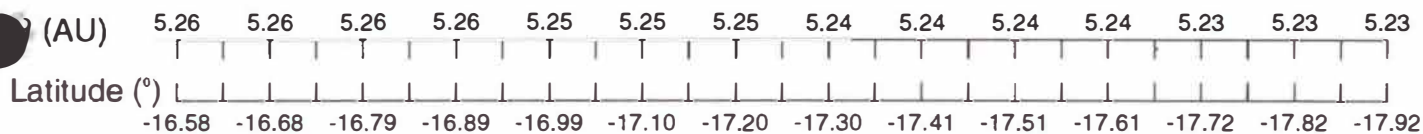
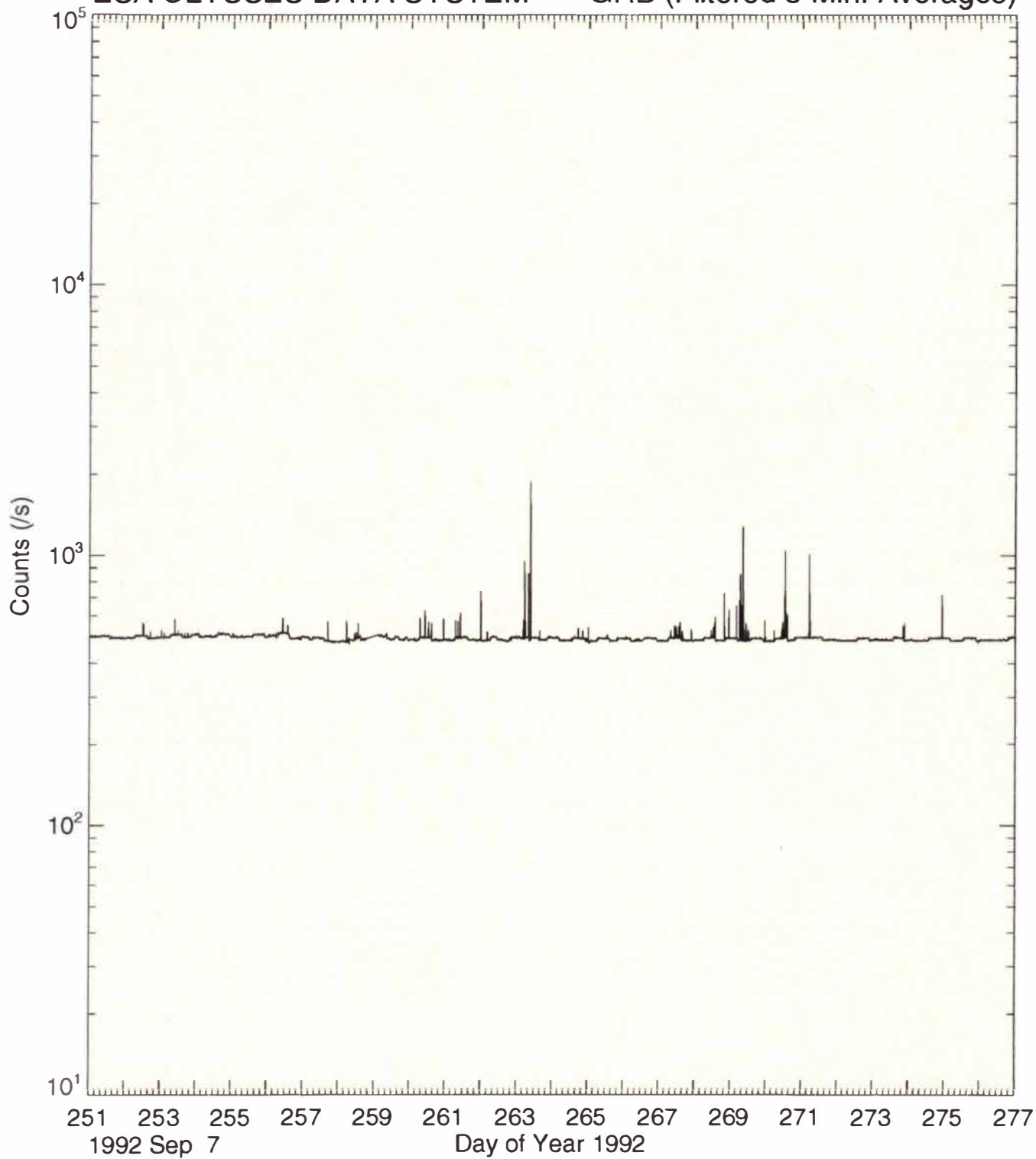


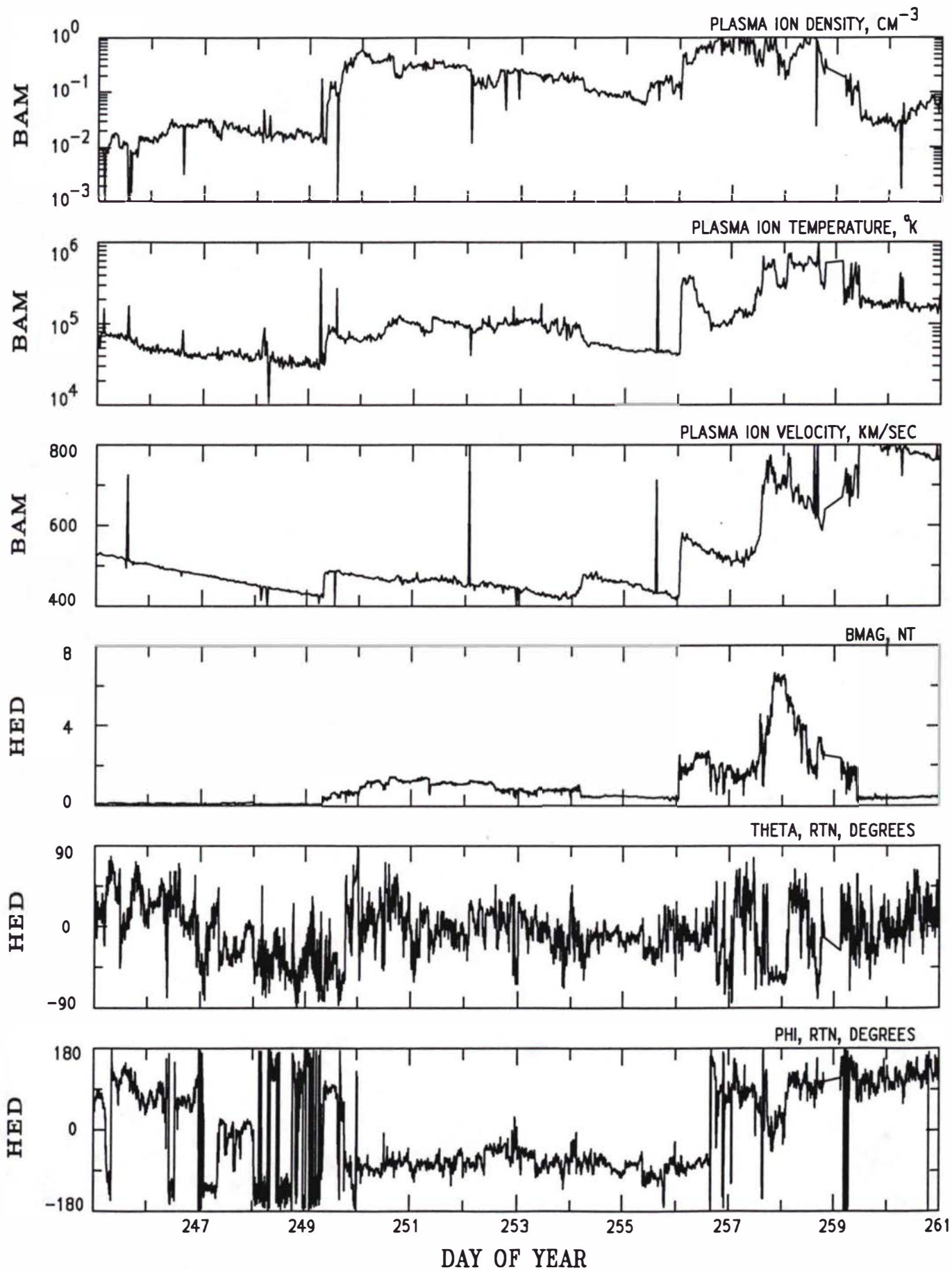
ESA ULYSSES DATA SYSTEM

GRB (Filtered 5 Min. Averages)



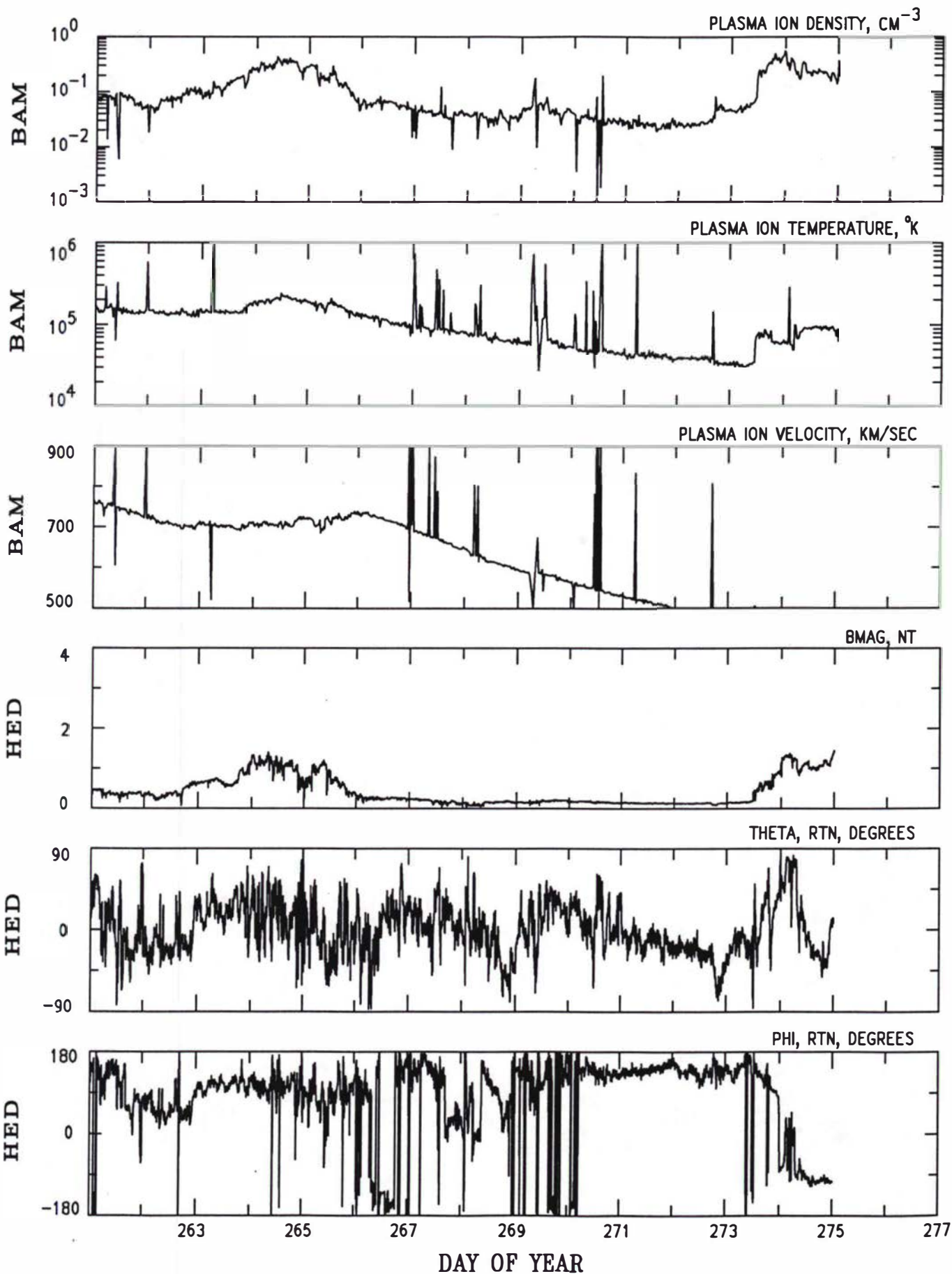
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

92 245 SEP 1 00:00:00.000 - 92 261 SEP 17 00:00:00.000



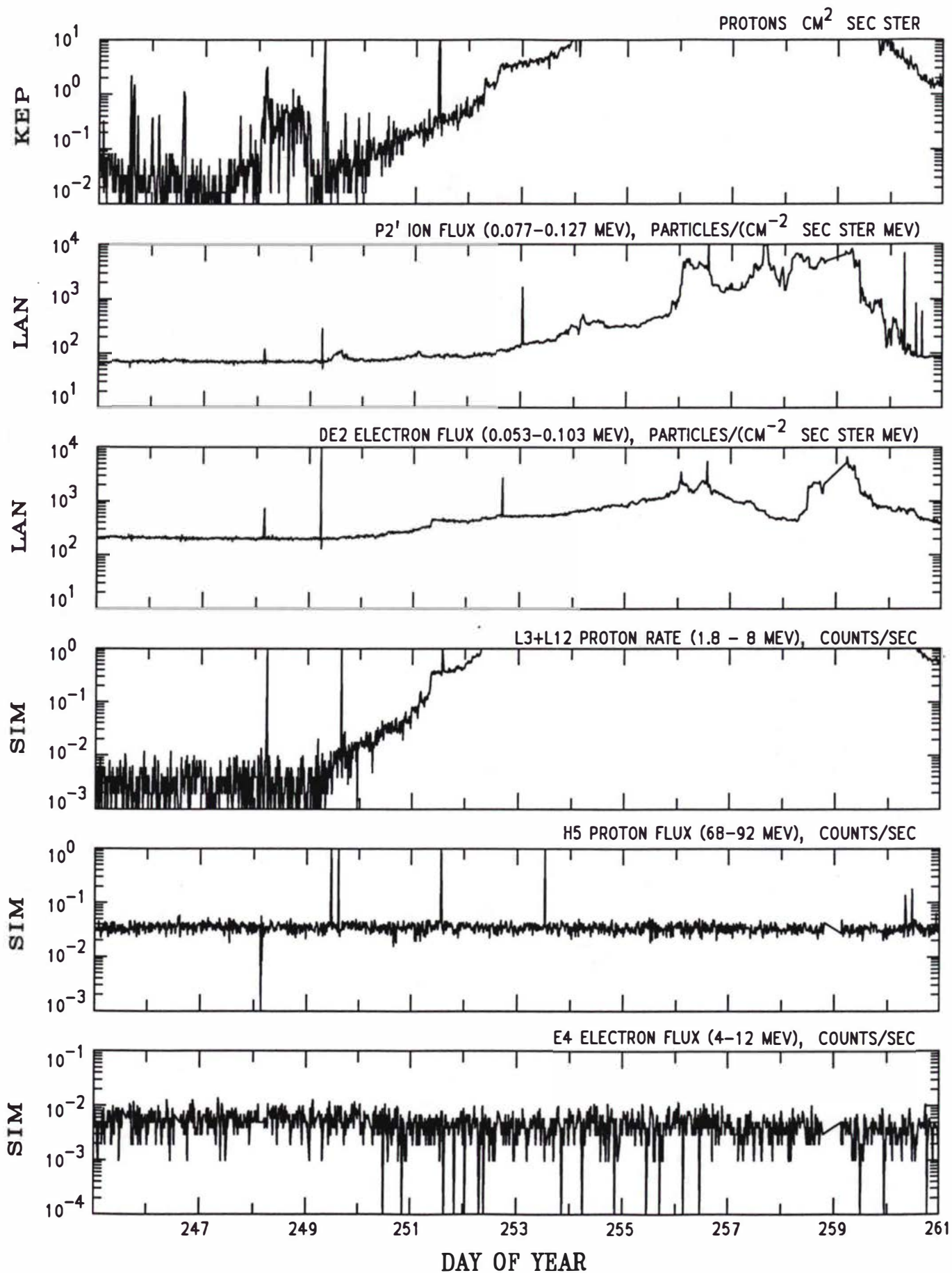
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

92 261 SEP 17 00:00:00.000 - 92 277 OCT 3 00:00:00.000



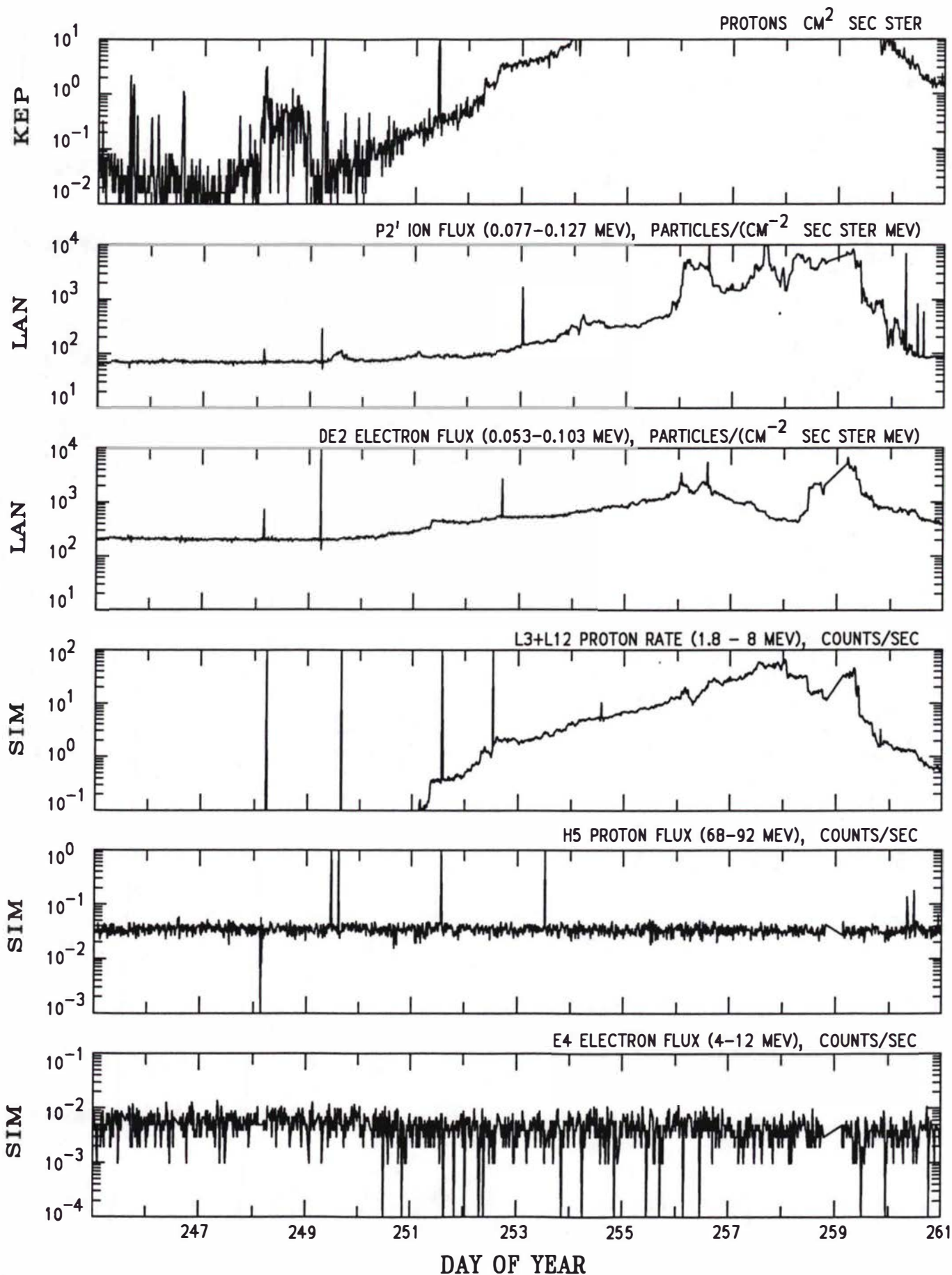
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

92 245 SEP 1 00:00:00.000 - 92 261 SEP 17 00:00:00.000



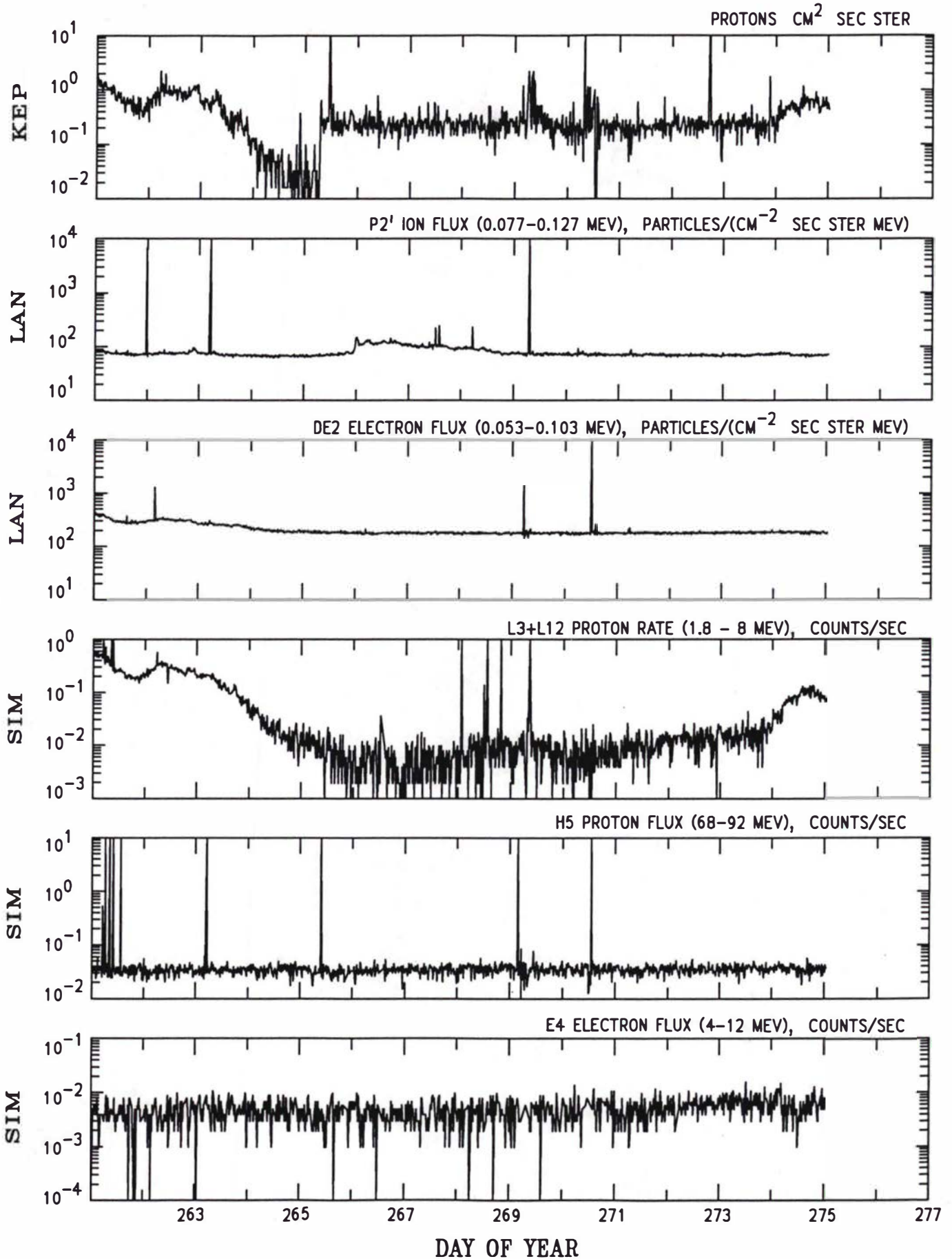
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

92 245 SEP 1 00:00:00.000 - 92 261 SEP 17 00:00:00.000



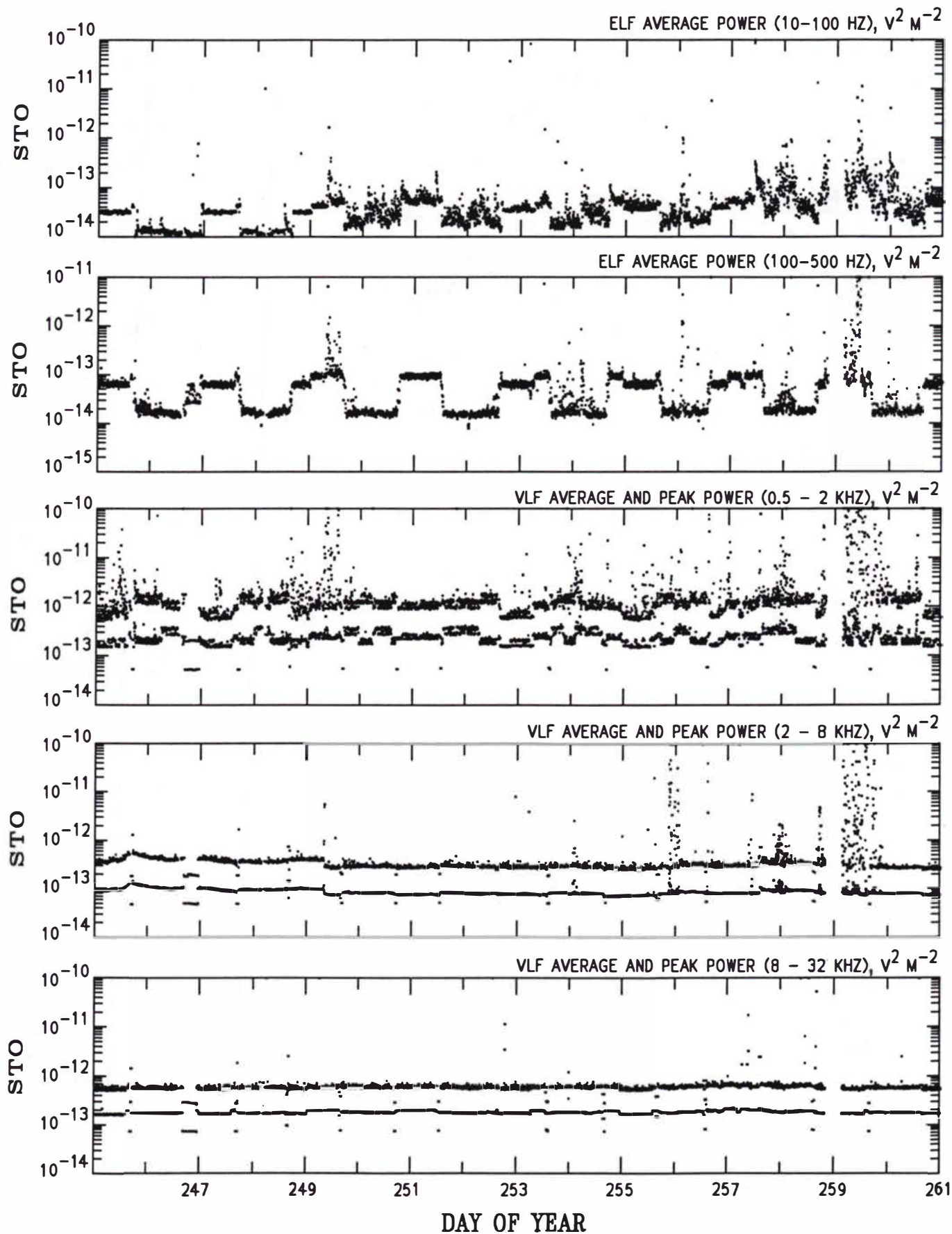
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

92 261 SEP 17 00:00:00.000 - 92 277 OCT 3 00:00:00.000



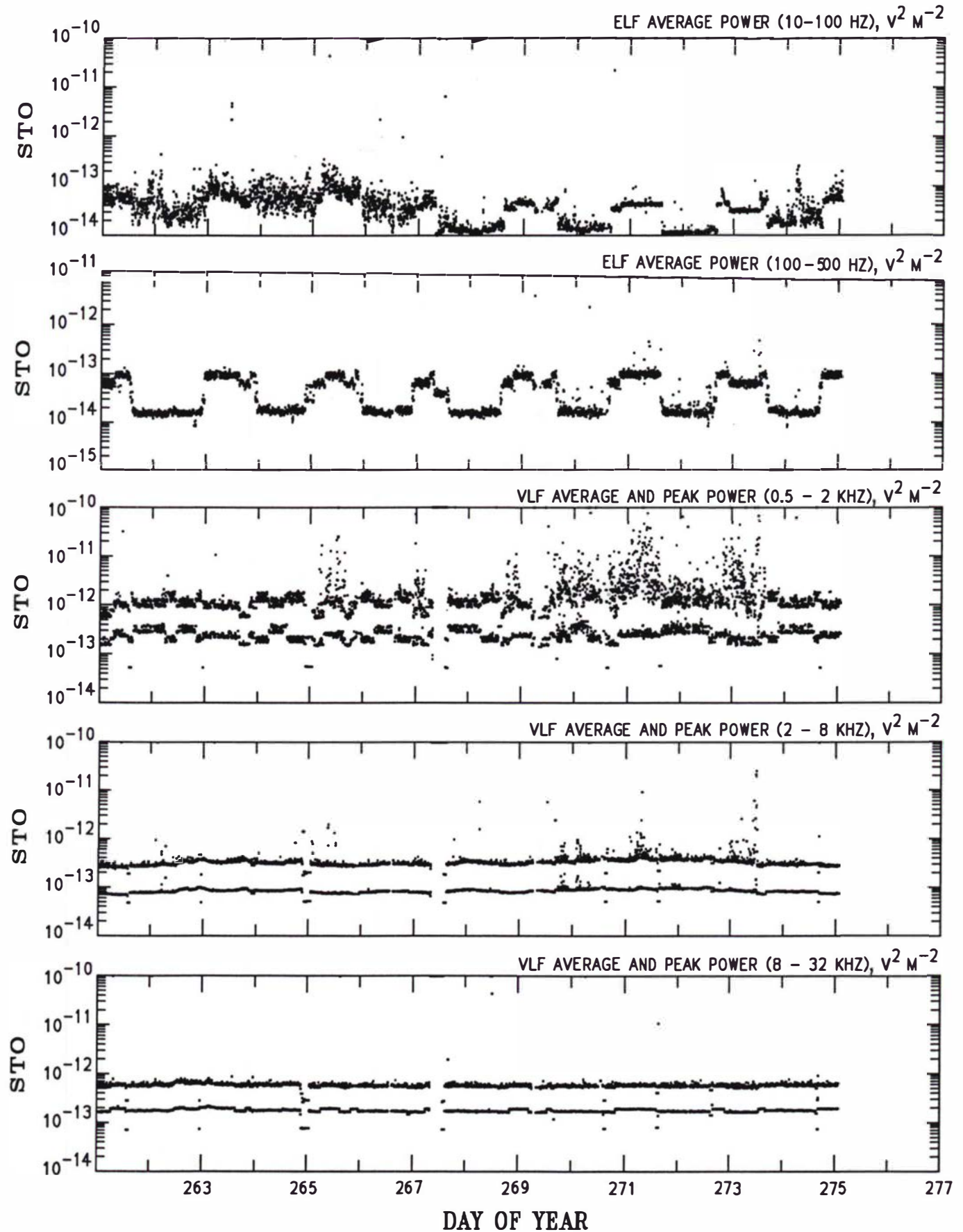
ULYSSES CDR - PLASMA WAVE

92 245 SEP 1 00:00:00.000 - 92 261 SEP 17 00:00:00.000



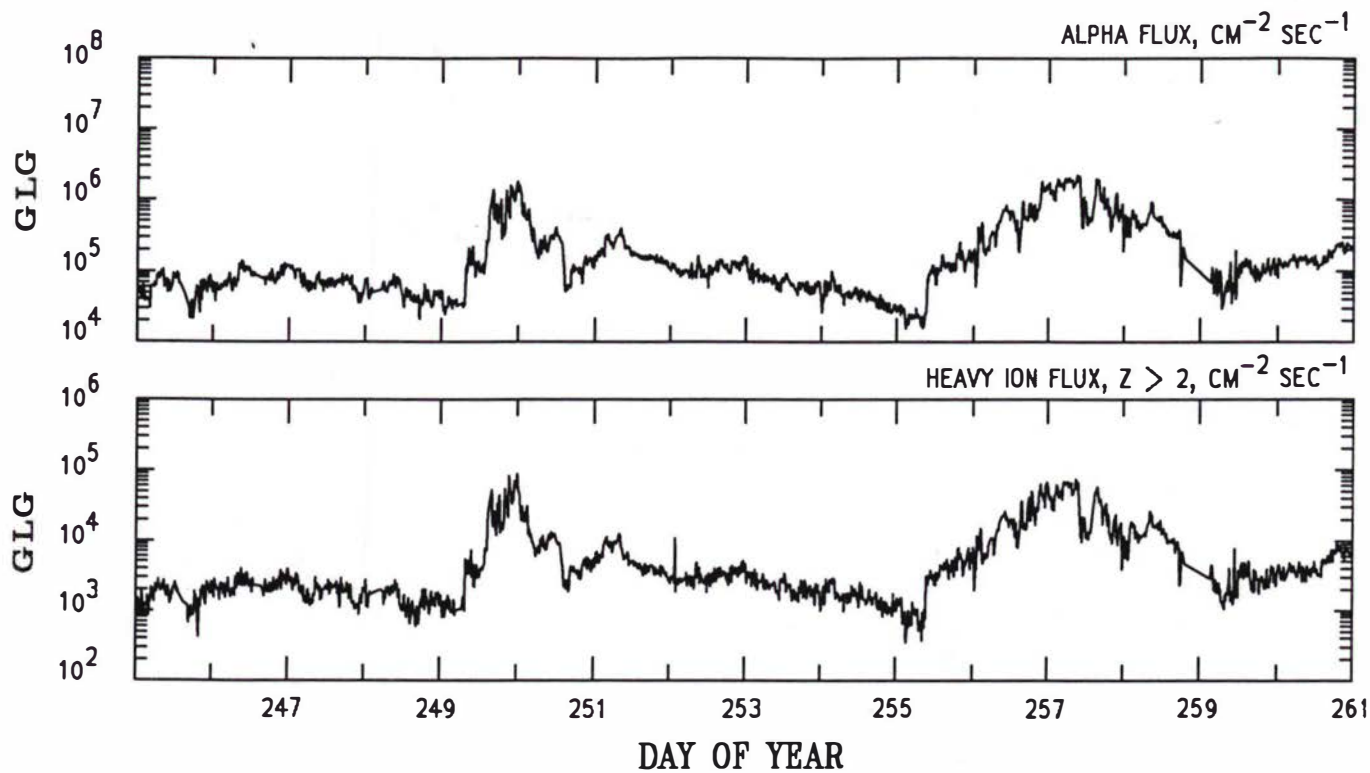
ULYSSES CDR - PLASMA WAVE

92 261 SEP 17 00:00:00.000 - 92 277 OCT 3 00:00:00.000



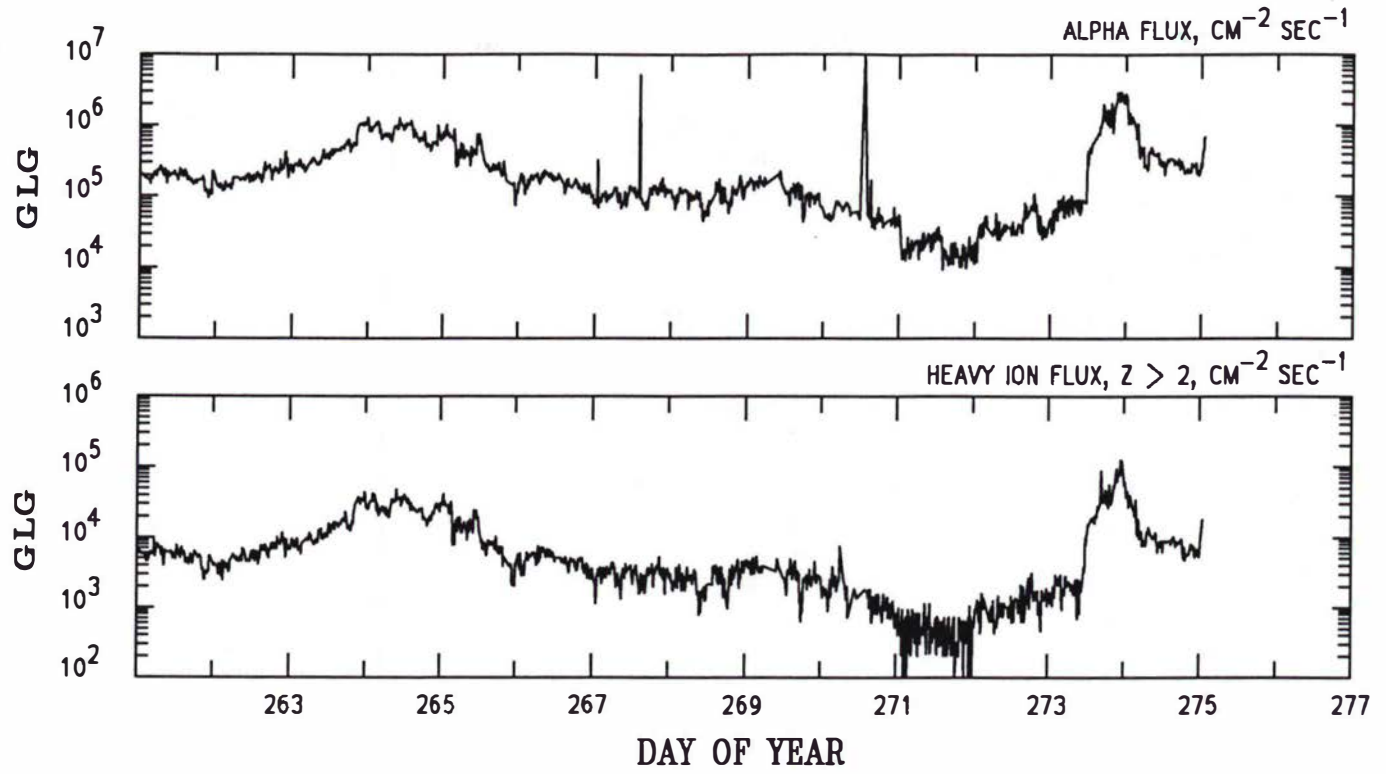
ULYSSES CDR - SOLAR WIND ION COMPOSITION

92 245 SEP 1 00:00:00.000 - 92 261 SEP 17 00:00:00.000



ULYSSES CDR - SOLAR WIND ION COMPOSITION

92 261 SEP 17 00:00:00.000 - 92 277 OCT 3 00:00:00.000



.92.245.00.11.38.438

HUS monthly long term thermal data

818

RET

E002 2ARADTMP S/C

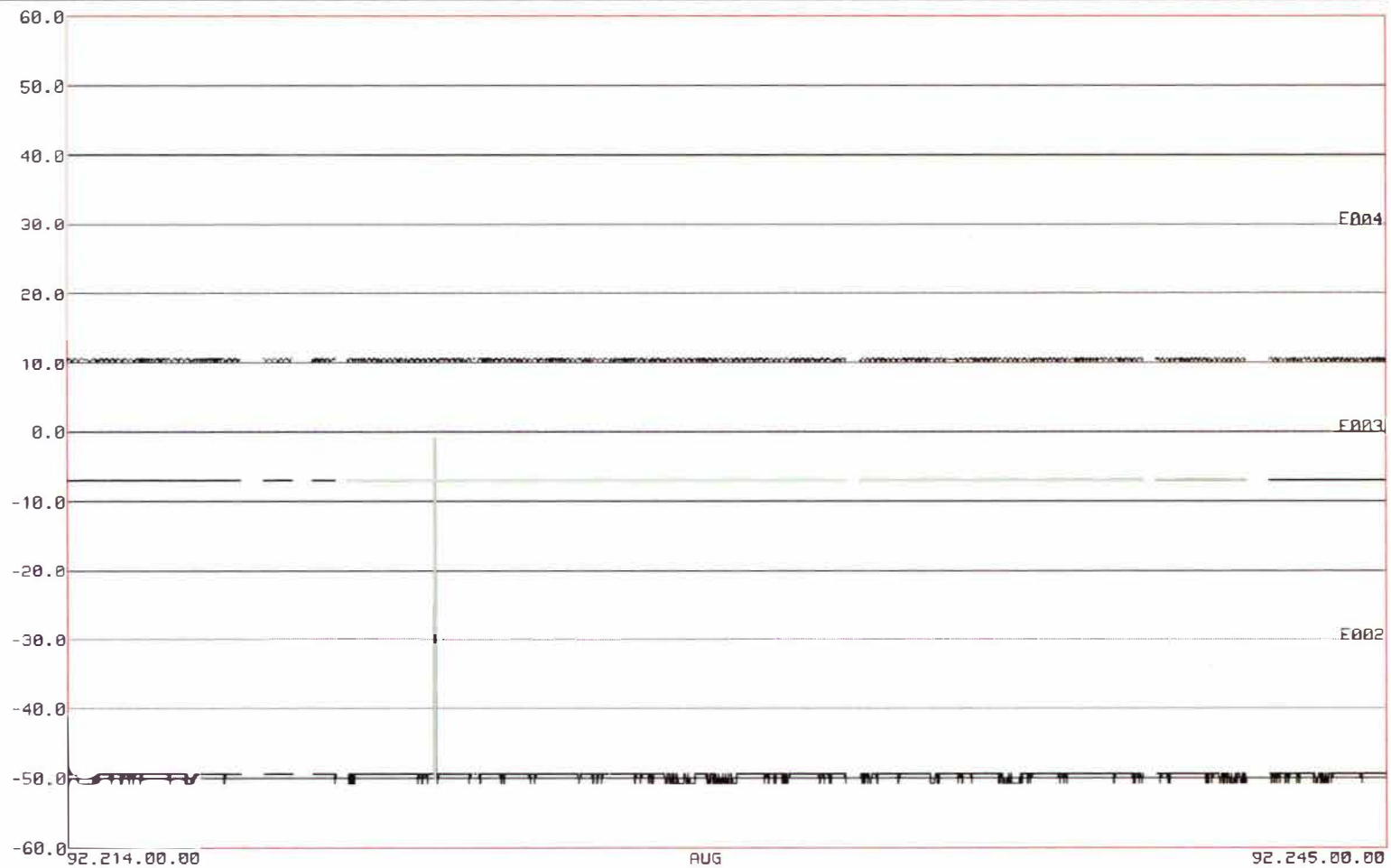
-7.1

E003 2BSENTMP S/C

-49.3

E004 2ASENSTMP EX

10.45



From khurley@omni:.dna_node.jplgp.span Thu Nov 26 00:35:15 1992
Date: Thu, 26 Nov 92 00:25:16 -0800
From: khurley@omni:.dna_node.jplgp.span
To: "khurley@sunspot.ssl.berkeley.edu"%jpldig.span@JPLDIG.jpl.nasa.gov
Content-Length: 3999

1st Sept	Earth pointing manoeuvre. Routine operations.
245.13:00-16:00	Many bad formats received due to Conjunction 2 geometry.
2nd Sept	KEP EPAC RAM Dump. Routine operations.
246.17:50	Q3023 STO daily sequence #3 rejected at decoder 2.
246.19:55	Q3023 STO daily sequence #3 rejected at decoder 2 following retransmission.
246.13:00-16:00	Many bad formats received due to Conjunction 2 geometry.
246.22:40	Q3023 STO daily sequence #3 rejected at decoder 2 following 2nd transmission.
246.23:34	STO daily sequence #3 sent successfully as single commands.
3rd Sept	Routine operations.
4th Sept	Earth pointing manoeuvre. Routine operations.
248.03:15-03:37	22m unrecoverable data loss during playback.
5th Sept	Routine operations. Routine DSU switching, DSU1 on line.
6th Sept	Routine operations.
7th Sept	Earth pointing manoeuvre. KEP EPAC IFC. Routine operations.
8th Sept	KEP GAS Health Check. Routine operations.
9th Sept	HED Calibration. Routine operations.
10th Sept	Earth pointing manoeuvre. Routine operations.
11th Sept	Routine operations.
12th Sept	Routine operations.
13th Sept	Earth pointing manoeuvre. Routine operations.
14th Sept	Routine operations over DSS 61 only. KEP EPAC IFC. DSS 42 pass cancelled due to maser problem.
258.15:52:45 to 259.03:01	7h30m irrecoverable data loss due to loss of DSS-42. All command activity postponed until next pass.
15th Sept	Routine operations.
259.21:00	HUS Datation test started.
16th Sept	Earth pointing manoeuvre. HET Calibration. Routine operations.
260.04:08	HUS Datation test commanding completed.
17th Sept	Routine operations.

18th Sept	Routine operations.
19th Sept	Earth pointing manoeuvre. Routine operations.
263.04:40-05:38 SCET	Approximately 1h of bad data due to heavy rain at DSS-42, then problems with beginning of pass at DSS-61. Data from 263.05:38-06:38 SCET was received on DSS-65 via a new GCF (Ground Comms Facility) which was under test.
20th Sept	Routine operations. STO Daily command sequence #4 delayed by approximately 2.75 hours due to ground segment commanding problems. Finally executed at 265.00:39 SCET.
21st Sept	Routine operations. KEP EPAC IFC.
265.20:48-21:50	62m of realtime data loss due to X-band maser failure at DSS-42. DSS-43 came off maintenance to support.
22nd Sept	Routine operations. Earth pointing manoeuvre.
266.12:28-14:07	1h39m of realtime data loss due on DSS-12 due to comms problems at Goldstone complex.
23rd Sept	HED Calibration. Routine operations.
24th Sept	Routine operations. STO DPU reset performed.
25th Sept	Routine operations. Earth pointing manoeuvre.
269.05:30-09:20 SCET	Many hits to playback data due to heavy rain at DSS61 on DOY 270.
26th Sept	Routine operations. Heavy rain during pass at DSS61. Realtime telemetry losses especially between 270.11:30-13:30 SCET. Also affected playback data during this period (see previous day's entry).
27th Sept	Routine operations.
271.05:08-05:49	Problems locking up on signal at AOS at DSS61. 42m of bad realtime data.
28th Sept	Routine operations. KEP EPAC IFC. Earth pointing manoeuvre.
272.16:41-17:16 SCET	35m of realtime data loss at DSS12 due to comms problems at Goldstone complex. Playback data for 272.04:10-05:20 lost.
29th Sept	Routine operations.
30th Sept	Routine operations. KEP RAM Dump.

CATSEARCH PROGRAM

BATSE BURST # 1885
EVENT OF 1992 SEP 1 DAY OF YEAR=245
EVENT CROSSING TIME AT BATSE : 21976. S. OR 06:06:15.7
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 261.600 14.500
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 1/ 9/ 92 IS:
RA= 157.813 DEC= 1.014 DIST= 6.269 AU
BATSE-ULYSSES DISTANCE = 937846888. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 76.92 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 707.80 SECS.
CROSSING TIME AT ULYSSES IS 22684. S. OR 06:18:03.5 +/- 589.79 SECONDS

No

From MALLOZZI@ssl.msfc.nasa.gov Wed Sep 2 11:52:59 1992
Date: Wed, 2 Sep 1992 13:53:44 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1296

NO.: 01885 ^{SEP 1} BATSE BURST TRIGGER

TIME: TJD=8866 SECONDS=21975

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=135.3 AZIMUTH=89.4 ERROR= DEGREES

COMMENTS:
SINGLE PEAK BURST LASTING APPROXIMATELY 90 SEC
OBSERVED ABOVE 100 KEV, BUT NOT ABOVE 300 KEV

8 / 6 / 94

ULYSSES RT

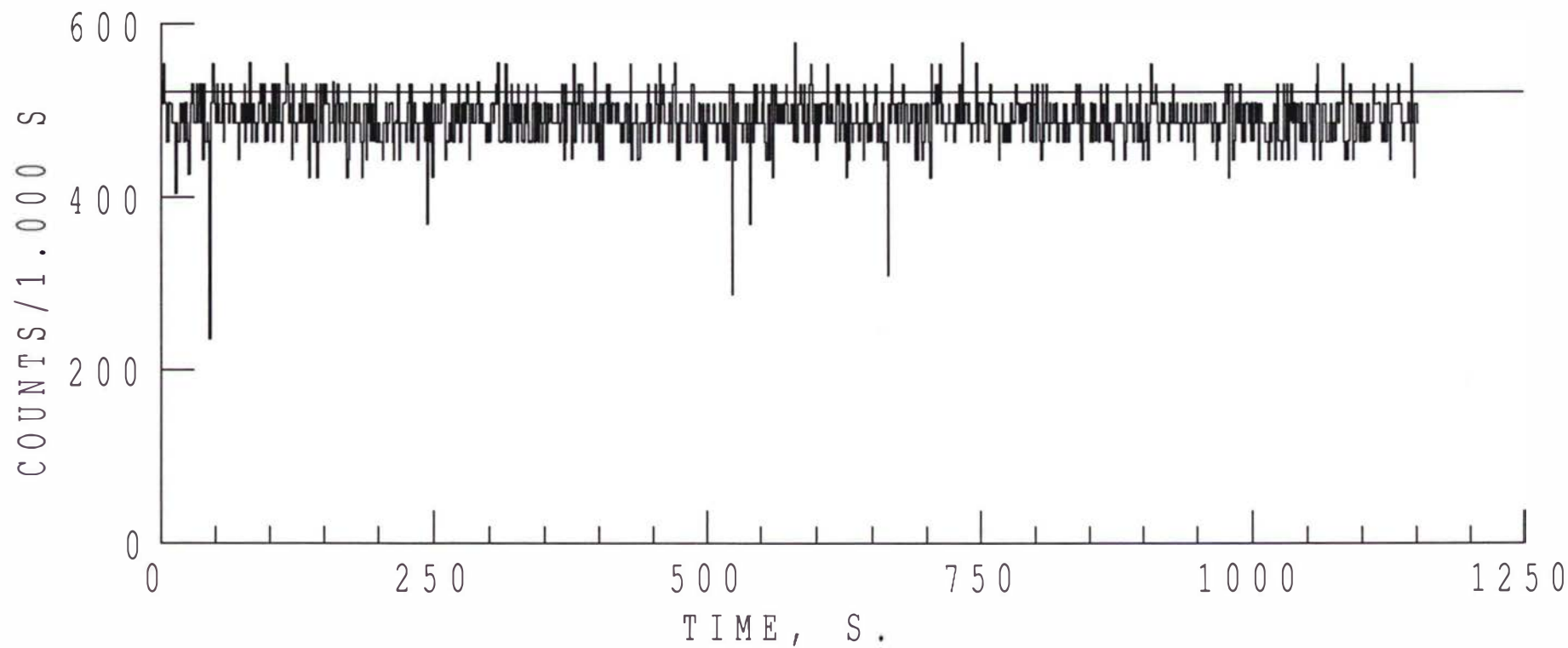
1 / 9 / 92 22104.441 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS |



From khurley@space6.ssl.berkeley.edu Tue Dec 15 16:52:38 1992

Date: Tue, 15 Dec 92 16:46:51

From: khurley@space6.ssl.berkeley.edu

Content-Length: 1193

get Venus crossing times
Fax to Robin

Dear John,

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

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

August	UCT	ECT	
10	77700	-----	
13	11000	12828	N/O
16	42600	45360	N/O
17	15055	-----	
19	40612	-----	
22	84184	-----	DMSP 81542 (3 surr.)
24	38400	39183	N/O DMSP (2)
27	85245	-----	
29	30755	-----	
29	63712	-----	
30	05800	06318	N/O
30	32310	-----	

September	UCT	ECT	
1	04311	-----	(solar?) RK will check 4/93
2	03230	-----	DMSP (3) ~01243
3		84540	N/O
4	00420		Same as previous event
19	28450	-----	(solar?)
21	00060	-----	

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

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

POSITION OF ULYSSES ON 1/ 9/1992 IS:

A= 157.813 DEC= 1.014 DIST= 6.269 AU

POSITION OF VENUS ON 1/ 9/1992 IS ALPHA= 180.813 DELTA= .867 DISTANCE=1.55744 AU

DISTANCE BETWEEN TWO OBJECTS AT

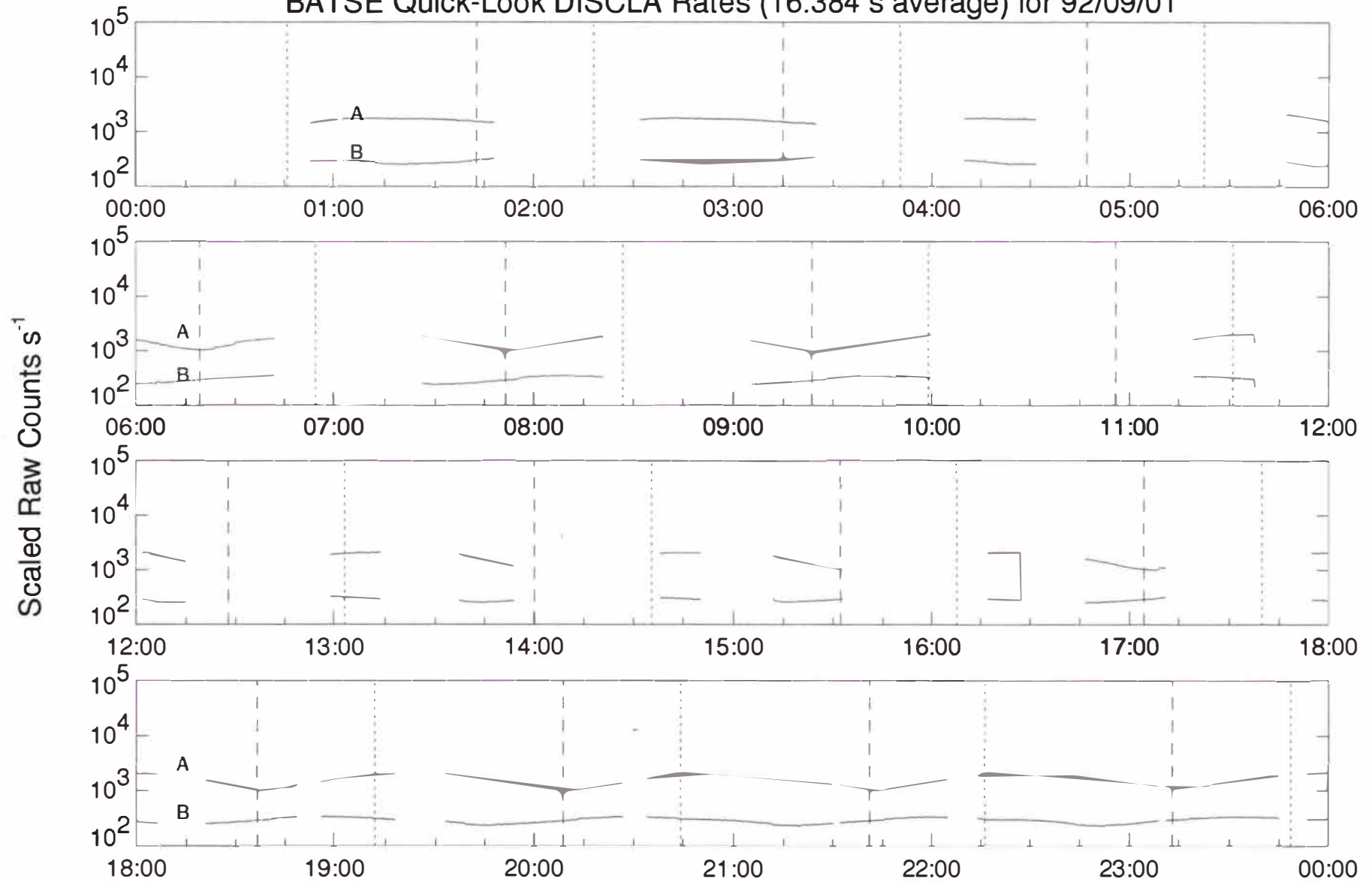
157.813 1.014 227947000.00 KM. AND

180.813 .867 232992600.00 KM. IS

729075800.00 KM., OR 4.874 A.U., OR 2431.93 LIGHT-SECONDS

THE ANGLE BETWEEN THEM IS 22.997 DEGREES

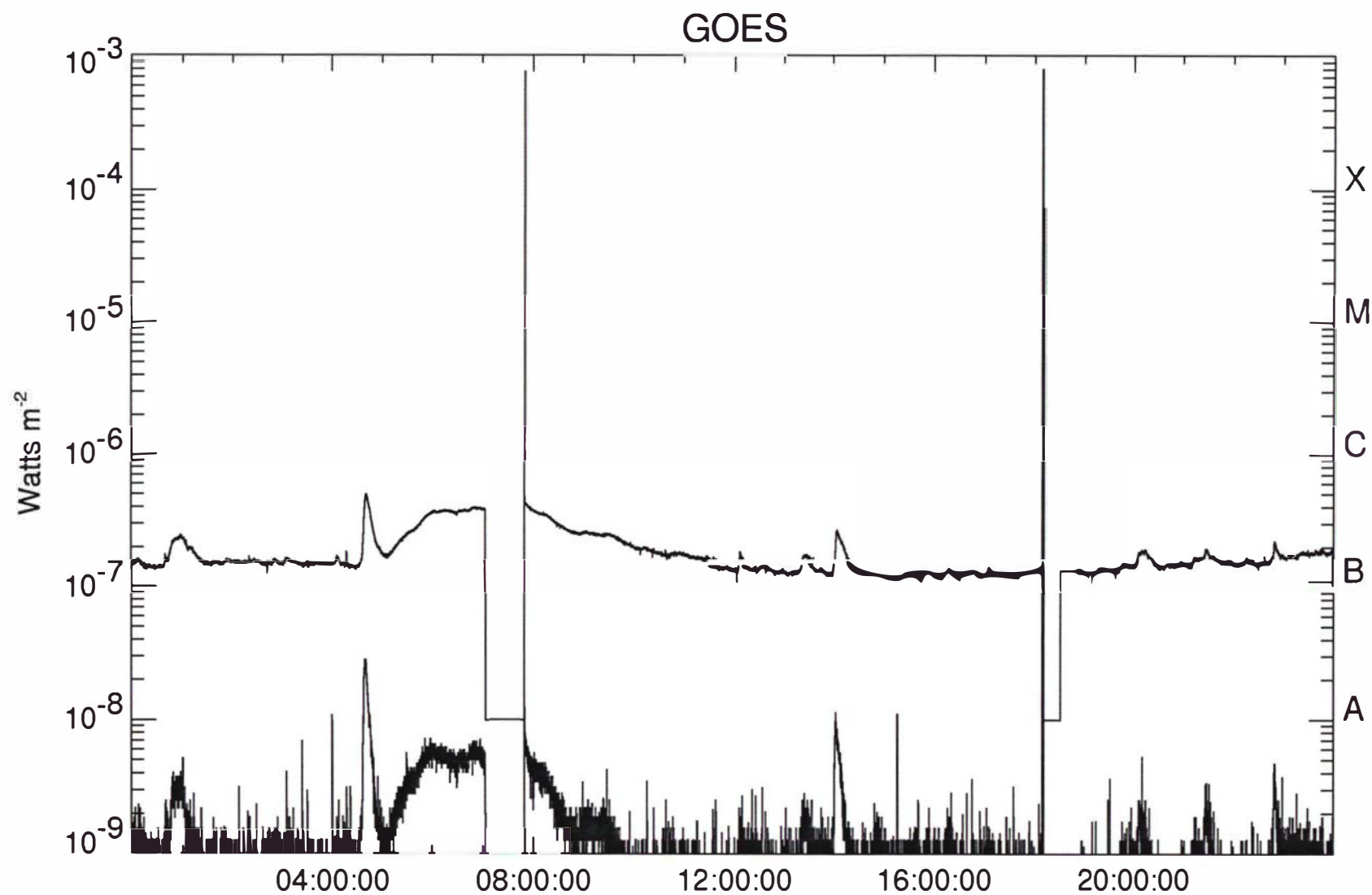
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/01



Current Time: 92/09/29, 0225 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

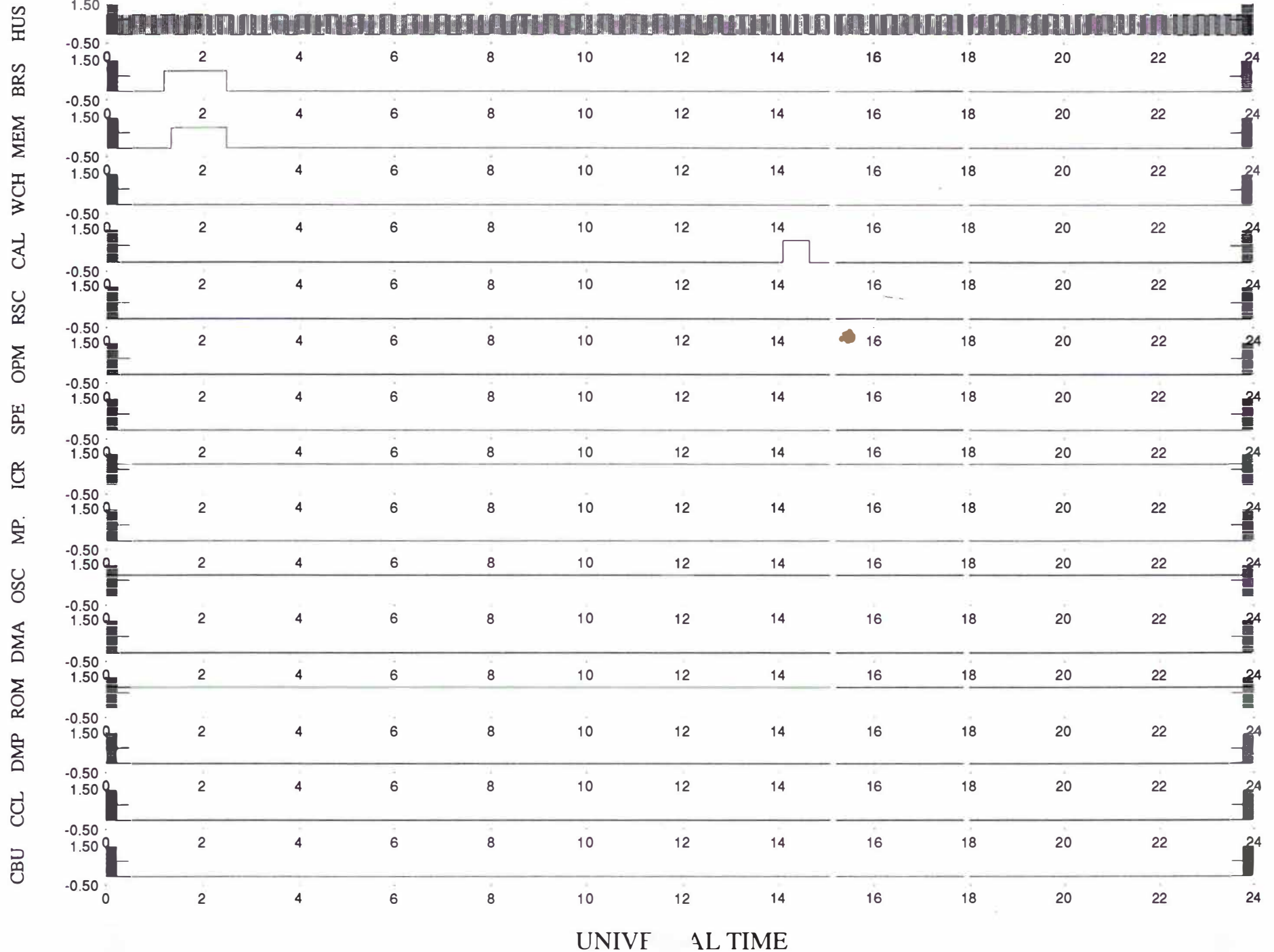


Data Start: 92/09/01, 0000:01

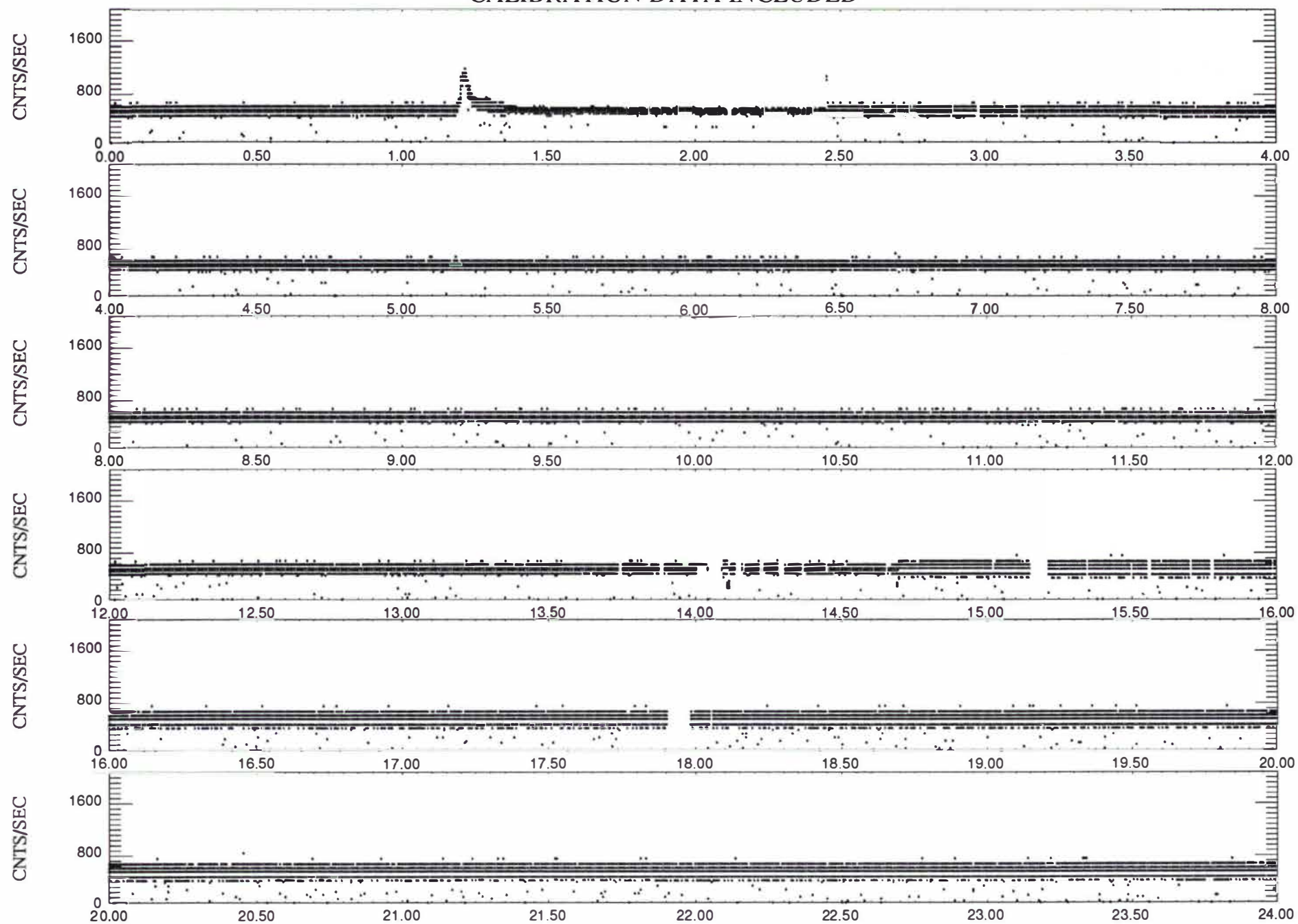
Plot created: 95/05/25, 1816

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

BURST NUMBER 15

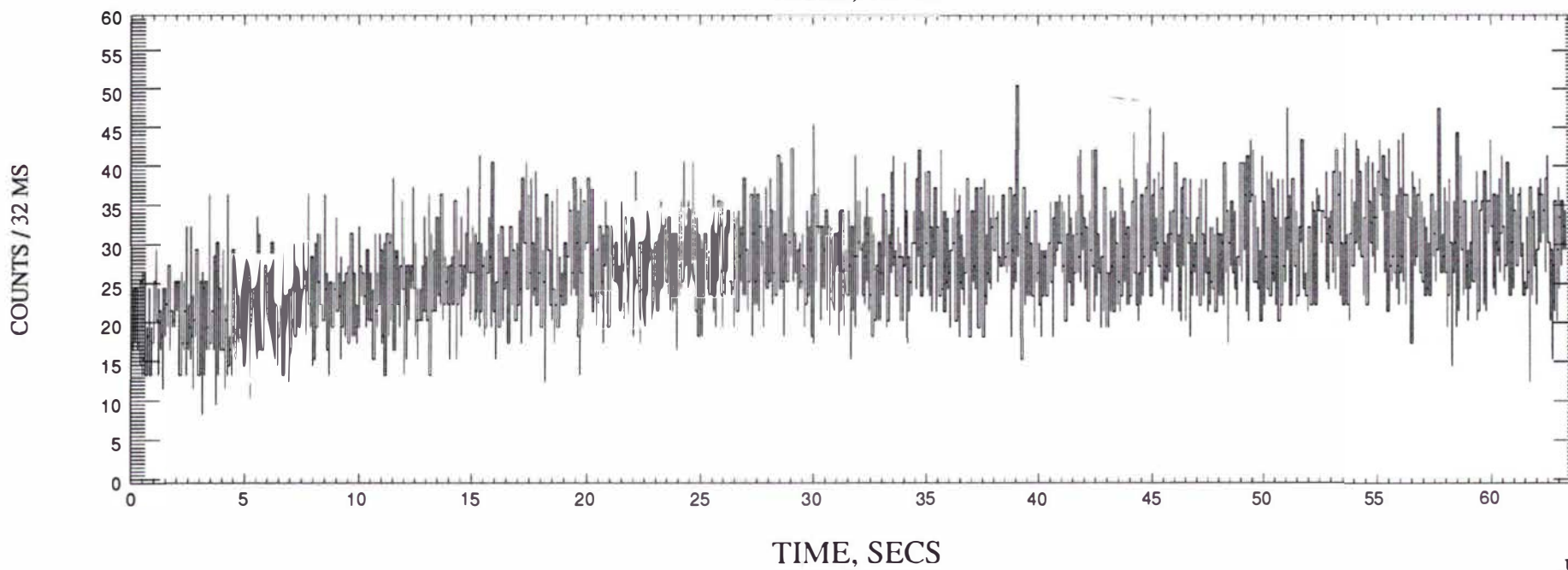
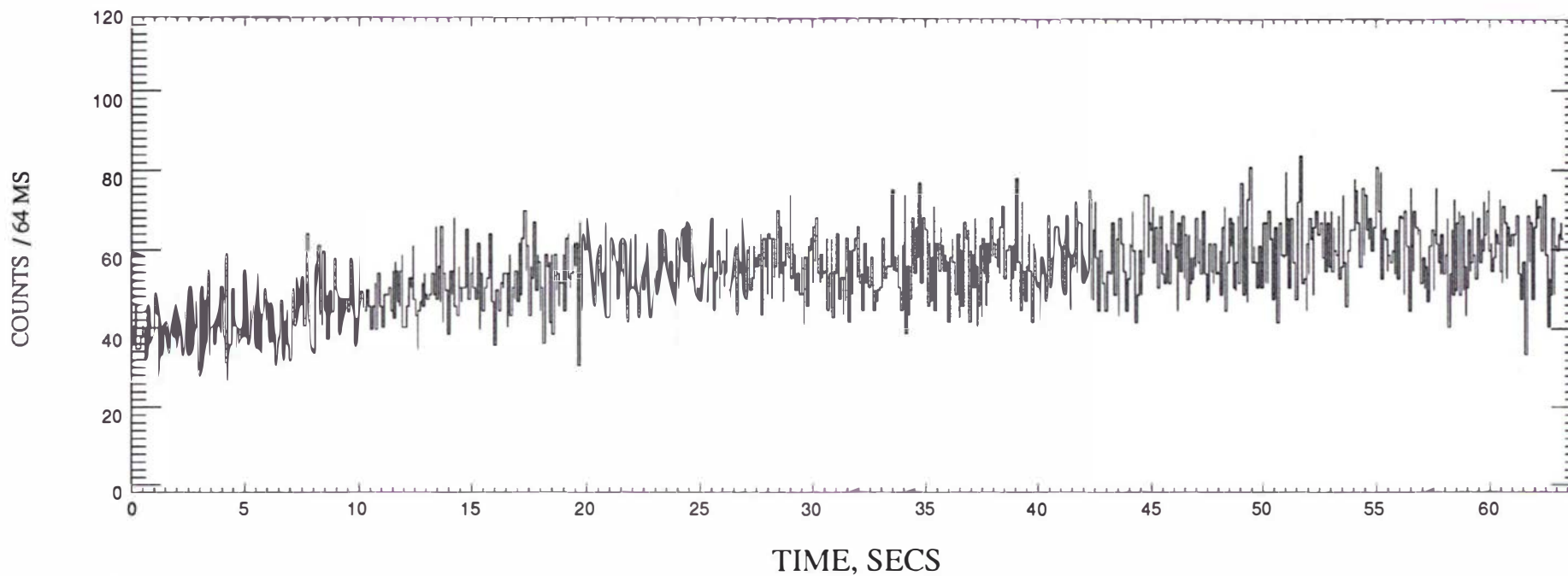


CALIBRATION DATA INCLUDED

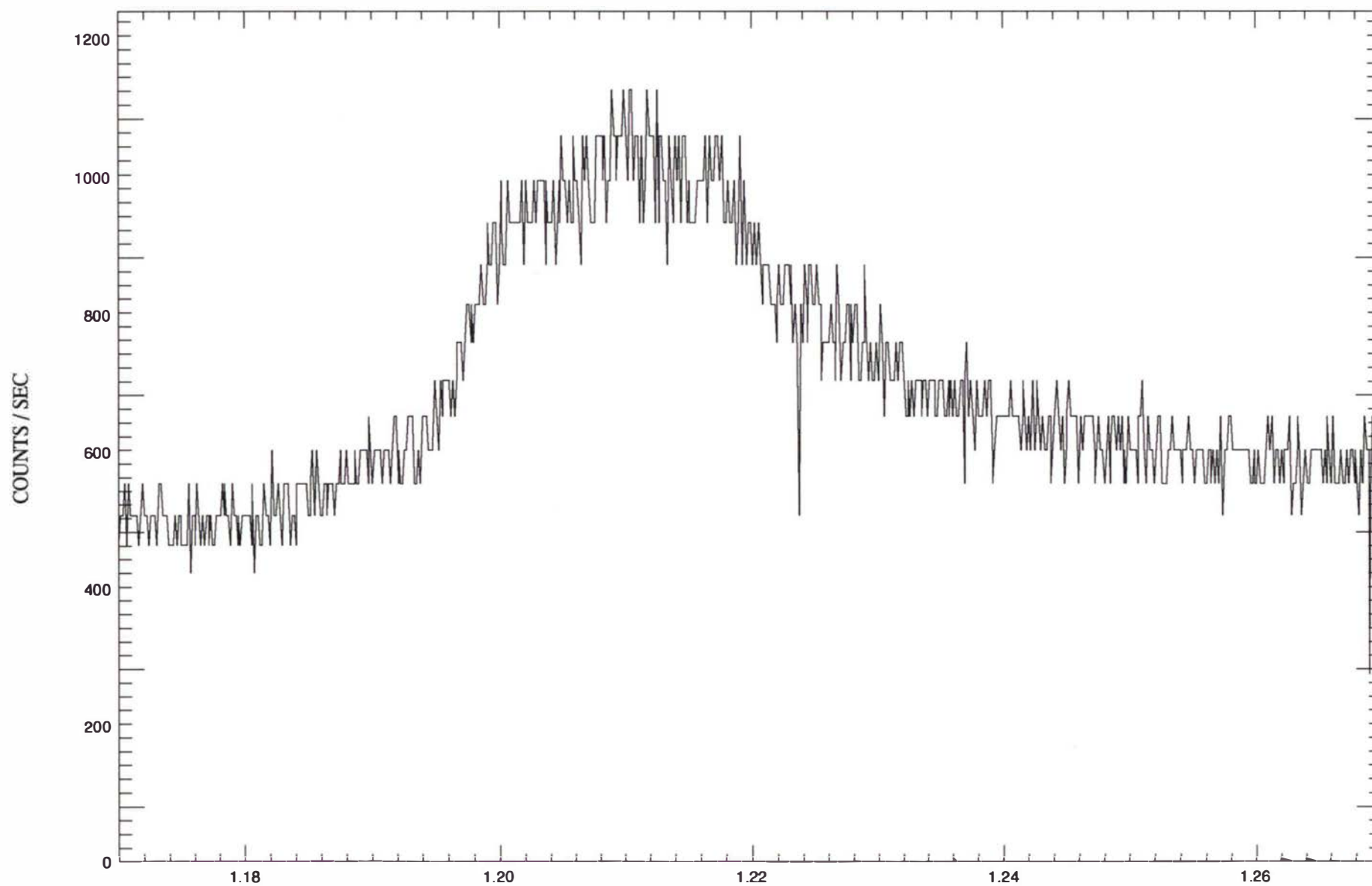


UNIVERSAL TIME

Burst Counter 15 at UT= 1.197504259745 h= 4311.015 s



CALIBRATION DATA INCLUDED



CATSEARCH PROGRAM

BATSE BURST # 1886
EVENT OF 1992 SEP 2 DAY OF YEAR=246
EVENT CROSSING TIME AT BATSE : 1736. S. OR 00:28:56.3
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 280.700 -21.600
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 2/ 9/ 92 IS:
RA= 157.949 DEC= .913 DIST= 6.268 AU
BATSE-ULYSSES DISTANCE = 937620992. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 59.42 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1591.31 SECS.
CROSSING TIME AT ULYSSES IS 3328. S. OR 00:55:27.6 +/- 541.62 SECONDS

Trigger

From HORACK@ssl.msfc.nasa.gov Thu Sep 3 12:19:12 1992
Date: Thu, 3 Sep 1992 14:20:10 -0500 (CDT)
From: HORACK@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1539

BATSE BURST TRIGGER

NO.: 01886

Sep 2
TIME: TJD=8867 SECONDS=01736

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=150. AZIMUTH=147. ERROR= DEGREES

COMMENTS:

BIG BURST WITH EMISSION 270 SECONDS AFTER TRIGGER. INITIAL PART OF BURST IS EXTREMELY INTENSE, SOMEWHAT SYMMETRIC IN PROFILE, AND LASTS ABOUT 15 SEC. BETWEEN THIS AND T = 260, BACKGROUND IS PRESENT. BUMP OUT AT T=260 LASTS ABOUT 20 SECONDS, AND IS NOT NEARLY AS INTENSE. BOTH EMISSION FEATURES SEEN ABOVE 300 KEV. FIRST (BIG) PEAK HAS SOME DETAILED STRUCTURE AT HIGHER ENERGY.

Yes

Helios corr < 1ms - no change

Date: Oct 16 '97

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

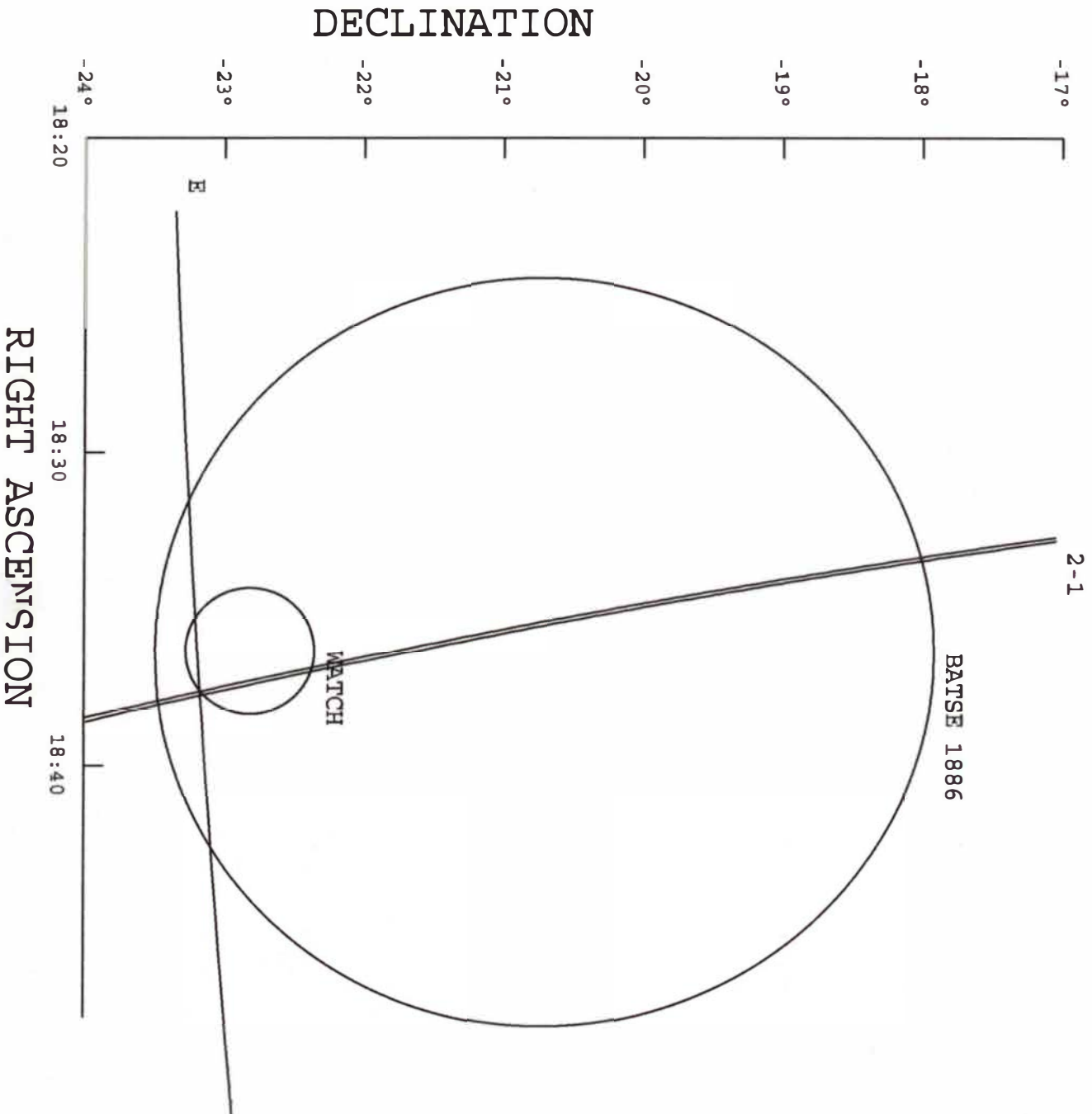
- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?

- ☒ ACCESS database updated?

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

EVENT OF SEP 2, 1992 0:53

16/10/97



RIGHT ASCENSION

BATSE

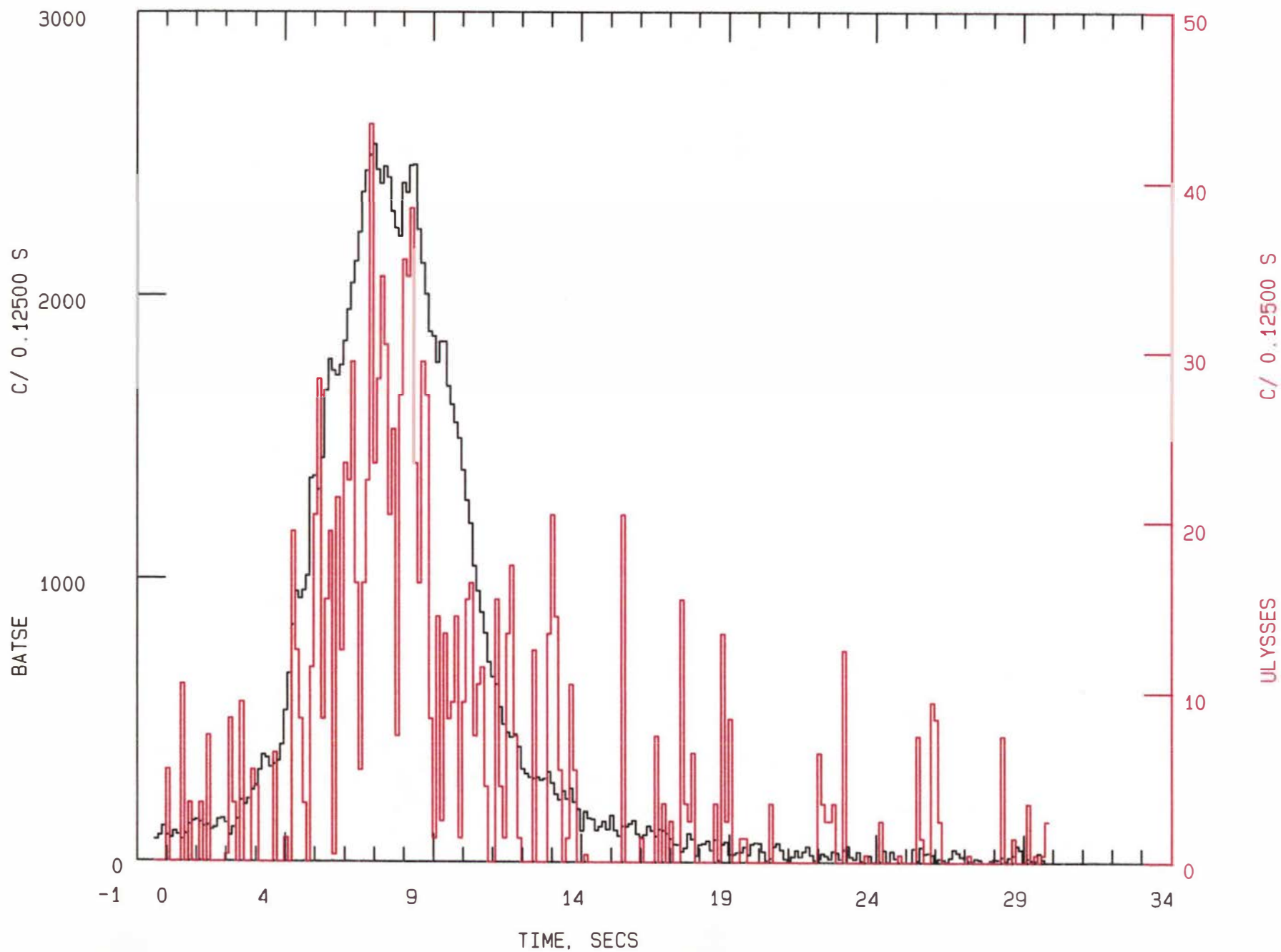
-ULYSSES

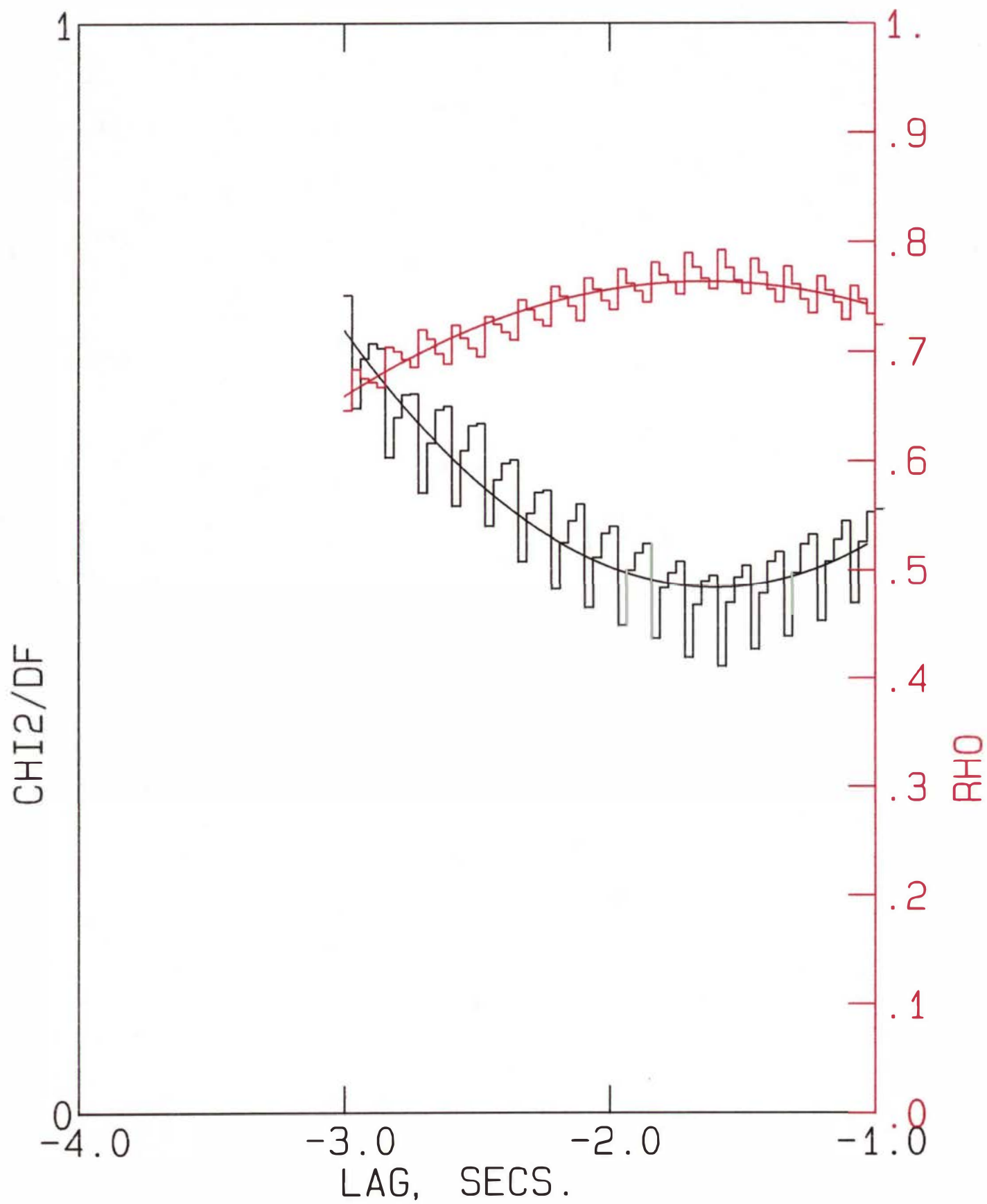
CORRELATION

2/ 9/92

1736.322

16/10/97





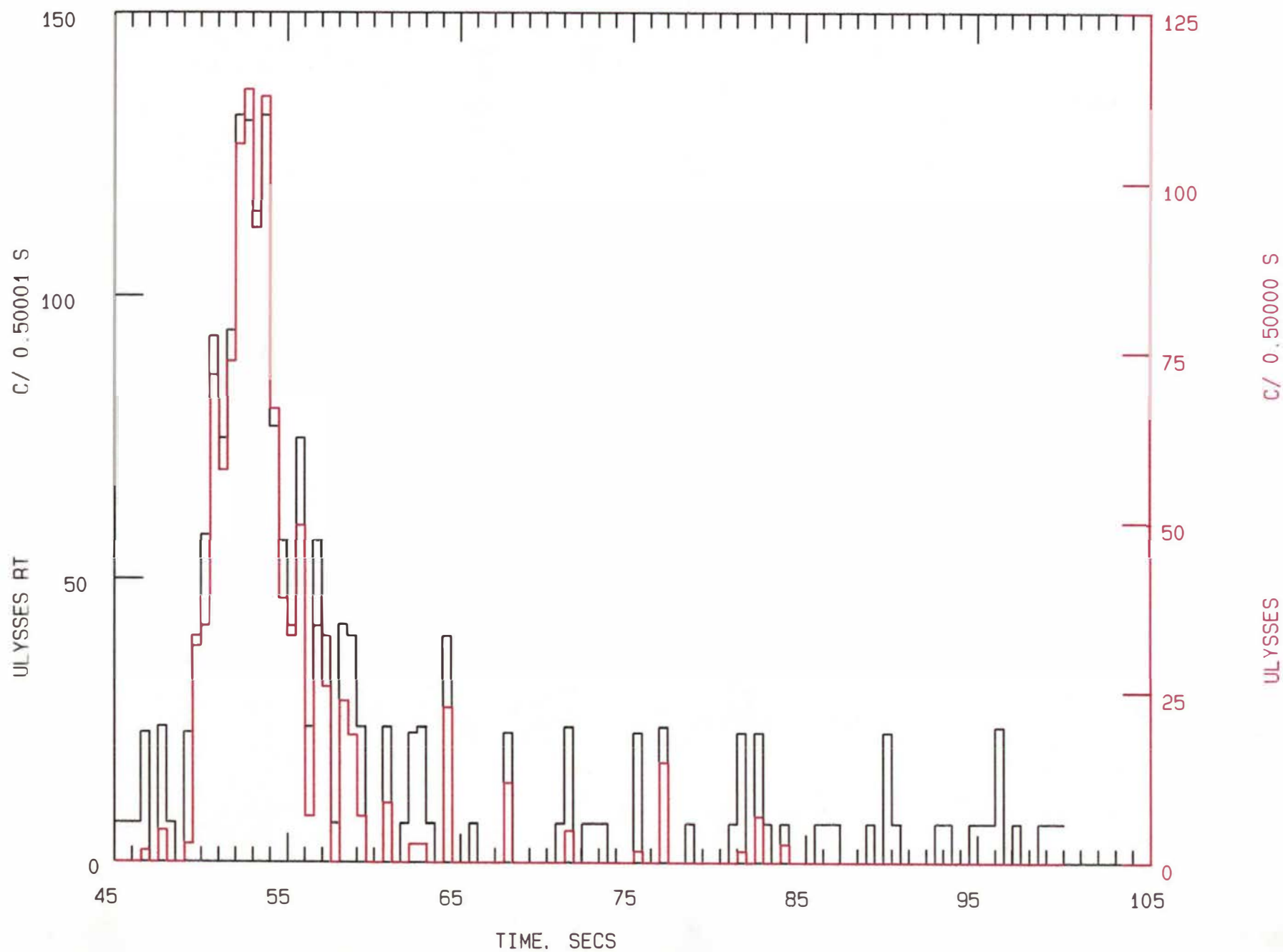
ULYSSES RT-ULYSSES

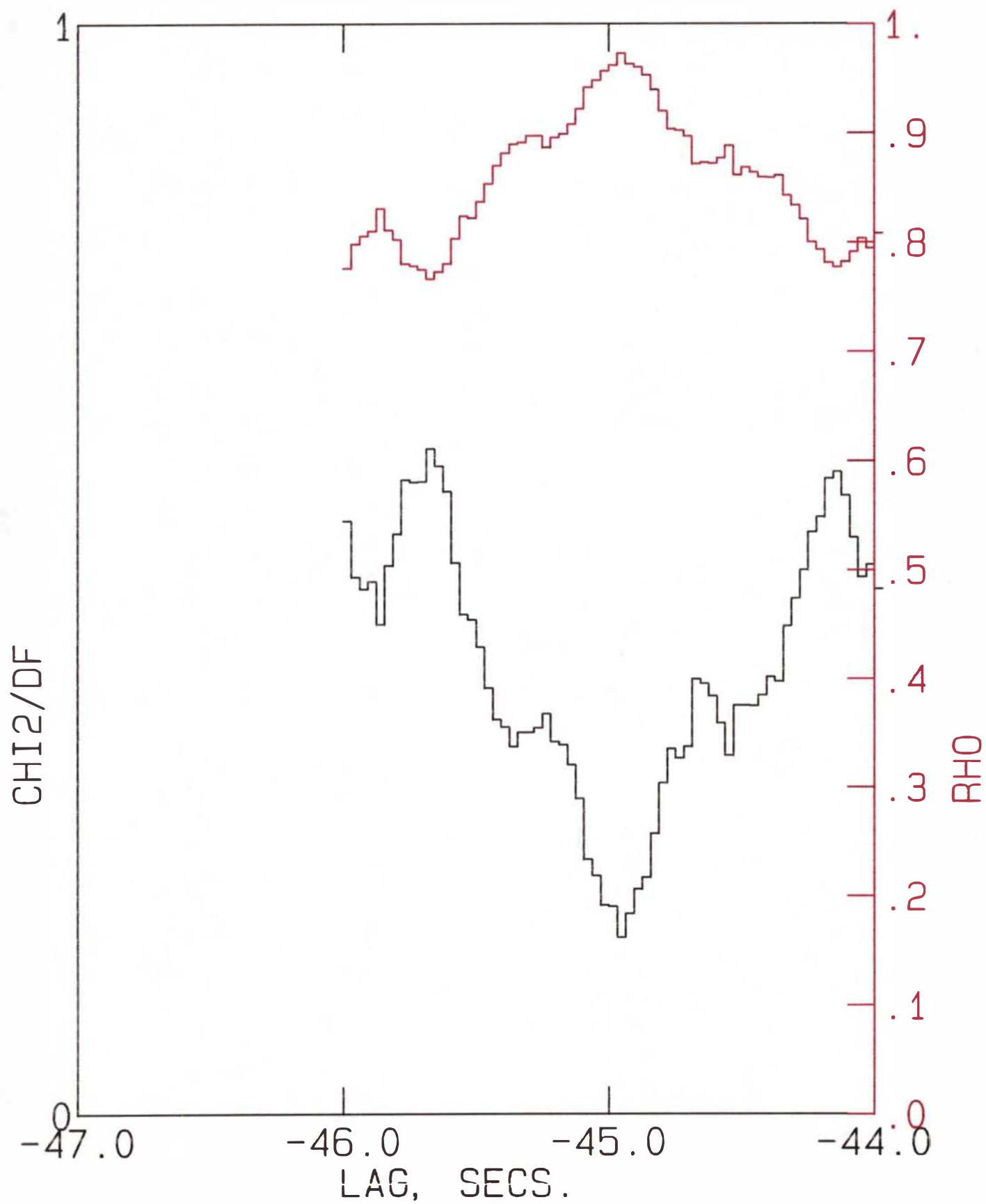
CORRELATION

2/ 9/92

3178.034

16/10/97

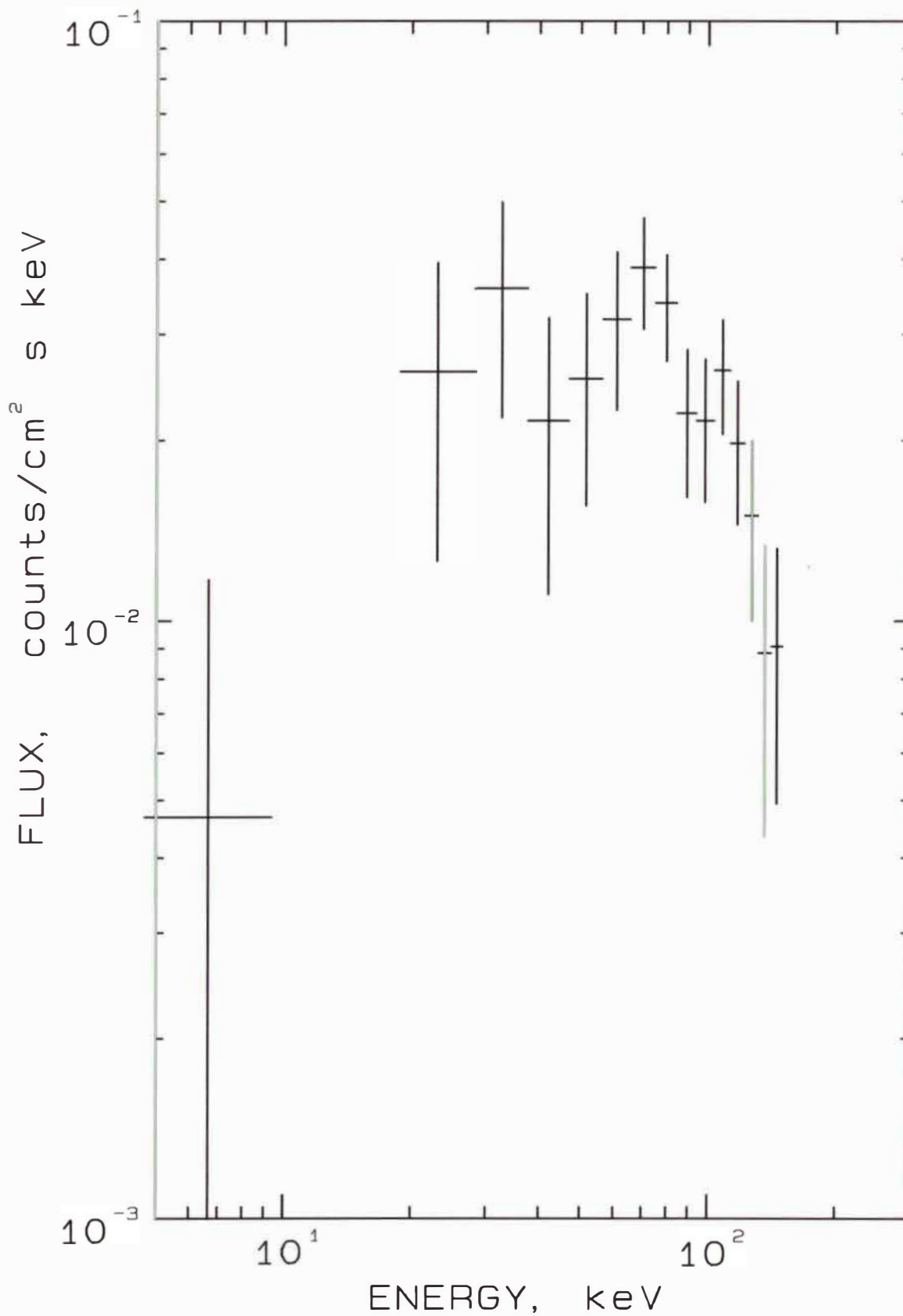




ULYSSES 02/09/92 3230.384

16/10/97

SPECTRUM INTEGRATED OVER 20.7 SECONDS, INTERVALS 2 TO 20



ULYSSES 02/09/92 3230.384 BURST SPECTRAL COUNT RATES

4- 18 keV

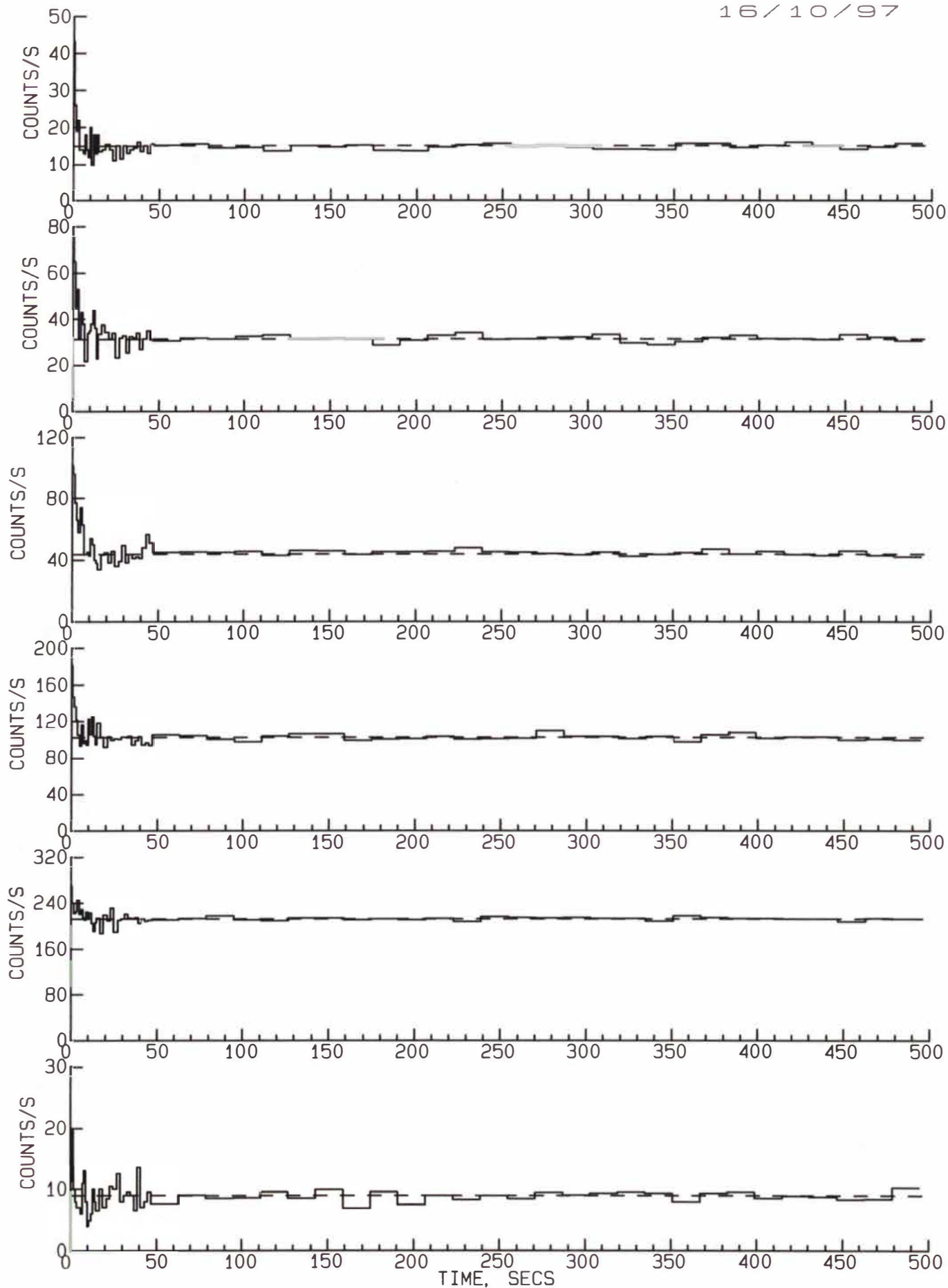
18- 46 keV

46- 75 keV

75-103 keV

103-131 keV

131-150 keV



16/10/97

ULYSSES

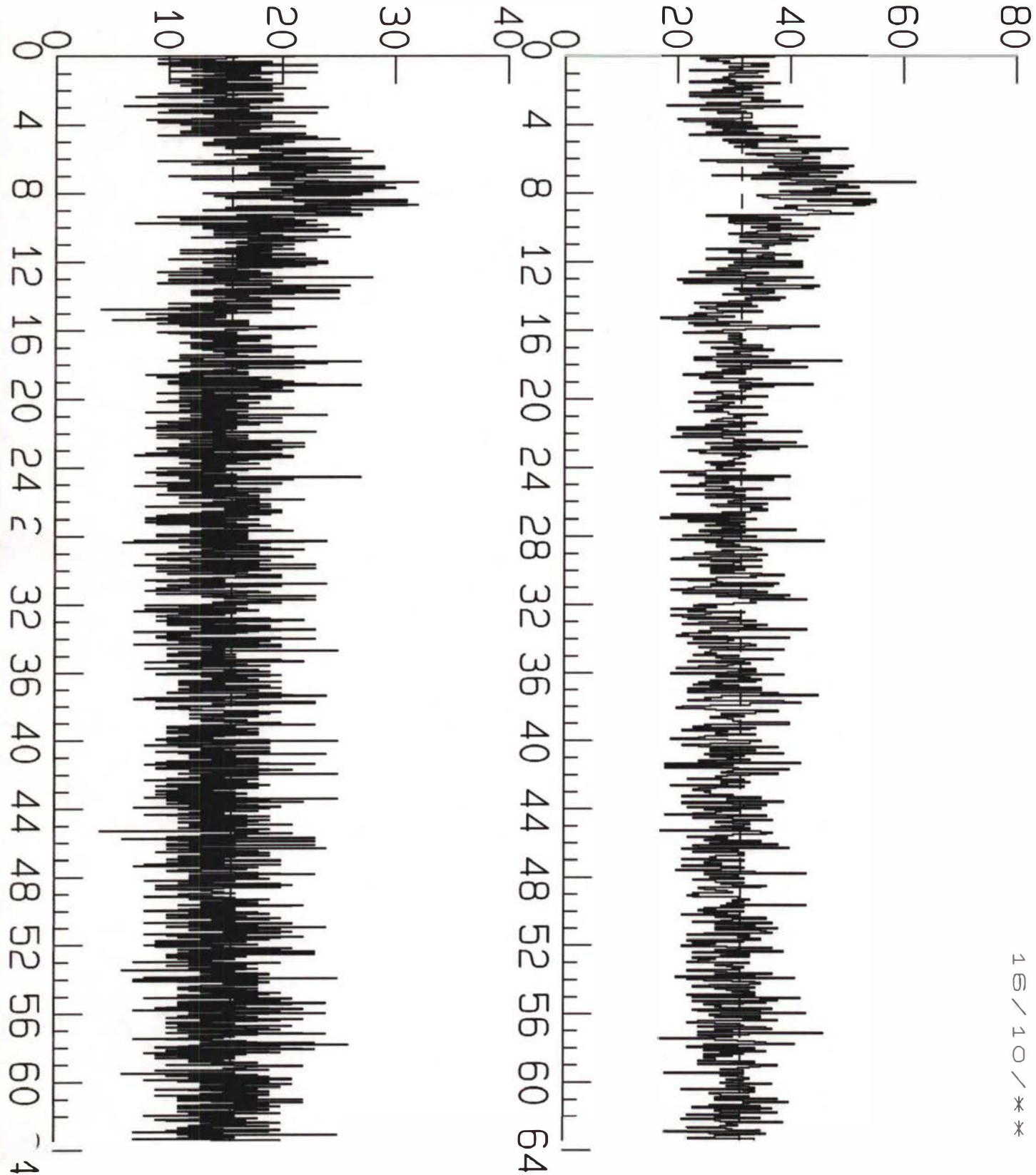
02/09/92

Ttrig= 3230.411

22- 150 keV

COUNTS/0.031 S

COUNTS/0.062 S



16/10/11

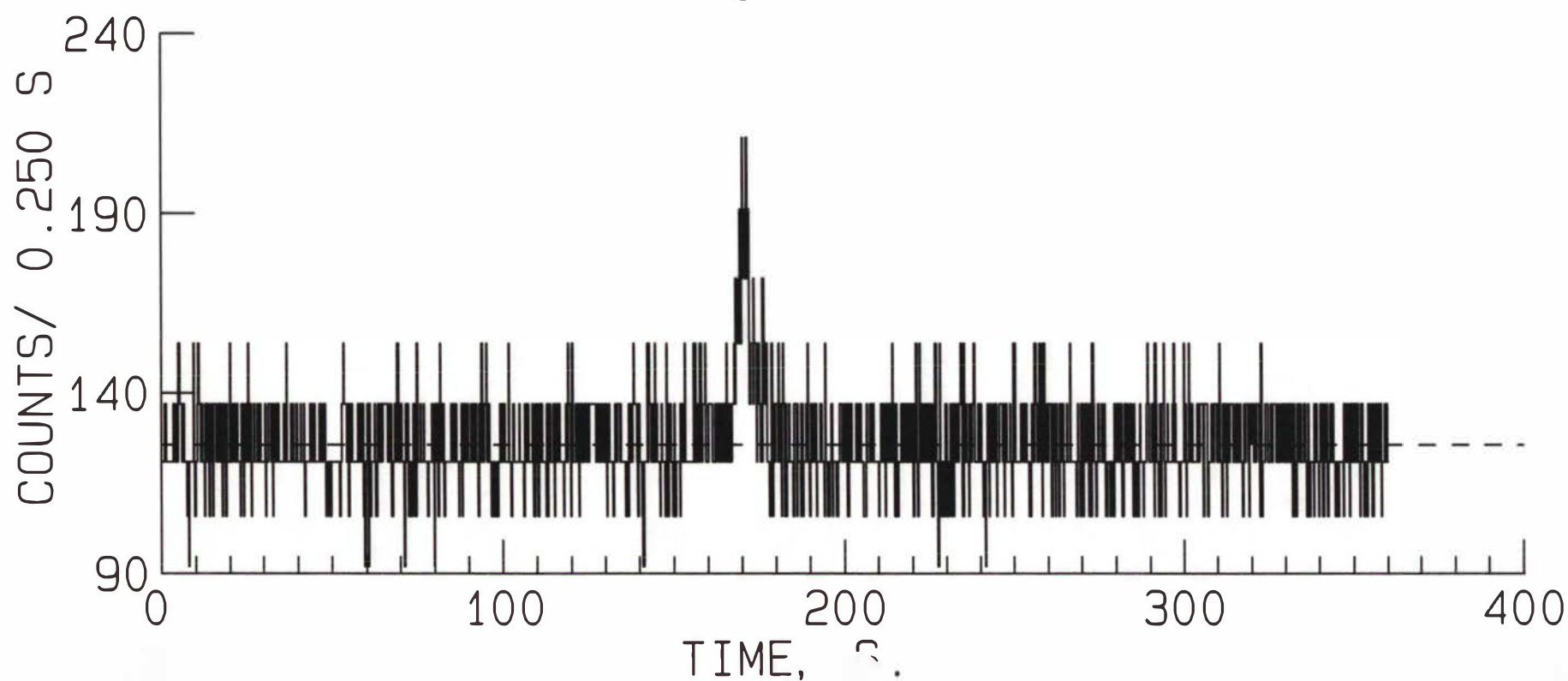
ULYSSES RT

16/10/97

2/ 9/92 3060.017 s

22- 150 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



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

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

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

Chryssa and Stayce:

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

NOTES:

NA: Not apparent in 20-second averaged data (extracting the 2-sec data is
a more time-consuming task, not undertaken in every case).

NA?: Some slight indication of a peak in 20-second averaged data.

SA: South Atlantic Anomaly, obscuring data with high background rates.

SR: South Radiation Belt background.

NR: North Radiation Belt background.

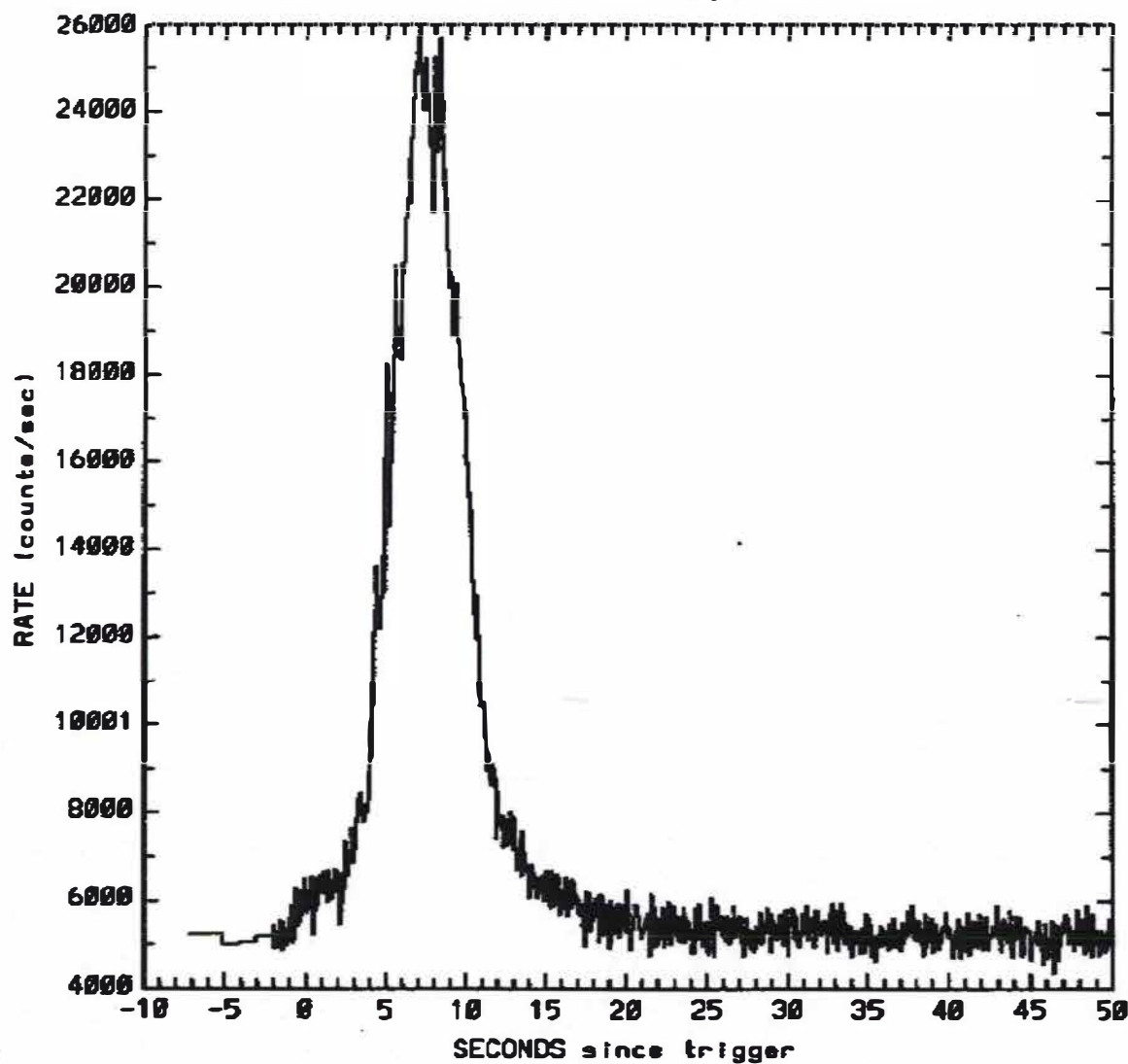
ND: No data for this time.

YES: Burst definitely detected by one or more DMSP satellites (8,9,10,11).

NO: No evidence of a peak in 2-sec data. (NO/OBSC: Obscured by Earth)

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

DISCSC Data for K. Hurley, No. 1886



26-MAY-1995 10:36:57

Created by MDPS BD
(Burst Display)
Version 12.25

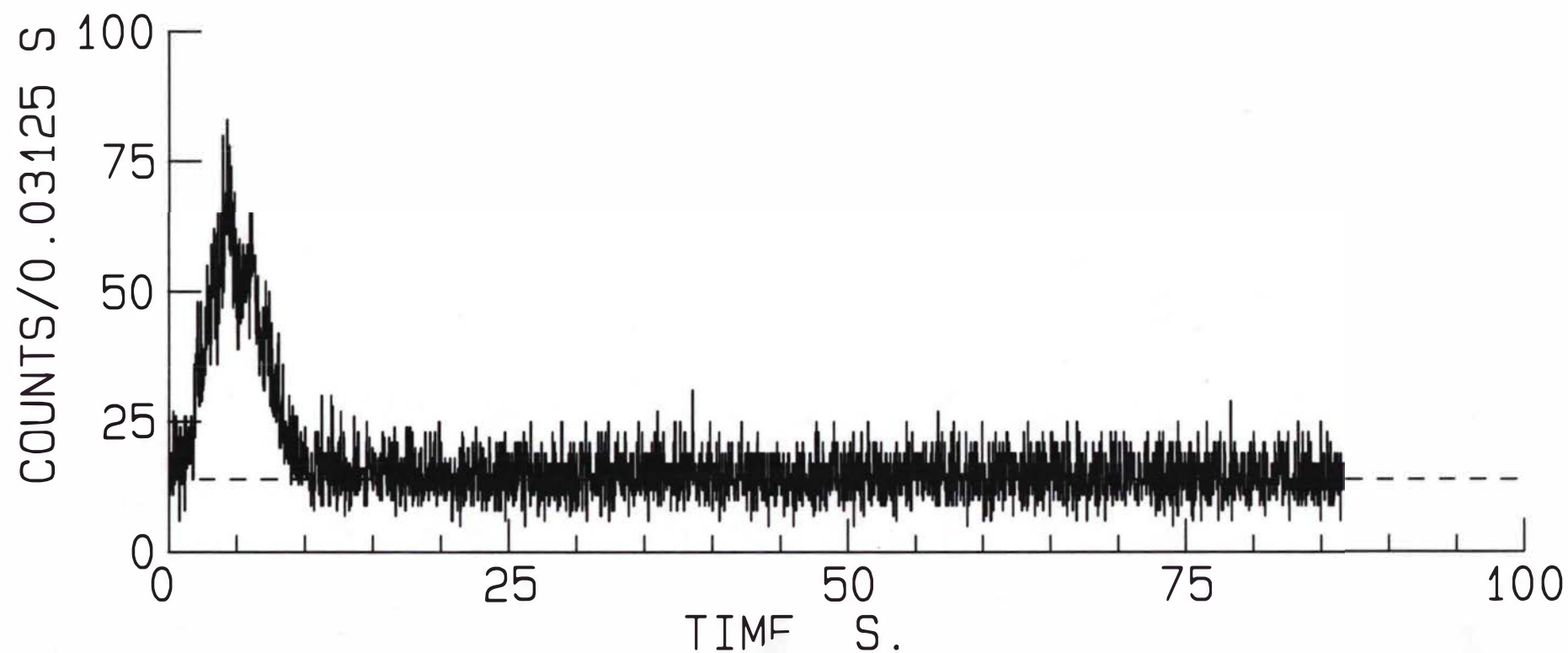
Trigger # : 1886

Trigger Time:
8867 / 1736.322Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: PREB + DISCLAMinimum Integ. Time:
0.064 secondsDetectors [7..8]:
7-5----Discriminators:
{ 1..2 }Quality Mask:
DOTSP:

PHEBUS

2/ 9/92 1738.912 s

100- 1600 keV



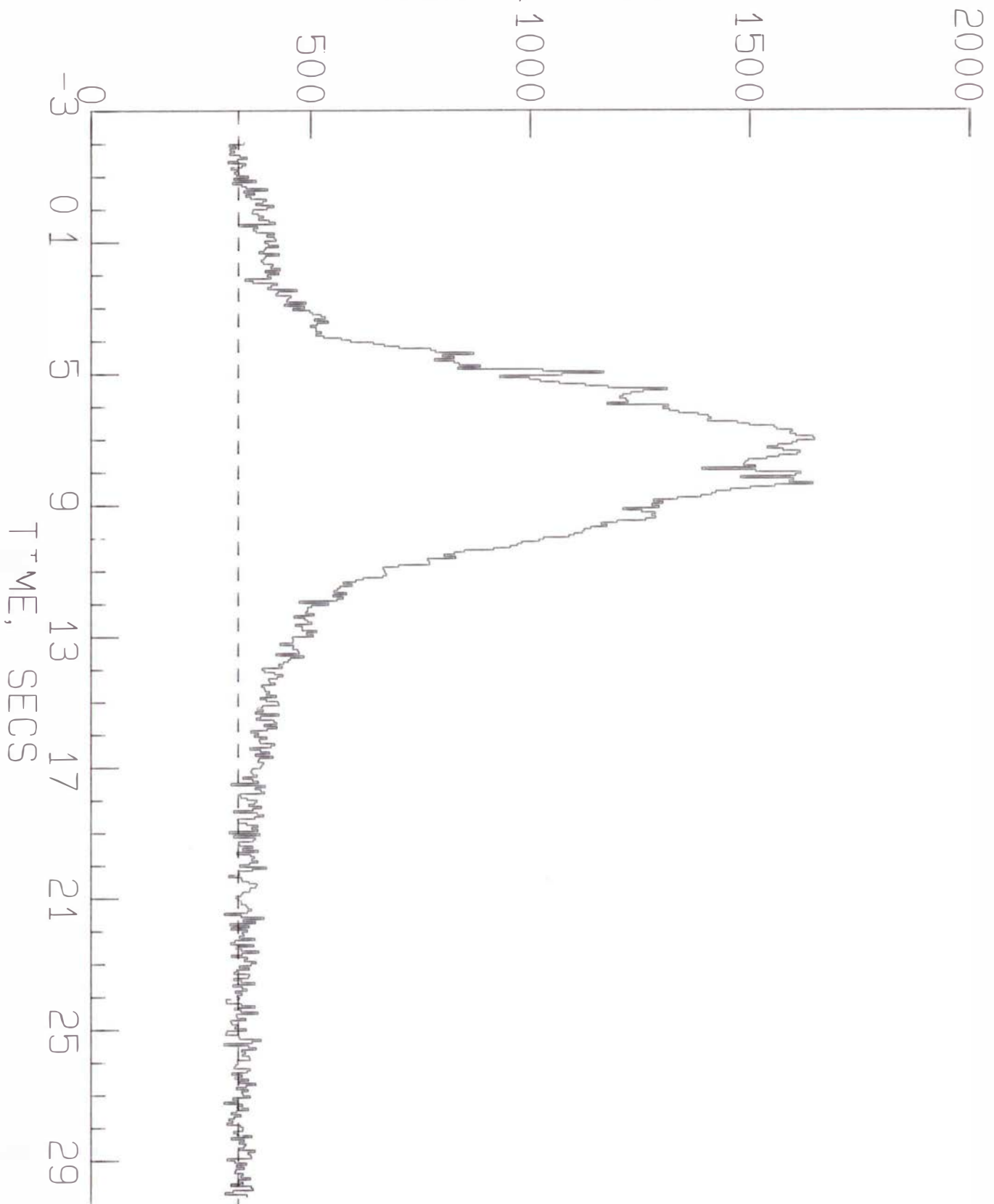
BATSE

02/09/92

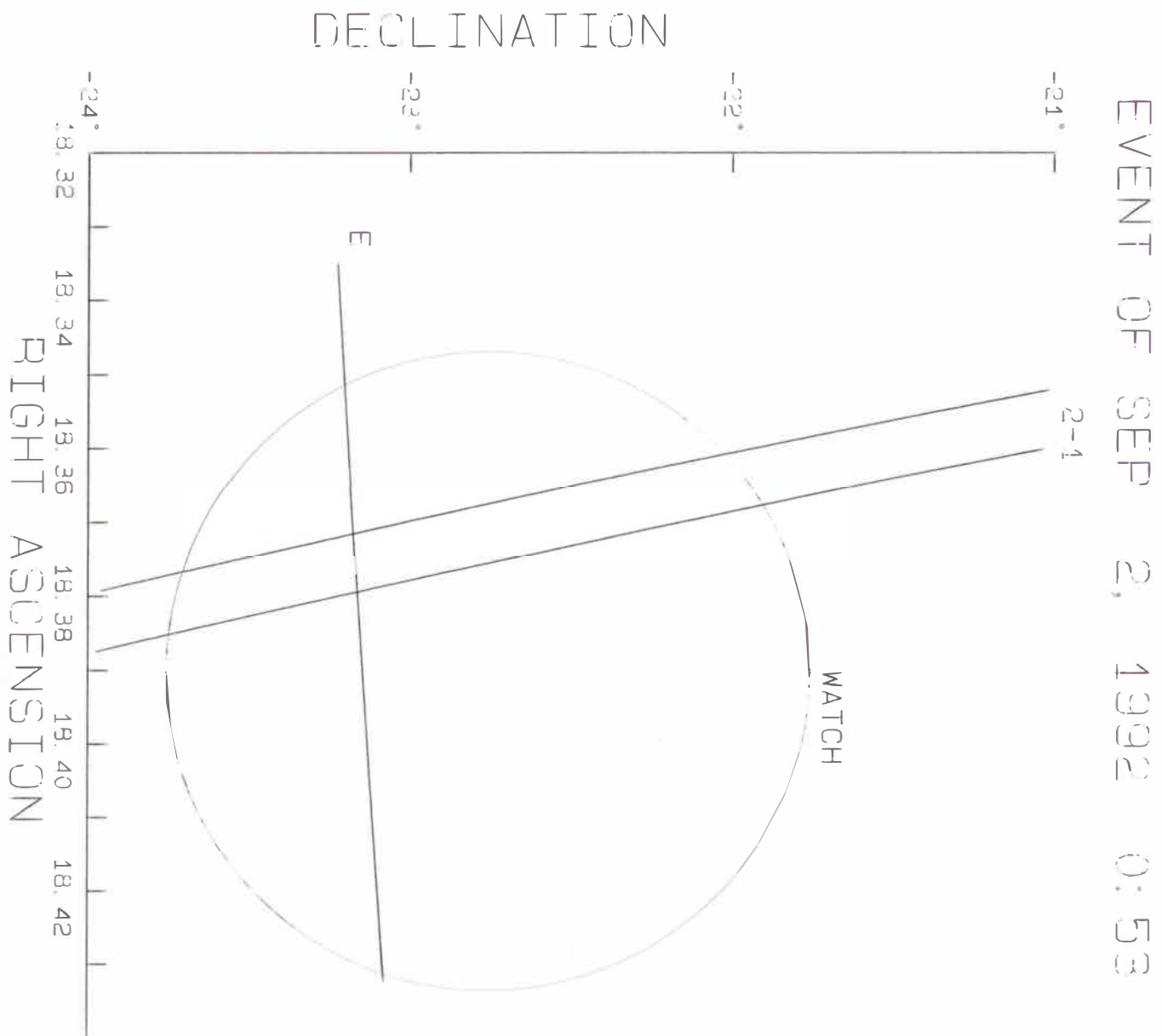
1736.322

25- 100 keV

COUNTS/ .064 S



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



5/10/93

ULYSSES

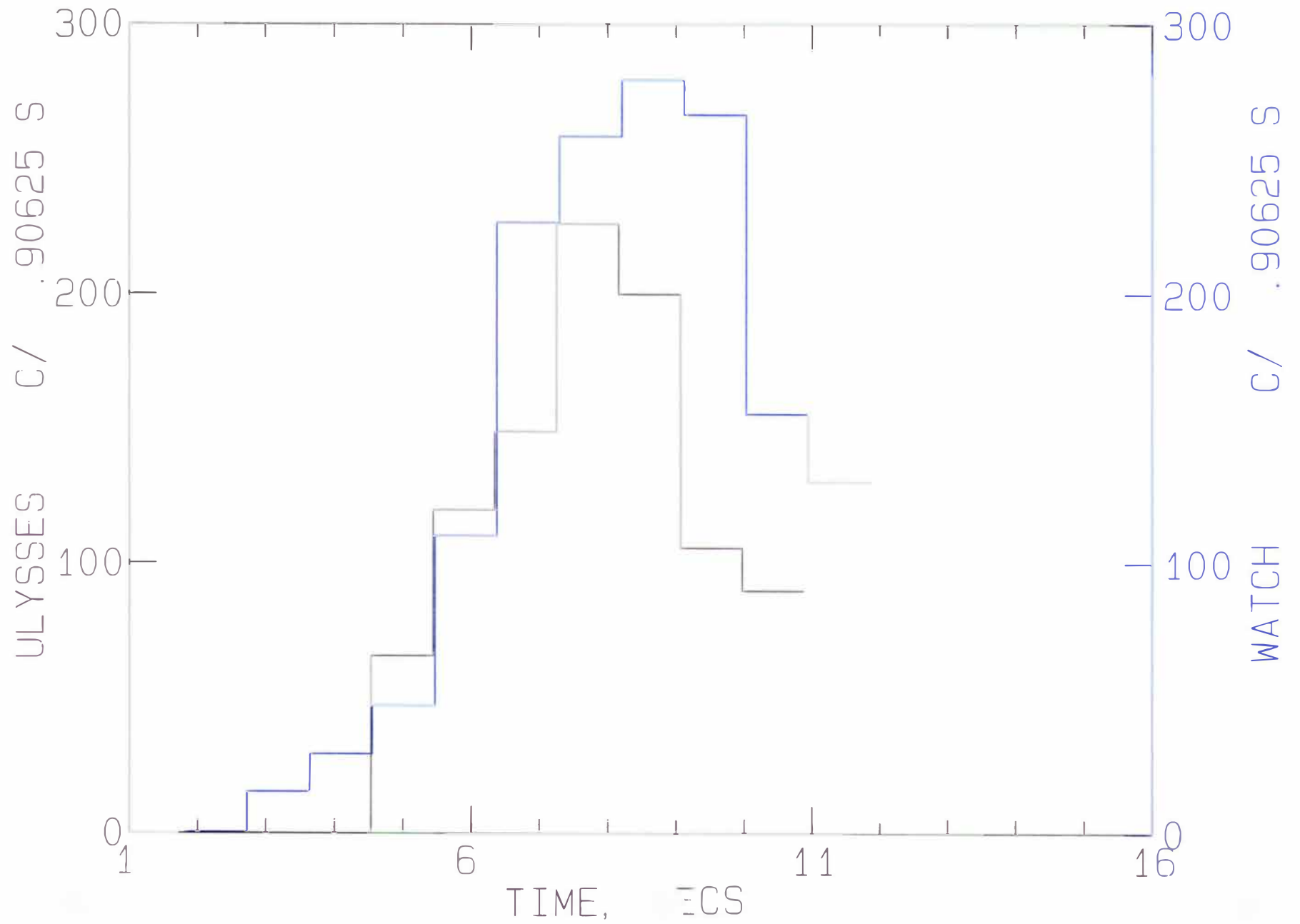
-WATCH

CORRELATION

02/09/92

3230.383

5/10/93



ULYSSES

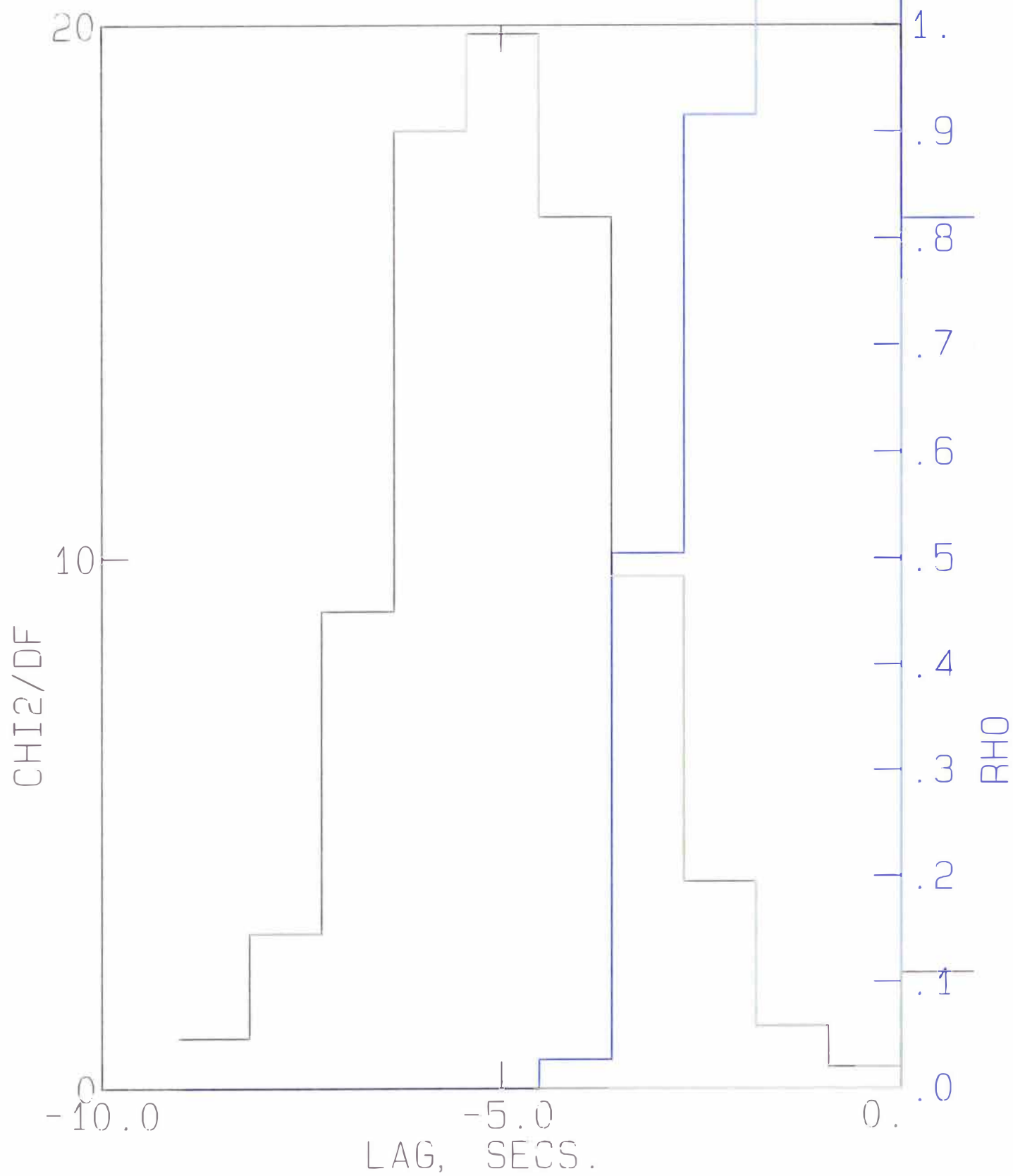
-WATCH

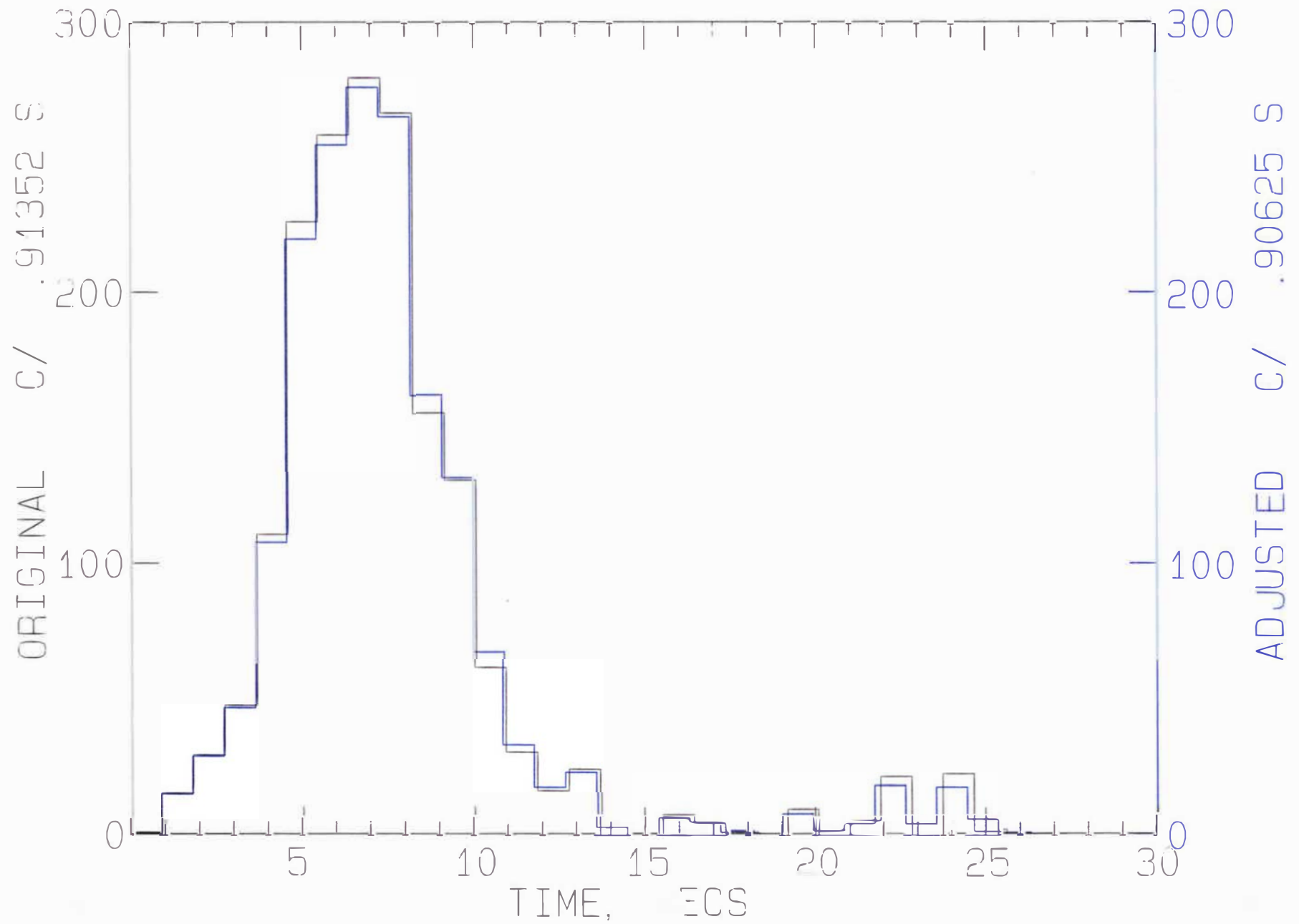
CORRELATION

02/09/92

3230.383

5/10/93





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

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

May 5 14:26 1993 standard input Page 1

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

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

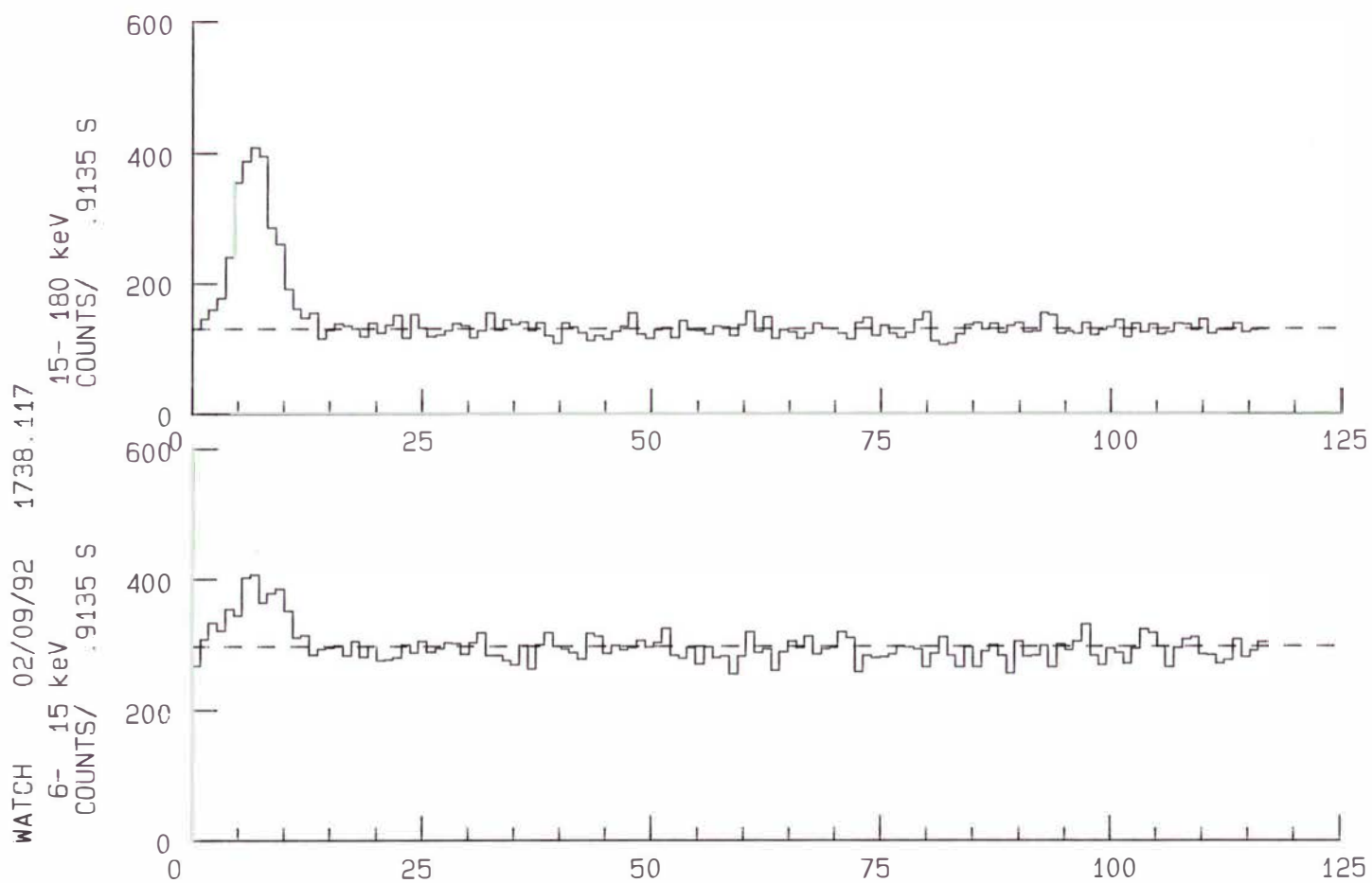
FROM: ESSDP2::TERRELL 93/05/05
TO: UCBSP::KHURLEY
CC: BATSE::KOUVELIOTOU
SUBJ: DMSP GRB DATA

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

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

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

4/10/93

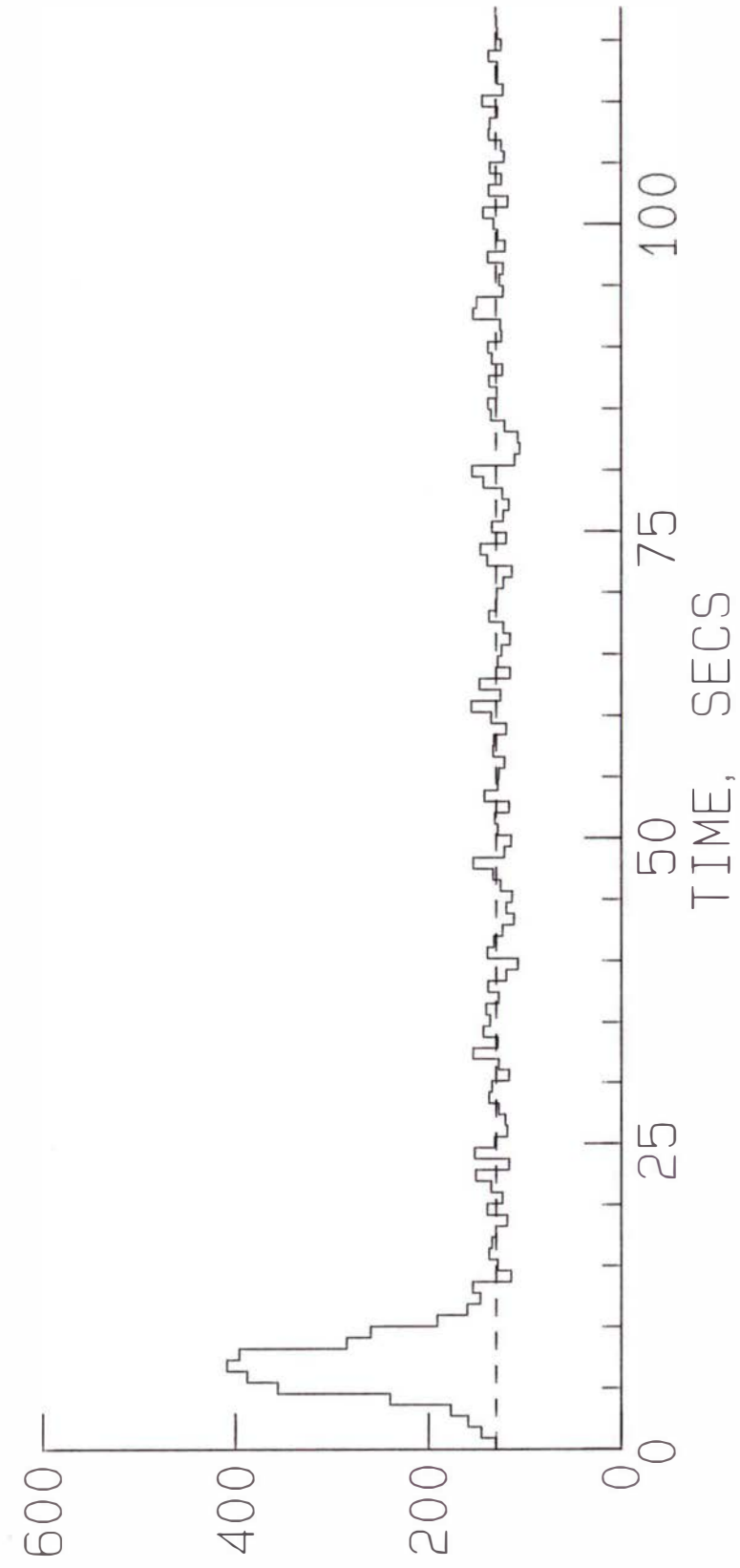


WATCH

02/09/92

15 - 180 keV

COUNTS/ .914 S



4/10/93

From khurley@space6.ssl.berkeley.edu Tue Dec 15 16:52:38 1992

Date: Tue, 15 Dec 92 16:46:51

From: khurley@space6.ssl.berkeley.edu

Content-Length: 1193

get Venus crossing times
Fax to Robin

Dear John,

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

July	UCT	ECT	
1	72000	70740	N/O
7	25300	23615	N/O
14	46000	47040	← Only one they have PVO data for! (Among the ones for which ECT is given)
18	55000	52860	N/O
26	02066	-----	
31	62196	61620	N/O
August			
10	77700	-----	
13	11000	12828	N/O
16	42600	45360	N/O
17	15055	-----	
19	40612	-----	
22	84184	-----	DMSD 8:542 (3 sur et)
24	38400	39183	N/O DMSD (2)
27	85245	-----	
29	30755	-----	
29	63712	-----	
30	05800	06318	N/O
30	32310	-----	
September			
1	04311	-----	(solar?)
2	<u>03230</u>	-----	DMSD (3) 10/24/92 KK will check 1/93
3		84540	N/O
4	00420		Same as previous event
19	28450	-----	(solar?)
21	00060	-----	
October			
1	80900	-----	
3	20880	-----	
4	49100	-----	
6	40720	-----	
9	21980	24070	N/O
13	81256	-----	
15	04000	05792	N/O
22	55200	55200	N/O
25	52578	-----	
27	26805	-----	
29	42125	-----	
30	64000	-----	(solar)
31	40000	-----	

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

POSITION OF ULYSSES ON 2/ 9/1992 IS:

RA= 157.949 DEC= .913 DIST= 6.268 AU

POSITION OF VENUS ON 2/ 9/1992 IS ALPHA= 181.928 DELTA= .352 DISTANCE=1.55318 ^

TI DISTANCE BETWEEN TWO OBJECTS AT

157.949 .913 237621100.00 KM AND

181.928 .352 232356000.00 KM. IS

731450100.00 KM., OR 4.889 A.U., OR 2439.85 LIGHT-SECONDS

THE ANGLE BETWEEN THEM IS 23.984 DEGREES

Info from CK Sep 2

BATSEARCH PROGRAM

EVENT BURST #
EVENT OF 1992 SEP 2 DAY OF YEAR=246
EVENT CROSSING TIME AT BATSE : 43600. S. OR 12:06:40.0
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 294.000 -15.000
BATSE PEAK COUNTING RATE: 0 C/S
EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 2/ 9/ 92 IS:
RA= 157.949 DEC= .913 DIST= 6.268 AU
BATSE-ULYSSES DISTANCE = 937620992. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 45.62 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 2187.61 SECS.
CROSSING TIME AT ULYSSES IS 45788. S. OR 12:43:07 +/- 471.28 SECONDS

NO

12 / 9 / 92

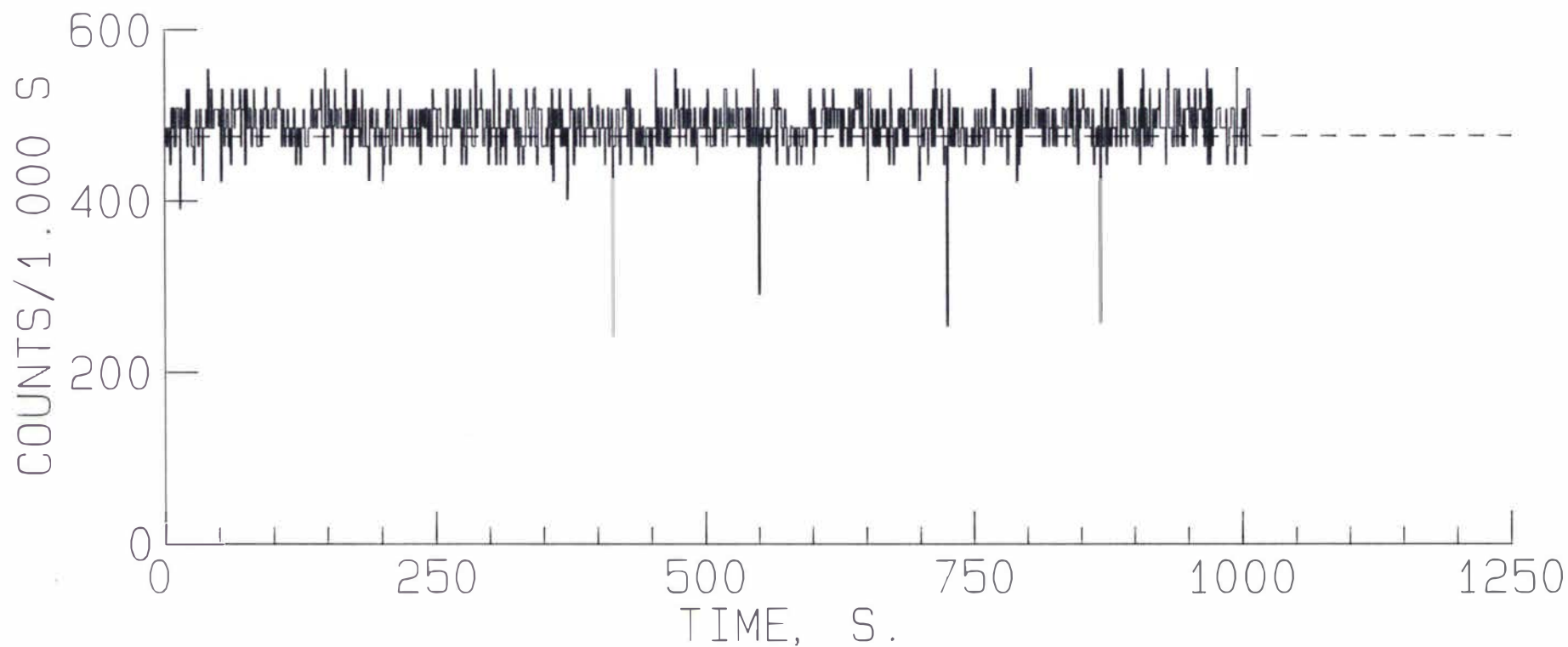
ULYSSES RT

2 / 9 / 92 45288.184 s

.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



CATSEARCH PROGRAM

BATSE BURST # 1887
EVENT OF 1992 SEP 2 DAY OF YEAR=246
EVENT CROSSING TIME AT BATSE : 66148. S. OR 18:22:28.4
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 84.000 -67.100
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 2/ 9/ 92 IS:
RA= 157.949 DEC= .913 DIST= 6.268 AU
BATSE-ULYSSES DISTANCE = 937620992. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 95.33 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -290.54 SECS.
CROSSING TIME AT ULYSSES IS 65858. S. OR 18:17:37.8 +/- 586.23 SECONDS

No

From HORACK@ssl.msfc.nasa.gov Thu Sep 3 12:24:10 1992
Date: Thu, 3 Sep 1992 14:25:11 -0500 (CDT)
From: HORACK@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1539

BATSE BURST TRIGGER

NO.: 01887

TIME: TJD=8867 SECONDS=66148

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=92. AZIMUTH=259. ERROR= DEGREES

COMMENTS:

WEAK BURST ALSO CONSISTING OF TWO EMISSION REGIONS. THE FIRST LASTS ABOUT 2-3 SEC, WITH SOME DETAILED STRUCTURE. THE SECOND IS 1/2 AS INTENSE AS FIRST AND LASTS ALSO ABOUT 3 SECONDS. THIS ONE APPEARS TO HAVE SMOOTHER PROFILE. DATA IS RATHER INCOMPLETE DUE TO TDRSS CONTACTS. THE EVENT IS SEEN TO AN ENERGY OF 300 KEV, POSSIBLY HIGHER

No trigger

8 / 6 / 94

ULYSSES RT

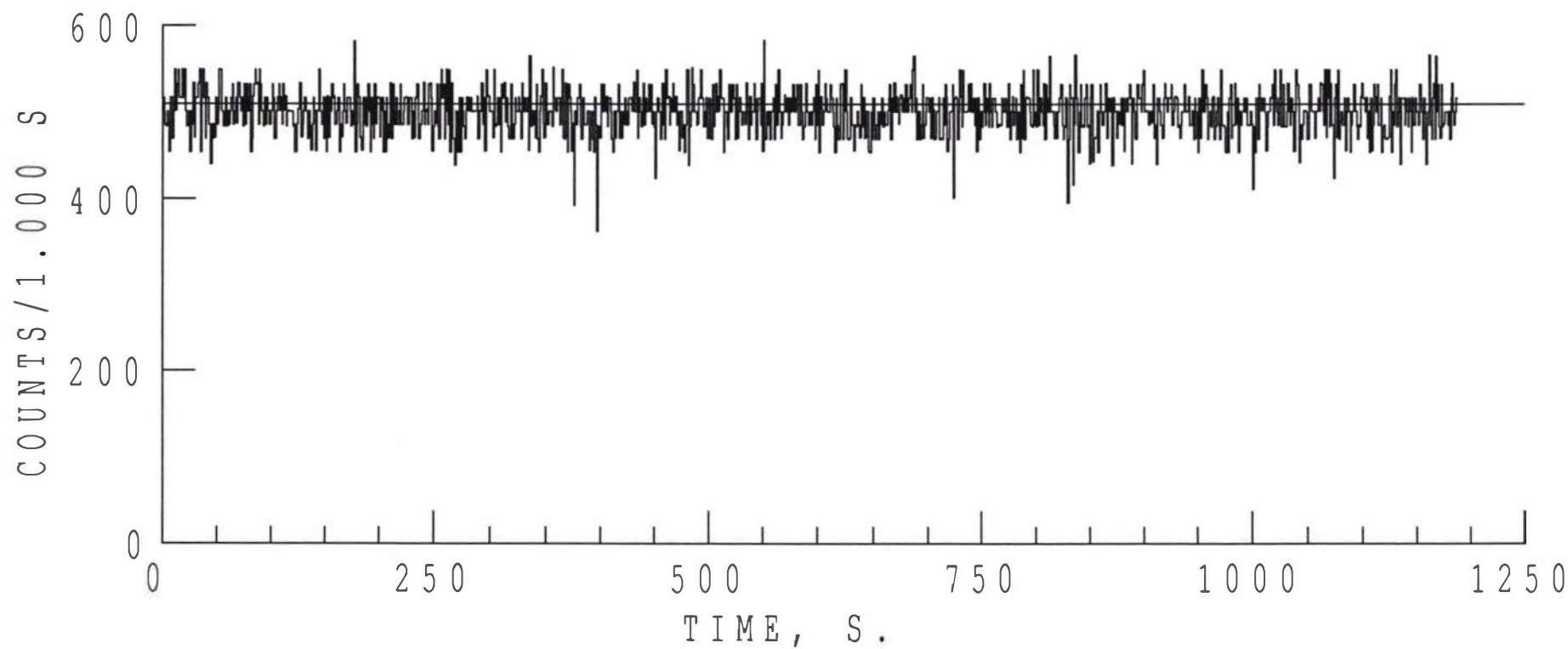
2 / 9 / 92 65268.008 s

0.250 S INTERVALS REGROUPED BY 4

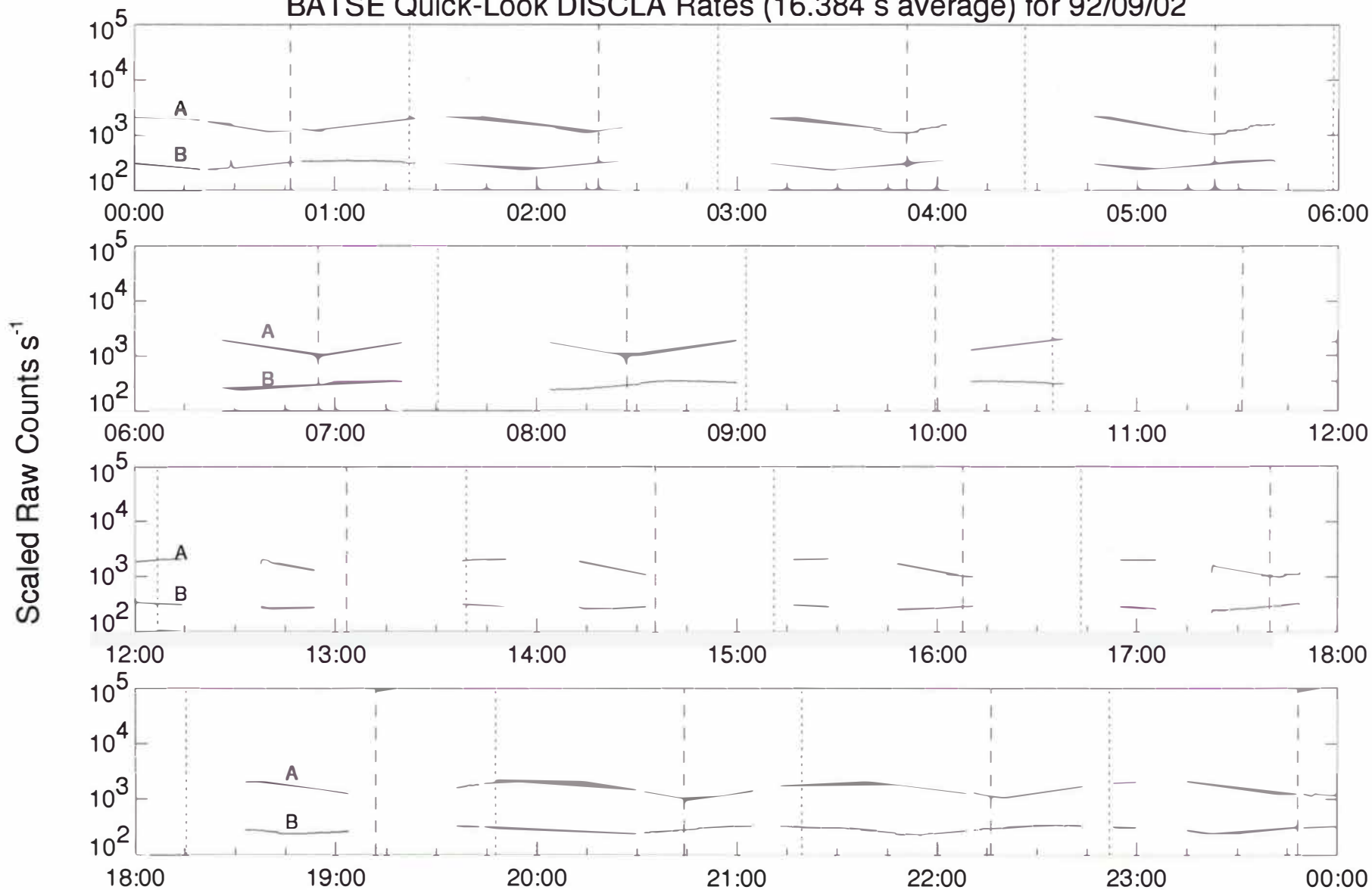
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



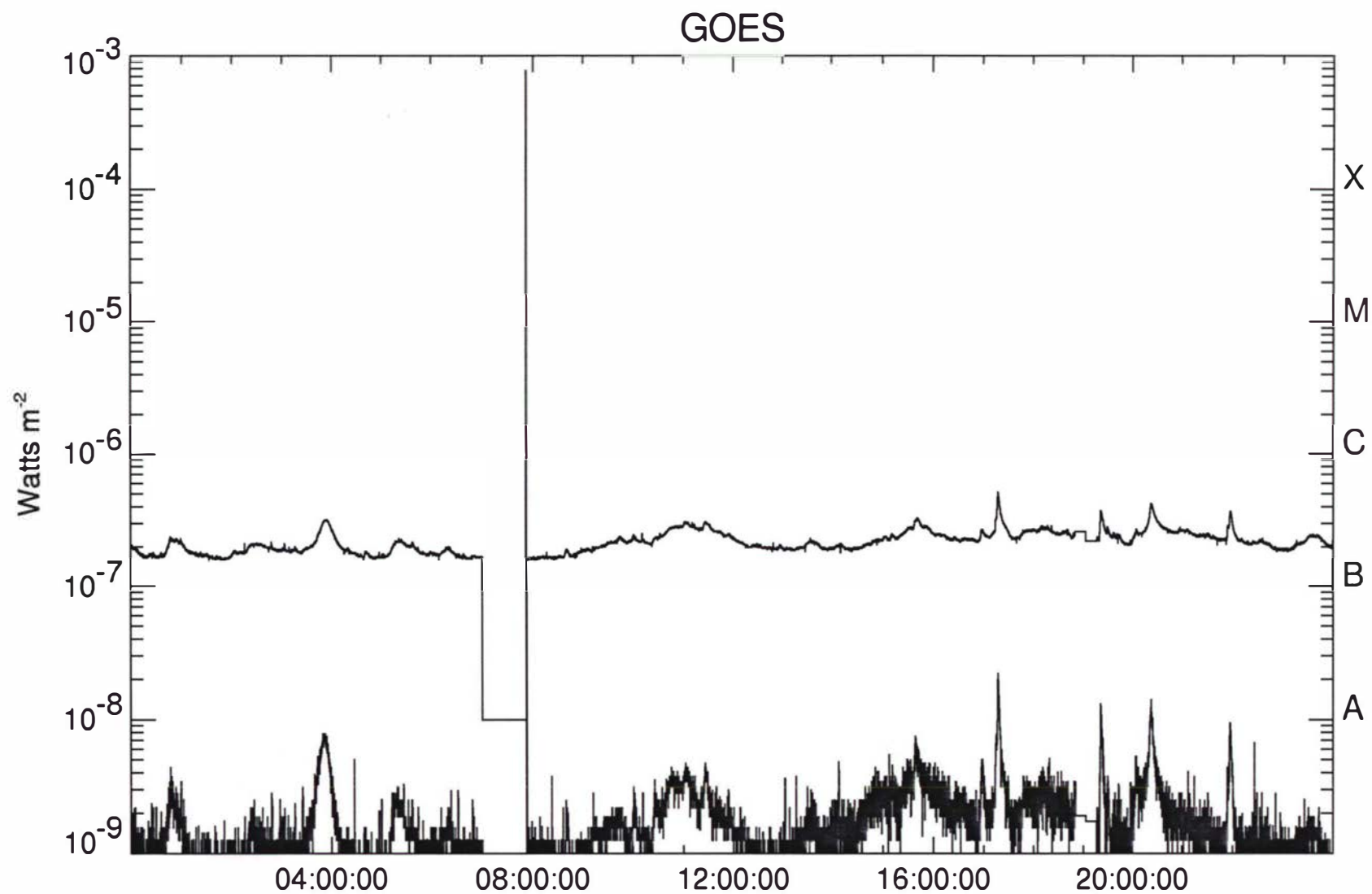
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/02



Current Time: 92/09/29, 0226 EDT
A: Channel 1 Most Sunward LAD
B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare



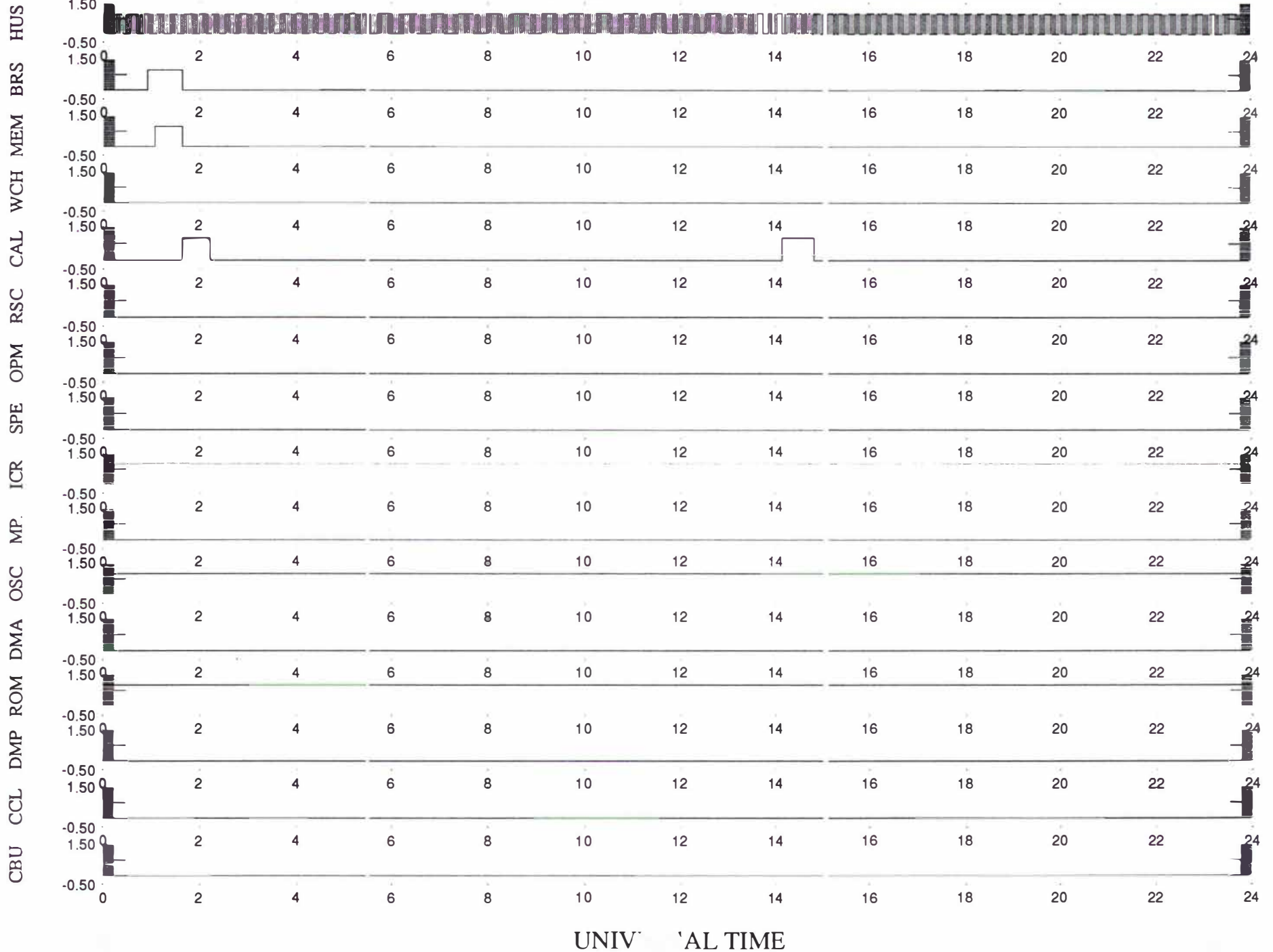
Data Start: 92/09/02, 0000:02

Plot created: 95/05/25, 1820

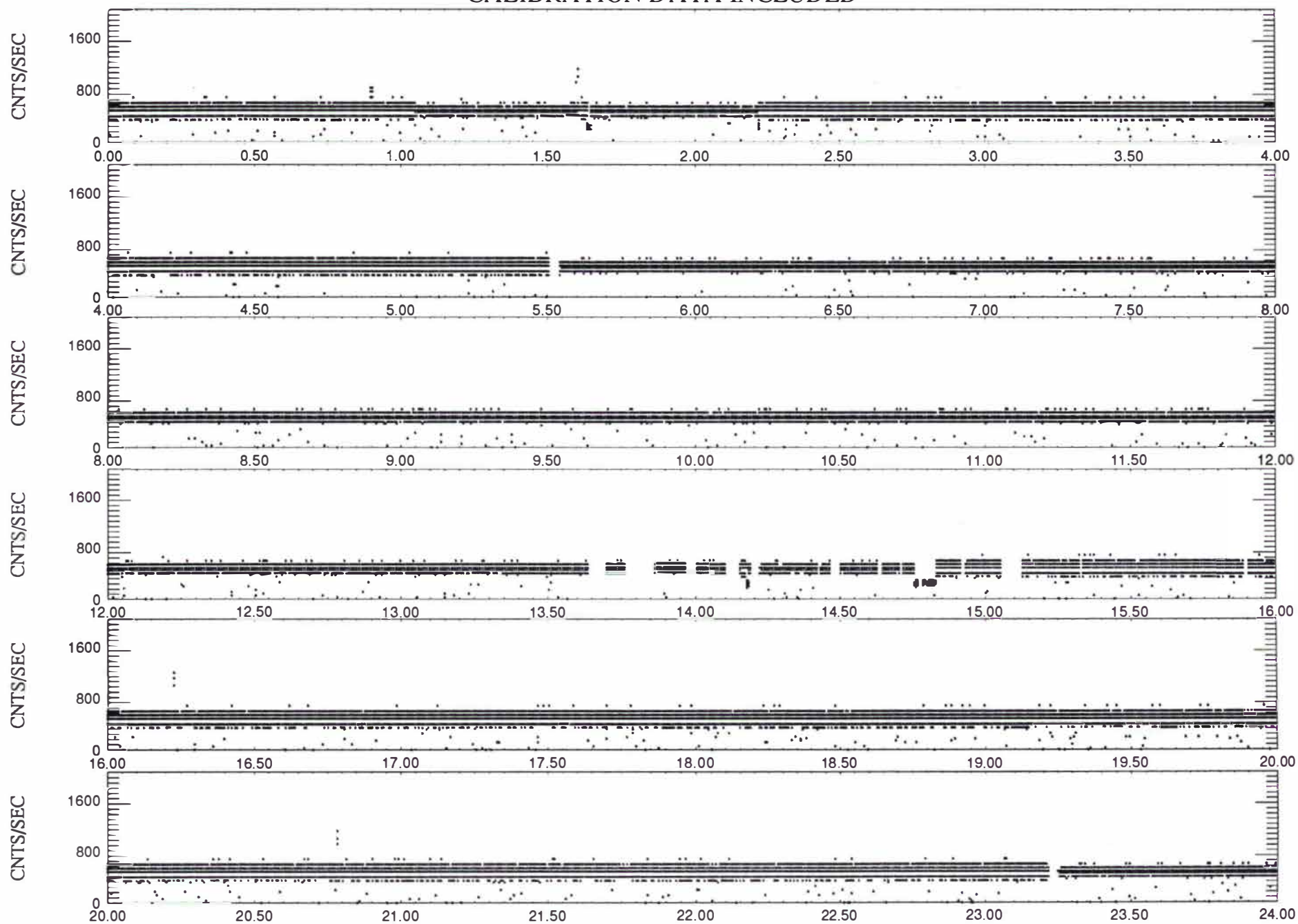
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BURST NUMBER 0

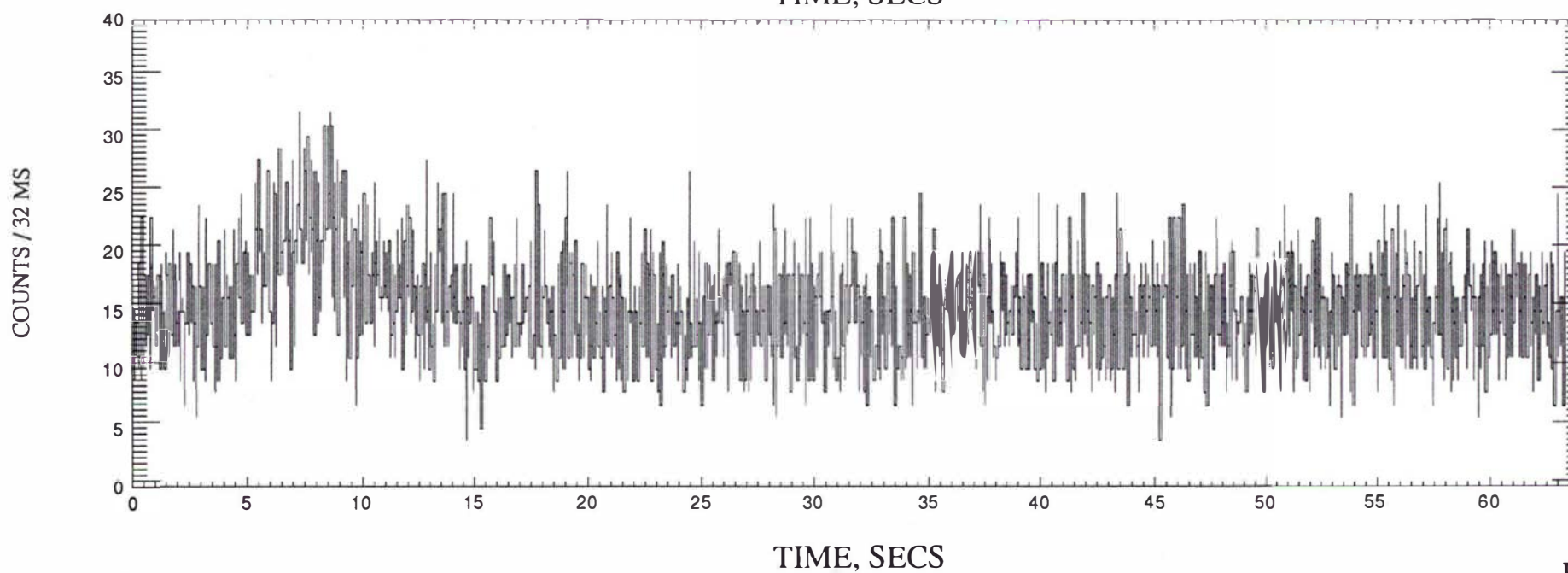
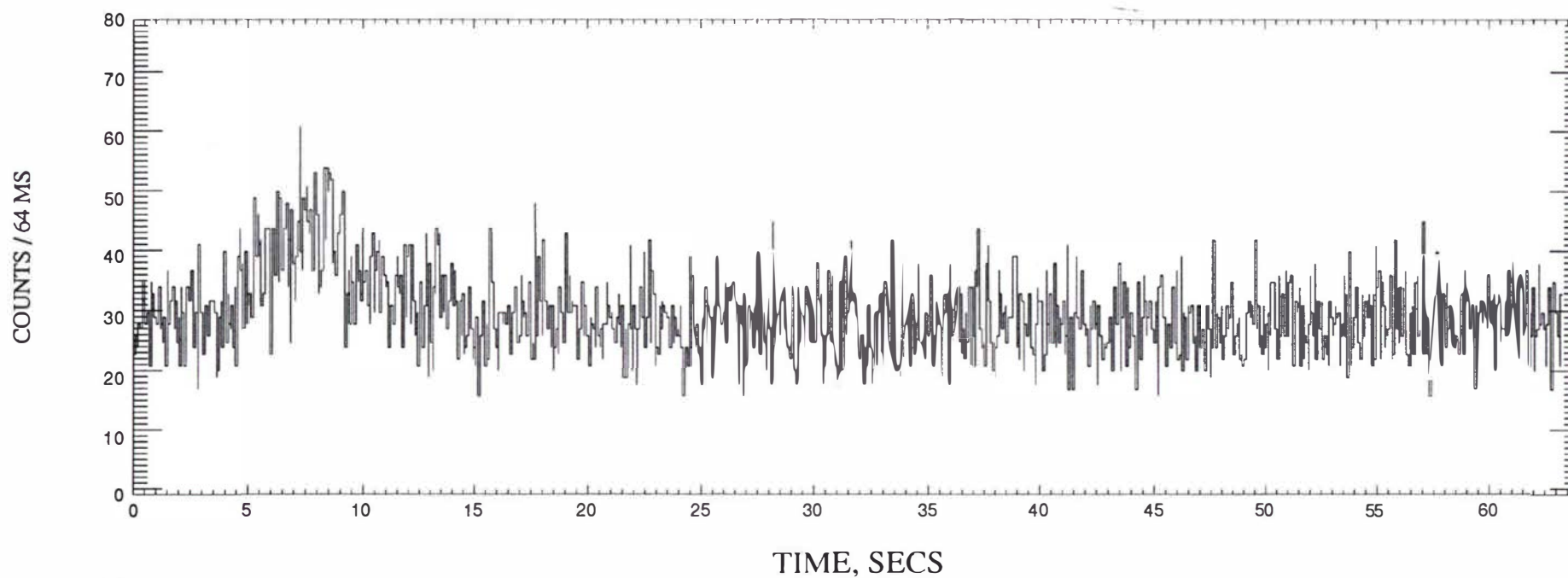


CALIBRATION DATA INCLUDED



UNIVERSAL TIME

Burst Counter 0 at UT= 0.897328703139 h= 3230.383 s



CATSEARCH PROGRAM

BATSE BURST # 1888
EVENT OF 1992 SEP 3 DAY OF YEAR=247
EVENT CROSSING TIME AT BATSE : 2957. S. OR 00:49:17.2
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 50.300 -69.900
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 3/ 9/ 92 IS:
RA= 158.086 DEC= .812 DIST= 6.266 AU
BATSE-ULYSSES DISTANCE = 937359192. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 83.21 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 369.81 SECS.
CROSSING TIME AT ULYSSES IS 3327. S. OR 00:55:27.0 +/- 594.65 SECONDS

RI

From MEEGAN@ssl.msfc.nasa.gov Fri Sep 4 12:41:54 1992
Date: Fri, 4 Sep 1992 14:43:01 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER
NO.: 01888
TIME: TJD=8868 SECONDS=02957
TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N
SIGNIFICANCE: SIGMA
INTENSITY: COUNTS/CM2
LOCATION: ZENITH=104.6 AZIMUTH=246.7 ERROR= DEGREES
COMMENTS:
SINGLE PEAKED GAMMA-RAY BURST OF 2 SECOND DURATION. NOT SEEN ABOVE 300KEV.

