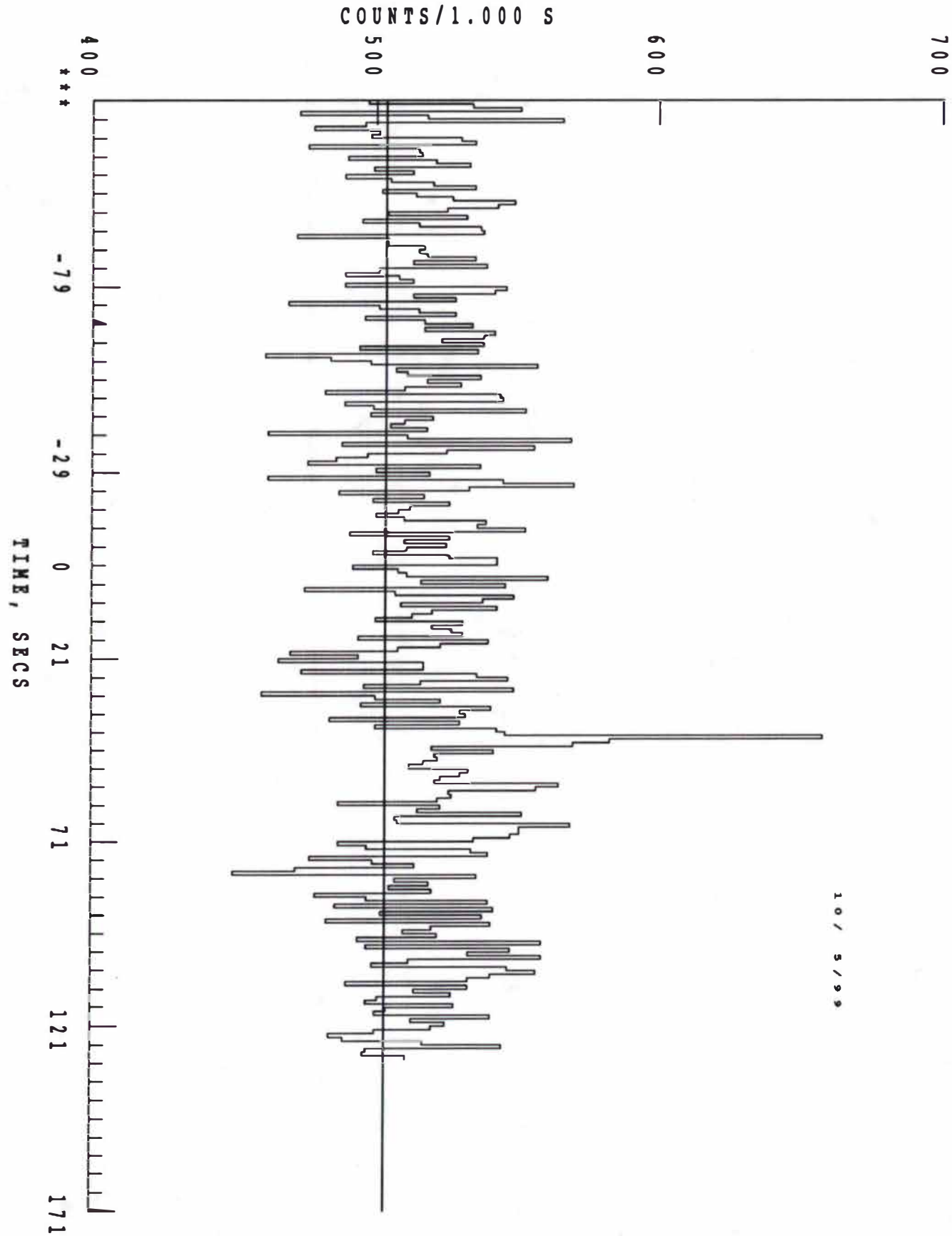

NEAR GRS -BATSE CORRELATION 26/09/97 82609.087 2/ 2/ 0
200
150
100
50
0
C/ 2.00000 S
NEAR GRS
3000
2000
1000
0
C/ 2.00000 S
BATSE
41
46
51
56
61
66
71
TIME, SECS

NEAR GRS -BATSE CORRELATION 26/09/97 82609.087




27/ 1/ 0
BATSE
26/09/97 825579.425
100-1000 keV
COUNTS/0.064 S
700
500
300
100
-3
0 1
5
9
13
17
21
25
29
ME. SECS


DISCSC Data for K. Hurley, No. 6400
11001
10001
9000
8000
7000
6000
5000
4000
3000
RATE (counts/sec)
-10
0
10
20
30
40
50
60
70
80
90
SECONDS since trigger
21-JAN-2000 13:36:47
Created by MOPS BD
(Burst Display)
Version 12.26
Trigger # : 6400
Trigger Time:
10717 / 82579.425
Burst Data Type:
DISCSC
Deadtime
Corrected: N
Background Data
Type: PREB + DISCLA
Minimum Integ. Time:
0.064 seconds
Detectors [7..0]:
7---3---
Discriminators:
[3 , 4]
Quality Mask:
BDISP1


NEAR
26/09/97
82609.087
100-1000 keV
COUNTS/1.000 S
400
500
600
700
***
-79
-29
0
21
71
121
171
TIME, SECS
10/ 5/99

BATSE BURST# 6400

ULYSSES RT 15/ 1/98

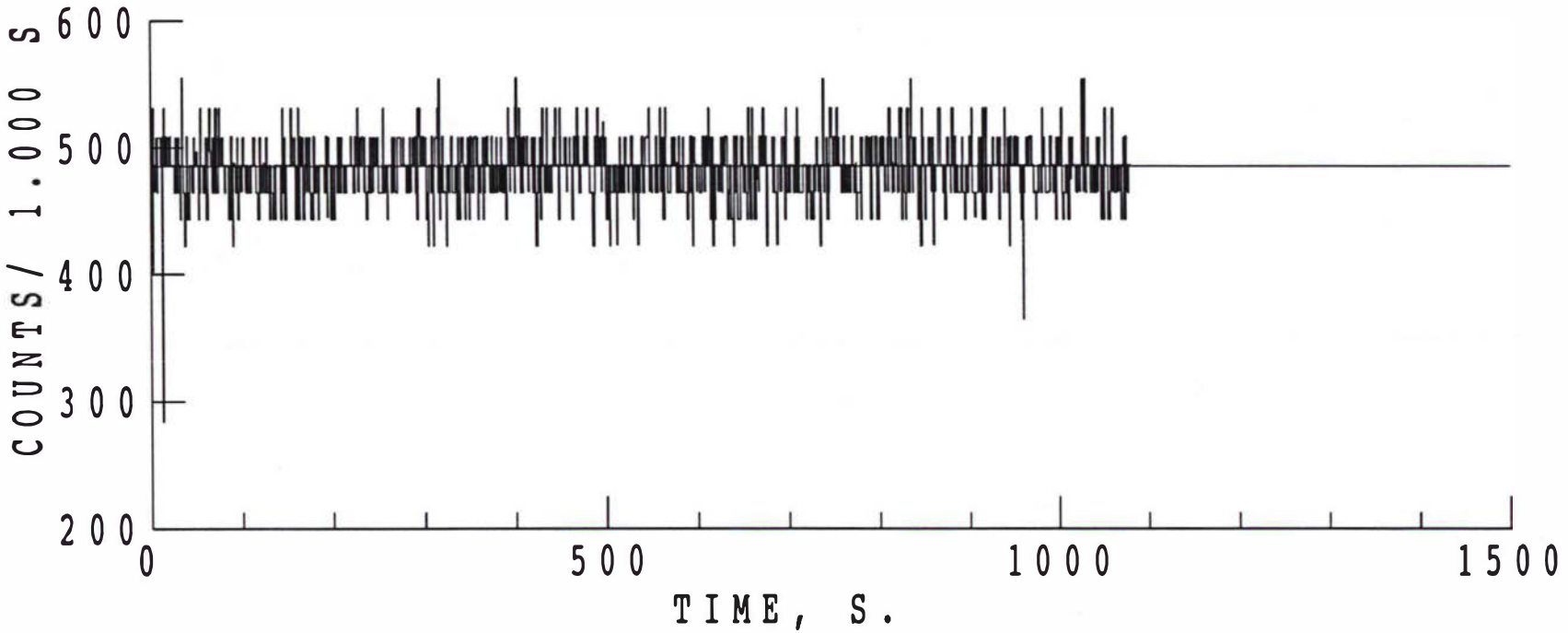
26/ 9/97 83412.078 s

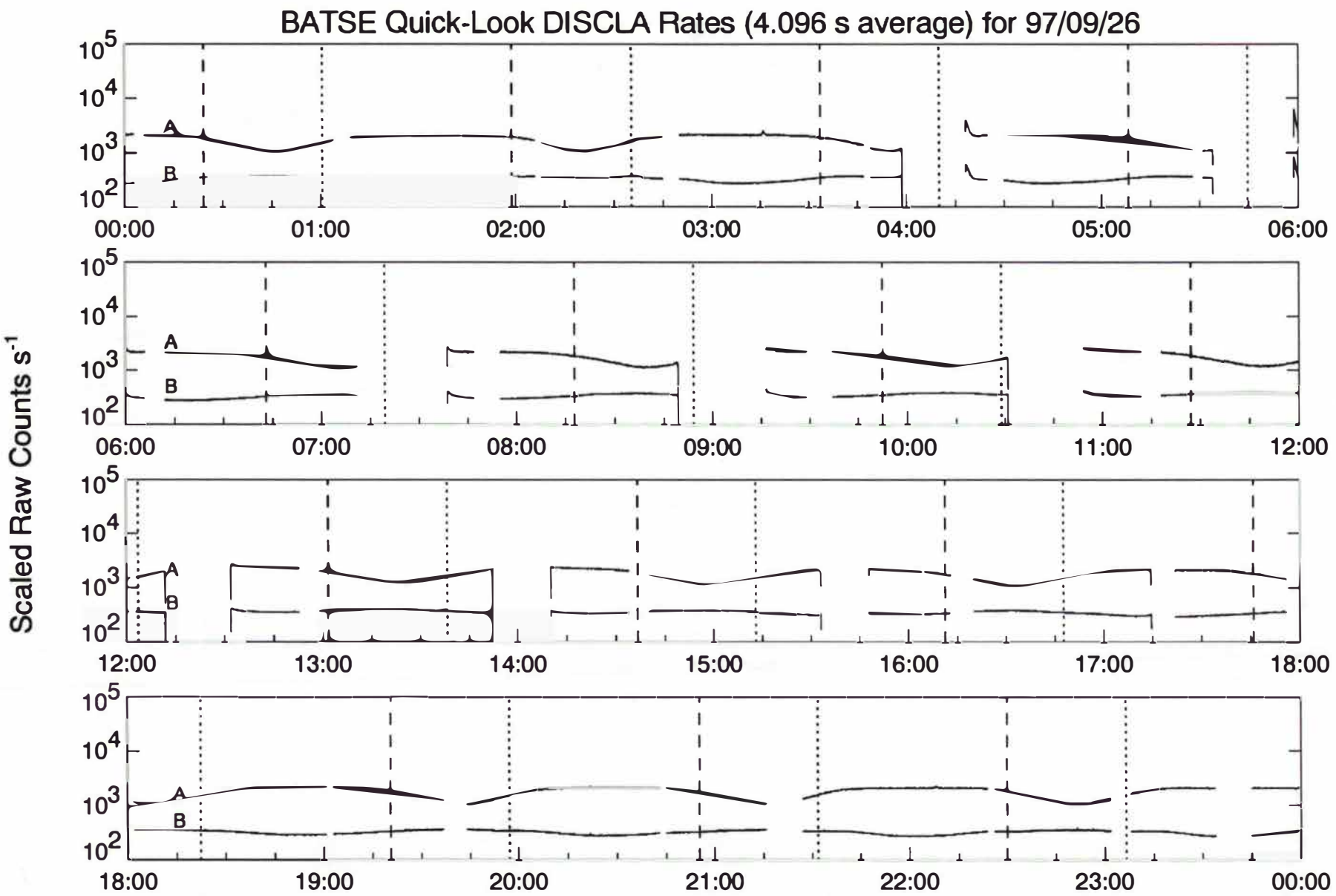
0.500 S INTERVALS REGROUPED BY 2

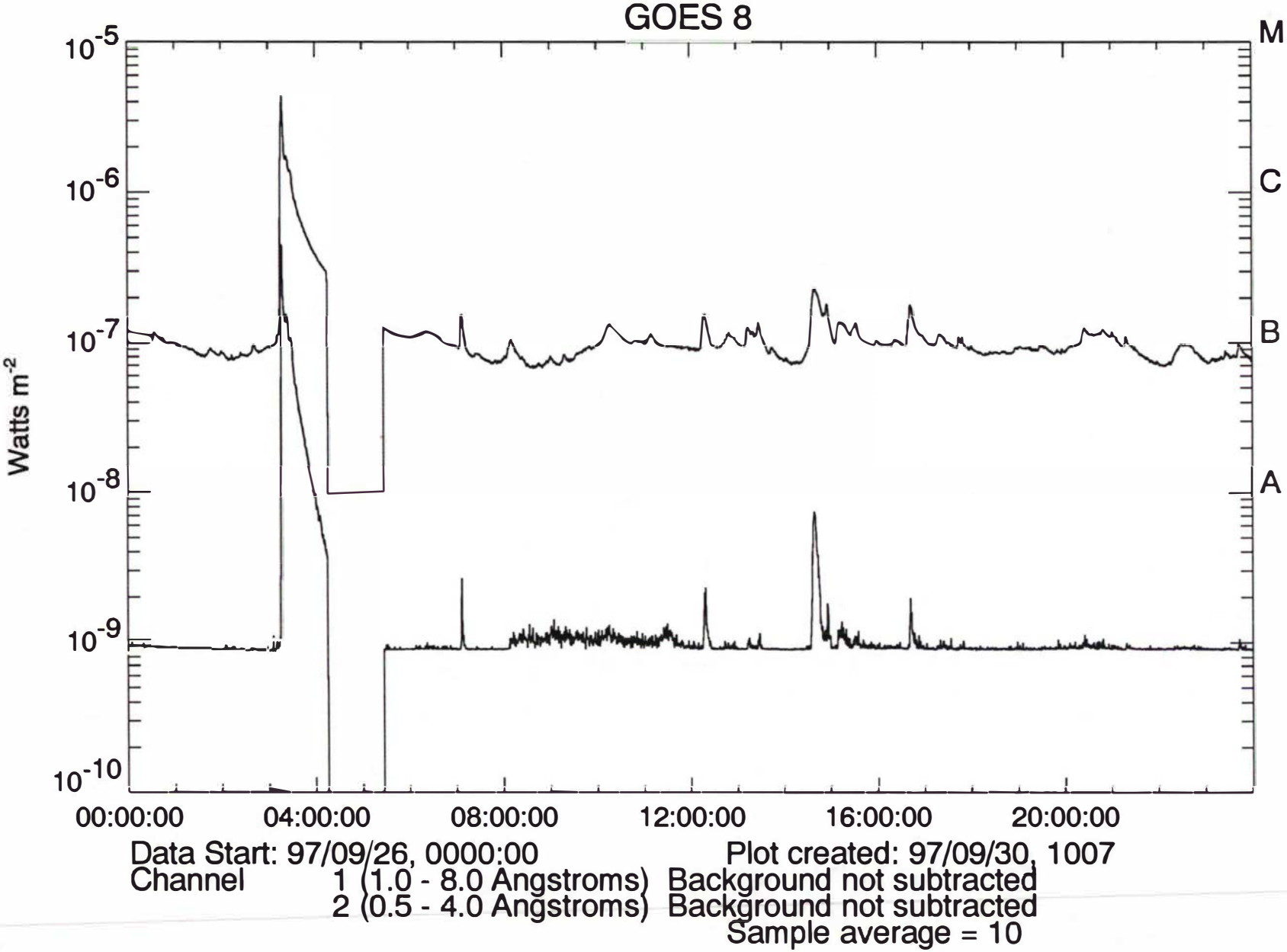
0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

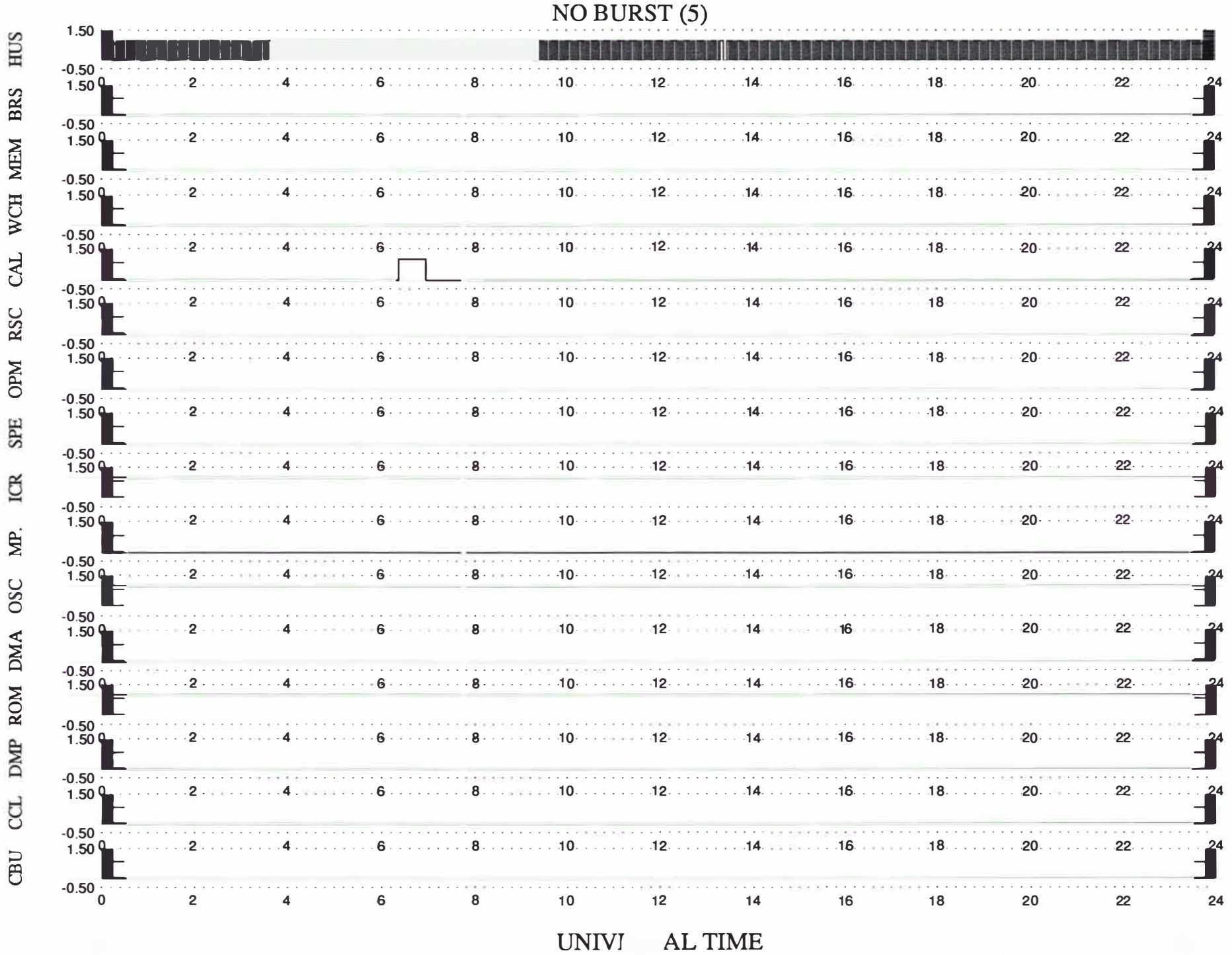
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS




BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/26
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/09/30, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare

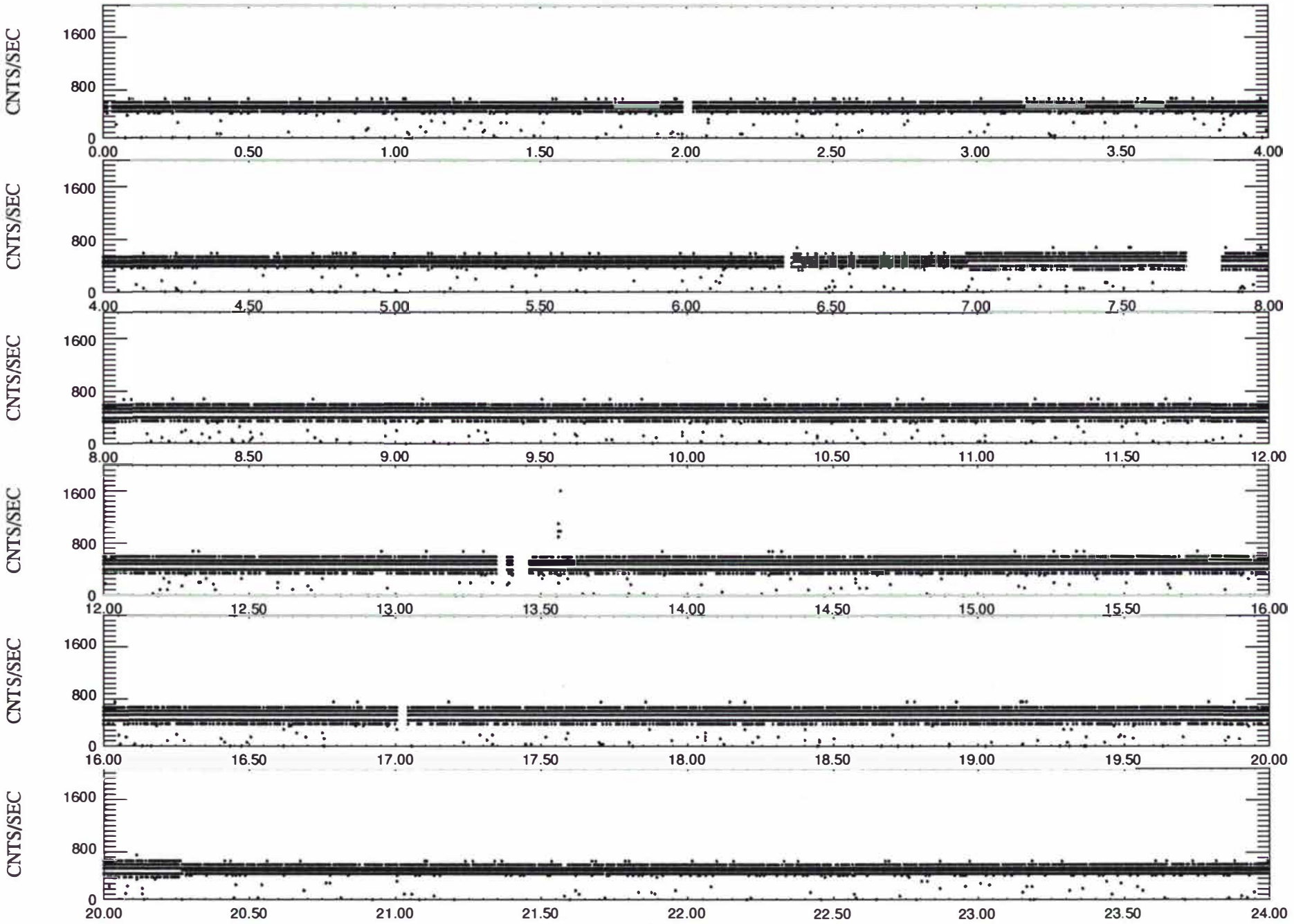

GOES 8
M
C
B
A
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
10^{-10}
Watts m^{-2}
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/26, 0000:00
Plot created: 97/09/30, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 269, year 1997 to day 269, year 1997 1/14/98



