

1000

1000

1000

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1000

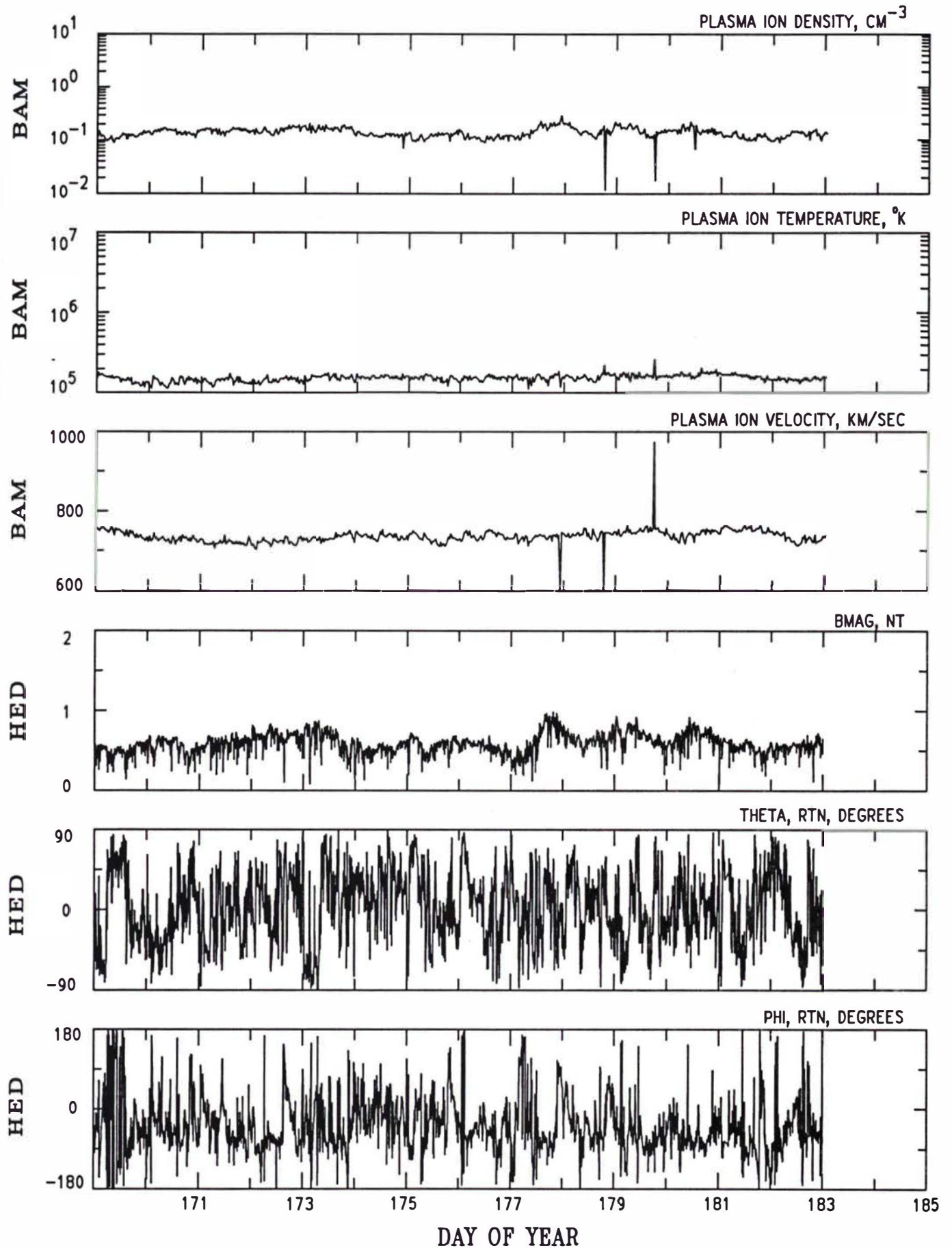
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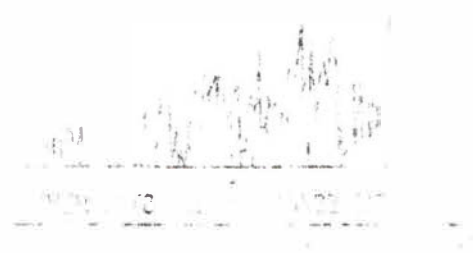
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1000

ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

96 169 JUN 17 00:00:00.000 - 96 185 JUL 3 00:00:00.000





100
90
80
70
60
50
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30
20
10
0

1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

100
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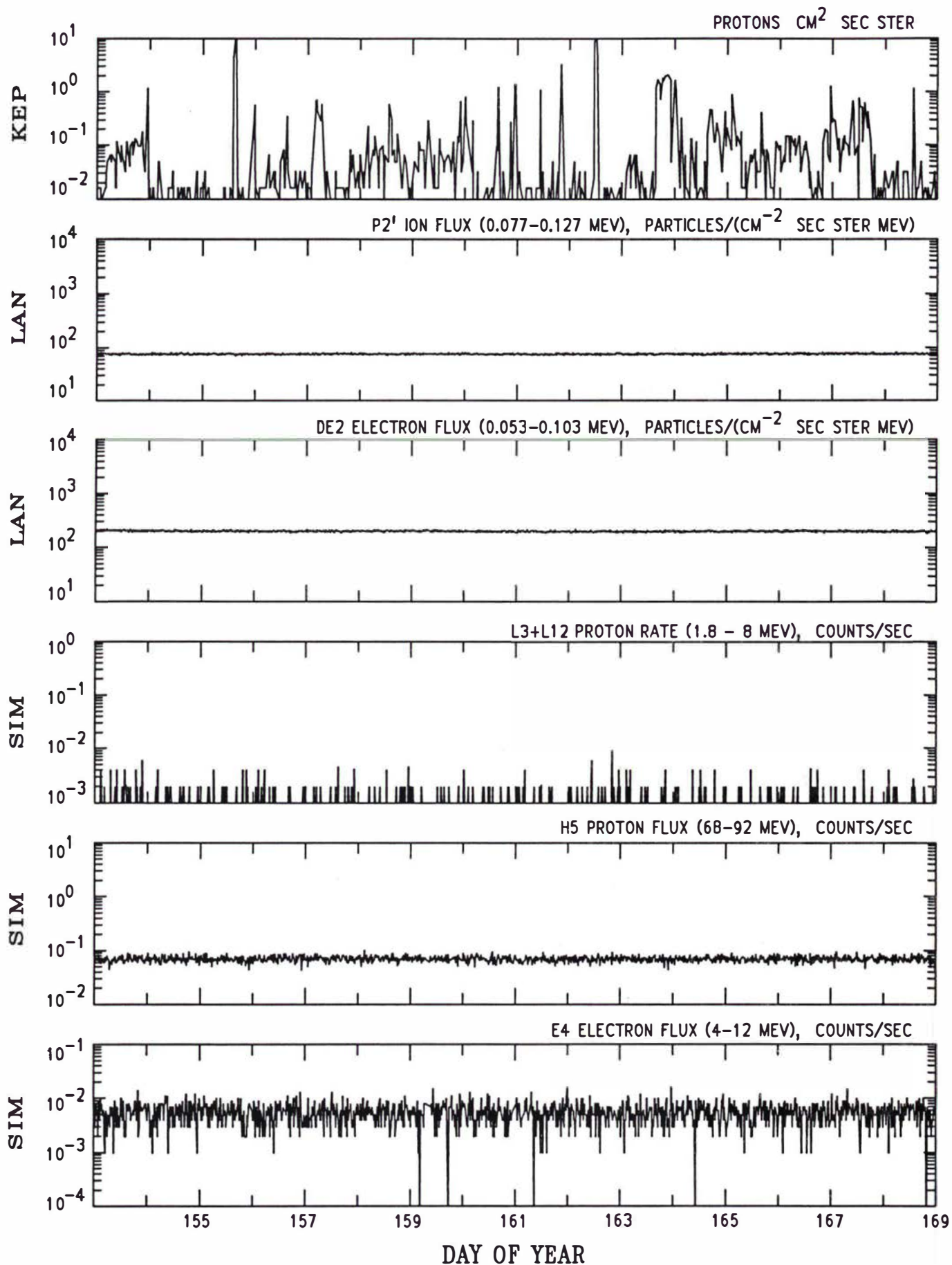
1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

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1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

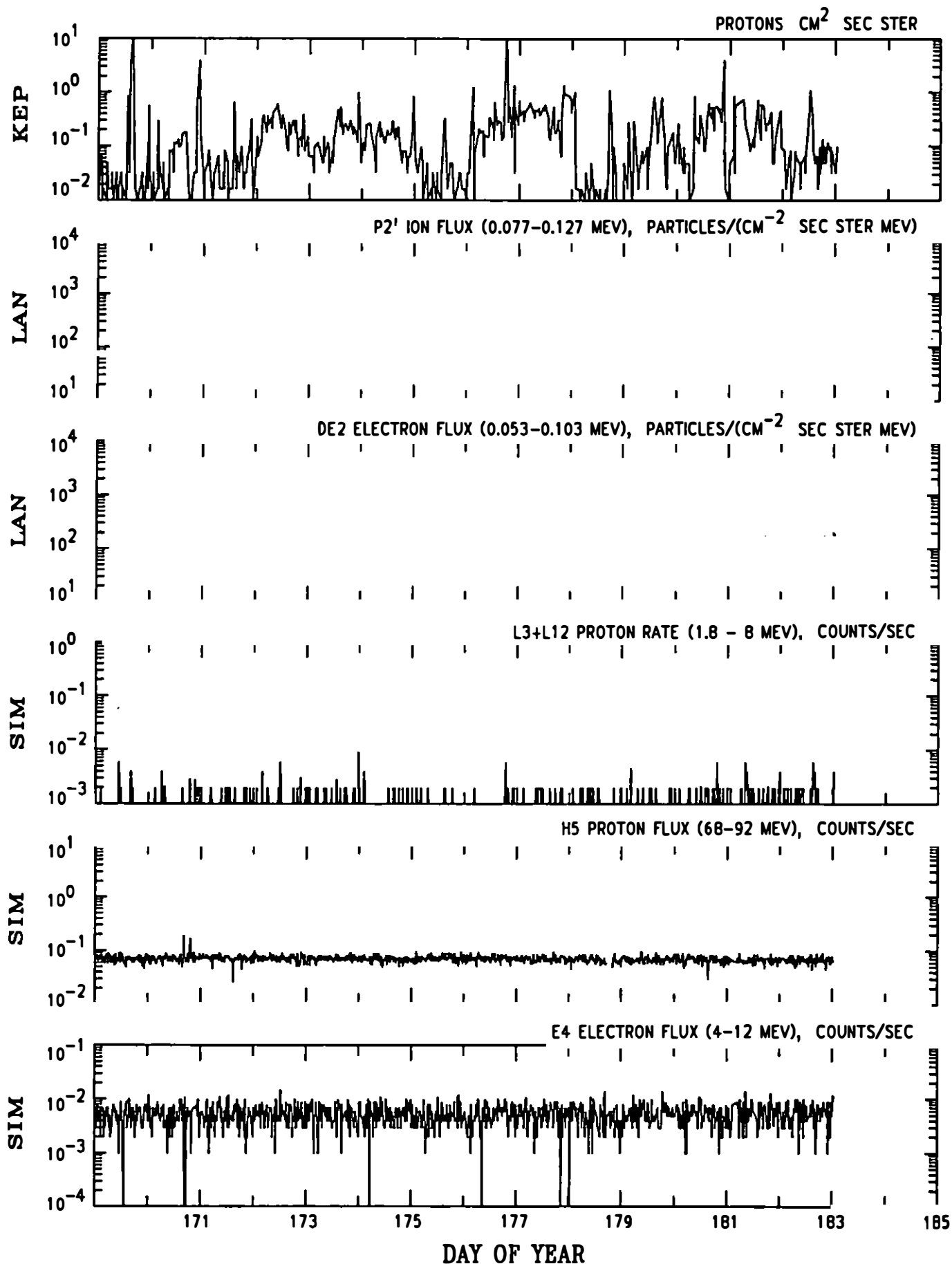
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

96 153 JUN 1 00:00:00.000 - 96 169 JUN 17 00:00:00.000



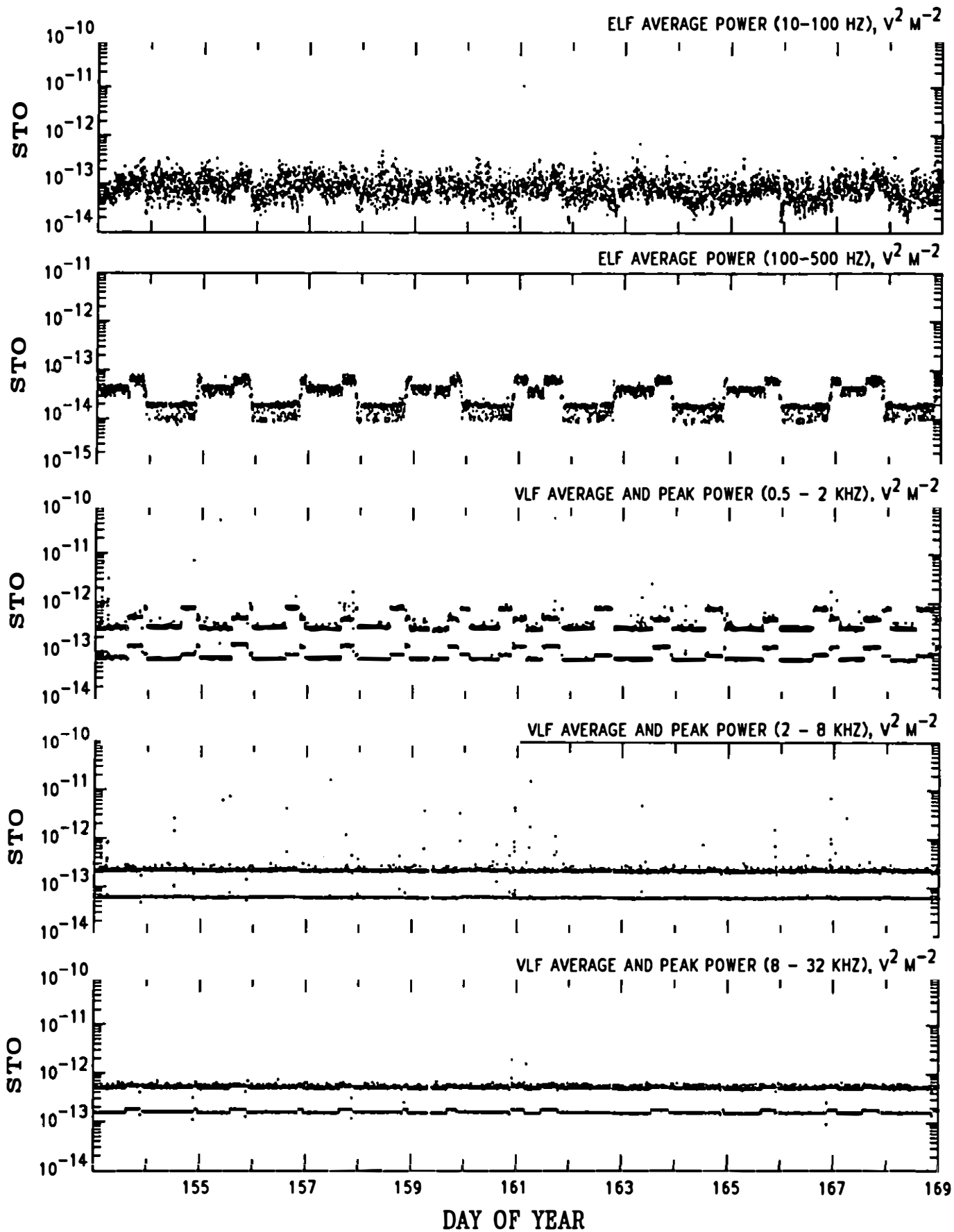
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

96 169 JUN 17 00:00:00.000 - 96 185 JUL 3 00:00:00.000



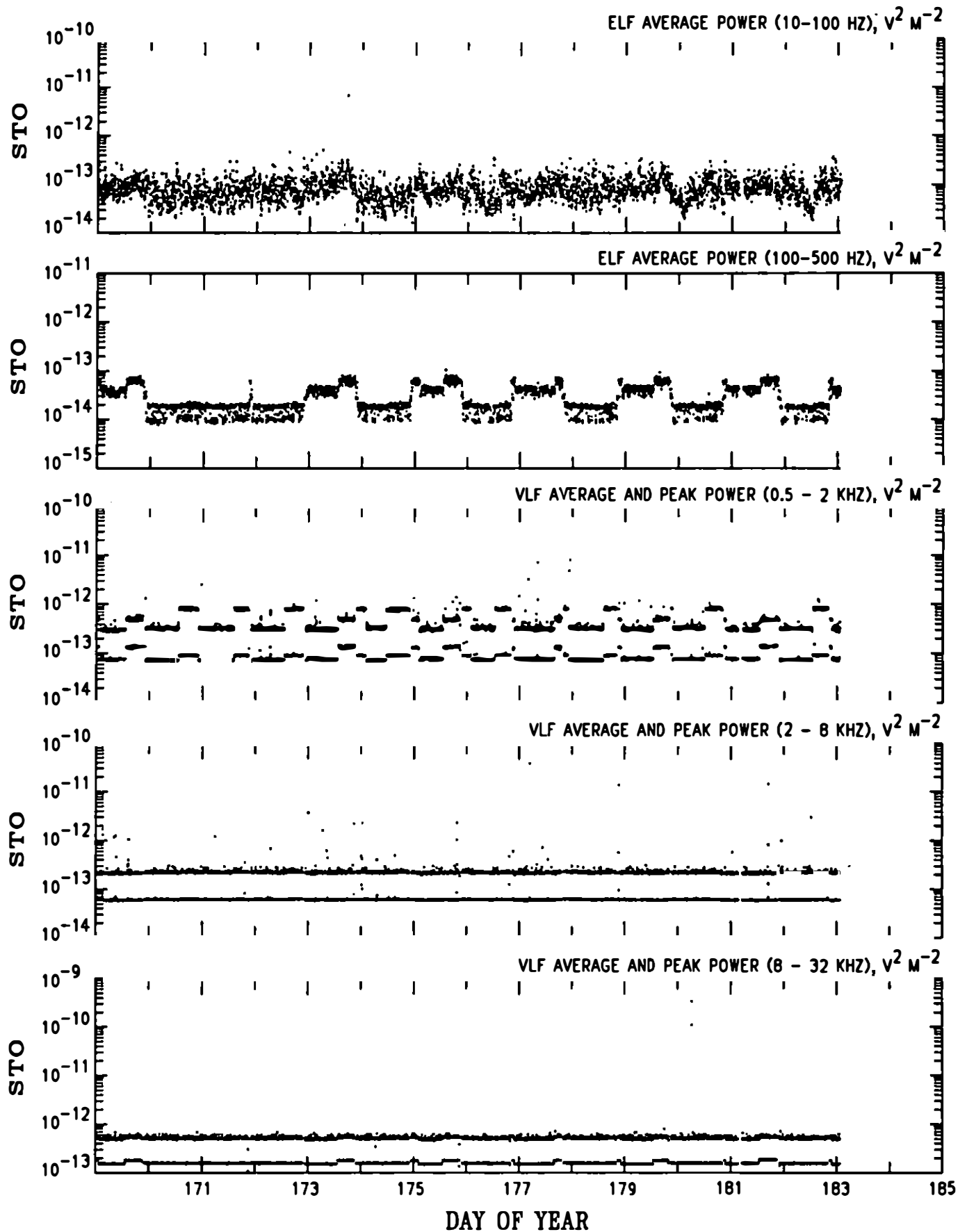
ULYSSES CDR - PLASMA WAVE

96 153 JUN 1 00:00:00.000 - 96 169 JUN 17 00:00:00.000



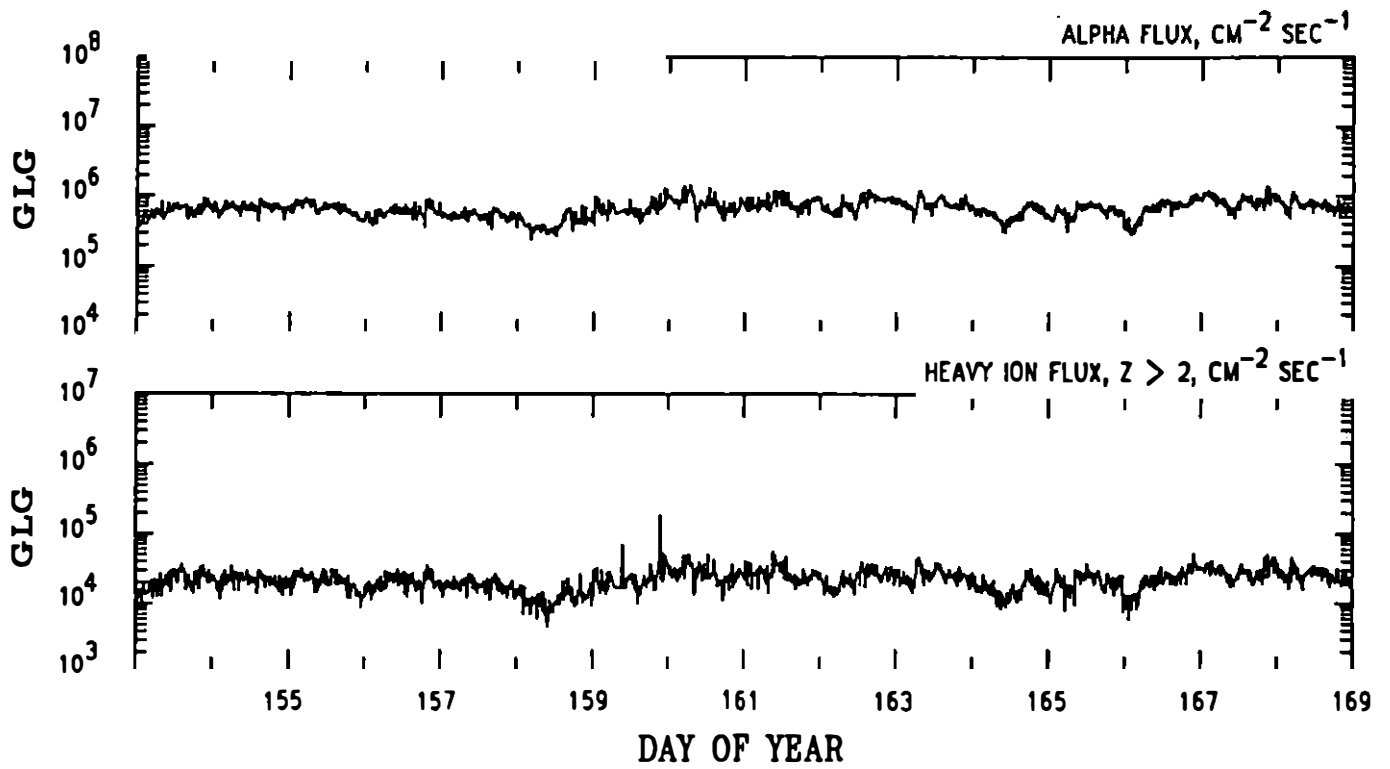
ULYSSES CDR - PLASMA WAVE

96 169 JUN 17 00:00:00.000 - 96 185 JUL 3 00:00:00.000



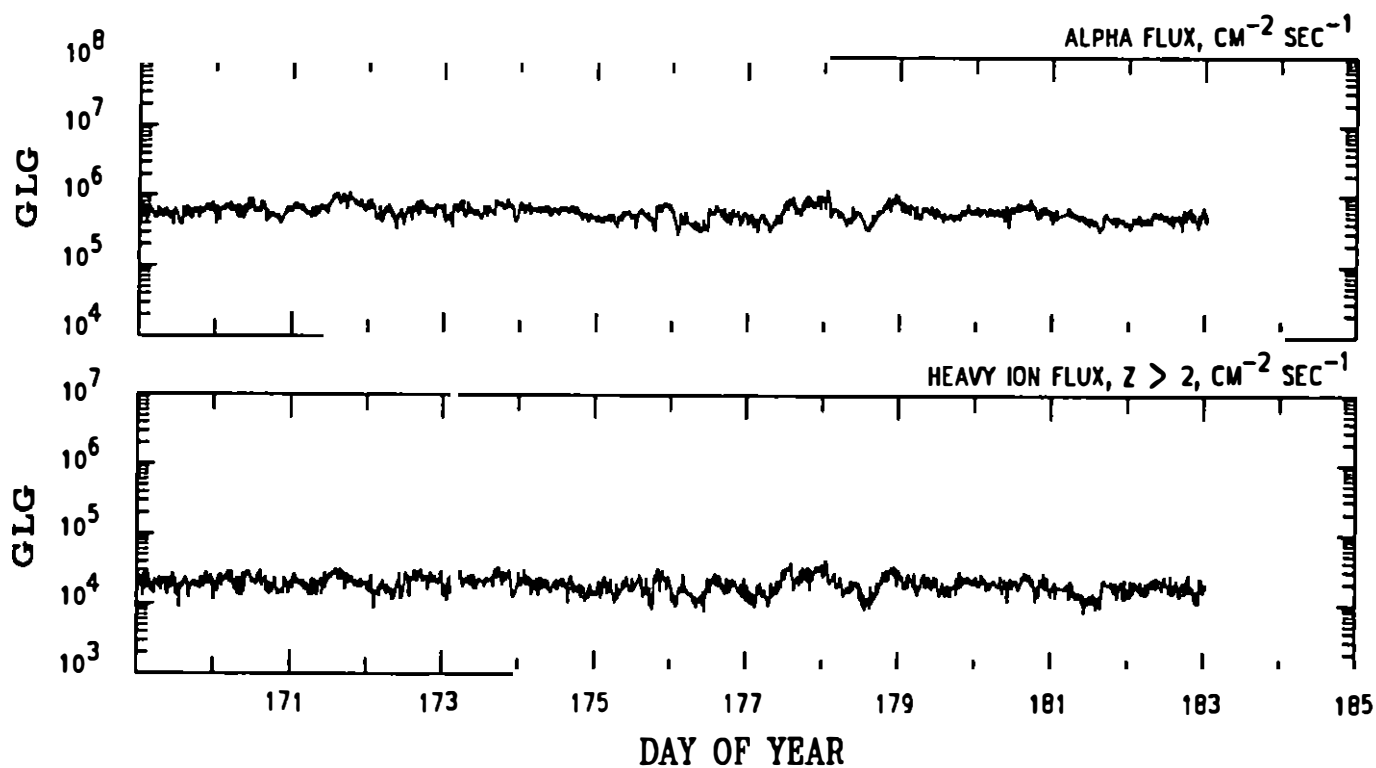
ULYSSES CDR - SOLAR WIND ION COMPOSITION

96 153 JUN 1 00:00:00.000 - 96 169 JUN 17 00:00:00.000



ULYSSES CDR - SOLAR WIND ION COMPOSITION

96 169 JUN 17 00:00:00.000 - 96 185 JUL 3 00:00:00.000



From DEAL@fender.msfc.nasa.gov Tue Jun 4 07:28 PDT 1996
From: DEAL@fender.msfc.nasa.gov
Date: Tue, 4 Jun 1996 9:28:10 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5482

BATSEARCH PROGRAM

BATSE BURST # 5482
EVENT OF 1996 JUN 1 DAY OF YEAR=153
EVENT CROSSING TIME AT BATSE : 17149. S. OR 04:45:49.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 209.000 -57.000
BATSE PEAK COUNTING RATE: 3800 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 1/ 6/ 96 IS:
RA= 148.984 DEC= 54.134 DIST= 4.188 AU
BATSE-ULYSSES DISTANCE = 626532035. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 58.66 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1087.11 SECS.
CROSSING TIME AT ULYSSES IS 18236. S. OR 05:03:56 +/- 376.39 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 1/ 6/ 96 IS:
RA= 49.268 DEC= 17.960 DIST= 2.367 AU
MARS-BATSE DISTANCE = 354085280. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 41.87 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 879.48 SECS.
CROSSING TIME AT MARS IS 18028. S. OR 05:00:28 +/- 150.23 SECONDS

BATSE BURST TRIGGER

NO.: 5482

TIME: TJD=0235 SECONDS=17149

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=53.6 AZIMUTH=225.0 ERROR=1.7 DEGREES

COMMENTS:

MULTI-PULSED BURST LASTING ~ 220 S. FIRST PULSE AT T-190 (50 S. IN DUR.), NEXT A
T T-120S (30S. IN DUR.), T-82 (30 S. IN DUR.) MAIN PULSE AT T-10 S. (40 S. IN DUR
) NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5482	960601	10235	17149	3800	209	-57	220

BATSE #

5482

4 / 6 / 96

ULYSSES RT

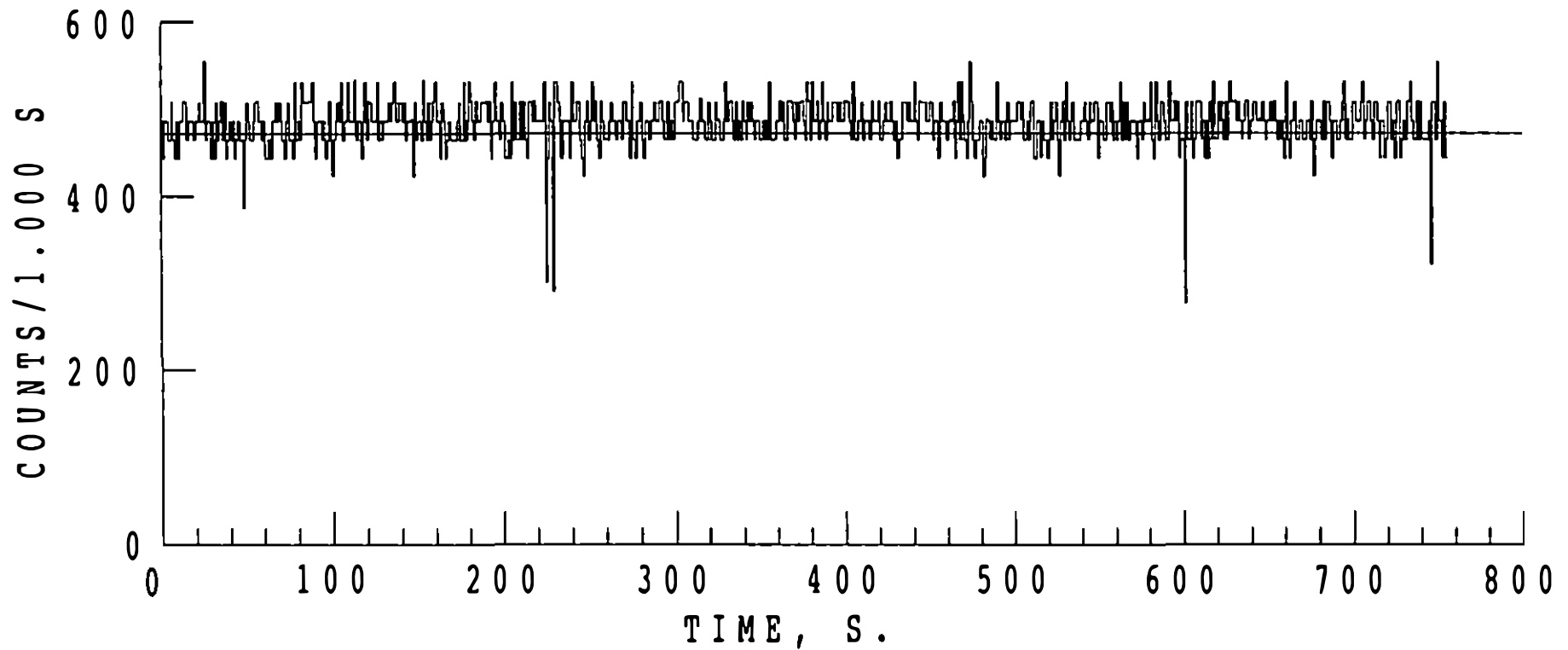
1 / 6 / 96 17856.480 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



KONUS

ULYSSES RT

29 / 01 / 00

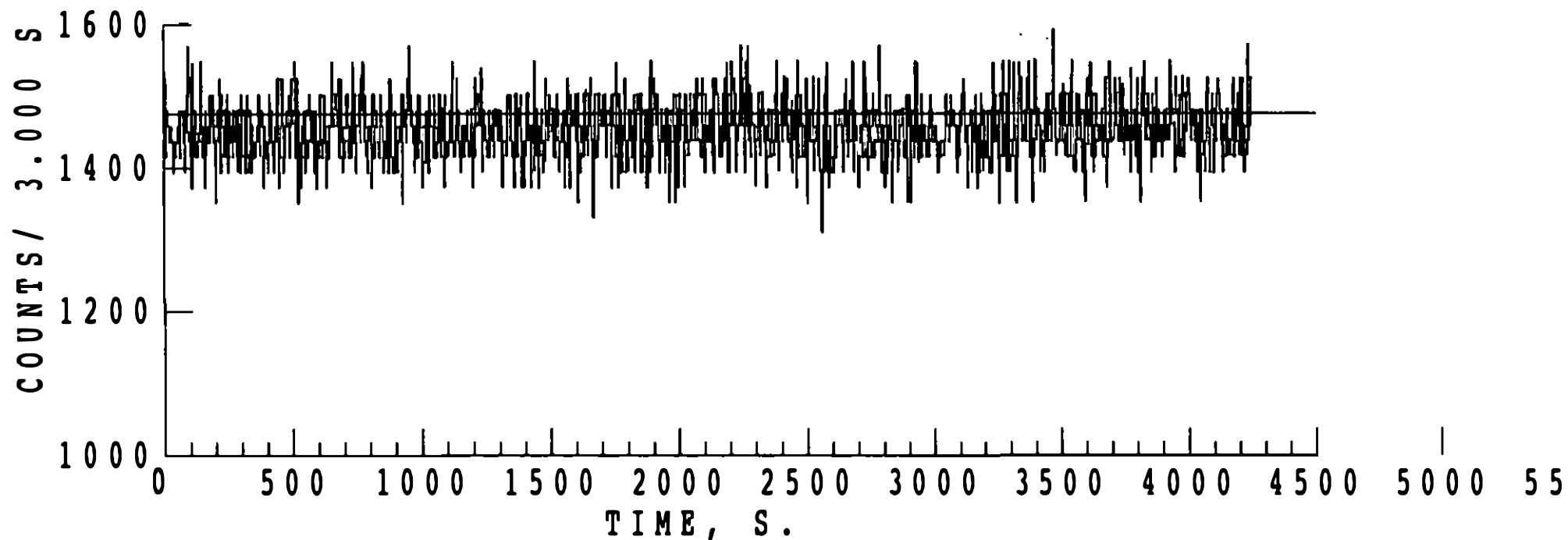
01/06/96 39708.273 s

0.500 S INTERVALS REGROUPED BY 6

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From DEAL@fender.msfc.nasa.gov Tue Jun 4 07:30 PDT 1996
From: DEAL@fender.msfc.nasa.gov
Date: Tue, 4 Jun 1996 9:30:04 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5483

BATSEARCH PROGRAM

BATSE BURST # 5483
EVENT OF 1996 JUN 1 DAY OF YEAR=153
EVENT CROSSING TIME AT BATSE : 65576. S. OR 18:12:56.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 6.000 65.000
BATSE PEAK COUNTING RATE: 5000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 1/ 6/ 96 IS:
RA= 149.050 DEC= 53.992 DIST= 4.197 AU
BATSE-ULYSSES DISTANCE = 627863714. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=122.32 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1119.58 SECS.
CROSSING TIME AT ULYSSES IS 64456. S. OR 17:54:16 +/- 340.29 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 1/ 6/ 96 IS:
RA= 49.268 DEC= 17.960 DIST= 2.367 AU
MARS-BATSE DISTANCE = 354085280. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=124.90 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -675.82 SECS.
CROSSING TIME AT MARS IS 64900. S. OR 18:01:40 +/- 157.91 SECONDS

BATSE BURST TRIGGER

NO.: 5483

TIME: TJD=0235 SECONDS=65576

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=139.1 AZIMUTH=53.0 ERROR=3.9 DEGREES

COMMENTS:

GRB LASTING ~ 4 S. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5483	960601	10235	65576	5000	006	+65	4

BATSE #

5483

4 / 6 / 96

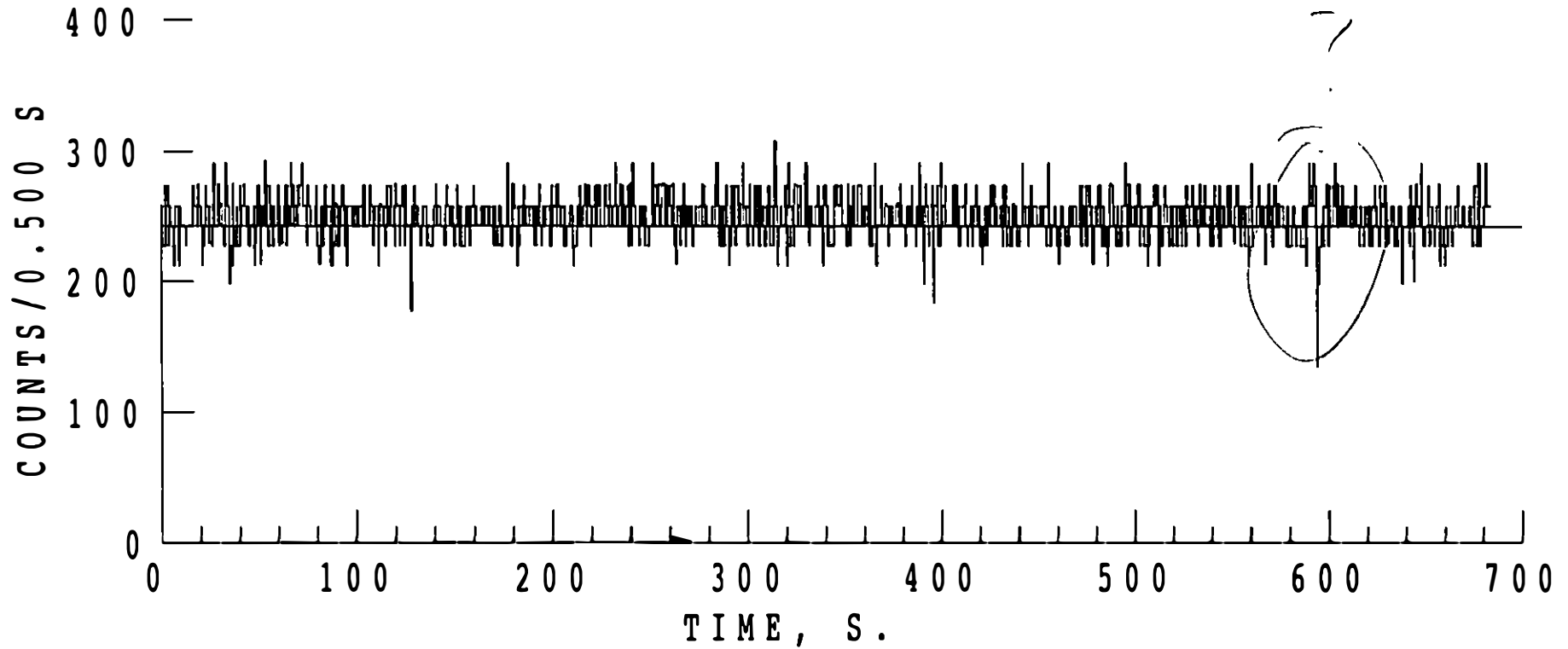
ULYSSES RT

1 / 6 / 96 64116.102 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N=10 M=2
>4.0 SIGMA FLUCTUATIONS



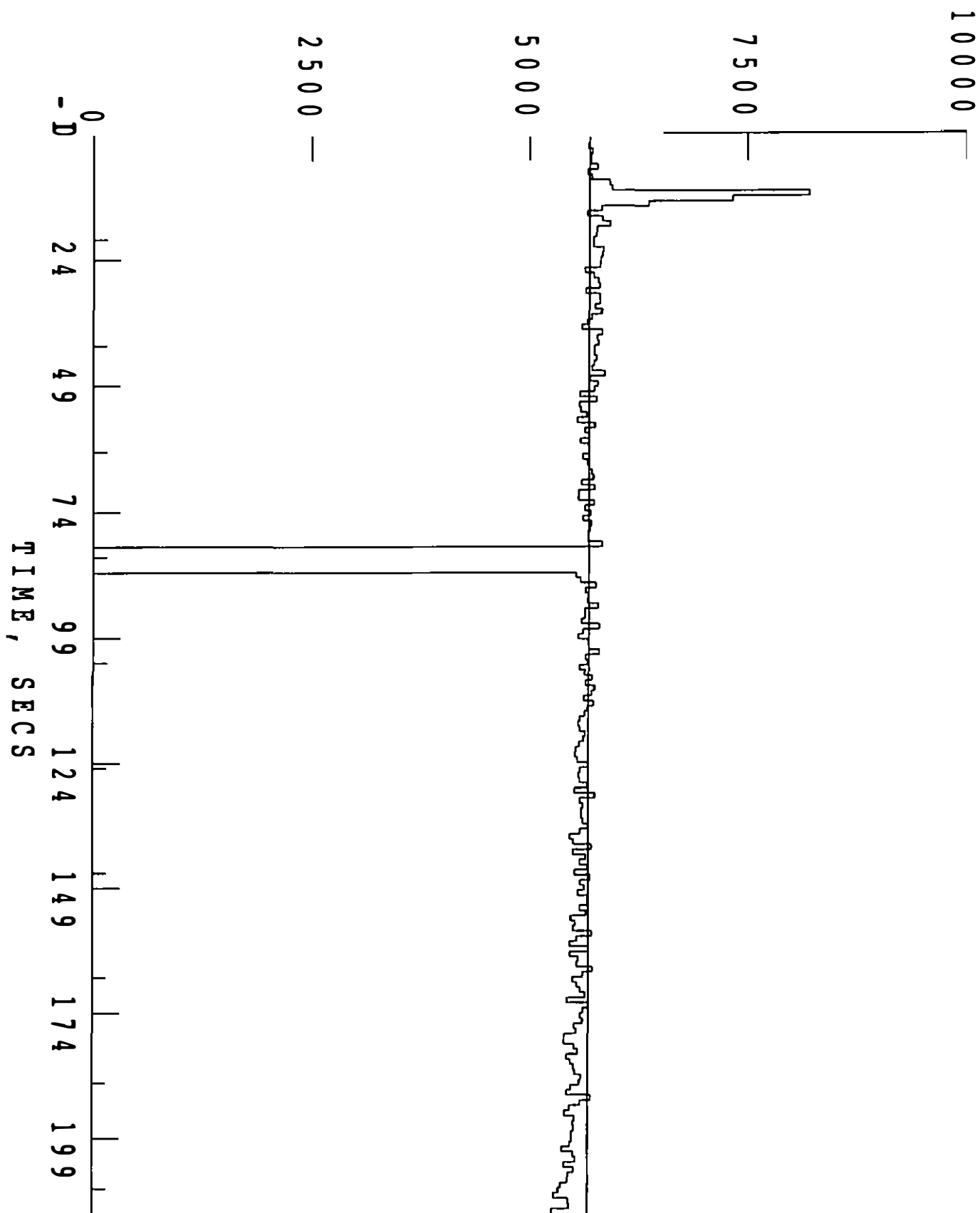
BACODINE

01/06/96

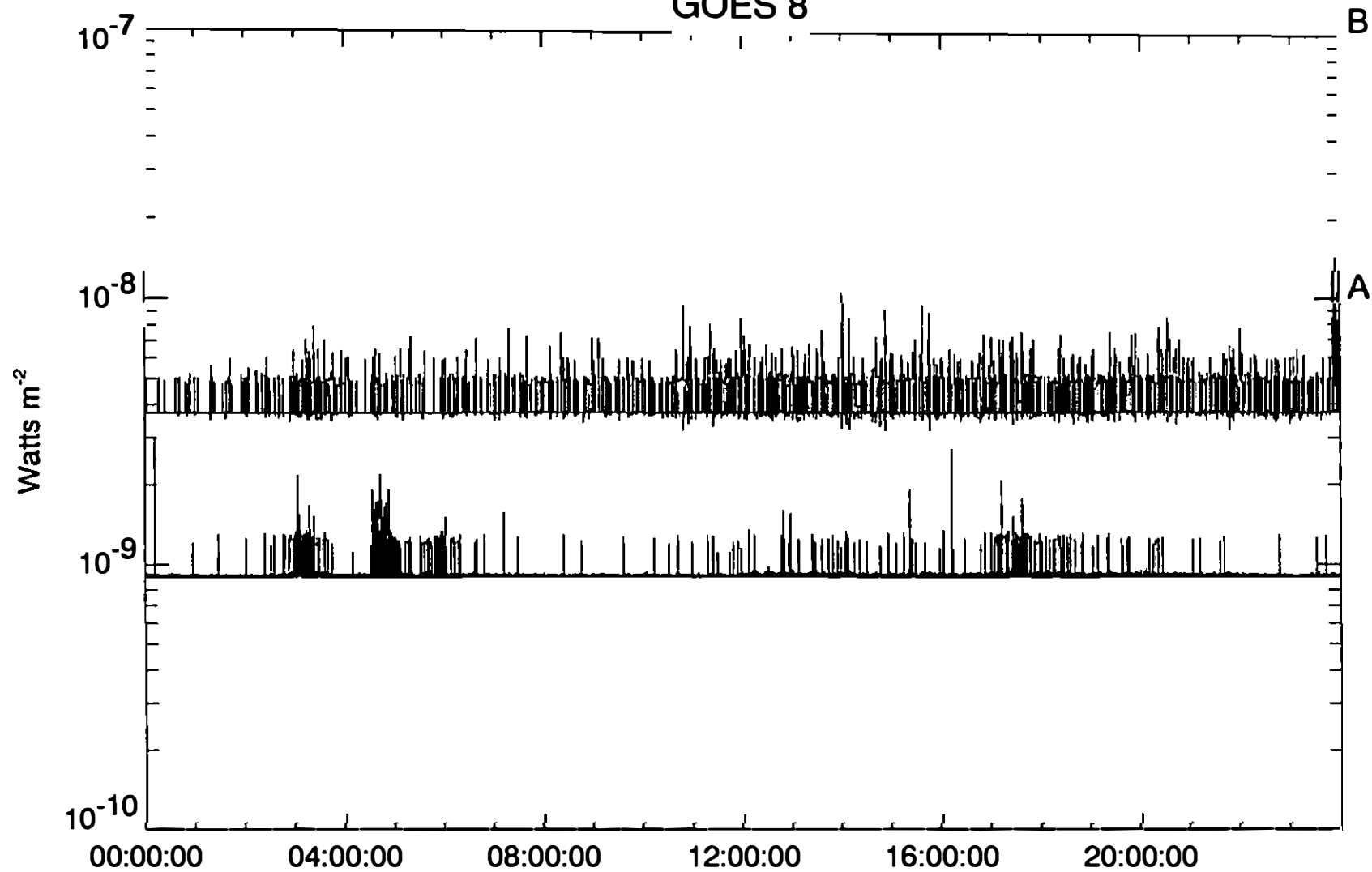
65565.385

25 - 100 keV

COUNTS/1.024 S



GOES 8

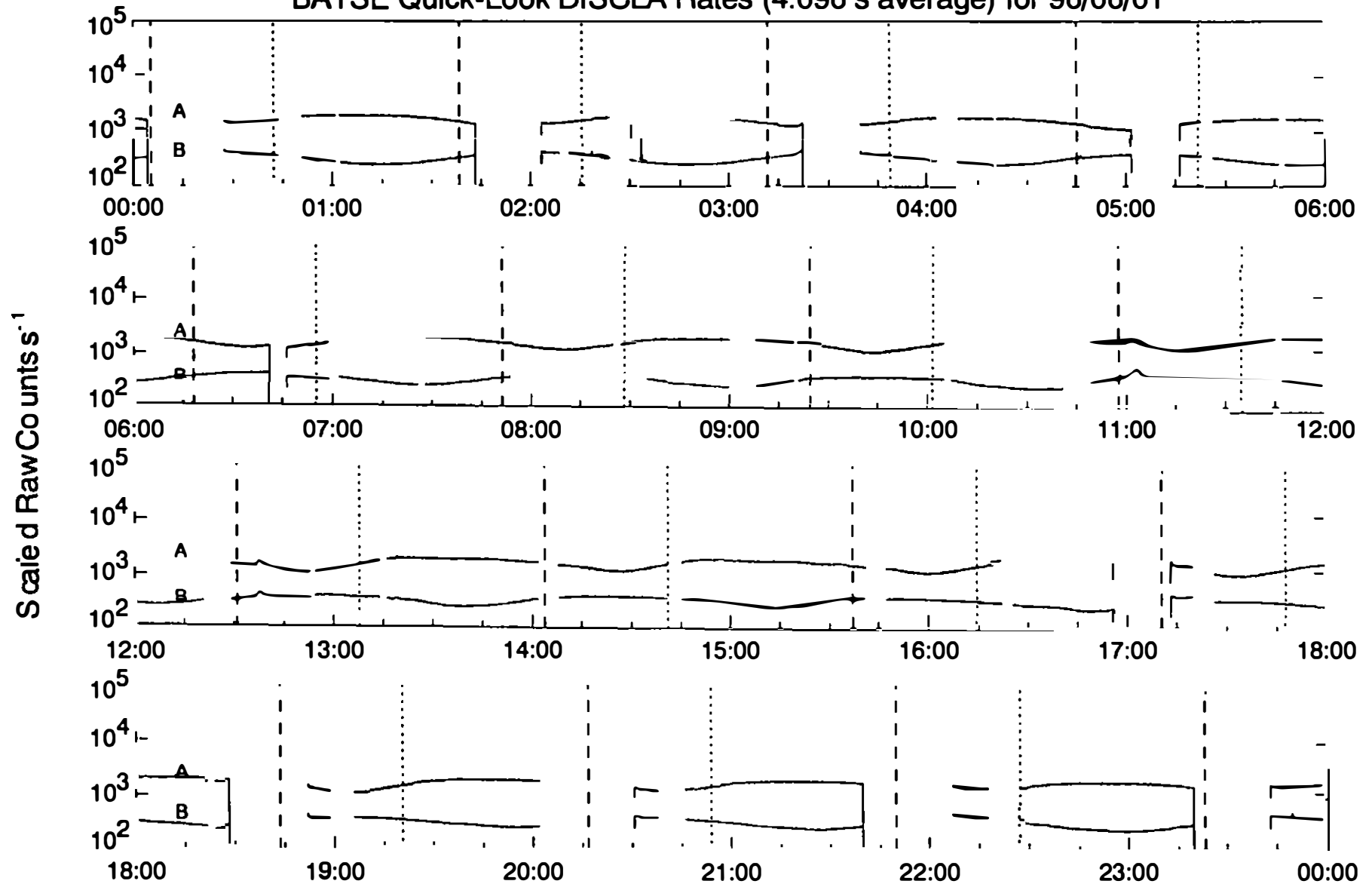


Data Start: 96/06/01, 0000:00

Plot created: 96/06/03, 1003

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

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/01



Current Time: 96/06/03, 1004 EDT

A: Channel 0 Most Sunward LAD

B: Sum Channel 0 Anti-Sunward LADs X .05

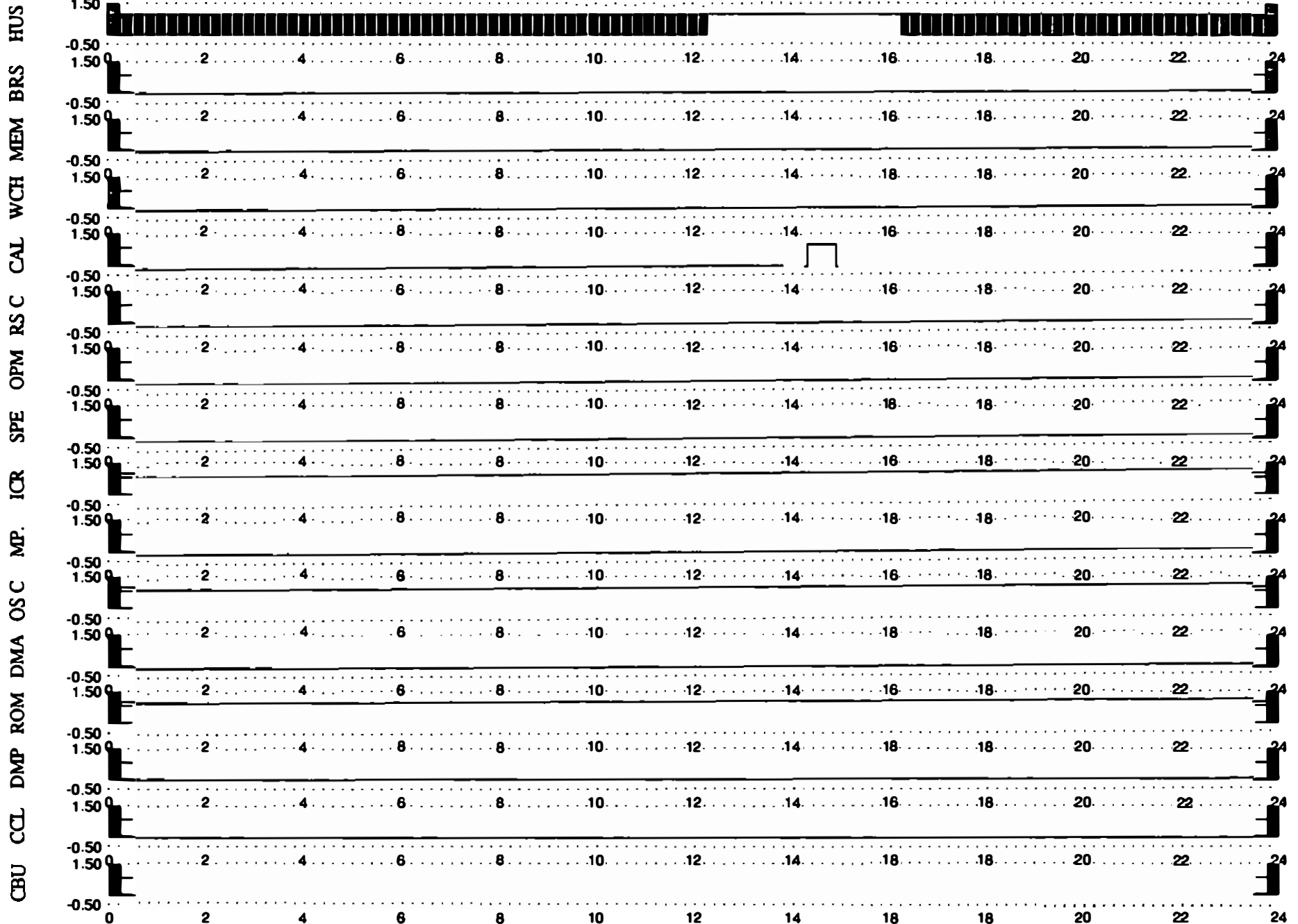
Dotted line: Day entry

Dashed line: Night entry

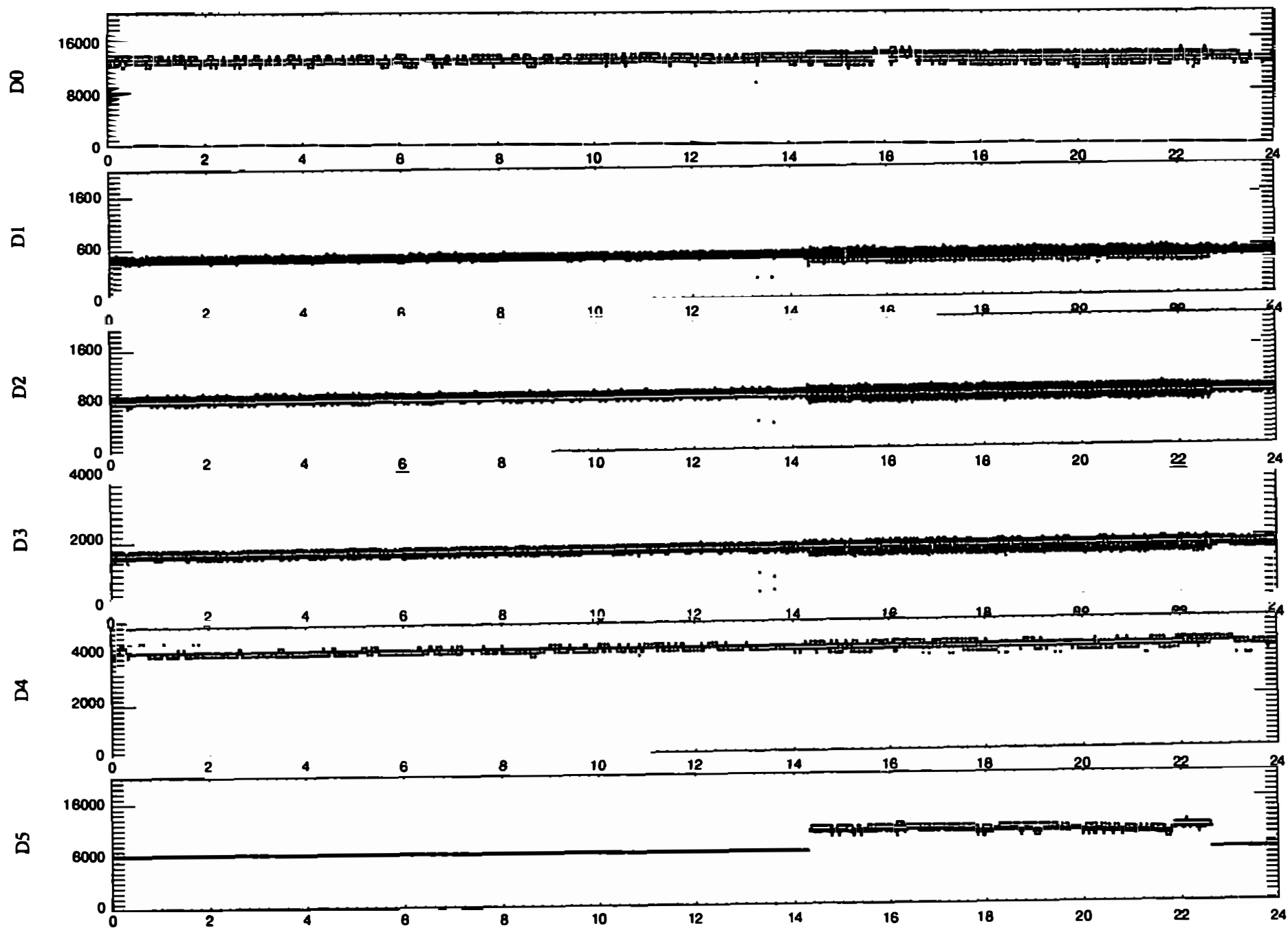
* Solar Burst Trigger

+ Solar Flare

NO BURST (13)

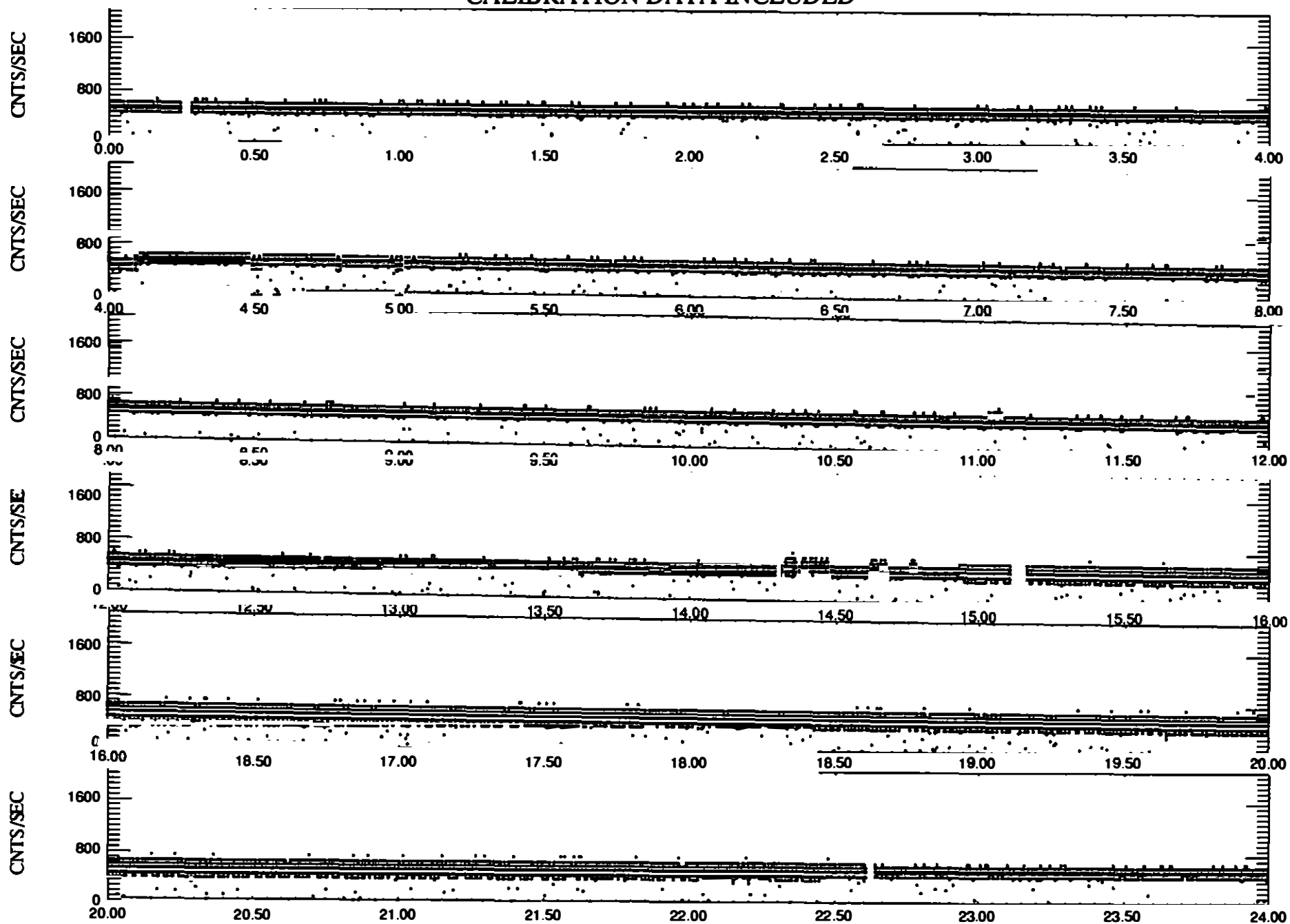


UNIVERSAL TIME



UNIVERSAL TIME

CALIBRATION DATA INCLUDED



UNIVERSAL TIME

From DEAL@fender.msfc.nasa.gov Tue Jun 4 07:31 PDT 1996
From: DEAL@fender.msfc.nasa.gov
Date: Tue, 4 Jun 1996 9:31:40 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5484

BATSEARCH PROGRAM

ND

BATSE BURST # 5484
EVENT OF 1996 JUN 2 DAY OF YEAR=154
EVENT CROSSING TIME AT BATSE : 14383. S. OR 03:59:43.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 273.000 -35.000
BATSE PEAK COUNTING RATE: 10000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 2/ 6/ 96 IS:
RA= 149.098 DEC= 53.889 DIST= 4.203 AU
BATSE-ULYSSES DISTANCE = 628825236. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 42.89 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1536.77 SECS.
CROSSING TIME AT ULYSSES IS 15920. S. OR 04:25:19 +/- 321.19 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 2/ 6/ 96 IS:
RA= 50.003 DEC= 18.158 DIST= 2.366 AU
MARS-BATSE DISTANCE = 353942976. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 41.58 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 883.15 SECS.
CROSSING TIME AT MARS IS 15266. S. OR 04:14:26 +/- 149.45 SECONDS

BATSE BURST TRIGGER

NO.: 5484

TIME: TJD=0236 SECONDS=14383

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=78.7 AZIMUTH=180.4 ERROR=.8 DEGREES

COMMENTS:

GRB LASTING ~ 25 S. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5484	960602	10236	14383	10000	273	-35	25

BATSE #

5484

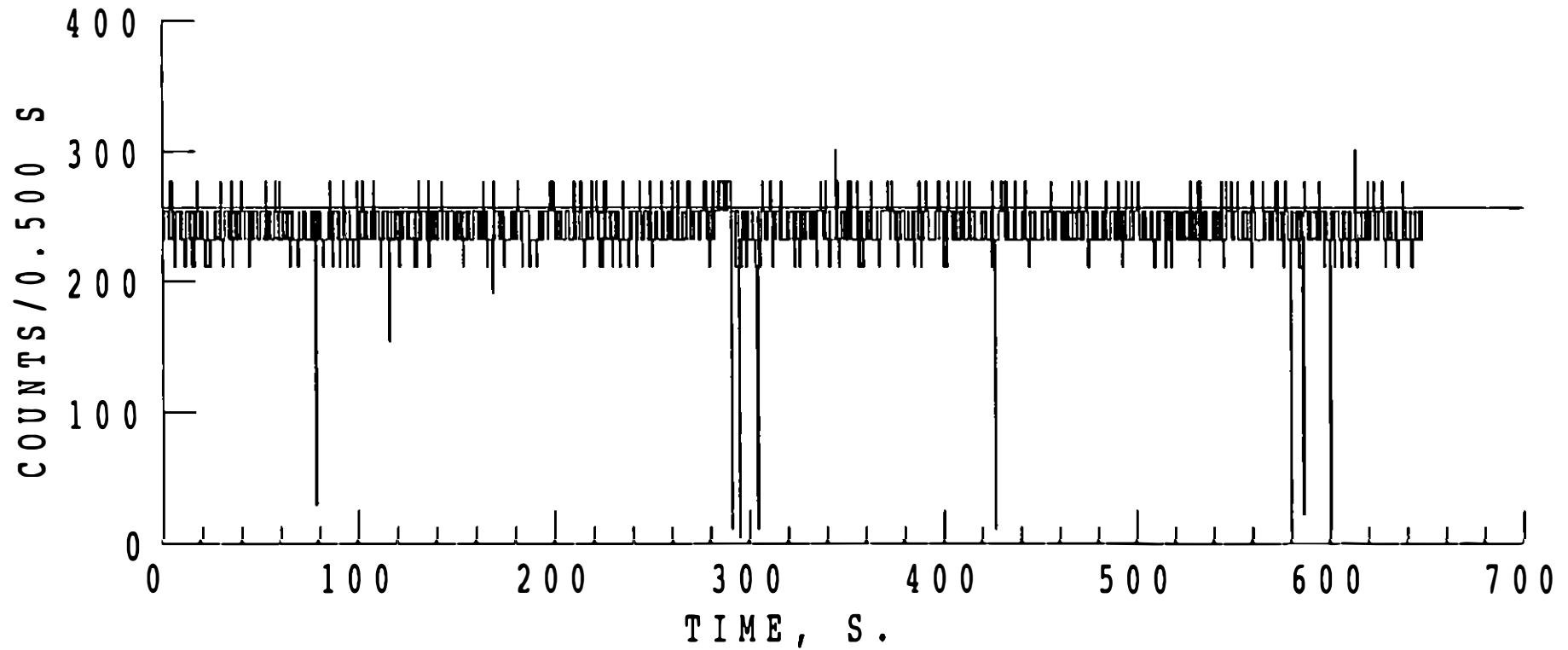
4 / 6 / 96

ULYSSES RT

2 / 6 / 96 15588.107 s

0 - 0 keV

N=10 M=2
>4.0 SIGMA FLUCTUATIONS



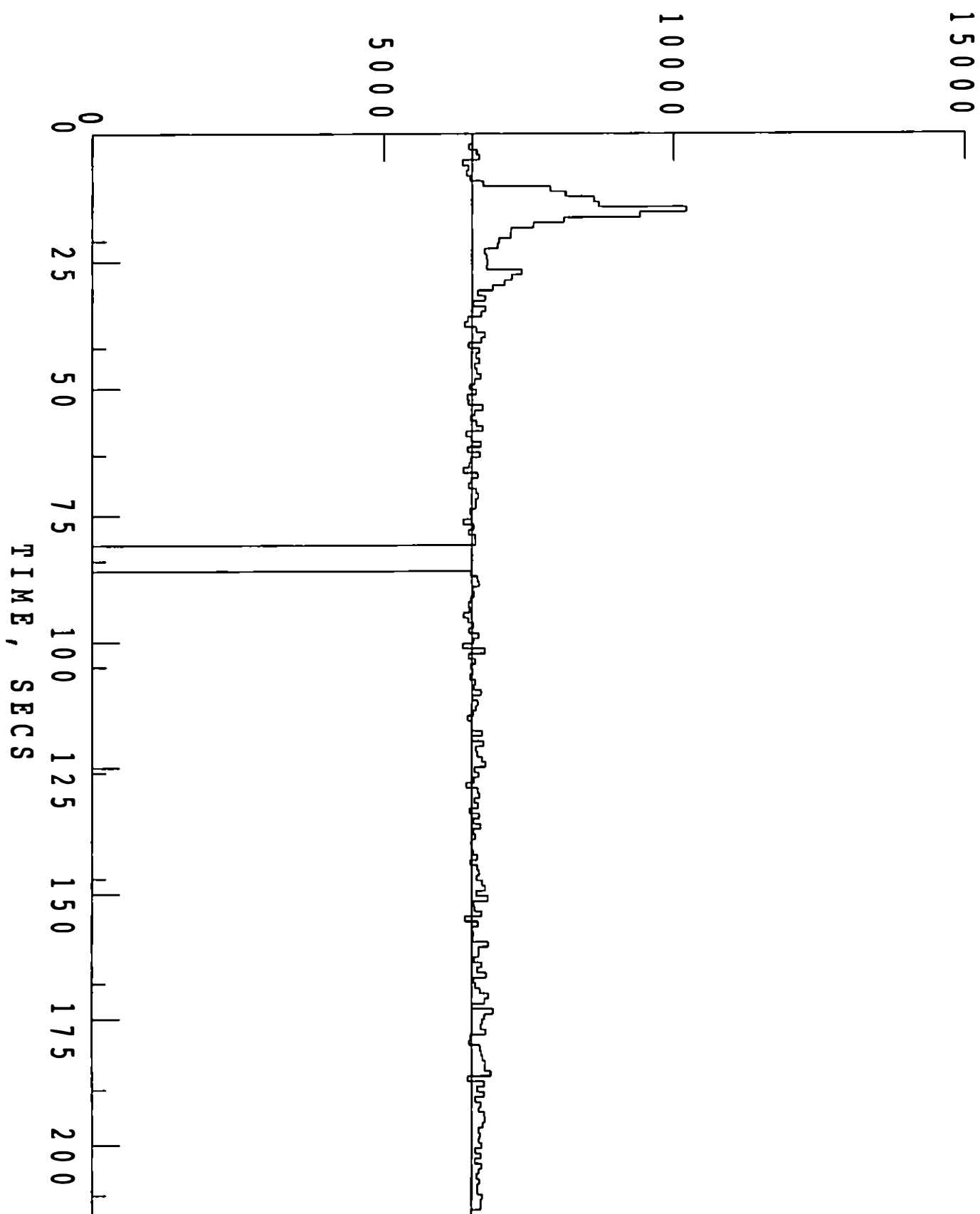
BACODINE

02/06/96

14372.553

25 - 100 keV

COUNTS/1.024 S



96	2	29	22445.141	S2	740	1520	550	0.3	0.5	8	250	Search	
96	3	5	33645.352	S1	440	390	70	>10	0.8	1.8	251	Search	
96	3	12	35074.697	S2	160	730	330	<0.25	0.2	0.1	252	Search	
96	3	19	51992.828	S1		800	970	>7	0.16	0.4	253	RI	S277
96	3	21	76321.803	S2	4600	4550	1020	0.03	42	46	254	Trig	S290
96	3	22	19642.728	S1	1060	1760	1120	40	2	28	255	Trig	S304
96	3	24	80064.124	S2	320	520	150	0.07	1	14	257	Search	
96	3	25	69892.978	S1	250	620	460	6	0.5	0.5	258	NO	S330
96	3	31	21208.784	S1	220	520	120	4.4	2	24	271	RI	S369
96	4	4	25289.264	S2	420	750	240	0.07	4	9	272	Search ± 1750	
96	4	9	77143.618	S2	650	1170	420	0.17	0.5	5	273	RI KA	S417
96	4	10	80648.201	S2	190	330	140	<0.05	1	35	274	Search ± 1750	
96	4	18	06106.854	S1	200	330	70	1	2	2	277	RI KA	S418
96	4	18	08271.303	S2	350	770	50	<0.1	3	30	278	Search KA ± 1750	
96	4	18	66796.140	S1	1160	1000	50	10	1	3	290	Trig	S436
96	4	20	17324.809	S2	300	1190	1080	1	0.3	0.04	303	Search ± 1760	
96	4	22	59981.190	S2	160	410	140	0.5	4	12	305	RI	S443
96	4	25	86395.862	S2	1300	730		<0.04	44	16	306	Search KA ± 1750	
96	4	28	47556.501	S2	270	420	230	<0.04	1	170	307	RI	S450
96	4	30	49895.524	S1	250	640	180	8	8	18	309	RI KA	S451
96	5	1	31344.546	S1	380	870	350	3.7	20	56	310	Search ± 2050	
96	5	6	47384.998	S1	160	490	190	1.1	3	6	312	Search ± 2050	
96	5	7	44869.909	S2	460	760	290	0.03	20	98	313	Search ± 2050	
96	5	10	38723.598	S2	560	1300	330	0.1	1	7	317	Trig	
96	5	19	14766.283	S2	1700	7700	8000	0.4	0.1	0.56	319	Search ± 2050	
96	5	21	62489.430	S1	330	500	90	5.8	1	8	320	Search ± 2050	
96	5	23	59522.013	S1	270	550	580	10	1	3	321	RI	S470
96	5	29	43663.061	S2	1700	4000	5000	0.15	0.5	3.5	322	Trig	S477
96	5	29	80722.705	S2	420	620	140	0.1	1	14	323	Trig KA	
96	5	30	62300.750	S1	180	400	110	>20	2	14	324	Search ± 2050	
96	5	31	06926.043	S1	300	440	120	4.7	50	7	325	Search ± 2050	
96	5	31	73498.259	S2	1600	4250	2800	0.5	27	19	326	Trig	
96	6	2	42664.032	S1	1000	1450	1400	>2	0.3	0.03	327	Search ± 2100	NO
96	6	5	29392.672	S1	400	950	410	1.3	2	87	328	RI	S486
96	6	7	78106.176	S2	890	1280	550	0.04	32	120	329	RI	S489
96	6	10	84502.254	S2	200	1000	1500	0.9	0.16	0.11	330	Search ± 2100	
96	6	12	71198.677	S1	650	2800	2700	1.4	0.5	18	331	Trig	
96	6	14	67654.516	S1	80	1800	1600	1	0.18	0.1	332	Search ± 2100	
96	6	17	76195.941	S1	350	560		>8	1	0.6	333	NO	S504
96	6	22	74906.054	S2	100	360	280	0.2	4	8	334	Search ± 2100	
96	6	23	04734.229	S2	130	320	150	0.5	7	25	335	RI KA	S512
96	6	23	77186.871	S2	250	350	130	0.05	6	15	336	Search ± 2100	
96	6	25	16949.252	S1	180	280	70	4.6	6	9	337	RI	S518
96	6	28	19224.223	S2	500	410	120	0.06	12	6	338	RI	S523
96	7	2	54698.284	S1	280	350	70	2.8	23	85	339	RI	S525
96	7	3	65443.861	S1	200	560	600	3	1	0.4	340	NO	S527
96	7	7	36999.311	S2	1600	1200		0.06	2	5	341	RI	S530
96	7	8	72577.095	S2	900	820	160	0.2	1	6	342	Search ± 2300	
96	7	9	00246.641	S1	260	1000	400	0.95	15	4	343	Trig KA	
96	7	10	00662.014	S2	1800	4700	3600	0.13	0.5	48	345	Trig	
96	7	11	63757.543	S1	560	2400	900	1.25	0.5	19	346	Trig	
96	7	11	68451.869	S2	200	360	170	<0.07	2	41	347	Search ± 2300	
96	7	22	25522.448	S2	360	650	170	0.27	17	151	348	RI	S548
96	7	22	56346.728	S1	700	1000	200	2.6	3	6	349	Search ± 2300	
96	7	27	43056.737	S2	500	1000	500	0.7	0.5	15	350	Search ± 2300	
96	7	31	20761.638	S2	800	1160	170	0.9	0.5	4	353	RI	S557
96	8	3	67525.033	S1	4000	8000	3000	3	0.02	0.18	354	Trig KA	S561
96	8	4	84535.906	S2	2000	2600	600	<0.03	0.5	2	355	Trig KA	S563
96	8	5	78957.888	S2	1270	2360	380	0.05	1	20	356	Trig	
96	8	6	80989.772	S2	420	850	250	1	86	10	357	RI	S566

KONUS 20

25 / 11 / 96

ULYSSES RT

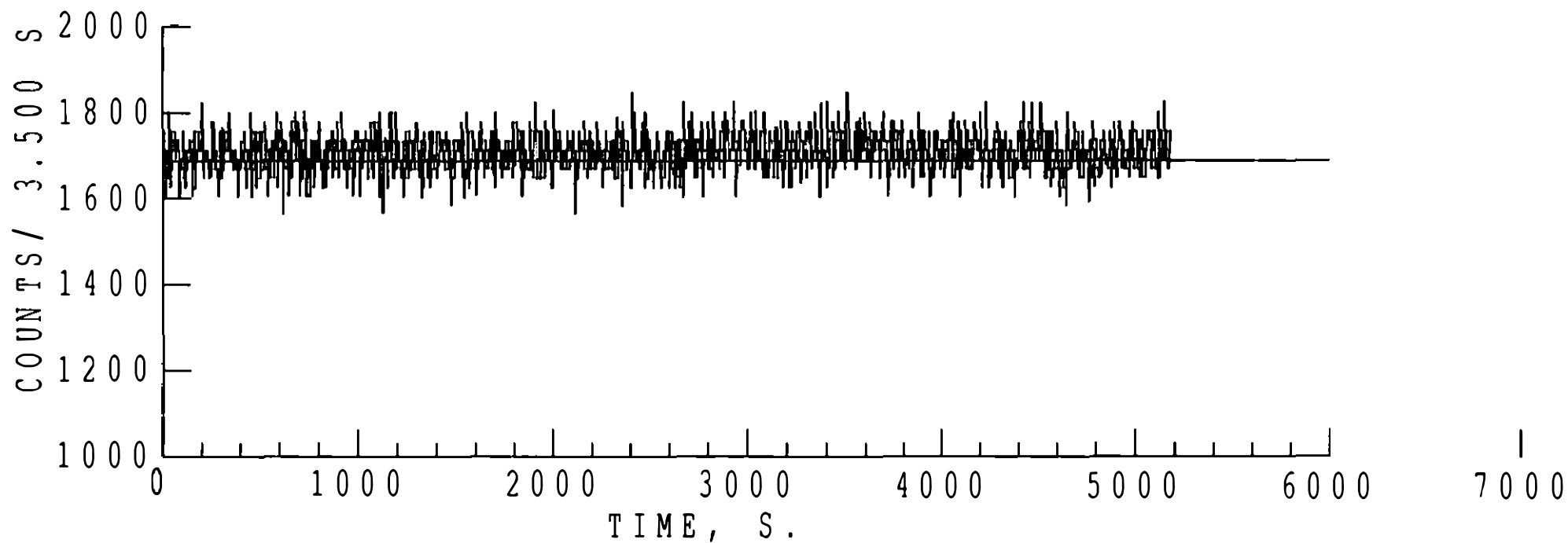
2 / 6 / 96 40068.438 s

0.500 S INTERVALS REGROUPED BY 7

0 - 0 keV

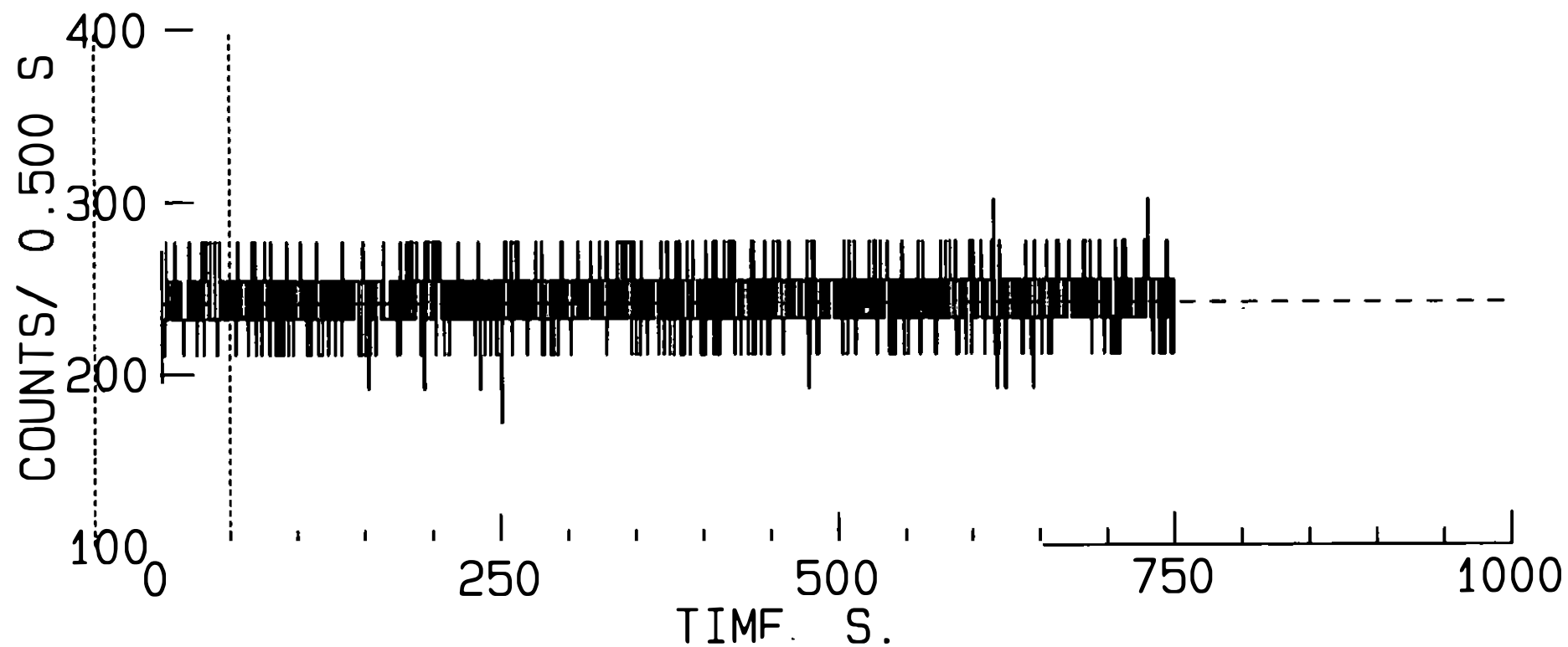
N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



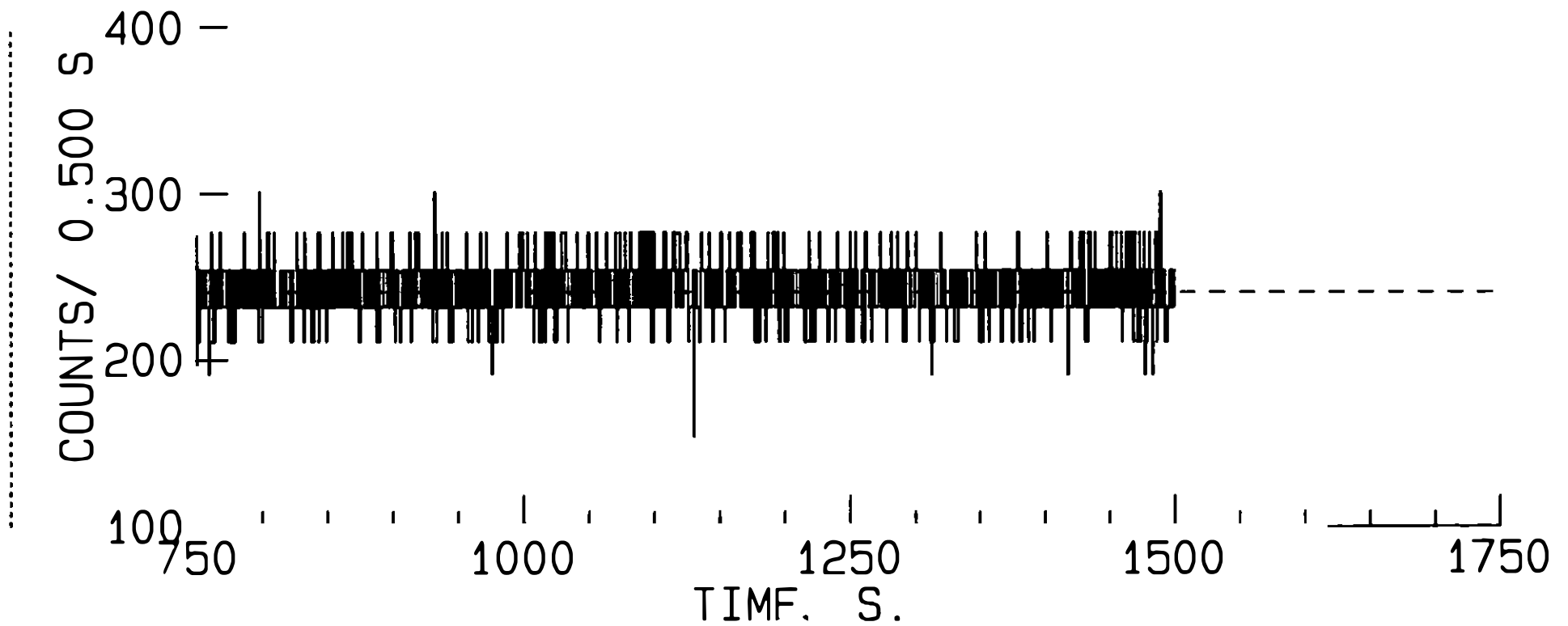
ULYSSES RT
2/ 6/96 40068.438 s
21- 144 keV

13/ 8/ 8



ULYSSES RT
2/ 6/96 40068.438 s
21- 144 keV

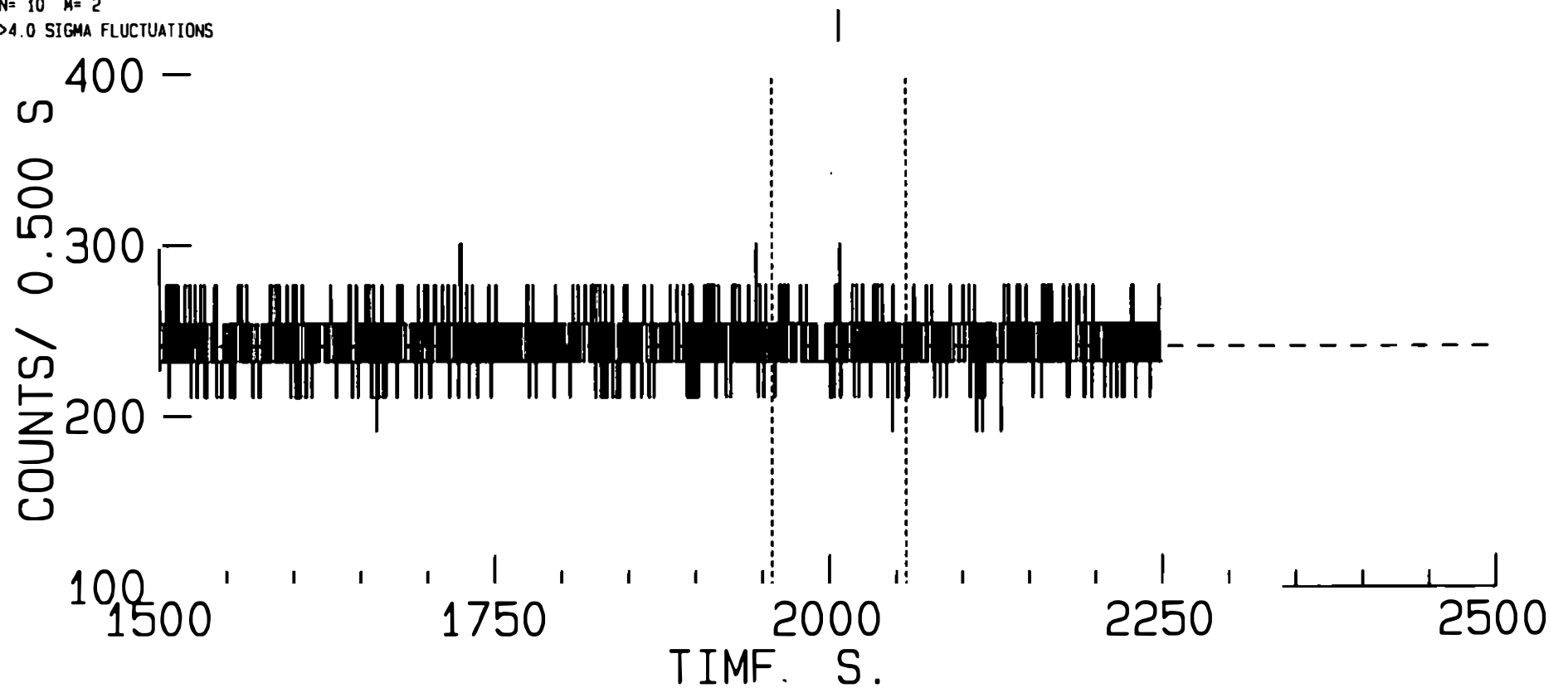
13/ 8/ 8



ULYSSES RT
2/ 6/96 40068.438 s
21- 144 keV

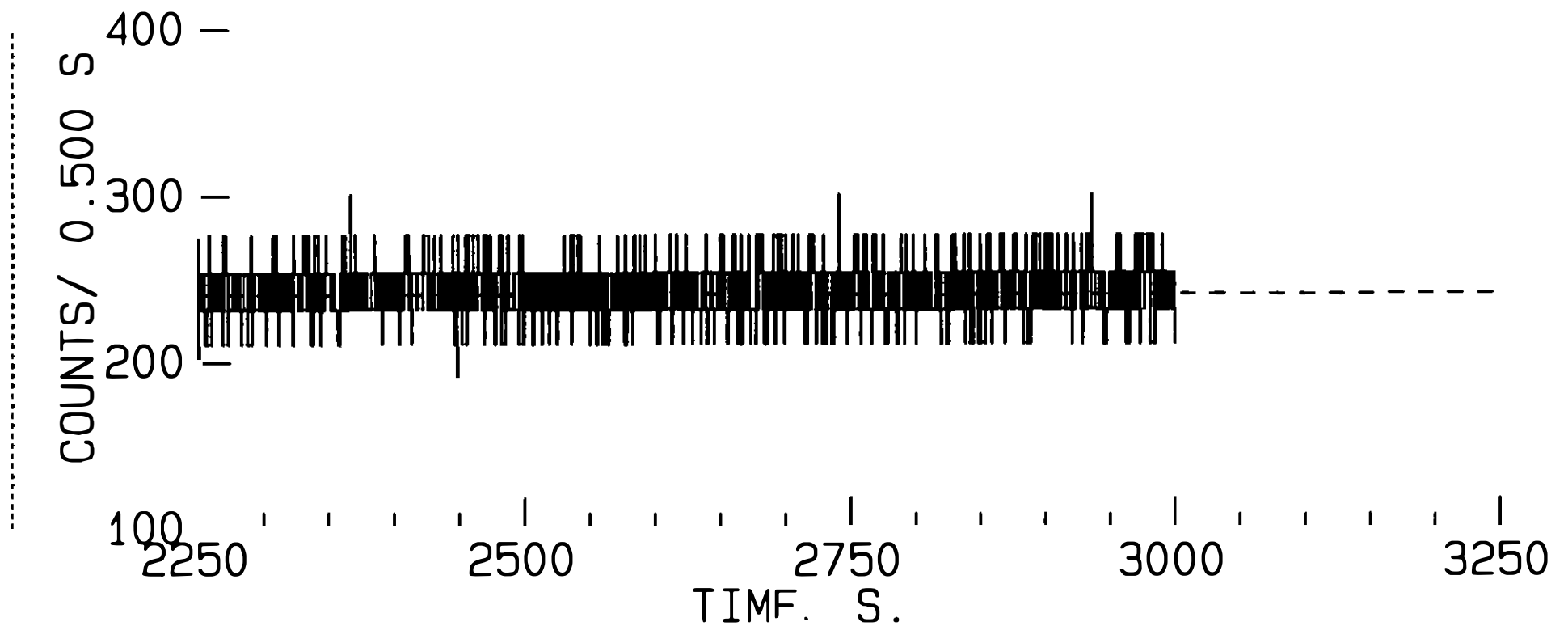
13/ 8/ 8

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



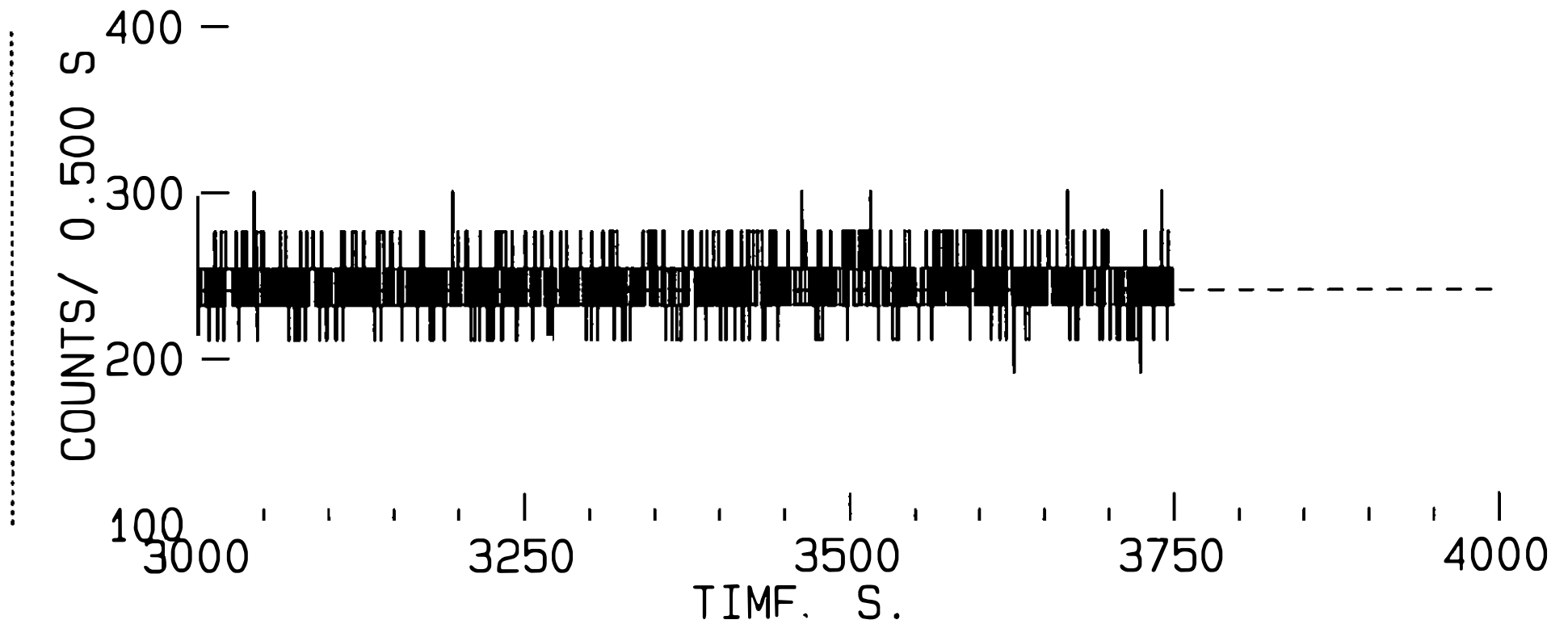
ULYSSES RT
2/ 6/96 40068.438 s
21- 144 keV

13/ 8/ 8



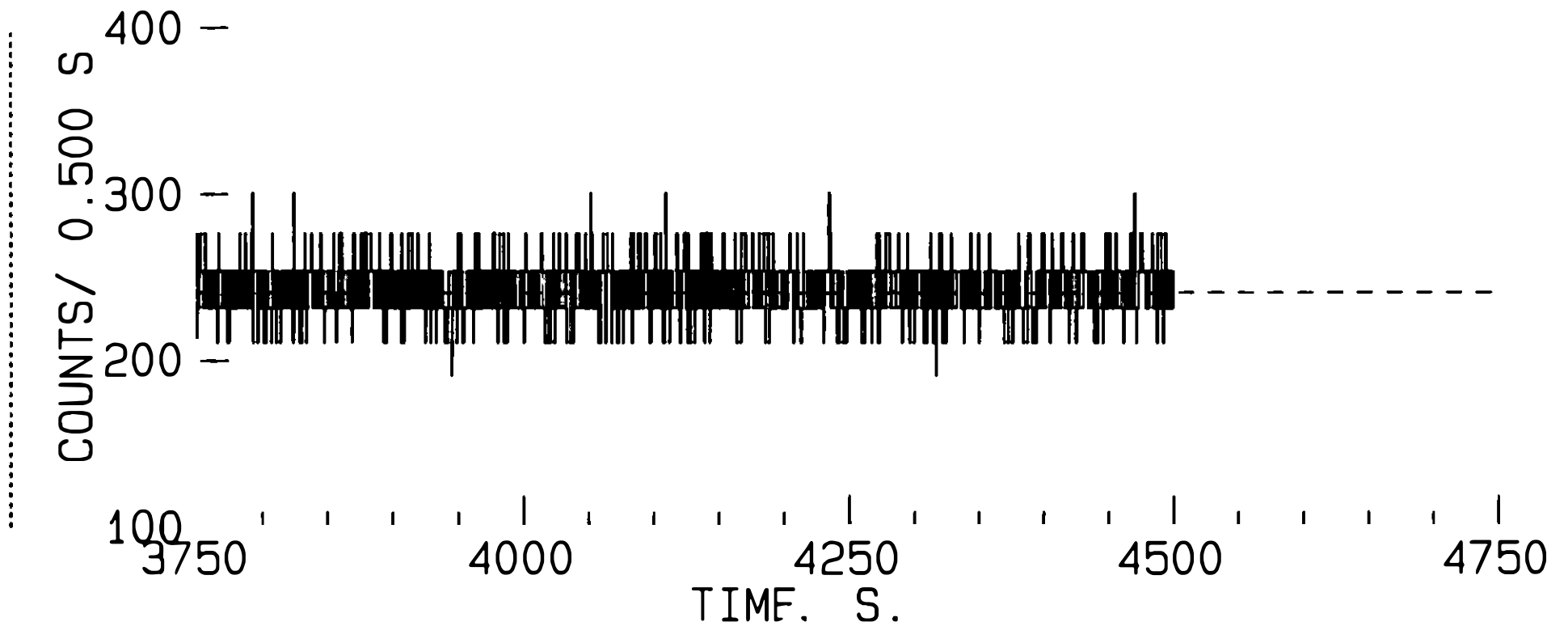
ULYSSES RT
2/ 6/96 40068.438 s
21- 144 keV

13/ 8/ 8



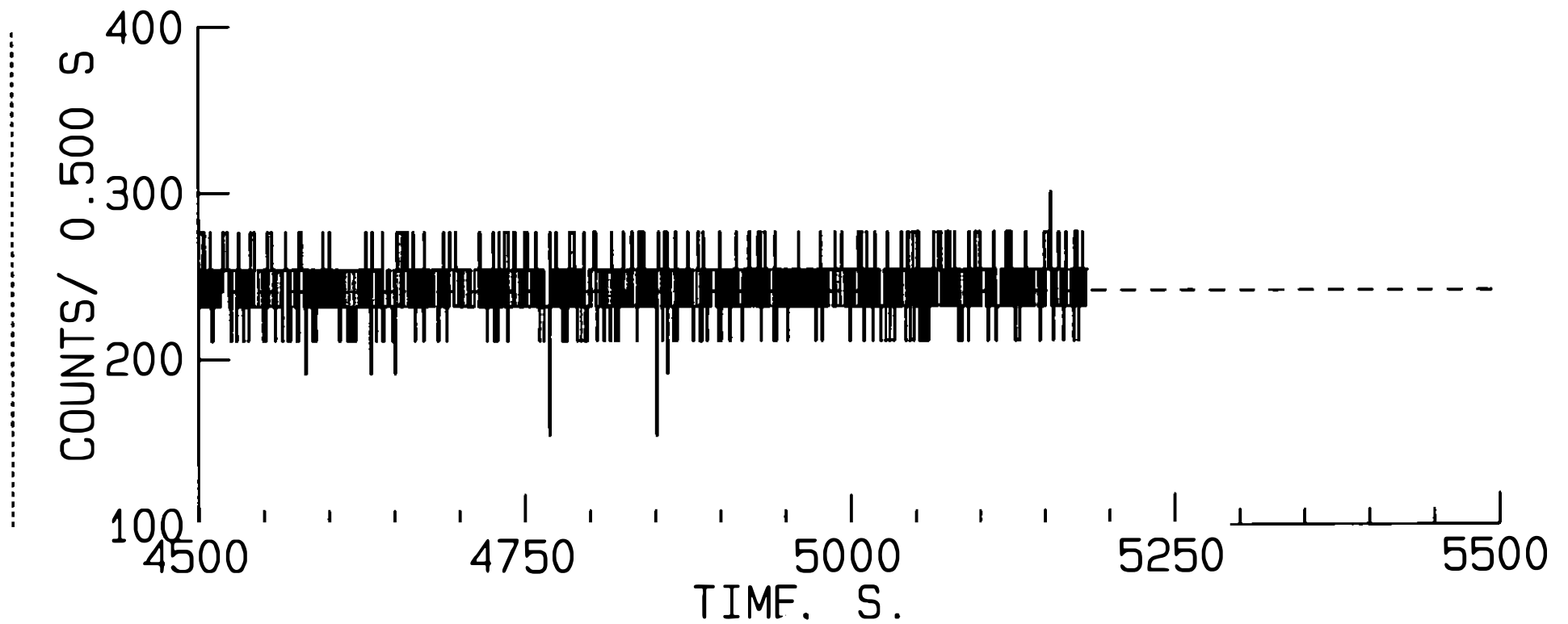
ULYSSES RT
2/ 6/96 40068.438 s
21- 144 keV

13/ 8/ 8

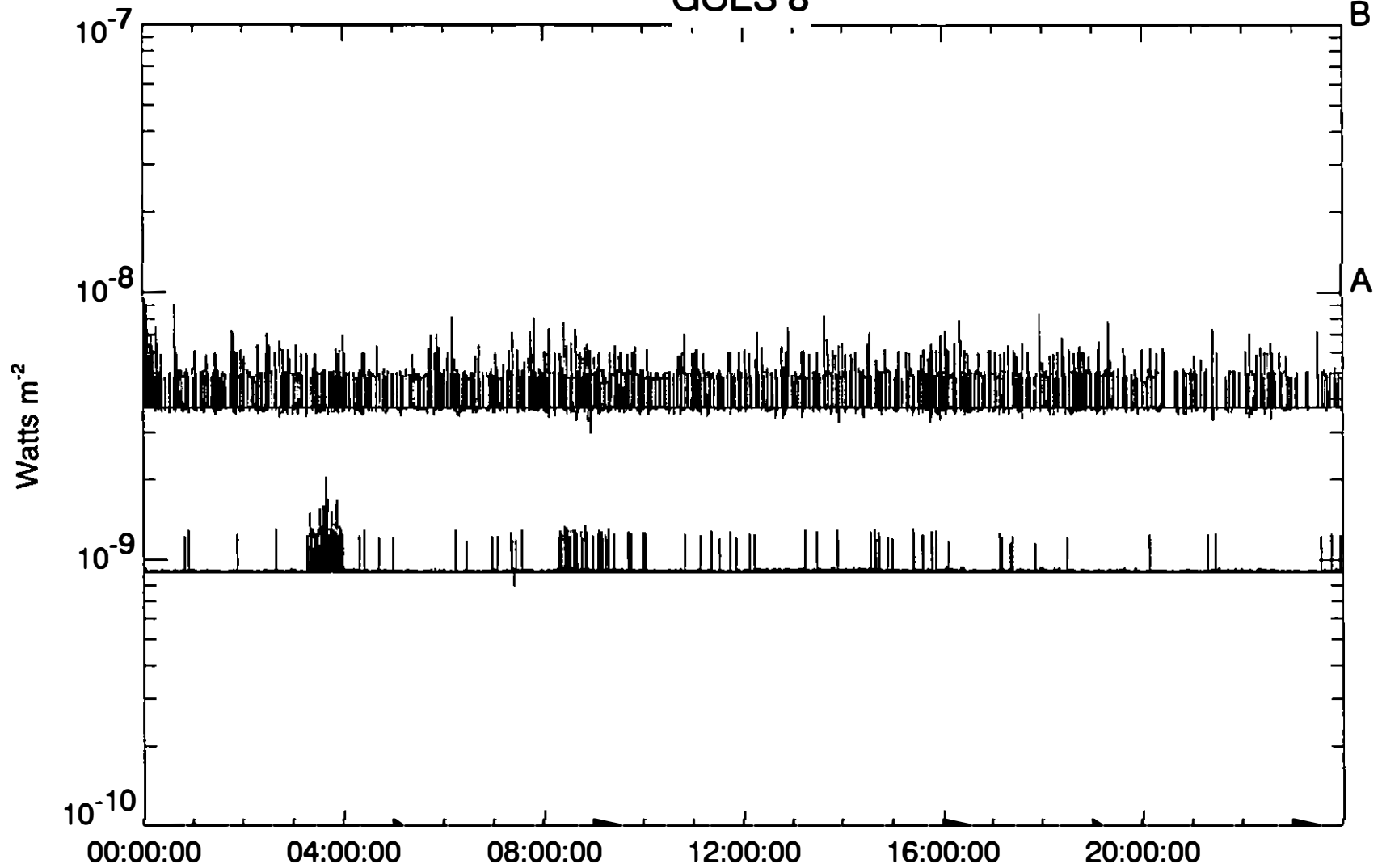


ULYSSES RT
2/ 6/96 40068.438 s
21- 144 keV

13/ 8/ 8



GOES 8

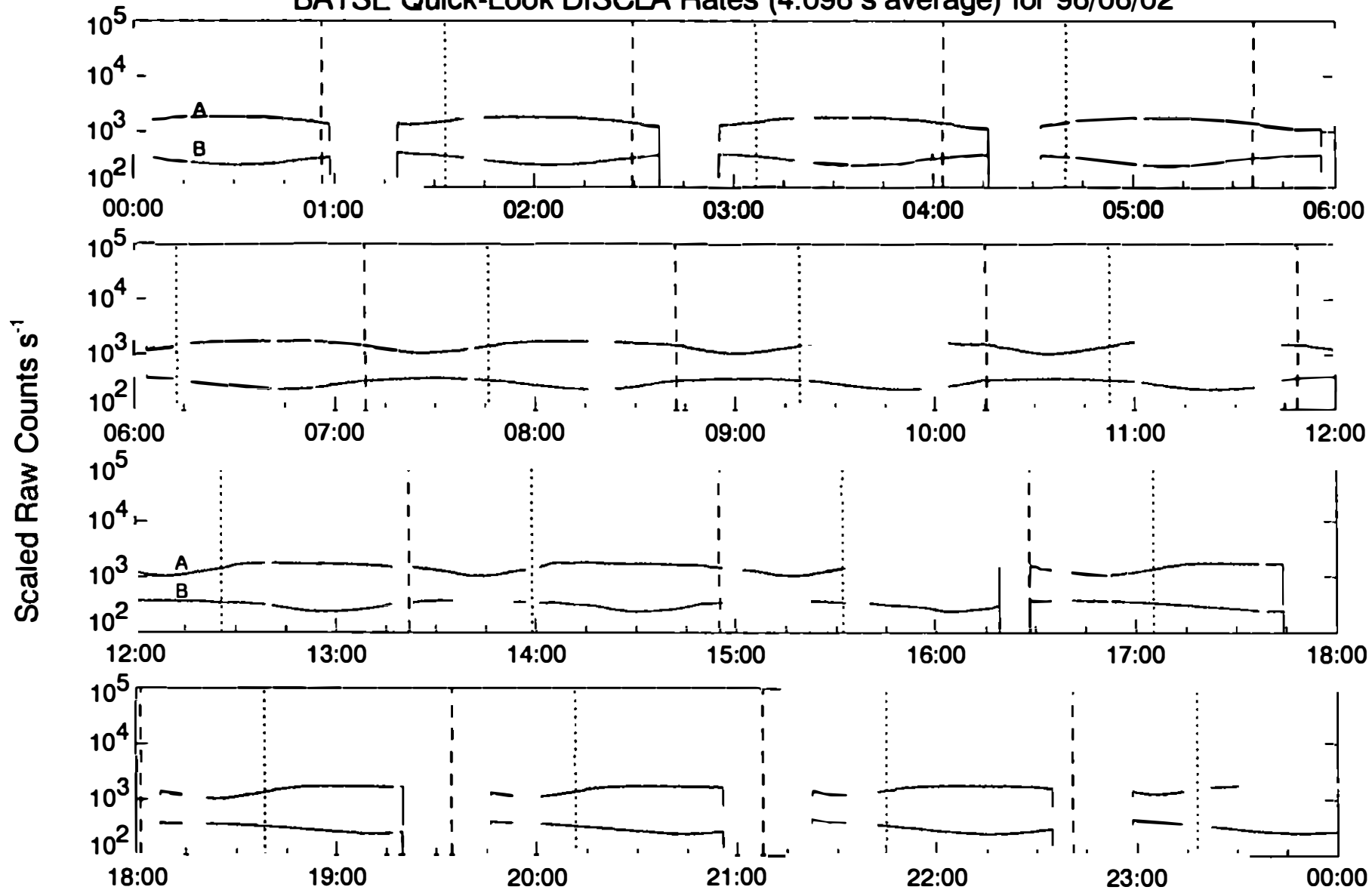


Data Start: 96/06/02, 0000:00

Plot created: 96/06/04, 1003

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

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/02

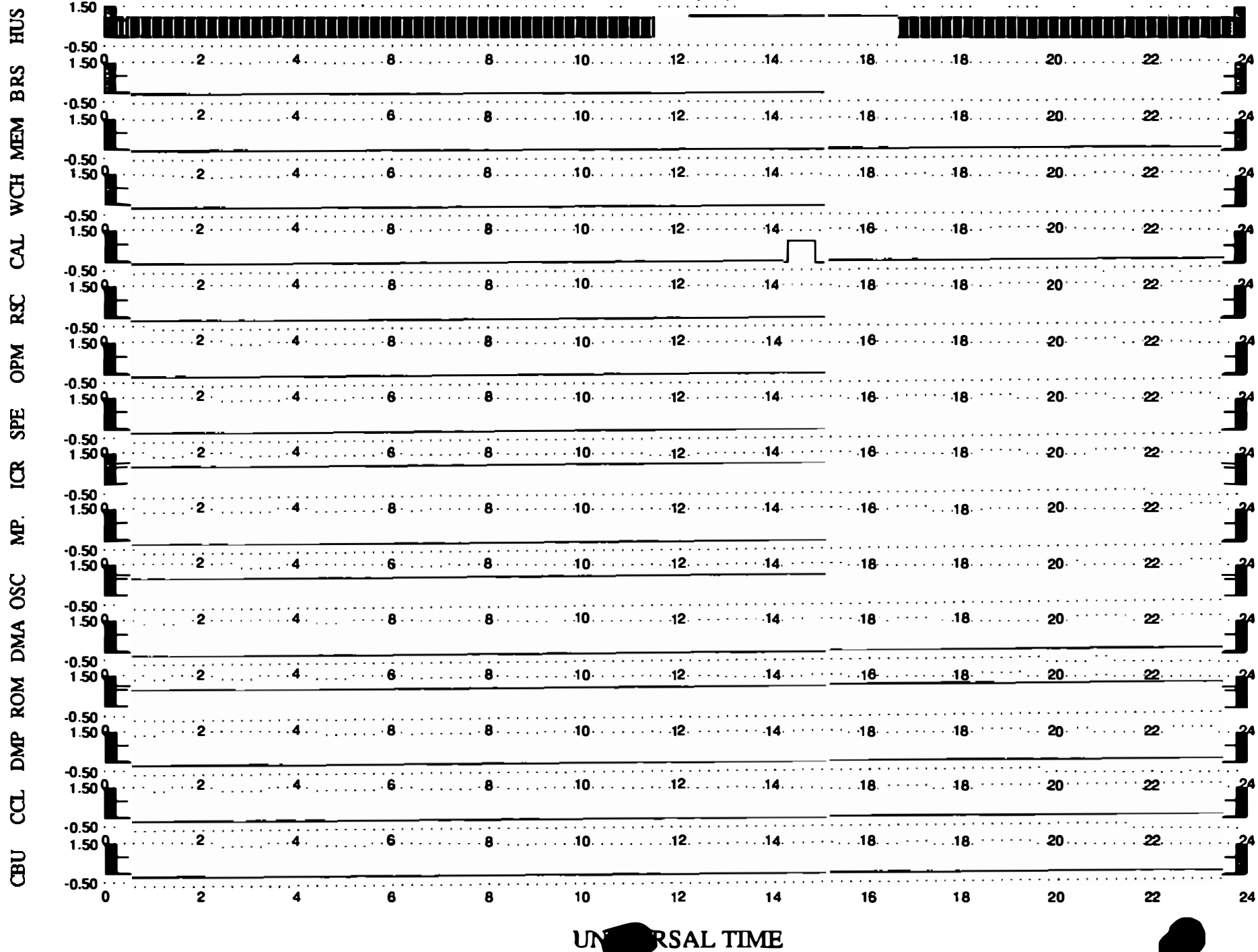


Current Time: 96/06/04, 1004 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

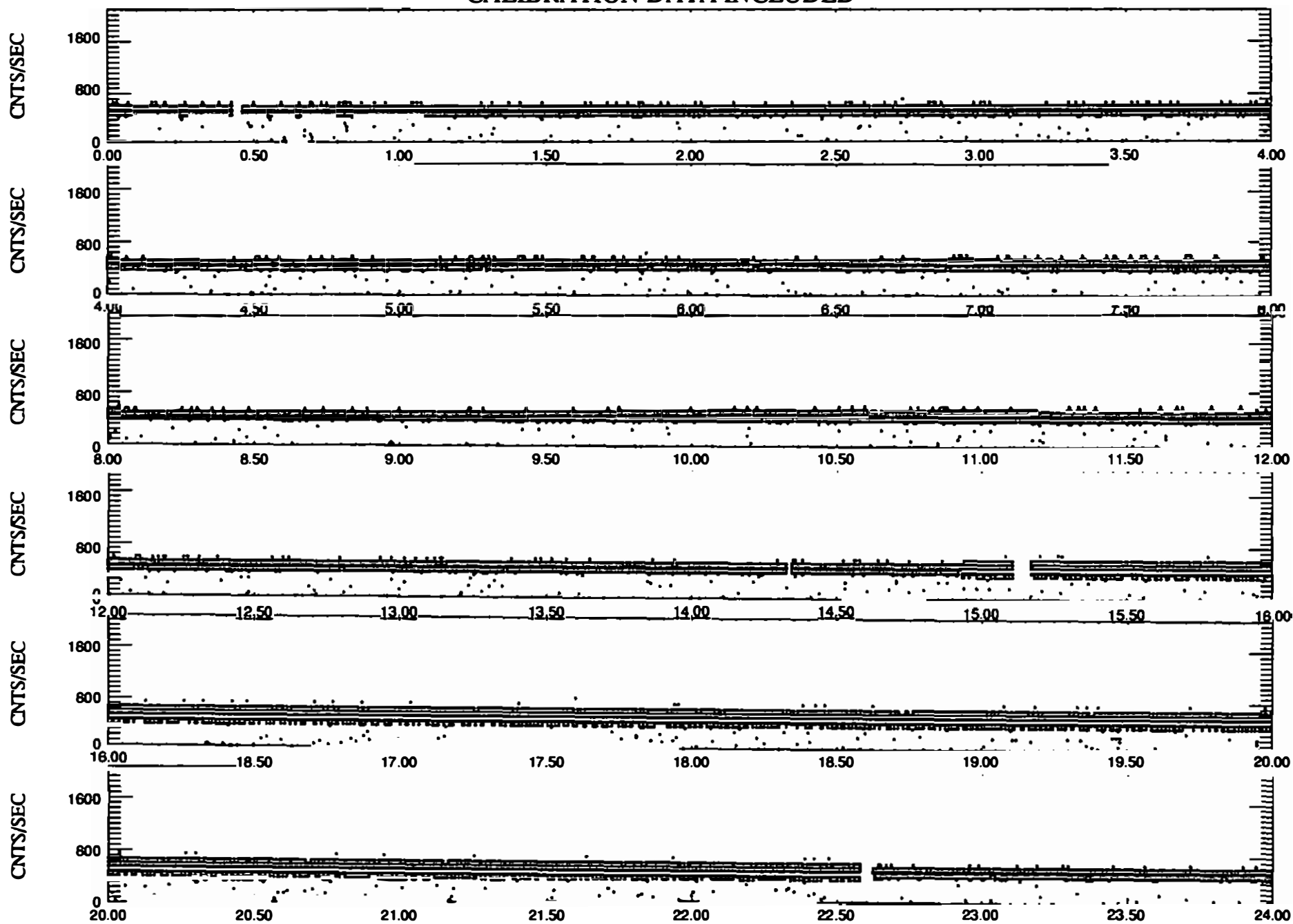
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

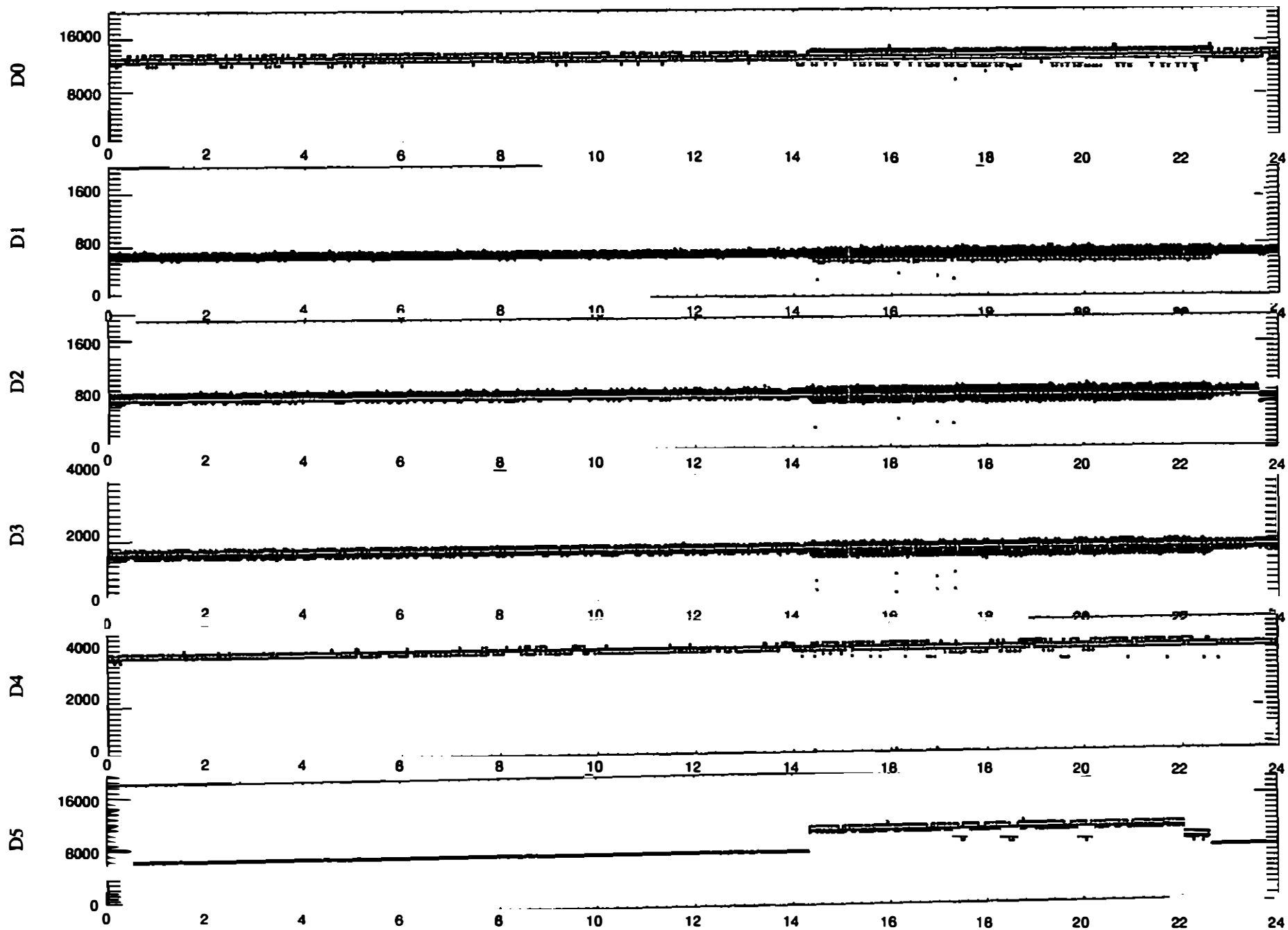
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

KONUS

ULYSSES RT

29 / 01 / 00

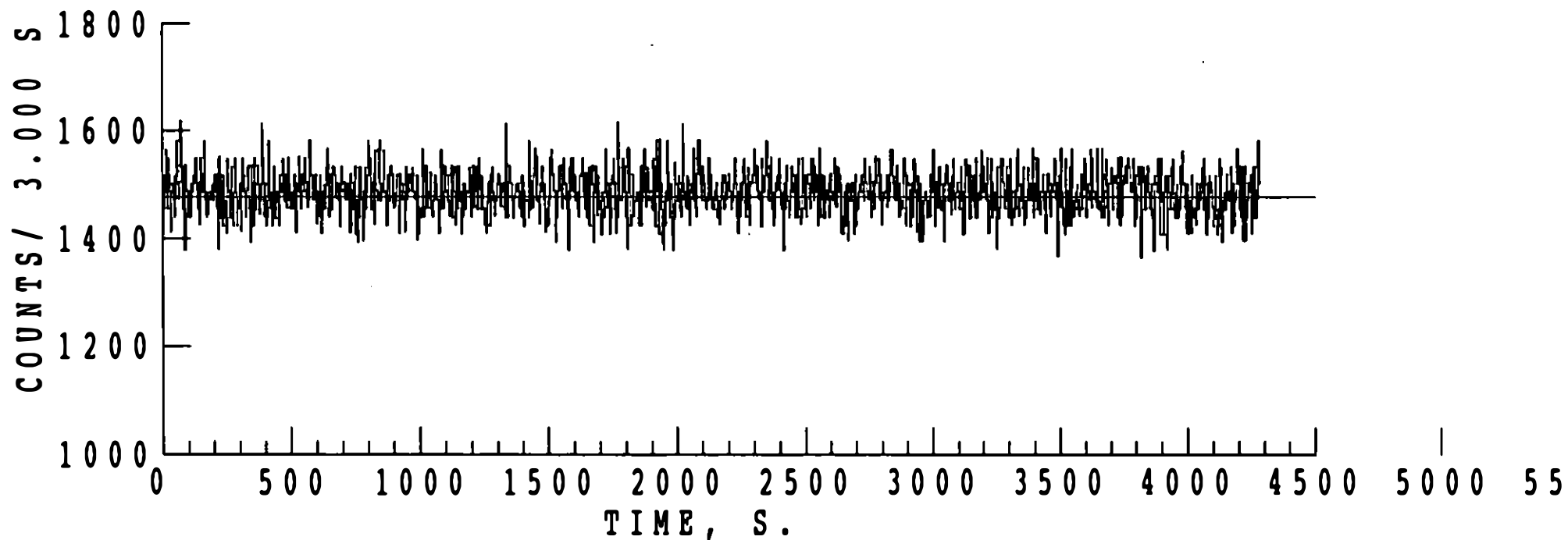
03/06/96 58788.090 s

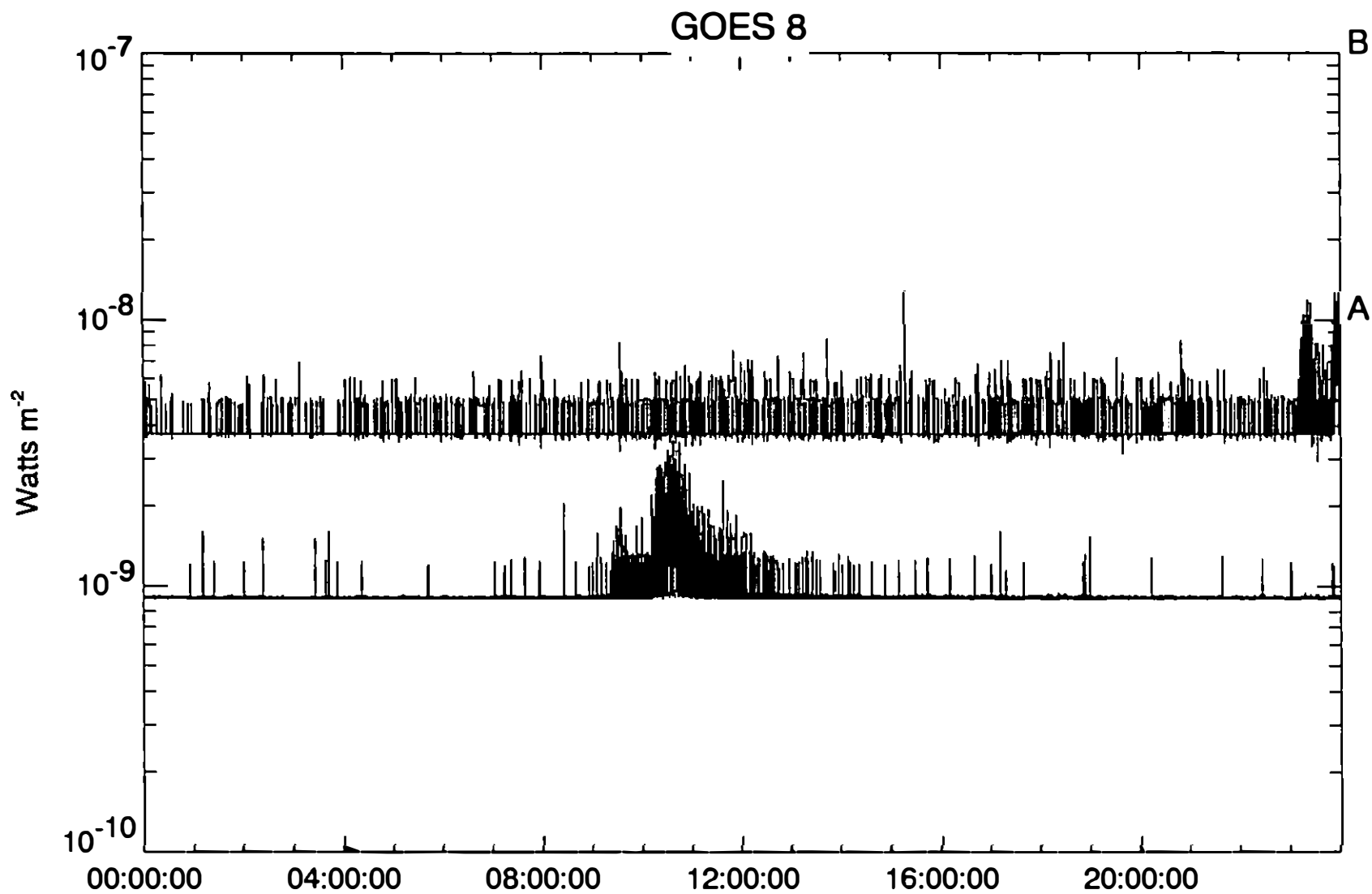
0.250 S INTERVALS REGROUPED BY 12

0 - 0 keV

B= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

B= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





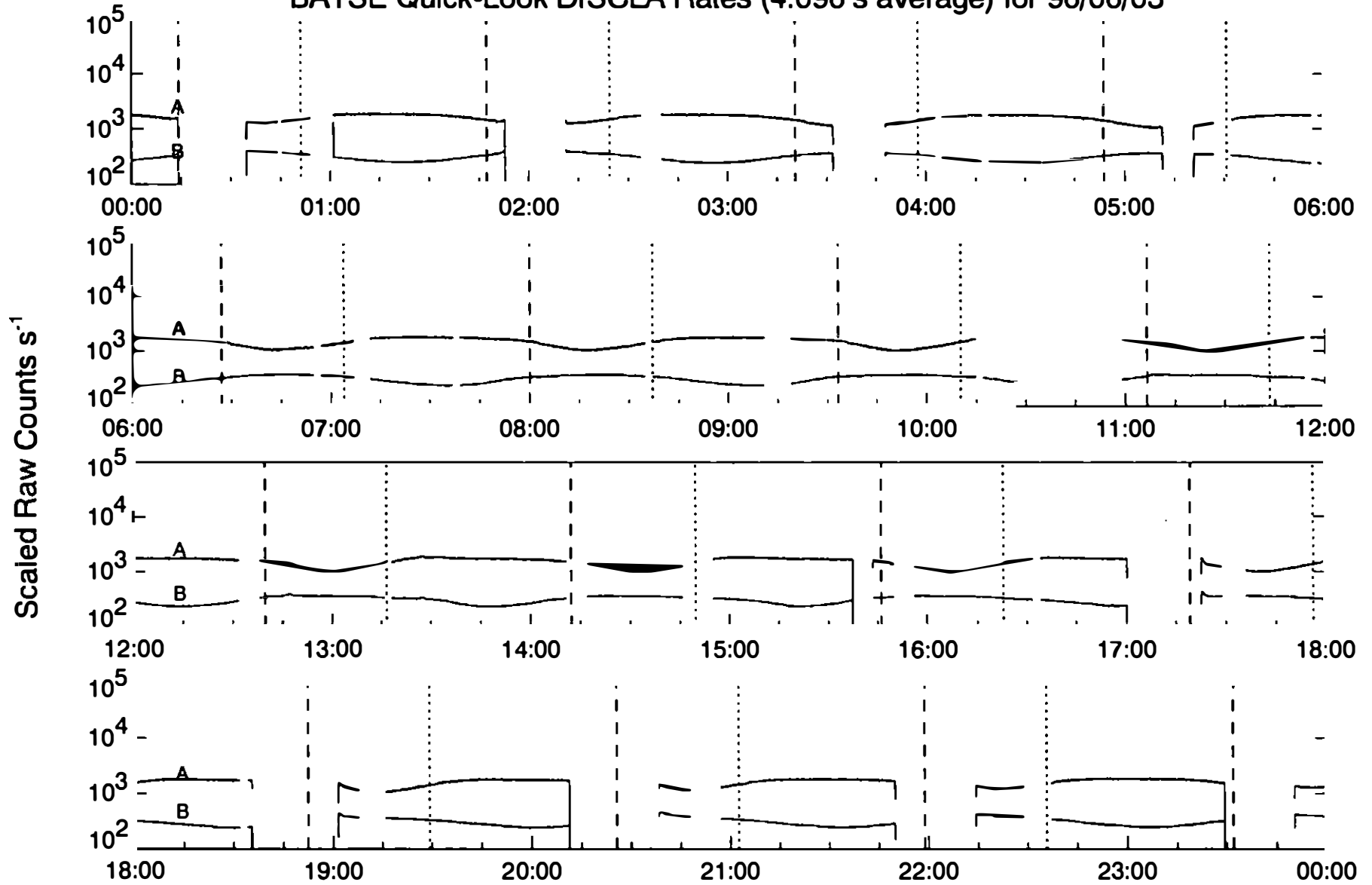
Data Start: 96/06/03, 0000:00

Plot created: 96/06/05, 1003

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/03



Current Time: 96/06/05, 1004 EDT

A: Channel 0 Most Sunward LAD

B: Sum Channel 0 Anti-Sunward LADs X .05

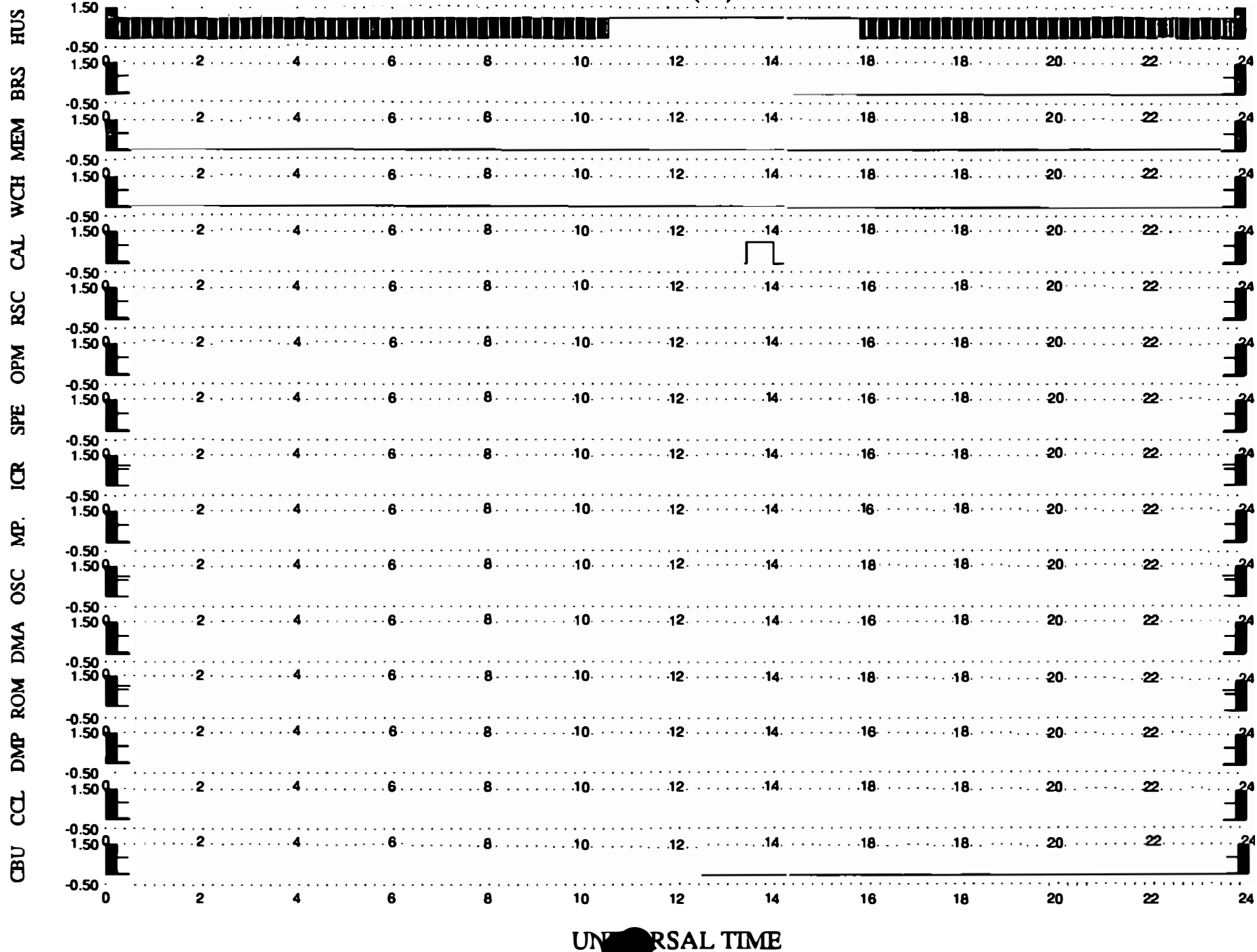
Dotted line: Day entry

Dashed line: Night entry

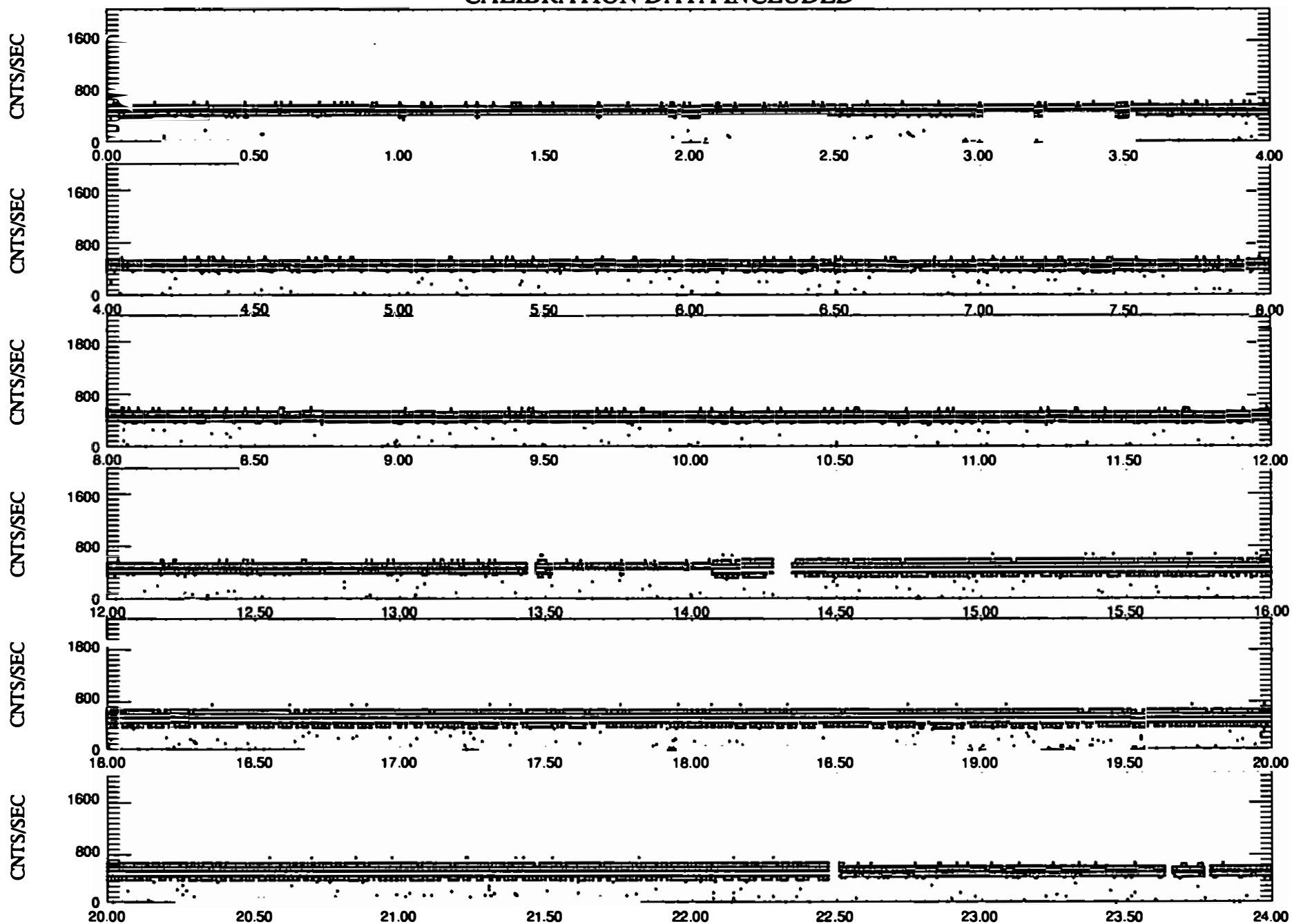
* Solar Burst Trigger

+ Solar Flare

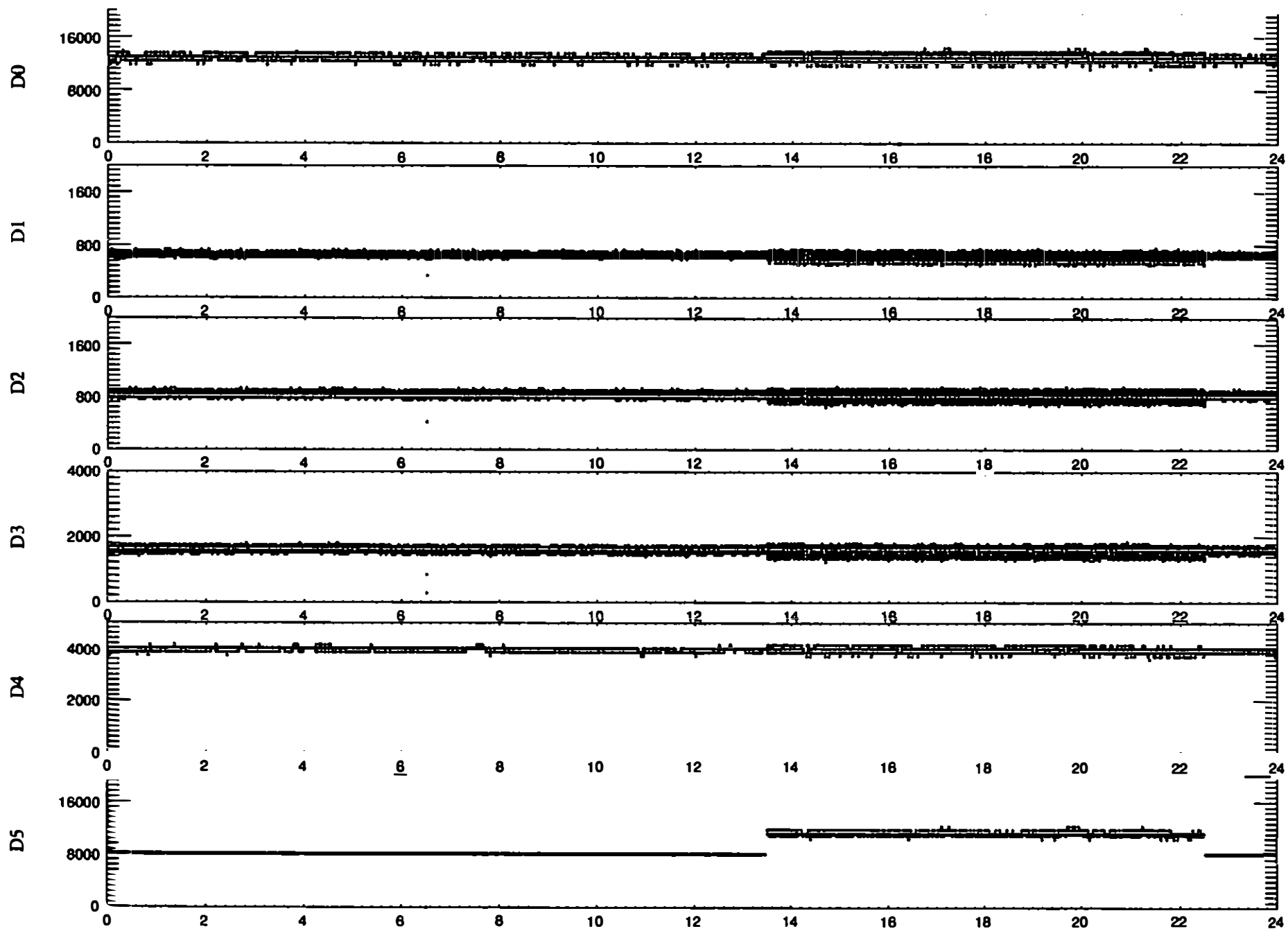
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From HAGEDON@fender.msfc.nasa.gov Wed Jun 5 09:21 PDT 1996
From: HAGEDON@fender.msfc.nasa.gov
Date: Wed, 5 Jun 1996 11:21:07 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5485

BATSEARCH PROGRAM

No

BATSE BURST # 5485
EVENT OF 1996 JUN 4 DAY OF YEAR=156
EVENT CROSSING TIME AT BATSE : 73668. S. OR 20:27:48.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 314.000 -27.000
BATSE PEAK COUNTING RATE: 1700 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 4/ 6/ 96 IS:
RA= 149.434 DEC= 53.218 DIST= 4.246 AU
BATSE-ULYSSES DISTANCE = 635143719. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 28.61 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1859.89 SECS.
CROSSING TIME AT ULYSSES IS 75528. S. OR 20:58:47 +/- 254.39 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 4/ 6/ 96 IS:
RA= 51.475 DEC= 18.544 DIST= 2.364 AU
MARS-BATSE DISTANCE = 353645920. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 75.27 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 299.96 SECS.
CROSSING TIME AT MARS IS 73968. S. OR 20:32:47 +/- 202.63 SECONDS

BATSE BURST TRIGGER

NO.: 5485

TIME: TJD=0238 SECONDS=73668

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=77.2 AZIMUTH=143.7 ERROR=13.9 DEGREES

COMMENTS:

VERY WEAK SINGLE PULSE WITH SOME SUBSTRUCTURE. DUR.~5 SEC.
NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5485	960604	10238	73668	1700	314	-27	5

BATSE #

5485

5 / 6 / 96

ULYSSES RT

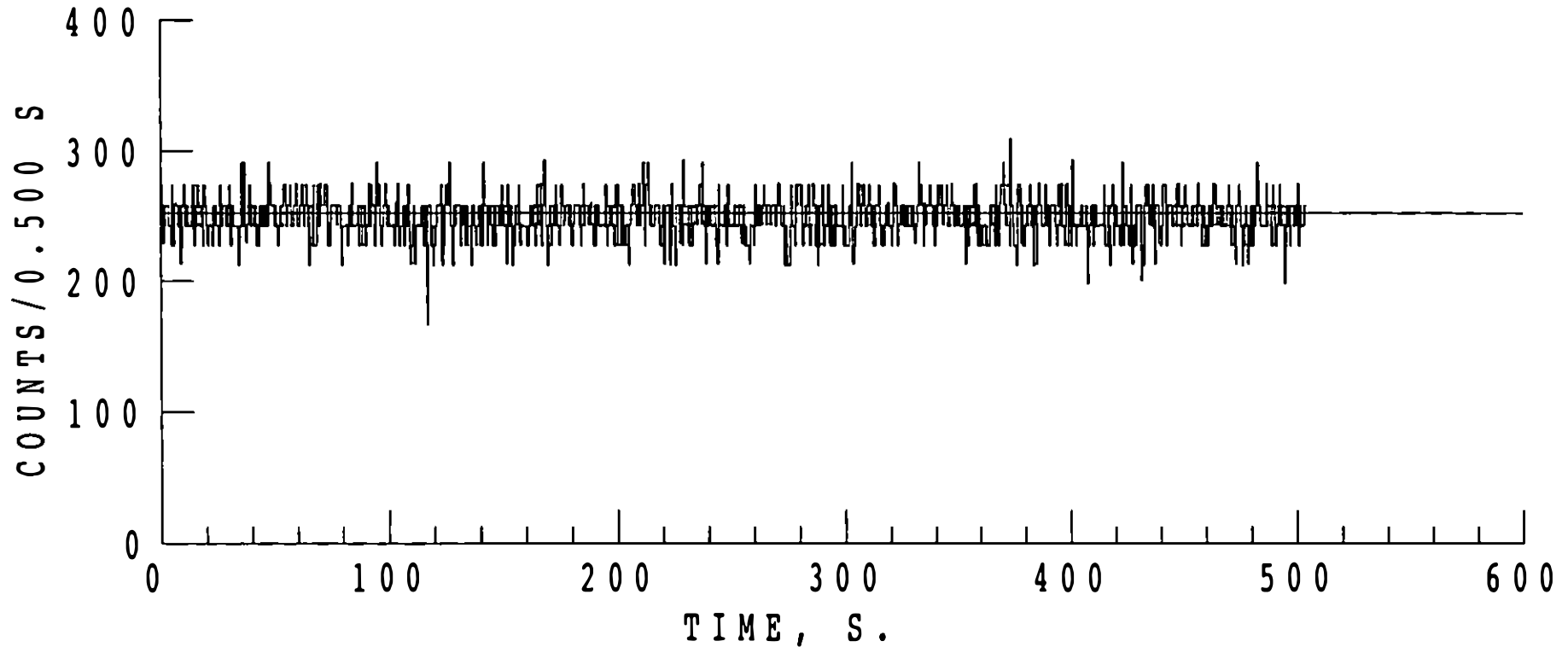
4 / 6 / 96 75276.156 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N=10 M=2

>4.0 SIGMA FLUCTUATIONS



BACODINE

04/06/96

73656.009

25 - 100 keV

COUNTS/1.024 S

7500

5000

2500

0

Pushback 1744-28

24

49

74

99

124

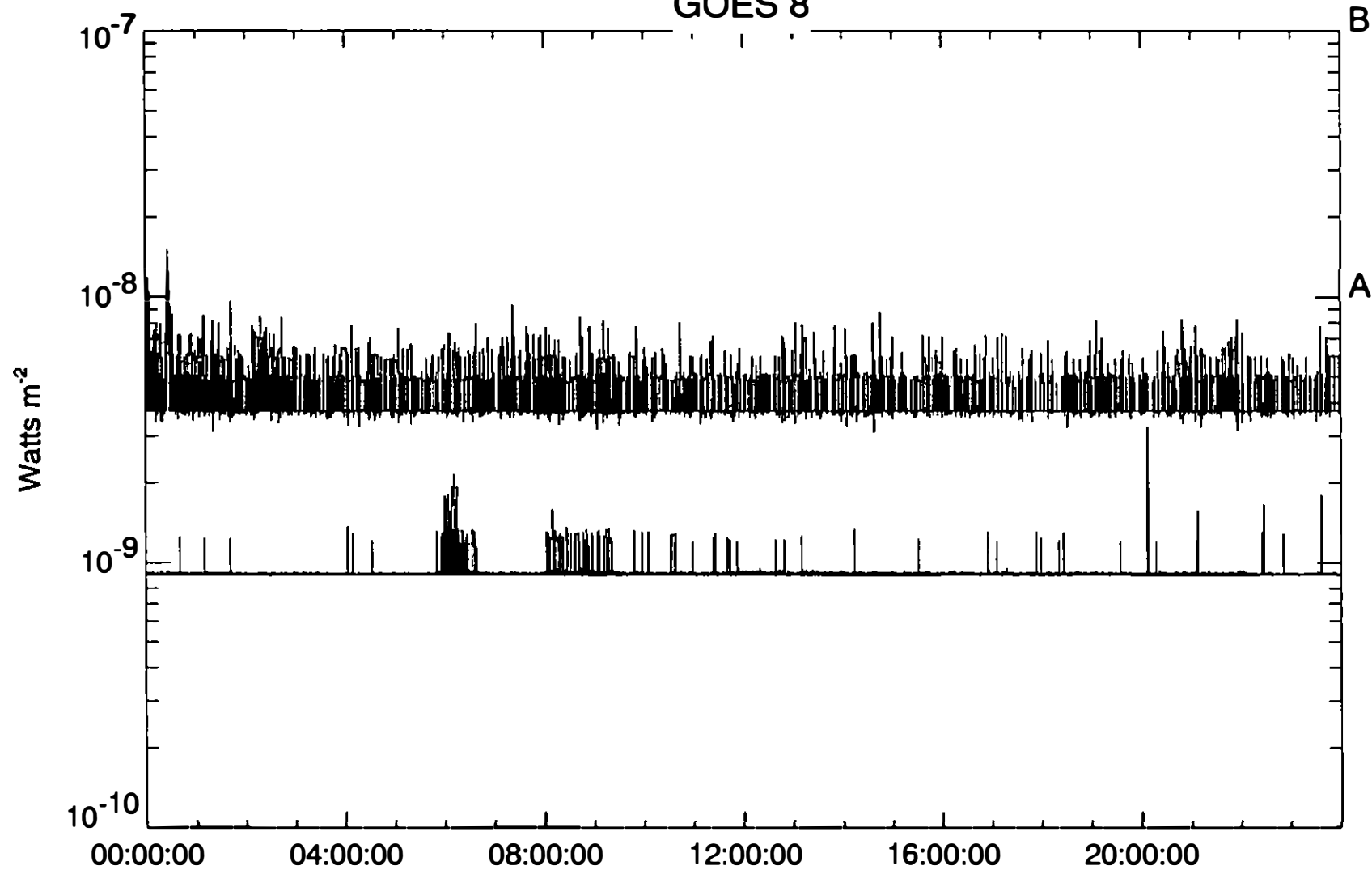
149

174

199

TIME, SECS

GOES 8

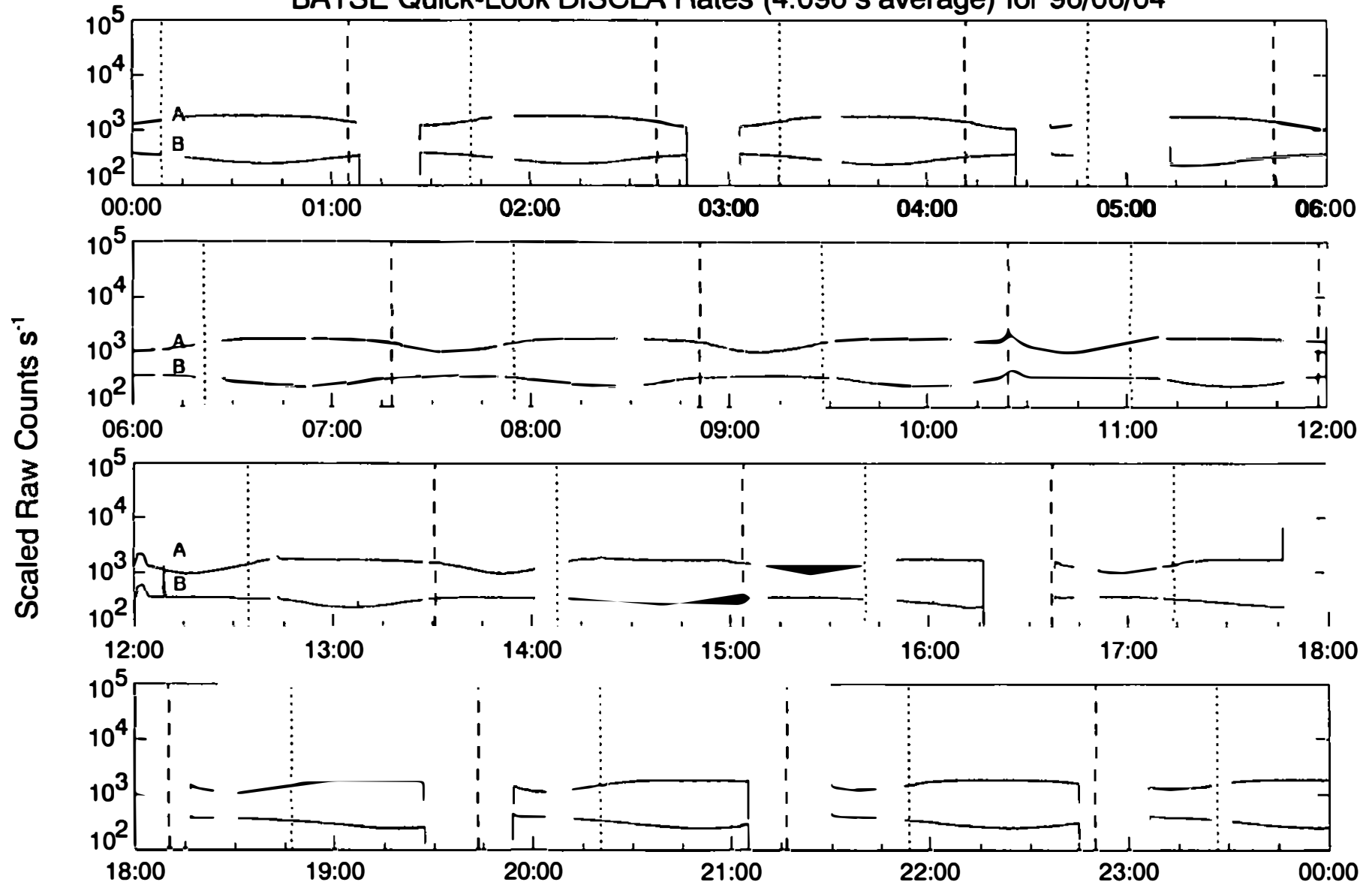


Data Start: 96/06/04, 0000:00

Plot created: 96/06/06, 1004

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

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/04

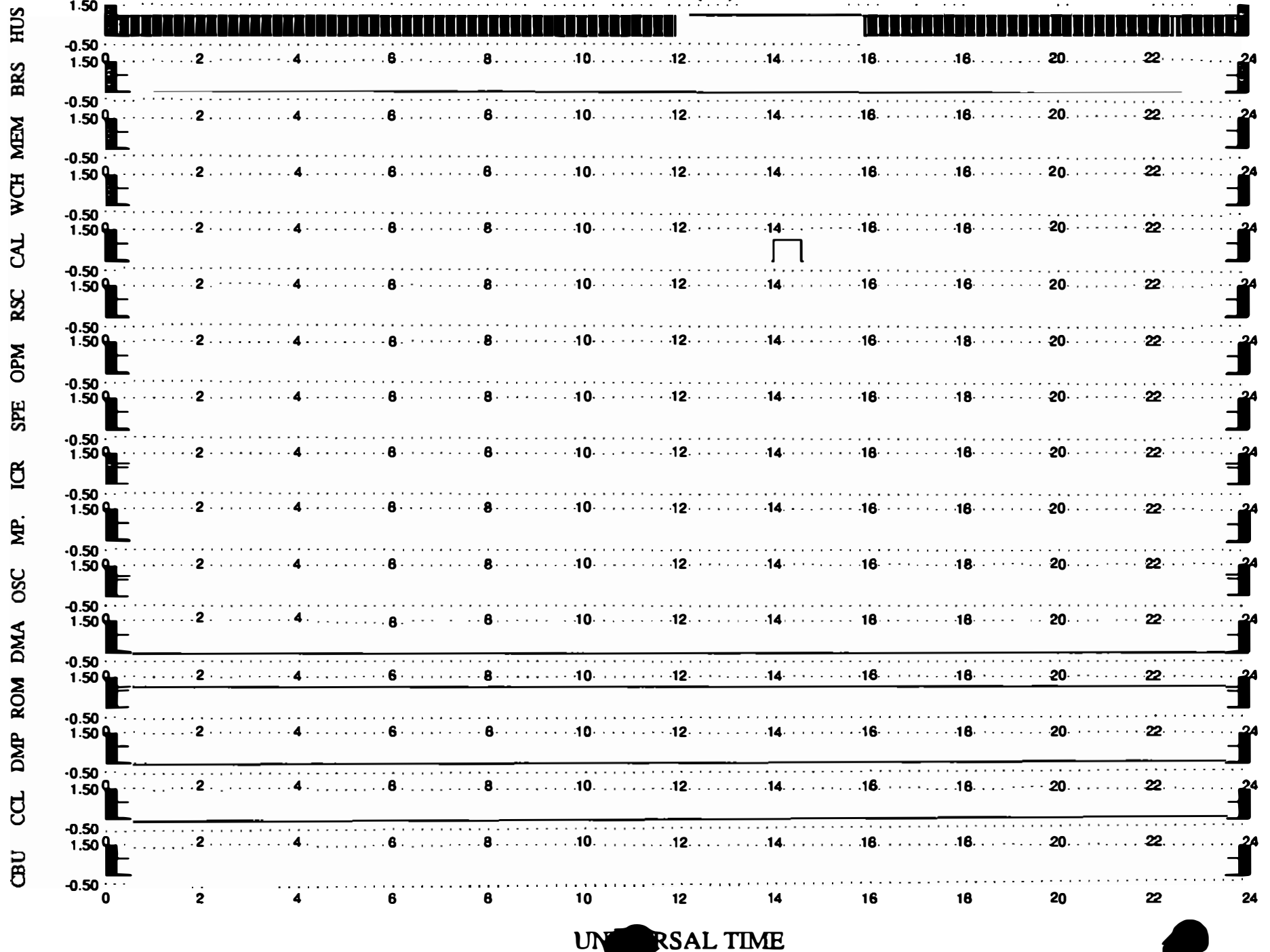


Current Time: 96/06/06, 1004 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

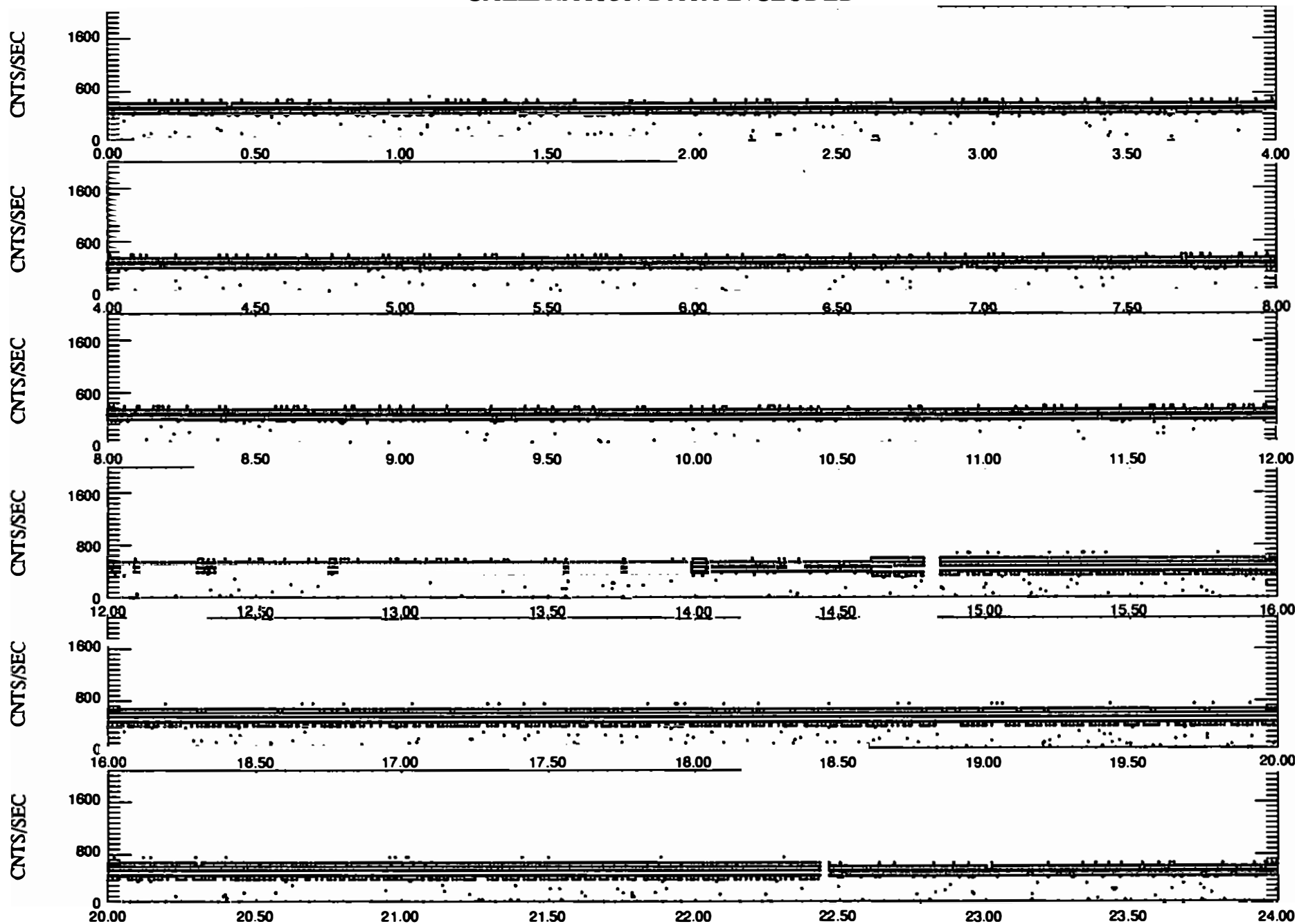
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

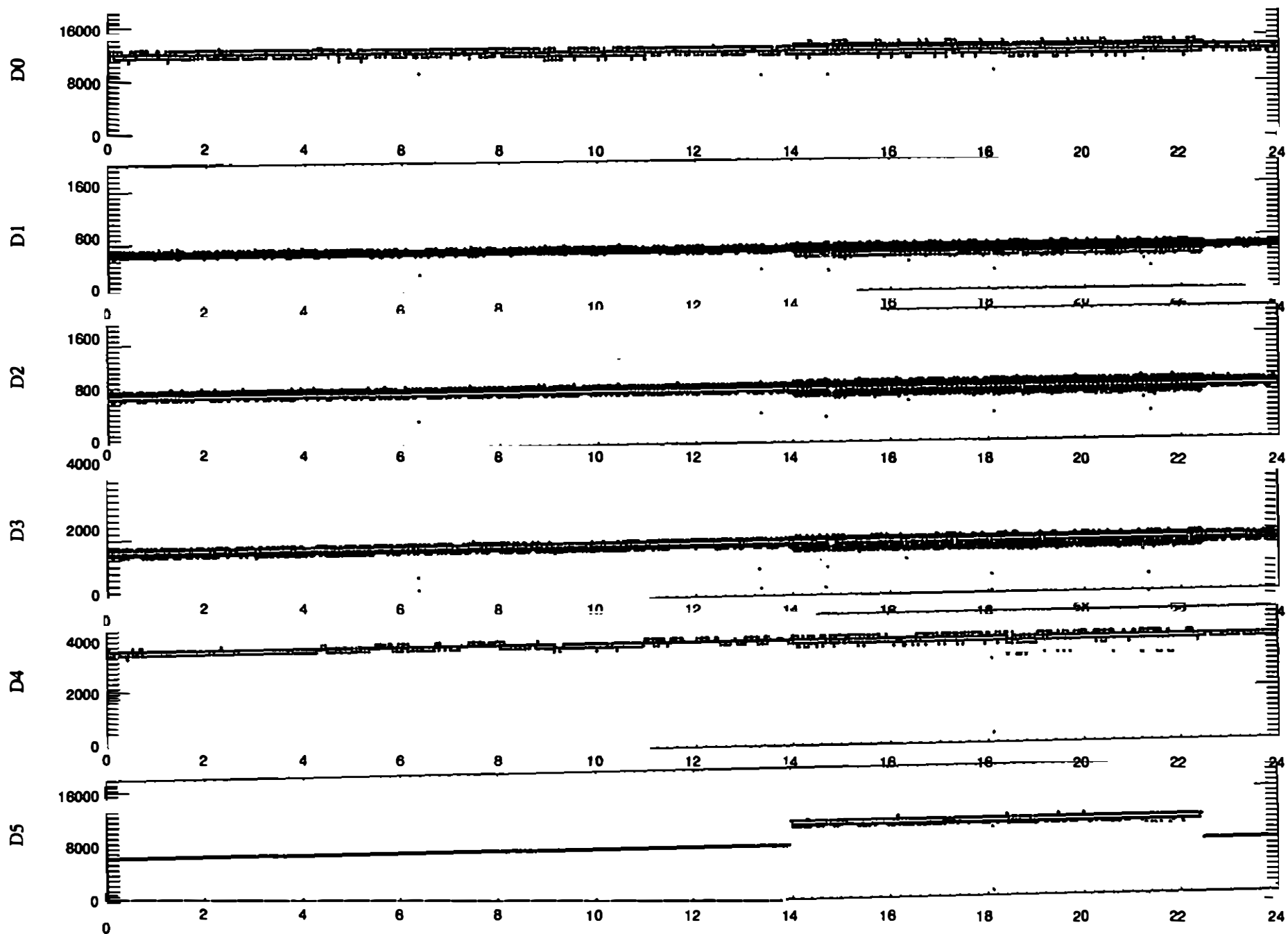
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From WOODSP@ssl.msfc.nasa.gov Fri Jun 7 09:27 PDT 1996
From: WOODSP@ssl.msfc.nasa.gov
Date: Fri, 7 Jun 1996 11:27:37 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5486

BATSEARCH PROGRAM

Trigger

BATSE BURST # 5486
EVENT OF 1996 JUN 5 DAY OF YEAR=157
EVENT CROSSING TIME AT BATSE : 29392. S. OR 08:09:52.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 154.000 -2.000
BATSE PEAK COUNTING RATE: 32000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 5/ 6/ 96 IS:
RA= 149.498 DEC= 53.097 DIST= 4.253 AU
BATSE-ULYSSES DISTANCE = 636282438. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=124.77 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1210.48 SECS.
CROSSING TIME AT ULYSSES IS 28182. S. OR 07:49:41 +/- 334.29 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 5/ 6/ 96 IS:
RA= 52.212 DEC= 18.732 DIST= 2.363 AU
MARS-BATSE DISTANCE = 353490944. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 78.20 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 241.21 SECS.
CROSSING TIME AT MARS IS 29633. S. OR 08:13:53 +/- 204.05 SECONDS

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5486	960605	10239	29392	32000	154	-02	150

96	2	29	22445.141	S2	740	1520	550	0.3	0.5	8	250	Seam RI	
96	3	5	33645.352	S1	440	390	70	>10	0.8	1.8	251	Seam NO	
96	3	12	35074.697	S2	160	730	330	<0.25	0.2	0.1	252	Seam NO	
96	3	19	51992.828	S1		800	970	>7	0.16	0.4	253	RI	5277
96	3	21	76321.803	S2	4600	4550	1020	0.03	42	46	254	Trig	5290
96	3	22	19642.728	S1	1060	1760	1120	40	2	28	255	Trig	5304
96	3	24	80064.124	S2	320	520	150	0.07	1	14	257	Seam RI	
96	3	25	69892.978	S1	250	620	460	6	0.5	0.5	258	NO	5339
96	3	31	21208.784	S1	220	520	120	4.4	2	24	271	RI	5389
96	4	4	25289.264	S2	420	750	240	0.07	4	9	272	Seam RI	
96	4	9	77143.618	S2	650	1170	420	0.17	0.5	5	273	RI KA	5417
96	4	10	80648.201	S2	190	330	140	<0.05	1	35	274	Seam RI	
96	4	18	06106.854	S1	200	330	70	1	2	2	277	RI KA	5418
96	4	18	08271.303	S2	350	770	50	<0.1	3	30	278	Seam KA NO	
96	4	18	66796.140	S1	1160	1000	50	10	1	3	290	Trig	5436
96	4	20	17324.809	S2	300	1190	1080	1	0.3	0.04	303	Seam RI	
96	4	22	59981.190	S2	160	410	140	0.5	4	12	305	RI	5463
96	4	25	86395.862	S2	1300	730		<0.04	44	16	306	Seam KA NO	RI
96	4	28	47556.501	S2	270	420	230	<0.04	1	170	307	RI	5450
96	4	30	49895.524	S1	250	640	180	8	8	18	309	RI KA	5451
96	5	1	31344.546	S1	380	870	350	3.7	20	56	310	Seam RI	
96	5	6	47384.998	S1	160	490	190	1.1	3	6	312	Seam RI	
96	5	7	44869.909	S2	460	760	290	0.03	20	98	313	Seam RI	
96	5	10	38723.598	S2	560	1300	330	0.1	1	7	317	Trig	
96	5	19	14766.283	S2	1700	7700	8000	0.4	0.1	0.56	319	Seam NO	
96	5	21	62489.430	S1	330	500	90	5.8	1	8	320	Seam RI	
96	5	23	59522.013	S1	270	550	580	10	1	3	321	RI	5473
96	5	29	43663.061	S2	1700	4000	5000	0.15	0.5	3.5	322	Trig	5477
96	5	29	80722.705	S2	420	620	140	0.1	1	14	323	Trig KA	
96	5	30	62300.750	S1	180	400	110	>20	2	14	324	Seam N/O	
96	5	31	06926.043	S1	300	440	120	4.7	50	7	325	Seam RI	
96	5	31	73498.259	S2	1600	4250	2800	0.5	27	19	326	Trig	
96	6	2	42664.032	S1	1000	1450	1400	>2	0.3	0.03	327	Seam NO	
96	6	5	29392.672	S1	400	950	410	1.3	2	87	328	RI	5486
96	6	7	78106.176	S2	890	1280	550	0.04	32	120	329	RI	5489
96	6	10	84502.254	S2	200	1000	1500	0.9	0.16	0.11	330	Seam NO	
96	6	12	71198.677	S1	650	2800	2700	1.4	0.5	18	331	Trig	
96	6	14	67654.516	S1	80	1800	1600	1	0.18	0.1	332	Seam NO	
96	6	17	76195.941	S1	350	560		>8	1	0.6	333	NO	5504
96	6	22	74906.054	S2	100	360	280	0.2	4	8	334	Seam NO	
96	6	23	04734.229	S2	130	320	150	0.5	7	25	335	RI KA	5512
96	6	23	77186.871	S2	250	350	130	0.05	6	15	336	Seam RI	
96	6	25	16949.252	S1	180	280	70	4.6	6	9	337	RI	5518
96	6	28	19224.223	S2	500	410	120	0.06	12	6	338	RI	5523
96	7	2	54698.284	S1	280	350	70	2.8	23	85	339	RI	5525
96	7	3	65443.861	S1	200	560	600	3	1	0.4	340	NO	5527
96	7	7	36999.311	S2	1600	1200		0.06	2	5	341	RI	5530
96	7	8	72577.095	S2	900	820	160	0.2	1	6	342	Seam RI	
96	7	9	00246.641	S1	260	1000	400	0.95	15	4	343	Trig KA	
96	7	10	00662.014	S2	1800	4700	3600	0.13	0.5	48	345	Trig	
96	7	11	63757.543	S1	560	2400	900	1.25	0.5	19	346	Trig	
96	7	11	68451.869	S2	200	360	170	<0.07	2	41	347	Seam NO	
96	7	22	25522.448	S2	360	650	170	0.27	17	151	348	RI	5548
96	7	22	56346.728	S1	700	1000	200	2.6	3	6	349	Seam RI	
96	7	27	43056.737	S2	500	1000	500	0.7	0.5	15	350	Seam RI	
96	7	31	20761.638	S2	800	1160	170	0.9	0.5	4	353?	RI	5557
96	8	3	67525.033	S1	4000	8000	3000	3	0.02	0.18	354	Trig KA	5561
96	8	4	84535.906	S2	2000	2600	600	<0.03	0.5	2	355	Trig KA	5563
96	8	5	78957.888	S2	1270	2360	380	0.05	1	20	356	Trig	
96	8	6	80989.772	S2	420	850	250	1	86	10	357	RI	5566

From isac.ernet.in!kmarar@vigyan.iisc.ernet.in Fri Jun 28 22:57 PDT 1996
Date: Sat, 29 Jun 1996 10:45:56 +0000 (CUT)
From: kmarar@isac.ernet.in
X-Sender: kmarar@se07
Hurley K <khurley@sunspot.ssl.berkeley.edu>
Subject: sross-c2
Mime-Version: 1.0

Dear Kevin

Sross-c2 detected two events as follows

June 5 at 08:11:04.9 UT

June 7 at 21:42:04.6 UT

Were they seen by Ulysses, Batse, Wind or others?

