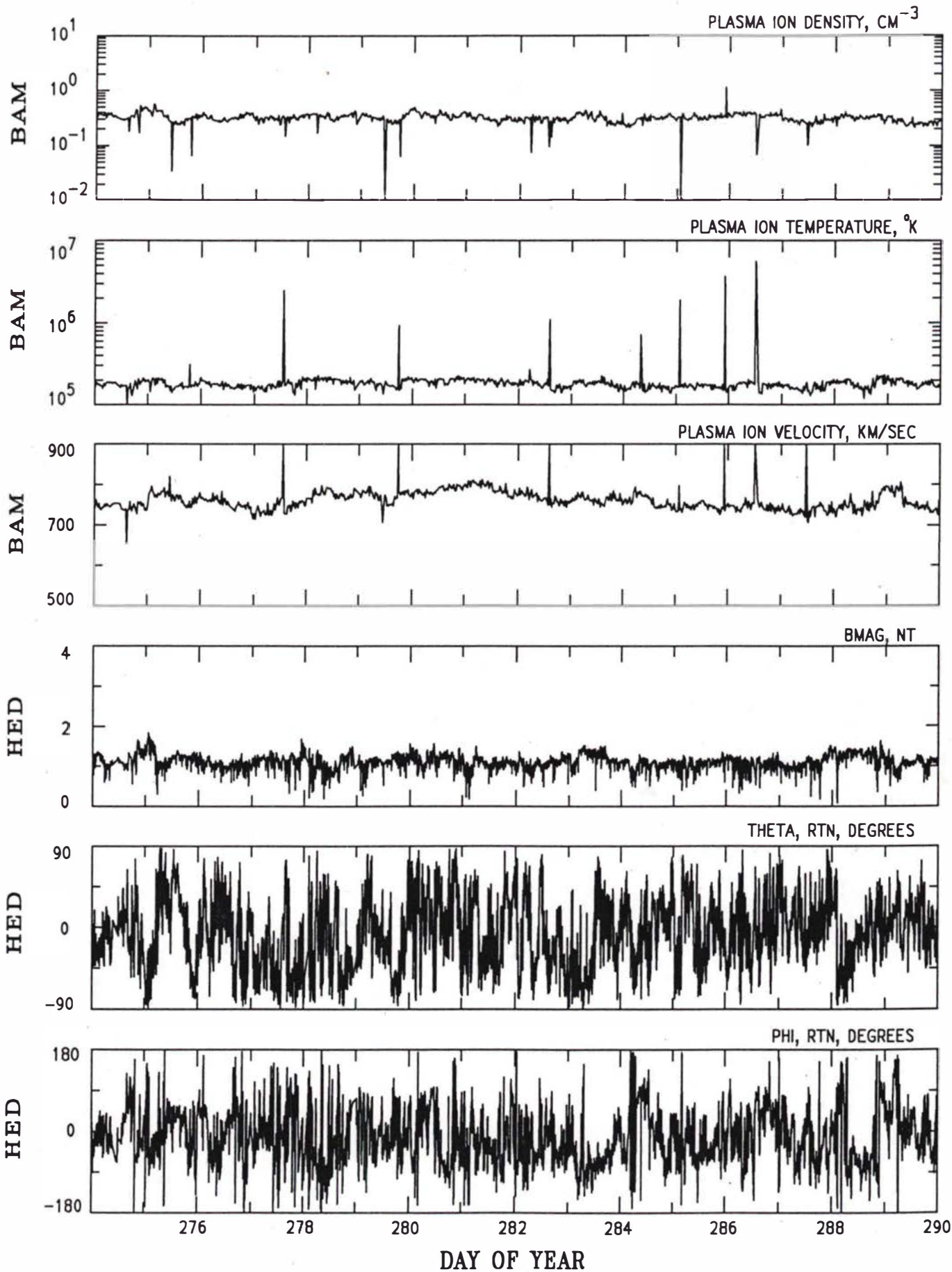


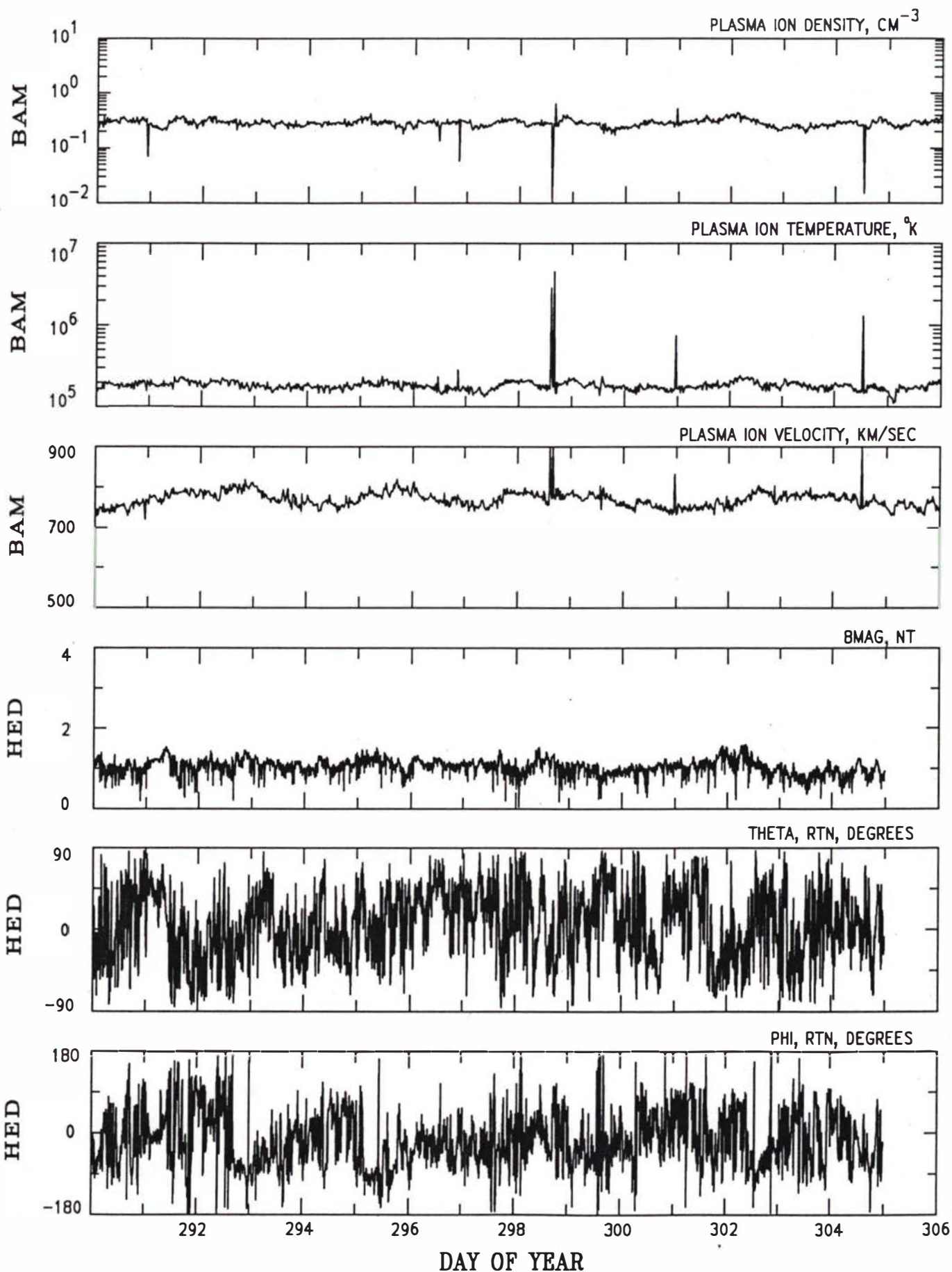
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

95 274 OCT 1 00:00:00.000 - 95 290 OCT 17 00:00:00.000



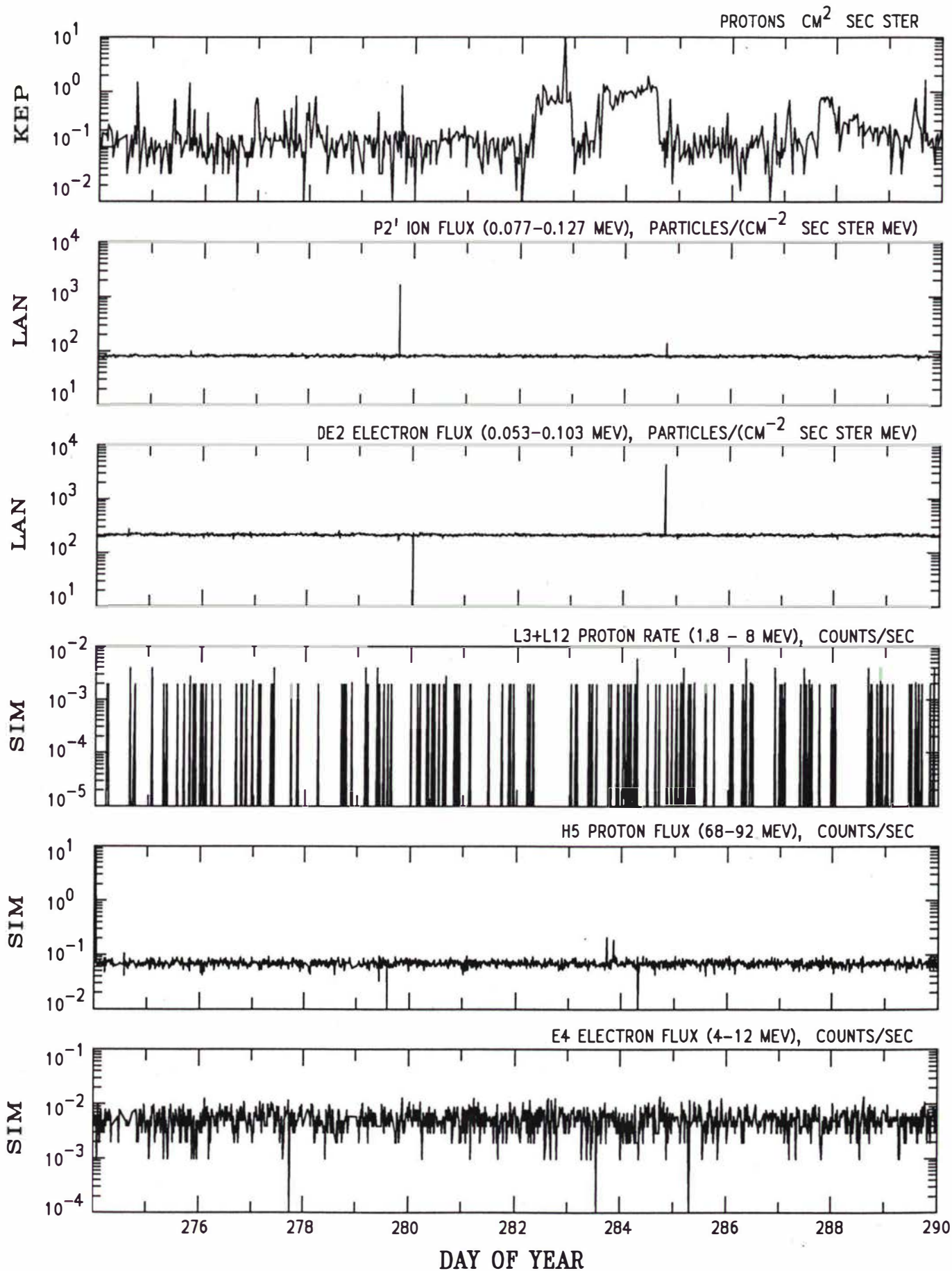
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

95 290 OCT 17 00:00:00.000 - 95 306 NOV 2 00:00:00.000



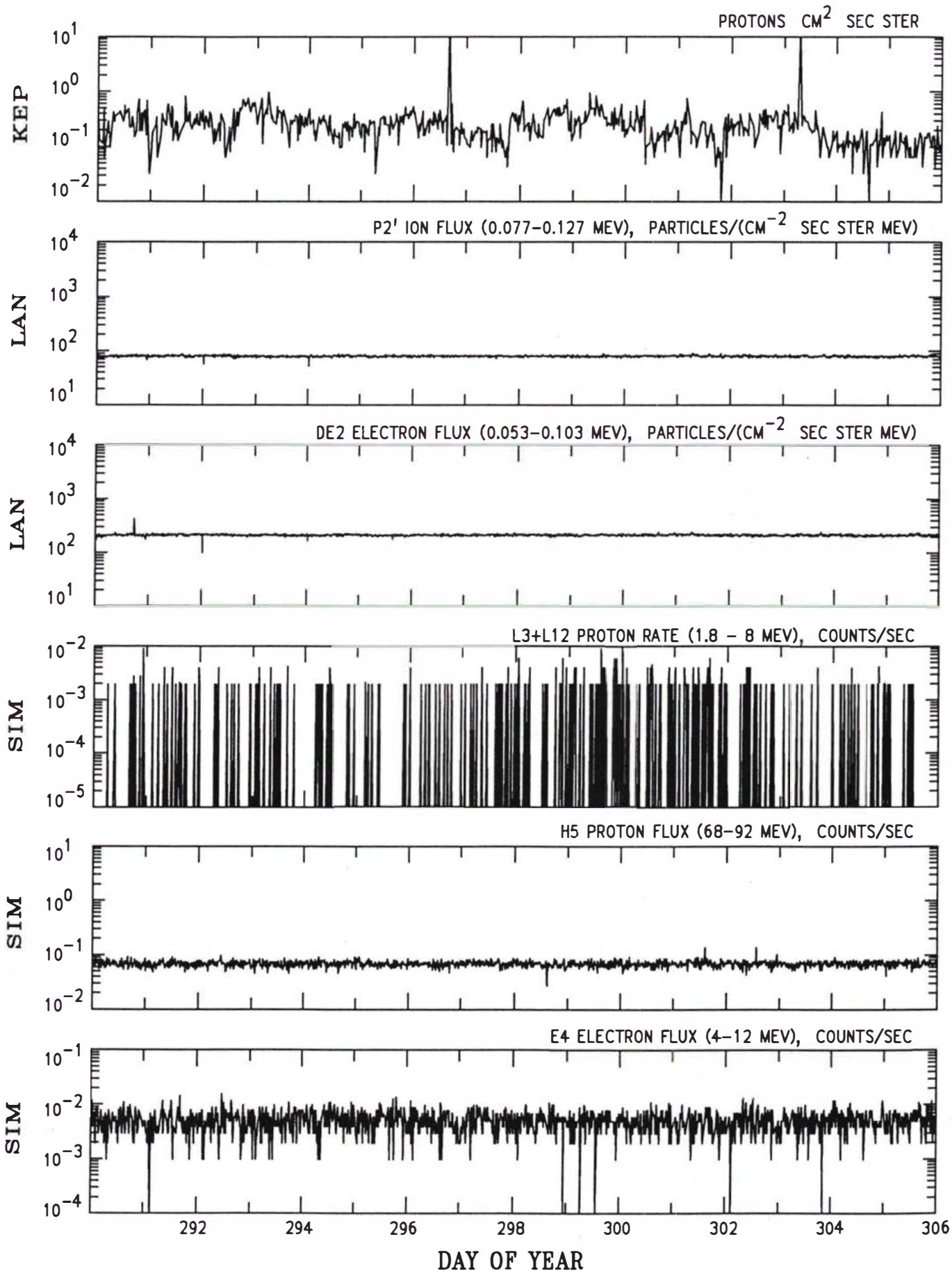
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

95 274 OCT 1 00:00:00.000 - 95 290 OCT 17 00:00:00.000



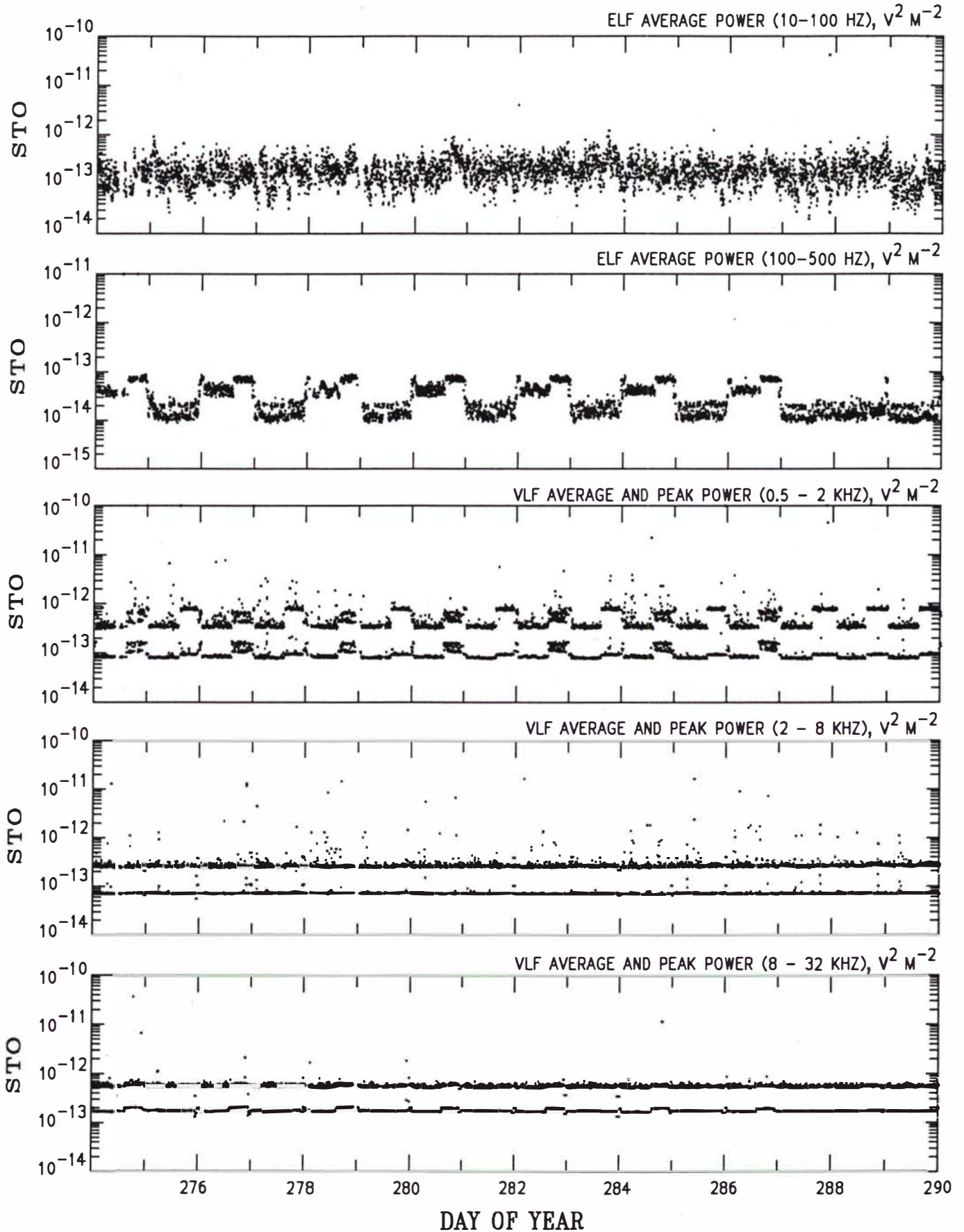
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

95 290 OCT 17 00:00:00.000 - 95 306 NOV 2 00:00:00.000



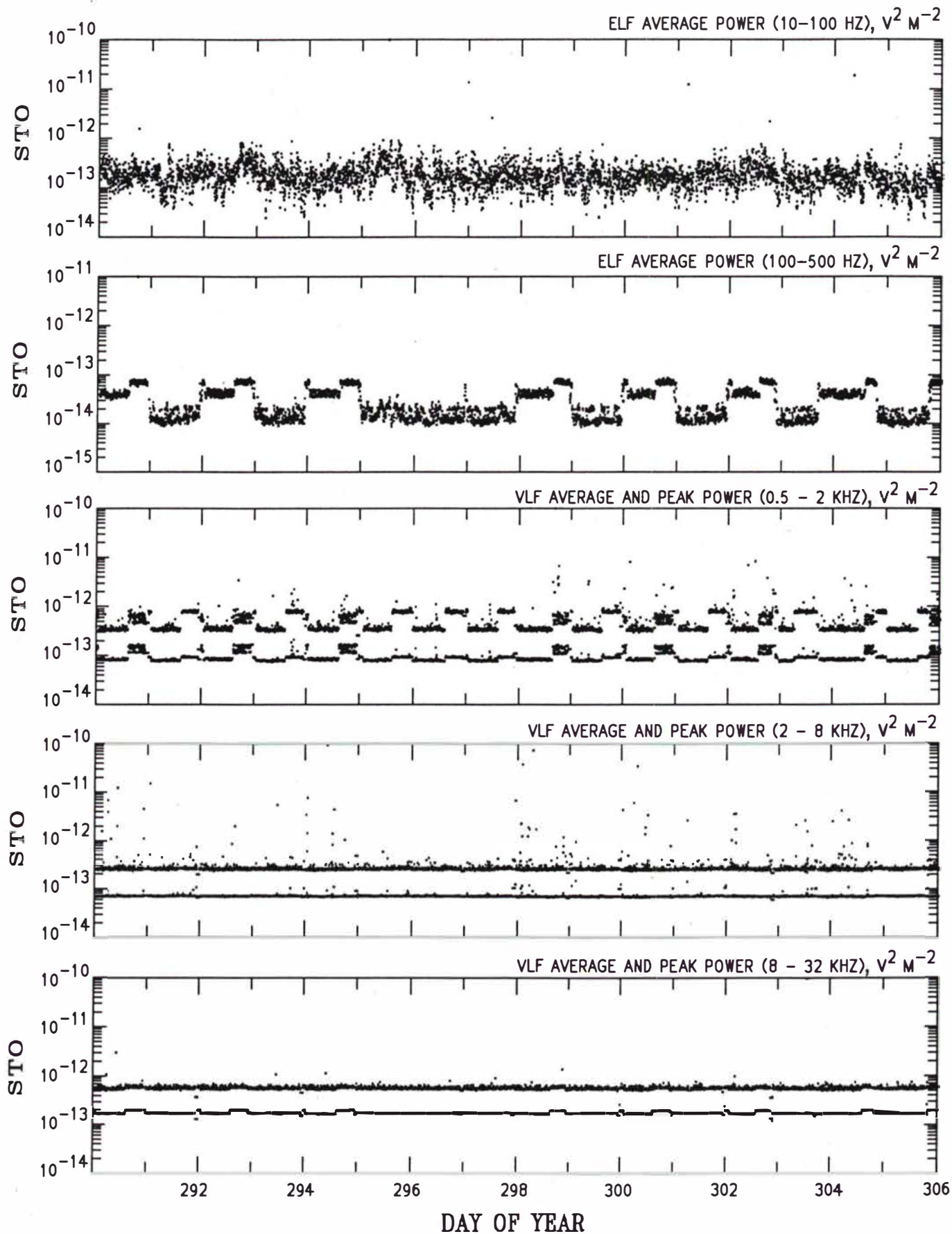
ULYSSES CDR - PLASMA WAVE

95 274 OCT 1 00:00:00.000 - 95 290 OCT 17 00:00:00.000



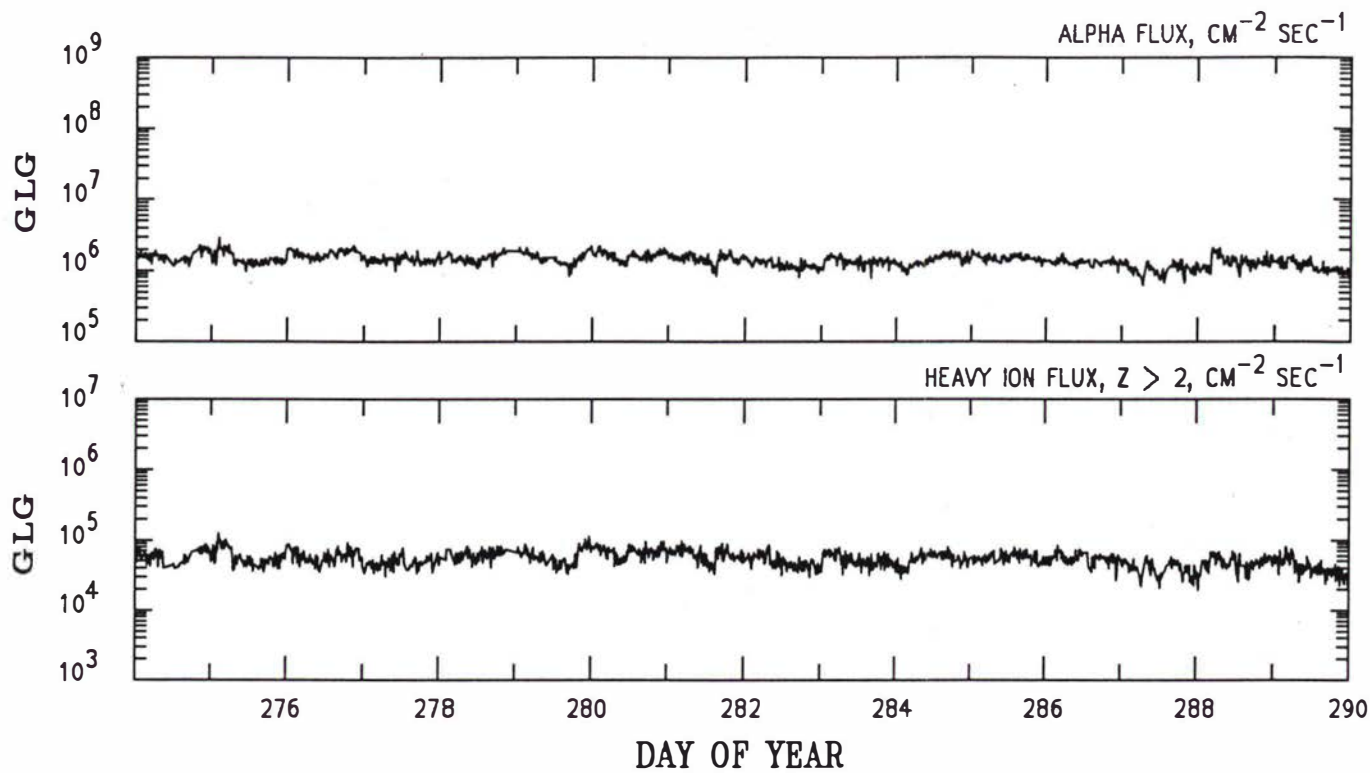
ULYSSES CDR - PLASMA WAVE

95 290 OCT 17 00:00:00.000 - 95 306 NOV 2 00:00:00.000



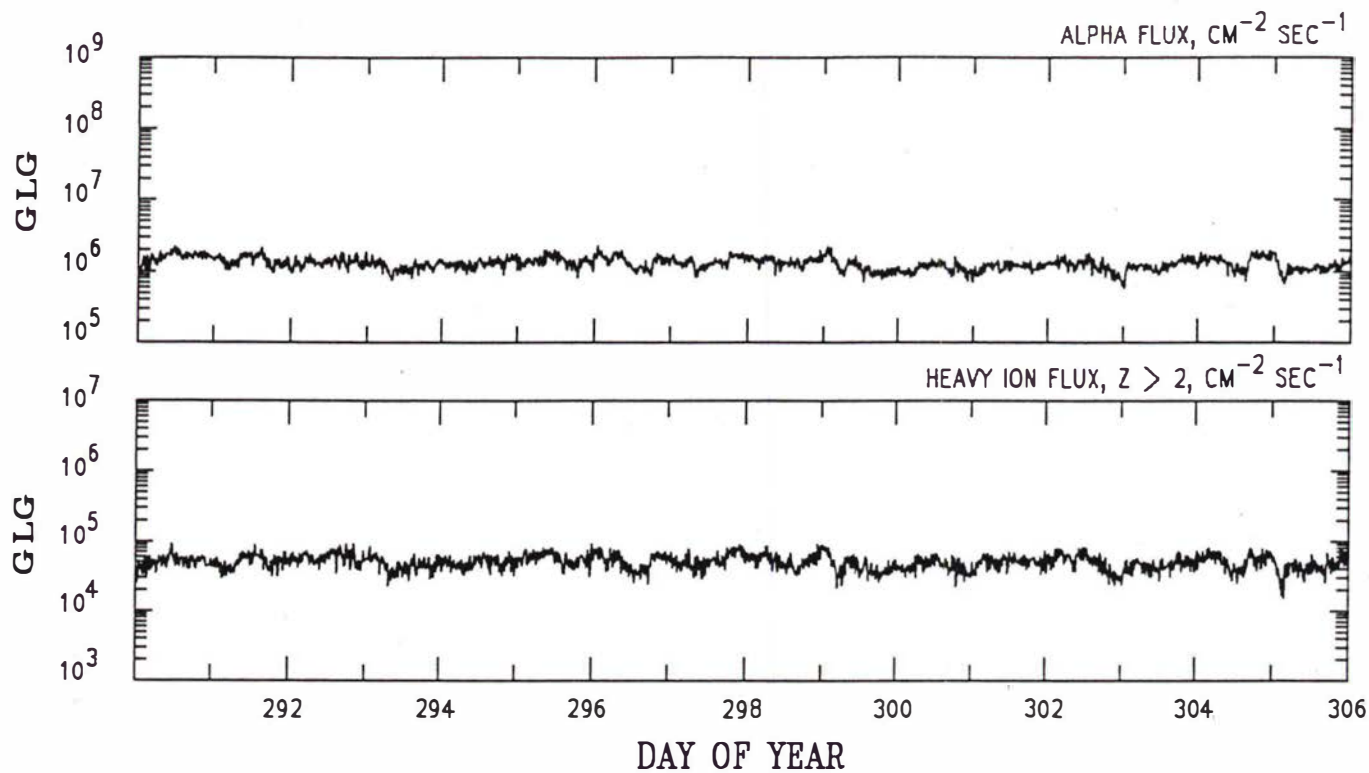
ULYSSES CDR - SOLAR WIND ION COMPOSITION

95 274 OCT 1 00:00:00.000 - 95 290 OCT 17 00:00:00.000



ULYSSES CDR - SOLAR WIND ION COMPOSITION

95 290 OCT 17 00:00:00.000 - 95 306 NOV 2 00:00:00.000



From DEAL@SSLLES.MSFC.NASA.GOV Mon Oct 2 15:13 PDT 1995
Date: Mon, 2 Oct 1995 17:13:00 -0500 (CDT)
From: DEAL@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@ssl.msfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3833

TIME: TJD=9991 SECONDS=19203

TYPE: CYGX-1 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

CYGX-1 RISING OCCULTATION STEP.

From HAGEDON@fender.msfc.nasa.gov Tue Oct 3 10:27 PDT 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Tue, 3 Oct 1995 12:27:32 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 3834

TIME: TJD=9991 SECONDS=41576

TYPE: CYG X-1 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

CYG X-1 RISE. NOT VISIBLE ABOVE 300 KEV.

From williams@sunspot Thu Sep 10 18:05 PDT 1998
Date: Thu, 10 Sep 1998 18:09:58 -0700
From: williams@sunspot (Roger Williams)
To: khurley@sunspot
Subject: RT Event Problems 94258-96229
Cc: williams@sunspot

Kevin,

The next wave of results is finished relative to differences in ascii files for events from your realtime event list. These results are for yyddds from your list in the range 94258-96229 or Sep 15, 1994 to August 16, 1996.

Using yyddds from your list we investigated ALL ascii files that we have made on that day and compared old vs. new decom versions. Again, this was because times in the list were Earth times and thus not easily related to a Ulysses window. Thus the list of files may contain irrelevant entries.

The list of files is attached.

Roger and J

<This message contains 1 attachments (not printed)>

Timing error

:94321_2A1_02.91_03.58.ascii.diff.Z
:94324_2A1_20.05_20.72.ascii.diff.Z
:94331_2A1_15.32_15.99.ascii.diff.Z
:94356_2A1_05.27_05.93.ascii.diff.Z
:94356_2A1_07.32_07.44.ascii.diff.Z
:95013_2A1_05.65_06.32.ascii.diff.Z
:95042_2A1_02.31_02.45.ascii.diff.Z
:95042_2A1_04.10_04.76.ascii.diff.Z
:95076_2A1_20.14_20.81.ascii.diff.Z
:95091_2A1_20.66_20.80.ascii.diff.Z
:95135_2A1_06.08_06.74.ascii.diff.Z
:95176_2A1_02.36_03.02.ascii.diff.Z
e95221_2A1_23.76_23.89.ascii.diff.Z
e95274_2A1_11.27_12.02.ascii.diff.Z
e95275_2A1_22.78_22.91.ascii.diff.Z
e95306_2A1_05.54_05.66.ascii.diff.Z
e95323_2A1_11.72_14.09.ascii.diff.Z
e95359_2A1_09.18_09.96.ascii.diff.Z
e96007_2A1_05.00_05.78.ascii.diff.Z
e96007_2A1_18.67_19.45.ascii.diff.Z
e96015_2A1_17.16_17.31.ascii.diff.Z
e96106_2A1_01.13_01.31.ascii.diff.Z
e96142_2A1_16.64_18.08.ascii.diff.Z
e96149_2A1_02.19_02.42.ascii.diff.Z
e96185_2A1_13.93_14.38.ascii.diff.Z
e96185_2A1_14.02_14.24.ascii.diff.Z
e96209_2A1_11.24_12.68.ascii.diff.Z
e96226_2A1_10.12_11.51.ascii.diff.Z

BATSE time corrected 10/01

Date: Jul 5 2002

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? **No**

2. For 3 Spacecraft events

- ☐ Konus N/S anisotropy used to distinguish between positions?
- ☐ SAX anisotropy used to distinguish between positions?
- ☐ SAX Earth-blocking used to distinguish between positions?
- ☐ $\Sigma 3\Delta t$'s calculated?

3. For 4 Spacecraft Events

- ☐ BMAPSUM executed to get chisquare for alternate positions?

- ☒ ACCESS database updated?

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

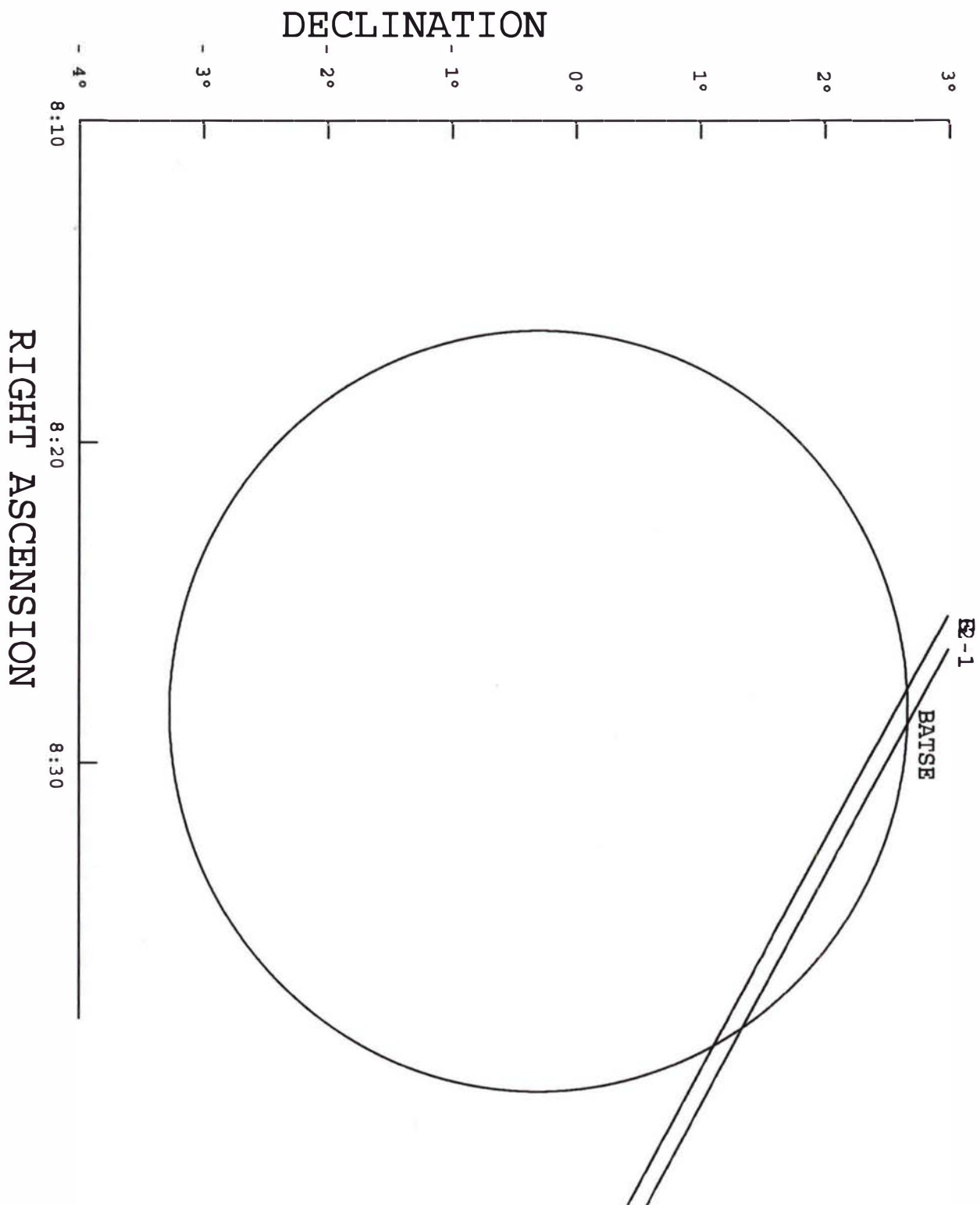
G=GALACTIC EQUATOR

1 BATSE

2 ULYSSES

EVENT OF OCT 1, 1995 11:37

5 / 7 / 2



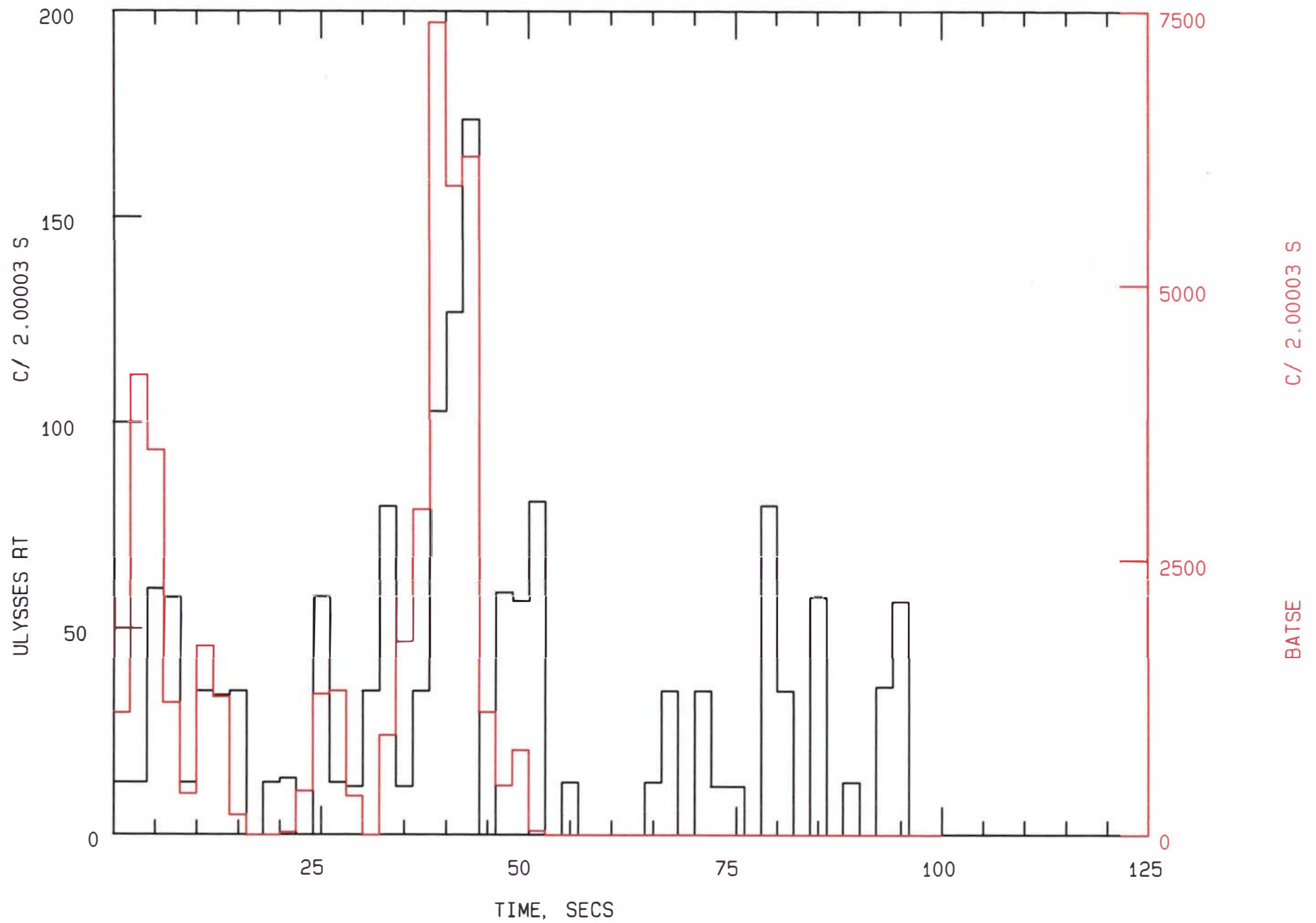
ULYSSES RT-BATSE

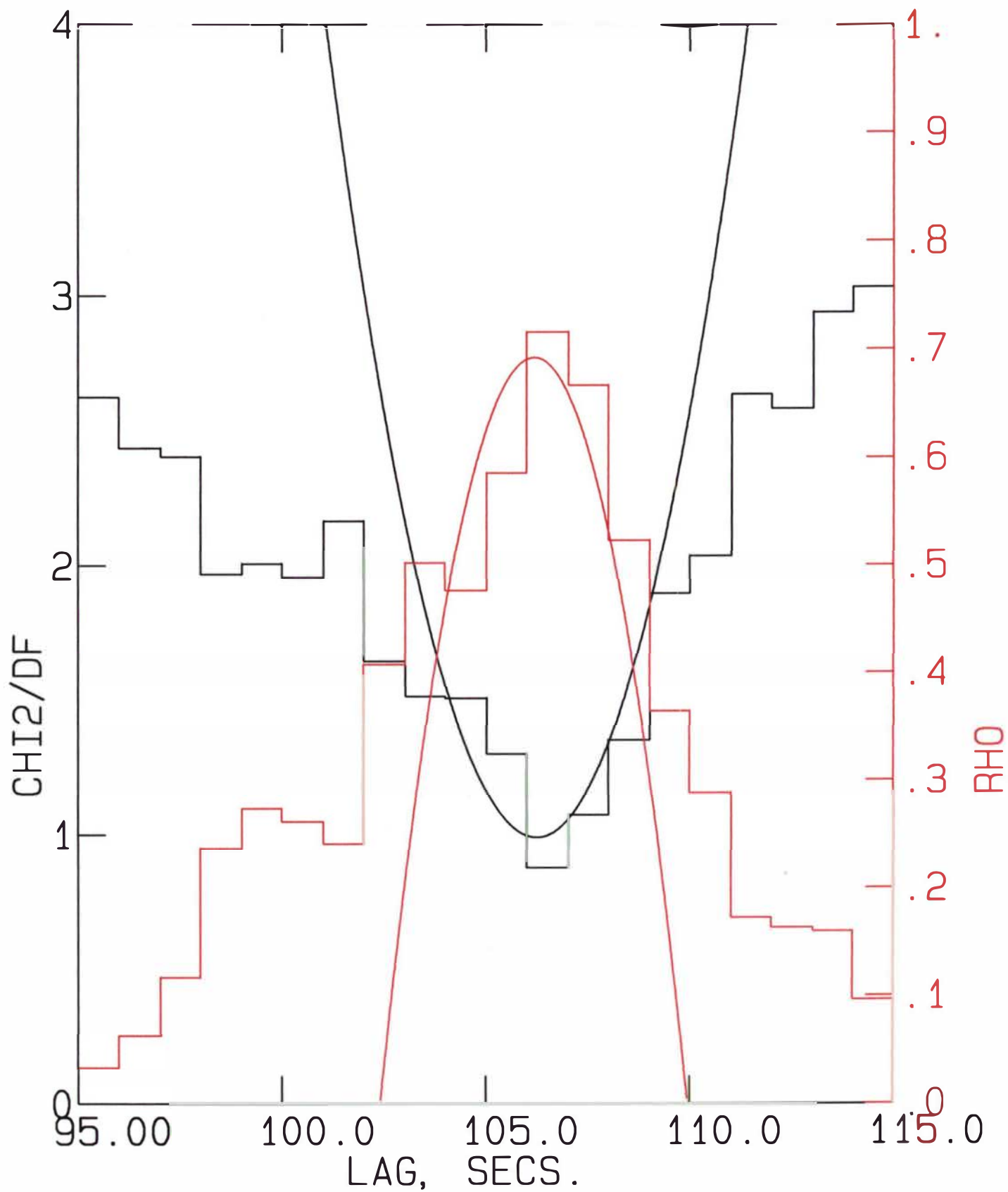
CORRELATION

1/10/95

41644.164

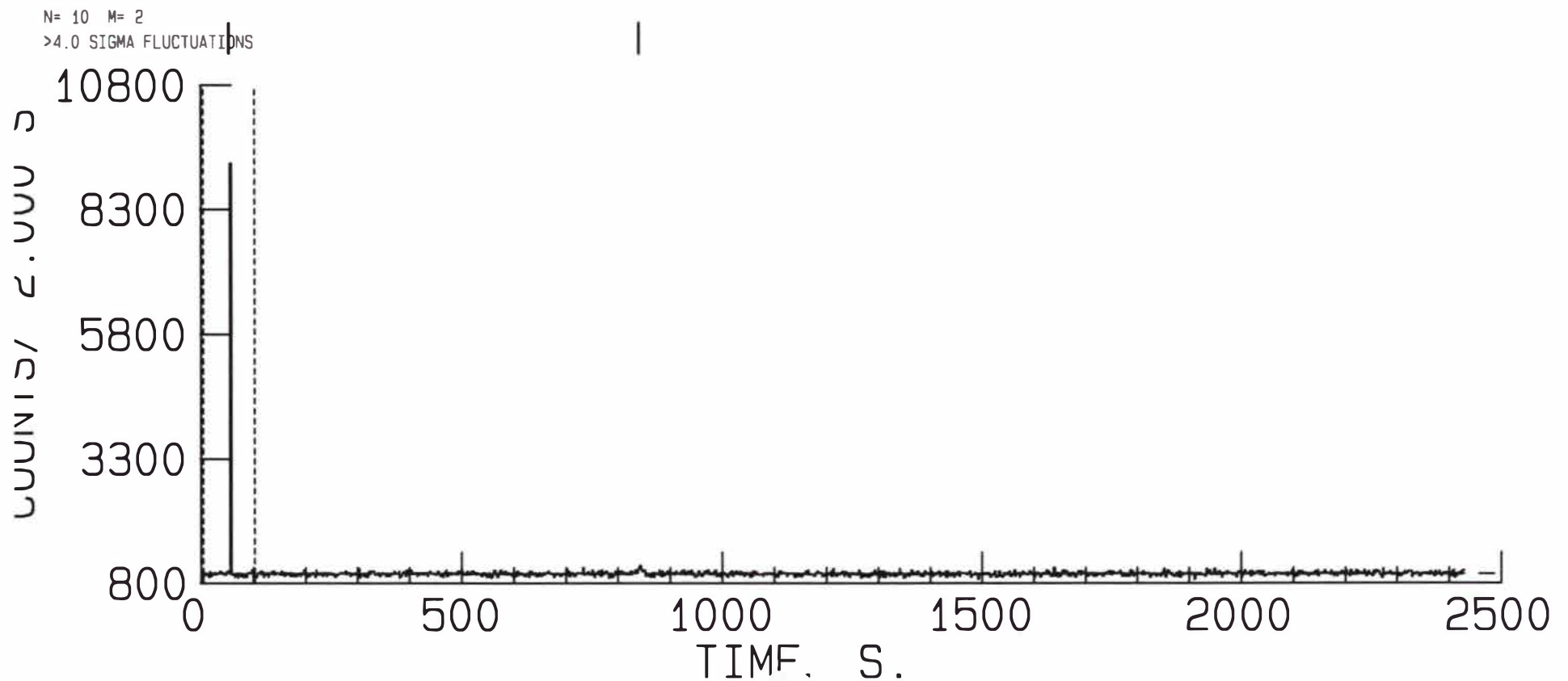
5/ 7/ 2





ULYSSES RT
1/10/95 40844.133 s
0.500 S INTERVALS REGROUPED BY 4
21- 143 keV

5 / 7 / 2

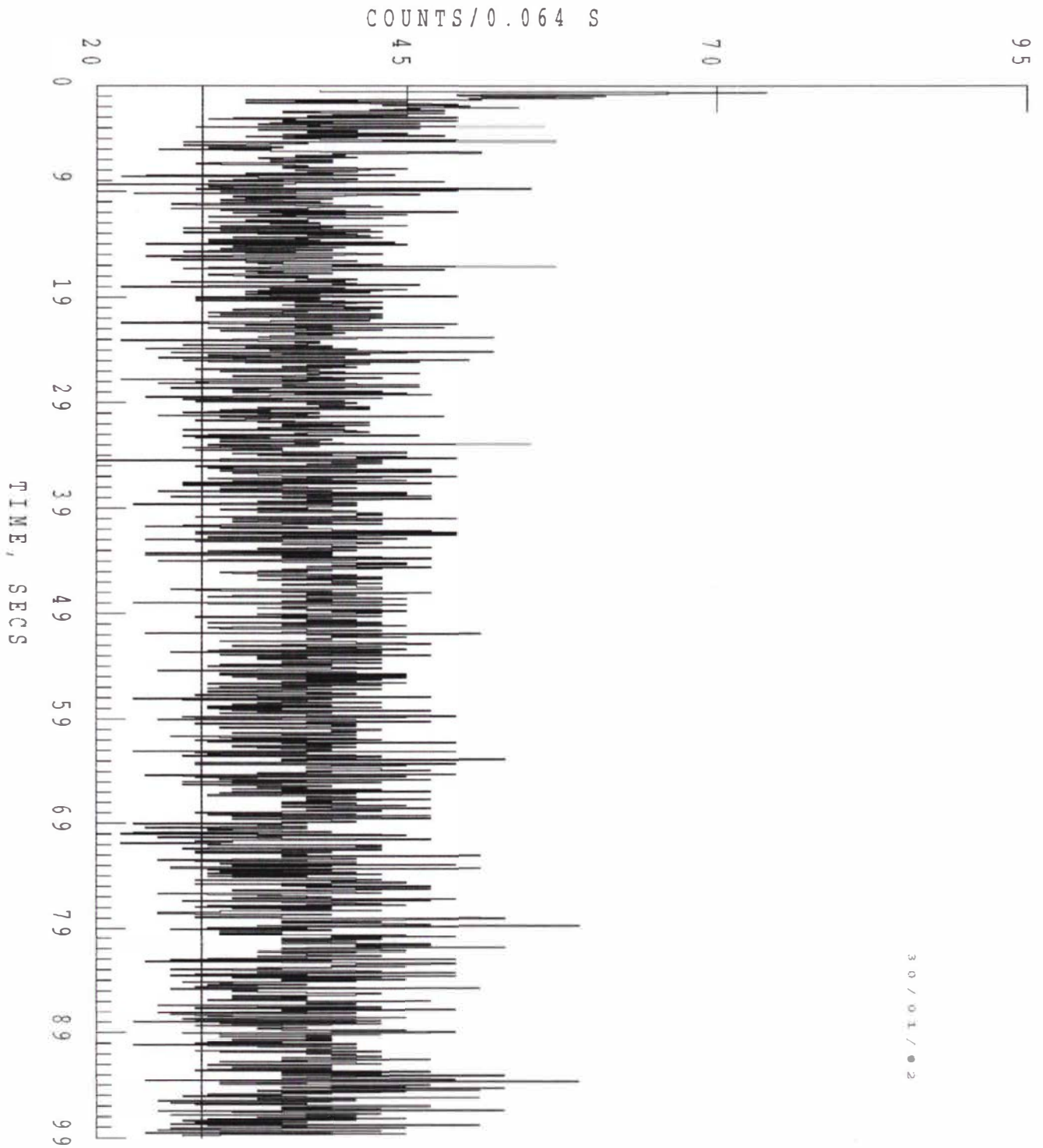


KONUS1

01/10/95

41907.288

50 - 200 keV



From DEAL@SSLLES.MSFC.NASA.GOV Tue Oct 3 07:00 PDT 1995
Date: Tue, 3 Oct 1995 8:59:55 -0500 (CDT)
From: DEAL@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@ssl.msfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3835

TIME: TJD=9991 SECONDS=47175

TYPE: CYGX-1 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

CYGX-1 RISING OCCULTATION STEP.