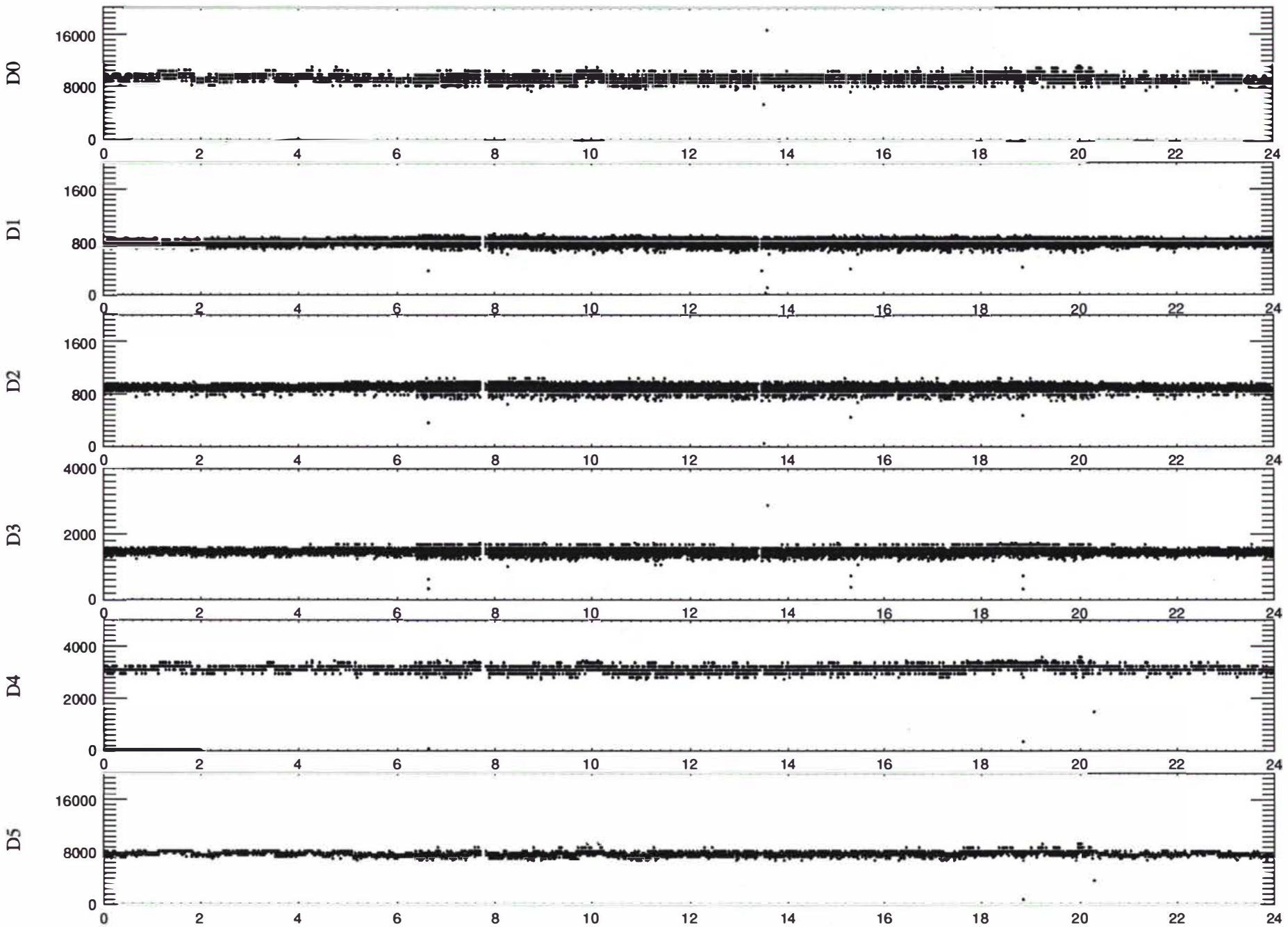
HUS 2A, MODE 1, NOT AVERAGED EDR day 269, year 1997 to day 269, year 1997 1/14/98

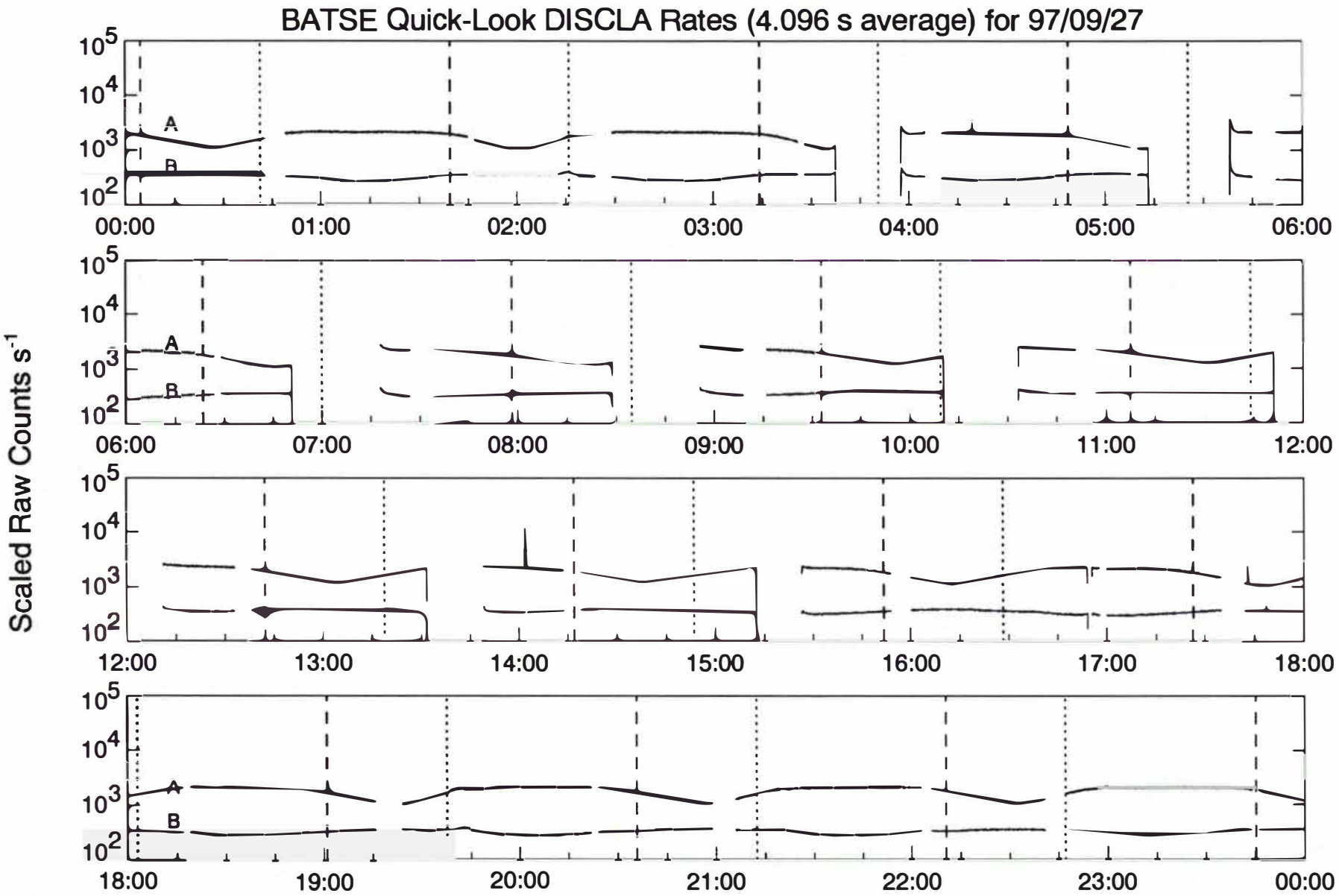
CALIBRATION DATA INCLUDED



UNIV[illegible]AL TIME

HUS 2B COUNTS / SEC EDR day 269, year 1997 to day 269, year 1997 1/14/98

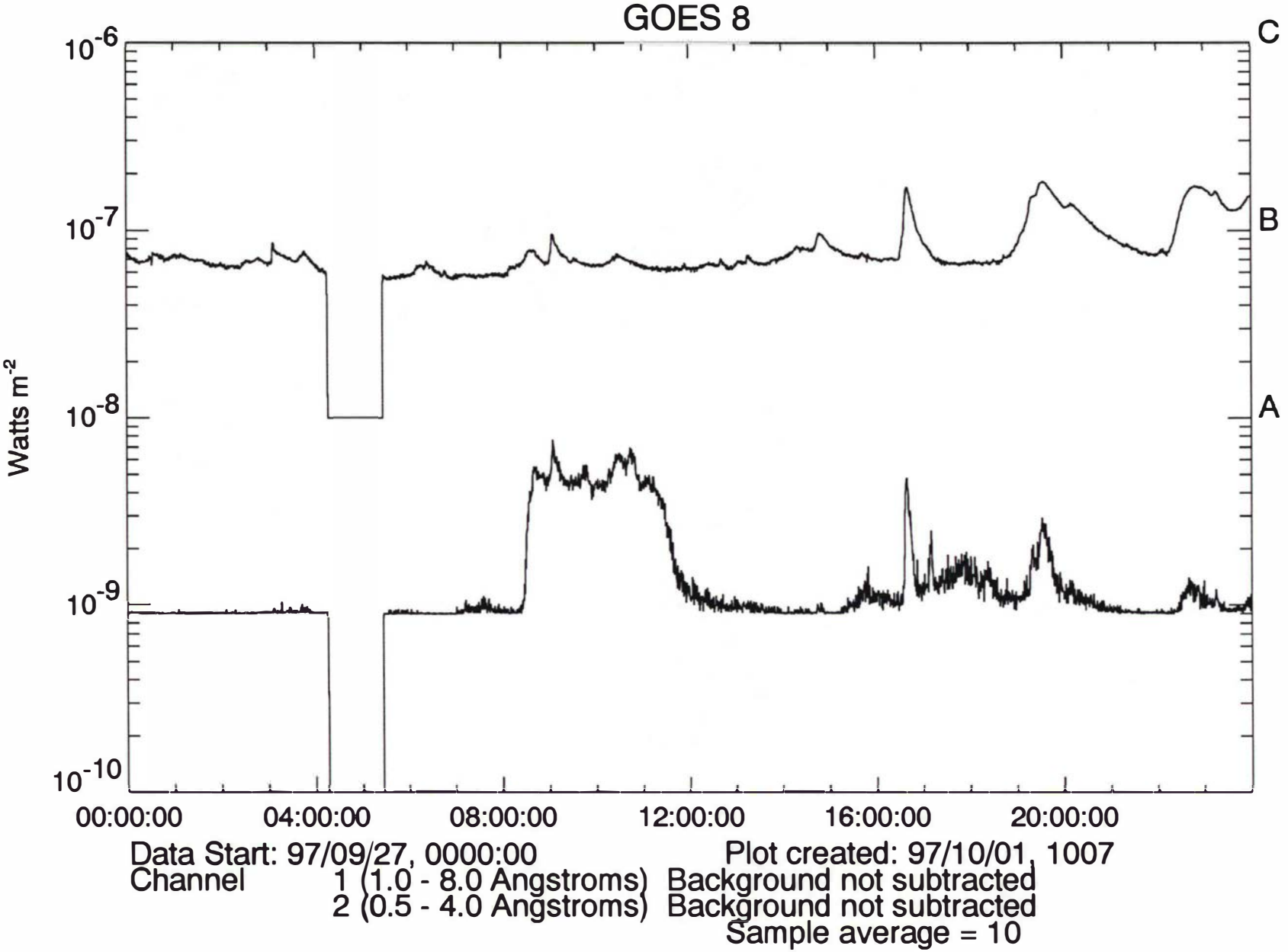




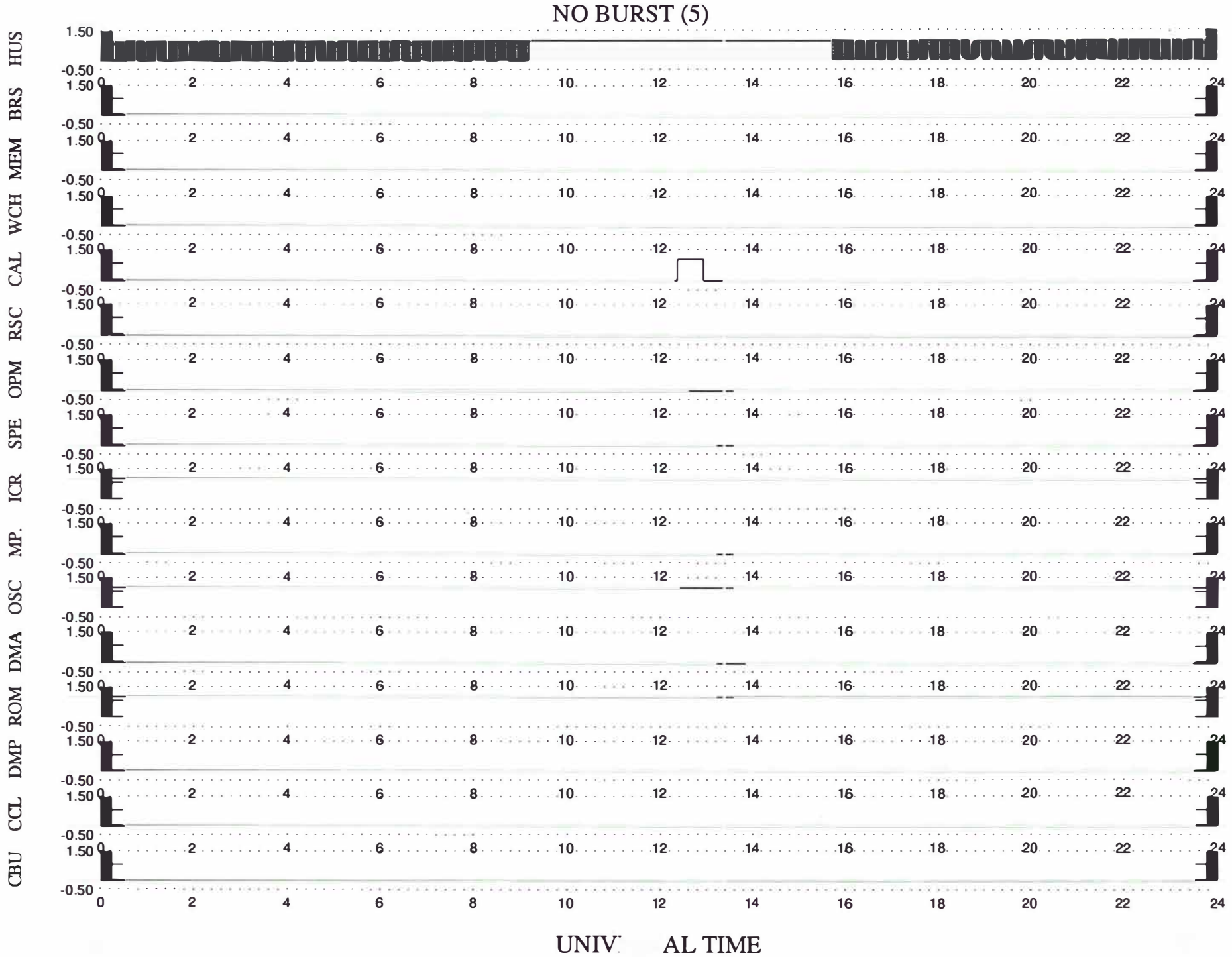
Current Time: 97/10/01, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
\+ Solar Flare

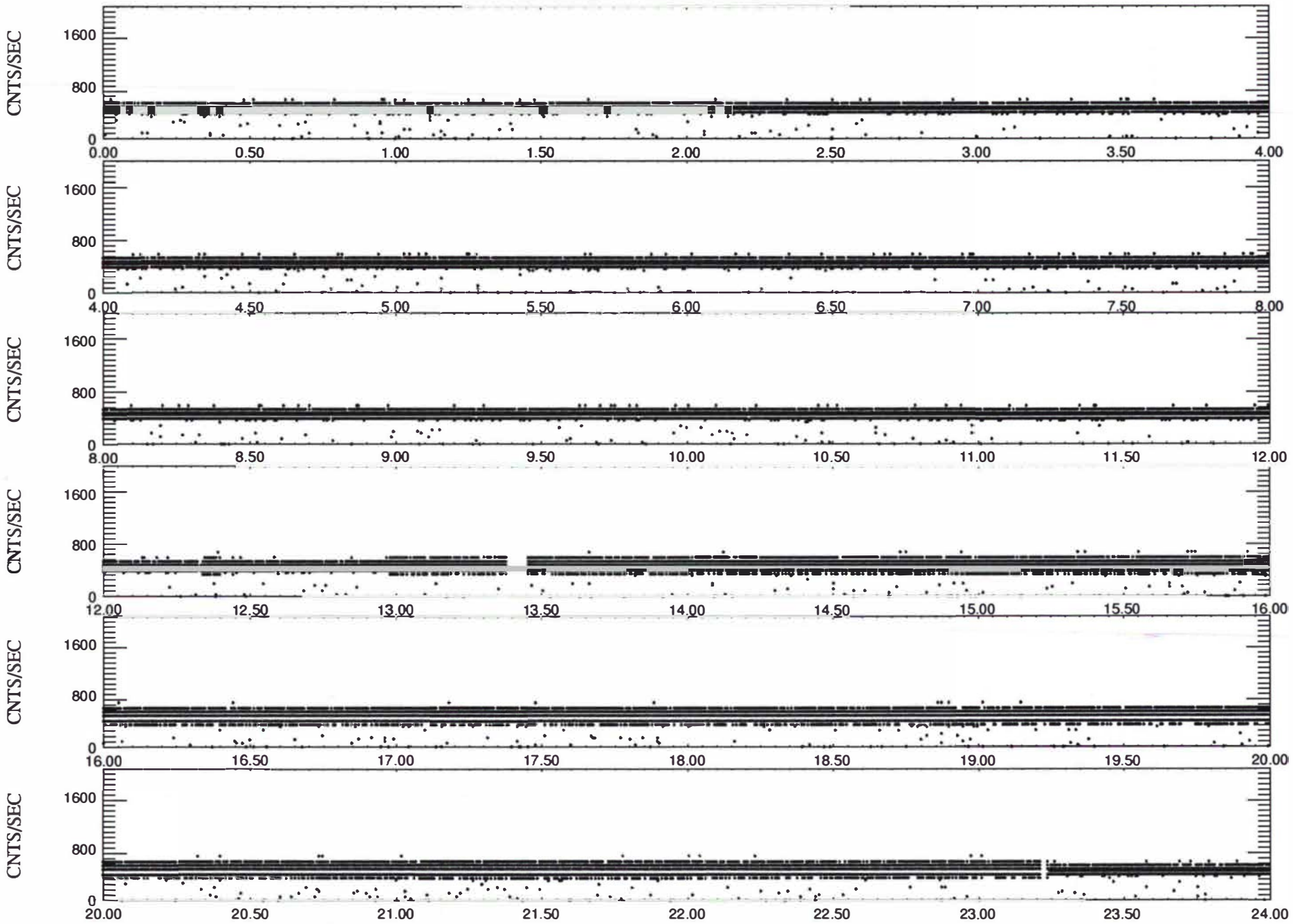

GOES 8
C
B
A
10^{-6}
10^{-7}
10^{-8}
10^{-9}
10^{-10}
Watts m^{-2}
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/27, 0000:00
Plot created: 97/10/01, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 270, year 1997 to day 270, year 1997 1/14/98



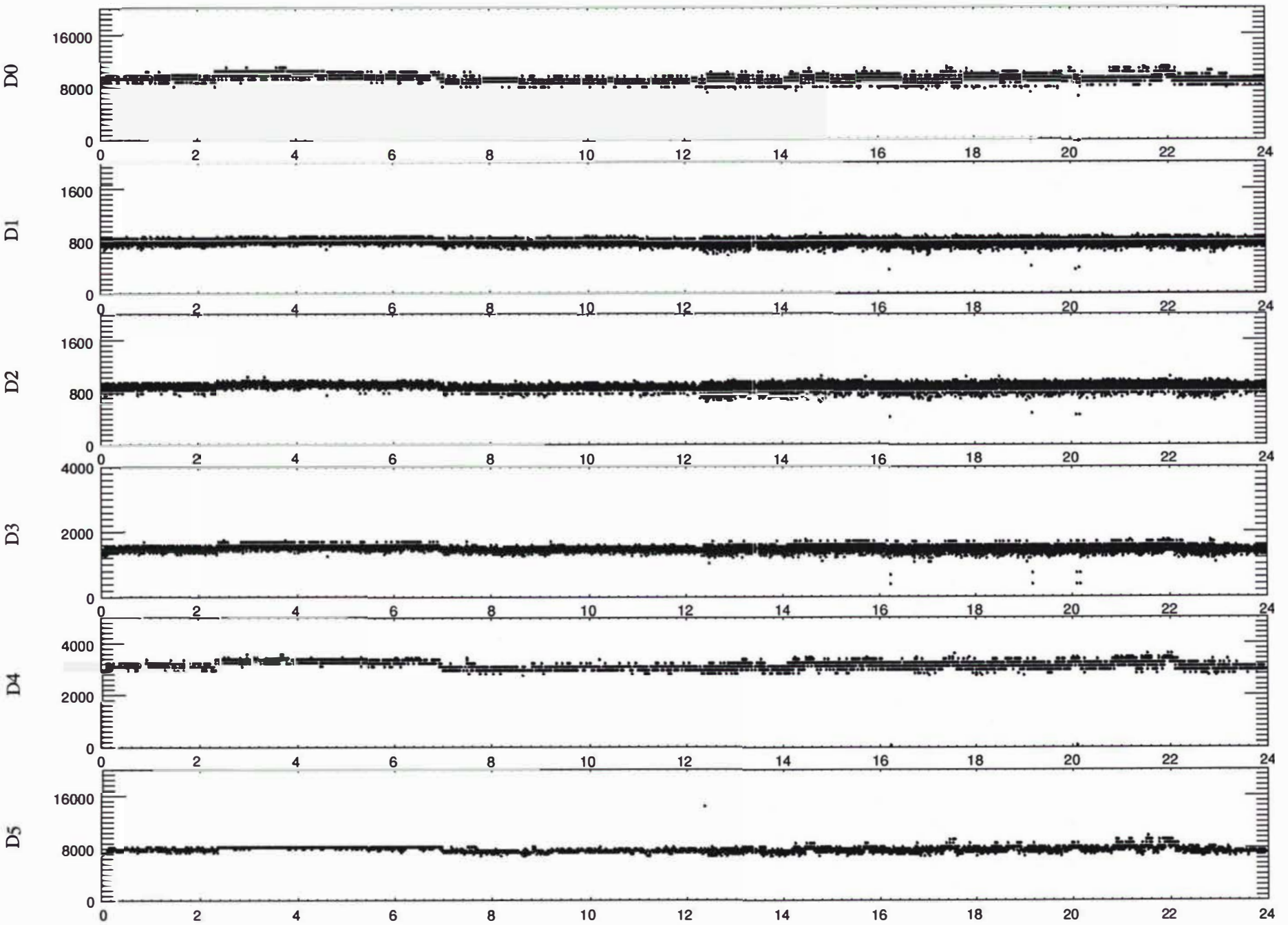
HUS 2A, MODE 1, NOT AVERAGED EDR day 270, year 1997 to day 270, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV AL TIME

HUS 2B COUNTS / SEC EDR day 270, year 1997 to day 270, year 1997 1/14/98



From SURASAK@SSLLES.MSFC.NASA.GOV Tue Sep 30 12:15:49 1997
Return-Path: <SURASAK@SSLMOR.msfc.nasa.gov>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id MAA28994; Tue, 30 Sep 1997 12:15:40 -0700
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
        id MAA09487; Tue, 30 Sep 1997 12:15:39 -0700
Date: Tue, 30 Sep 1997 14:15:28 -0500 (CDT)
From: SURASAK@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <970930141529.2020eadc@SSLLES.MSFC.NASA.GOV>
Subject: Crossing Windows for BATSE Burst 6401
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6401
EVENT OF 1997 SEP 28 DAY OF YEAR=271
EVENT CROSSING TIME AT BATSE : 8507. S. OR 02:21:47.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 168.000 79.000
BATSE PEAK COUNTING RATE: 3550 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 28/ 9/ 97 IS:
RA= 165.267 DEC= 16.434 DIST= 6.160 AU
BATSE-ULYSSES DISTANCE = 921467424. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=117.42 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1415.50 SECS.
CROSSING TIME AT ULYSSES IS 7091. S. OR 01:58:11 +/- 502.19 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 28/ 9/ 97 IS:
RA= 236.904 DEC= -21.035 DIST= 1.779 AU
MARS-BATSE DISTANCE = 266108672. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 73.25 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 255.86 SECS.
CROSSING TIME AT MARS IS 8763. S. OR 02:26:02 +/- 151.45 SECONDS