RI

Helio corr ~ 3 ms - no change

Date: Dec 9 '97

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

- ☐ 2.042 s subtracted for bursts prior to June 25 1992 and DISCSC programs prior to Version 2.16 (August 28 1992)? *N/A*
- ☒ BATSE ephemeris for T_0 ? *Actually, it's ~ 600 s off!*
- ☒ Error circle position and radius from public catalog used?
- ☒ If MER data were used, is a 30 ms systematic error included?

3. PVO Data

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

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

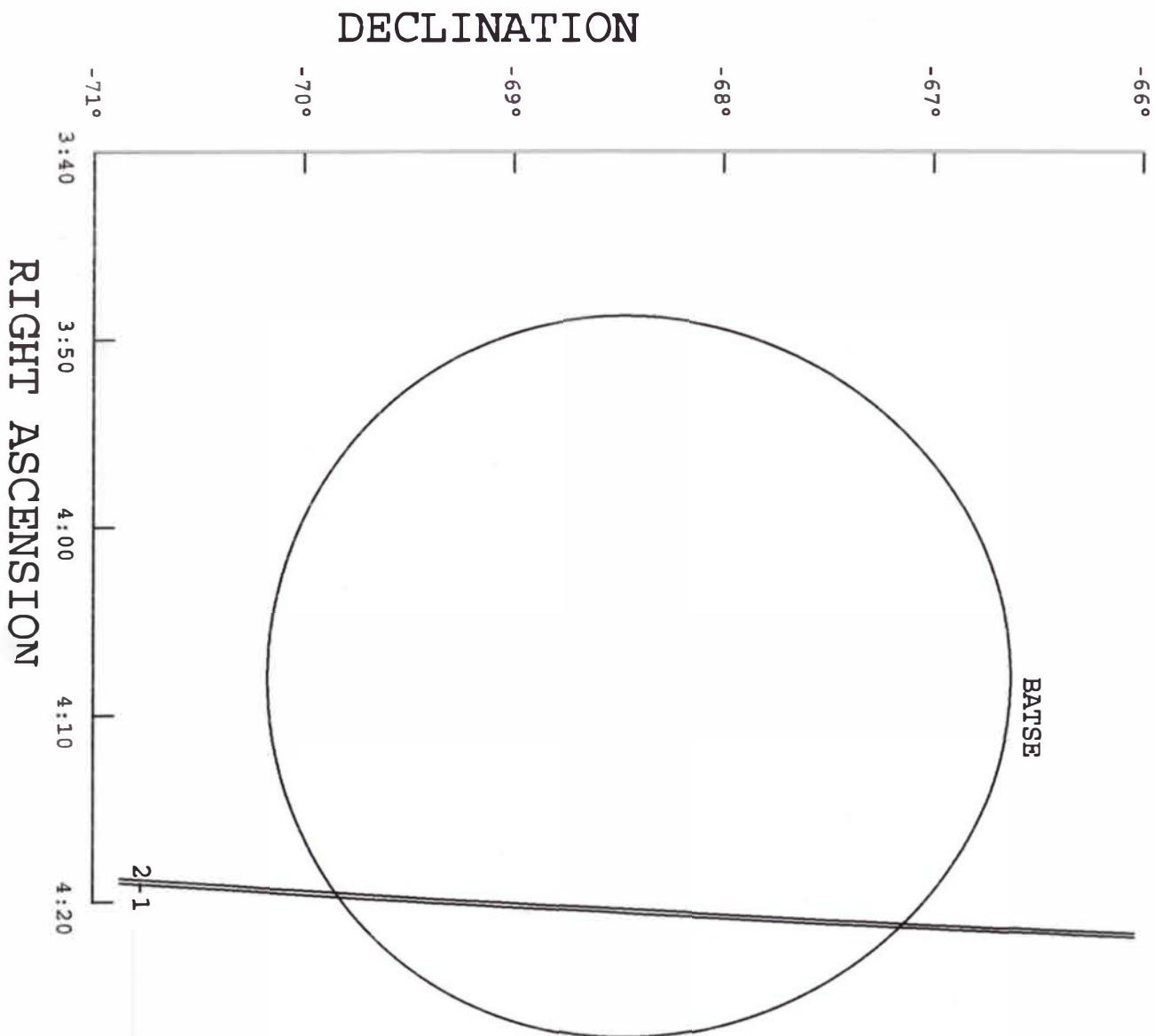
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF SEP 3, 1992 0:50

9/12/97



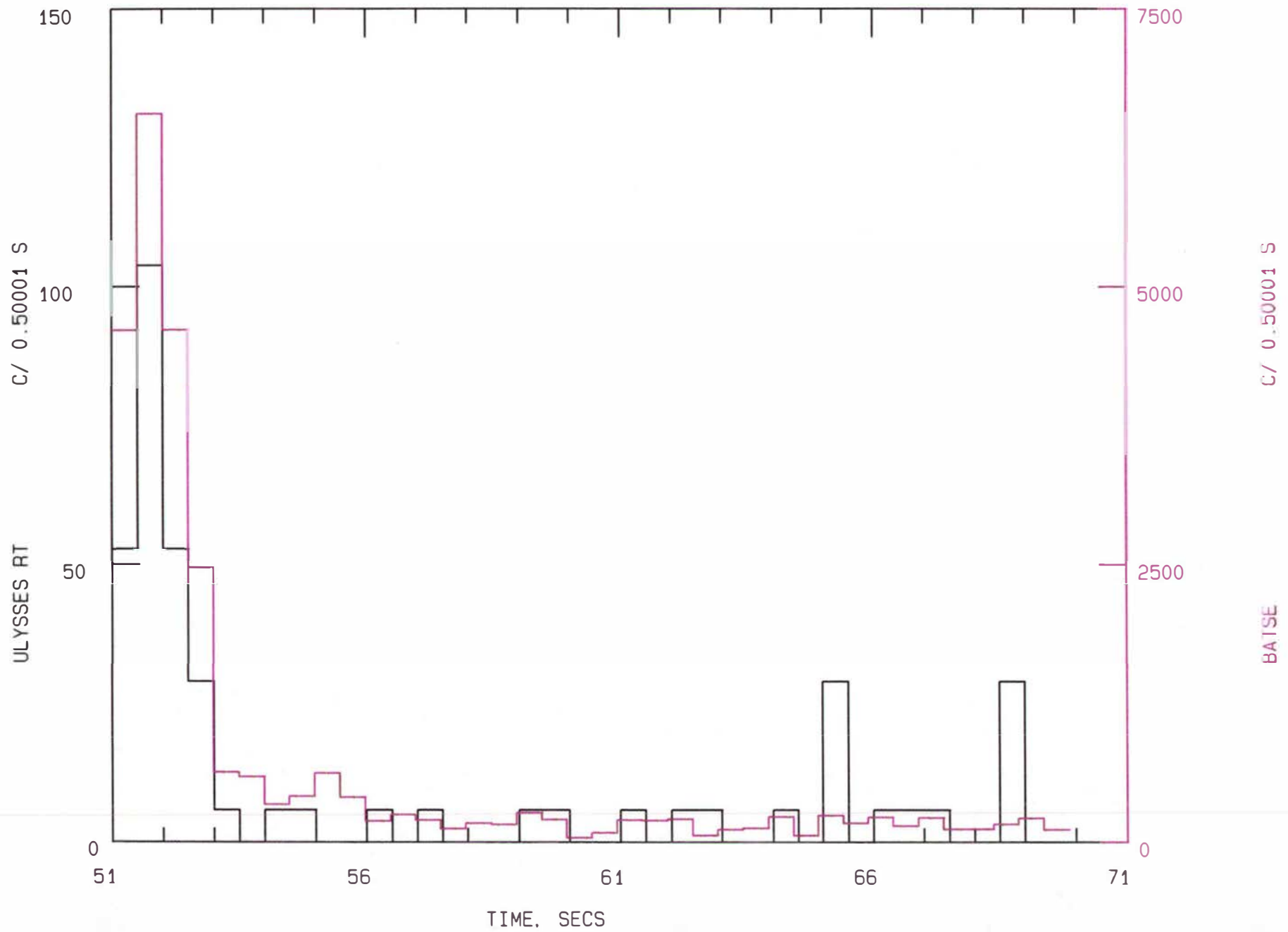
ULYSSES RT-BATSE

CORRELATION

3/ 9/92

3006.420

9/12/97



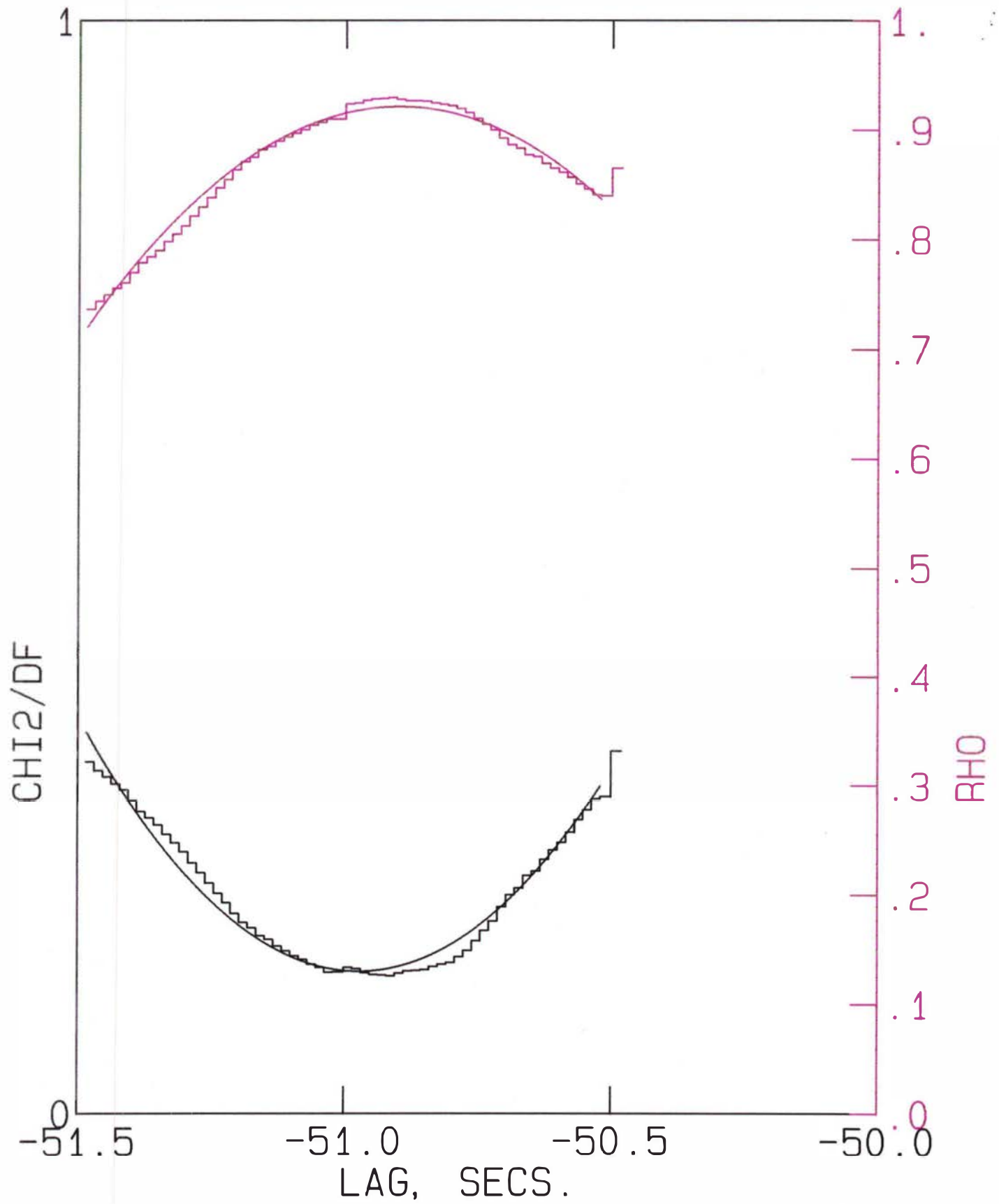
9/12/97

ULYSSES RT-BATSE

CORRELATION

3/ 9/92

3006.420



ULYSSES RT

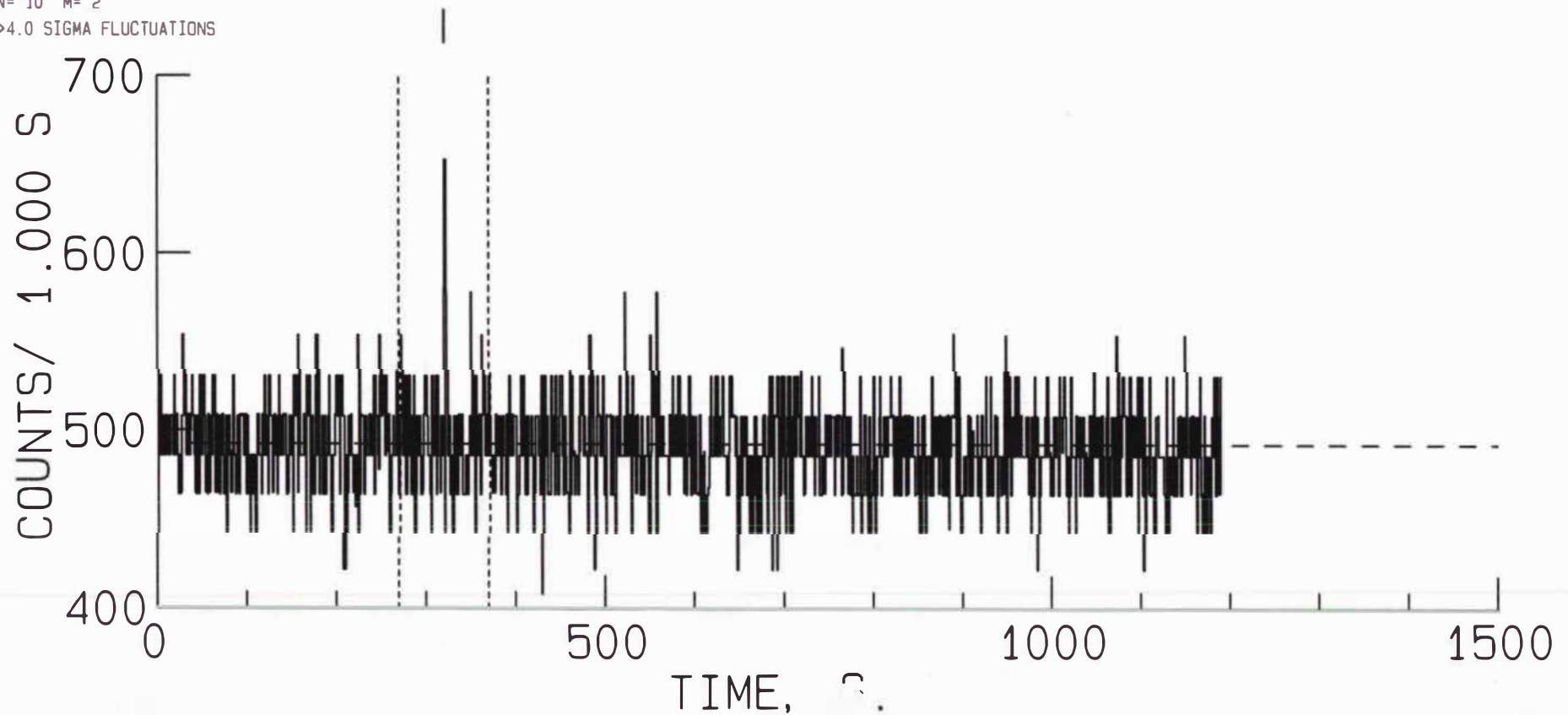
9/12/97

3/ 9/92 2736.387 s

0.500 S INTERVALS REGROUPED BY 2

22- 149 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

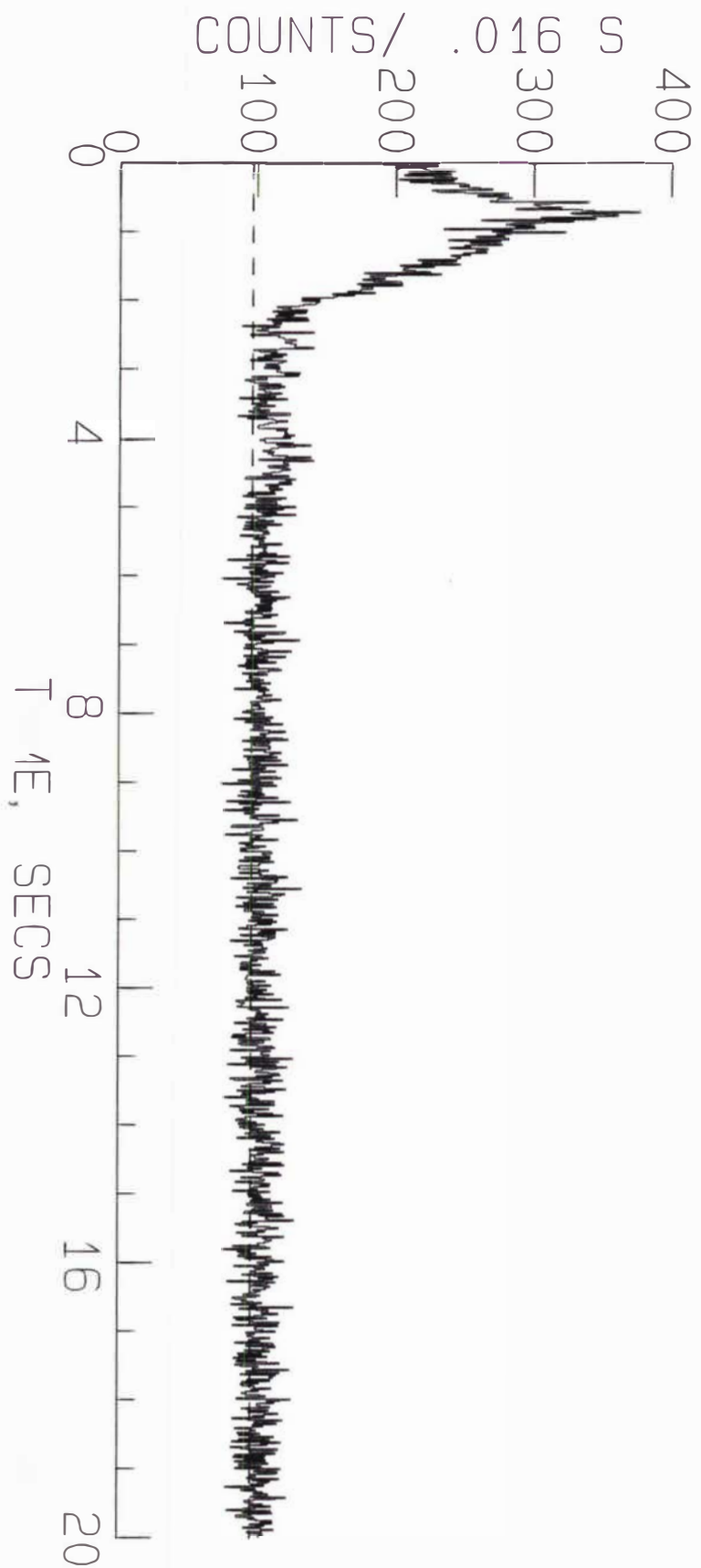


BATSE

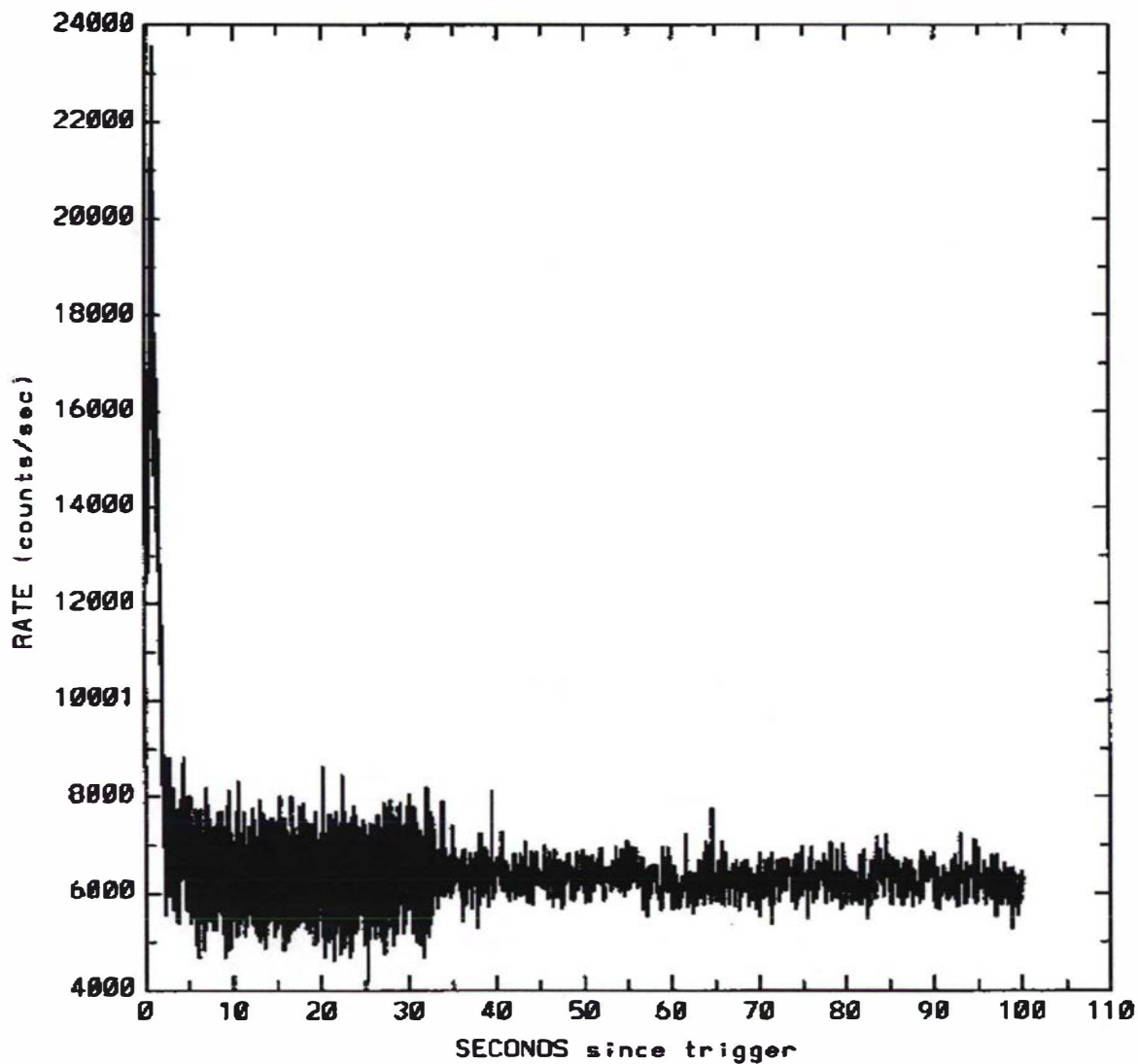
03/09/92

2957.213

25- 100 keV



DATA FOR K. HURLEY



18-AUG-1993 11:32:37

Created by MOPS 8D
(Burst Display)
Version 2.19

Trigger # . 1888

Trigger Time:
5868 / 2957.213Burst Data Type:
MERDeadtime
Corrected. NBackground Data
Type. CONTMinimum Integ. Time.
0.016 second(s)Detectors [7..8].
11000000Channels.
(8: 6)Quality Mask.
80ISP1

RK- KH Nov 11 93

PVO Replies to the WARCH/Ulysses Huntsville us

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

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

24 Aug 92 N/O - OFF

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

25 Sep 92 N/O - OFF

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

Version 3.0 sep. 12 1993.

The data given below is pre-publication data. The data should not be quoted without prior consultations with the WATCH-GRANAT collaboration. The list is prepared in support of searches for counterparts or multi-spacecraft identifications. The positions given for the localized sources are in most cases based on the fitted mean attitude of GRANAT.

The positional uncertainty is 1 degree error circle radius.

#	date	UT-time	sd	l(s)	m(s)	m/l	position(1950)	Q	t	comments	#Wm	sdp	theta	phi
1	900118	17:40:47	33	280	225	1.1	11h36.3m -44.7	F3	8	4 peaks	0423	28	22.42	26.50
2	900126	18:04:27	146	25	11	0.5	08h44.6m -38.0	F3	r	2 peaks, soft tail	0481	70	21.35	138.49
3	900222	11:56:34	38	33	15	1.5	22h29.9m 35.1	F3	1	1 peak, soft tail	0650	25	20.16	144.39
4	900708	11:30:20	36	160	95	2.0	12h22.3m 31.4	F3	1	3 peaks	1490	29	58.49	90.41
5	900901	01:35:46	36	230	110	4.0	18h19.4m -44.8	F3	4	4 peaks	1811	28	39.58	167.23
6	900925	20:25:22	18	45	42	1.2	8h56.0m -35.3	F3	1	Structured event	1970	13	50.37	264.93
7	900929	01:49:48	40	180	180	1.3	11h12.9m -06.6	F3	r	2 groups of spikes	1990	32	44.31	344.08
8	901009	00:15:50	30	11	9	3.5	23h12.1m +29.6	F3	1	1 peak	2041	17	52.34	319.13
9	901116	01:42:08	19	15	15	2.2	02h36.7m +25.1	F3	8	1 peak	2241	11	53.92	15.72
10	901219	21:52:52	24	50	35	2.2	23h06.9m -53.9	F3	8	1 peak	2490	18	57.94	83.18
11	910122	15:13:35	28	127	-	0.0			1	Soft, structured	2670	25	42.26	142.13
12	910219	11:45:24	43	67	54	0.7	14h12.5m 59.0	F3	r	2 peaks	2813	29	25.97	230.72
13	910310	13:02:05	81	41	40	2.5	12h11.9m 06.4	F3	1	3 peaks	2931	40	51.36	351.15
14	910627	04:29:24	20	11	-	0.4	(13h14m -03.2)	I2	1	1 peak. X-burst?	3643	18	20.70	262.04
15	910821	10:33:56	21	66	66	0.5	23h31.8m -72.6	F3	4	Struct. + sharp pk.	3991	14	51.52	116.19
16	911016	11:03:30	22	160	-	0.1	19h47.8m -04.8	F3	8	very soft, 2 peaks	4381	17	32.03	227.19
17	911202	20:28:59	41	20	11	0.7	11h27.1m -23.2	F3	1	Single struct. peak	4623	16	35.87	30.52
18	911209	18:36:11	42	30	12	1.8	17h26.4m -44.4	F3	r	4 peaks	4680	28	34.53	320.77
19	920311	02:20:37	42	40	40	1.3	08h45.4m -36.4	F3	8	1 peak	5201	37	51.39	83.56
20	920714	13:04:51	36	40	36	2.1	14h41.6m -30.0	F3	8	1 peak	5921	28	43.75	202.33
21	920718	14:41:15	30	90	30	0.4	01h22.6m -3.5	F3	8	1 odd peak	5953	20	17.97	302.95
22	920718	21:32:46	40	7	5	1.8	19h43.0m -56.5	F3	1	1 dull peak	5951	29	24.43	93.23
23	920723	20:03:10	186	13	8	3.9	19h04.5m 27.4	F3	1	1 dull peak	5991	79	33.49	208.18
24	920902	00:29:04	49	13	9	4.6	18h36.0m -22.8	F3	1	1 dull peak	6163	30	49.14	320.14
25	920903	01:36:15	23	154	103	2.0	19h43.0m 35.2	F3	4	Main peak + spikes	6173	14	38.94	230.29
26	920903	23:29:05	92	24	15	2.5	20h06.3m 21.7	F3	r	1 peak (low E. str)	6183	49	43.53	249.60
27	920925	20:30:42	25	120	120	2.5	13h27.0m 43.1	F3	1	3 peaks	6313	13	51.98	115.24
28	920925	22:49:14	43	347	340	1.3	22h02.0m 24.0	F3	4	struct, soft tails	6311	32	43.03	65.02

1950 →
295.75, 35.2
2000
296.213, 35.32

date UT-time sd l(s) m(s) m/l position(1950) Q t comments #Wm

comments:

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

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

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

l(s): Duration in 6-15 keV band (Low NaI channel)

m(s): Duration in 15-180 keV band (Med CsI channel)

m/l: Hardness: (sd(Med NaI)+sd(Med CsI)) / sd(Low NaI)

posit.: All events in the above list (except 910627) have been localized consistently at least twice based on independent data sets. We are therefore convinced of their true cosmic nature, even without confirming evidence from other spacecraft. GRB 910627 has been included in the list because it is confirmed to be cosmic by many other instruments, and the WATCH position is quite secure due to the good signal to noise ratio.

Q: Type of attitude data: I2: initial pointing at obs. start. 2 axes (poor, syst. error: ± 0.8 deg)
A2: actual pointing at burst time. 2 axes (better, syst. error: ± 0.5 deg)
F3: fitted mean pointing for TM session. 3 axes (TBD (± 0.5 deg?))
t: Best time resolution available: 1, 4, 8, 16 motor rotations (approx. 0.9 s)
m: 1 motor rotation in 4 ms steps
r: raw memory (4 ms steps)
#Wm Telemetry session and WATCH unit identifier
sdp: Standard deviations above background in final modulation pattern
used for source localization. As a rough guide, the statistical
uncertainty in the source position is $240/\text{sdp}$ arcminutes. In most
cases the systematic errors dominates the error budget.
theta and phi: Source position in WATCH instrument coordinates.

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

G=GALACTIC EQUATOR

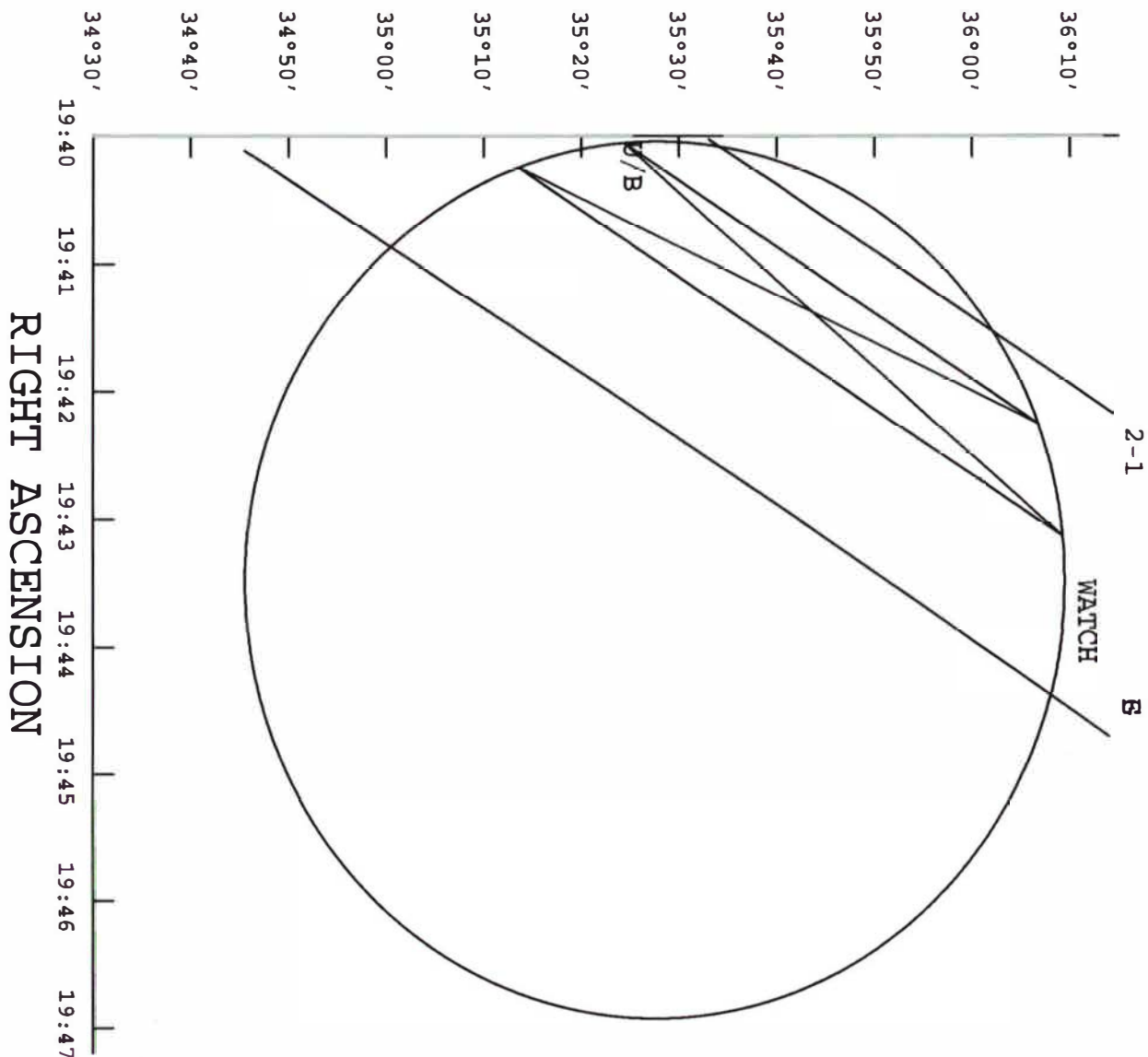
1 ULYSSES

2 WATCH

EVENT OF SEP 3, 1992 2:04

1/ 7/ 2

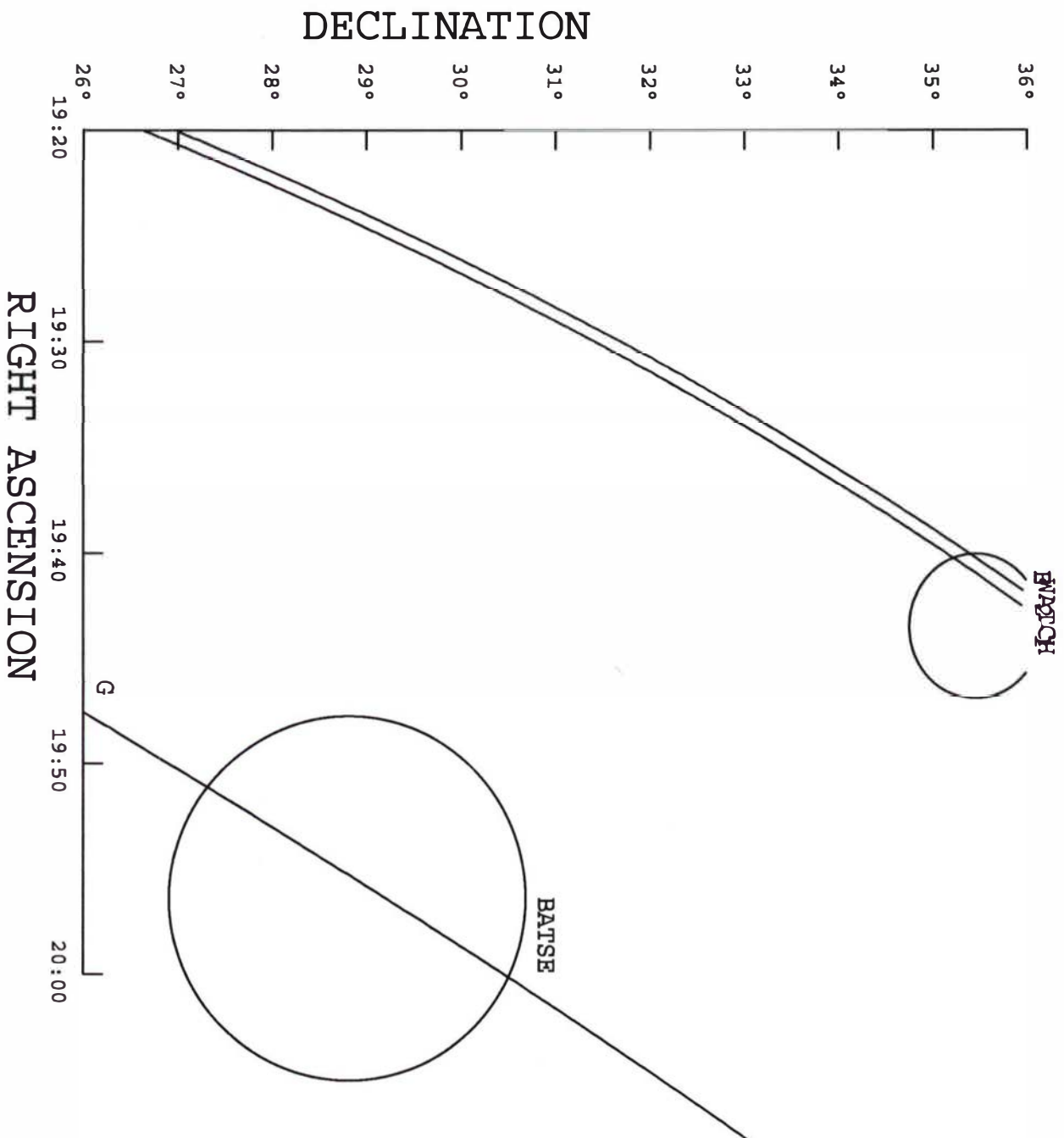
DECLINATION

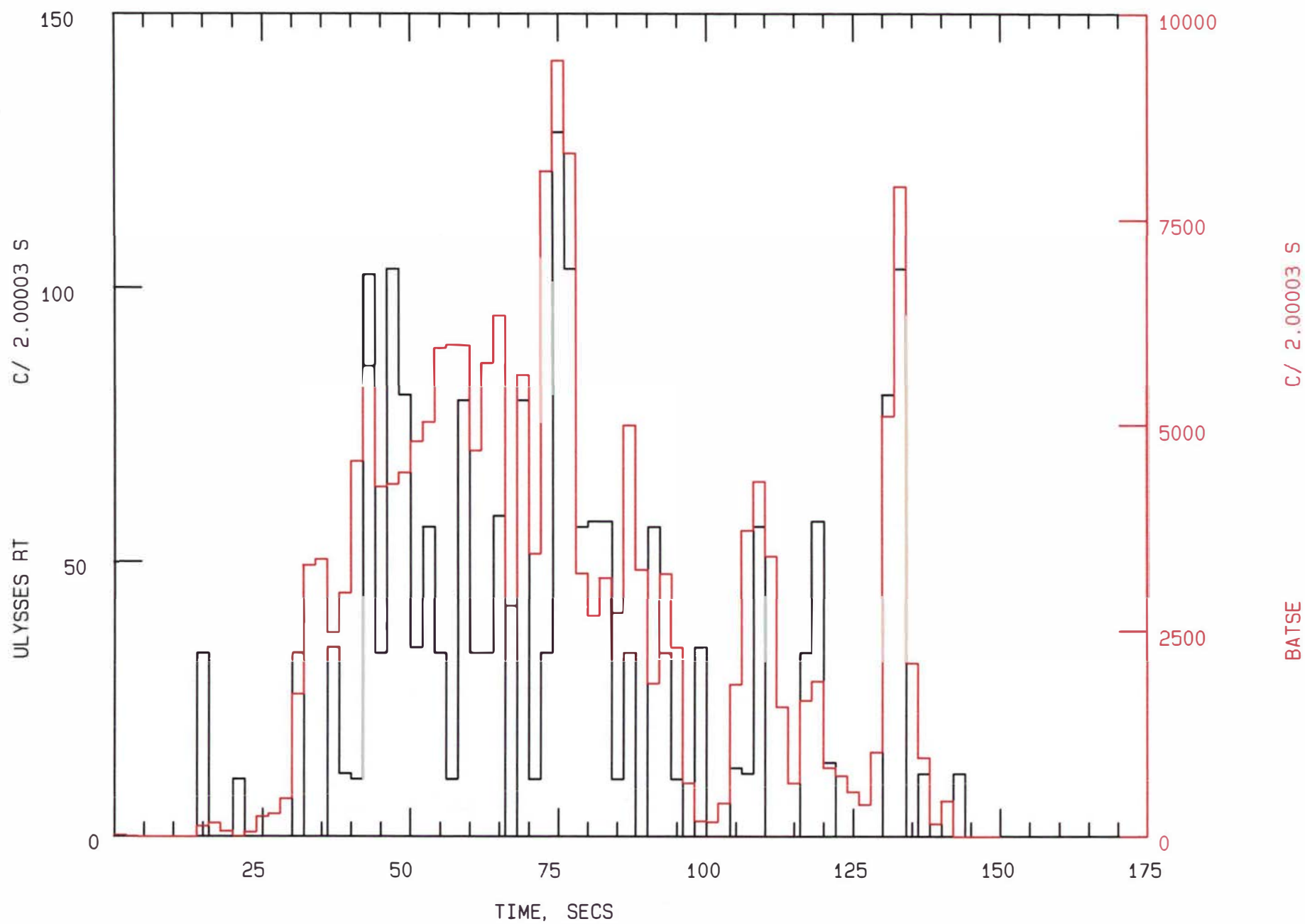


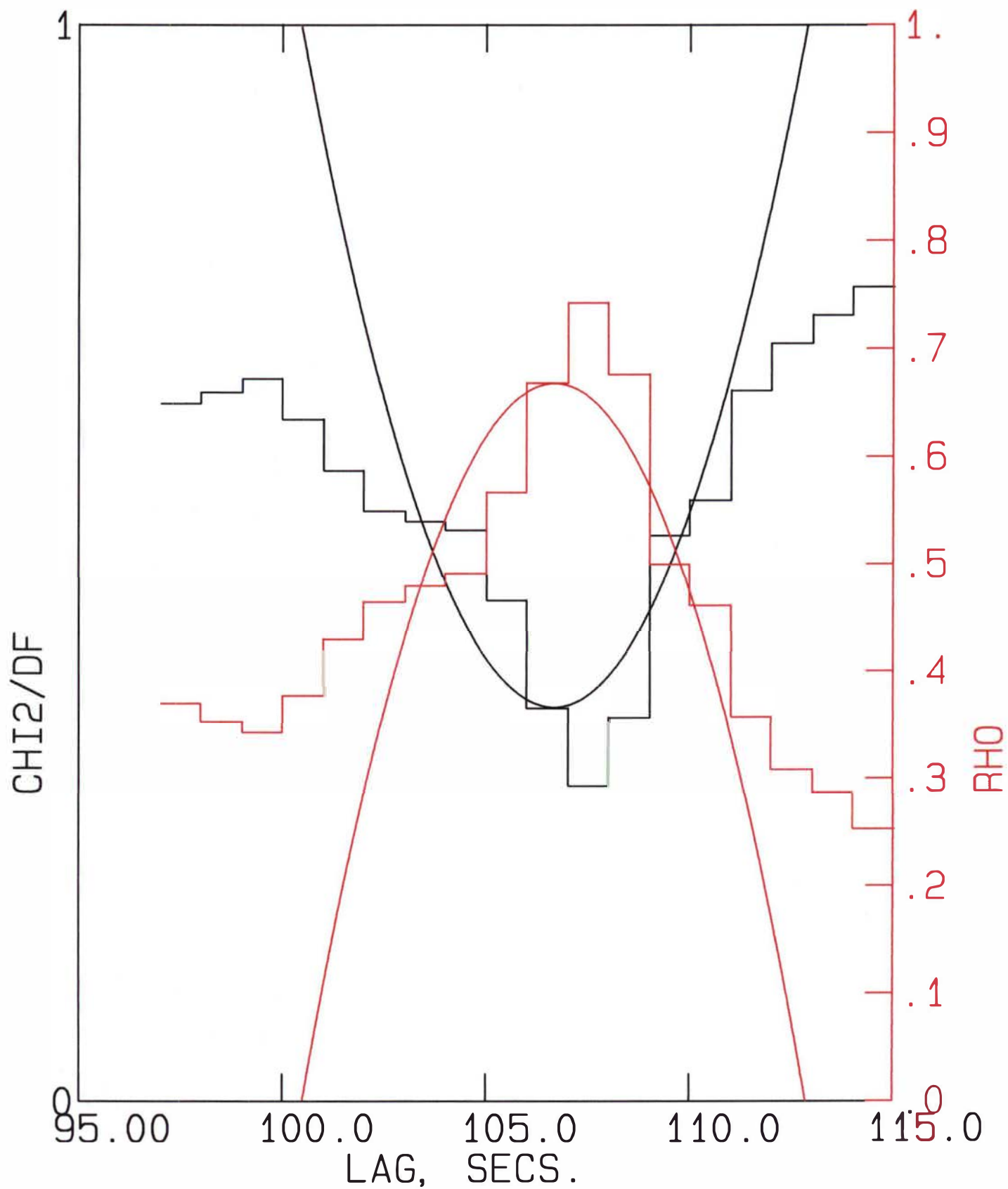
N-M = CORRELATION BETWEEN SATELLITES N AND M
 EARTH-N = EARTH AS SEEN FROM SATELLITE N
 S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
 1 BATSE 2 ULYSSES

EVENT OF SEP 3, 1992 1:35

1 / 7 / 2

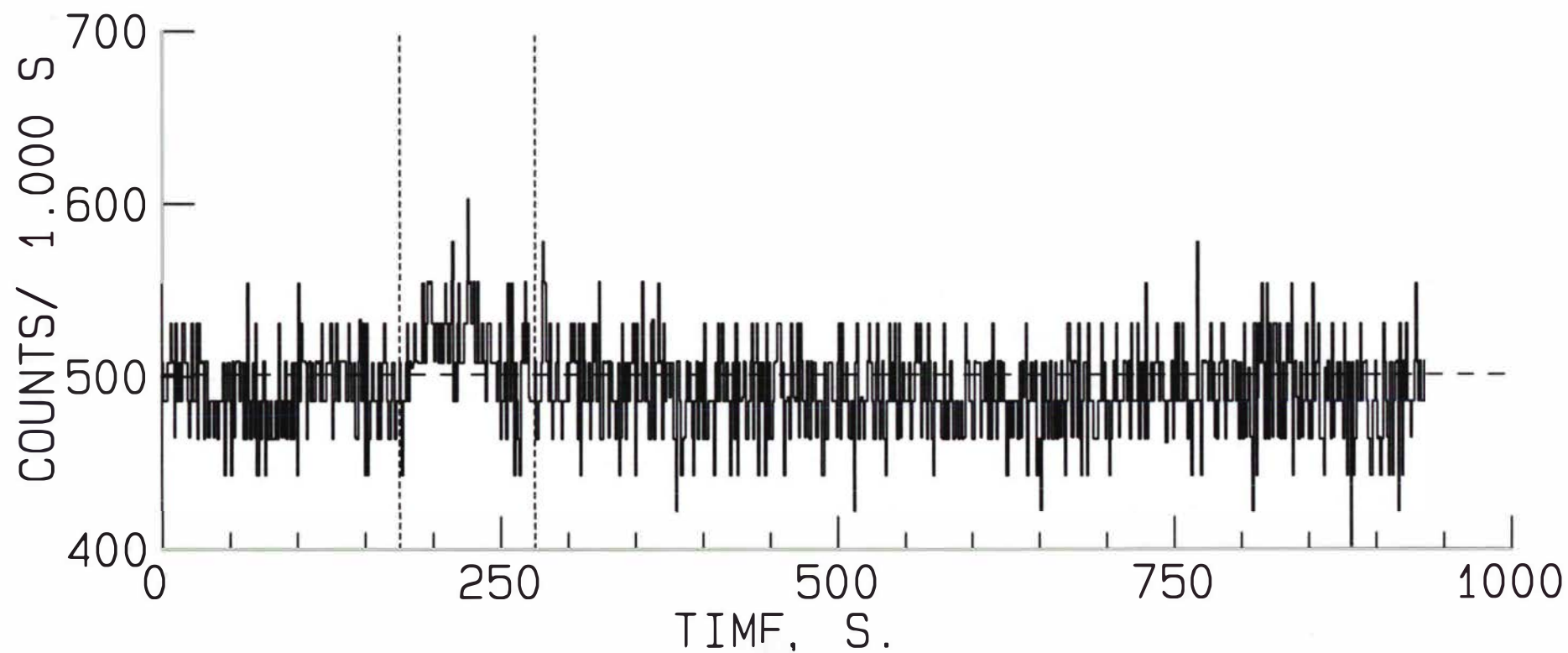






ULYSSES RT
3/ 9/92 7380.460 s
0.500 S INTERVALS REGROUPED BY 2
22- 149 keV

1 / 7 / 2



No helio. corr applied

Date: Mar 31 '99

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

Re-done with BATSE
July 1 2002
BATSE time corrected
9/30

2. BATSE Data

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

3. PVO Data

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

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

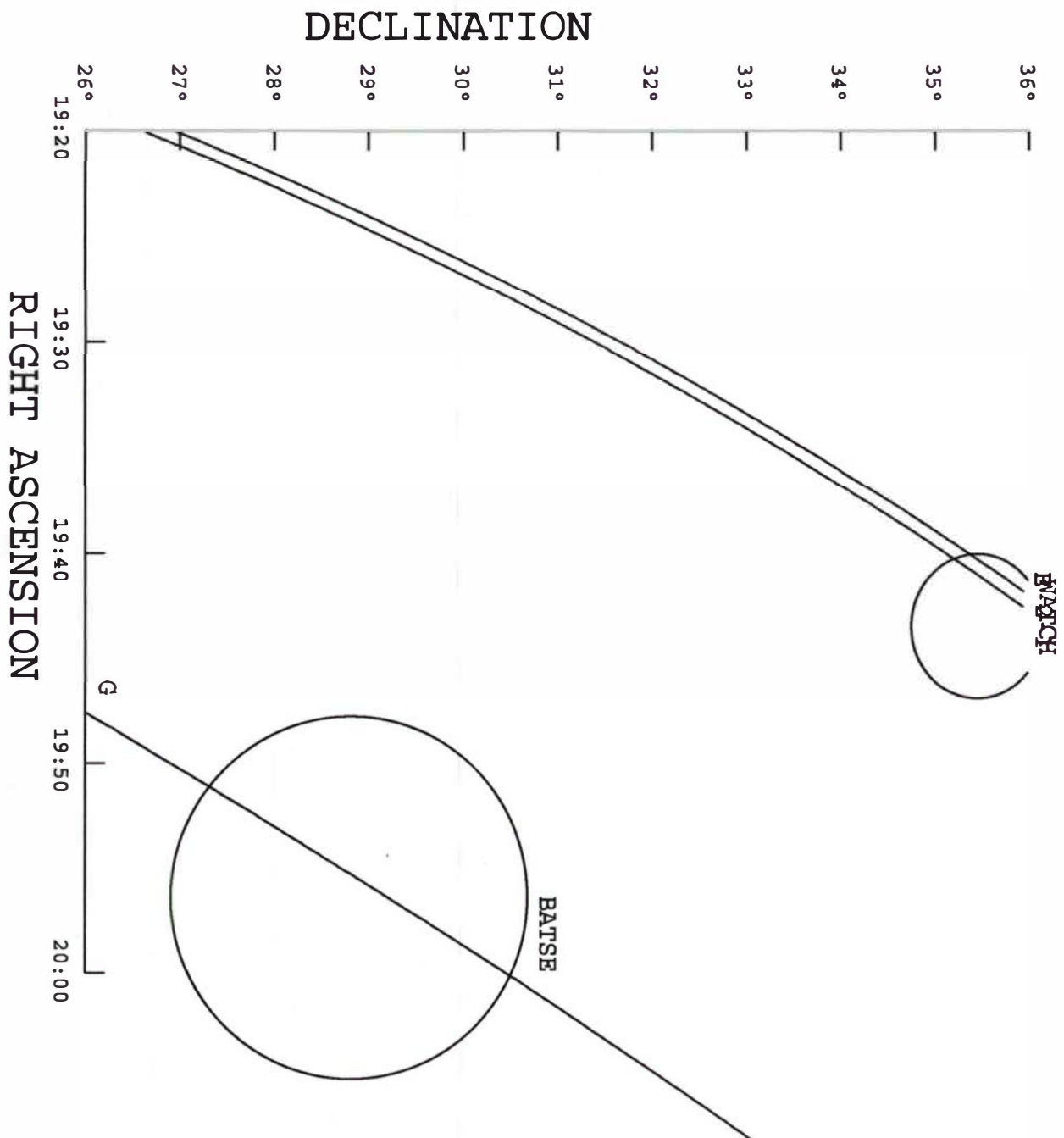
G=GALACTIC EQUATOR

1 BATSE

2 ULYSSES

EVENT OF SEP 3, 1992 1:35

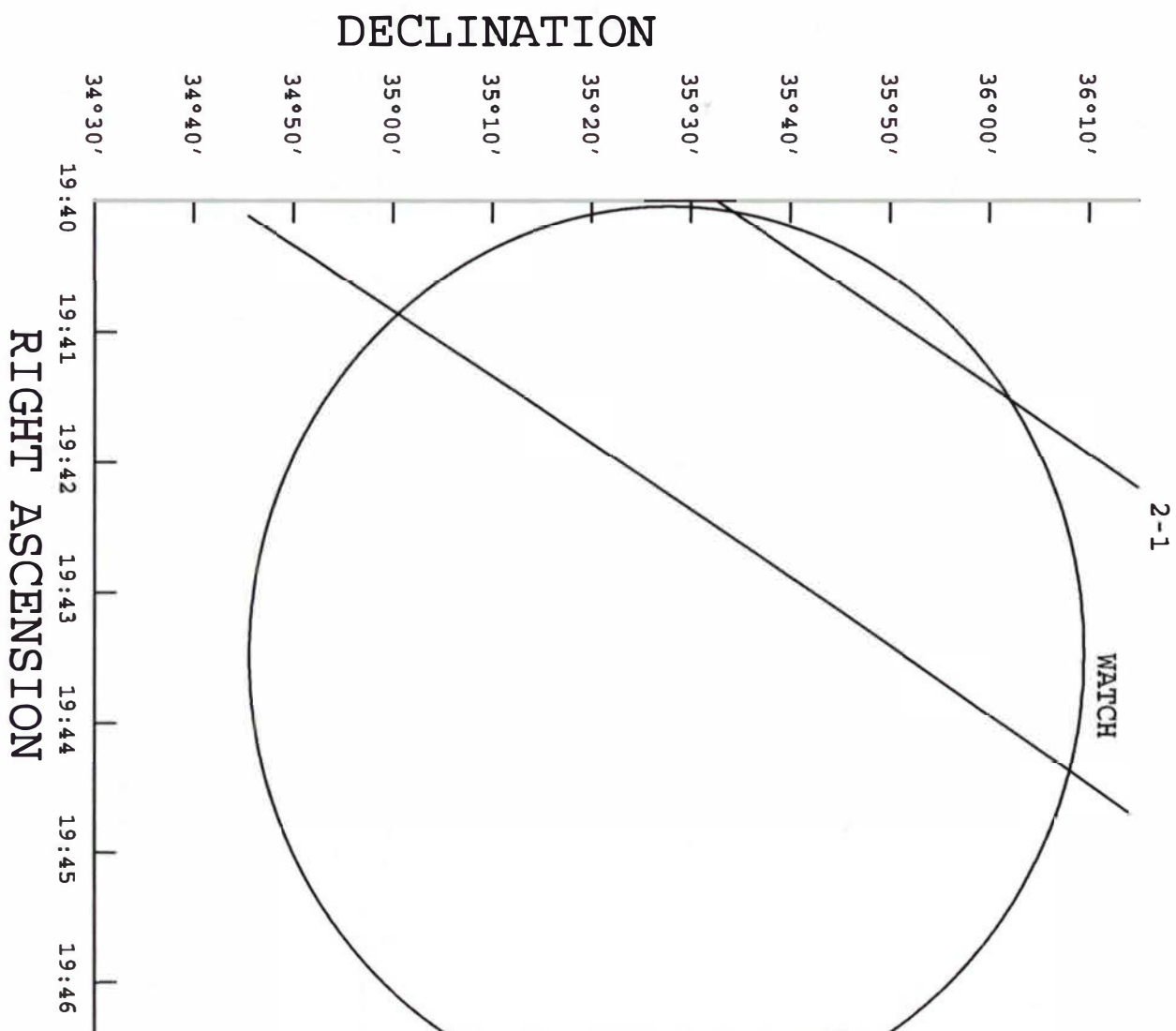
30 / 9 / 2



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 WATCH

EVENT OF SEP 3, 1992 2:04

31/ 3/99



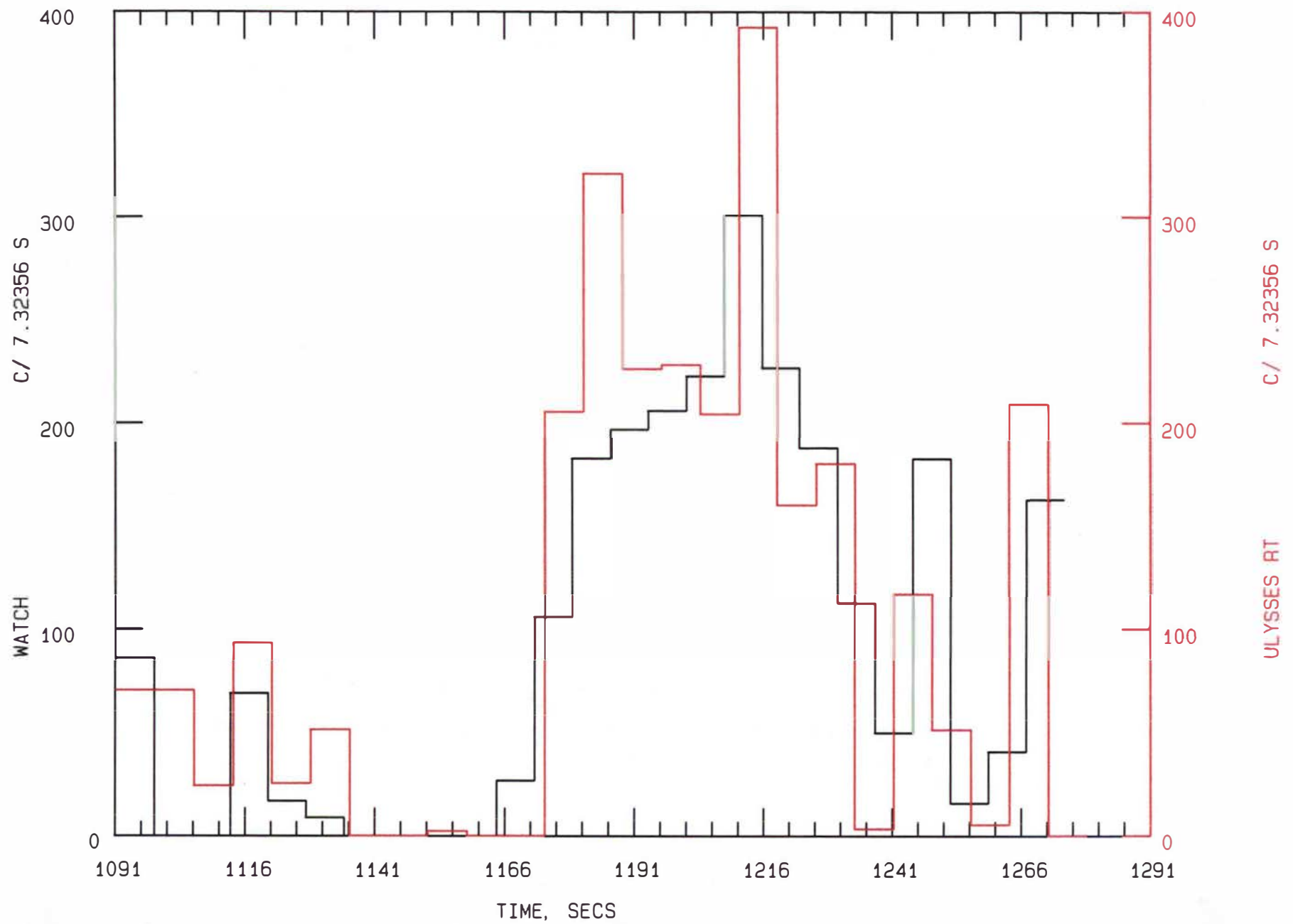
WATCH

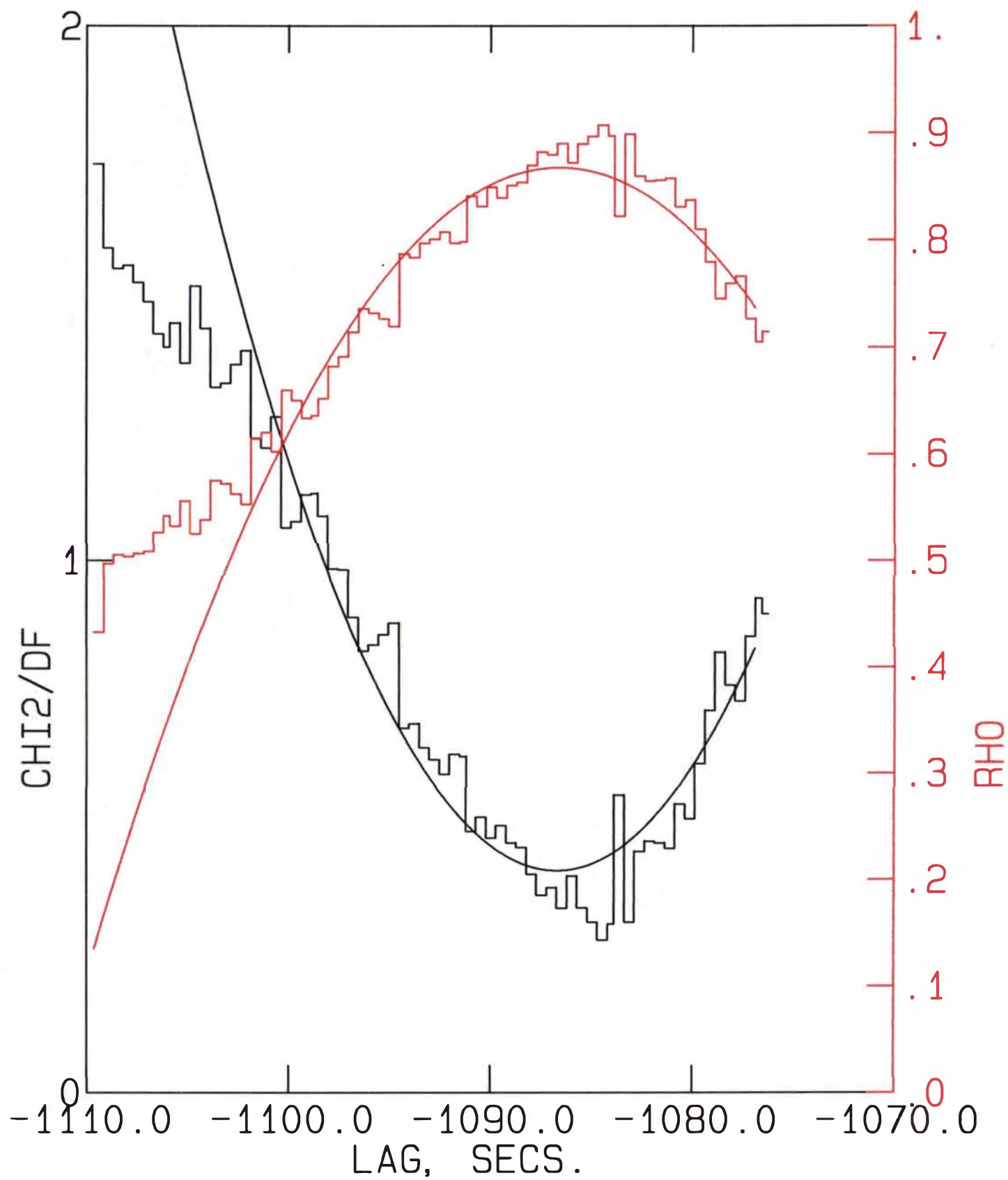
-ULYSSES RT CORRELATION

03/09/92

4563.701

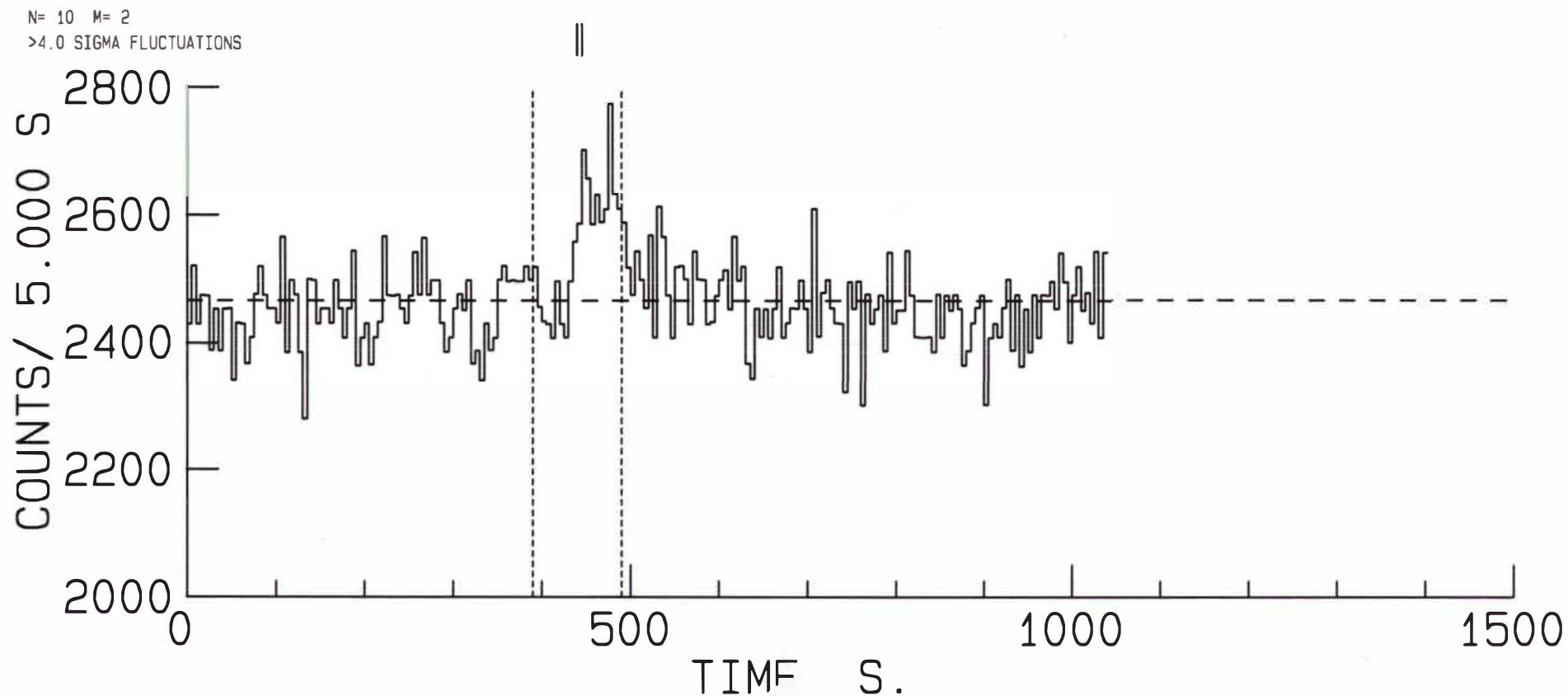
31/ 3/99





ULYSSES RT
3/ 9/92 7128.460 s
0.500 S INTERVALS REGROUPED BY 10
22- 149 keV

31 / 3 / 99



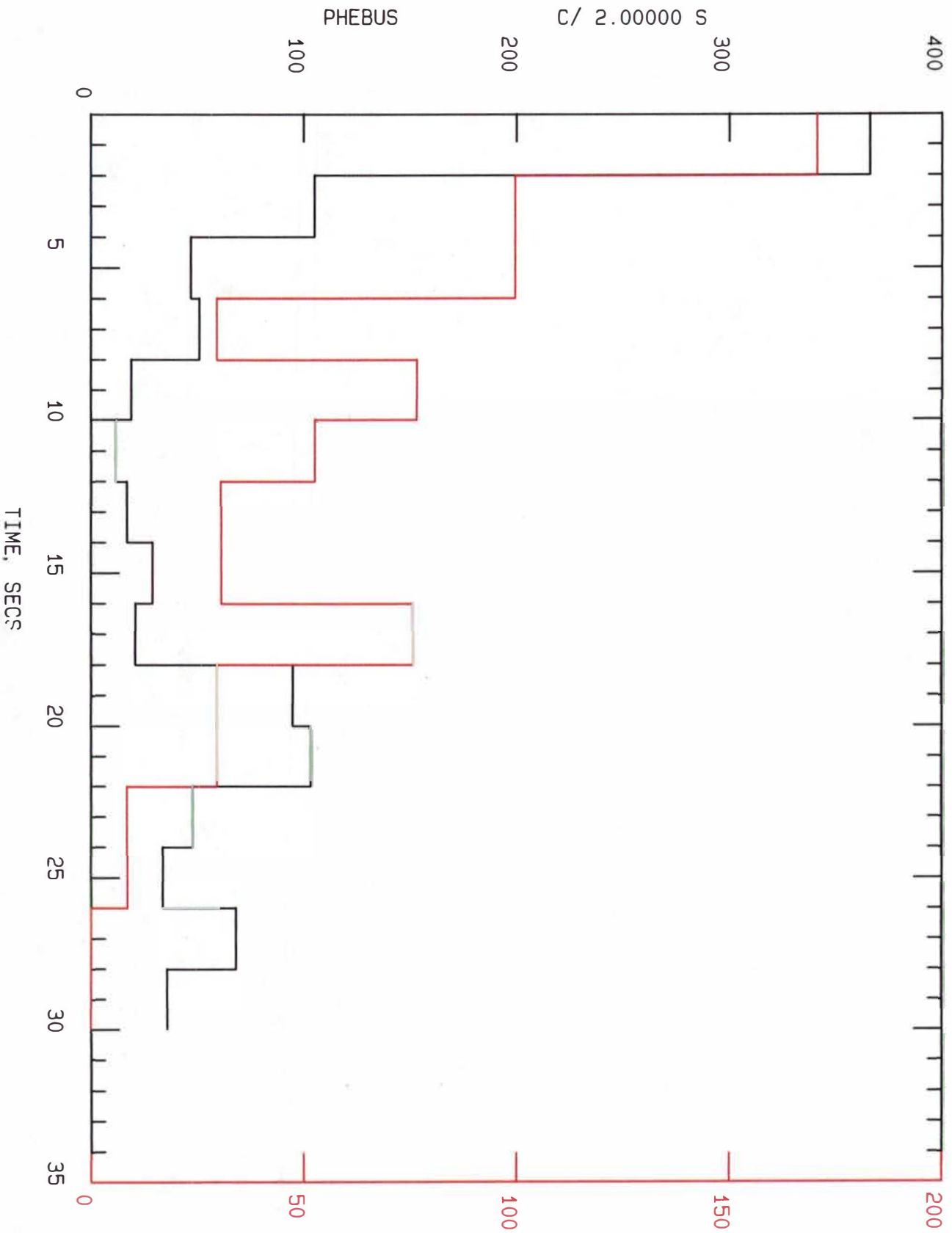
PHEBUS-ULYSSES RT CORRELATION

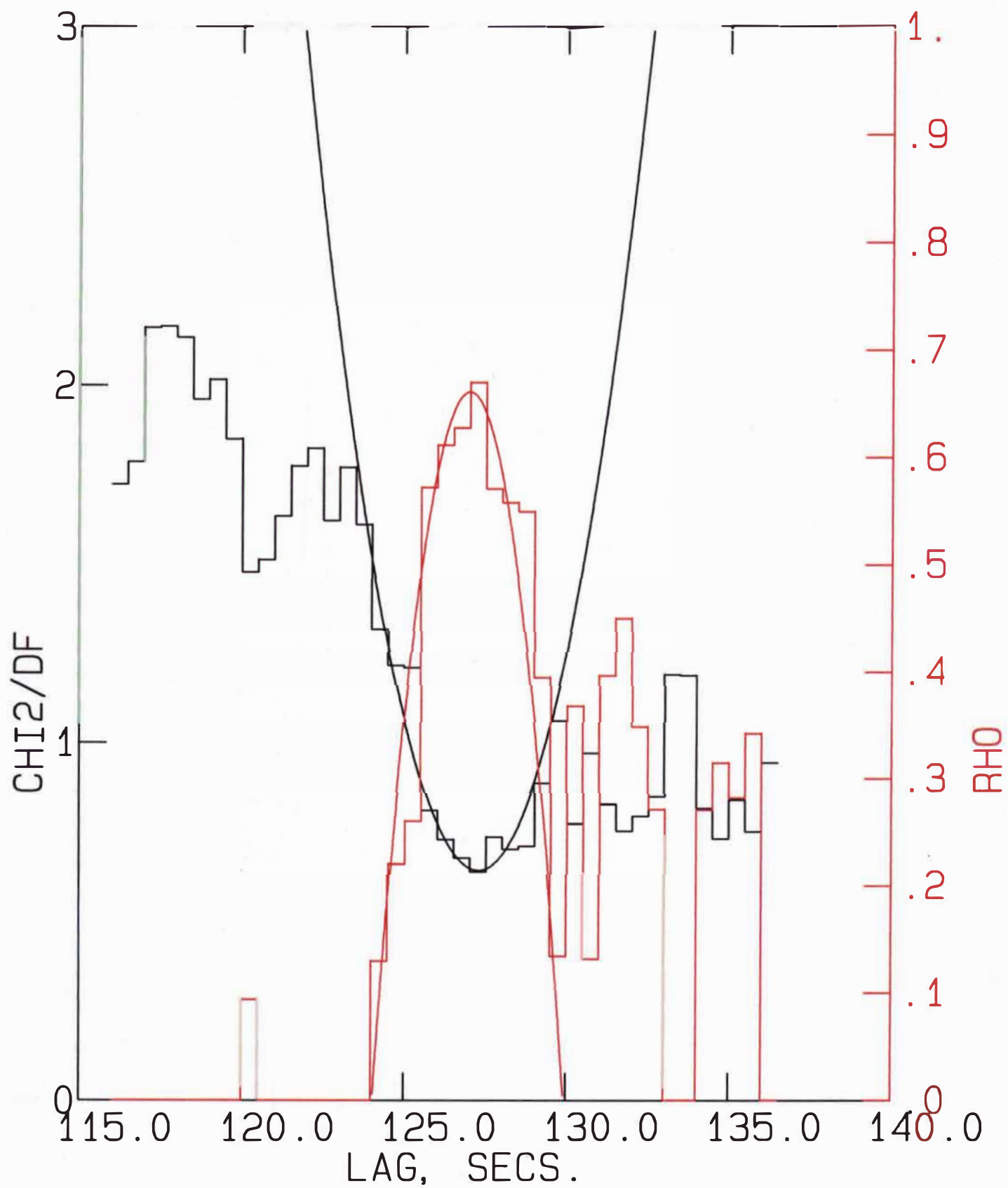
3 / 9 / 92

5835.198

8 / 12 / 99

Probably not trustworthy - the two true histories are very different

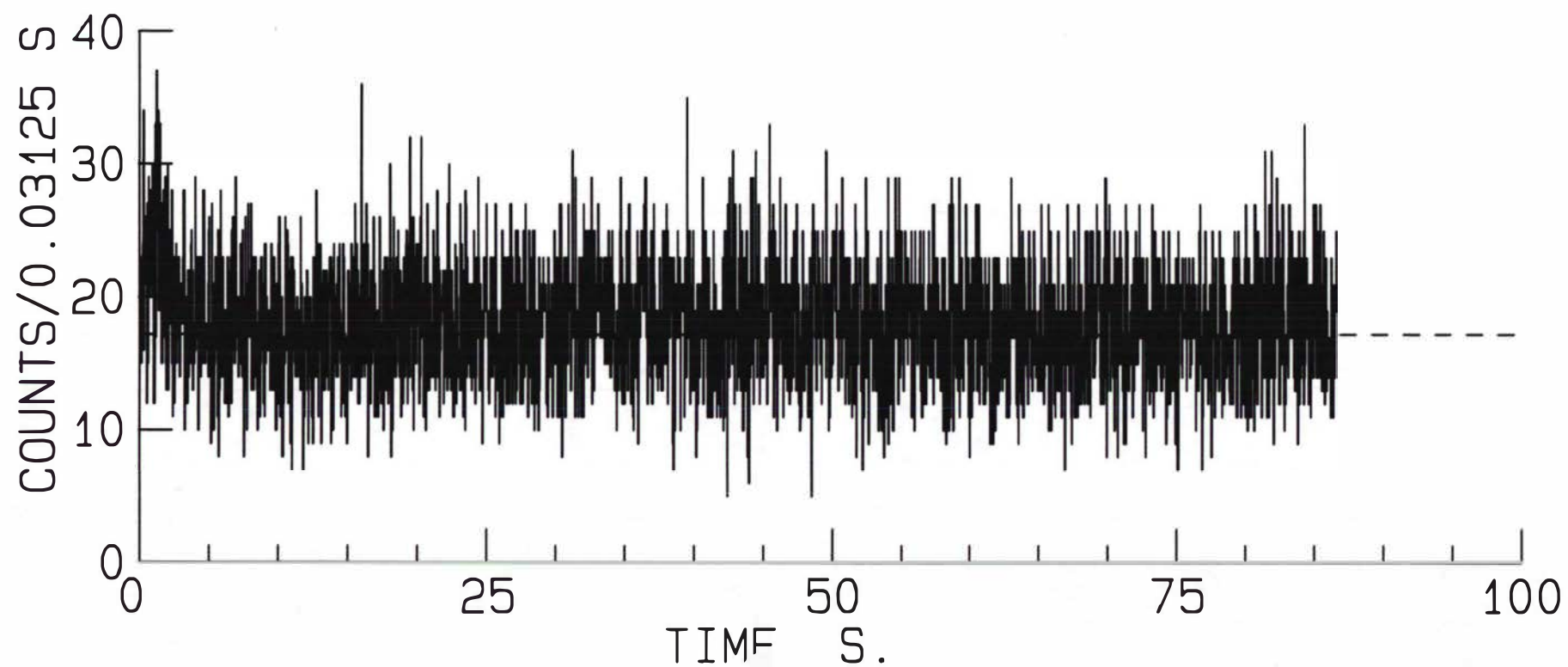




PHEBUS

3/ 9/92 5835.198 s

100- 1600 keV



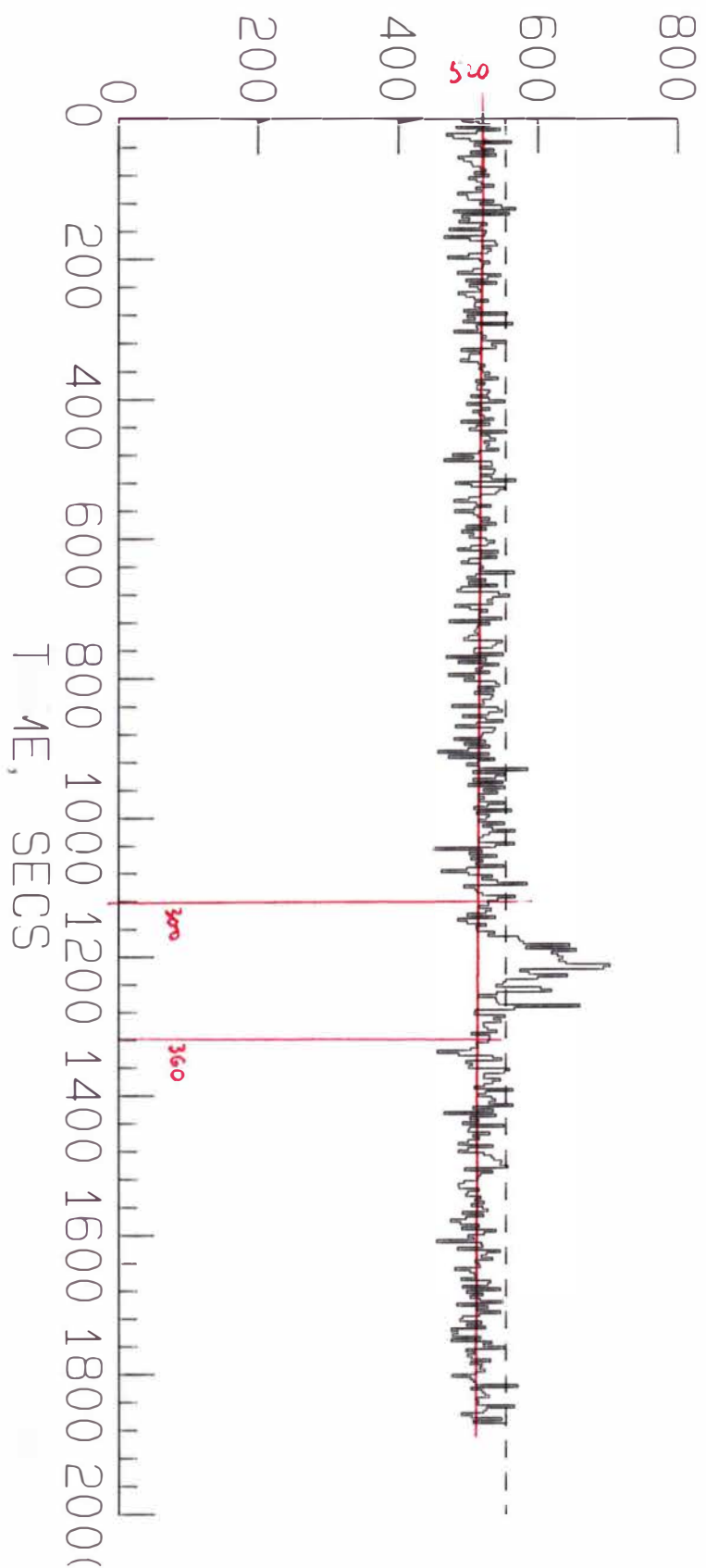
WATCH

03/09/92

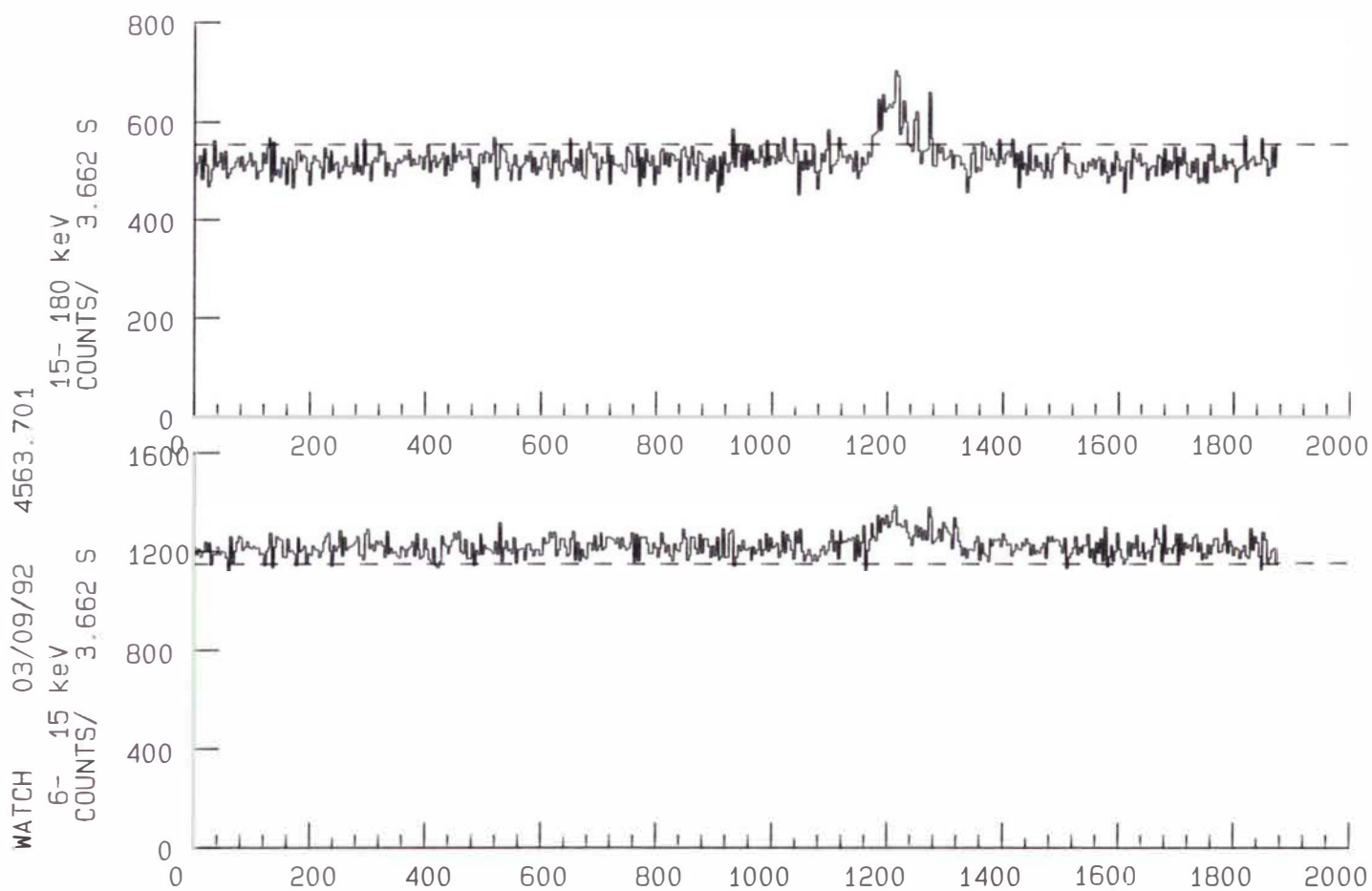
4563.701

15- 180 keV

COUNTS/3.662 S



4 / 10 / 93



From root Mon Oct 11 04:04 1993
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA13046; Mon, 11 Oct 93 04:04:33
Received: from danpost.uni-c.dk by sunspot.ssl.berkeley.edu (4.1/1.30.1)
id AA14815; Mon, 11 Oct 93 04:06:18 PDT
Received: from dmicvx.dmi.min.dk (dmicvx.dmi.min.dk [130.226.64.16]) by danpost.uni-c.dk (8.6.
Received: by dmicvx.dmi.min.dk (5.64/1.36)
id AA19172; Mon, 11 Oct 93 11:09:29 GMT
From: nlu@dmi.min.dk (Niels Lund)
Message-Id: <9310111109.AA19172@dmicvx.dmi.min.dk>
Subject: J-P Roques told me that you did not receive my message, please ack (fwd)
To: khurley@sunspot.ssl.berkeley.edu
Date: Mon, 11 Oct 1993 11:09:29 +0000 (WET)
X-Mailer: ELM [version 2.4 PL0]
Content-Type: text
Content-Length: 625
Status: R

> Subject: J-P Roques told me that you did not receive my message, please ack
> thisone
>
> Dear Niels,
>
> please find enclosed the GRANAT positions you asked for :
>
> Date : 1992/07/18 14h 41m 15.5s
> Position (km) : X = -23404.1 Y= 36890.1 Z = 139571.7
>
> Date : 1992/09/03 01h 36m 15.5s
> Position (km) : X = -96043.5 Y= 105000.3 Z = 87163.0
>
> Date : 1992/09/25 22h 49m 14.5s
> Position (km) : X = 6912.6 Y= 5226.3 Z = 117601.3
>
>
> Note that the position is in the geocentric equatorial system, in equinox J2000.0
>
> Best Regards,
>
> J-L Atteia
>

PROGRAM WATEPH

²⁰⁰⁰ X(1950)	²⁰⁰⁰ Y(1950)	²⁰⁰⁰ Z(1950)	DISTANCE	²⁰⁰⁰ RA(1950)	²⁰⁰⁰ DEC(1950)	RA(2000)	DEC(2000)
-96043.500	105000.300	87163.000	166873.621	132.449	31.489	133.215	31.3

No helio or clock corr ever applied

Date: Dec 2 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☐ Jim Schmidling's stat file correction applied? *NO*
- ☐ Final ephemeris used?
- ☐ Final, CDROM data used?
- ☐ Were data checked by Joe Springer for 0.5 s errors?
- ☐ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
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3. PVO Data

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

920903 in
This burst is ~~not~~ in the published
WATER catalog
off Sazonov
et al

Date: Mar 31 99

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied? No helio corr applied
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
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N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

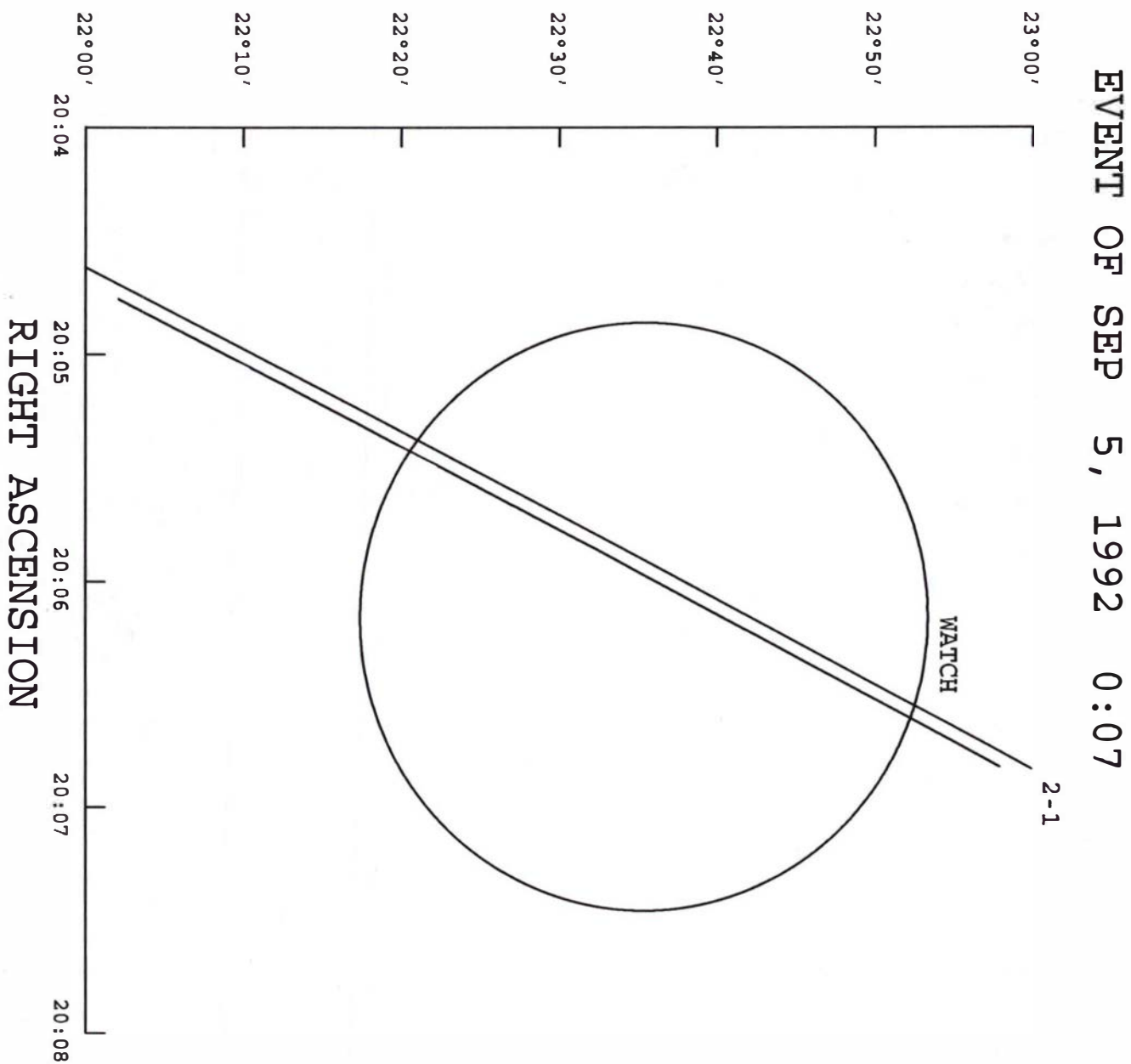
E=ECLIPTIC

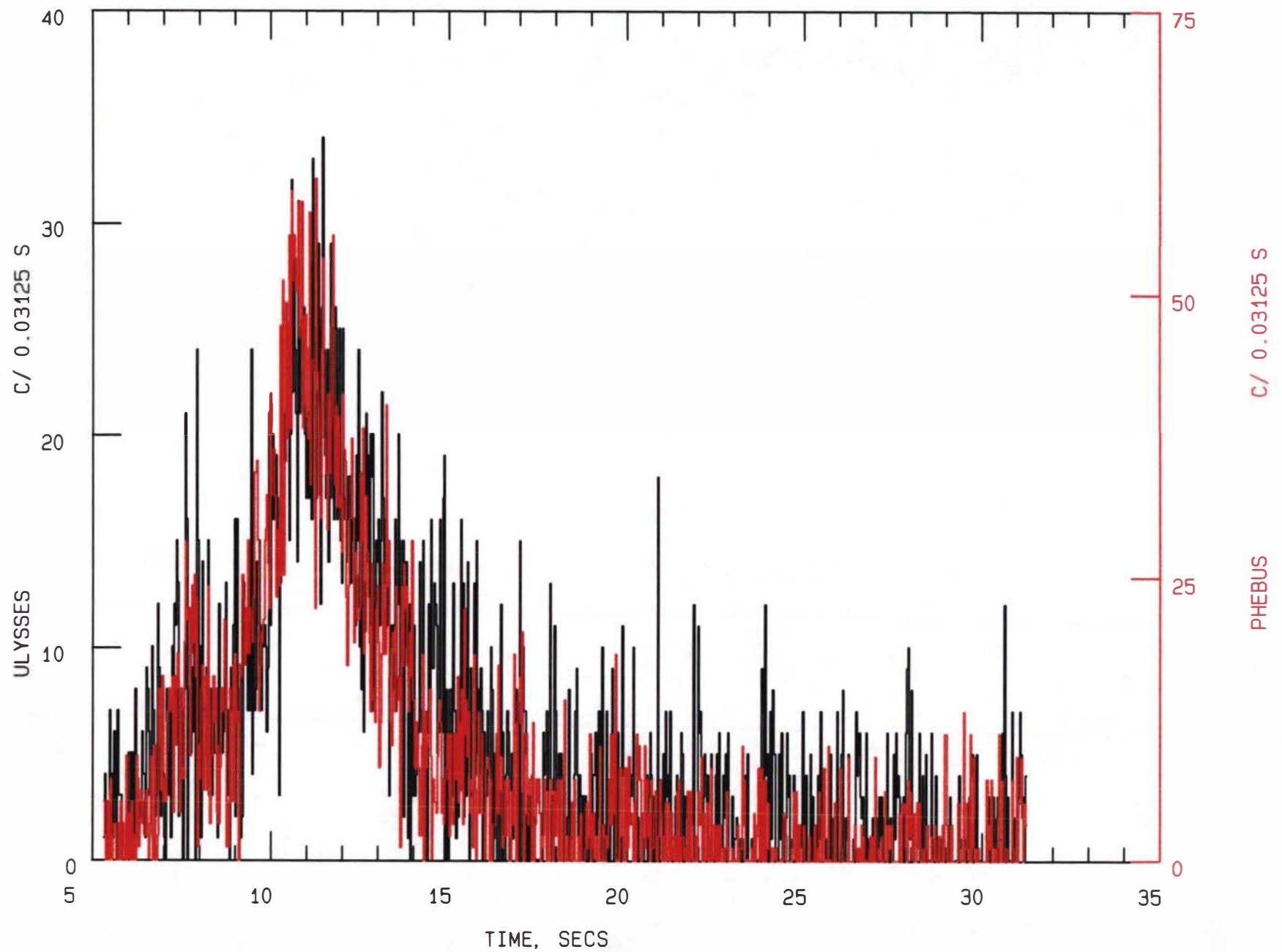
G=GALACTIC EQUATOR

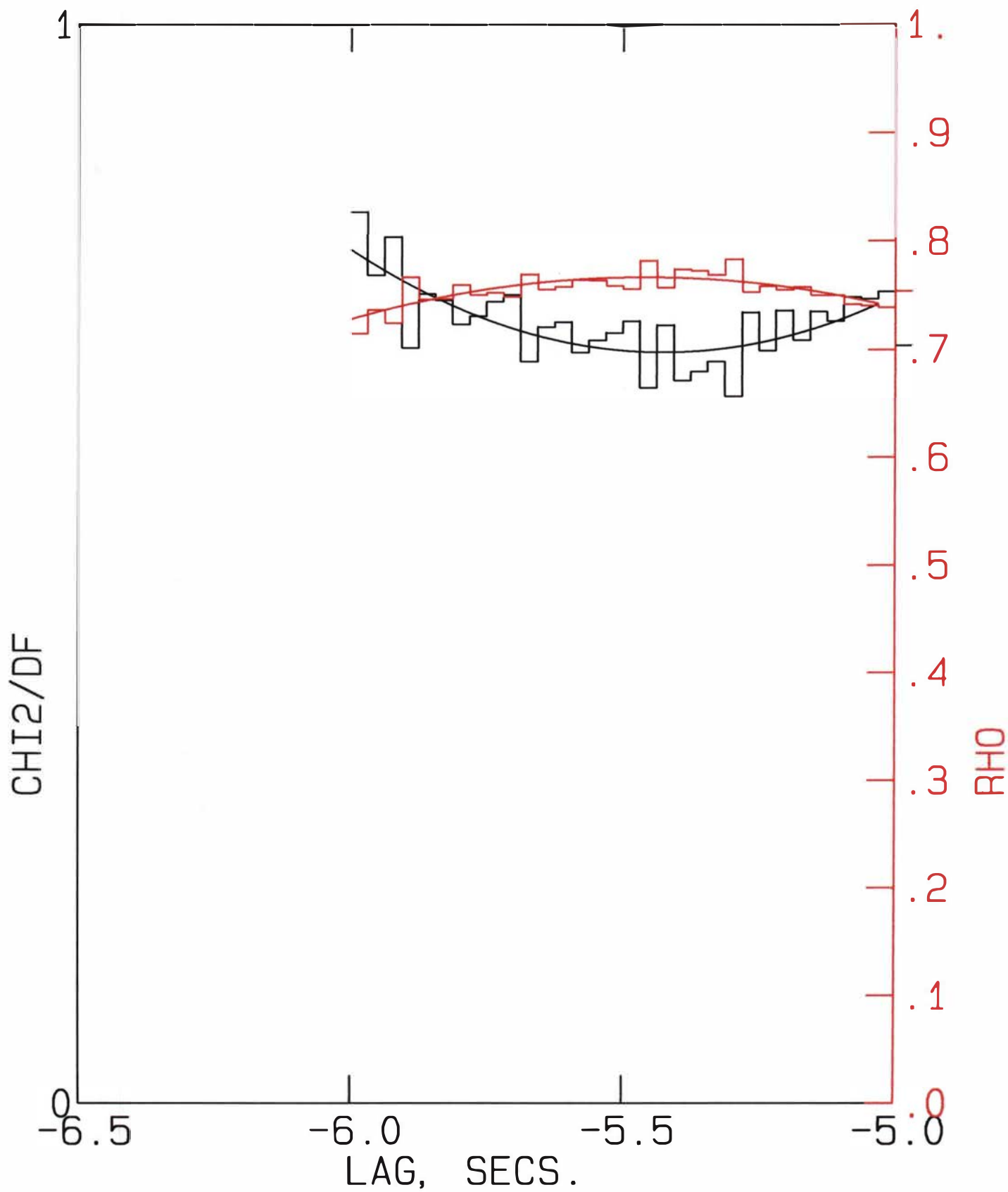
1 ULYSSES

2 PHEBUS

DECLINATION







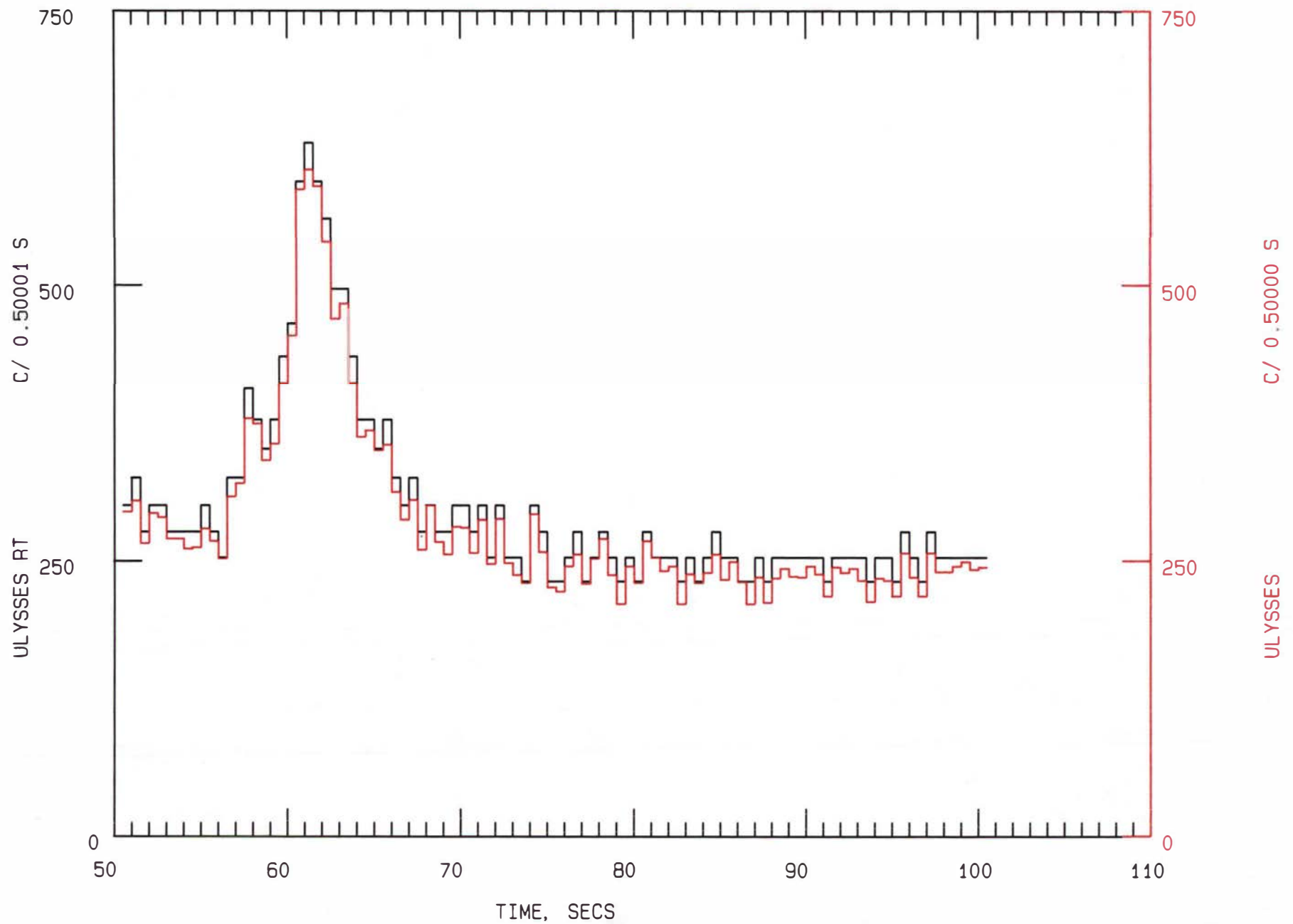
ULYSSES RT-ULYSSES

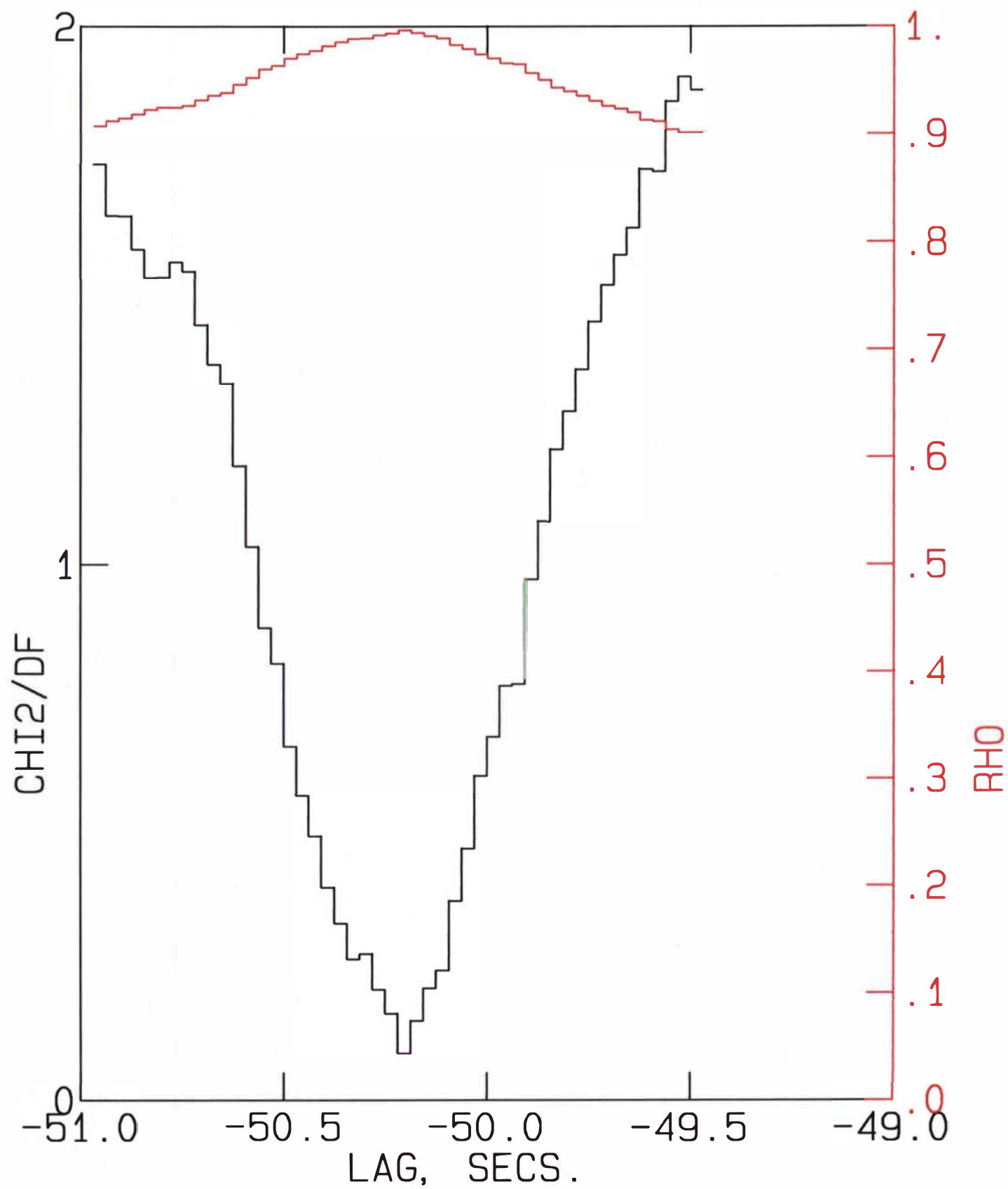
CORRELATION

4/ 9/92

367.250

31/ 3/99





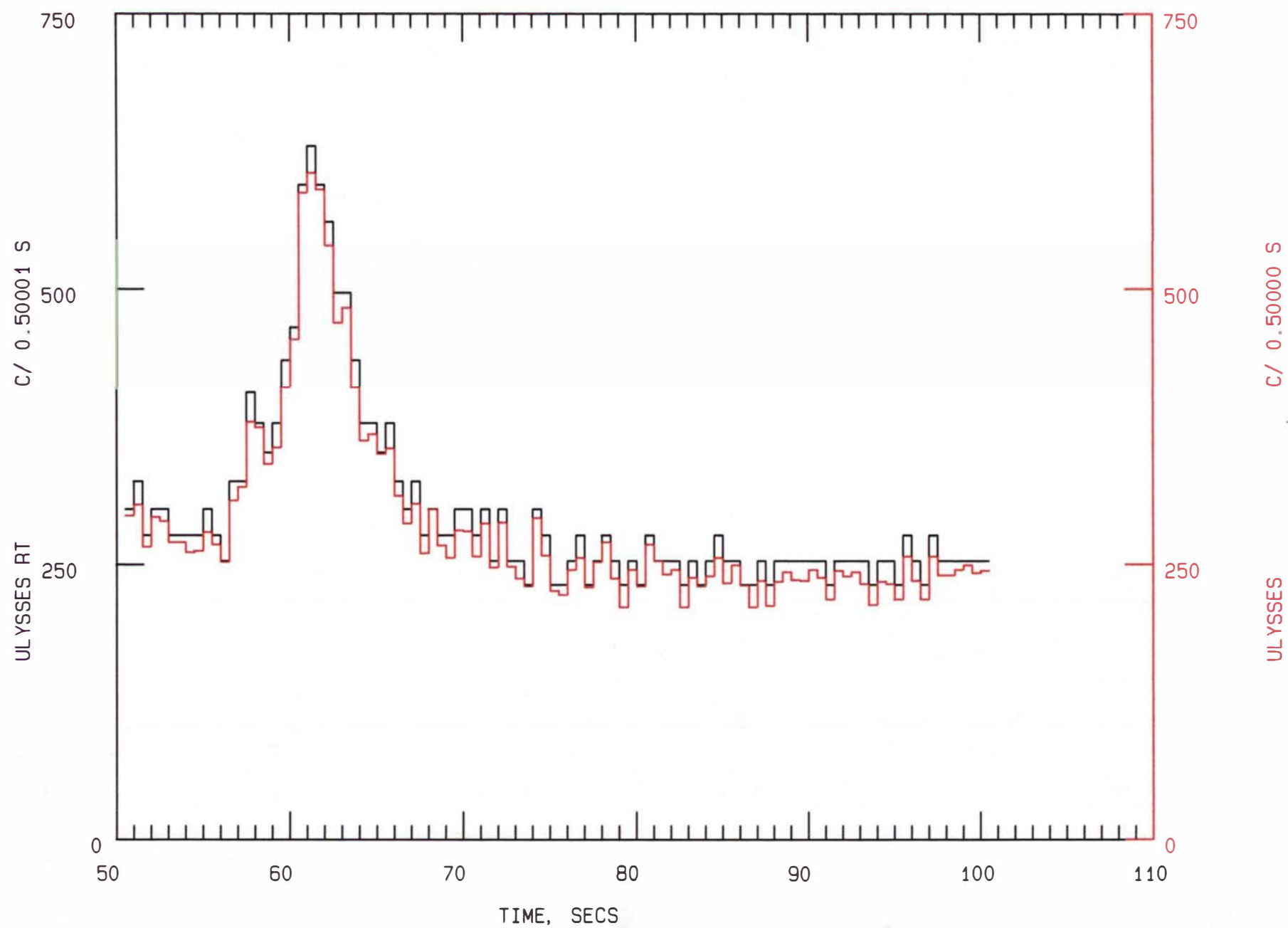
ULYSSES RT-ULYSSES

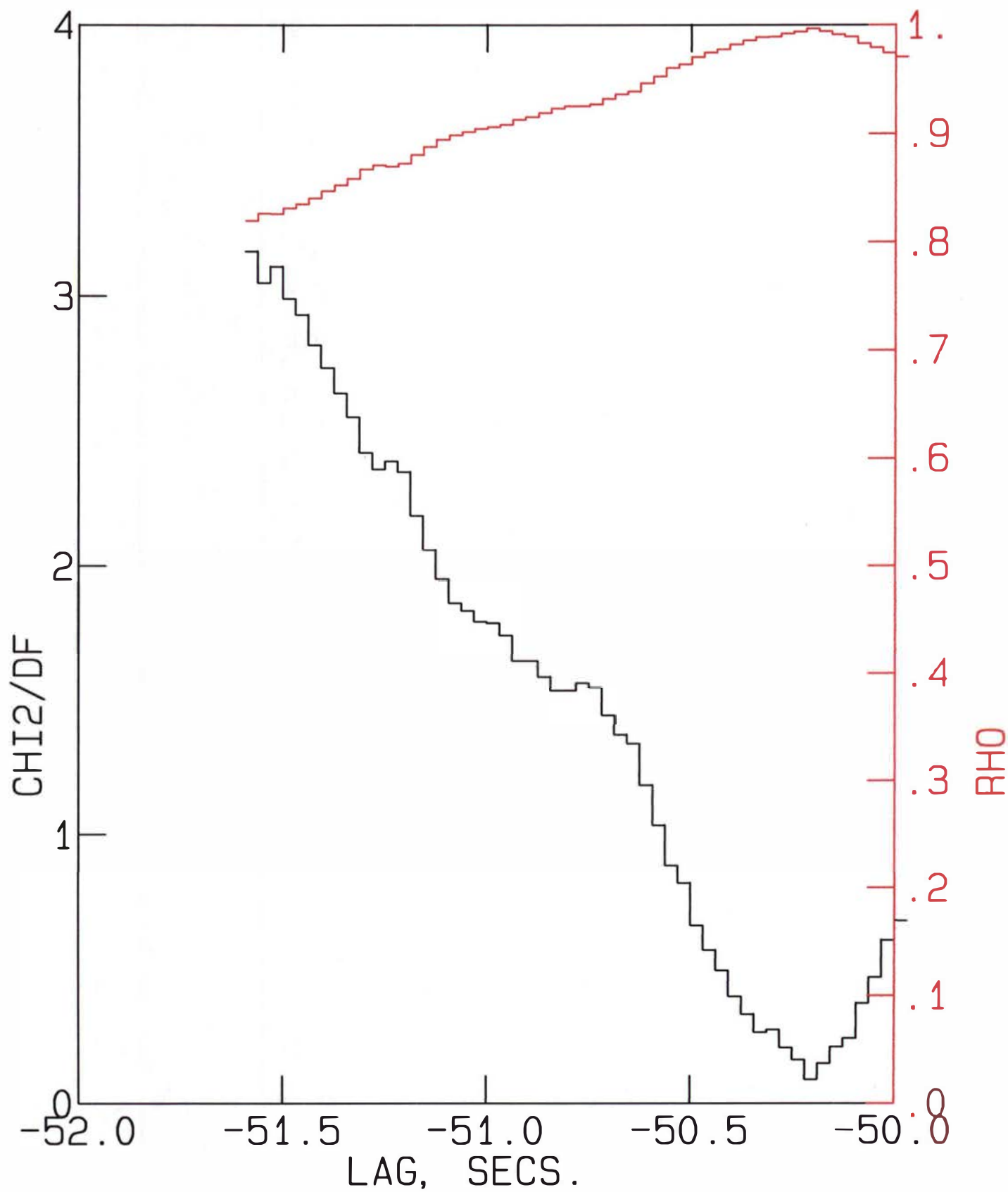
CORRELATION

4/ 9/92

367.250

31/ 3/99



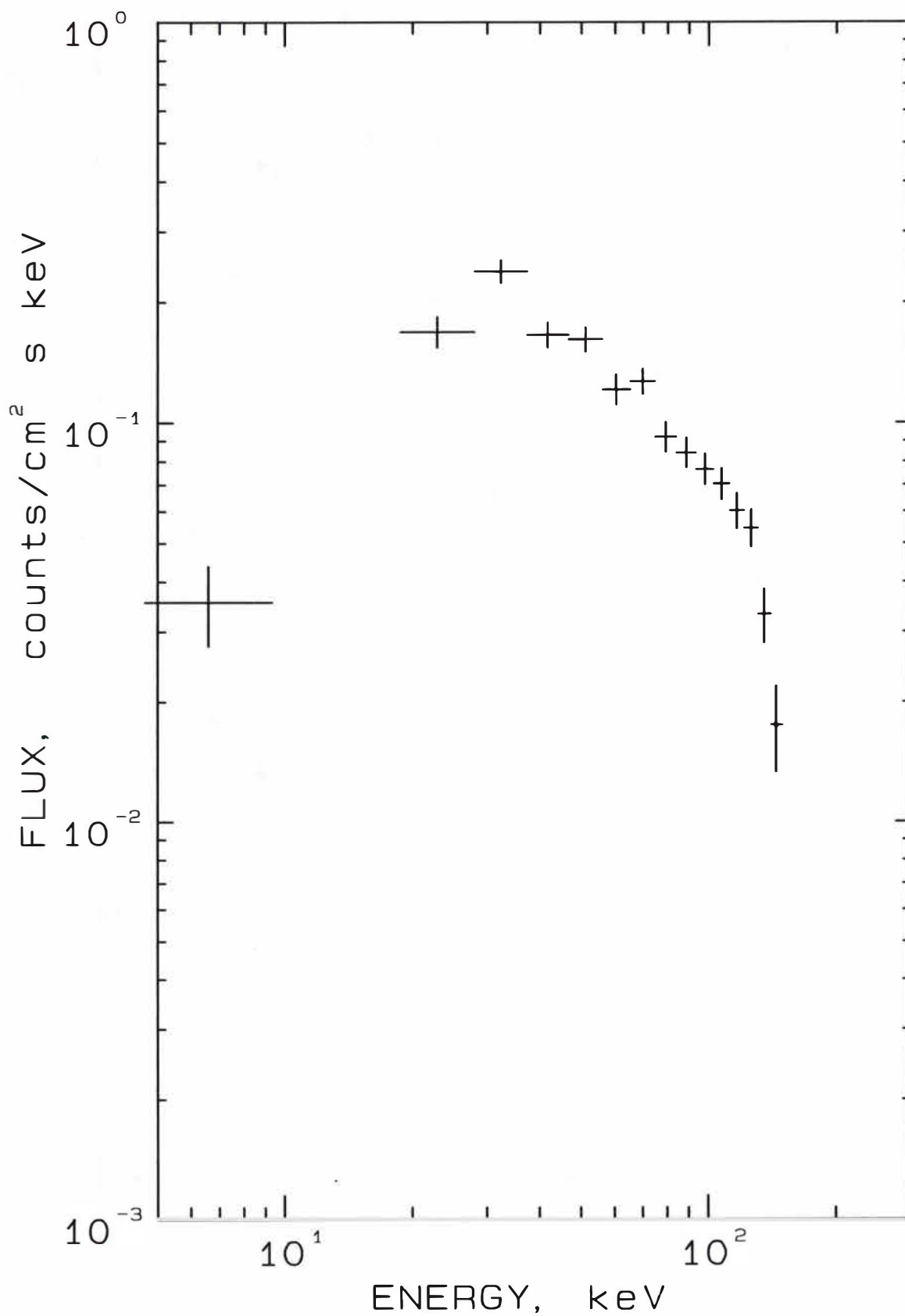


ULYSSES 04/09/92

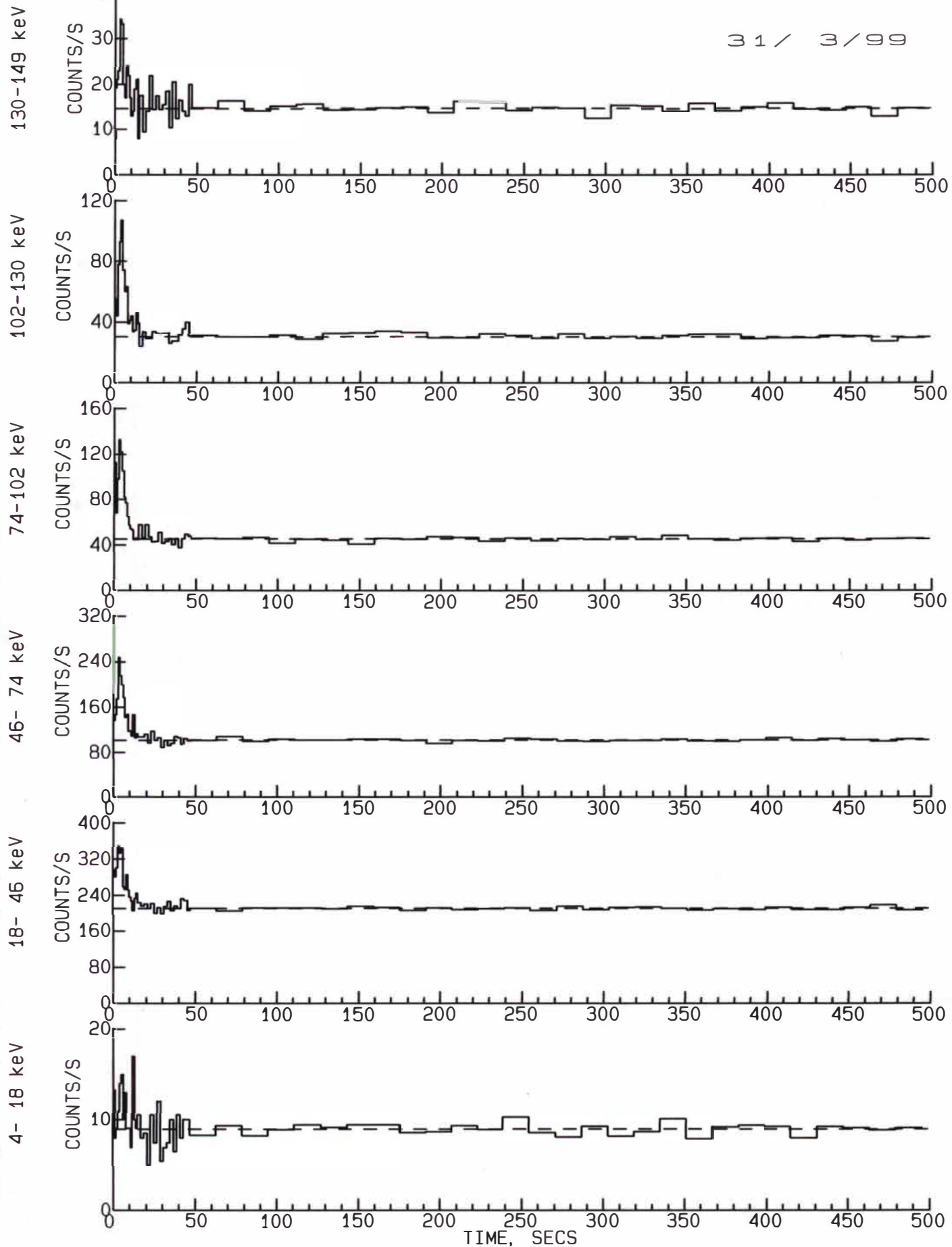
424.838

31/ 3/99

SPECTRUM INTEGRATED OVER 20.9 SECONDS, INTERVALS 2 TO 20



ULYSSES 04/09/92 BURST SPECTRAL COUNT RATES

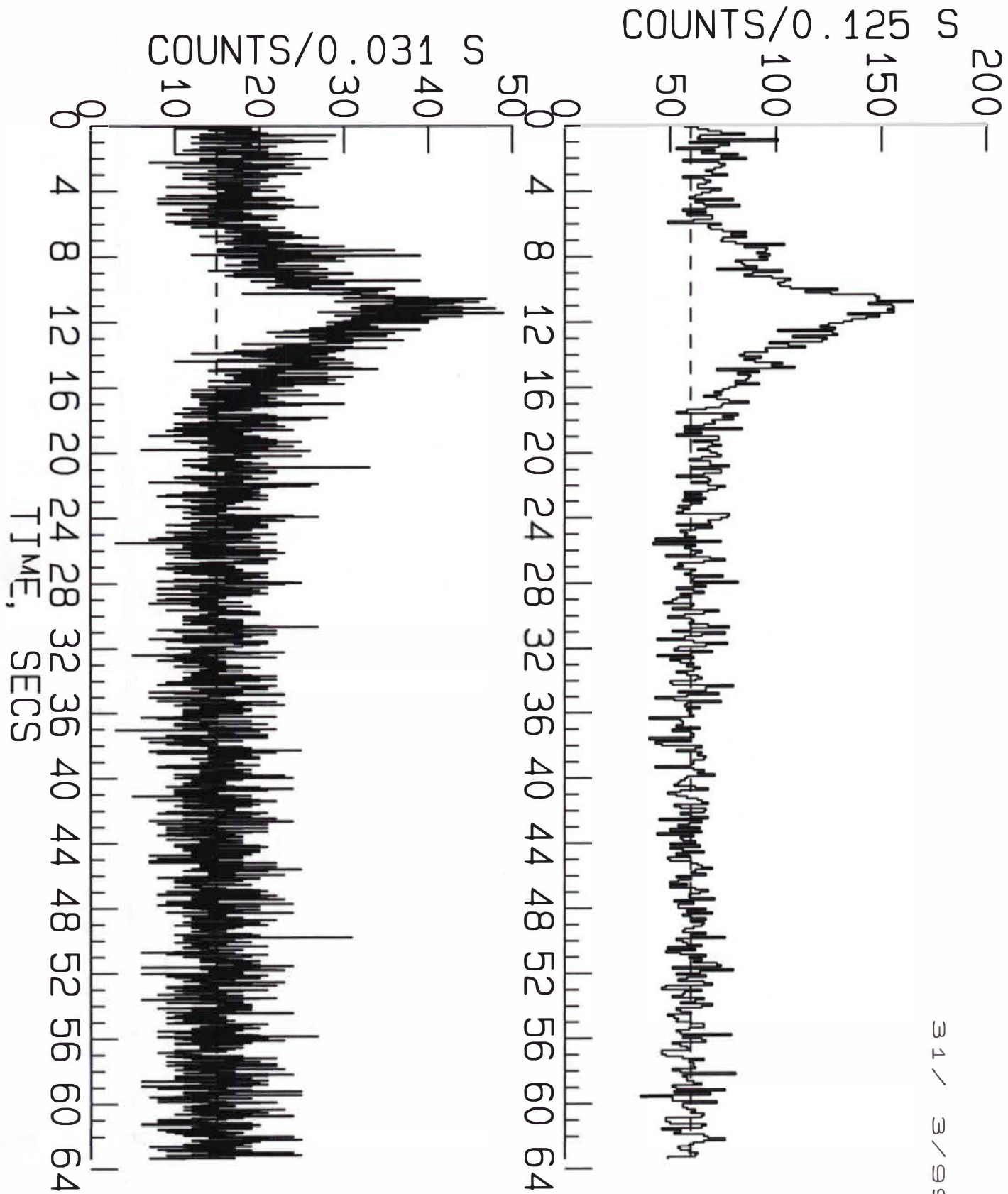


ULYSSES

04/09/92

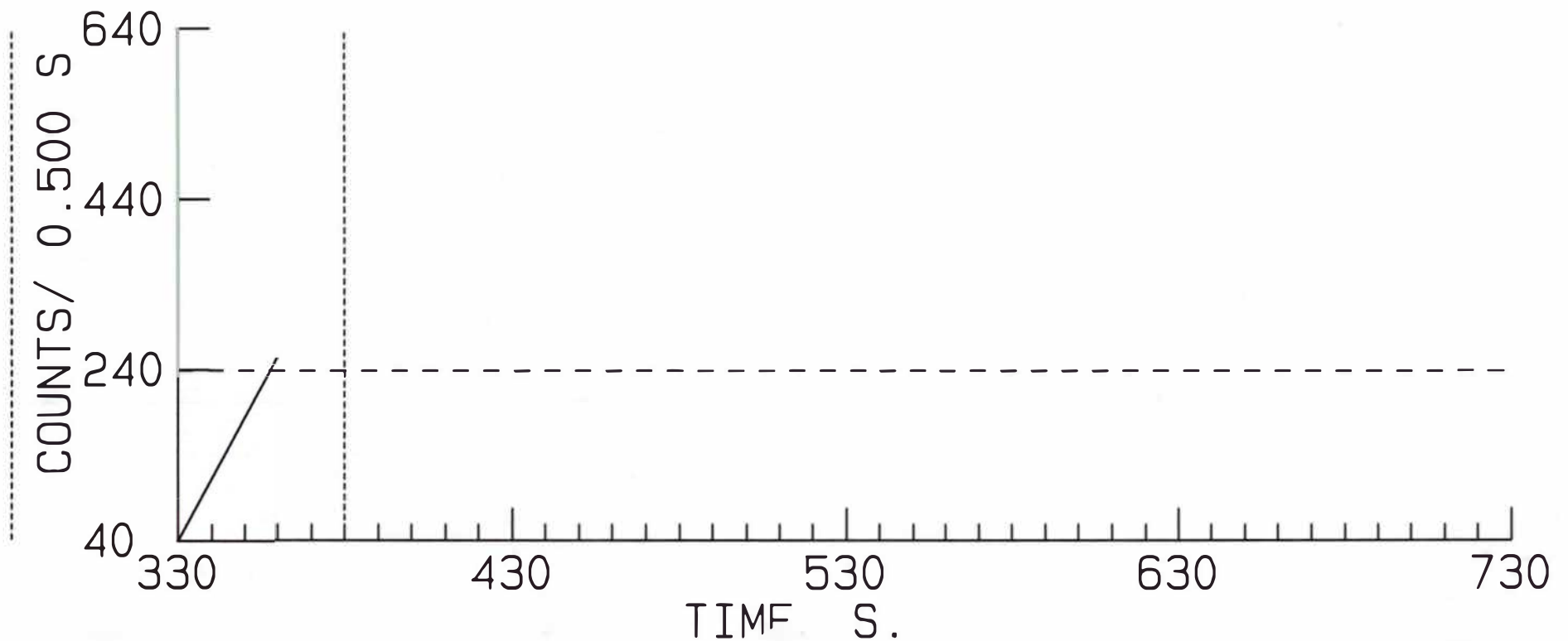
Ttrig= 425.454

22- 149 keV



ULYSSES RT
4/ 9/92 252.228 s
22- 149 keV

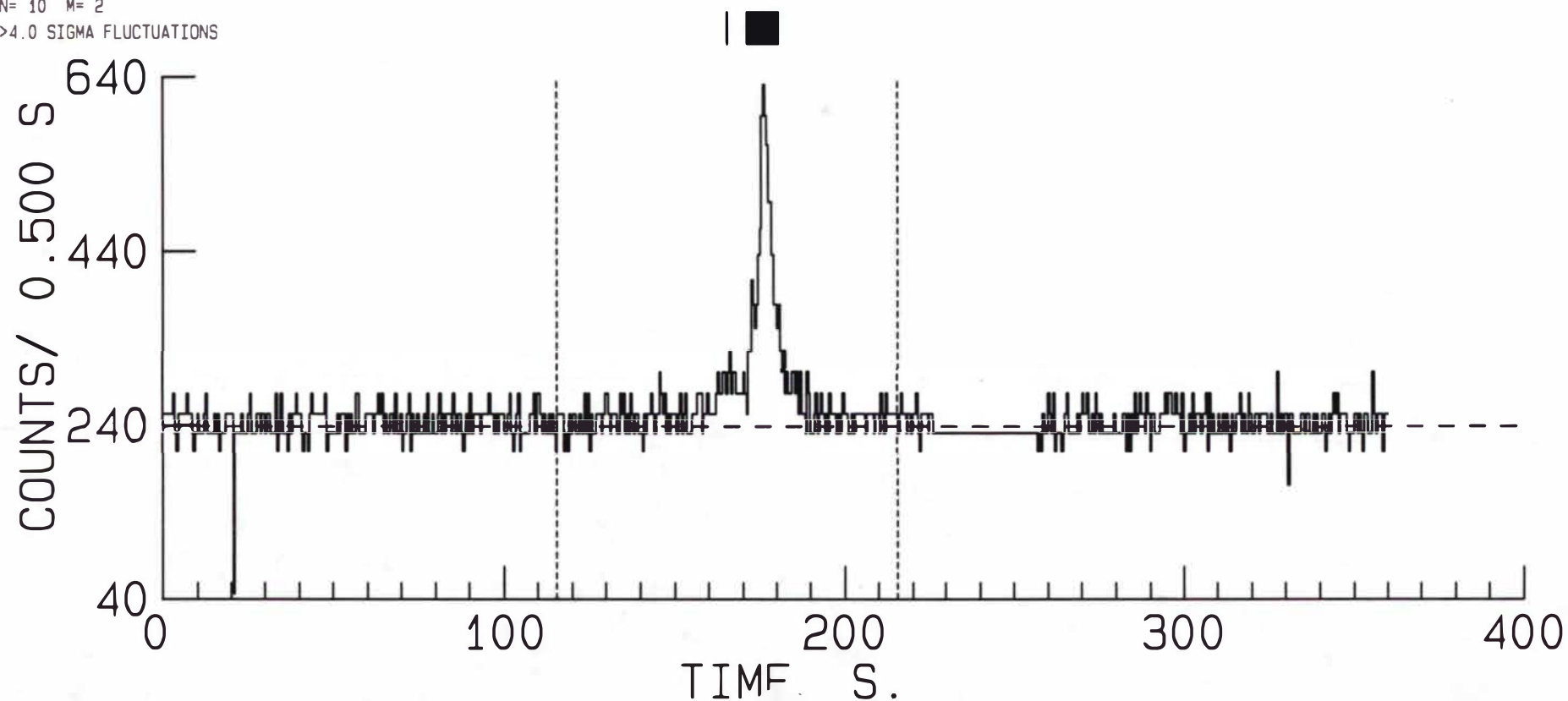
31 / 3/99



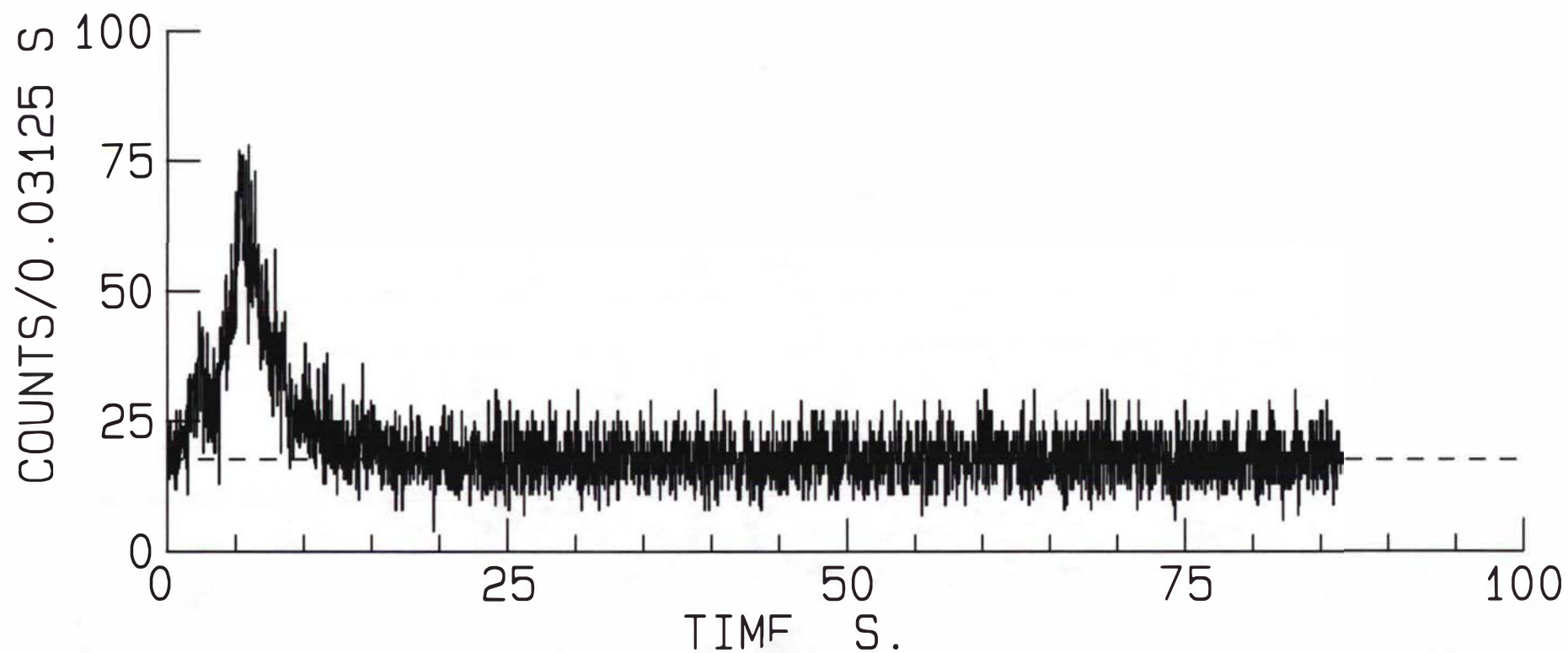
ULYSSES RT
4/ 9/92 252.228 s
22- 149 keV

31 / 3 / 99

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



PHEBUS
3/ 9/92 84539.400 s
100- 1600 keV



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

Aug 17 '93

506	509	512	480	496	507	515	461	506	505
507	544	477	496	511	516	529	515	500	537
533	499	510	518	497	505	491	541	498	481
497	503	495	503	478	493	496	499	501	494
474	531	498	484	528	522	505	505	507	500
516	504	491	500	516	531	499	506	495	489
509	517	525	497	523	503	528	465	530	506
504	508	525	476	558	529	514	521	462	521
515	511	533	540	547	525	550	518	506	524
501	483	509	492	495	492	489	511	536	465
512	492	539	524	522	507	538	515	498	512
531	527	521	565	495	484	469	532	530	486
495	521	489	542	511	463	508	527	542	492
529	480	504	488	495	522	495	533	475	521
513	511	513	526	521	514	497	532	498	492
500	521	508	474	477	462	488	531	544	528
514	502	477	513	490	522	530	504	505	514
501	499	535	530	554	519	518	490	536	494
511	480	472	499	493	524	518	526	491	505
523	488	523	527	516	491	510	523	518	489
501	470	466	492	542	523	537	483	485	487
524	468	473	536	495	557	537	487	527	516
495	463	546	511	503	465	468	523	537	549
515	516	482	528	486	520	528	496	500	485
505	501	496	558	515	495	509	523	519	501
521	436	484	514	519	517	517	492	554	479
495	523	503	508	491	506	486	507	524	488
517	444	475	521	489	499	503	504	503	503
508	497	535	529	522	485	514	482	489	503
533	496	536	511	531	500	499	501	514	492
515	534	494	544	478	511	502	498	521	511
516	527	508	488	528	500	501	551	502	511
507	498	505	503	514	508	508	520	498	527
539	467	503	491	449	514	553	498	498	536
494	497	484	522	535	504	529	512	502	545
508	529	510	511	516	488	528	535	489	504
541	492	510	475	544	530	516	490	520	516
494	565	478	509	529	503	611	1393	1132	574
529	515	550	502	531	547	491	505	490	517
517	513	535	514	504	503	521	537	443	539
519	551	506	520	518	525	522	518	474	502
505	571	492	504	536	494	533	545	498	522
549	507	493	510	524	518	500	528	484	551
495	533	526	508	522	527	517	508	524	509
514	485	515	526	504	560	480	508	539	517
549	579	543	522	534	500	516	495	523	523
491	507	552	506	495	494	492	478	472	532
547	507								

GRB 920903A WATCH data. (W6173)

Low energy count rate (6-15 keV)

UT start time: ' 1992 09 03 01:16:03.701

UT end time: ' 1992 09 03 01:47:18.538

Channel width: 3.66178 s

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1218	1189	1211	1180	1200	1240	1205	1235	1150	1190
1191	1219	1191	1202	1198	1178	1123	1259	1157	1200
1238	1264	1258	1208	1220	1240	1218	1213	1222	1213
1216	1190	1194	1146	1202	1217	1275	1138	1218	1261
1250	1247	1180	1177	1252	1201	1205	1193	1145	1258
1200	1206	1221	1156	1193	1188	1222	1209	1206	1179

1202	1240	1261	1273	1205	1143	1224	1205	1220	1284
1185	1258	1206	1220	1221	1229	1240	1261	1186	1187
1169	1271	1288	1213	1227	1205	1242	1230	1242	1224
1177	1281	1192	1214	1195	1199	1184	1176	1218	1210
1181	1209	1218	1240	1185	1272	1209	1173	1180	1252
1209	1169	1153	1217	1146	1138	1161	1263	1230	1221
1193	1223	1244	1273	1251	1281	1200	1193	1248	1172
1172	1233	1145	1204	1191	1271	1190	1225	1213	1210
1205	1193	1238	1190	1315	1160	1214	1242	1204	1209
1193	1254	1154	1208	1209	1214	1166	1229	1230	1206
1183	1207	1206	1187	1186	1255	1234	1236	1278	1256
1276	1183	1206	1250	1252	1220	1184	1191	1252	1279
1168	1235	1164	1208	1181	1172	1233	1233	1207	1264
1204	1222	1274	1206	1217	1258	1258	1254	1247	1234
1253	1213	1253	1221	1206	1212	1233	1275	1160	1267
1163	1256	1257	1257	1233	1192	1192	1234	1216	1178
1213	1274	1233	1199	1226	1184	1165	1230	1206	1200
1233	1289	1255	1168	1184	1257	1256	1212	1193	1267
1197	1252	1251	1222	1178	1223	1185	1257	1166	1177
1292	1177	1179	1274	1287	1144	1177	1224	1204	1245
1210	1207	1216	1167	1220	1192	1208	1249	1187	1206
1270	1202	1253	1216	1222	1234	1179	1201	1280	1196
1268	1244	1207	1173	1279	1235	1289	1200	1165	1188
1206	1186	1163	1186	1164	1180	1207	1222	1190	1205
1238	1286	1202	1241	1172	1283	1236	1241	1239	1250
1245	1256	1164	1266	1181	1235	1304	1127	1203	1249
1313	1261	1244	1343	1276	1332	1310	1345	1296	1317
1360	1386	1306	1309	1300	1298	1325	1276	1253	1225
1263	1303	1261	1295	1249	1283	1248	1377	1338	1232
1241	1253	1289	1241	1315	1297	1281	1267	1212	1334
1298	1243	1223	1188	1213	1176	1207	1209	1205	1240
1260	1168	1232	1193	1183	1160	1251	1225	1248	1246
1252	1222	1272	1249	1229	1230	1185	1201	1229	1213
1207	1236	1225	1250	1233	1188	1228	1194	1203	1195
1216	1232	1174	1259	1243	1261	1242	1248	1244	1224
1196	1254	1135	1177	1194	1217	1260	1191	1215	1198
1225	1226	1267	1177	1211	1157	1235	1196	1250	1163
1298	1141	1182	1224	1164	1200	1275	1210	1179	1153
1170	1238	1184	1233	1217	1266	1184	1198	1235	1173
1196	1205	1165	1223	1292	1254	1232	1161	1305	1192
1213	1213	1196	1226	1270	1161	1271	1191	1235	1217
1227	1203	1256	1268	1201	1234	1169	1194	1175	1229
1194	1225	1250	1255	1199	1200	1230	1291	1196	1243
1225	1186	1216	1210	1176	1201	1224	1184	1174	1293
1207	1259	1236	1181	1129	1276	1248	1153	1174	1204
1212	1151								

Medium energy count rate (15-180 keV)

UT start time: ' 1992 09 03 01:16:03.701

UT end time: ' 1992 09 03 01:47:18.538

Channel width: 3.66178 s

492	516	531	483	546	512	469	479	503	562
509	518	537	504	540	486	494	505	507	518
526	509	530	501	512	519	537	511	519	485
499	500	537	517	548	568	479	559	491	502
487	527	517	473	526	524	466	503	539	542
521	533	528	501	471	517	531	522	521	507
485	547	528	497	541	502	514	518	486	497
509	529	510	509	517	494	556	499	510	493
564	512	514	480	520	526	520	555	534	540
490	517	502	502	489	515	524	516	521	531
524	543	511	524	513	513	531	528	504	530
553	498	519	531	507	516	523	537	490	531
512	502	555	518	531	539	523	530	526	544
515	478	508	466	534	535	517	539	537	518

534	568	482	505	552	544	540	518	501	480
512	533	509	481	508	514	531	520	540	497
526	491	508	502	526	538	528	504	485	543
518	541	501	490	518	522	516	566	511	498
525	501	542	490	484	544	559	535	527	535
481	503	528	516	516	548	473	531	514	512
509	514	501	494	549	540	535	509	508	550
469	526	486	544	520	511	531	472	509	495
540	545	514	537	509	536	533	521	523	477
543	549	529	492	526	550	512	482	539	536
521	519	480	525	495	531	500	457	530	472
538	514	498	516	585	507	552	539	507	550
500	553	522	542	515	523	516	551	528	508
562	512	530	526	515	552	521	535	567	530
521	516	515	566	539	451	520	502	541	504
521	511	551	498	462	501	535	520	542	584
494	510	513	521	567	542	528	529	516	533
525	499	539	485	499	526	512	513	538	529
572	574	579	644	582	655	619	627	634	629
639	702	693	574	587	641	599	554	550	540
604	619	541	515	540	541	544	659	566	510
509	553	537	547	522	523	528	541	505	531
531	529	512	514	504	456	487	536	548	497
506	501	559	552	523	522	546	535	523	509
564	525	515	534	539	530	564	507	536	466
540	503	515	492	551	502	500	531	507	516
500	486	536	500	486	523	534	537	548	546
557	495	535	518	515	513	494	486	487	516
500	497	518	510	523	505	521	528	492	522
497	475	489	516	491	540	523	500	508	455
519	521	485	546	526	519	535	510	515	517
481	503	509	511	490	532	528	492	546	498
521	503	517	549	484	528	512	547	516	492
488	519	498	525	476	485	478	518	476	534
522	552	497	509	499	505	532	503	520	517
524	510	477	504	508	511	571	504	520	524
530	511	515	514	566	526	522	490	505	548
507	554								

GRB 920903B WATCH data. (W6183)

Low energy count rate (6-15 keV)

UT start time: ' 1992 09 03 23 28 36.985

UT end time: ' 1992 9 03 23 32 31.551

Channel width: 0.9164 s

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327	337	306	315	316	335	304	317	313	327
312	310	332	348	330	326	351	326	397	405
376	365	346	393	394	414	416	429	531	517
594	756	694	647	602	491	488	426	444	388
372	474	420	376	391	349	331	380	348	357
333	357	322	288	305	289	331	317	296	308
315	322	325	301	319	331	314	343	320	321
313	334	323	321	298	327	310	338	296	338
343	328	325	306	328	300	318	290	309	299
309	325	314	347	338	271	341	325	304	330
310	311	302	345	342	353	334	310	337	294
307	307	327	321	325	309	328	328	315	356
335	328	338	369	346	328	304	302	324	306
285	311	301	324	316	320	318	335	318	316
337	328	329	316	320	286	336	317	324	350

319	290	283	356	293	286	298	302	329	325
336	299	351	306	299	332	281	320	326	275
329	311	318	325	308	342	328	326	331	309
313	341	296	349	324	325	288	317	310	291
341	322	326	308	288	327	314	329	337	320
310	346	299	338	287	297	344	349	329	331
294	324	330	322	325	361	309	315	327	352
341	293	308	292	285	332	296	328	326	300
332	286	314	346	304	303	296	309	324	305
331	314	312	300	324	303	325	314	338	299
311	350	363	303	313	334				

Medium energy count rate (15-180 keV)

UT start time: ' 1992 09 03 23 28 36.985

UT end time: ' 1992 9 03 23 32 31.551

Channel width: 0.9164 s

163	167	170	170	161	147	167	196	169	181
158	149	167	182	161	180	205	172	209	183
199	171	180	201	168	196	184	284	363	329
452	706	556	493	366	300	302	217	258	206
225	219	220	182	185	181	153	168	164	155
163	165	186	162	163	172	184	175	152	159
159	166	136	157	174	138	169	159	164	168
166	173	178	149	149	146	147	160	163	156
169	180	141	152	144	150	156	170	159	171
159	146	159	164	144	154	174	157	152	172
167	173	150	159	165	161	161	159	157	181
168	153	166	172	154	158	166	166	166	153
156	133	160	169	154	156	168	160	160	162
149	154	141	152	138	188	162	157	150	165
143	138	152	177	159	150	142	147	181	164
188	178	165	153	138	154	154	160	135	144
147	174	152	165	127	134	188	141	153	146
166	151	174	162	130	164	162	168	160	146
125	164	137	179	163	147	150	164	154	168
155	147	147	166	143	147	135	133	156	158
137	162	149	150	151	137	168	142	141	142
179	148	140	158	168	144	126	150	156	160
153	153	158	159	178	145	163	158	154	162
141	166	138	146	140	178	140	169	147	147
143	158	152	154	170	155	146	162	153	141
177	182	156	146	164	184				

Low energy count rate (6-15 keV) (PH.ch. 0-6)

UT start time: 1992 09 03 23:29:04.462

UT end time: 1992 09 03 23:29:18.288

channel width: 24.685 ms

NOTE: The channel width given is the mean over the data shown, it does not exactly match 1/32 of the channel width corresponding to the rotation rate. This is due to small variations in the motor speed. The difference amounts to an error of 12 ms when one tries to calculate the start time of the high time resolution data using the timing of the "1 rotation" count rate data shown above. Errors of magnitude 10-20 ms are to be expected on all normal WATCH count rate data. (Data with time resolutions of 1, 4, 8 or 16 motor rotations). For high time resolution data the errors due to fluctuations in the motor speed are not likely to exceed a few ms.

14	14	20	16	14	25	21	17
11	20	12	19	17	12	20	20
11	21	27	19	26	16	12	15
16	15	21	30	22	17	24	13
19	26	20	25	18	23	24	21

24	21	17	20	19	20	21	13
26	17	27	24	18	15	11	23
20	18	19	22	23	19	28	21
19	18	15	25	24	33	26	22
22	26	18	11	19	29	18	17
20	19	29	23	22	18	24	23
20	17	28	21	26	24	11	21
19	23	15	18	16	32	23	24
16	24	18	10	17	18	17	19
24	18	19	18	19	21	18	18
16	21	18	21	16	17	19	18
16	21	20	22	23	21	31	13
20	18	21	14	12	16	13	19
19	17	16	13	17	20	17	14
13	16	17	19	14	14	14	9
12	13	16	8	20	18	14	12
15	17	13	14	10	15	20	17
21	14	17	16	9	25	21	11
15	17	17	21	17	16	16	14
14	15	16	16	14	14	14	11
21	19	12	12	11	11	11	16
20	14	9	10	12	14	9	17
15	13	10	18	13	12	15	14
13	22	11	11	14	15	11	8
13	8	16	6	9	20	10	8
17	16	15	13	22	12	14	15
16	16	14	20	12	13	13	18
8	19	15	16	12	18	11	13
14	15	11	11	8	9	18	17
14	8	17	11	8	8	13	15
7	14	15	14	13	8	14	10
14	10	20	12	12	15	11	11
10	15	7	9	13	12	10	13
9	14	9	12	15	9	7	11
13	12	10	8	5	11	20	18
14	16	7	14	18	15	9	12
13	10	14	10	12	9	4	8
16	11	11	10	9	15	13	14
12	11	16	17	16	14	14	16
17	22	14	13	15	25	16	12
15	14	10	10	19	14	17	11
9	14	17	23	11	19	18	7
11	9	12	11	19	9	8	17
15	17	8	11	16	21	12	10
10	11	13	14	9	17	12	16
13	14	11	11	11	17	10	13
17	6	12	10	8	14	15	7
12	12	11	12	12	14	15	11
14	12	11	13	7	18	11	8
8	9	10	13	11	11	10	12
9	11	17	15	7	15	11	16
20	6	15	15	12	12	11	15
11	15	5	10	12	16	15	6
14	6	12	14	11	7	9	14
12	10	16	13	7	11	14	10
6	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0

Low energy count rate (15-60 keV) (PH.ch. 7-49)

UT start time: 1992 09 03 23:29:04.462

UT end time: 1992 09 03 23:29:18.288

channel width: 24.685 ms

12	18	7	6	12	12	11	19
17	9	15	9	12	11	17	15

10	12	21	12	16	17	11	9
13	16	13	14	14	16	16	22
14	18	15	21	21	23	23	17
17	13	25	14	17	25	20	28
25	19	18	21	20	21	20	15
9	18	20	17	15	18	19	16
23	18	16	18	17	18	19	15
24	18	14	11	10	12	12	17
14	13	11	9	21	17	16	17
15	16	16	14	15	15	18	8
14	13	17	19	22	14	20	20
12	12	9	18	13	10	13	16
12	18	7	11	6	7	14	17
11	12	13	11	11	12	17	10
12	7	11	14	9	5	8	7
10	7	13	11	5	5	10	11
7	13	13	14	6	9	13	12
8	9	4	11	10	8	8	11
9	6	13	9	10	5	6	7
9	10	5	11	9	8	7	10
8	8	8	5	8	9	7	5
5	4	9	9	9	6	11	12
8	15	12	8	5	7	4	8
13	5	10	8	4	12	10	7
14	8	7	10	8	8	1	17
3	5	4	10	5	6	4	7
4	4	6	9	3	3	5	6
5	4	14	4	3	8	7	5
4	6	8	6	9	8	10	8
8	2	6	9	7	4	7	9
1	7	11	8	12	13	12	6
8	8	10	5	5	11	4	4
7	4	10	5	2	6	5	5
5	7	5	4	6	4	6	8
5	11	5	8	6	3	3	7
9	6	7	4	6	1	7	6
5	1	4	5	9	5	8	11
4	6	6	7	6	3	12	6
3	6	5	3	10	4	4	8
5	6	9	5	6	8	3	6
7	6	12	7	5	9	4	9
6	4	6	4	3	7	7	6
8	4	11	7	4	7	3	4
8	3	4	7	5	9	7	3
3	7	4	9	7	9	6	8
9	8	5	4	6	5	6	8
3	6	7	7	9	6	6	4
4	9	11	7	6	6	6	4
4	3	4	5	7	3	4	4
5	7	4	2	7	10	5	6
4	3	3	8	4	2	4	6
3	3	8	9	3	3	4	1
8	5	5	6	6	9	4	3
3	4	2	5	11	3	6	6
4	8	3	8	4	7	3	1
7	6	5	4	4	6	3	5
4	7	3	4	10	5	1	3
7	2	6	5	6	5	5	4

Low energy count rate (60-180 keV) (PH.ch. 50-127)

UT start time: 1992 09 03 23:29:04.462

UT end time: 1992 09 03 23:29:18.288

channel width: 24.685 ms

7	7	5	5	5	2	3	5
4	7	5	0	5	3	2	6
5	1	7	5	6	6	1	13

6	8	8	8	6	1	5	9
7	14	2	3	5	4	3	5
6	8	9	5	9	5	6	9
2	6	6	6	4	3	7	2
3	4	5	4	6	7	8	5
5	5	2	8	9	3	4	5
10	4	8	8	10	7	4	4
3	6	6	9	7	6	6	5
6	8	4	9	12	4	3	10
5	5	8	7	5	5	5	6
7	7	5	5	8	4	4	5
7	5	4	6	10	8	6	9
4	3	3	6	8	5	7	4
4	5	4	9	6	7	3	4
5	3	4	2	5	6	4	8
2	6	9	7	3	6	9	7
5	3	3	1	5	6	8	5
12	6	3	4	5	8	4	5
6	10	8	8	1	8	6	3
6	11	7	2	5	3	2	6
5	3	9	8	7	4	8	3
7	7	9	4	6	5	7	10
5	7	9	6	10	8	7	12
9	6	4	5	2	4	4	8
4	3	3	4	6	5	2	7
9	7	5	7	4	6	7	5
7	5	5	5	3	9	3	8
5	6	6	4	9	4	4	7
6	7	7	7	8	10	10	6
4	8	5	7	8	5	4	7
7	5	4	5	4	7	8	3
6	2	4	5	12	7	10	3
6	2	5	8	6	6	6	5
6	10	3	7	7	6	4	7
3	3	5	4	5	6	6	4
3	7	0	4	8	6	5	4
5	3	6	4	3	6	13	5
11	5	12	4	9	2	4	2
4	8	4	3	6	7	5	6
2	7	6	9	8	1	1	6
4	5	7	5	9	6	7	13
3	5	4	3	7	8	7	3
4	7	7	2	4	3	5	10
6	7	4	4	7	6	4	7
6	6	5	3	7	12	9	6
1	10	5	3	5	6	10	7
4	3	7	5	6	9	9	3
7	6	5	7	5	4	6	10
4	12	4	2	1	8	4	5
3	6	3	6	5	6	6	4
6	6	4	6	3	6	3	3
4	10	14	6	4	9	5	5
4	5	9	6	6	5	4	10
6	9	7	7	5	5	6	6
4	6	8	5	11	3	9	6
7	3	3	7	4	10	4	4
7	6	8	4	4	5	5	6
2	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0

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

Version 2.1 Aug. 17. 1993.

From MEEGAN@ssl.msfc.nasa.gov Fri Sep 4 12:55:18 1992
Date: Fri, 4 Sep 1992 14:56:13 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01889

TIME: TJD=8868 SECONDS=10874

TYPE: PARTICLES SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT.