Krishnan

Helio corr removed

Date: Nov 17 '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

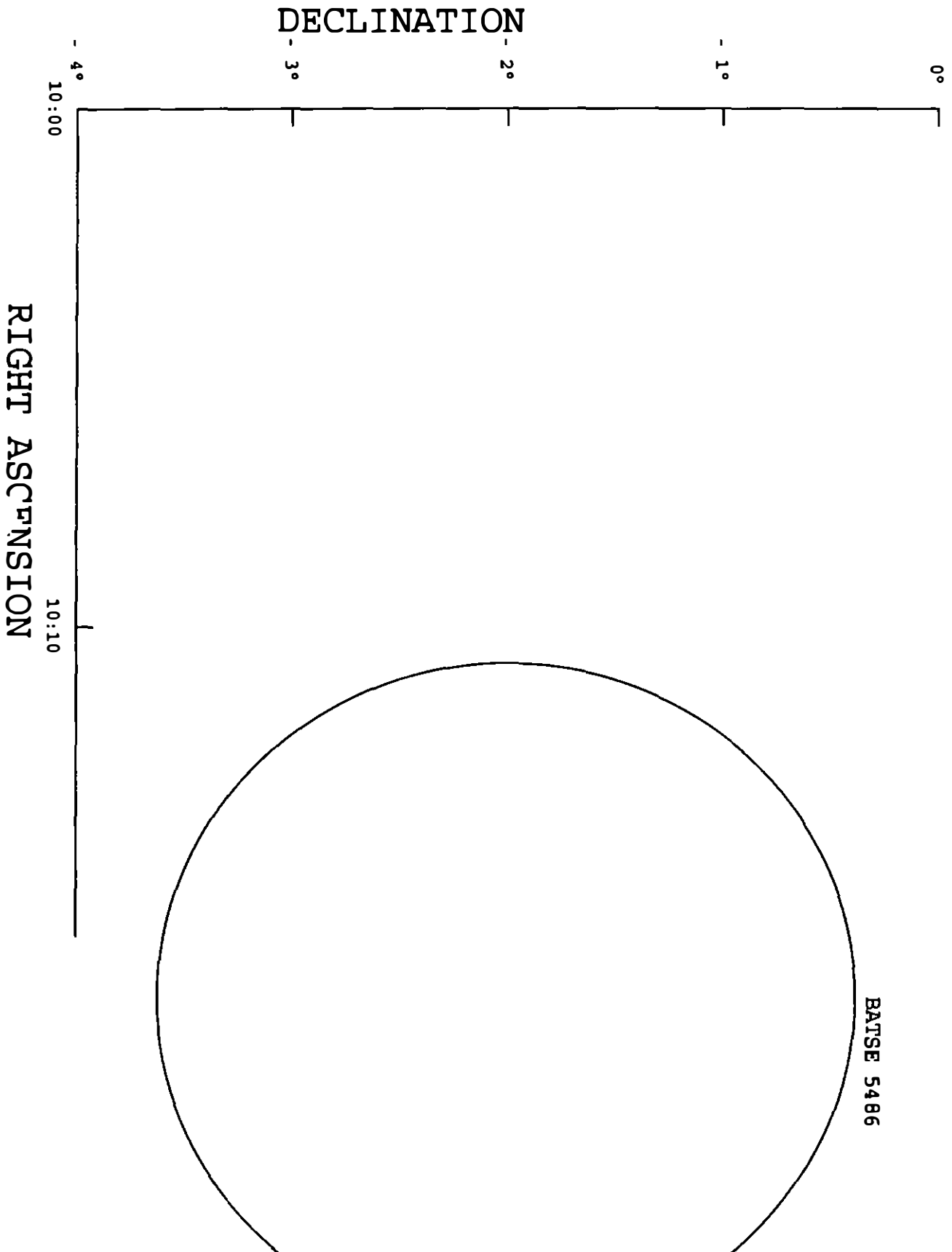
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF JUN 5, 1996 7:49

17/11/97



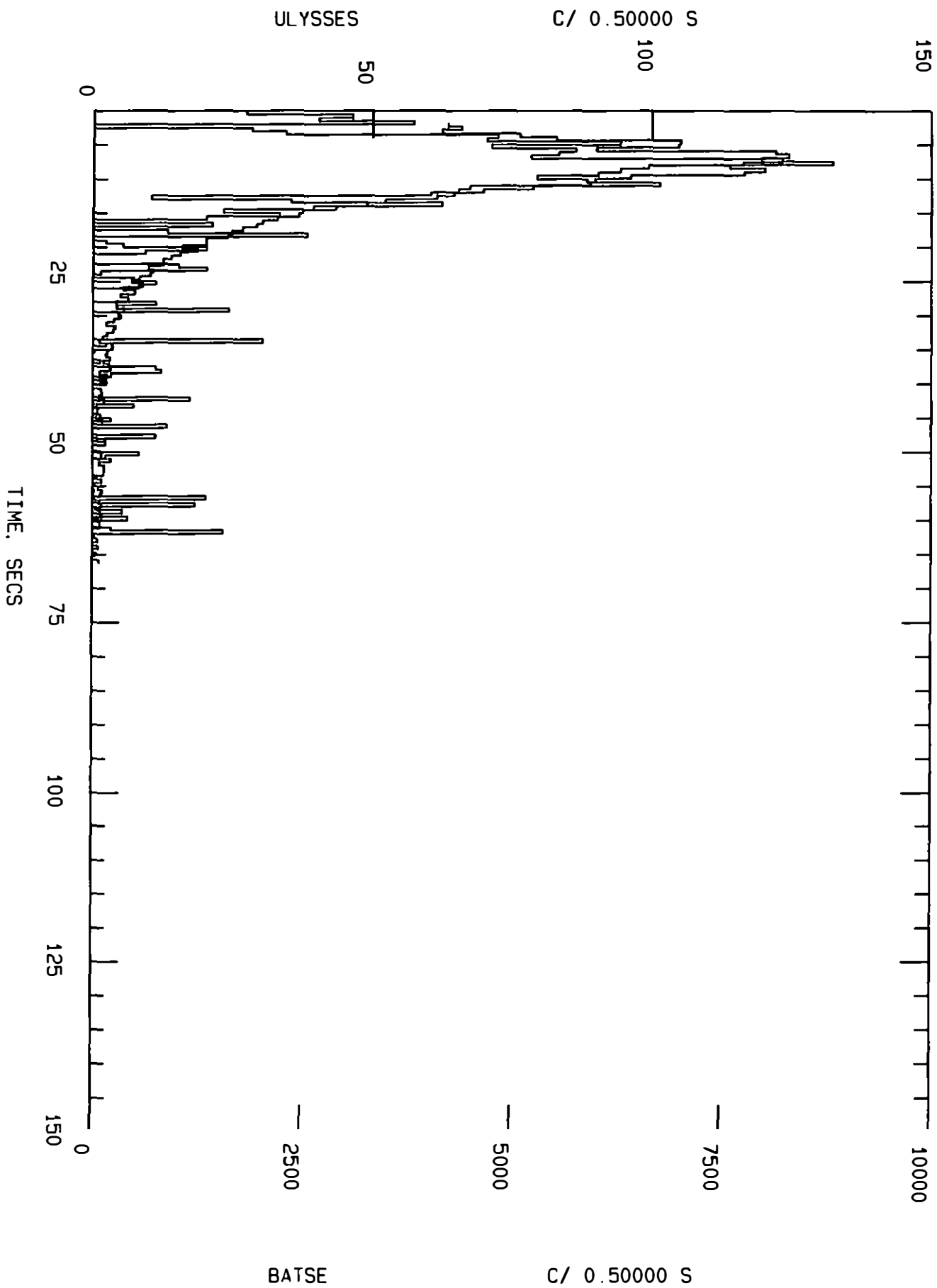
ULYSSES -BATSE

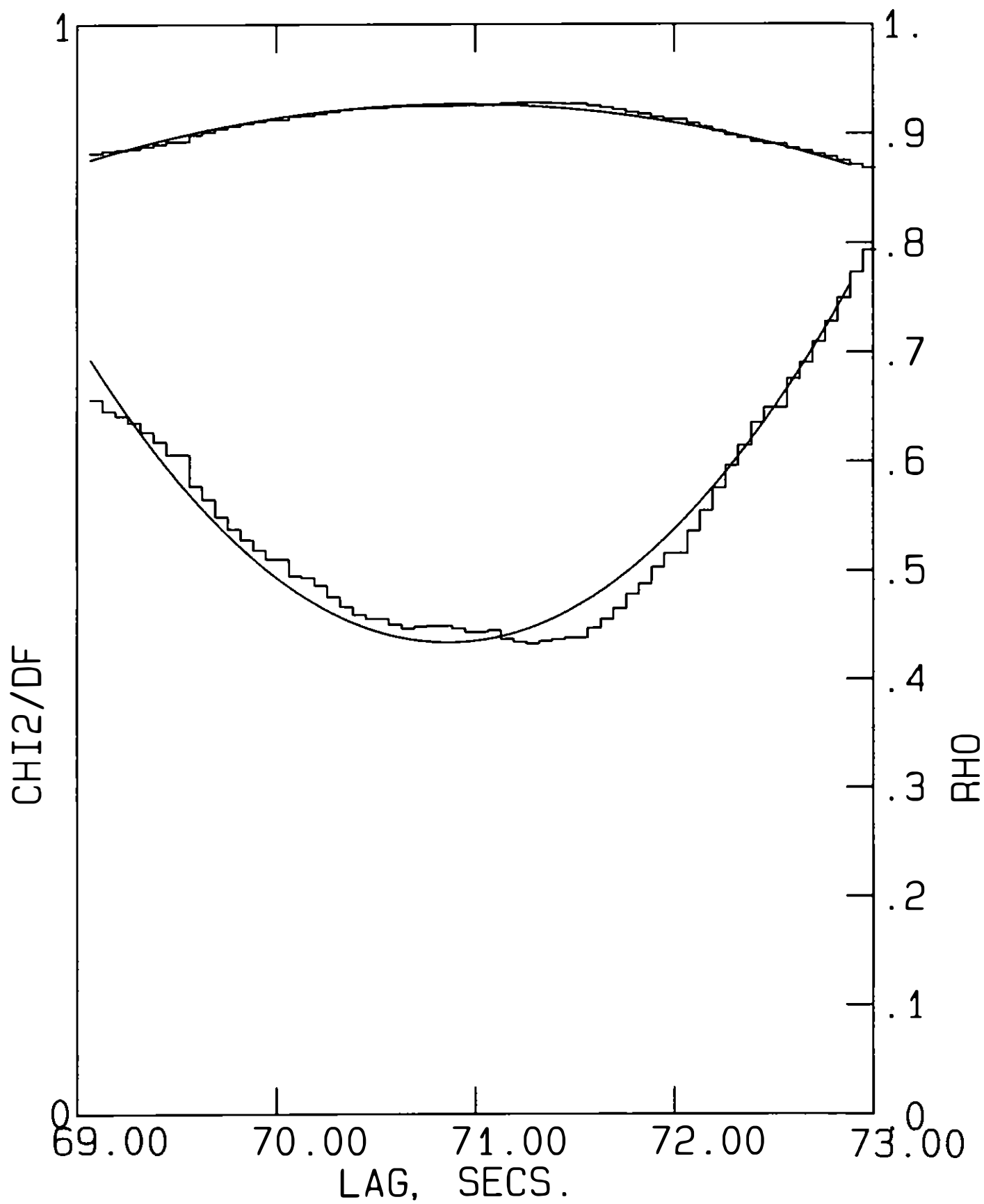
CORRELATION

05/06/96

28194 401

17/11/97





ULYSSES RT-ULYSSES

CORRELATION

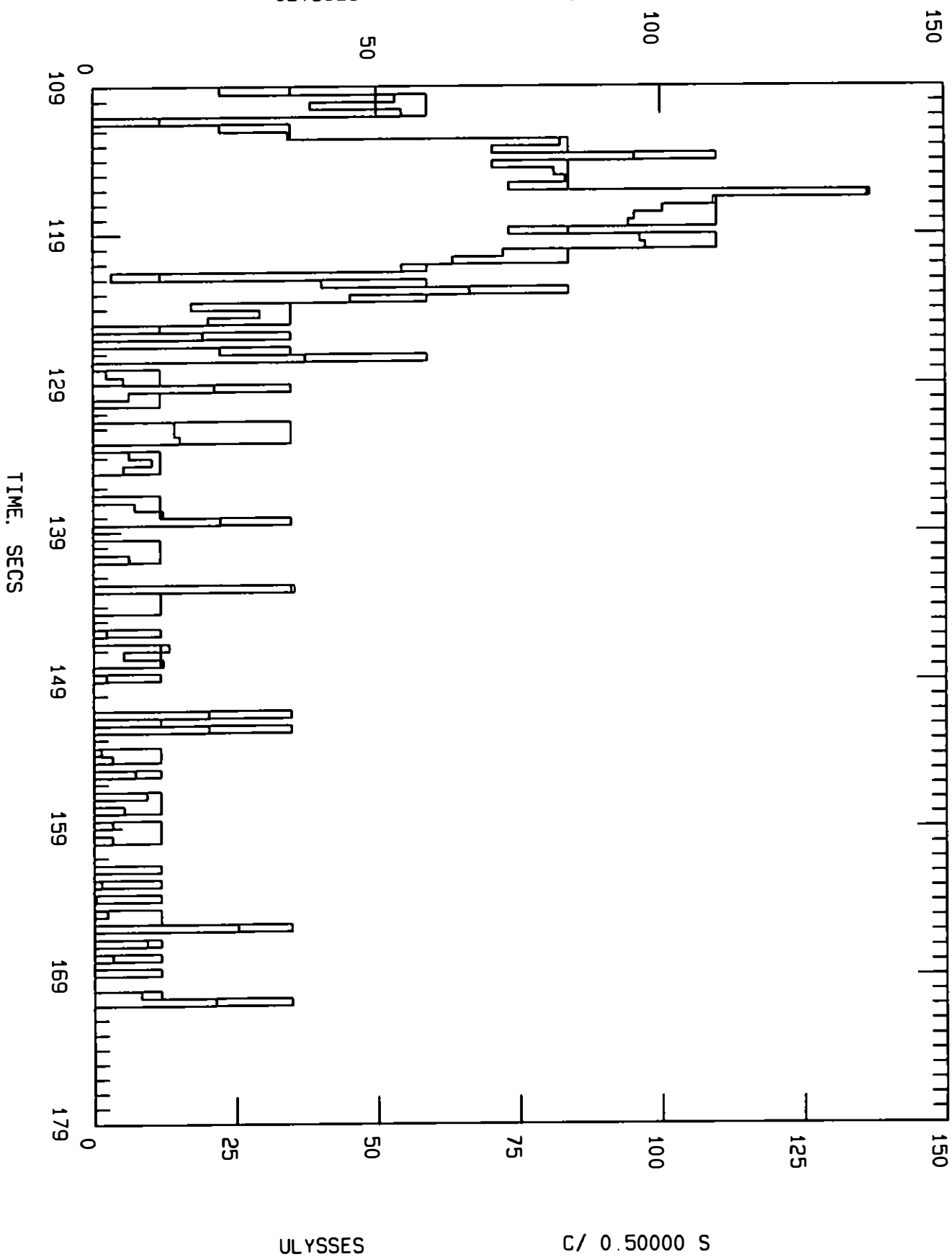
5/ 6/96

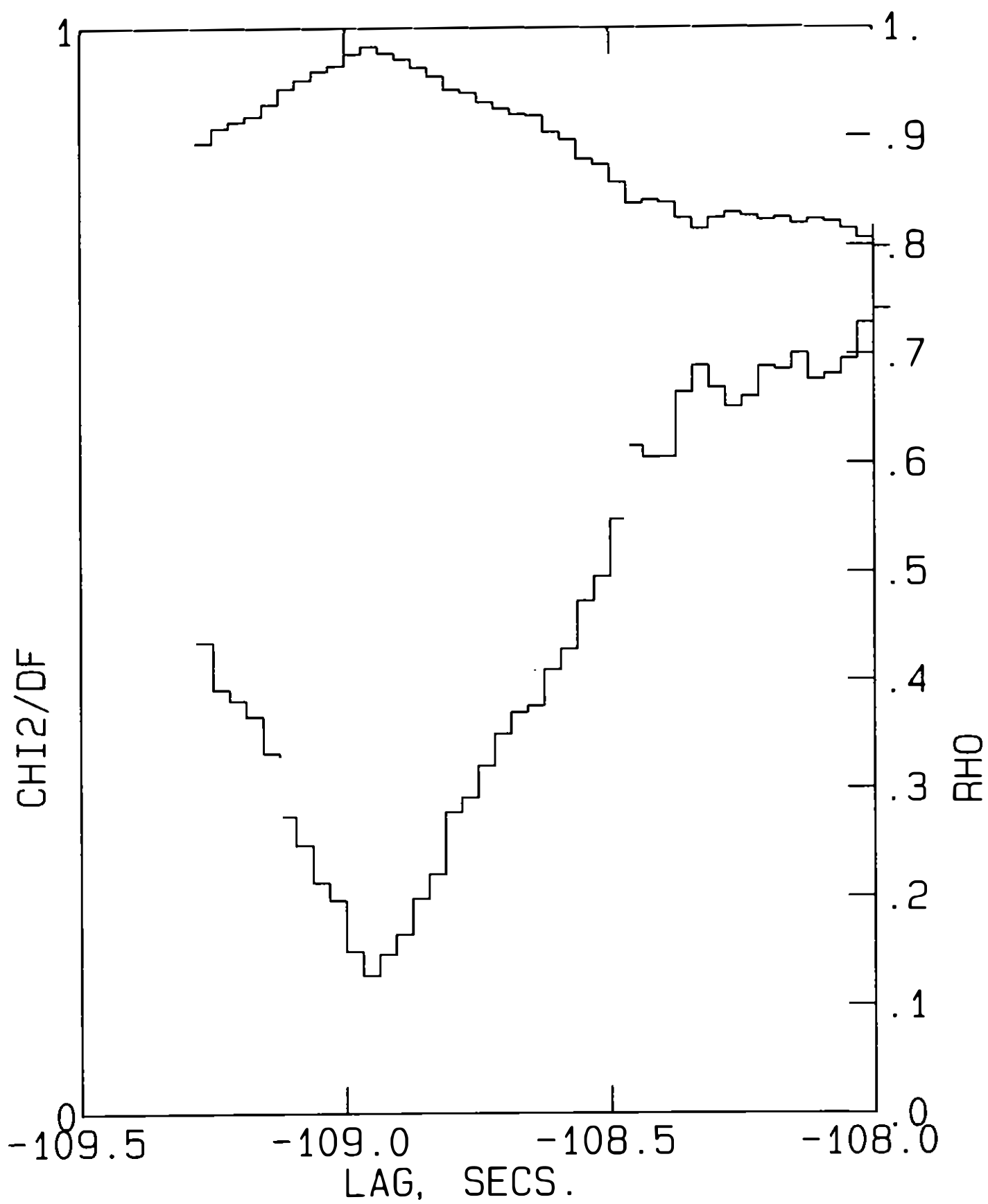
28078.039

17/11/97

ULYSSES RT

C/ 0.50001 S

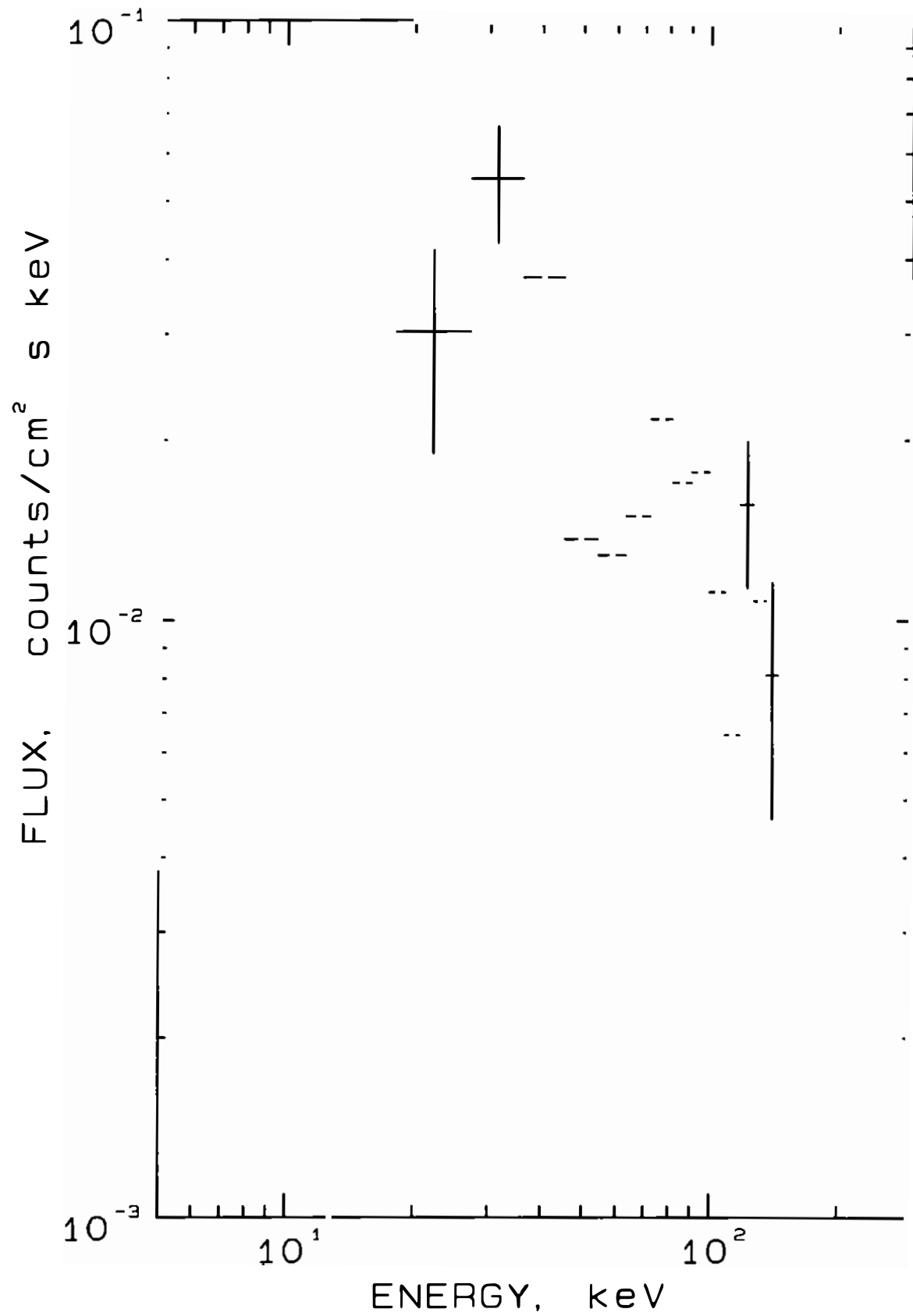




ULYSSES 05/06/96 28194.527

17/11/97

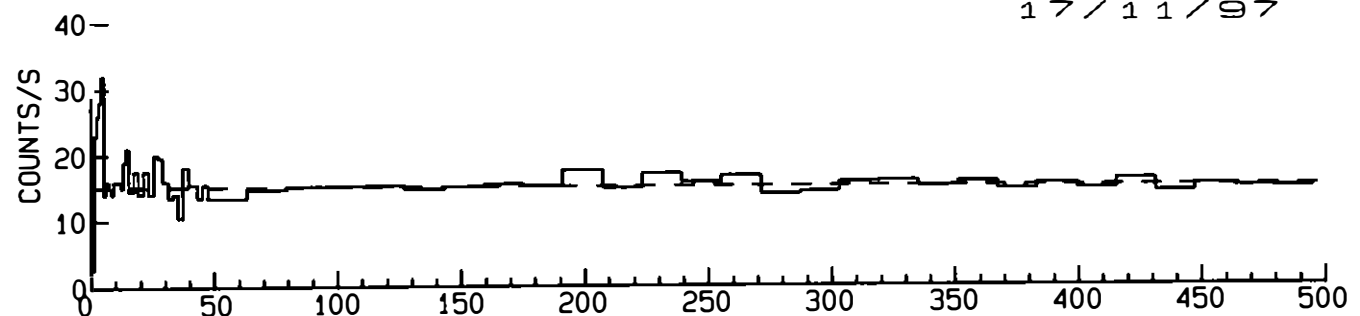
SPECTRUM INTEGRATED OVER 31.2 SECONDS, INTERVALS 2 TO 25



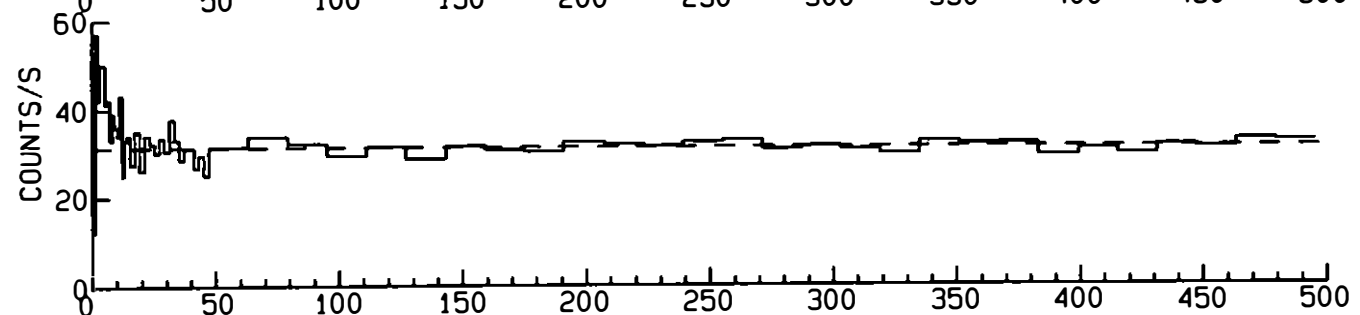
ULYSSES 05/06/96 28194 527 BURST SPECTRAL COUNT RATES

17 / 11 / 97

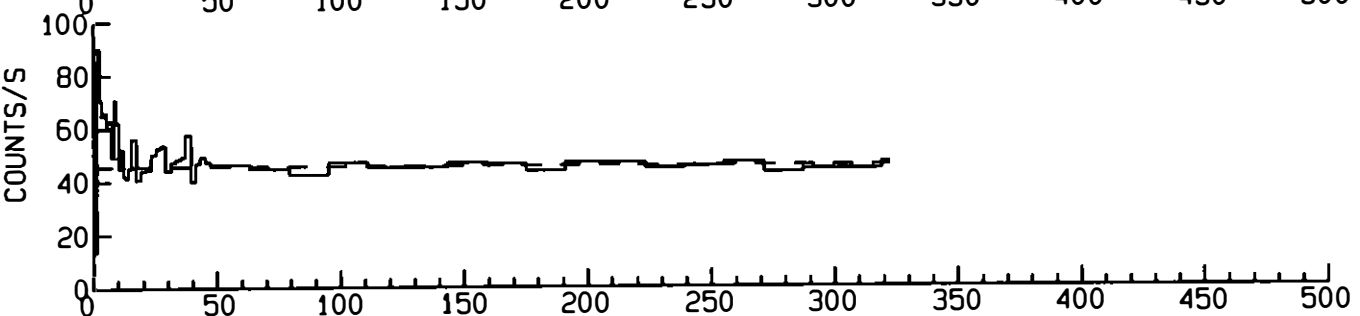
126-144 keV



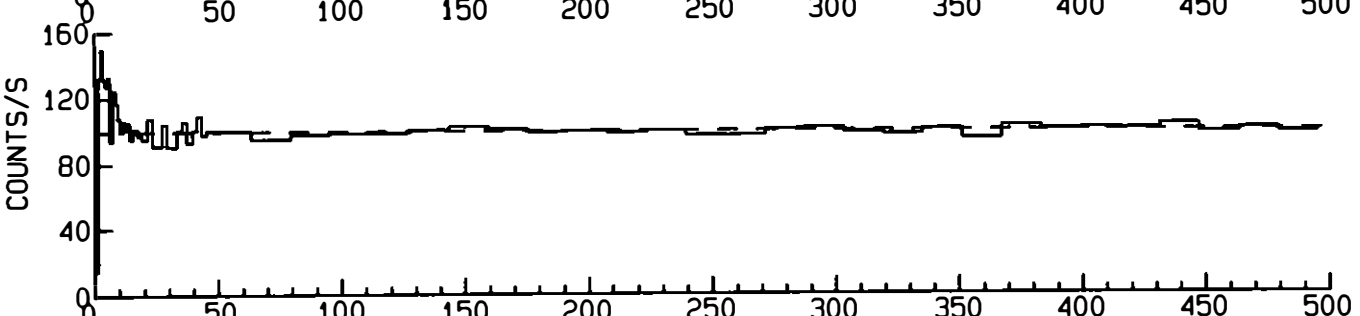
99-126 keV



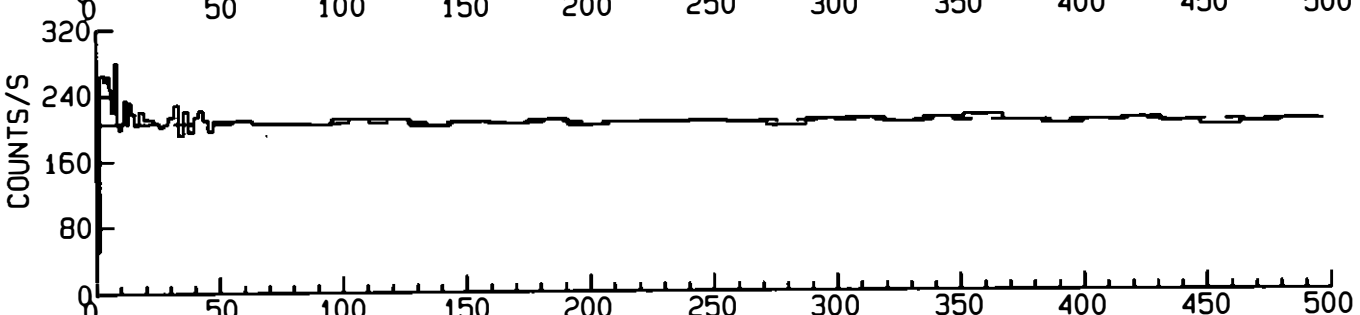
72-99 keV



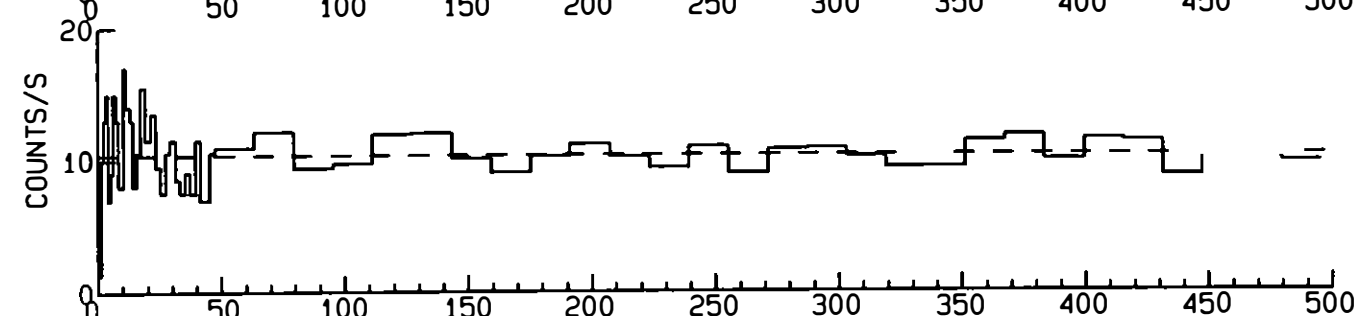
45-72 keV



18-45 keV



4-18 keV



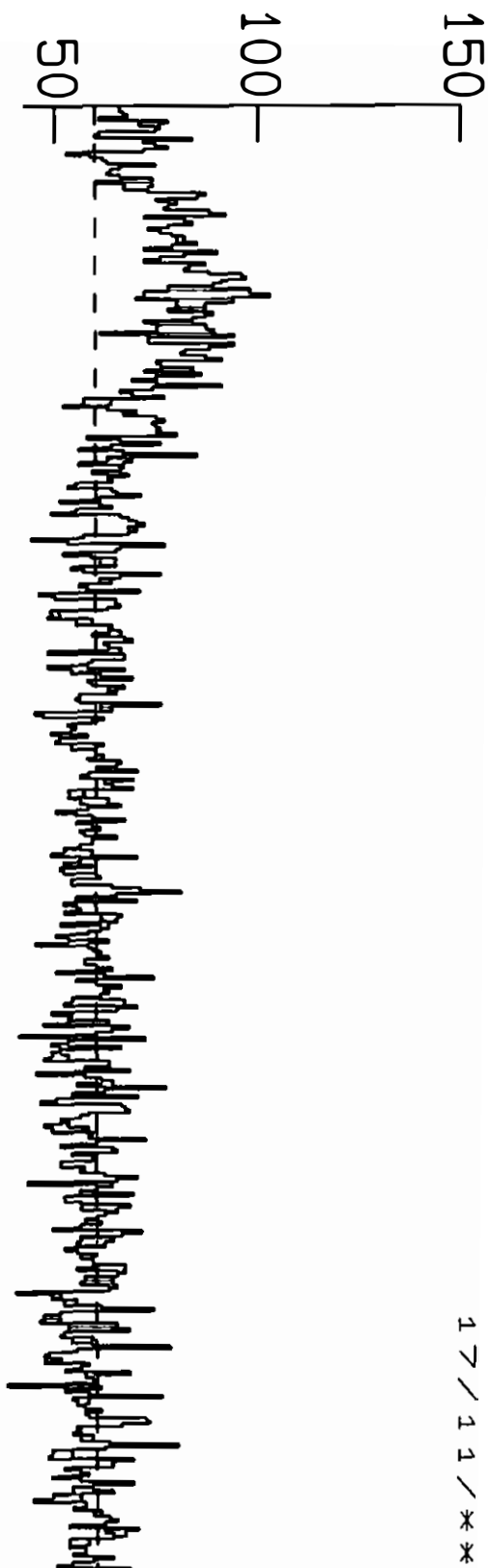
ULYSSES

05/06/96

Ttrig=28194.401

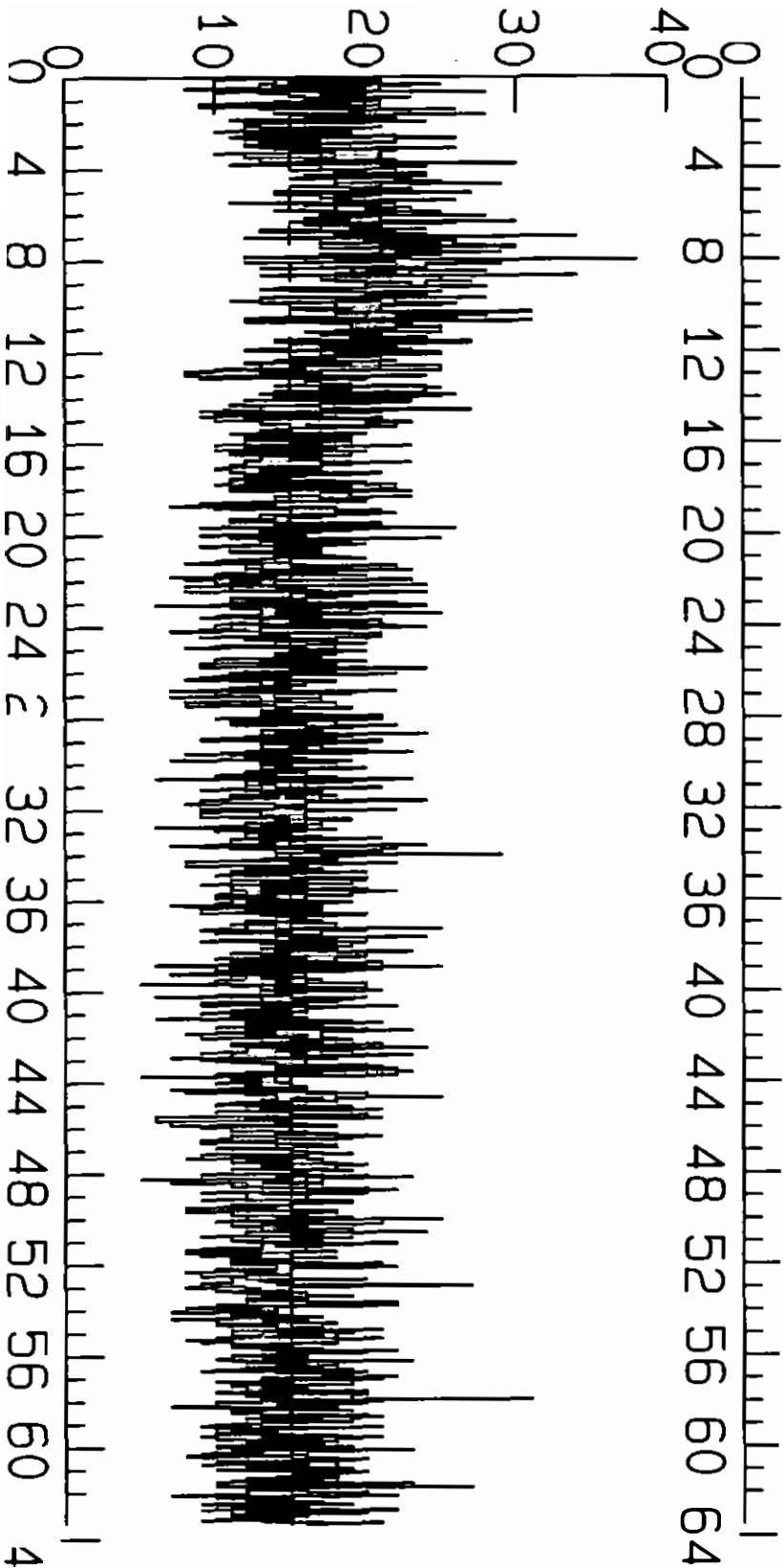
0- 0 keV

COUNTS/0.125 S



17/11**

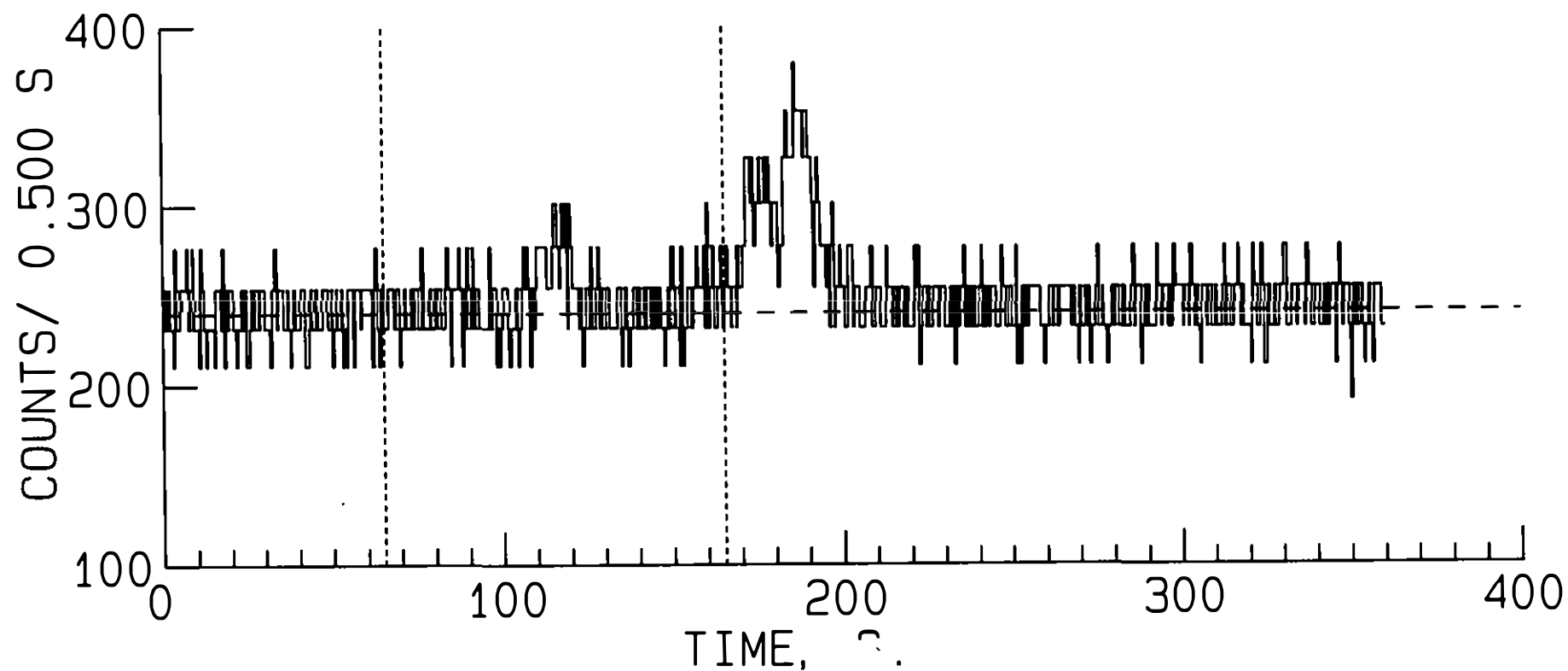
COUNTS/0.031 S



ULYSSES RT
5/ 6/96 28008.175 s
21- 145 keV

17 / 11 / 97

N= 10 M= 2
>4 σ SIGMA FLUCTUATIONS



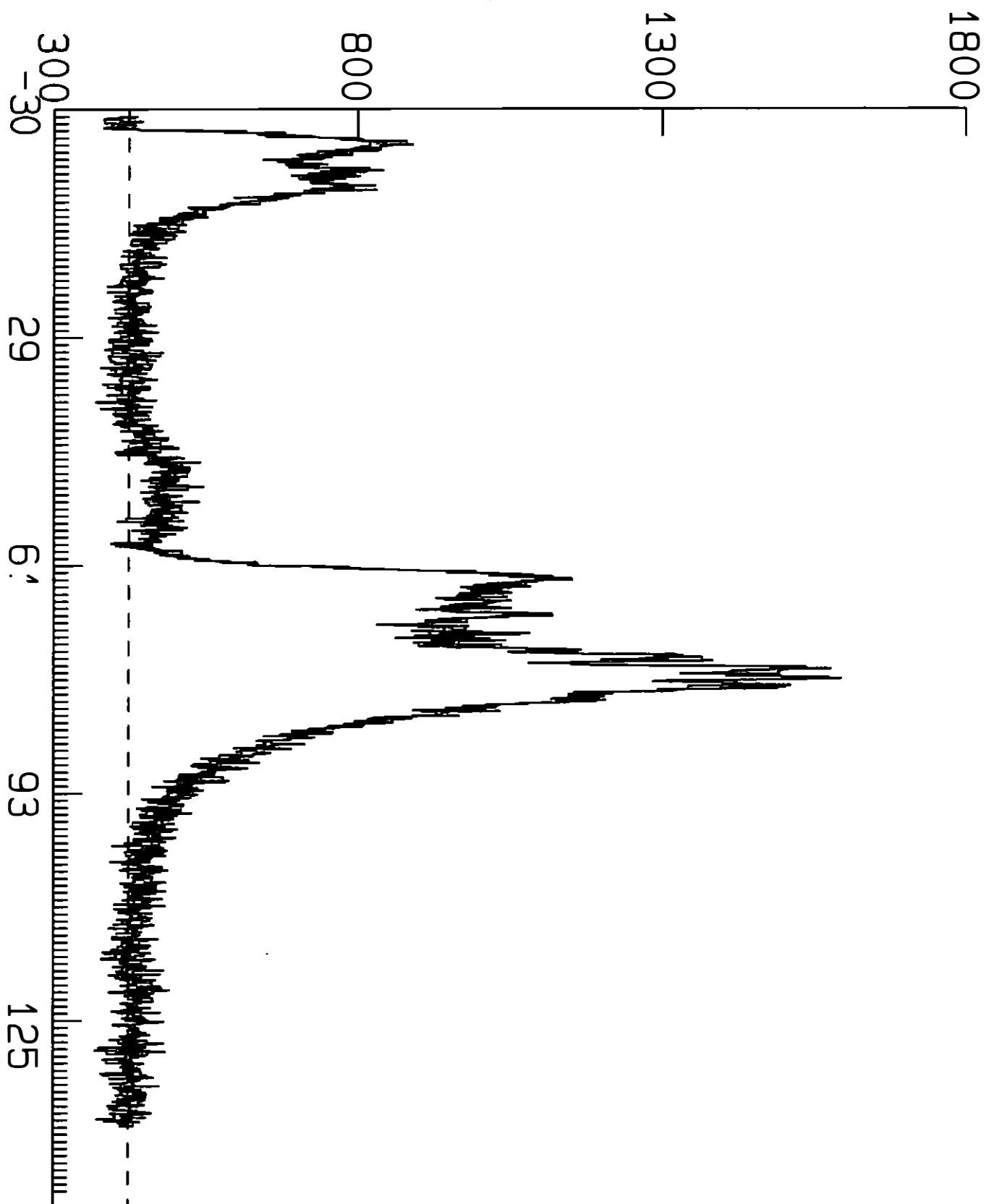
BATSE

05/06/96

29392.138

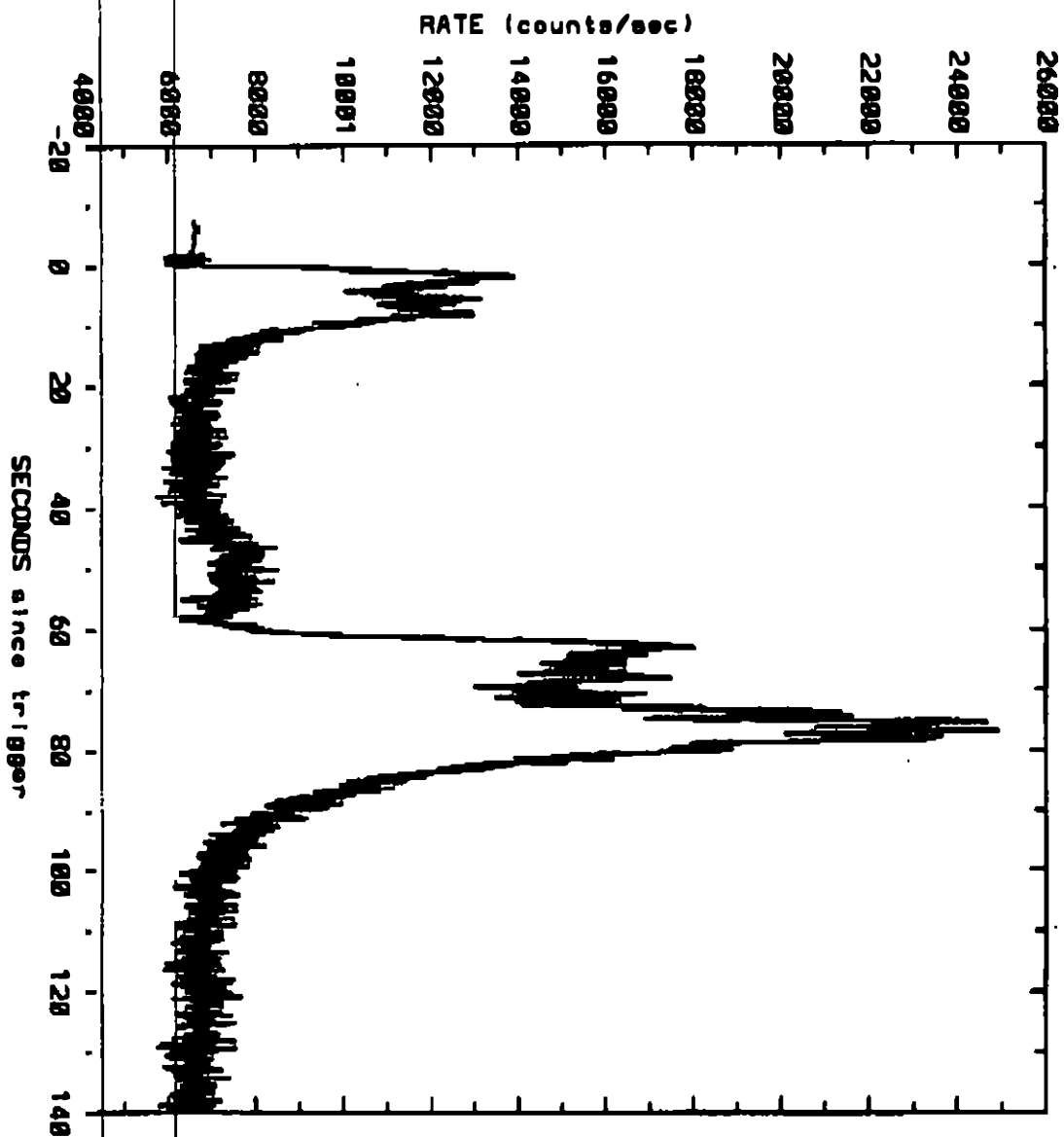
25- 100 keV

COUNTS/0.064 S



20 / 6 / 96

DISCSC Data for K. Hurley, No. 5486



10-08-1996 12:02:42

Created by NOPS 80
(Burnt Display)
Version 12.25Trigger = 5486
Trigger Time:
10230 / 25002.138
Burnt Data Type:
DISCSCDeadtime
Corrected: N
Background Data
Type: PWB + DISCSC
Minimum Integ. Time:
0.064 seconds
Datafile 17.01.Discriminators:
(1, 2)Quality Mask:
001971

From WOODSP@ssl.msfc.nasa.gov Fri Jun 7 09:30 PDT 1996
From: WOODSP@ssl.msfc.nasa.gov
Date: Fri, 7 Jun 1996 11:30:25 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5487

BATSEARCH PROGRAM

No

BATSE BURST # 5487
EVENT OF 1996 JUN 5 DAY OF YEAR=157
EVENT CROSSING TIME AT BATSE : 47495. S. OR 13:11:35.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 244.000 53.000
BATSE PEAK COUNTING RATE: 2200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 5/ 6/ 96 IS:
RA= 149.525 DEC= 53.045 DIST= 4.256 AU
BATSE-ULYSSES DISTANCE = 636770296. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=127.59 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1295.59 SECS.
CROSSING TIME AT ULYSSES IS 46199. S. OR 12:49:59 +/- 322.54 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 5/ 6/ 96 IS:
RA= 52.212 DEC= 18.732 DIST= 2.363 AU
MARS-BATSE DISTANCE = 353490944. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 72.46 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 355.44 SECS.
CROSSING TIME AT MARS IS 47850. S. OR 13:17:30 +/- 200.59 SECONDS

BATSE BURST TRIGGER

NO.: 5487

TIME: TJD=1023 SECONDS=47495

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=166.6 AZIMUTH=223.4 ERROR=3.5 DEGREES

COMMENTS:

GRB LASTING ~8S. SOME SUBSTRUCTURE. NOT VISIBLE ABOVE 300KEV

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5487	960605	10239	47495	2200	244	+53	8

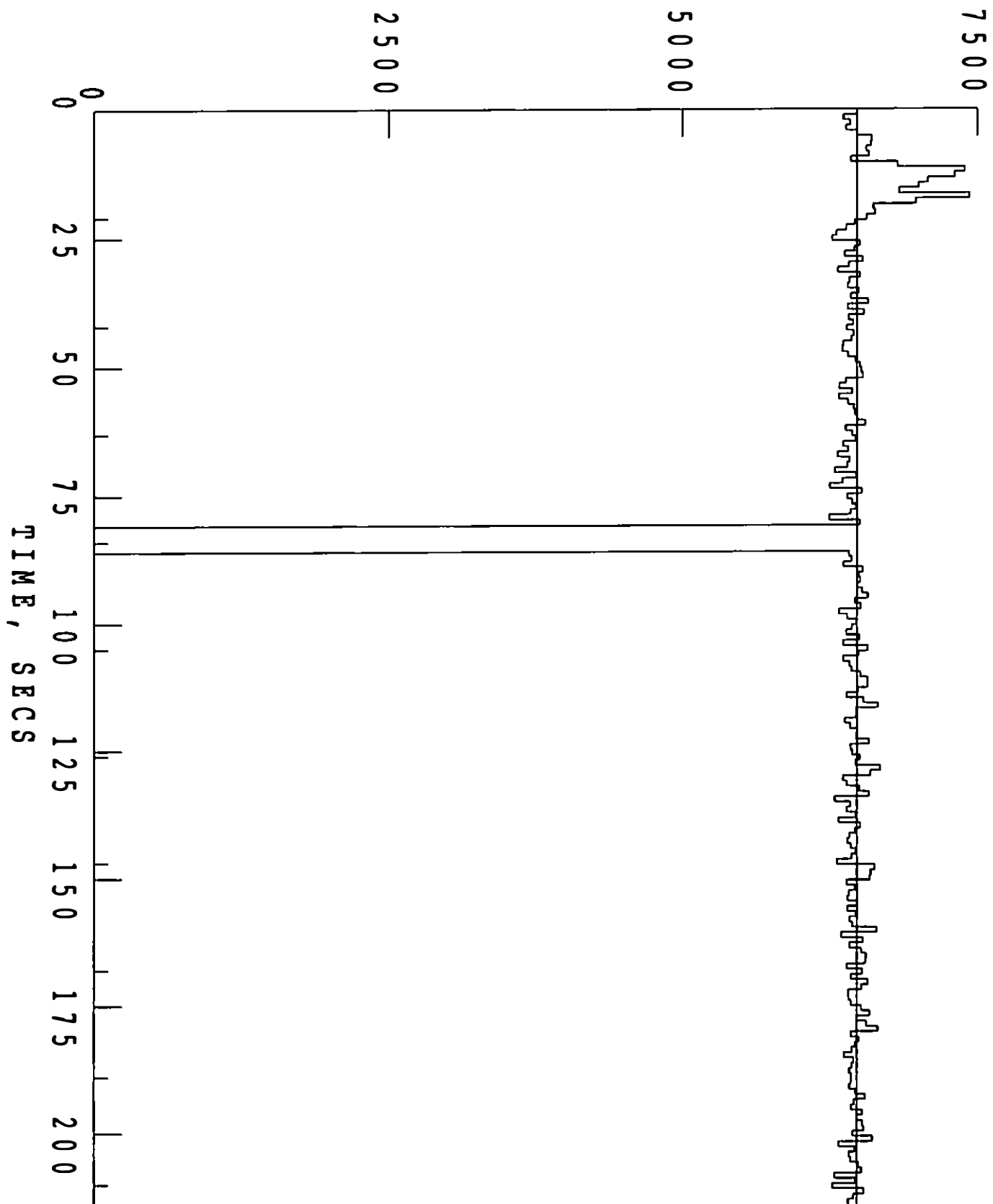
BACODINE

05/06/96

47483.593

25 - 100 keV

COUNTS/1.024 S



BATSE #

5487

7 / 6 / 96

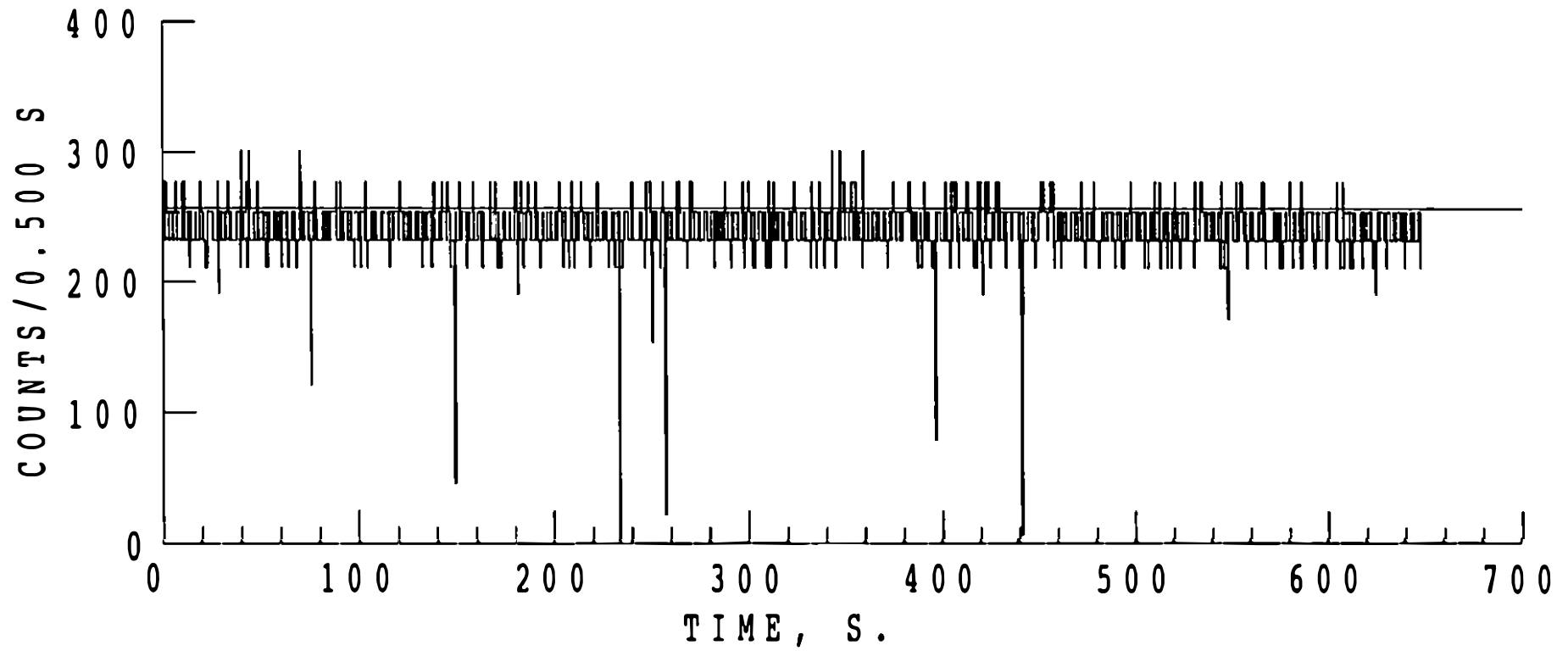
ULYSSES RT

5 / 6 / 96 45864.410 s

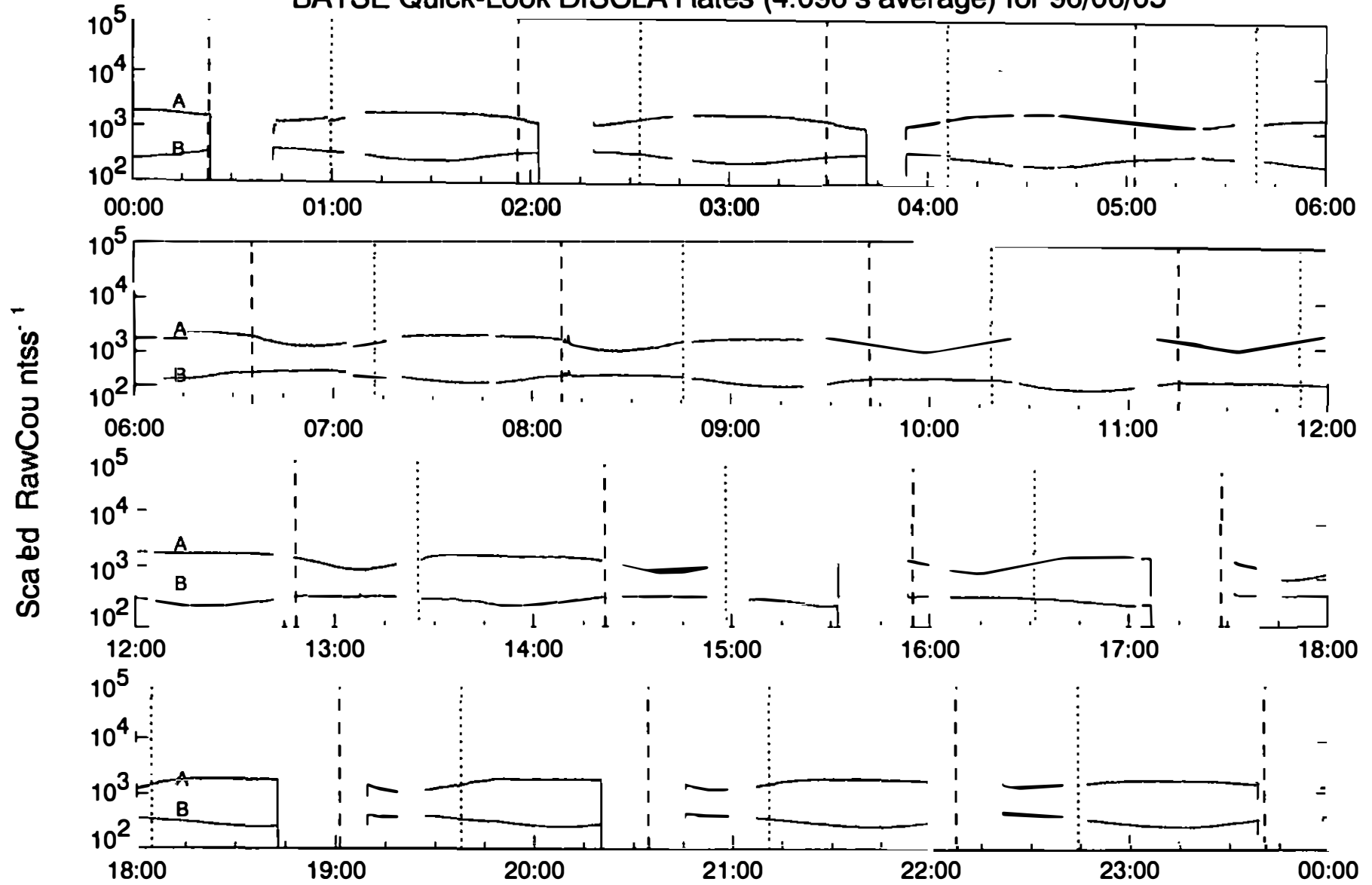
0 - 0 keV

N=10 M=2

>4.0 SIGMA FLUCTUATIONS



BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/05

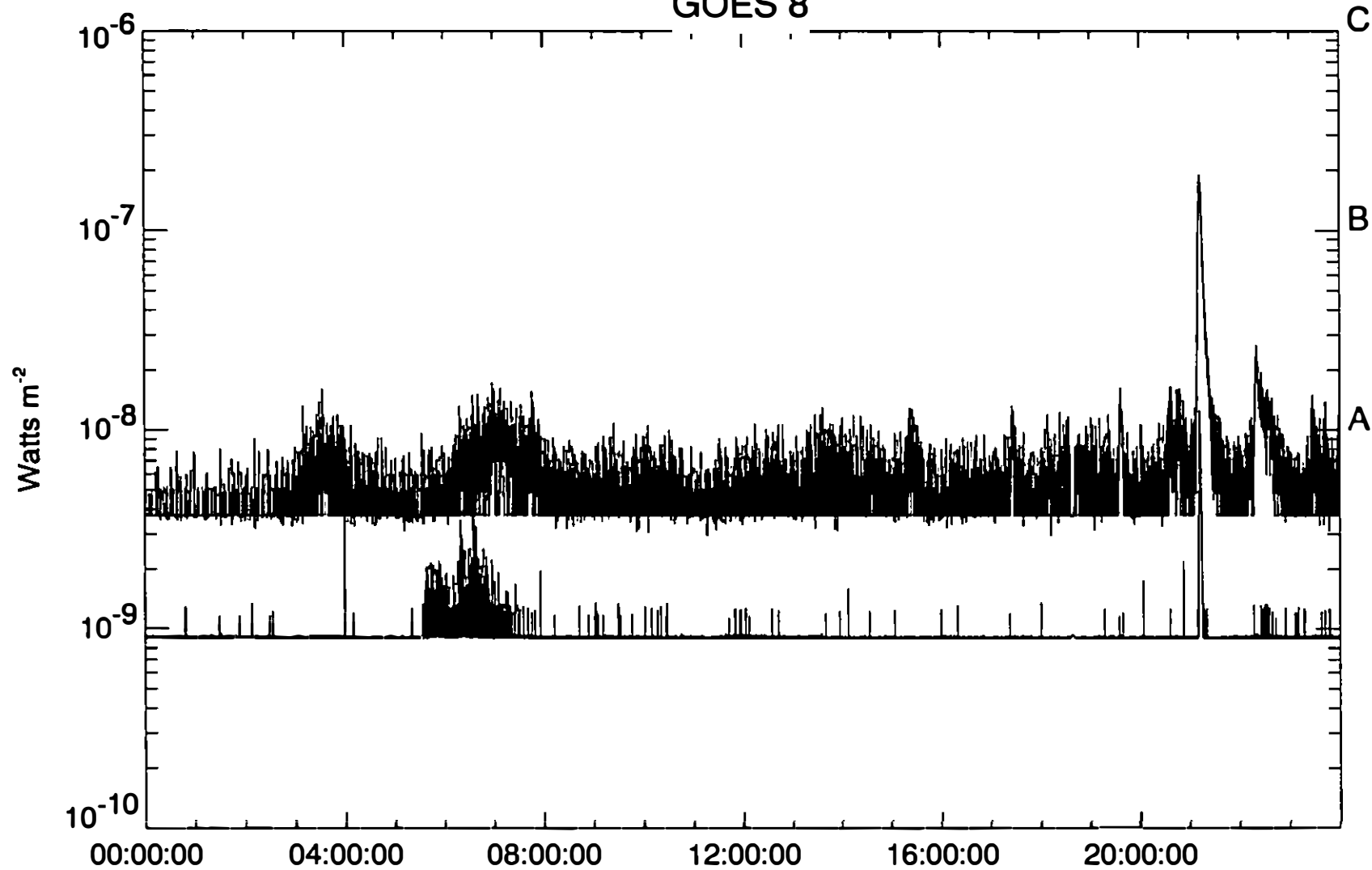


Current Time: 96/06/07, 1004 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

GOES 8

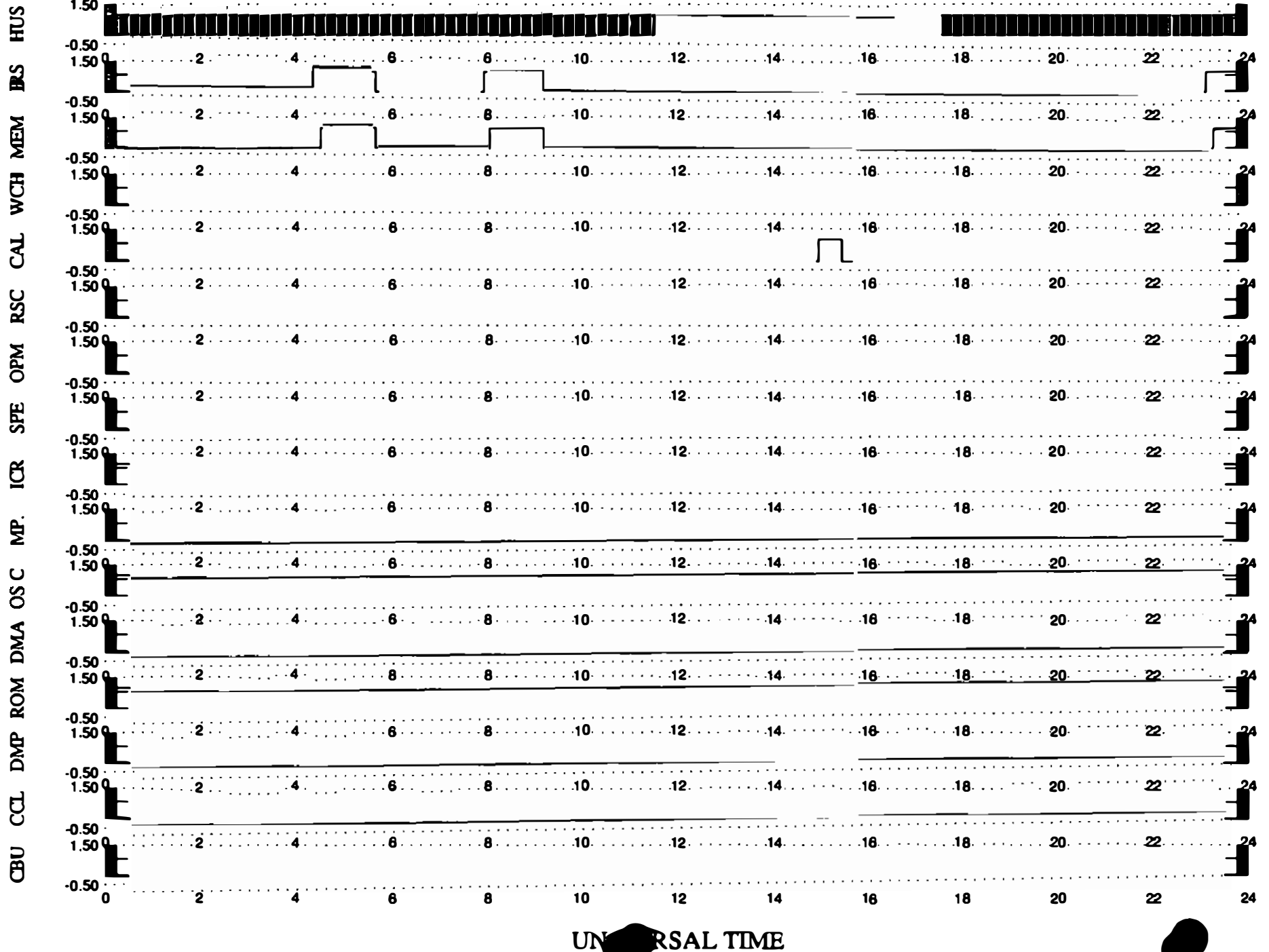


Data Start: 96/06/05, 0000:00

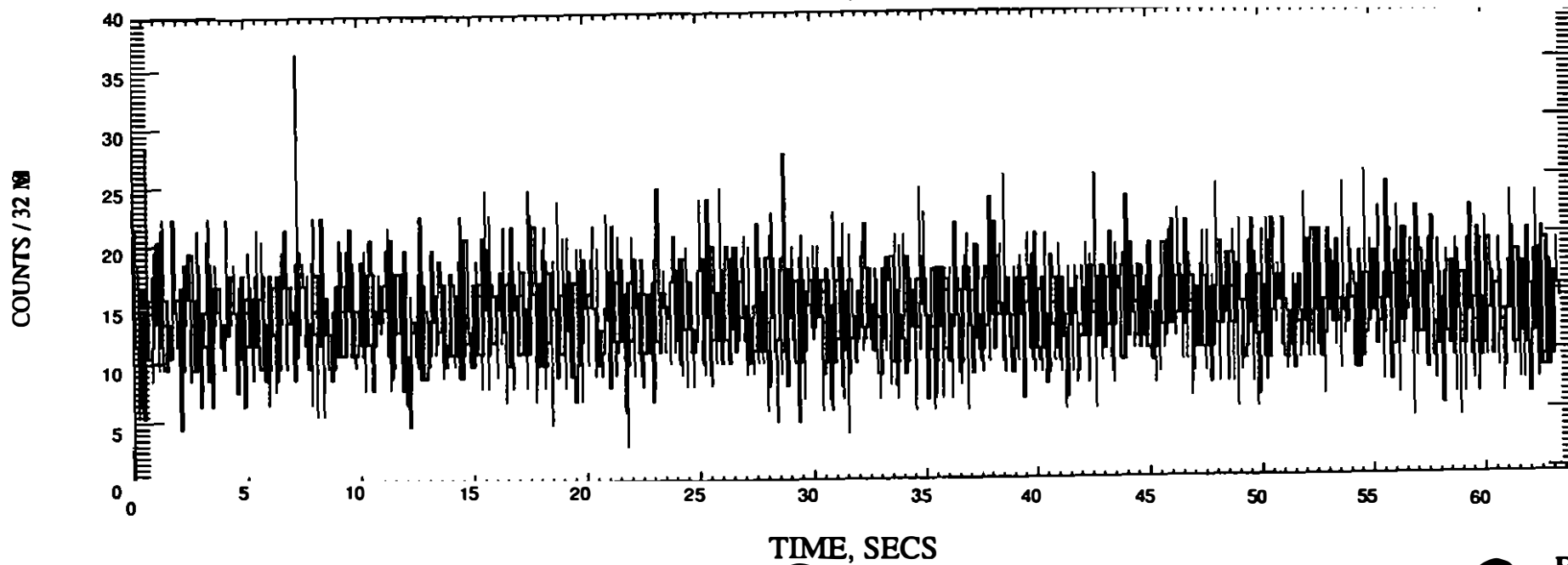
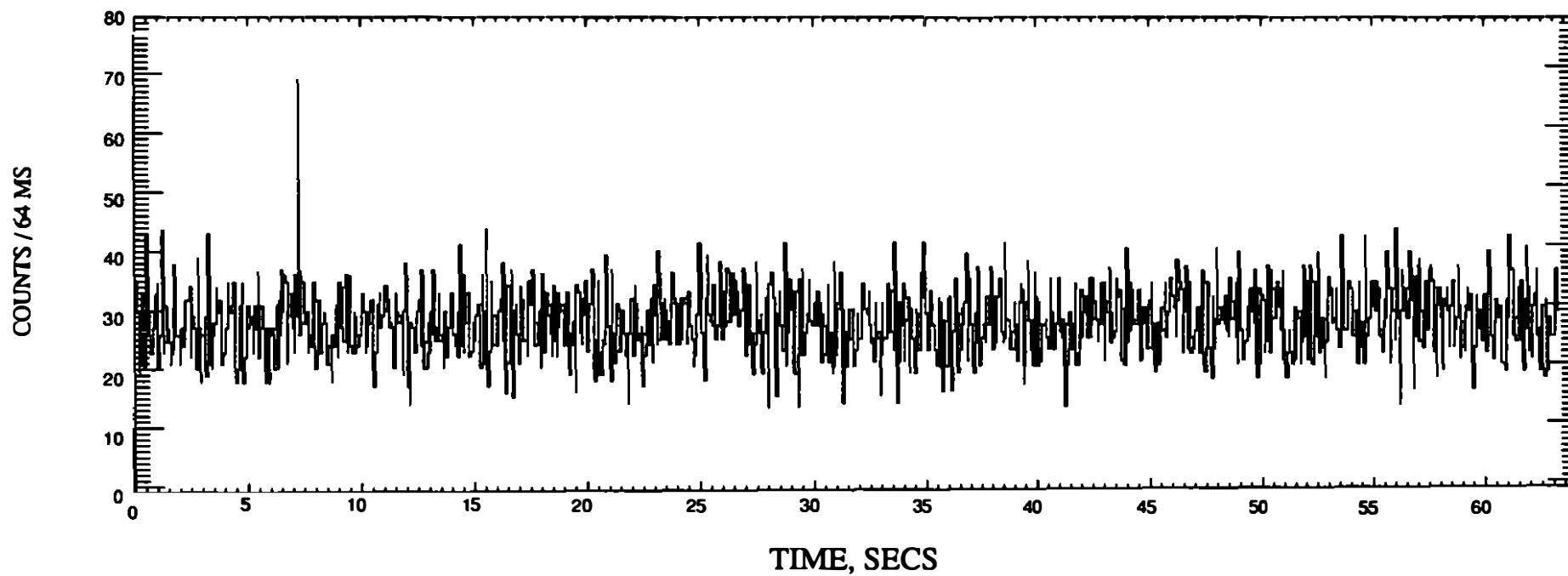
Plot created: 96/06/07, 1003

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

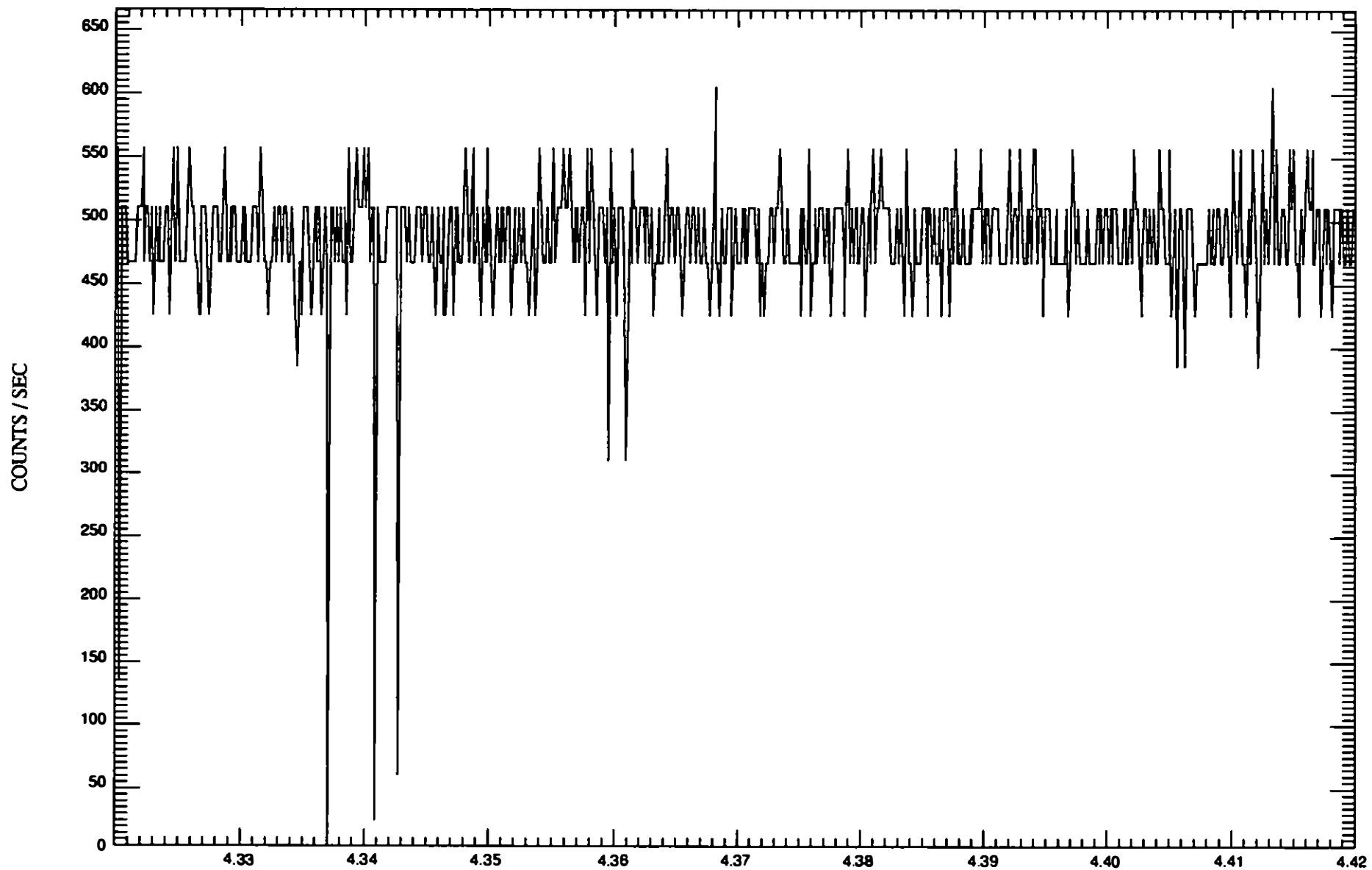
BURST NUMBER 14 - 15, 0



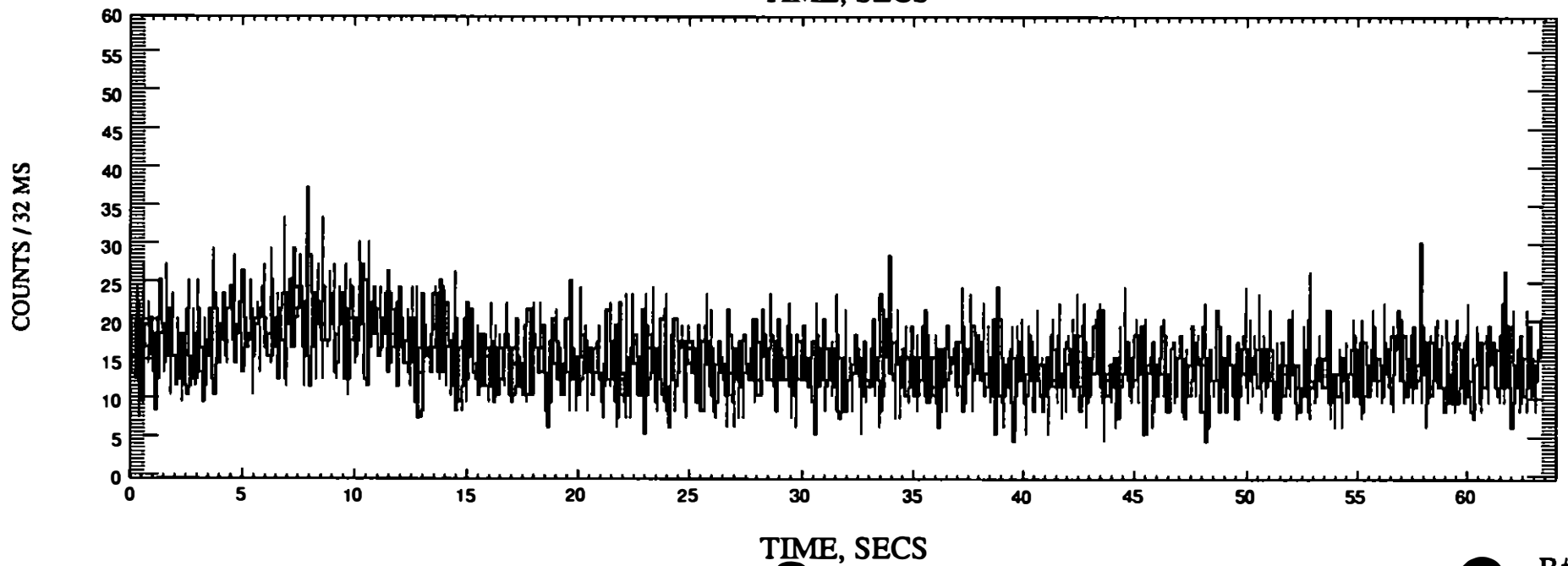
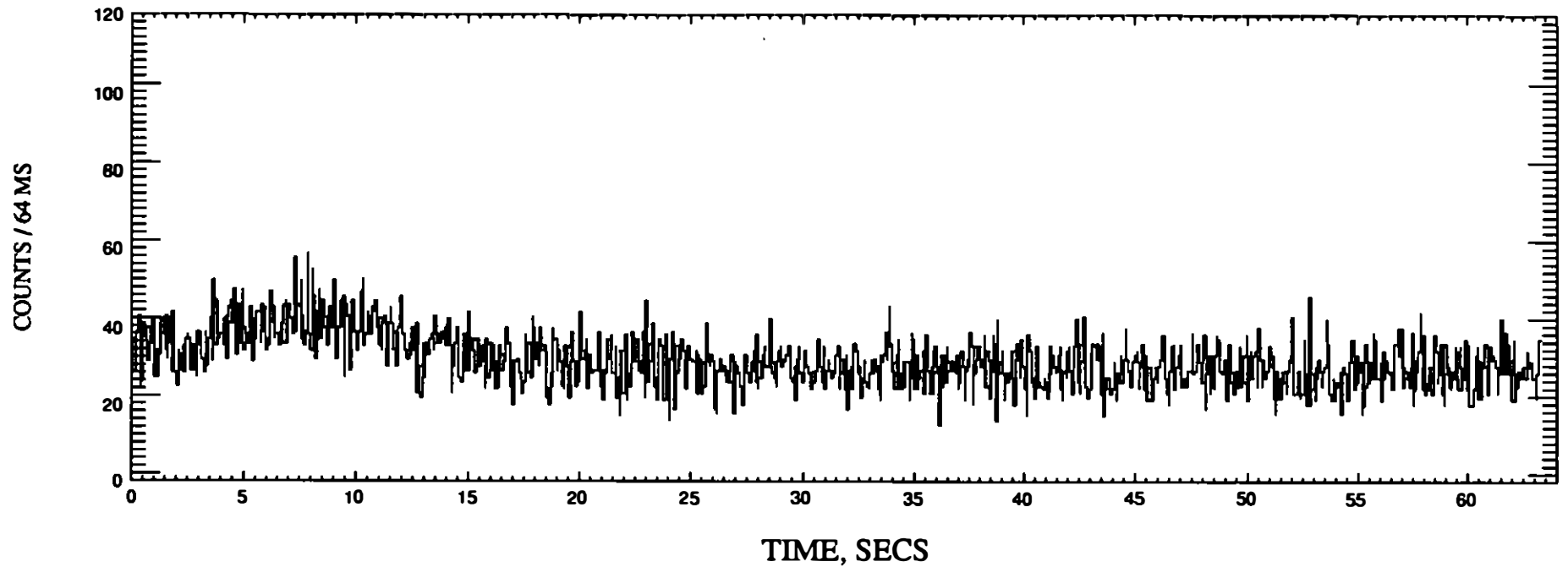
Burst Counter 14 at UT= 4.368261210124 h=15725.740 s 04:22:05.740



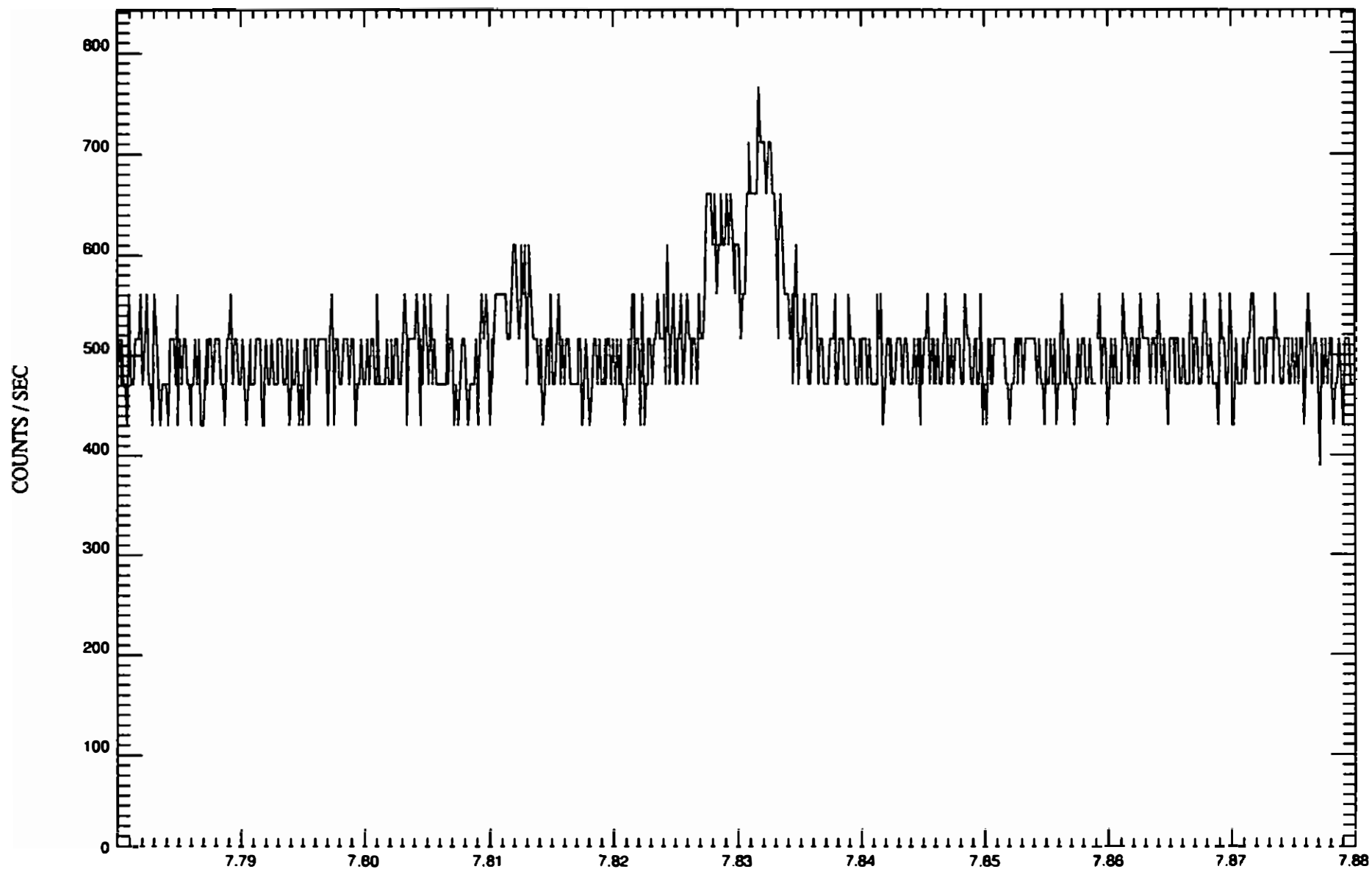
CALIBRATION DATA INCLUDED



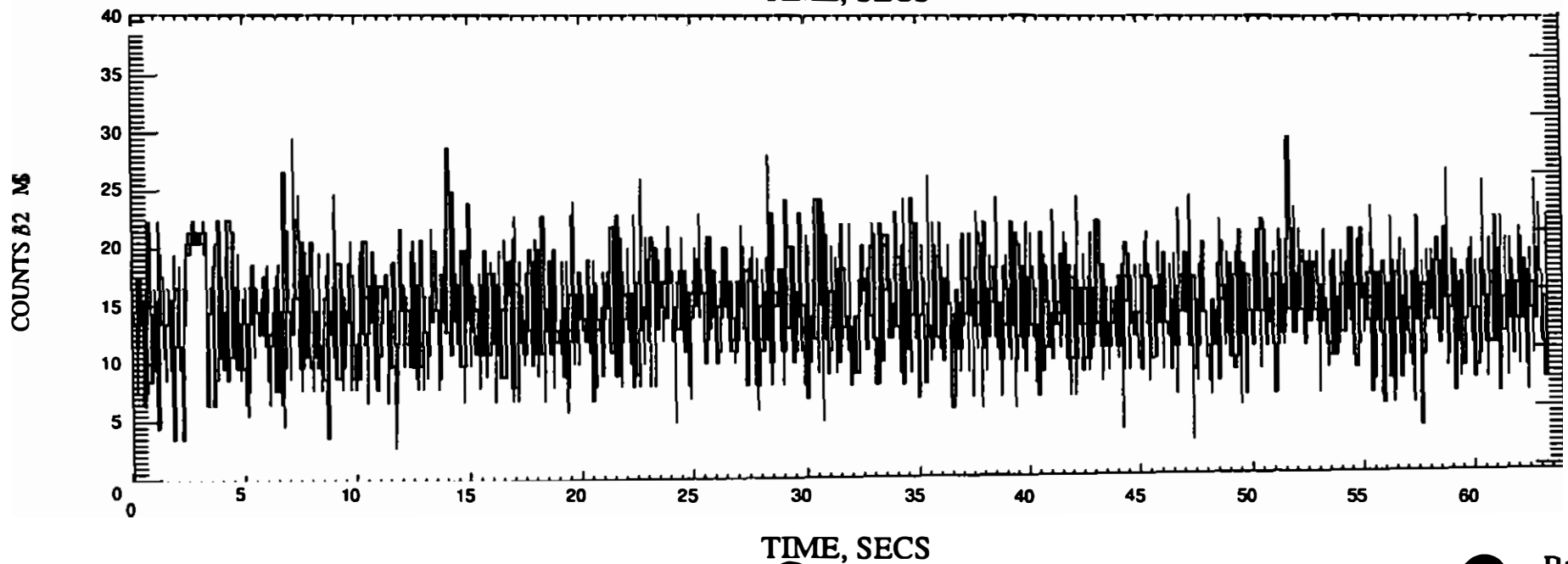
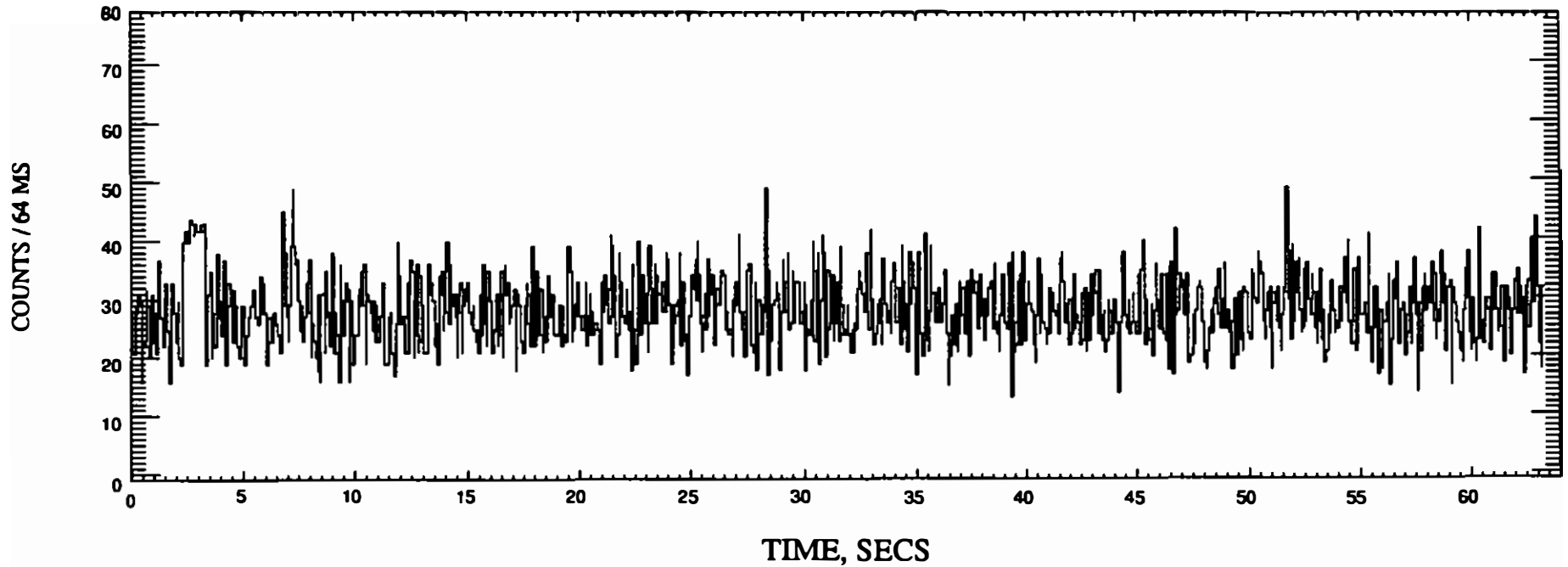
Burst Counter 15 at UT= 7.831813066271 h=28194.527 s 07:49:54.527



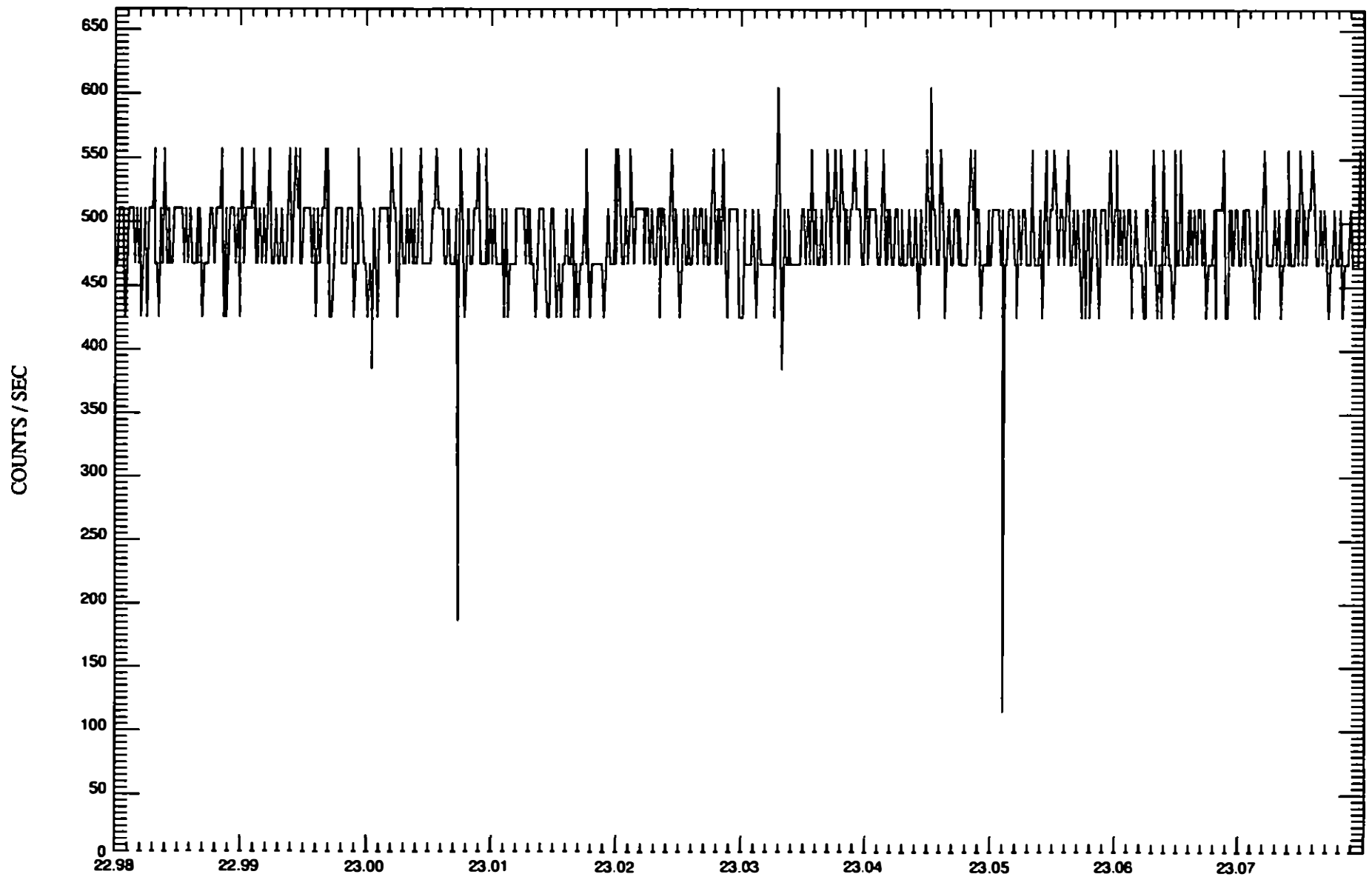
CALIBRATION DATA INCLUDED



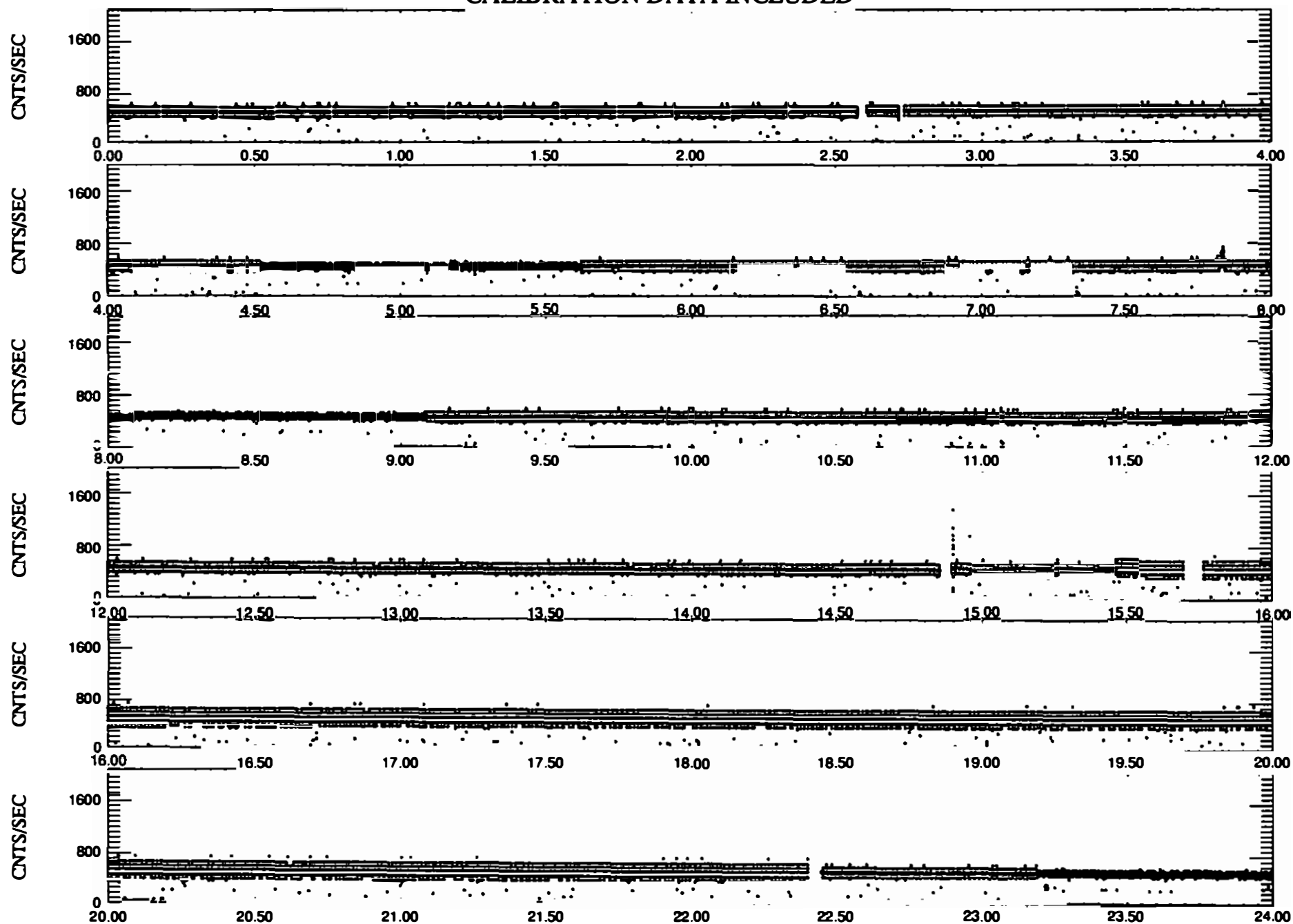
Burst Counter 0 at UT=23.033098420037 h=82919.154 s 23:01:59.154



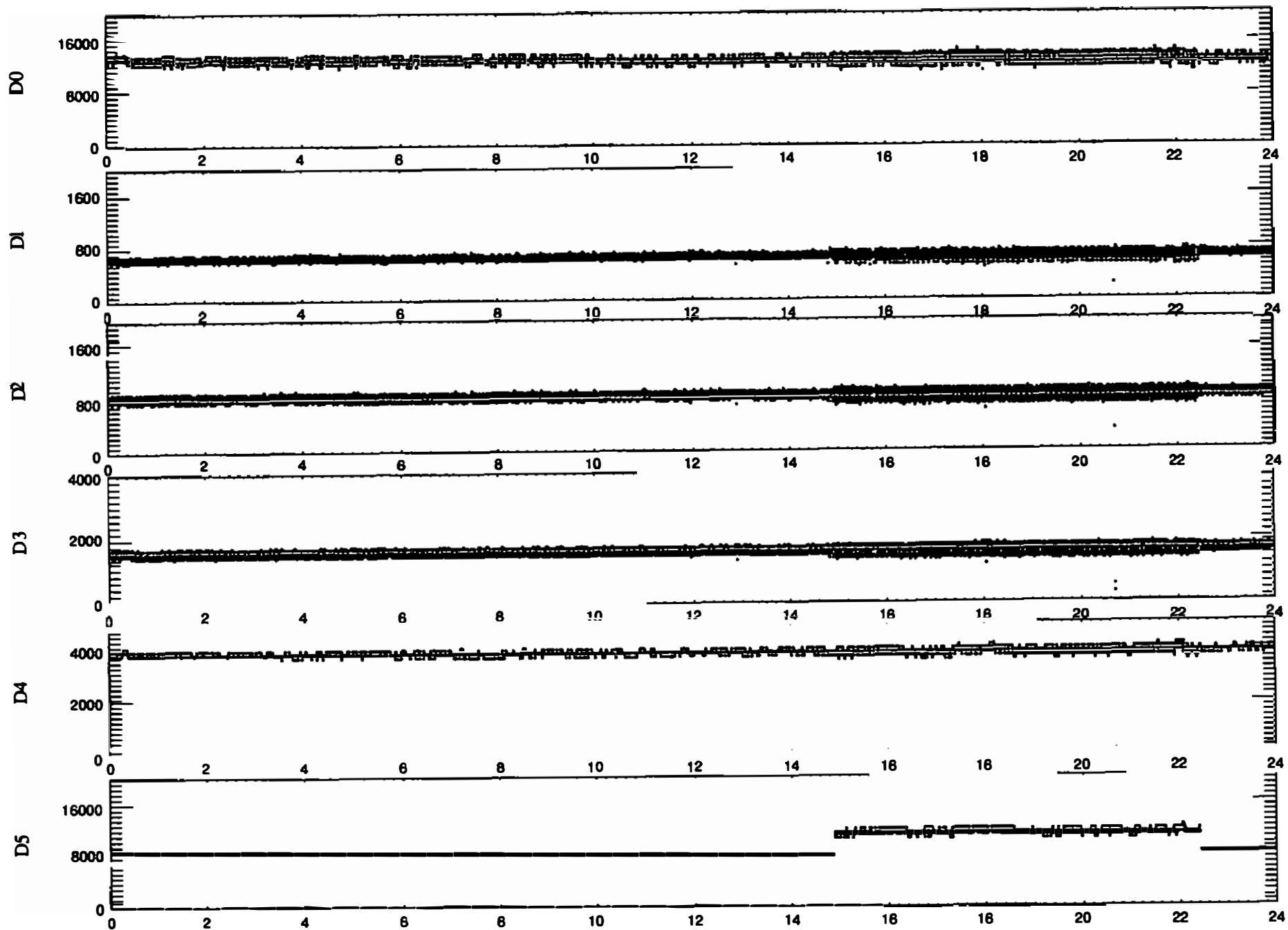
CALIBRATION DATA INCLUDED



CALIBRATION DATA INCLUDED

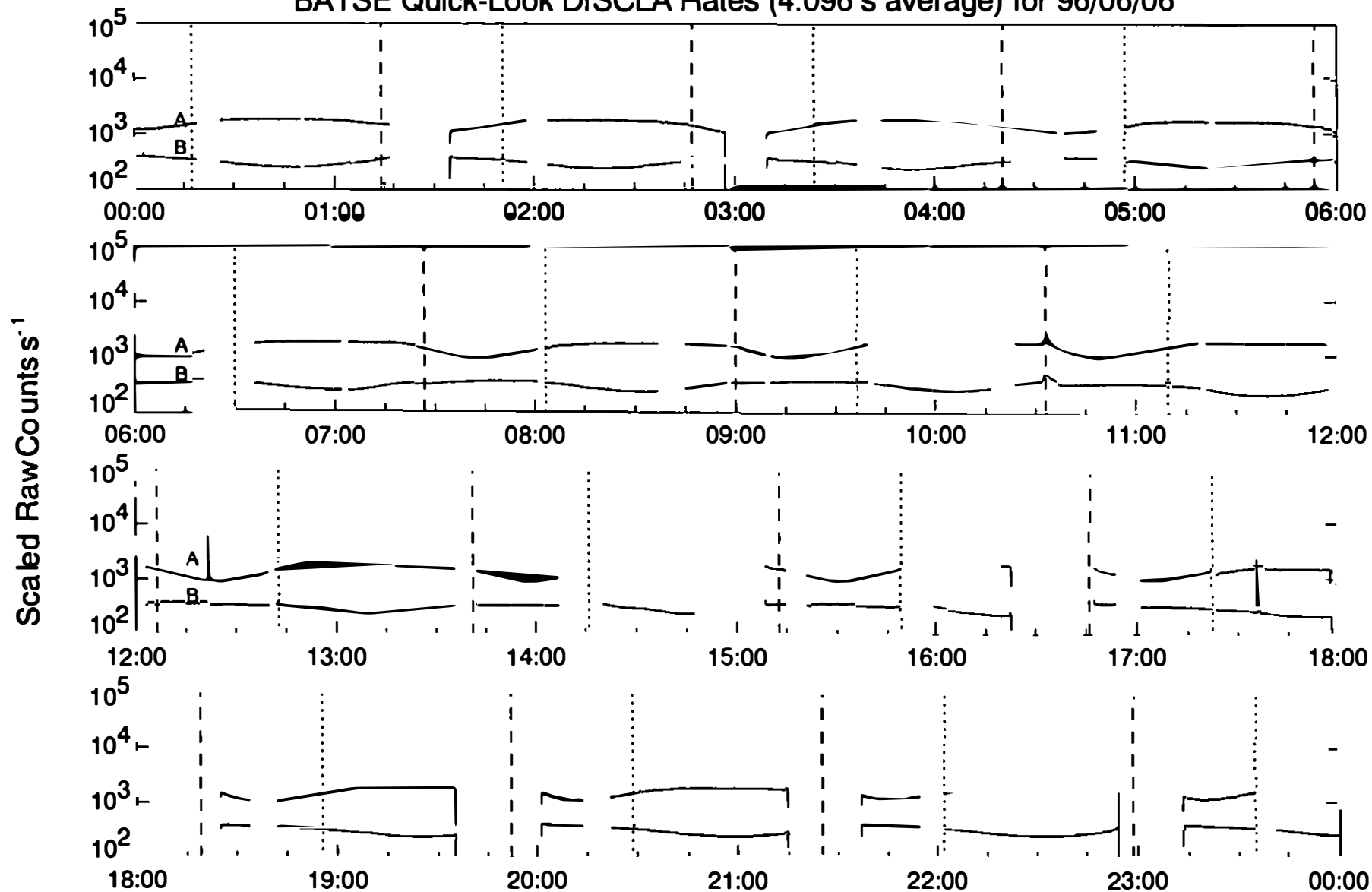


UNIVERSAL TIME



UNIVERSAL TIME

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/06



Current Time: 96/06/08, 1004 EDT

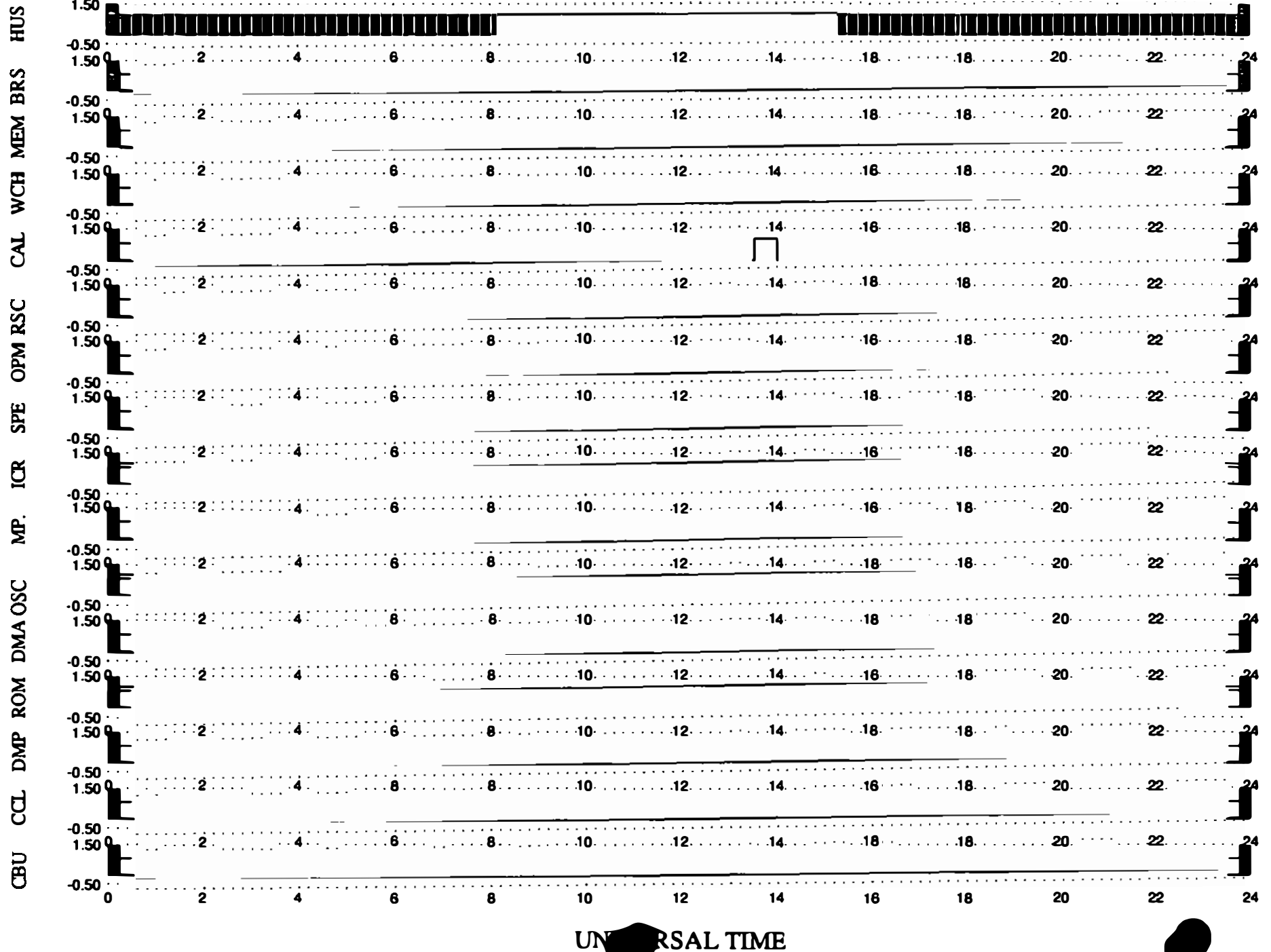
A: Channel 0 Most Sunward LAD

B: Sum Channel 0 Anti-Sunward LADs X .05

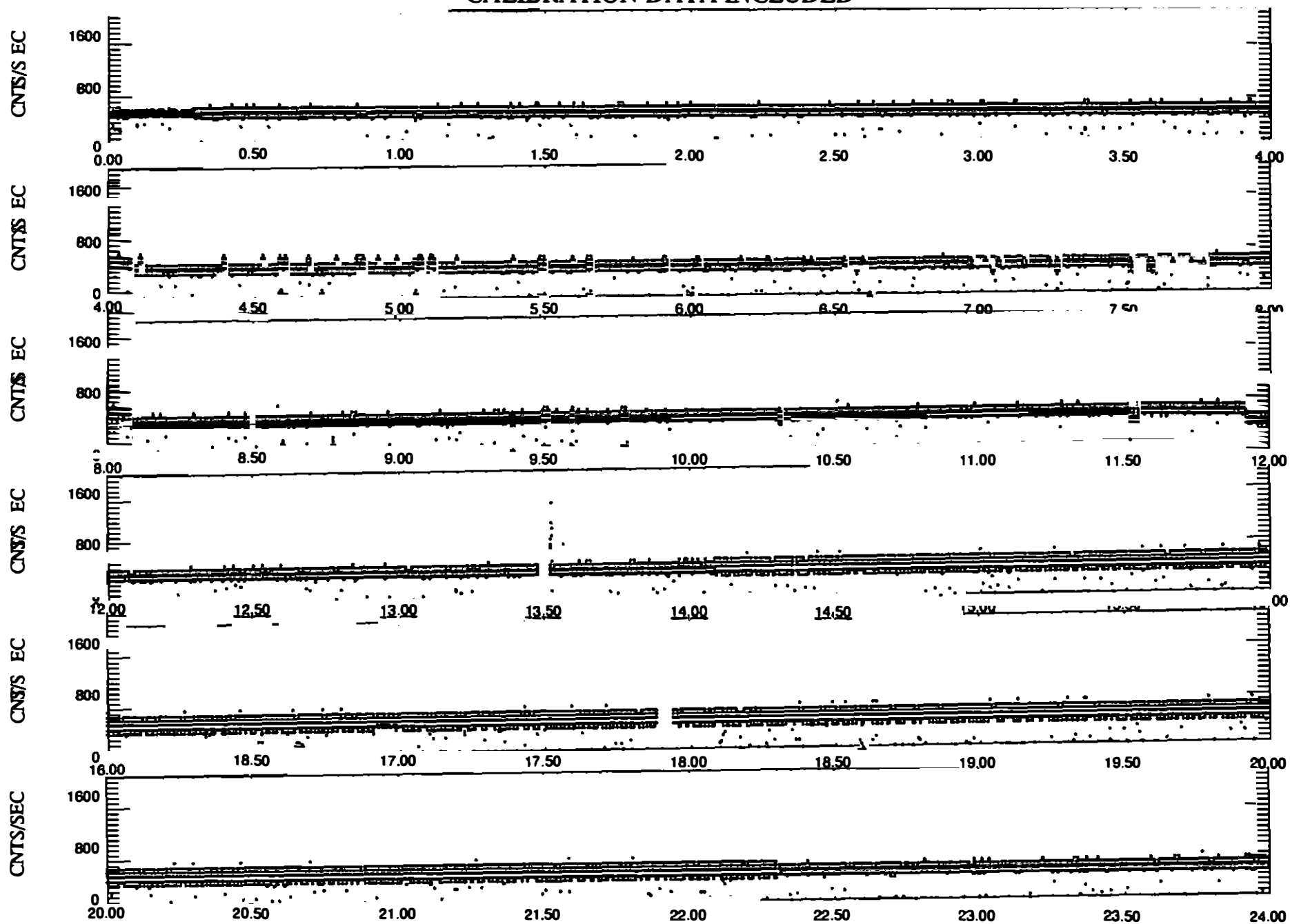
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

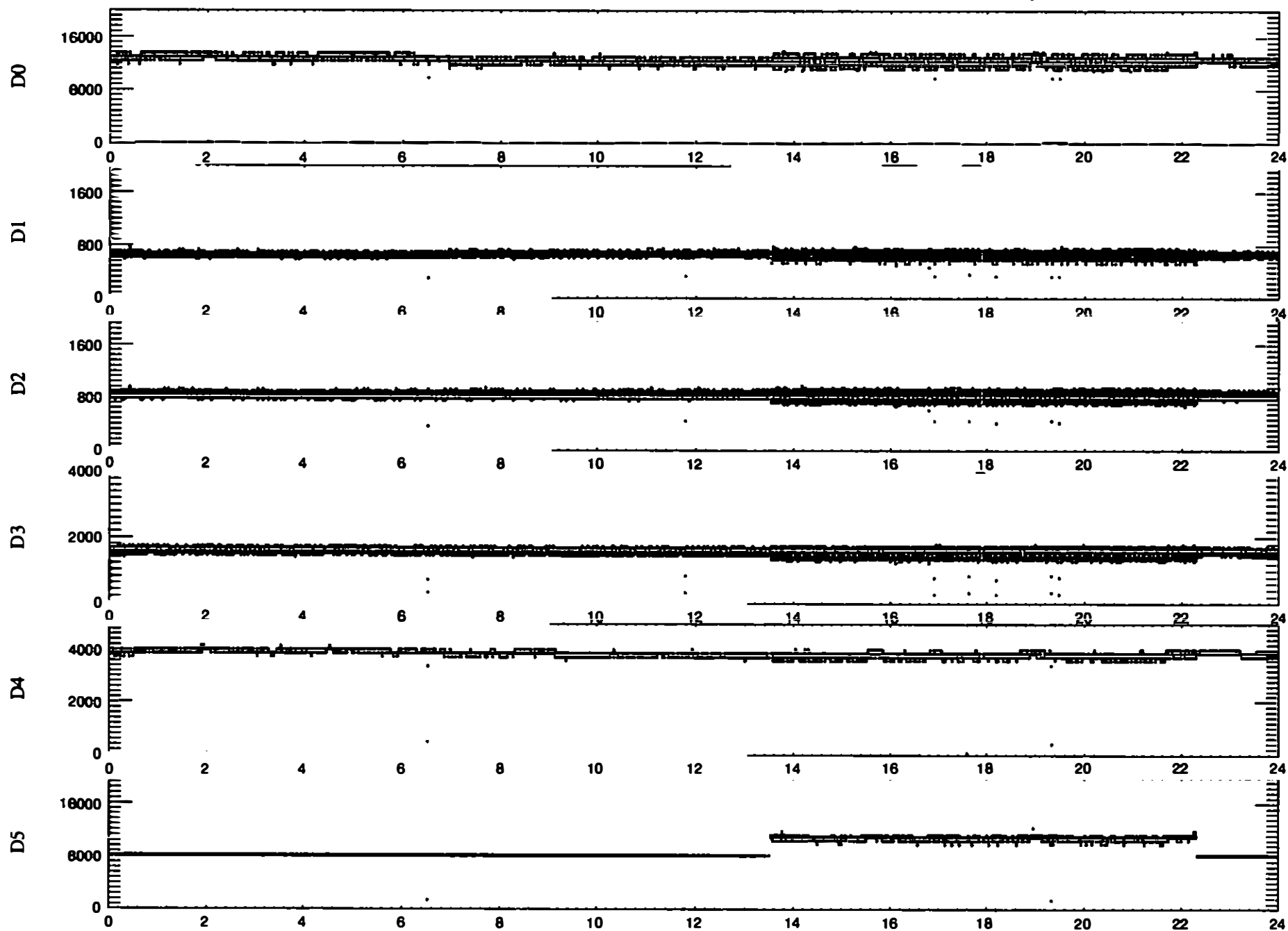
NO BURST (0)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From RICHARDSON@SSLLES.MSFC.NASA.GOV Tue Jun 11 09:29 PDT 1996
From: RICHARDSON@SSLLES.MSFC.NASA.GOV
Date: Tue, 11 Jun 1996 11:28:45 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5488

BATSEARCH PROGRAM

NO

BATSE BURST # 5488
EVENT OF 1996 JUN 7 DAY OF YEAR=159
EVENT CROSSING TIME AT BATSE : 22122. S. OR 06:08:42.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 299.000 -24.000
BATSE PEAK COUNTING RATE: 3300 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 7/ 6/ 96 IS:
RA= 149.754 DEC= 52.625 DIST= 4.283 AU
BATSE-ULYSSES DISTANCE = 640744218. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 36.89 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1709.38 SECS.
CROSSING TIME AT ULYSSES IS 23831. S. OR 06:37:11 +/- 298.71 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 7/ 6/ 96 IS:
RA= 53.688 DEC= 19.100 DIST= 2.361 AU
MARS-BATSE DISTANCE = 353167776. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 60.42 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 581.54 SECS.
CROSSING TIME AT MARS IS 22704. S. OR 06:18:23 +/- 186.70 SECONDS

BATSE BURST TRIGGER

NO.: 5488

TIME: TJD=0241 SECONDS=22122

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=84.9 AZIMUTH=155.1 ERROR=8.5 DEGREES

COMMENTS:

GRB. SHORT. FAST RISE WITH SLOWER DECAY. DUR.~ 0.5 SEC. NOT VISIBLE ABOVE 300KEV

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5488	960607	10241	22122	3300	299	-24	.5

BATSE BURST# 5488

ULYSSES RT

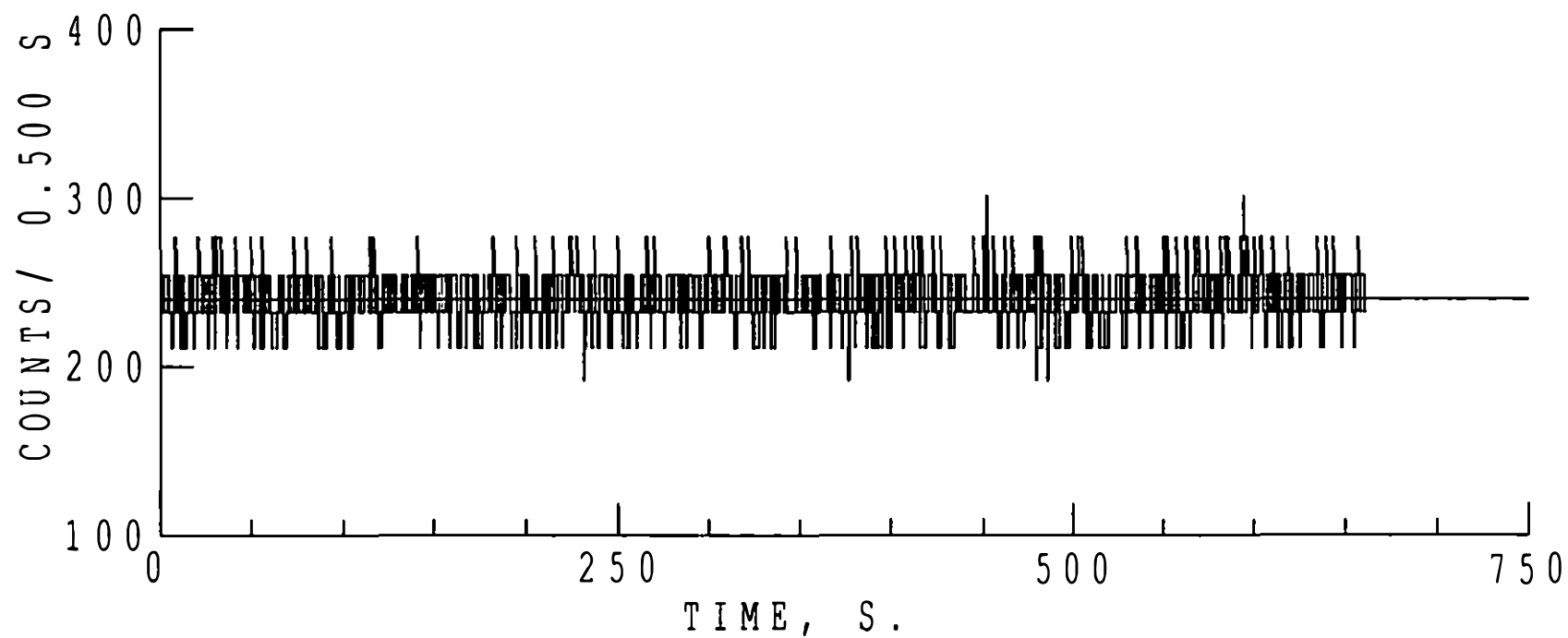
19/12/96

7/6/96 23400.400 s

0-0 keV

N=10 M=10
>4.0 SIGMA FLUCTUATIONS

N=10 M=2
>4.0 SIGMA FLUCTUATIONS



From RICHARDSON@ssl.msfc.nasa.gov Tue Jun 11 06:39 PDT 1996
Date: Tue, 11 Jun 1996 8:39:36 -0500 (CDT)
From: RICHARDSON@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5489

BATSEARCH PROGRAM

Trigger

BATSE BURST # 5489
EVENT OF 1996 JUN 7 DAY OF YEAR=159
EVENT CROSSING TIME AT BATSE : 78075. S. OR 21:41:15.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 48.000 75.000
BATSE PEAK COUNTING RATE: 31000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 7/ 6/ 96 IS:
RA= 149.843 DEC= 52.468 DIST= 4.293 AU
BATSE-ULYSSES DISTANCE = 642241750. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=137.19 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1571.64 SECS.
CROSSING TIME AT ULYSSES IS 76503. S. OR 21:15:03 +/- 278.88 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 7/ 6/ 96 IS:
RA= 53.688 DEC= 19.100 DIST= 2.361 AU
MARS-BATSE DISTANCE = 353167776. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=124.02 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-659.03 SECS.
CROSSING TIME AT MARS IS 77416. S. OR 21:30:15 +/- 159.52 SECONDS

BATSE BURST TRIGGER

NO.: 5489

TIME: TJD=0241 SECONDS=78075

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=141.2 AZIMUTH=26.0 ERROR=3.6 DEGREES

COMMENTS:

GRB. LOTS OF STRUCTURE. TOTAL DUR. ~ 240 SEC. VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5489	960607	10241	78075	31000	048	+75	240

96	2	29	22445.141	S2	740	1520	550	0.3	0.5	8	250	Search RI	
96	3	5	33645.352	S1	440	390	70	>10	0.8	1.8	251	Search NO	
96	3	12	35074.697	S2	160	730	330	<0.25	0.2	0.1	252	Search NO	
96	3	19	51992.828	S1		800	970	>7	0.16	0.4	253	RI	5277
6	3	21	76321.803	S2	4600	4550	1020	0.03	42	46	254	Trig	5293
6	3	22	19642.728	S1	1060	1760	1120	40	2	28	255	Trig	5304
96	3	24	80064.124	S2	320	520	150	0.07	1	14	257	Search RI	
96	3	25	69892.978	S1	250	620	460	6	0.5	0.5	258	NO	5339
96	3	31	21208.784	S1	220	520	120	4.4	2	24	271	RI	5389
96	4	4	25289.264	S2	420	750	240	0.07	4	9	272	Search RI	
96	4	9	77143.618	S2	650	1170	420	0.17	0.5	5	273	RI KA	5419
96	4	10	80648.201	S2	190	330	140	<0.05	1	35	274	Search RI	
96	4	18	06106.854	S1	200	330	70	1	2	2	277	RI KA	5413
96	4	18	08271.303	S2	350	770	50	<0.1	3	30	278	Search NO	
96	4	18	66796.140	S1	1160	1000	50	10	1	3	290	Trig	5436
96	4	20	17324.809	S2	300	1190	1080	1	0.3	0.04	303	Search RI	
96	4	22	59981.190	S2	160	410	140	0.5	4	12	305	RI	5443
96	4	25	86395.862	S2	1300	730		<0.04	44	16	306	Search RI	
96	4	28	47556.501	S2	270	420	230	<0.04	1	170	307	RI	5450
96	4	30	49895.524	S1	250	640	180	8	8	18	309	RI KA	5451
96	5	1	31344.546	S1	380	870	350	3.7	20	56	310	Search RI	
96	5	6	47384.998	S1	160	490	190	1.1	3	6	312	Search RI	
96	5	7	44869.909	S2	460	760	290	0.03	20	98	313	Search RI	
96	5	10	38723.598	S2	560	1300	330	0.1	1	7	317	Trig	
96	5	19	14766.283	S2	1700	7700	8000	0.4	0.1	0.56	319	Search NO	
96	5	21	62489.430	S1	330	500	90	5.8	1	8	320	Search RI	
96	5	23	59522.013	S1	270	550	580	10	1	3	321	RI	5473
96	5	29	43663.061	S2	1700	4000	5000	0.15	0.5	3.5	322	Trig	5477
96	5	29	80722.705	S2	420	620	140	0.1	1	14	323	Trig KA	
96	5	30	62300.750	S1	180	400	110	>20	2	14	324	Search N/O	
96	5	31	06926.043	S1	300	440	120	4.7	50	7	325	Search RI	
96	5	31	73498.259	S2	1600	4250	2800	0.5	27	19	326	Trig	
96	6	2	42664.032	S1	1000	1450	1400	>2	0.3	0.03	327	Search NO	
96	6	5	29392.672	S1	400	950	410	1.3	2	87	328	RI	5486
96	6	7	78106.176	S2	890	1280	550	0.04	32	120	329	RI	5489
96	6	10	84502.254	S2	200	1000	1500	0.9	0.16	0.11	330	Search NO	
96	6	12	71198.677	S1	650	2800	2700	1.4	0.5	18	331	Trig	
96	6	14	67654.516	S1	80	1800	1600	1	0.18	0.1	332	Search NO	
96	6	17	76195.941	S1	350	560		>8	1	0.6	333	NO	5504
96	6	22	74906.054	S2	100	360	280	0.2	4	8	334	Search NO	
96	6	23	04734.229	S2	130	320	150	0.5	7	25	335	RI KA	5512
96	6	23	77186.871	S2	250	350	130	0.05	6	15	336	Search RI	
96	6	25	16949.252	S1	180	280	70	4.6	6	9	337	RI	5514
96	6	28	19224.223	S2	500	410	120	0.06	12	6	338	RI	5523
96	7	2	54698.284	S1	280	350	70	2.8	23	85	339	RI	5525
96	7	3	65443.861	S1	200	560	600	3	1	0.4	340	NO	5527
96	7	7	36999.311	S2	1600	1200		0.06	2	5	341	RI	5530
96	7	8	72577.095	S2	900	820	160	0.2	1	6	342	Search RI	
96	7	9	00246.641	S1	260	1000	400	0.95	15	4	343	Trig KA	
96	7	10	00662.014	S2	1800	4700	3600	0.13	0.5	48	345	Trig	
96	7	11	63757.543	S1	560	2400	900	1.25	0.5	19	346	Trig	
96	7	11	68451.869	S2	200	360	170	<0.07	2	41	347	Search NO	
96	7	22	25522.448	S2	360	650	170	0.27	17	151	348	RI	5548
96	7	22	56346.728	S1	700	1000	200	2.6	3	6	349	Search RI	
96	7	27	43056.737	S2	500	1000	500	0.7	0.5	15	350	Search RI	
96	7	31	20761.638	S2	800	1160	170	0.9	0.5	4	353?	RI	5557
96	8	3	67525.033	S1	4000	8000	3000	3	0.02	0.18	354	Trig KA	5561
96	8	4	84535.906	S2	2000	2600	600	<0.03	0.5	2	355	Trig KA	5563
96	8	5	78957.888	S2	1270	2360	380	0.05	1	20	356	Trig	
96	8	6	80989.772	S2	420	850	250	1	86	10	357	RI	5566

From isac.ernet.in!kmarar@vigyan.iisc.ernet.in Fri Jun 28 22:57 PDT 1996
Date: Sat, 29 Jun 1996 10:45:56 +0000 (CUT)
From: kmarar@isac.ernet.in
X-Sender: kmarar@se07
Hurley K <khurley@sunspot.ssl.berkeley.edu>
Subject: sross-c2
Mime-Version: 1.0

Dear Kevin

Sross-c2 detected two events as follows

June 5 at 08:11:04.9 UT

June 7 at 21:42:04.6 UT

Were they seen by Ulysses, Batse, Wind or others?

Krishnan

Helio corr removed

Date: Mar 11 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

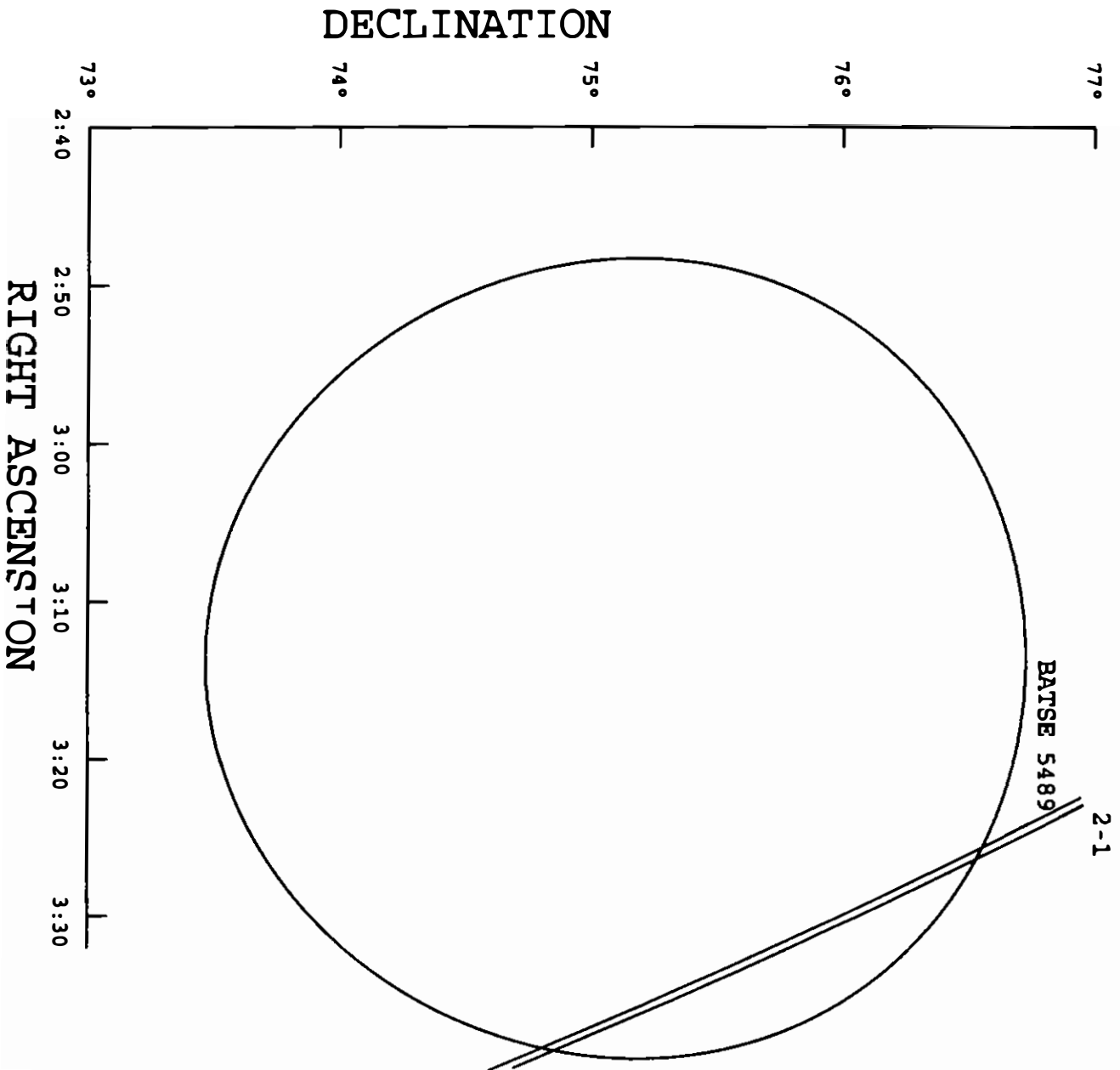
3. PVO Data

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

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

EVENT OF JUN 7, 1996 21:15

11/ 3/98



ULYSSES

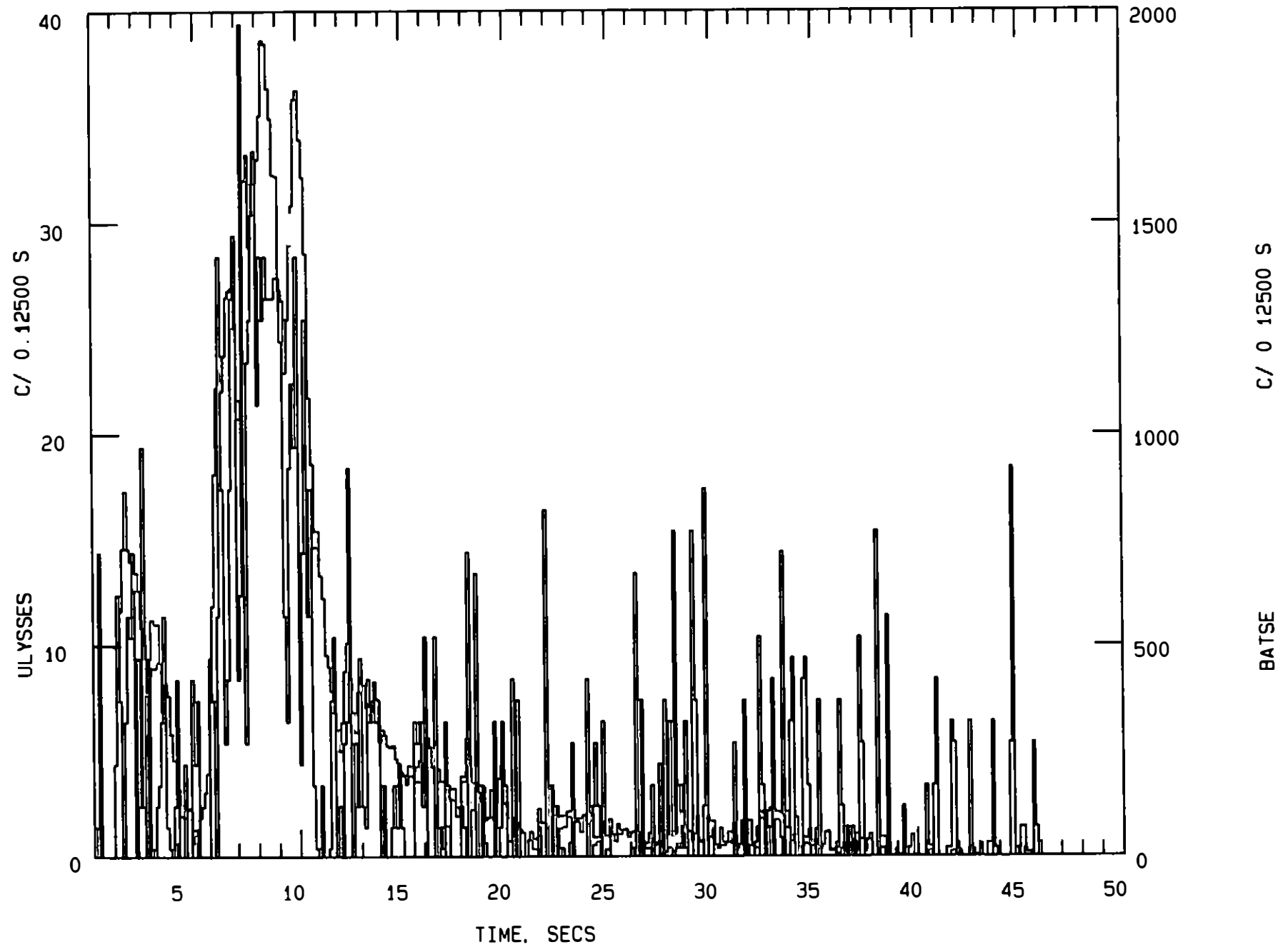
-BATSE

CORRELATION

07/06/96

76523.094

11/ 3/98



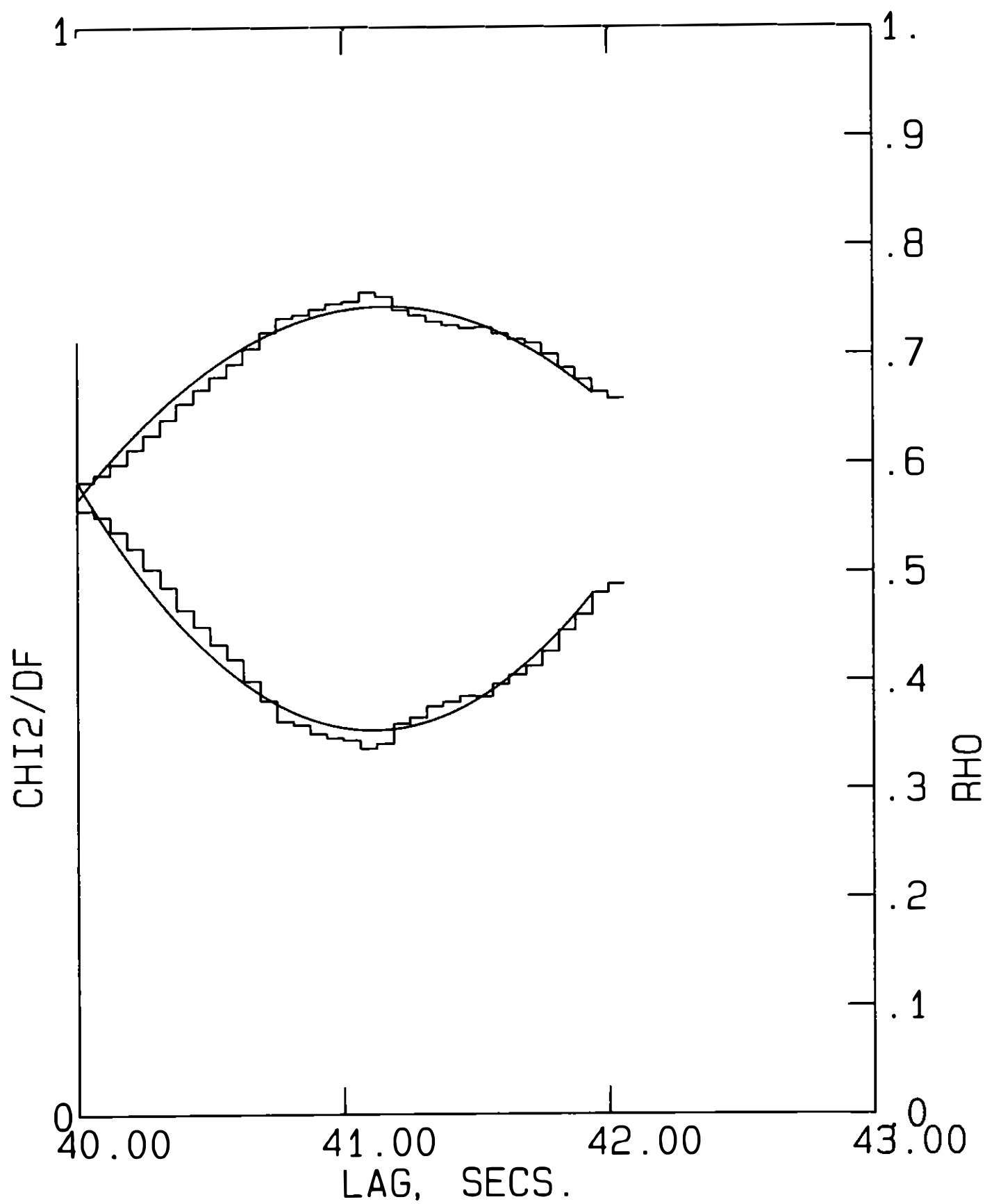
ULYSSES

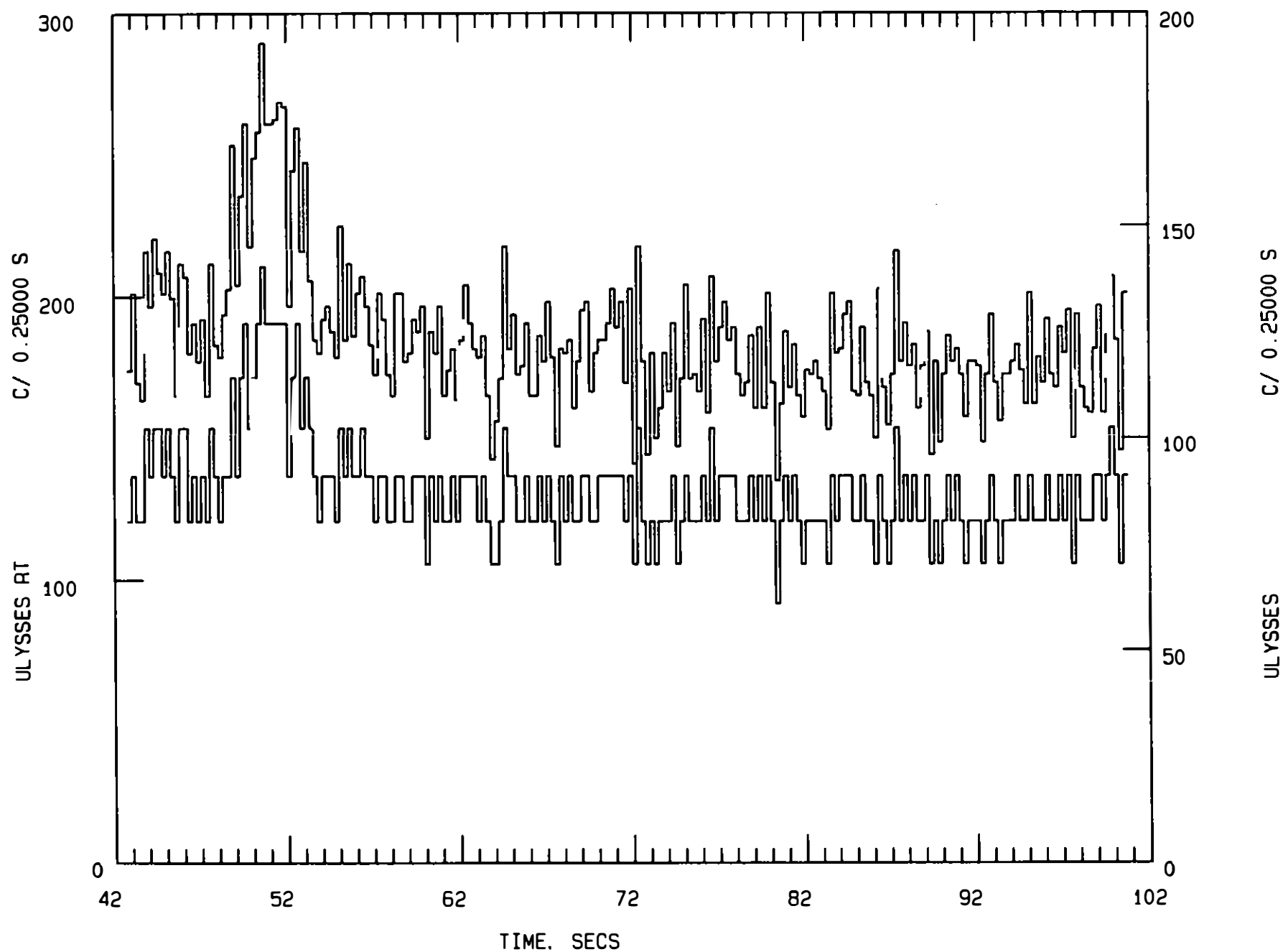
-BATSE

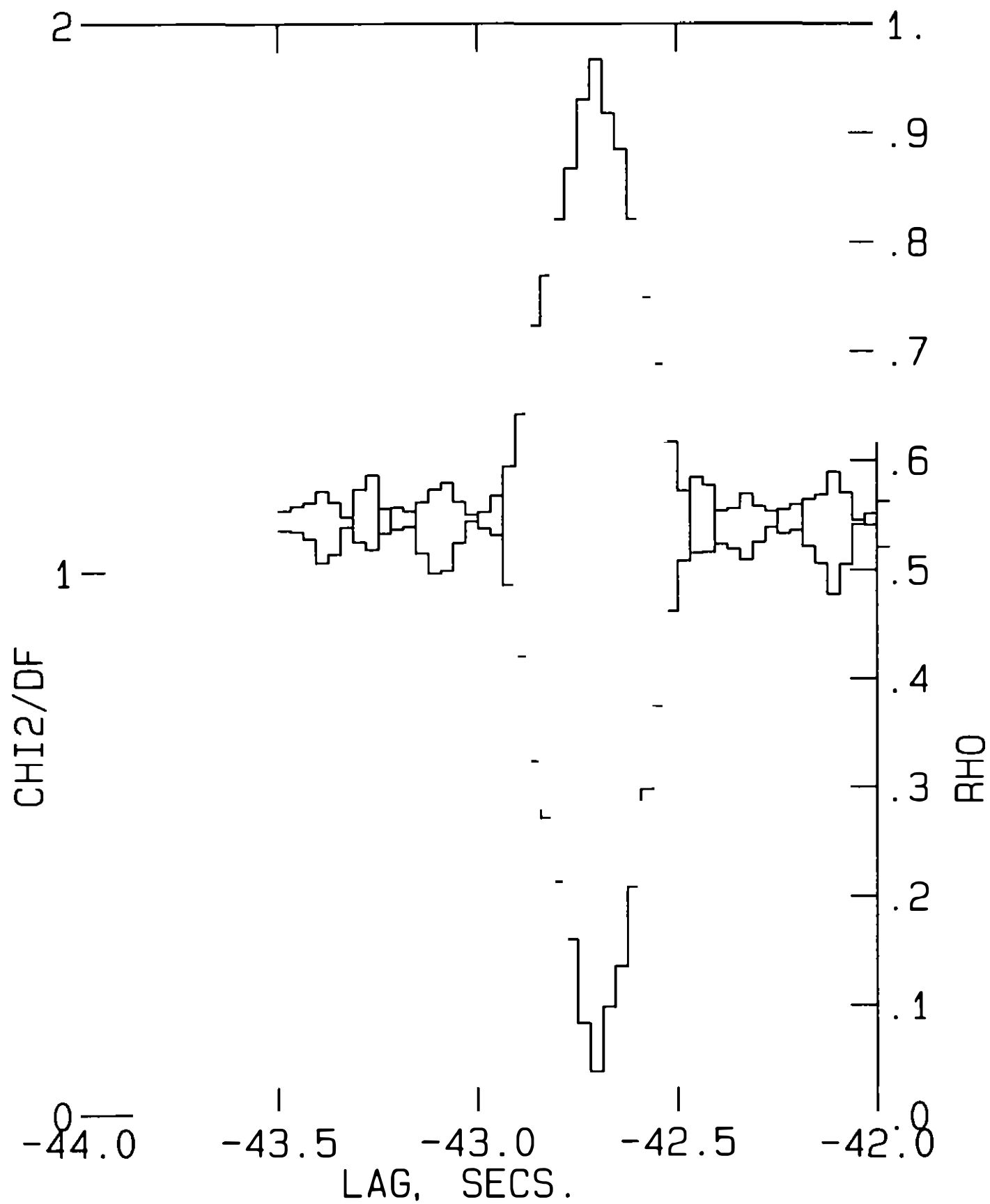
CORRELATION

07/06/96

76523.094



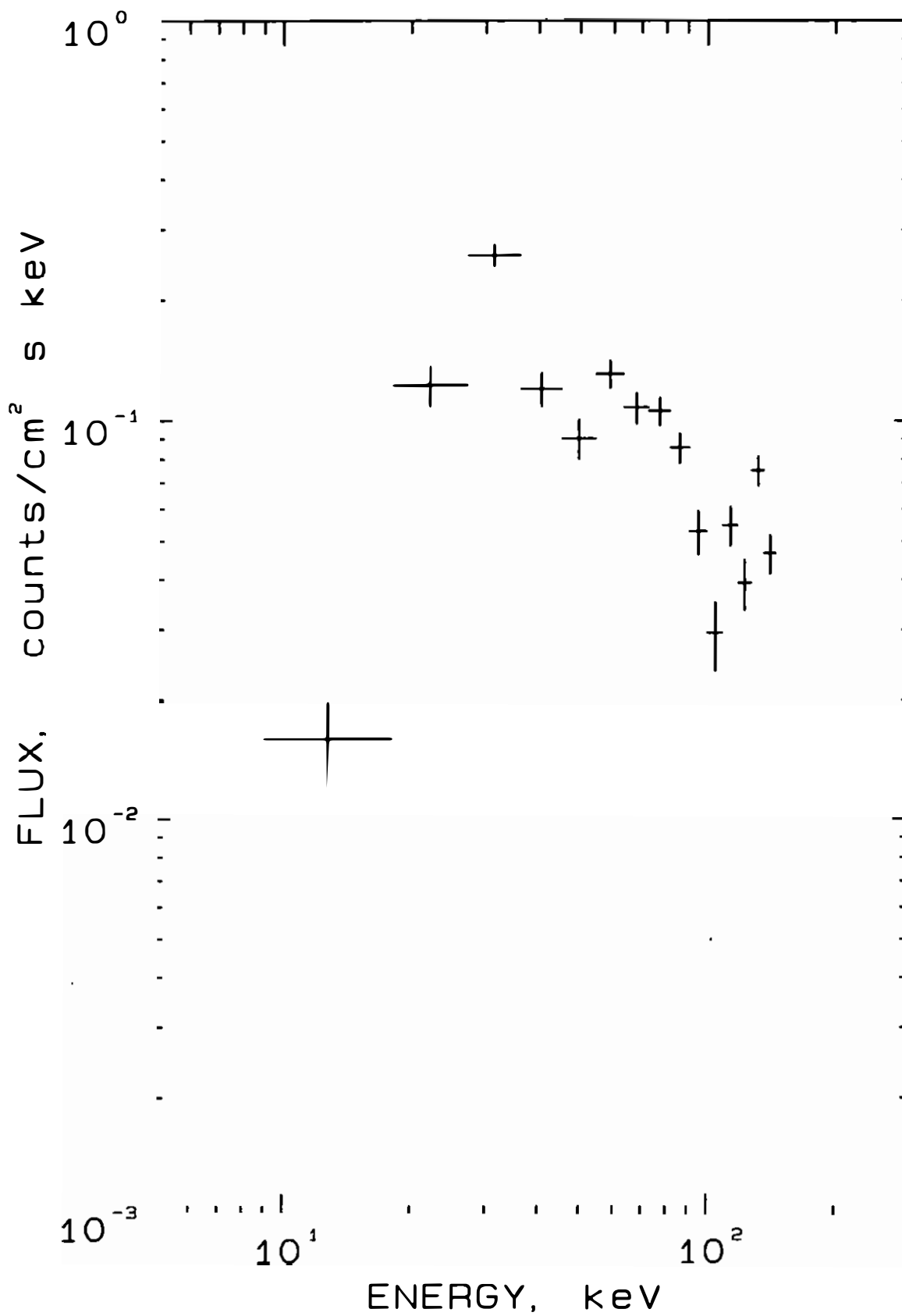




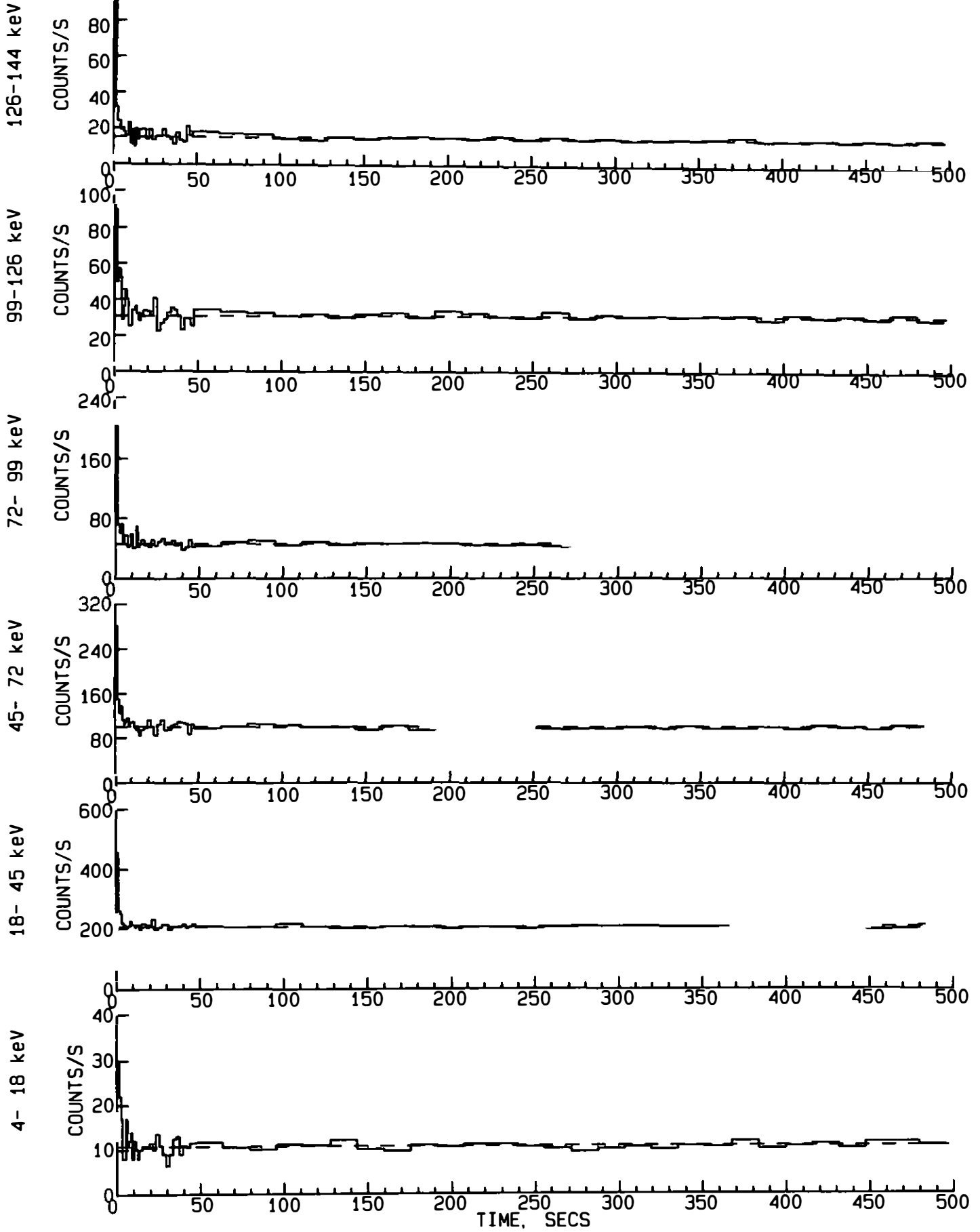
ULYSSES 07/06/96 76523.222

11/ 3/98

SPECTRUM INTEGRATED OVER 21.4 SECONDS. INTERVALS 2 TO 20



ULYSSES 07/06/96 76523.222 BURST SPECTRAL COUNT RATES



ULYSSES

07/06/96

Ttrig=76523.094

0- 0 keV

COUNTS/0.031 S

COUNTS/0.125 S

800-

600-

400-

200-

0

4

8

12

16

20

24

28

32

36

40

44

48

52

56

60

64

100-

200-

300-

400-

0

4

8

12

16

20

24

28

32

36

40

44

48

52

56

60

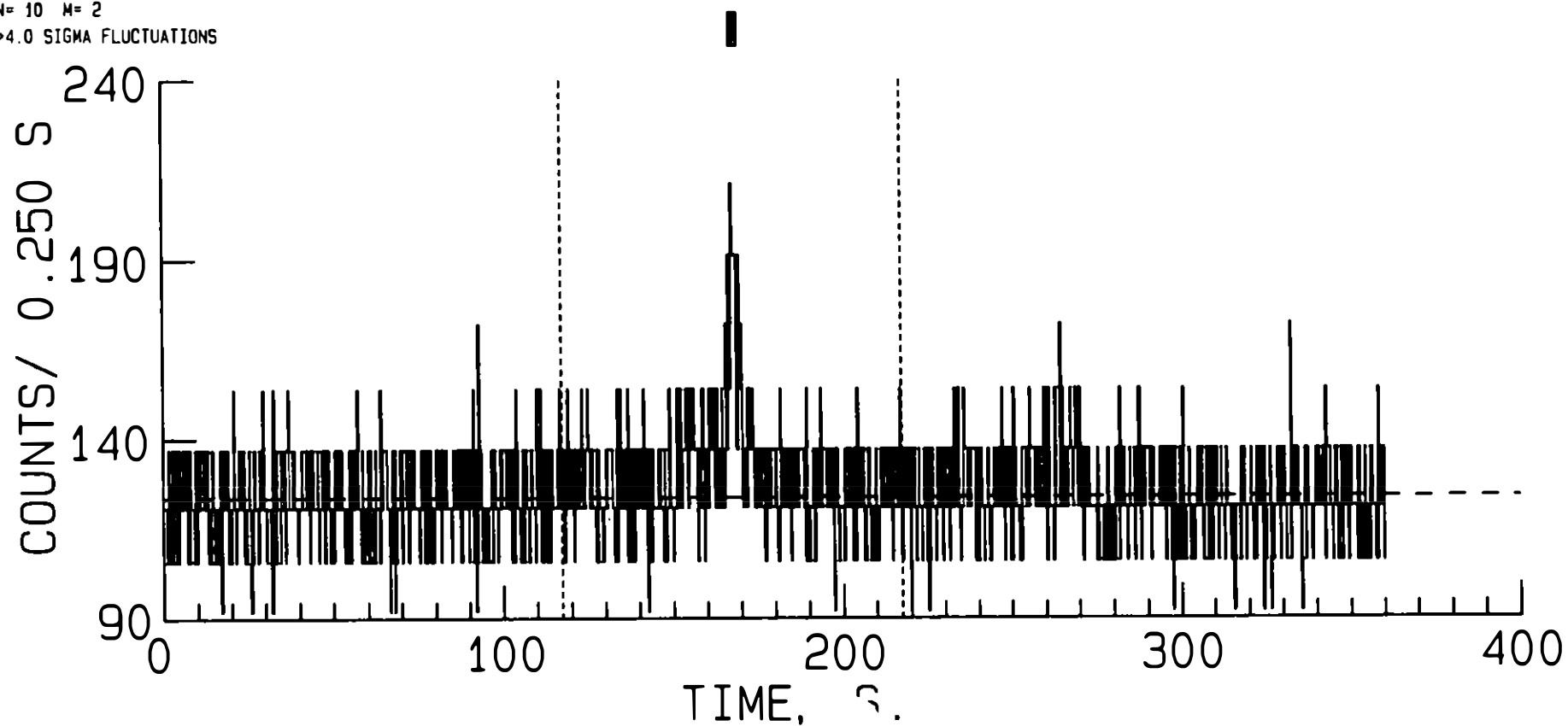
64

11 / 3 / **

ULYSSES RT
7/ 6/96 76356.105 s
21- 145 keV

11 / 3/98

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



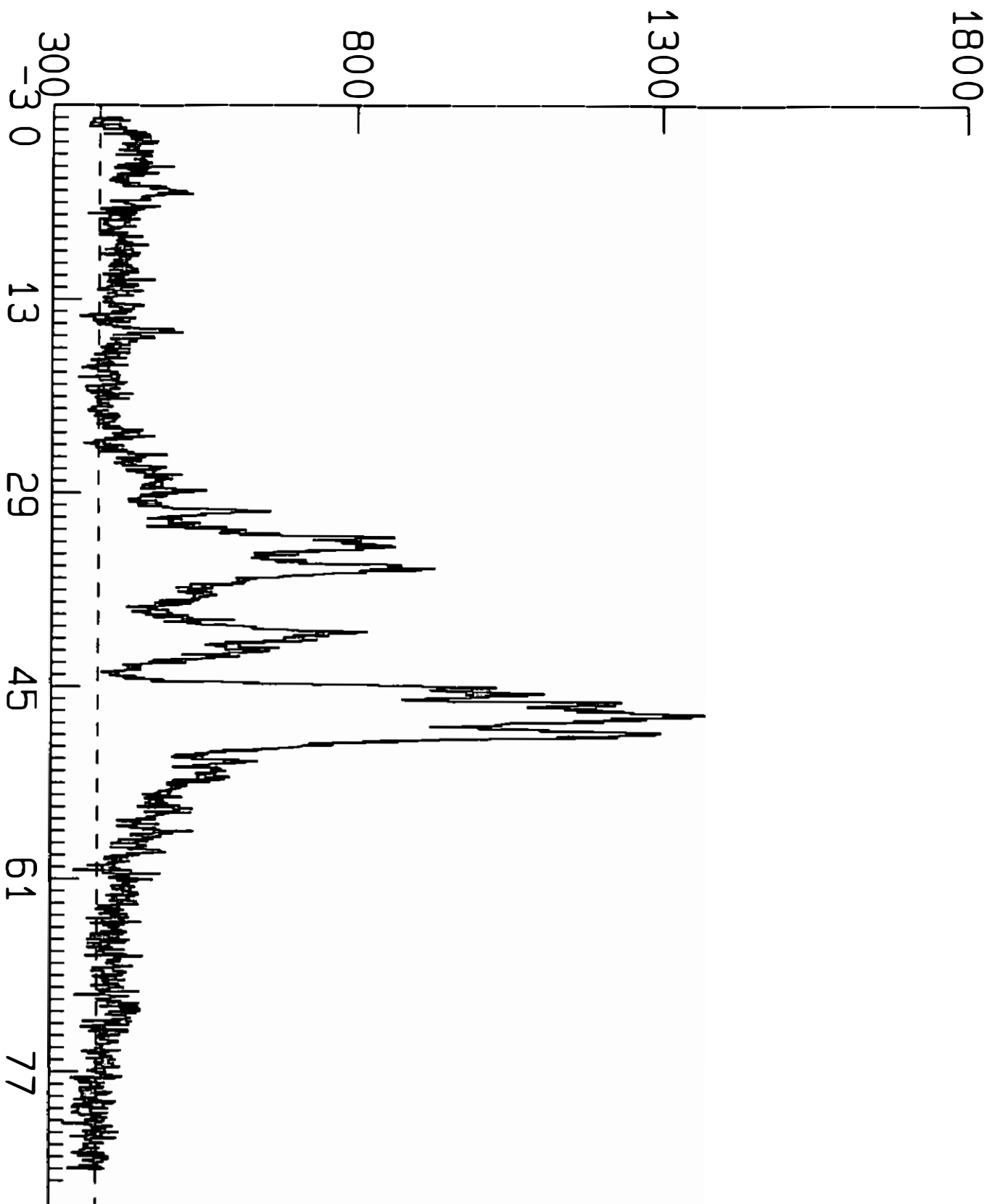
BATSE

07/06/96

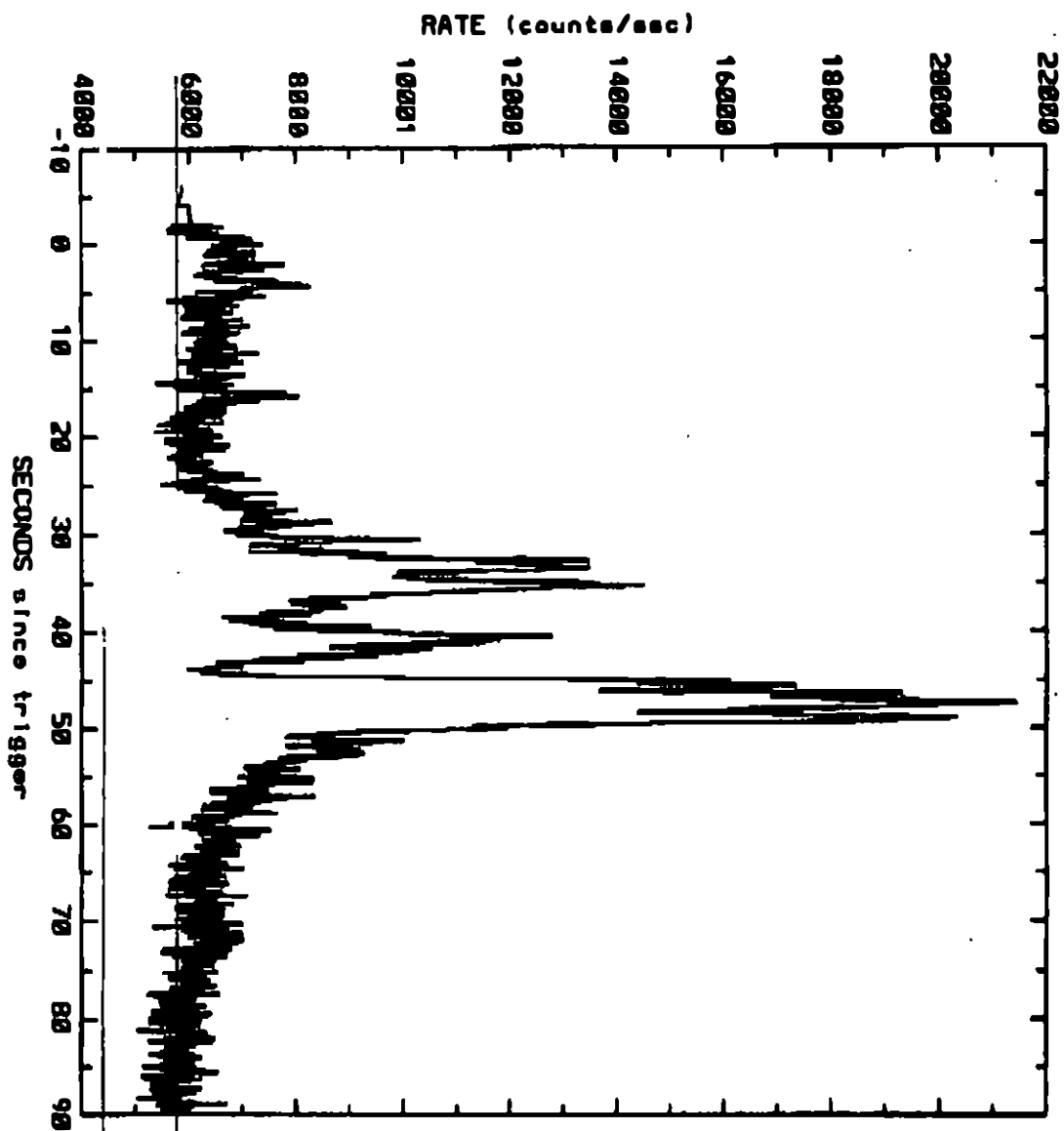
78075.594

25- 100 keV

COUNTS/0.064 S



DISCSC Data for K. Hurley. No. 5489



19-JUN-1996 12:53:53

Created by RUPB EO
(Burst Display)
Version 12.25

Trigger # : 5489

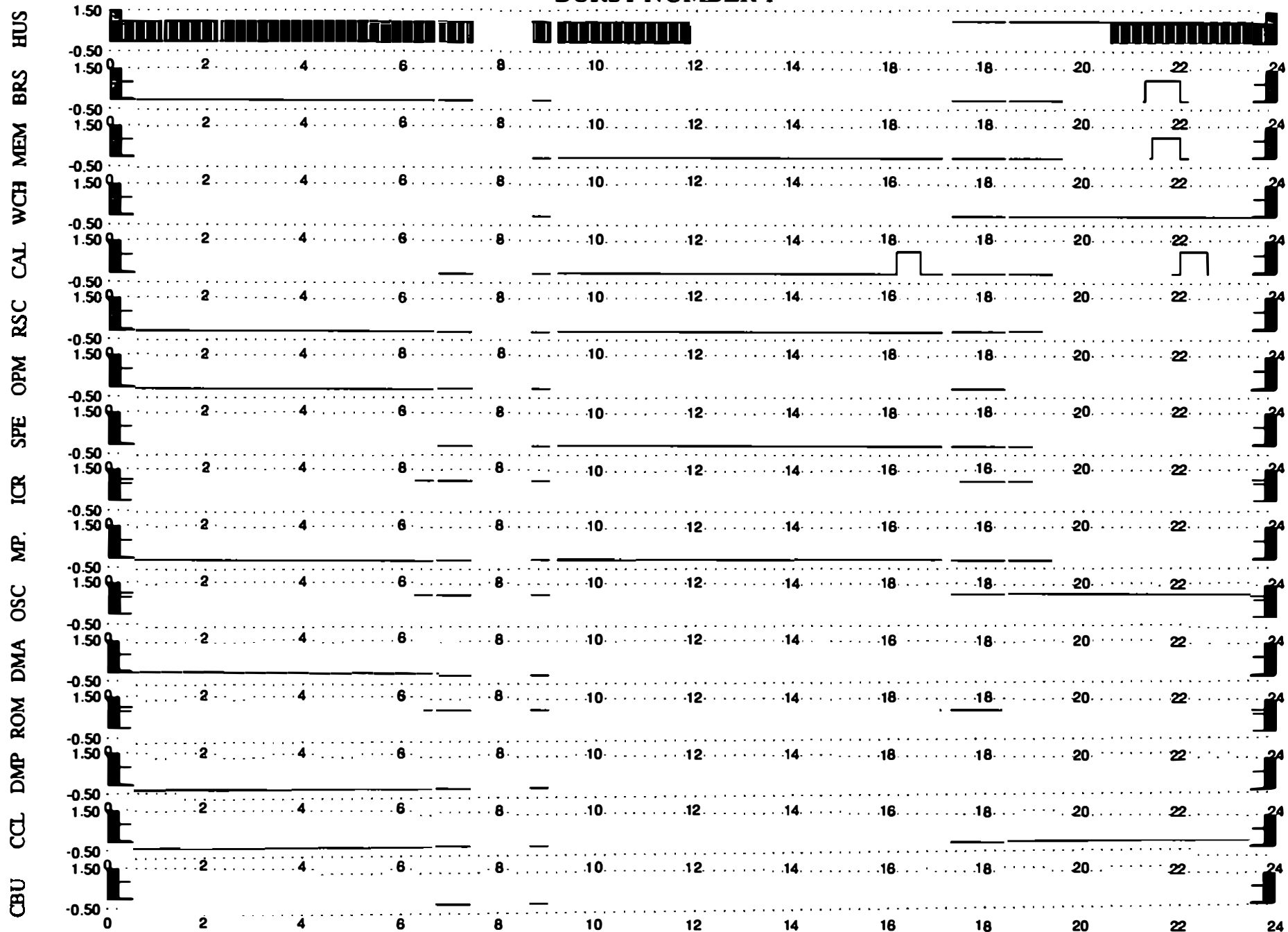
Trigger Time:
19241 / 76075.594Burst Data Type:
016CSCDeadTime
Corrected: NBackground Data
Type: P003 + DISCLAMinimum Integ. Time:
0.064 sec (nd/c)

Data Range [7..8].