BATSE BURST TRIGGER

NO.: 6401

TIME: TJD=0719 SECONDS=8507

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

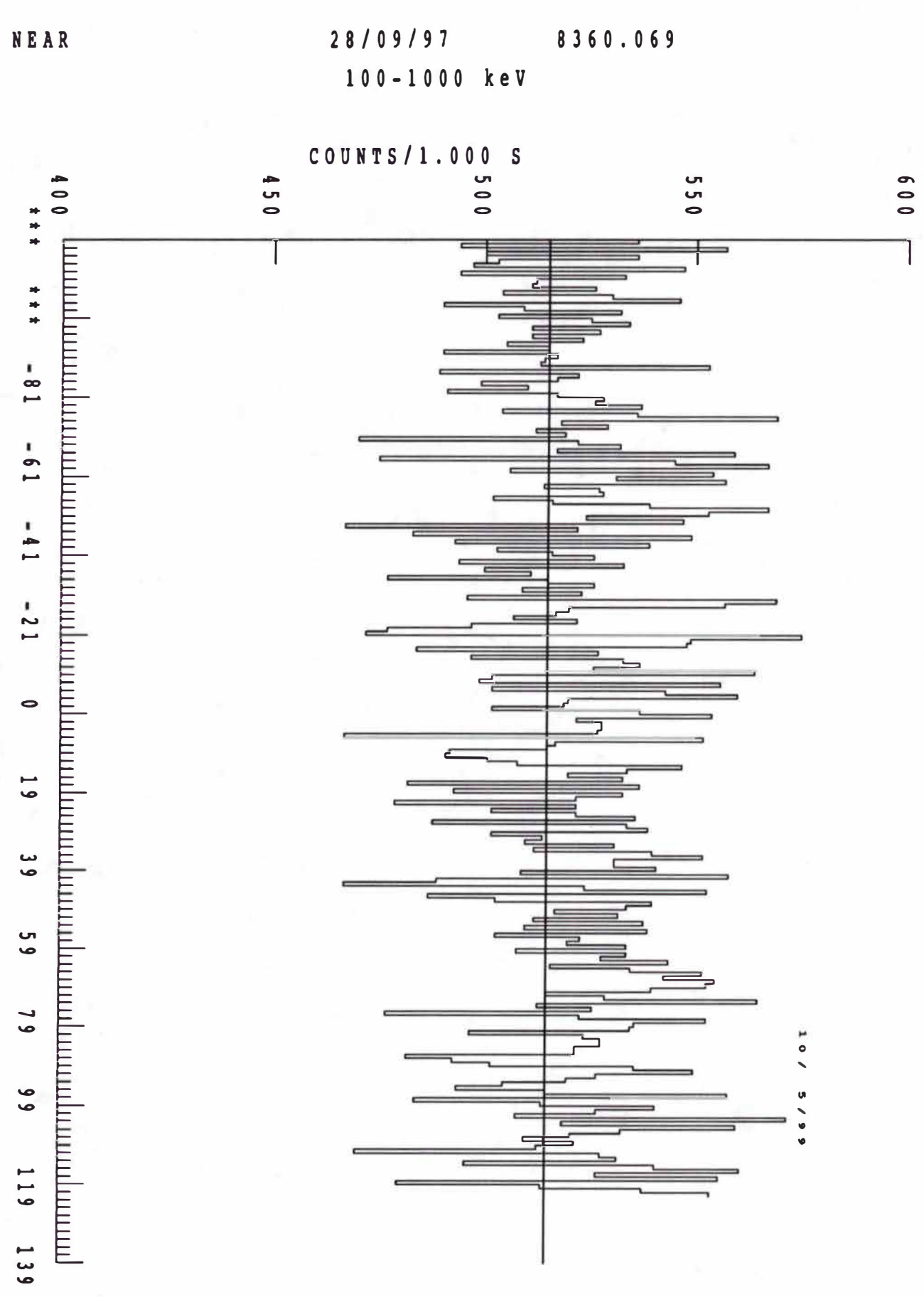
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=136.2 AZIMUTH=359.9 ERROR=9.18 DEGREES

COMMENTS:
GRB. DURATION ABOUT 2 SECONDS. SINGLE PULSE. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6401	970928	10719	08507	3550	168	+79	2


NEAR
28/09/97
8360.069
100-1000 keV
COUNTS/1.000 S
400
450
500
550
600
*** *** -81 -61 -41 -21 0 19 39 59 79 99 119 139
TIME, SECS
10/ 5/99

BATSE BURST# 6401

ULYSSES RT 30/ 9/97

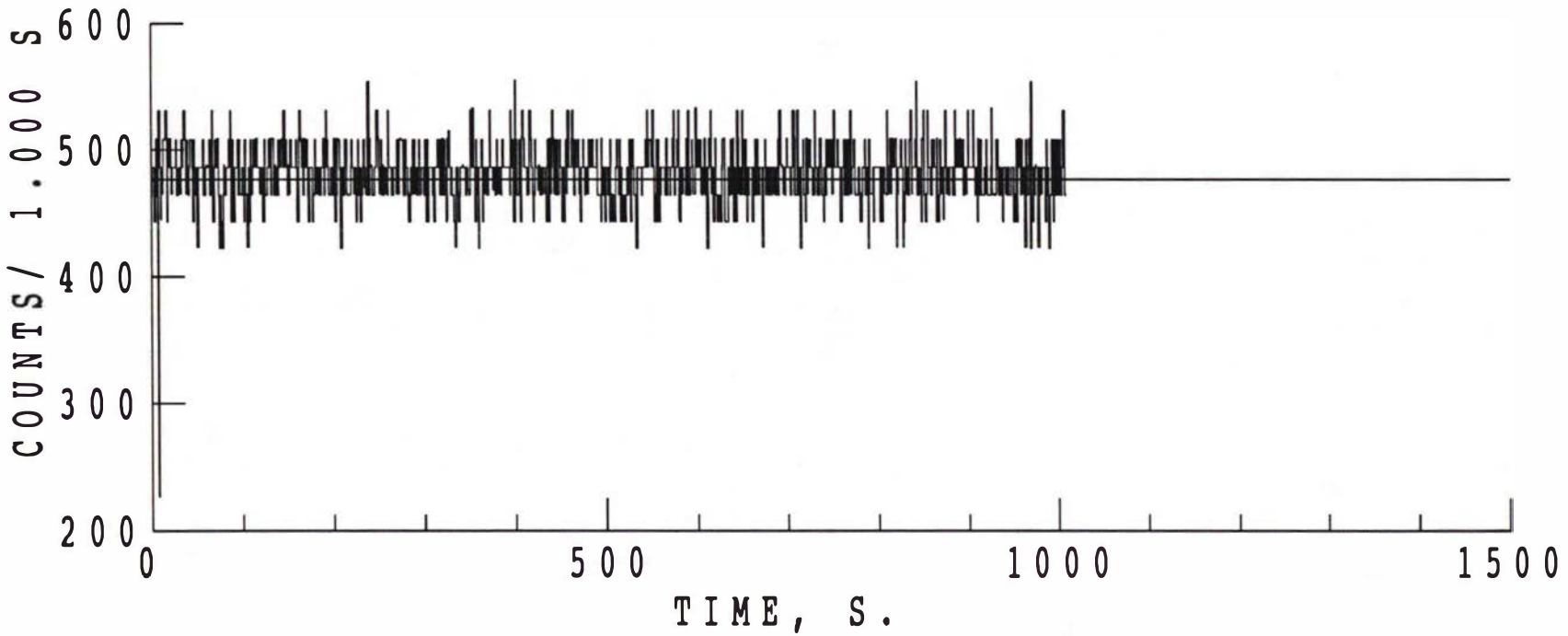
28/ 9/97 6588.160 s

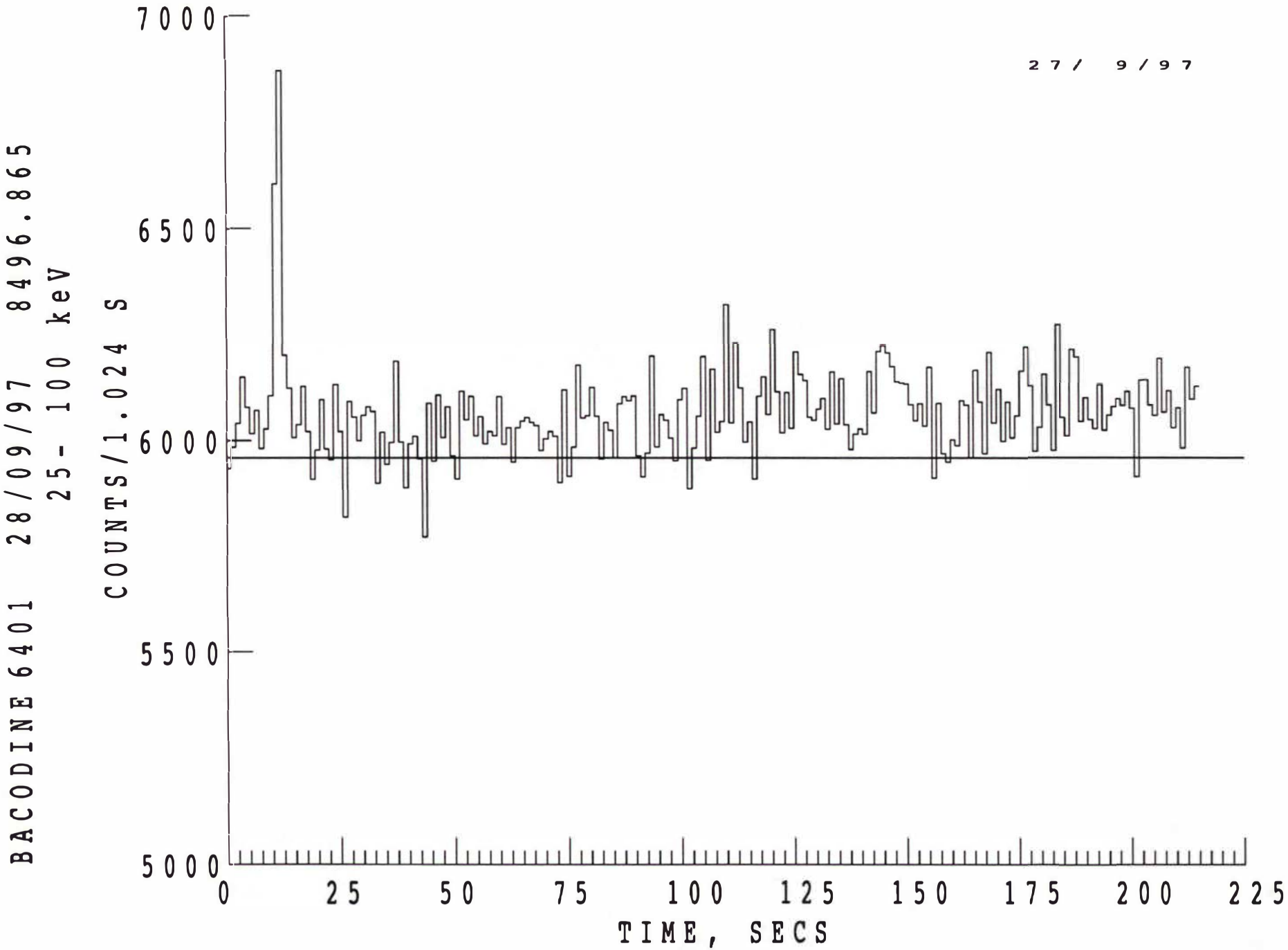
0.500 S INTERVALS REGROUPED BY 2

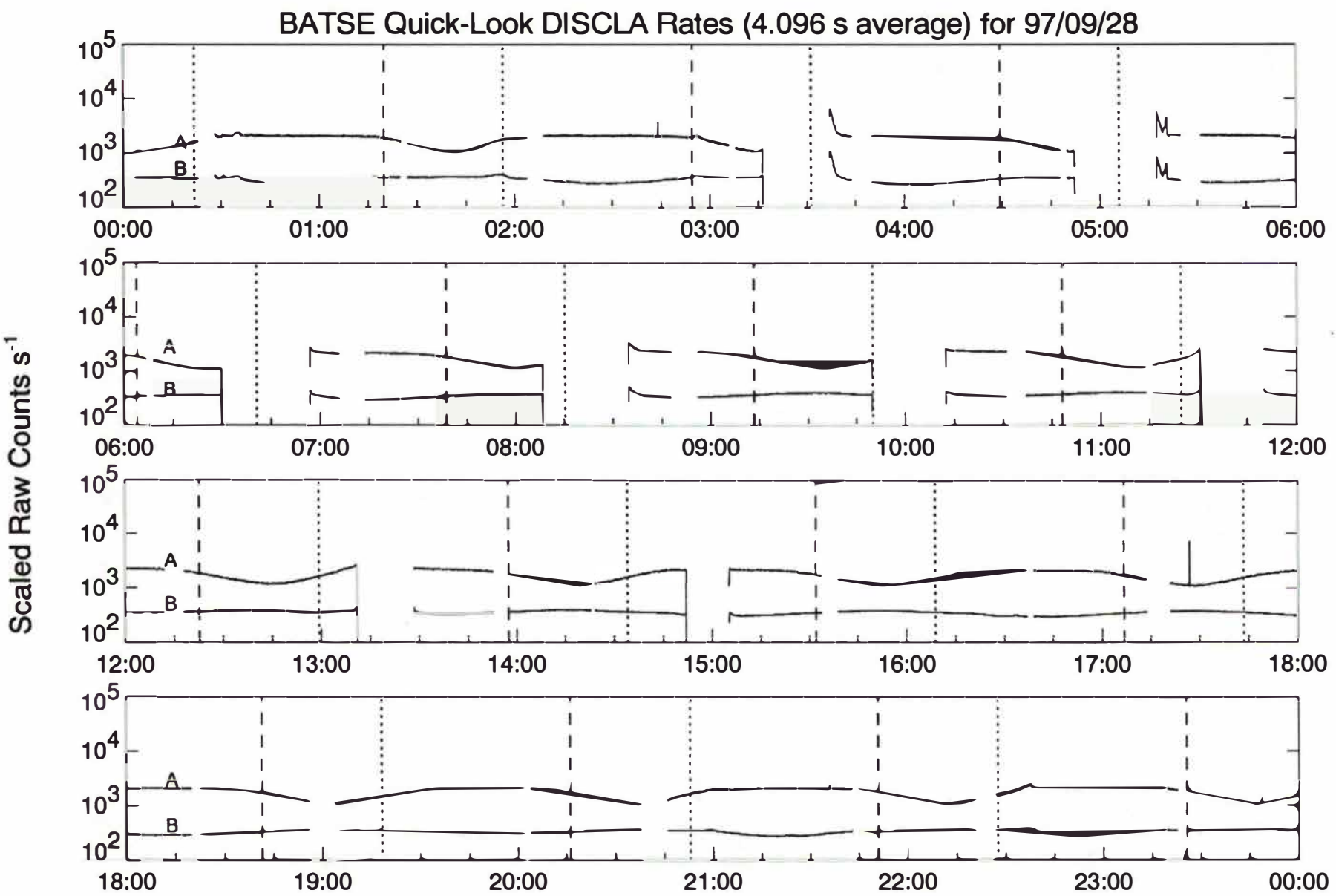
0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



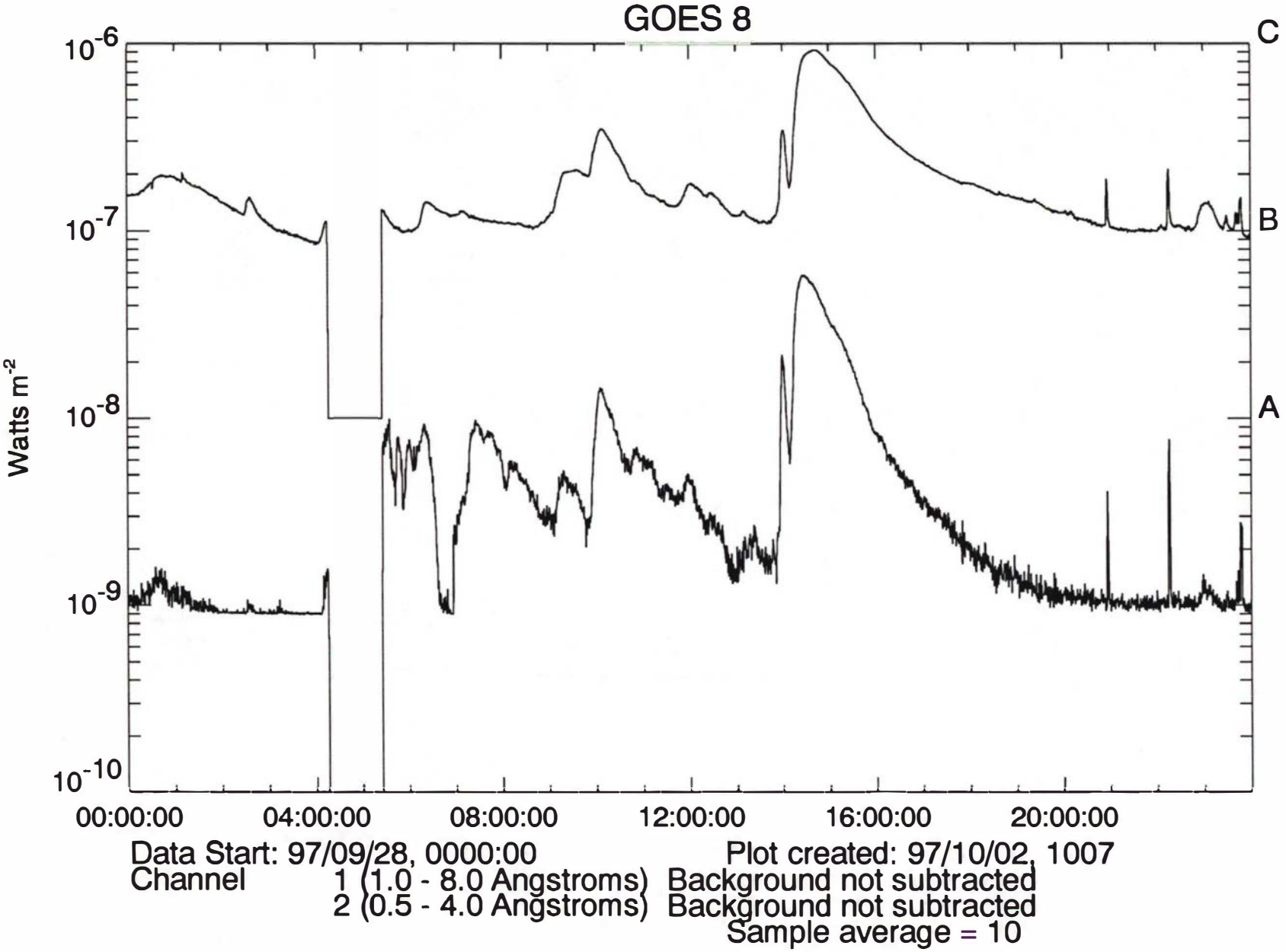

BACODINE 6401 28/09/97 8496.865
25- 100 keV
COUNTS/1.024 S
7000
6500
6000
5500
5000
0
25
50
75
100
125
150
175
200
225
TIME, SECS
27/ 9/97



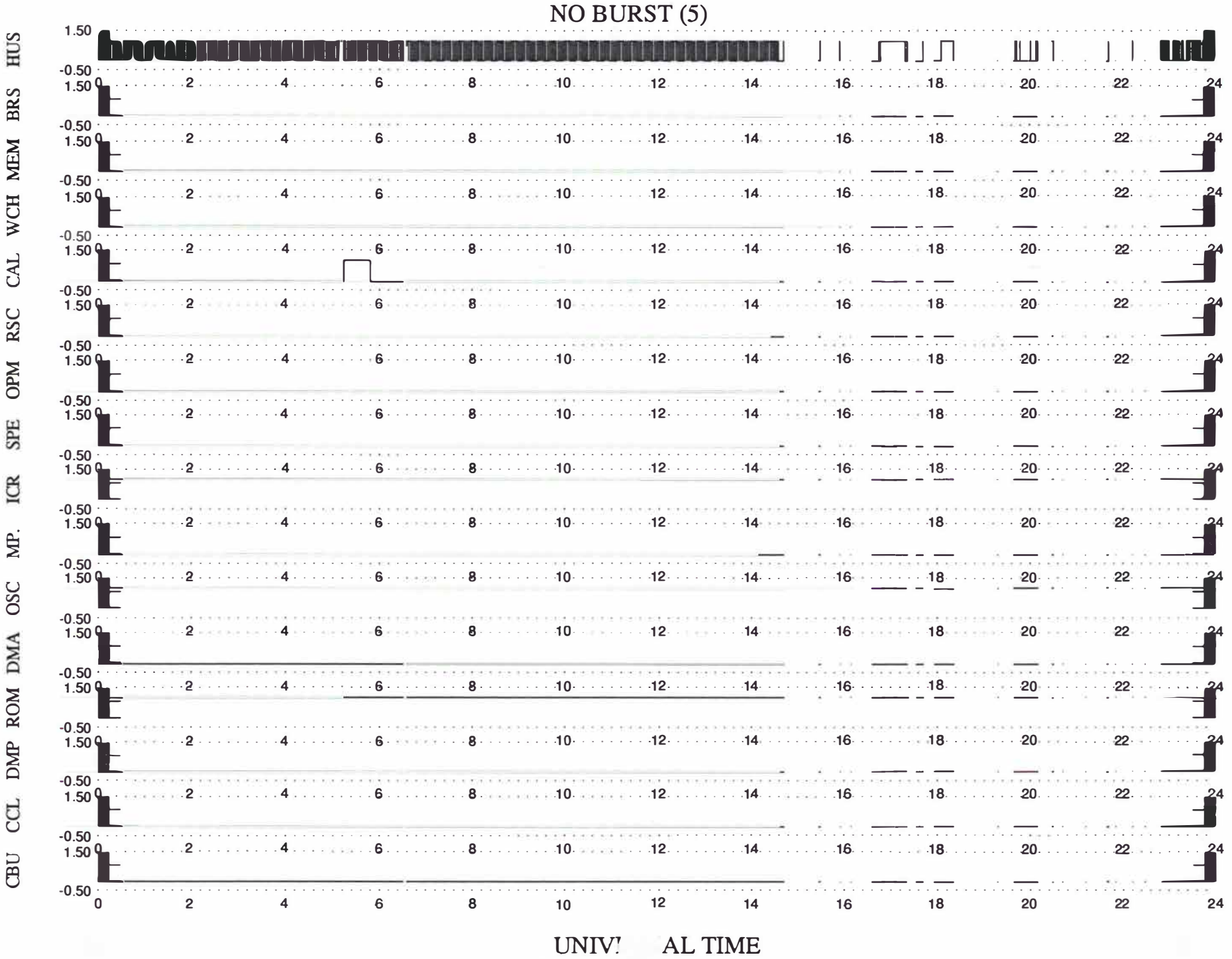
Current Time: 97/10/02, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
\+ Solar Flare

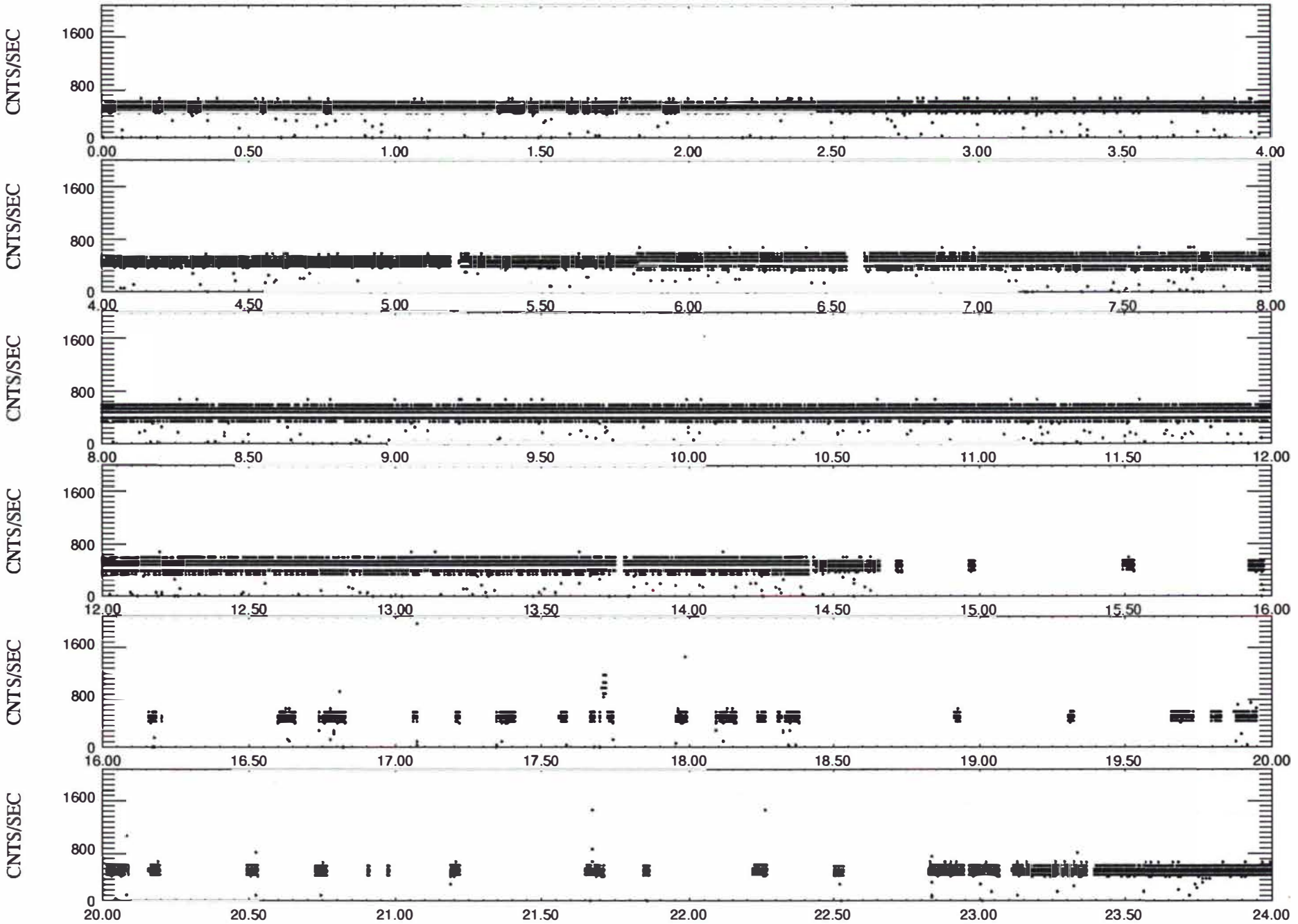

GOES 8
C
B
A
Watts m-2
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/28, 0000:00
Plot created: 97/10/02, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 271, year 1997 to day 271, year 1997 1/14/98