From HAGEDON@fender.msfc.nasa.gov Tue Oct 3 10:29 PDT 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Tue, 3 Oct 1995 12:29:13 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 3836

TIME: TJD=9991 SECONDS=55868

TYPE: CYG X-1 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

CYG X-1 RISE. NOT VISIBLE ABOVE 300 KEV.

From DEAL@SSLLES.MSFC.NASA.GOV Tue Oct 3 10:38 PDT 1995
Date: Tue, 3 Oct 1995 12:37:22 -0500 (CDT)
From: DEAL@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@ssl.msfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3837

TIME: TJD=9991 SECONDS=61478

TYPE: CYGX-1 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=2.5 AZIMUTH=12.6 ERROR=19.5 DEGREES

COMMENTS:

CYGX-1 FLUCTUATION

From DEAL@SSLLES.MSFC.NASA.GOV Tue Oct 3 07:23 PDT 1995
Date: Tue, 3 Oct 1995 9:23:10 -0500 (CDT)
From: DEAL@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@ssl.msfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3838

TIME: TJD=9991 SECONDS=69541

TYPE: CYGX-1 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

CYGX-1 RISING OCCULTATION STEP

From DEAL@SSLLES.MSFC.NASA.GOV Tue Oct 3 07:27 PDT 1995
Date: Tue, 3 Oct 1995 9:27:18 -0500 (CDT)
From: DEAL@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@ssl.msfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3839

TIME: TJD=9991 SECONDS=75136

TYPE: CYGX-1 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

CYGX-1 RISING OCCULTATION STEP

From DEAL@ssl.msfc.nasa.gov Tue Oct 3 10:45 PDT 1995
From: DEAL@ssl.msfc.nasa.gov
Date: Tue, 3 Oct 1995 12:45:33 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3840

BATSEARCH PROGRAM

BATSE BURST # 3840
EVENT OF 1995 OCT 1 DAY OF YEAR=274
EVENT CROSSING TIME AT BATSE : 80045. S. OR 22:14:05.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 214.000 51.000
BATSE PEAK COUNTING RATE: 500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 1/10/ 95 IS:
RA= 202.374 DEC= 60.186 DIST= 2.718 AU
BATSE-ULYSSES DISTANCE = 406604337. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=168.74 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1330.19 SECS.
CROSSING TIME AT ULYSSES IS 78715. S. OR 21:51:54 +/- 75.77 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 1/10/ 95 IS:
RA= 223.419 DEC= -17.082 DIST= 2.144 AU
MARS-BATSE DISTANCE = 320684832. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=111.42 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -390.62 SECS.
CROSSING TIME AT MARS IS 79654. S. OR 22:07:34 +/- 166.96 SECONDS

BATSE BURST TRIGGER

NO.: 3840

TIME: TJD=9991 SECONDS=80045

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=74.2 AZIMUTH=340.2 ERROR=8.9 DEGREES

COMMENTS:

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

3 / 10 / 95

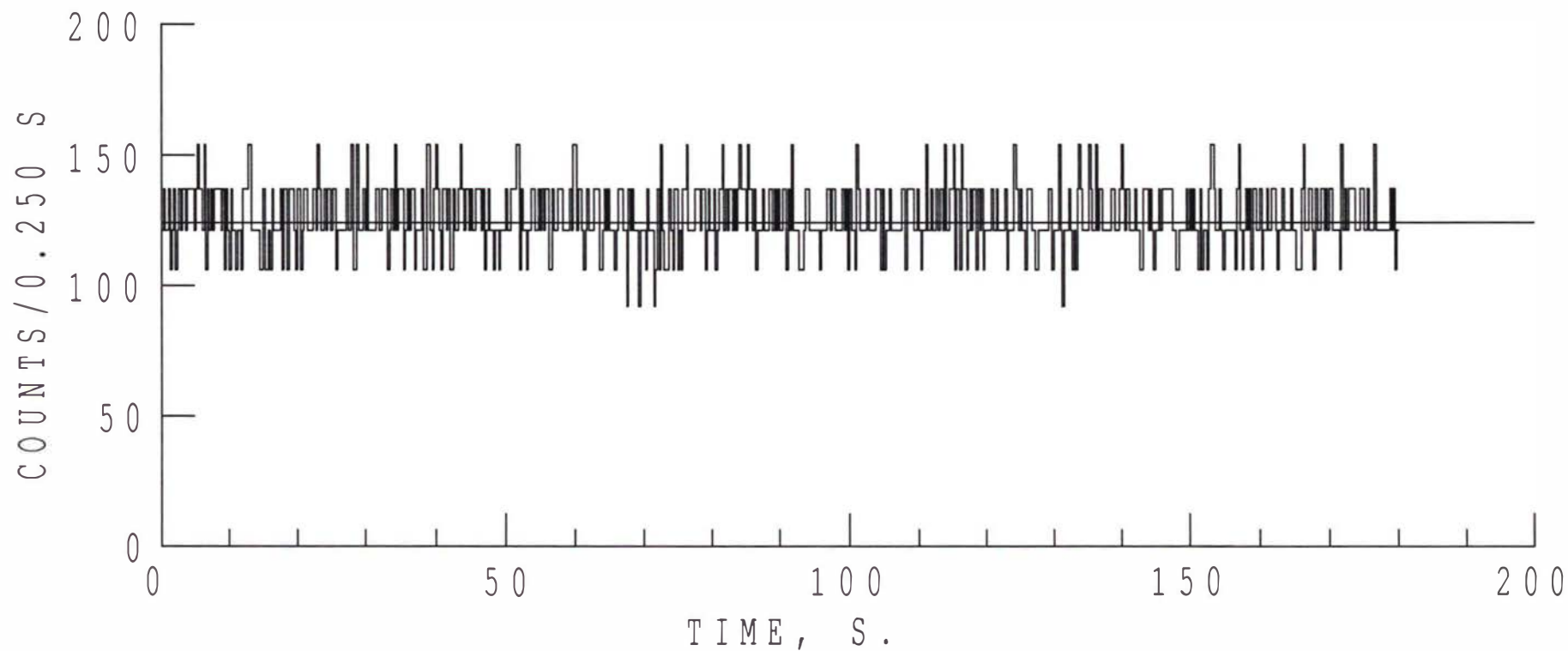
ULYSSES RT

1 / 10 / 95 78624.000 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From DEAL@SSLLES.MSFC.NASA.GOV Tue Oct 3 10:31 PDT 1995
Date: Tue, 3 Oct 1995 12:30:55 -0500 (CDT)
From: DEAL@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@ssl.msfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3841

TIME: TJD=9991 SECONDS=86324

TYPE: CYGX-1 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

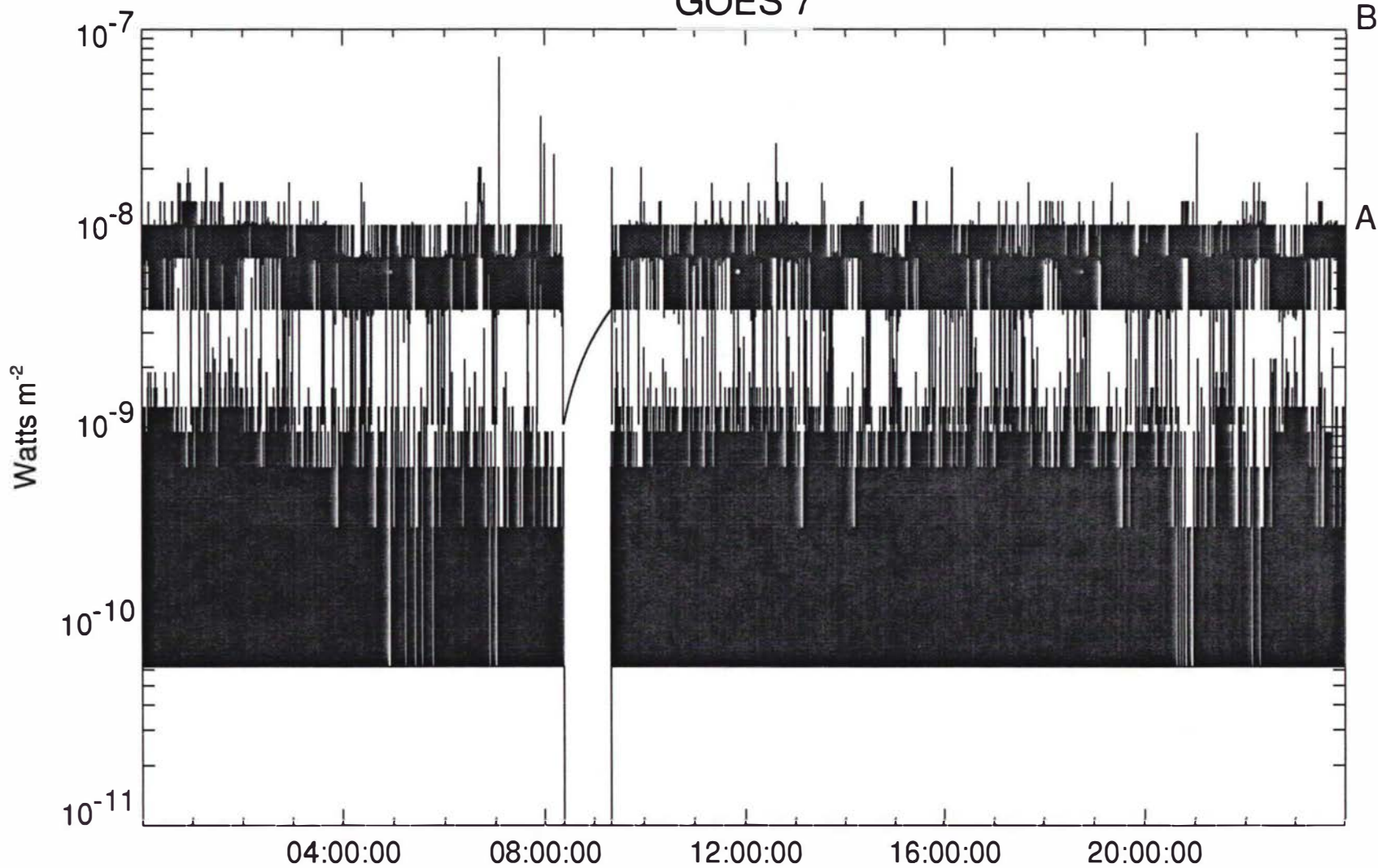
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

CYGX-1 OCCULTATION RISING STEP

GOES 7



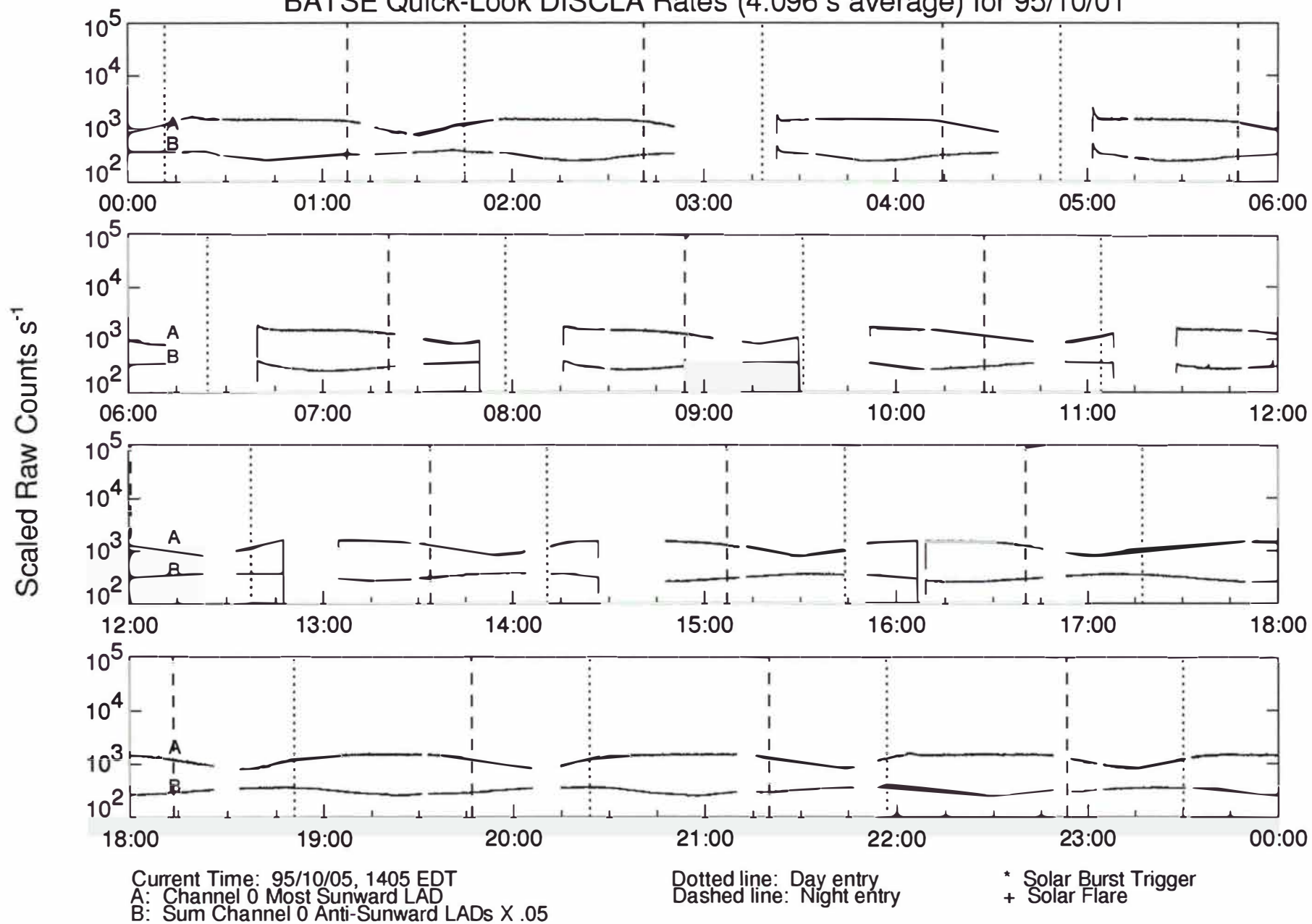
Data Start: 95/10/01, 0000:01

Plot created: 95/11/14, 1527

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

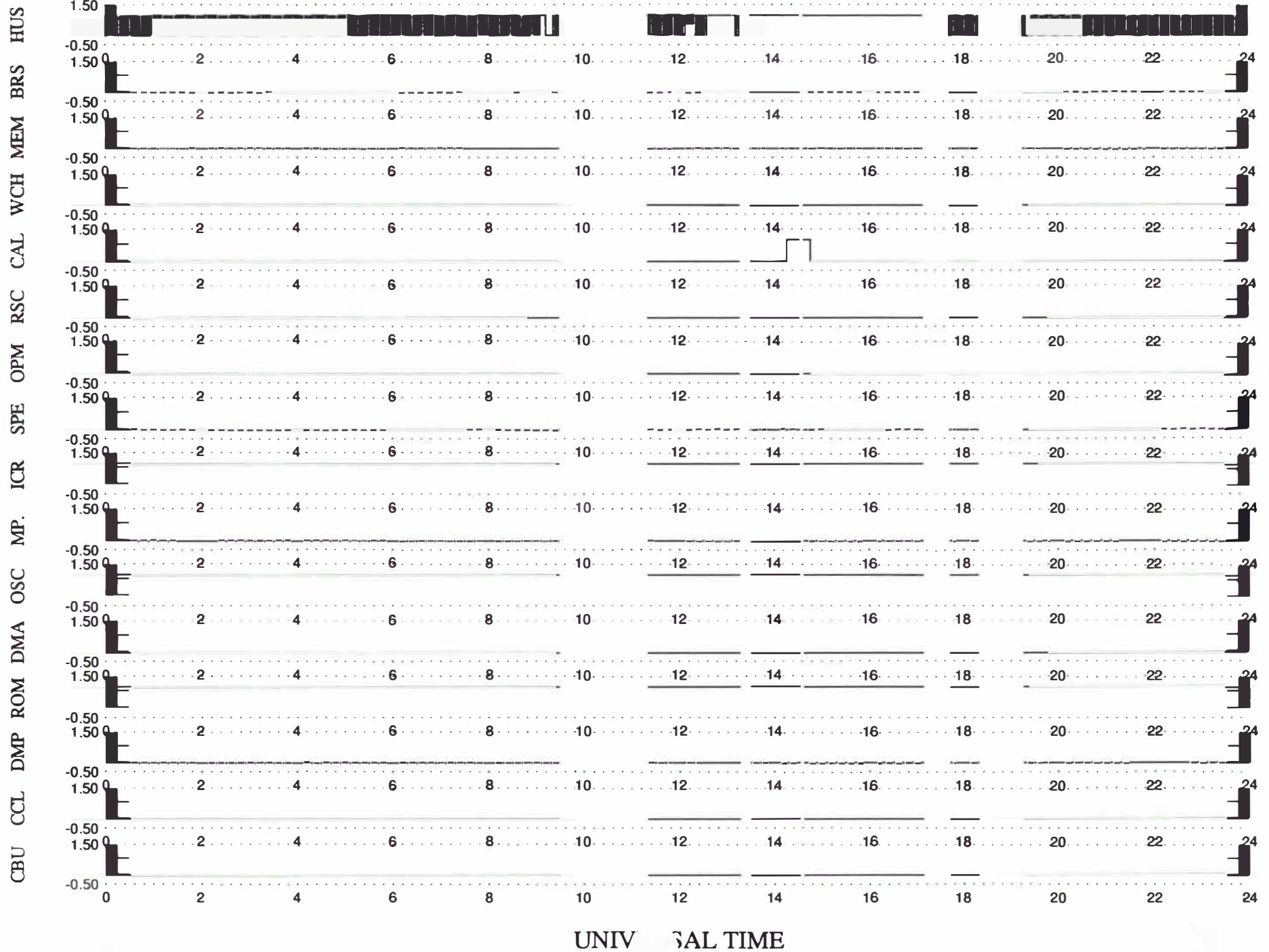
Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/01



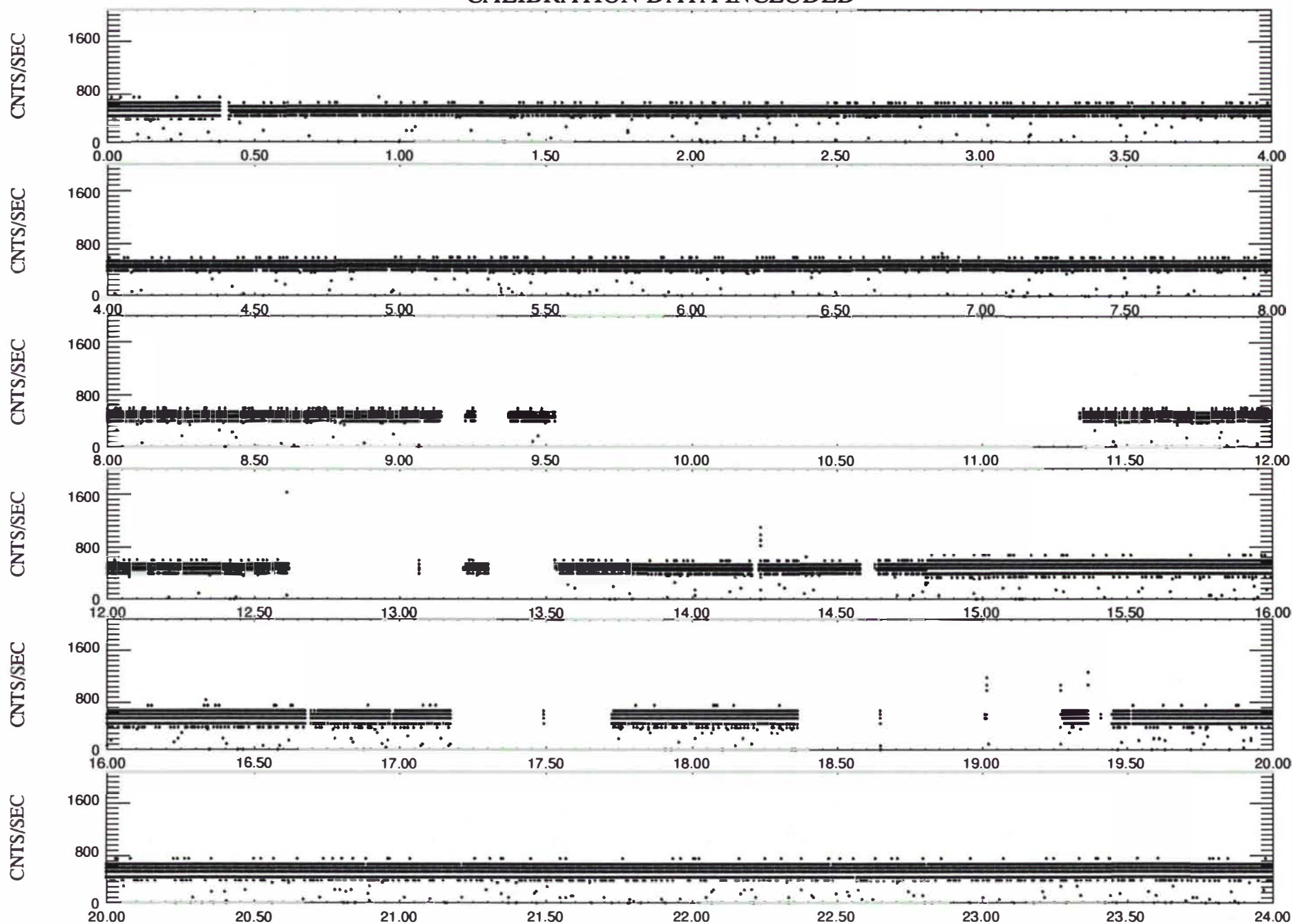
HUS MODES EDR day 274, year 1995 to day 274, year 1995 NO BURST (0)

1/26/96

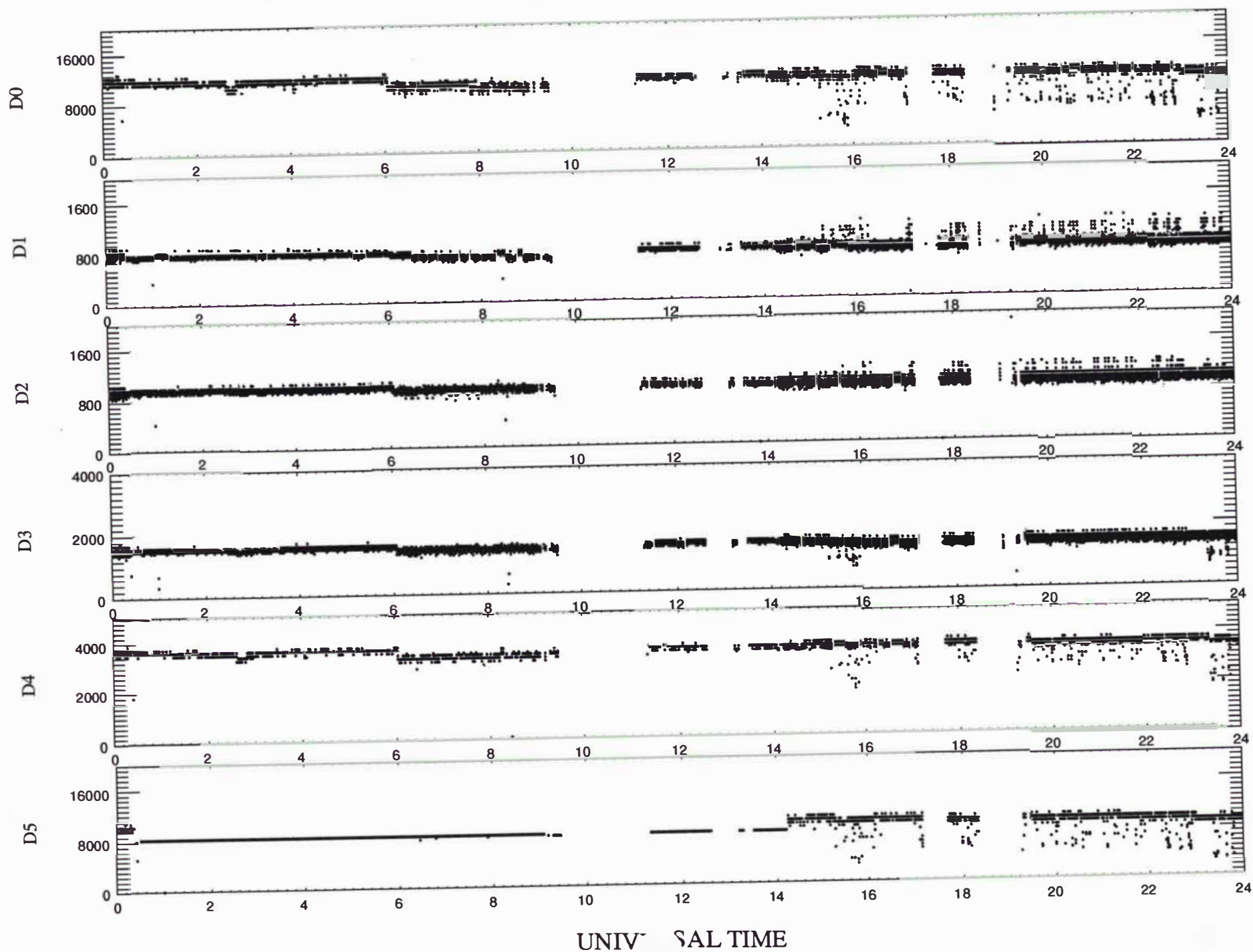


HUS 2A, MODE 1, NOT AVERAGED EDR day 274, year 1995 to day 274, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV SAL TIME



From BATSE@BATSE.MSFC.NASA.GOV Tue Oct 3 11:40 PDT 1995
From: BATSE@BATSE.MSFC.NASA.GOV
Date: Tue, 3 Oct 1995 13:39:22 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@BATSE.MSFC.NASA.GOV, LHEAVXBARTHELMY@BATSE.MSFC.NASA.GOV,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@BATSE.MSFC.NASA.GOV,
band@cass09.ucsd.edu, gruber@cass09.ucsd.edu, matteson@cass09.ucsd.edu,
PACIESAS@BATSE.MSFC.NASA.GOV, HORACK@BATSE.MSFC.NASA.GOV,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3842

TIME: TJD=9992 SECONDS=61452

TYPE: CYG X-1 SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

CYG X-1 OCCULTATION RISE. NO LOCATION WAS DONE ON THIS EVENT.

From WOODSP@SSLLES.MSFC.NASA.GOV Tue Oct 3 14:19 PDT 1995
Date: Tue, 3 Oct 1995 16:19:28 -0500 (CDT)
From: WOODSP@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3843

BATSEARCH PROGRAM

RI

BATSE BURST # 3843
EVENT OF 1995 OCT 2 DAY OF YEAR=275
EVENT CROSSING TIME AT BATSE : 77587. S. OR 21:33:07.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 47.000 -2.000
BATSE PEAK COUNTING RATE: 6000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 2/10/ 95 IS:
RA= 202.737 DEC= 59.973 DIST= 2.723 AU
BATSE-ULYSSES DISTANCE = 407414202. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 60.91 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 660.66 SECS.
CROSSING TIME AT ULYSSES IS 78248. S. OR 21:44:07 +/- 266.22 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 2/10/ 95 IS:
RA= 224.109 DEC= -17.291 DIST= 2.147 AU
MARS-BATSE DISTANCE = 321195744. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 19.50 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1009.94 SECS.
CROSSING TIME AT MARS IS 78597. S. OR 21:49:56 +/- 77.43 SECONDS

BATSE BURST TRIGGER

NO.: 3843

TIME: TJD=9992 SECONDS=77587

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=83.3 AZIMUTH=205.8 ERROR=1.0 DEGREES

COMMENTS:

GRB WITH SYMMETRIC OR ANTI-FRED STRUCTURE. DURATION LASTS ABOUT 50 SEC.
VISIBLE IN CHANNEL 4. V/VMAX = .0309

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3843	951002	9992	77587	6000	047	-02	50

95	7	1	117	23737	23737	3658
95	7	6	121	42735	42735	3662
95	7	11	123	13789	13789	3663
95	7	13	BGR	32133	32176	3664
95	7	30	128	76149	76124	3720
95	8	4	131	7135	07134	3734
95	8	4	133	45377	45376	3735
95	8	8	BGR	13023	12974	3745
95	8	9	136	85945	85945	3750
95	8	18	137	5065	05002	3765
95	8	22	140	13751	13749	3767
95	9	4	142	52692	52688	3776
95	9	9	145	85473	85452	3788
95	9	19	151	51465	51447	3806
95	9	21	152	20947	20947	3811
95	9	22	BGR	15495		
95	9	22	BGR	25929		
95	9	26	BGR	63919		
95	10	1	153	41907		
95	10	2	BGR	77583		3843
95	10	4	BGR	83974		
95	10	5	154	14842.112		
95	10	8	156	46287.863		
95	10	10	BGR	11774		
95	10	11	157	77693.094		3860
95	10	13	159	57097.299		
95	10	14	160	13108.167		
95	10	14	161	43561.3		
95	10	16	162	02484.285		3870
95	10	16	BGR	71607		3871
95	10	18	163	19832.069		
95	10	19	64	11712.625		
95	10	19	165	48244.594		3875
95	10	25	167	85239.738		
95	11	2	168	07085.879		
95	11	2	69	21209.015		3891
95	11	2	BGR	28693		
95	11	5	BGR	01745		
95	11	5	170	05868.077		3893
95	11	5	171	46827.808		
95	11	7	BGR	27298		
95	11	11	BGR	34960		
95	11	12	172	66495.244		
95	11	13	173	84358.872		3906
95	11	15	BGR	38929		
95	11	17	175	10123.762		
95	11	18	BGR	82560		
95	11	19	176	29831.402		3912
95	11	19	177	46457.519		
95	11	19		59448		
95	11	21		22280		
95	11	22	179	09841.38		
95	11	22	180	17107.738		
95	11	23	BGR	65408		
95	11	24	BGR	21266		3918
95	11	24	BGR	25132		

-- T. L. Cline ----- LHEAVX::CLINE

From cline@lheavx.gsfc.nasa.gov Fri Jan 26 13:00 PST 1996
 Date: Fri, 26 Jan 1996 13:00:45 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: Improved list; same question.

Dear Kevin,
 I'm making a little progress here, tracking down these events. This is a slightly improved list, with a few more BATSE triggers identified. - TLC

Yr	Mn	Dy	Konus#	Konus Tzero	BATSE Tz, #	Ulysses
94	11	14	BGR	07360	07358 3283	- NO
94	11	19	4	70269.175	70250 3287	R I
94	11	21	6	62700.945	62697 3290	trig.
94	11	25	7	79470.156	79470 3295	R I
94	11	26	BGR	01246	01245 3296	
94	11	26	8	44557.952	44521 3298	trig.
94	11	26	BGR	60860	60861 3299	
94	11	26	9	71809.732	71798 3301	R I
94	11	27	10	52225.68	52217 3303	R I
94	11	28	BGR	56220	56217 3305	
94	12	28	28	27585.915	27581 3330	R I
94	12	29	29	82268.781	82258 3334	R I
95	1	4	31	26319.613	26319 3345	R I
95	1	11	33	17352.241	17263 3351	R I
95	1	11	34	44329	44310 3352	
95	1	17	BGR	05760	05761 3360	
95	1	18	BGR	44574	44589 3364	
95	2	7	BGR	02774	02781 3406	
95	2	8	45	07824	07824 3408	
95	2	10	47	08424	08421 3410	
95	2	11	48	08697	08697 3412	trig.
95	2	11	50	72469	72468 3415	
95	2	21	BGR	74701	74705 3436	
95	2	26	54	53351	53336 3442	
95	3	1	BGR	75731	75761 3448	
95	3	4	56	37661	37657 3453	
95	3	5	58	54309	54304 3458	
95	3	10	BGR	78388	78395 3464	
95	3	25	63	25841	25844 3480	
95	3	25	64	63392	63391 3481	
95	3	27	BGR	26323	26347 3485	
95	3	27	BGR	85672	85671 3486	
95	4	1	69	42647	42642 3488	
95	4	1	70	74635	74634 3489	
95	4	3	71	47985	47987 3491	
95	4	3	72	84828	84826 3492	
95	4	16	BGR	48420	48419 3509	
95	4	18	81	83793	83795 3512	
95	4	25	86	00923	00919 3523	
95	4	30	BGR	54224	54229 3527	
95	5	3	88	66971	66970 3537	
95	5	10	90	28083	28079 3569	
95	5	13	93	81706	81703 3571	
95	5	21	97	25161	25157 3588	
95	5	22	98	23898	23896 3590	
95	5	22	100	85280	85283 3593	
95	5	24	102	14902	14899 3598	
95	6	2	104	25592	25592 3618	
95	6	10	107	6849	06849 3637	
95	6	24	111	84124	84084 3648	
95	6	25	113	14626	14601 3649	
95	6	29	115	37033	37036 3654	
95	7	1	116	12762	12758 3657	

Helio corr removed

Date: Feb 20 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

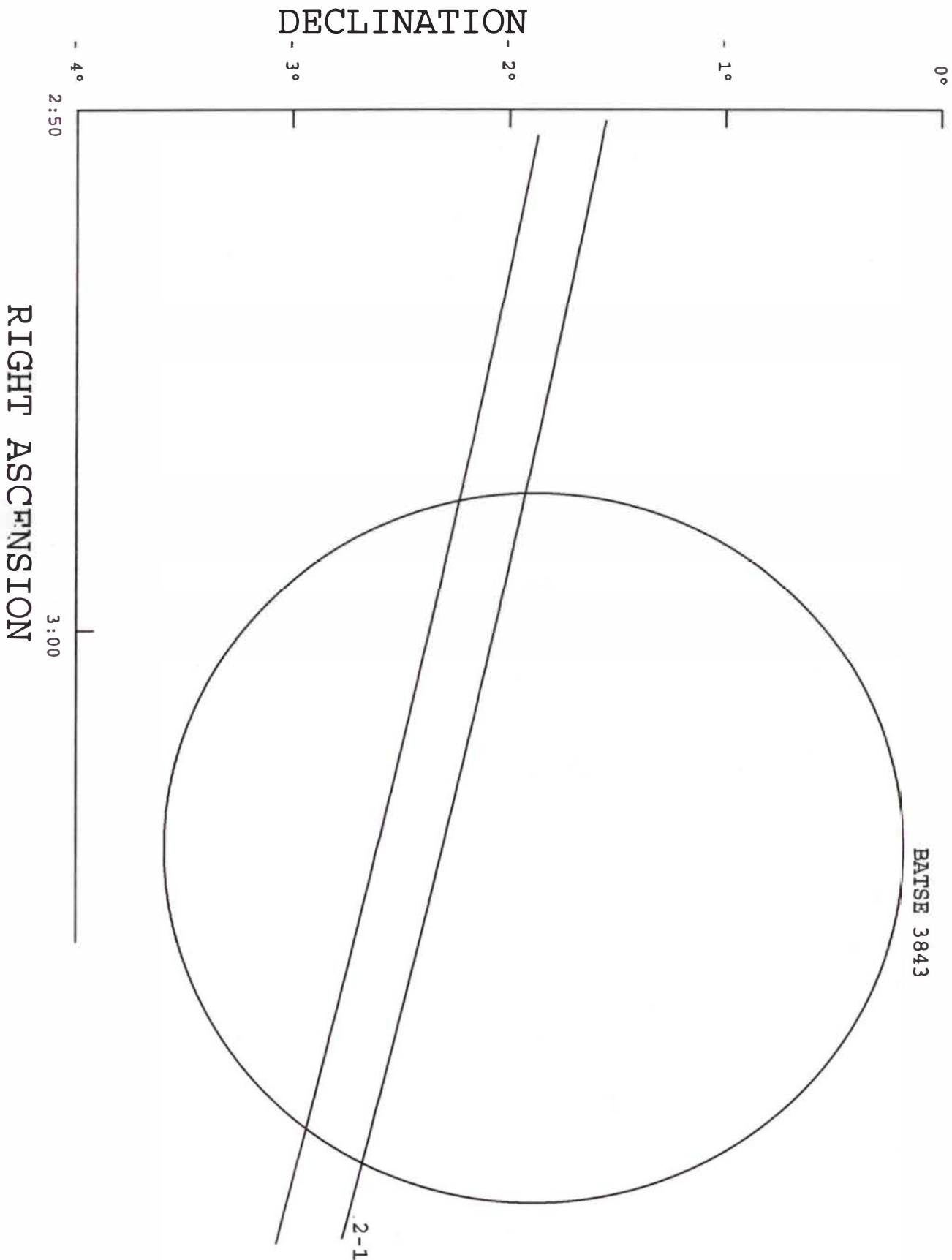
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF OCT 2, 1995 21:43

20/ 2/98



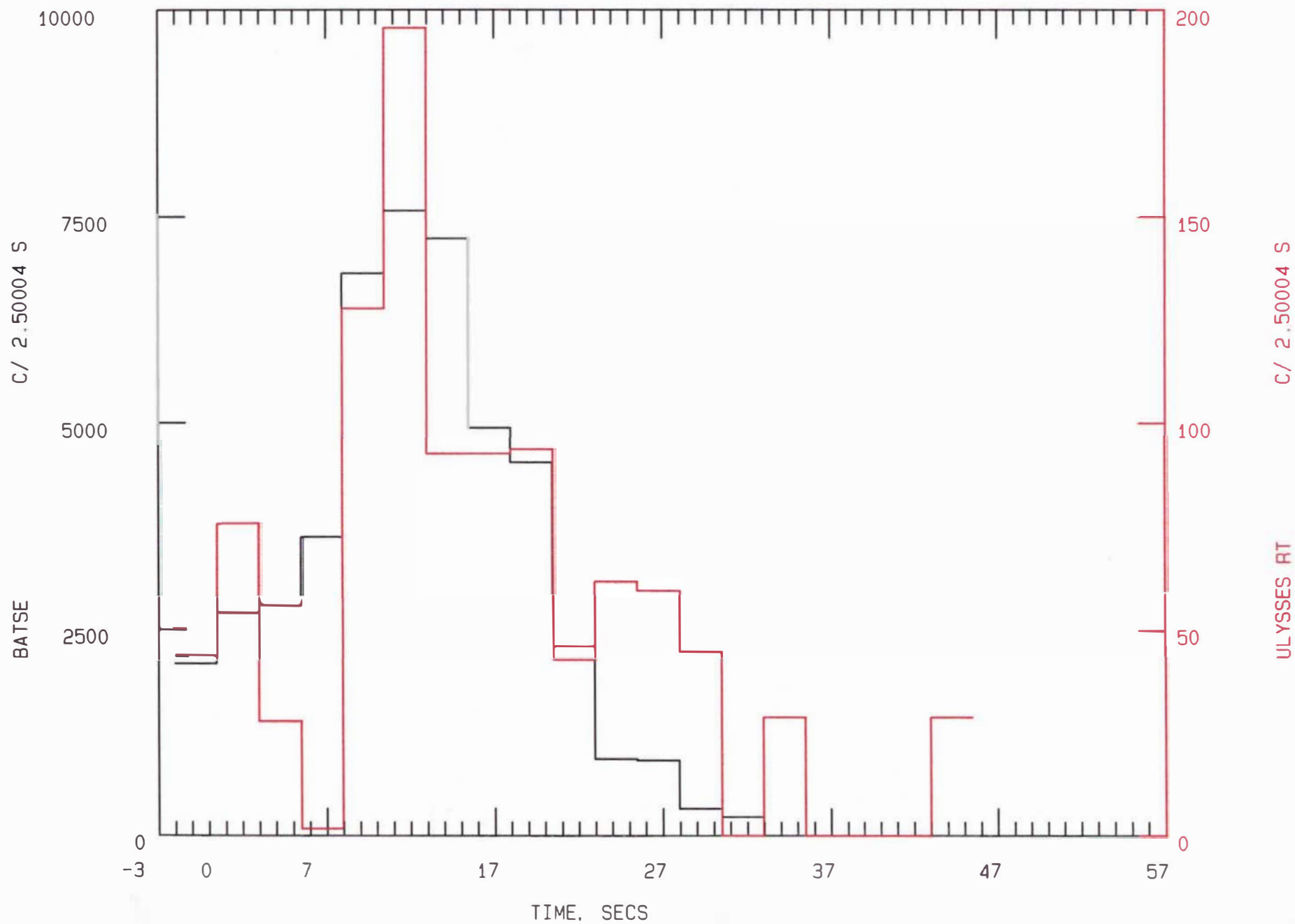
BATSE

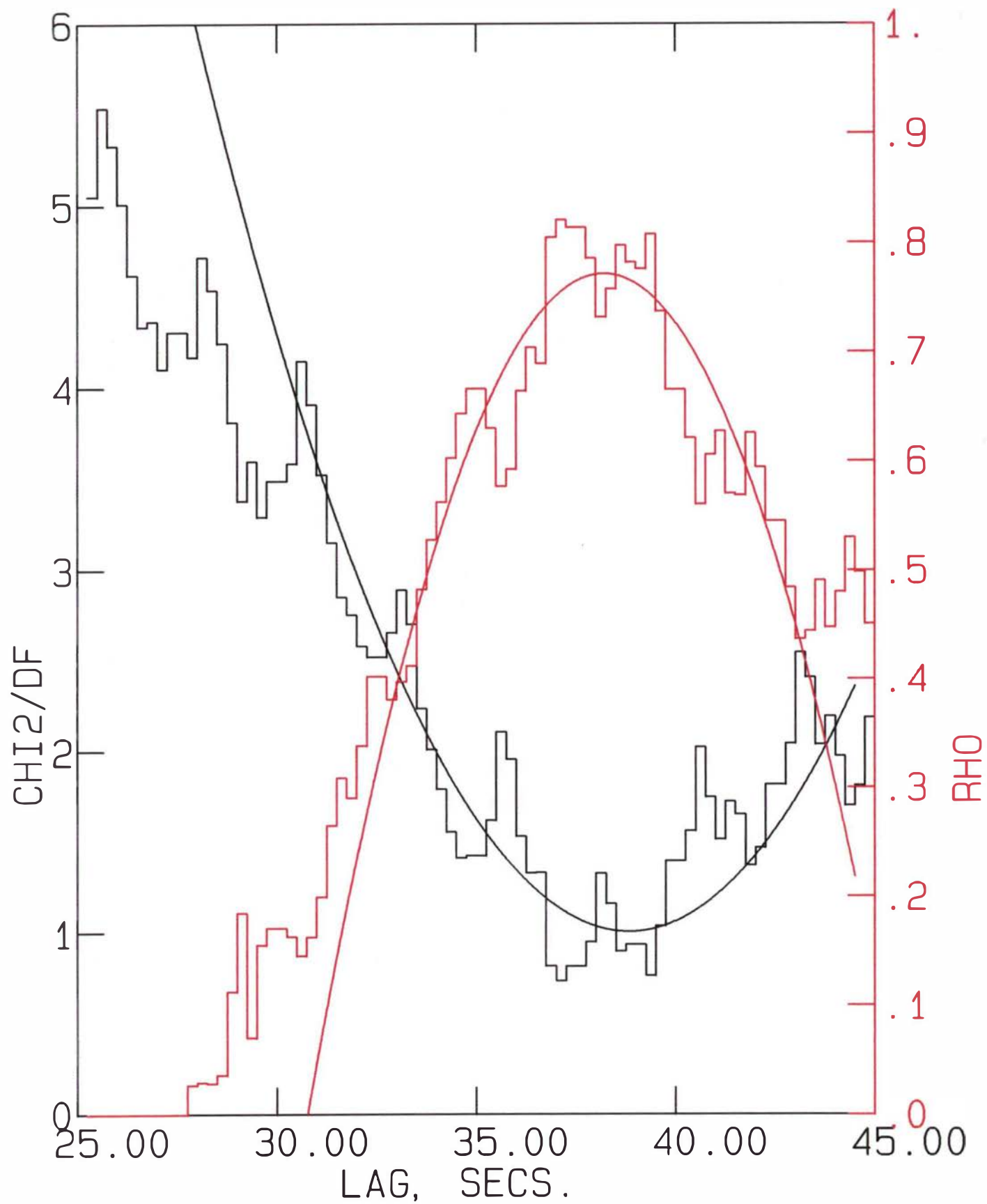
-ULYSSES RT CORRELATION

2/10/95

77586.098

20/ 2/98





ULYSSES RT

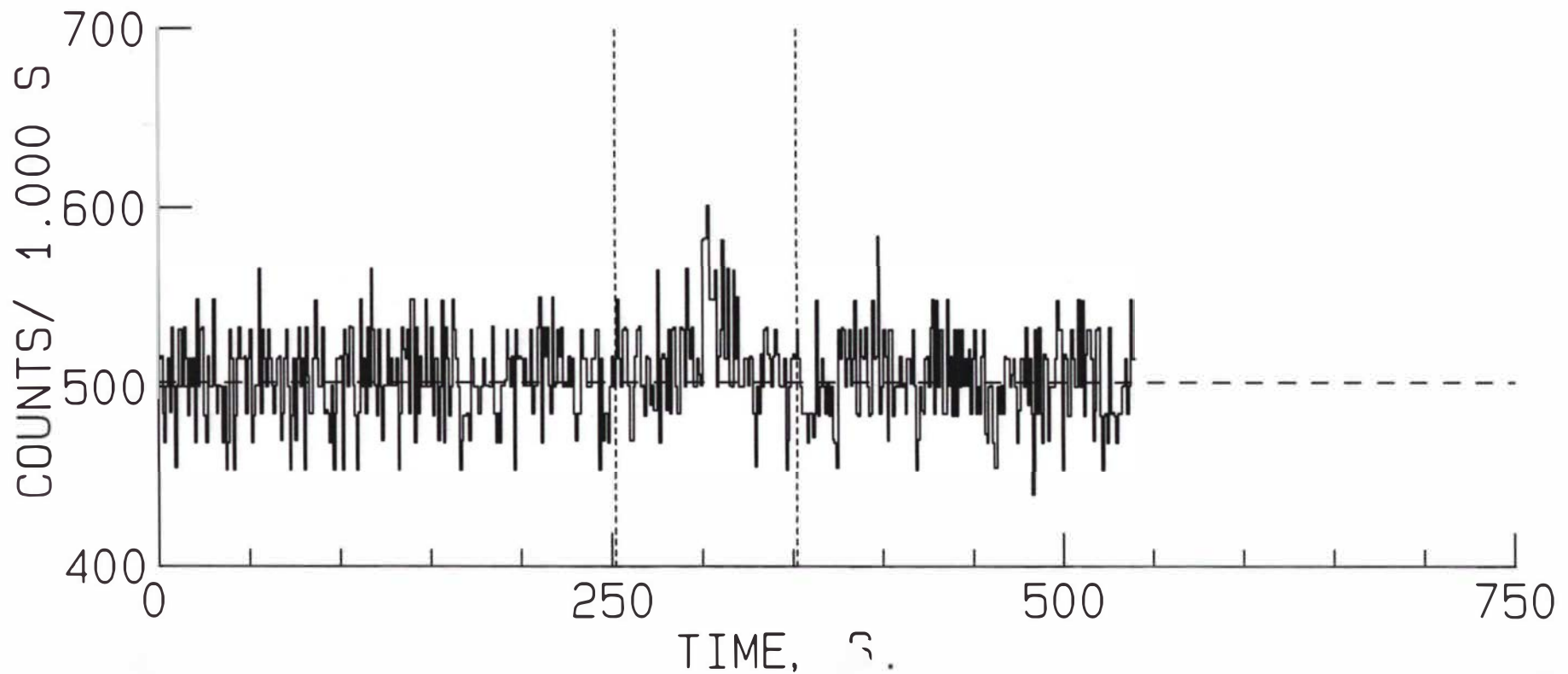
20 / 2 / 98

2/10/95 77976.168 s

0.250 S INTERVALS REGROUPED BY 4

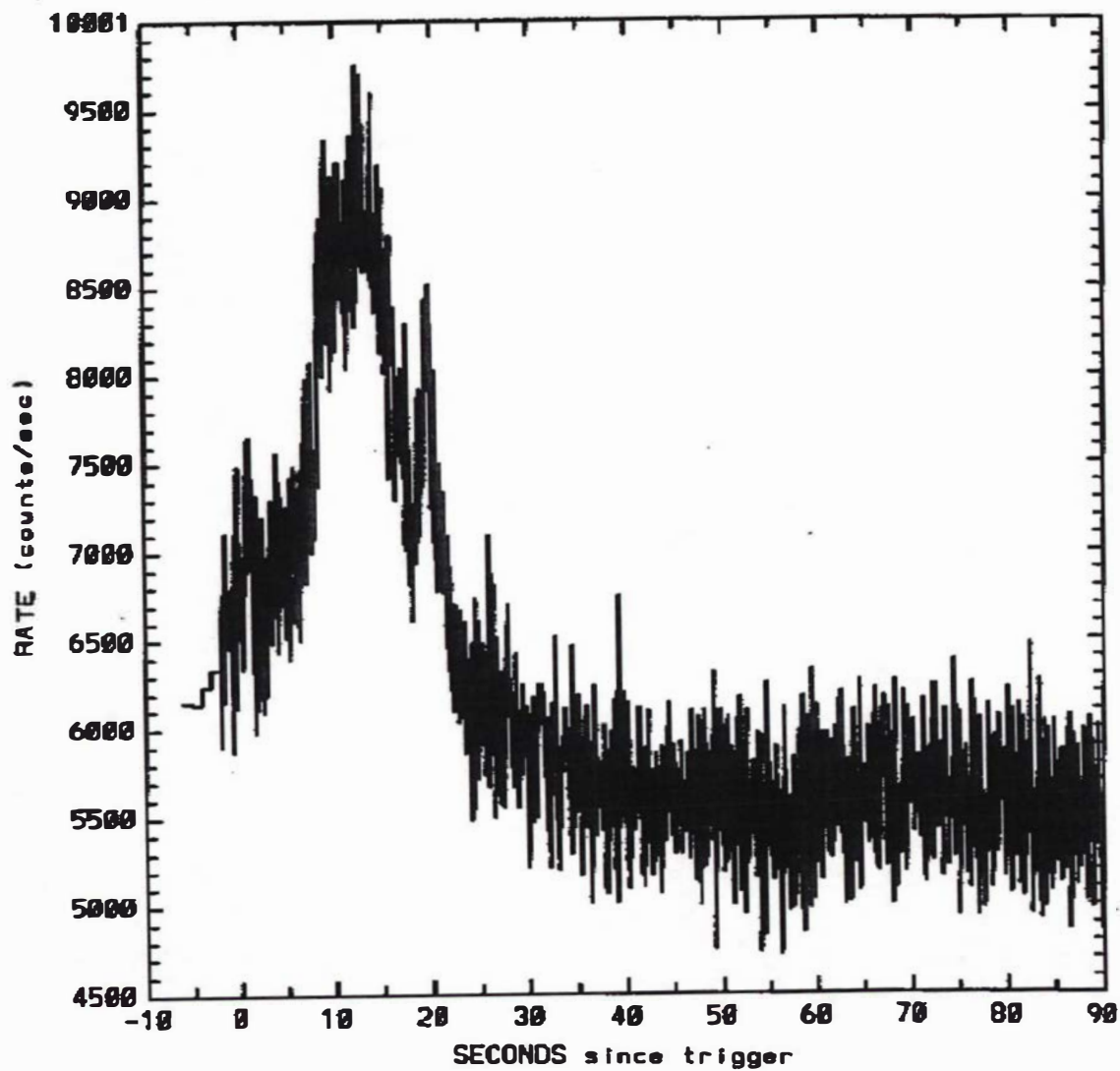
21- 143 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