---3-1-

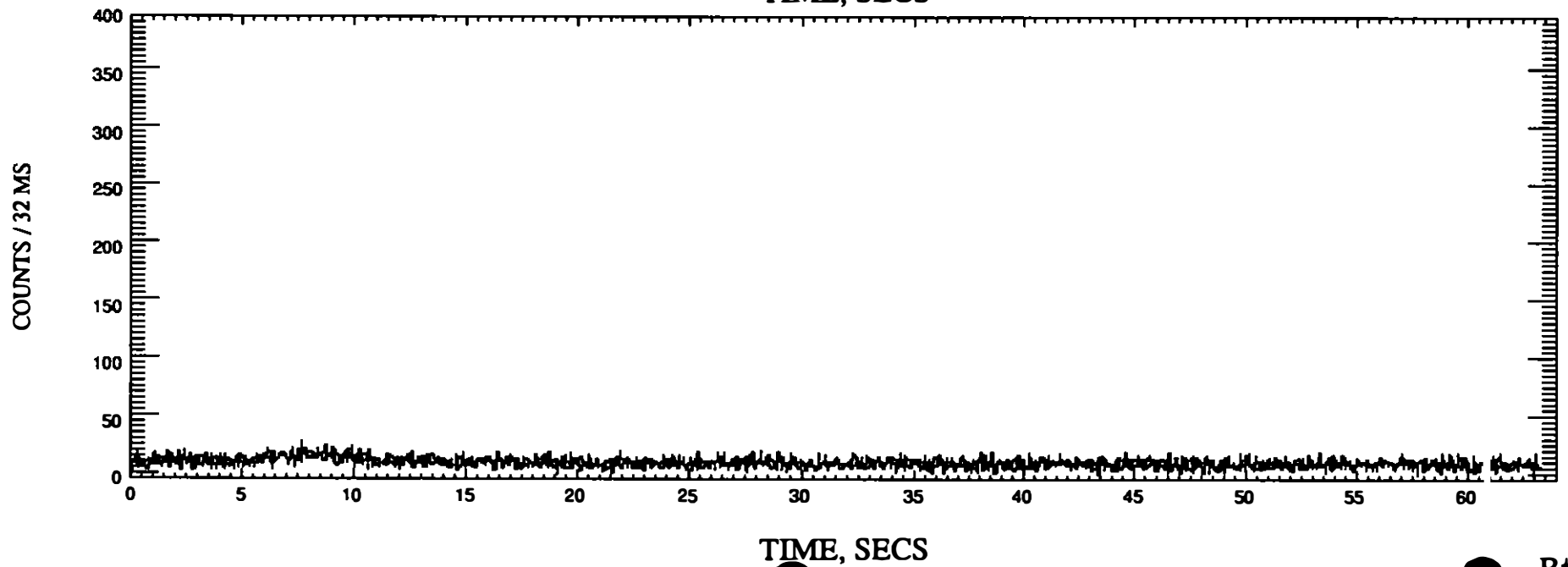
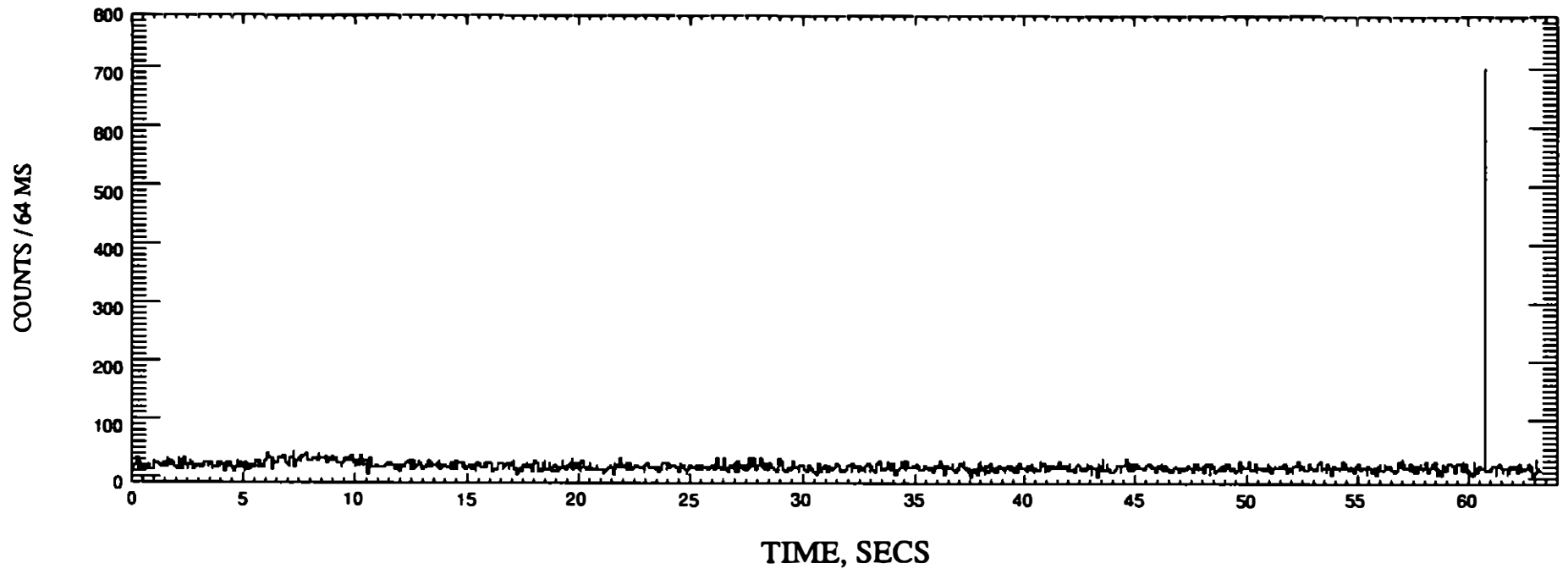
Discrimination:
(1..2)Quality Mask:
801501

BURST NUMBER 1

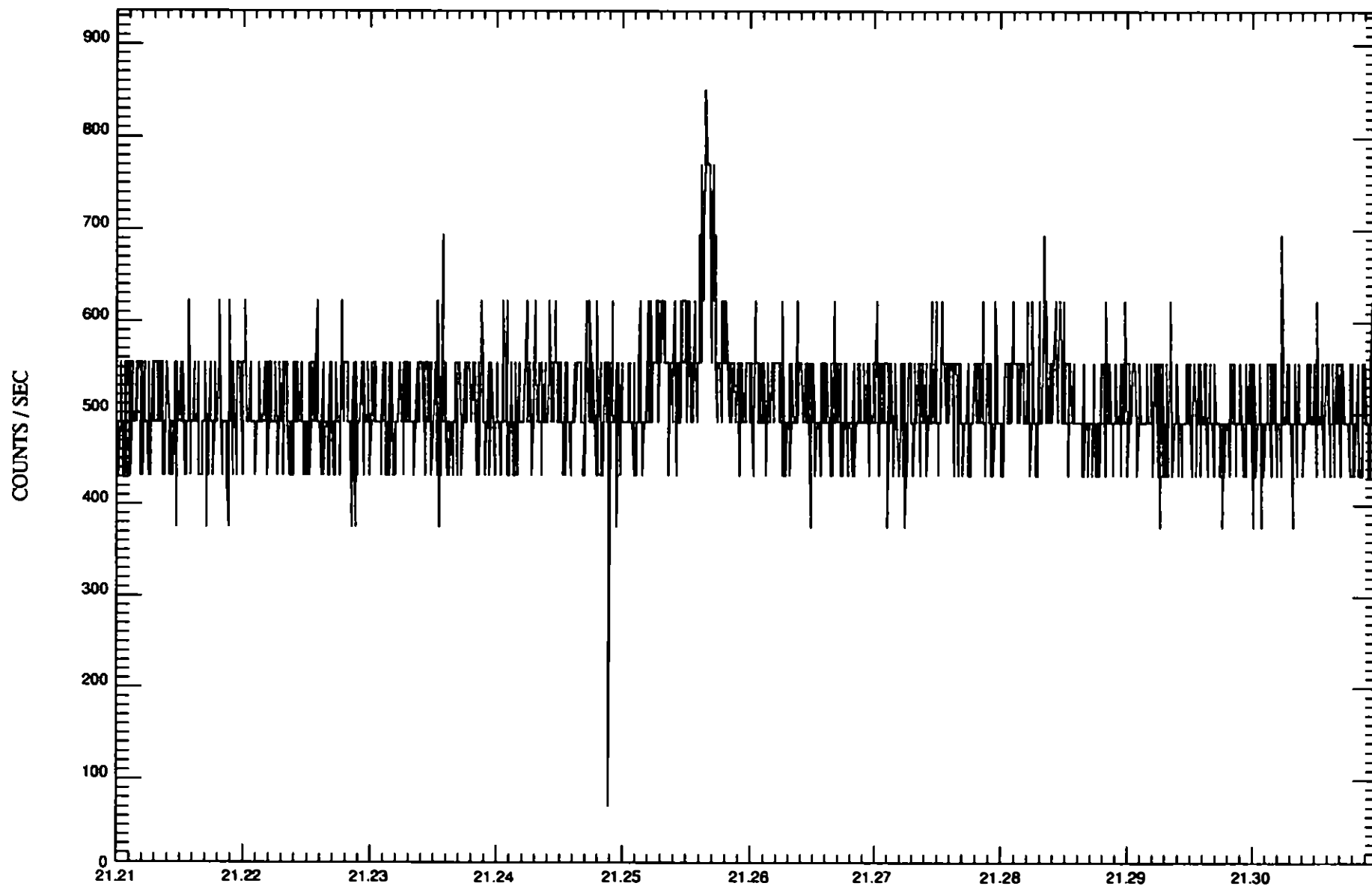


UNIVERSAL TIME

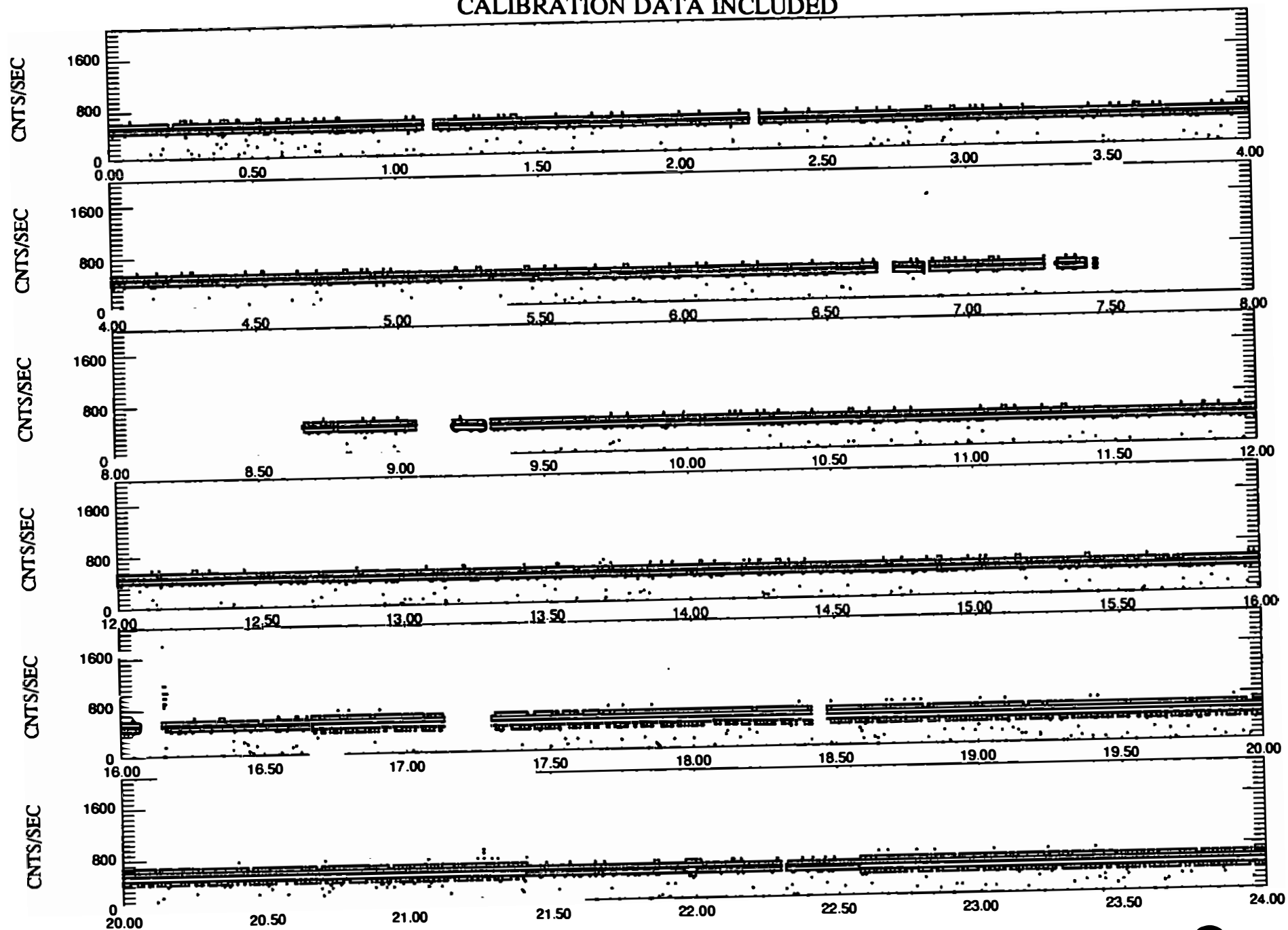
Burst Counter 1 at UT=21.256450674269 h=76523.222 s 21:15:23.222



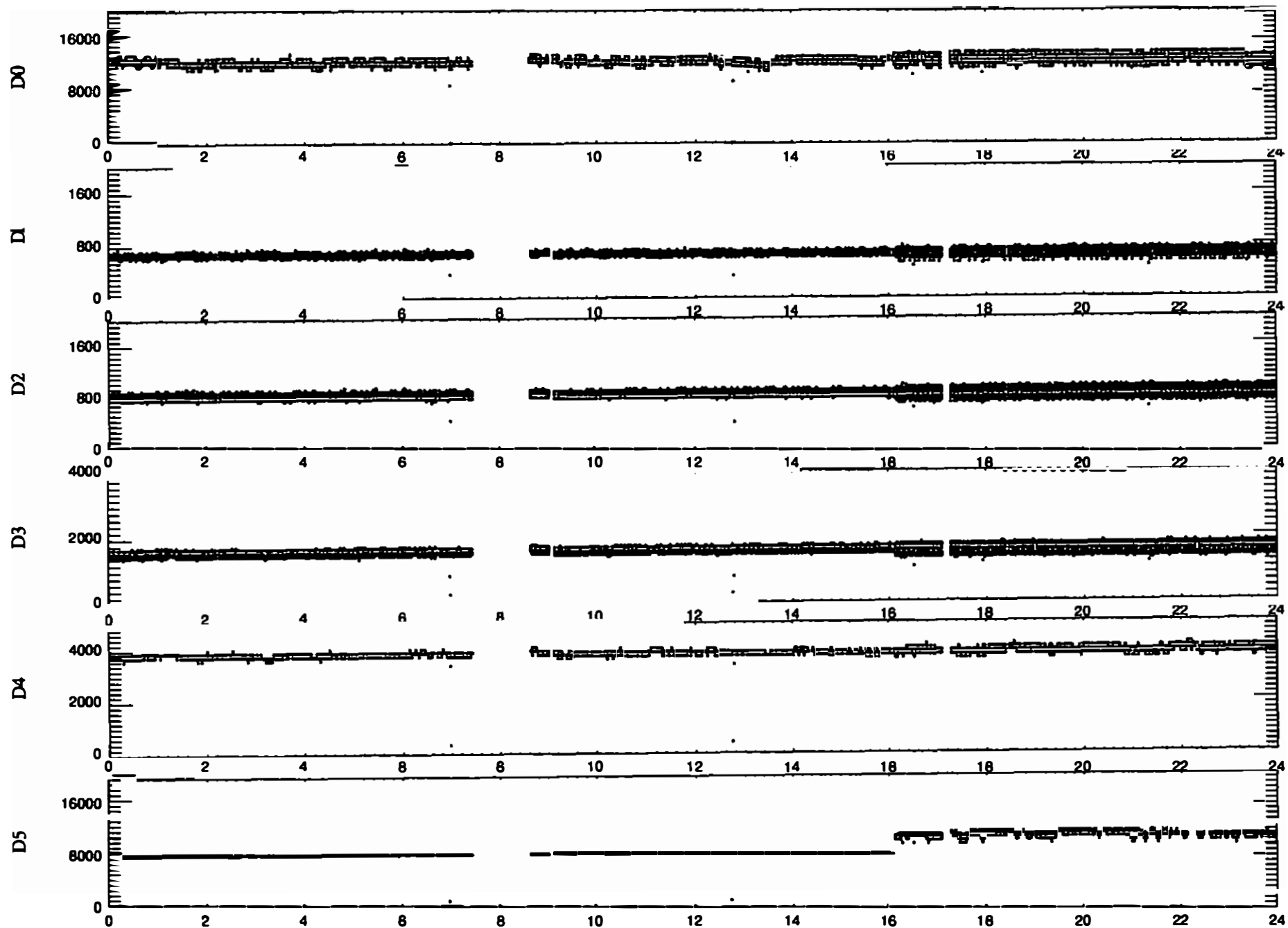
CALIBRATION DATA INCLUDED



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From WOODSP@ssl.msfc.nasa.gov Tue Jun 11 07:04 PDT 1996
From: WOODSP@ssl.msfc.nasa.gov
Date: Tue, 11 Jun 1996 9:04:02 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5490

BATSEARCH PROGRAM

BATSE BURST # 5490
EVENT OF 1996 JUN 8 DAY OF YEAR=160
EVENT CROSSING TIME AT BATSE : 56012. S. OR 15:33:32.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 256.000 -13.000
BATSE PEAK COUNTING RATE: 2700 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 8/ 6/ 96 IS:
RA= 149.948 DEC= 52.286 DIST= 4.305 AU
BATSE-ULYSSES DISTANCE = 643964843. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 69.95 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 736.28 SECS.
CROSSING TIME AT ULYSSES IS 56748. S. OR 15:45:48 +/- 411.52 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 8/ 6/ 96 IS:
RA= 54.427 DEC= 19.279 DIST= 2.360 AU
MARS-BATSE DISTANCE = 352999328. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 21.63 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1094.55 SECS.
CROSSING TIME AT MARS IS 57107. S. OR 15:51:46 +/- 91.98 SECONDS

BATSE BURST TRIGGER

NO.: 5490

TIME: TJD=0242 SECONDS=56012

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=101.8 AZIMUTH=194.1 ERROR=2.8 DEGREES

COMMENTS:

GRB LASTING ABOUT 22 SEC. MULTI-PEAKED COMPLEX EVENT THAT MAY SHOW HARD
TO SOFT SPECTRAL EVOLUTION. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5490	960608	10242	56012	2700	256	-13	22

BATSE #

5490

11 / 6 / 96

ULYSSES RT

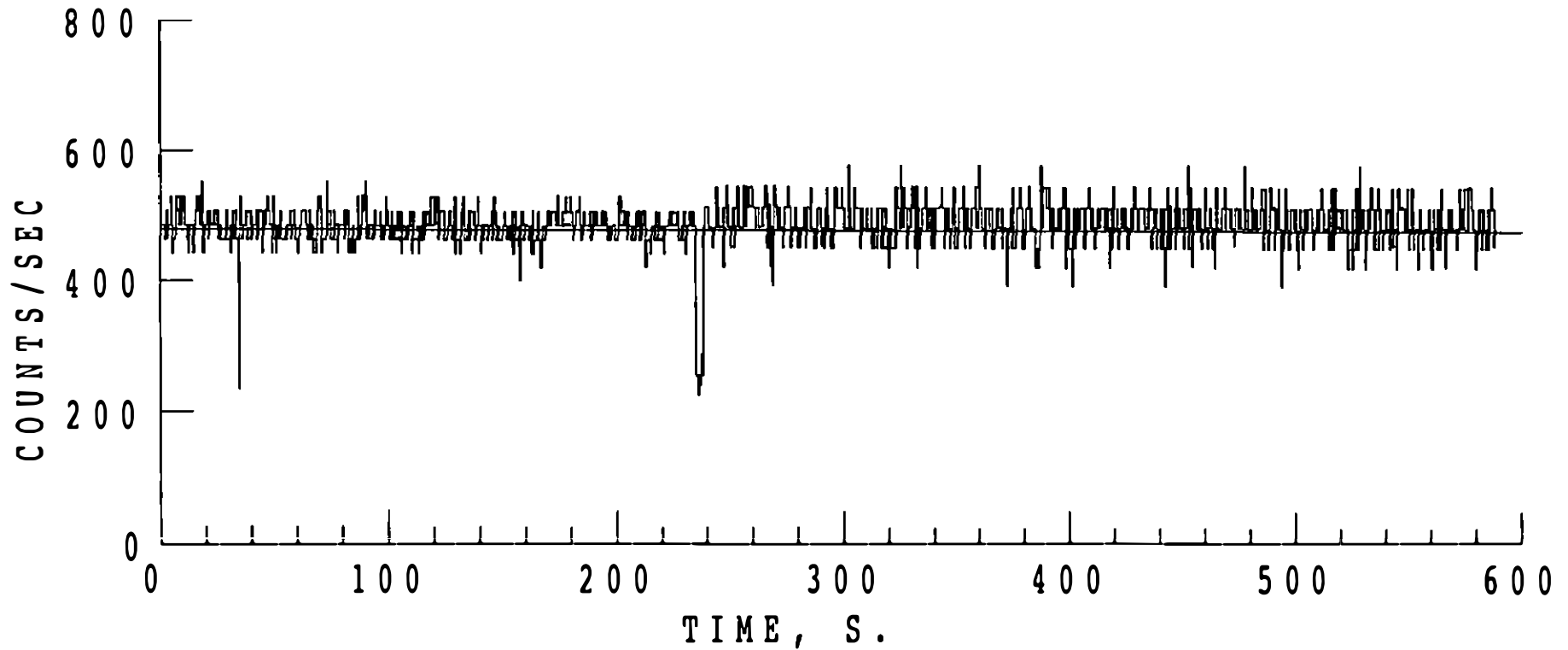
8 / 6 / 96 56340.484 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

B=10 M=2

>4.0 SIGMA FLUCTUATIONS



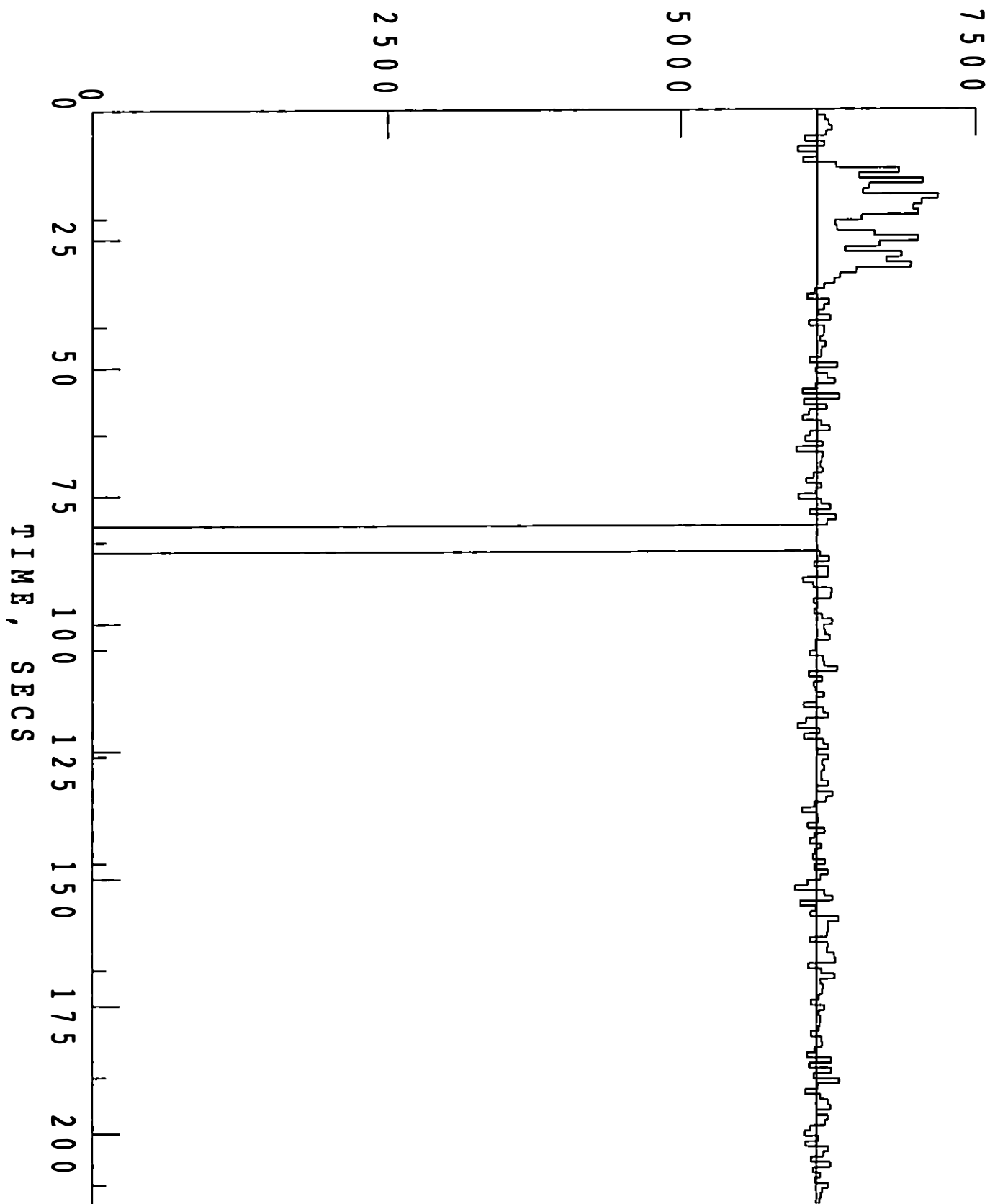
BACODINE

08/06/96

56000.201

25- 100 keV

COUNTS/1.024 S



From WOODSP@SSLLES.MSFC.NASA.GOV Tue Jun 11 07:06 PDT 1996
Date: Tue, 11 Jun 1996 9:06:26 -0500 (CDT)
From: WOODSP@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5491

BATSEARCH PROGRAM

No

BATSE BURST # 5491
EVENT OF 1996 JUN 8 DAY OF YEAR=160
EVENT CROSSING TIME AT BATSE : 69702. S. OR 19:21:42.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 328.000 69.000
BATSE PEAK COUNTING RATE: 6000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 8/ 6/ 96 IS:
RA= 149.970 DEC= 52.248 DIST= 4.307 AU
BATSE-ULYSSES DISTANCE = 644331147. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=121.26 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1115.18 SECS.
CROSSING TIME AT ULYSSES IS 68587. S. OR 19:03:06 +/- 352.05 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 8/ 6/ 96 IS:
RA= 54.427 DEC= 19.279 DIST= 2.360 AU
MARS-BATSE DISTANCE = 352999328. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=109.23 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -387.76 SECS.
CROSSING TIME AT MARS IS 69314. S. OR 19:15:14 +/- 187.14 SECONDS

BATSE BURST TRIGGER

NO.: 5491

TIME: TJD=0242 SECONDS=69702

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=153.1 AZIMUTH=64.1 ERROR=8.5 DEGREES

COMMENTS:

GRB LASTING 0.17 SEC. SHARP SPIKE FOLLOWED BY A SMOOTH HUMP OF EMISSION.
SPIKE LASTS ~ 1.5 MSEC. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5491	960608	10242	69702	6000	328	+69	.17

BATSE #

5491

11 / 6 / 96

ULYSSES RT

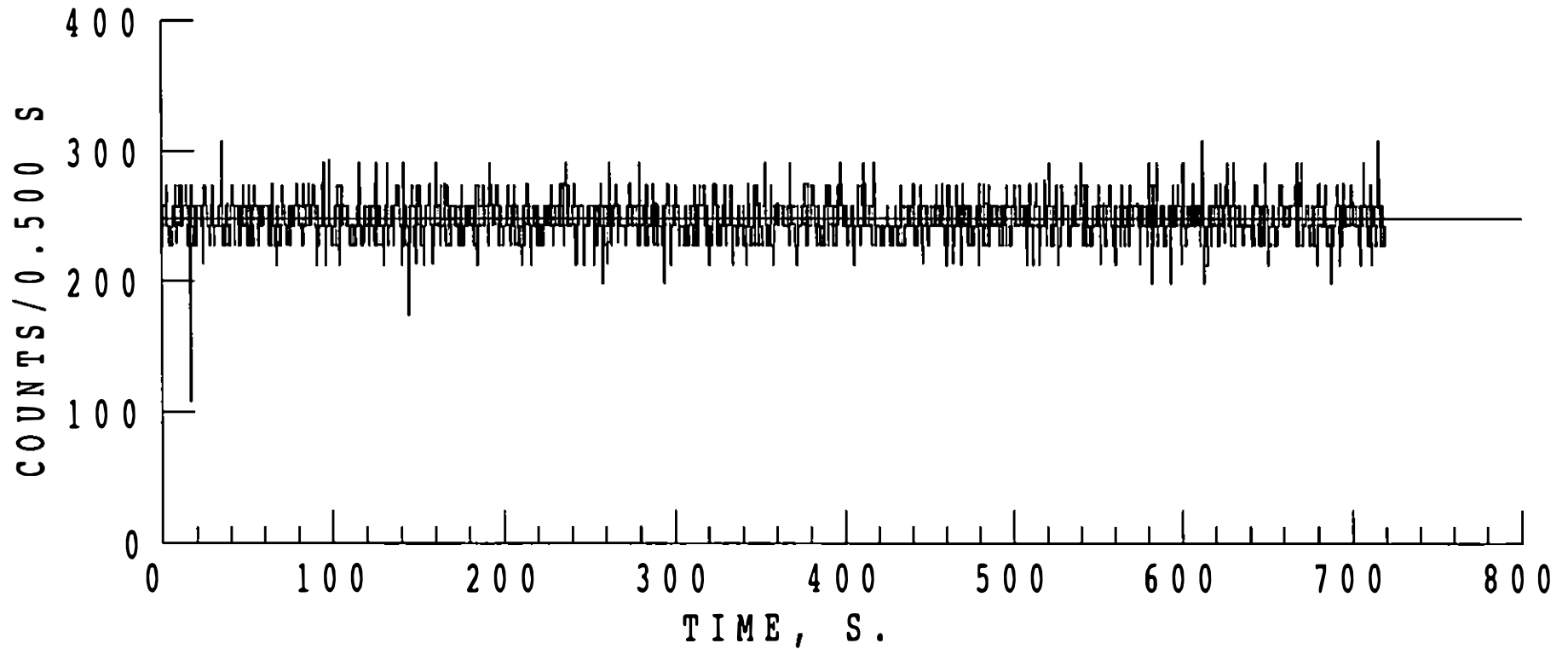
8 / 6 / 96 68220.141 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N=10 M=2

>4.0 SIGMA FLUCTUATIONS



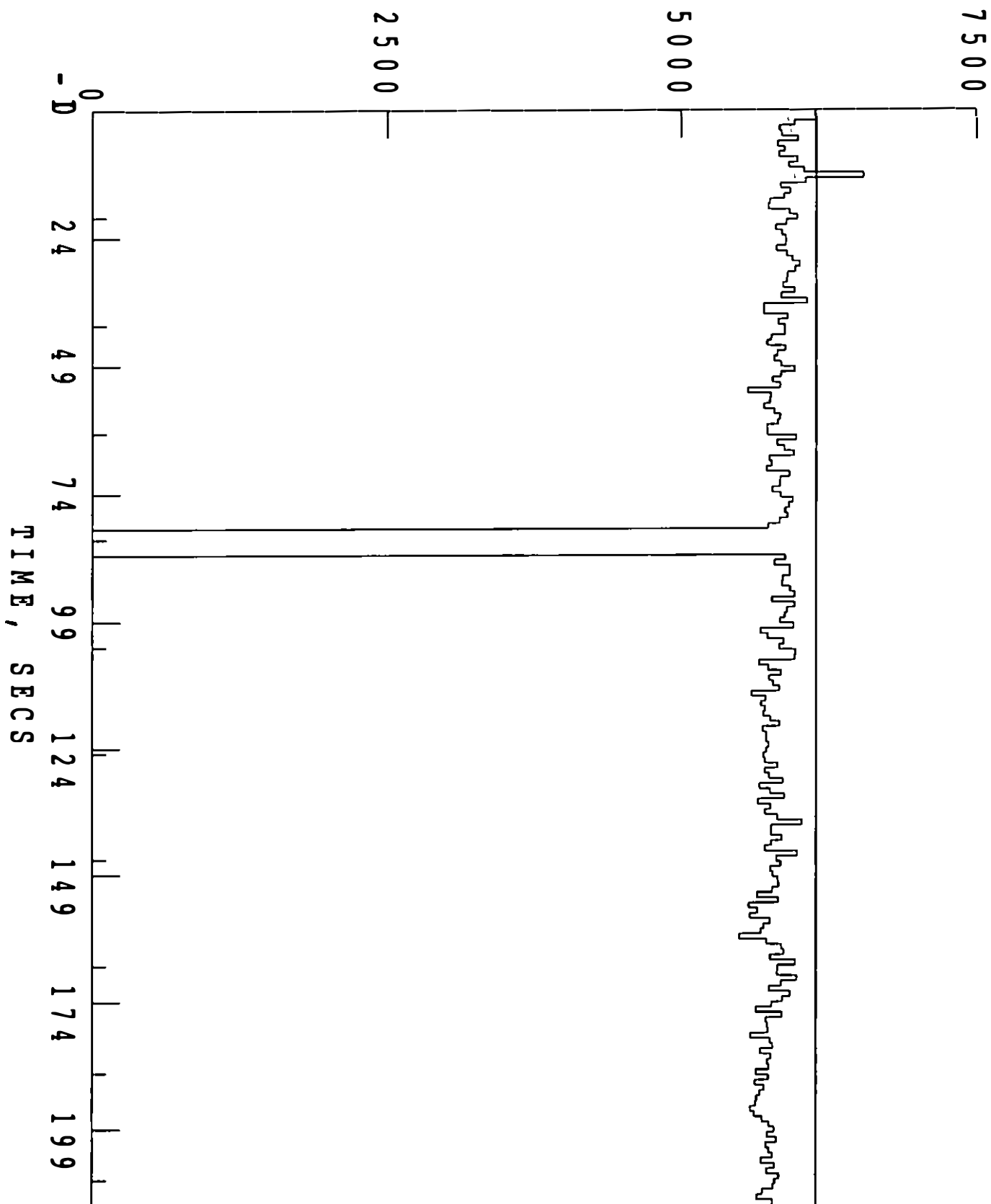
BACODINE

08/06/96

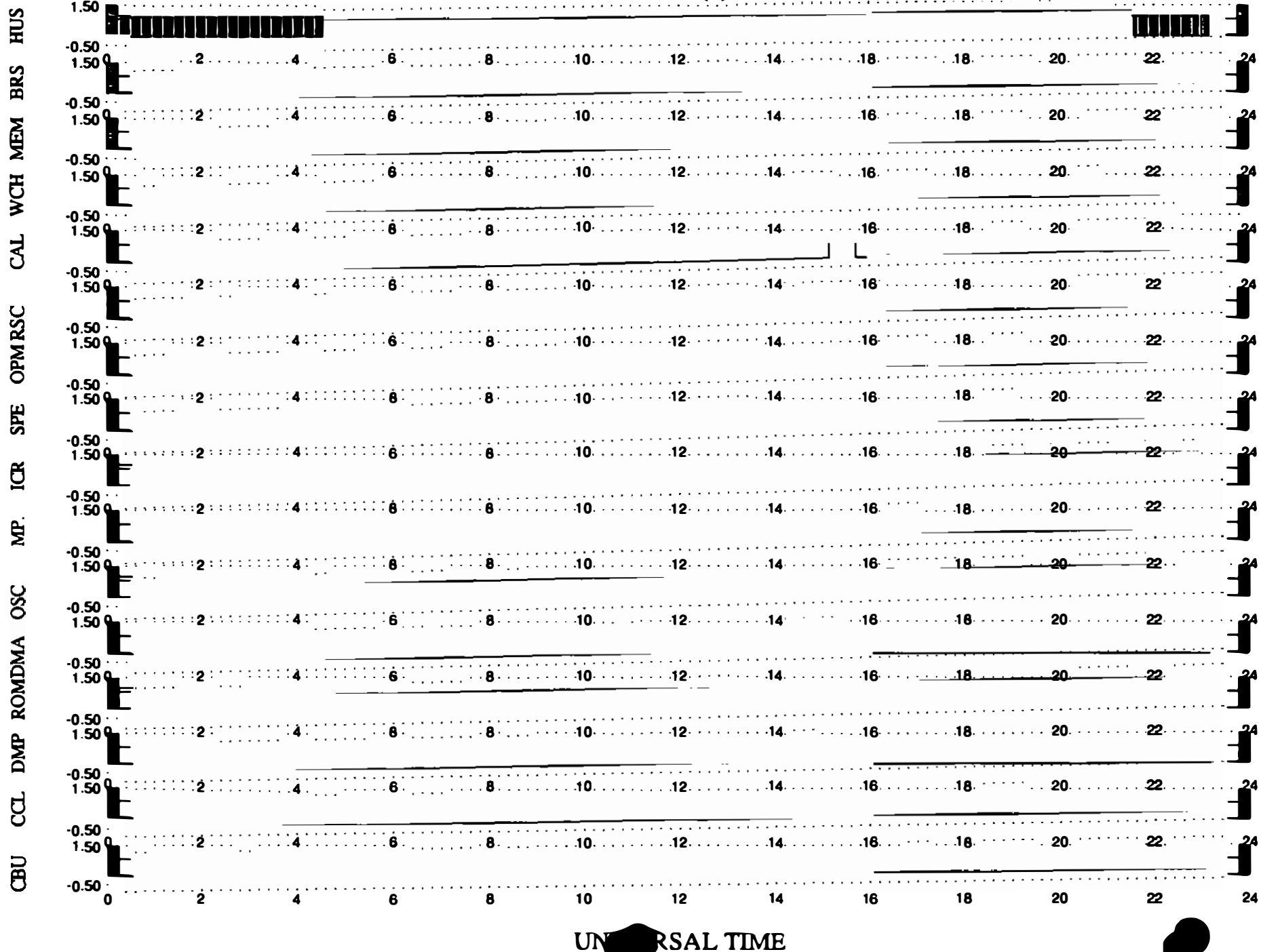
69691.081

25- 100 keV

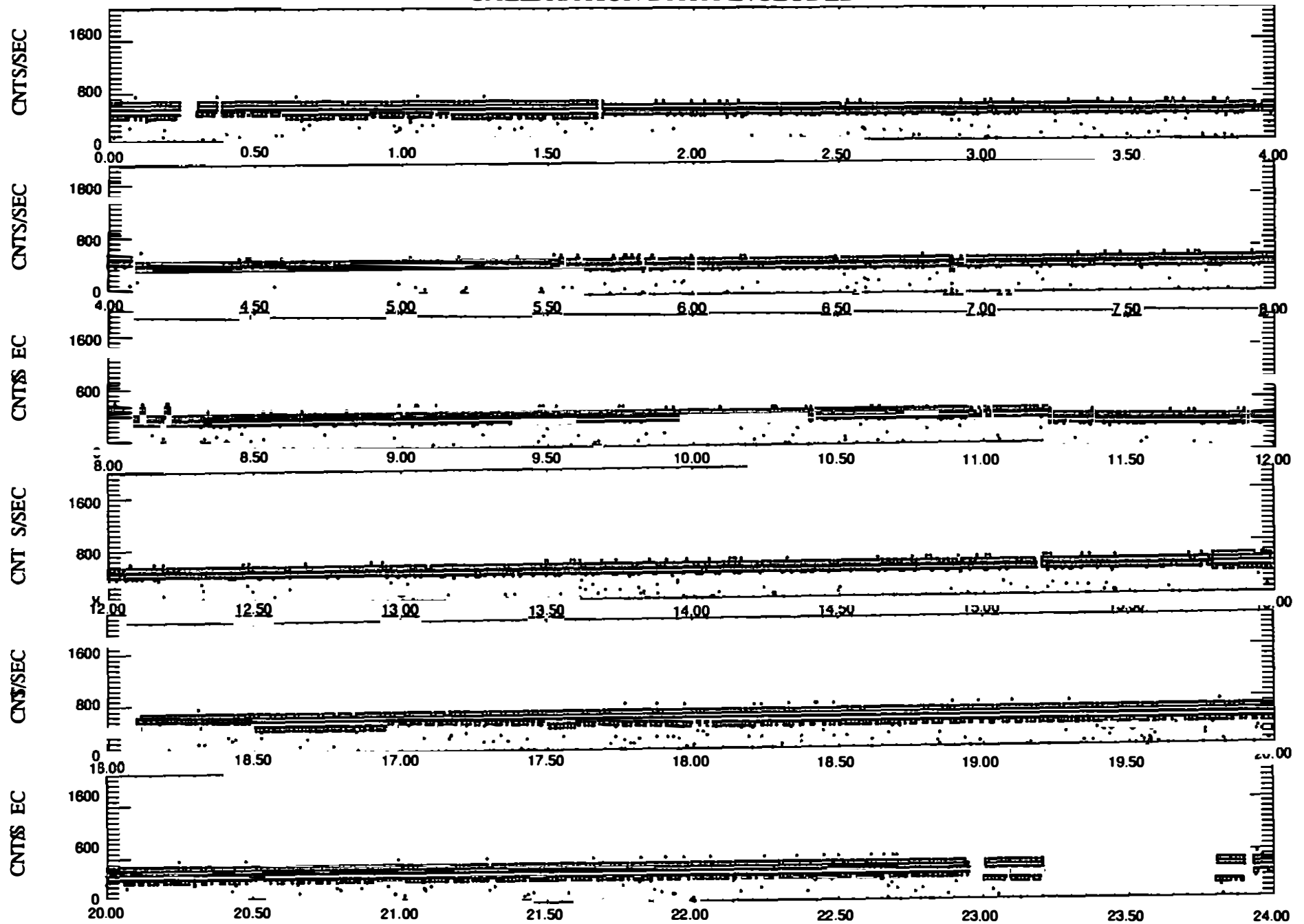
COUNTS/1.024 S



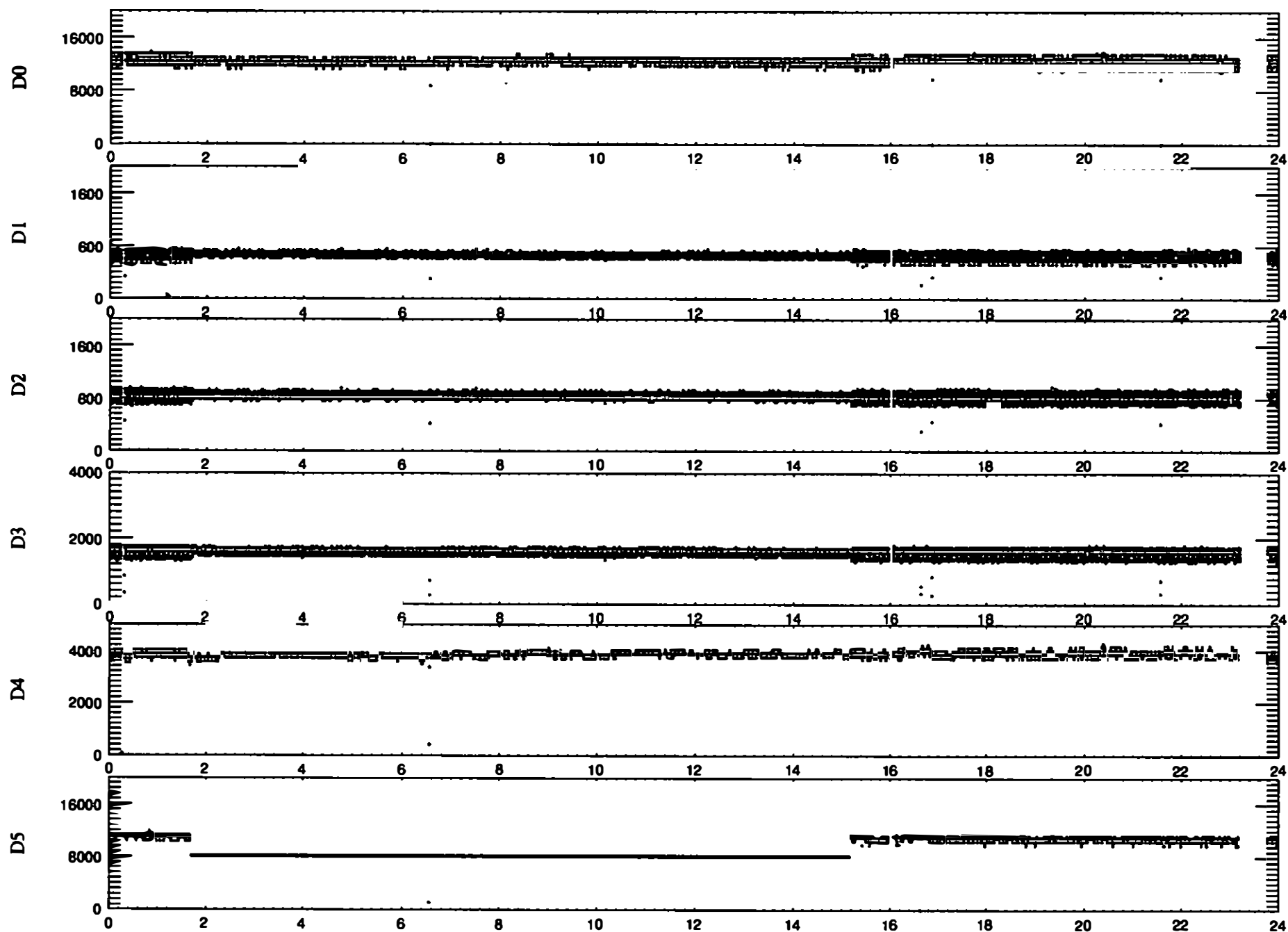
NO BURST (1)



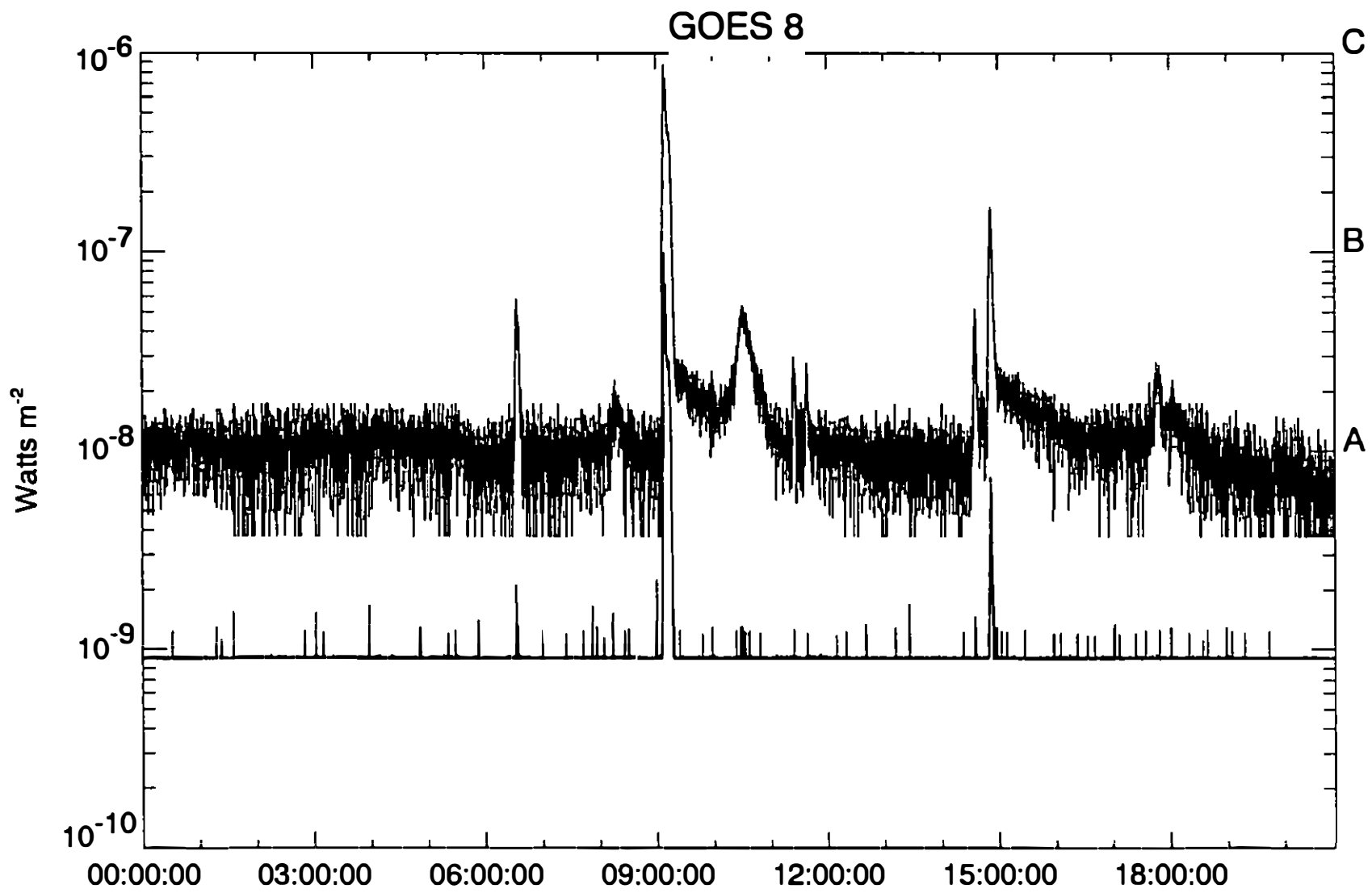
CALIBRATION DATA INCLUDED



UNIVERSAL TIME

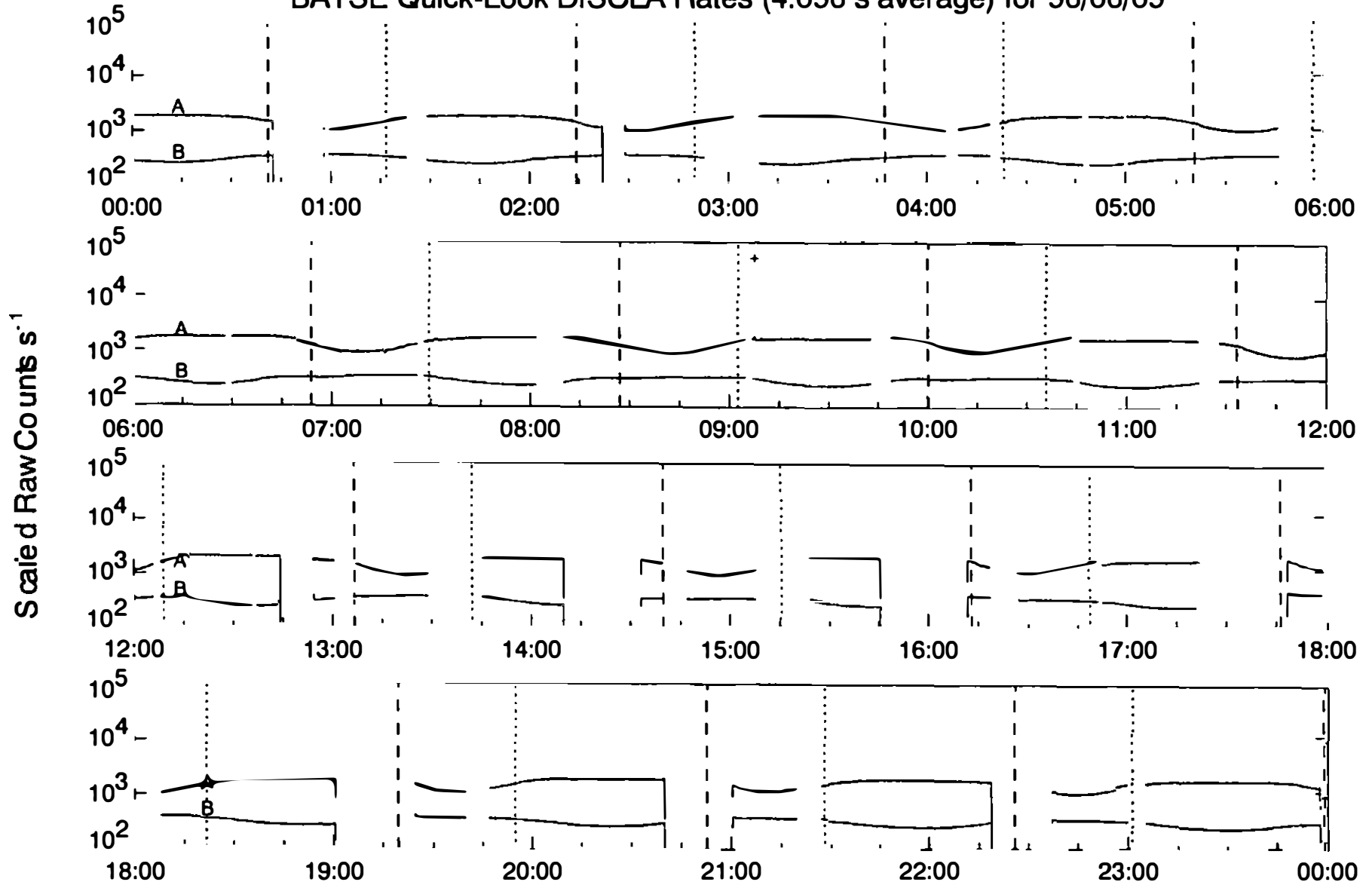


UNIVERSAL TIME



Data Start: 96/06/09, 0000:00 Plot created: 96/06/11, 1003
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/09



Current Time: 96/06/11, 1004 EDT

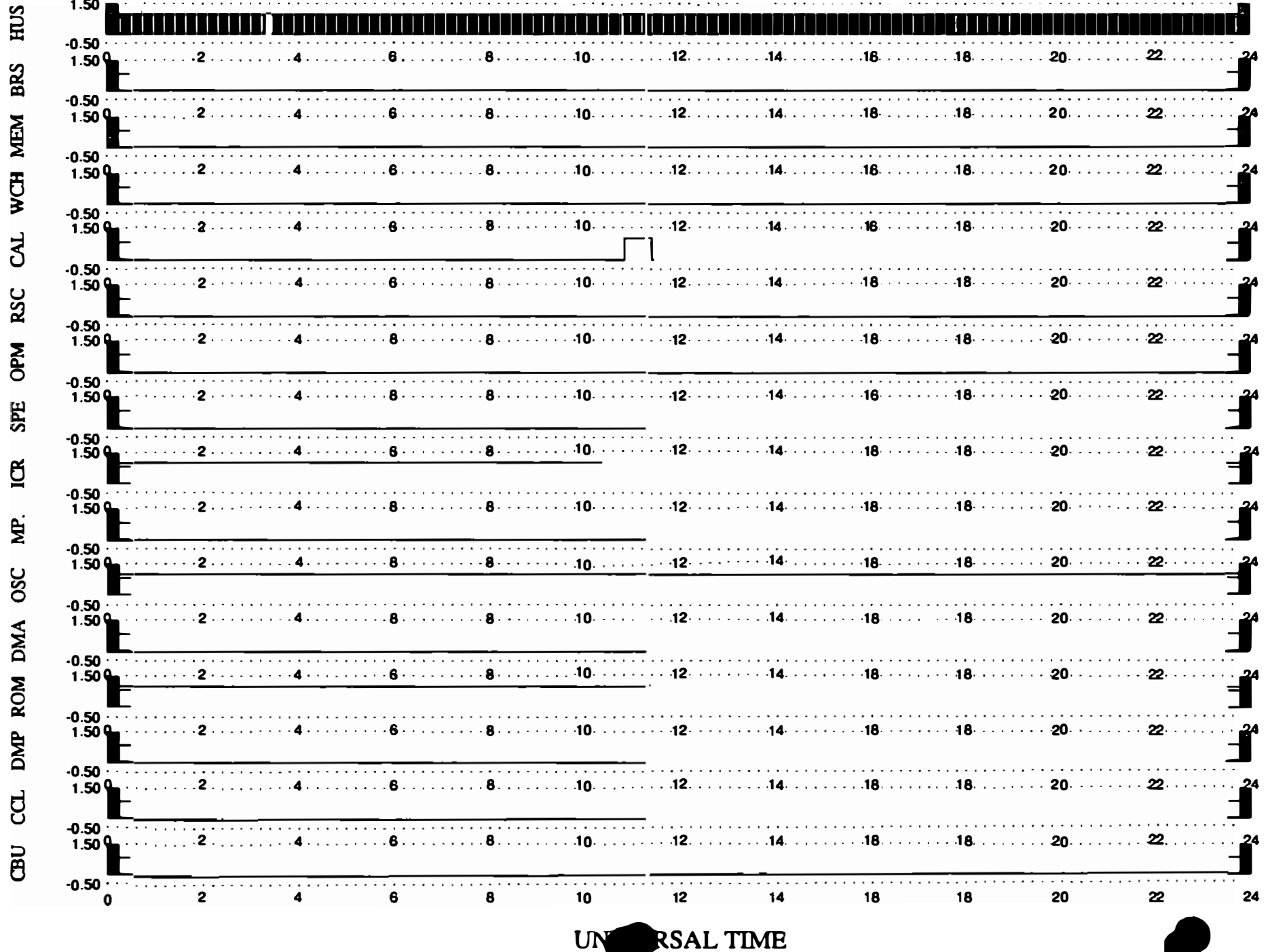
A: Channel 0 Most Sunward LAD

B: Sum Channel 0 Anti-Sunward LADs X .05

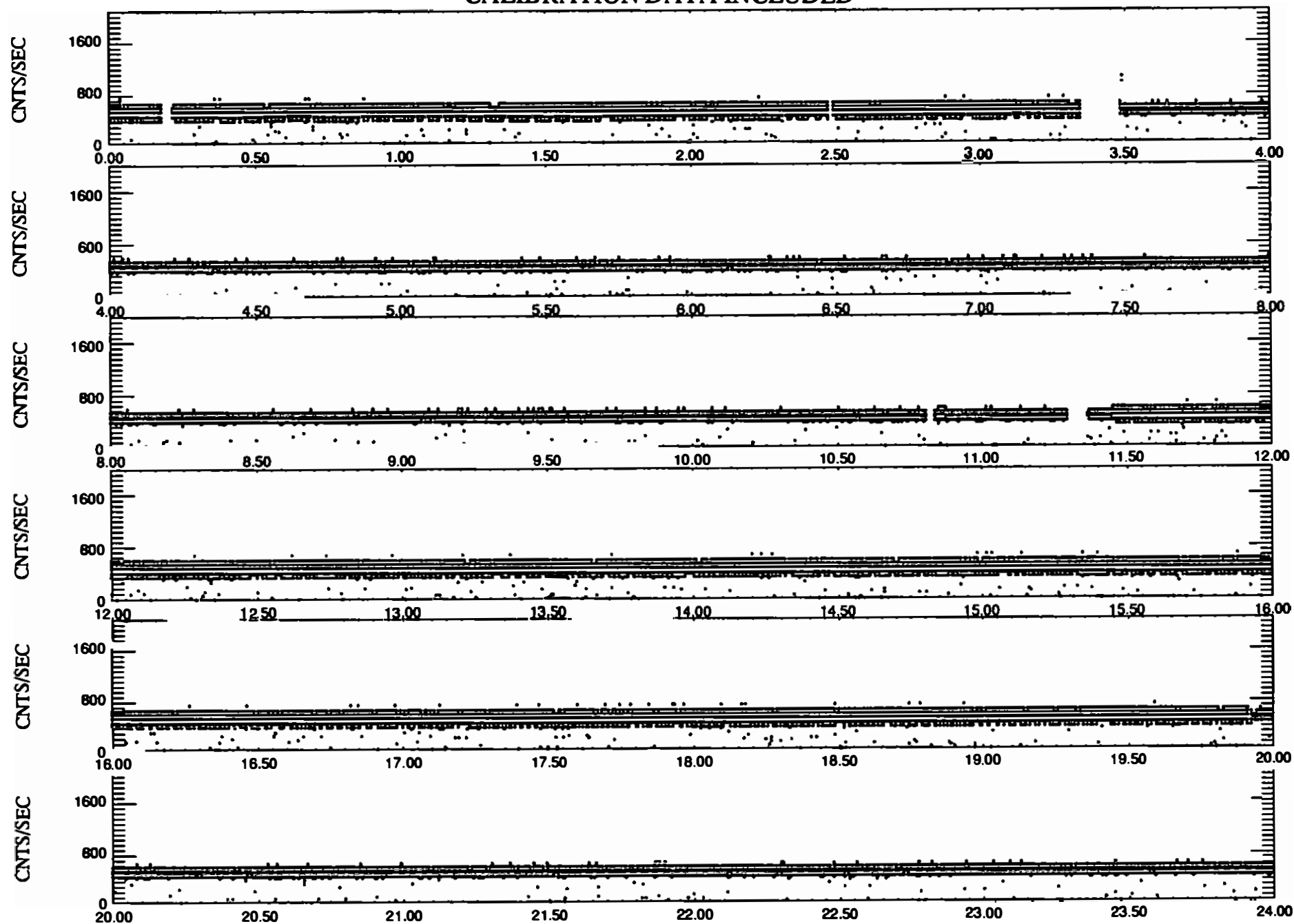
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

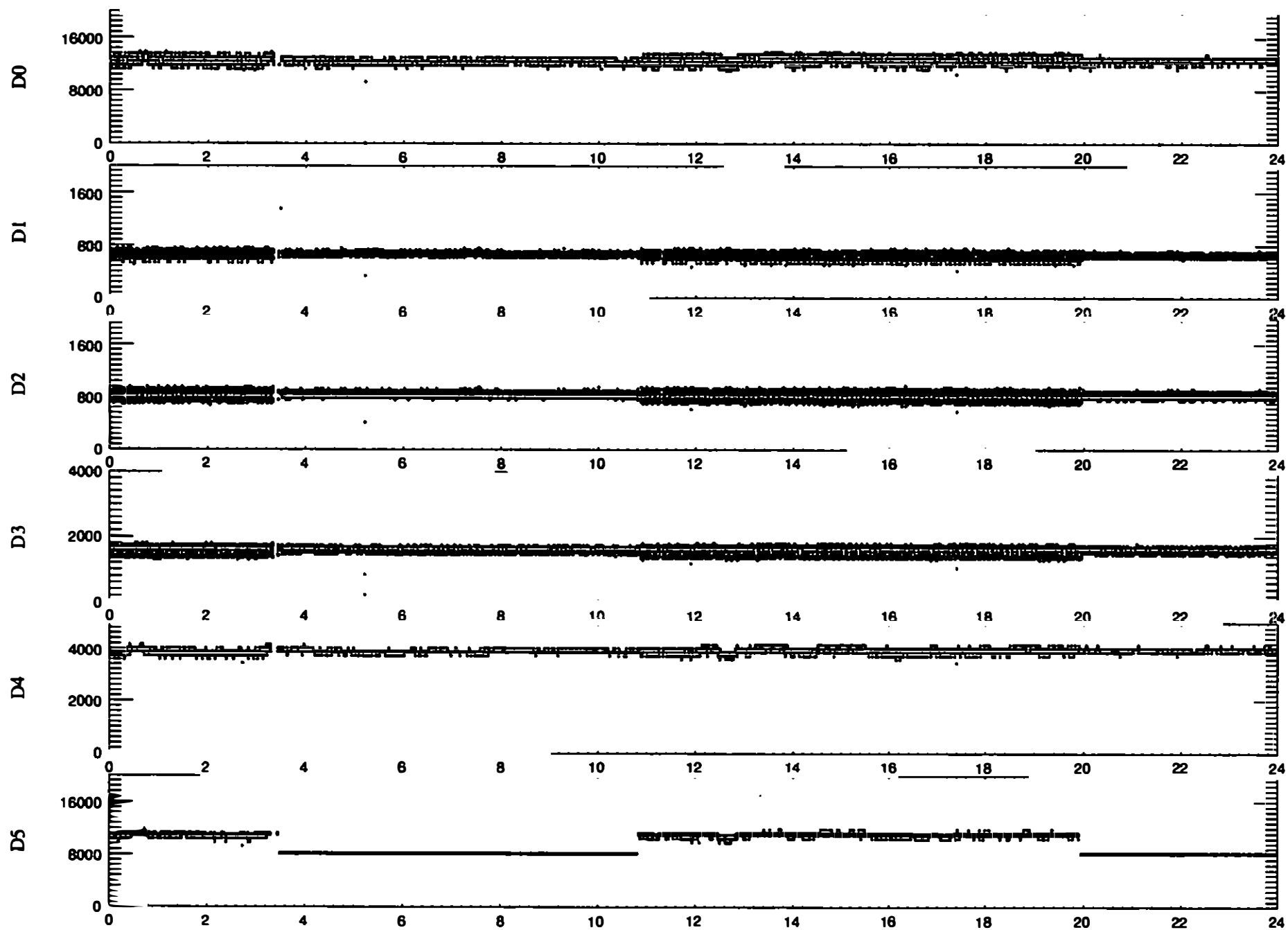
NO BURST (1)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

Date: 3 Oct 2011

BURST TRIANGULATION CHECKLIST

I. Ulysses Data

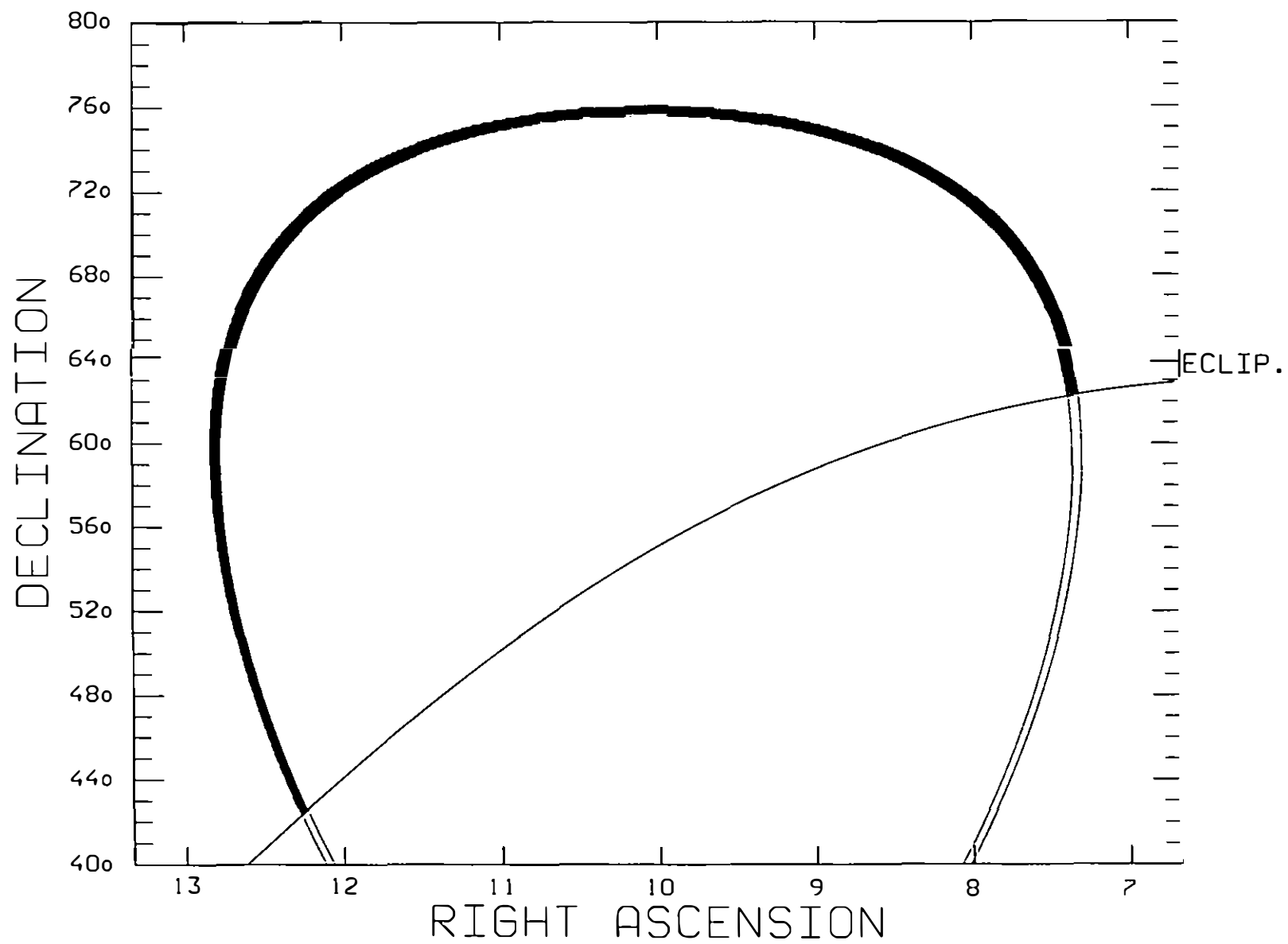
- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☒ Is the order of the data in CORREL such that a vernier is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

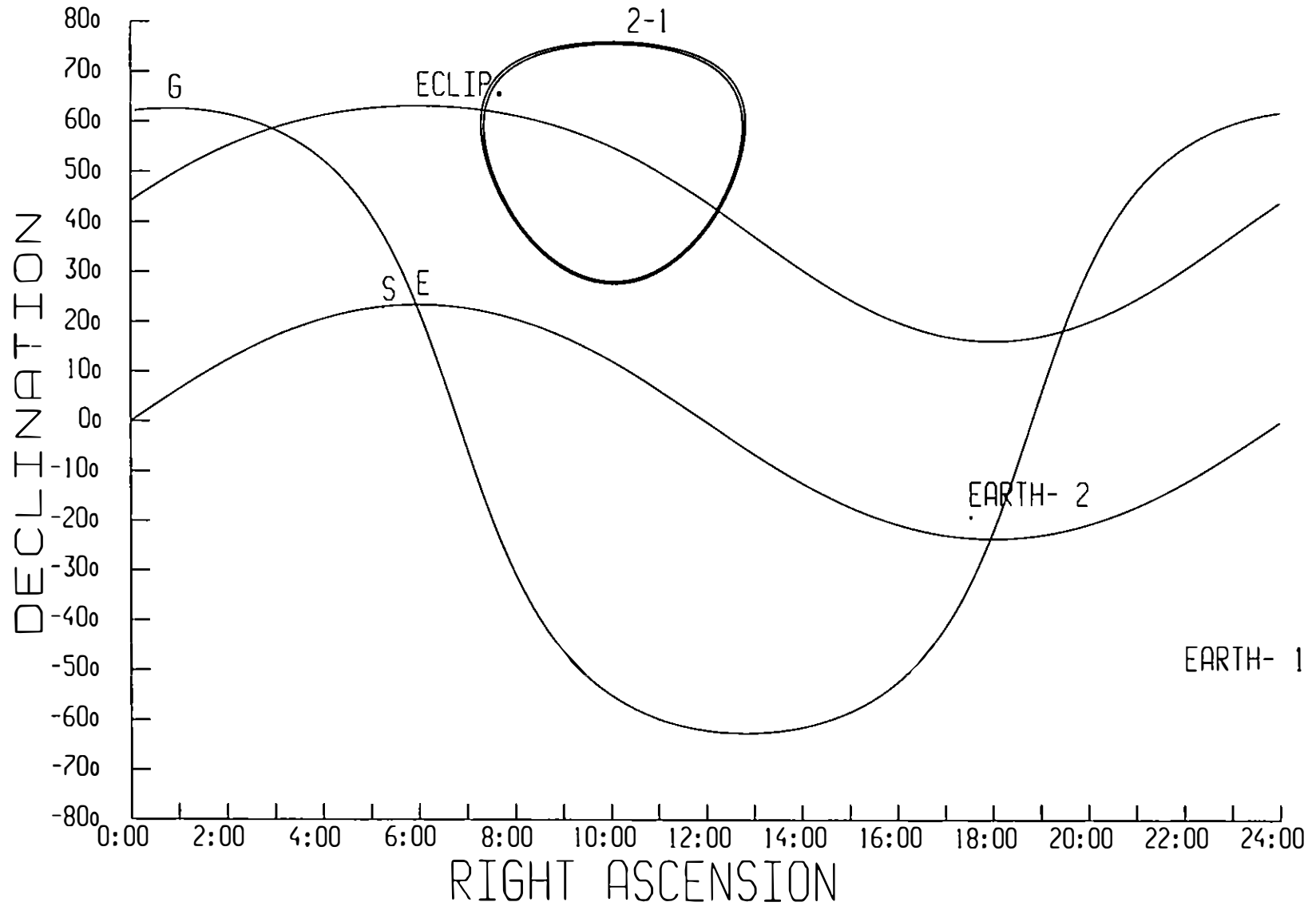
- ☐ Ephemeris of PVO used (not Venus)?
 - ☐ 2000 coordinates used?
 - ☐ Geocentric time used?
-
- ☒ ACCESS and MBL databases updated with identical times?



EVENT OF JUN 10, 1996 8:11

03/10/2011

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



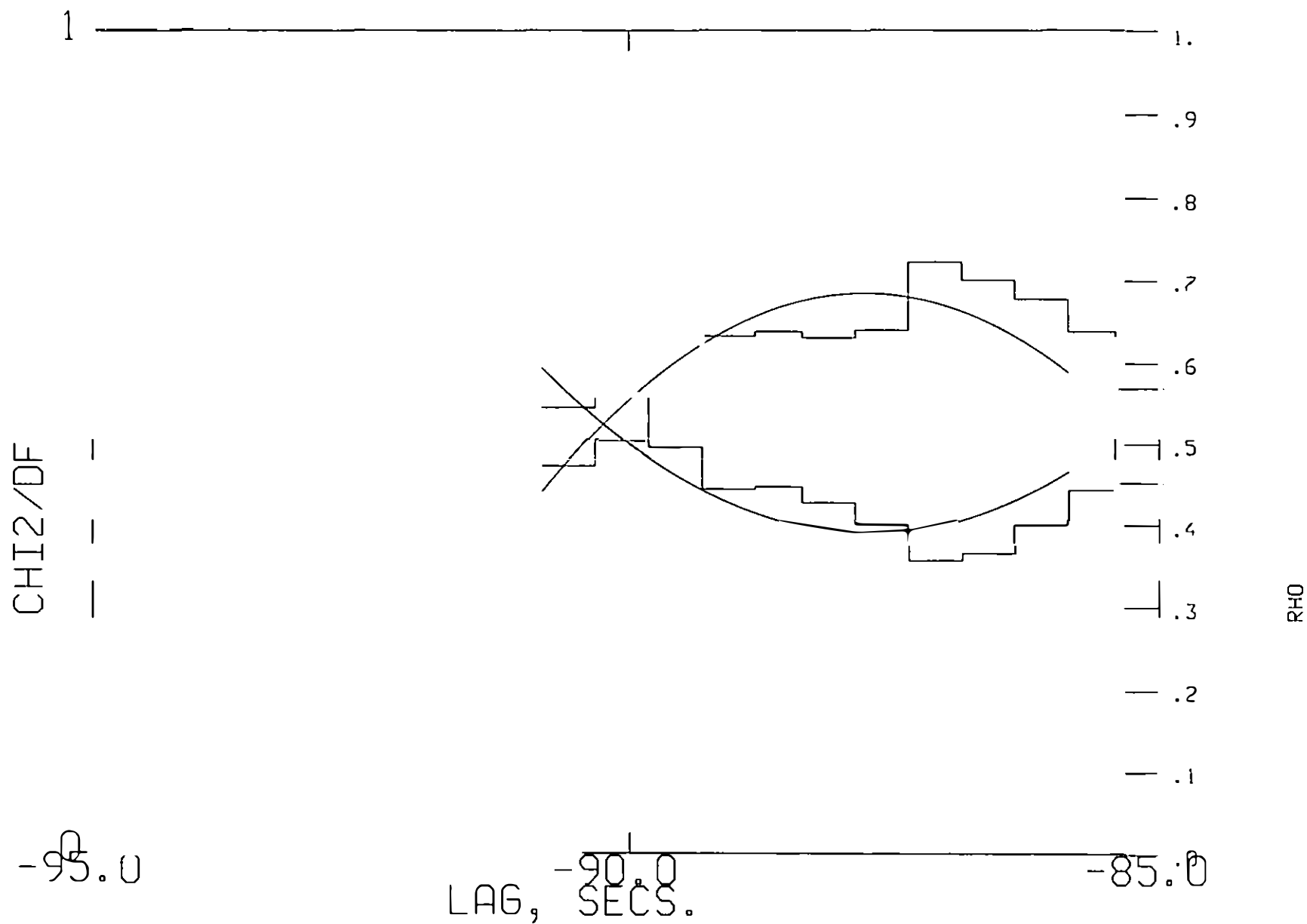
KONUS

-ULYSSES RT CORRELATION

10/06/96

31371.615

3/10/11



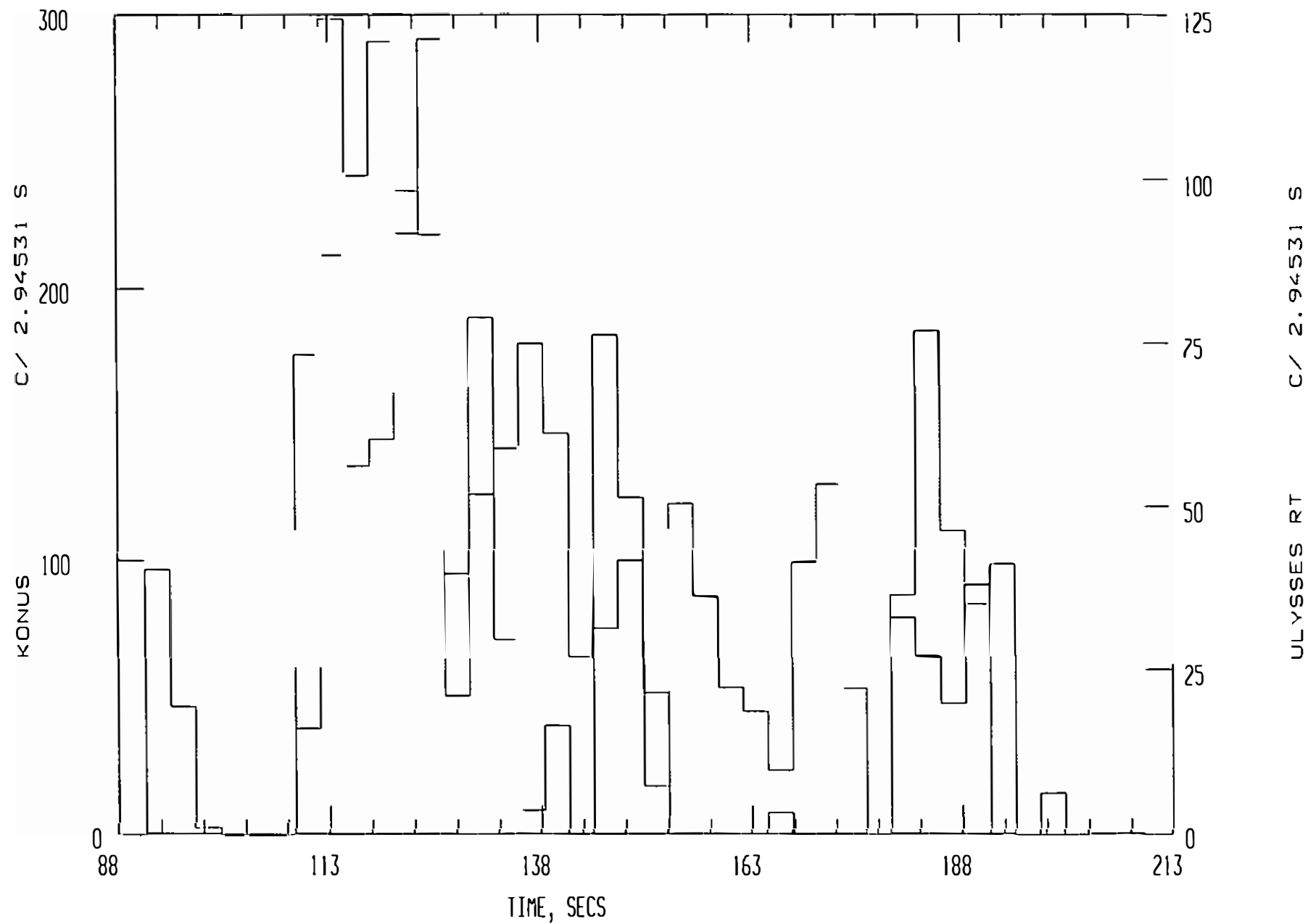
KONUS

-ULYSSES RT CORRELATION

10/06/96

31371.615

3/10/11



KONUS 19960610 29517

ULYSSES RT

29 / 09 / 11

10 / 06 / 96 29412.414 s

0 - 0 keV

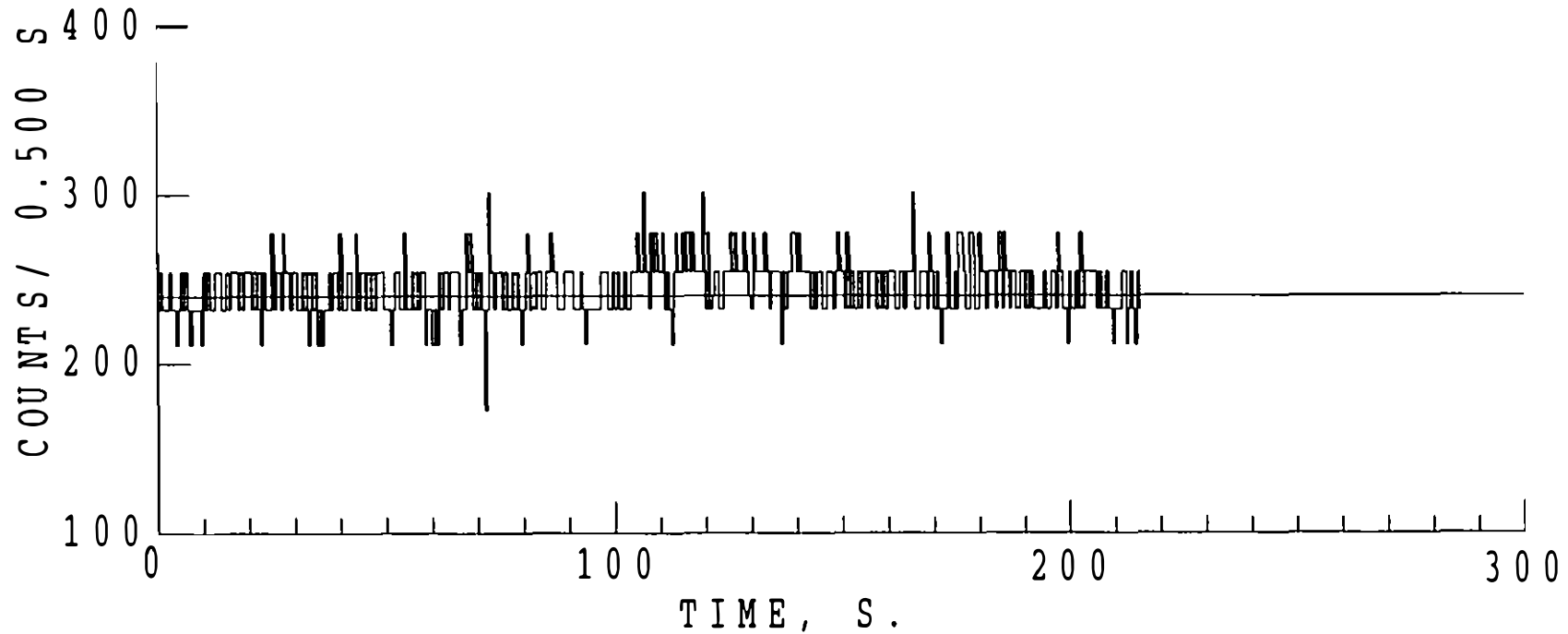
N= 10 M= 10

>4.0 SIGMA FLUCTUATIONS

|

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



03/10/2011

3600

DETECTOR 1 - S. ECLIPSE

COUNTS/2.945 S

2600

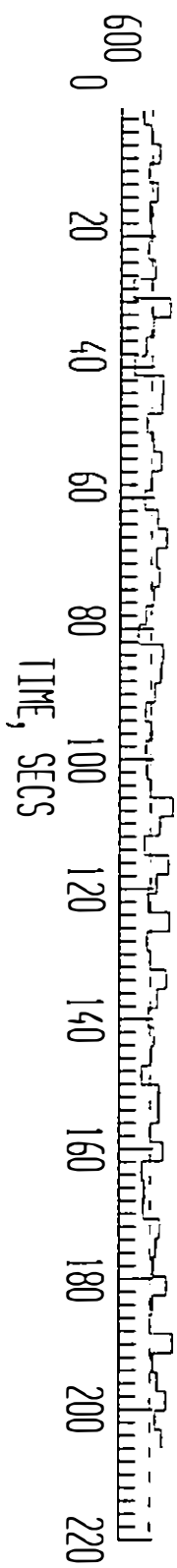
1600

10/06/96 31371.615

50- 200 keV 200- 750 keV

KONUS

10- 50 keV

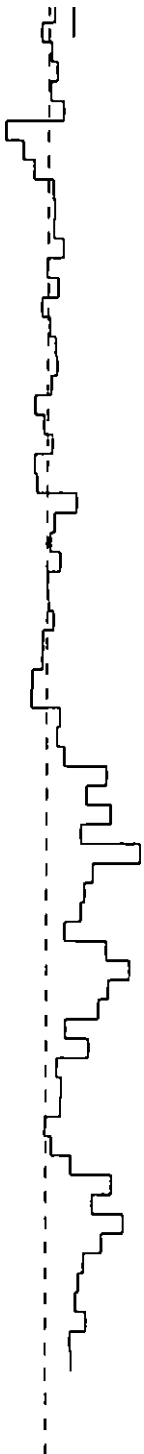


03/10/2011

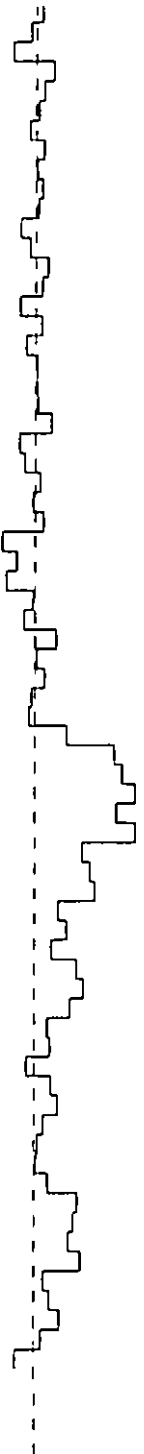
4400

DETECTOR 2 - N. ECLIPSE

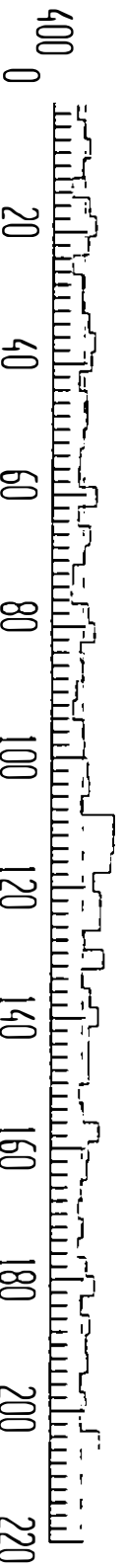
3400



2400



1400



KONUS

10/06/96

31371.615

10- 50 keV

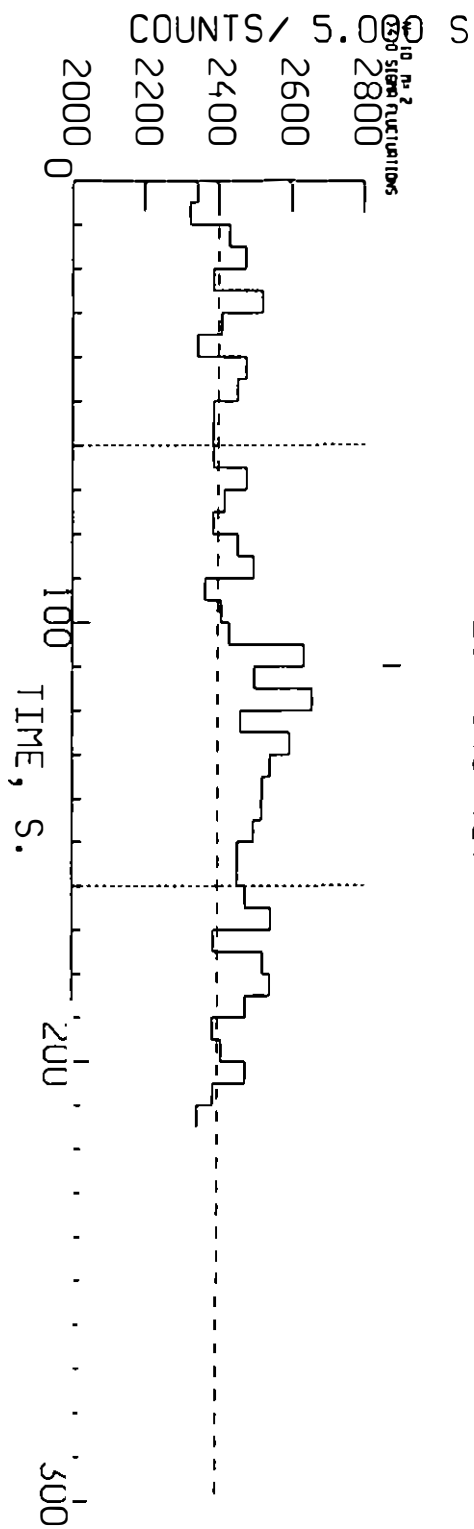
50- 200 keV

200- 750 keV

COUNTS/2.945 S

TIME, SECS

ULYSSES RT 29412.414 s
 10/ 6/96
 0.500 S INTERVALS REGROUPED BY 10
 21- 145 keV



From DEAL@fender.msfc.nasa.gov Tue Jun 11 12:47 PDT 1996
From: DEAL@fender.msfc.nasa.gov
Date: Tue, 11 Jun 1996 14:47:09 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5492

BATSEARCH PROGRAM

RI

BATSE BURST # 5492
EVENT OF 1996 JUN 10 DAY OF YEAR=162
EVENT CROSSING TIME AT BATSE : 76983. S. OR 21:23:03.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 328.000 -29.000
BATSE PEAK COUNTING RATE: 3400 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 10/ 6/ 96 IS:
RA= 150.270 DEC= 51.746 DIST= 4.339 AU
BATSE-ULYSSES DISTANCE = 649109940. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 22.81 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1995.89 SECS.
CROSSING TIME AT ULYSSES IS 78979. S. OR 21:56:18 +/- 226.04 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 10/ 6/ 96 IS:
RA= 55.907 DEC= 19.627 DIST= 2.357 AU
MARS-BATSE DISTANCE = 352648288. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 82.37 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 156.17 SECS.
CROSSING TIME AT MARS IS 77139. S. OR 21:25:39 +/- 204.79 SECONDS

BATSE BURST TRIGGER

NO.: 5492

TIME: TJD=0244 SECONDS=76983

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=70.0 AZIMUTH=132.7 ERROR=2.6 DEGREES

COMMENTS:

GRB LASTING 155SEC. PRECURSOR AT T-140SEC.

MAIN PEAK HAS COMPLEX STRUCTURE AND WAS POSSIBLY OCCULTED BY THE EARTH AT
~T+10SEC. VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5492	960610	10244	76983	3400	328	-29	155

Helio corr removed

Date: Mar 11 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

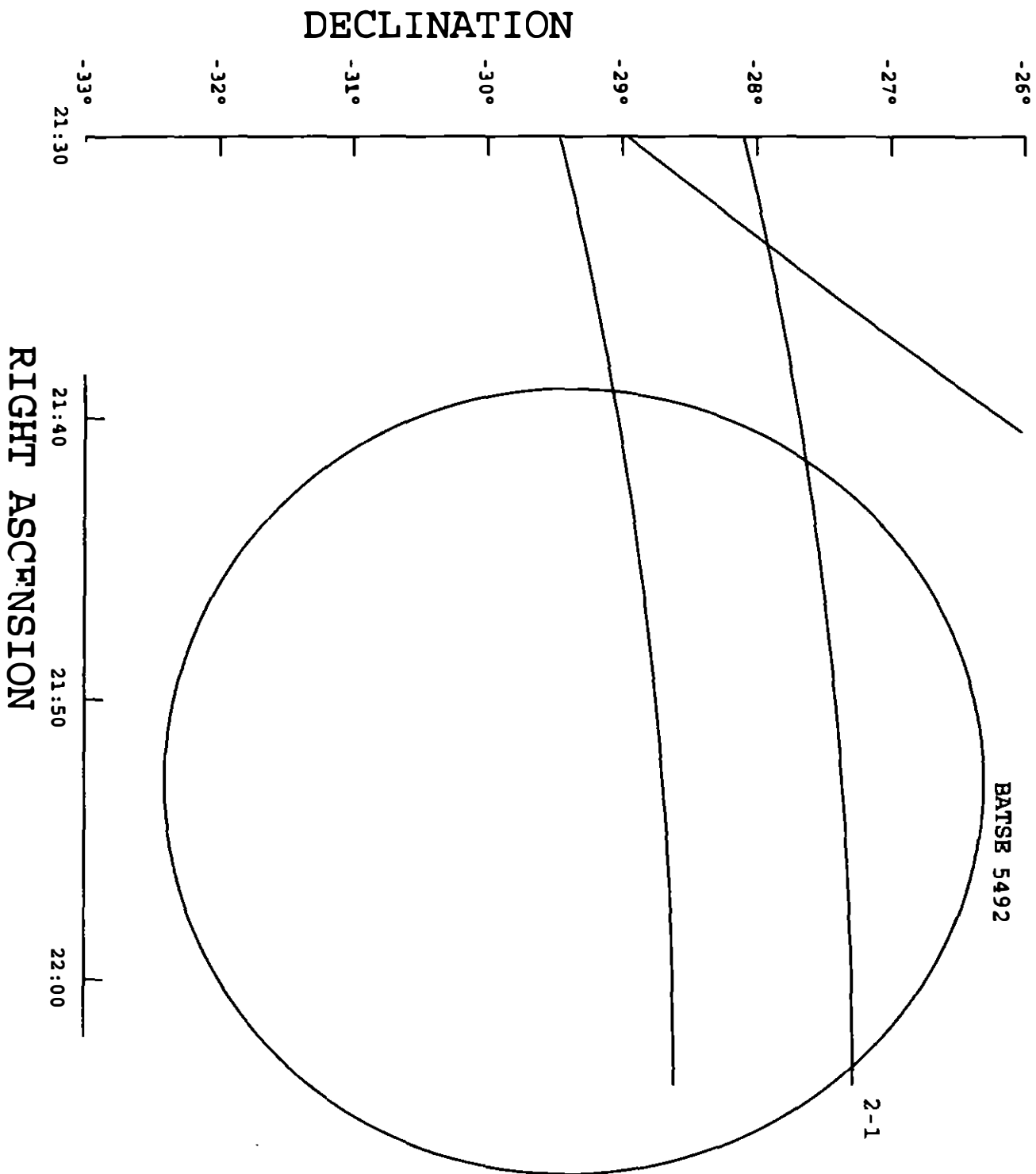
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF JUN 10, 1996 21:55

11/ 3/98



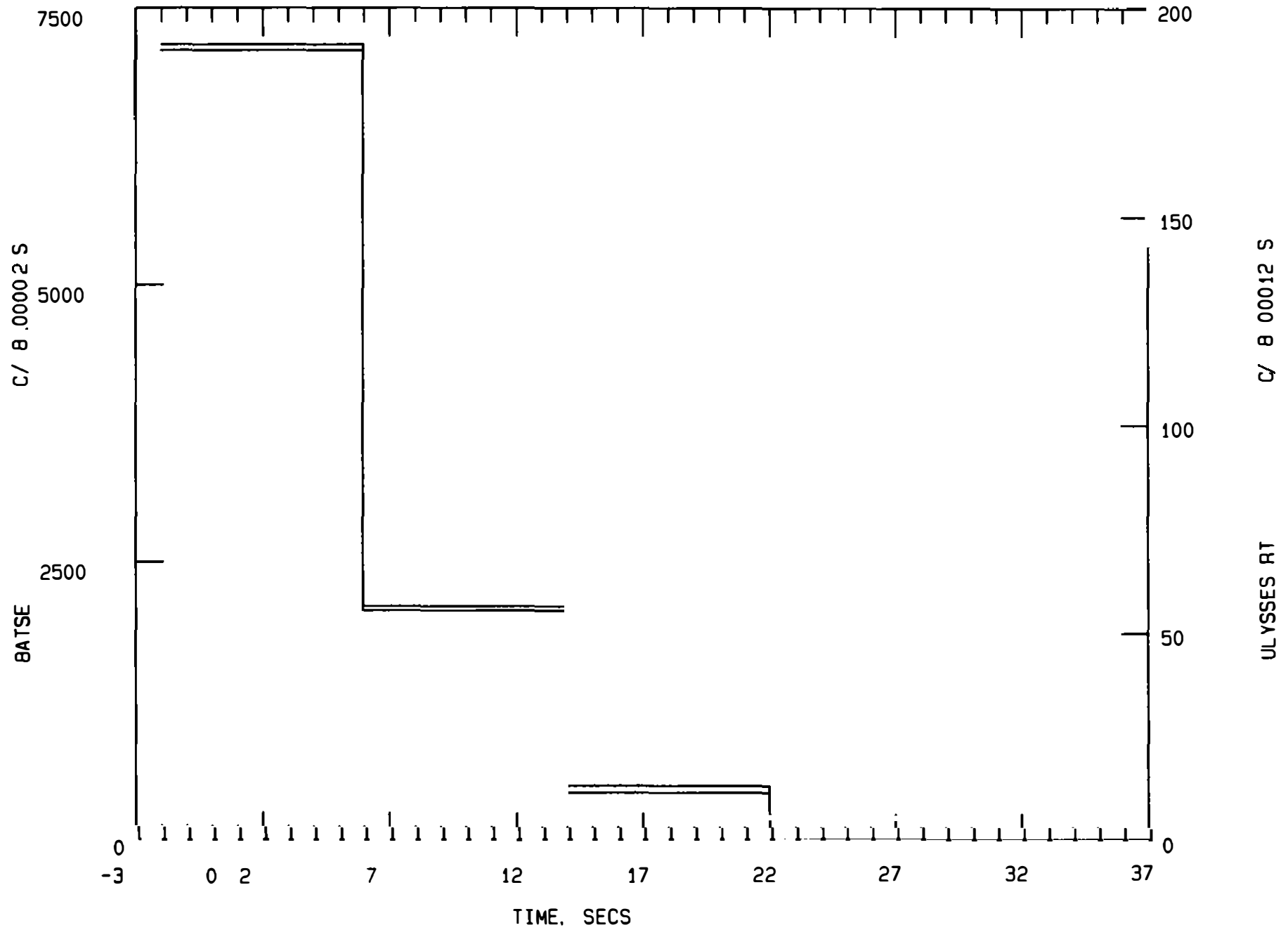
BATSE

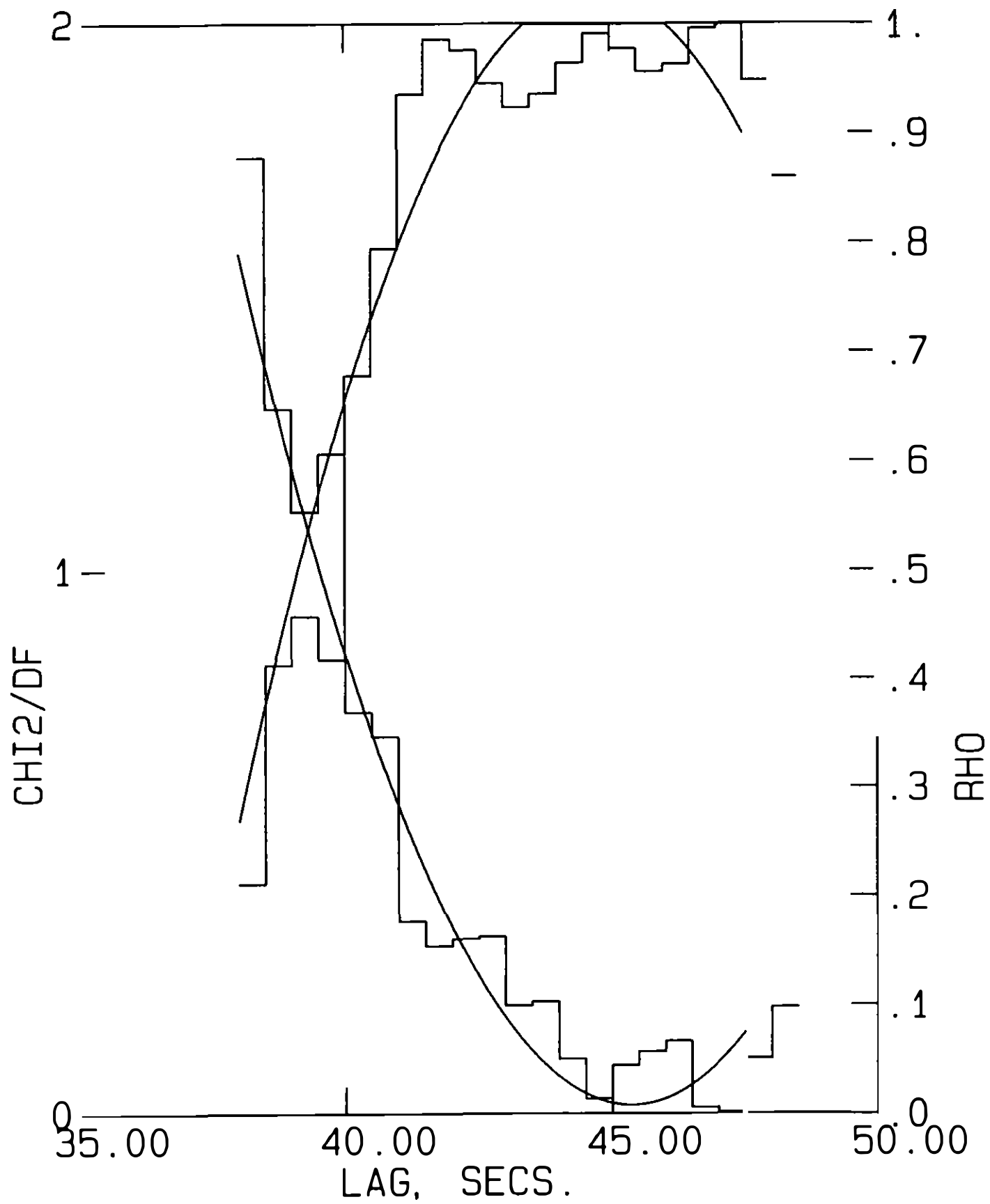
-ULYSSES RT CORRELATION

10/ 6/96

76982.986

11/ 3/98





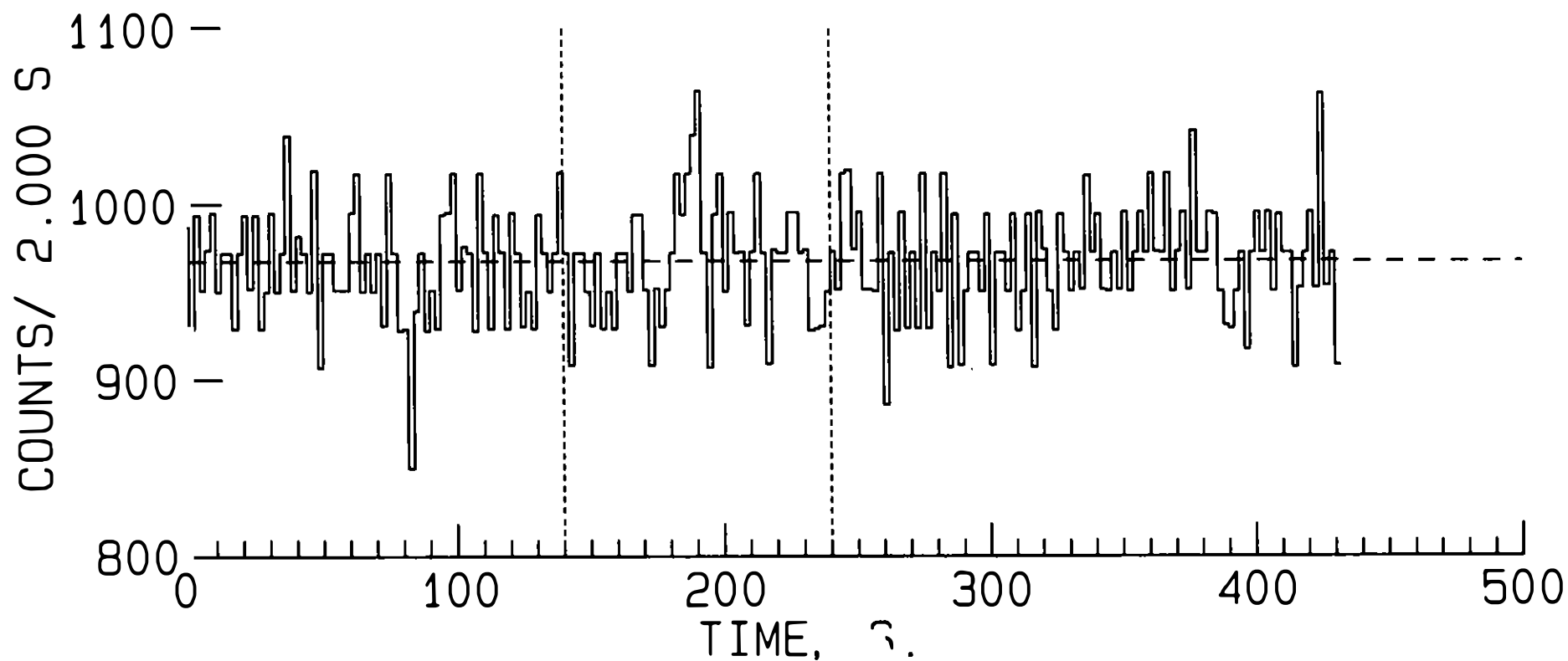
ULYSSES RT

11 / 3 / 98

10/ 6/96 78768.067 s

0.500 S INTERVALS REGROUPED BY 4

21- 145 keV



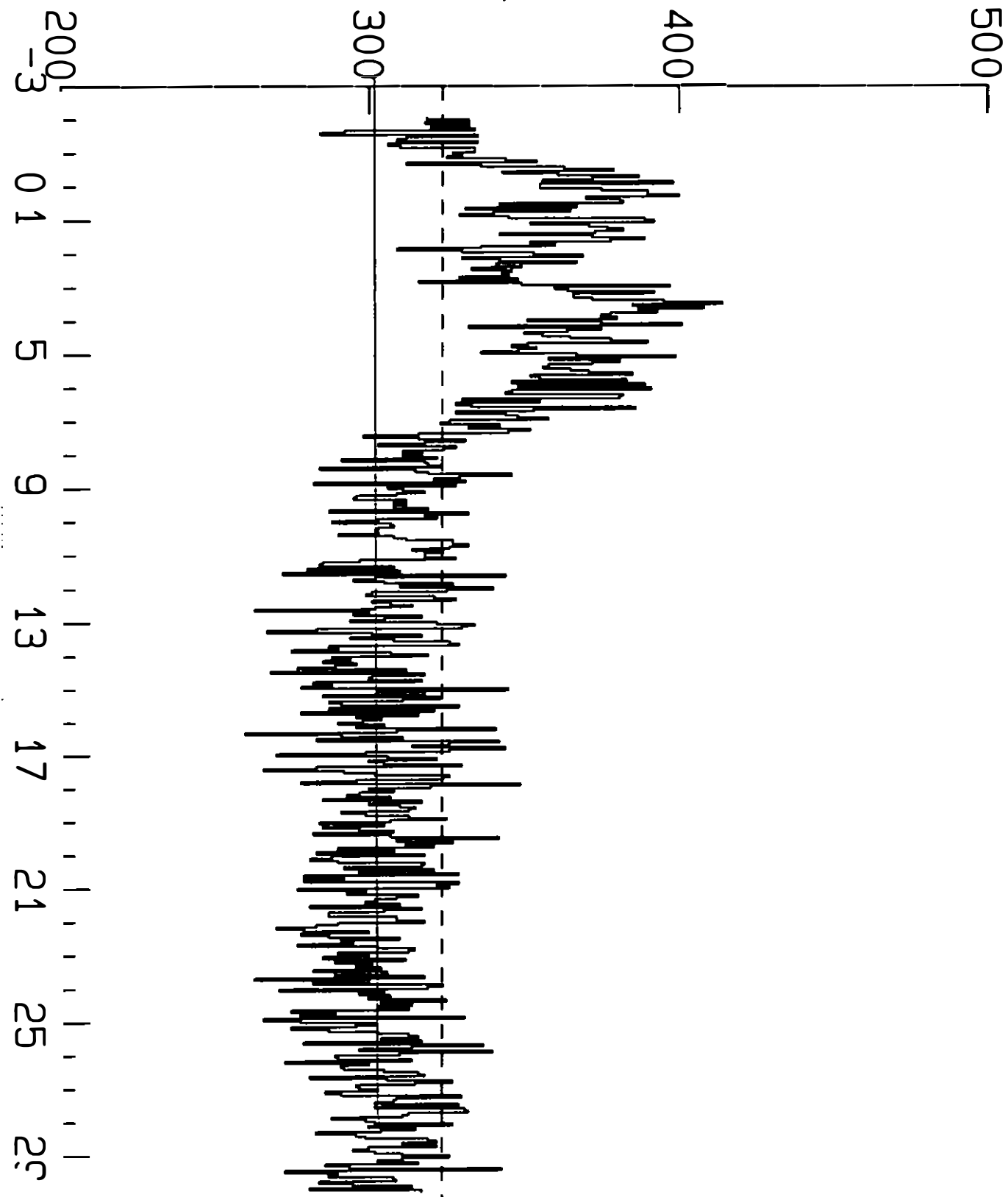
BATSE

10/06/96

76982.986

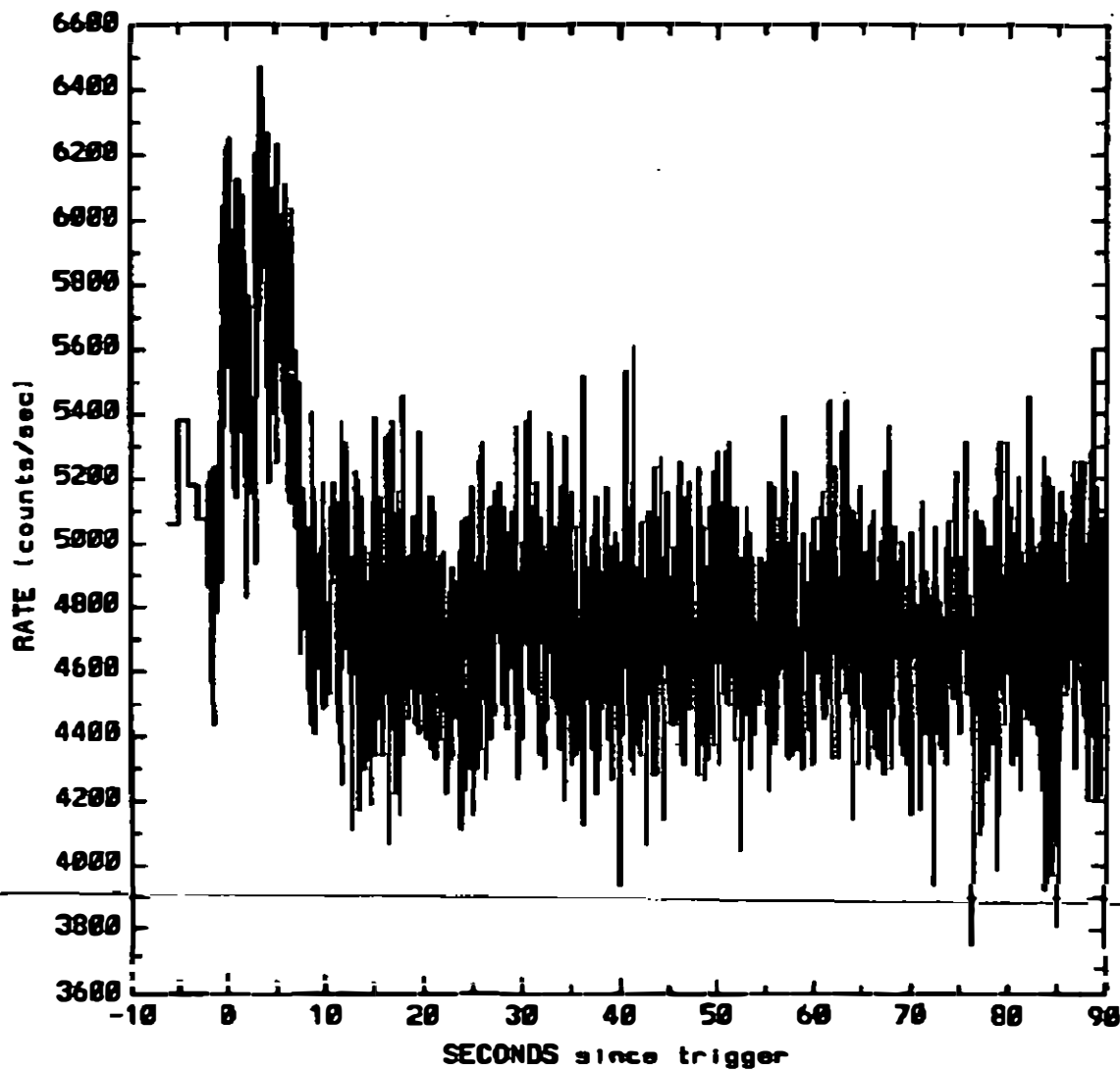
25- 100 keV

COUNTS/0.064 S



20 / 6 / 96

DISCSC Data for K. Hurley, No. 5492



19-JUN-1998 12:18:01

Created by NUPB BD
(Burst Display)
Version t2.25

Trigger # . 5492

Trigger Time:
18244 / 70982.986Burst Data Type:
DISCSCDeadtime
Corrected. NBackground Data
Type. PREB + DISCLAMinimum Integ. Time:
0.064 secondsDetectors [7..8].
-50Discriminators.
[1..2]Quality Mark.
BDISP1

96	2	29	22445.141	S2	740	1520	550	0.3	0.5	8	250	Search	
96	3	5	33645.352	S1	440	390	70	>10	0.8	1.8	251	Search	
96	3	12	35074.697	S2	160	730	330	<0.25	0.2	0.1	252	Search	
96	3	19	51992.828	S1		800	970	>7	0.16	0.4	253	RT	S2=7
96	3	21	76321.803	S2	4600	4550	1020	0.03	42	46	254	Trig	S293
96	3	22	19642.728	S1	1060	1760	1120	40	2	28	255	Trig	S304
96	3	24	80064.124	S2	320	520	150	0.07	1	14	257	Search	
96	3	25	69892.978	S1	250	620	460	6	0.5	0.5	258	NO	S339
96	3	31	21208.784	S1	220	520	120	4.4	2	24	271	RT	S389
96	4	4	25289.264	S2	420	750	240	0.07	4	9	272	Search ± 1750	
96	4	9	77143.618	S2	650	1170	420	0.17	0.5	5	273	RT KA	S413
96	4	10	80648.201	S2	190	330	140	<0.05	1	35	274	Search ± 1750	
96	4	18	06106.854	S1	200	330	70	1	2	2	277	RT KA	S413
96	4	18	08271.303	S2	350	770	50	<0.1	3	30	278	Search KA ± 1750	
96	4	18	66796.140	S1	1160	1000	50	10	1	3	290	Trig	S436
96	4	20	17324.809	S2	300	1190	1080	1	0.3	0.04	303	Search ± 1750	
96	4	22	59981.190	S2	160	410	140	0.5	4	12	305	RT	S443
96	4	25	86395.862	S2	1300	730		<0.04	44	16	306	Search KA ± 1750	
96	4	28	47556.501	S2	270	420	230	<0.04	1	170	307	RT	S450
96	4	30	49895.524	S1	250	640	180	8	8	18	309	RT KA	S451
96	5	1	31344.546	S1	380	870	350	3.7	20	56	310	Search ± 2050	
96	5	6	47384.998	S1	160	490	190	1.1	3	6	312	Search ± 2050	
96	5	7	44869.909	S2	460	760	290	0.03	20	98	313	Search ± 2050	
96	5	10	38723.598	S2	560	1300	330	0.1	1	7	317	Trig	
96	5	19	14766.283	S2	1700	7700	8000	0.4	0.1	0.56	319	Search ± 2050	
96	5	21	62489.430	S1	330	500	90	5.8	1	8	320	Search ± 2050	
96	5	23	59522.013	S1	270	550	580	10	1	3	321	RT	S470
96	5	29	43663.061	S2	1700	4000	5000	0.15	0.5	3.5	322	Trig	S477
96	5	29	80722.705	S2	420	620	140	0.1	1	14	323	Trig KA	
96	5	30	62300.750	S1	180	400	110	>20	2	14	324	Search ± 2050	
96	5	31	06926.043	S1	300	440	120	4.7	50	7	325	Search ± 2050	
96	5	31	73498.259	S2	1600	4250	2800	0.5	27	19	326	Trig	
96	6	2	42664.032	S1	1000	1450	1400	>2	0.3	0.03	327	Search ± 2100	
96	6	5	29392.672	S1	400	950	410	1.3	2	87	328	RT	S486
96	6	7	78106.176	S2	890	1280	550	0.04	32	120	329	RT	S489
96	6	10	84502.254	S2	200	1000	1500	0.9	0.16	0.11	330	Search ± 2100	
96	6	14	71198.677	S1	650	2800	2700	1.4	0.5	18	331	Trig	
96	6	14	67654.516	S1	80	1800	1600	1	0.18	0.1	332	Search ± 2100	
96	6	17	76195.941	S1	350	560		>8	1	0.6	333	NO	S504
96	6	22	74906.054	S2	100	360	280	0.2	4	8	334	Search ± 2100	
96	6	23	04734.229	S2	130	320	150	0.5	7	25	335	RT KA	S512
96	6	23	77186.871	S2	250	350	130	0.05	6	15	336	Search ± 2100	
96	6	25	16949.252	S1	180	280	70	4.6	6	9	337	RT	S518
96	6	28	19224.223	S2	500	410	120	0.06	12	6	338	RT	S523
96	7	2	54698.284	S1	280	350	70	2.8	23	85	339	RT	S525
96	7	3	65443.861	S1	200	560	600	3	1	0.4	340	NO	S527
96	7	7	36999.311	S2	1600	1200		0.06	2	5	341	RT	S530
96	7	8	72577.095	S2	900	820	160	0.2	1	6	342	Search ± 2300	
96	7	9	00246.641	S1	260	1000	400	0.95	15	4	343	Trig KA	
96	7	10	00662.014	S2	1800	4700	3600	0.13	0.5	48	345	Trig	
96	7	11	63757.543	S1	560	2400	900	1.25	0.5	19	346	Trig	
96	7	11	68451.869	S2	200	360	170	<0.07	2	41	347	Search ± 2350	
96	7	22	25522.448	S2	360	650	170	0.27	17	151	348	RT	S548
96	7	22	56346.728	S1	700	1000	200	2.6	3	6	349	Search ± 2300	
96	7	27	43056.737	S2	500	1000	500	0.7	0.5	15	350	Search ± 2350	
96	7	31	20761.638	S2	800	1160	170	0.9	0.5	4	353?	RT	S557
96	8	3	67525.033	S1	4000	8000	3000	3	0.02	0.18	354	Trig KA	S561
96	8	4	84535.906	S2	2000	2600	600	<0.03	0.5	2	355	Trig KA	S563
96	8	5	78957.888	S2	1270	2360	380	0.05	1	20	356	Trig	
96	8	6	80989.772	S2	420	850	250	1	86	10	357	RT	S566

KONUS 21

ULYSSES RT

25 / 11 / 96

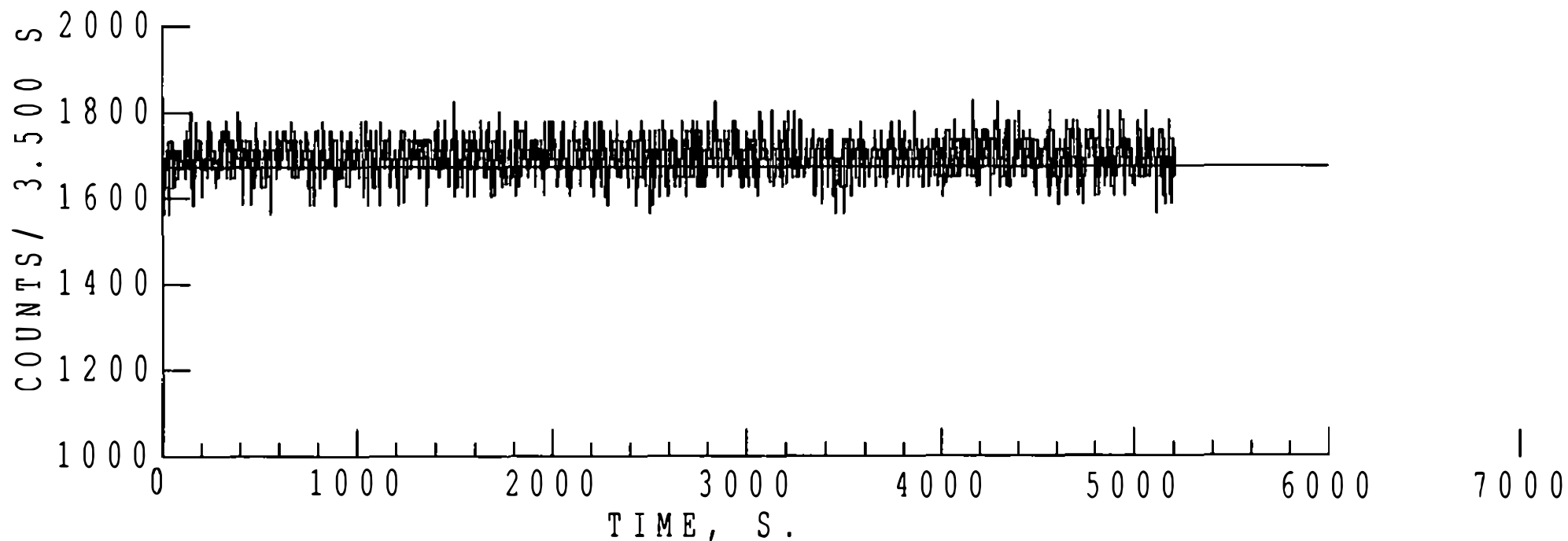
10 / 6 / 96 81900.102 s

0.500 S INTERVALS REGROUPED BY 7

0 - 0 keV

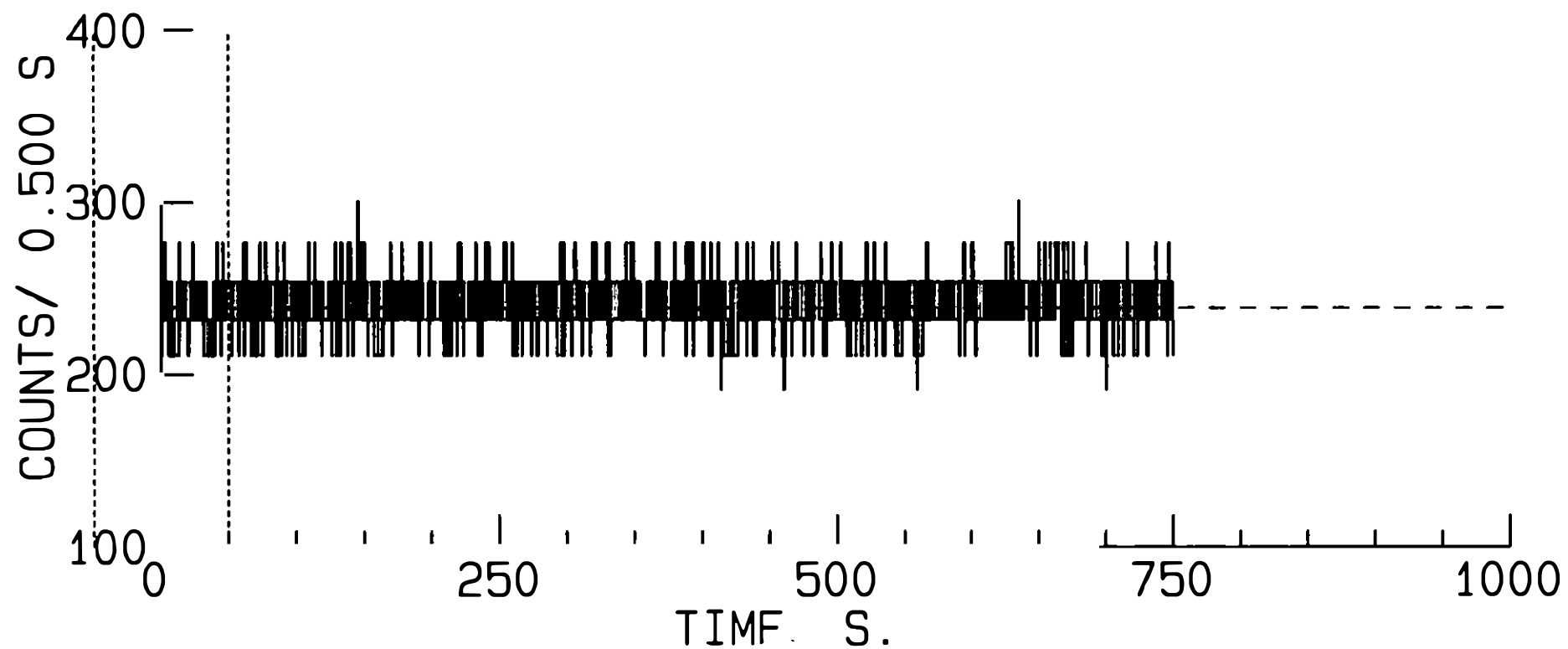
M= 10 H=10
>4.0 SIGMA FLUCTUATIONS

M= 10 H= 2
>4.0 SIGMA FLUCTUATIONS



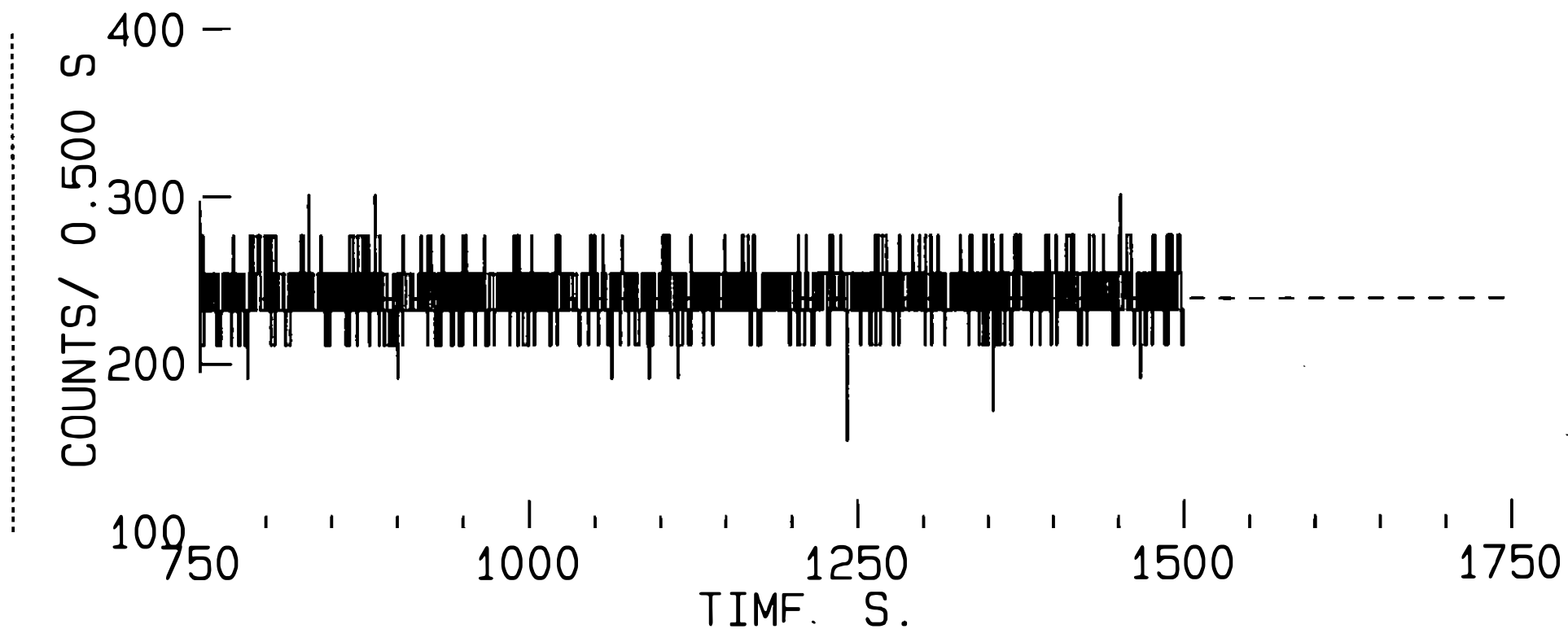
ULYSSES RT
10/ 6/96 81900.102 s
21- 145 keV

13/ 8/ 8



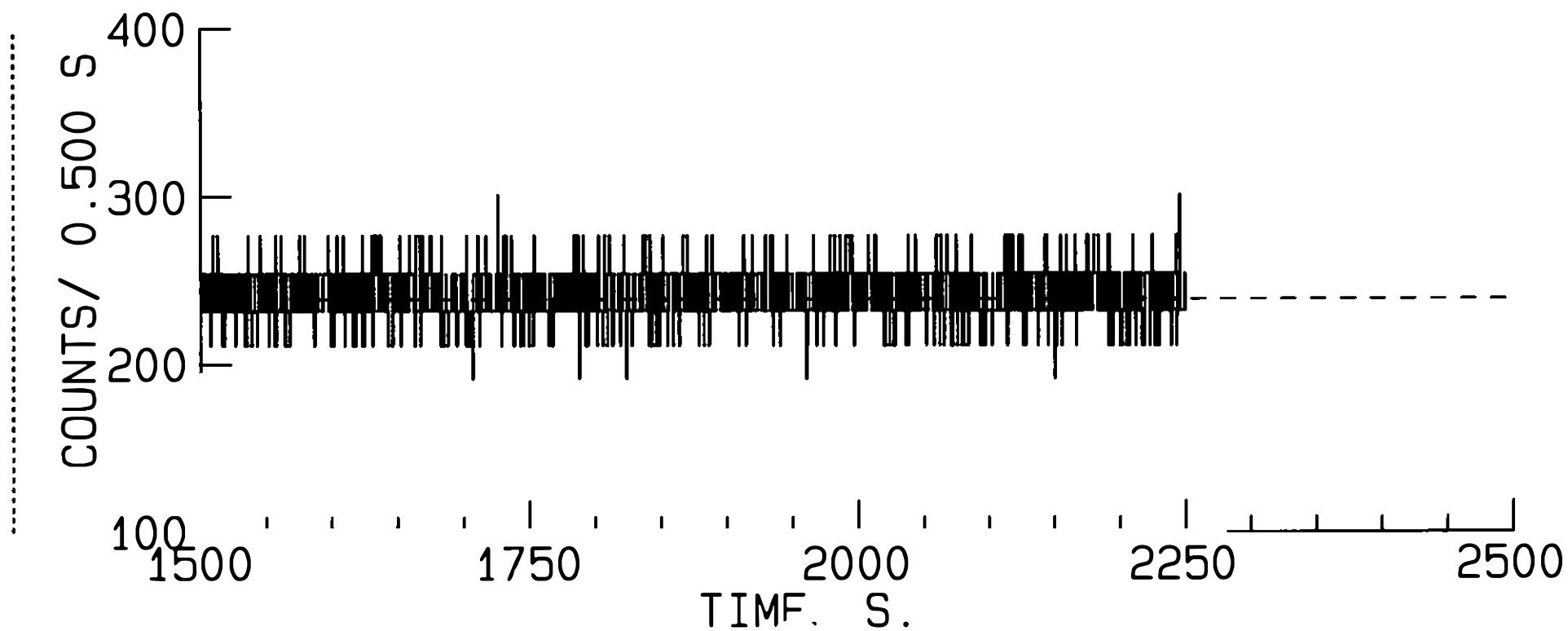
ULYSSES RT
10/ 6/96 81900.102 s
21- 145 keV

13/ 8/ 8



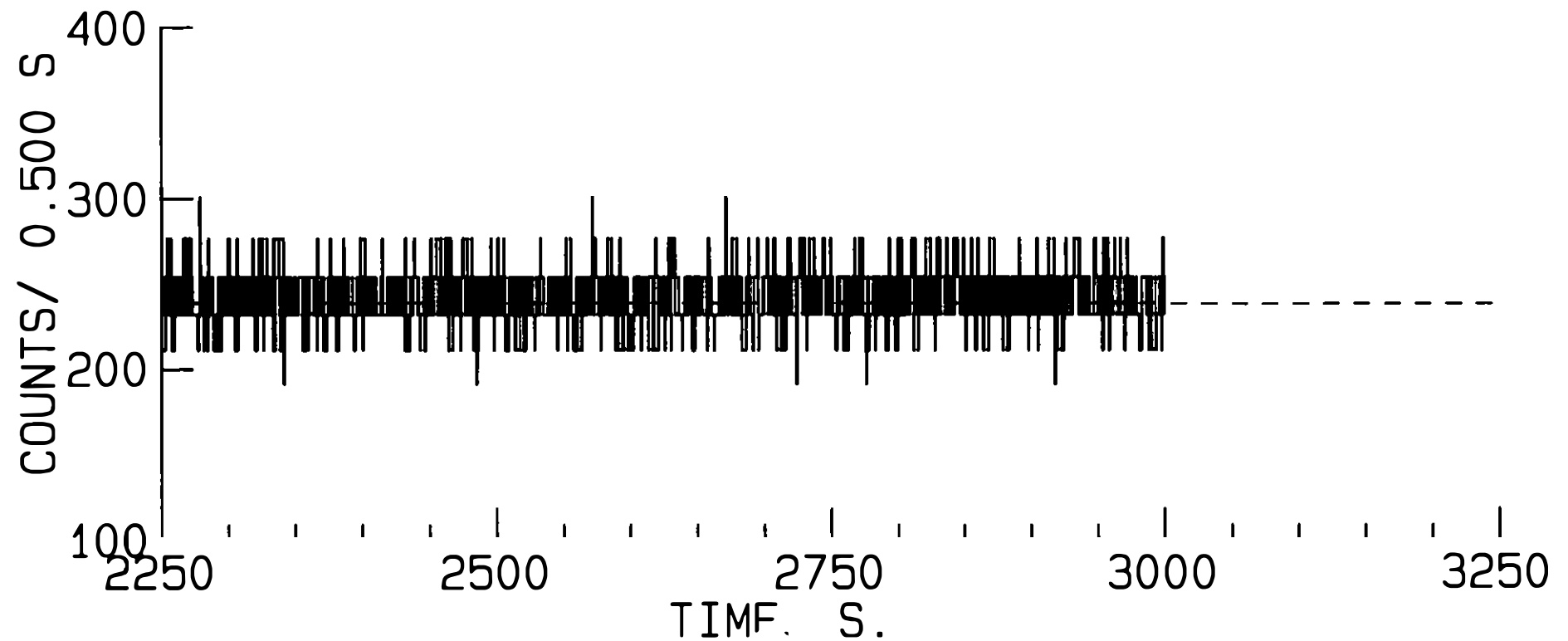
ULYSSES RT
10/ 6/96 81900.102 s
21- 145 keV

13/ 8/ 8



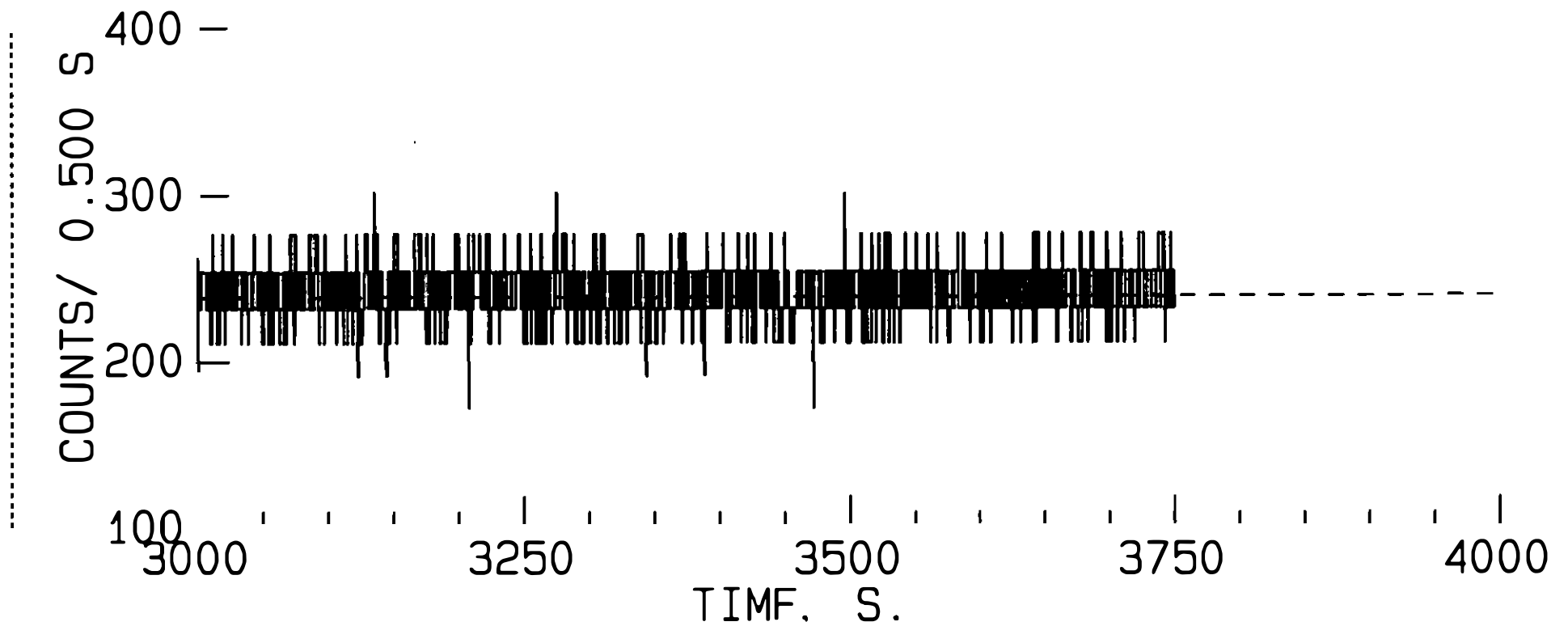
ULYSSES RT
10/ 6/96 81900.102 s
21- 145 keV

13/ 8/ 8



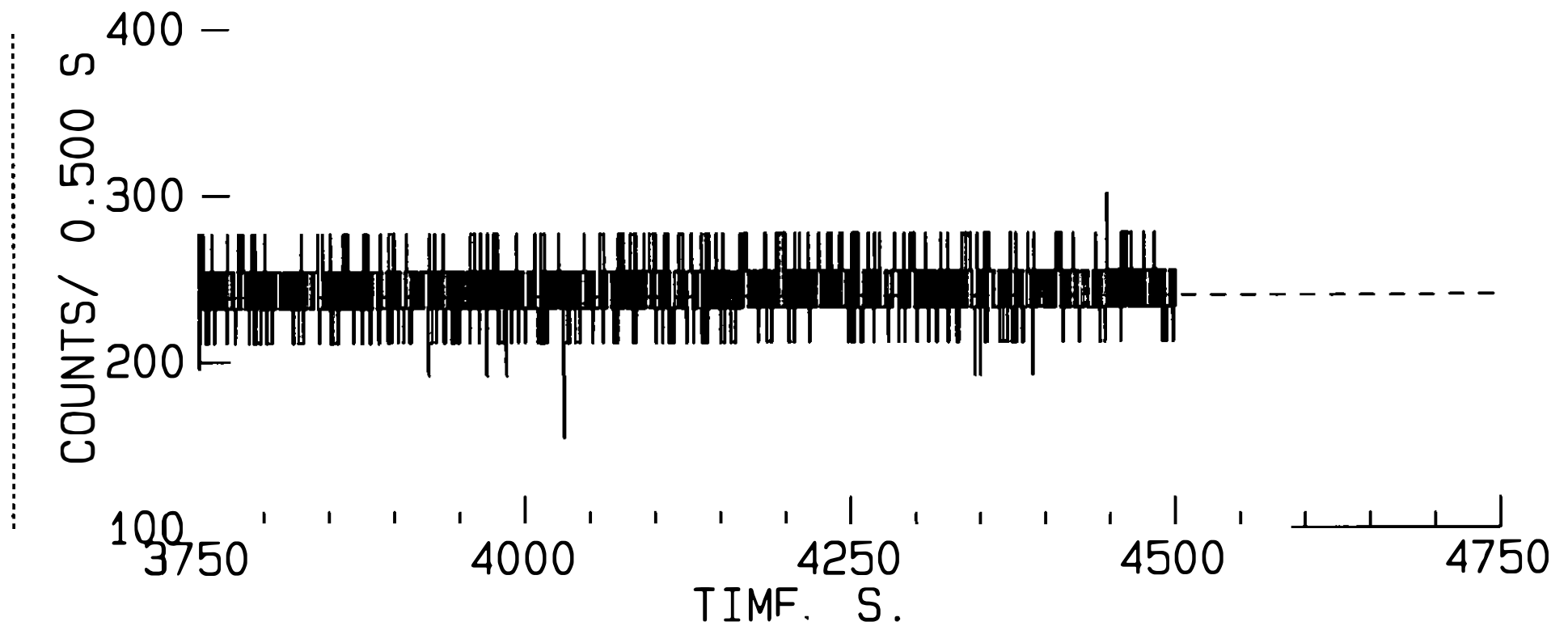
ULYSSES RT
10/ 6/96 81900.102 s
21- 145 keV

13/ 8/ 8



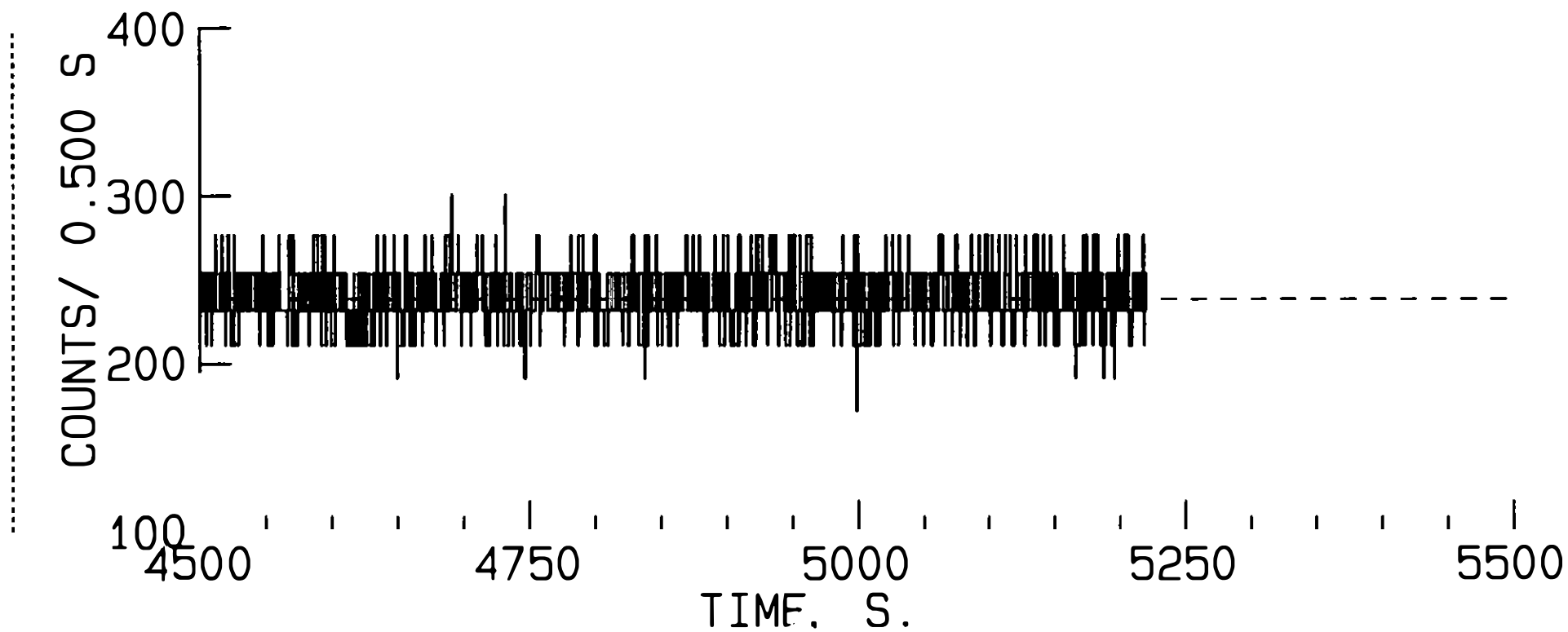
ULYSSES RT
10/ 6/96 81900.102 s
21- 145 keV

13/ 8/ 8

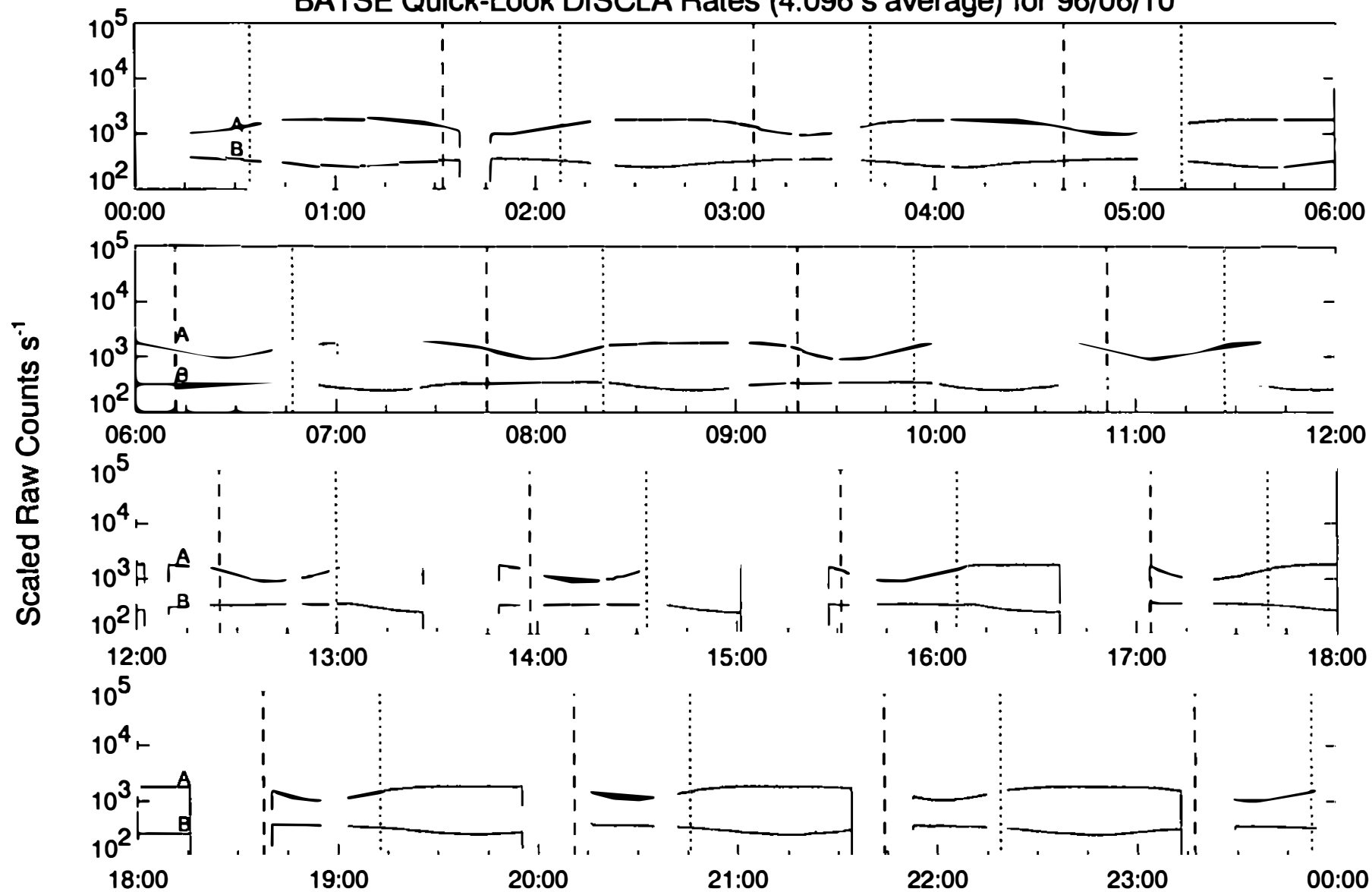


ULYSSES RT
10/ 6/96 81900.102 s
21- 145 keV

13/ 8/ 8



BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/10



Current Time: 96/06/12, 1004 EDT

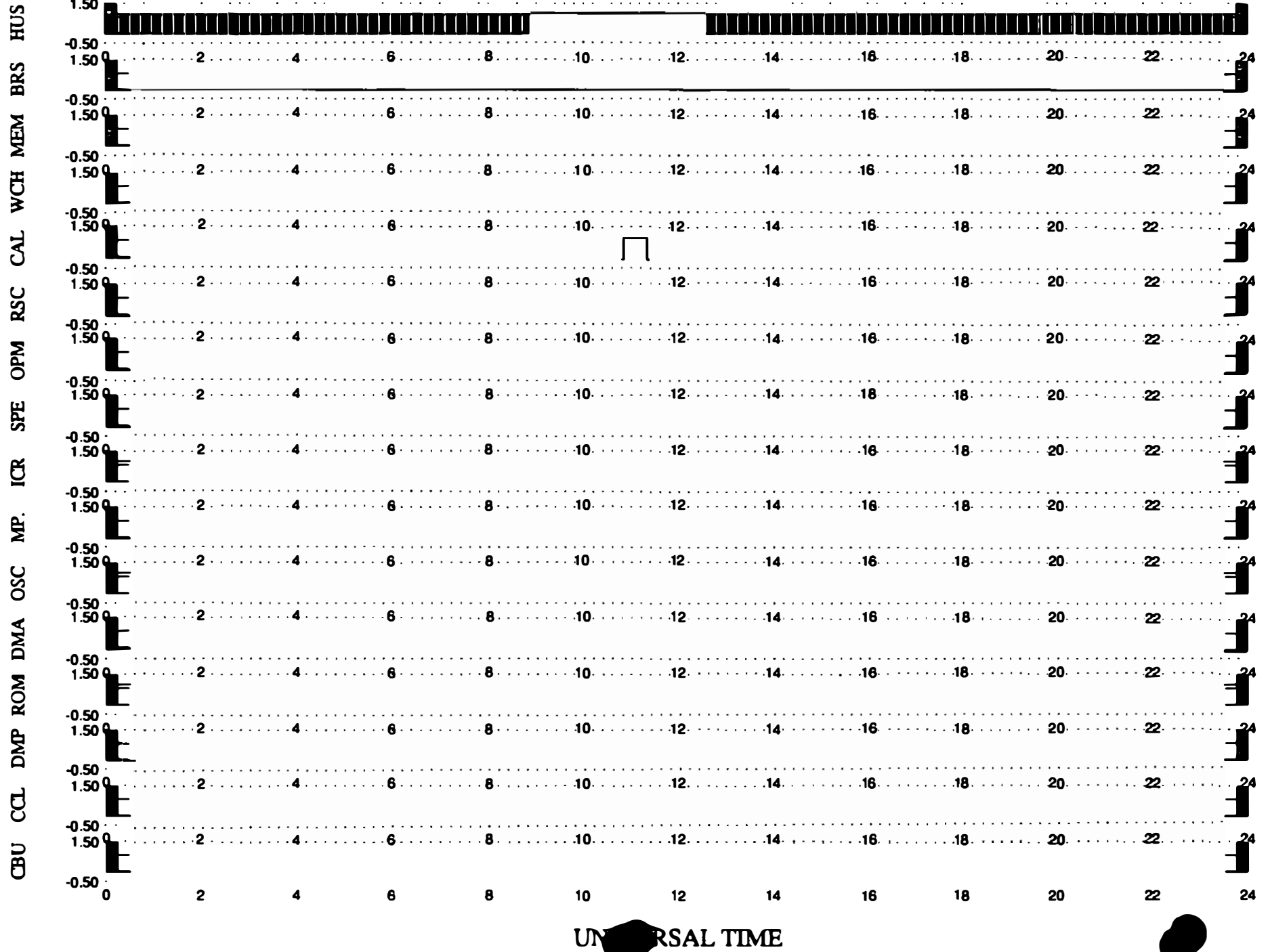
A: Channel 0 Most Sunward LAD

B: Sum Channel 0 Anti-Sunward LADs X .05

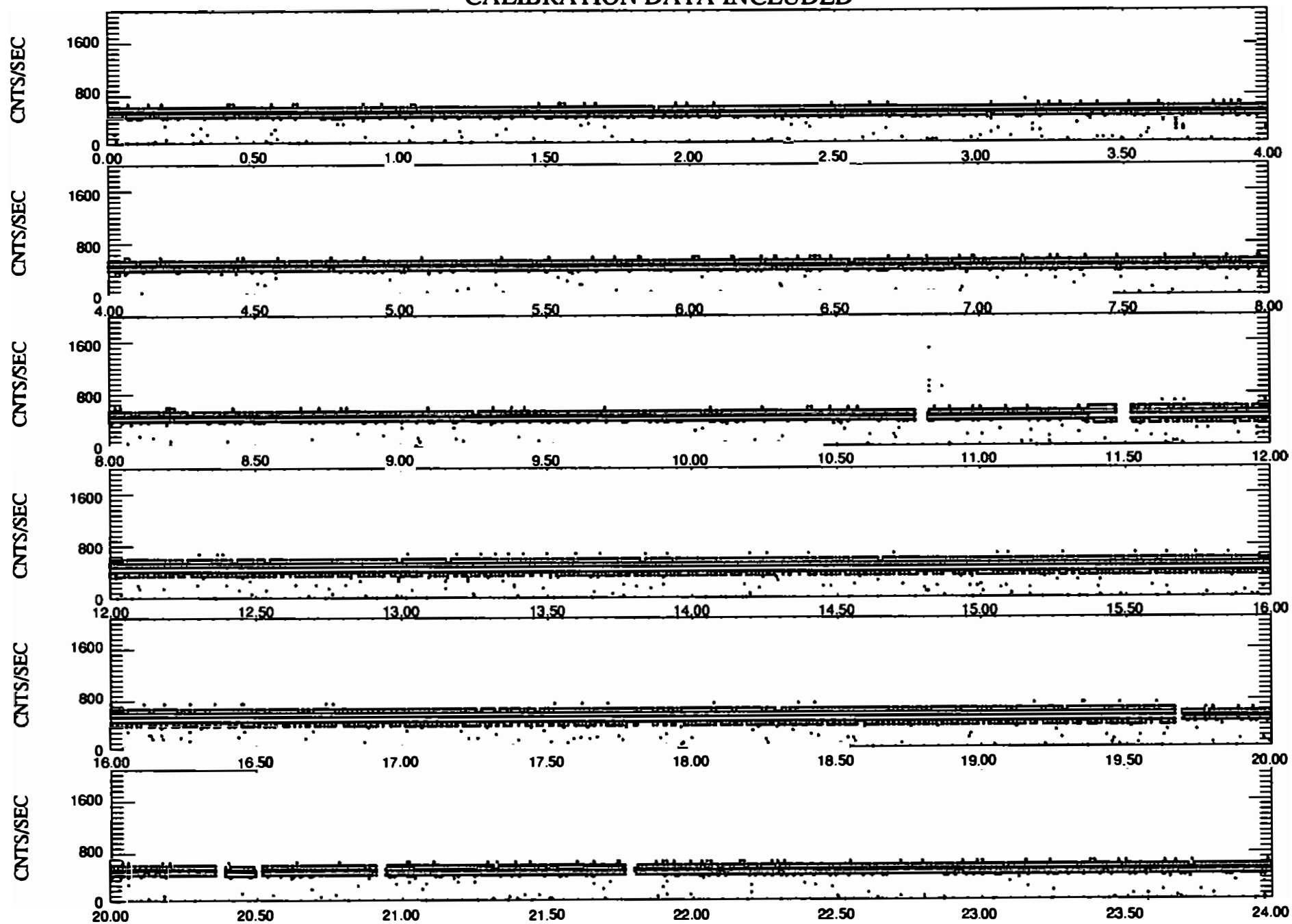
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

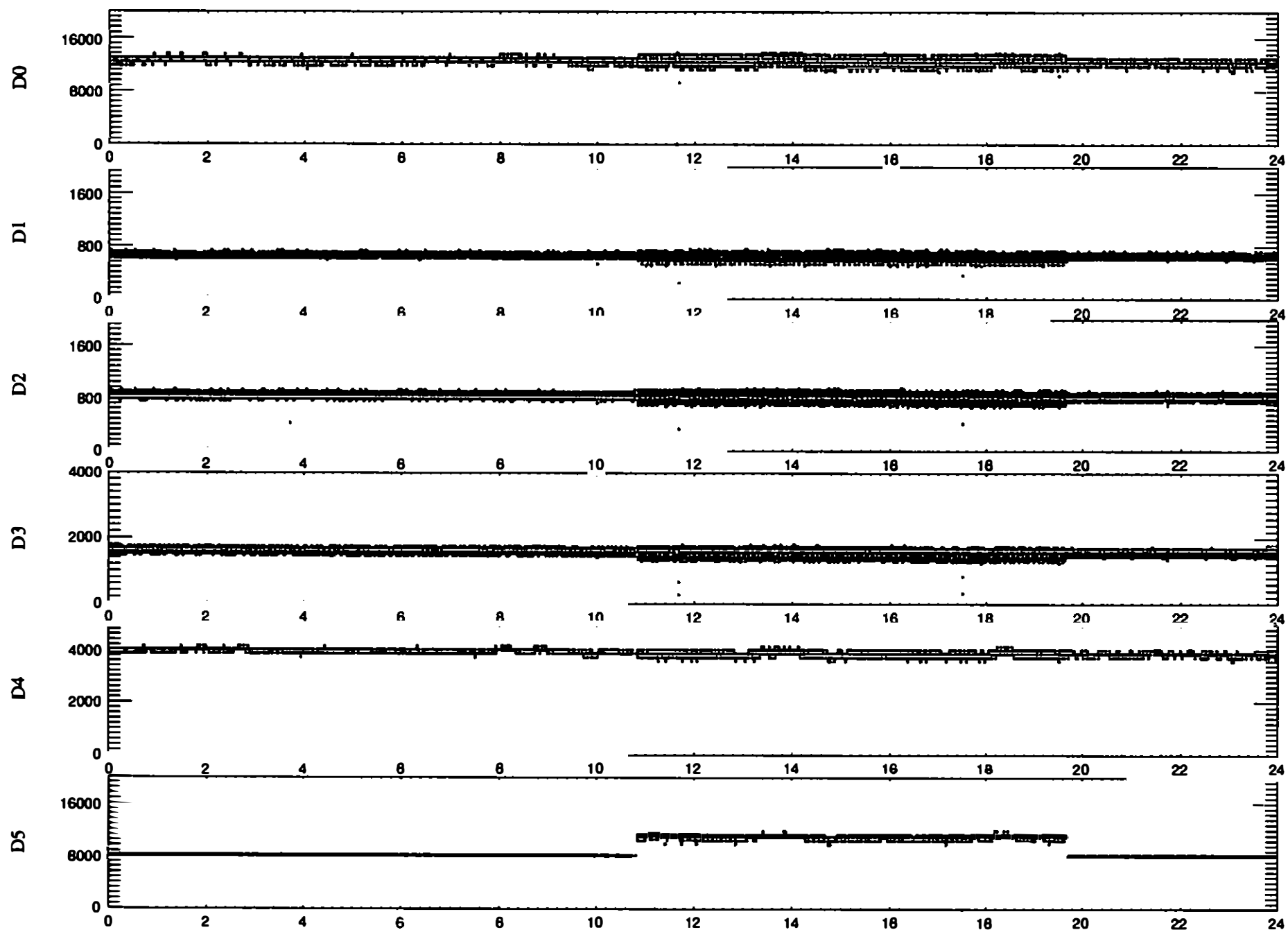
NO BURST (1)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

KONUS

ULYSSES RT

29 / 01 / 00

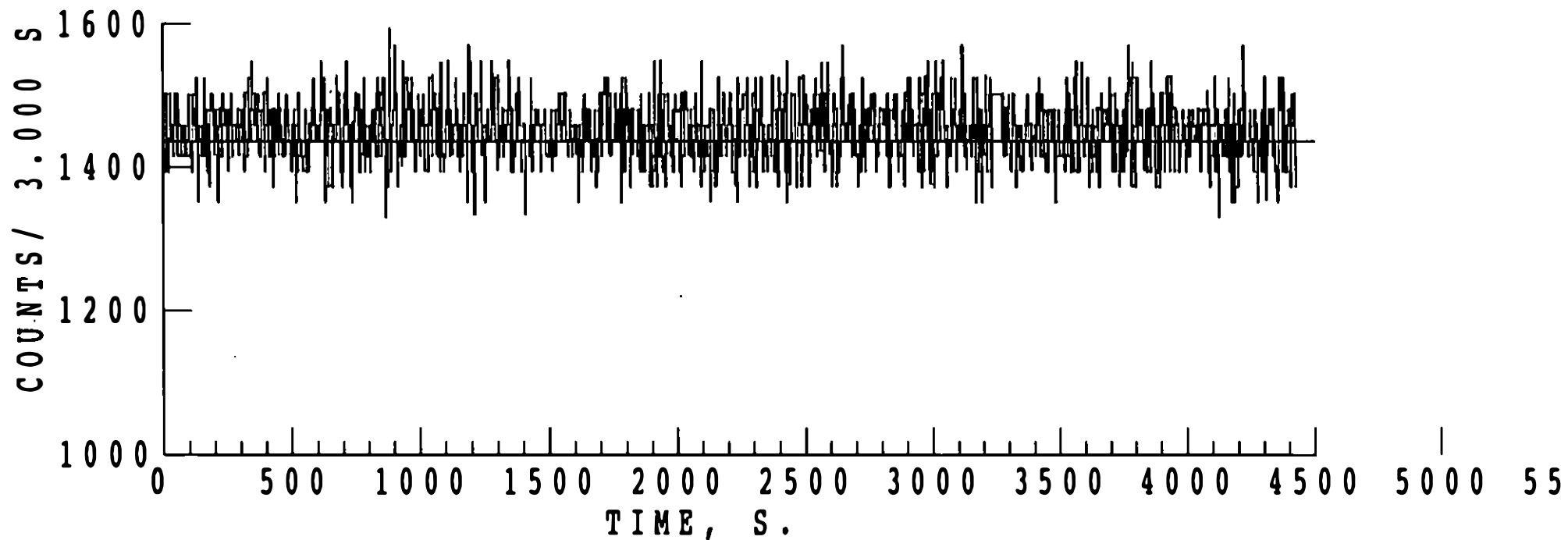
11/06/96 17712.406 s

0.500 S INTERVALS REGROUPED BY 6

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



KONUS

ULYSSES RT

29 / 01 / 00

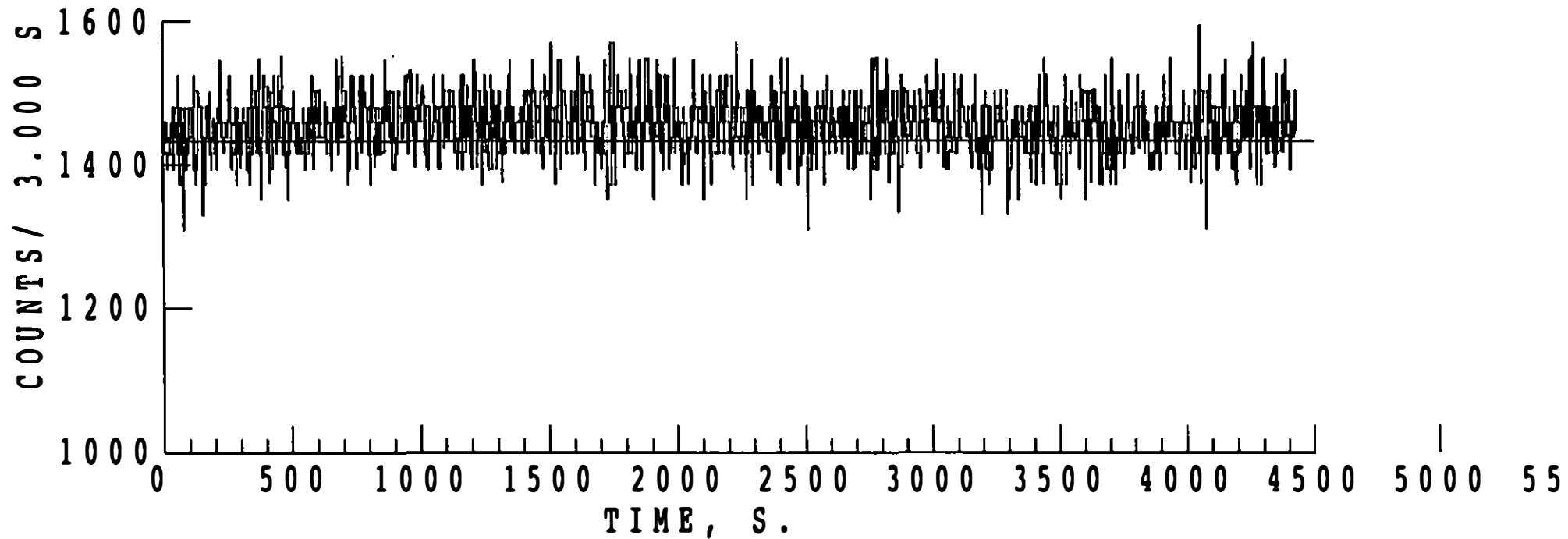
11/06/96 29844.062 s

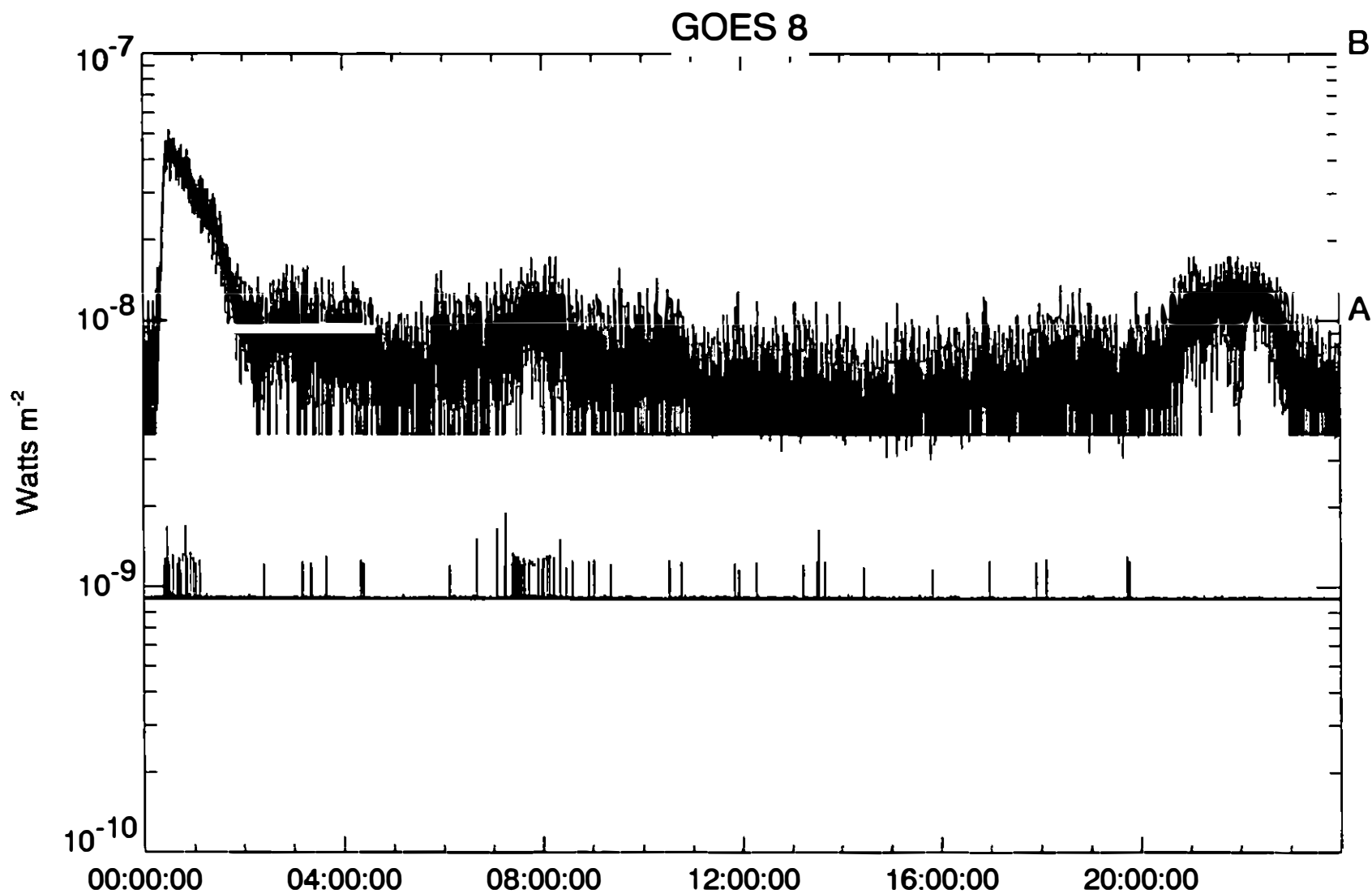
0.500 S INTERVALS REGROUPED BY 6

0 - 0 keV

N=10 M=2

>4.0 SIGMA FLUCTUATIONS





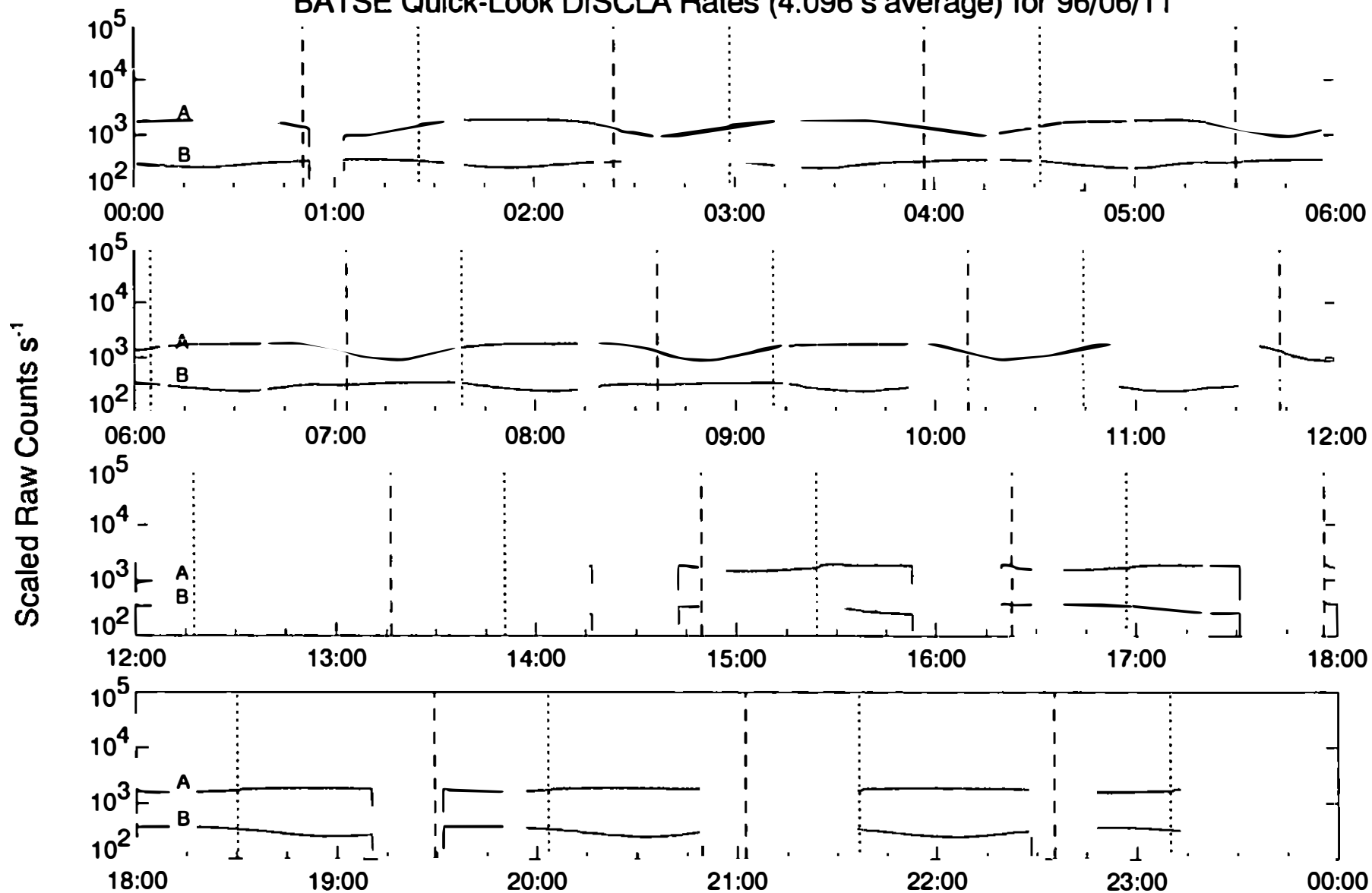
Data Start: 96/06/11, 0000:00

Plot created: 96/06/13, 1003

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/11



Current Time: 96/06/13, 1004 EDT

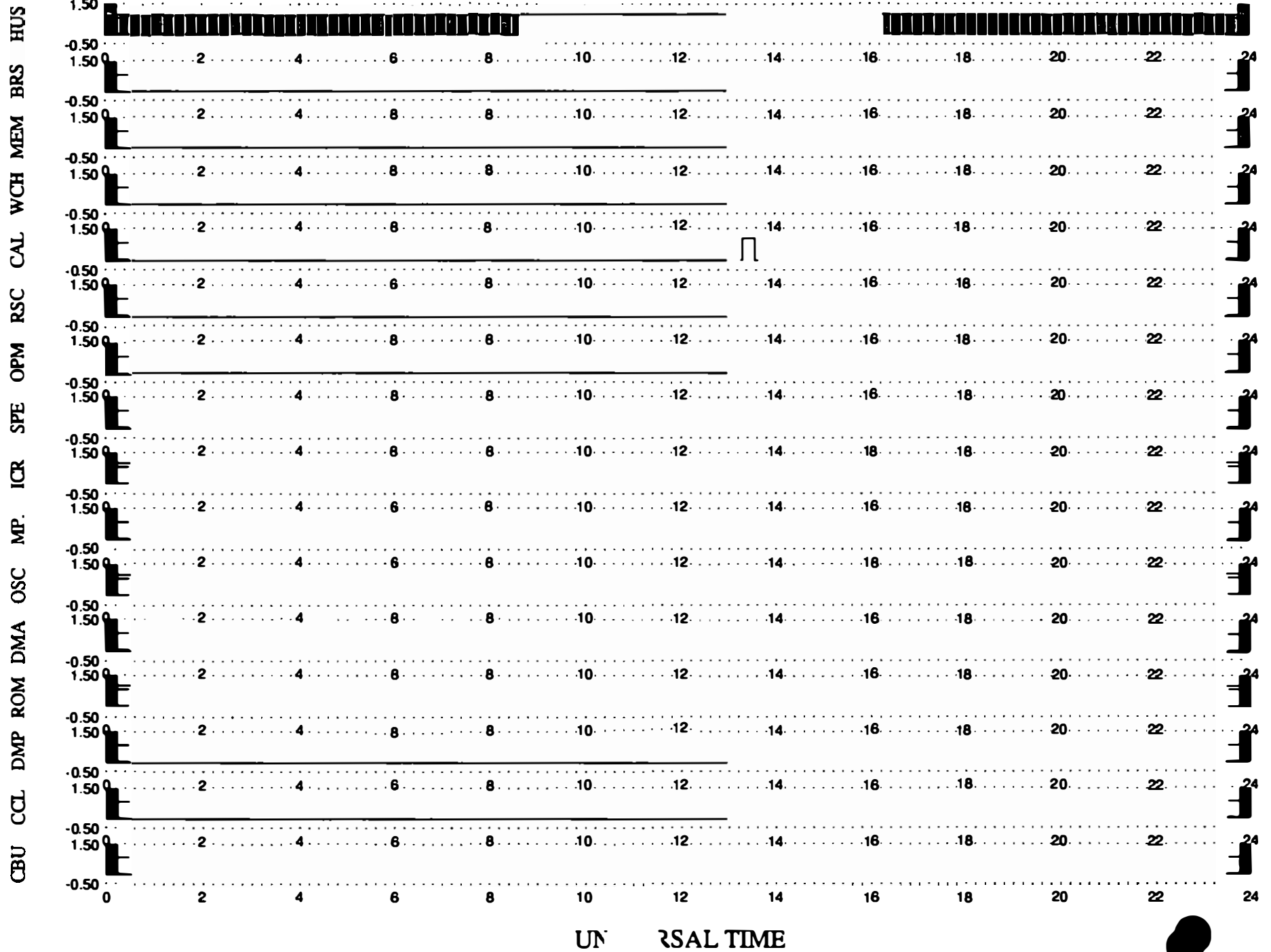
A: Channel 0 Most Sunward LAD

B: Sum Channel 0 Anti-Sunward LADs X .05

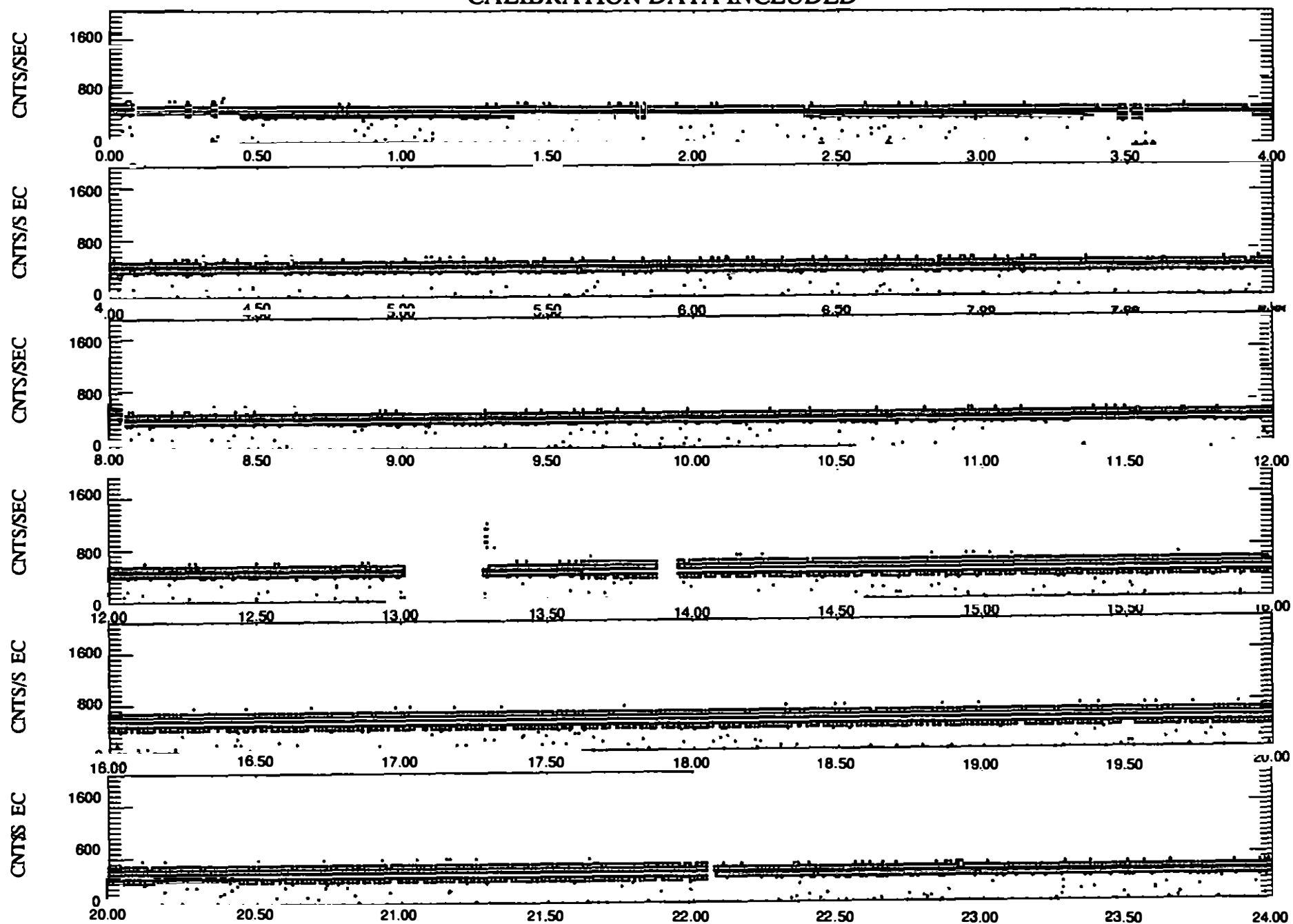
Dotted line: Day entry
Dashed line: Night entry

★ Solar Burst Trigger
+ Solar Flare

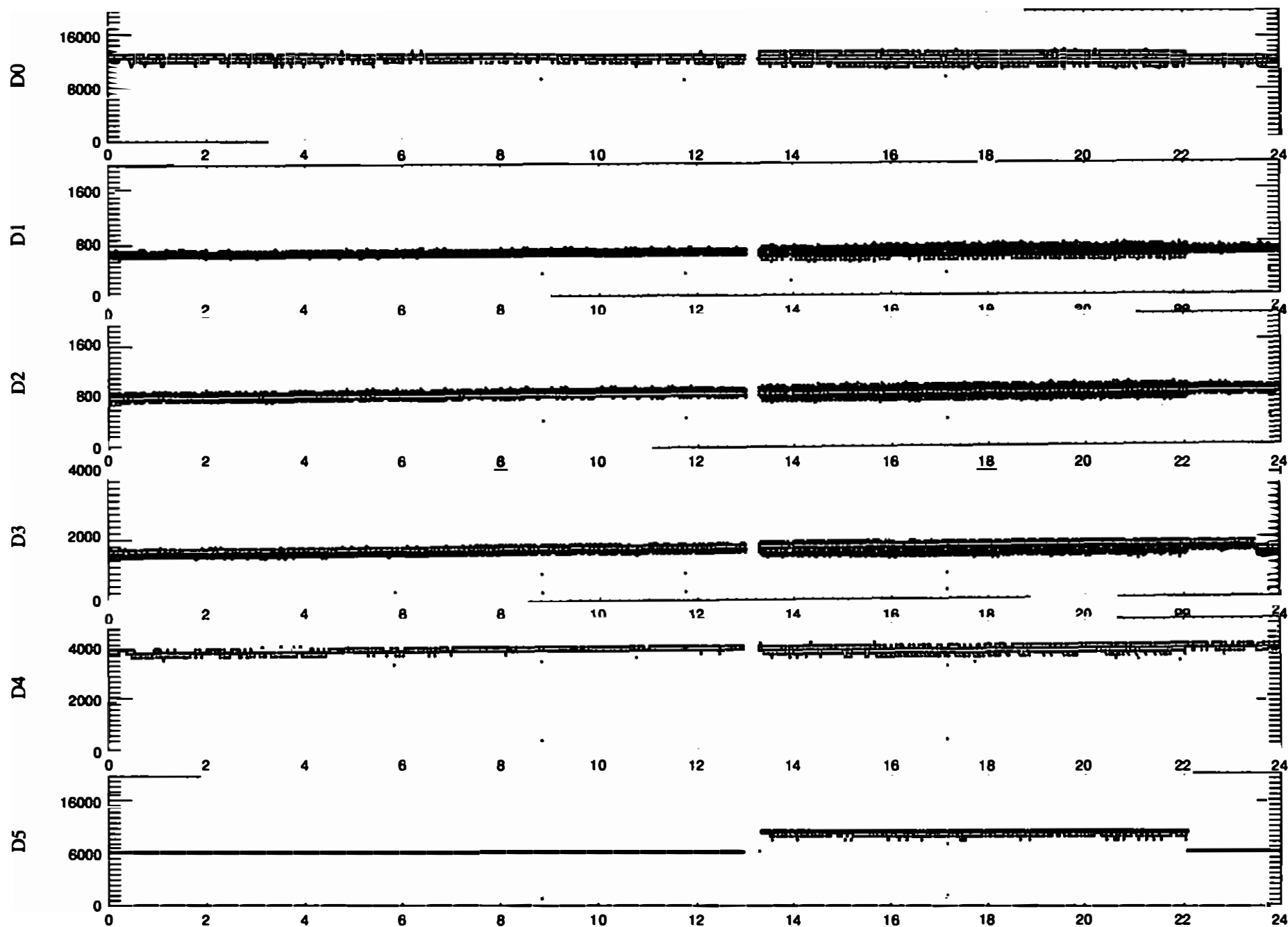
NO BURST (1)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From RICHARDSON@ssl.msfc.nasa.gov Fri Jun 14 09:15 PDT 1996
Date: Fri, 14 Jun 1996 11:15:47 -0500 (CDT)
From: RICHARDSON@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5493

ND

BATSEARCH PROGRAM

BATSE BURST # 5493
EVENT OF 1996 JUN 12 DAY OF YEAR=164
EVENT CROSSING TIME AT BATSE : 20552. S. OR 05:42:32.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 22.000 6.000
BATSE PEAK COUNTING RATE: 2400 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 12/ 6/ 96 IS:
RA= 150.471 DEC= 51.425 DIST= 4.359 AU
BATSE-ULYSSES DISTANCE = 652175911. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 72.30 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 661.48 SECS.
CROSSING TIME AT ULYSSES IS 21213. S. OR 05:53:33 +/- 419.85 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 12/ 6/ 96 IS:
RA= 57.389 DEC= 19.963 DIST= 2.355 AU
MARS-BATSE DISTANCE = 352277696. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=142.92 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -937.40 SECS.
CROSSING TIME AT MARS IS 19615. S. OR 05:26:54 +/- 108.78 SECONDS

BATSE BURST TRIGGER

NO.: 5493

TIME: TJD=0246 SECONDS=20552

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=116.8 AZIMUTH=53.2 ERROR=1.8 DEGREES

COMMENTS:

GRB. LOTS OF SPIKEY STRUCTURE. DUR.~120S. NOT VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5493	960612	10246	20552	2400	022	+06	120

BATSE #

5493

14 / 6 / 96

ULYSSES RT

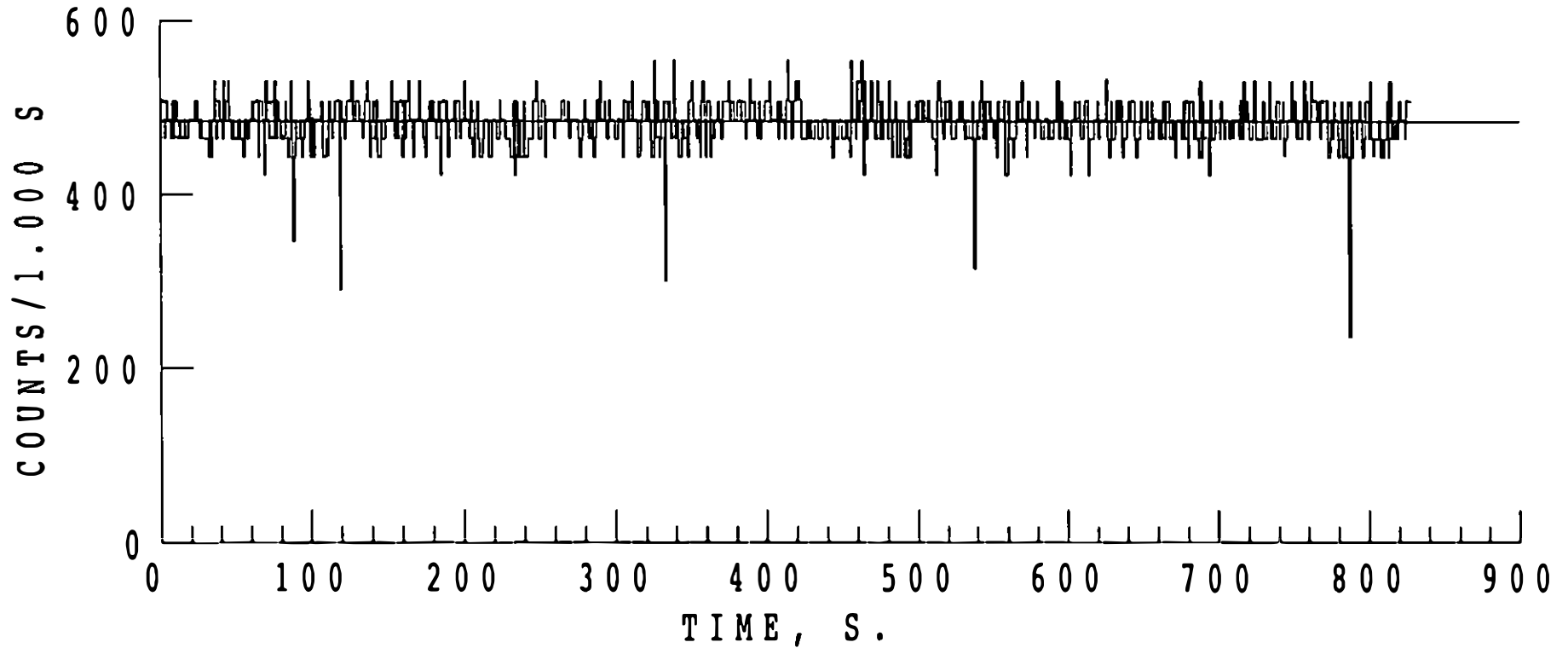
12 / 6 / 96 20808.088 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



Date: Oct 3 2011

BURST TRIANGULATION CHECKLIST

I. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Is the order of the data in CORREL such that a vernier is done on the data with the best time resolution?

2. For Konus events

- ☒ Konus ecliptic latitude used with latest calibration?

2. For Odyssey events

- ☐ Was CHECKMO run to eliminate data gaps?
- ☐ Did the Odyssey ephemeris correspond to the event time? (When there is data in the database, the ephemeris is for the start of record, usually ~1320 s prior to the request time; when there is no data in the database, the ephemeris is for the request time in the e-mail, so the request time in mosearch should be equal to the GRB time. Note that the time in the return e-mail will be ~1320 s prior to the time requested, in the line "no HEND data...")
- ☐ Was Mars-blocking used?
- ☐ For cruise phase data (April – October 2001), was the updated data used? (Old data has timing errors)
- ☐ GRS database searched for triggered data? Database data between August 2005 and January 2006 should be re-extracted, due to timing errors. (E-mailed data should be OK).
- ☐ GRS and HEND data cross-correlated to check timing?

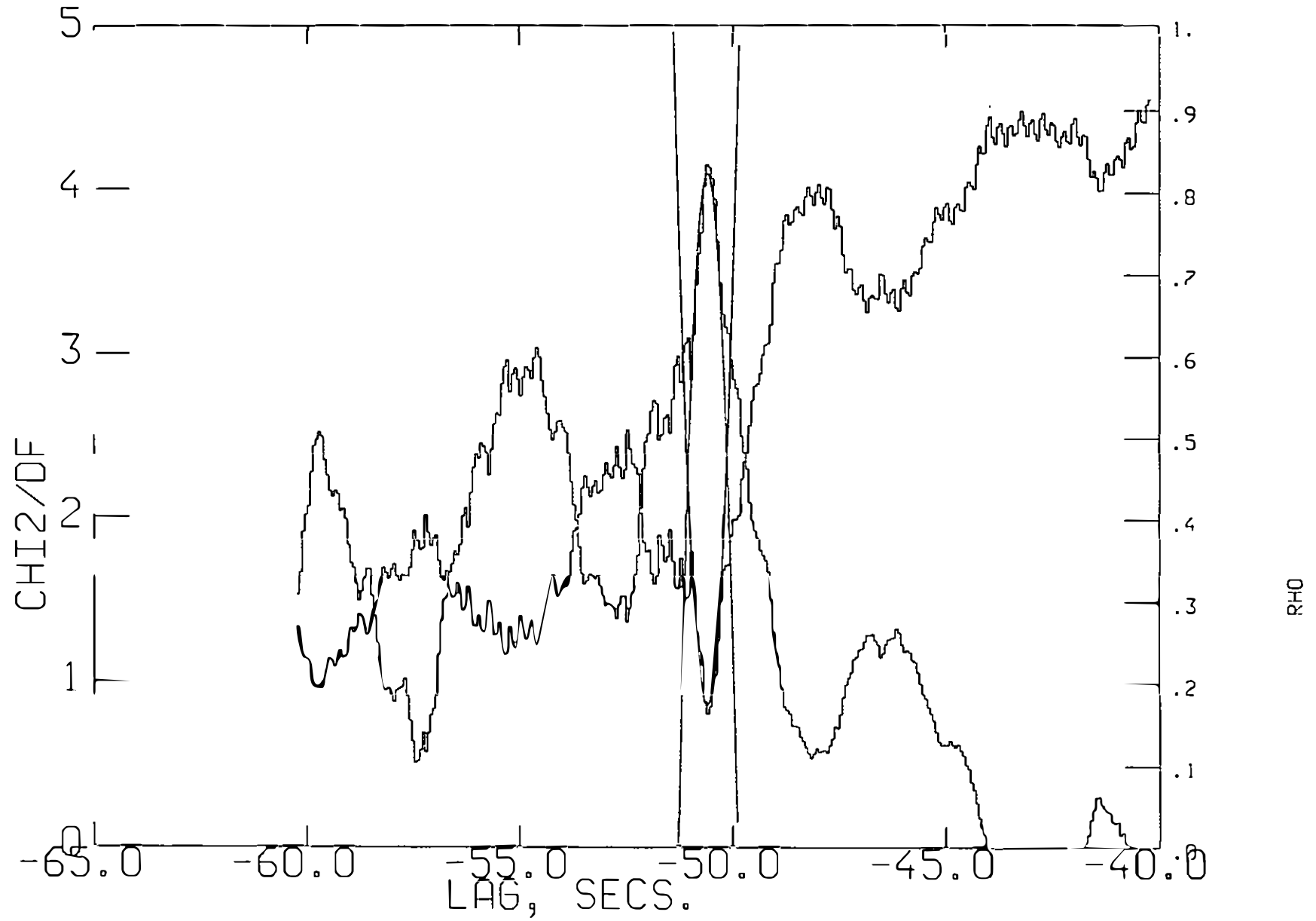
2. For 3 or More Spacecraft events

- ☐ $\Sigma 3\Delta t$'s calculated, and/or BMAPSUM executed?

3. For INTEGRAL events

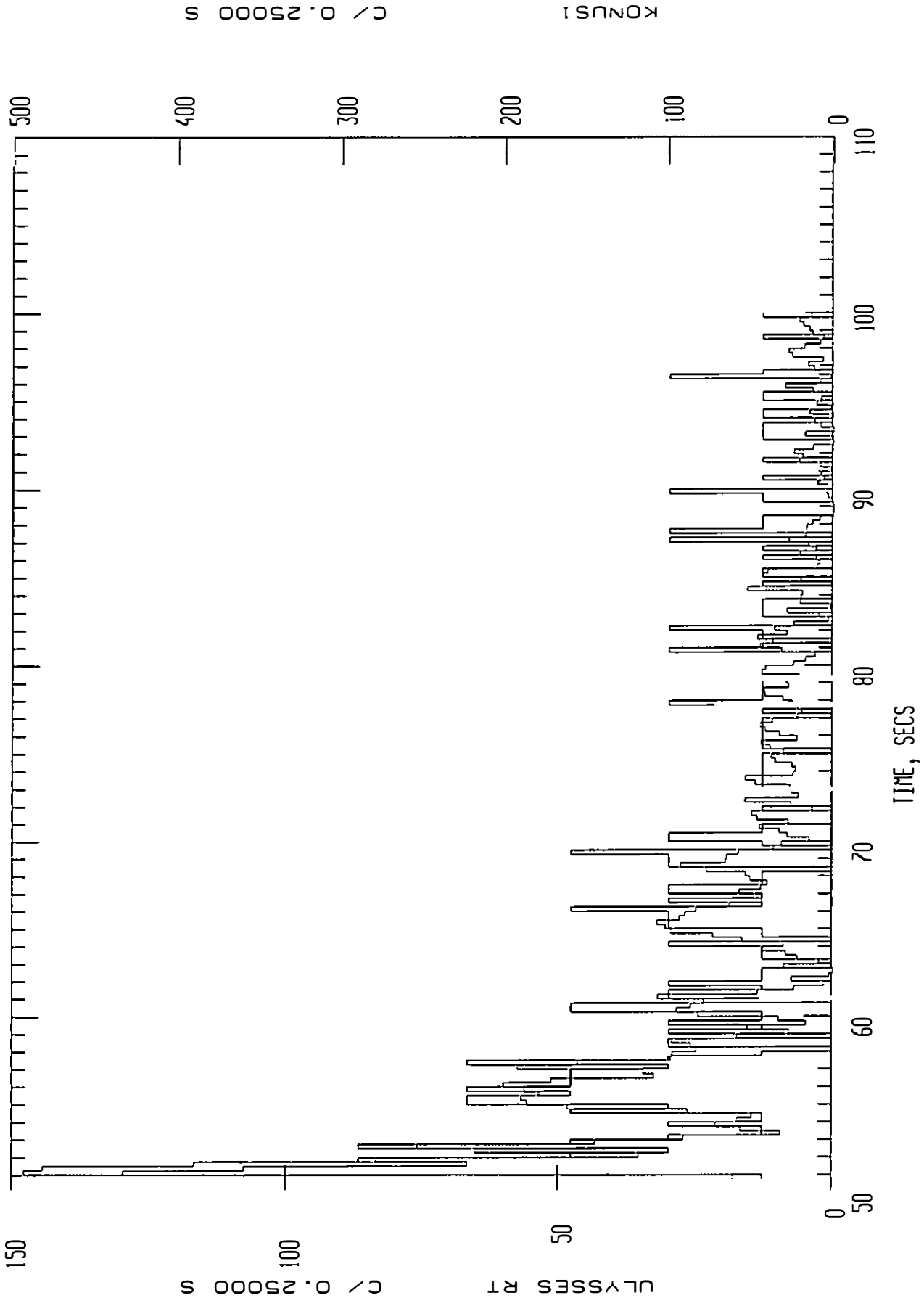
- ☐ INTEGRAL SPI-ACS website checked for bursts that weren't transmitted automatically?
- ☐ 125 ms added to INTEGRAL SPI-ACS time for bursts prior to April 2 2004 11:00 UT?
- ☐ Updated ephemeris used for bursts prior to September 30, 2003?

-
- ☒ ACCESS and MBL4 databases updated with identical times?