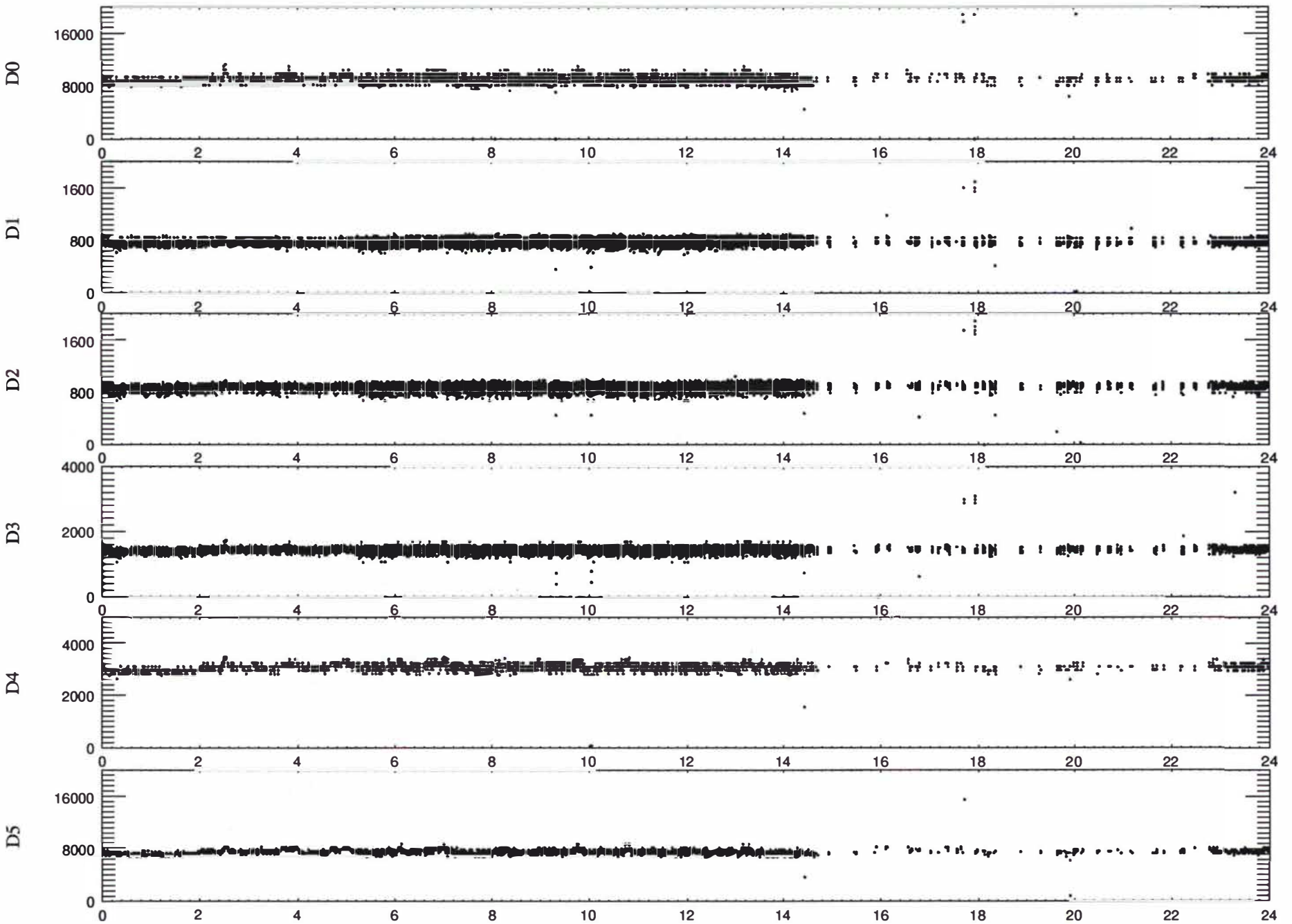
HUS 2A, MODE 1, NOT AVERAGED EDR day 271, year 1997 to day 271, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV 'AL TIME

HUS 2B COUNTS / SEC EDR day 271, year 1997 to day 271, year 1997 1/14/98



From HENZE@BATSE.MSFC.NASA.GOV Wed Oct 1 10:57:07 1997
Date: Wed, 1 Oct 1997 12:55:49 -0500 (CDT)
From: Bill Henze (205-544-7616) <HENZE@BATSE.MSFC.NASA.GOV>
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu,
gruber@cass09.ucsd.edu, matteson@cass09.ucsd.edu,
PACIESAS@BATSE.MSFC.NASA.GOV, HORACK@BATSE.MSFC.NASA.GOV,
khurley@sunspot.ssl.berkeley.edu, lmm@egret.gsfc.nasa.gov,
mops@osse.nrl.navy.mil, grove@osse.nrl.navy.mil,
matz@osse.nrl.navy.mil, share@osse.nrl.navy.mil,
messina@osse.nrl.navy.mil, sandora@osse.nrl.navy.mil,
park@kabul.llnl.gov
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6402

TIME: TJD=0720 SECONDS=01903

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

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=141.6 AZIMUTH=224.6 ERROR=012.0 DEGREES

COMMENTS:
CYG X-1 FLUCTUATION AFTER OCCULTATION RISE AT ~T-11 S.

From SURASAK@SSLLES.MSFC.NASA.GOV Tue Sep 30 14:20:15 1997
Date: Tue, 30 Sep 1997 16:16:20 -0500 (CDT)
From: SURASAK@SSLLES.MSFC.NASA.GOV
To: burst@comptel.sr.unh.edu, grobad@estsa2.estec.esa.nl,
cline@lheavx.gsfc.nasa.gov, barthelmy@lheavx.gsfc.nasa.gov,
bacodine@lheawww.gsfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 6403

TIME: TJD=0720 SECONDS=53926

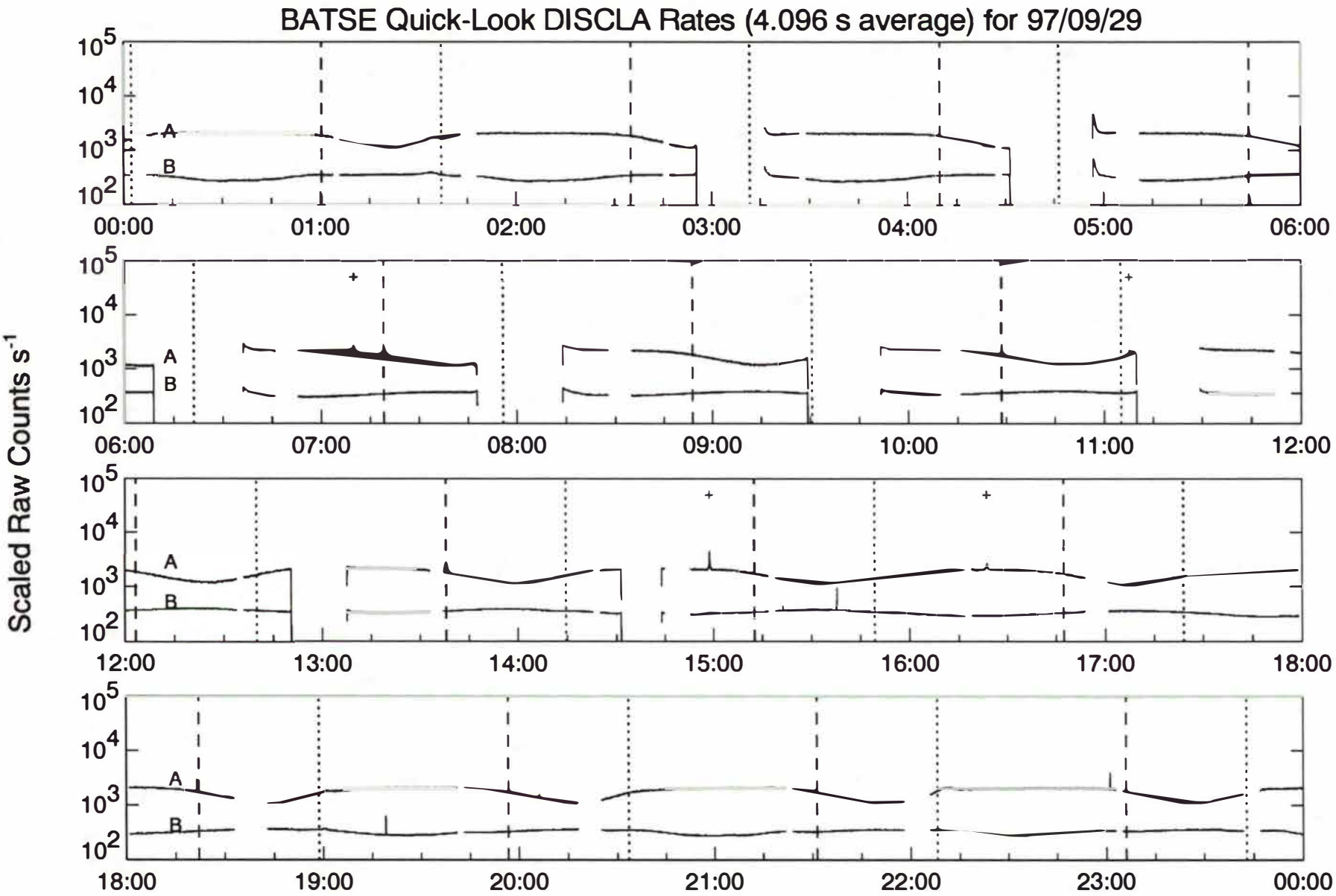
TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

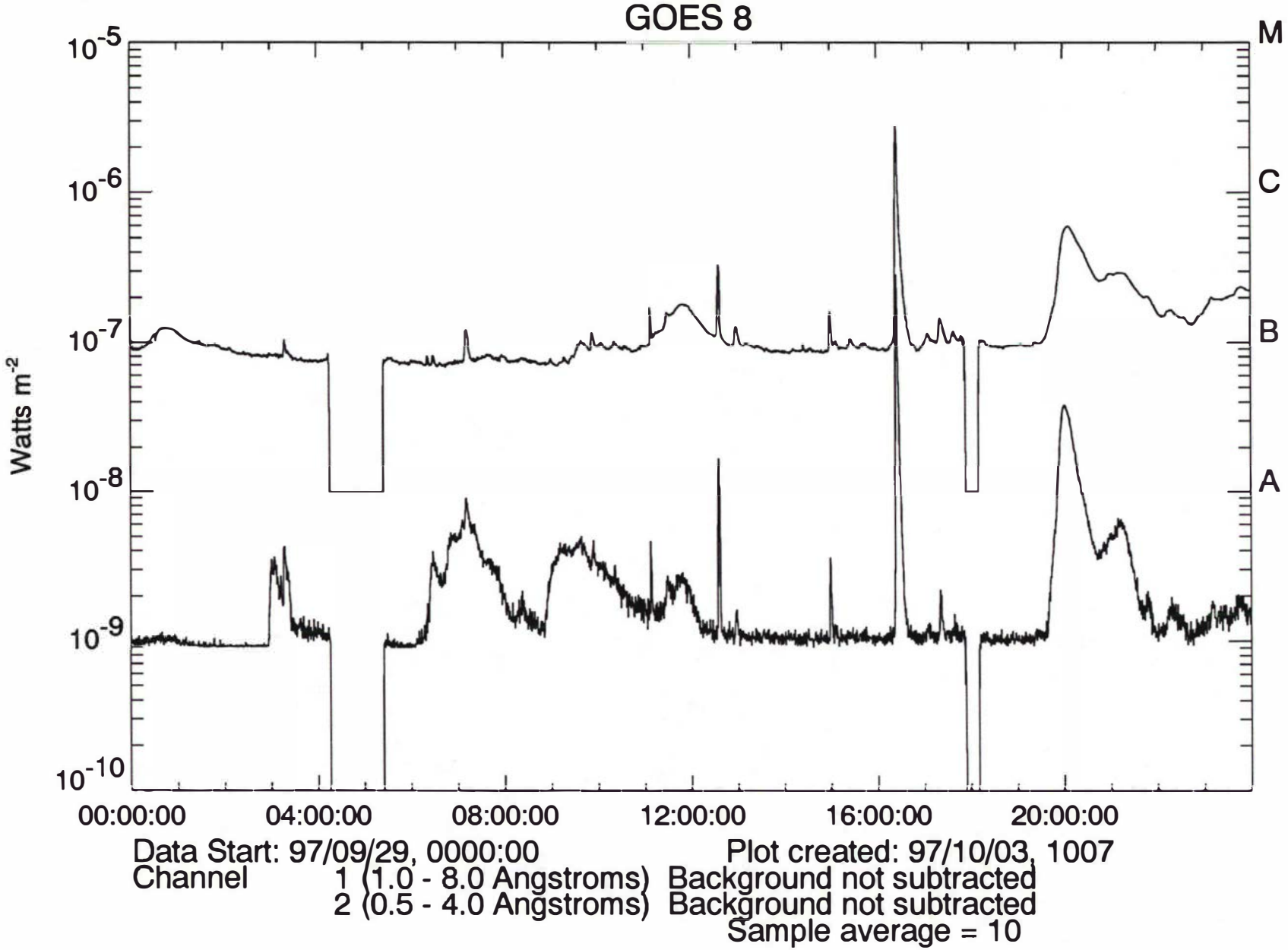
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

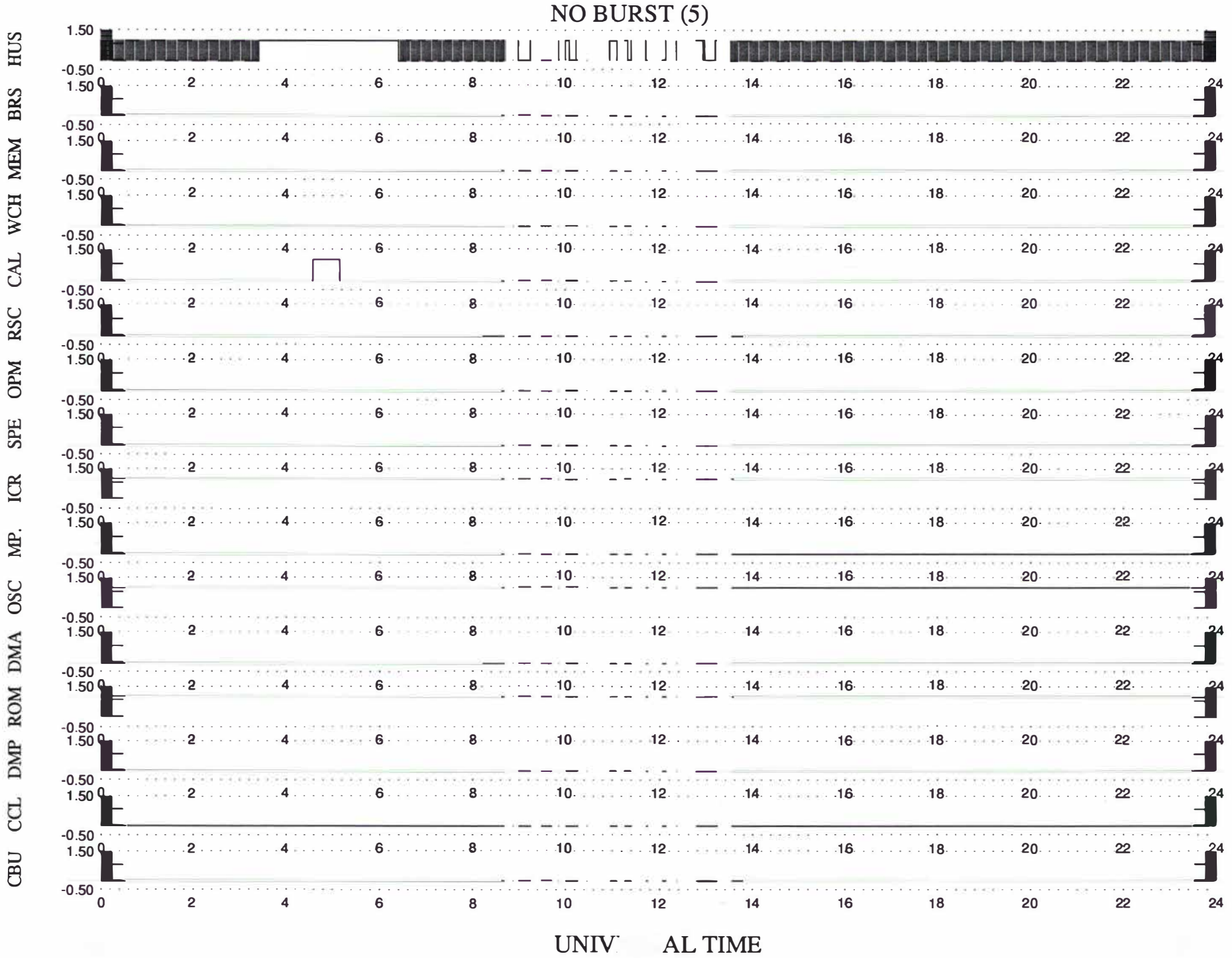
LOCATION: ZENITH=59.7 AZIMUTH=331.0 ERROR=1.534 DEGREES

COMMENTS:
SOLAR FLARE. GOES B1.7, NO OPTICAL ID. SINGLE PULSE WITH SUBSTRUCTURE.,
DURATION ABOUT 50S. STARTS AT ABOUT T-30S. NOT VISIBLE ABOVE 100 KEV.


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/29
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/10/03, 1009 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare

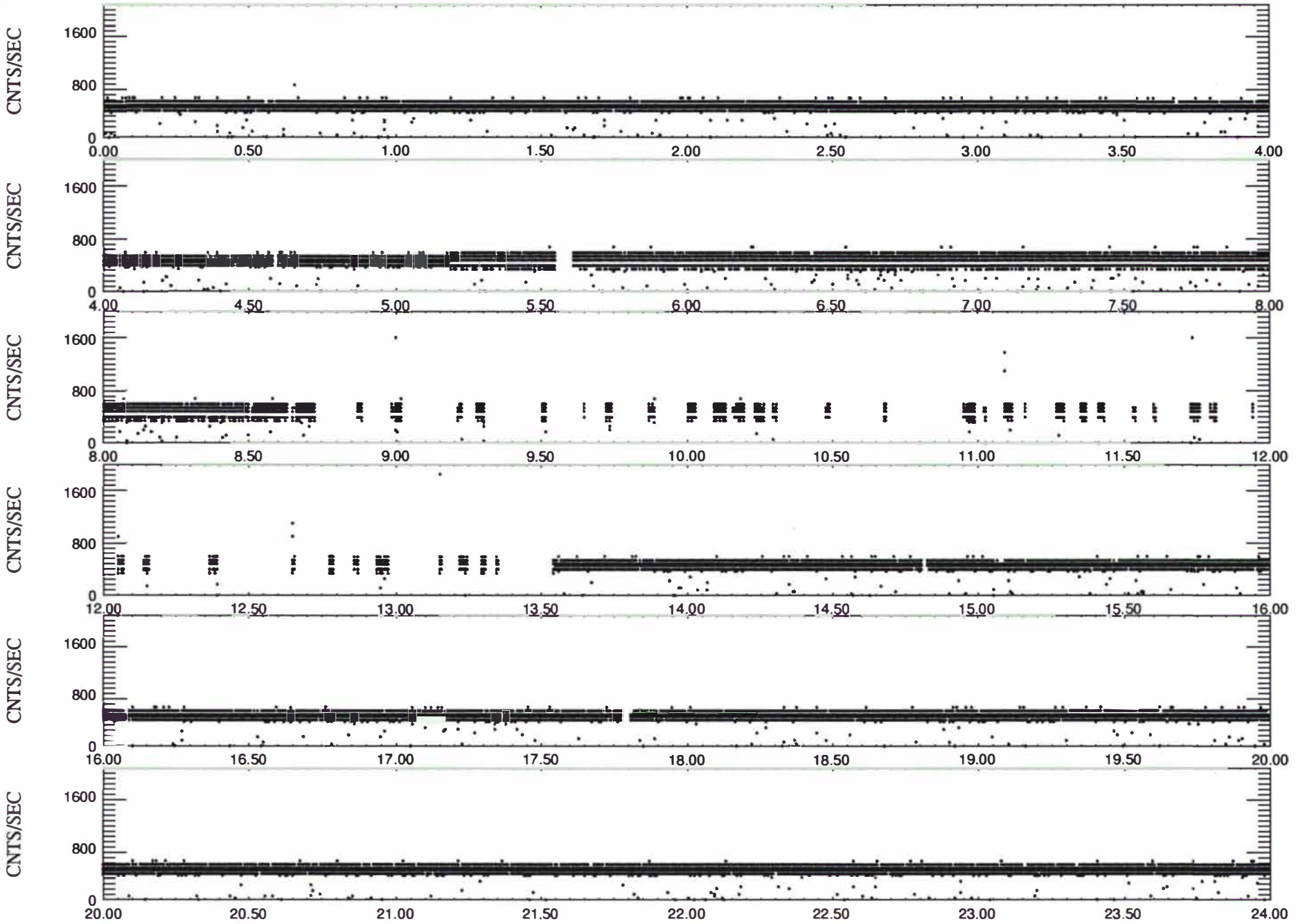

GOES 8
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
10^{-10}
Watts m^{-2}
M
C
B
A
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/29, 0000:00
Plot created: 97/10/03, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 272, year 1997 to day 272, year 1997 1/14/98