WATCH

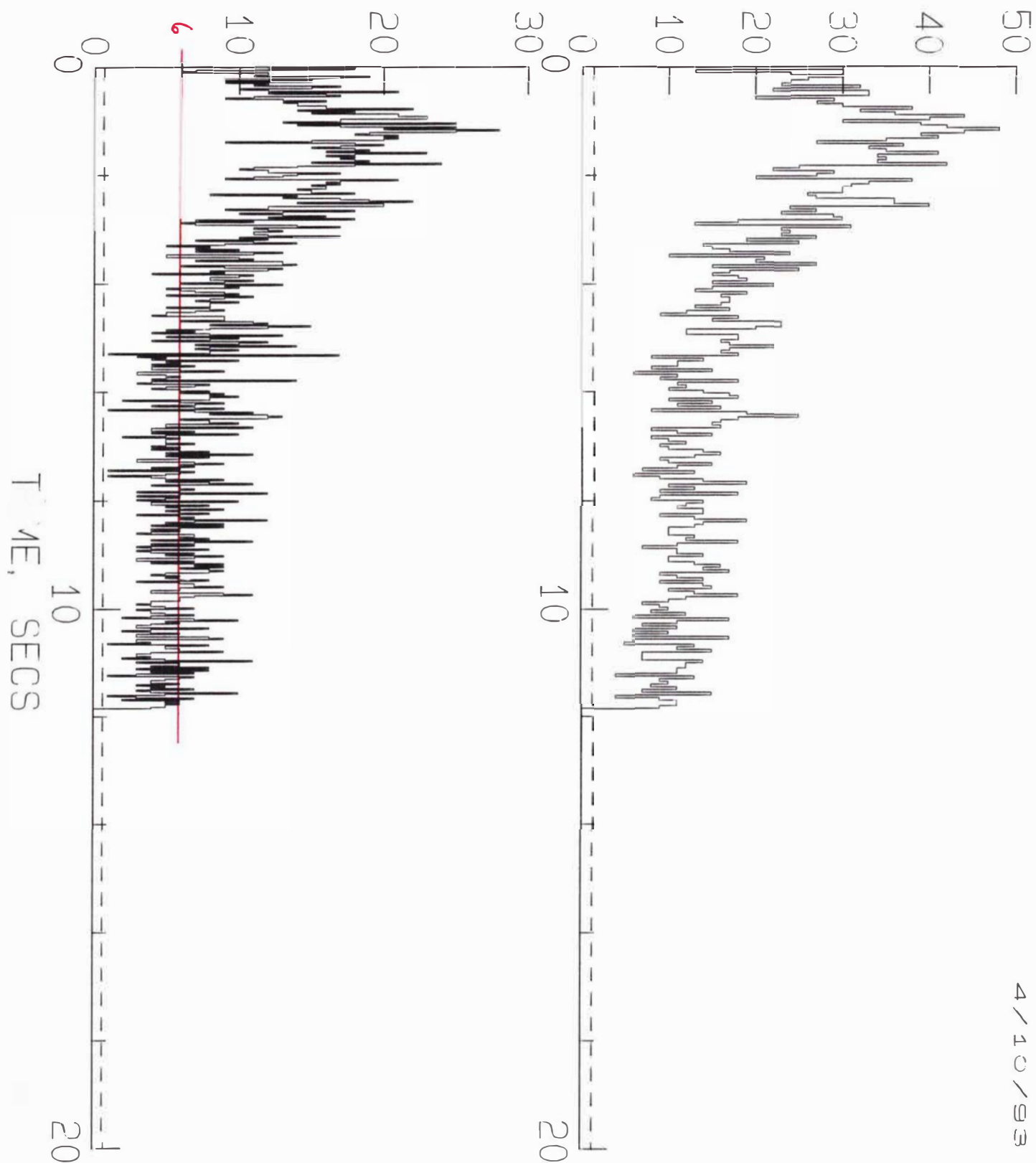
03/09/92

84544.462

15- 60 keV

COUNTS/ .025 S

COUNTS/ .049 S



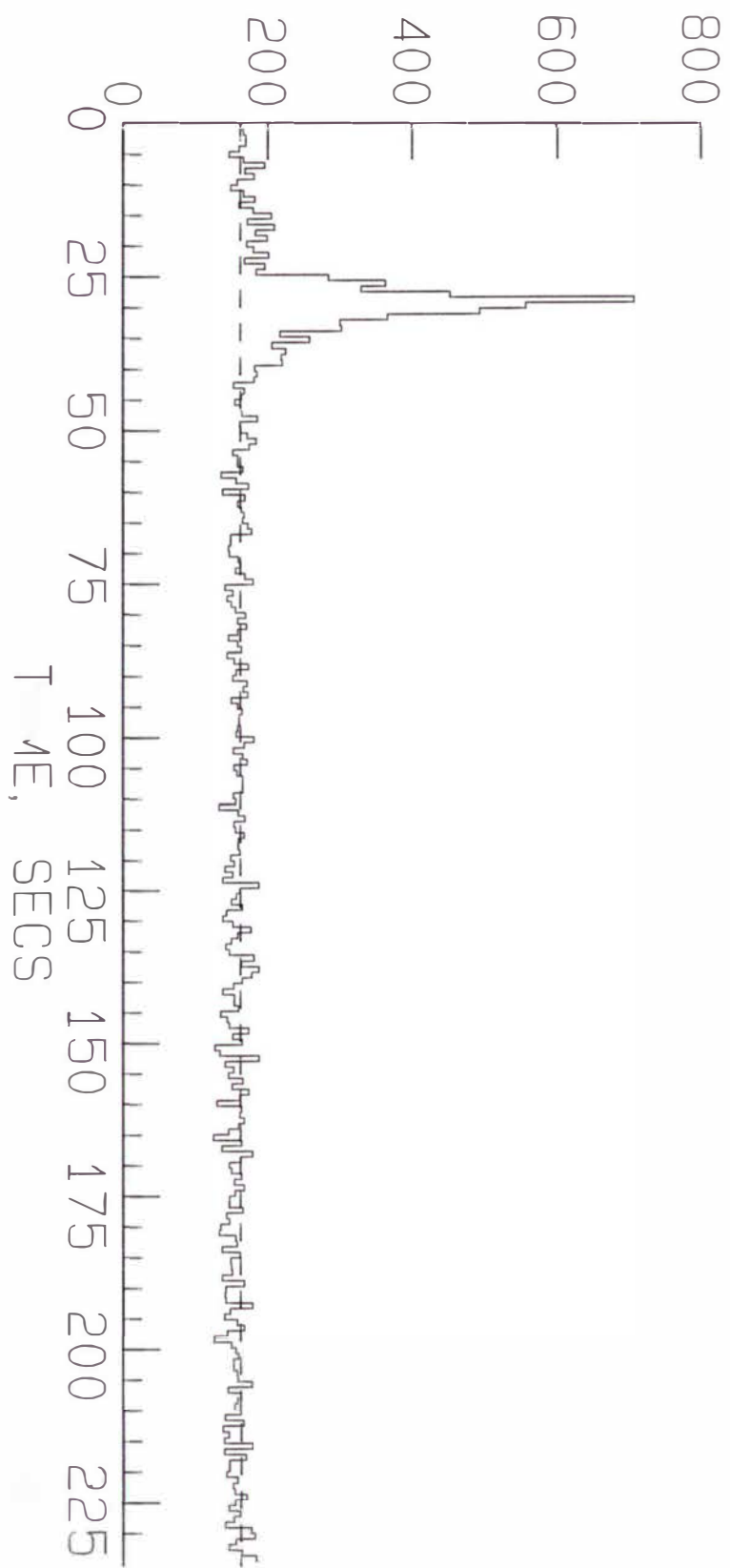
WATCH

03/09/92

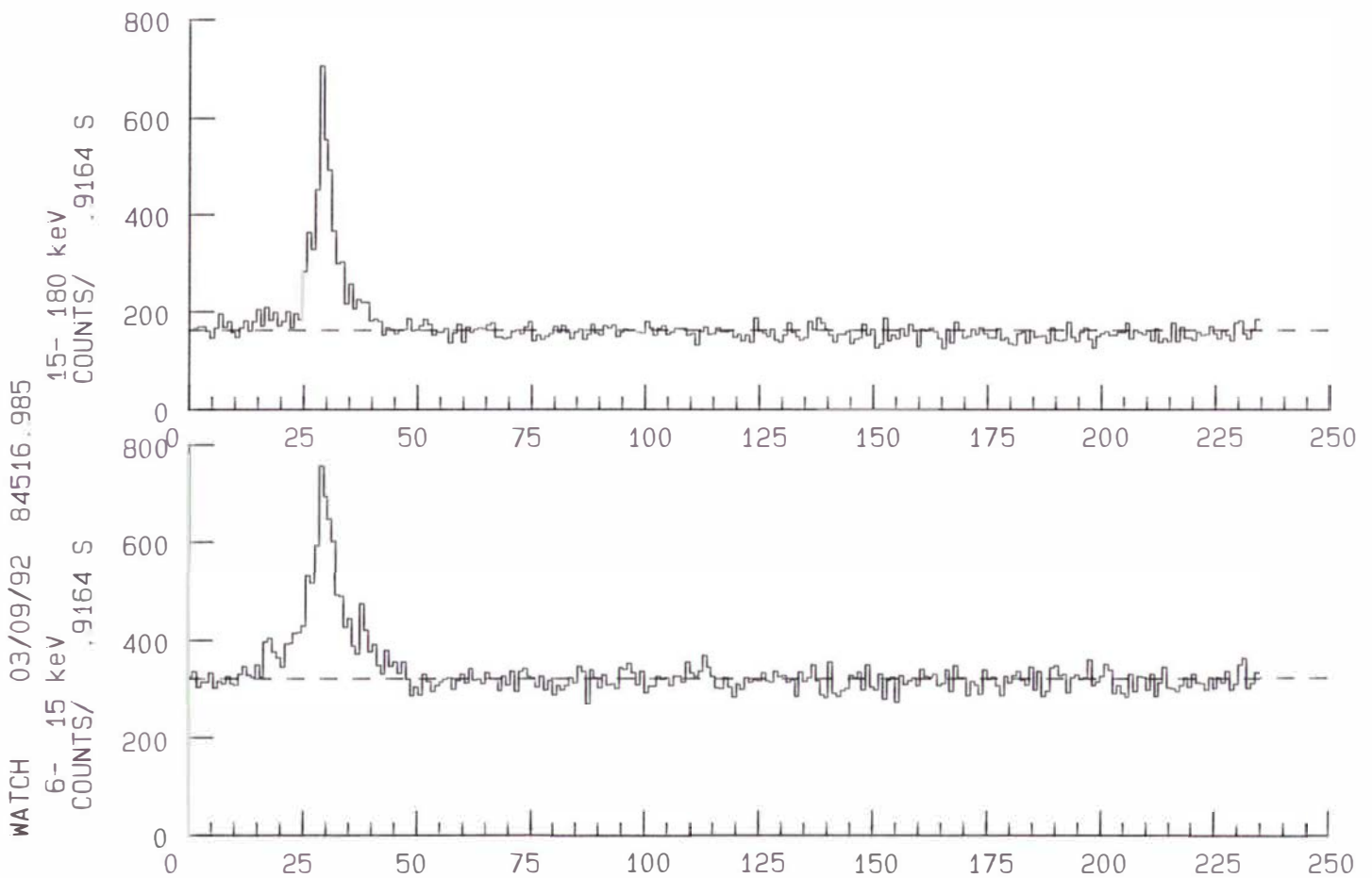
84516.985

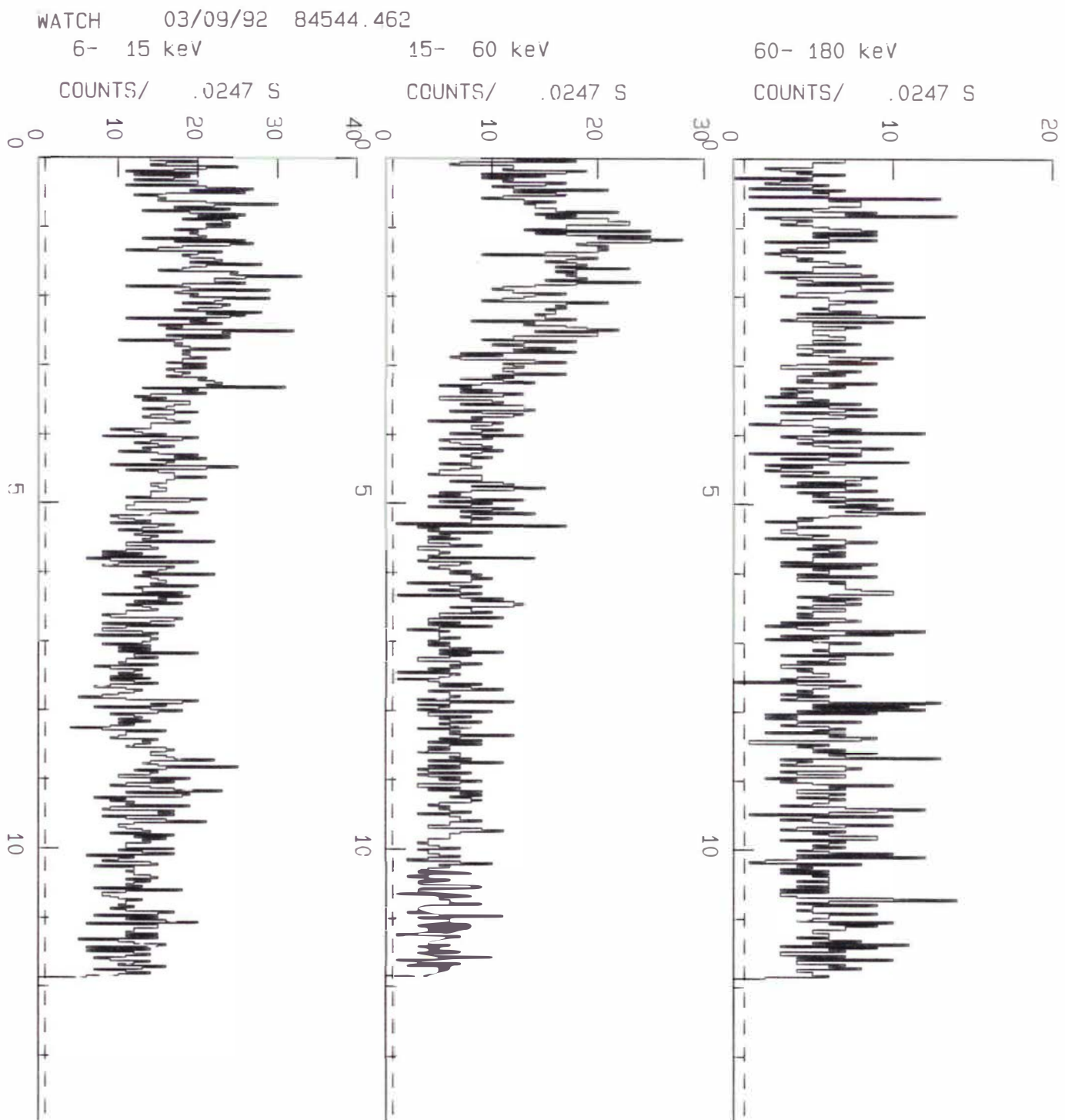
15- 180 keV

COUNTS/ .916 S



4/10/93





From @space6.ssl.berkeley.edu,@cmsa.berkeley.edu:X024862@JPNRKY00.BITNET Wed Dec 16 04:28:08 J
Date: 16 DEC 1992 21:06:34 JST
From: <X024862@JPNRKY00.BITNET@cmsa.berkeley.edu>
Subject: Yohkoh GBD data
To: <khurley@space6.ssl.berkeley.edu>
Content-Length: 789

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

Dear Dr. Hurley:

I am sending the Yohkoh GBD data of following five events.

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

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

That's all.

I hope our data are helpful to you.

With best regards,

Masato Yoshimori

Acknowledge-To: <X024862@JPNRKY00>

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

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

Dear Dr. Hurley:

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

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

Date (Day/Month/Year)	UT (hh:mm)	Comment
27/11/91* U B	04:22	HXS <i>d: 5</i>
✓09/12/91	18:36	HXS/RBM <i>17:40 + 50</i>
21/12/91* No U B	06:17	HXS/RBM
18/02/92* U-BE No B	18:44	HXS
✓06/04/92	02:45	HXS/RBM
19/04/92* No U B	01:22	HXS/RBM
19/05/92* U-BE No B	16:30	HXS/RBM
17/06/92* B U-BE	05:29	HXS
✓22/06/92	07:05	HXS/RBM
01/07/92* No U B	19:39	HXS
11/07/92 U	16:09	HXS/RBM
✓31/07/92	17:07	HXS/RBM
16/08/92 No U B	12:36	HXS
✓24/08/92	10:56	HXS/RBM
✓03/09/92	23:29	HXS

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

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

With best regards,

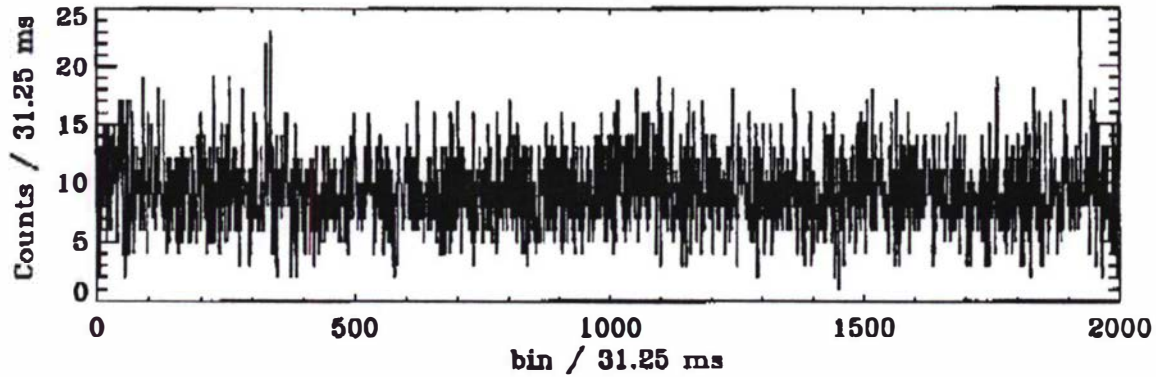
Masato Yoshimori

Acknowledge-To: <X024862@JPNRKY00>

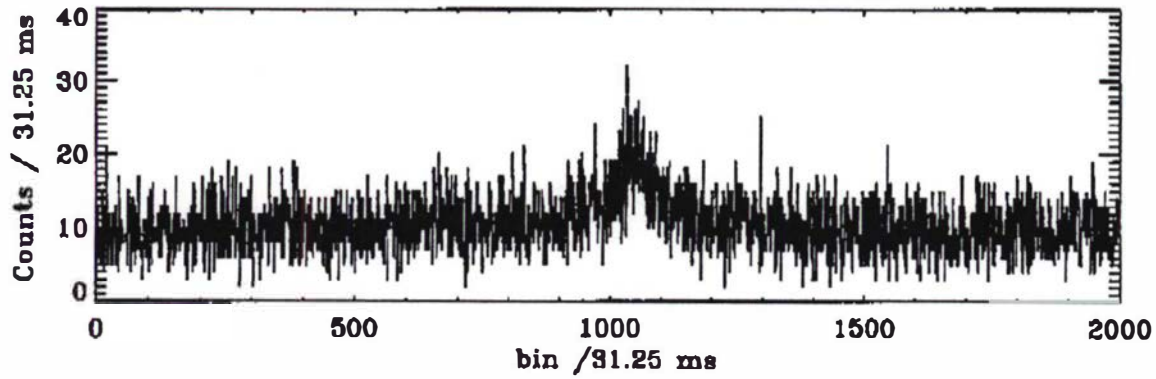
10/19

Yohkoh

GB920903 RBM PC TIME PROFILE



GB920903 HXS PC TIME PROFILE



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

Dear Dr. Yoshimori

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

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

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

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

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

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

1992 Sep 3 23:29: Observed by Ulysses on September 4. Apparently no other observations. No - WATCH,
PHEBUS

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

Best regards,

Kevin Hurley

M. Yoshimori

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

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

Dear Dr. Hurley:

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

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

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

Thank you in advance for it.

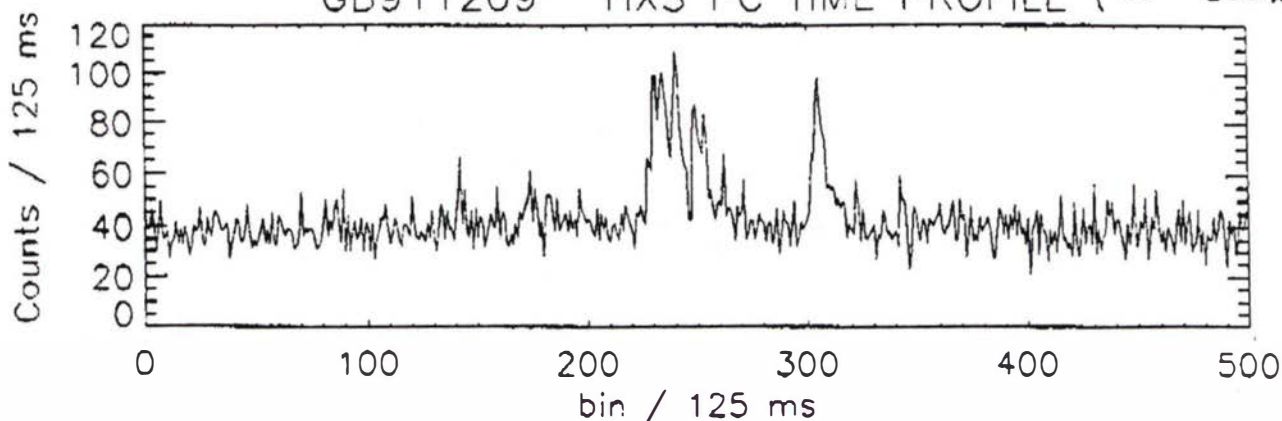
With best regards,

Masato Yoshimori

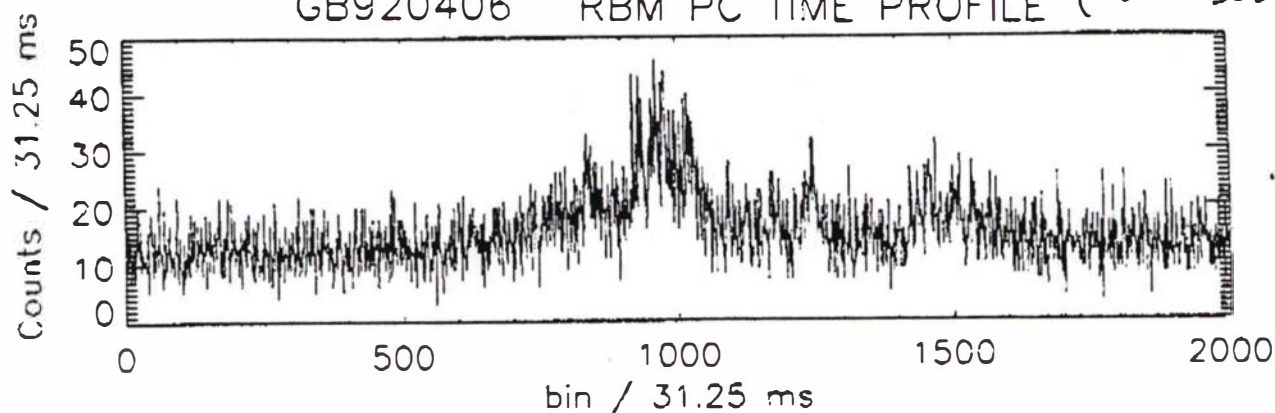


7/2

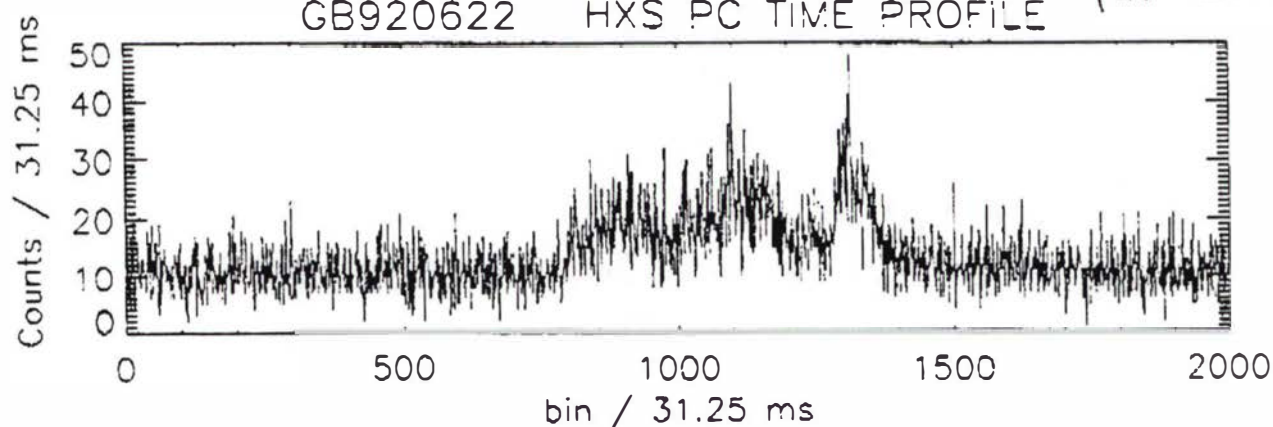
GB911209 HXS PC TIME PROFILE (20-600keV)



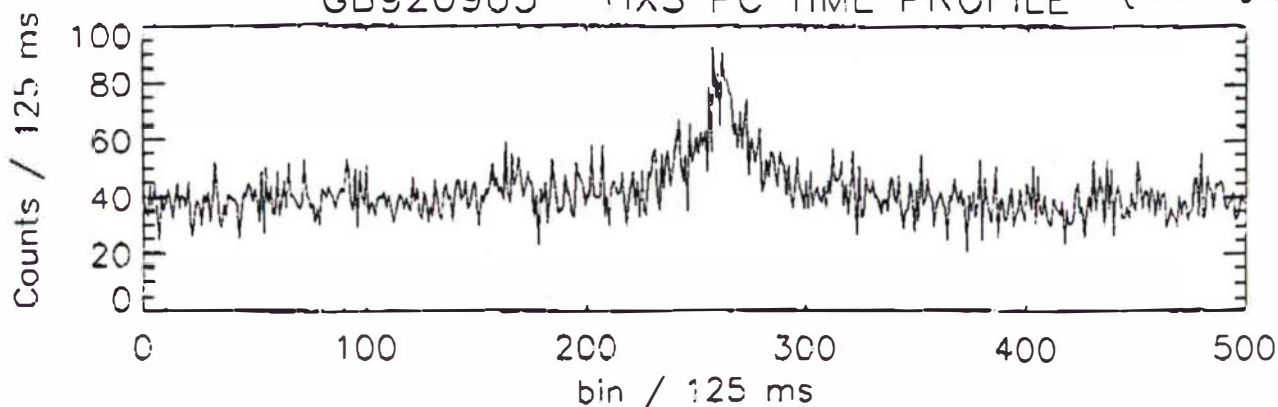
GB920406 RBM PC TIME PROFILE (10-300keV)



GB920622 HXS PC TIME PROFILE (20-600keV)



GB920903 HXS PC TIME PROFILE (20-600keV)



From khurley@space6.ssl.berkeley.edu Tue Dec 15 16:52:38 1992

Date: Tue, 15 Dec 92 16:46:51

From: khurley@space6.ssl.berkeley.edu

Content-Length: 1193

get Venus crossing times
Fax to Robin

Dear John,

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

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

August

10	77700	-----
13	11000	12828 N/O
16	42600	45360 N/O
17	15055	-----
19	40612	-----
22	84184	----- DMSP 8:542 (3 sun lt)
24	38400	39183 N/O DMSP (2)
27	85245	-----
29	30755	-----
29	63712	-----
30	05800	06318 N/O
30	32310	-----

September

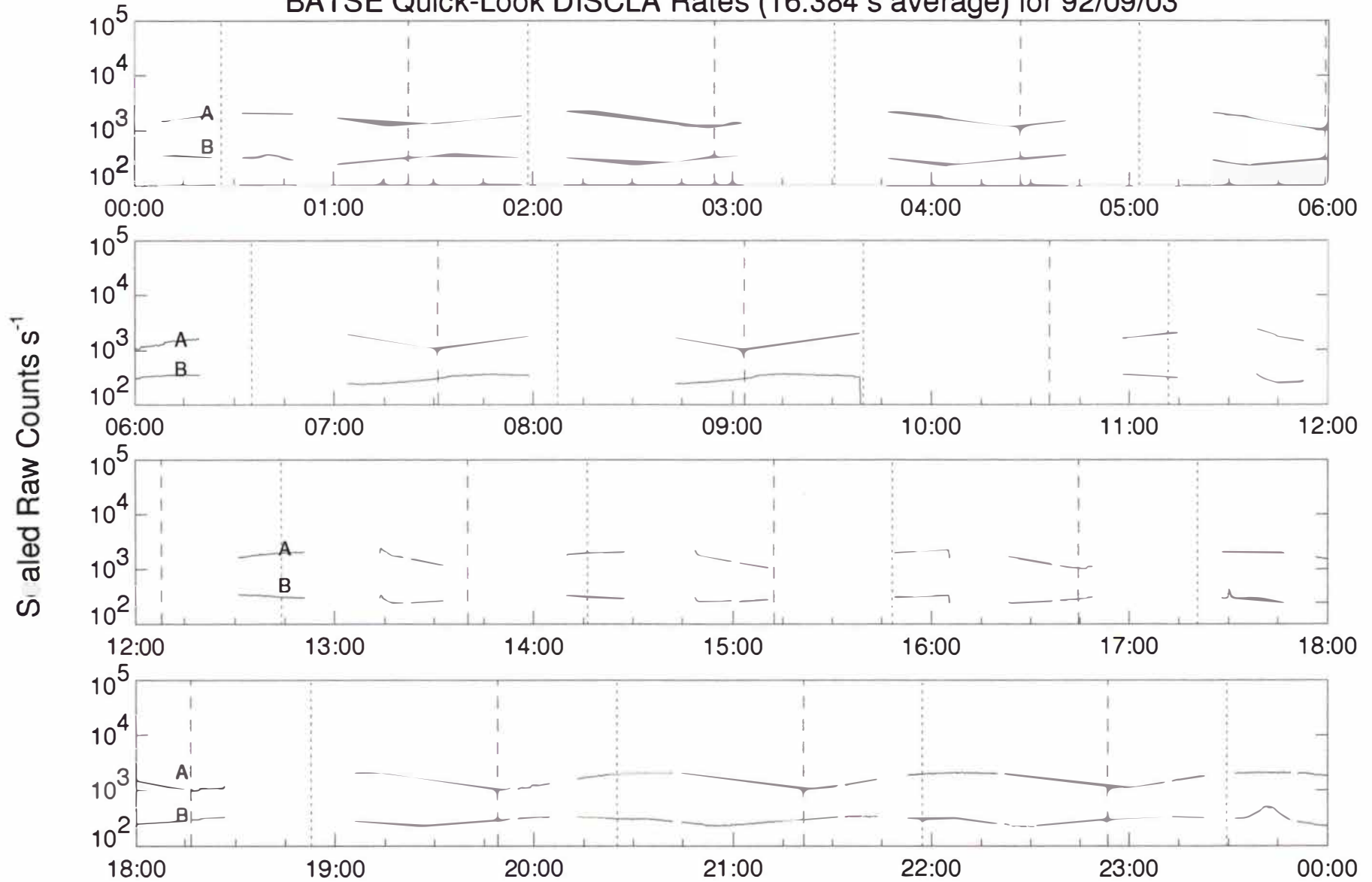
1	04311	----- (solar?)
2	03230	----- DMSP (3) ~01743
3		84540 N/O
4	00420	----- Same as previous event
19	28450	----- (solar?)
21	00060	-----

October

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

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

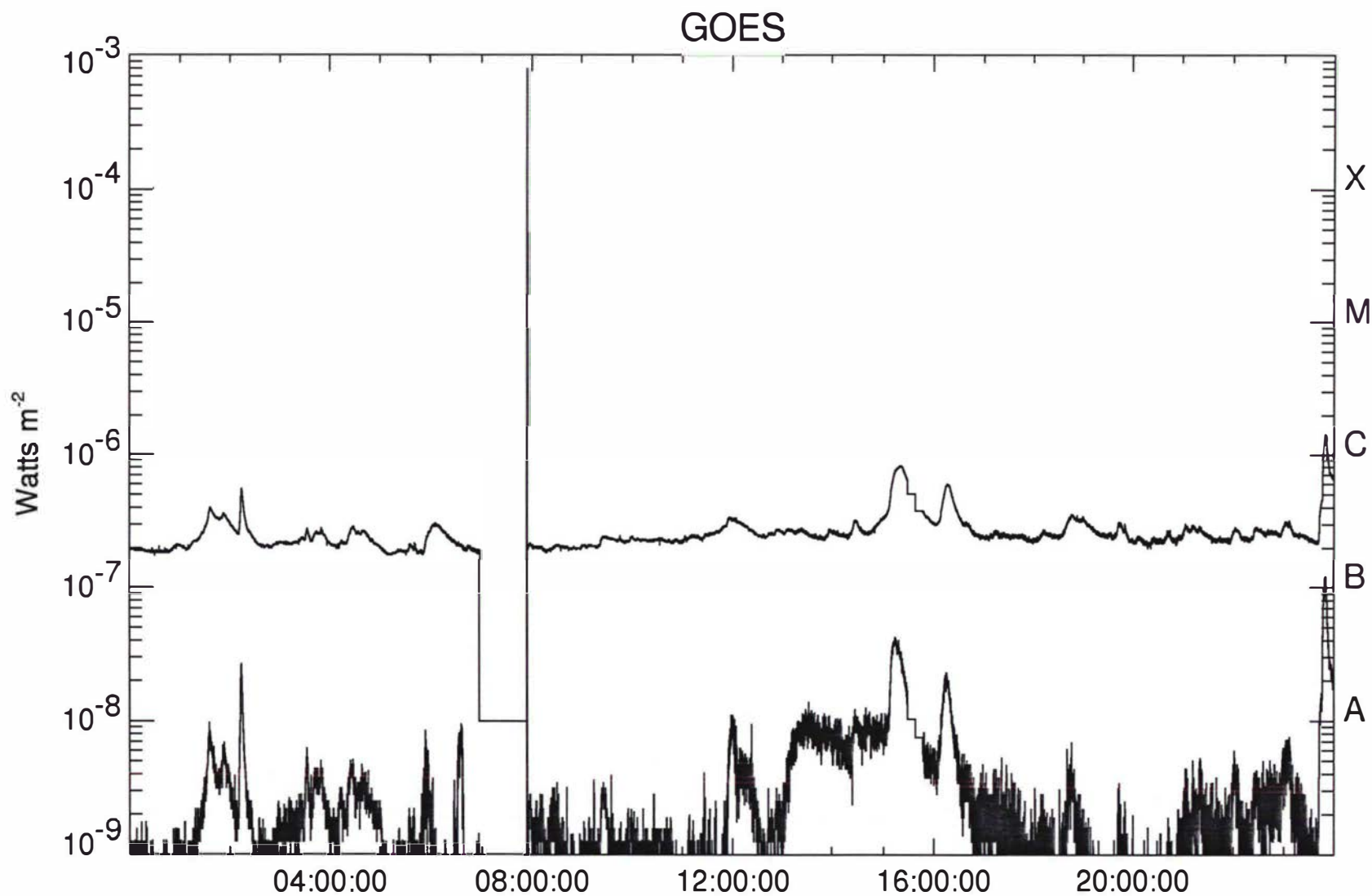
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/03



Current Time: 92/09/29, 0227 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



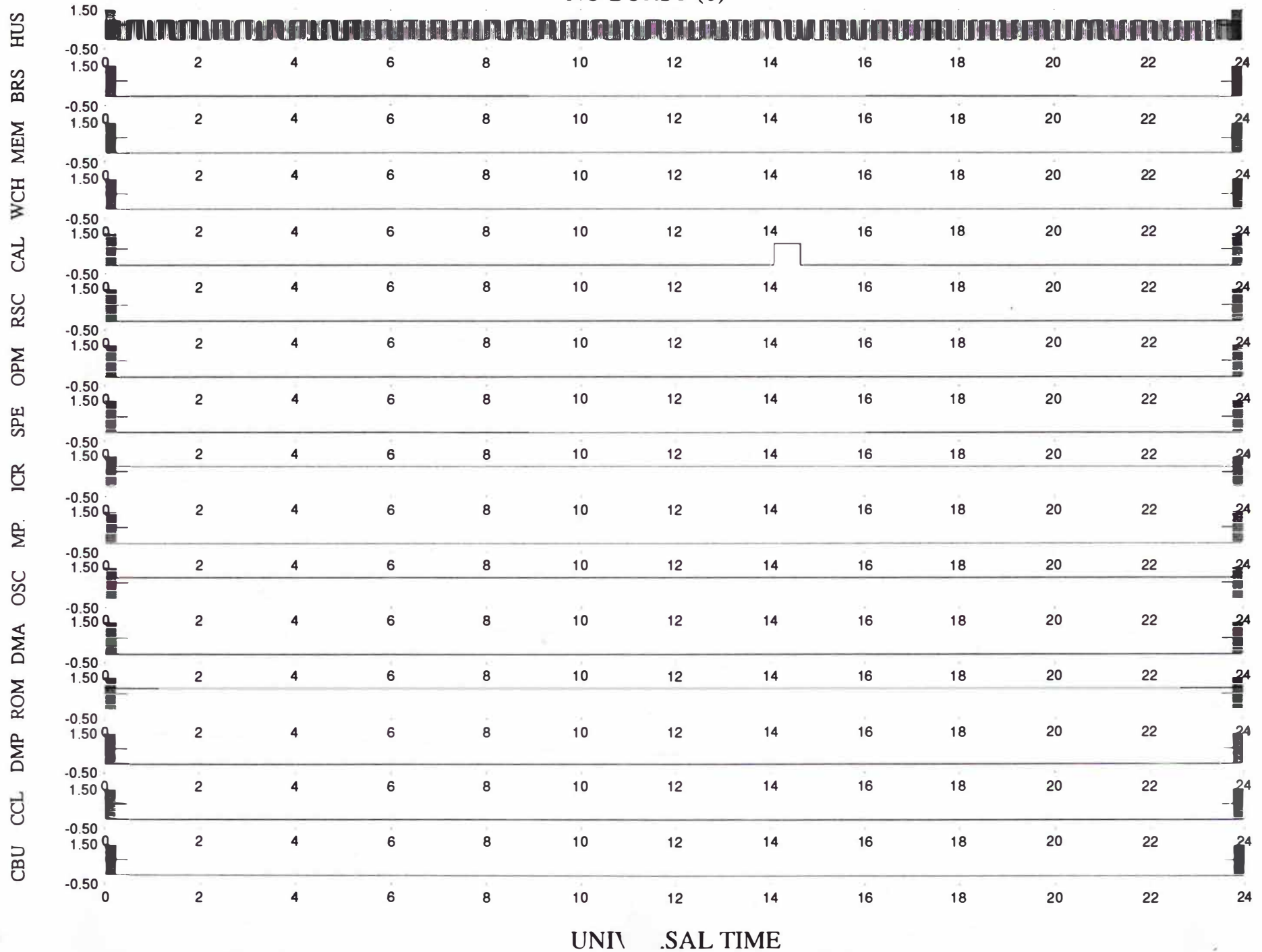
Data Start: 92/09/03, 0000:00

Plot created: 95/05/25, 1823

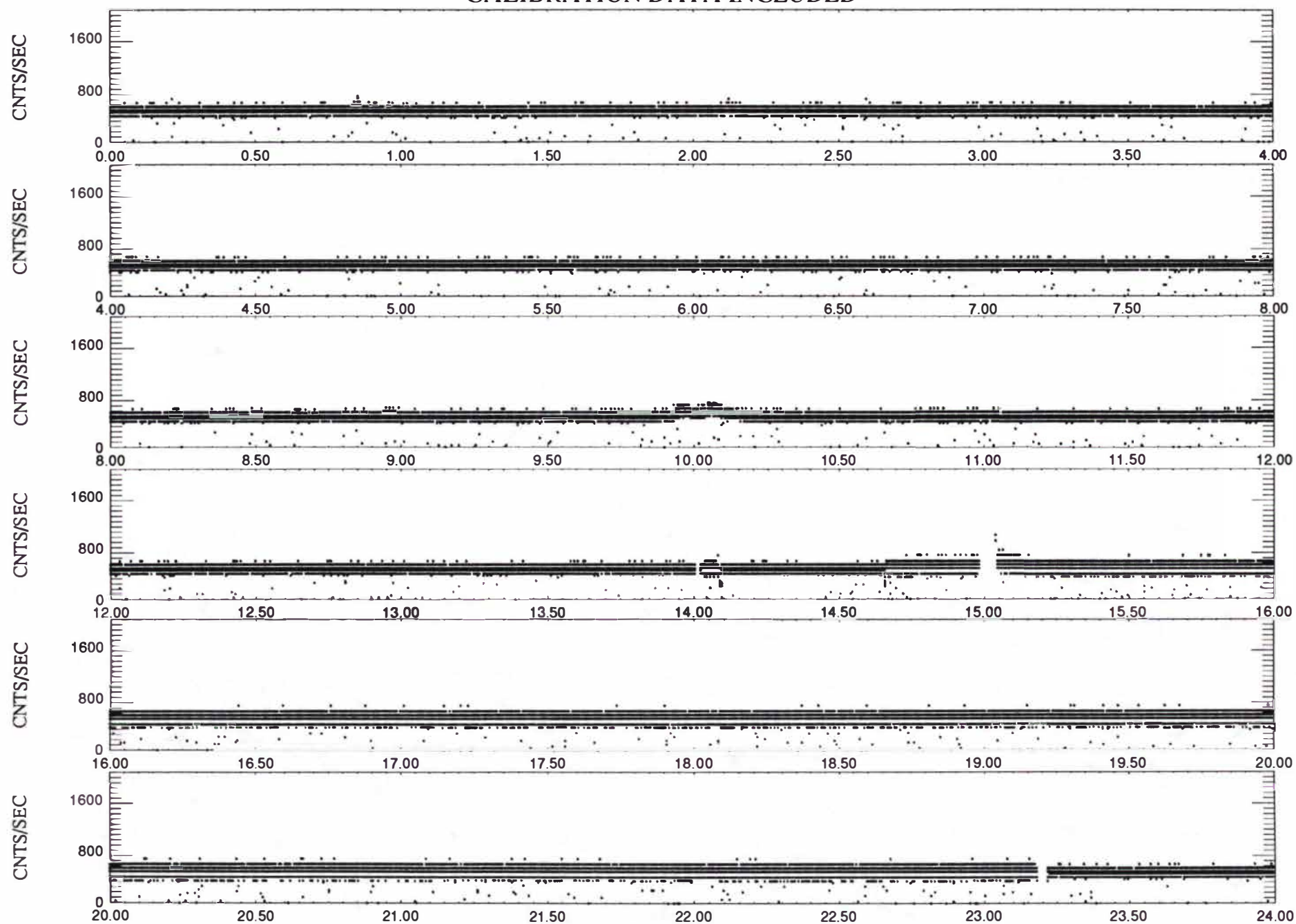
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (0)



CALIBRATION DATA INCLUDED



PHEBUS

4/ 9/92 16896.918 s

100- 1600 keV

s

COUNTS/0.03125

60

50

40

30

20

10

0

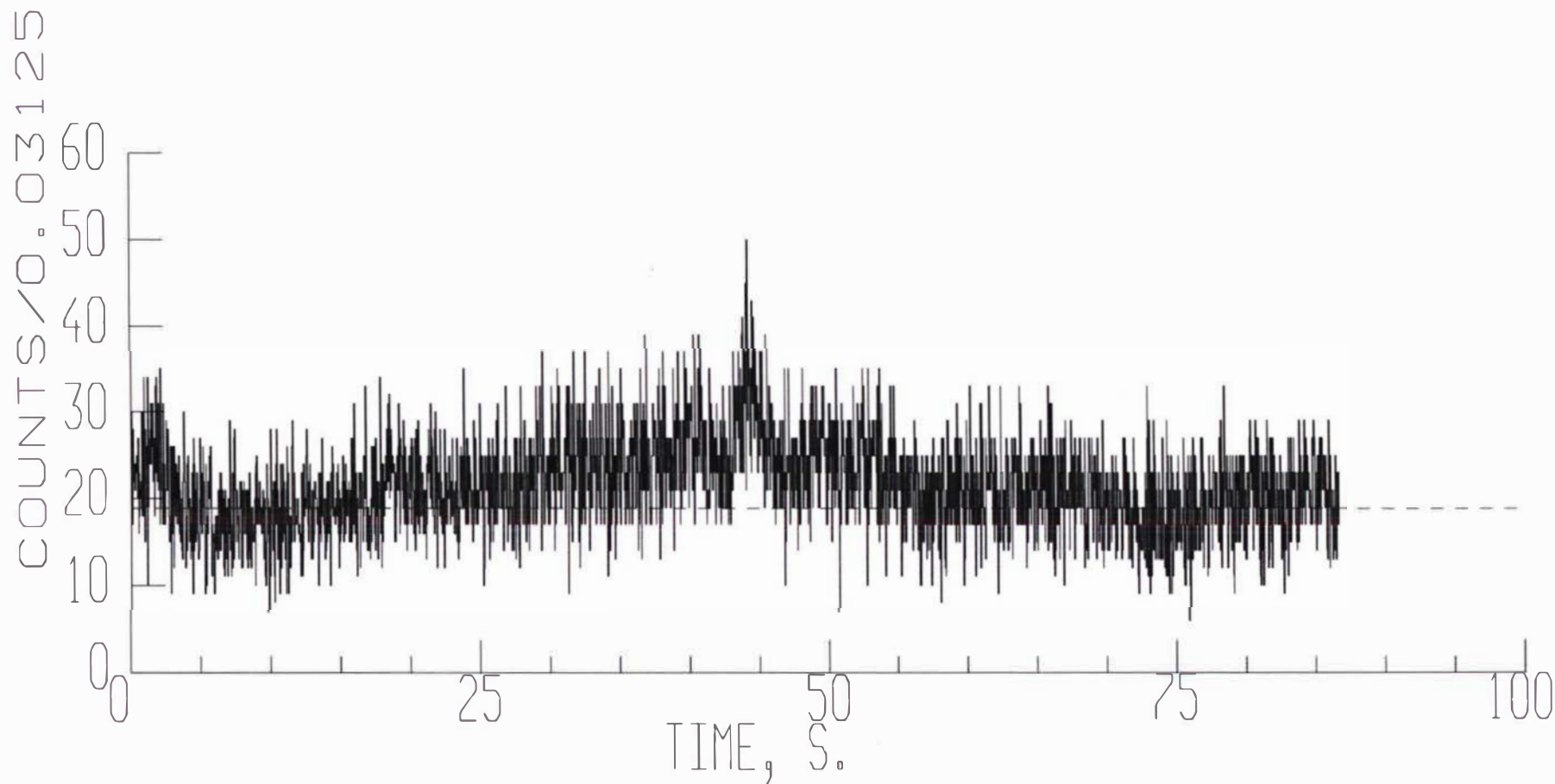
25

50

75

100

TIME, S.



For 4/9/92

Filters were:

10,000

2500 (counts/sec)

ULYSSES RT

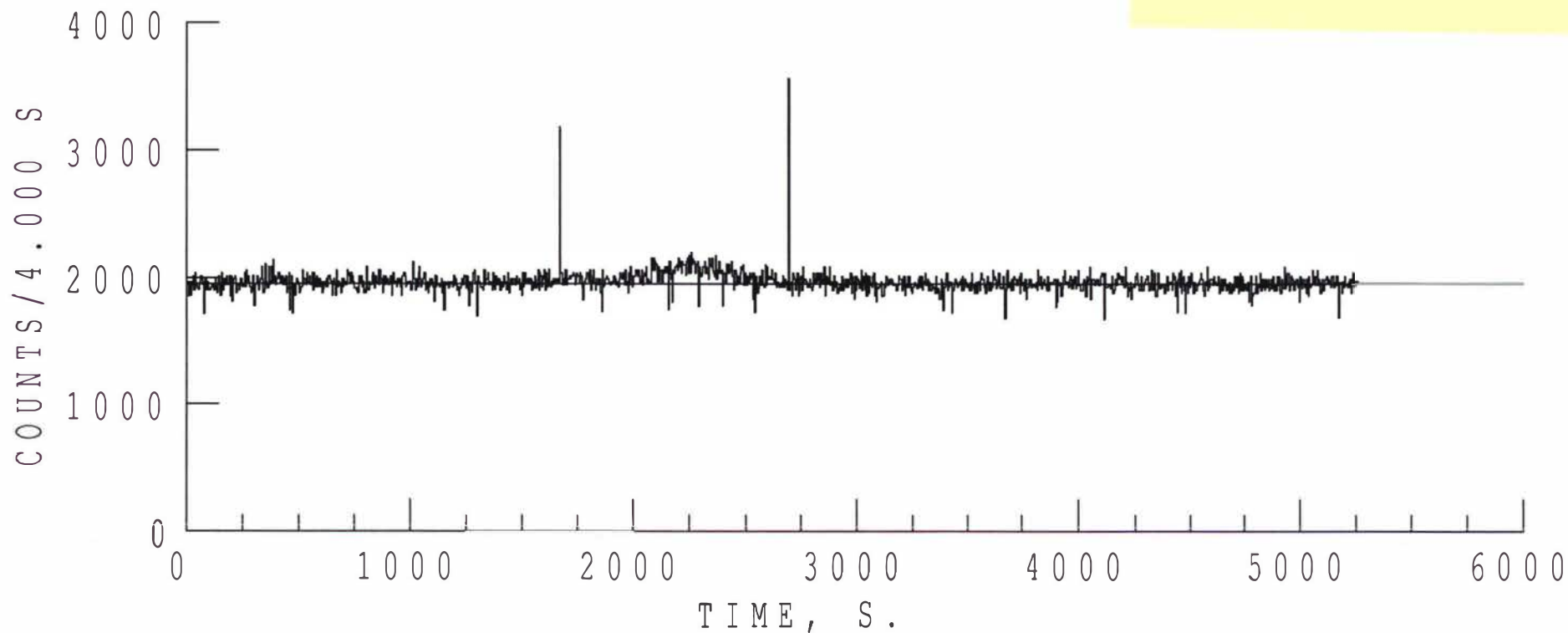
4 / 9 / 92 13788.439 s

0.500 S INTERVALS REGROUPED

0 - 0 keV

N=10 M=2

>4.0 SIGMA FLUCTUATIONS



2 3 / 2 / 9 5

U L Y S S E S R T

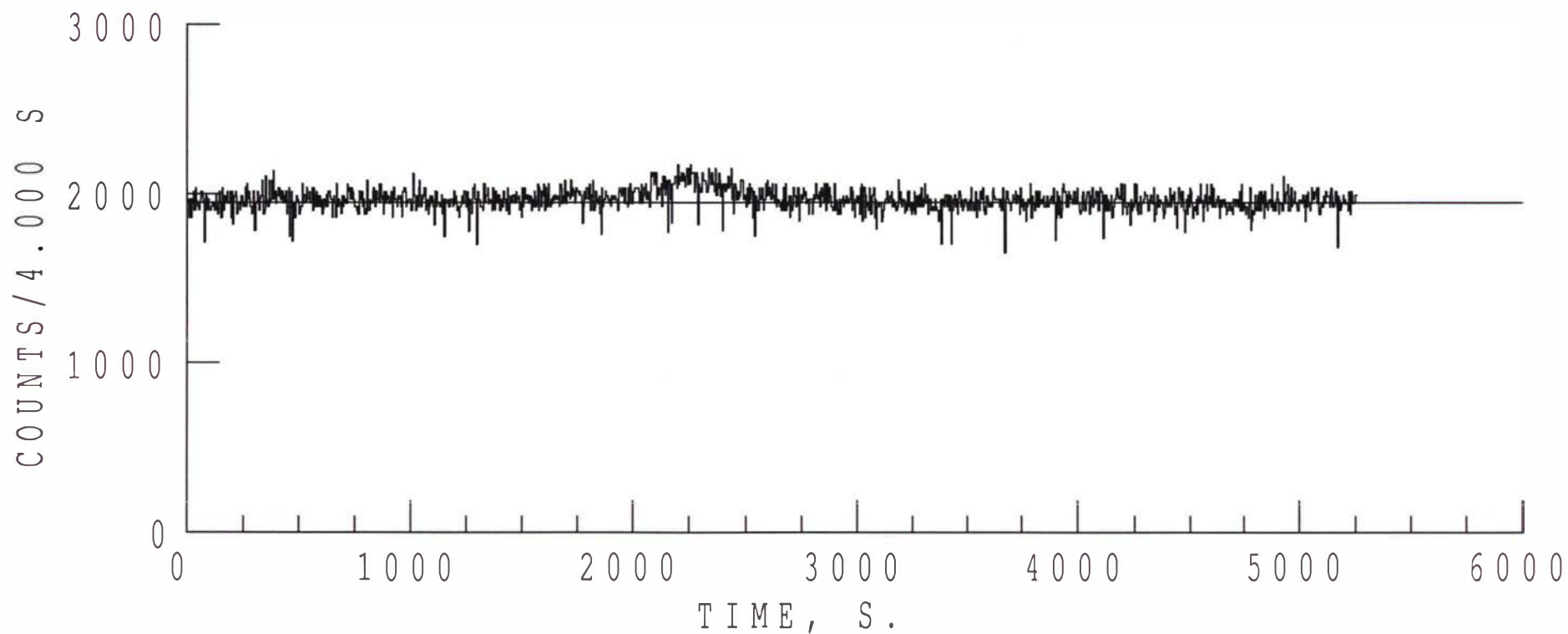
4 / 9 / 9 2 1 3 7 8 8 . 4 3 9 s

0 . 5 0 0 S I N T E R V A L S R E G R O U P E D B Y 8

0 - 0 k e V

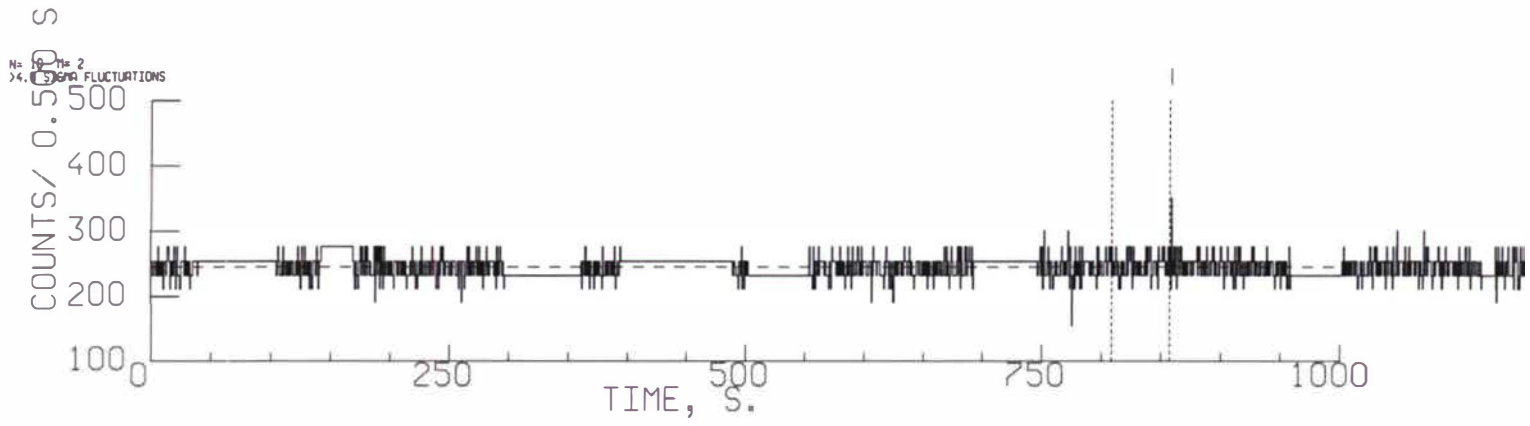
N = 10 M = 2

> 4.0 SIGMA FLUCTUATIONS



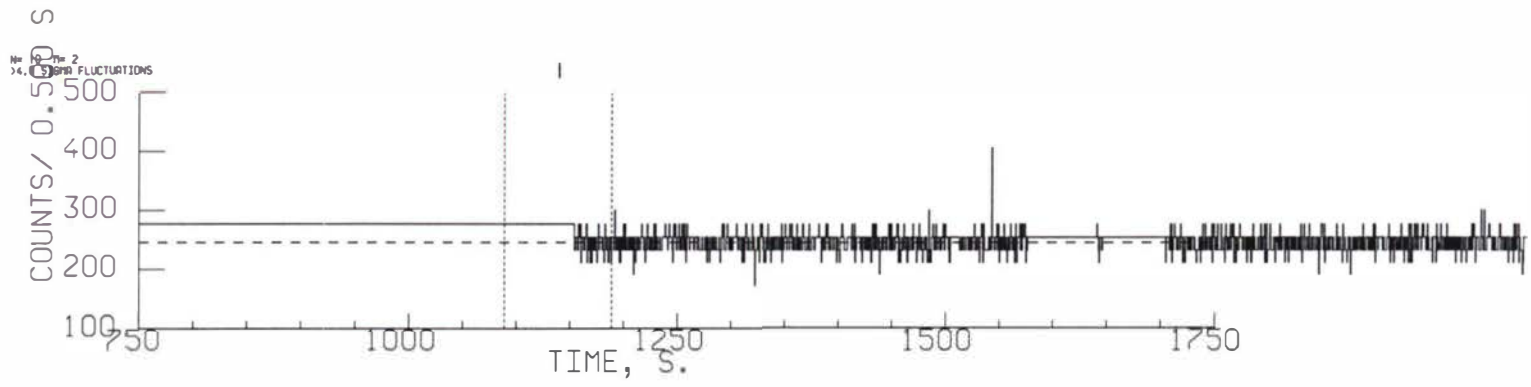
ULYSSES RT
4/ 9/92 13716.440 s
22- 149 keV

28/ 7/11



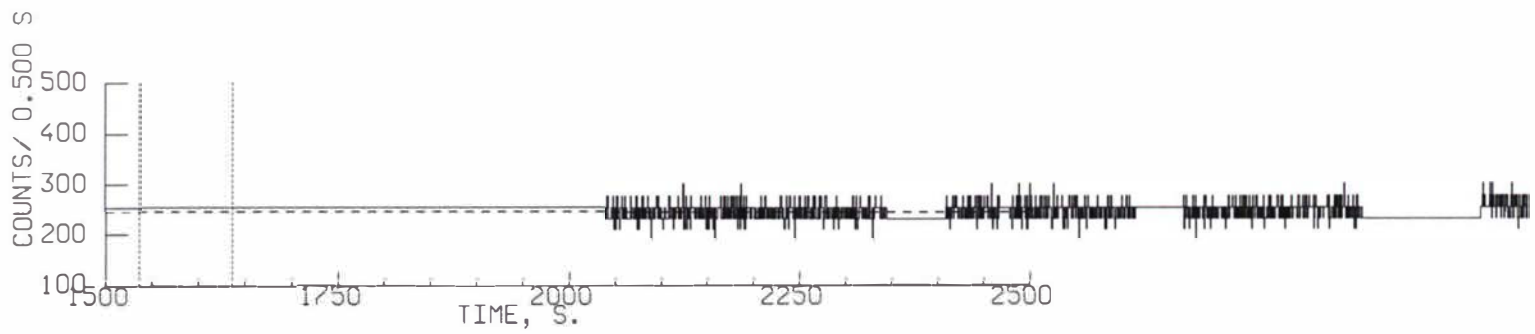
ULYSSES RT
4/ 9/92 13716.440 s
22- 149 keV

28/ 7/11



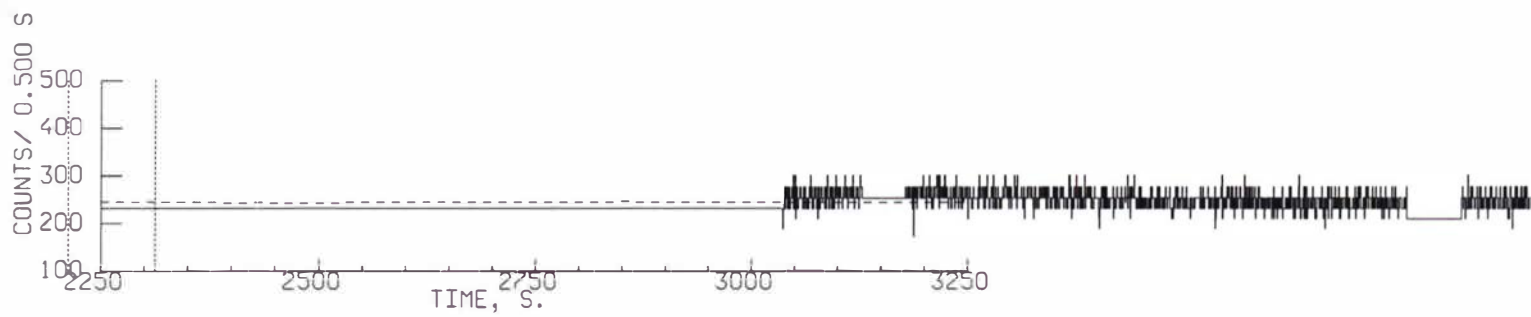
ULYSSES RT
4/ 9/92 13716.440 s
22- 149 keV

28/ 7/11



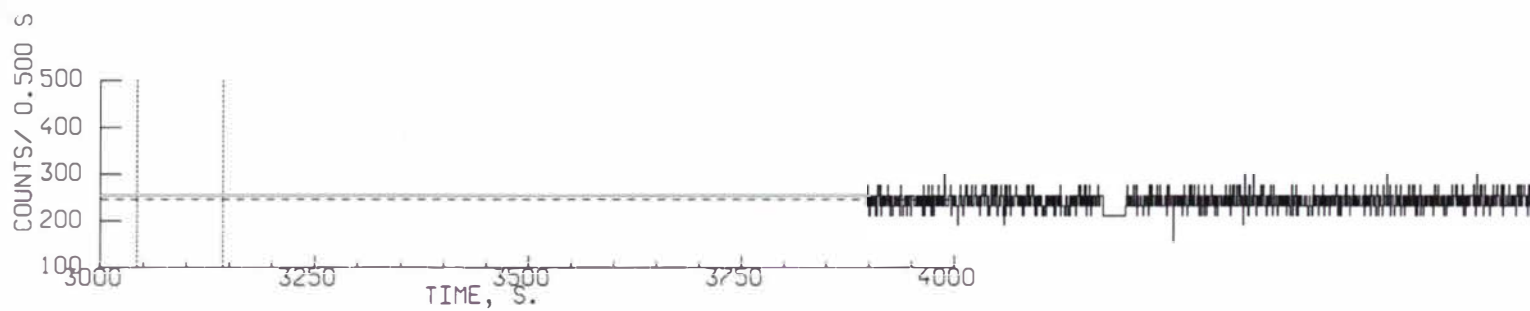
ULYSSES RT
4/ 9/92 13716.440 s
22- 149 keV

28/ 7/11



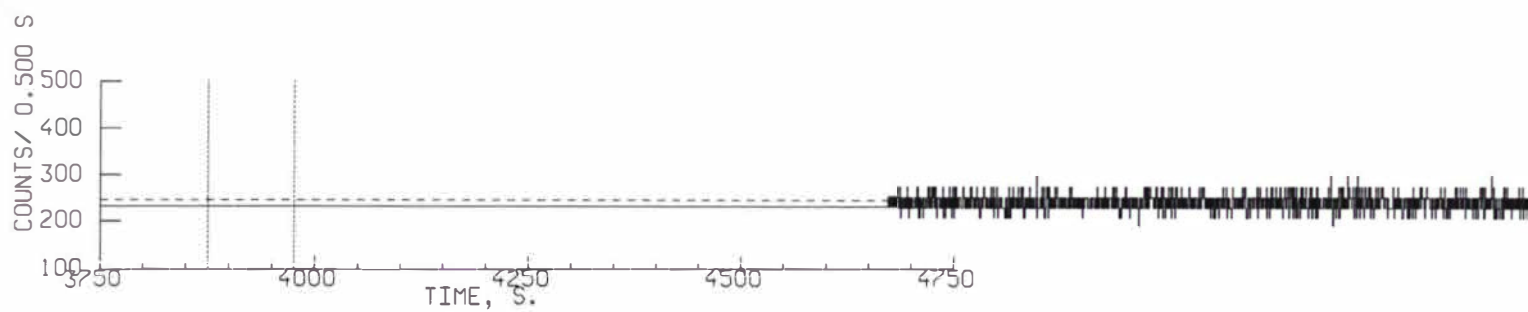
ULYSSES RT
4/ 9/92 13716.440 s
22- 149 keV

28/ 7/11



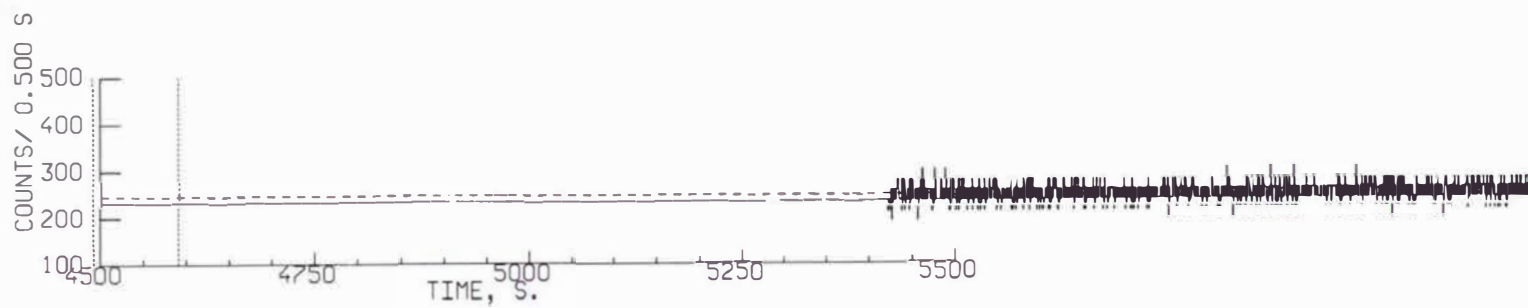
ULYSSES RT
4/ 9/92 13716.440 s
22- 149 keV

28/ 7/11



ULYSSES RT
4/ 9/92 13716.440 s
22- 149 keV

28/ 7/11



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

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

REGARDS,

RAY

From root Wed Dec 8 07:58 1993
 Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
 id AA08899; Wed, 8 Dec 93 07:57:44
 Received: from mx.nsi.nasa.gov by sunspot.ssl.berkeley.edu (4.1/1.30.1)
 id AA22497; Wed, 8 Dec 93 07:00:41 PST
 Received: Wed, 8 Dec 93 07:03:53 PST from ESSDP2.dnet by mx.nsi.nasa.gov (4.1/1.2)
 Message-Id: <9312081503.AA10272@mx.nsi.nasa.gov>
 Received: from ESSDP2.dnet by AMES.dnet with MAIL-11
 (utk-maill1d v1.7); Wed, 8 Dec 93 07:03:57 PST
 Date: Wed, 8 Dec 93 07:03:57 PST
 From: 068486@essdp2.span.nasa.gov
 X-To: AMES::"khurley@space6.ssl.berkeley.edu"
 Subject: RE:
 To: khurley@space6.ssl.berkeley.edu
 Status: R

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

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

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

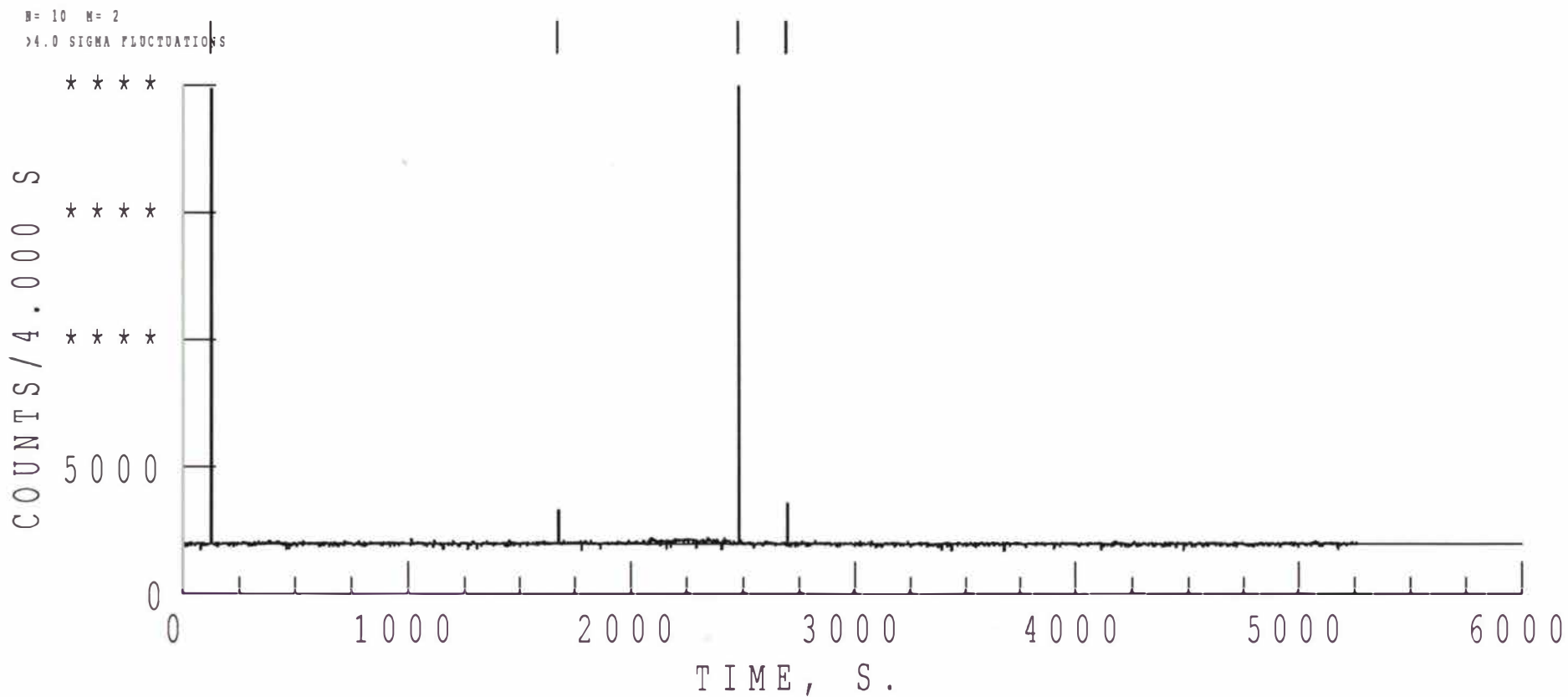
2 2 / 2 / 9 5

U L Y S S E S R T

4 / 9 / 9 2 1 3 7 8 8 . 4 3 9 s

0 . 5 0 0 S I N T E R V A L S R E G R O U P E D B Y 8

0 - 0 k e V



From SHARIFF@ssl.msfc.nasa.gov Tue Sep 8 10:54:51 1992
Date: Tue, 8 Sep 1992 12:52:29 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 01890

TIME: TJD=8869 *Sep 4* SECONDS=05755

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=088.8 AZIMUTH=349.4 ERROR= DEGREES

COMMENTS:

SOLAR FLARE.UNCLASSIFIED GOES EVENT(~C CLASS).TWO SHARP PULSES OBSERVED.
DURATION ~100S.

BATSE BURST TRIGGER

NO.: 01891

TIME: TJD=8869 SECONDS=47353

TYPE: UNKNOWN SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=021.2 AZIMUTH=205.3 ERROR= DEGREES

COMMENTS:

UNKNOWN. INSUFFICIENT DATA.

No Ulysses trigger

BATSE BURST TRIGGER

NO.: 01892

TIME: TJD=8869 SECONDS=81942

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

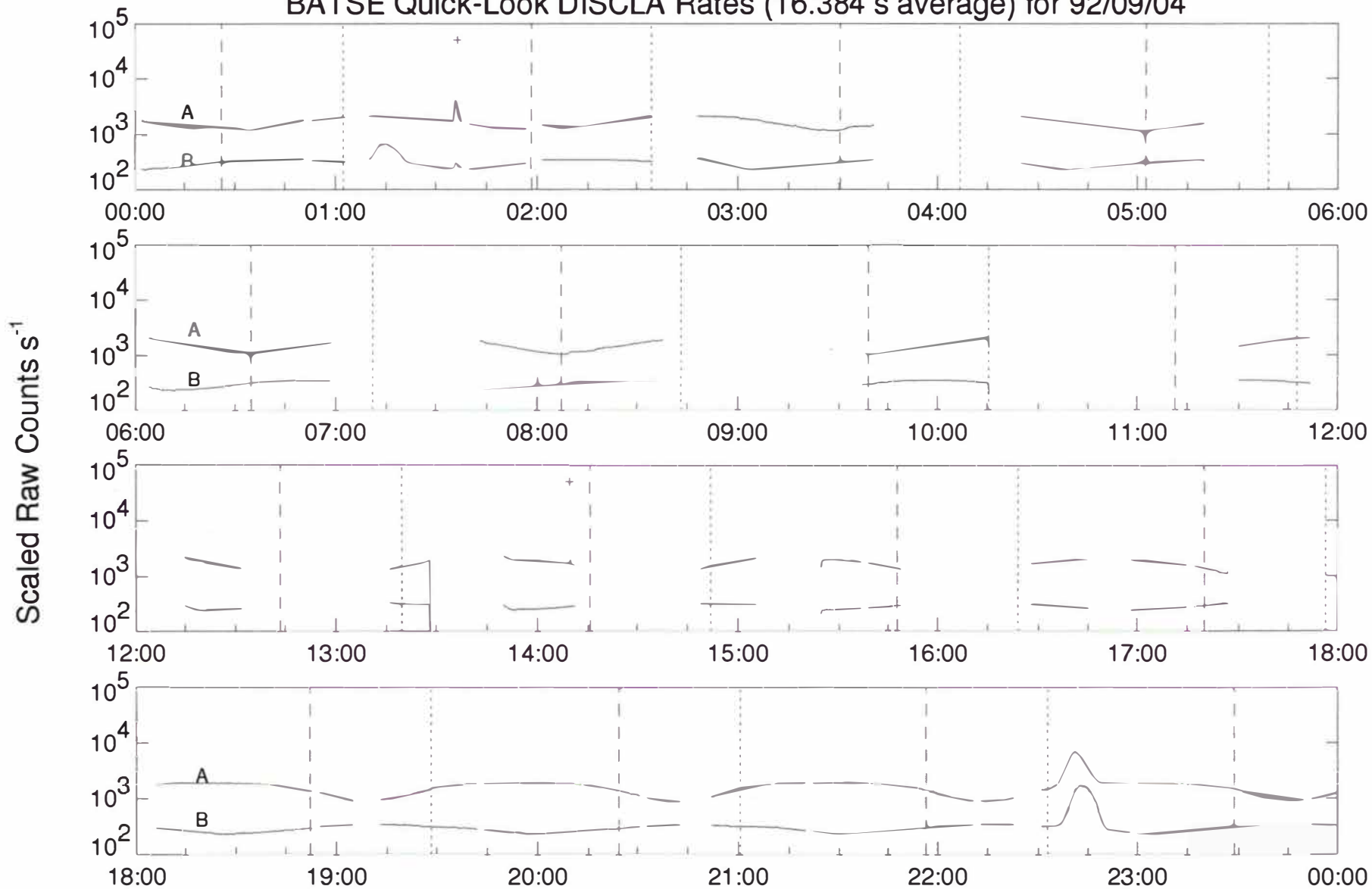
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

ELECTRON PREC. EVENT.

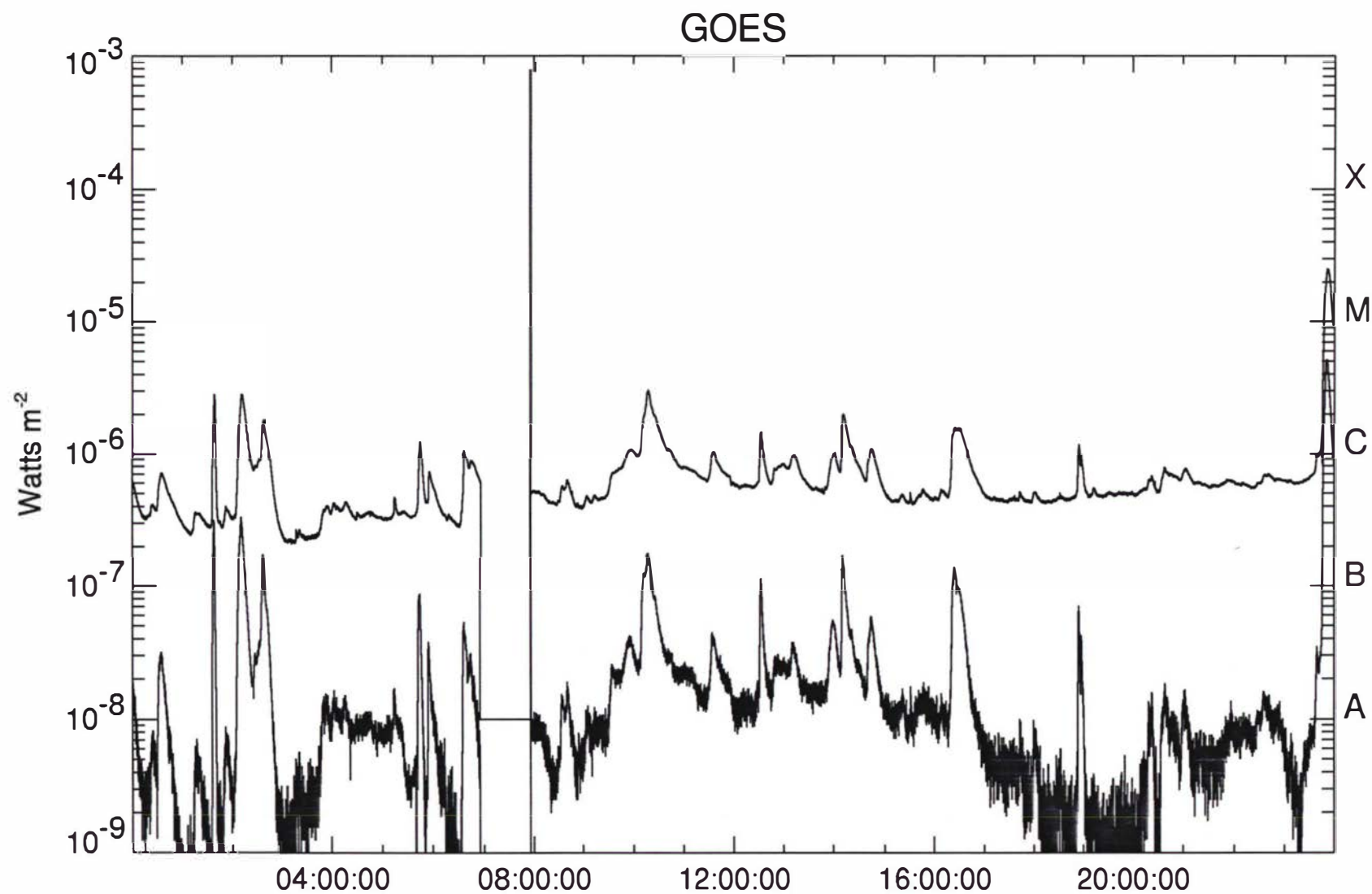
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/04



Current Time: 92/09/29, 0228 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



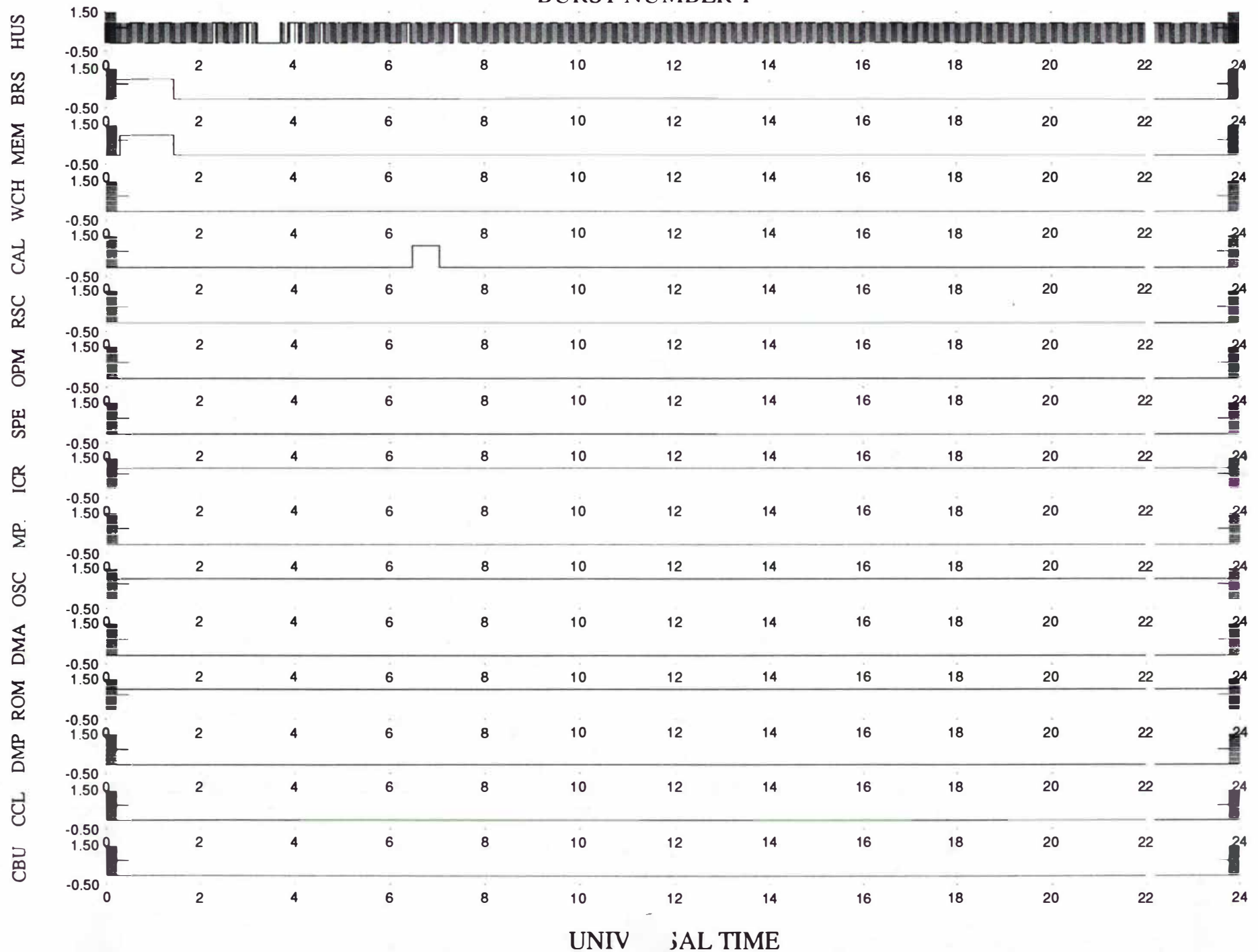
Data Start: 92/09/04, 0000:00

Plot created: 95/05/25, 1826

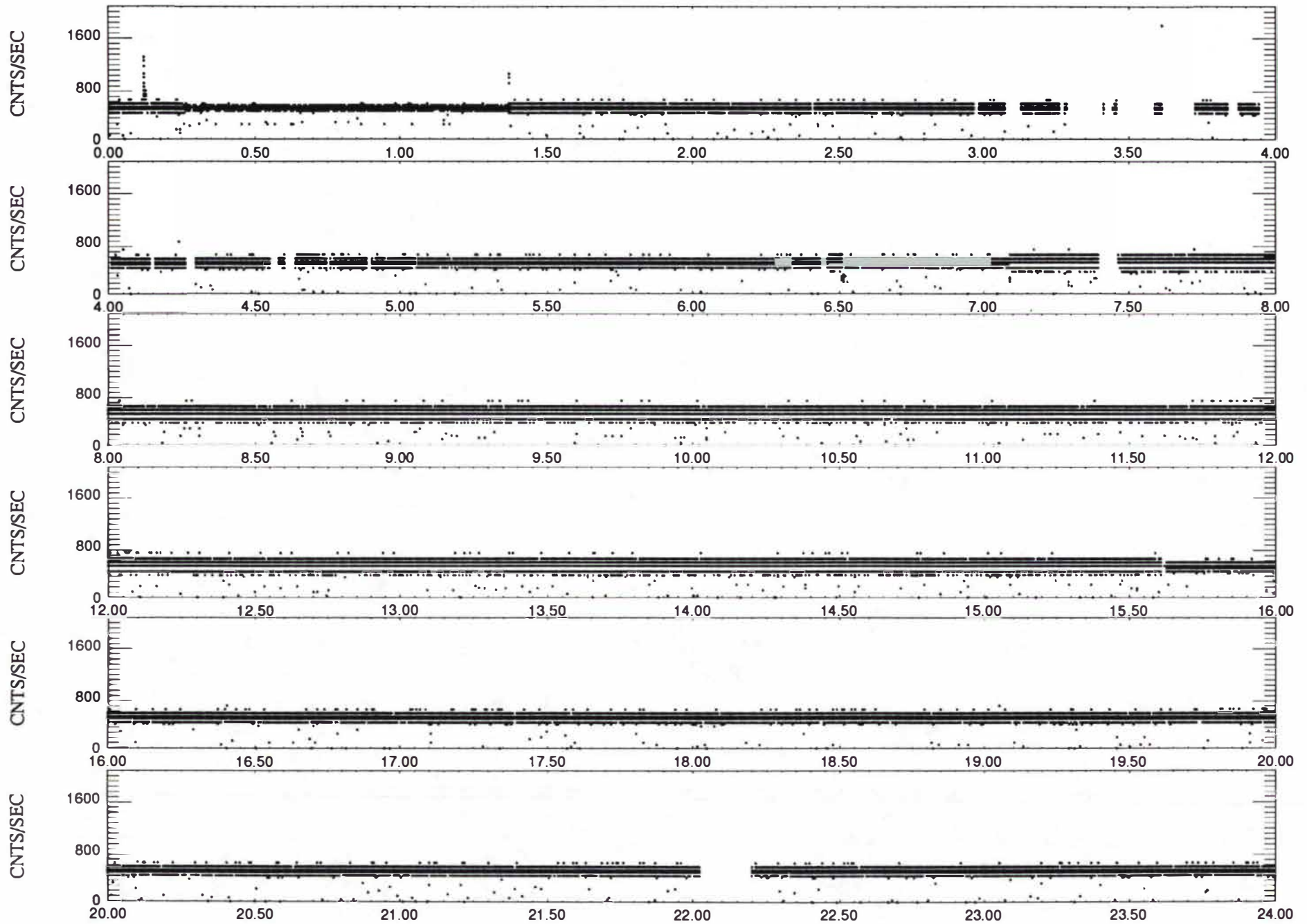
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BURST NUMBER 1

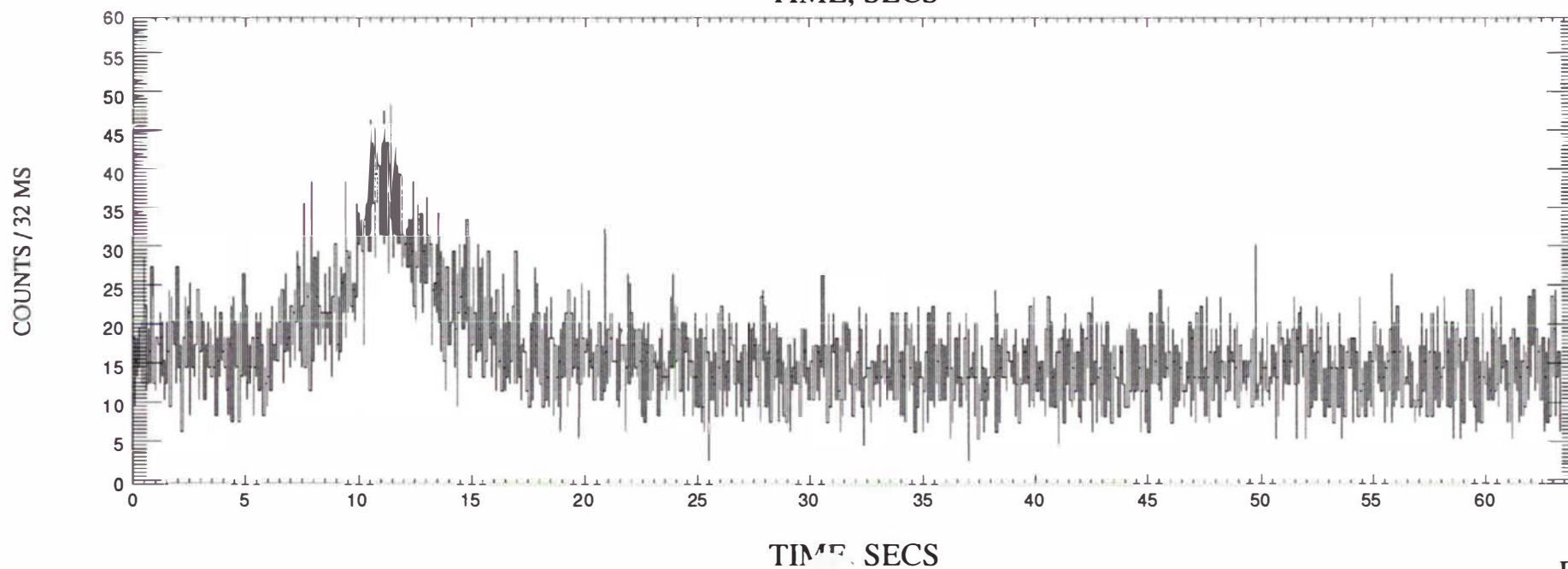
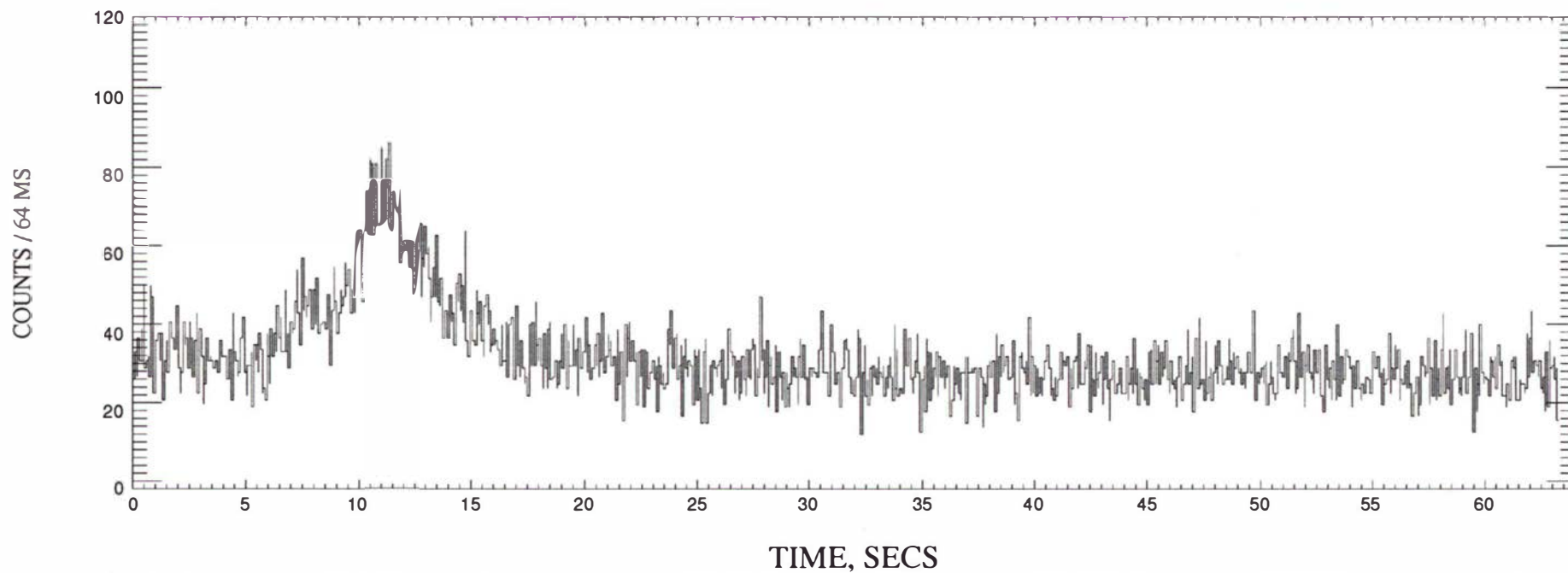


CALIBRATION DATA INCLUDED

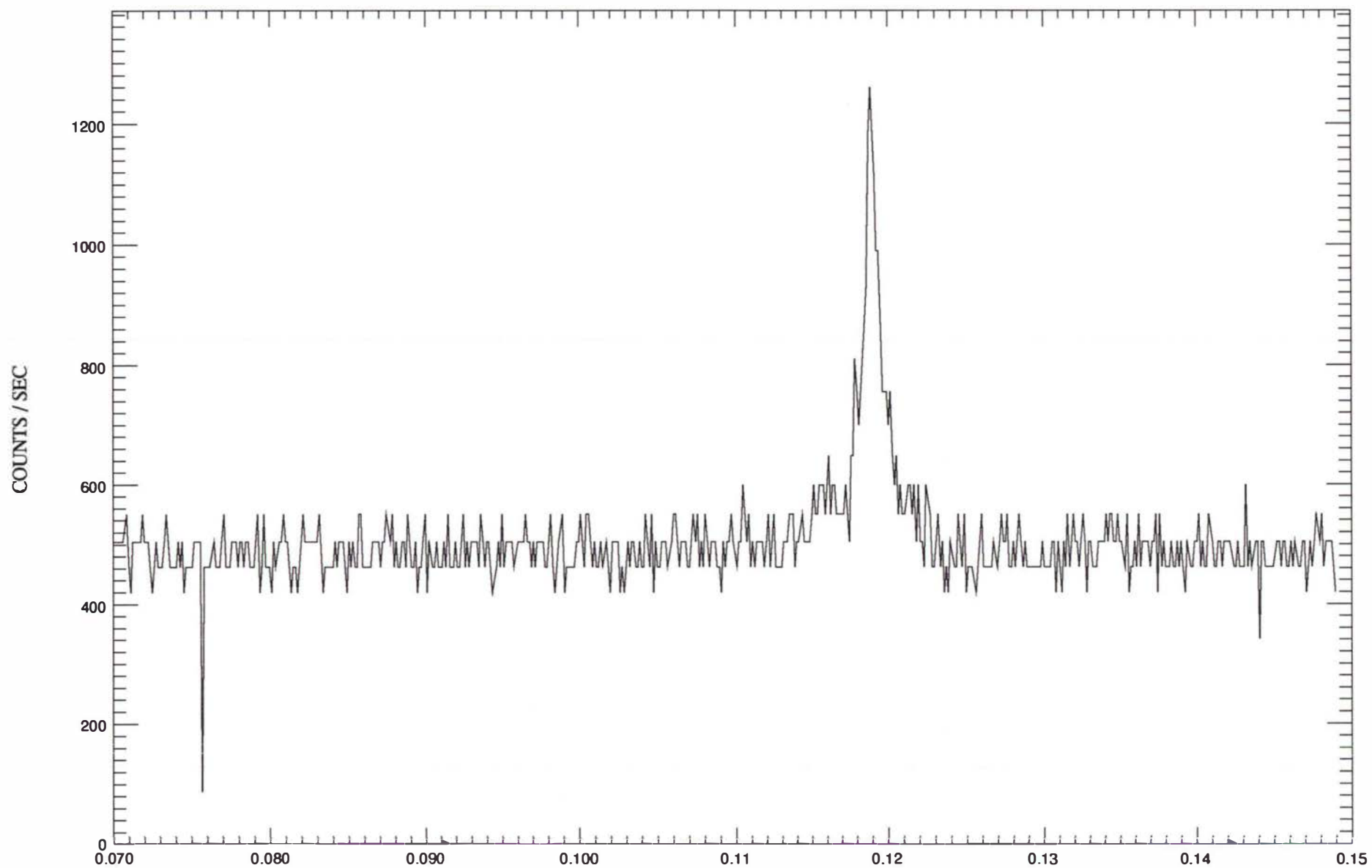


UNT (SAL TIME)

Burst Counter 1 at UT= 0.118010283576 h= 424.837 s



CALIBRATION DATA INCLUDED



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

From KOUVELIOTOU@ssl.msfc.nasa.gov Tue Sep 8 10:02:15 1992
Date: Tue, 8 Sep 1992 11:49:37 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@estec.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01893

TIME: TJD=8870 SECONDS=06582

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

From KOUVELIOTOU@ssl.msfc.nasa.gov Sun Sep 6 12:59:58 1992
Date: Sun, 6 Sep 1992 15:01:04 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01894

TIME: TJD=8870 SECONDS=23430

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

From KOUVELIOTOU@ssl.msfc.nasa.gov Sun Sep 6 11:35:51 1992
Date: Sun, 6 Sep 1992 13:36:53 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 01895

TIME: TJD=8870 SECONDS=41190

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=89.1 AZIMUTH=347.8 ERROR= DEGREES

COMMENTS:

M4.0 GOES FLARE THAT SET THE YELLOW LIMITS. LONG DURATION EVENT,
LASTING ~ 500 S, WITH MULTYPEAKED, COMPLEX STRUCTURE. SEEN, BARELY,
ABOVE 320 KEV.

From KOUVELIOTOU@ssl.msfc.nasa.gov Sun Sep 6 13:17:57 1992
Date: Sun, 6 Sep 1992 15:19:10 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 01896

TIME: TJD=8870 SECONDS=62686

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

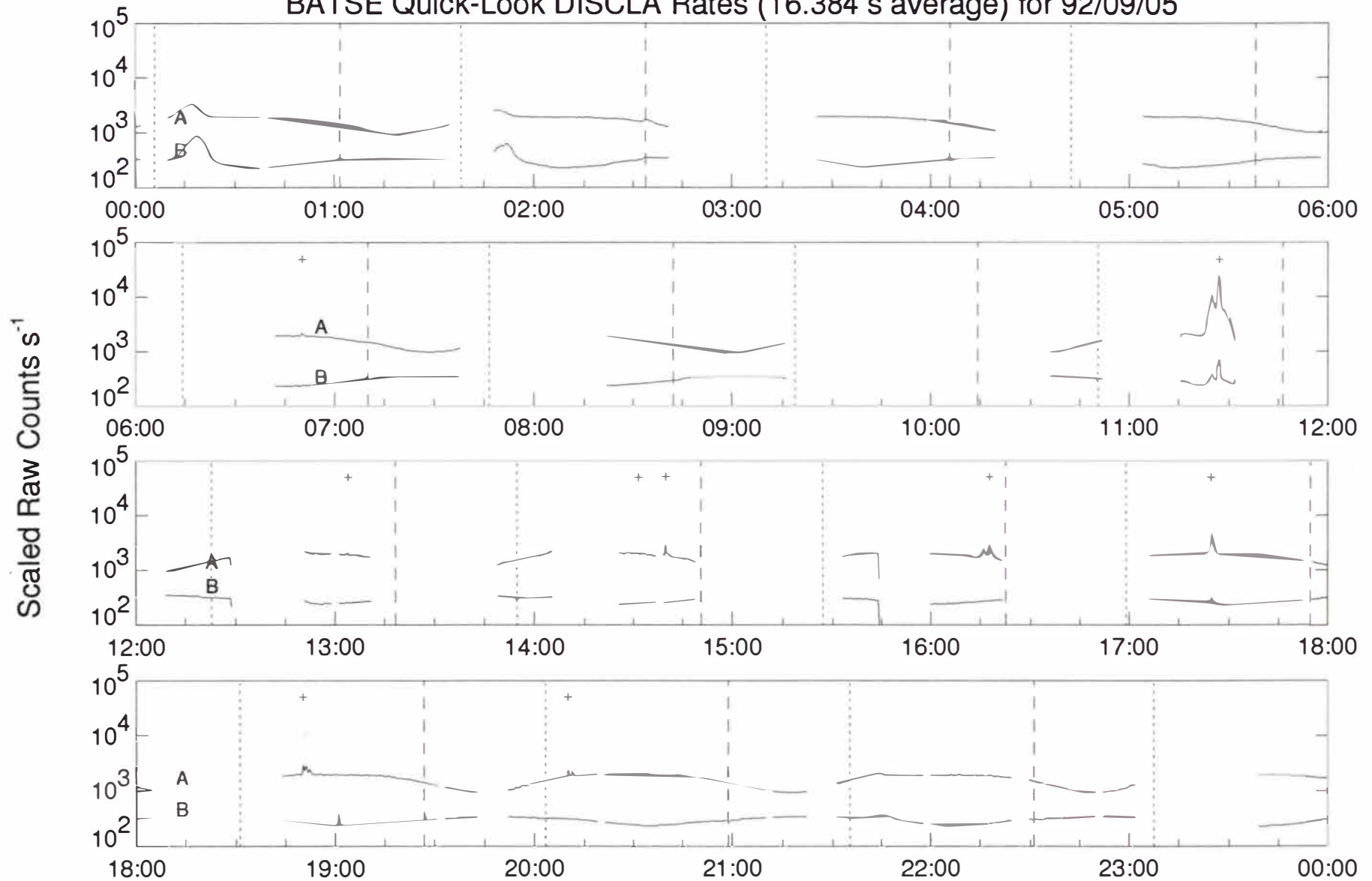
INTENSITY: COUNTS/CM2

LOCATION: ZENITH=090.2 AZIMUTH=351.5 ERROR= DEGREES

COMMENTS:

C4.6 GOES EVENT. MULTYPEAKED, COMPLEX STRUCTURE, LASTING
~ 100 S. NOT SEEN ABOVE 320 KEV.

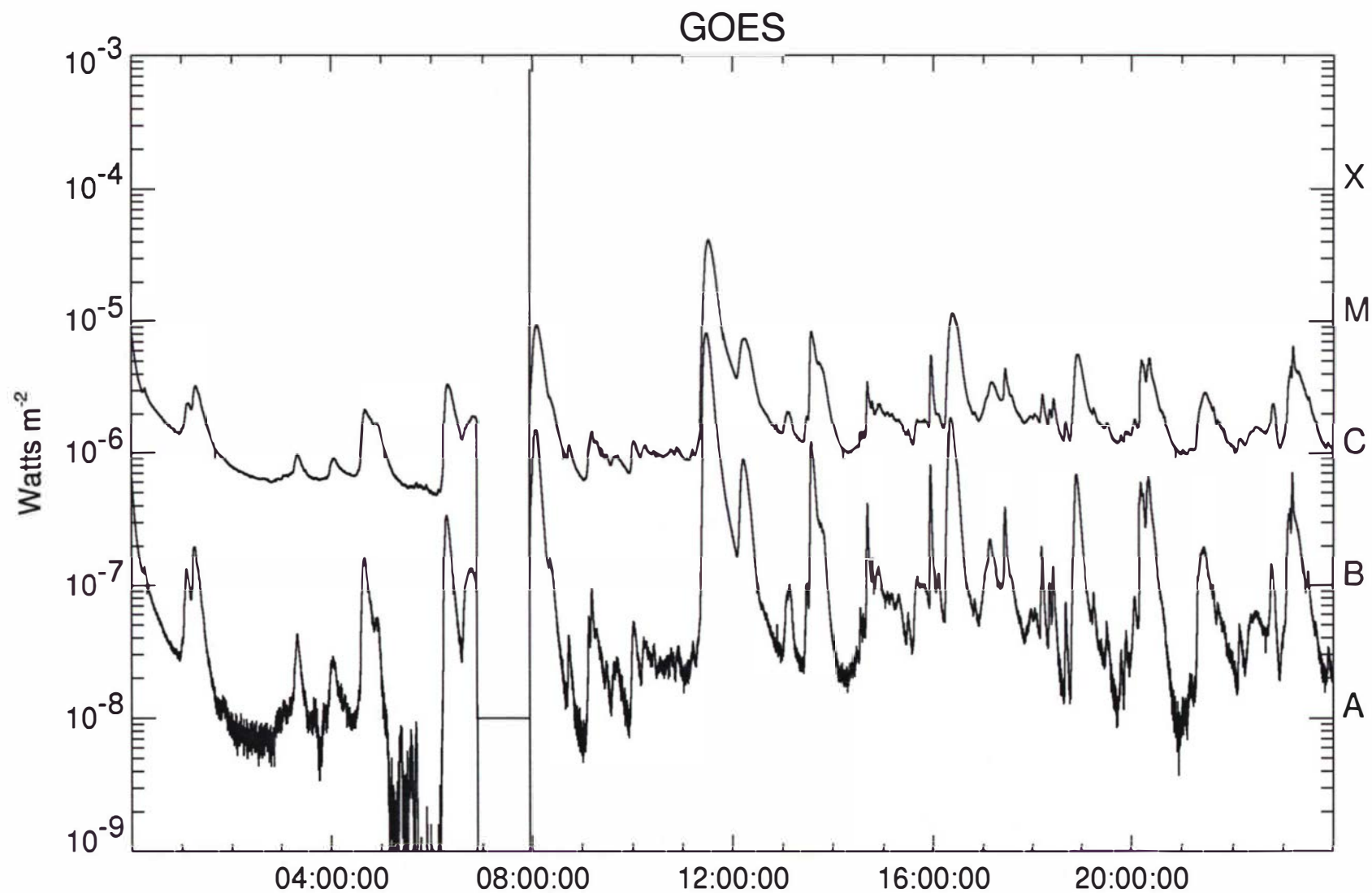
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/05



Current Time: 92/09/29, 0228 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



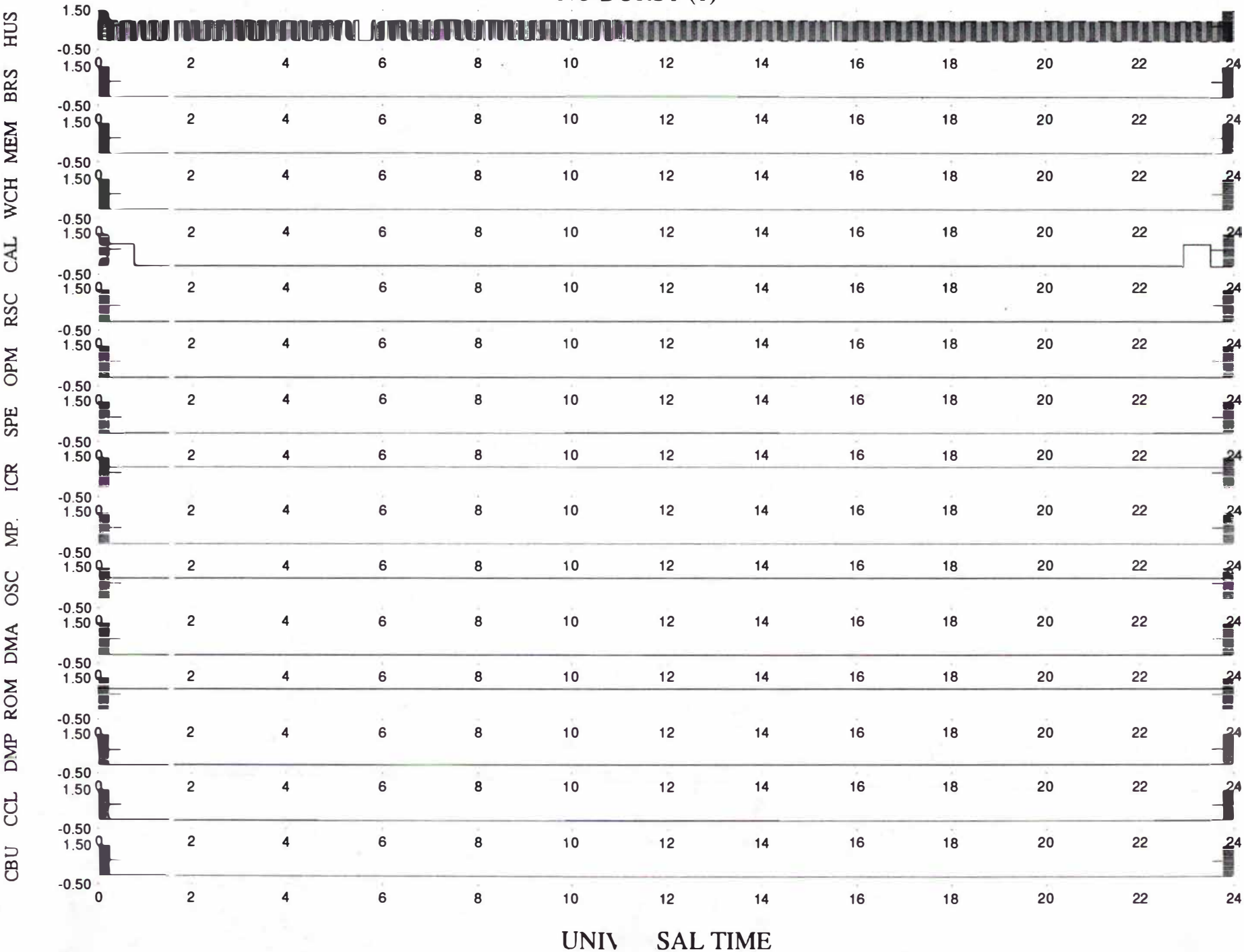
Data Start: 92/09/05, 0000:01

Plot created: 95/05/25, 1829

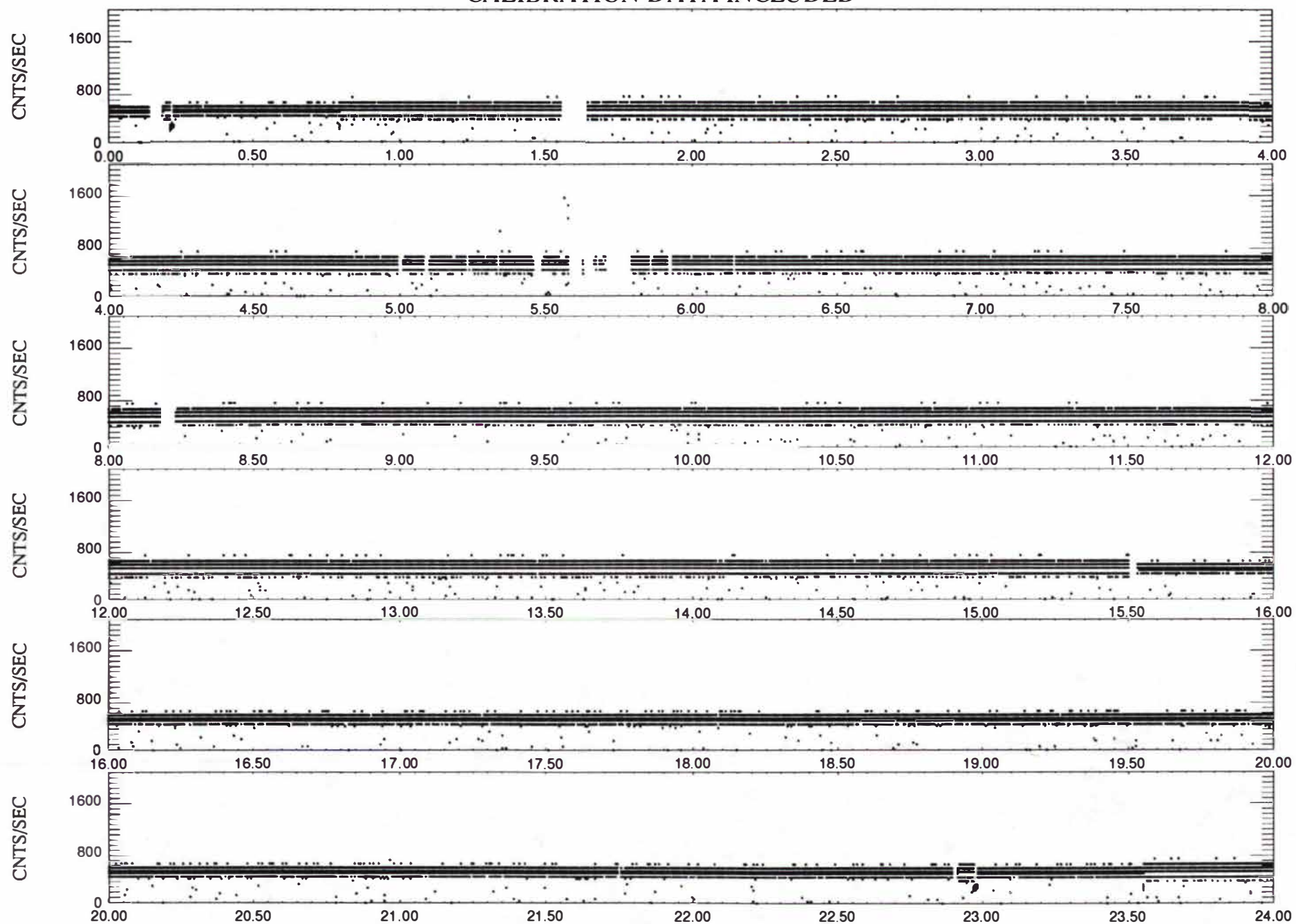
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (1)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME

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

From PREECE@ssl.msfc.nasa.gov Tue Sep 8 07:01:45 1992
Date: Tue, 8 Sep 1992 8:58:07 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01897

TIME: TJD=8871 ^{Sep 6} SECONDS=32595

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

GOES M3.3 SOLAR FLARE, 300 SEC. DURATION. SEEN ABOVE 120 KEV.

From PREECE@ssl.msfc.nasa.gov Tue Sep 8 07:27:30 1992
Date: Tue, 8 Sep 1992 9:23:50 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1458

BATSE BURST TRIGGER

NO.: 01898

TIME: TJD=8871 SECONDS=42799

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

GOES M4.0 SOLAR FLARE. MAIN OUTBURST IS 300 SEC. LONG. ADDITIONAL EMISSION CONTINUES FOR 1000 SEC. AFTER THE TRIGGER, AND SOME EMISSION IS PRESENT BEFORE THE TRIGGER AS WELL. COMPLICATED STRUCTURE IN EACH MAJOR EMISSION PERIOD. SEEN ABOVE 120 KEV.

From PREECE@ssl.msfc.nasa.gov Tue Sep 8 10:06:27 1992
Date: Tue, 8 Sep 1992 10:10:42 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@estec.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 01899

TIME: TJD=8871 SECONDS=48457

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

GOES M1.4 SOLAR FLARE, 140 SEC. LONG. HIGHLY STRUCTURED, NOT SEEN MUCH BETWEEN
120 AND 300 KEV.

From PREECE@ssl.msfc.nasa.gov Tue Sep 8 10:06:19 1992
Date: Tue, 8 Sep 1992 10:35:18 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@estec.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1458

BATSE BURST TRIGGER

NO.: 01900

TIME: TJD=8871 SECONDS=75219

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

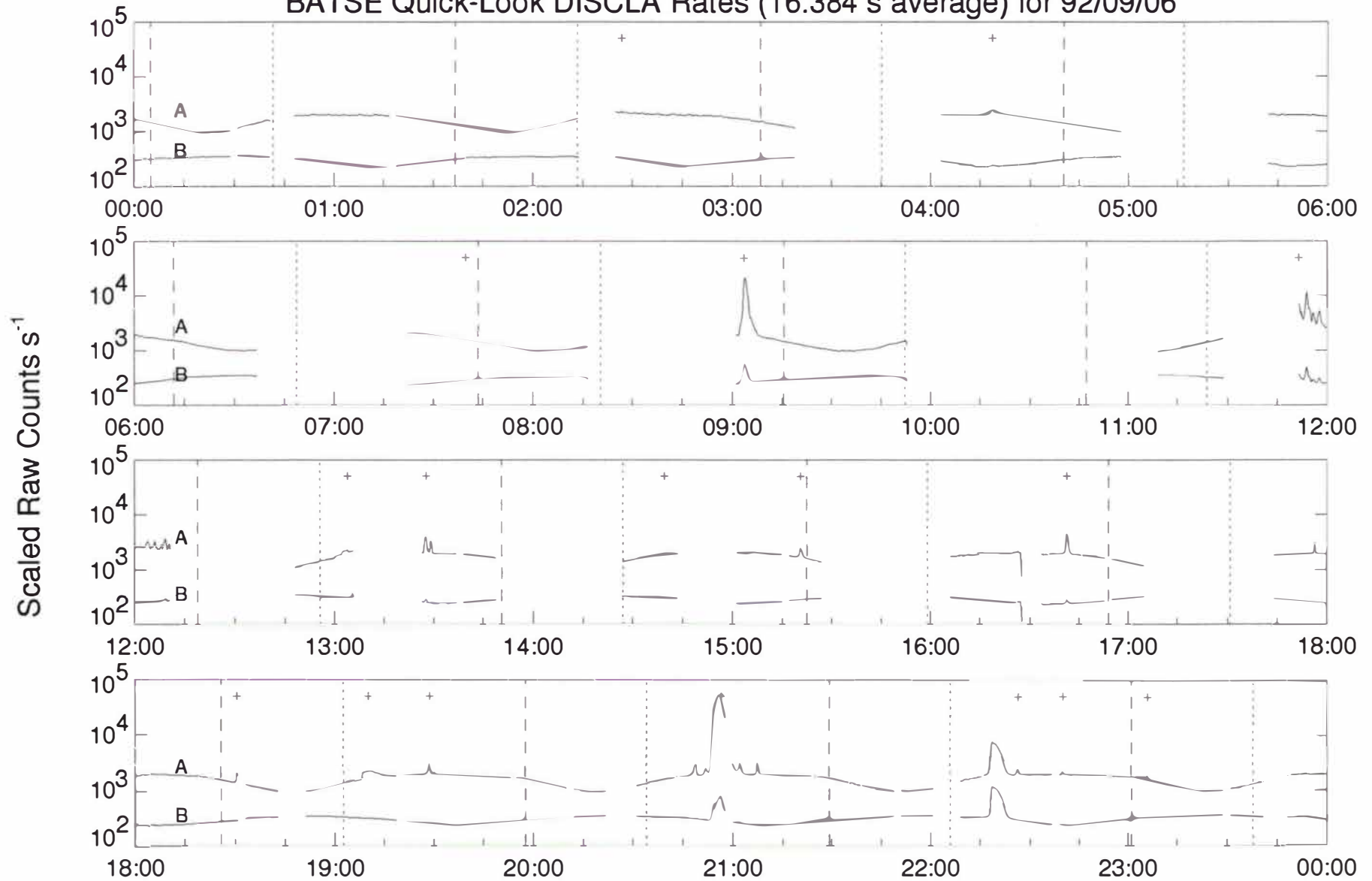
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

GOES X1.3 SOLAR FLARE. ALMOST PERIODIC STRUCTURE, 300 SEC. LONG, WITH LOW-LEVEL
EMISSION BEFORE AND AFTER THE TRIGGER. NOT SEEN MUCH ABOVE 300 KEV., IF AT ALL.
ALTHOUGH THE SOLAR FLARE TRIGGER SIGNAL WAS NOT SEND, THE LOCATION IS SMACK ON
THE SUN'S.

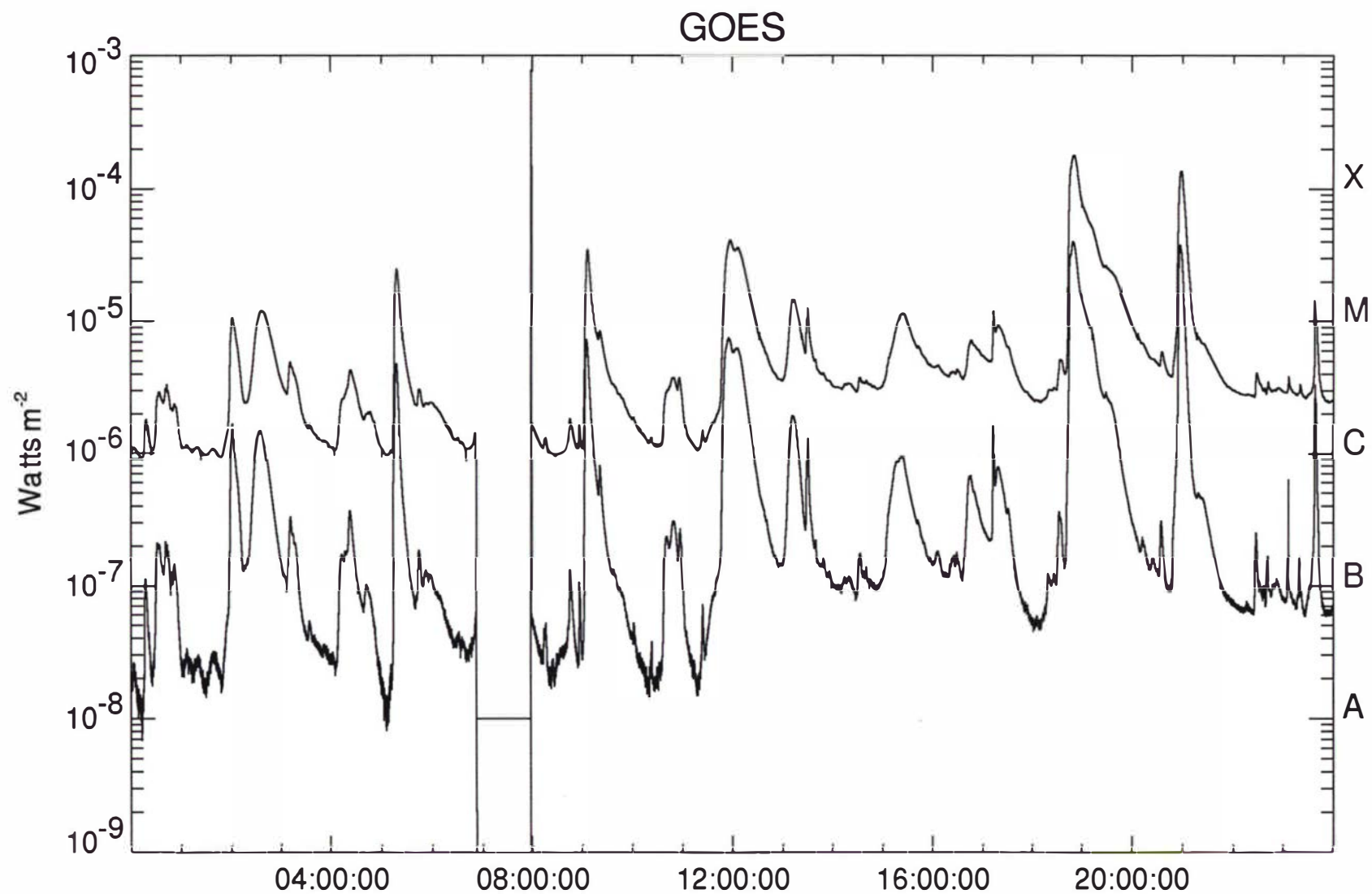
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/06



Current Time: 92/09/29, 0229 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



Data Start: 92/09/06, 0000:02

Plot created: 95/05/25, 1832

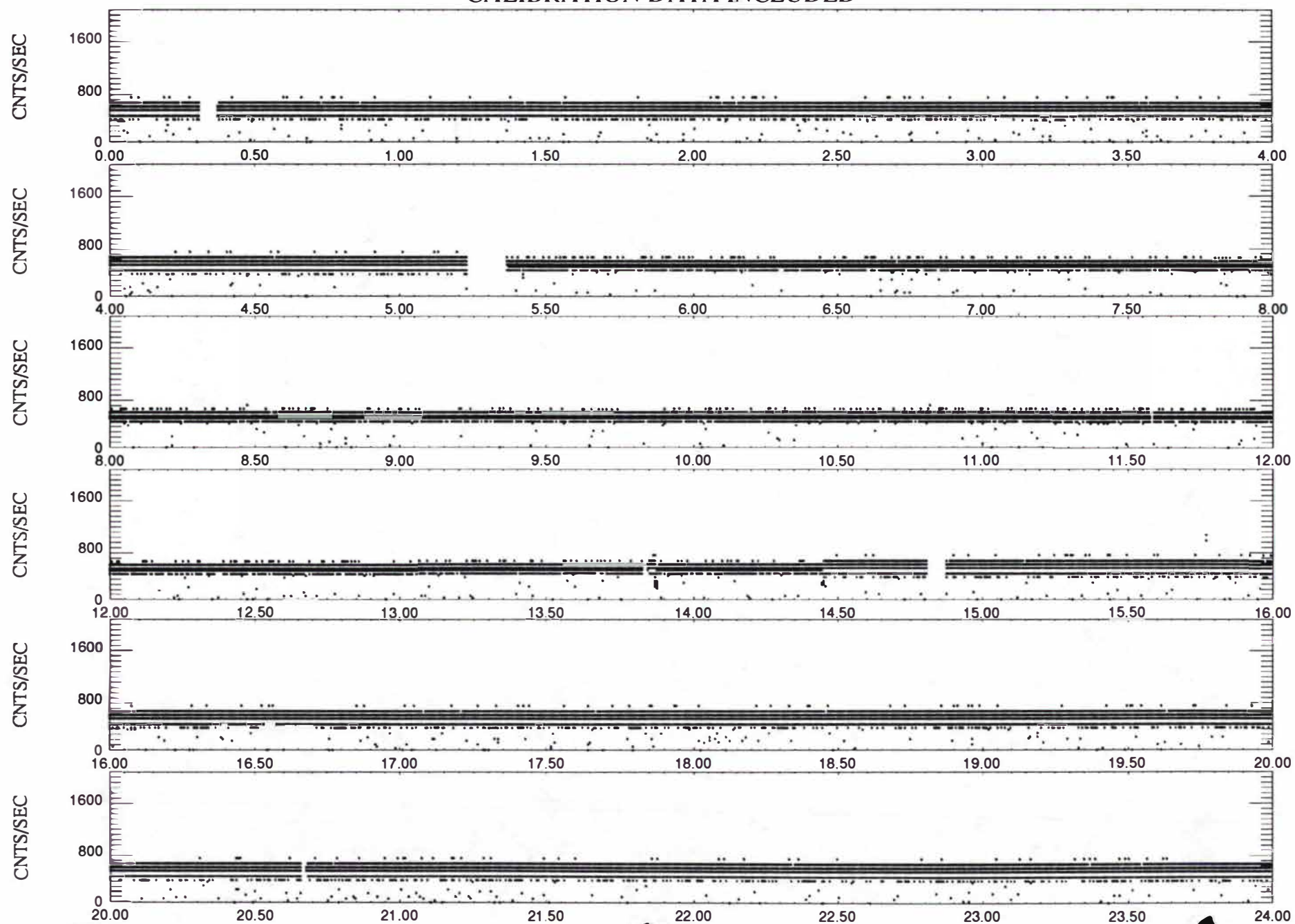
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

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



CALIBRATION DATA INCLUDED



UNIVERSAL TIME

NO.: 01901
TIME: TJD=8872 SECONDS=00159

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SOLAR FLARE OF ~57 SECOND DURATION. FLARE STARTS AT TRIGGER - 22 SECONDS,
AND PEAKS AT ~ TRIGGER + 3 SECONDS. NO EMISSION DETECTED ABOVE 300 KEV.

BATSE BURST TRIGGER

NO.: 01902

TIME: TJD=8872 SECONDS=06898

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SOLAR FLARE OF ~40 SECOND DURATION, STARTING AT ~TRIGGER - 20 SECONDS.
PEAK IS AT TRIGGER TIME. NO EMISSION OBSERVED ABOVE 300 KEV. WEAKER
SOFT EMISSION IS OBSERVED BEFORE THE TRIGGER, STARTING AT ~ TRIGGER -
80 SECONDS, AND LASTING FOR ~30 SECONDS. CLASSIFIED AS A C4.5 FLARE
IN GOES X-RAY DATA.

BATSE BURST TRIGGER

NO.: 01903

TIME: TJD=8872 SECONDS=18559

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SOLAR FLARE WITH COMPLEX TIME HISTORY FOR FIRST ~ 70 SECONDS, FOLLOWED
BY WEAK EXTENDED EMISSION FOR NEXT 140 SECONDS. NO EMISSION DETECTED
ABOVE 300 KEV.

BATSE BURST TRIGGER

NO.: 01904

TIME: TJD=8872 SECONDS=18900

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
FLARE OF ~80 SECOND DURATION, WITH PEAK RATE AT TRIGGER TIME. EMISSION
ABOVE 300 KEV IS OBSERVED, BUT WEAK.

BATSE BURST TRIGGER

NO.: 01905

TIME: TJD=8872 SECONDS=23510

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
FLARE OF ~ 650 SECOND DURATION, WITH COMPLEX TIME HISTORY. PEAK
RATE OCCURS AT ~ TRIGGER + 3 SECONDS. EMISSION ABOVE 300 KEV IS VERY
WEAK. CLASSIFIED AS M7.1 FLARE IN GOES X-RAY DATA.

BATSE BURST TRIGGER

NO.: 01906

TIME: TJD=8872 SECONDS=45345

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SOLAR FLARE WITH EMISSION marginally observed above 100 KEV. TIME HISTORY CONSISTS OF ONE MAIN INTERVAL STARTING AT ~ TRIGGER - 10 SECONDS AND LASTING FOR ~ 40 SECONDS (WITH PEAK RATE AT ~ TRIGGER + 3 SECONDS) AND EXTENDED EMISSION LASTING FOR AT LEAST ANOTHER 40 SECONDS, POSSIBLY ENDING IN A DATA GAP. CLASSIFIED AS A C4.5 FLARE IN GOES X-RAY DATA.

BATSE BURST TRIGGER

NO.: 01907

TIME: TJD=8872 SECONDS=52190

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SOLAR FLARE OF UNKNOWN DURATION DUE TO MISSING PRE-TRIGGER DATA (LOWER LIMIT OF 50 SECONDS). NO EMISSION DETECTED ABOVE 300 KEV. CLASSIFIED AS C4.9 FLARE IN GOES X-RAY DATA.

BATSE BURST TRIGGER

NO.: 1908

TIME: TJD=8872 SECONDS=67717

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SOLAR FLARE OF ~ 160 SECOND DURATION, WITH PEAK RATE AT TRIGGER + 64 SECONDS. NO EMISSION DETECTED ABOVE 300 KEV.

BATSE BURST TRIGGER

NO.: 01909

TIME: TJD=8872 SECONDS=73881

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SOLAR FLARE WITH DURATION OF ~ 60 SECONDS. TIME HISTORY CONSISTS OF A SMOOTH RISE TO THE PEAK, AND PULSES SUPERIMPOSED ON A SLOW DECAY. NO EMISSION OBSERVED ABOVE 300 KEV.

BATSE BURST TRIGGER

NO.: 01910

TIME: TJD=8872 SECONDS=77469

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SOLAR FLARE OF ~ 30 SECOND DURATION. NO EMISSION OBSERVED ABOVE 300 KEV. PEAK RATE IS AT TRIGGER TIME.

BATSE BURST TRIGGER

NO.: 01911

TIME: TJD=8872 SECONDS=82800

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

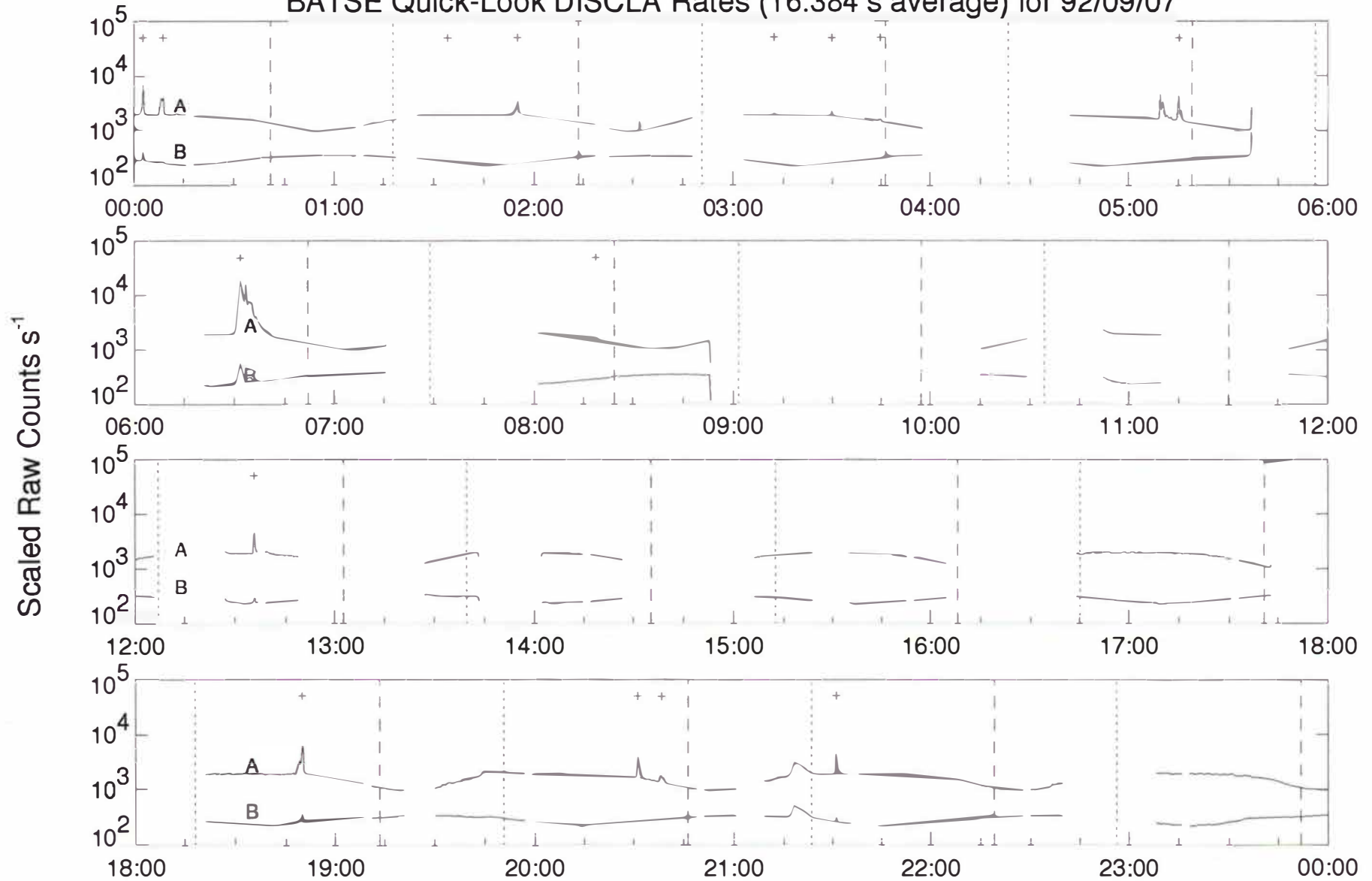
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SOLAR FLARE OF UNKNOWN DURATION DUE TO INSUFFICIENT DATA (LOWER LIMIT OF 120 SECONDS). COMPLEX TIME HISTORY WITH PEAK RATE AT ~ TRIGGER + 23 SECONDS. WEAK EMISSION OBSERVED ABOVE 300 KEV. CLASSIFIED AS M2.9 FLARE IN GOES X-RAY DATA.

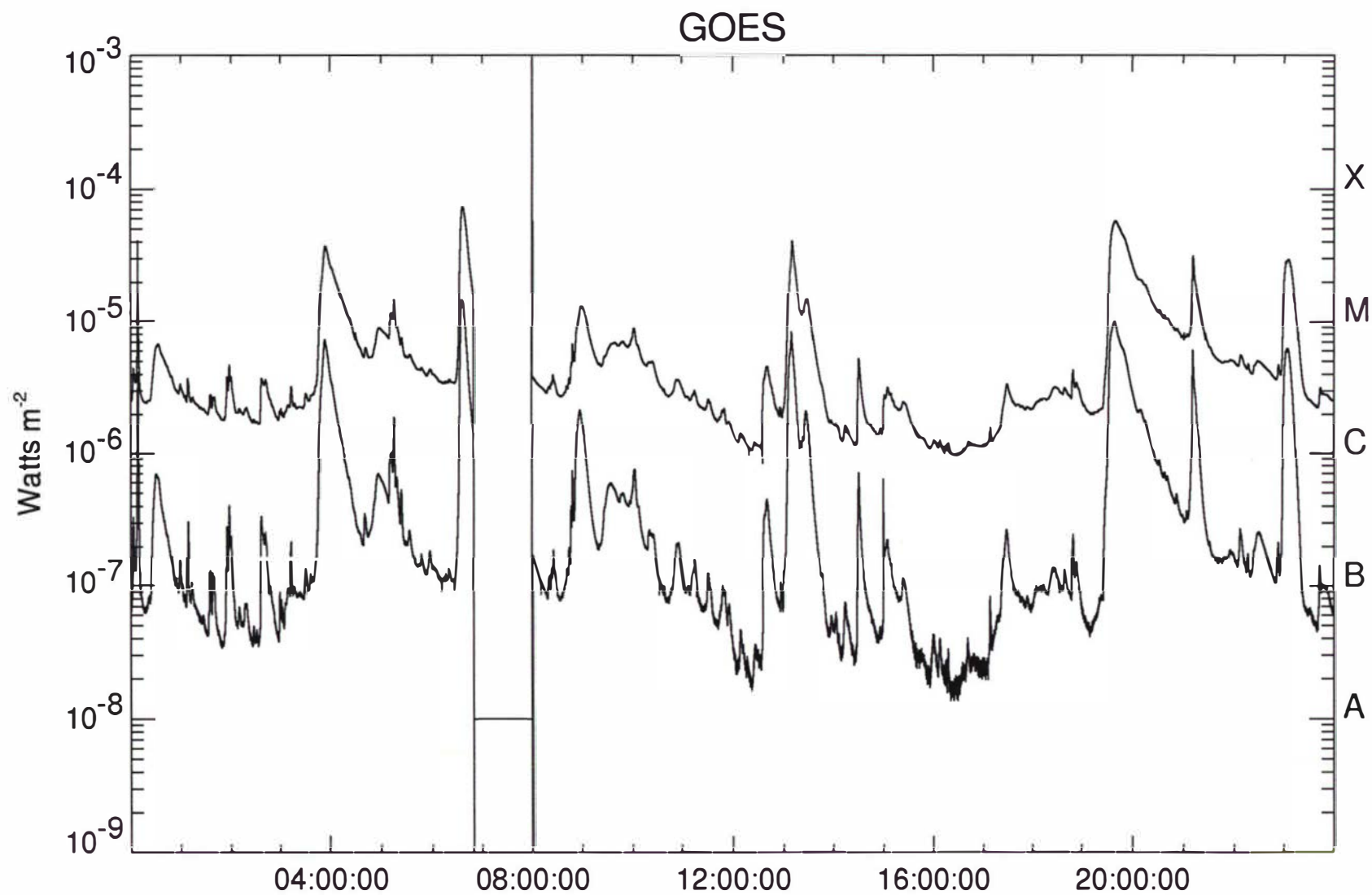
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/07



Current Time: 92/09/29, 0230 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



Data Start: 92/09/07, 0000:00

Plot created: 95/05/25, 1835

Channel

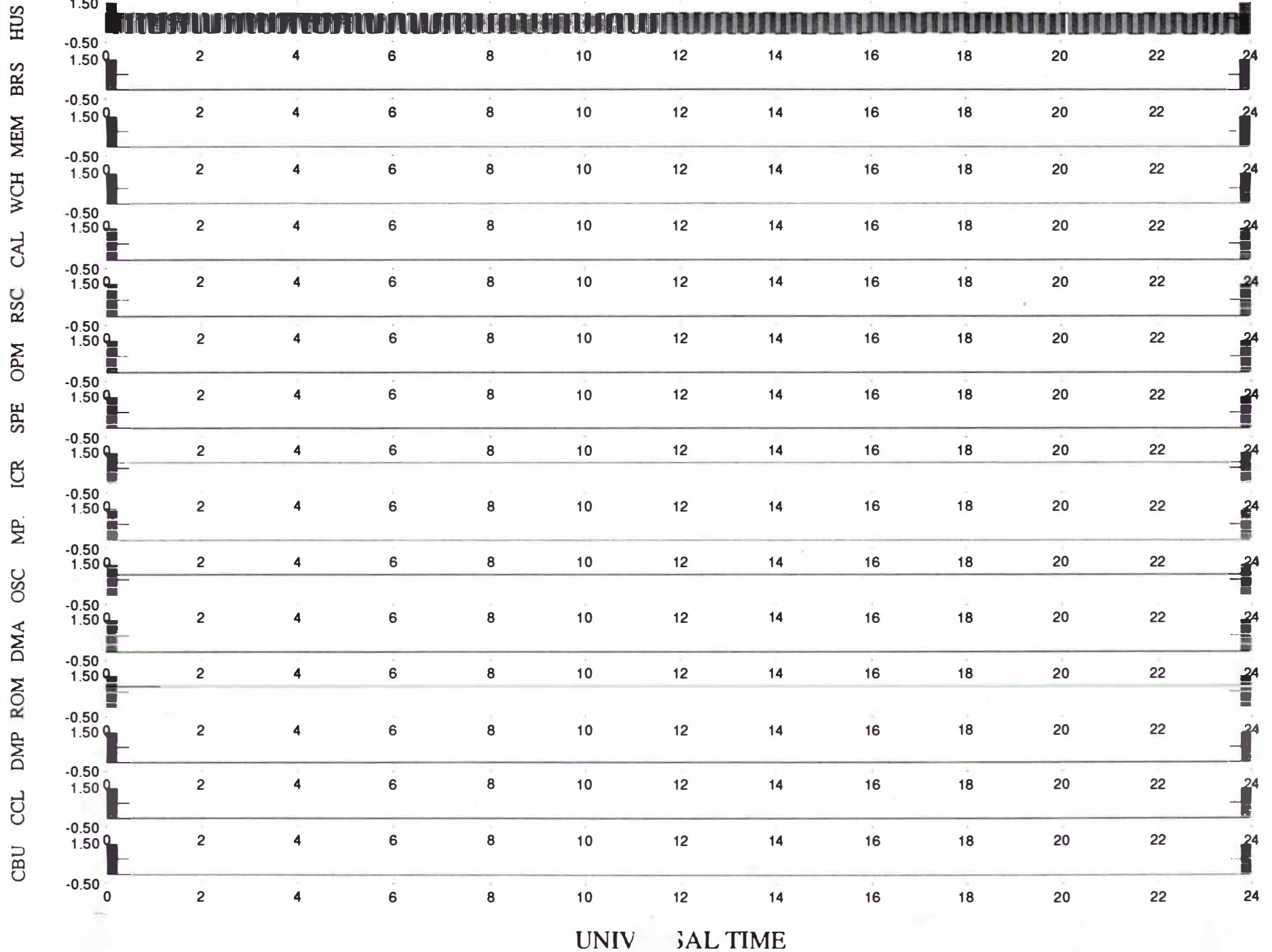
1 (1.0 - 8.0 Angstroms)

Background not subtracted

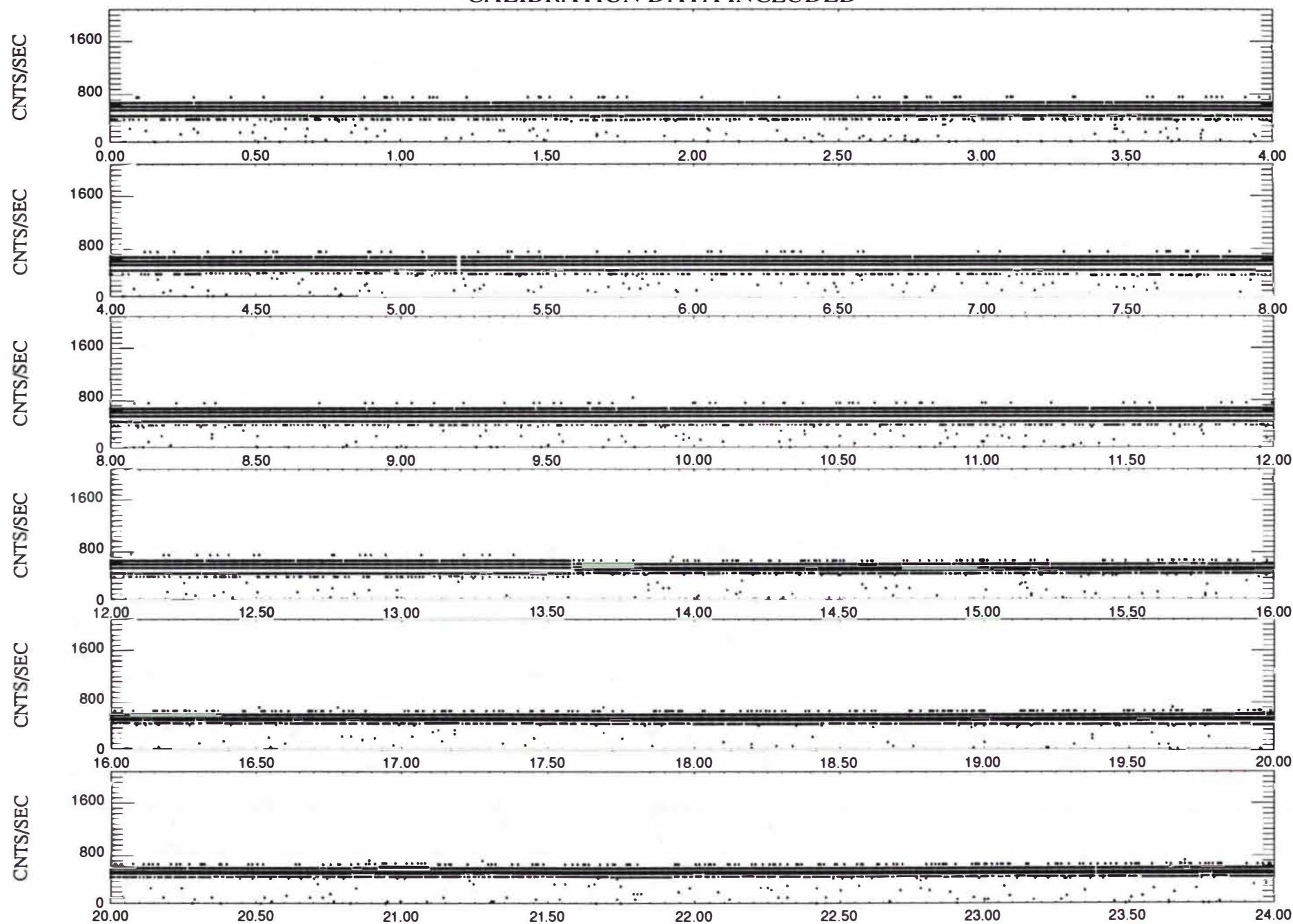
2 (0.5 - 4.0 Angstroms)

Background not subtracted

NO BURST (1)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME

CATSEARCH PROGRAM

BATSE BURST # 1912
EVENT OF 1992 SEP 8 DAY OF YEAR=252
EVENT CROSSING TIME AT BATSE : 30105. S. OR 08:21:44.9
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 99.300 -16.200
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 8/ 9/ 92 IS:
RA= 158.766 DEC= .300 DIST= 6.253 AU
BATSE-ULYSSES DISTANCE = 935504152. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=119.10 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1517.84 SECS.
CROSSING TIME AT ULYSSES IS 28587. S. OR 07:56:27.0 +/- 500.31 SECONDS

No

From MALLOZZI@ssl.msfc.nasa.gov Wed Sep 9 13:59:04 1992
Date: Wed, 9 Sep 1992 16:00:11 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1288

BATSE BURST TRIGGER

NO.: 01912

TIME: TJD=8873 ^{Sep 8} SECONDS=30104

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=057.8 AZIMUTH=288.2 ERROR= DEGREES

COMMENTS:

SINGLE SPIKE EVENT OBSERVED ABOVE 100 KEV, AND POSSIBLY
ABOVE 300 KEV. DURATION OF EVENT ~0.3 SEC.

8 / 6 / 94

ULYSSES RT

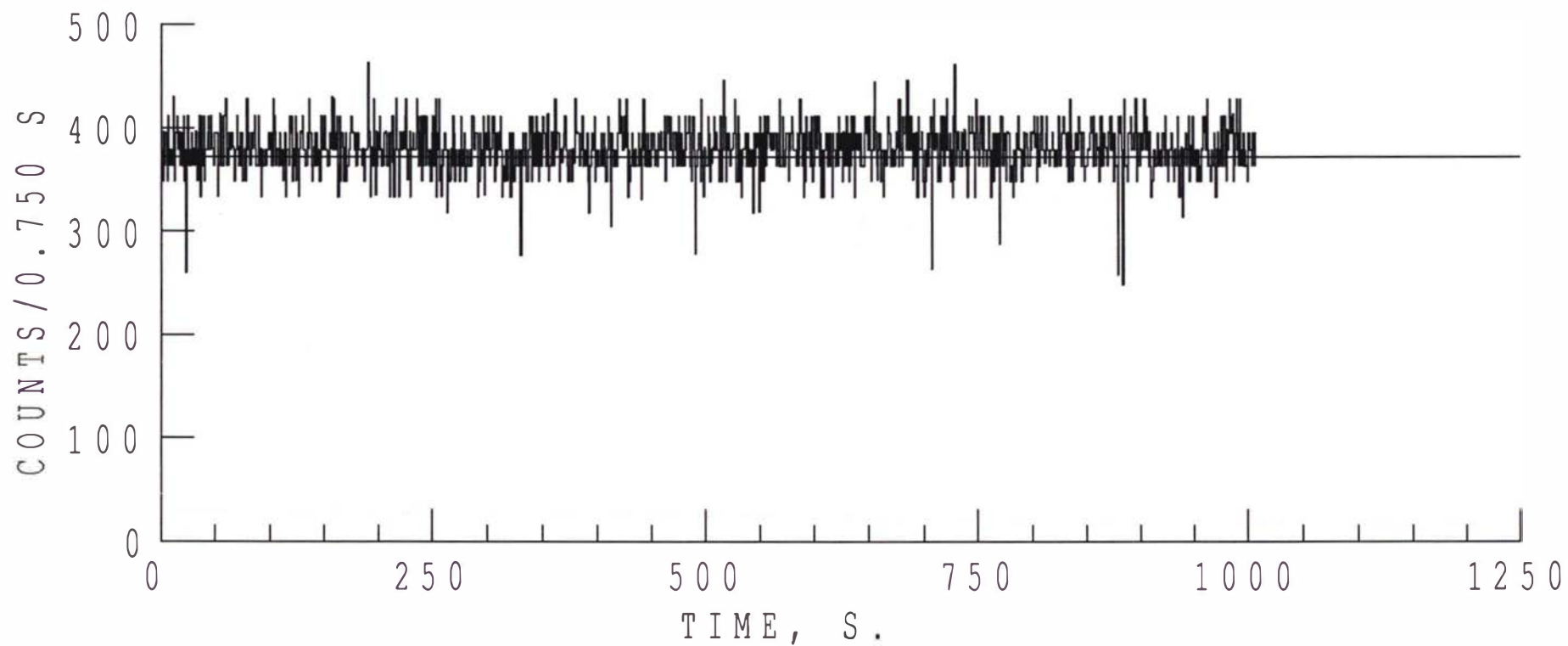
8 / 9 / 92 28080.182 s

0.250 S INTERVALS REGROUPED BY 3

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From jlaros@LPL.Arizona.EDU Thu Jun 15 09:53 PDT 1995
Date: Thu, 15 Jun 1995 09:55:54 -0700
From: jlaros@LPL.Arizona.EDU (John Laros)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Re: 921004

Kevin,

I found a PVO plot. Trigger was at 49960.747, with a sharp dip in the center of the main peak coming about 2.5 s later.

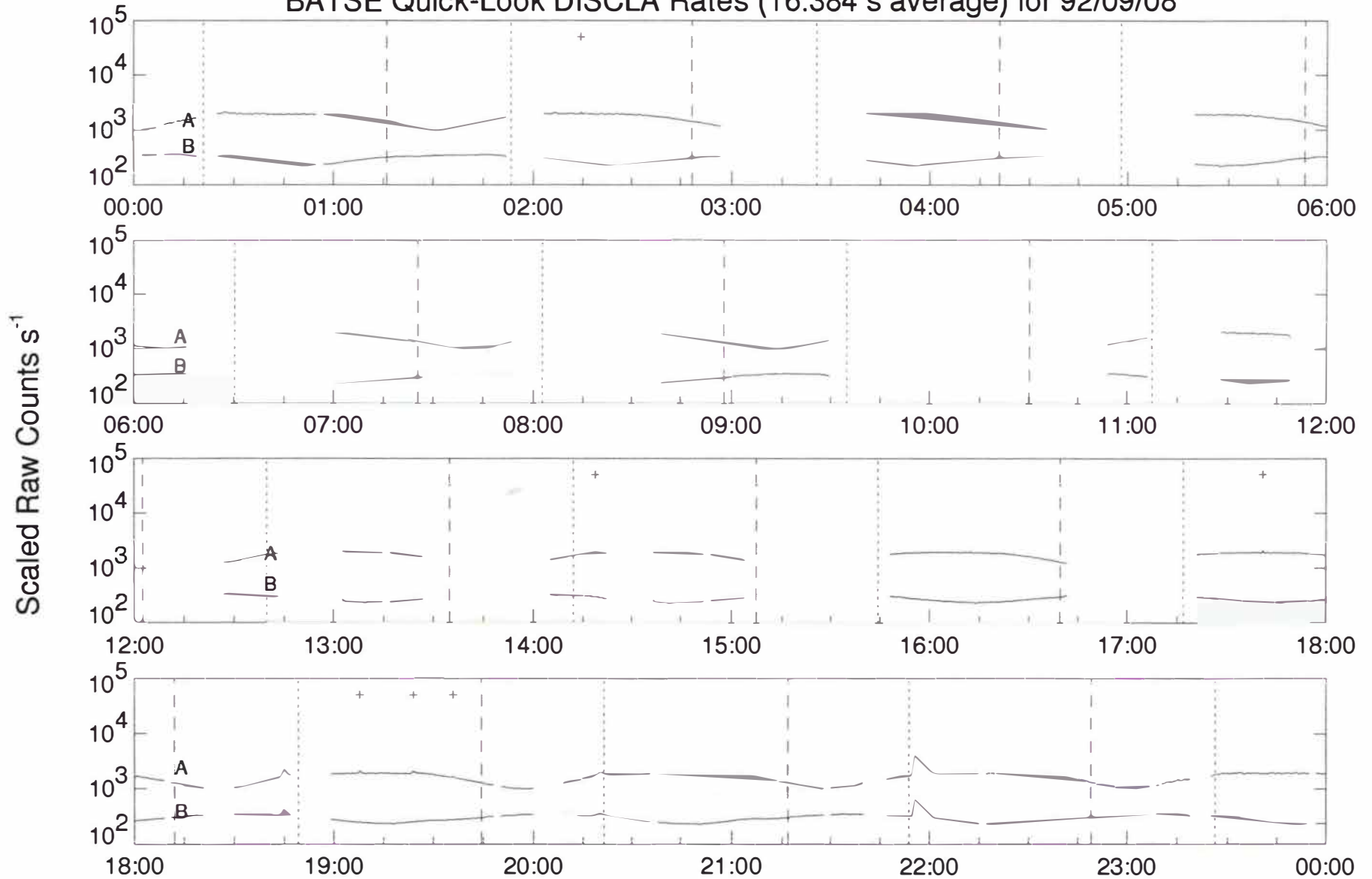
There are two other unrecorded "12th hour" PVO triggers:

920908 43405.494 Almost surely solar 12:03:25
920731 61854.429 CCE. Sharp spike 2.0 s after trigger.

I guess we should recheck the "N/O" entries after 7/25.

John

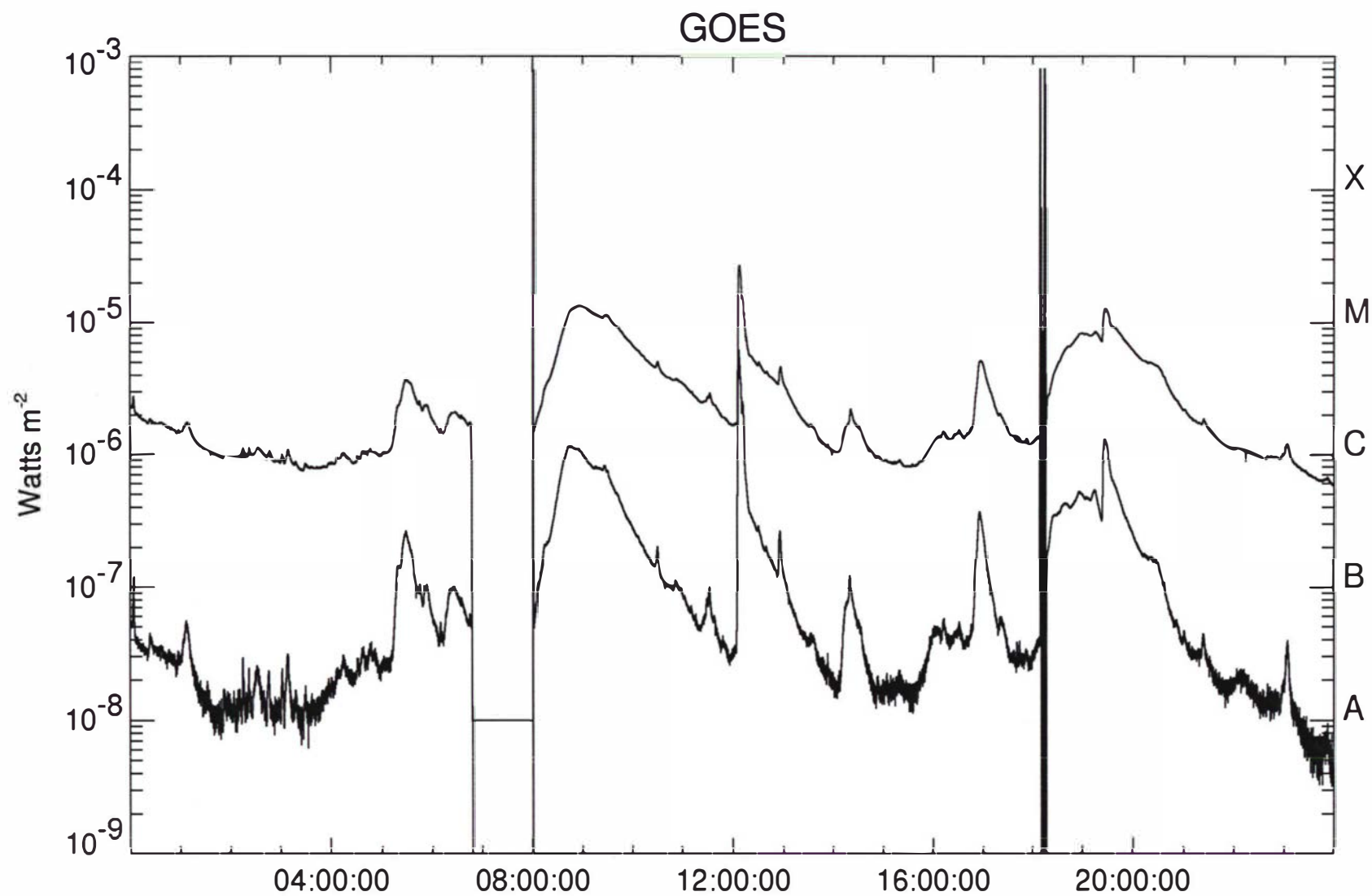
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/08



Current Time: 92/09/29, 0231 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



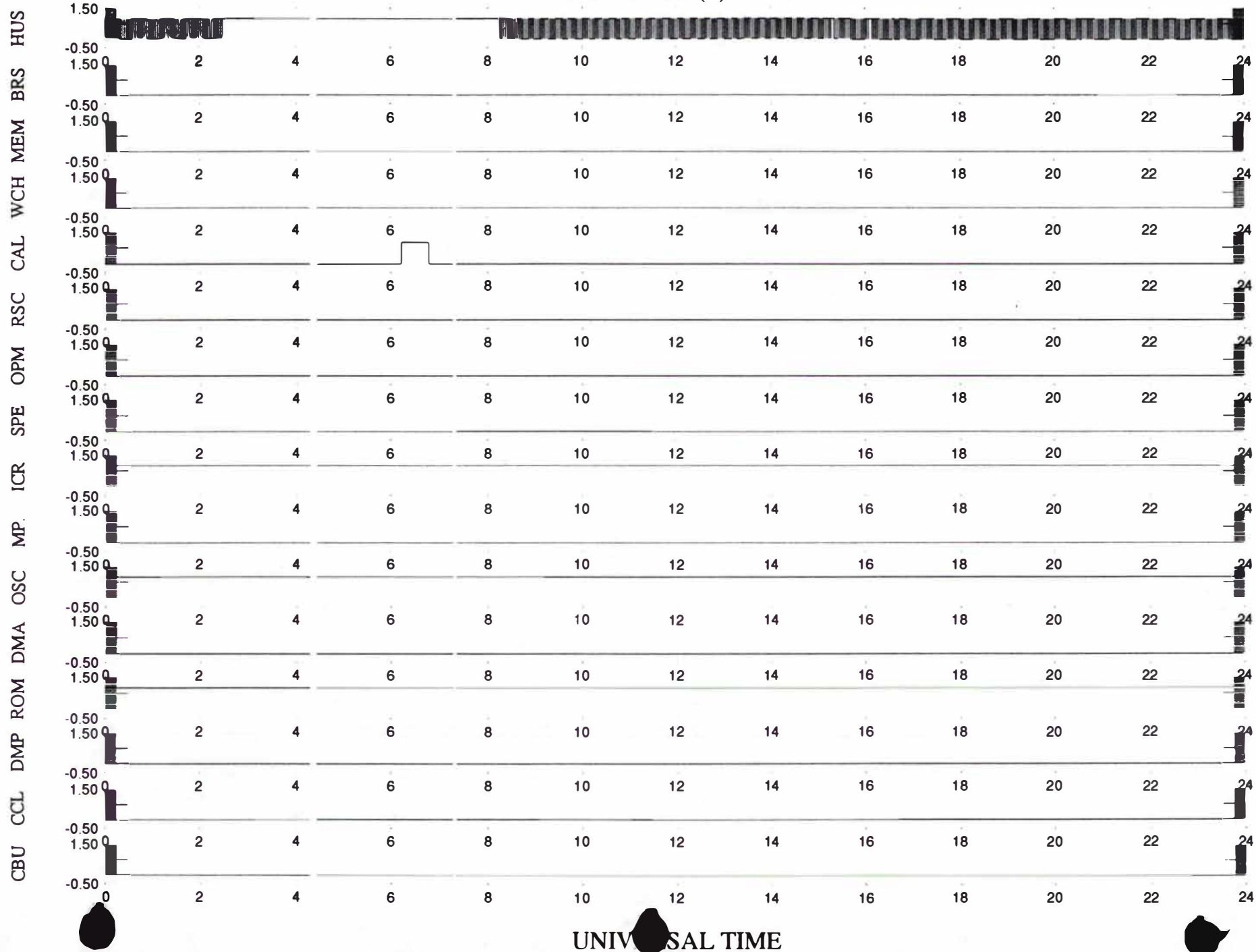
Data Start: 92/09/08, 0000:00

Plot created: 95/05/25, 1838

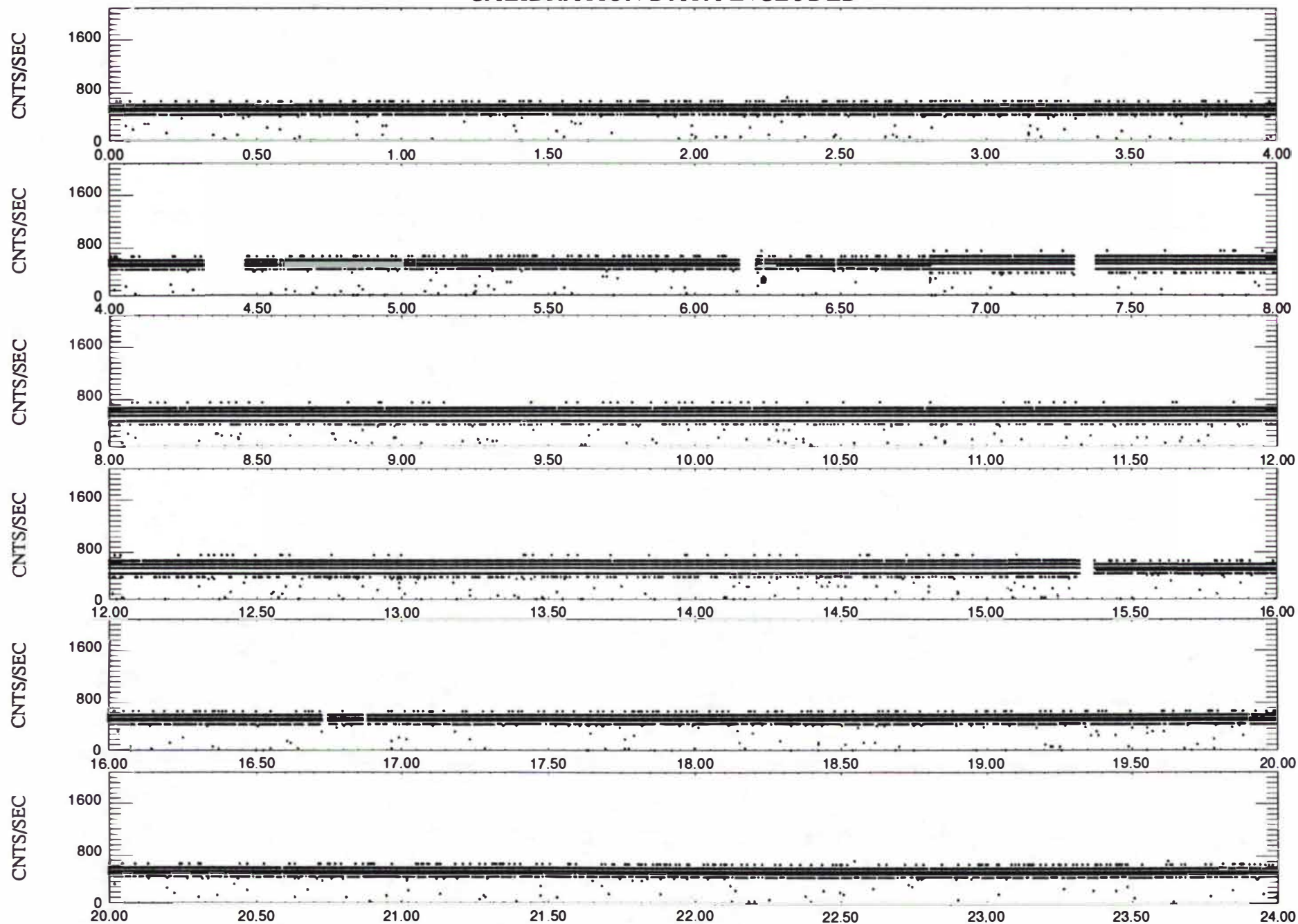
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (1)



CALIBRATION DATA INCLUDED



UNP SAL TIME

NO.: 1913

SEP 9

TIME: TJD=8874 SECONDS=09493

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= 99.1 AZIMUTH=350.7 ERROR= DEGREES

COMMENTS:

THIS FLARE WAS SEEN BY GOES AND CLASSIFIED AS OF CLASS M3.1. IT LASTS FOR ABOUT 50 S AND SHOWS NO SIGNAL ABOVE 100 KEV. THE TIME HISTORY CONSISTS OF MULTIPLE PEAKS WHILE THE INTENSITY REACHES A MAXIMUM DURING THE SECOND HALF.

BATSE BURST TRIGGER

NO.: 1914

TIME: TJD=8874 SECONDS=22319

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= 93.3 AZIMUTH=350.9 ERROR= DEGREES

COMMENTS:

THIS FLARE WAS SEEN BY GOES AND CLASSIFICATION IS C2.3. THIS IS COMPARATIVELY A SHORT FLARE BULK OF WHICH LASTS FOR ABOUT 10 S WHILE THE ENTIRE FLARE DURATION IS ABOUT 25 S. THE TIME HISTORY CONSISTS OF A SINGLE LARGE PEAK WITH 2-3 SMALL PEAKS SUPERPOSED DURING THE PEAK INTENSITY. IT DOES NOT SHOW SIGNAL ABOVE 100 KEV

BATSE BURST TRIGGER

NO.: 1915

TIME: TJD=8874 SECONDS=28075

TYPE: UNKNOWN

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= 70.9 AZIMUTH=271.2 ERROR= DEGREES

COMMENTS:

THIS TRIGGER CONSISTING OF A NARROW (POSSIBLY LESS THAN 64 MS) SPIKE IS APPARENTLY ORIGINATING FROM THE EARTH! IT SHOWS SIGNIFICANT SIGNAL ABOVE 300 KEV AND IS VERY SIMILAR TO A FEW TRIGGERS RECORDED EARLIER BY BATSE. SINCE IT IS NOT OF COSMIC ORIGIN IT IS CLASSIFIED AS "UNKNOWN".

BATSE BURST TRIGGER

NO.: 1916

TIME: TJD=8874 SECONDS=30593

TYPE: SAA ENT SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

TRIGGER DURING SAA ENTRY.

BATSE BURST TRIGGER

NO.: 1917

TIME: TJD=8874 SECONDS=58767

TYPE: ELE.PRE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

ELECTRON PRECIPITATION EVENT.

BATSE BURST TRIGGER

NO.: 1918

TIME: TJD=8874 SECONDS=84028

TYPE: ELE.PRE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

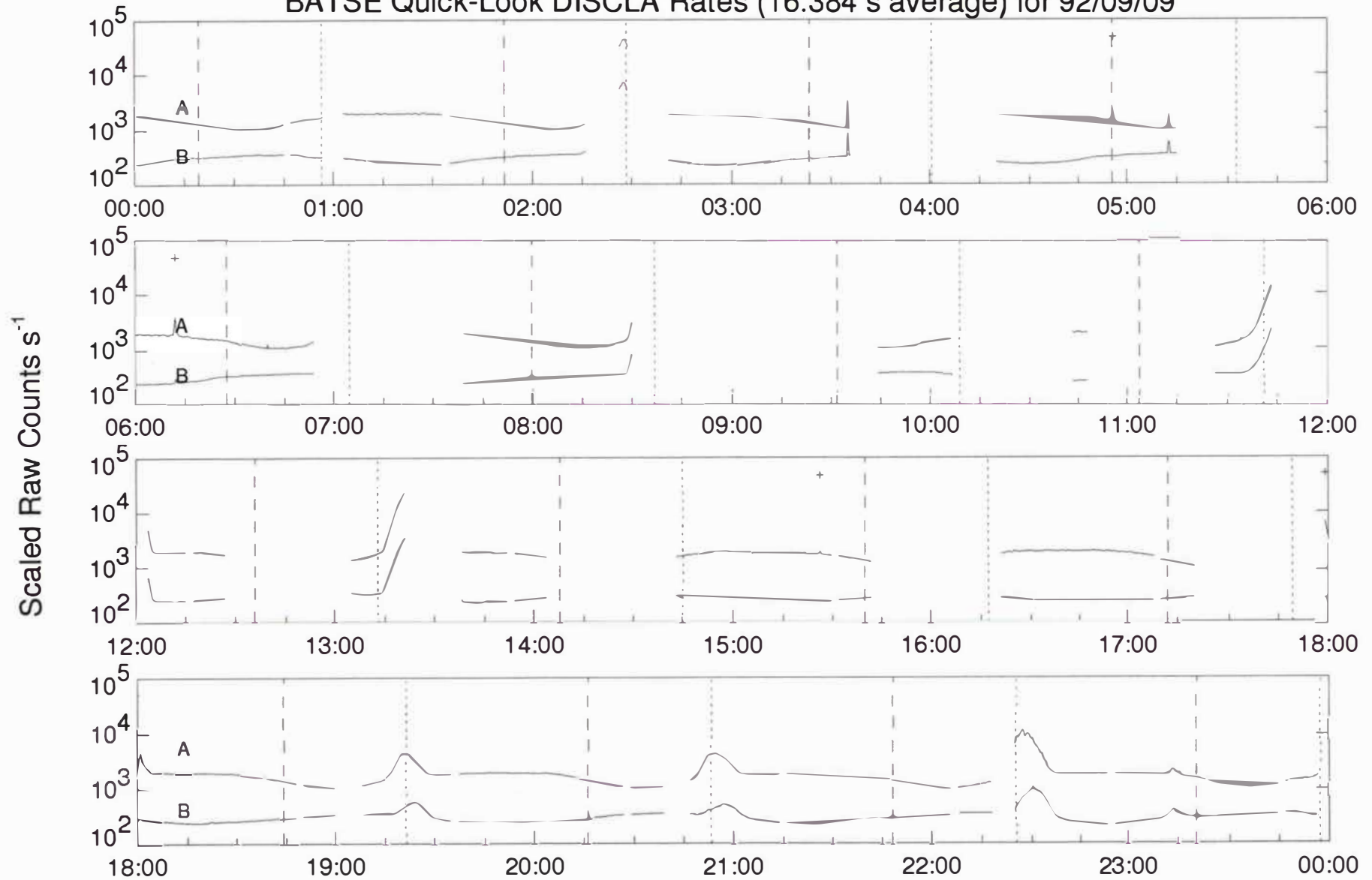
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

ELECTRON PRECIPITATION EVENT.