3/10/11

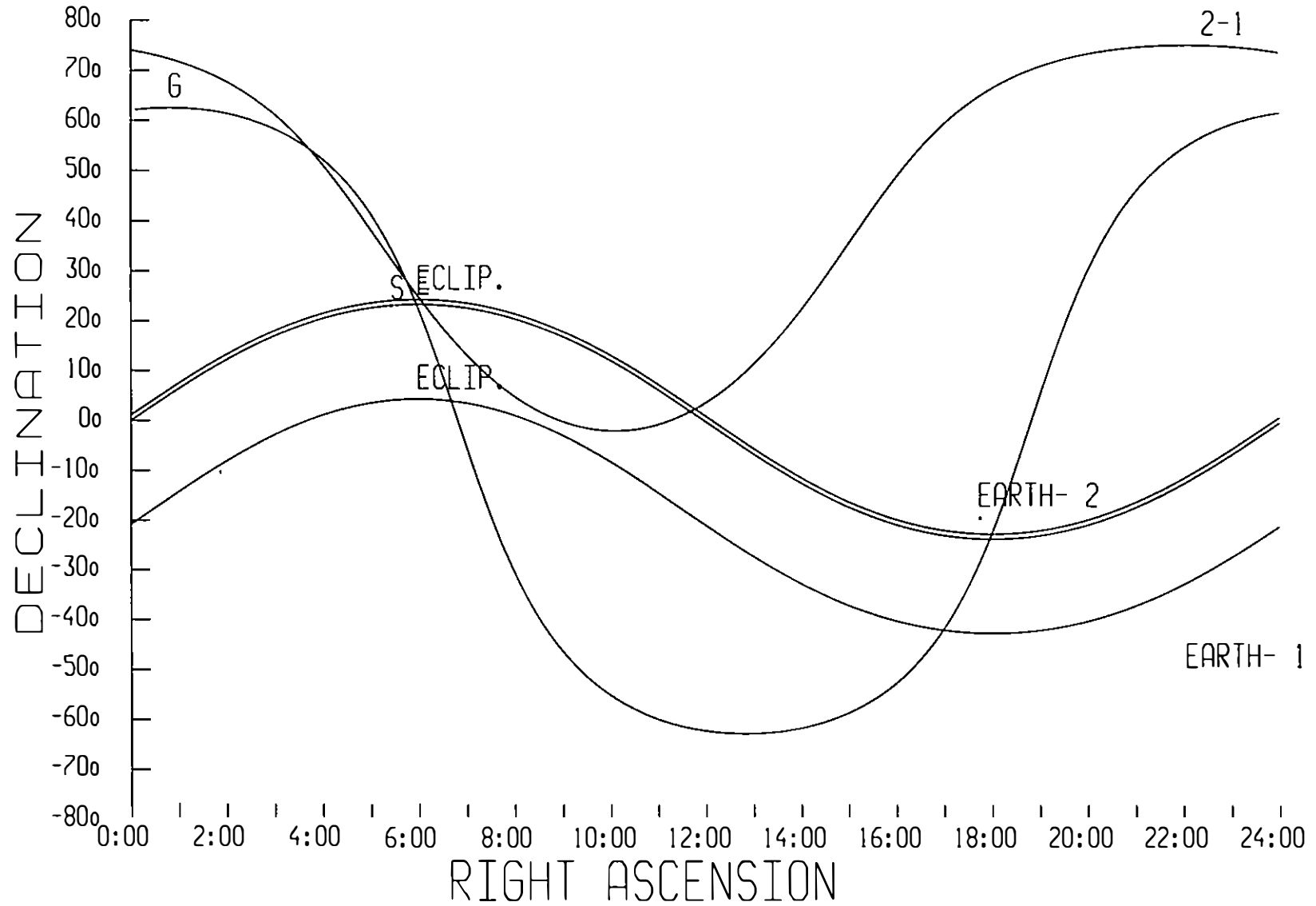
ULYSSES RT-KONUS1 CORRELATION 12/ 6/96 69846.237

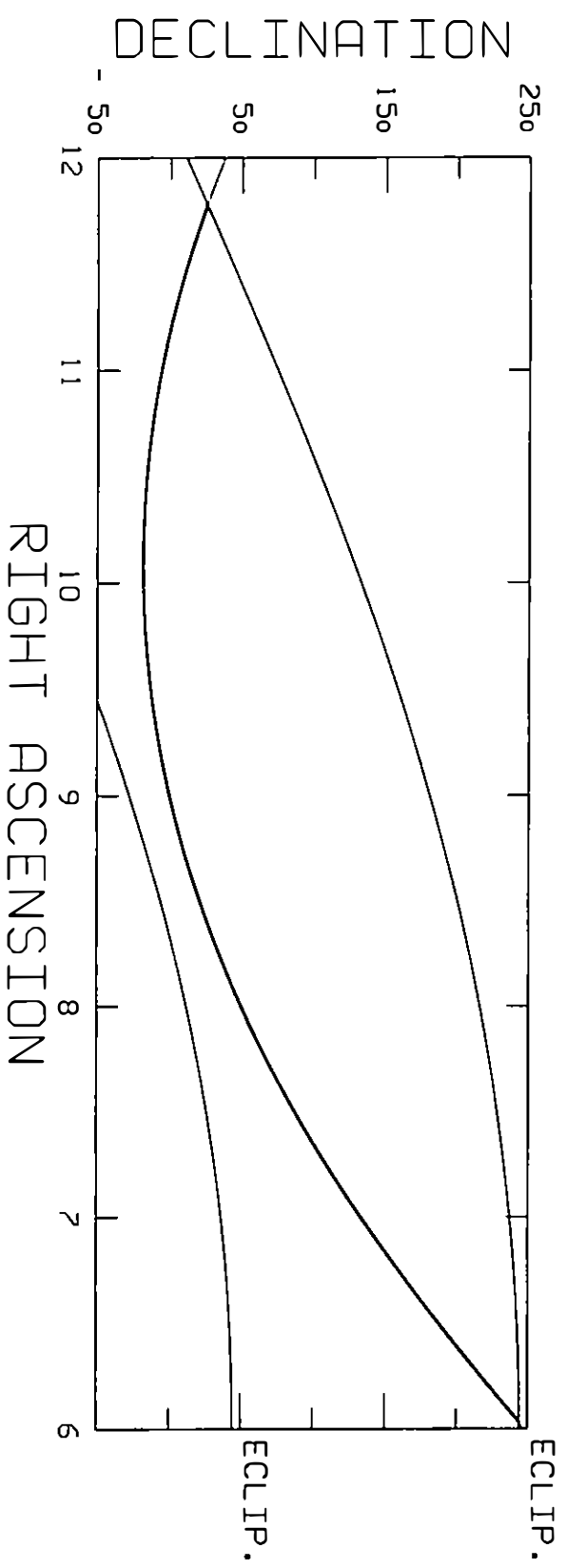


EVENT OF JUN 12, 1996 19:24

03/10/2011

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





KONUS 19960612 69897

ULYSSES RT

29/09/11

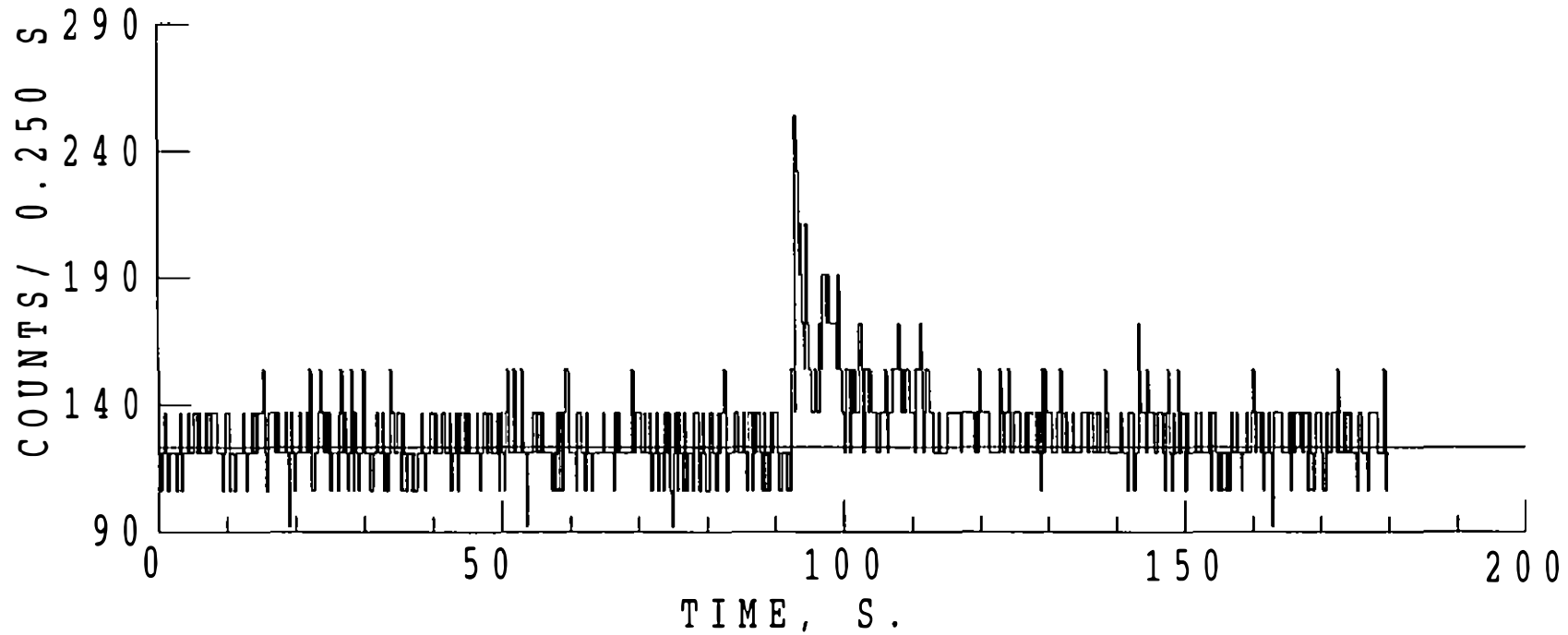
12/06/96 69804.242 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS

|||

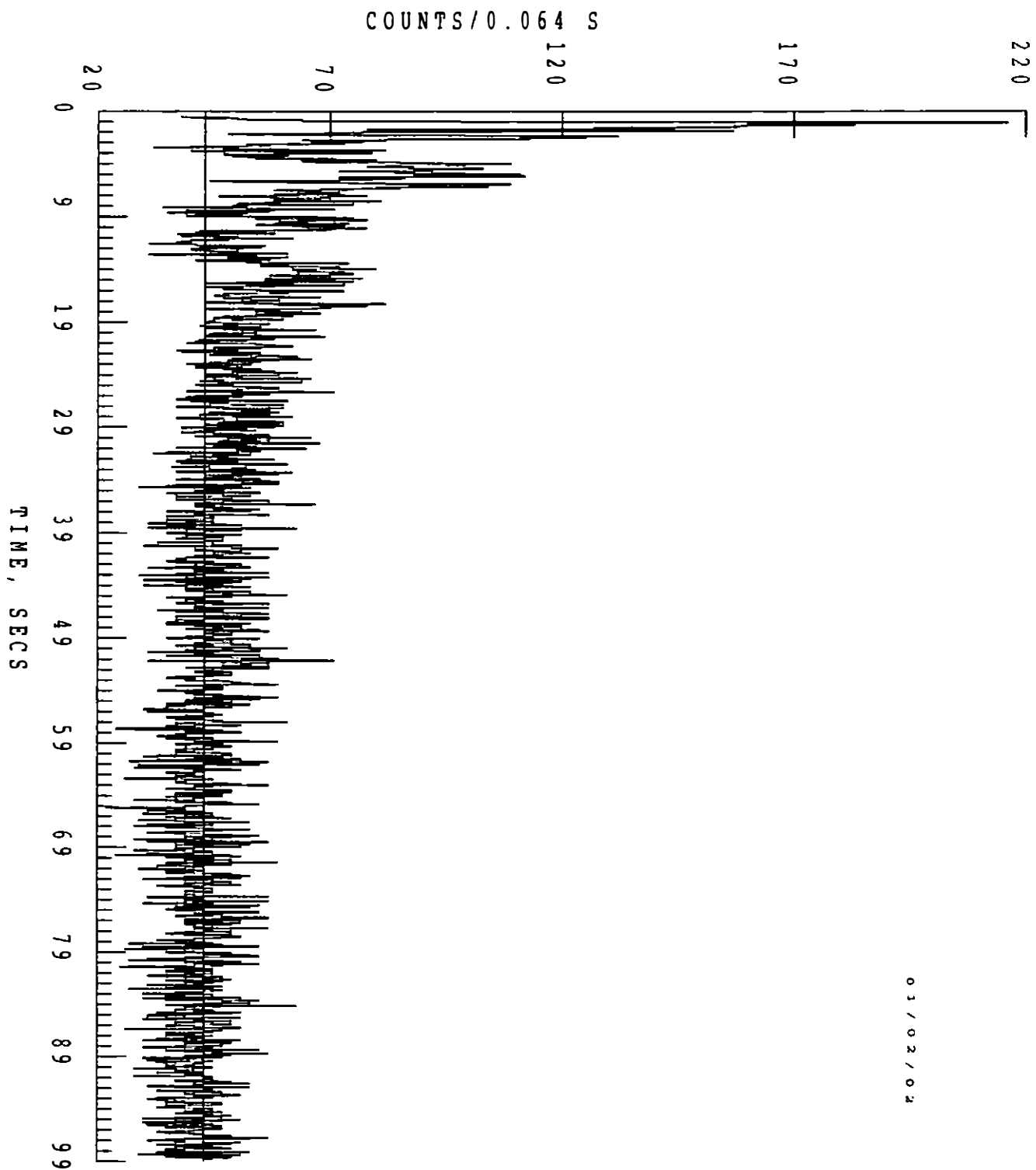


KONUS1

12/06/96

71198.677

50 - 200 keV



01/02/02

KONUS1 19960612 71198

ULYSSES RT

01/02/02

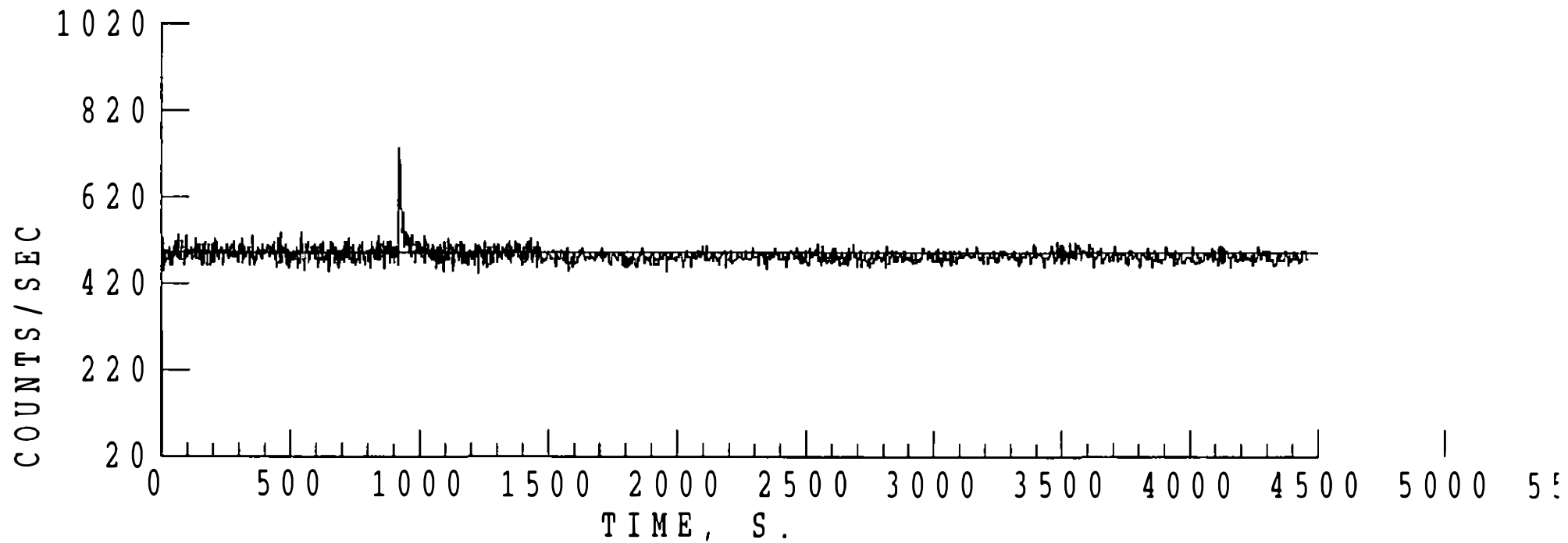
12/06/96 68976.227 s

INTERVALS REGROUPED BY 9

0 - 0 keV

H= 10 H= 10
>4.0 SIGMA FLUCTUATIONS

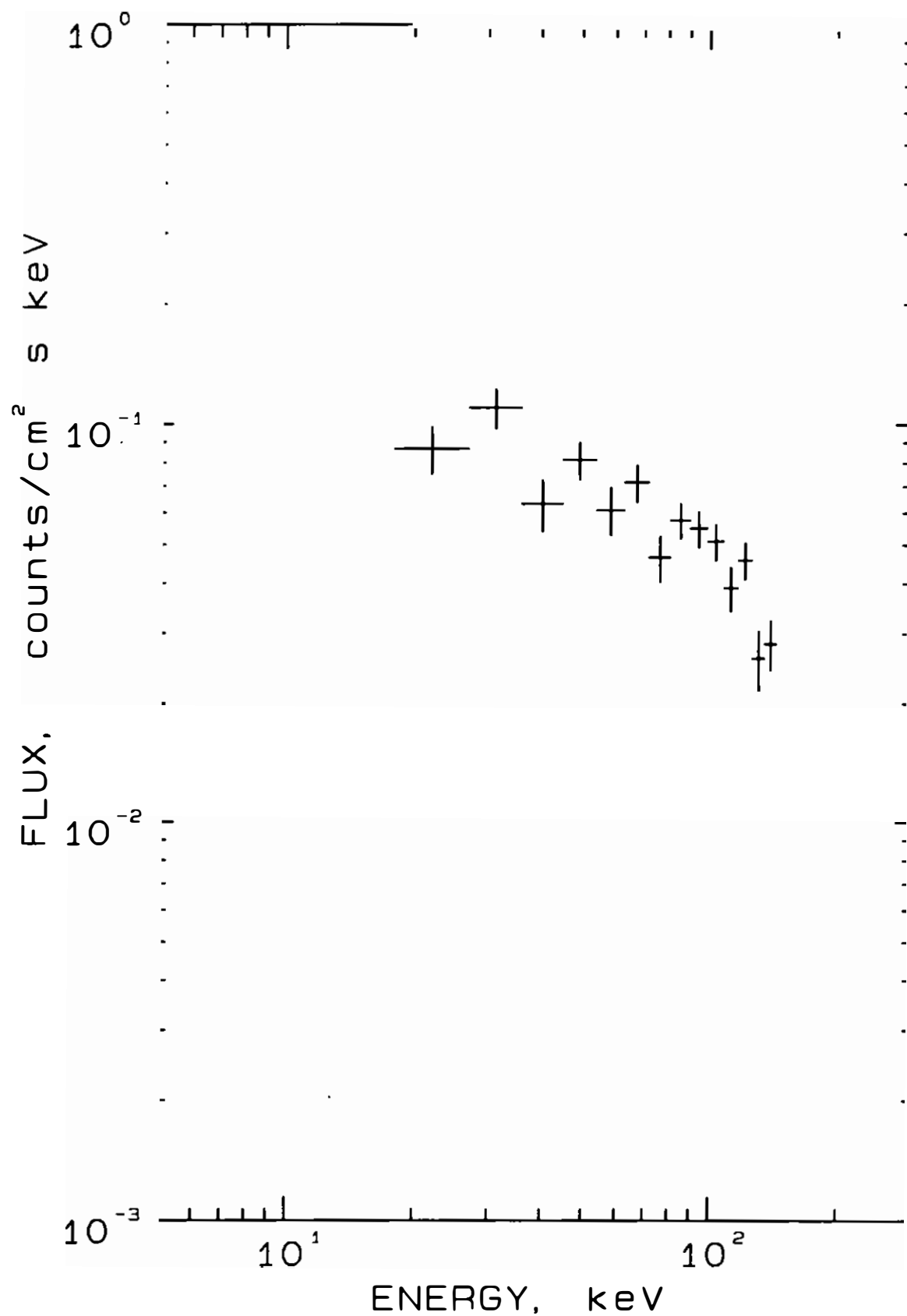
H= 10 H= 2
>4.0 SIGMA FLUCTUATIONS



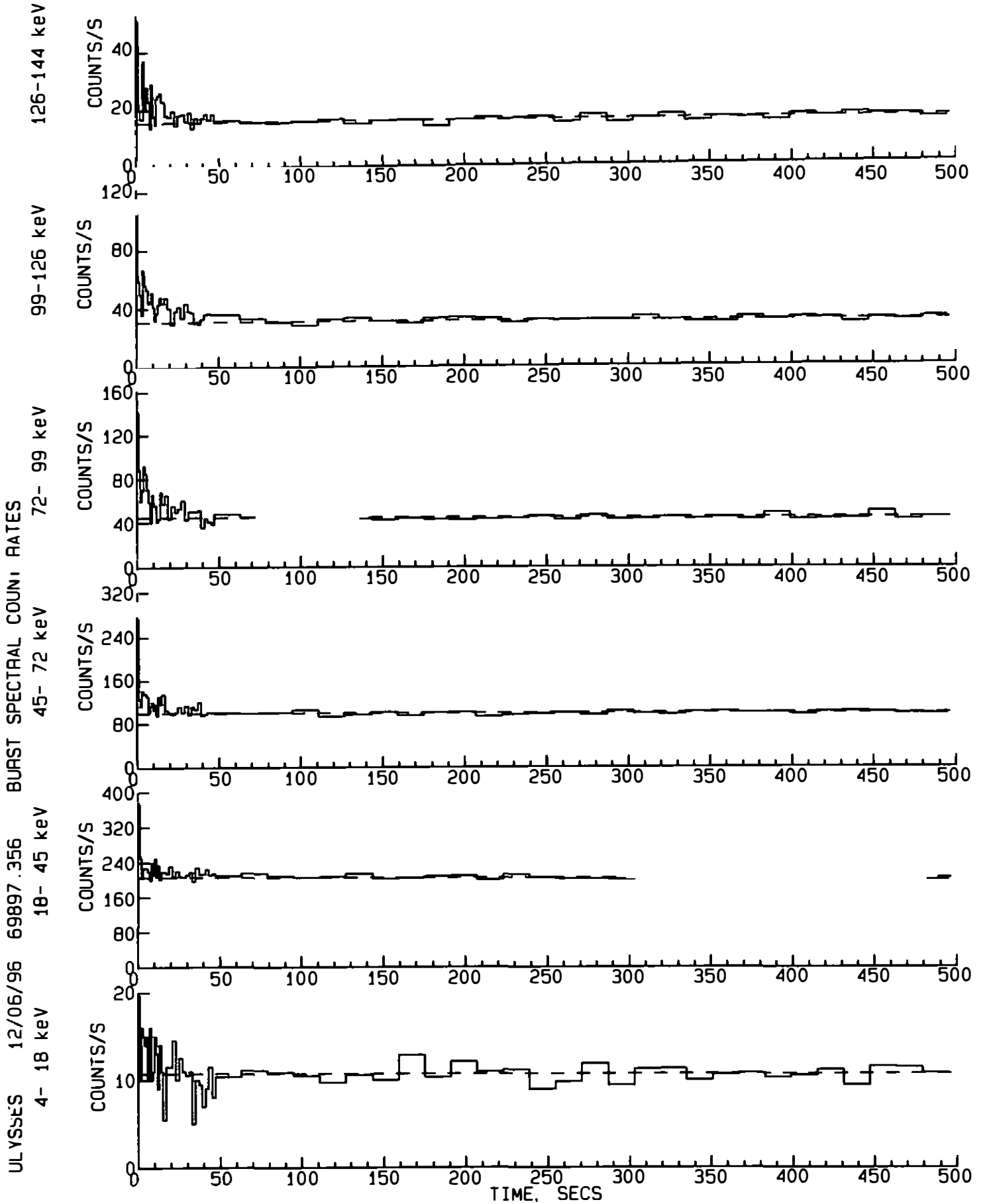
ULYSSES 12/06/96 69897.356

20/11/97

SPECTRUM INTEGRATED OVER 30.9 SECONDS. INTERVALS 2 TO 25

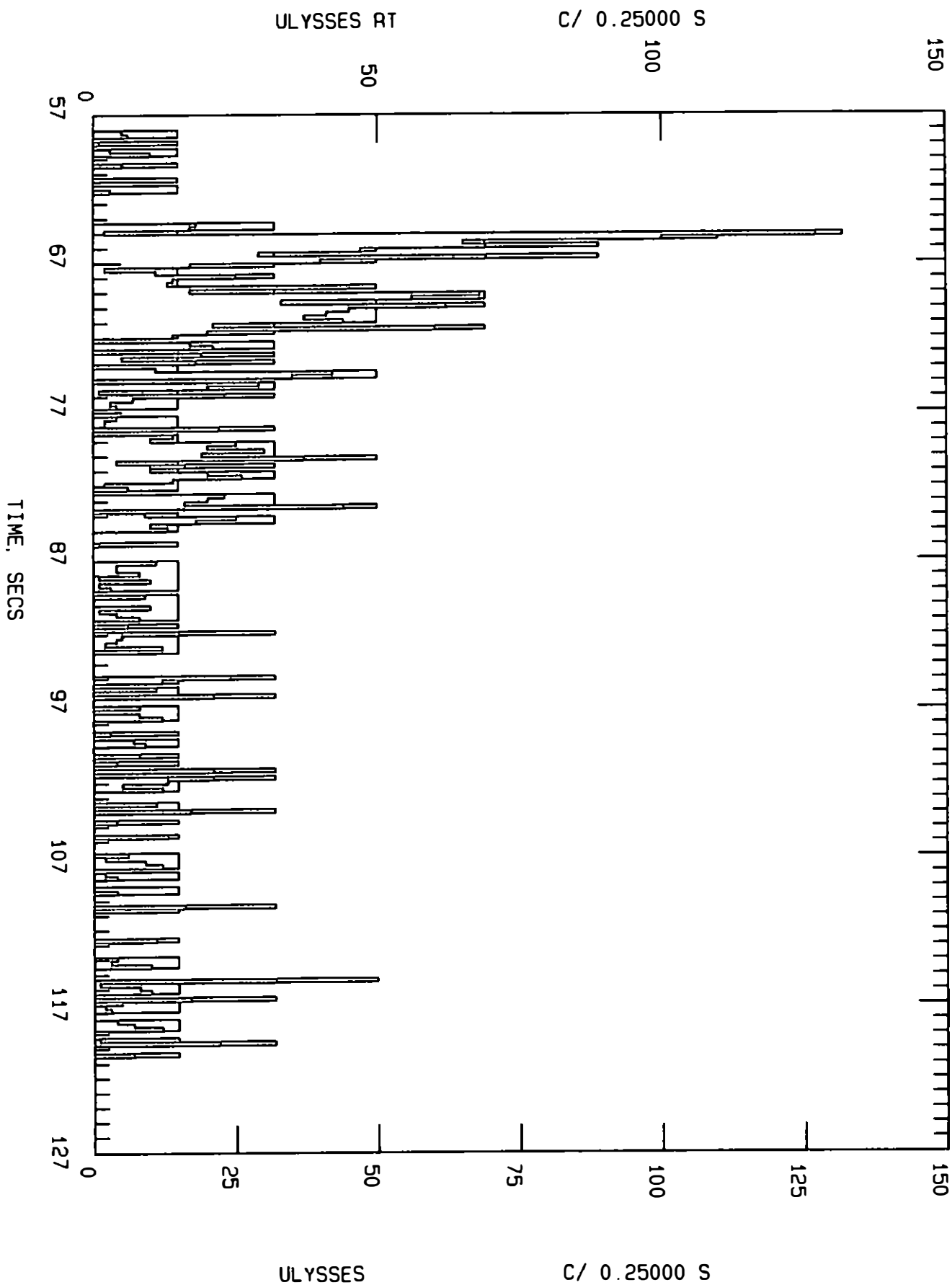


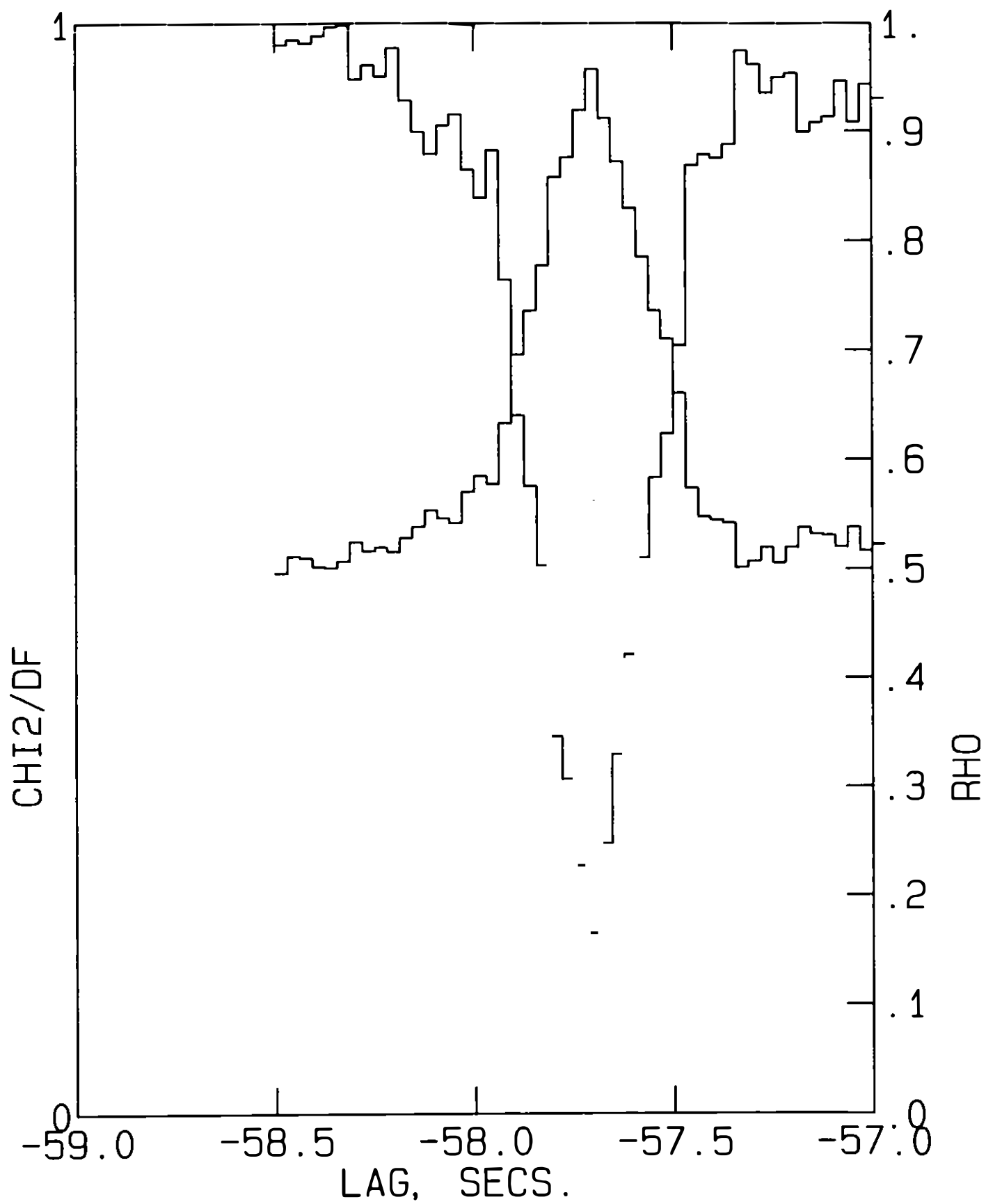
20 / 11 / 97



ULYSSES RT-ULYSSES CORRELATION 12/ 6/96 69832 102

20/11/97





ULYSSES

12/06/96

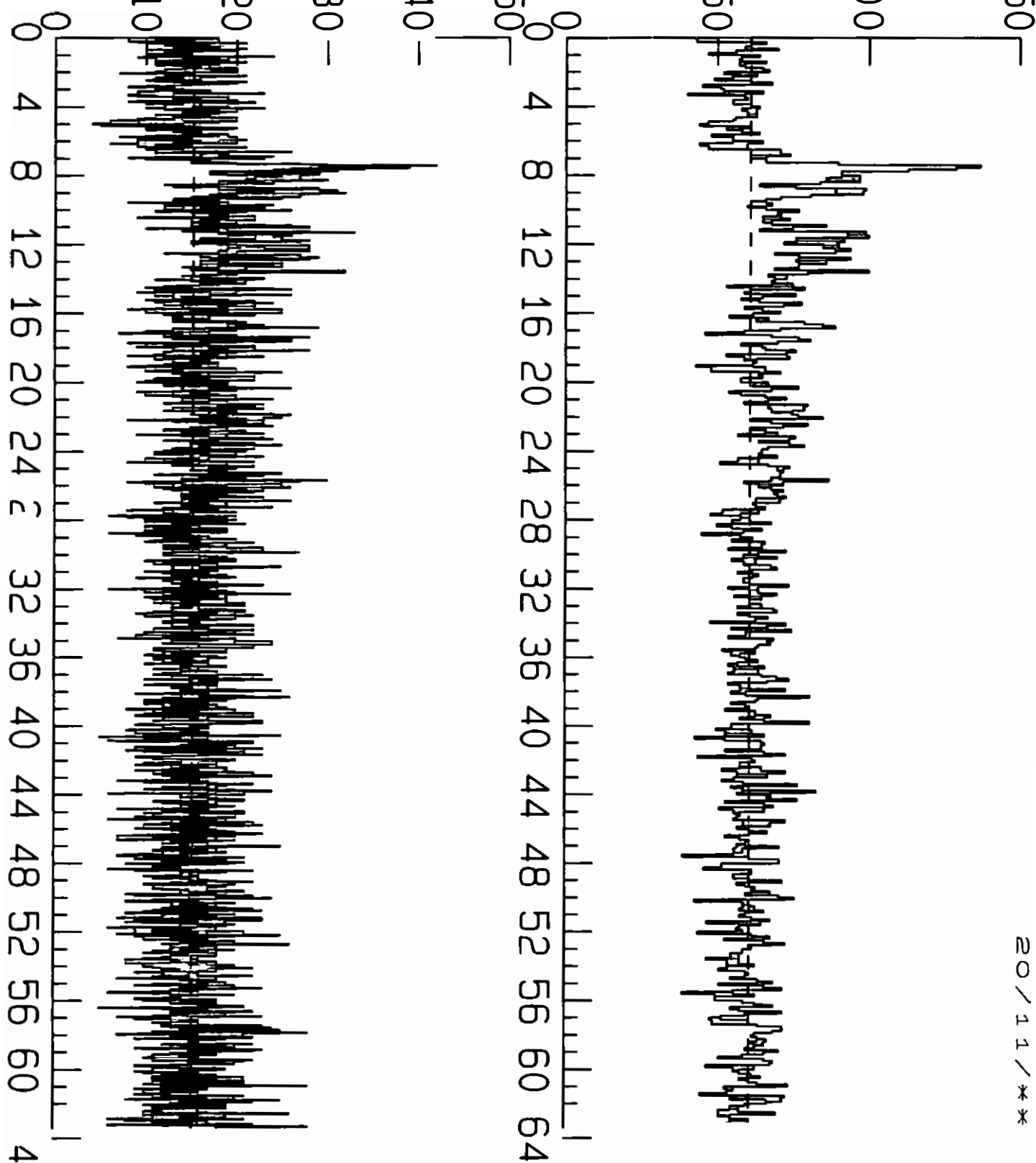
Ttrig=69897.226

0- 0 keV

COUNTS/0.031 S

COUNTS/0.125 S

20/11/11



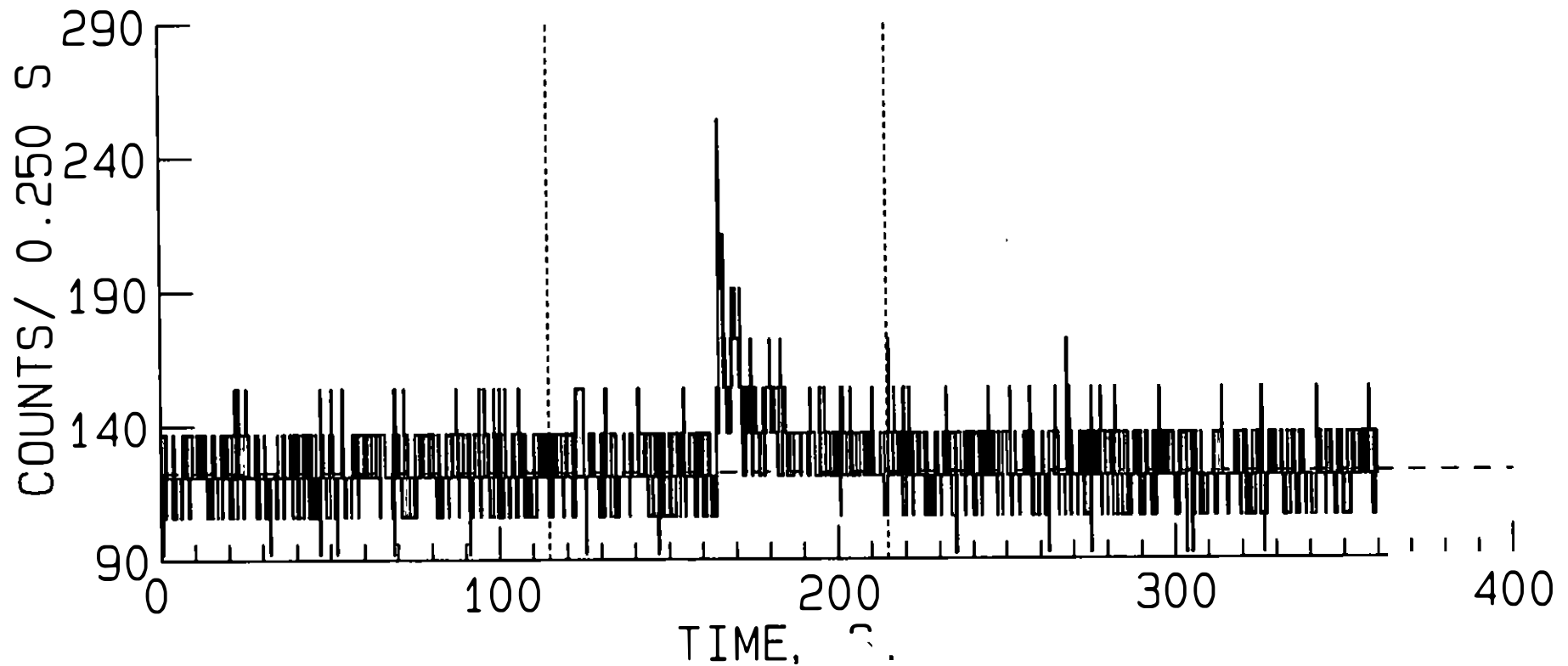
ULYSSES RT

20 / 11 / 97

12 / 6 / 96 69732.238 s

21- 144 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



96	2	29	22445.141	S2	740	1520	550	0.3	0.5	8	250	Search RI	
96	3	5	33645.352	S1	440	390	70	>10	0.8	1.8	251	Search NO	
96	3	12	35074.697	S2	160	730	330	<0.25	0.2	0.1	252	Search NO	
96	3	19	51992.828	S1		800	970	>7	0.16	0.4	253	RI	5277
96	3	21	76321.803	S2	4600	4550	1020	0.03	42	46	254	Trig	5299
96	3	22	19642.728	S1	1060	1760	1120	40	2	28	255	Trig	5304
96	3	24	80064.124	S2	320	520	150	0.07	1	14	257	Search RI	
96	3	25	69892.978	S1	250	620	460	6	0.5	0.5	258	NO	5339
96	3	31	21208.784	S1	220	520	120	4.4	2	24	271	RI	5369
96	4	4	25289.264	S2	420	750	240	0.07	4	9	272	Search RI	
96	4	9	77143.618	S2	650	1170	420	0.17	0.5	5	273	RI KA	5417
96	4	10	80648.201	S2	190	330	140	<0.05	1	35	274	Search RI	
96	4	18	06106.854	S1	200	330	70	1	2	2	277	RI KA	5418
96	4	18	08271.303	S2	350	770	50	<0.1	3	30	278	Search KA 125 NO	
96	4	18	66796.140	S1	1160	1000	50	10	1	3	290	Trig	5436
96	4	20	17324.809	S2	300	1190	1080	1	0.3	0.04	303	Search RI	
96	4	22	59981.190	S2	160	410	140	0.5	4	12	305	RI	5443
96	4	25	86395.862	S2	1300	730		<0.04	44	16	306	Search KA 1125 RI	
96	4	28	47556.501	S2	270	420	230	<0.04	1	170	307	RI	5450
96	4	30	49895.524	S1	250	640	180	8	8	18	309	RI KA	5451
96	5	1	31344.546	S1	380	870	350	3.7	20	56	310	Search RI	
96	5	6	47384.998	S1	160	490	190	1.1	3	6	312	Search RI	
96	5	7	44869.909	S2	460	760	290	0.03	20	98	313	Search RI	
96	5	10	38723.598	S2	560	1300	330	0.1	1	7	317	Trig	
96	5	19	14766.283	S2	1700	7700	8000	0.4	0.1	0.56	319	Search NO	
96	5	21	62489.430	S1	330	500	90	5.8	1	8	320	Search RI	
96	5	23	59522.013	S1	270	550	580	10	1	3	321	RI	5470
96	5	29	43663.061	S2	1700	4000	5000	0.15	0.5	3.5	322	Trig	5477
96	5	29	80722.705	S2	420	620	140	0.1	1	14	323	Trig KA	
96	5	30	62300.750	S1	180	400	110	>20	2	14	324	Search N/O	
96	5	31	06926.043	S1	300	440	120	4.7	50	7	325	Search RI	
96	5	31	73498.259	S2	1600	4250	2800	0.5	27	19	326	Trig	
96	6	2	42664.032	S1	1000	1450	1400	>2	0.3	0.03	327	Search NO	
96	6	5	29392.672	S1	400	950	410	1.3	2	87	328	RI	5486
96	6	7	78106.176	S2	890	1280	550	0.04	32	120	329	RI	5489
96	6	10	84502.254	S2	200	1000	1500	0.9	0.16	0.11	330	Search NO	
96	6	12	71198.677	S1	650	2800	2700	1.4	0.5	18	331	Trig	
96	6	14	67654.516	S1	80	1800	1600	1	0.18	0.1	332	Search NO	
96	6	17	76195.941	S1	350	560		>8	1	0.6	333	NO	5500
96	6	22	74906.054	S2	100	360	280	0.2	4	8	334	Search NO	
96	6	23	04734.229	S2	130	320	150	0.5	7	25	335	RI KA	5512
96	6	23	77186.871	S2	250	350	130	0.05	6	15	336	Search RI	
96	6	25	16949.252	S1	180	280	70	4.6	6	9	337	RI	5514
96	6	28	19224.223	S2	500	410	120	0.06	12	6	338	RI	5523
96	7	2	54698.284	S1	280	350	70	2.8	23	85	339	RI	5525
96	7	3	65443.861	S1	200	560	600	3	1	0.4	340	NO	5527
96	7	7	36999.311	S2	1600	1200		0.06	2	5	341	RI	5530
96	7	8	72577.095	S2	900	820	160	0.2	1	6	342	Search RI	
96	7	9	00246.641	S1	260	1000	400	0.95	15	4	343	Trig KA	
96	7	10	00662.014	S2	1800	4700	3600	0.13	0.5	48	345	Trig	
96	7	11	63757.543	S1	560	2400	900	1.25	0.5	19	346	Trig	
96	7	11	68451.869	S2	200	360	170	<0.07	2	41	347	Search NO	
96	7	22	25522.448	S2	360	650	170	0.27	17	151	348	RI	5548
96	7	22	56346.728	S1	700	1000	200	2.6	3	6	349	Search RI	
96	7	27	43056.737	S2	500	1000	500	0.7	0.5	15	350	Search RI	
96	7	31	20761.638	S2	800	1160	170	0.9	0.5	4	353?	RI	5557
96	8	3	67525.033	S1	4000	8000	3000	3	0.02	0.18	354	Trig KA	5561
96	8	4	84535.906	S2	2000	2600	600	<0.03	0.5	2	355	Trig KA	5563
96	8	5	78957.888	S2	1270	2360	380	0.05	1	20	356	Trig	
96	8	6	80989.772	S2	420	850	250	1	86	10	357	RI	5566

From BUTTERWORTH@LHEAVX.GSFC.NASA.GOV Tue Jun 18 09:40 PDT 1996
From: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Date: Tue, 18 Jun 1996 12:36:35 -0400 (EDT)
To: khurley@sunspot.ssl.berkeley.edu, kmarar@isac.ernet.in, jterrell@lanl.gov,
yosimori@rikkyo.ac.jp, CLINE@LHEAVX.GSFC.NASA.GOV,
scott@rosserv.gsfc.nasa.gov, TEEGARDEN@LHEAVX.GSFC.NASA.GOV
CC: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Subject: Ulysses 12 June event was also seen by Konus

Hi Everyone,

Konus triggered at 19:46:38.677 on a moderately intense and very hard event. Above 50 keV, there were several almost equally spaced peaks, with progressively lower intensities: centered near T+0s, T+5s, T+10s, T+14S, T+18s, etc.. Each peak had some fine structure. The count rates above 50 keV declined slowly, to reach background values at about T+50s.

Paul.

Date: Tue, 18 Jun 1996 08:37:55 -0700
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <199606181537.IAA07343@scylla.berkeley.edu>
To: scott@lheamail.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu,
butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
kmarar@isac.ernet.in, teegarden@lheavx.gsfc.nasa.gov,
jterrell@lanl.gov, yosimori@rikkyo.ac.jp
Subject: June 12 GRB
Sun-Charset: US-ASCII

ULYSSES GAMMA-RAY BURSTS NOT REPORTED BY BATSE:

Ulysses triggered on a moderate, 20 s long event June 12 1996 around 19:25 UT at Ulysses.

The spacecraft was about 2175 light-seconds from Earth.

Was these events detected by anyone else?

CC: ulyssesbursts alias list
(barthelmy, butterworth, cline, marar, teegarden, terrell, yoshimori)

From TERRELL@nisdp0.lanl.gov Fri Jun 28 13:58 PDT 1996

From: TERRELL@nisdp0.lanl.gov

Date: Fri, 28 Jun 1996 14:58:51 -0600 (MDT)

To: khurley@sunspot.ssl.berkeley.edu

Subject: DMSP detections

From: jterrell@lanl.gov (James Terrell) 960628

To: khurley@sunspot.ssl.berkeley.edu, butterworth@heavx.gsfc.nasa.gov,
cline@heavx.gsfc.nasa.gov, kmarar@isac.ernet.in,
scott@rosserv.gsfc.nasa.gov, teegarden@heavx.gsfc.nasa.gov,
yosimori@rikkyo.ac.jp

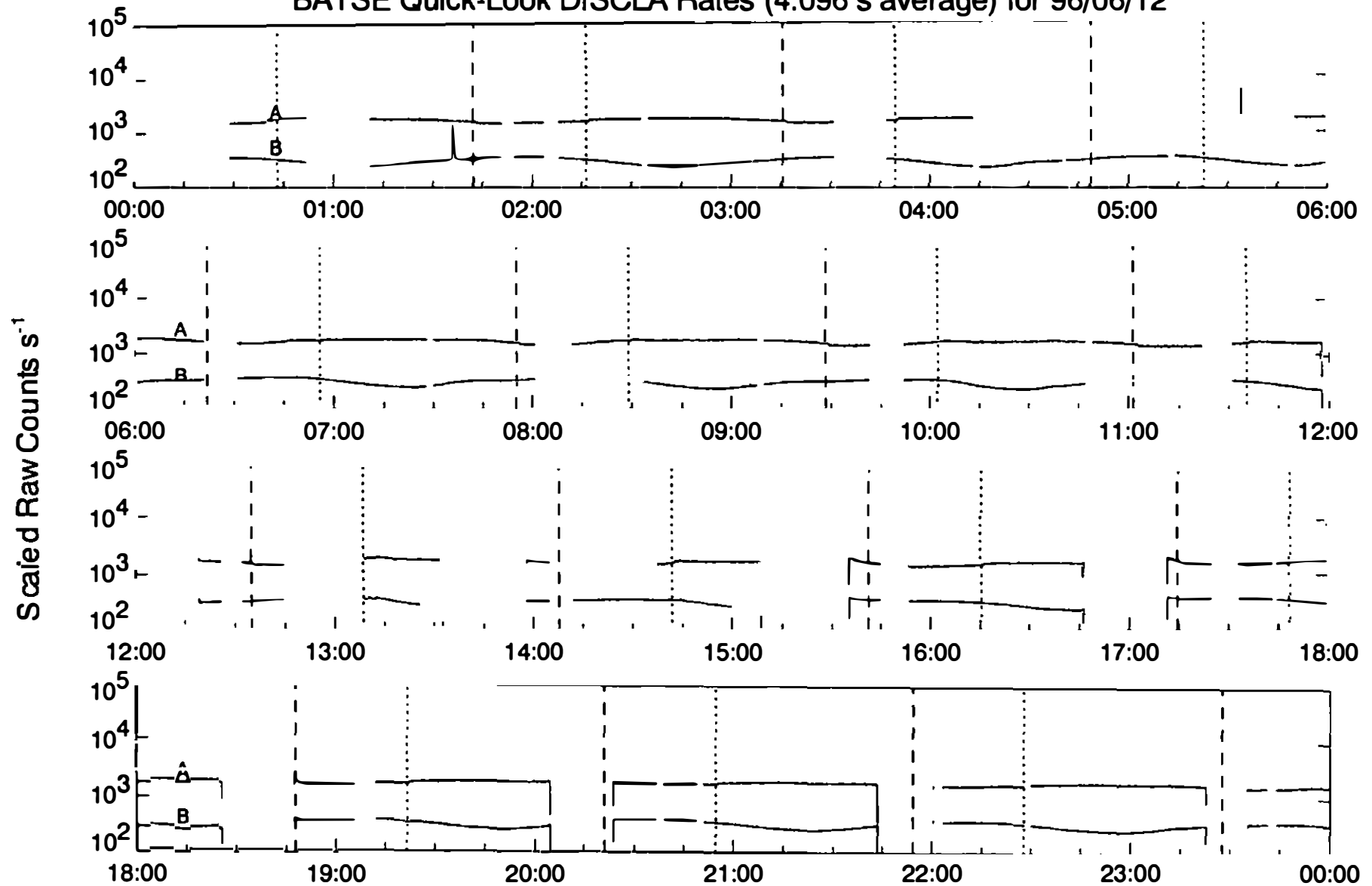
Subject: DMSP GRB detections of non-BATSE bursts (960410, 960612)

DMSP 12 detected the ULYSSES/KONUS burst of 960612 as a hard (>550 keV) multiple burst, with peaks at 71201.8, 71205.8, and 71209.8 sec UT (2-sec counts), extending over 14 sec. DMSP 13 did not detect it, but was entering the South Atlantic Anomaly.

DMSP 12 apparently detected the ULYSSES (<2 sec) of 960410 (43320 UT) as a short (<2 sec) moderately hard (>200 keV) burst at 44685.5 UT peak, but DMSP 13 did not.

Other ULYSSES bursts in the 960229--960531 range were not (or apparently not) detected, in some cases because of radiation belts. --Jim

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/12



Current Time: 96/06/14, 1004 EDT

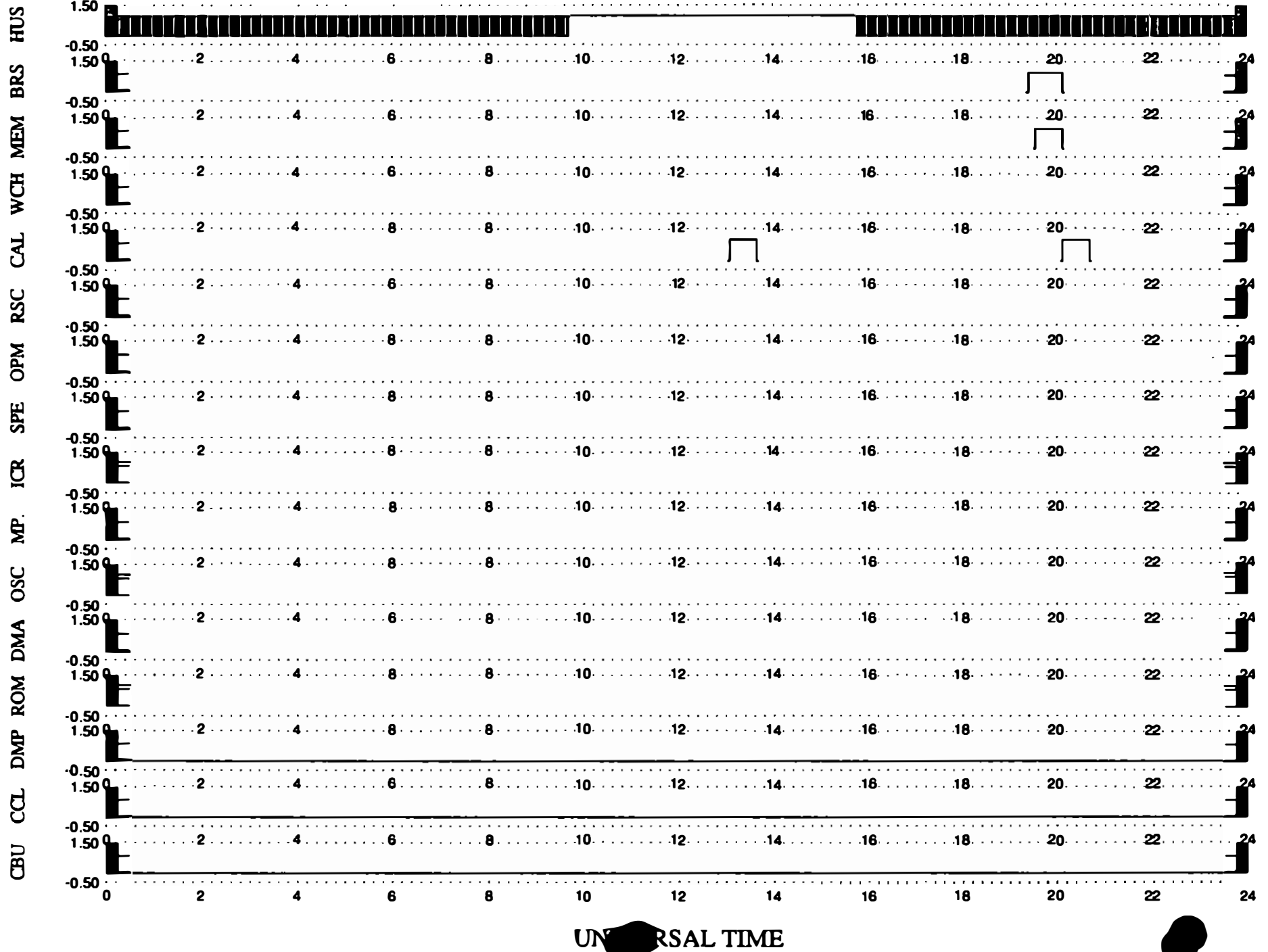
A: Channel 0 Most Sunward LAD

B: Sum Channel 0 Anti-Sunward LADs X .05

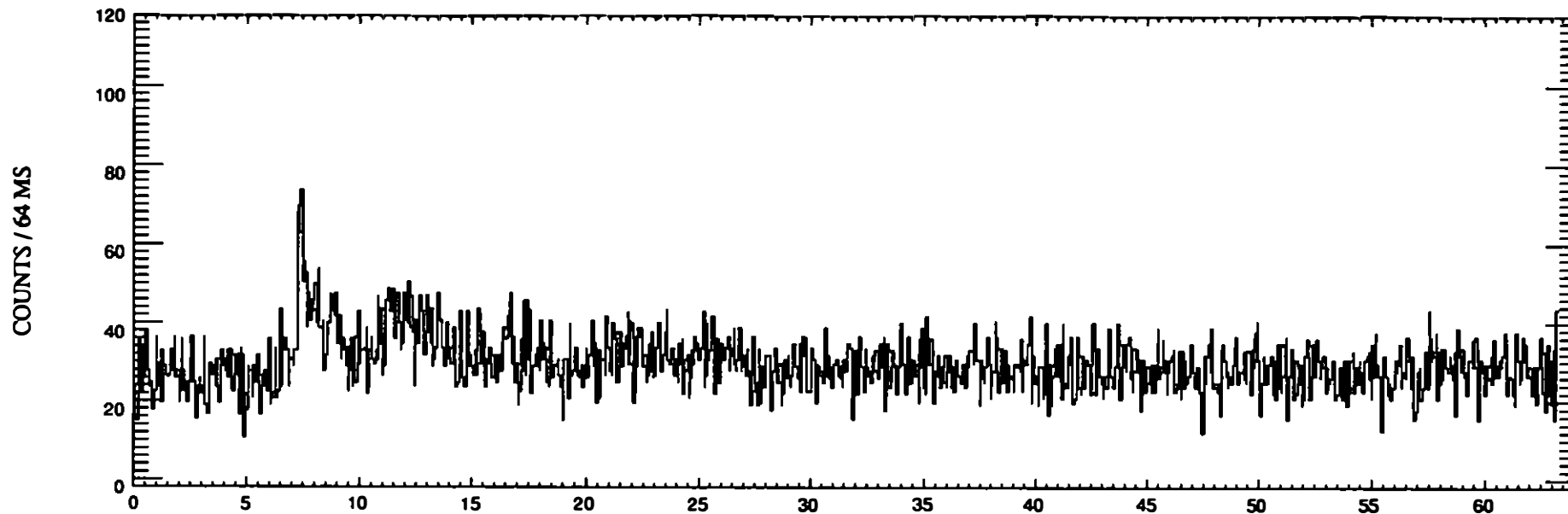
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

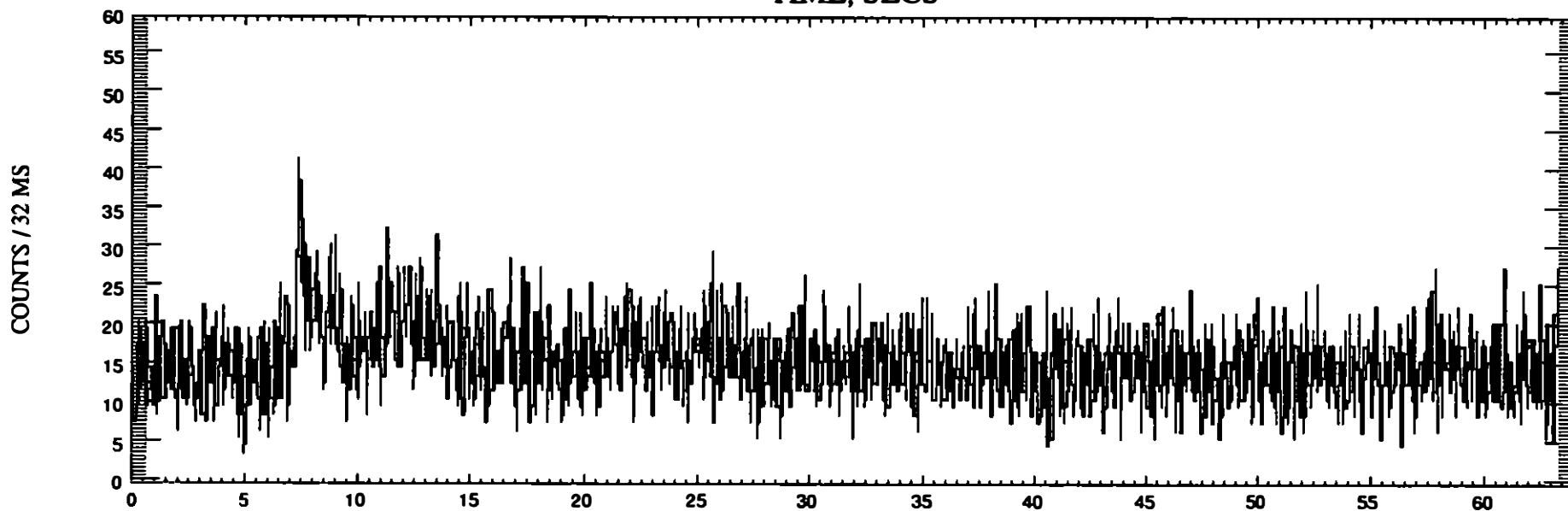
BURST NUMBER 2



Burst Counter 2 at UT=19.415932133993 h=69897.356 s 19:24:57.356

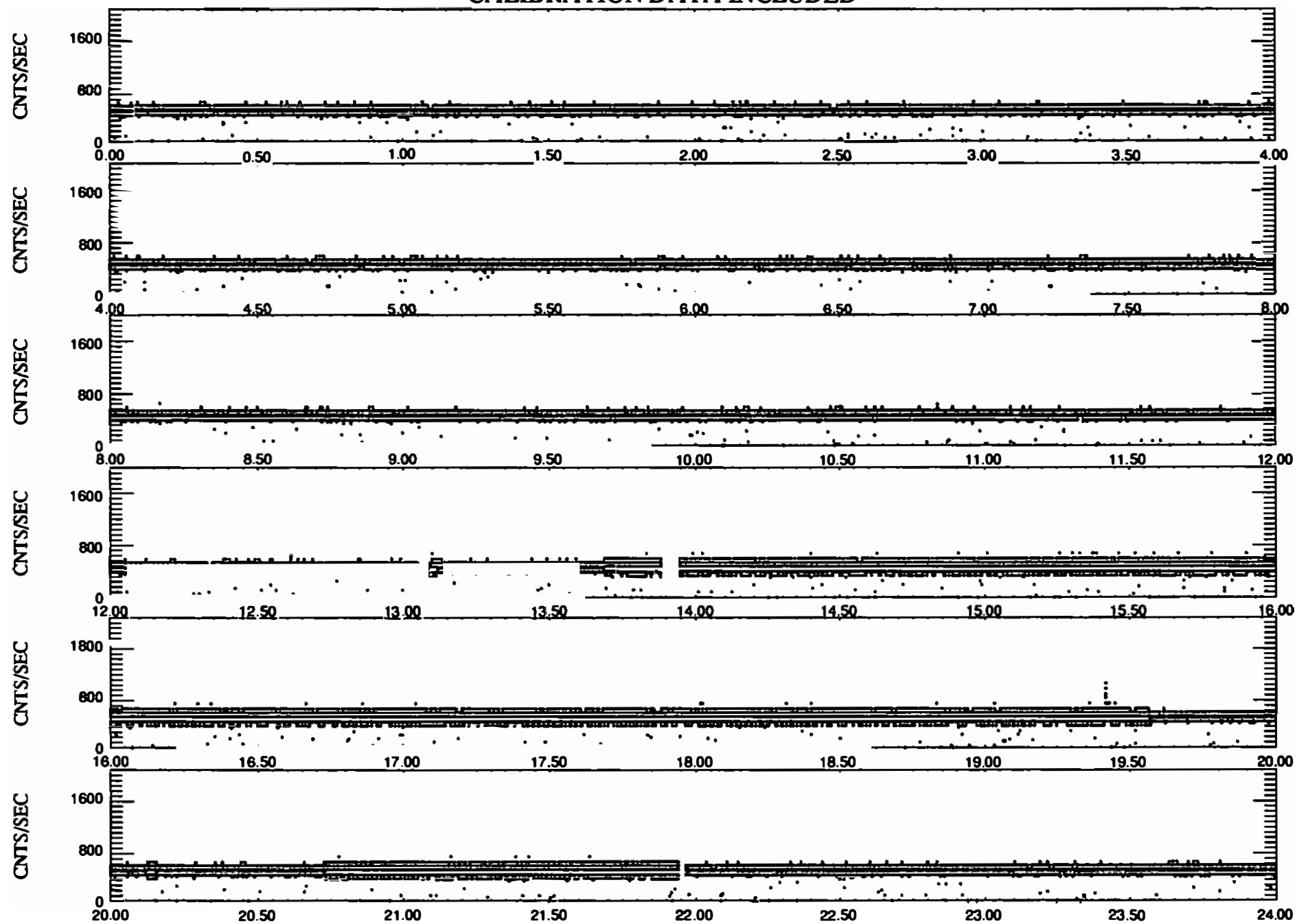


TIME, SECS

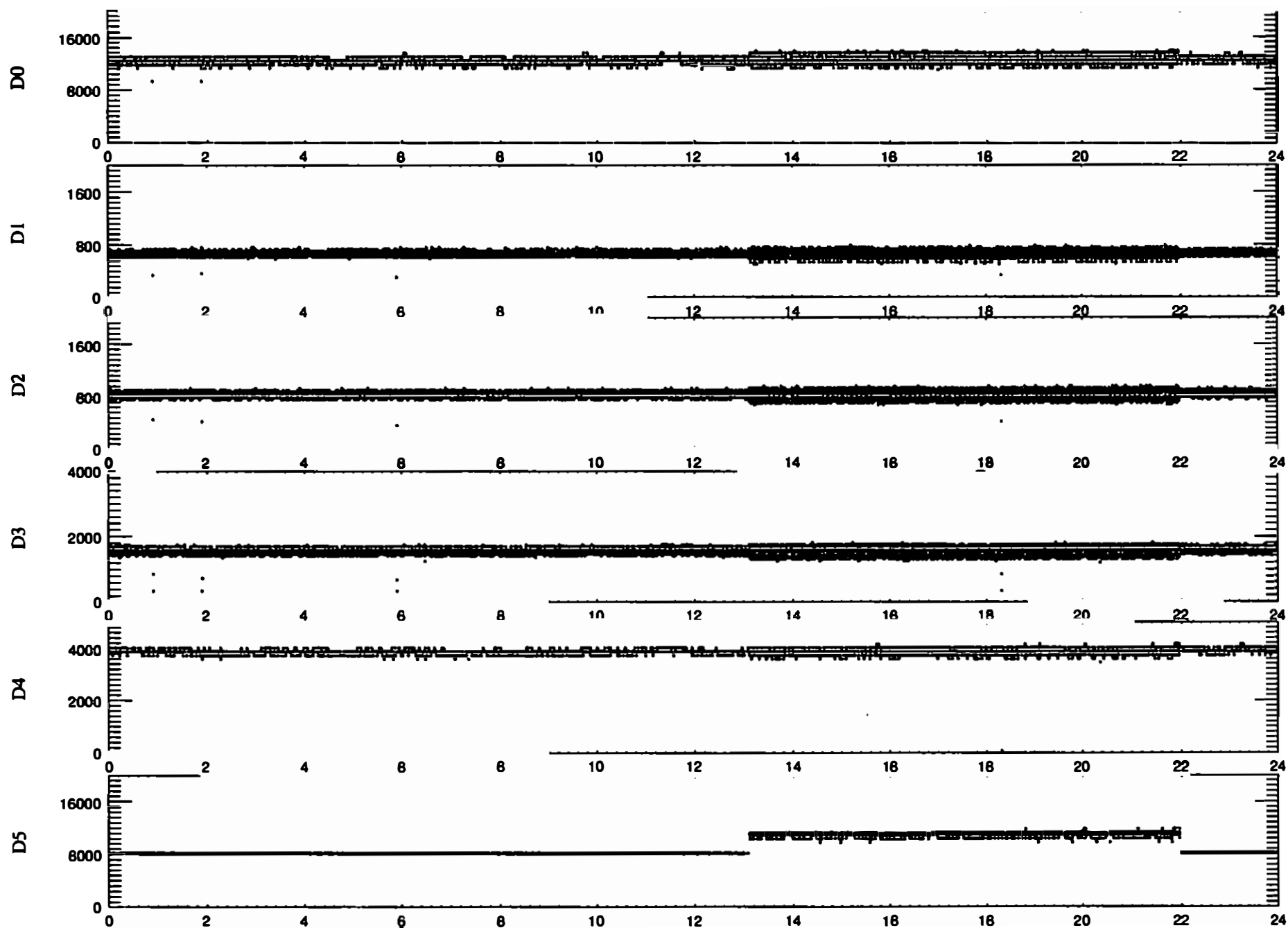


TIME, SECS

CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From PANJEVG@ssl.msfc.nasa.gov Wed Jun 19 14:48 PDT 1996
From: PANJEVG@ssl.msfc.nasa.gov
Date: Wed, 19 Jun 1996 16:48:35 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5494

BATSEARCH PROGRAM

NO

BATSE BURST # 5494
EVENT OF 1996 JUN 13 DAY OF YEAR=165
EVENT CROSSING TIME AT BATSE : 225. S. OR 00:03:45.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 276.000 -66.000
BATSE PEAK COUNTING RATE: 3300 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 13/ 6/ 96 IS:
RA= 150.586 DEC= 51.244 DIST= 4.371 AU
BATSE-ULYSSES DISTANCE = 653903355. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 30.69 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1875.71 SECS.
CROSSING TIME AT ULYSSES IS 2101. S. OR 00:35:00 +/- 271.76 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 13/ 6/ 96 IS:
RA= 58.131 DEC= 20.126 DIST= 2.354 AU
MARS-BATSE DISTANCE = 352084896. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 51.99 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 723.23 SECS.
CROSSING TIME AT MARS IS 948. S. OR 00:15:48 +/- 171.63 SECONDS

BATSE BURST TRIGGER

NO.: 5494

TIME: TJD=0247 SECONDS=225

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=46.3 AZIMUTH=134.1 ERROR=3.48 DEGREES

COMMENTS:

GRB LASTING ~28SECS. 2 MAIN EPISODES. VISIBLE ABOVE 300KEV

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5494	960613	10247	00225	3300	276	-66	28

BATSE #

5494

ULYSSES RT

5 / 12 / 96

13 / 6 / 96 1836.484 s

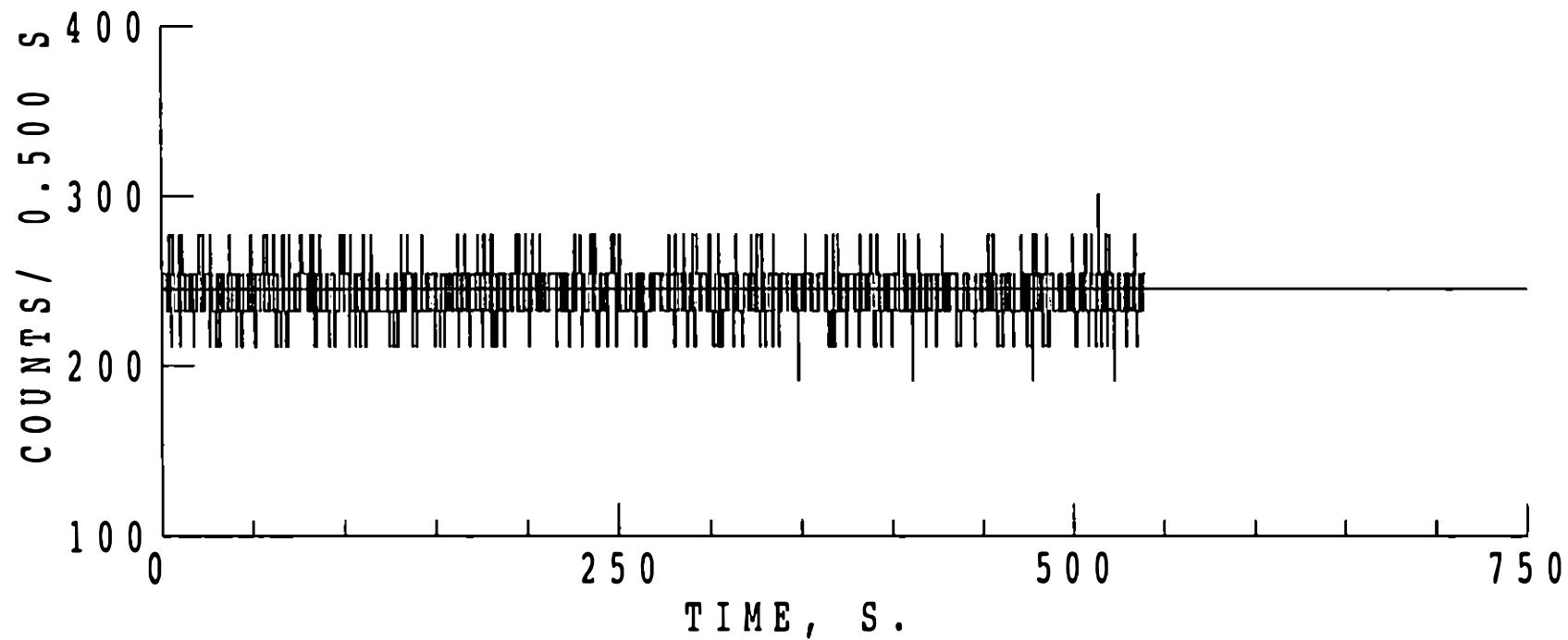
0 - 0 keV

N= 10 M=10

>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



KONUS

ULYSSES RT

29 / 01 / 00

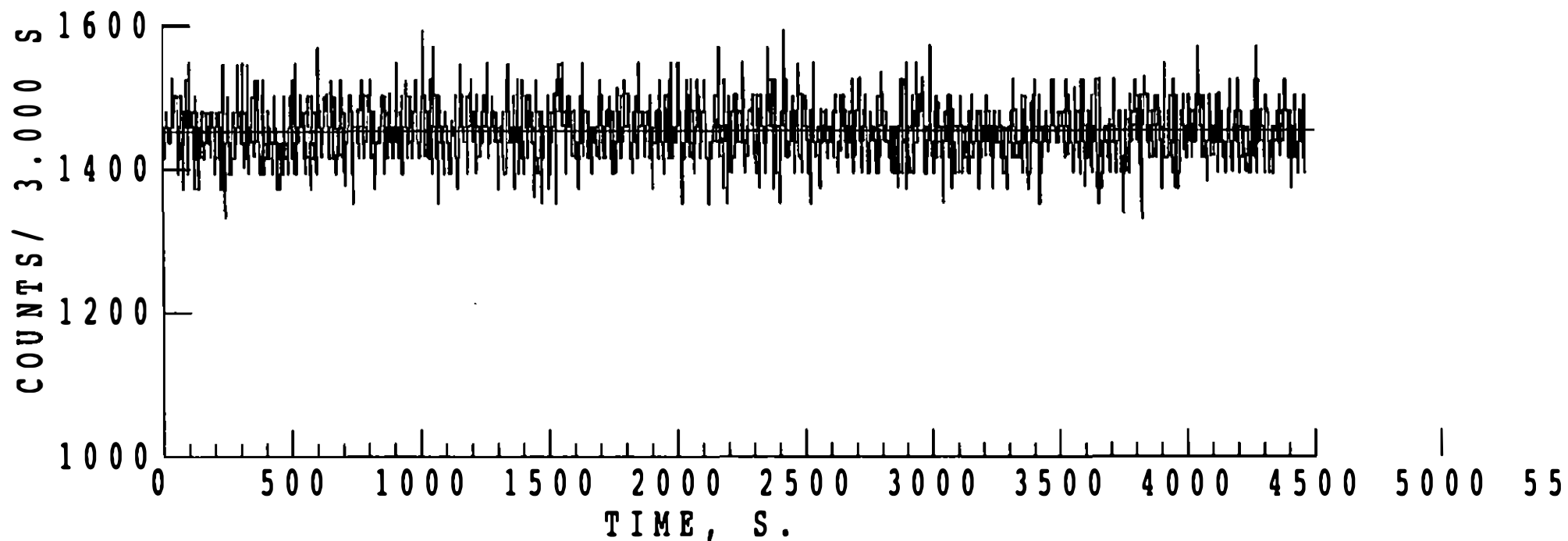
13 / 06 / 96 47232.078 s

0.500 S INTERVALS REGROUPED BY 6

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From PANJEVG@ssl.msfc.nasa.gov Wed Jun 19 07:07 PDT 1996
From: PANJEVG@ssl.msfc.nasa.gov
Date: Wed, 19 Jun 1996 9:07:29 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5495

BATSEARCH PROGRAM

ND

BATSE BURST # 5495
EVENT OF 1996 JUN 13 DAY OF YEAR=165
EVENT CROSSING TIME AT BATSE : 49269. S. OR 13:41:09.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 222.000 36.000
BATSE PEAK COUNTING RATE: 9500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 13/ 6/ 96 IS:
RA= 150.674 DEC= 51.111 DIST= 4.380 AU
BATSE-ULYSSES DISTANCE = 655181890. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=128.33 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1355.27 SECS.
CROSSING TIME AT ULYSSES IS 47914. S. OR 13:18:33 +/- 327.08 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 13/ 6/ 96 IS:
RA= 58.131 DEC= 20.126 DIST= 2.354 AU
MARS-BATSE DISTANCE = 352084896. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 58.17 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 619.48 SECS.
CROSSING TIME AT MARS IS 49888. S. OR 13:51:28 +/- 182.64 SECONDS

BATSE BURST TRIGGER

NO.: 5495

TIME: TJD=0247 SECONDS=49269

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=109.2 AZIMUTH=234.6 ERROR=2.33 DEGREES

COMMENTS:

GRB LASTING ~26SEC. 2 MAIN EPISODES. TRIGGERED EPISODE HAS FRED
STRUCTURE. VISIBLE ABOVE 300KEV

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5495	960613	10247	49269	9500	222	+36	26

BATSE #

5495

19 / 6 / 96

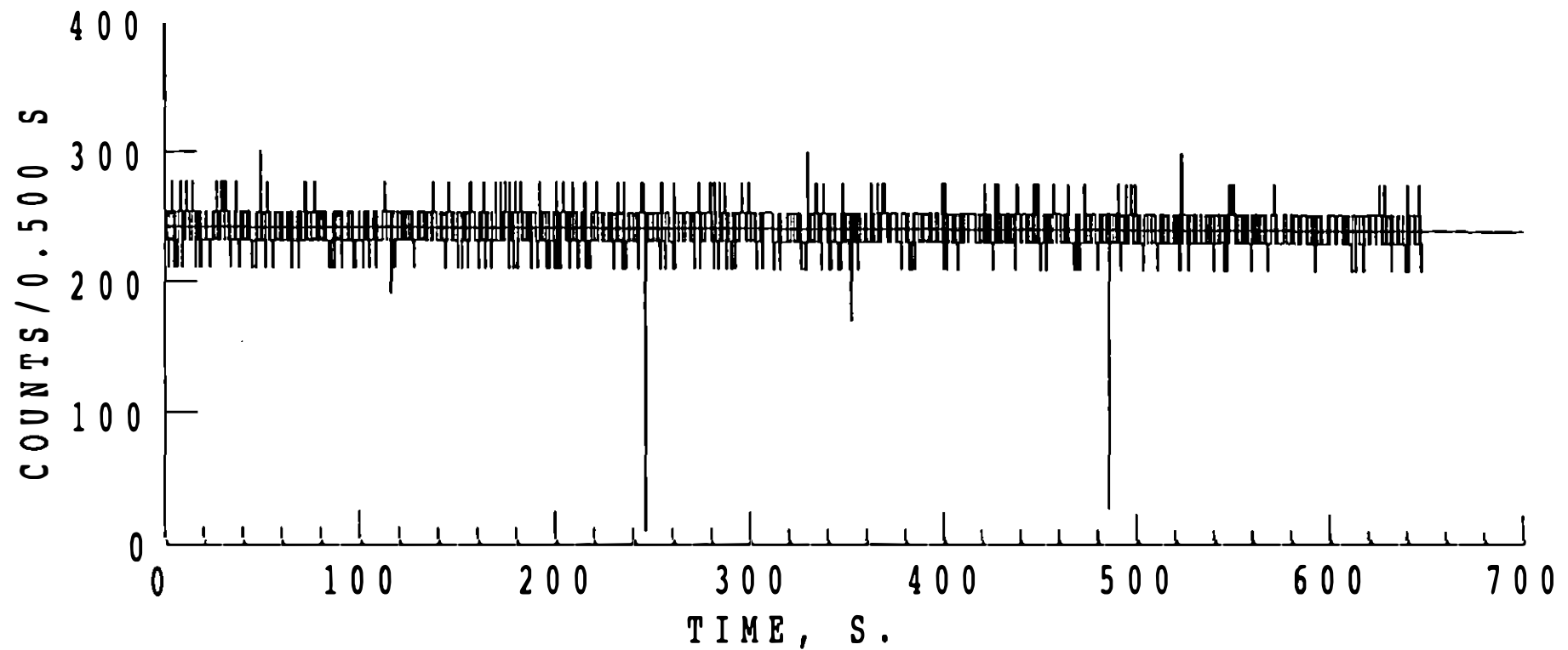
ULYSSES RT

13 / 6 / 96 47592.090 s

0 - 0 keV

N=10 M=2

>4.0 SIGMA FLUCTUATIONS



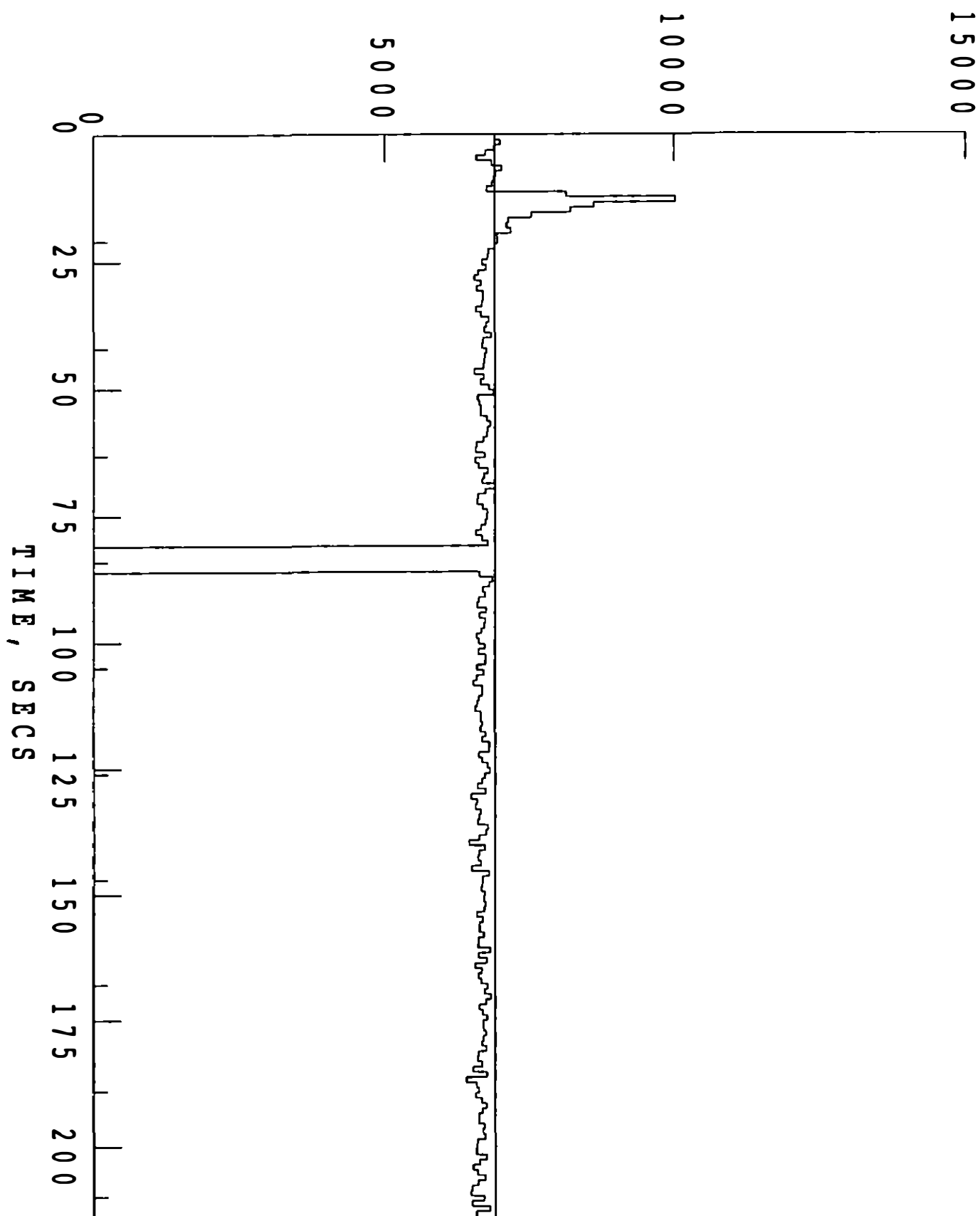
BACODINE

13/06/96

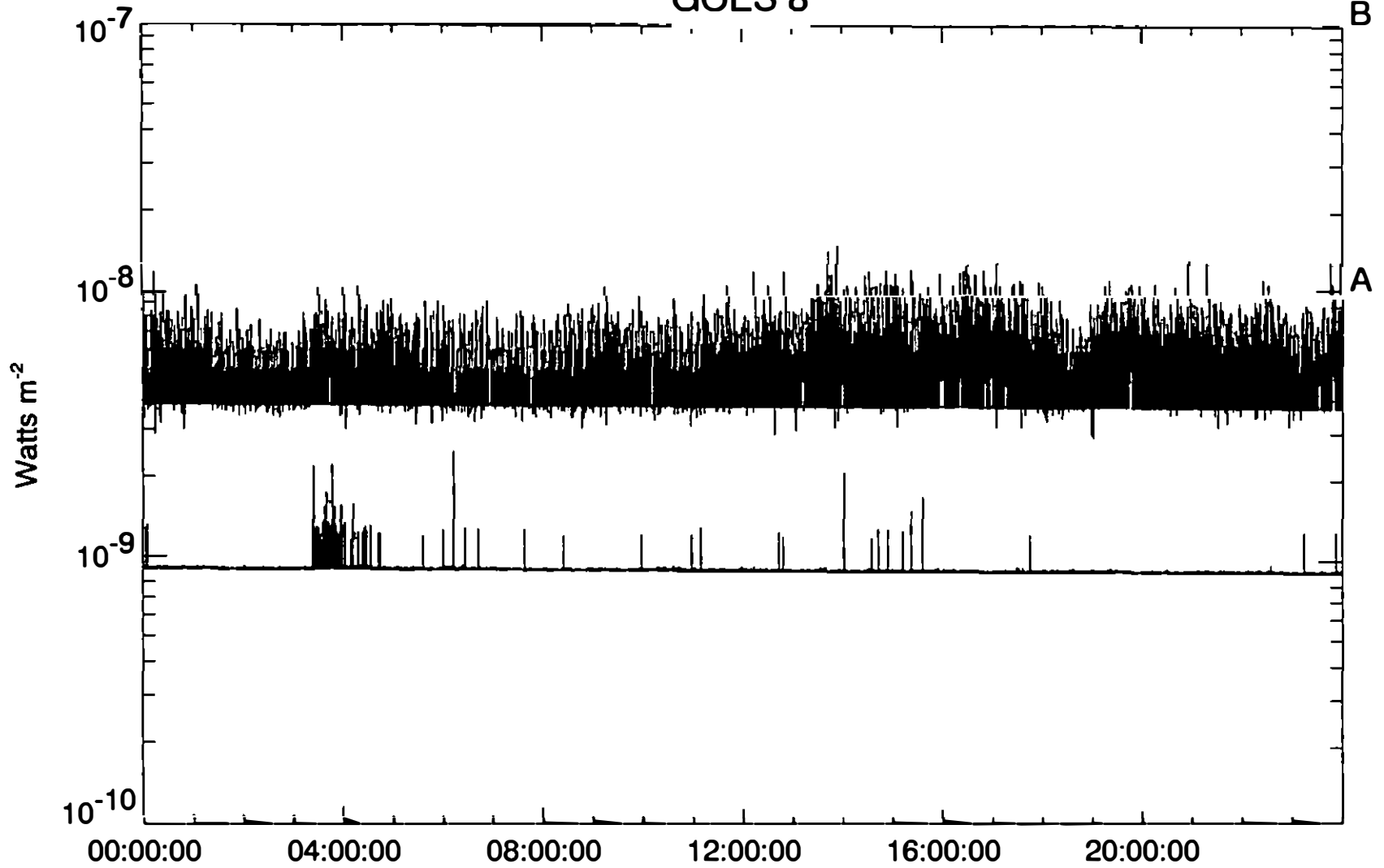
49257.161

25 - 100 keV

COUNTS/1.024 S



GOES 8

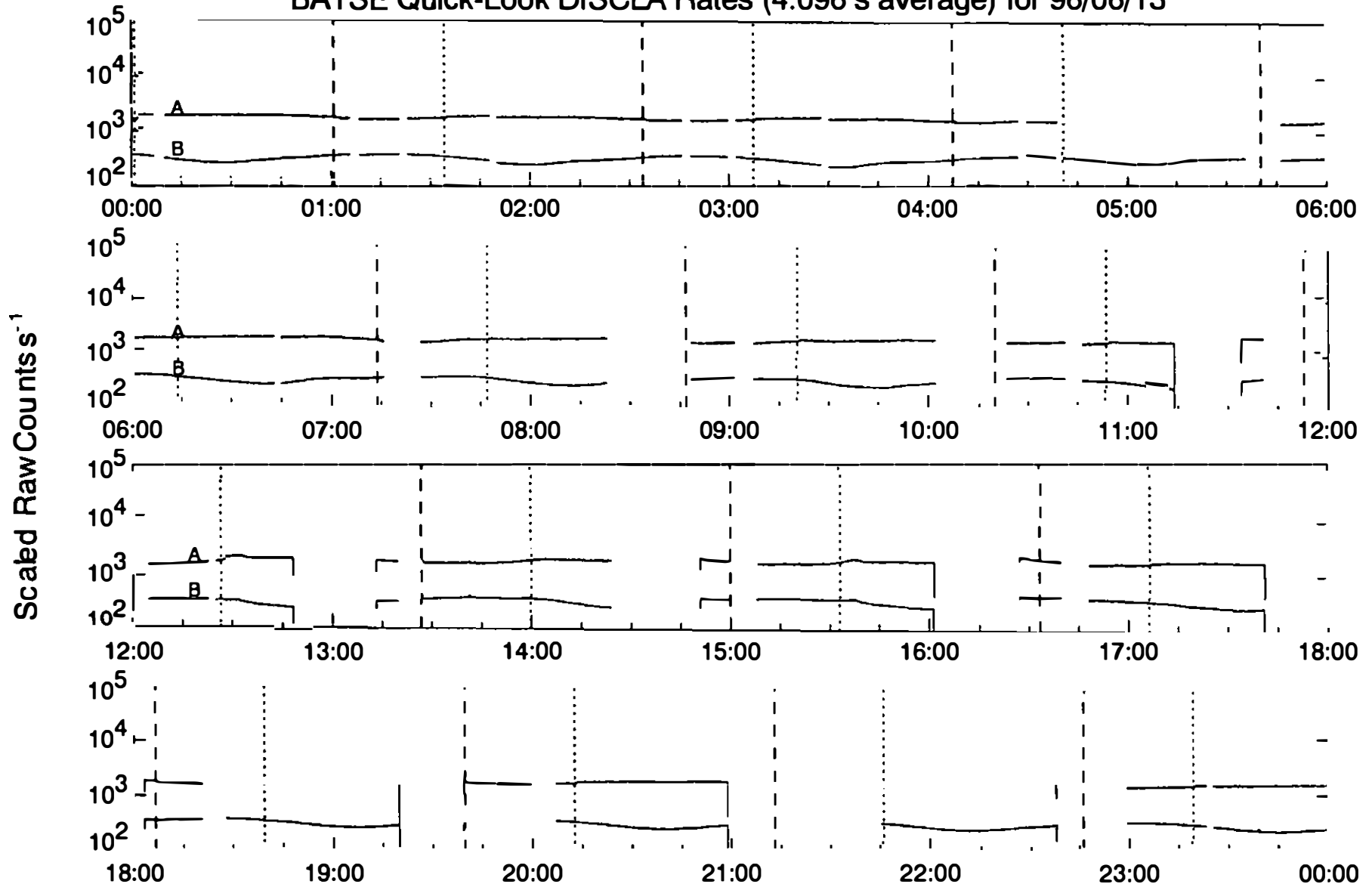


Data Start: 96/06/13, 0000:00

Plot created: 96/06/15, 1003

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

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/13

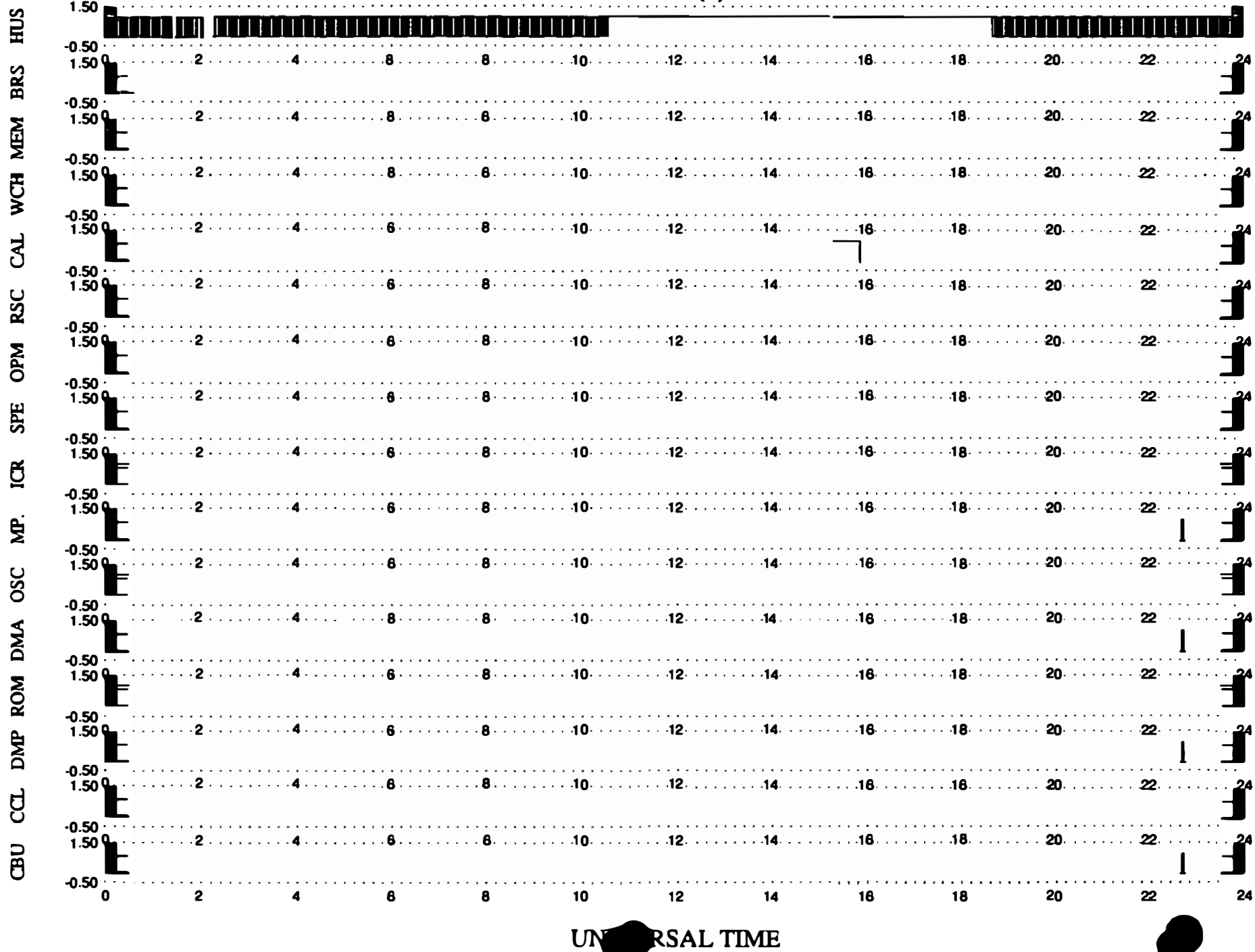


Current Time: 96/06/15, 1004 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

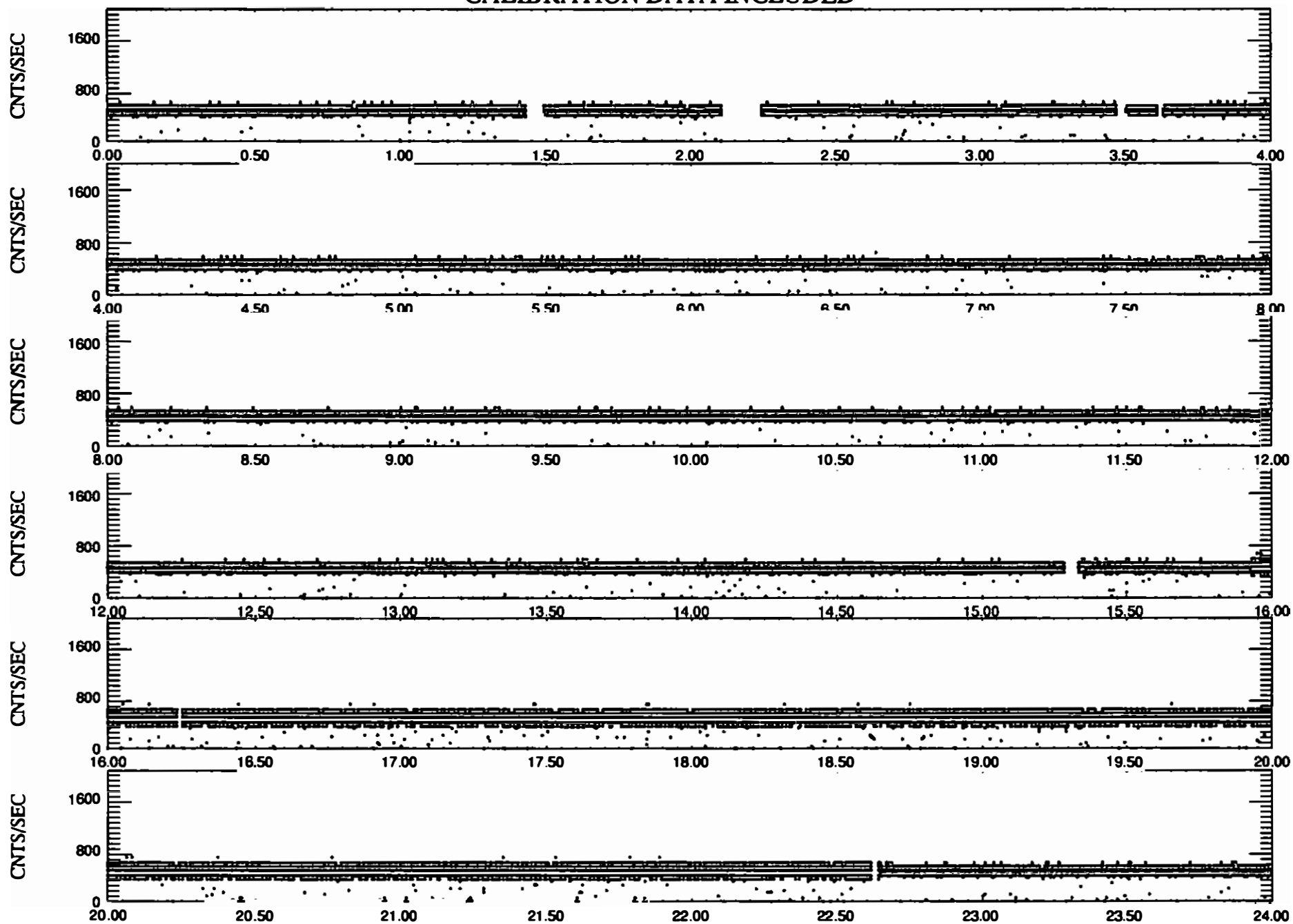
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

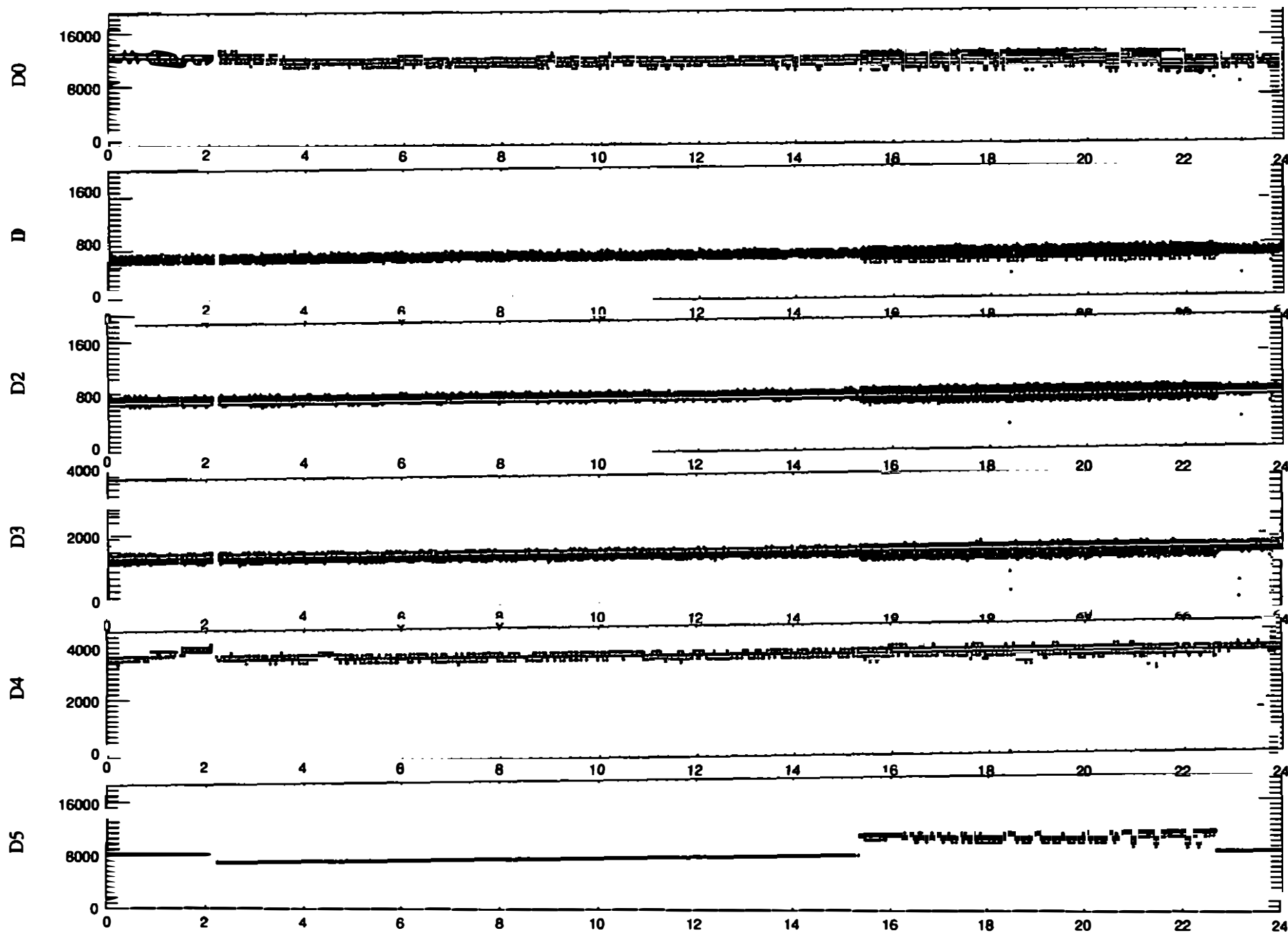
NO BURST (2)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

KONUS

ULYSSES RT

29 / 01 / 00

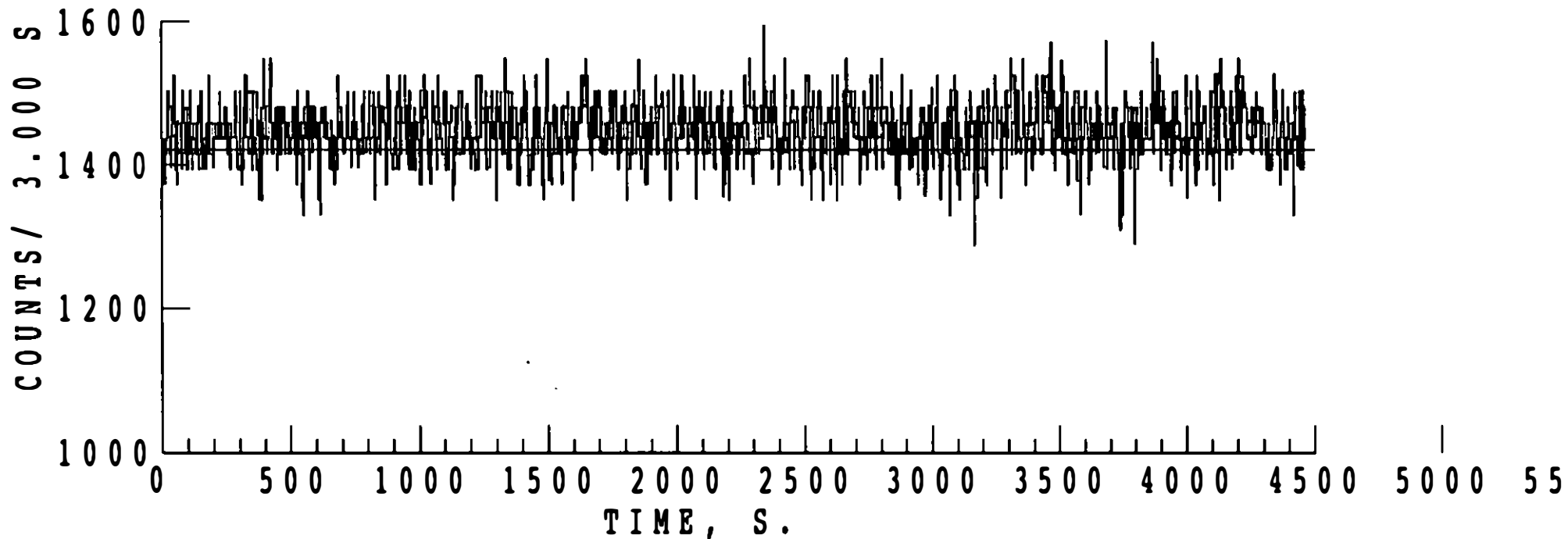
14 / 06 / 96 21564.385 s

0.500 S INTERVALS REGROUPED BY 6

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From HAGEDON@fender.msfc.nasa.gov Mon Jun 17 11:21 PDT 1996
From: HAGEDON@fender.msfc.nasa.gov
Date: Mon, 17 Jun 1996 13:21:40 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5496

BATSEARCH PROGRAM

BATSE BURST # 5496
EVENT OF 1996 JUN 14 DAY OF YEAR=166
EVENT CROSSING TIME AT BATSE : 63781. S. OR 17:43:01.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 212.000 44.000
BATSE PEAK COUNTING RATE: 16000 C/S

ND

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 14/ 6/ 96 IS:
RA= 150.855 DEC= 50.837 DIST= 4.397 AU
BATSE-ULYSSES DISTANCE = 657801876. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=139.27 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1662.85 SECS.
CROSSING TIME AT ULYSSES IS 62118. S. OR 17:15:18 +/- 273.29 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 14/ 6/ 96 IS:
RA= 58.874 DEC= 20.285 DIST= 2.352 AU
MARS-BATSE DISTANCE = 351886944. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 68.84 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 423.76 SECS.
CROSSING TIME AT MARS IS 64205. S. OR 17:50:04 +/- 196.48 SECONDS

BATSE BURST TRIGGER

NO.: 5496

TIME: TJD=0248 SECONDS=63781

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=65.6 AZIMUTH=87.6 ERROR=4.2 DEGREES

COMMENTS:

BURST. SINGLE SPIKE WITH SUBSTRUCTURE. DUR.~70MS. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5496	960614	10248	63781	16000	212	+44	.070

BATSE #

5496

17 / 6 / 96

ULYSSES RT

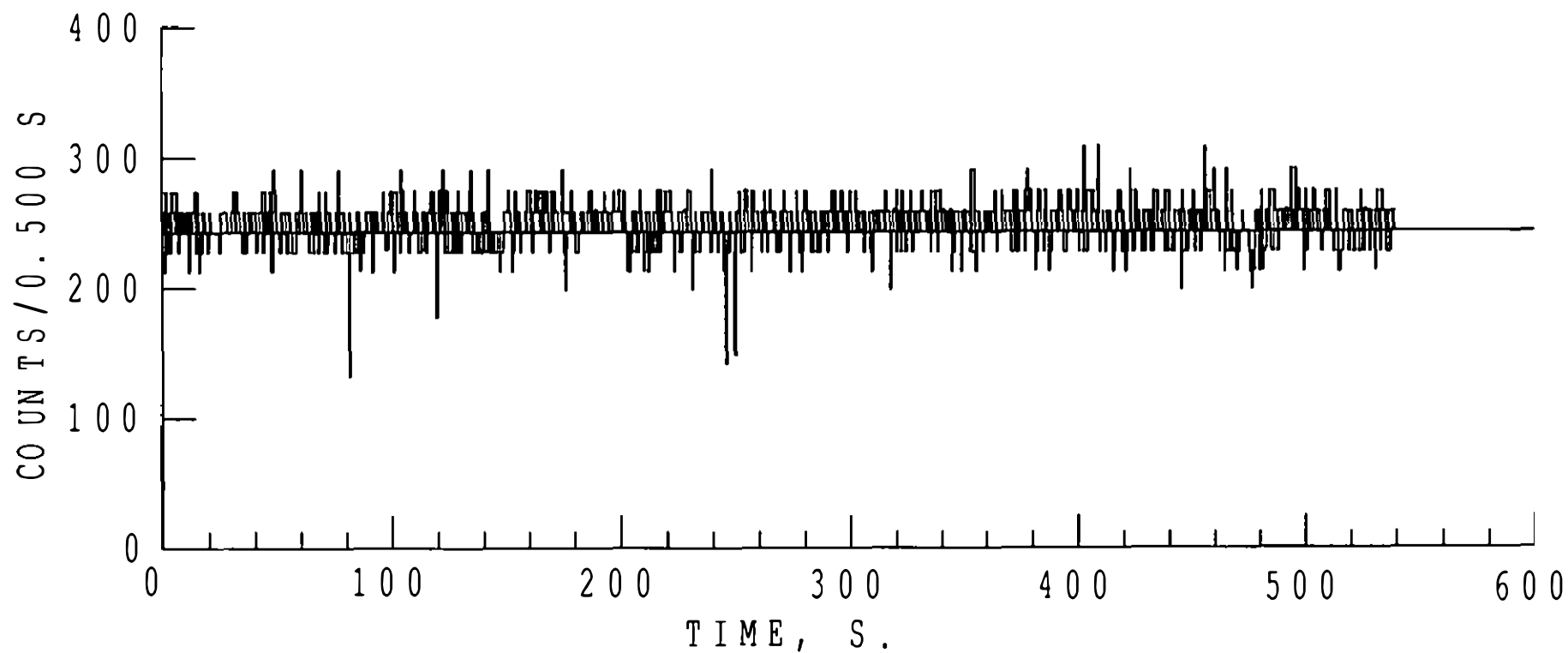
14 / 6 / 96 61848.172 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 N= 2

0.0 SIGMA FLUCTUATIONS



96	2	29	22445.141	S2	740	1520	550	0.3	0.5	8	250	Search	
96	3	5	33645.352	S1	440	390	70	>10	0.8	1.8	251	Search	
96	3	12	35074.697	S2	160	730	330	<0.25	0.2	0.1	252	Search	
96	3	19	51992.828	S1		800	970	>7	0.16	0.4	253	RT	5277
96	3	21	76321.803	S2	4600	4550	1020	0.03	42	46	254	Trig	5299
96	3	22	19642.728	S1	1060	1760	1120	40	2	28	255	Trig	5304
96	3	24	80064.124	S2	320	520	150	0.07	1	14	257	Search	
96	3	25	69892.978	S1	250	620	460	6	0.5	0.5	258	NO	5339
96	3	31	21208.784	S1	220	520	120	4.4	2	24	271	RT	5369
96	4	4	25289.264	S2	420	750	240	0.07	4	9	272	Search ± 750	
96	4	9	77143.618	S2	650	1170	420	0.17	0.5	5	273	RT KA	5417
96	4	10	80648.201	S2	190	330	140	<0.05	1	35	274	Search ± 1250	
96	4	18	06106.854	S1	200	330	70	1	2	2	277	RT KA	5411
96	4	18	08271.303	S2	350	770	50	<0.1	3	30	278	Search KA ± 750	
96	4	18	66796.140	S1	1160	1000	50	10	1	3	290	Trig	5436
96	4	20	17324.809	S2	300	1190	1080	1	0.3	0.04	303	Search ± 1250	
96	4	22	59981.190	S2	160	410	140	0.5	4	12	305	RT	5443
96	4	25	86395.862	S2	1300	730		<0.04	44	16	306	Search KA ± 1750	
96	4	28	47556.501	S2	270	420	230	<0.04	1	170	307	RT	5450
96	4	30	49895.524	S1	250	640	180	8	8	18	309	RT KA	5451
96	5	1	31344.546	S1	380	870	350	3.7	20	56	310	Search ± 2050	
96	5	6	47384.998	S1	160	490	190	1.1	3	6	312	Search ± 2050	
96	5	7	44869.909	S2	460	760	290	0.03	20	98	313	Search ± 2050	
96	5	10	38723.598	S2	560	1300	330	0.1	1	7	317	Trig	
96	5	19	14766.283	S2	1700	7700	8000	0.4	0.1	0.56	319	Search ± 2050	
96	5	21	62489.430	S1	330	500	90	5.8	1	8	320	Search ± 2050	
96	5	23	59522.013	S1	270	550	580	10	1	3	321	RT	5470
96	5	29	43663.061	S2	1700	4000	5000	0.15	0.5	3.5	322	Trig	5477
96	5	29	80722.705	S2	420	620	140	0.1	1	14	323	Trig KA	
96	5	30	62300.750	S1	180	400	110	>20	2	14	324	Search ± 2050	
96	5	31	06926.043	S1	300	440	120	4.7	50	7	325	Search ± 2050	
96	5	31	73498.259	S2	1600	4250	2800	0.5	27	19	326	Trig	
96	6	2	42664.032	S1	1000	1450	1400	>2	0.3	0.03	327	Search ± 2050	
96	6	5	29392.672	S1	400	950	410	1.3	2	87	328	RT	5486
96	6	7	78106.176	S2	890	1280	550	0.04	32	120	329	RT	5489
96	6	10	84502.254	S2	200	1000	1500	0.9	0.16	0.11	330	Search ± 2050	
96	6	12	71198.677	S1	650	2800	2700	1.4	0.5	18	331	Trig	
96	6	14	67654.516	S1	80	1800	1600	1	0.18	0.1	332	Search ± 2050	NO
96	6	17	76195.941	S1	350	560		>8	1	0.6	333	NO	5504
96	6	22	74906.054	S2	100	360	280	0.2	4	8	334	Search ± 2050	
96	6	23	04734.229	S2	130	320	150	0.5	7	25	335	RT KA	5512
96	6	23	77186.871	S2	250	350	130	0.05	6	15	336	Search ± 2050	
96	6	25	16949.252	S1	180	280	70	4.6	6	9	337	RT	5518
96	6	28	19224.223	S2	500	410	120	0.06	12	6	338	RT	5523
96	7	2	54698.284	S1	280	350	70	2.8	23	85	339	RT	5525
96	7	3	65443.861	S1	200	560	600	3	1	0.4	340	NO	5527
96	7	7	36999.311	S2	1600	1200		0.06	2	5	341	RT	5530
96	7	8	72577.095	S2	900	820	160	0.2	1	6	342	Search ± 2350	
96	7	9	00246.641	S1	260	1000	400	0.95	15	4	343	Trig KA	
96	7	10	00662.014	S2	1800	4700	3600	0.13	0.5	48	345	Trig	
96	7	11	63757.543	S1	560	2400	900	1.25	0.5	19	346	Trig	
96	7	11	68451.869	S2	200	360	170	<0.07	2	41	347	Search ± 2350	
96	7	22	25522.448	S2	360	650	170	0.27	17	151	348	RT	5548
96	7	22	56346.728	S1	700	1000	200	2.6	3	6	349	Search ± 2350	
96	7	27	43056.737	S2	500	1000	500	0.7	0.5	15	350	Search ± 2350	
96	7	31	20761.638	S2	800	1160	170	0.9	0.5	4	353?	RT	5557
96	8	3	67525.033	S1	4000	8000	3000	3	0.02	0.18	354	Trig KA	5561
96	8	4	84535.906	S2	2000	2600	600	<0.03	0.5	2	355	Trig KA	5563
96	8	5	78957.888	S2	1270	2360	380	0.05	1	20	356	Trig	
96	8	6	80989.772	S2	420	850	250	1	86	10	357	RT	5566

KONUS 22

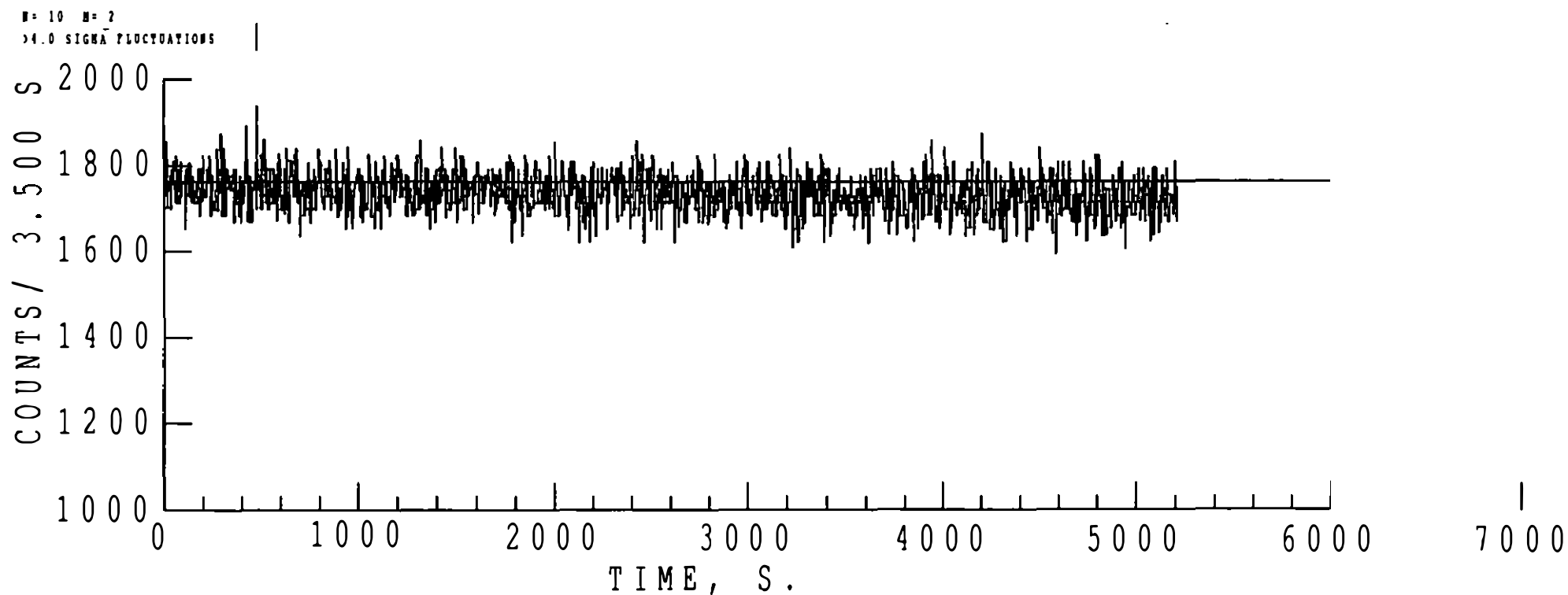
ULYSSES RT

25 / 11 / 96

14 / 6 / 96 65052.211 s

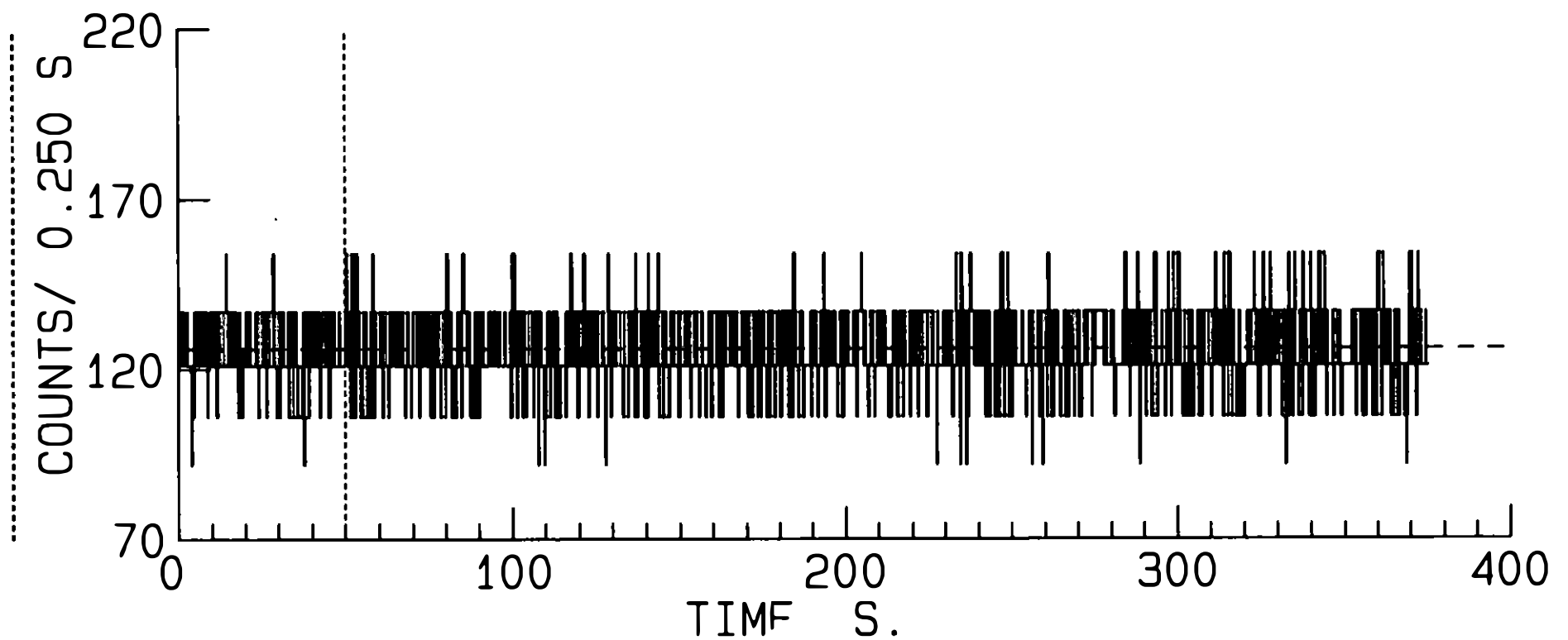
0.250 S INTERVALS REGROUPED BY 14

0 - 0 keV



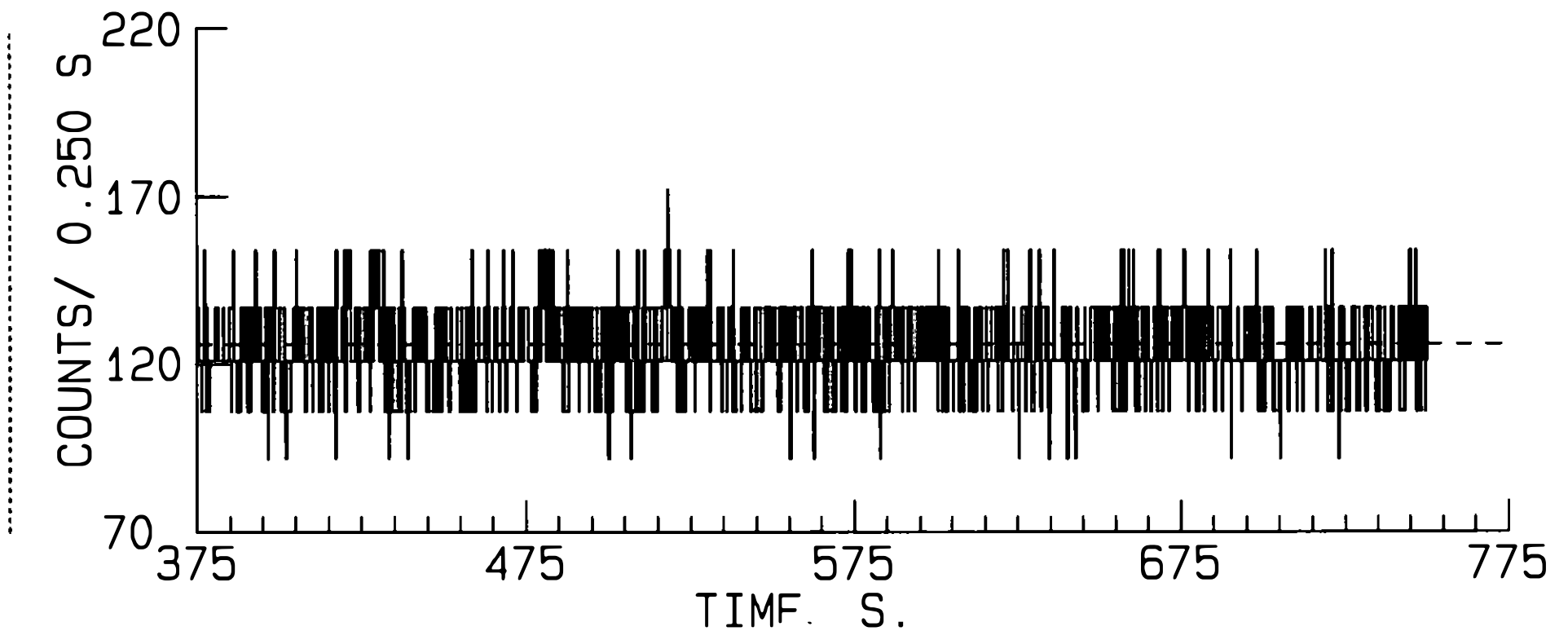
ULYSSES RT
14/ 6/96 65052.211 s
21- 144 keV

13/ 8/ 8



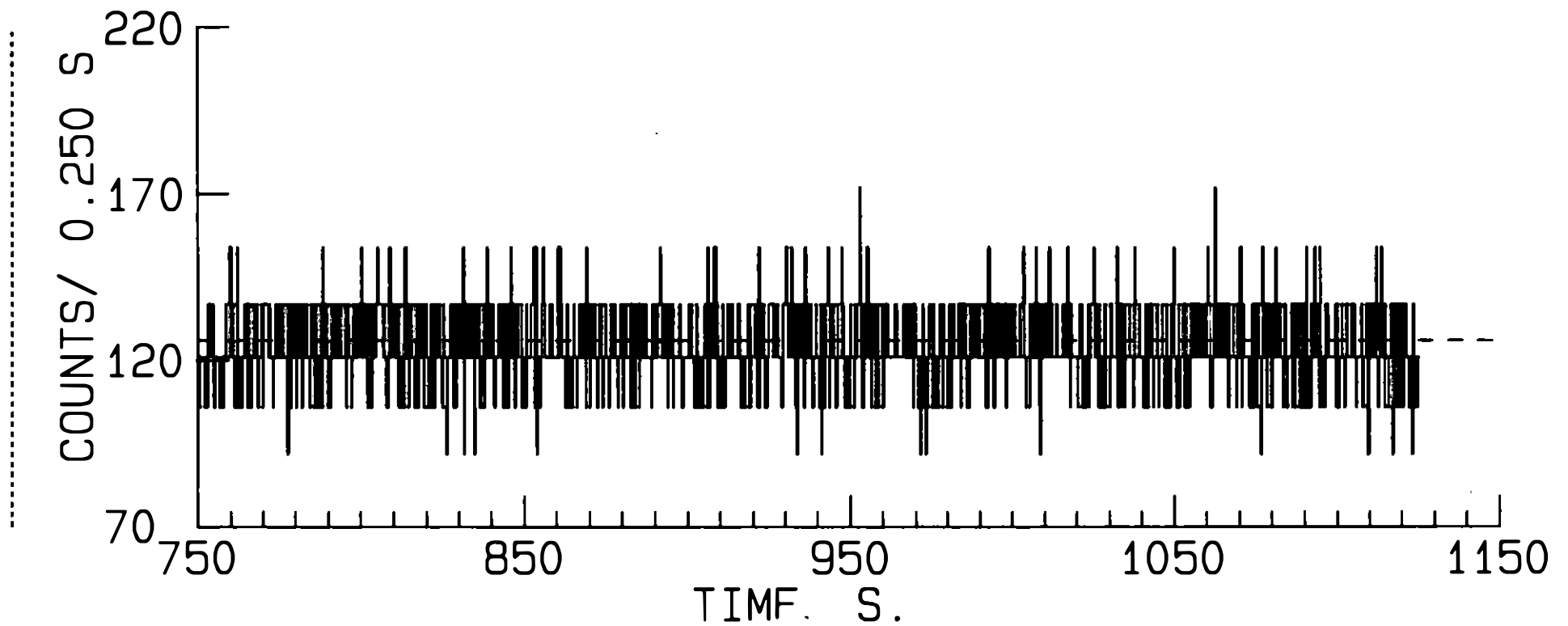
ULYSSES RT
14/ 6/96 65052.211 s
21- 144 keV

13/ 8/ 8



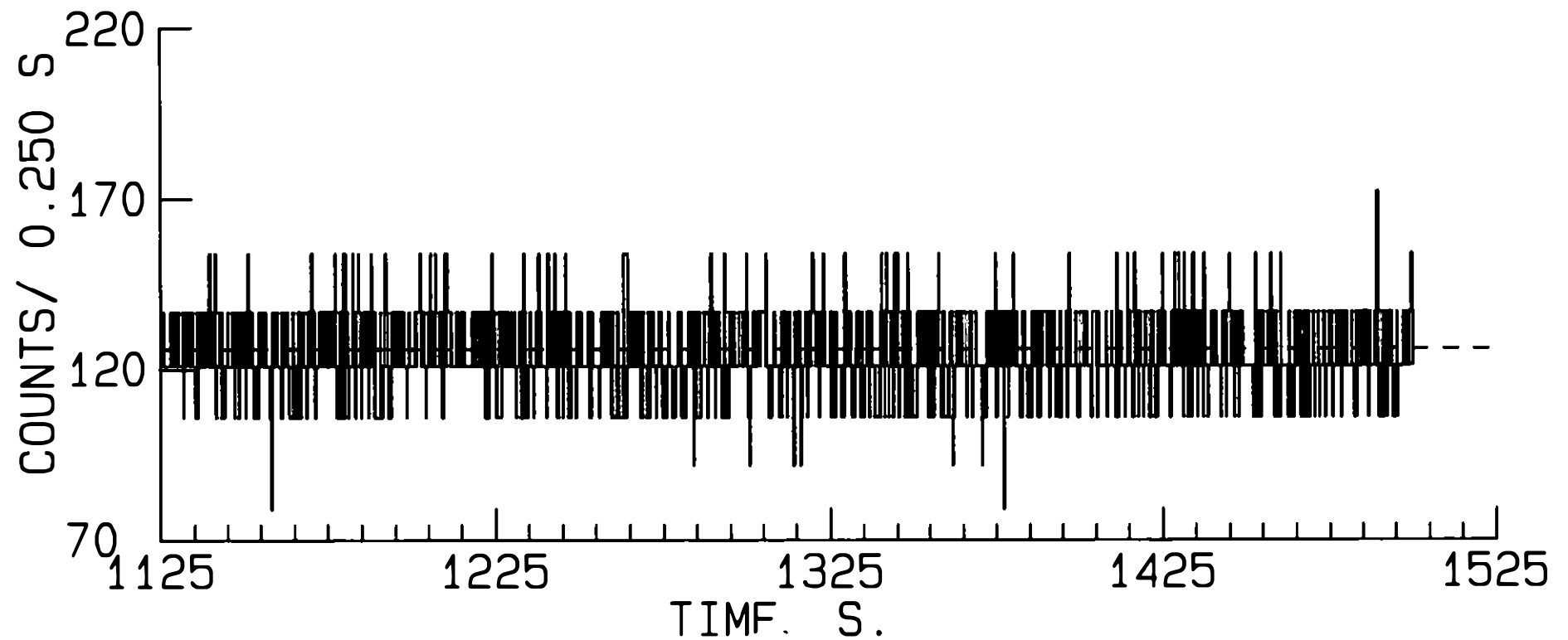
ULYSSES RT
14/ 6/96 65052.211 s
21- 144 keV

13/ 8/ 8



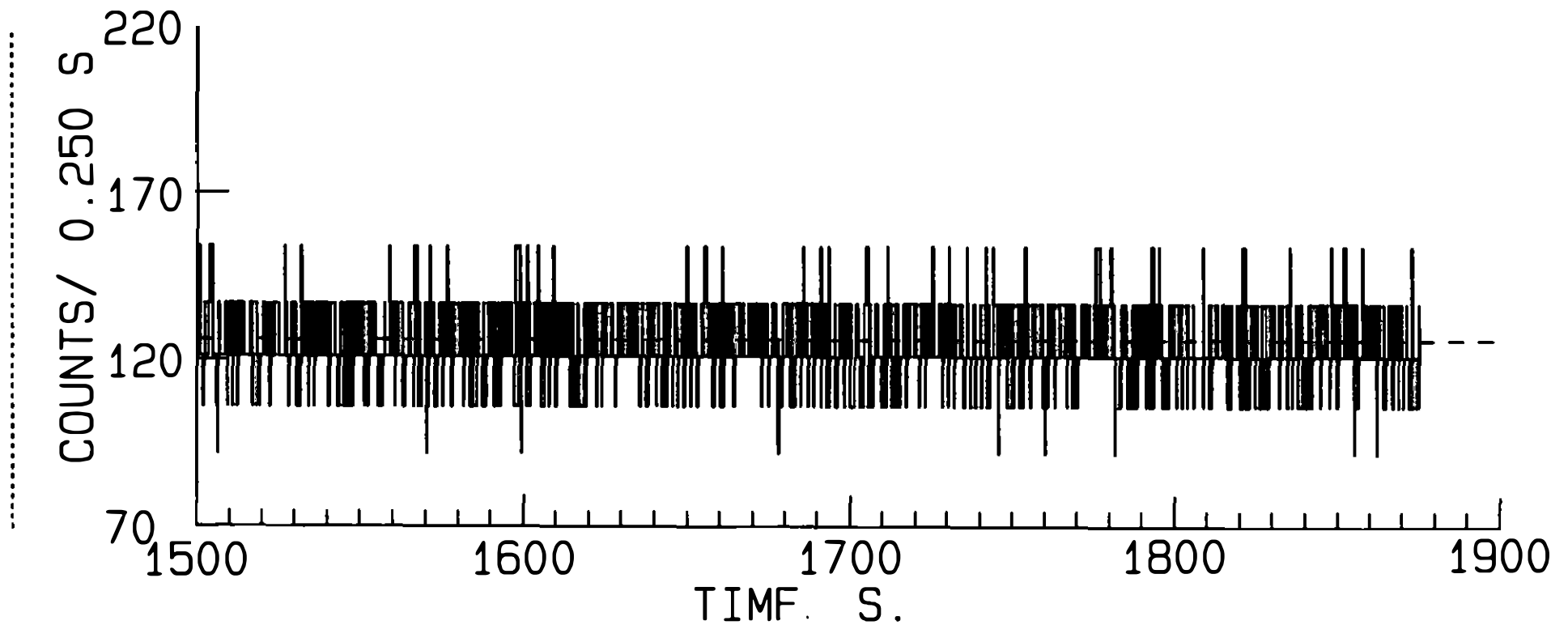
ULYSSES RT
14/ 6/96 65052.211 s
21- 144 keV

13/ 8/ 8



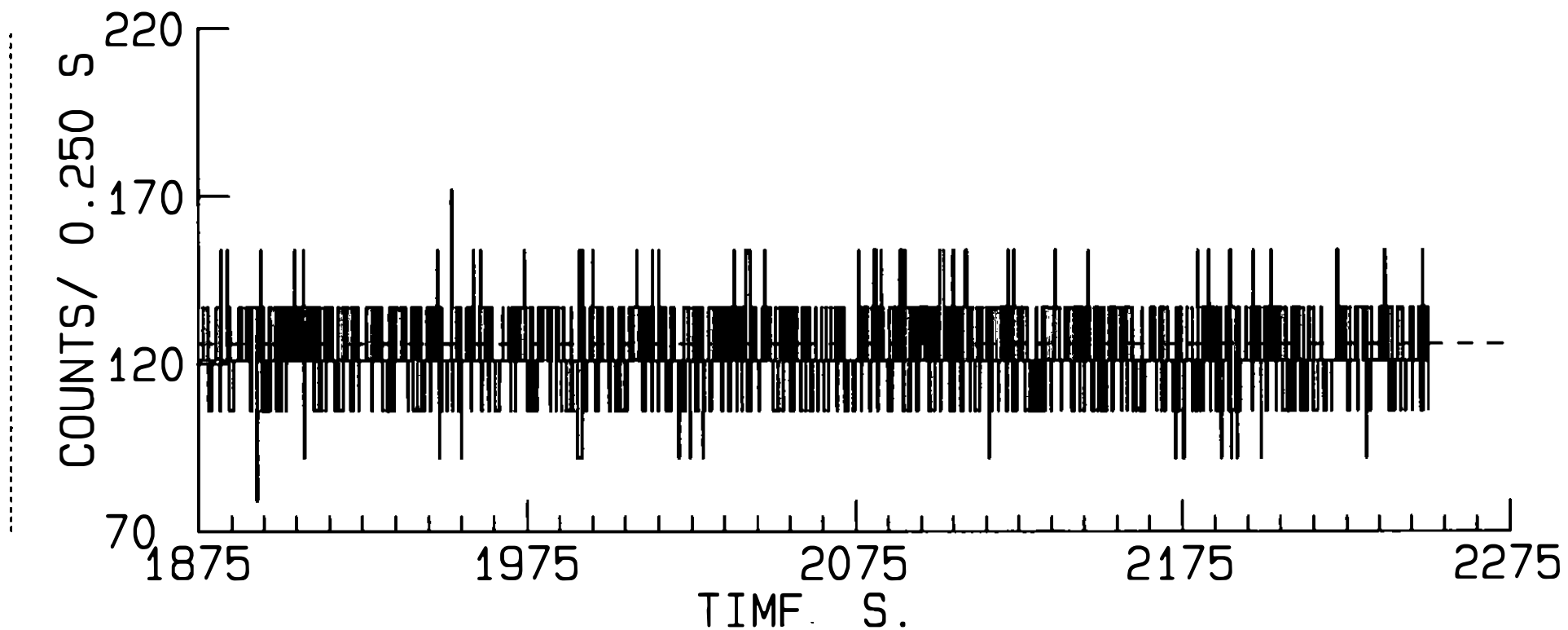
ULYSSES RT
14/ 6/96 65052.211 s
21- 144 keV

13/ 8/ 8



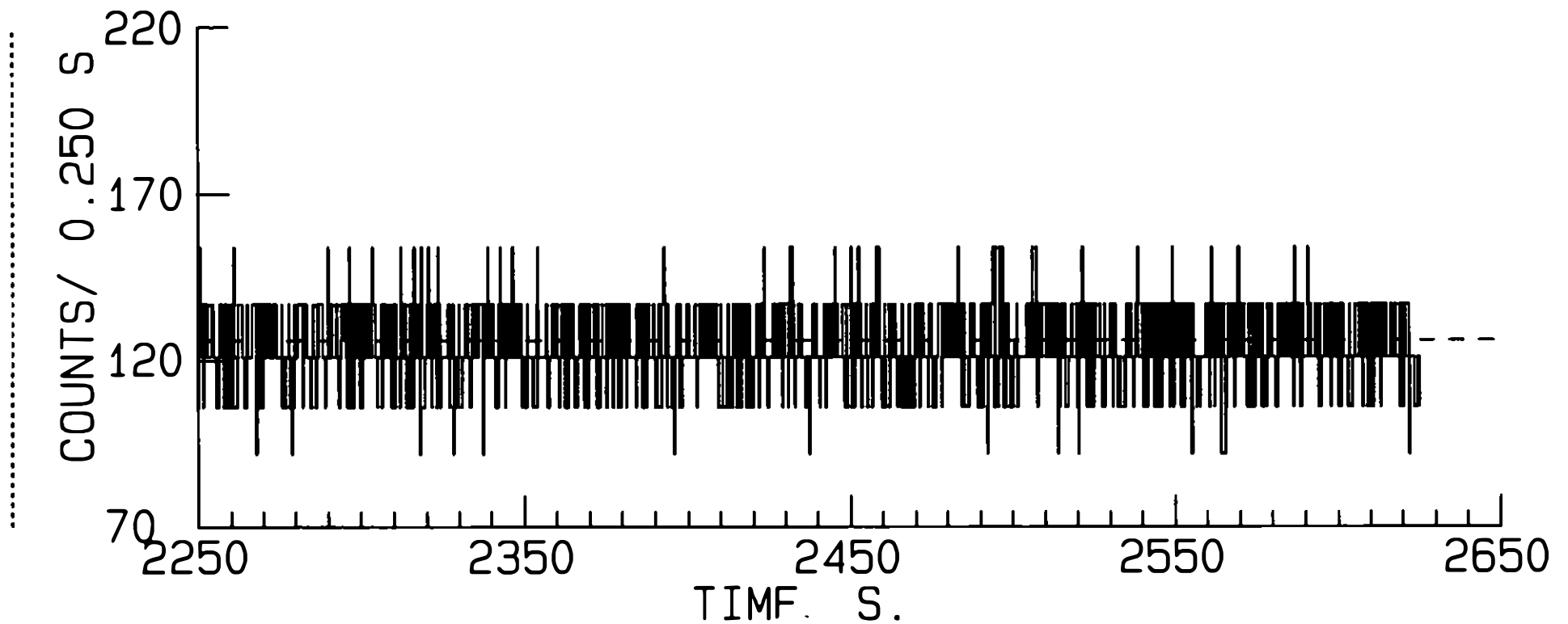
ULYSSES RT
14/ 6/96 65052.211 s
21- 144 keV

13/ 8/ 8



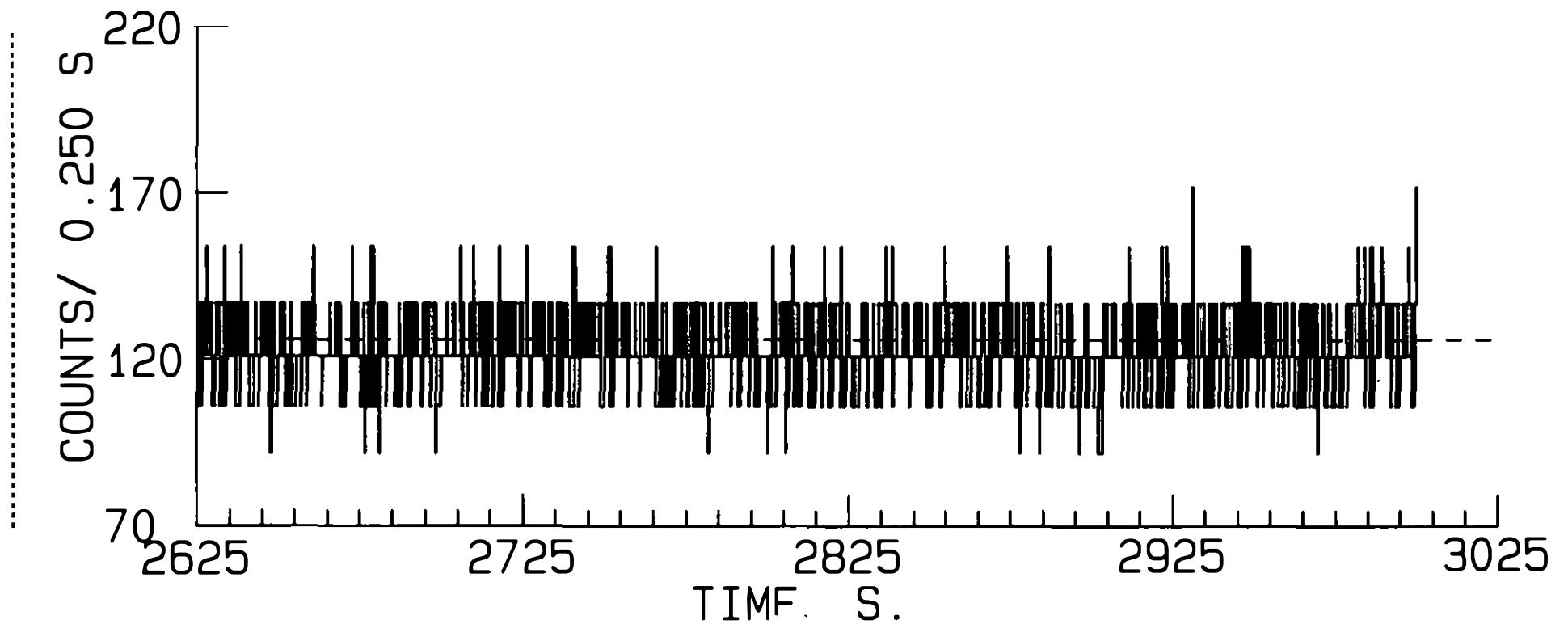
ULYSSES RT
14/ 6/96 65052.211 s
21- 144 keV

13/ 8/ 8



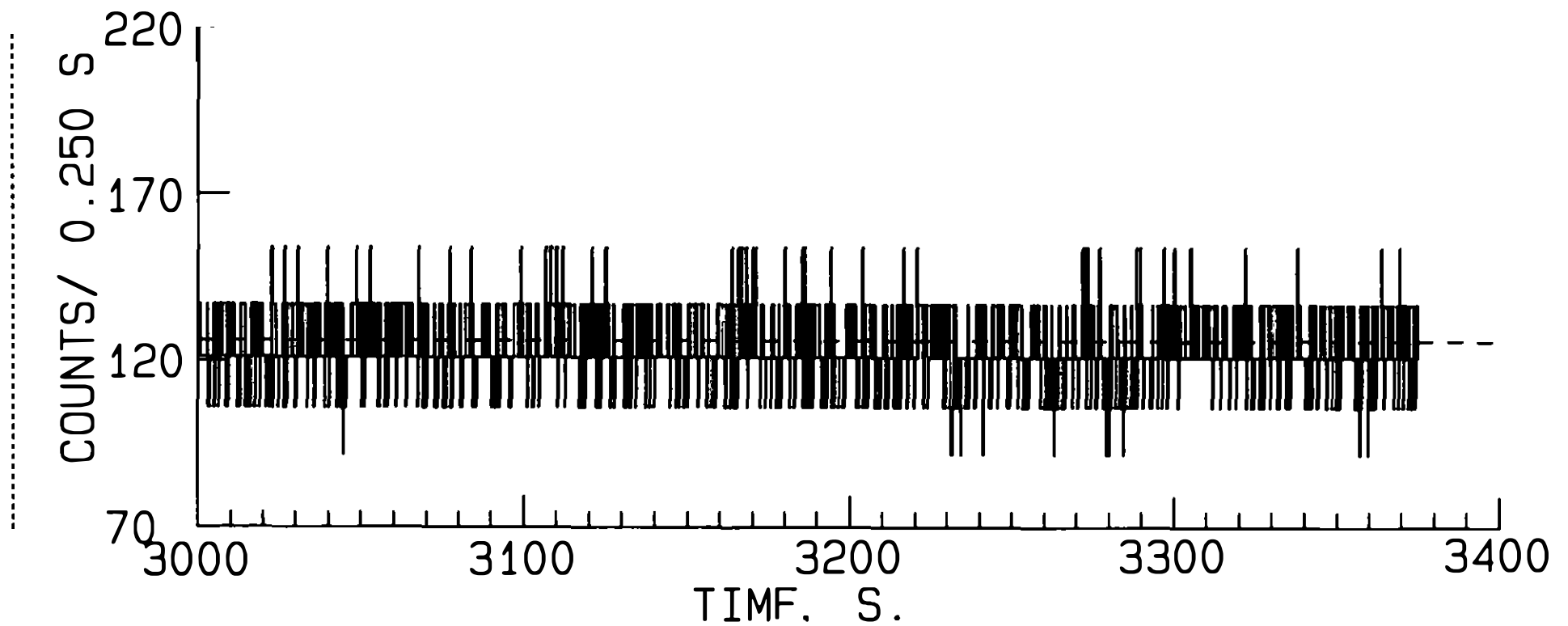
ULYSSES RT
14/ 6/96 65052.211 s
21- 144 keV

13/ 8/ 8



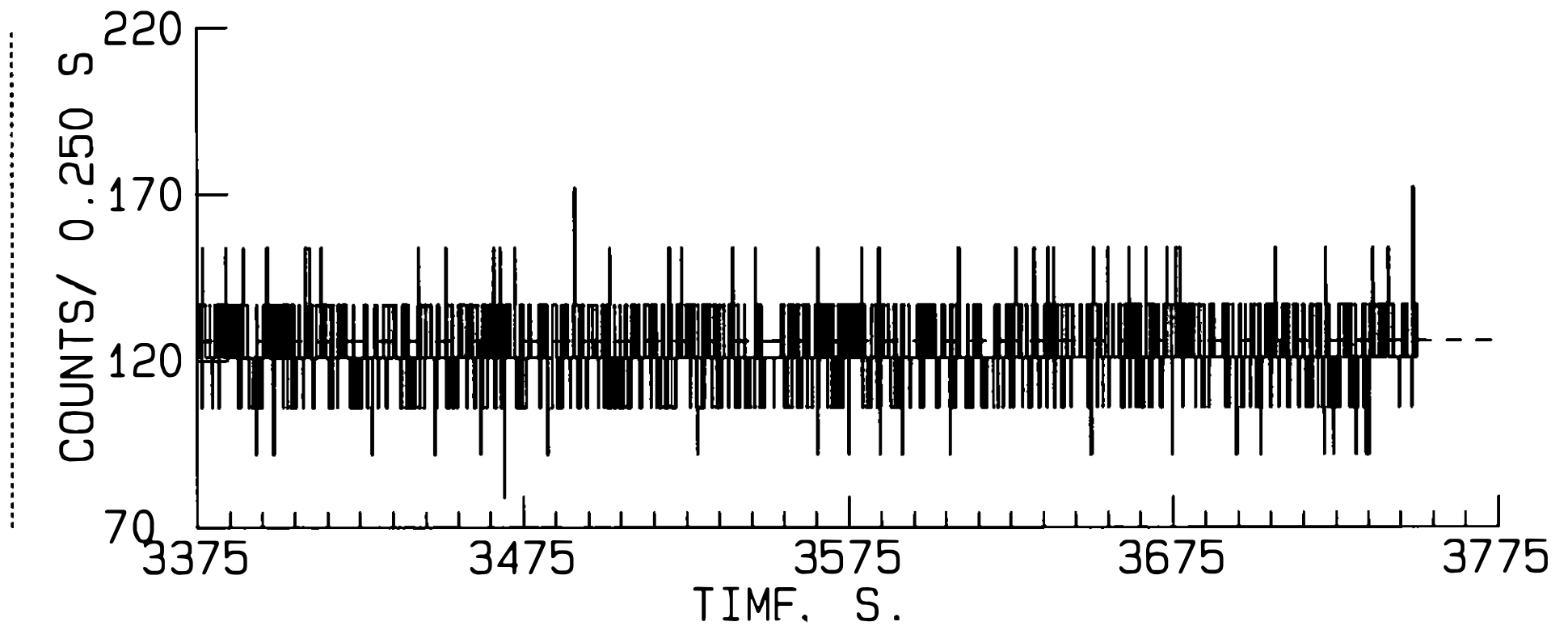
ULYSSES RT
14/ 6/96 65052.211 s
21- 144 keV

13/ 8/ 8



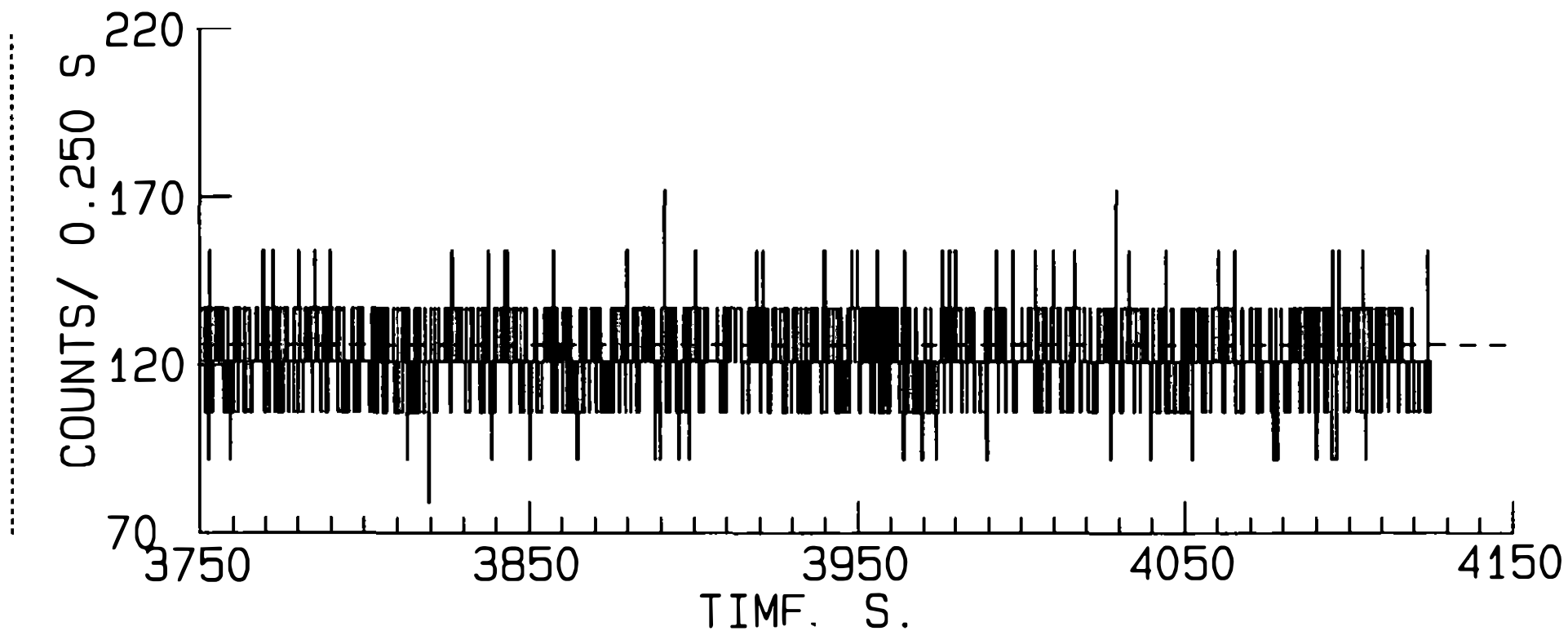
ULYSSES RT
14/ 6/96 65052.211 s
21- 144 keV

13/ 8/ 8



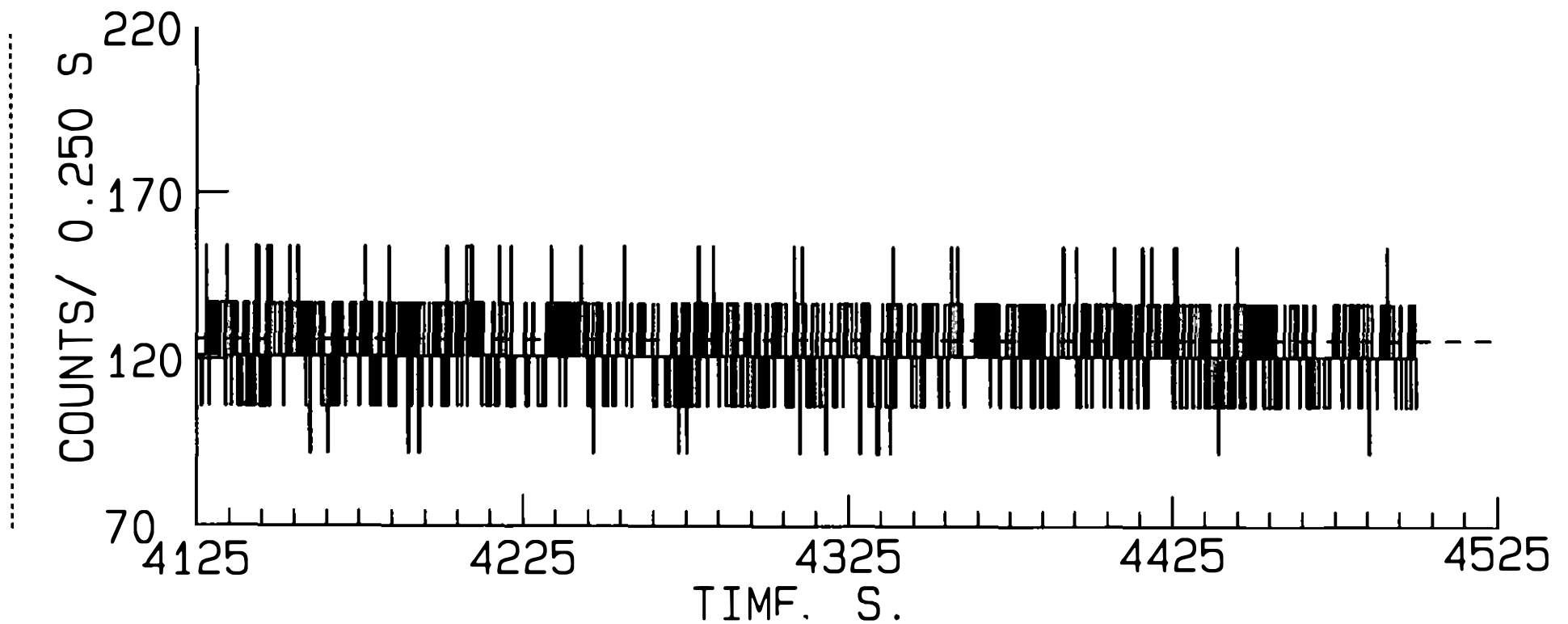
ULYSSES RT
14/ 6/96 65052.211 s
21- 144 keV

13 / 8 / 8



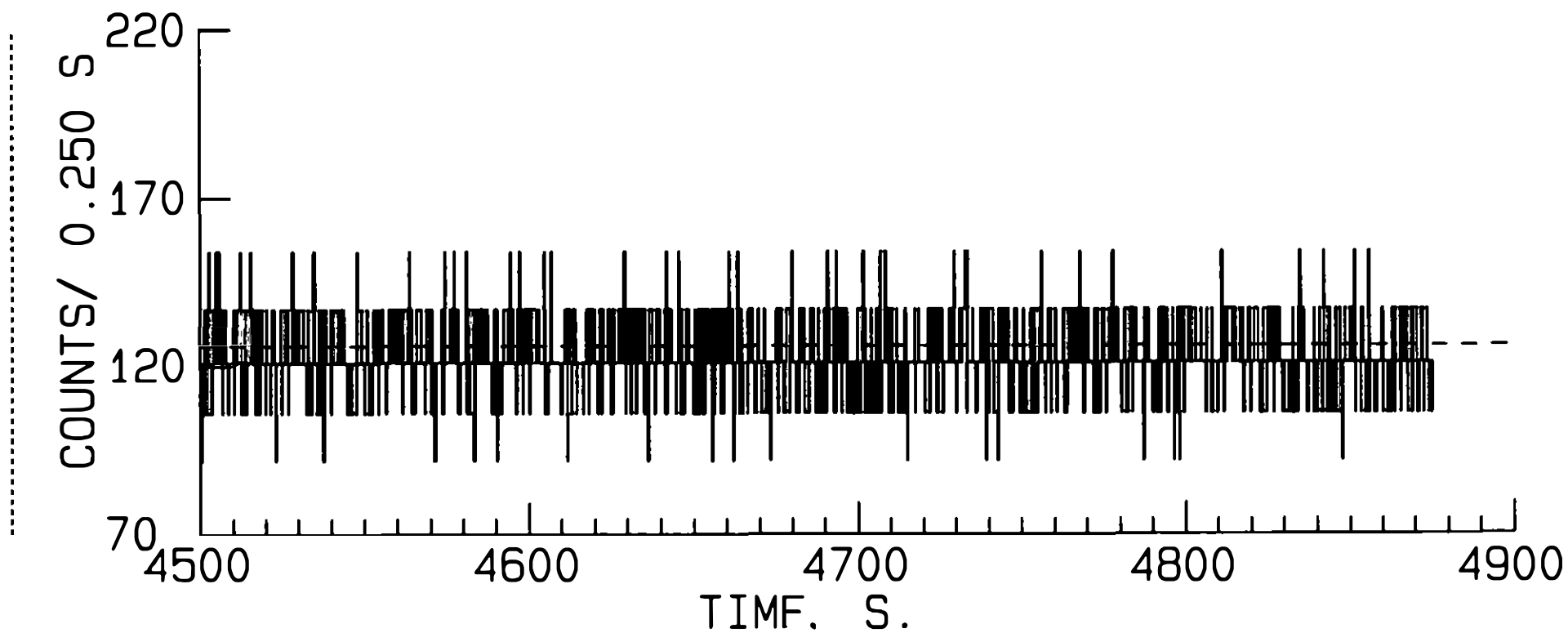
ULYSSES RT
14/ 6/96 65052.211 s
21- 144 keV

13/ 8/ 8



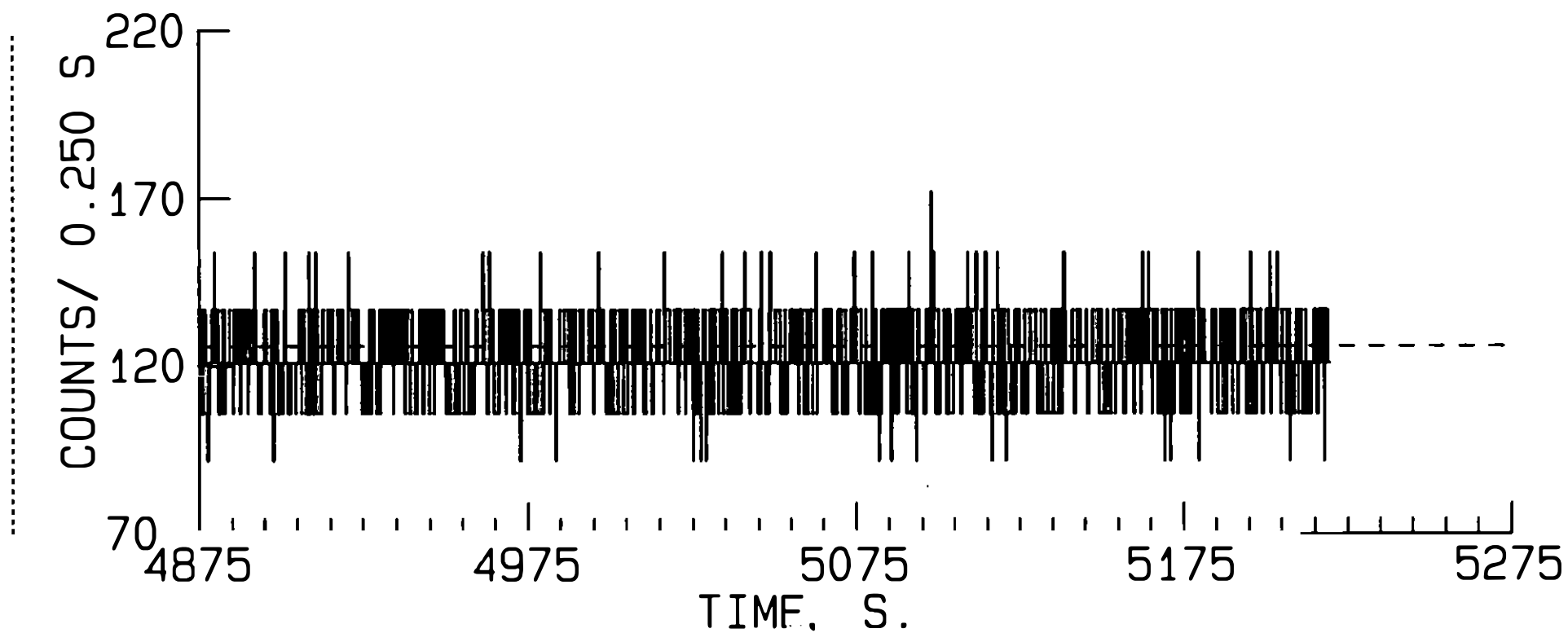
ULYSSES RT
14/ 6/96 65052.211 s
21- 144 keV

13/ 8/ 8



ULYSSES RT
14/ 6/96 65052.211 s
21- 144 keV

13/ 8/ 8



KONUS

ULYSSES RT

29 / 01 / 00

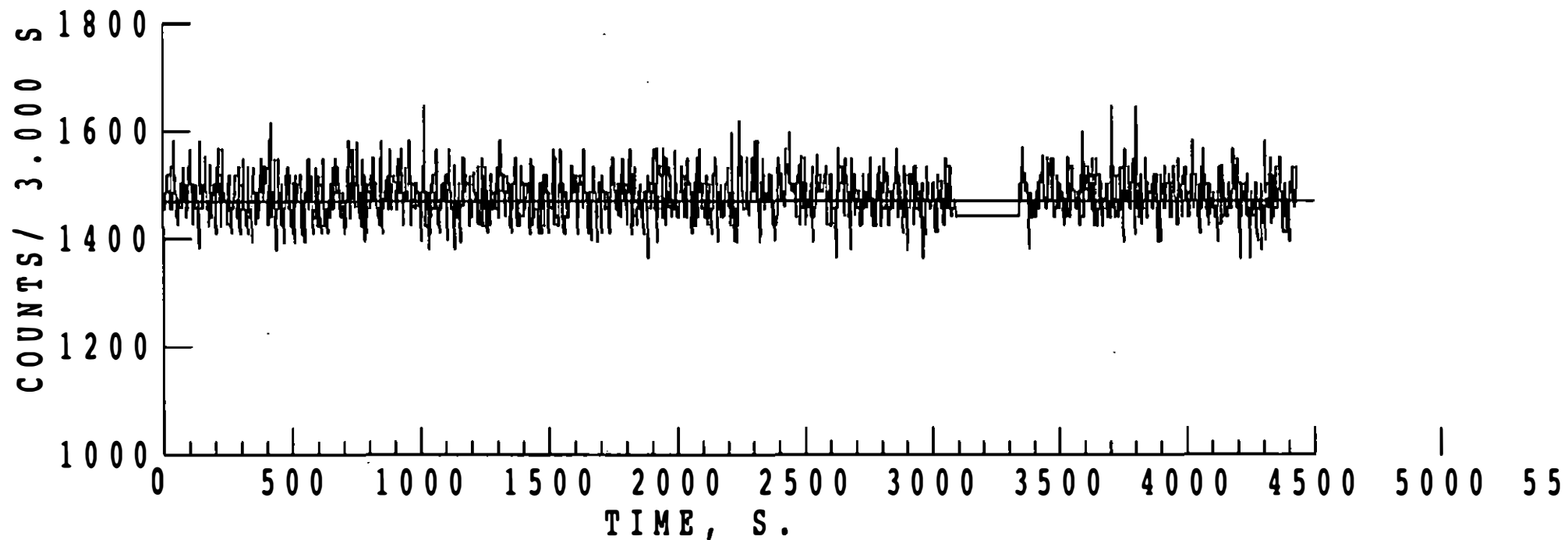
14 / 06 / 96 81396.180 s

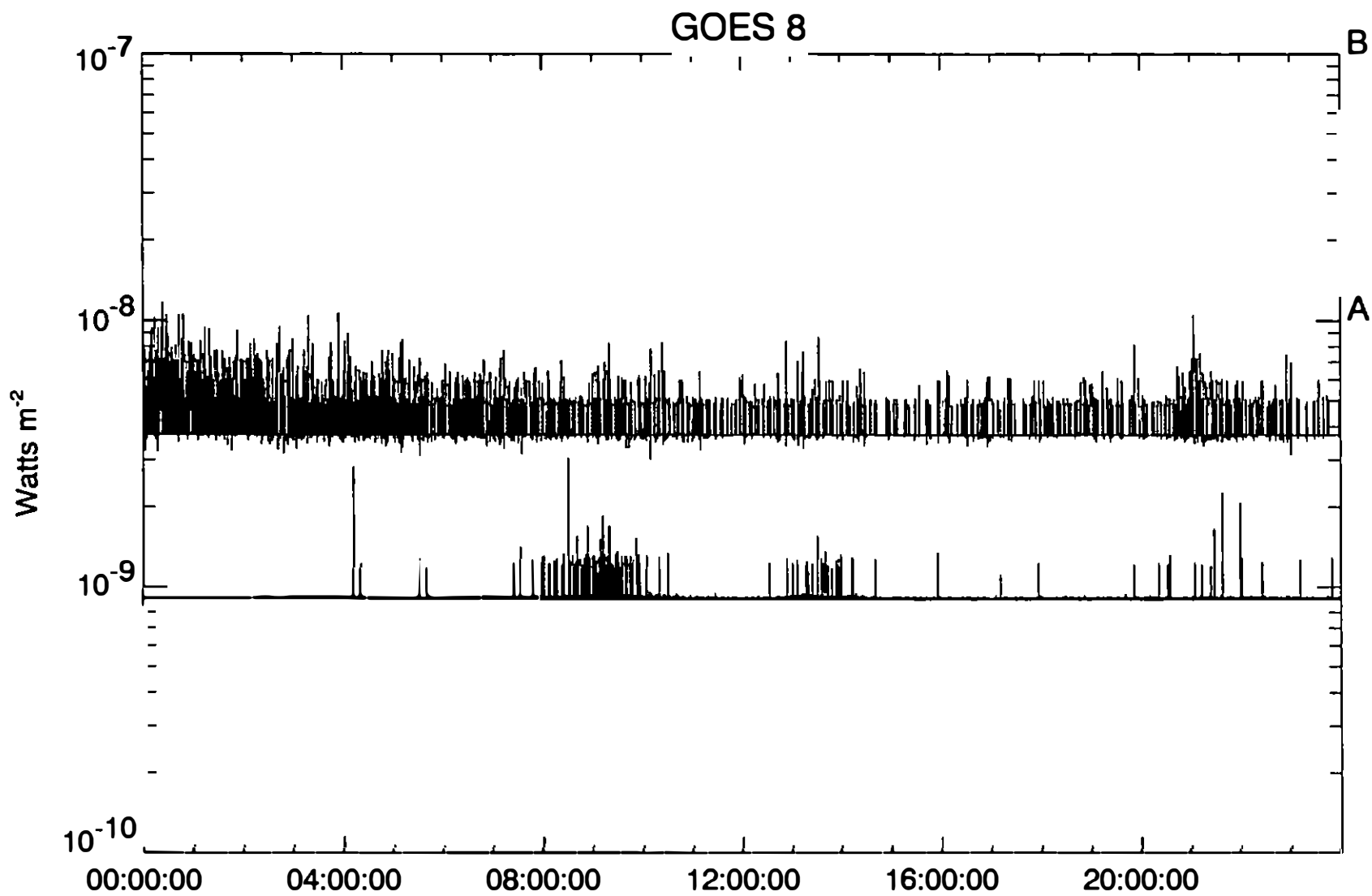
0.250 S INTERVALS REGROUPED BY 12

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





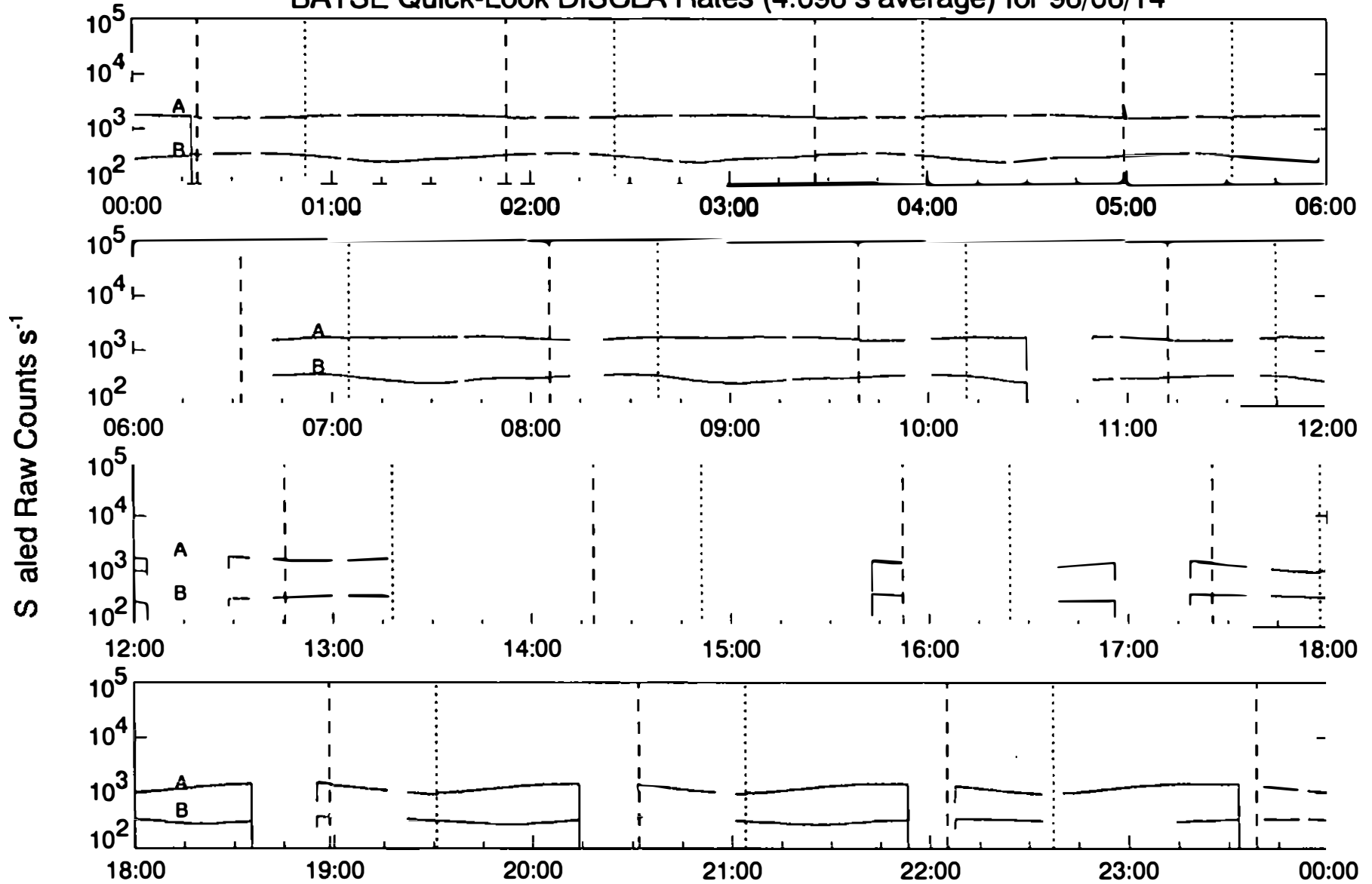
Data Start: 96/06/14, 0000:00

Plot created: 96/06/16, 1003

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/14



Current Time: 96/06/16, 1004 EDT

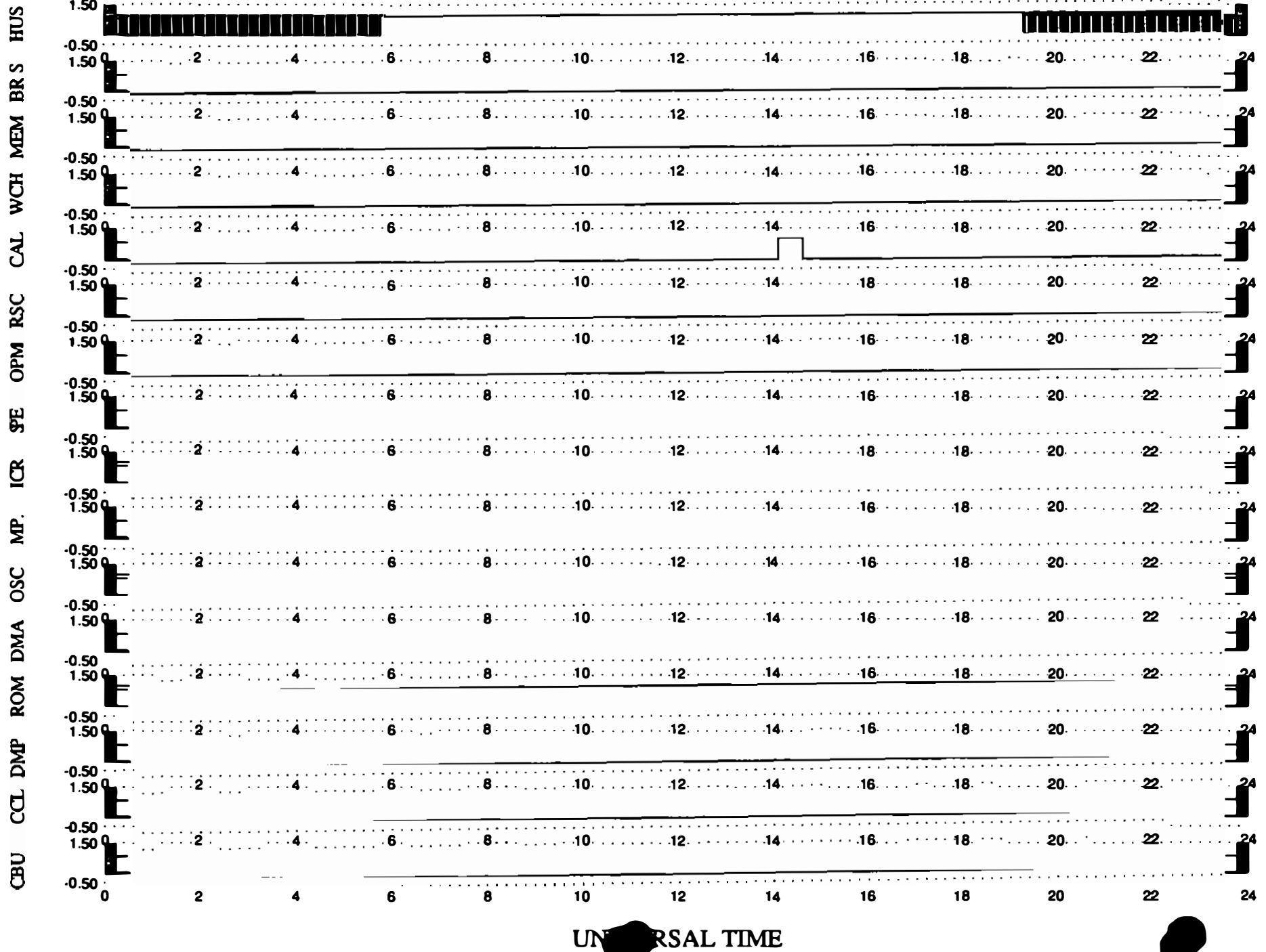
A: Channel 0 Most Sunward LAD

B: Sum Channel 0 Anti-Sunward LADs X .05

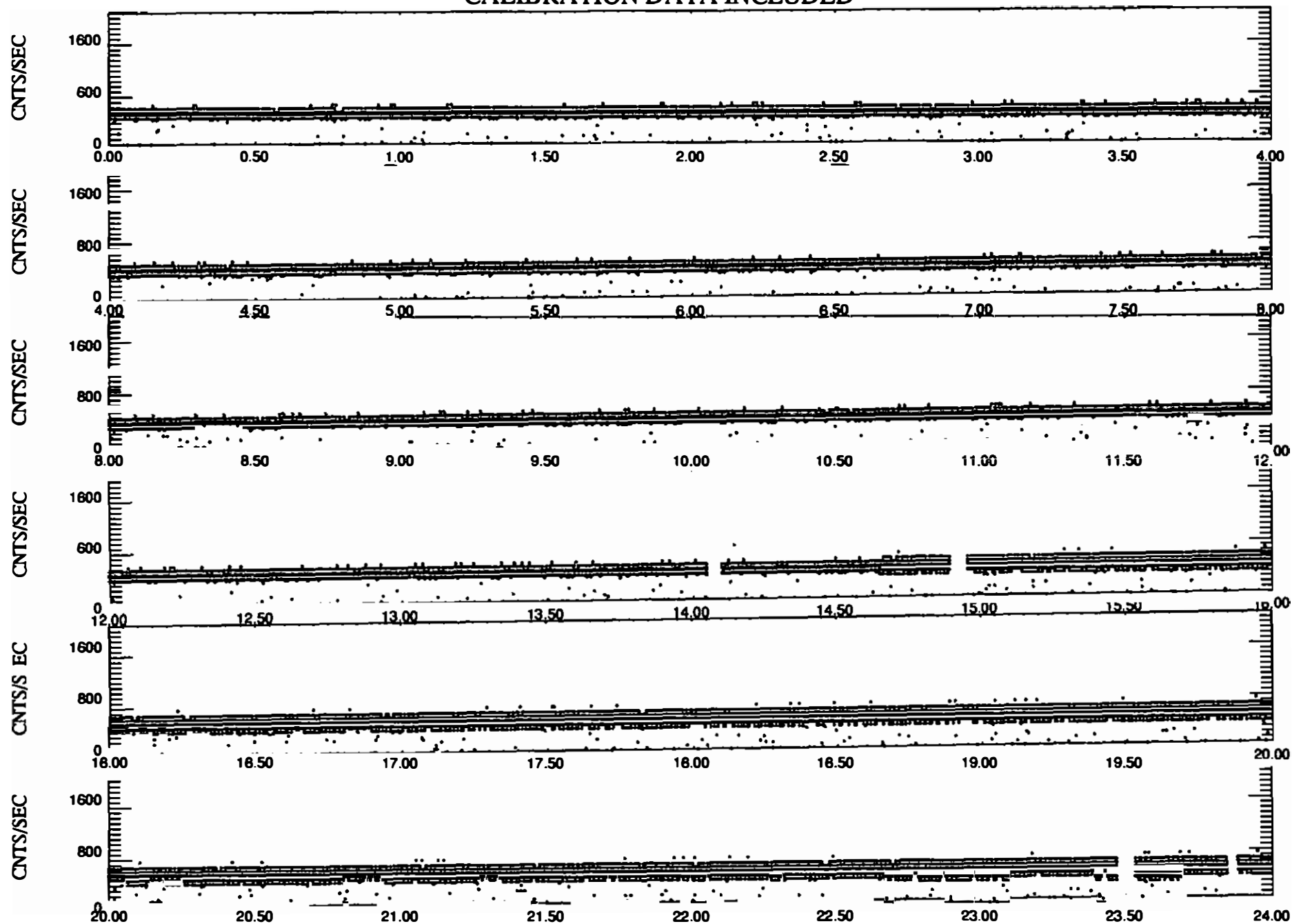
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

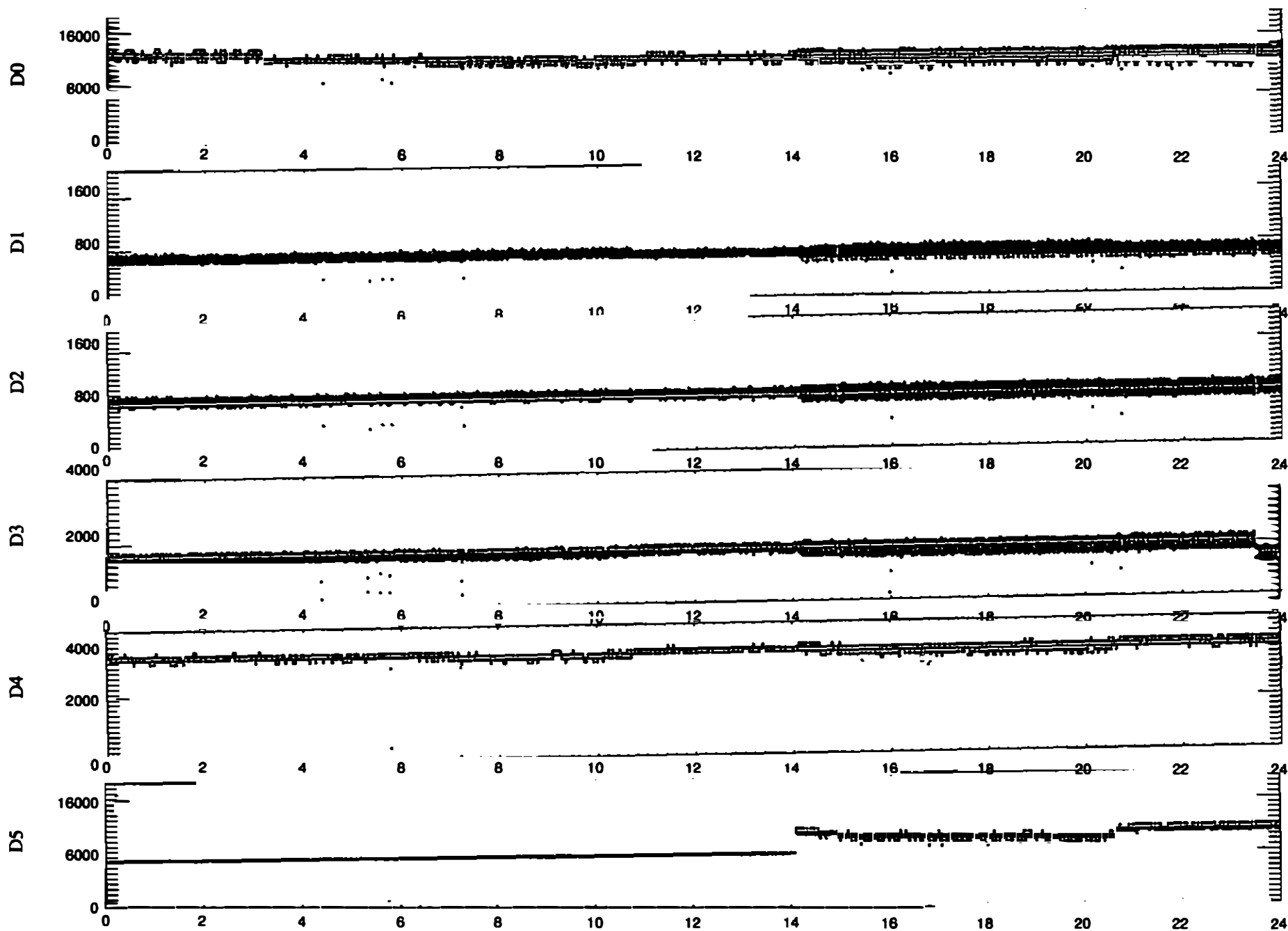
NO BURST (2)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From RICHARDSON@ssl.msfc.nasa.gov Tue Jun 18 08:48 PDT 1996
From: RICHARDSON@ssl.msfc.nasa.gov
Date: Tue, 18 Jun 1996 10:48:43 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5497

BATSEARCH PROGRAM

ND

BATSE BURST # 5497
EVENT OF 1996 JUN 15 DAY OF YEAR=167
EVENT CROSSING TIME AT BATSE : 7588. S. OR 02:06:28.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 111.000 51.000
BATSE PEAK COUNTING RATE: 2500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 15/ 6/ 96 IS:
RA= 150.910 DEC= 50.756 DIST= 4.402 AU
BATSE-ULYSSES DISTANCE = 658578855. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=155.13 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1993.03 SECS.
CROSSING TIME AT ULYSSES IS 5595. S. OR 01:33:14 +/- 180.15 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 15/ 6/ 96 IS:
RA= 59.617 DEC= 20.441 DIST= 2.351 AU
MARS-BATSE DISTANCE = 351683808. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=129.75 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -750.13 SECS.
CROSSING TIME AT MARS IS 6838. S. OR 01:53:57 +/- 145.19 SECONDS

BATSE BURST TRIGGER

NO.: 5497

TIME: TJD=0249 SECONDS=7588

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=98.5 AZIMUTH=32.2 ERROR=4.5 DEGREES

COMMENTS:

GRB. LONG WITH STRUCTURE. DUR.~120SEC. NOT VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5497	960615	10249	07588	2500	111	+51	120

BATSE #

5497

18 / 6 / 96

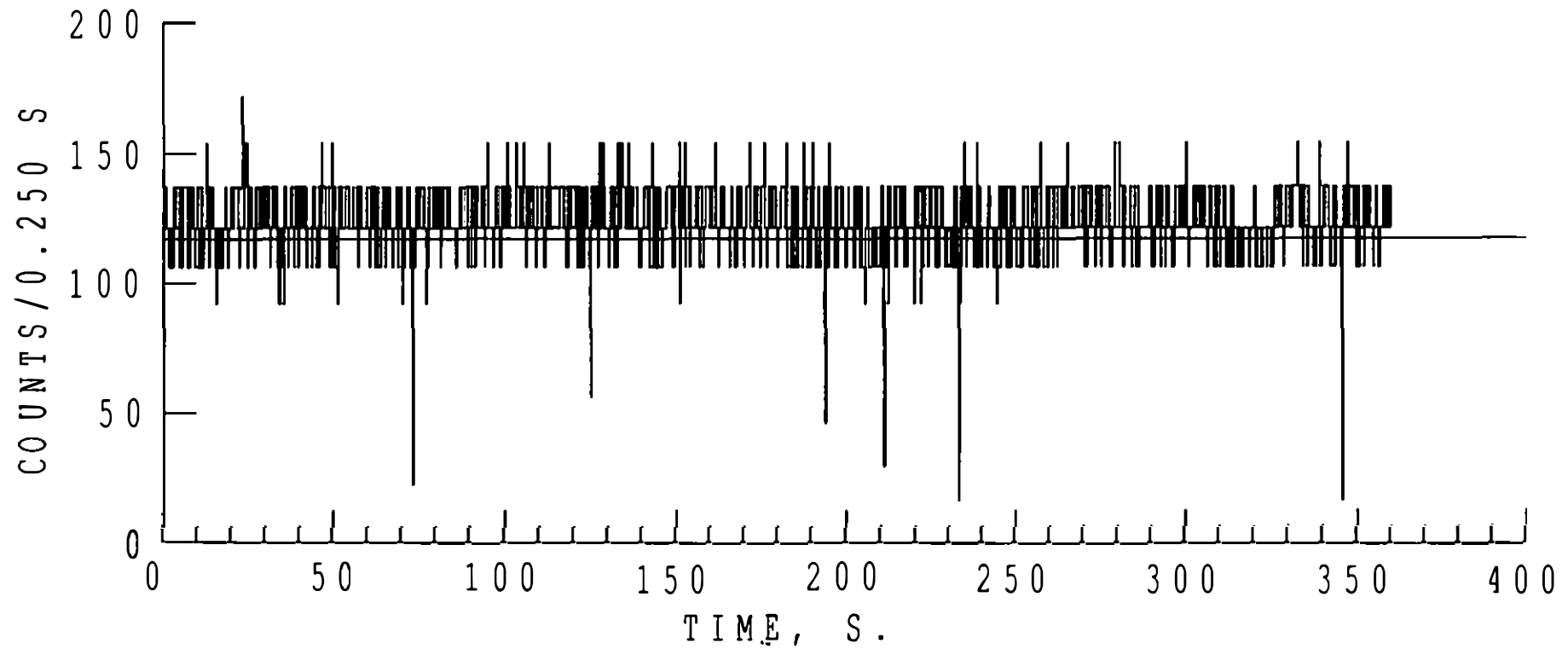
ULYSSES RT

15 / 6 / 96 5400.068 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



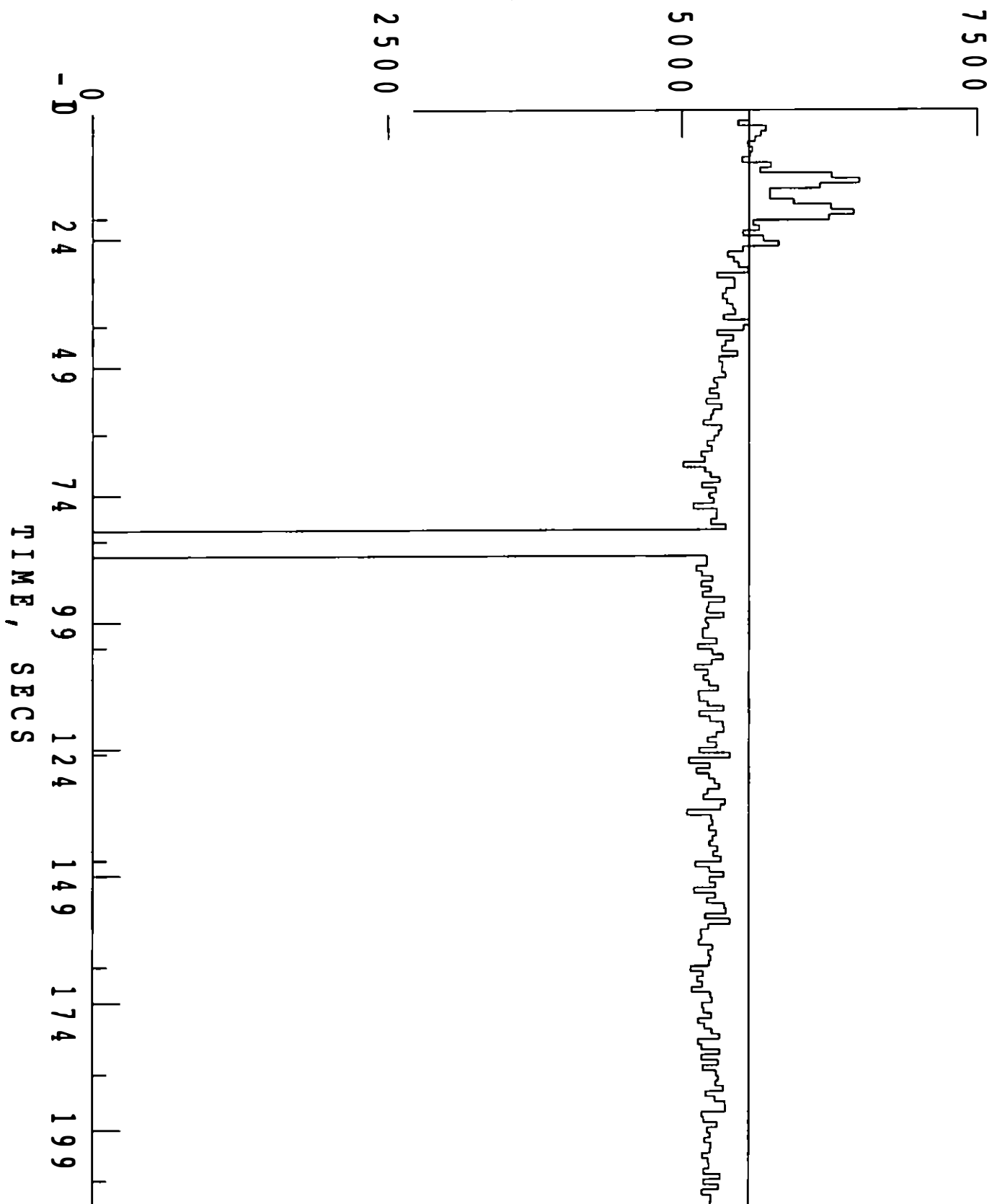
BACODINE

15/06/96

7576.265

25 - 100 keV

COUNTS/1.024 S



From DEAL@fender.msfc.nasa.gov Mon Jun 17 14:41 PDT 1996
From: DEAL@fender.msfc.nasa.gov
Date: Mon, 17 Jun 1996 16:41:26 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5498

BATSEARCH PROGRAM

BATSE BURST # 5498 . NO
EVENT OF 1996 JUN 15 DAY OF YEAR=167
EVENT CROSSING TIME AT BATSE : 14822. S. OR 04:07:02.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 214.000 63.000
BATSE PEAK COUNTING RATE: 2400 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 15/ 6/ 96 IS:
RA= 150.923 DEC= 50.736 DIST= 4.404 AU
BATSE-ULYSSES DISTANCE = 658764825. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=145.08 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1801.76 SECS.
CROSSING TIME AT ULYSSES IS 13020. S. OR 03:37:00 +/- 241.02 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 15/ 6/ 96 IS:
RA= 59.617 DEC= 20.441 DIST= 2.351 AU
MARS-BATSE DISTANCE = 351683808. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 85.85 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 84.94 SECS.
CROSSING TIME AT MARS IS 14907. S. OR 04:08:26 +/- 204.42 SECONDS

BATSE BURST TRIGGER

NO.: 5498

TIME: TJD=0249 SECONDS=14822

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=59.9 AZIMUTH=67.6 ERROR=14.5 DEGREES

COMMENTS:

GRB LASTING ~ 0.8 S. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5498	960615	10249	14822	2400	214	+63	.8

BATSE #

5498

17 / 6 / 96

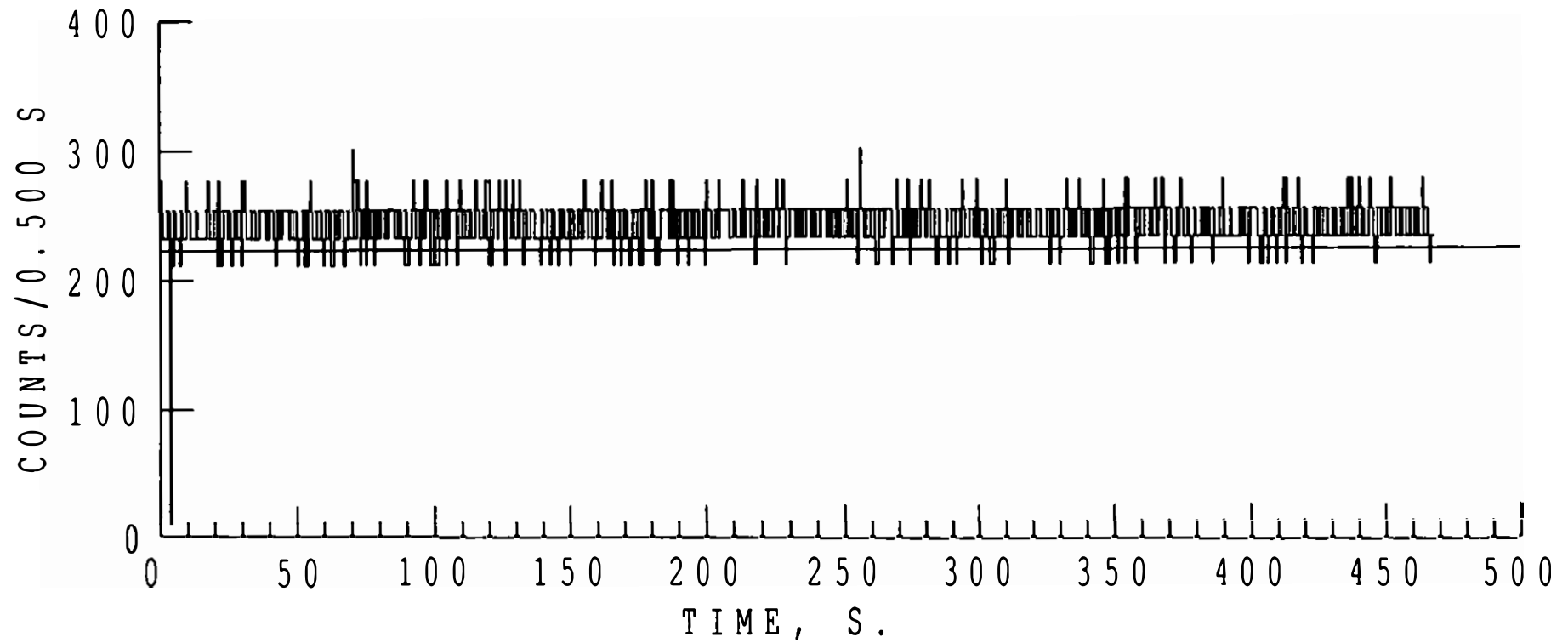
ULYSSES RT

15 / 6 / 96 12780.413 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From RICHARDSON@SSLLES.MSFC.NASA.GOV Tue Jun 18 11:02 PDT 1996
From: RICHARDSON@SSLLES.MSFC.NASA.GOV
Date: Tue, 18 Jun 1996 13:02:00 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5499

BATSEARCH PROGRAM

ND

BATSE BURST # 5499
EVENT OF 1996 JUN 15 DAY OF YEAR=167
EVENT CROSSING TIME AT BATSE : 86315. S. OR 23:58:35.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 296.000 -66.000
BATSE PEAK COUNTING RATE: 6250 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 15/ 6/ 96 IS:
RA= 151.054 DEC= 50.544 DIST= 4.416 AU
BATSE-ULYSSES DISTANCE = 660606476. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 23.52 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 2020.54 SECS.
CROSSING TIME AT ULYSSES IS 88336. S. OR 24:32:15 +/- 233.33 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 15/ 6/ 96 IS:
RA= 59.617 DEC= 20.441 DIST= 2.351 AU
MARS-BATSE DISTANCE = 351683808. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 57.99 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 621.81 SECS.
CROSSING TIME AT MARS IS 86937. S. OR 24:08:56 +/- 182.14 SECONDS

BATSE BURST TRIGGER

NO.: 5499

TIME: TJD=0249 SECONDS=86315

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=96.2 AZIMUTH=215.4 ERROR=7.5 DEGREES

COMMENTS:

GRB. SHORT, DOUBLE SPIKED. DUR.~0.8 SEC. VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5499	960615	10249	86315	6250	296	-66	.8