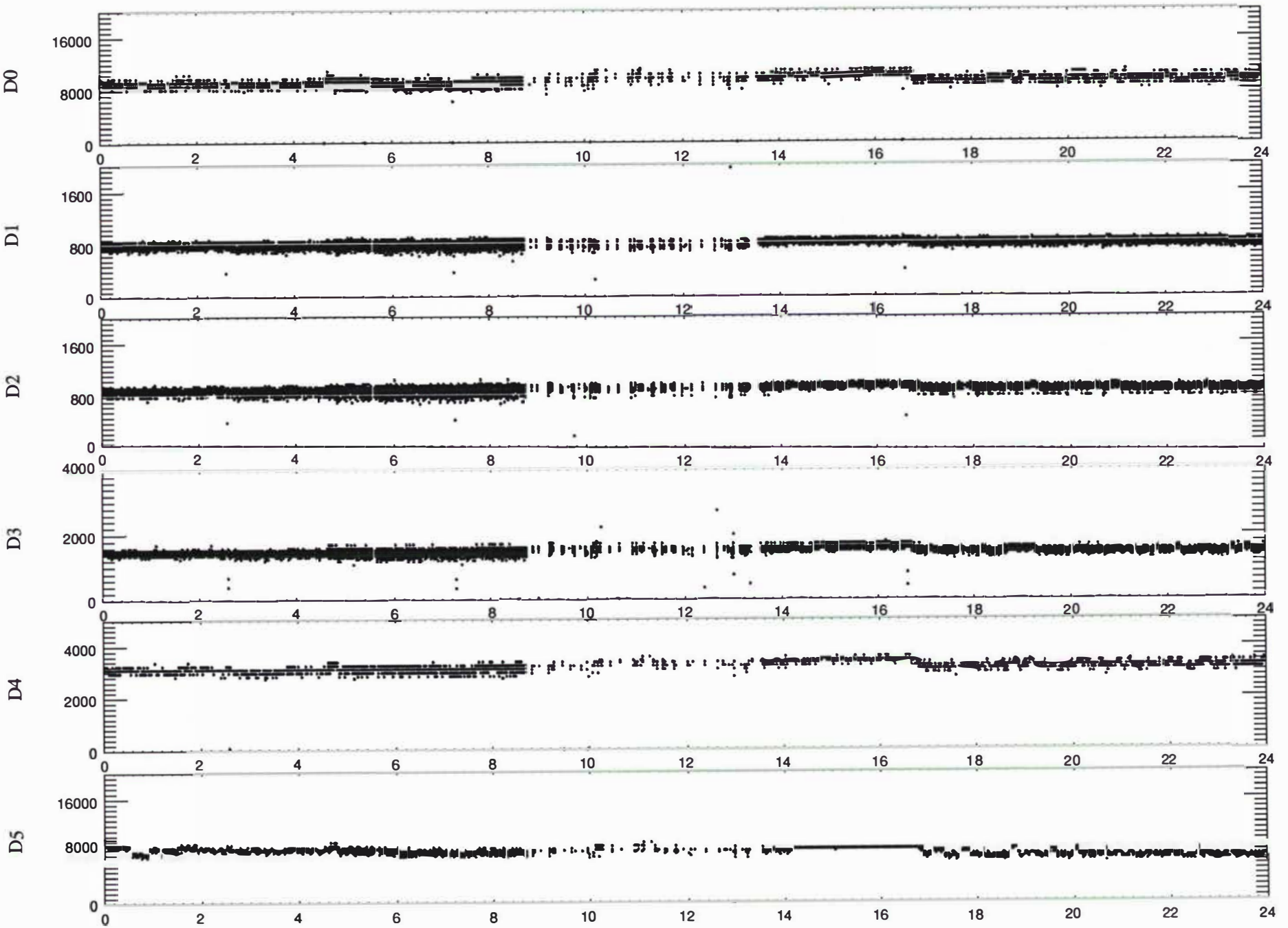
HUS 2A, MODE 1, NOT AVERAGED EDR day 272, year 1997 to day 272, year 1997 1/14/98

CALIBRATION DATA INCLUDED



UNIV' 'AL TIME

HUS 2B COUNTS / SEC EDR day 272, year 1997 to day 272, year 1997 1/14/98



From WOODSP@SSLMOR.msfc.nasa.gov Fri Oct 3 07:03:01 1997
Return-Path: <WOODSP@SSLMOR.msfc.nasa.gov>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
id HAA03154; Fri, 3 Oct 1997 07:03:00 -0700
From: WOODSP@SSLMOR.msfc.nasa.gov
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
id HAA02441; Fri, 3 Oct 1997 07:02:57 -0700
Date: Fri, 3 Oct 1997 9:02:50 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <971003090250.2140c918@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6404
Content-Length: 1122
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6404
EVENT OF 1997 SEP 30 DAY OF YEAR=273
EVENT CROSSING TIME AT BATSE : 59. S. OR 00:00:59.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 281.000 -85.000
BATSE PEAK COUNTING RATE: 78000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 30/ 9/ 97 IS:
RA= 165.515 DEC= 16.268 DIST= 6.148 AU
BATSE-ULYSSES DISTANCE = 919683952. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 71.64 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 966.54 SECS.
CROSSING TIME AT ULYSSES IS 1026. S. OR 00:17:05 +/- 570.16 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 30/ 9/ 97 IS:
RA= 238.364 DEC= -21.346 DIST= 1.788 AU
MARS-BATSE DISTANCE = 267484688. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=114.98 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -376.82 SECS.
CROSSING TIME AT MARS IS 86082. S. OR 23:54:42 +/- 134.69 SECONDS

BATSE BURST TRIGGER

NO.: 6404

TIME: TJD=0721 SECONDS=59

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

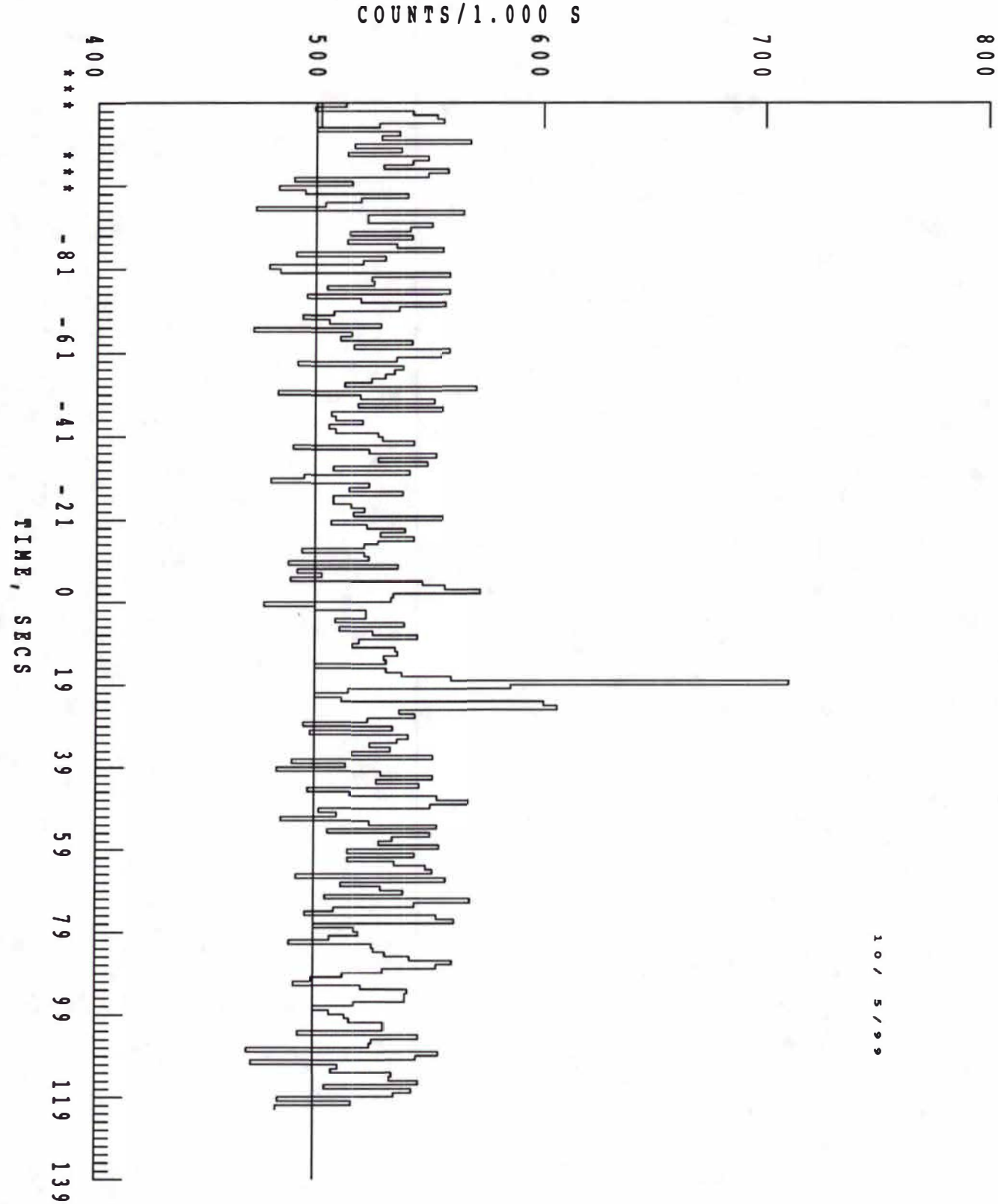
LOCATION: ZENITH=35.2 AZIMUTH=189.6 ERROR=0.9 DEGREES

COMMENTS:
BRIGHT GRB LASTING ABOUT 70 SEC. MULTIPLE PULSES WITH SUBSTRUCTURE.
TWO BRIGHTEST PULSES SEPARATED BY ABOUT 35 SECONDS. VISIBLE ABOVE
300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6404	970930	10721	00059	78000	281	-85	70

NEAR 30/09/97 249.037

100-1000 keV



From BUTTERWORTH@PIZZA.GSFC.NASA.GOV Thu Oct 9 11:22 PDT 1997
Date: Thu, 9 Oct 1997 14:17:43 -0400 (EDT)
From: BUTTERWORTH@PIZZA.GSFC.NASA.GOV
Subject: NEAR event at 970930:00:04:39 was not seen by Konus.
xrtpm@leptpm.gsfc.nasa.gov, cline@apache.gsfc.nasa.gov,
palmer@rosserv.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu
X-Vmsmail-To: TIM

Tim,

Konus does not see a corresponding event. The Sun was extremely active on 970930, producing 13 of the 14 triggers we observed that day, so there must be a good chance that the NEAR event was solar too.

Paul.

Date: Thu, 2 Oct 1997 14:13:49 -0400 (EDT)
From: Tim McClanahan <xrtpm@leptpm.gsfc.nasa.gov>
Message-Id: <199710021813.OAA15586@leptpm.gsfc.nasa.gov>
To: David.M.Palmer.1@gsfc.nasa.gov, cline@apache.gsfc.nasa.gov,
butterworth@pizza.gsfc.nasa.gov
Subject: Re: TGRS triggers matching NEAR
Mime-Version: 1.0
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit
Content-MD5: 2GeHg4zmpz9J0Y56bZVVvg==

event to report from NEAR GRS.

1997: 273: 0: 04: 39 Max val = 711 Mean = 526

Tim McClanahan

Date: 3 Feb 00

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

☑ 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

☑ BATSE ephemeris for T_0?

☑ Error circle position and radius from public catalog used?

☐ If MER data were used, is a 30 ms systematic error included?

3. NEAR Data

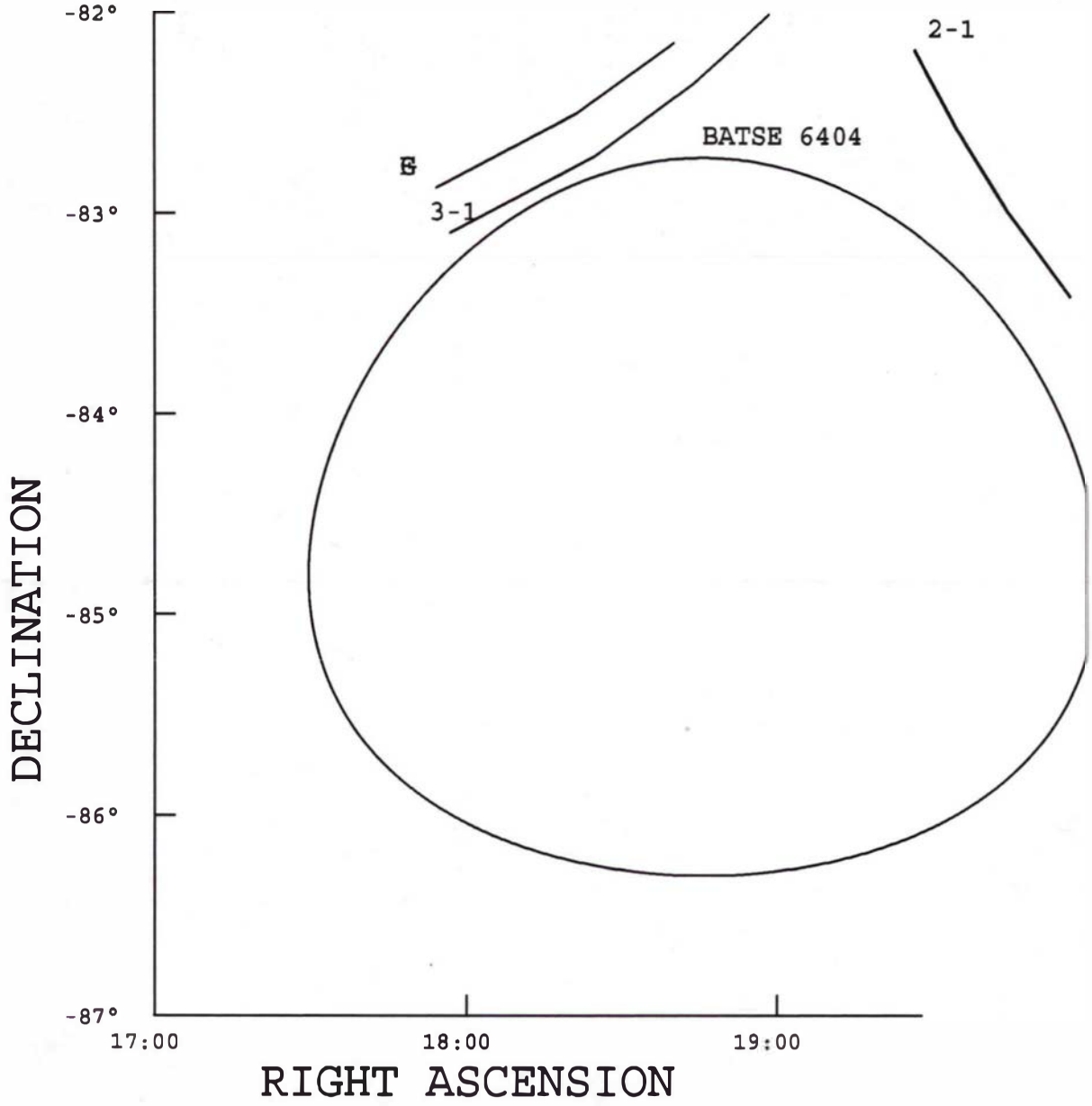
☑ Final, correct time used? (Files postmarked vwx@bocc1, or from Teresa Sheets, have the correct time; files on website have incorrect times)

☑ BATSE >100 keV data used for NEAR correlation?

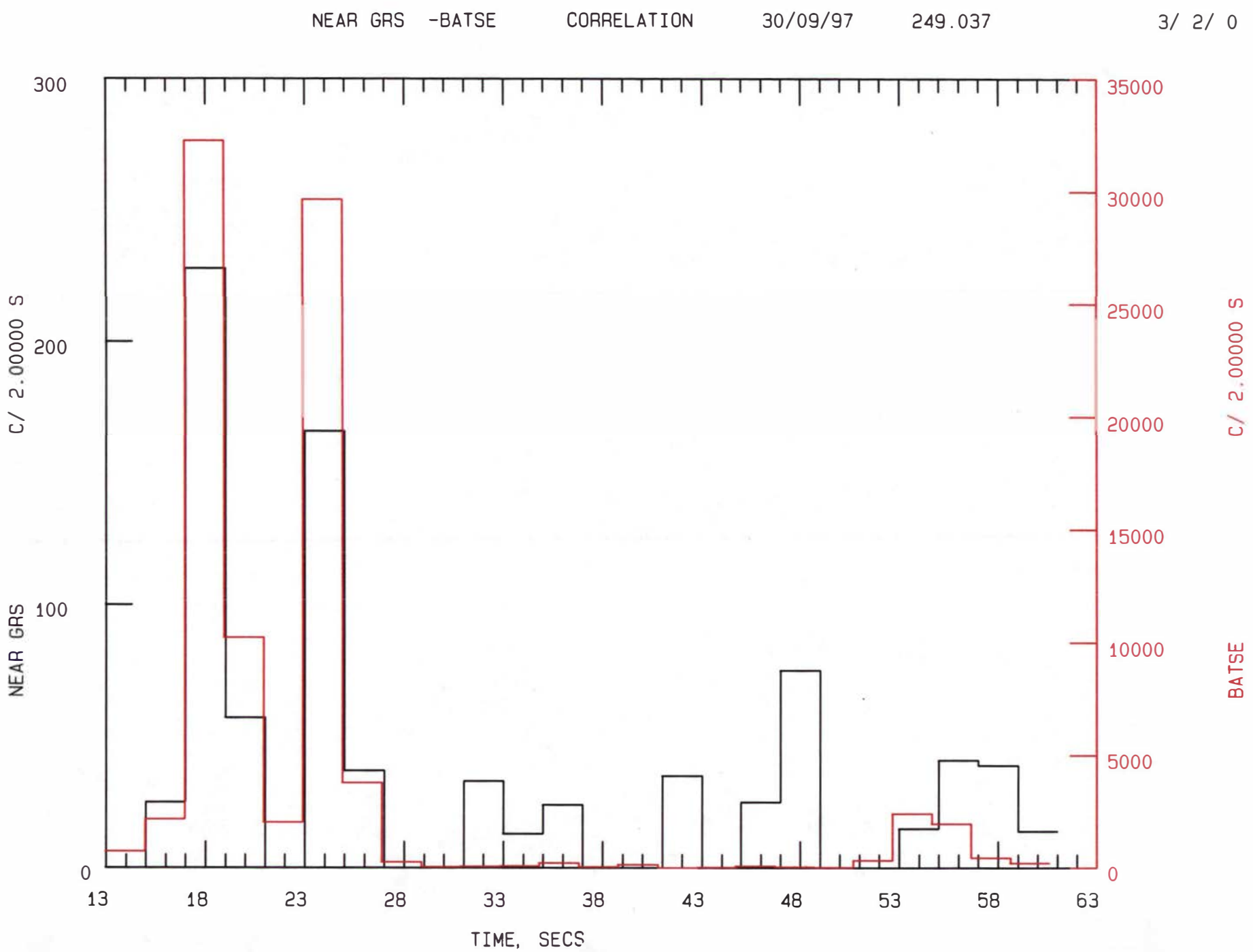
☑ ACCESS database updated?