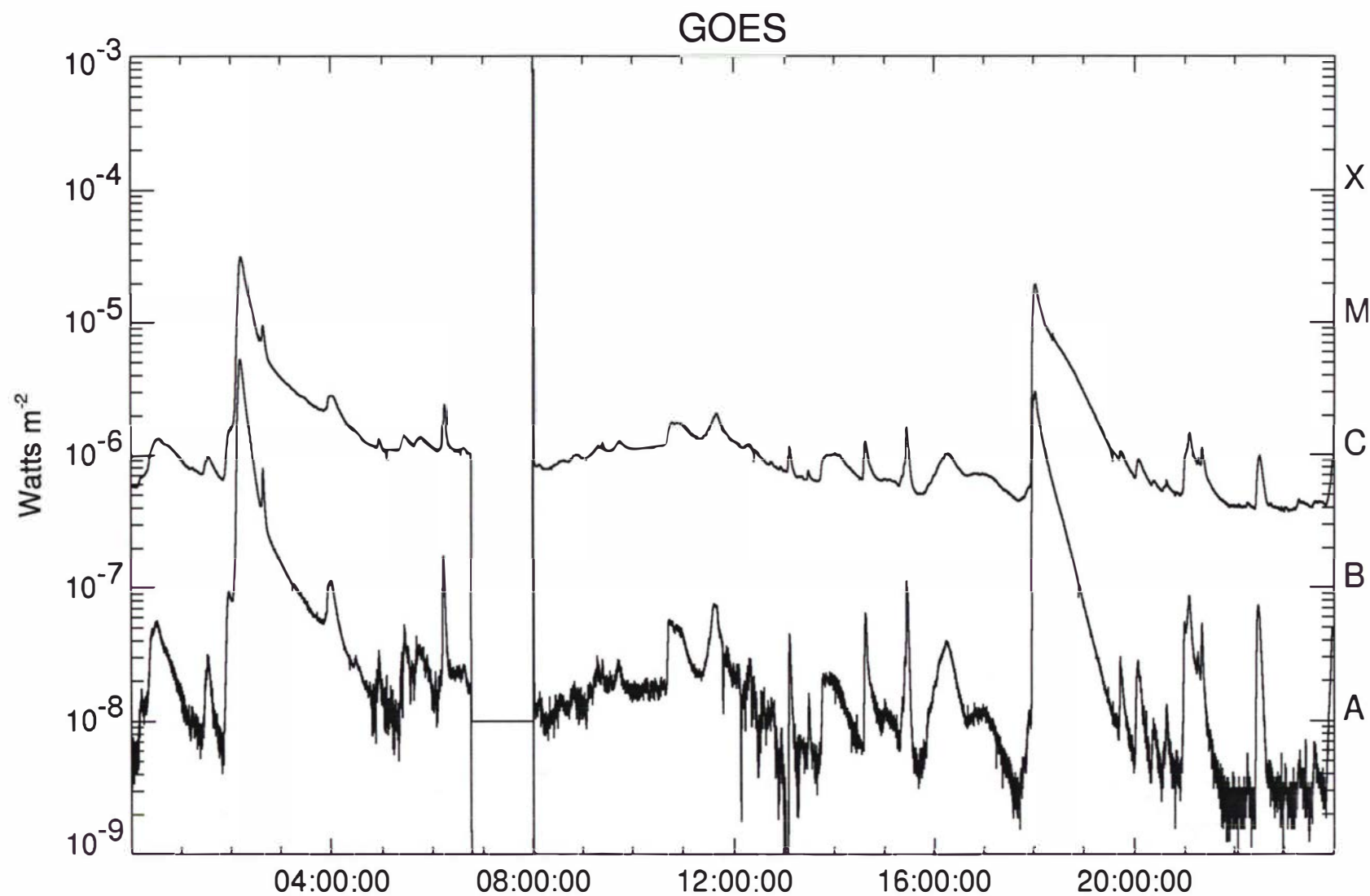
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/09



Current Time: 92/09/29, 0232 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



Data Start: 92/09/09, 0000:01

Plot created: 95/05/25, 1858

Channel

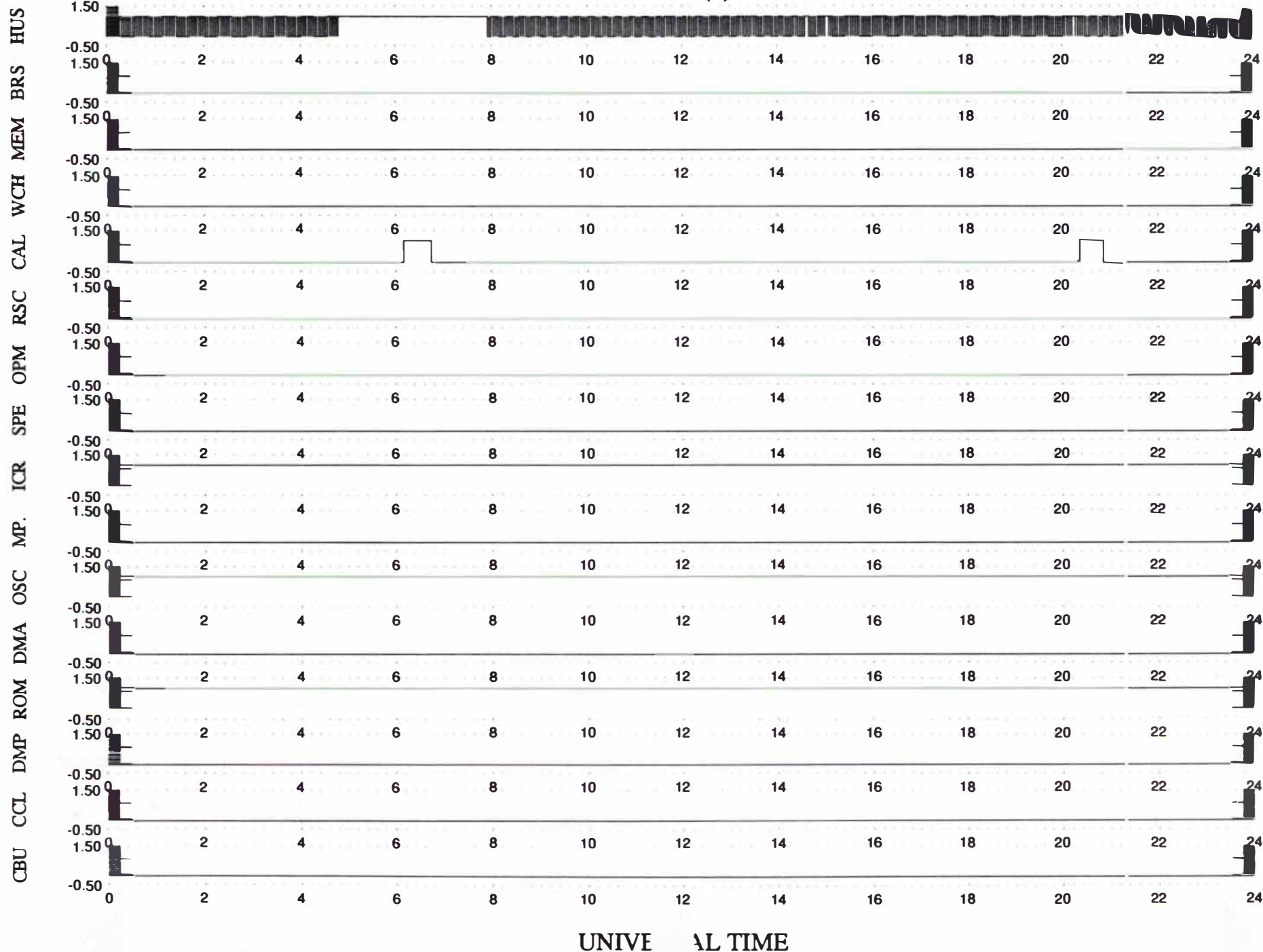
1 (1.0 - 8.0 Angstroms)

Background not subtracted

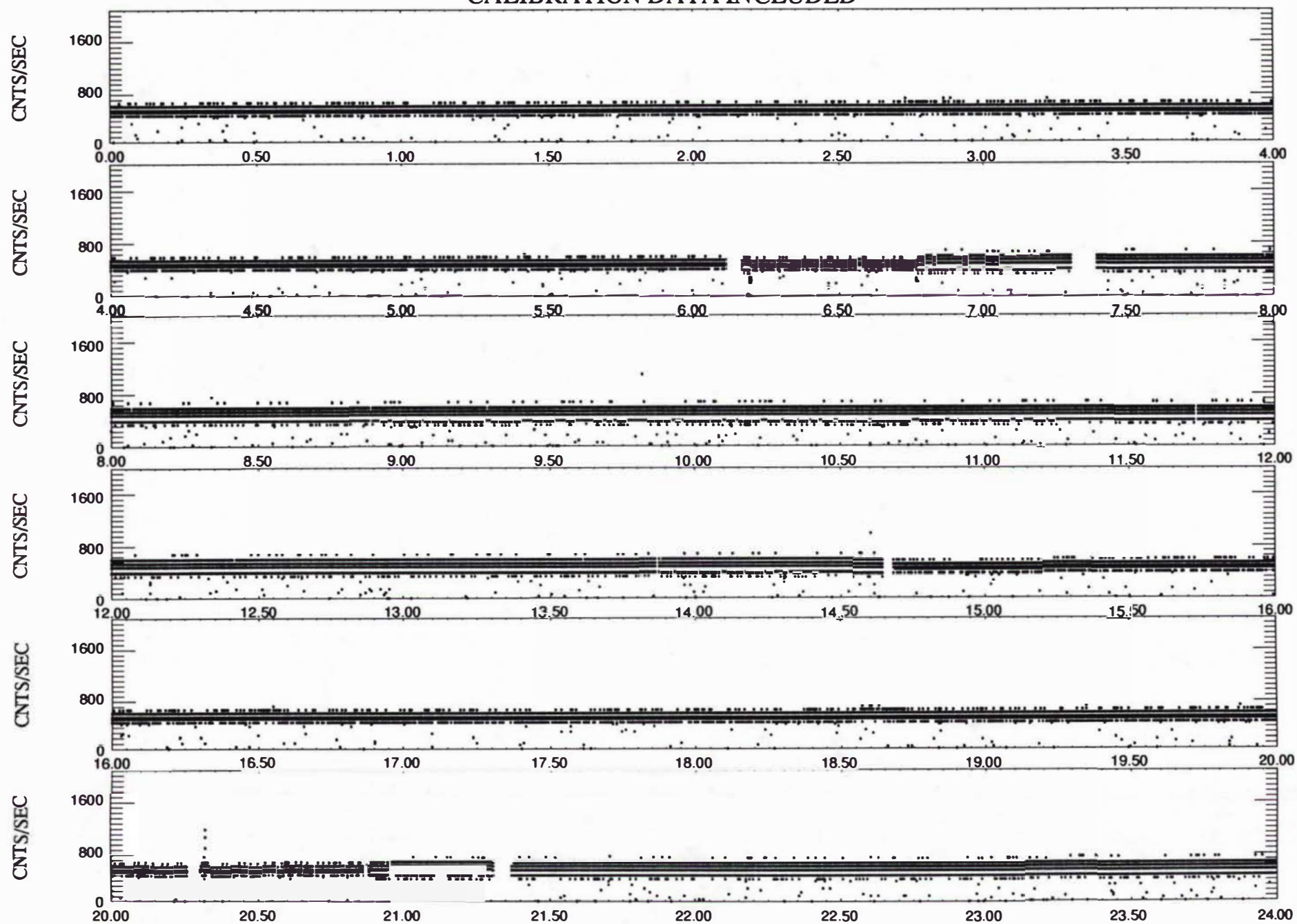
2 (0.5 - 4.0 Angstroms)

Background not subtracted

NO BURST (1)



CALIBRATION DATA INCLUDED



UNIV AL TIME

164
From BRAINERD@ssl.msfc.nasa.gov Sat Sep 12 15:07:04 1992
Date: Sat, 12 Sep 1992 15:14:23 -0500 (CDT)
From: BRAINERD@ssl.msfc.nasa.gov (Jim Brainerd, (205) 544-4970)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01919

TIME: TJD=8875^{SEP 10} SECONDS=71441

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT.

From BRAINERD@ssl.msfc.nasa.gov Sat Sep 12 15:07:12 1992
Date: Sat, 12 Sep 1992 15:23:38 -0500 (CDT)
From: BRAINERD@ssl.msfc.nasa.gov (Jim Brainerd, (205) 544-4970)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1222

BATSE BURST TRIGGER

NO.: 01920

TIME: TJD=8875 SECONDS=77394

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

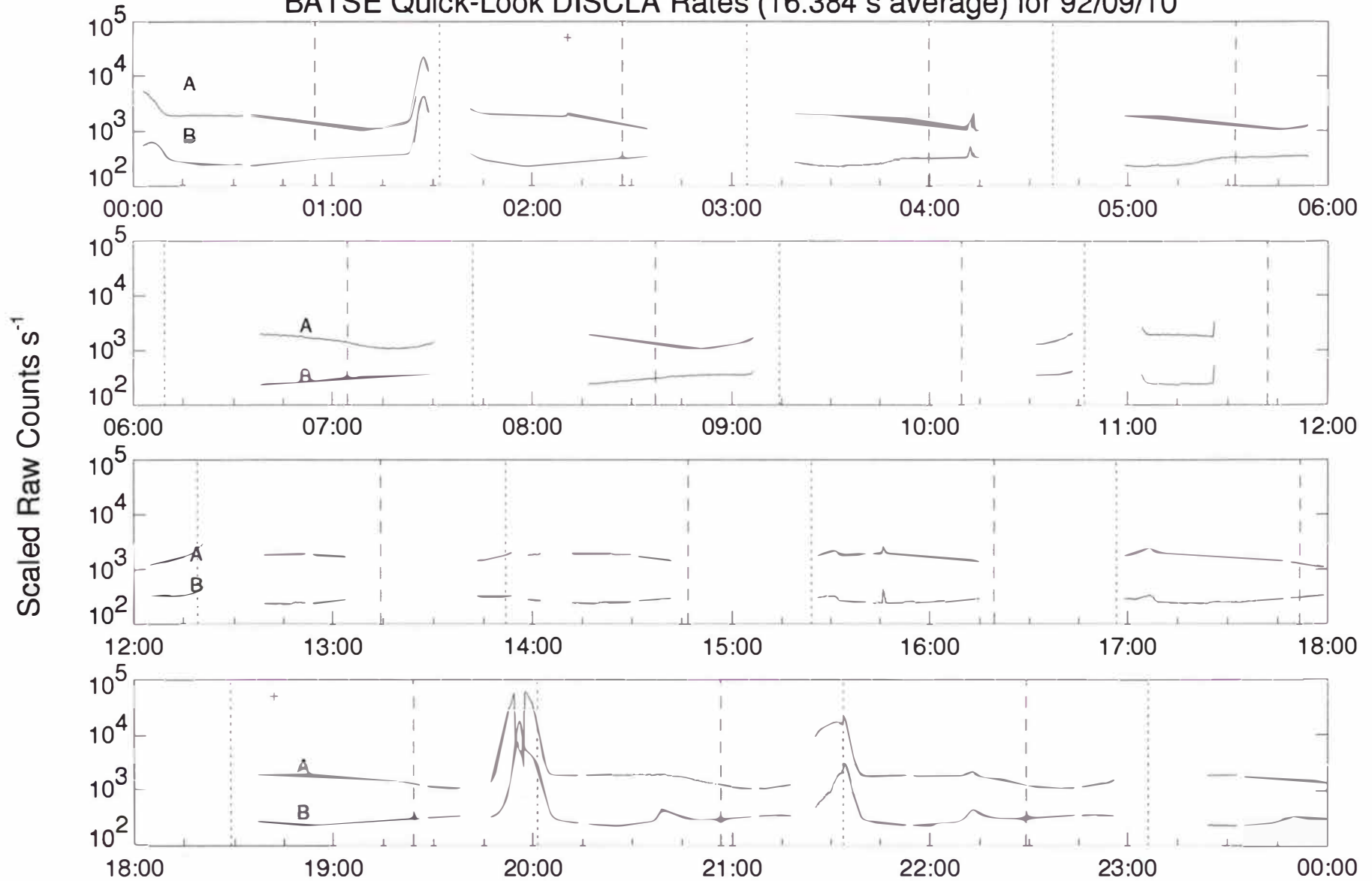
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT

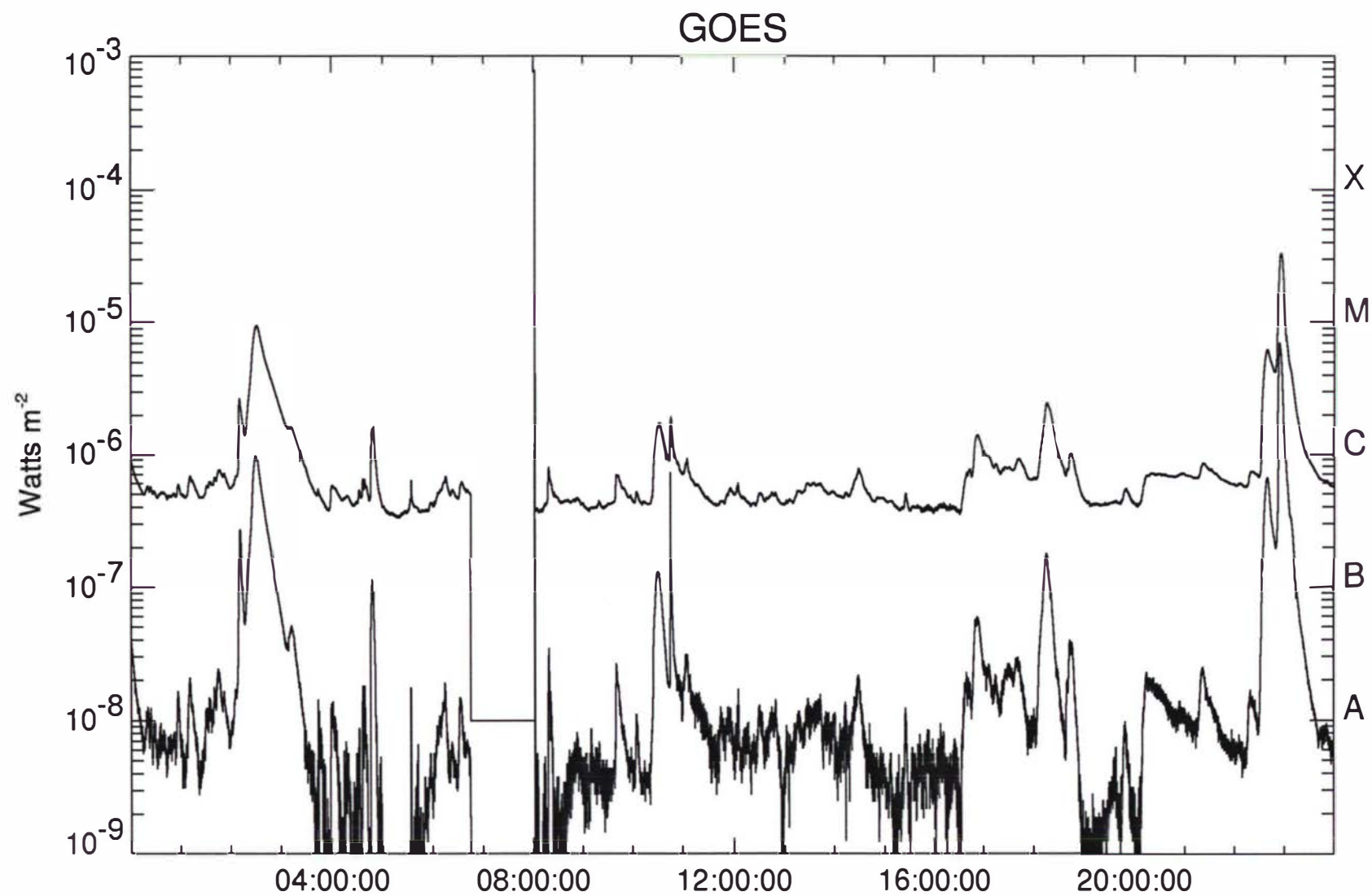
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/10



Current Time: 92/09/29, 0233 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



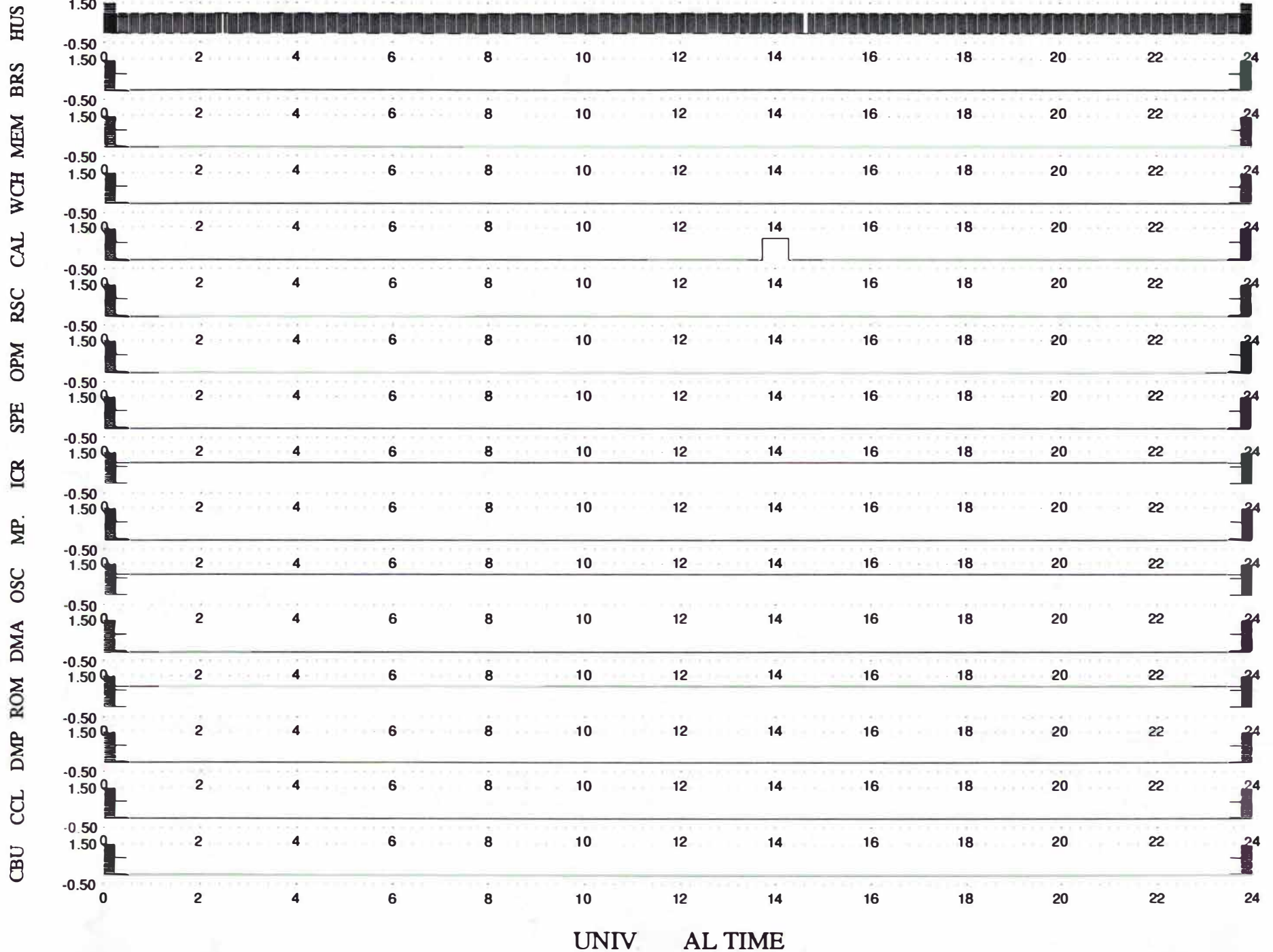
Data Start: 92/09/10, 0000:02

Plot created: 95/05/25, 1901

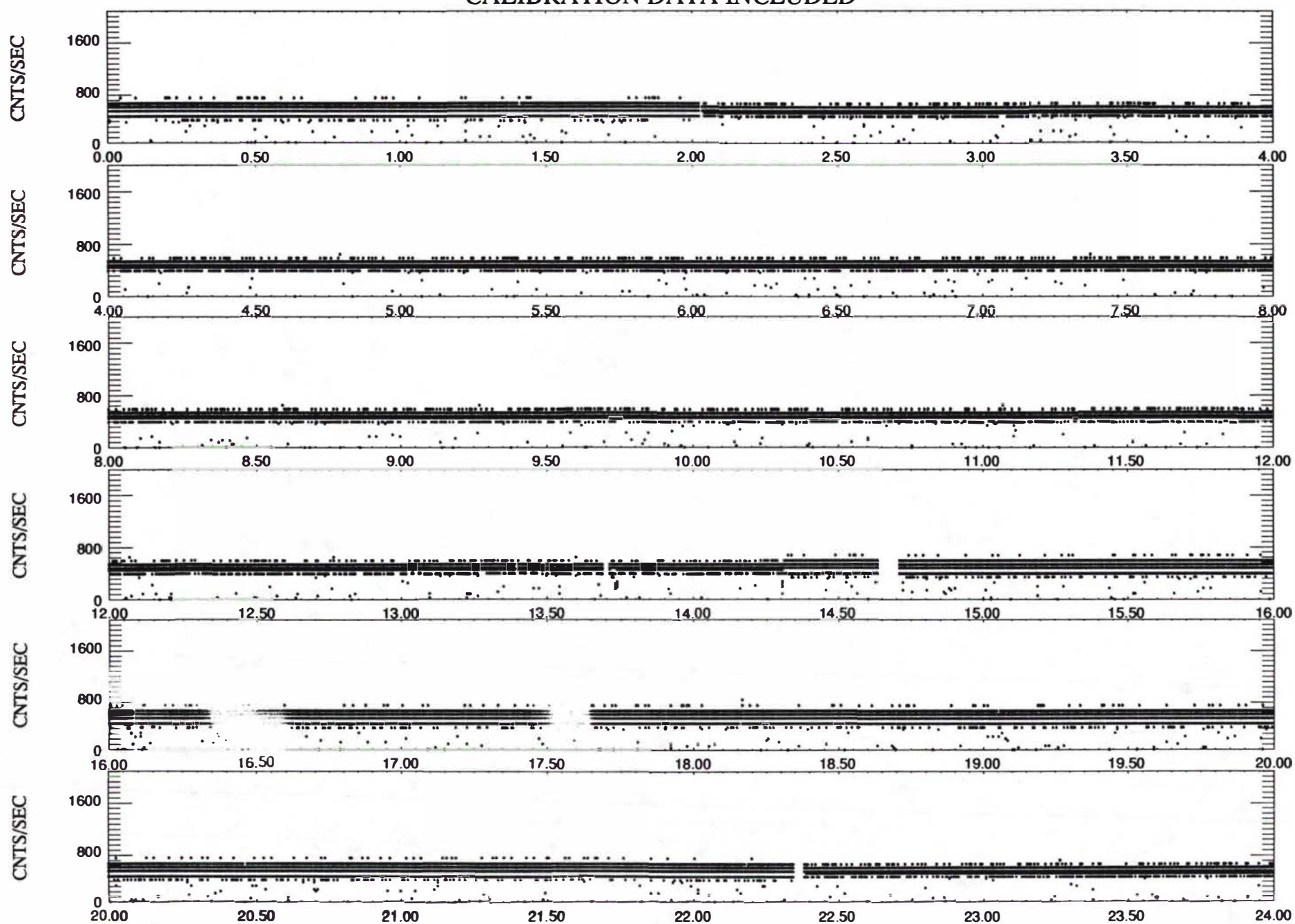
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (1)



CALIBRATION DATA INCLUDED



UNIV AL TIME

From SHARIFF@ssl.msfc.nasa.gov Mon Sep 14 09:33:54 1992
Date: Mon, 14 Sep 1992 11:32:52 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01921

Sep 11
TIME: TJD=8876 SECONDS=21867

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

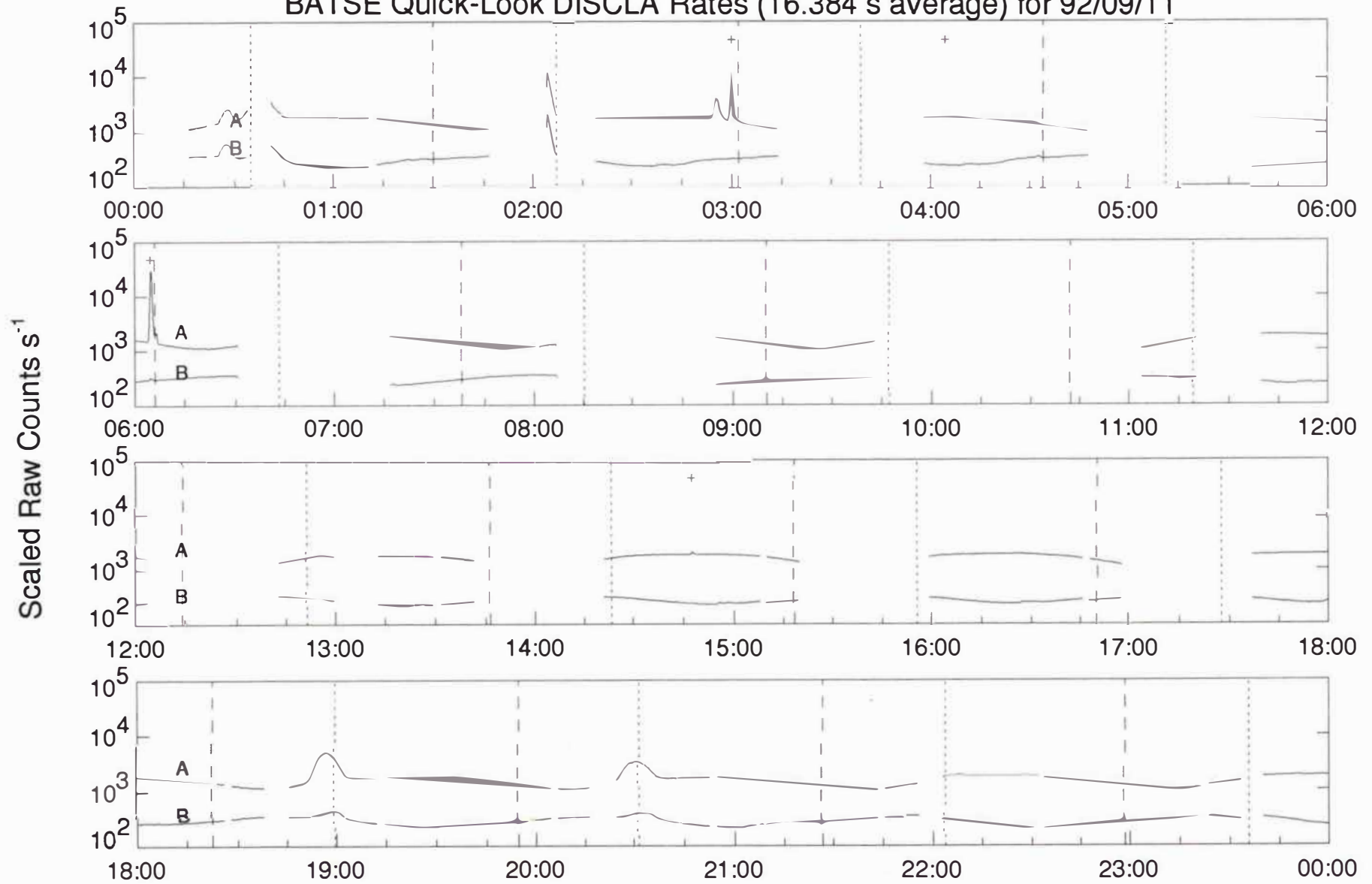
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

STRONG SOLAR FLARE OF DURATION ~40S. CLASSIFIED AS M1.4 ON GOES.

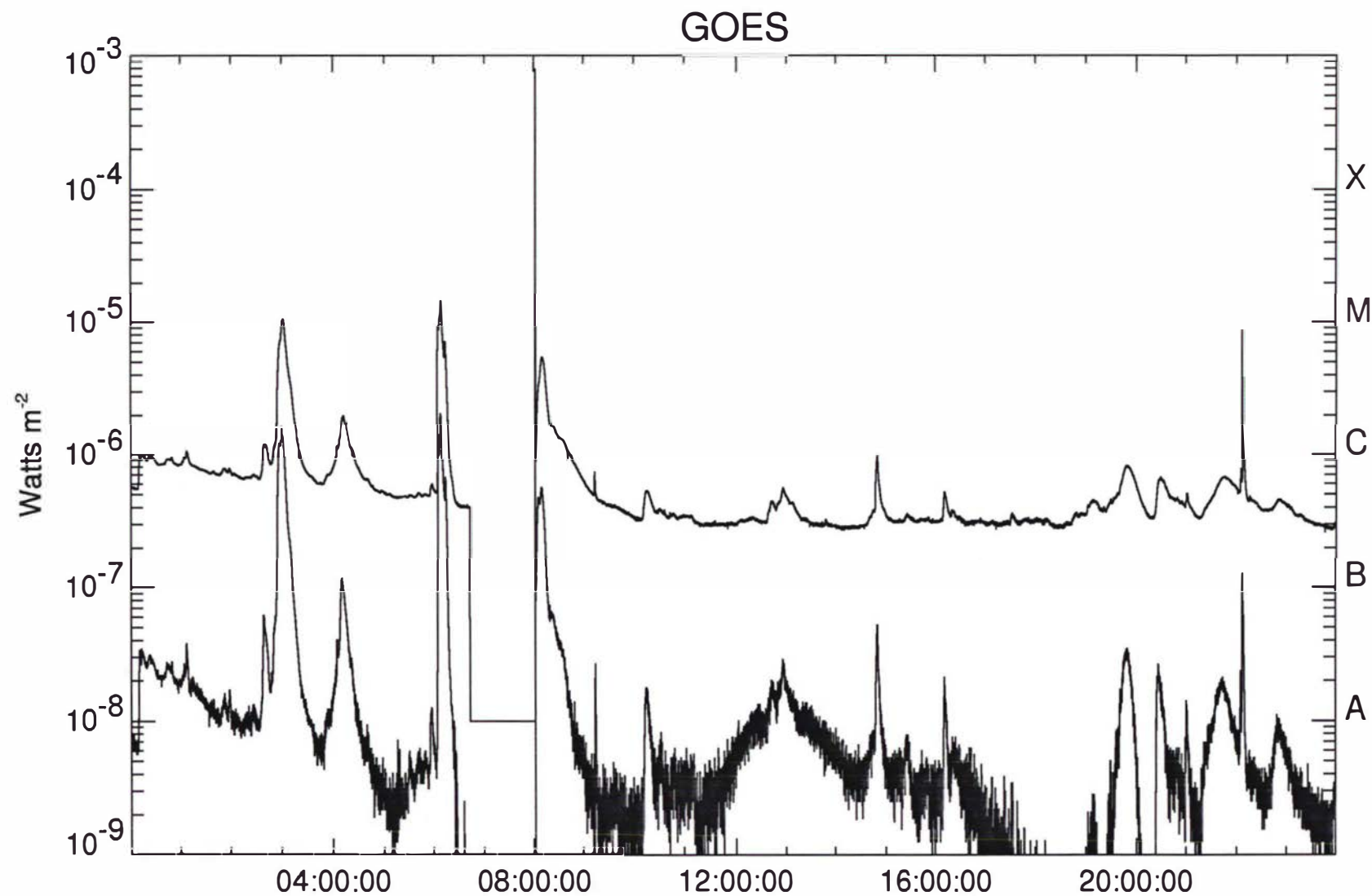
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/11



Current Time: 92/09/29, 0234 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



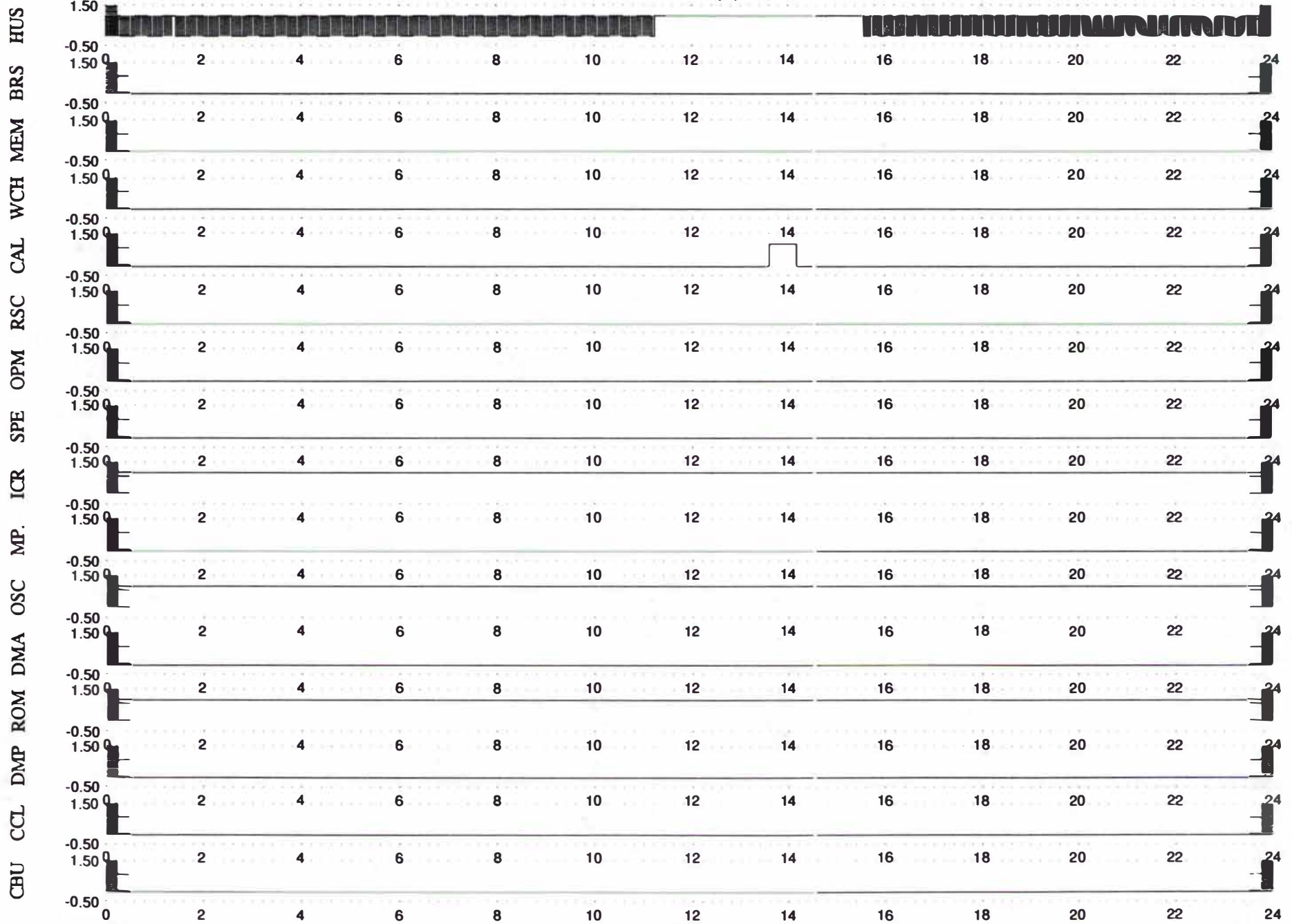
Data Start: 92/09/11, 0000:02

Plot created: 95/05/25, 1905

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

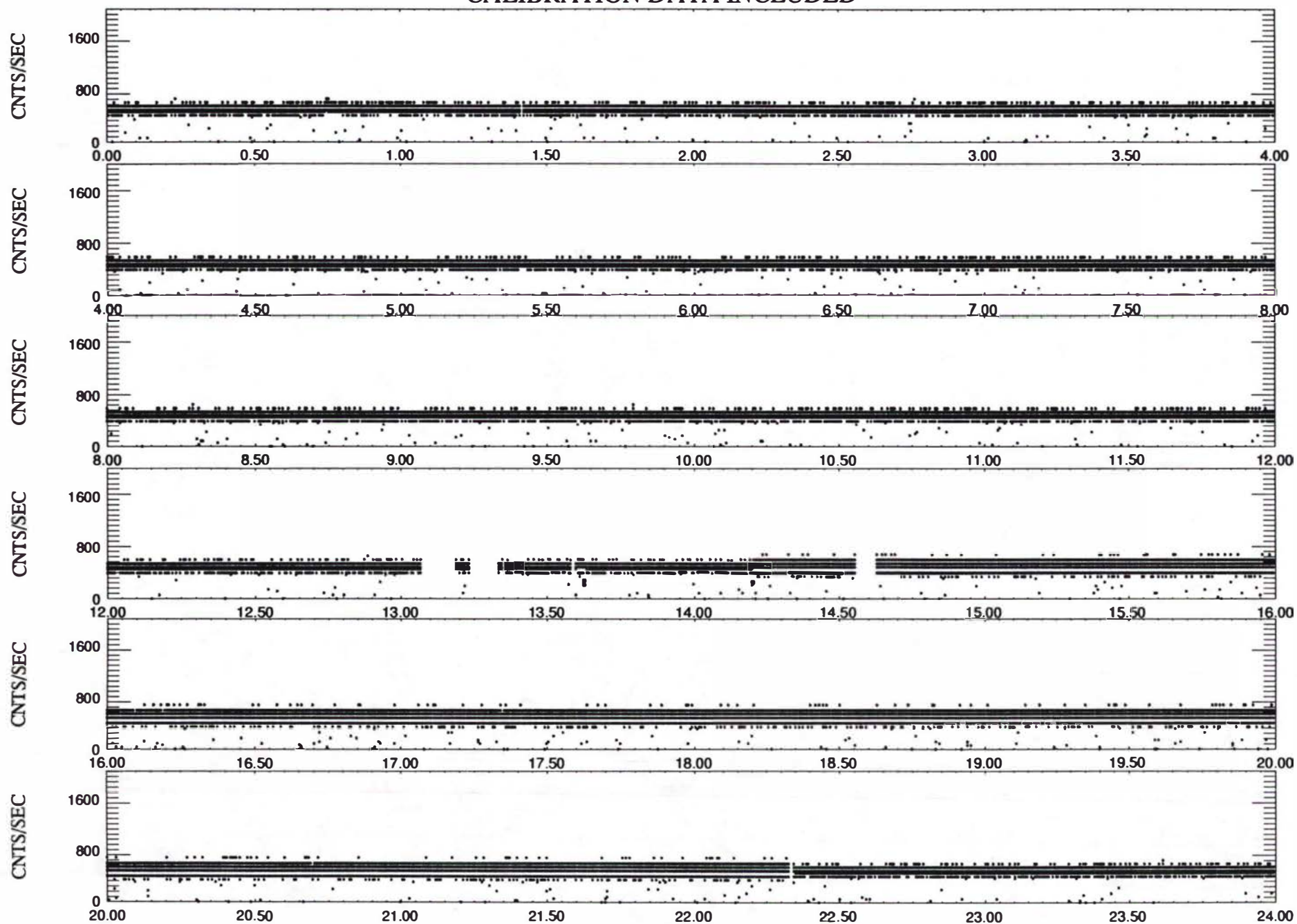
2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (1)



UNIVE AL TIME

CALIBRATION DATA INCLUDED



UNIV AL TIME

CATSEARCH PROGRAM

BATSE BURST # 1922
EVENT OF 1992 SEP 12 DAY OF YEAR=256
EVENT CROSSING TIME AT BATSE : 16867. S. OR 04:41:06.9
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 257.400 -13.300
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 12/ 9/ 92 IS:
RA= 159.306 DEC= -.115 DIST= 6.239 AU
BATSE-ULYSSES DISTANCE = 933366368. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 82.15 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 425.16 SECS.
CROSSING TIME AT ULYSSES IS 17292. S. OR 04:48:12.1 +/- 591.92 SECONDS

NO

From BRIGGS@ssl.msfc.nasa.gov Sun Sep 13 20:06:04 1992
Date: Sun, 13 Sep 1992 22:07:41 -0500 (CDT)
From: BRIGGS@ssl.msfc.nasa.gov (Michael S. Briggs, 205-544-7716, Code ES-62, MSFC)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 01922

TIME: TJD=8877 SECONDS=16867

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=152.2 AZIMUTH=094.0 ERROR= DEGREES

COMMENTS:

BURST CONSISTS OF 5 SPIKES. BURST VISIBLE FROM -2 TO +4 SEC AND FROM
11 TO 13 SEC. BURST IS NOT VISIBLE ABOVE ABOUT 300 KEV.

NO. 0.42

8 / 6 / 94

ULYSSES RT

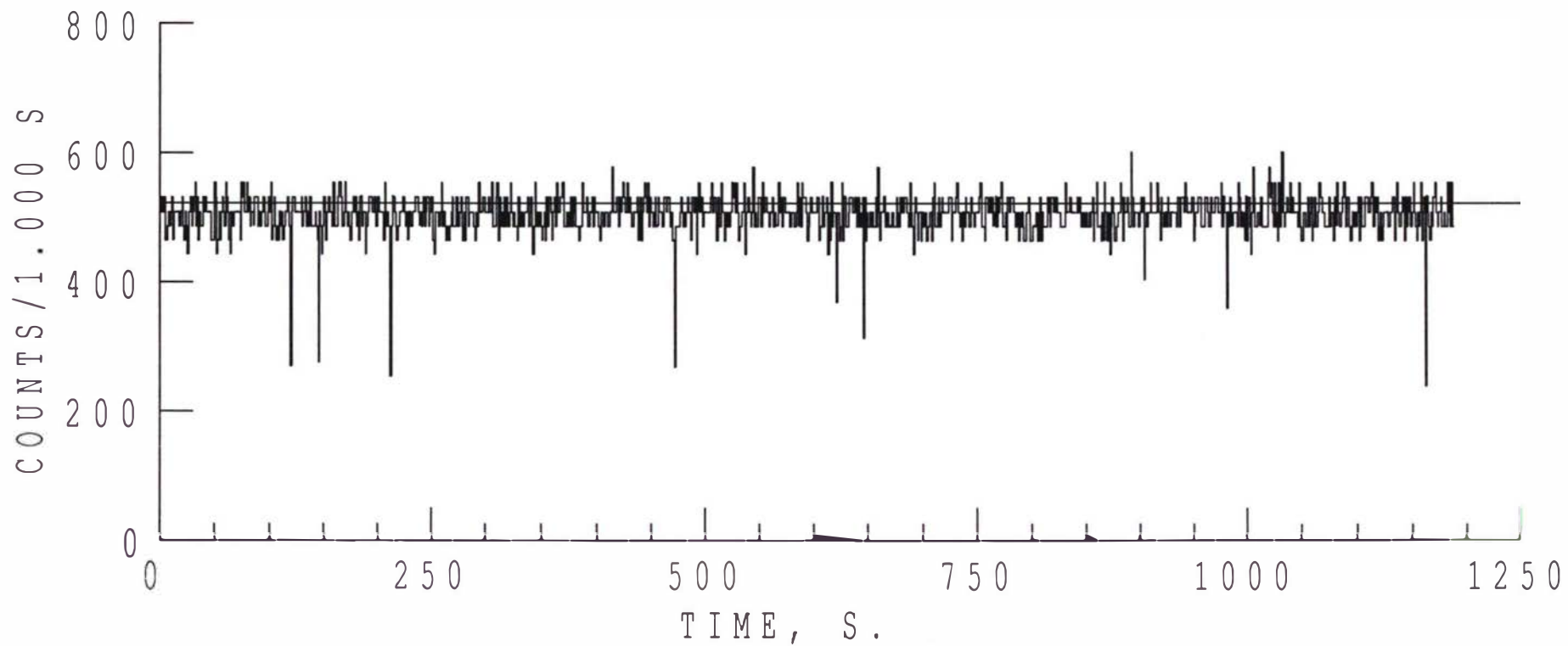
12 / 9 / 92 16704.006 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From BRIGGS@ssl.msfc.nasa.gov Mon Sep 14 10:55:14 1992
Date: Mon, 14 Sep 1992 12:56:36 -0500 (CDT)
From: BRIGGS@ssl.msfc.nasa.gov (Michael S. Briggs, 205-544-7716, Code ES-62, MSFC)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01923

TIME: TJD=^{Sep 12}8877 SECONDS=56328

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

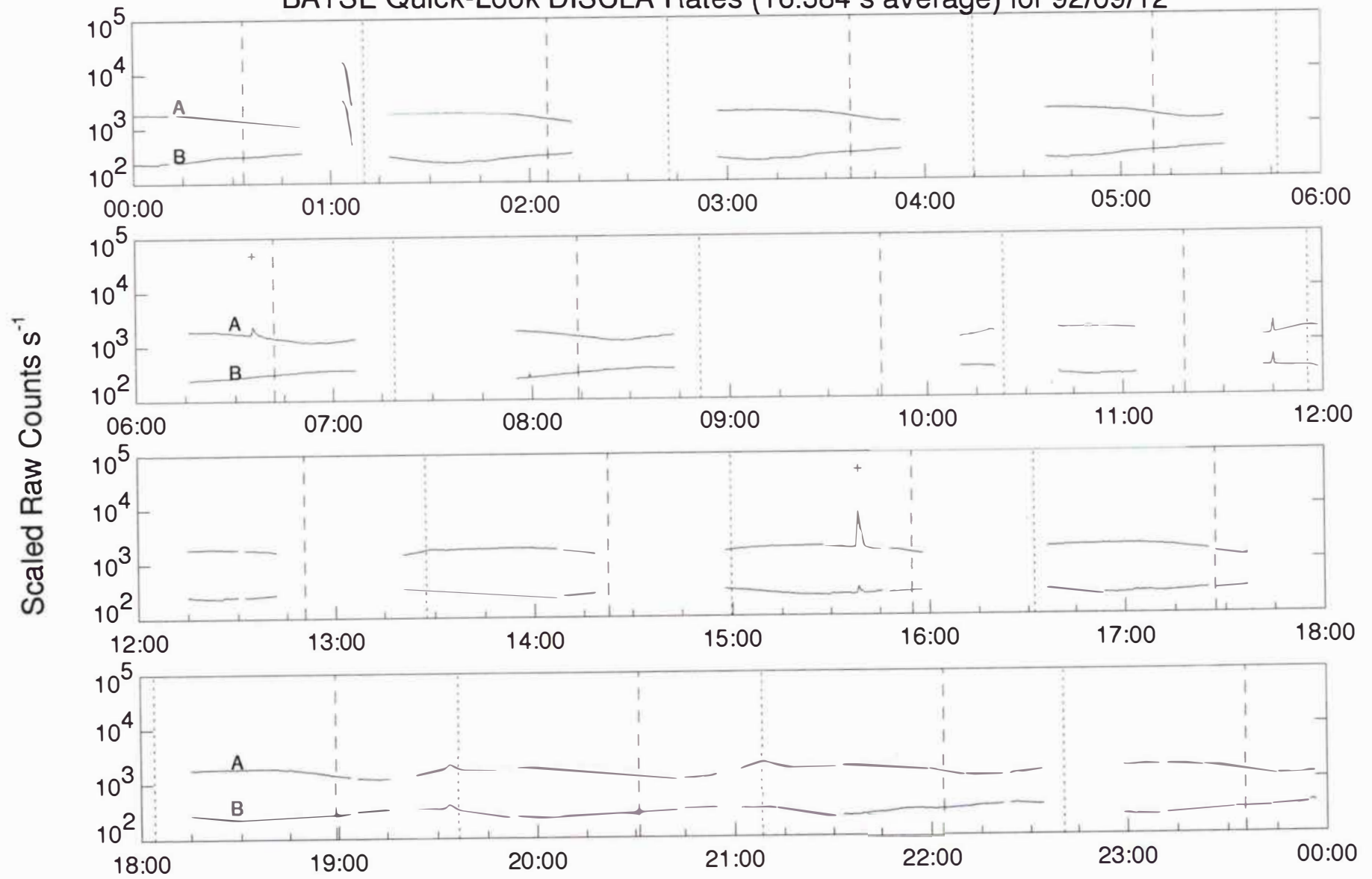
INTENSITY: COUNTS/CM2

LOCATION: ZENITH=097.5 AZIMUTH=350.3 ERROR= DEGREES

COMMENTS:

GOES C4/5 SOLAR FLARE. NOT SEEN ABOVE 100 KEV.

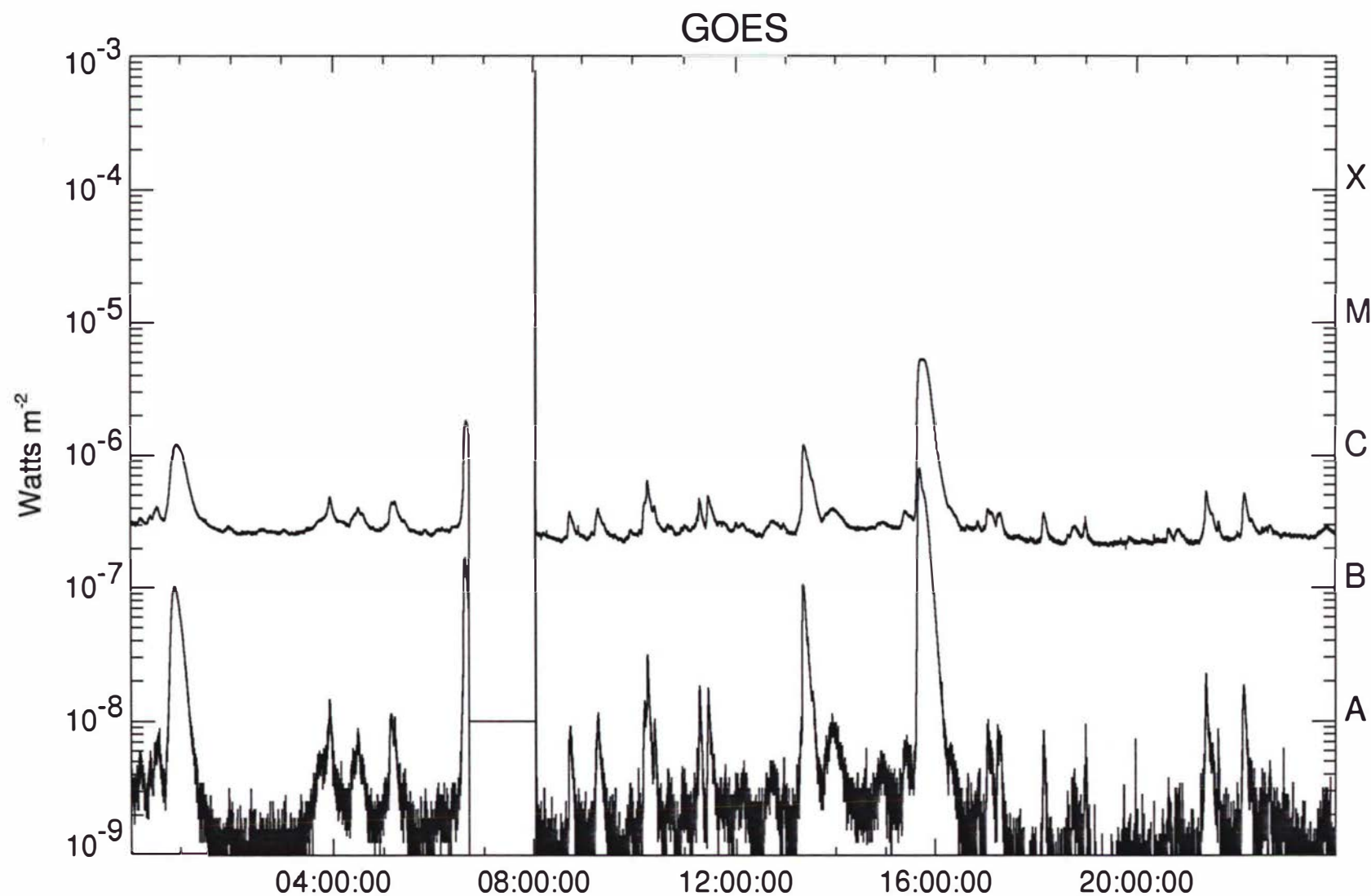
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/12



Current Time: 92/09/29, 0235 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



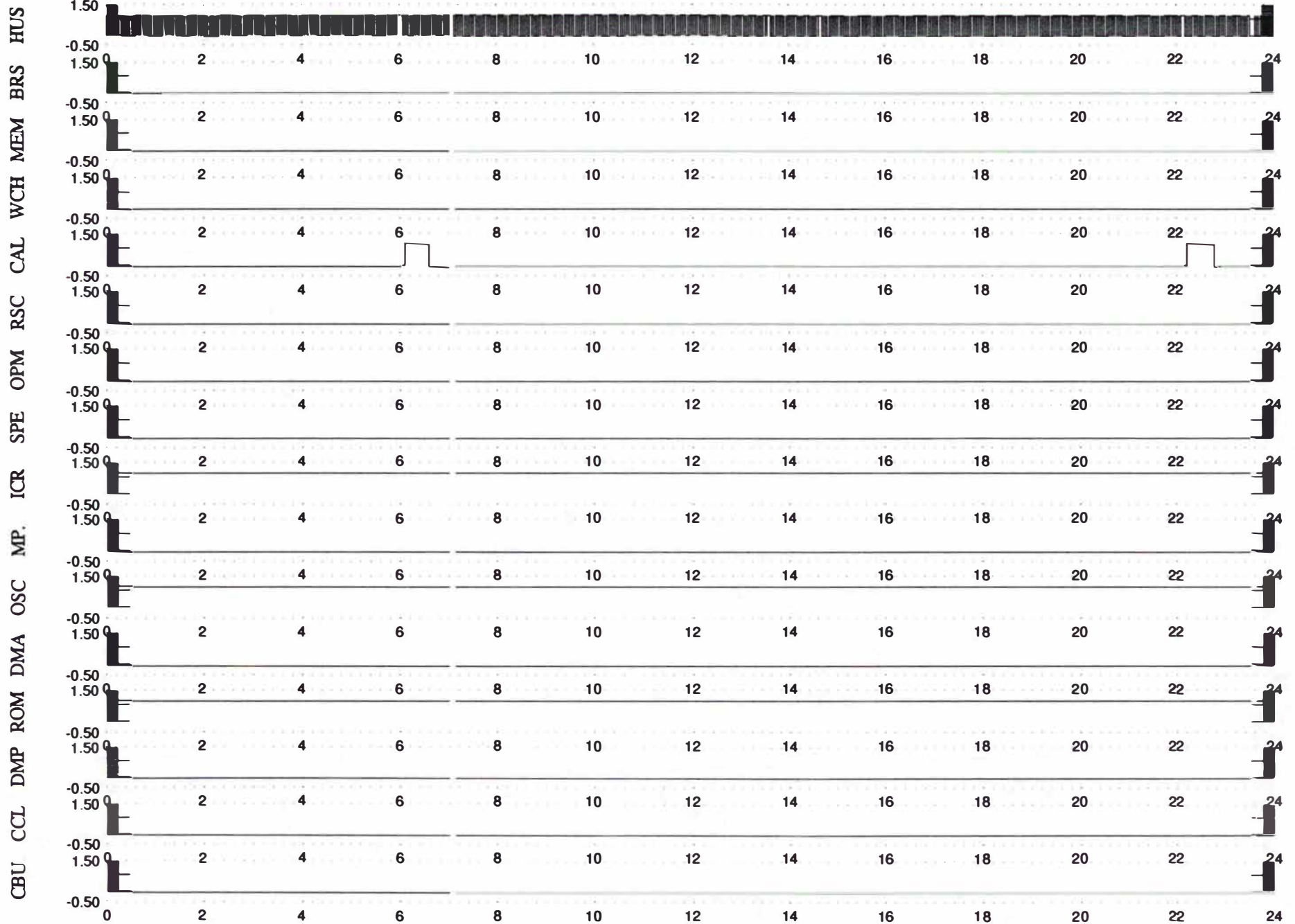
Data Start: 92/09/12, 0000:00

Plot created: 95/05/25, 1908

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

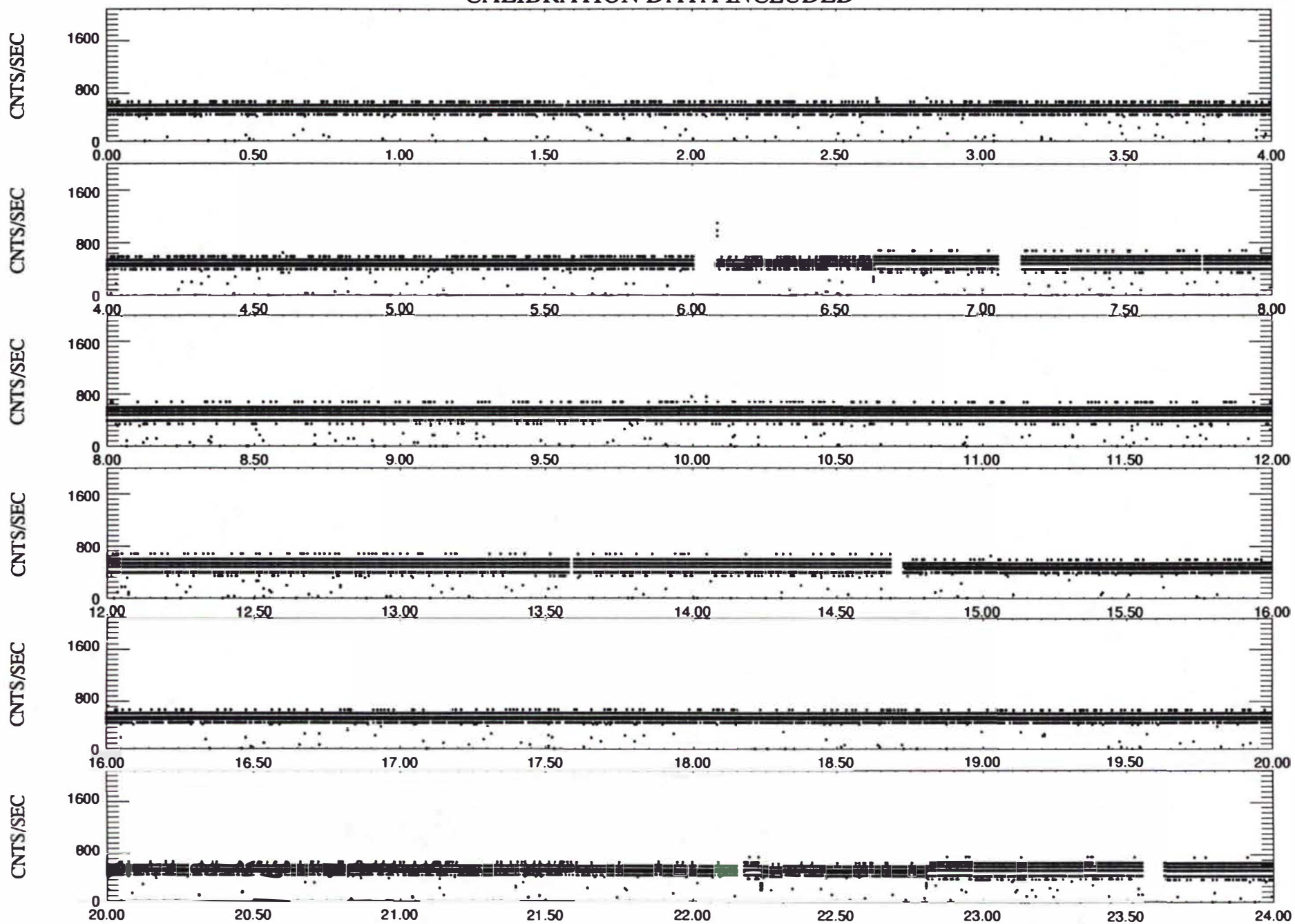
Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (1)



UNIV AL TIME

CALIBRATION DATA INCLUDED



UNIV UNIV TIME

CATSEARCH PROGRAM

BATSE BURST # 1924
EVENT OF 1992 SEP 13 DAY OF YEAR=257
EVENT CROSSING TIME AT BATSE : 14101. S. OR 03:55:01.1
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 352.000 53.400
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 13/ 9/ 92 IS:
RA= 159.440 DEC= -.220 DIST= 6.235 AU
BATSE-ULYSSES DISTANCE = 932742536. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 54.19 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1820.22 SECS.
CROSSING TIME AT ULYSSES IS 15921. S. OR 04:25:21.3 +/- 515.72 SECONDS

BATSE BURST TRIGGER

NO.: 1924

Sep 13
TIME: TJD=8878 SECONDS=14101

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=35.7 AZIMUTH=115.5 ERROR= DEGREES

COMMENTS:

DURATION ABOUT 10 SECONDS, SINGLE PEAK, GOOD LOCATION, EMISSION SEEN ABOVE 300 KEV.

No Ulysses trig

BATSE BURST TRIGGER

NO.: 1924

Sep 13
TIME: TJD=8878 SECONDS=14101

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=54.3 AZIMUTH=115.5 ERROR= DEGREES

COMMENTS:

THIS IS A CORRECTION TO THE ZENITH ANGLE OF THE LOCATION OF TRIGGER NUMBER 1924. PREVIOUS COMMENTS ABOUT THIS TRIGGER STILL APPLY.

8 / 6 / 94

ULYSSES RT

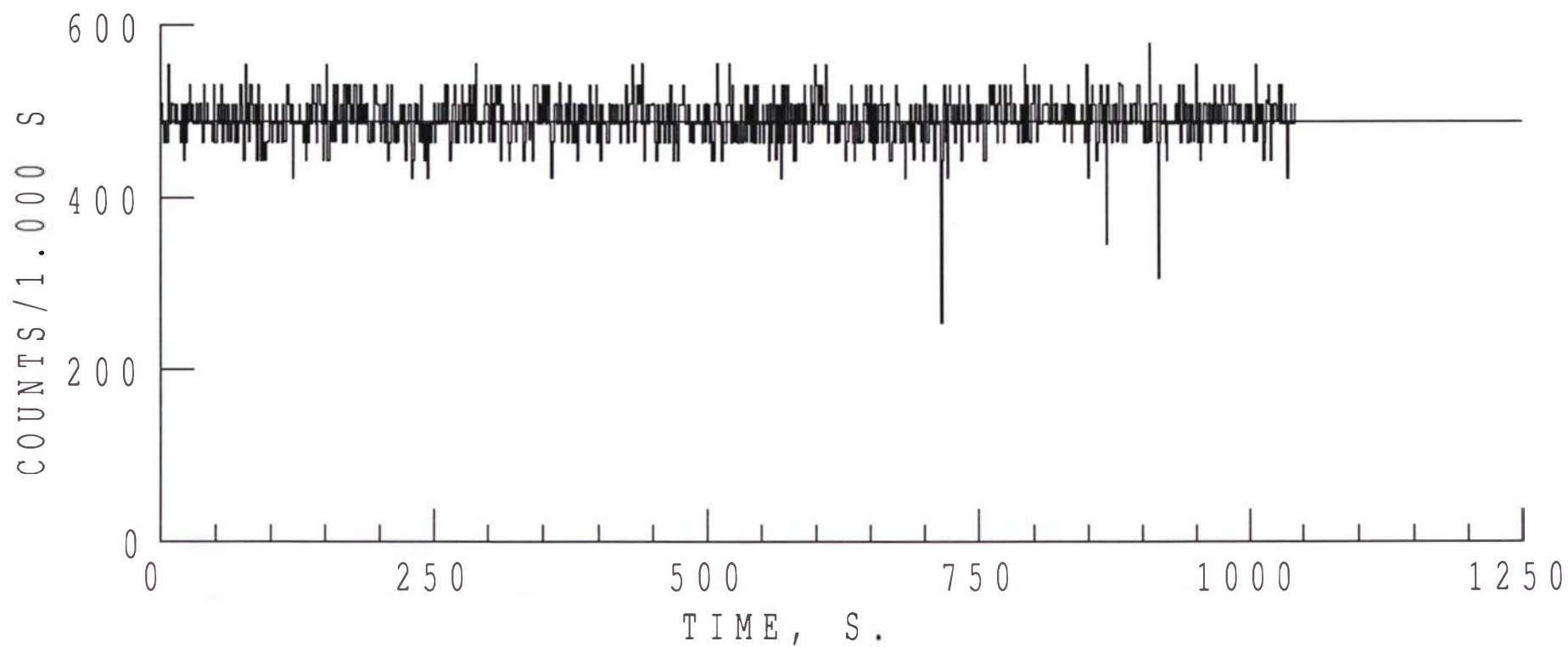
13 / 9 / 92 15408.356 s

0.500 S INTERVALS REGROUPED BY 2

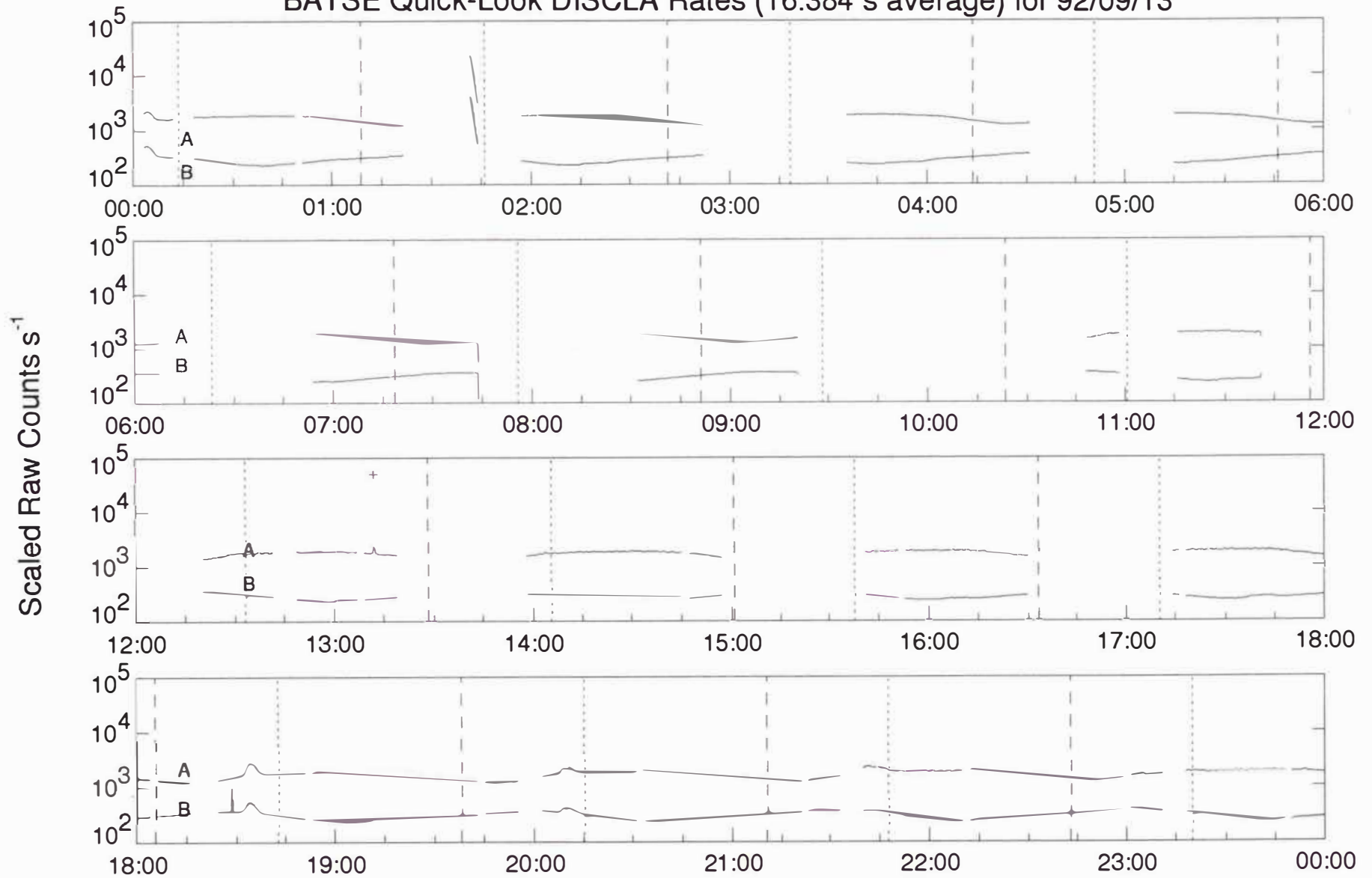
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



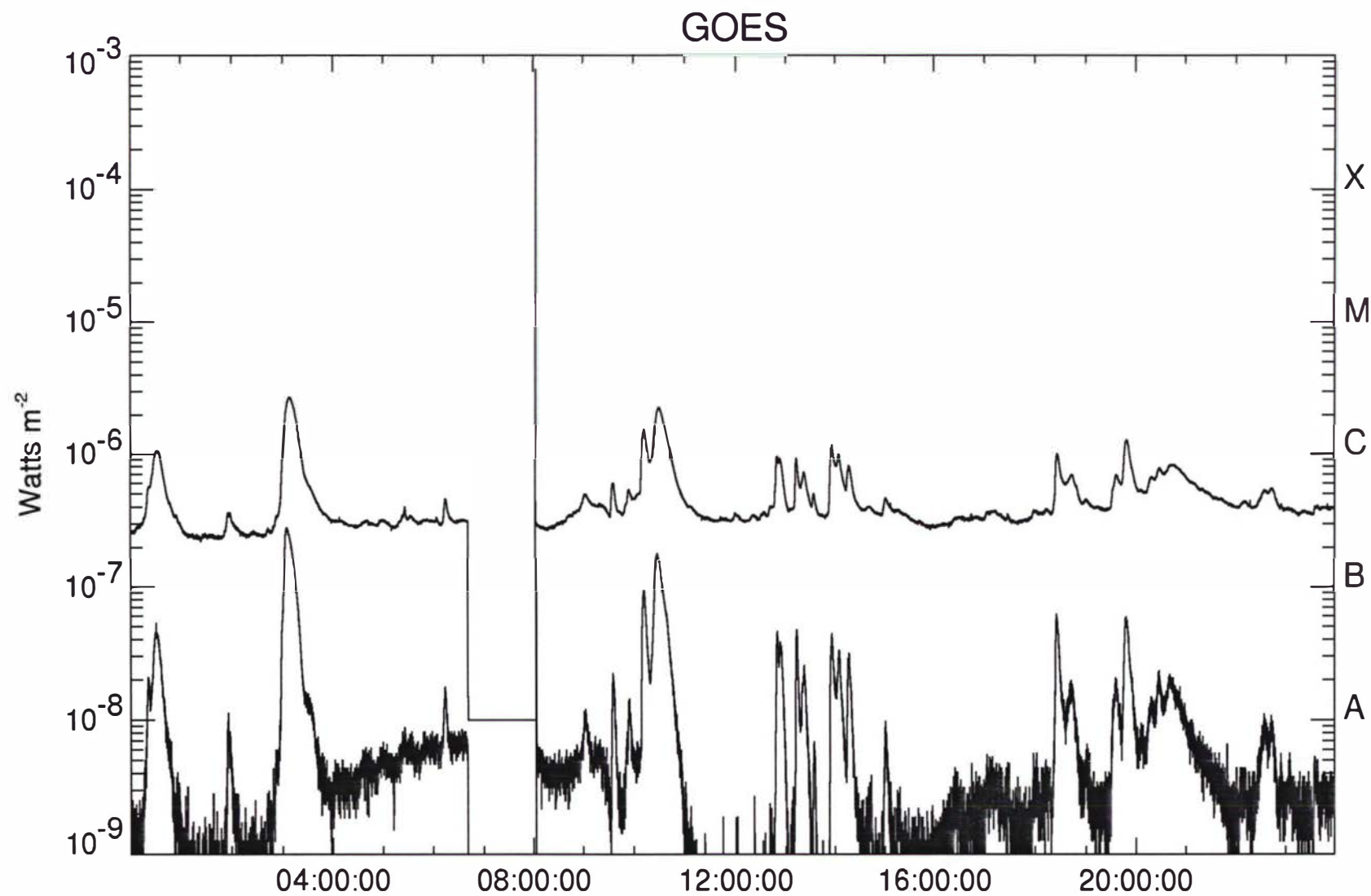
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/13



Current Time: 92/09/29, 0236 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



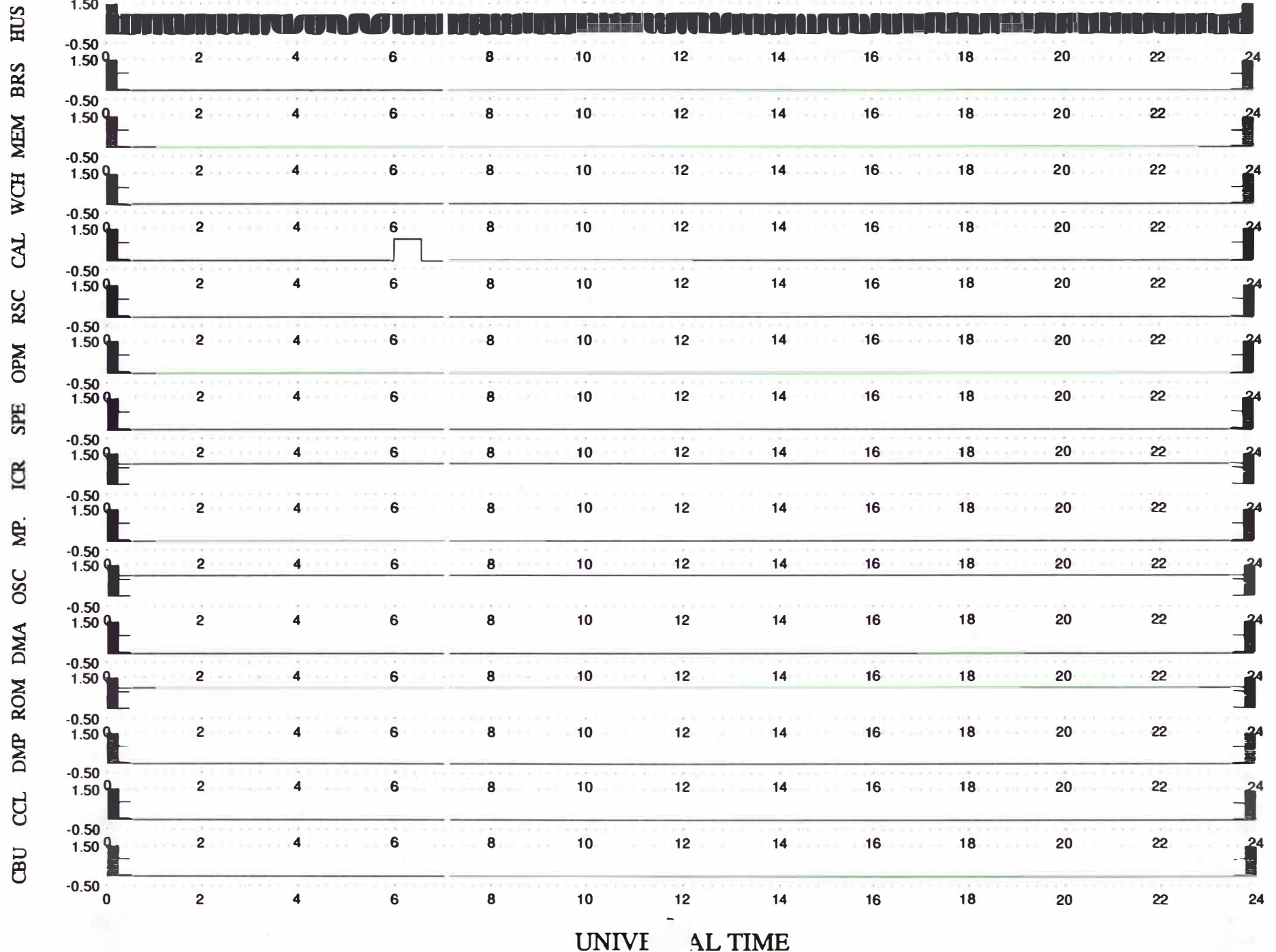
Data Start: 92/09/13, 0000:01

Plot created: 95/05/25, 1911

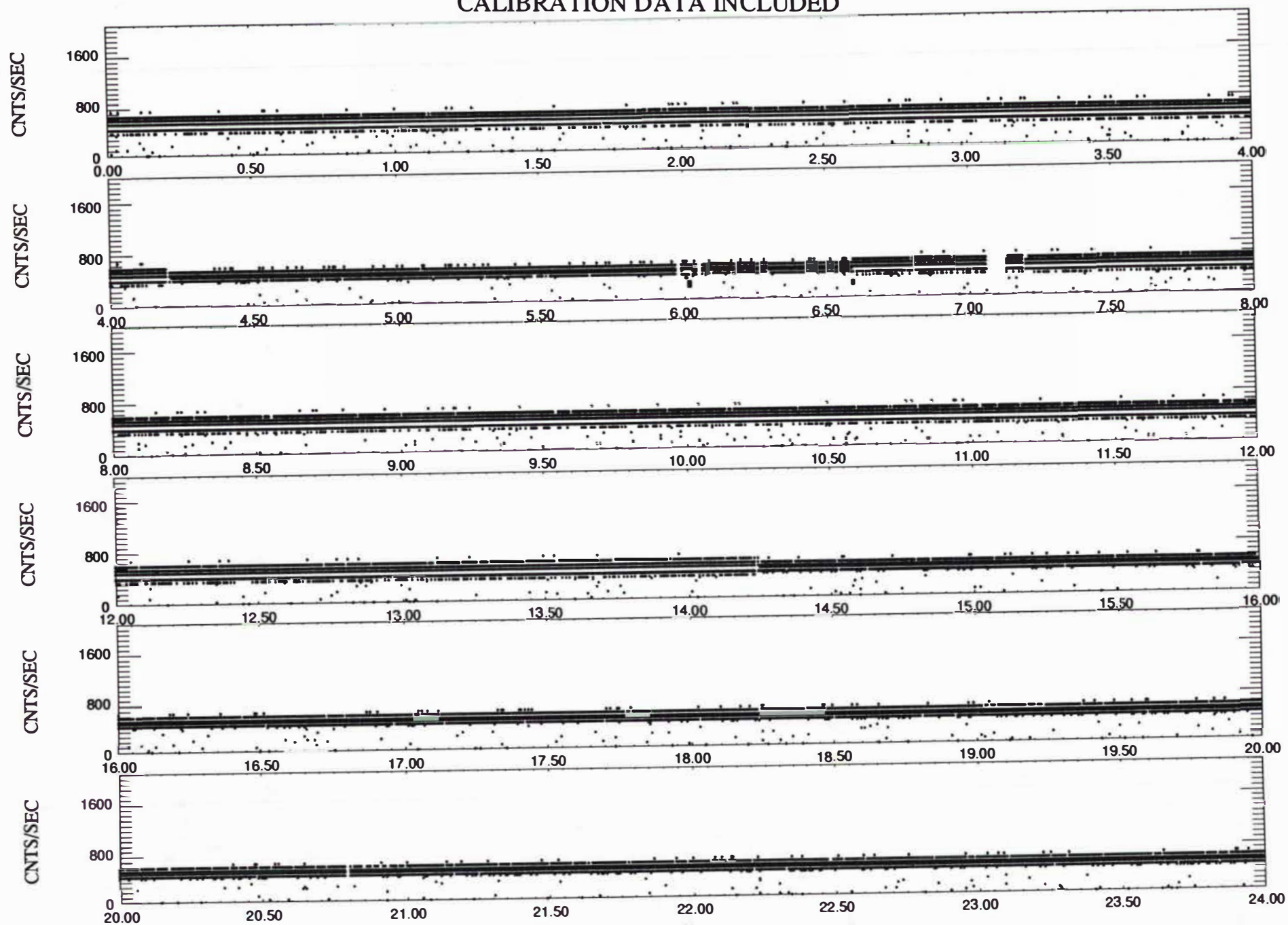
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (1)



CALIBRATION DATA INCLUDED



UNIV. TIME

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

From HAGEDON@ssl.msfc.nasa.gov Wed Sep 16 06:54:07 1992
Date: Wed, 16 Sep 1992 8:55:26 -0500 (CDT)
From: HAGEDON@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01925

TIME: TJD=8879 SECONDS=53327

TYPE: FLARE

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=101 AZIMUTH=355 ERROR= DEGREES

COMMENTS:

GOES C1.6 SOLAR FLARE.

From MEEGAN@ssl.msfc.nasa.gov Wed Sep 16 13:26:10 1992
Date: Wed, 16 Sep 1992 15:27:55 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 01926

TIME: TJD=8879 SECONDS=61235

TYPE: UNKNOWN

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

VERY STRANGE EVENT. APPEARS TO BE A VERY LARGE PHOSPHORESCENCE EVENT IN
DETECTOR 5, COINCIDENT WITH A STATISTICAL FLUCTUATION, JUST ABOVE THRESHOLD,
IN DETECTOR 4, POSSIBLY CAUSED BY GRO J0422+32. DEFINITELY NOT A BURST.

*Redefined as phosphorescent
spike by Briggs 2001*

From HAGEDON@ssl.msfc.nasa.gov Wed Sep 16 06:59:10 1992
Date: Wed, 16 Sep 1992 8:58:58 -0500 (CDT)
From: HAGEDON@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01927

TIME: TJD=8879 SECONDS=68855

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

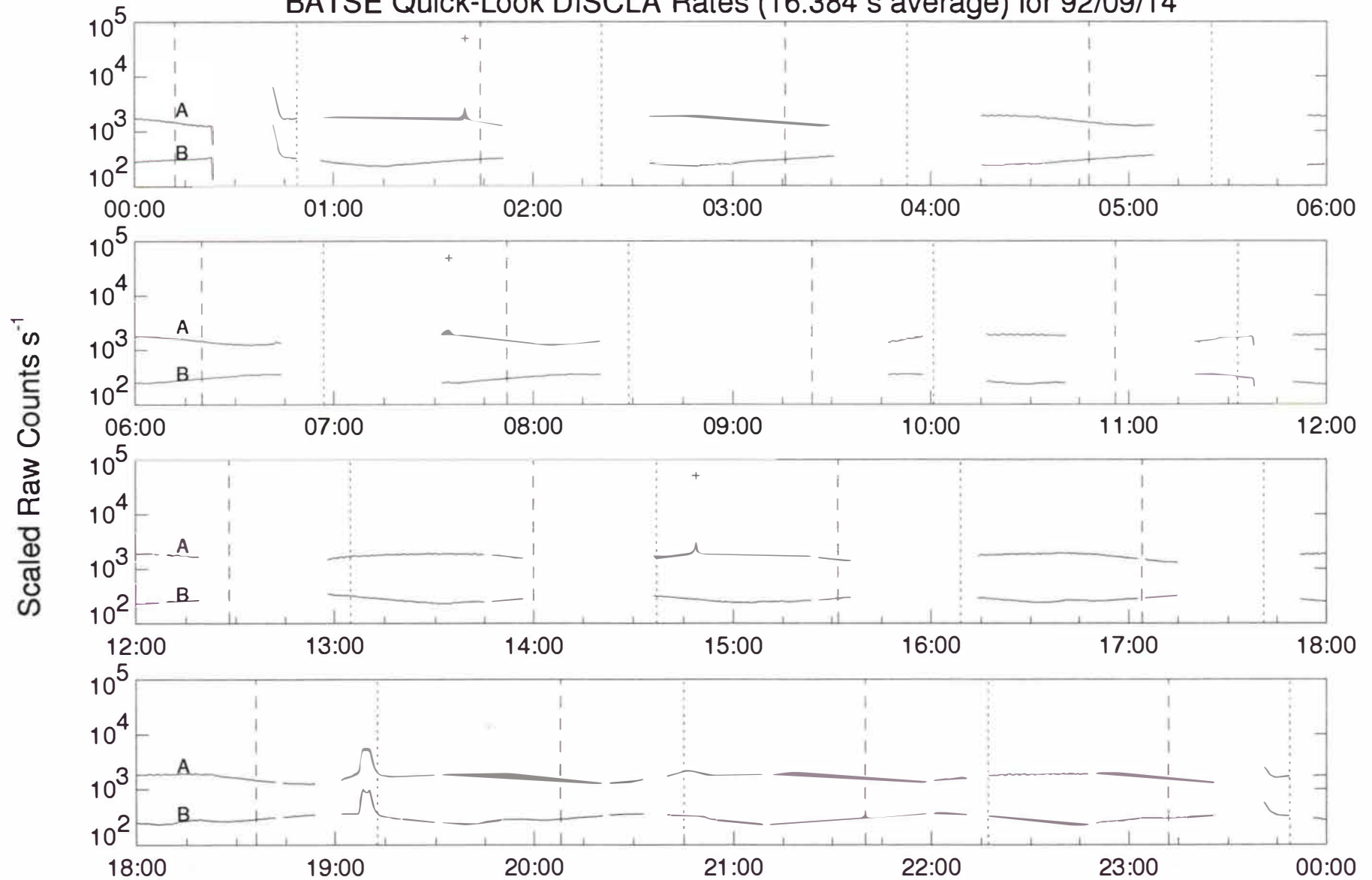
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

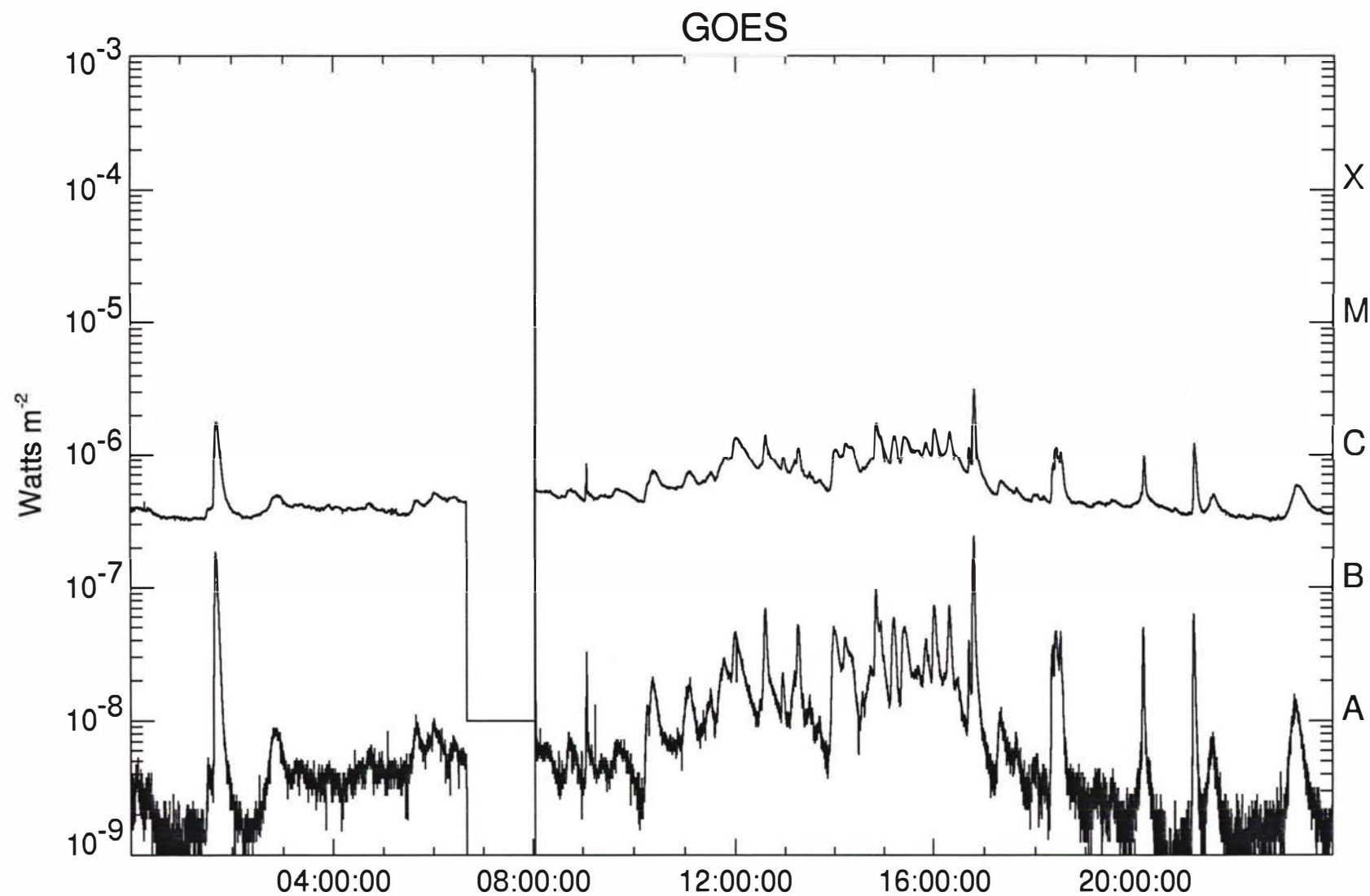
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/14



Current Time: 92/09/29, 0236 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



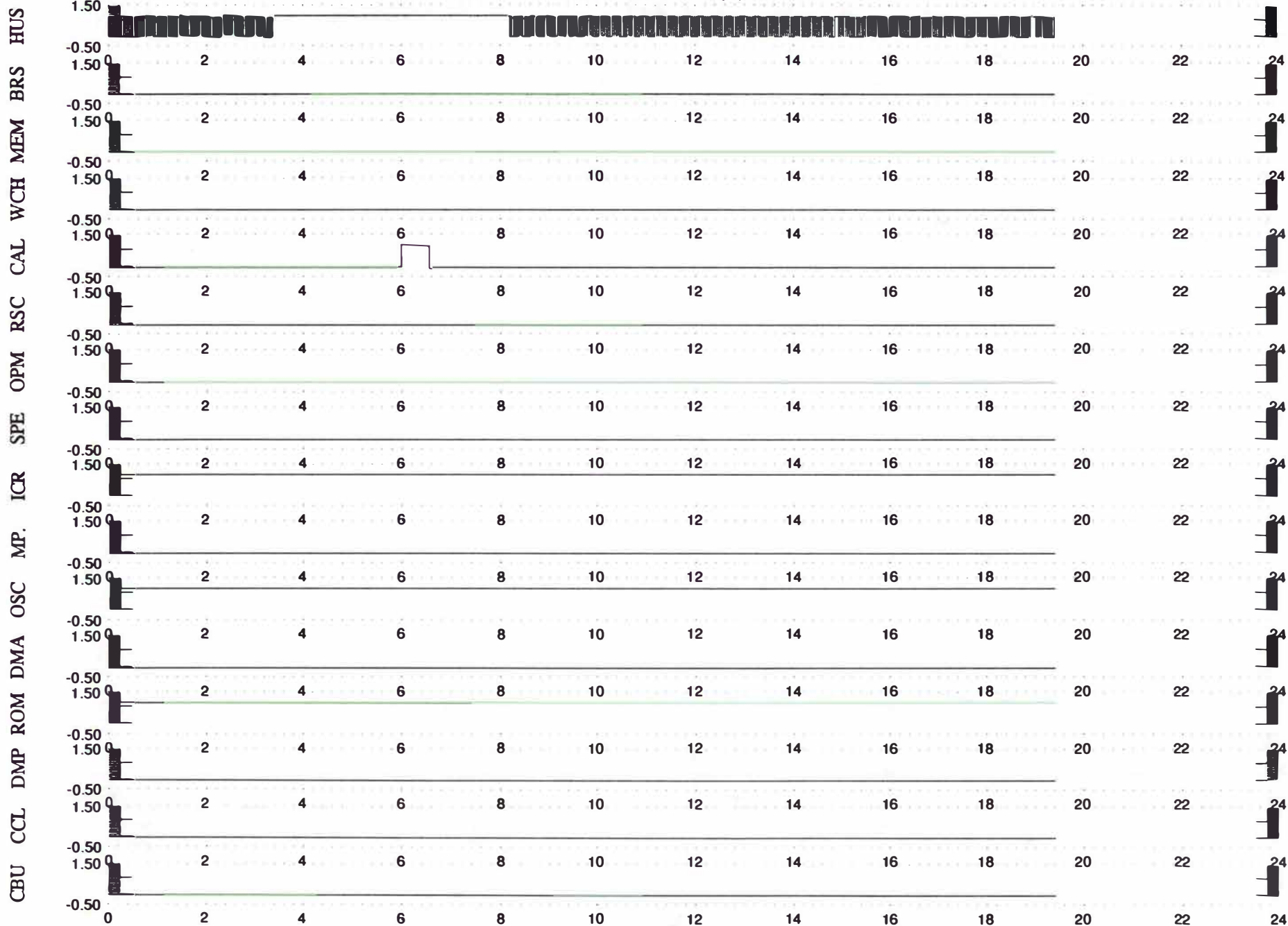
Data Start: 92/09/14, 0000:01

Plot created: 95/05/25, 1915

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

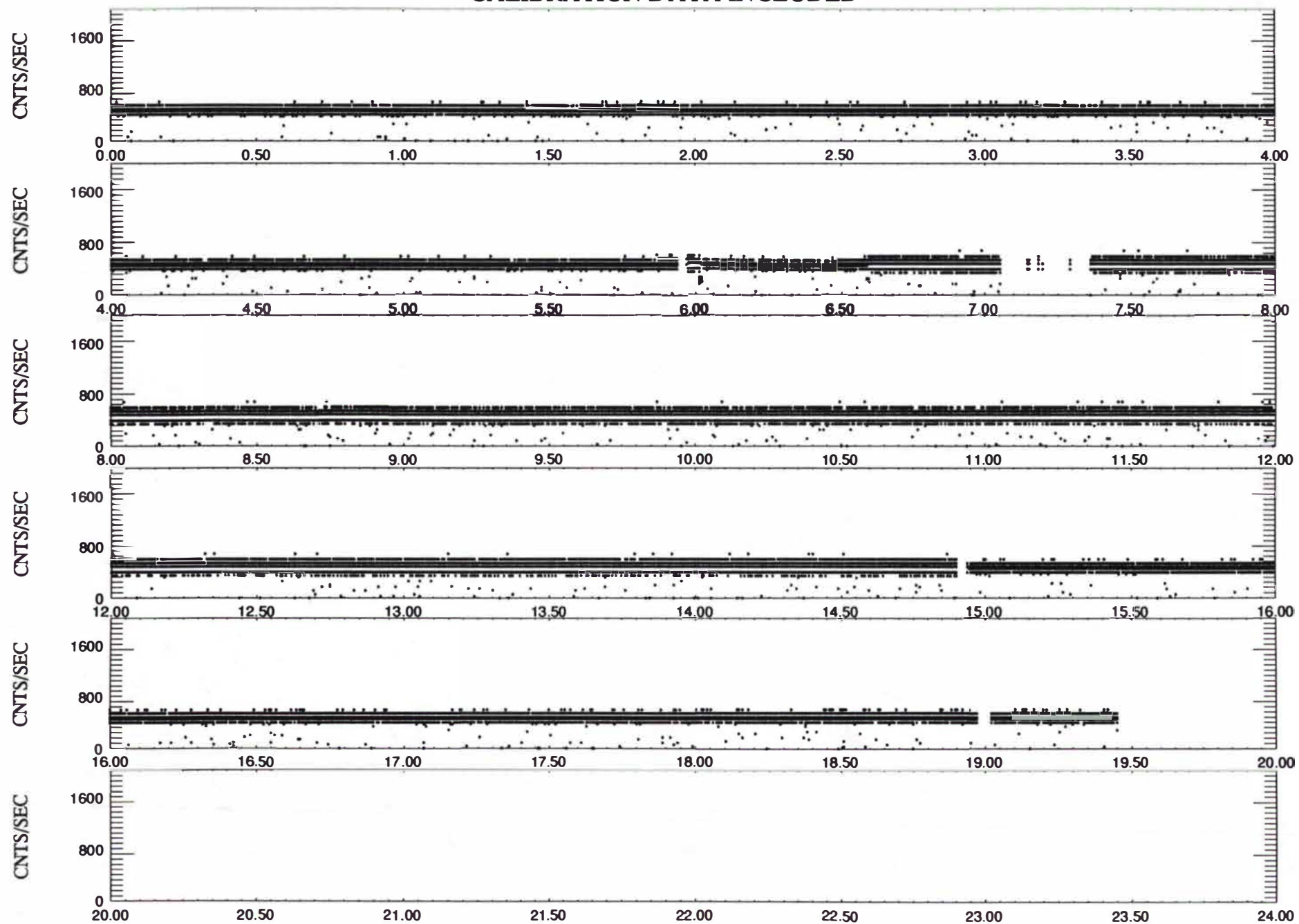
Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (1)



UNIVERSAL TIME

CALIBRATION DATA INCLUDED



UNIV AL TIME

From MALLOZZI@ssl.msfc.nasa.gov Wed Sep 16 14:37:29 1992
Date: Wed, 16 Sep 1992 16:39:03 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 01928

TIME: TJD=8880 SECONDS=23838

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

GOES C2.6 FLARE. MAIN PEAK ~30 SEC DURATION.
EMISSION STARTS AT ~200 SEC BEFORE TRIGGER. OBSERVED ABOVE 100 KEV,
BUT NOT ABOVE 300 KEV.

From MALLOZZI@ssl.msfc.nasa.gov Wed Sep 16 14:42:12 1992
Date: Wed, 16 Sep 1992 16:43:46 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01929

TIME: TJD=8880 SECONDS=65247

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

PARTICLE EVENT.

From MALLOZZI@ssl.msfc.nasa.gov Wed Sep 16 14:46:00 1992
Date: Wed, 16 Sep 1992 16:47:39 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01930

TIME: TJD=8880 SECONDS=71067

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT.

HERRINGTON, EUGENE / JPL/01 - HPDesk print.

ject: Datation Test Schedule

ator: Roy ROSE / JPL/01 Dated: 08/04/92 at 0829.

August 4, 1992

To: N. Angold

From: R. Rose

Subject: HUS Datation Test Schedule

The following tracking passes have been selected for conducting the HUS Datation tests requested by the experimenter:

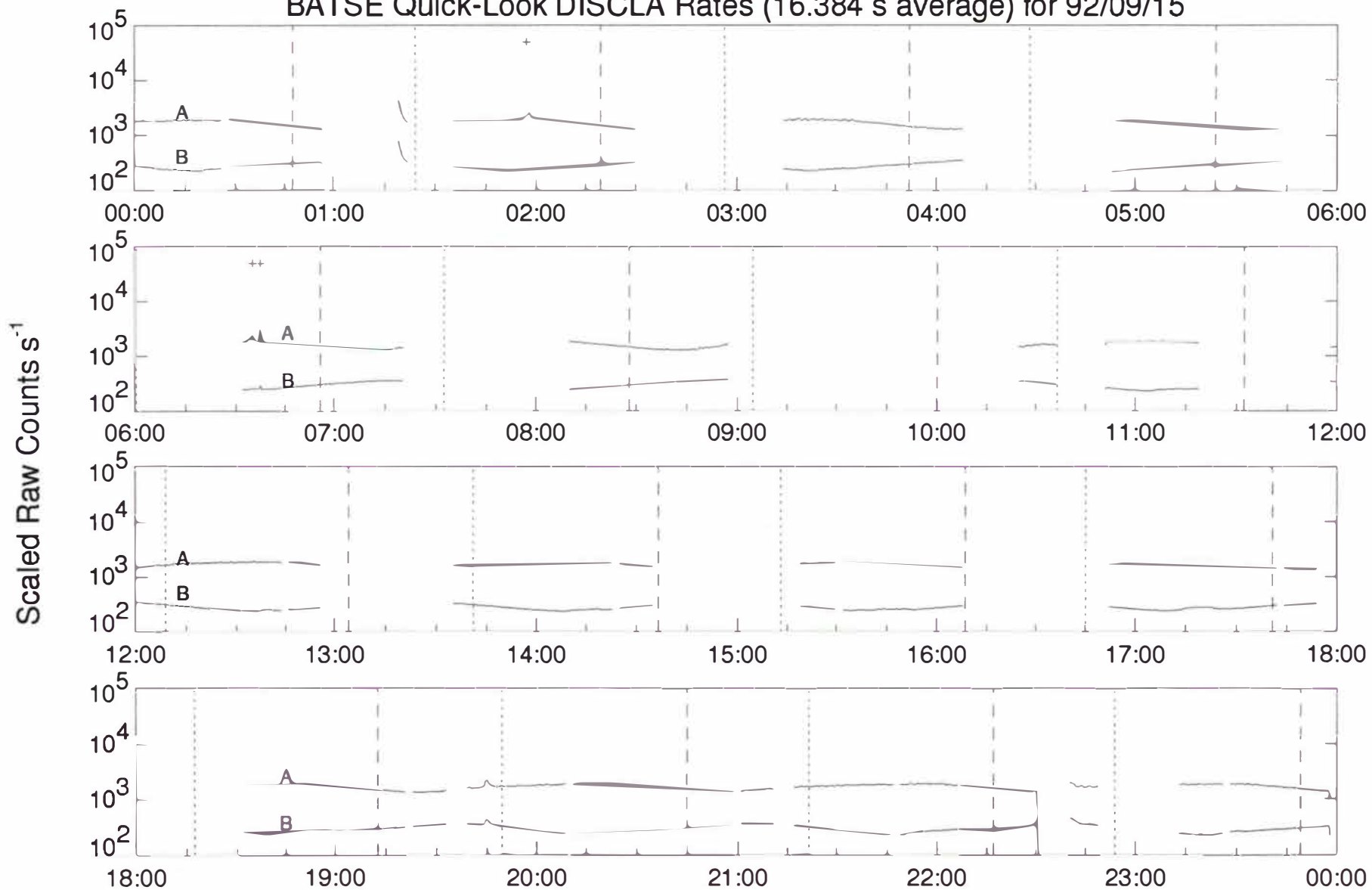
DOY	DSS	START	BOT	EOT	END
259	43	1815	2015	0445	0500 <i>Tues Sep 15</i>
292	14	1015	1215	2030	2045 <i>Sun Oct 18</i>

The command subcarrier/bit rate change scheduled for 9/30/92 will be delayed until 10/20/92 in order to retain the nominal subcarrier/bit rate for both tests.

Please advise if this schedule is not satisfactory.

P. Beech
J. Covate
D. Enari
C. Finley
E. Herrington
Don Meyer
D. Morris
J. Osoro
G. Rogers
R. Simbol

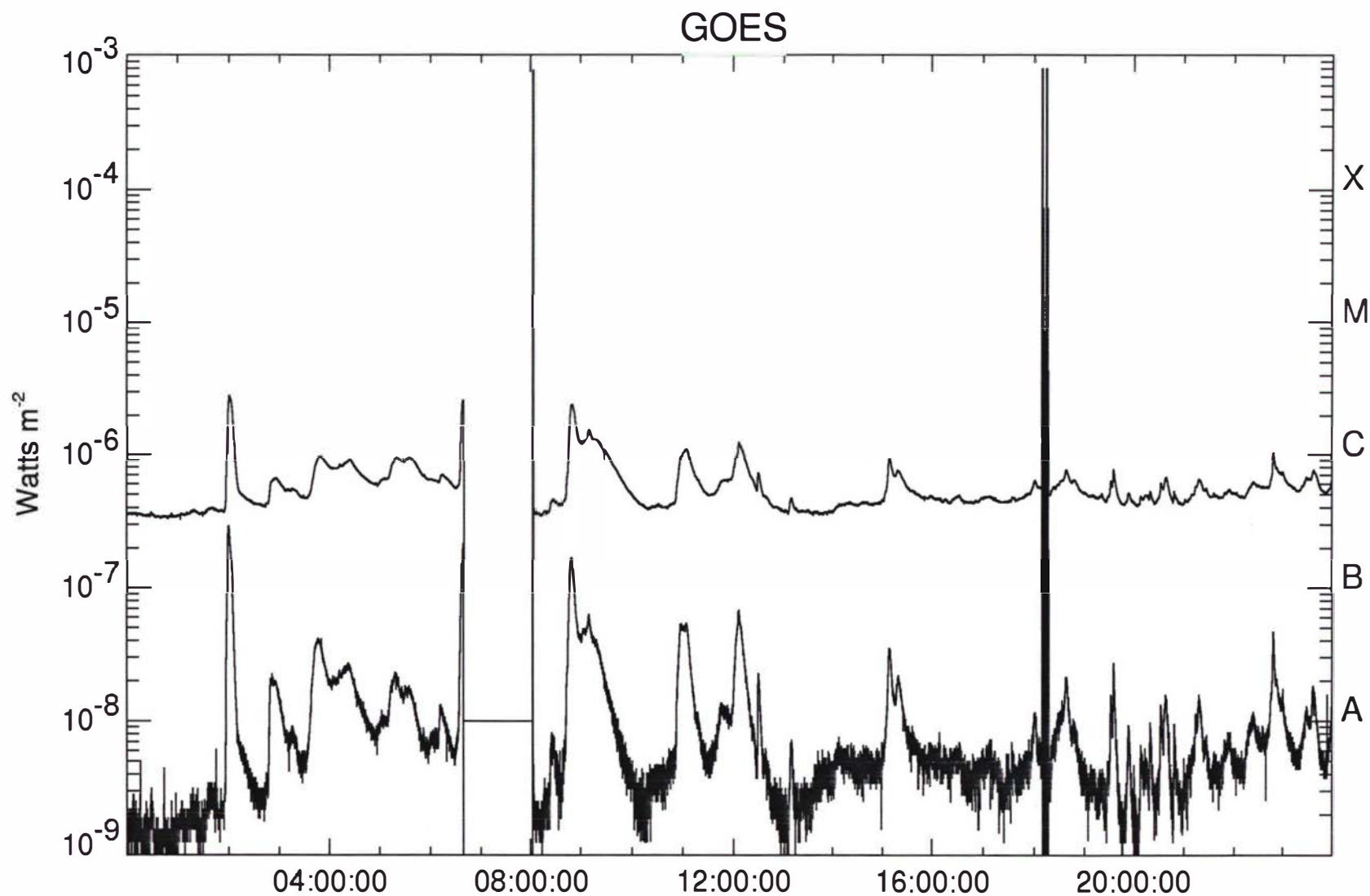
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/15



Current Time: 92/09/29, 0237 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

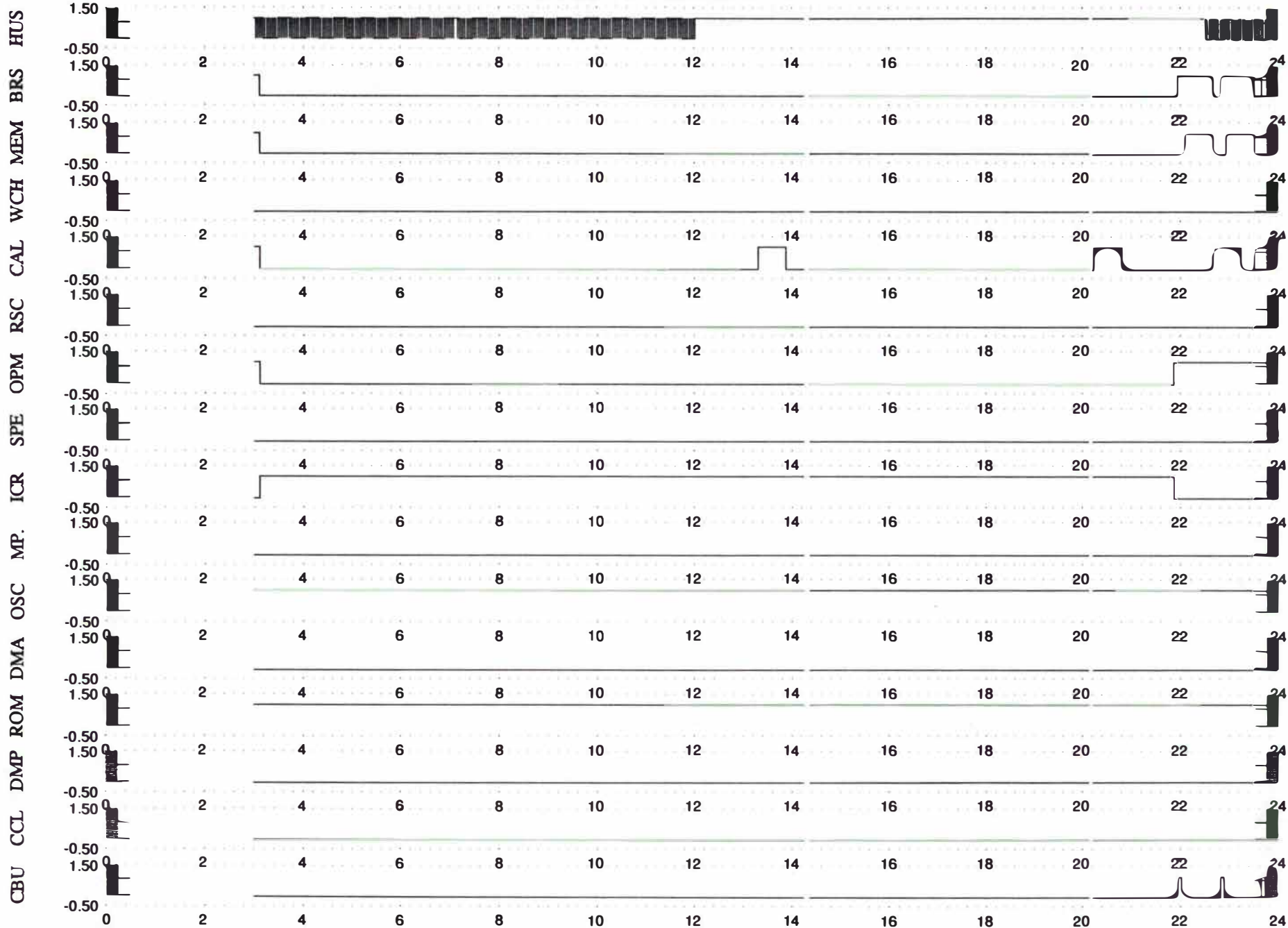
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



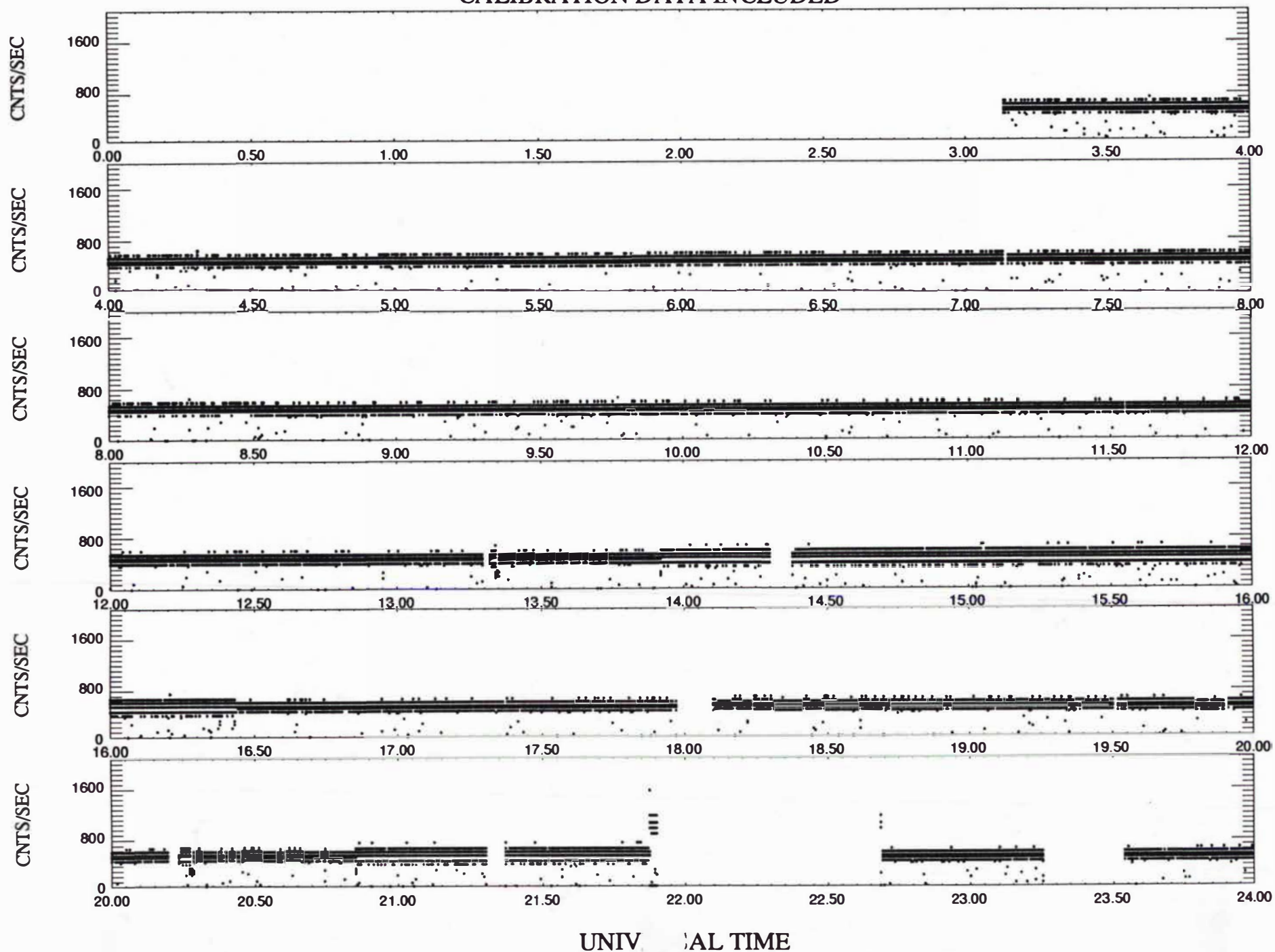
Data Start: 92/09/15, 0000:02 Plot created: 95/05/25, 1918
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
 2 (0.5 - 4.0 Angstroms) Background not subtracted

BURST NUMBER 2 - 4

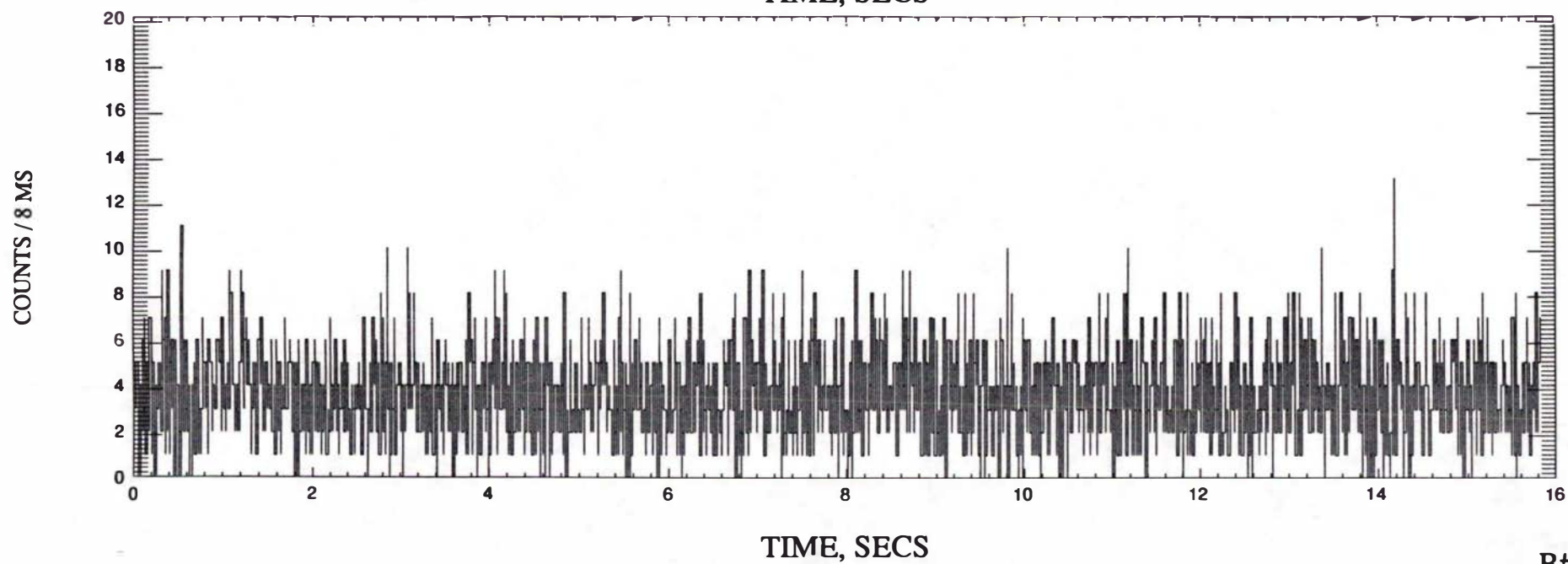
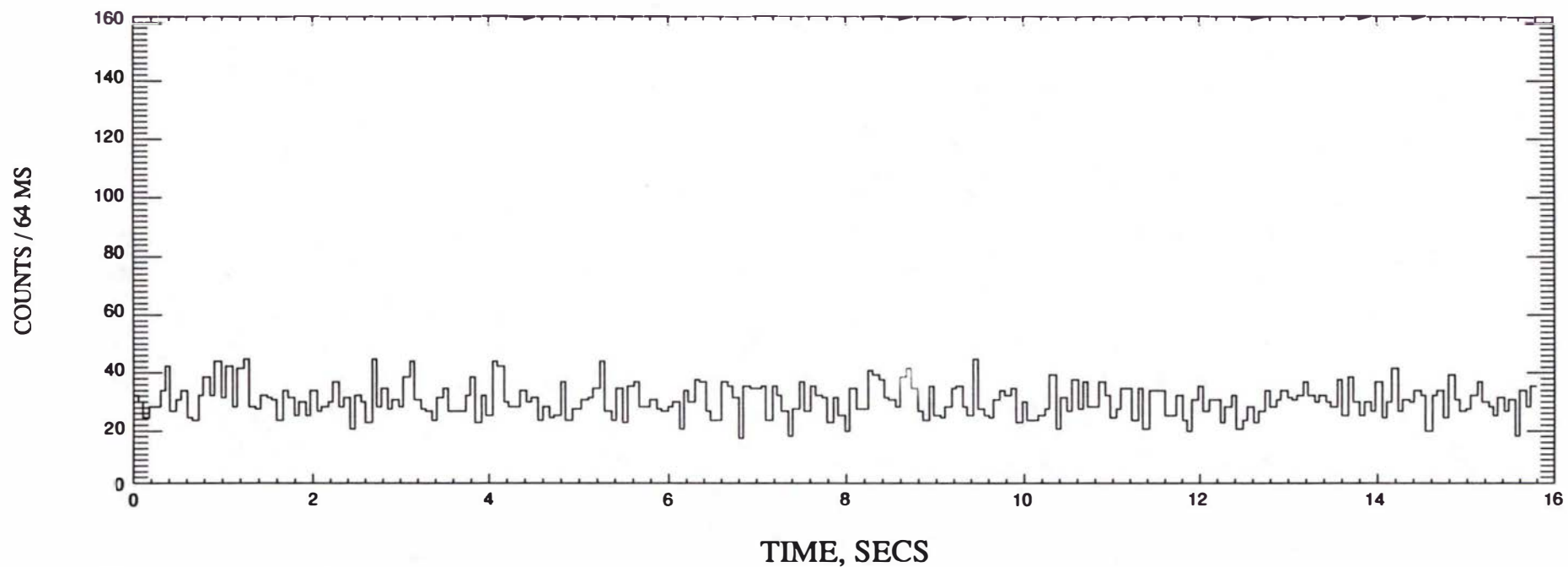


UNIVI AL TIME

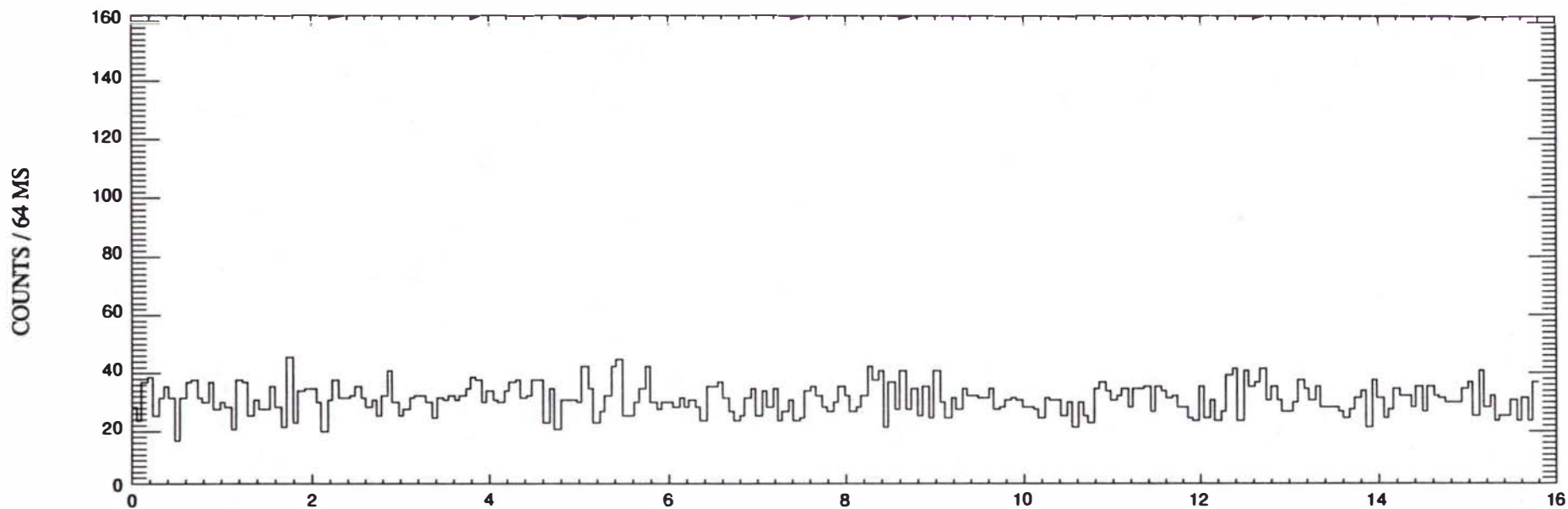
CALIBRATION DATA INCLUDED



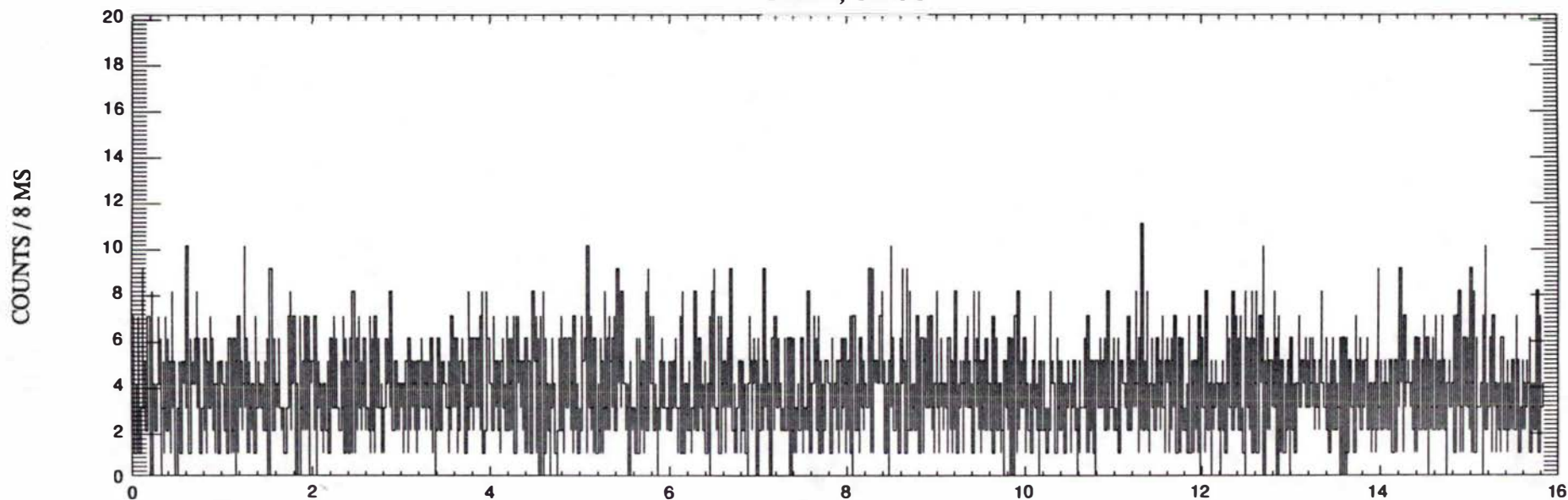
Burst Counter 2 at UT=21.950000551012 h=79020.002 s



Burst Counter 3 at UT=22.783312670390 h=82019.926 s

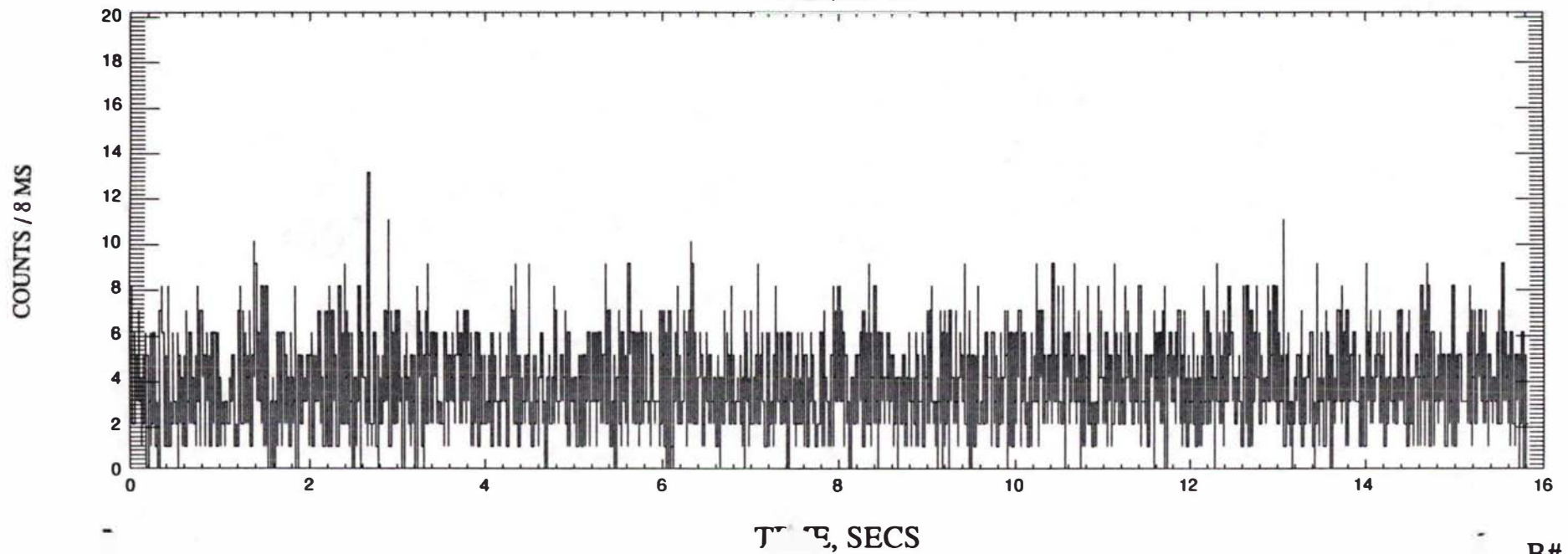
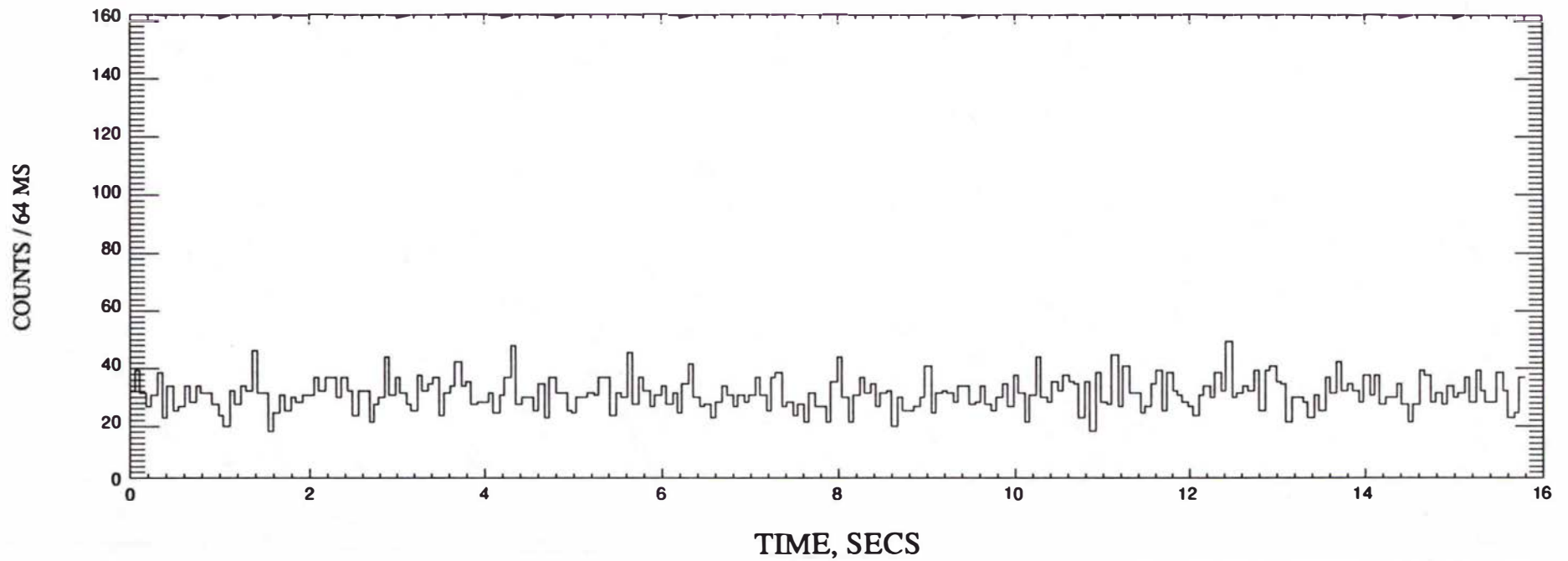


TIME, SECS



TIME, SECS

Burst Counter 4 at UT=23.616624789768 h=85019.849 s



From PREECE@ssl.msfc.nasa.gov Thu Sep 17 12:34:55 1992
Date: Thu, 17 Sep 1992 14:36:31 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01931

TIME: TJD=8881 SECONDS=37098

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

GOES M1.0 SOLAR FLARE, 65 SEC. LONG. NOT SEEN ABOVE 120 KEV.

From PREECE@ssl.msfc.nasa.gov Thu Sep 17 13:24:39 1992
Date: Thu, 17 Sep 1992 15:26:27 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01932

TIME: TJD=8881 SECONDS=55528

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

GROJ0422+32 RISE.

From PREECE@ssl.msfc.nasa.gov Thu Sep 17 13:45:54 1992
Date: Thu, 17 Sep 1992 15:47:33 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01933

TIME: TJD=8881 SECONDS=85763

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

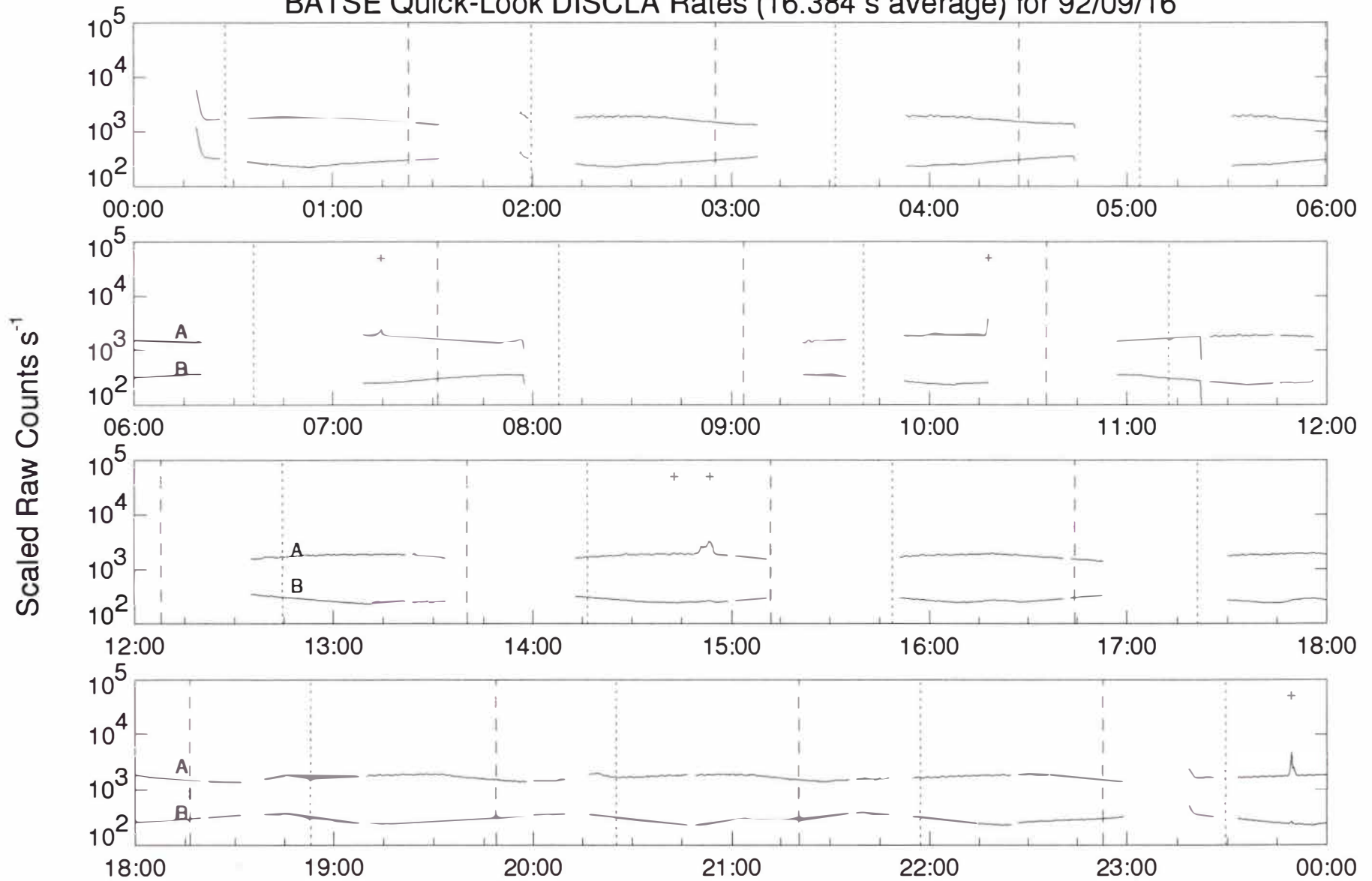
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

GOES C3.7 SOLAR FLARE, 110 SECS. LONG. NOT SEEN ABOVE 120 KEV.

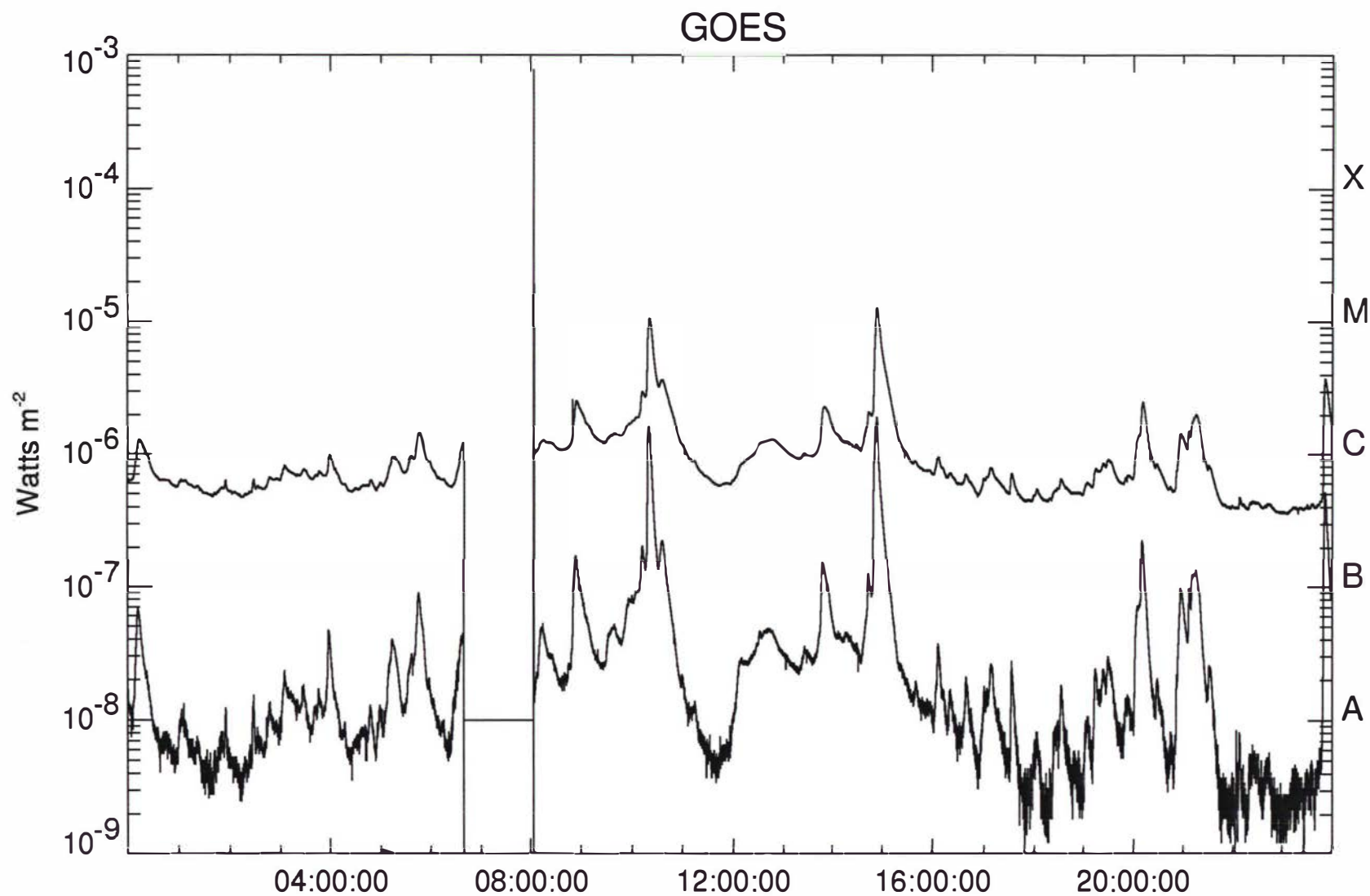
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/16



Current Time: 92/09/29, 0238 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

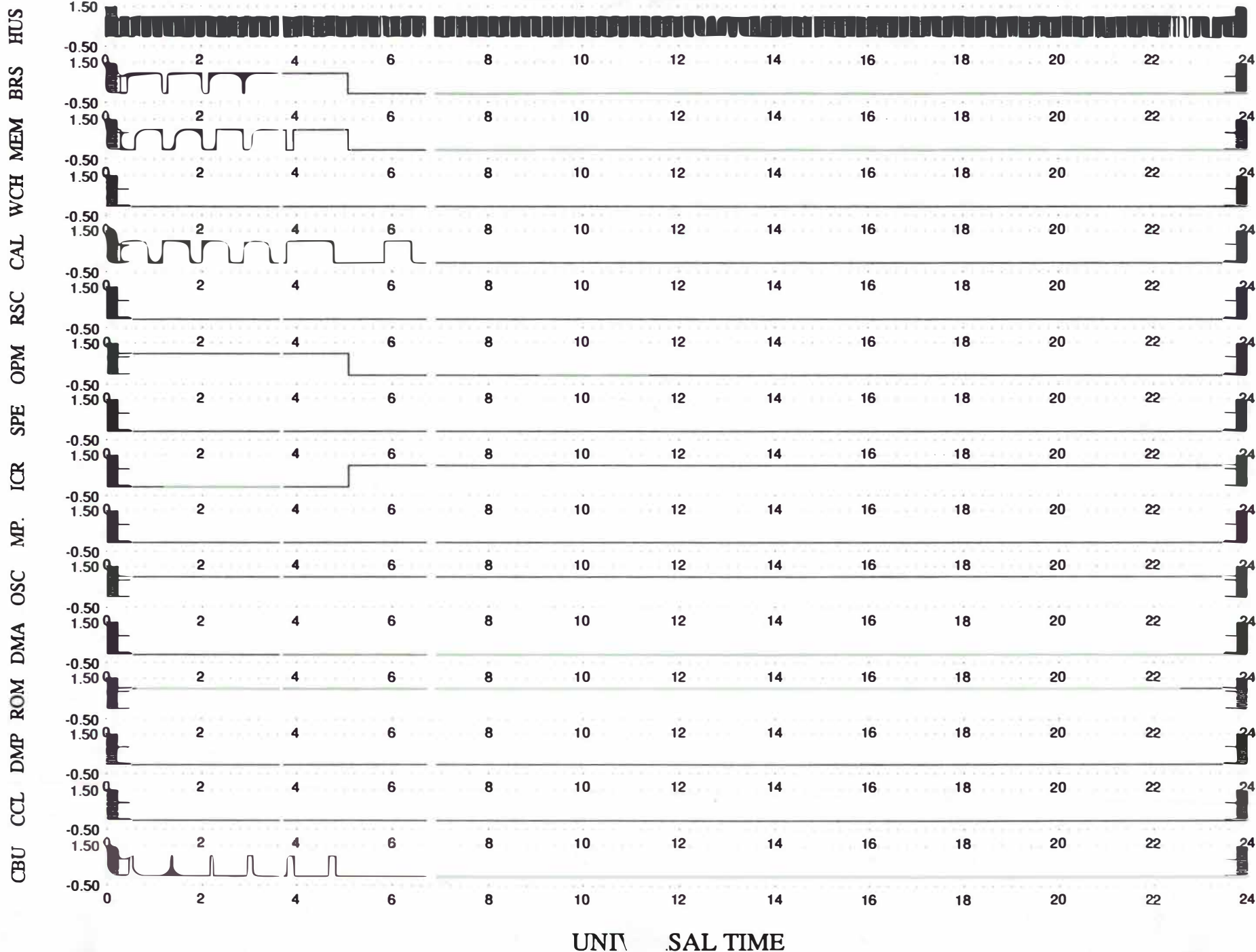
* Solar Burst Trigger
 + Solar Flare



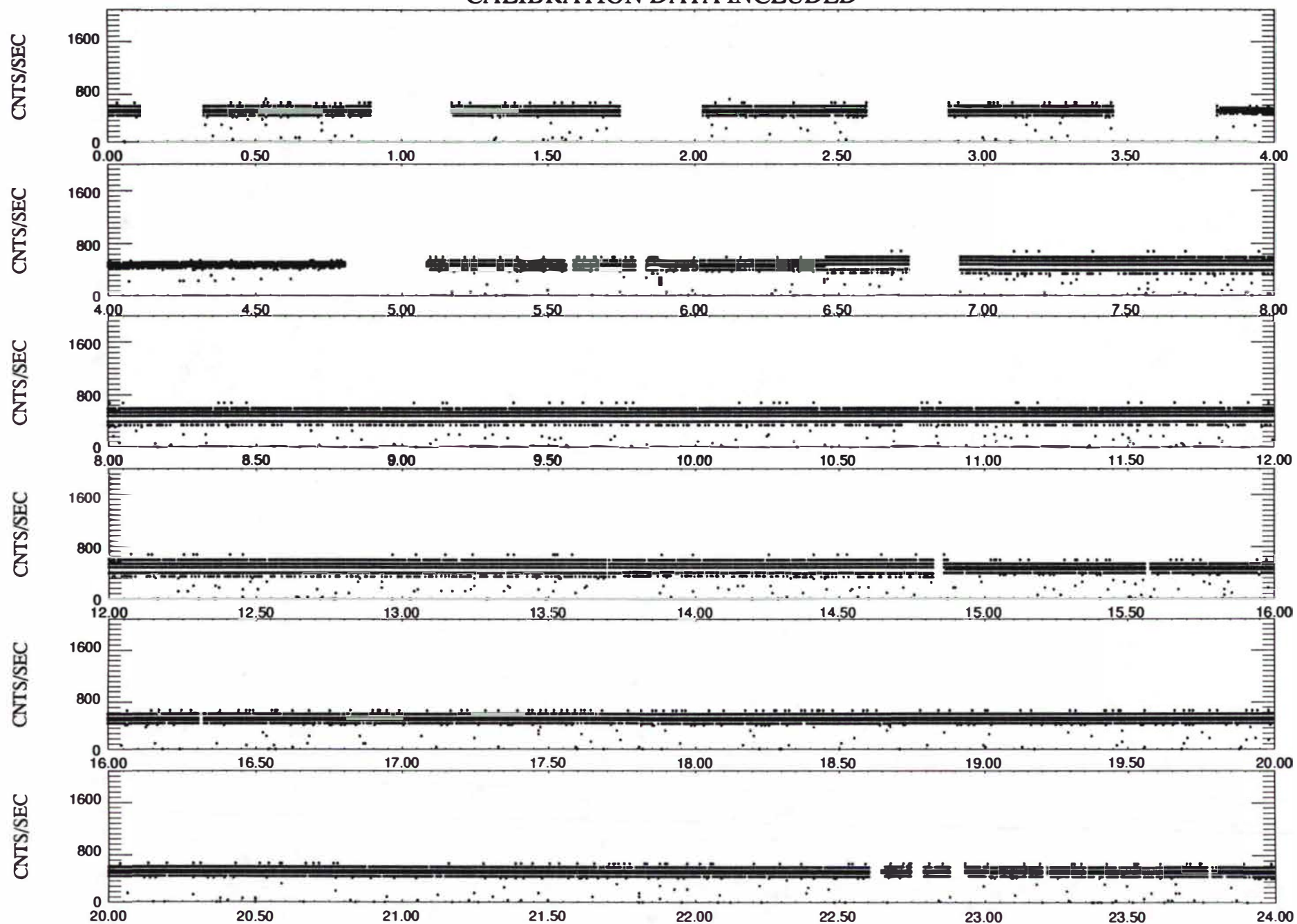
Data Start: 92/09/16, 0000:00 Plot created: 95/05/25, 1922

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

BURST NUMBER 5 - 9

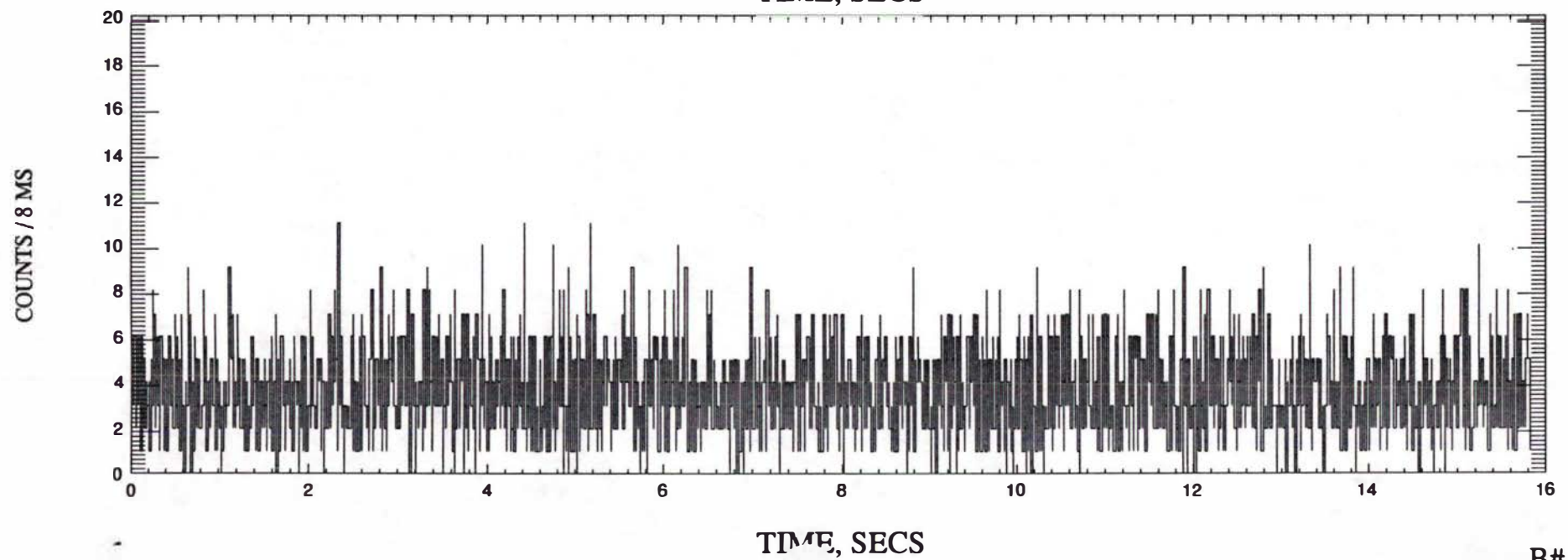
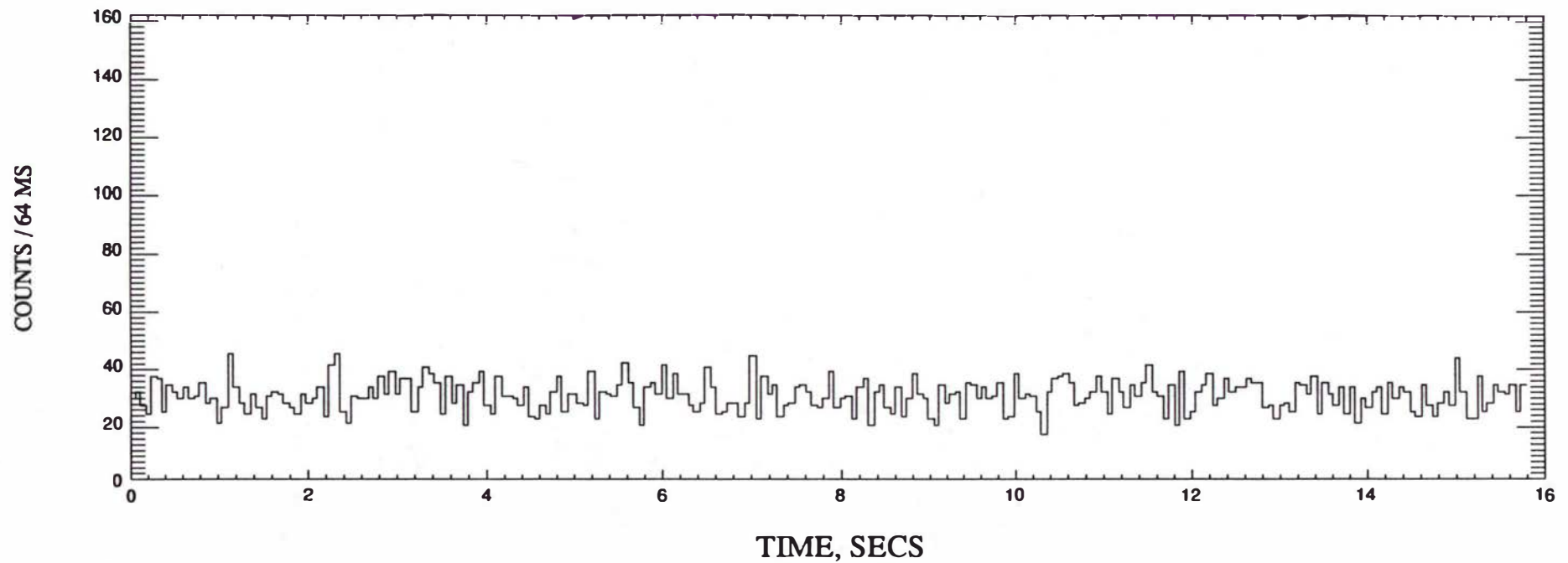


CALIBRATION DATA INCLUDED

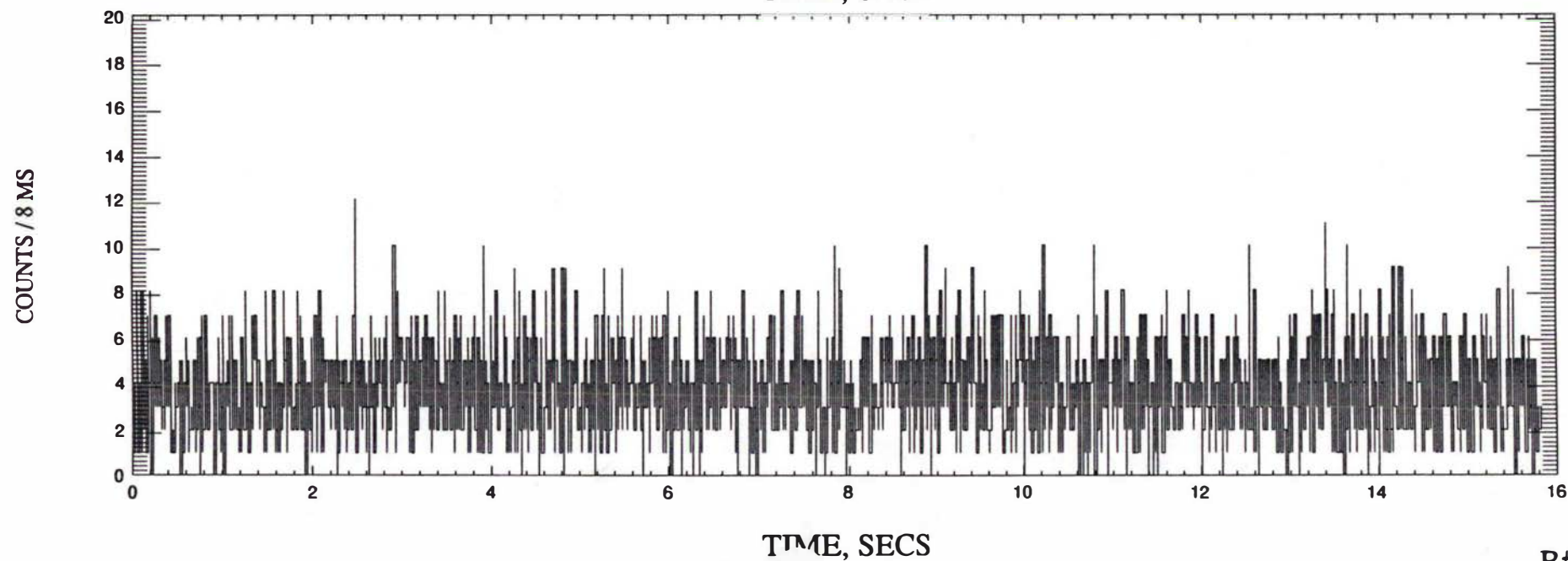
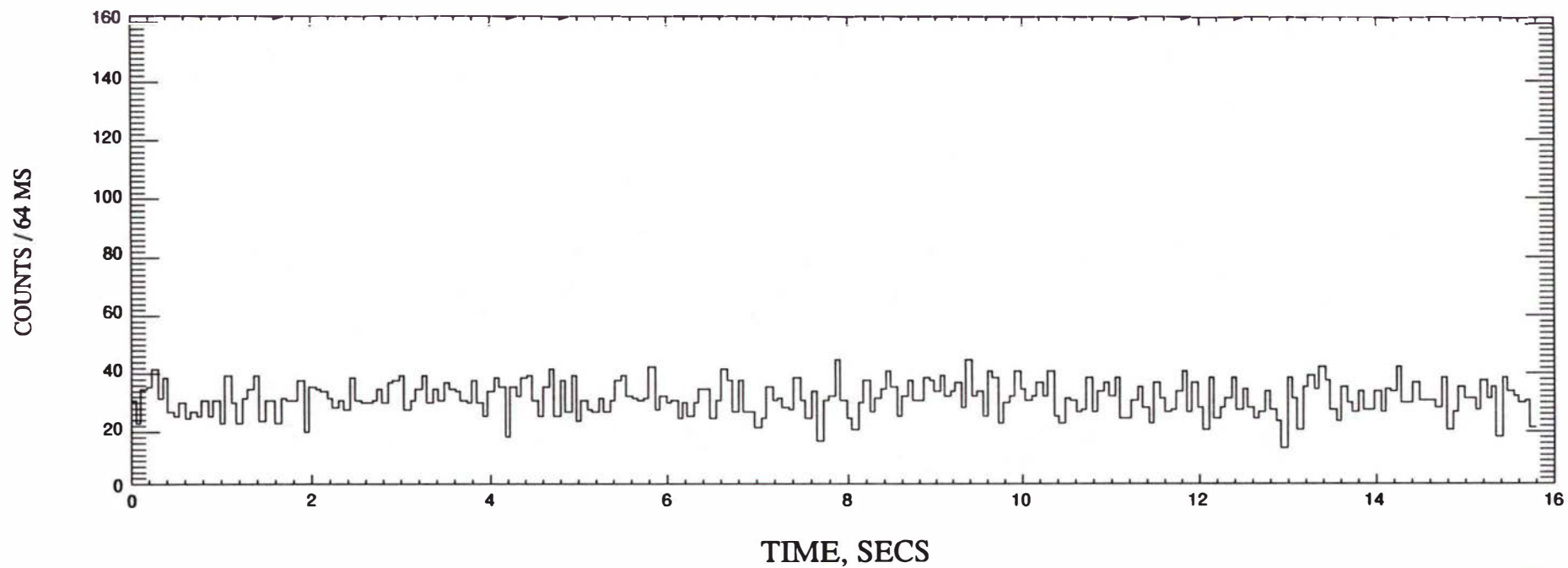


UNIV AL TIME

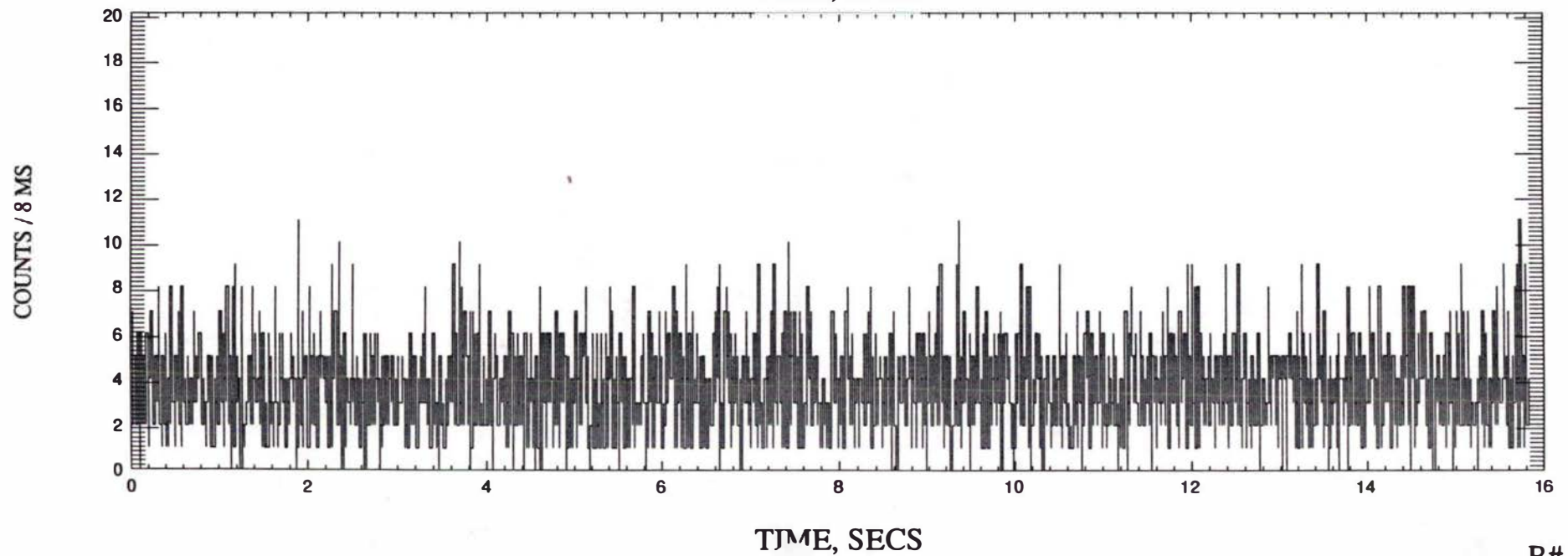
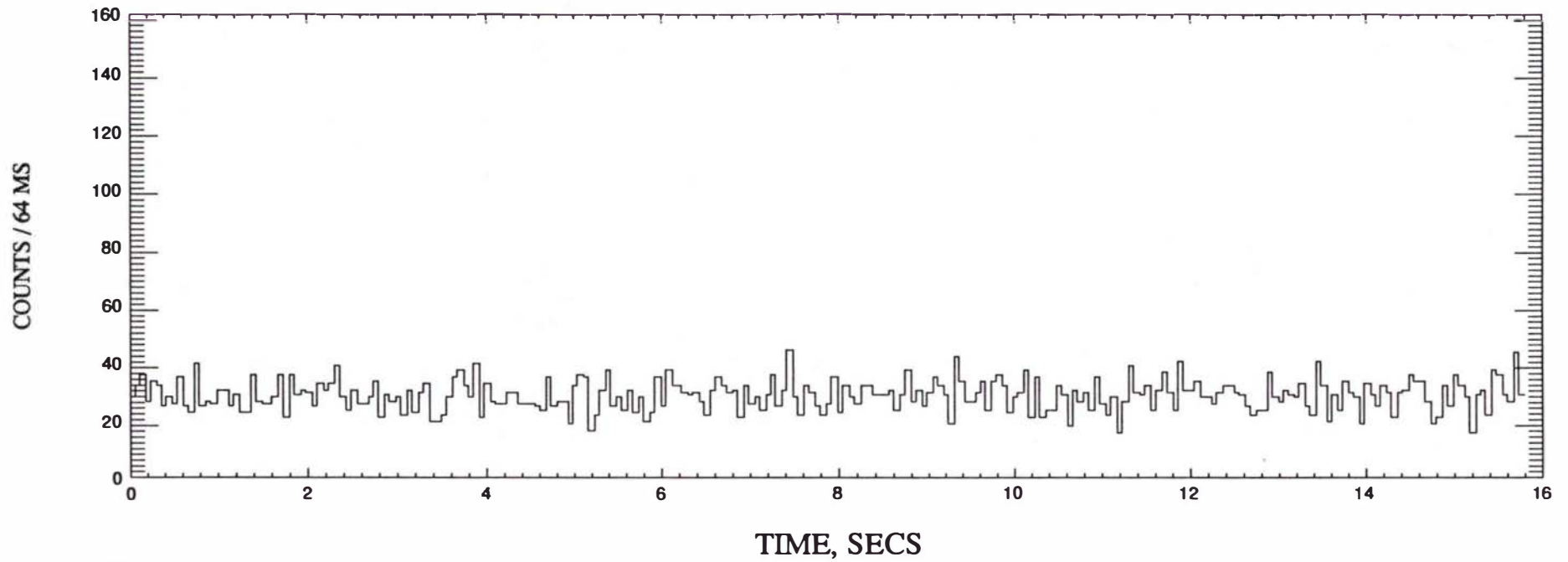
Burst Counter 5 at UT= 0.449935785929 h= 1619.769 s



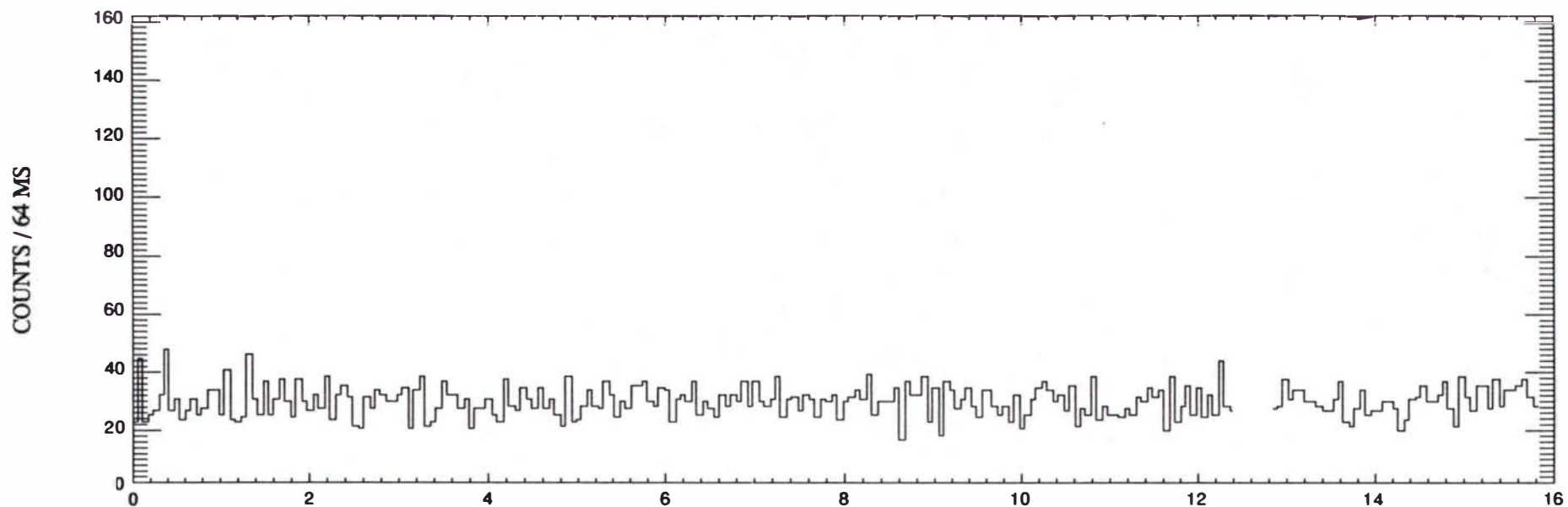
Burst Counter 6 at UT= 1.283247905307 h= 4619.692 s



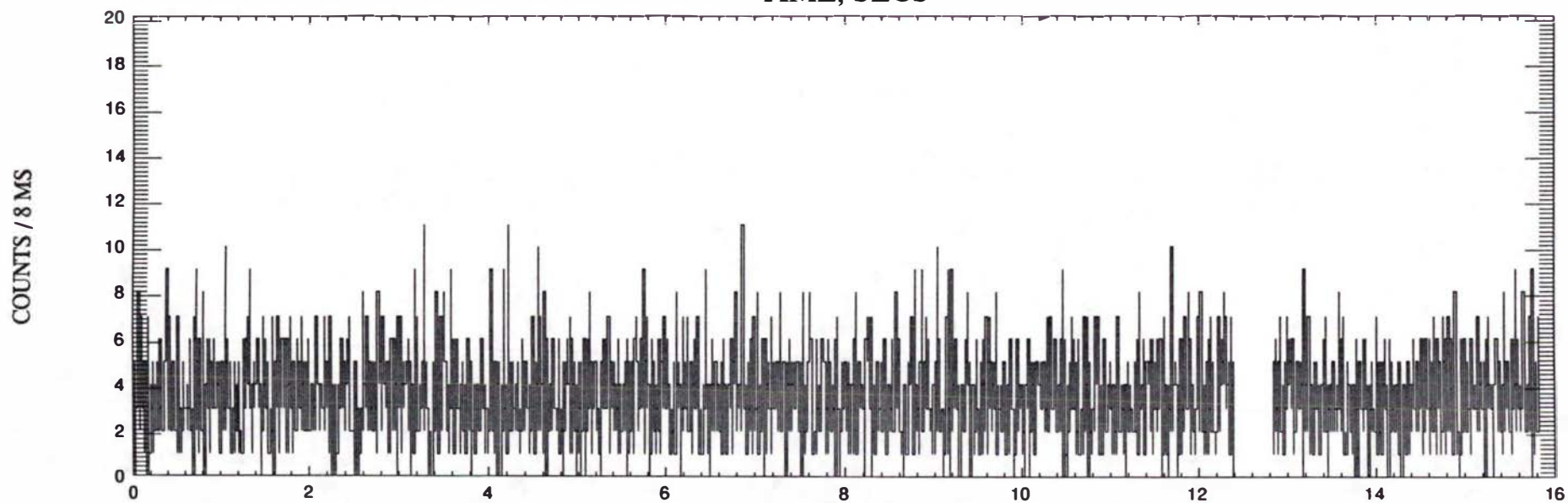
Burst Counter 7 at UT= 2.116560028924 h= 7619.616 s



Burst Counter 8 at UT= 2.949871020847 h=10619.536 s

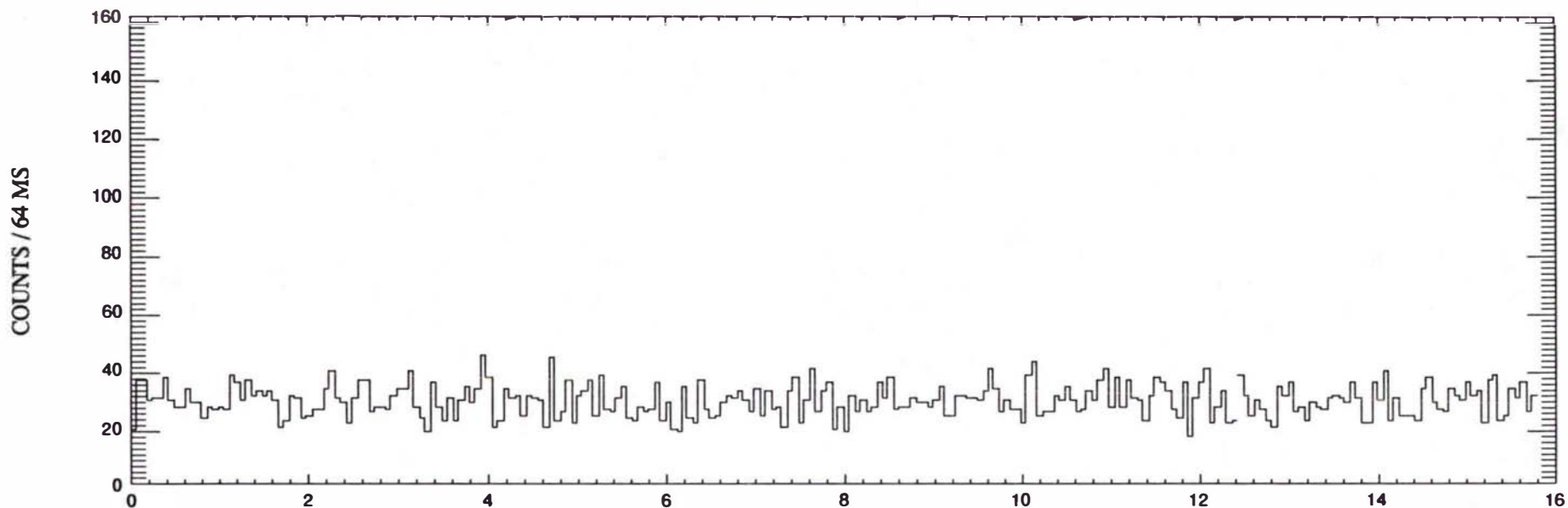


TIME, SECS

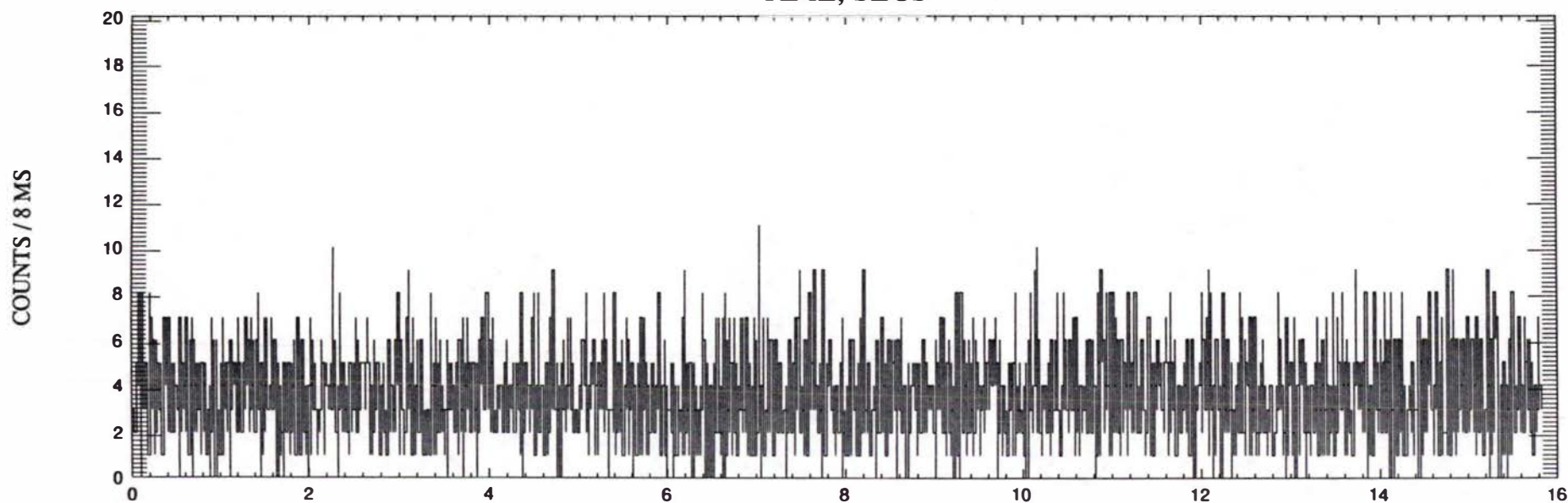


TIME, SECS

Burst Counter 9 at UT= 3.712069778442 h=13363.451 s



TIME, SECS



TIME, SECS

CATSEARCH PROGRAM

BATSE BURST # 1934
EVENT OF 1992 SEP 17 DAY OF YEAR=261
EVENT CROSSING TIME AT BATSE : 41728. S. OR 11:35:28.1
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 6.100 48.200
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 17/ 9/ 92 IS:
RA= 159.974 DEC= -.642 DIST= 6.216 AU
BATSE-ULYSSES DISTANCE = 929886672. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 52.65 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1881.99 SECS.
CROSSING TIME AT ULYSSES IS 43610. S. OR 12:06:50.1 +/- 506.64 SECONDS

NO

From KOSHUT@ssl.msfc.nasa.gov Fri Sep 18 08:54:26 1992
Date: Fri, 18 Sep 1992 10:56:15 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER
NO.: 01934 *Sep 17*
TIME: TJD=8882 SECONDS=41728
TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N
SIGNIFICANCE: SIGMA
INTENSITY: COUNTS/CM2
LOCATION: ZENITH=41.5 AZIMUTH=122.5 ERROR= DEGREES

COMMENTS:
BURST OF ~ 10 SECOND DURATION WITH MARGINAL EMISSION ABOVE 300 KEV.
TIME HISTORY CONSISTS OF A FAST RISE TO PEAK AT TRIGGER + 1 SECOND,
FOLLOWED BY AN EXPONENTIAL DECAY TO BACKGROUND.