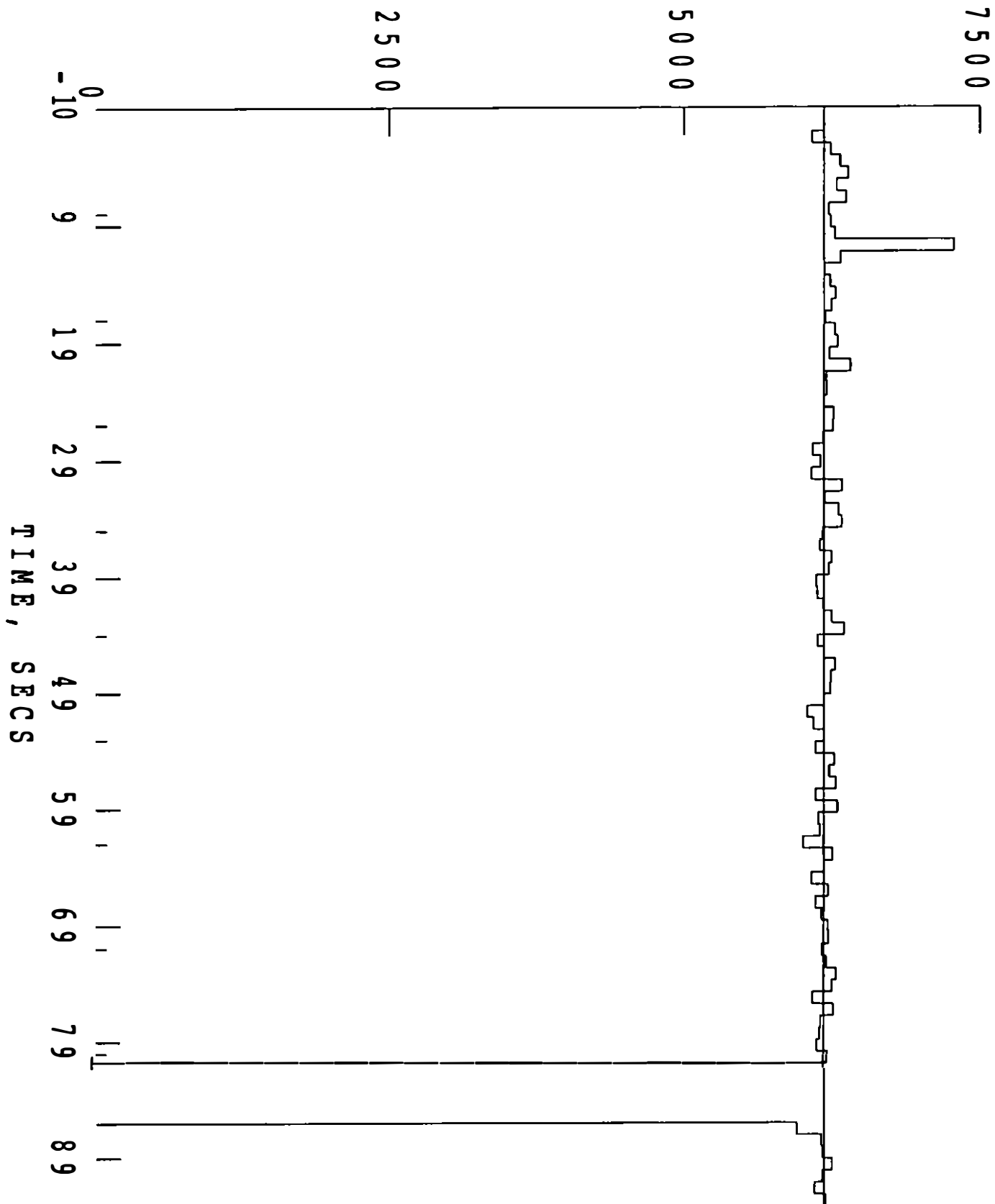
BACODINE

15/06/96

86305.481

25- 100 keV

COUNTS/1.024 S



BATSE BURST# 5499

ULYSSES RT

20 / 12 / 96

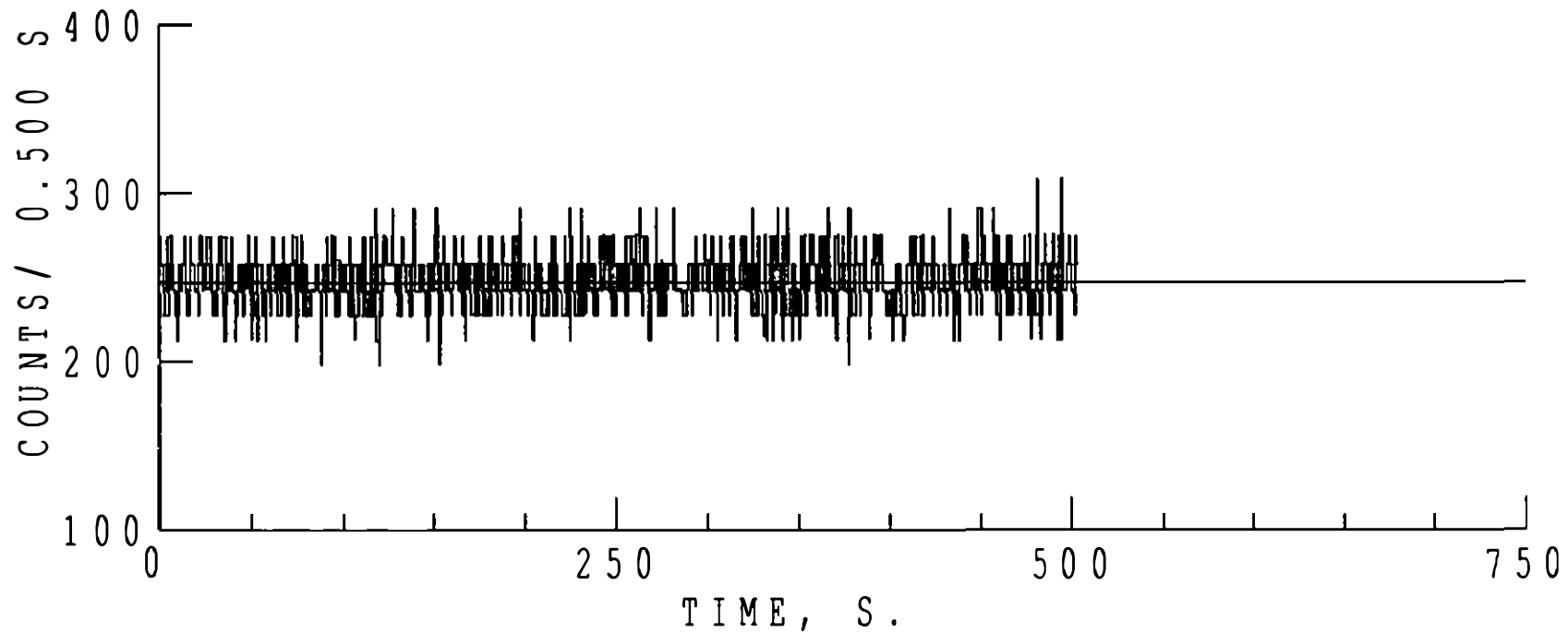
16 / 6 / 96 1692.164 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

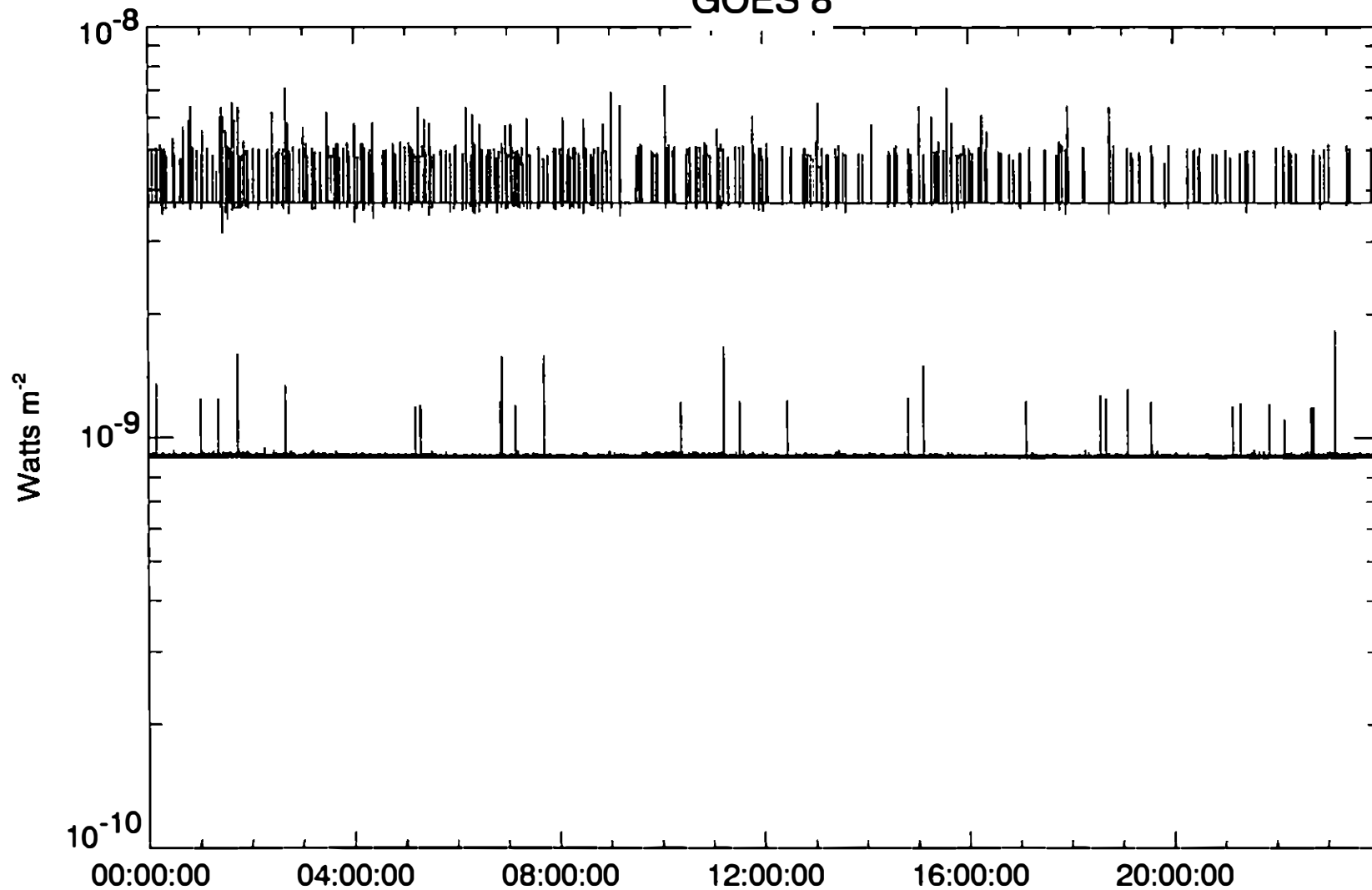
N= 10 N=10
>4.0 SIGMA FLUCTUATIONS

N= 10 N= 2
>4.0 SIGMA FLUCTUATIONS



GOES 8

A

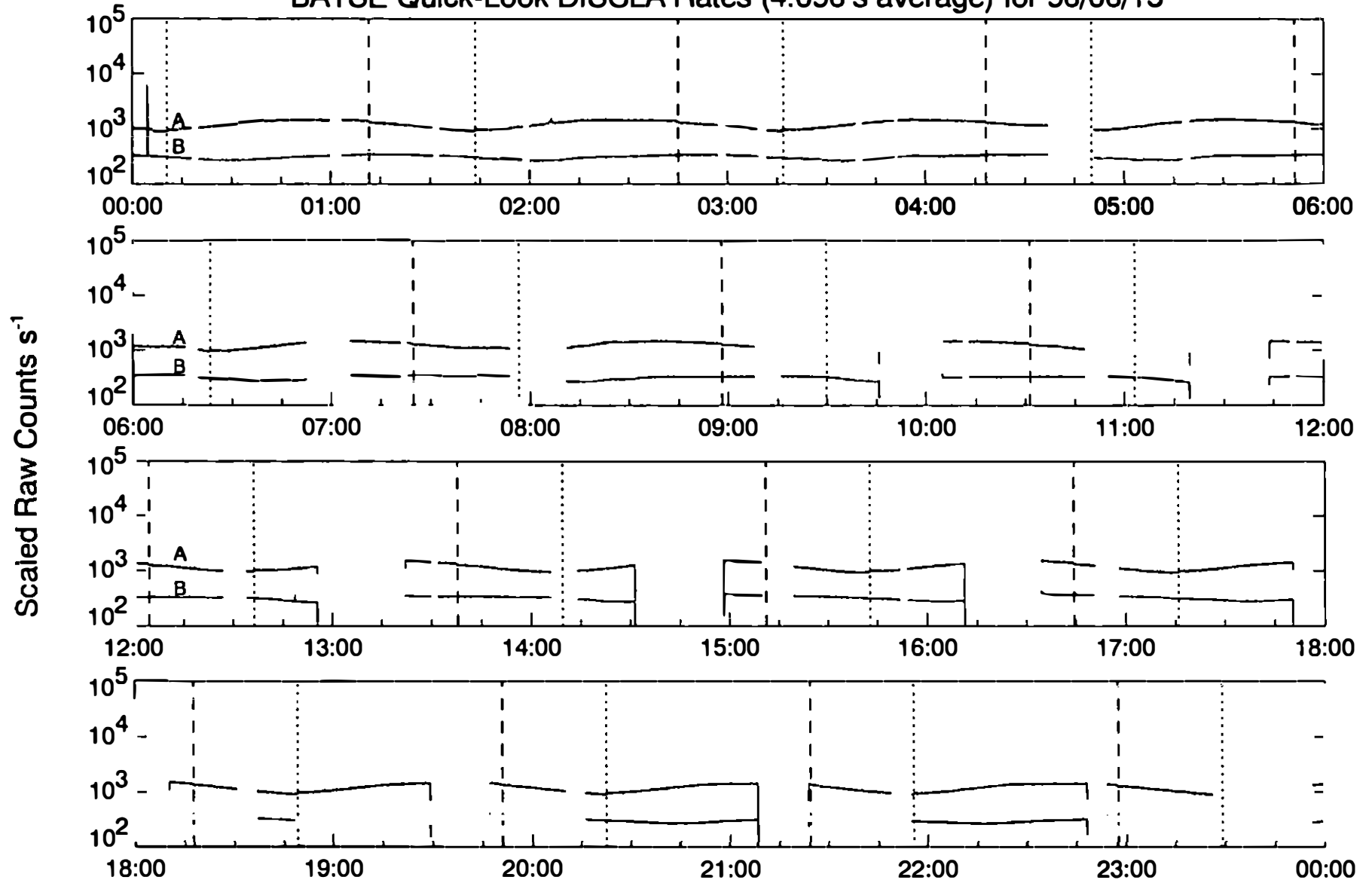


Data Start: 96/06/15, 0000:00

Plot created: 96/06/17, 1003

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

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/15

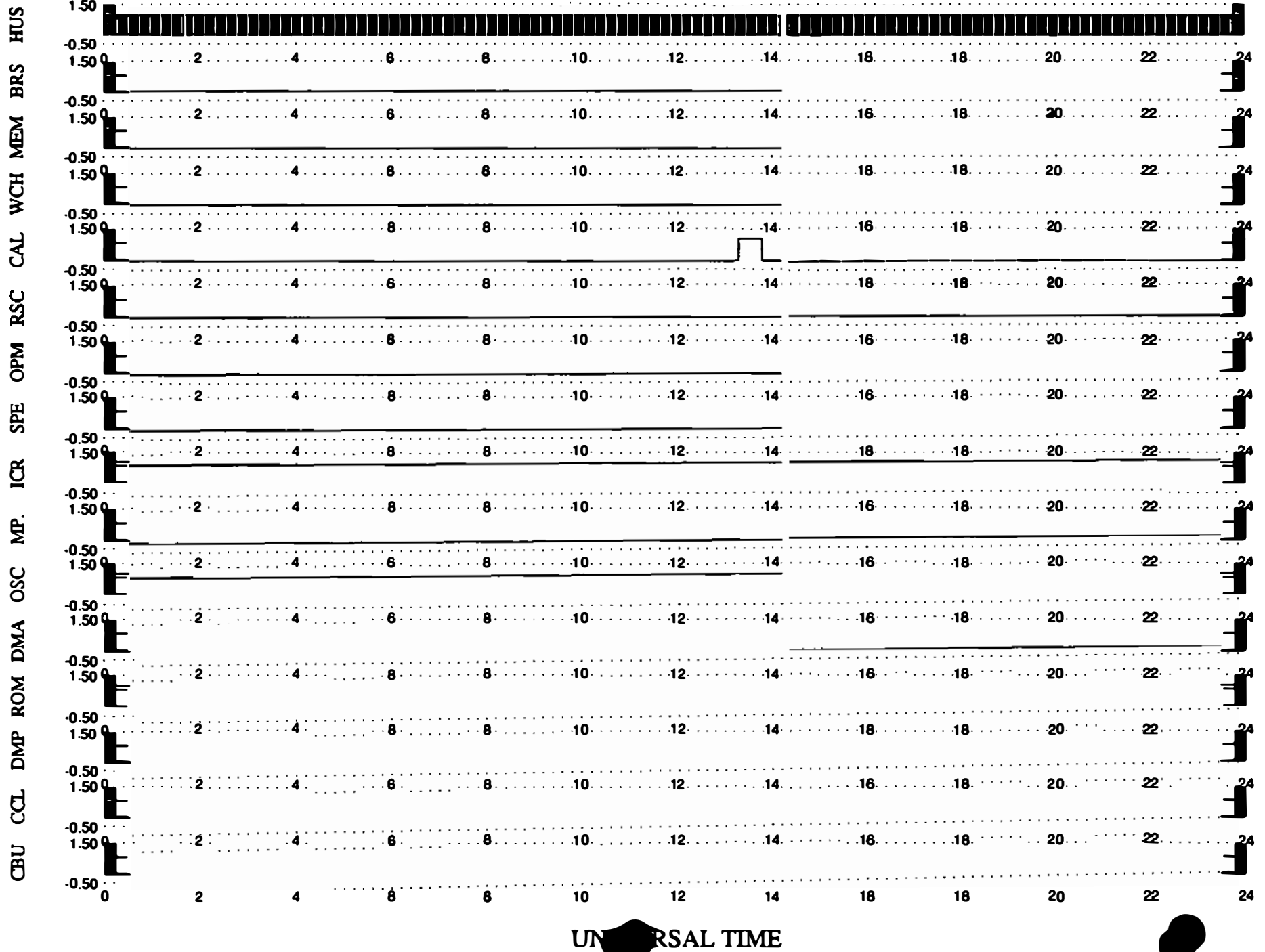


Current Time: 96/06/17, 1004 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

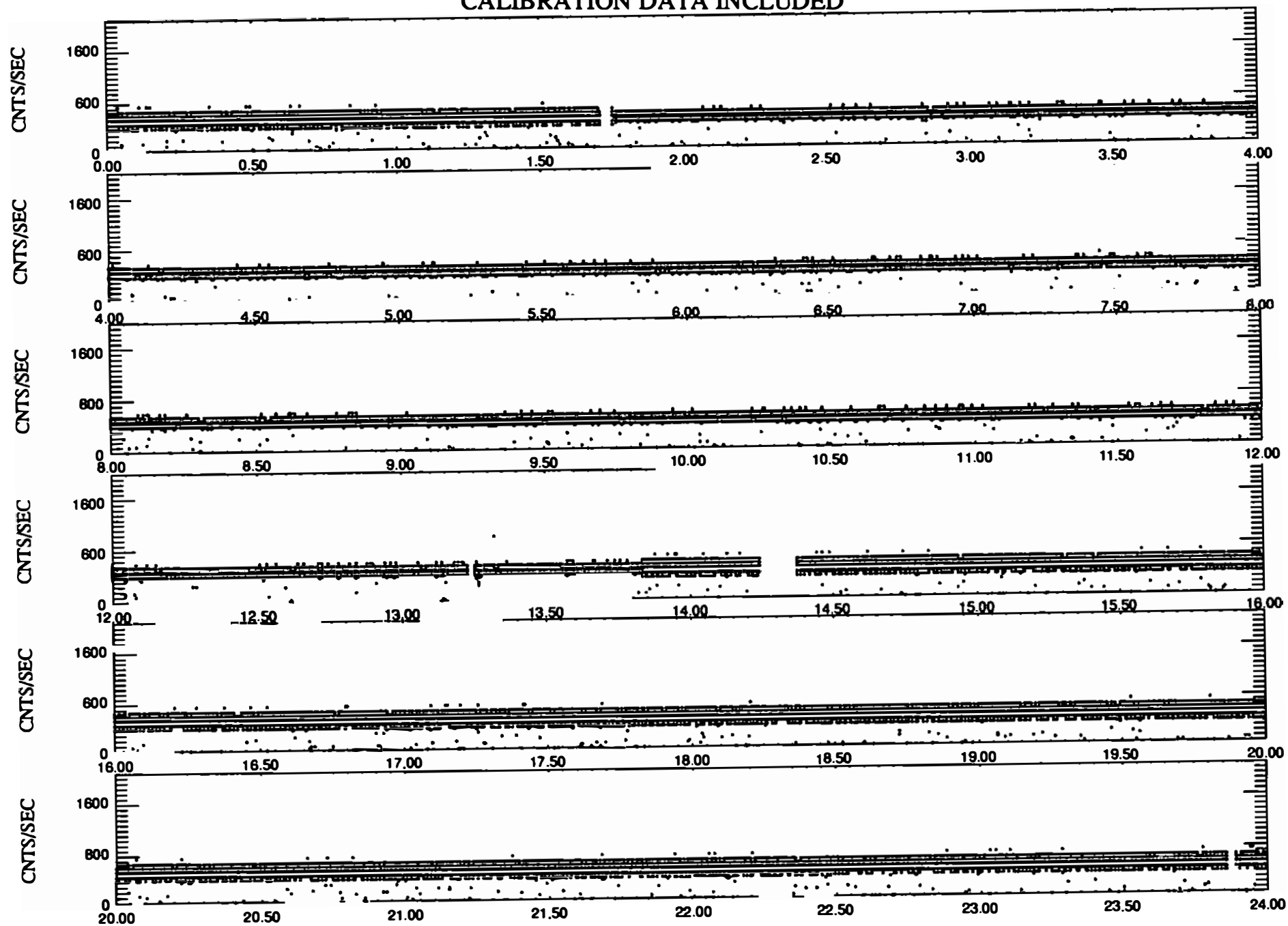
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

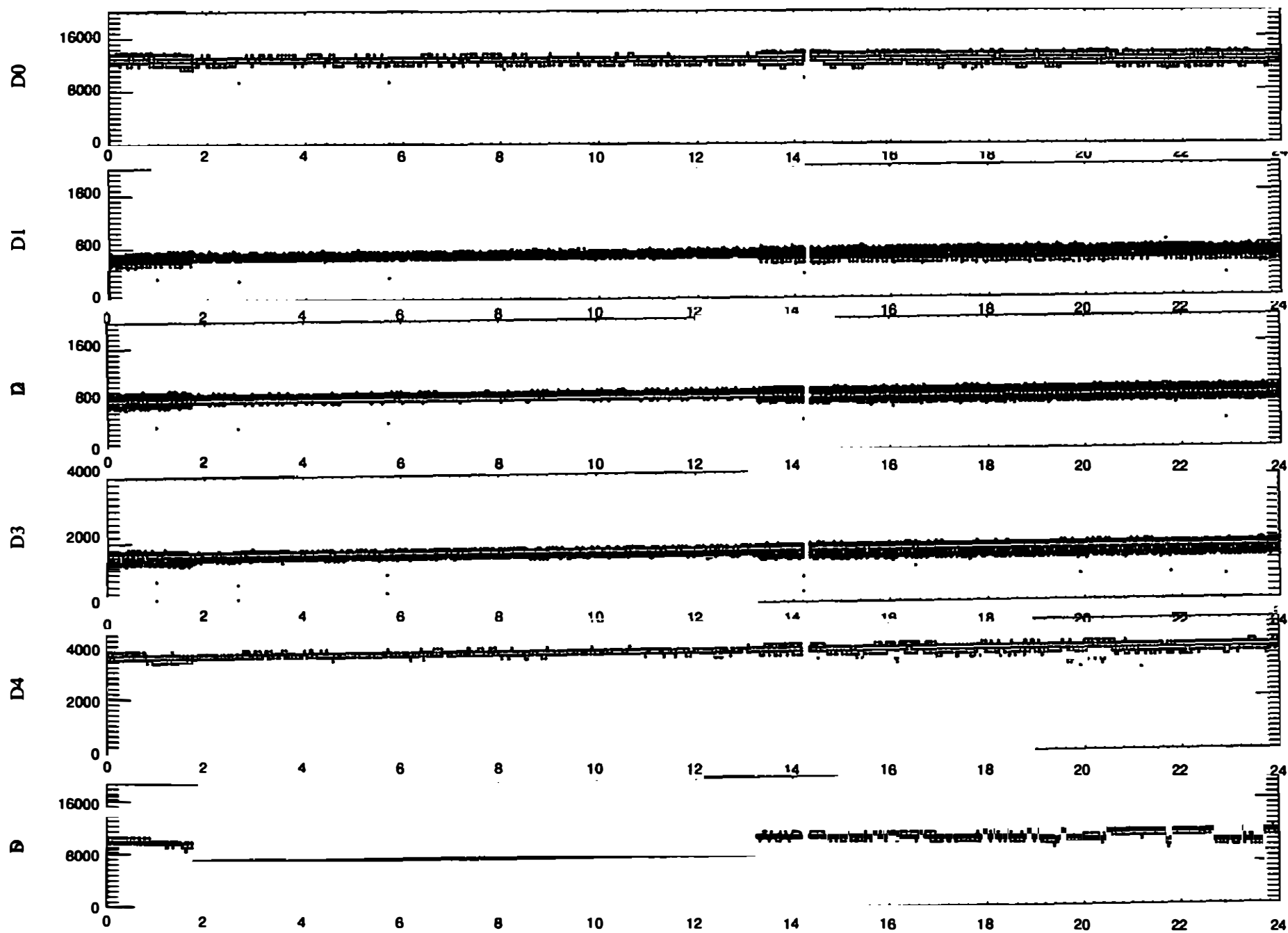
NO BURST (2)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From PANJEVG@SSLLES.MSFC.NASA.GOV Wed Jun 19 07:42 PDT 1996
Date: Wed, 19 Jun 1996 9:42:30 -0500 (CDT)
From: PANJEVG@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5500

BATSEARCH PROGRAM

BATSE BURST # 5500
EVENT OF 1996 JUN 16 DAY OF YEAR=168
EVENT CROSSING TIME AT BATSE : 25444. S. OR 07:04:04.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 171.000 44.000
BATSE PEAK COUNTING RATE: 28000 C/S

ND

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 16/ 6/ 96 IS:
RA= 151.101 DEC= 50.475 DIST= 4.420 AU
BATSE-ULYSSES DISTANCE = 661259832. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=165.08 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-2131.36 SECS.
CROSSING TIME AT ULYSSES IS 23313. S. OR 06:28:32 +/- 116.23 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 16/ 6/ 96 IS:
RA= 60.361 DEC= 20.594 DIST= 2.349 AU
MARS-BATSE DISTANCE = 351475456. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 90.40 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -8.20 SECS.
CROSSING TIME AT MARS IS 25436. S. OR 07:03:55 +/- 203.42 SECONDS

BATSE BURST TRIGGER

NO.: 5500

TIME: TJD=0250 SECONDS=25444

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=90.4 AZIMUTH=71.9 ERROR=2.6 DEGREES

COMMENTS:

GRB LASTING ~.1SECS. SINGLE PULSE. VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5500	960616	10250	25444	28000	171	+44	.1

BATSE #

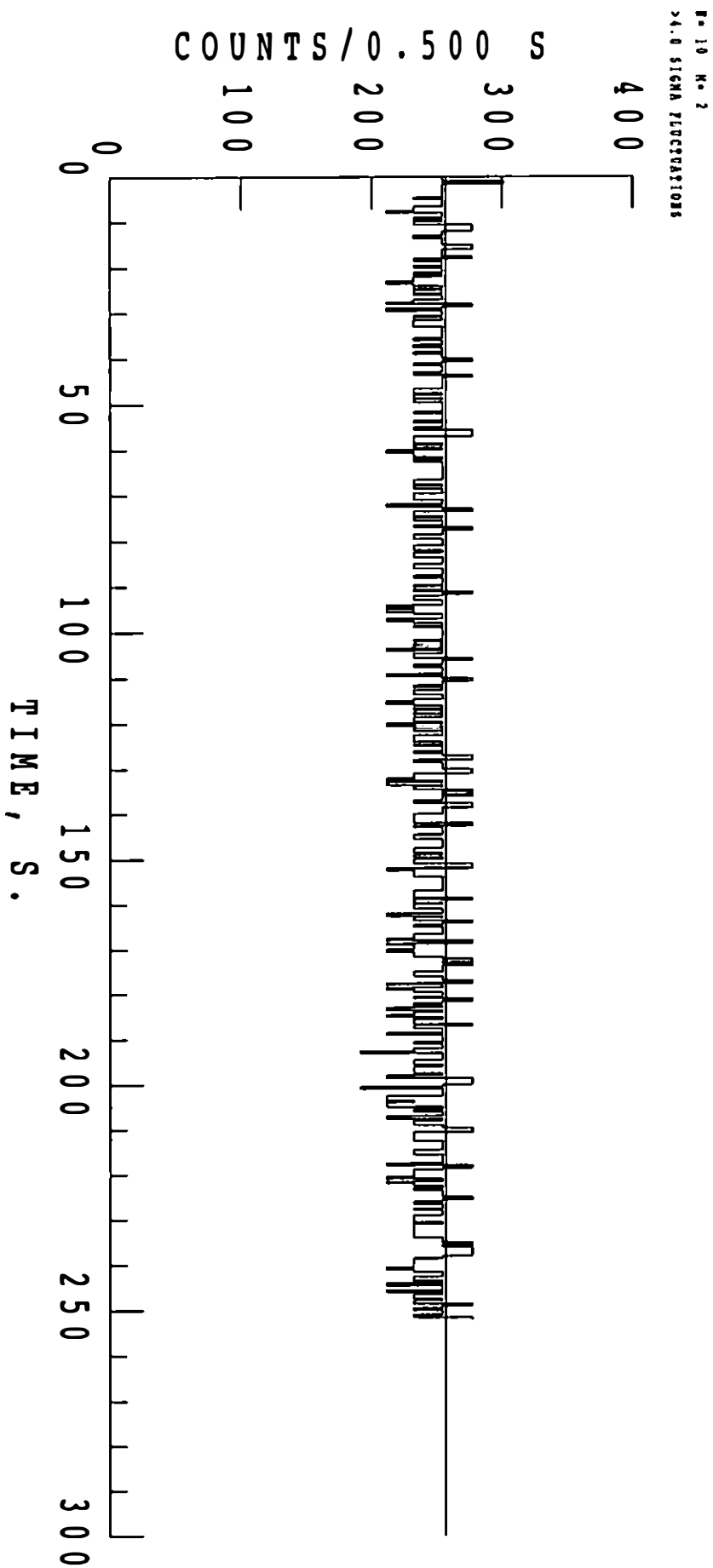
5500

19 / 6 / 96

ULYSSES RT

16 / 6 / 96 23184.191 s

0 - 0 keV



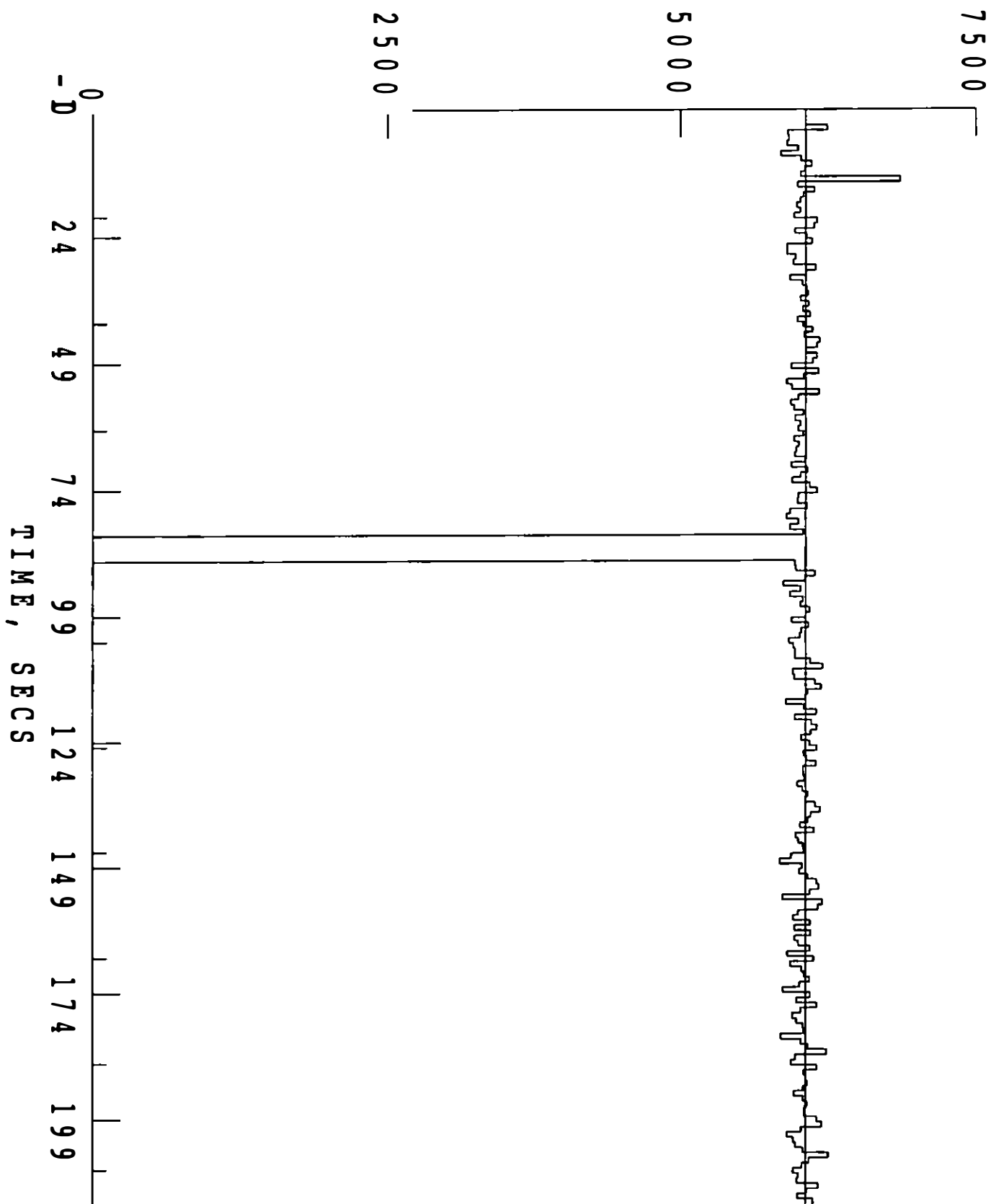
BACODINE

16/06/96

25431.753

25 - 100 keV

COUNTS/1.024 S



From PANJEVG@ssl.msfc.nasa.gov Wed Jun 19 07:40 PDT 1996
From: PANJEVG@ssl.msfc.nasa.gov
Date: Wed, 19 Jun 1996 9:40:20 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5501

BATSEARCH PROGRAM

WJD

BATSE BURST # 5501
EVENT OF 1996 JUN 16 DAY OF YEAR=168
EVENT CROSSING TIME AT BATSE : 47703. S. OR 13:15:03.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 177.000 -36.000
BATSE PEAK COUNTING RATE: 5200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 16/ 6/ 96 IS:
RA= 151.143 DEC= 50.416 DIST= 4.424 AU
BATSE-ULYSSES DISTANCE = 661833007. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 90.62 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -24.08 SECS.
CROSSING TIME AT ULYSSES IS 47679. S. OR 13:14:38 +/- 432.89 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 16/ 6/ 96 IS:
RA= 60.361 DEC= 20.594 DIST= 2.349 AU
MARS-BATSE DISTANCE = 351475456. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 56.89 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 640.49 SECS.
CROSSING TIME AT MARS IS 48343. S. OR 13:25:43 +/- 180.21 SECONDS

BATSE BURST TRIGGER

NO.: 5501

TIME: TJD=0250 SECONDS=47703

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=129.6 AZIMUTH=149.6 ERROR=1.05 DEGREES

COMMENTS:

GRB LASTING ~.5SECS. 2 PEAKS. NOT VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5501	960616	10250	47703	5200	177	-36	.5

BATSE #

5501

19 / 6 / 96

ULYSSES RT

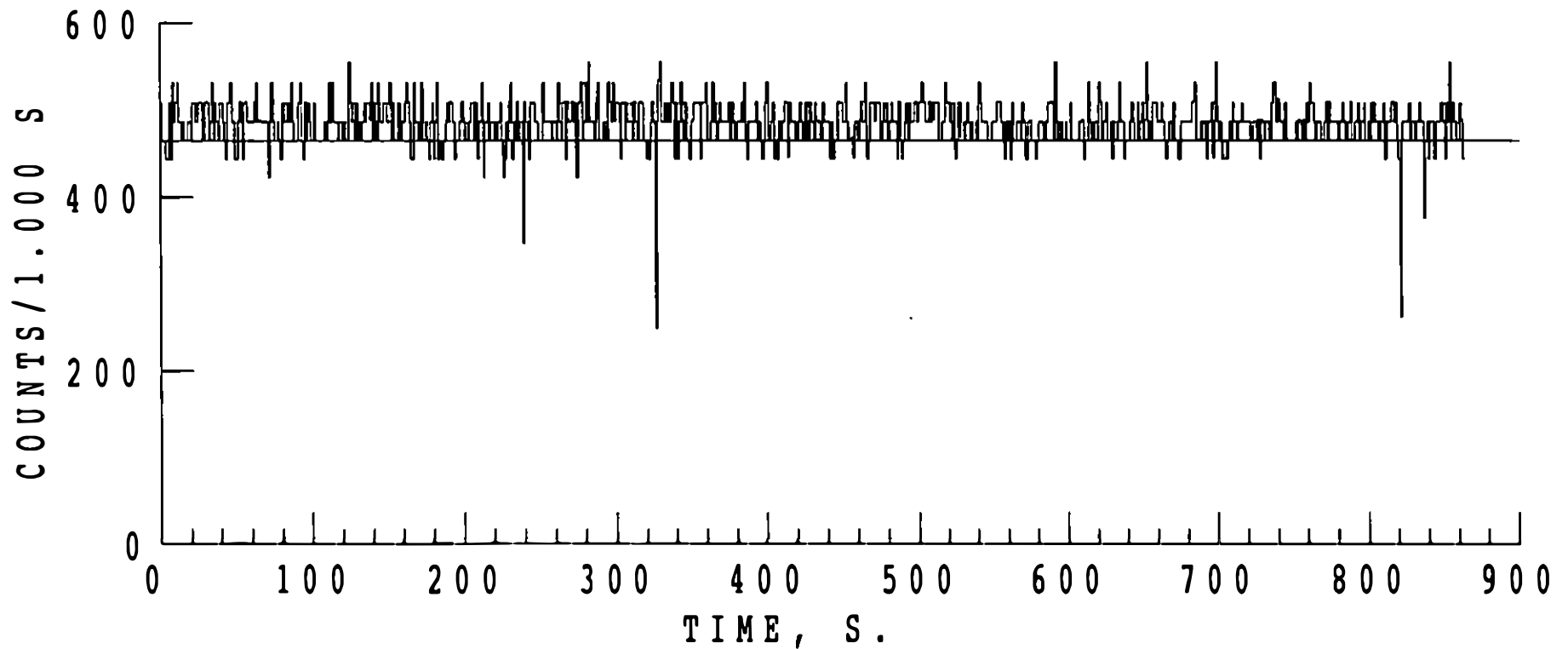
16 / 6 / 96 47232.016 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

B= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From BUTTERWORTH@LHEAVX.GSFC.NASA.GOV Wed Jun 19 09:33 PDT 1996
From: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Date: Wed, 19 Jun 1996 12:29:32 -0400 (EDT)
To: khurley@sunspot.ssl.berkeley.edu, kmarar@isac.ernet.in, jterrell@lanl.gov,
yosimori@rikkyo.ac.jp, CLINE@LHEAVX.GSFC.NASA.GOV,
scott@rosserv.gsfc.nasa.gov, TEEGARDEN@LHEAVX.GSFC.NASA.GOV
CC: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Subject: Konus did not see the Ulysses event of June 16, 16:53 UT

Hi Everyone,

Konus did not trigger on June 16 and there are no events visible in the waiting-mode data (recorded in 3-second time intervals).

Paul.

Date: Wed, 19 Jun 1996 08:26:55 -0700
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <199606191526.IAA01573@scylla.berkeley.edu>
To: scott@lheamail.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu,
butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
kmarar@isac.ernet.in, teegarden@lheavx.gsfc.nasa.gov,
jterrell@lanl.gov, yosimori@rikkyo.ac.jp
Subject: GRB 960616
X-Sun-Charset: US-ASCII

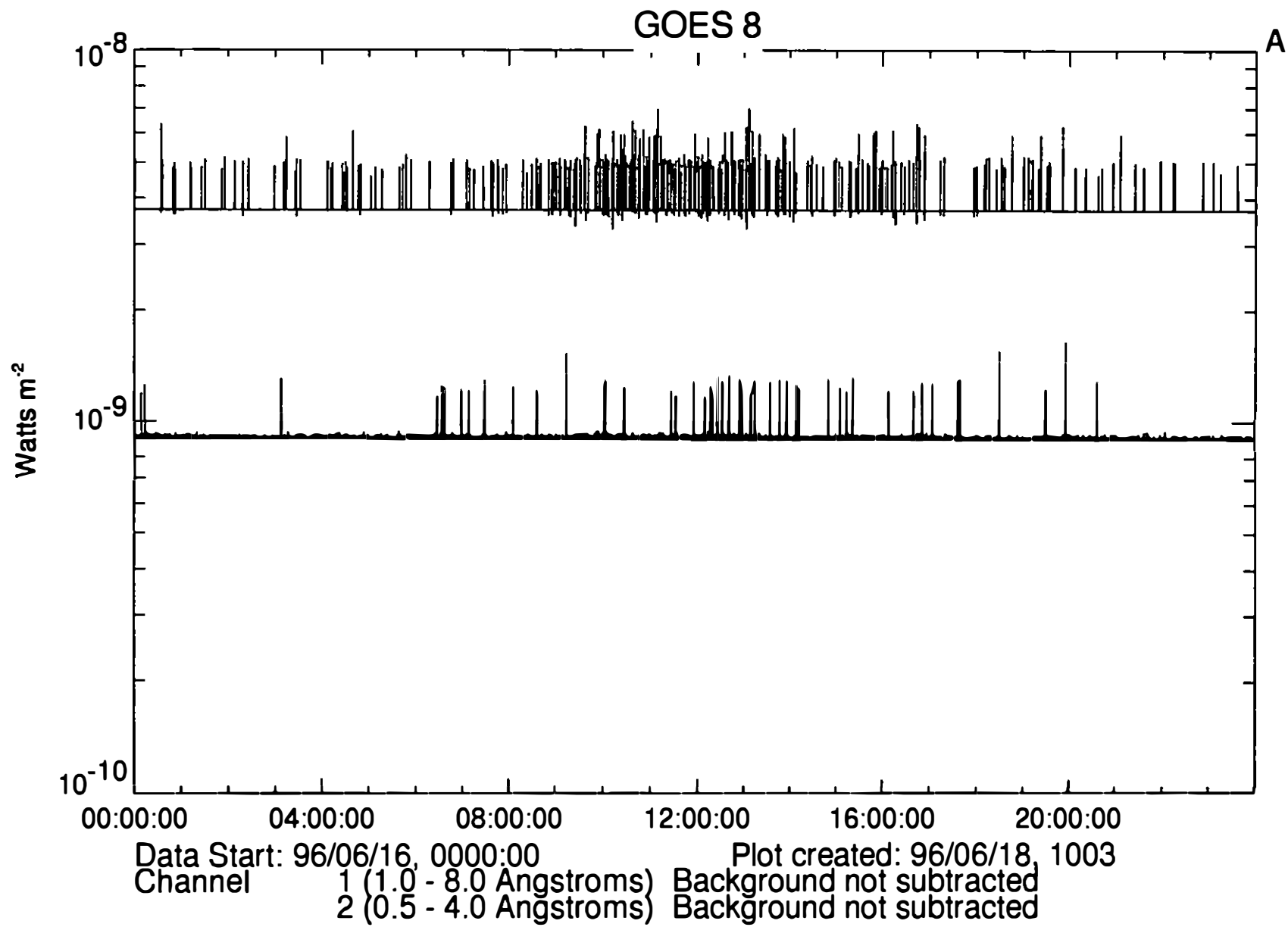
ULYSSES GAMMA-RAY BURSTS NOT REPORTED BY BATSE:

Ulysses triggered on a very weak, 32 ms long event June 16 1996 around 16:53 UT at Ulysses.

The spacecraft was about 2175 light-seconds from Earth.

Were these events detected by anyone else?

CC: ulyssesbursts alias list
(barthelmy, butterworth, cline, marar, teegarden, terrell, yoshimori)



From PANJEVG@ssl.msfc.nasa.gov Thu Jun 20 15:47 PDT 1996
From: PANJEVG@ssl.msfc.nasa.gov
Date: Thu, 20 Jun 1996 17:47:08 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5502

BATSEARCH PROGRAM

NO

BATSE BURST # 5502
EVENT OF 1996 JUN 16 DAY OF YEAR=168
EVENT CROSSING TIME AT BATSE : 66495. S. OR 18:28:15.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 109.000 63.000
BATSE PEAK COUNTING RATE: 32000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 16/ 6/ 96 IS:
RA= 151.178 DEC= 50.365 DIST= 4.427 AU
BATSE-ULYSSES DISTANCE = 662313733. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=154.26 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1990.08 SECS.
CROSSING TIME AT ULYSSES IS 64505. S. OR 17:55:04 +/- 186.33 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 16/ 6/ 96 IS:
RA= 60.361 DEC= 20.594 DIST= 2.349 AU
MARS-BATSE DISTANCE = 351475456. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=126.46 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -696.68 SECS.
CROSSING TIME AT MARS IS 65798. S. OR 18:16:38 +/- 153.13 SECONDS

BATSE BURST TRIGGER

NO.: 5502

TIME: TJD=1025 SECONDS=66495

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=87.1 AZIMUTH=32.4 ERROR=2.56 DEGREES

COMMENTS:

UNUSUALLY SHORT AND HARD BURST. DURATION ~.045SEC.
VISIBLE ABOVE 300KEV

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5502	960616	10250	66495	32000	109	+63	.045

BATSE #

5502

20 / 6 / 96

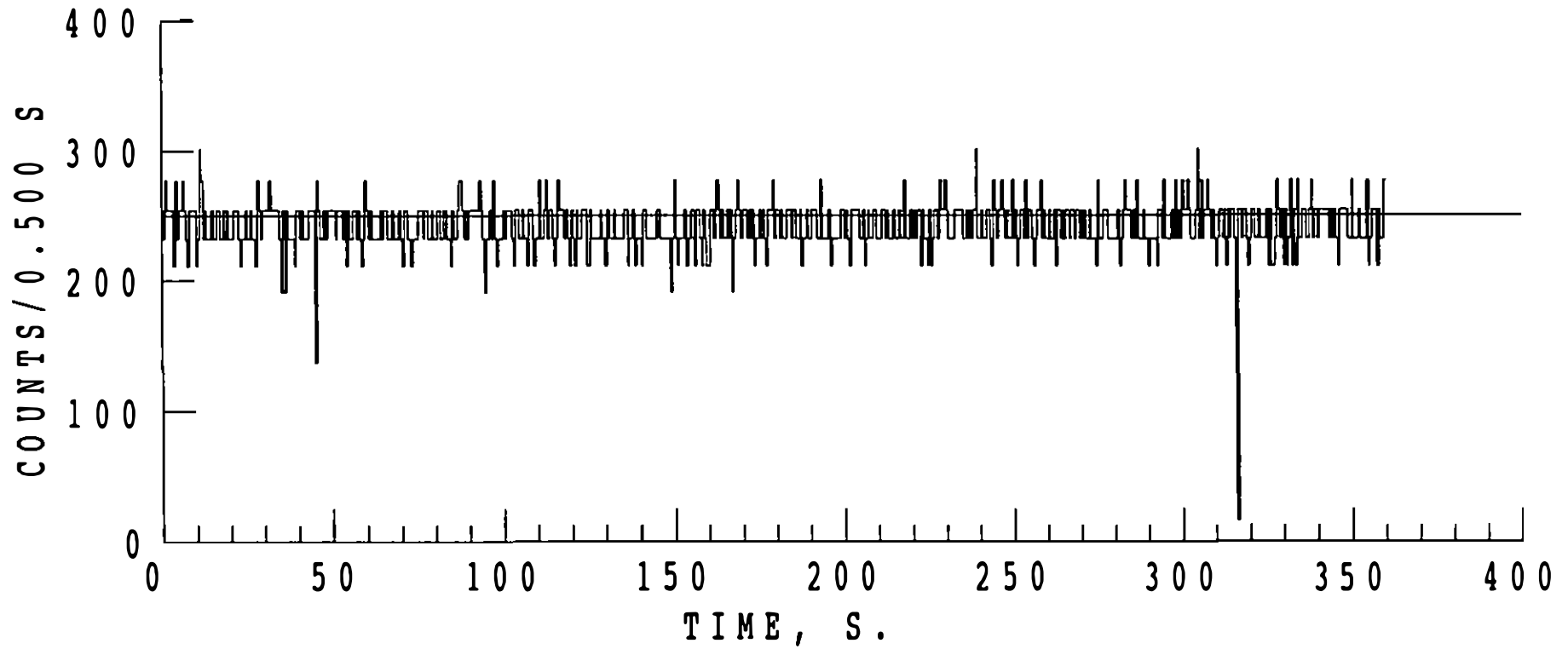
ULYSSES RT

16 / 6 / 96 64332.242 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



BATSE #

5502

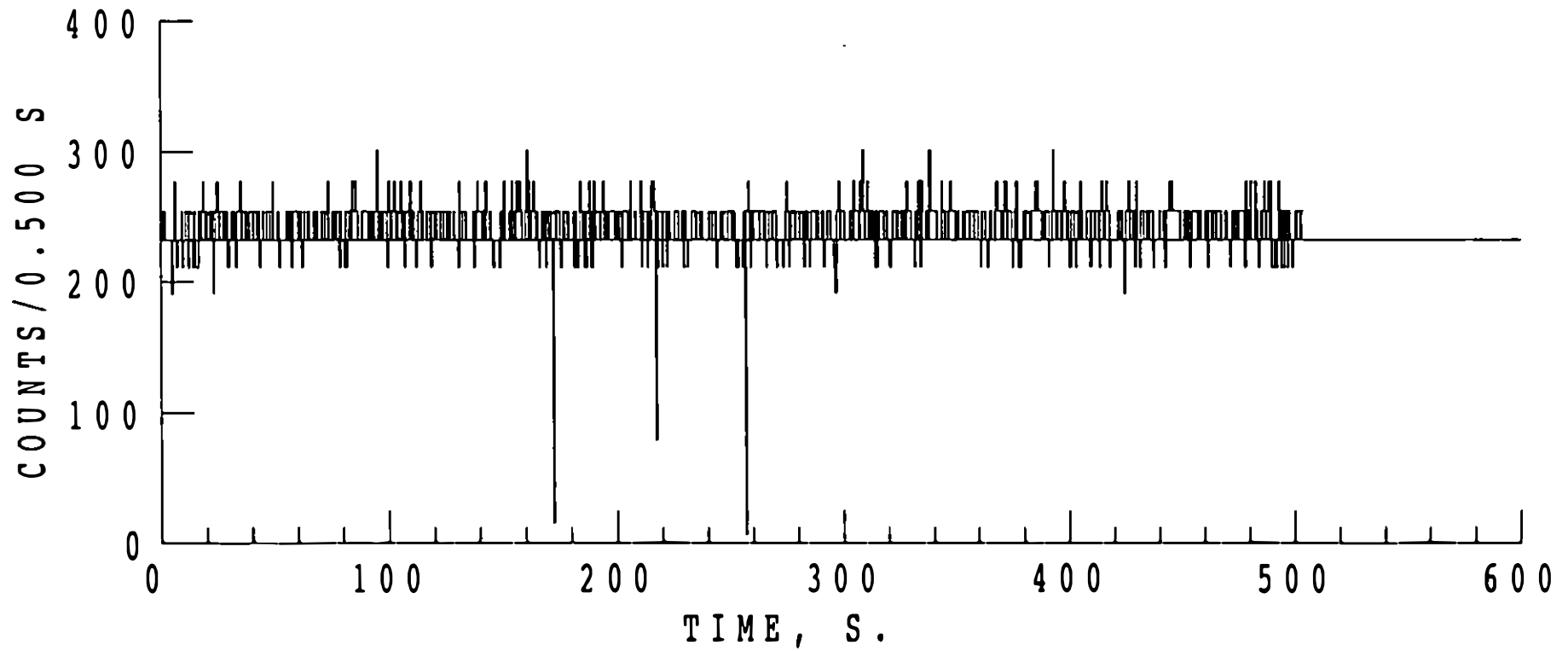
20 / 6 / 96

ULYSSES RT

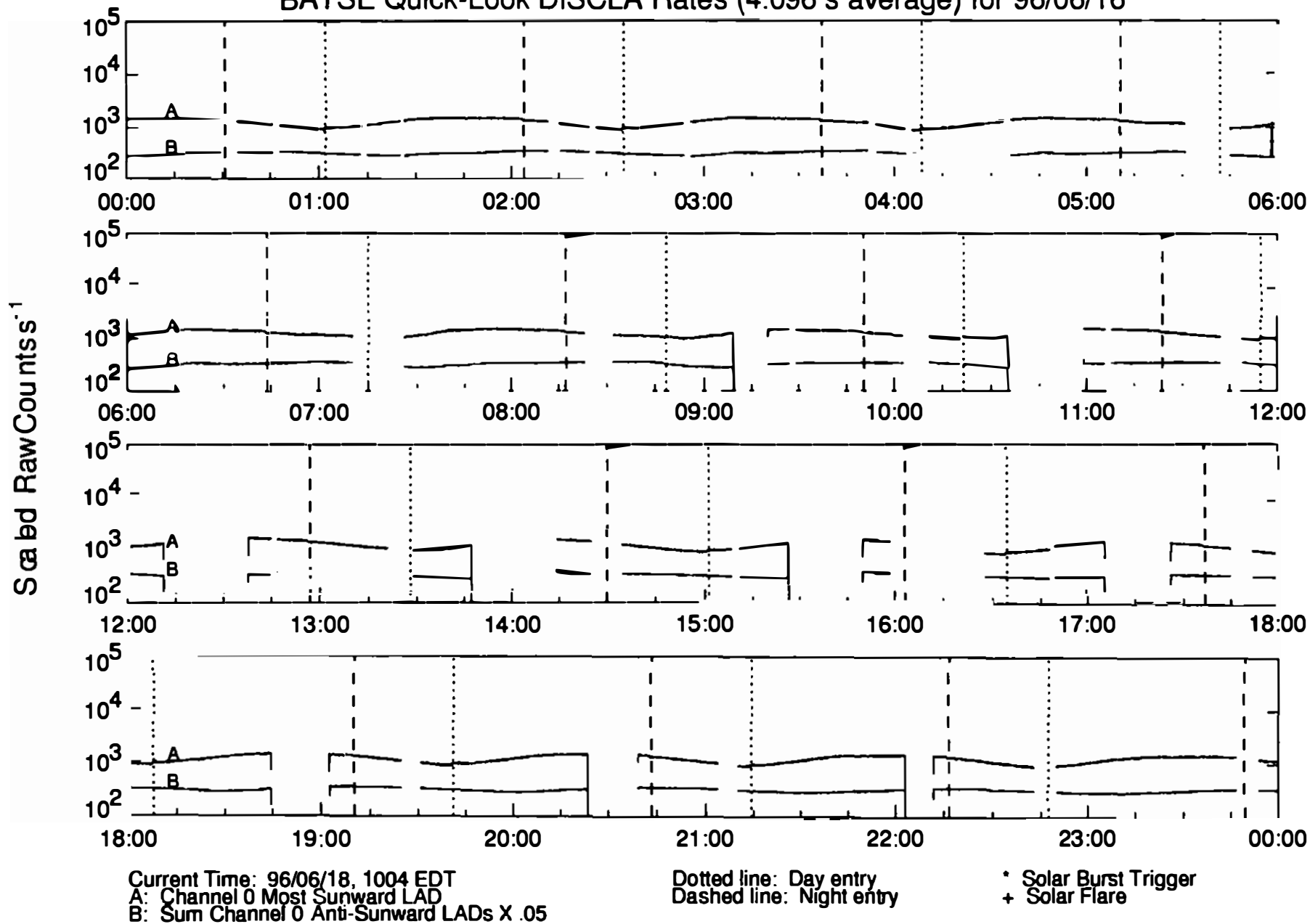
16 / 6 / 96 64476.242 s

0 - 0 keV

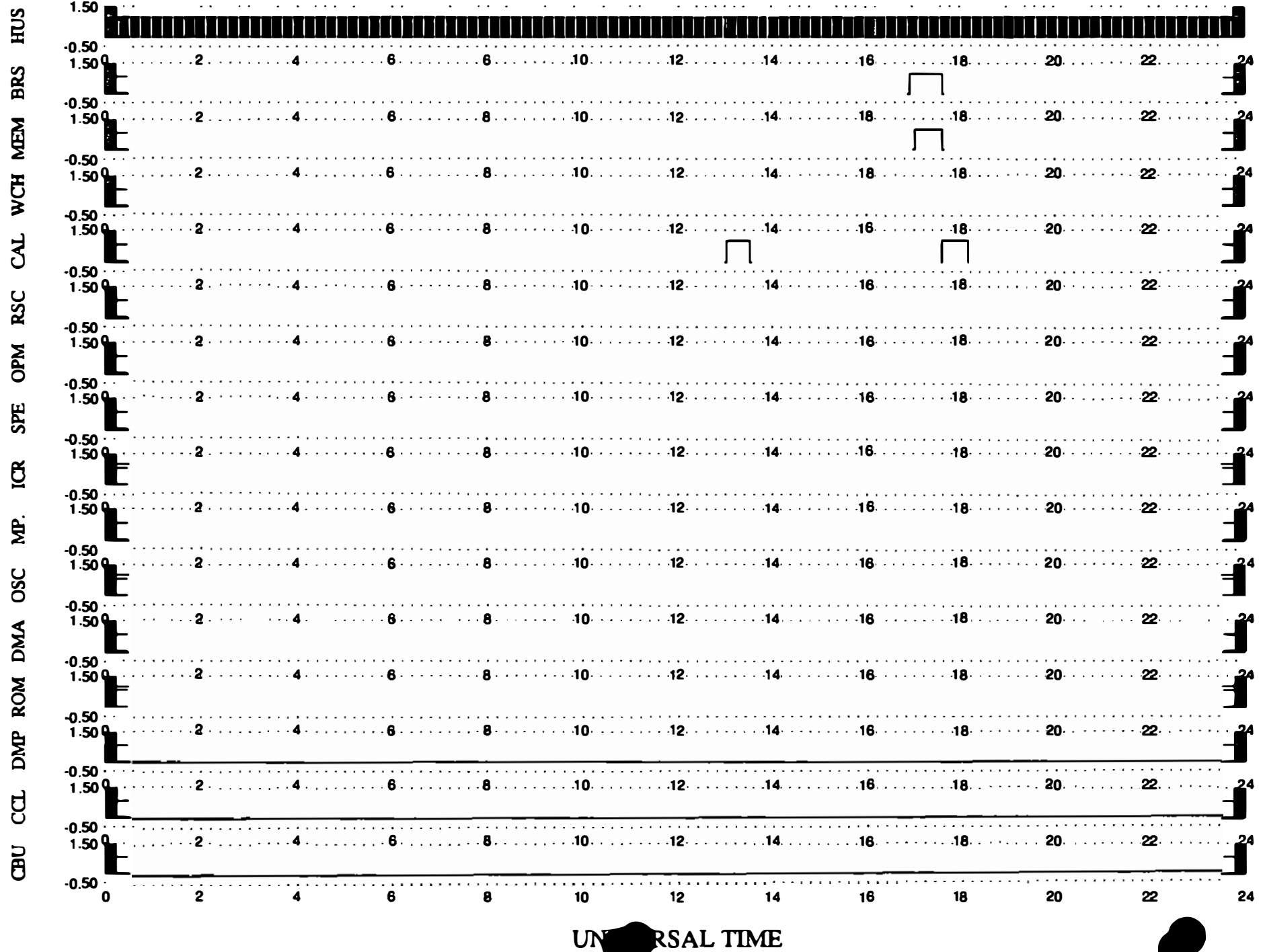
N=10 M=2
>4.0 SIGMA FLUCTUATIONS



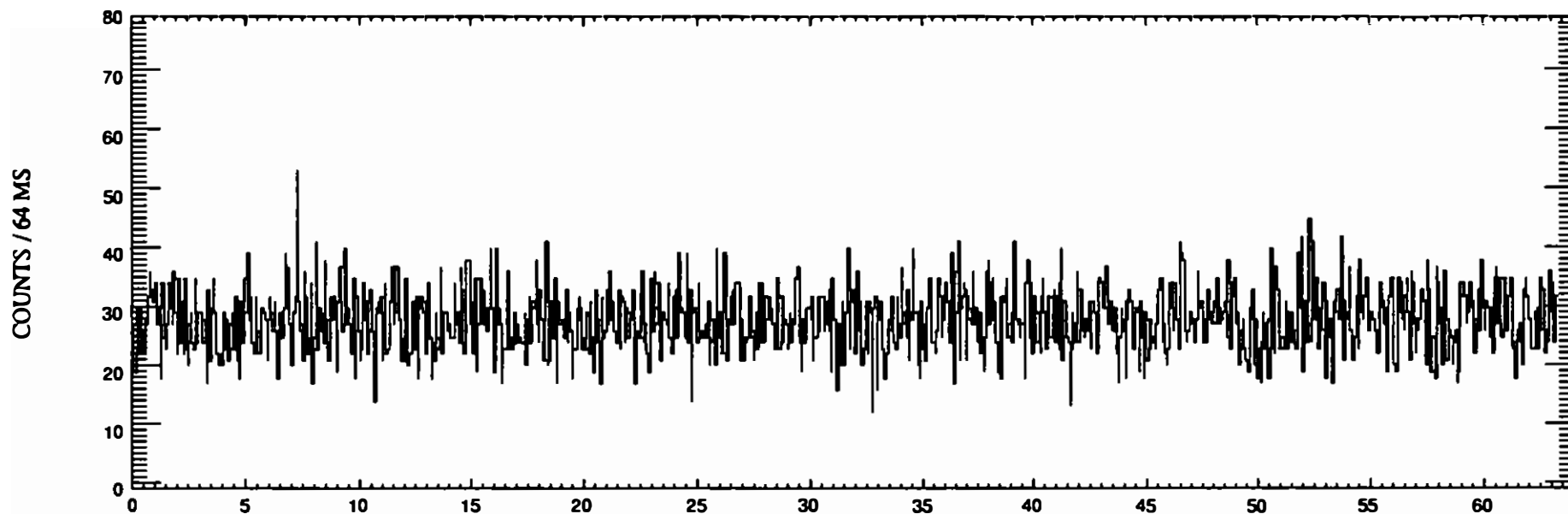
BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/16



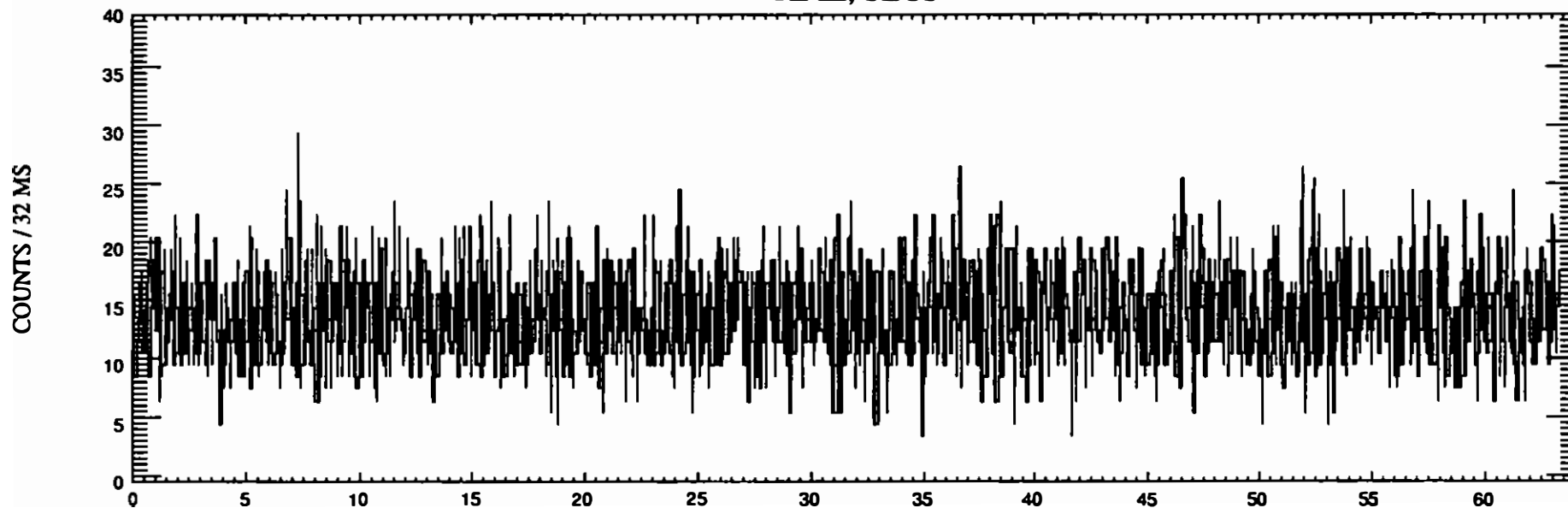
BURST NUMBER 3



Burst Counter 3 at UT=16.880259742737 h=60768.935 s 16:52:48.935

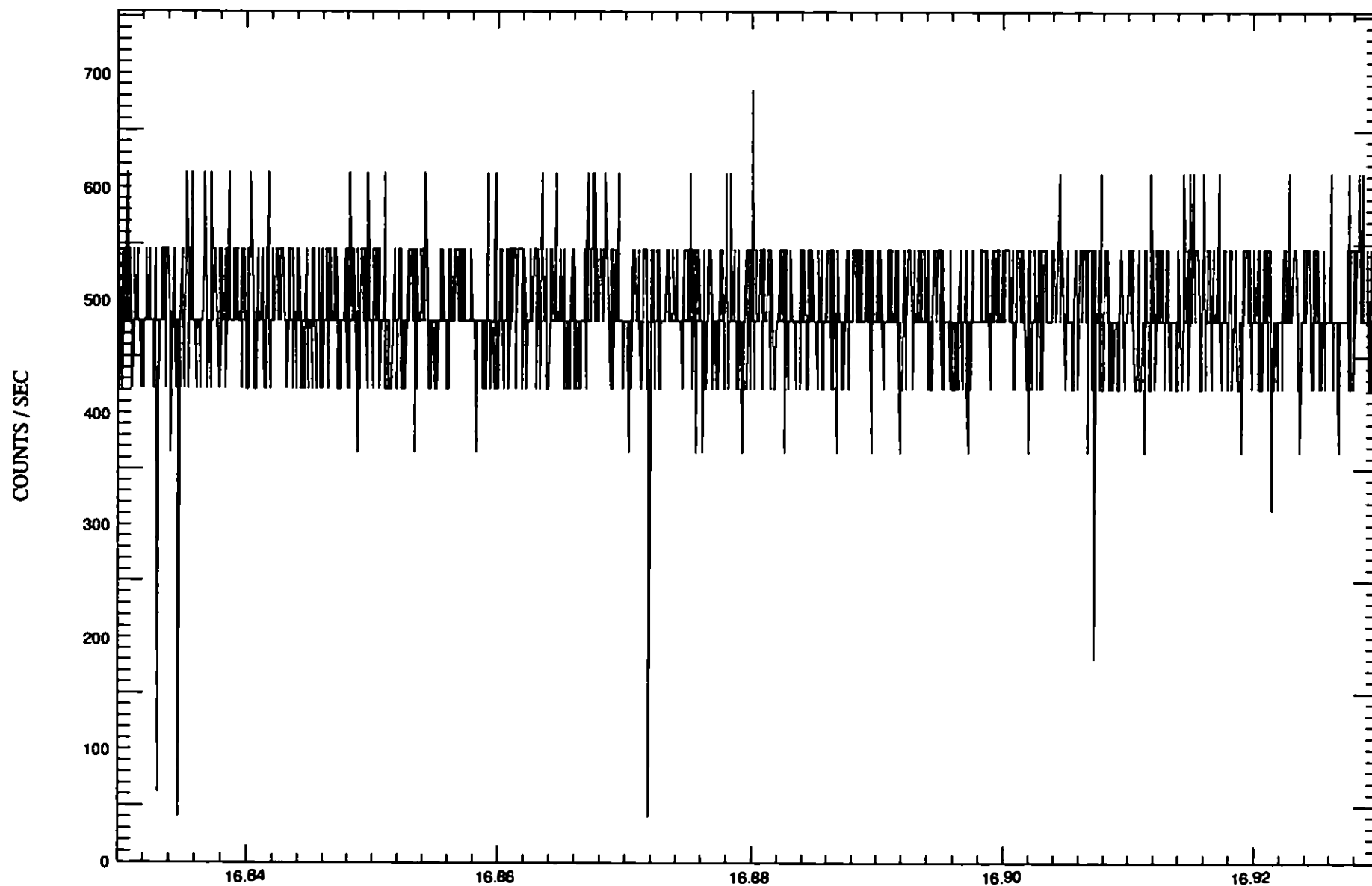


TIME, SECS

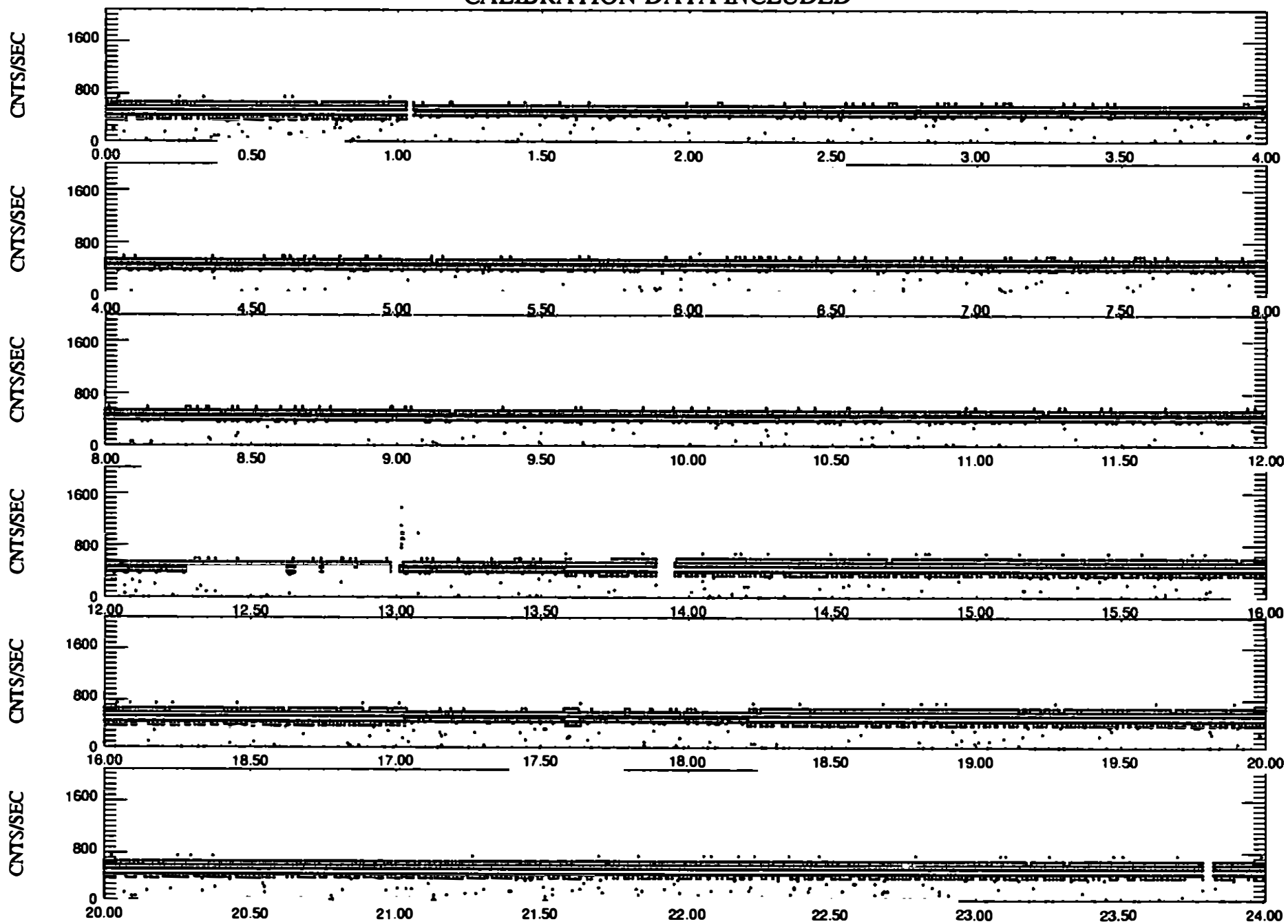


TIME, SECS

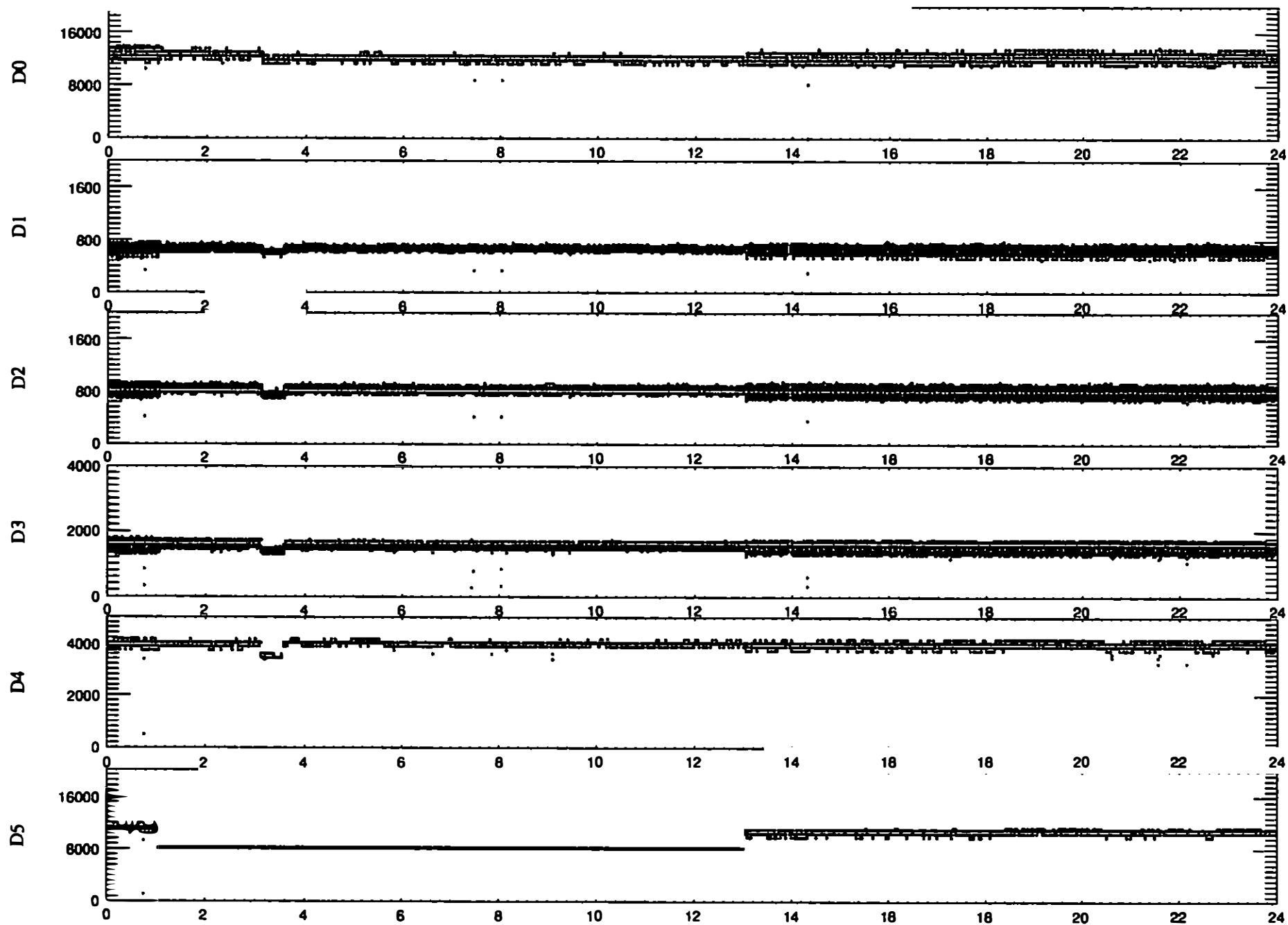
CALIBRATION DATA INCLUDED



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From DEAL@fender.msfc.nasa.gov Wed Jun 19 10:47 PDT 1996
From: DEAL@fender.msfc.nasa.gov
Date: Wed, 19 Jun 1996 12:47:34 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5503

BATSEARCH PROGRAM

BATSE BURST # 5503
EVENT OF 1996 JUN 17 DAY OF YEAR=169
EVENT CROSSING TIME AT BATSE : 13138. S. OR 03:38:58.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 310.000 -45.000
BATSE PEAK COUNTING RATE: 3500 C/S

NO

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 17/ 6/ 96 IS:
RA= 151.240 DEC= 50.278 DIST= 4.433 AU
BATSE-ULYSSES DISTANCE = 663155841. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 15.19 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 2134.77 SECS.
CROSSING TIME AT ULYSSES IS 15273. S. OR 04:14:32 +/- 183.04 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 17/ 6/ 96 IS:
RA= 61.105 DEC= 20.744 DIST= 2.348 AU
MARS-BATSE DISTANCE = 351261792. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 60.75 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 572.44 SECS.
CROSSING TIME AT MARS IS 13710. S. OR 03:48:30 +/- 186.19 SECONDS

BATSE BURST TRIGGER

NO.: 5503

TIME: TJD=0251 SECONDS=13138

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=76.0 AZIMUTH=225.7 ERROR= DEGREES

COMMENTS:

GRB PRECURSOR AT T-150 AND ONE AT T-83. ENTIRE EVENT LASTING ~ 180 S. NOT VISIBL
E ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5503	960617	10251	13138	3500	310	-45	180

BATSE #

5503

19 / 6 / 96

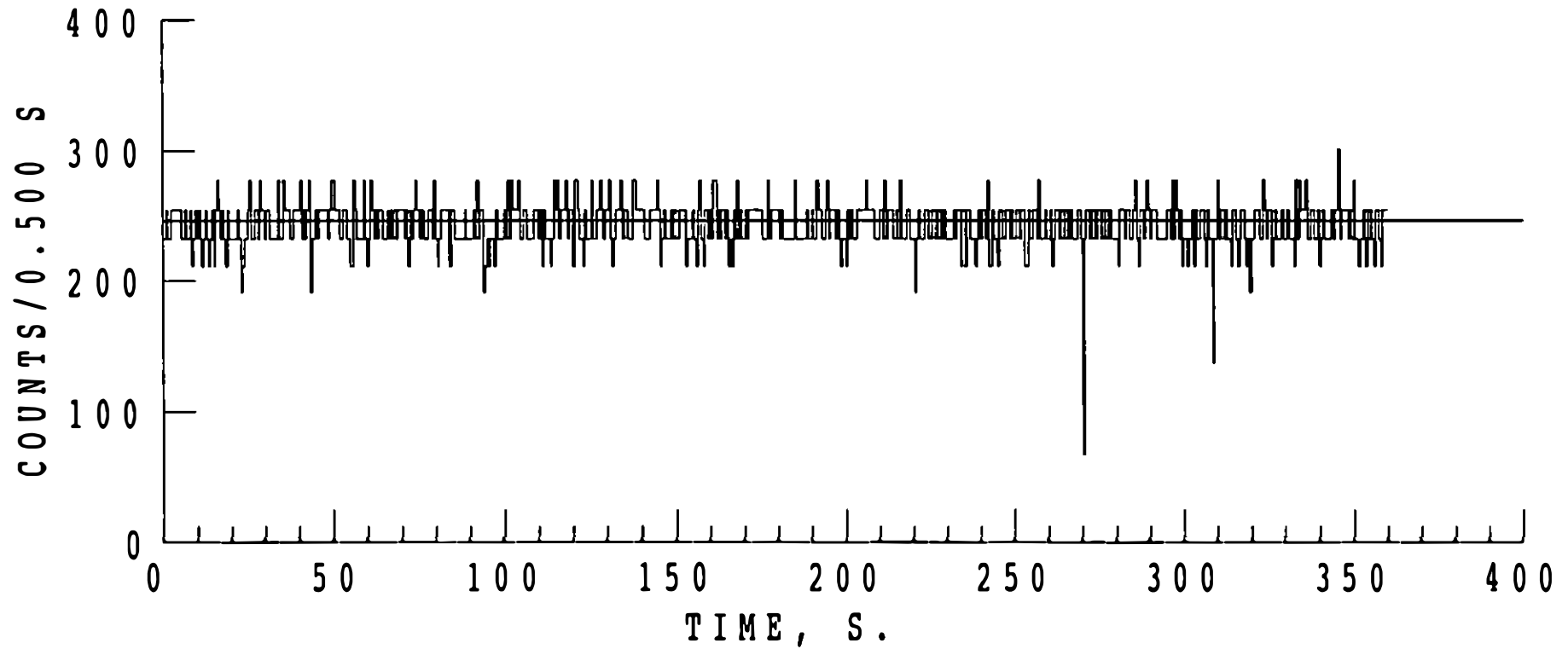
ULYSSES RT

17 / 6 / 96 15084.231 s

0 - 0 keV

N=10 M=2

>4.0 SIGMA FLUCTUATIONS



From DEAL@fender.msfc.nasa.gov Tue Jun 18 12:39 PDT 1996
From: DEAL@fender.msfc.nasa.gov
Date: Tue, 18 Jun 1996 14:39:00 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5504

BATSEARCH PROGRAM

BATSE BURST # 5504
EVENT OF 1996 JUN 17 DAY OF YEAR=169
EVENT CROSSING TIME AT BATSE : 76196. S. OR 21:09:56.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 162.000 -31.000
BATSE PEAK COUNTING RATE: 9500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 17/ 6/ 96 IS:
RA= 151.358 DEC= 50.110 DIST= 4.444 AU
BATSE-ULYSSES DISTANCE = 664759662. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 98.34 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -321.69 SECS.
CROSSING TIME AT ULYSSES IS 75874. S. OR 21:04:34 +/- 426.02 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 17/ 6/ 96 IS:
RA= 61.105 DEC= 20.744 DIST= 2.348 AU
MARS-BATSE DISTANCE = 351261792. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 70.49 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 391.26 SECS.
CROSSING TIME AT MARS IS 76587. S. OR 21:16:27 +/- 197.69 SECONDS

BATSE BURST TRIGGER

NO.: 5504

TIME: TJD=0251 SECONDS=76196

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=141.3 AZIMUTH=138.5 ERROR=2.5 DEGREES

COMMENTS:

GRB LASTING ~ 7 S. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5504	960617	10251	76196	9500	162	-31	7

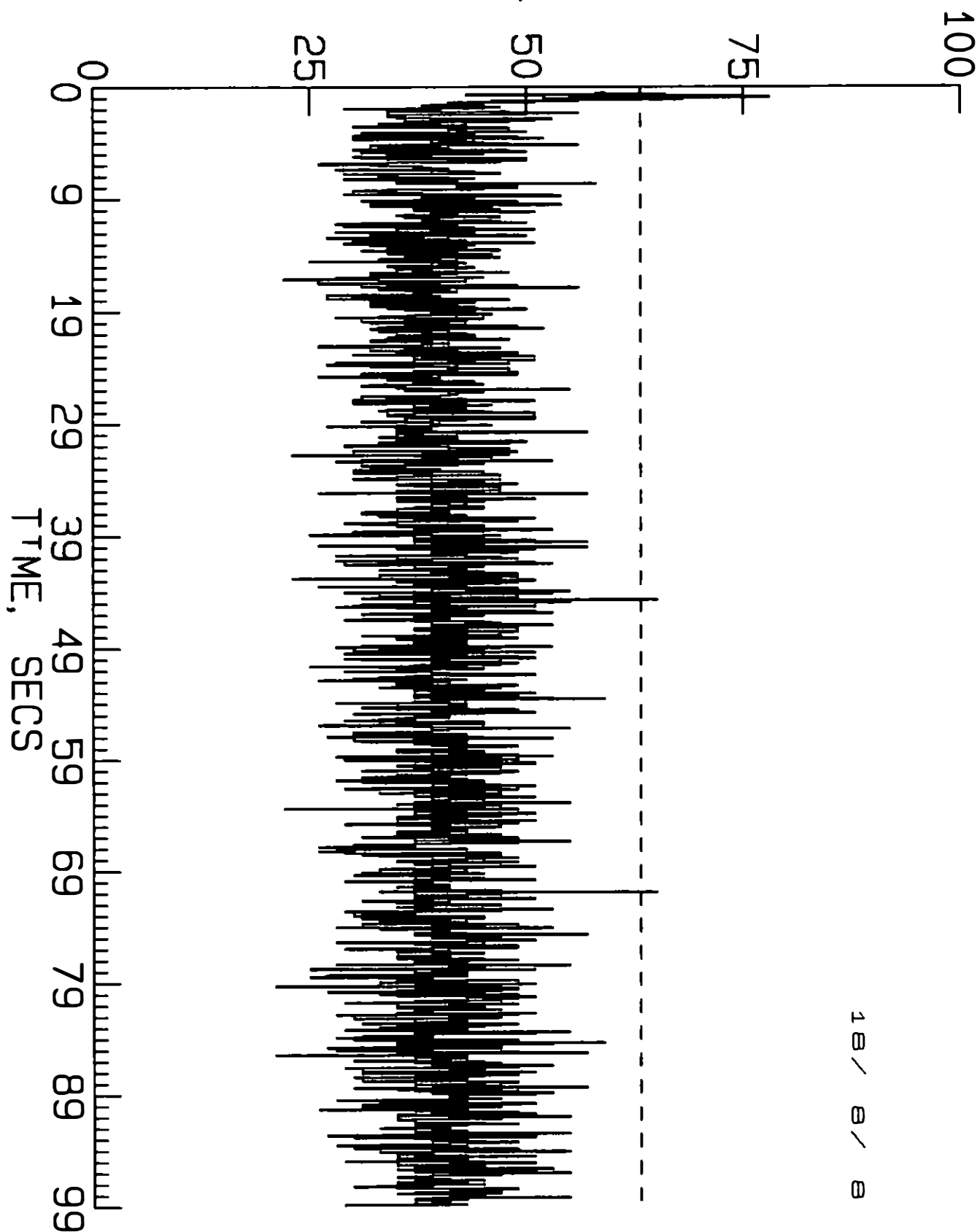
96	2	29	22445.141	S2	740	1520	550	0.3	0.5	8	250	Scand RI	
96	3	5	33645.352	S1	440	390	70	>10	0.8	1.8	251	Scand NO	
96	3	12	35074.697	S2	160	730	330	<0.25	0.2	0.1	252	Scand NO	
96	3	19	51992.828	S1		800	970	>7	0.16	0.4	253	RI	5277
5	3	21	76321.803	S2	4600	4550	1020	0.03	42	46	254	Trig	5297
96	3	22	19642.728	S1	1060	1760	1120	40	2	28	255	Trig	5304
96	3	24	80064.124	S2	320	520	150	0.07	1	14	257	Scand RI	
96	3	25	69892.978	S1	250	620	460	6	0.5	0.5	258	NO	5339
96	3	31	21208.784	S1	220	520	120	4.4	2	24	271	RI	5389
96	4	4	25289.264	S2	420	750	240	0.07	4	9	272	Scand RI	
96	4	9	77143.618	S2	650	1170	420	0.17	0.5	5	273	RI KA	5417
96	4	10	80648.201	S2	190	330	140	<0.05	1	35	274	Scand RI	
96	4	18	06106.854	S1	200	330	70	1	2	2	277	RI KA	5418
96	4	18	08271.303	S2	350	770	50	<0.1	3	30	278	Scand KA RI	NO
96	4	18	66796.140	S1	1160	1000	50	10	1	3	290	Trig	5436
96	4	20	17324.809	S2	300	1190	1080	1	0.3	0.04	303	Scand RI	
96	4	22	59981.190	S2	160	410	140	0.5	4	12	305	RI	5443
96	4	25	86395.862	S2	1300	730		<0.04	44	16	306	Scand KA RI	RI
96	4	28	47556.501	S2	270	420	230	<0.04	1	170	307	RI	5450
96	4	30	49895.524	S1	250	640	180	8	8	18	309	RI KA	5451
96	5	1	31344.546	S1	380	870	350	3.7	20	56	310	Scand RI	RI
96	5	6	47384.998	S1	160	490	190	1.1	3	6	312	Scand RI	RI
96	5	7	44869.909	S2	460	760	290	0.03	20	98	313	Scand RI	RI
96	5	10	38723.598	S2	560	1300	330	0.1	1	7	317	Trig	
96	5	19	14766.283	S2	1700	7700	8000	0.4	0.1	0.56	319	Scand NO	
96	5	21	62489.430	S1	330	500	90	5.8	1	8	320	Scand RI	RI
96	5	23	59522.013	S1	270	550	580	10	1	3	321	RI	5472
96	5	29	43663.061	S2	1700	4000	5000	0.15	0.5	3.5	322	Trig	5477
96	5	29	80722.705	S2	420	620	140	0.1	1	14	323	Trig KA	
96	5	30	62300.750	S1	180	400	110	>20	2	14	324	Scand N/O	
96	5	31	06926.043	S1	300	440	120	4.7	50	7	325	Scand RI	RI
96	5	31	73498.259	S2	1600	4250	2800	0.5	27	19	326	Trig	
96	6	2	42664.032	S1	1000	1450	1400	>2	0.3	0.03	327	Scand NO	
96	6	5	29392.672	S1	400	950	410	1.3	2	87	328	RI	5486
96	6	7	78106.176	S2	890	1280	550	0.04	32	120	329	RI	5489
96	6	10	84502.254	S2	200	1000	1500	0.9	0.16	0.11	330	Scand NO	
96	6	12	71198.677	S1	650	2800	2700	1.4	0.5	18	331	Trig	
96	6	14	67654.516	S1	80	1800	1600	1	0.18	0.1	332	Scand NO	
96	6	17	76195.941	S1	350	560		>8	1	0.6	333	NO	5504
96	6	22	74906.054	S2	100	360	280	0.2	4	8	334	Scand NO	
96	6	23	04734.229	S2	130	320	150	0.5	7	25	335	RI KA	5512
96	6	23	77186.871	S2	250	350	130	0.05	6	15	336	Scand RI	RI
96	6	25	16949.252	S1	180	280	70	4.6	6	9	337	RI	5514
96	6	28	19224.223	S2	500	410	120	0.06	12	6	338	RI	5523
96	7	2	54698.284	S1	280	350	70	2.8	23	85	339	RI	5525
96	7	3	65443.861	S1	200	560	600	3	1	0.4	340	NO	5527
96	7	7	36999.311	S2	1600	1200		0.06	2	5	341	RI	5530
96	7	8	72577.095	S2	900	820	160	0.2	1	6	342	Scand RI	RI
96	7	9	00246.641	S1	260	1000	400	0.95	15	4	343	Trig KA	
96	7	10	00662.014	S2	1800	4700	3600	0.13	0.5	48	345	Trig	
96	7	11	63757.543	S1	560	2400	900	1.25	0.5	19	346	Trig	
96	7	11	68451.869	S2	200	360	170	<0.07	2	41	347	Scand NO	
96	7	22	25522.448	S2	360	650	170	0.27	17	151	348	RI	5548
96	7	22	56346.728	S1	700	1000	200	2.6	3	6	349	Scand RI	RI
96	7	27	43056.737	S2	500	1000	500	0.7	0.5	15	350	Scand RI	RI
96	7	31	20761.638	S2	800	1160	170	0.9	0.5	4	353?	RI	5557
96	8	3	67525.033	S1	4000	8000	3000	3	0.02	0.18	354	Trig KA	5561
96	8	4	84535.906	S2	2000	2600	600	<0.03	0.5	2	355	Trig KA	5563
96	8	5	78957.888	S2	1270	2360	380	0.05	1	20	356	Trig	
96	8	6	80989.772	S2	420	850	250	1	86	10	357	RI	5566

KONUS

17/06/96 76195.940

50- 200 keV

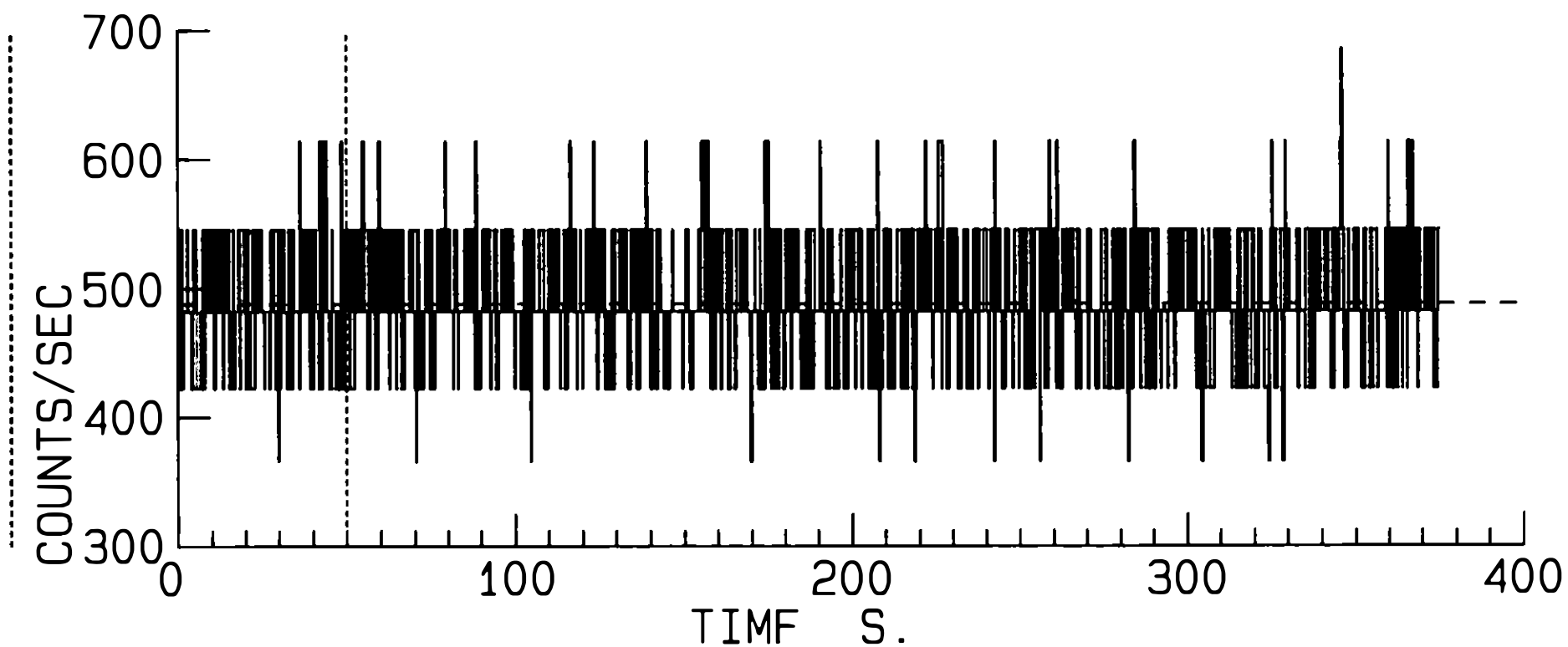
COUNTS/0.064 S



18 / 8 / 8

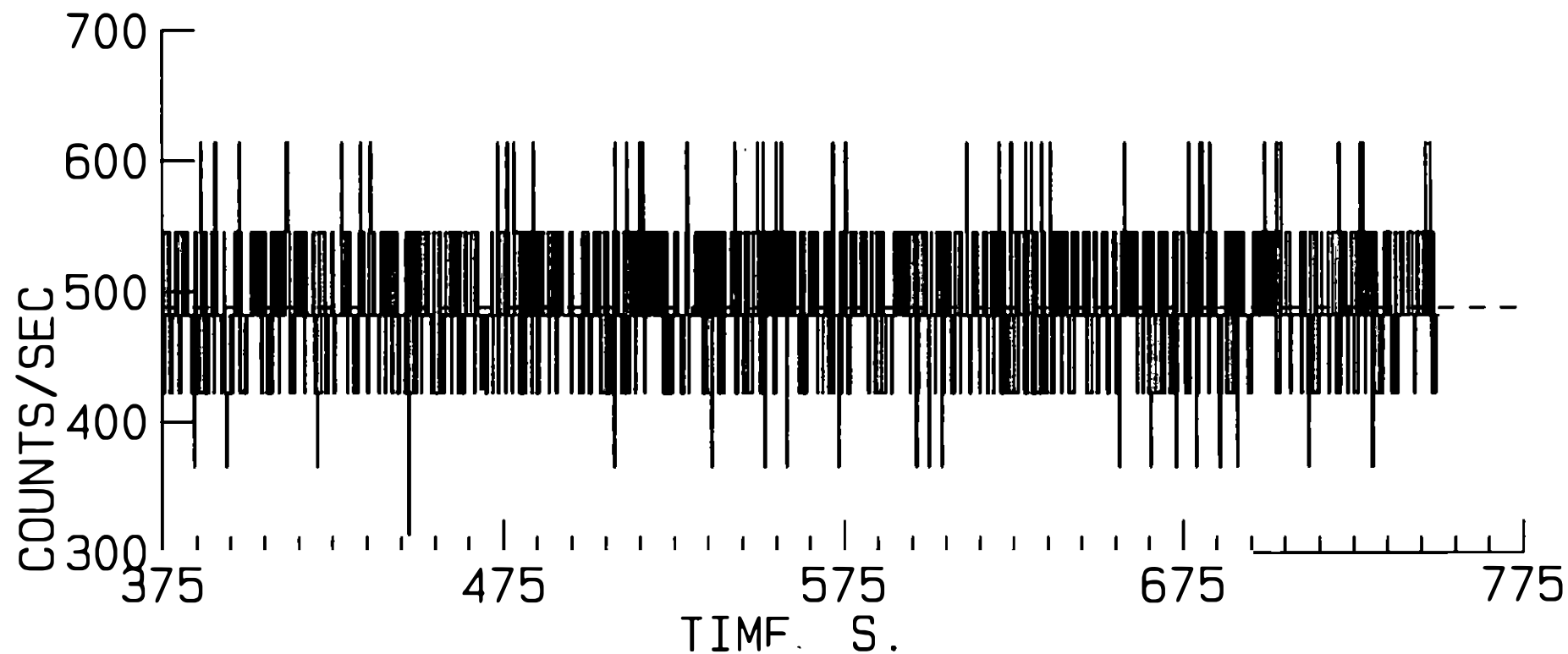
ULYSSES RT
17/ 6/96 73944.016 s
21- 145 keV

21 / 8 / 8



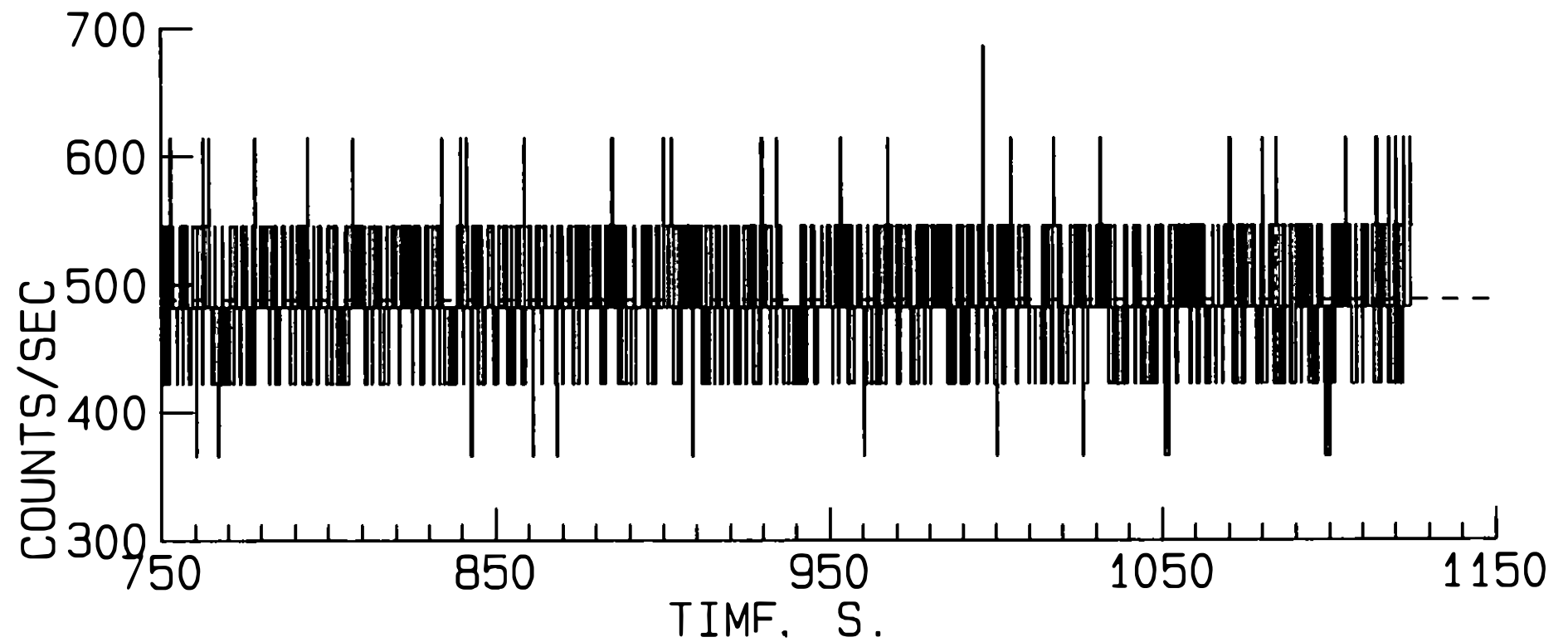
ULYSSES RT
17/ 6/96 73944.016 s
21- 145 keV

21 / 8 / 8



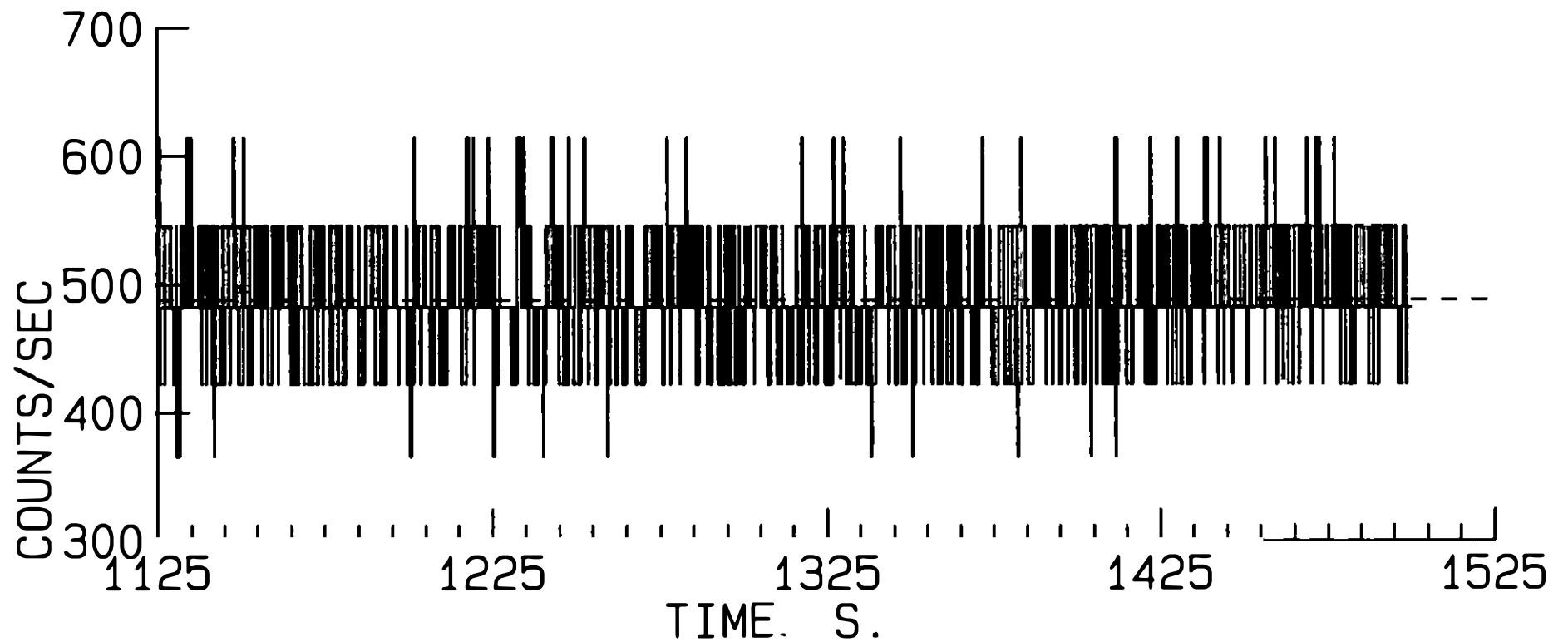
ULYSSES RT
17/ 6/96 73944.016 s
21- 145 keV

21 / 8 / 8



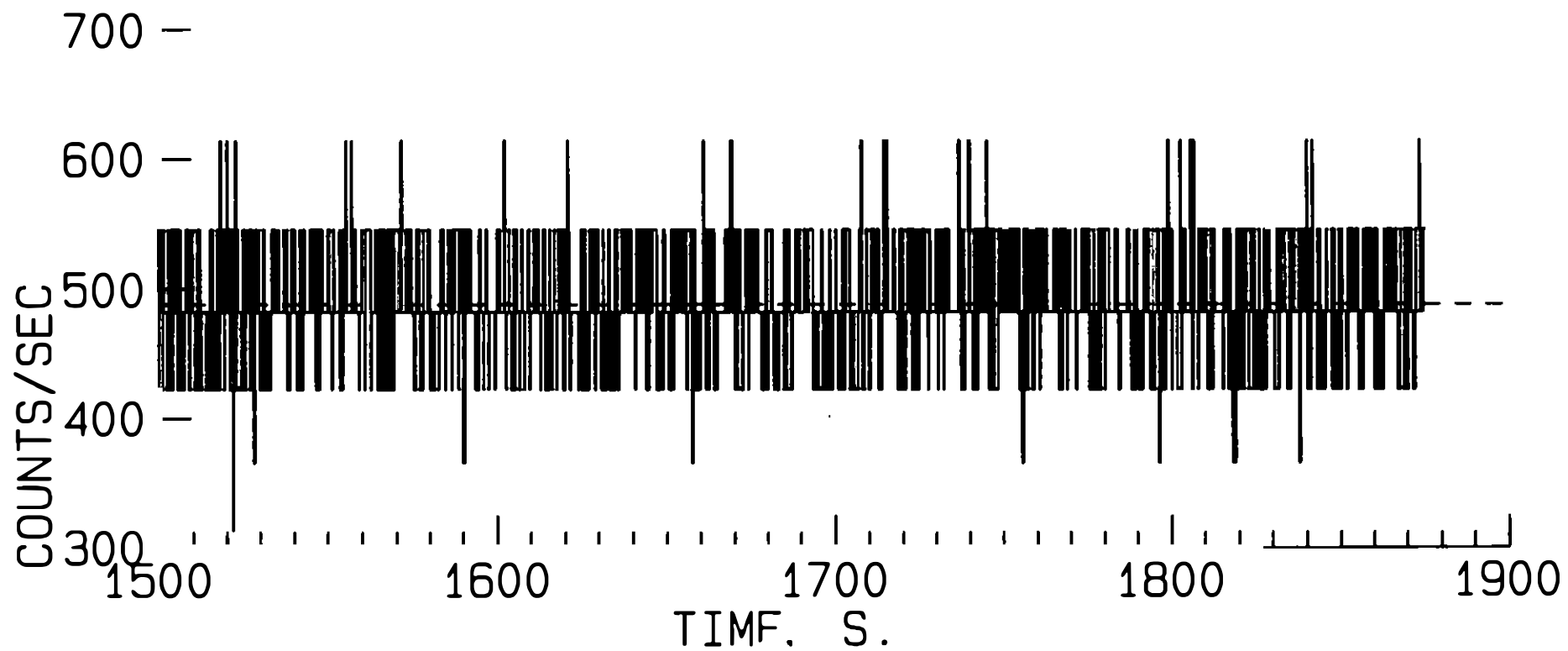
ULYSSES RT
17/ 6/96 73944.016 s
21- 145 keV

21 / 8 / 8



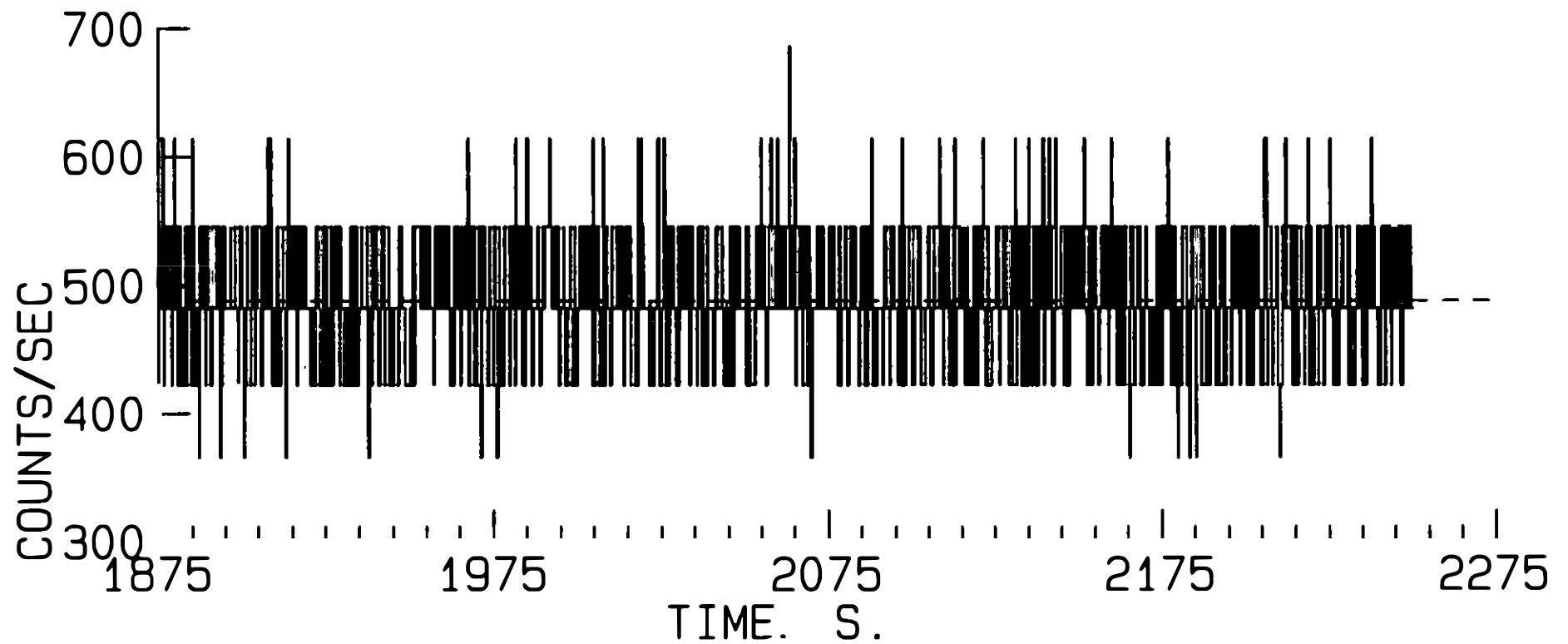
ULYSSES RT
17/ 6/96 73944.016 s
21- 145 keV

21 / 8 / 8



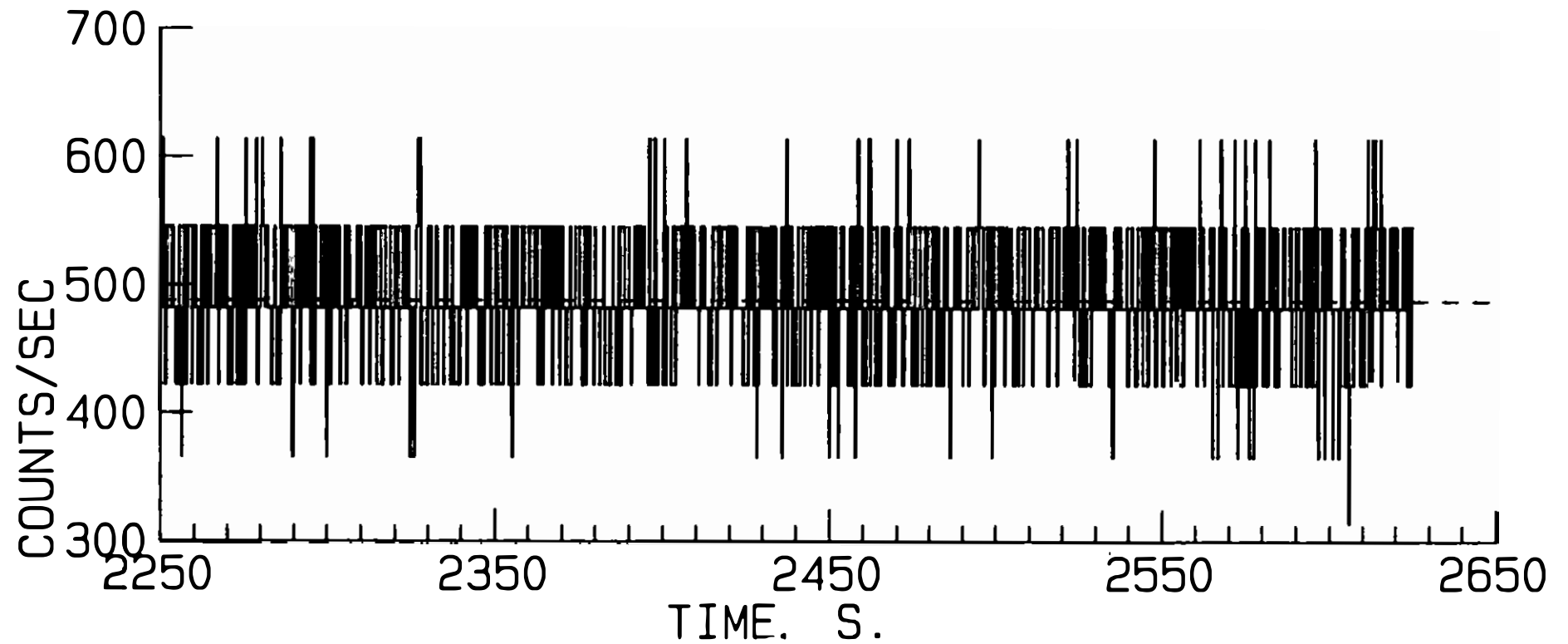
ULYSSES RT
17/ 6/96 73944.016 s
21- 145 keV

21 / 8 / 8



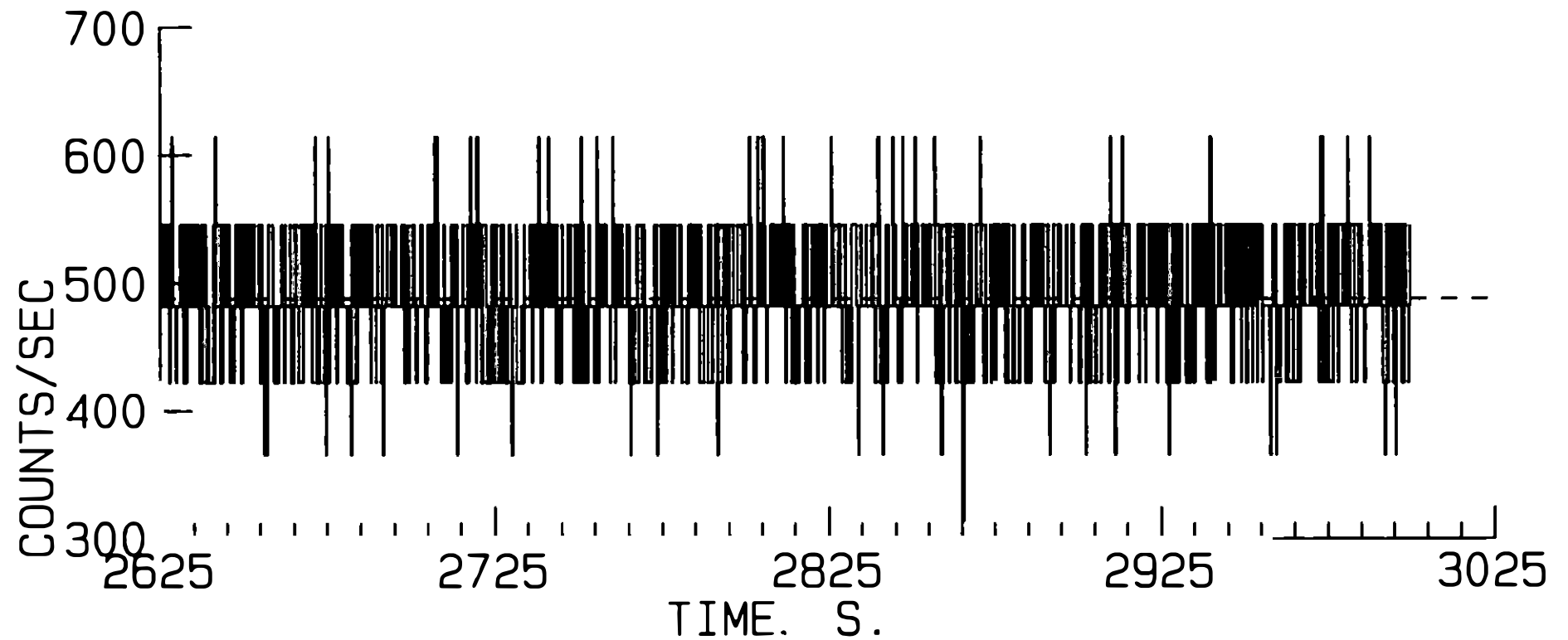
ULYSSES RT
17/ 6/96 73944.016 s
21- 145 keV

21 / 8 / 8



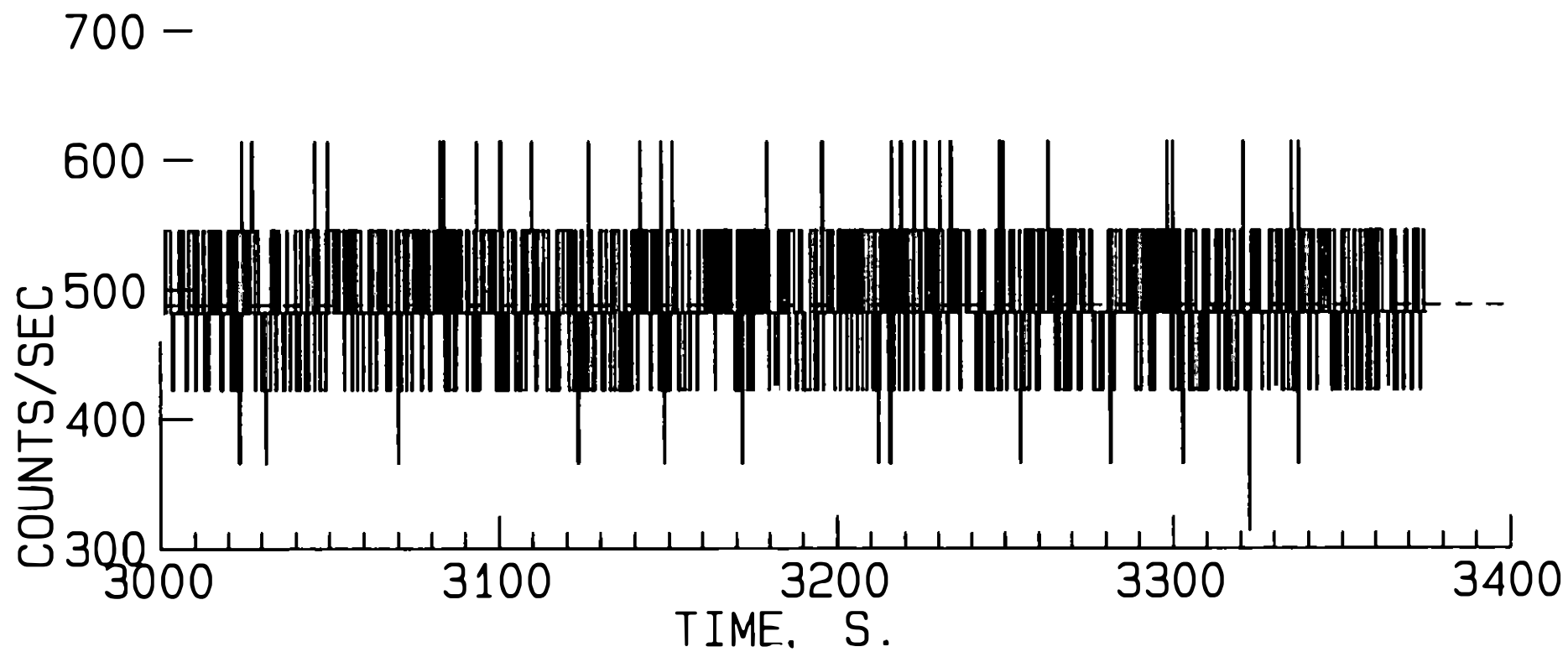
ULYSSES RT
17/ 6/96 73944.016 s
21- 145 keV

21 / 8 / 8



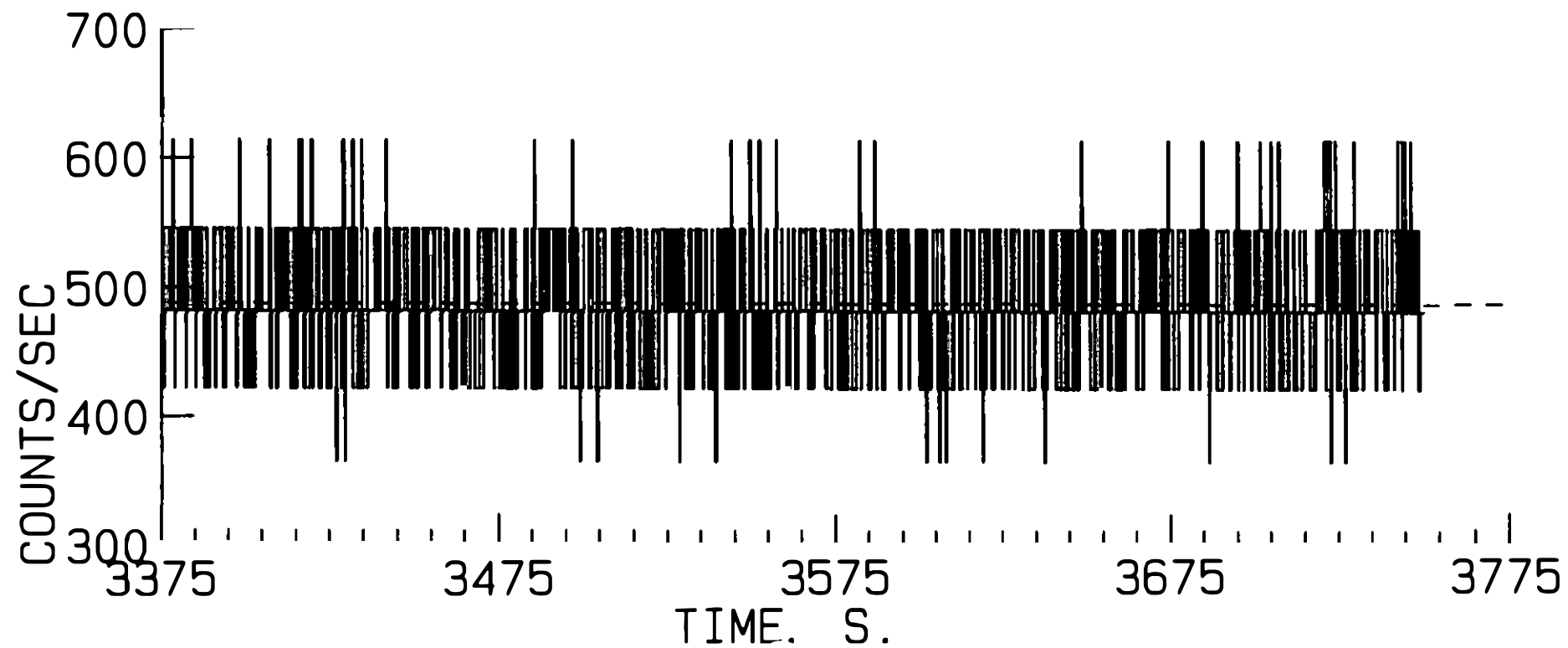
ULYSSES RT
17/ 6/96 73944.016 s
21- 145 keV

21 / 8 / 8



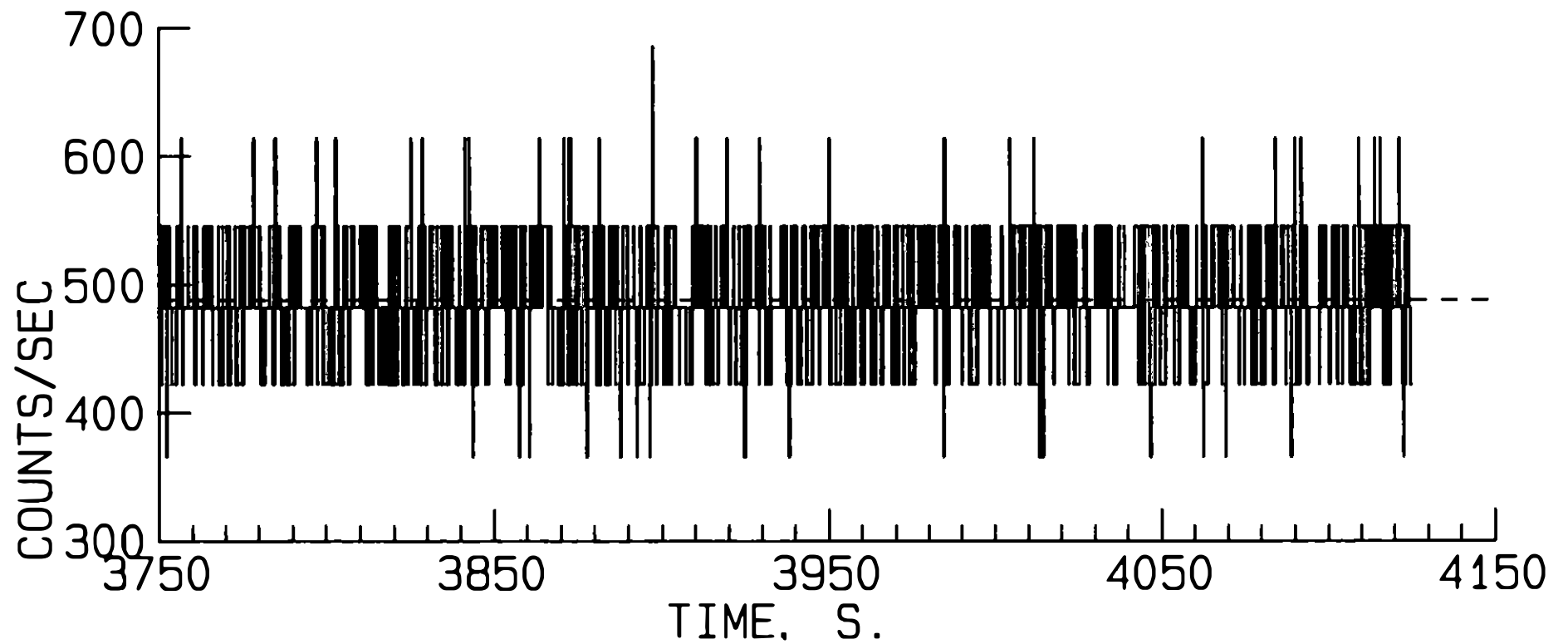
ULYSSES RT
17/ 6/96 73944.016 s
21- 145 keV

21 / 8 / 8



ULYSSES RT
17/ 6/96 73944.016 s
21- 145 keV

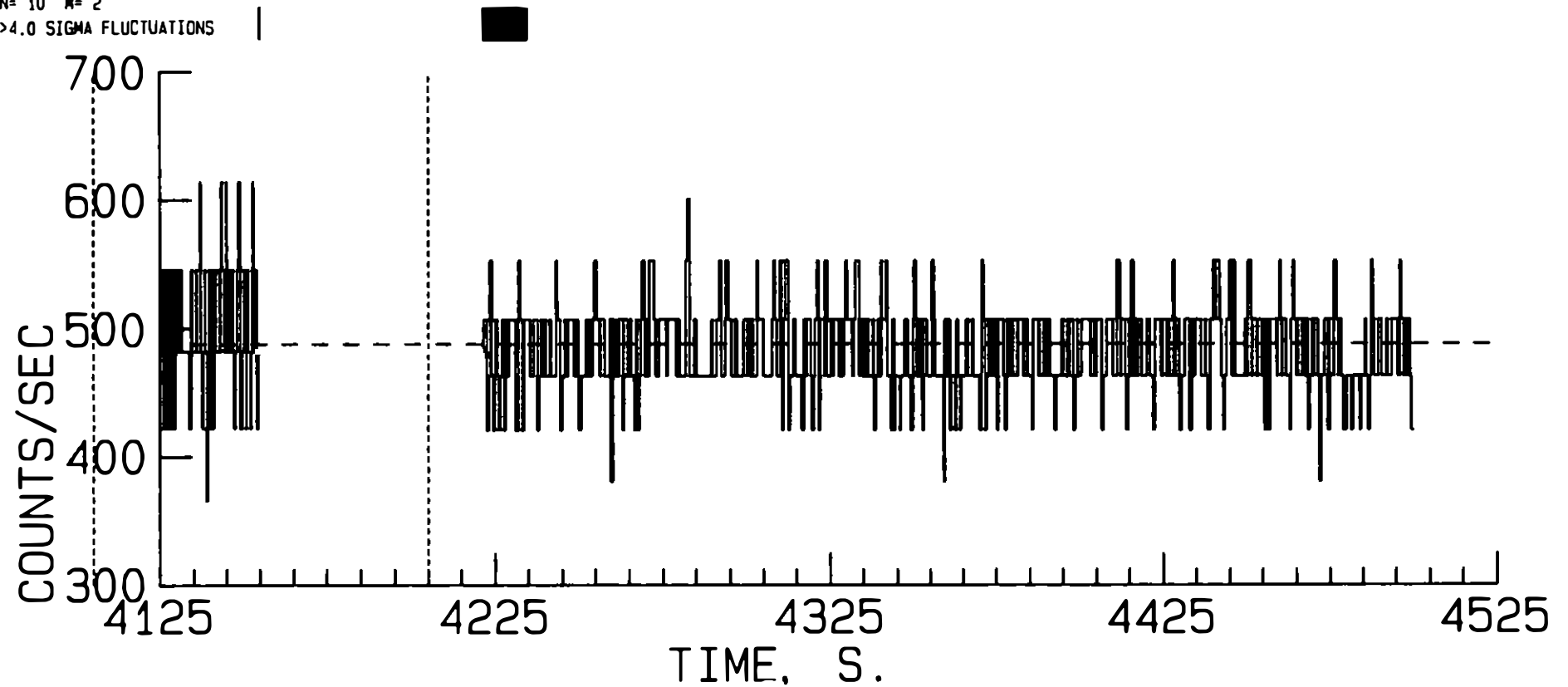
21 / 8 / 8



ULYSSES RT
17/ 6/96 73944.016 s
21- 145 keV

21 / 8 / 8

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



BATSE #

5504

18 / 6 / 96

ULYSSES RT

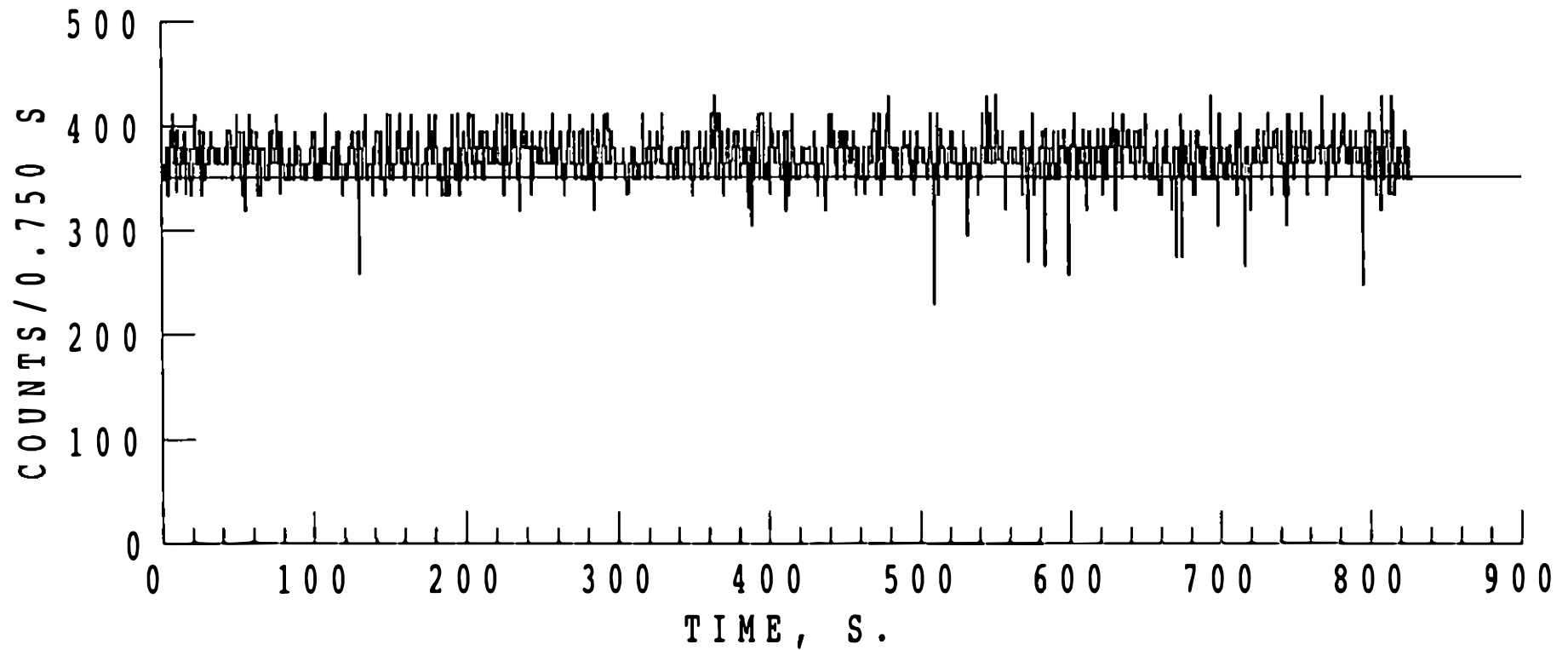
17 / 6 / 96 75456.031 s

0.250 S INTERVALS REGROUPED BY 3

0 - 0 keV

N=10 M=2

>4.0 SIGMA FLUCTUATIONS



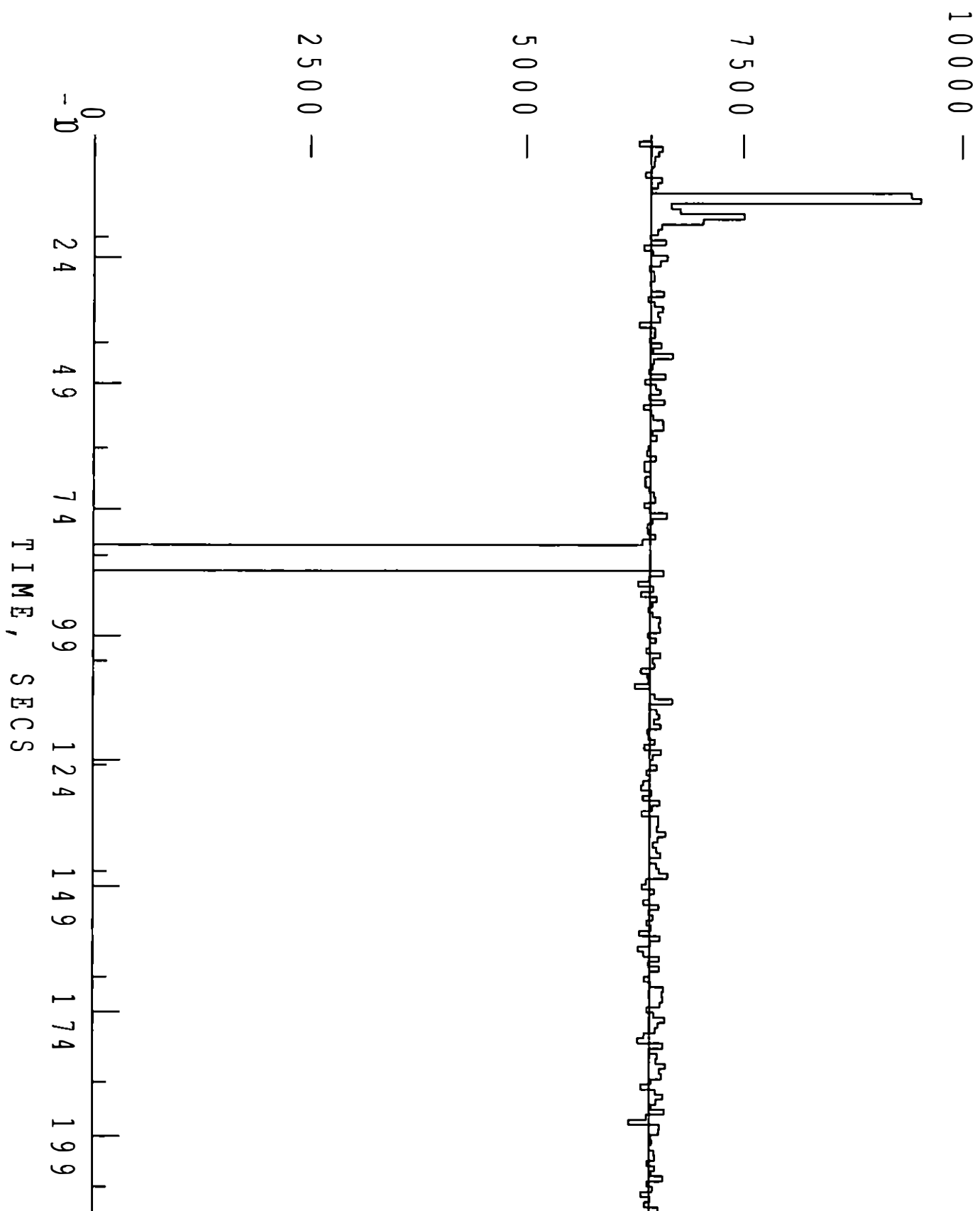
BACODINE

17/06/96

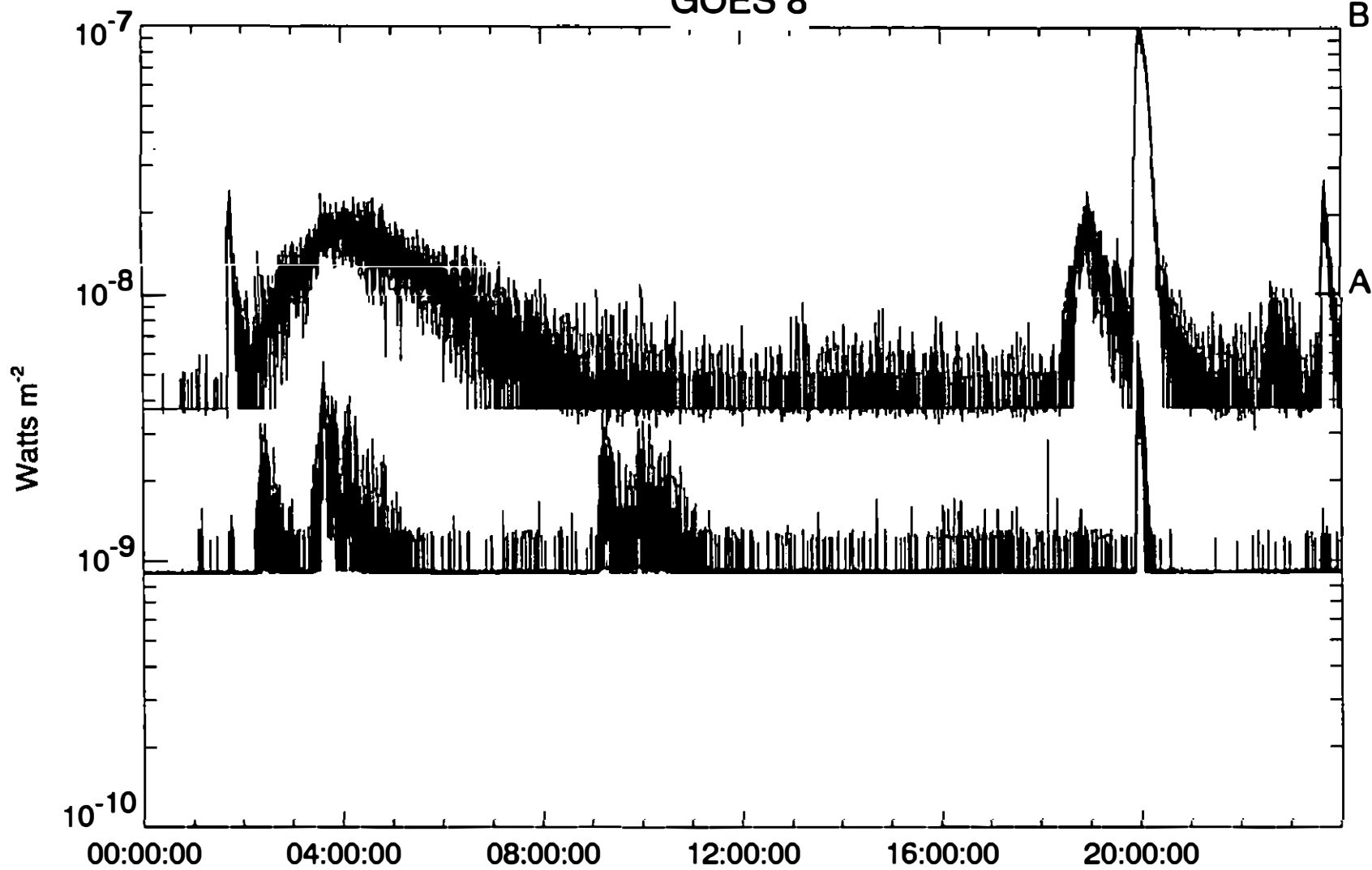
76184.265

25 - 100 keV

COUNTS/1.024 S



GOES 8



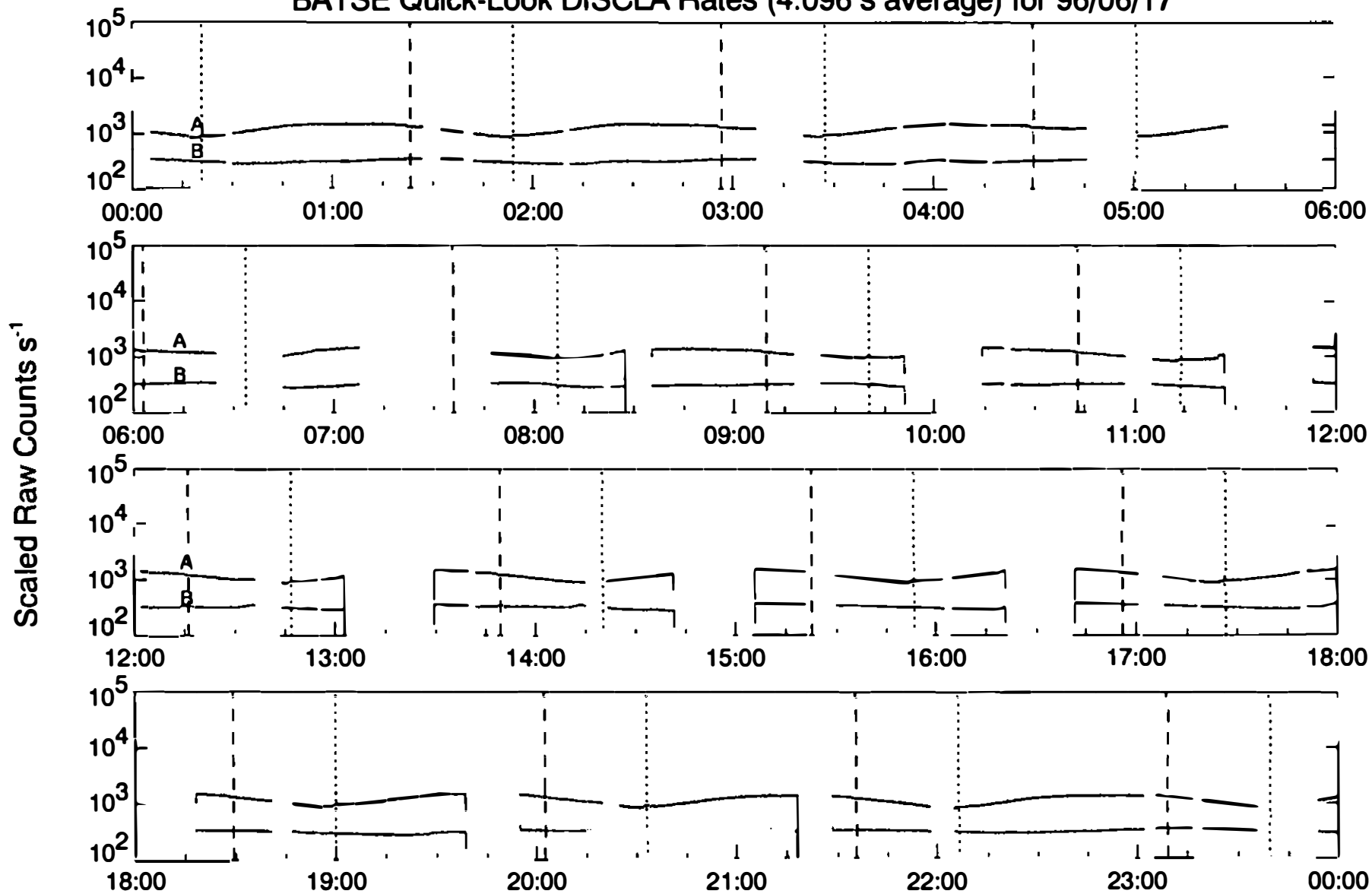
Data Start: 96/06/17, 0000:00

Plot created: 96/06/19, 1003

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/17

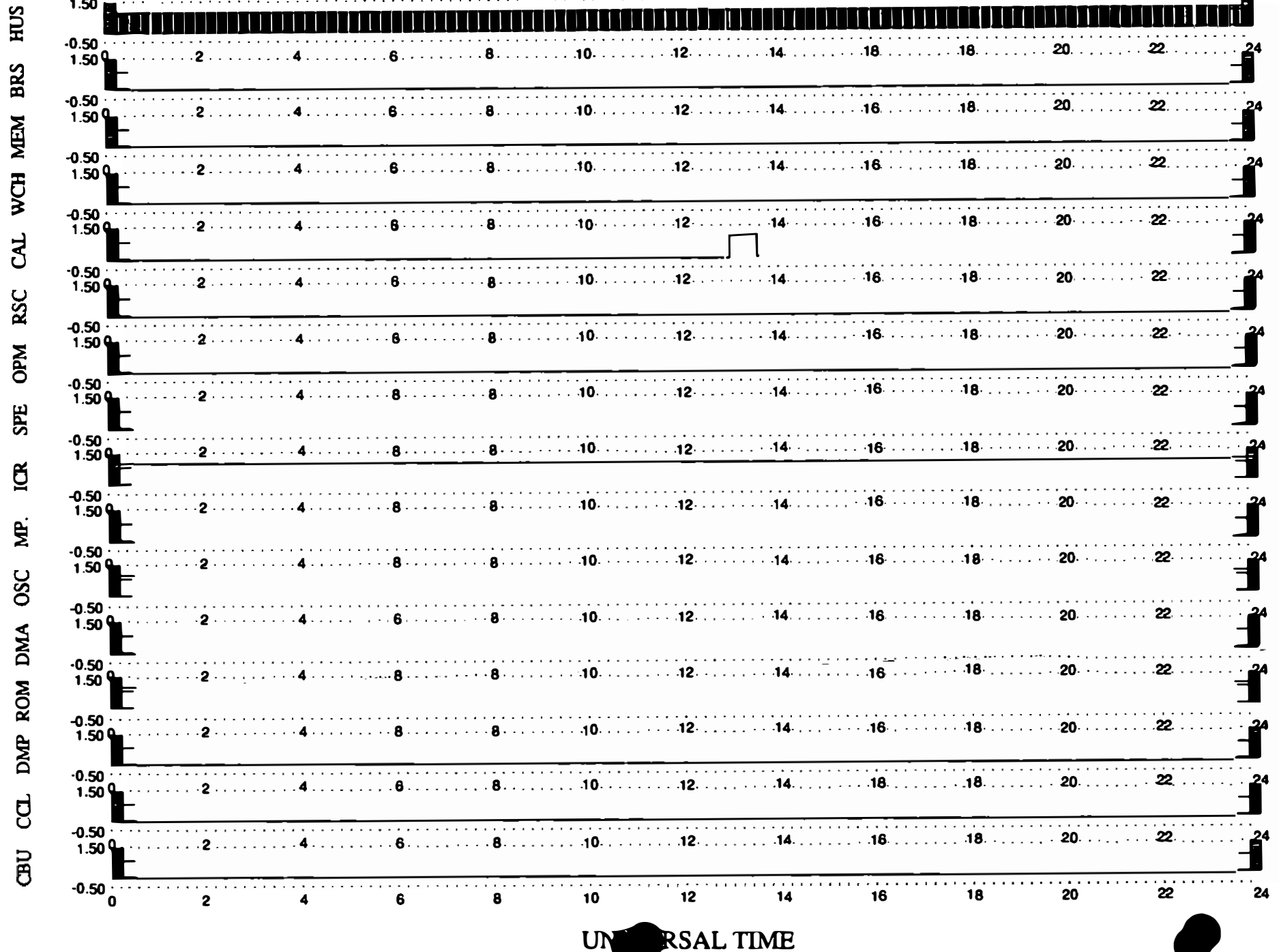


Current Time: 96/06/19, 1004 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

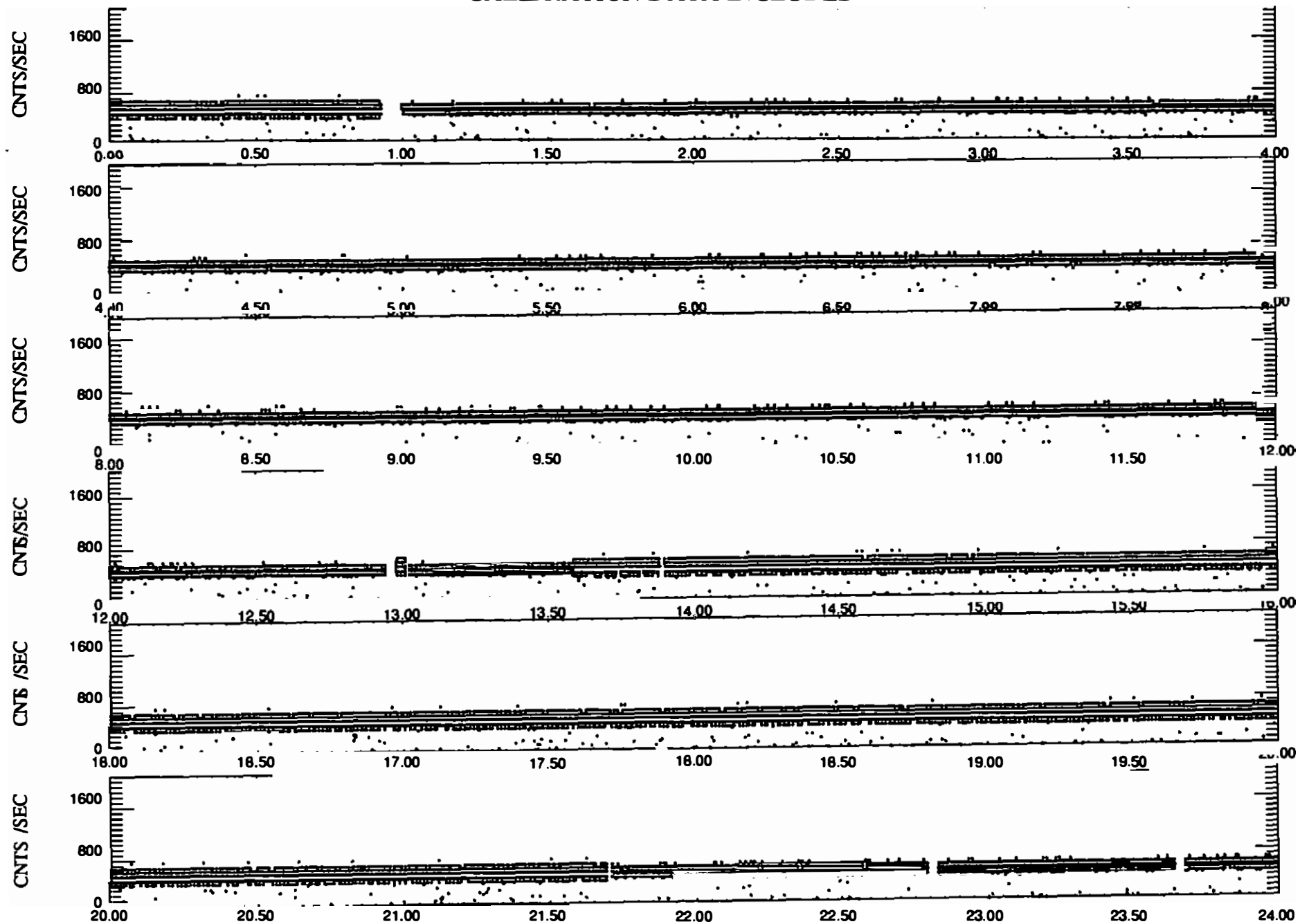
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

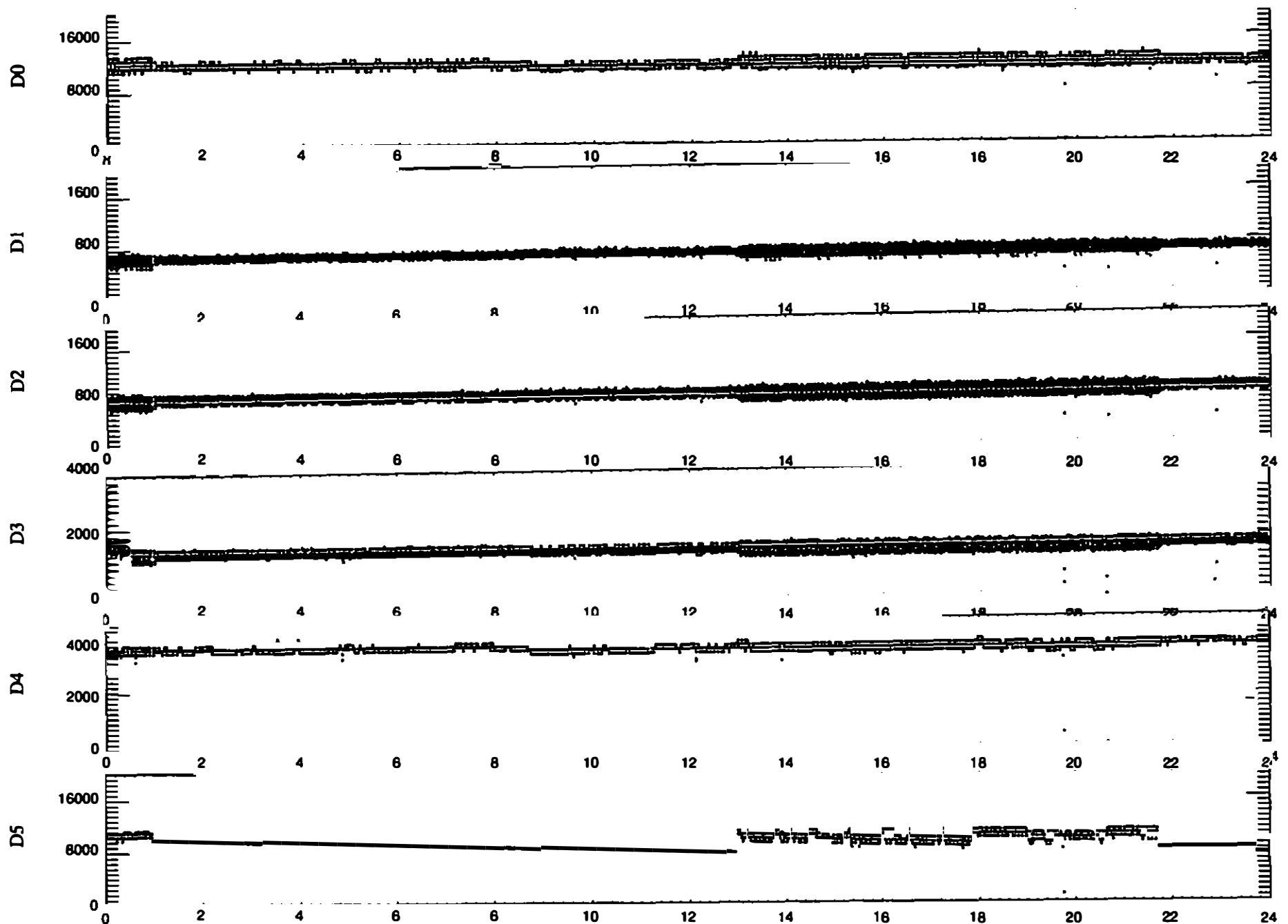
NO BURST (3)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From PANJEVG@SSLLES.MSFC.NASA.GOV Thu Jun 20 15:25 PDT 1996
Date: Thu, 20 Jun 1996 17:25:37 -0500 (CDT)
From: PANJEVG@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5505

BATSEARCH PROGRAM

BATSE BURST # 5505 ND
EVENT OF 1996 JUN 18 DAY OF YEAR=170
EVENT CROSSING TIME AT BATSE : 8000. S. OR 02:13:20.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 203.000 54.000
BATSE PEAK COUNTING RATE: 3000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 18/ 6/ 96 IS:
RA= 151.393 DEC= 50.062 DIST= 4.447 AU
BATSE-ULYSSES DISTANCE = 665223766. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=148.72 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1896.42 SECS.
CROSSING TIME AT ULYSSES IS 6104. S. OR 01:41:43 +/- 221.22 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 18/ 6/ 96 IS:
RA= 61.850 DEC= 20.890 DIST= 2.347 AU
MARS-BATSE DISTANCE = 351042848. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 82.00 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 163.00 SECS.
CROSSING TIME AT MARS IS 8163. S. OR 02:16:02 +/- 203.79 SECONDS

BATSE BURST TRIGGER

NO.: 5505

TIME: TJD=0252 SECONDS=8000

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=68.1 AZIMUTH=75.5 ERROR=3.16 DEGREES

COMMENTS:

GRB LASTING ~100SEC. COMPLEX STRUCTURE. NOT VISIBLE ABOVE 300KEV

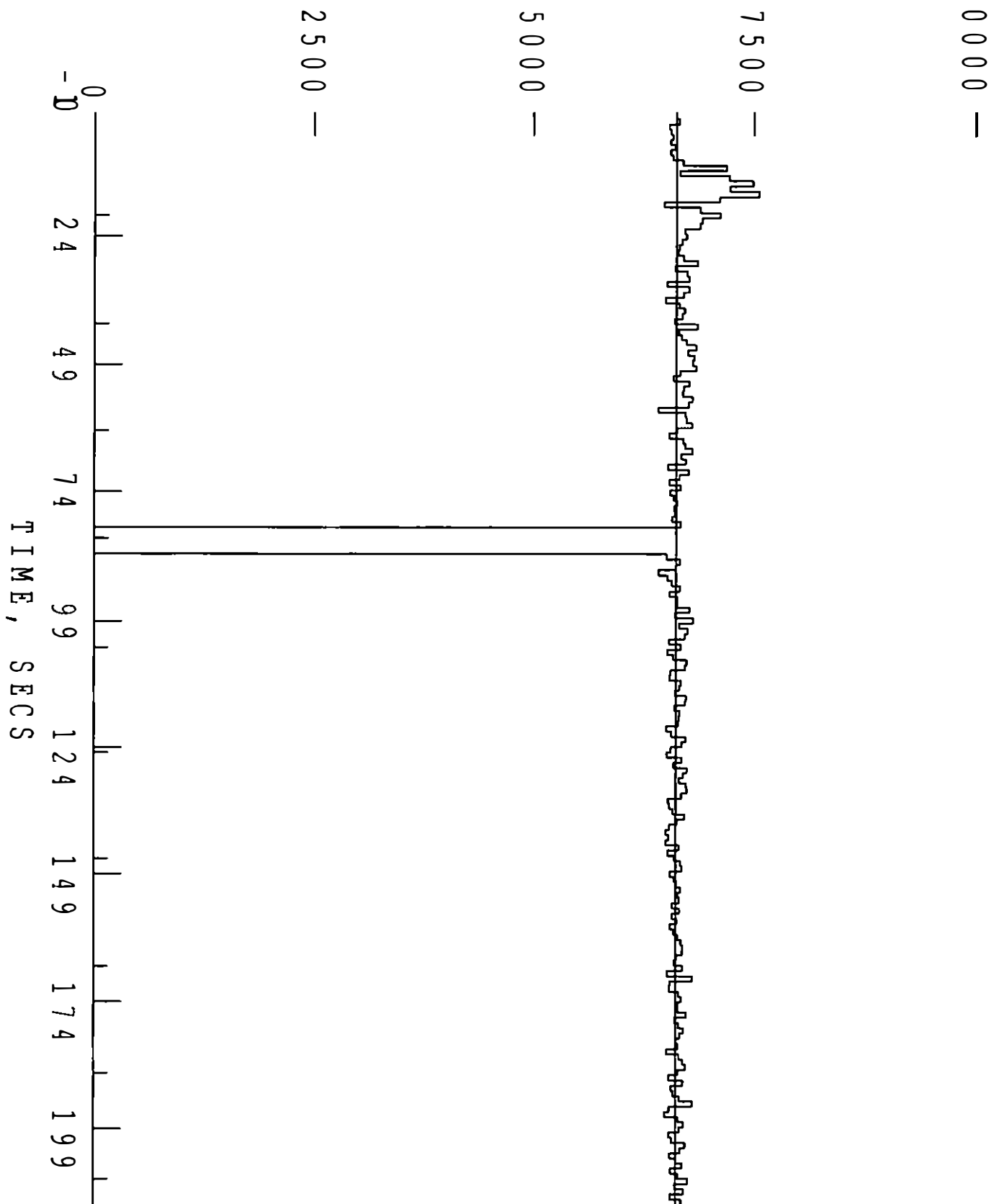
BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5505	960618	10252	08000	3000	203	+54	100

BACODINE

18/06/96

7988.937

25 - 100 keV
COUNTS/1.024 S



BATSE #

5505

20 / 6 / 96

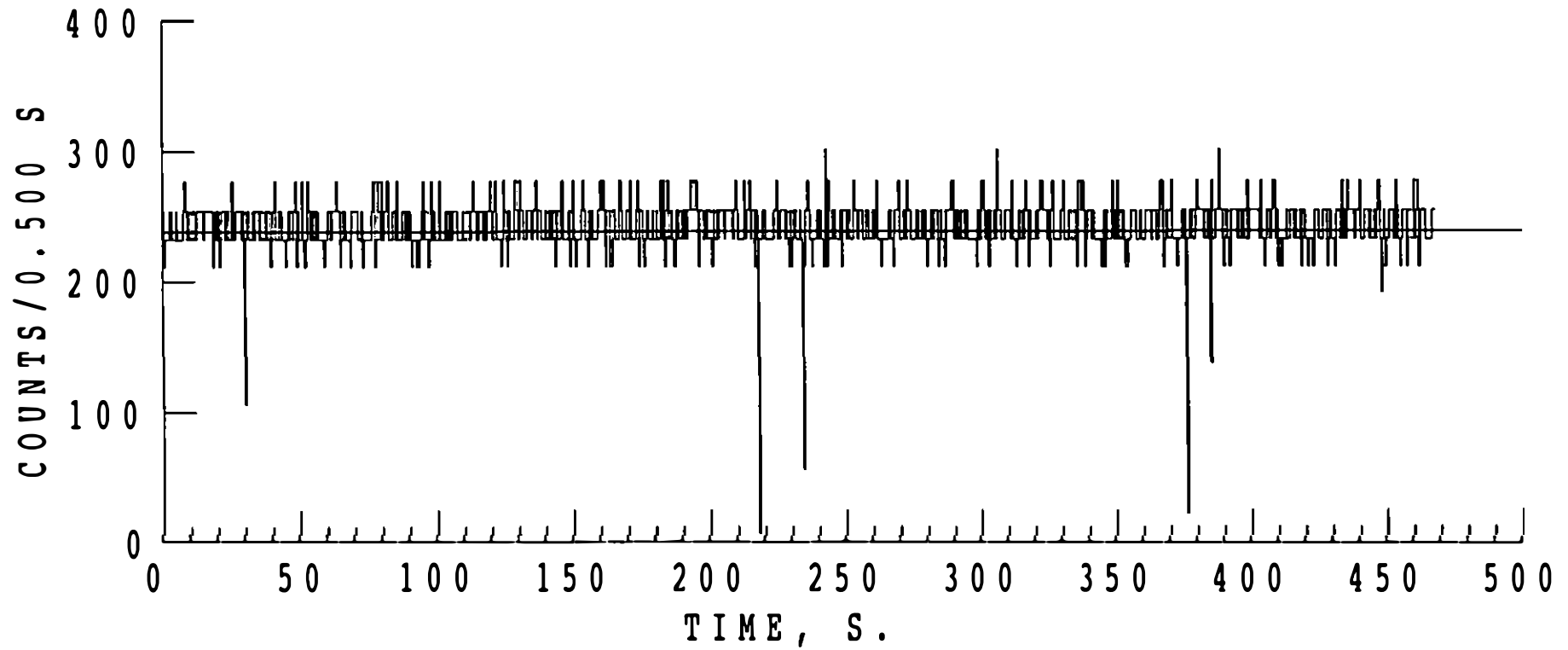
ULYSSES RT

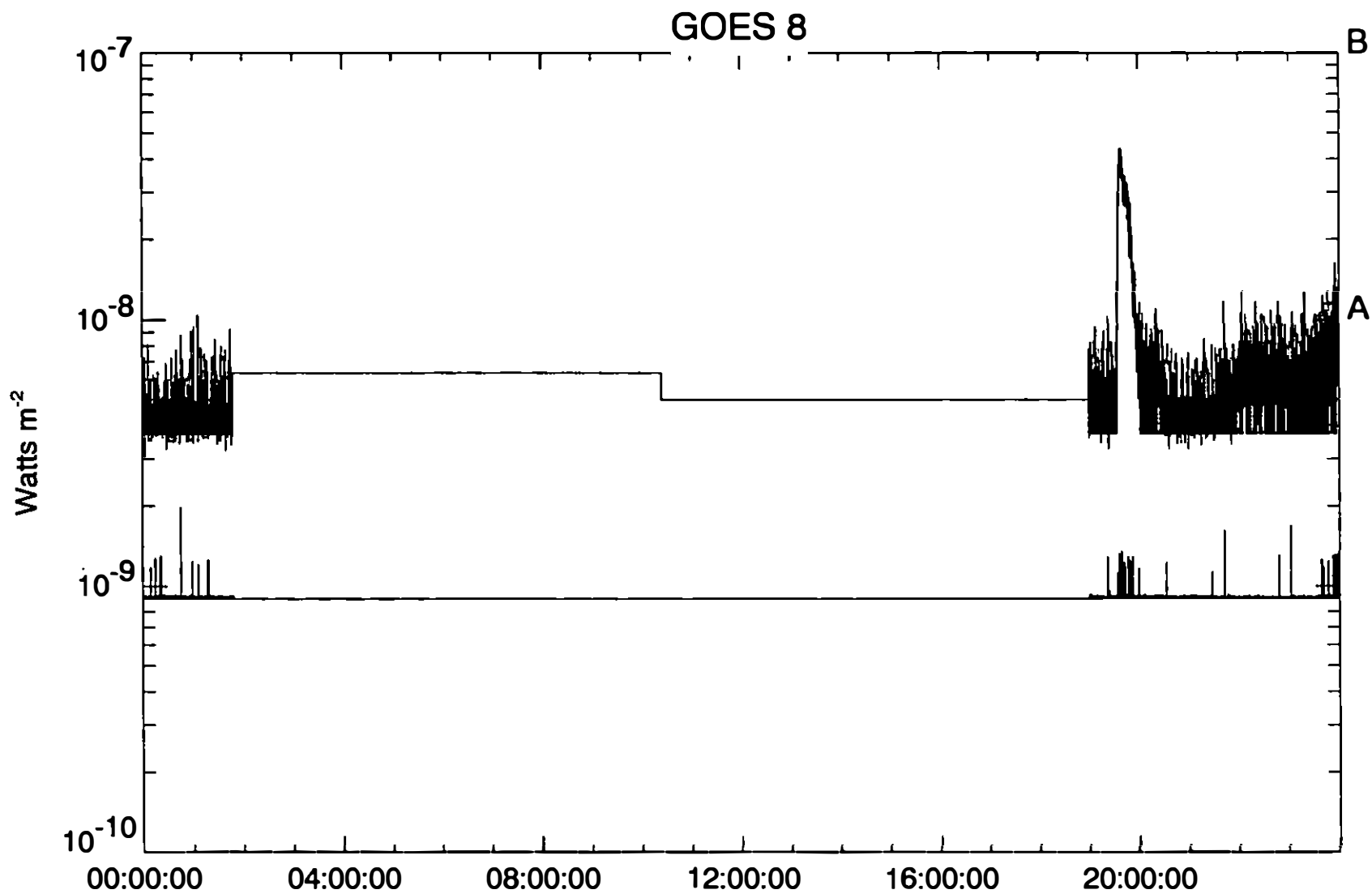
18 / 6 / 96 5868.253 s

0 - 0 keV

N=10 M=2

>4.0 SIGMA FLUCTUATIONS





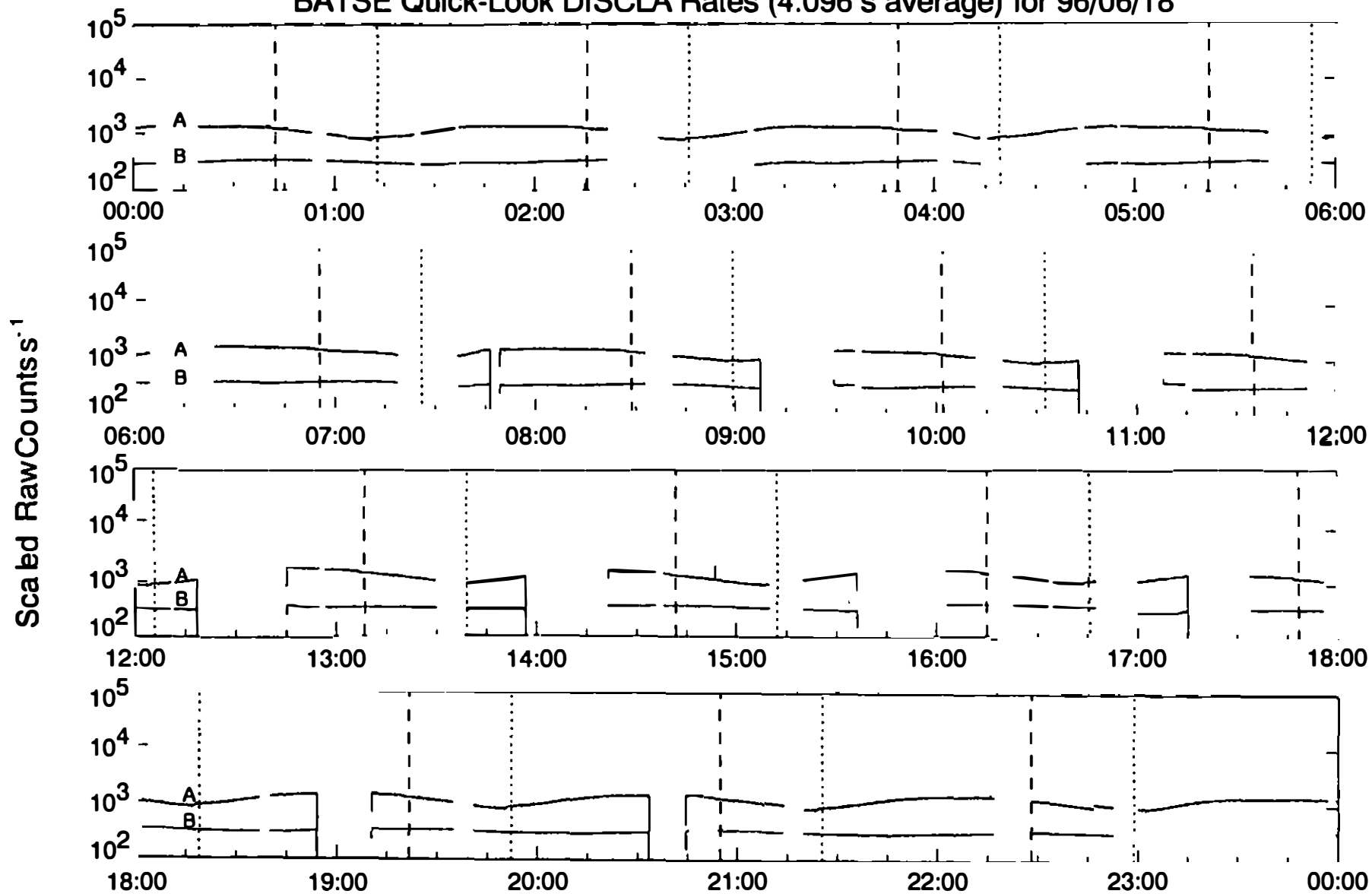
Data Start: 96/06/18, 0000:00

Plot created: 96/06/20, 1003

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/18

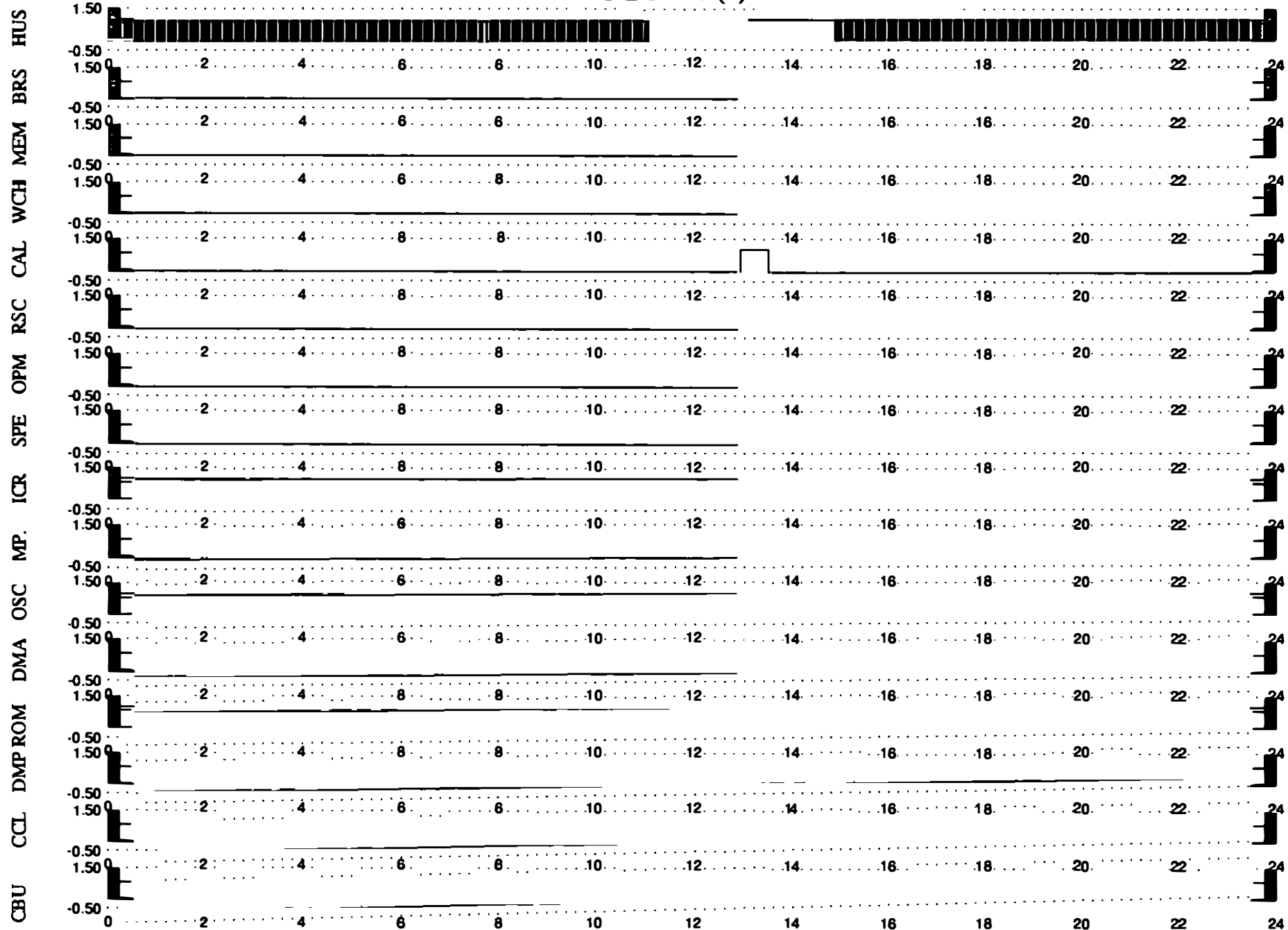


Current Time: 96/06/20, 1003 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

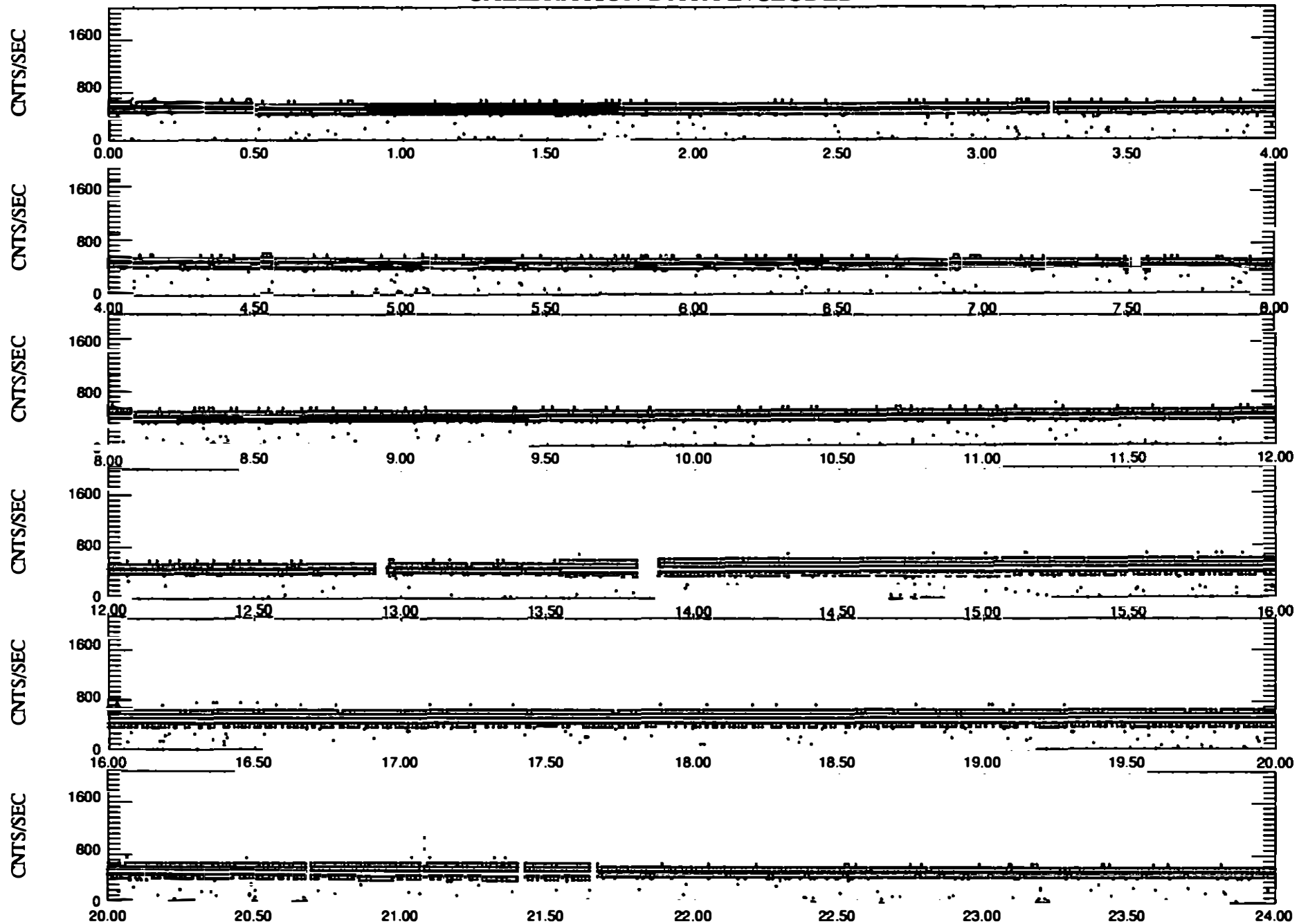
* Solar Burst Trigger
+ Solar Flare

NO BURST (3)

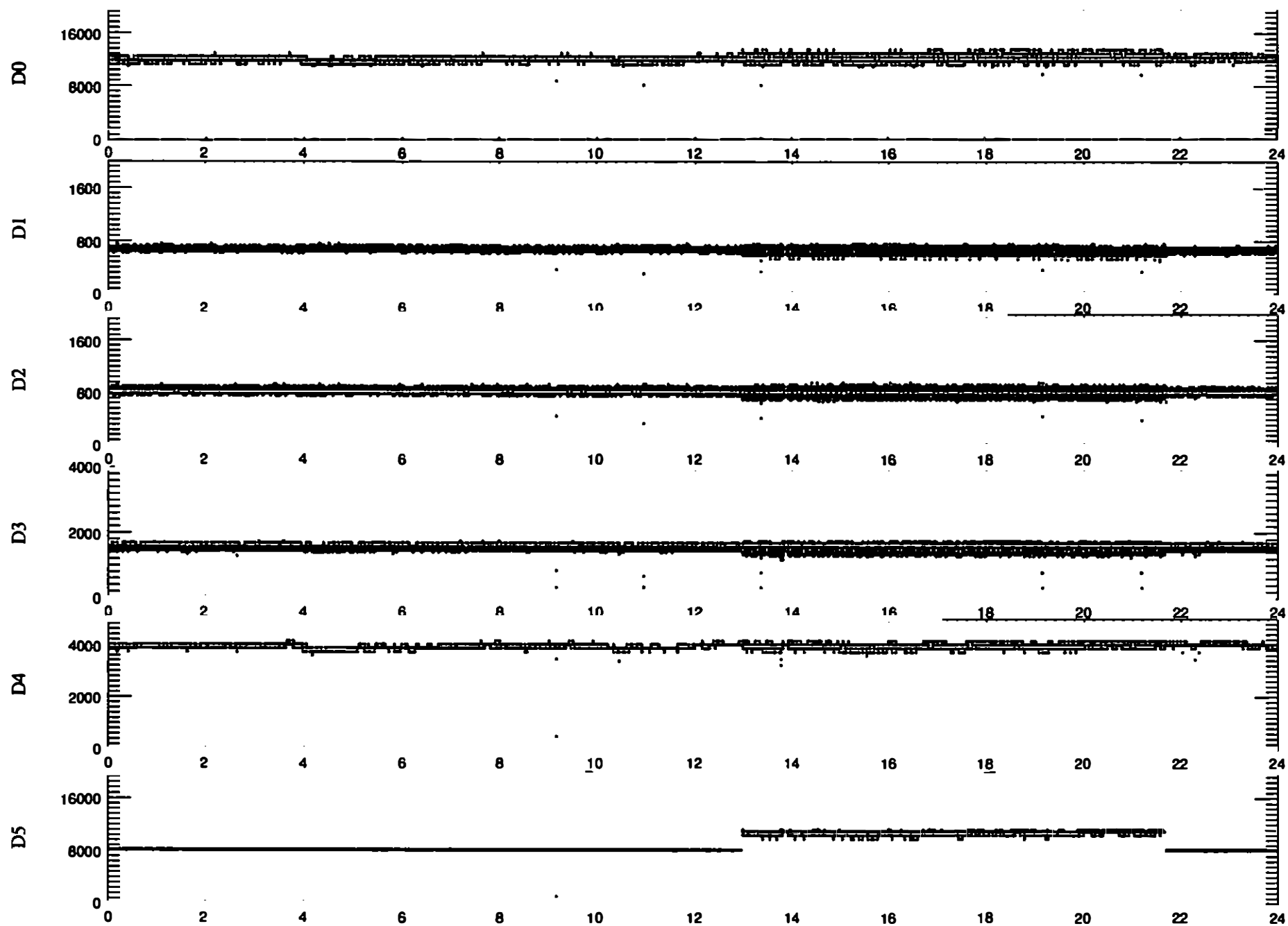


UNIVERSAL TIME

CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From WOODSP@ssl.msfc.nasa.gov Thu Jun 20 10:59 PDT 1996
From: WOODSP@ssl.msfc.nasa.gov
Date: Thu, 20 Jun 1996 12:58:02 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@estsa2.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu,
gruber@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 5506

TIME: TJD=0253 SECONDS=25295

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

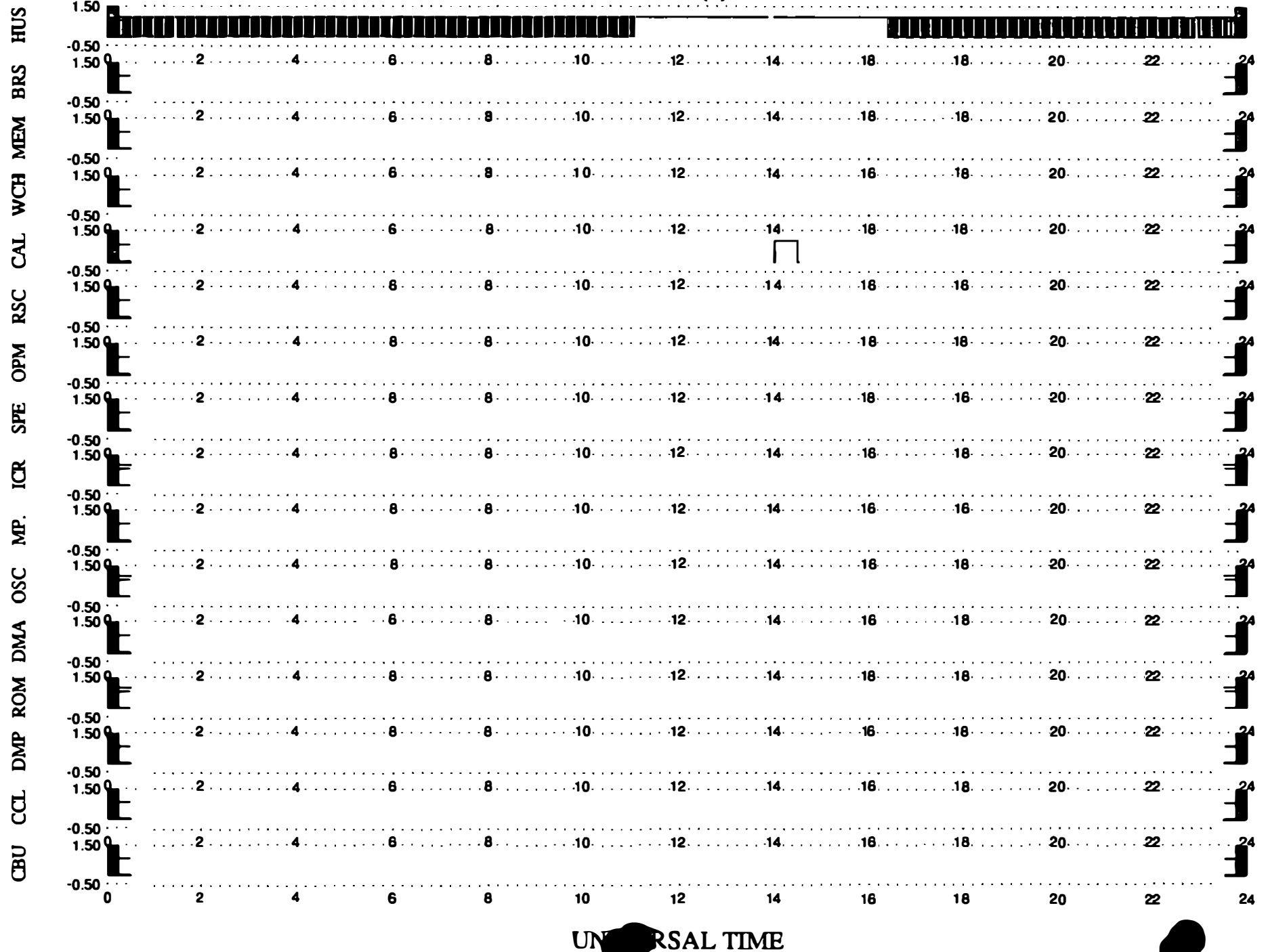
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