Oct 2

DISCSC Data for K. Hurley, No. 3843



6-OCT-1995 13:53:51

Created by MDPS 80
(Burst Display)
Version 12.25

Trigger = 3843

Trigger Time:
9942 / 77586.848Burst Data Type:
DISCSCDeadTime
Corrected: NBackground Data
Type: PWEB + DISCLAMinimum Integ. Time:
0.064 secondsDetectors [7..8]:
76-----Discriminators:
(1.2)Quality Mask:
BDISP1

BATSE

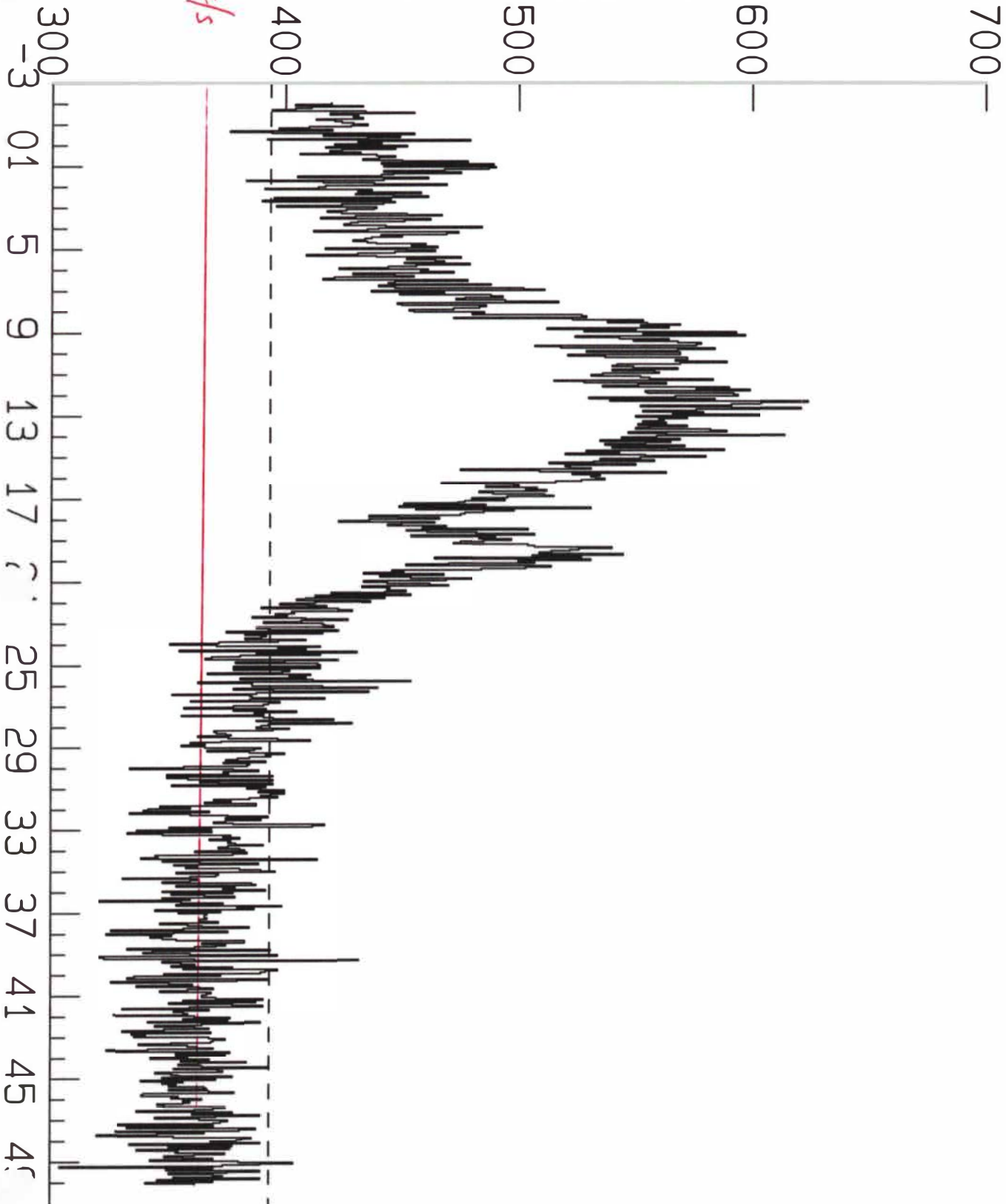
02/10/95

77586.098

25- 100 keV

COUNTS/0.064 S

5790 c/s



10/10/95

From WOODSP@SSLLES.MSFC.NASA.GOV Tue Oct 3 15:00 PDT 1995
Date: Tue, 3 Oct 1995 17:00:14 -0500 (CDT)
From: WOODSP@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@ssl.msfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3844

TIME: TJD=9992 SECONDS=84980

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

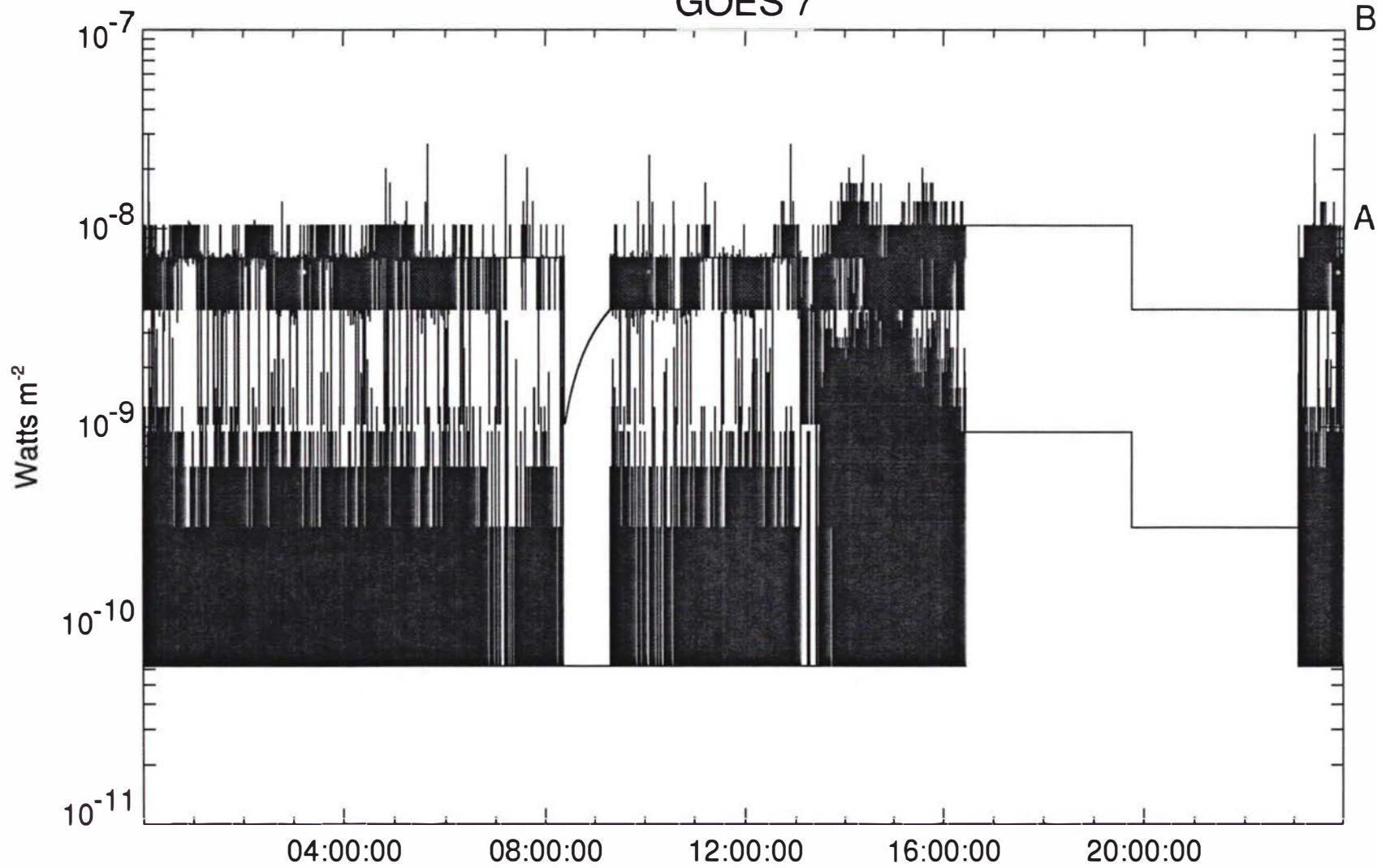
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT

GOES 7



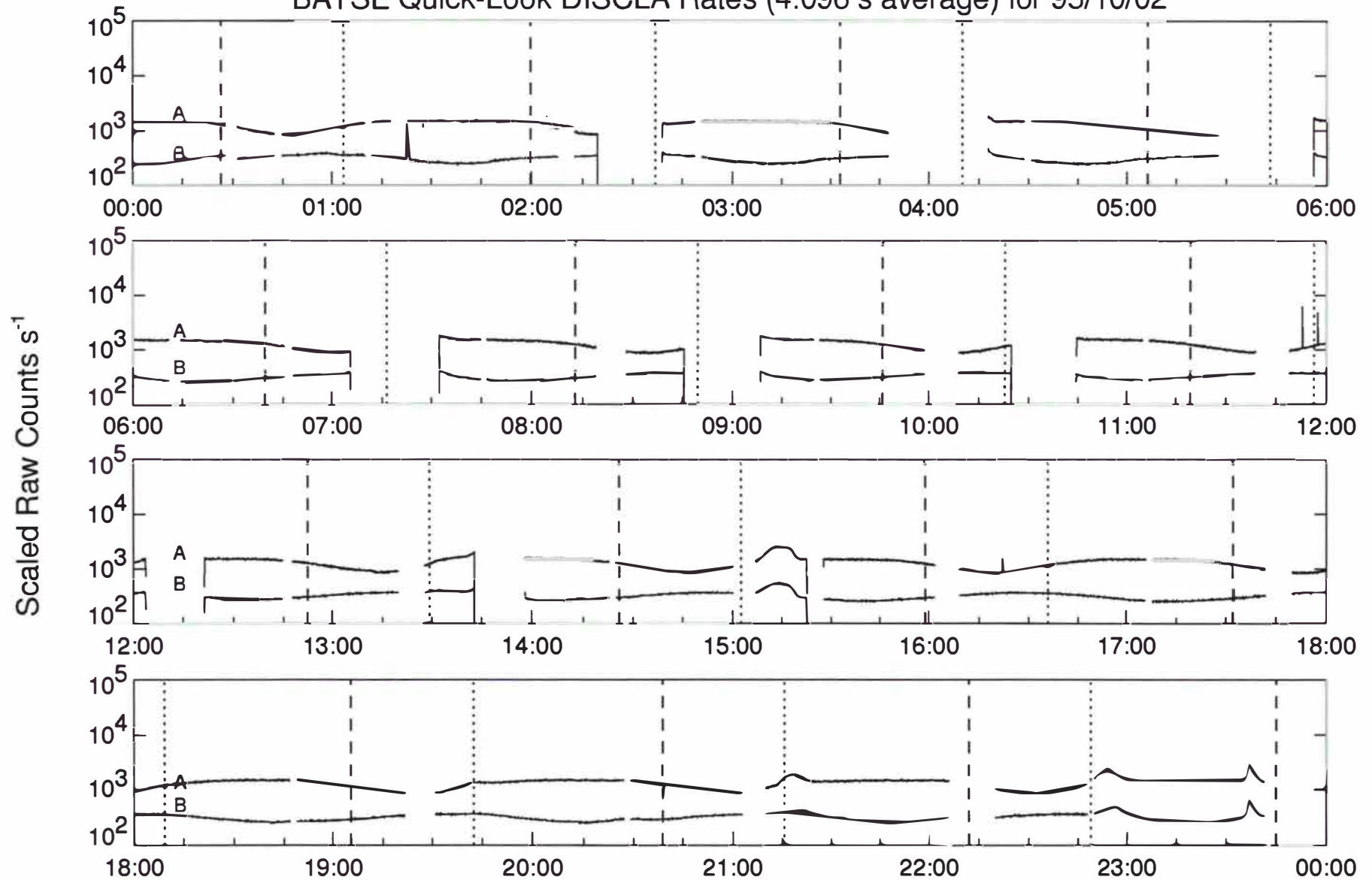
Data Start: 95/10/02, 0000:02

Plot created: 95/11/14, 1643

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 95/10/02



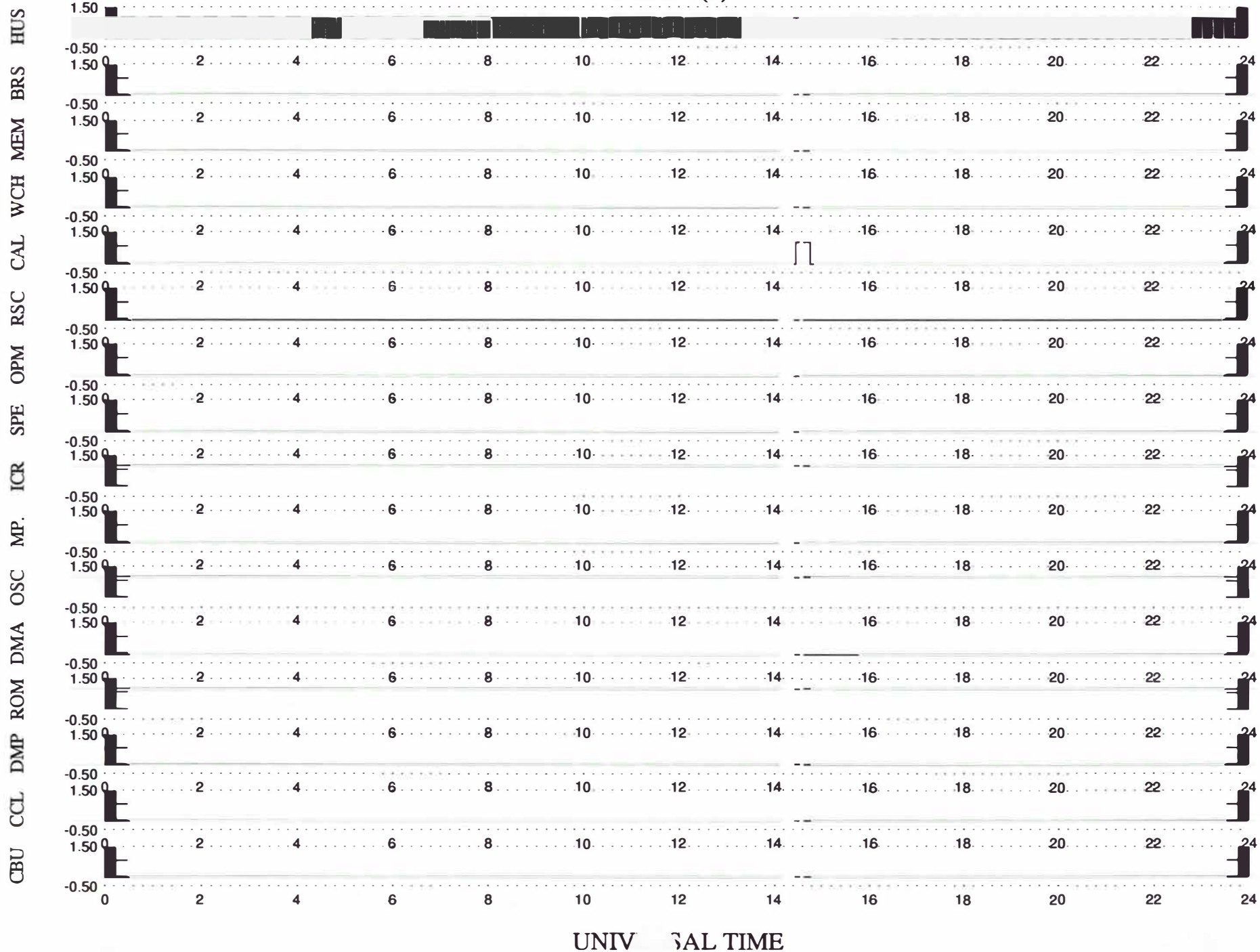
Current Time: 95/10/05, 1402 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

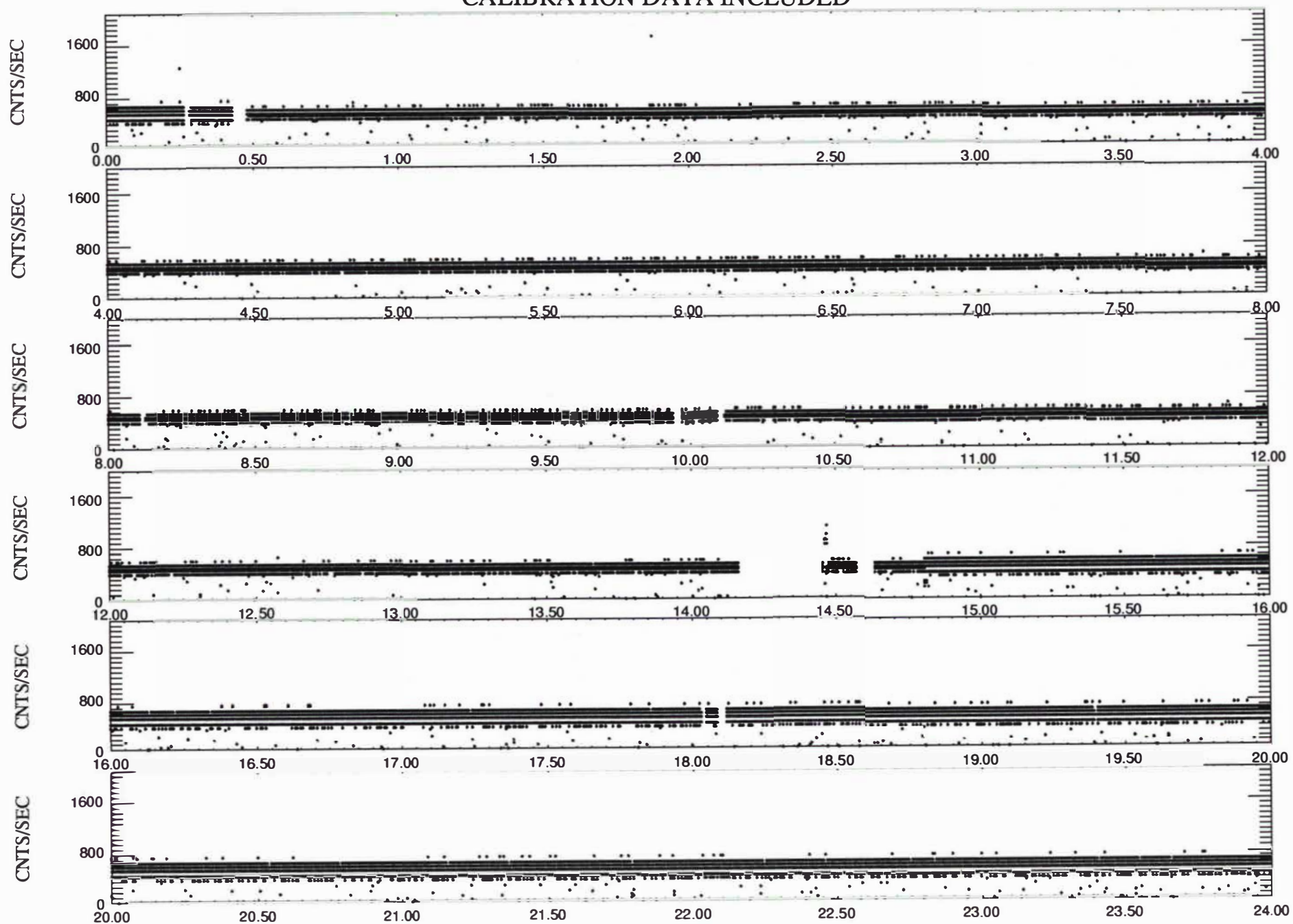
HUS MODES EDR day 275, year 1995 to day 275, year 1995 NO BURST (0)

1/26/96

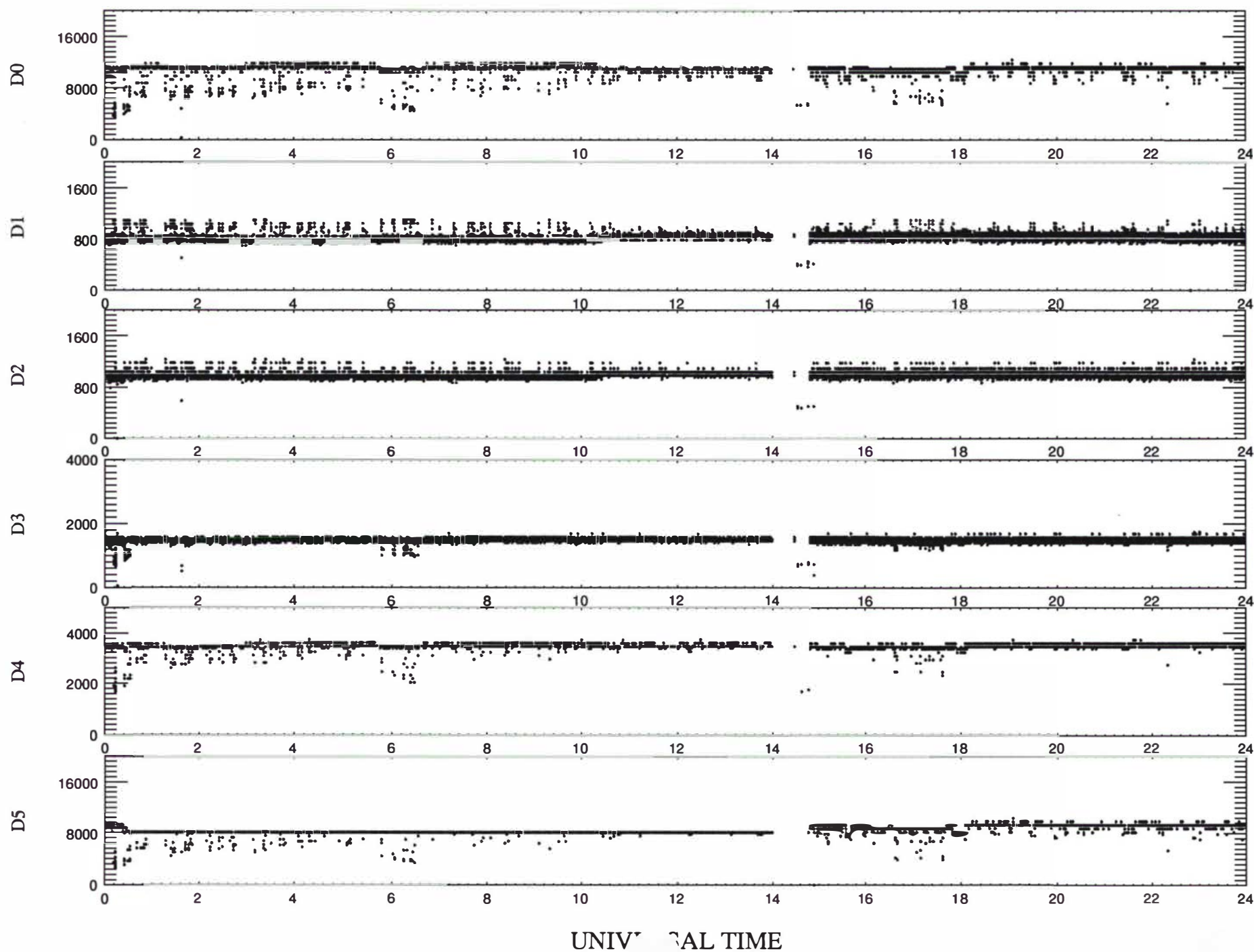


HUS 2A, MODE 1, NOT AVERAGED EDR day 275, year 1995 to day 275, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV SAL TIME



From HAGEDON@fender.msfc.nasa.gov Wed Oct 4 12:08 PDT 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Wed, 4 Oct 1995 14:06:42 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 3845

TIME: TJD=9993 SECONDS=09884

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

From HAGEDON@fender.msfc.nasa.gov Wed Oct 4 12:22 PDT 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Wed, 4 Oct 1995 14:21:59 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3846

BATSEARCH PROGRAM

BATSE BURST # 3846
EVENT OF 1995 OCT 3 DAY OF YEAR=276
EVENT CROSSING TIME AT BATSE : 33519. S. OR 09:18:39.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 40.000 87.000
BATSE PEAK COUNTING RATE: 1800 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 3/10/ 95 IS:
RA= 202.918 DEC= 59.869 DIST= 2.726 AU
BATSE-ULYSSES DISTANCE = 407815603. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=146.99 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1140.74 SECS.
CROSSING TIME AT ULYSSES IS 32378. S. OR 08:59:38 +/- 161.34 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 3/10/ 95 IS:
RA= 224.803 DEC= -17.497 DIST= 2.150 AU
MARS-BATSE DISTANCE = 321700800. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 69.51 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 375.56 SECS.
CROSSING TIME AT MARS IS 33895. S. OR 09:24:54 +/- 180.22 SECONDS

BATSE BURST TRIGGER

NO.: 3846

TIME: TJD=9993 SECONDS=33519

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=52.5 AZIMUTH=299.5 ERROR=3.88 DEGREES

COMMENTS:

BURST. SINGLE SPIKE, DUR.-0.3 SEC. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3846	951003	9993	33519	1800	040	+87	.3

BATSE BURST# 3846

12 / 2 / 96

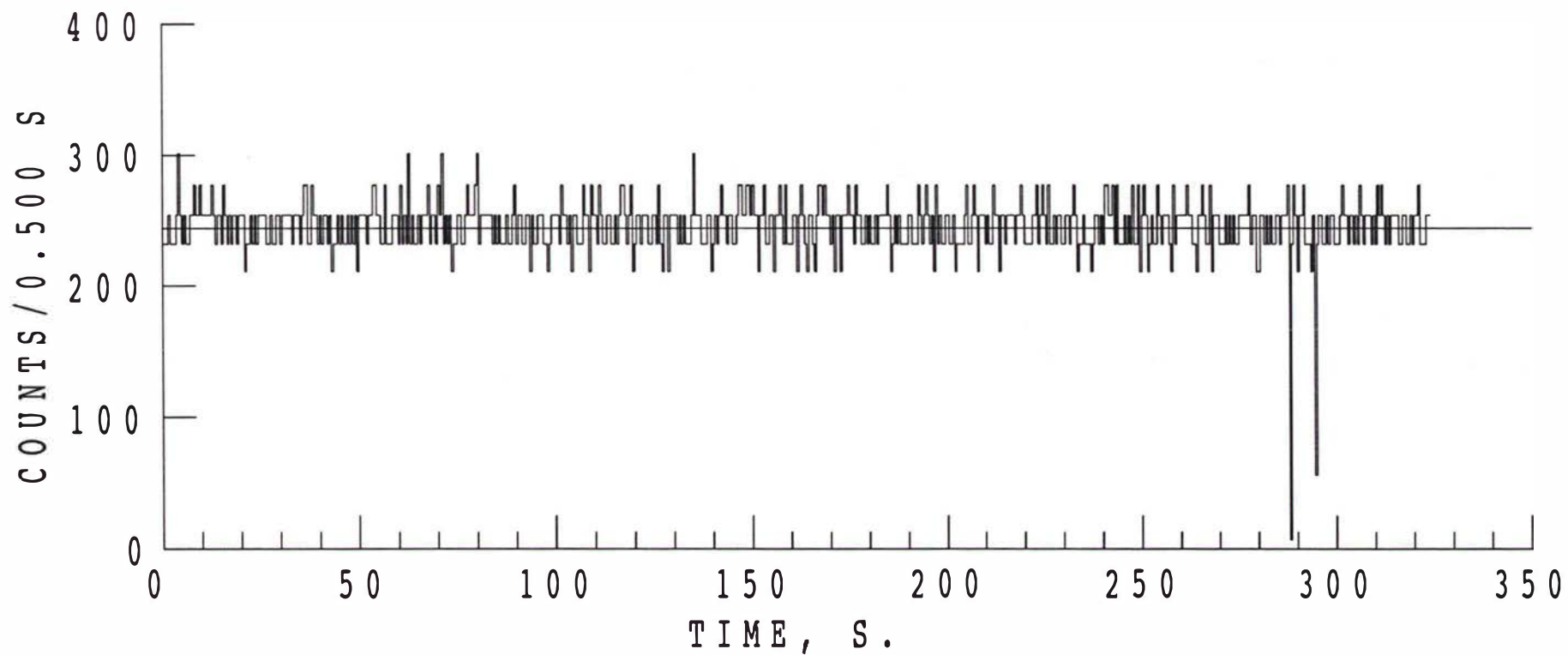
ULYSSES RT

3 / 10 / 95 32220.336 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From HAGEDON@fender.msfc.nasa.gov Wed Oct 4 12:17 PDT 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Wed, 4 Oct 1995 14:15:28 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 3847

TIME: TJD=9993 SECONDS=68267

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

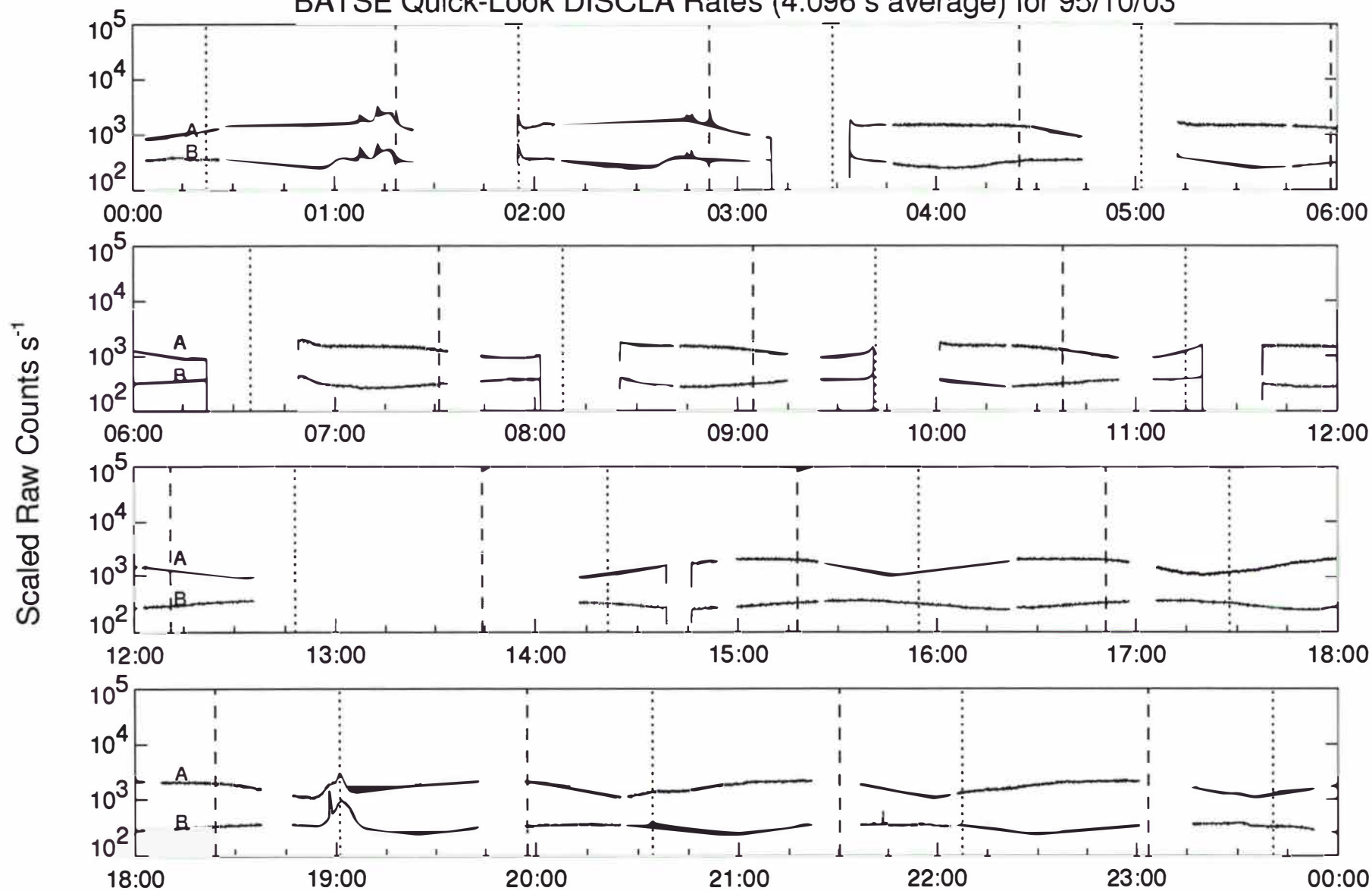
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/03



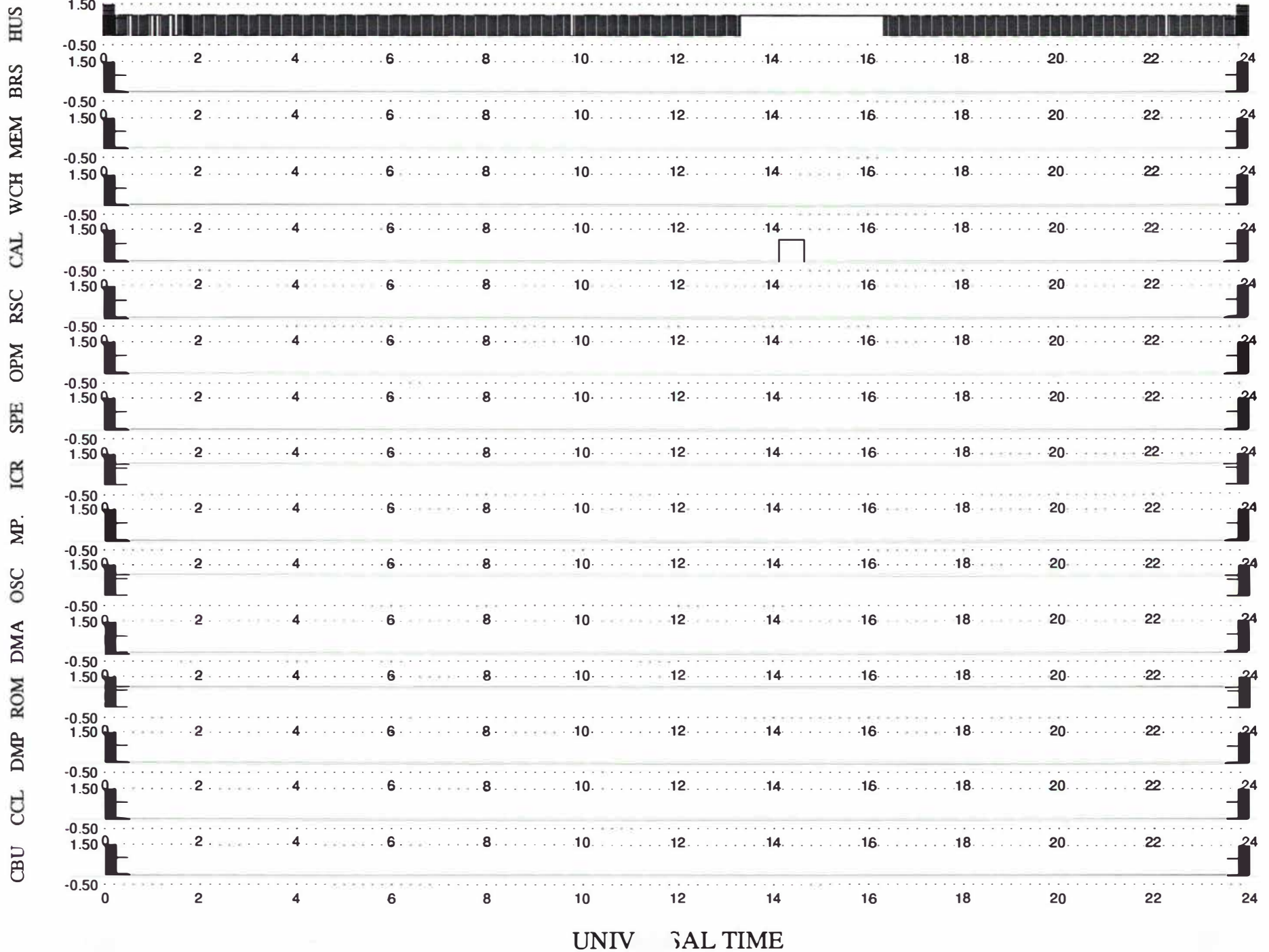
Current Time: 95/10/05, 0528 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

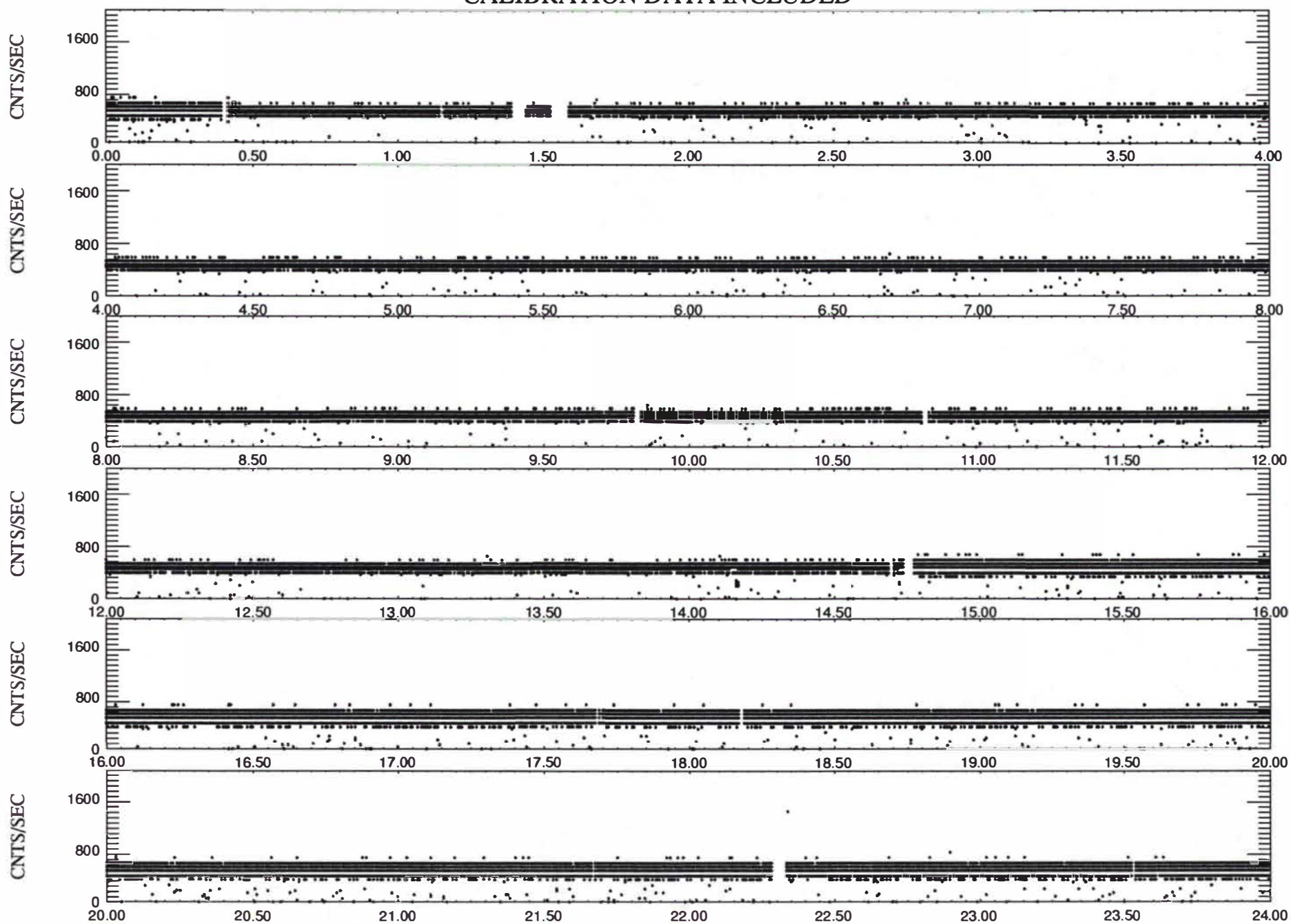
HUS MODES EDR day 276, year 1995 to day 276, year 1995
NO BURST (0)

1/26/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 276, year 1995 to day 276, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV CAL TIME

From WOODSP@ssl.msfc.nasa.gov Thu Oct 5 11:13 PDT 1995
From: WOODSP@ssl.msfc.nasa.gov
Date: Thu, 5 Oct 1995 13:13:27 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3848

BATSEARCH PROGRAM

BATSE BURST # 3848
EVENT OF 1995 OCT 4 DAY OF YEAR=277
EVENT CROSSING TIME AT BATSE : 37428. S. OR 10:23:48.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 22.000 -5.000
BATSE PEAK COUNTING RATE: 3900 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 4/10/ 95 IS:
RA= 203.304 DEC= 59.648 DIST= 2.732 AU
BATSE-ULYSSES DISTANCE = 408663025. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 54.66 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 788.54 SECS.
CROSSING TIME AT ULYSSES IS 38217. S. OR 10:36:56 +/- 255.02 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 4/10/ 95 IS:
RA= 225.499 DEC= -17.701 DIST= 2.154 AU
MARS-BATSE DISTANCE = 322200128. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 32.45 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 906.90 SECS.
CROSSING TIME AT MARS IS 38335. S. OR 10:38:54 +/- 113.90 SECONDS

BATSE BURST TRIGGER

NO.: 3848

TIME: TJD=9994 SECONDS=37428

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=104.4 AZIMUTH=169.4 ERROR=2.5 DEGREES

COMMENTS:

GRB FRED WITH A 7 SEC DURATION. VISIBLE IN CHANNEL 4.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3848	951004	9994	37428	3900	022	-05	7

BATSE BURST# 3848

12 / 2 / 96

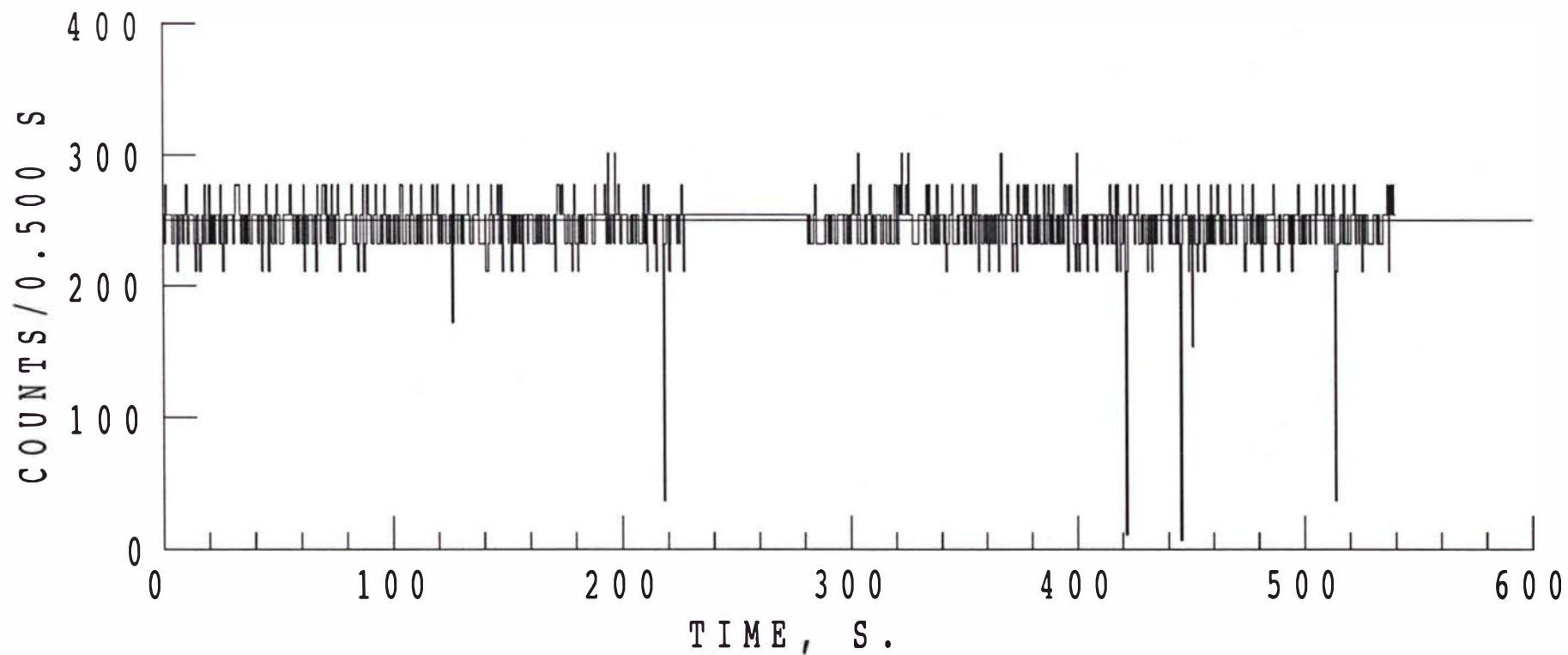
ULYSSES RT

4 / 10 / 95 37944.359 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From WOODSP@SSLLES.MSFC.NASA.GOV Thu Oct 5 09:54 PDT 1995
From: WOODSP@SSLLES.MSFC.NASA.GOV
Date: Thu, 5 Oct 1995 11:53:07 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@SSLLES.MSFC.NASA.GOV, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3849

TIME: TJD=9994 SECONDS=65685

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

PARTICLES AT A DISTANCE.