8 / 6 / 94

ULYSSES RT

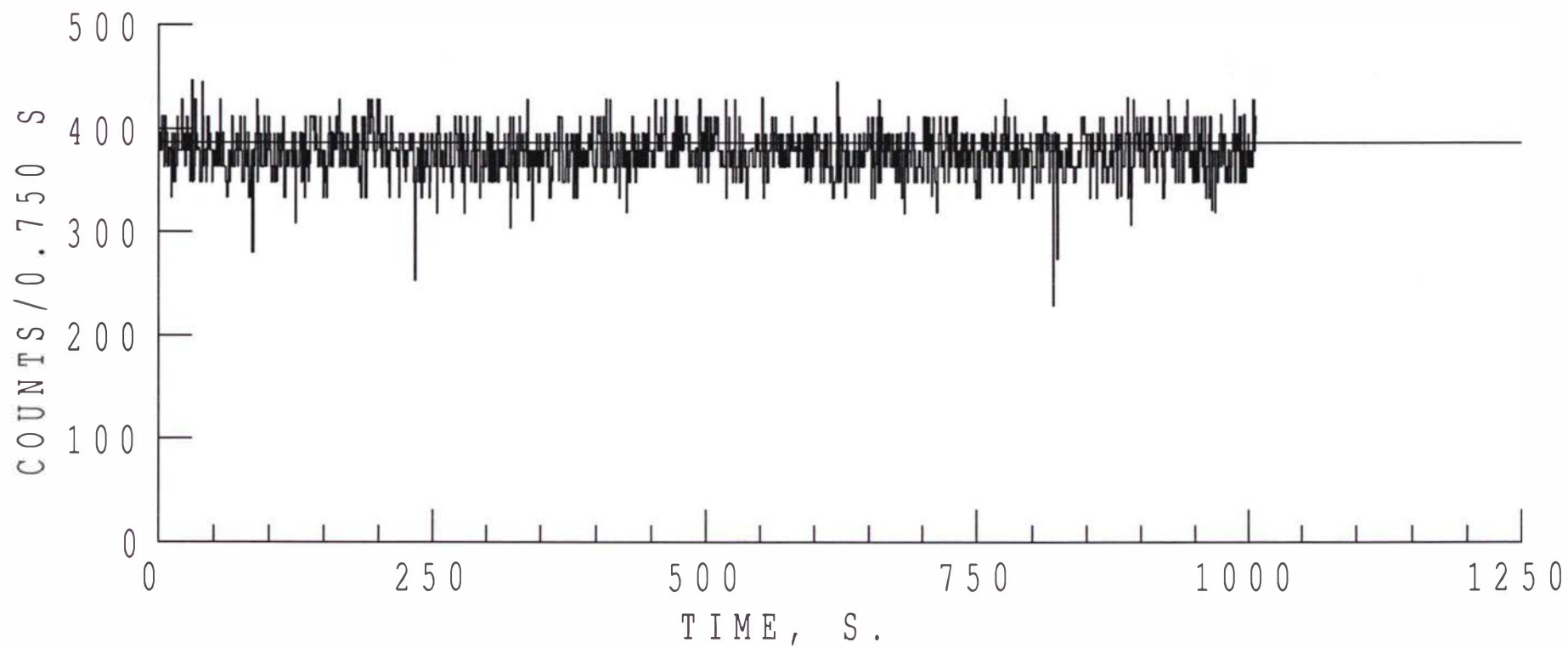
17 / 9 / 92 43092.016 s

0.250 S INTERVALS REGROUPED BY 3

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From KOSHUT@ssl.msfc.nasa.gov Fri Sep 18 07:56:46 1992
Date: Fri, 18 Sep 1992 9:58:29 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01935

TIME: TJD=8882 SECONDS=58007

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE PRECIPITATION EVENT.

From KOSHUT@ssl.msfc.nasa.gov Fri Sep 18 07:58:53 1992
Date: Fri, 18 Sep 1992 10:00:41 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01936

TIME: TJD=8882 SECONDS=63858

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE PRECIPITATION EVENT.

From KOSHUT@ssl.msfc.nasa.gov Mon Sep 21 09:39:38 1992
Date: Mon, 21 Sep 1992 11:41:13 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01937

TIME: TJD=8882 SECONDS=69510

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

PARTICLE PRECIPITATION EVENT, WITH FLUCTUATIONS FROM VELA X-1 SUPERIMPOSED.

From KOSHUT@ssl.msfc.nasa.gov Mon Sep 21 11:11:53 1992
Date: Mon, 21 Sep 1992 13:13:53 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01938

TIME: TJD=8882 SECONDS=75141

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

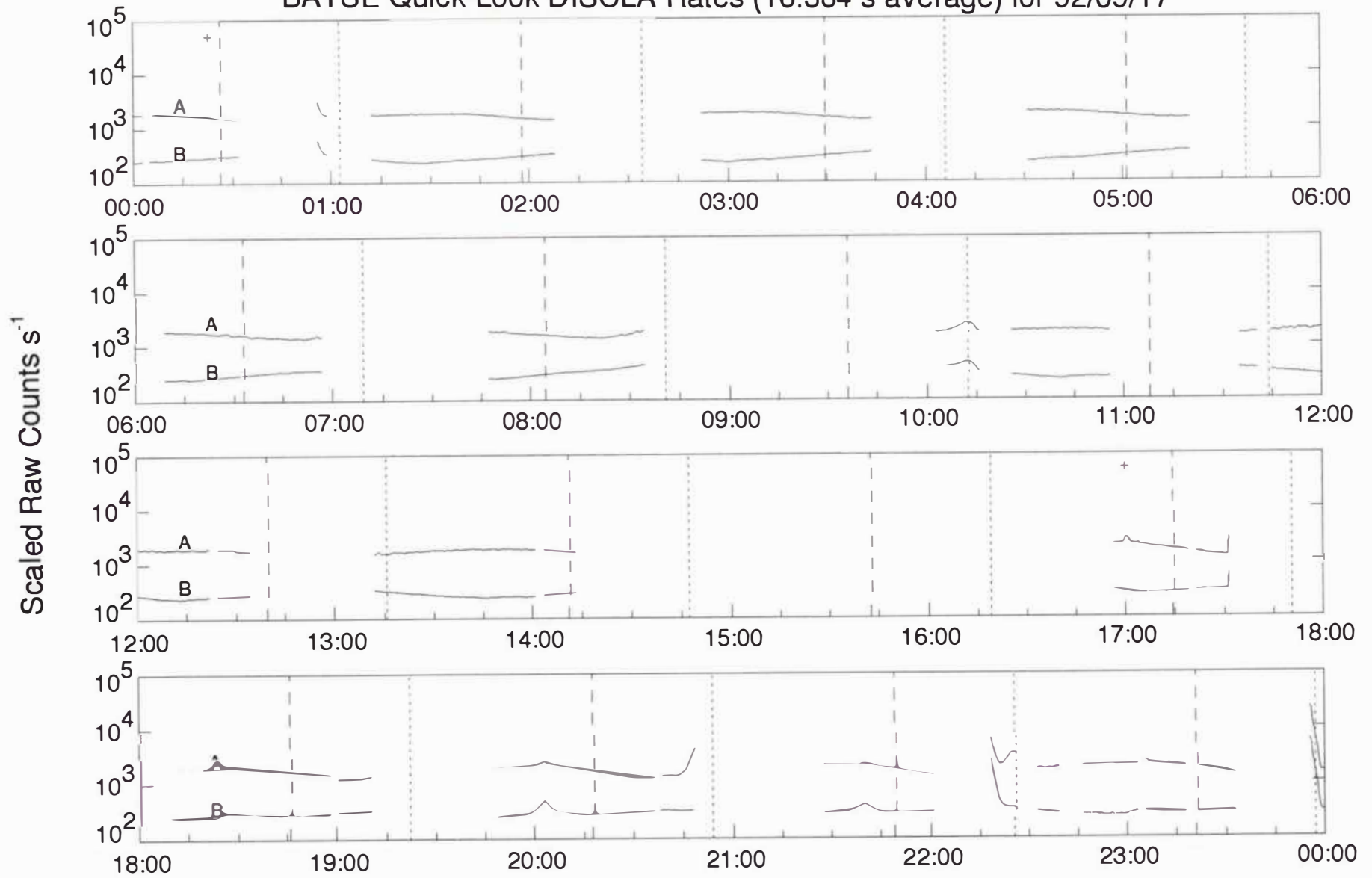
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

PARTICLE PRECIPITATION EVENT, WITH FLUCTUATIONS FROM VELA X-1 SUPERIMPOSED.

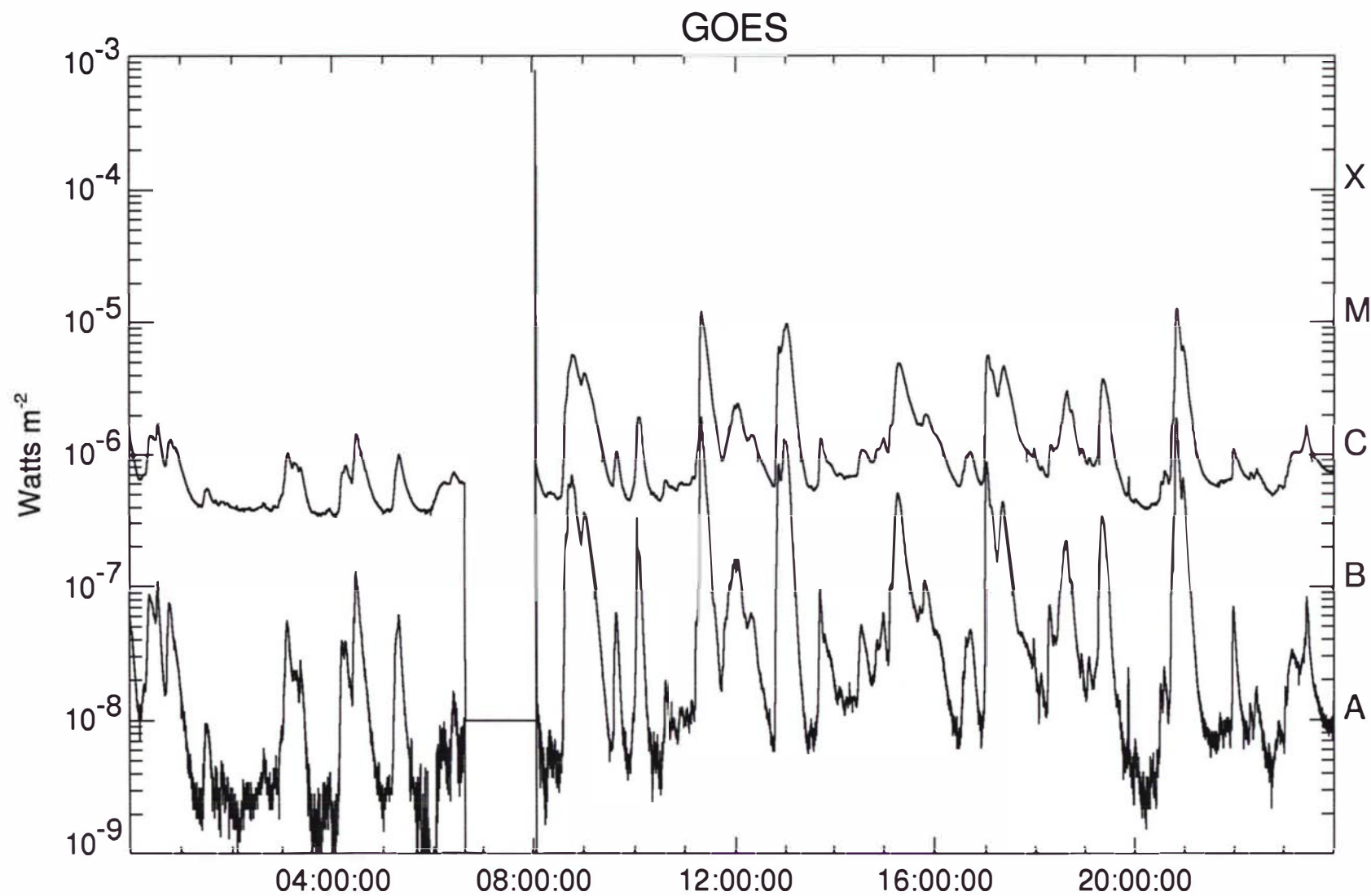
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/17



Current Time: 92/09/29, 0239 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



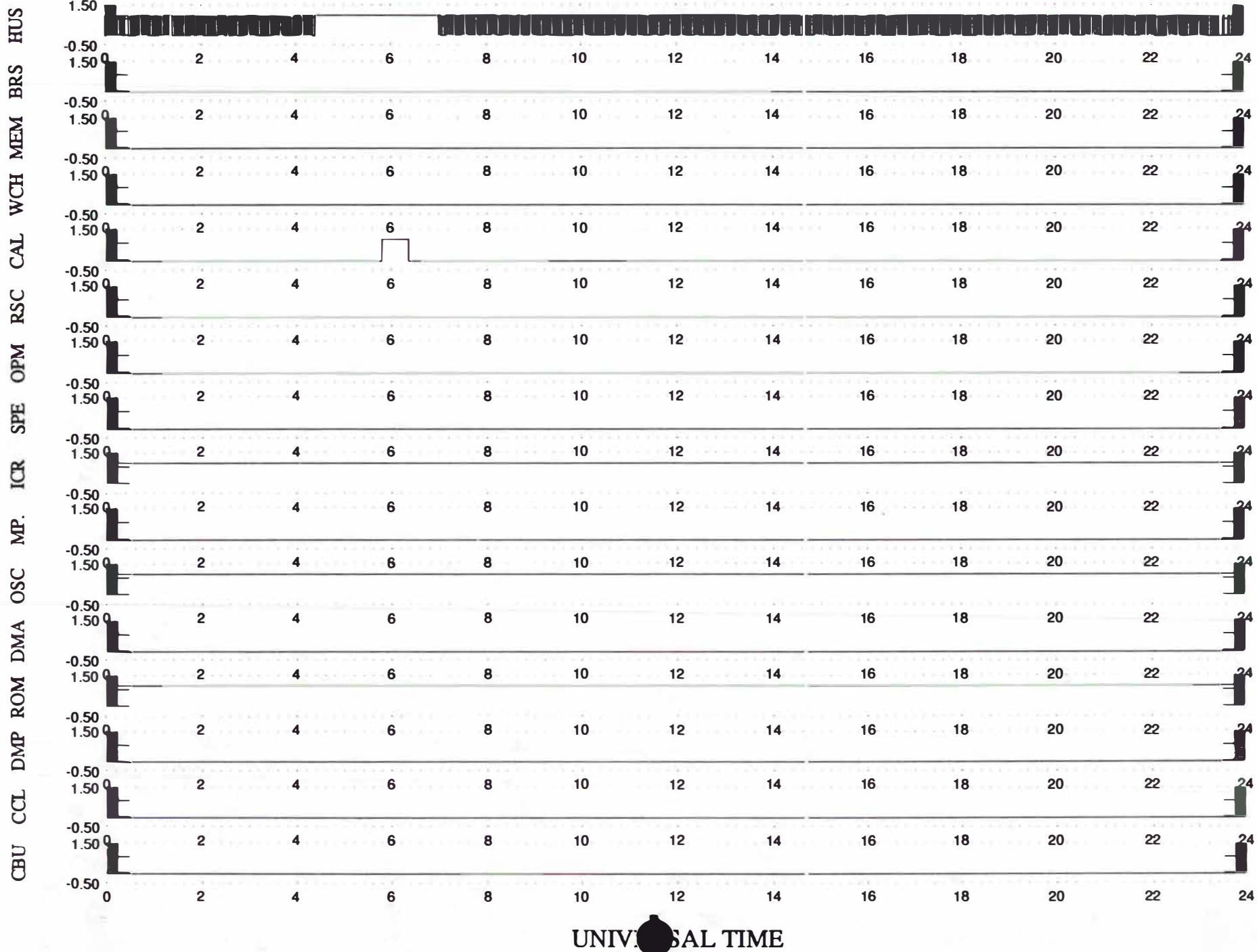
Data Start: 92/09/17, 0000:00

Plot created: 95/05/25, 1927

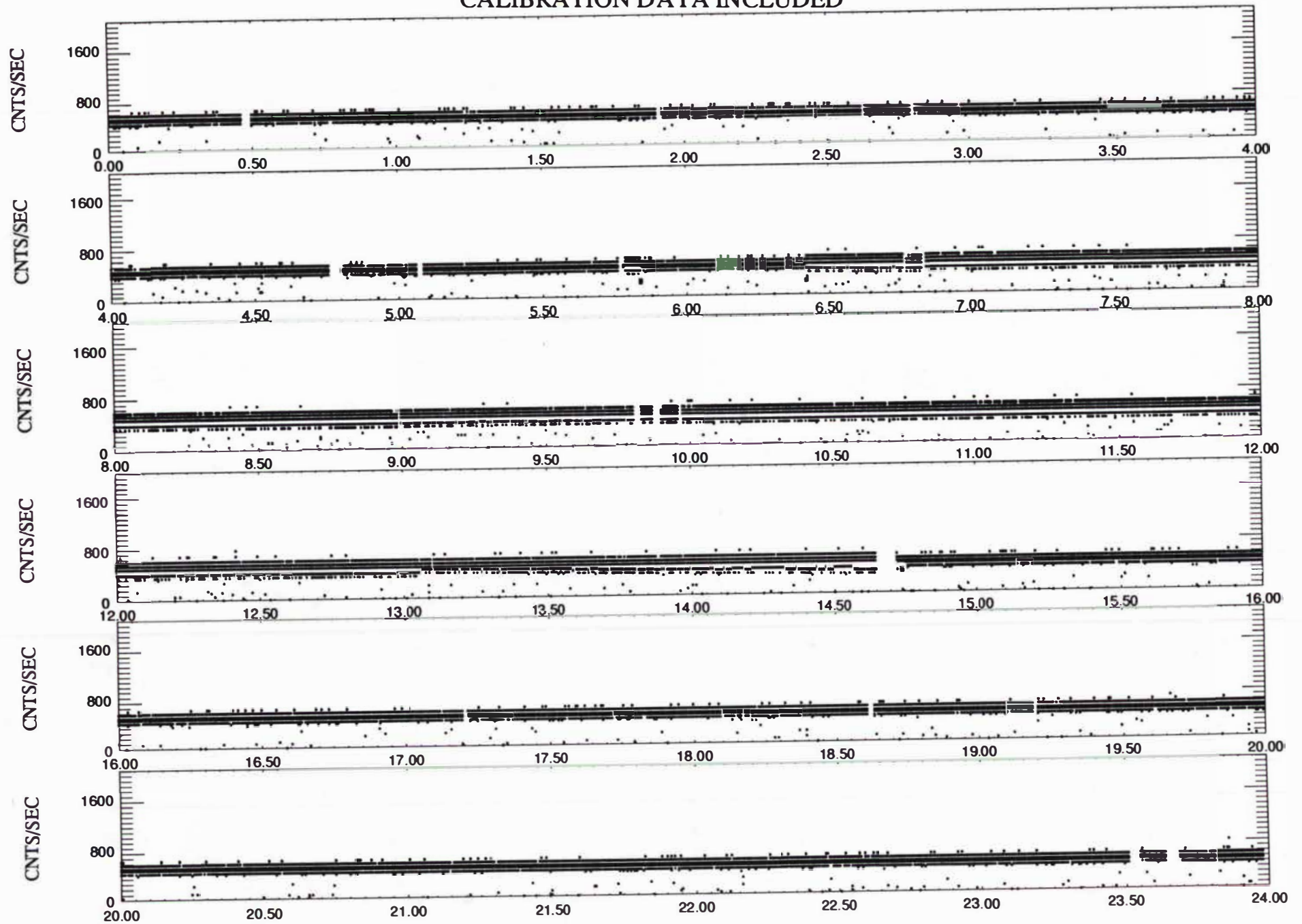
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (9)



CALIBRATION DATA INCLUDED



UNIV SAL TIME

From springer@pop.jpl.nasa.gov Tue Feb 25 10:31 PST 1997
X-Sender: springer@pop.jpl.nasa.gov
Date: Tue, 25 Feb 1997 10:31:09 -0800
To: khurley@sunspot.ssl.berkeley.edu
From: Joe Springer <springer@pop.jpl.nasa.gov>
Subject: Time Tag Error Final Report
Cc: Ed.B.Massey@jpl.nasa.gov, Eugene.G.Herrington@jpl.nasa.gov
Mime-Version: 1.0

Kevin,

We have the final results of our examination of time tag accuracy at the 950-odd data points you specified. The results are quite favorable in the sense that, statistically speaking, I would have expected more 'hits'.

Roger Williams established some 'ground rules' for this task. Those data points listed as 'ULYSSES RT' were to be checked for a period extending from ten minutes before the point to an hour after the point. Those listed as 'ULYSSES' were to be checked for a period extending ten minutes before and ten minutes after the point.

Within those bounds, there were 2 bad points. We typically checked a much longer period than required and found 6 additional errors, each well outside of the required period but 'in the neighborhood'.

It is interesting to note that ALL of the identified timing errors were the result of mis-timed tape recorder carryover data; none of the 'off by one minor frame' timing errors were found to coincide with these data points.

Regards,

Joe

The results are as follows:

ERRORS WITHIN YOUR BOUNDS:

	Your time Designation (mm/dd/yy)	Error	Magnitude of error
1.	9/26/91 68462.643	32 frames wrong 13 min 24 seconds after data pt.	64 SCLK counts 128 seconds high
2.	9/18/92 36388.026	32 frames wrong 39 min after data point	10176 SCLK ~5 hr 39 min low

OTHER ERRORS 'in the neighborhood':

3.	7/17/91 21785.887	32 frames wrong 1 hour after data point	64 SCLK counts 128 seconds high
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4.	9/25/92	77152.249	32 frames wrong between	4940 SCLK counts
	and	84728.363	2 data points but out of	~3 hr 6 min low
			range	
	12/8/95	85564.438	32 frames wrong 47 min	52672 SCLK
	counts		before data point	~29 hr 15 min
				low
6.	12/13/95	78120.000	32 frames wrong between	53760 SCLK
	counts			
	and	84420.000	2 data points but out of	~29 hr 52 min
			range	
				low
7.	1/1/96	4320.000	32 frames wrong 11 minutes	99200 SCLK
	counts		before data point	~27 hr 33 min low
8.	1/2/96	50472.000	1 frame wrong 33 minutes	123328 SCLK
	counts		after data point	~34 hr 15 min low

From ajct@LAEFF.ESA.Es Thu Aug 1 08:06 PDT 1996
From: "Alberto J. Castro-Tirado" <ajct@LAEFF.ESA.Es>
Date: Thu, 1 Aug 1996 17:05:47 +0200 (MET DST)
To: khurley@sunspot.ssl.berkeley.edu
Subject: 920918

Dear Kevin,

We also noticed that there is a burst that was observed by WATCH/
EURECA and Ulysses for which we do not have the corresponding annulus.
It would be nice if you could also provide us the data. The trigger time
(for Phebus) was Sep 18, 1992, 09:41:19.340 UT.

Best regards,

ALberto
1 Aug 1996

L2 Phebus.1"

From root Wed Sep 15 07:19 1993
 Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
 id AA03895; Wed, 15 Sep 93 07:19:28
 Received: from mhs-relay.cs.wisc.edu by sunspot.ssl.berkeley.edu (4.1/1.30.1)
 id AA04138; Wed, 15 Sep 93 07:22:11 PDT
 X400-Received: by mta mhs-relay.cs.wisc.edu in /PRMD=XNREN/ADMD= /C=US/;
 Relayed; Wed, 15 Sep 1993 09:23:36 +0000
 X400-Received: by /PRMD=inria/ADMD=atlas/C=fr/; Relayed;
 Wed, 15 Sep 1993 09:23:32 +0000
 X400-Received: by /PRMD=cnes/ADMD=atlas/C=FR/; Relayed;
 Wed, 15 Sep 1993 09:23:20 +0000
 Date: Wed, 15 Sep 1993 09:23:20 +0000
 X400-Originator: BARAT@cnesta.span.cnes.fr
 X400-Recipients: khurley@space6.ssl.berkeley.edu
 X400-Mts-Identifier: [/PRMD=cnes/ADMD=atlas/C=FR/;748102939@eliot.cnes.fr]
 X400-Content-Type: P2-1984 (2)
 Content-Identifier: Balistic info...
 From: BARAT@cnesta.span.cnes.fr
 Message-Id: <0097295C.5360EC60.3179@cnesta.cnes.fr>
 To: khurley@space6.ssl.berkeley.edu
 Subject: Balistic informations for GRB910517 and GRB920918
 Status: R

Dear Dr Hans Krimm,

Although the Phebus instrument, which operates in the .1 - 100 MeV nominal energy range, consists of six detectors, in-situ GRB source localizations are difficult due to nearly isotropic response of detectors, large photopeak efficiencies at high energy (0.66 at 1 MeV), FOV partially obstructed by satellite materials ...

I can give you only a rough estimate (or rather a forecast) of the source direction, regarding the count-rate observed in the six detectors. Please, note that I sent to Kevin Hurley the GRB920918 time history in order to localize this event by triangulation.

Sincerely

Claude Barat

cc : K. Hurley

1991 May 17 event detected at 5:02:42.959 UT (h:mm:ss.msec) by PHEBUS

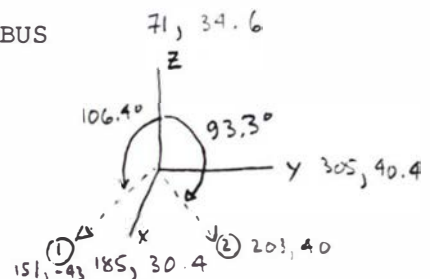
Satellite coordinates at this time (alpha, delta, R, equatorial system 1950.0)

alpha = 10.2131 (hh,mn,sec)
 delta = 34.4732 (deg,',')
 R = 173171.0 (km)

Direction of the satellite axes (alpha, delta, 1950.0)

+ X : alpha = 12.2007 (hh,mn,sec) delta = + 30.2659 (deg,',')
 + Y : alpha = 20.2016 (hh,mn,sec) delta = + 40.2454 (deg,',')
 + Z : alpha = 4.4419 (hh,mn,sec) delta = + 34.3729 (deg,',')

The burst source position appears to be unclear, although solutions located on the half celestial sphere limited by the XOY plane towards -Z are unlikely.



1992 Sept 18 event detected at 9:41:19.340 UT (h:mm:ss.msec) by PHEBUS

Satellite coordinates at this time (alpha, delta, R, 1950.0)

alpha = 9.2802 (hh,mn,sec)
 delta = 61.4652 (deg,',')
 R = 159249.4 (km)

Direction of the satellite axes (alpha, delta, 1950.0)

+ X :	alpha = 17.4237 (hh,mn,sec)	delta = - 29.0603 (deg,', '')
+ Y :	alpha = 17.5735 (hh,mn,sec)	delta = + 60.5048 (deg,', '')
+ Z :	alpha = 11.4611 (hh,mn,sec)	delta = + 1.3558 (deg,', '')

The burst source location seems to be either in the $\pi/2$ solid angle limited by axes +X, -Y, and -Z or in the $\pi/2$ solid angle defined by -X, -Y, and -Z.

file "phebus"

From root Wed Sep 15 07:12 1993
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA03892; Wed, 15 Sep 93 07:12:07
Received: from mhs-relay.cs.wisc.edu by sunspot.ssl.berkeley.edu (4.1/1.30.1)
id AA04114; Wed, 15 Sep 93 07:14:47 PDT
X400-Received: by mta mhs-relay.cs.wisc.edu in /PRMD=XNREN/ADMD= /C=US/;
Relayed; Wed, 15 Sep 1993 09:15:25 +0000
X400-Received: by /PRMD=inria/ADMD=atlas/C=fr/; Relayed;
Wed, 15 Sep 1993 09:15:20 +0000
X400-Received: by /PRMD=cnes/ADMD=atlas/C=FR/; Relayed;
Wed, 15 Sep 1993 09:15:09 +0000
Date: Wed, 15 Sep 1993 09:15:09 +0000
X400-Originator: BARAT@CNESTA.span.cnes.fr
X400-Recipients: khurley@space6.ssl.berkeley.edu
X400-Mts-Identifier: [/PRMD=cnes/ADMD=atlas/C=FR/;748102448@eliot.cnes.fr]
X400-Content-Type: P2-1984 (2)
Content-Identifier: 920918 Time H...
From: BARAT@cnesta.span.cnes.fr
Message-Id: <0097295B.2B2DE5A0.3175@cnesta.cnes.fr>
To: khurley@space6.ssl.berkeley.edu
Subject: 920918 Time History from Phebus
Status: R

Cher Kevin,

Voici la partie interessante du profil temporel de GRB920918.
Ce burst, plutot faiblard, a ete vu sur deux detecteurs (130
(-Z) et 34 (+Y) ci joint). Tu trouveras des explications en fin
de fichier et des informations balistiques dans le courrier
envoye a Hans Krimm dont je t'ai envoye une copie

GRB 920918 Event - Detector Nr 34 (+Y)

118	112	212	139	94	0	6	34	2	76	196	188	4	34	2	5
2	2	5	5	4	5	4	2	5	6	2	6	4	5	2	4
2	4	2	4	3	6	3	6	3	4	1	5	7	4	4	3
3	2	5	3	1	6	2	3	1	1	5	6	4	3	3	3
4	5	7	2	3	6	4	1	7	8	6	3	3	6	2	4
3	3	5	2	6	5	4	4	4	3	4	1	3	4	3	2
1	4	4	5	4	7	5	6	2	6	6	5	5	8	2	4
5	6	6	3	5	4	5	8	6	6	7	6	9	8	3	6
6	3	4	7	5	2	6	7	6	5	5	7	7	6	6	4
5	4	4	4	8	7	4	4	2	4	6	9	8	4	5	6
5	4	3	4	11	3	2	1	3	8	6	5	1	4	1	4
2	5	5	6	4	3	4	9	4	5	7	4	1	4	7	4
12	4	7	6	6	3	9	6	3	5	3	4	3	5	3	6
6	5	3	5	7	2	2	8	6	4	8	5	4	4	1	4
7	6	4	0	6	3	6	6	5	2	8	6	5	6	4	2
2	2	4	7	5	8	4	6	6	7	5	5	5	3	8	4
10	5	8	4	8	6	8	4	4	5	7	9	7	6	2	5
7	6	13	9	4	5	4	8	5	7	7	5	5	8	5	4
7	4	4	5	3	5	5	7	4	11	8	5	6	5	4	2
5	4	6	6	4	7	2	3	7	5	5	7	5	6	5	4
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7	11	3	10	4	5	5	4	4	6	2	5	6	9	3	3
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7	3	4	7	4	4	1	6	2	1	9	6	14	5	10	13
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8	6	3	4	7	4	2	6	5	2	8	8	4	8	6	8
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7	3	8	7	9	5	11	4	4	6	6	7	9	6	9	5
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2	6	13	2	6	4	2	4	9	5	4	4	2	9	8	7
2	7	8	3	9	5	7	4	9	3	1	10	5	7	5	1
6	2	4	3	4	11	8	6	9	2	4	3	4	7	7	3
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1	6	6	3	6	3	9	5	8	4	7	0	2	5	2	7
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6	8	5	3	7	4	8	3	2	5	4	5	3	5	4	2
5	6	4	3	7	3	3	1	7	5	3	5	8	6	3	5
5	7	3	7	4	4	7	4	5	6	1	4	5	2	3	2
3	6	1	7	5	4	2	3	4	1	5	4	6	5	6	3
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3	2	5	2	7	5	3	2	2	5	4	7	2	3	11	5
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2	6	3	5	6	5	8	5	5	5	8	2	4	5	3	5
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4	4	4	7	7	2	5	12	6	10	3	7	4	5	6	3
5	3	6	6	2	7	7	3	10	3	4	7	9	6	7	3
3	2	7	4	9	6	5	3	5	6	4	5	3	4	8	7
6	3	6	7	4	5	8	1	2	4	3	2	7	4	7	2
6	2	2	8	0	8	5	6	5	3	8	3	3	7	4	5
11	5	6	6	4	8	7	5	7	4	8	4	6	4	4	6
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3	5	3	3	3	5	6	5	1	2	4	6	6	6	5	4
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6	2	5	6	5	4	8	3	7	6	3	8	6	2	4	7
118	112	212	139	94	0	7	34	2	76	196	188	4	34	2	6
4	11	8	9	16	13	7	9	8	11	13	6	13	13	9	4
11	10	14	3	9	11	11	6	14	9	11	10	9	11	9	8
8	9	5	12	8	8	11	6	8	8	3	9	5	11	9	10
9	10	3	8	6	10	8	4	10	7	9	8	10	7	7	8
11	9	5	8	4	5	7	7	4	8	11	11	10	8	9	6
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8	8	2	12	5	13	12	9	6	3	7	8	9	9	10	8
4	9	5	10	7	6	5	8	7	6	4	8	7	4	12	10
7	7	12	6	9	9	9	12	7	5	10	9	11	13	5	8
8	10	8	6	6	11	10	3	8	4	5	7	8	4	6	8
5	6	12	4	10	3	5	4	11	13	8	3	4	5	16	13
7	7	8	8	11	11	10	8	14	10	13	10	8	10	10	9
5	11	6	5	15	11	8	7	8	9	8	12	6	4	2	8
9	11	9	10	9	8	7	13	10	6	7	5	14	9	13	7
10	7	9	4	9	5	6	5	7	7	7	10	11	7	8	5
5	3	8	9	7	11	6	5	5	8	13	9	8	5	13	7
6	7	15	10	17	7	11	13	7	8	11	12	8	11	8	8
8	10	10	9	8	7	11	6	5	6	4	4	11	7	11	2
11	14	6	12	8	8	8	8	10	11	5	12	5	13	3	8
7	10	7	6	8	6	7	6	4	8	10	8	7	6	9	8
10	6	6	8	6	10	11	9	11	12	14	13	5	6	13	10
13	10	4	14	8	4	8	10	8	14	10	14	4	9	5	5
7	3	11	8	3	12	8	10	12	8	9	6	12	12	8	11
5	12	8	16	10	11	11	11	10	4	7	8	11	5	7	11
10	10	6	12	5	10	8	7	12	6	11	6	13	11	9	12
10	5	13	9	12	8	14	6	10	5	6	9	10	13	7	9
12	8	8	7	10	6	11	15	8	7	5	11	5	5	6	10
11	5	15	5	11	7	12	10	7	5	8	11	7	6	7	5
9	5	9	8	11	7	9	6	8	9	7	8	11	5	9	6
6	9	13	9	8	8	10	5	12	8	6	10	9	6	9	8
7	11	10	5	5	6	12	7	11	8	12	9	6	12	6	3
11	8	2	9	9	8	11	9	7	2	13	5	6	8	7	9
5	11	3	3	9	9	7	9	11	5	10	10	3	7	10	6
9	2	11	6	4	6	8	5	8	10	7	5	8	8	5	8

3	7	6	7	8	3	8	8	7	5	7	6	7	4	10	9
6	8	4	11	9	10	6	4	6	5	9	8	5	5	7	11
6	2	5	4	5	7	10	0	5	4	7	6	6	6	8	9
9	3	6	11	4	2	3	9	3	6	6	8	7	10	10	2
5	14	4	6	8	4	4	7	10	5	10	4	14	9	5	2
6	2	7	4	6	8	7	10	4	3	10	9	7	4	9	9
9	9	6	9	4	12	6	8	9	6	2	10	4	8	9	9
11	5	5	9	4	9	5	9	7	13	9	6	7	7	6	6
6	6	5	8	15	10	8	16	6	6	4	6	7	4	11	2
9	9	7	8	2	10	7	6	3	11	6	8	6	9	11	7
9	5	9	8	4	10	8	15	9	9	3	8	8	6	7	7
8	10	7	6	9	9	6	7	6	11	11	8	6	9	9	14
9	6	8	11	3	5	7	4	4	9	5	12	11	8	5	11
5	11	9	4	9	17	5	6	7	7	9	4	7	4	6	8
7	7	9	14	11	9	10	5	7	3	9	6	3	6	8	5
12	8	8	4	3	11	7	2	8	3	11	5	8	8	8	8
9	5	7	7	7	9	4	9	7	7	5	7	6	7	6	6
5	8	5	6	6	7	6	9	9	5	9	8	5	5	8	10
8	6	4	5	10	7	4	15	9	6	5	5	4	7	2	3
7	6	10	8	4	7	5	7	11	4	7	7	5	6	10	8
2	6	10	8	6	8	9	6	8	9	7	8	9	9	9	11
9	6	6	3	7	8	7	8	3	4	5	15	4	6	4	9
6	7	6	6	5	5	11	9	5	5	10	7	5	4	5	5
12	10	8	7	9	6	7	8	9	9	8	7	6	6	8	7
6	7	5	7	10	5	8	6	9	5	8	12	9	10	13	10
10	11	4	7	5	7	5	7	9	6	6	6	5	4	3	5
6	12	10	9	7	3	8	7	8	7	8	6	8	7	8	8
6	5	5	3	4	4	12	8	7	7	6	8	8	7	8	7
4	10	12	9	9	3	10	4	6	12	9	7	8	5	12	13

END

Some explanations

Chaque bloc contient 1024 octets; les 16 premiers octets correspondent au header qui commence toujours par la synchro (118 112 212 139 pour Granat). Le premier comptage de chaque bloc est donc le 17 eme, soit 1008 comptages par bloc.

Chaque intervalle du premier bloc represente 1/128 s avec 256 valeurs dans la prememoire. Le trigger time se trouve dans le 257 eme intervalle dont les limites sont synchrones avec le 1/128 s. Ce premier bloc couvre donc 7.875 secondes dont 2 secondes de prememoire.

Chaque intervalle du second bloc represente 1/64 s. Attention : les valeurs de ce bloc sont compressees (de 16 a 8 octets). L'algorithme de compression est le meme que celui de Lilas et Apex. Duree totale de ce bloc : 15.75 s soit 23.625 s au total des deux blocs.

Je suis bien sur interesse de connaitre la direction de la source si tu peux la localiser

Amities

Claude

Chaque intervalle

No helio. or clock corr even applied

Date: Dec 2 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

*Large discrepancy!
Perhaps the Ulysses event is
not the Eureka one*

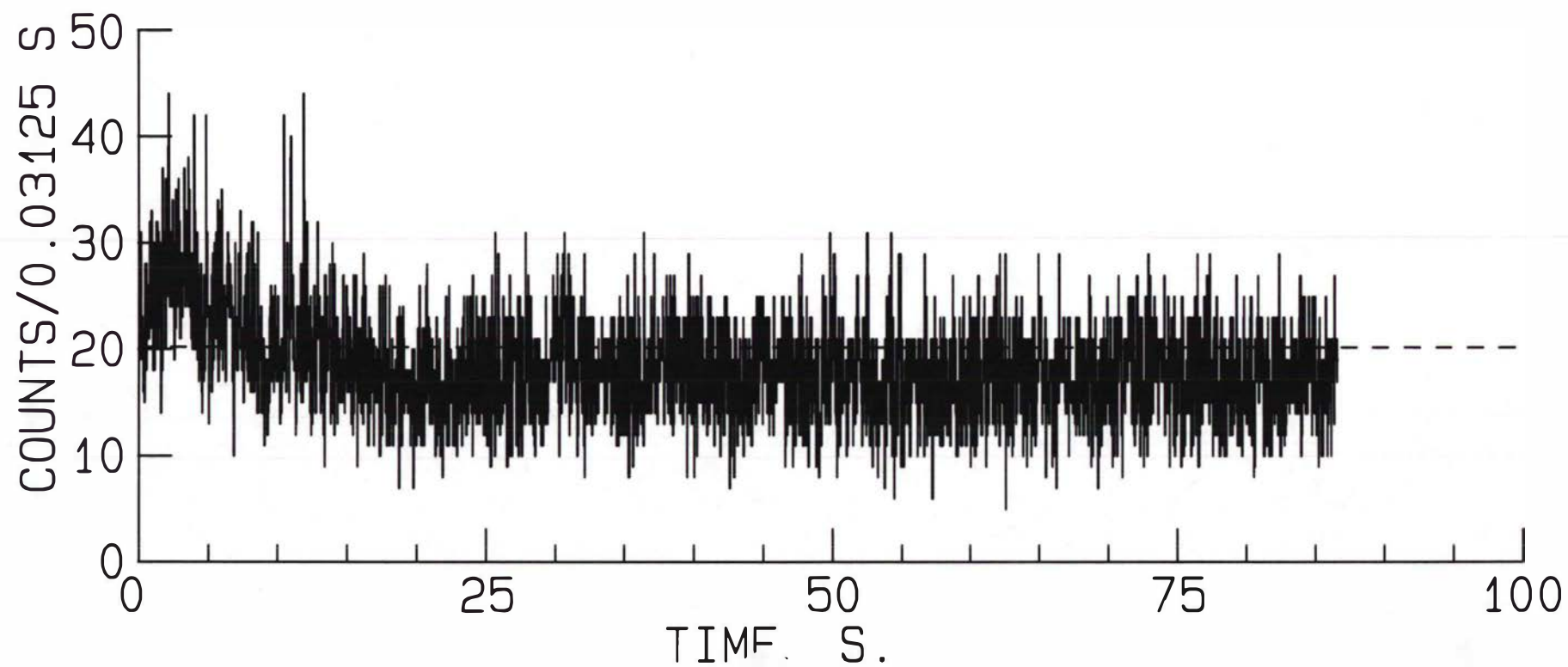
2. BATSE Data

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

3. PVO Data

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

PHEBUS
18/ 9/92 34877.336 s
100- 1600 keV



WATCH

ULYSSES RT

31 / 3 / 99

18 / 9 / 92 34056.238 s

0.250 S INTERVALS REGROUPED BY 4

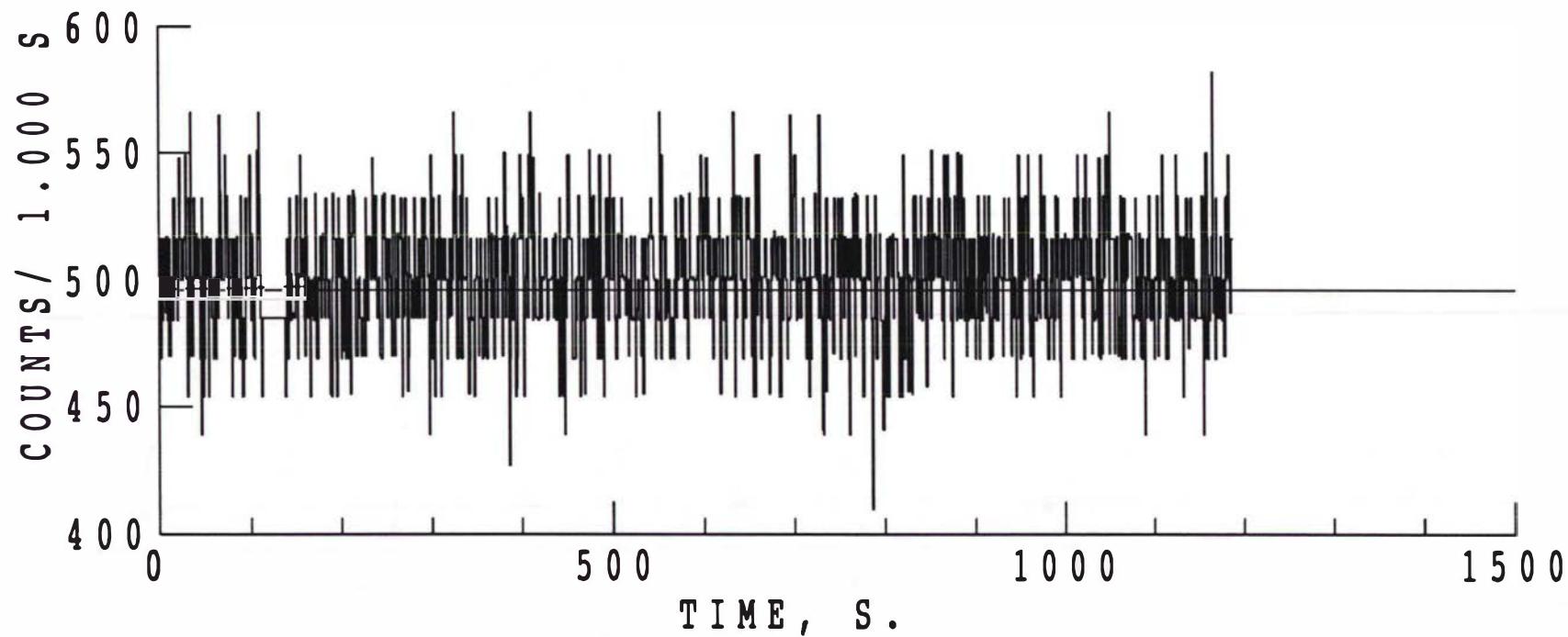
0 - 0 keV

N= 10 M= 10

>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



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

Hello Kevin,

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

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

GRB 920918 09:41:20 16h23m30s -04d18' 245.875 - 4.3

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

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

Best regards,
Soren

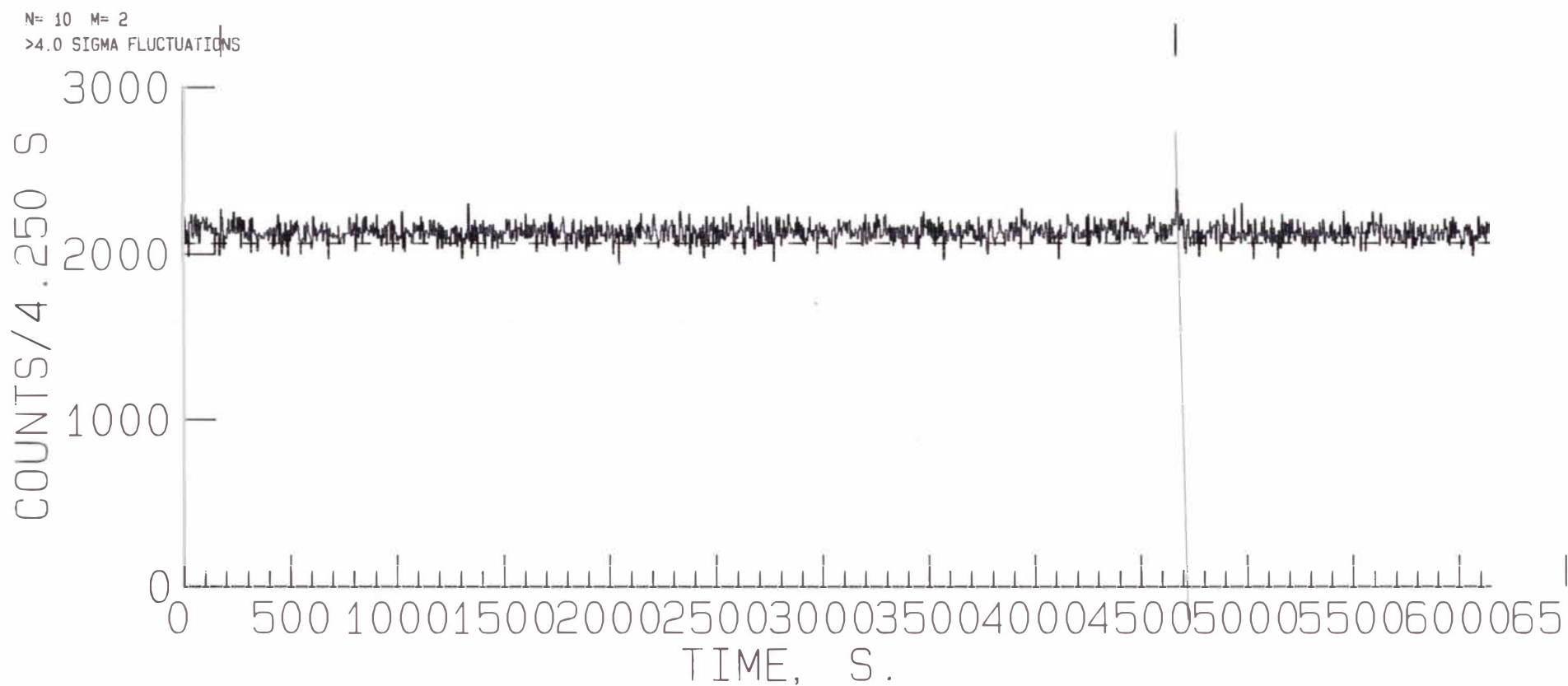
ULYSSES RT

28/10/93

18/ 9/92 31788.203 s

.250 S INTERVALS REGROUPED BY 17

22- 150 keV



From sb@dsri.dk Thu Oct 28 08:15:04 1993
Date: Thu, 28 Oct 93 16:12:34 +0100
From: Soeren Brandt <sb@dsri.dk>
To: khurley@sunspot.ssl.berkeley.edu
Subject: GRBs
Content-Length: 6493

Hello Kevin,

Thanks for the timing circle of GRB 920814. It is sad that our pair hypothesis has to go, but it shows the importance of getting small error boxes to avoid chasing correlation which are not there.

I send the WATCH-EURECA data for GRB 920918. The position is
alfa (J2000) = 16h23m30s, delta (J2000) = -04d18m.
245.875 -4.3

I have also found a burst on 12 June 1993 at
alfa (J2000) = 07h58m40s, delta (J2000) = -02d39m.
Those data are also included.

Soren

WATCH-EURECA data for GRB 920918

alfa (J2000) = 16h23m30s
delta (J2000) = -04d18m

number of bins	256								
start of first bin	34608.50	09:36:48.50							
end of last bin	35069.74	09:44:29.74							
duration per bin	1.802 sec								
399	395	429	406	398	401	432	421	414	407
403	418	428	420	450	426	423	421	410	434
429	432	419	423	411	390	416	395	426	416
432	359	405	416	396	451	411	440	402	414
431	413	400	415	421	400	440	412	404	413
407	470	414	421	425	427	414	429	391	432
401	406	431	444	396	429	435	424	416	444
401	436	423	417	421	441	410	395	449	431
393	437	390	390	425	424	406	449	419	416
406	403	470	378	383	417	415	406	444	425
400	428	455	430	422	424	419	451	438	410
444	421	440	448	420	411	424	418	412	387
437	429	436	428	437	434	413	441	443	425
445	440	438	437	482	458	459	476	476	419
451	457	477	471	427	446	419	461	482	518
543	481	522	506	522	512	540	422	446	470
442	444	448	527	472	507	479	419	449	481
463	456	452	468	450	444	460	391	426	434
403	481	420	429	438	484	462	419	447	418
432	429	446	436	455	464	461	407	429	443
436	425	398	457	442	452	447	461	429	431
418	398	443	480	445	419	455	429	448	452
435	412	445	439	433	427	464	441	426	418
439	419	467	443	497	452	428	434	448	453
433	449	442	404	445	445	431	460	434	462
429	451	463	492	440	430				

WATCH-EURECA data for GRB 930612

alfa (J2000) = 07h58m40s
delta (J2000) = -02d39m

number of bins 512



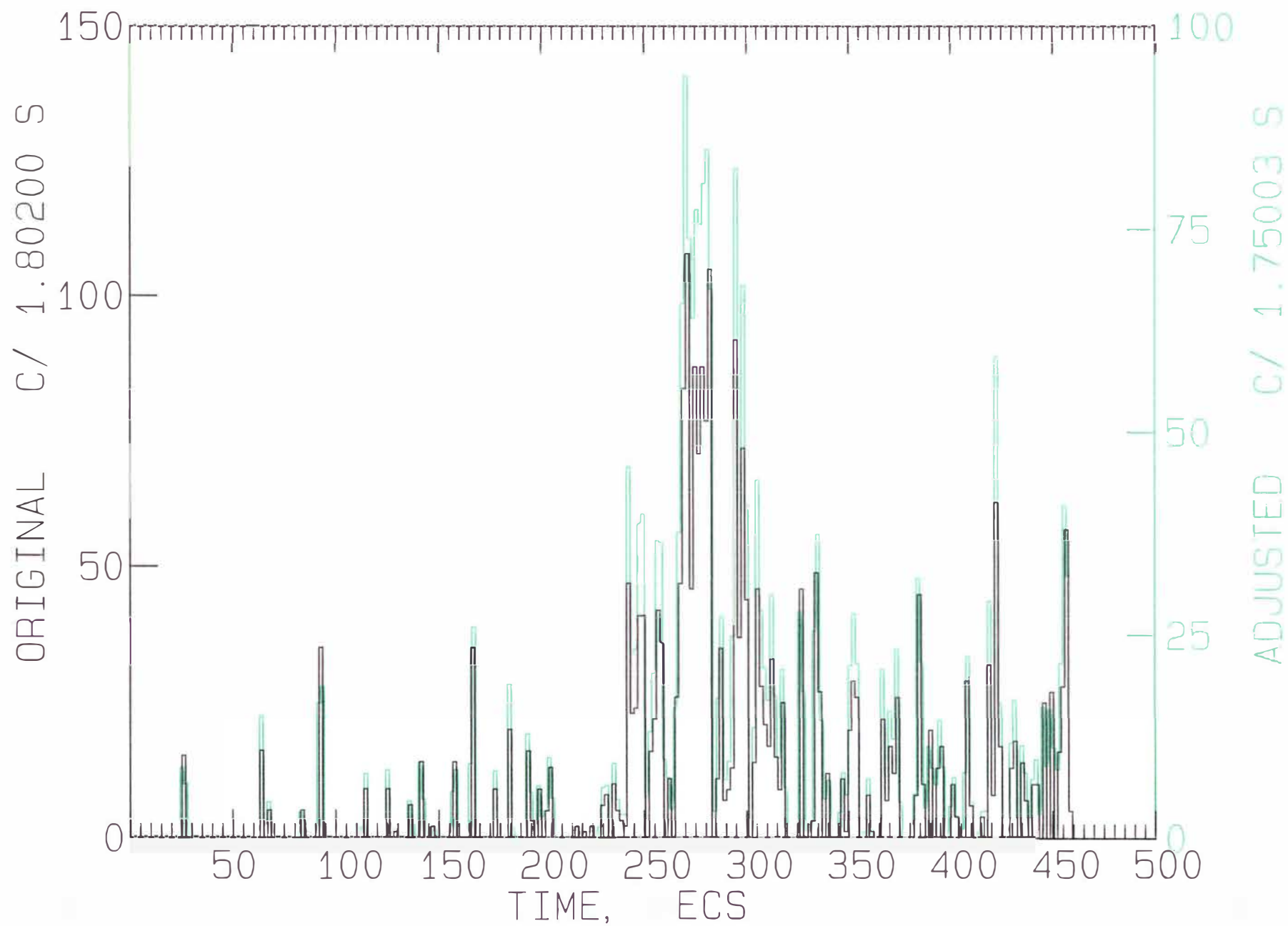
ORIGINAL AND ADJUSTED WATCH

TIME HISTORIES

09/18/92

34608.500

30/10/93



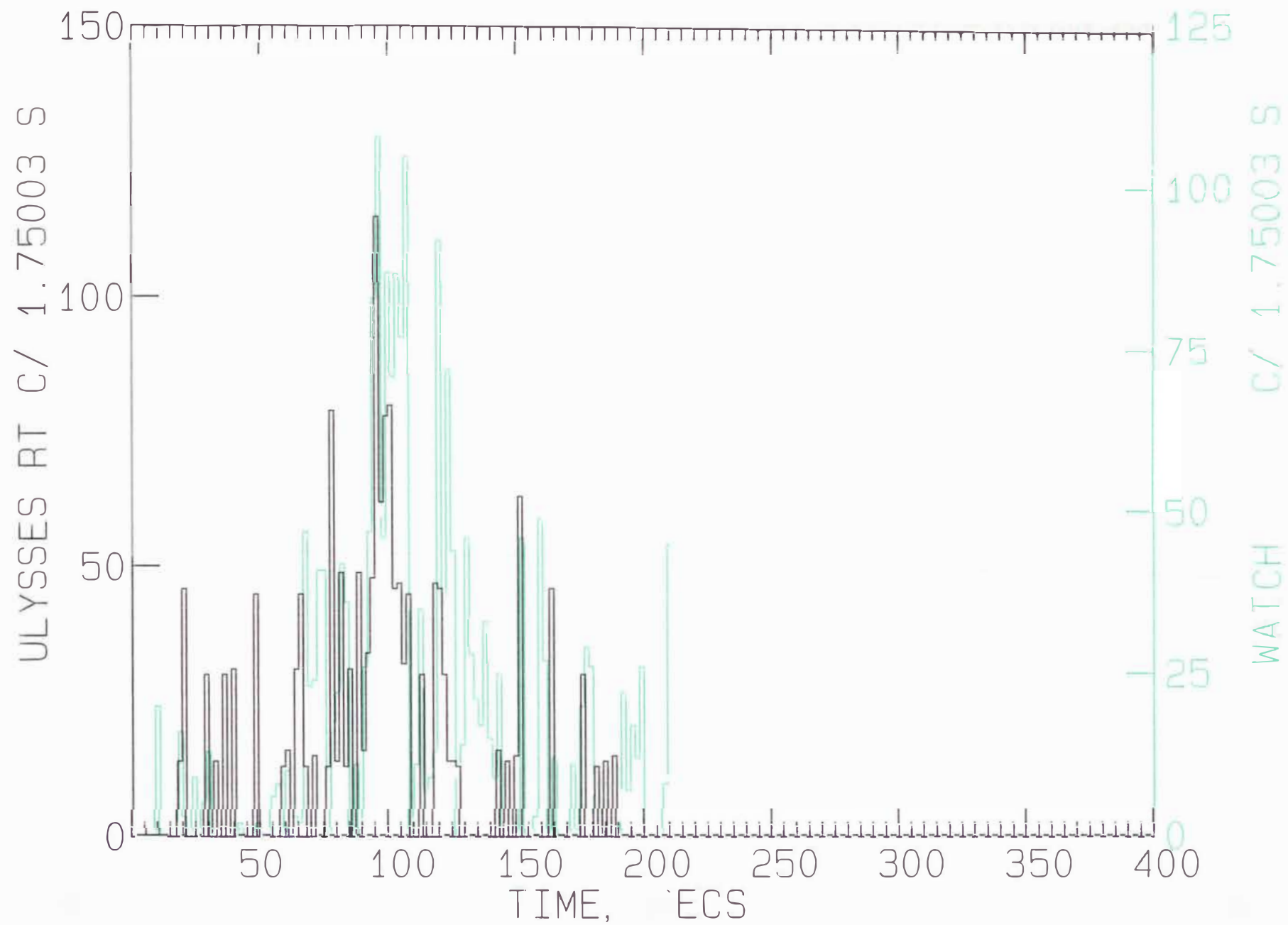
ULYSSES RT-WATCH

CORRELATION

18/ 9/92

36388.026

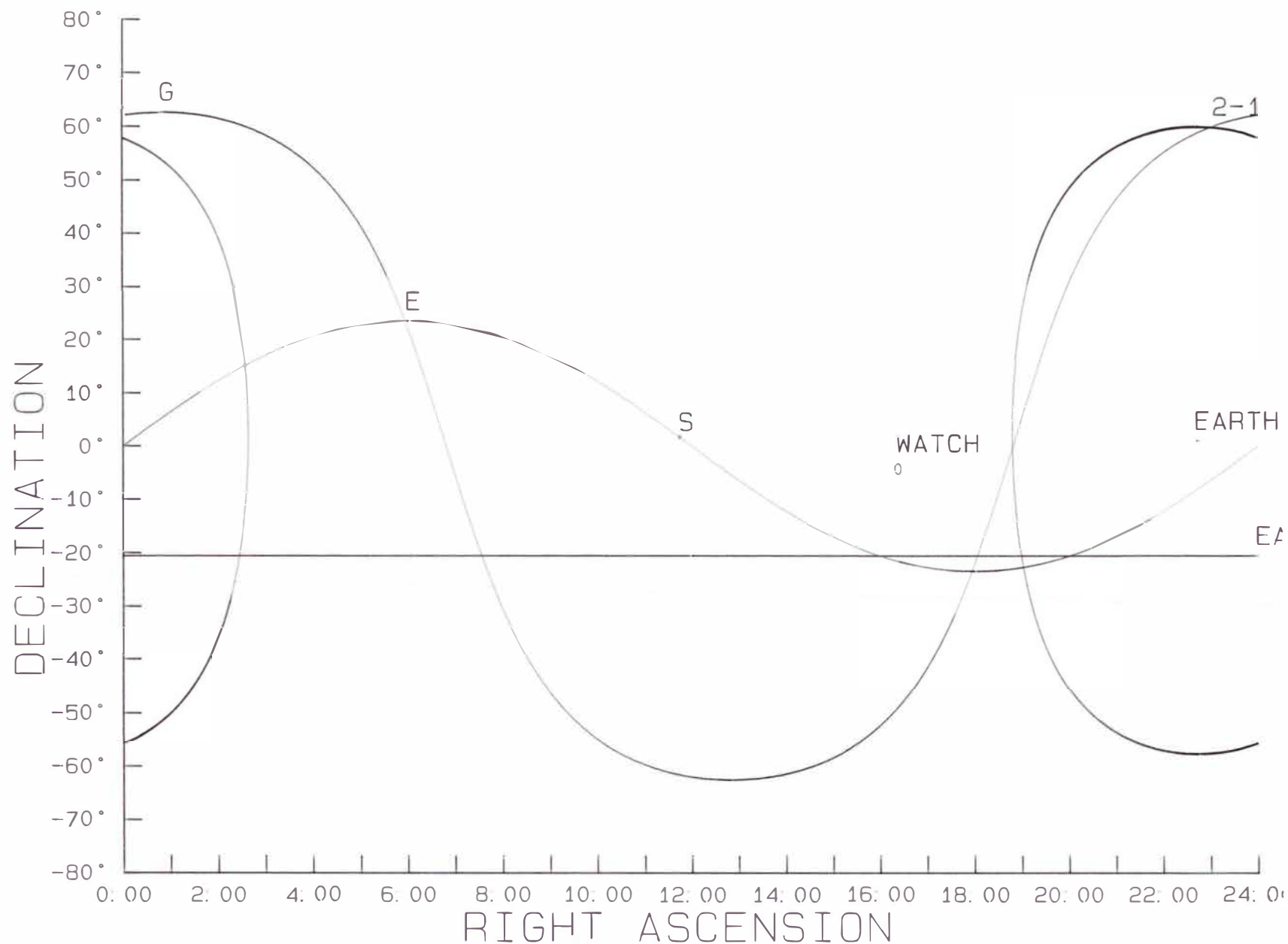
30/10/93



EVENT OF SEP 18, 1992 10: 06

30/10/93

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



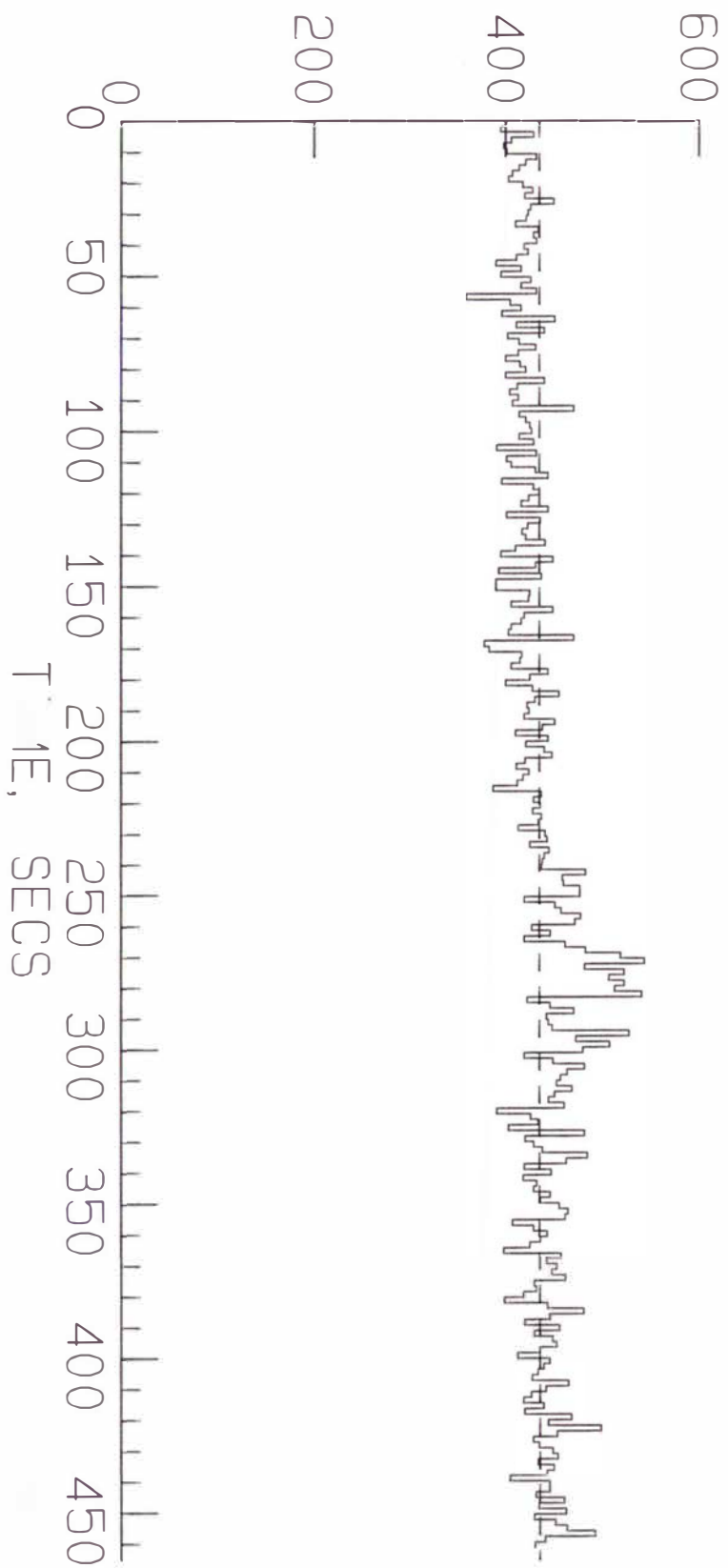
WATCH

09/18/92

34608.500

15- 150 keV

COUNTS/1.802 S



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

From SHARIFF@ssl.msfc.nasa.gov Mon Sep 21 11:54:48 1992
Date: Mon, 21 Sep 1992 13:56:50 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01939

TIME: TJD=8883 SECONDS=37913

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
GRO J0422+32 TRANSIENT FLUCTUATION.

From SHARIFF@ssl.msfc.nasa.gov Mon Sep 21 12:02:38 1992
Date: Mon, 21 Sep 1992 14:04:37 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01940

TIME: TJD=8883 SECONDS=48757

TYPE: 0442+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

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

From SHARIFF@ssl.msfc.nasa.gov Mon Sep 21 12:11:36 1992
Date: Mon, 21 Sep 1992 14:13:20 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01941

TIME: TJD=8883 SECONDS=59810

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

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

BATSE BURST TRIGGER

NO.: 01942

TIME: TJD=8883 SECONDS=68384

TYPE: PARTICLE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

BATSE BURST TRIGGER

NO.: 01943

TIME: TJD=8883 SECONDS=82972

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

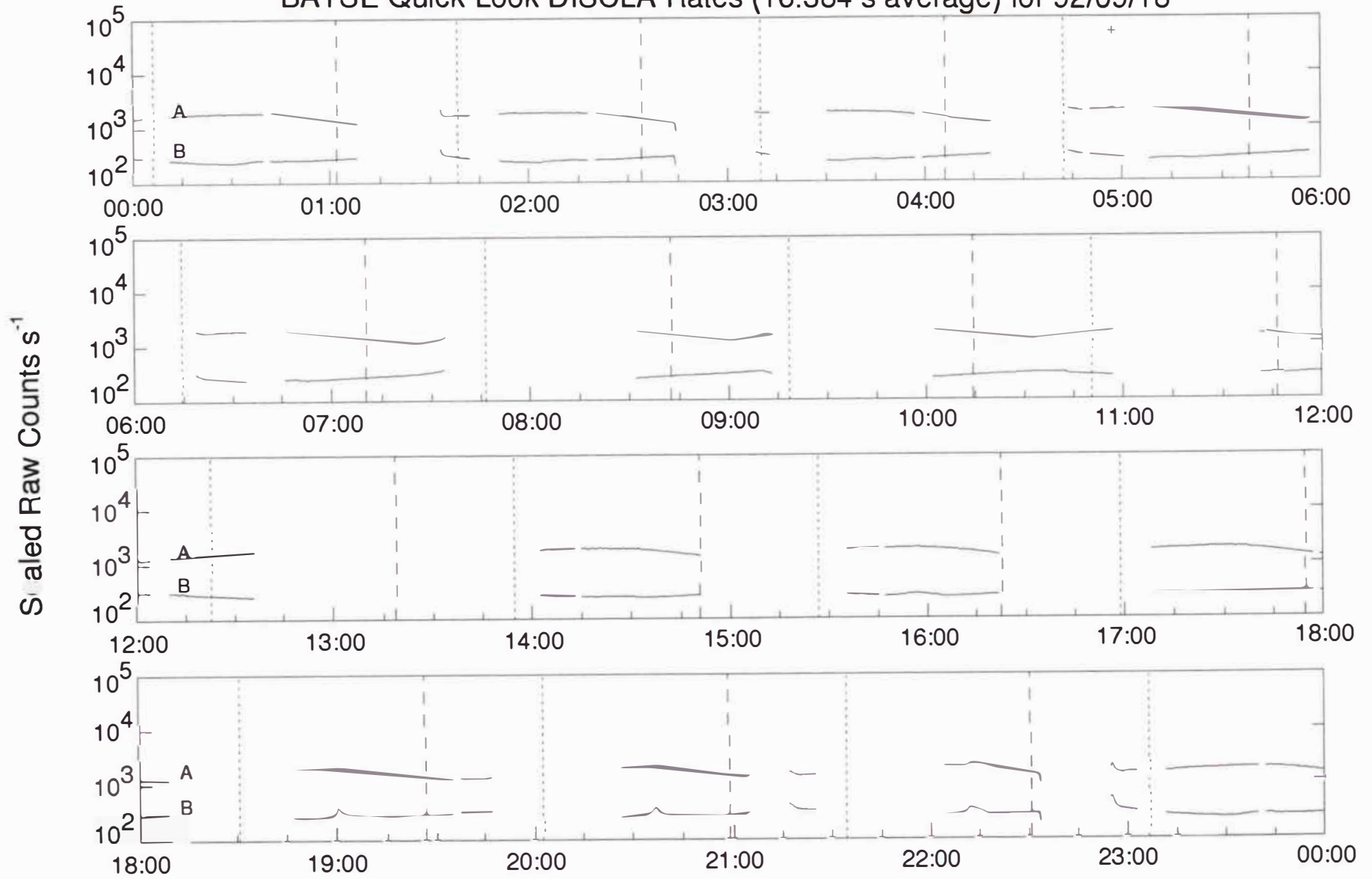
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
FLUCTUATION OF TRANSIENT GRO J0422+32.

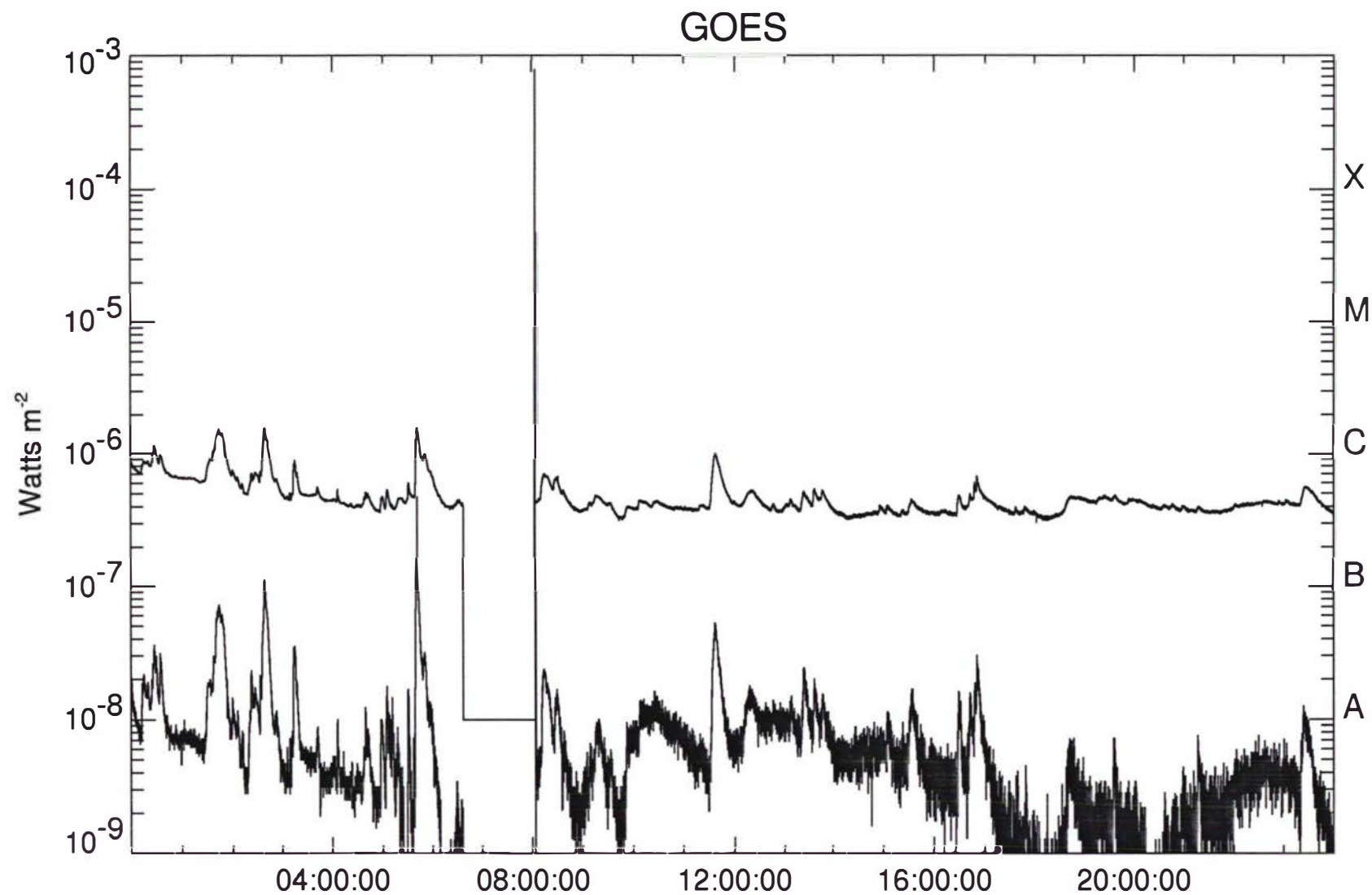
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/18



Current Time: 92/09/29, 0240 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



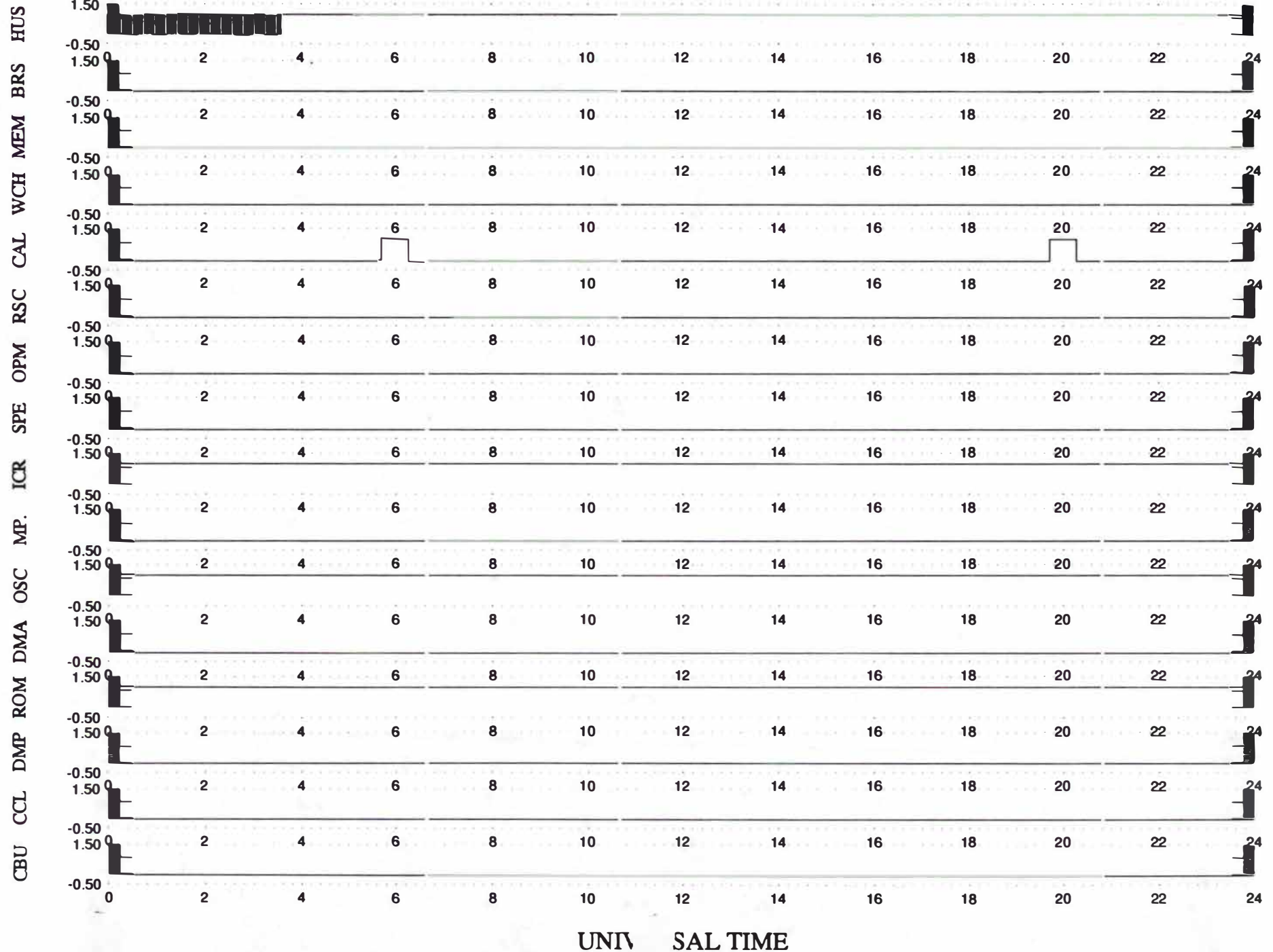
Data Start: 92/09/18, 0000:01

Plot created: 95/05/25, 1930

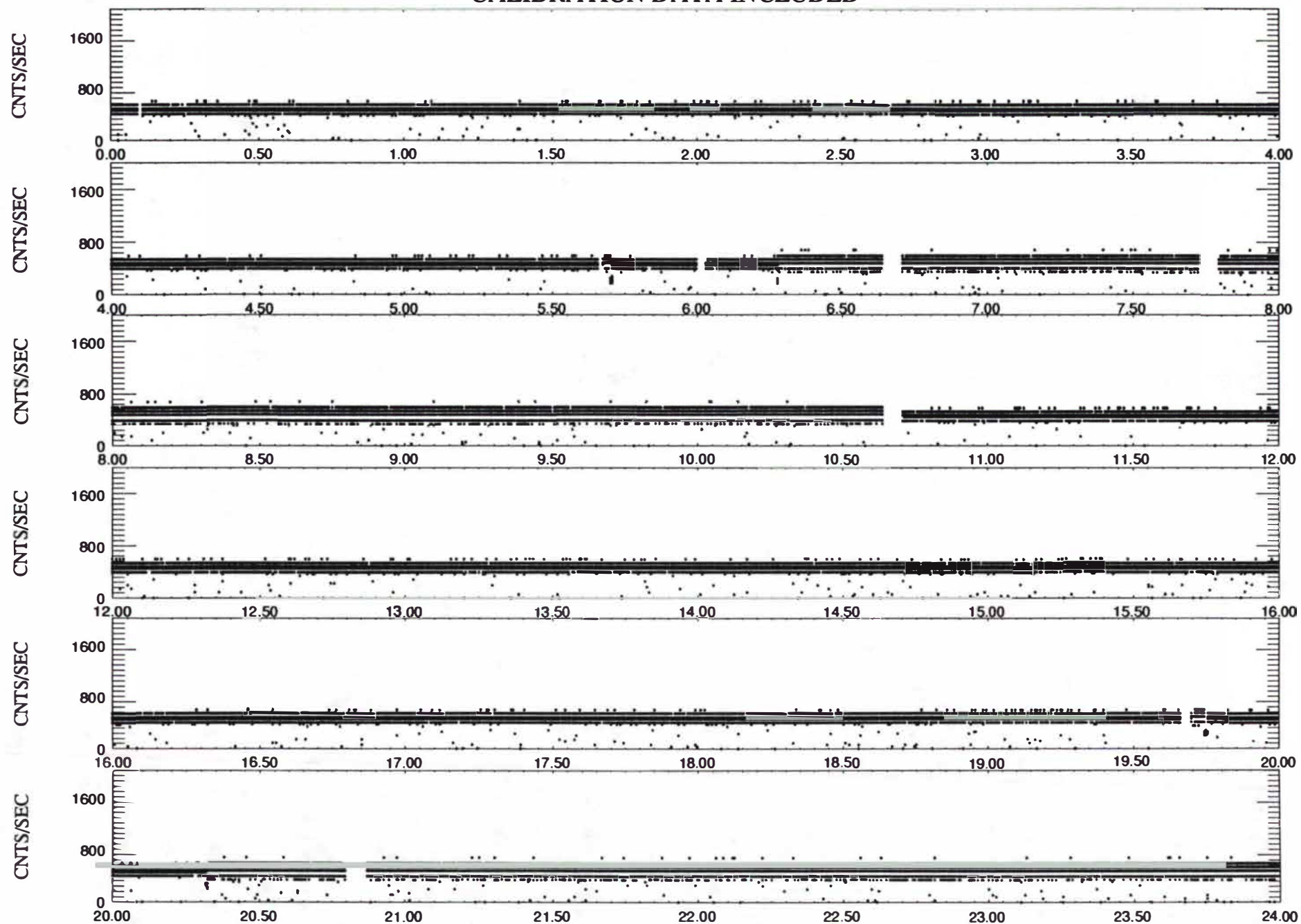
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (9)



CALIBRATION DATA INCLUDED



UNIV AL TIME

From MALLOZZI@ssl.msfc.nasa.gov Mon Sep 21 12:16:57 1992
Date: Mon, 21 Sep 1992 14:18:58 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01944

TIME: TJD=8884 SECONDS=34269

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

TRIGGERED ON RISE OF SOURCE GROJ0422+32

From MALLOZZI@ssl.msfc.nasa.gov Mon Sep 21 12:19:24 1992
Date: Mon, 21 Sep 1992 14:21:27 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01945

TIME: TJD=8884 SECONDS=50844

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

PARTICLE EVENT.

From MALLOZZI@ssl.msfc.nasa.gov Mon Sep 21 12:21:14 1992
Date: Mon, 21 Sep 1992 14:23:16 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01946

TIME: TJD=8884 SECONDS=59127

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT...

From MALLOZZI@ssl.msfc.nasa.gov Mon Sep 21 12:23:18 1992
Date: Mon, 21 Sep 1992 14:25:20 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 01947

TIME: TJD=8884 SECONDS=64794

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
YOU GUESSED IT--ANOTHER PARTICLE EVENT.
ONE ORBIT AFTER TRIGGER #1946.

From khurley@space6.ssl.berkeley.edu Tue Dec 15 16:52:38 1992

Date: Tue, 15 Dec 92 16:46:51

From: khurley@space6.ssl.berkeley.edu

Content-Length: 1193

get Venus crossing times

FAX to Robin

Dear John,

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

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

August	UCT	ECT
10	77700	-----
13	11000	12828 N/O
16	42600	45360 N/O
17	15055	-----
19	40612	-----
22	84184	----- DMSP 8:542 (3 suns)
24	38400	39183 N/O DMSP (2)
27	85245	-----
29	30755	-----
29	63712	-----
30	05800	06318 N/O
30	32310	-----

September	UCT	ECT
1	04311	----- (solar?)
2	03230	----- DMSP (3) ~91243
3		84540 N/O
4	00420	----- Same as previous event
19	28450	----- (solar?) RK well done 4/93
21	00060	-----

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

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

POSITION OF ULYSSES ON 19/ 9/1992 IS:

RA= 160.238 DEC= - .855 DIST= 6.205 AU

POSITION OF VENUS ON 19/ 9/1992 IS ALPHA= 200.963 DELTA= -8.308 DISTANCE=1.47498 AU

DISTANCE BETWEEN TWO OBJECTS AT

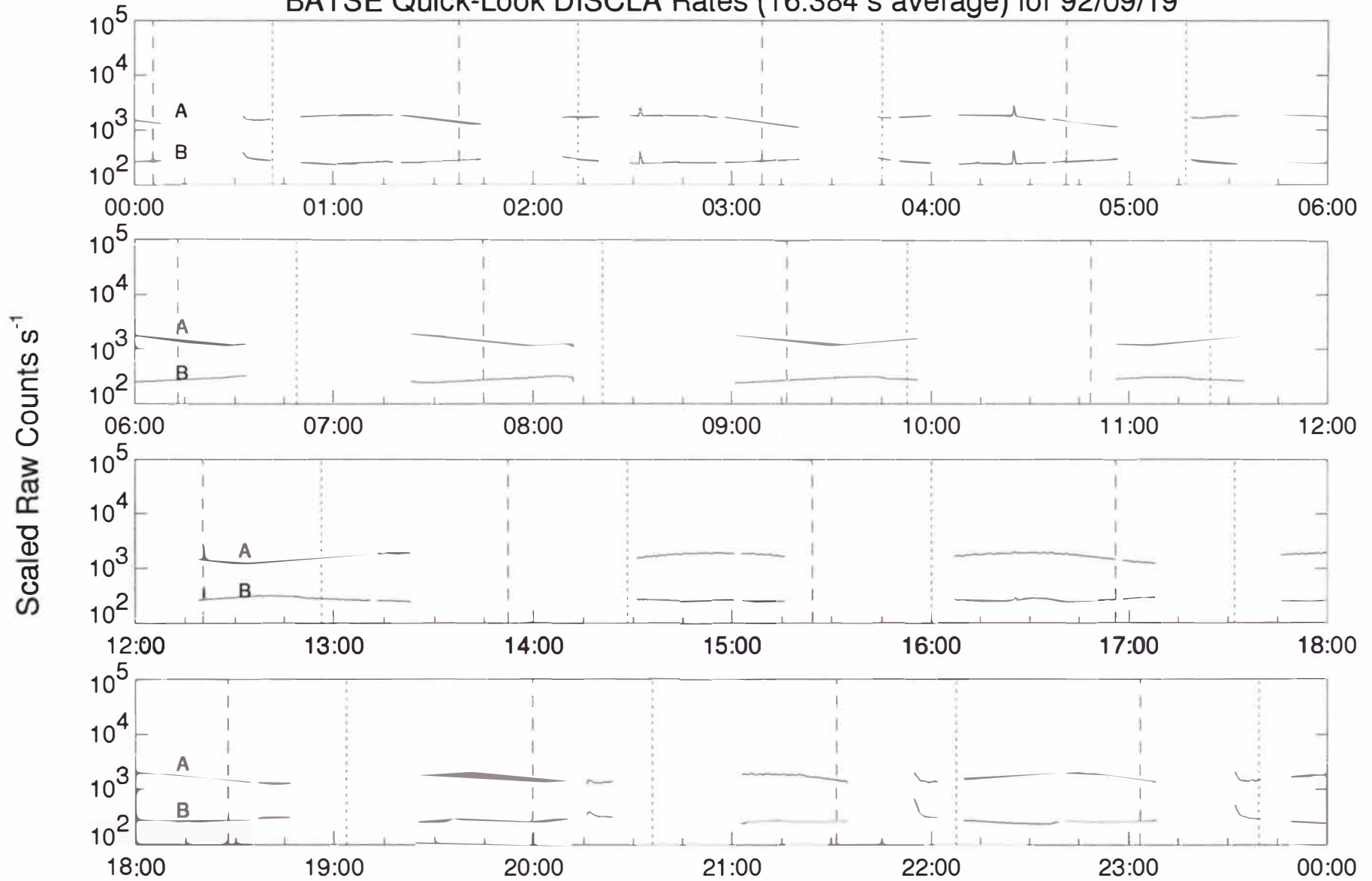
RA= 160.238 DEC= - .855 928244200.00 KM. AND

RA= 200.963 DEC= -8.308 220656700.00 KM. IS

776069100.00 KM., OR 5.188 A.U., OR 2588.69 LIGHT-SECONDS

THE ANGLE BETWEEN THEM IS 41.238 DEGREES

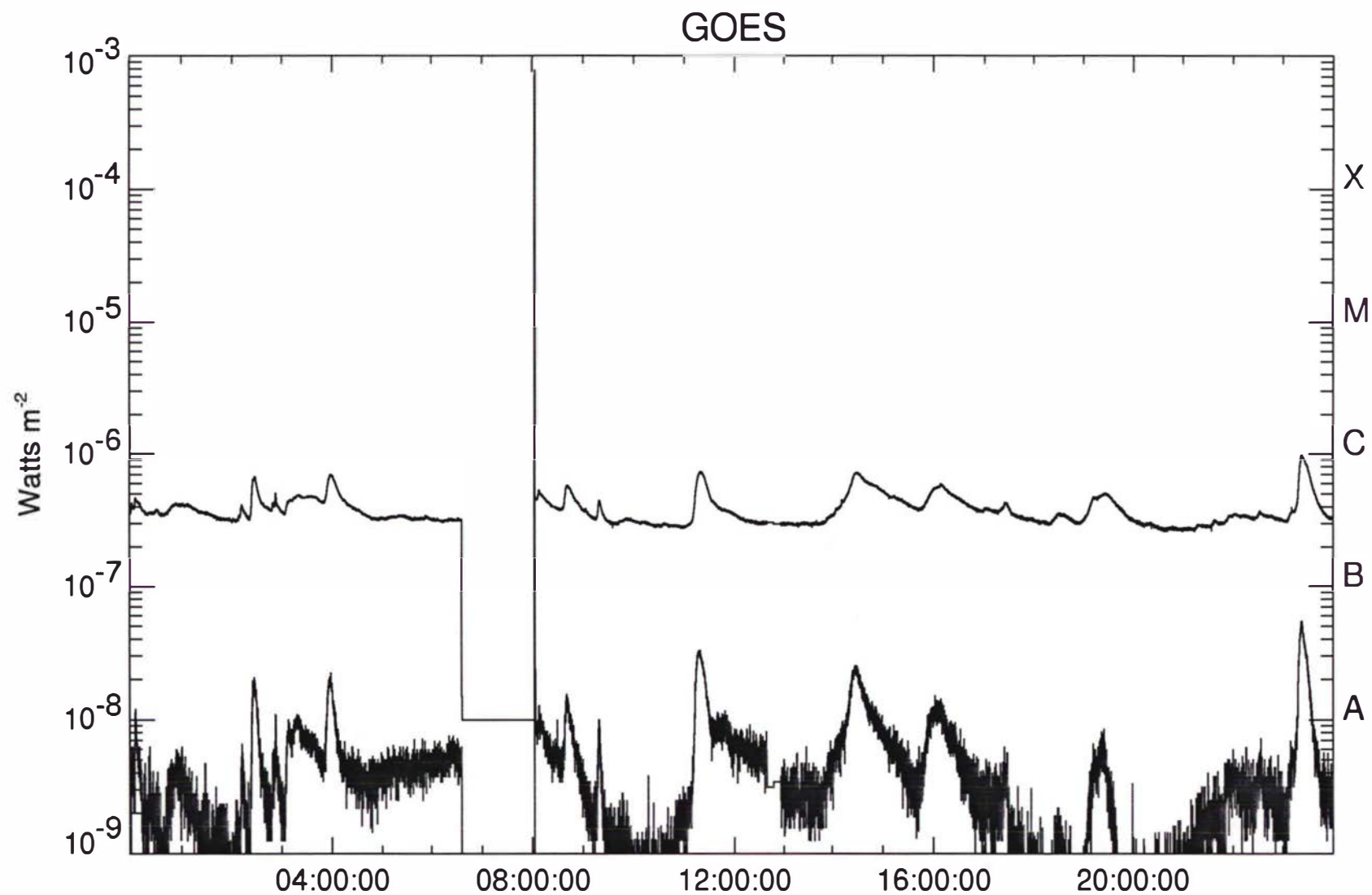
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/19



Current Time: 92/09/29, 0241 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



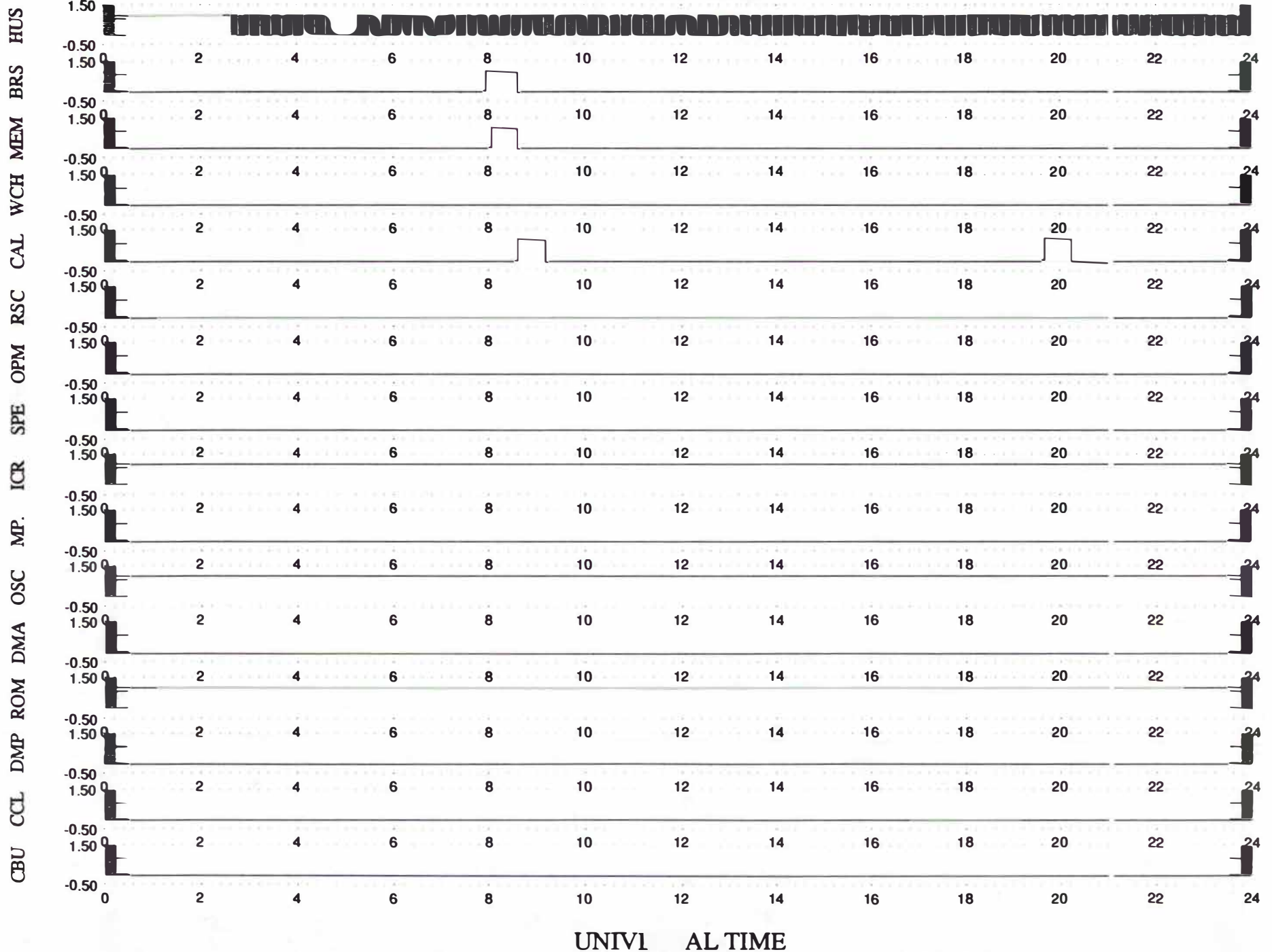
Data Start: 92/09/19, 0000:02

Plot created: 95/05/25, 1933

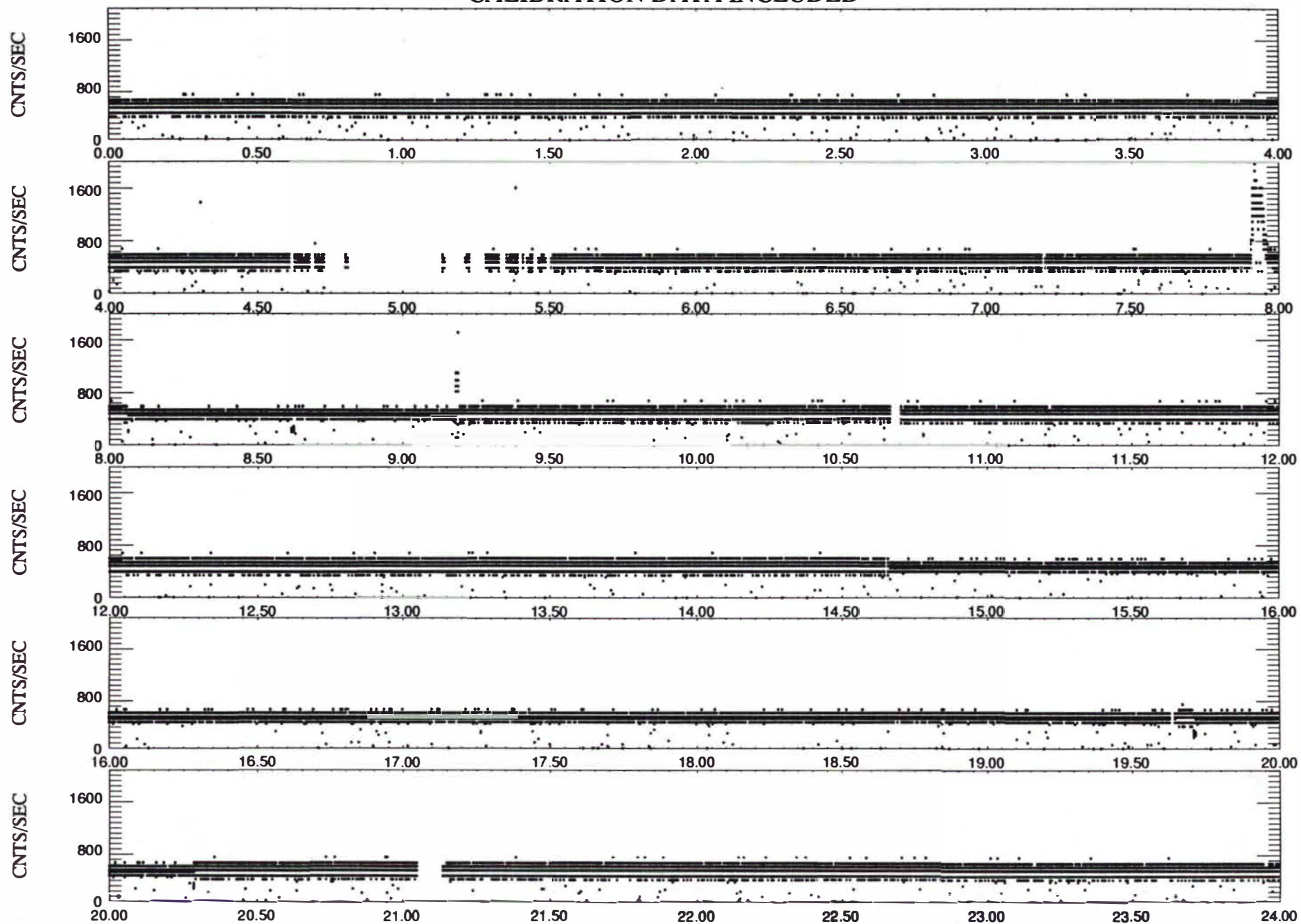
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BURST NUMBER 10

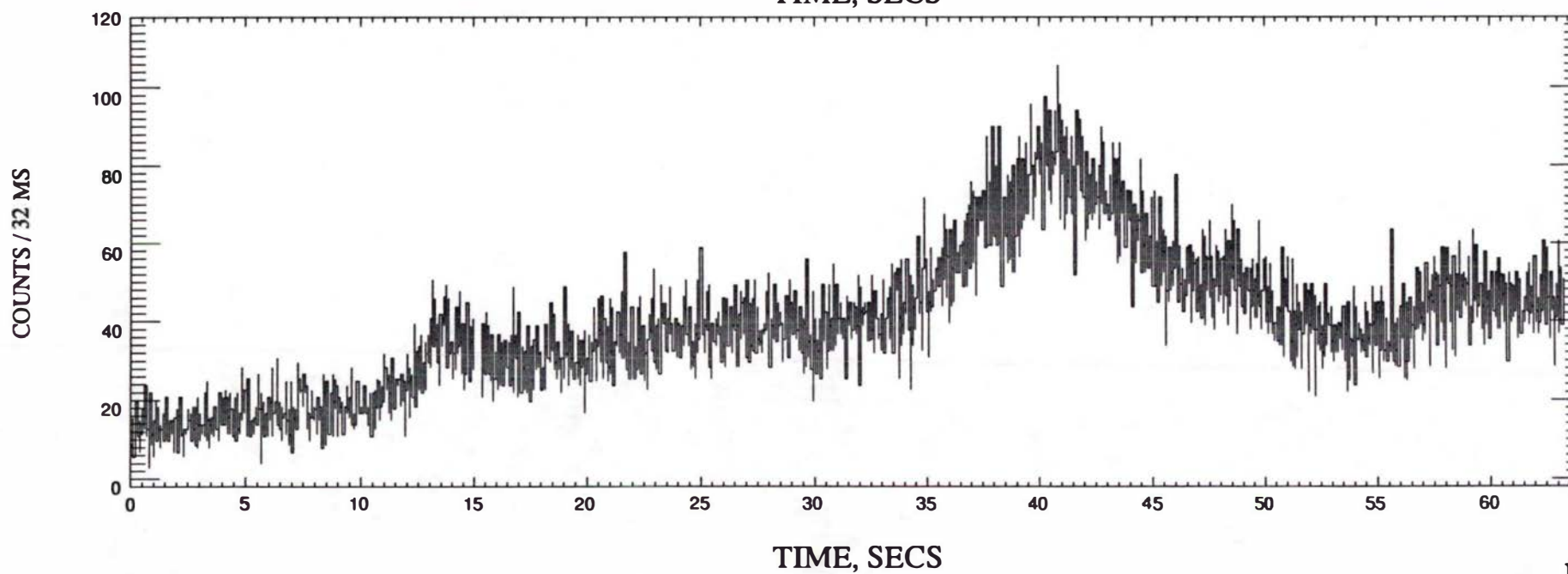
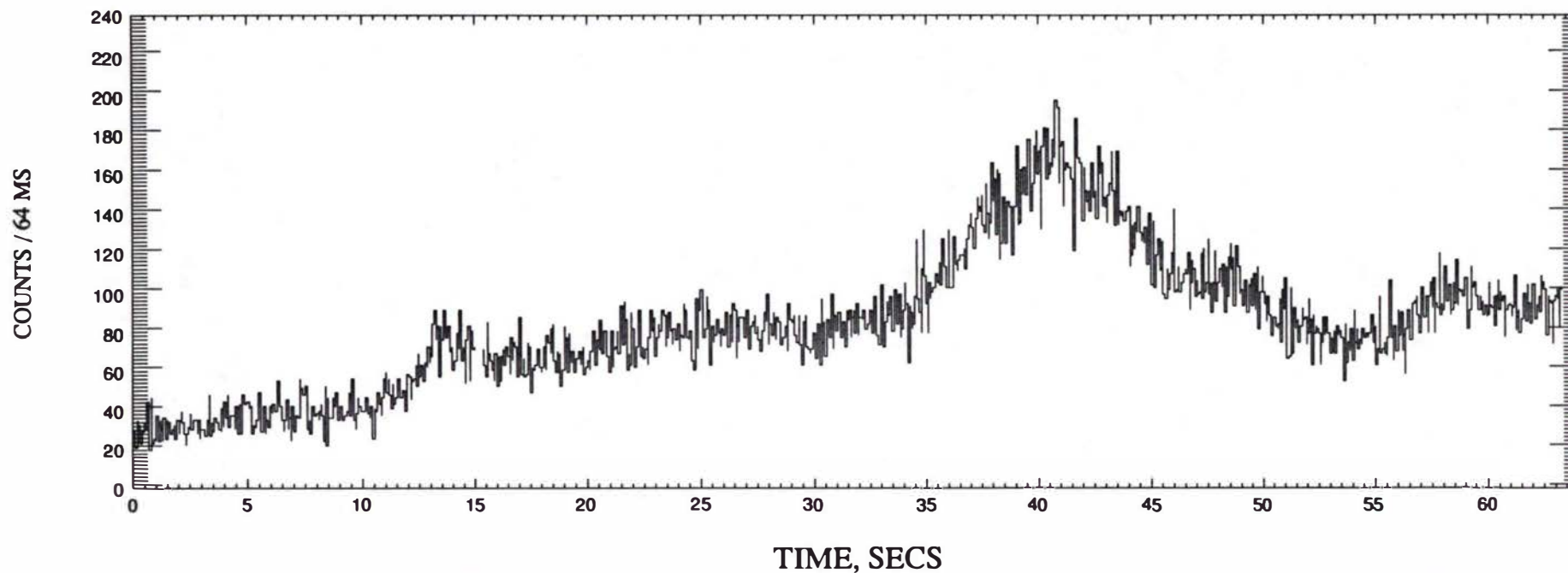


CALIBRATION DATA INCLUDED

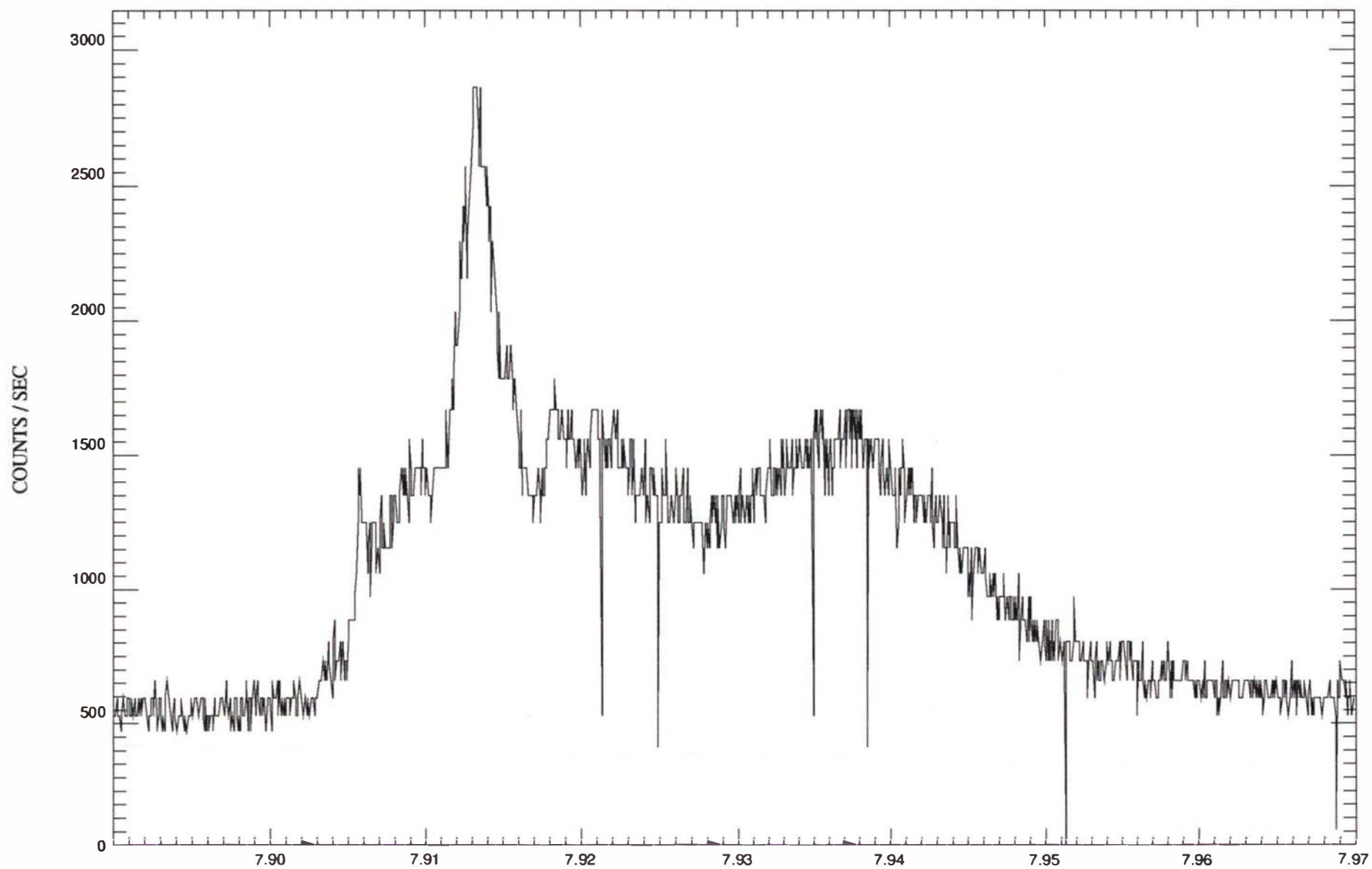


UNIV SAL TIME

Burst Counter 10 at UT= 7.904169404772 h=28455.010 s



CALIBRATION DATA INCLUDED



CATSEARCH PROGRAM

BATSE BURST # 1948
EVENT OF 1992 SEP 20 DAY OF YEAR=264
EVENT CROSSING TIME AT BATSE : 4419. S. OR 01:13:39.2
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 192.100 -26.400
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 20/ 9/ 92 IS:
RA= 160.370 DEC= -.962 DIST= 6.199 AU
BATSE-ULYSSES DISTANCE = 927368904. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=140.28 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2379.39 SECS.
CROSSING TIME AT ULYSSES IS 2040. S. OR 00:33:59.8 +/- 357.06 SECONDS

NO

From BHAT@ssl.msfc.nasa.gov Tue Sep 22 09:57:04 1992
Date: Tue, 22 Sep 1992 11:59:04 -0500 (CDT)
From: BHAT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1457

BATSE BURST TRIGGER
NO.: 1948
TIME: TJD=8885 SECONDS=04419
TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N
SIGNIFICANCE: SIGMA
INTENSITY: COUNTS/CM2
LOCATION: ZENITH=081.8 AZIMUTH=304.7 ERROR= DEGREES

COMMENTS:
THIS IS AN UNUSUAL WEAK AND SOFT BURST WHERE THE TIME HISTORY CONSISTS OF 3
PEAKS AND SHOW NO SIGNAL ABOVE 300 KEV. WHILE THE FIRST 2 PEAKS LOCATE TO ONE
SOURCE, THE THIRD PEAK IS DUE TO A SECOND UNTRIGGERED BURST WHICH LOCATES AT
GRO ZENITH =25.8 AND AZIMUTH = 318.0. THIS IS SEEN FOR THE FIRST TIME BY BATSE.

NO U

CATSEARCH PROGRAM

BATSE BURST # 1948

EVENT OF 1992 SEP 20 DAY OF YEAR=264

EVENT CROSSING TIME AT BATSE : 4419. S. OR 01:13:39.2

COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)

BURST ARRIVAL DIRECTION: 150.570 20.010

BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND

POSITION OF ULYSSES ON 20/ 9/ 92 IS:

RA= 160.370 DEC= -0.962 DIST= 6.199 AU

BATSE-ULYSSES DISTANCE = 927368904. KM.

ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=156.93 DEG.

LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2846.04 SECS.

CROSSING TIME AT ULYSSES IS 1573. S. OR 00:26:13.1 +/- 217.20 SECONDS

9 / 11 / 95

ULYSSES RT

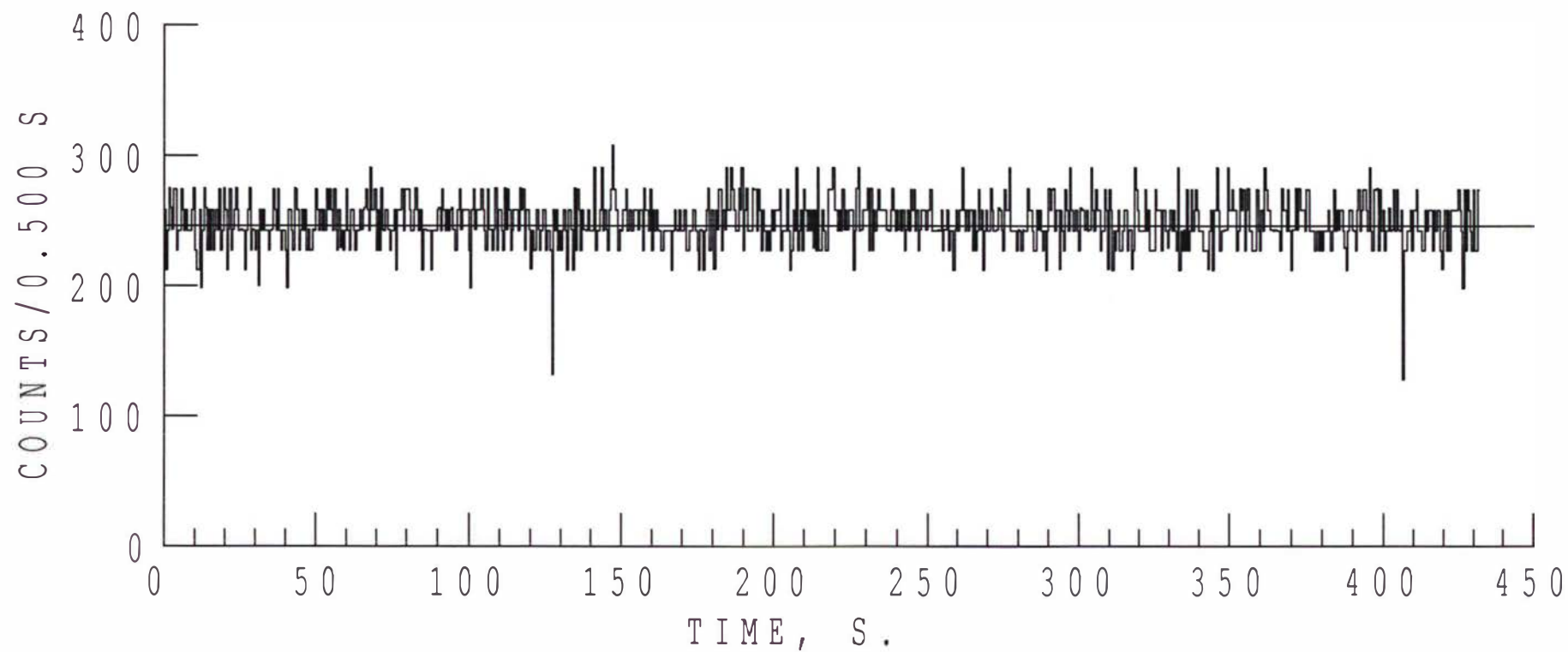
20 / 9 / 92 1368.207 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From BHAT@ssl.msfc.nasa.gov Mon Sep 21 13:09:31 1992
Date: Mon, 21 Sep 1992 15:11:02 -0500 (CDT)
From: BHAT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 1949

TIME: TJD=8885 SECONDS=42643

TYPE: J422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=61.6 AZIMUTH=165.9 ERROR= DEGREES

COMMENTS:

GRO J0422+32 TRANSIENT SOURCE FLUCTUATION. THE LIGHT CURVE CONSISTS OF TWO
DISTINCT PEAKS SEPARATED BY ABOUT 150 SEC, BOTH OF WHICH LOCATE TO THE
TRANSIENT SOURCE.

From BHAT@ssl.msfc.nasa.gov Mon Sep 21 13:38:11 1992
Date: Mon, 21 Sep 1992 15:40:13 -0500 (CDT)
From: BHAT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 1950

TIME: TJD=8885 SECONDS=53063

TYPE: ELE.PRE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

ELECTRON PRECIPITATION EVENT.

From BHAT@ssl.msfc.nasa.gov Mon Sep 21 13:41:28 1992
Date: Mon, 21 Sep 1992 15:43:30 -0500 (CDT)
From: BHAT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 1951

TIME: TJD=8885 SECONDS=58888

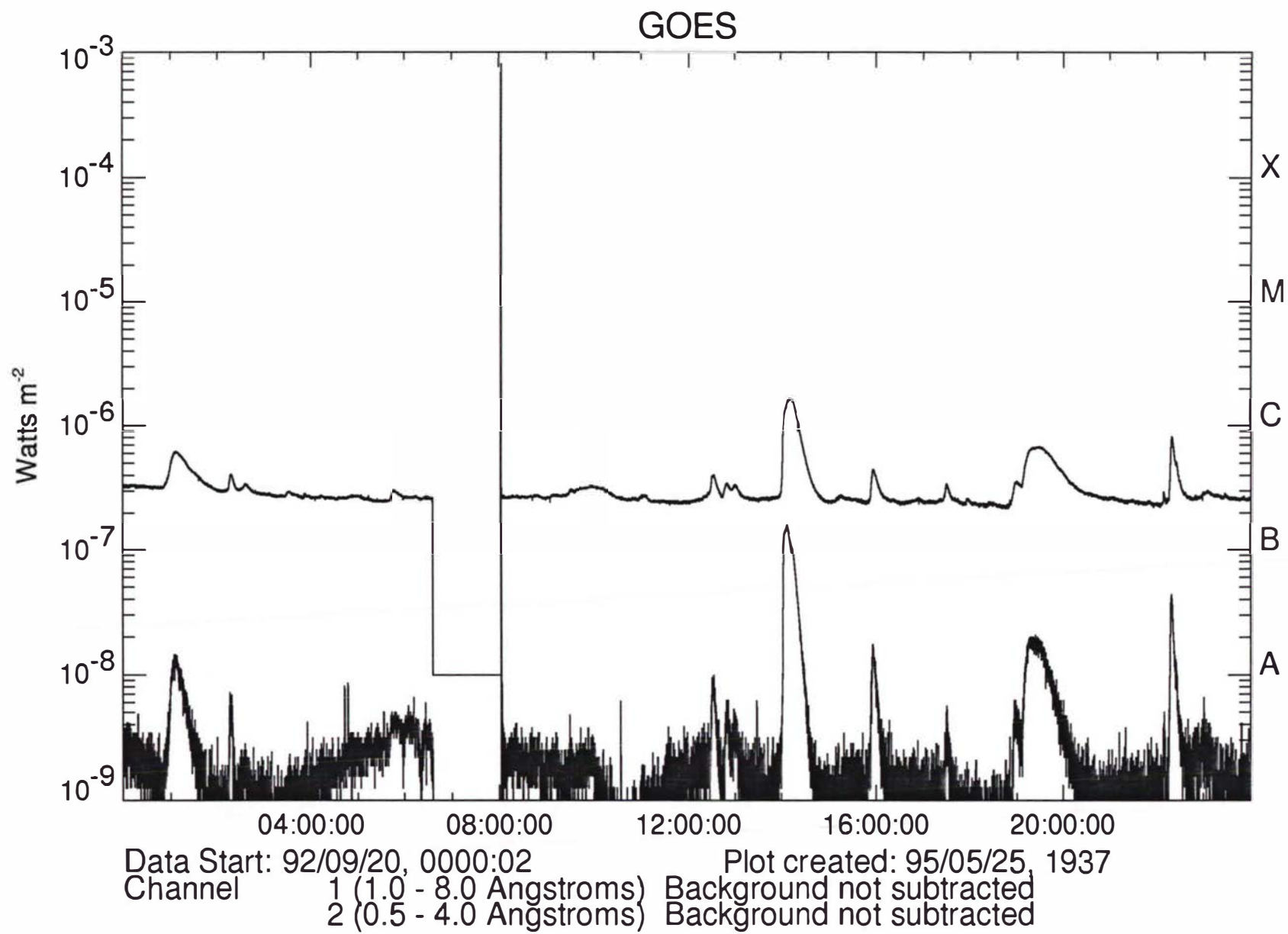
TYPE: ELE.PRE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

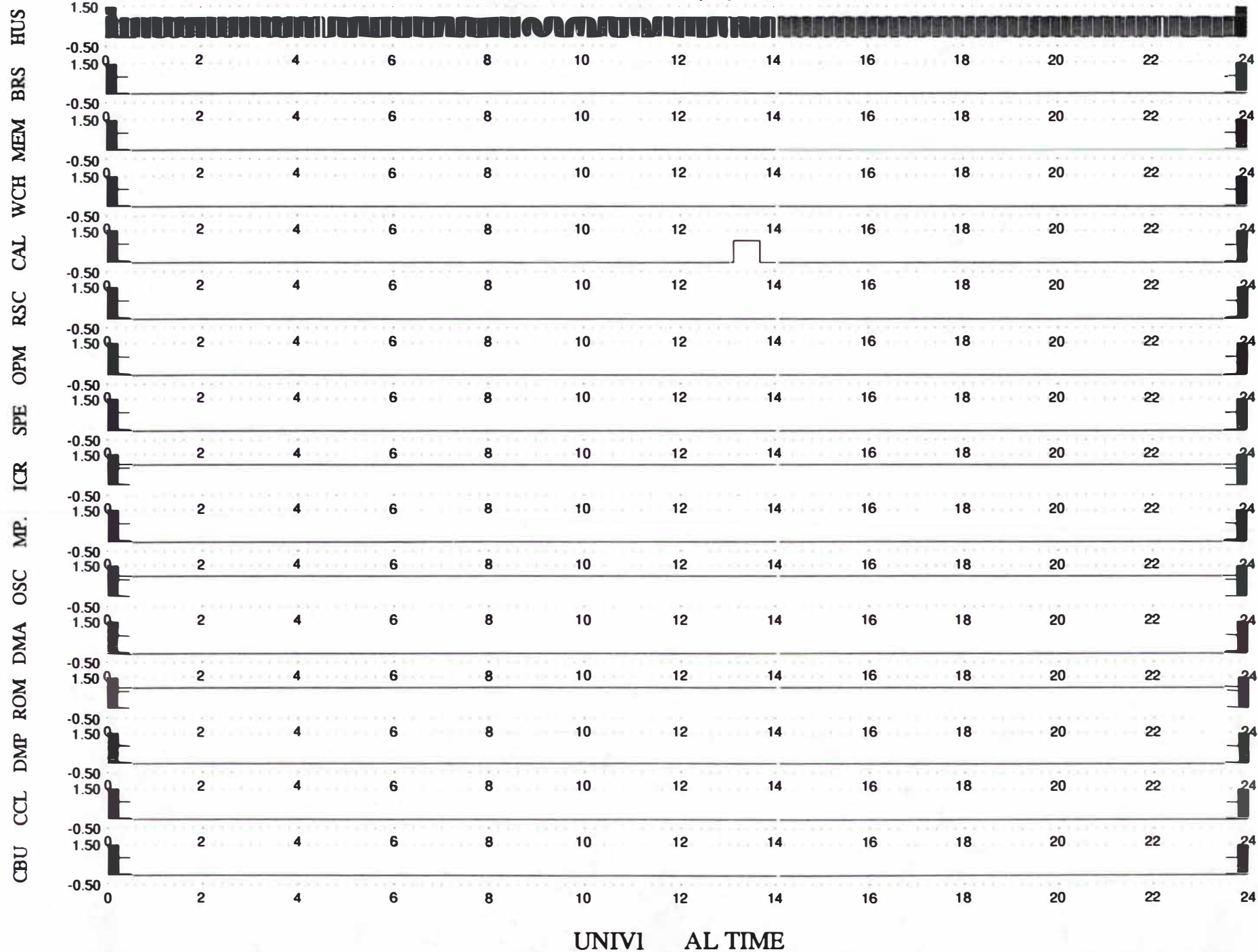
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

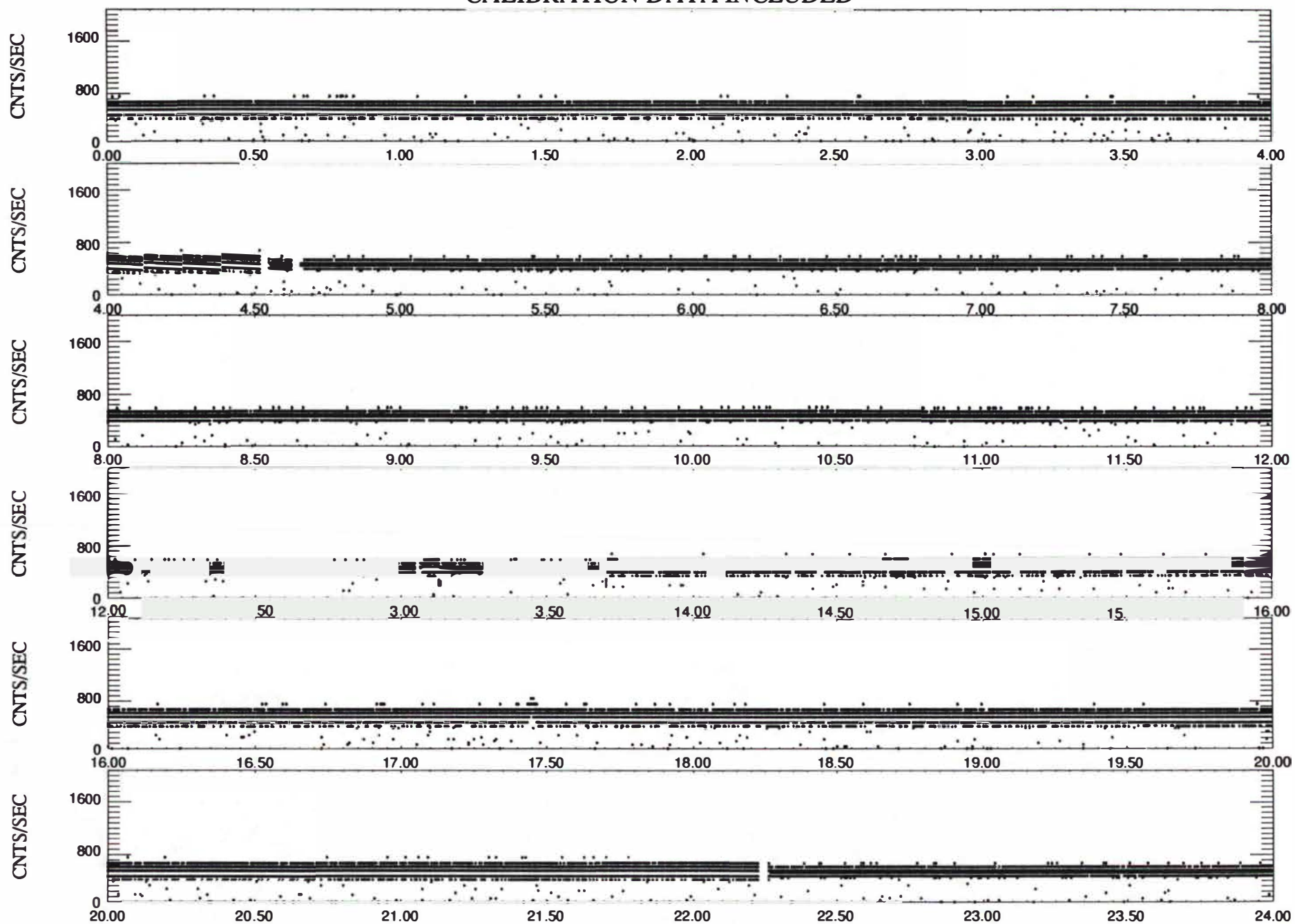
COMMENTS:
ELECTRON PRECIPITATION EVENT.



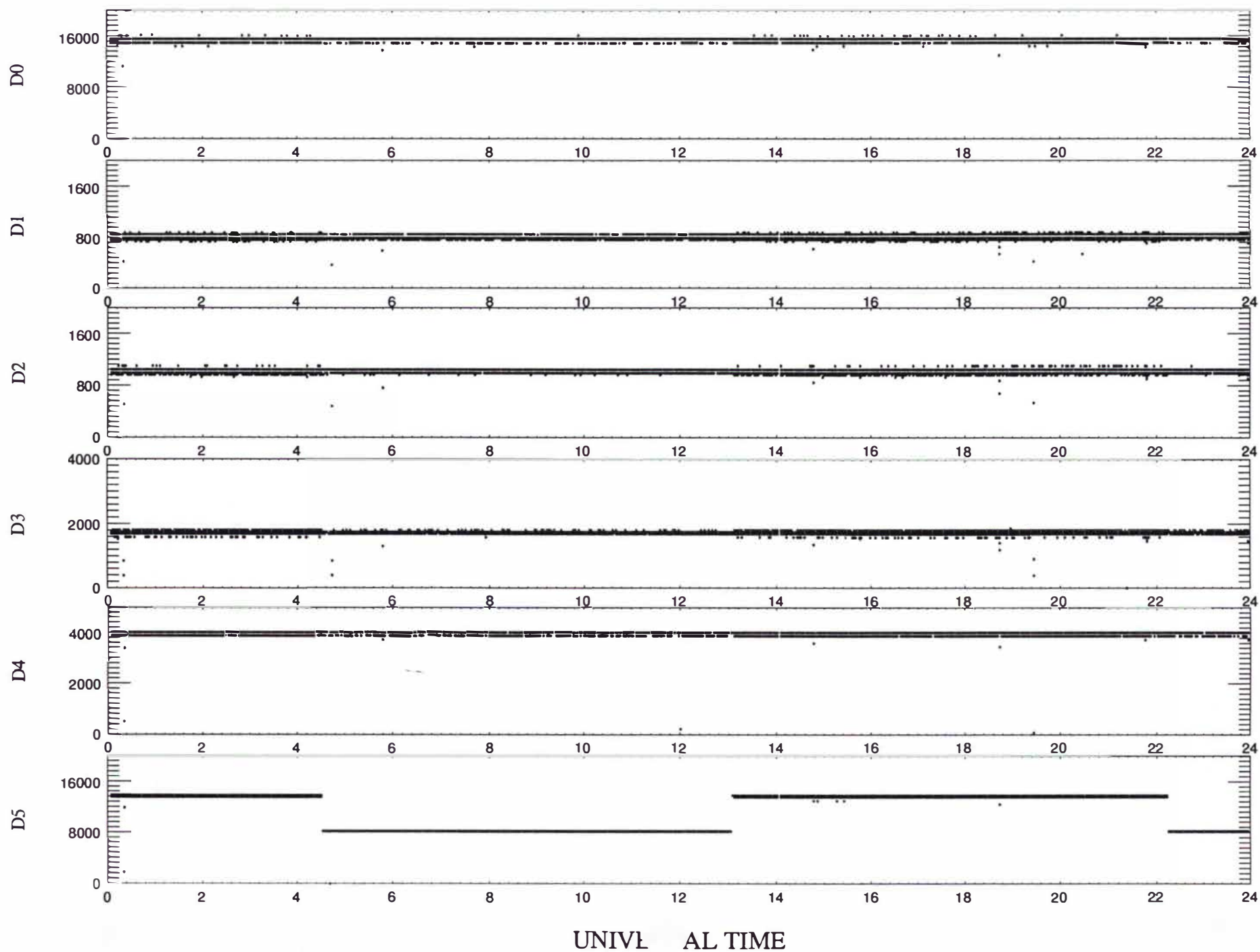
NO BURST (10)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From khurley@space6.ssl.berkeley.edu Tue Dec 15 16:52:38 1992

Date: Tue, 15 Dec 92 16:46:51

From: khurley@space6.ssl.berkeley.edu

Content-Length: 1193

*get Venus crossing times
Fax to Robin*

Dear John,

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

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

Sept Mar 2

August	UCT	ECT
10	77700	-----
13	11000	12828 <i>N/O</i>
16	42600	45360 <i>N/O</i>
17	15055	-----
19	40612	-----
22	84184	----- <i>DMSP 8:542 (3 source)</i>
24	38400	39183 <i>N/O</i> <i>DMSP (2)</i>
27	85245	-----
29	30755	-----
29	63712	-----
30	05800	06318 <i>N/O</i>
30	32310	-----

September	UCT	ECT
1	04311	----- <i>(solar?)</i>
2	03230	----- <i>DMSP (3) 091243</i>
3		84540 <i>N/O</i>
4	00420	----- <i>Same as previous event</i>
19	28450	----- <i>(solar?)</i>
21	00060	----- <i>KK will check 4/93</i>

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

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

POSITION OF ULYSSES ON 21/ 9/1992 IS:

RA= 160.501 DEC= -1.069 DIST= 6.193 AU

POSITION OF VENUS ON 21/ 9/1992 IS ALPHA= 203.234 DELTA= -9.291 DISTANCE=1.46511

THE DISTANCE BETWEEN TWO OBJECTS AT

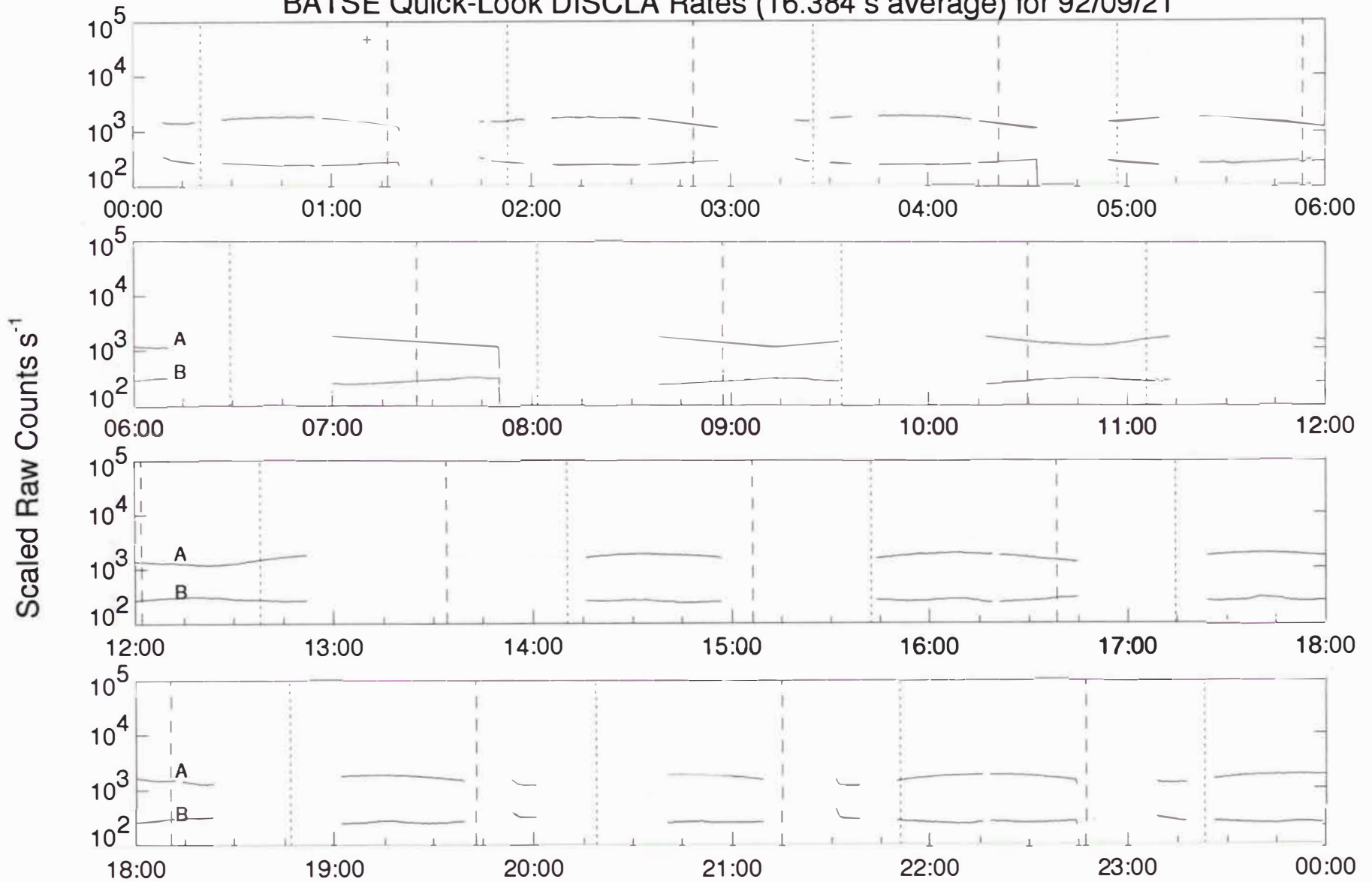
160.501 -1.069 926457900.00 KM. AND

203.234 -9.291 219180500.00 KM. IS

381535300.00 KM., OR 5.224 A.U., OR 2606.92 LIGHT-SECONDS

THE ANGLE BETWEEN THEM IS 43.300 DEGREES

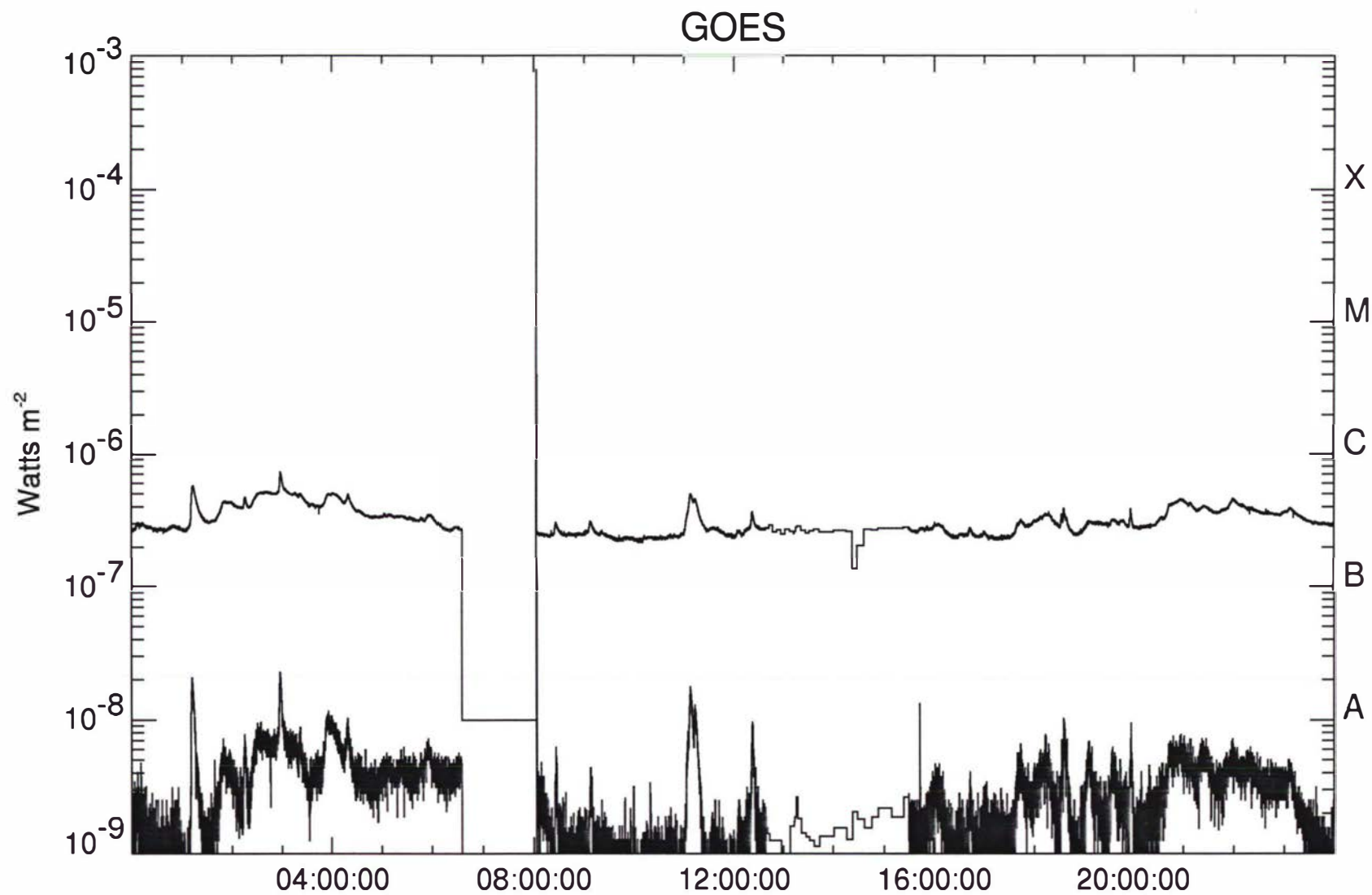
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/21



Current Time: 92/09/29, 0243 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



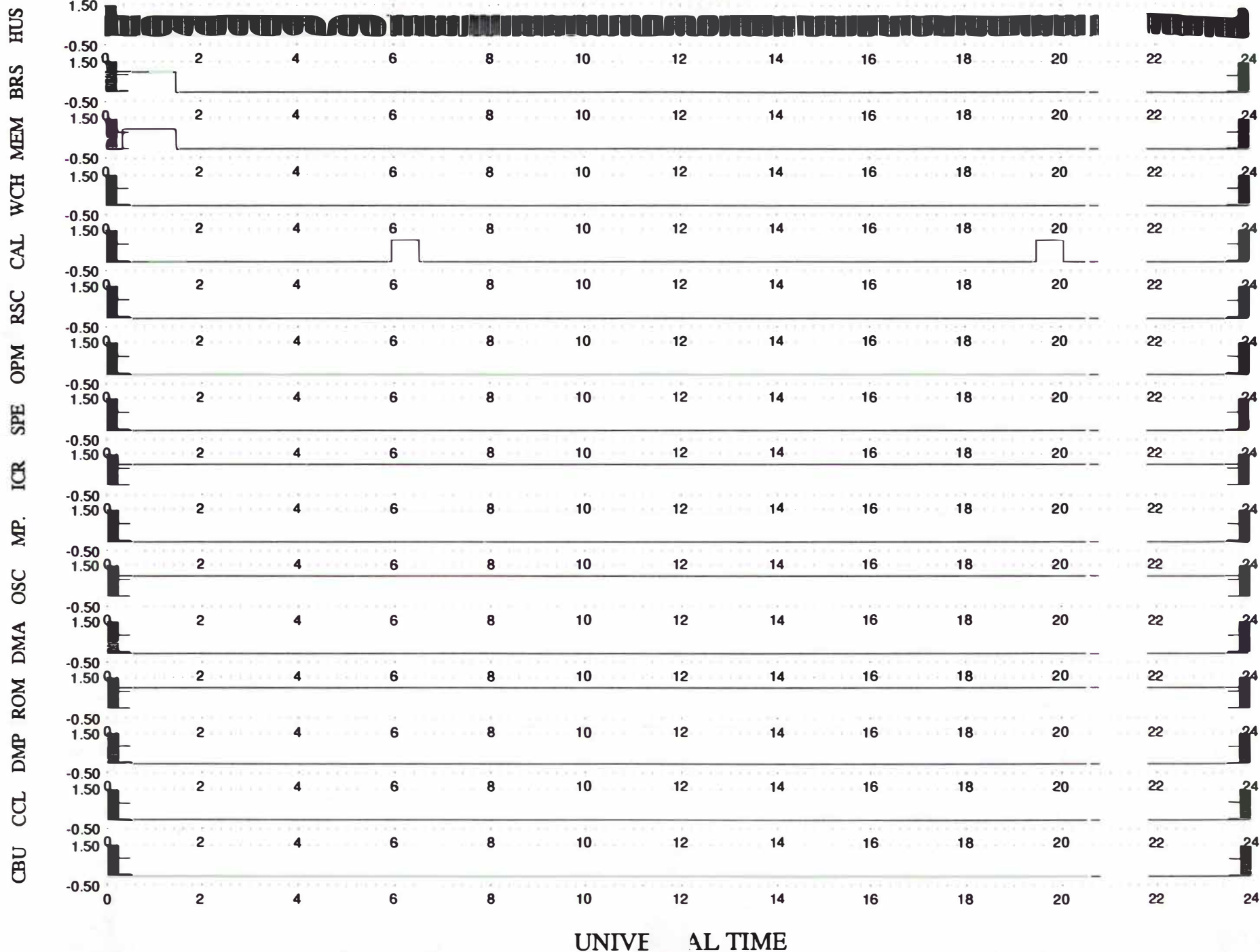
Data Start: 92/09/21, 0000:00

Plot created: 95/05/25, 1940

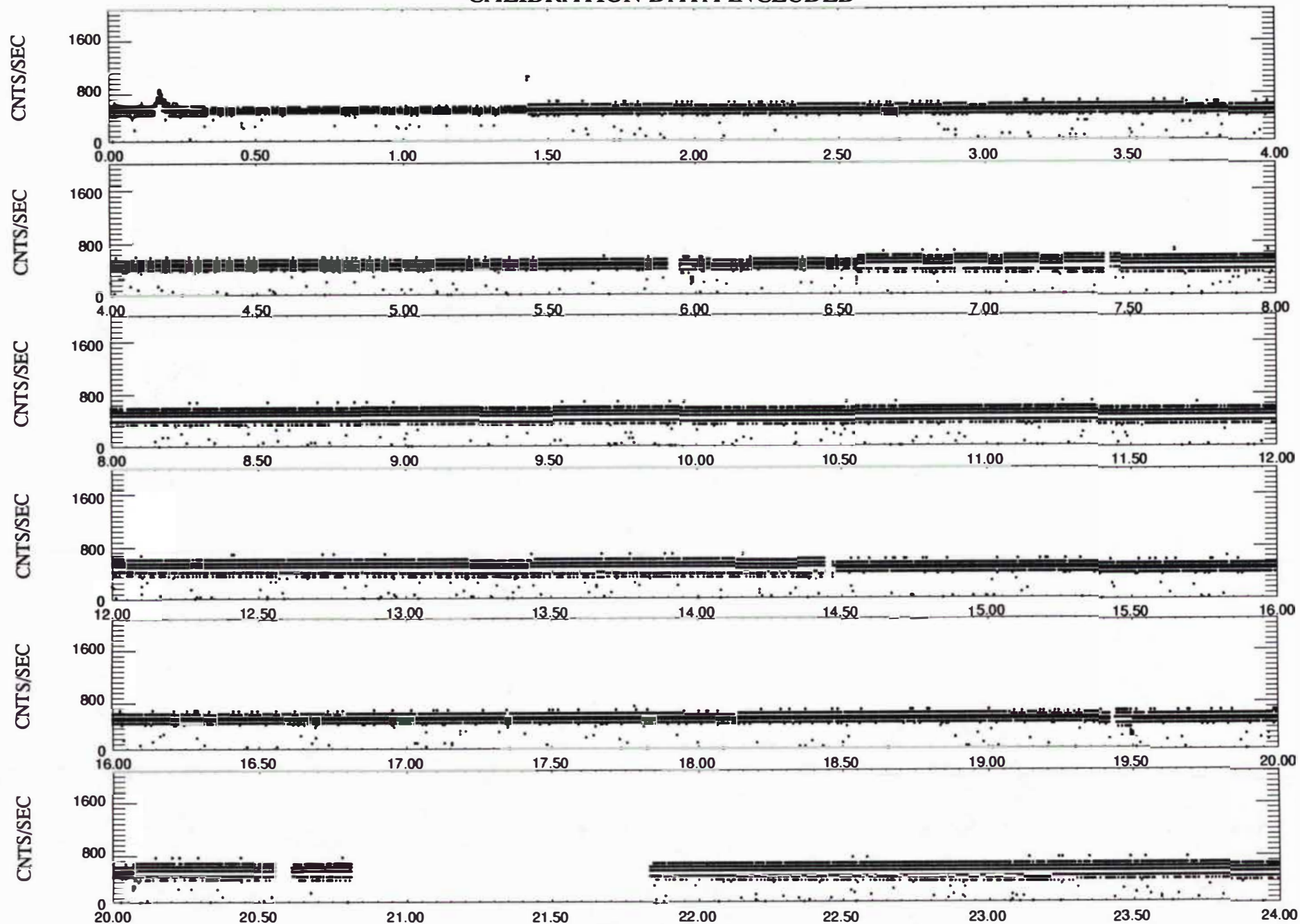
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BURST NUMBER 11

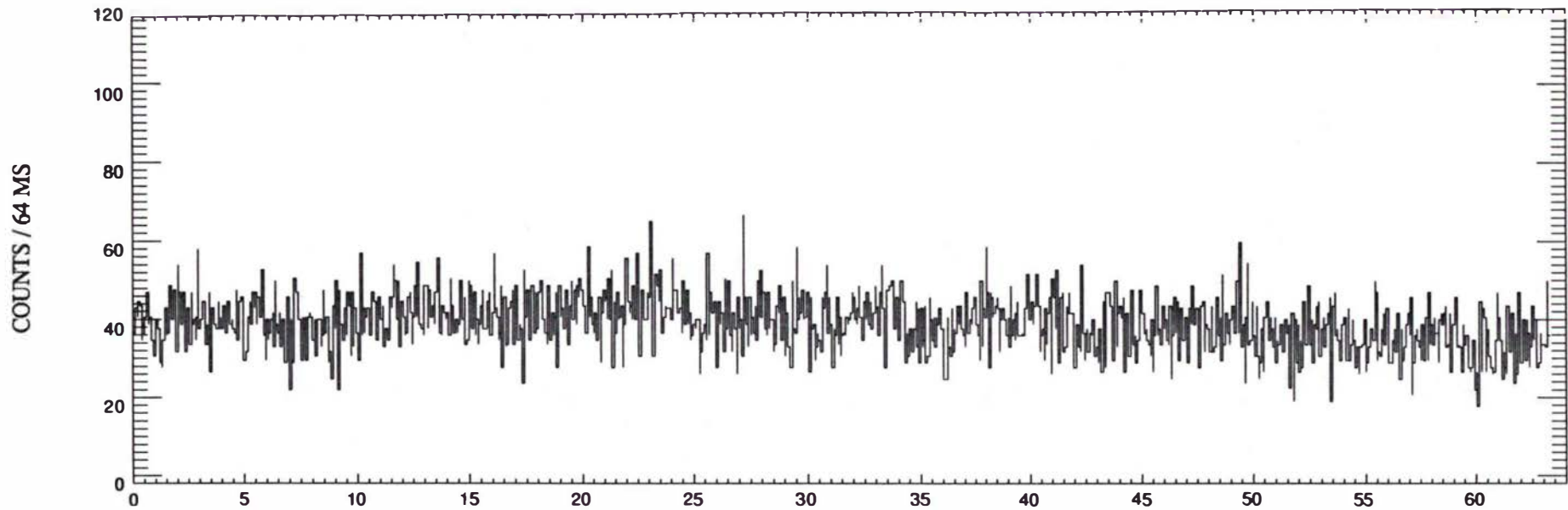


CALIBRATION DATA INCLUDED

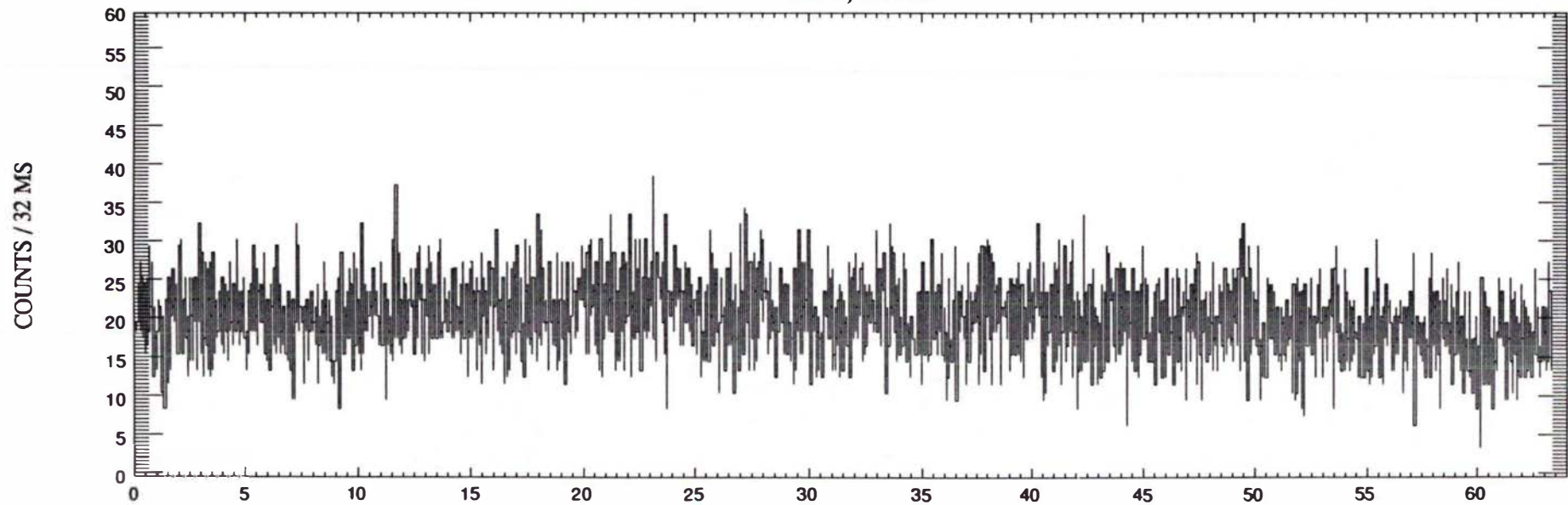


UNIV SAL TIME

Burst Counter 11 at UT= 0.166712748210 h= 600.166 s

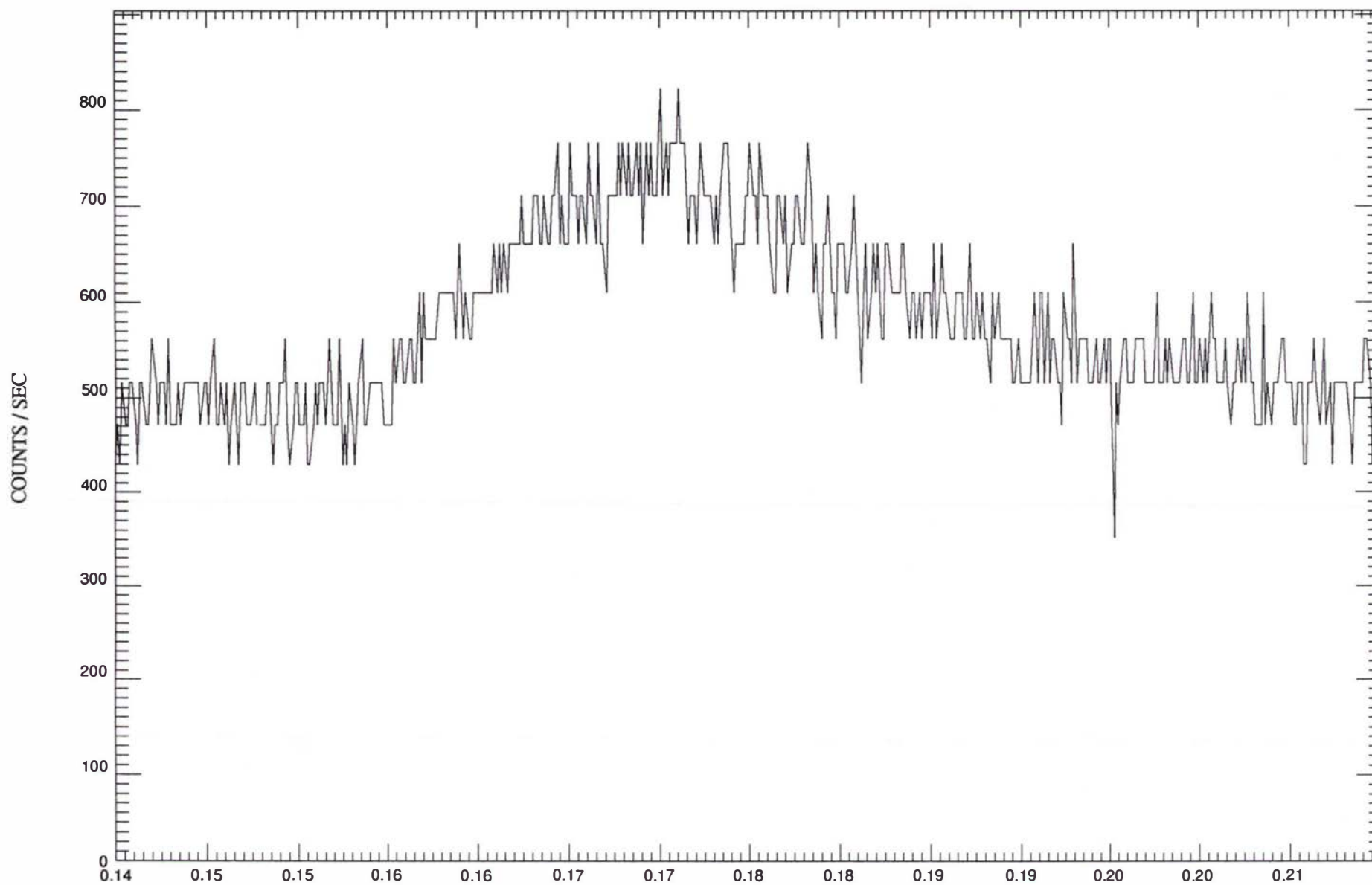


TIME, SECS



TIME, SECS

CALIBRATION DATA INCLUDED



From MEEGAN@ssl.msfc.nasa.gov Thu Sep 24 09:01:42 1992
Date: Thu, 24 Sep 1992 11:03:46 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01952

Sep 23
TIME: TJD=8888 SECONDS=64969

TYPE: 0422+32

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

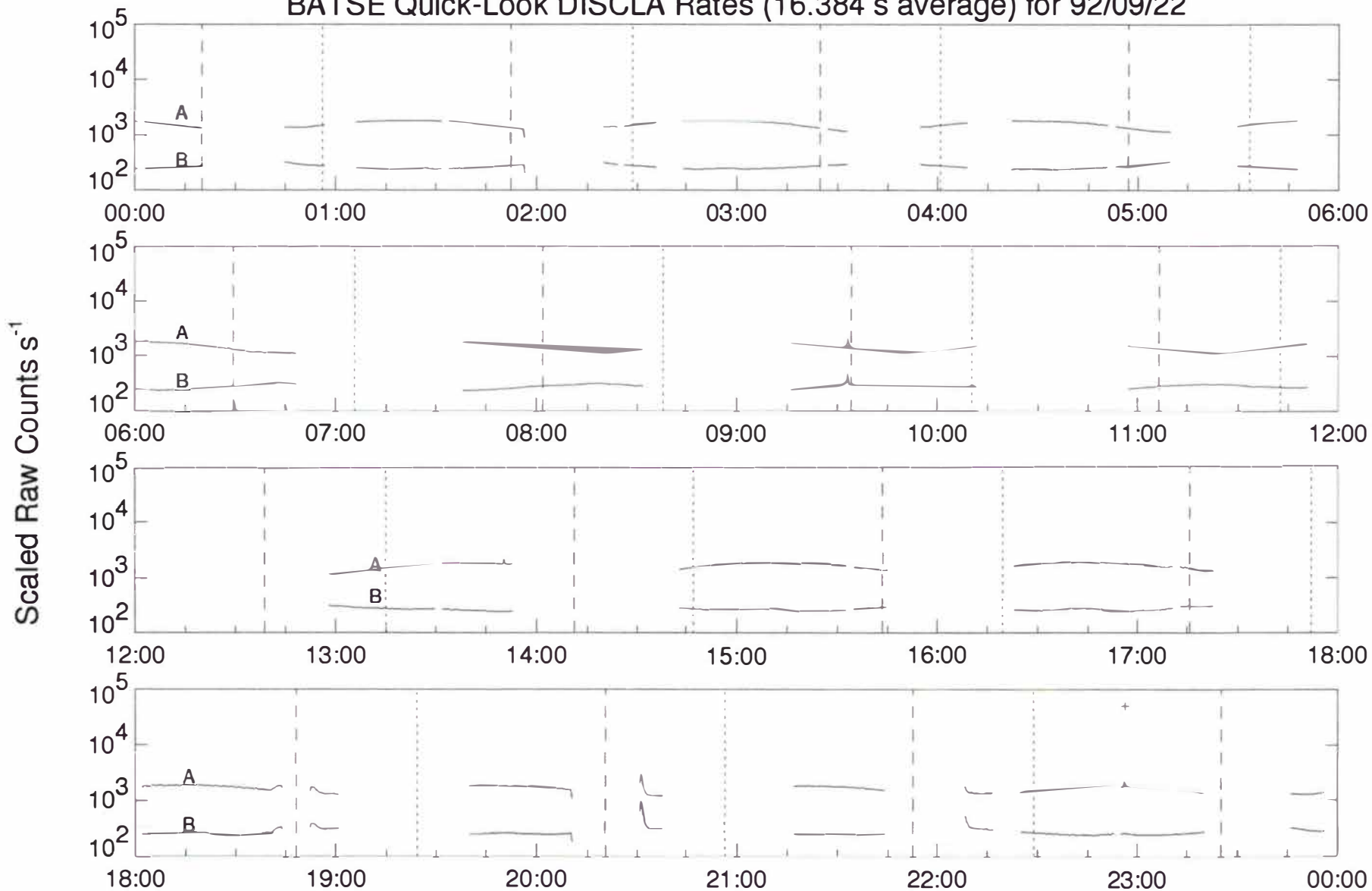
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

FLUCTUATION OF GRO J0422+32.