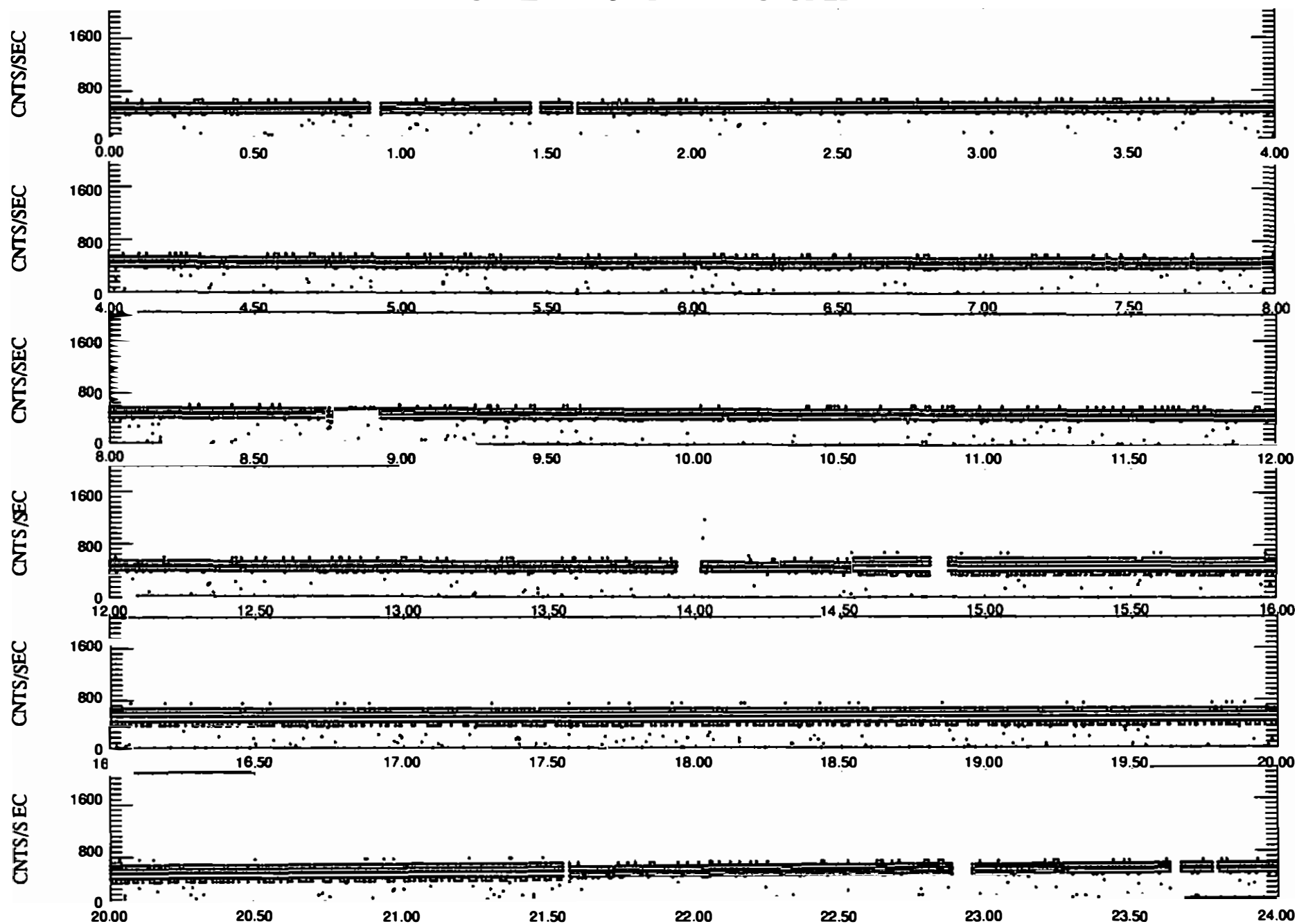
COMMENTS:

SAA EXIT

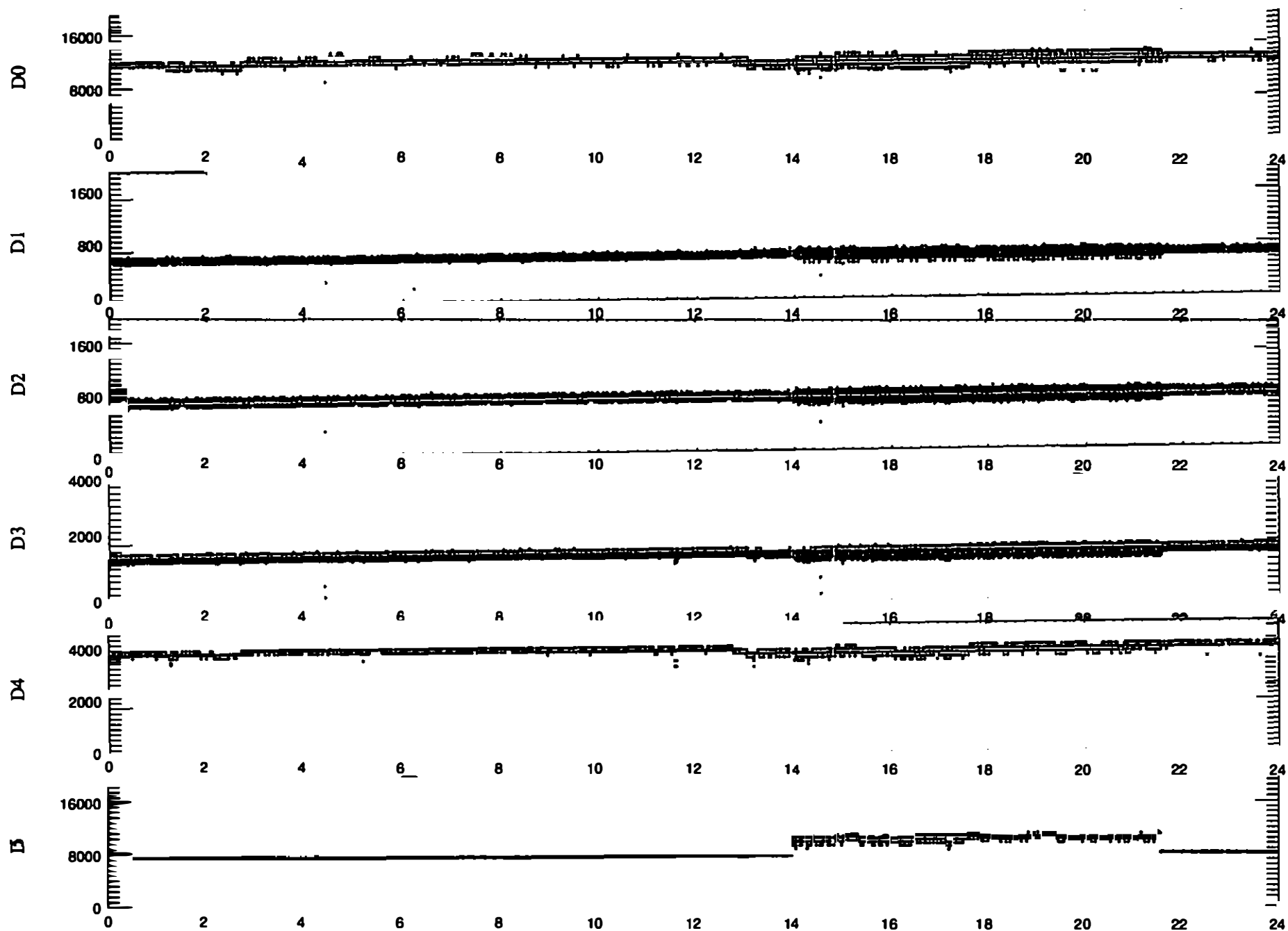
NO BURST (3)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From HAGEDON@fender.msfc.nasa.gov Fri Jun 21 08:51 PDT 1996
From: HAGEDON@fender.msfc.nasa.gov
Date: Fri, 21 Jun 1996 10:50:57 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5507

BATSEARCH PROGRAM

BATSE BURST # 5507
EVENT OF 1996 JUN 20 DAY OF YEAR=172
EVENT CROSSING TIME AT BATSE : 19535. S. OR 05:25:35.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 207.000 28.000
BATSE PEAK COUNTING RATE: 1600 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 20/ 6/ 96 IS:
RA= 151.747 DEC= 49.578 DIST= 4.478 AU
BATSE-ULYSSES DISTANCE = 669864098. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=133.13 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1527.70 SECS.
CROSSING TIME AT ULYSSES IS 18007. S. OR 05:00:07 +/- 309.89 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 20/ 6/ 96 IS:
RA= 63.340 DEC= 21.172 DIST= 2.344 AU
MARS-BATSE DISTANCE = 350588960. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 60.42 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 577.30 SECS.
CROSSING TIME AT MARS IS 20112. S. OR 05:35:12 +/- 185.34 SECONDS

BATSE BURST TRIGGER

NO.: 5507

TIME: TJD=0254 SECONDS=19535

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=76.2 AZIMUTH=101.5 ERROR=5.2 DEGREES

COMMENTS:

BURST. WEAK SINGLE PULSE. DUR.~10 SEC. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5507	960620	10254	19535	1600	207	+28	10

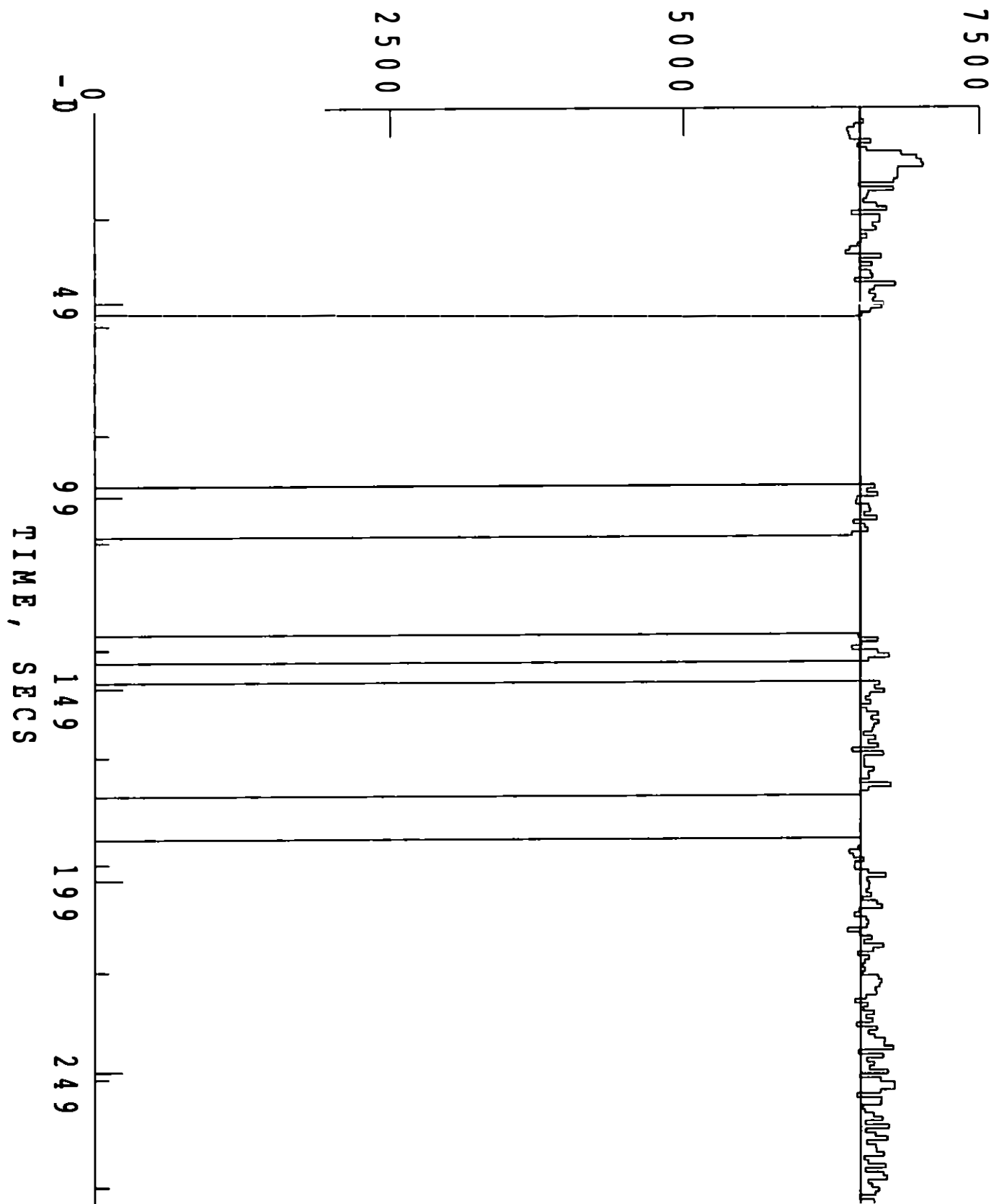
BACODINE

20/06/96

19523.273

25- 100 keV

COUNTS/1.024 S



BACODINE# 5507

21 / 6 / 96

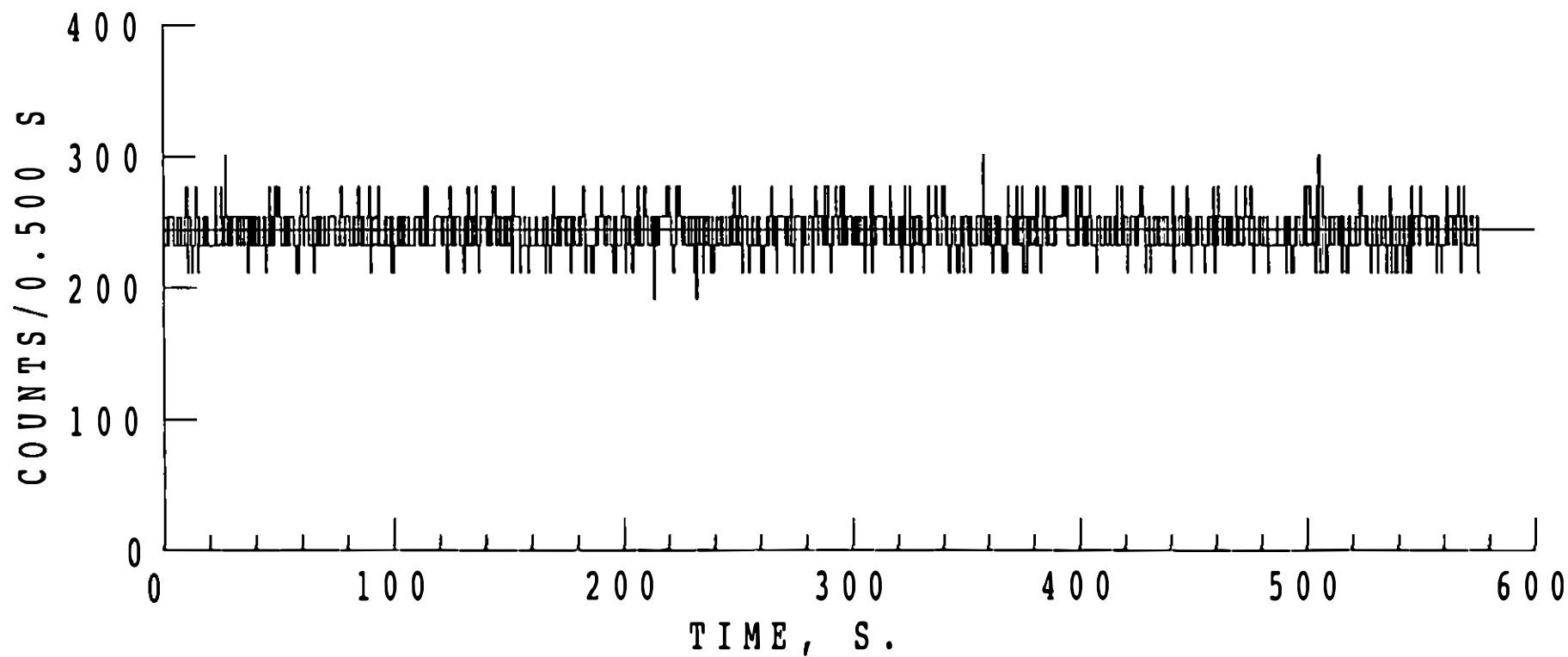
ULYSSES RT

20 / 6 / 96 17568.148 s

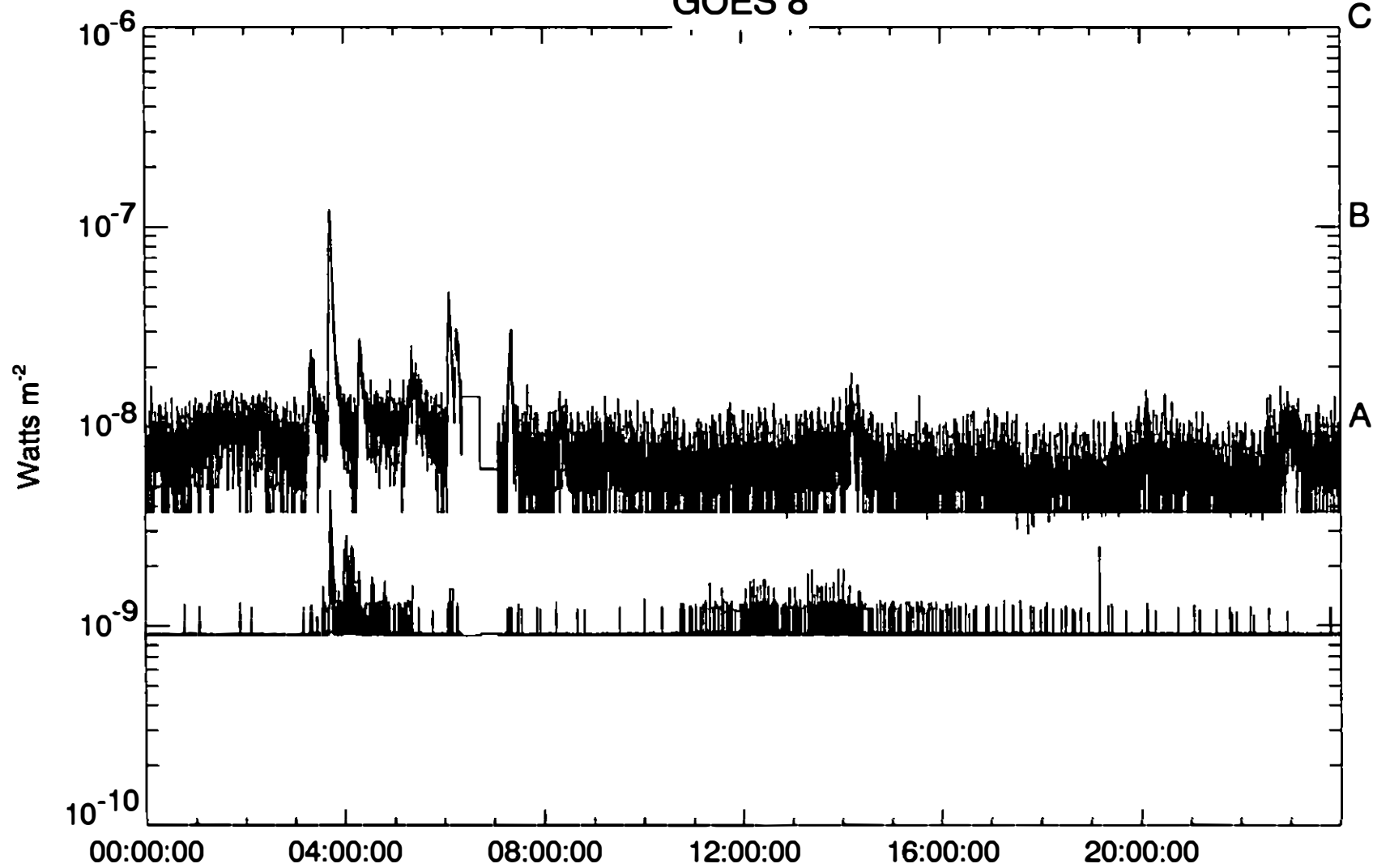
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



GOES 8

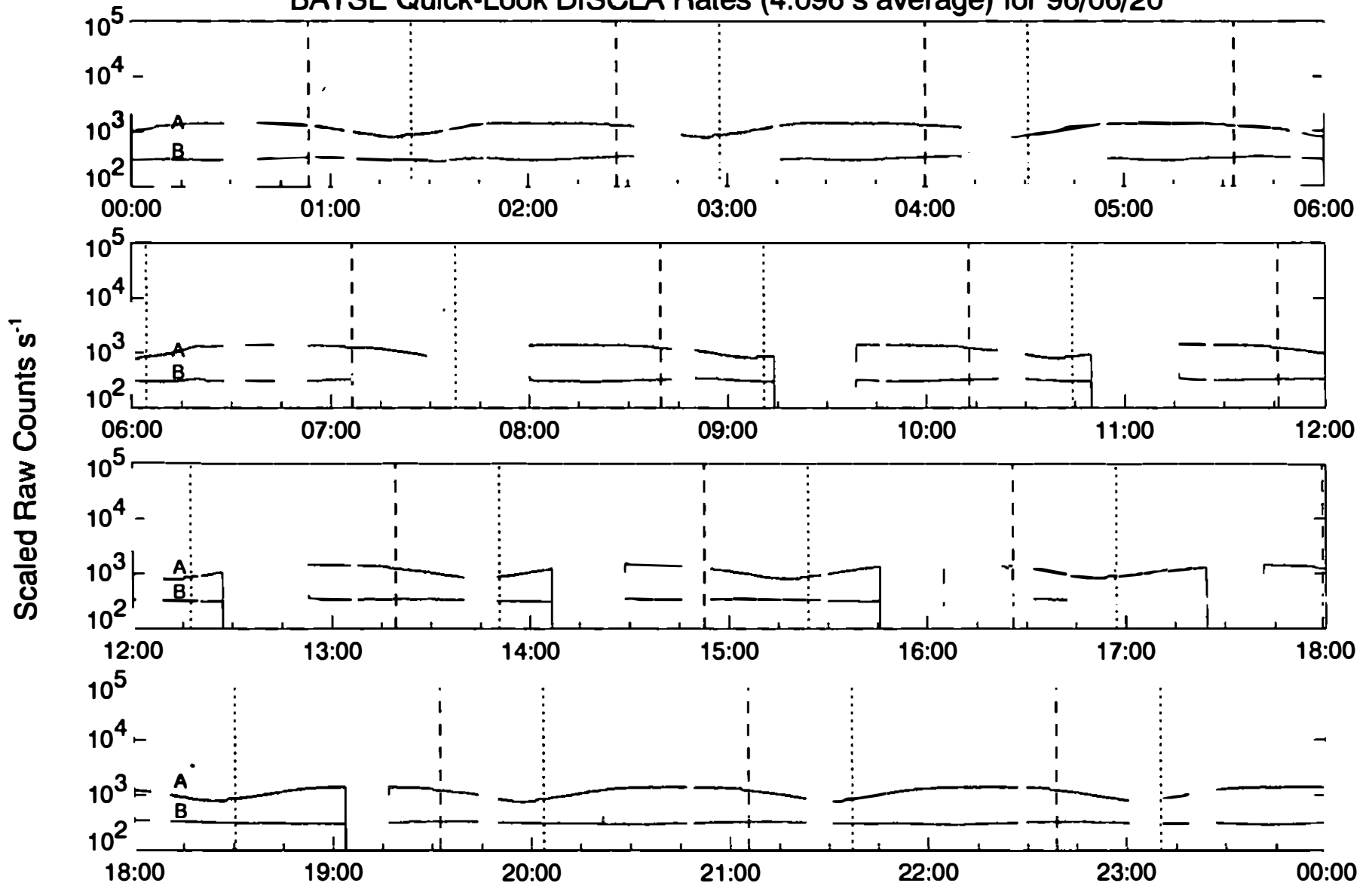


Data Start: 96/06/20, 0000:00

Plot created: 96/06/22, 1003

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

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/20

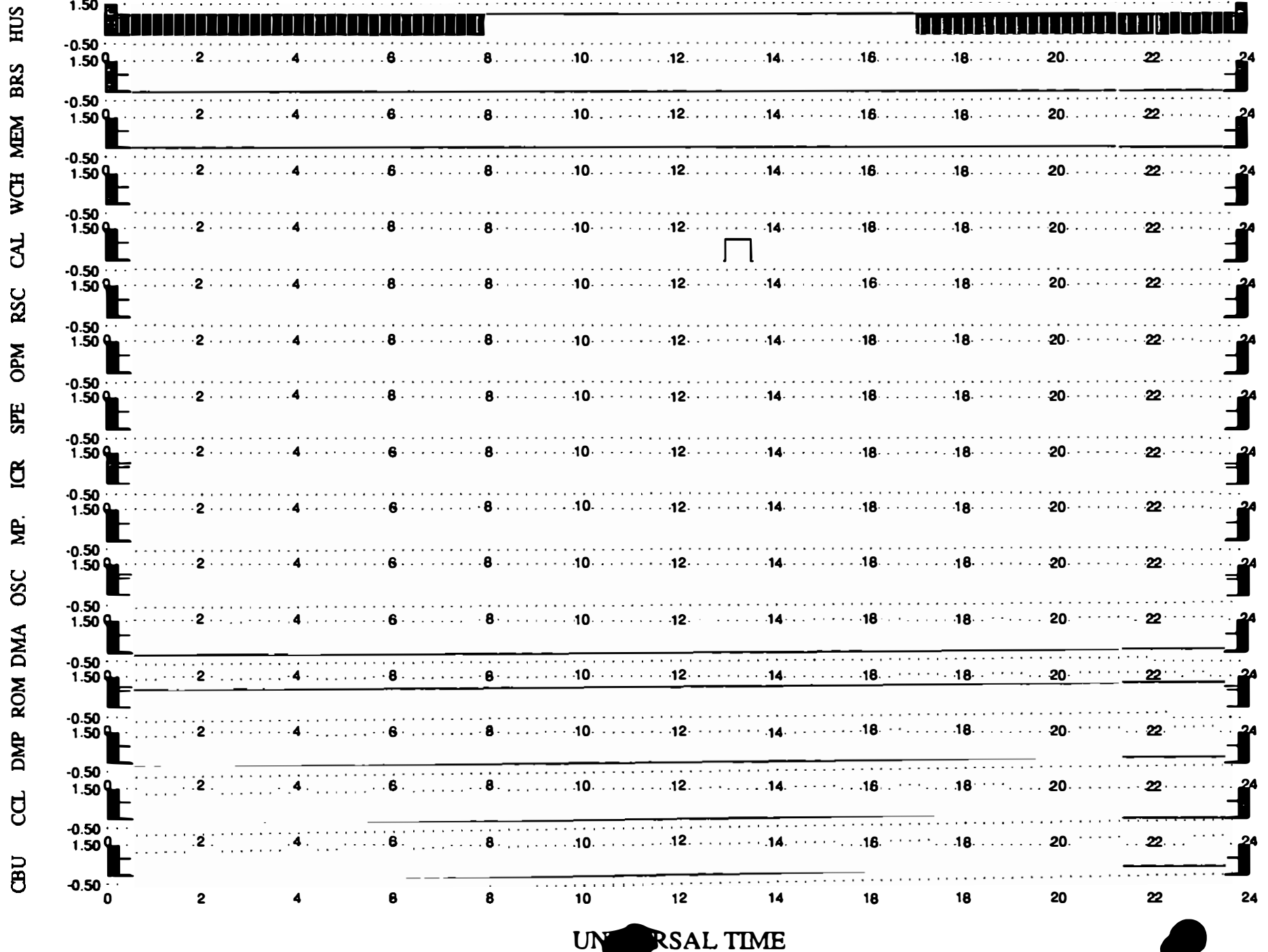


Current Time: 96/06/22, 1004 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

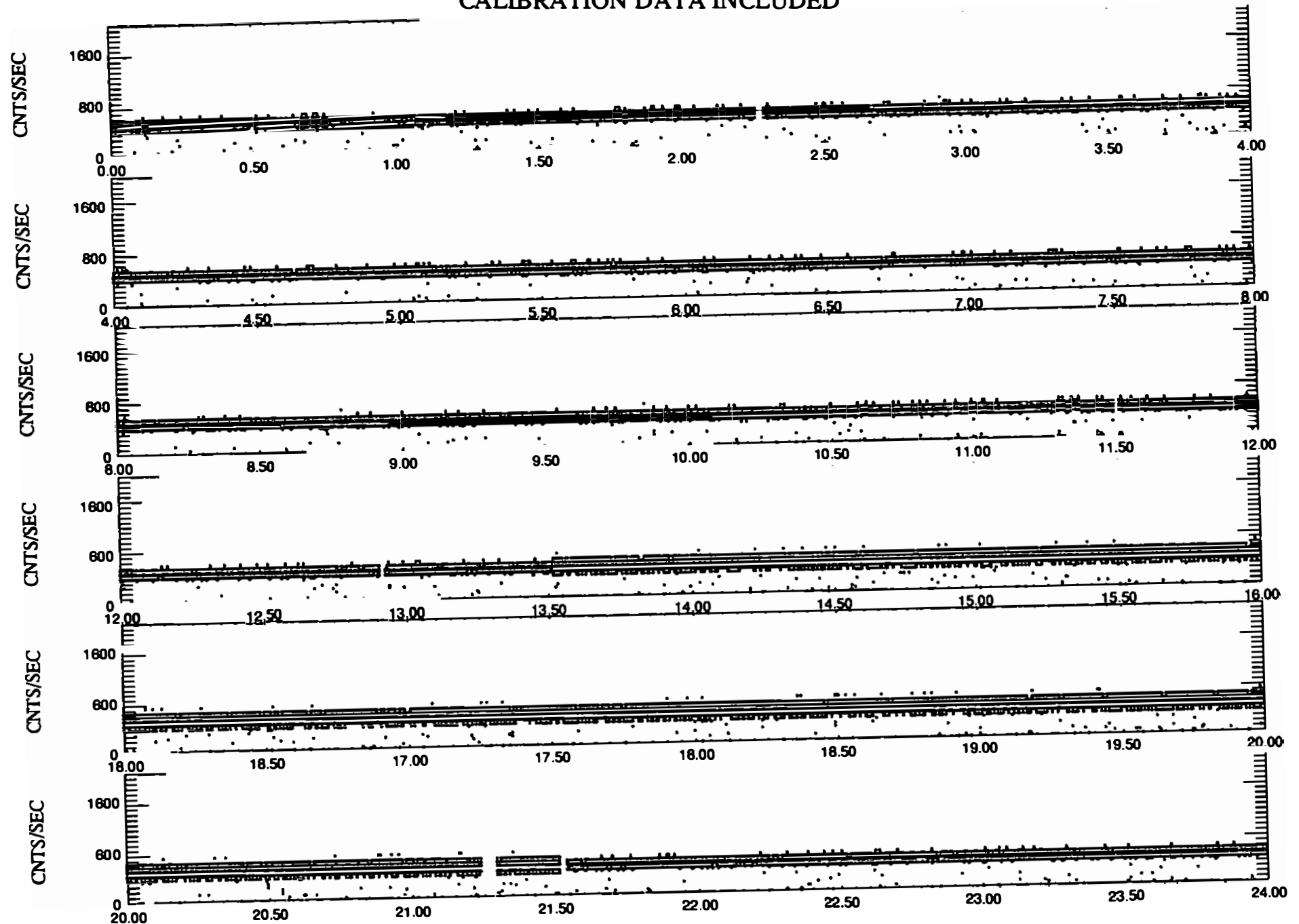
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

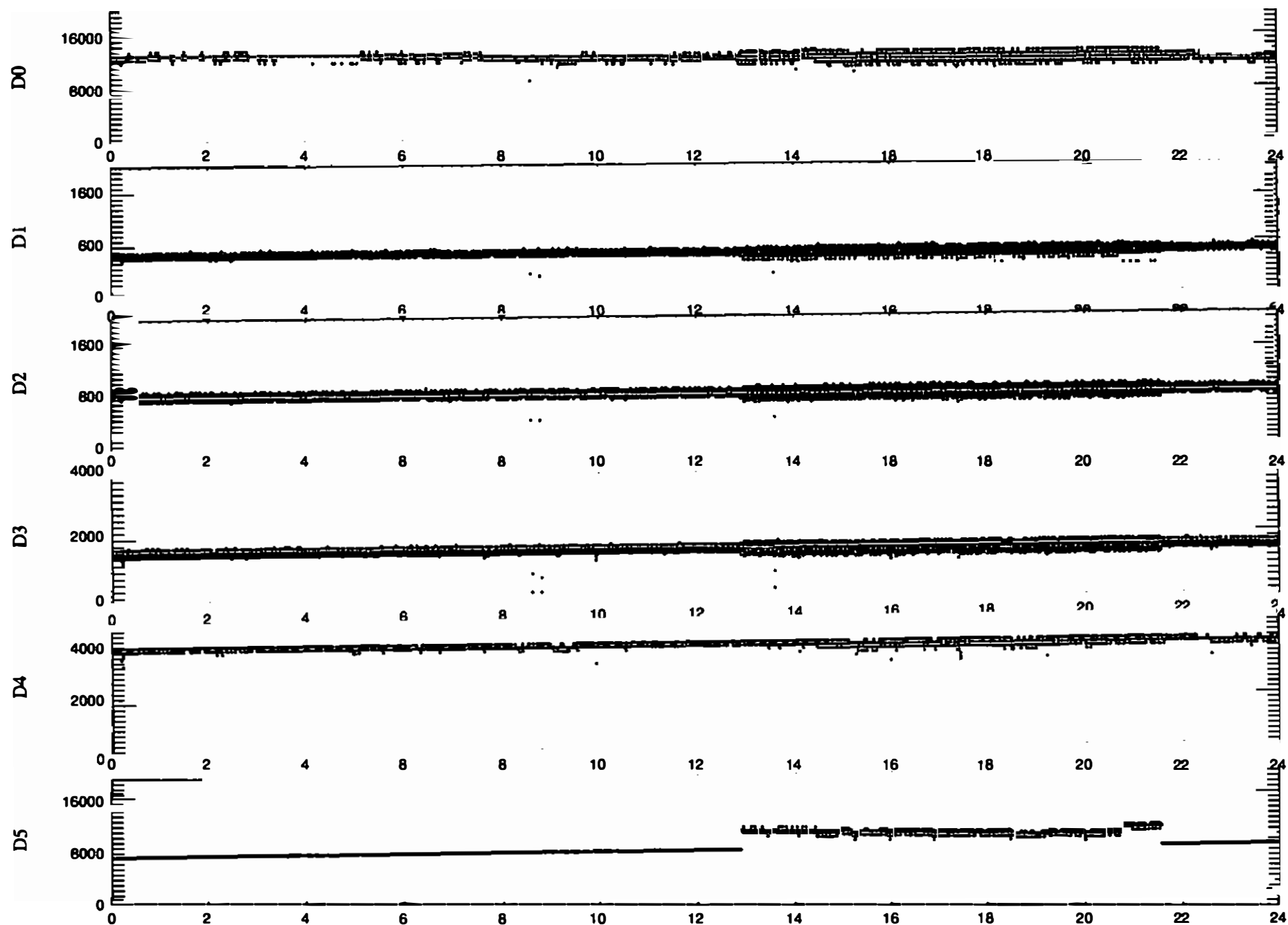
NO BURST (3)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From SURASAK@SSLLES.MSFC.NASA.GOV Tue Jun 25 12:19 PDT 1996
Date: Tue, 25 Jun 1996 14:18:55 -0500 (CDT)
From: SURASAK@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5508

BATSEARCH PROGRAM

NO

BATSE BURST # 5508
EVENT OF 1996 JUN 21 DAY OF YEAR=173
EVENT CROSSING TIME AT BATSE ; 8412. S. OR 02:20:12.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 356.000 14.000
BATSE PEAK COUNTING RATE: 3700 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 21/ 6/ 96 IS:
RA= 151.895 DEC= 49.382 DIST= 4.490 AU
BATSE-ULYSSES DISTANCE = 671742059. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 66.86 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 880.49 SECS.
CROSSING TIME AT ULYSSES IS 9292. S. OR 02:34:52 +/- 421.10 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 21/ 6/ 96 IS:
RA= 64.086 DEC= 21.308 DIST= 2.342 AU
MARS-BATSE DISTANCE = 350353984. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=115.17 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -497.00 SECS.
CROSSING TIME AT MARS IS 7915. S. OR 02:11:55 +/- 176.09 SECONDS

BATSE BURST TRIGGER

NO.: 5508

TIME: TJD=0255 SECONDS=8412

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=56.6 AZIMUTH=303.4 ERROR=5.836 DEGREES

COMMENTS:

GRB. DUR~8 SEC. SINGLE PEAK. NOT VISIBLE ABOVE 300 KEV.
SUCCESSIVE UNTRIGGERED PULSE AT T+465S IS AT THE SAME LOCATION.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5508	960621	10255	08412	3700	356	+14	8

BATSE #

5508

25 / 6 / 96

ULYSSES RT

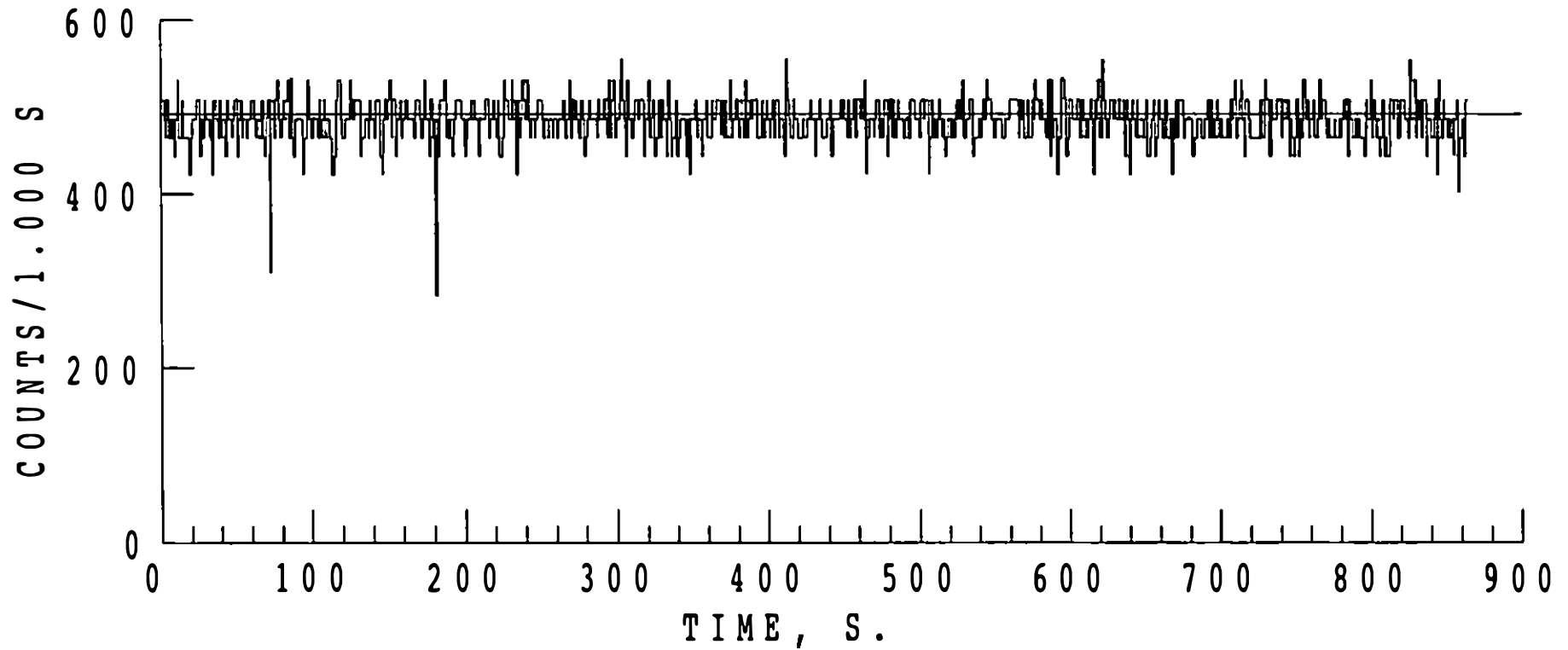
21 / 6 / 96 8856.166 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N=10 M=2

>4.0 SIGMA FLUCTUATIONS



From SURASAK@ssl.msfc.nasa.gov Wed Jun 26 09:37 PDT 1996
From: SURASAK@ssl.msfc.nasa.gov
Date: Wed, 26 Jun 1996 11:37:38 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5509

BATSEARCH PROGRAM

NO

BATSE BURST # 5509
EVENT OF 1996 JUN 21 DAY OF YEAR=173
EVENT CROSSING TIME AT BATSE : 17306. S. OR 04:48:26.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 91.000 32.000
BATSE PEAK COUNTING RATE: 2200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 21/ 6/ 96 IS:
RA= 151.912 DEC= 49.359 DIST= 4.492 AU
BATSE-ULYSSES DISTANCE = 671962555. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=132.12 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1503.16 SECS.
CROSSING TIME AT ULYSSES IS 15803. S. OR 04:23:22 +/- 315.84 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 21/ 6/ 96 IS:
RA= 64.086 DEC= 21.308 DIST= 2.342 AU
MARS-BATSE DISTANCE = 350353984. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=153.77 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1048.36 SECS.
CROSSING TIME AT MARS IS 16258. S. OR 04:30:57 +/- 73.74 SECONDS

BATSE BURST TRIGGER

NO.: 5509

TIME: TJD=0255 SECONDS=17306

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=113.3 AZIMUTH=12.0 ERROR=4.273 DEGREES

COMMENTS:

GRB. DUR~40S. SINGLE PEAK. NOT VISIBLE ABOVE 300 KEV.
POSSIBLE WEAK RECURSOR EMISSION BEGINNING AT ~ T-100S.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5509	960621	10255	17306	2200	091	+32	40

BATSE #

5509

26 / 6 / 96

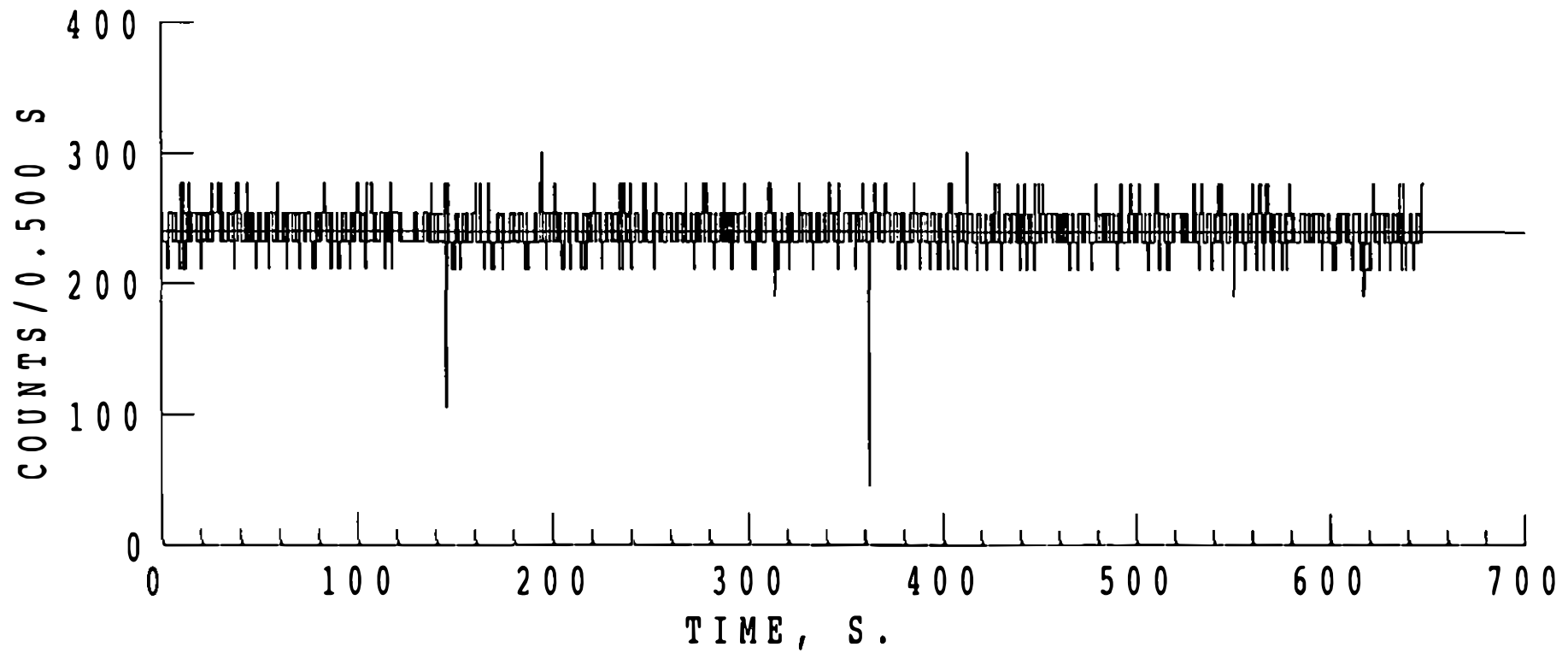
ULYSSES RT

21 / 6 / 96 15480.253 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From SURASAK@SSLLES.MSFC.NASA.GOV Tue Jun 25 12:45 PDT 1996
Date: Tue, 25 Jun 1996 14:44:33 -0500 (CDT)
From: SURASAK@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5510

BATSEARCH PROGRAM

ND

BATSE BURST # 5510
EVENT OF 1996 JUN 21 DAY OF YEAR=173
EVENT CROSSING TIME AT BATSE : 23685. S. OR 06:34:45.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 290.000 25.000
BATSE PEAK COUNTING RATE: 1950 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 21/ 6/ 96 IS:
RA= 151.925 DEC= 49.342 DIST= 4.493 AU
BATSE-ULYSSES DISTANCE = 672123415. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 83.18 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 266.21 SECS.
CROSSING TIME AT ULYSSES IS 23951. S. OR 06:39:11 +/- 440.53 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 21/ 6/ 96 IS:
RA= 64.086 DEC= 21.308 DIST= 2.342 AU
MARS-BATSE DISTANCE = 350353984. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 64.29 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 507.06 SECS.
CROSSING TIME AT MARS IS 24192. S. OR 06:43:12 +/- 190.50 SECONDS

BATSE BURST TRIGGER

NO.: 5510

TIME: TJD=0255 SECONDS=23685

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=7.2 AZIMUTH=166.7 ERROR=2.836 DEGREES

COMMENTS:

GRB. DUR~50 S. DOUBLE PEAKS. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5510	960621	10255	23685	1950	290	+25	50

BATSE #

5510

25 / 6 / 96

ULYSSES RT

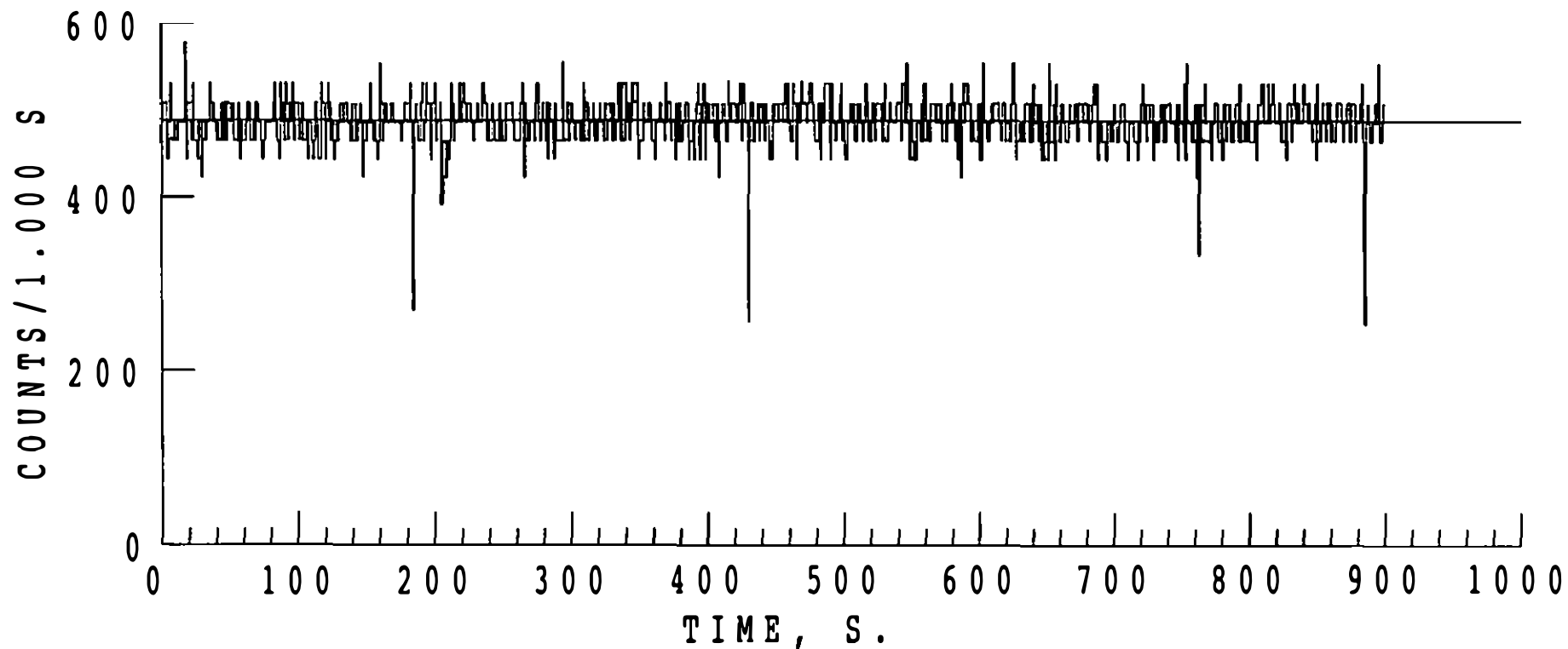
21 / 6 / 96 23508.354 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N = 10 M = 2

>4.0 SIGMA FLUCTUATIONS



From SURASAK@ssl.msfc.nasa.gov Tue Jun 25 13:27 PDT 1996
From: SURASAK@ssl.msfc.nasa.gov
Date: Tue, 25 Jun 1996 14:55:47 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5511

BATSEARCH PROGRAM

BATSE BURST # 5511 NO
EVENT OF 1996 JUN 21 DAY OF YEAR=173
EVENT CROSSING TIME AT BATSE : 80609. S. OR 22:23:29.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 72.000 57.000
BATSE PEAK COUNTING RATE: 1400 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 21/ 6/ 96 IS:
RA= 152.037 DEC= 49.195 DIST= 4.502 AU
BATSE-ULYSSES DISTANCE = 673529710. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=134.14 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1564.57 SECS.
CROSSING TIME AT ULYSSES IS 79044. S. OR 21:57:24 +/- 306.16 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 21/ 6/ 96 IS:
RA= 64.086 DEC= 21.308 DIST= 2.342 AU
MARS-BATSE DISTANCE = 350353984. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=143.84 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -943.49 SECS.
CROSSING TIME AT MARS IS 79666. S. OR 22:07:45 +/- 105.40 SECONDS

BATSE BURST TRIGGER

NO.: 5511

TIME: TJD=0255 SECONDS=80609

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=84.5 AZIMUTH=13.5 ERROR=8.468 DEGREES

COMMENTS:

GRB. WEAK SINGLE PULSE, DUR~8S. NOT VISIBLE ABOVE 300 KEV. SPARSE DATA.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5511	960621	10255	80609	1400	072	+57	8

BATSE #

5511

25 / 6 / 96

ULYSSES RT

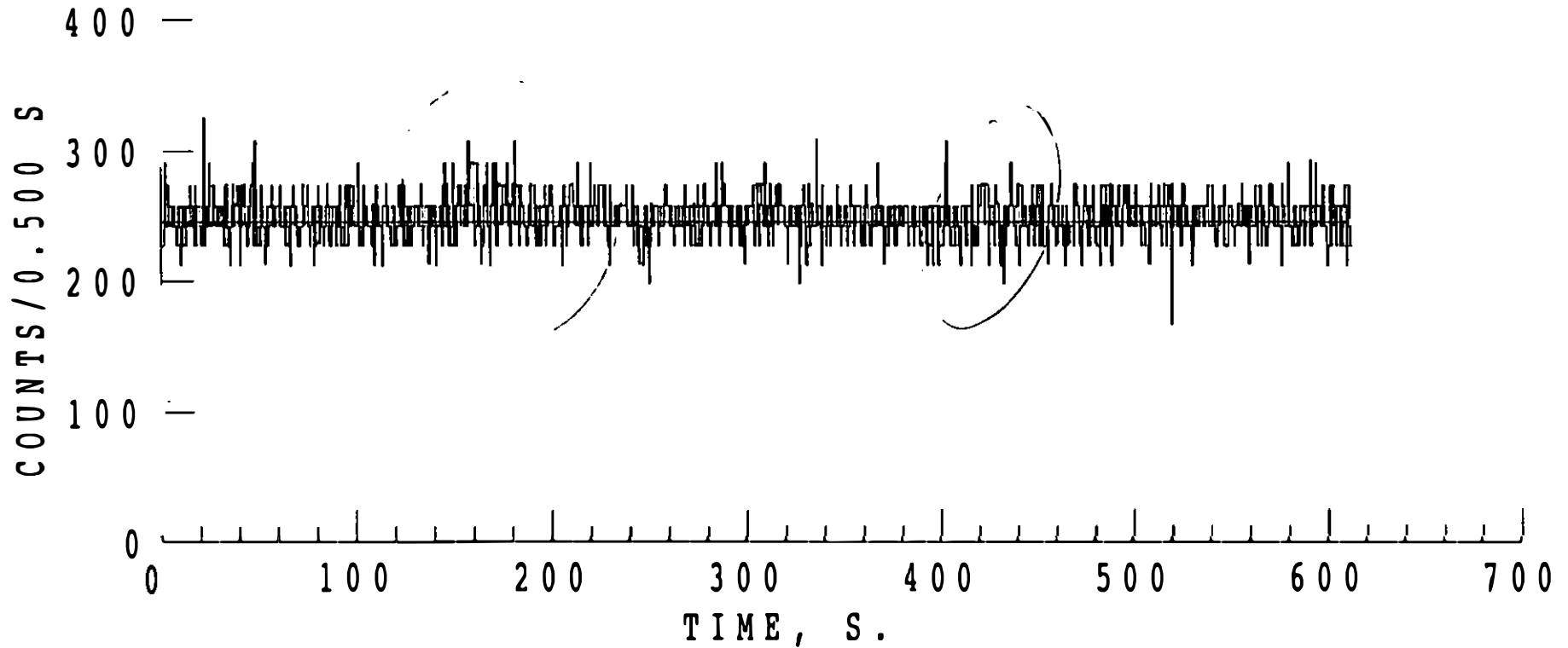
21 / 6 / 96 78732.078 s

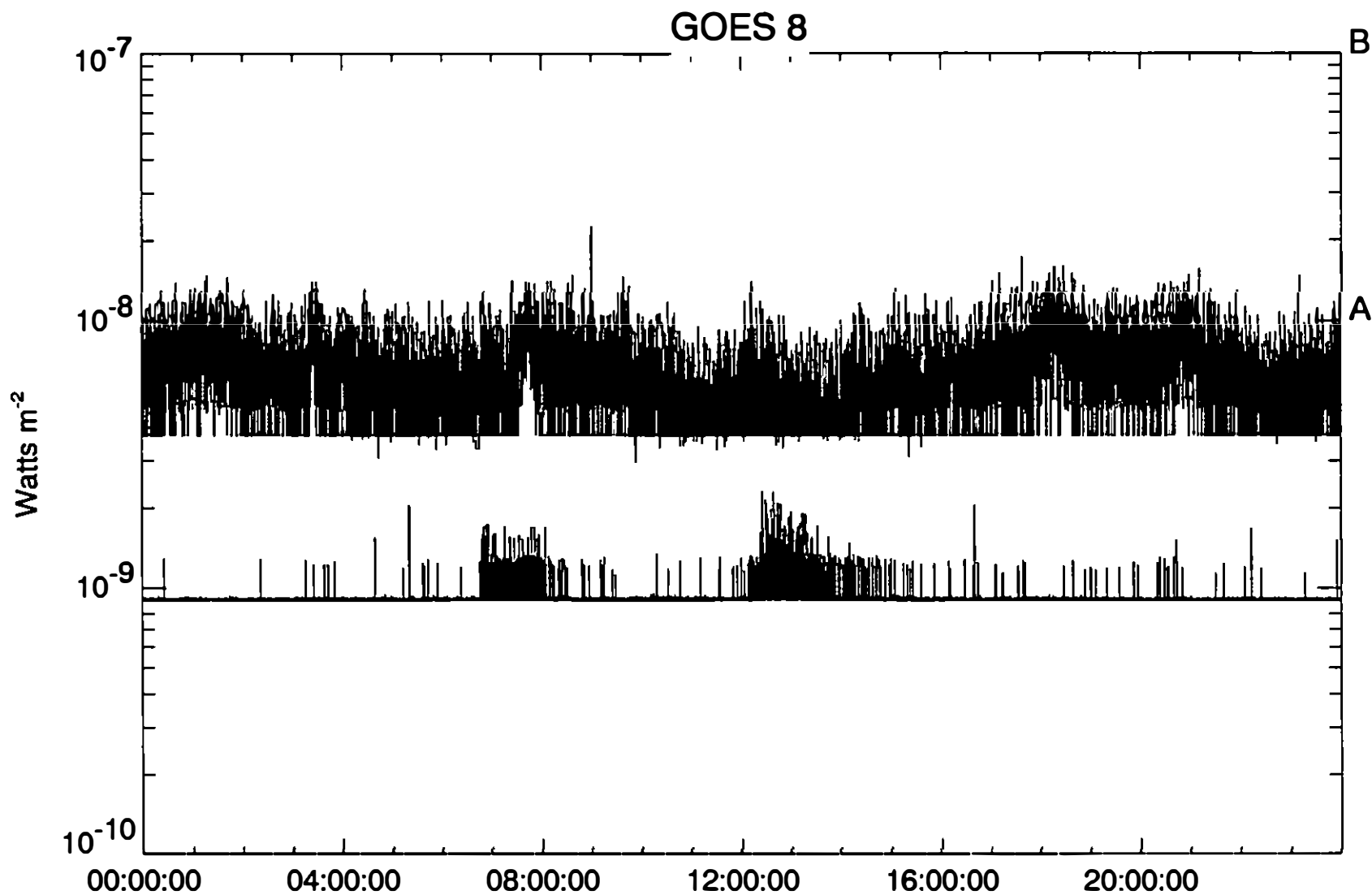
0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N=10 M=2

>4.0 SIGMA FLUCTUATIONS





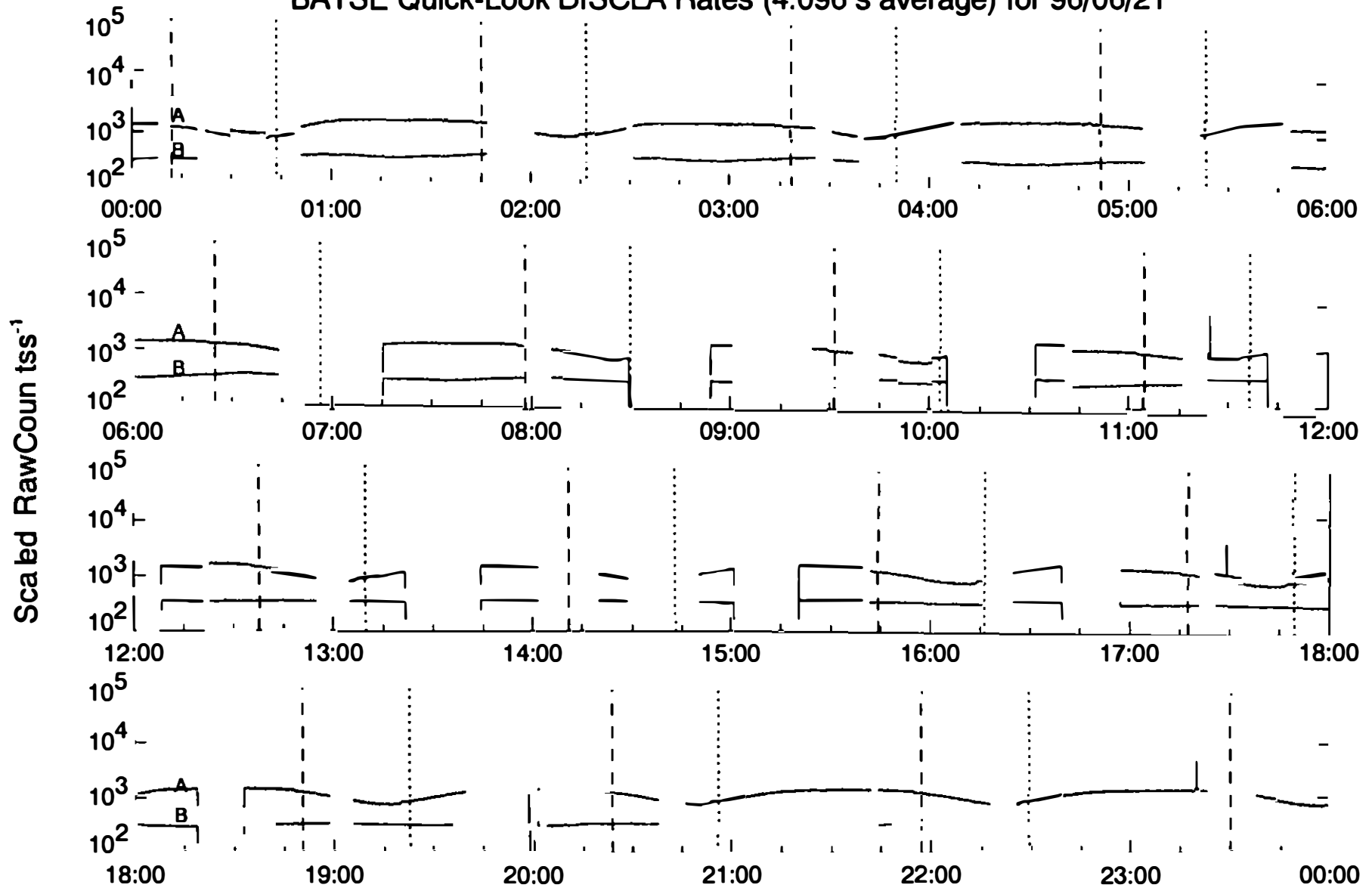
Data Start: 96/06/21, 0000:00

Plot created: 96/06/23, 1003

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/21



Current Time: 96/06/23, 1004 EDT

A: Channel 0 Most Sunward LAD

B: Sum Channel 0 Anti-Sunward LADs X .05

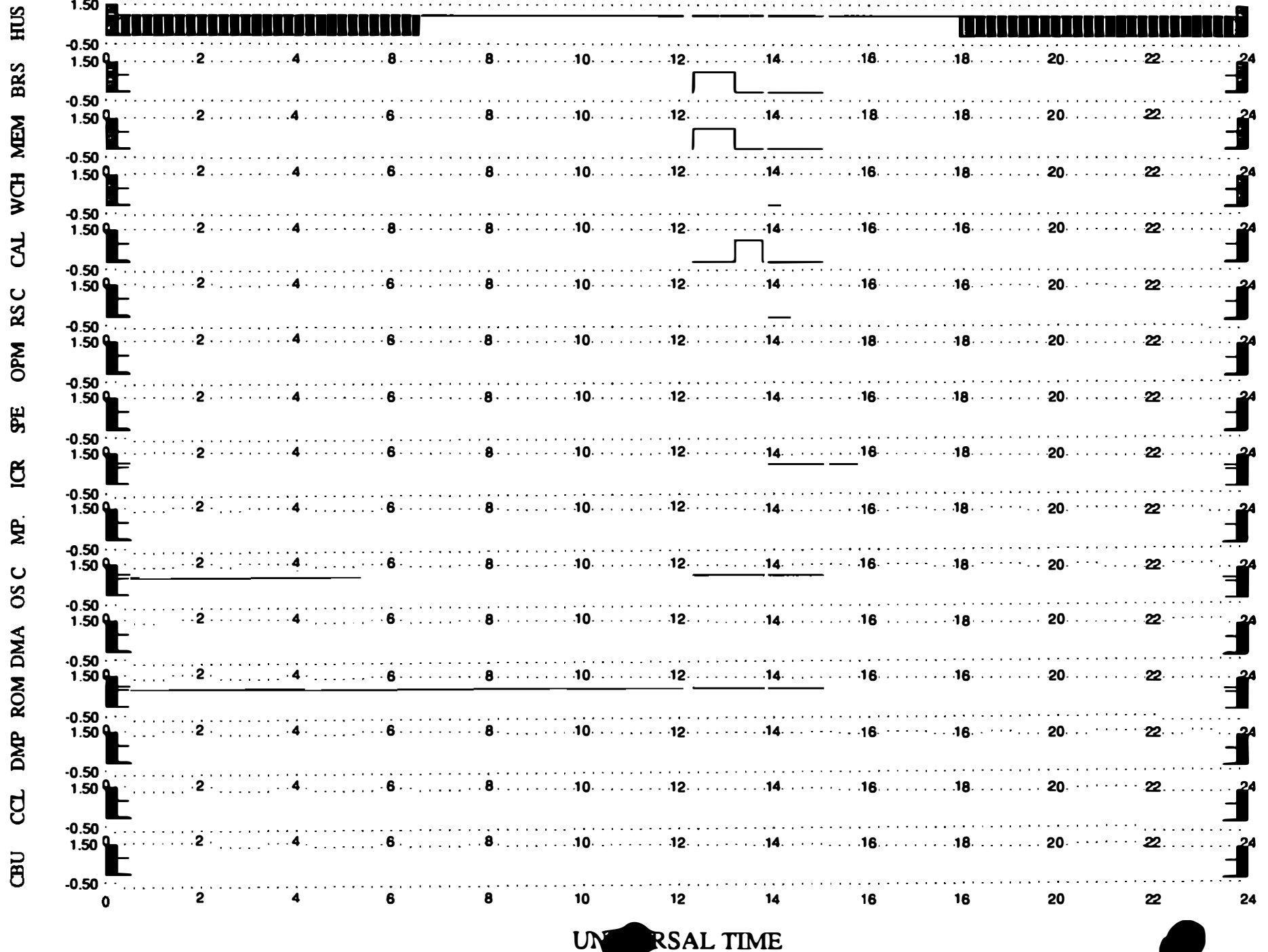
Dotted line: Day entry

Dashed line: Night entry

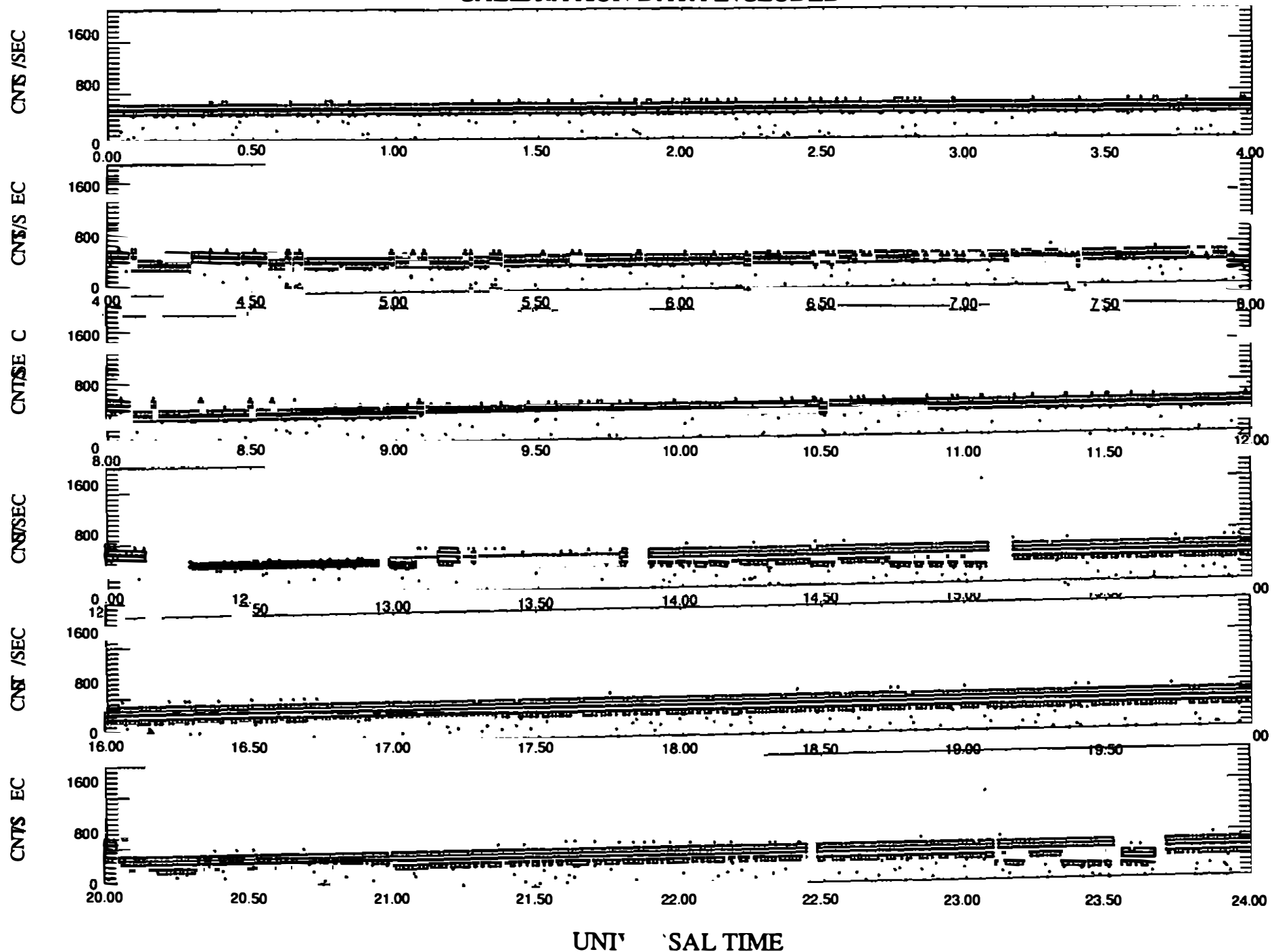
* Solar Burst Trigger

+ Solar Flare

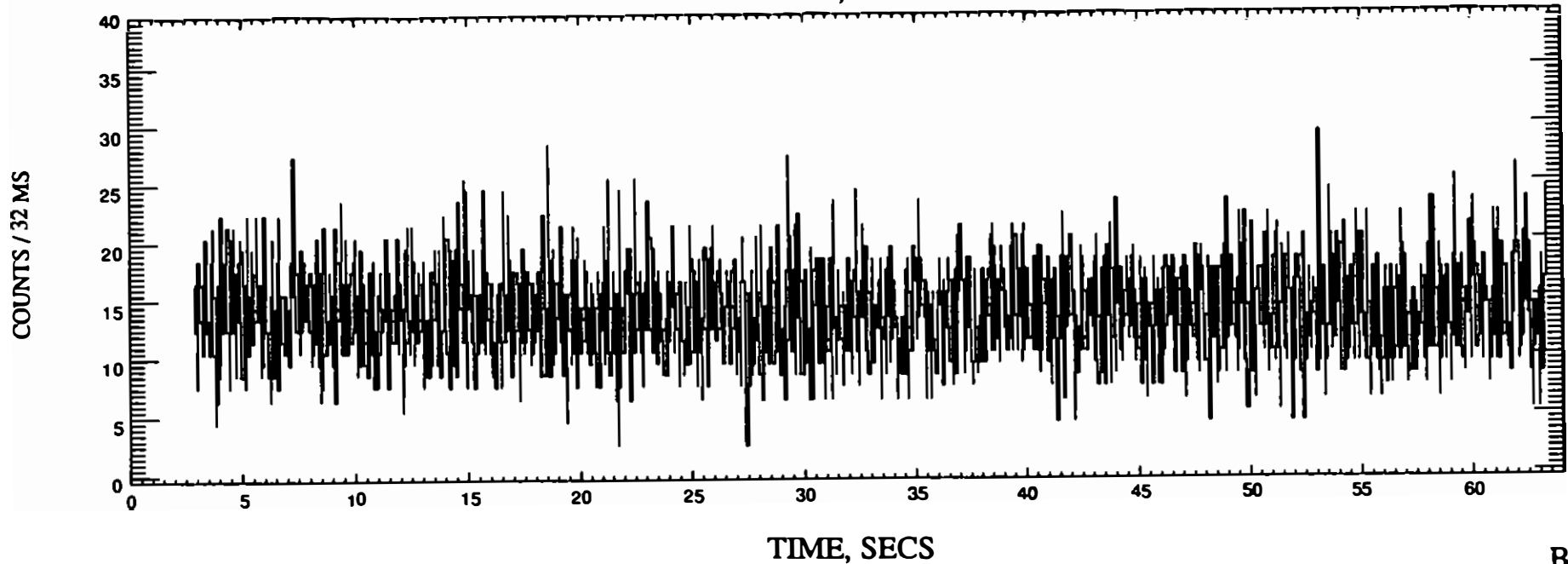
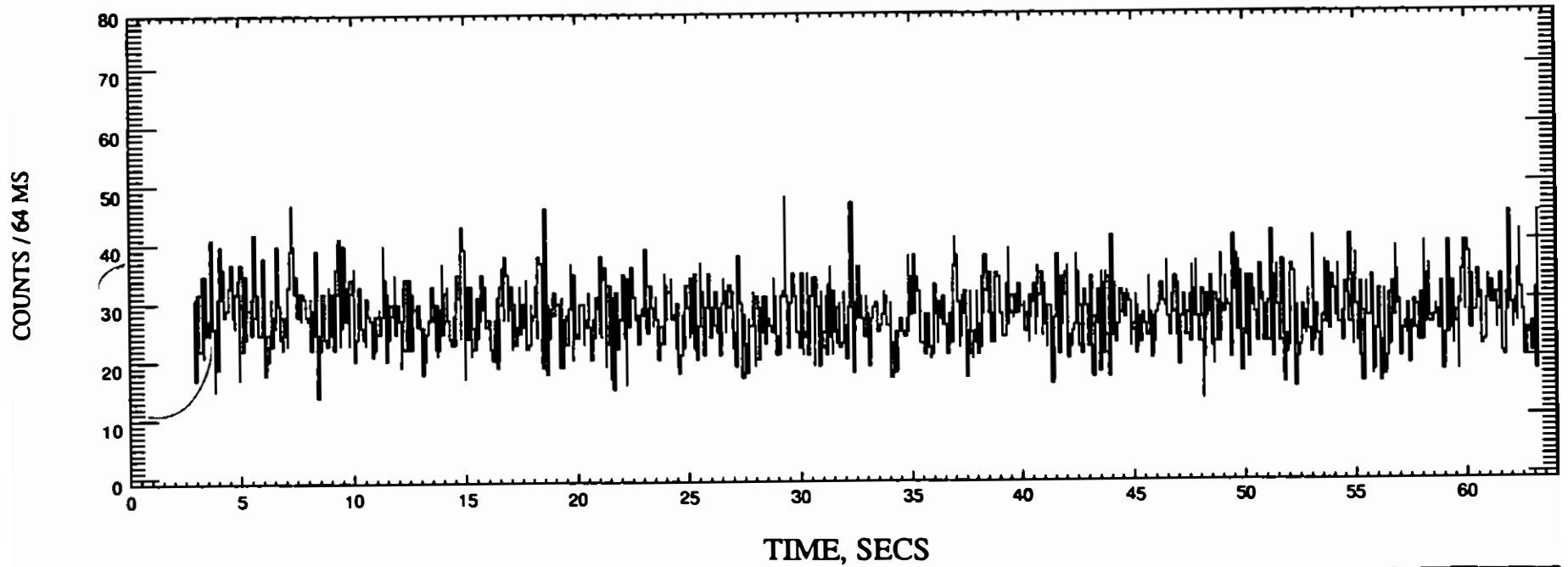
BURST NUMBER 4

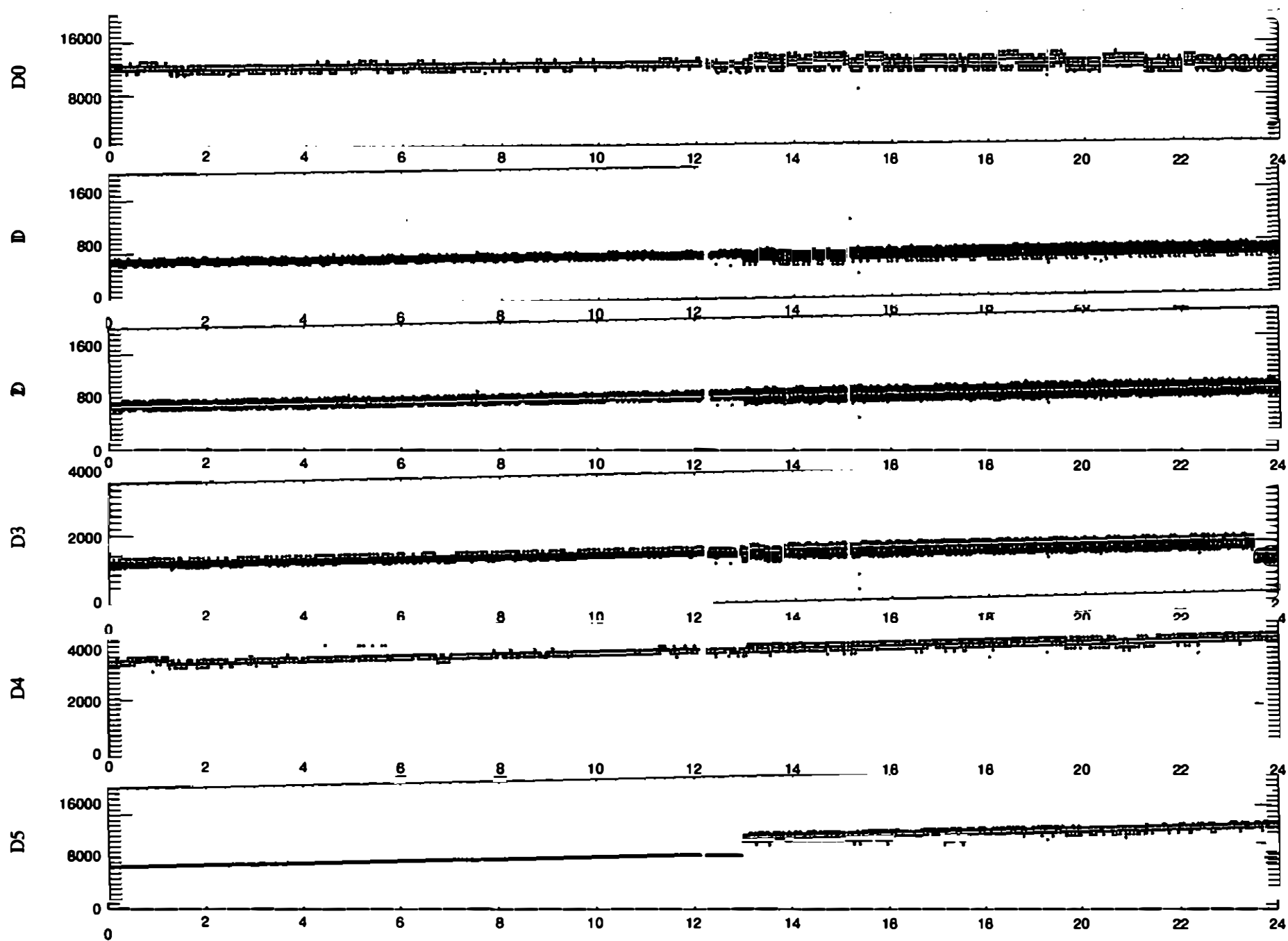


CALIBRATION DATA INCLUDED



Burst Counter 4 at UT=13.183447706434 h=47460.412 s 13:11:00.412 Wrong time - data gap





UNIVERSAL TIME

From BUTTERWORTH@LHEAVX.GSFC.NASA.GOV Thu Jun 27 09:51 PDT 1996

From: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV

Date: Thu, 27 Jun 1996 12:52:40 -0400 (EDT)

To: khurley@sunspot.ssl.berkeley.edu, kmarar@isac.ernet.in, jterrell@lanl.gov,
yosimori@rikkyo.ac.jp, CLINE@LHEAVX.GSFC.NASA.GOV,
scott@rosserv.gsfc.nasa.gov, TEEGARDEN@LHEAVX.GSFC.NASA.GOV

CC: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV

Subject: Konus did not detect the Ulysses event near 18:13 UT on June 22

Hi Everyone,

Konus did not trigger near the Ulysses event and there are no events visible in the waiting-mode data (accumulated in 3 second intervals).

Paul.

Date: Thu, 27 Jun 1996 09:33:10 -0700

From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)

Message-Id: <199606271633.JAA28175@scylla.berkeley.edu>

To: scott@lheamail.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu,
butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
kmarar@isac.ernet.in, teegarden@lheavx.gsfc.nasa.gov,
jterrell@lanl.gov, yosimori@rikkyo.ac.jp

Subject: 960622

X-Sun-Charset: US-ASCII

YSSSES GAMMA-RAY BURST NOT REPORTED BY BATSE:

Ulysses triggered on a very weak, 32 ms long event June 22 1996 around 18:13 UT at Ulysses.

The spacecraft was about 2175 light-seconds from Earth.

Was these events detected by anyone else?

CC: ulyssesbursts alias list

(barthelmy, butterworth, cline, marar, teegarden, terrell, yoshimori)

96	2	29	22445.141	S2	740	1520	550	0.3	0.5	8	250	Search	
96	3	5	33645.352	S1	440	390	70	>10	0.8	1.8	251	Search	
96	3	12	35074.697	S2	160	730	330	<0.25	0.2	0.1	252	Search	
96	3	19	51992.828	S1		800	970	>7	0.16	0.4	253	RT	S222
96	3	21	76321.803	S2	4600	4550	1020	0.03	42	46	254	Trig	S293
96	3	22	19642.728	S1	1060	1760	1120	40	2	28	255	Trig	S304
96	3	24	80064.124	S2	320	520	150	0.07	1	14	257	Search	
96	3	25	69892.978	S1	250	620	460	6	0.5	0.5	258	NO	S339
96	3	31	21208.784	S1	220	520	120	4.4	2	24	271	RT	S369
96	4	4	25289.264	S2	420	750	240	0.07	4	9	272	Search ± 1750	
96	4	9	77143.618	S2	650	1170	420	0.17	0.5	5	273	RT KA	S417
96	4	10	80648.201	S2	190	330	140	<0.05	1	35	274	Search ± 1750	
96	4	18	06106.854	S1	200	330	70	1	2	2	277	RT KA	S418
96	4	18	08271.303	S2	350	770	50	<0.1	3	30	278	Search KA ± 1750	
96	4	18	66796.140	S1	1160	1000	50	10	1	3	290	Trig	S436
96	4	20	17324.809	S2	300	1190	1080	1	0.3	0.04	303	Search ± 1750	
96	4	22	59981.190	S2	160	410	140	0.5	4	12	305	RT	S443
96	4	25	86395.862	S2	1300	730		<0.04	44	16	306	Search KA ± 1750	
96	4	28	47556.501	S2	270	420	230	<0.04	1	170	307	RT	S450
96	4	30	49895.524	S1	250	640	180	8	8	18	309	RT KA	S451
96	5	1	31344.546	S1	380	870	350	3.7	20	56	310	Search ± 2050	
96	5	6	47384.998	S1	160	490	190	1.1	3	6	312	Search ± 2050	
96	5	7	44869.909	S2	460	760	290	0.03	20	98	313	Search ± 2050	
96	5	10	38723.598	S2	560	1300	330	0.1	1	7	317	Trig	
96	5	19	14766.283	S2	1700	7700	8000	0.4	0.1	0.56	319	Search ± 2050	
96	5	21	62489.430	S1	330	500	90	5.8	1	8	320	Search ± 2050	
96	5	23	59522.013	S1	270	550	580	10	1	3	321	RT	S470
96	5	29	43663.061	S2	1700	4000	5000	0.15	0.5	3.5	322	Trig	S477
96	5	29	80722.705	S2	420	620	140	0.1	1	14	323	Trig KA	
96	5	30	62300.750	S1	180	400	110	>20	2	14	324	Search ± 2050	
96	5	31	06926.043	S1	300	440	120	4.7	50	7	325	Search ± 2050	
96	5	31	73498.259	S2	1600	4250	2800	0.5	27	19	326	Trig	
96	6	2	42664.032	S1	1000	1450	1400	>2	0.3	0.03	327	Search ± 2050	
96	6	5	29392.672	S1	400	950	410	1.3	2	87	328	RT	S486
96	6	7	78106.176	S2	890	1280	550	0.04	32	120	329	RT	S489
96	6	10	84502.254	S2	200	1000	1500	0.9	0.16	0.11	330	Search ± 2050	
96	6	12	71198.677	S1	650	2800	2700	1.4	0.5	18	331	Trig	
96	6	14	67654.516	S1	80	1800	1600	1	0.18	0.1	332	Search ± 2050	
96	6	17	76195.941	S1	350	560		>8	1	0.6	333	NO	S504
96	6	22	74906.054	S2	100	360	280	0.2	4	8	334	Search ± 2050	NO
96	6	23	04734.229	S2	130	320	150	0.5	7	25	335	RT KA	S512
96	6	23	77186.871	S2	250	350	130	0.05	6	15	336	Search ± 2050	
96	6	25	16949.252	S1	180	280	70	4.6	6	9	337	RT	S518
96	6	28	19224.223	S2	500	410	120	0.06	12	6	338	RT	S523
96	7	2	54698.284	S1	280	350	70	2.8	23	85	339	RT	S525
96	7	3	65443.861	S1	200	560	600	3	1	0.4	340	NO	S527
96	7	7	36999.311	S2	1600	1200		0.06	2	5	341	RT	S530
96	7	8	72577.095	S2	900	820	160	0.2	1	6	342	Search ± 2300	
96	7	9	00246.641	S1	260	1000	400	0.95	15	4	343	Trig KA	
96	7	10	00662.014	S2	1800	4700	3600	0.13	0.5	48	345	Trig	
96	7	11	63757.543	S1	560	2400	900	1.25	0.5	19	346	Trig	
96	7	11	68451.869	S2	200	360	170	<0.07	2	41	347	Search ± 2300	
96	7	22	25522.448	S2	360	650	170	0.27	17	151	348	RT	S548
96	7	22	56346.728	S1	700	1000	200	2.6	3	6	349	Search ± 2300	
96	7	27	43056.737	S2	500	1000	500	0.7	0.5	15	350	Search ± 2350	
96	7	31	20761.638	S2	800	1160	170	0.9	0.5	4	353?	RT	S557
96	8	3	67525.033	S1	4000	8000	3000	3	0.02	0.18	354	Trig KA	S561
96	8	4	84535.906	S2	2000	2600	600	<0.03	0.5	2	355	Trig KA	S563
96	8	5	78957.888	S2	1270	2360	380	0.05	1	20	356	Trig	
96	8	6	80989.772	S2	420	850	250	1	86	10	357	RT	S566

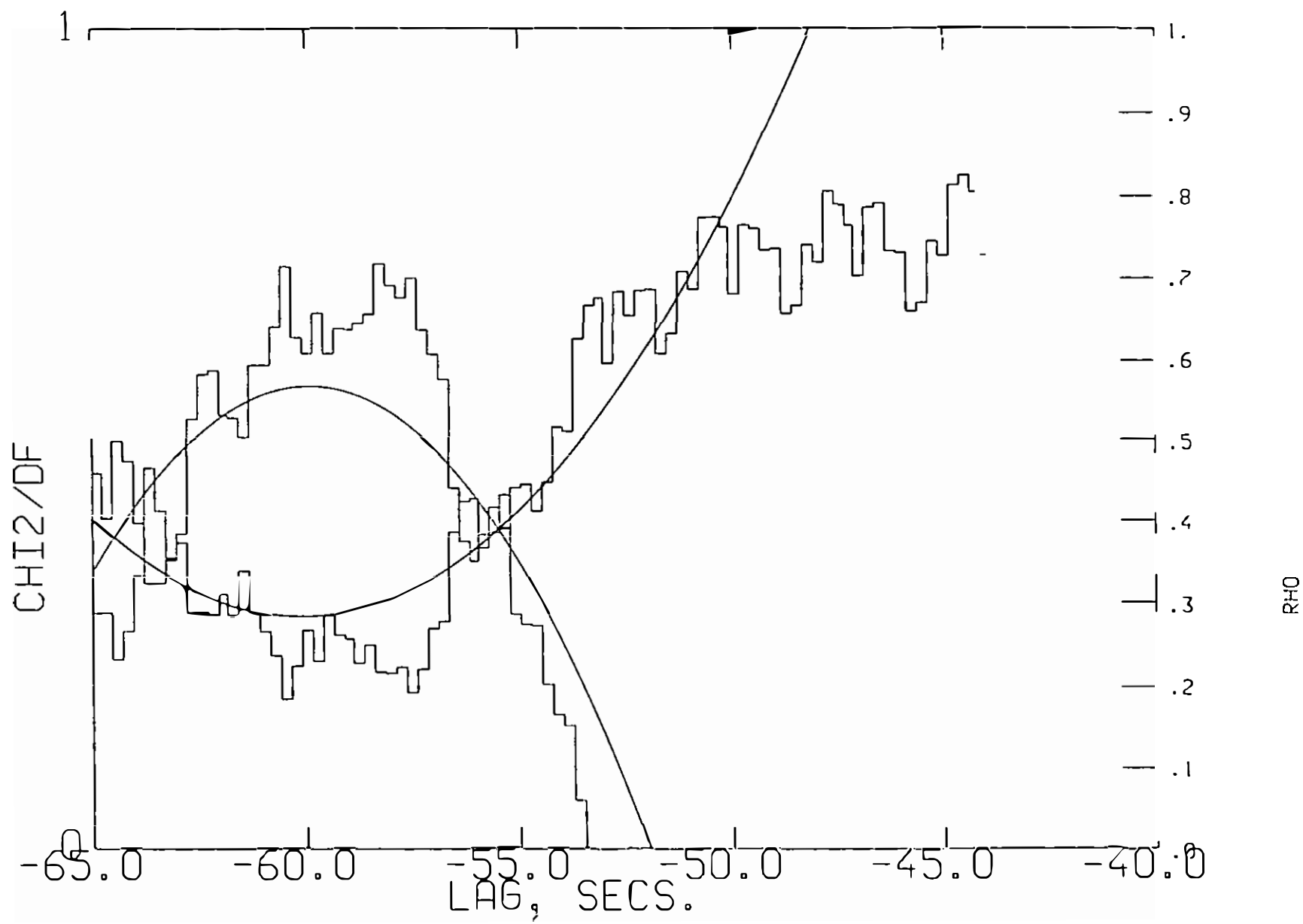
KONUS

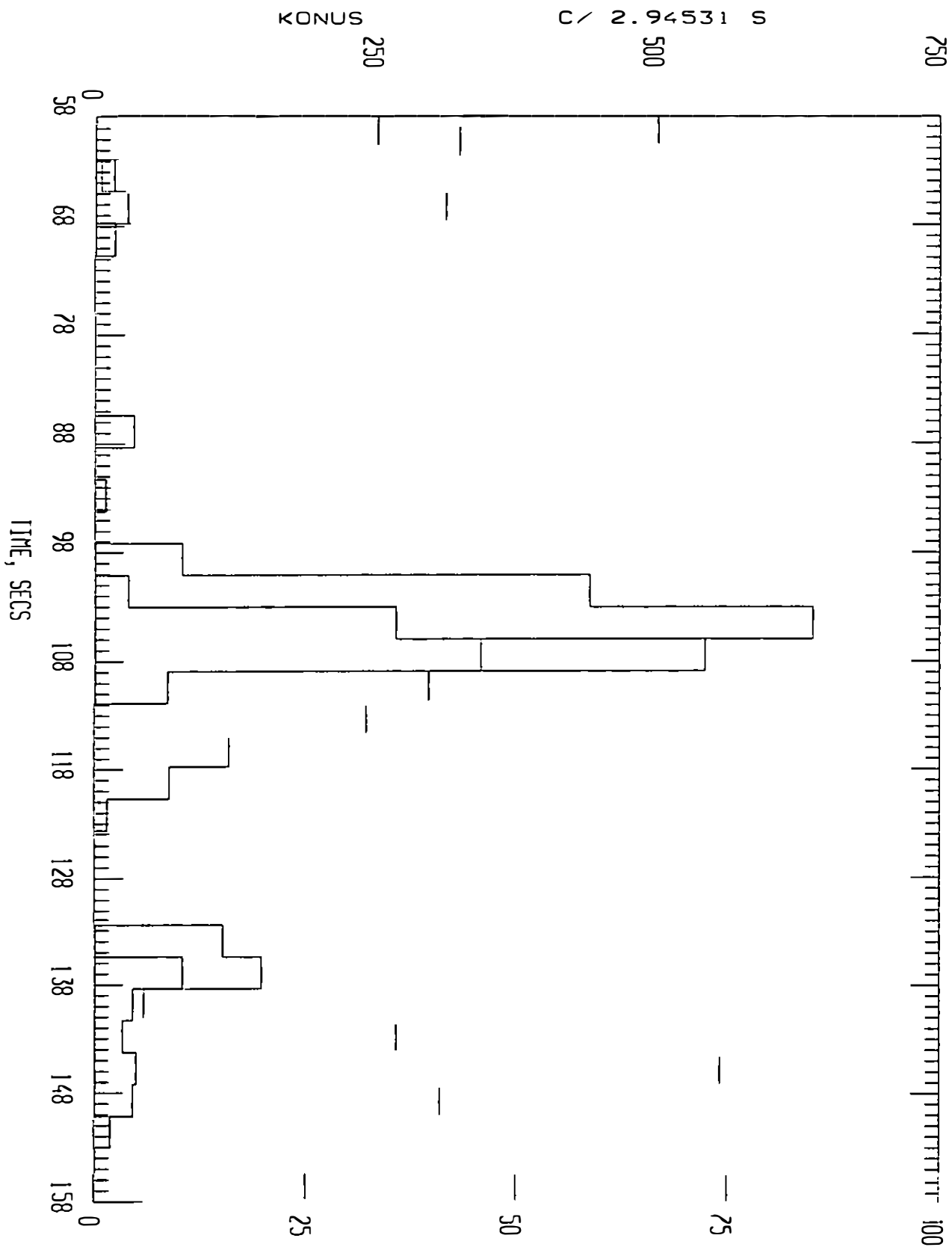
-ULYSSES RT CORRELATION

22/06/96

74798.766

6/10/11

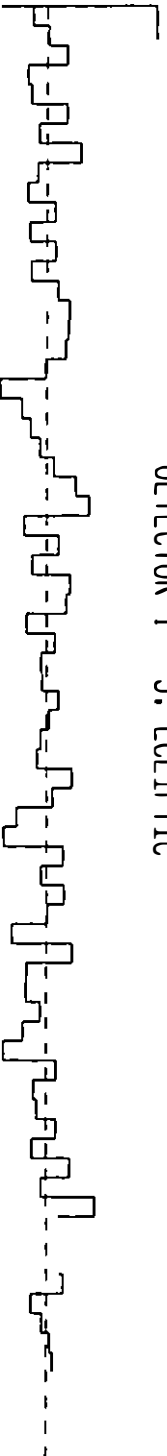




06/10/2011

3600

DETECTOR 1 - S. ECLIPSE



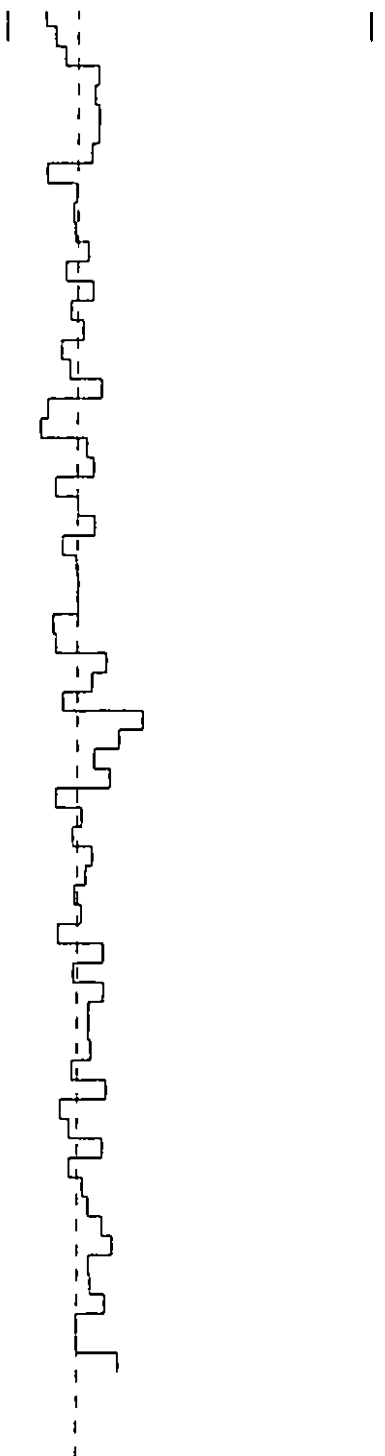
22/06/96 74798.766

50- 200 keV 200- 750 keV

COUNTS/2.945 S

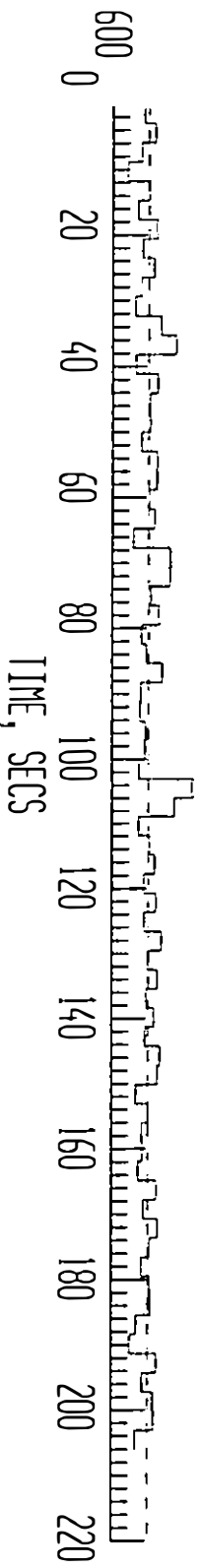
2600

1600



KONUS

10- 50 keV



KONUS

22/06/96

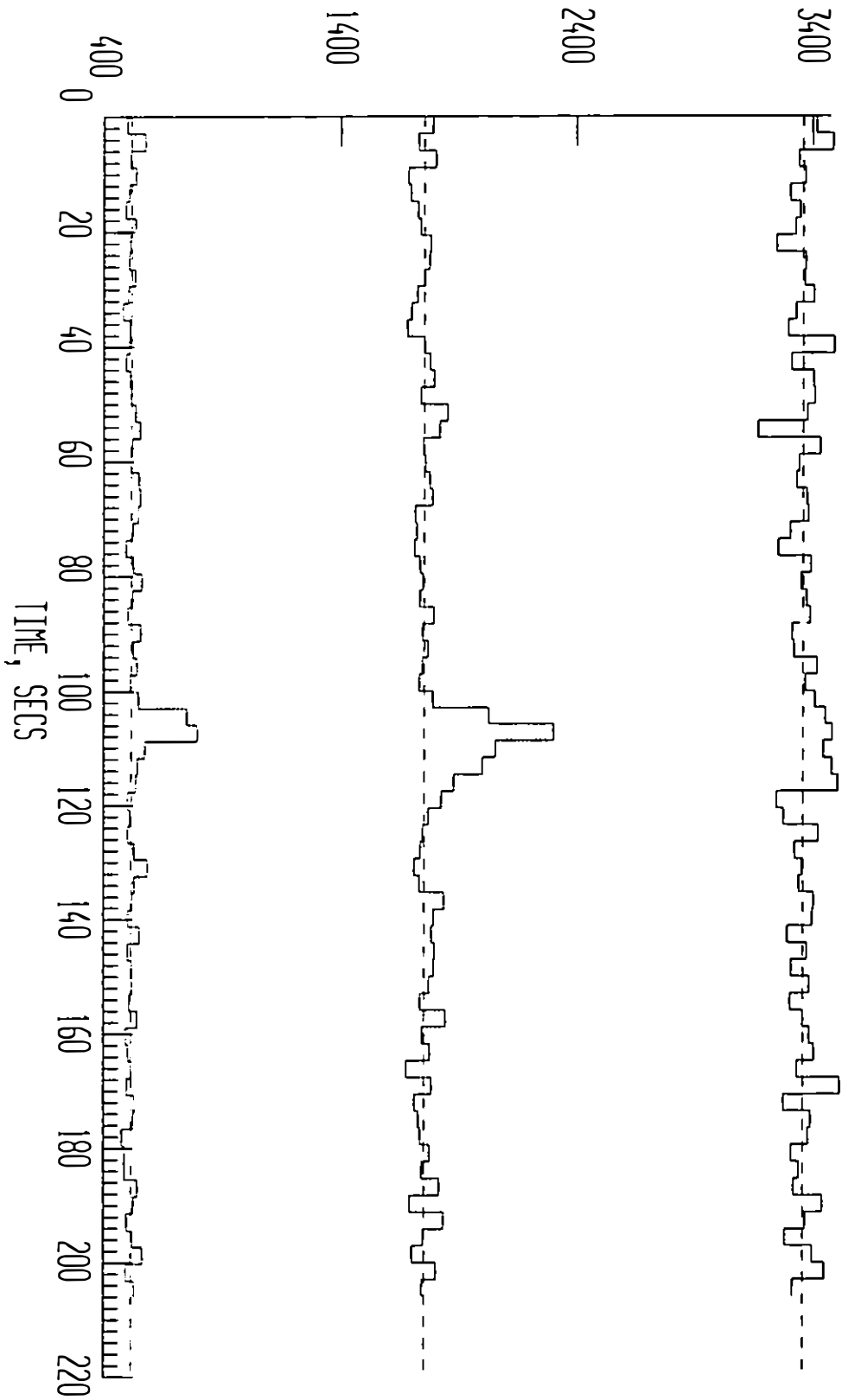
74798.766

10- 50 keV

50- 200 keV

200- 750 keV

COUNTS/2.945 S



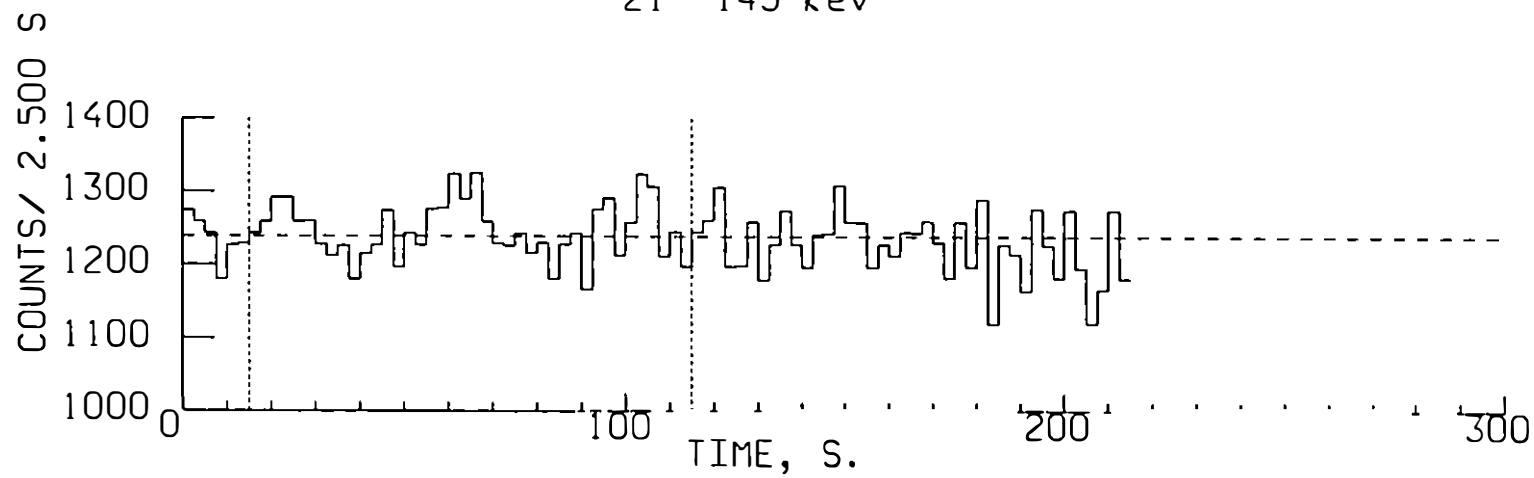
4400 —

DETECTOR 2 - N. ECLIPSE

06/10/2011

ULYSSES RT
22/ 6/96 72720.125 s
0.250 S INTERVALS REGROUPED BY 10
21- 145 keV

3/10/11



KONUS 19960622 72824

ULYSSES RT

29 / 09 / 11

22/06/96 72720.125 s

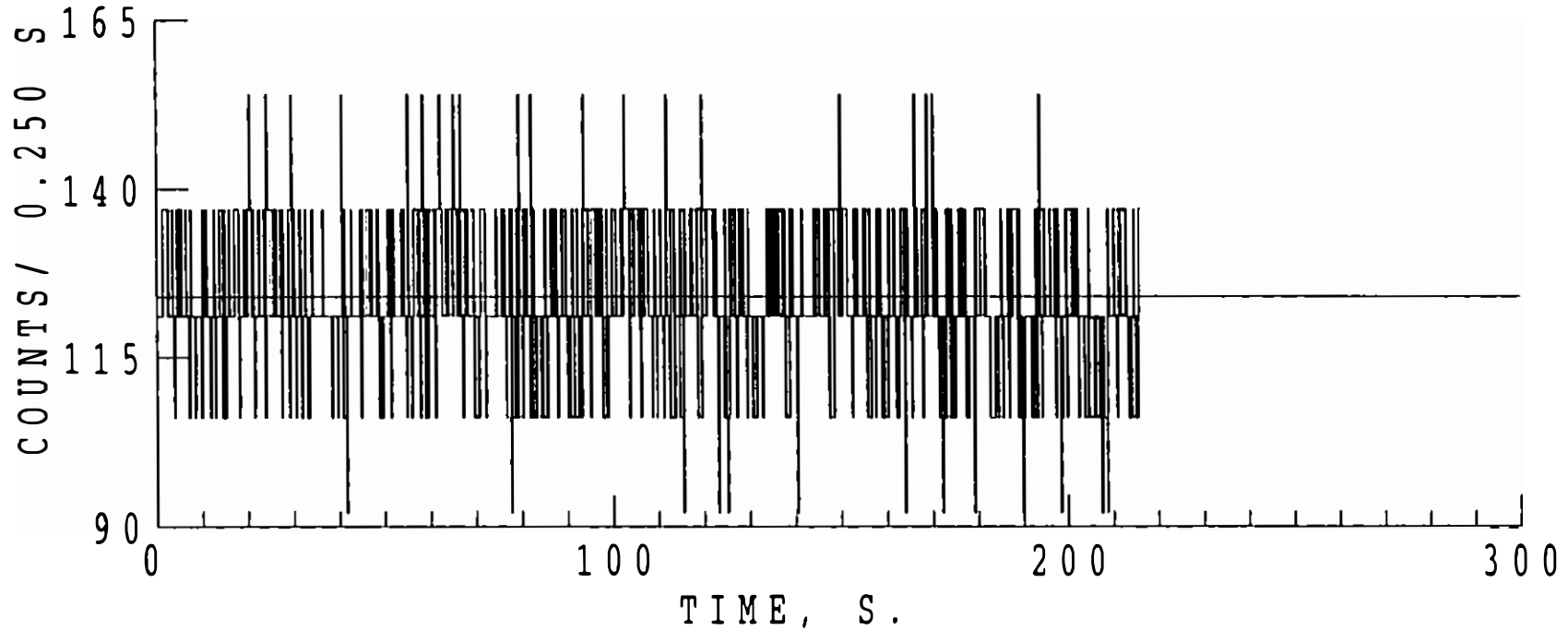
0 - 0 keV

N= 10 M= 10

>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



KONUS 23

ULYSSES RT

25 / 11 / 96

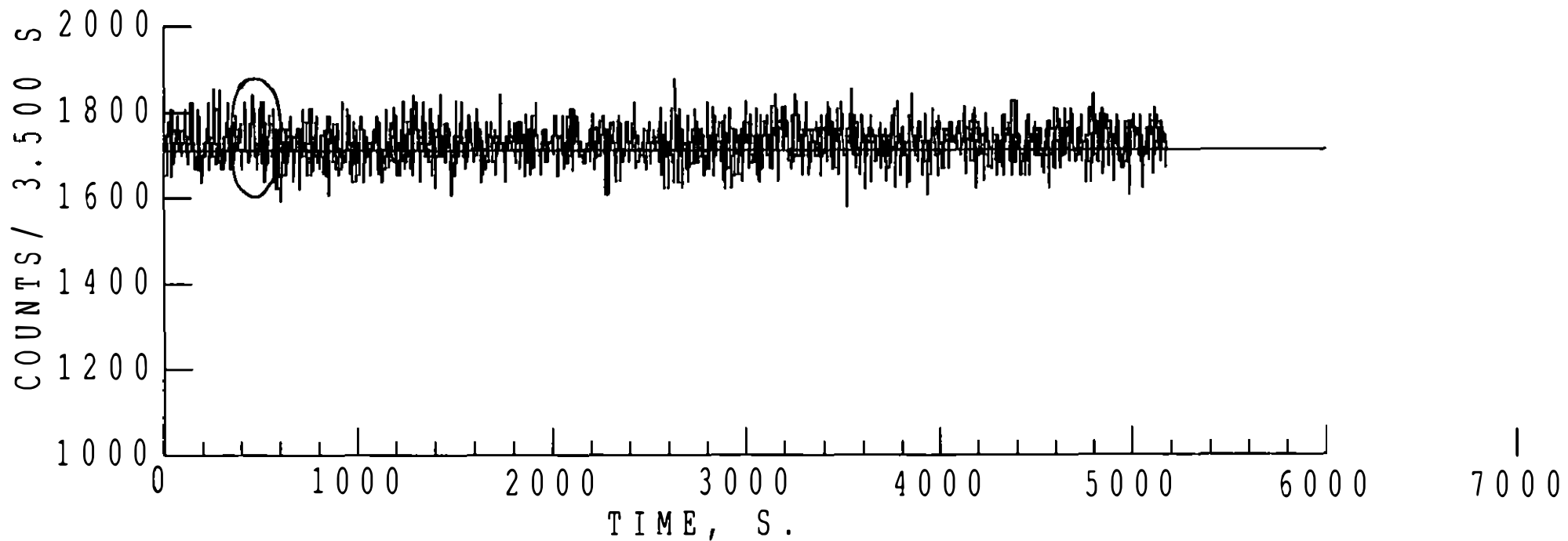
22 / 6 / 96 72324.125 s

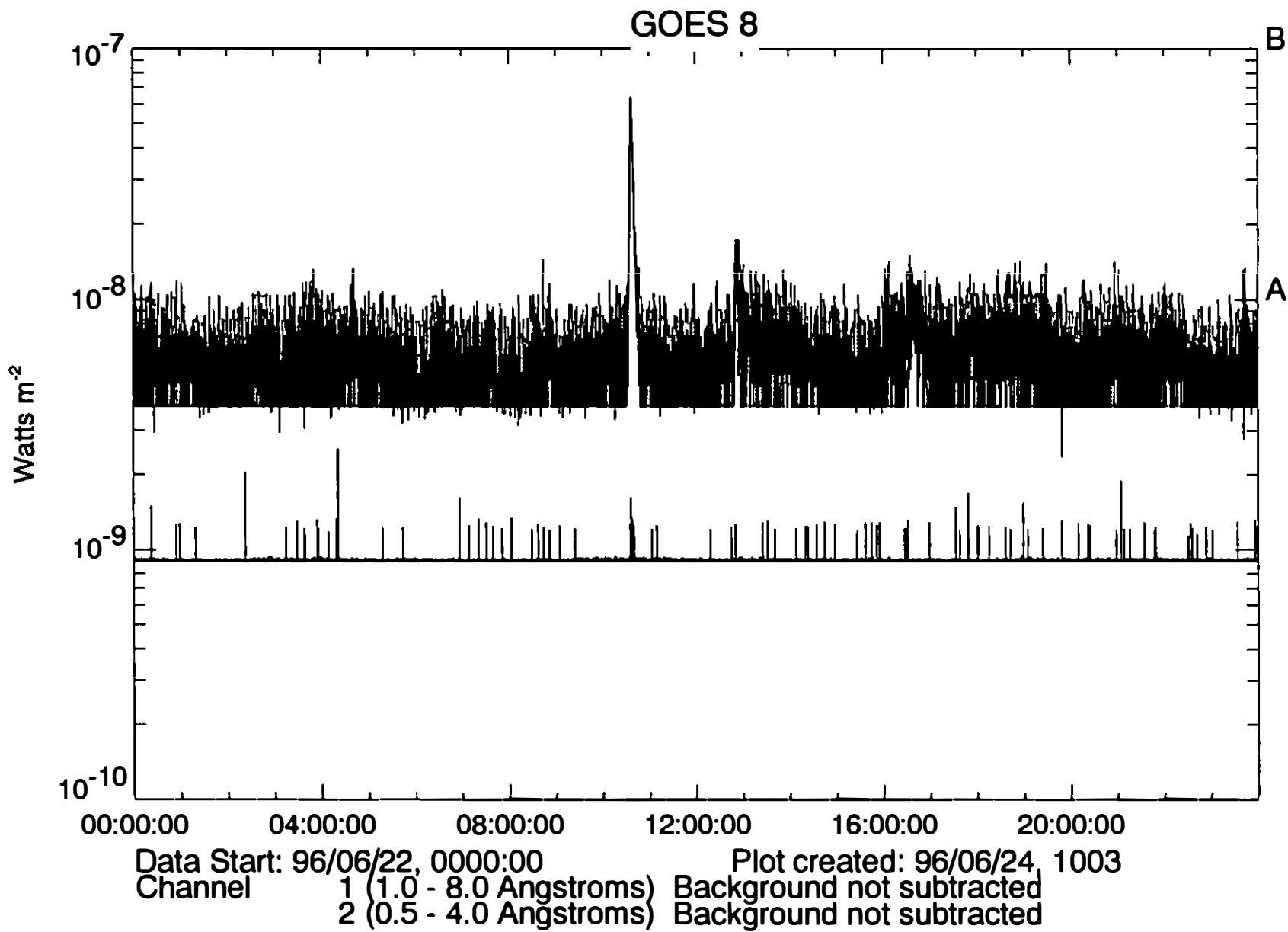
0.250 S INTERVALS REGROUPED BY 14

0 - 0 keV

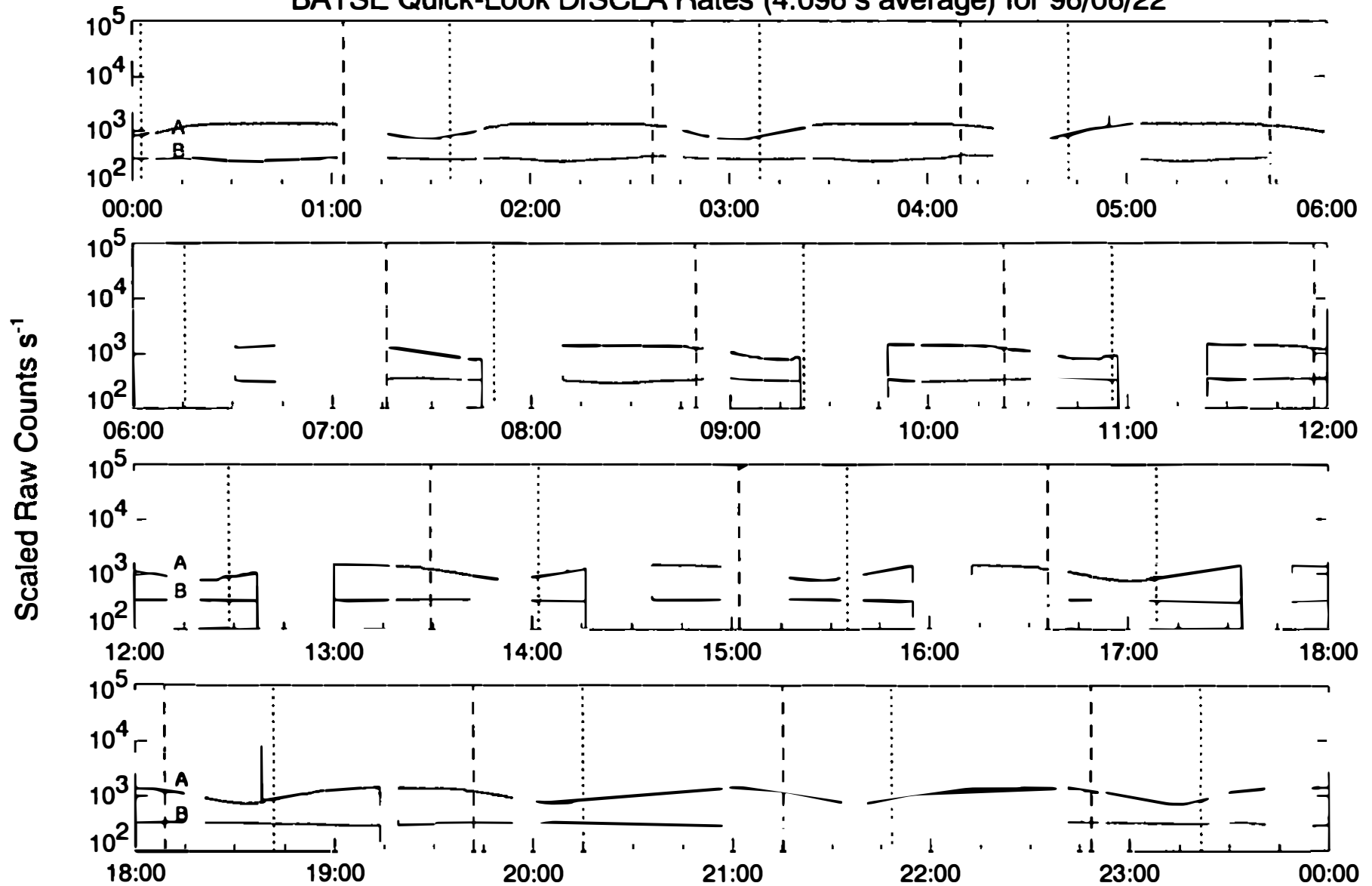
N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/22

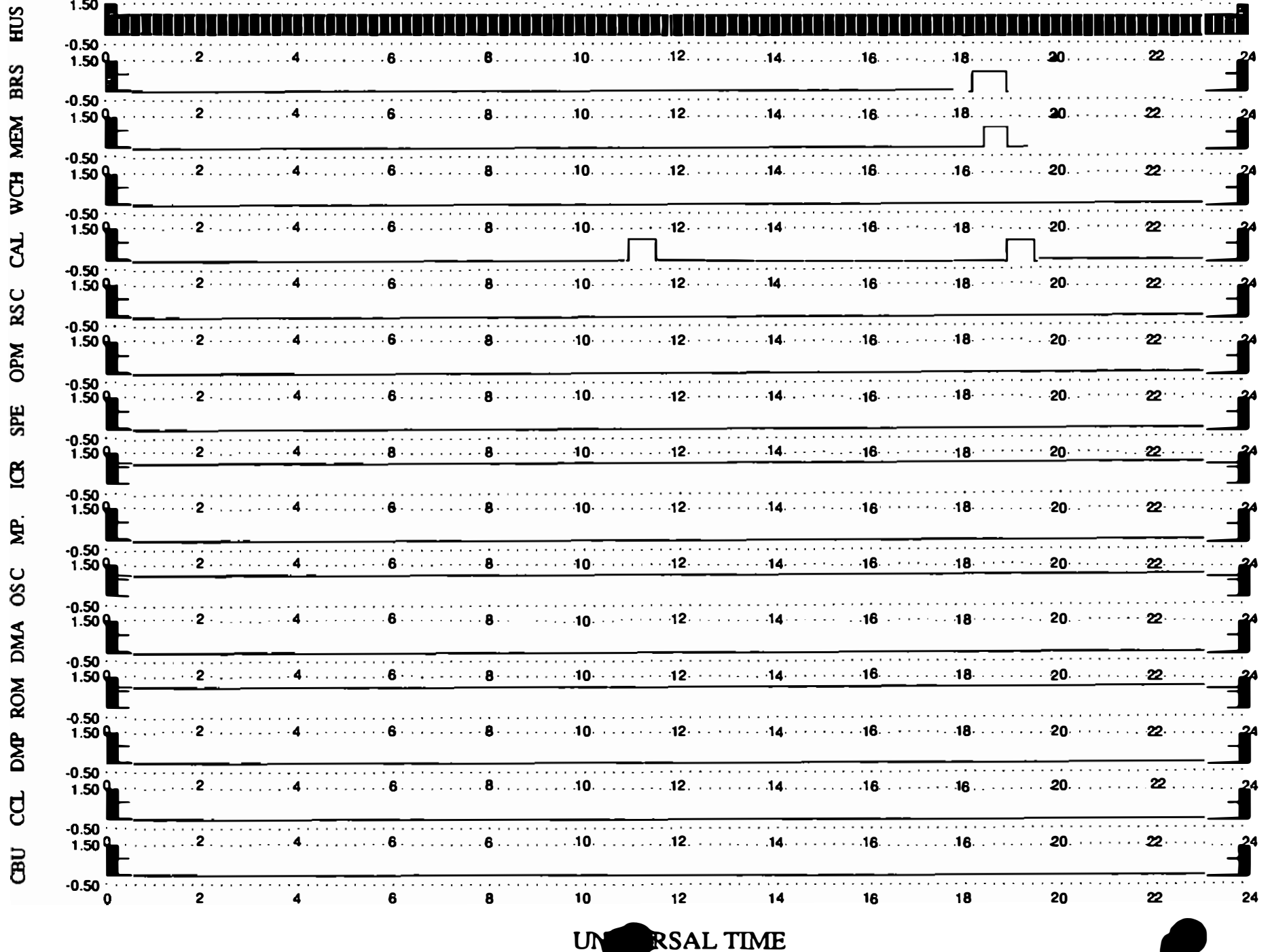


Current Time: 96/06/24, 1004 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

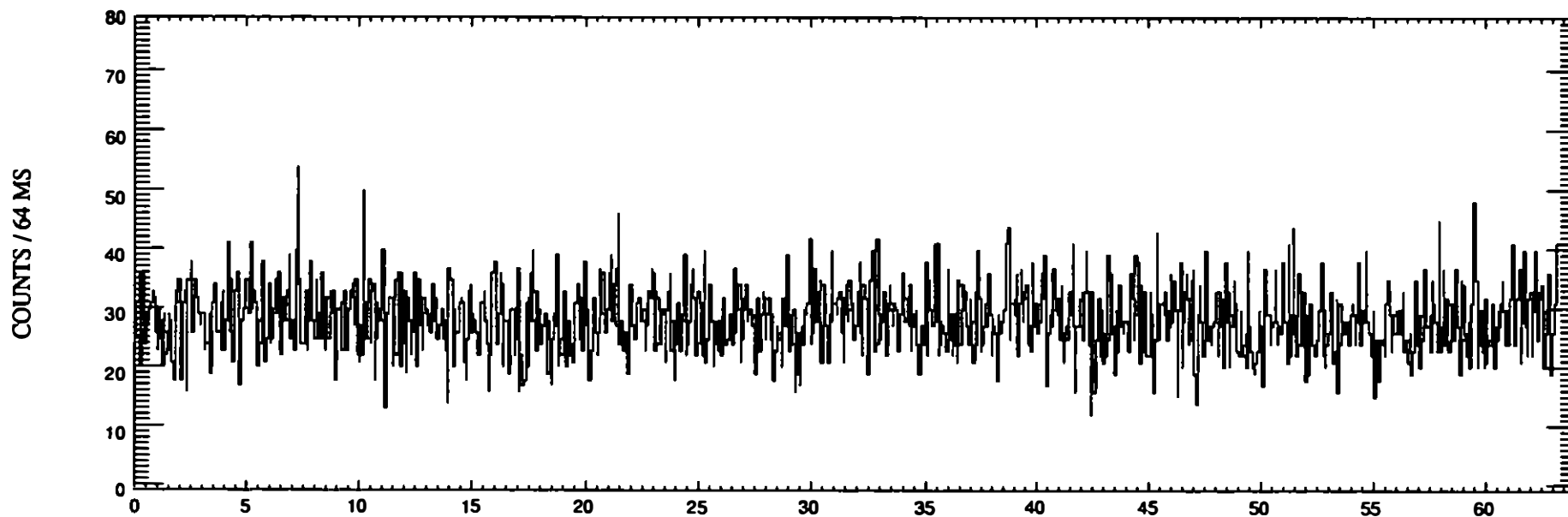
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

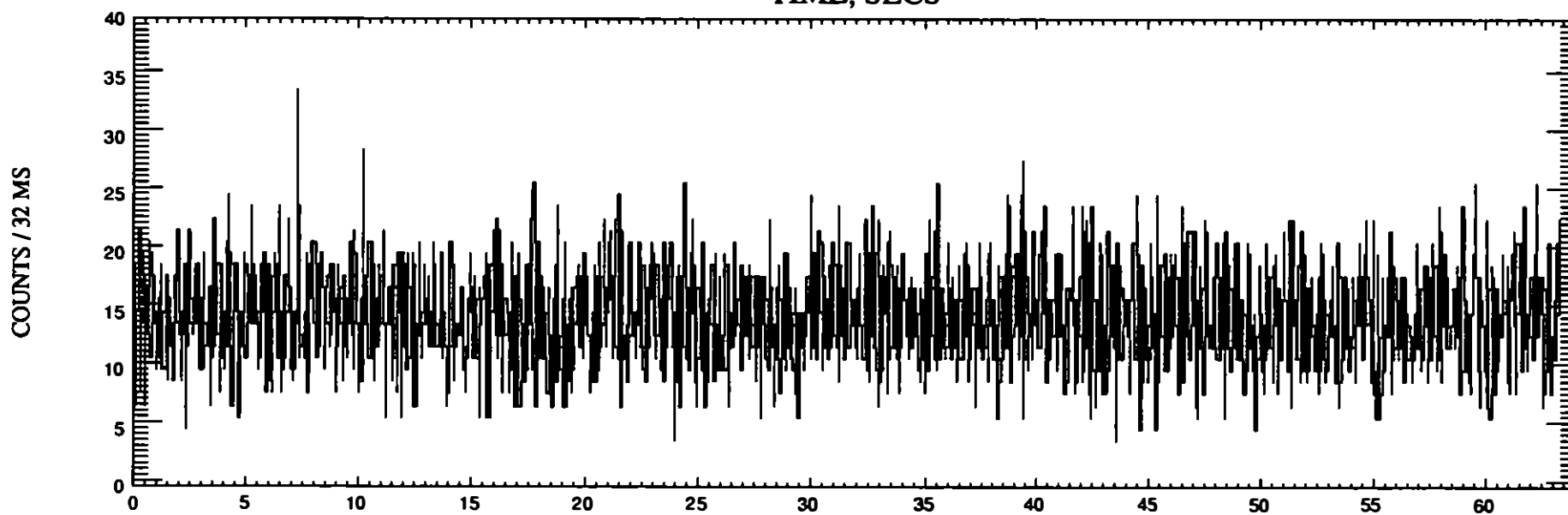
BURST NUMBER 5



Burst Counter 5 at UT=18.225526360406 h=65611.895 s 18:13:31.895

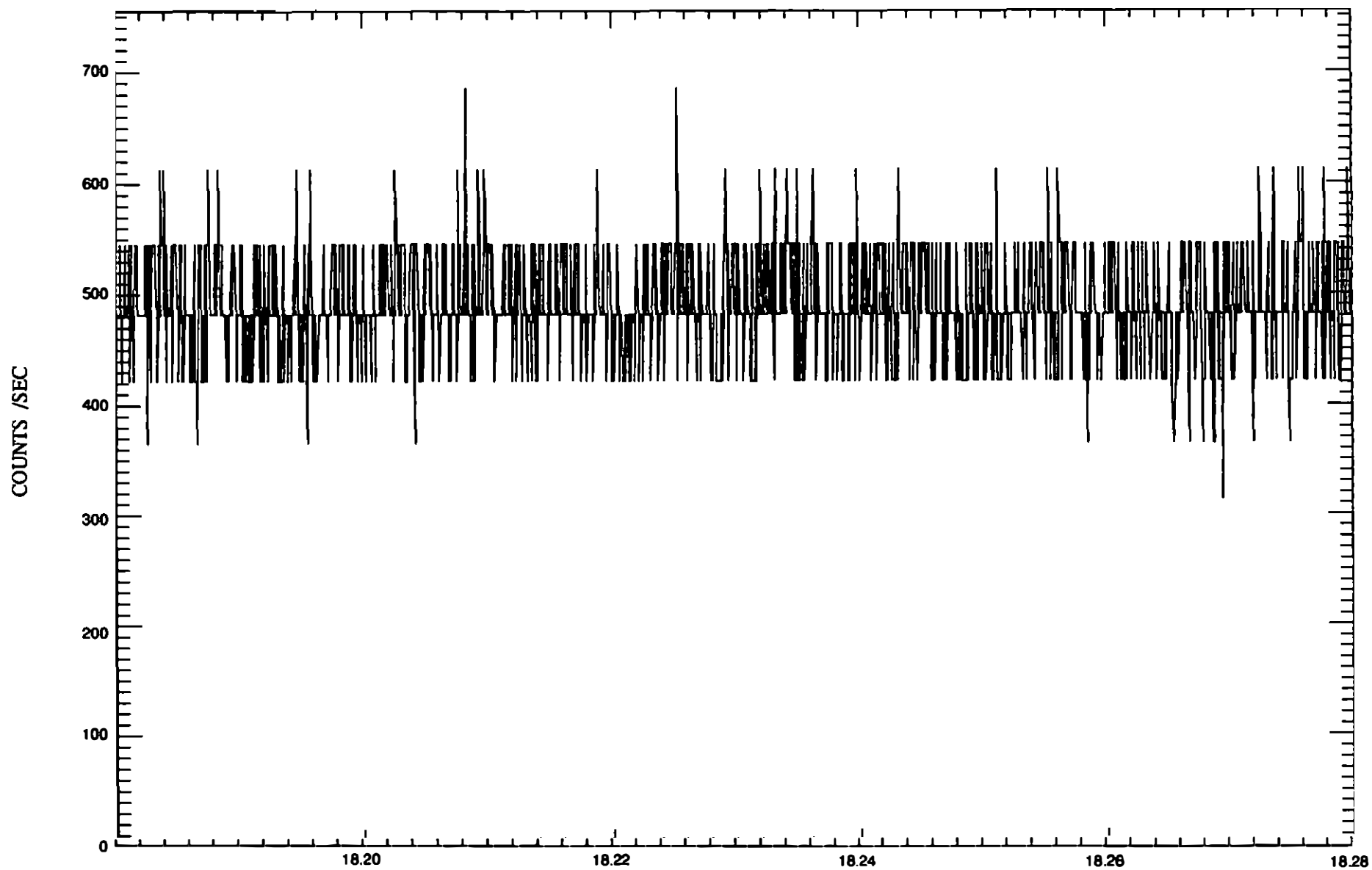


TIME, SECS



TIME, SECS

CALIBRATION DATA INCLUDED

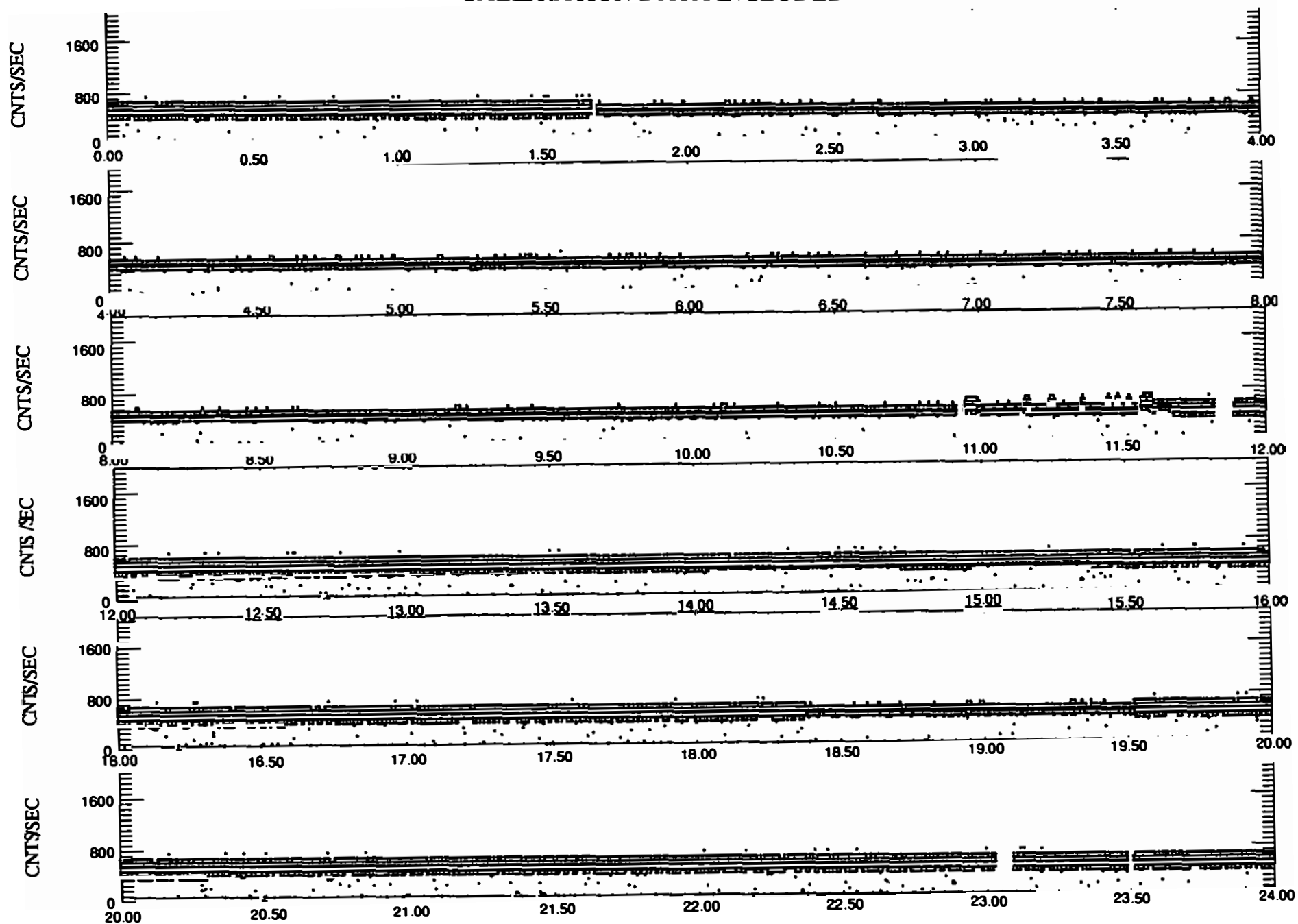


HUS 2A, MODE 1, NOT AVERAGED

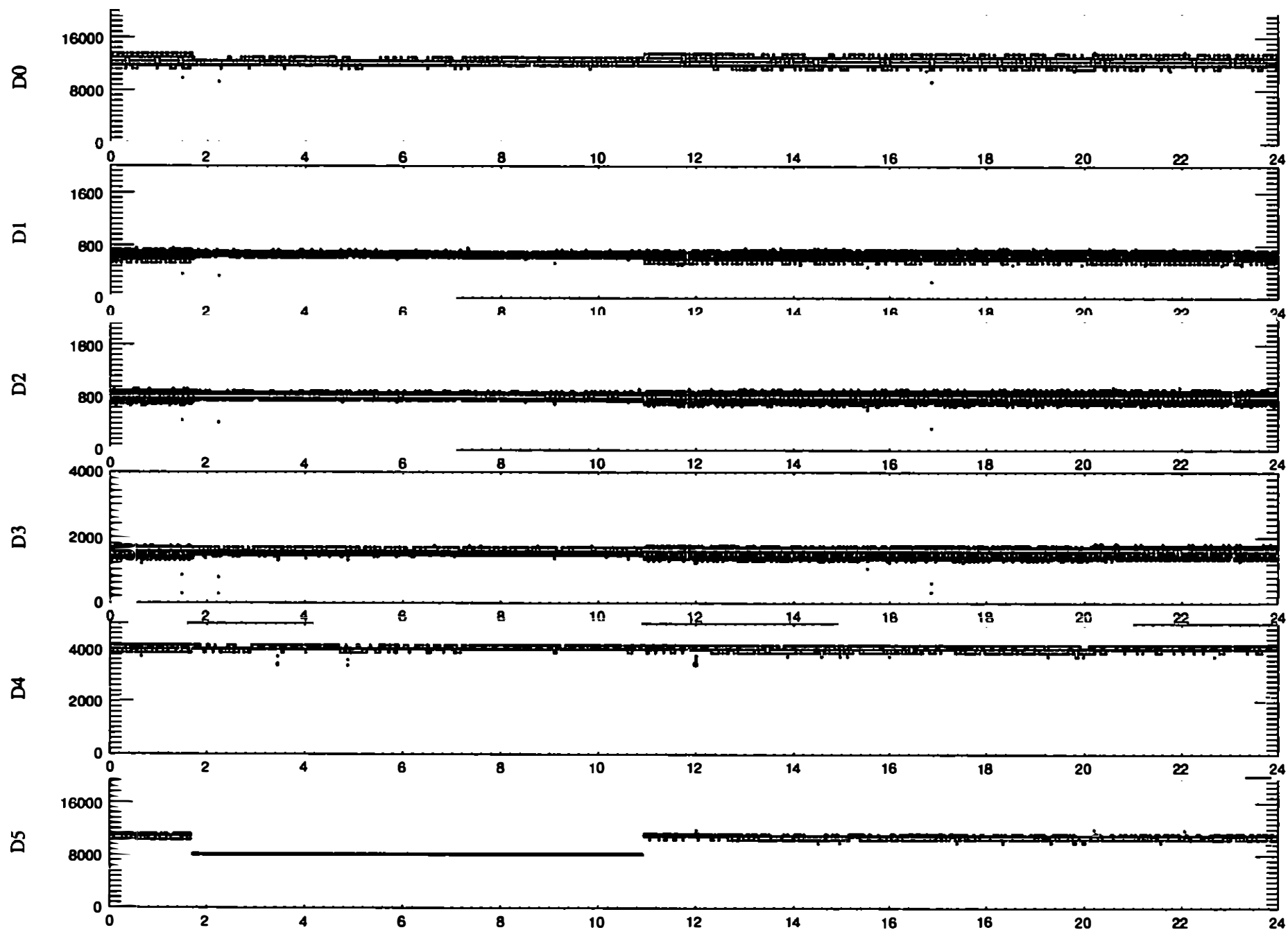
EDR day 174, year 1996 to day 174, year 1996

11/25/96

CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From DEAL@fender.msfc.nasa.gov Tue Jun 25 12:22 PDT 1996
From: DEAL@fender.msfc.nasa.gov
Date: Tue, 25 Jun 1996 14:22:04 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5512

BATSEARCH PROGRAM

RI

BATSE BURST # 5512
EVENT OF 1996 JUN 23 DAY OF YEAR=175
EVENT CROSSING TIME AT BATSE ; 4728. S. OR 01:18:48.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 181.000 8.000
BATSE PEAK COUNTING RATE: 10200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 23/ 6/ 96 IS:
RA= 152.230 DEC= 48.946 DIST= 4.518 AU
BATSE-ULYSSES DISTANCE = 675916003. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=132.46 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1521.96 SECS.
CROSSING TIME AT ULYSSES IS 3206. S. OR 00:53:26 +/- 315.68 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 23/ 6/ 96 IS:
RA= 65.579 DEC= 21.569 DIST= 2.339 AU
MARS-BATSE DISTANCE = 349867936. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 69.87 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 401.65 SECS.
CROSSING TIME AT MARS IS 5130. S. OR 01:25:29 +/- 196.34 SECONDS

BATSE BURST TRIGGER

NO.: 5512

TIME: TJD=0257 SECONDS=4728

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=107.9 AZIMUTH=105.5 ERROR=0.7 DEGREES

COMMENTS:

GRB LISTING ~ 135 S. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5512	960623	10257	04728	10200	181	+08	135

96	2	29	22445.141	S2	740	1520	550	0.3	0.5	8	250	Search RI	
96	3	5	33645.352	S1	440	390	70	>10	0.8	1.8	251	Search NO	
96	3	12	35074.697	S2	160	730	330	<0.25	0.2	0.1	252	Search NO	
96	3	19	51992.828	S1		800	970	>7	0.16	0.4	253	RI	5277
6	3	21	76321.803	S2	4600	4550	1020	0.03	42	46	254	Trig	5293
6	3	22	19642.728	S1	1060	1760	1120	40	2	28	255	Trig	5304
96	3	24	80064.124	S2	320	520	150	0.07	1	14	257	Search RI	
96	3	25	69892.978	S1	250	620	460	6	0.5	0.5	258	NO	5339
96	3	31	21208.784	S1	220	520	120	4.4	2	24	271	RI	5369
96	4	4	25289.264	S2	420	750	240	0.07	4	9	272	Search RI	
96	4	9	77143.618	S2	650	1170	420	0.17	0.5	5	273	RI KA	5413
96	4	10	80648.201	S2	190	330	140	<0.05	1	35	274	Search RI	
96	4	18	06106.854	S1	200	330	70	1	2	2	277	RI KA	5413
96	4	18	08271.303	S2	350	770	50	<0.1	3	30	278	Search KA 225: NO	
96	4	18	66796.140	S1	1160	1000	50	10	1	3	290	Trig	5436
96	4	20	17324.809	S2	300	1190	1080	1	0.3	0.04	303	Search RI	
96	4	22	59981.190	S2	160	410	140	0.5	4	12	305	RI	5443
96	4	25	86395.862	S2	1300	730		<0.04	44	16	306	Search KA 225: RI	
96	4	28	47556.501	S2	270	420	230	<0.04	1	170	307	RI	5450
96	4	30	49895.524	S1	250	640	180	8	8	18	309	RI KA	5451
96	5	1	31344.546	S1	380	870	350	3.7	20	56	310	Search RI	
96	5	6	47384.998	S1	160	490	190	1.1	3	6	312	Search RI	
96	5	7	44869.909	S2	460	760	290	0.03	20	98	313	Search RI	
96	5	10	38723.598	S2	560	1300	330	0.1	1	7	317	Trig	
96	5	19	14766.283	S2	1700	7700	8000	0.4	0.1	0.56	319	Search NO	
96	5	21	62489.430	S1	330	500	90	5.8	1	8	320	Search RI	
96	5	23	59522.013	S1	270	550	580	10	1	3	321	RI	5473
96	5	29	43663.061	S2	1700	4000	5000	0.15	0.5	3.5	322	Trig	5477
96	5	29	80722.705	S2	420	620	140	0.1	1	14	323	Trig KA	
96	5	30	62300.750	S1	180	400	110	>20	2	14	324	Search N/O	
96	5	31	06926.043	S1	300	440	120	4.7	50	7	325	Search RI	
96	5	31	73498.259	S2	1600	4250	2800	0.5	27	19	326	Trig	
96	6	2	42664.032	S1	1000	1450	1400	>2	0.3	0.03	327	Search NO	
96	6	5	29392.672	S1	400	950	410	1.3	2	87	328	RI	5486
96	6	7	78106.176	S2	890	1280	550	0.04	32	120	329	RI	5489
96	6	10	84502.254	S2	200	1000	1500	0.9	0.16	0.11	330	Search NO	
96	6	12	71198.677	S1	650	2800	2700	1.4	0.5	18	331	Trig	
96	6	14	67654.516	S1	80	1800	1600	1	0.18	0.1	332	Search NO	
96	6	17	76195.941	S1	350	560		>8	1	0.6	333	NO	5504
96	6	22	74906.054	S2	100	360	280	0.2	4	8	334	Search NO	
96	6	23	04734.229	S2	130	320	150	0.5	7	25	335	RI KA	5512
96	6	23	77186.871	S2	250	350	130	0.05	6	15	336	Search RI	
96	6	25	16949.252	S1	180	280	70	4.6	6	9	337	RI	5518
96	6	28	19224.223	S2	500	410	120	0.06	12	6	338	RI	5523
96	7	2	54698.284	S1	280	350	70	2.8	23	85	339	RI	5525
96	7	3	65443.861	S1	200	560	600	3	1	0.4	340	NO	5527
96	7	7	36999.311	S2	1600	1200		0.06	2	5	341	RI	5530
96	7	8	72577.095	S2	900	820	160	0.2	1	6	342	Search RI	
96	7	9	00246.641	S1	260	1000	400	0.95	15	4	343	Trig KA	
96	7	10	00662.014	S2	1800	4700	3600	0.13	0.5	48	345	Trig	
96	7	11	63757.543	S1	560	2400	900	1.25	0.5	19	346	Trig	
96	7	11	68451.869	S2	200	360	170	<0.07	2	41	347	Search NO	
96	7	22	25522.448	S2	360	650	170	0.27	17	151	348	RI	5548
96	7	22	56346.728	S1	700	1000	200	2.6	3	6	349	Search RI	
96	7	27	43056.737	S2	500	1000	500	0.7	0.5	15	350	Search RI	
96	7	31	20761.638	S2	800	1160	170	0.9	0.5	4	353?	RI	5557
96	8	3	67525.033	S1	4000	8000	3000	3	0.02	0.18	354	Trig KA	5561
96	8	4	84535.906	S2	2000	2600	600	<0.03	0.5	2	355	Trig KA	5563
96	8	5	78957.888	S2	1270	2360	380	0.05	1	20	356	Trig	
96	8	6	80989.772	S2	420	850	250	1	86	10	357	RI	5566

Helio corr removed

Date: Oct 23 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

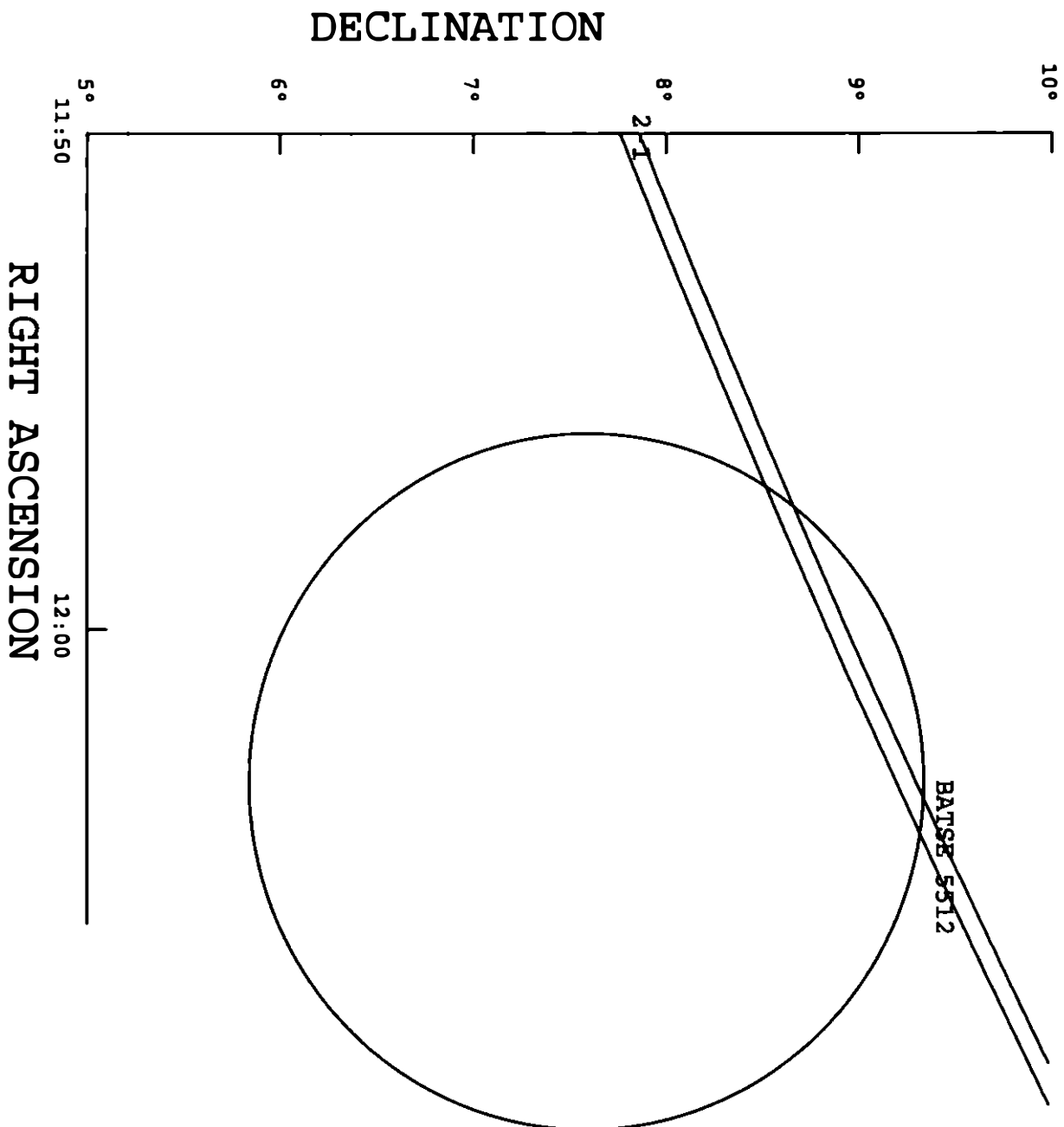
3. PVO Data

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

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

EVENT OF JUN 23, 1996 0:52

23/10/98



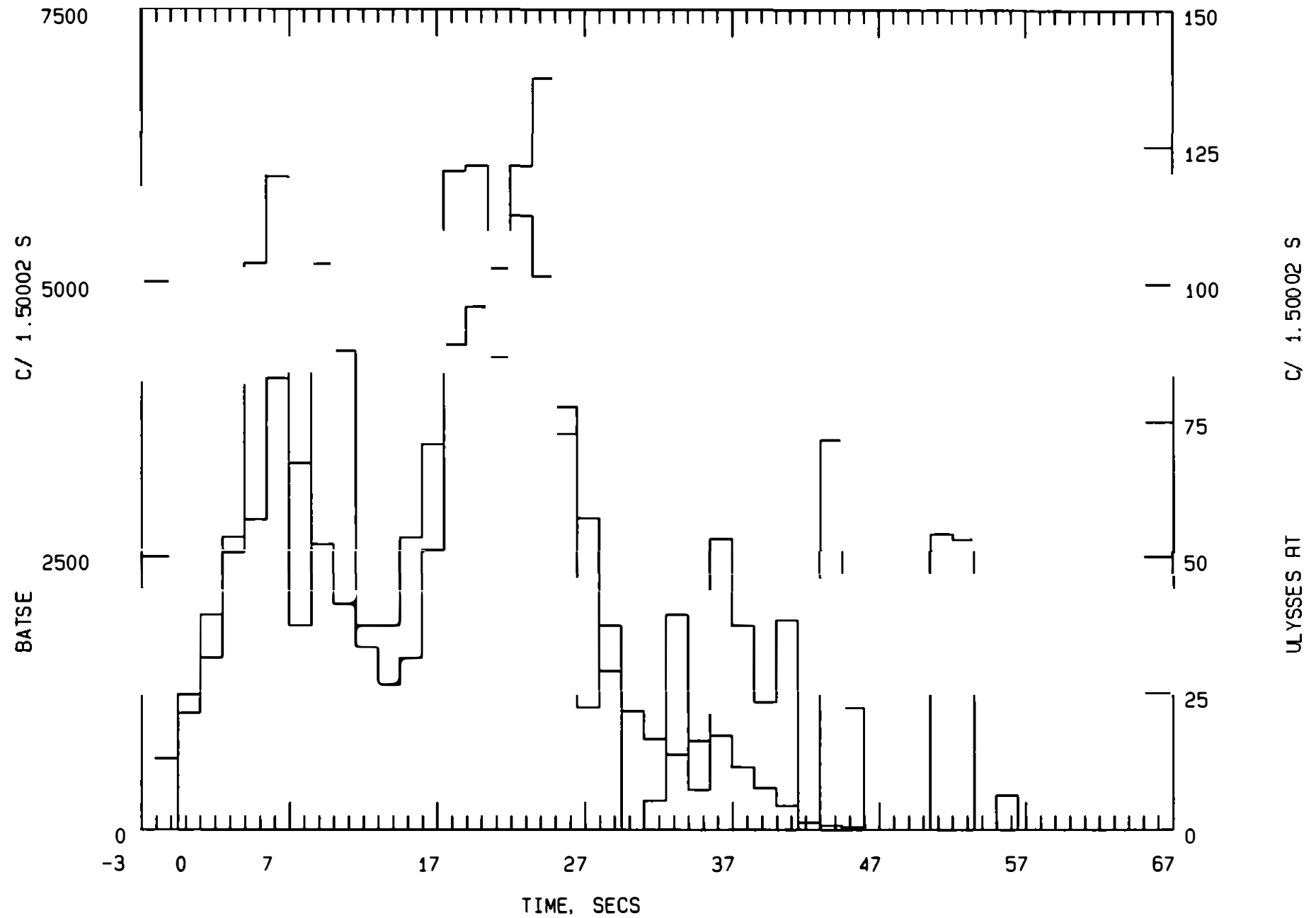
BATSE

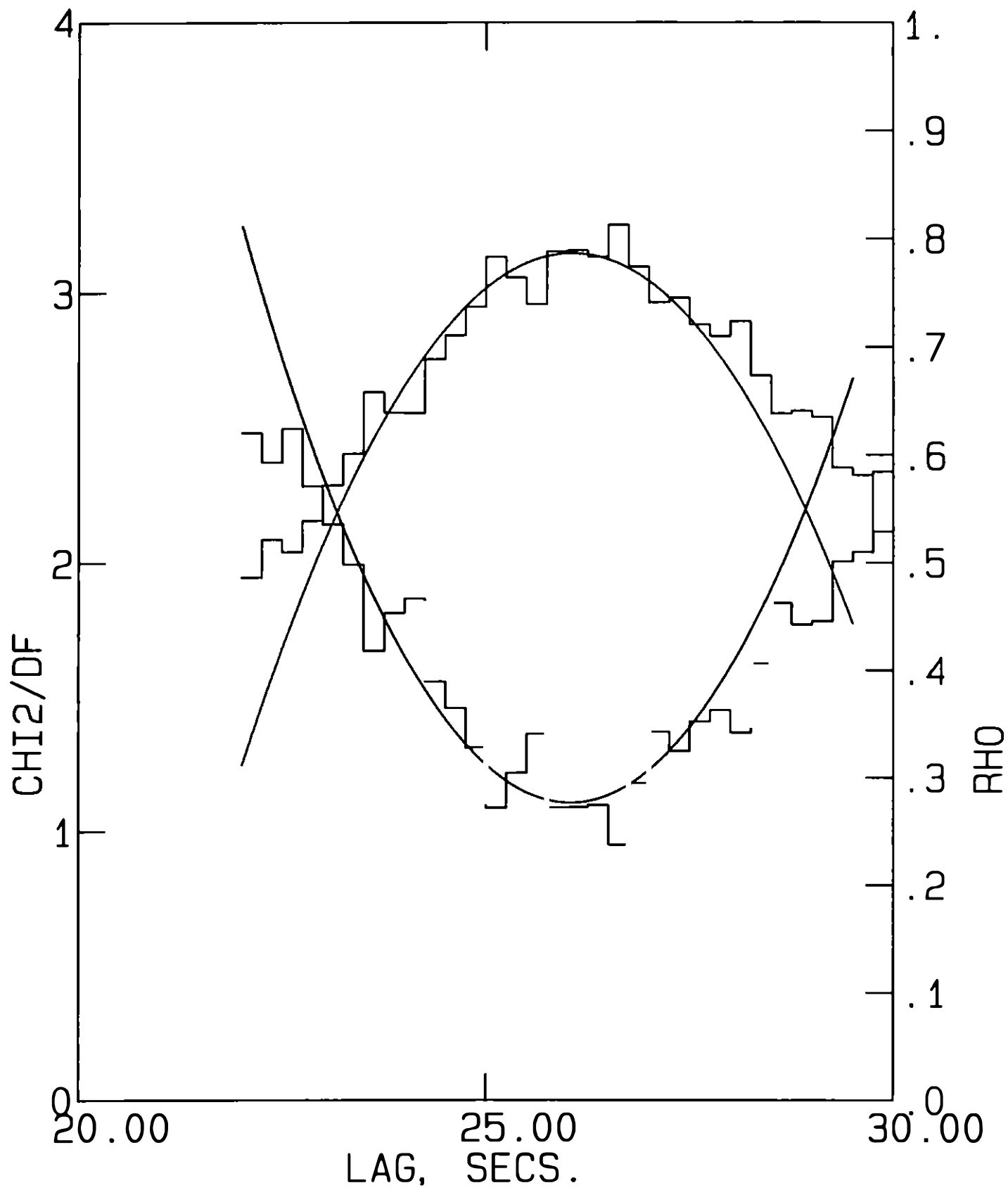
-ULYSSES RT CORRELATION

23/ 6/96

4728.522

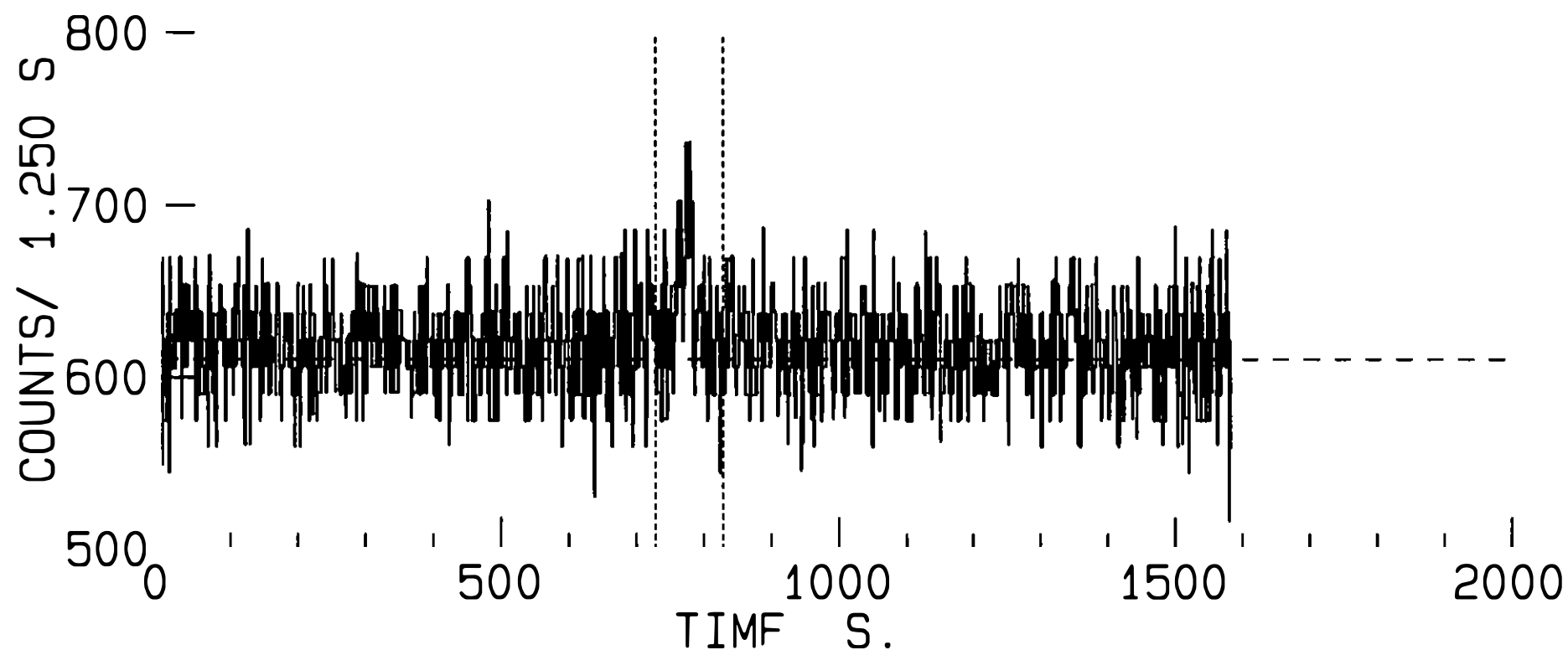
23/10/98





ULYSSES RT
23/ 6/96 2412.091 s
0.250 S INTERVALS REGROUPED BY 5
21- 145 keV

23/10/98



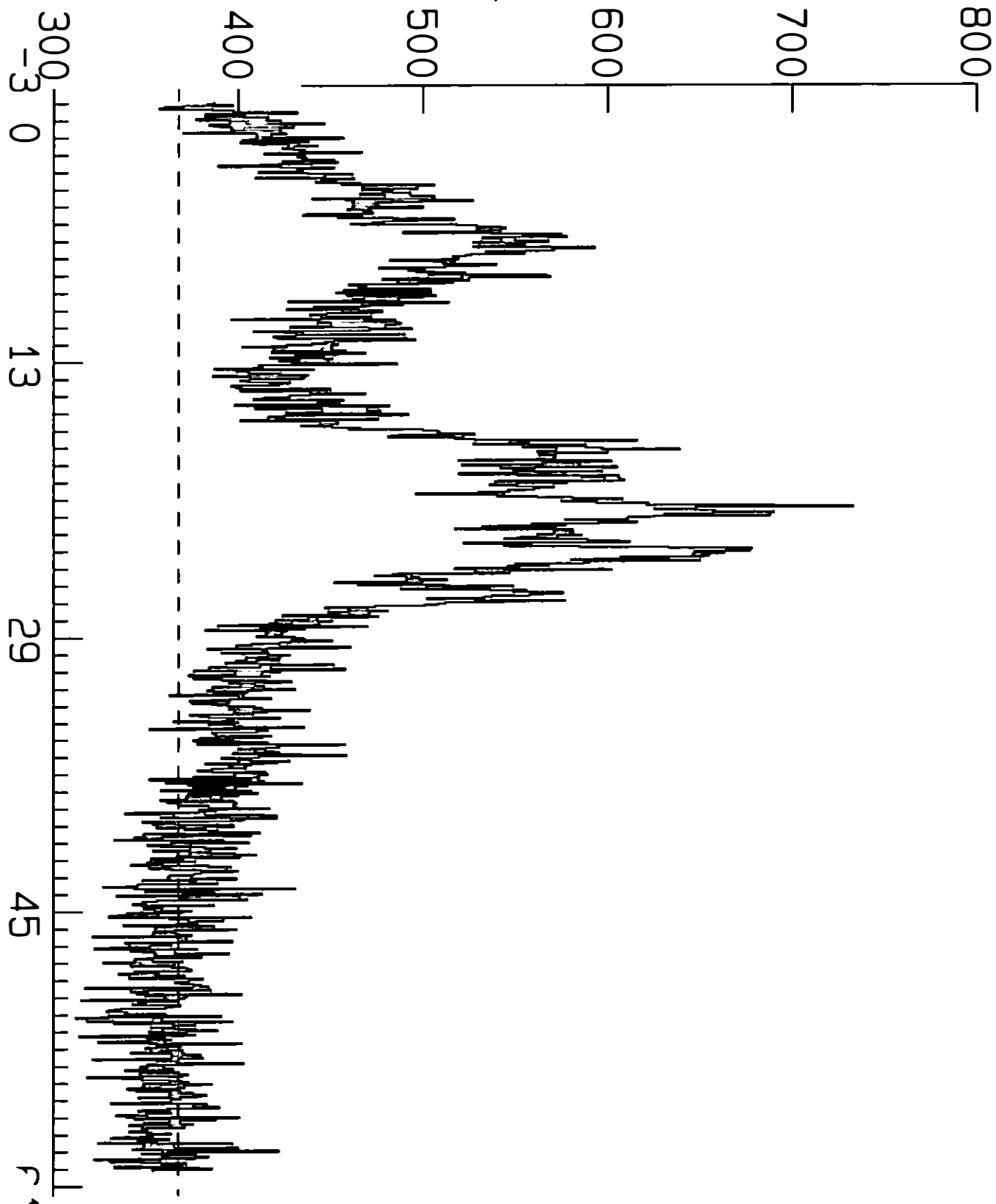
BATSE

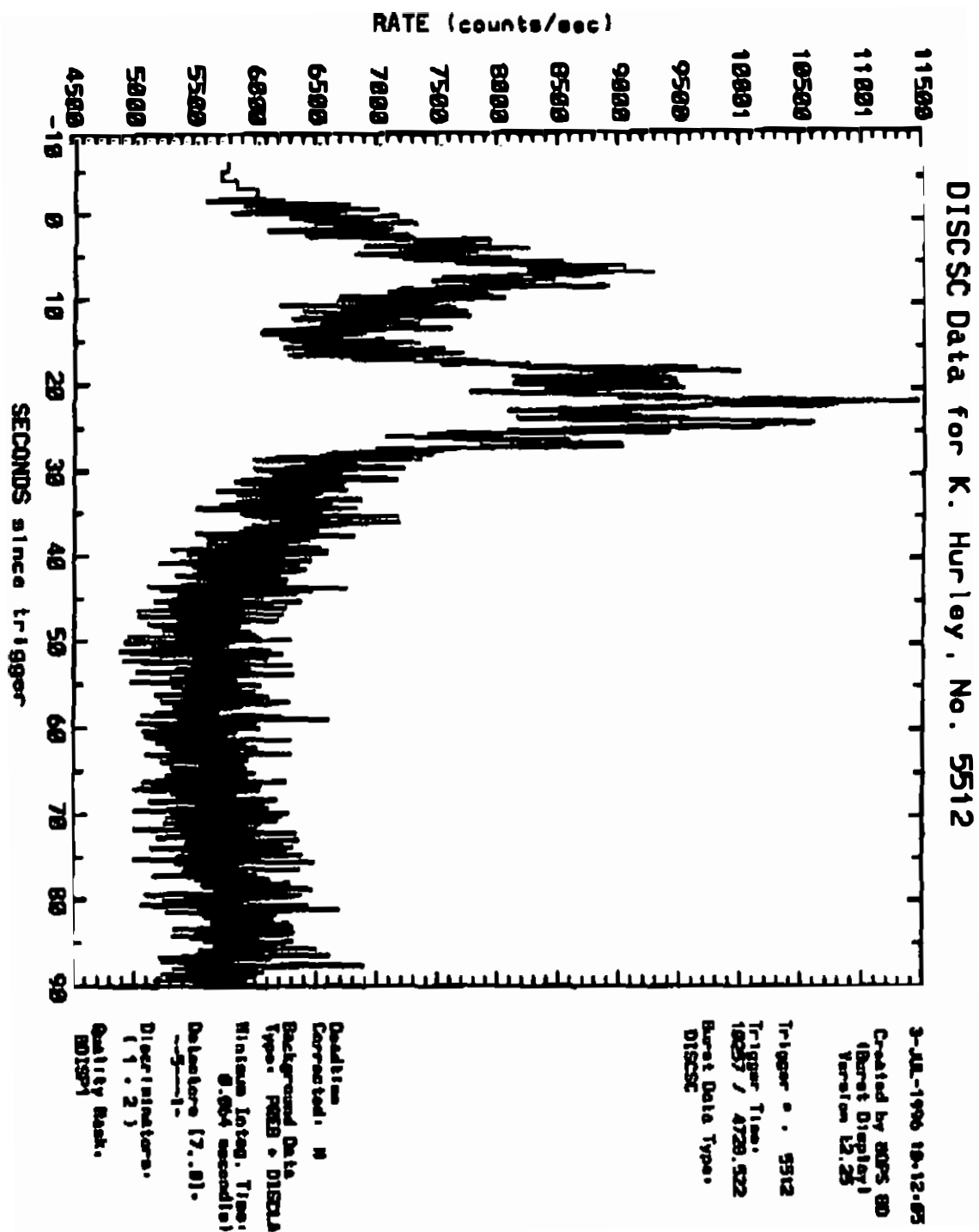
23/06/96

4728.522

25- 100 keV

COUNTS/0.064 S





From DEAL@fender.msfc.nasa.gov Tue Jun 25 12:27 PDT 1996
From: DEAL@fender.msfc.nasa.gov
Date: Tue, 25 Jun 1996 14:26:46 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5513

BATSEARCH PROGRAM

RI ?

BATSE BURST # 5513
EVENT OF 1996 JUN 23 DAY OF YEAR=175
EVENT CROSSING TIME AT BATSE : 12038. S. OR 03:20:38.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 287.000 -46.000
BATSE PEAK COUNTING RATE: 1500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 23/ 6/ 96 IS:
RA= 152.244 DEC= 48.927 DIST= 4.519 AU
BATSE-ULYSSES DISTANCE = 676092128. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 30.27 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1947.68 SECS.
CROSSING TIME AT ULYSSES IS 13986. S. OR 03:53:05 +/- 276.96 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 23/ 6/ 96 IS:
RA= 65.579 DEC= 21.569 DIST= 2.339 AU
MARS-BATSE DISTANCE = 349867936. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 41.51 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 873.96 SECS.
CROSSING TIME AT MARS IS 12912. S. OR 03:35:11 +/- 147.55 SECONDS

BATSE BURST TRIGGER

NO.: 5513

TIME: TJD=0257 SECONDS=12038

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=76.3 AZIMUTH=209.0 ERROR=7.6 DEGREES

COMMENTS:

GRB LASTING ~ 15 S. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5513	960623	10257	12038	1500	287	-46	15

BATSE #

5513

25 / 6 / 96

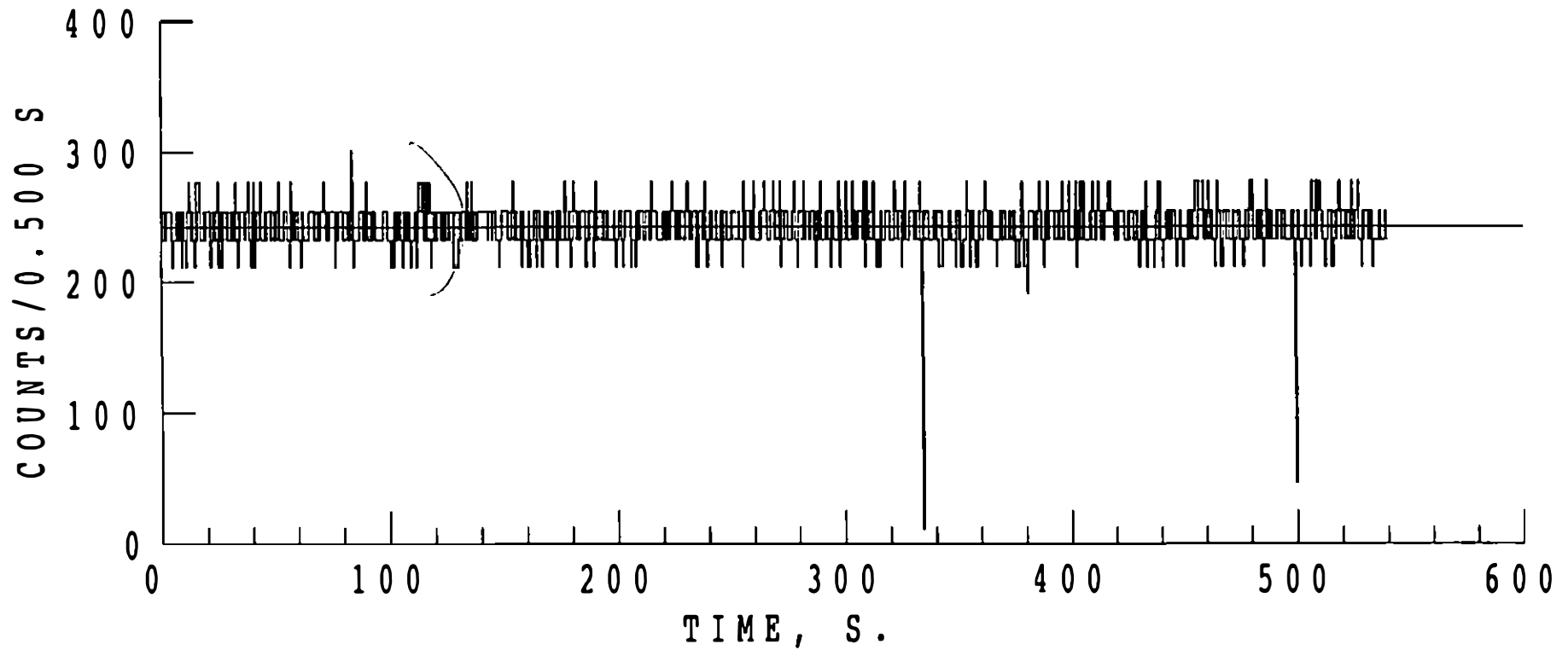
ULYSSES RT

23 / 6 / 96 13716.487 s

0 - 0 keV

N=10 M=2

>4.0 SIGMA FLUCTUATIONS



From DEAL@fender.msfc.nasa.gov Tue Jun 25 12:35 PDT 1996
From: DEAL@fender.msfc.nasa.gov
Date: Tue, 25 Jun 1996 14:35:09 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5514

BATSEARCH PROGRAM

RT

BATSE BURST # 5514
EVENT OF 1996 JUN 23 DAY OF YEAR=175
EVENT CROSSING TIME AT BATSE : 33103. S. OR 09:11:43.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 164.000 -60.000
BATSE PEAK COUNTING RATE: 9000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 23/ 6/ 96 IS:
RA= 152.287 DEC= 48.873 DIST= 4.523 AU
BATSE-ULYSSES DISTANCE = 676608807. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 70.71 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 745.51 SECS.
CROSSING TIME AT ULYSSES IS 33849. S. OR 09:24:08 +/- 431.16 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 23/ 6/ 96 IS:
RA= 65.579 DEC= 21.569 DIST= 2.339 AU
MARS-BATSE DISTANCE = 349867936. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 67.26 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 451.03 SECS.
CROSSING TIME AT MARS IS 33554. S. OR 09:19:14 +/- 193.72 SECONDS

BATSE BURST TRIGGER

NO.: 5514

TIME: TJD=0257 SECONDS=33103

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=137.0 AZIMUTH=183.1 ERROR=6.0 DEGREES

COMMENTS:

GRB LASTING ~ 2.5 S. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5514	960623	10257	33103	9000	164	-60	2.5

Helio corr removed

Date: Mar 11 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☐ Is the order of the data in CORREL such that a vernier is done on the data with the best time resolution? ~~Not~~ 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

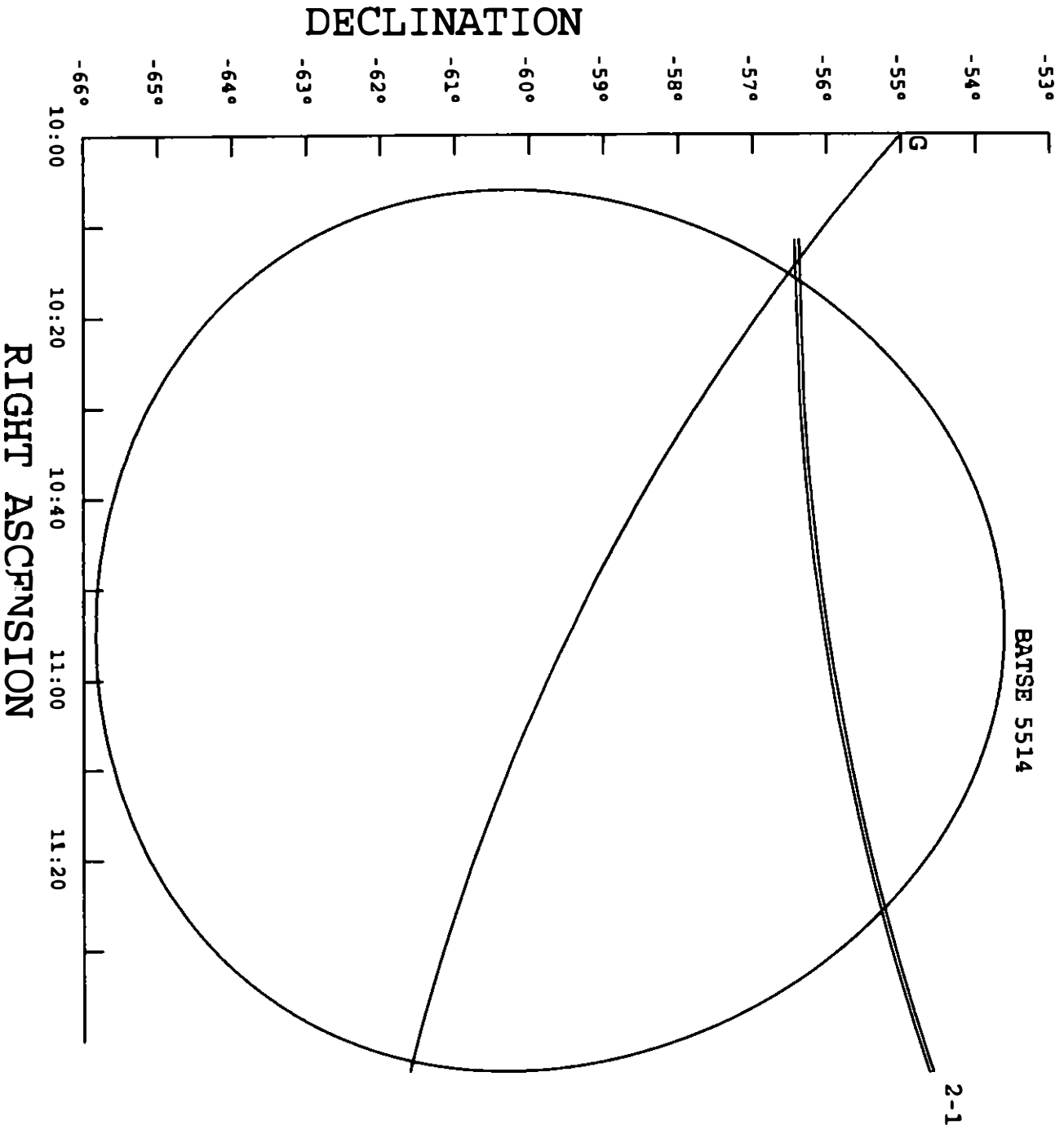
3. PVO Data

- ☐ 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 JUN 23, 1996 9:20

11/ 3/98



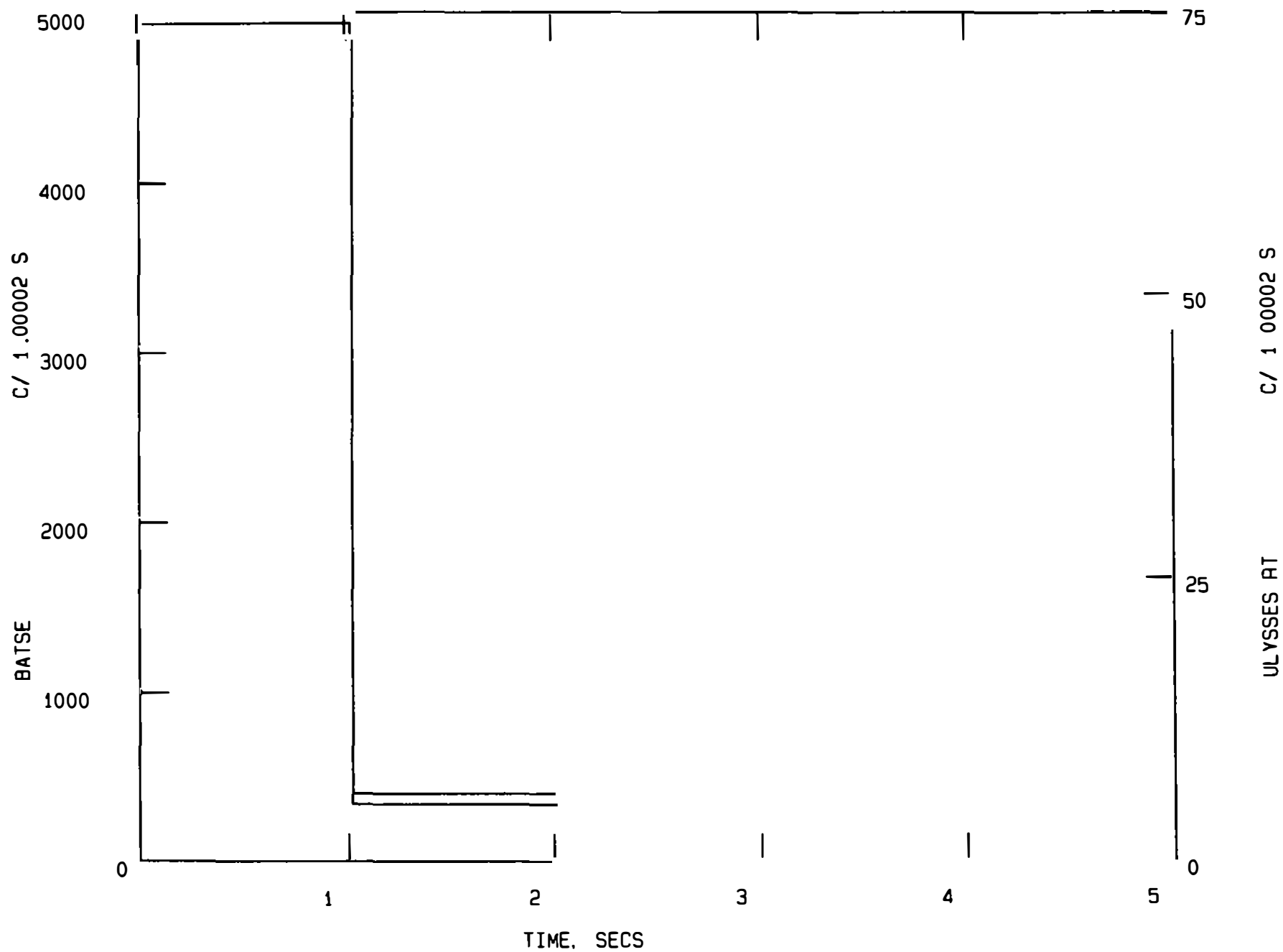
BATSE

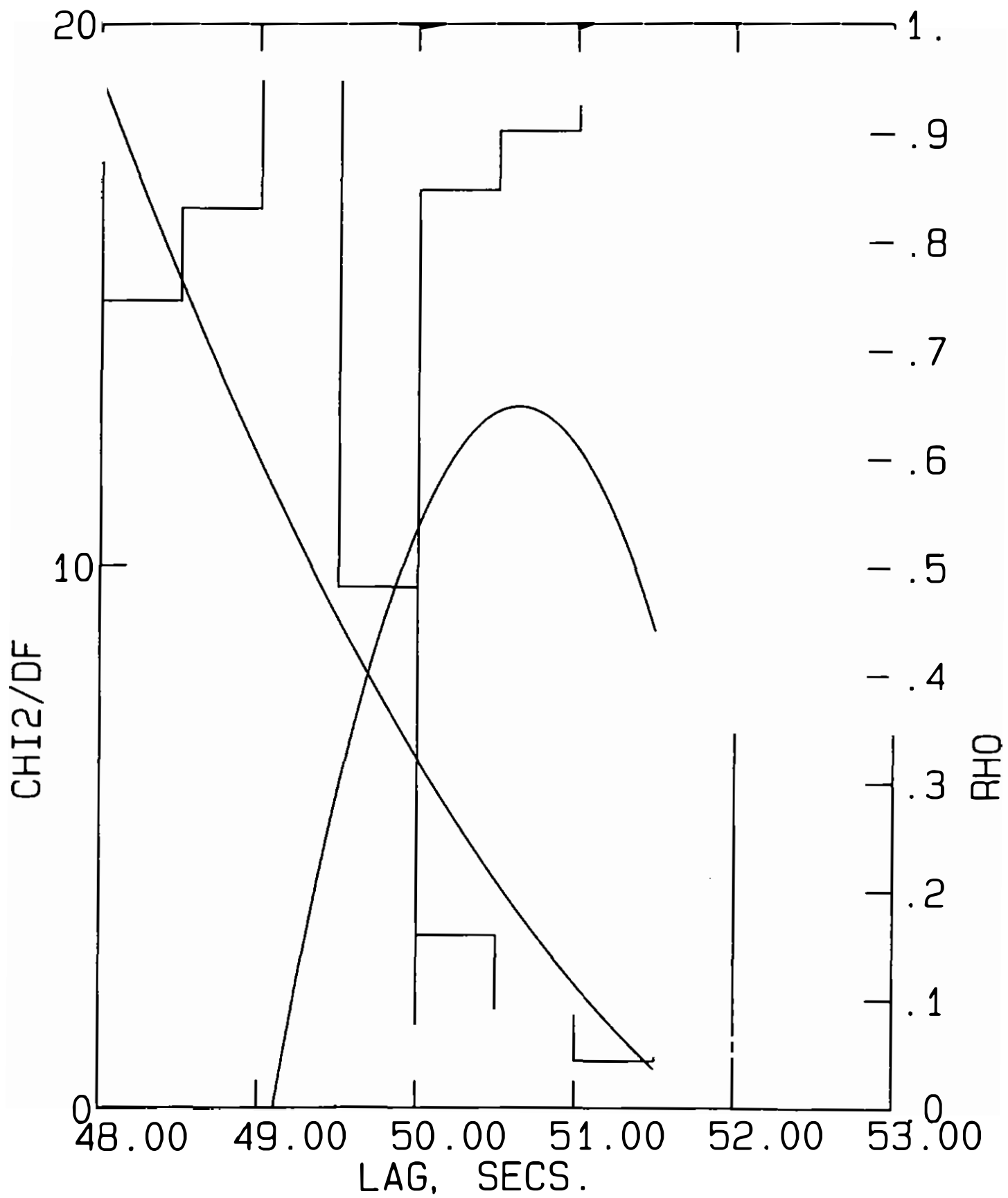
-ULYSSES RT CORRELATION

23/ 6/96

33103.306

11/ 3/98





ULYSSES RT

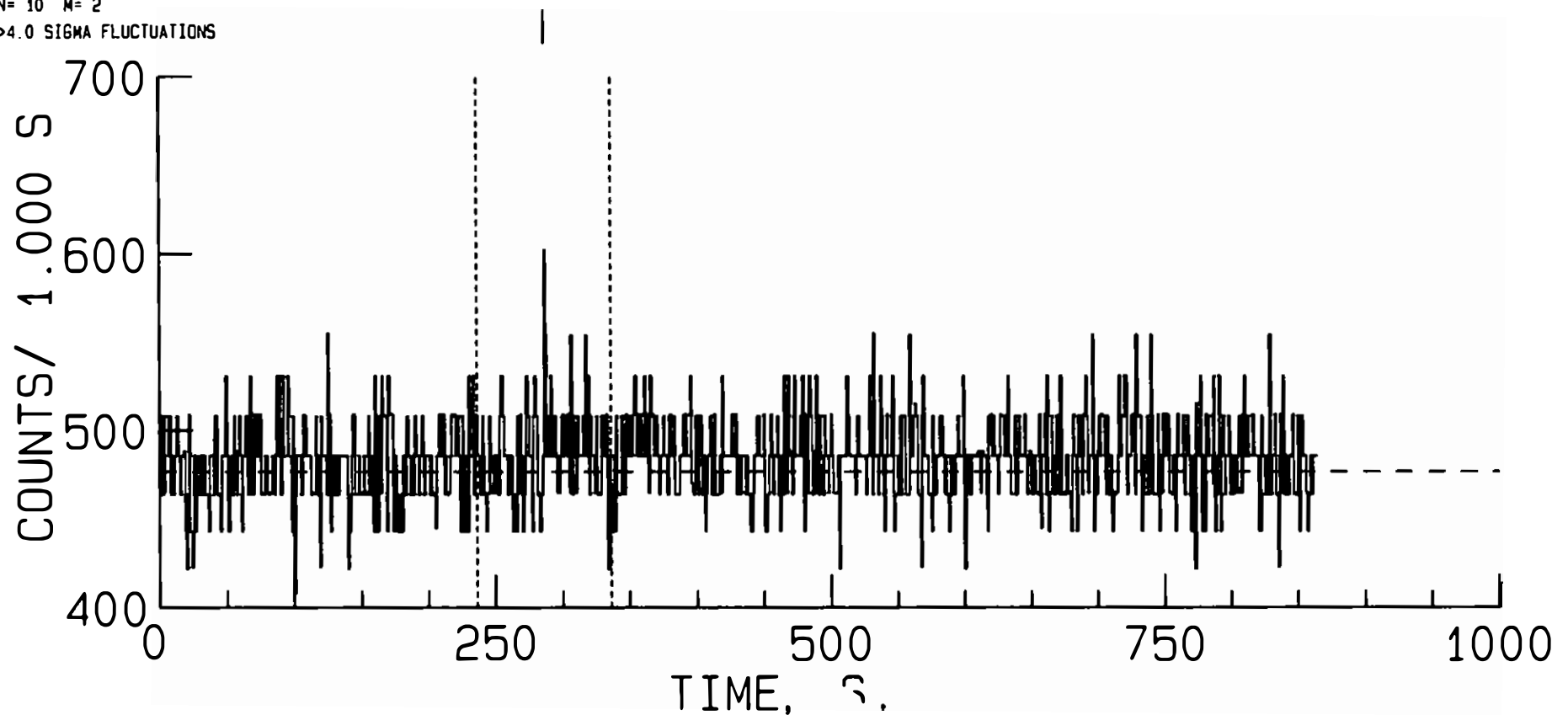
11 / 3 / 98

23 / 6 / 96 33408.241 s

0.500 S INTERVALS REGROUPED BY 2

21- 145 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



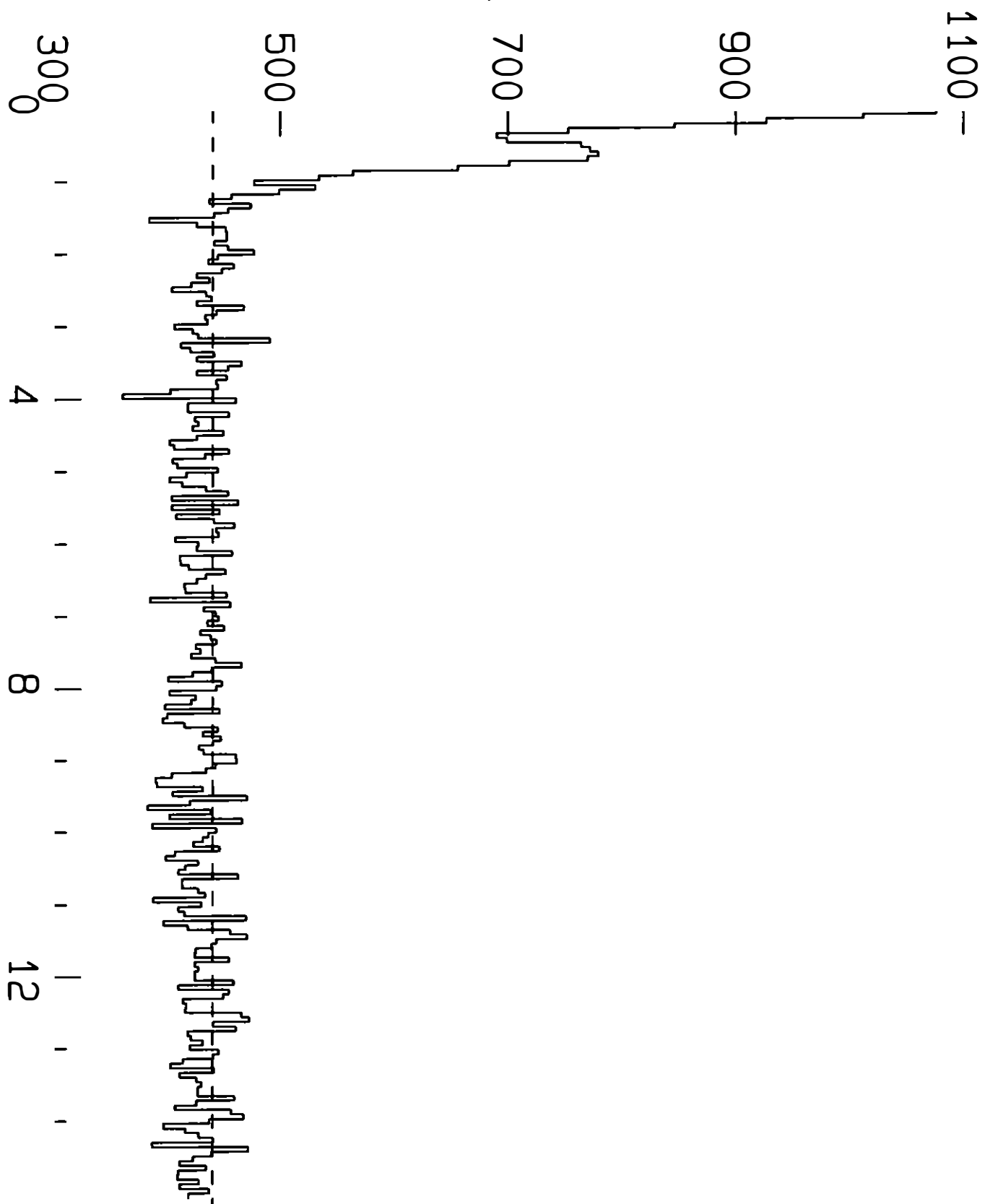
BATSE

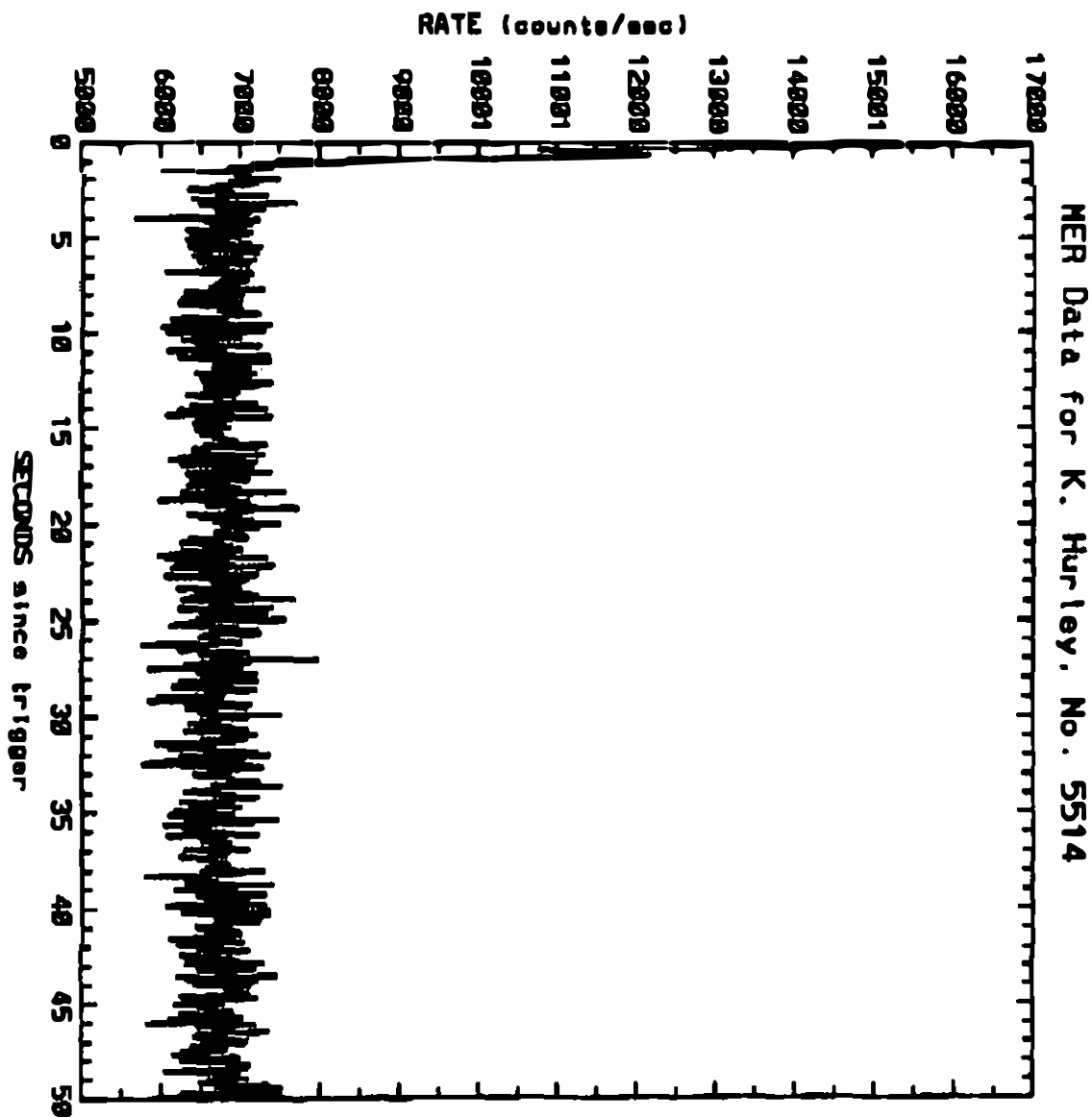
23/06/96

33103.306

25- 100 keV

COUNTS/0.064 S





3-JUL-1996 16:17:44
 Created by MDPS BD
 (Burst Display)
 Version 12.25

Trigger # : 5514
 Trigger Time:
 1995/7/30 18:30:06
 Burst Data Type:
 ME2

Deadtime
 Corrected: N
 Background Data
 Type: CONT

Minimum Integ. Time:
 0.004 second(s)
 Duration (7.0).
 7-5-----
 Channel:
 (0 - 6)
 Quality Mask:
 801571

Date: Oct 15 '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? *N/A*
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☐ Is the order of the data in CORREL such that a vernier is done on the data with the best time resolution? *No - poor statistics*

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?