From WOODSP@SSLLES.MSFC.NASA.GOV Thu Oct 5 09:56 PDT 1995
From: WOODSP@SSLLES.MSFC.NASA.GOV
Date: Thu, 5 Oct 1995 11:54:49 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@SSLLES.MSFC.NASA.GOV, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3850

TIME: TJD=9994 SECONDS=

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

PARTICLES AT A DISTANCE.

95	7	1	117	23737	23737	3658
95	7	6	121	42735	42735	3662
95	7	11	123	13789	13789	3663
95	7	13	BGR	32133	32176	3664
95	7	30	128	76149	76124	3720
95	8	4	131	7135	07134	3734
95	8	4	133	45377	45376	3735
95	8	8	BGR	13023	12974	3745
95	8	9	136	85945	85945	3750
95	8	18	137	5065	05002	3765
95	8	22	140	13751	13749	3767
95	9	4	142	52692	52688	3776
95	9	9	145	85473	85452	3788
95	9	19	151	51465	51447	3806
95	9	21	152	20947	20947	3811
95	9	22	BGR	15495		
95	9	22	BGR	25929		
95	9	26	BGR	63919		
95	10	1	153	41907		
95	10	2	BGR	77583		3843
95	10	4	BGR	83974		
95	10	5	154	14842.112		
95	10	8	156	46287.863		
95	10	10	BGR	11774		
95	10	11	157	77693.094		3860
95	10	13	159	57097.299		
95	10	14	160	13108.167		
95	10	14	161	43561.3		
95	10	16	162	02484.285		3870
95	10	16	BGR	71607		3871
95	10	18	163	19832.069		
95	10	19	64	11712.625		
95	10	19	165	48244.594		3875
95	10	25	167	85239.738		
95	11	2	168	07085.879		
95	11	2	69	21209.015		3891
95	11	2	BGR	28693		
95	11	5	BGR	01745		
95	11	5	170	05868.077		3893
95	11	5	171	46827.808		
95	11	7	BGR	27298		
95	11	11	BGR	34960		
95	11	12	172	66495.244		
95	11	13	173	84358.872		3906
95	11	15	BGR	38929		
95	11	17	175	10123.762		
95	11	18	BGR	82560		
95	11	19	176	29831.402		3912
95	11	19	177	46457.519		
95	11	19		59448		
95	11	21		22280		
95	11	22	179	09841.38		
95	11	22	180	17107.738		
95	11	23	BGR	65408		
95	11	24	BGR	21266		3918
95	11	24	BGR	25132		

 -- T. L. Cline ----- LHEAVX::CLINE

From cline@lheavx.gsfc.nasa.gov Fri Jan 26 13:00 PST 1996
 Date: Fri, 26 Jan 1996 13:00:45 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: Improved list; same question.

Dear Kevin,

I'm making a little progress here, tracking down these events. This is a slightly improved list, with a few more BATSE triggers identified. - TLC

Yr	Mn	Dy	Konus#	Konus Tzero	BATSE Tz, #	Ulysses
94	11	14	BGR	07360	07358	3283 - NO
94	11	19	4	70269.175	70250	3287 R I
94	11	21	6	62700.945	62697	3290 trig.
94	11	25	7	79470.156	79470	3295 R I
94	11	26	BGR	01246	01245	3296
94	11	26	8	44557.952	44521	3298 trig.
94	11	26	BGR	60860	60861	3299
94	11	26	9	71809.732	71798	3301 R I
94	11	27	10	52225.68	52217	3303 R I
94	11	28	BGR	56220	56217	3305
94	12	28	28	27585.915	27581	3330 R I
94	12	29	29	82268.781	82258	3334 R I
95	1	4	31	26319.613	26319	3345 R I
95	1	11	33	17352.241	17263	3351 R I
95	1	11	34	44329	44310	3352
95	1	17	BGR	05760	05761	3360
95	1	18	BGR	44574	44589	3364
95	2	7	BGR	02774	02781	3406
95	2	8	45	07824	07824	3408
95	2	10	47	08424	08421	3410
95	2	11	48	08697	08697	3412 trig.
95	2	11	50	72469	72468	3415
95	2	21	BGR	74701	74705	3436
95	2	26	54	53351	53336	3442
95	3	1	BGR	75731	75761	3448
95	3	4	56	37661	37657	3453
95	3	5	58	54309	54304	3458
95	3	10	BGR	78388	78395	3464
95	3	25	63	25841	25844	3480
95	3	25	64	63392	63391	3481
95	3	27	BGR	26323	26347	3485
95	3	27	BGR	85672	85671	3486
95	4	1	69	42647	42642	3488
95	4	1	70	74635	74634	3489
95	4	3	71	47985	47987	3491
95	4	3	72	84828	84826	3492
95	4	16	BGR	48420	48419	3509
95	4	18	81	83793	83795	3512
95	4	25	86	00923	00919	3523
95	4	30	BGR	54224	54229	3527
95	5	3	88	66971	66970	3537
95	5	10	90	28083	28079	3569
95	5	13	93	81706	81703	3571
95	5	21	97	25161	25157	3588
95	5	22	98	23898	23896	3590
95	5	22	100	85280	85283	3593
95	5	24	102	14902	14899	3598
95	6	2	104	25592	25592	3618
95	6	10	107	6849	06849	3637
95	6	24	111	84124	84084	3648
95	6	25	113	14626	14601	3649
95	6	29	115	37033	37036	3654
95	7	1	116	12762	12758	3657

KONUS 19951004 83970

ULYSSES RT

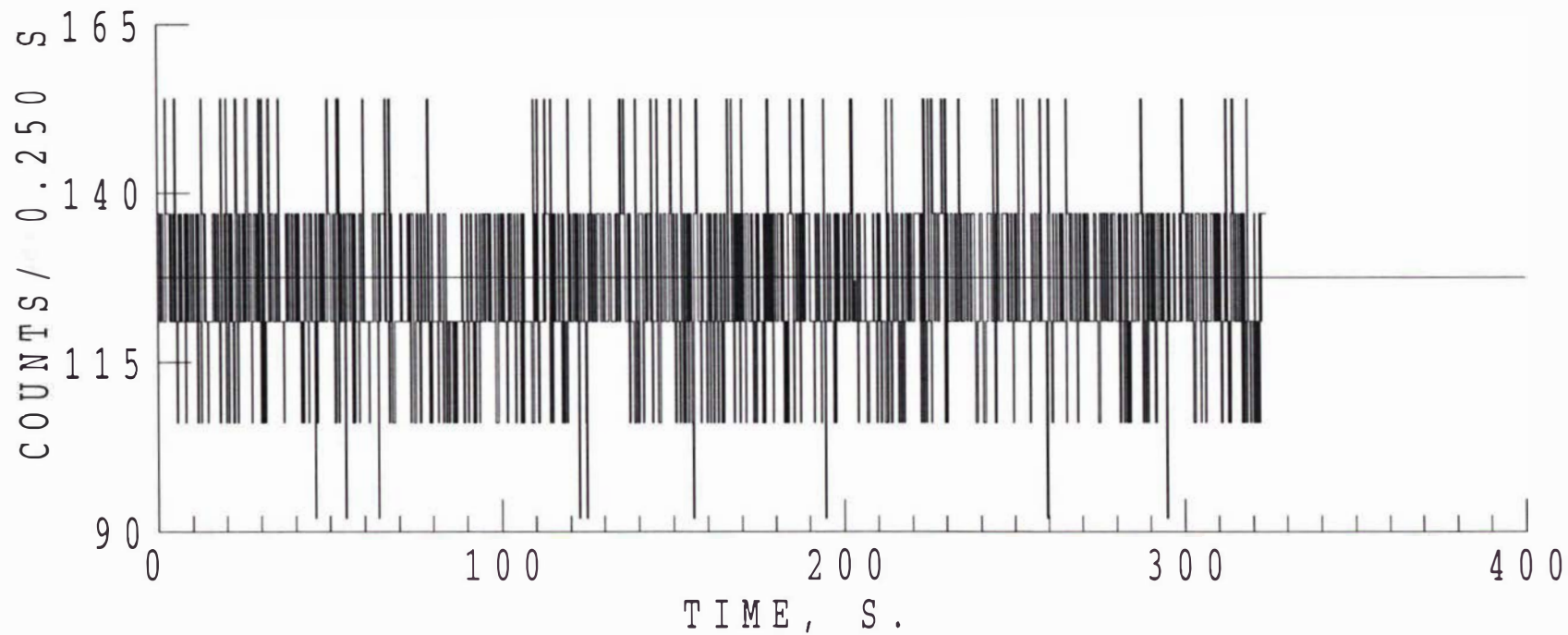
01 / 09 / 11

04 / 10 / 95 83808.109 s

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



1 / 2 / 9 6

U L Y S S E S R T

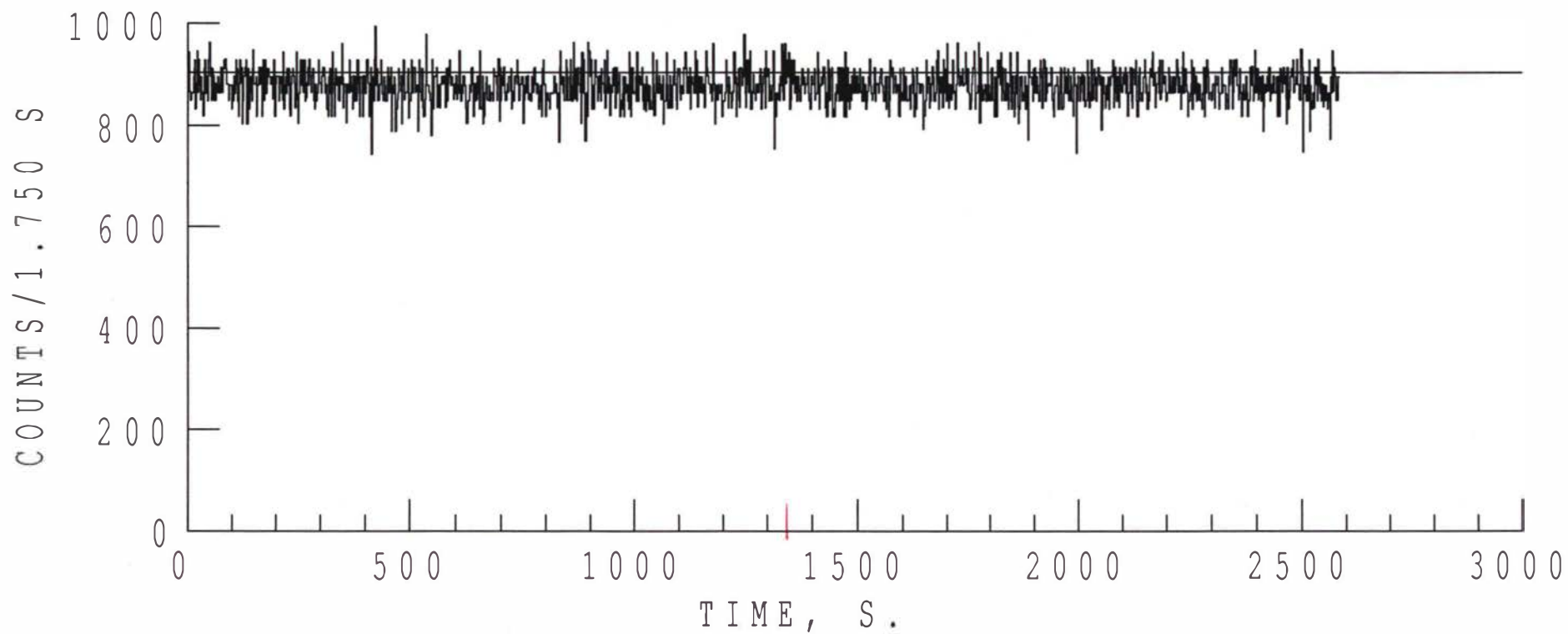
4 / 1 0 / 9 5 8 2 6 2 0 . 0 9 4 s

0 . 2 5 0 s I N T E R V A L S R E G R O U P E D B Y 7

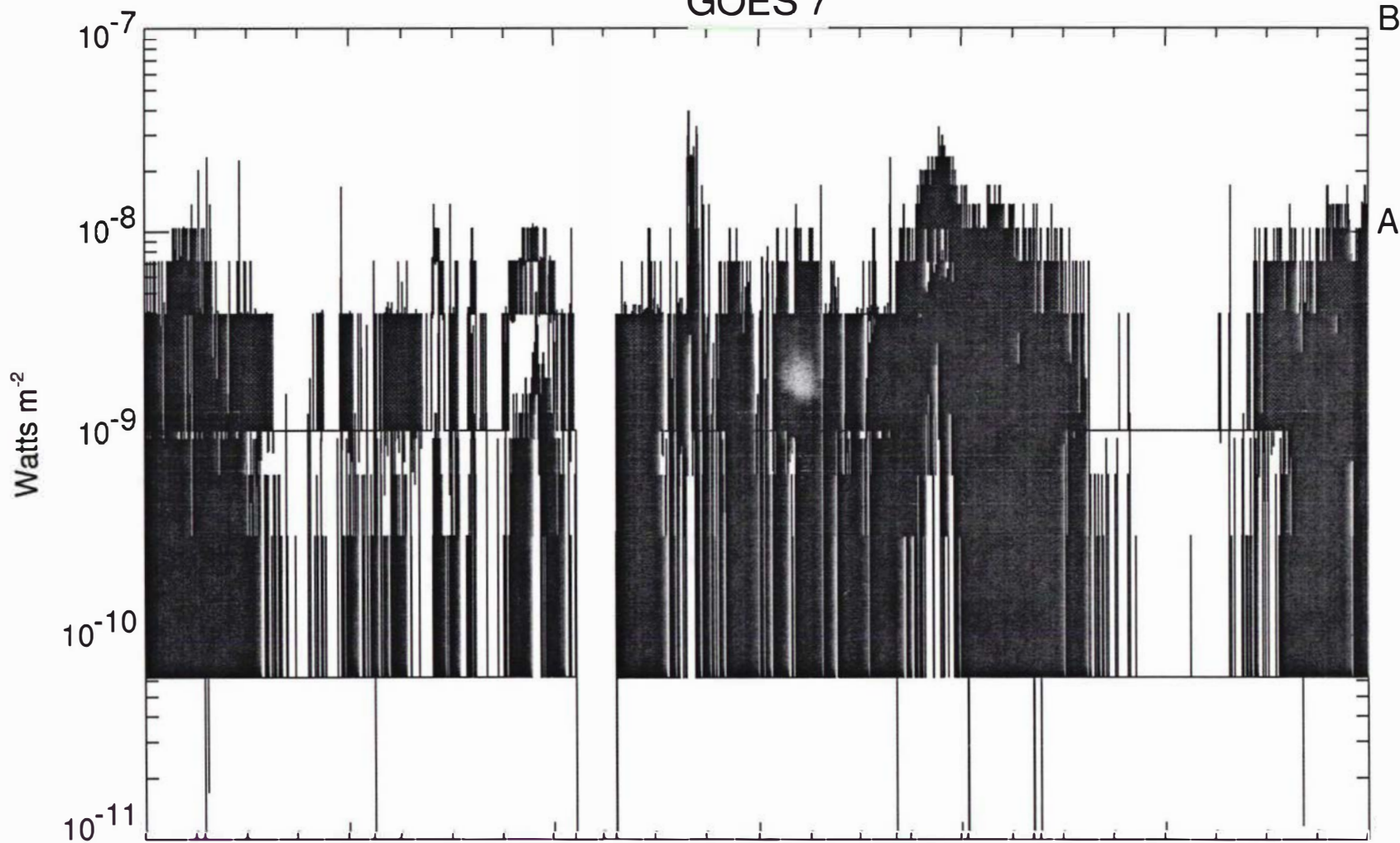
0 - 0 k e V

N = 10 M = 2

> 4.0 SIGMA FLUCTUATIONS



GOES 7



Data Start: 95/10/04, 0000:00

Plot created: 95/11/15, 1806

Channel

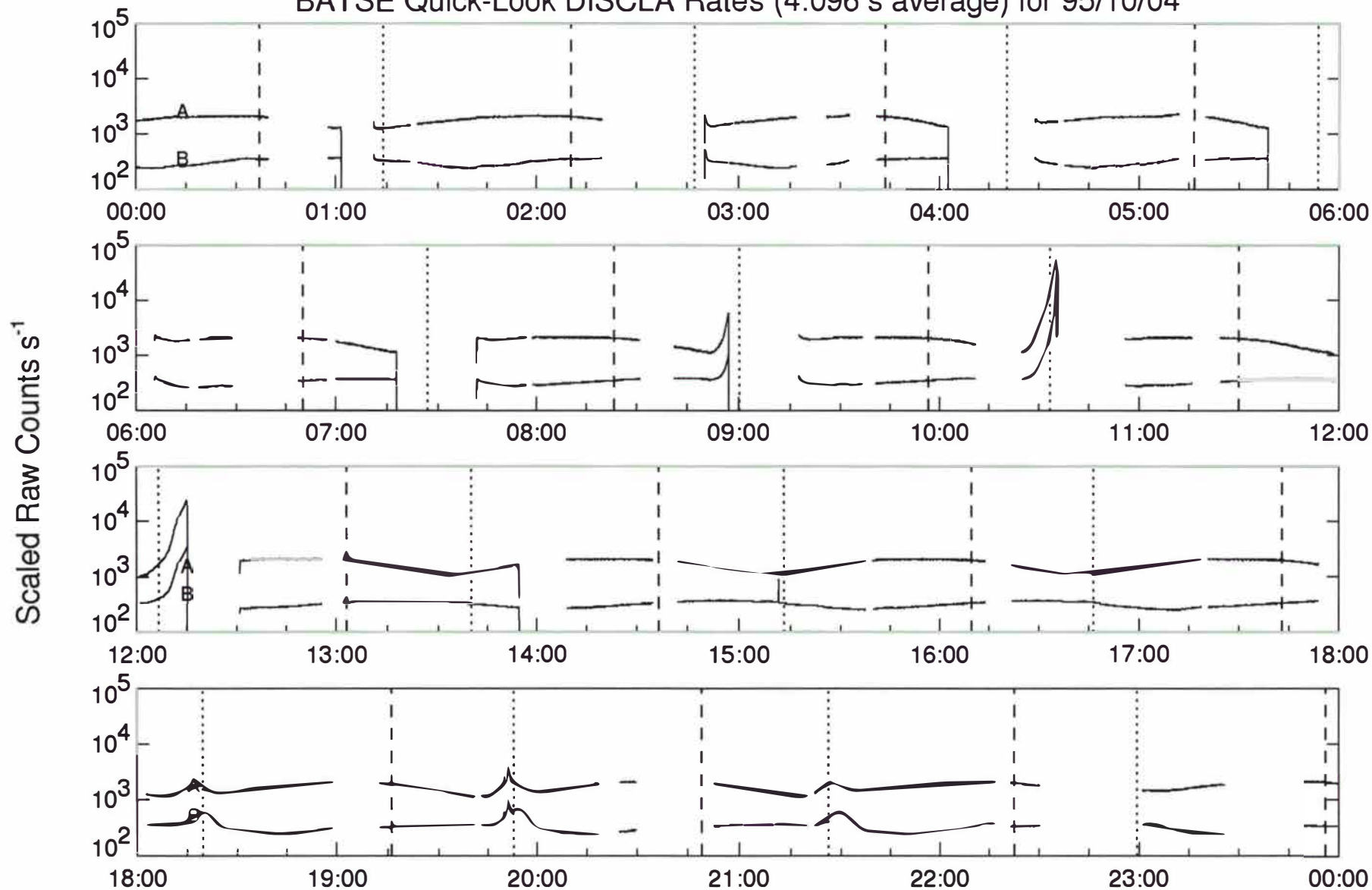
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/04



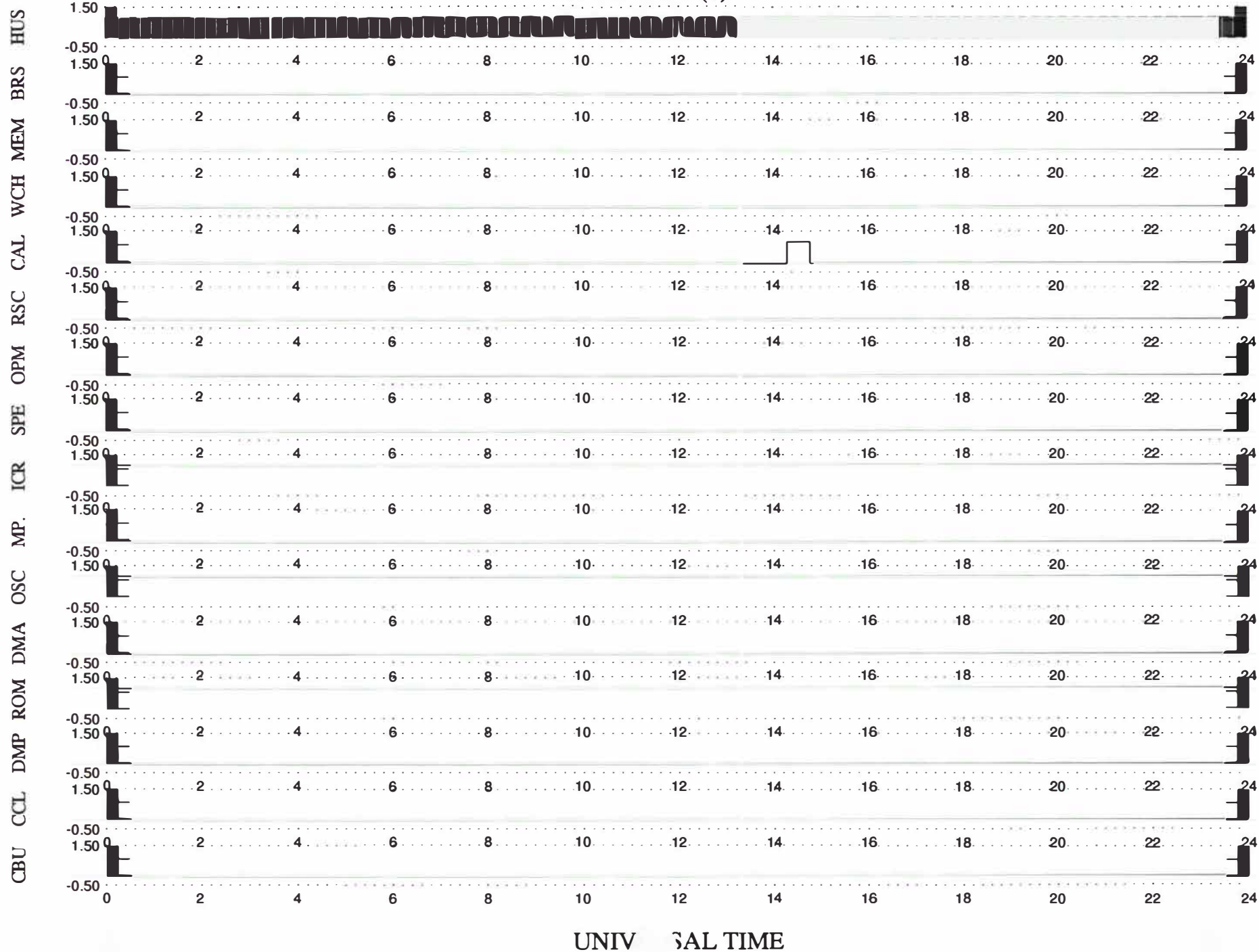
Current Time: 95/10/06, 0528 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

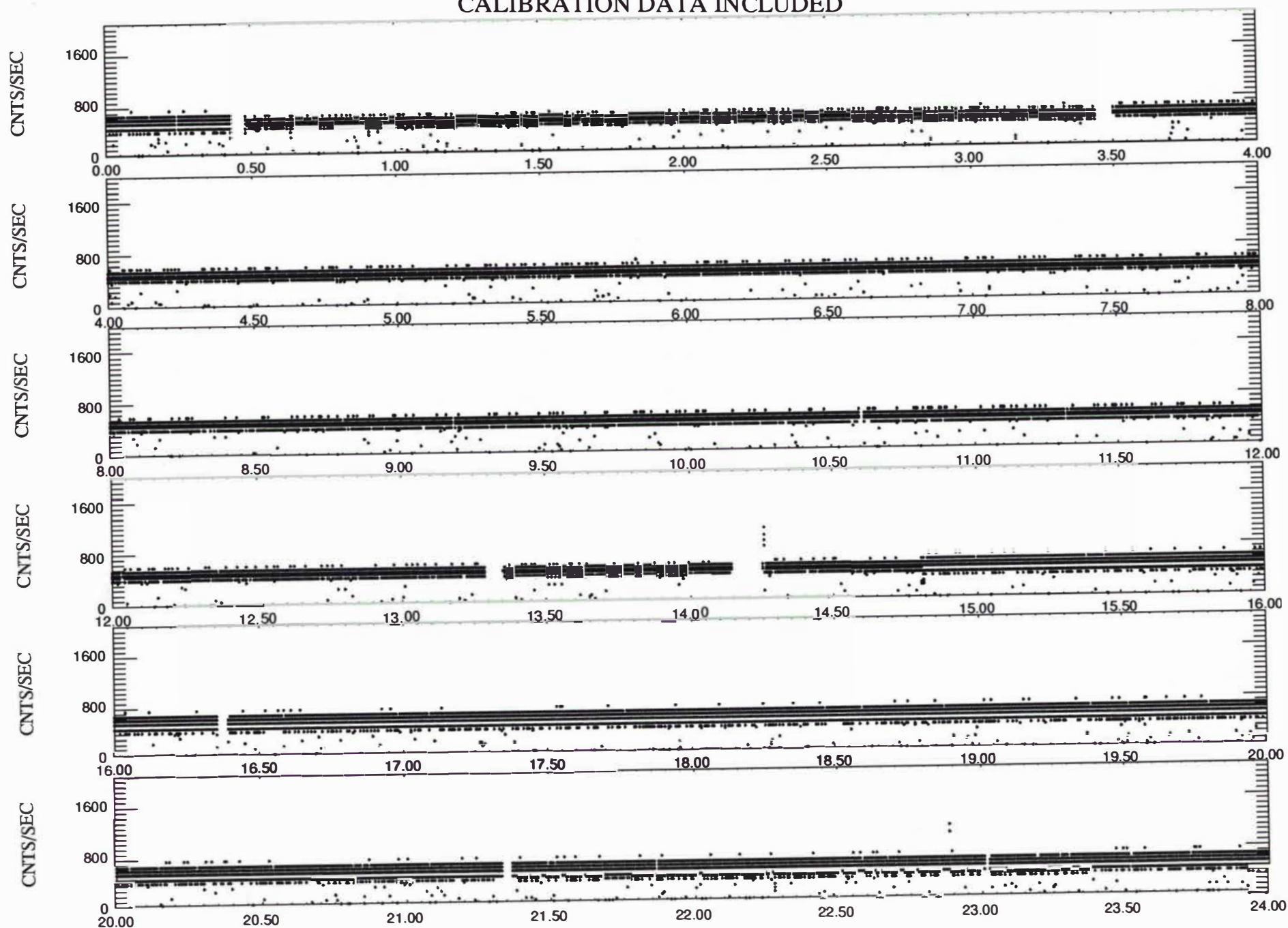
HUS MODES EDR day 277, year 1995 to day 277, year 1995
NO BURST (0)

1/26/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 277, year 1995 to day 277, year 1995
CALIBRATION DATA INCLUDED

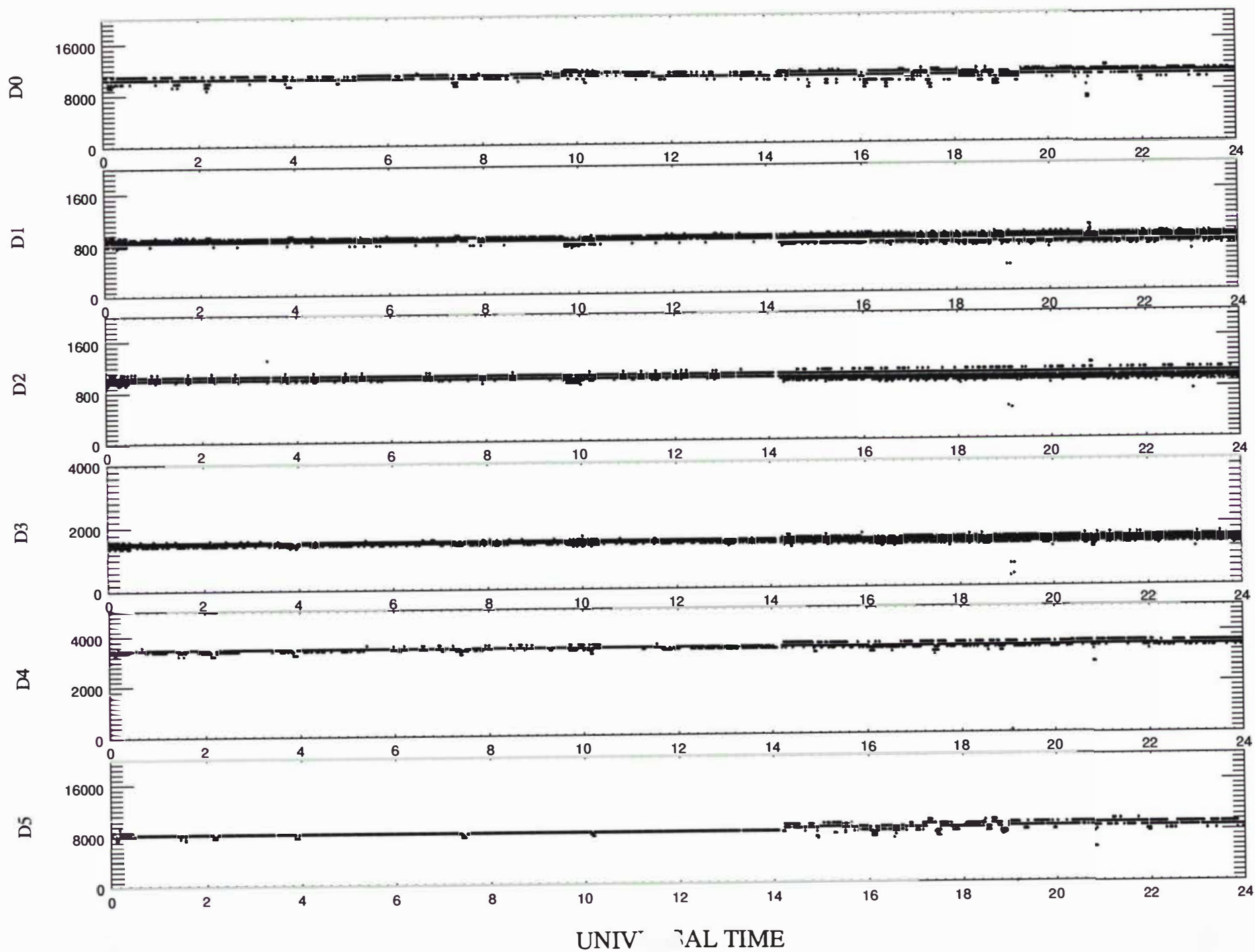
1/26/96



UNIVERSAL TIME

HUS 2B COUNTS / SEC QEDR day 277, year 1995 to day 277, year 1995

10/5/95



From DEAL@SSLLES.MSFC.NASA.GOV Mon Oct 9 09:21 PDT 1995
Date: Mon, 9 Oct 1995 11:21:21 -0500 (CDT)
From: DEAL@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@ssl.msfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3851

TIME: TJD=9995 SECONDS=80465

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT

95	7	1	117	23737	23737	3658
95	7	6	121	42735	42735	3662
95	7	11	123	13789	13789	3663
95	7	13	BGR	32133	32176	3664
95	7	30	128	76149	76124	3720
95	8	4	131	7135	07134	3734
95	8	4	133	45377	45376	3735
95	8	8	BGR	13023	12974	3745
95	8	9	136	85945	85945	3750
95	8	18	137	5065	05002	3765
95	8	22	140	13751	13749	3767
95	9	4	142	52692	52688	3776
95	9	9	145	85473	85452	3788
95	9	19	151	51465	51447	3806
95	9	21	152	20947	20947	3811
95	9	22	BGR	15495		
95	9	22	BGR	25929		
95	9	26	BGR	63919		
95	10	1	153	41907		
95	10	2	BGR	77583		3843
95	10	4	BGR	83974		
95	10	5	154	14842.112		
95	10	8	156	46287.863		
95	10	10	BGR	11774		
95	10	11	157	77693.094		3860
95	10	13	159	57097.299		
95	10	14	160	13108.167		
95	10	14	161	43561.3		
95	10	16	162	02484.285		3870
95	10	16	BGR	71607		3871
95	10	18	163	19832.069		
95	10	19	64	11712.625		
95	10	19	165	48244.594		3875
95	10	25	167	85239.738		
95	11	2	168	07085.879		
95	11	2	69	21209.015		3891
95	11	2	BGR	28693		
95	11	5	BGR	01745		
95	11	5	170	05868.077		3893
95	11	5	171	46827.808		
95	11	7	BGR	27298		
95	11	11	BGR	34960		
95	11	12	172	66495.244		
95	11	13	173	84358.872		3906
95	11	15	BGR	38929		
95	11	17	175	10123.762		
95	11	18	BGR	82560		
95	11	19	176	29831.402		3912
95	11	19	177	46457.519		
95	11	19		59448		
95	11	21		22280		
95	11	22	179	09841.38		
95	11	22	180	17107.738		
95	11	23	BGR	65408		
95	11	24	BGR	21266		3918
95	11	24	BGR	25132		

-- T. L. Cline ----- LHEAVX::CLINE

From cline@lheavx.gsfc.nasa.gov Fri Jan 26 13:00 PST 1996
 Date: Fri, 26 Jan 1996 13:00:45 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: Improved list; same question.

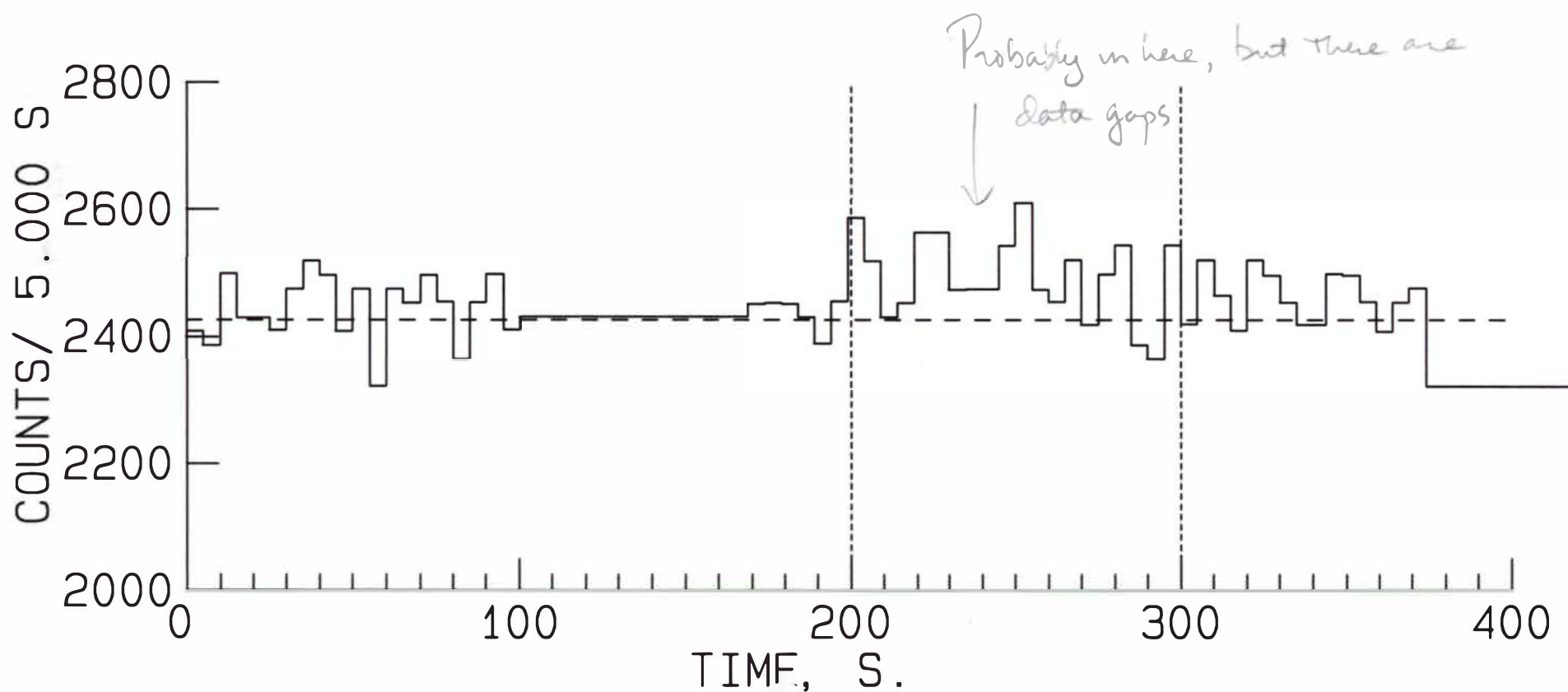
Dear Kevin,

I'm making a little progress here, tracking down these events. This is a slightly improved list, with a few more BATSE triggers identified. - TLC

Yr	Mn	Dy	Konus#	Konus Tzero	BATSE Tz, #	Ulysses
94	11	14	BGR	07360	07358	3283 - NO
94	11	19	4	70269.175	70250	3287 R I
94	11	21	6	62700.945	62697	3290 trig.
94	11	25	7	79470.156	79470	3295 R I
94	11	26	BGR	01246	01245	3296
94	11	26	8	44557.952	44521	3298 trig.
94	11	26	BGR	60860	60861	3299
94	11	26	9	71809.732	71798	3301 R I
94	11	27	10	52225.68	52217	3303 R I
94	11	28	BGR	56220	56217	3305
94	12	28	28	27585.915	27581	3330 R I
94	12	29	29	82268.781	82258	3334 R I
95	1	4	31	26319.613	26319	3345 R I
95	1	11	33	17352.241	17263	3351 R I
95	1	11	34	44329	44310	3352
95	1	17	BGR	05760	05761	3360
95	1	18	BGR	44574	44589	3364
95	2	7	BGR	02774	02781	3406
95	2	8	45	07824	07824	3408
95	2	10	47	08424	08421	3410
95	2	11	48	08697	08697	3412 trig.
95	2	11	50	72469	72468	3415
95	2	21	BGR	74701	74705	3436
95	2	26	54	53351	53336	3442
95	3	1	BGR	75731	75761	3448
95	3	4	56	37661	37657	3453
95	3	5	58	54309	54304	3458
95	3	10	BGR	78388	78395	3464
95	3	25	63	25841	25844	3480
95	3	25	64	63392	63391	3481
95	3	27	BGR	26323	26347	3485
95	3	27	BGR	85672	85671	3486
95	4	1	69	42647	42642	3488
95	4	1	70	74635	74634	3489
95	4	3	71	47985	47987	3491
95	4	3	72	84828	84826	3492
95	4	16	BGR	48420	48419	3509
95	4	18	81	83793	83795	3512
95	4	25	86	00923	00919	3523
95	4	30	BGR	54224	54229	3527
95	5	3	88	66971	66970	3537
95	5	10	90	28083	28079	3569
95	5	13	93	81706	81703	3571
95	5	21	97	25161	25157	3588
95	5	22	98	23898	23896	3590
95	5	22	100	85280	85283	3593
95	5	24	102	14902	14899	3598
95	6	2	104	25592	25592	3618
95	6	10	107	6849	06849	3637
95	6	24	111	84124	84084	3648
95	6	25	113	14626	14601	3649
95	6	29	115	37033	37036	3654
95	7	1	116	12762	12758	3657