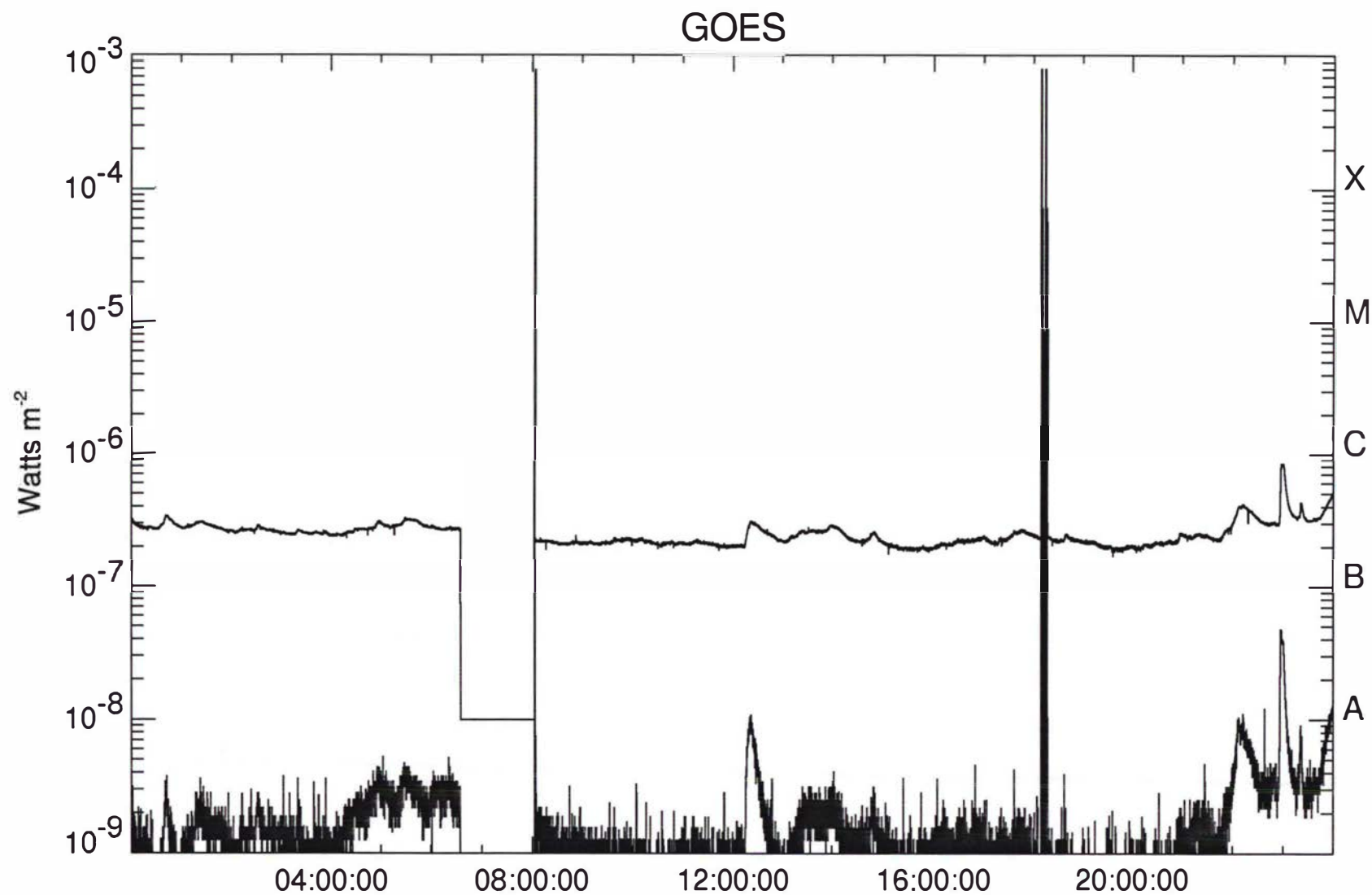
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/22



Current Time: 92/09/29, 0244 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



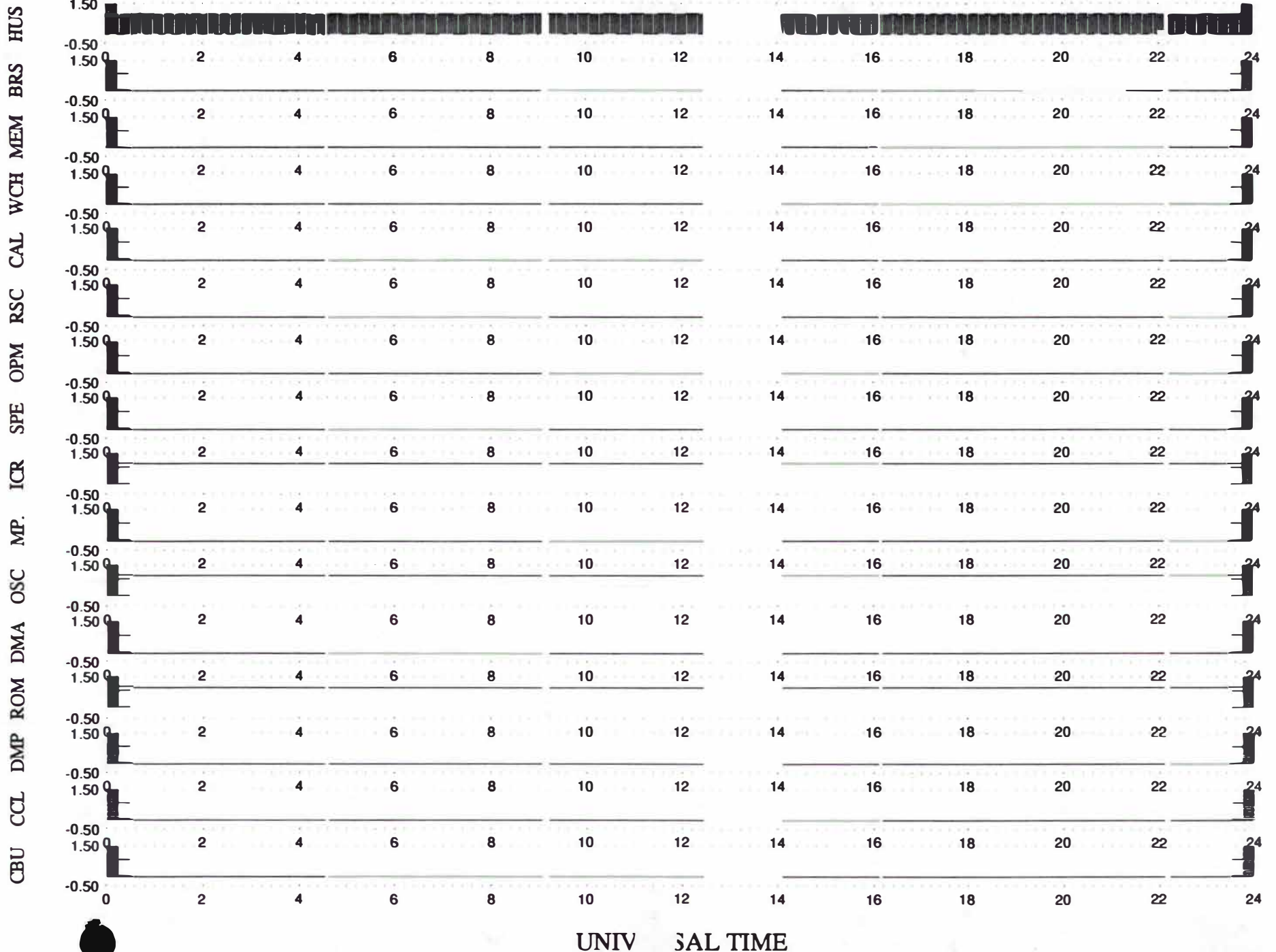
Data Start: 92/09/22, 0000:06

Plot created: 95/05/25, 1943

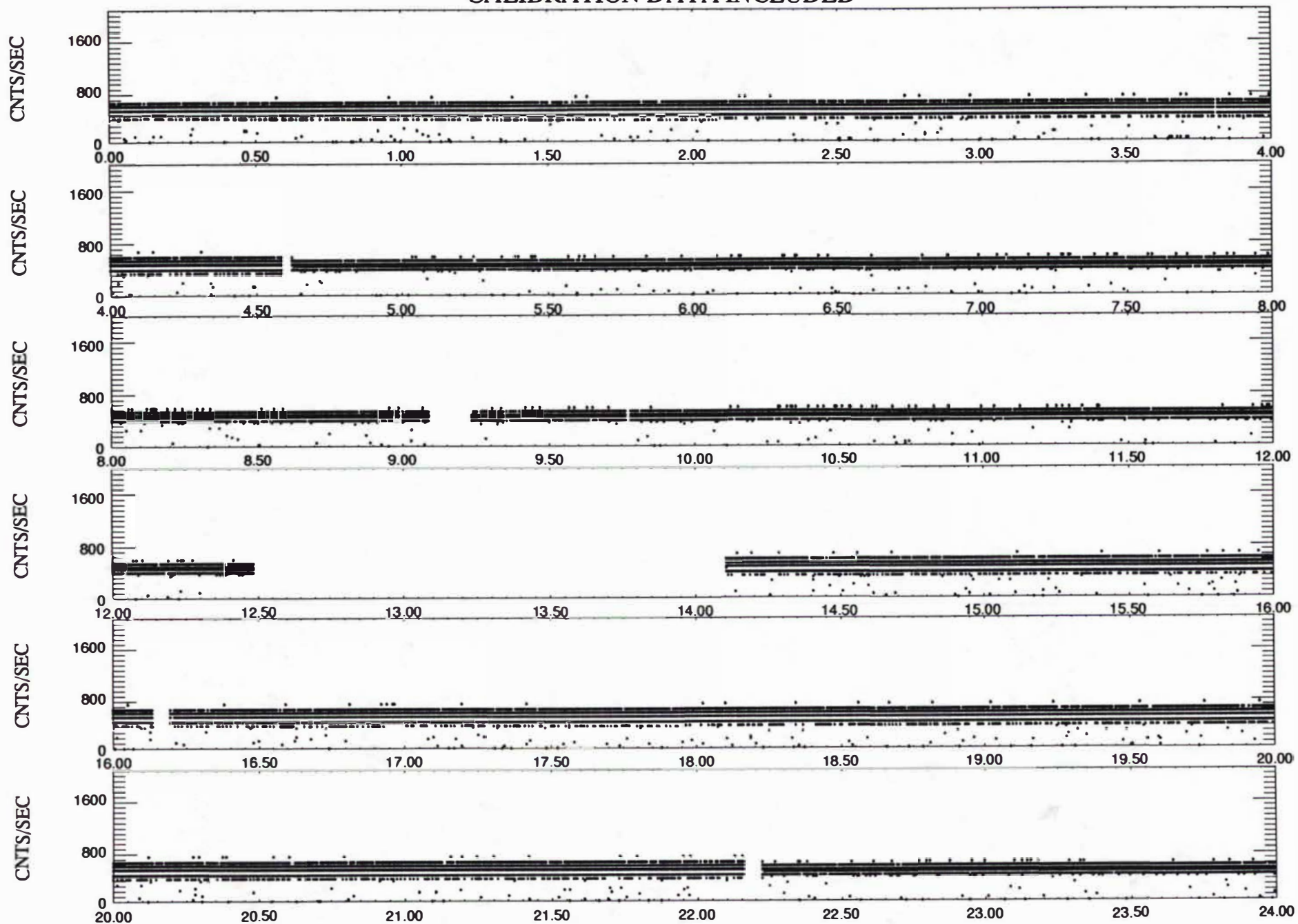
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (11)



CALIBRATION DATA INCLUDED



UNIV CAL TIME

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

May 5 14:26 1993 standard input Page 1

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

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

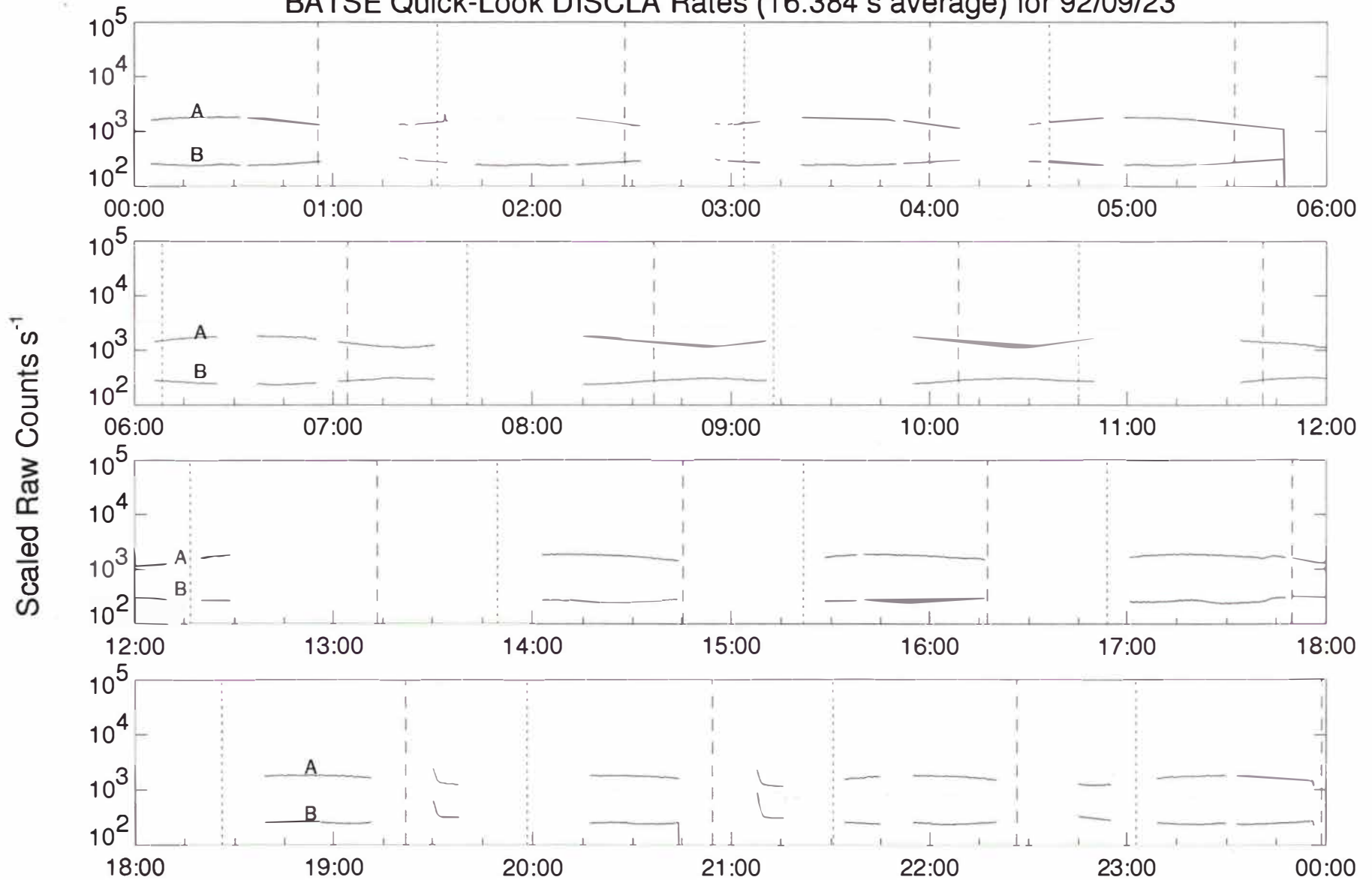
FROM: ESSDP2::TERRELL 93/05/05
TO: UCBSP::KHURLEY
CC: BATSE::KOUVELIOTOU
SUBJ: DMSP GRB DATA

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

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

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

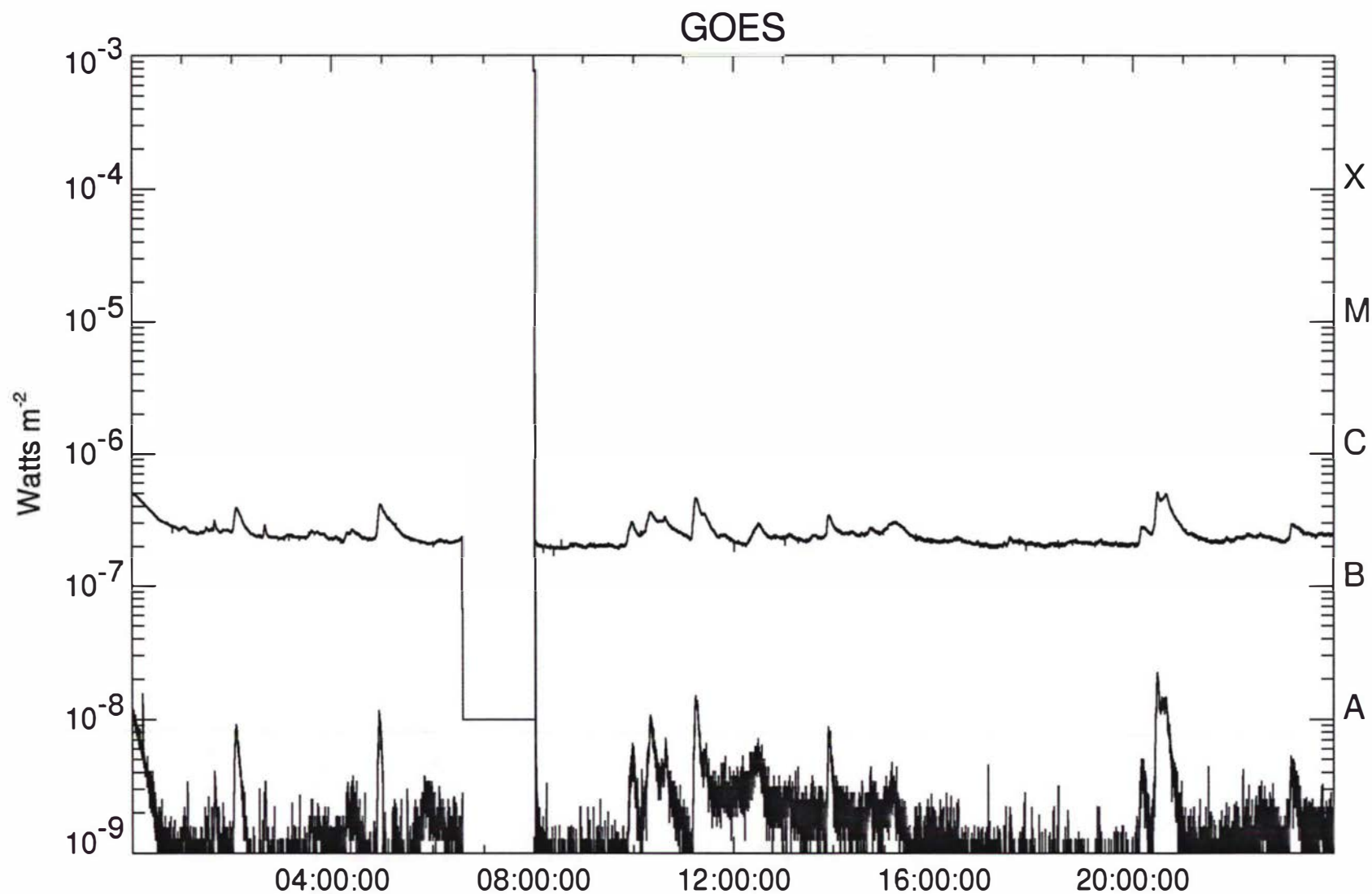
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/23



Current Time: 92/09/29, 0245 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



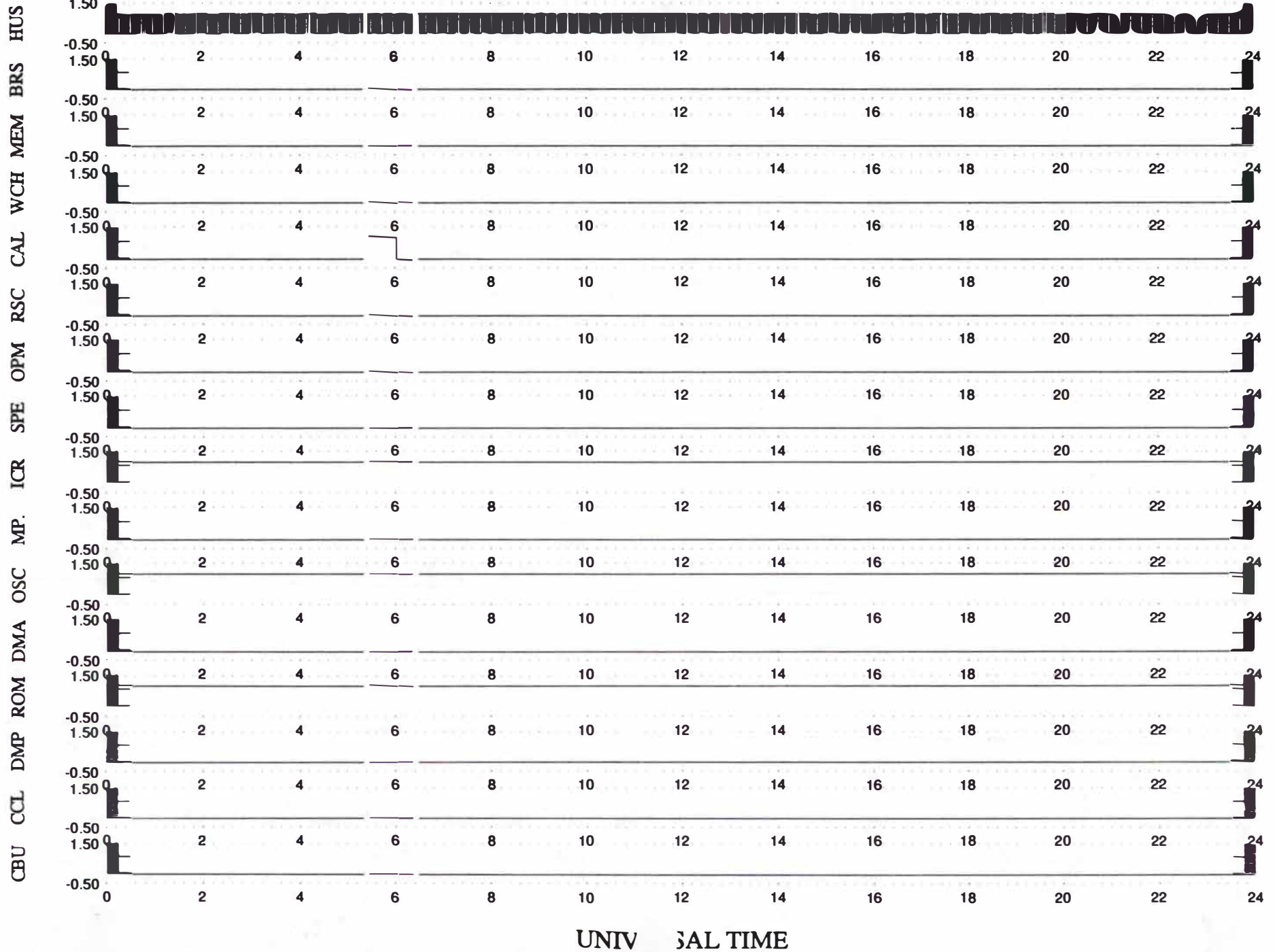
Data Start: 92/09/23, 0000:01

Plot created: 95/05/25, 1946

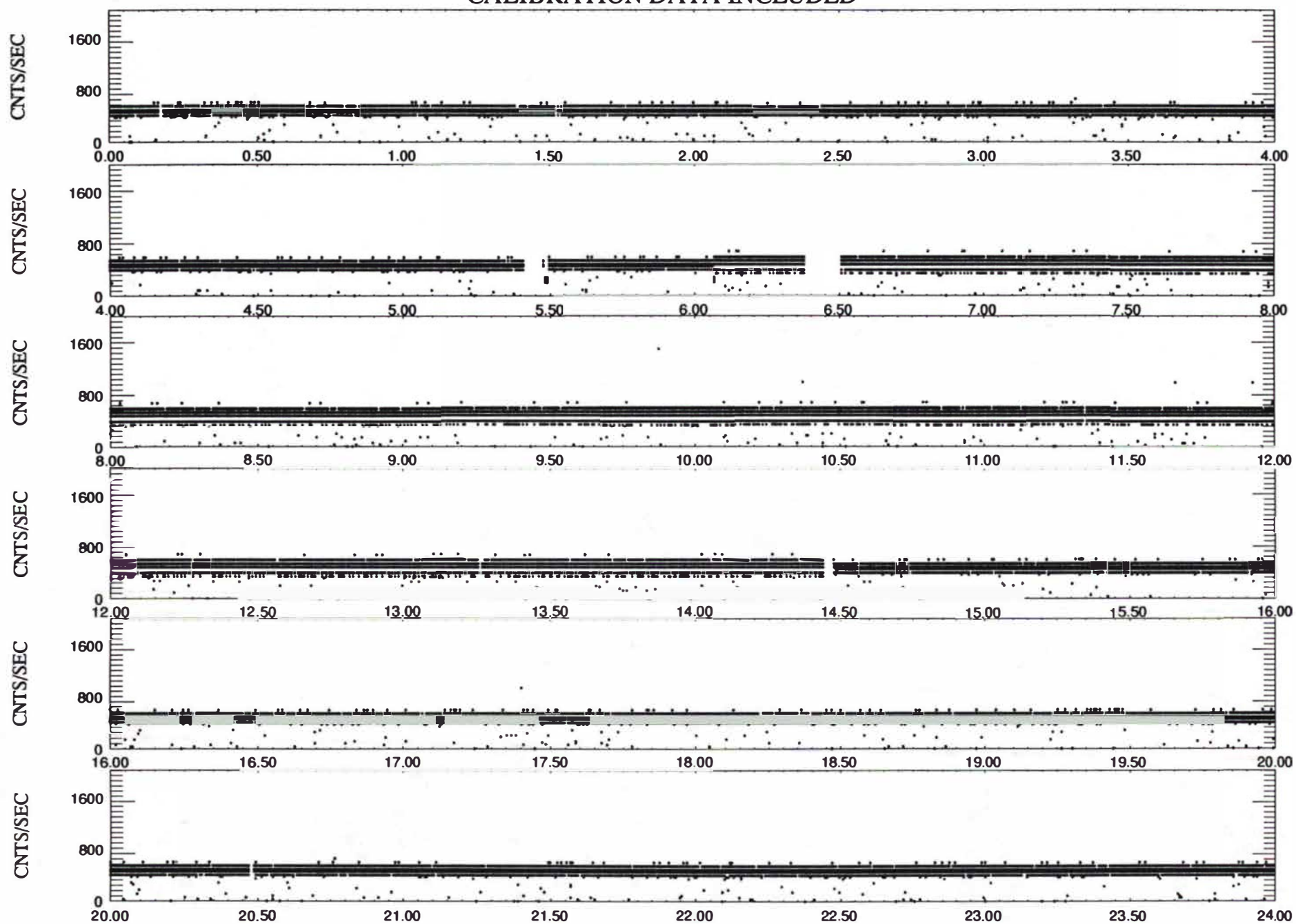
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (11)



CALIBRATION DATA INCLUDED



UNIV AL TIME

CATSEARCH PROGRAM

BATSE BURST # 1953
EVENT OF 1992 SEP 24 DAY OF YEAR=268
EVENT CROSSING TIME AT BATSE : 65459. S. OR 18:10:58.5
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 122.500 -69.700
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 24/ 9/ 92 IS:
RA= 160.890 DEC= -1.393 DIST= 6.173 AU
BATSE-ULYSSES DISTANCE = 923513712. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=107.14 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -907.66 SECS.
CROSSING TIME AT ULYSSES IS 64551. S. OR 17:55:50.9 +/- 547.30 SECONDS

NO

From BRAINERD@ssl.msfc.nasa.gov Fri Sep 25 12:38:10 1992
Date: Fri, 25 Sep 1992 14:40:22 -0500 (CDT)
From: BRAINERD@ssl.msfc.nasa.gov (Jim Brainerd, (205) 544-4970)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01953

TIME: TJD=8889 SECONDS=65458

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=101.2 AZIMUTH=275.5 ERROR= DEGREES

COMMENTS:

SINGLE PEAKED BURST OF 1 SECOND DURATION. IS SEEN ABOVE 300 KEV.

8 / 6 / 94

ULYSSES RT

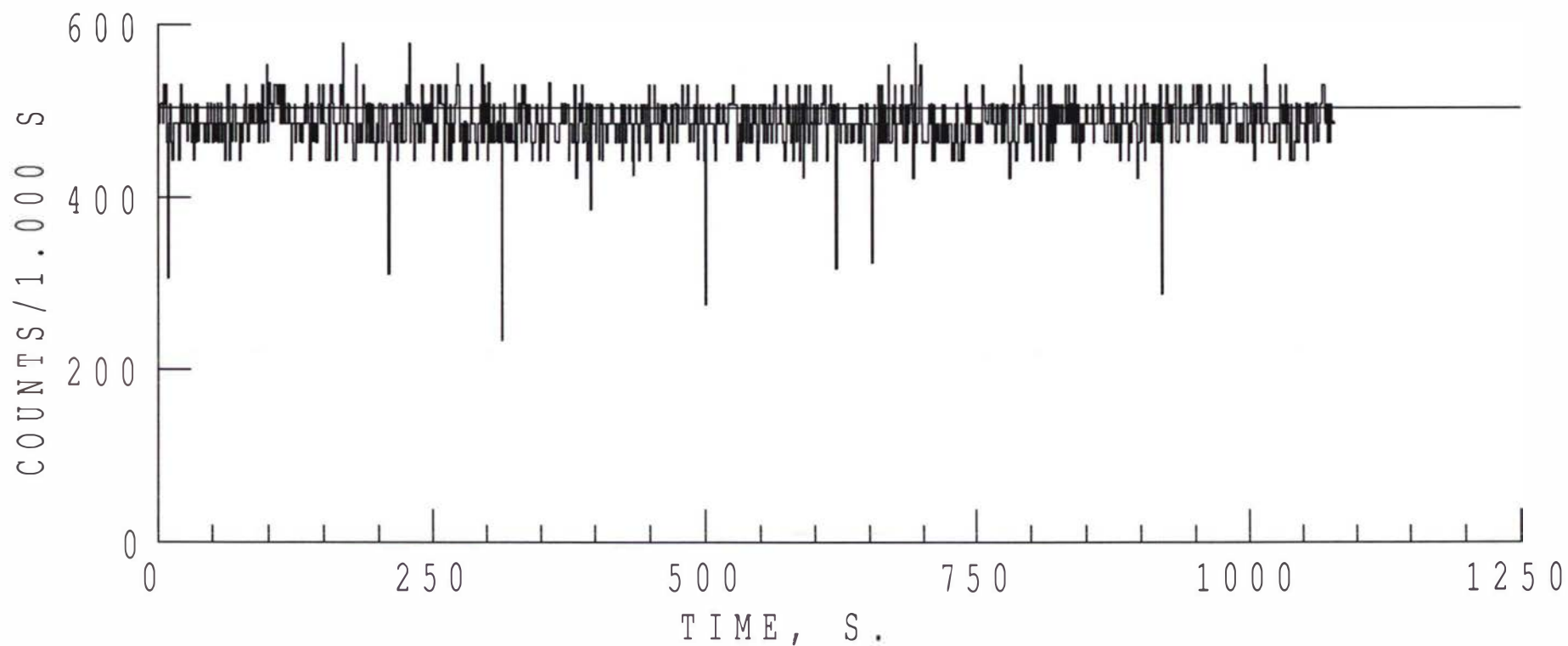
24 / 9 / 92 64008.172 s

0.500 S INTERVALS REGROUPED BY 2

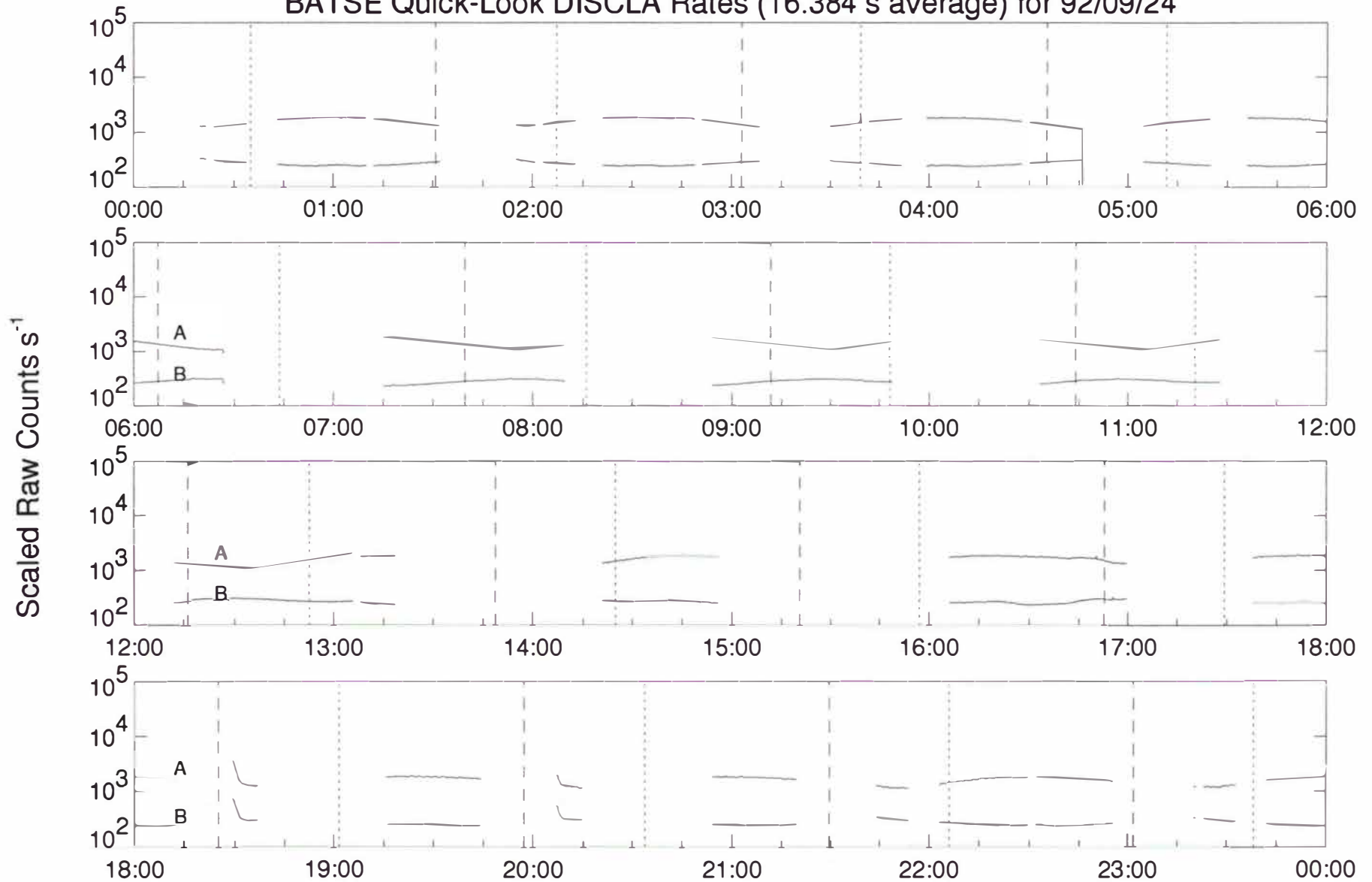
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



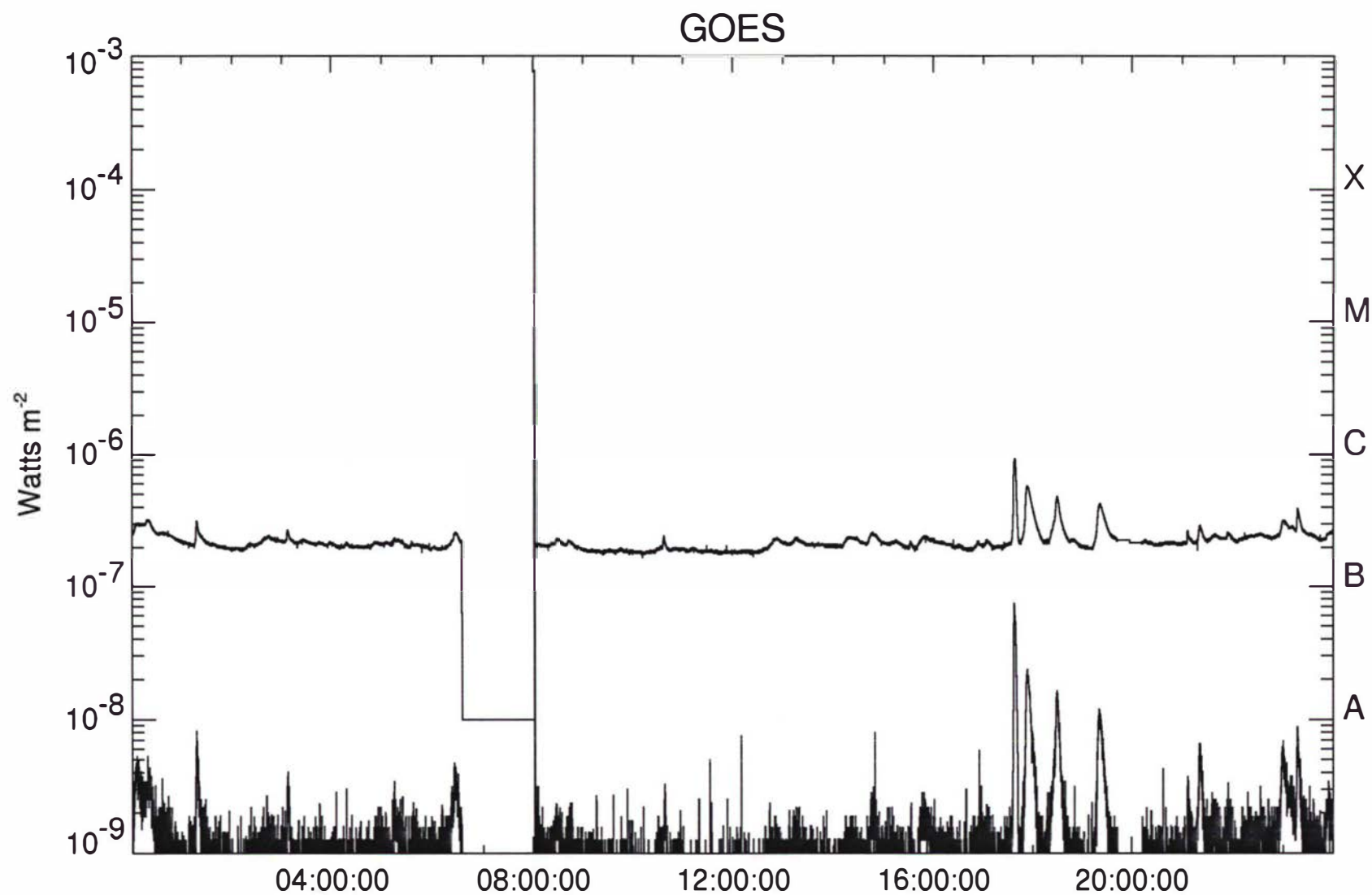
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/24



Current Time: 92/09/29, 0245 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

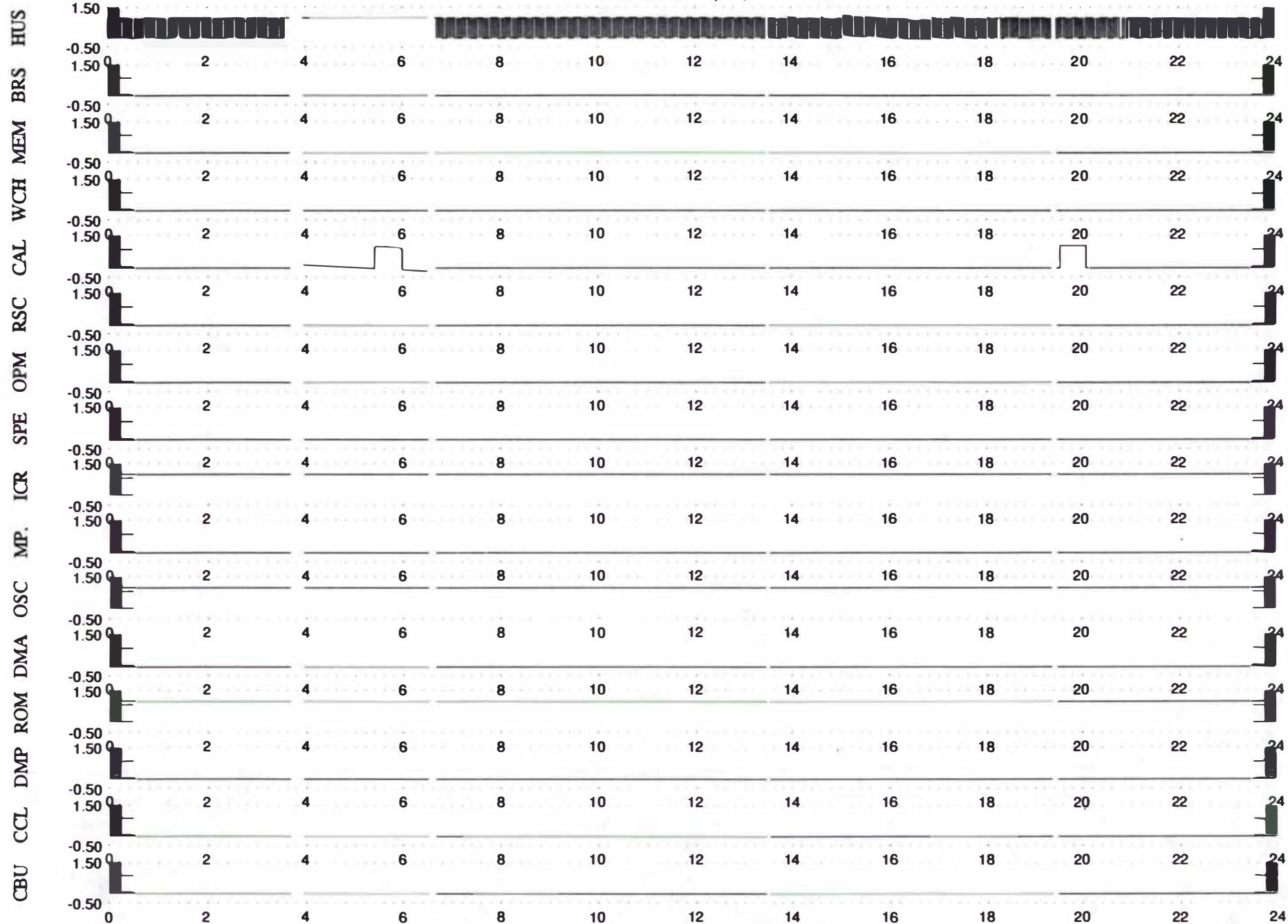
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

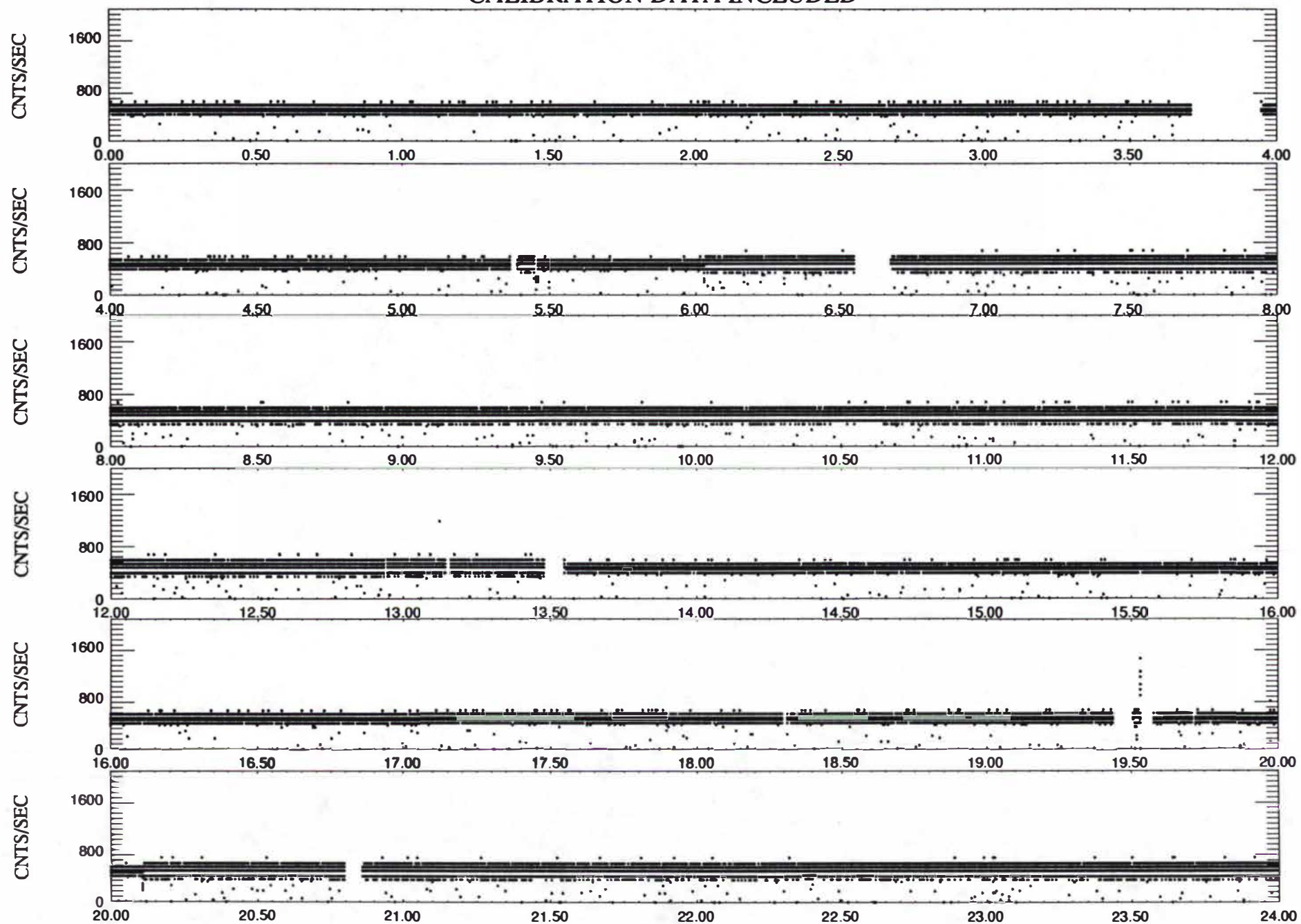


Data Start: 92/09/24, 0000:02 Plot created: 95/05/25, 1950
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (11)



CALIBRATION DATA INCLUDED



UNIV AL TIME

From springer@pop.jpl.nasa.gov Tue Feb 25 10:31 PST 1997
X-Sender: springer@pop.jpl.nasa.gov
Date: Tue, 25 Feb 1997 10:31:09 -0800
To: khurley@sunspot.ssl.berkeley.edu
From: Joe Springer <springer@pop.jpl.nasa.gov>
Subject: Time Tag Error Final Report
Cc: Ed.B.Massey@jpl.nasa.gov, Eugene.G.Herrington@jpl.nasa.gov
Mime-Version: 1.0

Kevin,

We have the final results of our examination of time tag accuracy at the 950-odd data points you specified. The results are quite favorable in the sense that, statistically speaking, I would have expected more 'hits'.

Roger Williams established some 'ground rules' for this task. Those data points listed as 'ULYSSES RT' were to be checked for a period extending from ten minutes before the point to an hour after the point. Those listed as 'ULYSSES' were to be checked for a period extending ten minutes before and ten minutes after the point.

Within those bounds, there were 2 bad points. We typically checked a much longer period than required and found 6 additional errors, each well outside of the required period but 'in the neighborhood'.

It is interesting to note that ALL of the identified timing errors were the result of mis-timed tape recorder carryover data; none of the 'off by one minor frame' timing errors were found to coincide with these data points.

Regards,

Joe

The results are as follows:

ERRORS WITHIN YOUR BOUNDS:

	Your time Designation (mm/dd/yy)	Error	Magnitude of error
1.	9/26/91 68462.643	32 frames wrong 13 min 24 seconds after data pt.	64 SCLK counts 128 seconds high
2.	9/18/92 36388.026	32 frames wrong 39 min after data point	10176 SCLK ~5 hr 39 min low

OTHER ERRORS 'in the neighborhood':

3.	7/17/91 21785.887	32 frames wrong 1 hour after data point	64 SCLK counts 128 seconds high
----	-------------------	--	------------------------------------

4.	9/25/92	77152.249	32 frames wrong between	4940 SCLK counts
	and	84728.363	2 data points but out of	~3 hr 6 min low
			range	
	12/8/95	85564.438	32 frames wrong 47 min	52672 SCLK
counts			before data point	~29 hr 15 min
low				
6.	12/13/95	78120.000	32 frames wrong between	53760 SCLK
counts			2 data points but out of	~29 hr 52 min
	and	84420.000	range	
low				
7.	1/1/96	4320.000	32 frames wrong 11 minutes	99200 SCLK
counts			before data point	~27 hr 33 min low
8.	1/2/96	50472.000	1 frame wrong 33 minutes	123328 SCLK
counts			after data point	~34 hr 15 min low

CATSEARCH PROGRAM

BATSE BURST # 1954
EVENT OF 1992 SEP 25 DAY OF YEAR=269
EVENT CROSSING TIME AT BATSE : 31839. S. OR 08:50:38.8
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 122.200 -58.300
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 25/ 9/ 92 IS:
RA= 161.019 DEC= -1.502 DIST= 6.166 AU
BATSE-ULYSSES DISTANCE = 922462024. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=115.57 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1327.94 SECS.
CROSSING TIME AT ULYSSES IS 30511. S. OR 08:28:30.9 +/- 511.74 SECONDS

NO

From KOSHUT@ssl.msfc.nasa.gov Mon Sep 28 09:36:39 1992
Date: Mon, 28 Sep 1992 11:38:59 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 01954

TIME: TJD=8890 SECONDS=31838

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=90. AZIMUTH=273. ERROR= DEGREES

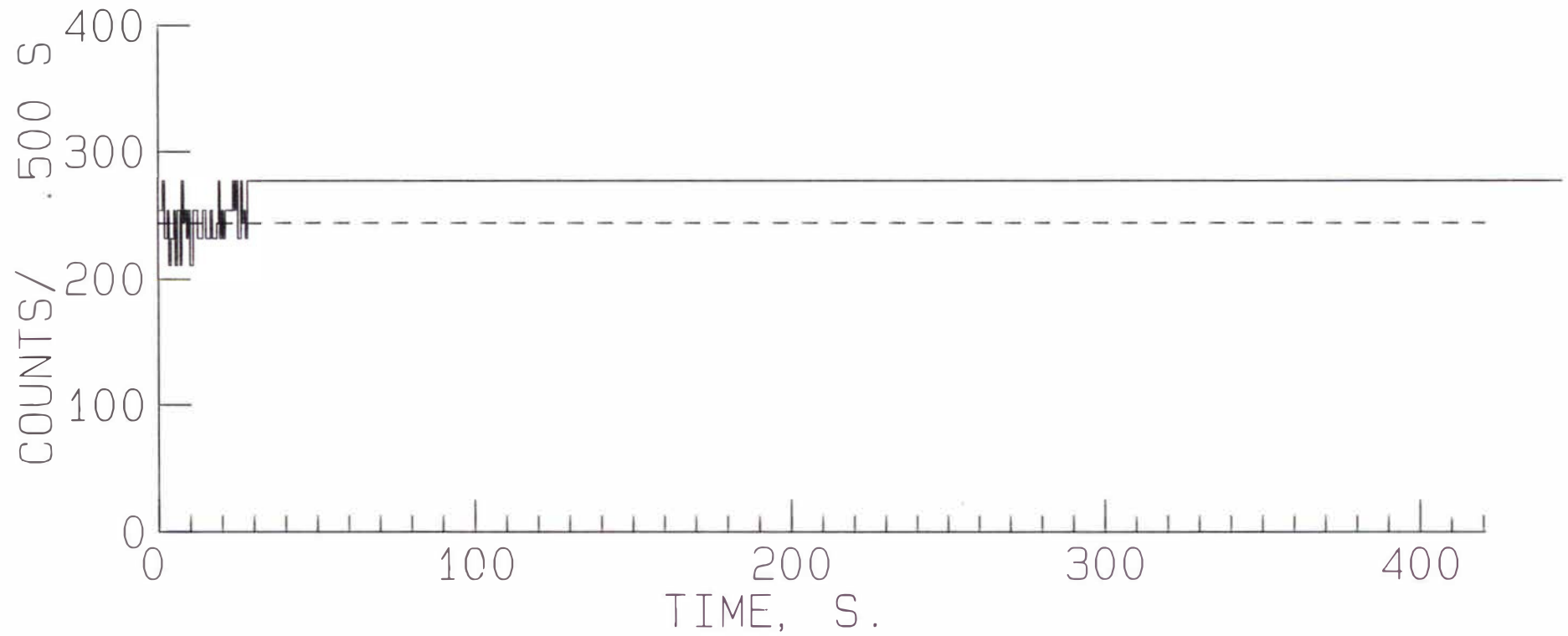
COMMENTS:

NOT MUCH DATA AVAILABLE FOR THIS BURST. DURATION IS AT LEAST 45 SECONDS,
NO FLUX OBSERVED ABOVE 300 KEV.

ULYSSES RT
25/ 9/92 29988.002 s
22- 149 keV

23/ 6/94

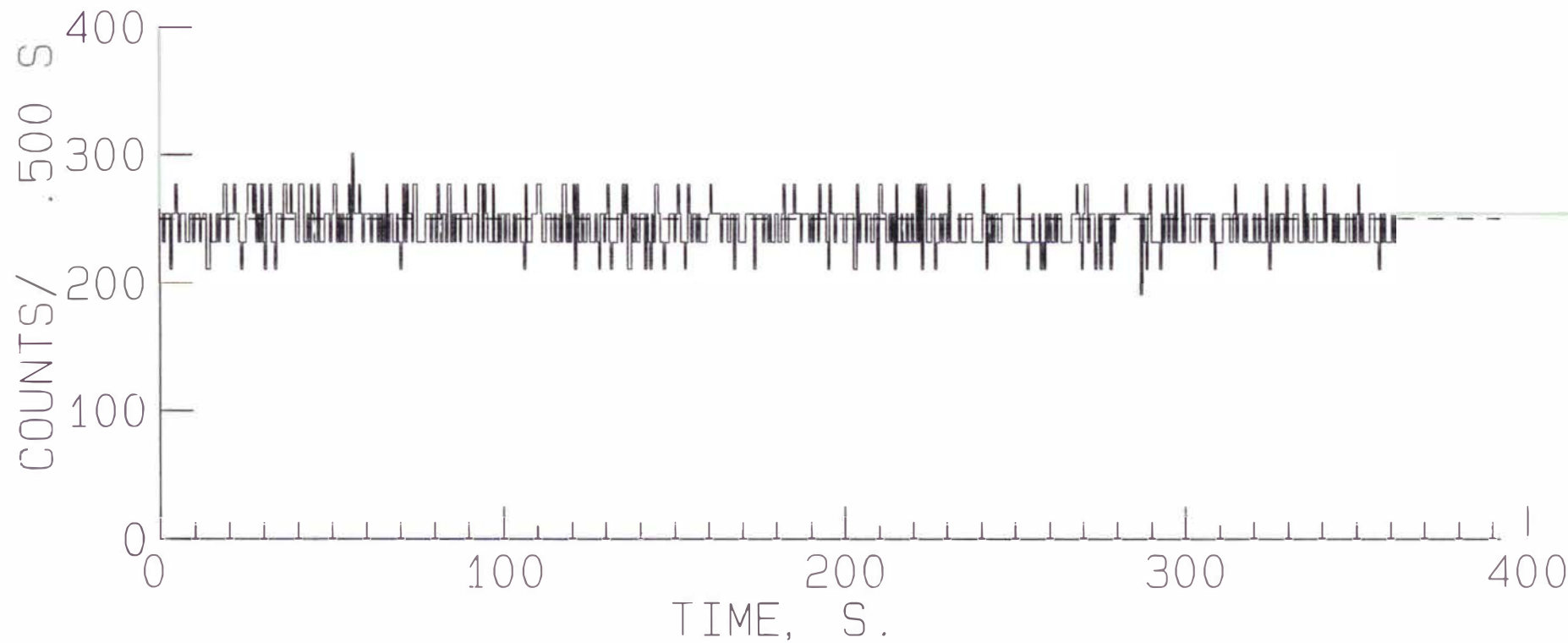
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



ULYSSES RT
25/ 9/92 30490.510 s
22- 149 keV

23/ 6/94

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From KOSHUT@ssl.msfc.nasa.gov Sat Sep 26 13:13:10 1992
Date: Sat, 26 Sep 1992 15:15:27 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01955

TIME: TJD=8890 SECONDS=62213

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

TRIGGERED ON ENTRY INTO SAA.

BATSEARCH PROGRAM

BATSE BURST # WATCH
EVENT OF 1992 SEP 25 DAY OF YEAR=269
EVENT CROSSING TIME AT BATSE : 73842. S. OR 20:30:42.0
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 202.000 43.000
BATSE PEAK COUNTING RATE: 0 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 25/ 9/ 92 IS:
RA= 161.128 DEC= -1.595 DIST= 6.160 AU
BATSE-ULYSSES DISTANCE = 921534978. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=122.26 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1640.95 SECS.
CROSSING TIME AT ULYSSES IS 72201. S. OR 20:03:21 +/- 476.35 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 25/ 9/ 92 IS:
RA= 97.629 DEC= 23.463 DIST= 1.180 AU
MARS-BATSE DISTANCE = 176590100. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 96.03 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -61.86 SECS.
CROSSING TIME AT MARS IS 73780. S. OR 20:29:40 +/- 100.76 SECONDS

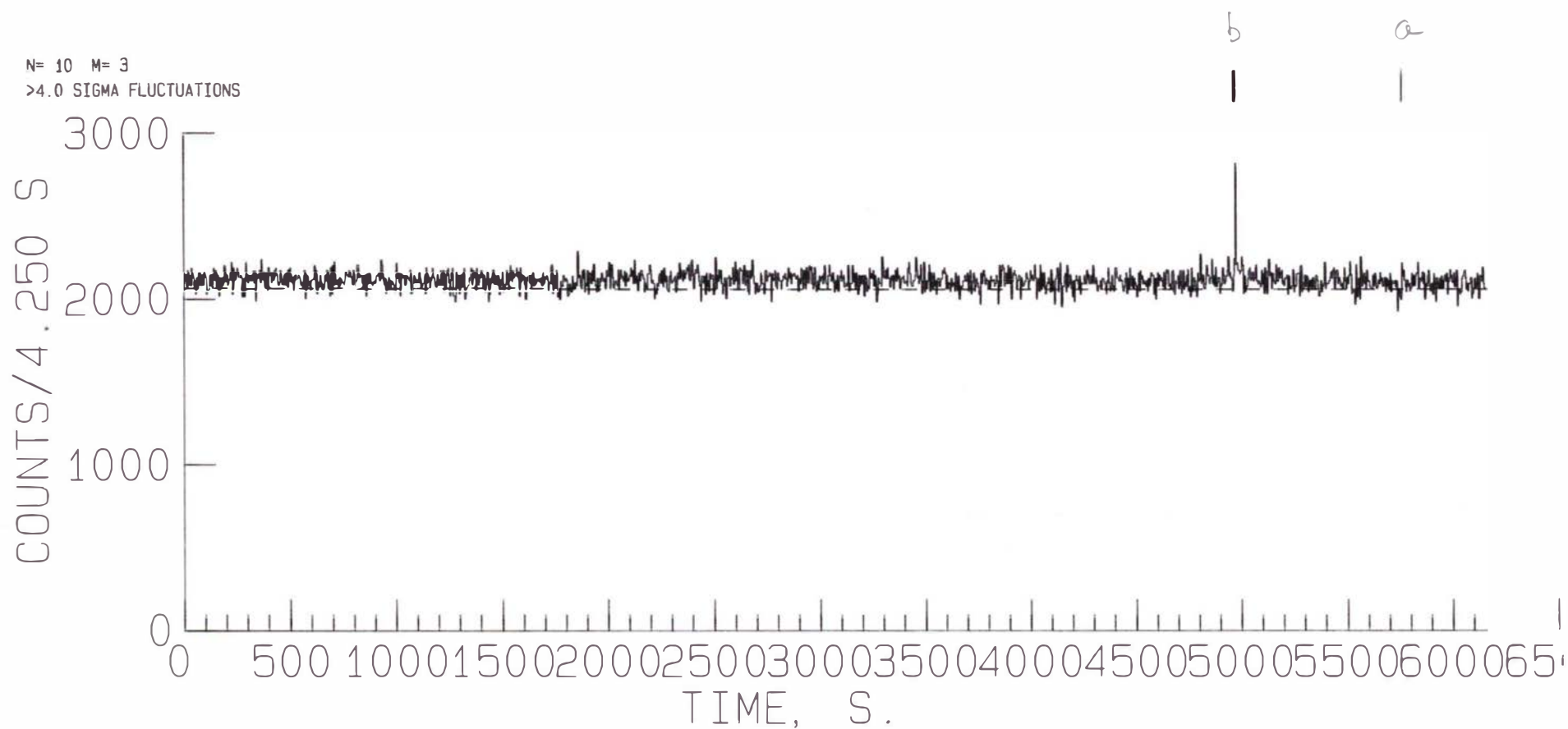
ULYSSES RT

27/12/93

25/ 9/92 67176.086 s

.250 S INTERVALS REGROUPED BY 17

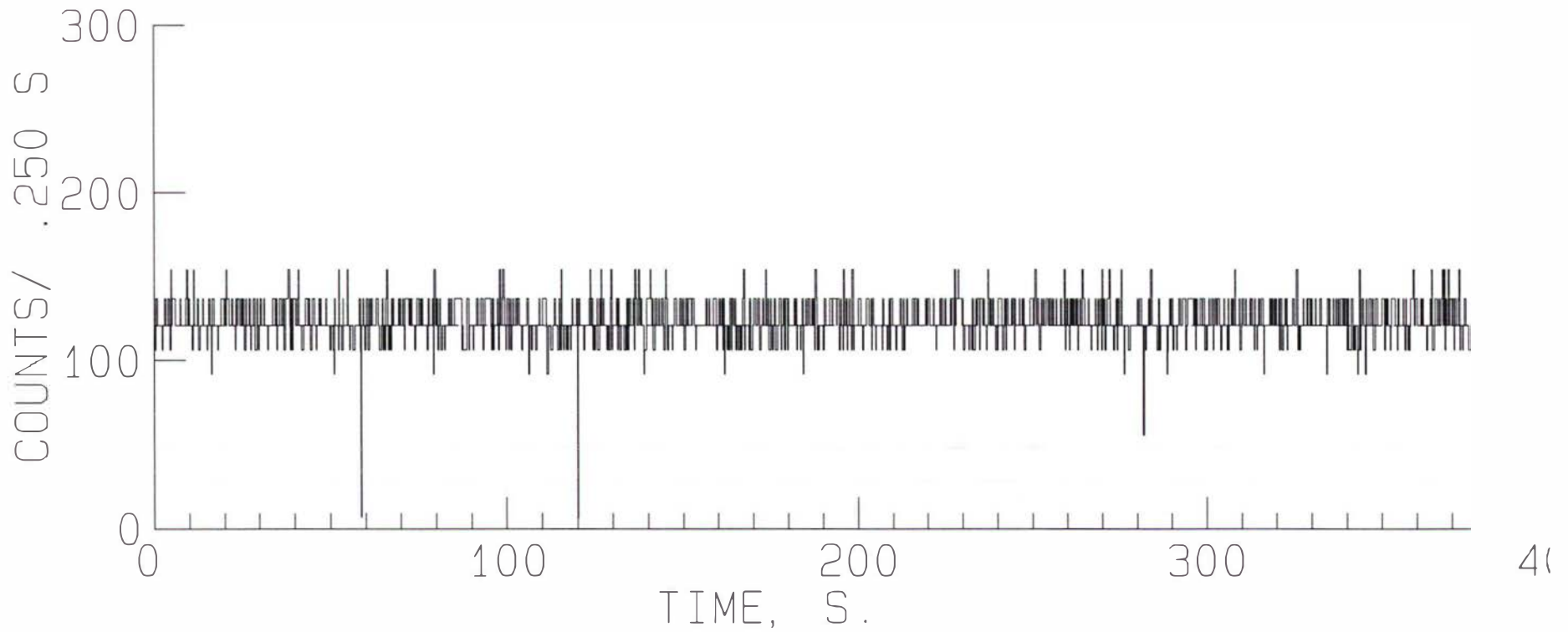
22- 149 keV



ULYSSES RT
25/ 9/92 67176.086 s
22- 149 keV

15/12/93

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



ULYSSES RT

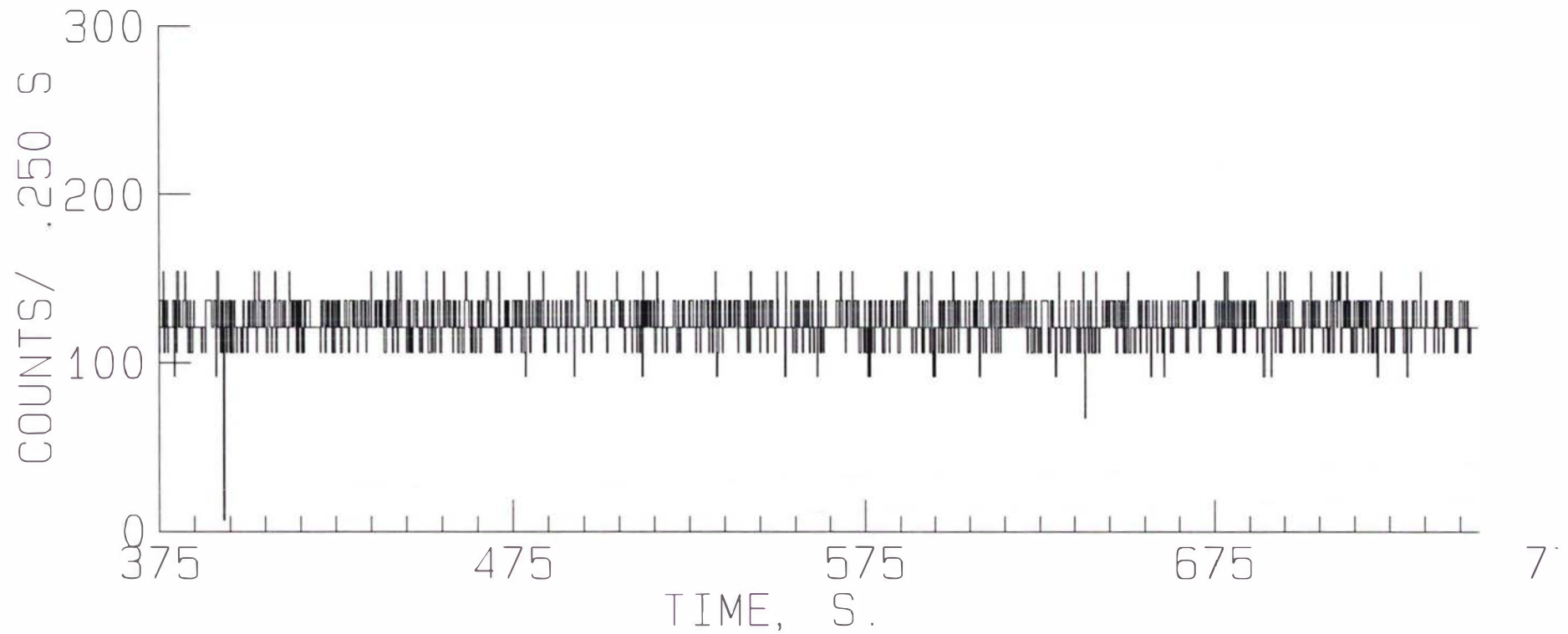
15/12/93

25/ 9/92 67176.086 s

22- 149 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



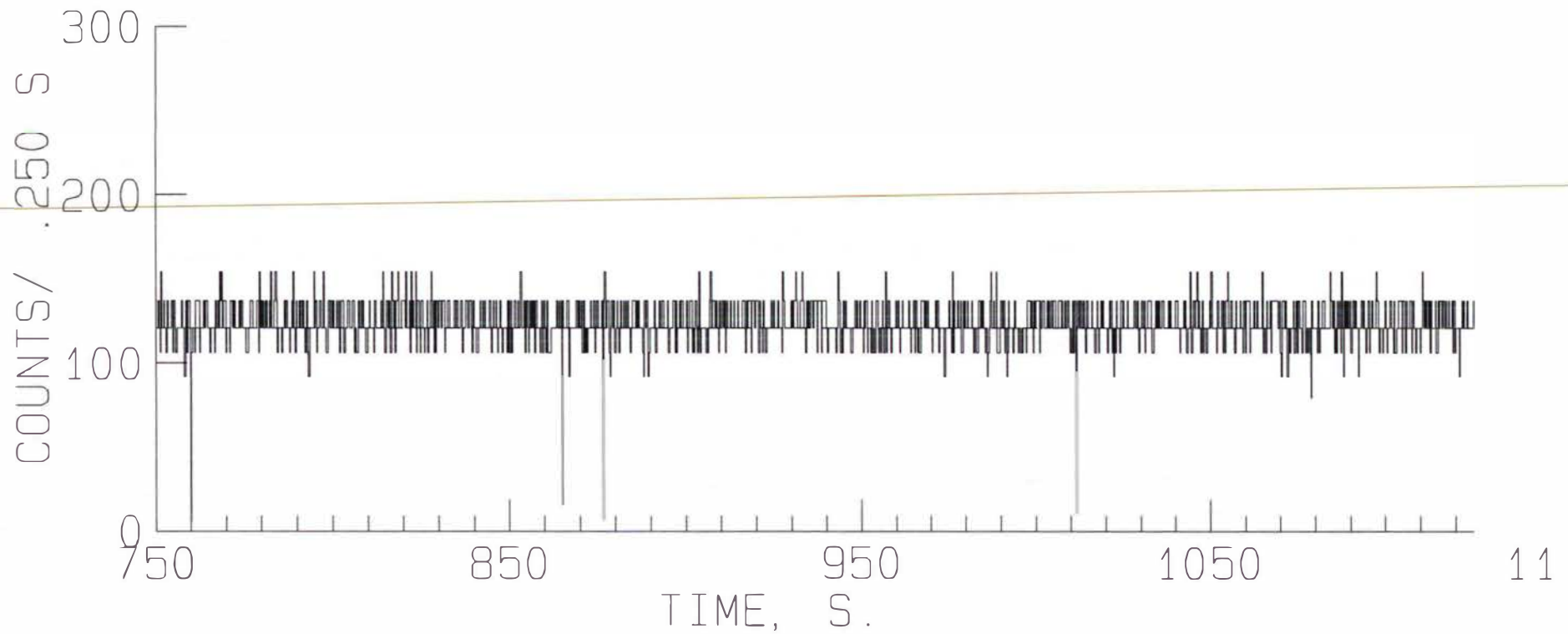
ULYSSES RT

15/12/93

25/ 9/92 67176.086 s

22- 149 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



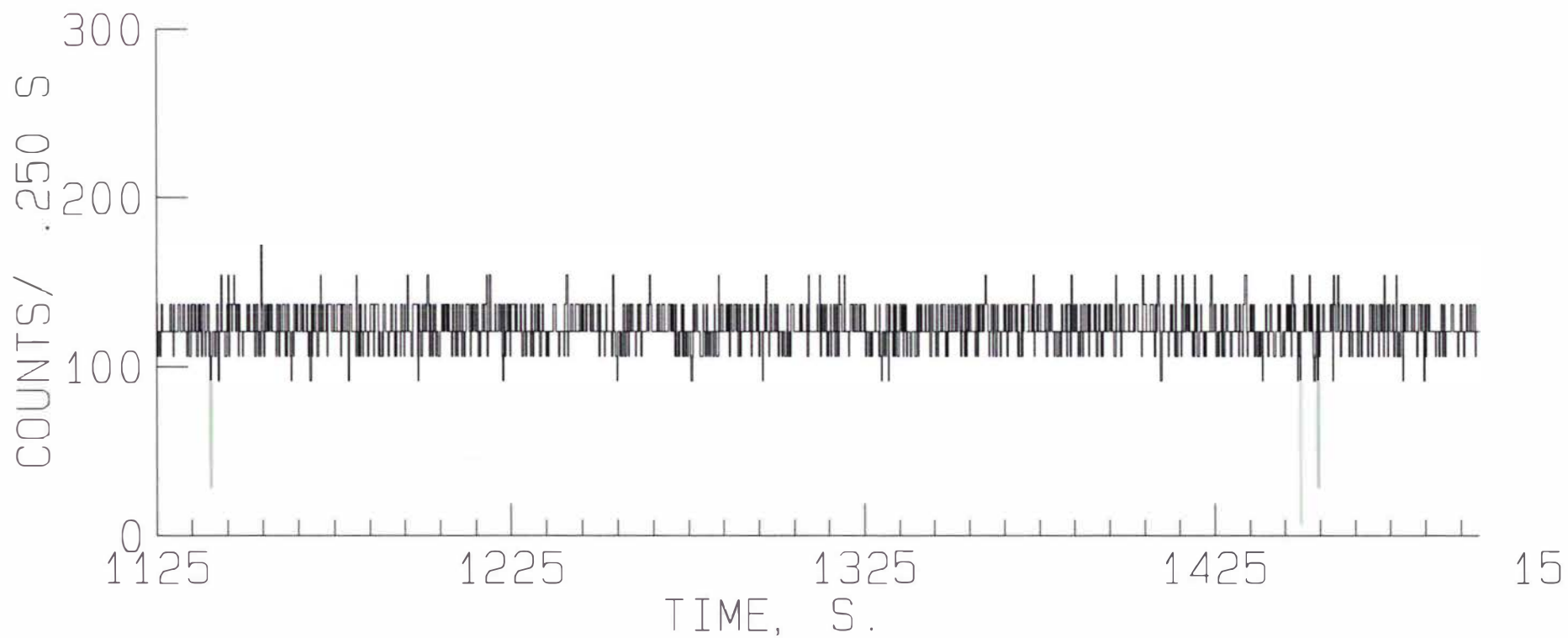
ULYSSES RT

15/12/93

25/ 9/92 67176.086 s

22- 149 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



ULYSSES RT

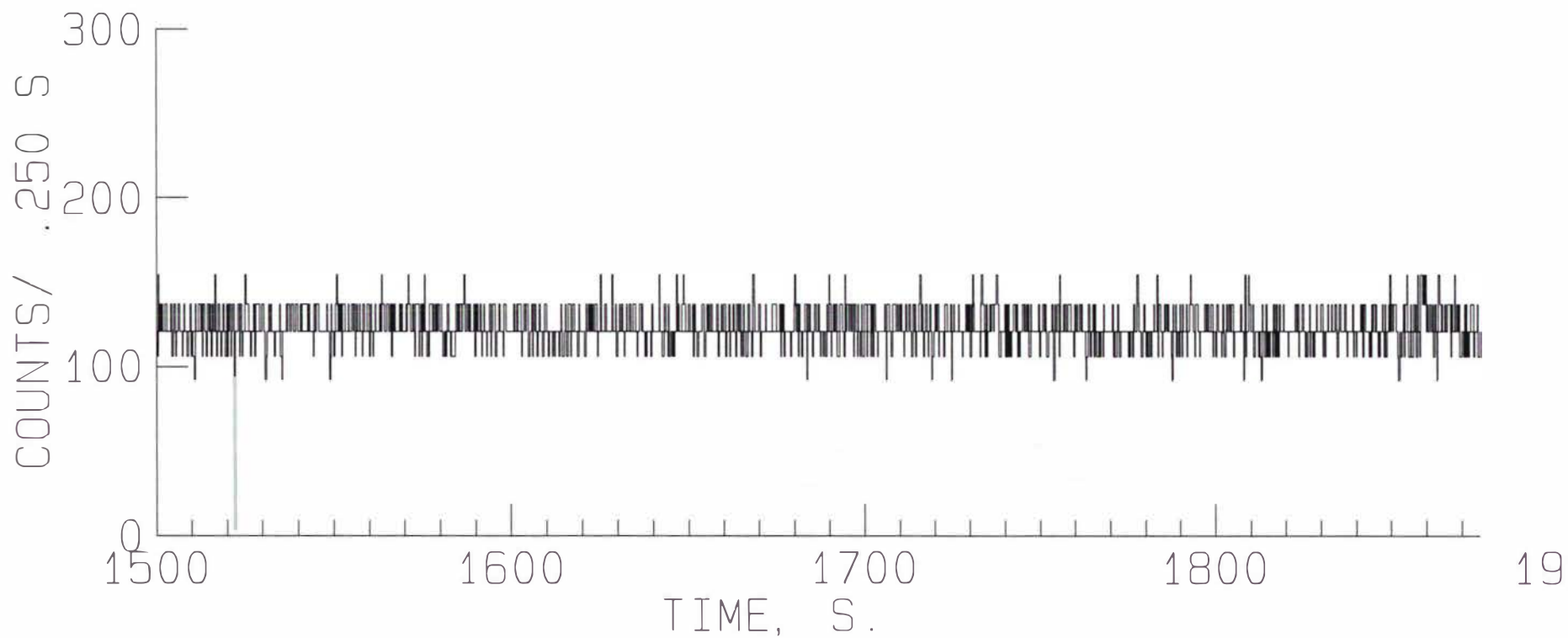
15/12/93

25/ 9/92 67176.086 s

22- 149 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



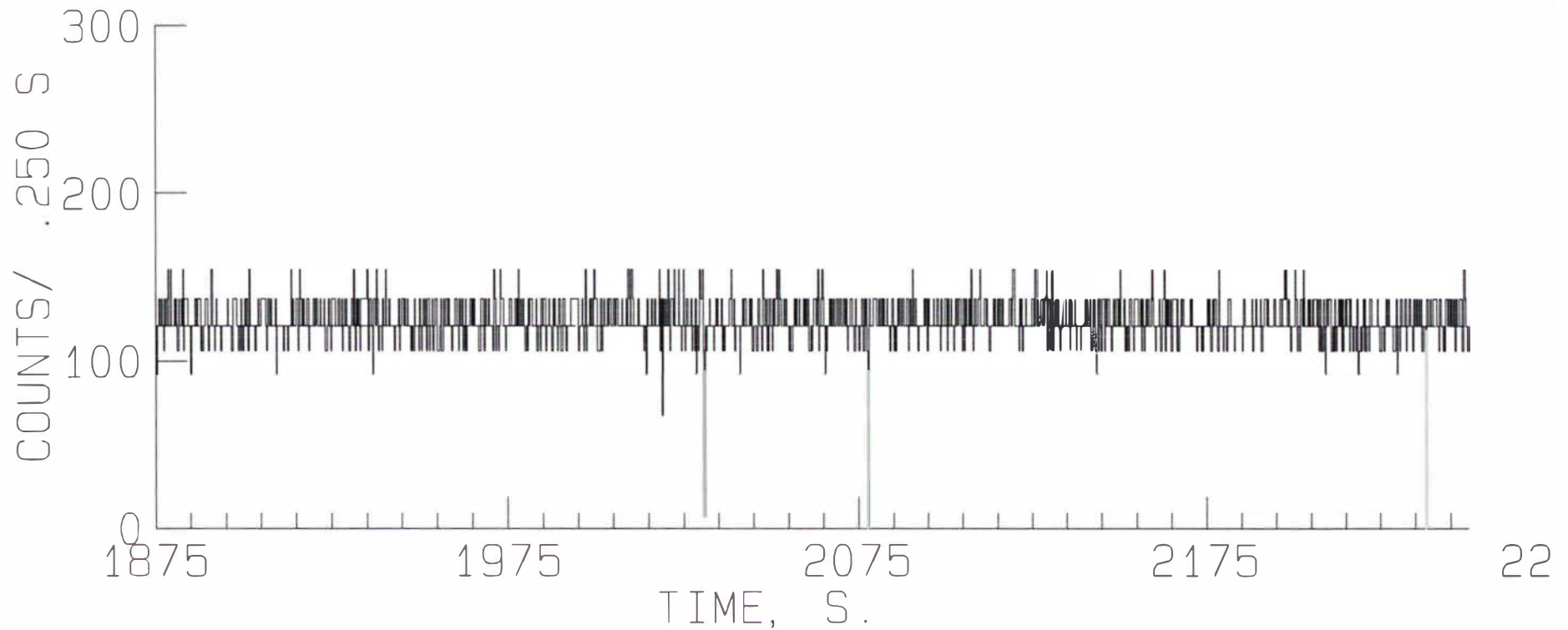
ULYSSES RT

15/12/93

25/ 9/92 67176.086 s

22- 149 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



ULYSSES RT

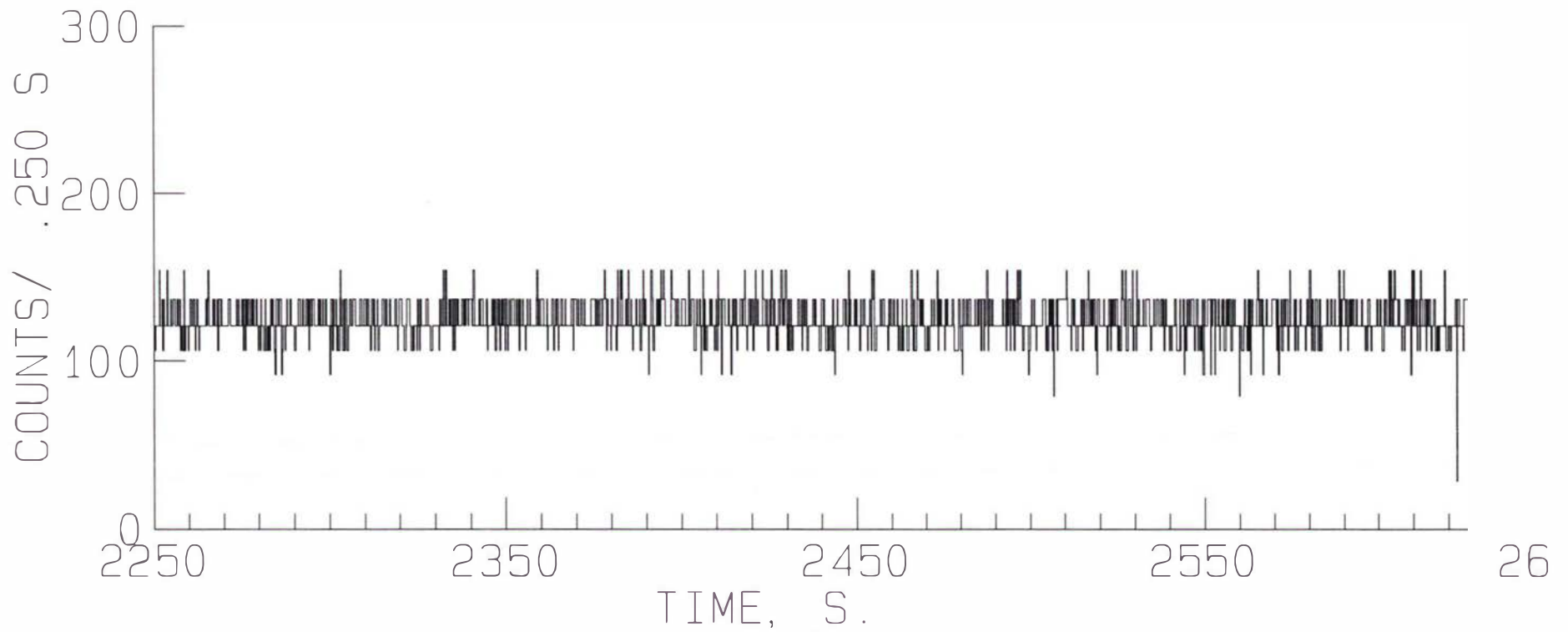
15/12/93

25/ 9/92 67176.086 s

22- 149 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



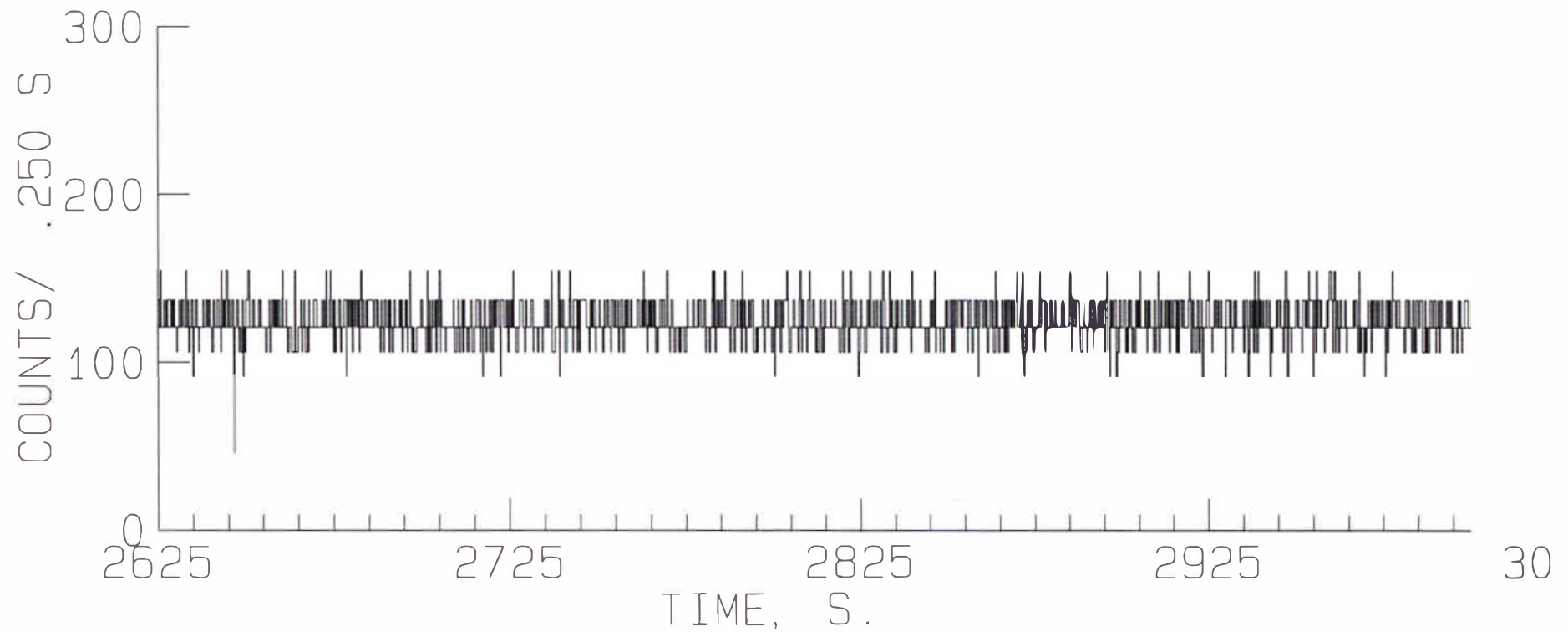
ULYSSES RT

15/12/93

25/ 9/92 67176.086 s

22- 149 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



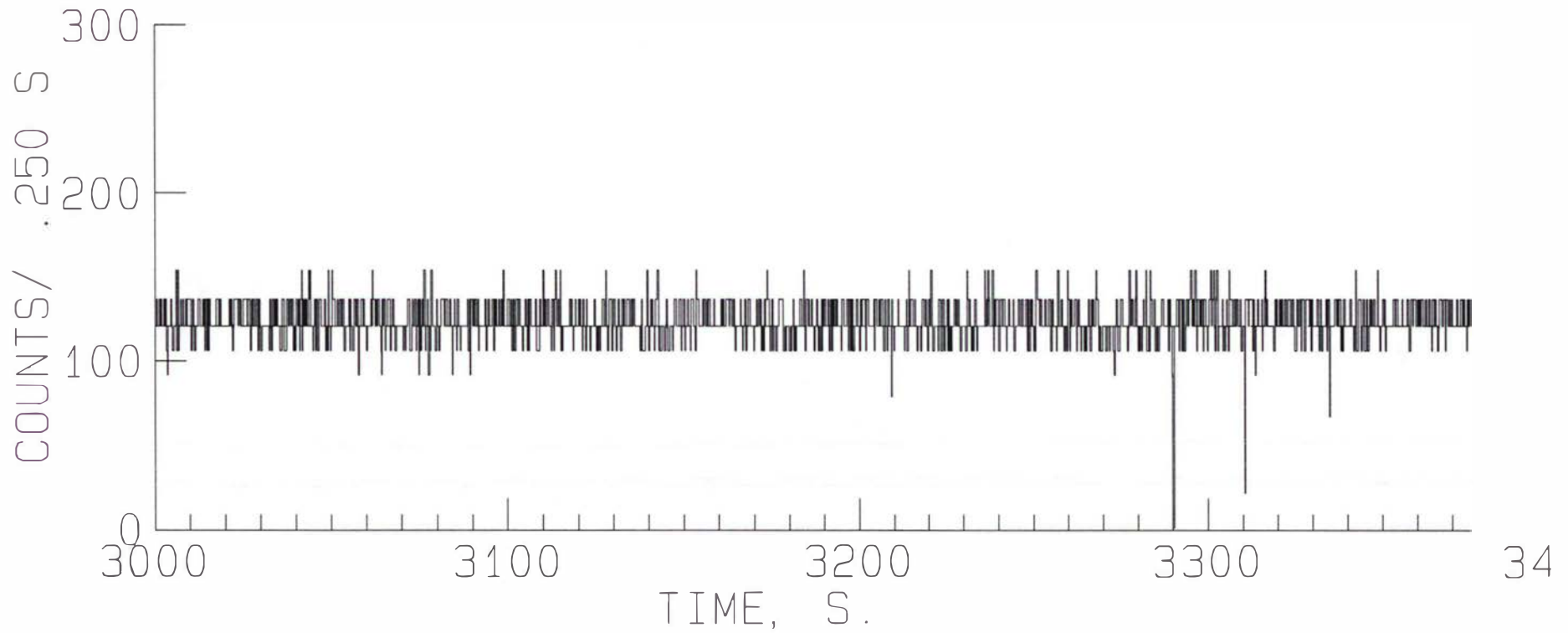
ULYSSES RT

15/12/93

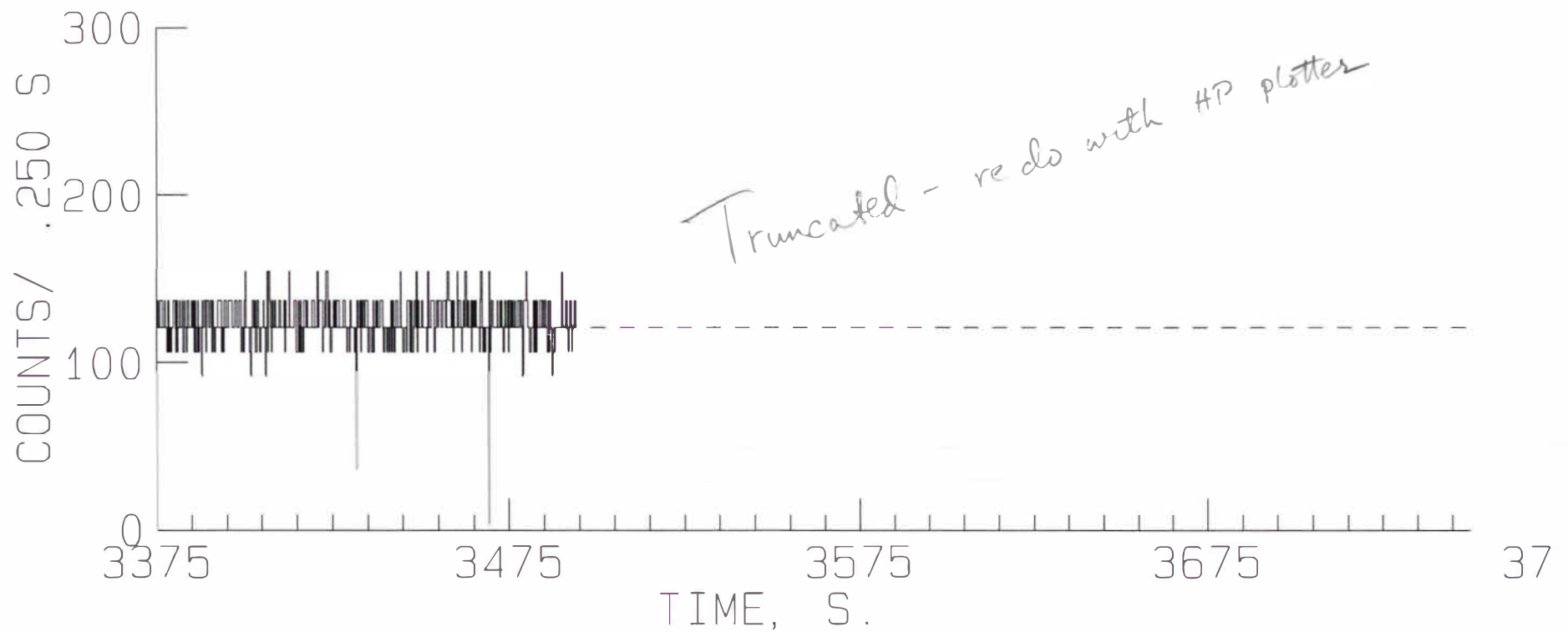
25/ 9/92 67176.086 s

22- 149 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



ULYSSES RT
25/ 9/92 67176.086 s
22- 149 keV



From khurley@space6.ssl.berkeley.edu Wed Dec 15 10:55:46 1993
Date: Wed, 15 Dec 93 11:53:02
From: khurley@space6.ssl.berkeley.edu
Content-Length: 2621

Dear Alberto,

I've looked through the WATCH candidate events, and this is what I have found.

23/7/91: Ulysses had 0.25 s data for the entire crossing window. I searched it on two timescales: 0.25 s and 3.25 s. Neither shows any strong evidence for an event, but there may be a very weak event in the rebinned data (3.25 s resolution). What is the duration of your event? PVO data is available for this time, but only at 64 s resolution - is it worth looking?

15/8/91: Ulysses had 0.25 s data for the entire crossing window, but it was noisy. There were numerous noise spikes which lasted 0.25, 0.5, and 0.75 s, and a few dropouts. When I eliminate the big noise spikes there are still many smaller ones. I searched the data on two timescales: 0.25 and 2.75 s. There is nothing obvious, but again, I need to know the event duration to have a better look.

16/8/91: Ulysses had 0.25 s data for the entire crossing window. I searched it on two timescales: 0.25 s and 3.25 s. Neither shows any evidence for an event. PVO had coverage, too, and they detected nothing.

7/3/92: We find a small rate increase in the crossing window. If you send me the WATCH data, I can get an annulus.

15/6/92: Ulysses had 0.25 s data for the entire crossing window. I searched it on two timescales: 0.25 and 4 s. In the 4 s data, there is perhaps a very weak event, about 16 s long. Is that what you see with WATCH?

25/9/92a and b: "a" event: Ulysses had 0.25 s data for the entire crossing window. I searched it on two timescales: 0.25 and 4.25 s. I find the "b" event in this window, but nothing else.

"b" event: The time of the b event has changed by 15 minutes in your new list, but it is now inconsistent with the BATSE time, which was consistent with your original time. Given this, and the fact that the "a" event is close to one hour before the "b" time, is it possible that there is a mistake, and that "a" and "b" are the same event, at 20:30?

14/3/93: Ulysses had 0.25 s data for the entire crossing window. I searched it on two timescales: 0.25 s and 2.75 s. No evidence for any event.

21/7/93 06:17: Ulysses had 0.25 s data for the entire crossing window. I searched it on two timescales: 0.25 and 3.5 s. No evidence for any event.

21/7/93 13:00: Ulysses had 1 s data for the entire window. I searched it on two timescales: 1 s and 4 s. There was a BATSE event at 45935 s, which we recorded as a weak rate increase. There was also a 2 s increase in the Ulysses data, which could be your event. How long was the WATCH event, and are you sure of the time (i.e., could it be the BATSE event)?

Kevin

Dear Kevin,

Here I send you my comments about the WATCH GRBs-like events you examined:

23/7/91. The duration of this event is around 10 s, but it is very weak. Enclosed I send the time profile for this burst. Note the small increase in the count rate visible in the WATCH data.

15/8/91. The duration of the event is 40 s. It is a clear burst.

16/8/91. If you did not see anything in Ulysses and PVO, I suppose it is a particle event.

7/3/92. I send you the time history in order to get an annulus.

14/3/92. Particle event. The same than 15/8/91.

21/3/92. WATCH sees the event at 13:00:54. The duration is 1 s. The center of the field is at alfa: 15 30; delta = +32. No increase in the count rate is visible at the time of the BATSE burst in all the three units. A particle event ?

21/7/92. Particle event. The same than 15/8/91.

15/6/92. The event is only a peak in one WATCH bin, i.e. the duration is around 7 s.

25/9/92a. There is an error in my list. The trigger time is 20:30:42, not 19:30:42.

25/9/92b. It is a completely different event that lasted for about 15 s. At 20:45:14. The center of the field is at 08 35 + 29. Nothing to do with 920925a or 920925c.

Did you finally confirm 910408?

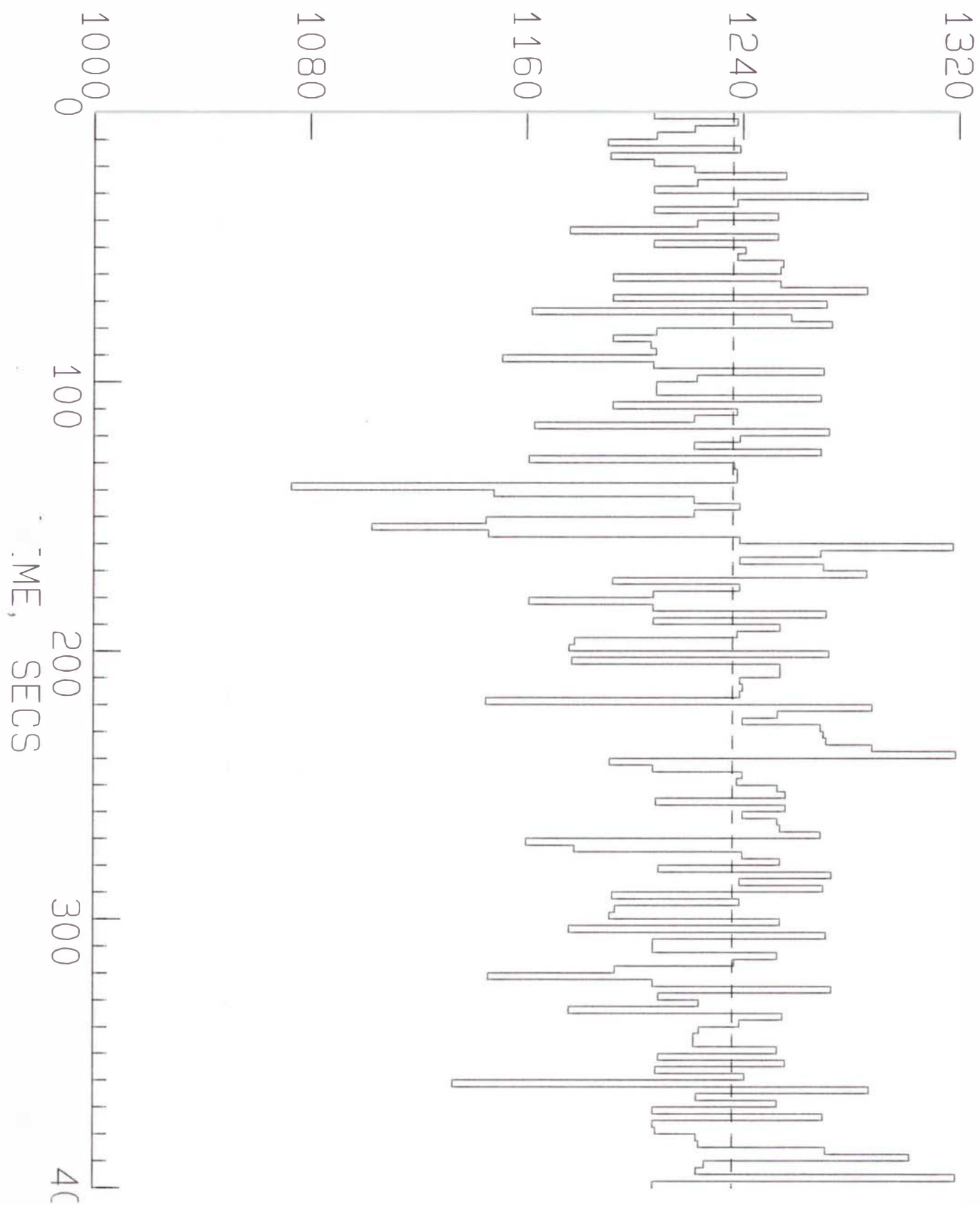
Regards
Alberto
17 Dec 1993

P.S. Please, note that I will be absent from Dec 20 to Jan 20! But you always could reach me by fax at +34 52 61 04 49.

ULYSSES RT 25/ 9/92

22- 149 keV 72776.176 S

COUNTS/2.500 S



FAXCOVER

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DATE: Nov 23, 1993

Page 1 of 2

FROM: Alberto J. CASTRO-TIRADO

TO : Kevin HURLEY

FAX no

Name : 510 643 8640

Dear Kevin.

Thank you for your answer. Enclosed I send you the list of CONFIRMED 69 GRBS plus 14 CANDIDATES. Now you may fill the WATCH response in the Master GRB list for WATCH-GRAWAT in the period 1/1/90 - 25/9/92.

GRB 920321 (at 13:00:44) is a ≤ 1.5 burst in WATCH data, so I think it could be the same event seen by Ulysses. We do not have better time resolution.

The other repeater is 900126/920311. The two error boxes are separated by 1° , at $\sim \alpha = 08^h 46^m$ $\delta = -38^\circ$ (1450.0)

Kind regards,

Alberto

First GRANAT/WATCH
Gamma-Ray Burst
Catalogue

1w obs (yy:mm:dd)	U.T. (hh:mm:ss)
900118	17:40:40
900120	20:37:33
900123a	01:42:13
900123b	18:44:17
900126	18:04:27
900222	11:56:35
900308	09:32:02
900327	10:24:28
900404	17:54:36
900413	10:11:21
900708a	11:30:21
900708b	18:44:53
900901	01:35:17
900925	20:25:22
900929	01:49:18
901009	00:15:46
901015b	08:44:48
901027	04:21:07
901112	14:57:37
901116	01:42:10
901119	18:08:32
901219	21:52:43
910117	00:57:51
910122	15:13:40
910202	20:57:35
910219	11:45:25
910310	13:02:06
910312	12:43:09
910425	00:37:52
910517	05:02:20
910627	04:29:24
910717a	04:41:07
910717b	13:07:25

910721	19:30:12
910723	14:06:20
910814	19:14:31
910815	14:24:32
910817	17:09:26
910818	13:44:46
910821	10:33:36
910901	05:24:14
910925	03:35:36
910927	23:26:53
911016	11:03:31
911018	05:32:00
911022	04:14:58
911202	20:28:51
911205	23:04:41
911209	18:36:00
920105	17:41:17
920116	18:30:35
920130	00:29:17
920302	06:16:54
920307	00:18:06
920311	02:20:20
920325	17:17:37
920615	14:24:56
920714	13:04:52
920718a	14:41:16
920718b	21:32:47
920720	05:53:04
920723a	01:00:44
920723b	30:03:11
920814	00:10:25
920902	00:29:04
920903a	01:36:15
920903b	23:28:52
920925a	19:30:43
920925b	20:45:14
920925c	22:46:14

CANDIDATES

900415	06:20:58
900603	06:20:50
900616	03:56:50
900618	23:12:22
900625	22:04:16
900628	11:17:53
900815	11:35:12
900914	04:46:40
901015a	02:42:16
910408	22:24:18
910414	07:38:27
910816	01:57:40
920314	05:48:32
920321	13:00:49
920721	06:17:25

RK- KH Nov 11 93

PVO Replies to the WARCH/Ulysses Huntsville us

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

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

24 Aug 92 N/O - OFF

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

25 Sep 92 N/O - OFF

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



Date: Apr 1 98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

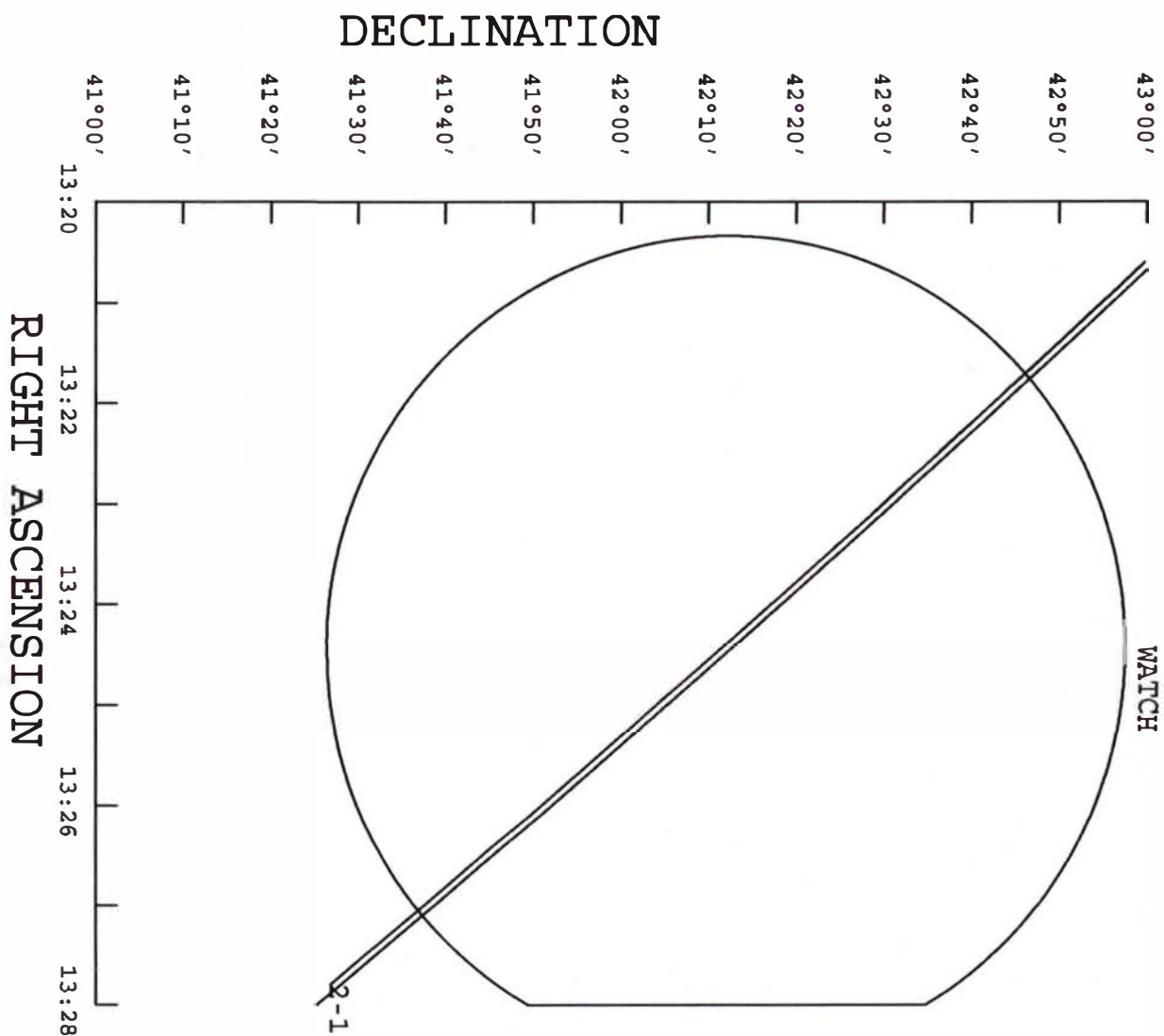
G=GALACTIC EQUATOR

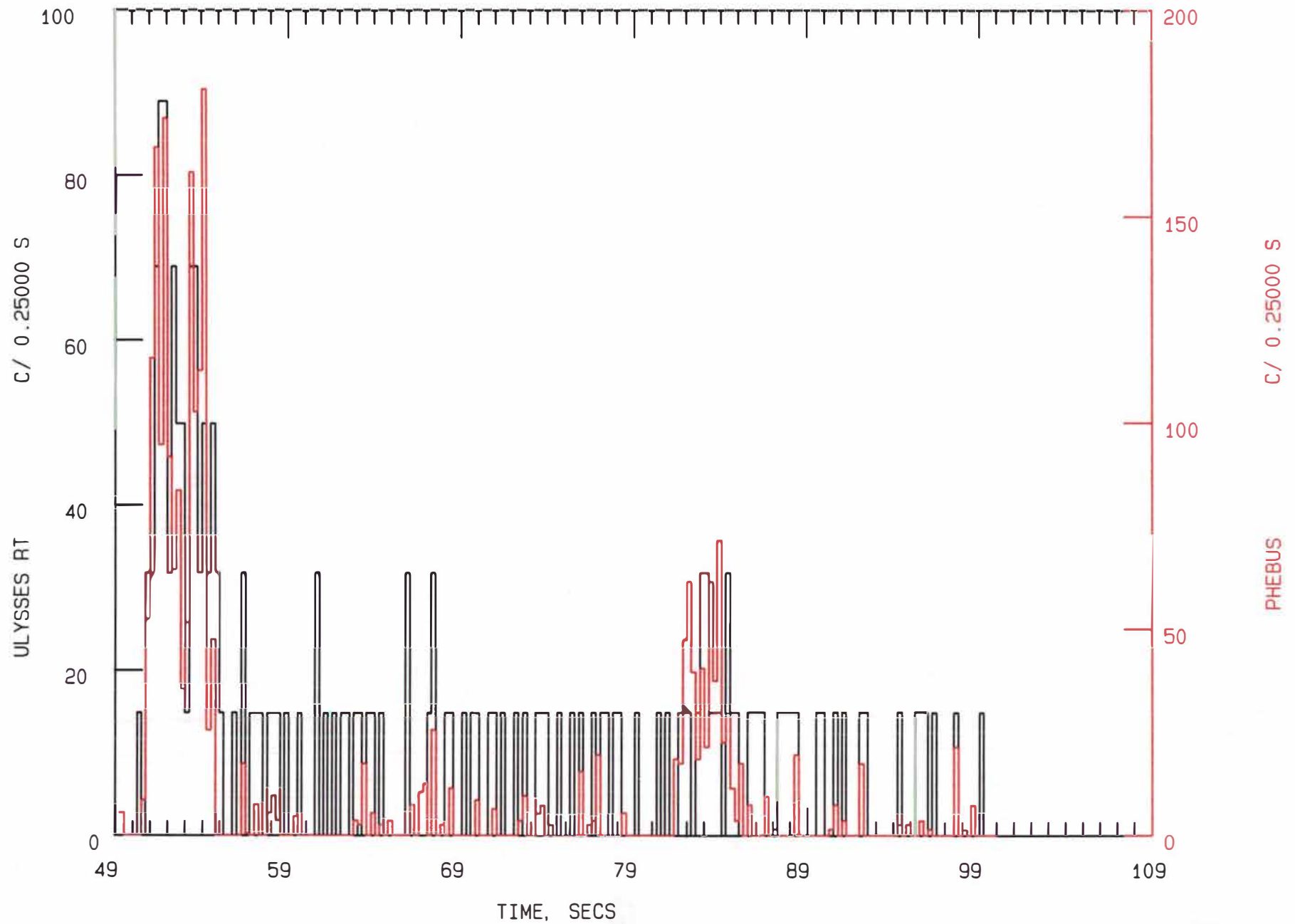
1 ULYSSES

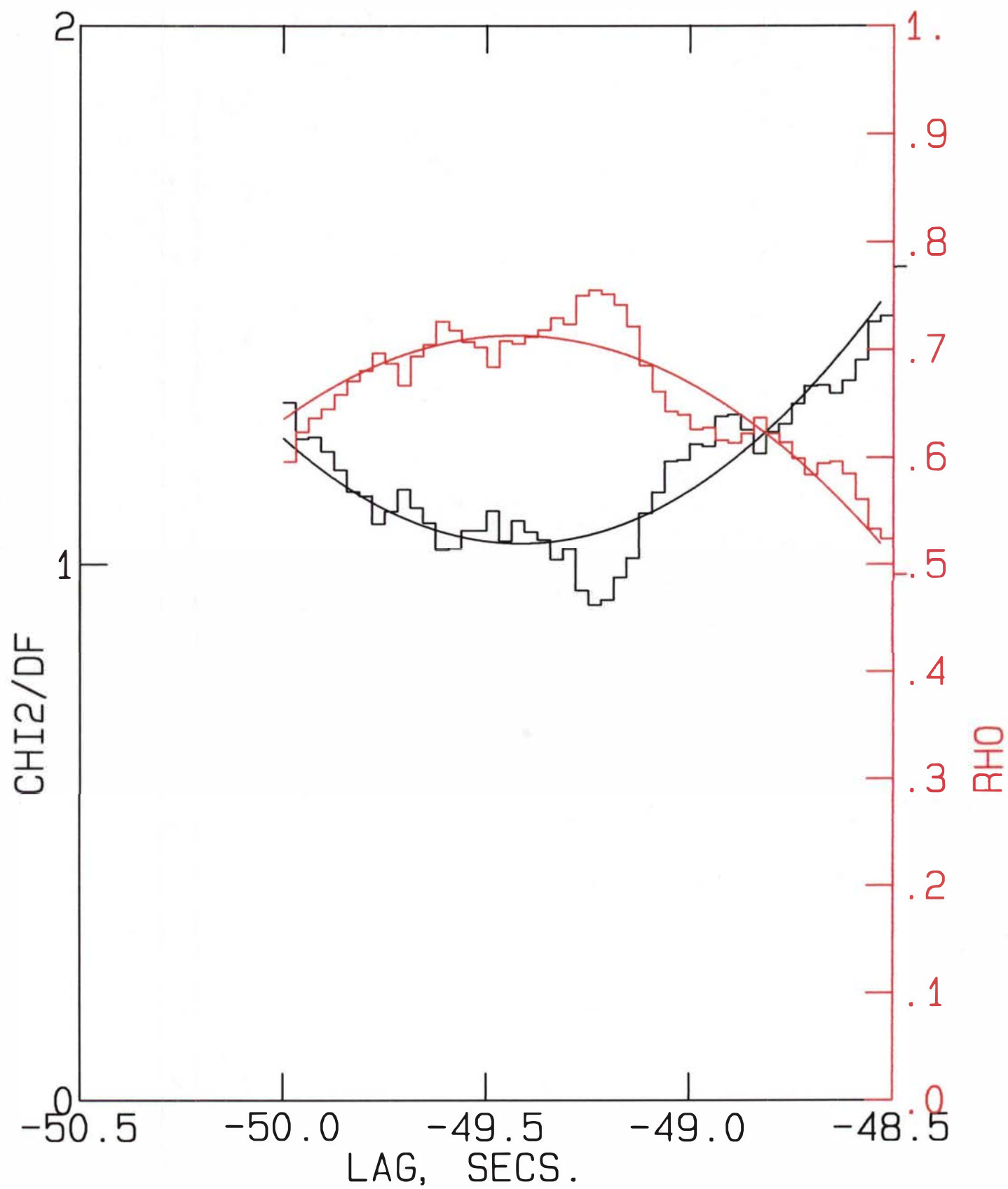
2 PHEBUS

EVENT OF SEP 25, 1992 20:01

1 / 4/99



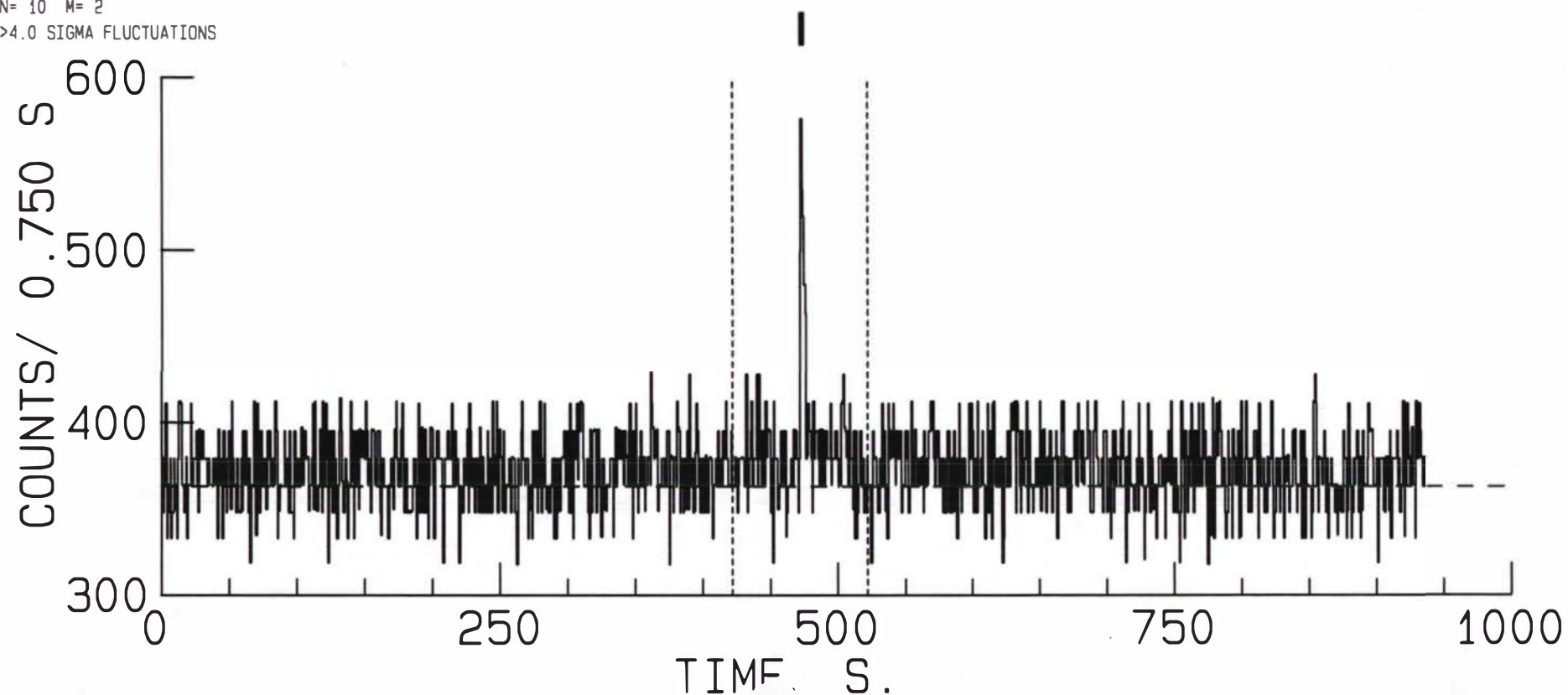




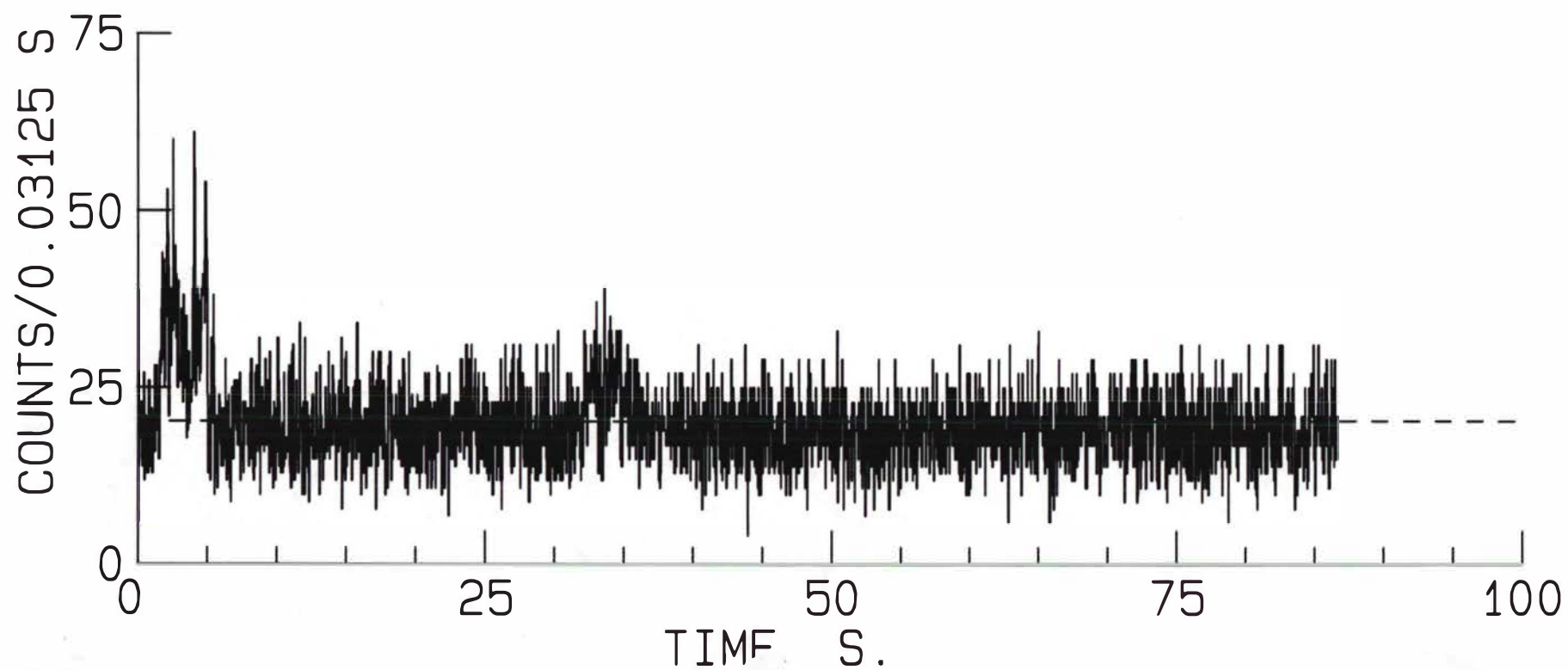
ULYSSES RT
25/ 9/92 71676.159 s
0.250 S INTERVALS REGROUPED BY 3
22- 149 keV

1 / 4 / 99

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



PHEBUS
25/ 9/92 73839.406 s
100- 1600 keV



From plaga@HEGRA1.mppmu.mpg.de Mon Oct 14 10:47 PDT 1996
Return-Path: <plaga@HEGRA1.mppmu.mpg.de>
Received: from HEGRA1.mppmu.mpg.de by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
id KAA15964; Mon, 14 Oct 1996 10:47:02 -0700
Received: from HEGRA5.MPPMU.MPG.DE by HEGRA1.mppmu.mpg.de; (5.65/1.1.8.2/24Mar96-0858PM)
id AA14748; Mon, 14 Oct 1996 18:50:42 +0100
Received: by HEGRA5.mppmu.mpg.de; (5.65/1.1.8.2/02Apr96-8.2MPM)
id AA25958; Mon, 14 Oct 1996 18:49:08 +0100
From: Rainer Plaga <plaga@HEGRA1.mppmu.mpg.de>
Date: Mon, 14 Oct 1996 18:49:08 +0100
Message-Id: <9610141749.AA25958@HEGRA5.mppmu.mpg.de>
To: khurley@sunspot.ssl.berkeley.edu
Subject: GRB 25.9.1992
Content-Type: text
Content-Length: 2904
X-Lines: 63
Status: RO

Dear Dr Hurley,

I would like to kindly ask you for additional information on a burst seen by the IPN, for which we have some indication for TeV emission.

The burst in question was found in a search for GRBs in the data recorded by the Cherenkov air shower detector AIROBICC on La Palma (energy threshold ~ 16 TeV) in its first year of operation (March 92 - March 93).

For the GRB of 25 Sep 92 22:46:01 UT (duration ~ 5 min, big fluence, observed only by WATCH and ULYSSES, and therefore one IPN ring exists), which had optimal viewing conditions, we found a fluctuation with probability less than 10^{-4} within the search interval, but 9 deg. away from the WATCH nominal position and ~ 40 sec prior the WATCH trigger. The fluctuation is 2.5 deg. away from the IPN arc (see postscript plot attached in the following e-mail).

We estimated that the systematic pointing error of AIROBICC is around 0.2 deg., and so it cannot explain the disagreement of AIROBICC with WATCH and IPN. A timing error is discarded because the absolute accuracy of our Rubidium clock (connected to a GPS system) is at least 1 sec and we have a second clock for extra check.

We are preparing a publication with the observational results and in order to clarify whether this fluctuation has a statistical origin or might be actually due to GRB emission, we would kindly request that you check again your data and the localization of that burst. We also would like to have as much information of this burst as possible, i.e., time profile, intensity, particular incidences, etc.

We would like to know if it is possible that an error might happen that explains the disagreement. For instance, an error obtaining the time difference between WATCH and ULYSSES could explain the disagreement of AIROBICC with IPN (but probably not with WATCH). Such an error could arise if different peaks of the burst were used. We have the time profile of this burst as seen by WATCH and it shows two main peaks. WATCH was triggered by the first one which was lower than the second one. If it is possible that ULYSSES was triggered by the second one, that would induce a timing error of more than 2 minutes (separation of both main peaks) which would move IPN a lot.

We have checked the angular distance between WATCH and IPN for other bursts in the IPN catalog and we have found 2 cases (out of 26) in that the minimum separation between WATCH and IPN was much bigger than the quoted errors. There are also other bursts for which this separation, if not excessive (as the ones above), is out of the expectation for the quoted errors and the size of the sample. Could this discrepancy be due to IPN through the above mentioned mechanism?

Thanks a lot for your assistance

Eckart Lorenz
MPI fuer Physik
Foehringer Ring 6
80803 Muenchen
Germany

email ecl@hegra1.mppmu.mpg.de
Tel 49-89-32354-241
FAX 49-89-3226704

From khurley@sunspot Fri Oct 18 10:28 PDT 1996
Return-Path: <khurley@sunspot>
Received: from scylla.berkeley.edu by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
id KAA01058; Fri, 18 Oct 1996 10:28:25 -0700
Received: by scylla.berkeley.edu (SMI-8.6/SMI-SVR4)
id KAA25484; Fri, 18 Oct 1996 10:32:15 -0700
Date: Fri, 18 Oct 1996 10:32:15 -0700
From: khurley@sunspot (Kevin Hurley)
Message-Id: <199610181732.KAA25484@scylla.berkeley.edu>
To: ecl@HEGRA1.mppmu.mpg.de
Subject: Re: GRB 25.9.1992
Cc: khurley@sunspot
X-Sun-Charset: US-ASCII
Content-Type: text
Content-Length: 3444
X-Lines: 62
Status: RO

Dear Eckart,

Thank you for getting back to me with the details of this fascinating event. I have gone back over the Ulysses and WATCH data, and I conclude that there is no reason to change the triangulation. I am faxing you a few pages to show you the details, which I also summarize below.

The event was clearly detected by Ulysses as a rate increase (as opposed to a triggered event) in the 0.25 s resolution data. On the plot covering about 1000 s you can see the main peak, around 400 s, followed by a secondary peak about 30 s later, and finally, around 800 s, another peak, which may or may not be part of the same event. The Ulysses data in this mode do not have energy spectra, but if we assume an E^{-2} photon spectrum, the fluence was about 8×10^{-6} erg/cm². You mentioned no WATCH peaks separated by about two minutes. In the WATCH data that I have (which lasts 128 s) I find only the first two peaks in the Ulysses data, and no evidence for a peak 2 min later.

On an expanded plot, you will find the Ulysses and WATCH data plotted for the best fitting lag. Note that the two peaks are evident in both Ulysses and WATCH, eliminating the possibility of a 30 s or so error. An associated plot shows how the chi-square and the correlation coefficient of the Ulysses/WATCH time history comparison vary as a function of lag. The chi-square reaches a clear minimum at the same time that the correlation coefficient reaches its maximum, and the minimum and maximum values are reasonable and consistent with other triangulations. Again, a good sign that there are no other possible lags that fit the data better.

Since I do not have the actual coordinates of the event that you saw, I cannot confirm the numbers that you give for the offsets from the WATCH and Ulysses positions. However, I will take your 2.5 degree number as the correct one. To triangulate this event, I assumed a ± 1 s uncertainty in the best lag between Ulysses and WATCH, and this gave an annulus of width ± 0.022 degrees. A 2.5 degree error would be about 113 times as large, and would therefore require about a 113 s adjustment to the time of Ulysses or WATCH. Although there is no way to exclude this absolutely, it would be the first time that such an error was found. In addition, as you note, we would also have to move the WATCH error circle, requiring not one, but two large errors.

You noted that several Ulysses annuli do not pass through WATCH positions. I believe that the explanation for this is the poorly known attitude of the GRANAT spacecraft for many WATCH bursts. That is, although the Russians knew the attitude quite accurately, Niels Lund did not have access to this information. He has recently told me that he has finally acquired the data that he needs to refine the WATCH positions, and we are hoping that these discrepancies will go away. I do not believe that they are due to an incorrect estimate of the WATCH/Ulysses lag. For each event, we examine all the records quite carefully, and do the cross-correlation as a function of lag which you see in the faxed figures. When events have many peaks, and are incorrectly aligned, this is quite evident in the chi-square and correlation coefficient, as well as in the plots of the two time histories.

So, as much as I would love to move the annulus and the WATCH error circle to accomodate your event, I can find no good reason to do so.

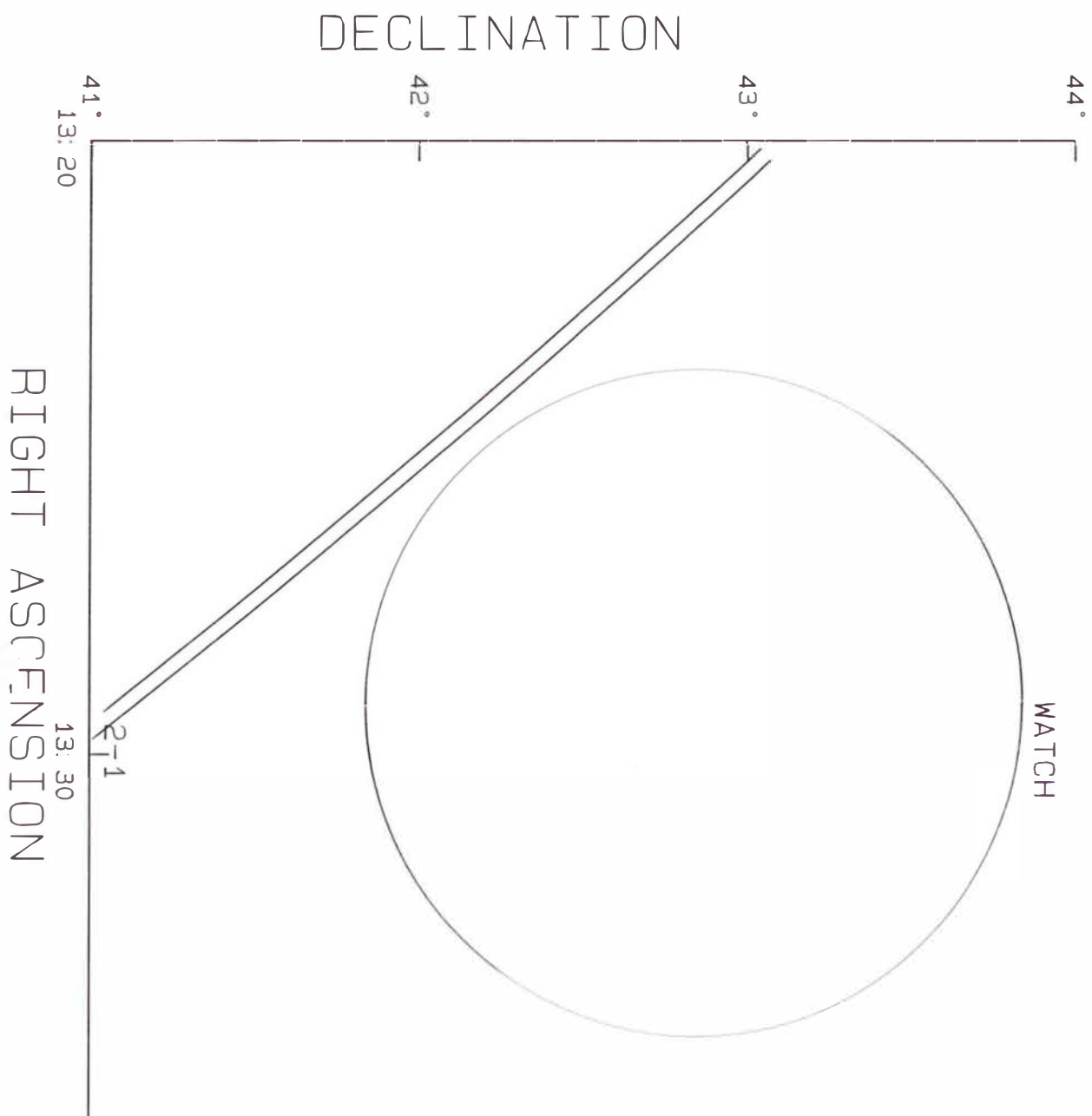
Best regards,

Kevin

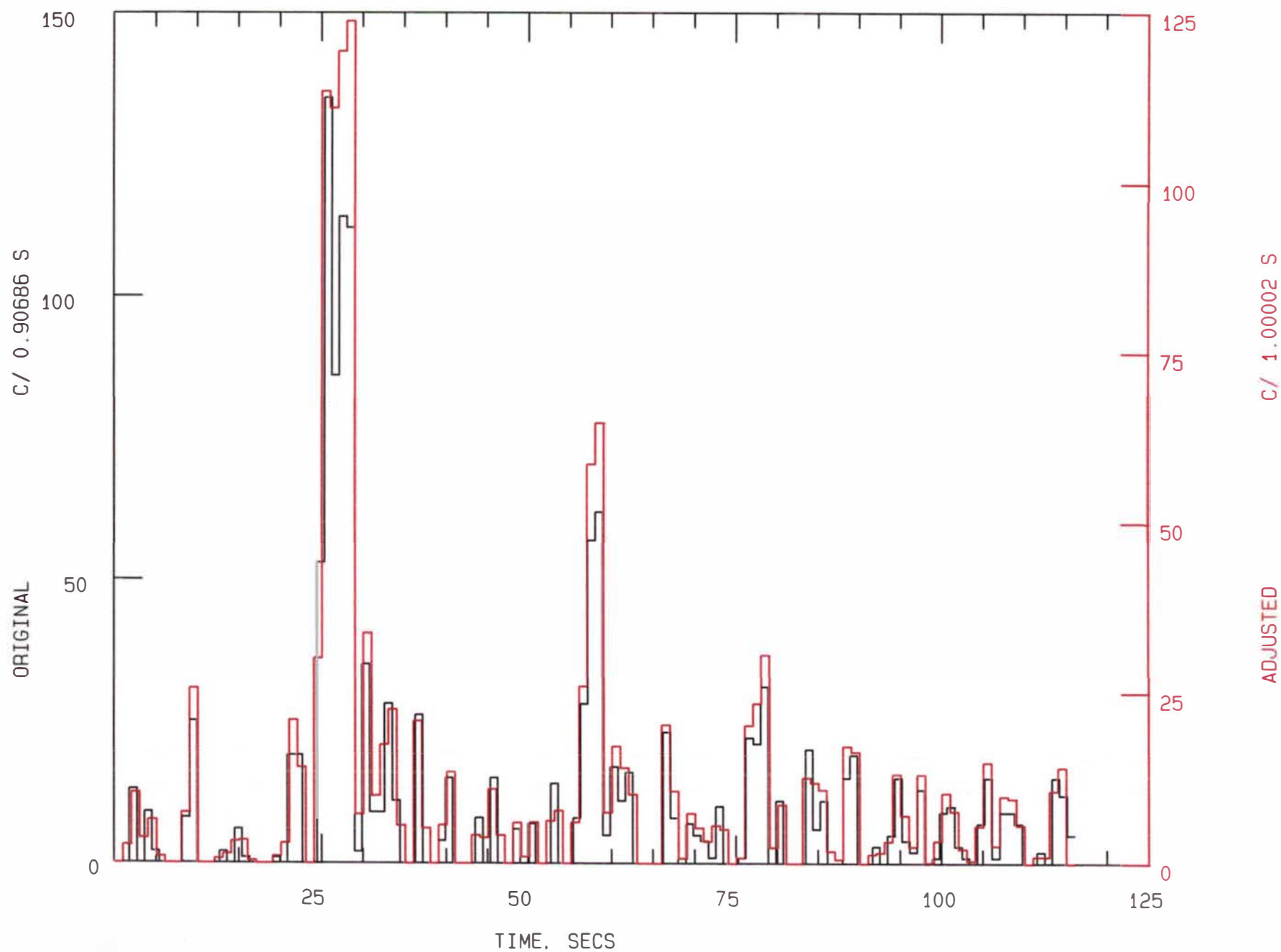
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 WATCH

EVENT OF SEP 25, 1992 20: 01

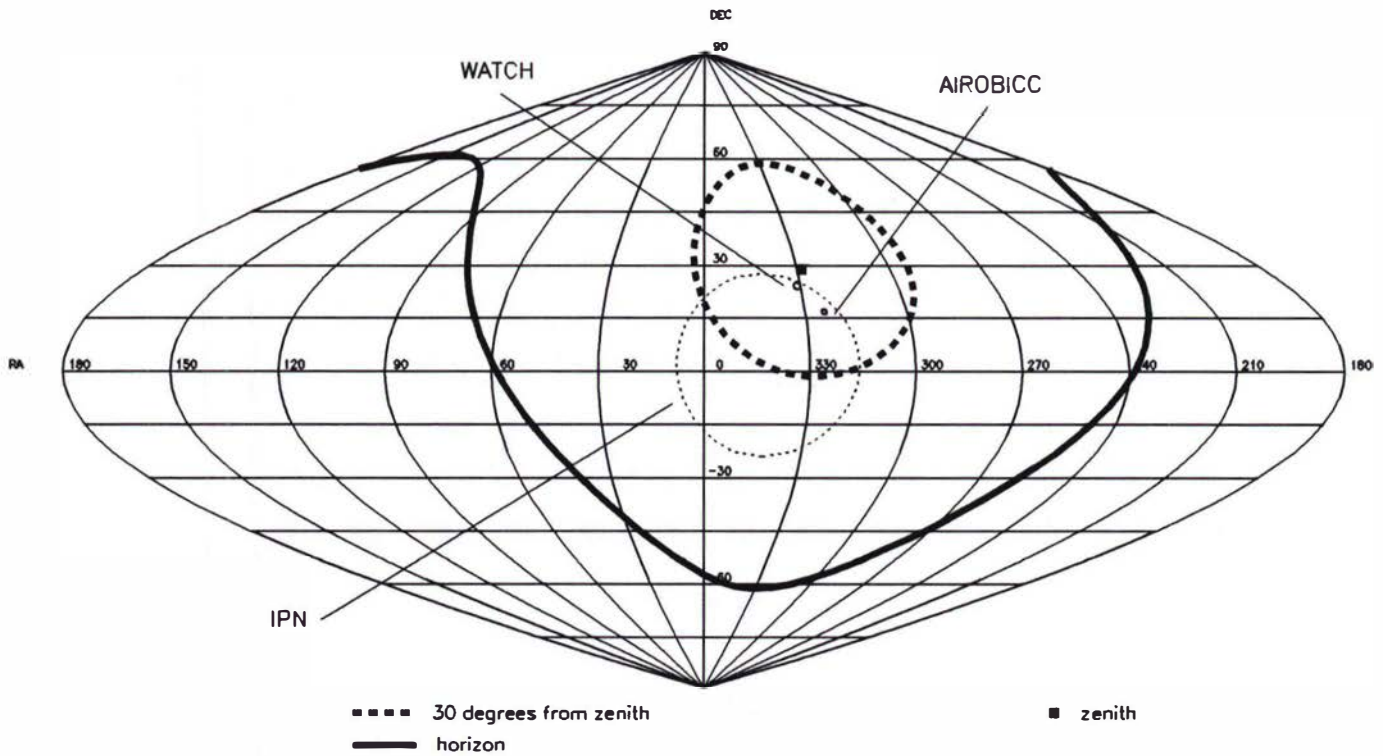
11/10/93



18/10/96



Fri Sep 25 22:46:01 GMT 1992: Where HEGRA is looking at



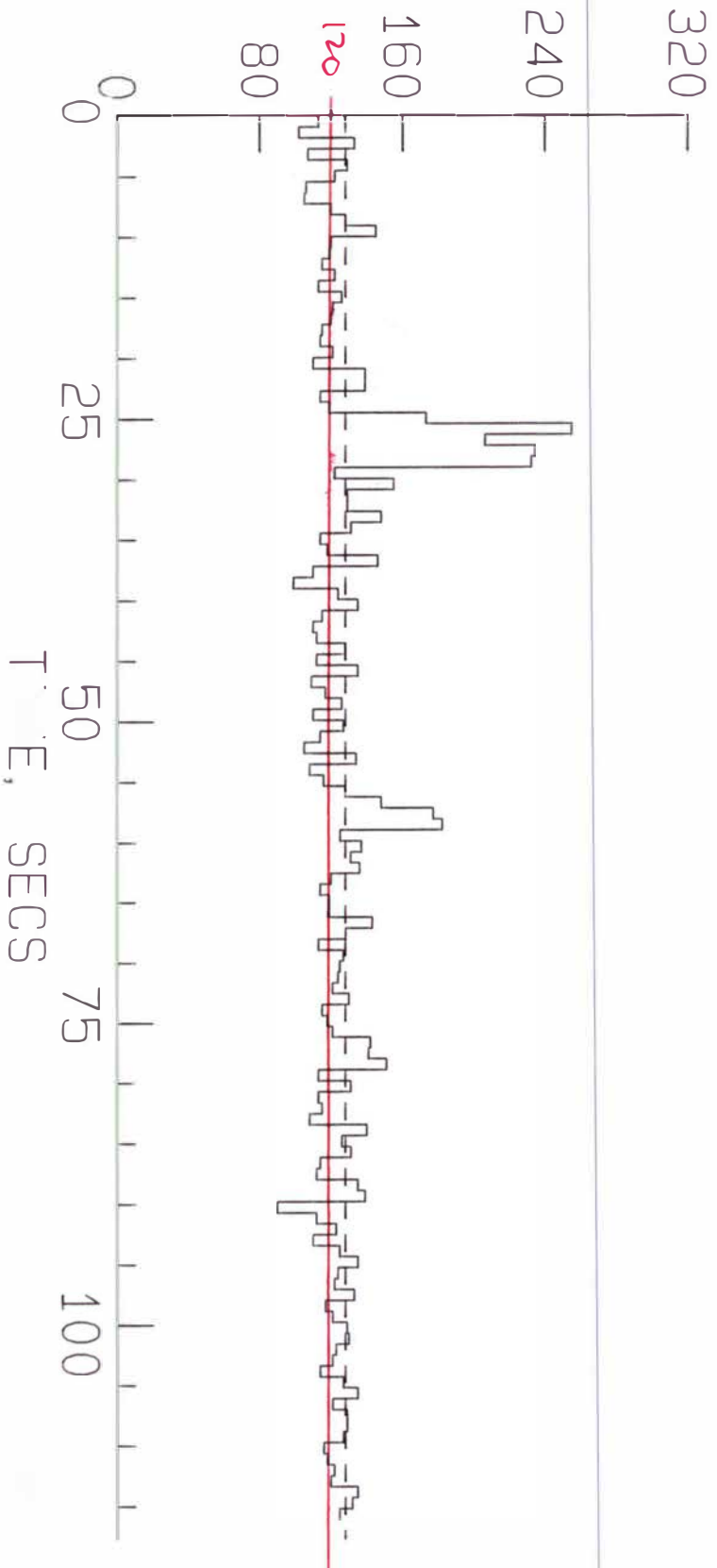
WATCH

25/09/92

73816.941

15- 180 keV

COUNTS/ .907 S



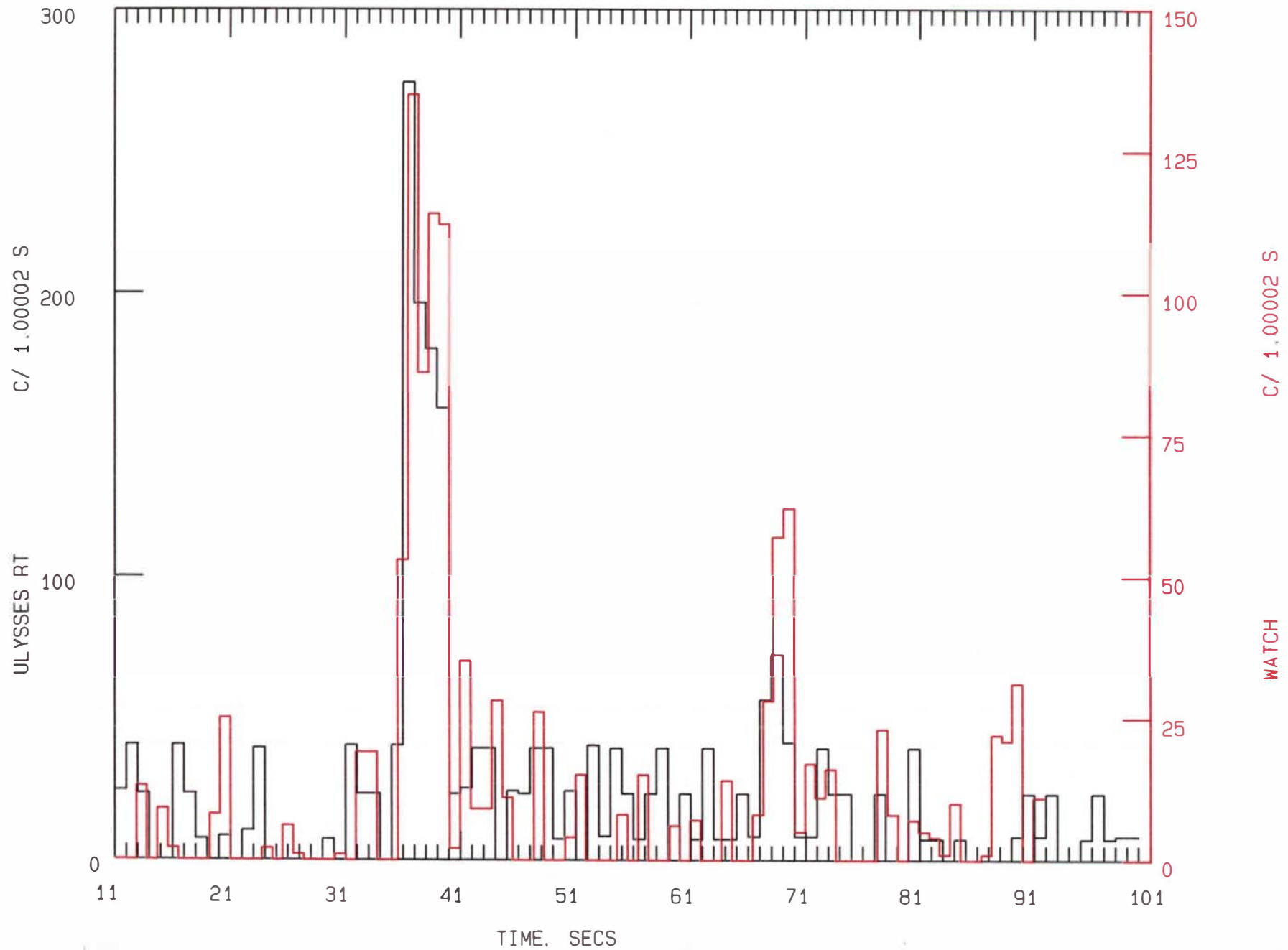
ULYSSES RT-WATCH

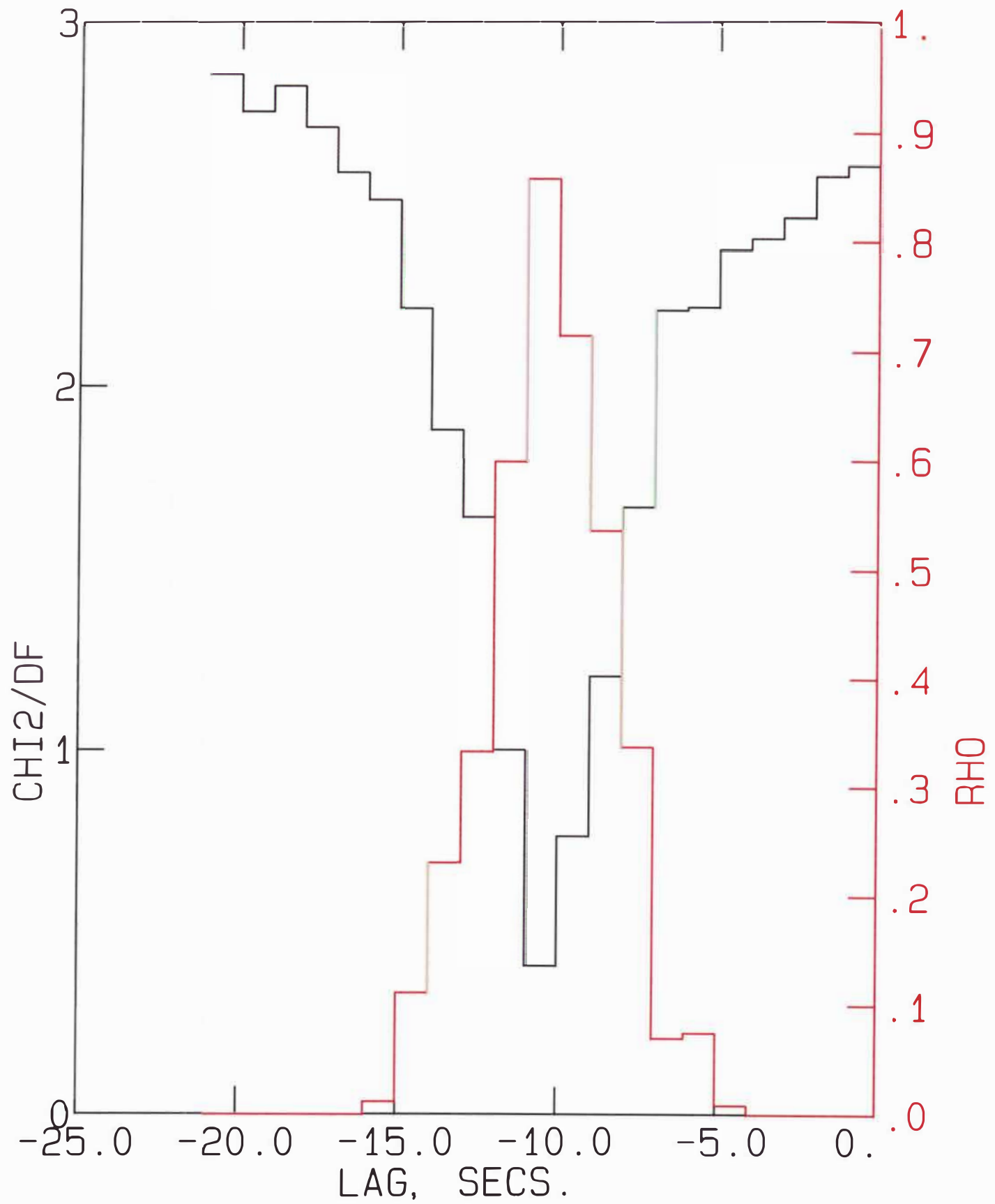
CORRELATION

25/ 9/92

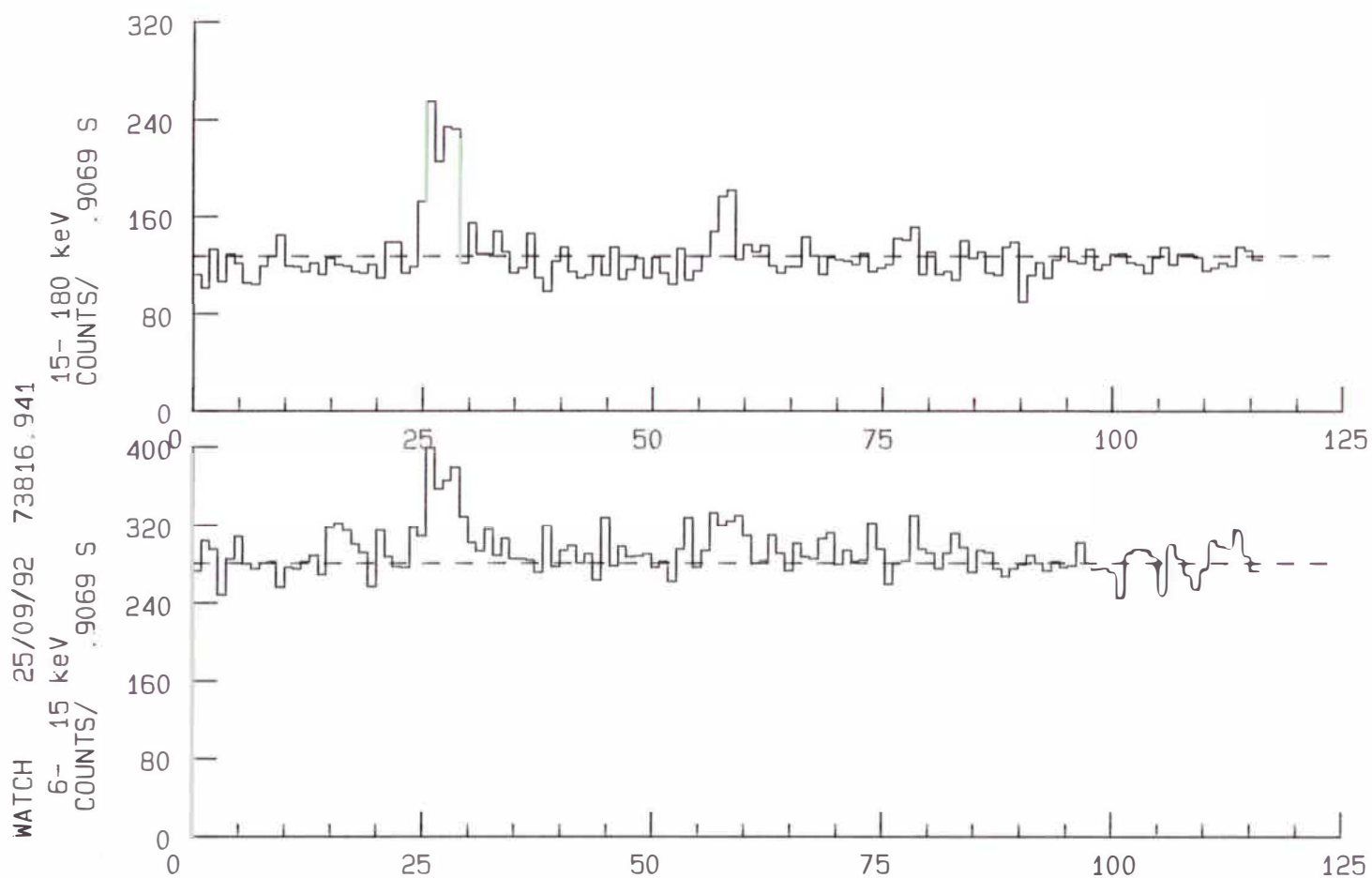
72112.168

18/10/96





7/10/93



CATSEARCH PROGRAM

BATSE BURST # 1956
EVENT OF 1992 SEP 25 DAY OF YEAR=269
EVENT CROSSING TIME AT BATSE : 78316. S. OR 21:45:16.1
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 155.700 66.500
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 25/ 9/ 92 IS:
RA= 161.019 DEC= -1.502 DIST= 6.166 AU
BATSE-ULYSSES DISTANCE = 922462024. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=111.89 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1147.28 SECS.
CROSSING TIME AT ULYSSES IS 77169. S. OR 21:26:08.9 +/- 528.27 SECONDS

RI

From KOSHUT@ssl.msfc.nasa.gov Sat Sep 26 13:24:23 1992
Date: Sat, 26 Sep 1992 15:26:40 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER
NO.: 01956

TIME: TJD=8890 SECONDS=78316

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=39.4 AZIMUTH=94.9 ERROR= DEGREES

COMMENTS:
BURST OF ~ 20 SECONDS DURATION, WITH WEAK FLUX ABOVE 300 KEV.
TIME HISTORY APPEARS AS SMOOTH RISE TO PEAK AT ~ T + 3 SECONDS,
FOLLOWED BY AN EXPONENTIAL FALL TO BACKGROUND.

RI

Halo. corr removed

Date: Dec 9 '97

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

- ☒ ACCESS database updated?

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

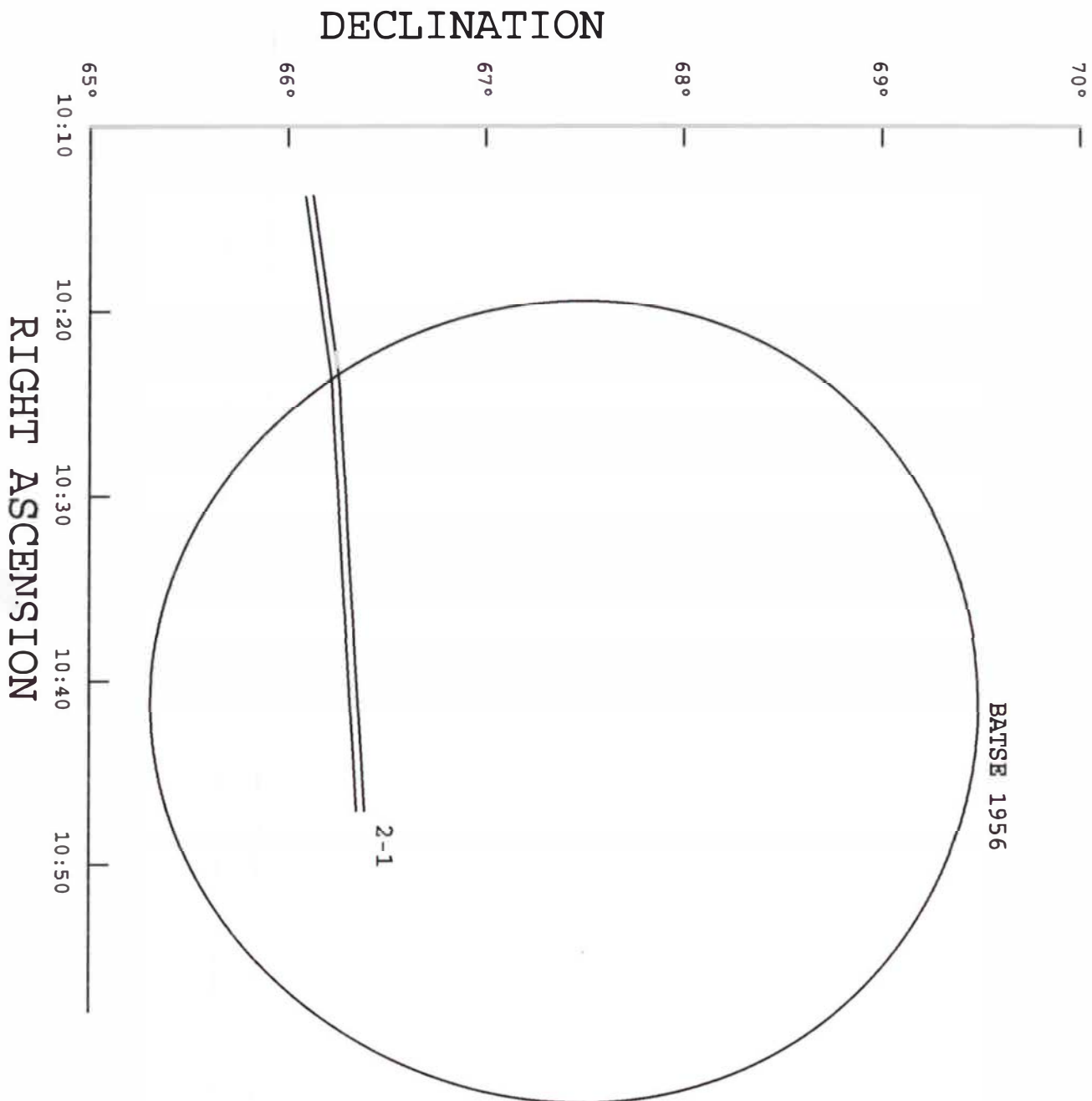
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF SEP 25, 1992 21:25

9/12/97



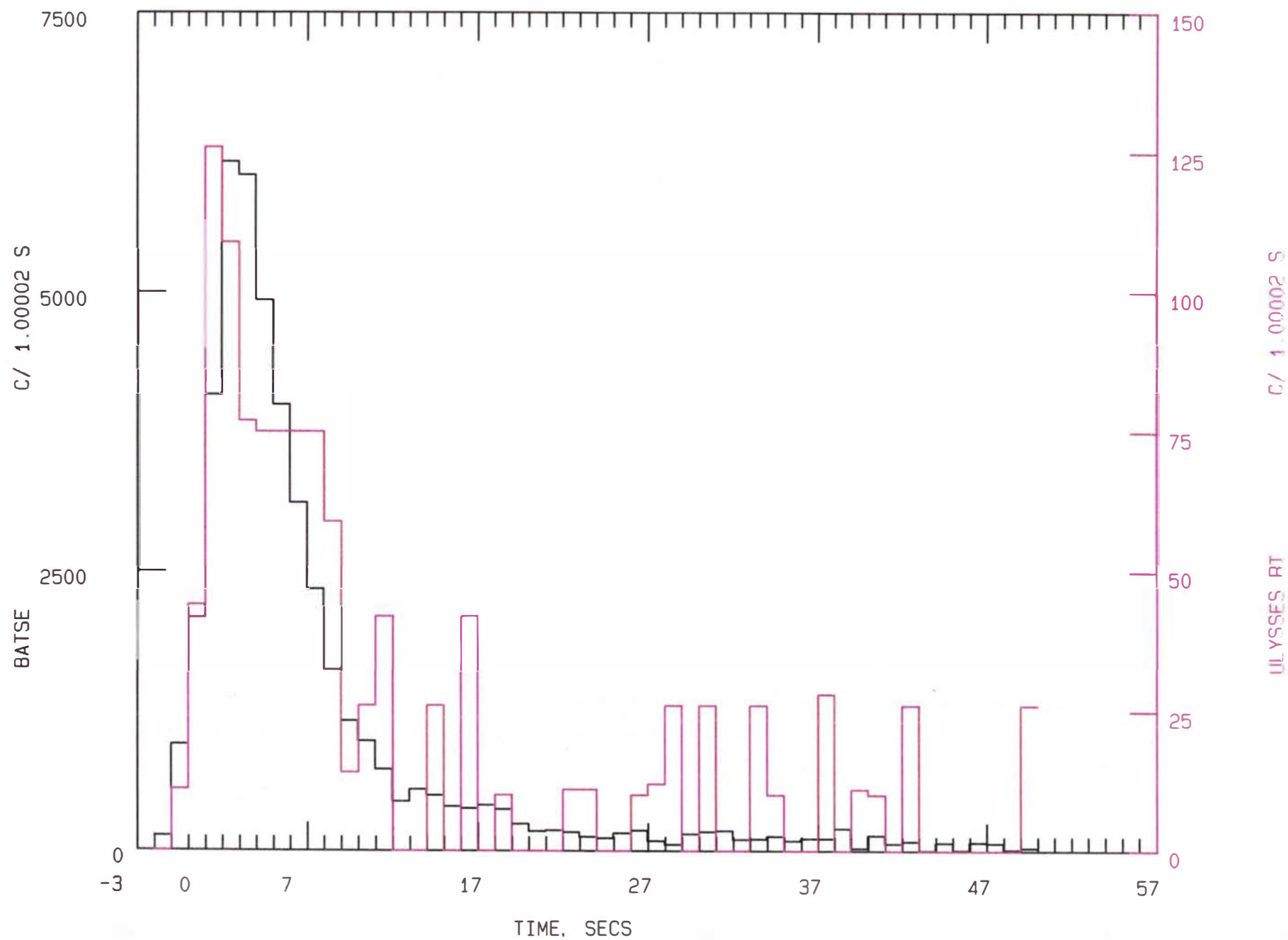
BATSE

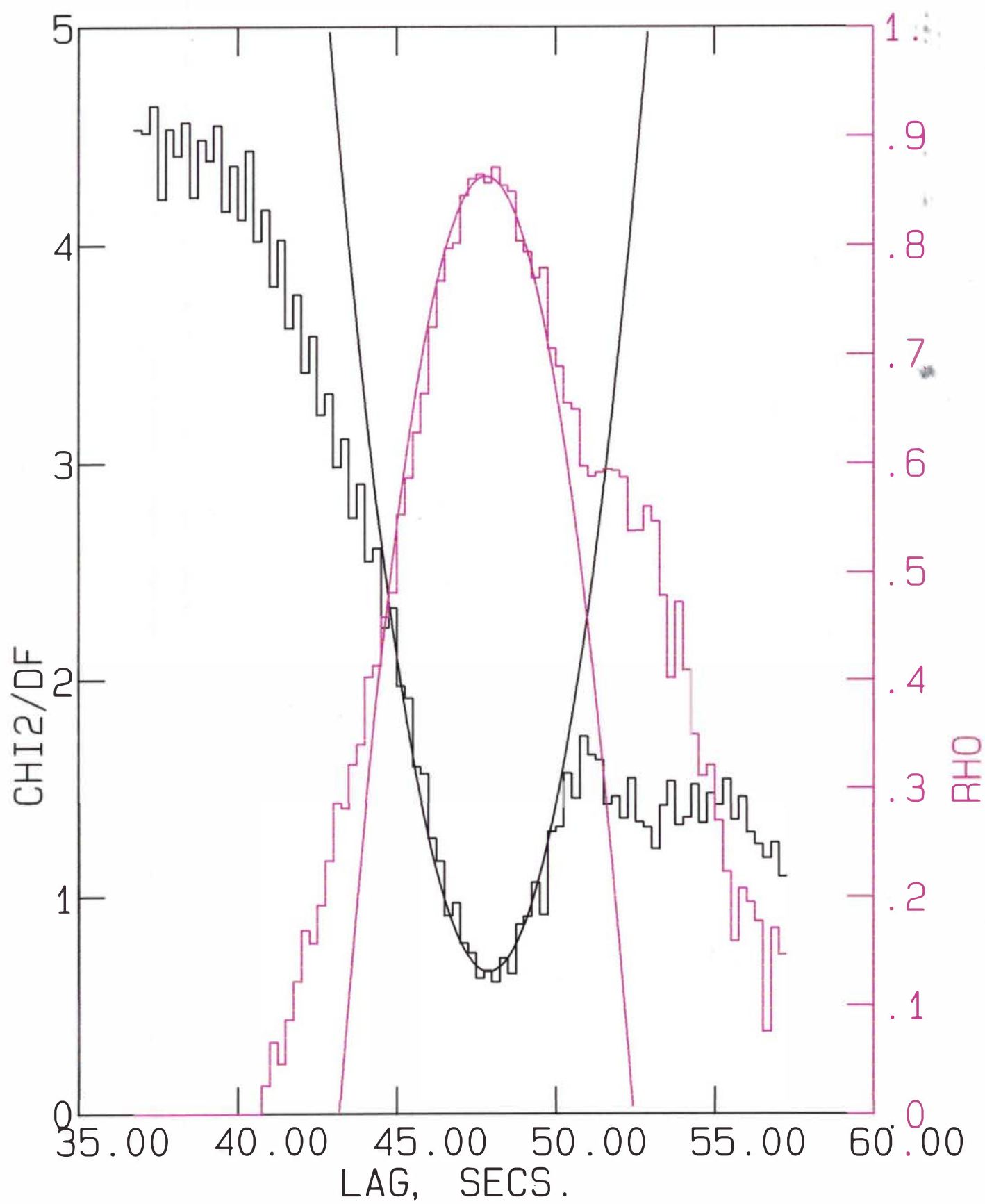
-ULYSSES RT CORRELATION

25/ 9/92

78316.161

9/12/97





ULYSSES RT

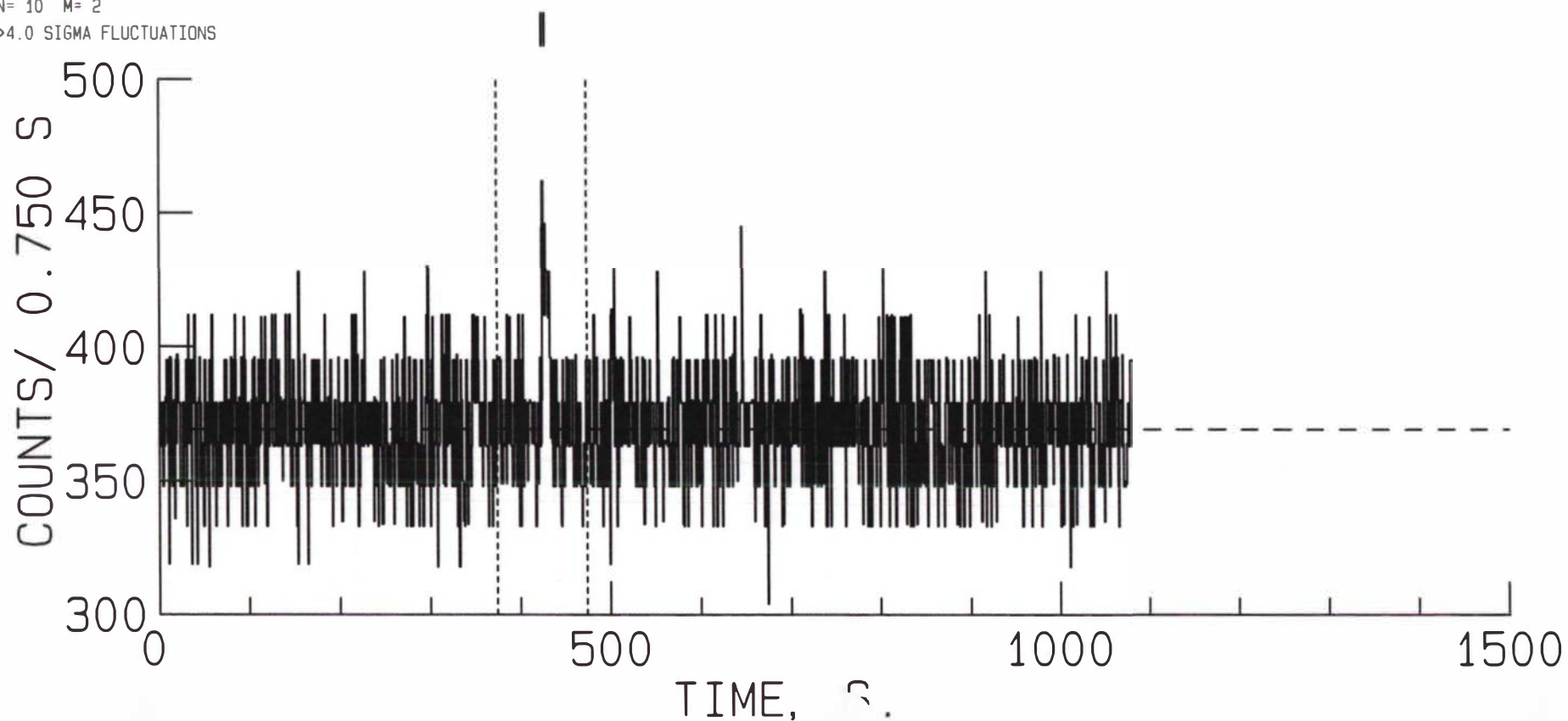
9/12/97

25/ 9/92 76752.240 s

0.250 S INTERVALS REGROUPED BY 3

22- 149 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



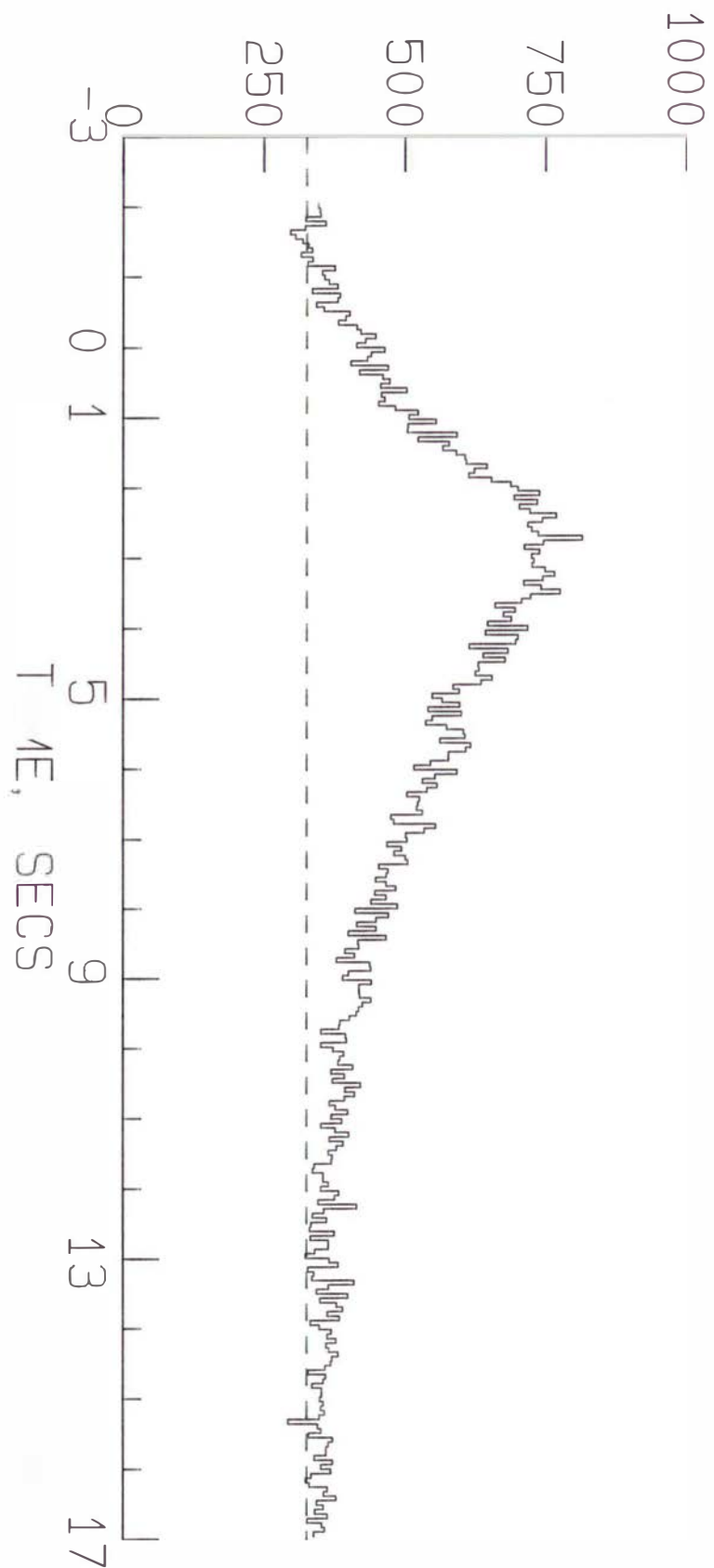
BATSE

25/09/92

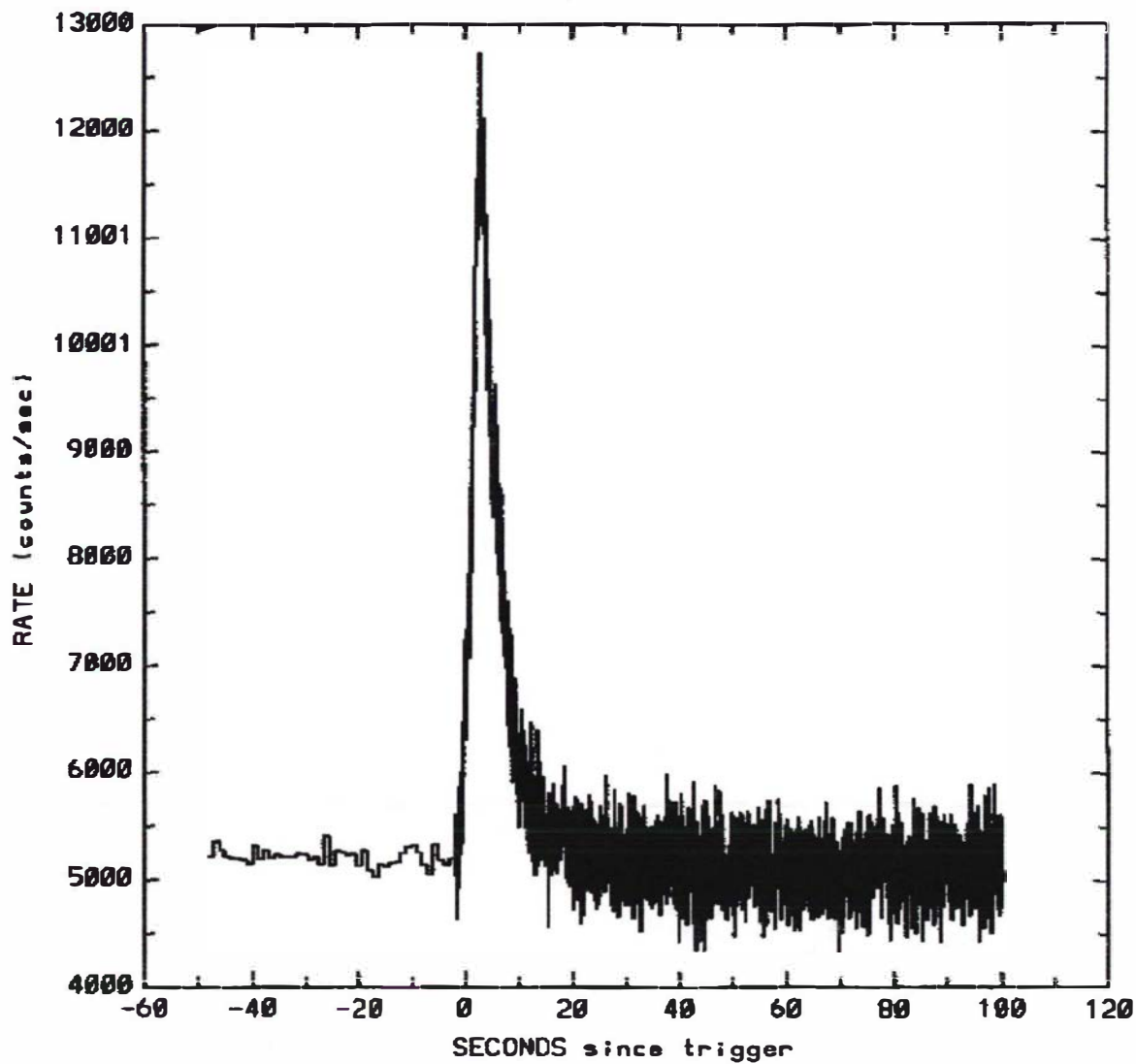
78316.161

30- 100 keV

COUNTS/ .064 S



Data for K. Hurley



14-JUN-1993 10.15.43

Created by HOPS 80
(Burst Display)
Version 2.19

Trigger # : 1956

Trigger Time:
8898 / 78316.162Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: PREB + DISCLAMinimum Integ. Time:
0.064 second(s)Detectors (7..0):
00010001Discriminators:
1 1, 2)Quality Mask:
BOTSP1

From kouveliotou%batse.span@Sdsc.Edu Thu Oct 7 15:02:35 1993
Date: Thu, 7 Oct 93 22:05:27 GMT
From: kouveliotou%batse.span@Sdsc.Edu (Chryssa Kouveliotou NASA/MSFC (205) 544-7711)
Subject: Kevin, is there an IPN location for any of them ?
To: khurley@sunspot.ssl.berkeley.edu
X-St-Vmsmail-To: HURLEY
Content-Length: 524

From: MPE::MPECR1::JCG 7-OCT-1993 16:20:21.32
To: MPE::BATSE::KOUVELIOTOU
CC: MPE::8858::COLE
Subj: GRB/optical

Dear Chryssa,

Don't even have BATSE coords
due to the changes for GB 920630 19436 we have now a simultaneous plate
(Hudec), so I ask for the coordinates.

yes Second question: We have found optical activity on simultaneous plates for
GB 920925 78316 and GB 920525 02506. Can you communicate the error radii
for these two locations? ~~Do you have~~ improved coordinates compared to those
which we got from you???