EVENT OF SEP 30, 1997 0:00

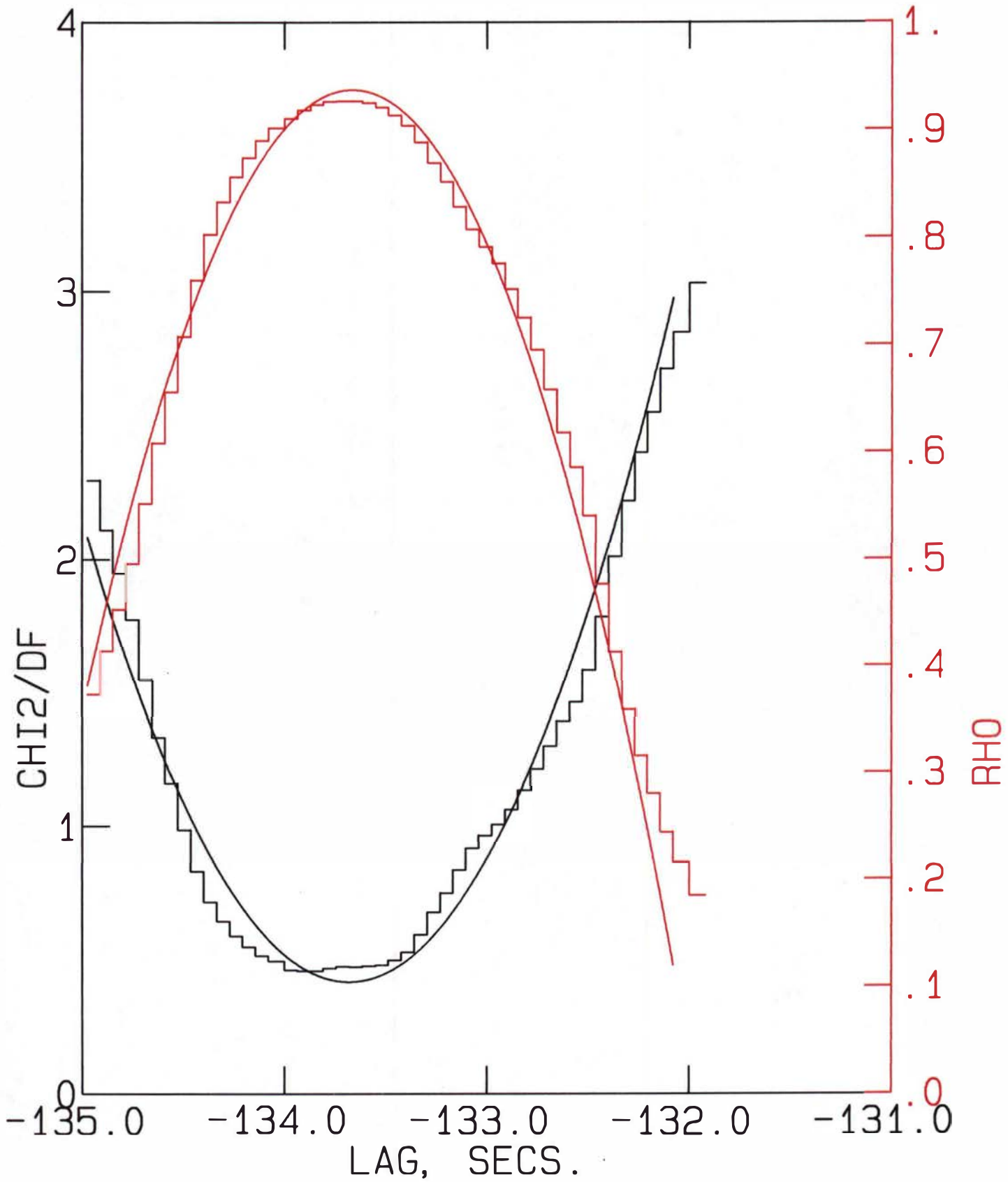
3/ 2/ 0

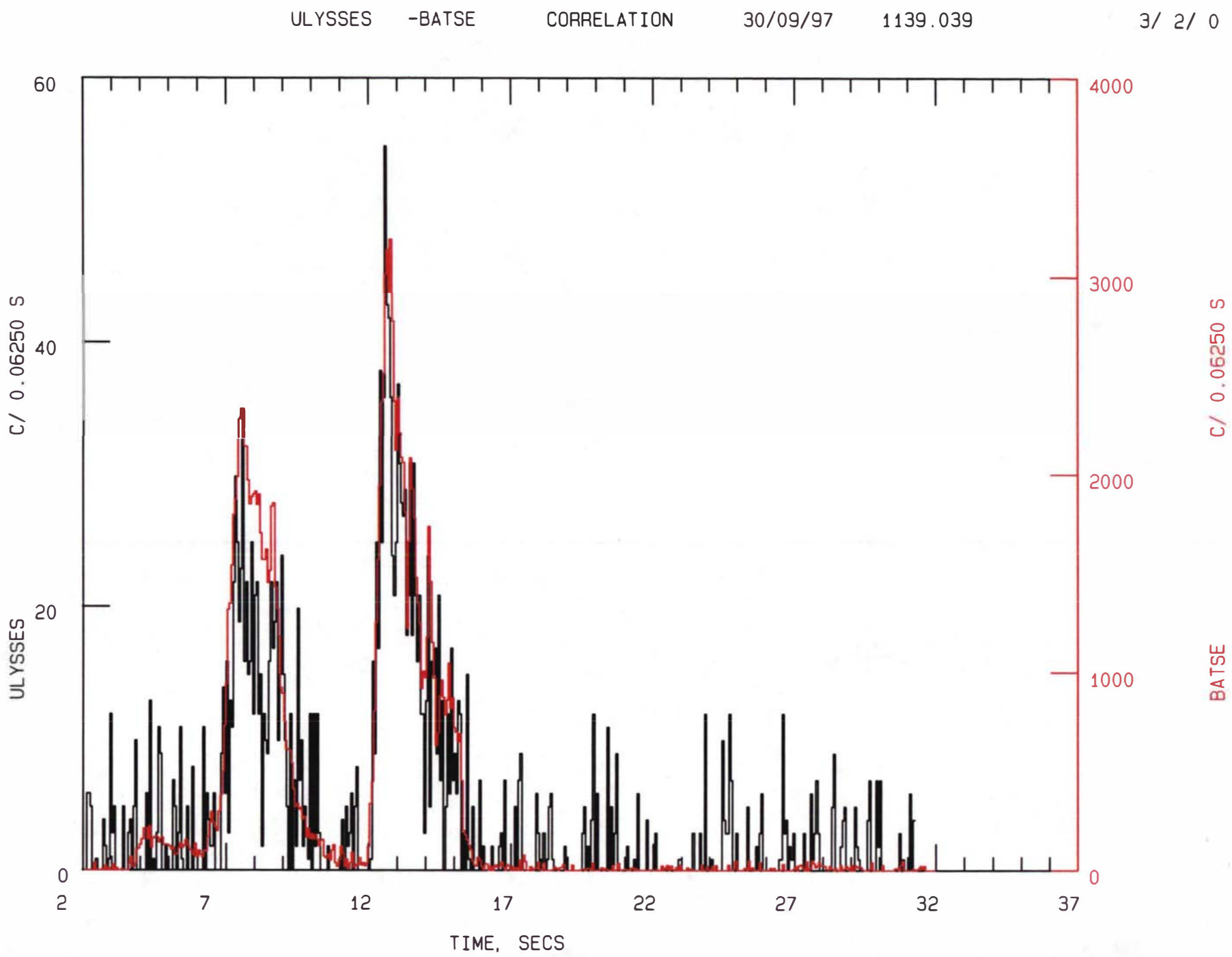


N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 BATSE 2 ULYSSES 3 NEAR

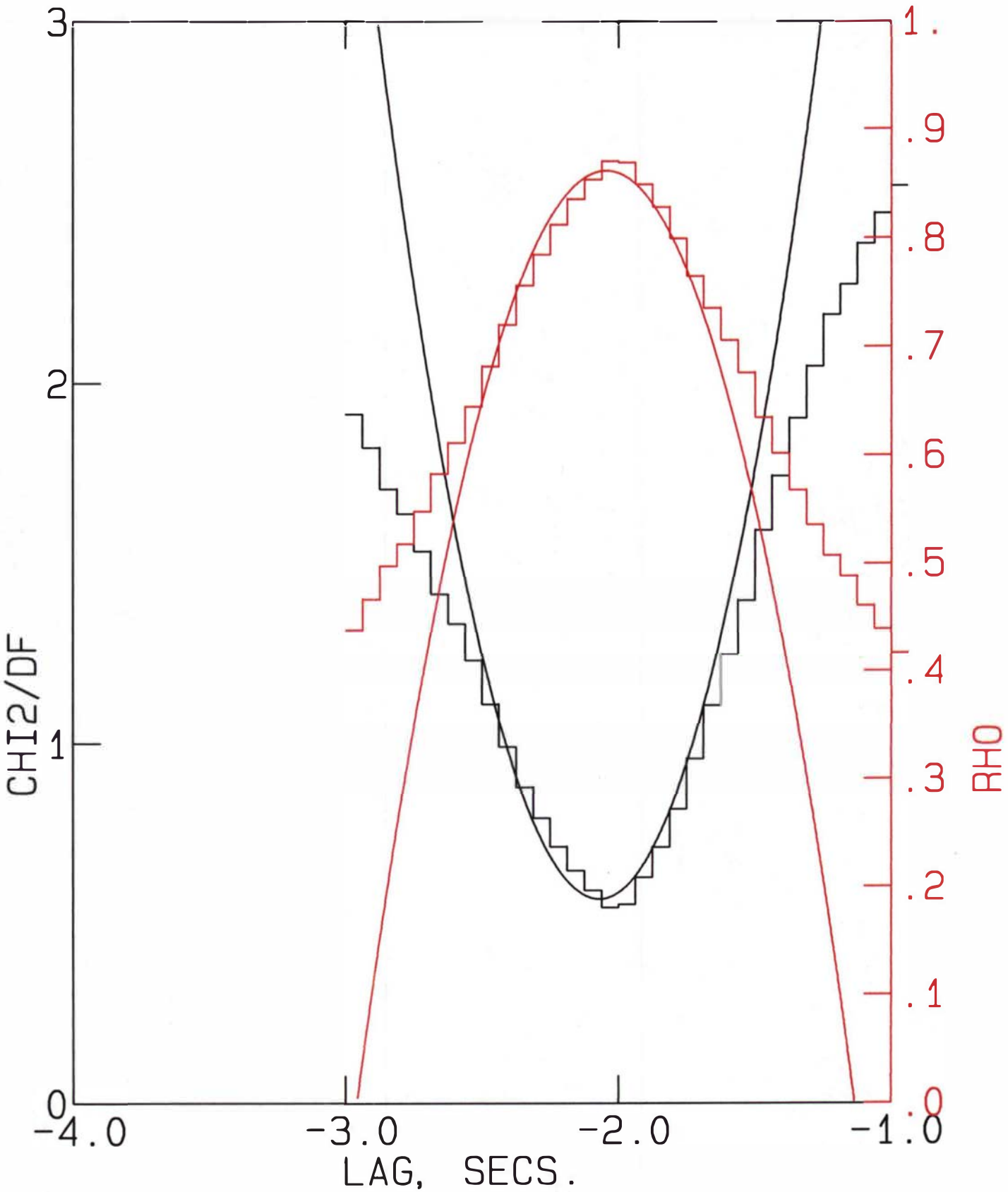

NEAR GRS -BATSE CORRELATION 30/09/97 249.037 3/ 2/ 0
300
200
100
0
C/ 2.00000 S
NEAR GRS
35000
30000
25000
20000
15000
10000
5000
0
C/ 2.00000 S
BATSE
13
18
23
28
33
38
43
48
53
58
63
TIME, SECS

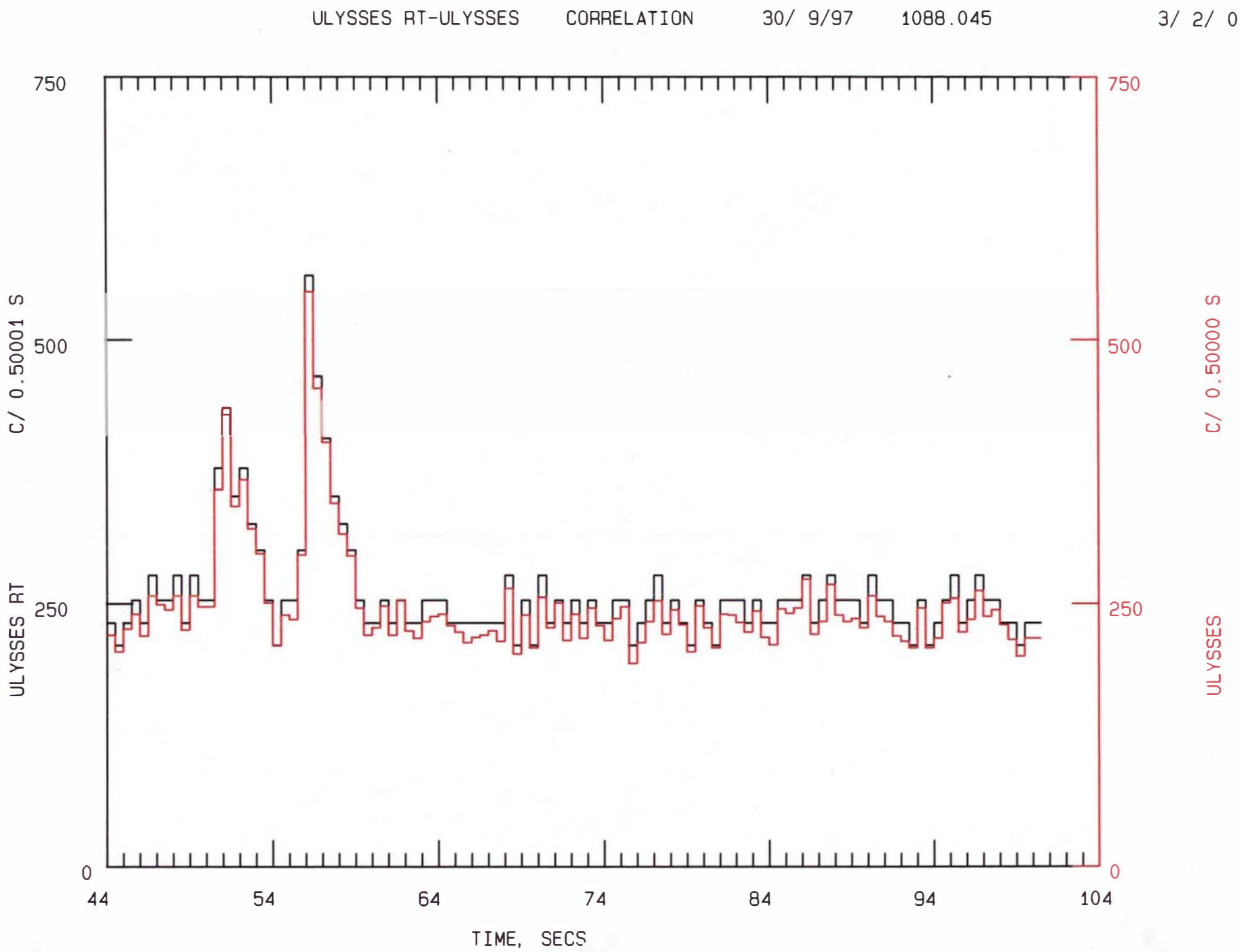
NEAR GRS -BATSE CORRELATION 30/09/97 249.037

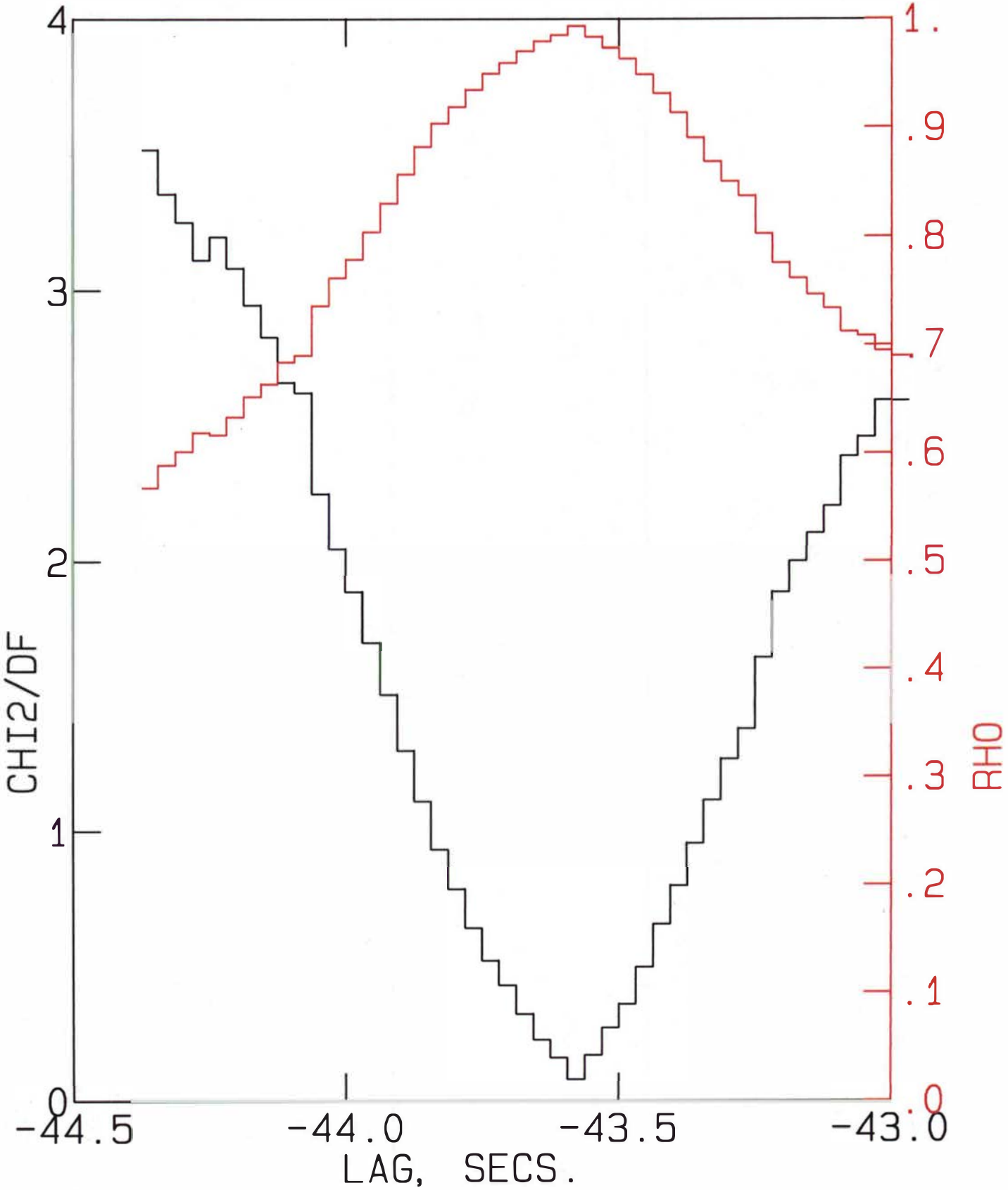



ULYSSES -BATSE CORRELATION 30/09/97 1139.039 3/ 2/ 0
60
40
20
0
ULYSSES
C/ 0.06250 S
4000
3000
2000
1000
0
BATSE
C/ 0.06250 S
2
7
12
17
22
27
32
37
TIME, SECS

ULYSSES -BATSE CORRELATION 30/09/97 1139.039

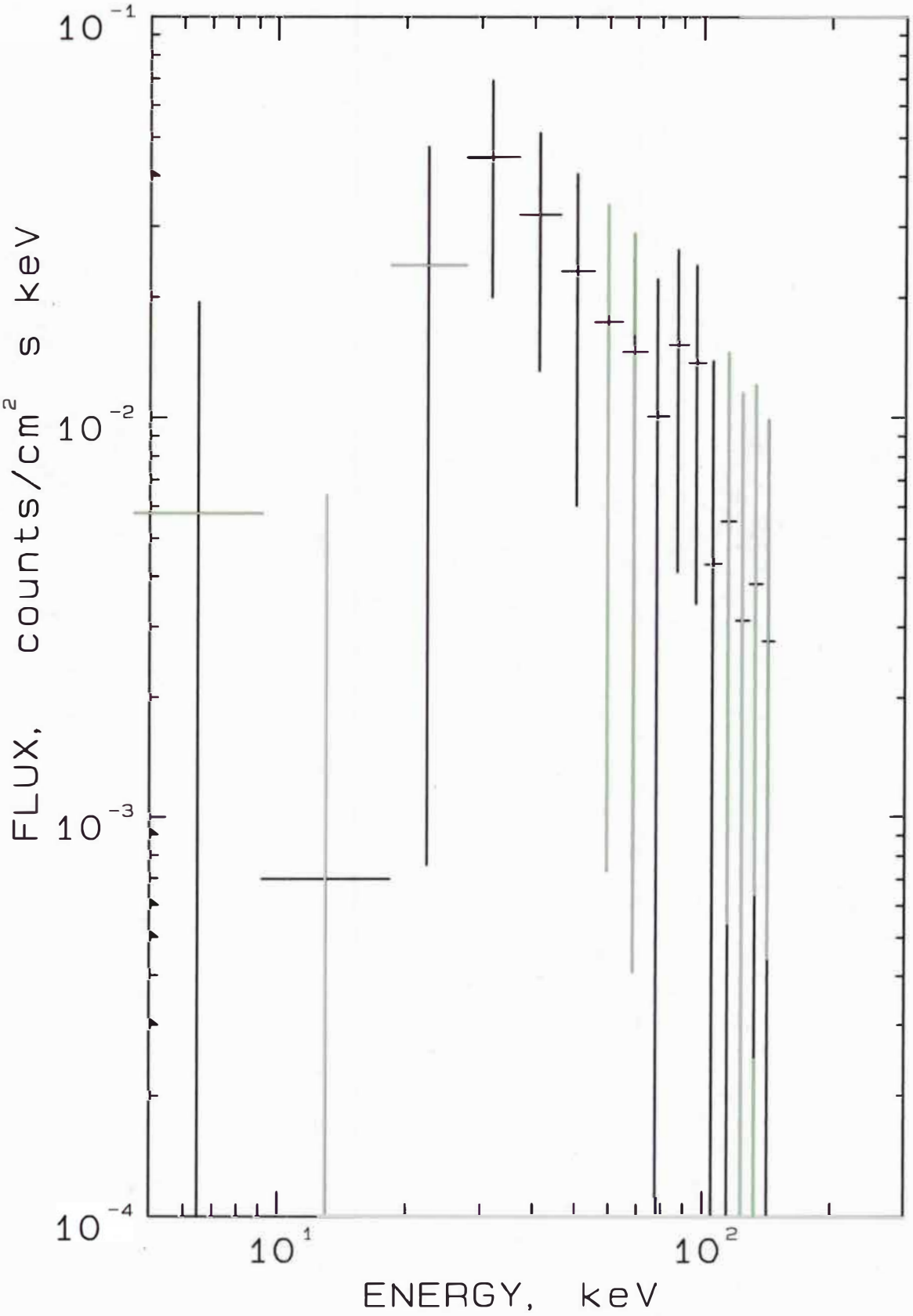


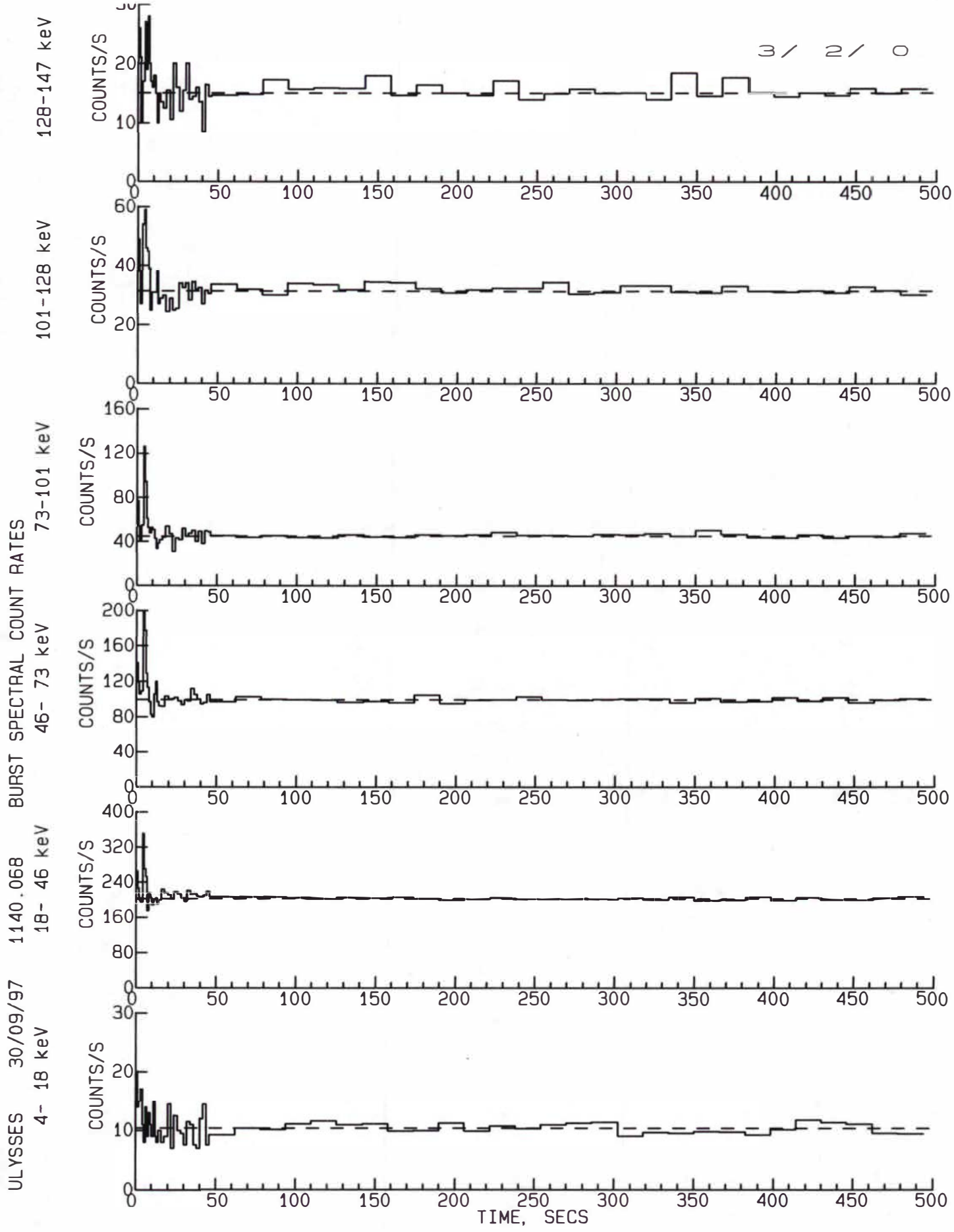

ULYSSES RT-ULYSSES CORRELATION 30/ 9/97 1088.045 3/ 2/ 0
750
500
250
0
C/ 0.50001 S
ULYSSES RT
750
500
250
0
C/ 0.50000 S
ULYSSES
44
54
64
74
84
94
104
TIME, SECS

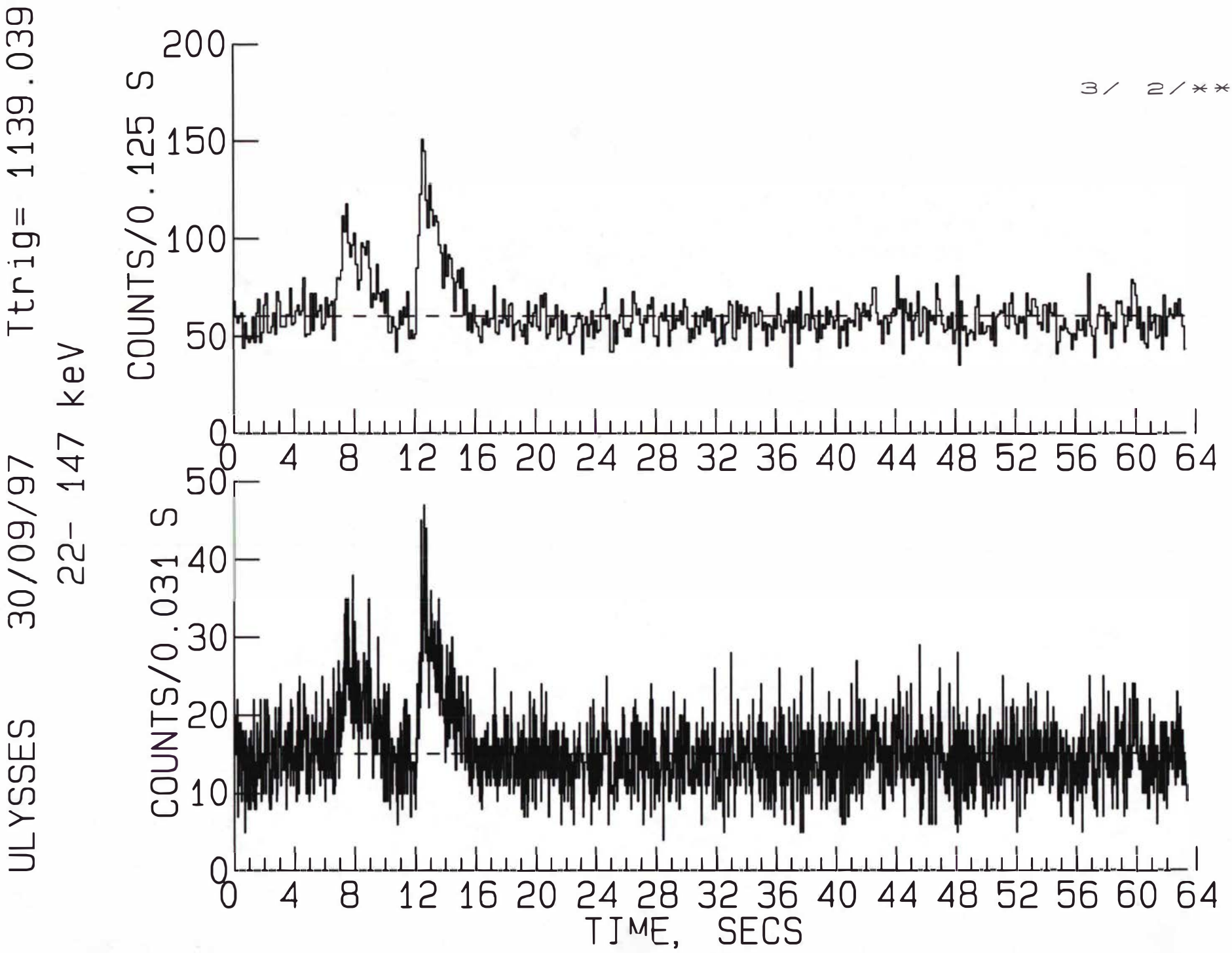

ULYSSES RT-ULYSSES CORRELATION 30/ 9/97 1088.045
CHI2/DF
RHO
LAG, SECS.
4
3
2
1
0
1.
.9
.8
.7
.6
.5
.4
.3
.2
.1
.0
-44.5
-44.0
-43.5
-43.0

ULYSSES 30/09/97 1140.068

SPECTRUM INTEGRATED OVER 44.0 SECONDS, INTERVALS 2 TO 30




ULYSSES 30/09/97 1140.068 BURST SPECTRAL COUNT RATES
4- 18 keV
18- 46 keV
46- 73 keV
73-101 keV
101-128 keV
128-147 keV
COUNTS/S
TIME, SECS
3/ 2/ 0