ULYSSES RT
5/10/95 15660.416 s
0.500 S INTERVALS REGROUPED BY 10
21- 143 keV

3 / 7 / 2



1 / 2 / 9 6

ULYSSES RT

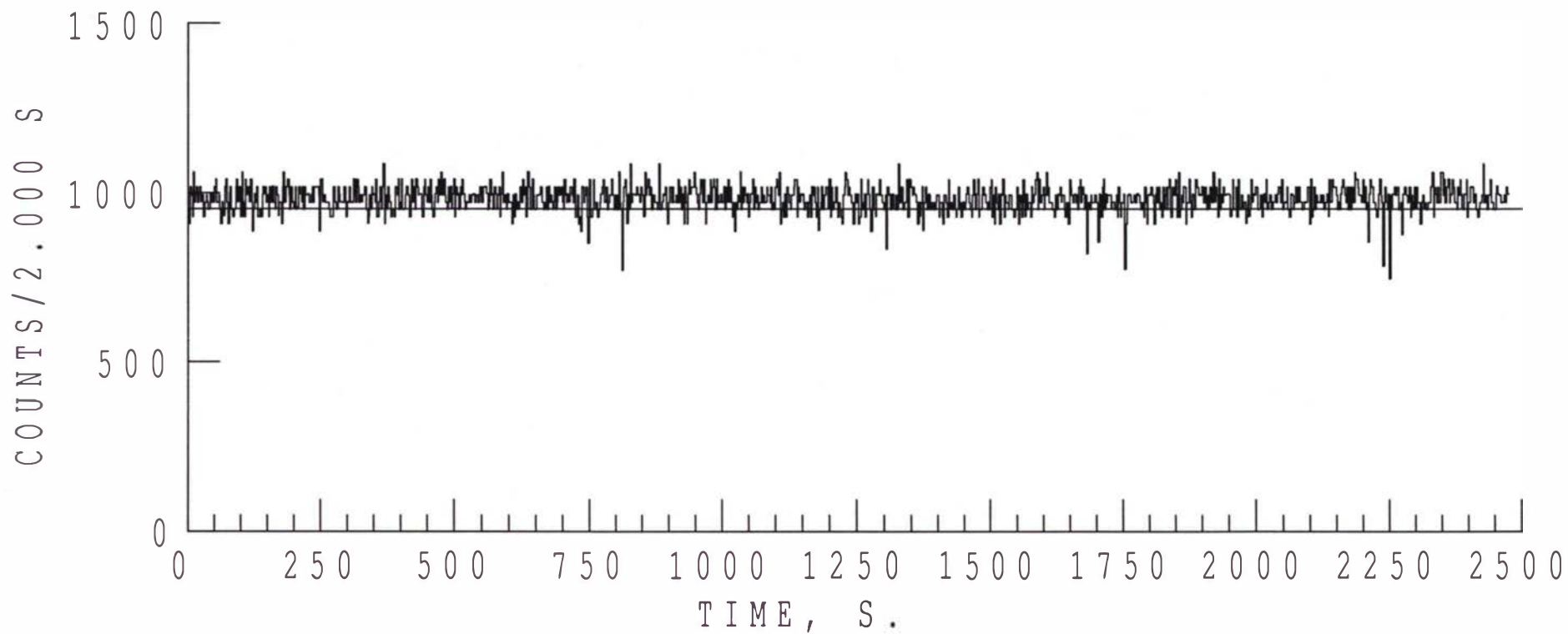
5 / 10 / 95 13500.382 s

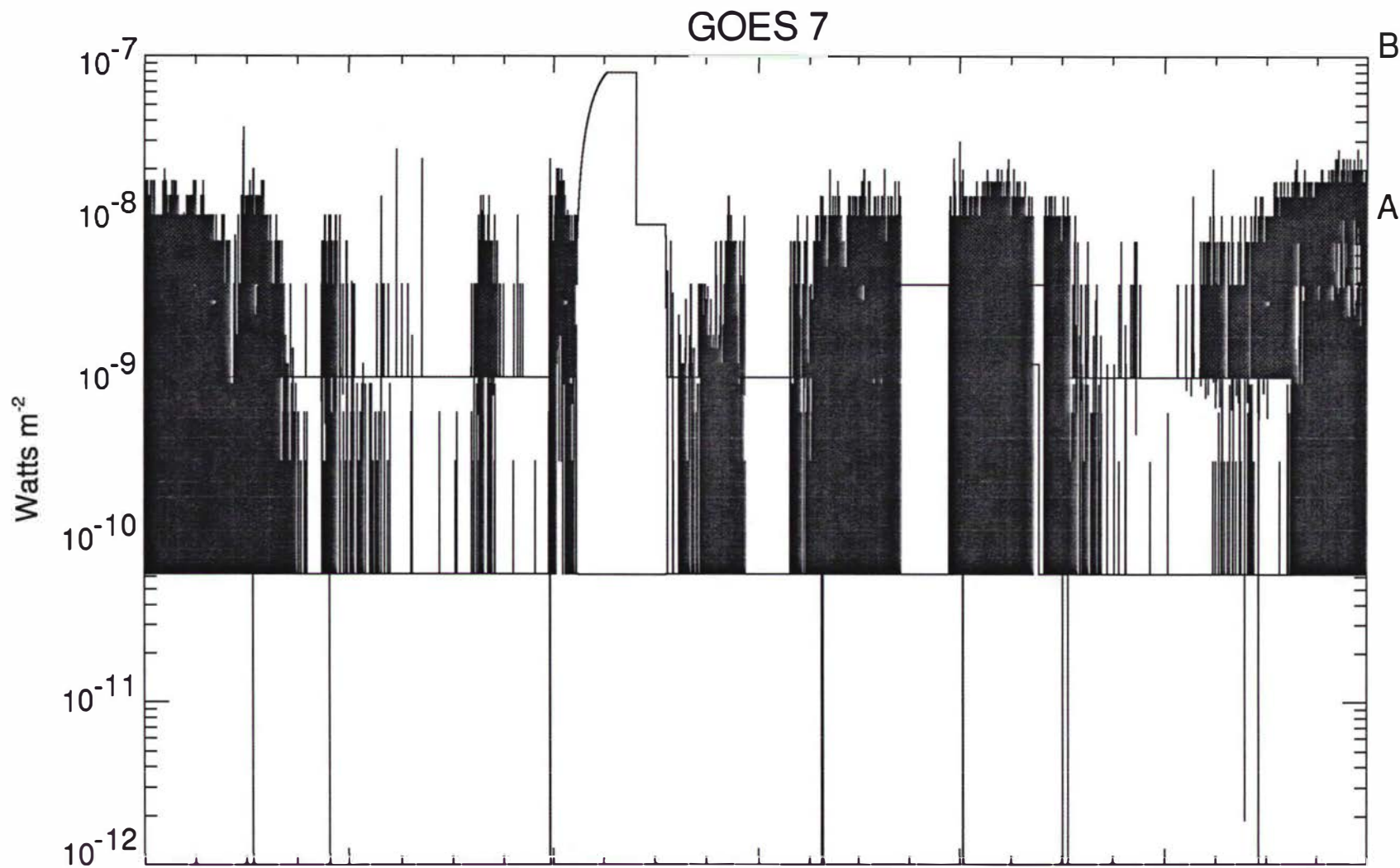
0.500 S INTERVALS REGROUPED BY 4

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





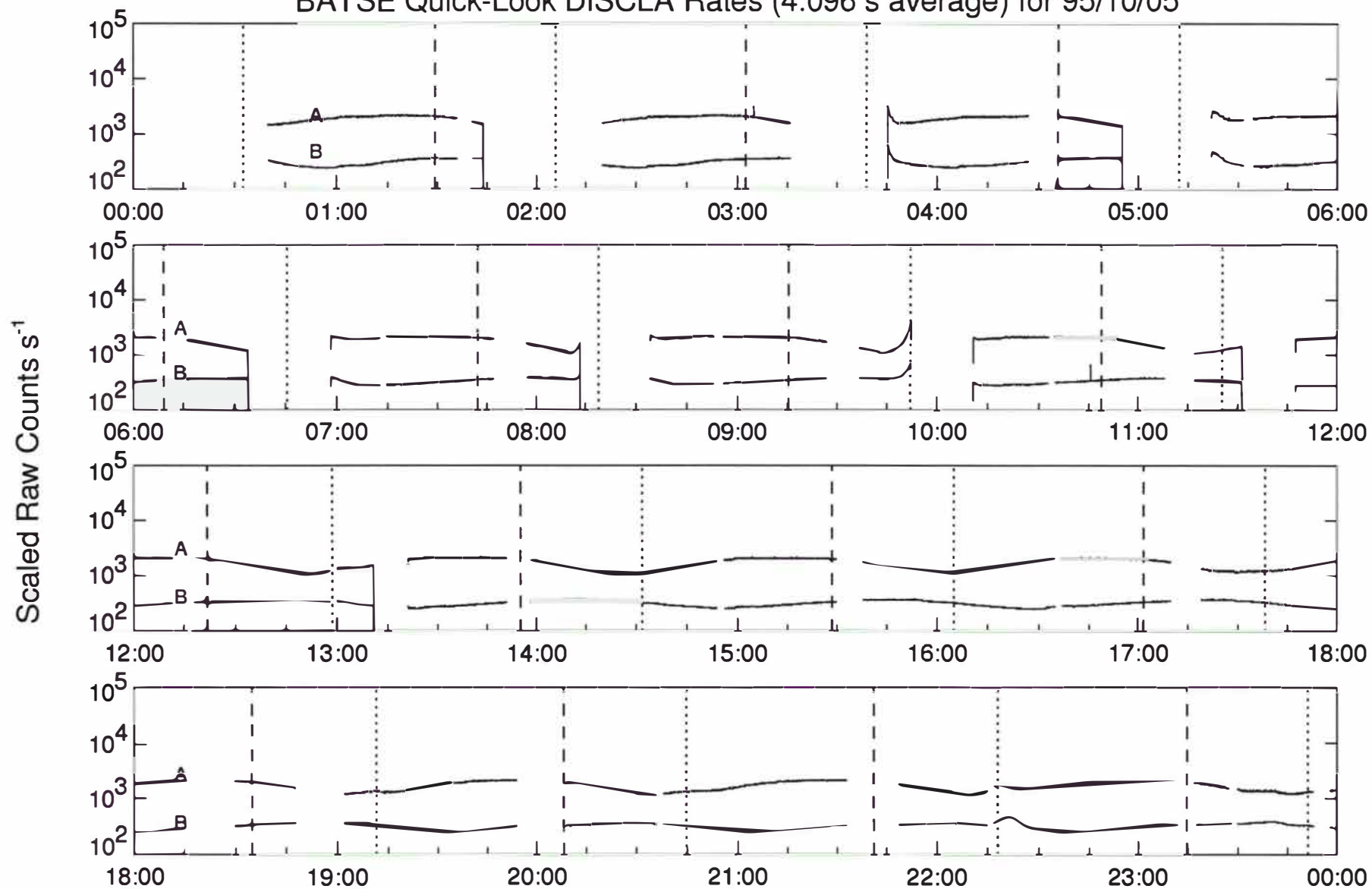
Data Start: 95/10/05, 0000:01

Plot created: 95/11/15, 1809

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 95/10/05



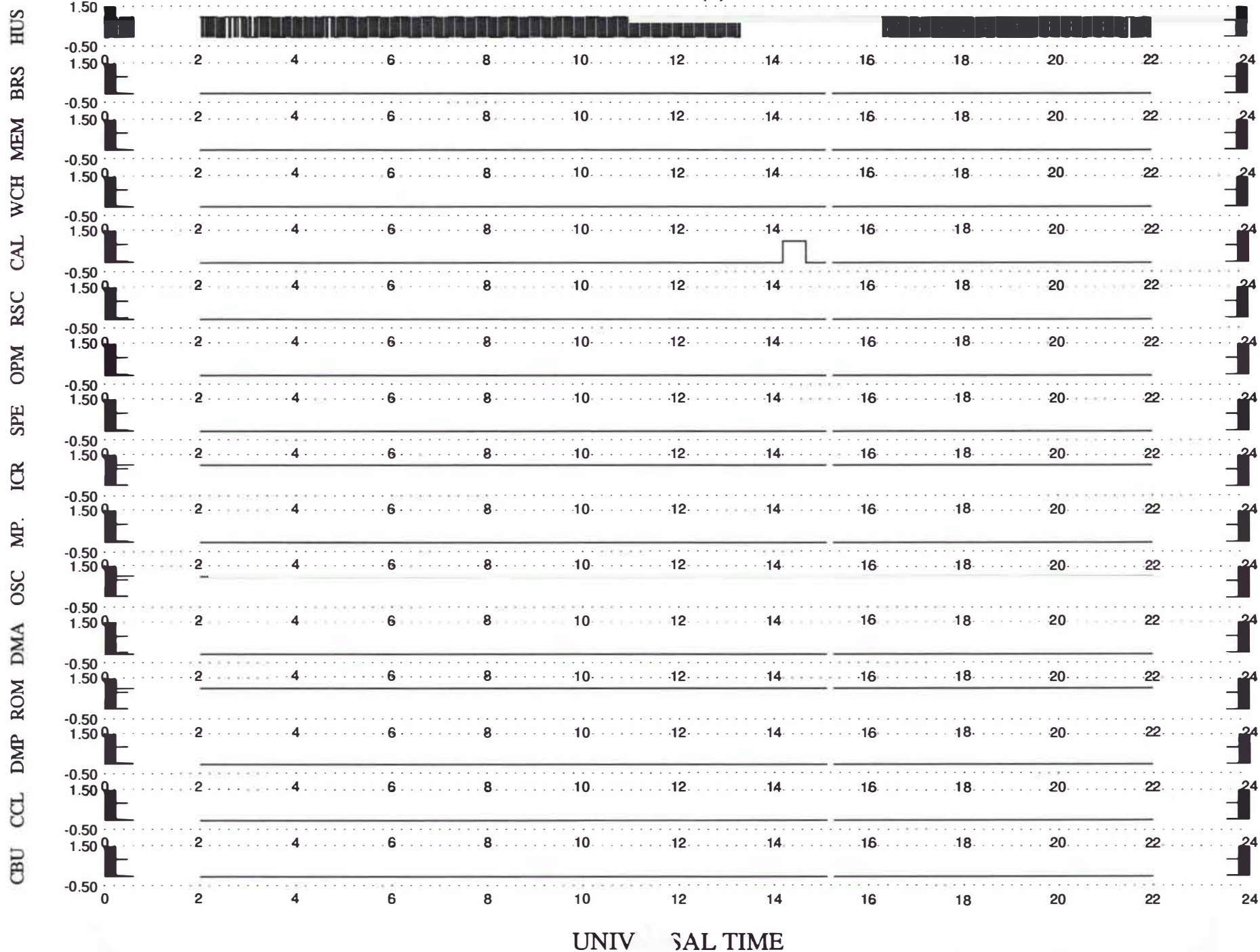
Current Time: 95/10/07, 0528 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

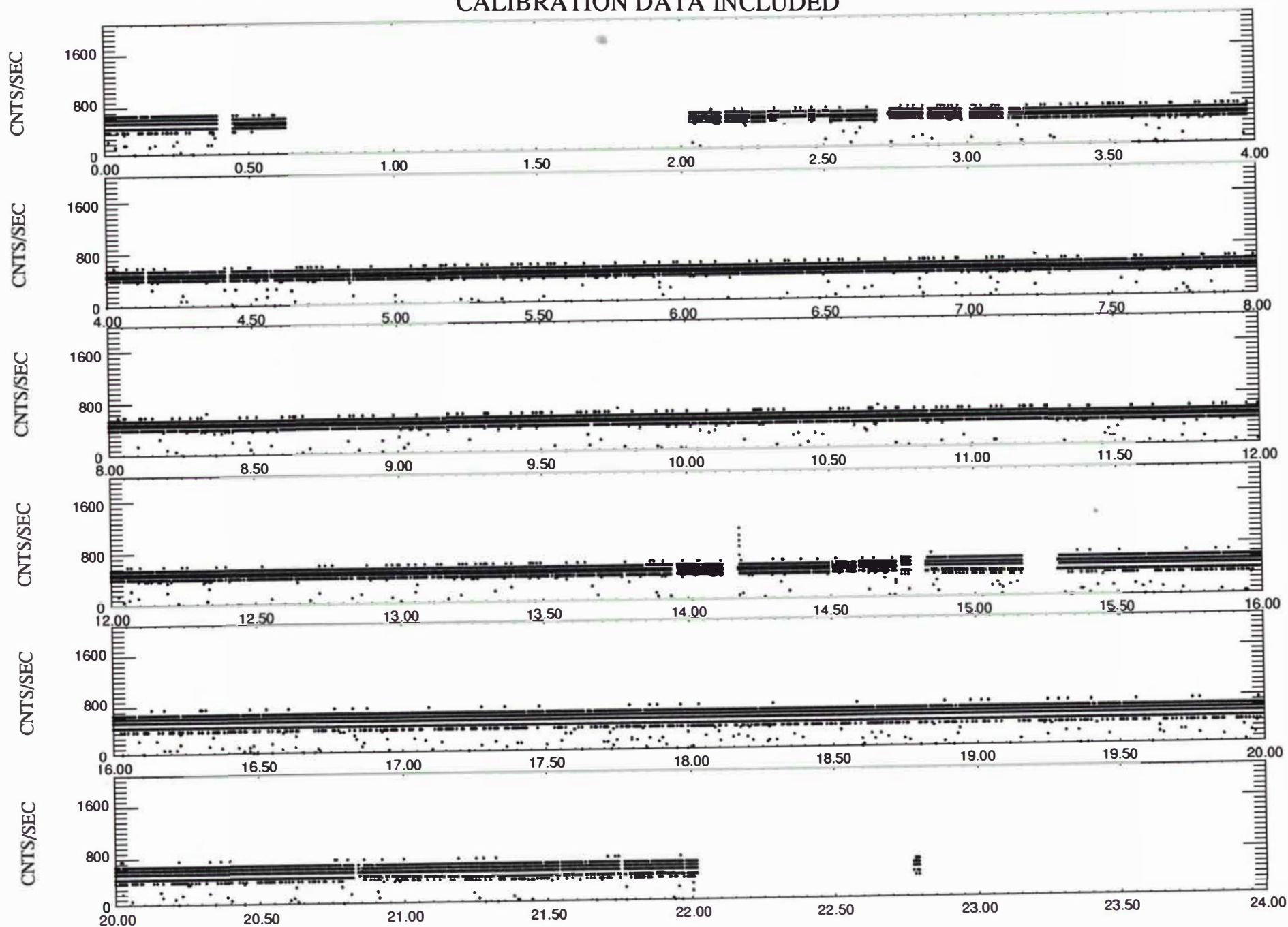
HUS MODES EDR day 278, year 1995 to day 278, year 1995
NO BURST (0)

1/26/96

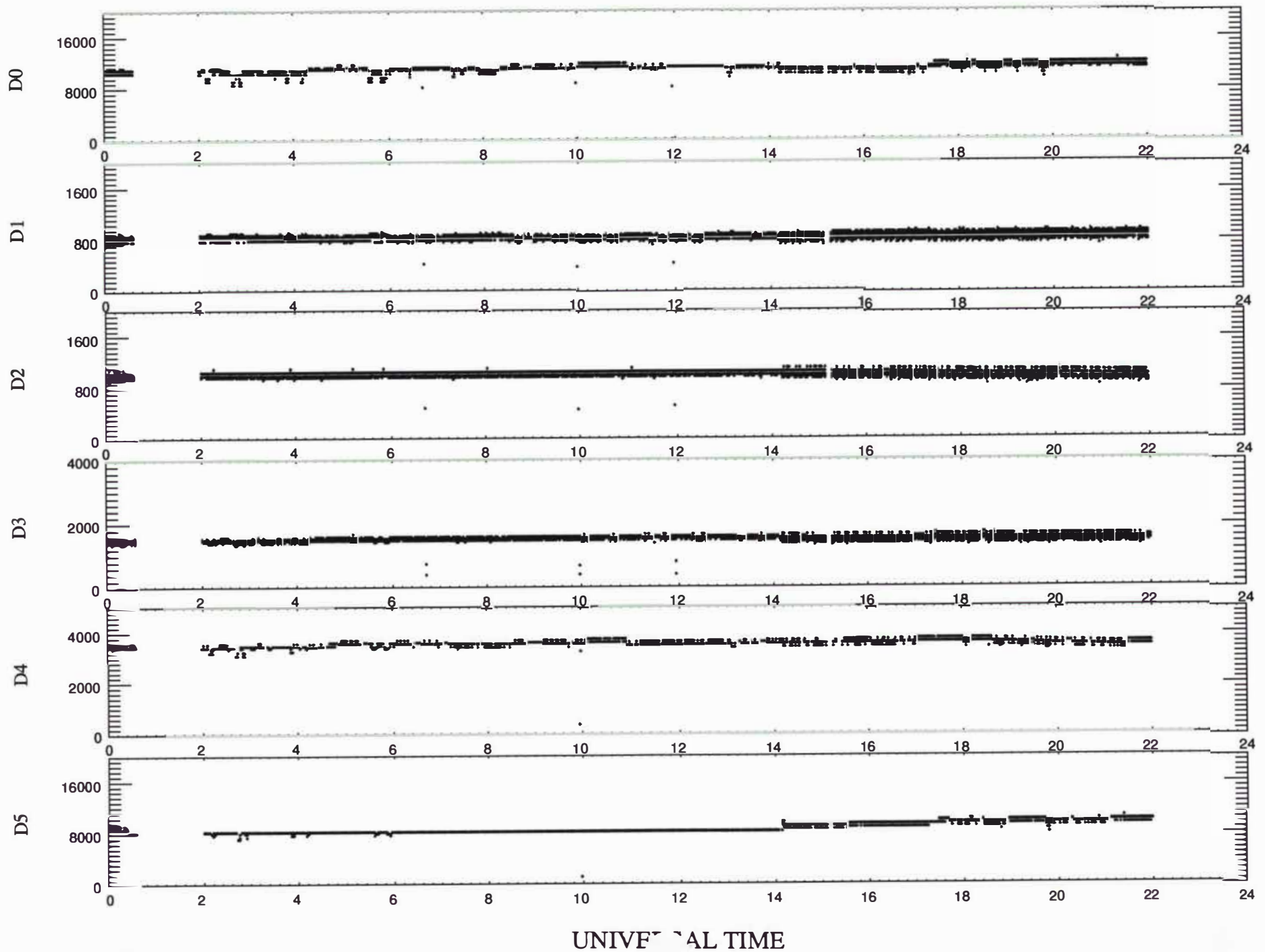


HUS 2A, MODE 1, NOT AVERAGED EDR day 278, year 1995 to day 278, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV SAL TIME



From SAHI@SSLLES.MSFC.NASA.GOV Mon Oct 9 09:22 PDT 1995
Date: Mon, 9 Oct 1995 11:22:28 -0500 (CDT)
From: SAHI@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@ssl.msfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3852

TIME: TJD=9996 SECONDS=60510

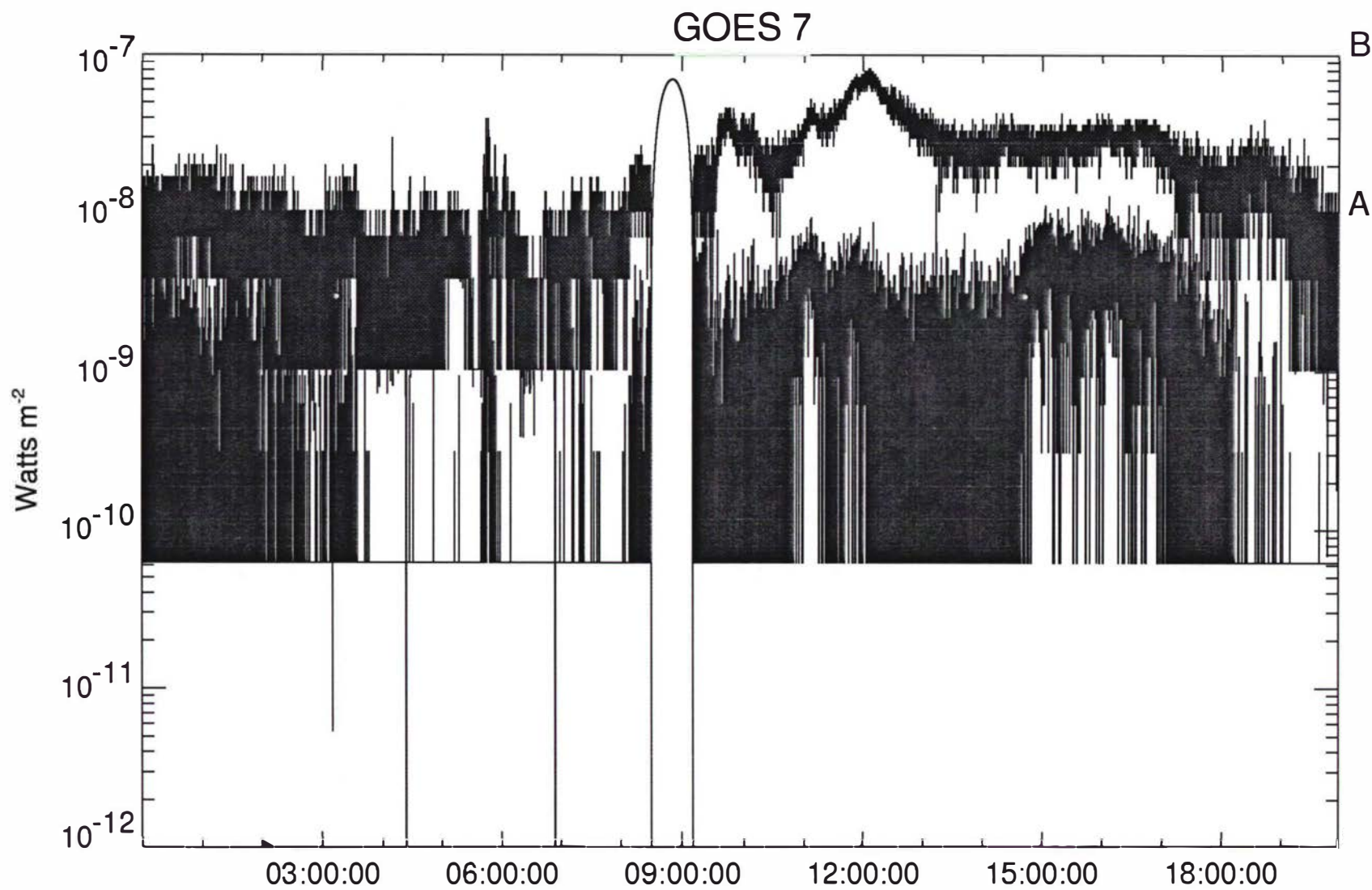
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.



Data Start: 95/10/06, 0000:02

Plot created: 95/11/15, 1830

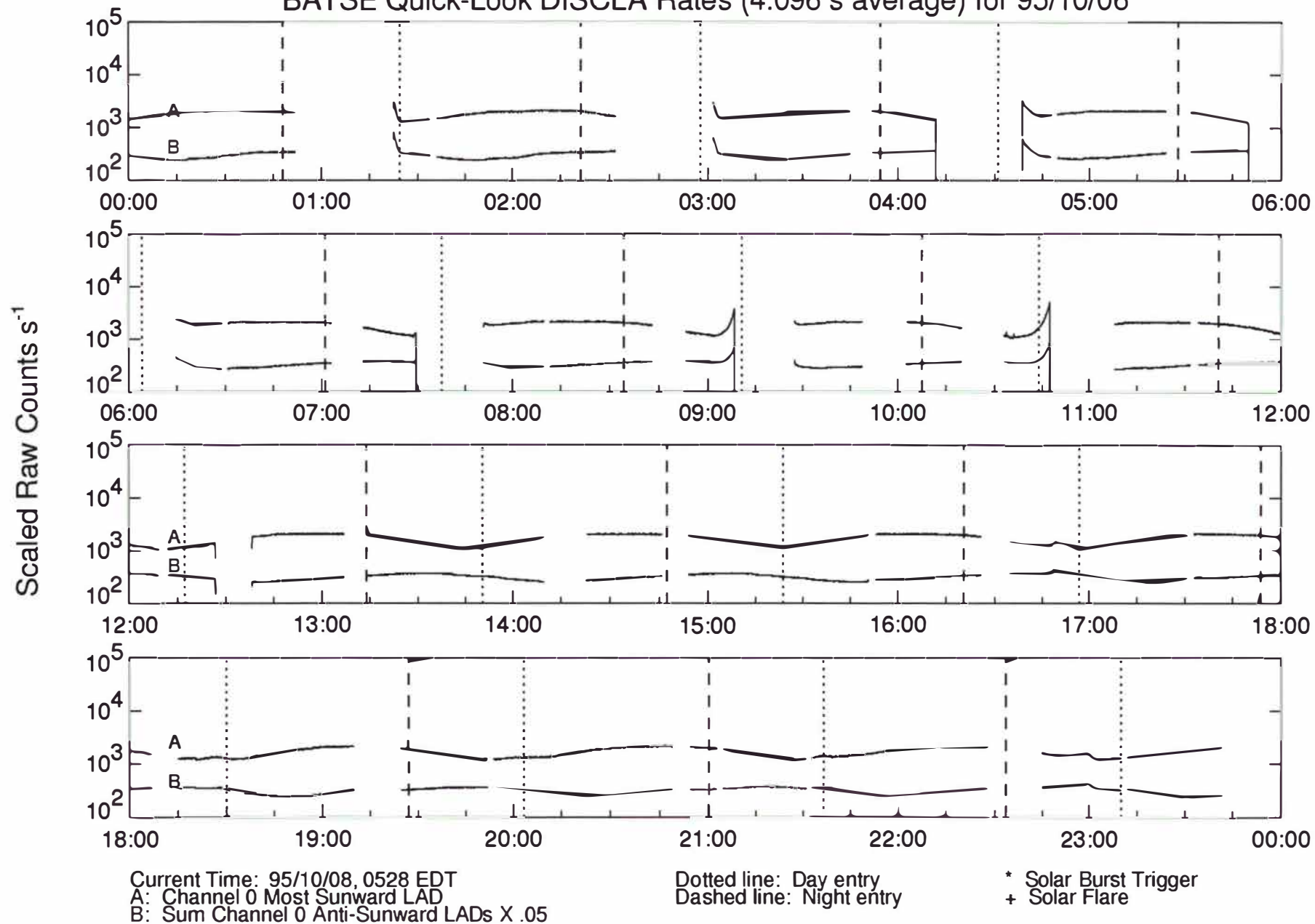
Channel 1 (1.0 - 8.0 Angstroms)

Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms)

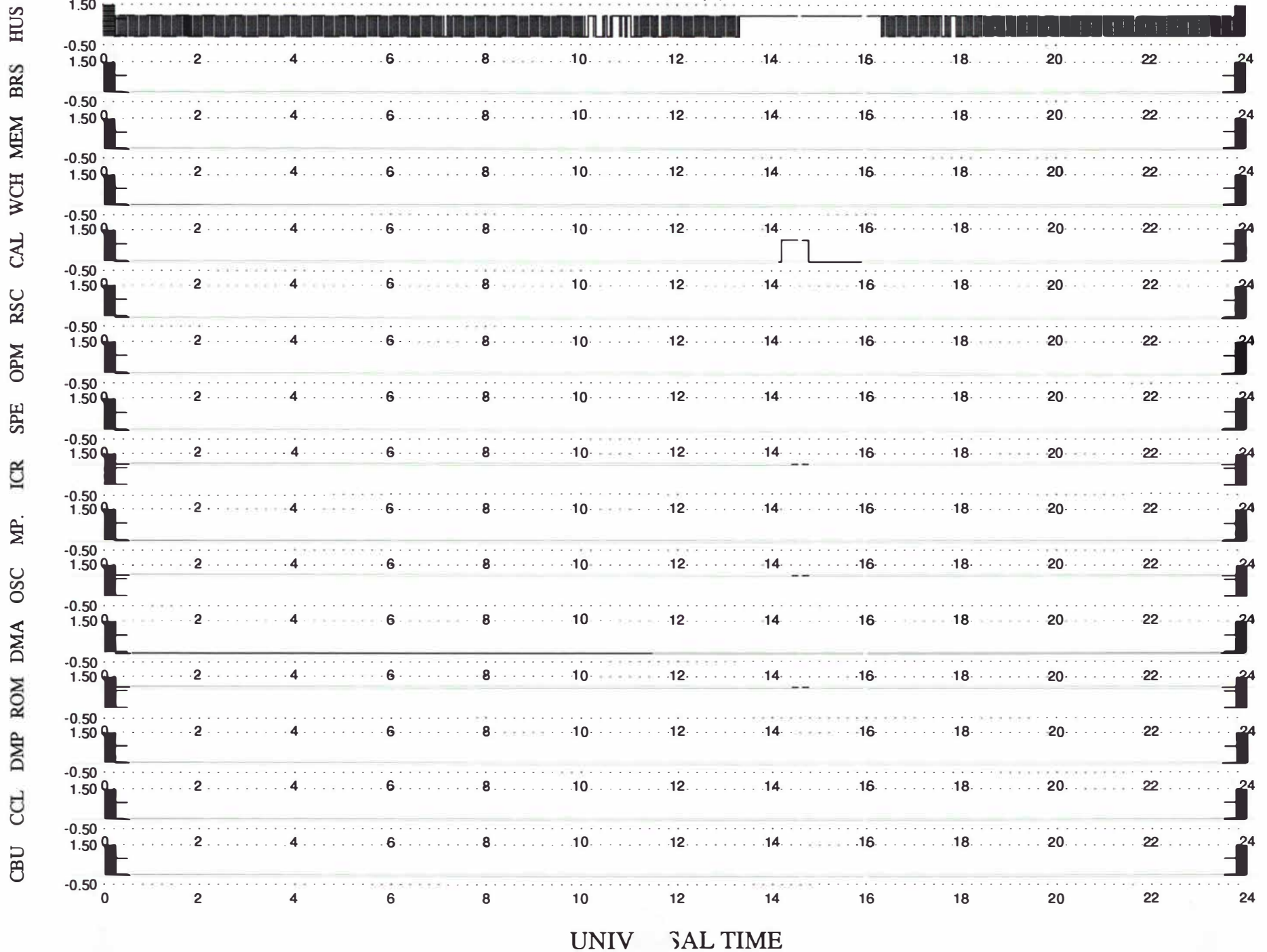
Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/06



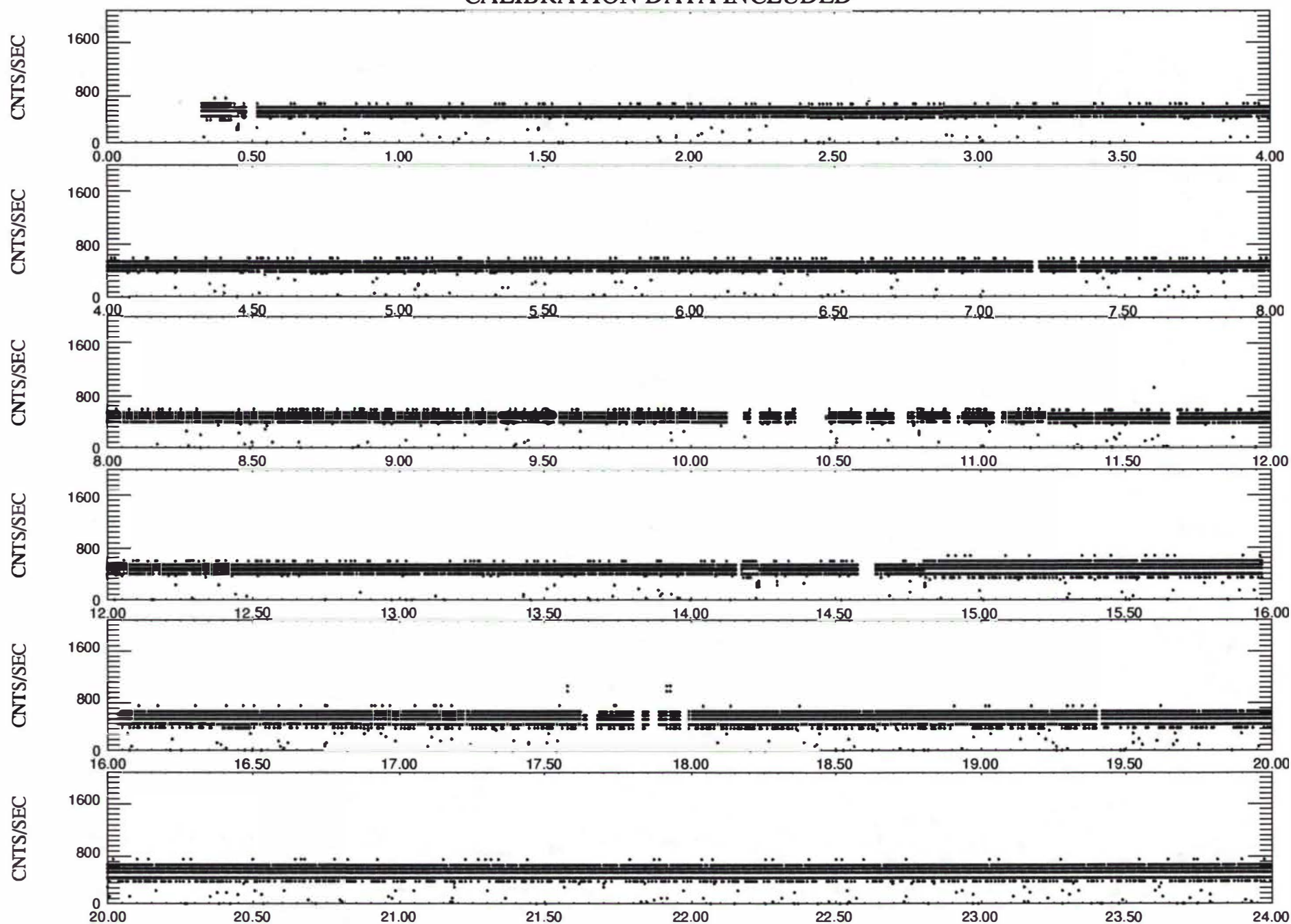
HUS MODES EDR day 279, year 1995 to day 279, year 1995
NO BURST (0)

1/26/96

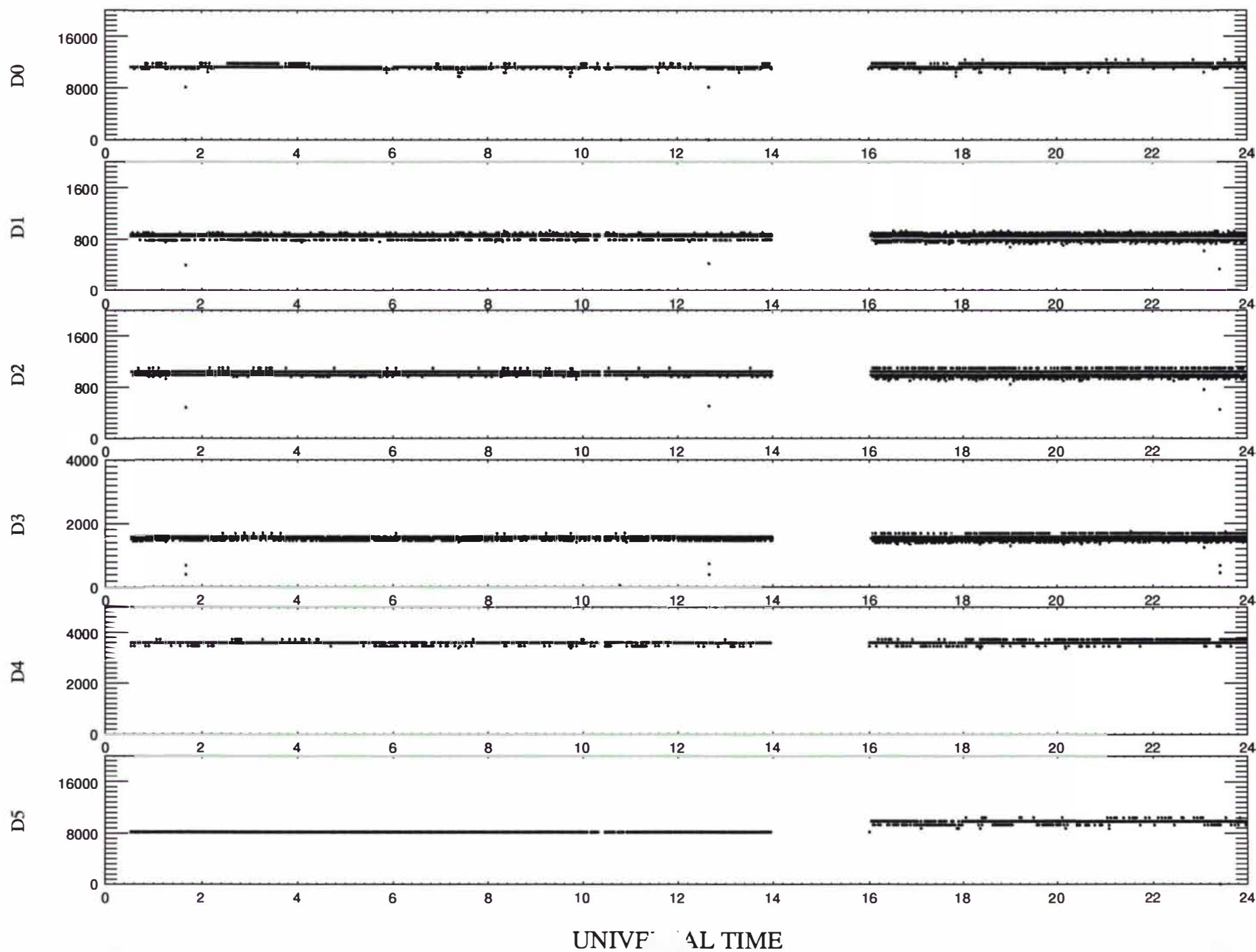


HUS 2A, MODE 1, NOT AVERAGED EDR day 279, year 1995 to day 279, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV SAL TIME



From HENZE@SSLLES.MSFC.NASA.GOV Tue Oct 10 09:32 PDT 1995
From: HENZE@SSLLES.MSFC.NASA.GOV
Date: Tue, 10 Oct 1995 11:32:13 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3853

BATSEARCH PROGRAM

BATSE BURST # 3853
EVENT OF 1995 OCT 7 DAY OF YEAR=280
EVENT CROSSING TIME AT BATSE : 4568. S. OR 01:16:08.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 204.000 9.000
BATSE PEAK COUNTING RATE: 6000 C/S

NO

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 7/10/ 95 IS:
RA= 204.254 DEC= 59.119 DIST= 2.745 AU
BATSE-ULYSSES DISTANCE = 410708302. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=129.88 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -878.42 SECS.
CROSSING TIME AT ULYSSES IS 3690. S. OR 01:01:29 +/- 219.18 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 7/10/ 95 IS:
RA= 227.604 DEC= -18.302 DIST= 2.164 AU
MARS-BATSE DISTANCE = 323664448. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=144.11 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -874.66 SECS.
CROSSING TIME AT MARS IS 3693. S. OR 01:01:33 +/- 96.60 SECONDS

BATSE BURST TRIGGER

NO.: 03853

TIME: TJD=9997 SECONDS=04568

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=073.9 AZIMUTH=344.9 ERROR=002.4 DEGREES

COMMENTS:

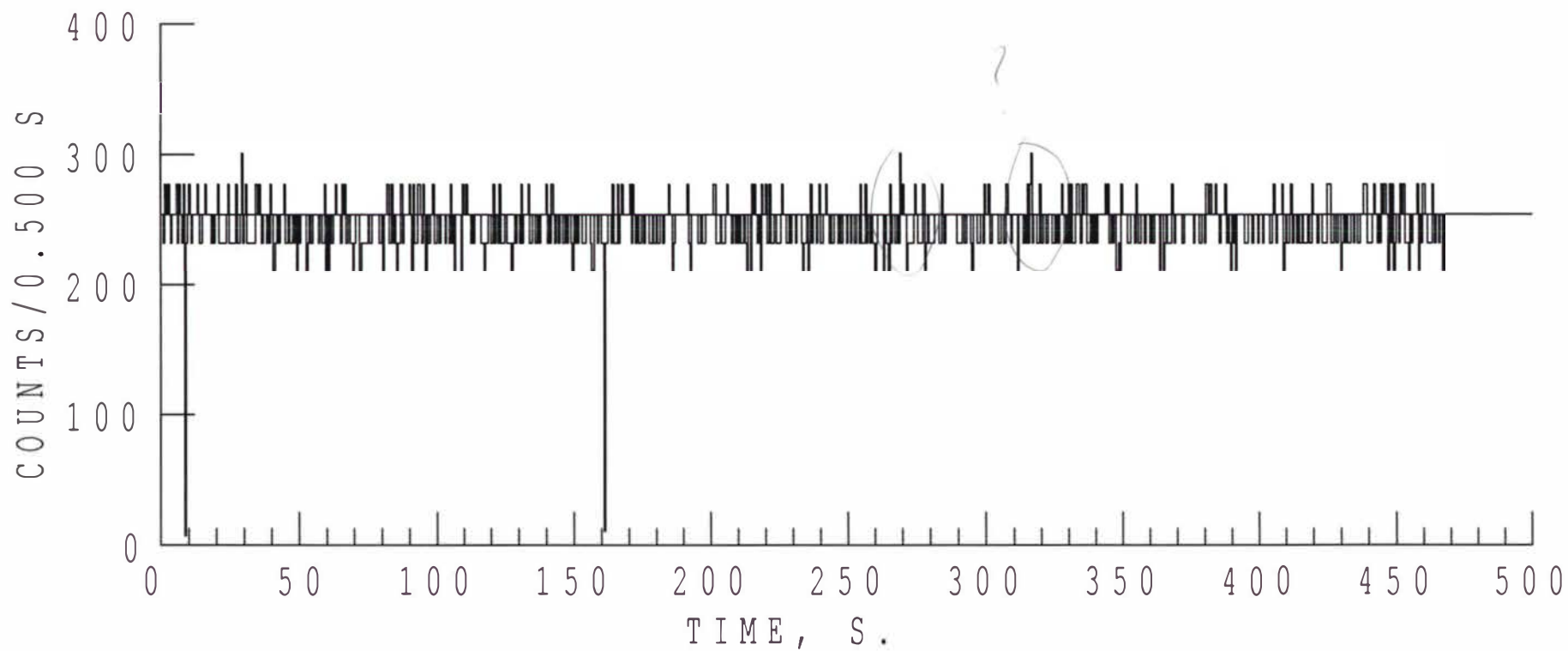
DUR. MAIN PULSE ~1.6 S. VISIBLE ABOVE 300 KEV.
WEAK ADDITIONAL EMISSION, TOTAL DUR. ~60 S.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3853	951007	9997	04568	6000	204	+09	1.6

10/10/95

ULYSSES RT
7/10/95 3456.069 s
0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



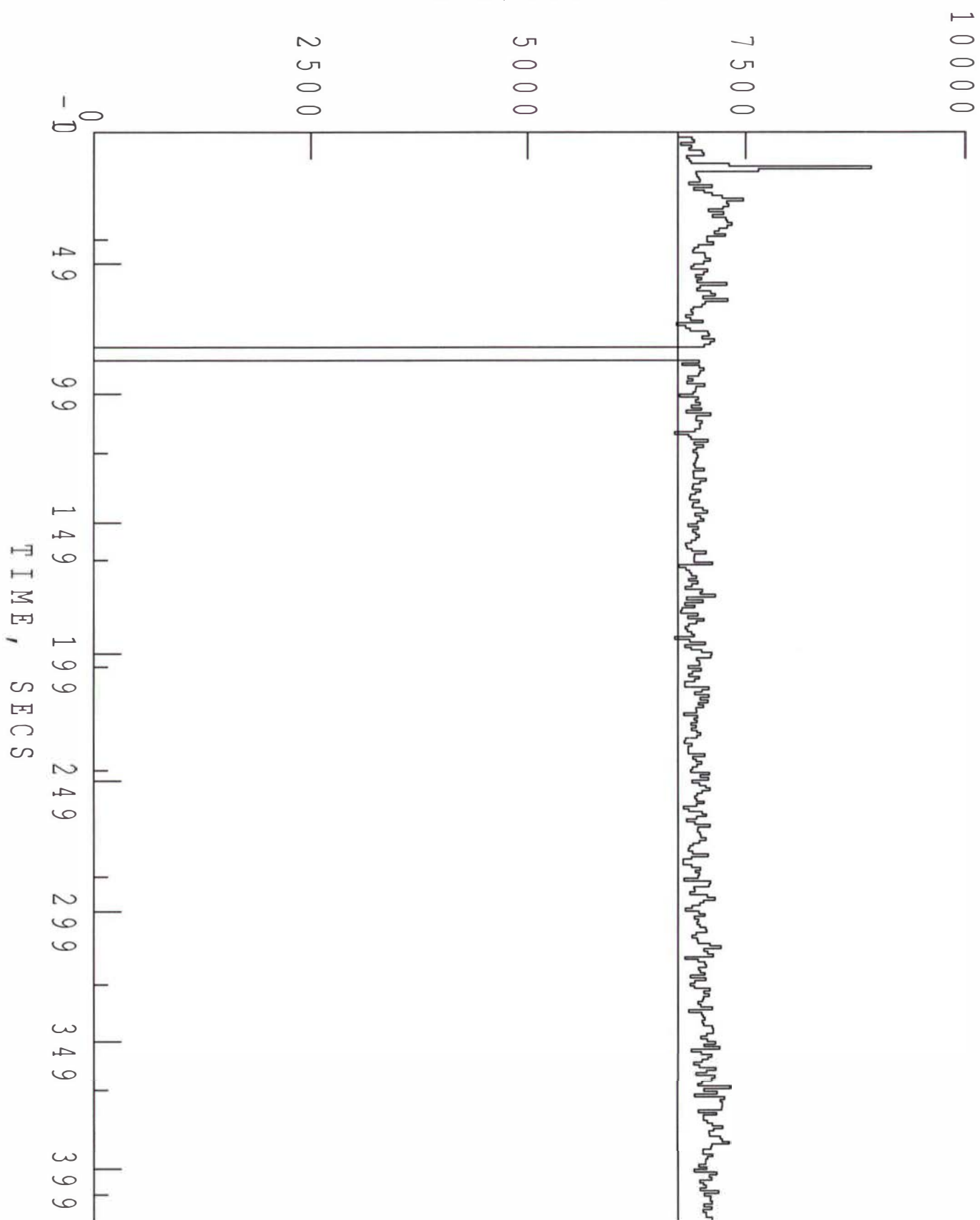
BACODINE

07/10/95

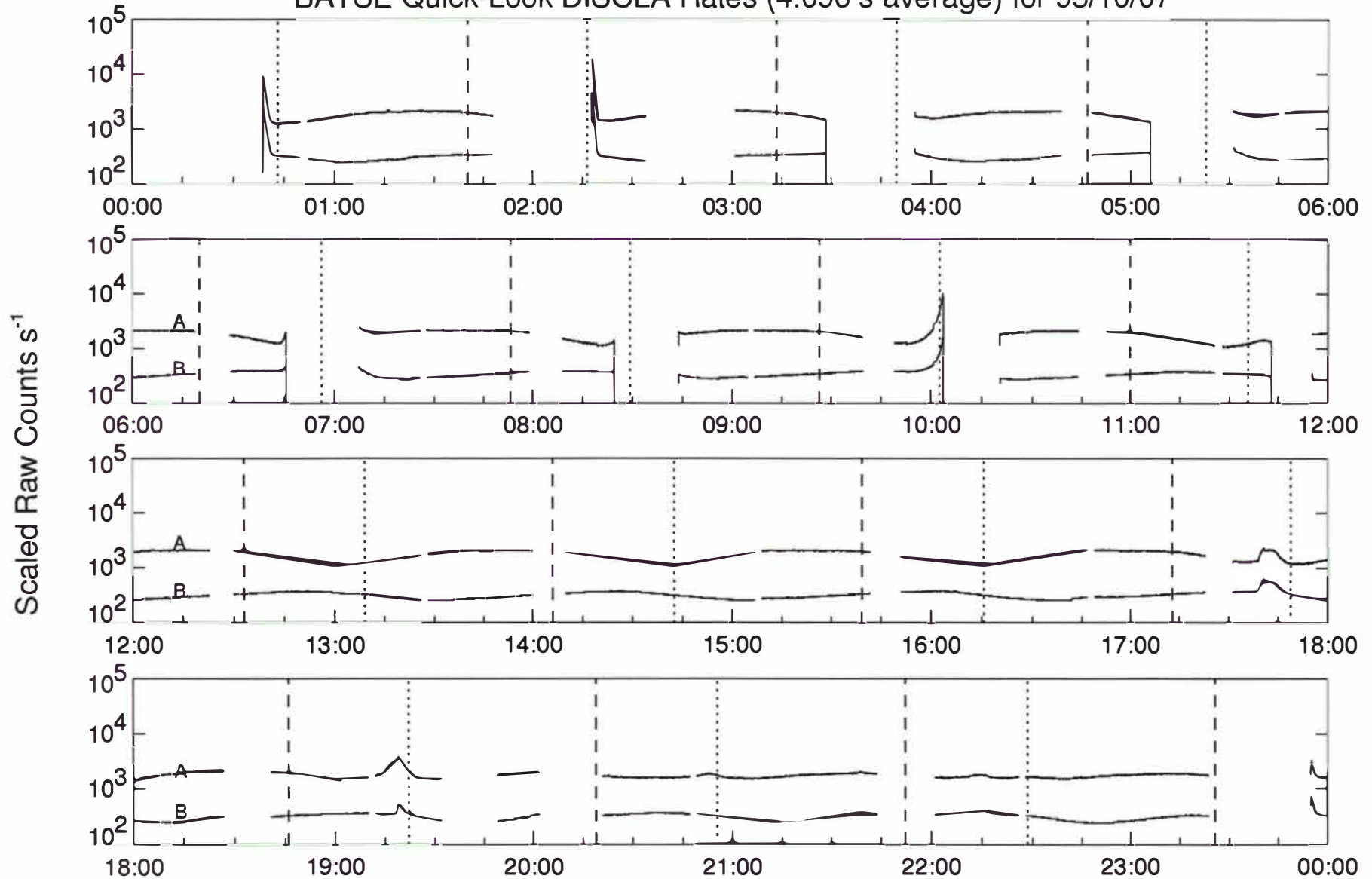
4556.465

25 - 100 keV

COUNTS/1.024 S



BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/07

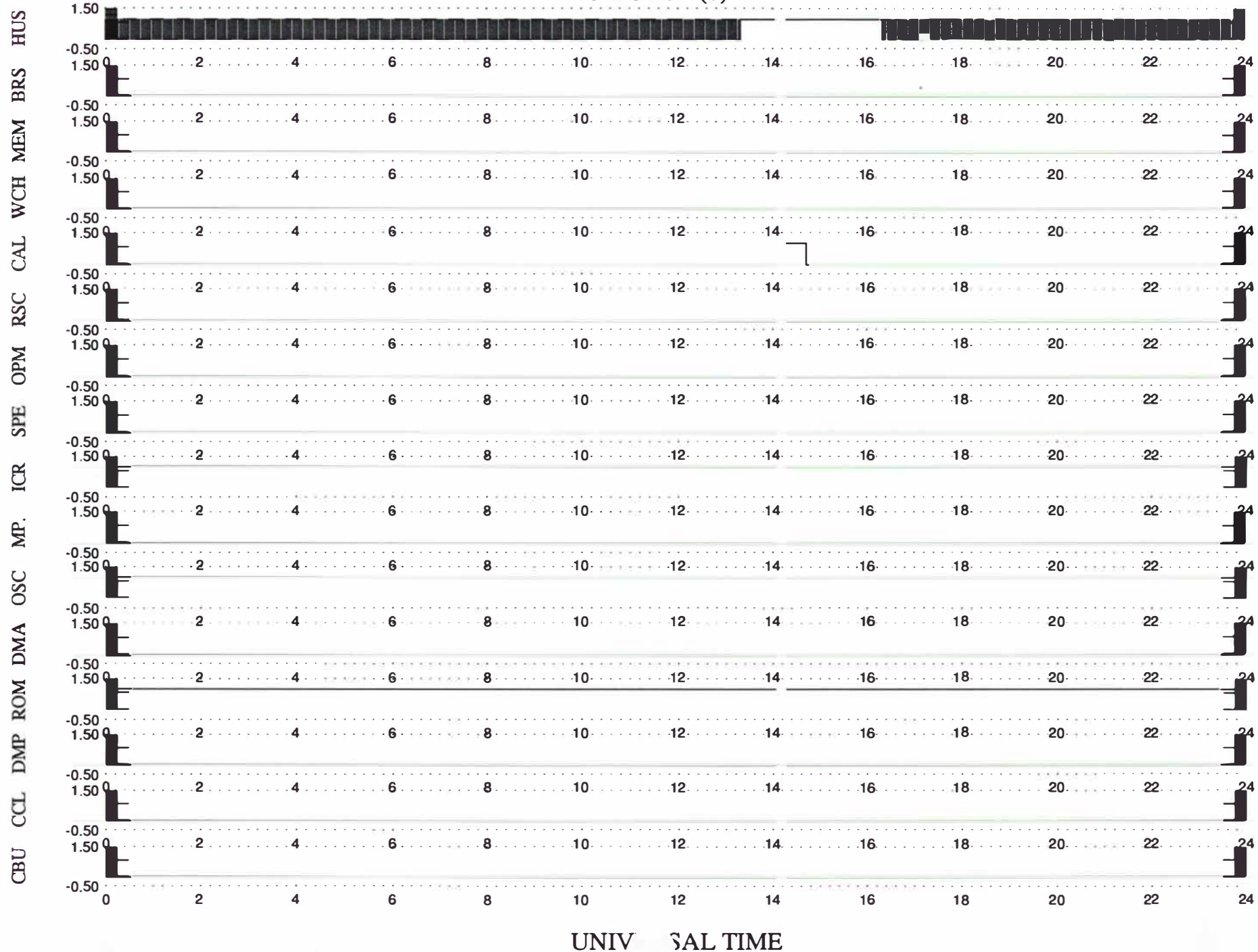


Current Time: 95/10/09, 0528 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