Didn't observe it

Best regards
Jochen

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

No helio or clock corr even applied

Date: Dec 2 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

BATSEARCH PROGRAM

WATCH

~~BATSE BURST~~

EVENT OF 1992 SEP 25 DAY OF YEAR=269
EVENT CROSSING TIME AT BATSE : 82154. S. OR 22:49:14.0
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 330.000 26.000
BATSE PEAK COUNTING RATE: 0 C/S
EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 25/ 9/ 92 IS:
RA= 161.019 DEC= -1.502 DIST= 6.166 AU
BATSE-ULYSSES DISTANCE = 922462024. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 26.69 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 2749.03 SECS.
CROSSING TIME AT ULYSSES IS 84903. S. OR 23:35:03 +/- 331.74 SECONDS
8.37 SECONDS

RI

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

G=GALACTIC EQUATOR

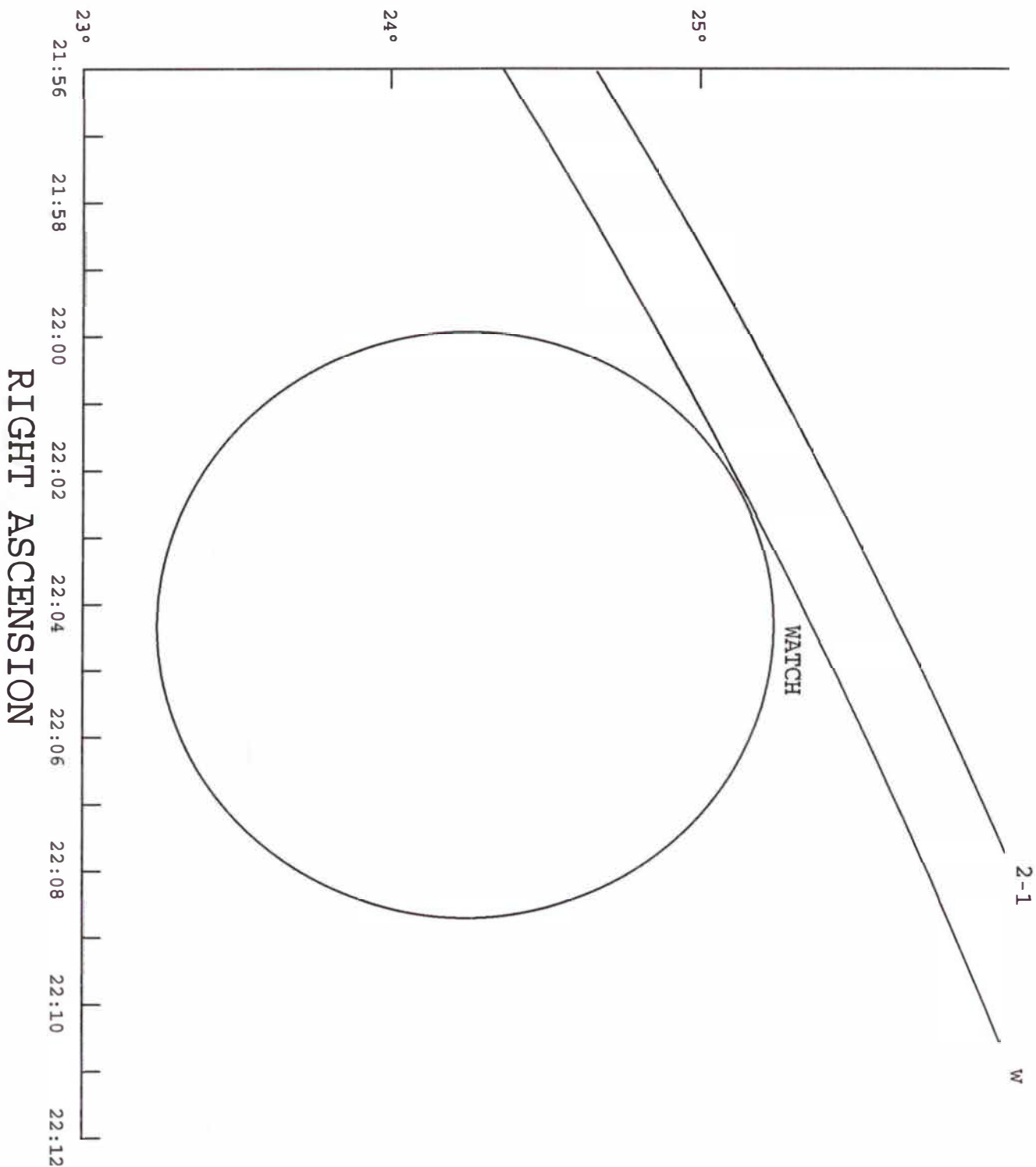
1 ULYSSES

2 WATCH

EVENT OF SEP 25, 1992 23:35

21/10/96

DECLINATION



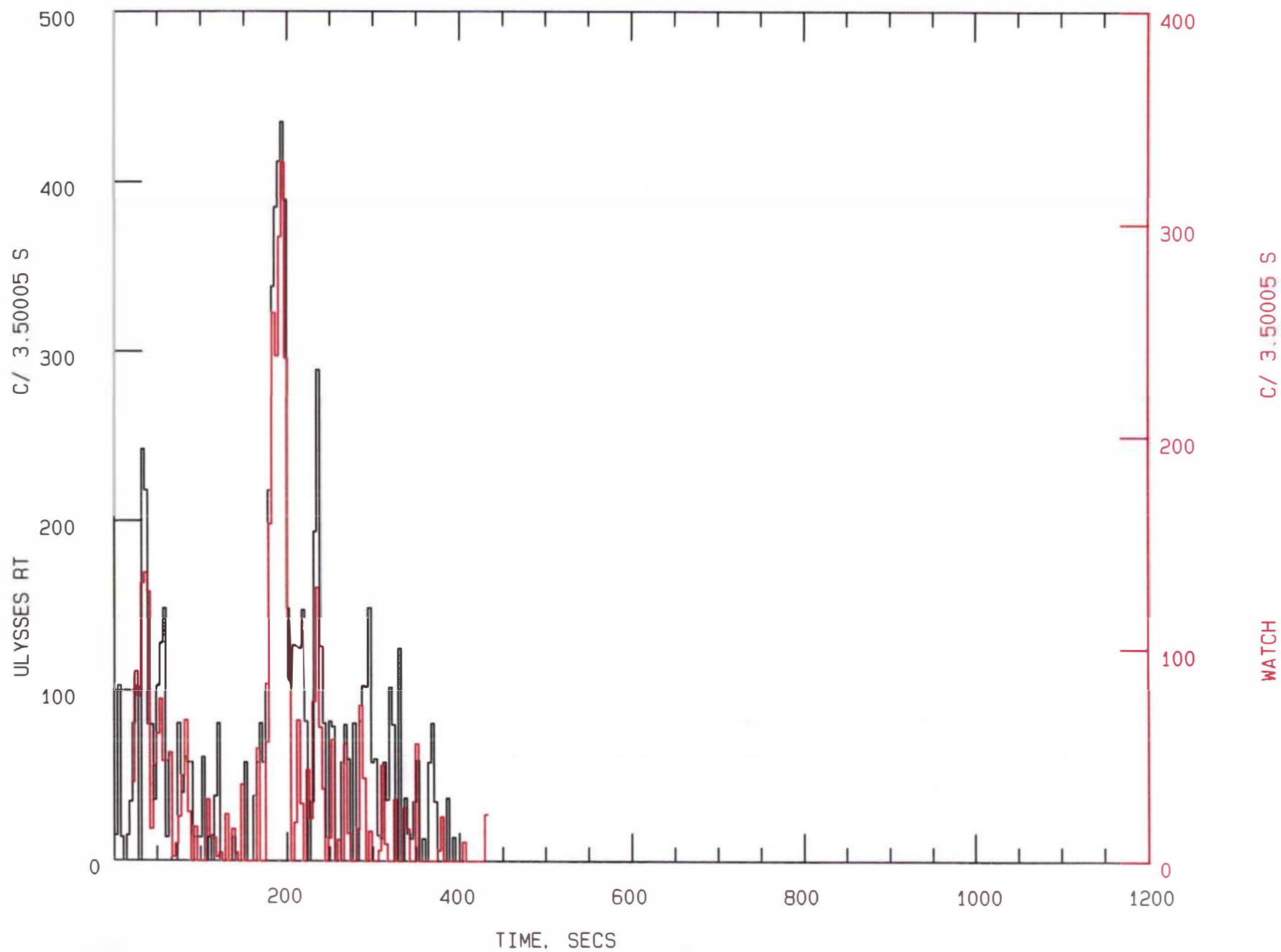
ULYSSES RT-WATCH

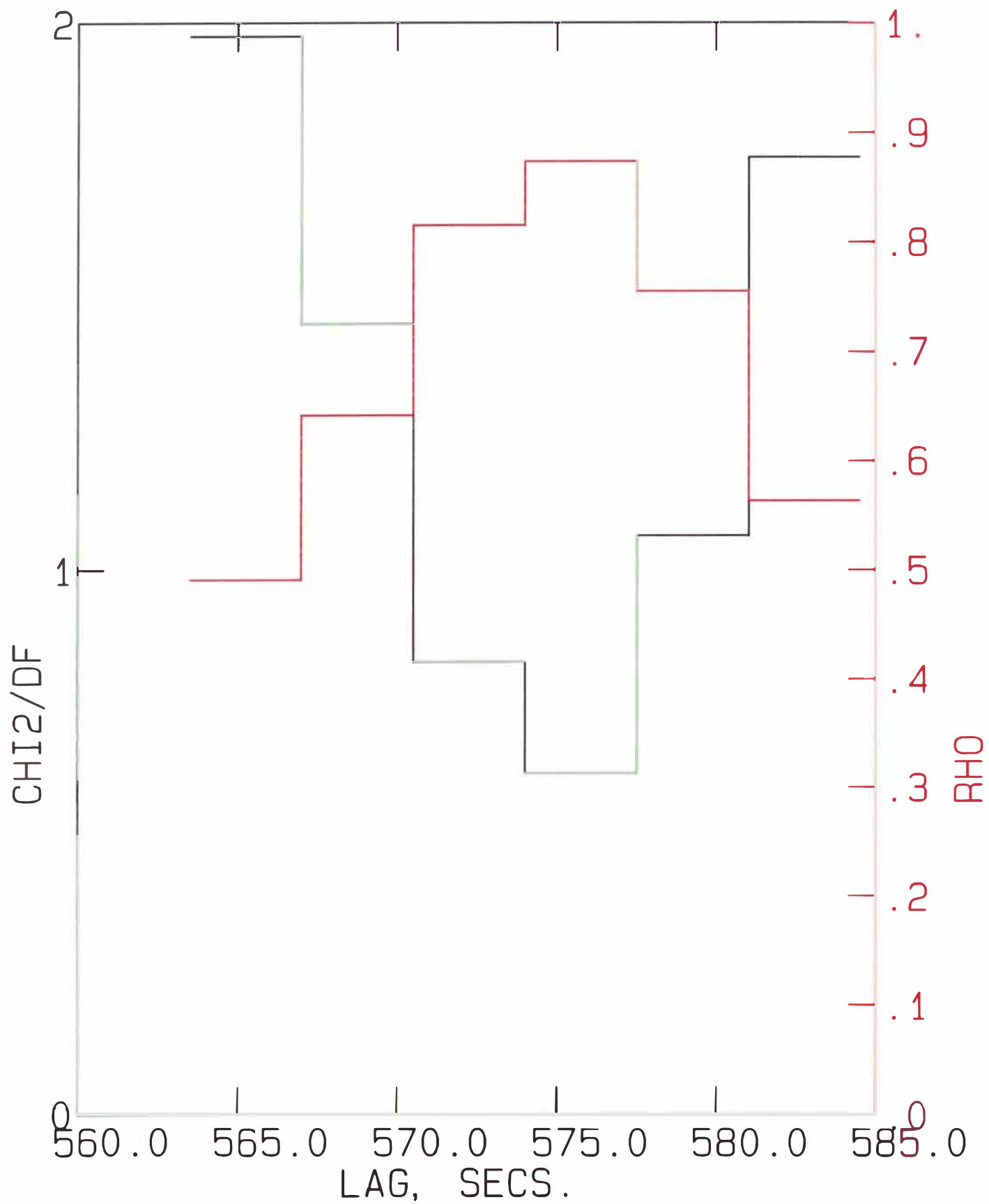
CORRELATION

25/ 9/92

84728.363

21/10/96





ULYSSES RT

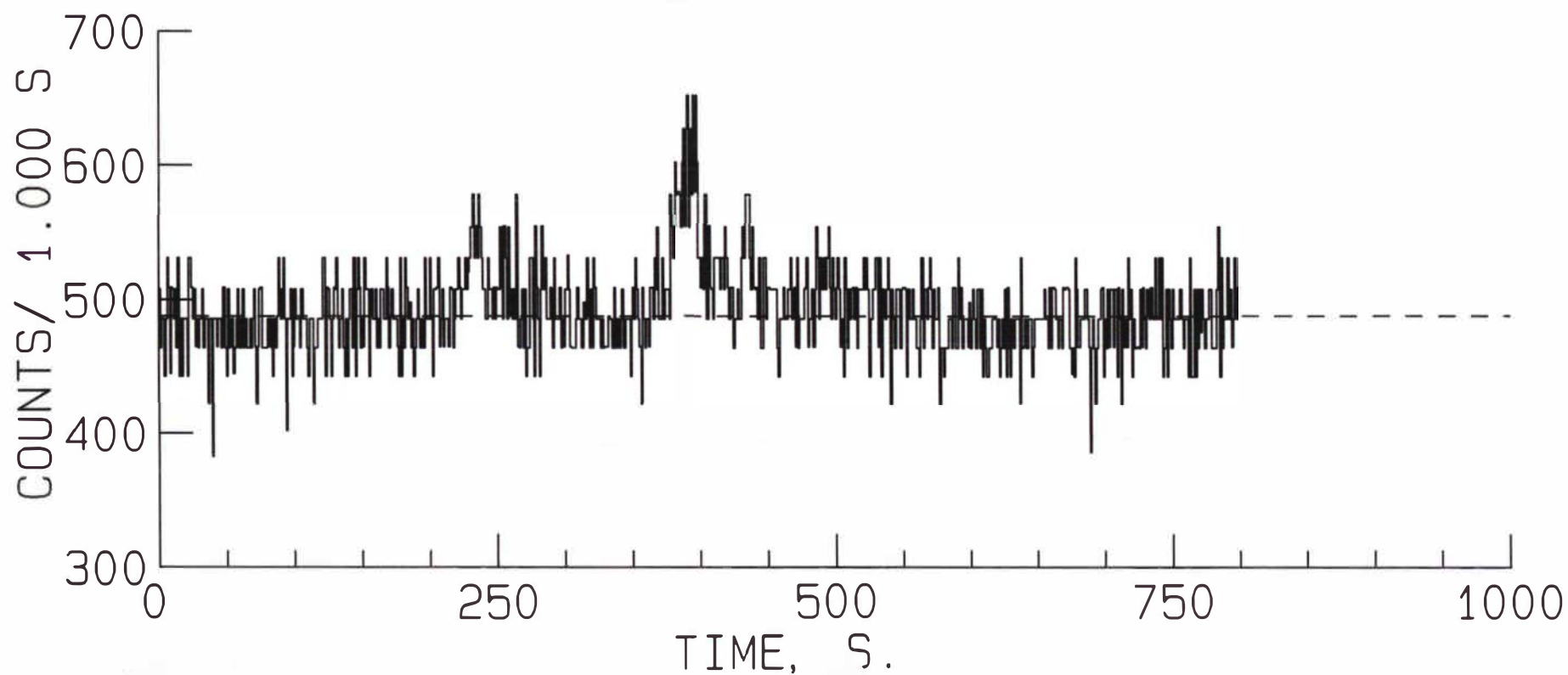
21 / 10 / 96

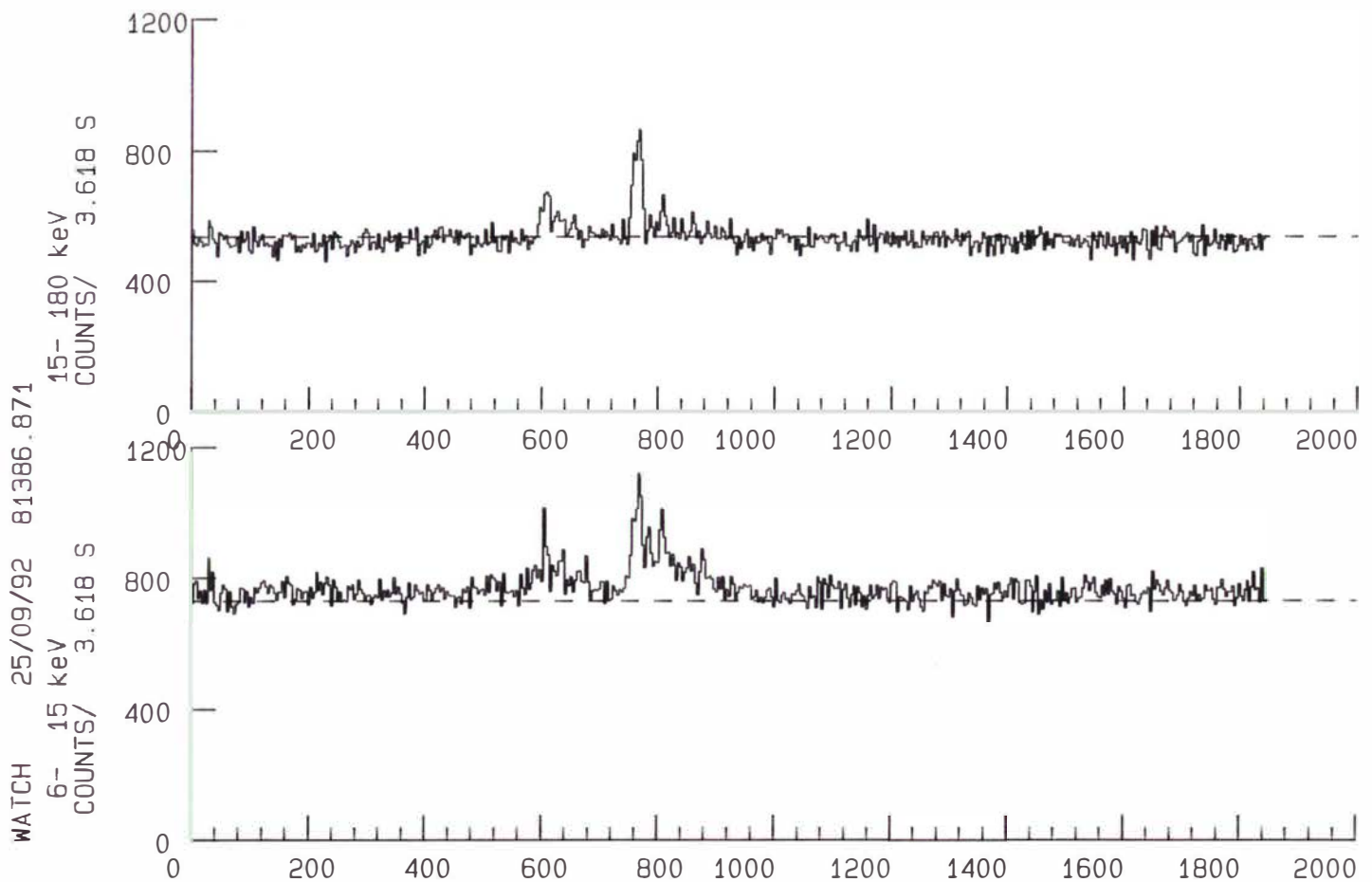
25/ 9/92 84528.363 s

0.500 S INTERVALS REGROUPED BY 2

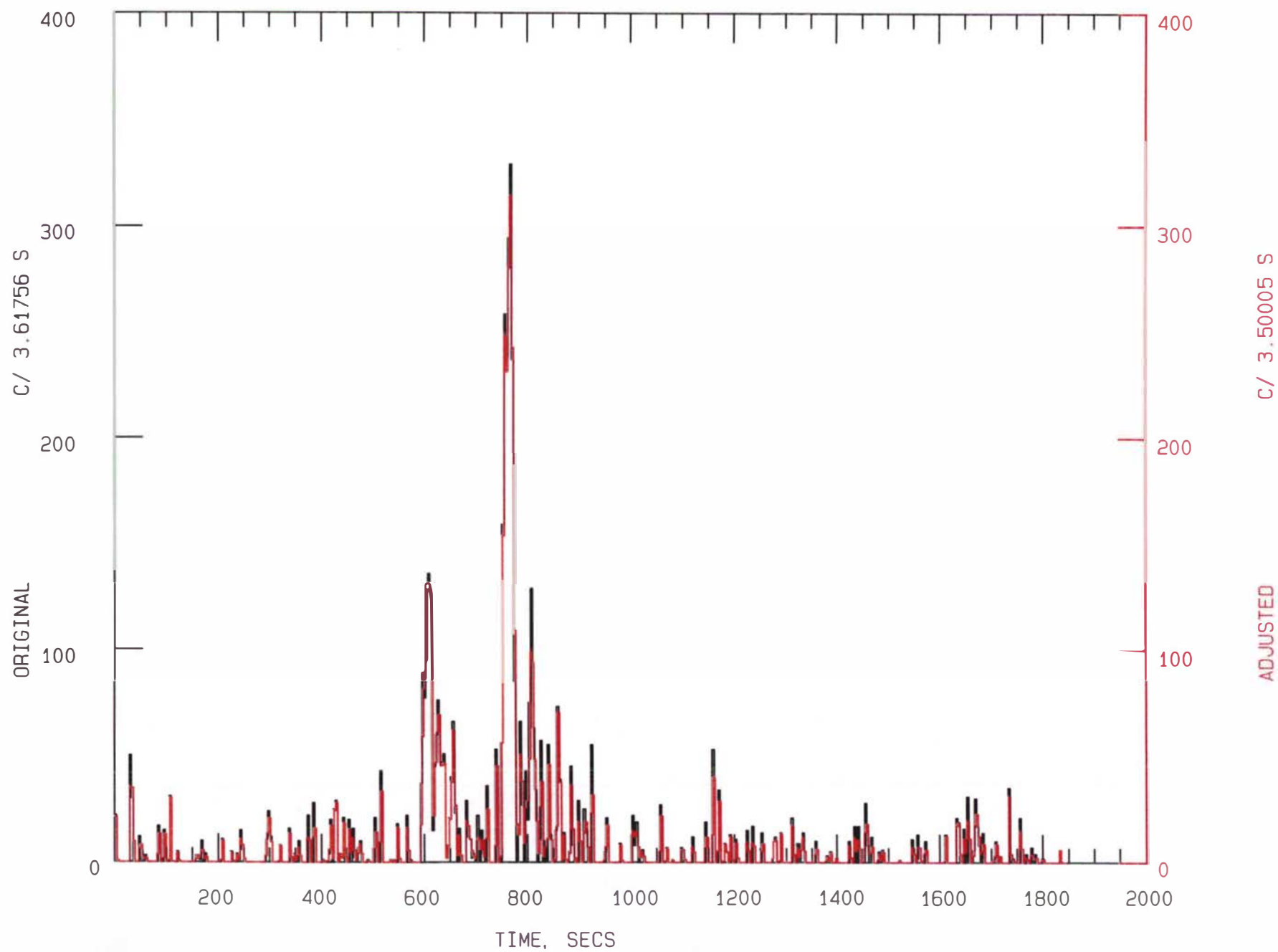
22- 149 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





21/10/96



Version 3.0 sep. 12 1993.

The data given below is pre-publication data. The data should not be quoted without prior consultations with the WATCH-GRANAT collaboration. The list is prepared in support of searches for counterparts or multi-spacecraft identifications. The positions given for the localized sources are in most cases based on the fitted mean attitude of GRANAT. The positional uncertainty is 1 degree error circle radius.

#	date	UT-time	sd	l(s)	m(s)	m/l	position(1950)	Q	t	comments	#Wm	sdp	theta	phi
1	900118	17:40:47	33	280	225	1.1	11h36.3m -44.7	F3	8	4 peaks	0423	28	22.42	26.50
2	900126	18:04:27	146	25	11	0.5	08h44.6m -38.0	F3	r	2 peaks, soft tail	0481	70	21.35	138.49
3	900222	11:56:34	38	33	15	1.5	22h29.9m 35.1	F3	1	1 peak, soft tail	0650	25	20.16	144.39
4	900708	11:30:20	36	160	95	2.0	12h22.3m 31.4	F3	1	3 peaks	1490	29	58.49	90.41
5	900901	01:35:46	36	230	110	4.0	18h19.4m -44.8	F3	4	4 peaks	1811	28	39.58	167.23
6	900925	20:25:22	18	45	42	1.2	8h56.0m -35.3	F3	1	Structured event	1970	13	50.37	264.93
7	900929	01:49:48	40	180	180	1.3	11h12.9m -06.6	F3	r	2 groups of spikes	1990	32	44.31	344.08
8	901009	00:15:50	30	11	9	3.5	23h12.1m +29.6	F3	1	1 peak	2041	17	52.34	319.13
9	901116	01:42:08	19	15	15	2.2	02h36.7m +25.1	F3	8	1 peak	2241	11	53.92	15.72
10	901219	21:52:52	24	50	35	2.2	23h06.9m -53.9	F3	8	1 peak	2490	18	57.94	83.18
11	910122	15:13:35	28	127	-	0.0			1	Soft, structured	2670	25	42.26	142.13
12	910219	11:45:24	43	67	54	0.7	14h12.5m 59.0	F3	r	2 peaks	2813	29	25.97	230.72
13	910310	13:02:05	81	41	40	2.5	12h11.9m 06.4	F3	1	3 peaks	2931	40	51.36	351.15
14	910627	04:29:24	20	11	-	0.4	13h14m -03.2	I2	1	1 peak. X-burst?	3643	18	20.70	262.04
15	910821	10:33:56	21	66	66	0.5	23h31.8m -72.6	F3	4	Struct. + sharp pk.	3991	14	51.52	116.19
16	911016	11:03:30	22	160	-	0.1	19h47.8m -04.8	F3	8	very soft, 2 peaks	4381	17	32.03	227.19
17	911202	20:28:59	41	20	11	0.7	11h27.1m -23.2	F3	1	Single struct. peak	4623	16	35.87	30.52
18	911209	18:36:11	42	30	12	1.8	17h26.4m -44.4	F3	r	4 peaks	4680	28	34.53	320.77
19	920311	02:20:37	42	40	40	1.3	08h45.4m -36.4	F3	8	1 peak	5201	37	51.39	83.56
20	920714	13:04:51	36	40	36	2.1	14h41.6m -30.0	F3	8	1 peak	5921	28	43.75	202.33
21	920718	14:41:15	30	90	30	0.4	01h22.6m -3.5	F3	8	1 odd peak	5953	20	17.97	302.95
22	920718	21:32:46	40	7	5	1.8	19h43.0m -56.5	F3	1	1 dull peak	5951	29	24.43	93.23
23	920723	20:03:10	186	13	8	3.9	19h04.5m 27.4	F3	1	1 dull peak	5991	79	33.49	208.18
24	920902	00:29:04	49	13	9	4.6	18h36.0m -22.8	F3	1	1 dull peak	6163	30	49.14	320.14
25	920903	01:36:15	23	154	103	2.0	19h43.0m 35.2	F3	4	Main peak + spikes	6173	14	38.94	230.29
26	920903	23:29:05	92	24	15	2.5	20h06.3m 21.7	F3	r	1 peak (low E. str)	6183	49	43.53	249.60
27	920925	20:30:42	25	120	120	2.5	13h27.0m 43.1	F3	1	3 peaks	6313	13	51.98	115.24
28	920925	22:49:14	43	347	340	1.3	22h02.0m 24.0	F3	4	struct, soft tails	6311	32	43.03	65.02

1950
201.75, 43.1 →
2000
202.274, 42.001

330.5 24 (1950) → 331.079 24.242 (2000)
date UT-time sd l(s) m(s) m/l position(1950) Q t comments #Wm

comments:

UT-time: Time for peak count rate in Med CsI band. Note time resolution!
Times marked with an asterisk are not yet well calibrated to UT.

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

l(s): Duration in 6-15 keV band (Low NaI channel)

m(s): Duration in 15-180 keV band (Med CsI channel)

m/l: Hardness: (sd(Med NaI)+sd(Med CsI)) / sd(Low NaI)

posit.: All events in the above list (except 910627) have been localized consistently at least twice based on independent data sets. We are therefore convinced of their true cosmic nature, even without confirming evidence from other spacecraft. GRB 910627 has been included in the list because it is confirmed to be cosmic by many other instruments, and the WATCH position is quite secure due to the good signal to noise ratio.

Q: Type of attitude data: I2: initial pointing at obs. start. 2 axes (poor, syst. error: ± 0.8 deg)
A2: actual pointing at burst time. 2 axes (better, syst. error: ± 0.5 deg)
F3: fitted mean pointing for TM session. 3 axes (TBD (± 0.5 deg?))

t: Best time resolution available: 1, 4, 8, 16 motor rotations (approx. 0.9 s)
m: 1 motor rotation in 4 ms steps
r: raw memory (4 ms steps)

#Wm Telemetry session and WATCH unit identifier

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

theta and phi: Source position in WATCH instrument coordinates.

From root Thu Aug 19 08:47 1993
 Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
 id AA18688; Thu, 19 Aug 93 08:47:00
 Received: from danpost.uni-c.dk by sunspot.ssl.berkeley.edu (4.1/1.30.1)
 id AA21200; Thu, 19 Aug 93 08:50:35 PDT
 Received: from uhuru.dsri.dk (uhuru.dsri.dk [129.142.171.2]) by danpost.uni-c.dk (8.6+.beta.1,
 Received: by uhuru.dsri.dk (4.1/SMI-4.1)
 id AA29618; Thu, 19 Aug 93 17:48:03 +0200
 Date: Thu, 19 Aug 93 17:48:03 +0200
 From: Niels Lund <nl@dsri.dk>
 Message-Id: <9308191548.AA29618@uhuru.dsri.dk>
 To: khurley@sunspot.ssl.berkeley.edu
 Status: R

Dear Kevin:

Here comes five more time histories. By now you should have received the time histories corresponding to all the bursts mentioned in your fax of July 23/24. Plus, as a bonus, the burst of 920902.

I have taken closer look at GRB 910717. You mention that the WATCH position is inconsistent with the BATSE and the triangulation position. I have found (also evident from my burst list) that this is a very marginal burst for WATCH, only detected in the low energy band, and only localized once and at low confidence. I checked where your preferred position falls within the WATCH field-of-view and it is at the same off-axis angle as our position, but approximately 180 degrees away in modulation phase. This is frequently what happens when the data in WATCH are marginal. I therefore want to retract the WATCH position completely, and we should classify the event as confirmed by WATCH through time coincidence with BATSE. (We did actually trigger on this event).

I will now begin to work on the EURECA bursts. The one of 921022 is particularly interesting. We can localize it with WATCH, and the time history reminds me of GRB 790305 with an initial extremely sharp peak followed by extended emission (this one is apparently not pulsed!). The rise time of the initial peak is less than 10 msec, and we see a count rate of 31 counts per 3.5 msec at the peak - equivalent to almost 9000 cps. If you triggered on this one with ULYSSES and we also have BATSE data, we should be able to get an extremely small error box. Of course once we try to exploit the EURECA time data to the limit we discover all kinds of difficulties, however eventually we should be able to get below 10 ms noise with respect to UT. Unfortunately for most of our EURECA bursts we only have data with 0.85 s resolution - but for GRB 921022 we can go to 3.5 ms!

niels

GRB 910219 WATCH data. (W2813)

Low energy count rate (6-15 keV)

UT start time: ' 1991 02 19 11 44 27.466

UT end time: ' 1991 02 19 11 48 20.789

Channel width: 0.91142 s

^

128	140	120	141	124	116	120	126	137	133
134	123	147	131	133	127	121	133	152	132
123	130	142	147	121	140	135	160	142	123
149	127	136	117	131	142	116	134	136	149
135	133	139	111	136	121	119	135	133	142
160	127	109	153	143	141	154	125	131	118
118	115	160	425	405	317	175	212	199	181
164	153	150	146	139	135	147	164	167	152

GRB 920723 WATCH data. (W5991)

Low energy count rate (6-15 keV)

UT start time: ' 1992 07 23 20 02 44.359

UT end time: ' 1992 07 23 20 04 41.245

Channel width: 0.91317 s

[^]

232	216	219	240	213	211	203	216	220	231
227	214	217	217	219	221	204	206	204	218
202	211	233	227	201	227	249	279	526	666
705	674	740	682	522	371	324	247	283	232
248	239	249	247	245	244	243	226	235	248
252	264	235	231	234	247	217	229	203	214
233	223	251	231	237	222	221	224	227	246
226	217	220	219	238	235	240	216	240	197
230	207	254	226	242	228	207	240	219	220
222	228	196	217	207	217	215	239	230	224
257	215	222	229	215	246	215	217	225	239
223	253	219	217	236	238	199	202	235	216
220	221	200	221	225	218	214	239		

Medium energy count rate (15-180 keV)

UT start time: ' 1992 07 23 20 02 44.359

UT end time: ' 1992 07 23 20 04 41.245

Channel width: 0.91317 s

[^]

106	115	116	134	120	114	96	121	115	114
115	119	116	120	136	122	111	145	120	124
108	109	128	119	127	123	117	240	1117	1247
1072	831	795	627	237	192	164	142	149	136
115	132	140	117	124	137	123	118	155	129
152	146	121	119	134	149	123	124	125	136
124	149	127	119	137	135	120	154	122	131
119	135	129	111	113	127	141	134	148	138
118	145	123	149	127	154	132	139	132	117
177	116	111	123	129	131	123	137	123	146
142	132	114	119	121	130	113	134	132	142
132	120	102	116	129	143	152	120	105	145
98	111	103	139	113	118	135	127		

GRB 920925A WATCH data. (W6313)

Low energy count rate (6-15 keV)

UT start time: ' 1992 09 25 20 30 16.941

UT end time: ' 1992 09 25 20 32 13.019

Channel width: 0.90686 s

[^]

273	304	295	248	285	308	280	275	281	282
256	276	275	282	289	269	318	322	315	300
292	257	315	287	277	276	318	309	399	357
366	379	329	302	293	316	289	306	285	285
284	271	319	277	294	299	281	290	263	328
278	298	287	288	290	276	282	262	295	328
276	294	333	320	324	330	309	280	283	310
291	273	301	287	285	306	312	279	294	282
284	322	295	259	280	283	330	295	291	275
291	311	297	271	294	292	275	267	275	279
289	281	273	282	276	278	302	281	274	276
271	245	291	295	294	288	247	300	285	268
254	275	304	298	295	315	288	273		

Medium energy count rate (15-180 keV)

Date: Mar 26 '99

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

- ☐ ACCESS database updated?

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

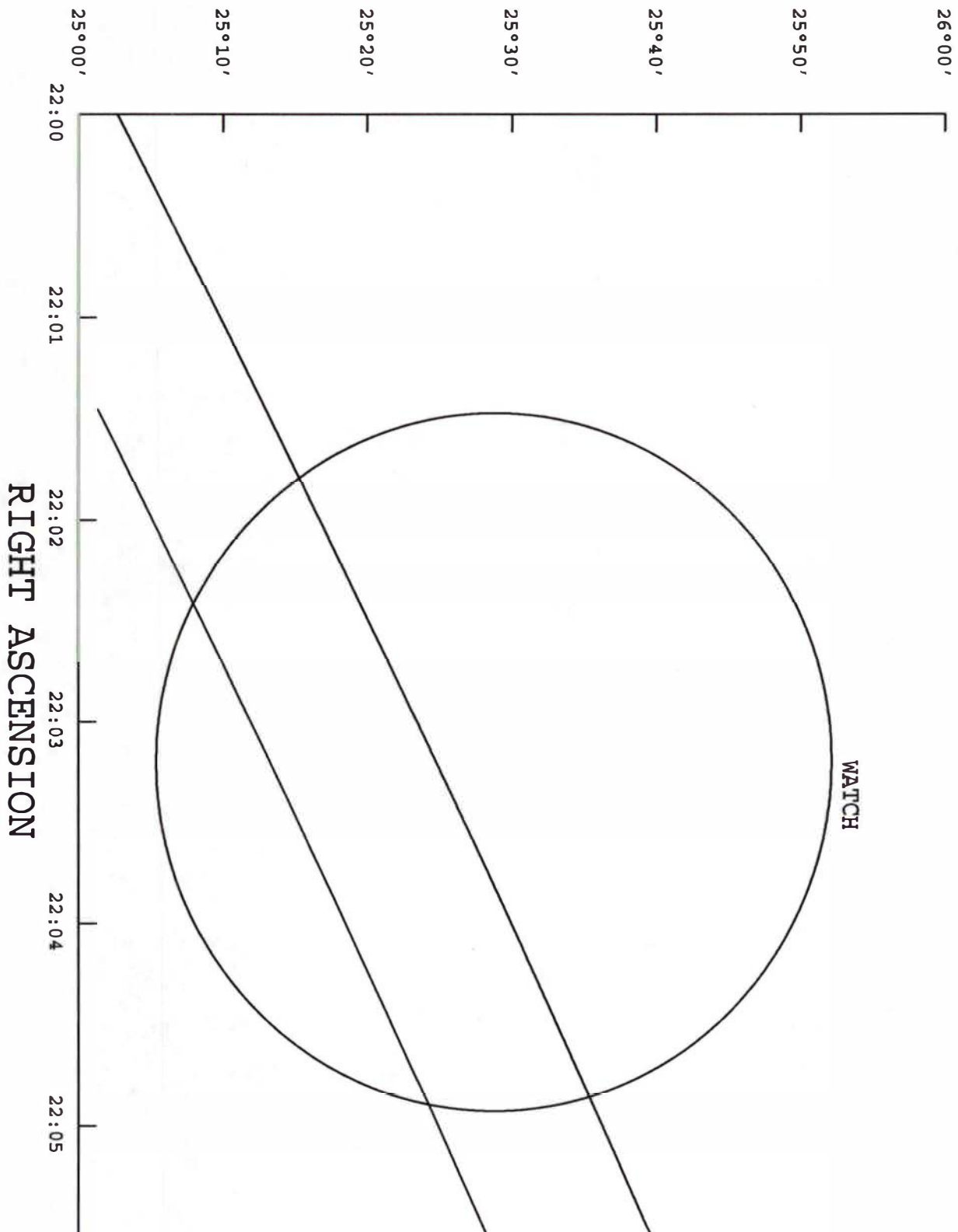
E=ECLIPTIC

G=GALACTIC EQUATOR

1 ULYSSES

2 WATCH

DECLINATION



EVENT OF SEP 25, 1992 23:35

26 / 3 / 99

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

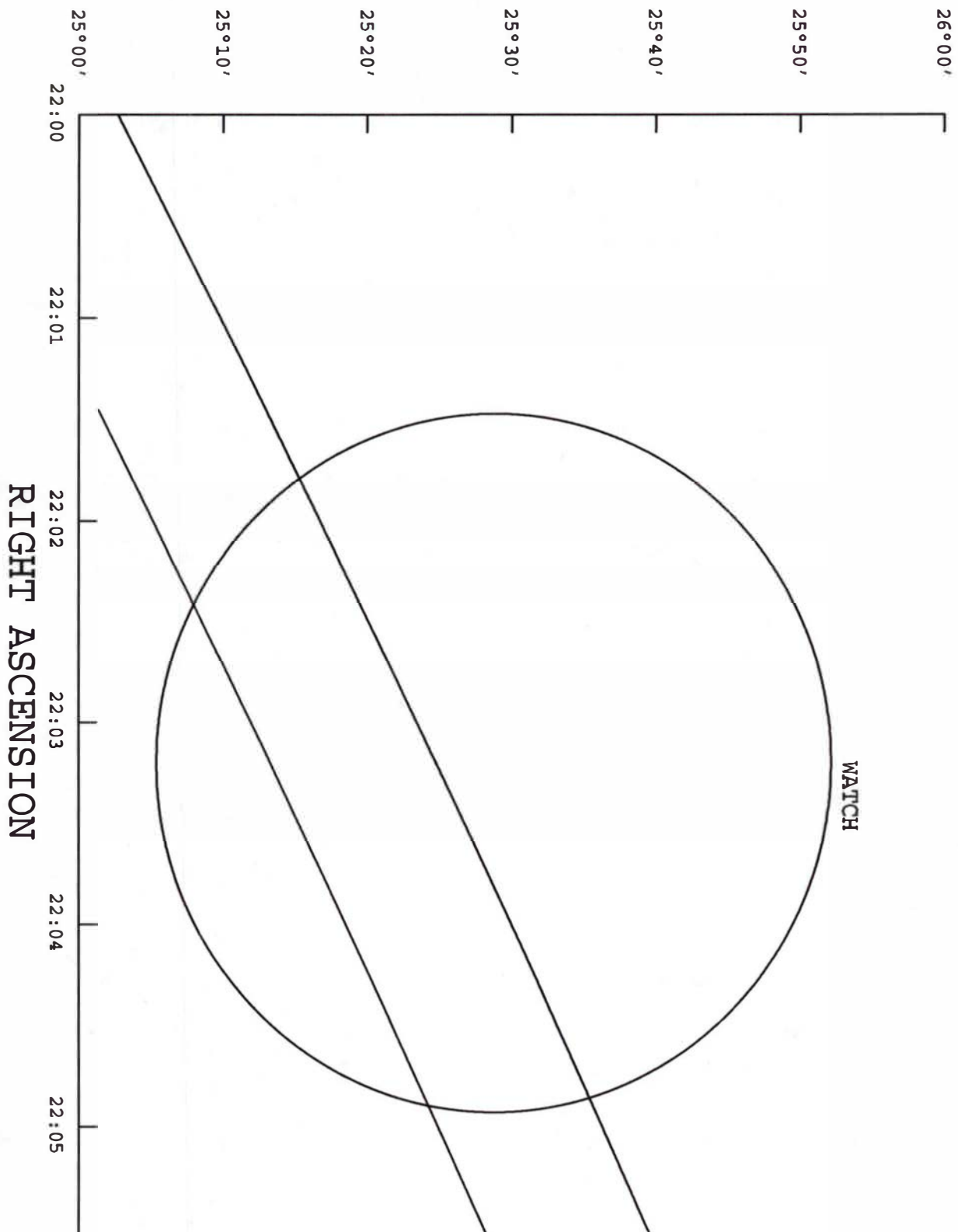
E=ECLIPTIC

G=GALACTIC EQUATOR

1 ULYSSES

2 WATCH

DECLINATION



EVENT OF SEP 25, 1992 23:32

26 / 3/99

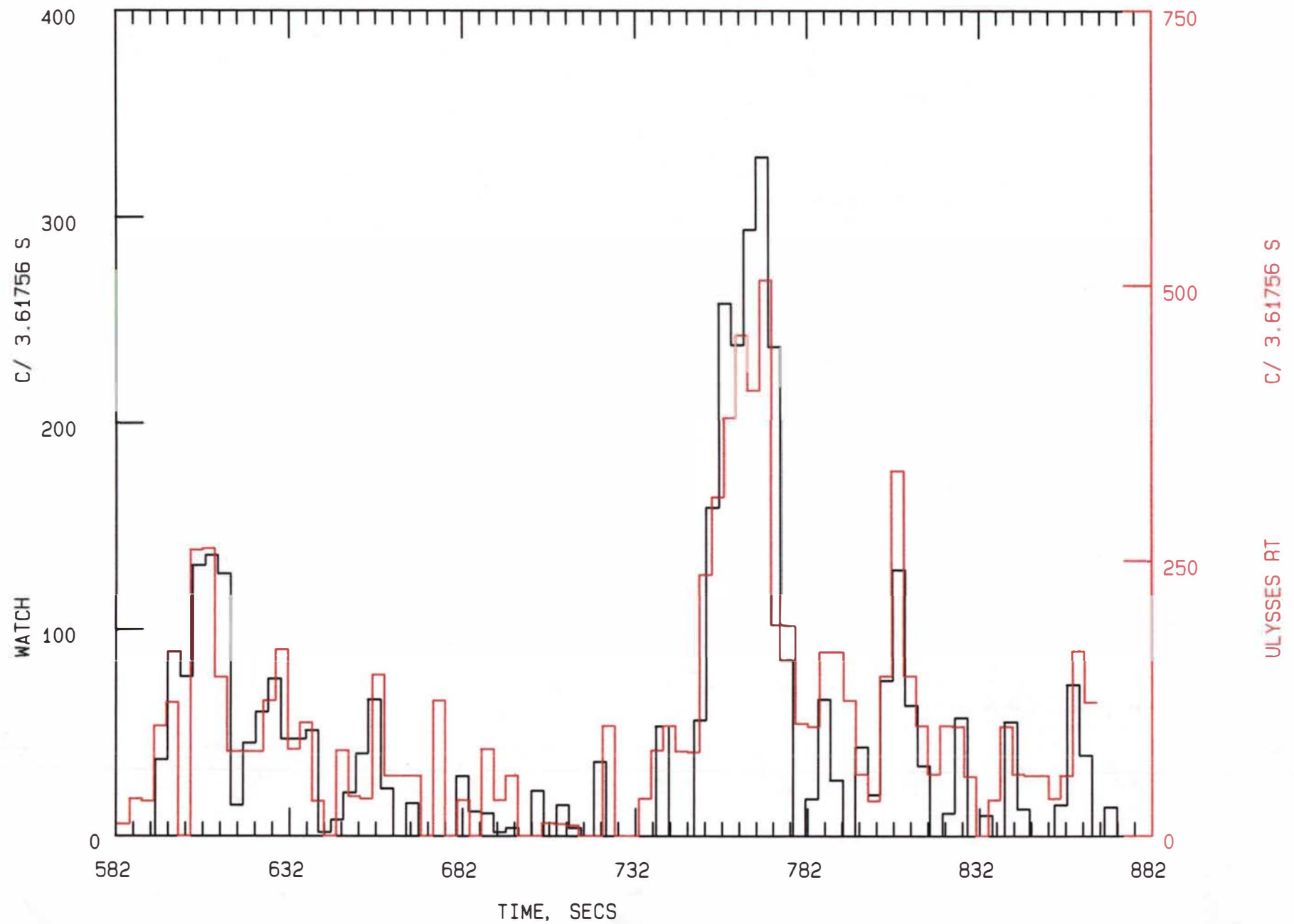
WATCH

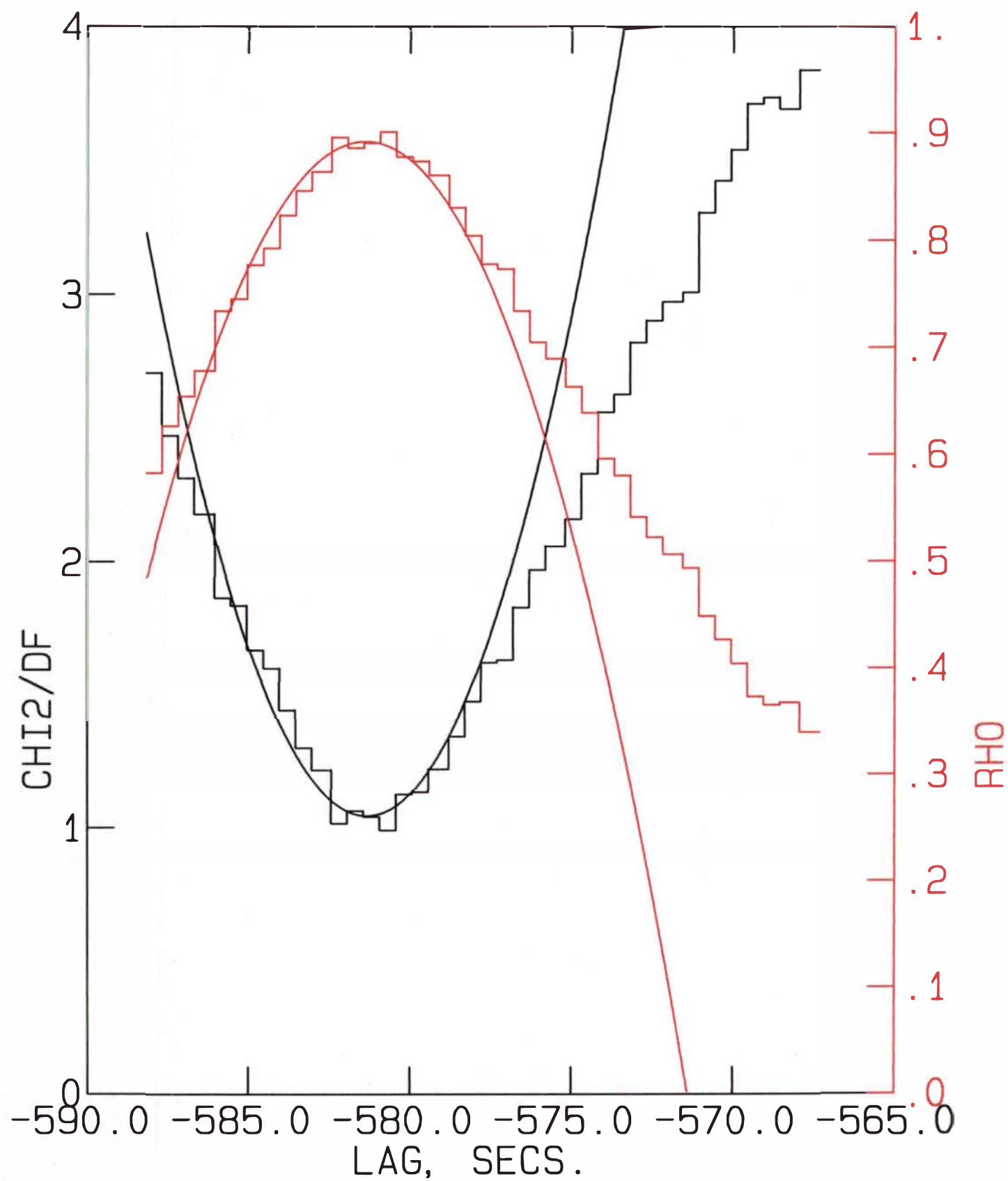
-ULYSSES RT CORRELATION

25/09/92

81386.871

26/ 3/99

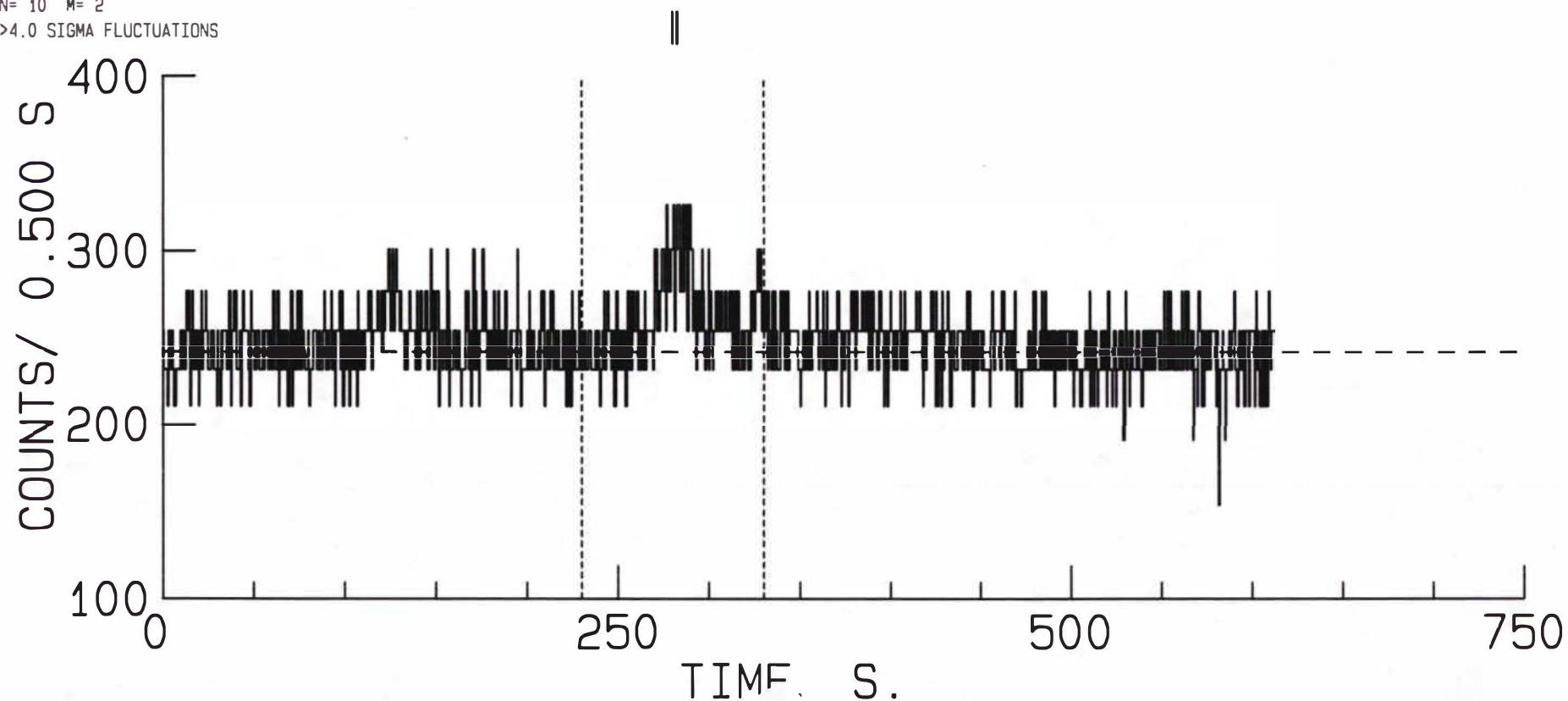




ULYSSES RT
25/ 9/92 84636.362 s
22- 149 keV

26/ 3/99

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From root Mon Oct 11 04:04 1993
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA13046; Mon, 11 Oct 93 04:04:33
Received: from danpost.uni-c.dk by sunspot.ssl.berkeley.edu (4.1/1.30.1)
id AA14815; Mon, 11 Oct 93 04:06:18 PDT
Received: from dmicvx.dmi.min.dk (dmicvx.dmi.min.dk [130.226.64.16]) by danpost.uni-c.dk (8.6.
Received: by dmicvx.dmi.min.dk (5.64/1.36)
id AA19172; Mon, 11 Oct 93 11:09:29 GMT
From: nlu@dmf.min.dk (Niels Lund)
Message-Id: <9310111109.AA19172@dmicvx.dmi.min.dk>
Subject: J-P Roques told me that you did not receive my message, please ack (fwd)
To: khurley@sunspot.ssl.berkeley.edu
Date: Mon, 11 Oct 1993 11:09:29 +0000 (WET)
X-Mailer: ELM [version 2.4 PL0]
Content-Type: text
Content-Length: 625
Status: R

> Subject: J-P Roques told me that you did not receive my message, please ack
> thisone

> Dear Niels,

> please find enclosed the GRANAT positions you asked for :

> Date : 1992/07/18 14h 41m 15.5s

> Position (km) : X = -23404.1 Y= 36890.1 Z = 139571.7

> Date : 1992/09/03 01h 36m 15.5s

> Position (km) : X = -96043.5 Y= 105000.3 Z = 87163.0

> Date : 1992/09/25 22h 49m 14.5s = 82154.5 s; *Tel is 81960.88* *Δt = 193.62 **
> Position (km) : X = 6912.6 Y= 5226.3 Z = 117601.3

> Note that the position is in the geocentric equatorial system, in equinox J2000.0

> Best Regards,

> J-L Atteia

* Use Ulysses time 84728.363 + 193.62 = 84921.983 =

23:35:21.983

PROGRAM WATEPH

²⁰⁰⁰ X(1950)	²⁰⁰⁰ Y(1950)	²⁰⁰⁰ Z(1950)	DISTANCE	²⁰⁰⁰ RA(1950)	²⁰⁰⁰ DEC(1950)	²⁰⁰⁰ RA(2000)	²⁰⁰⁰ DEC(2000)
6912.600	5226.300	117601.300	117920.159	37.091	85.786	40.010	86.0

long 4781-1

From nl@dsri.dk Mon Aug 9 08:07:41 1993
Date: Mon, 9 Aug 93 13:10:41 +0200
From: Niels Lund <nl@dsri.dk>
To: khurley@ucbssl.berkeley.edu
Content-Length: 20026

Dear Kevin:

Attached find two more WATCH time histories.

I have used a lot of time on GRB 911209 to get a better position. The GRANAT pointing data I have are apparently not consistent with our own data on Sco X-1 and Cyg X-1, both of these sources are by good luck in the field together with the burst. My best estimate for the burst position is now RA: 17h32m, Dec -43.8d (1950), but I expect that there will be future revisions.

263°, -43.8° (1950) →
263.20524, -43.83392

You were right about your suspicions concerning the UT-time of GRB 920925A. The time given by PHEBUS (20:30) is correct.

Both Soren Brandt and Alberto have been quite busy last week checking our data against your list and lists from PHEBUS and SIGMA. Obviously our own previous scanning have not been very efficient because they have come up with 14 new bursts which can be localized by WATCH. In addition many weak bursts have been identified in our data, bursts too weak to establish a reliable position based on WATCH data alone.

I attach an updated burst list giving the times of the bursts we can localize.

niels

Kevin: Please note the small peak 9 m 35 s before the main event. Do you see the same in the ULYSSES data? (Did BATSE see this although they missed the main event ?) WATCH cannot localize the precursor, but if it is real the ULYSSES-WATCH timing may show it to be consistent with the main event!

Niels

GRB 920925B WATCH data. (W6311)

Low energy count rate (6-15 keV)

UT start time: ' 1992 09 25 22 36 26.871

UT end time: ' 1992 9 25 23 7 19.063

Channel width: 3.61756 s

^

725	783	792	739	761	725	763	724	861	764
819	727	717	702	755	780	769	698	759	713
692	720	727	770	768	726	759	714	741	724
771	758	771	786	793	774	754	779	773	755
734	757	757	790	741	805	786	779	721	735
768	764	739	757	759	721	772	740	757	819
764	787	751	784	802	778	715	795	773	732
758	729	733	728	775	765	780	735	751	795
766	754	731	746	748	721	739	749	742	796
734	761	745	763	745	754	801	753	772	753
724	692	742	785	736	742	779	763	753	756
737	732	779	763	736	755	767	779	759	770
738	759	748	747	747	712	739	743	722	765
756	772	709	802	772	770	752	762	765	748
806	757	810	800	794	762	787	716	814	757
754	757	762	744	761	716	811	770	750	830
765	784	822	838	800	825	790	1015	895	870
759	837	821	808	851	851	886	750	795	777

802	758	791	819	821	790	786	867	788	733
760	763	761	766	787	788	722	790	732	736
774	762	749	763	758	768	804	800	868	980
974	1010	1120	1050	898	832	923	954	876	836
848	847	945	1010	923	874	877	835	871	838
793	844	833	789	815	830	863	820	841	784
749	818	888	855	799	800	806	796	766	758
801	765	803	734	764	745	802	782	730	755
772	767	779	774	772	777	735	742	762	727
740	725	740	762	769	742	712	798	732	725
746	754	736	737	722	750	748	760	782	750
744	729	706	772	740	745	709	803	787	705
797	781	740	808	776	768	767	787	706	764
781	737	712	749	775	717	773	755	712	745
705	746	777	737	747	777	737	771	764	767
738	724	782	789	787	695	742	740	736	729
702	775	728	749	759	736	712	699	758	753
775	767	791	784	774	789	732	781	747	741
766	680	759	796	764	749	746	715	719	753
740	721	713	775	733	767	751	765	663	748
753	784	765	786	754	738	760	741	779	798
736	797	788	725	720	723	791	792	774	697
758	806	689	734	704	762	727	782	720	731
734	759	713	801	733	753	723	739	766	769
726	737	741	769	807	788	762	784	800	755
744	739	777	747	792	751	797	759	751	721
773	760	737	710	775	780	746	748	728	721
736	750	760	753	771	698	821	765	792	780
760	749	768	792	761	755	732	734	747	779
760	729	715	738	756	746	777	731	748	735
737	777	762	762	768	736	720	771	770	794
766	745	757	756	775	716	739	782	745	730
764	790	728	773	818	763	769	726	830	730
749	762								

Medium energy count rate (15-180 keV)

UT start time: ' 1992 09 25 22 36 26.871

UT end time: ' 1992 9 25 23 7 19.063

Channel width: 3.61756 s

^

557	516	508	529	521	507	512	511	585	565
529	517	473	547	540	527	538	516	505	506
508	531	486	552	519	525	550	493	485	566
521	507	525	540	509	516	507	509	474	520
463	527	503	538	538	536	545	528	539	489
507	488	511	501	515	516	503	546	489	493
516	506	540	458	522	539	498	550	541	522
501	505	509	475	506	524	516	486	521	505
510	546	559	547	496	517	519	498	543	502
489	532	523	551	519	521	539	491	545	502
518	515	515	557	527	527	563	477	512	522
485	536	501	510	539	555	527	560	564	520
539	537	556	534	517	555	510	551	537	531
542	545	480	510	504	536	512	504	514	556
511	517	578	517	533	490	488	536	525	536
485	553	519	531	517	511	557	522	536	495
521	512	527	534	572	624	612	666	671	662
550	580	595	611	582	582	586	537	543	556
575	601	558	526	551	501	526	523	564	547
546	537	539	530	557	532	550	539	524	571
533	534	526	513	588	527	510	591	694	793
773	829	864	772	620	512	553	601	562	532
578	555	610	664	598	569	532	546	592	532
545	529	590	548	524	534	550	608	574	530
549	513	530	540	580	543	531	533	564	527
527	560	550	526	528	590	529	515	477	532

497	517	540	556	501	533	491	531	515	518
544	523	531	515	480	528	528	557	543	554
533	539	541	518	531	534	493	525	475	511
505	506	562	505	501	542	525	532	536	529
518	515	527	542	541	515	491	515	517	547
507	507	488	518	523	488	554	533	523	529
588	507	511	569	486	531	544	540	515	548
513	503	546	512	527	501	531	523	550	508
518	552	499	514	502	501	549	525	510	523
533	510	545	547	503	533	549	502	535	525
516	523	556	522	507	544	521	544	549	476
501	517	520	486	513	545	531	474	534	506
476	538	521	540	482	509	537	531	508	487
530	482	518	545	510	492	552	495	552	507
530	536	563	543	492	547	509	525	500	540
535	541	534	517	514	517	506	528	503	523
536	502	513	525	519	505	463	546	524	500
548	537	506	498	545	509	503	533	476	513
535	499	529	485	514	548	462	531	518	511
523	556	554	494	465	551	507	566	497	492
541	565	552	543	531	549	487	512	518	521
530	537	545	519	538	483	476	520	524	570
476	537	507	510	520	556	516	498	539	524
494	542	512	539	487	491	506	537	510	529
490	523	525	510	496	502	541	493	526	535
532	475								

GRB 920718A WATCH data. (W5953)

Low energy count rate (6-15 keV)

UT start time: ' 1992 7 18 14 22 12.880

UT end time: ' 1992 7 18 14 52 52.348

Channel width: 7.18542 s

^

2139	2107	2092	2140	2125	2114	2139	2122
2120	2148	2137	2099	2106	2174	2140	2191
2190	2089	2128	2132	2159	2226	2200	2205
2116	2067	2151	2135	2137	2101	2147	2223
2217	2147	2117	2009	2109	2200	2212	2207
2119	2127	2094	2136	2176	2102	2038	2203
2206	2180	2128	2143	2081	2099	2170	2189
2168	2124	2152	2158	1979	2109	2168	2083
2186	2133	2144	2139	2150	2238	2152	2158
2250	2194	2138	2103	2162	2195	2219	2207
2197	2192	2229	2149	2220	2179	2180	2153
2202	2252	2179	2137	2164	2312	2268	2238
2188	2232	2192	2310	2183	2220	2172	2213
2222	2215	2191	2097	2183	2222	2229	2240
2210	2224	2231	2184	2162	2243	2142	2160
2180	2179	2283	2219	2231	2197	2172	2193
2188	2151	2255	2327	2182	2344	2174	2141
2214	2262	2224	2217	2190	2189	2258	2266
2310	2147	2183	2285	2185	2241	2253	2234
2223	2389	2447	2352	2388	2410	2747	3319
2889	2704	2492	2494	2425	2393	2199	2249
2238	2126	2296	2296	2277	2228	2176	2239
2301	2254	2240	2246	2266	2294	2212	2240
2220	2242	2279	2174	2326	2252	2220	2288
2239	2297	2261	2240	2240	2322	2277	2304
2266	2229	2198	2191	2278	2316	2367	2306
2291	2308	2265	2271	2248	2262	2228	2177
2145	2264	2308	2264	2221	2263	2140	2289
2264	2321	2322	2254	2299	2328	2179	2230
2328	2370	2319	2281	2328	2252	2275	2262

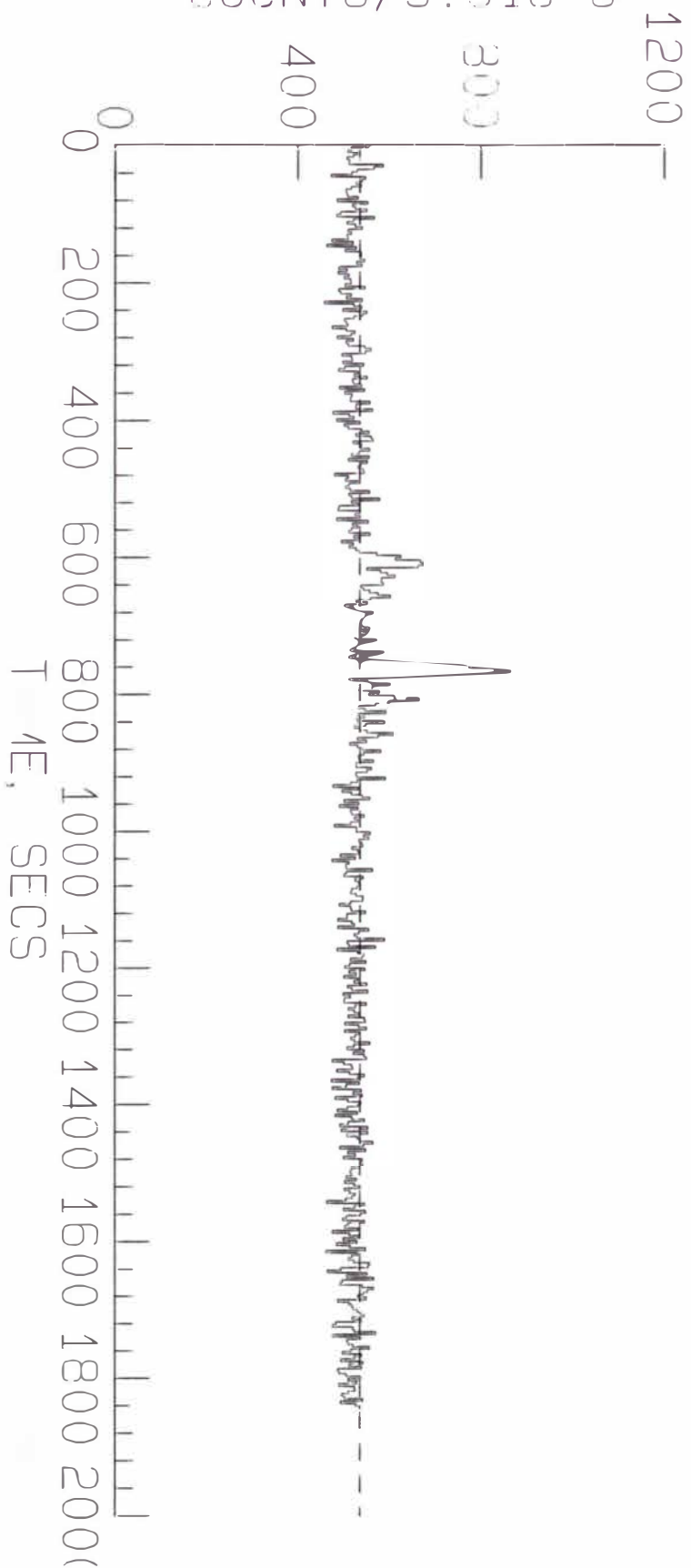
WATCH

25/09/92

81385.871

15- 180 keV

COUNTS/3.618 S



From root Mon Jun 7 21:41 1993
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA07179; Mon, 7 Jun 93 21:41:03
Received: from nettlerash.berkeley.edu by sunspot.ssl.berkeley.edu (4.1/1.30.1)
id AA14634; Mon, 7 Jun 93 21:43:08 PDT
Received: from cmsa.Berkeley.EDU by nettlerash.berkeley.edu (5.67.1/1.34.6)
id AA07194; Mon, 7 Jun 93 21:41:51 -0700
Message-Id: <9306080441.AA07194@nettlerash.berkeley.edu>
Received: from cmsa.Berkeley.EDU by cmsa.Berkeley.EDU (IBM VM SMTP V2R2)
with BSMTP id 7118; Mon, 07 Jun 93 21:42:56 PDT
Received: from CSEARN.BITNET by cmsa.Berkeley.EDU (Mailer R2.08 R208004) with
BSMTP id 3636; Mon, 07 Jun 93 21:42:55 PDT
Received: from CSEARN.BITNET (ASTMPH) by CSEARN.BITNET (Mailer R2.08 PTF008)
with BSMTP id 5918; Tue, 08 Jun 93 06:41:41 MDT
Date: Tue, 08 Jun 93 06:41:11 MDT
From: "R.Hudec" <ASTMPH%CSEARN.BITNET@cmsa.berkeley.edu>
To: khurley@space6.ssl.berkeley.edu
Status: R

to: Kevin Hurley <knurley@space6.ssl.berkeley.edu>

Dear Kevin:

We have found an optical activity roughly 2 degrees from the centre of the BATSE error box of GRB 920925 (at 78316sec). Please let me know whether a better (IPN) position is available for this trigger. Thank you.

Have you received my previous email regarding the availability of computer readable GRB data for the purpose of searches for coincidences with optical triggers?

If not, the message is repeated below:

I would like to ask you for advice or help with the following problem. We have created a databasis with all detected optical triggers. Our idea is to develop a program comparing automatically OT and GRB databases looking for possible coincidences both in positions and times. To run this project, we however need a database of GRB on a computer readable medium. What we need is : year/month/day/time ut position RA position delta error . At moment, we have only the BATSE catalogue in such a shape. Other catalogues we have are mainly different offprints etc. Do you have idea where to get a catalogue or list of detected grb involving the information we need? Naturally we can guarantee that the catalogue willnot be given to further persons etc. what is necessary. Please let me know your oppinion and advice. Thank you.

Many thanks again and best regards,

From khurley@space6.ssl.berkeley.edu Tue Jun 15 17:46:11 1993
Date: Tue, 15 Jun 93 17:44:07
From: khurley@space6.ssl.berkeley.edu
Content-Length: 297

MESSAGE FOR RENE HUDEC

Dear Rene,

I have worked out a timing arc for 920925 based on BATSE and Ulysses data. The annulus is centered at RA(2000)=161.771 degrees, dec(2000)=-1.862 degrees, radius 68.224 degrees, width about 5 arcminutes. I hope this includes your object. Let me know.

Kevin

From root Wed Jun 16 23:46 1993
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA11512; Wed, 16 Jun 93 23:46:31
Received: from nettlerash.berkeley.edu by sunspot.ssl.berkeley.edu (4.1/1.30.1)
id AA00954; Wed, 16 Jun 93 23:48:22 PDT
Received: from cmsa.Berkeley.EDU by nettlerash.berkeley.edu (5.67.1/1.34.6)
id AA17936; Wed, 16 Jun 93 23:47:35 -0700
Message-Id: <9306170647.AA17936@nettlerash.berkeley.edu>
Received: from cmsa.Berkeley.EDU by cmsa.Berkeley.EDU (IBM VM SMTP V2R2)
with BSMTP id 4947; Wed, 16 Jun 93 23:48:38 PDT
Received: from CSEARN.BITNET by cmsa.Berkeley.EDU (Mailer R2.08 R208004) with
BSMTP id 0127; Wed, 16 Jun 93 23:48:38 PDT
Received: from CSEARN.BITNET (ASTMPH) by CSEARN.BITNET (Mailer R2.08 PTF008)
with BSMTP id 4940; Thu, 17 Jun 93 08:44:58 MDT
Date: Thu, 17 Jun 93 08:44:38 MDT
From: "R.Hudec" <ASTMPH%CSEARN.BITNET@cmsa.berkeley.edu>
To: khurley@space6.ssl.berkeley.edu
Status: R

to: Kevin Hurley <khurley@space6.ssl.berkeley.edu>

Dear Kevin,
thank you for providing us the error annulus for 920925. There
seems however to be disagreement with the BATSE position which is RA =
155 and delta = 69. The time of the BATSE trigger is 78316 sec.
Could you please try to explain this disagreement?

Thank you. Best regards Rene Hudec

From khurley@space6.ssl.berkeley.edu Thu Jun 17 08:33:51 1993
Date: Thu, 17 Jun 93 08:31:46
From: khurley@space6.ssl.berkeley.edu
Content-Length: 256

MESSAGE FOR RENE HUDEC

Dear Rene,

I don't see any discrepancy in the timing annulus for September 25, 1992.
The annulus passes through the BATSE 7 degree radius error circle. I can
send you a fax with the annulus and error circle if you need it.

Kevin

Faxed 6/21

From root Wed Jun 23 22:01 1993
Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
id AA00129; Wed, 23 Jun 93 22:01:31
Received: from nettlerash.berkeley.edu by sunspot.ssl.berkeley.edu (4.1/1.30.1)
id AA00410; Wed, 23 Jun 93 22:03:08 PDT
Received: from cmsa.Berkeley.EDU by nettlerash.berkeley.edu (5.67.1/1.34.6)
id AA16710; Wed, 23 Jun 93 22:02:39 -0700
Message-Id: <9306240502.AA16710@nettlerash.berkeley.edu>
Received: from cmsa.Berkeley.EDU by cmsa.Berkeley.EDU (IBM VM SMTP V2R2)
with BSMTP id 1182; Wed, 23 Jun 93 22:03:33 PDT
Received: from CSEARN.BITNET by cmsa.Berkeley.EDU (Mailer R2.08 R208004) with
BSMTP id 8460; Wed, 23 Jun 93 22:03:32 PDT
Received: from CSEARN.BITNET (ASTMPH) by CSEARN.BITNET (Mailer R2.08 PTF008)
with BSMTP id 5266; Thu, 24 Jun 93 07:04:09 MDT
Date: Thu, 24 Jun 93 07:03:47 MDT
From: "R.Hudec" <ASTMPH%CSEARN.BITNET@cmsa.berkeley.edu>
To: khurley@space6.ssl.berkeley.edu
Status: R

to: Kevin Hurley <khurley@space6.ssl.berkeley.edu>

Dear Kevin:

1. Thank your for e-mailing of the list of IPN small boxes. We are also interested to receive larger boxes (according to your point 6) which might be useful for searches on wide field patrol plates.

2. Thank you for faxing us the error box for 920925. The object indicating optical activity is at 1950.0 10:41:08 and +69:02.3 i.e. well inside and not far from the centre of the BATSE box but about 2 degrees far from the Ulysses/BATSE annuli. The object is a variable star R UMa (a Mira type variable) and seems to be roughly in maximum at the time of the GRB. It is probably a chance coincidence only, but, to be absolutely sure, it would be good idea to look on the GRB error box for possible shifts. We investigate R UMa in more detail recently.

Best regards Rene Hudec

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

May 5 14:26 1993 standard input Page 1

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

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

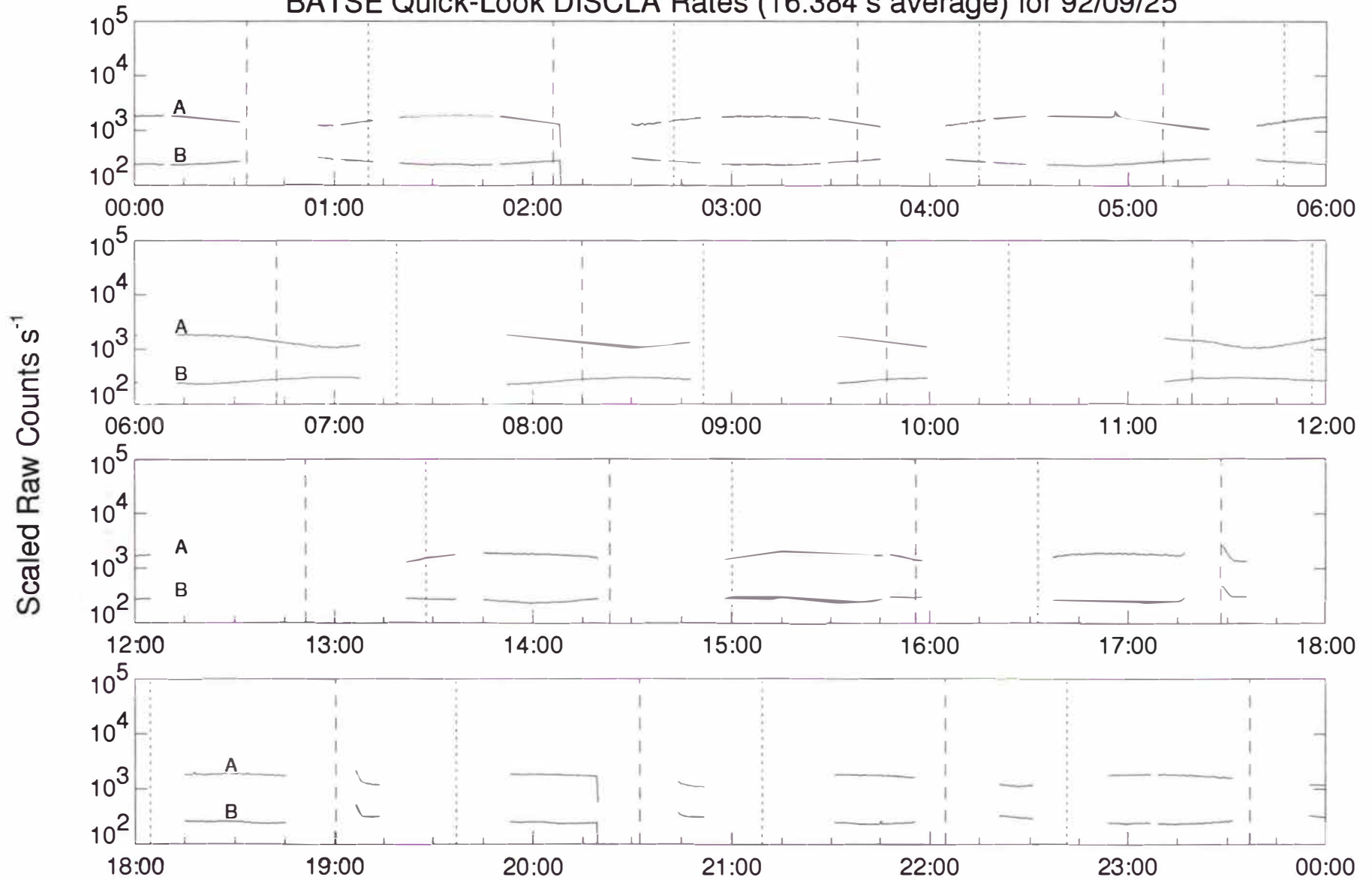
FROM: ESSDP2::TERRELL 93/05/05
TO: UCBSP::KHURLEY
CC: BATSE::KOUVELIOTOU
SUBJ: DMSP GRB DATA

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

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

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

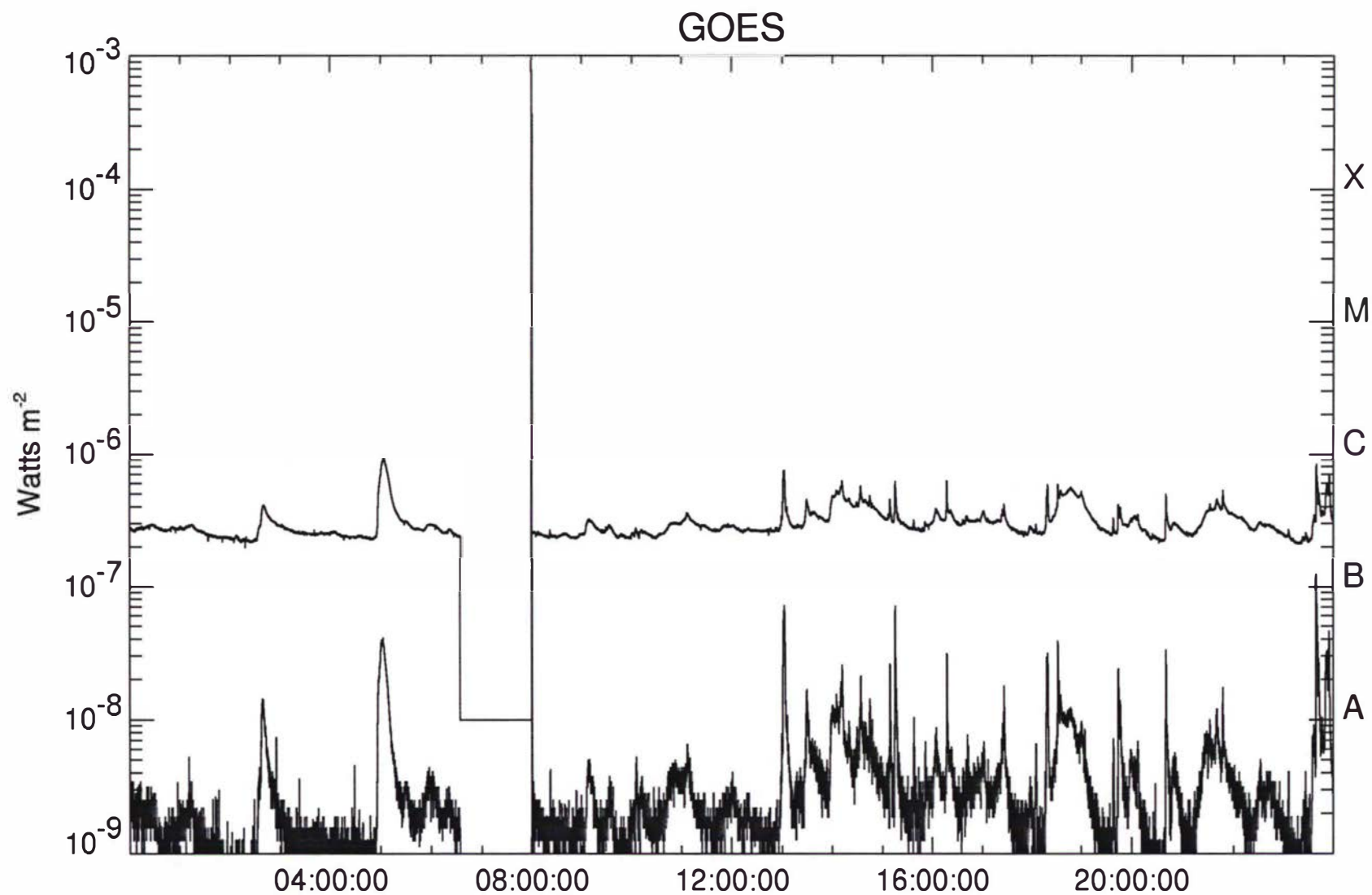
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/25



Current Time: 92/09/29, 0246 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



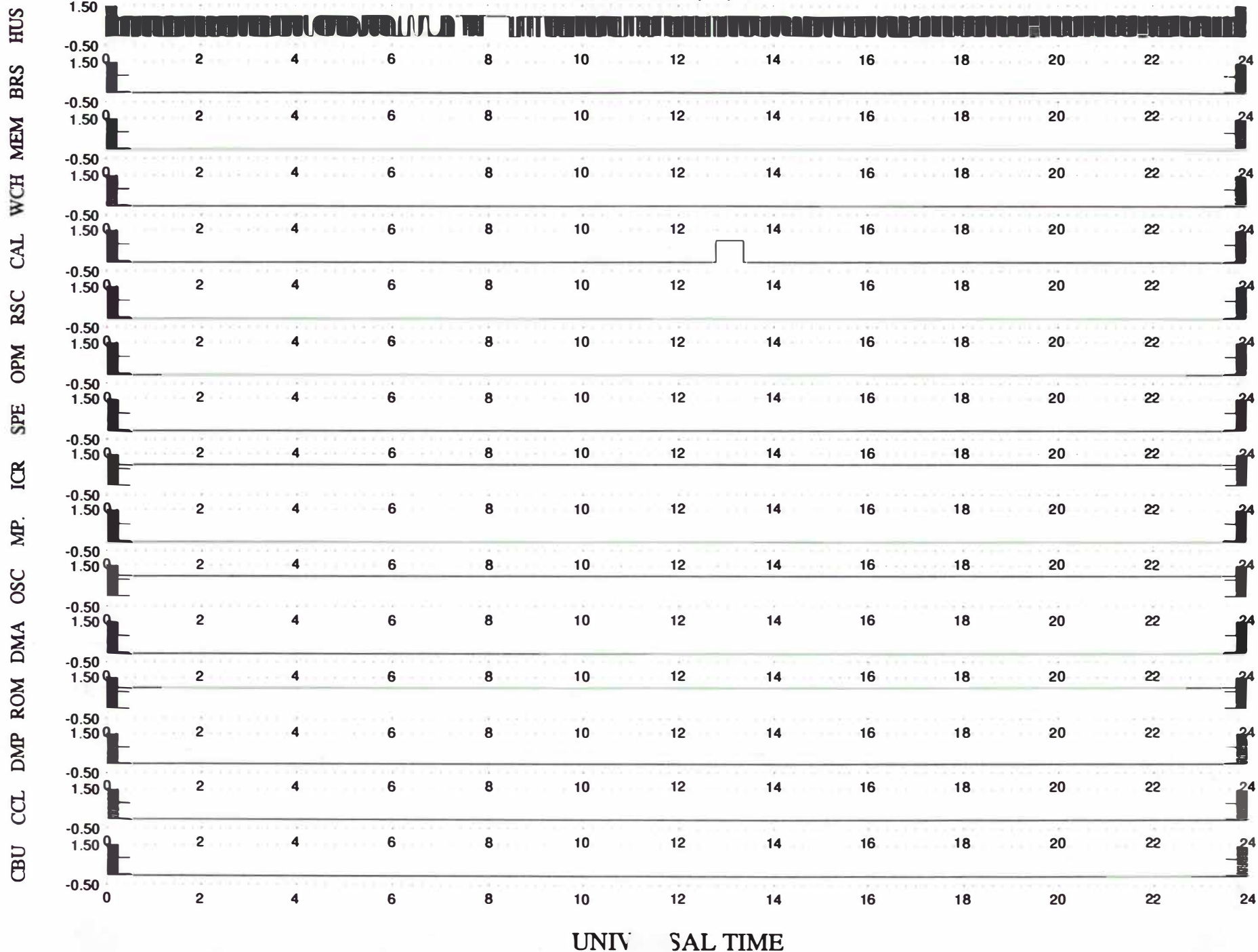
Data Start: 92/09/25, 0000:02

Plot created: 95/05/25, 1954

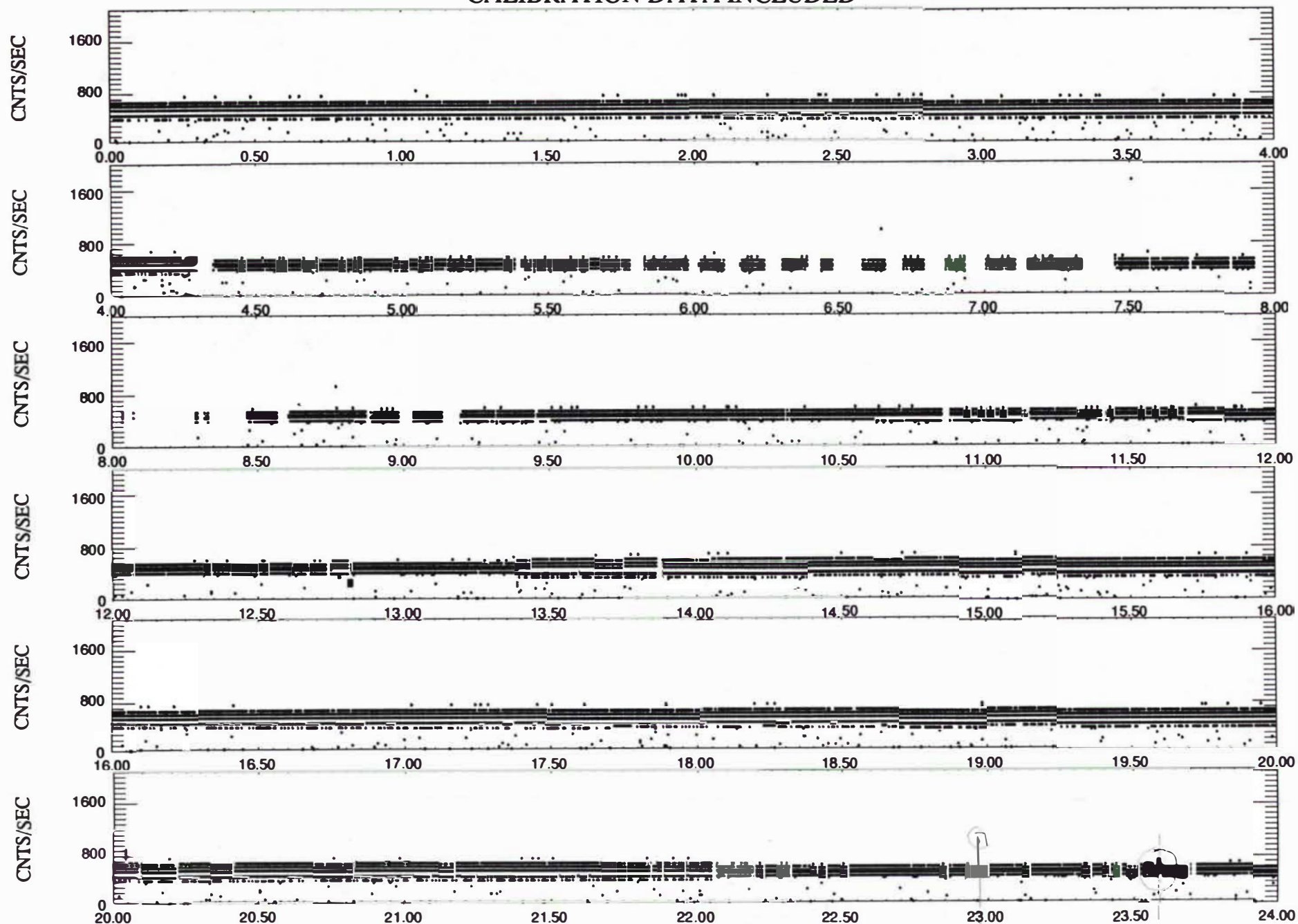
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

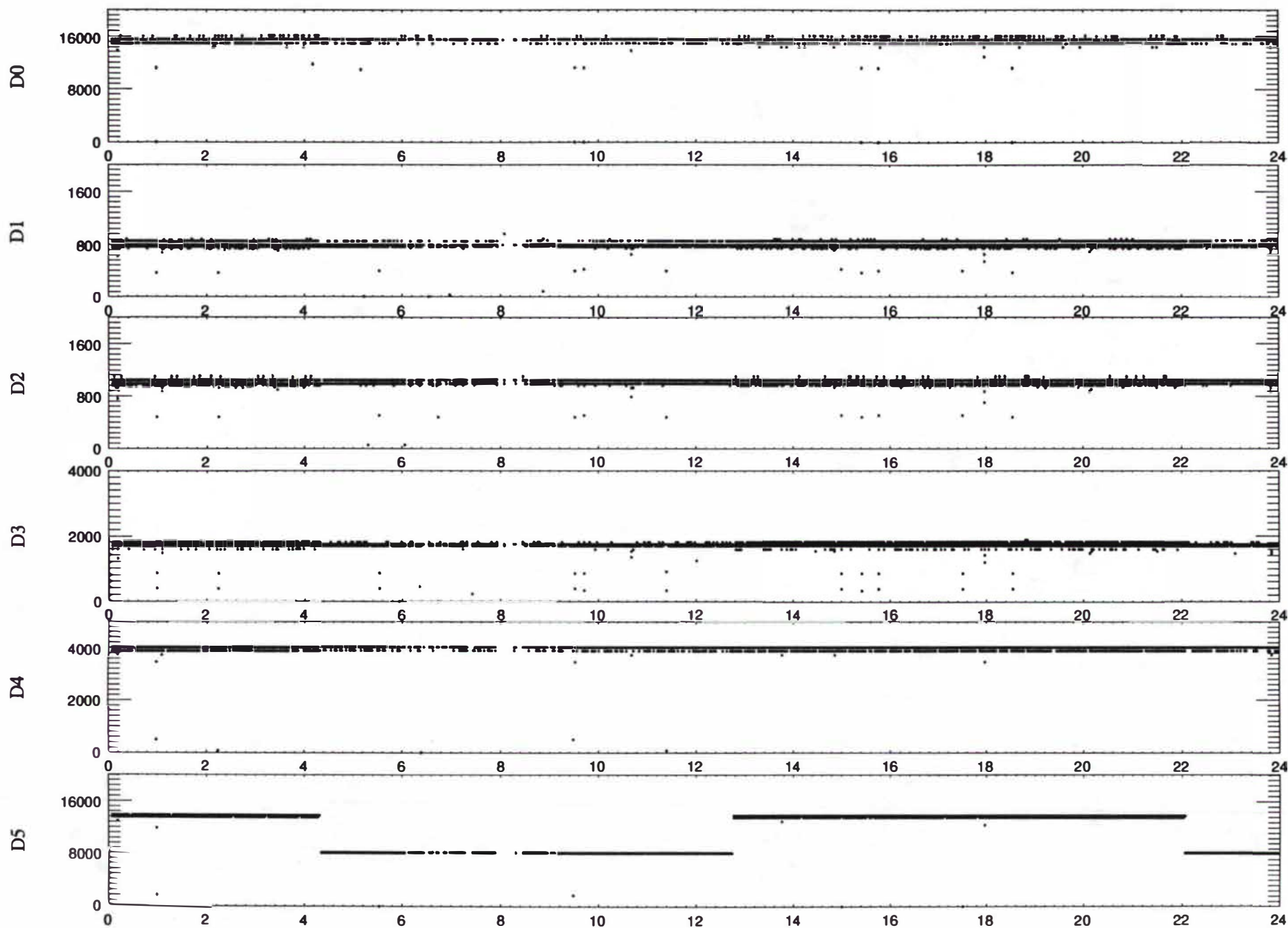
NO BURST (11)



CALIBRATION DATA INCLUDED



UNIV AL TIME



UNIVERSAL TIME

From BRIGGS@ssl.msfc.nasa.gov Mon Sep 28 11:07:59 1992
Date: Mon, 28 Sep 1992 13:10:26 -0500 (CDT)
From: BRIGGS@ssl.msfc.nasa.gov (Michael S. Briggs, 205-544-7716, Code ES-62, MSFC)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01957

TIME: TJD=8891 SECONDS=21272

TYPE: j0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

FLUCTUATION OF TRANSIENT 13 SEC AFTER ITS RISE.

From BRIGGS@ssl.msfc.nasa.gov Mon Sep 28 11:14:48 1992
Date: Mon, 28 Sep 1992 13:17:13 -0500 (CDT)
From: BRIGGS@ssl.msfc.nasa.gov (Michael S. Briggs, 205-544-7716, Code ES-62, MSFC)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01958

TIME: TJD=8891 SECONDS=42923

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

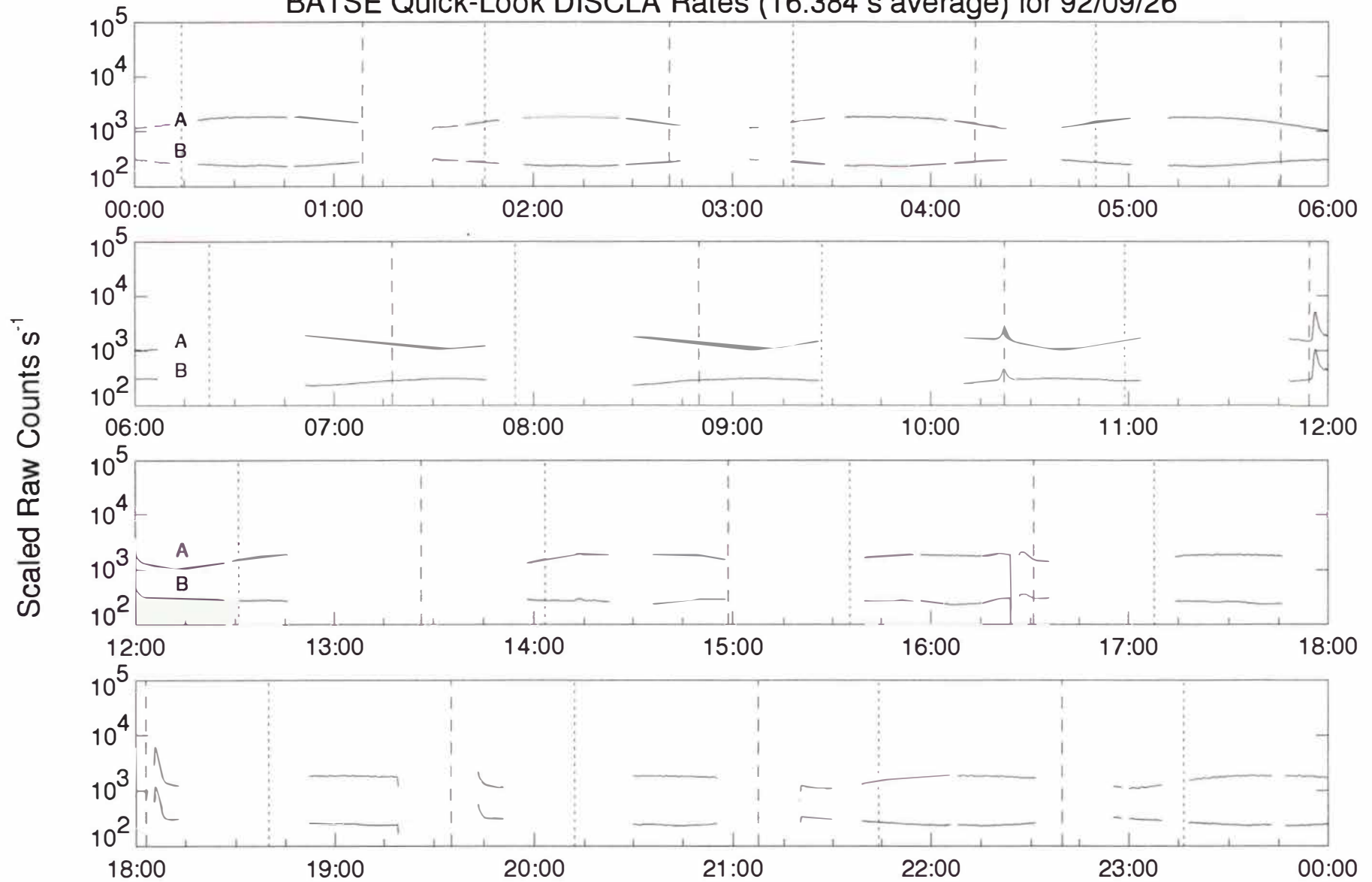
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

ELECTRON PERCIPITATION EVENT

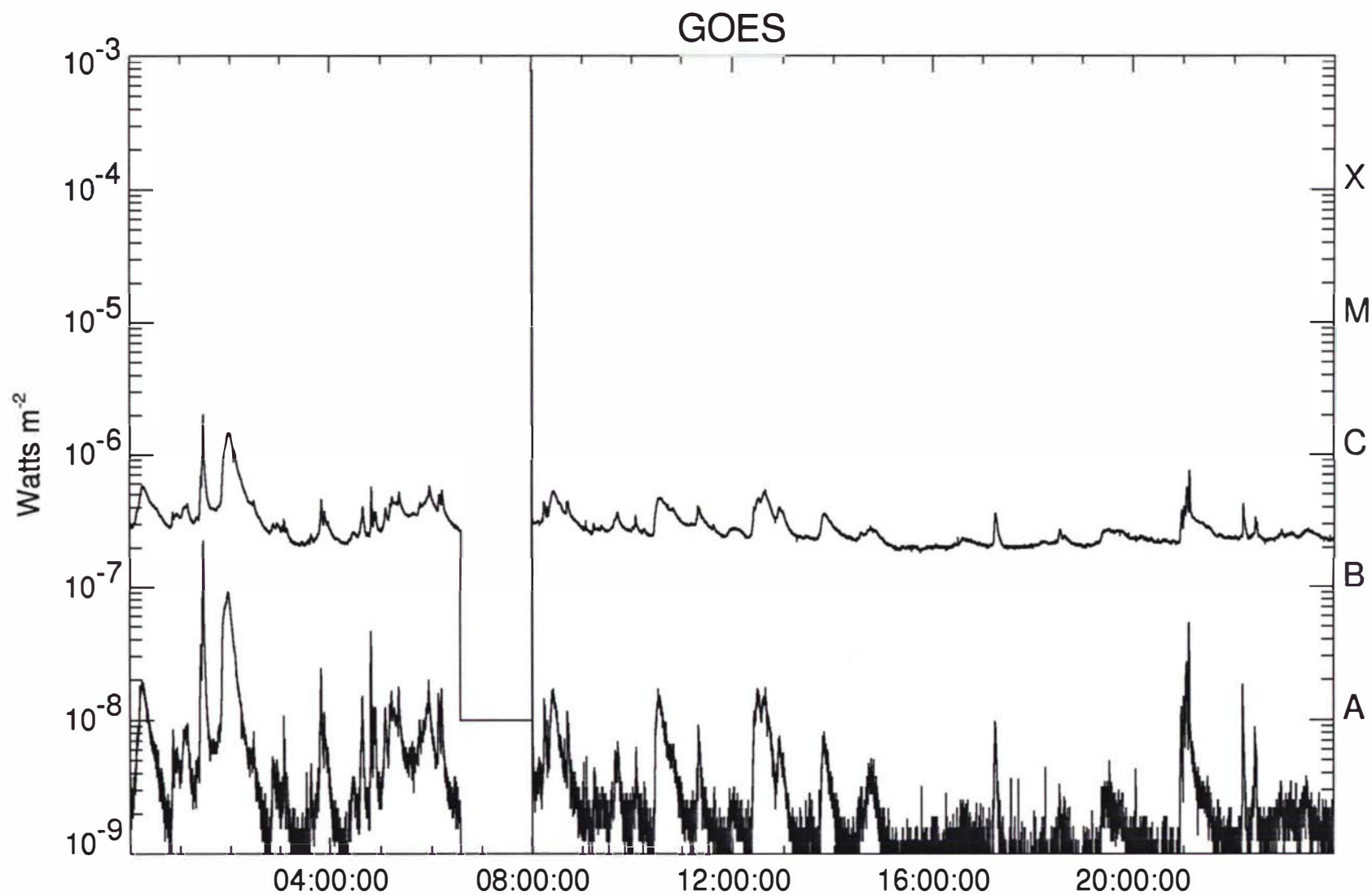
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/26



Current Time: 92/10/06, 1409 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



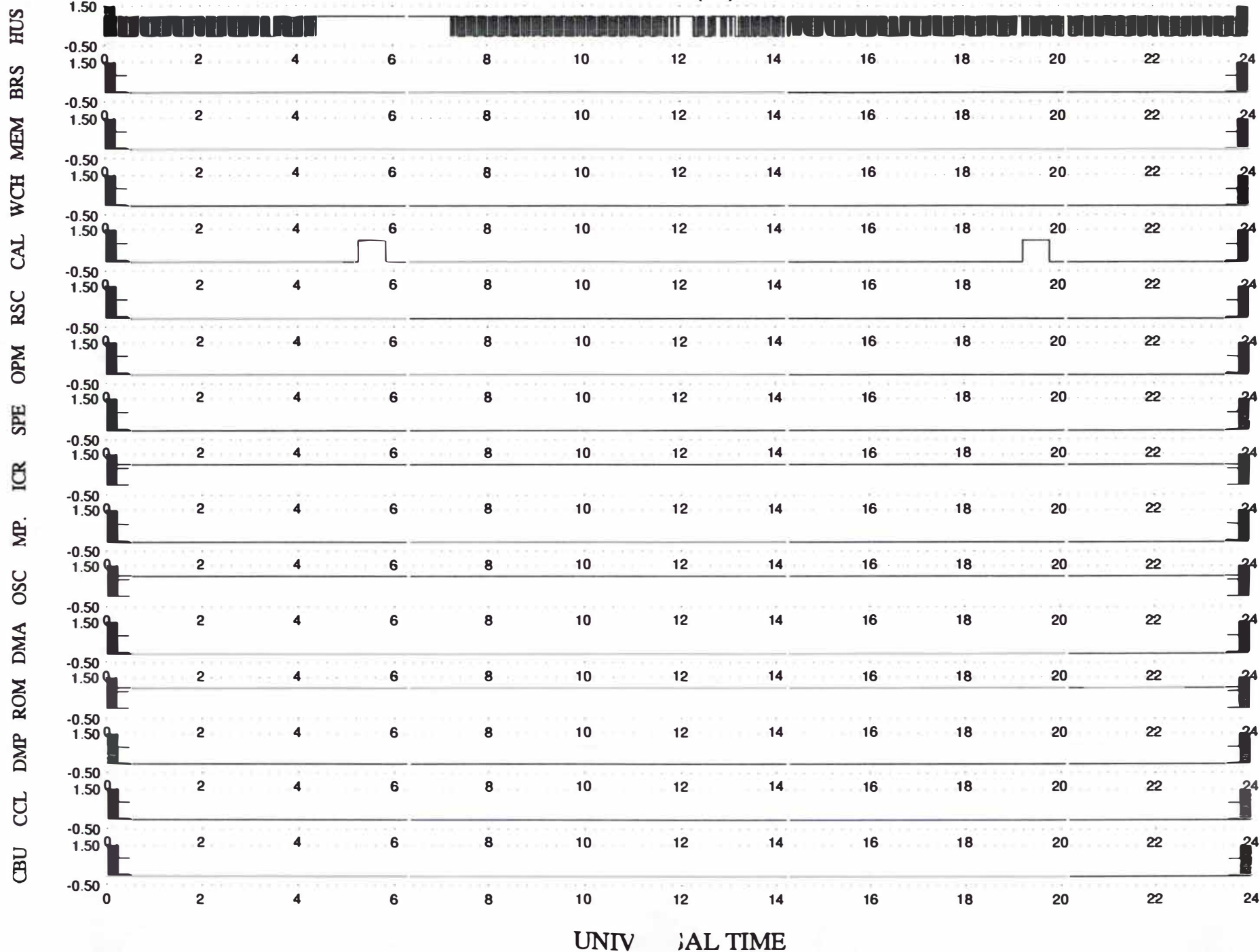
Data Start: 92/09/26, 0000:00

Plot created: 95/05/25, 1957

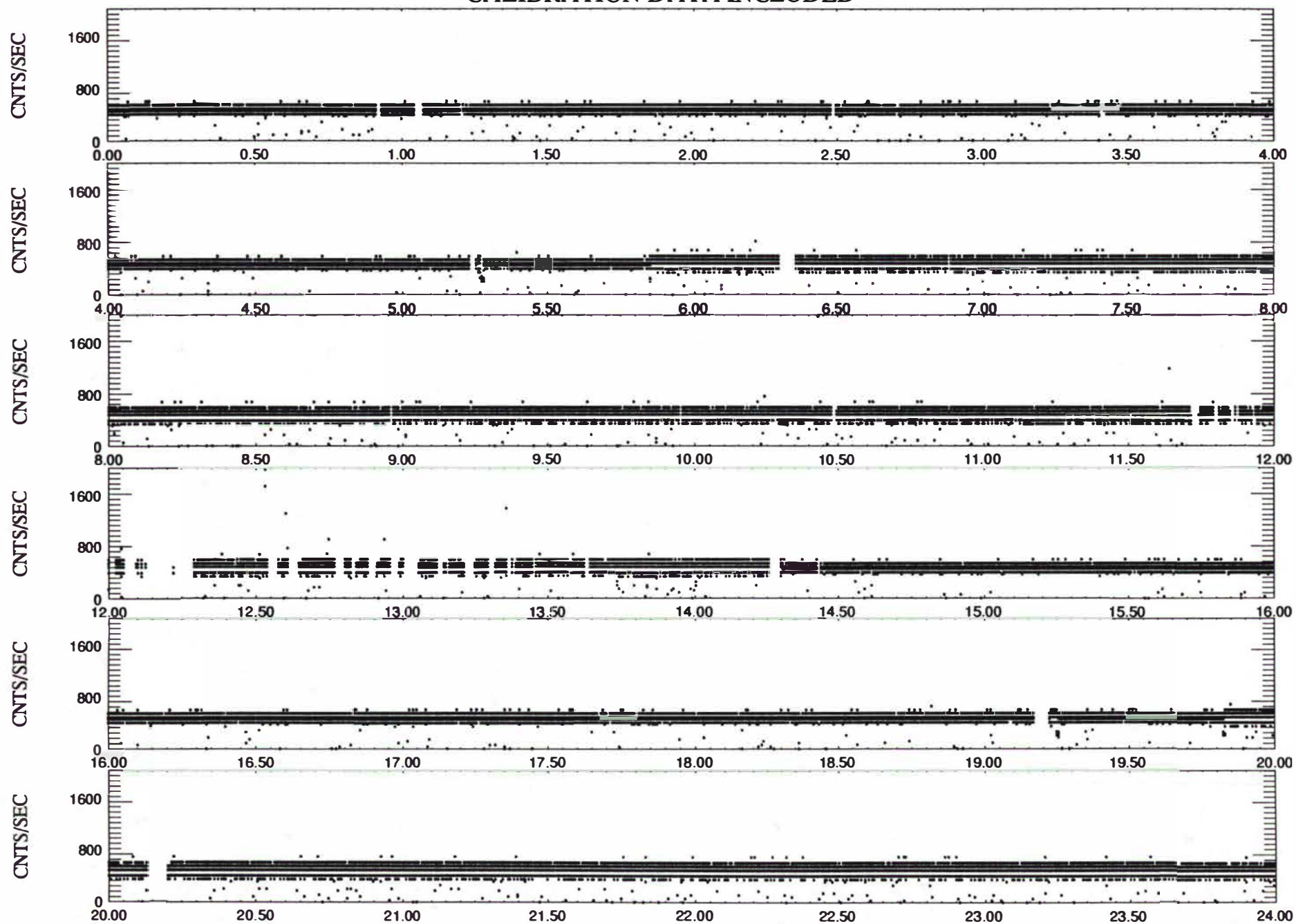
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

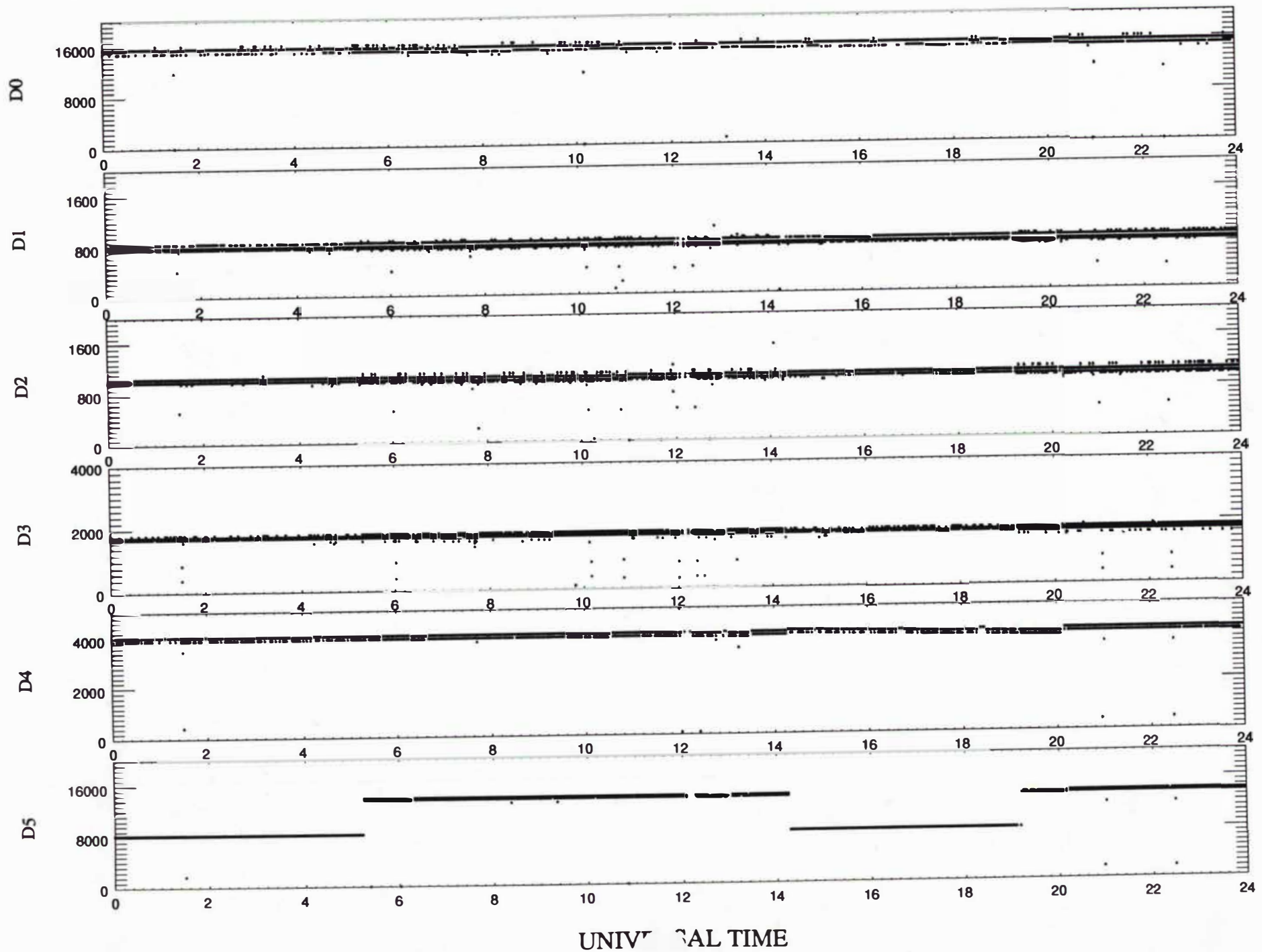
NO BURST (11)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From BHAT@ssl.msfc.nasa.gov Tue Sep 29 06:47:28 1992
Date: Tue, 29 Sep 1992 8:49:52 -0500 (CDT)
From: BHAT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 1959

TIME: TJD=8892 SECONDS=29050

TYPE: GRO J04 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=062.2 AZIMUTH=174.0 ERROR= DEGREES

COMMENTS:

FLUCTUATION OF THE HXR TRANSIENT GRO J0422+32 ABOUT 51 S AFTER THE CRAB RISE.

From BHAT@ssl.msfc.nasa.gov Tue Sep 29 06:53:23 1992
Date: Tue, 29 Sep 1992 8:55:53 -0500 (CDT)
From: BHAT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 1960

TIME: TJD=8892 SECONDS=39245

TYPE: ELE.PRE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

ELECTRON PRECIPITATION EVENT.

From BHAT@ssl.msfc.nasa.gov Tue Sep 29 06:55:48 1992
Date: Tue, 29 Sep 1992 8:58:15 -0500 (CDT)
From: BHAT@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 1961

TIME: TJD=8892 SECONDS=45128

TYPE: ELE.PRE SOLAR FLARE TRIGGER SIGNAL:N

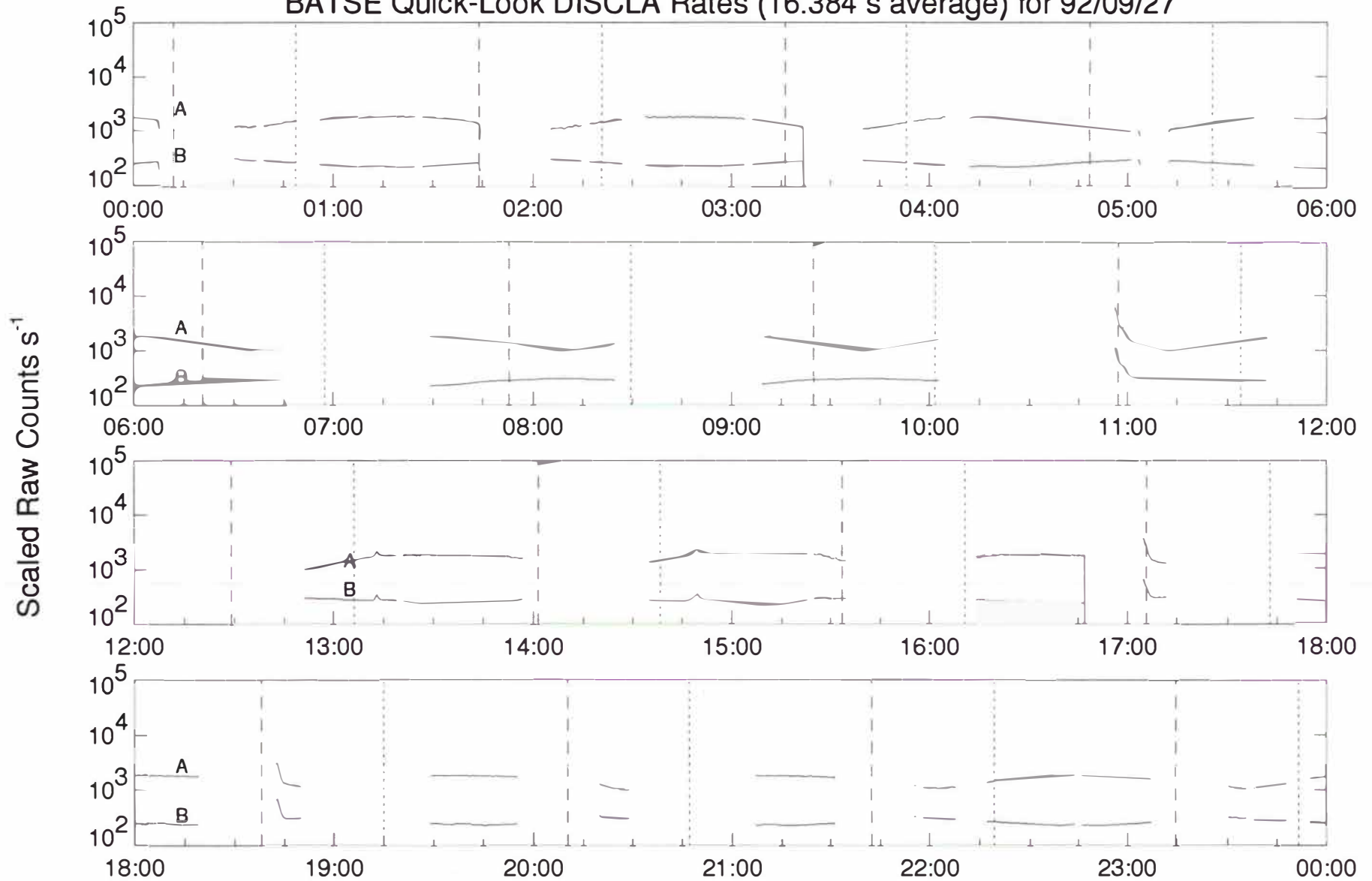
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON PRECIPITATION EVENT.

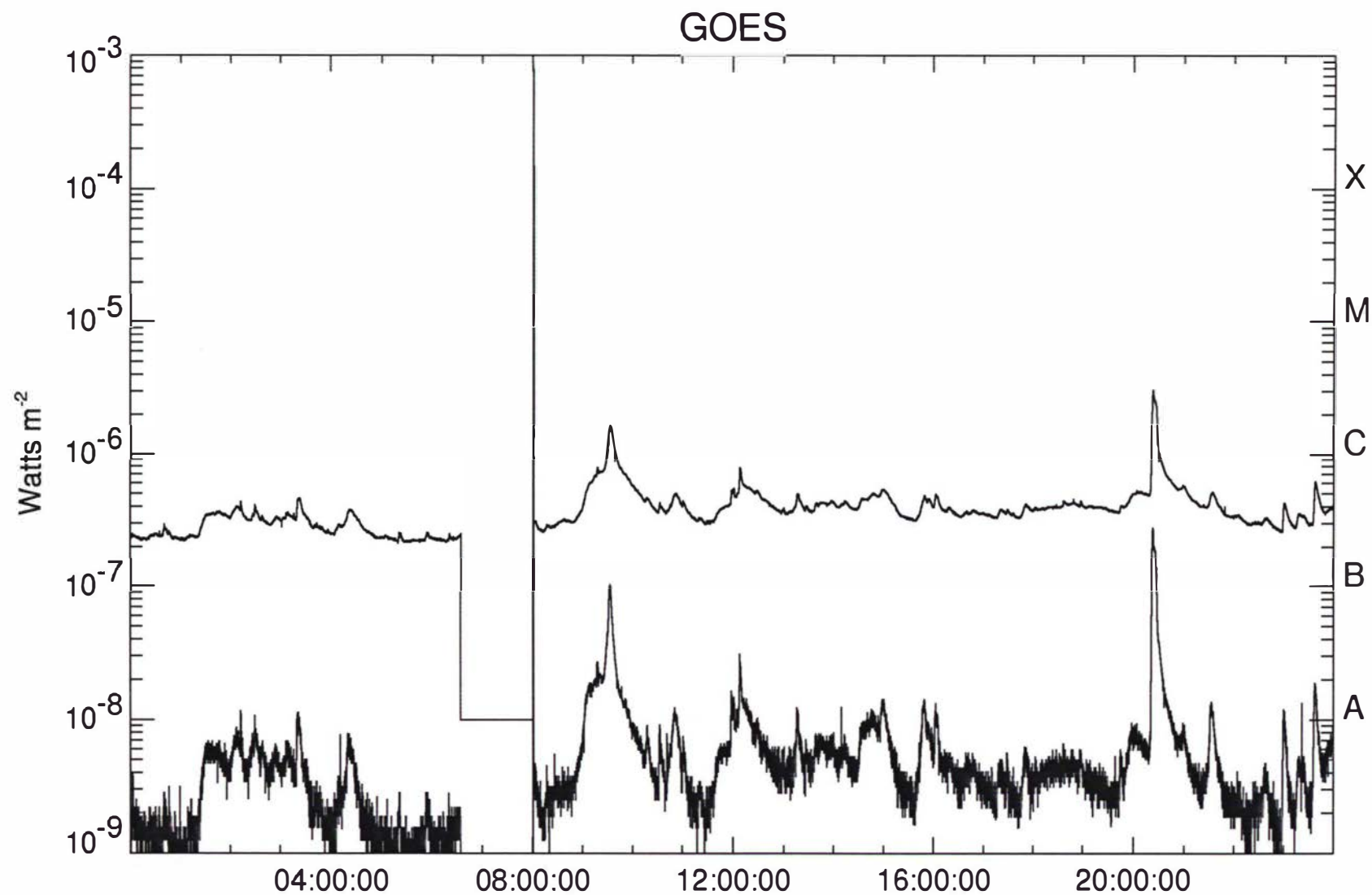
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/27



Current Time: 92/10/06, 1410 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



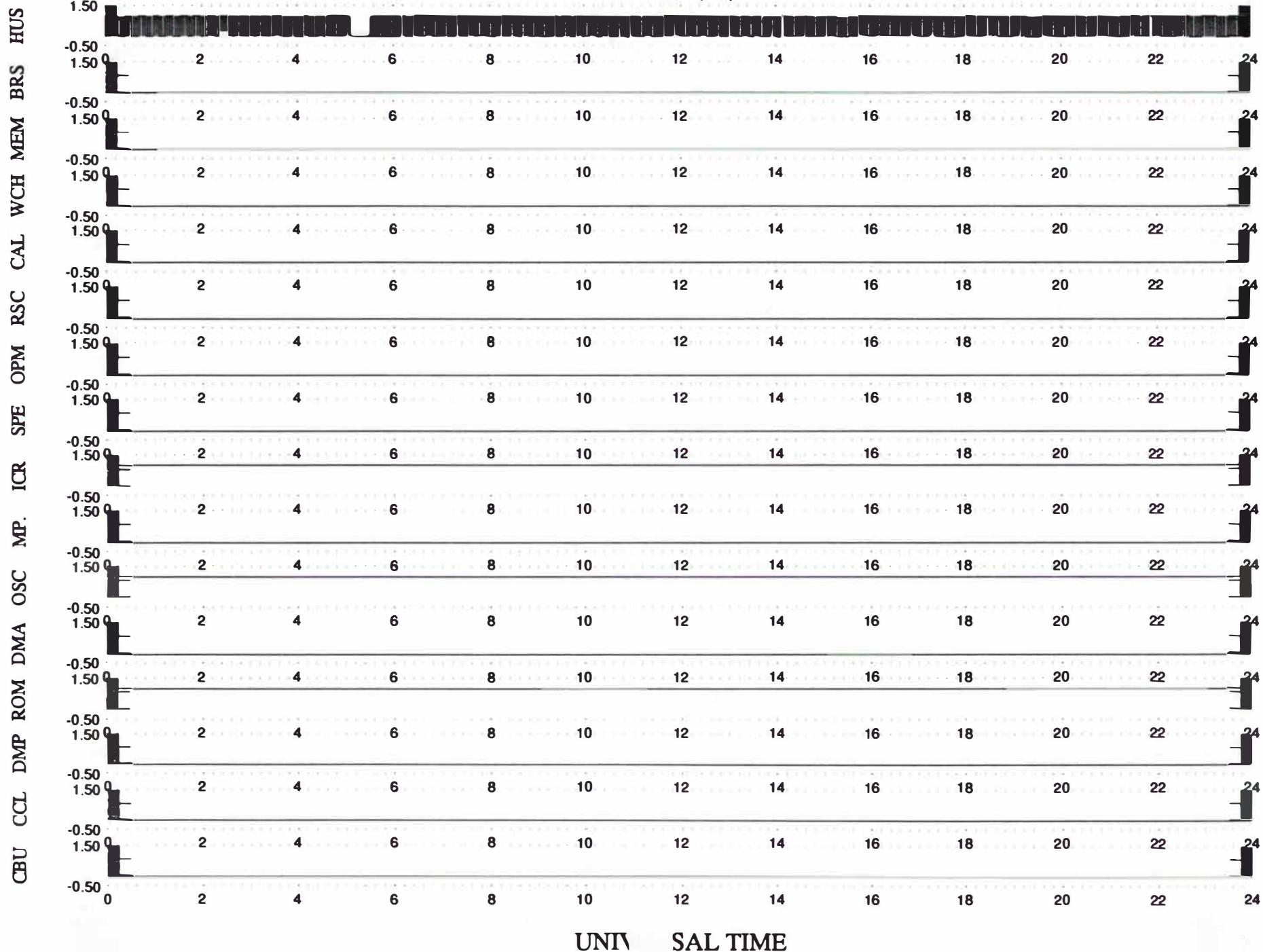
Data Start: 92/09/27, 0000:07

Plot created: 95/05/25, 2001

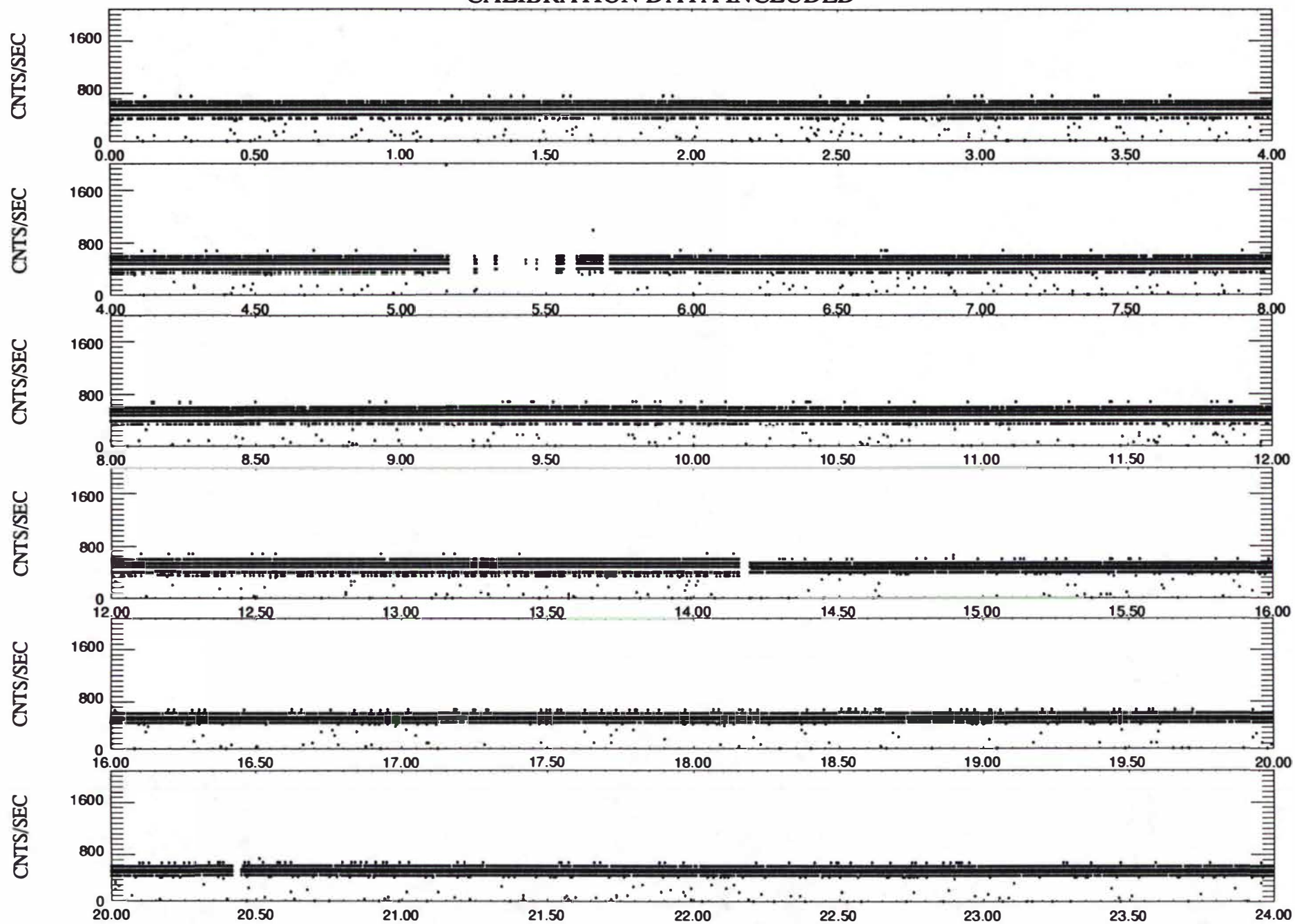
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

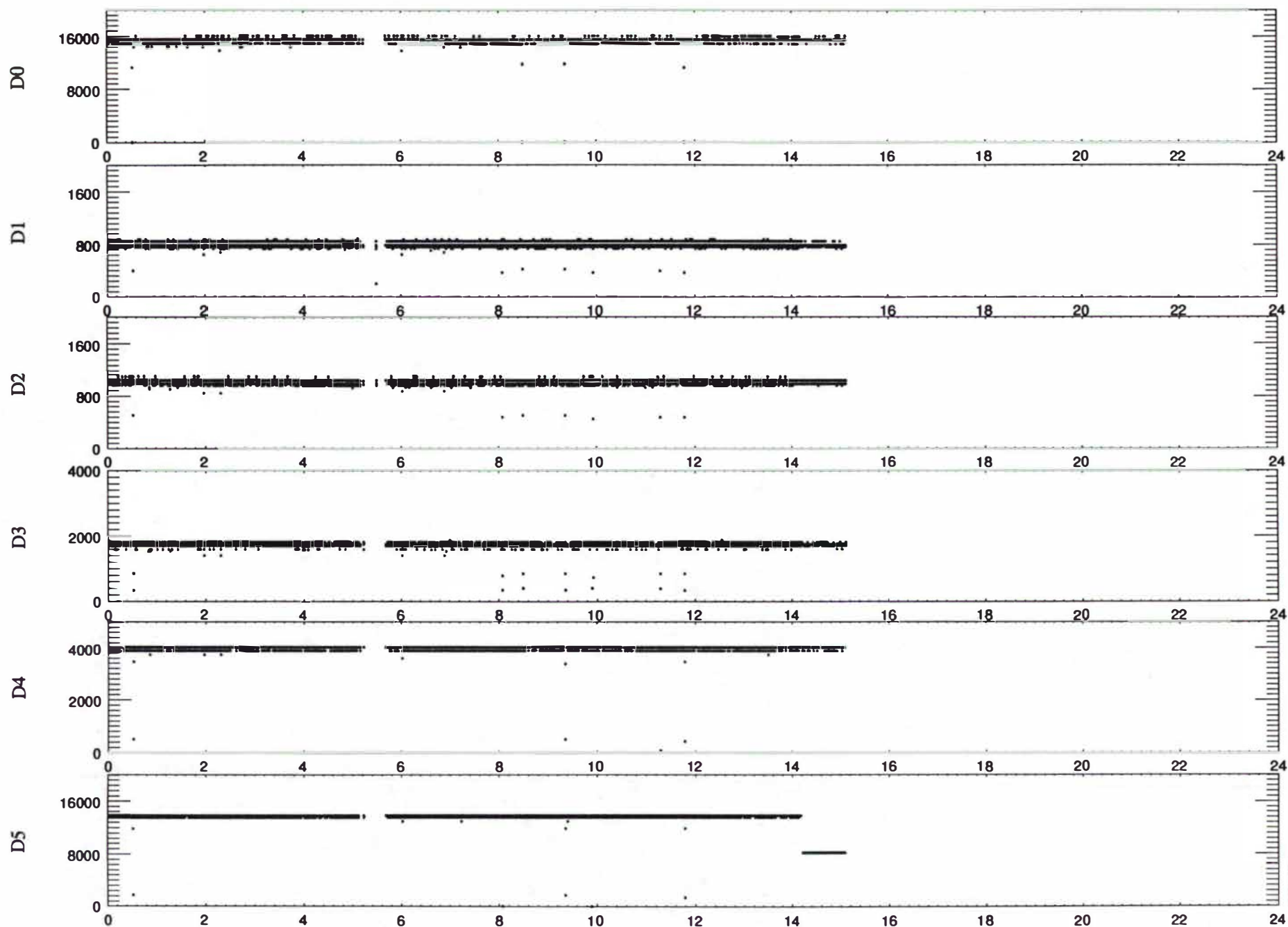
NO BURST (11)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



UNIV. CAL TIME

CATSEARCH PROGRAM

BATSE BURST # 1962
EVENT OF 1992 SEP 28 DAY OF YEAR=272
EVENT CROSSING TIME AT BATSE : 64279. S. OR 17:51:18.6
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 323.900 20.100
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 28/ 9/ 92 IS:
RA= 161.402 DEC= -1.829 DIST= 6.144 AU
BATSE-ULYSSES DISTANCE = 919094528. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 25.02 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 2777.99 SECS.
CROSSING TIME AT ULYSSES IS 67057. S. OR 18:37:36.6 +/- 317.33 SECONDS

No

From HAGEDON@ssl.msfc.nasa.gov Thu Oct 1 06:13:12 1992
Date: Thu, 1 Oct 1992 8:15:42 -0500 (CDT)
From: HAGEDON@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1292

BATSE BURST TRIGGER

NO.: 01962

TIME: TJD=8893 SECONDS=64278

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=129.5 AZIMUTH=106.4 ERROR= DEGREES

COMMENTS:

WEAK SINGLE SPIKE. DURATION ~0.2S. HARD EVENT; SEEN ABOVE 300 KEV, BUT NOT
BELOW 50 KEV.

8 / 6 / 94

ULYSSES RT

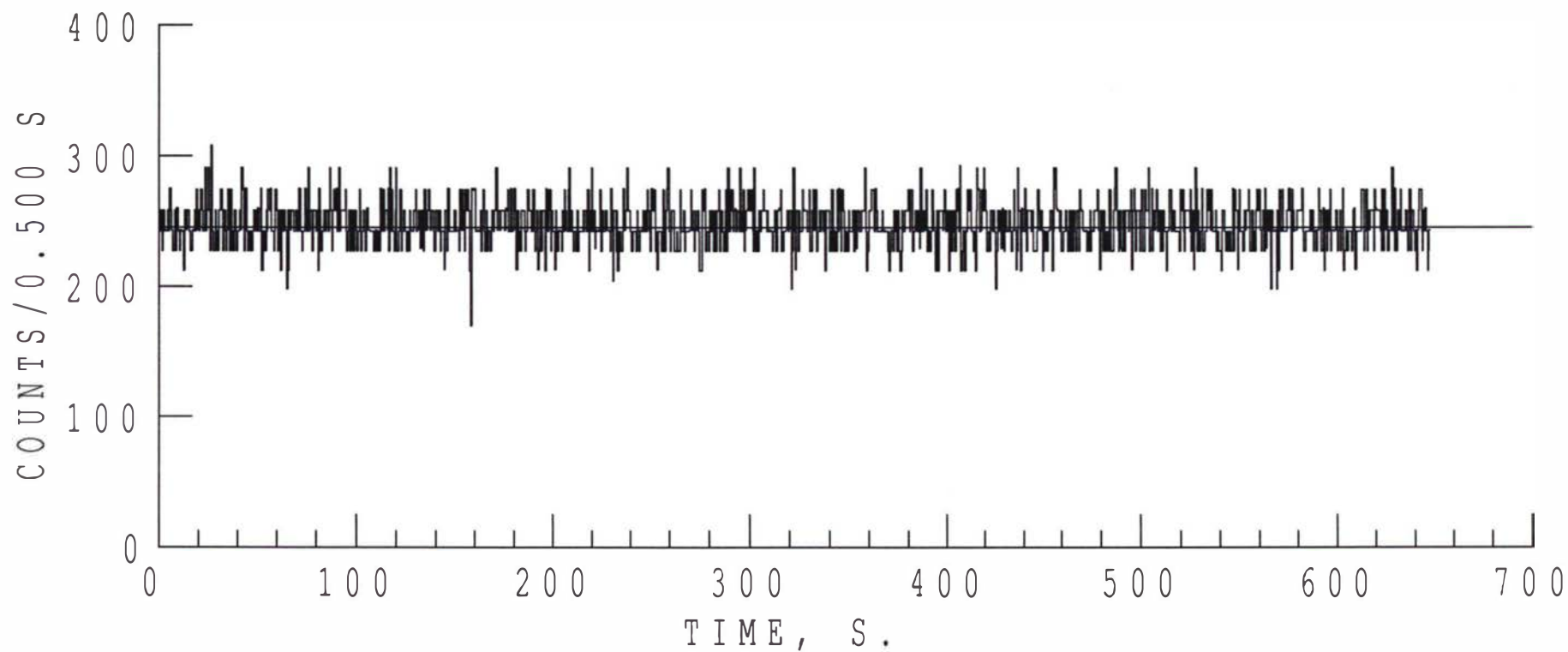
28 / 9 / 92 66744.188 s

0.250 S INTERVALS REGROUPED BY 2

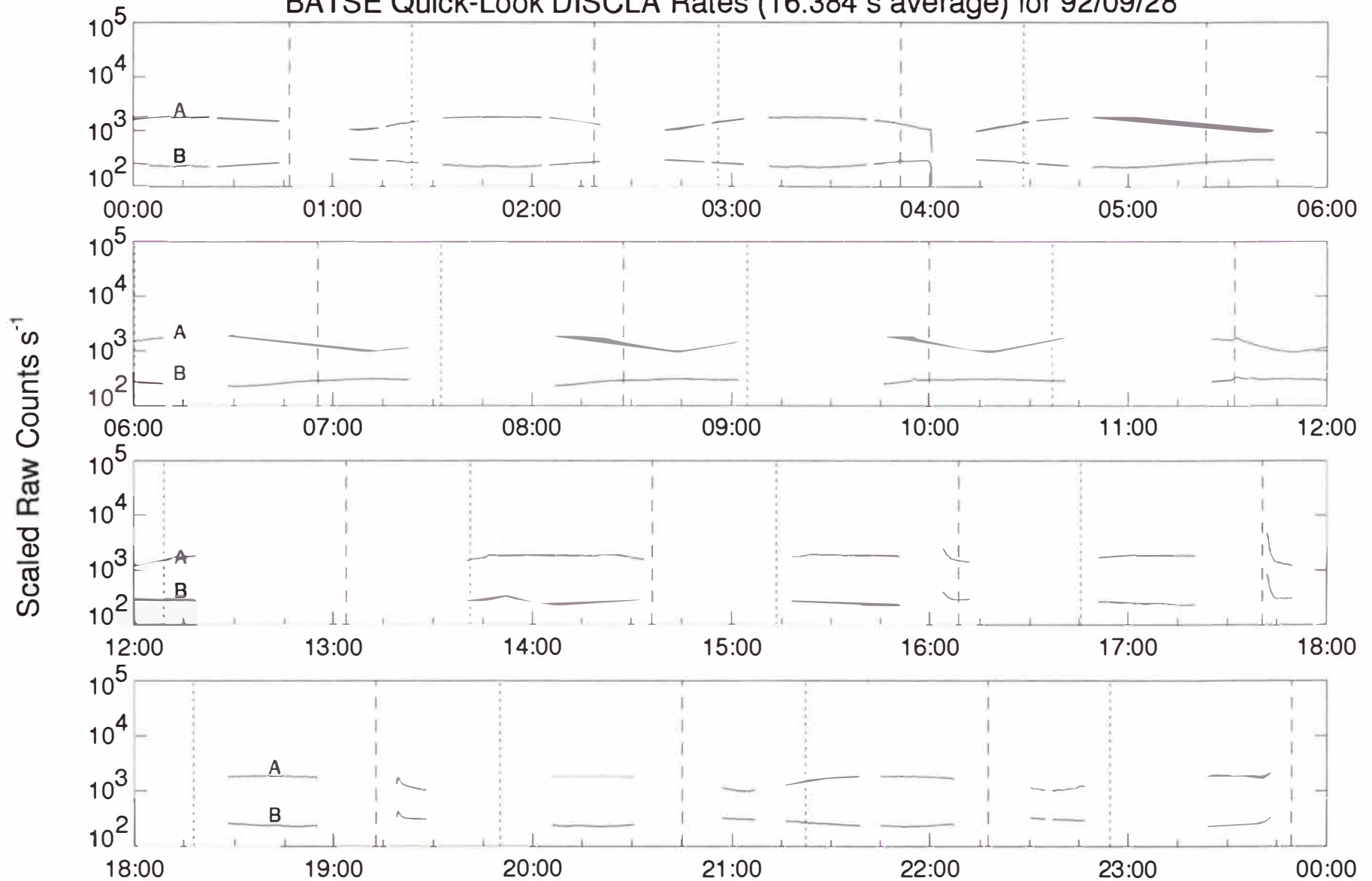
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



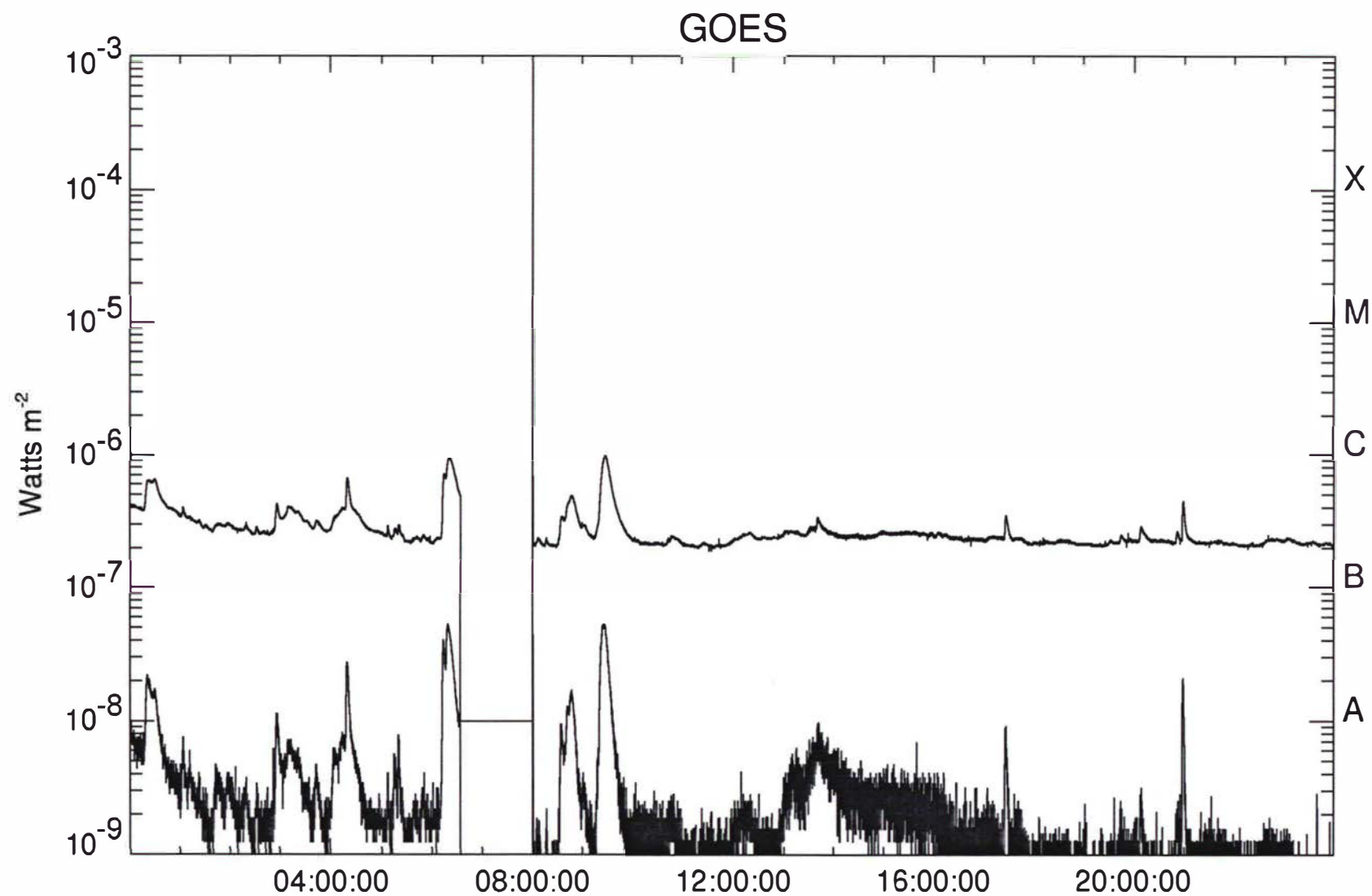
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/28



Current Time: 92/10/06, 1411 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



Data Start: 92/09/28, 0000:01

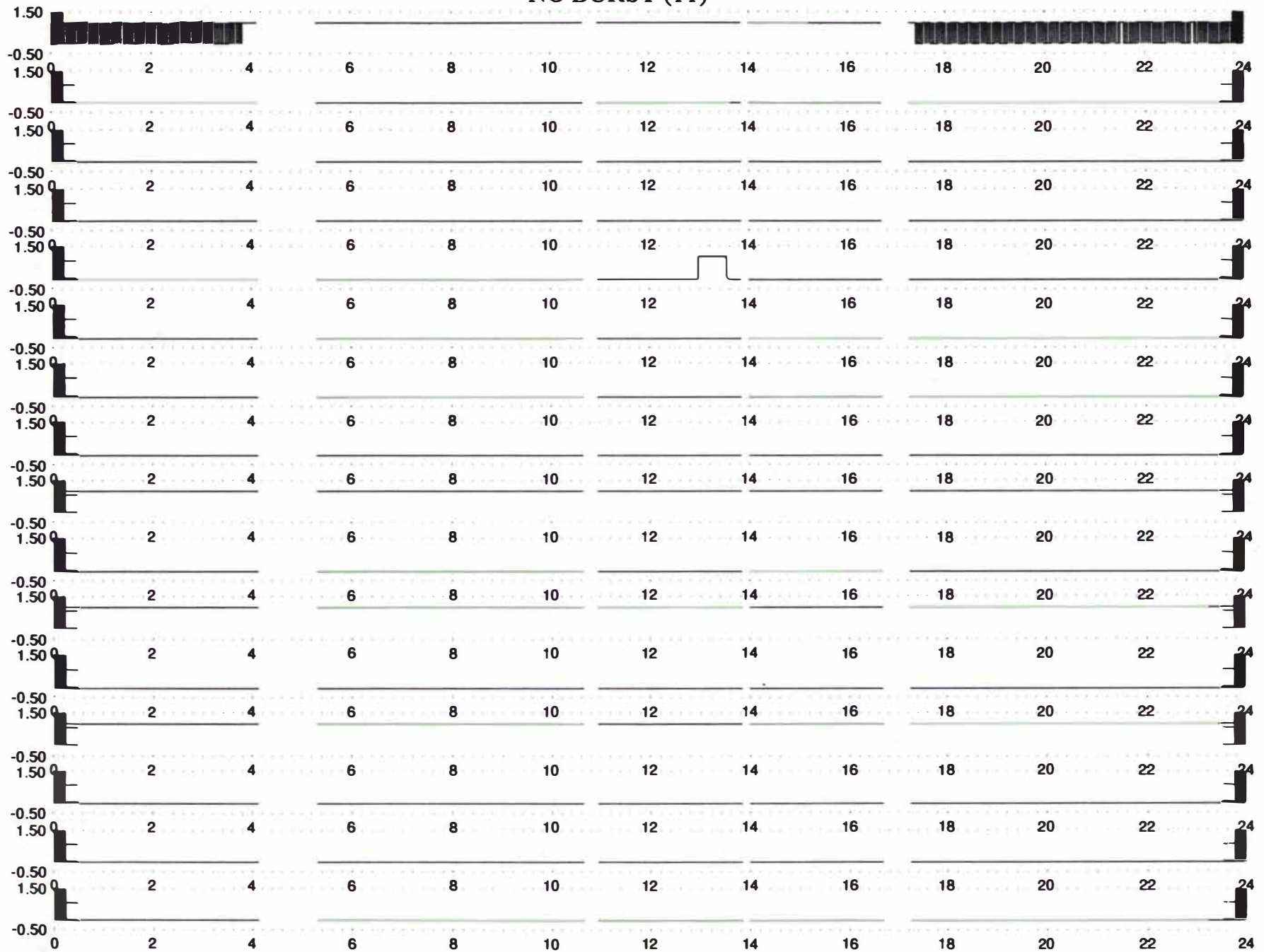
Plot created: 95/05/25, 2004

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

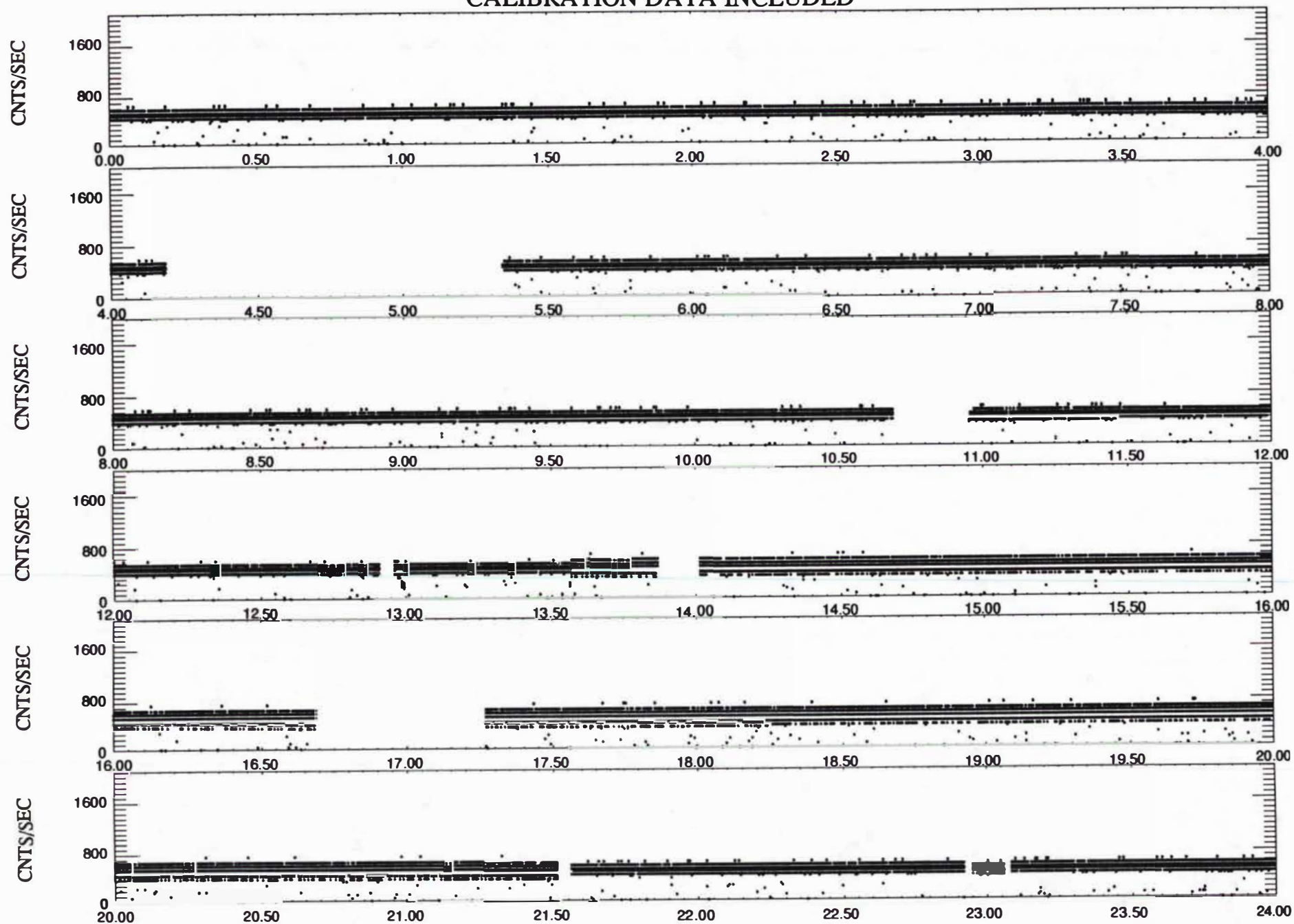
NO BURST (11)

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

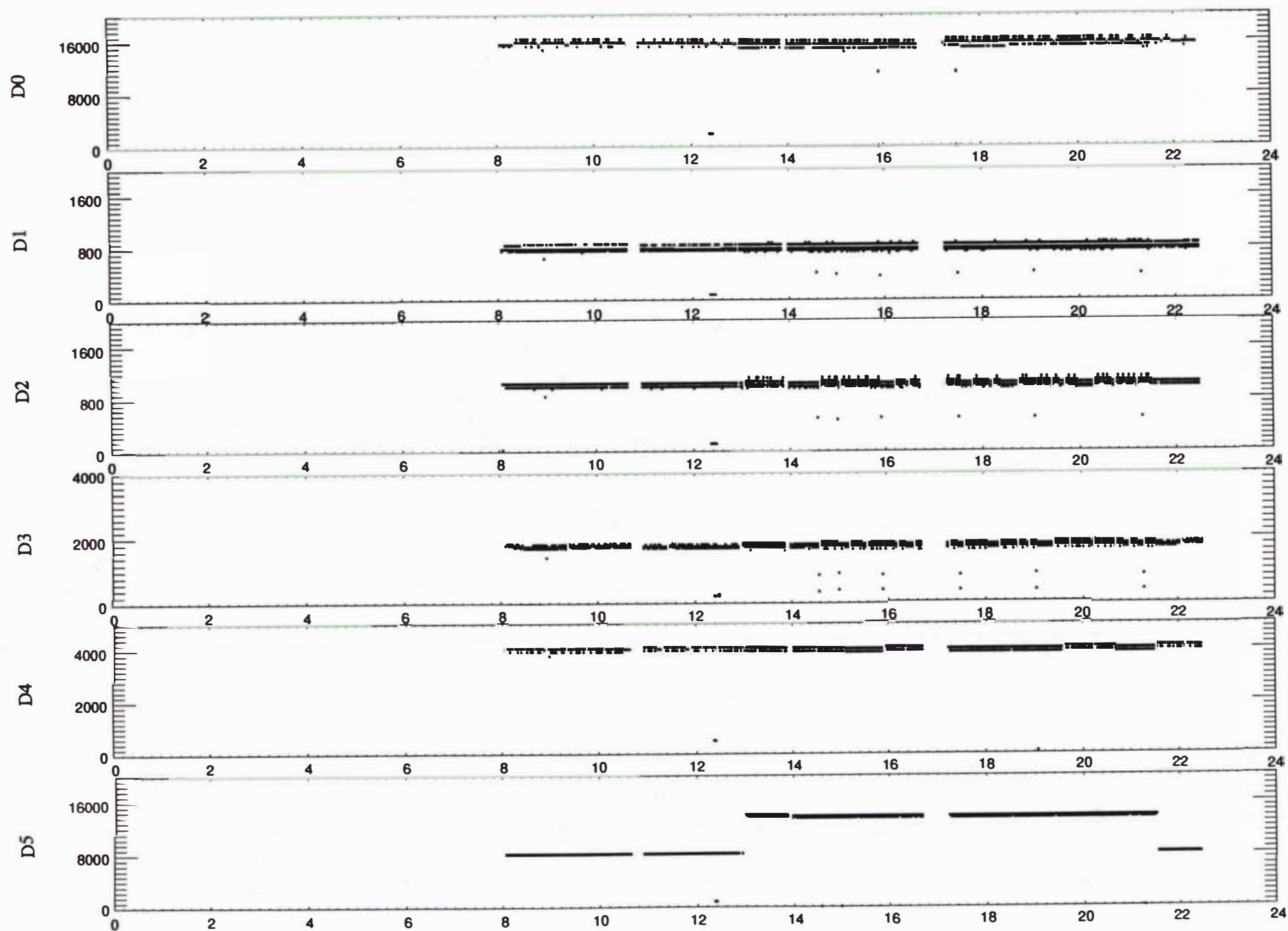


UNITS 3AL TIME

CALIBRATION DATA INCLUDED



UNIV SAL TIME



UNIVERSAL TIME

From MALLOZZI@ssl.msfc.nasa.gov Thu Oct 1 07:49:42 1992
Date: Thu, 1 Oct 1992 9:52:14 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01963

Sep 29

TIME: TJD=8894 SECONDS=46002

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT.