*U/B ratio is high - 0.05 - and locations disagree -
revisit when the statistics of the U/B ratio are better*

From DEAL@fender.msfc.nasa.gov Tue Jun 25 12:36 PDT 1996
From: DEAL@fender.msfc.nasa.gov
Date: Tue, 25 Jun 1996 14:36:38 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5515

BATSEARCH PROGRAM

BATSE BURST # 5515
EVENT OF 1996 JUN 23 DAY OF YEAR=175
EVENT CROSSING TIME AT BATSE : 65443. S. OR 18:10:43.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 359.000 0.000
BATSE PEAK COUNTING RATE: 3300 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 23/ 6/ 96 IS:
RA= 152.352 DEC= 48.791 DIST= 4.528 AU
BATSE-ULYSSES DISTANCE = 677395559. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 53.93 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1330.50 SECS.
CROSSING TIME AT ULYSSES IS 66774. S. OR 18:32:53 +/- 387.28 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 23/ 6/ 96 IS:
RA= 65.579 DEC= 21.569 DIST= 2.339 AU
MARS-BATSE DISTANCE = 349867936. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=111.69 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -431.39 SECS.
CROSSING TIME AT MARS IS 65012. S. OR 18:03:31 +/- 181.71 SECONDS

BATSE BURST TRIGGER

NO.: 5515

TIME: TJD=0257 SECONDS=65443

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=66.5 AZIMUTH=291.2 ERROR=2.4 DEGREES

COMMENTS:

GRB LASTING ~ 70 S. NOT VISIBLE ABOVE 300 KEV.

RI ?
Doubtful:
u/B ratio off
Location off
NO - REMOVE
FROM CATALOG

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5515	960623	10257	65443	3300	359	0	70

From CONNAUV@gibson.msfc.nasa.gov Wed Oct 29 12:53 PST 1997
Date: Wed, 29 Oct 1997 14:54:59 -0600 (CST)
From: CONNAUV@gibson.msfc.nasa.gov (Valerie Connaughton)
Subject: RE: BATSE 5515
khurley@sunspot.ssl.berkeley.edu
X-Vmsmail-To: SMTP:"khurley@sunspot.ssl.berkeley.edu"

Dear Kevin,

some time ago you commented on the high U/B ratio for this burst and wondered if it were occulted to CGRO just before the BATSE trigger.

Trigger time: 65443.5 sod
Prev occ end: 63209 (approx - in gap)
Next occ beg: 66586 sod

so no go,

Valerie

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

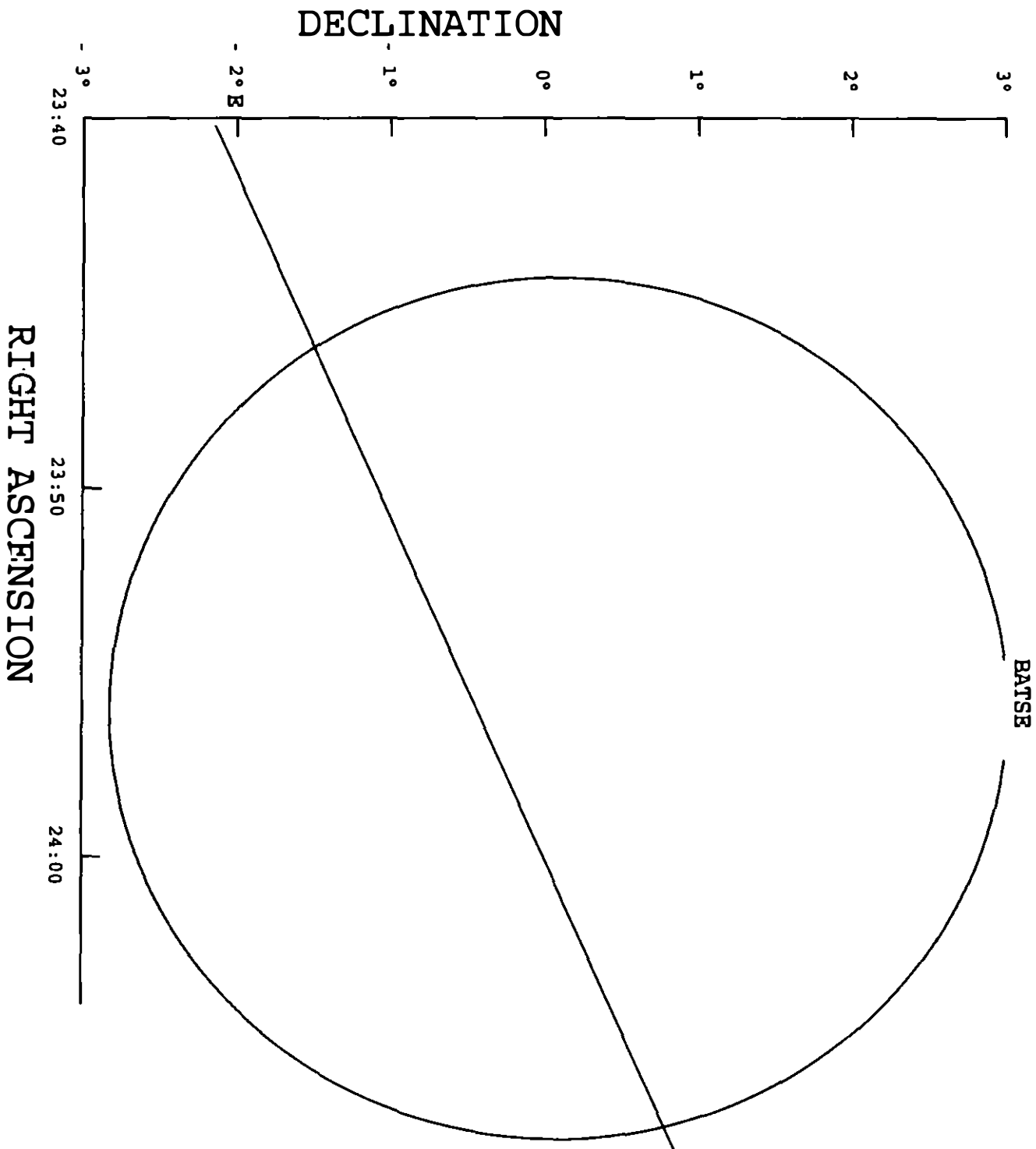
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF JUN 23, 1996 18:26

15/10/97



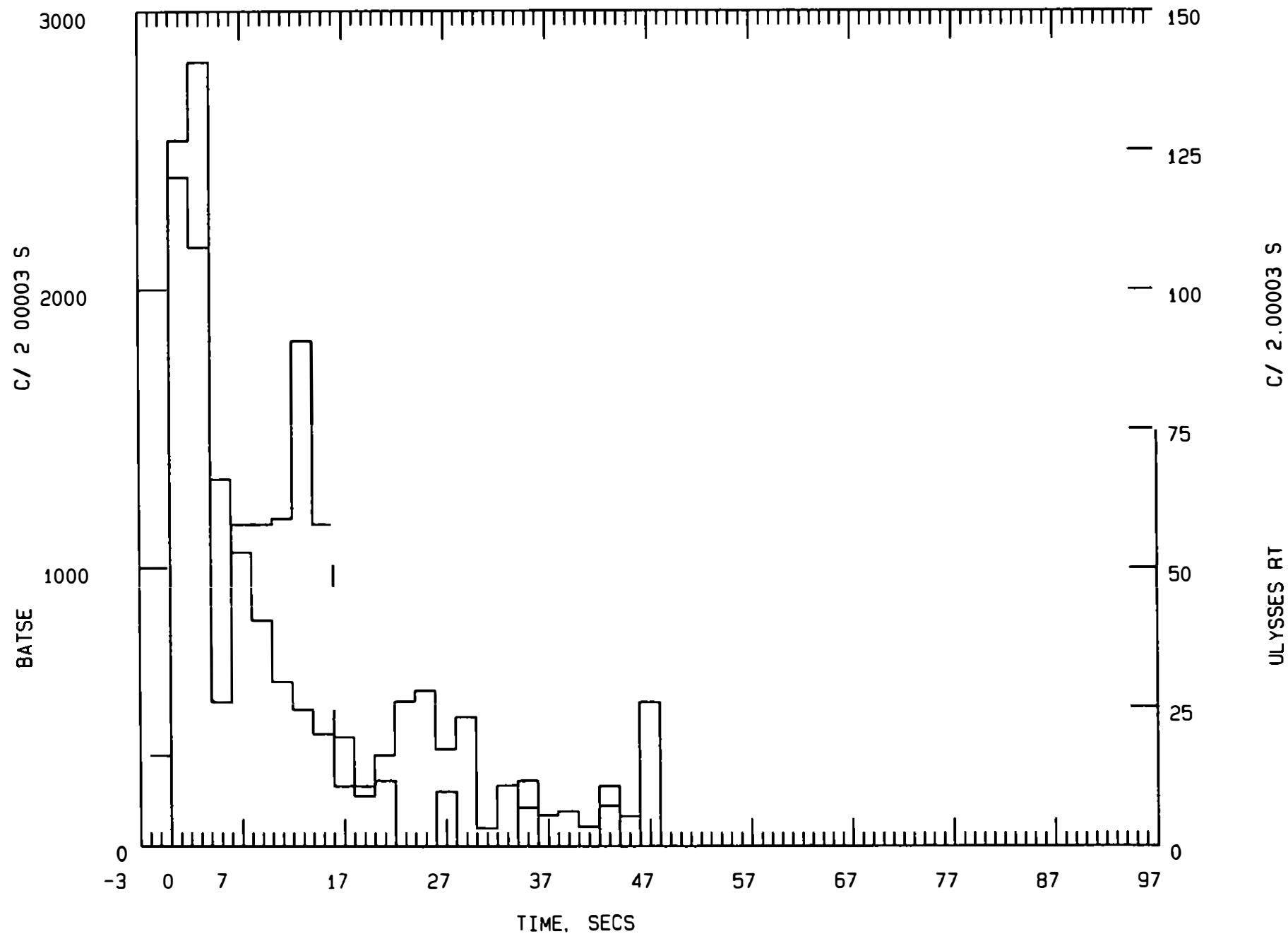
BATSE

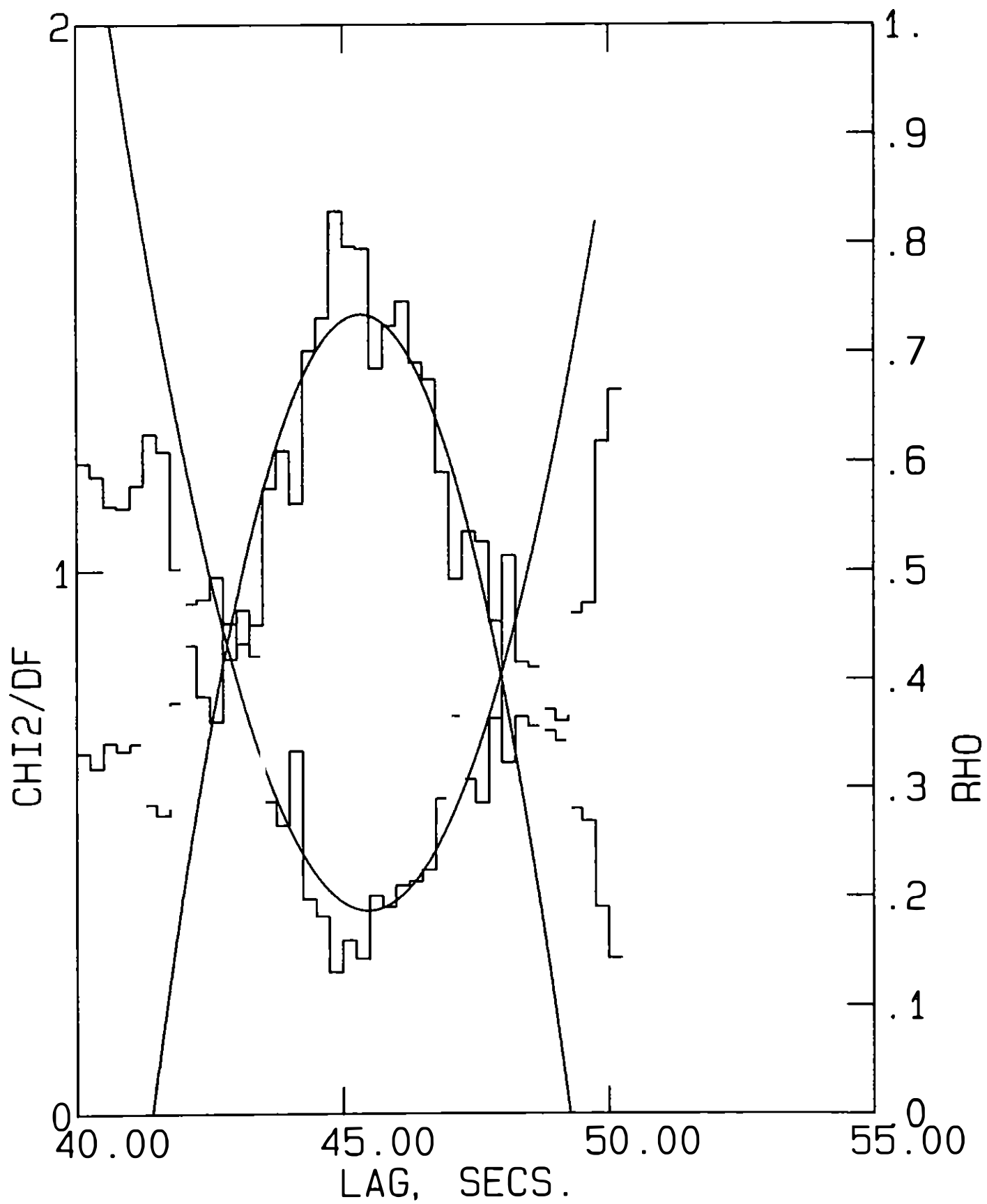
-ULYSSES RT CORRELATION

23/ 6/96

65443.530

15/10/97





ULYSSES RT

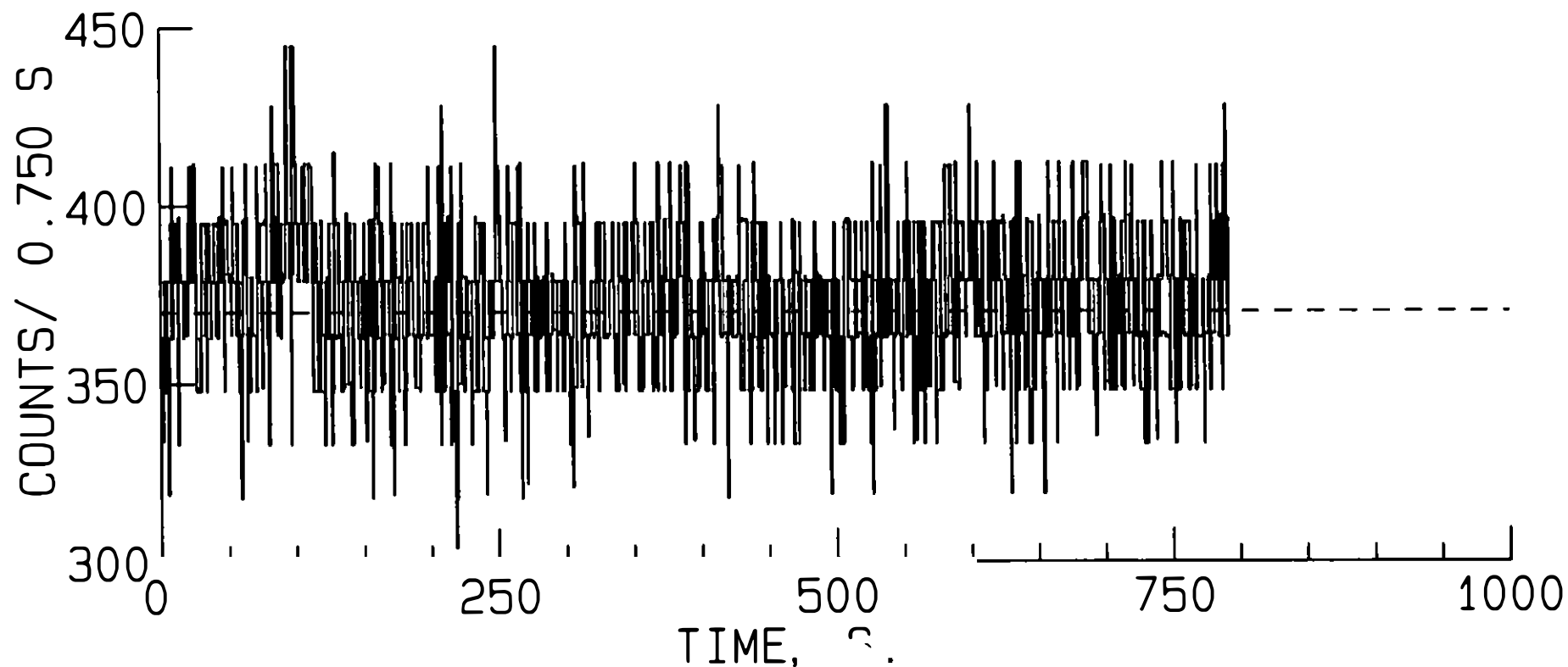
15/10/97

23/ 6/96 66348.176 s

0.250 S INTERVALS REGROUPED BY 3

21- 145 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

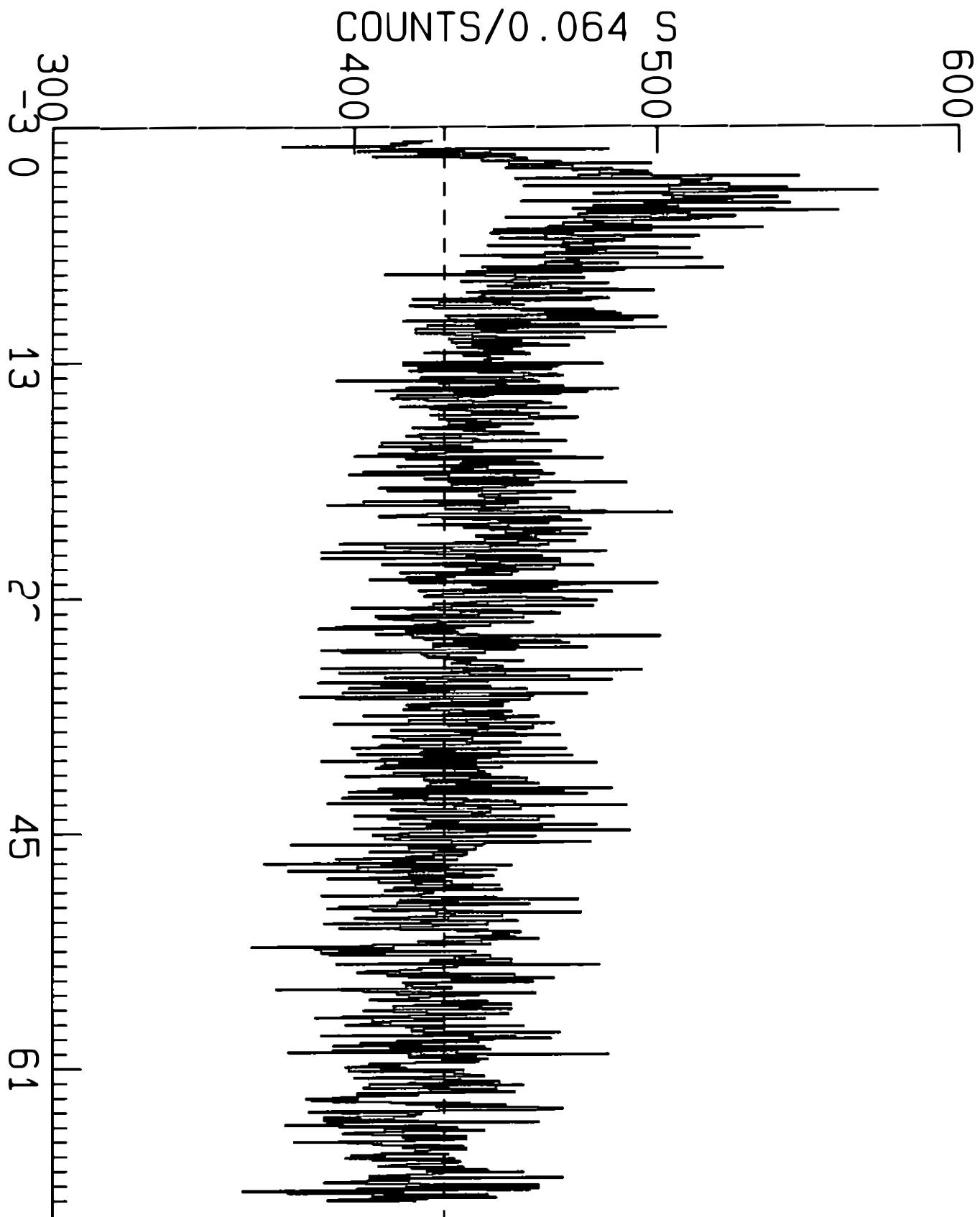


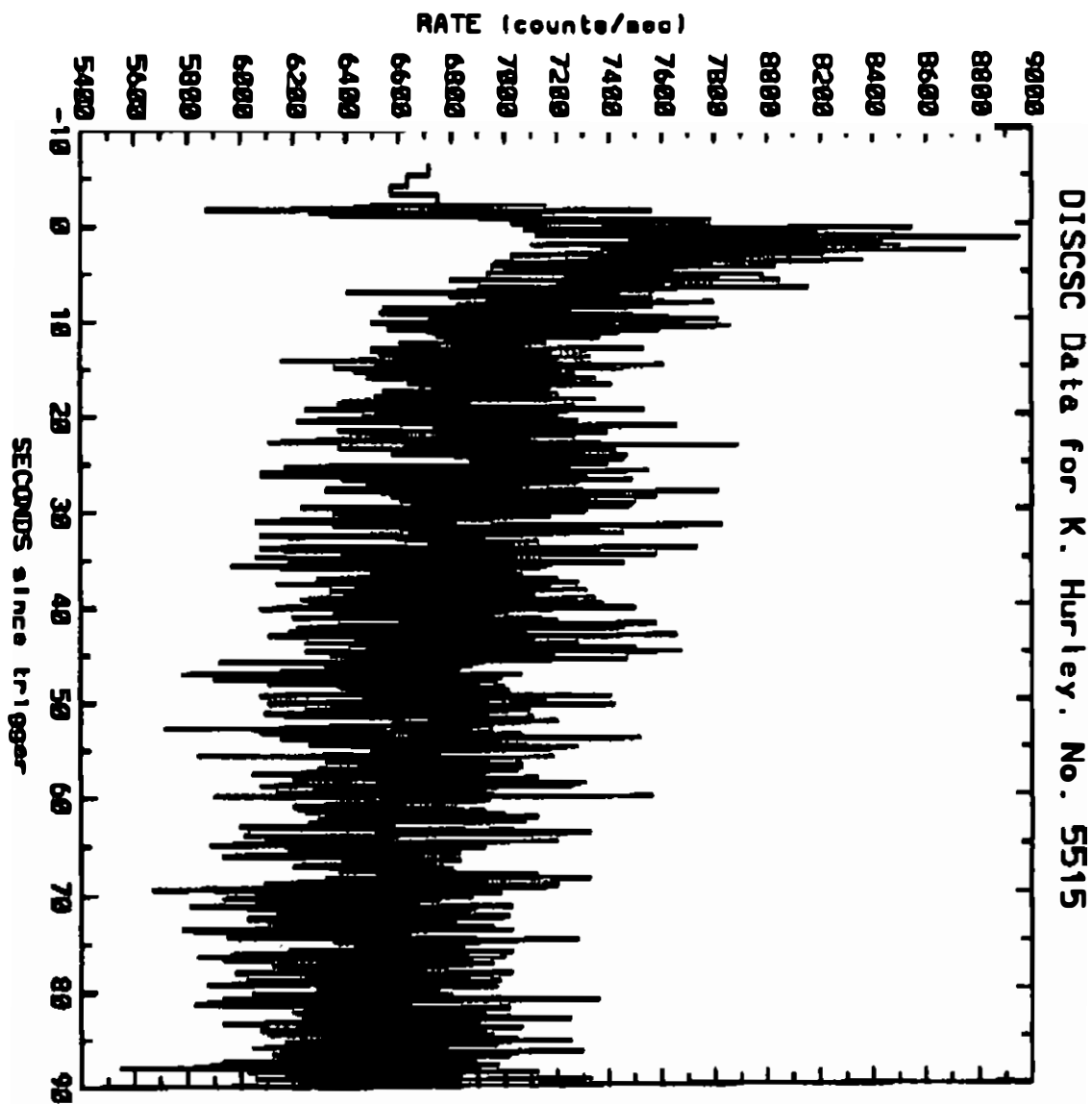
BATSE

23/06/96

65443.530

25- 100 keV





3-JUL-1996 16:20:01
 Created by NOPS BD
 (Burst Display)
 Duration 12.25
 Trigger # : 5515
 Trigger Time:
 10257 / 05443.500
 Burst Data Type:
 DISCSC

Deadtime
 Corrected: 0
 Background Data
 Type: PDEB + DISCSC
 Minimum Latch Time:
 0.004 seconds
 Detector (7..8):
 0---2---
 Discrimination:
 11.21
 Quality Check:
 801871

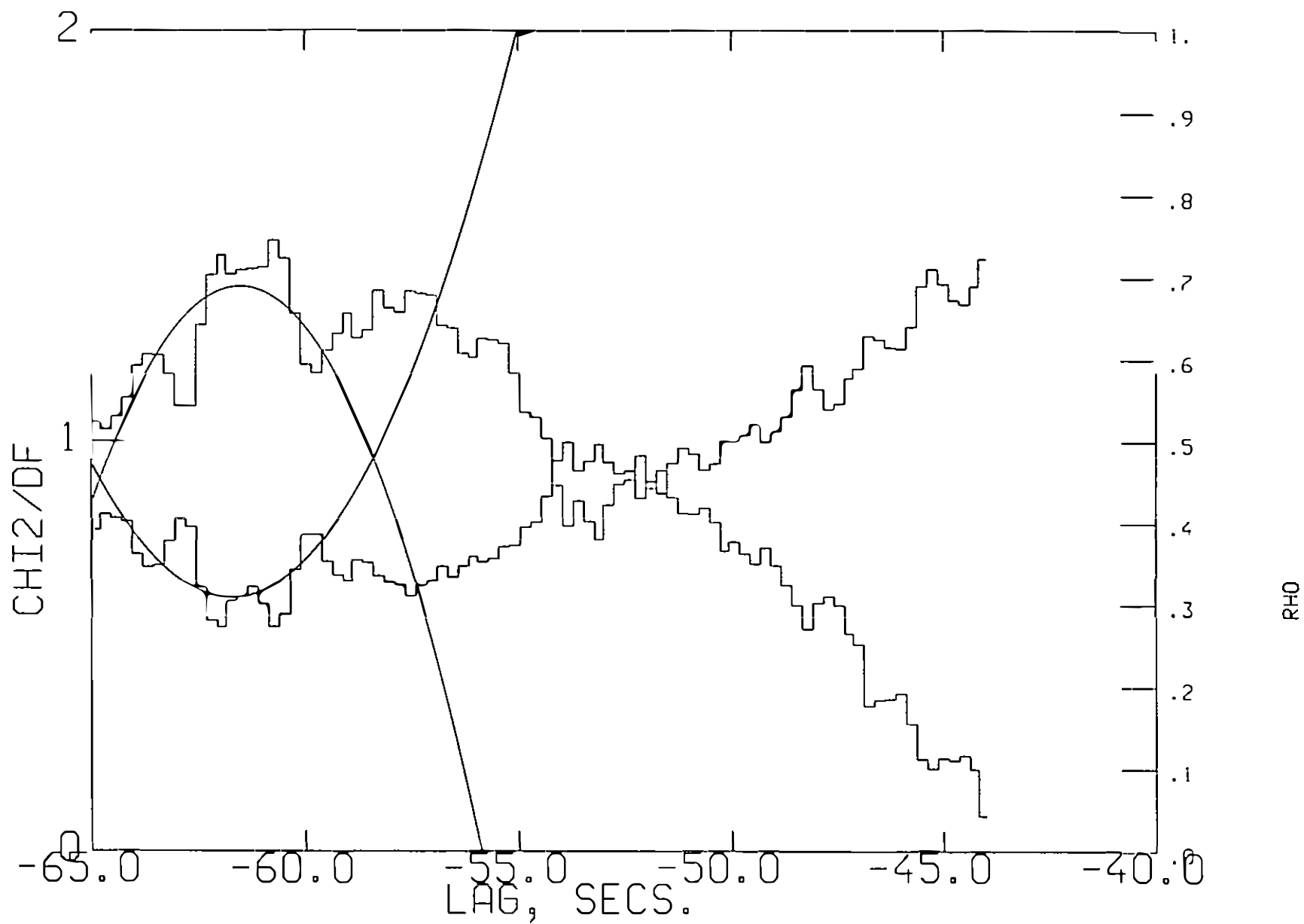
KONUS

-ULYSSES RT CORRELATION

23/06/96

65823.016

6/10/11



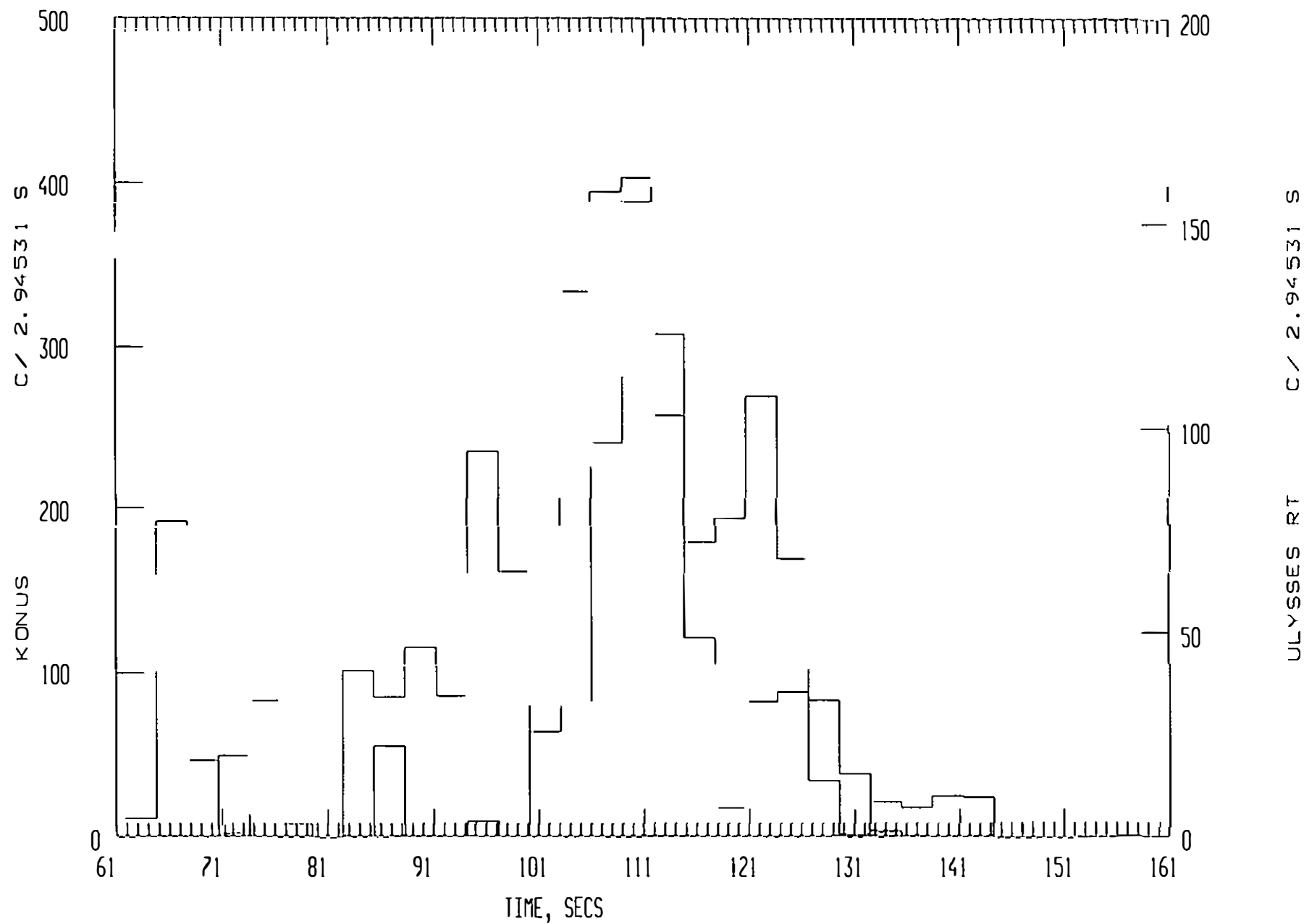
KONUS

-ULYSSES RT CORRELATION

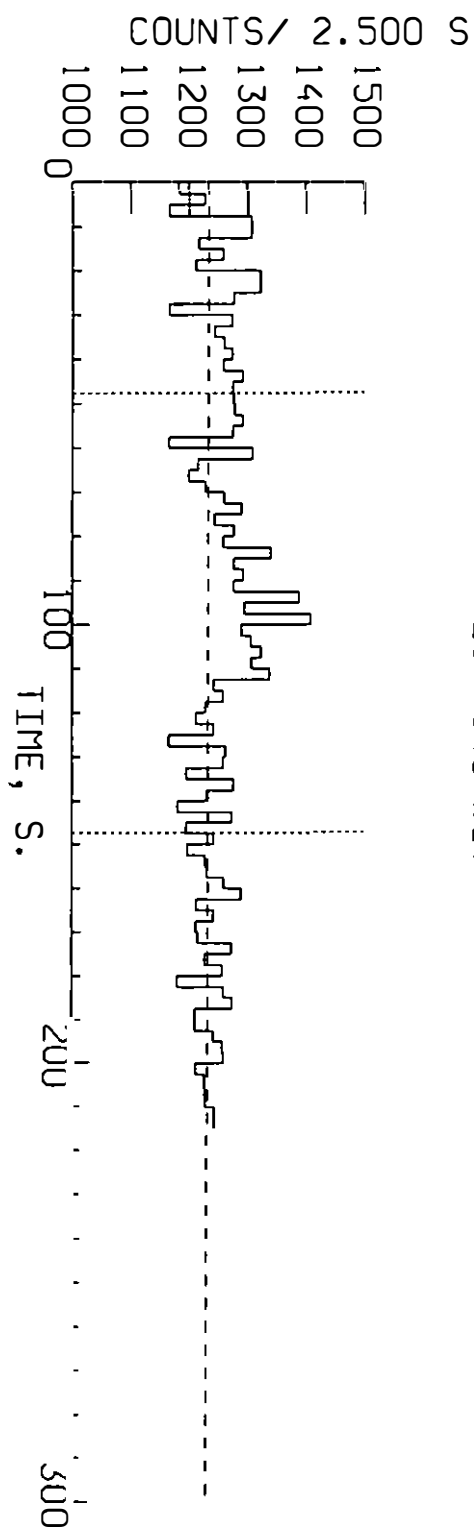
23/06/96

65823.016

6/10/11



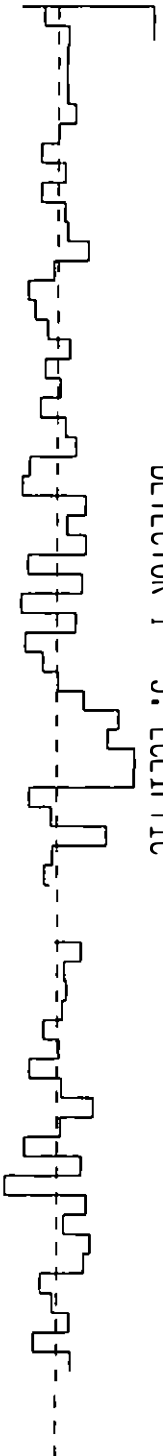
ULYSSES RT 66348.180 s
23/ 6/96
0.250 S INTERVALS REGROUPED BY 10
21- 145 keV



06/10/2011

3600

DETECTOR 1 - S. ECLIPSE



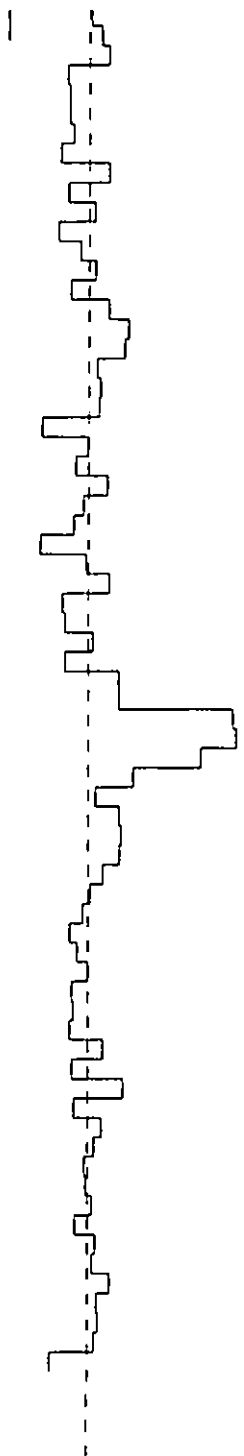
23/06/96 65823.016

50- 200 keV 200- 750 keV

COUNTS/2.945 S

2600

1600



KONUS

10- 50 keV

600

0

20

40

60

80

100

120

140

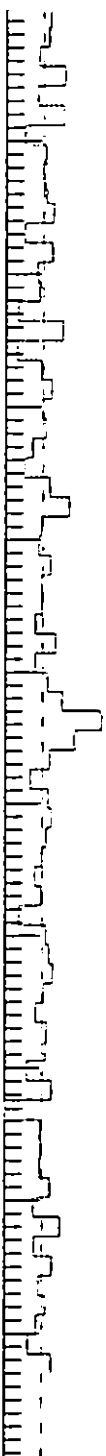
160

180

200

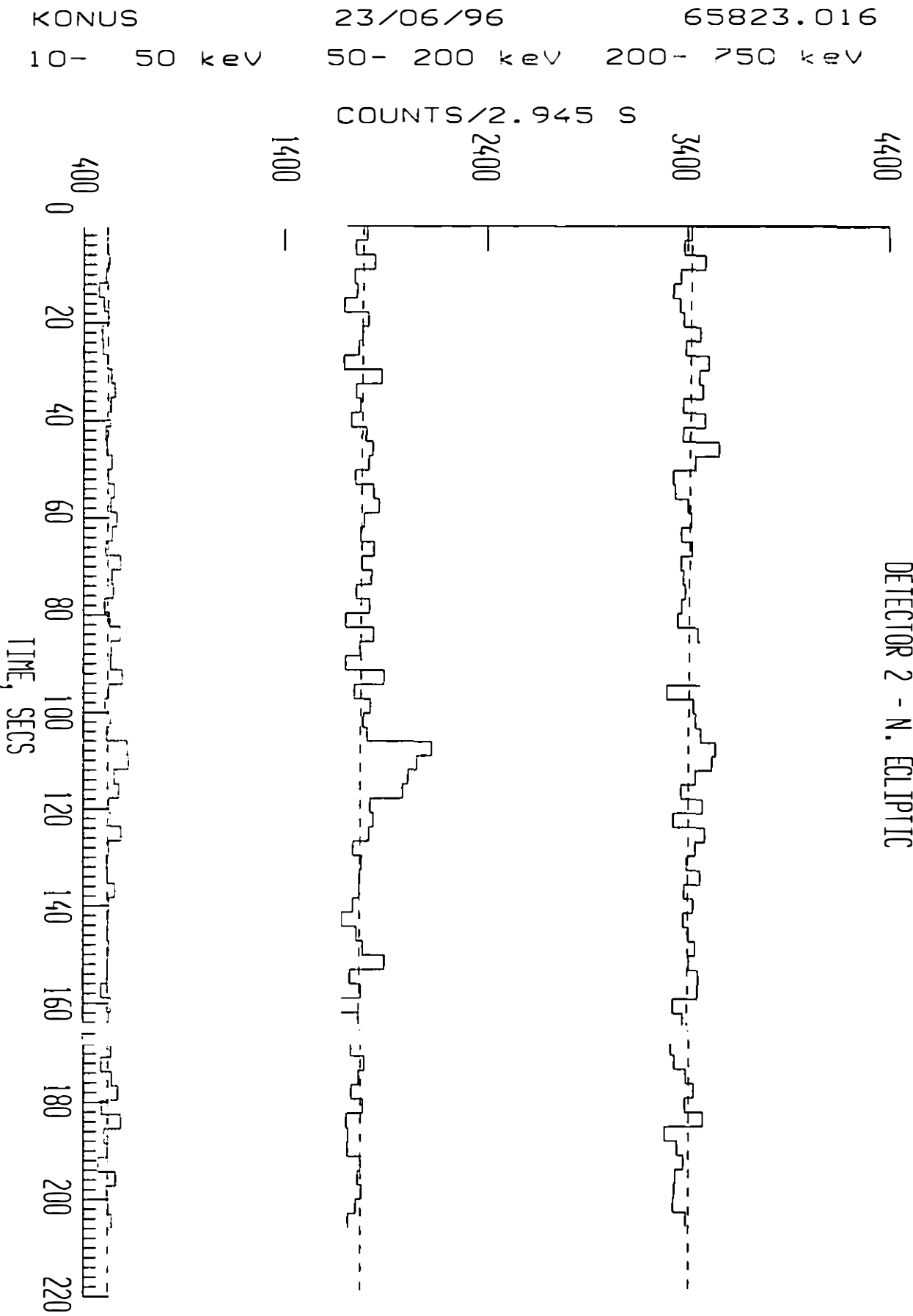
220

TIME, SECS



06/10/2011

DETECTOR 2 - N. ECLIPSE



KONUS 19960623 66462

ULYSSES RT

03/10/11

23/06/96 66348.180 s

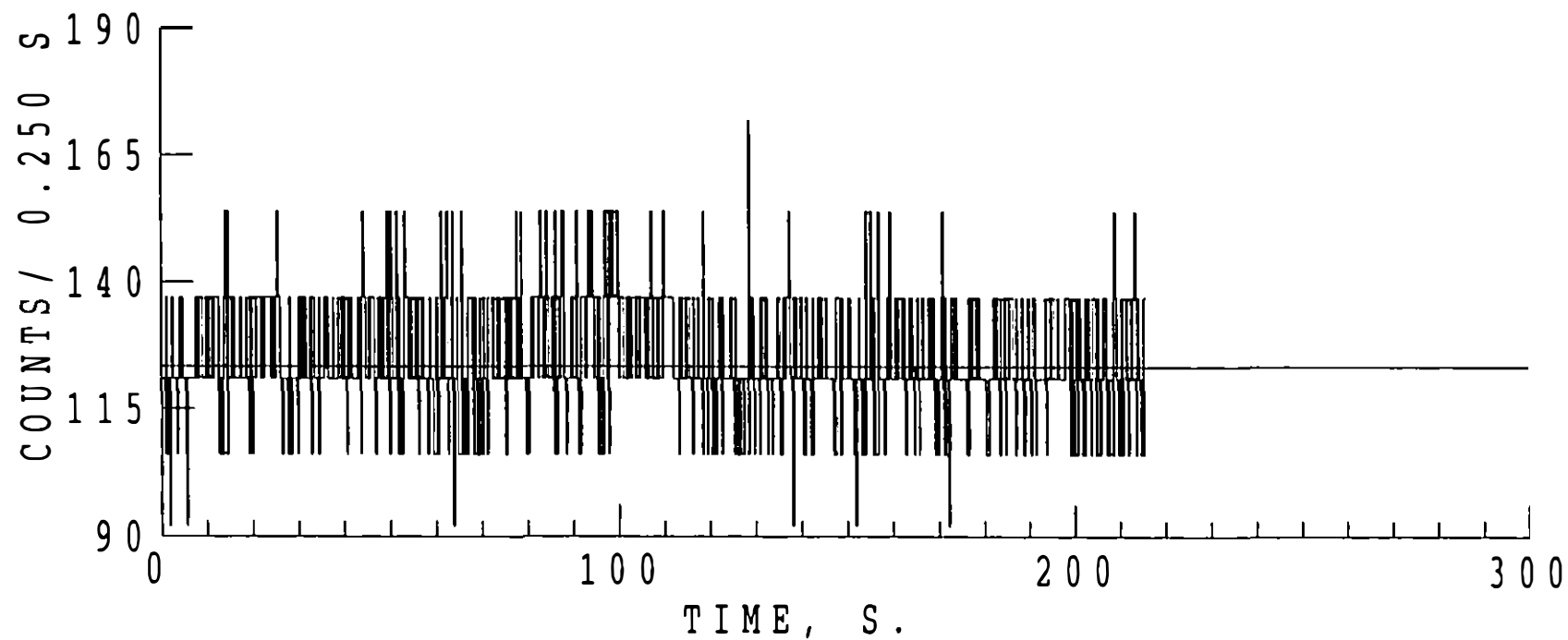
0 - 0 keV

N= 10 N= 10

>4.0 SIGMA FLUCTUATIONS

N= 10 N= 2

>4.0 SIGMA FLUCTUATIONS



KONUS 19960623 65930

ULYSSES RT

29 / 09 / 11

23/06/96 63612.141 s

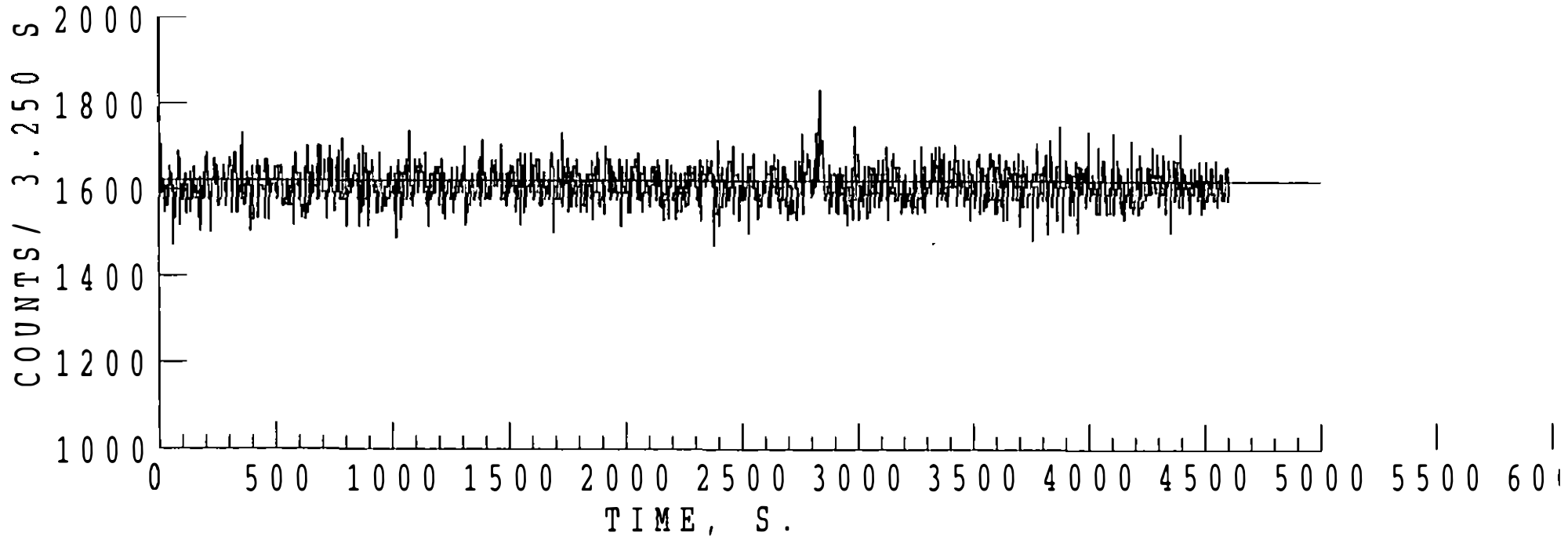
0.250 S INTERVALS REGROUPED BY 13

0 - 0 keV

M= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

| This is the BATSE burst,
not the KONUS one

M= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



Date: Oct 3 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Is the order of the data in CORREL such that a vernier is done on the data with the best time resolution?

2. For Konus events

- ☒ Konus ecliptic latitude used with latest calibration?

2. For Odyssey events

- ☐ Was CHECKMO run to eliminate data gaps?
- ☐ Did the Odyssey ephemeris correspond to the event time? (When there is data in the database, the ephemeris is for the start of record, usually ~1320 s prior to the request time; when there is no data in the database, the ephemeris is for the request time in the e-mail, so the request time in mosearch should be equal to the GRB time. Note that the time in the return e-mail will be ~1320 s prior to the time requested, in the line "no HEND data...")
- ☐ Was Mars-blocking used?
- ☐ For cruise phase data (April – October 2001), was the updated data used? (Old data has timing errors)
- ☐ GRS database searched for triggered data? Database data between August 2005 and January 2006 should be re-extracted, due to timing errors. (E-mailed data should be OK).
- ☐ GRS and HEND data cross-correlated to check timing?

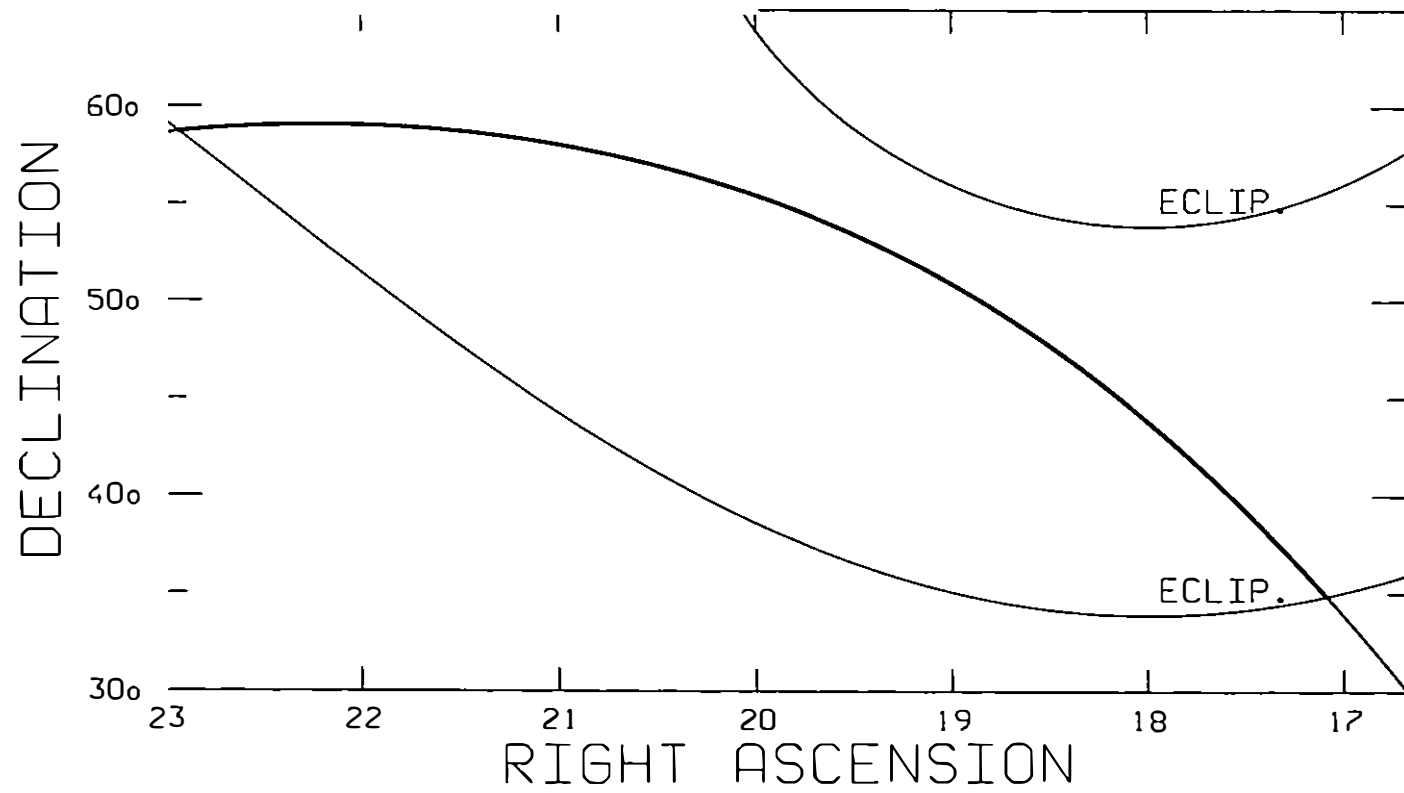
2. For 3 or More Spacecraft events

- ☐ $\Sigma 3\Delta t$'s calculated, and/or BMAPSUM executed?

3. For INTEGRAL events

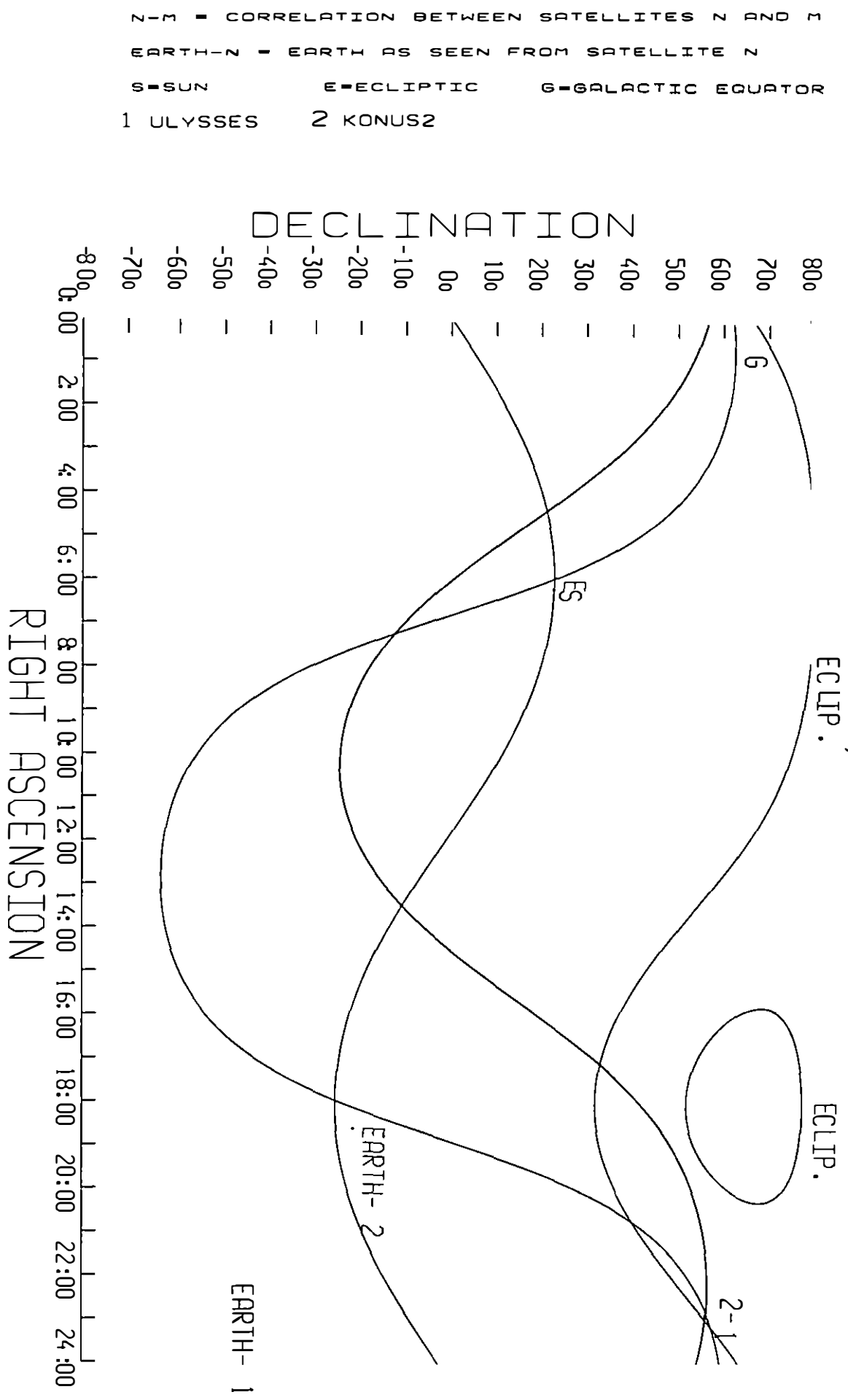
- ☐ INTEGRAL SPI-ACS website checked for bursts that weren't transmitted automatically?
- ☐ 125 ms added to INTEGRAL SPI-ACS time for bursts prior to April 2 2004 11:00 UT?
- ☐ Updated ephemeris used for bursts prior to September 30, 2003?

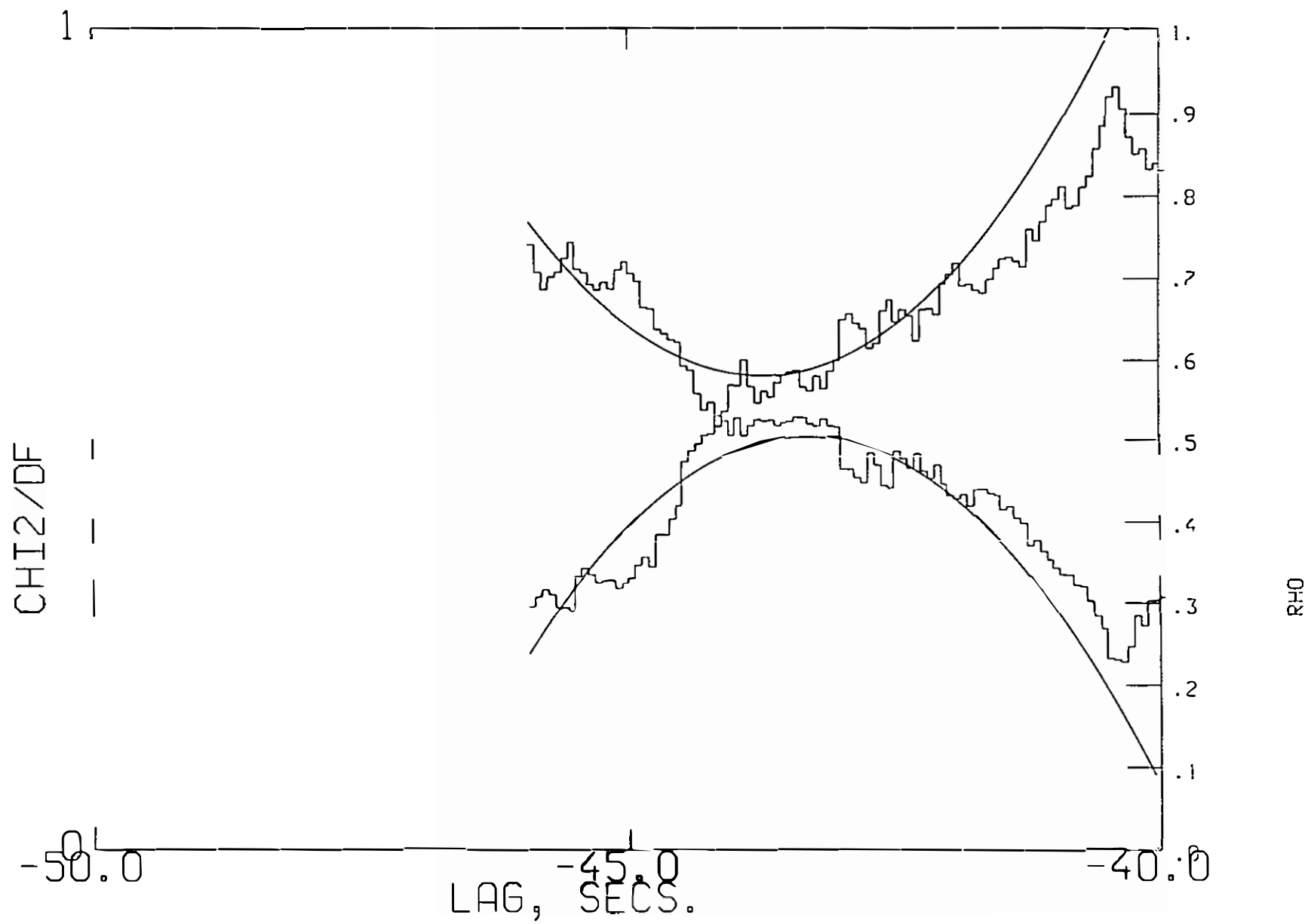
-
- ☒ ACCESS and MBL4 databases updated with identical times?

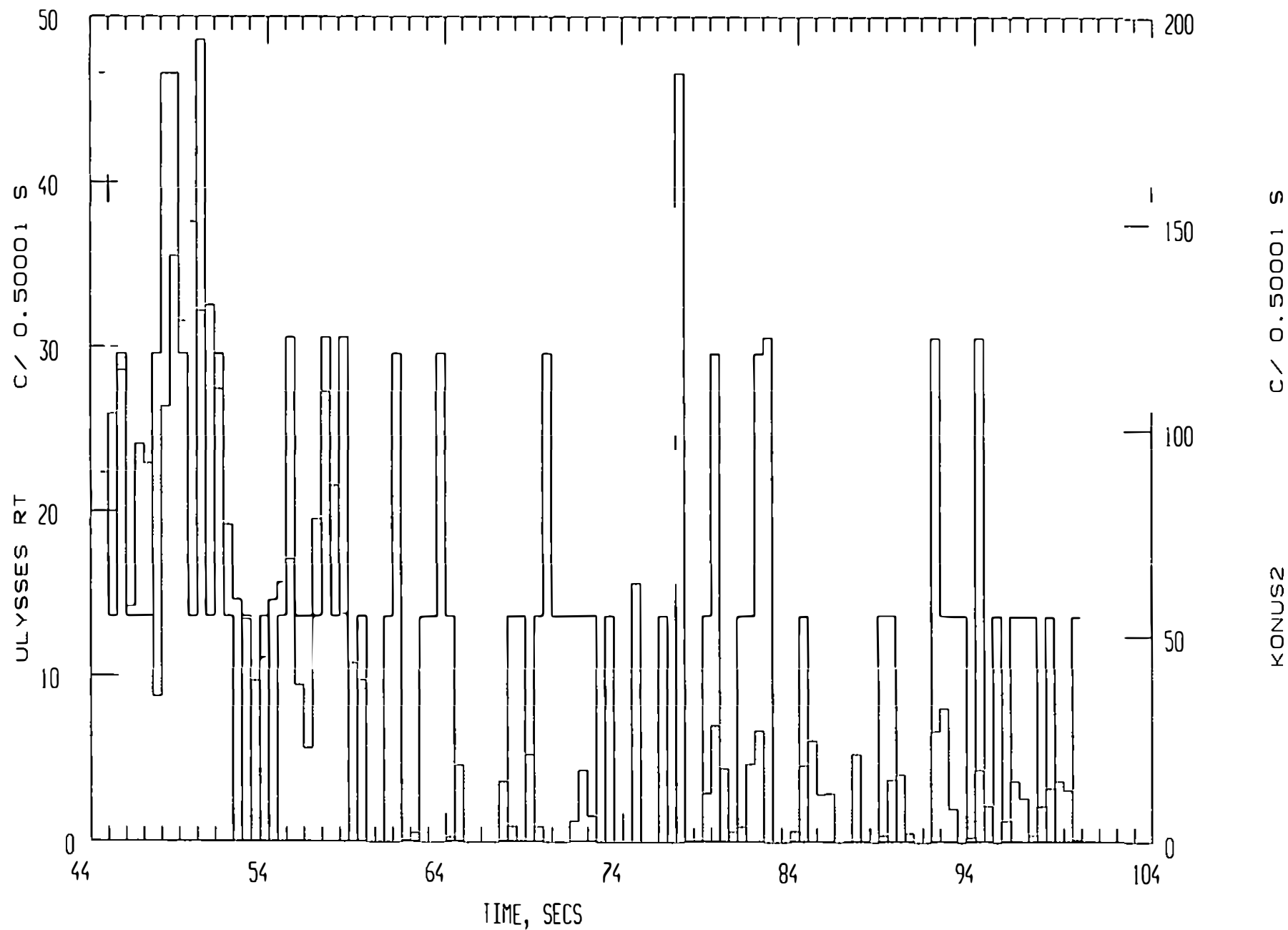


EVENT OF JUN 23, 1996 21:14

03/10/2011







KONUS 19960623 76480

ULYSSES RT

29/09/11

23/06/96 76392.055 s

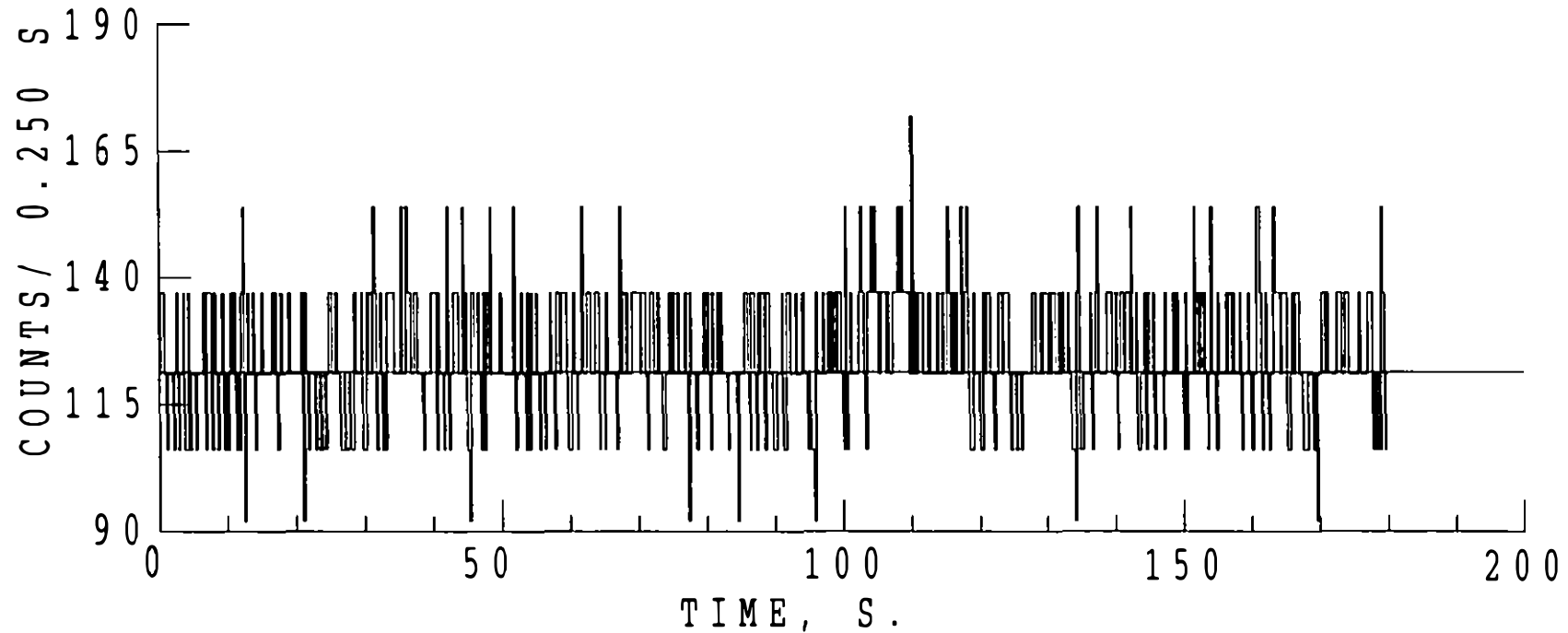
0 - 0 keV

N= 10 M= 10

>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS

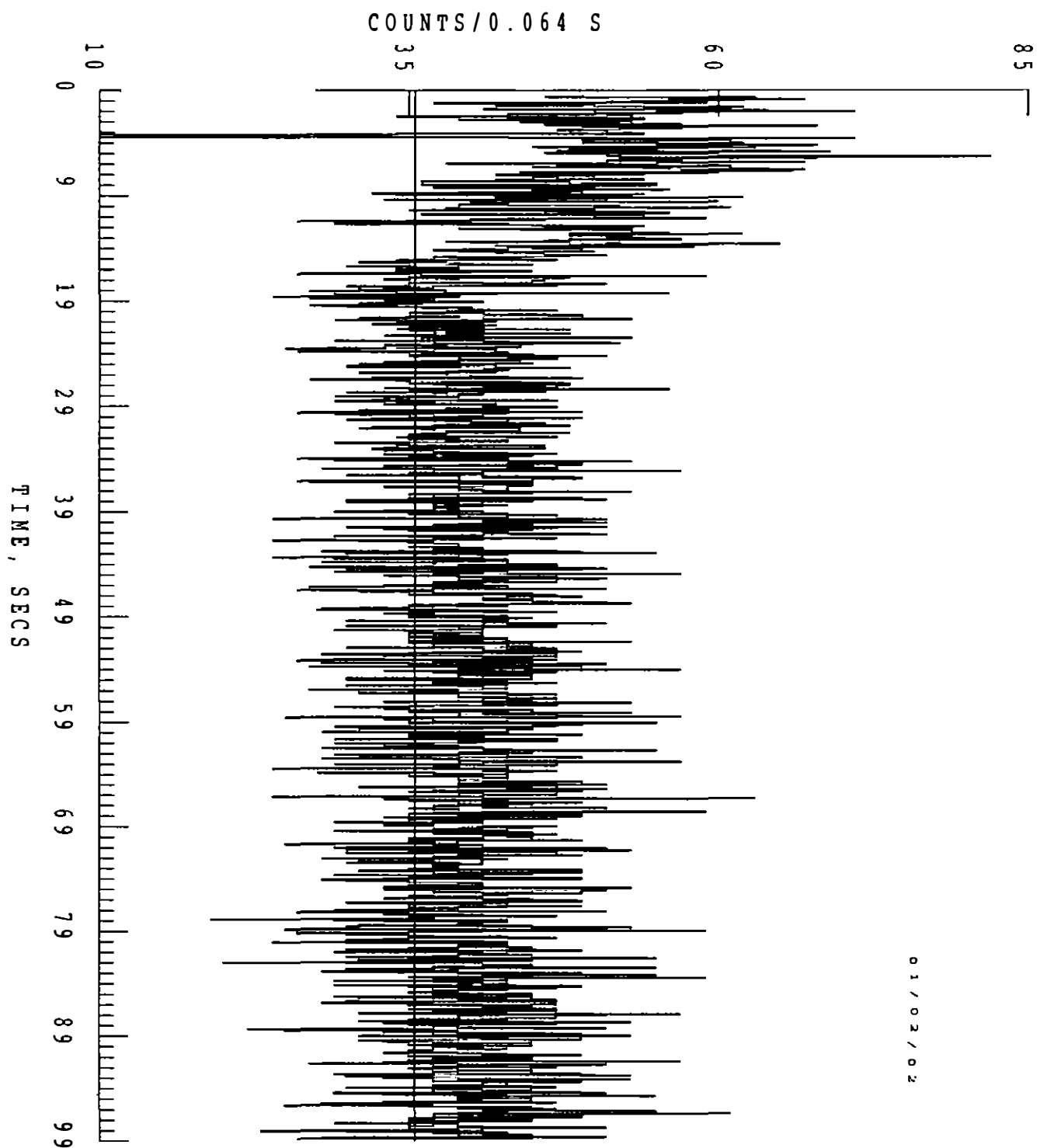


KONUS2

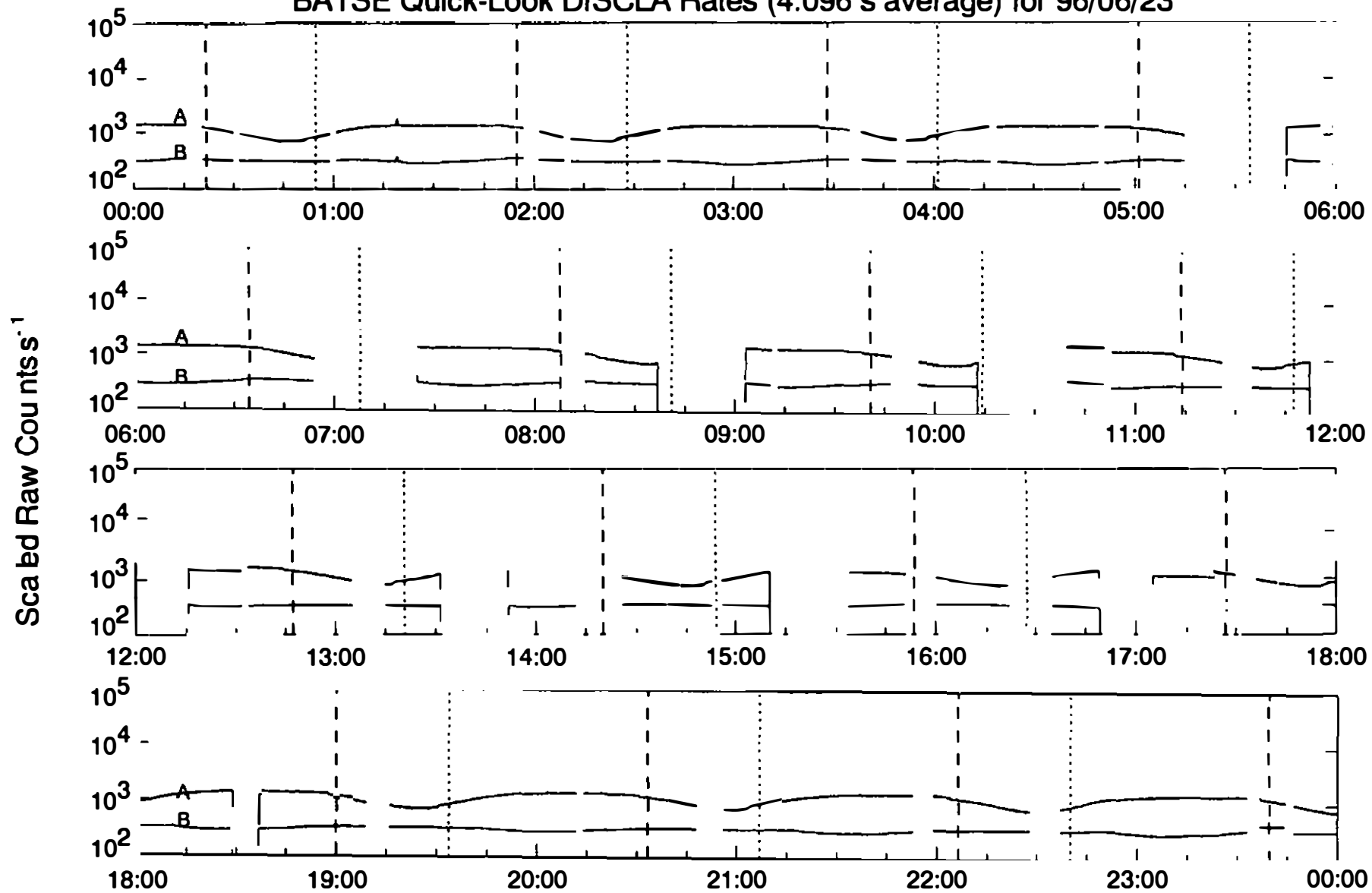
23/06/96

77186.871

50 - 200 keV



BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/23



Current Time: 96/06/25, 1004 EDT

A: Channel 0 Most Sunward LAD

B: Sum Channel 0 Anti-Sunward LADs X .05

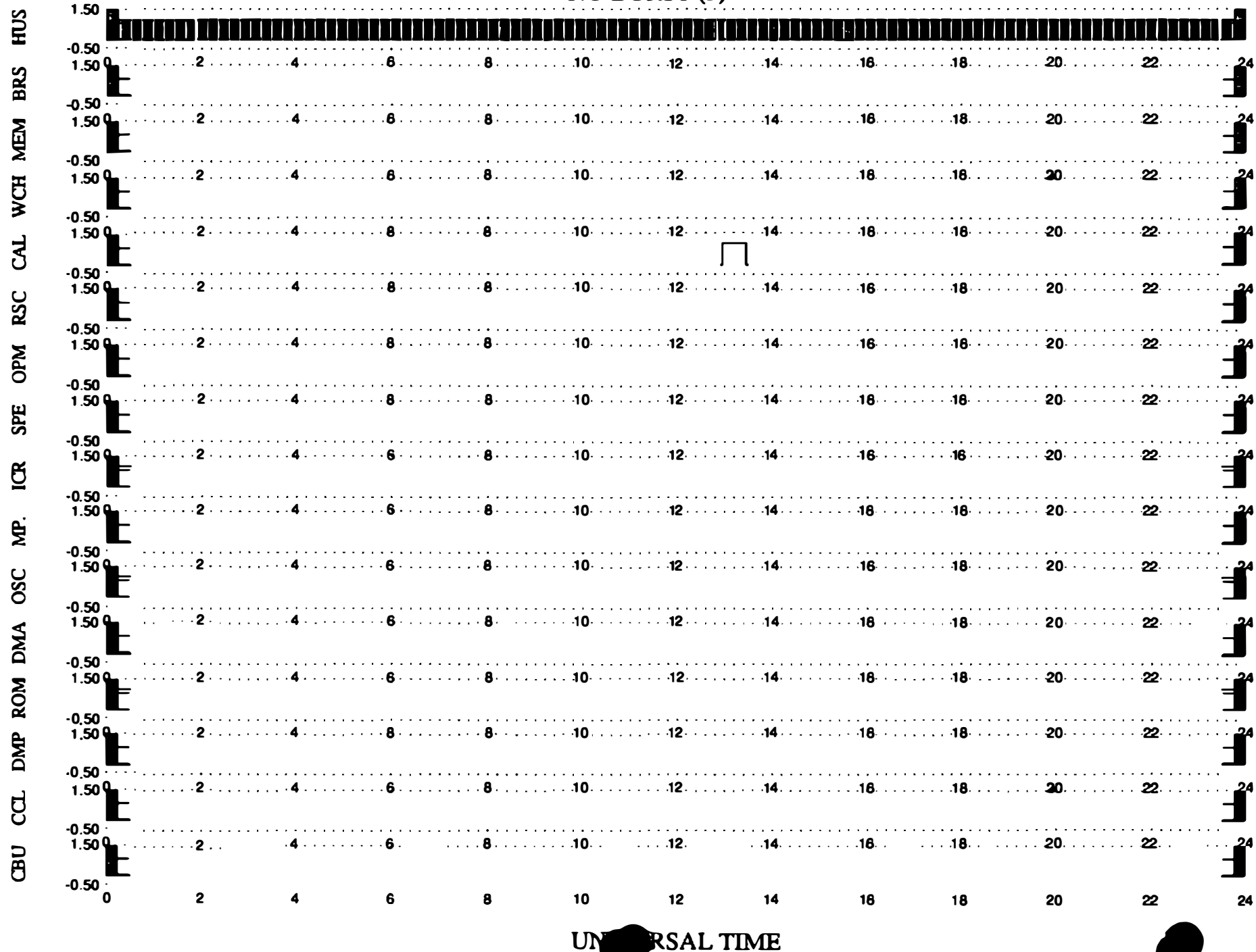
Dotted line: Day entry

Dashed line: Night entry

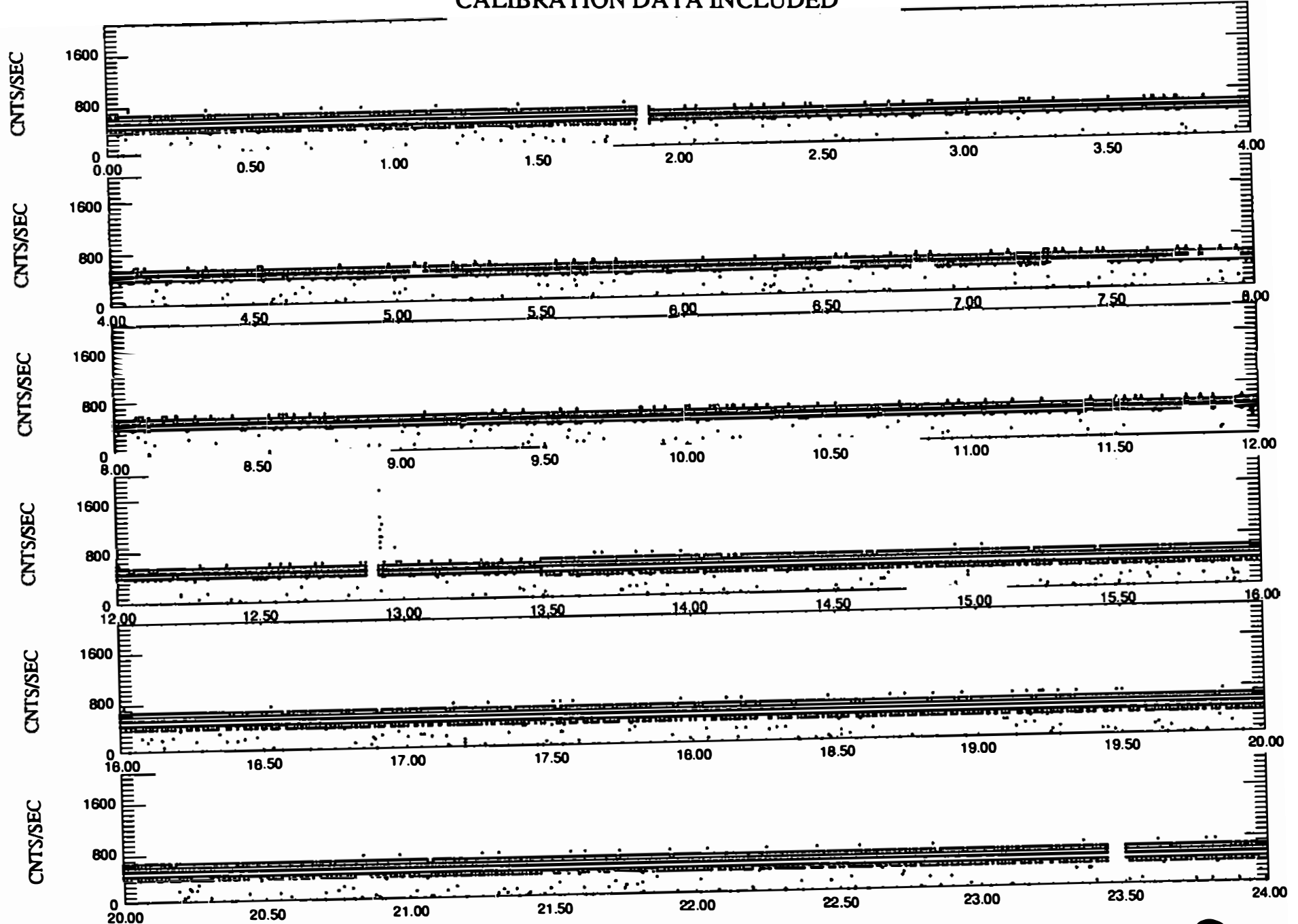
* Solar Burst Trigger

+ Solar Flare

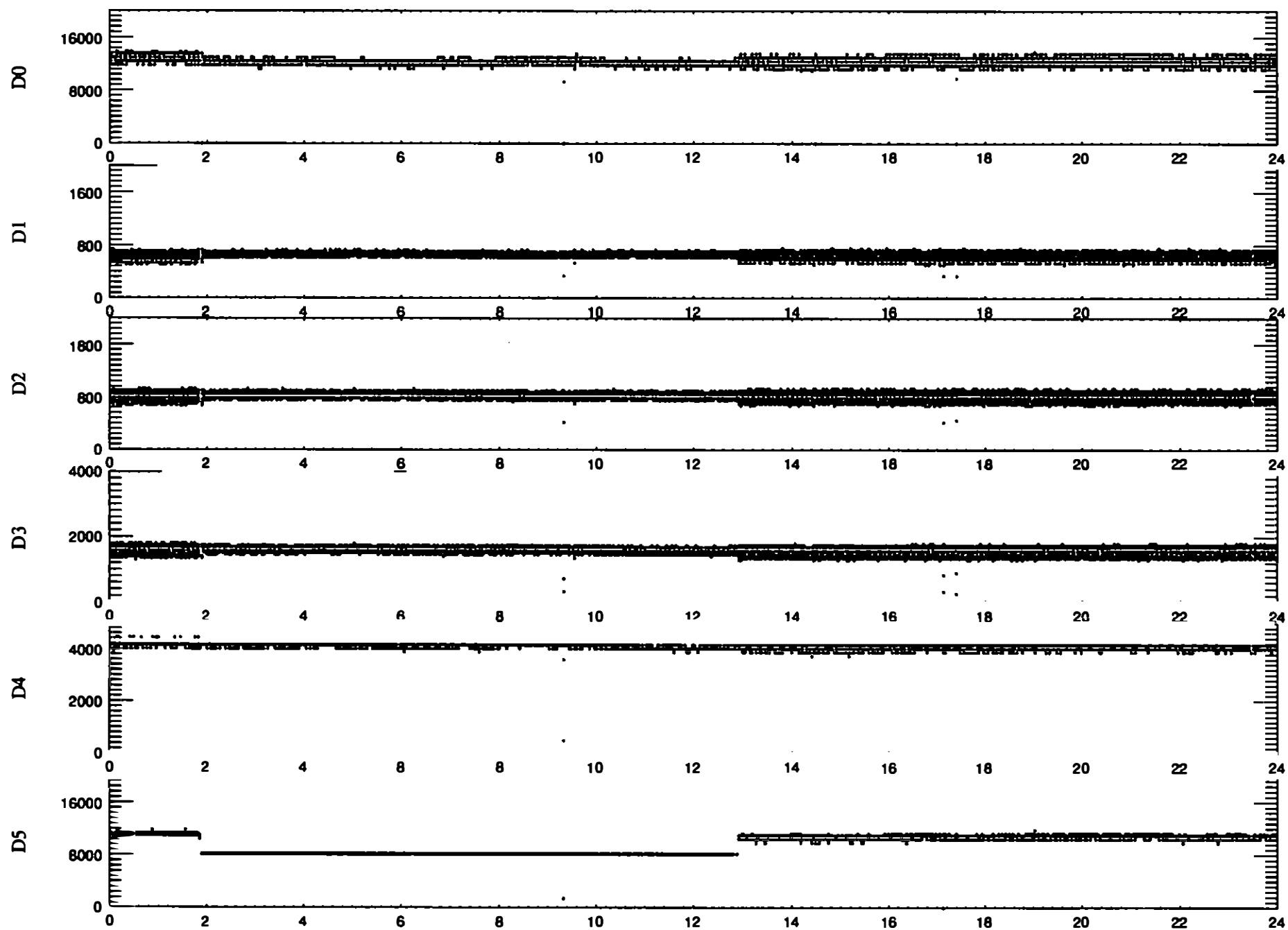
NO BURST (5)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From WOODSP@SSLLES.MSFC.NASA.GOV Tue Jun 25 11:31 PDT 1996
Date: Tue, 25 Jun 1996 13:30:23 -0500 (CDT)
From: WOODSP@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5516

BATSEARCH PROGRAM

BATSE BURST # 5516
EVENT OF 1996 JUN 24 DAY OF YEAR=176
EVENT CROSSING TIME AT BATSE : 9437. S. OR 02:37:17.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 178.000 -15.000
BATSE PEAK COUNTING RATE: 1900 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 24/ 6/ 96 IS:
RA= 152.414 DEC= 48.713 DIST= 4.533 AU
BATSE-ULYSSES DISTANCE = 678138939. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=112.36 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -860.41 SECS.
CROSSING TIME AT ULYSSES IS 8577. S. OR 02:22:56 +/- 400.14 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 24/ 6/ 96 IS:
RA= 66.325 DEC= 21.695 DIST= 2.337 AU
MARS-BATSE DISTANCE = 349616864. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 64.71 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 498.15 SECS.
CROSSING TIME AT MARS IS 9935. S. OR 02:45:35 +/- 190.63 SECONDS

BATSE BURST TRIGGER

NO.: 5516

TIME: TJD=0258 SECONDS=9437

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=121.9 AZIMUTH=124.6 ERROR=4.5 DEGREES

COMMENTS:

GRB LASTING 28 SEC. SINGLE PULSE. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5516	960624	10258	09437	1900	178	-15	28

BATSE #

5516

25 / 6 / 96

ULYSSES RT

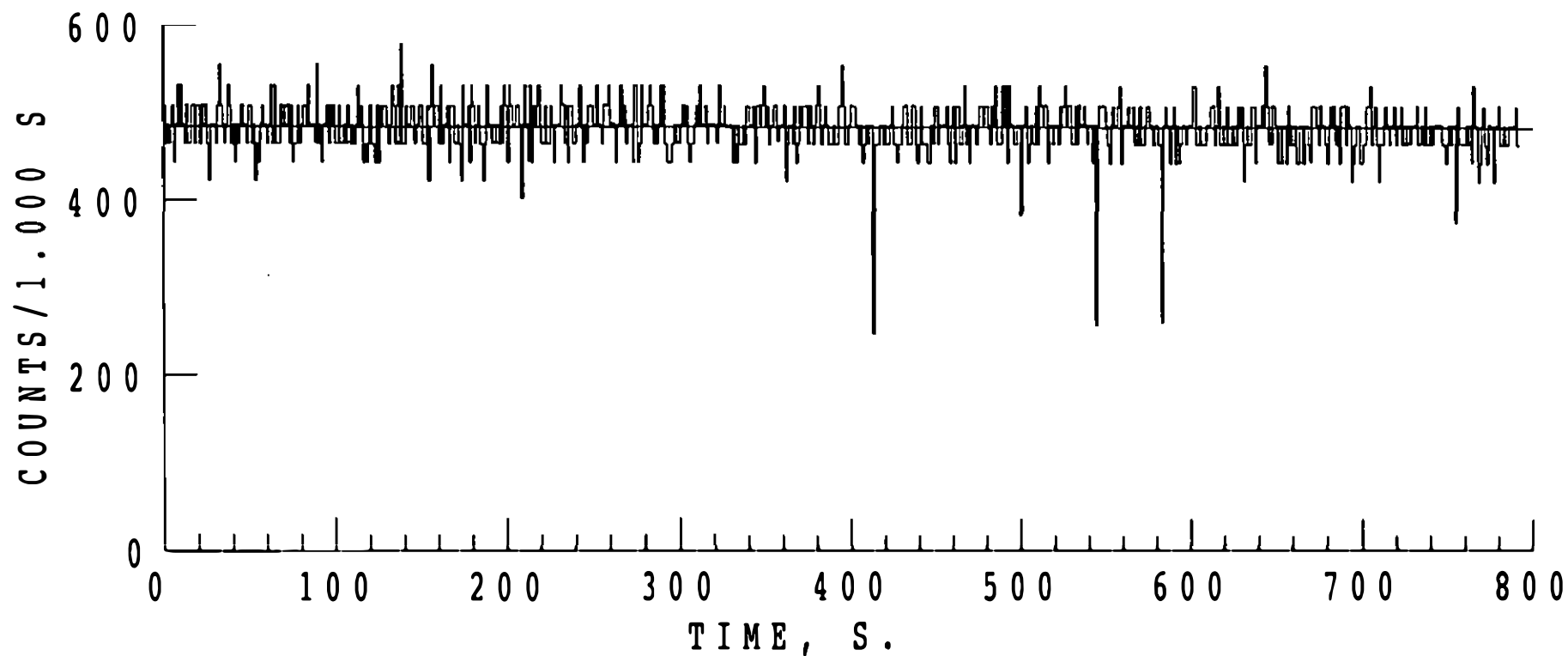
24 / 6 / 96 8172.044 s

0.500 S INTERVALS REGROUPED BY 2

0 - 0 keV

N=10 M=2

>4.0 SIGMA FLUCTUATIONS



From WOODSP@ssl.msfc.nasa.gov Tue Jun 25 11:24 PDT 1996
From: WOODSP@ssl.msfc.nasa.gov
Date: Tue, 25 Jun 1996 13:24:04 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5517

BATSEARCH PROGRAM

RT

BATSE BURST # 5517
EVENT OF 1996 JUN 24 DAY OF YEAR=176
EVENT CROSSING TIME AT BATSE : 12373. S. OR 03:26:13.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 99.000 32.000
BATSE PEAK COUNTING RATE: 6300 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 24/ 6/ 96 IS:
RA= 152.419 DEC= 48.705 DIST= 4.533 AU
BATSE-ULYSSES DISTANCE = 678208704. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=137.03 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1655.22 SECS.
CROSSING TIME AT ULYSSES IS 10718. S. OR 02:58:37 +/- 292.59 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 24/ 6/ 96 IS:
RA= 66.325 DEC= 21.695 DIST= 2.337 AU
MARS-BATSE DISTANCE = 349616864. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=149.22 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1001.96 SECS.
CROSSING TIME AT MARS IS 11371. S. OR 03:09:31 +/- 88.39 SECONDS

BATSE BURST TRIGGER

NO.: 5517

TIME: TJD=0258 SECONDS=12373

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=115.5 AZIMUTH=19.3 ERROR=1.8 DEGREES

COMMENTS:

GRB LASTING 8 SEC. SINGLE BRIGHT PULSE. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5517	960624	10258	12373	6300	099	+32	8

Helio corr removed

Date: *Mar 11 '98*

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

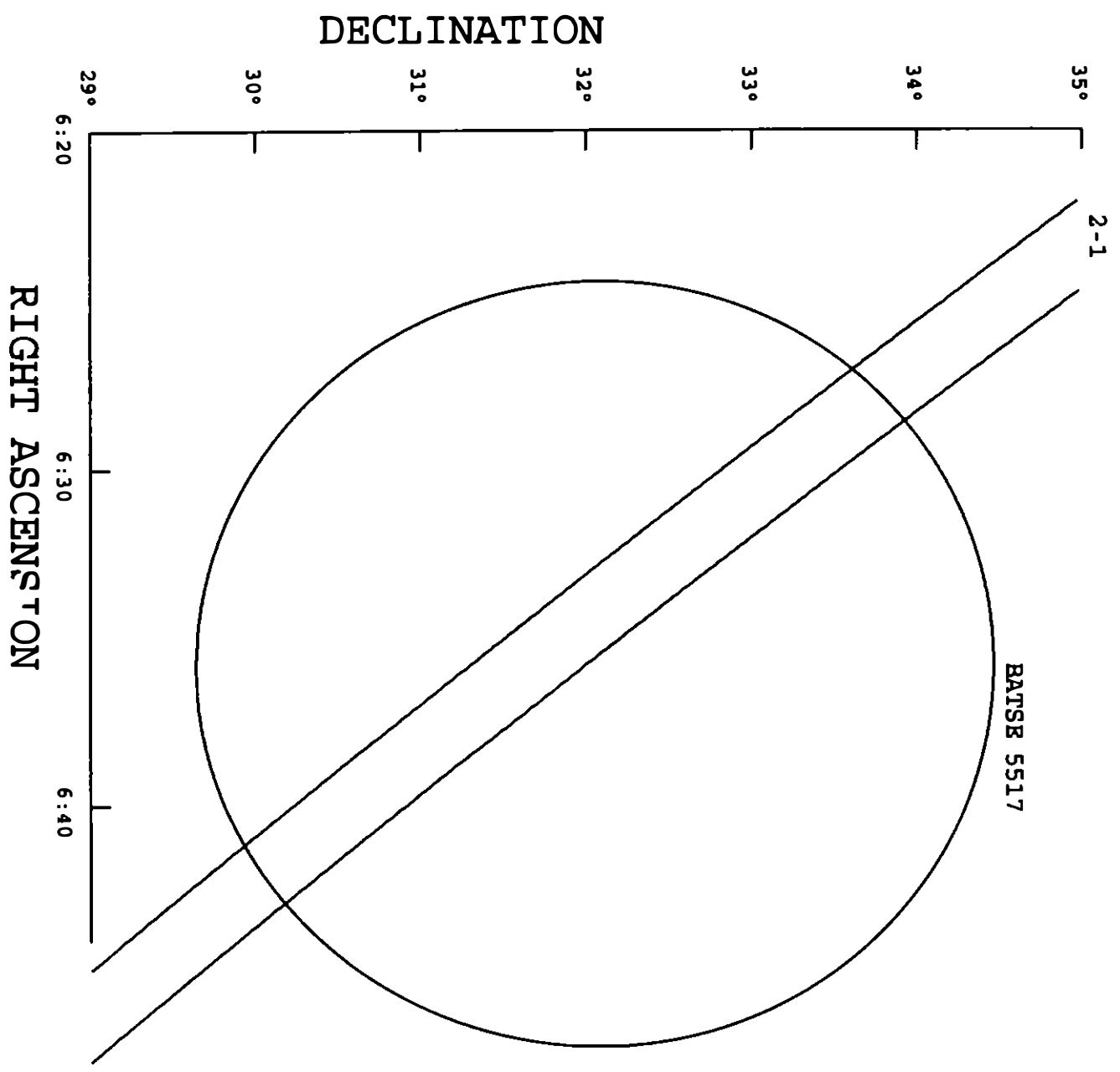
3. PVO Data

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

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

EVENT OF JUN 24, 1996 2:58

11/ 3/98



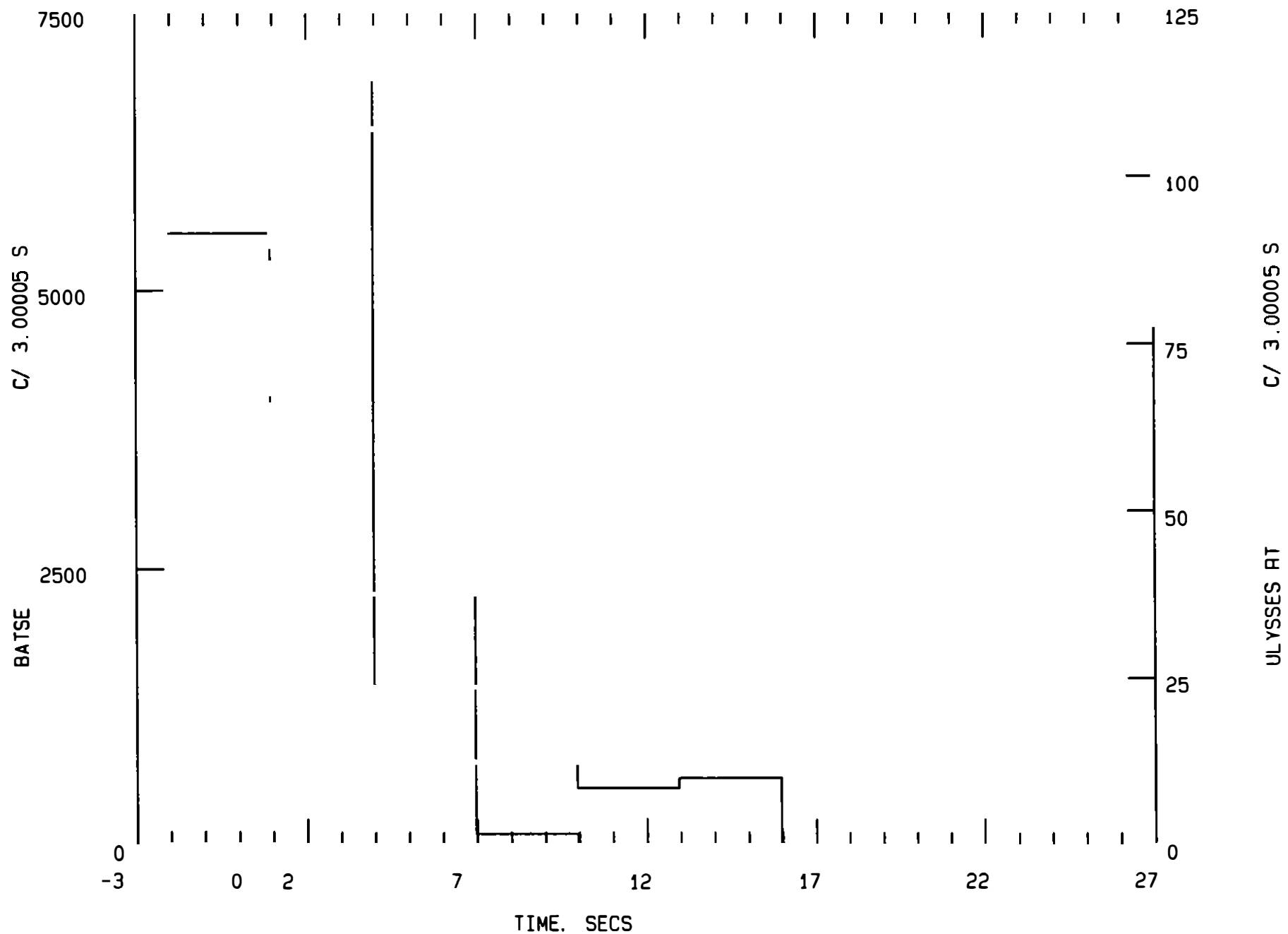
BATSE

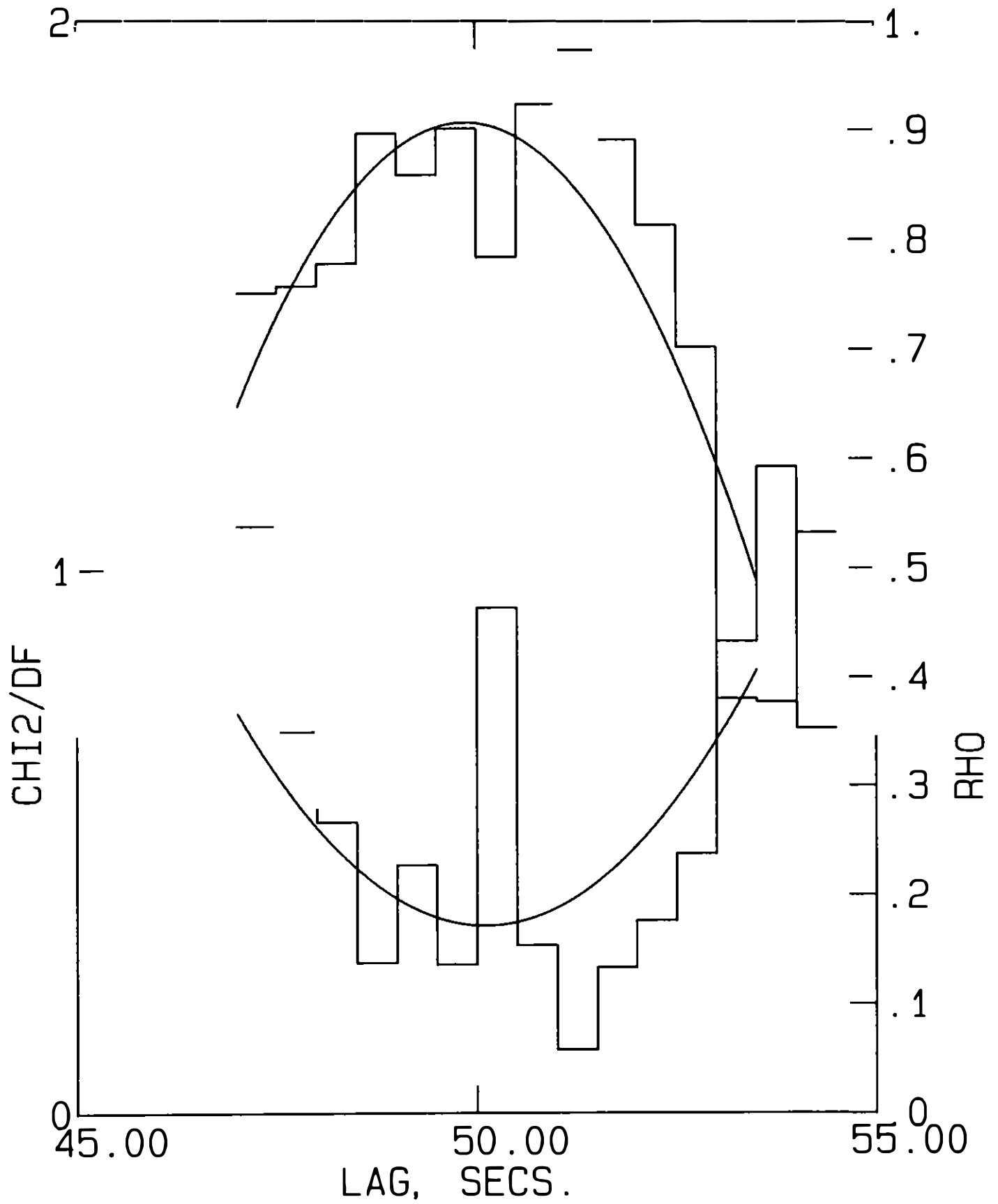
-ULYSSES RT CORRELATION

24/ 6/96

12373.450

11/ 3/98





ULYSSES RT

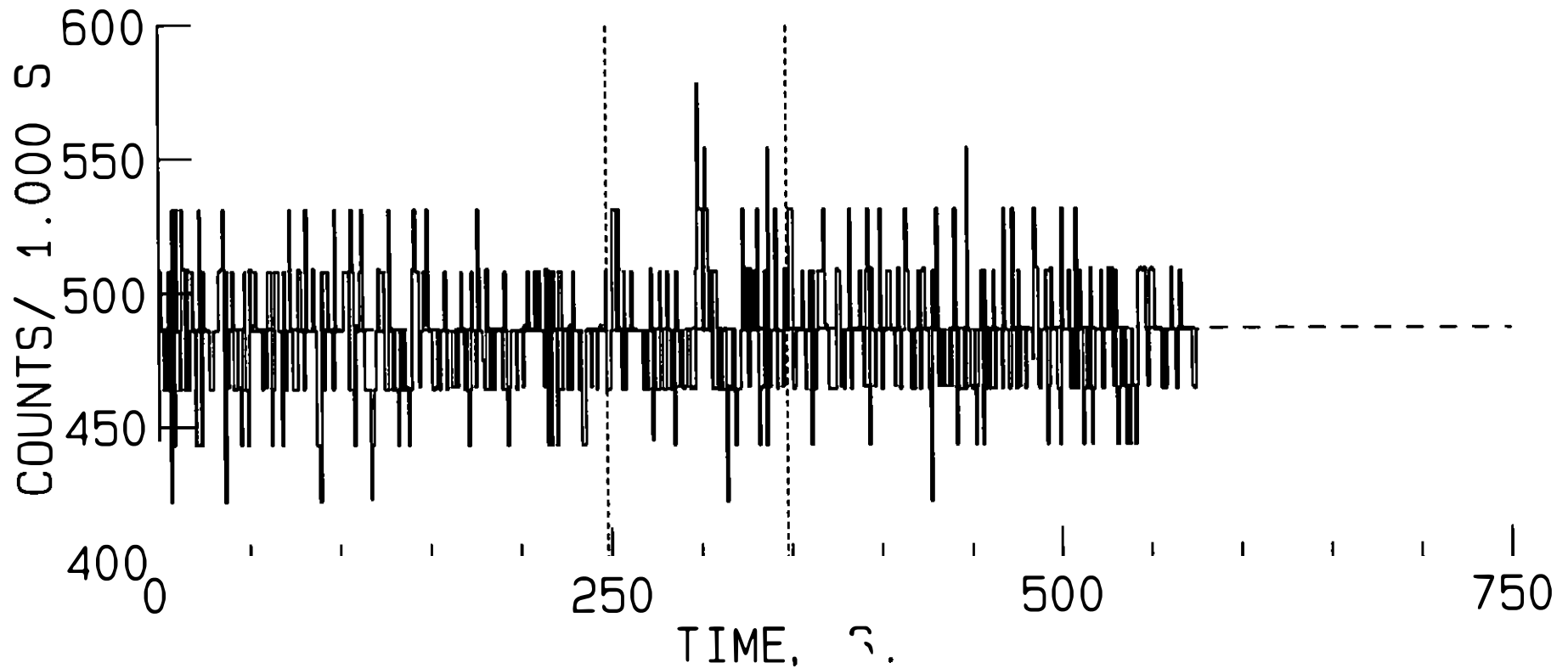
11 / 3 / 98

24 / 6 / 96 10440.076 s

0.500 S INTERVALS REGROUPED BY 2

21- 145 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



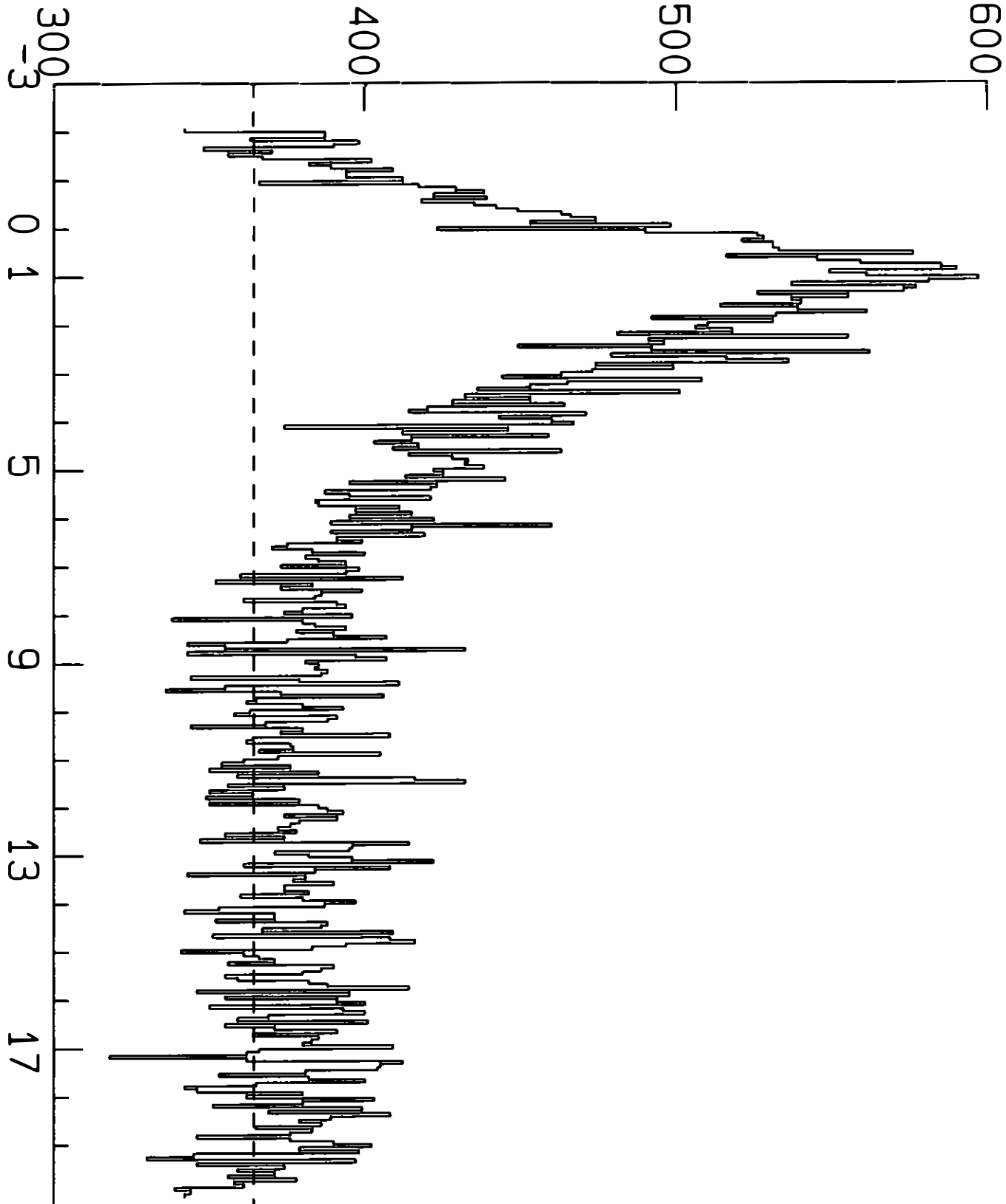
BATSE

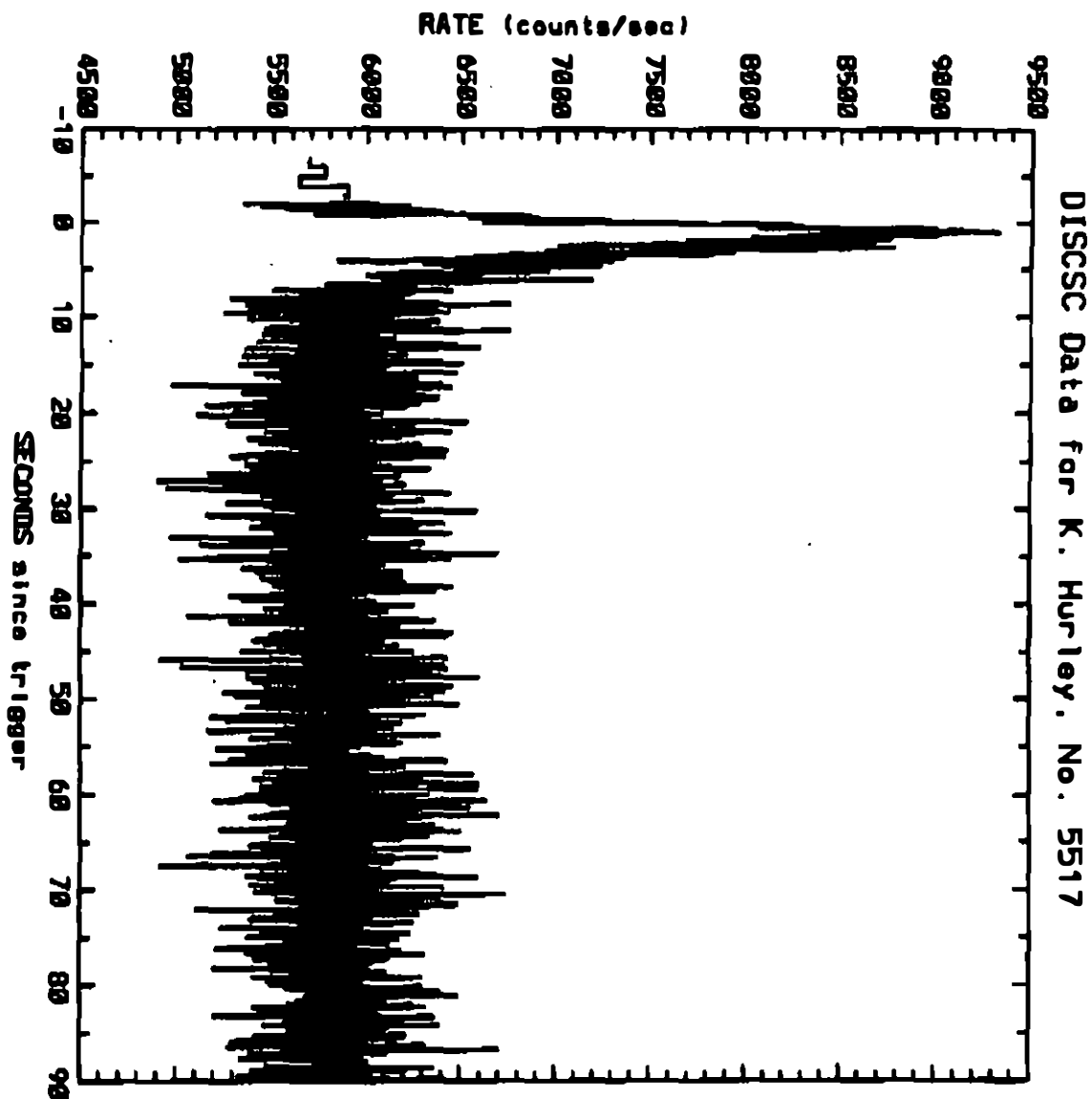
24/06/96

12373.450

25- 100 keV

COUNTS/0.064 S





3-JUL-1998 10:22:58
 Created by MDP8 BD
 (Barrel Display)
 Version 02.25

Trigger # : 5517
 Trigger Time:
 10255 / 12373.459

Barrel Data Type:
 DISCSC

Deadtime
 Corrected: N

Background Data
 Type: PRED + DISCSC

Minimum Logging Time:
 0.004 seconds

Duration (7.0):
 -----3-1-

Discriminator:
 (1, 2)

Quality Mask:
 001001

Date: Oct 6 2011

BURST TRIANGULATION CHECKLIST

I. Ulysses Data

- ☐ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Is the order of the data in CORREL such that a vernier is done on the data with the best time resolution?

2. For Konus events

- ☒ Konus ecliptic latitude used with latest calibration?

2. For Odyssey events

- ☐ Was CHECKMO run to eliminate data gaps?
- ☐ Did the Odyssey ephemeris correspond to the event time? (When there is data in the database, the ephemeris is for the start of record, usually ~1320 s prior to the request time; when there is no data in the database, the ephemeris is for the request time in the e-mail, so the request time in mosearch should be equal to the GRB time. Note that the time in the return e-mail will be ~1320 s prior to the time requested, in the line "no HEND data...")
- ☐ Was Mars-blocking used?
- ☐ For cruise phase data (April – October 2001), was the updated data used? (Old data has timing errors)
- ☐ GRS database searched for triggered data? Database data between August 2005 and January 2006 should be re-extracted, due to timing errors. (E-mailed data should be OK).
- ☐ GRS and HEND data cross-correlated to check timing?

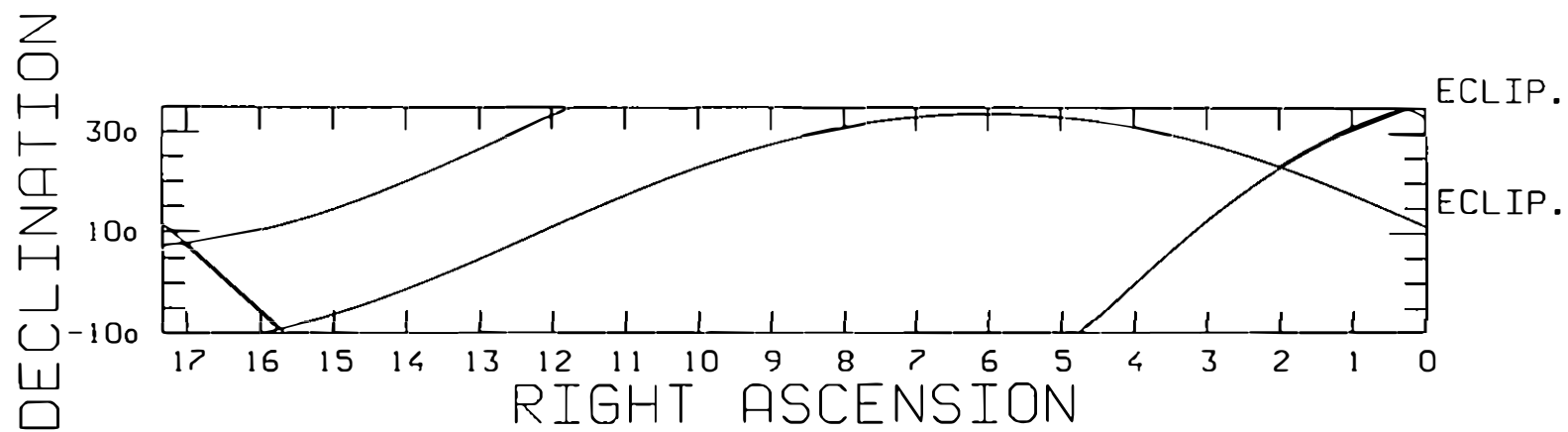
2. For 3 or More Spacecraft events

- ☐ $\Sigma 3\Delta t$'s calculated, and/or BMAPSUM executed?

3. For INTEGRAL events

- ☐ INTEGRAL SPI-ACS website checked for bursts that weren't transmitted automatically?
- ☐ 125 ms added to INTEGRAL SPI-ACS time for bursts prior to April 2 2004 11:00 UT?
- ☐ Updated ephemeris used for bursts prior to September 30, 2003?

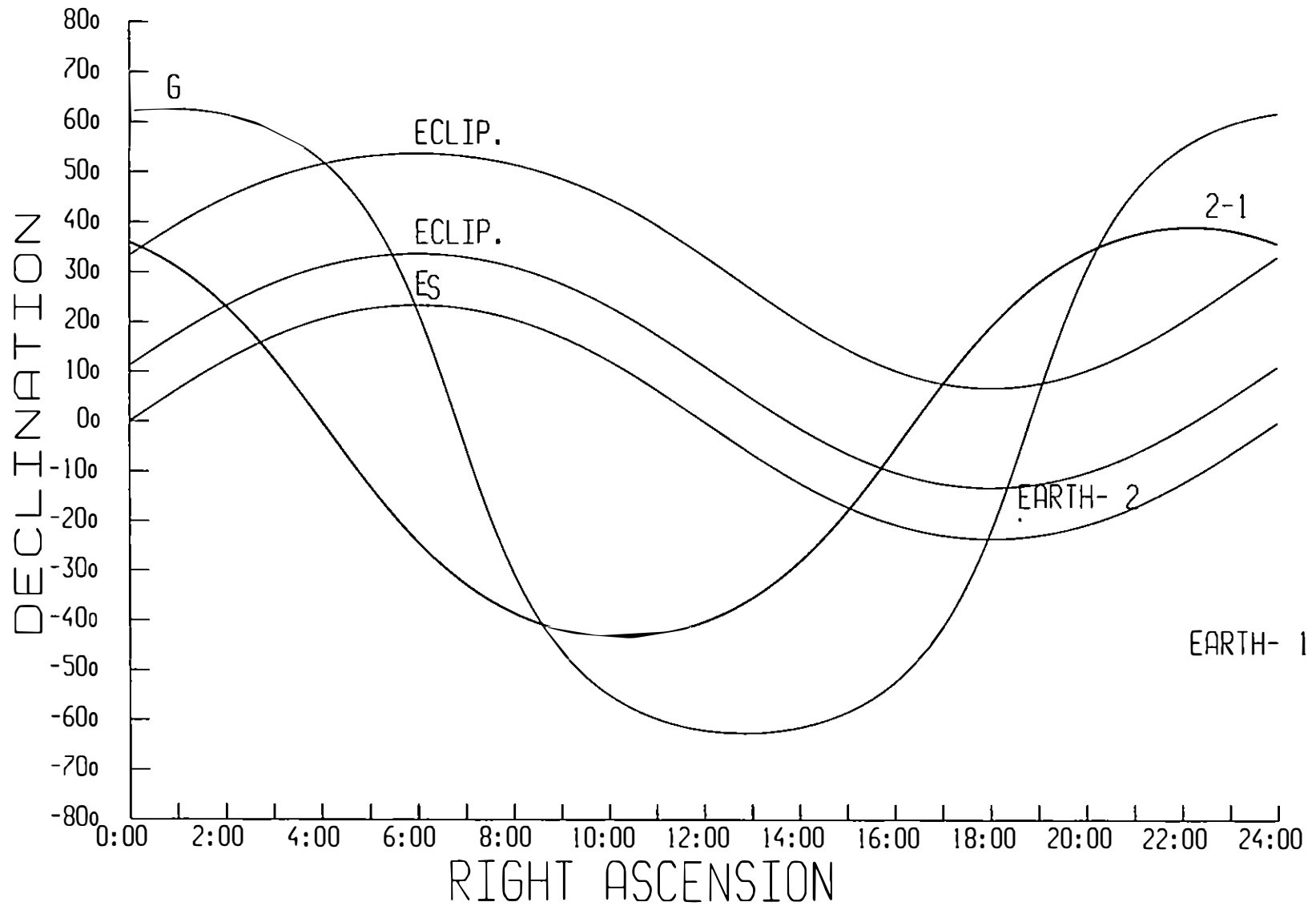
-
- ☒ ACCESS and MBL4 databases updated with identical times?



EVENT OF JUN 24, 1996 4:55

06/10/2011

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



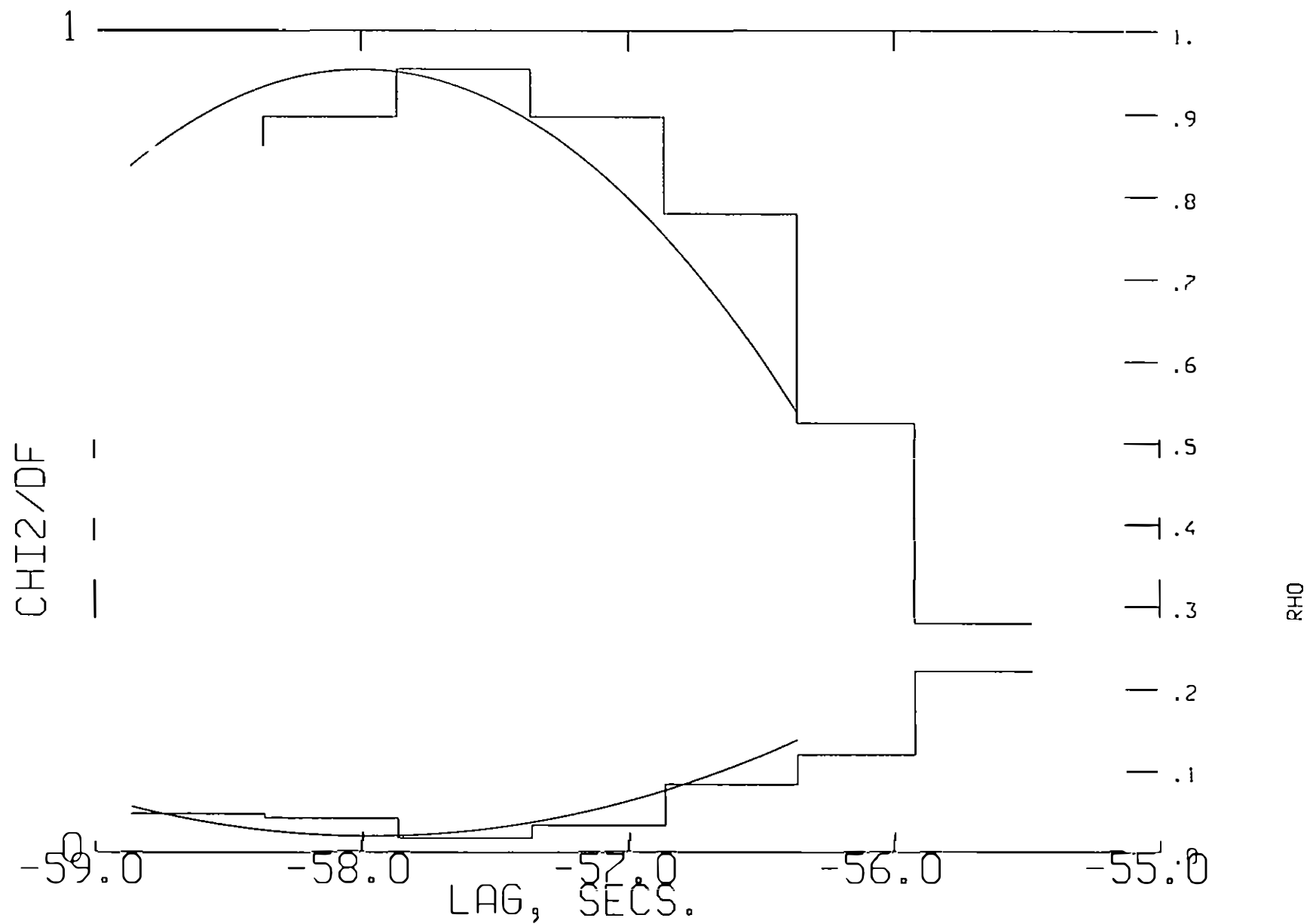
KONUS

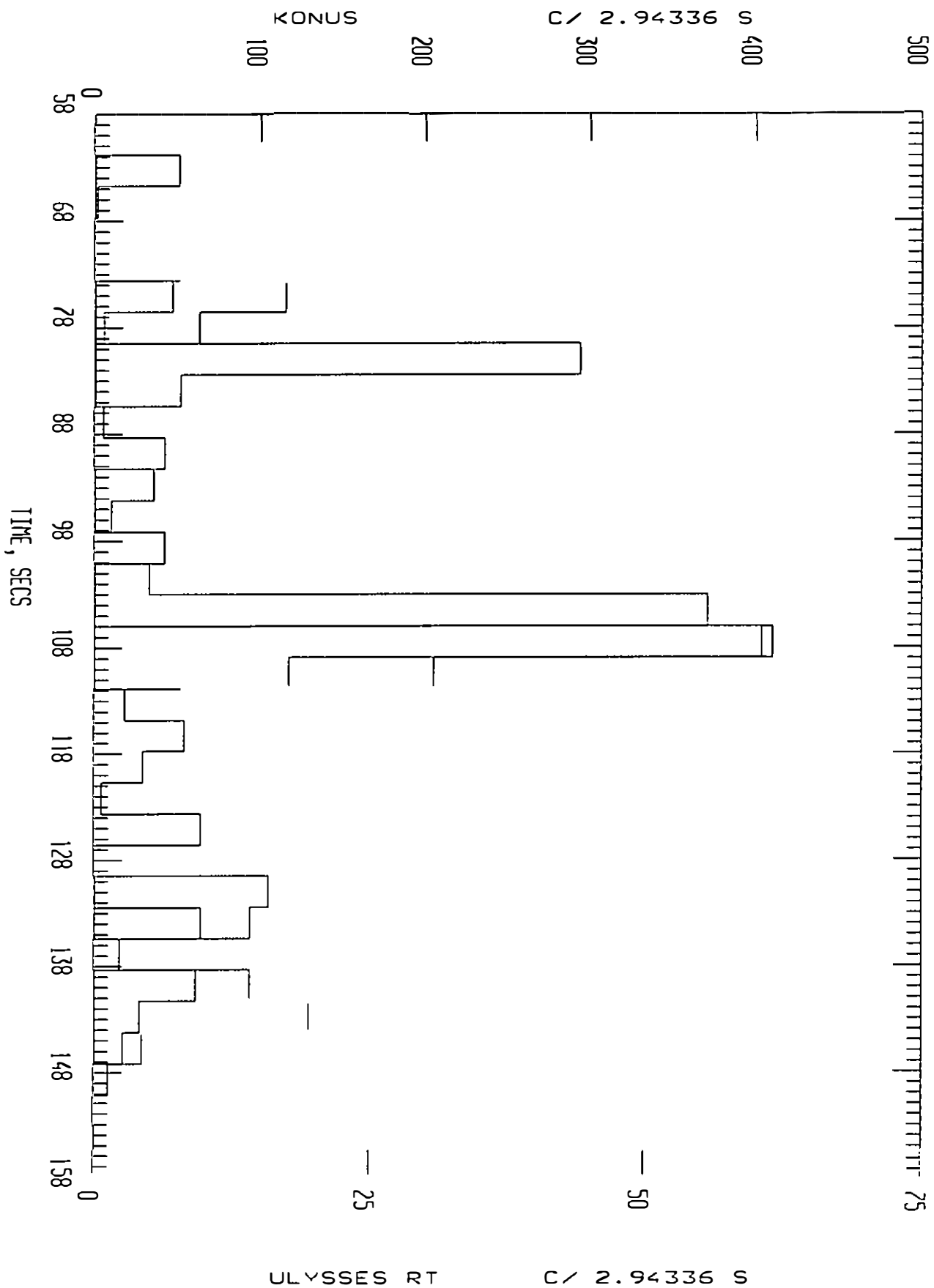
-ULYSSES RT CORRELATION

24/06/96

17600.811

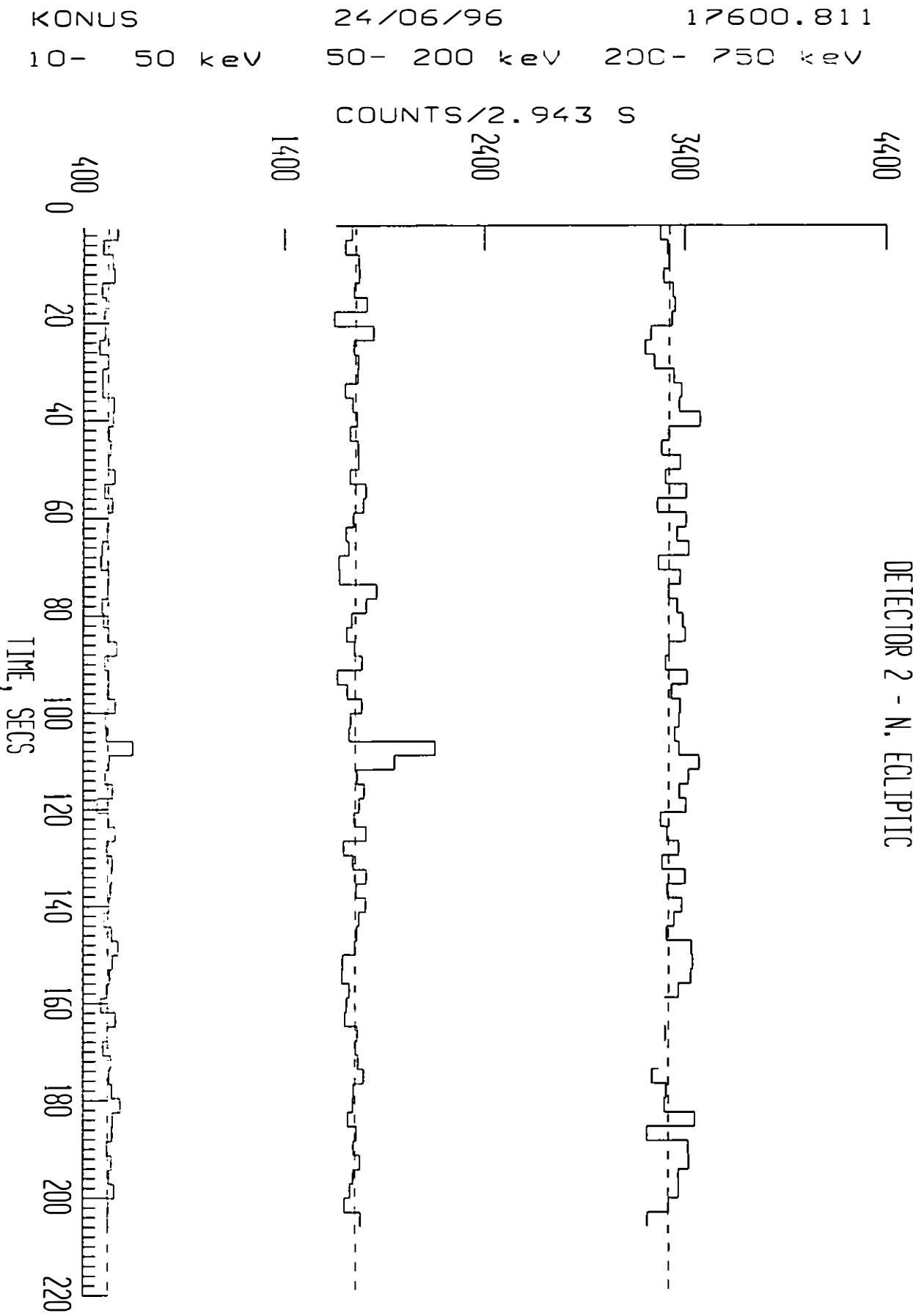
6/10/11





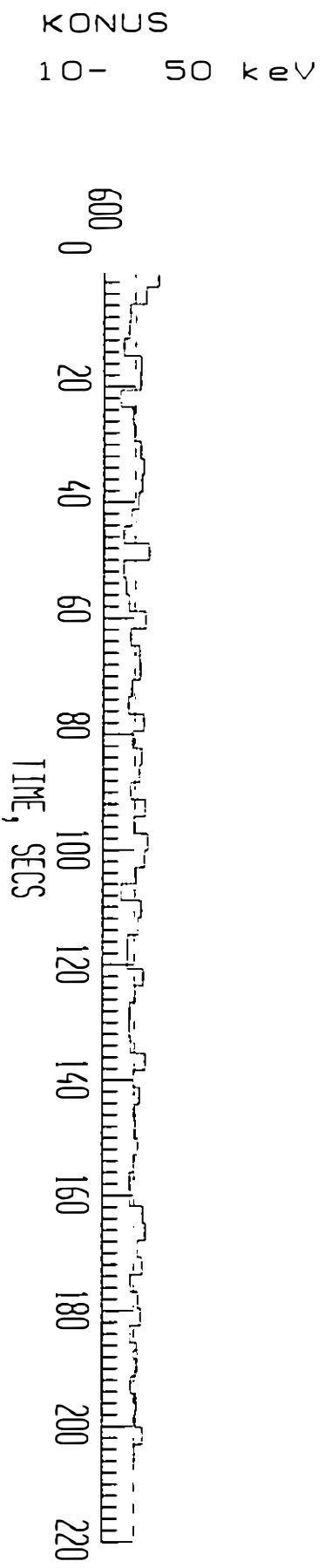
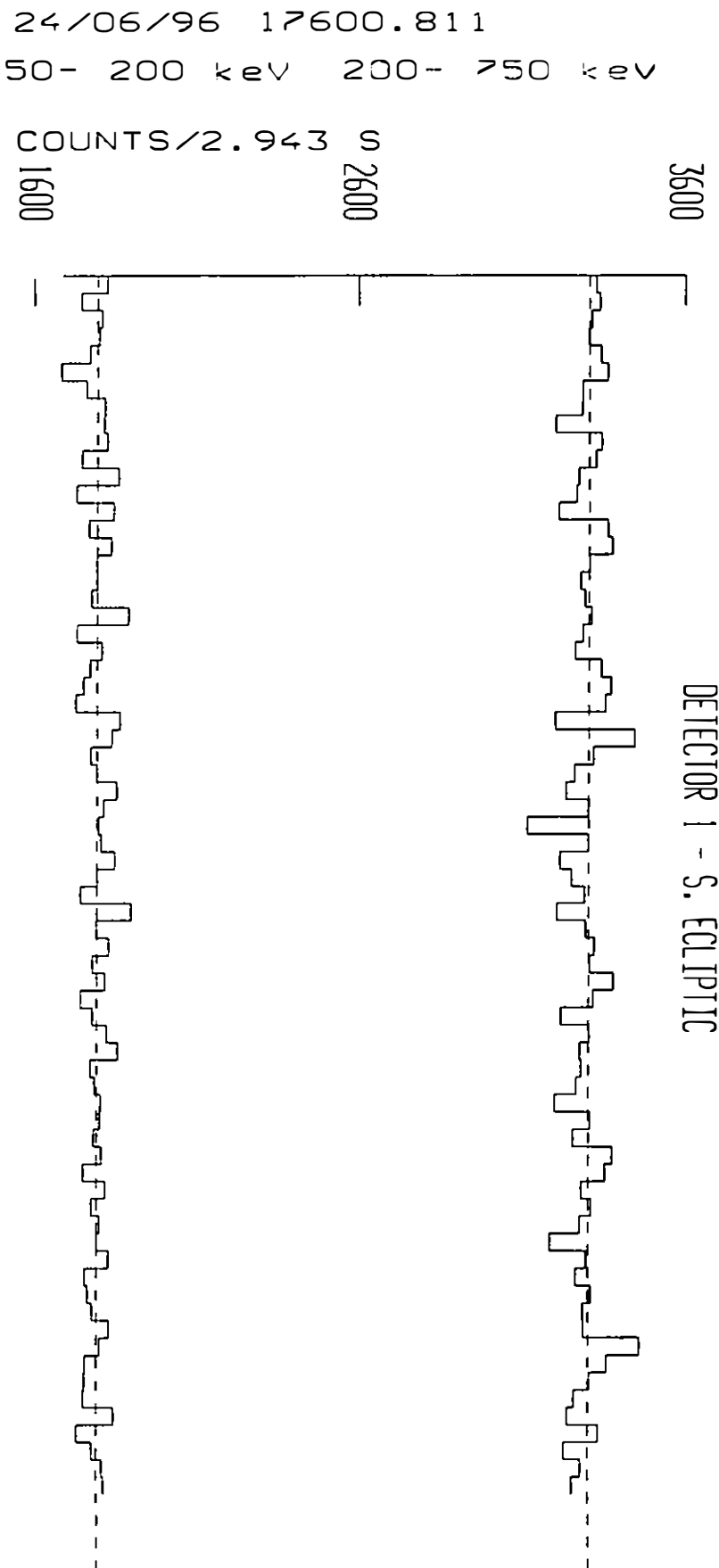
06/10/2011

DETECTOR 2 - N. ECLIPIC



06/10/2011

DETECTOR 1 - S. ECLIPSE



*Kopius base is 9's long.
what is a different level*

KONUS 19960624 17808

ULYSSES RT

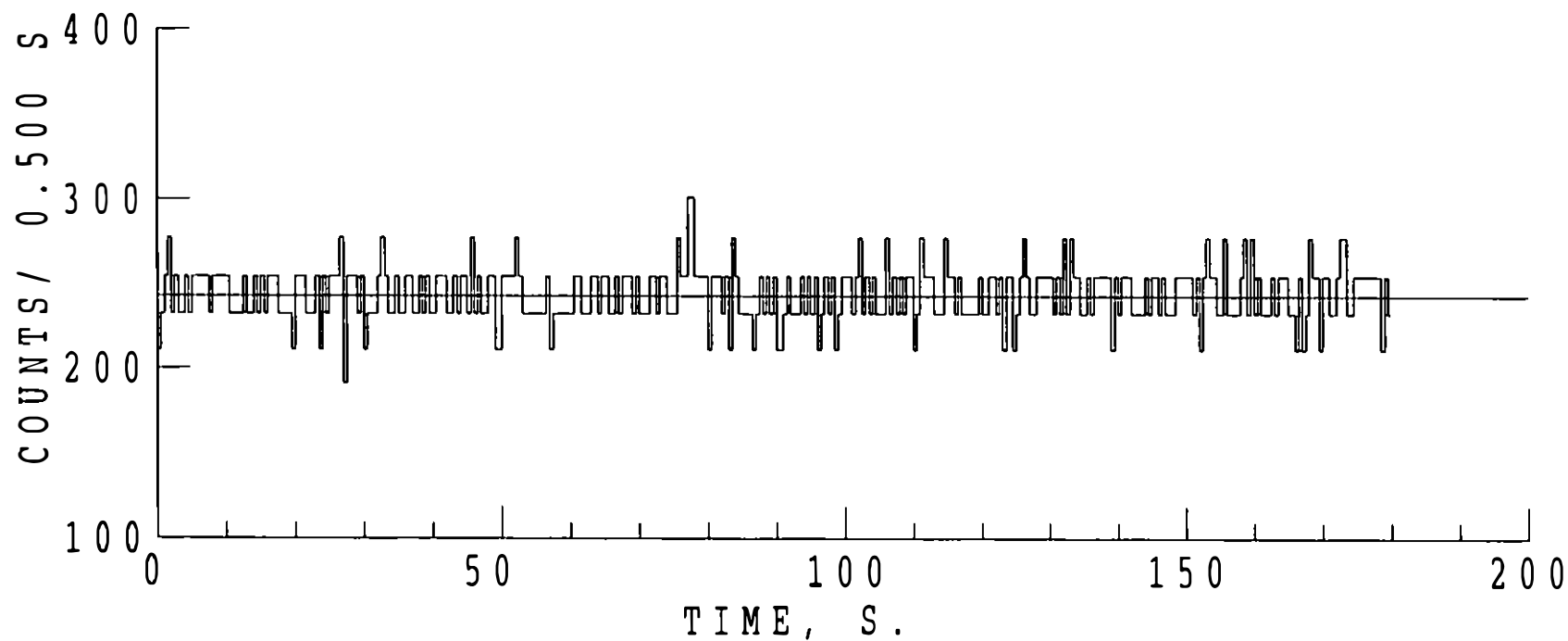
29/09/11

24/06/96 17712.170 s

0 - 0 keV

M= 10 N= 2

>4.0 SIGMA FLUCTUATIONS



KONUS

ULYSSES RT

29 / 01 / 00

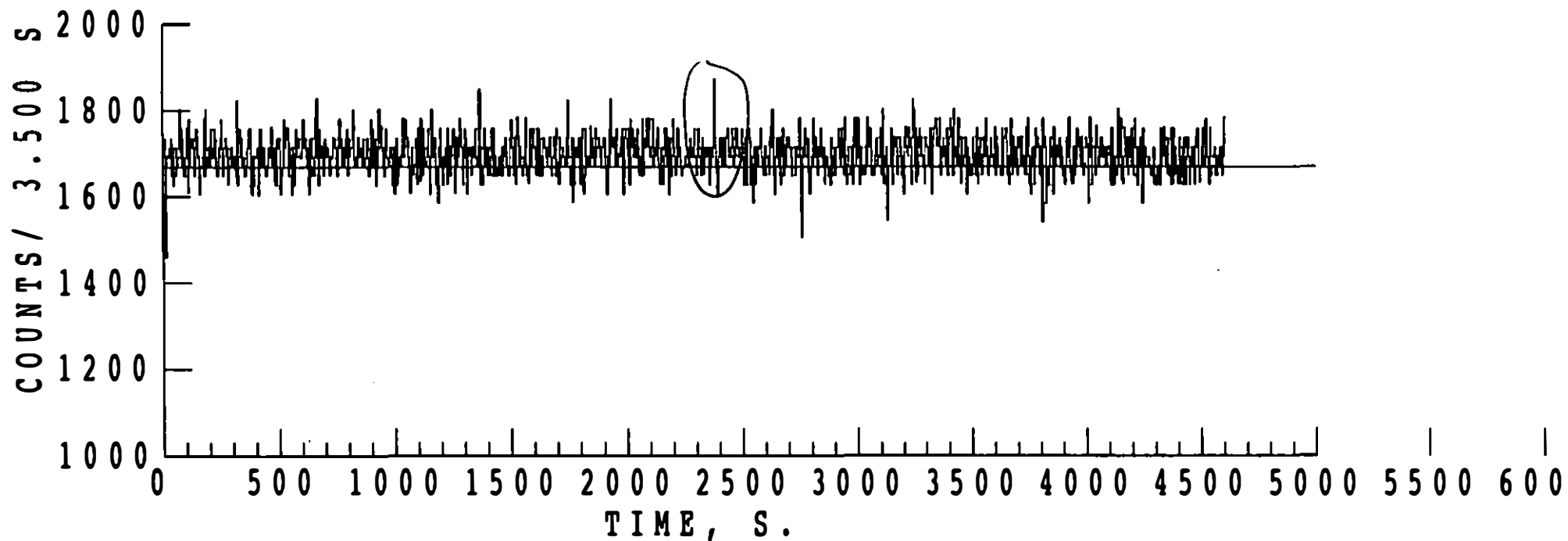
24 / 06 / 96 15408.136 s

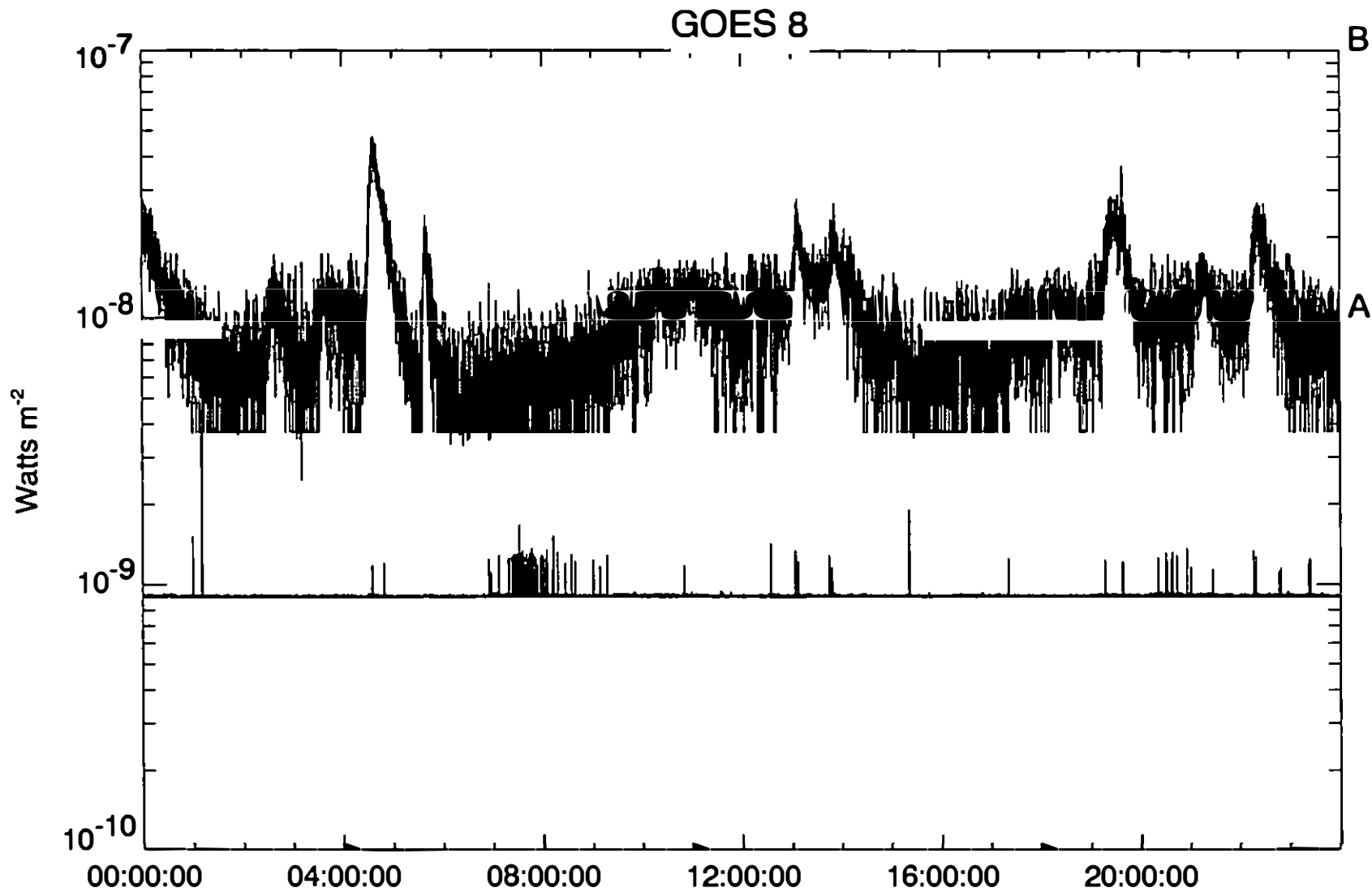
0.500 S INTERVALS REGROUPED BY 7

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





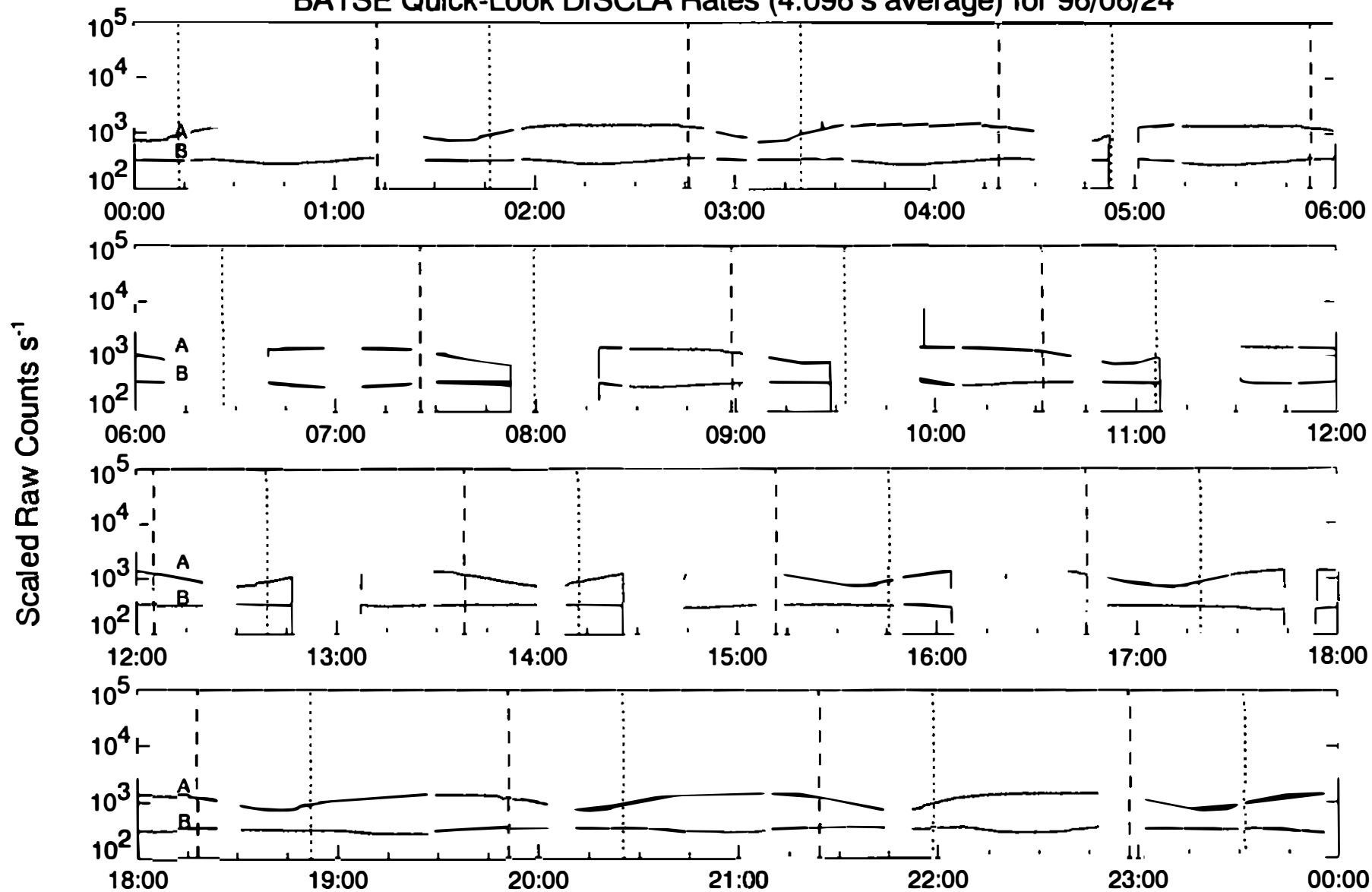
Data Start: 96/06/24, 0000:00

Plot created: 96/06/26, 1003

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/24



Current Time: 96/06/26, 1004 EDT

A: Channel 0 Most Sunward LAD

B: Sum Channel 0 Anti-Sunward LADs X .05

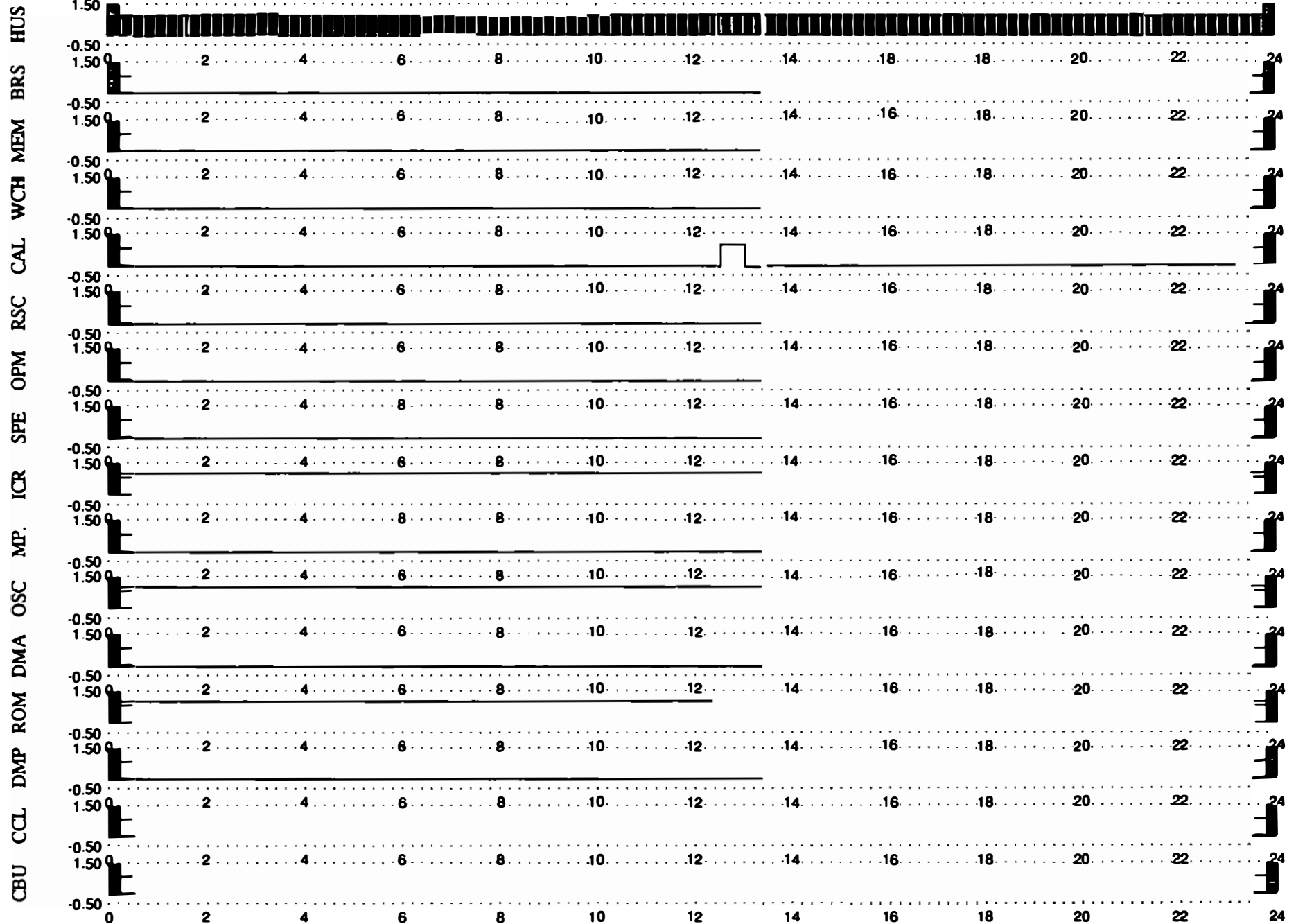
Dotted line: Day entry

Dashed line: Night entry

* Solar Burst Trigger

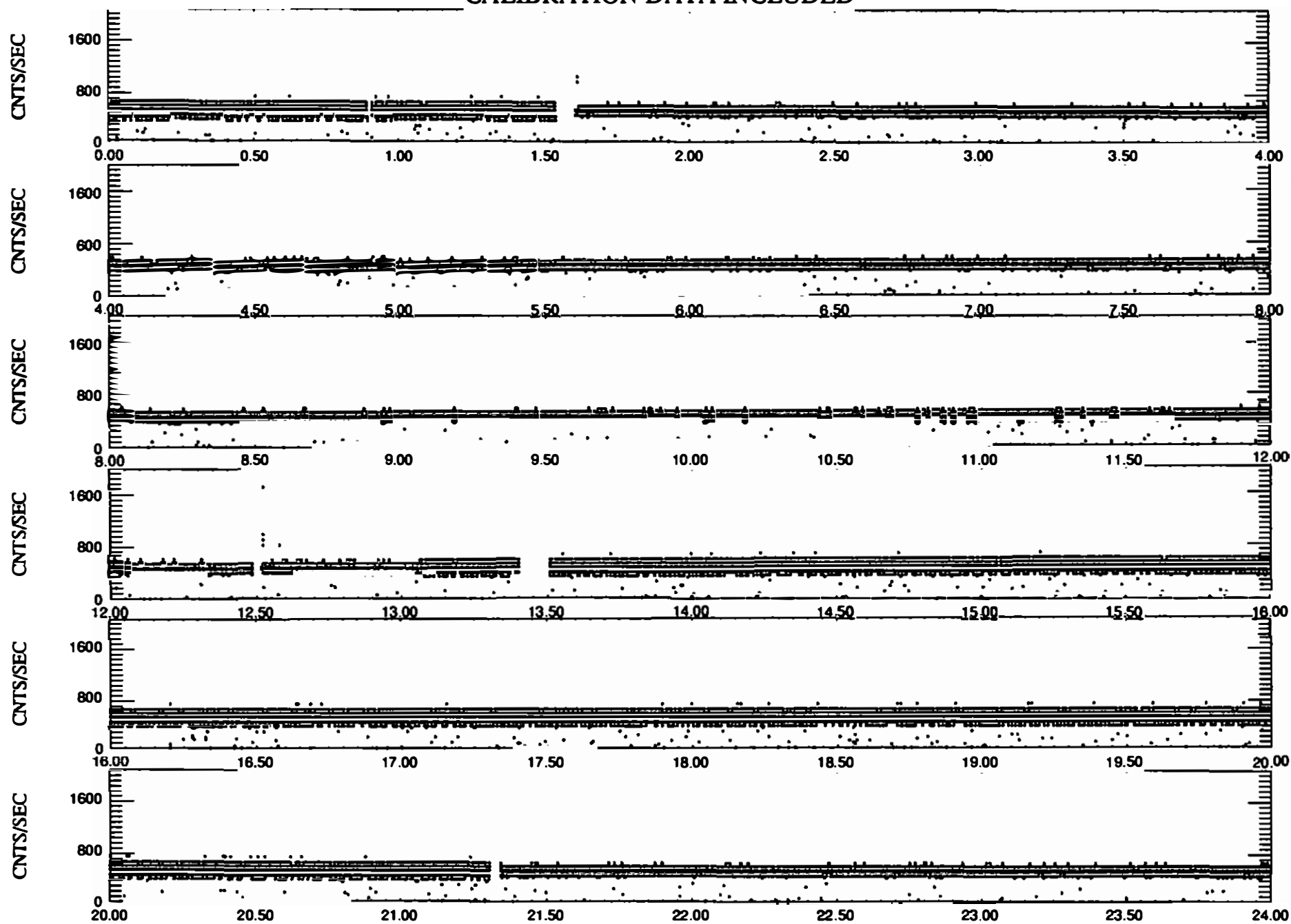
+ Solar Flare

NO BURST (5)

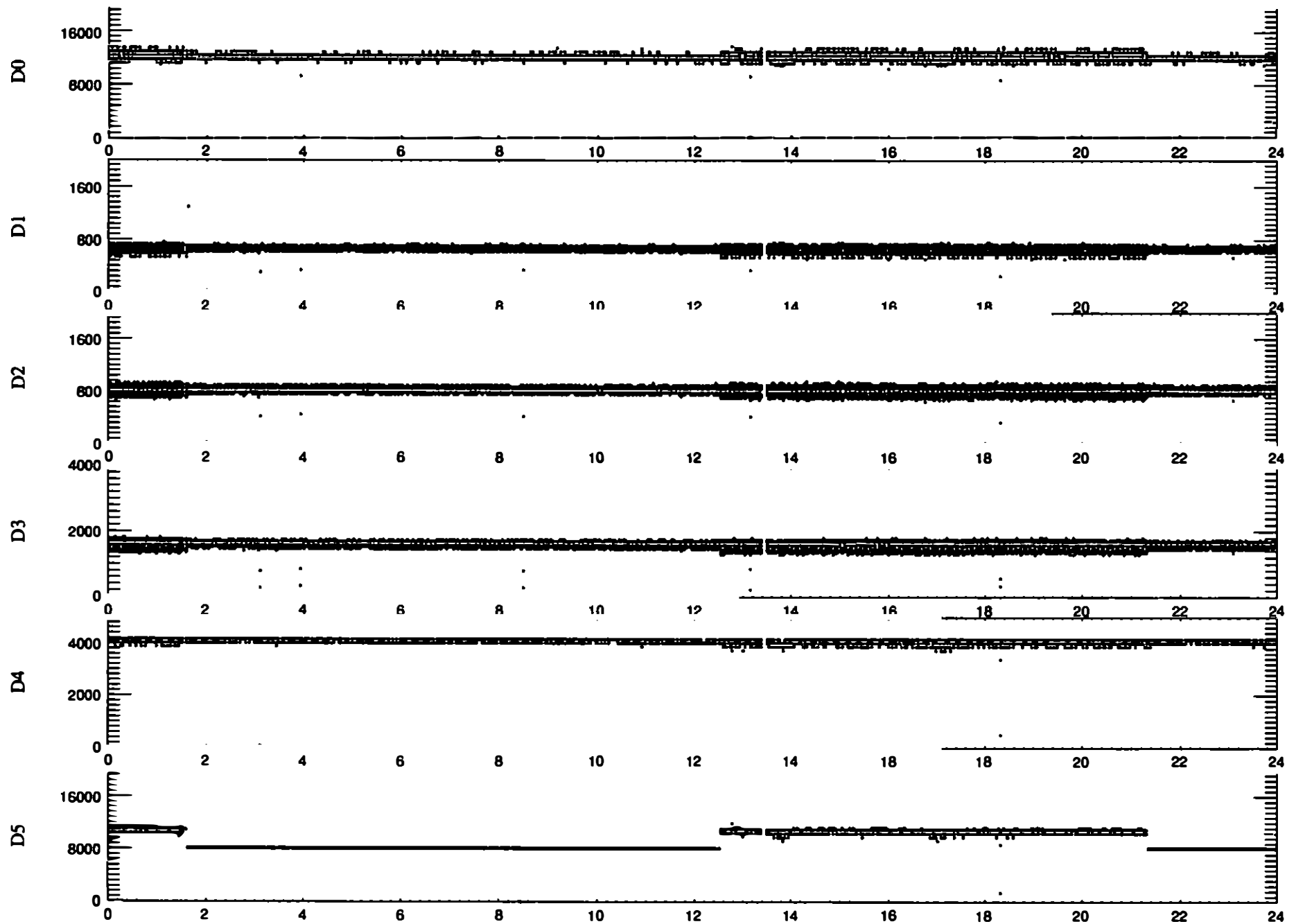


UNIVERSAL TIME

CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From BUTTERWORTH@LHEAVX.GSFC.NASA.GOV Fri Jun 28 10:12 PDT 1996
From: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Date: Fri, 28 Jun 1996 13:13:42 -0400 (EDT)
To: khurley@sunspot.ssl.berkeley.edu, kmarar@isac.ernet.in, jterrell@lanl.gov,
yosimori@rikkyo.ac.jp, CLINE@LHEAVX.GSFC.NASA.GOV,
scott@rosserv.gsfc.nasa.gov, TEEGARDEN@LHEAVX.GSFC.NASA.GOV
CC: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Subject: Konus did not see the Ulysses event of 00:53 on 25 June

Hi Everyone,

Konus did not trigger near this event, not are there any indications in the waiting-mode data (accumulated in 3-second intervals).

Paul.

Date: Fri, 28 Jun 1996 08:57:52 -0700
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <199606281557.IAA01866@scylla.berkeley.edu>
To: scott@lheamail.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu,
butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
kmarar@isac.ernet.in, teegarden@lheavx.gsfc.nasa.gov,
jterrell@lanl.gov, yosimori@rikkyo.ac.jp
Subject: 960625
X-Sun-Charset: US-ASCII

YSSSES GAMMA-RAY BURST NOT REPORTED BY BATSE:

Ulysses triggered on a very weak, 32 ms long event June 25 1996 around 00:53 UT at Ulysses.

The spacecraft was about 2175 light-seconds from Earth.

Was this event detected by anyone else?

CC: ulyssesbursts alias list
(barthelmy, butterworth, cline, marar, teegarden, terrell, yoshimori)

KONUS

29 / 01 / 00

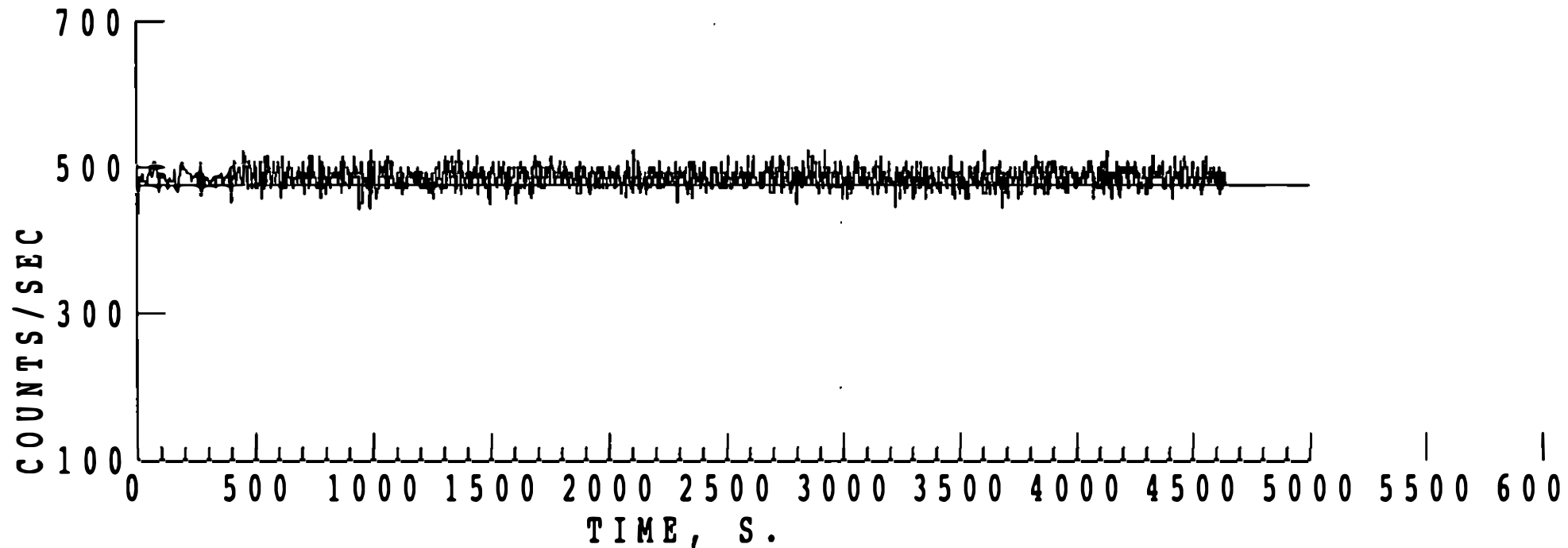
ULYSSES RT

25 / 06 / 96 7380.165 s

INTERVALS REGROUPED BY 6

0 - 0 keV

B= 10 M= 2
>6.0 SIGMA FLUCTUATIONS



From DEAL@fender.msfc.nasa.gov Wed Jun 26 11:16 PDT 1996
From: DEAL@fender.msfc.nasa.gov
Date: Wed, 26 Jun 1996 13:15:39 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5518

BATSEARCH PROGRAM

RI

BATSE BURST # 5518
EVENT OF 1996 JUN 25 DAY OF YEAR=177
EVENT CROSSING TIME AT BATSE : 16946. S. OR 04:42:26.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 111.000 -8.000
BATSE PEAK COUNTING RATE: 8500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 25/ 6/ 96 IS:
RA= 152.605 DEC= 48.475 DIST= 4.548 AU
BATSE-ULYSSES DISTANCE = 680403963. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=112.75 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -877.62 SECS.
CROSSING TIME AT ULYSSES IS 16068. S. OR 04:27:48 +/- 400.06 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 25/ 6/ 96 IS:
RA= 67.072 DEC= 21.817 DIST= 2.335 AU
MARS-BATSE DISTANCE = 349360416. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=127.62 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -711.32 SECS.
CROSSING TIME AT MARS IS 16235. S. OR 04:30:34 +/- 149.46 SECONDS

BATSE BURST TRIGGER

NO.: 5518

TIME: TJD=0259 SECONDS=16946

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=157.3 AZIMUTH=20.4 ERROR=0.9 DEGREES

COMMENTS:
GRB LASTING ~ 60 S. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5518	960625	10259	16946	8500	111	-08	60

96	2	29	22445.141	S2	740	1520	550	0.3	0.5	8	250	Search RI	
96	3	5	33645.352	S1	440	390	70	>10	0.8	1.8	251	Search NO	
96	3	12	35074.697	S2	160	730	330	<0.25	0.2	0.1	252	Search NO	
96	3	19	51992.828	S1		800	970	>7	0.16	0.4	253	RI	5277
5	3	21	76321.803	S2	4600	4550	1020	0.03	42	46	254	Trig	5299
6	3	22	19642.728	S1	1060	1760	1120	40	2	28	255	Trig	5304
96	3	24	80064.124	S2	320	520	150	0.07	1	14	257	Search RI	
96	3	25	69892.978	S1	250	620	460	6	0.5	0.5	258	NO	5339
96	3	31	21208.784	S1	220	520	120	4.4	2	24	271	RI	5389
96	4	4	25289.264	S2	420	750	240	0.07	4	9	272	Search RI	
96	4	9	77143.618	S2	650	1170	420	0.17	0.5	5	273	RI KA	5419
96	4	10	80648.201	S2	190	330	140	<0.05	1	35	274	Search RI	
96	4	18	06106.854	S1	200	330	70	1	2	2	277	RI KA	5413
96	4	18	08271.303	S2	350	770	50	<0.1	3	30	278	Search KA 225 NO	
96	4	18	66796.140	S1	1160	1000	50	10	1	3	290	Trig	5436
96	4	20	17324.809	S2	300	1190	1080	1	0.3	0.04	303	Search RI	
96	4	22	59981.190	S2	160	410	140	0.5	4	12	305	RI	5443
96	4	25	86395.862	S2	1300	730		<0.04	44	16	306	Search KA 225 RI	
96	4	28	47556.501	S2	270	420	230	<0.04	1	170	307	RI	5450
96	4	30	49895.524	S1	250	640	180	8	8	18	309	RI KA	5451
96	5	1	31344.546	S1	380	870	350	3.7	20	56	310	Search RI	
96	5	6	47384.998	S1	160	490	190	1.1	3	6	312	Search RI	
96	5	7	44869.909	S2	460	760	290	0.03	20	98	313	Search RI	
96	5	10	38723.598	S2	560	1300	330	0.1	1	7	317	Trig	
96	5	19	14766.283	S2	1700	7700	8000	0.4	0.1	0.56	319	Search NO	
96	5	21	62489.430	S1	330	500	90	5.8	1	8	320	Search RI	
96	5	23	59522.013	S1	270	550	580	10	1	3	321	RI	5470
96	5	29	43663.061	S2	1700	4000	5000	0.15	0.5	3.5	322	Trig	5477
96	5	29	80722.705	S2	420	620	140	0.1	1	14	323	Trig KA	
96	5	30	62300.750	S1	180	400	110	>20	2	14	324	Search N/O	
96	5	31	06926.043	S1	300	440	120	4.7	50	7	325	Search RI	
96	5	31	73498.259	S2	1600	4250	2800	0.5	27	19	326	Trig	
96	6	2	42664.032	S1	1000	1450	1400	>2	0.3	0.03	327	Search NO	
96	6	5	29392.672	S1	400	950	410	1.3	2	87	328	RI	5486
96	6	7	78106.176	S2	890	1280	550	0.04	32	120	329	RI	5489
96	6	10	84502.254	S2	200	1000	1500	0.9	0.16	0.11	330	Search NO	
96	6	12	71198.677	S1	650	2800	2700	1.4	0.5	18	331	Trig	
96	6	14	67654.516	S1	80	1800	1600	1	0.18	0.1	332	Search NO	
96	6	17	76195.941	S1	350	560		>8	1	0.6	333	NO	5500
96	6	22	74906.054	S2	100	360	280	0.2	4	8	334	Search NO	
96	6	23	04734.229	S2	130	320	150	0.5	7	25	335	RI KA	5512
96	6	23	77186.871	S2	250	350	130	0.05	6	15	336	Search RI	
96	6	25	16949.252	S1	180	280	70	4.6	6	9	337	RI	5518
96	6	28	19224.223	S2	500	410	120	0.06	12	6	338	RI	5523
96	7	2	54698.284	S1	280	350	70	2.8	23	85	339	RI	5525
96	7	3	65443.861	S1	200	560	600	3	1	0.4	340	NO	5527
96	7	7	36999.311	S2	1600	1200		0.06	2	5	341	RI	5530
96	7	8	72577.095	S2	900	820	160	0.2	1	6	342	Search RI	
96	7	9	00246.641	S1	260	1000	400	0.95	15	4	343	Trig KA	
96	7	10	00662.014	S2	1800	4700	3600	0.13	0.5	48	345	Trig	
96	7	11	63757.543	S1	560	2400	900	1.25	0.5	19	346	Trig	
96	7	11	68451.869	S2	200	360	170	<0.07	2	41	347	Search NO	
96	7	22	25522.448	S2	360	650	170	0.27	17	151	348	RI	5548
96	7	22	56346.728	S1	700	1000	200	2.6	3	6	349	Search RI	
96	7	27	43056.737	S2	500	1000	500	0.7	0.5	15	350	Search RI	
96	7	31	20761.638	S2	800	1160	170	0.9	0.5	4	353?	RI	5557
96	8	3	67525.033	S1	4000	8000	3000	3	0.02	0.18	354	Trig KA	5561
96	8	4	84535.906	S2	2000	2600	600	<0.03	0.5	2	355	Trig KA	5563
96	8	5	78957.888	S2	1270	2360	380	0.05	1	20	356	Trig	
96	8	6	80989.772	S2	420	850	250	1	86	10	357	RI	5566

Helio cor removed

Date: Mar. 11 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

- ☒ ACCESS database updated?