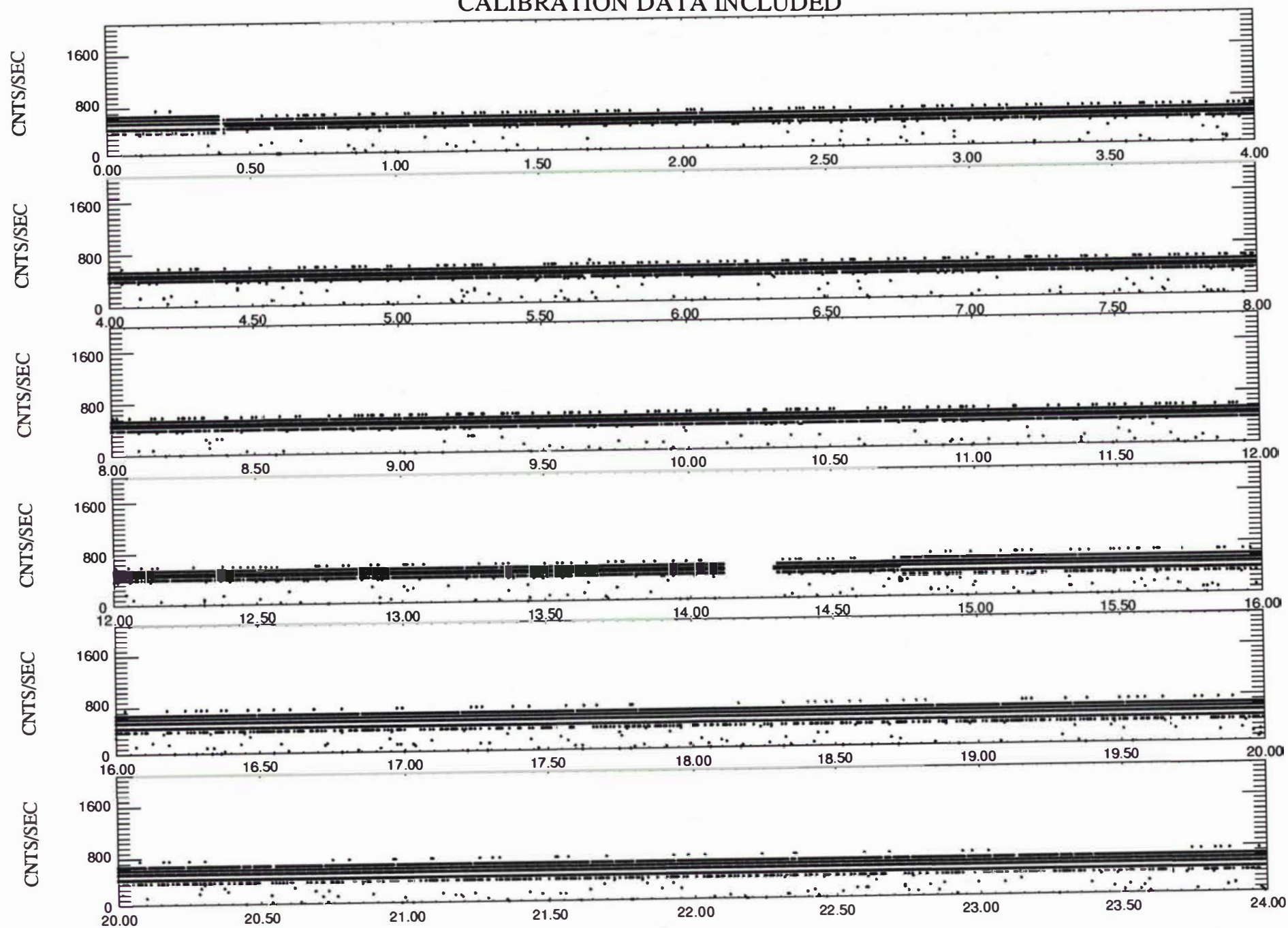
* Solar Burst Trigger
 + Solar Flare

1/26/96

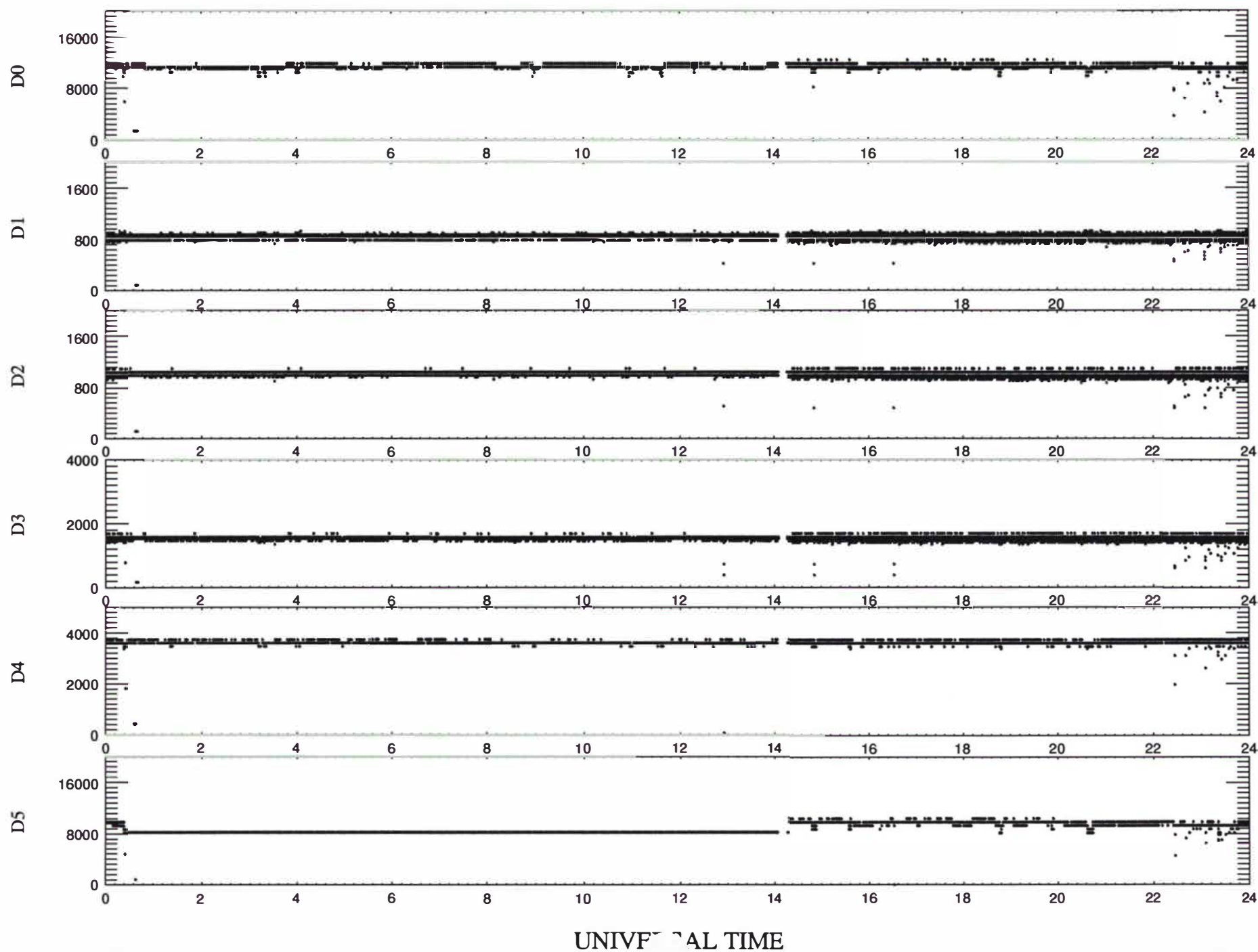


HUS 2A, MODE 1, NOT AVERAGED EDR day 280, year 1995 to day 280, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV SAL TIME



Date: Sep 6 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

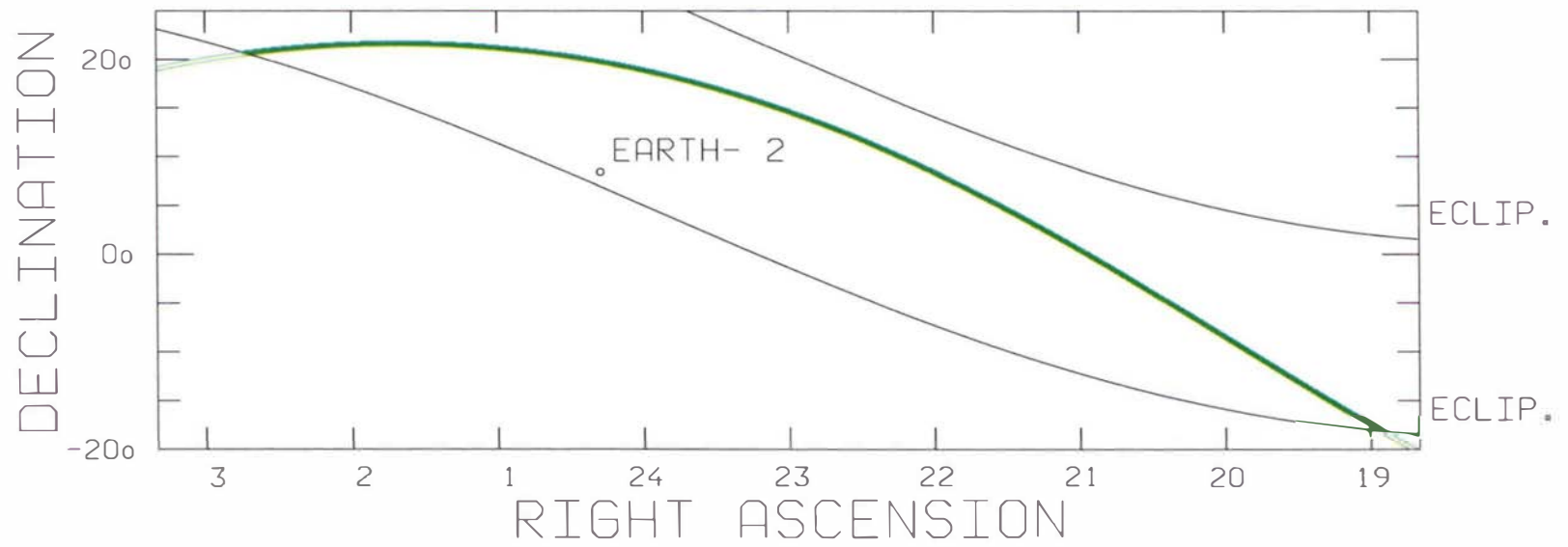
- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☐ Is the order of the data in CORREL such that a vernier is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

2. BATSE Data

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

3. PVO Data

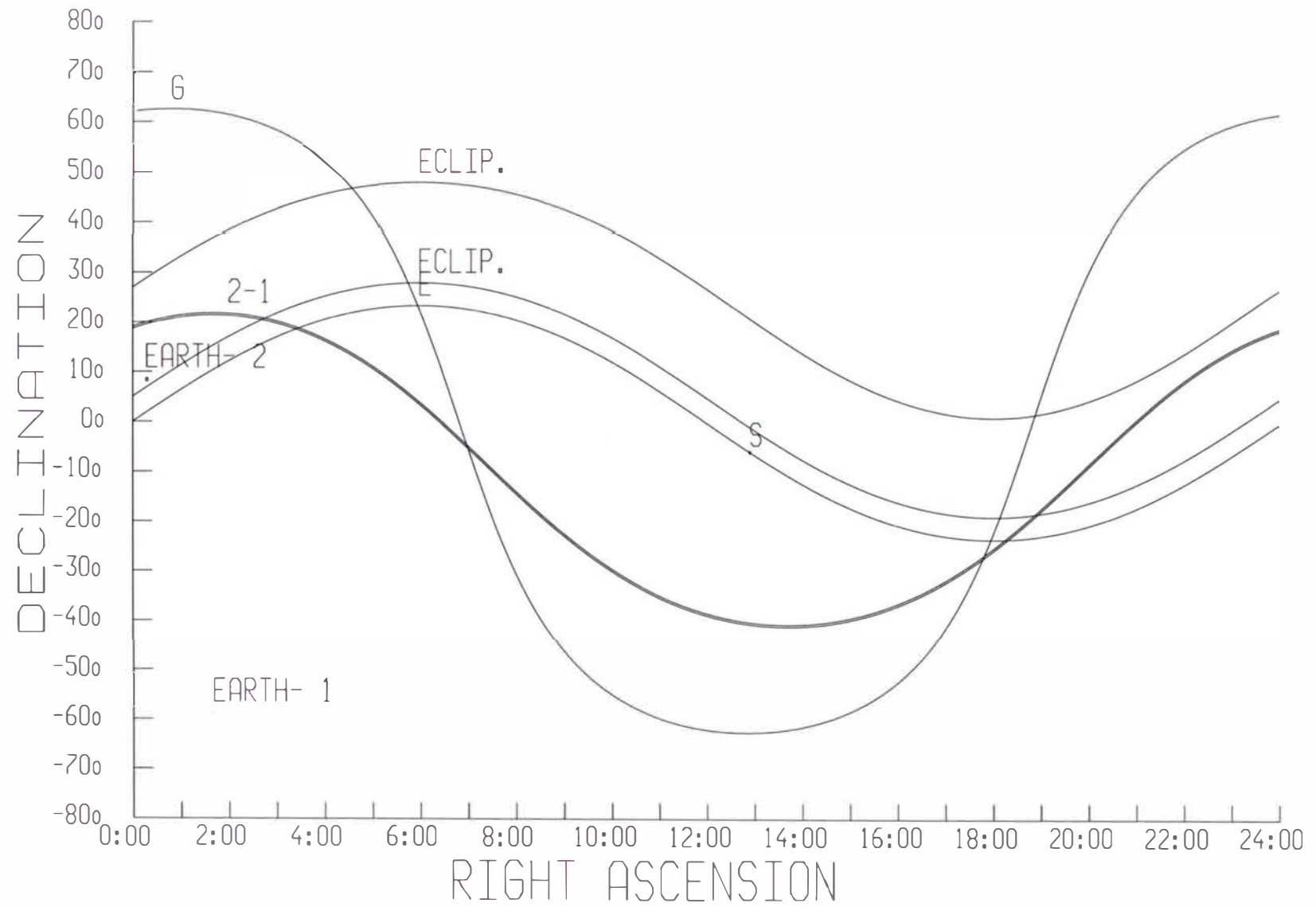
- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS and MBL databases updated with identical times?

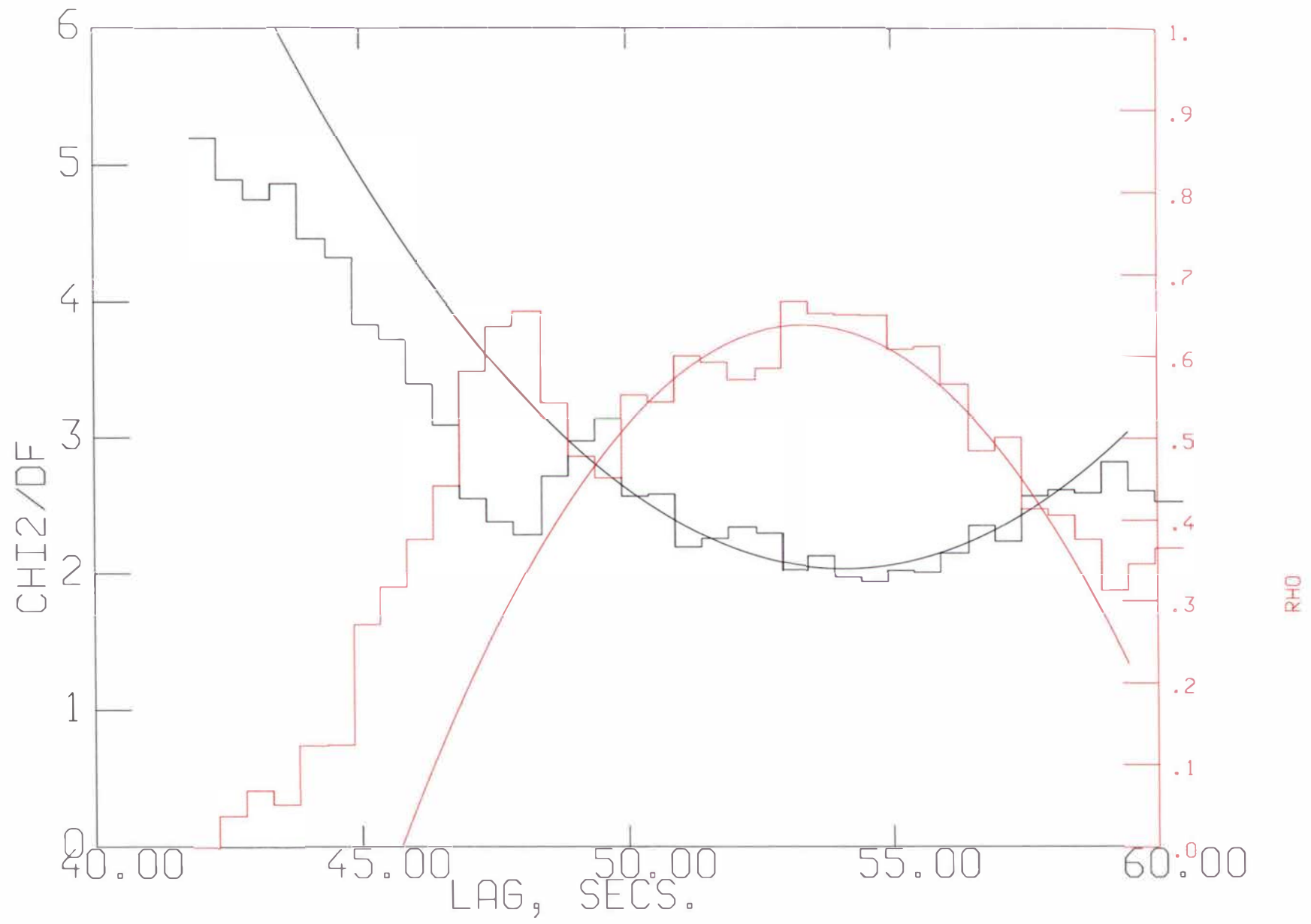


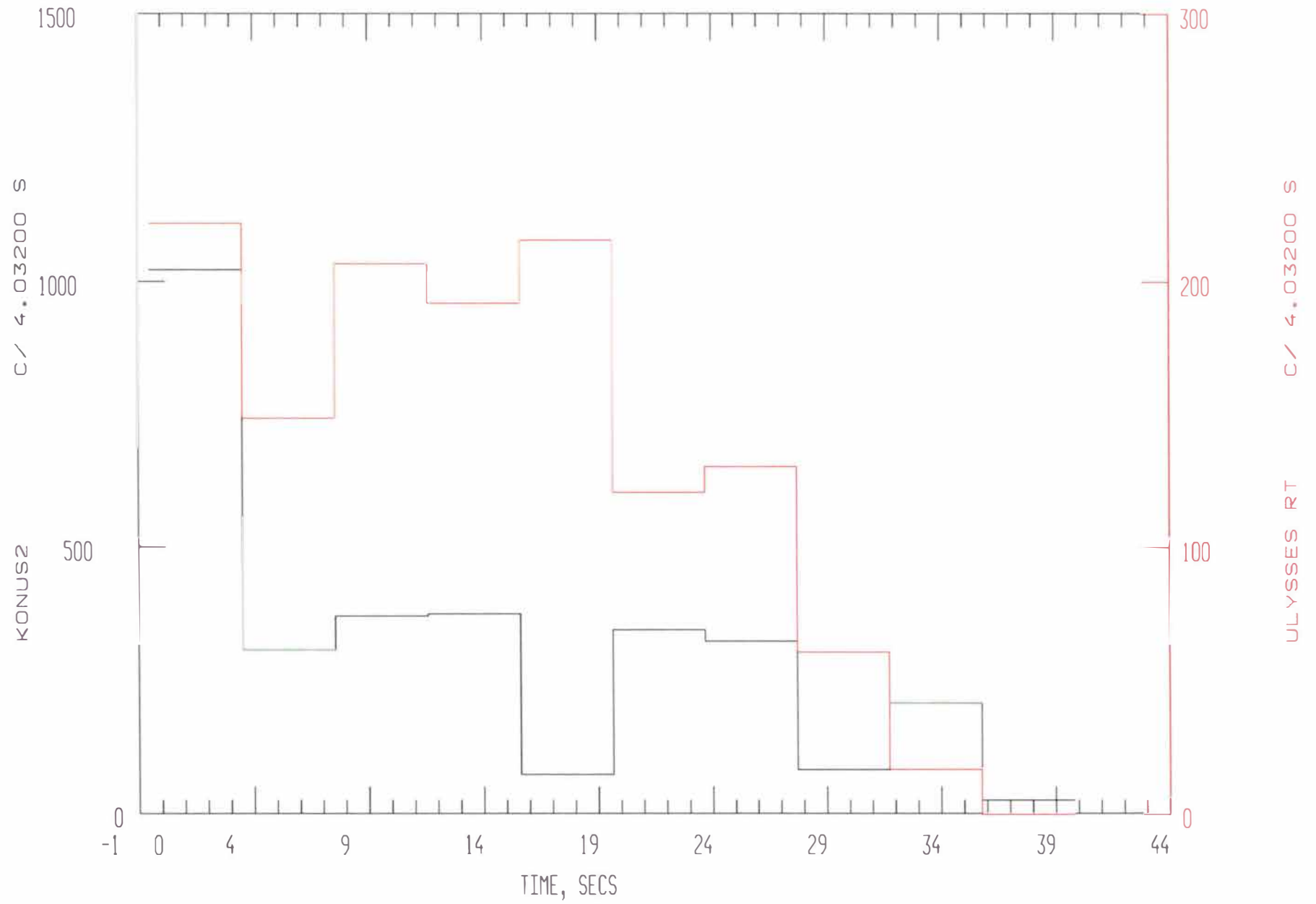
EVENT OF OCT 8, 1995 12:54

06/09/2011

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 KONUS2







KONUS 19951008 46556

ULYSSES RT

01 / 09 / 11

08/10/95 46440.199 s

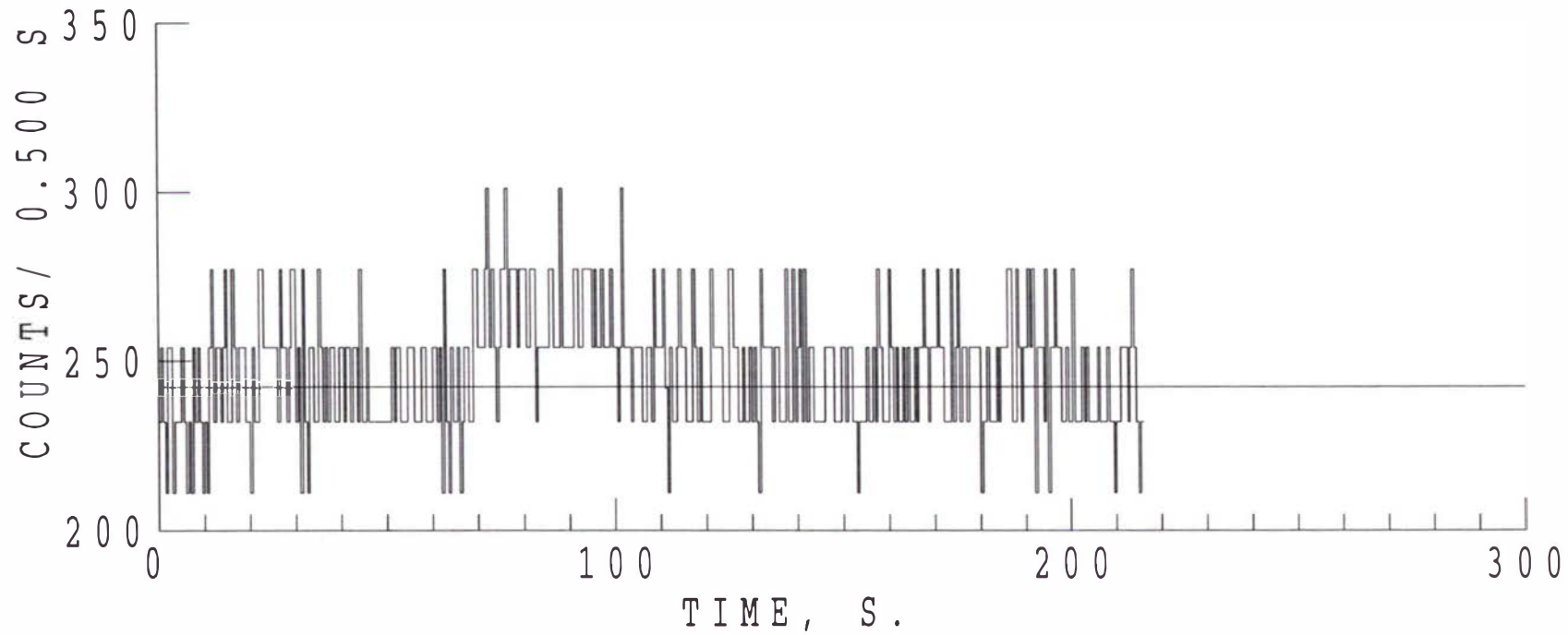
0 - 0 keV

N= 10 M= 10

>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2

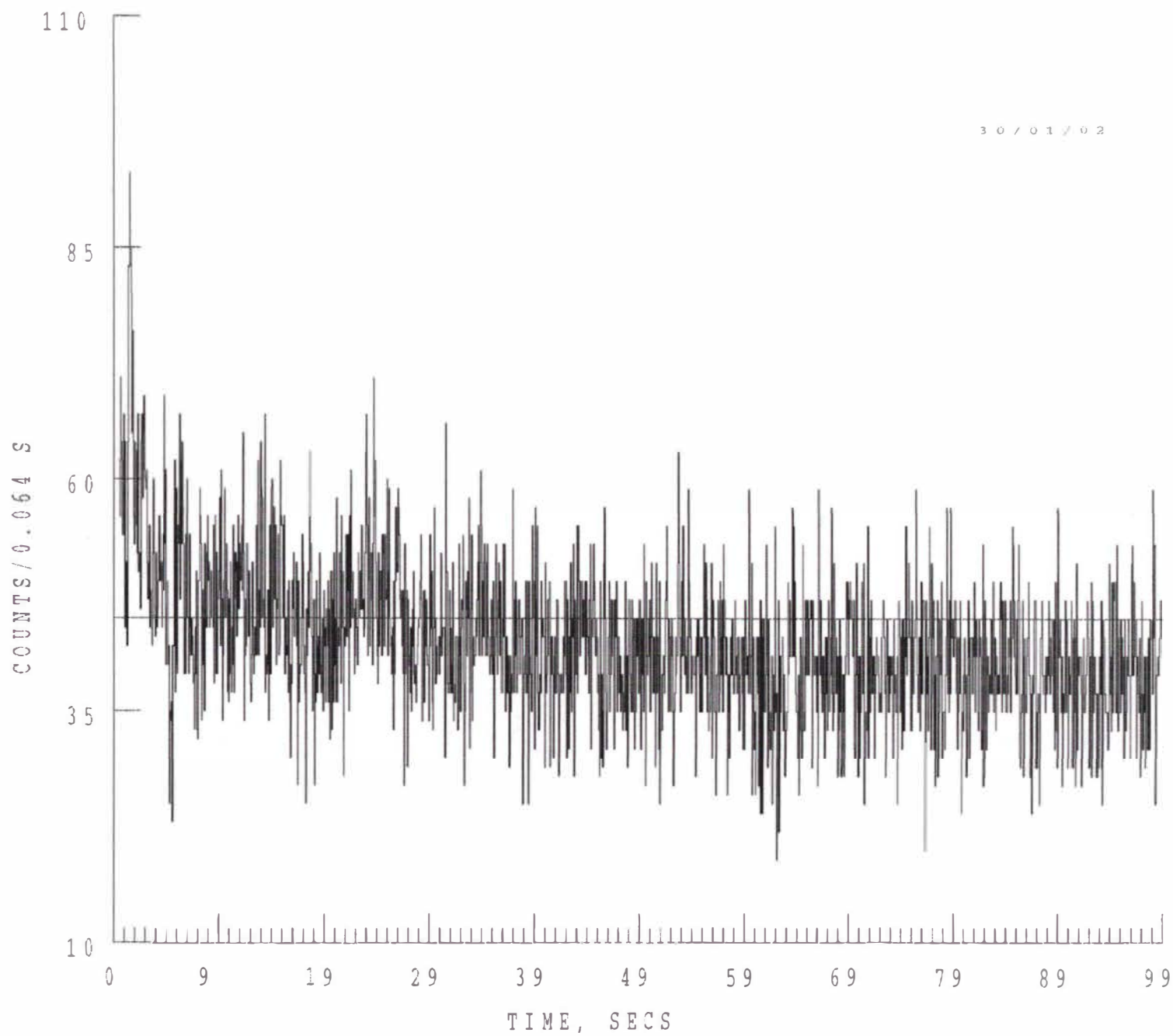
>4.0 SIGMA FLUCTUATIONS



KONUS2

08/10/95 46287.863

50-200 keV



KONUS2 19951008 46287

ULYSSES RT

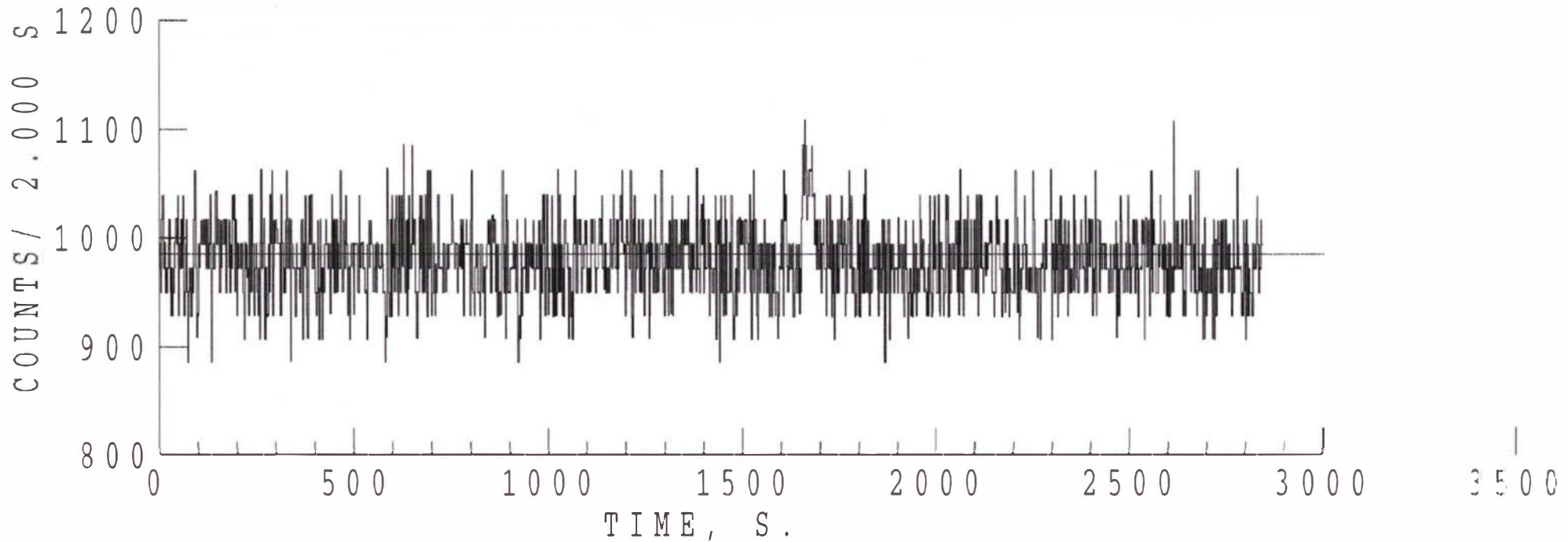
30/01/02

08/10/95 44856.176 s

0.500 S INTERVALS REGROUPED BY 4

0 - 0 keV

N= 10 E= 2
>4.0 SIGMA FLUCTUATIONS



From DEAL@SSLLES.MSFC.NASA.GOV Tue Oct 10 09:23 PDT 1995
From: DEAL@SSLLES.MSFC.NASA.GOV
Date: Tue, 10 Oct 1995 11:20:08 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@SSLLES.MSFC.NASA.GOV, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3854

TIME: TJD=9998 SECONDS=61067

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT AT A DISTANCE.

From DEAL@ssl.msfc.nasa.gov Tue Oct 10 09:27 PDT 1995
Date: Tue, 10 Oct 1995 11:25:05 -0500 (CDT)
From: DEAL@SSLLES.MSFC.NASA.GOV
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@SSLLES.MSFC.NASA.GOV, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3855

TIME: TJD=9998 SECONDS=72309

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

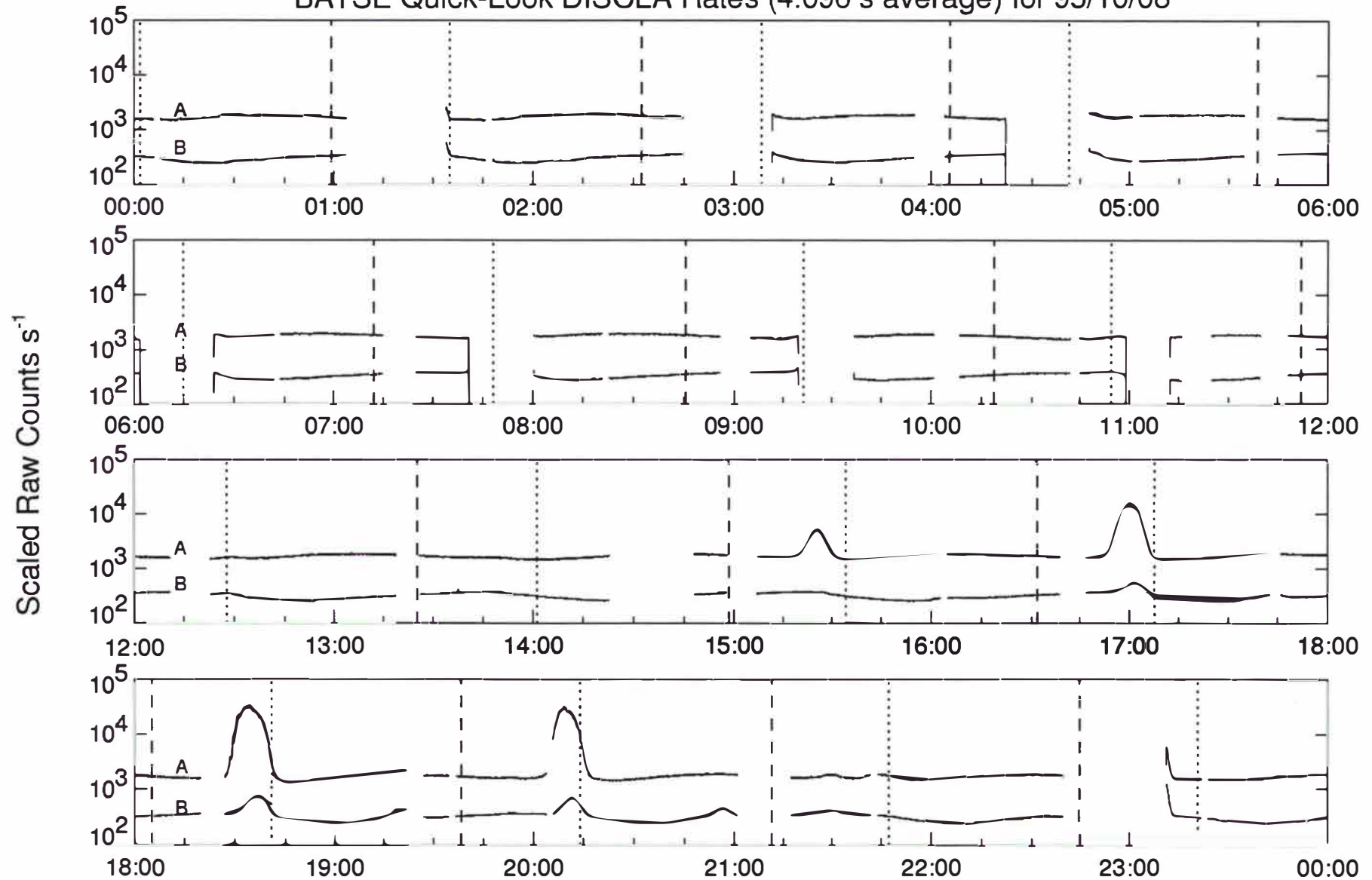
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT AT A DISTANCE.

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/08



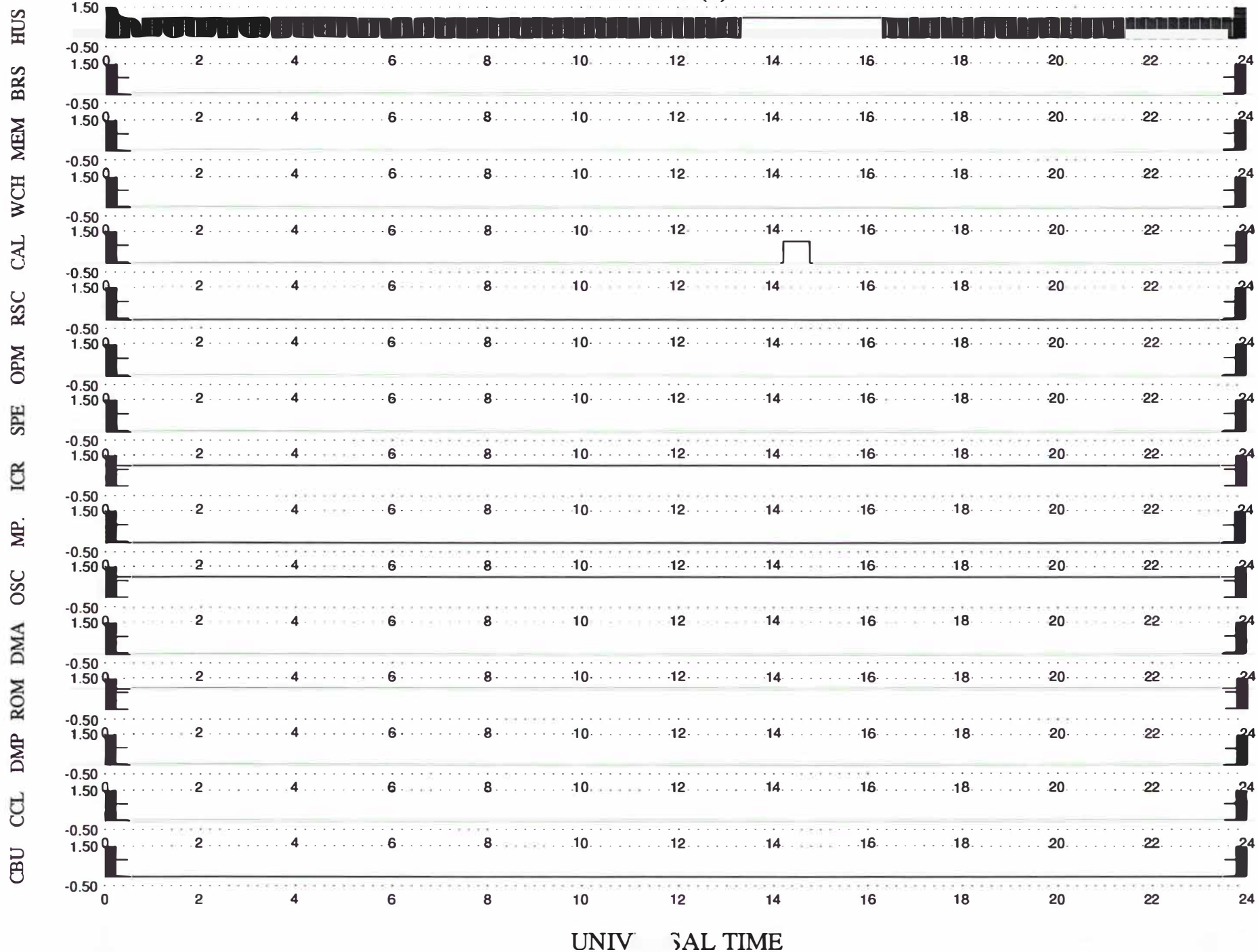
Current Time: 95/11/15, 1853 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

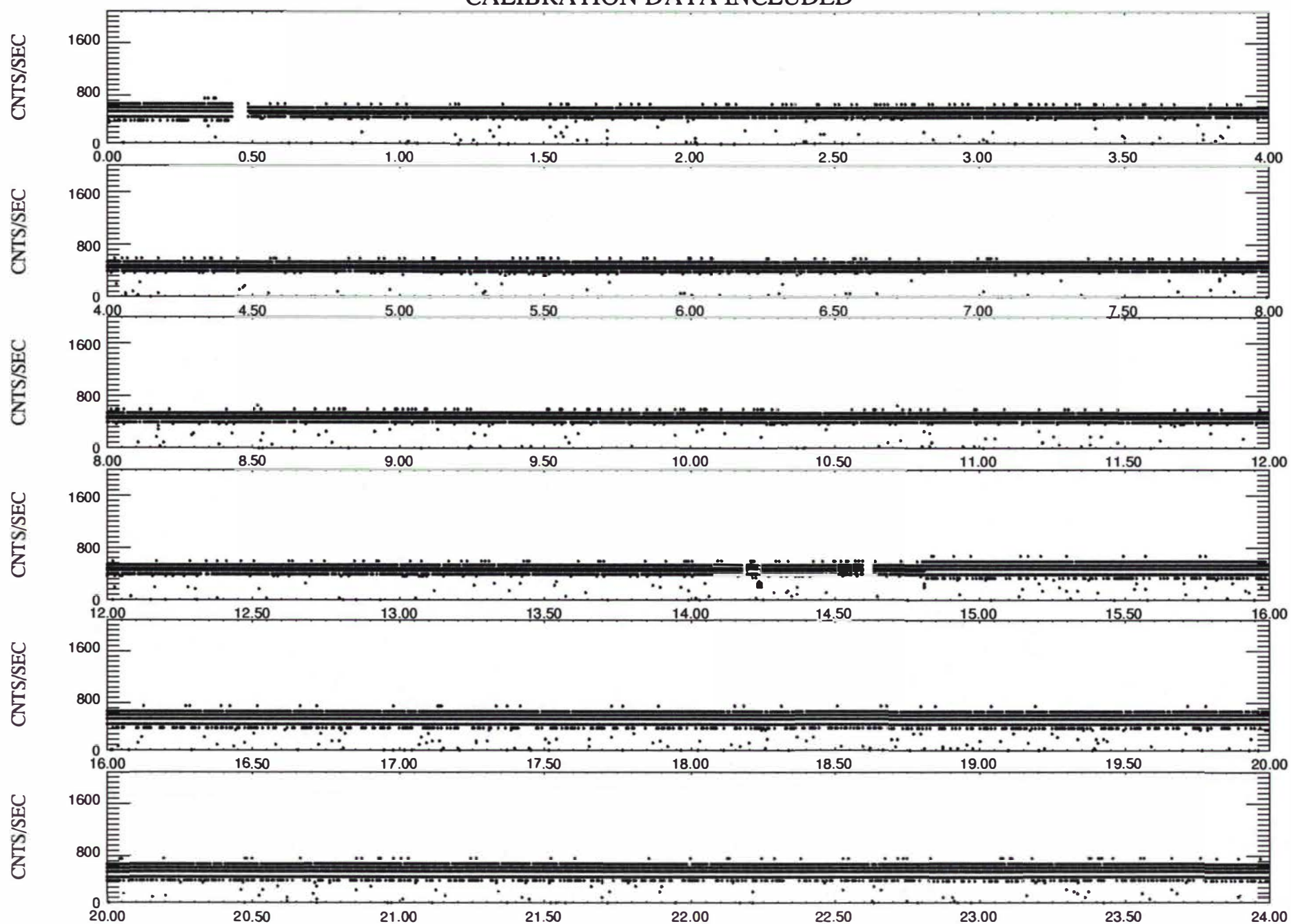
HUS MODES EDR day 281, year 1995 to day 281, year 1995
NO BURST (0)

1/26/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 281, year 1995 to day 281, year 1995
CALIBRATION DATA INCLUDED