From MALLOZZI@ssl.msfc.nasa.gov Thu Oct 1 07:51:58 1992
Date: Thu, 1 Oct 1992 9:54:29 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01964

Sep 29

TIME: TJD=8894 SECONDS=53500

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

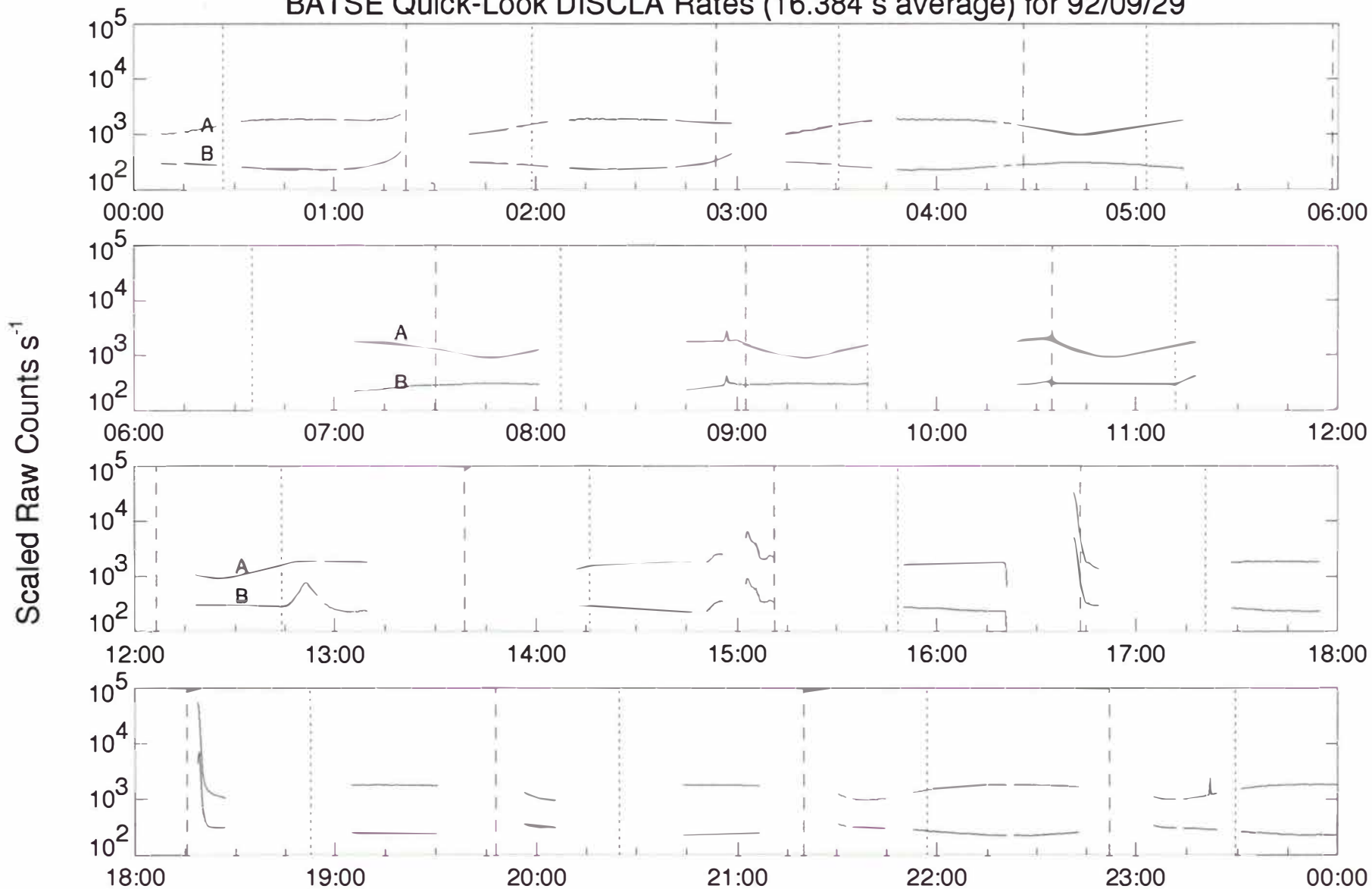
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON ENTRY INTO SAA.

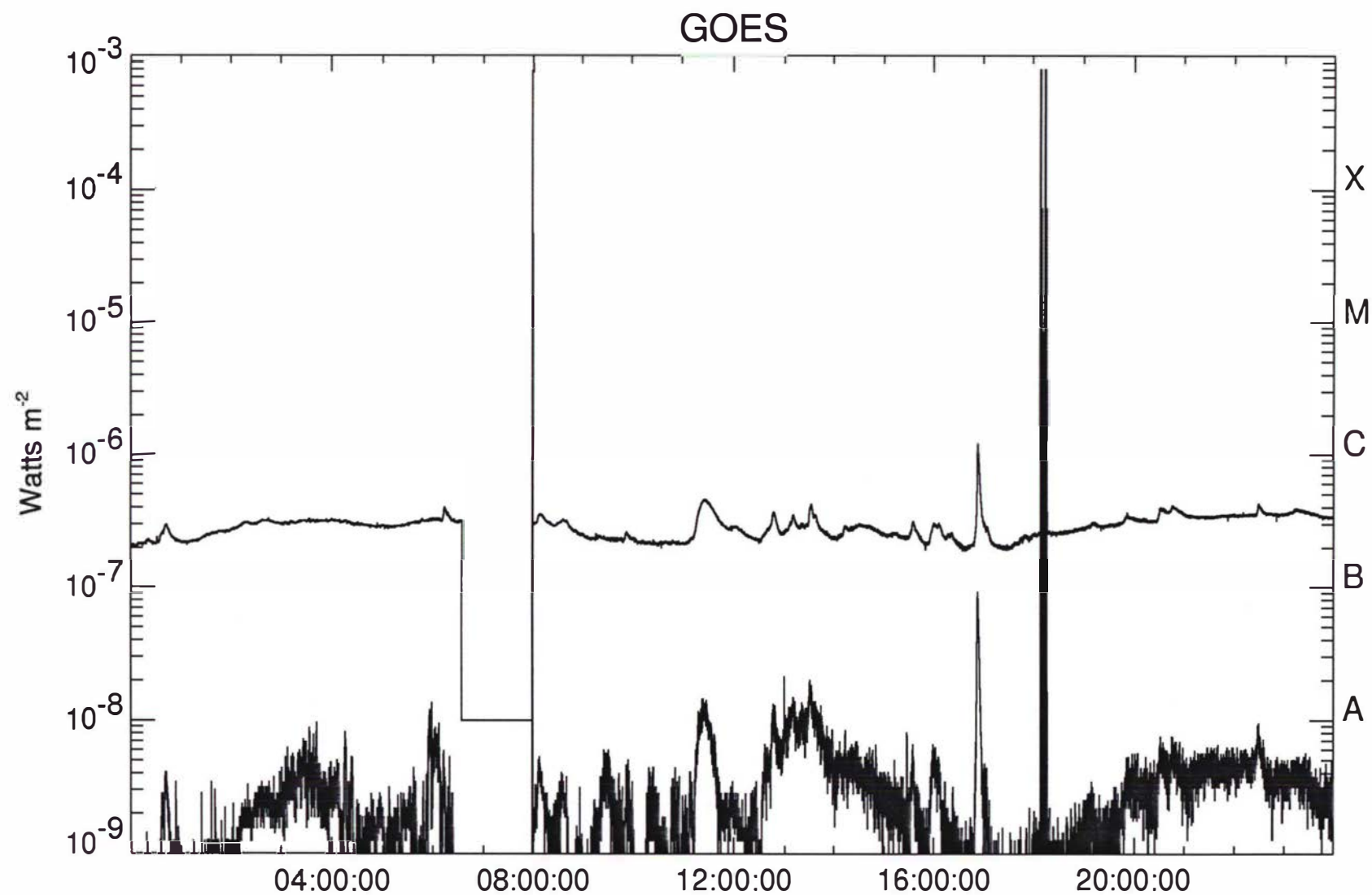
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/29



Current Time: 92/10/06, 1412 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



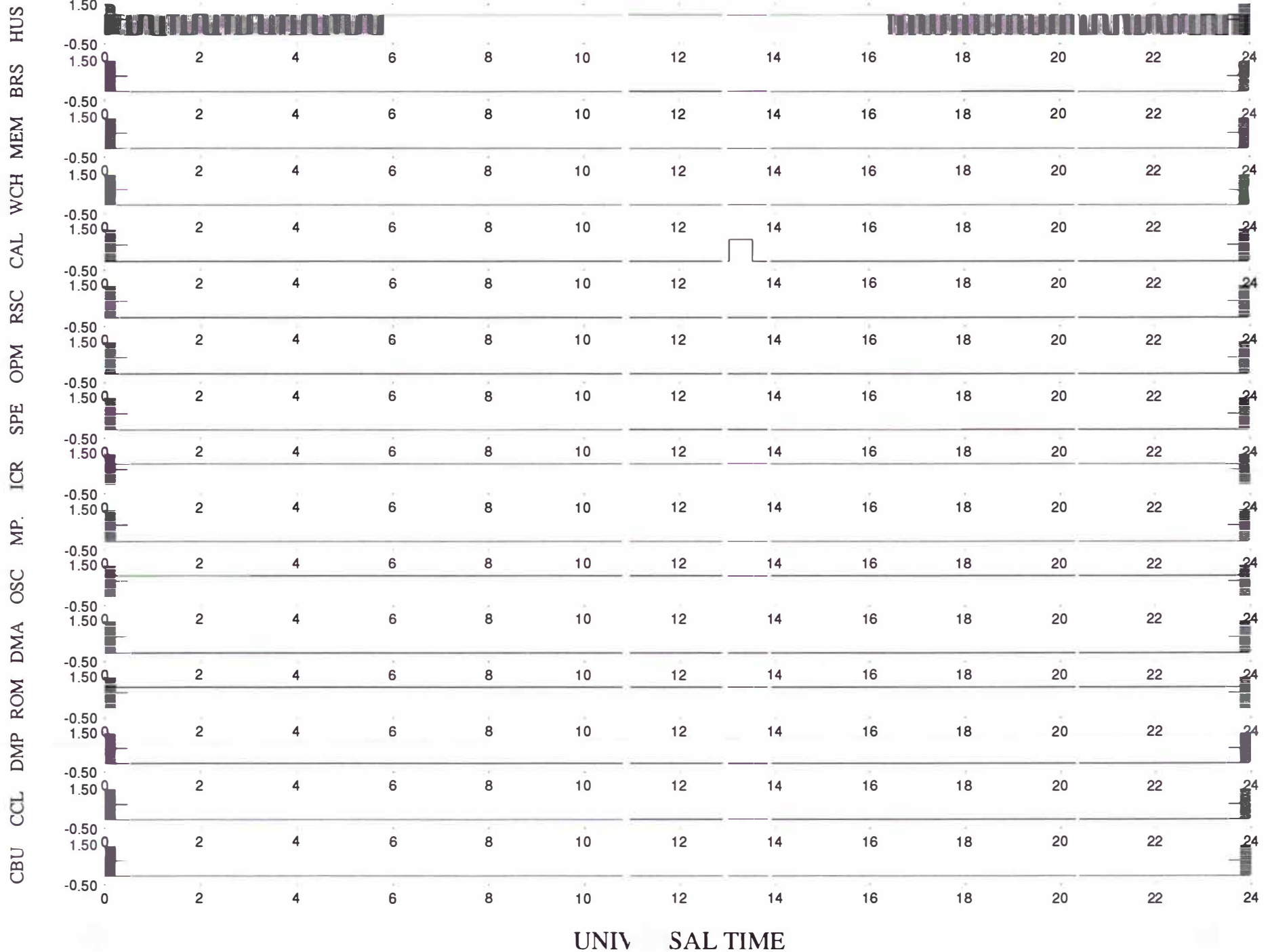
Data Start: 92/09/29, 0000:02

Plot created: 95/05/25, 2007

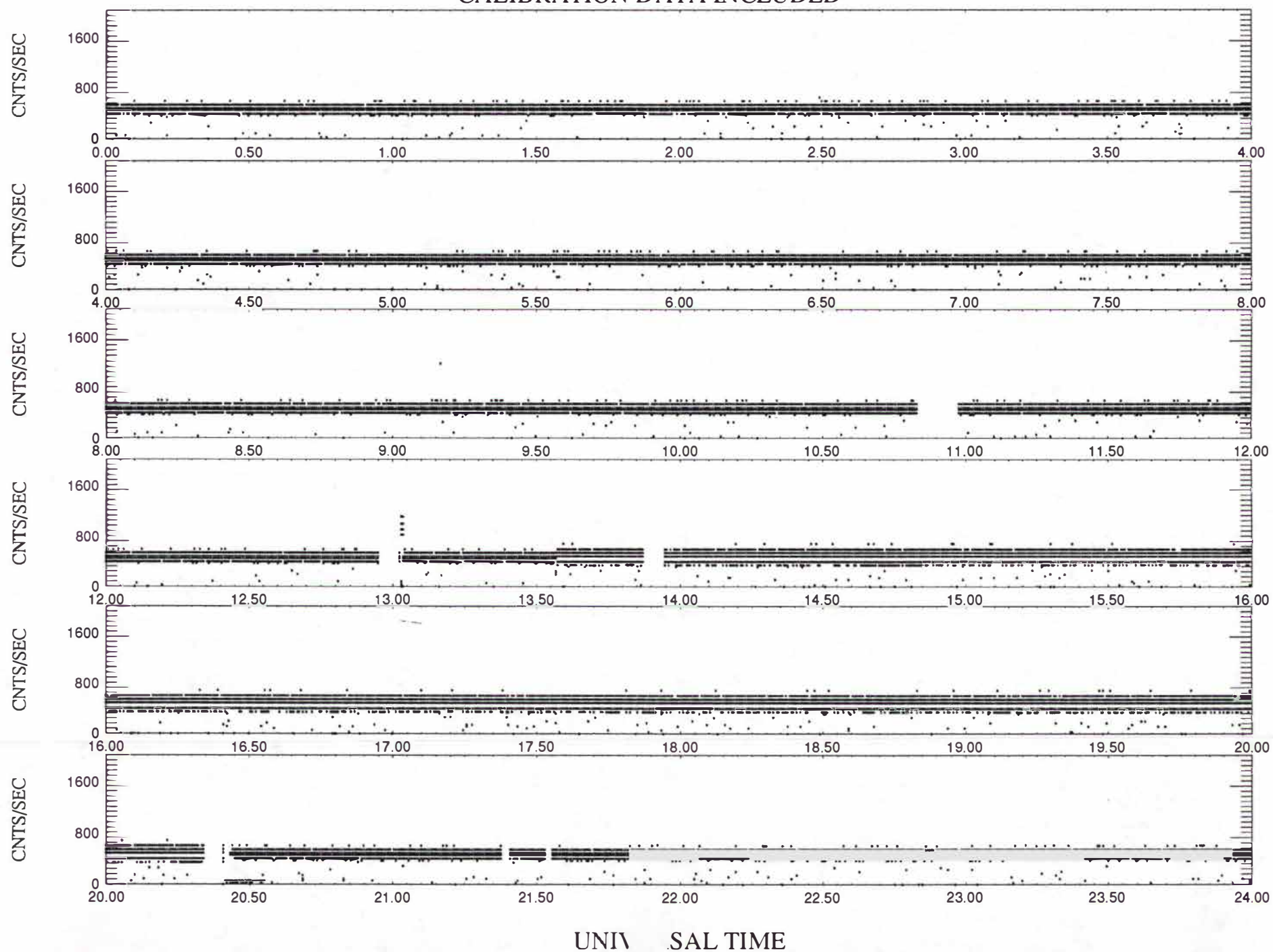
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

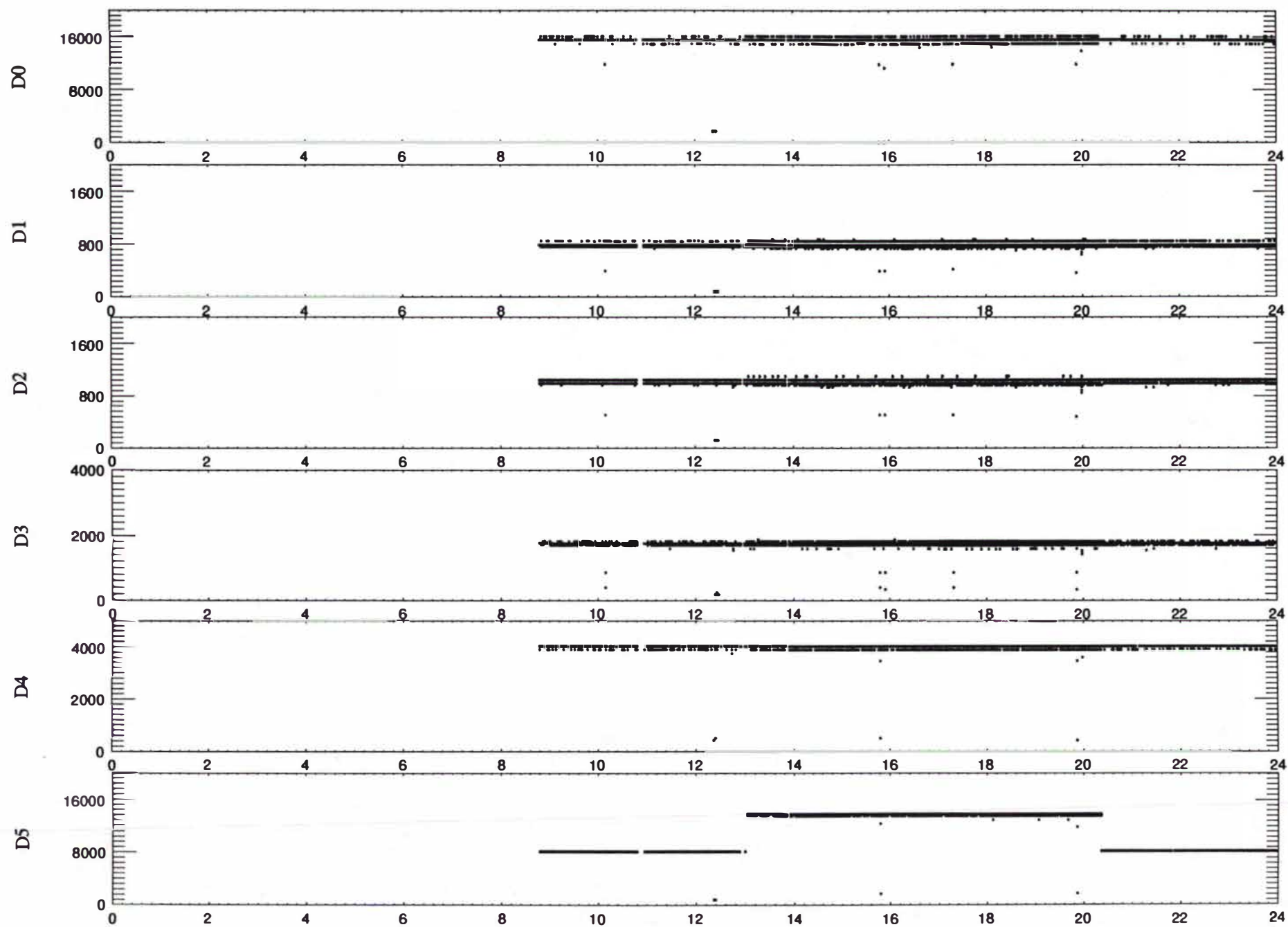
Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (11)



CALIBRATION DATA INCLUDED





UNIVERSAL TIME

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

From KOUVELIOTOU@ssl.msfc.nasa.gov Fri Oct 9 08:47:41 1992
Date: Fri, 9 Oct 1992 10:51:00 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
X-Vmsmail-To: KEVIN
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 01965

Sep 30
TIME: TJD=8895 SECONDS=43580

TYPE: UNKNOWN SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

VERY LITTLE DATA. OCCURED DURING GAP AND WAS OVERWRITTEN BY TRIGGER
1966. PROBABLY A FLUCTUATION OF GRO J0422+32.

No trigger

From KOUVELIOTOU@ssl.msfc.nasa.gov Fri Oct 9 08:47:53 1992
Date: Fri, 9 Oct 1992 10:51:12 -0500 (CDT)
From: KOUVELIOTOU@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
X-Vmsmail-To: KEVIN
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01966

TIME: TJD=8895 SECONDS=45873

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

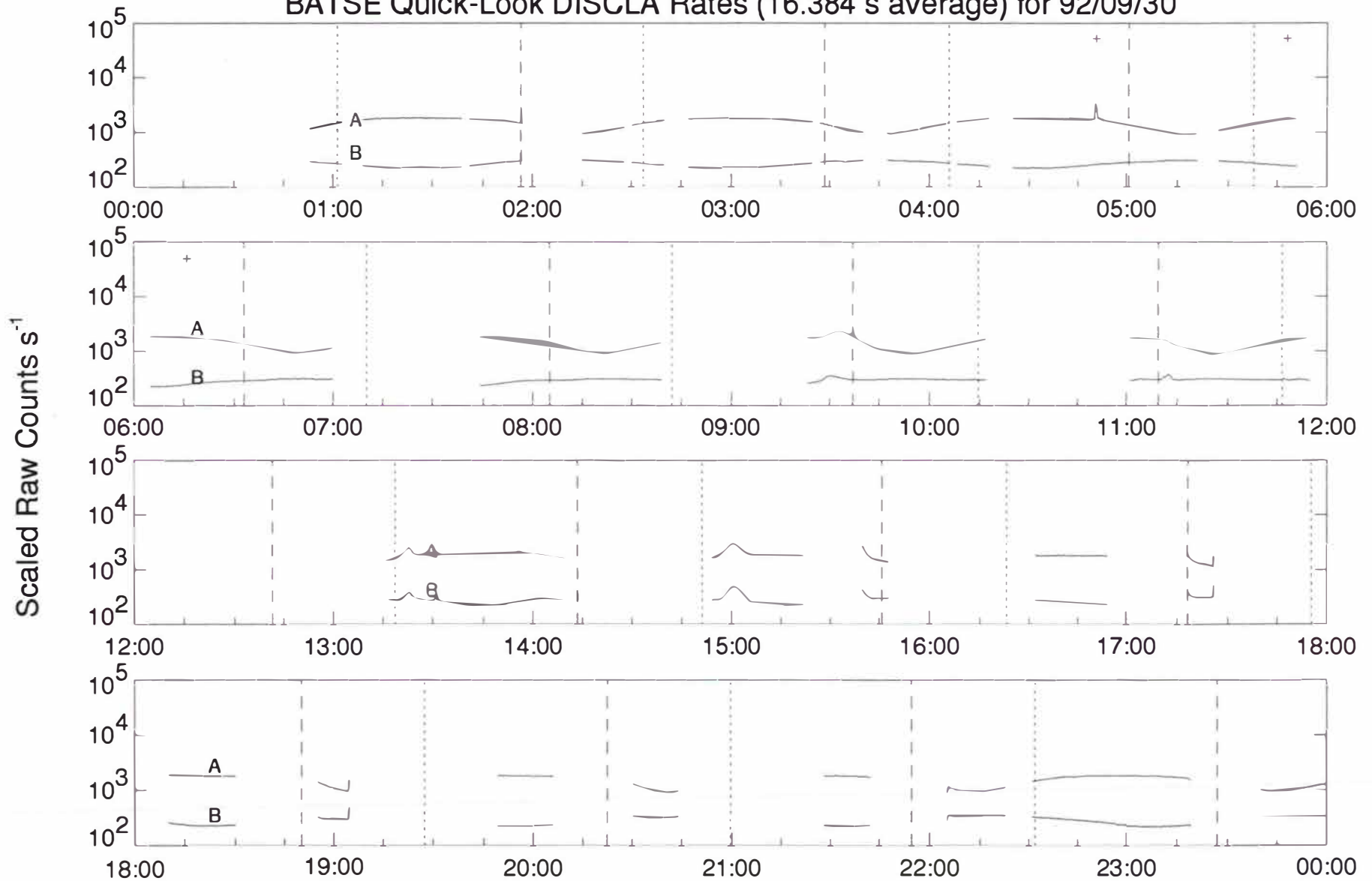
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

HUGE ELECTRON EVENT.

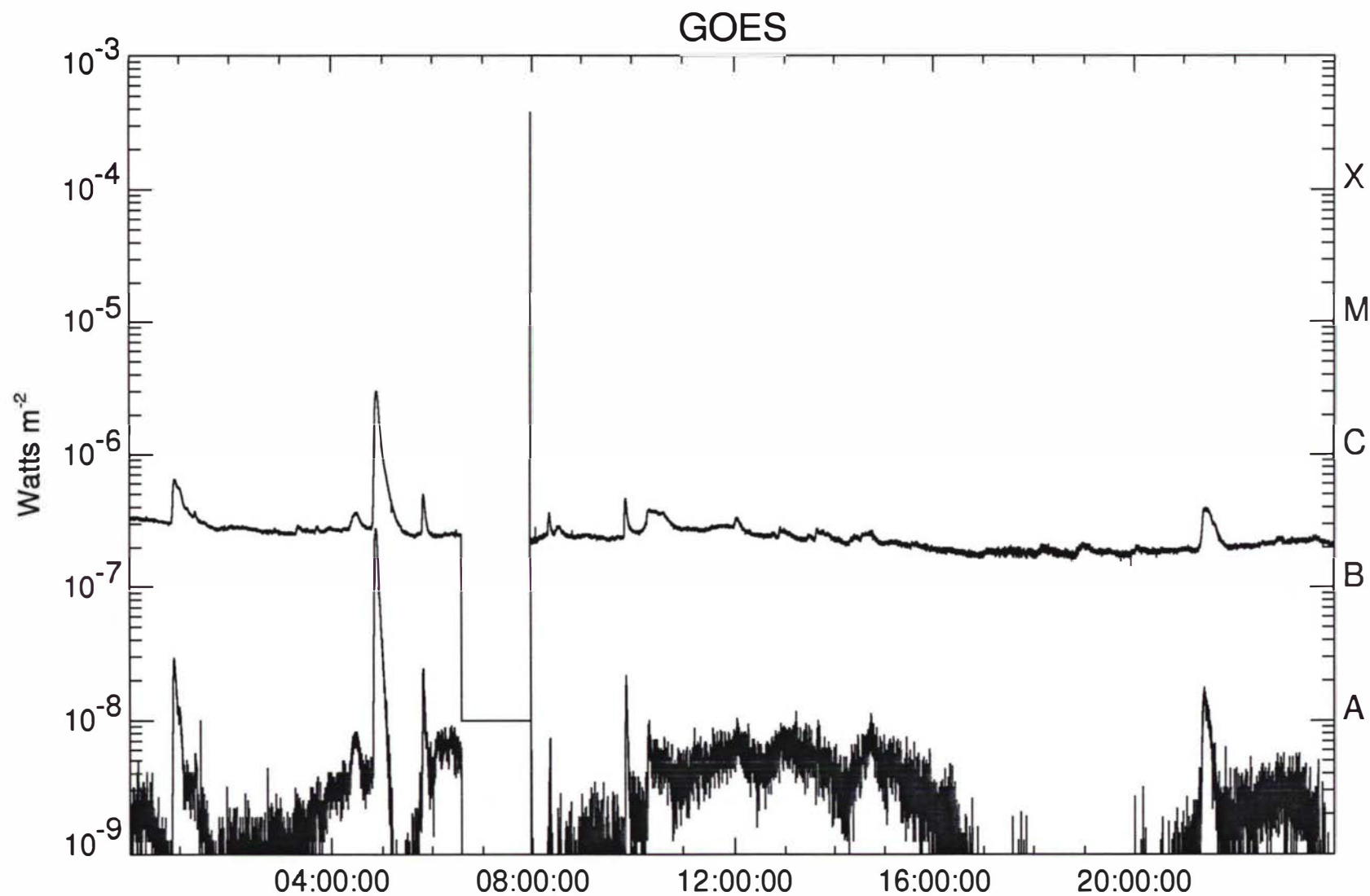
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/30



Current Time: 92/10/06, 1413 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



Data Start: 92/09/30, 0000:00

Plot created: 95/05/25, 2011

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

1000

1000

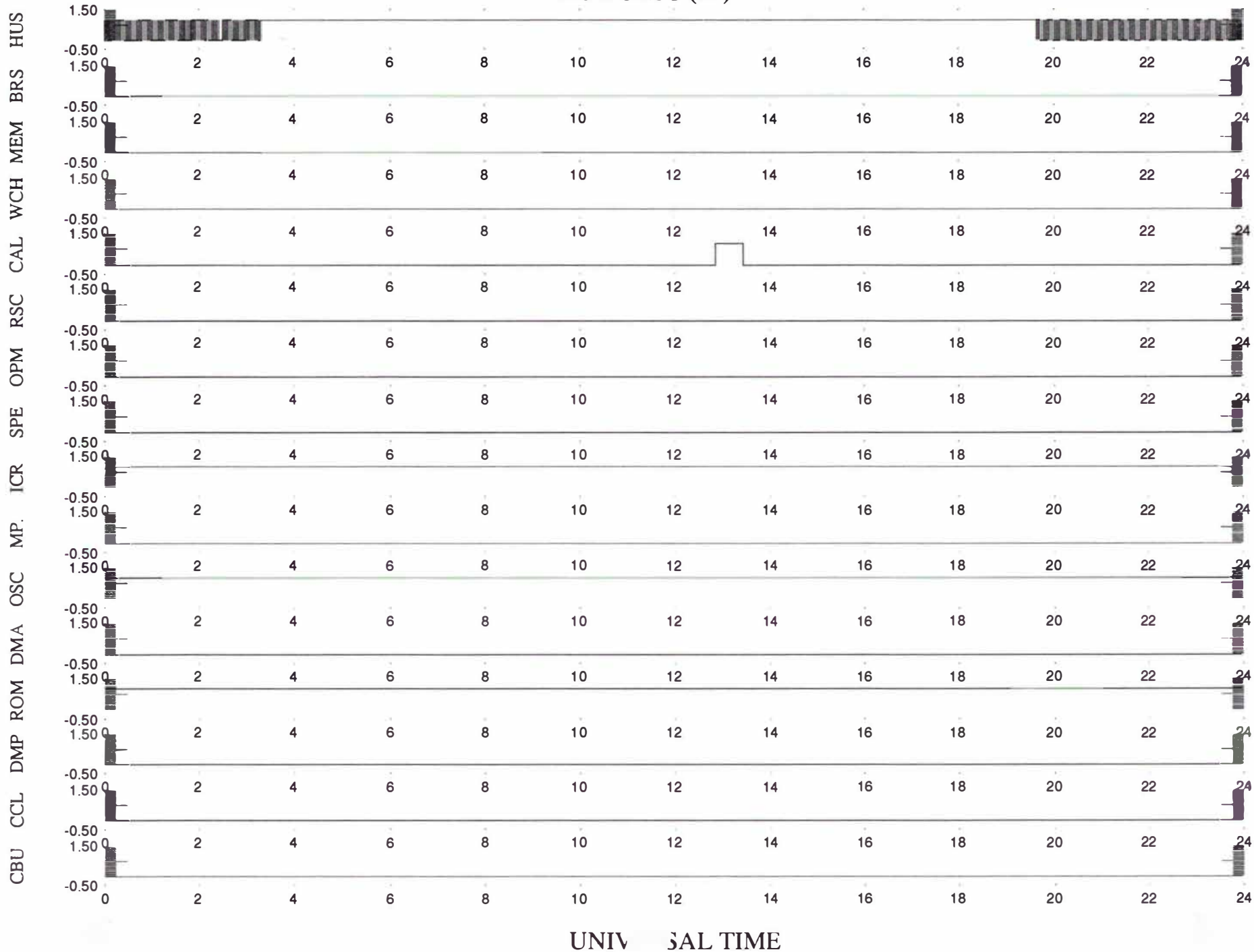
1000

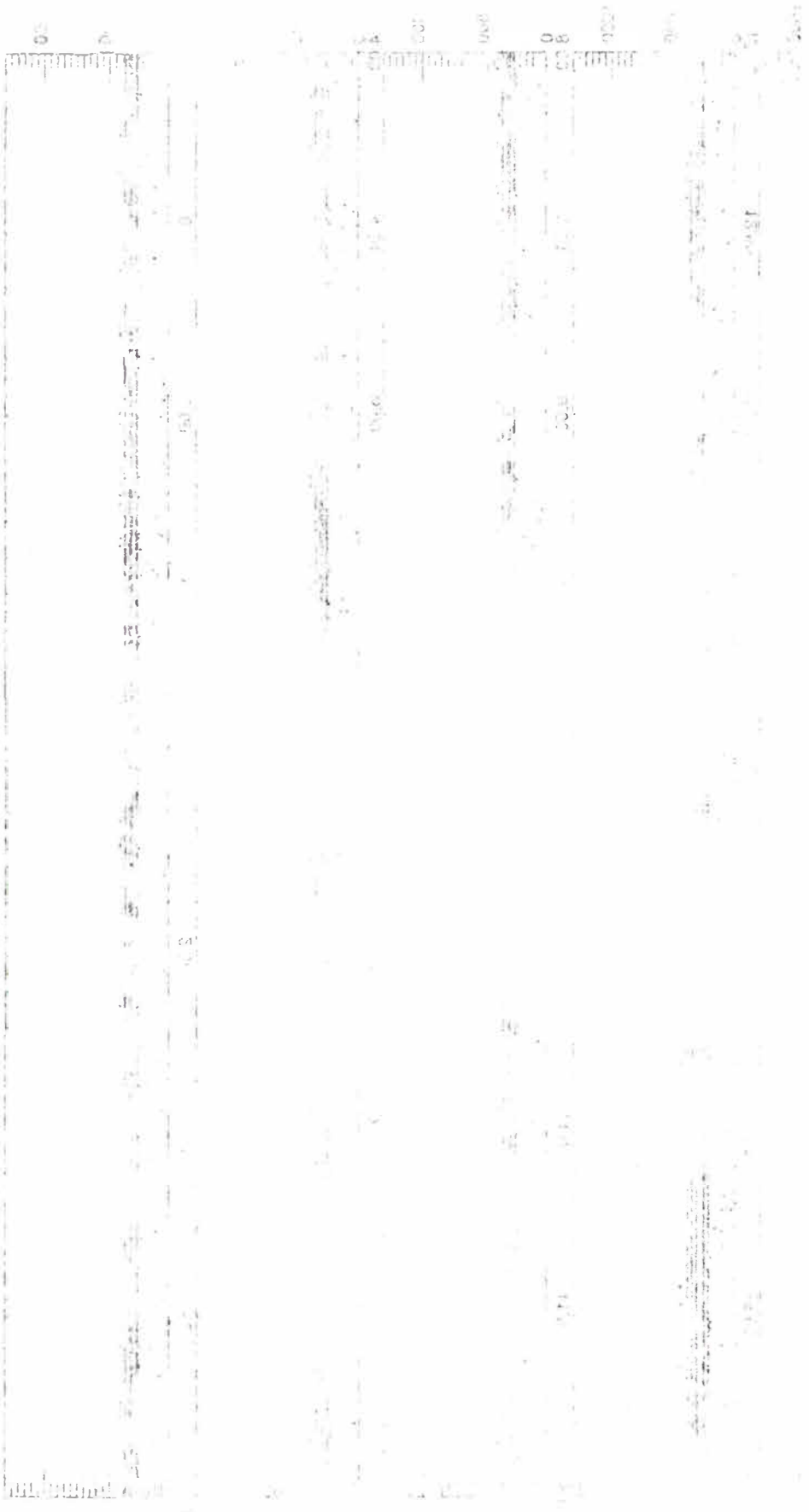
1000

1000

1000

NO BURST (11)

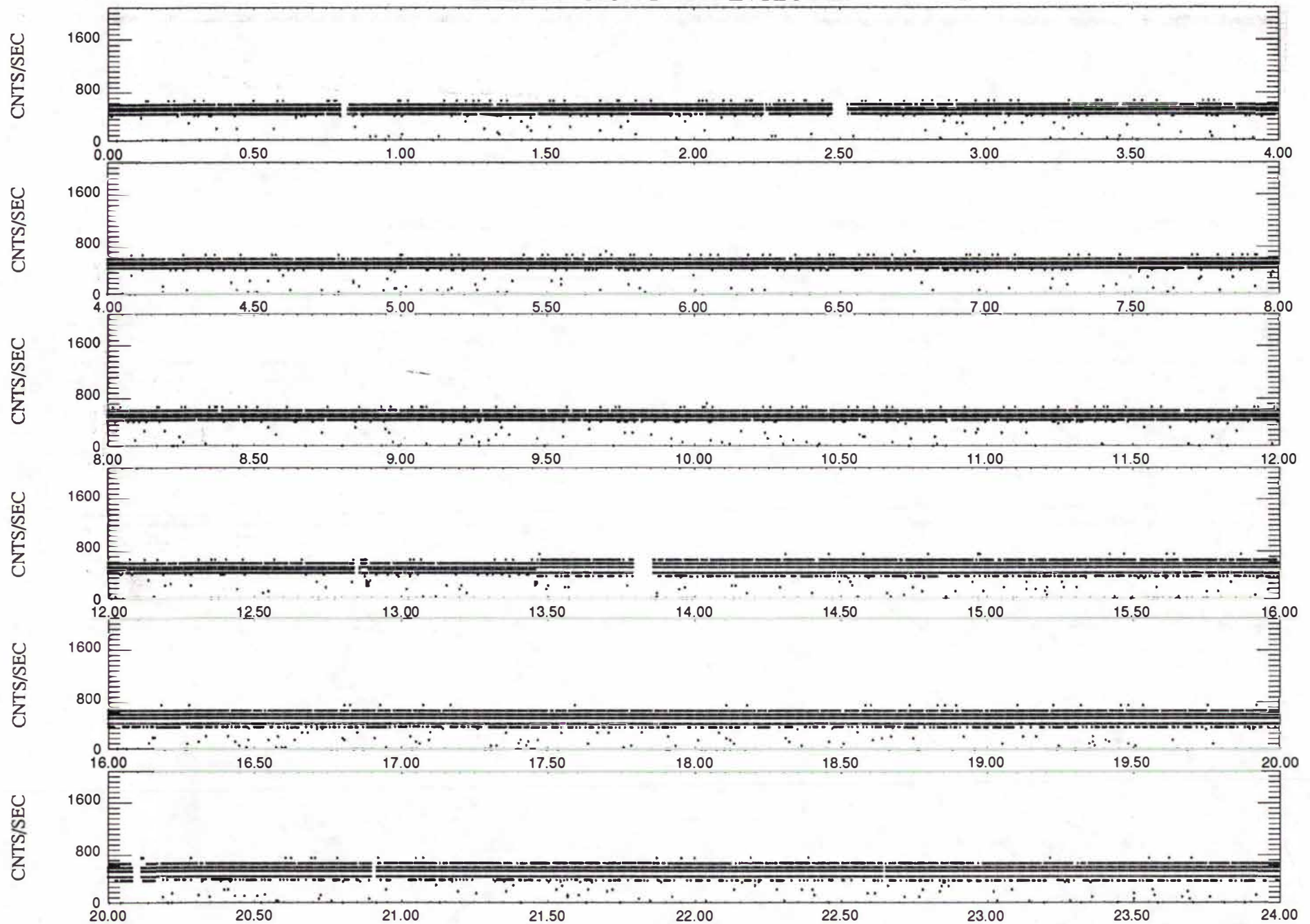




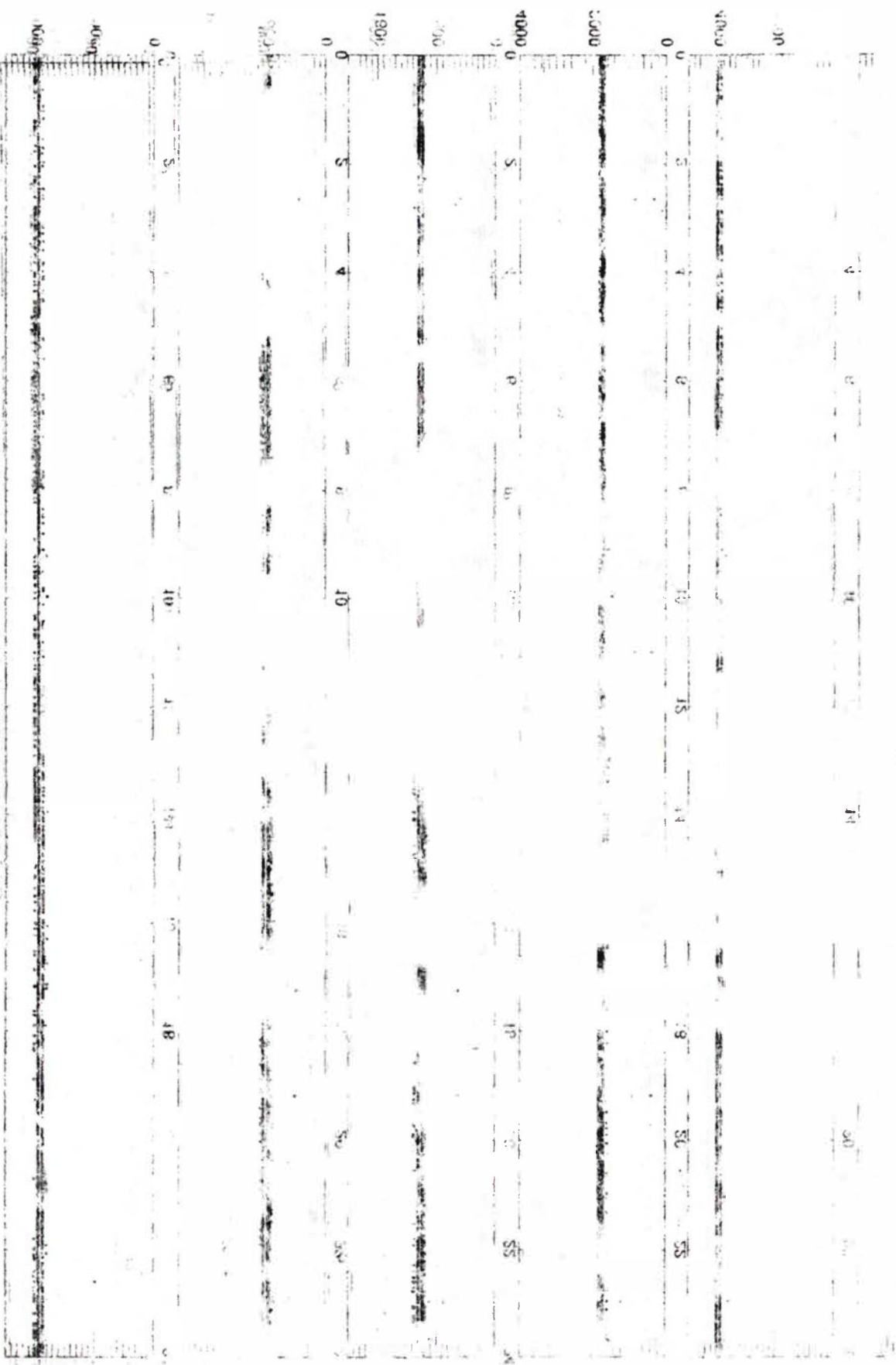
CATIBRY LION DATA INCLUDED

HUGO A. MOORE, JR. VOL. 1, 1905 TO 1935 11/12/35

CALIBRATION DATA INCLUDED

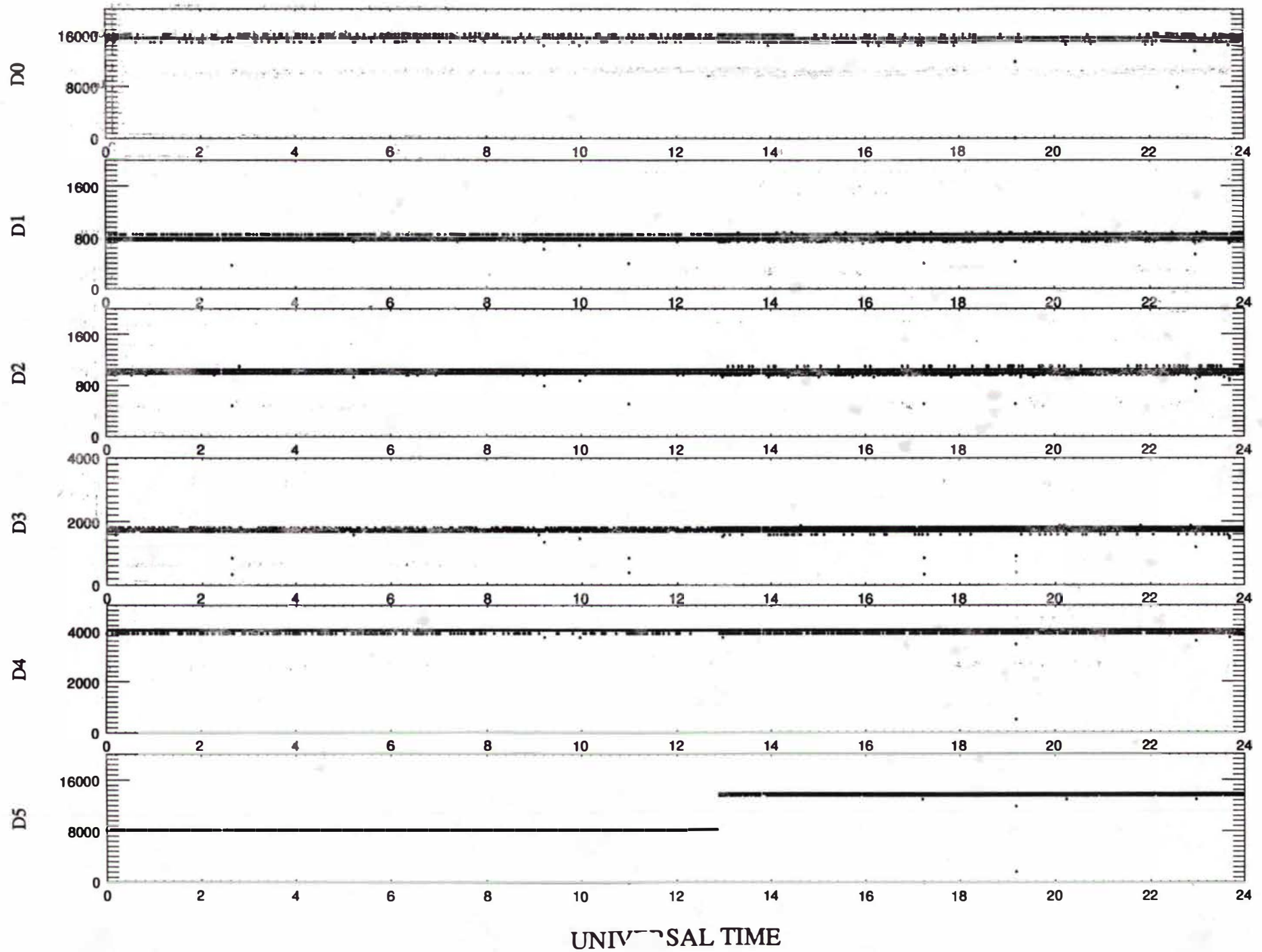


UNIV SAL TIME



23

МОРСКОЕ СООБЩЕНИЕ. ОФИЦИАЛЬНЫЙ ГАЗЕТНЫЙ ЛЕГЕНД 1905 ПО ГАЗЕТНОМУ ЛЕГЕНДУ 1905



CATSEARCH PROGRAM

BATSE BURST # 1922
EVENT OF 1992 SEP 12 DAY OF YEAR=256
EVENT CROSSING TIME AT BATSE : 16867. S. OR 04:41:06.9
COORDINATES ARE .000 .000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 257.400 -13.300
BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
POSITION OF ULYSSES ON 12/ 9/ 92 IS:
RA= 159.306 DEC= -.115 DIST= 6.239 AU
BATSE-ULYSSES DISTANCE = 933366368. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 82.15 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 425.16 SECS.
CROSSING TIME AT ULYSSES IS 17292. S. OR 04:48:12.1 +/- 591.92 SECONDS

NO

From BRIGGS@ssl.msfc.nasa.gov Sun Sep 13 20:06:04 1992
Date: Sun, 13 Sep 1992 22:07:41 -0500 (CDT)
From: BRIGGS@ssl.msfc.nasa.gov (Michael S. Briggs, 205-544-7716, Code ES-62, MSFC)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1296

BATSE BURST TRIGGER

NO.: 01922

TIME: TJD=8877 SECONDS=16867

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=152.2 AZIMUTH=094.0 ERROR= DEGREES

COMMENTS:

BURST CONSISTS OF 5 SPIKES. BURST VISIBLE FROM -2 TO +4 SEC AND FROM
11 TO 13 SEC. BURST IS NOT VISIBLE ABOVE ABOUT 300 KEV.

NO. 0.40

8 / 6 / 94

ULYSSES RT

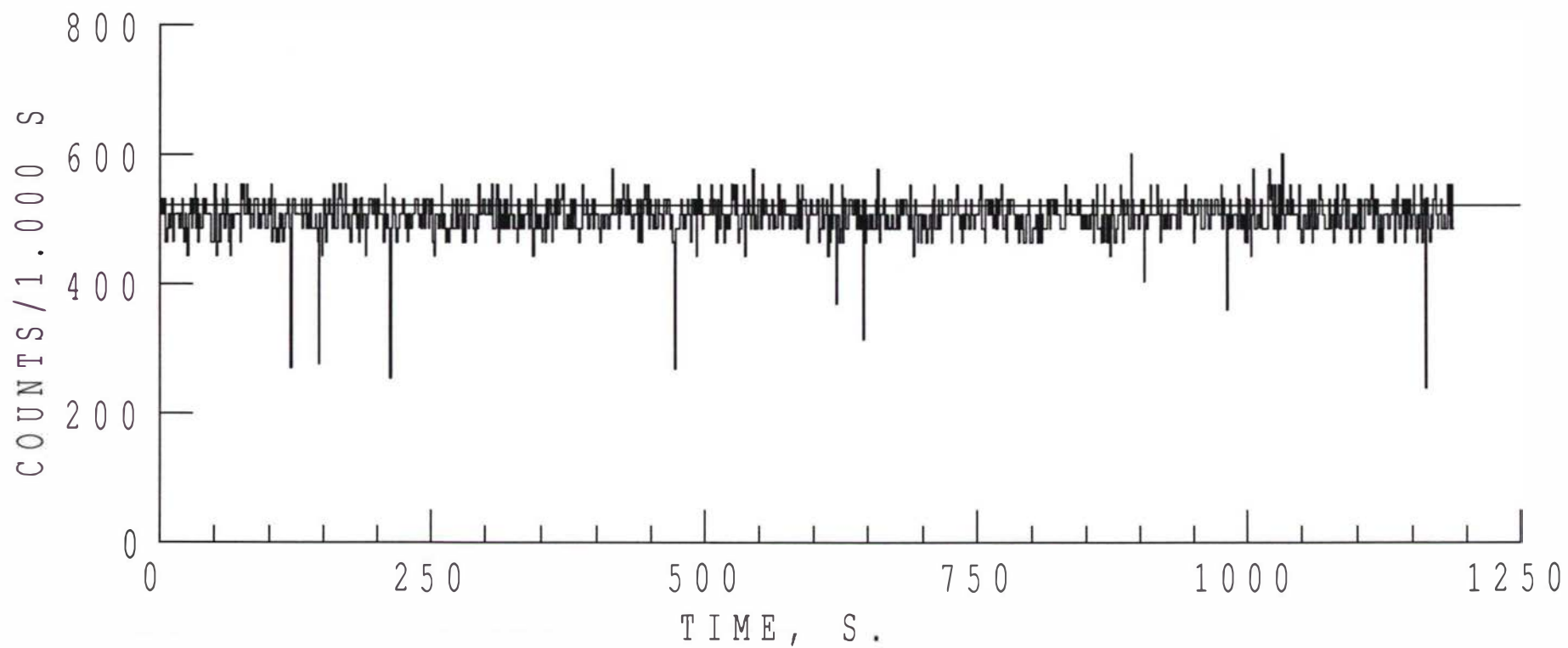
12 / 9 / 92 16704.006 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From BRIGGS@ssl.msfc.nasa.gov Mon Sep 14 10:55:14 1992
Date: Mon, 14 Sep 1992 12:56:36 -0500 (CDT)
From: BRIGGS@ssl.msfc.nasa.gov (Michael S. Briggs, 205-544-7716, Code ES-62, MSFC)
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01923

TIME: TJD=^{Sep 12}8877 SECONDS=56328

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

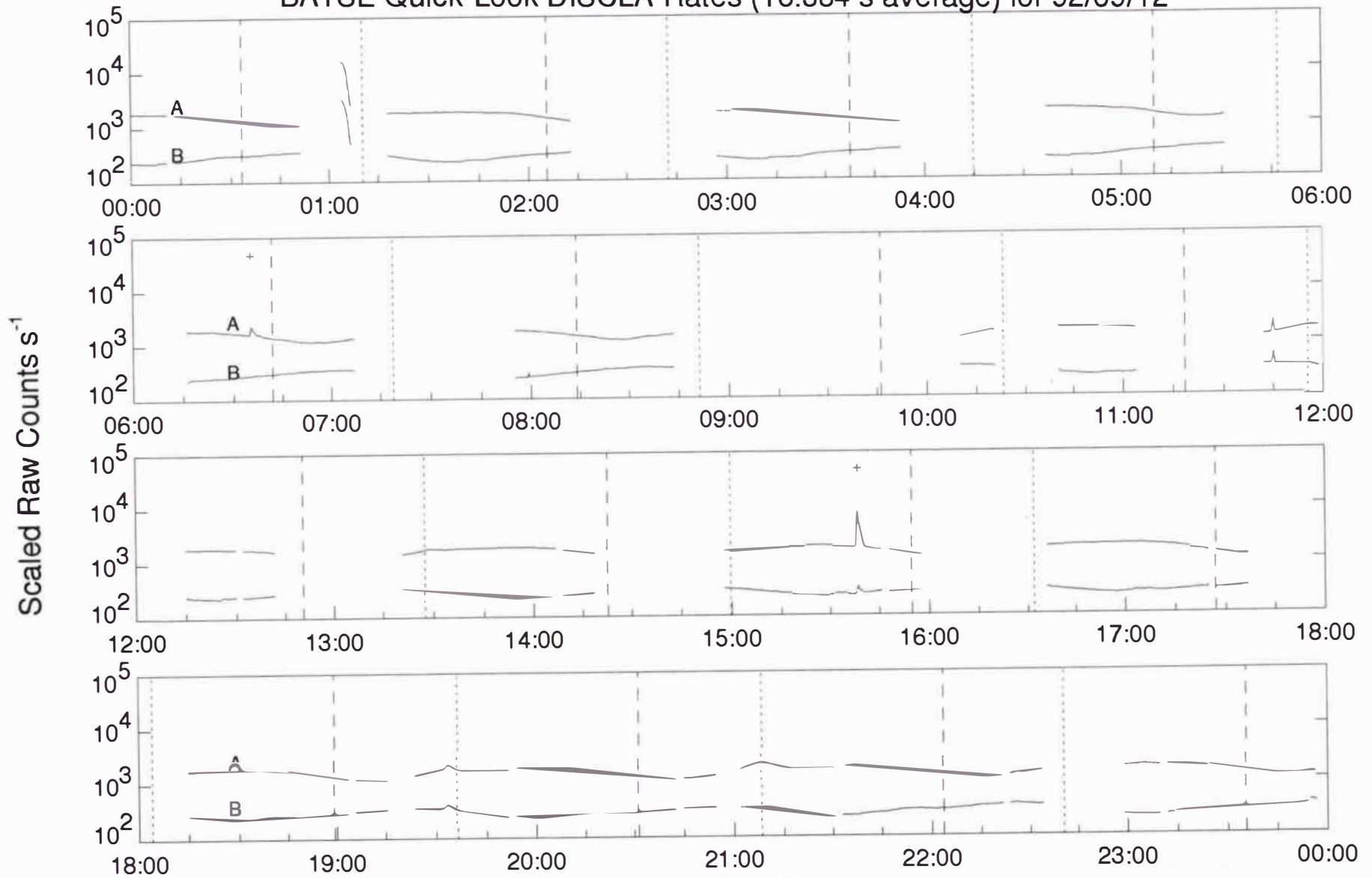
INTENSITY: COUNTS/CM2

LOCATION: ZENITH=097.5 AZIMUTH=350.3 ERROR= DEGREES

COMMENTS:

GOES C4/5 SOLAR FLARE. NOT SEEN ABOVE 100 KEV.

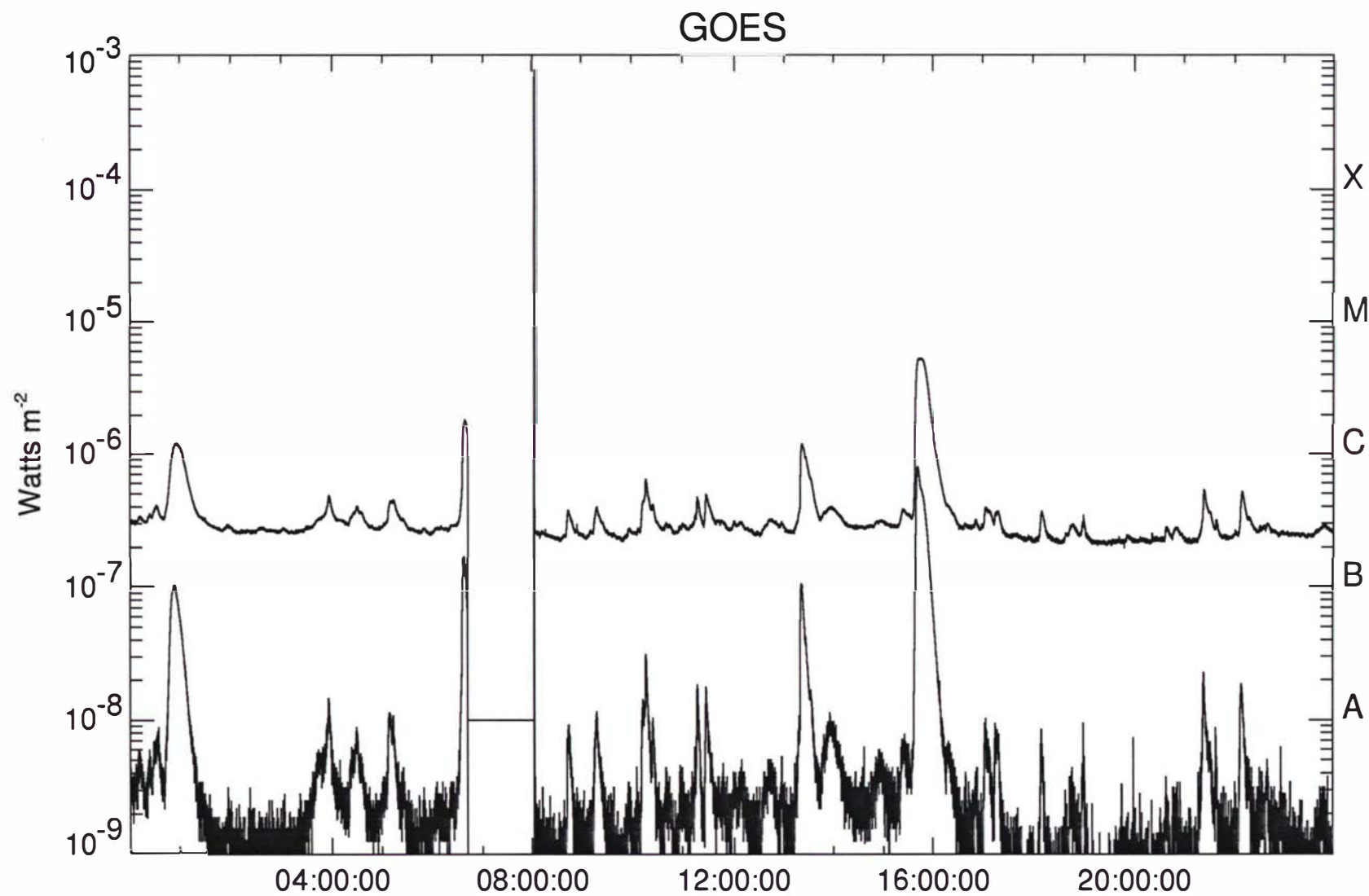
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/12



Current Time: 92/09/29, 0235 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

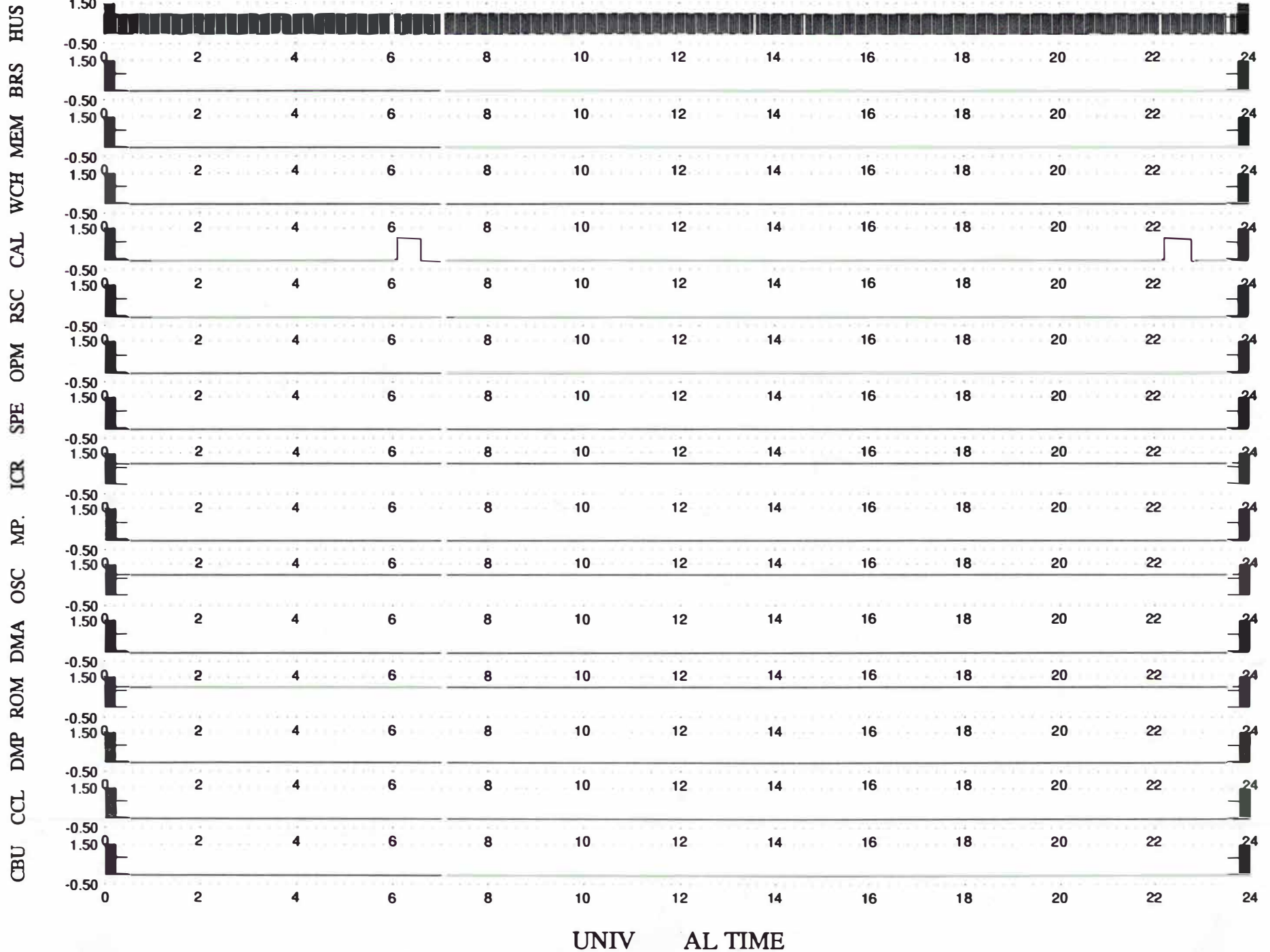
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

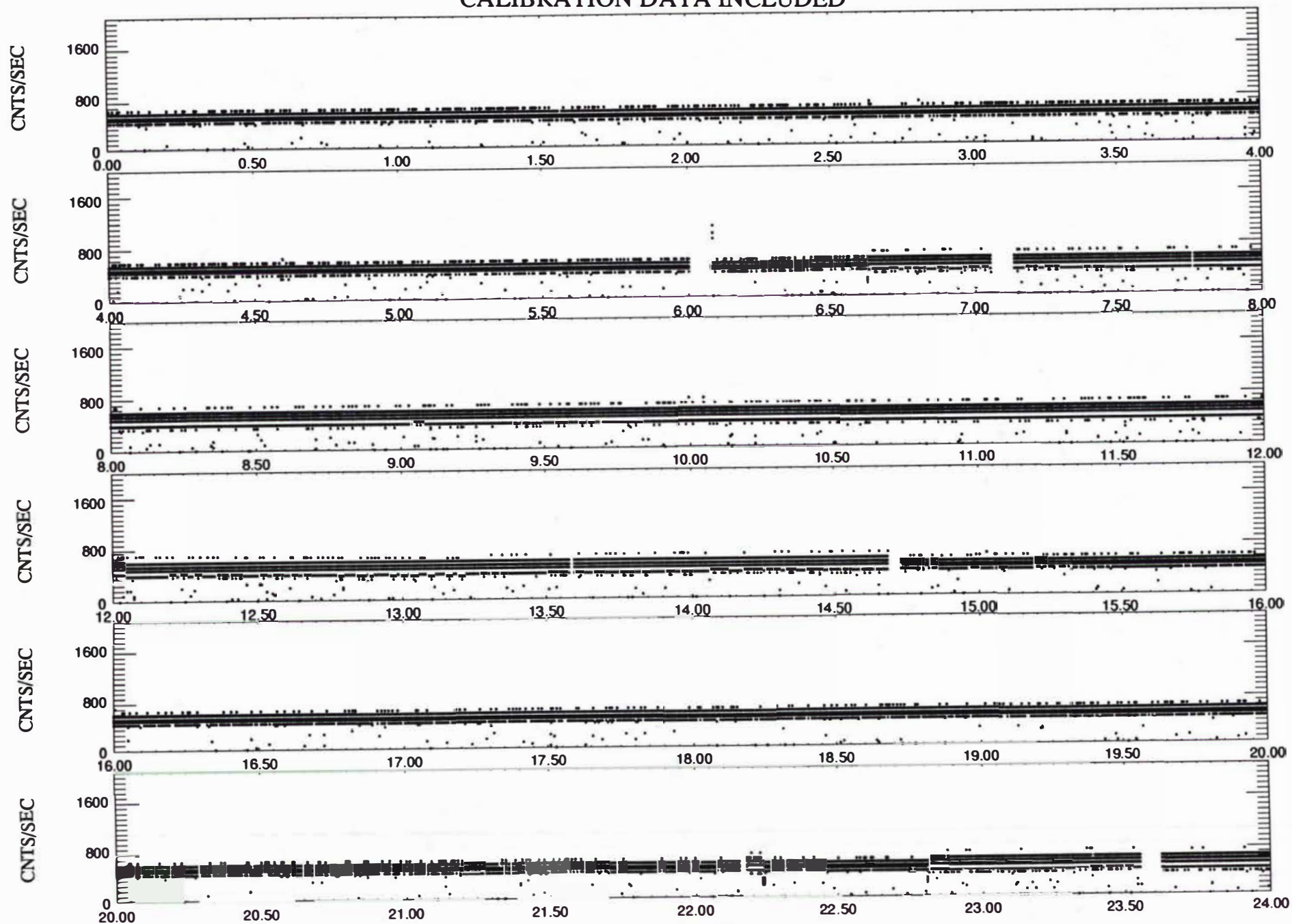


Data Start: 92/09/12, 0000:00 Plot created: 95/05/25, 1908
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
 2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (1)



CALIBRATION DATA INCLUDED



UNIV UNIV TIME

CATSEARCH PROGRAM

BATSE BURST # 1924

EVENT OF 1992 SEP 13 DAY OF YEAR=257

EVENT CROSSING TIME AT BATSE : 14101. S. OR 03:55:01.1

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

BURST ARRIVAL DIRECTION: 352.000 53.400

BATSE PEAK COUNTING RATE: 0000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND

POSITION OF ULYSSES ON 13/ 9/ 92 IS:

RA= 159.440 DEC= -.220 DIST= 6.235 AU

BATSE-ULYSSES DISTANCE = 932742536. KM.

ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 54.19 DEG.

LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1820.22 SECS.

CROSSING TIME AT ULYSSES IS 15921. S. OR 04:25:21.3 +/- 515.72 SECONDS

BATSE BURST TRIGGER

NO.: 1924

Sep 13
TIME: TJD=8878 SECONDS=14101

TYPE: BURST

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=35.7 AZIMUTH=115.5 ERROR= DEGREES

COMMENTS:

DURATION ABOUT 10 SECONDS, SINGLE PEAK, GOOD LOCATION, EMISSION SEEN ABOVE 300 KEV.

No Ulysses trig

BATSE BURST TRIGGER

NO.: 1924

Sep 13
TIME: TJD=8878 SECONDS=14101

TYPE: BURST

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=54.3 AZIMUTH=115.5 ERROR= DEGREES

COMMENTS:

THIS IS A CORRECTION TO THE ZENITH ANGLE OF THE LOCATION OF TRIGGER NUMBER 1924. PREVIOUS COMMENTS ABOUT THIS TRIGGER STILL APPLY.

8 / 6 / 94

ULYSSES RT

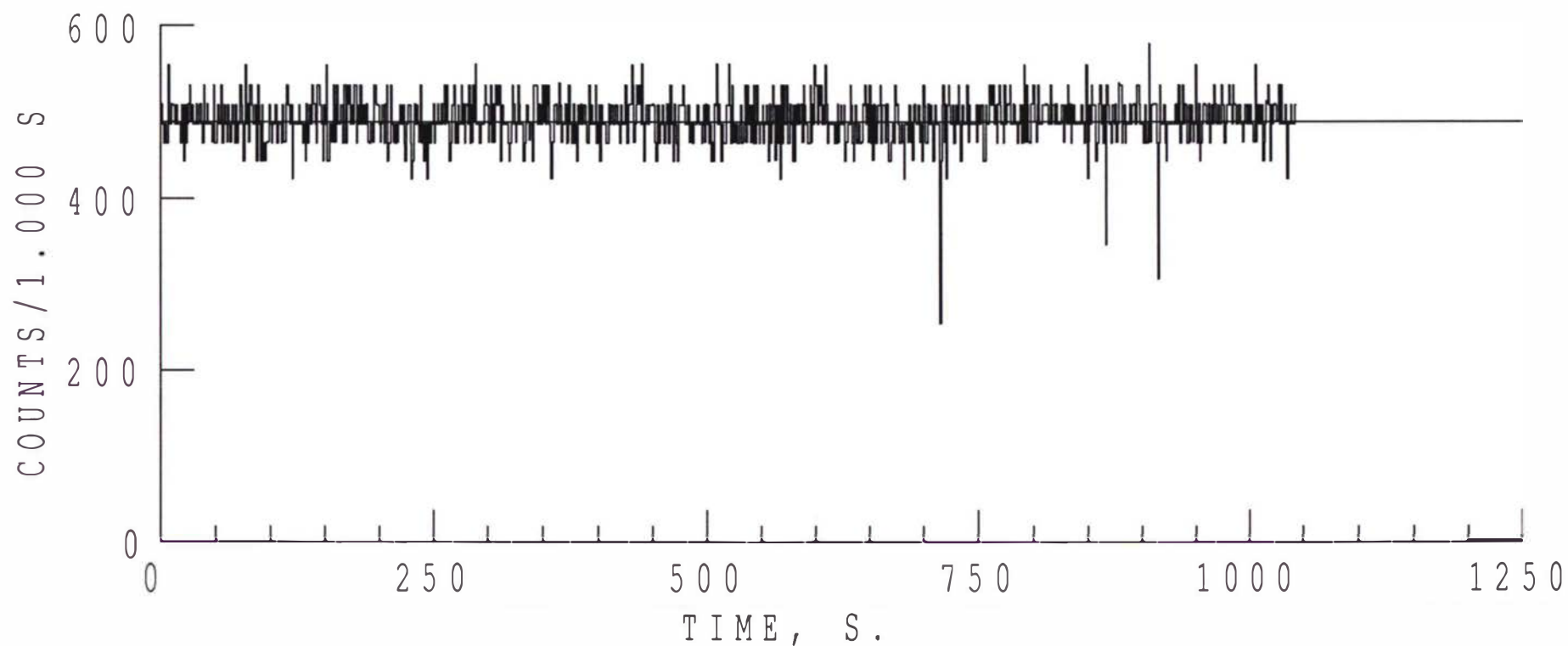
13 / 9 / 92 15408.356 s

0.500 S INTERVALS REGROUPED BY 2

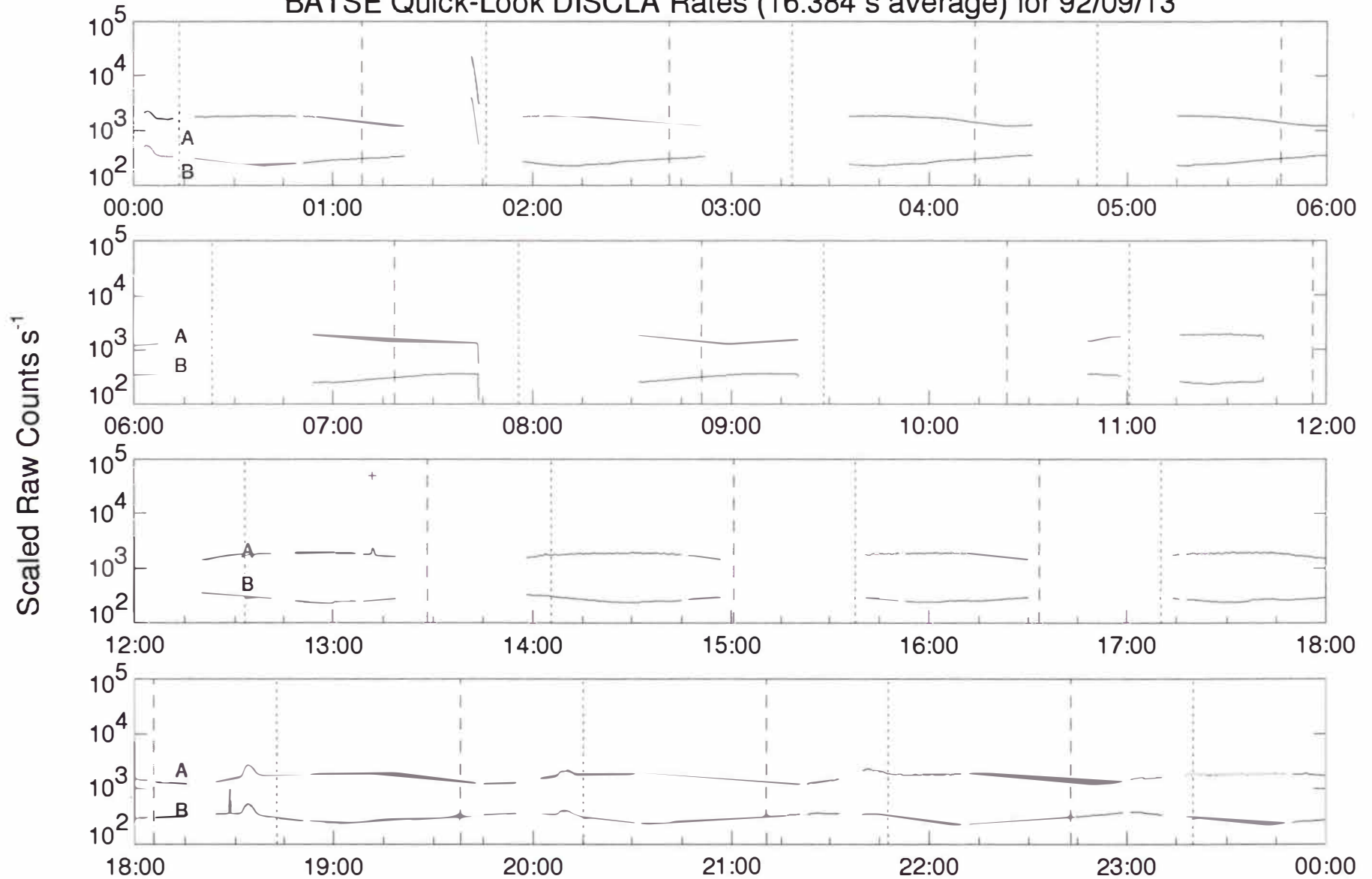
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



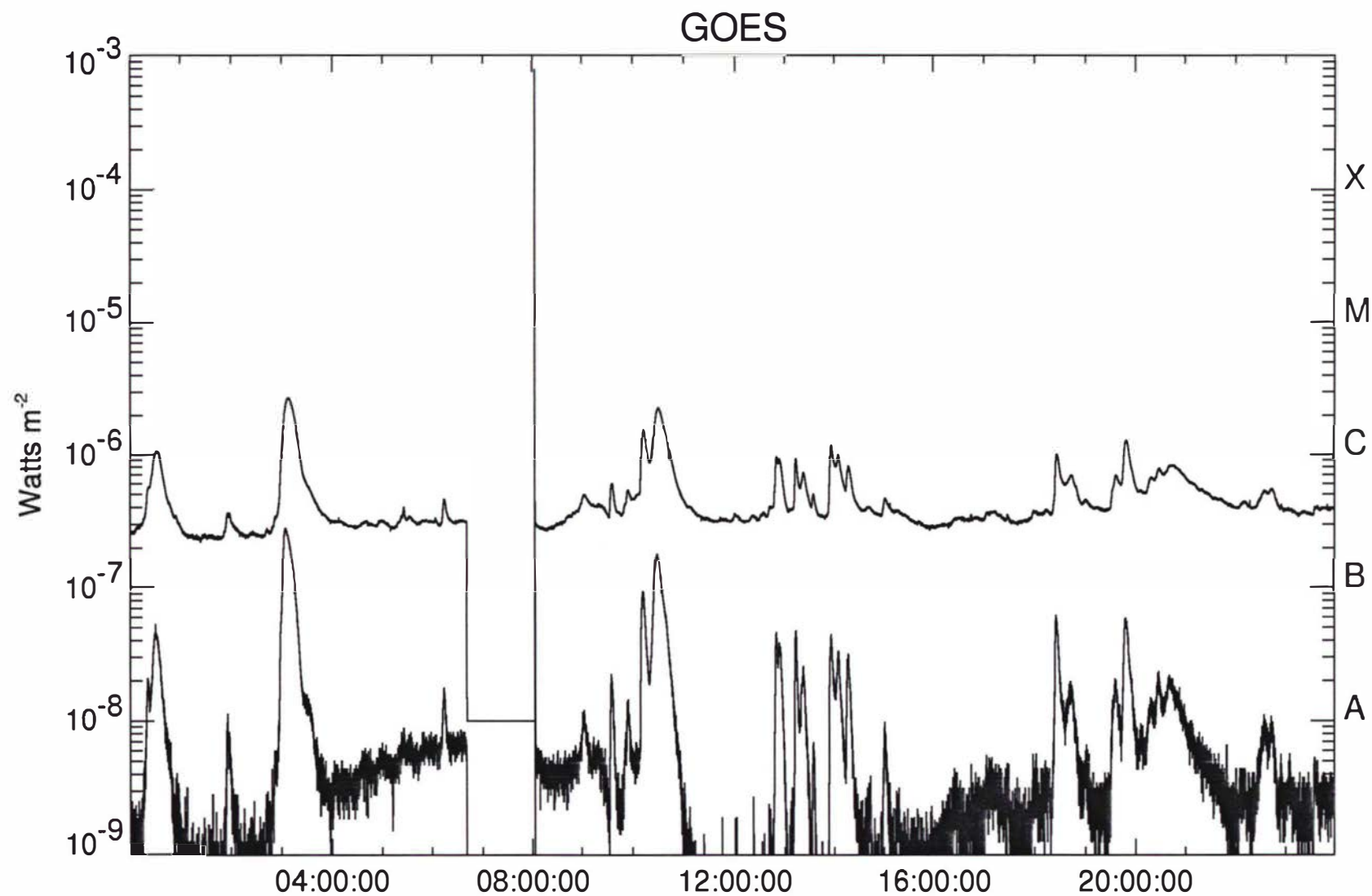
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/13



Current Time: 92/09/29, 0236 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



Data Start: 92/09/13, 0000:01

Plot created: 95/05/25, 1911

Channel

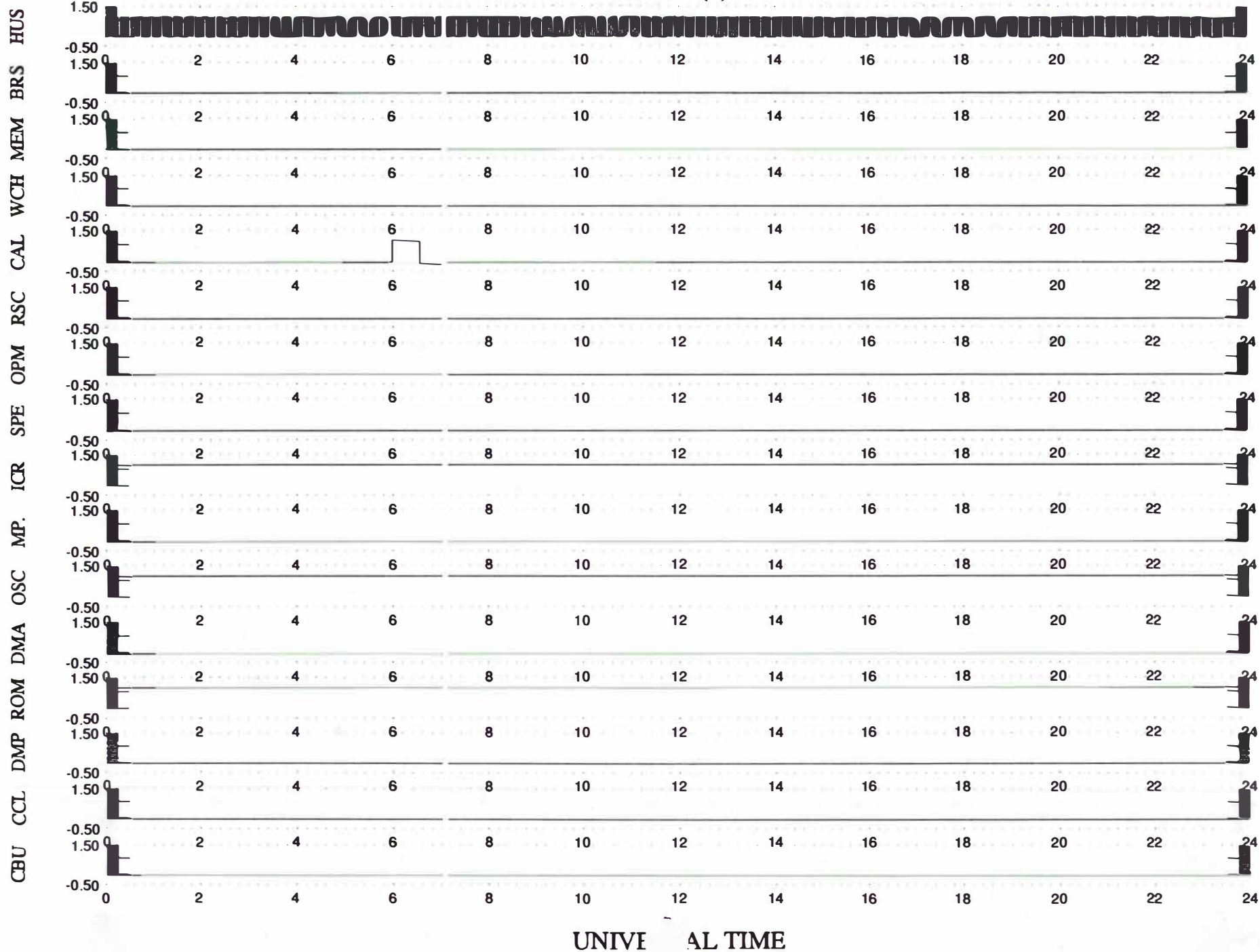
1 (1.0 - 8.0 Angstroms)

Background not subtracted

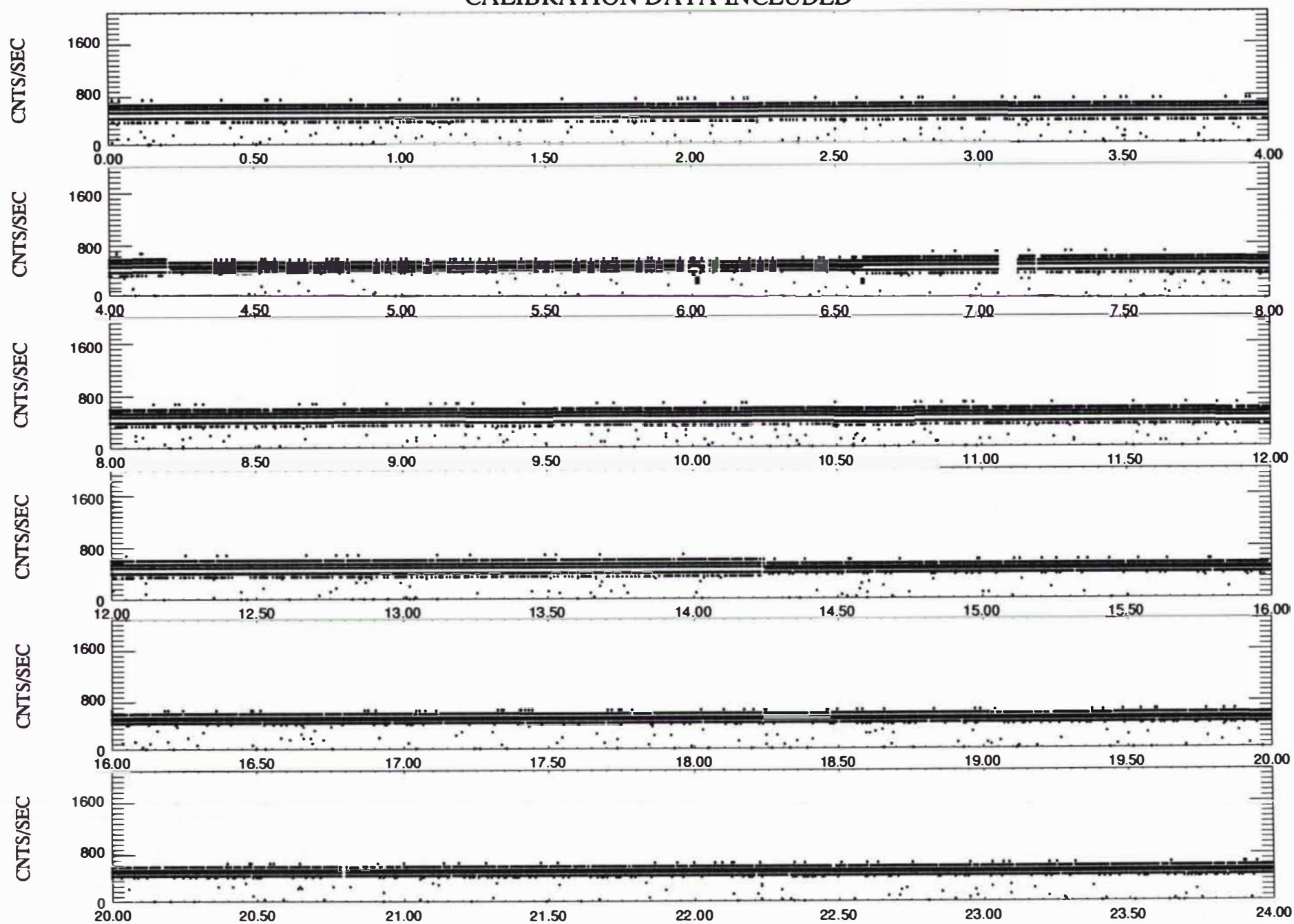
2 (0.5 - 4.0 Angstroms)

Background not subtracted

NO BURST (1)



CALIBRATION DATA INCLUDED



UNIV L TIME

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

From HAGEDON@ssl.msfc.nasa.gov Wed Sep 16 06:54:07 1992
Date: Wed, 16 Sep 1992 8:55:26 -0500 (CDT)
From: HAGEDON@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01925

TIME: TJD=8879 SECONDS=53327

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=101 AZIMUTH=355 ERROR= DEGREES

COMMENTS:
GOES C1.6 SOLAR FLARE.

From MEEGAN@ssl.msfc.nasa.gov Wed Sep 16 13:26:10 1992
Date: Wed, 16 Sep 1992 15:27:55 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 01926

TIME: TJD=8879 SECONDS=61235

TYPE: UNKNOWN SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
VERY STRANGE EVENT. APPEARS TO BE A VERY LARGE PHOSPHORESCENCE EVENT IN
DETECTOR 5, COINCIDENT WITH A STATISTICAL FLUCTUATION, JUST ABOVE THRESHOLD,
IN DETECTOR 4, POSSIBLY CAUSED BY GRO J0422+32. DEFINITELY NOT A BURST.

*Redesignated as phosphorescent
spike by Briggs 2001*

From HAGEDON@ssl.msfc.nasa.gov Wed Sep 16 06:59:10 1992
Date: Wed, 16 Sep 1992 8:58:58 -0500 (CDT)
From: HAGEDON@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01927

TIME: TJD=8879 SECONDS=68855

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

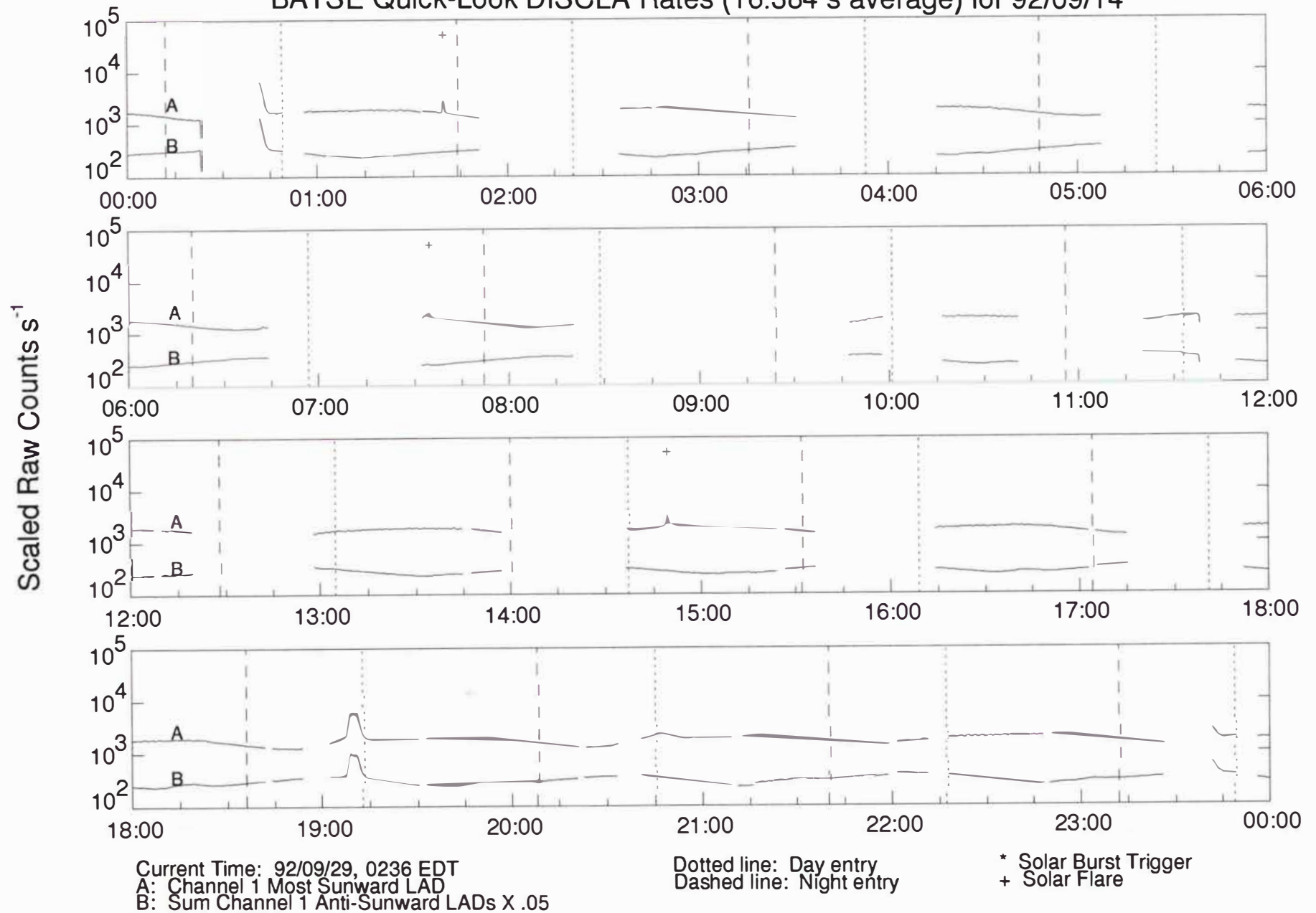
SIGNIFICANCE: SIGMA

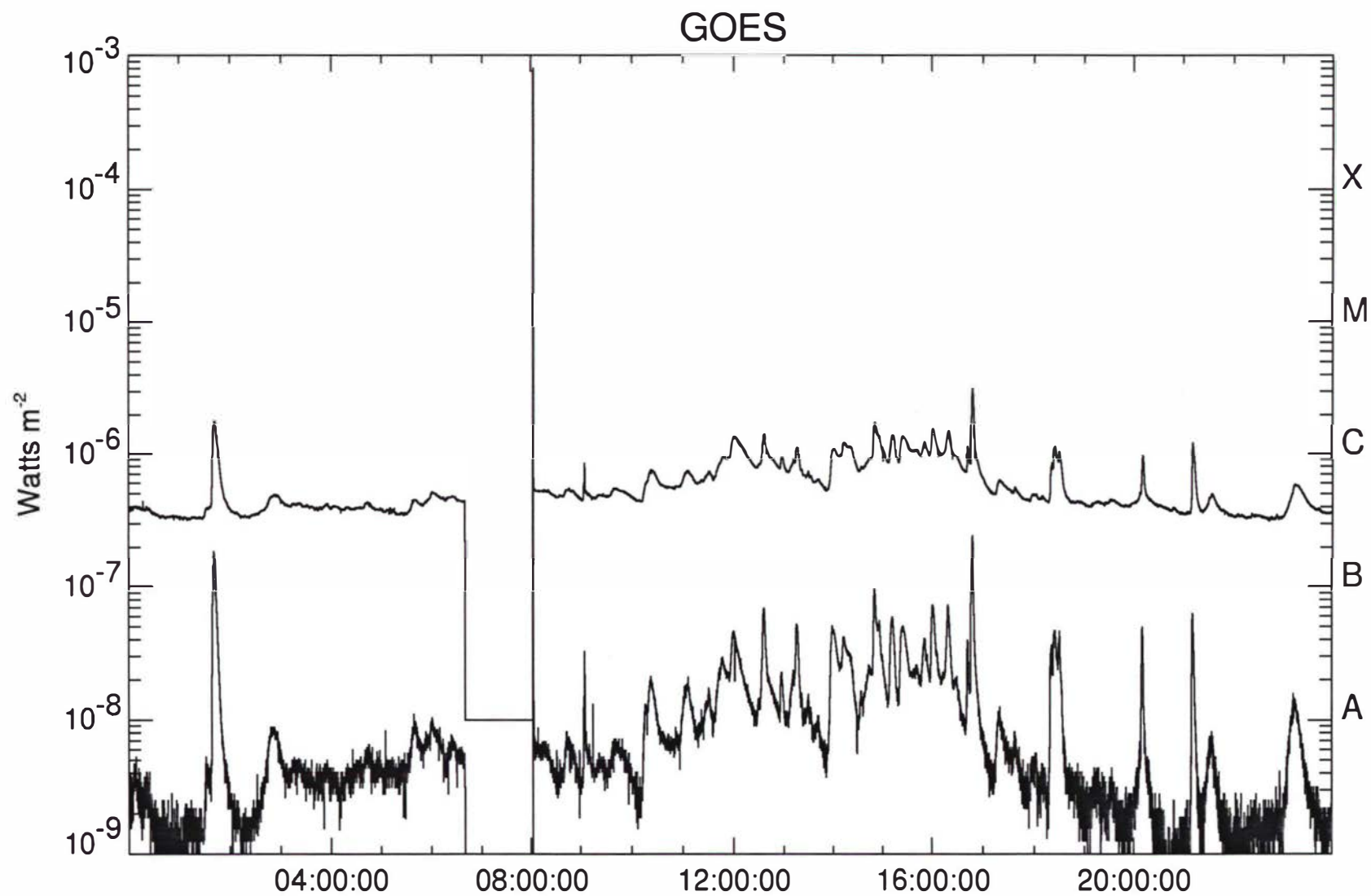
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/14





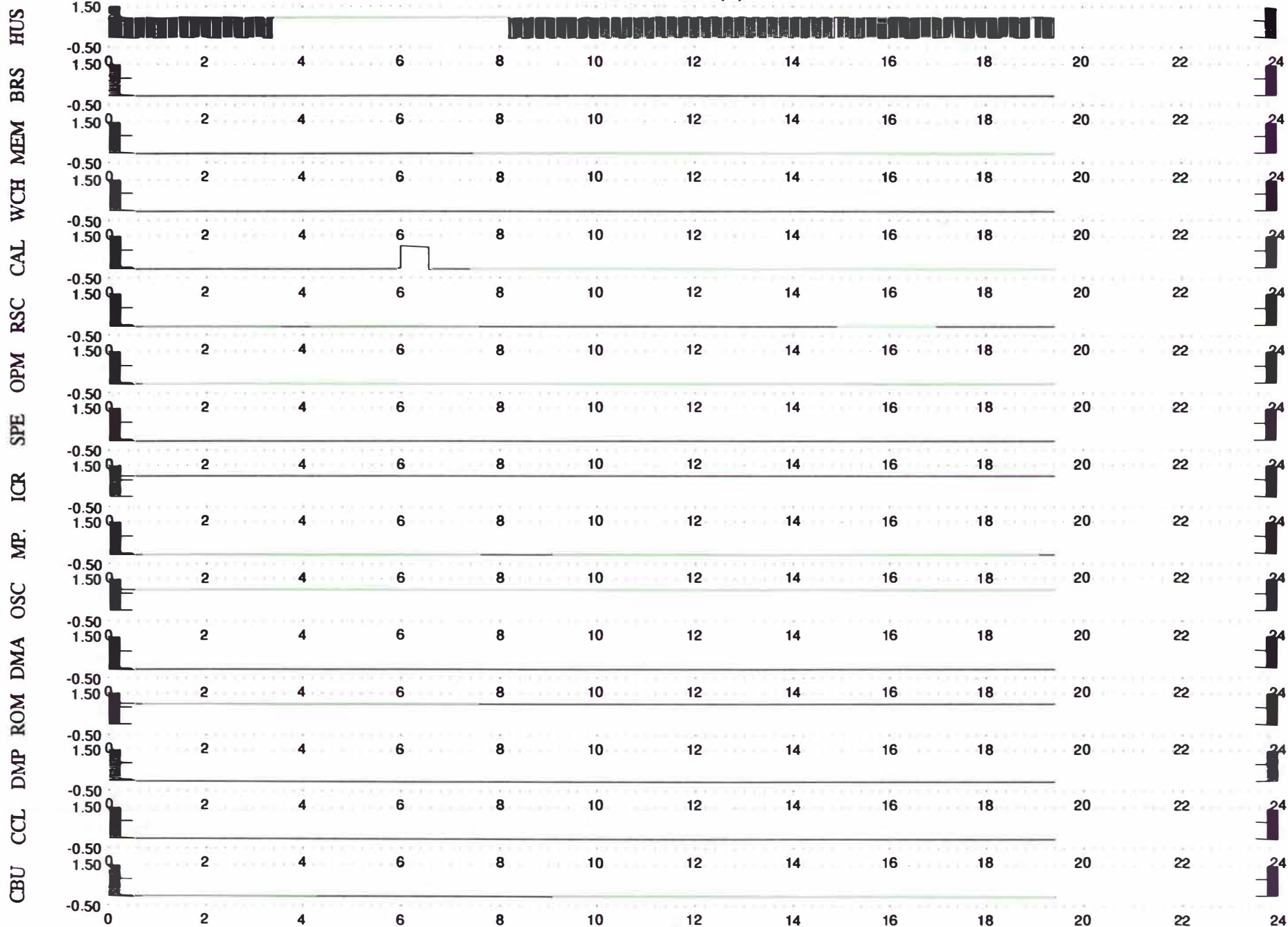
Data Start: 92/09/14, 0000:01

Plot created: 95/05/25, 1915

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

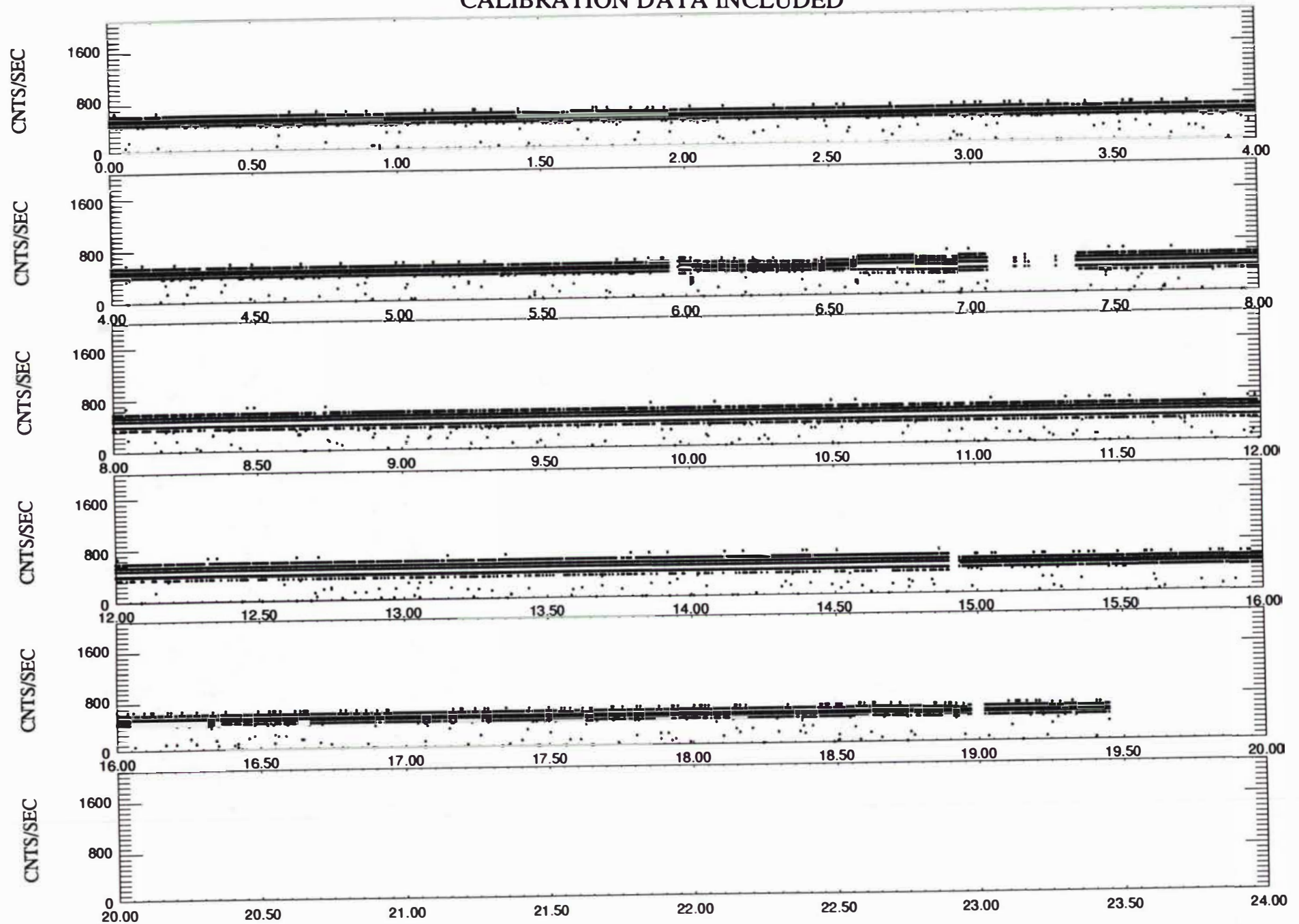
Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

NO BURST (1)



UNIV. AL TIME

CALIBRATION DATA INCLUDED



UNIVF AL TIME



From MALLOZZI@ssl.msfc.nasa.gov Wed Sep 16 14:37:29 1992
Date: Wed, 16 Sep 1992 16:39:03 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1377

BATSE BURST TRIGGER

NO.: 01928

TIME: TJD=8880 SECONDS=23838

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

GOES C2.6 FLARE. MAIN PEAK ~30 SEC DURATION.
EMISSION STARTS AT ~200 SEC BEFORE TRIGGER. OBSERVED ABOVE 100 KEV,
BUT NOT ABOVE 300 KEV.

From MALLOZZI@ssl.msfc.nasa.gov Wed Sep 16 14:42:12 1992
Date: Wed, 16 Sep 1992 16:43:46 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01929

TIME: TJD=8880 SECONDS=65247

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

PARTICLE EVENT.

From MALLOZZI@ssl.msfc.nasa.gov Wed Sep 16 14:46:00 1992
Date: Wed, 16 Sep 1992 16:47:39 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01930

TIME: TJD=8880 SECONDS=71067

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT.

HERRINGTON, EUGENE / JPL/01 - HPDesk print.

ject: Datation Test Schedule

ator: Roy ROSE / JPL/01 Dated: 08/04/92 at 0829.

August 4, 1992

To: N. Angold

From: R. Rose

Subject: HUS Datation Test Schedule

The following tracking passes have been selected for conducting the HUS Datation tests requested by the experimenter:

DOY	DSS	START	BOT	EOT	END
259	43	1815	2015	0445	0500
292	14	1015	1215	2030	2045

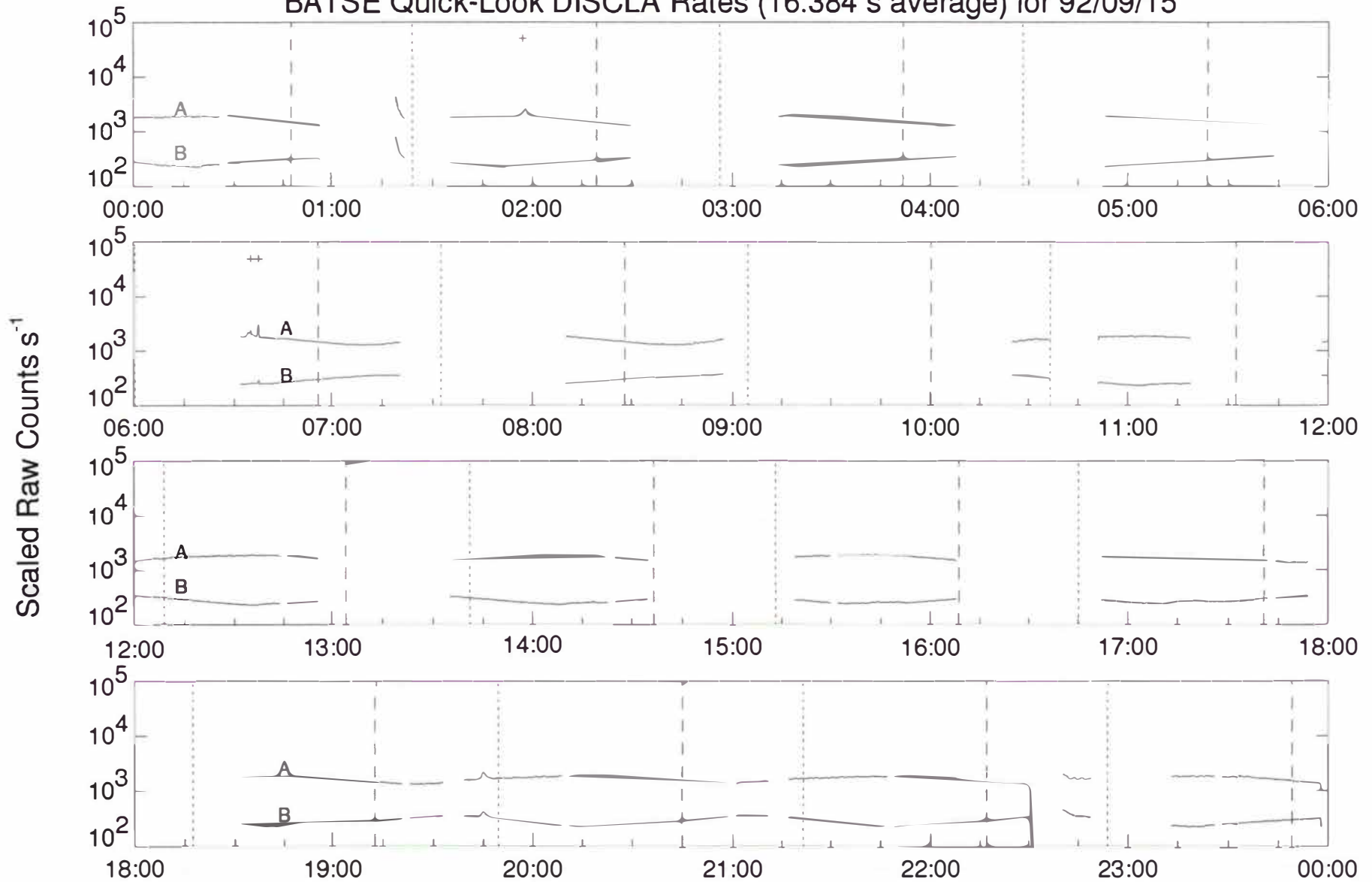
Tues Sep 15
Sun Oct 18

The command subcarrier/bit rate change scheduled for 9/30/92 will be delayed until 10/20/92 in order to retain the nominal subcarrier/bit rate for both tests.

Please advise if this schedule is not satisfactory.

P. Beech
J. Covate
D. Enari
C. Finley
E. Herrington
Don Meyer
D. Morris
J. Osoro
G. Rogers
R. Simbol

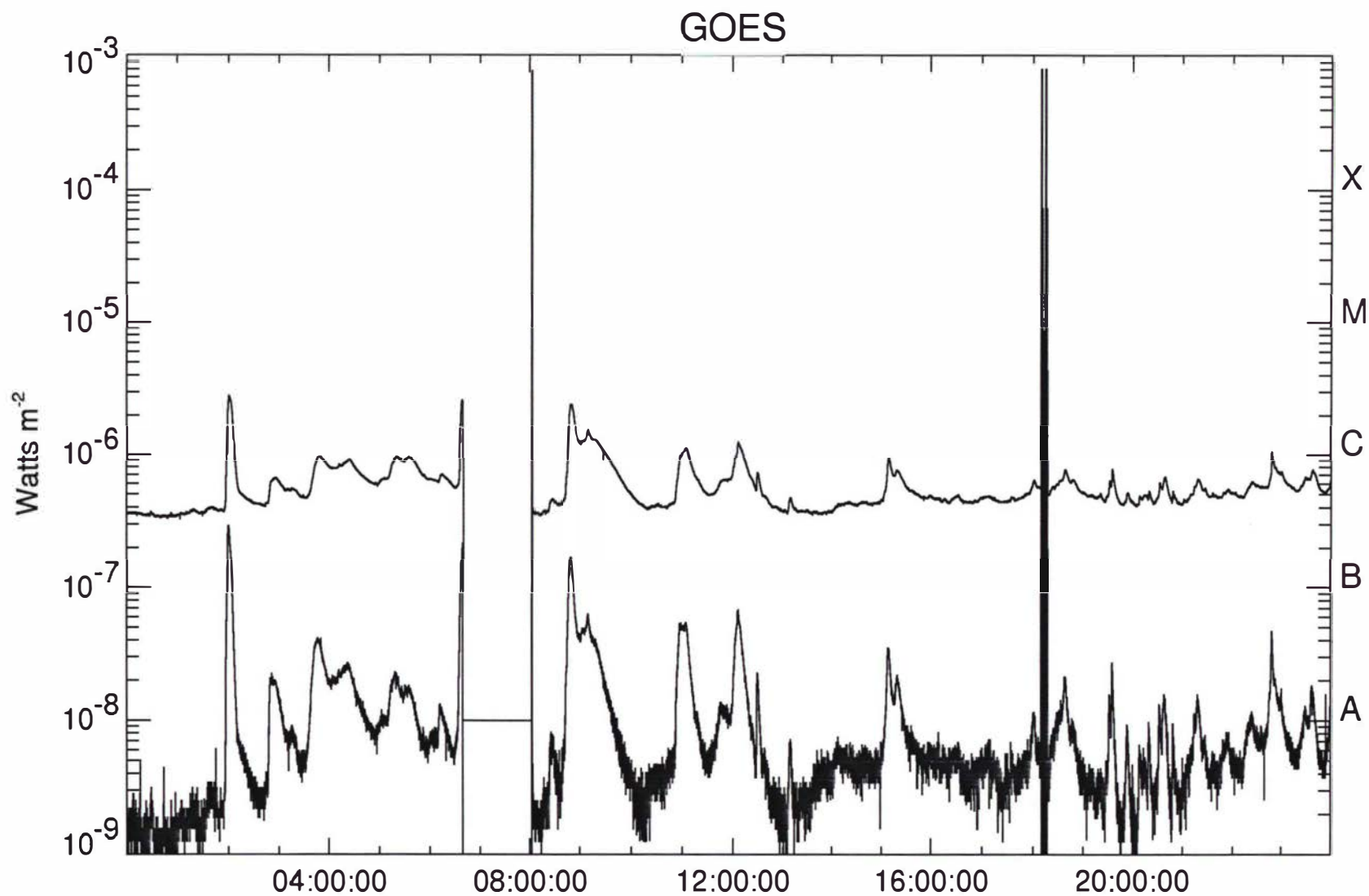
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/15



Current Time: 92/09/29, 0237 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



Data Start: 92/09/15, 0000:02

Plot created: 95/05/25, 1918

Channel

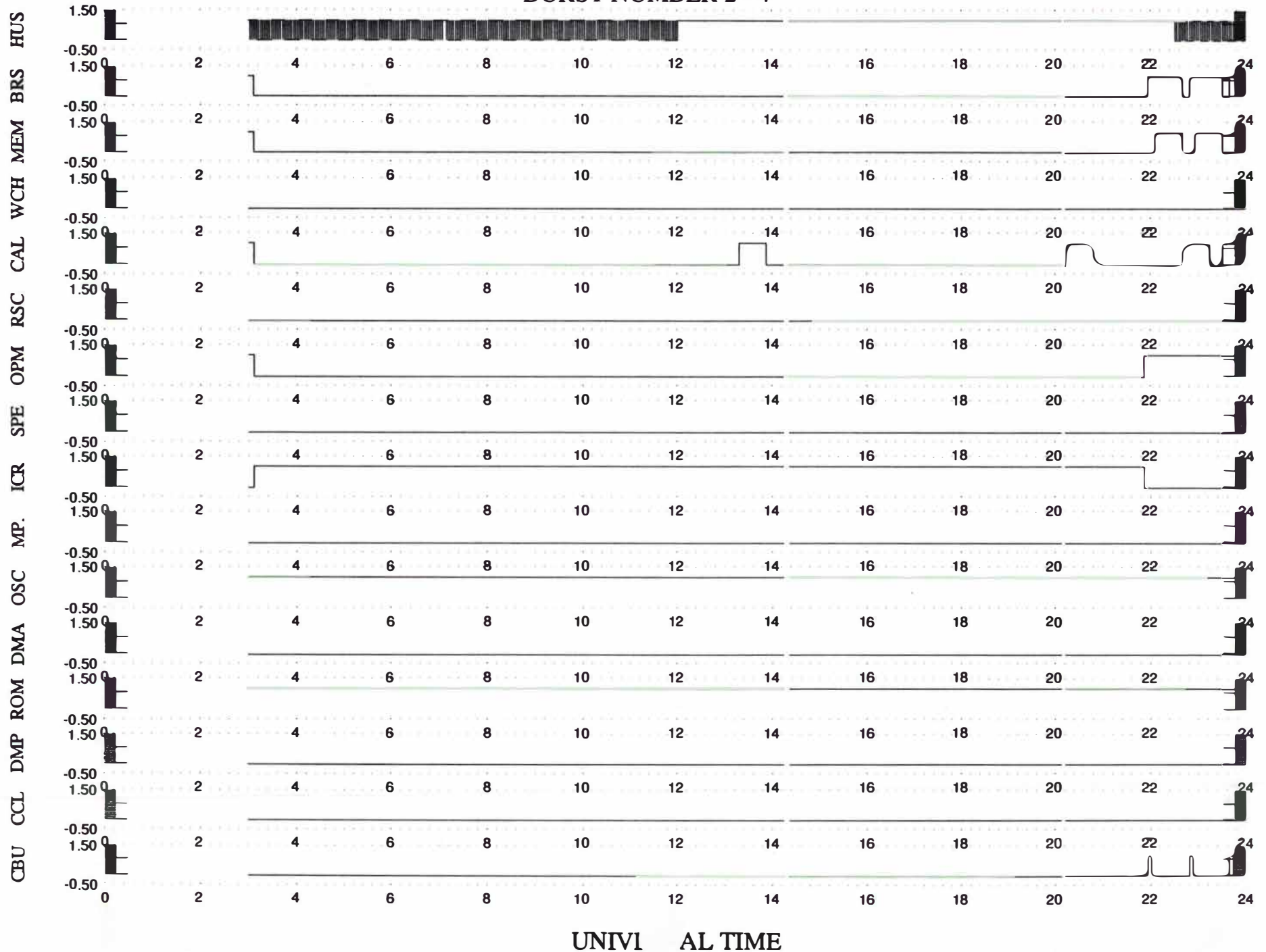
1 (1.0 - 8.0 Angstroms)

Background not subtracted

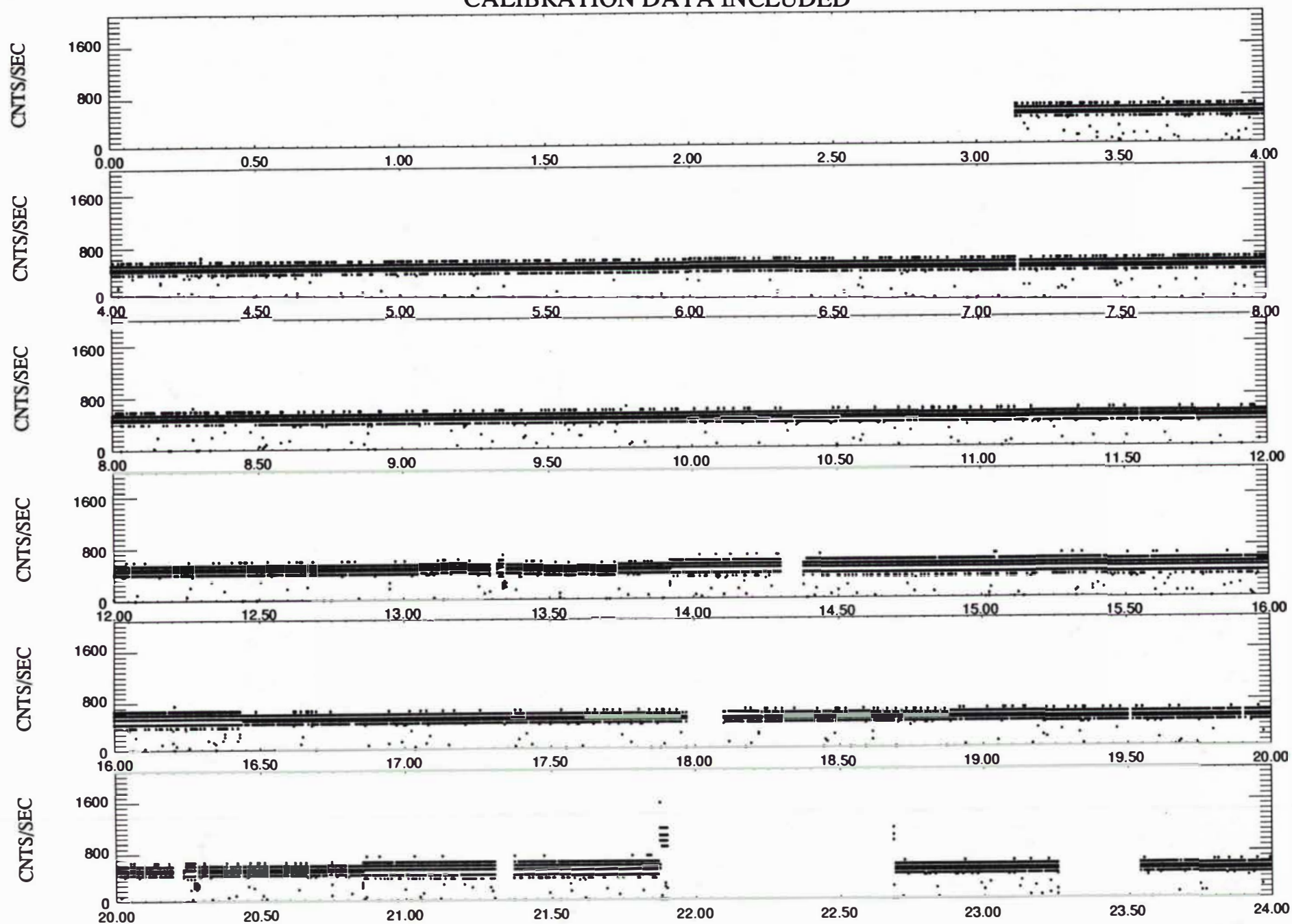
2 (0.5 - 4.0 Angstroms)

Background not subtracted

BURST NUMBER 2 - 4

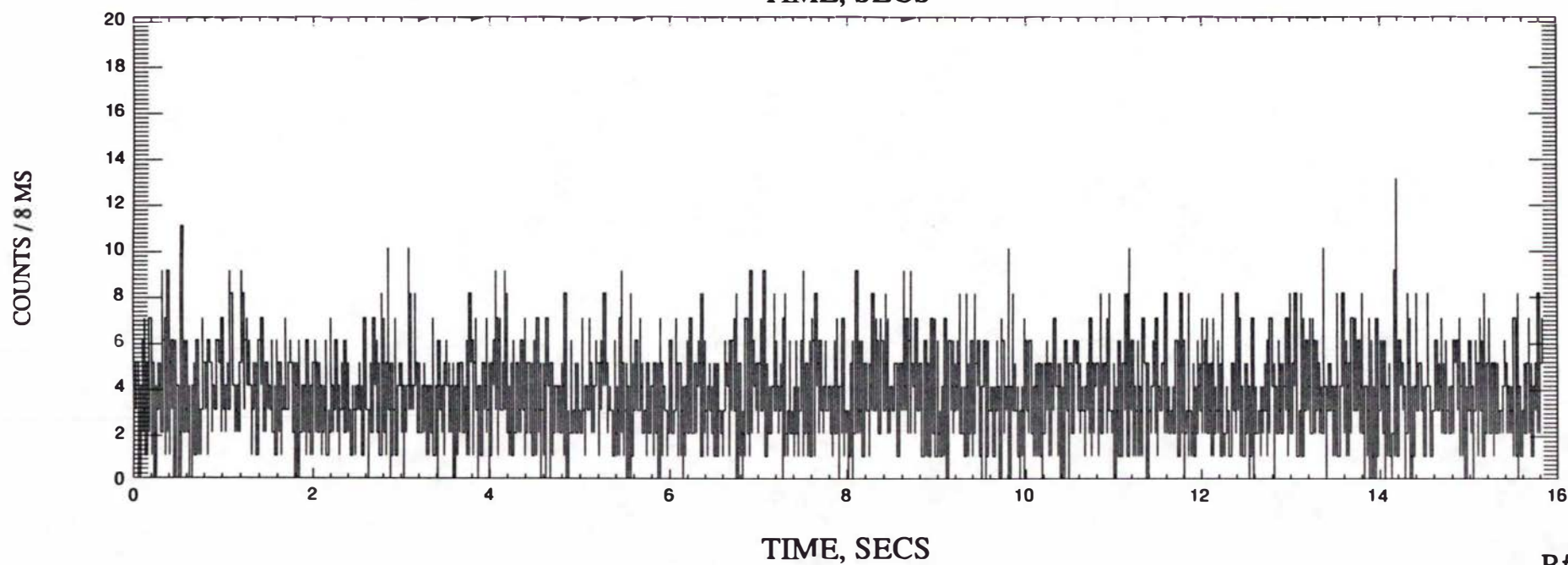
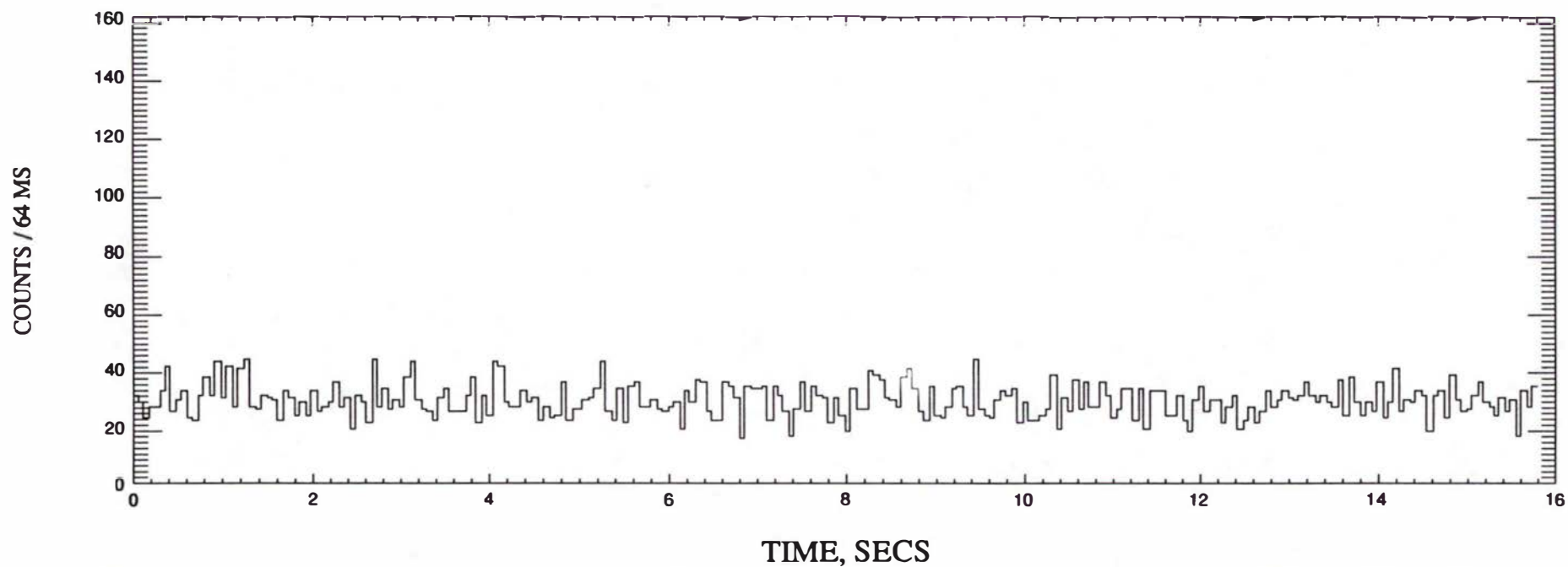


CALIBRATION DATA INCLUDED

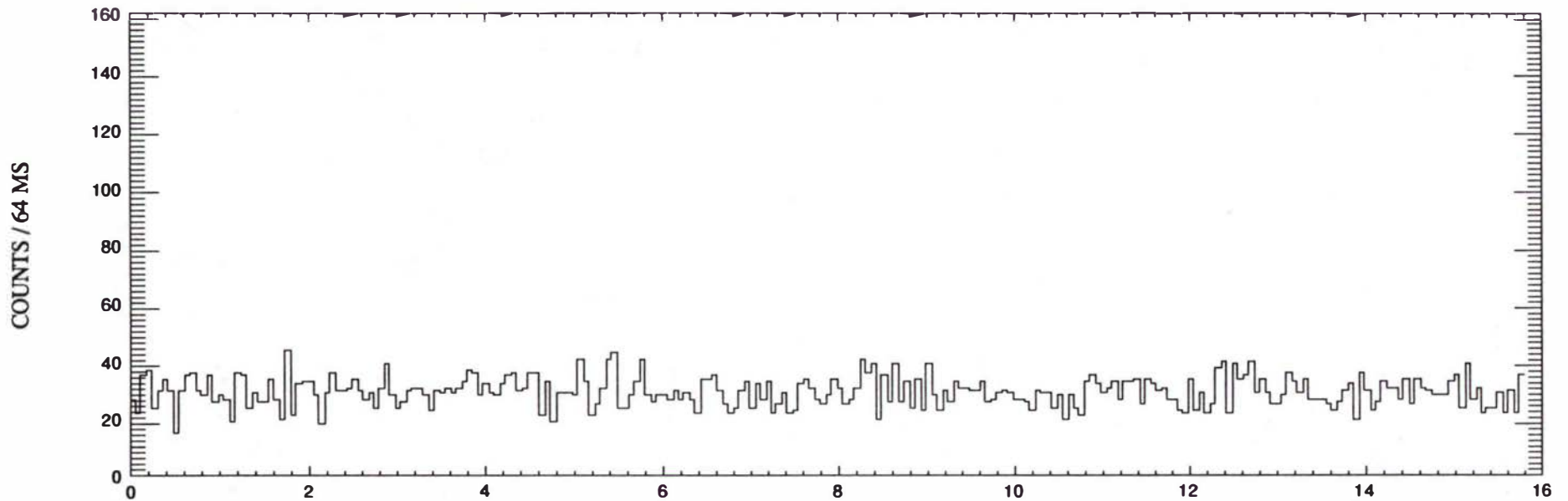


UNIV. TIME

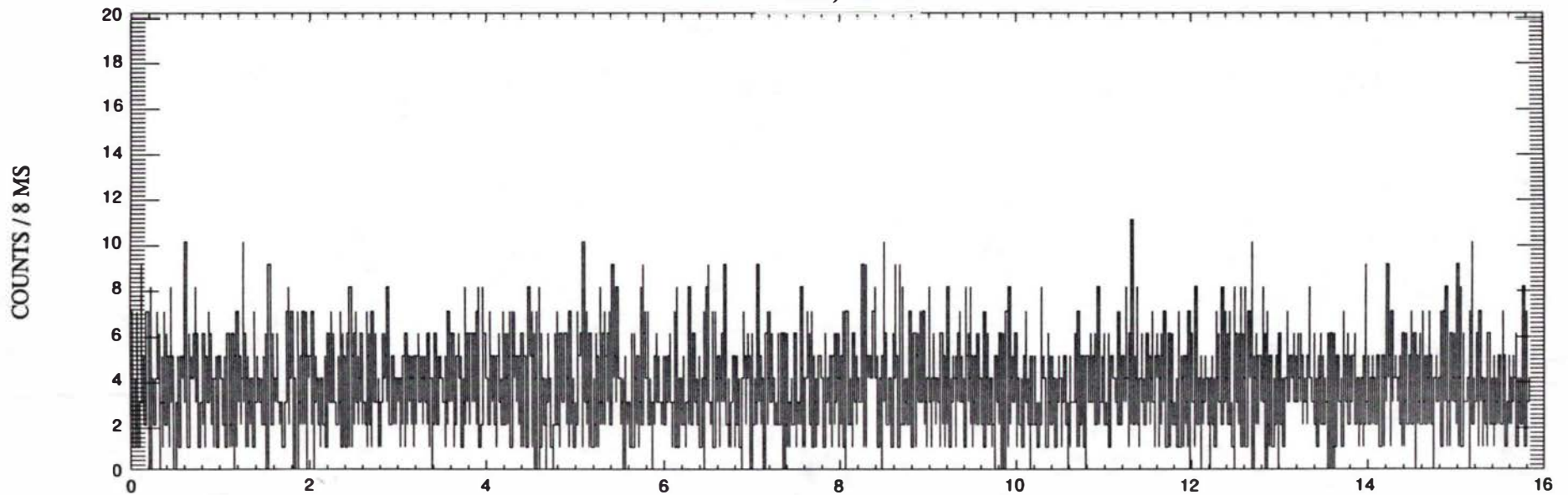
Burst Counter 2 at UT=21.950000551012 h=79020.002 s



Burst Counter 3 at UT=22.783312670390 h=82019.926 s

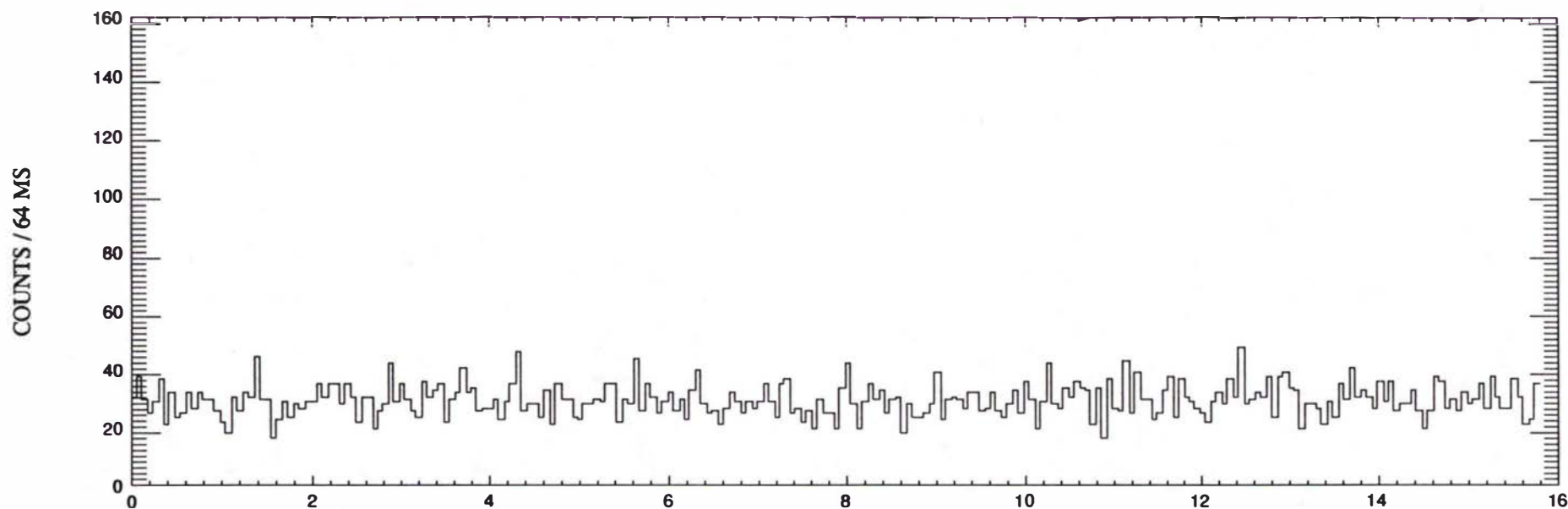


TIME, SECS

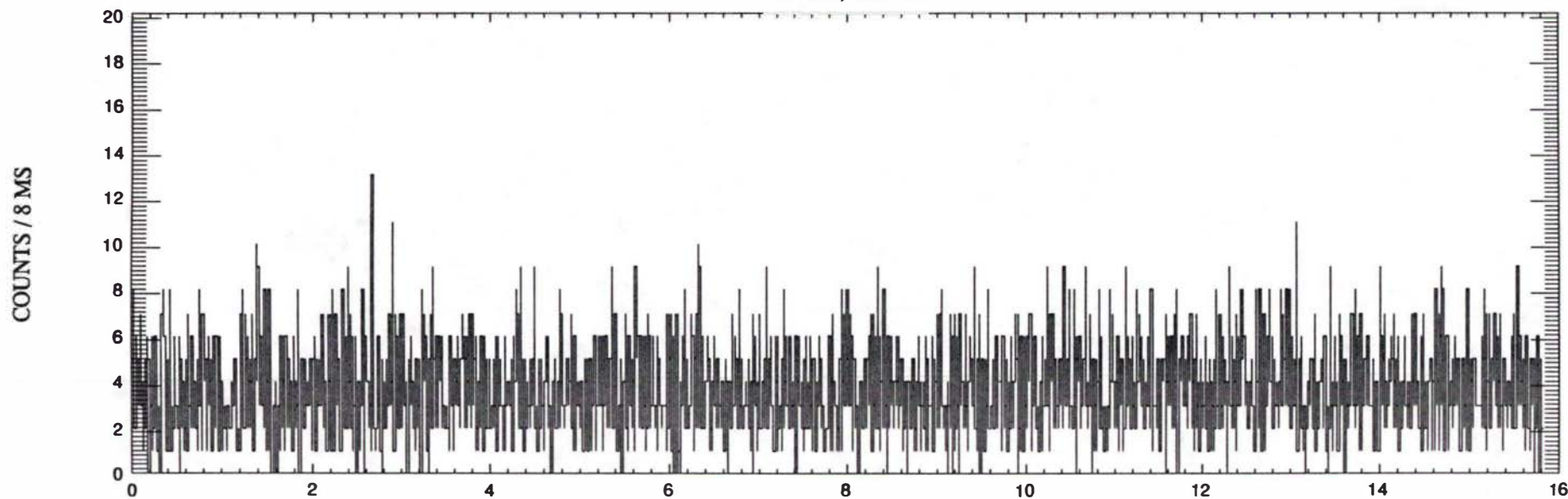


TIME, SECS

Burst Counter 4 at UT=23.616624789768 h=85019.849 s



TIME, SECS



TIME, SECS

From PREECE@ssl.msfc.nasa.gov Thu Sep 17 12:34:55 1992
Date: Thu, 17 Sep 1992 14:36:31 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01931

TIME: TJD=8881 SECONDS=37098

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

GOES M1.0 SOLAR FLARE, 65 SEC. LONG. NOT SEEN ABOVE 120 KEV.

From PREECE@ssl.msfc.nasa.gov Thu Sep 17 13:24:39 1992
Date: Thu, 17 Sep 1992 15:26:27 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01932

TIME: TJD=8881 SECONDS=55528

TYPE: 0422+32 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

GROJ0422+32 RISE.

From PREECE@ssl.msfc.nasa.gov Thu Sep 17 13:45:54 1992
Date: Thu, 17 Sep 1992 15:47:33 -0500 (CDT)
From: PREECE@ssl.msfc.nasa.gov
Subject: Burst Trigger Message
To: igse@unhrcc.unh.edu, jryan@unhrcc.unh.edu, GROBAD@ESTEC.BITNET,
khurley@space6.ssl.berkeley.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Content-Length: 1215

BATSE BURST TRIGGER

NO.: 01933

TIME: TJD=8881 SECONDS=85763

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

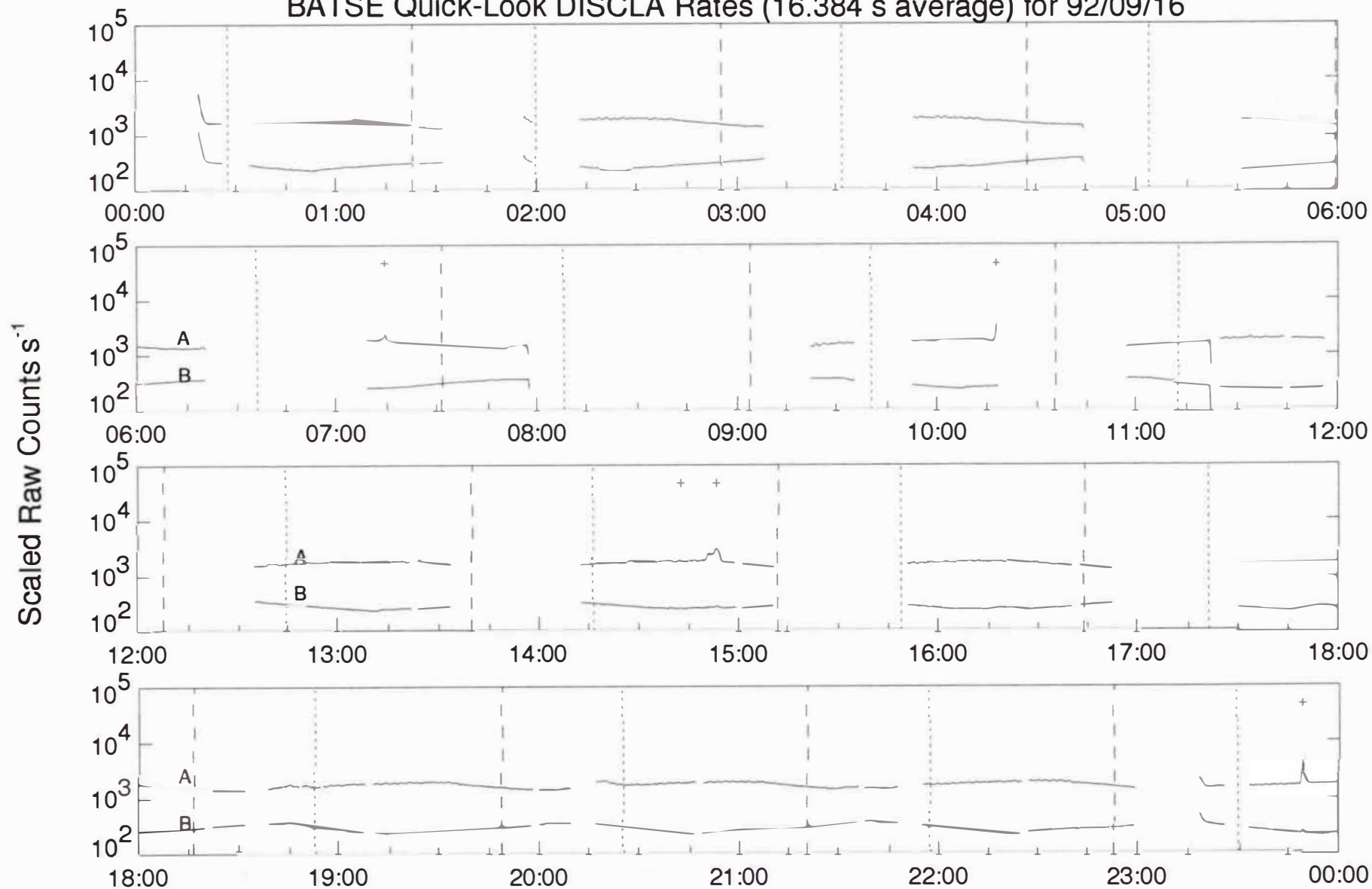
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

GOES C3.7 SOLAR FLARE, 110 SECS. LONG. NOT SEEN ABOVE 120 KEV.

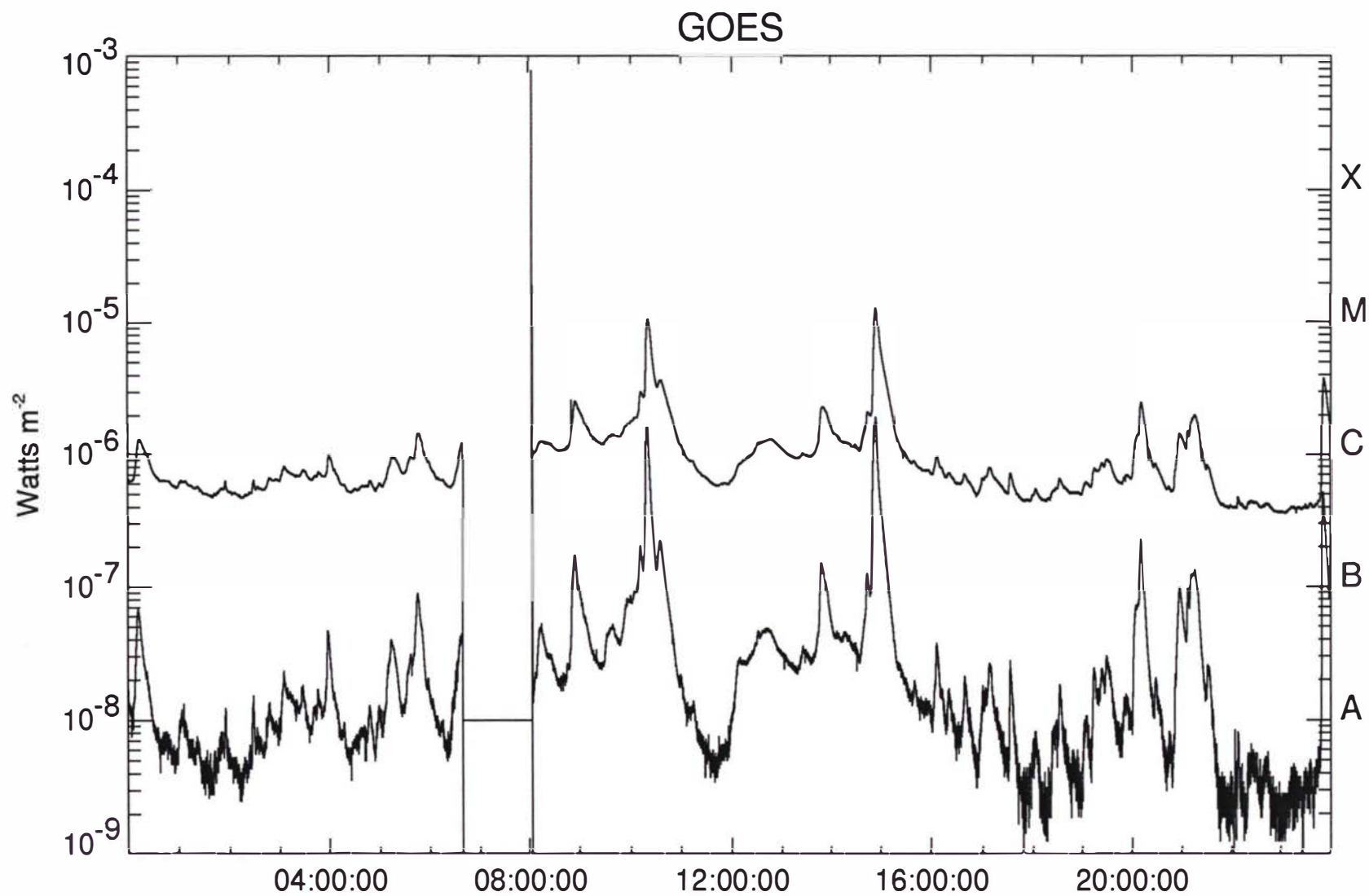
BATSE Quick-Look DISCLA Rates (16.384 s average) for 92/09/16



Current Time: 92/09/29, 0238 EDT
 A: Channel 1 Most Sunward LAD
 B: Sum Channel 1 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare



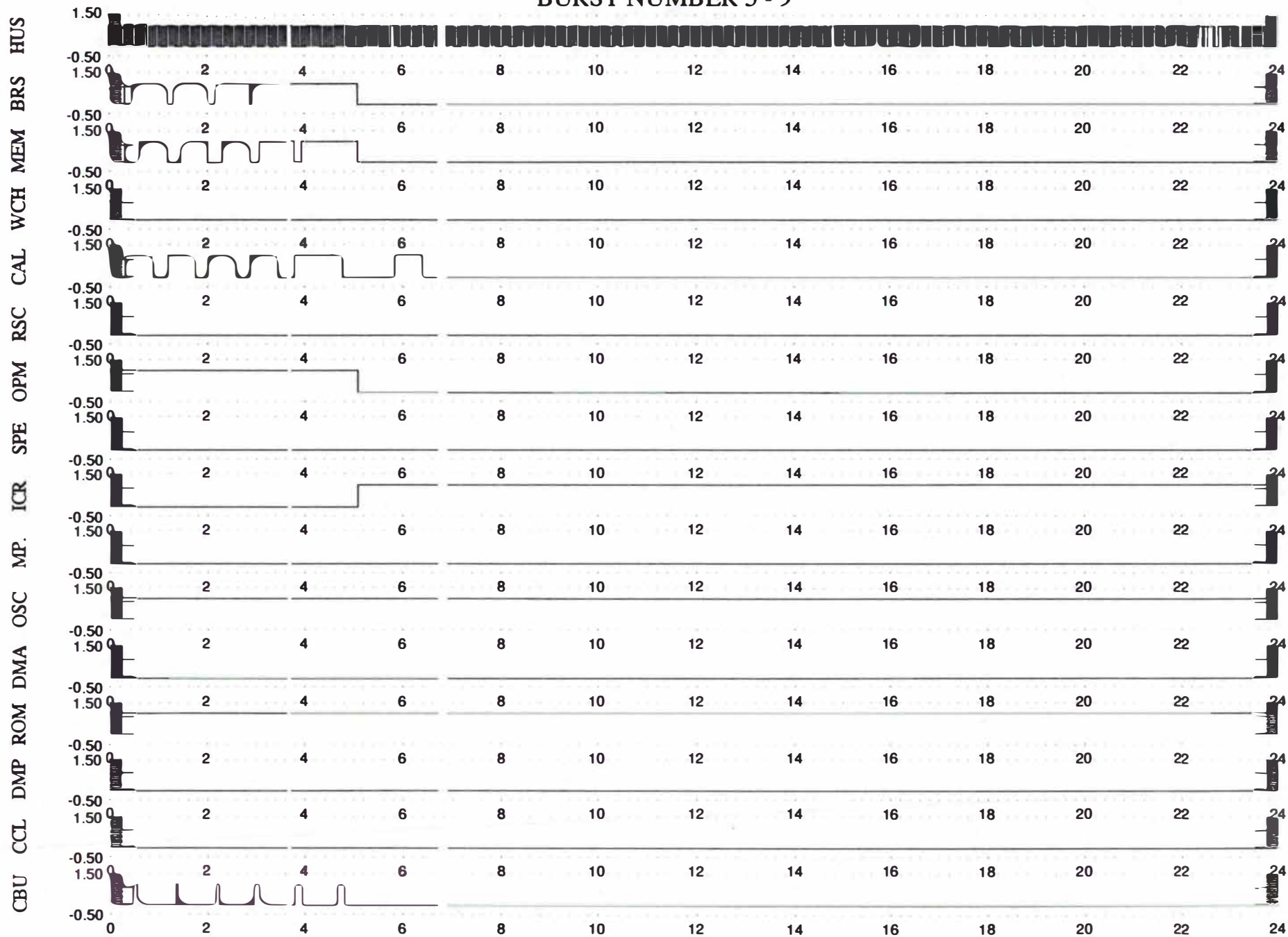
Data Start: 92/09/16, 0000:00

Plot created: 95/05/25, 1922

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

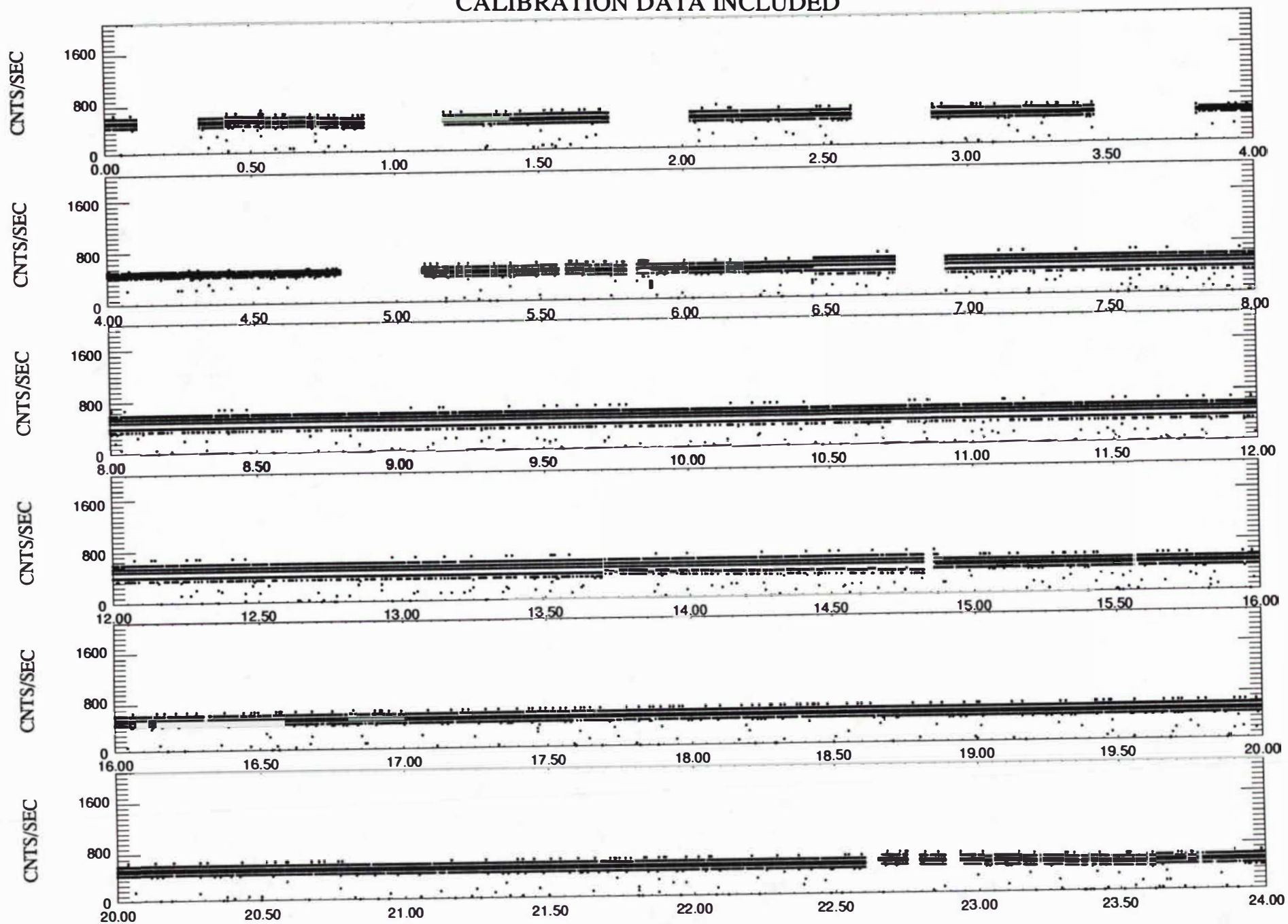
2 (0.5 - 4.0 Angstroms) Background not subtracted

BURST NUMBER 5 - 9



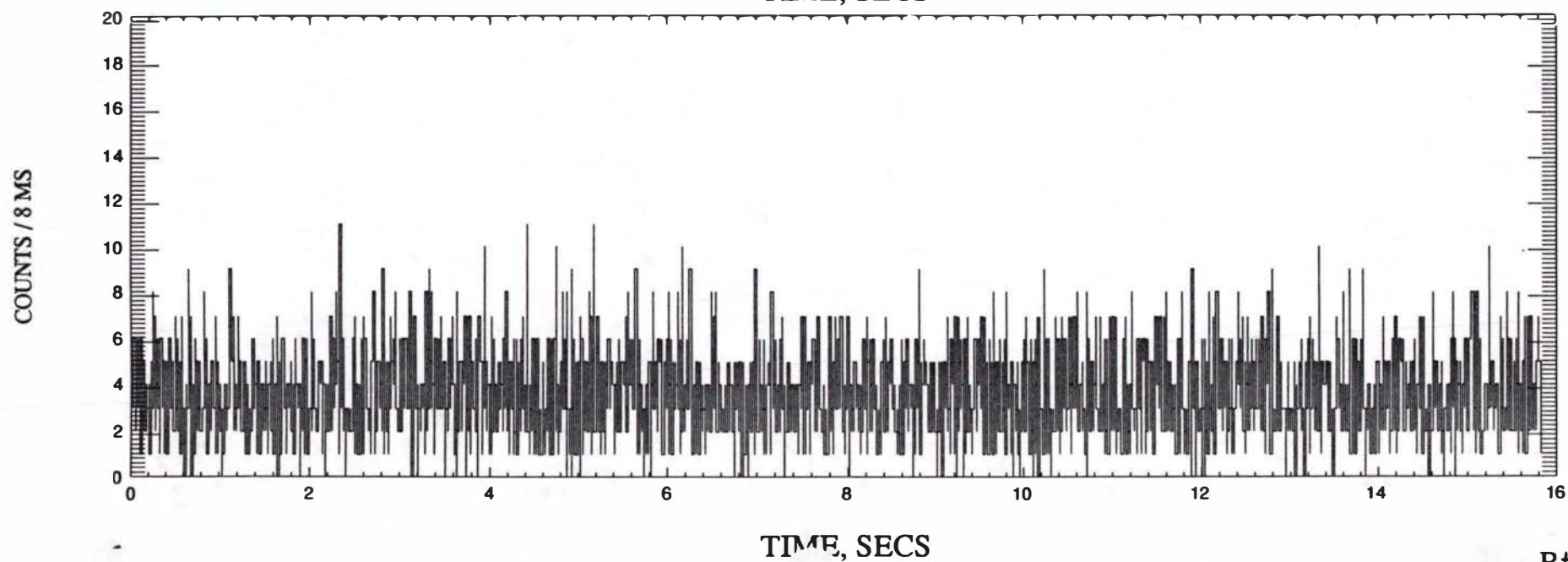
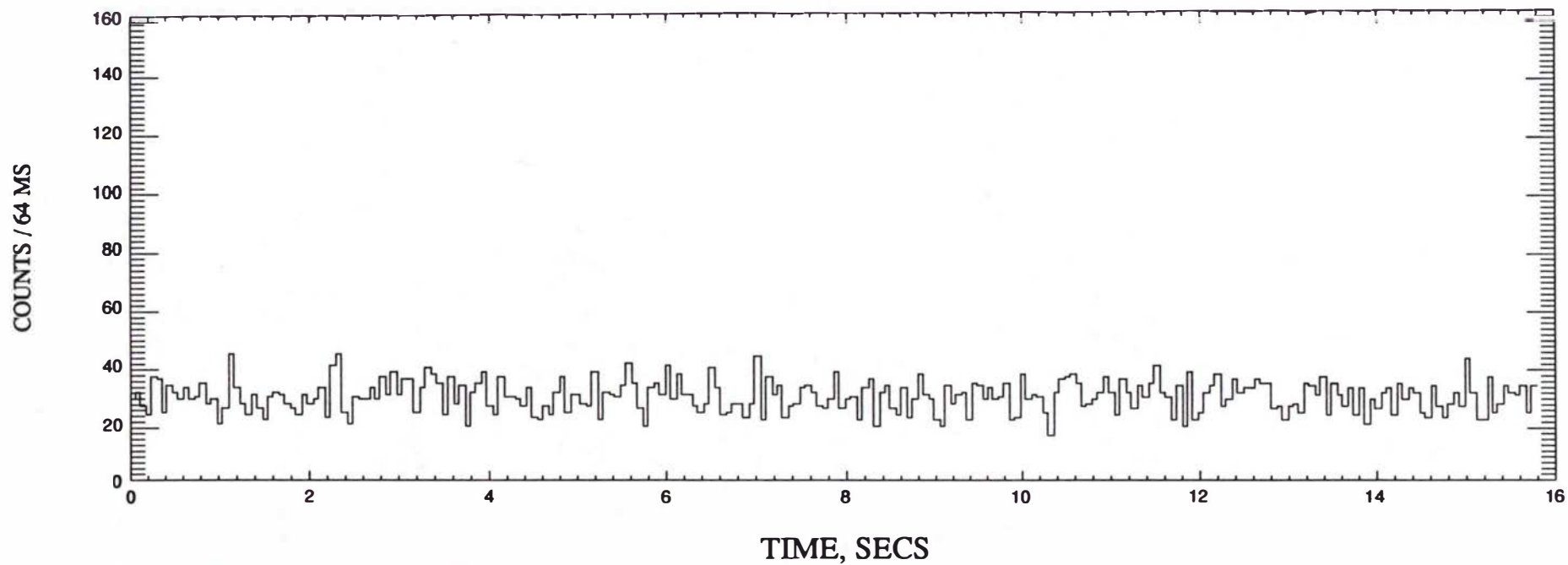
UNITS SAL TIME

CALIBRATION DATA INCLUDED

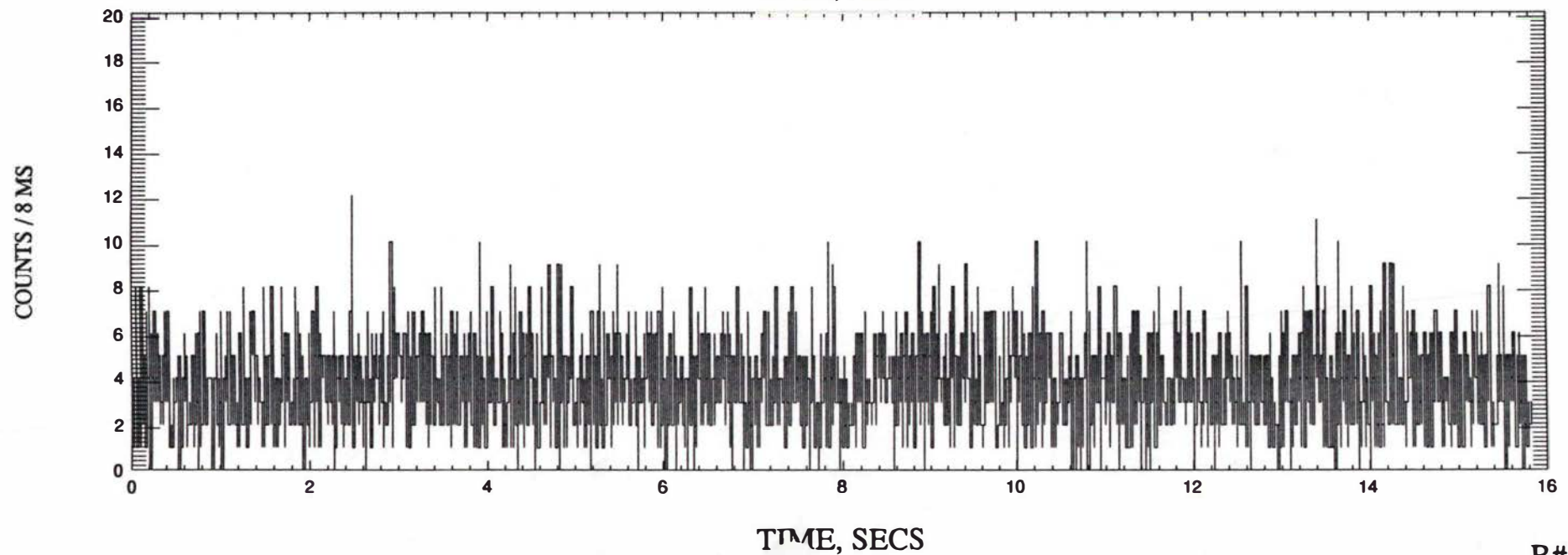
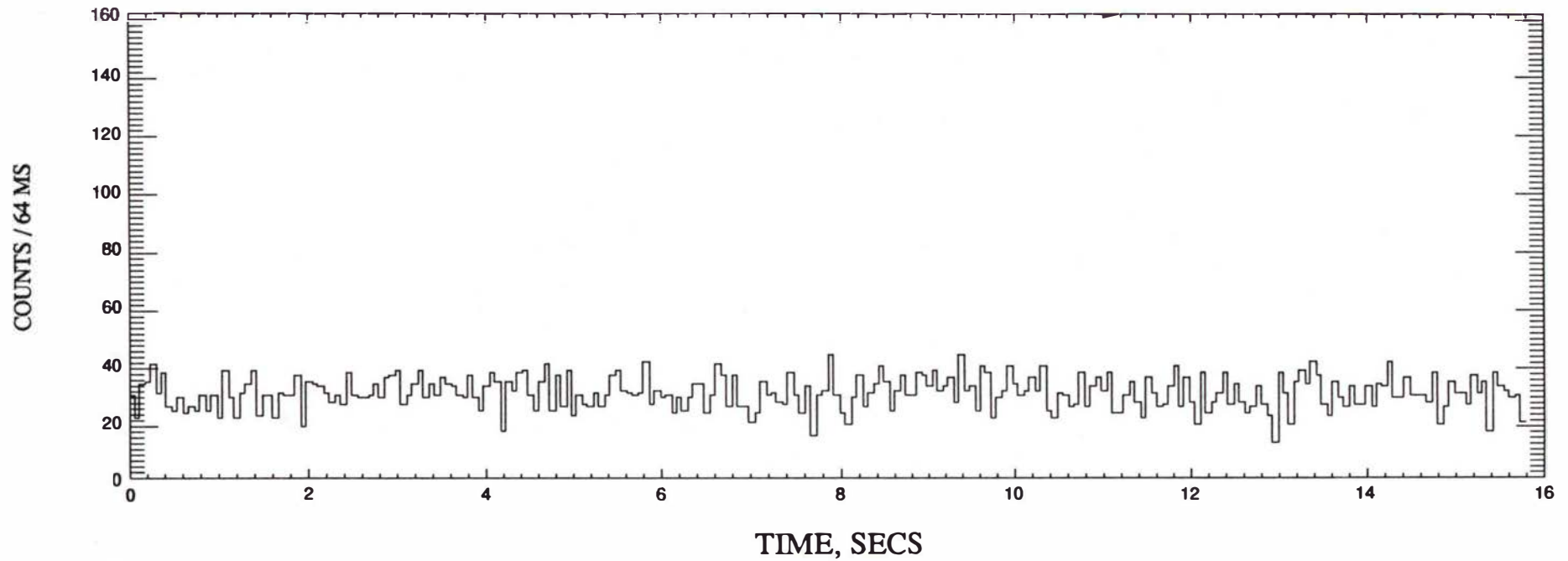


UNIV' 'AL TIME

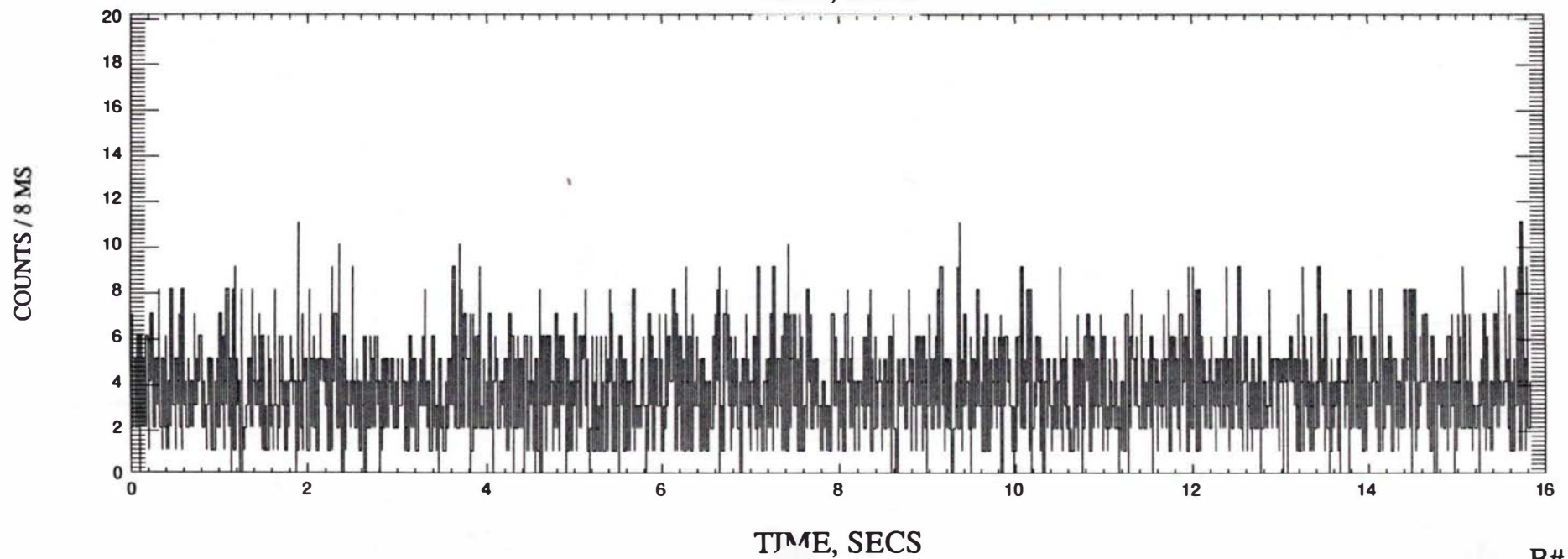
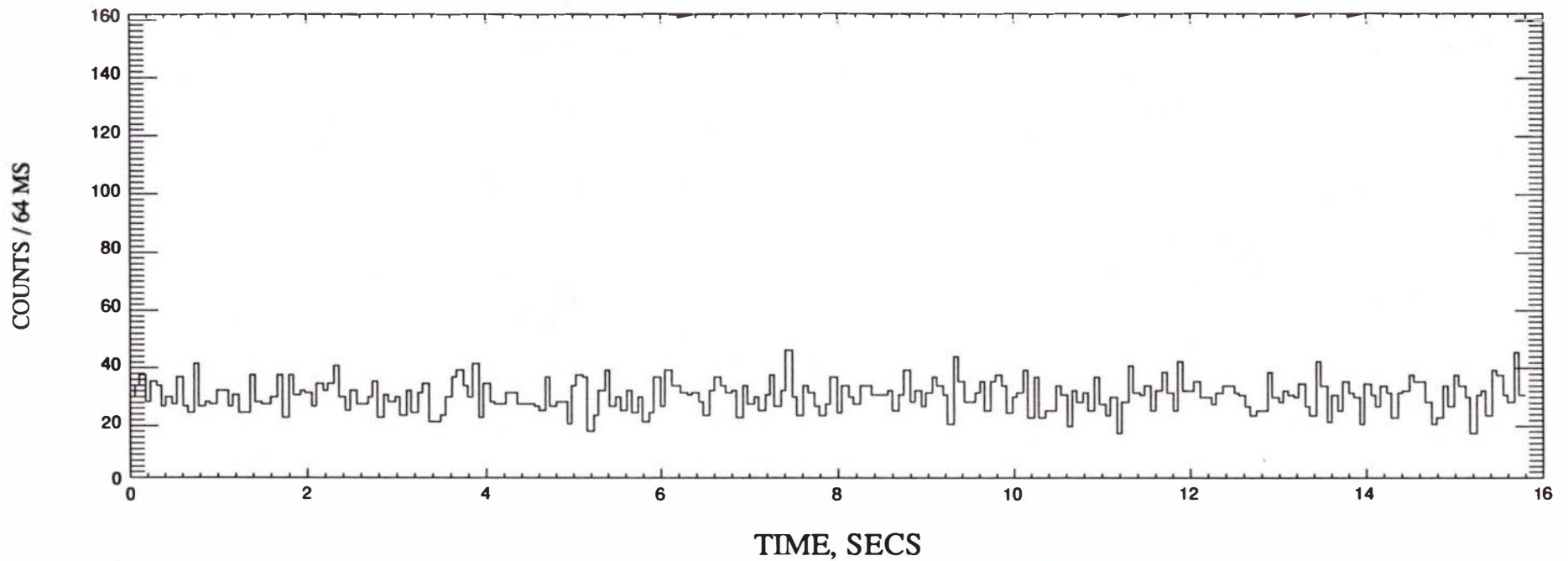
Burst Counter 5 at UT= 0.449935785929 h= 1619.769 s



Burst Counter 6 at UT= 1.283247905307 h= 4619.692 s



Burst Counter 7 at UT= 2.116560028924 h= 7619.616 s



Burst Counter 8 at UT= 2.949871020847 h=10619.536 s