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

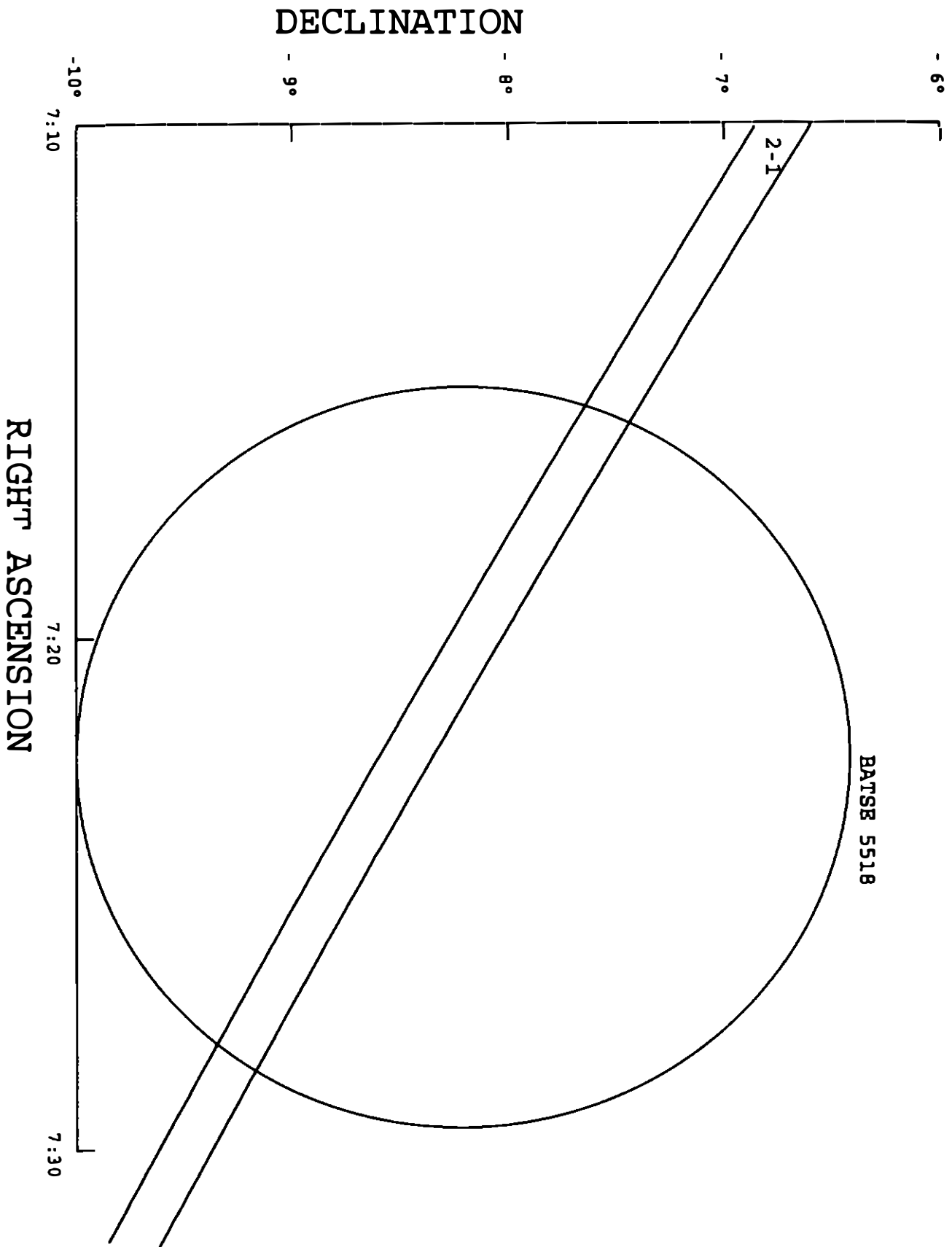
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF JUN 25, 1996 4:27

11/ 3/98



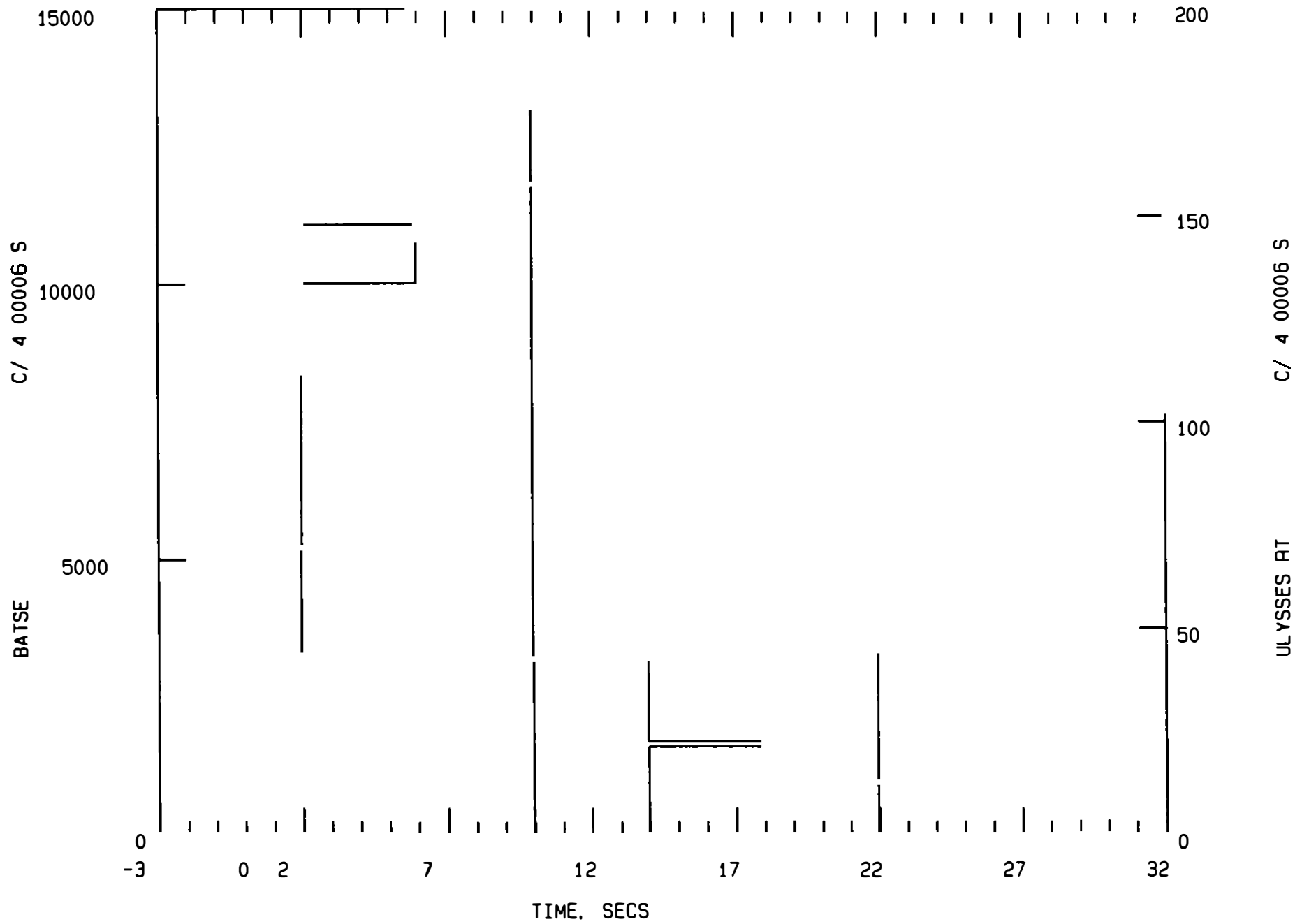
BATSE

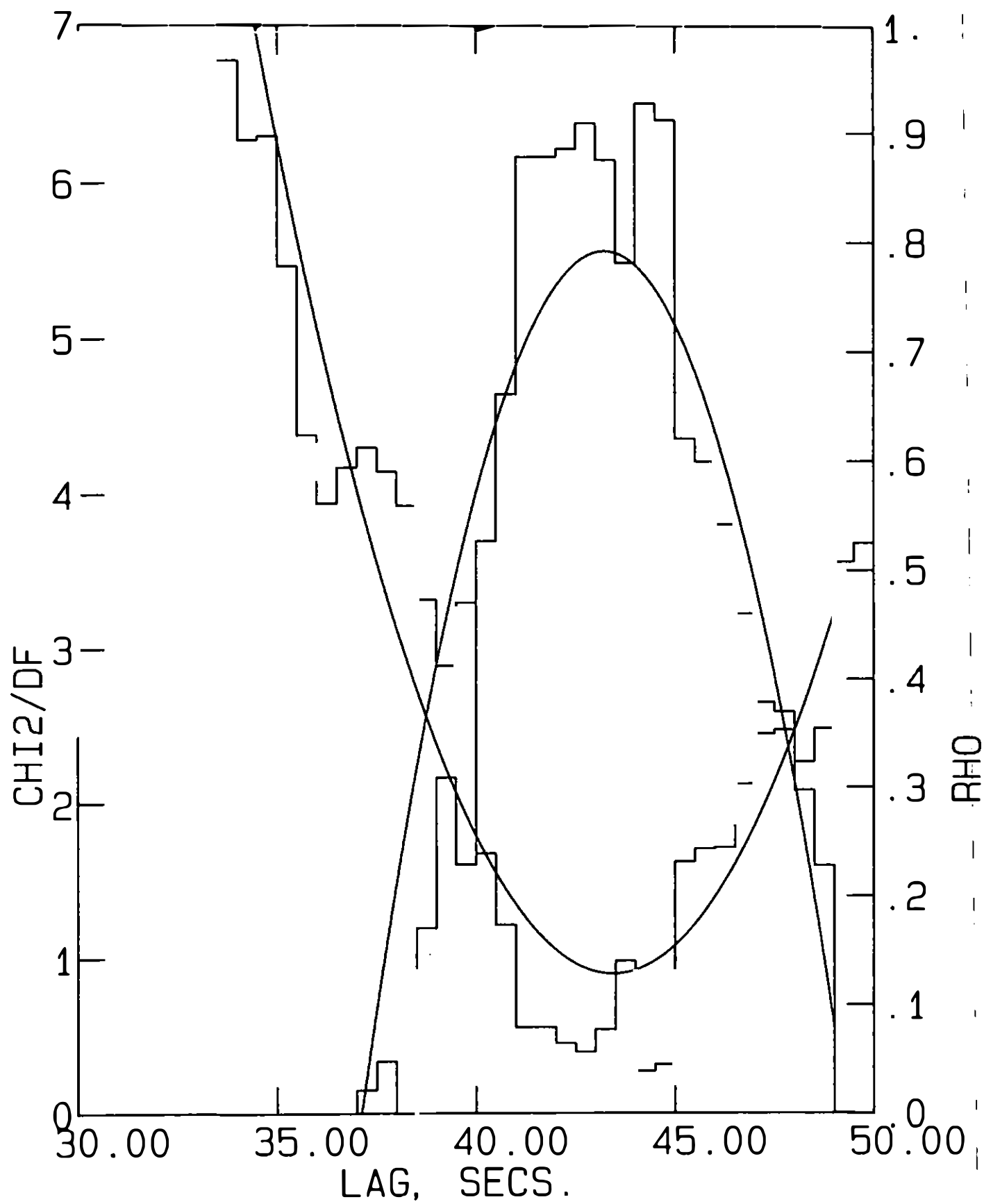
-ULYSSES RT CORRELATION

25/ 6/96

16946.890

11/ 3/98





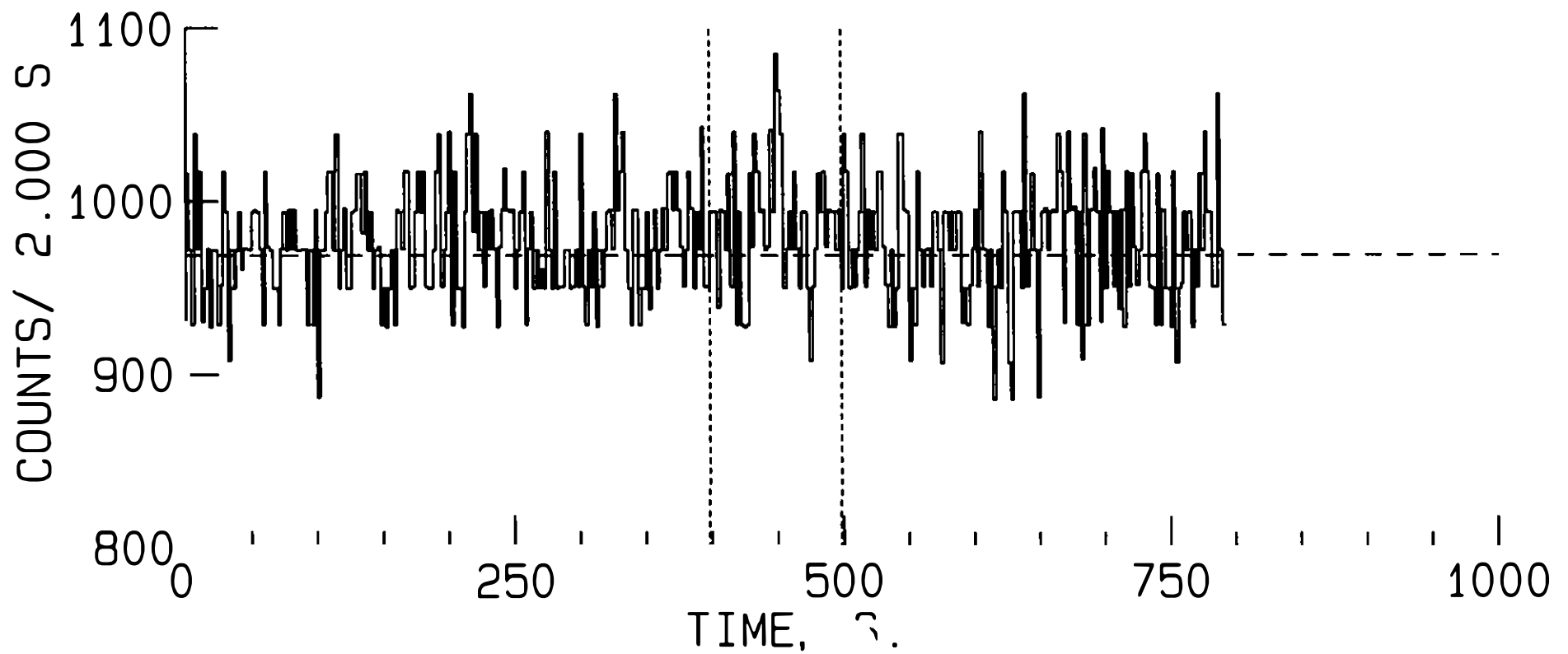
ULYSSES RT

11 / 3 / 98

25 / 6 / 96 15660.272 s

0.500 S INTERVALS REGROUPED BY 4

21- 145 keV



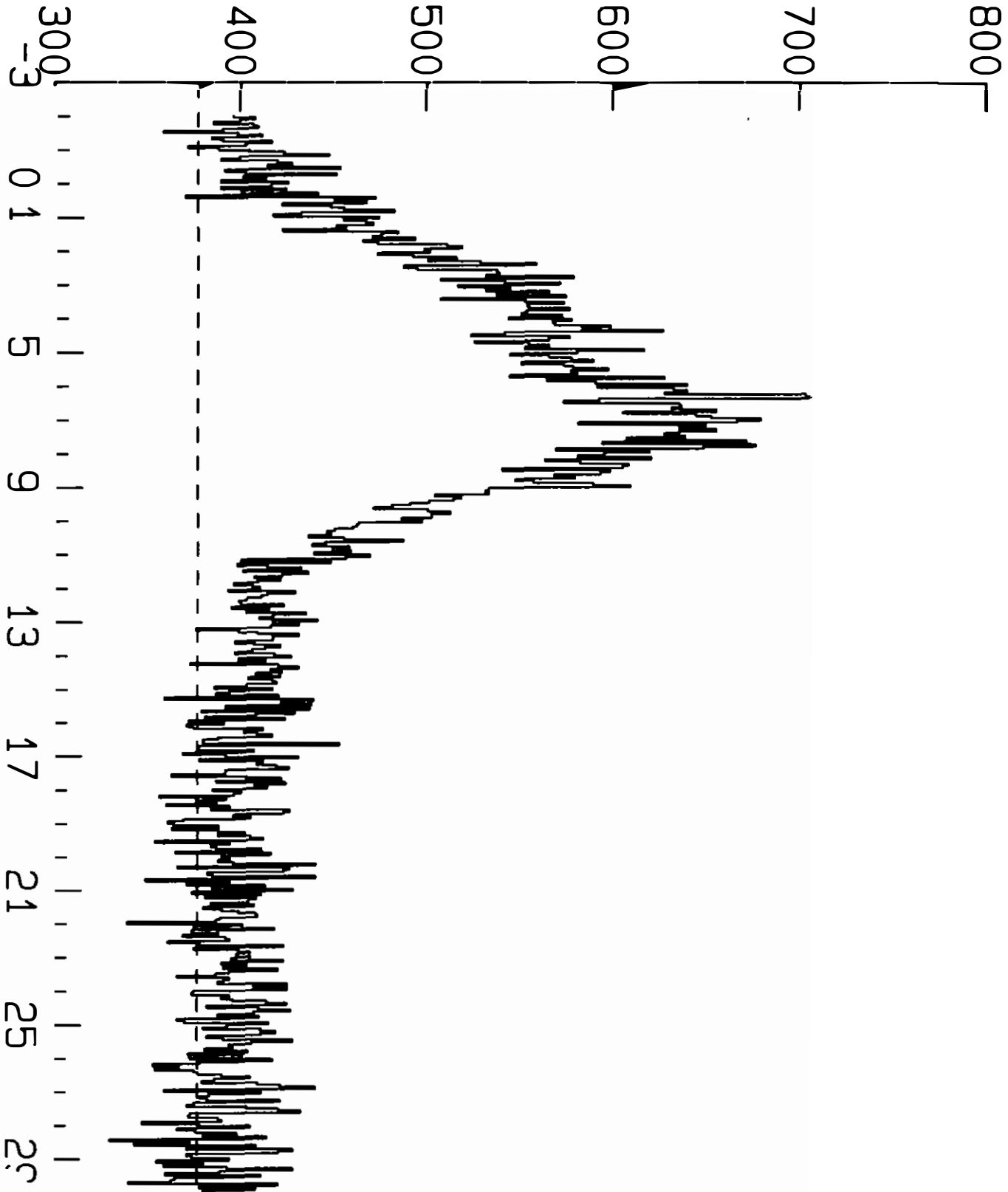
BATSE

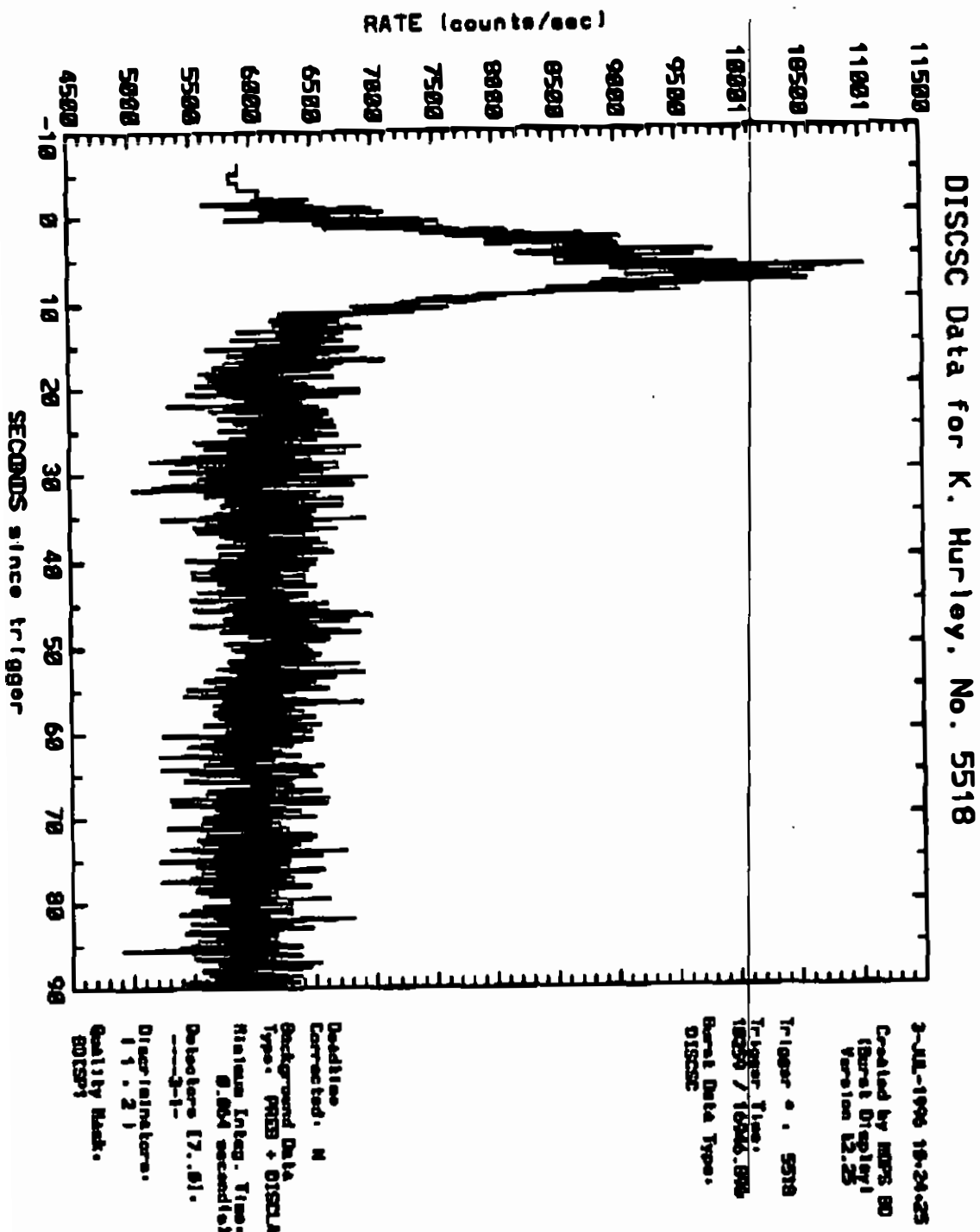
25/06/96

16946.890

25- 100 keV

COUNTS/0.064 S





From DEAL@fender.msfc.nasa.gov Wed Jun 26 11:26 PDT 1996
From: DEAL@fender.msfc.nasa.gov
Date: Wed, 26 Jun 1996 13:23:49 -0500 (CDT)
To: burst@comptel.sr.unh.edu, grobad@ests2.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, butterworth@lhev.gsfc.nasa.gov,
band@cass09.ucsd.edu, gruber@cass09.ucsd.edu, matteson@cass09.ucsd.edu,
PACIESAS@fender.msfc.nasa.gov, HORACK@fender.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 5519

TIME: TJD=0259 SECONDS=51654

TYPE: UNKNOWN SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

UNKNOWN. OCCURED DURING REORIENTATION.

From DEAL@fender.msfc.nasa.gov Wed Jun 26 11:13 PDT 1996
From: DEAL@fender.msfc.nasa.gov
Date: Wed, 26 Jun 1996 13:11:29 -0500 (CDT)
To: burst@compTEL.sr.unh.edu, grobad@estsA2.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, butterworth@lhevX.gsfc.nasa.gov,
band@cass09.ucsd.edu, gruber@cass09.ucsd.edu, matteson@cass09.ucsd.edu,
PACIESAS@fender.msfc.nasa.gov, HORACK@fender.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 5520

TIME: TJD=0259 SECONDS=85244

TYPE: TGF SOLAR FLARE TRIGGER SIGNAL:N

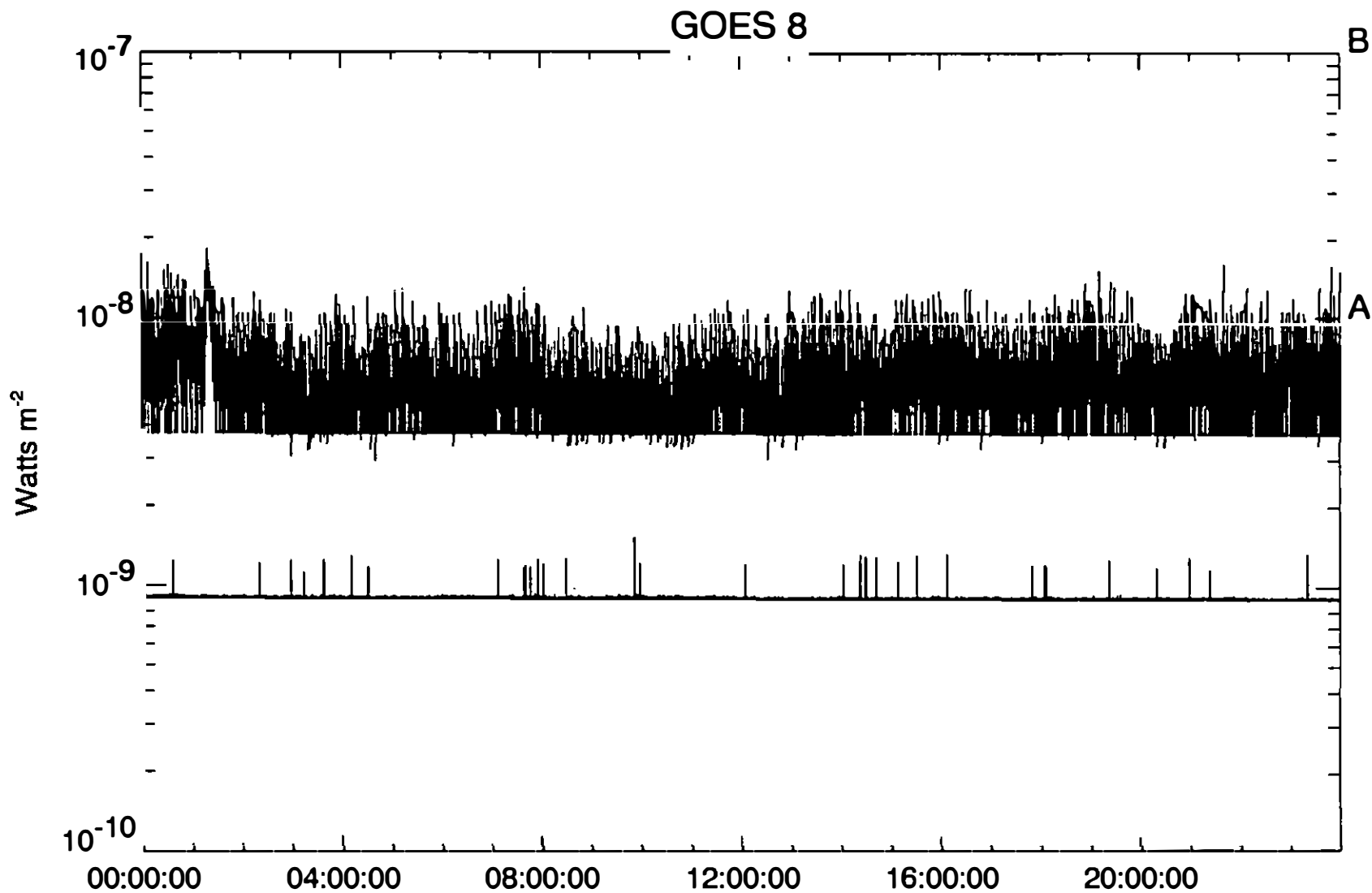
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=32.7 AZIMUTH=198.8 ERROR=11.8 DEGREES

COMMENTS:

TGF LASTING ~ 0.0015 S.



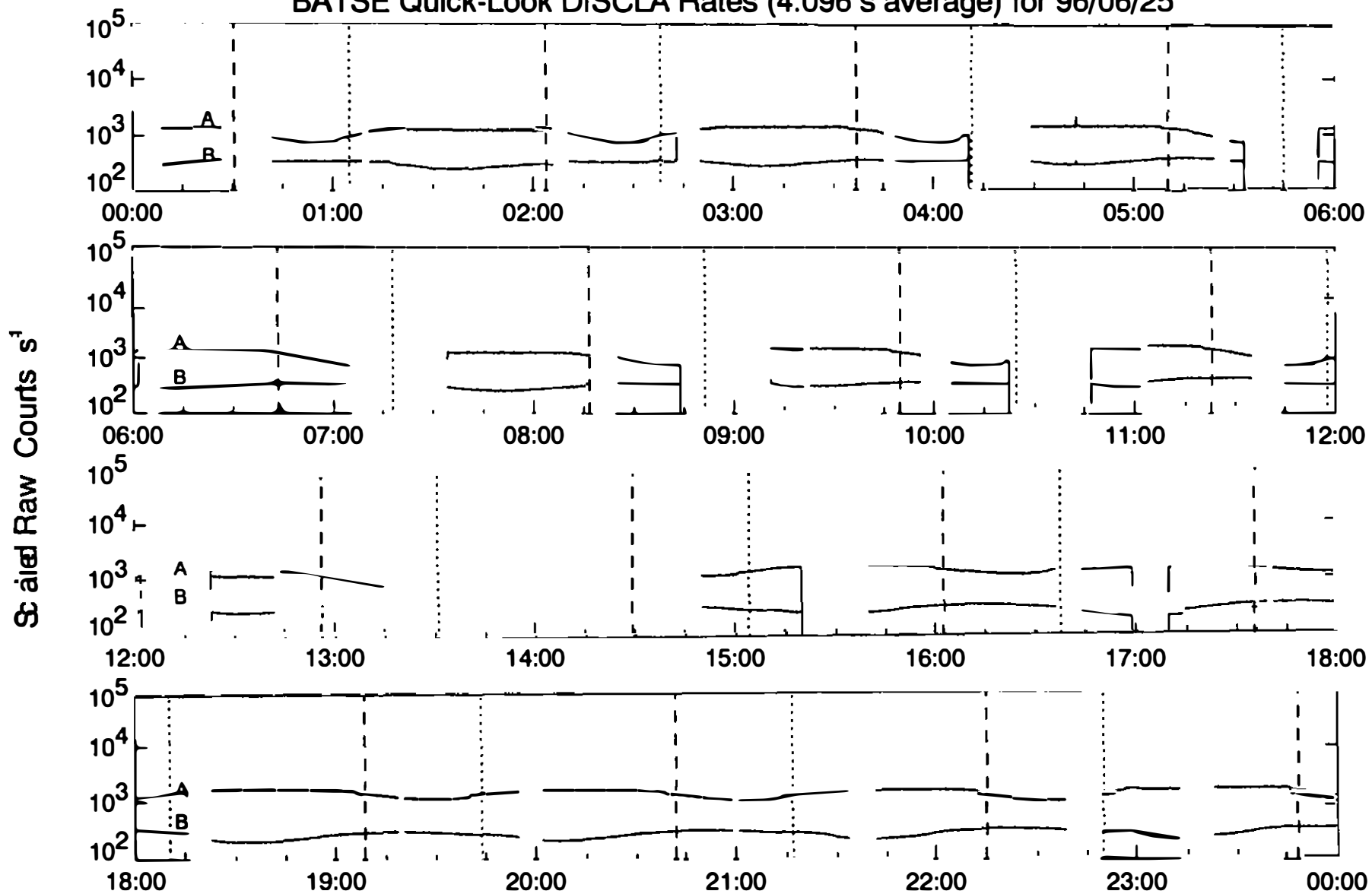
Data Start: 96/06/25, 0000:00

Plot created: 96/06/27, 1003

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/25

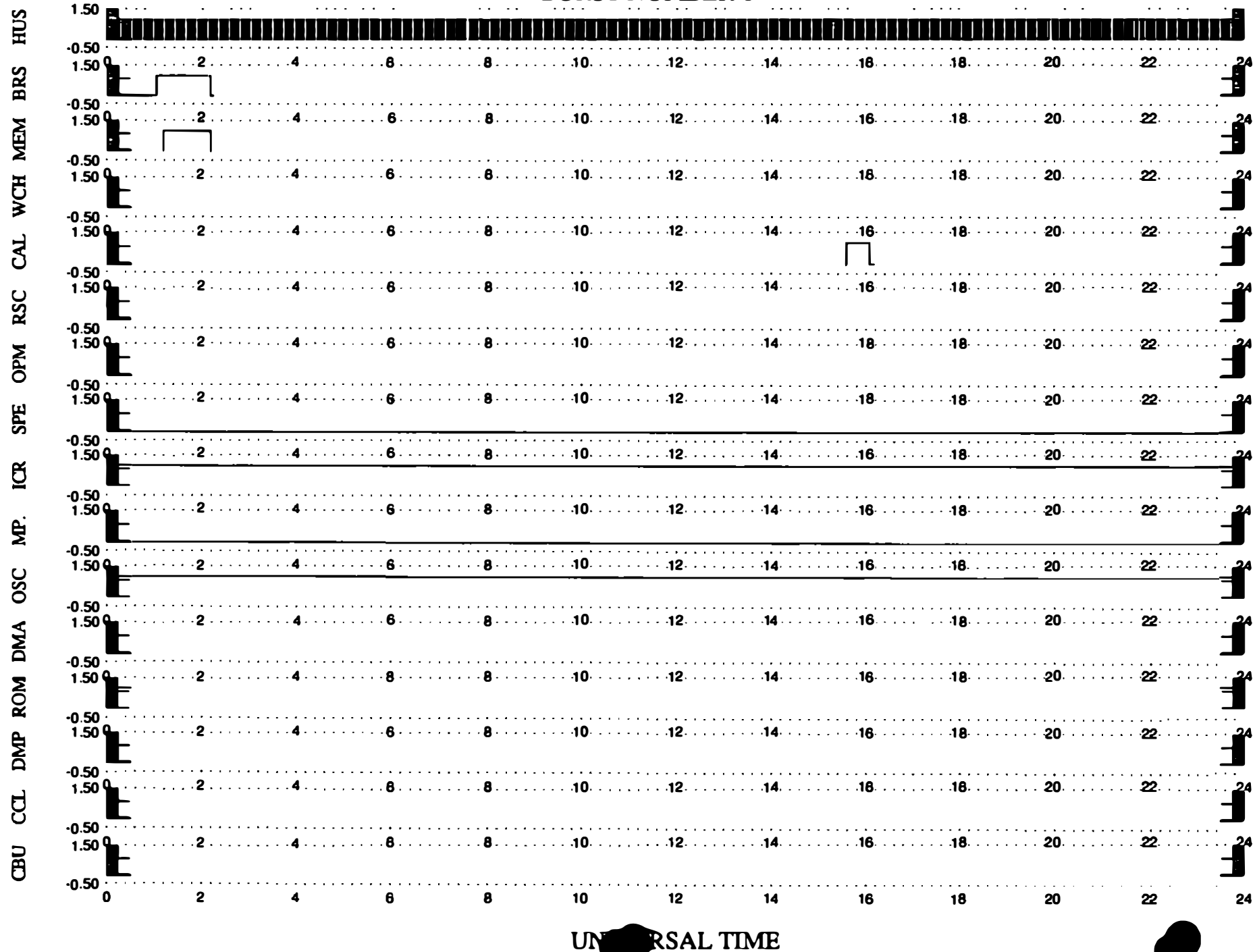


Current Time: 96/06/27, 1004 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

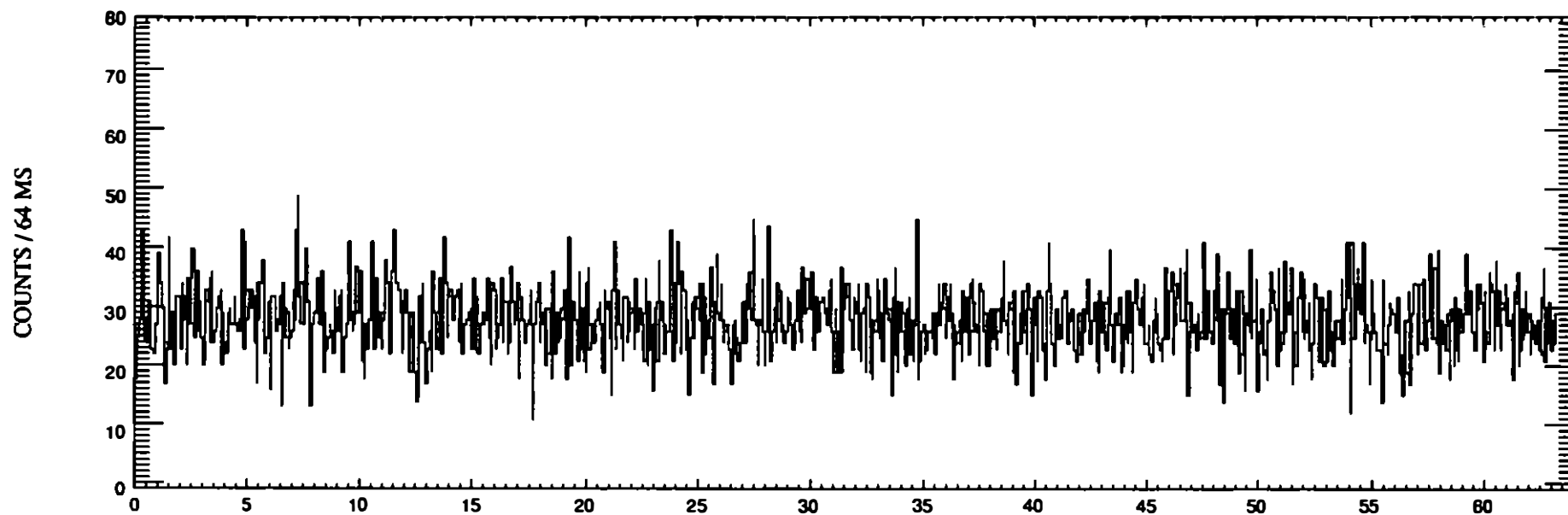
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

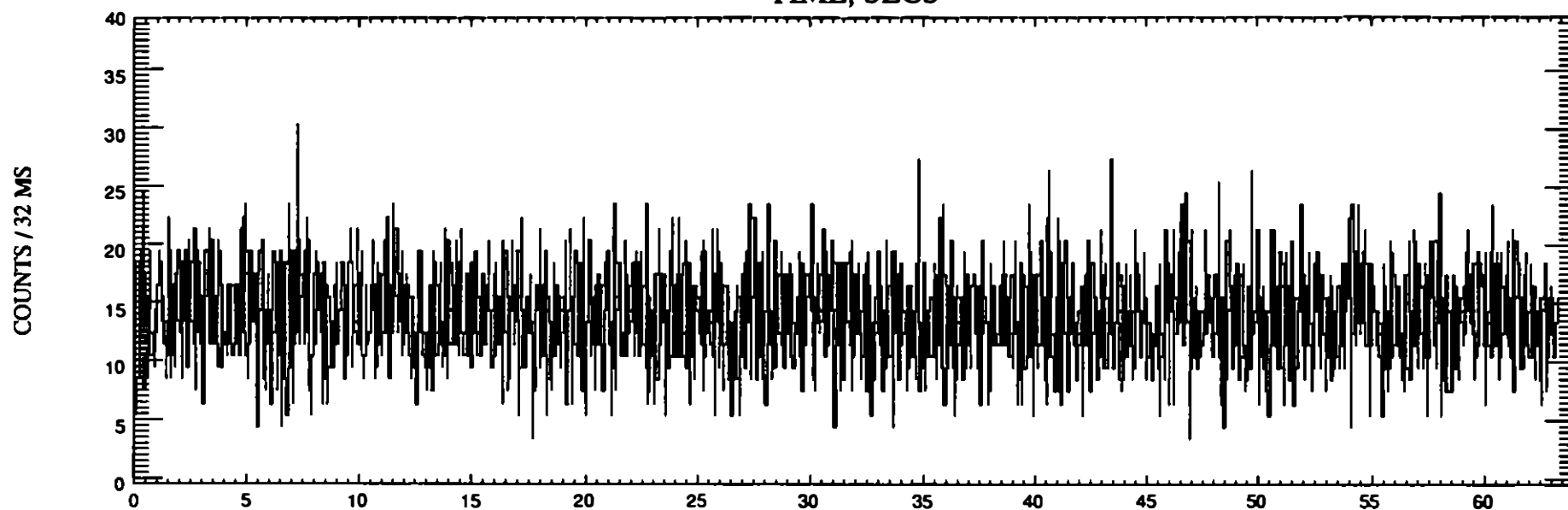
BURST NUMBER 6



Burst Counter 6 at UT= 0.899612240262 h= 3238.604 s 00:53:58.604

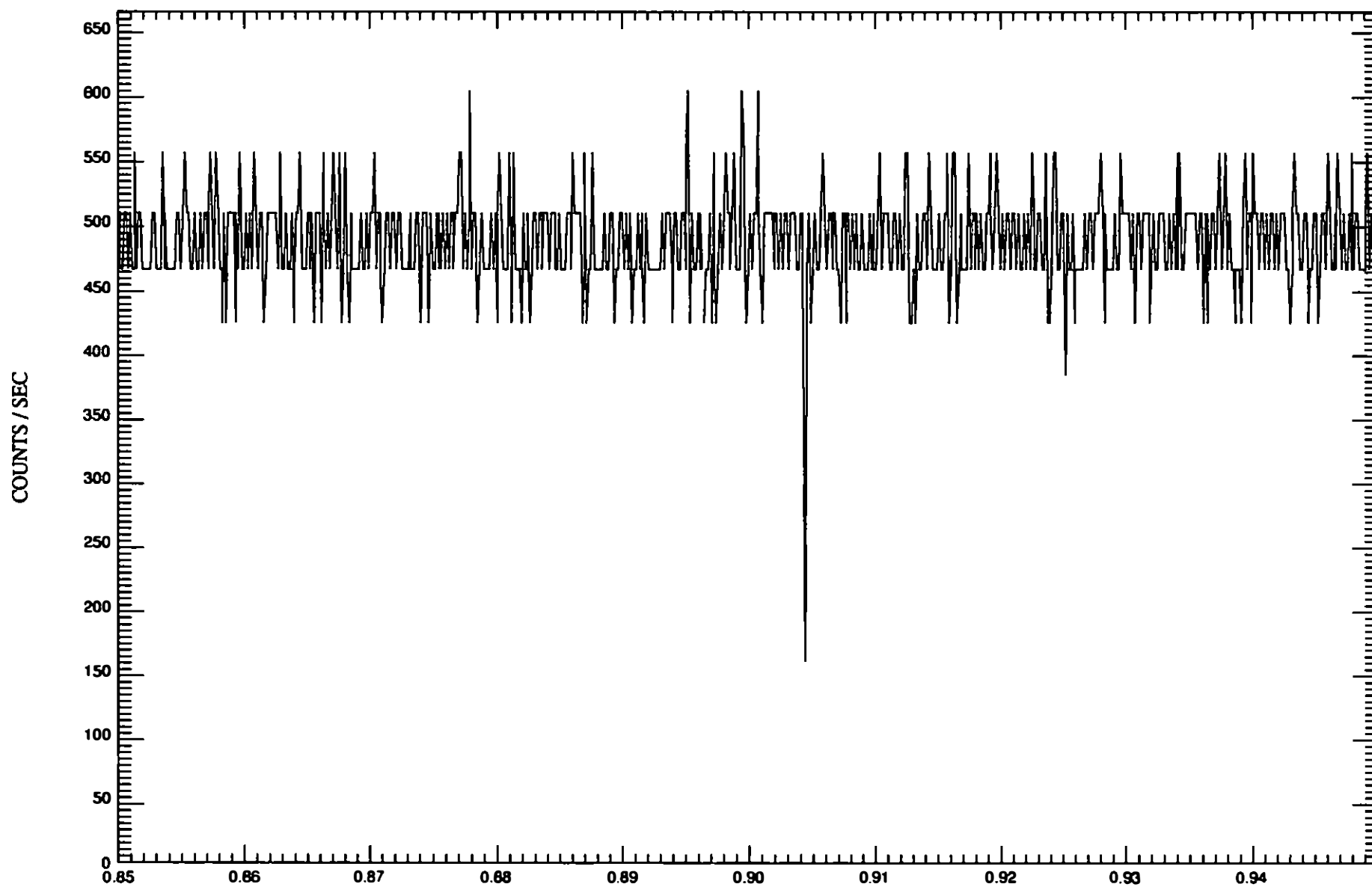


TIME, SECS

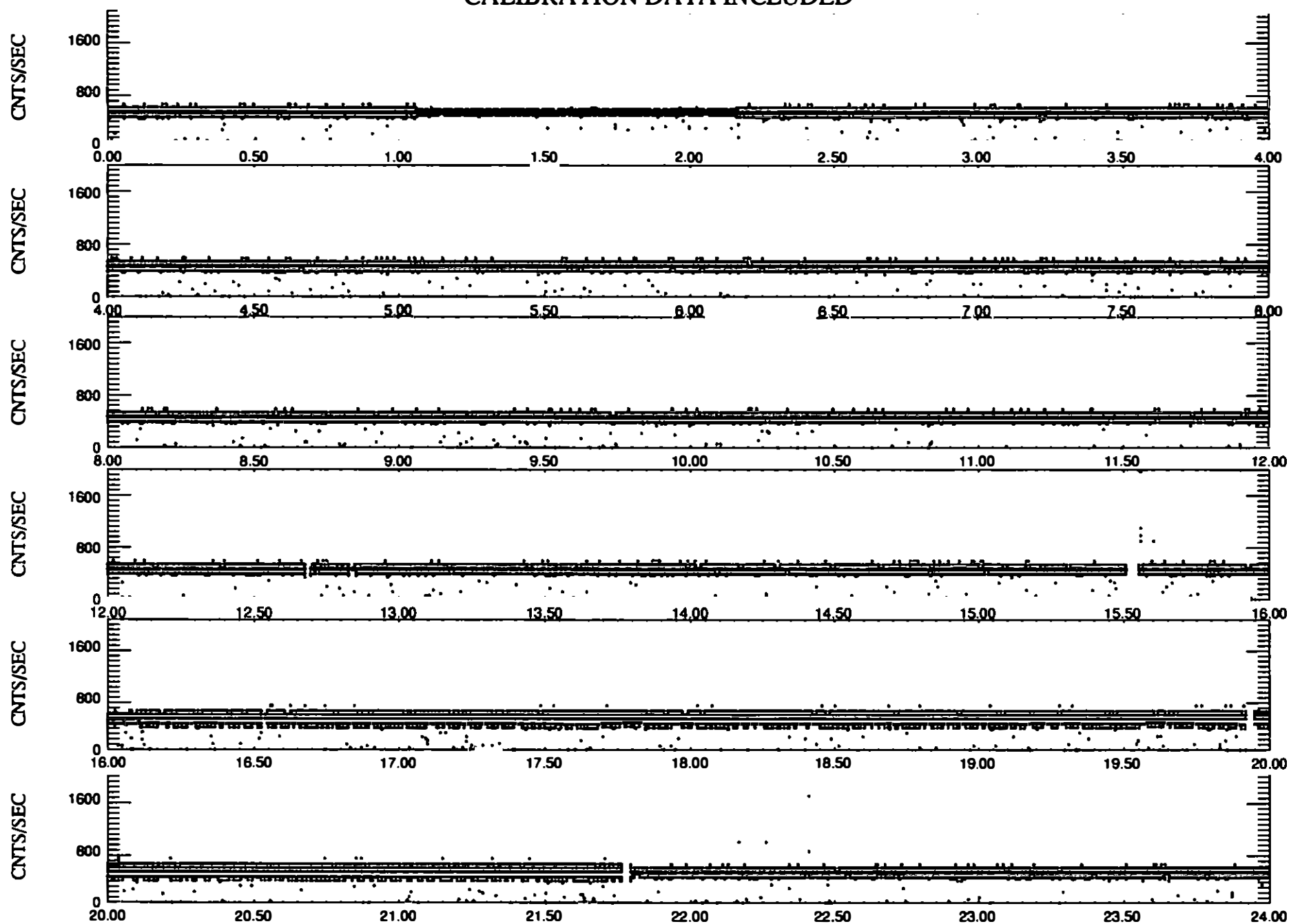


TIME, SECS

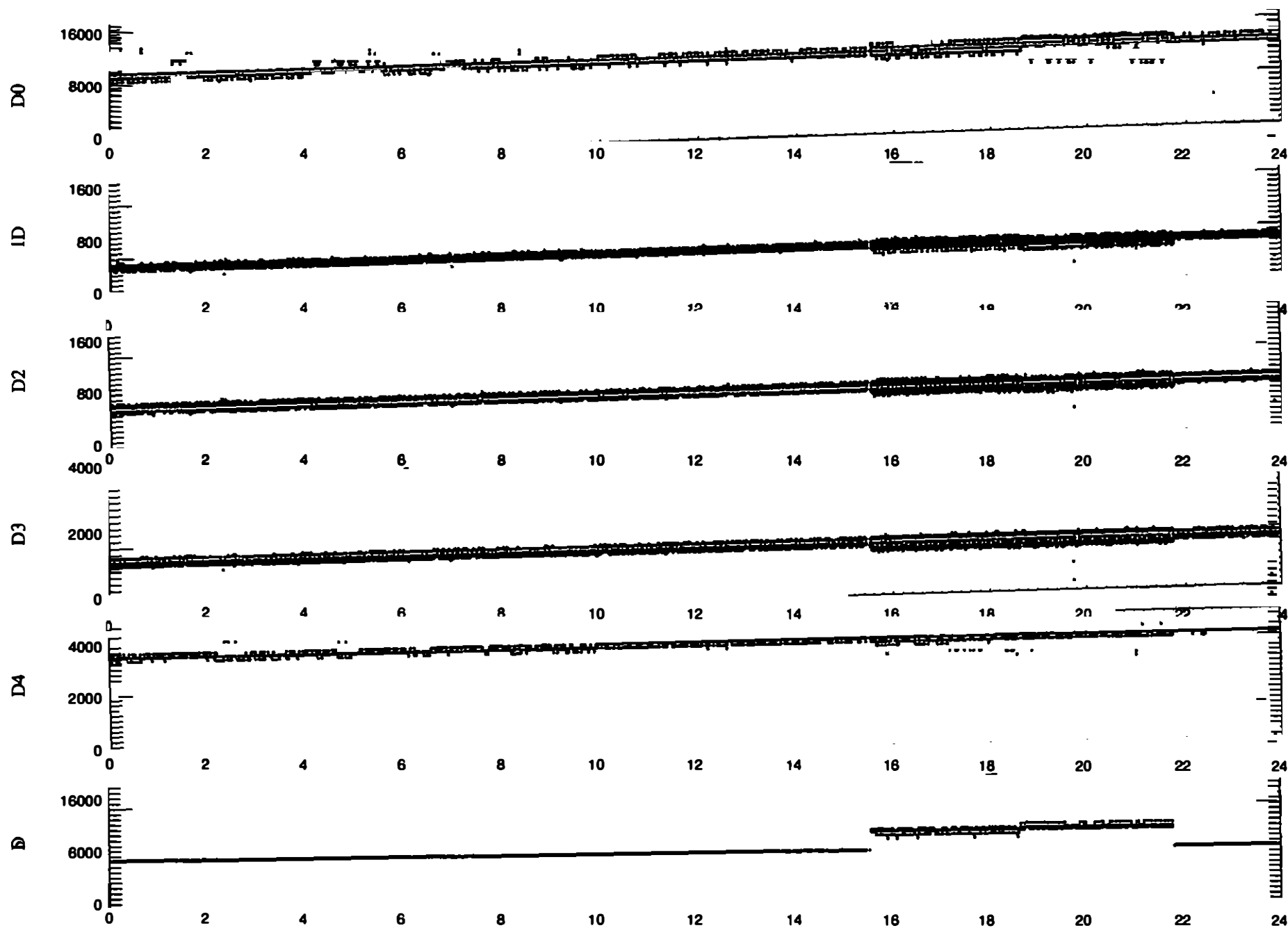
CALIBRATION DATA INCLUDED



CALIBRATION DATA INCLUDED



UT RSAL TIME



UNIVERSAL TIME

From RICHARDSON@SSLLES.MSFC.NASA.GOV Mon Jul 1 09:25 PDT 1996
Date: Mon, 1 Jul 1996 11:24:59 -0500 (CDT)
From: RICHARDSON@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5521

BATSEARCH PROGRAM

BATSE BURST # 5521
EVENT OF 1996 JUN 26 DAY OF YEAR=178
EVENT CROSSING TIME AT BATSE : 69254. S. OR 19:14:14.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 324.000 35.000
BATSE PEAK COUNTING RATE: 1500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 26/ 6/ 96 IS:
RA= 152.889 DEC= 48.127 DIST= 4.570 AU
BATSE-ULYSSES DISTANCE = 683721104. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 83.51 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 257.94 SECS.
CROSSING TIME AT ULYSSES IS 69512. S. OR 19:18:31 +/- 447.33 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 26/ 6/ 96 IS:
RA= 67.819 DEC= 21.936 DIST= 2.334 AU
MARS-BATSE DISTANCE = 349098592. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 91.88 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -38.15 SECS.
CROSSING TIME AT MARS IS 69216. S. OR 19:13:35 +/- 201.48 SECONDS

BATSE BURST TRIGGER

NO.: 5521

TIME: TJD=0260 SECONDS=69254

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=115.0 AZIMUTH=104.3 ERROR=3.4 DEGREES

COMMENTS:

GRB. DURING DATA GAP. DUR.~20SEC. VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5521	960626	10260	69254	1500	324	+35	20

BATSE #

5521

1 / 7 / 96

ULYSSES RT

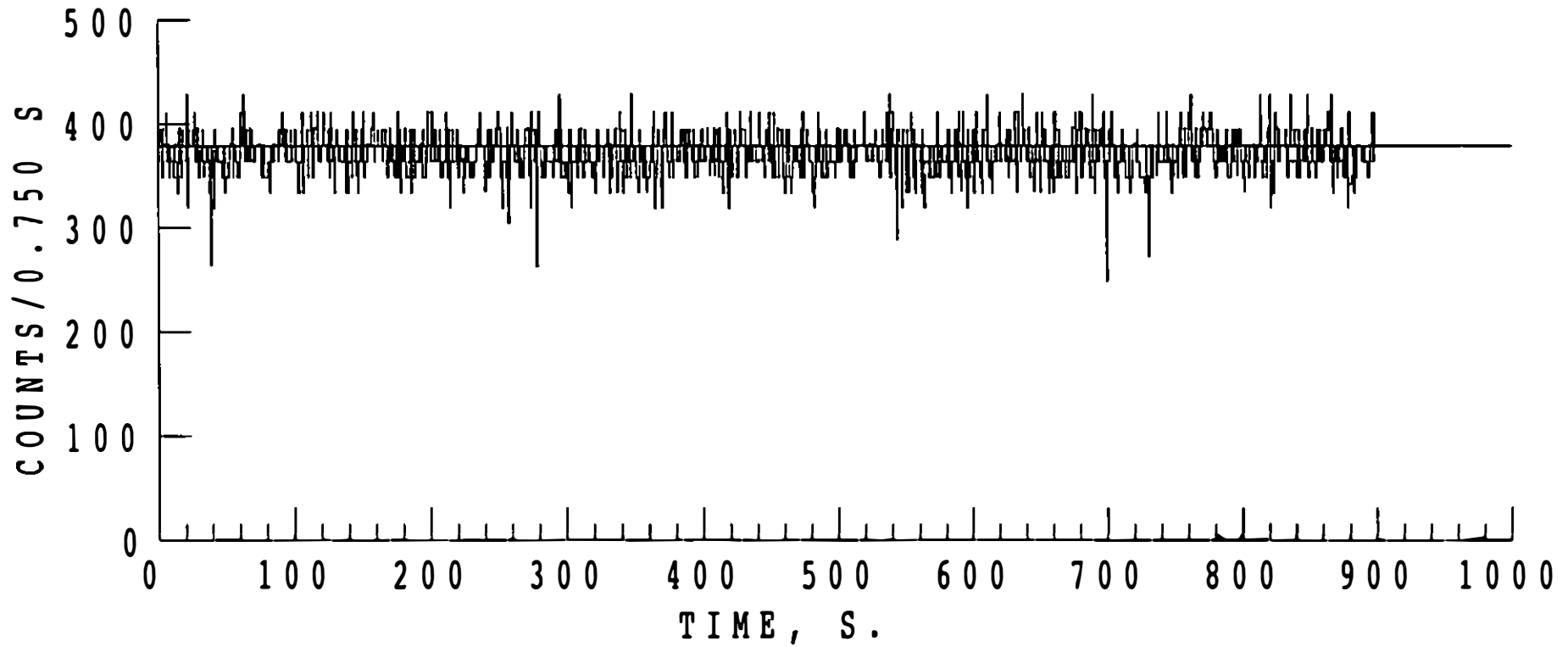
26 / 6 / 96 69048.094 s

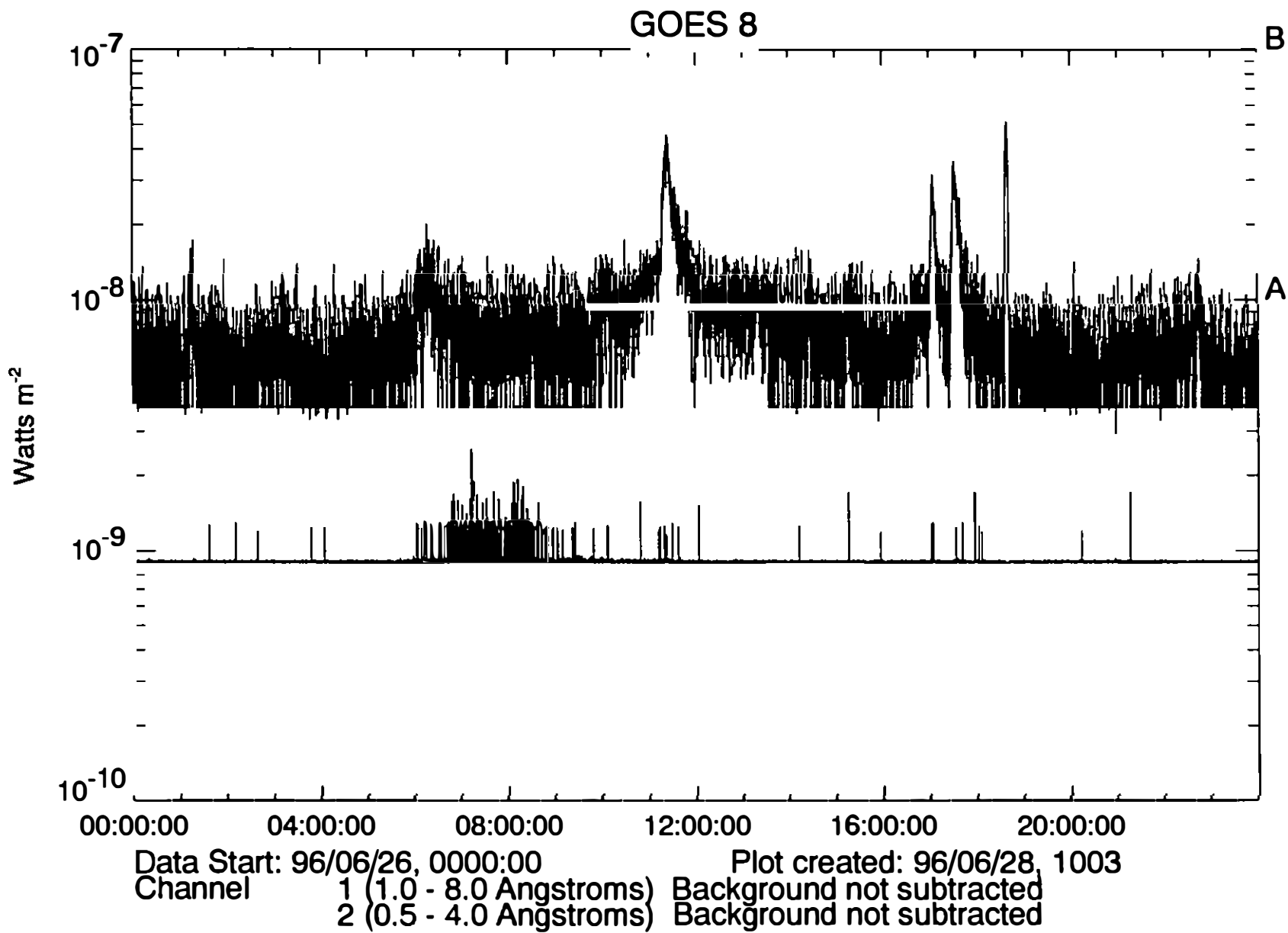
0.250 S INTERVALS REGROUPED BY 3

0 - 0 keV

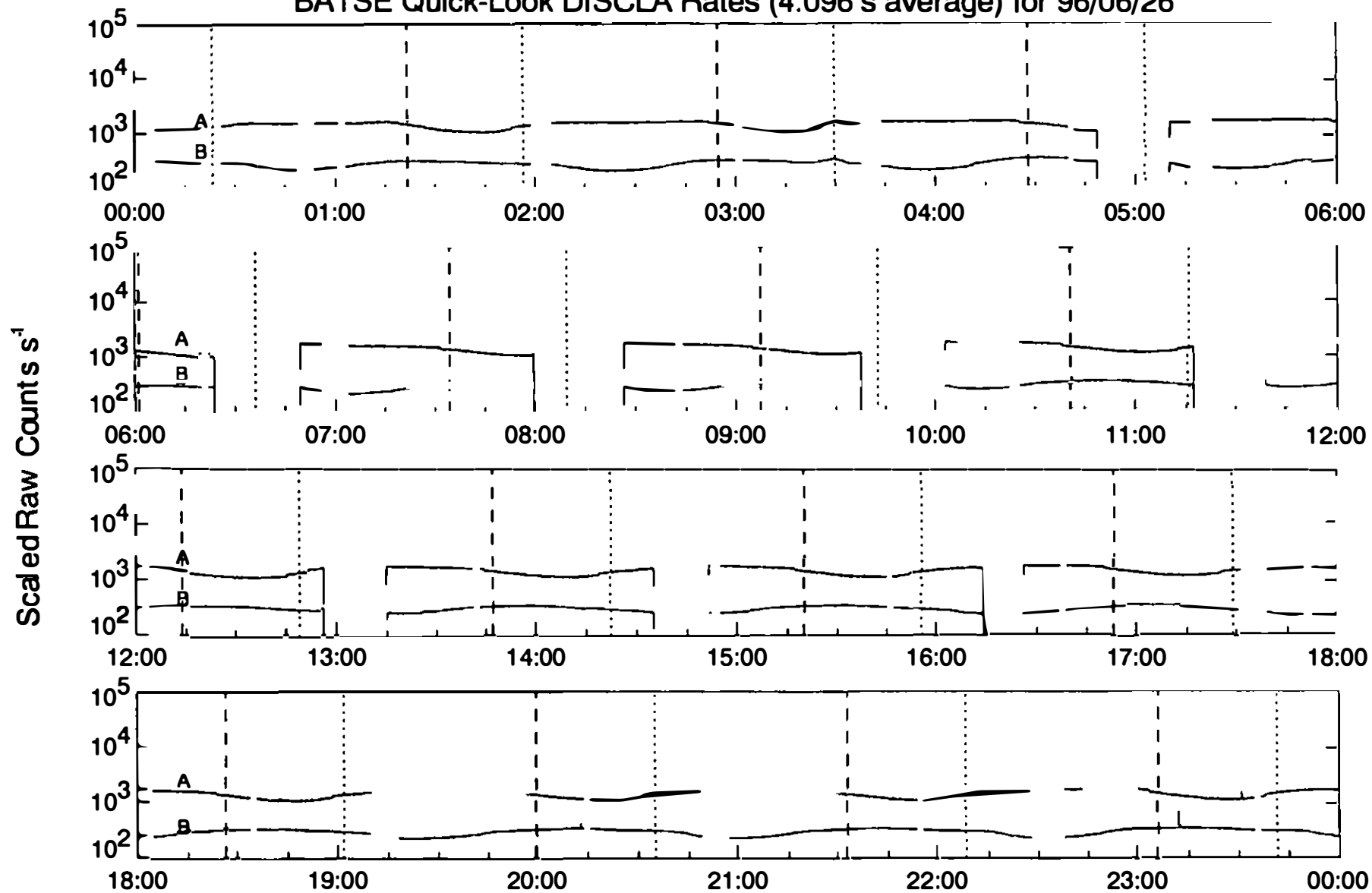
N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/26



Current Time: 96/06/28, 1004 EDT

A: Channel 0 Most Sunward LAD

B: Sum Channel 0 Anti-Sunward LADs X .05

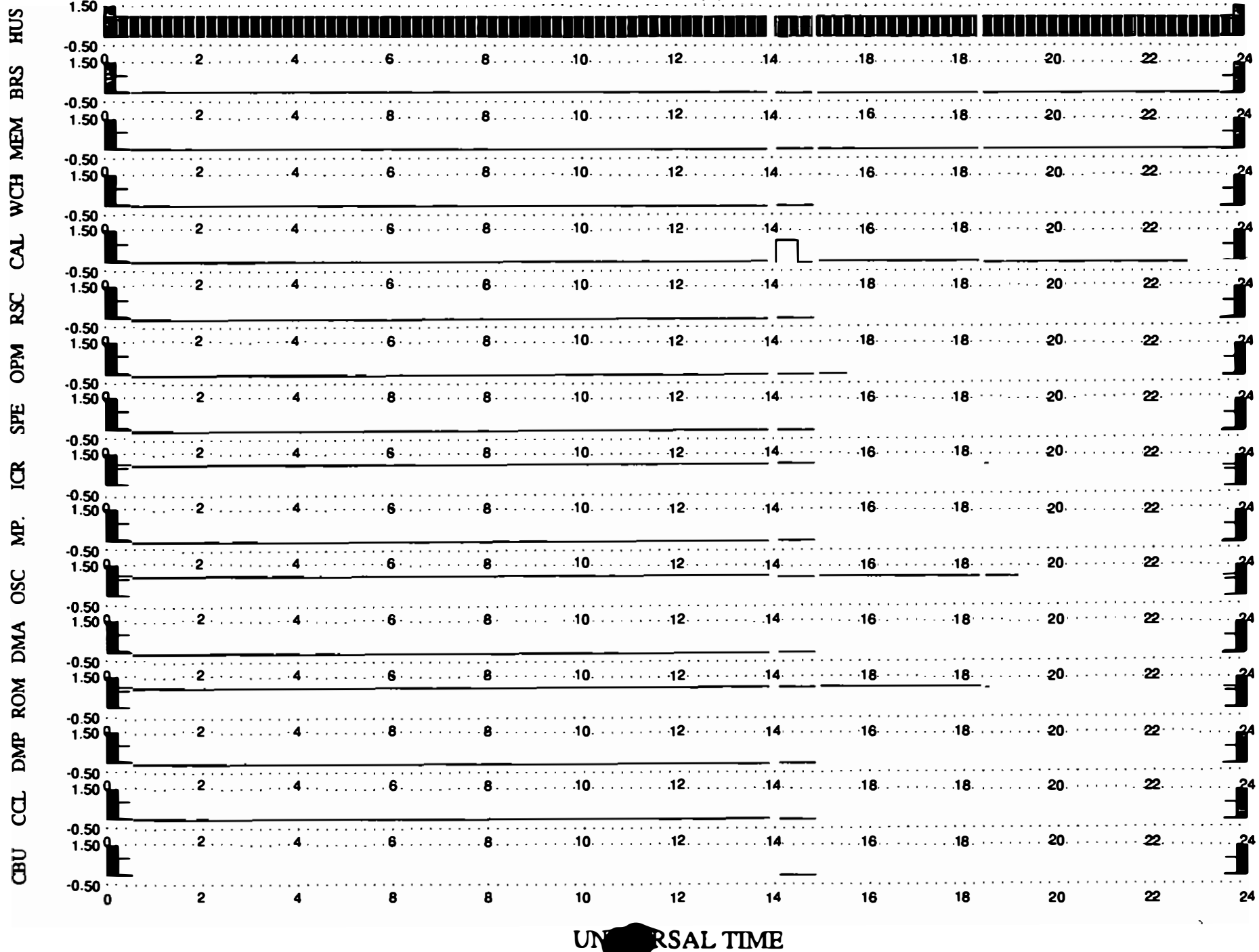
Dotted line: Day entry

Dashed line: Night entry

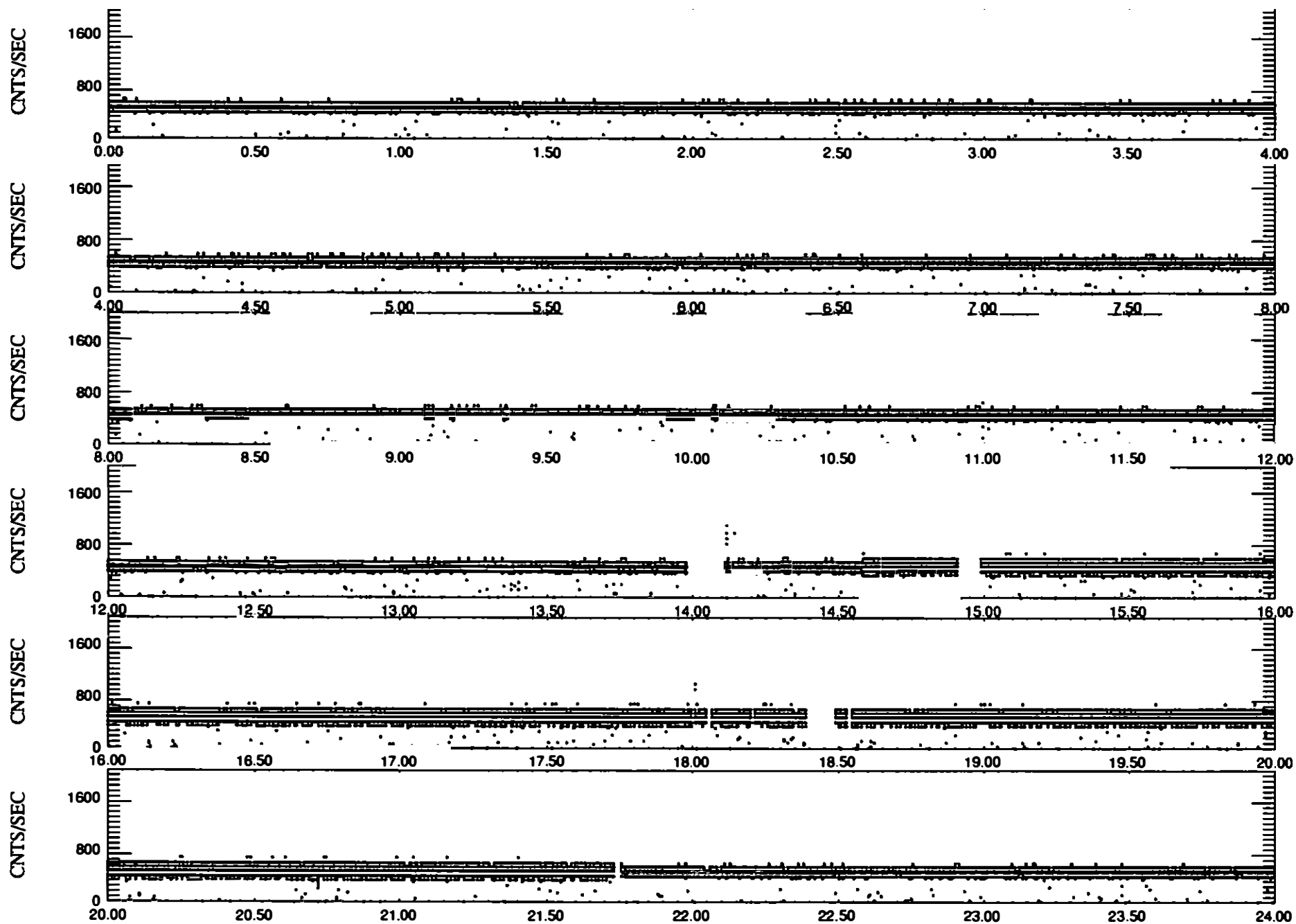
* Solar Burst Trigger

+ Solar Flare

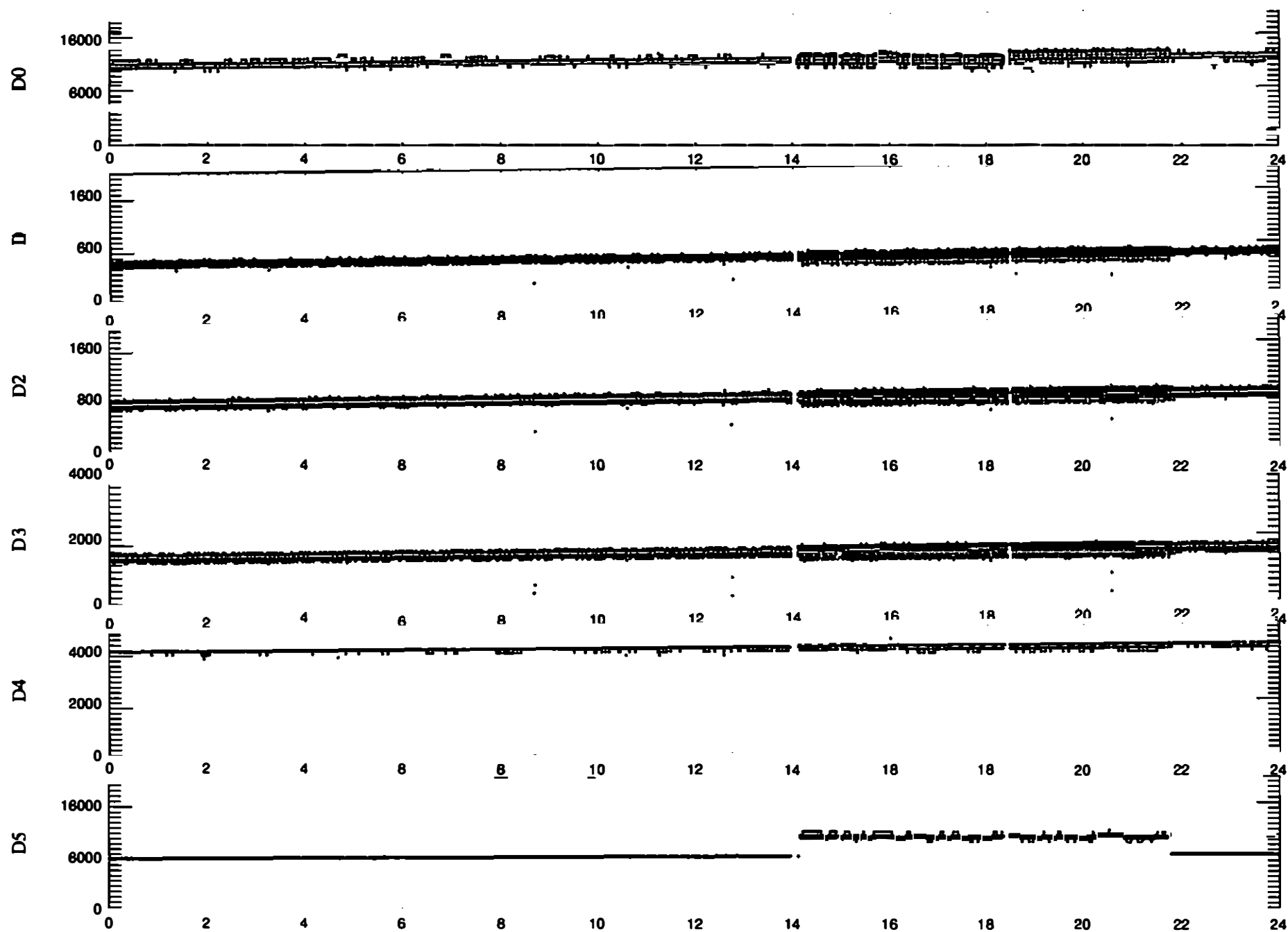
NO BURST (6)



CALIBRATION DATA INCLUDED

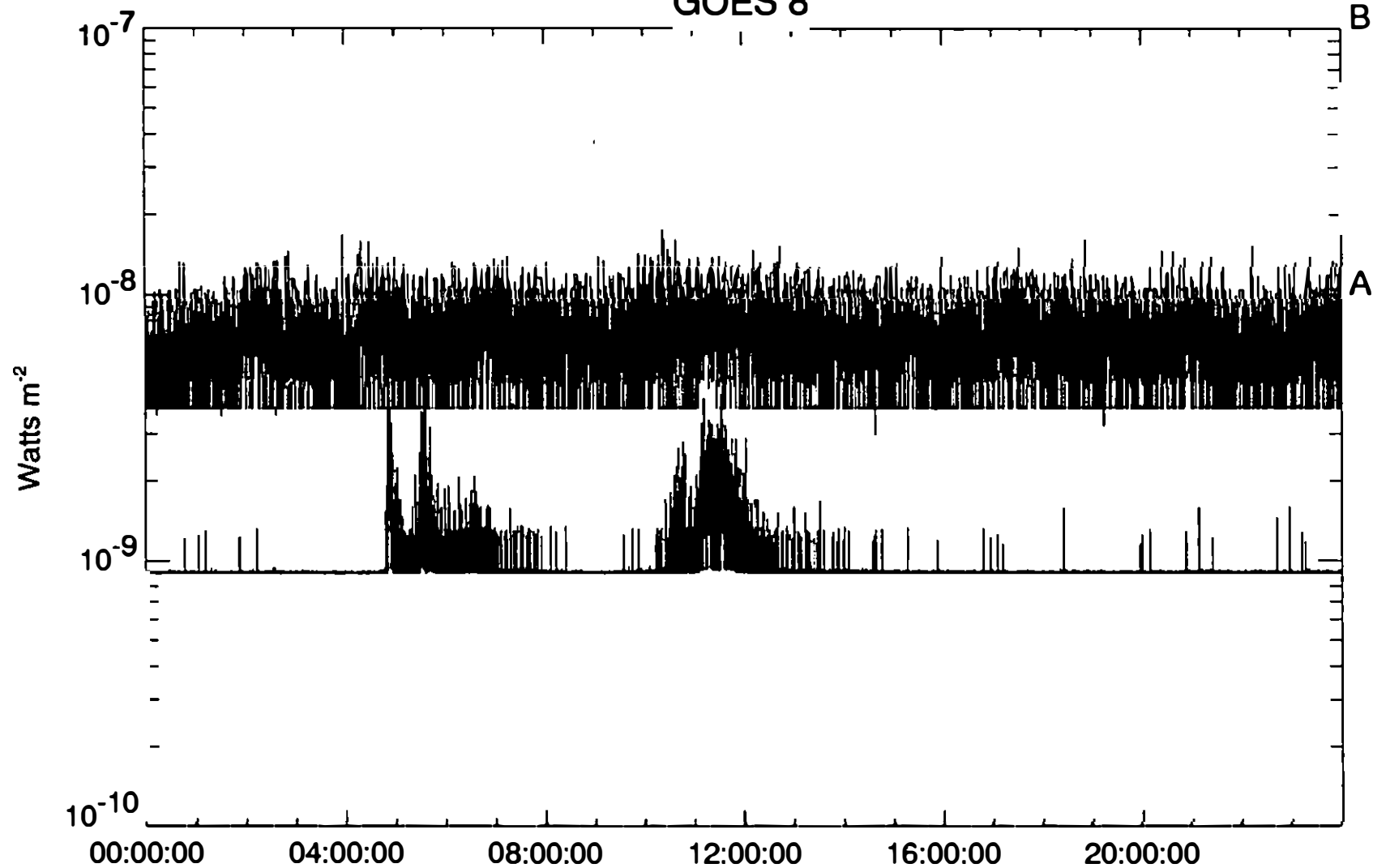


UNIVERSAL TIME



UNIVERSAL TIME

GOES 8

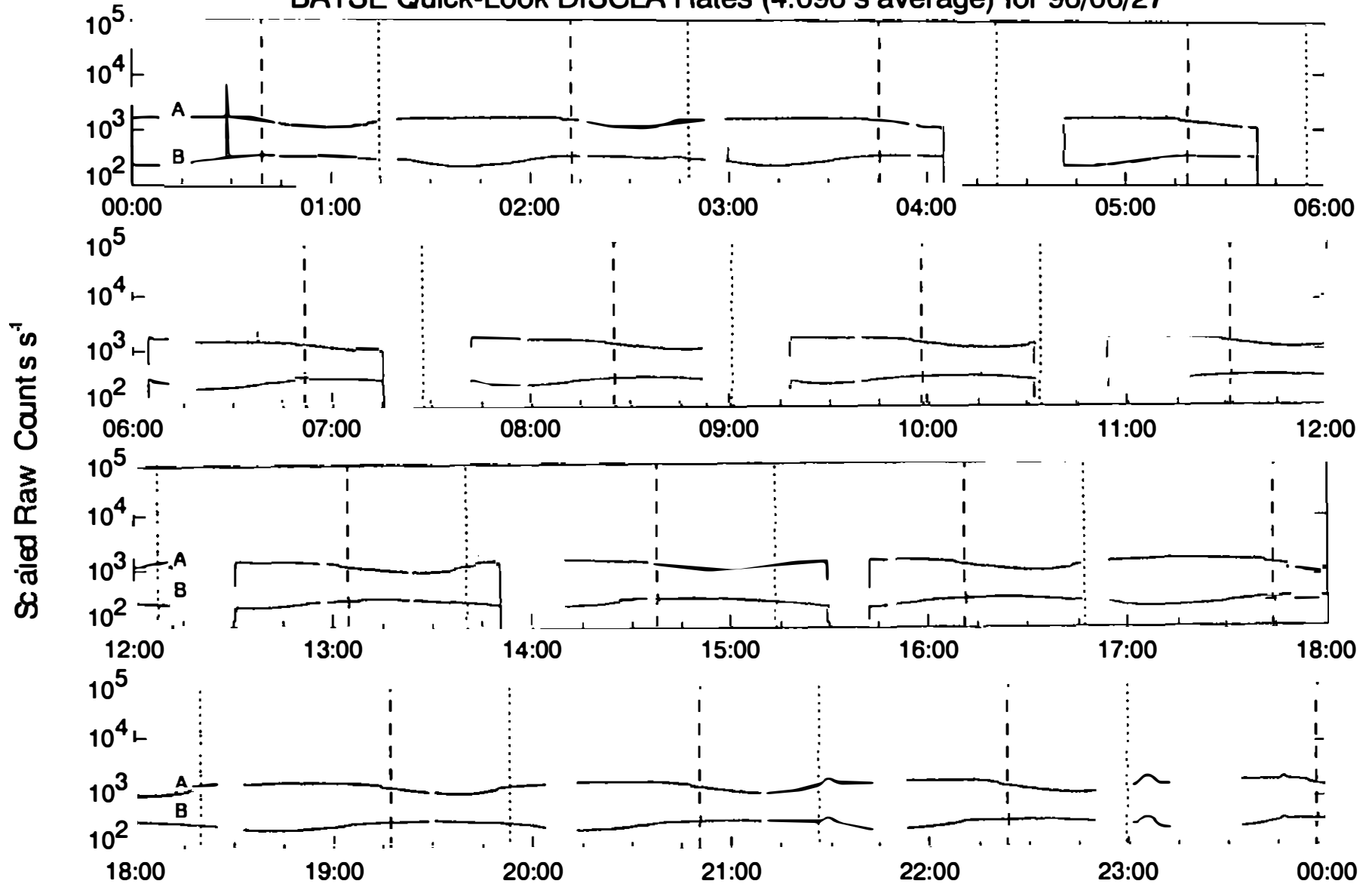


Data Start: 96/06/27, 0000:00

Plot created: 96/06/29, 1003

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

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/27

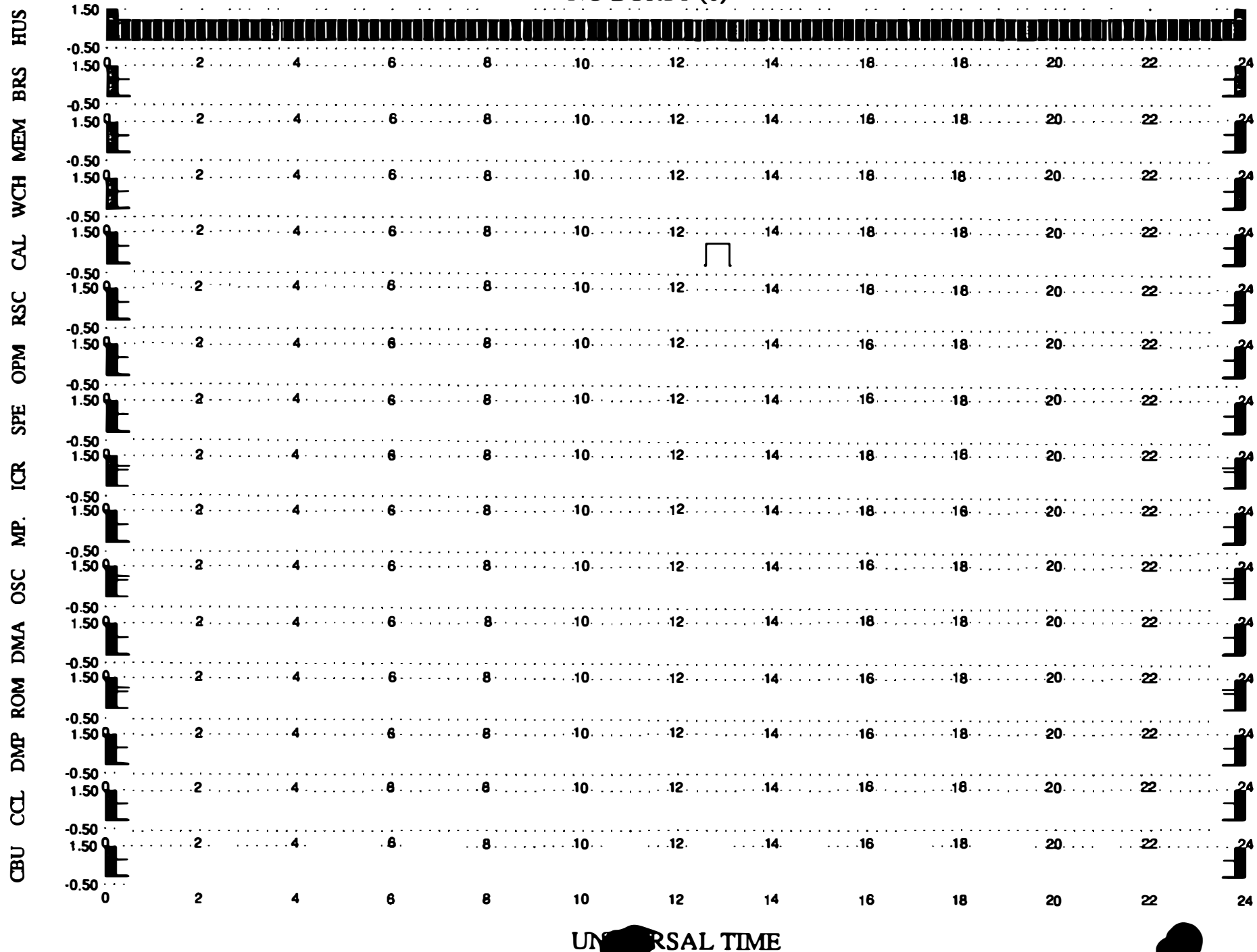


Current Time: 96/06/29, 1004 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

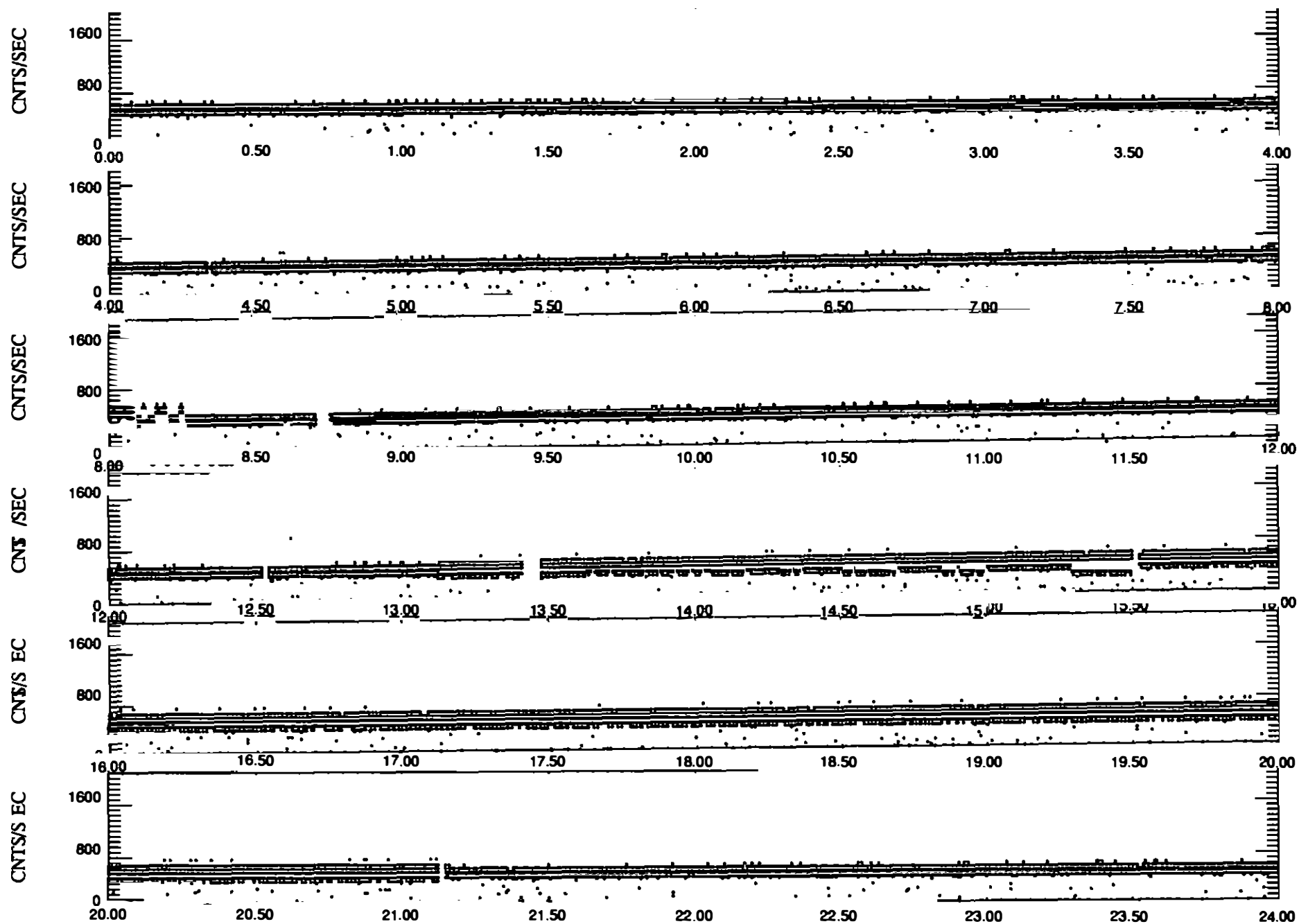
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

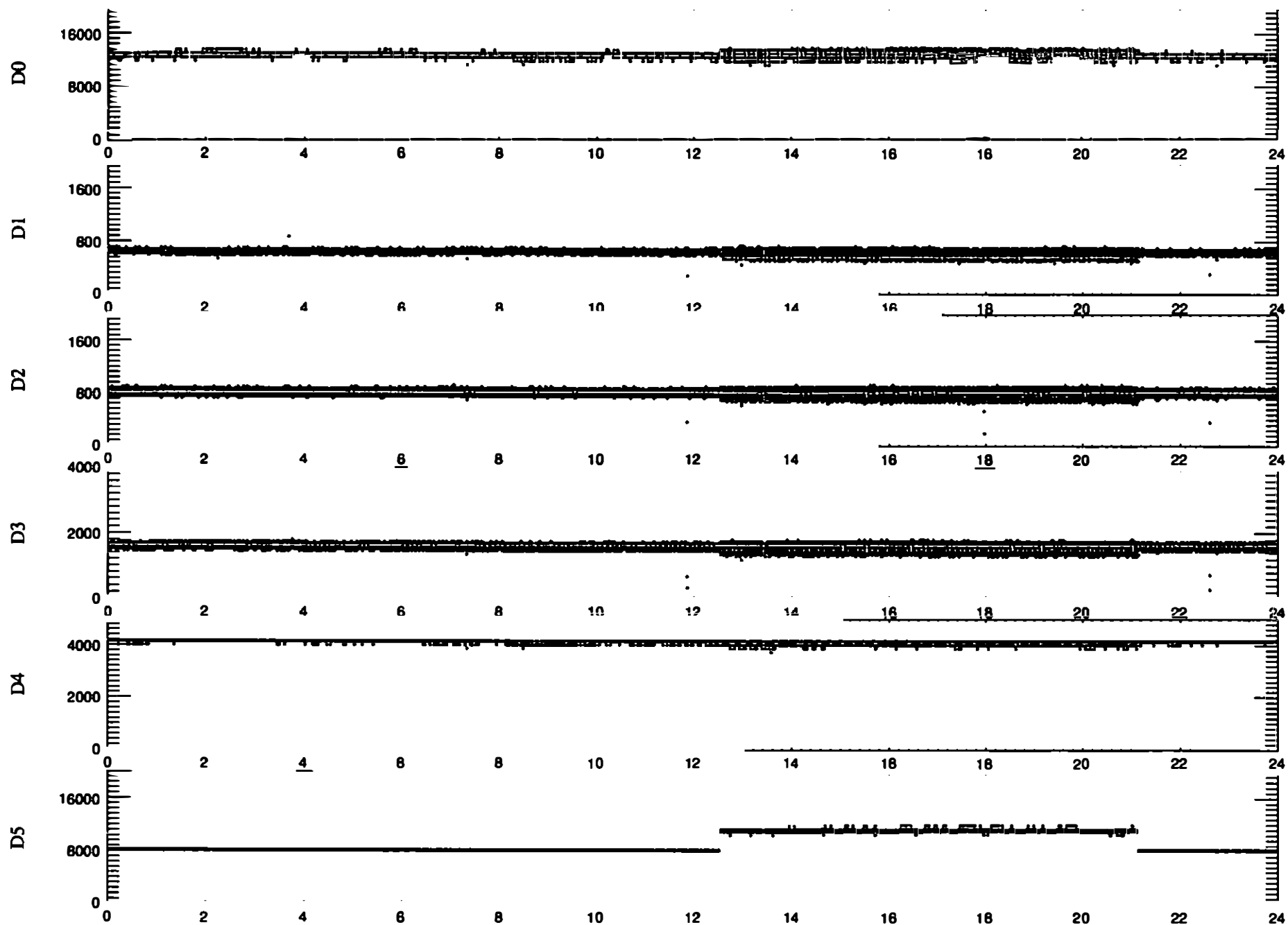
NO BURST (6)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From SURASAK@ssl.msfc.nasa.gov Tue Jul 2 11:59 PDT 1996
From: SURASAK@ssl.msfc.nasa.gov
Date: Tue, 2 Jul 1996 13:51:10 -0500 (CDT)
To: burst@compTEL.sr.unh.edu, grobad@estsA2.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 5522

TIME: TJD=0262 SECONDS=12036

TYPE: SAA ENT SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
HV TURNED OFF(SAA)~11S. AFTER TRIGGER.
SAA ENTRY.

From SURASAK@ssl.msfc.nasa.gov Tue Jul 2 12:03 PDT 1996
From: SURASAK@ssl.msfc.nasa.gov
Date: Tue, 2 Jul 1996 14:02:38 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 5523

BATSEARCH PROGRAM

BATSE BURST # 5523
EVENT OF 1996 JUN 28 DAY OF YEAR=180
EVENT CROSSING TIME AT BATSE : 19222. S. OR 05:20:22.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 327.000 48.000
BATSE PEAK COUNTING RATE: 12000 C/S

RT

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 28/ 6/ 96 IS:
RA= 153.146 DEC= 47.821 DIST= 4.590 AU
BATSE-ULYSSES DISTANCE = 686627357. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 95.97 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -238.21 SECS.
CROSSING TIME AT ULYSSES IS 18984. S. OR 05:16:23 +/- 441.87 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 28/ 6/ 96 IS:
RA= 69.314 DEC= 22.162 DIST= 2.330 AU
MARS-BATSE DISTANCE = 348558624. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 98.52 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -172.27 SECS.
CROSSING TIME AT MARS IS 19050. S. OR 05:17:29 +/- 197.01 SECONDS

BATSE BURST TRIGGER

NO.: 5523

TIME: TJD=0262 SECONDS=19222

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=109.5 AZIMUTH=90.6 ERROR=1.218 DEGREES

COMMENTS:

GRB. SINGLE PULSE WITH SUBSTRUCTURE. DUR=25S. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
5523	960628	10262	19222	12000	327	+48	25

Helio corr removed

Date: Mar 11 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

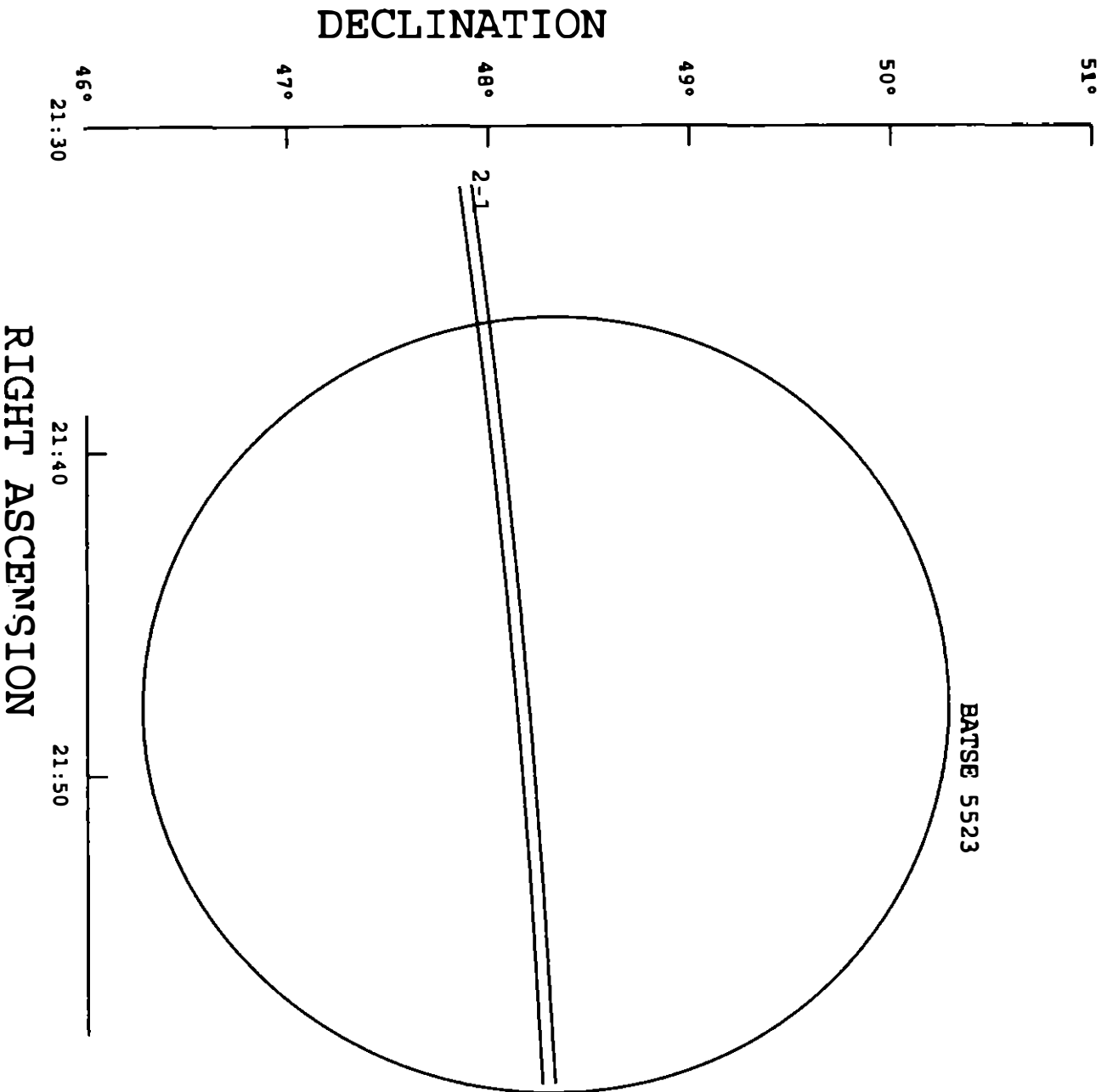
- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS database updated?

96	2	29	22445.141	S2	740	1520	550	0.3	0.5	8	250	Search RI	
96	3	5	33645.352	S1	440	390	70	>10	0.8	1.8	251	Search NO	
96	3	12	35074.697	S2	160	730	330	<0.25	0.2	0.1	252	Search NO	
96	3	19	51992.828	S1		800	970	>7	0.16	0.4	253	RI	5277
5	3	21	76321.803	S2	4600	4550	1020	0.03	42	46	254	Trig	5293
6	3	22	19642.728	S1	1060	1760	1120	40	2	28	255	Trig	5304
96	3	24	80064.124	S2	320	520	150	0.07	1	14	257	Search RI	
96	3	25	69892.978	S1	250	620	460	6	0.5	0.5	258	NO	5339
96	3	31	21208.784	S1	220	520	120	4.4	2	24	271	RI	5369
96	4	4	25289.264	S2	420	750	240	0.07	4	9	272	Search RI	
96	4	9	77143.618	S2	650	1170	420	0.17	0.5	5	273	RI KA	5417
96	4	10	80648.201	S2	190	330	140	<0.05	1	35	274	Search RI	
96	4	18	06106.854	S1	200	330	70	1	2	2	277	RI KA	5451
96	4	18	08271.303	S2	350	770	50	<0.1	3	30	278	Search KA 278: NO	
96	4	18	66796.140	S1	1160	1000	50	10	1	3	290	Trig	5436
96	4	20	17324.809	S2	300	1190	1080	1	0.3	0.04	303	Search RI	
96	4	22	59981.190	S2	160	410	140	0.5	4	12	305	RI	5443
96	4	25	86395.862	S2	1300	730		<0.04	44	16	306	Search KA 11250 RI	
96	4	28	47556.501	S2	270	420	230	<0.04	1	170	307	RI	5450
96	4	30	49895.524	S1	250	640	180	8	8	18	309	RI KA	5451
96	5	1	31344.546	S1	380	870	350	3.7	20	56	310	Search RI	
96	5	6	47384.998	S1	160	490	190	1.1	3	6	312	Search RI	
96	5	7	44869.909	S2	460	760	290	0.03	20	98	313	Search RI	
96	5	10	38723.598	S2	560	1300	330	0.1	1	7	317	Trig	
96	5	19	14766.283	S2	1700	7700	8000	0.4	0.1	0.56	319	Search NO	
96	5	21	62489.430	S1	330	500	90	5.8	1	8	320	Search RI	
96	5	23	59522.013	S1	270	550	580	10	1	3	321	RI	5473
96	5	29	43663.061	S2	1700	4000	5000	0.15	0.5	3.5	322	Trig	5477
96	5	29	80722.705	S2	420	620	140	0.1	1	14	323	Trig KA	
96	5	30	62300.750	S1	180	400	110	>20	2	14	324	Search N/O	
96	5	31	06926.043	S1	300	440	120	4.7	50	7	325	Search RI	
96	5	31	73498.259	S2	1600	4250	2800	0.5	27	19	326	Trig	
96	6	2	42664.032	S1	1000	1450	1400	>2	0.3	0.03	327	Search NO	
96	6	5	29392.672	S1	400	950	410	1.3	2	87	328	RI	5486
96	6	7	78106.176	S2	890	1280	550	0.04	32	120	329	RI	5489
96	6	10	84502.254	S2	200	1000	1500	0.9	0.16	0.11	330	Search NO	
96	6	12	71198.677	S1	650	2800	2700	1.4	0.5	18	331	Trig	
96	6	14	67654.516	S1	80	1800	1600	1	0.18	0.1	332	Search NO	
96	6	17	76195.941	S1	350	560		>8	1	0.6	333	NO	5504
96	6	22	74906.054	S2	100	360	280	0.2	4	8	334	Search NO	
96	6	23	04734.229	S2	130	320	150	0.5	7	25	335	RI KA	5512
96	6	23	77186.871	S2	250	350	130	0.05	6	15	336	Search RI	
96	6	25	16949.252	S1	180	280	70	4.6	6	9	337	RI	5518
96	6	28	19224.223	S2	500	410	120	0.06	12	6	338	RI	5523
96	7	2	54698.284	S1	280	350	70	2.8	23	85	339	RI	5525
96	7	3	65443.861	S1	200	560	600	3	1	0.4	340	NO	5527
96	7	7	36999.311	S2	1600	1200		0.06	2	5	341	RI	5530
96	7	8	72577.095	S2	900	820	160	0.2	1	6	342	Search RI	
96	7	9	00246.641	S1	260	1000	400	0.95	15	4	343	Trig KA	
96	7	10	00662.014	S2	1800	4700	3600	0.13	0.5	48	345	Trig	
96	7	11	63757.543	S1	560	2400	900	1.25	0.5	19	346	Trig	
96	7	11	68451.869	S2	200	360	170	<0.07	2	41	347	Search NO	
96	7	22	25522.448	S2	360	650	170	0.27	17	151	348	RI	5548
96	7	22	56346.728	S1	700	1000	200	2.6	3	6	349	Search RI	
96	7	27	43056.737	S2	500	1000	500	0.7	0.5	15	350	Search RI	
96	7	31	20761.638	S2	800	1160	170	0.9	0.5	4	353?	RI	5557
96	8	3	67525.033	S1	4000	8000	3000	3	0.02	0.18	354	Trig KA	5561
96	8	4	84535.906	S2	2000	2600	600	<0.03	0.5	2	355	Trig KA	5563
96	8	5	78957.888	S2	1270	2360	380	0.05	1	20	356	Trig	
96	8	6	80989.772	S2	420	850	250	1	86	10	357	RI	5566

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 JUN 28, 1996 5:15

11/ 3/98



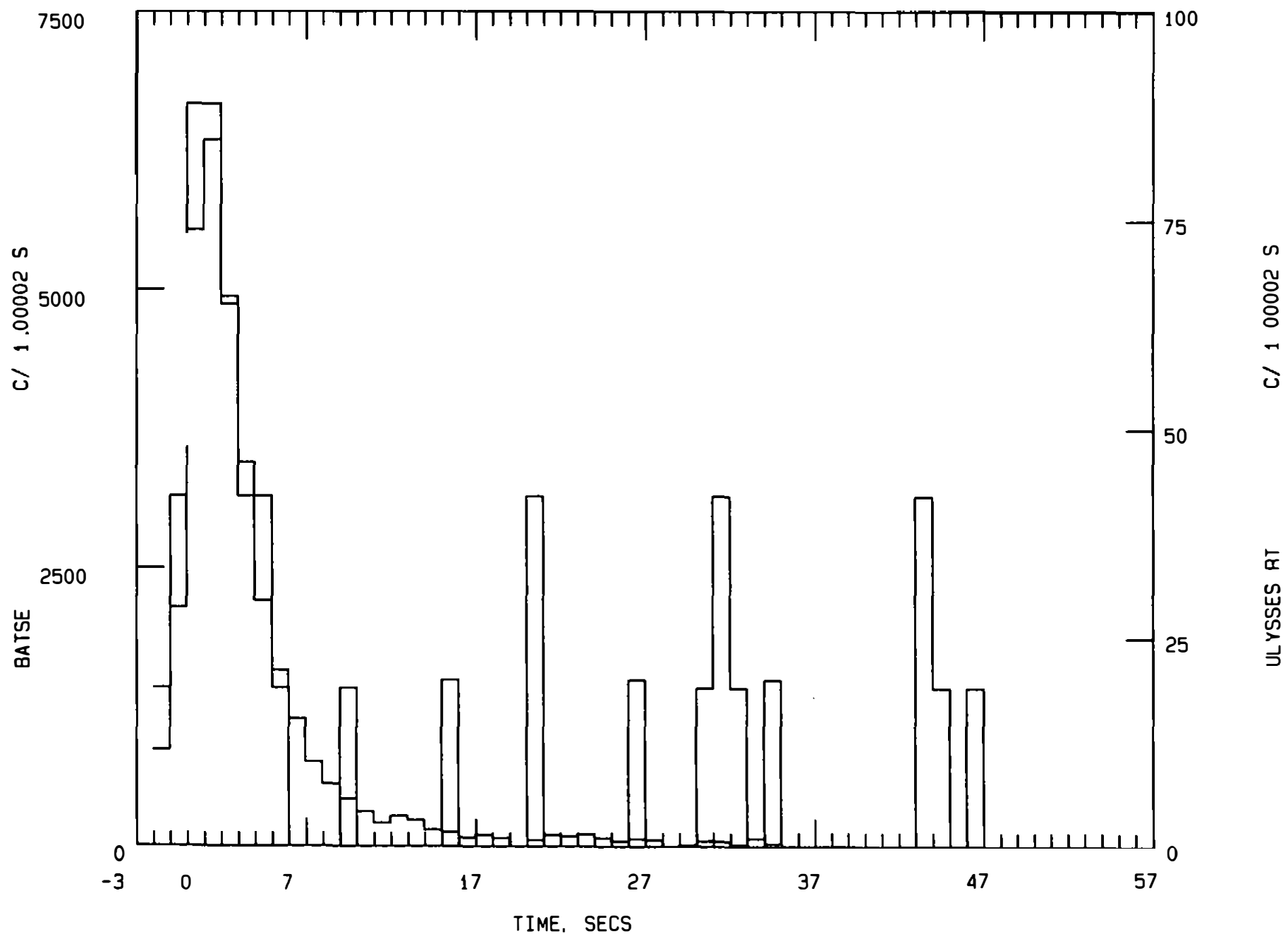
BATSE

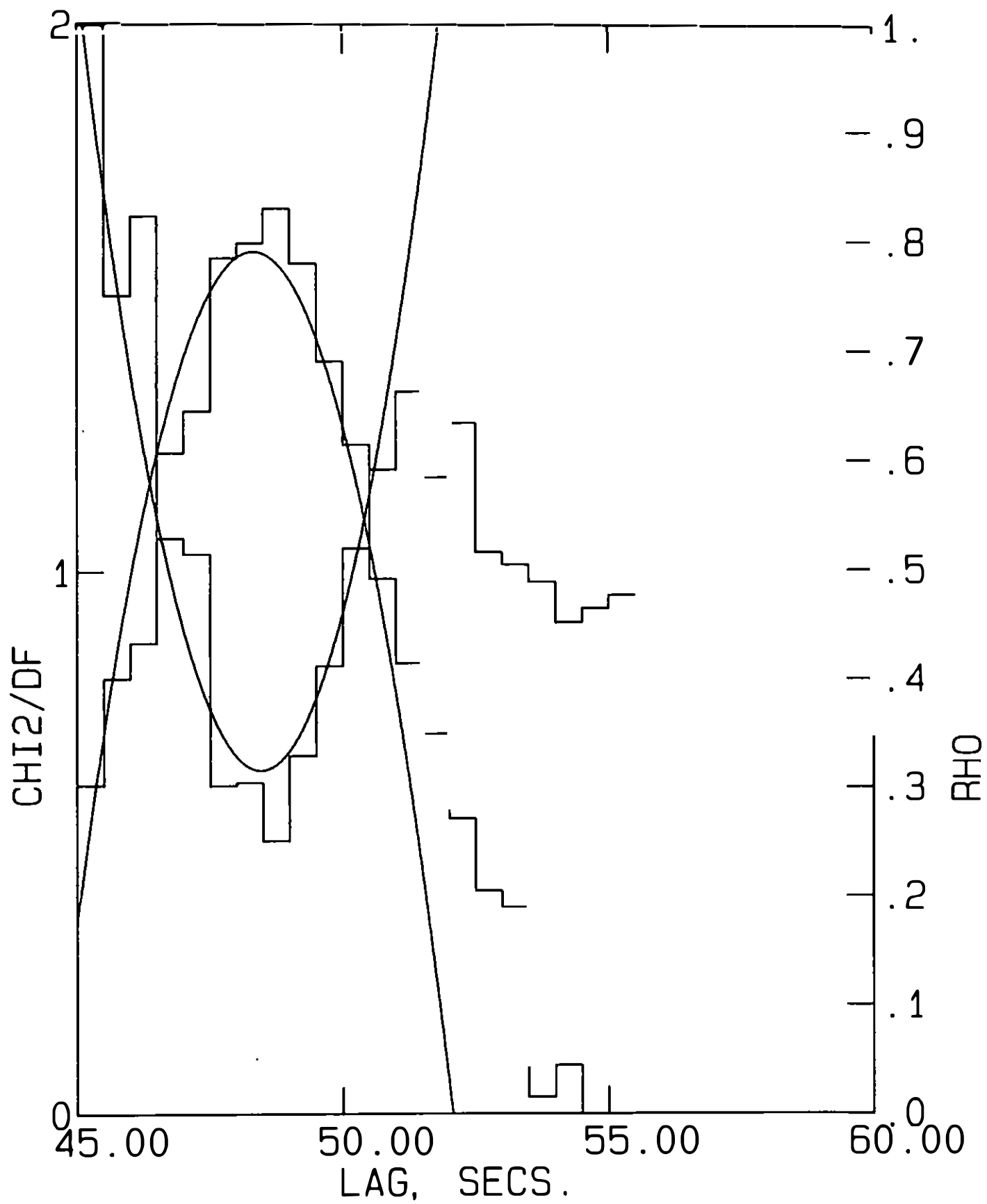
-ULYSSES RT CORRELATION

28/ 6/96

19222.730

11/ 3/98





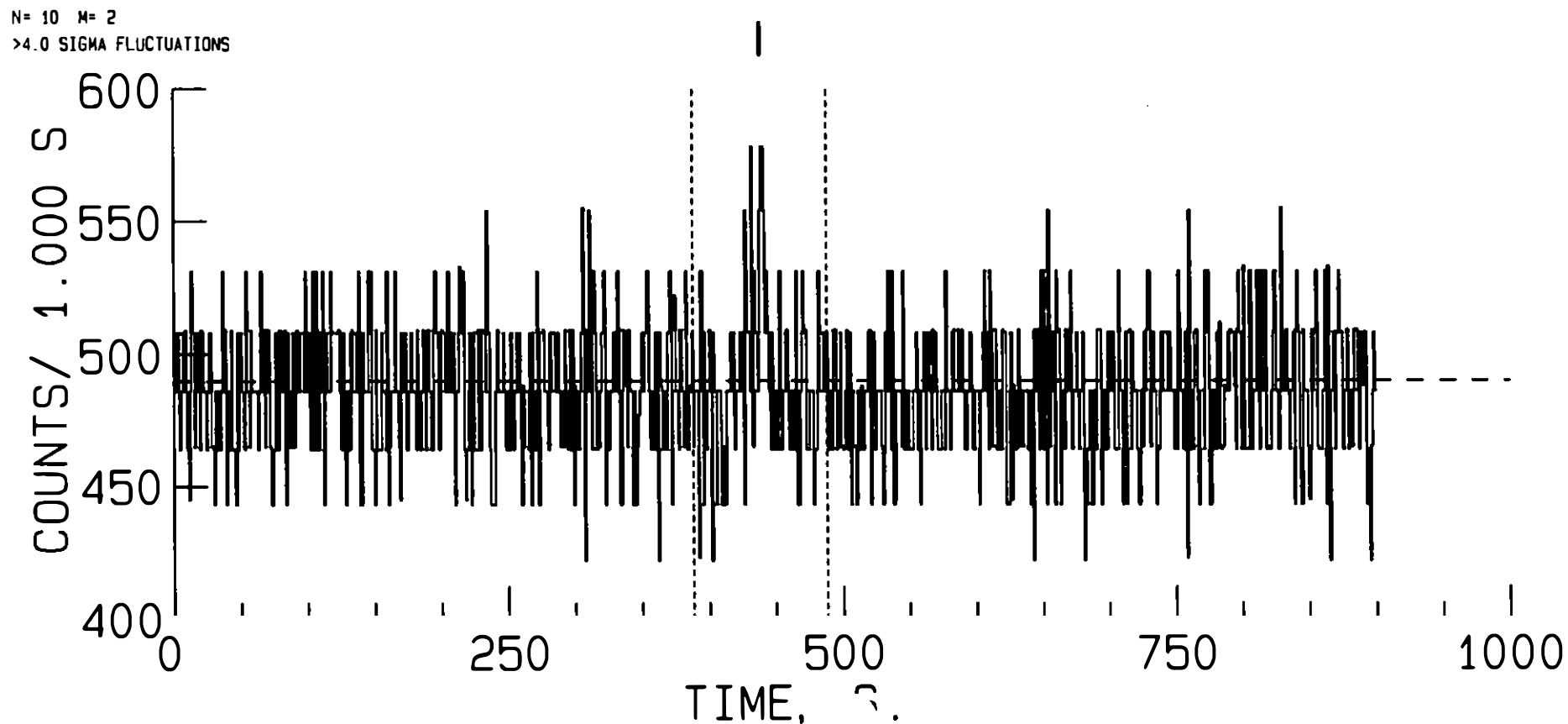
ULYSSES RT

11 / 3 / 98

28 / 6 / 96 18540.197 s

0.500 S INTERVALS REGROUPED BY 2

21- 145 keV

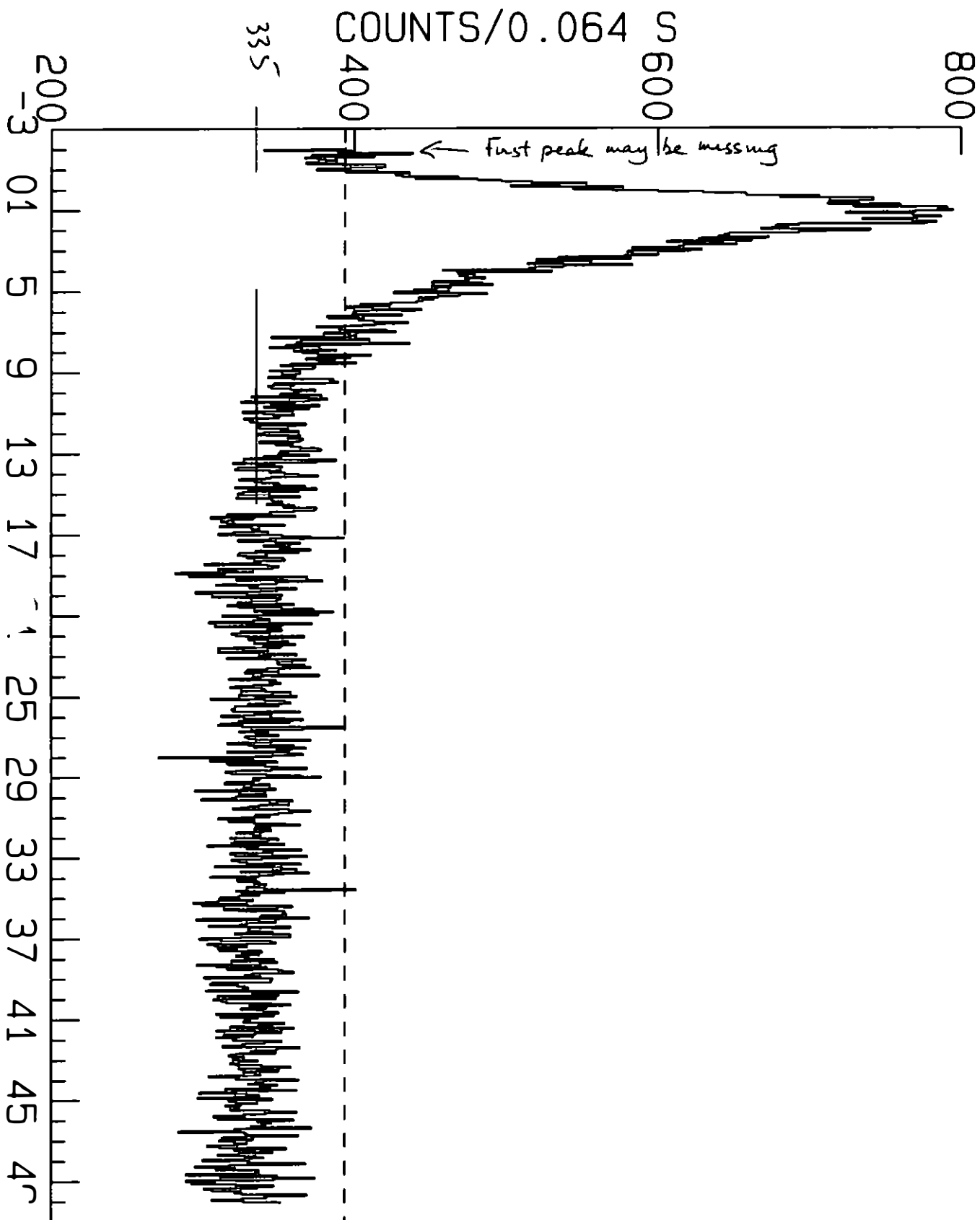


BATSE

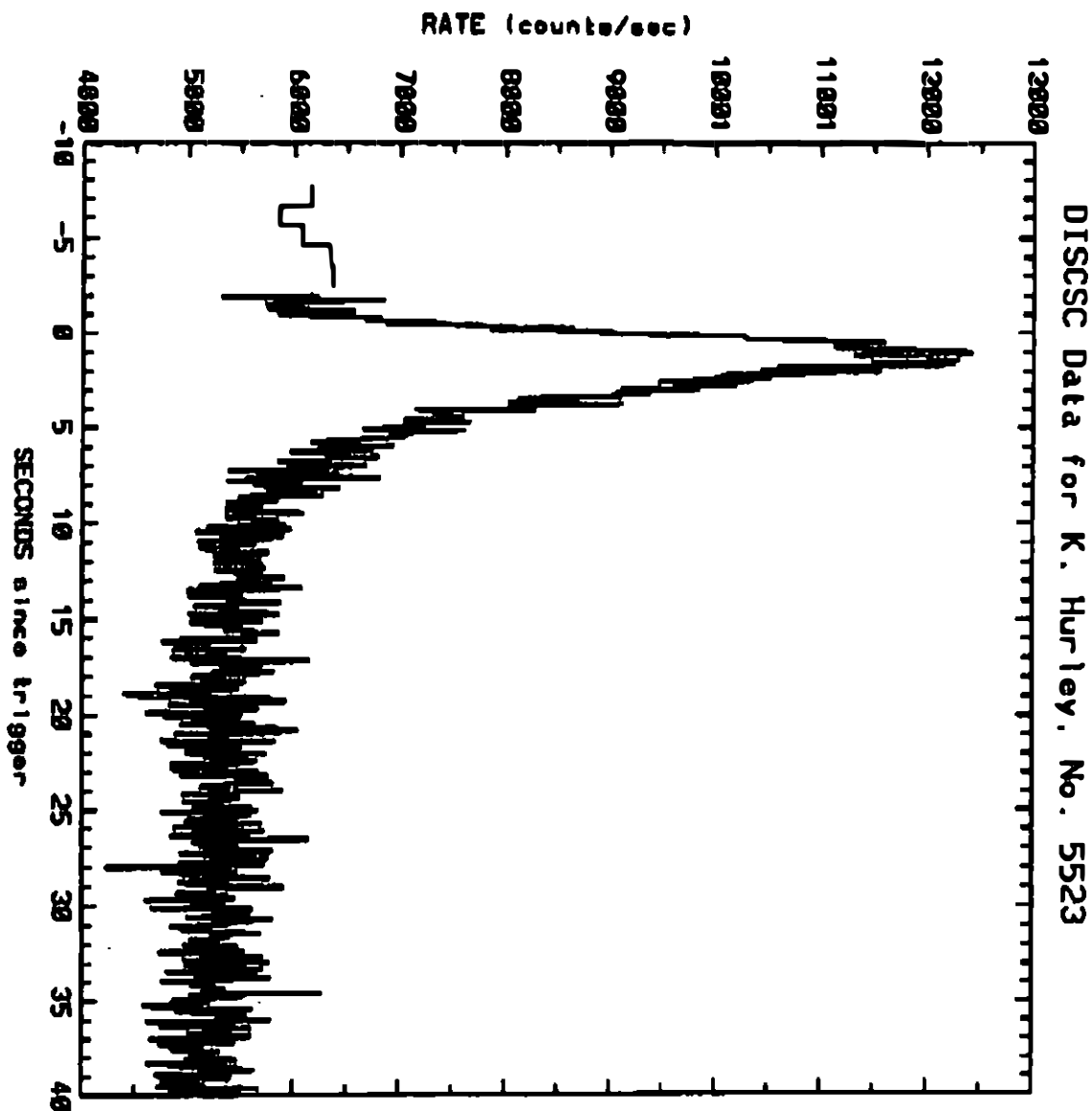
28/06/96

19222.730

25- 100 keV



12 / 7 / 96



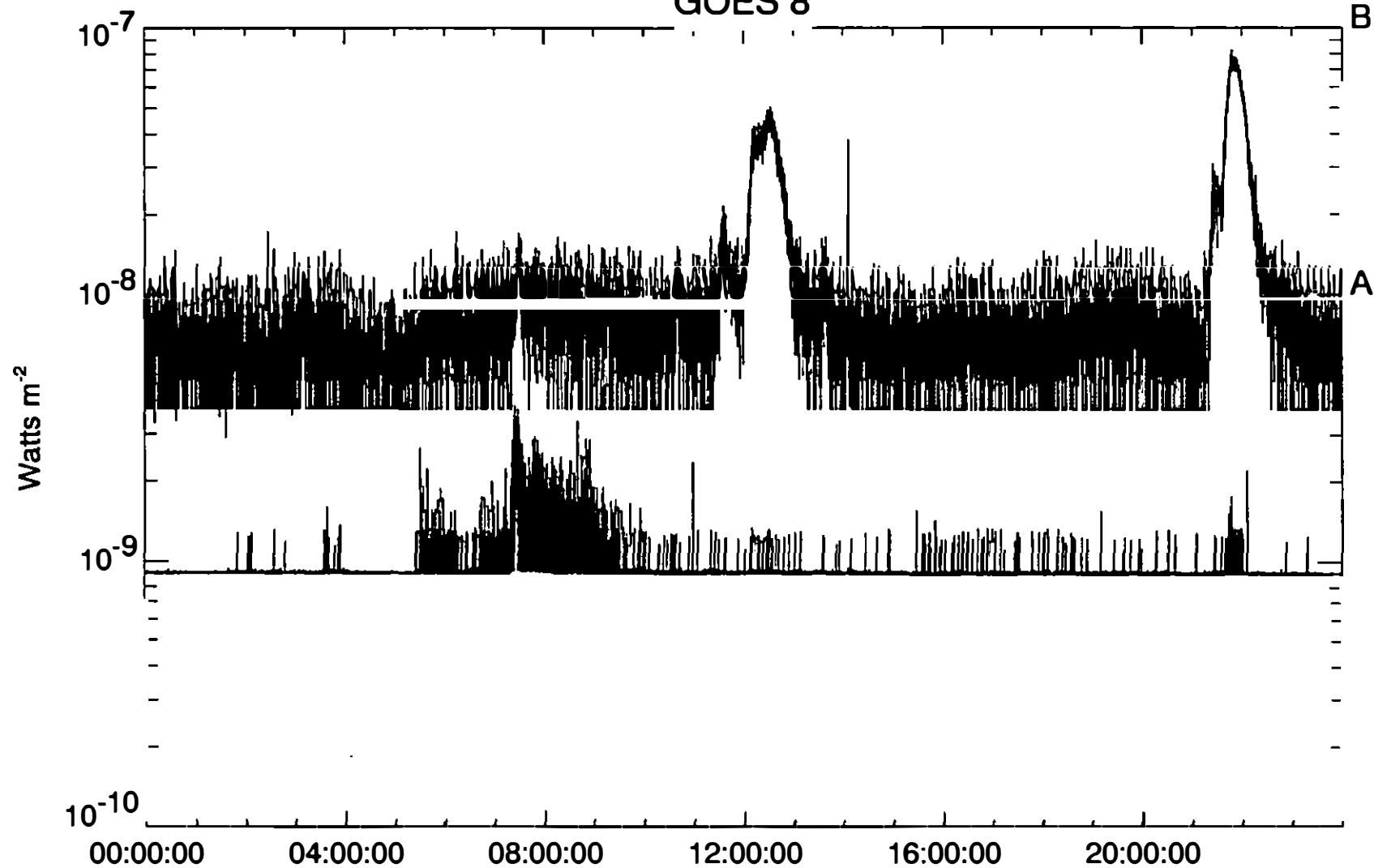
12-JUL-1996 08:42:46

Created by NPS BD
(Burst Display)
Version 12.25

Trigger # : 5523

Trigger Time:
18262 / 19222.738Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: PDB + DISCSCMinimum Integ. Time:
8.004 secondsDetector (7.0),
--5--1--Discrimination:
(1, 2)Quality Rank:
BDISP1

GOES 8

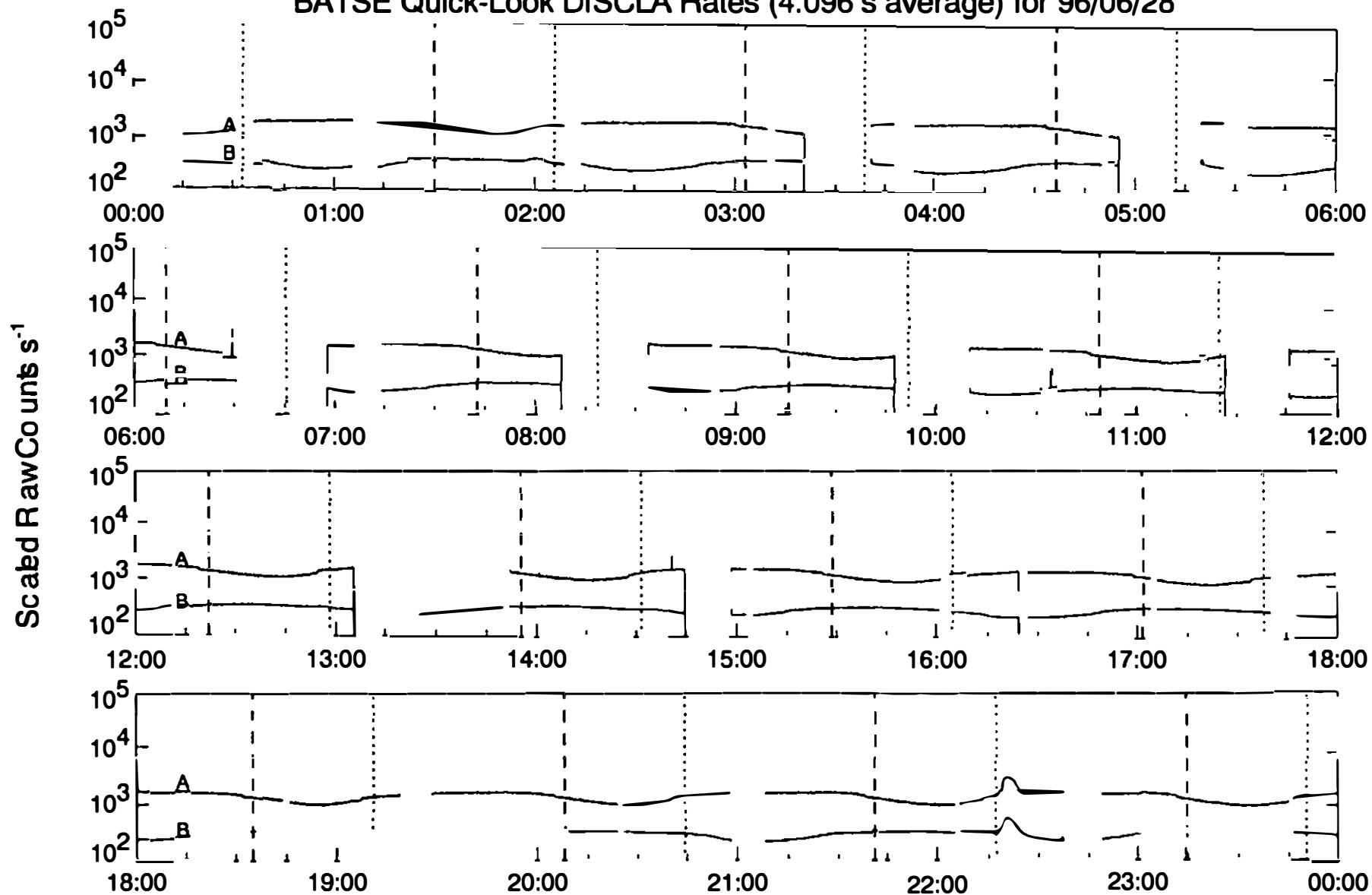


Data Start: 96/06/28, 0000:00

Plot created: 96/06/30, 1003

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

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/28

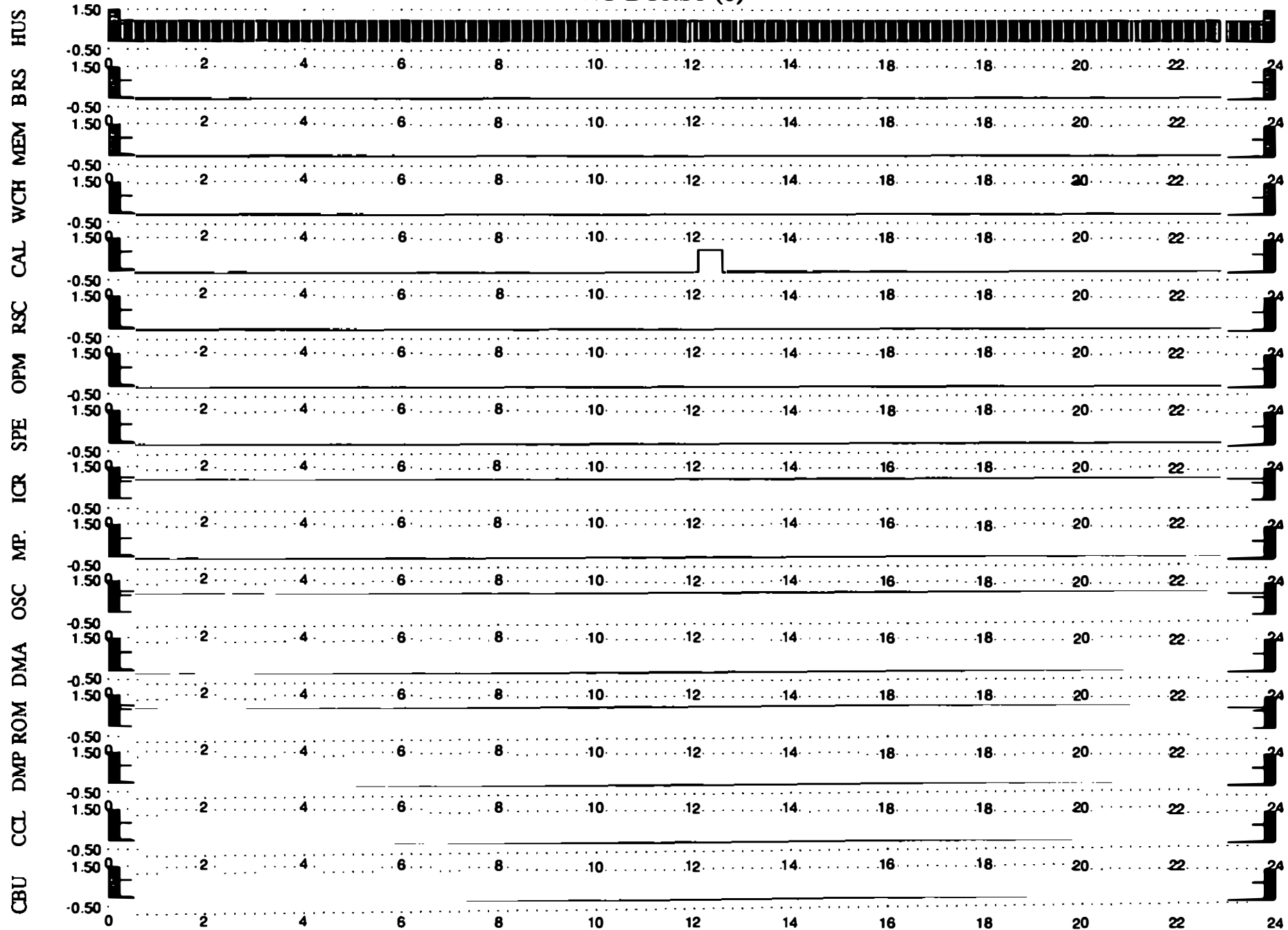


Current Time: 96/06/30, 1004 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

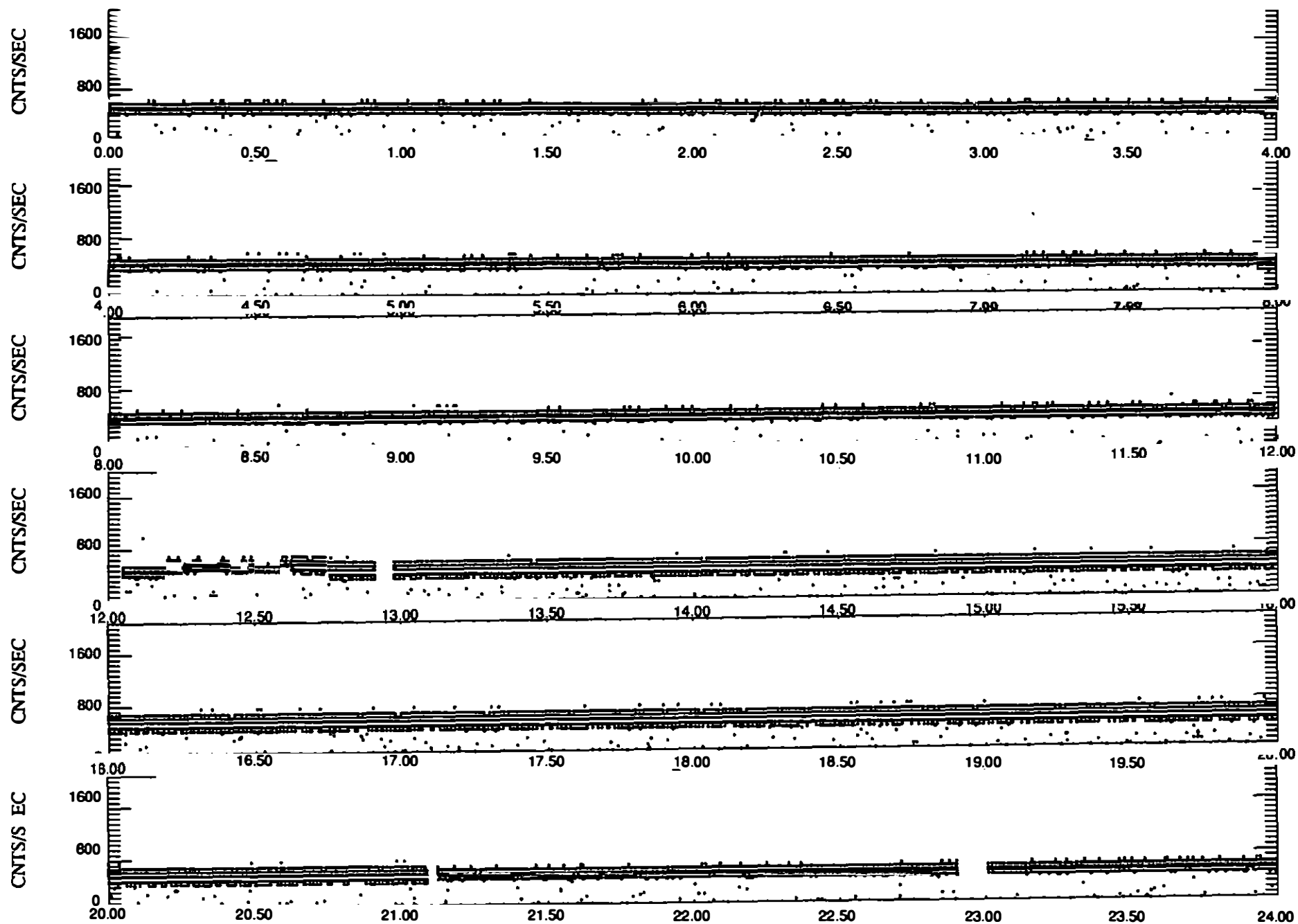
* Solar Burst Trigger
 + Solar Flare

NO BURST (6)

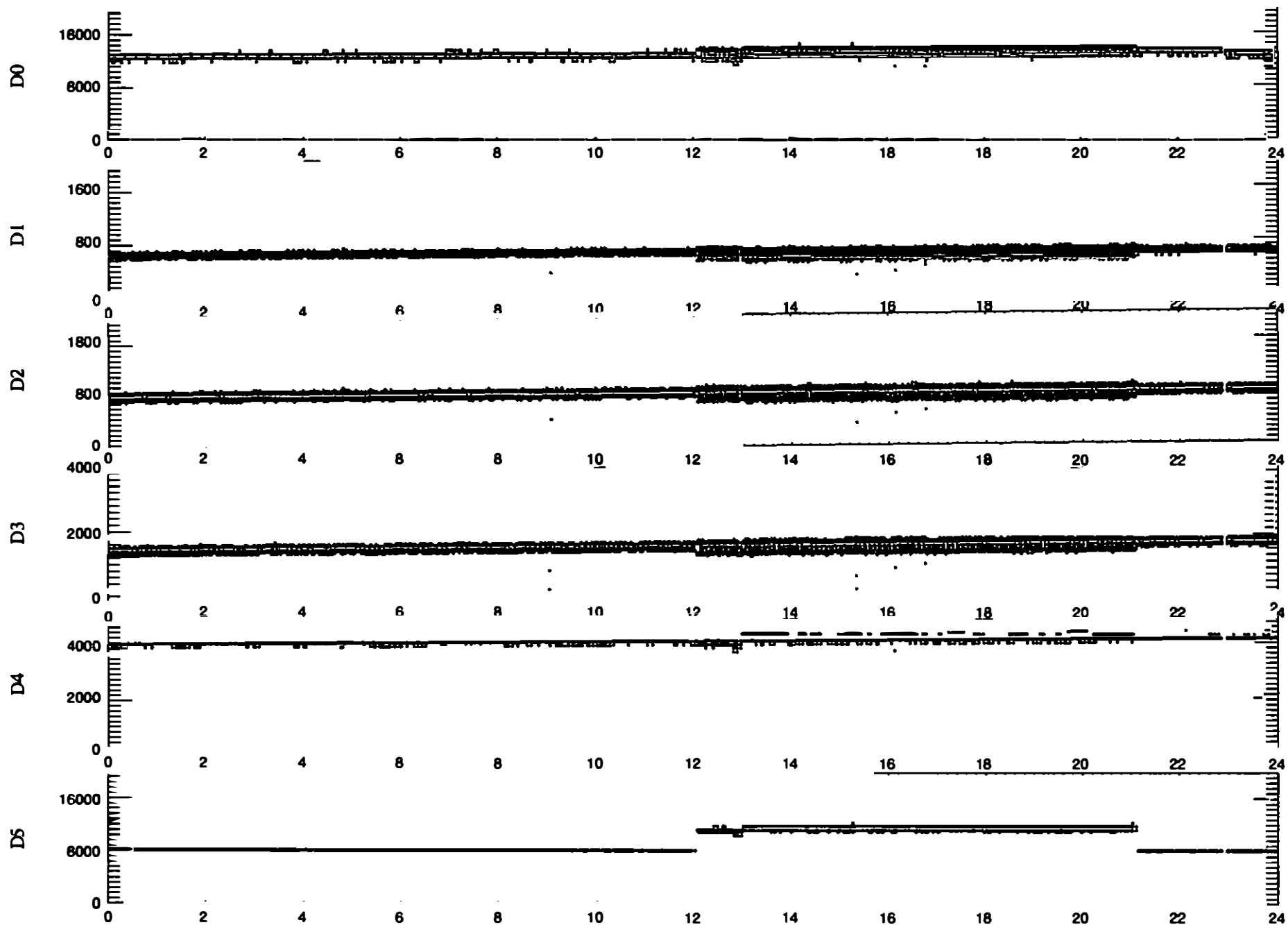


UNIVERSAL TIME

CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME

From BUTTERWORTH@lheavx.gsfc.nasa.gov Tue Jul 2 11:46 PDT 1996
From: BUTTERWORTH@lheavx.gsfc.nasa.gov
Date: Tue, 2 Jul 1996 14:48:32 -0400 (EDT)
To: khurley@sunspot.ssl.berkeley.edu, kmarar@isac.ernet.in, jterrell@lanl.gov,
yosimori@rikkyo.ac.jp, CLINE@lheavx.gsfc.nasa.gov,
scott@rosserv.gsfc.nasa.gov, TEEGARDEN@lheavx.gsfc.nasa.gov
CC: BUTTERWORTH@lheavx.gsfc.nasa.gov
Subject: Konus did not see the Ulysses event observed at 10:11 UT on June 29

Hi Everyone,

Konus did not trigger on June 29 and there are no signs of a corresponding event in the waiting-mode data (3 second bins).

Paul.

Date: Tue, 2 Jul 1996 09:58:18 -0700
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <199607021658.JAA16996@scylla.berkeley.edu>
To: scott@lheamail.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu,
butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
kmarar@isac.ernet.in, teegarden@lheavx.gsfc.nasa.gov,
jterrell@lanl.gov, yosimori@rikkyo.ac.jp
X-Sun-Charset: US-ASCII

ULYSSES GAMMA-RAY BURST NOT REPORTED BY BATSE:

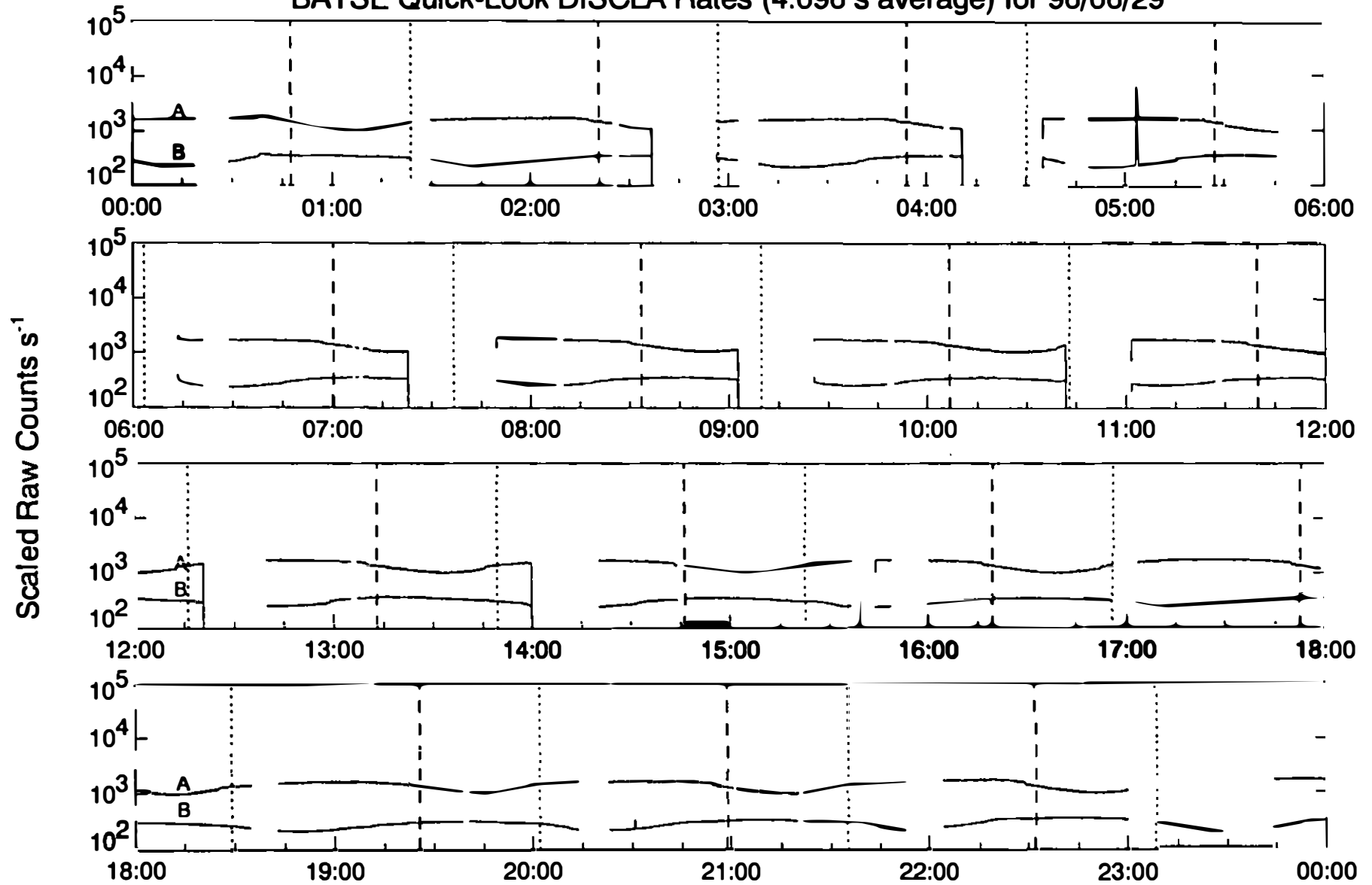
Ulysses triggered on a very weak, 32 ms long event June 29 1996 around 10:11 UT at Ulysses.

The spacecraft was about 2300 light-seconds from Earth.

Was this event detected by anyone else?

CC: ulyssesbursts alias list
(barthelmy, butterworth, cline, marar, teegarden, terrell, yoshimori)

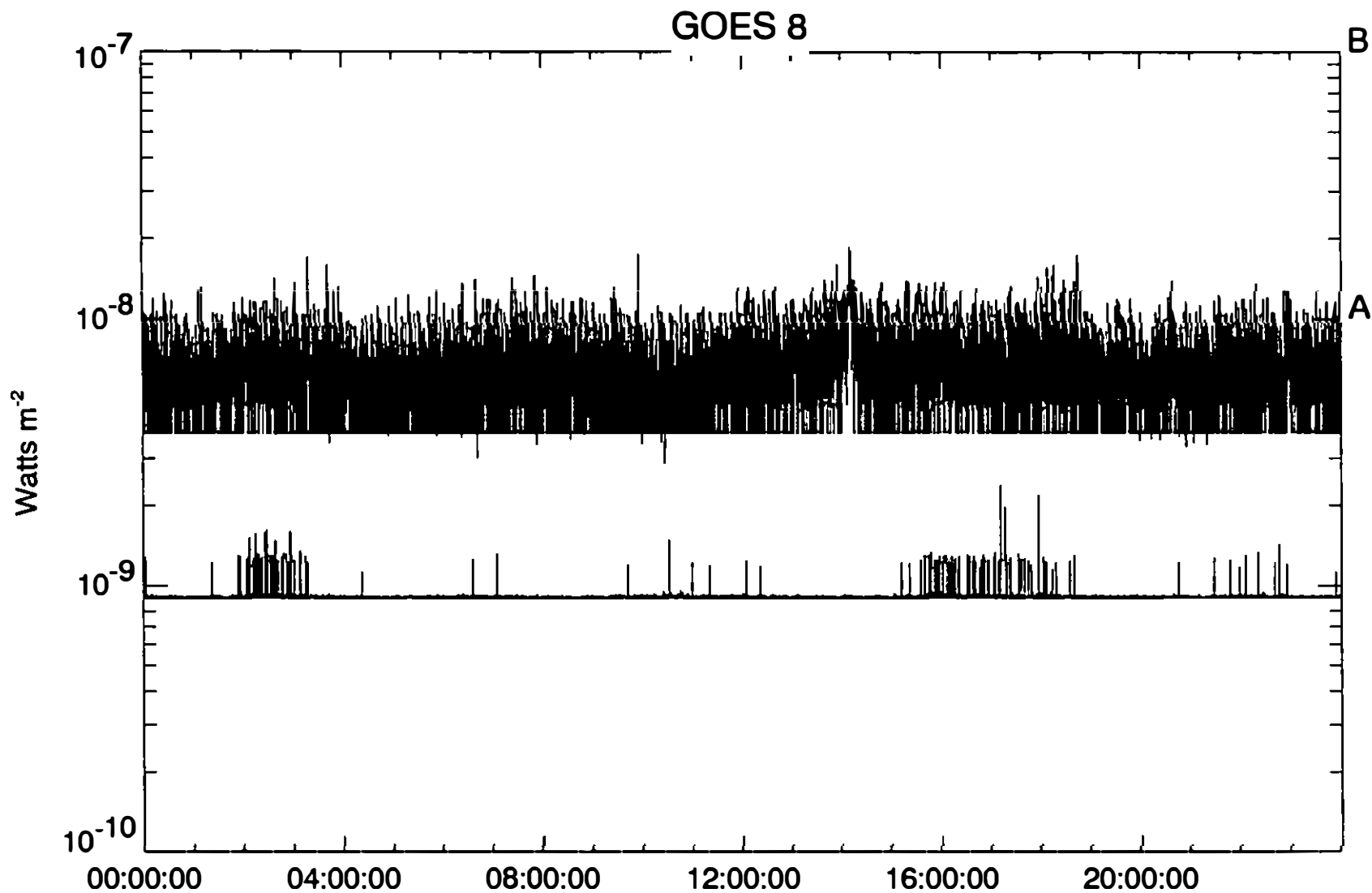
BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/29



Current Time: 96/07/01, 1004 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

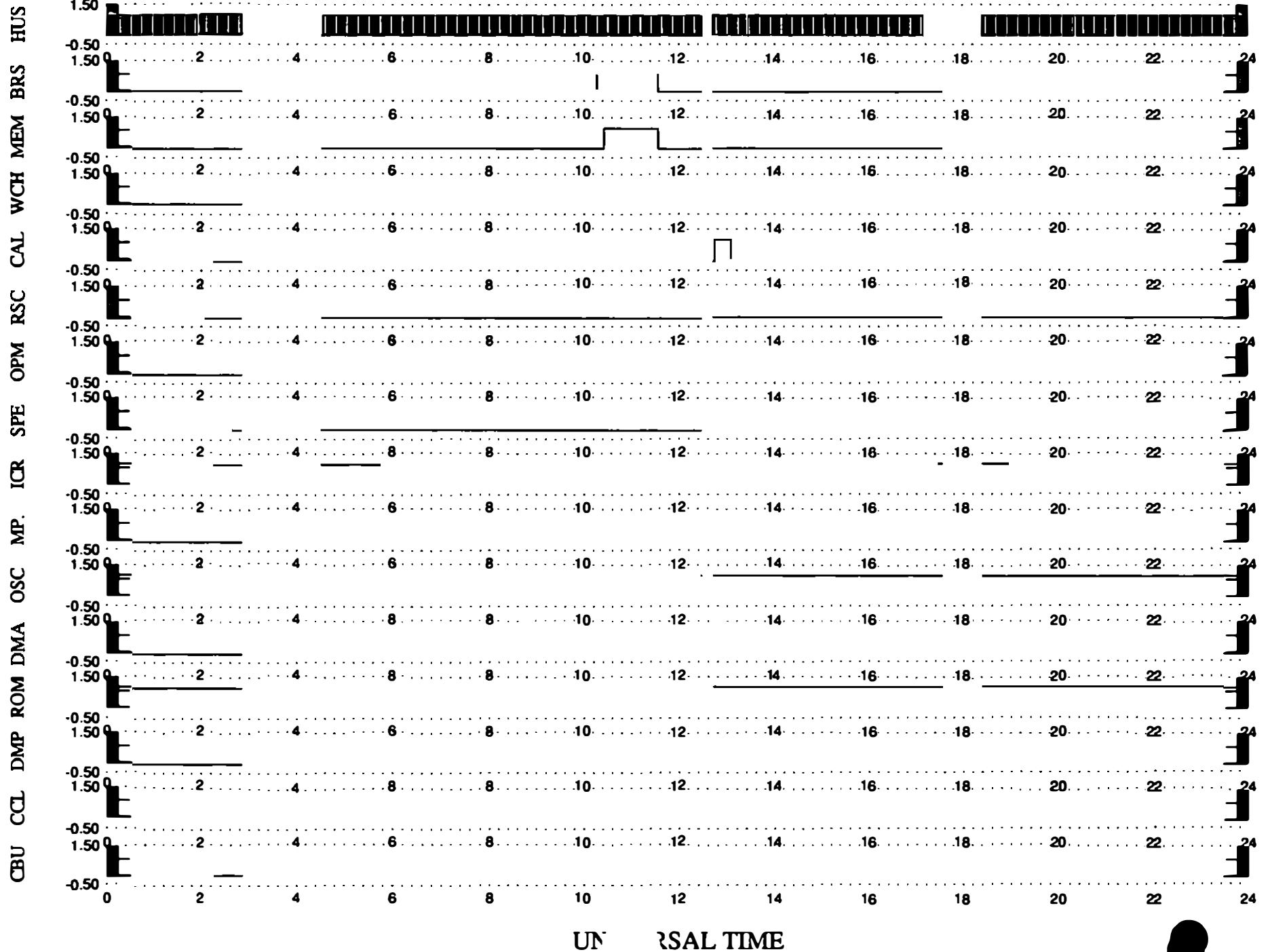
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

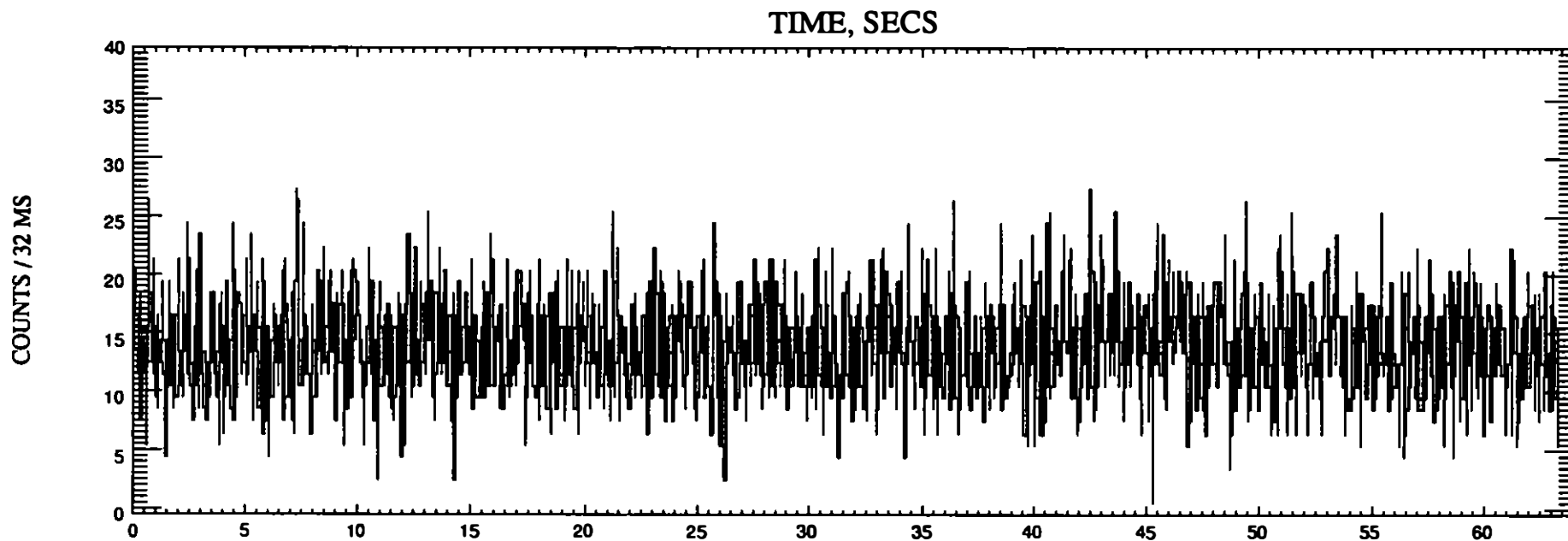
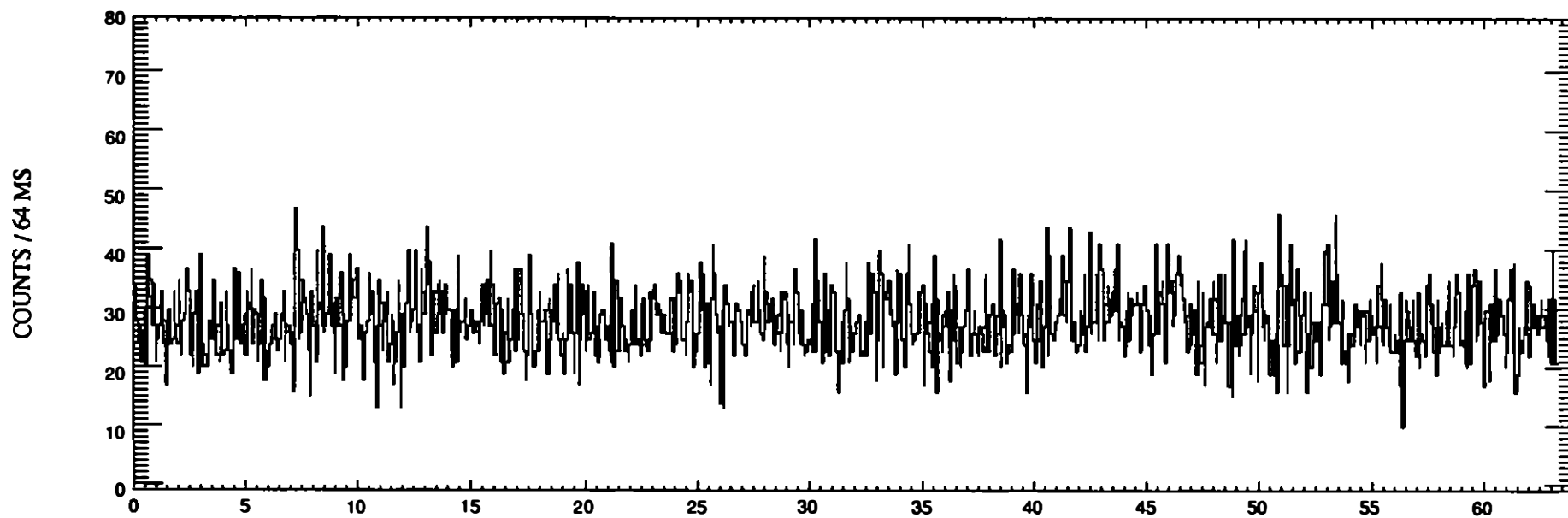


Data Start: 96/06/29, 0000:00 Plot created: 96/07/01, 1003
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
 2 (0.5 - 4.0 Angstroms) Background not subtracted

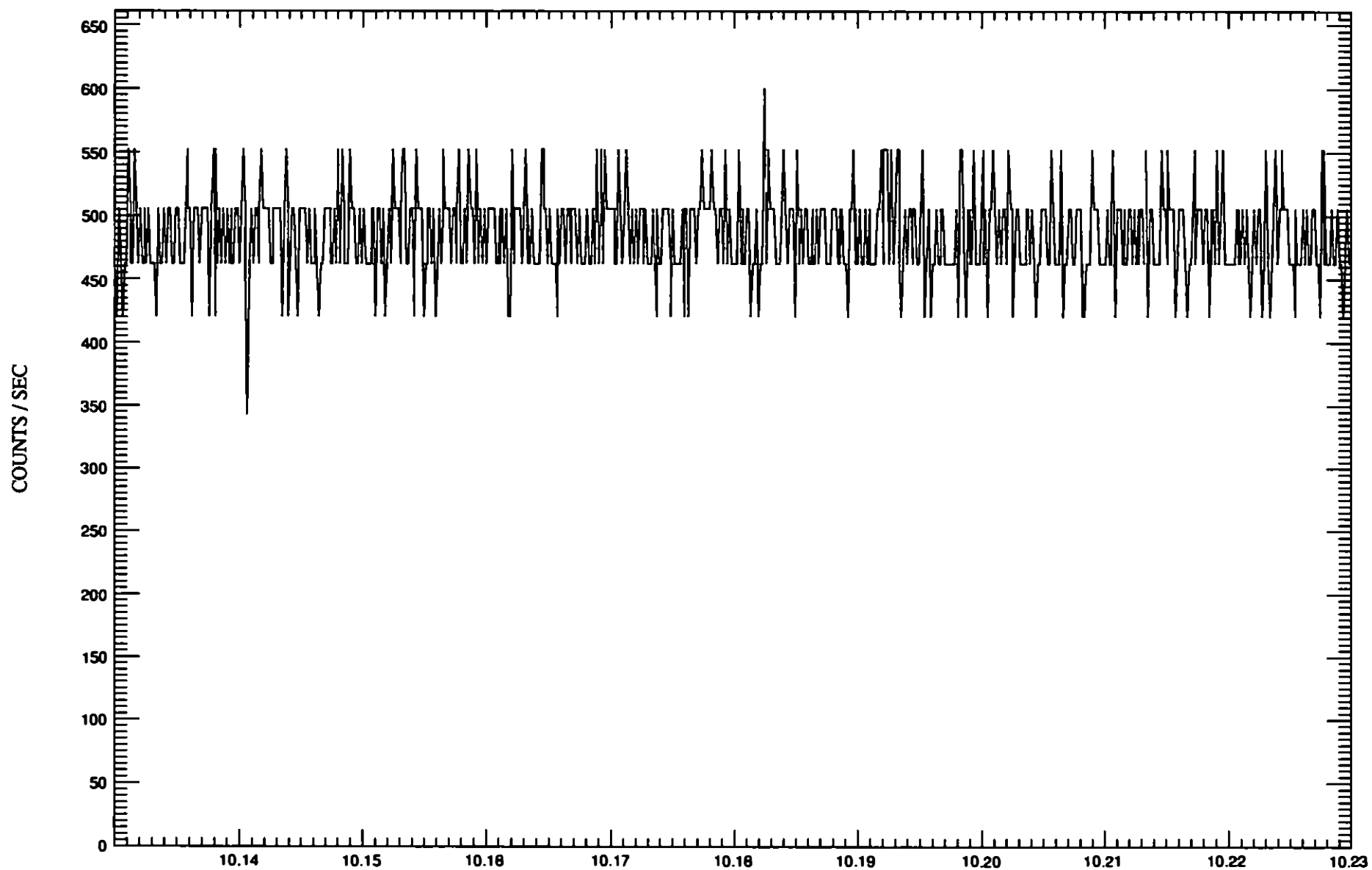
BURST NUMBER 7



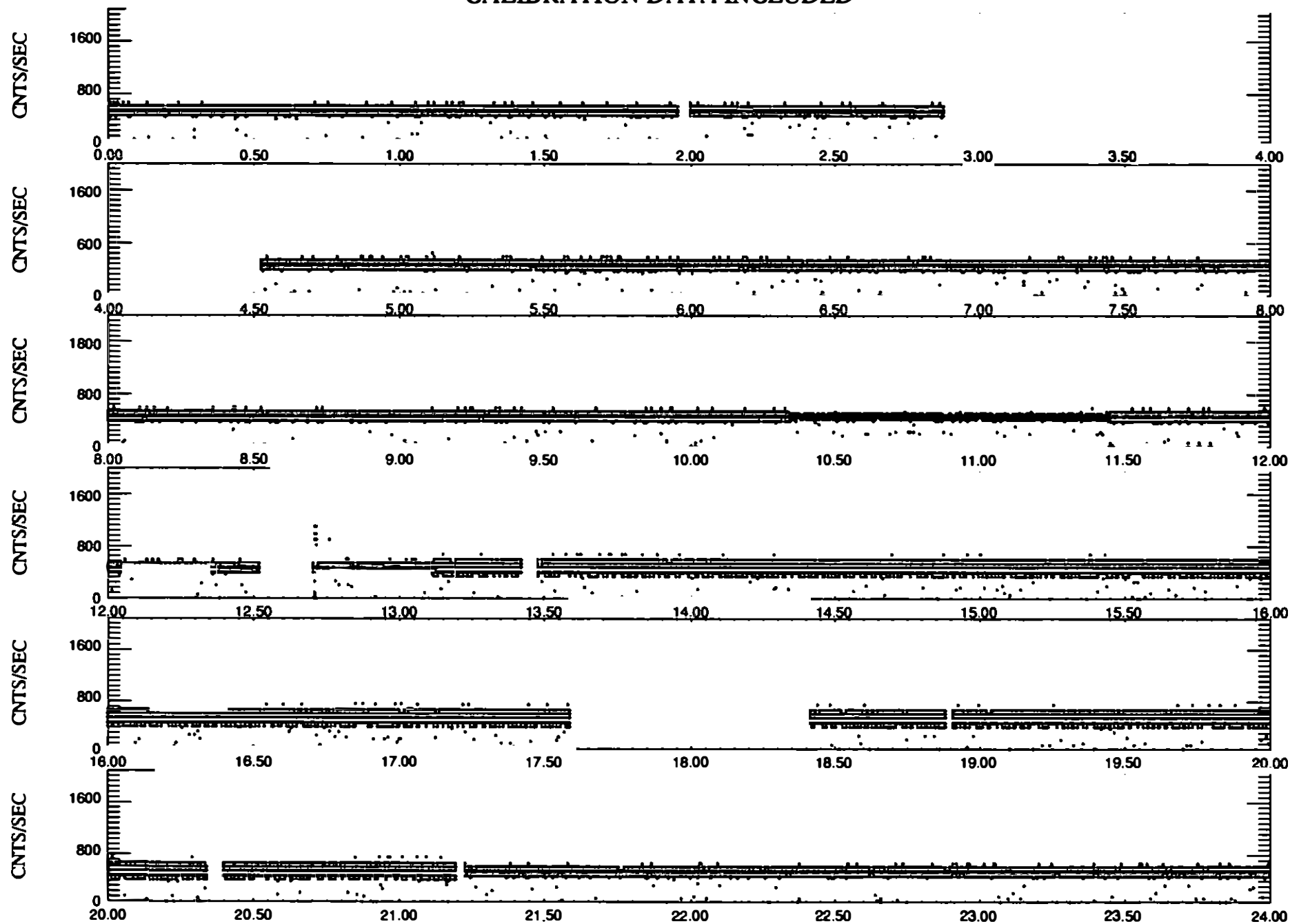
Burst Counter 7 at UT=10.182551528083 h=36657.186 s 10:10:57.186



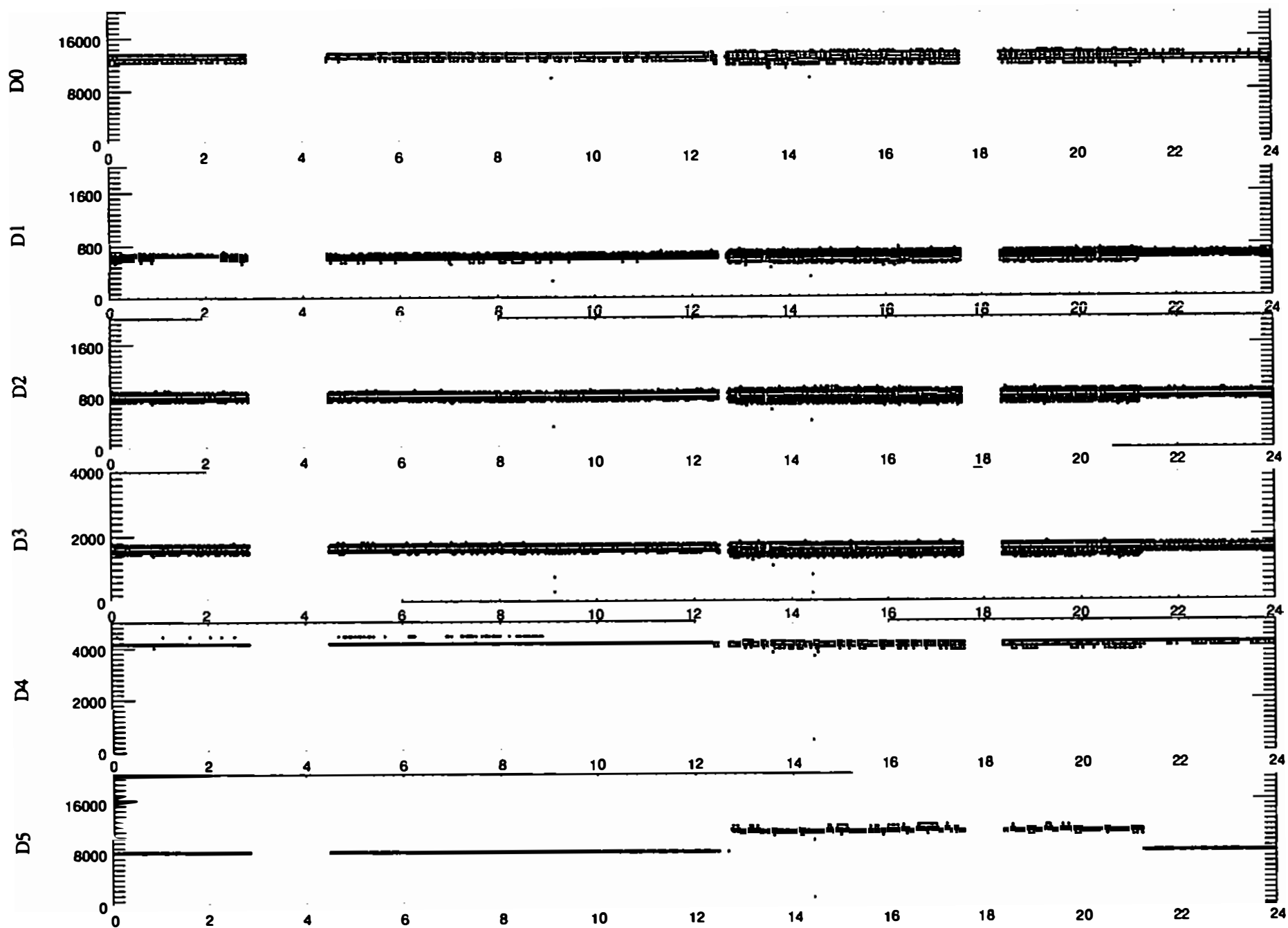
CALIBRATION DATA INCLUDED



CALIBRATION DATA INCLUDED

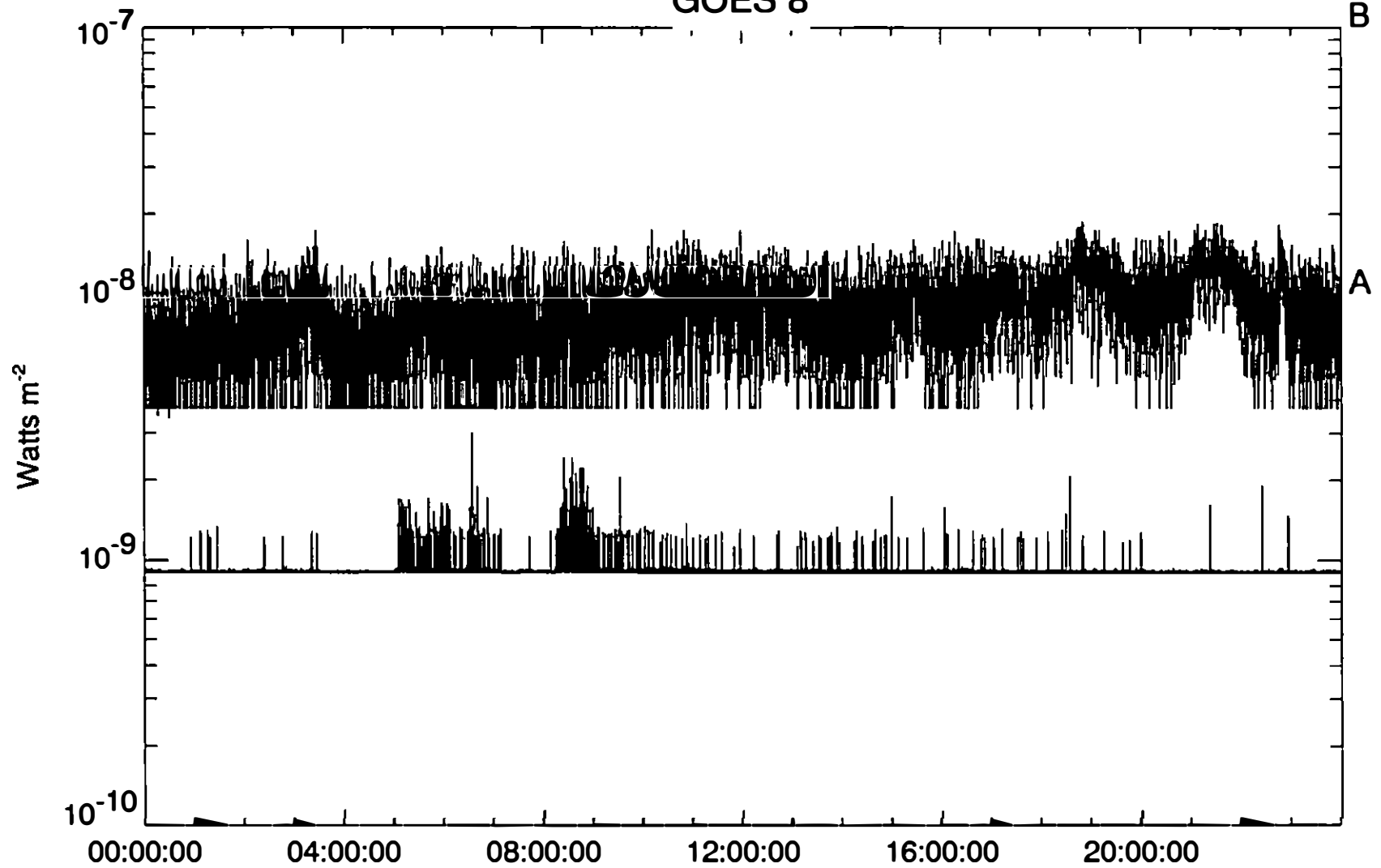


UNIVERSAL TIME



UNIVERSAL TIME

GOES 8

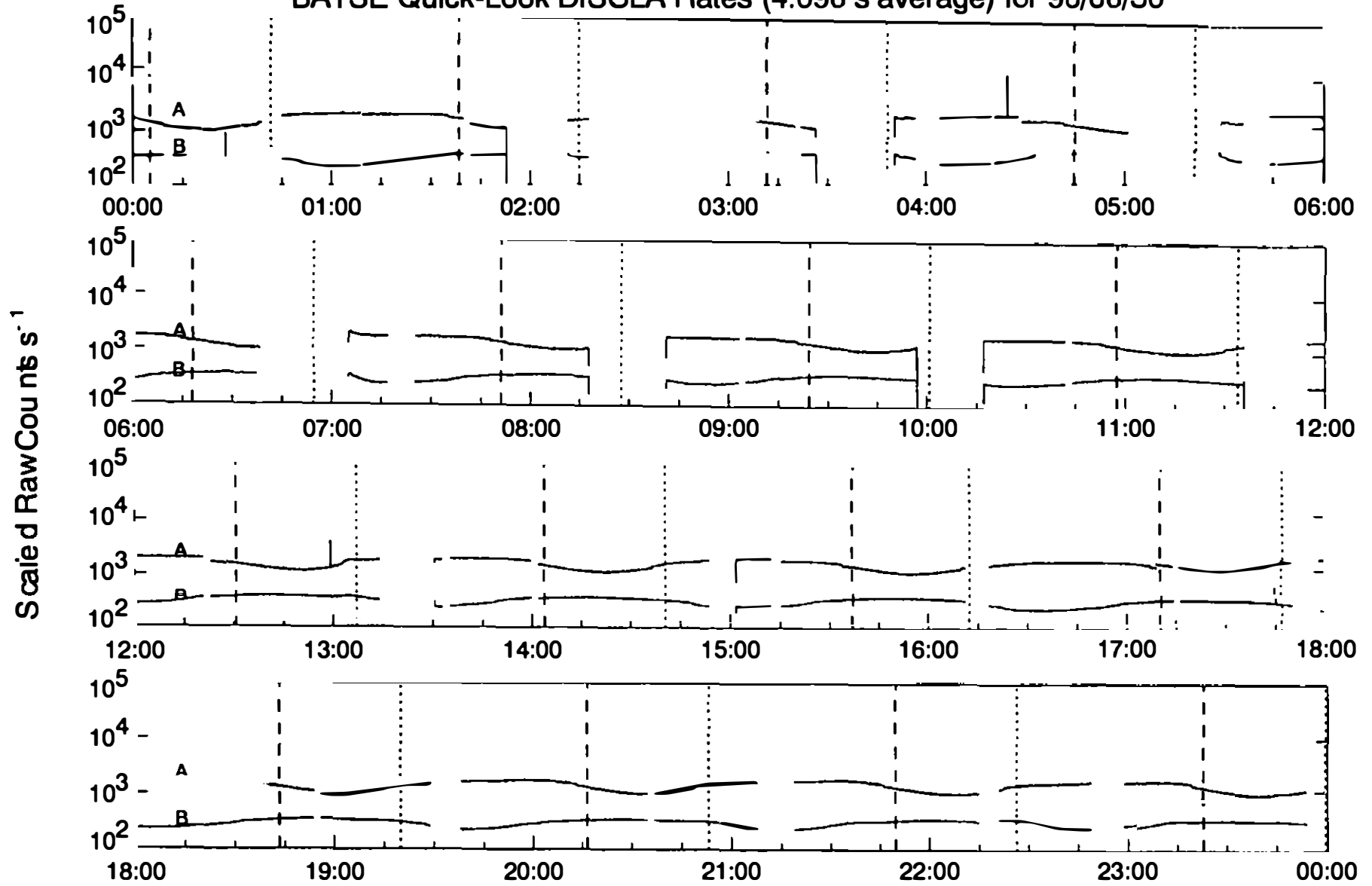


Data Start: 96/06/30, 0000:00

Plot created: 96/07/02, 1003

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

BATSE Quick-Look DISCLA Rates (4.096 s average) for 96/06/30

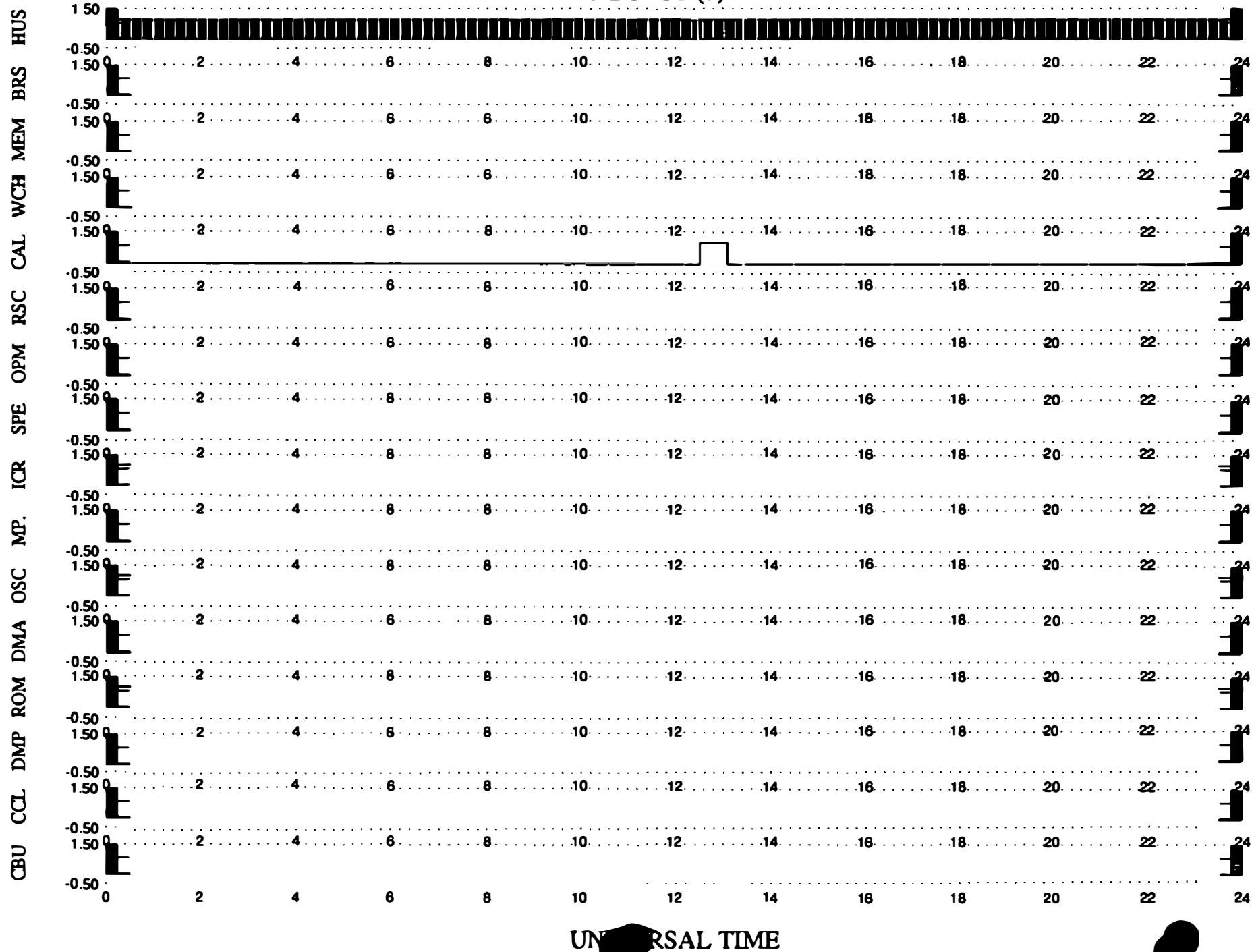


Current Time: 96/07/02, 1004 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

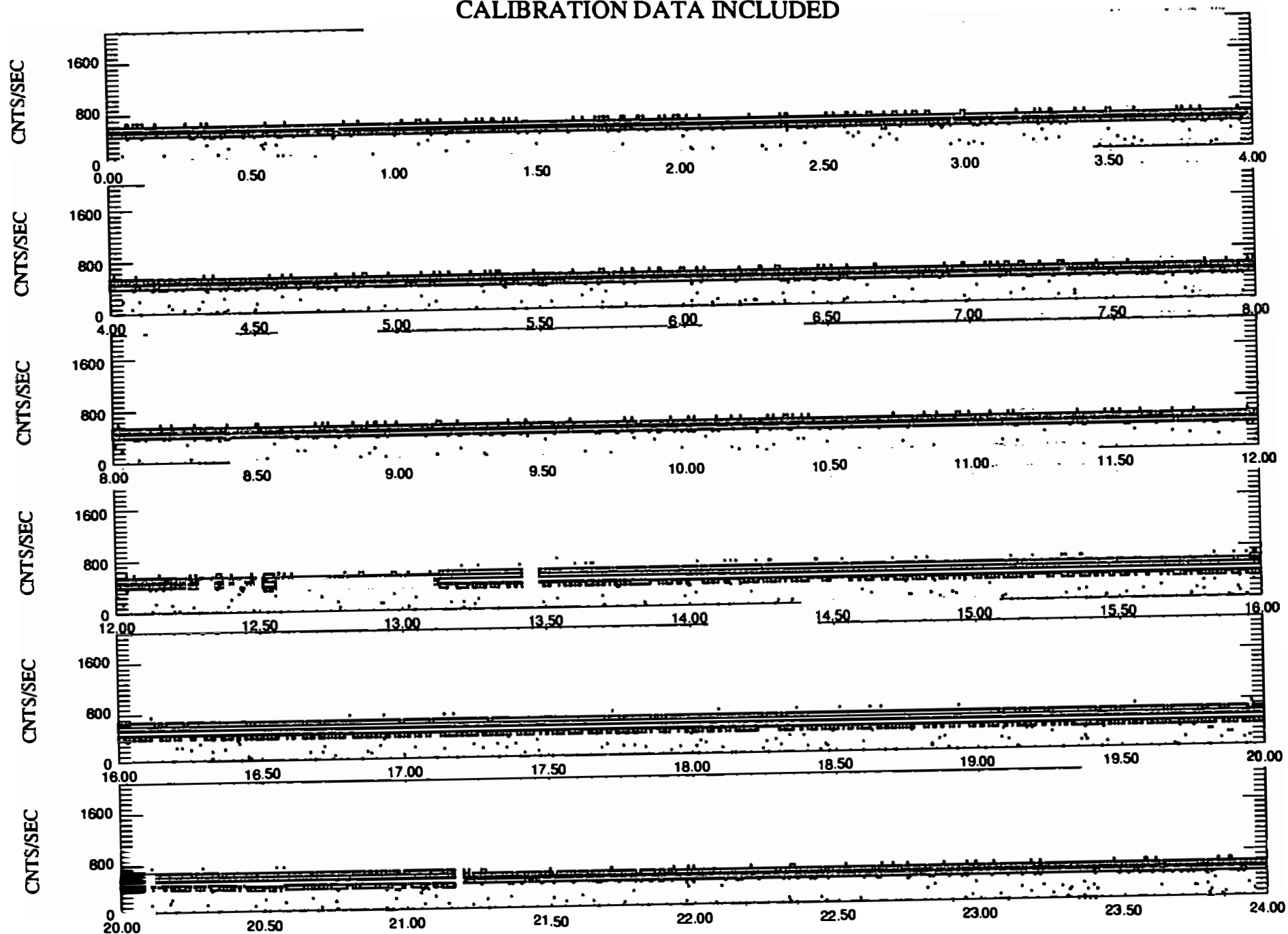
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

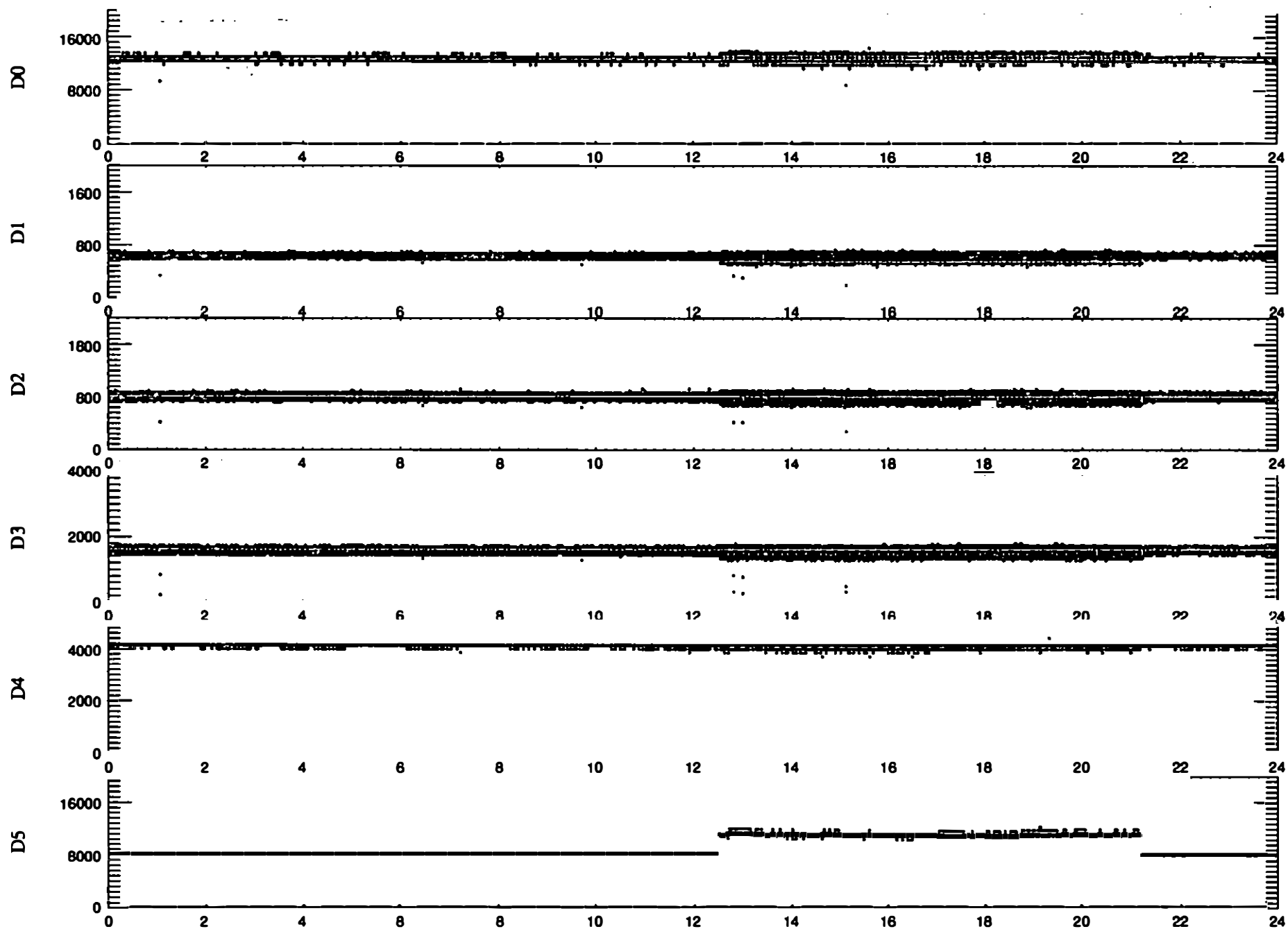
NO BURST (7)



CALIBRATION DATA INCLUDED



UNIVERSAL TIME



UNIVERSAL TIME