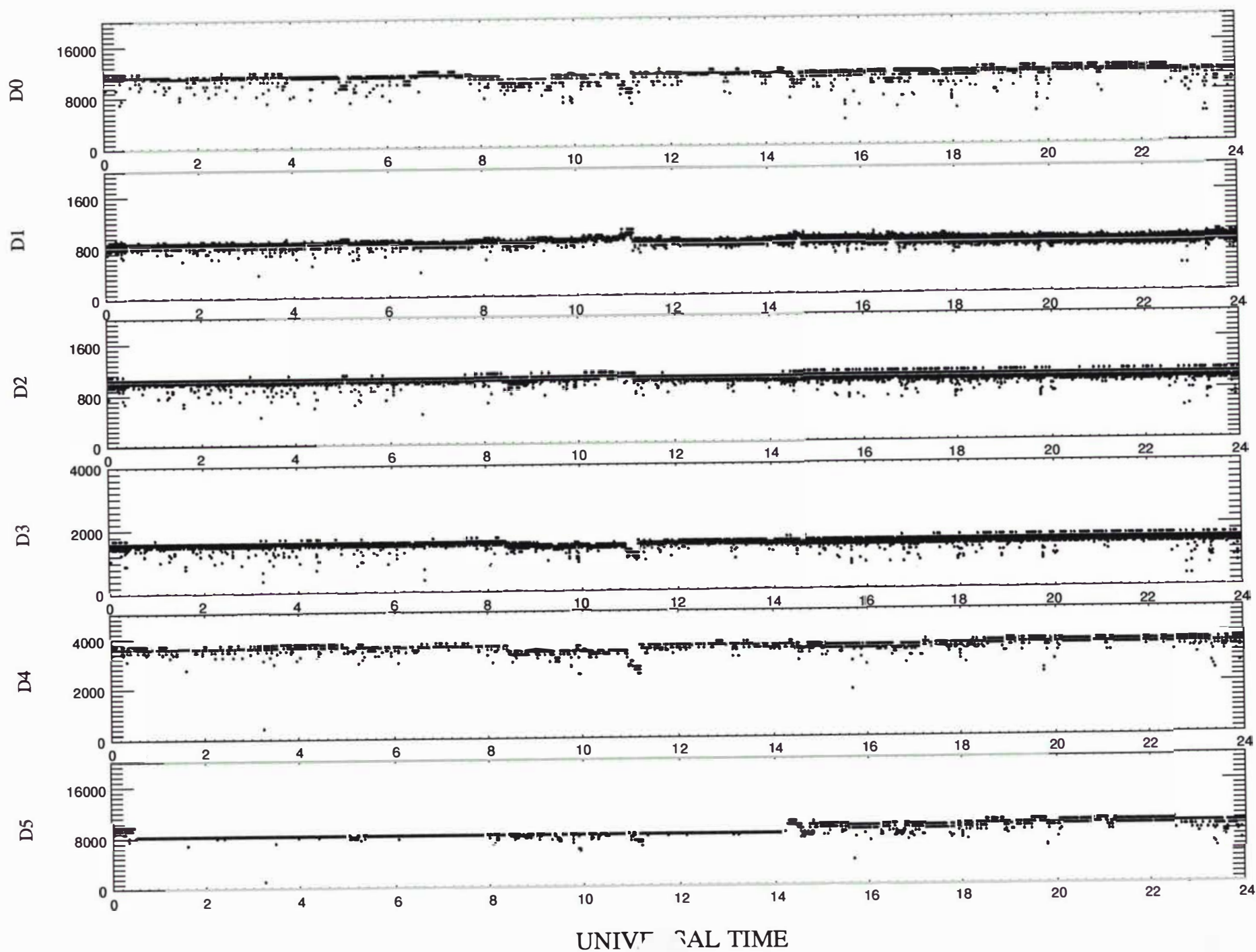
1/26/96

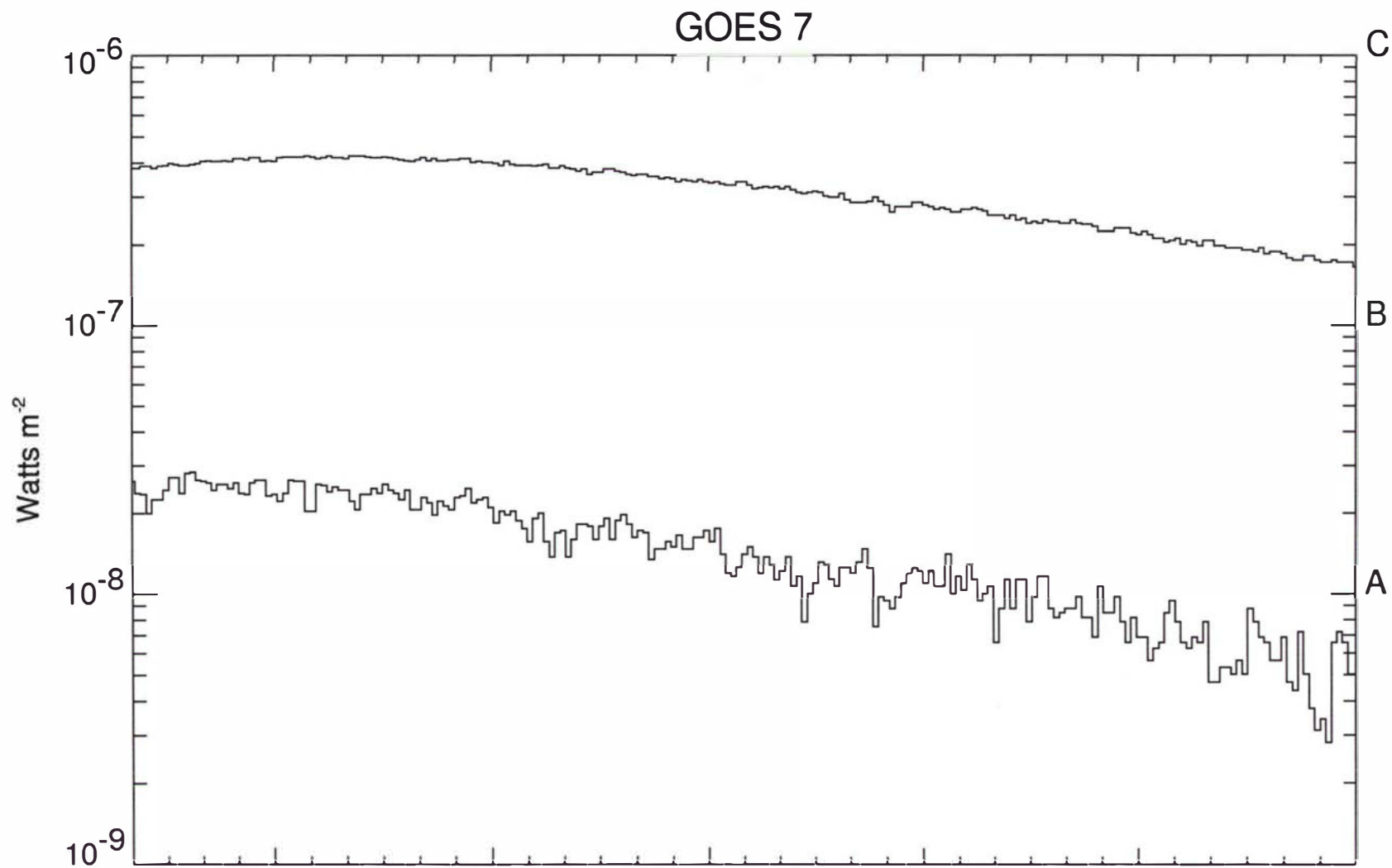


UNIV SAL TIME

HUS 2B COUNTS / SEC QEDR day 281, year 1995 to day 281, year 1995

10/11/95





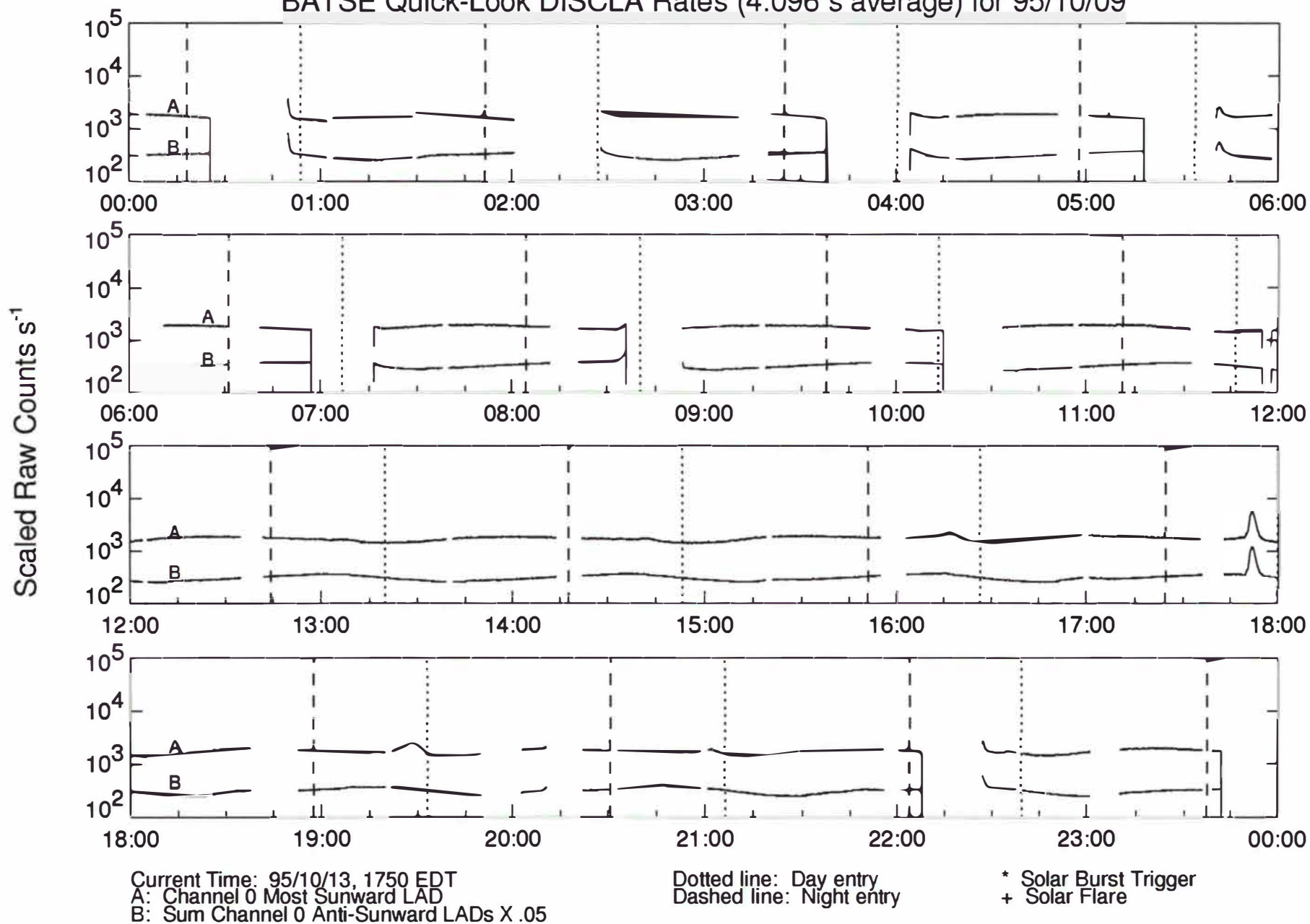
Data Start: 95/10/09, 2348:40

Plot created: 95/11/15, 1941

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

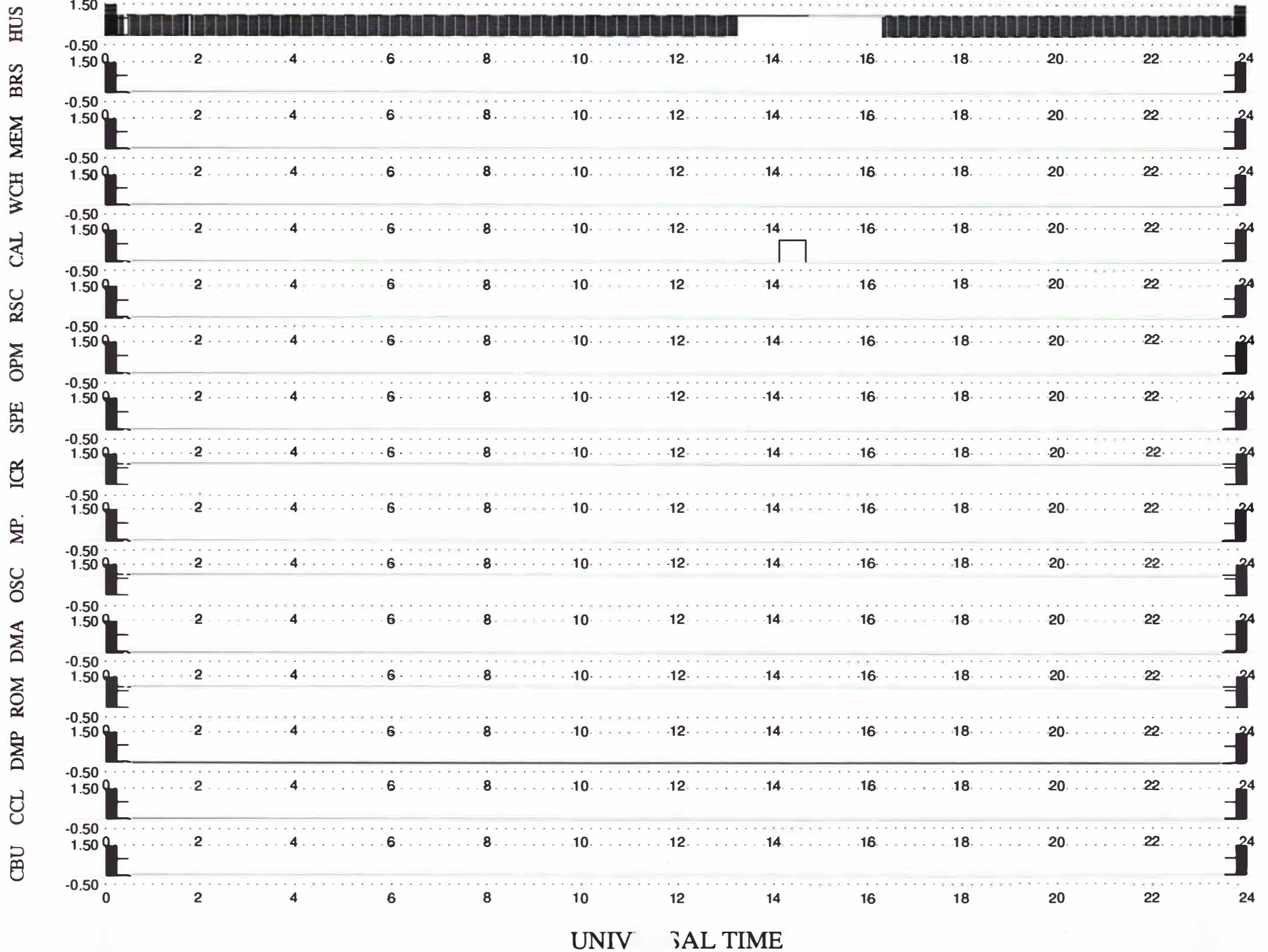
2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/09



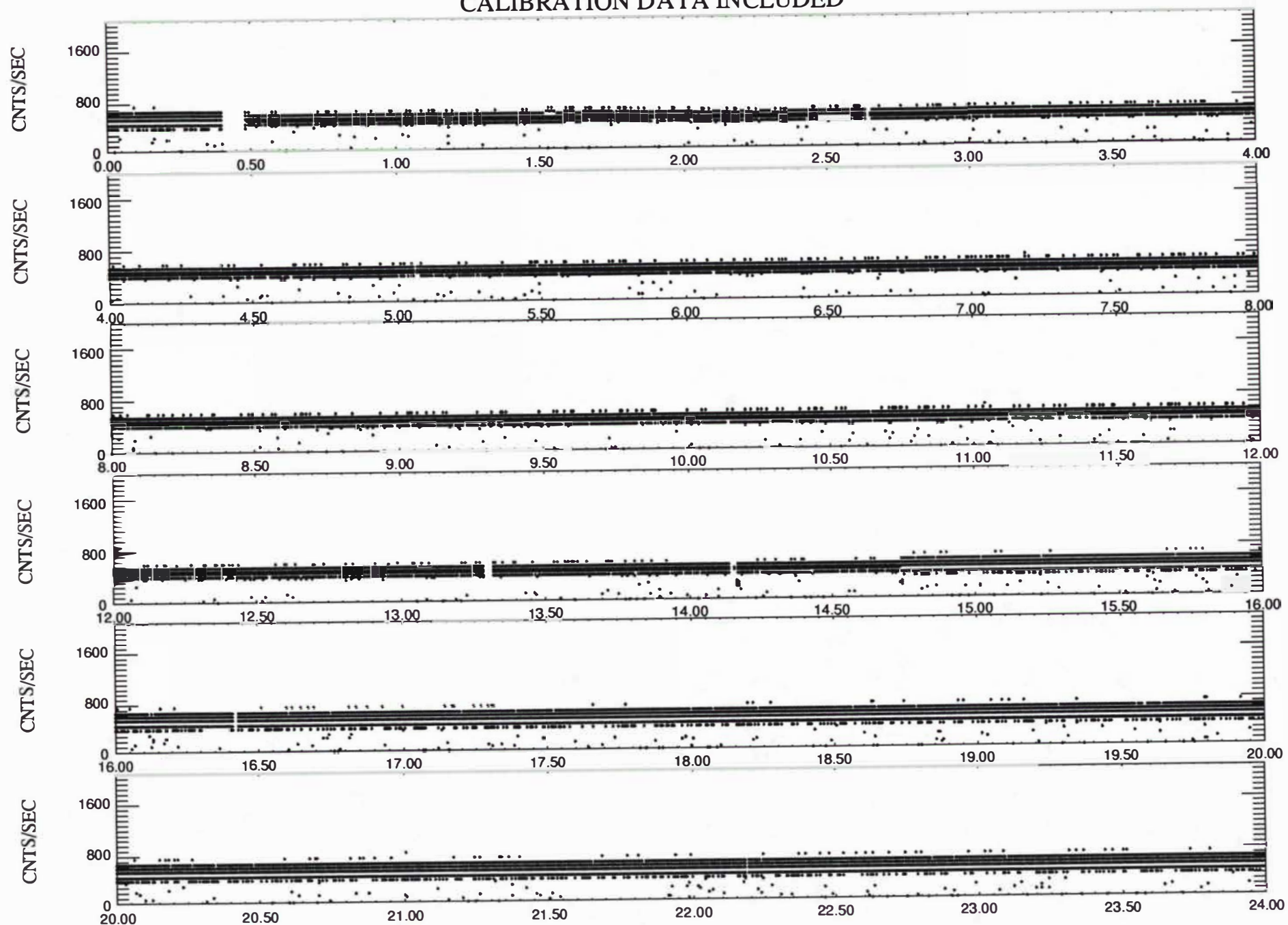
HUS MODES EDR day 282, year 1995 to day 282, year 1995
NO BURST (0)

1/26/96

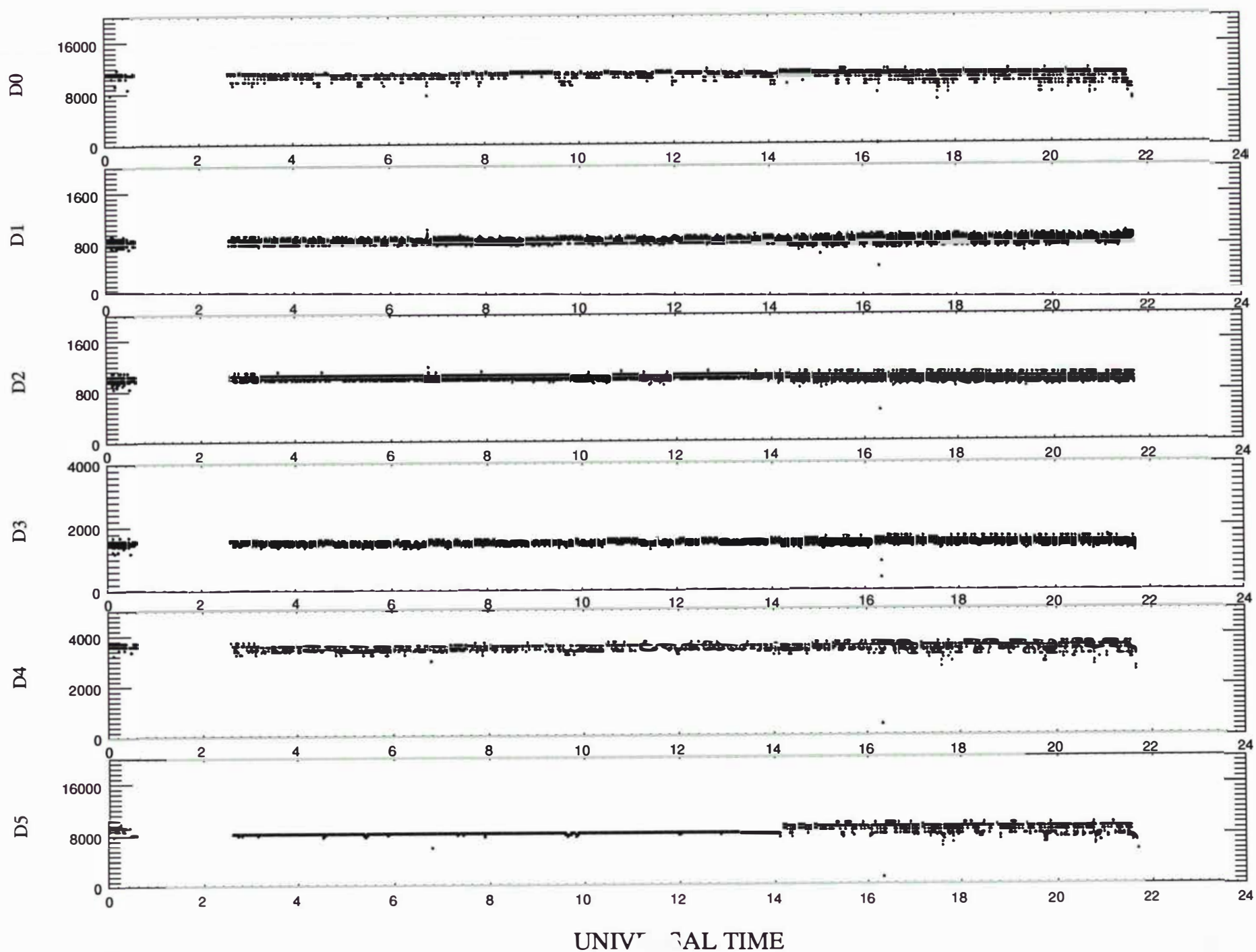


HUS 2A, MODE 1, NOT AVERAGED EDR day 282, year 1995 to day 282, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV. TIME



95	7	1	117	23737	23737	3658
95	7	6	121	42735	42735	3662
95	7	11	123	13789	13789	3663
95	7	13	BGR	32133	32176	3664
95	7	30	128	76149	76124	3720
95	8	4	131	7135	07134	3734
95	8	4	133	45377	45376	3735
95	8	8	BGR	13023	12974	3745
95	8	9	136	85945	85945	3750
95	8	18	137	5065	05002	3765
95	8	22	140	13751	13749	3767
95	9	4	142	52692	52688	3776
95	9	9	145	85473	85452	3788
95	9	19	151	51465	51447	3806
95	9	21	152	20947	20947	3811
95	9	22	BGR	15495		
95	9	22	BGR	25929		
95	9	26	BGR	63919		
95	10	1	153	41907		
95	10	2	BGR	77583		3843
95	10	4	BGR	83974		
95	10	5	154	14842.112		
95	10	8	156	46287.863		
95	10	10	BGR	11774		
95	10	11	157	77693.094		3860
95	10	13	159	57097.299		
95	10	14	160	13108.167		
95	10	14	161	43561.3		
95	10	16	162	02484.285		3870
95	10	16	BGR	71607		3871
95	10	18	163	19832.069		
95	10	19	64	11712.625		
95	10	19	165	48244.594		3875
95	10	25	167	85239.738		
95	11	2	168	07085.879		
95	11	2	69	21209.015		3891
95	11	2	BGR	28693		
95	11	5	BGR	01745		
95	11	5	170	05868.077		3893
95	11	5	171	46827.808		
95	11	7	BGR	27298		
95	11	11	BGR	34960		
95	11	12	172	66495.244		
95	11	13	173	84358.872		3906
95	11	15	BGR	38929		
95	11	17	175	10123.762		
95	11	18	BGR	82560		
95	11	19	176	29831.402		3912
95	11	19	177	46457.519		
95	11	19		59448		
95	11	21		22280		
95	11	22	179	09841.38		
95	11	22	180	17107.738		
95	11	23	BGR	65408		
95	11	24	BGR	21266		3918
95	11	24	BGR	25132		

--- T. L. Cline ----- LHEAVX::CLINE

From cline@lheavx.gsfc.nasa.gov Fri Jan 26 13:00 PST 1996
 Date: Fri, 26 Jan 1996 13:00:45 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: Improved list; same question.

Dear Kevin,

I'm making a little progress here, tracking down these events. This is a slightly improved list, with a few more BATSE triggers identified. - TLC

Yr	Mn	Dy	Konus#	Konus Tzero	BATSE Tz, #	Ulysses
94	11	14	BGR	07360	07358 3283	- NO
94	11	19	4	70269.175	70250 3287	R I
94	11	21	6	62700.945	62697 3290	trig.
94	11	25	7	79470.156	79470 3295	R I
94	11	26	BGR	01246	01245 3296	
94	11	26	8	44557.952	44521 3298	trig.
94	11	26	BGR	60860	60861 3299	
94	11	26	9	71809.732	71798 3301	R I
94	11	27	10	52225.68	52217 3303	R I
94	11	28	BGR	56220	56217 3305	
94	12	28	28	27585.915	27581 3330	R I
94	12	29	29	82268.781	82258 3334	R I
95	1	4	31	26319.613	26319 3345	R I
95	1	11	33	17352.241	17263 3351	R I
95	1	11	34	44329	44310 3352	
95	1	17	BGR	05760	05761 3360	
95	1	18	BGR	44574	44589 3364	
95	2	7	BGR	02774	02781 3406	
95	2	8	45	07824	07824 3408	
95	2	10	47	08424	08421 3410	
95	2	11	48	08697	08697 3412	trig.
95	2	11	50	72469	72468 3415	
95	2	21	BGR	74701	74705 3436	
95	2	26	54	53351	53336 3442	
95	3	1	BGR	75731	75761 3448	
95	3	4	56	37661	37657 3453	
95	3	5	58	54309	54304 3458	
95	3	10	BGR	78388	78395 3464	
95	3	25	63	25841	25844 3480	
95	3	25	64	63392	63391 3481	
95	3	27	BGR	26323	26347 3485	
95	3	27	BGR	85672	85671 3486	
95	4	1	69	42647	42642 3488	
95	4	1	70	74635	74634 3489	
95	4	3	71	47985	47987 3491	
95	4	3	72	84828	84826 3492	
95	4	16	BGR	48420	48419 3509	
95	4	18	81	83793	83795 3512	
95	4	25	86	00923	00919 3523	
95	4	30	BGR	54224	54229 3527	
95	5	3	88	66971	66970 3537	
95	5	10	90	28083	28079 3569	
95	5	13	93	81706	81703 3571	
95	5	21	97	25161	25157 3588	
95	5	22	98	23898	23896 3590	
95	5	22	100	85280	85283 3593	
95	5	24	102	14902	14899 3598	
95	6	2	104	25592	25592 3618	
95	6	10	107	6849	06849 3637	
95	6	24	111	84124	84084 3648	
95	6	25	113	14626	14601 3649	
95	6	29	115	37033	37036 3654	
95	7	1	116	12762	12758 3657	

1 / 2 / 9 6

U L Y S S E S R T

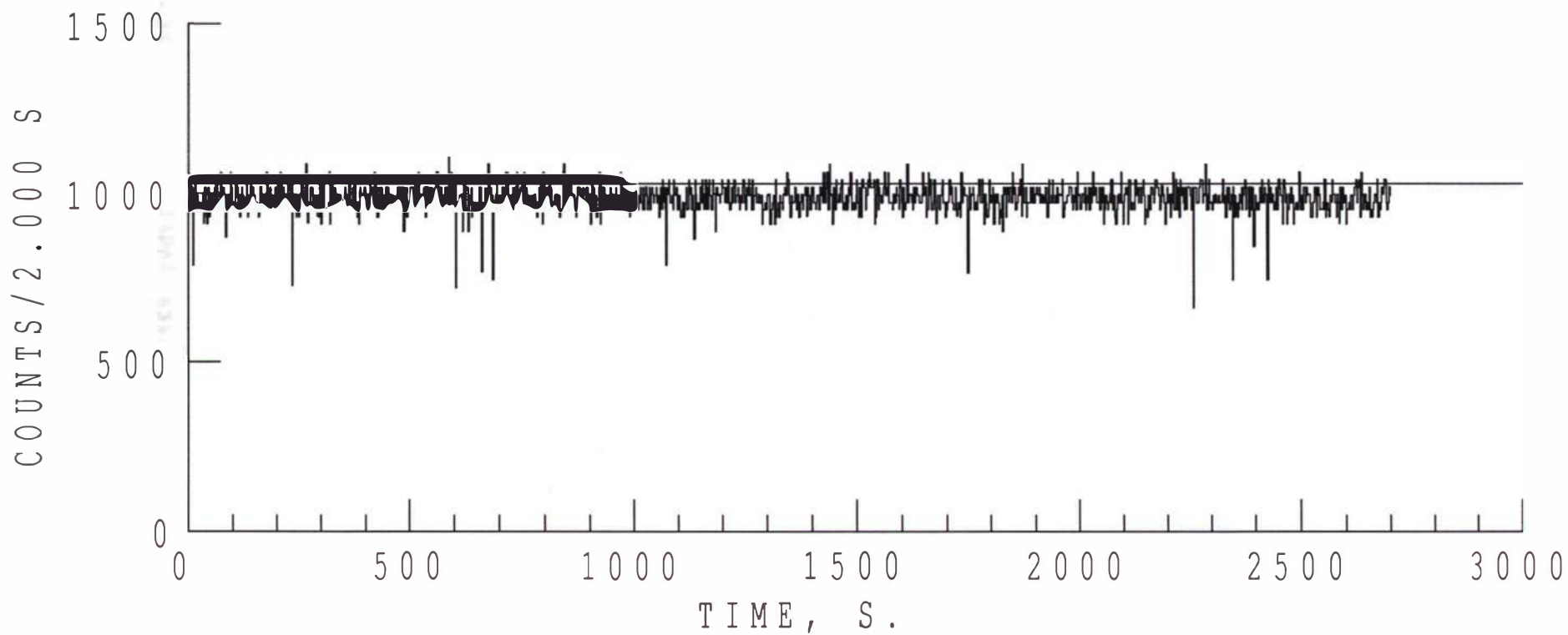
1 0 / 1 0 / 9 5 1 0 4 4 0 . 4 5 6 s

0 . 5 0 0 s I N T E R V A L S R E G R O U P E D B Y 4

0 - 0 k e V

N = 10 M = 2

> 4.0 SIGMA FLUCTUATIONS



From RICHARDSON@SSLLES.MSFC.NASA.GOV Fri Oct 13 11:25 PDT 1995
Date: Fri, 13 Oct 1995 13:24:57 -0500 (CDT)
From: RICHARDSON@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@ssl.msfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3856

TIME: TJD=0000 SECONDS=55816

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT

From RICHARDSON@SSLLES.MSFC.NASA.GOV Fri Oct 13 11:33 PDT 1995
Date: Fri, 13 Oct 1995 13:32:55 -0500 (CDT)
From: RICHARDSON@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3857

BATSEARCH PROGRAM

BATSE BURST # 3857
EVENT OF 1995 OCT 10 DAY OF YEAR=283
EVENT CROSSING TIME AT BATSE : 76344. S. OR 21:12:24.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 127.000 39.000
BATSE PEAK COUNTING RATE: 3000 C/S

RI

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 10/10/ 95 IS:
RA= 205.606 DEC= 58.405 DIST= 2.764 AU
BATSE-ULYSSES DISTANCE = 413495925. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=128.06 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -850.28 SECS.
CROSSING TIME AT ULYSSES IS 75494. S. OR 20:58:13 +/- 225.64 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 10/10/ 95 IS:
RA= 229.734 DEC= -18.881 DIST= 2.173 AU
MARS-BATSE DISTANCE = 325079808. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 68.55 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 396.59 SECS.
CROSSING TIME AT MARS IS 76741. S. OR 21:19:00 +/- 181.24 SECONDS

BATSE BURST TRIGGER

NO.: 3857

TIME: TJD=0000 SECONDS=76344

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=134.8 AZIMUTH=296.8 ERROR=3.2 DEGREES

COMMENTS:

GRB., DUR~30SEC. NOT VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3857	951010	10000	76344	3000	127	+39	30