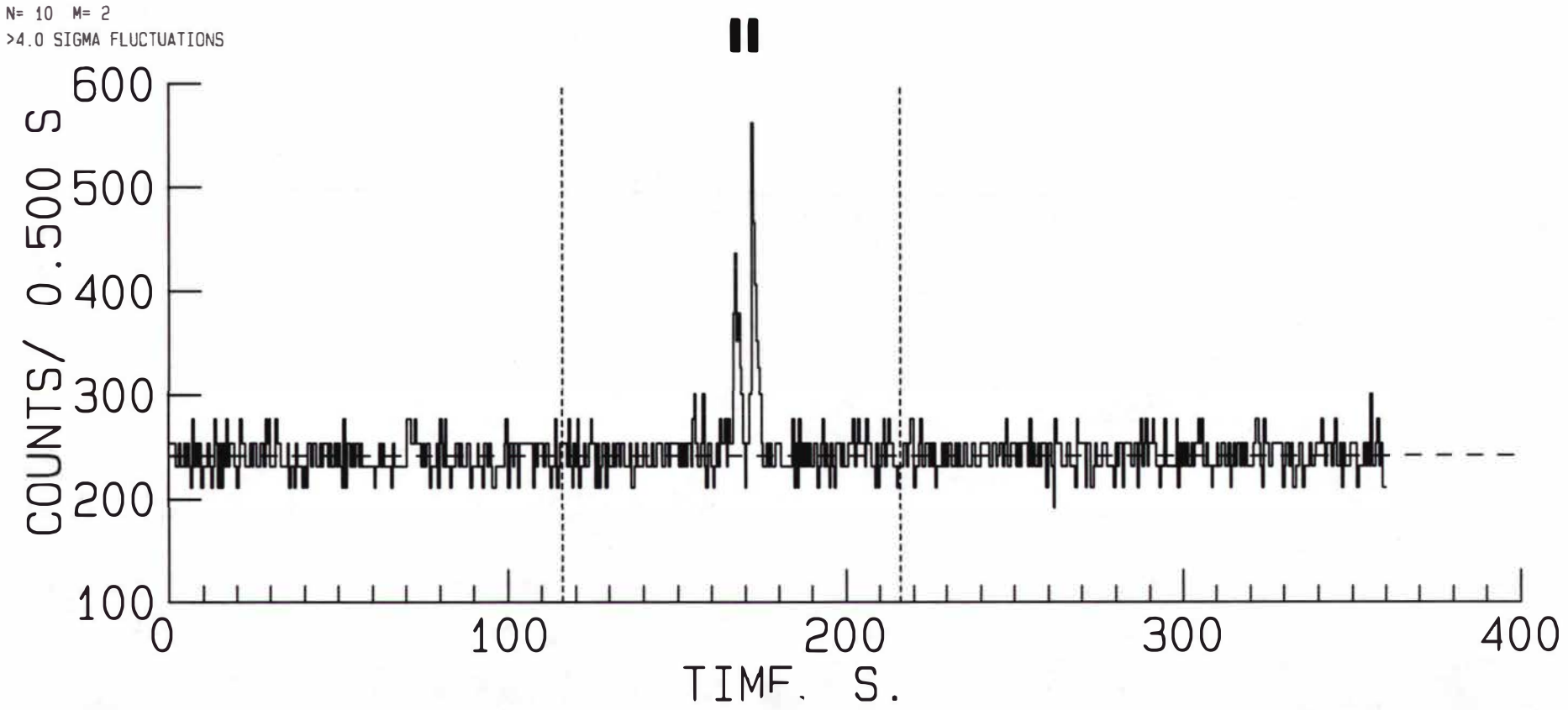

ULYSSES 30/09/97 Ttrig= 1139.039
22- 147 keV
3/ 2/**
COUNTS/0.125 S
COUNTS/0.031 S
TIME, SECS

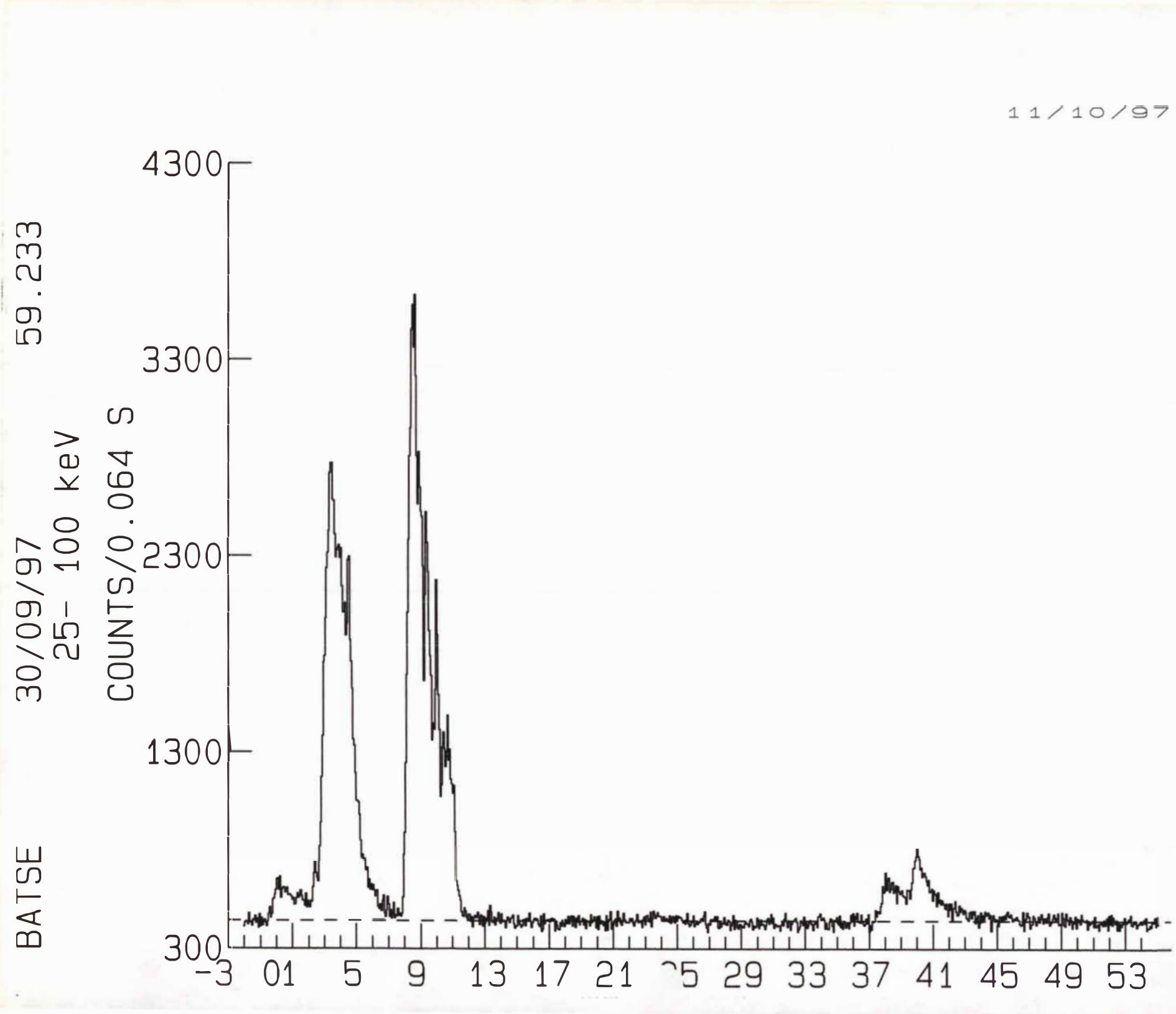
ULYSSES RT

3/ 2/ 0

30/ 9/97 972.033 s

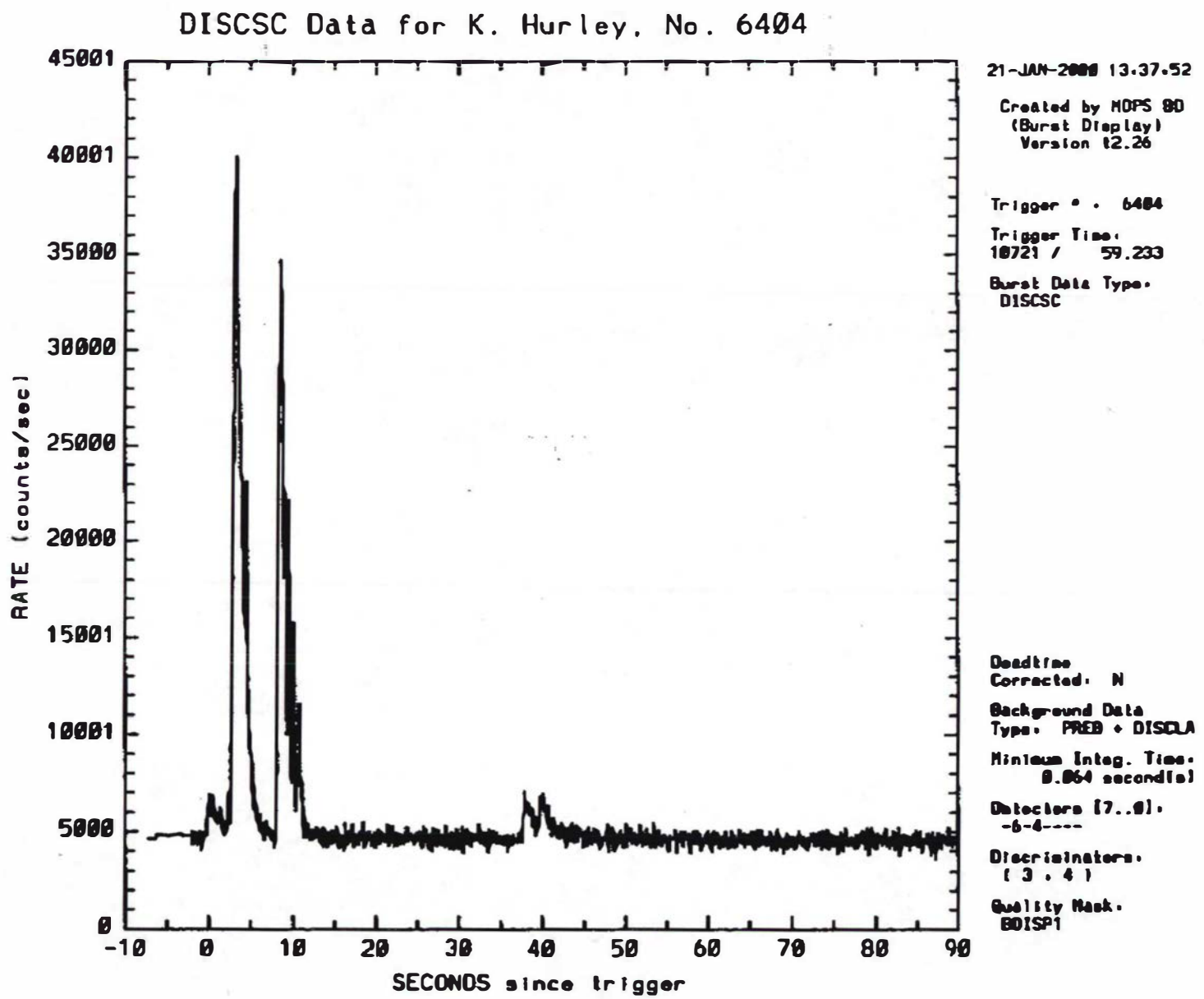
22- 147 keV

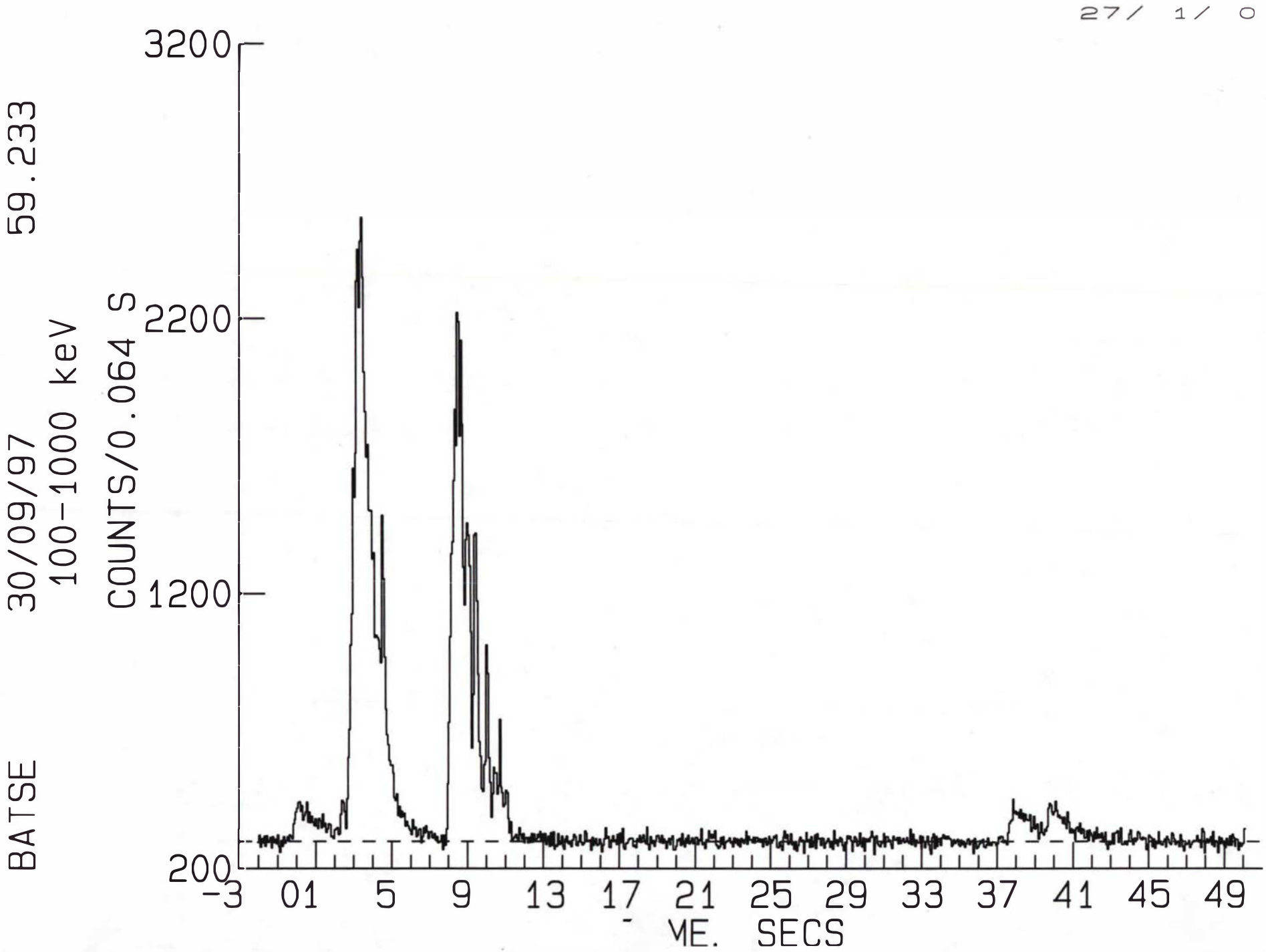



11/10/97
BATSE 30/09/97 59.233
25- 100 keV
COUNTS/0.064 S
4300
3300
2300
1300
300
-3 01 5 9 13 17 21 25 29 33 37 41 45 49 53

DISCSC Data for K. Hurley, No. 6404

P.07
BATSE
2565445800
01-21-2000 15:48




27/ 1/ 0
BATSE 30/09/97 59.233
100-1000 keV
COUNTS/0.064 S
3200
2200
1200
200
-3 01 5 9 13 17 21 25 29 33 37 41 45 49
ME. SECS

From WOODSP@SSLMOR.msfc.nasa.gov Fri Oct 3 07:05:31 1997
Return-Path: <WOODSP@SSLMOR.msfc.nasa.gov>
Received: from sunspot.ssl.berkeley.edu by apollo.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
id HAA03167; Fri, 3 Oct 1997 07:05:27 -0700
From: WOODSP@SSLMOR.msfc.nasa.gov
Received: from SSLMOR.MSFC.NASA.GOV by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
id HAA02474; Fri, 3 Oct 1997 07:05:26 -0700
Date: Fri, 3 Oct 1997 9:05:16 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Message-Id: <971003090516.2140c918@ssl.msfc.nasa.gov>
Subject: Crossing Windows for BATSE Burst 6405
Content-Length: 1135
X-Lines: 26
Status: RO

****
BATSEARCH PROGRAM
****

BATSE BURST # 6405
EVENT OF 1997 SEP 30 DAY OF YEAR=273
EVENT CROSSING TIME AT BATSE : 80339. S. OR 22:18:59.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 270.000 -88.000
BATSE PEAK COUNTING RATE: 2800 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 30/ 9/ 97 IS:
RA= 165.600 DEC= 16.212 DIST= 6.143 AU
BATSE-ULYSSES DISTANCE = 919035049. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 73.30 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 880.90 SECS.
CROSSING TIME AT ULYSSES IS 81220. S. OR 22:33:39 +/- 573.16 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 30/ 9/ 97 IS:
RA= 238.364 DEC= -21.346 DIST= 1.788 AU
MARS-BATSE DISTANCE = 267484688. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=113.05 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -349.27 SECS.
CROSSING TIME AT MARS IS 79990. S. OR 22:13:09 +/- 137.24 SECONDS

BATSE BURST TRIGGER
NO.: 6405

TIME: TJD=0721 SECONDS=80339

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

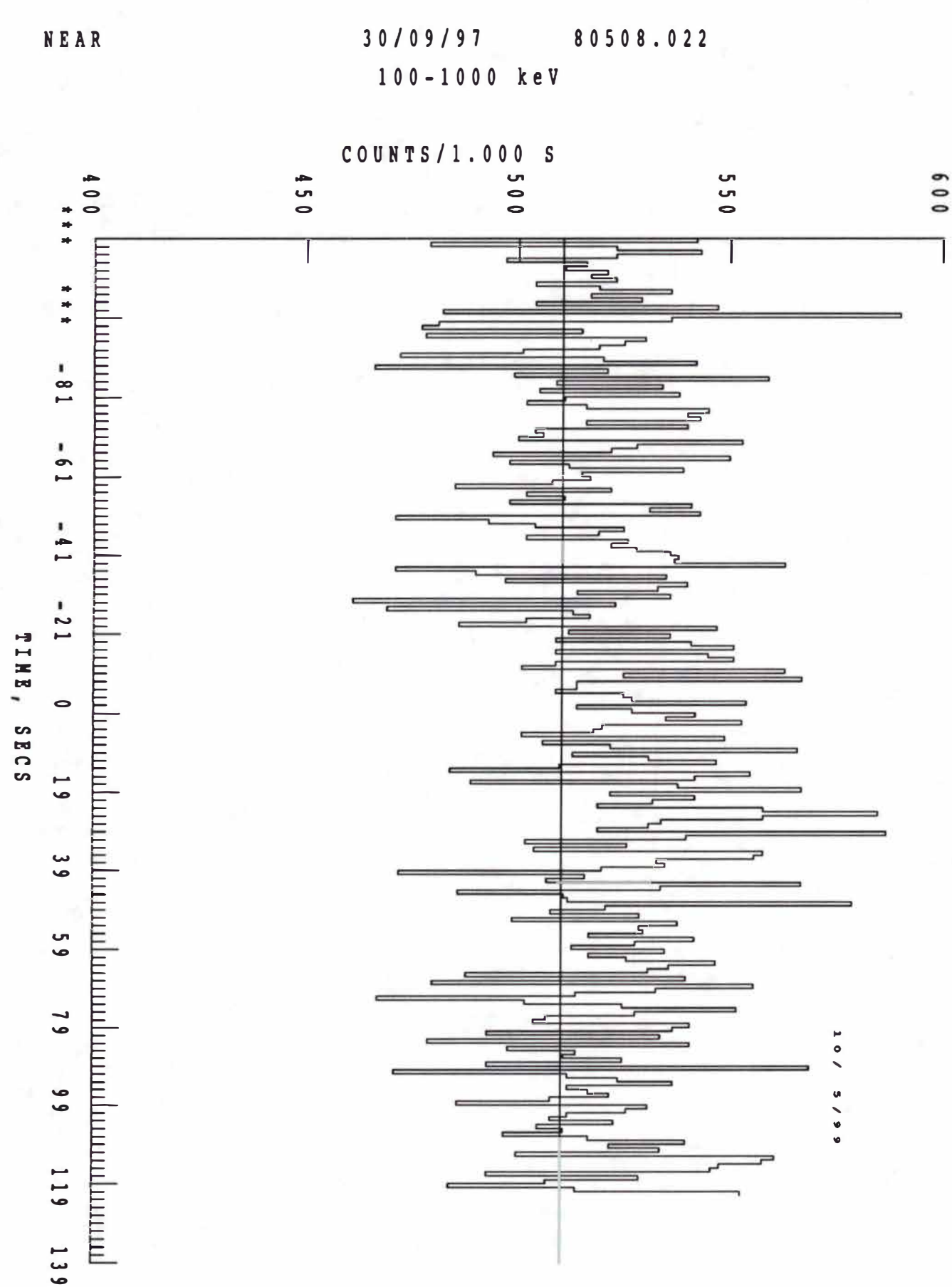
SIGNIFICANCE: SIGMA

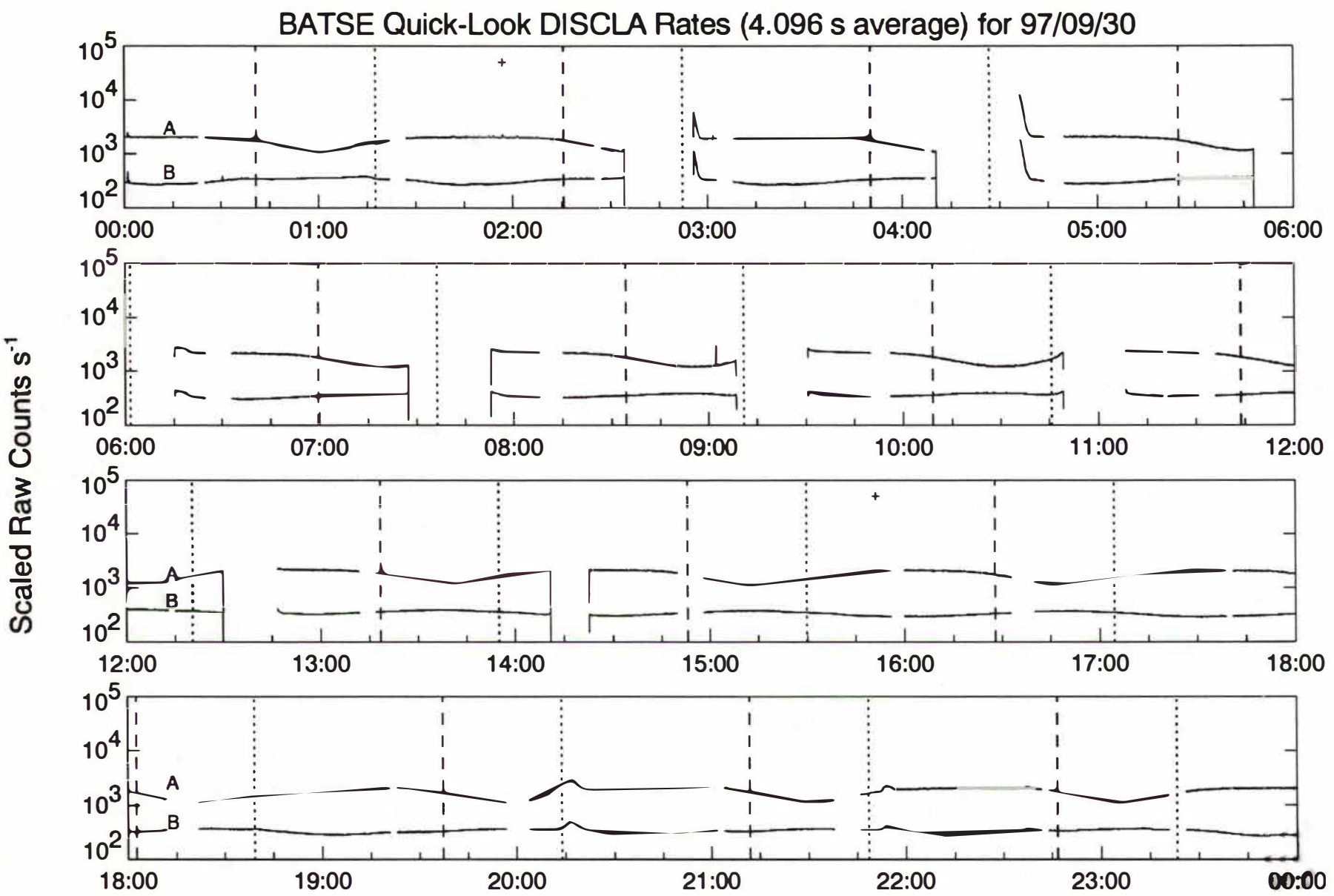
INTENSITY: COUNTS/CM2

LOCATION: ZENITH=33.1 AZIMUTH=184.7 ERROR=3.7 DEGREES

COMMENTS:
GRB LASTING ABOUT 40 SECONDS. DOUBLE PEAKED WITH FRED LIKE
STRUCTURE. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
6405	970930	10721	80339	2800	270	-88	40


NEAR
30/09/97
80508.022
100-1000 keV
COUNTS/1.000 S
400
450
500
550
600
*** *** -81 -61 -41 -21 0 19 39 59 79 99 119 139
TIME, SECS
10/ 5/99


BATSE Quick-Look DISCLA Rates (4.096 s average) for 97/09/30
Scaled Raw Counts s-1
10^5
10^4
10^3
10^2
A
B
00:00
01:00
02:00
03:00
04:00
05:00
06:00
06:00
07:00
08:00
09:00
10:00
11:00
12:00
12:00
13:00
14:00
15:00
16:00
17:00
18:00
18:00
19:00
20:00
21:00
22:00
23:00
00:00
Current Time: 97/10/04, 1008 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05
Dotted line: Day entry
Dashed line: Night entry
* Solar Burst Trigger
+ Solar Flare

BATSE BURST# 6405

ULYSSES RT 3/10/97

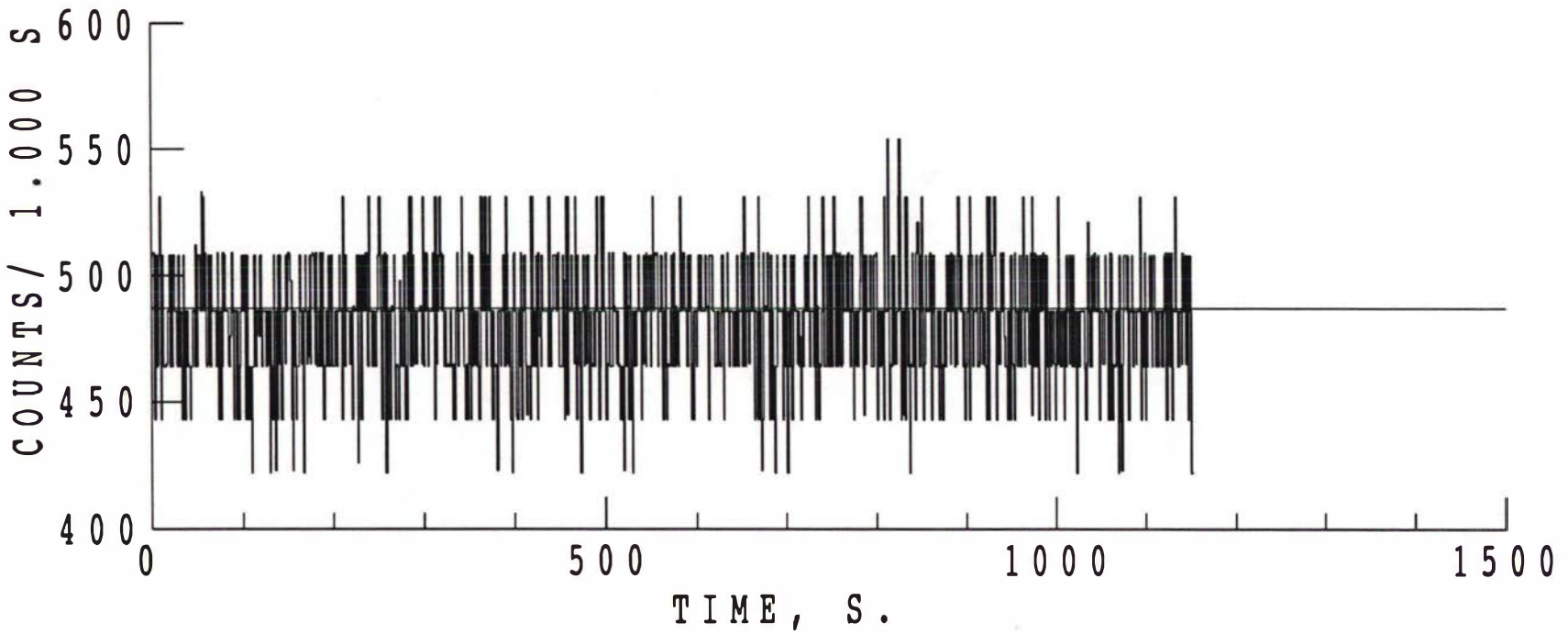
30/ 9/97 80640.430 s

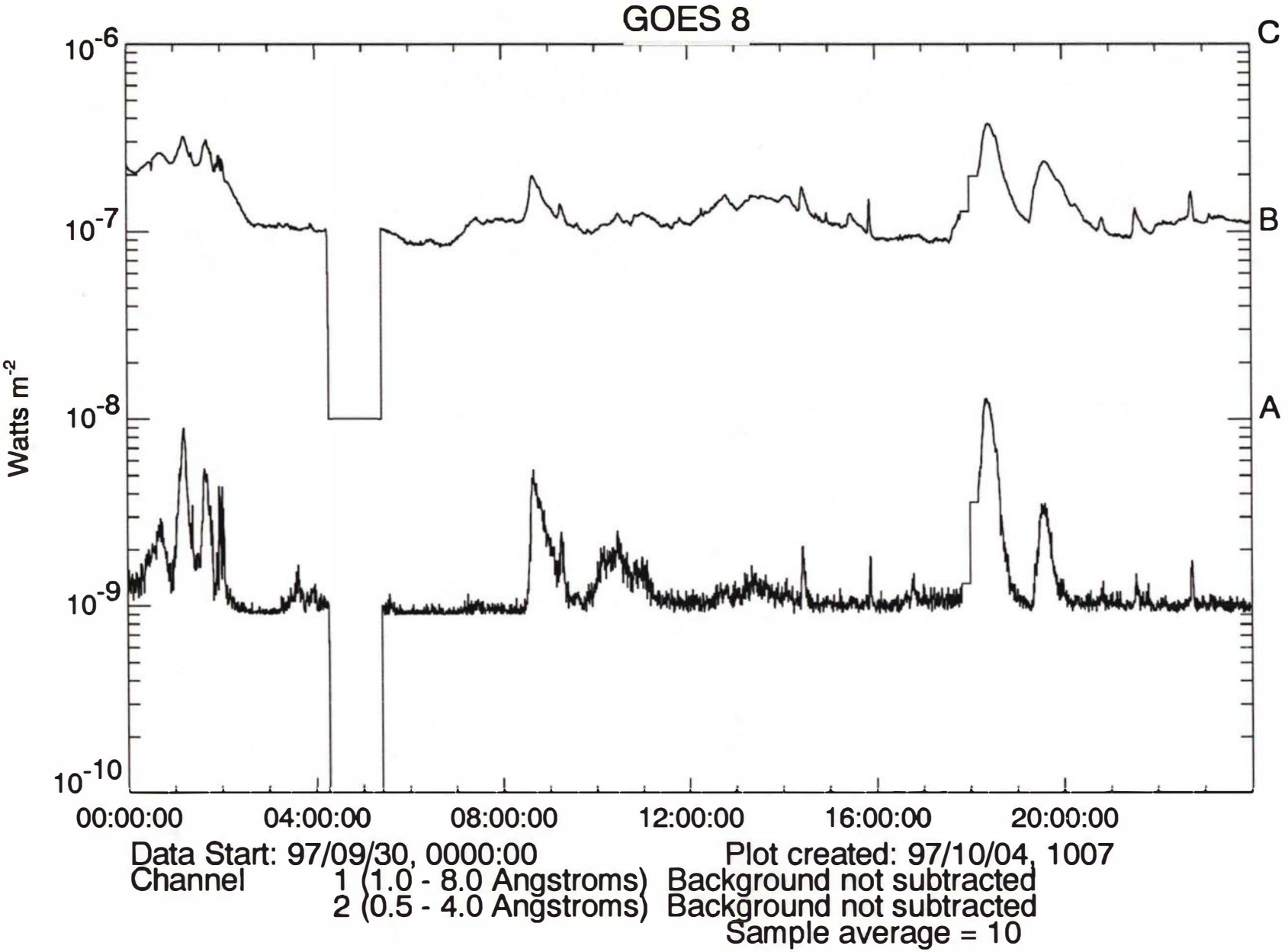
0.500 S INTERVALS REGROUPED BY 2

0- 0 keV

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

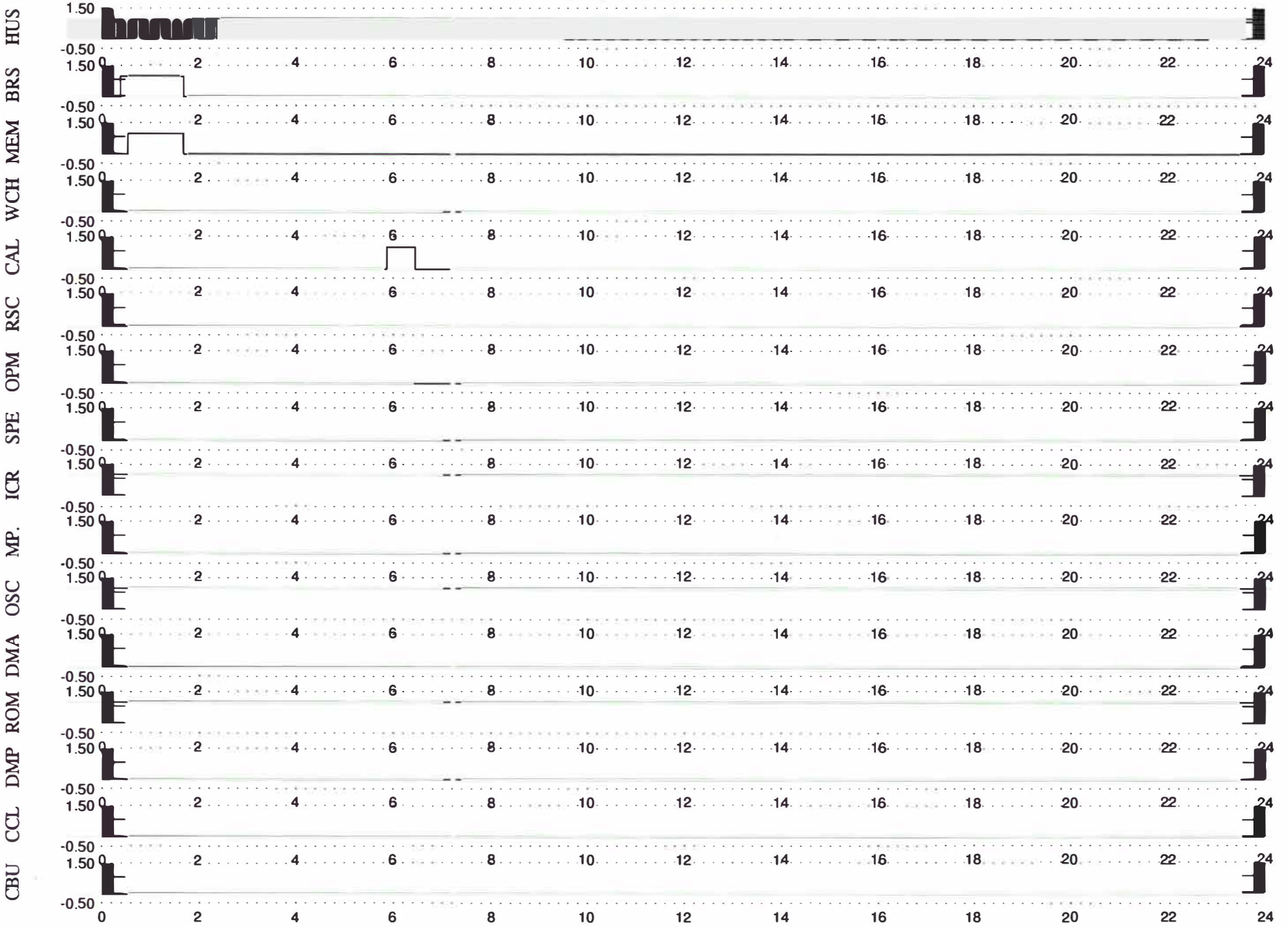
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS




GOES 8
C
B
A
Watts m-2
10-6
10-7
10-8
10-9
10-10
00:00:00
04:00:00
08:00:00
12:00:00
16:00:00
20:00:00
Data Start: 97/09/30, 0000:00
Plot created: 97/10/04, 1007
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 273, year 1997 to day 273, year 1997 1/14/98

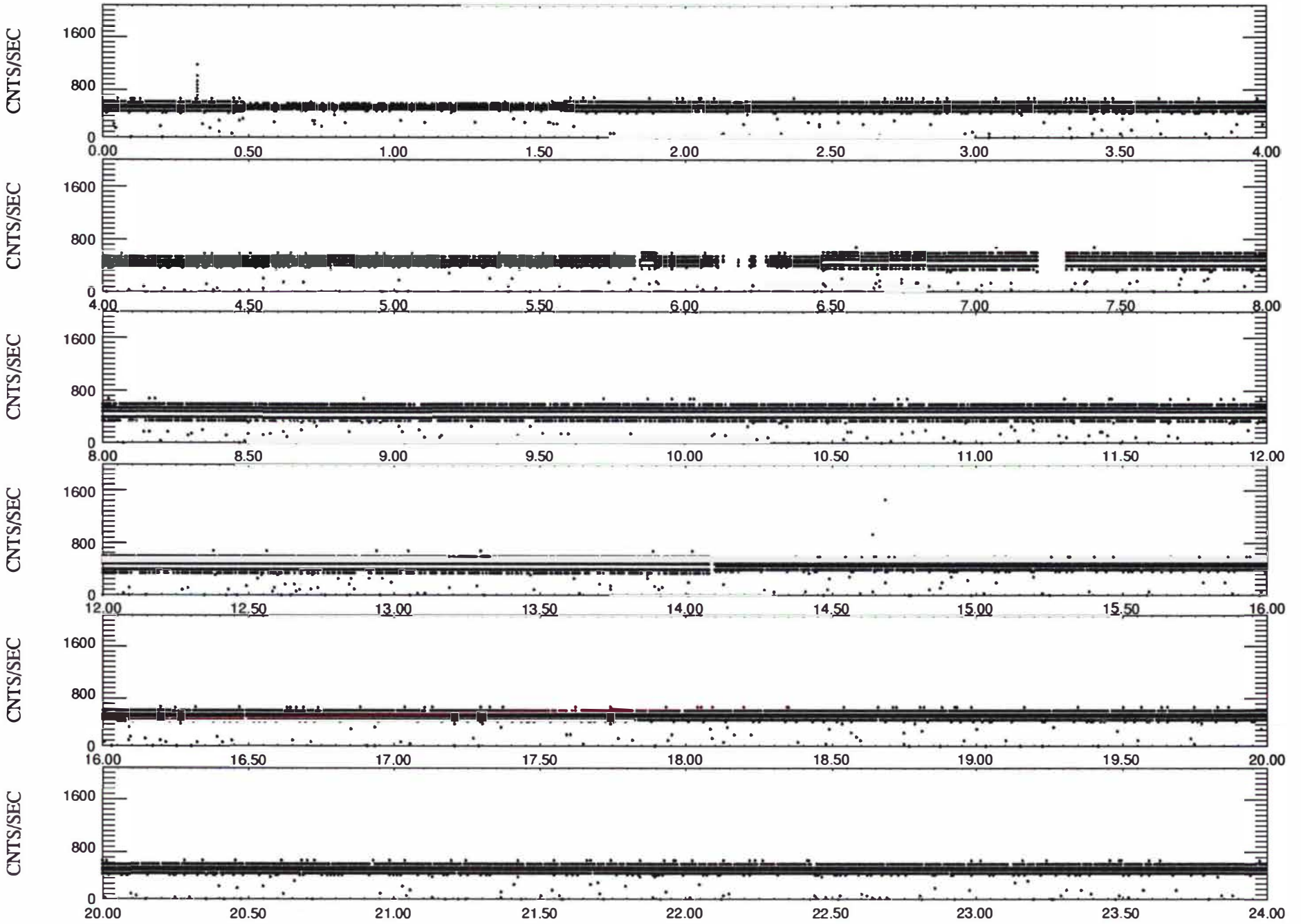
BURST NUMBER 6



UNIV AL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 273, year 1997 to day 273, year 1997 1/14/98

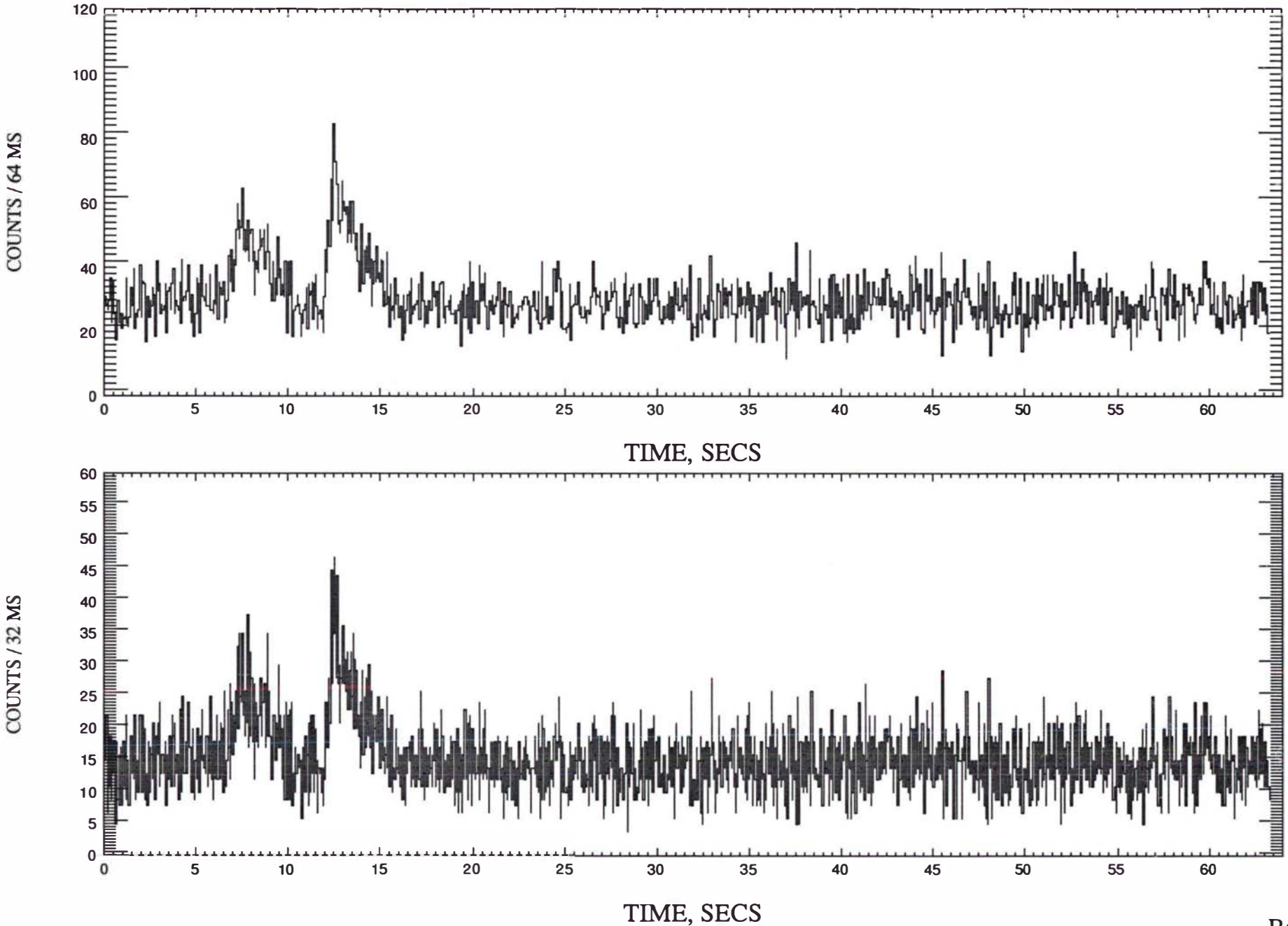
CALIBRATION DATA INCLUDED



UNIV' 'AL TIME

HUS 2A TRIGGERED DATA EDR day 273, year 1997 1/14/98

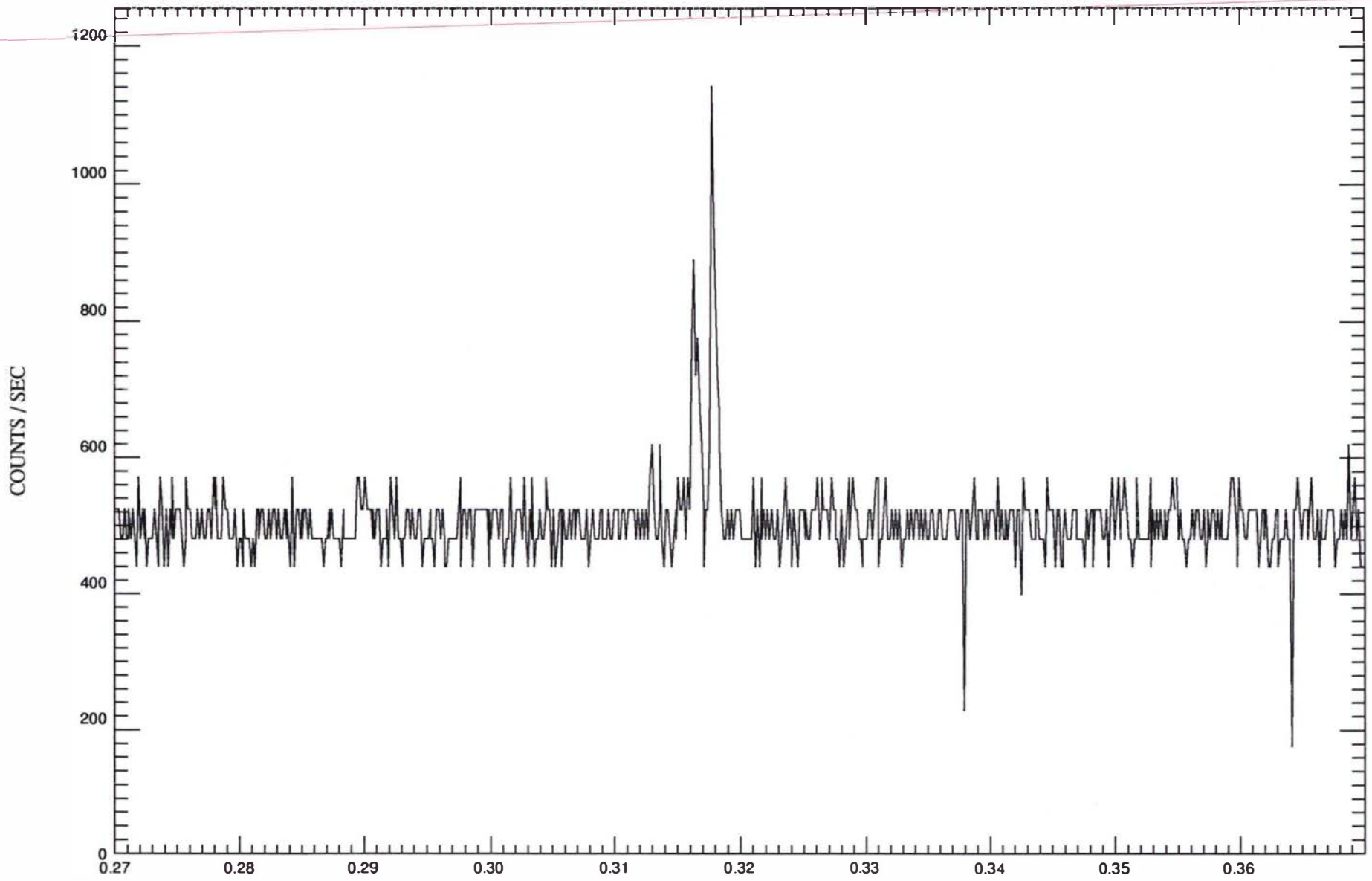
Burst Counter 6 at UT= 0.316393911574 h= 1139.018 s 00:18:59.018



B# 1

HUS 2A, MODE 1, NOT AVERAGED EDR day 273, year 1997 to day 273, year 1997 1/14/98

CALIBRATION DATA INCLUDED



HUS 2B COUNTS / SEC EDR day 273, year 1997 to day 273, year 1997 1/14/98