Helio corr removed

Date: Feb 20 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

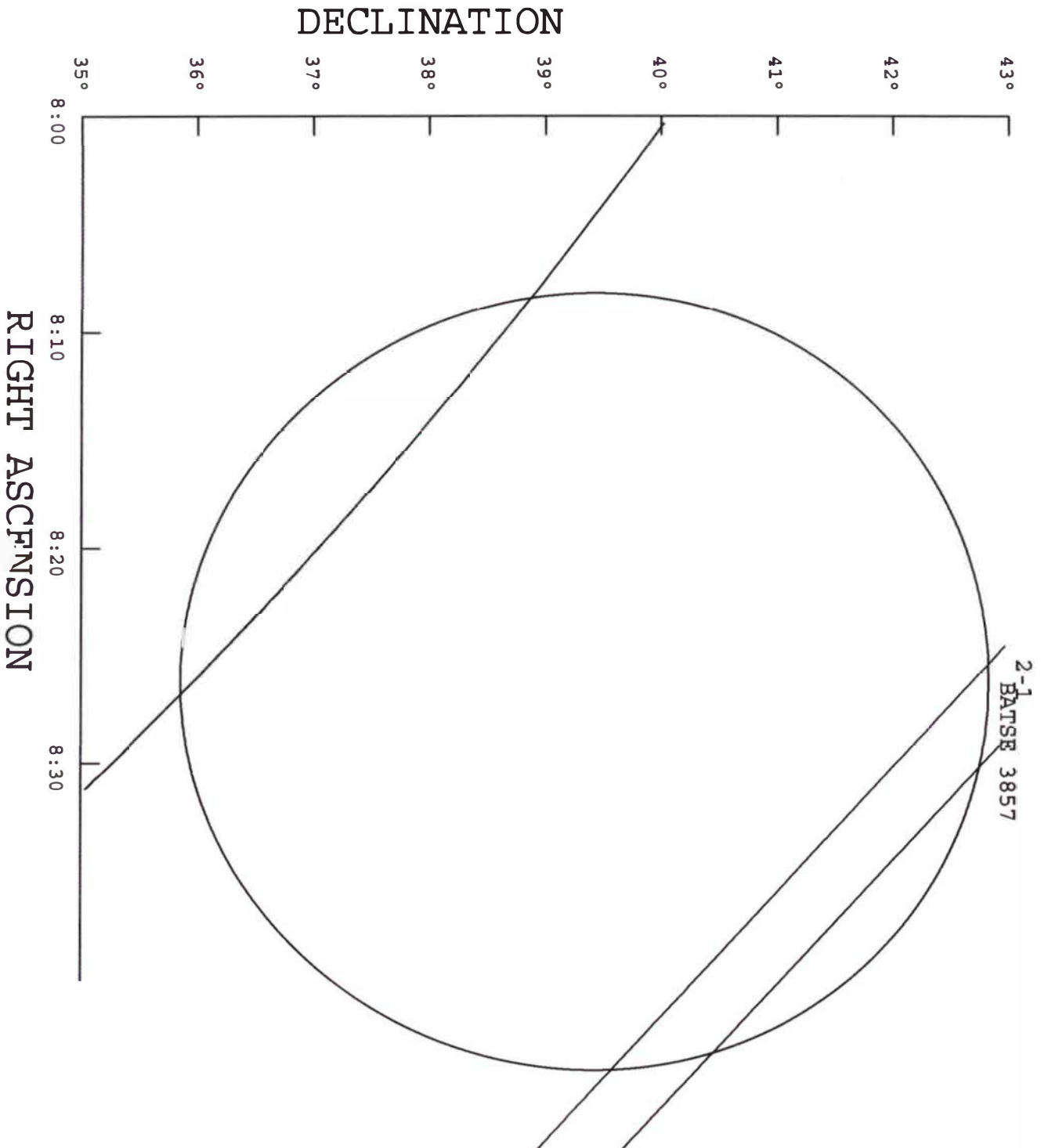
G=GALACTIC EQUATOR

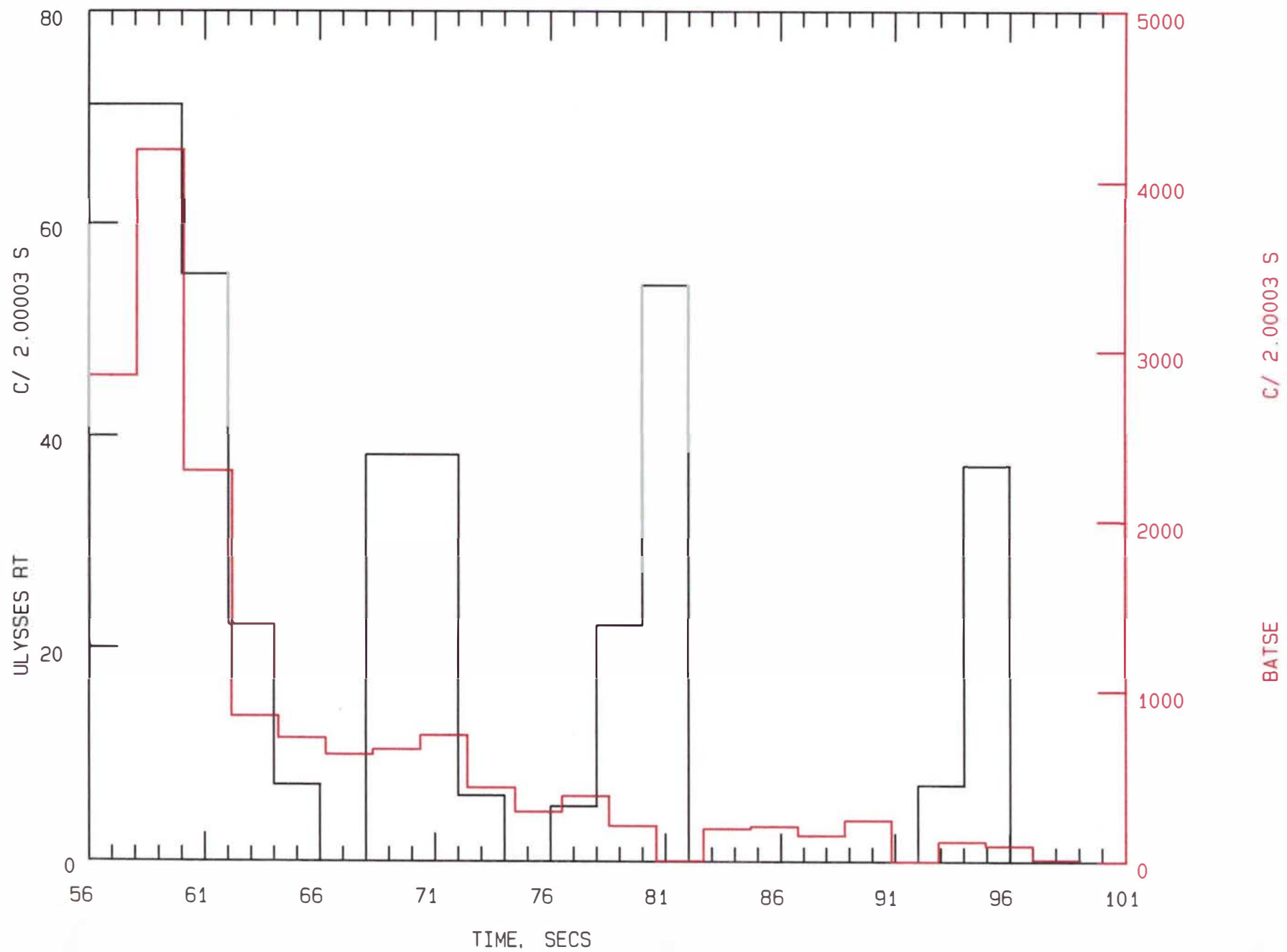
1 ULYSSES

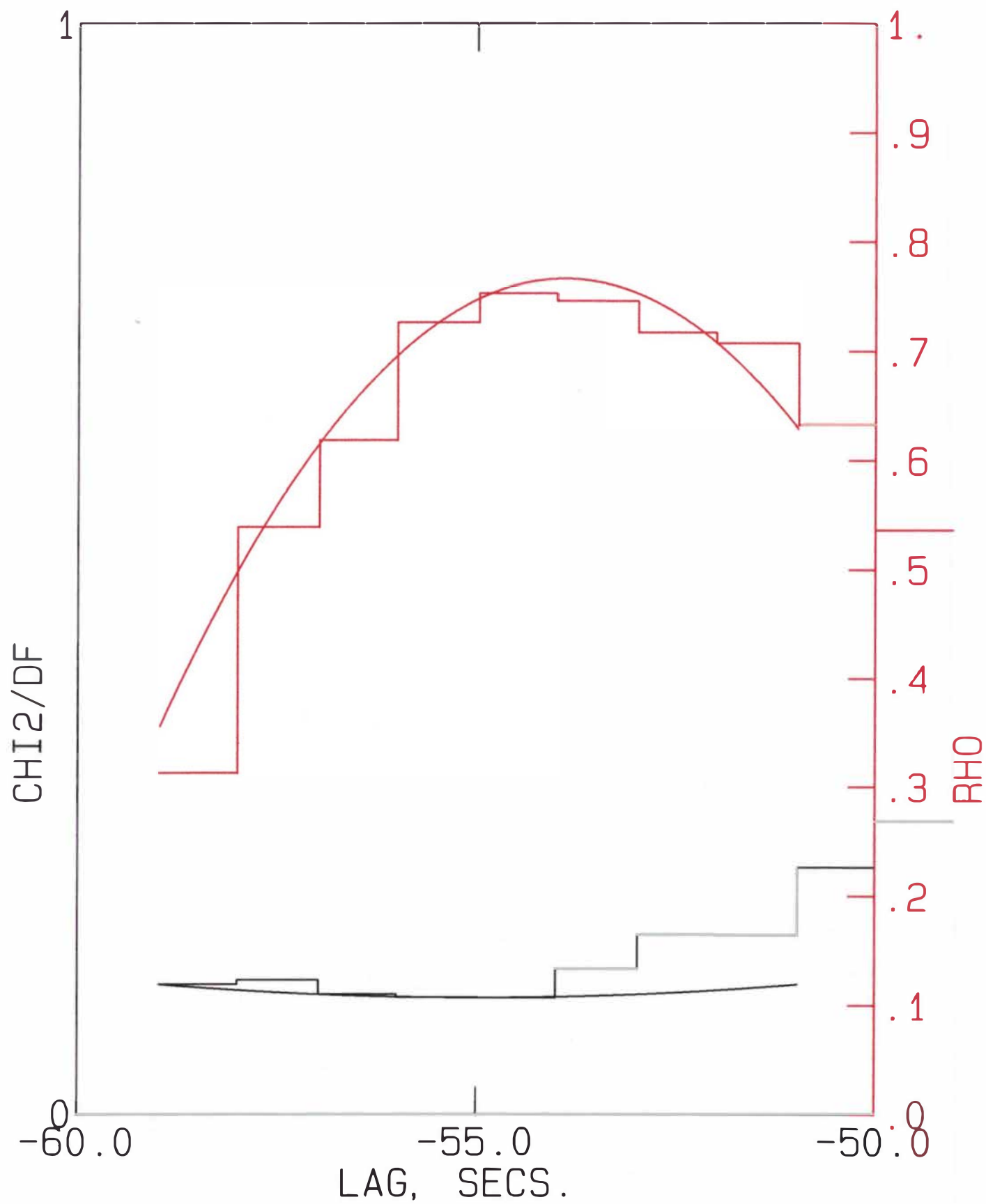
2 BATSE

EVENT OF OCT 10, 1995 20:56

20 / 2/98







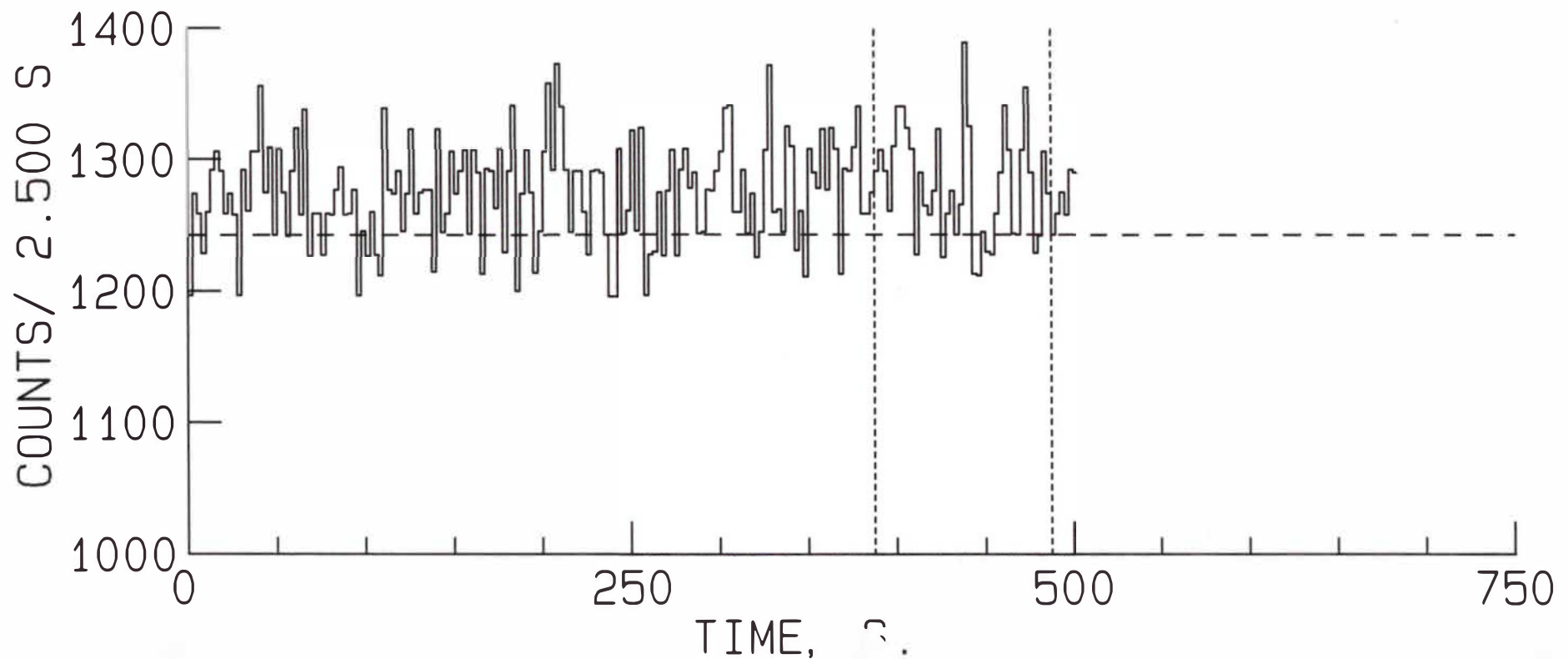
ULYSSES RT

20 / 2 / 98

10/10/95 75240.031 s

0.250 S INTERVALS REGROUPED BY 10

21- 143 keV



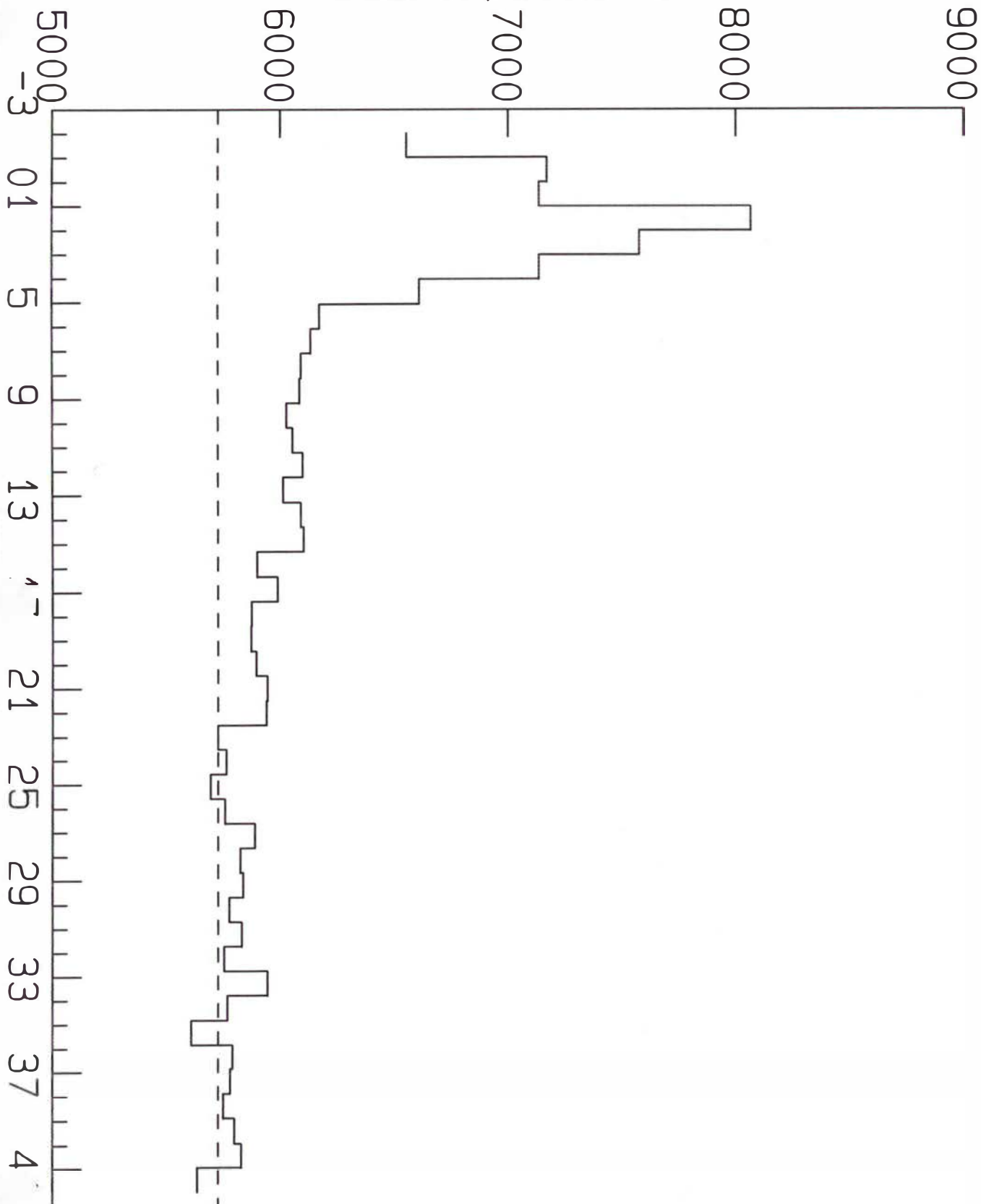
BATSE

10/10/95

76343.986

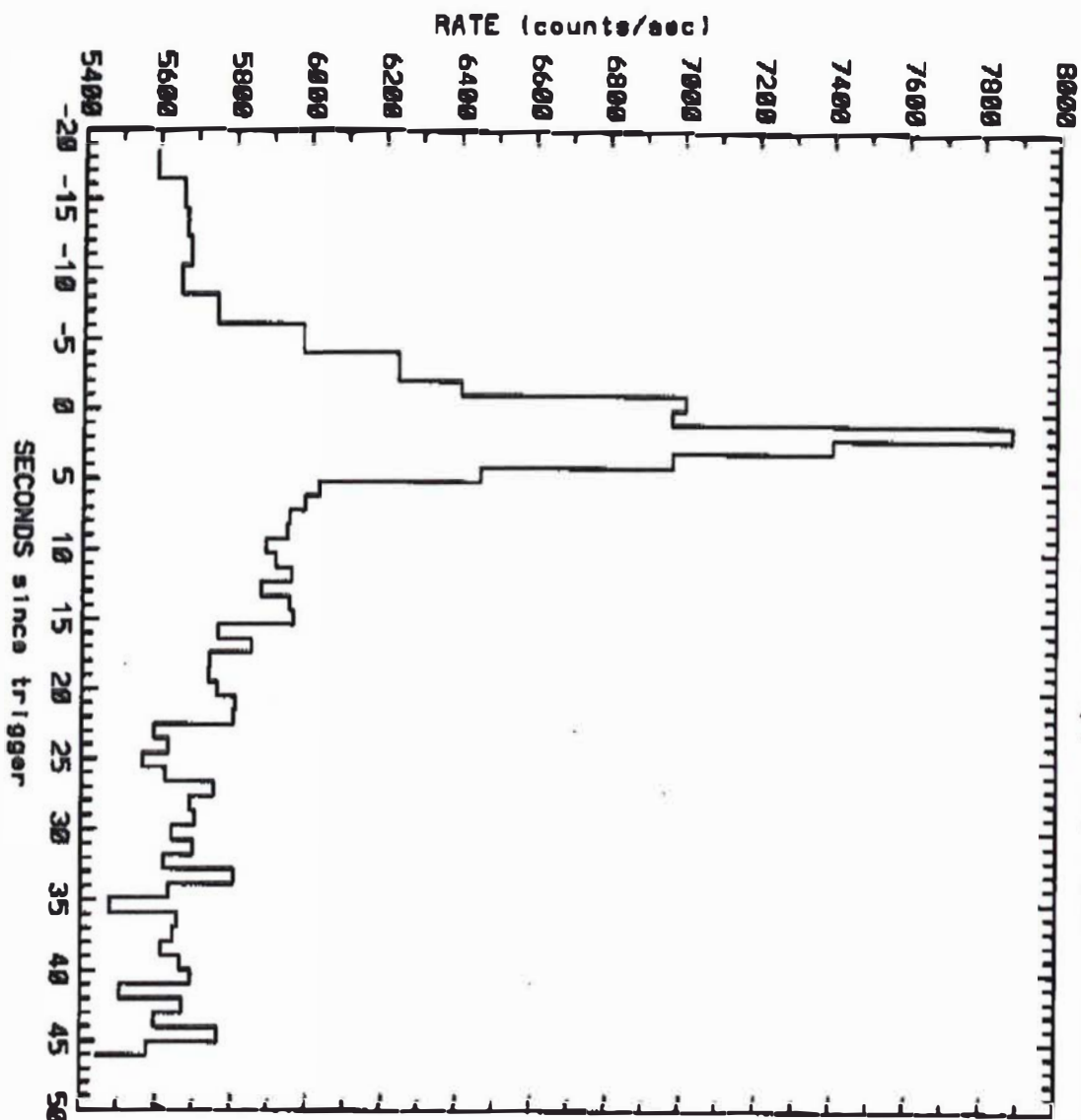
25- 100 keV

COUNTS/1.024 S



21/10/95

DISCLB Data for K. Hurley, No. 3857



28-OCT-1995 11:11.58

Created by MOPS BD
(Burst Display)
Version 12.25

Trigger # = 3857

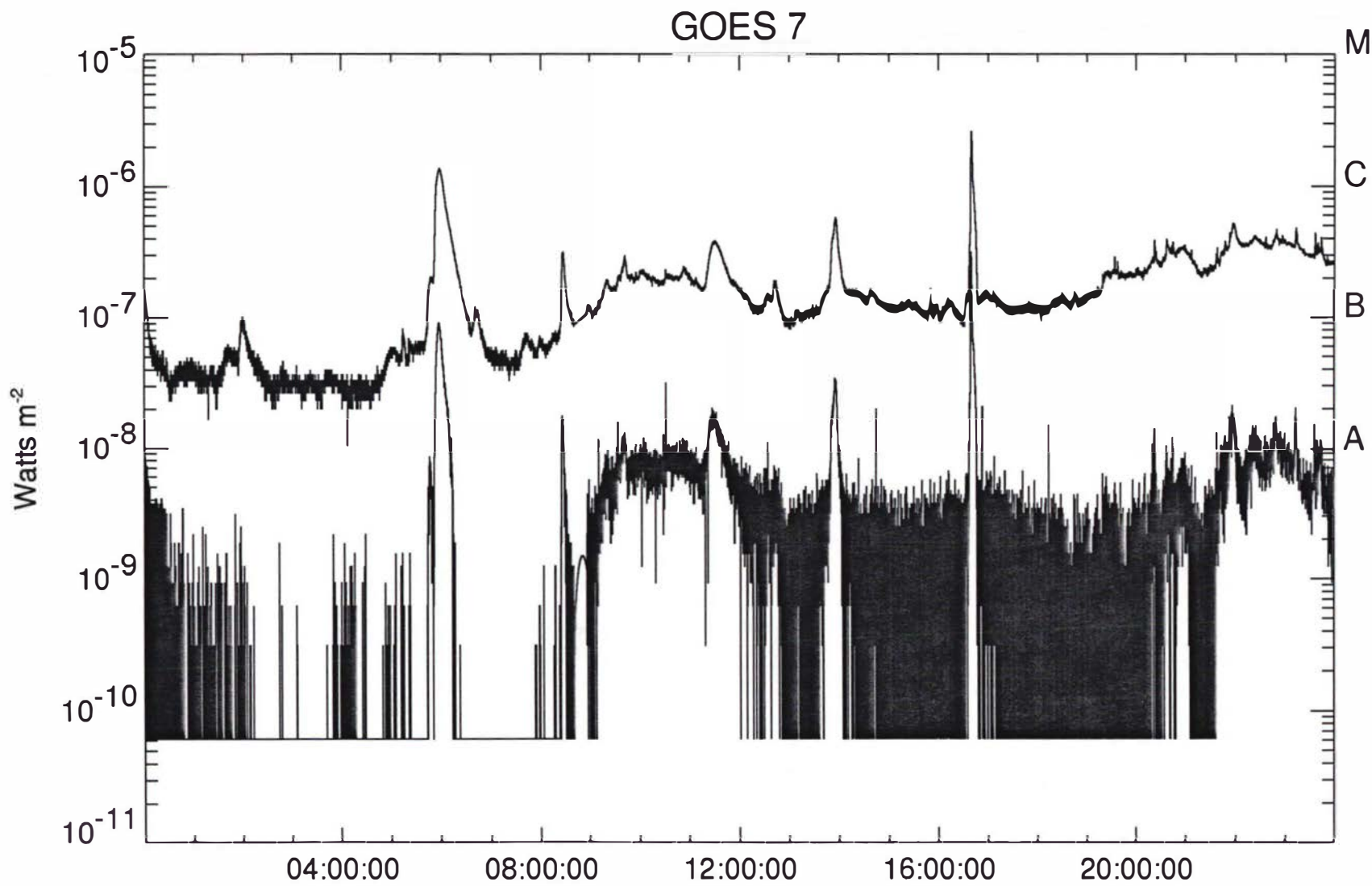
Trigger Time:

18000 / 76343.906

Burst Data Type:

DISCLB

Deadtime
Corrected: NBackground Data
Type: NoneMinimum Integ. Time:
1.024 secondsDetectors [7..0],
7---3---Discriminators:
1 1 . 2)Quality Mask:
BDISP1



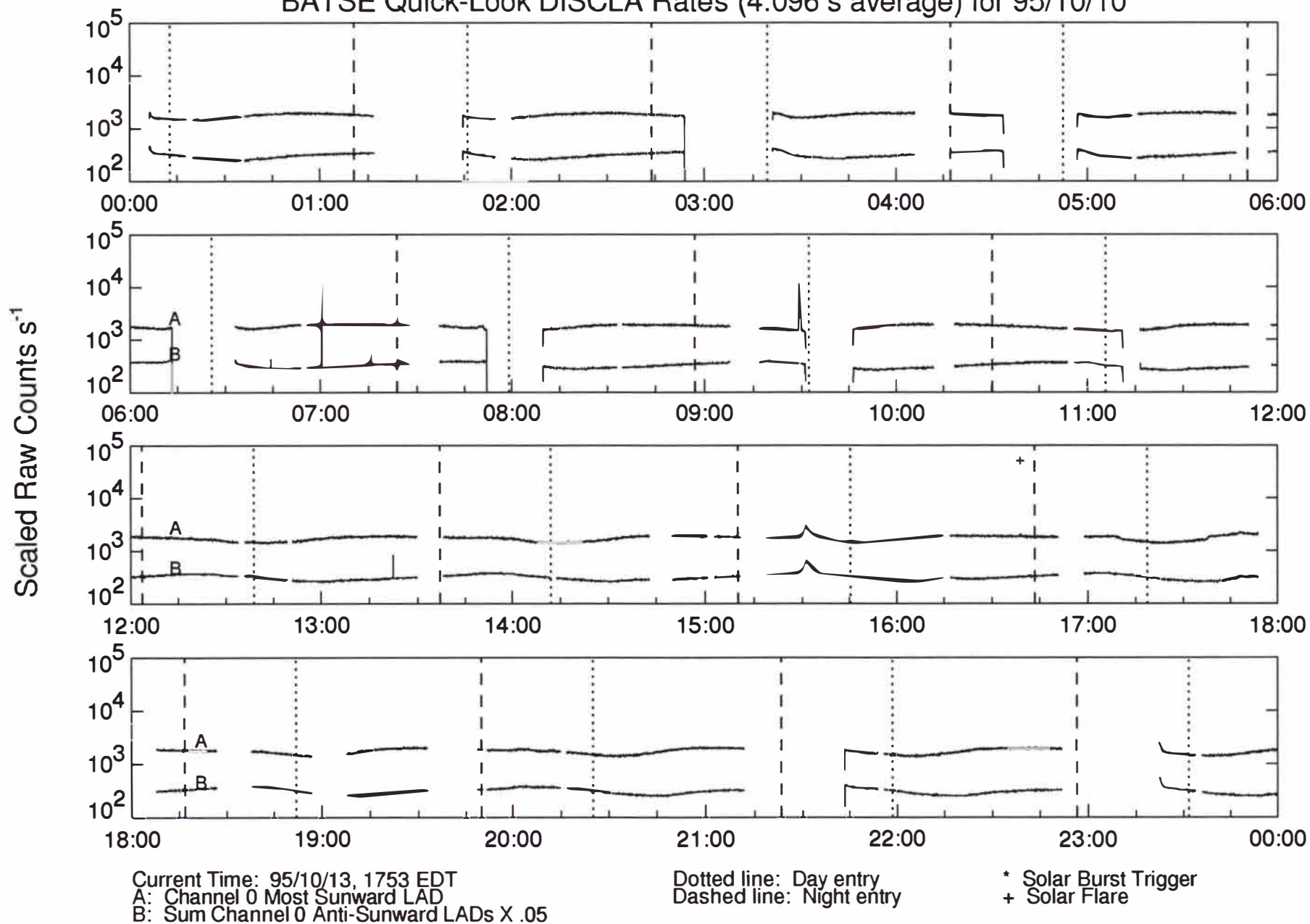
Data Start: 95/10/10, 0000:02

Plot created: 95/11/15, 1950

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

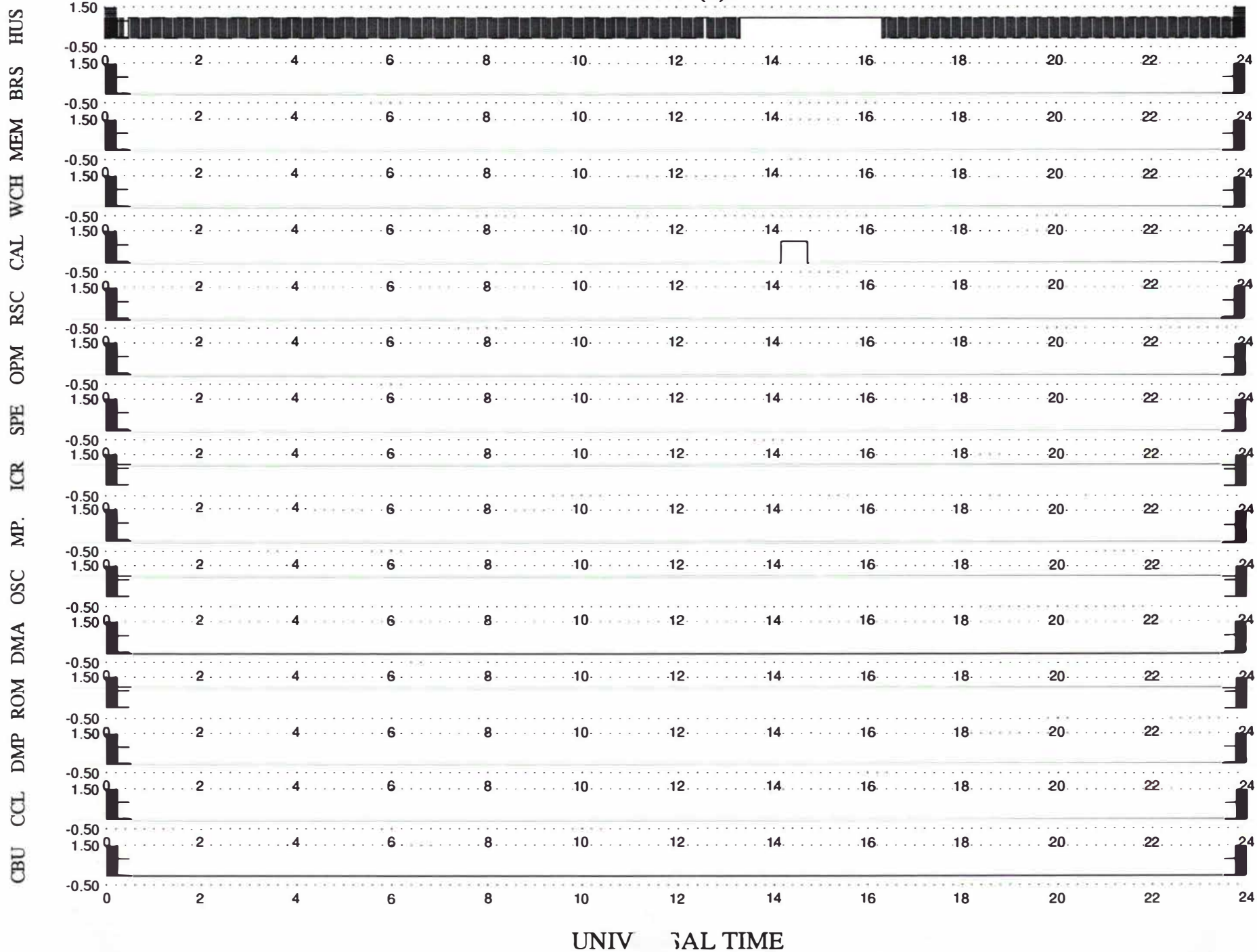
Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/10



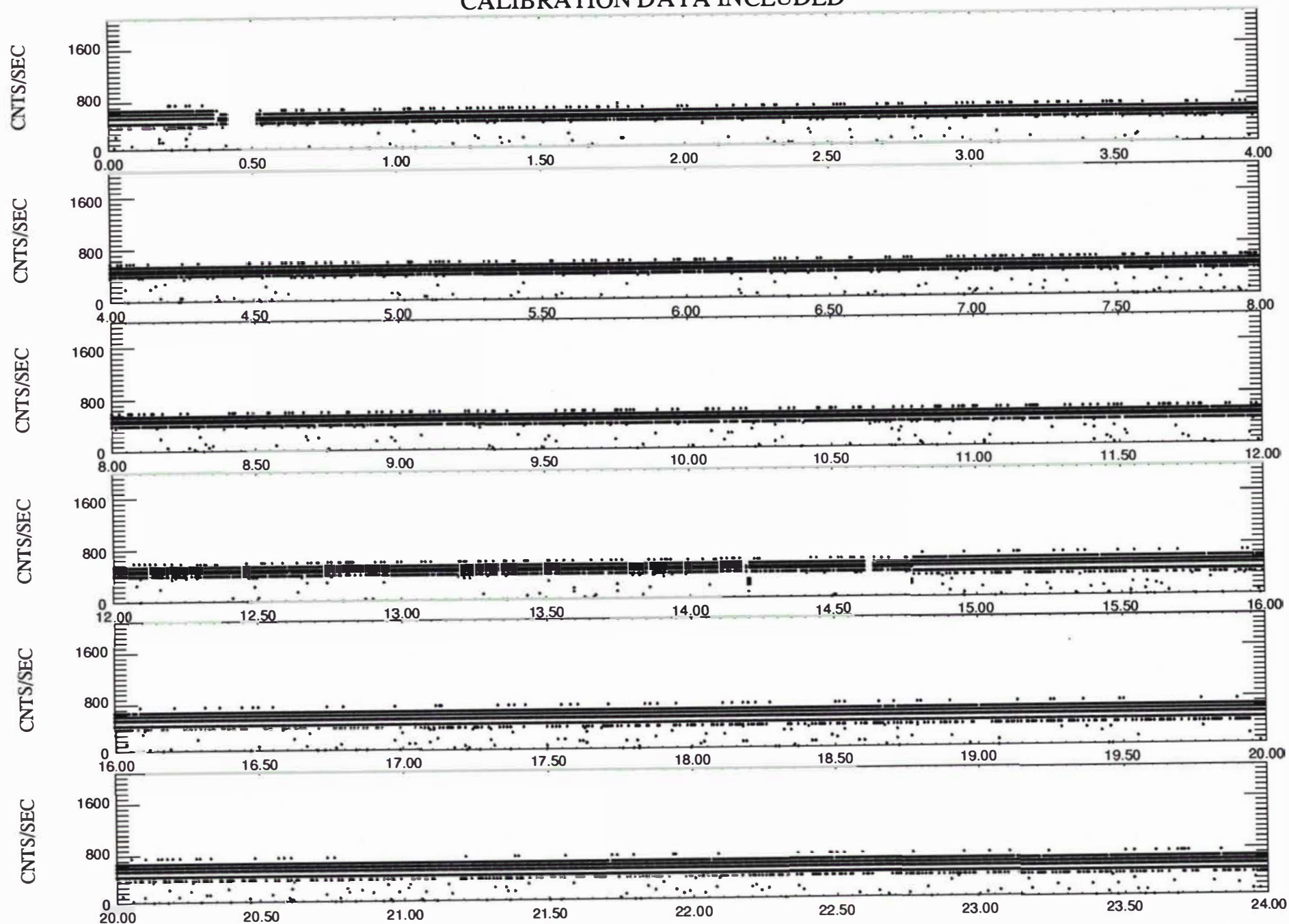
HUS MODES EDR day 283, year 1995 to day 283, year 1995
NO BURST (0)

1/26/96

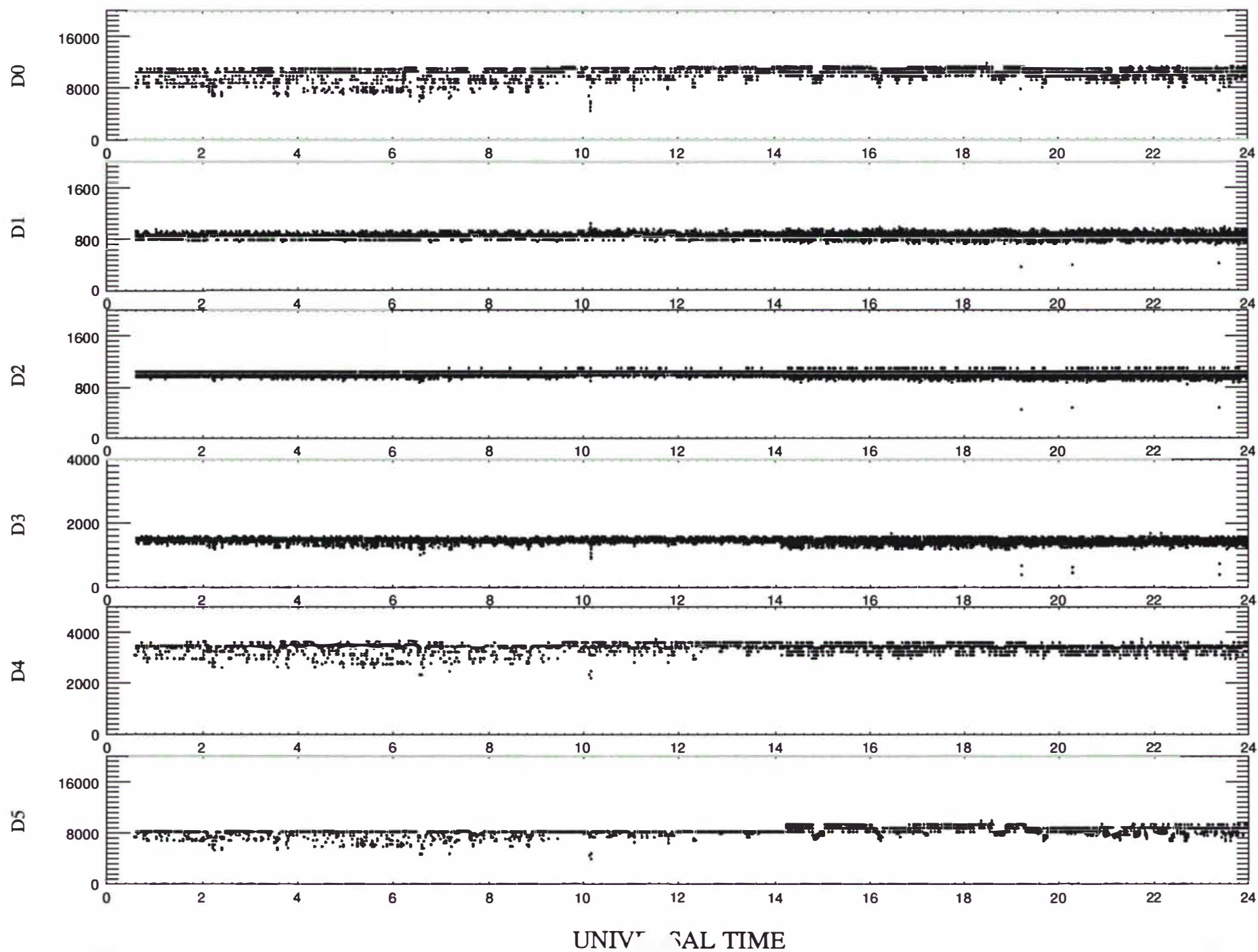


HUS 2A, MODE 1, NOT AVERAGED EDR day 283, year 1995 to day 283, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV SAL TIME

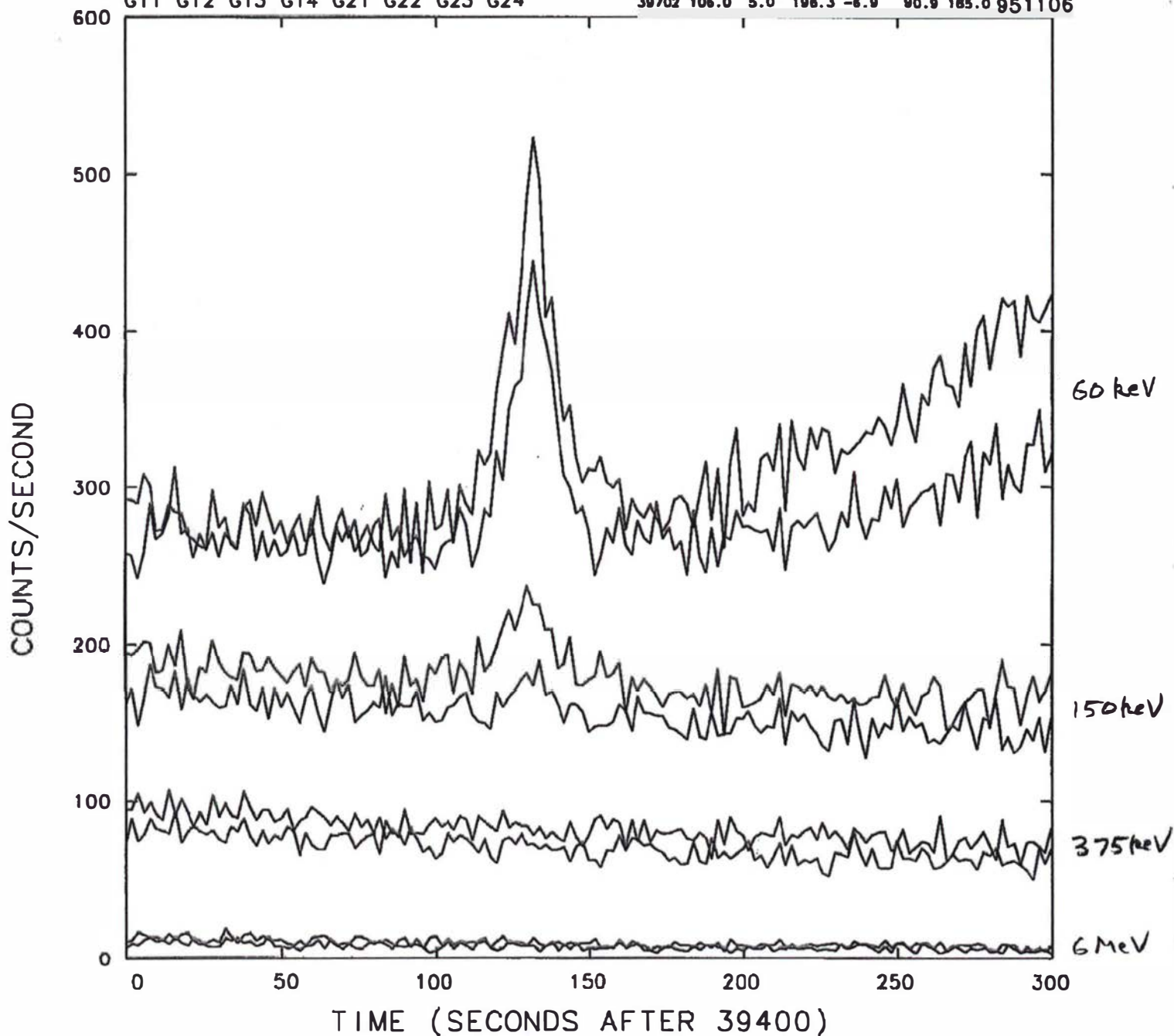


DMSP13 1995 OCT 11 95284

G11 G12 G13 G14 G21 G22 G23 G24

UT	SCRA	DEC	SUNRA	DEC	ANGSUN	GHAA
39400	108.9	22.6	196.3	-6.9	90.2	183.7
39702	106.0	5.0	196.3	-6.9	90.9	185.0

C51011B 951106



39531.9 PEAK [ULYSES: 39540]

MAGNETOSPHERIC?

J. Terrell

From TERRELL@nisdp0.lanl.gov Tue Nov 7 15:30 PST 1995
From: TERRELL@nisdp0.lanl.gov
Date: Tue, 7 Nov 1995 16:30:49 -0700 (MST)
To: khurley@sunspot.ssl.berkeley.edu
Subject: dmsp grb

From: jterrell@lanl.gov (James Terrell, NIS-2, MS/D436) 951107
To: butterworth@lheavx.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu,
cline@lheavx.gsfc.nasa.gov, kmarar@isac.ernet.in,
scott@circe.gsfc.nasa.gov

CC:
Subj: DMSP GRB detections

DMSP13 detected an intense event 1995 October 11 beginning ~39520 UT, with peak at 39532 UT, probably corresponding to the Ulysses trigger at 39540. Another similar event was seen around 45550, so that perhaps both events are magnetospheric. DMSP12 was in a radiation belt at the time of the first event.

DMSP13 detected repeated bursts 1995 October 11 starting at 77644 UT (peak), followed by several other peaks, notably at 77664 and 77738 UT. This may correspond to the Konus and BATSE observations at 77640 UT. DMSP12 was in a radiation belt at these times.

DMSP13 did not detect the Konus (and Ulysses) event of 1995 October 14, 13108 UT. The non-detection may aid in locating the intense event.
DMSP12 was in a radiation belt at that time. --Jim

From BUTTERWORTH@LHEAVX.GSFC.NASA.GOV Wed Oct 18 10:20 PDT 1995
From: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Date: Wed, 18 Oct 1995 13:15:07 -0400 (EDT)
To: khurley@sunspot.ssl.berkeley.edu, kmarar@isac.ernet.in, jterrell@lanl.gov,
CLINE@LHEAVX.GSFC.NASA.GOV, scott@circe.gsfc.nasa.gov
CC: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Subject: report on 11 and 14 October events - Konus saw both

Hi Everyone,

Konus triggered on the 14th at 03:38:28.167. The event was intense for 0.5 seconds and lingered faintly for several seconds afterwards. Above 50keV the intense period had two peaks.

In contrast, the 11 October episode was one of the longest lasting GRBs I've seen in Konus data. It was bright for 50 seconds, but there was also renewed activity at 75 and 125 seconds, and there are signs of elevated flux levels out to 4 minutes after the trigger (at which point we entered read-out mode, with no more data taken for many minutes).

Paul.

From: LHEAVX::BUTTERWORTH 18-OCT-1995 12:40:33.98
To: @ULYSSES
CC: BUTTERWORTH
bj: BTW - BATSE saw the 11 October event too.

Just scanned the BACODINE records, and BATSE had a trigger at 21.34 on the 11th - high southern declination, quite intense. No BATSE trigger near the Ulysses event on the 14th...

Paul.

From: LHEAVX::BUTTERWORTH 18-OCT-1995 12:28:03.65
To: @ULYSSES
CC: BUTTERWORTH
Subj: Konus (and TGRS) saw the 11 October burst, checking 14 October now

Hi Everyone,

Konus and TGRS saw the 11 October event. (The TGRS team asked me if Konus had seen it). I don't have the plots in front of me, but I recall that Konus saw it as an intense, long-lived (>50s) and complex event.

I'll go look at the data from the 16th now, and will report back within the hour.

Paul.

From: SMTP%"root@charybdis.ssl.berkeley.edu" 18-OCT-1995 11:54:21.14

From BUTTERWORTH@LHEAVX.GSFC.NASA.GOV Thu Oct 19 08:50 PDT 1995
From: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Date: Thu, 19 Oct 1995 11:45:32 -0400 (EDT)
To: root@charybdis.ssl.berkeley.edu
CC: khurley@sunspot.ssl.berkeley.edu, kmarar@isac.ernet.in, jterrell@lanl.gov,
BUTTERWORTH@LHEAVX.GSFC.NASA.GOV, CLINE@LHEAVX.GSFC.NASA.GOV,
scott@circe.gsfc.nasa.gov
Subject: Ulysses event at 10:59UT on 11 October was NOT seen by Konus

I haven't looked myself yet, but the current event list from Ioffe has nothing near that time.

Paul.

From root@charybdis Thu Oct 19 08:27 PDT 1995
Date: Thu, 19 Oct 1995 06:48:12 -0700
From: root@charybdis (0000-Admin(0000))
To: butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
jterrell@lanl.gov, khurley@sunspot, kmarar@isac.ernet.in,
scott@xtelab.gsfc.nasa.gov

ULYSSES GAMMA-RAY BURST NOT REPORTED BY BATSE:
(CORRECTION TO PREVIOUS MESSAGE)

1. Ulysses triggered on a 32 ms long event October 11 around 10:59 UT
(NOT 21:34 UT)
at Ulysses. This could be cosmic or particle-induced.

The spacecraft was about 1400 light-seconds from Earth.
Was this event detected by anyone else?

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

From HENZE@fender.msfc.nasa.gov Mon Oct 16 12:11 PDT 1995
From: HENZE@fender.msfc.nasa.gov
Date: Mon, 16 Oct 1995 14:10:39 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 03858

TIME: TJD=0001 SECONDS=22215

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=078.7 AZIMUTH=359.9 ERROR=001.9 DEGREES

COMMENTS:

GOES C5.0 FLARE. DUR. > 55 S. NOT VISIBLE ABOVE 300 KEV.

From HENZE@fender.msfc.nasa.gov Mon Oct 16 12:14 PDT 1995
From: HENZE@fender.msfc.nasa.gov
Date: Mon, 16 Oct 1995 14:14:27 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 03859

TIME: TJD=0001 SECONDS=33026

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=080.8 AZIMUTH=000.2 ERROR=001.1 DEGREES

COMMENTS:

GOES B8.4 FLARE. DUR. ~100 S. NOT VISIBLE ABOVE 100 KEV.

From HENZE@ssl.msfc.nasa.gov Mon Oct 16 12:49 PDT 1995
From: HENZE@ssl.msfc.nasa.gov
Date: Mon, 16 Oct 1995 14:49:15 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3860

BATSEARCH PROGRAM

RI

BATSE BURST # 3860
EVENT OF 1995 OCT 11 DAY OF YEAR=284
EVENT CROSSING TIME AT BATSE : 77679. S. OR 21:34:39.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 41.000 -58.000
BATSE PEAK COUNTING RATE: 14500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 11/10/ 95 IS:
RA= 205.958 DEC= 58.227 DIST= 2.769 AU
BATSE-ULYSSES DISTANCE = 414194649. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 7.93 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1368.39 SECS.
CROSSING TIME AT ULYSSES IS 79047. S. OR 21:57:27 +/- 103.88 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 11/10/ 95 IS:
RA= 230.450 DEC= -19.070 DIST= 2.176 AU
MARS-BATSE DISTANCE = 325541024. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 77.47 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 235.60 SECS.
CROSSING TIME AT MARS IS 77915. S. OR 21:38:34 +/- 187.61 SECONDS

BATSE BURST TRIGGER

NO.: 03860

TIME: TJD=0001 SECONDS=77679

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=104.8 AZIMUTH=112.3 ERROR=000.5 DEGREES

COMMENTS:

GRB. SPIKEY, DUR. ~43 S. HARD SPECTRUM. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3860	951011	10001	77679	14500	041	-58	43

95	7	1	117	23737	23737	3658
95	7	6	121	42735	42735	3662
95	7	11	123	13789	13789	3663
95	7	13	BGR	32133	32176	3664
95	7	30	128	76149	76124	3720
95	8	4	131	7135	07134	3734
95	8	4	133	45377	45376	3735
95	8	8	BGR	13023	12974	3745
95	8	9	136	85945	85945	3750
95	8	18	137	5065	05002	3765
95	8	22	140	13751	13749	3767
95	9	4	142	52692	52688	3776
95	9	9	145	85473	85452	3788
95	9	19	151	51465	51447	3806
95	9	21	152	20947	20947	3811
95	9	22	BGR	15495		
95	9	22	BGR	25929		
95	9	26	BGR	63919		
95	10	1	153	41907		
95	10	2	BGR	77583		3843
95	10	4	BGR	83974		
95	10	5	154	14842.112		
95	10	8	156	46287.863		
95	10	10	BGR	11774		
95	10	11	157	77693.094		3860
95	10	13	159	57097.299		
95	10	14	160	13108.167		
95	10	14	161	43561.3		
95	10	16	162	02484.285		3870
95	10	16	BGR	71607		3871
95	10	18	163	19832.069		
95	10	19	64	11712.625		
95	10	19	165	48244.594		3875
95	10	25	167	85239.738		
95	11	2	168	07085.879		
95	11	2	69	21209.015		3891
95	11	2	BGR	28693		
95	11	5	BGR	01745		
95	11	5	170	05868.077		3893
95	11	5	171	46827.808		
95	11	7	BGR	27298		
95	11	11	BGR	34960		
95	11	12	172	66495.244		
95	11	13	173	84358.872		3906
95	11	15	BGR	38929		
95	11	17	175	10123.762		
95	11	18	BGR	82560		
95	11	19	176	29831.402		3912
95	11	19	177	46457.519		
95	11	19		59448		
95	11	21		22280		
95	11	22	179	09841.38		
95	11	22	180	17107.738		
95	11	23	BGR	65408		
95	11	24	BGR	21266		3918
95	11	24	BGR	25132		

-- T. L. Cline ----- LHEAVX::CLINE

From cline@lheavx.gsfc.nasa.gov Fri Jan 26 13:00 PST 1996
 Date: Fri, 26 Jan 1996 13:00:45 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: Improved list; same question.

Dear Kevin,

I'm making a little progress here, tracking down these events. This is a slightly improved list, with a few more BATSE triggers identified. - TLC

Yr	Mn	Dy	Konus#	Konus Tzero	BATSE Tz, #	Ulysses
94	11	14	BGR	07360	07358	3283 - NO
94	11	19	4	70269.175	70250	3287 R I
94	11	21	6	62700.945	62697	3290 trig.
94	11	25	7	79470.156	79470	3295 R I
94	11	26	BGR	01246	01245	3296
94	11	26	8	44557.952	44521	3298 trig.
94	11	26	BGR	60860	60861	3299
94	11	26	9	71809.732	71798	3301 R I
94	11	27	10	52225.68	52217	3303 R I
94	11	28	BGR	56220	56217	3305
94	12	28	28	27585.915	27581	3330 R I
94	12	29	29	82268.781	82258	3334 R I
95	1	4	31	26319.613	26319	3345 R I
95	1	11	33	17352.241	17263	3351 R I
95	1	11	34	44329	44310	3352
95	1	17	BGR	05760	05761	3360
95	1	18	BGR	44574	44589	3364
95	2	7	BGR	02774	02781	3406
95	2	8	45	07824	07824	3408
95	2	10	47	08424	08421	3410
95	2	11	48	08697	08697	3412 trig.
95	2	11	50	72469	72468	3415
95	2	21	BGR	74701	74705	3436
95	2	26	54	53351	53336	3442
95	3	1	BGR	75731	75761	3448
95	3	4	56	37661	37657	3453
95	3	5	58	54309	54304	3458
95	3	10	BGR	78388	78395	3464
95	3	25	63	25841	25844	3480
95	3	25	64	63392	63391	3481
95	3	27	BGR	26323	26347	3485
95	3	27	BGR	85672	85671	3486
95	4	1	69	42647	42642	3488
95	4	1	70	74635	74634	3489
95	4	3	71	47985	47987	3491
95	4	3	72	84828	84826	3492
95	4	16	BGR	48420	48419	3509
95	4	18	81	83793	83795	3512
95	4	25	86	00923	00919	3523
95	4	30	BGR	54224	54229	3527
95	5	3	88	66971	66970	3537
95	5	10	90	28083	28079	3569
95	5	13	93	81706	81703	3571
95	5	21	97	25161	25157	3588
95	5	22	98	23898	23896	3590
95	5	22	100	85280	85283	3593
95	5	24	102	14902	14899	3598
95	6	2	104	25592	25592	3618
95	6	10	107	6849	06849	3637
95	6	24	111	84124	84084	3648
95	6	25	113	14626	14601	3649
95	6	29	115	37033	37036	3654
95	7	1	116	12762	12758	3657

Date: Feb 20 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

- ☐ 2.042 s subtracted for bursts prior to June 25 1992 and DISCSC programs prior to Version 2.16 (August 28 1992)?
- ☒ 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?

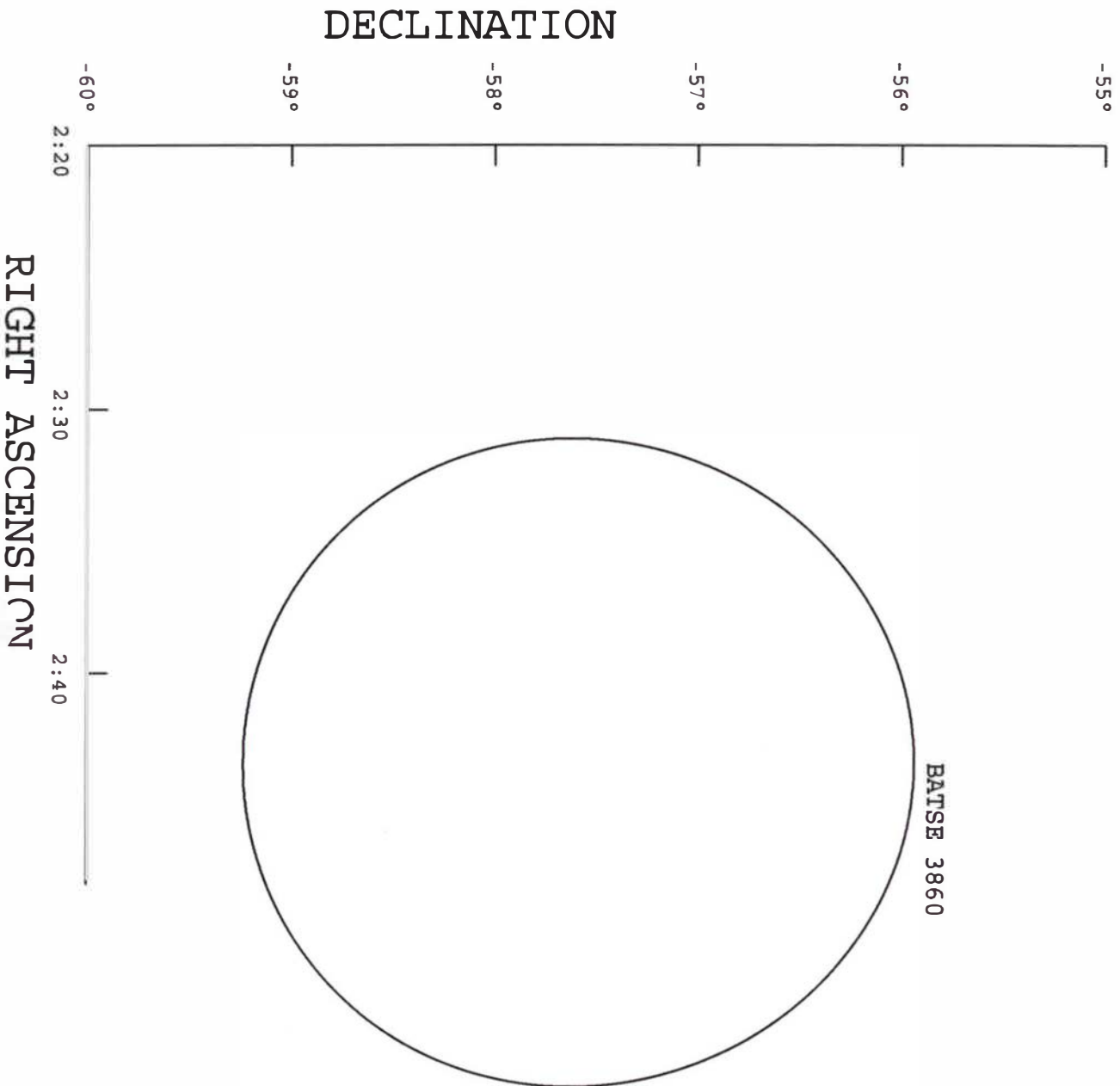
- ☐ ACCESS database updated?

No - Ulysses + BATSE events are apparently not the same. 1) light travel time violated
2) $U/B \sim 0.04$ 3) Ulysses bursts ~ 80 s long; BATSE ~ 30 s

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 OCT 11, 1995 21:56

20 / 2/98



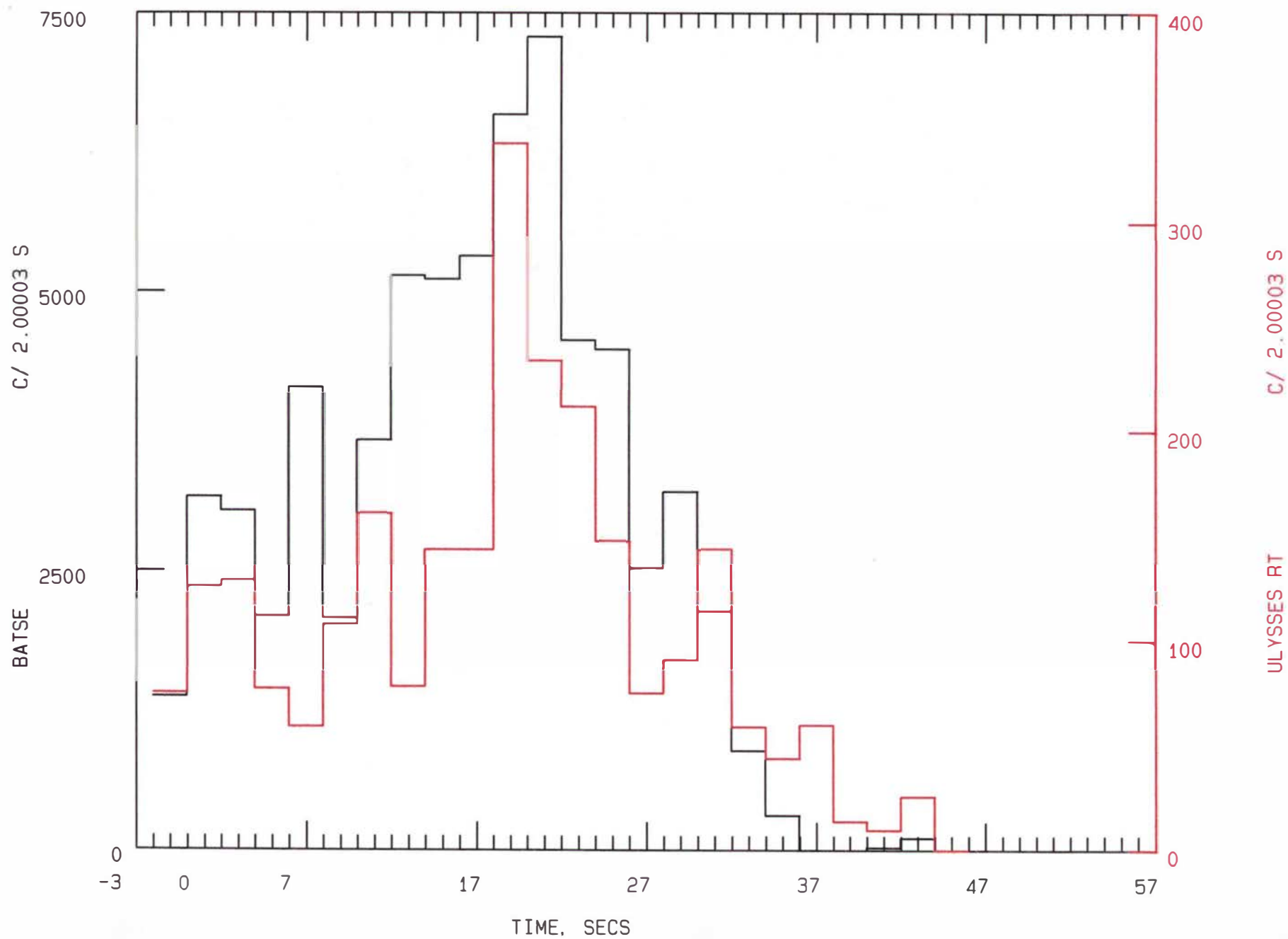
BATSE

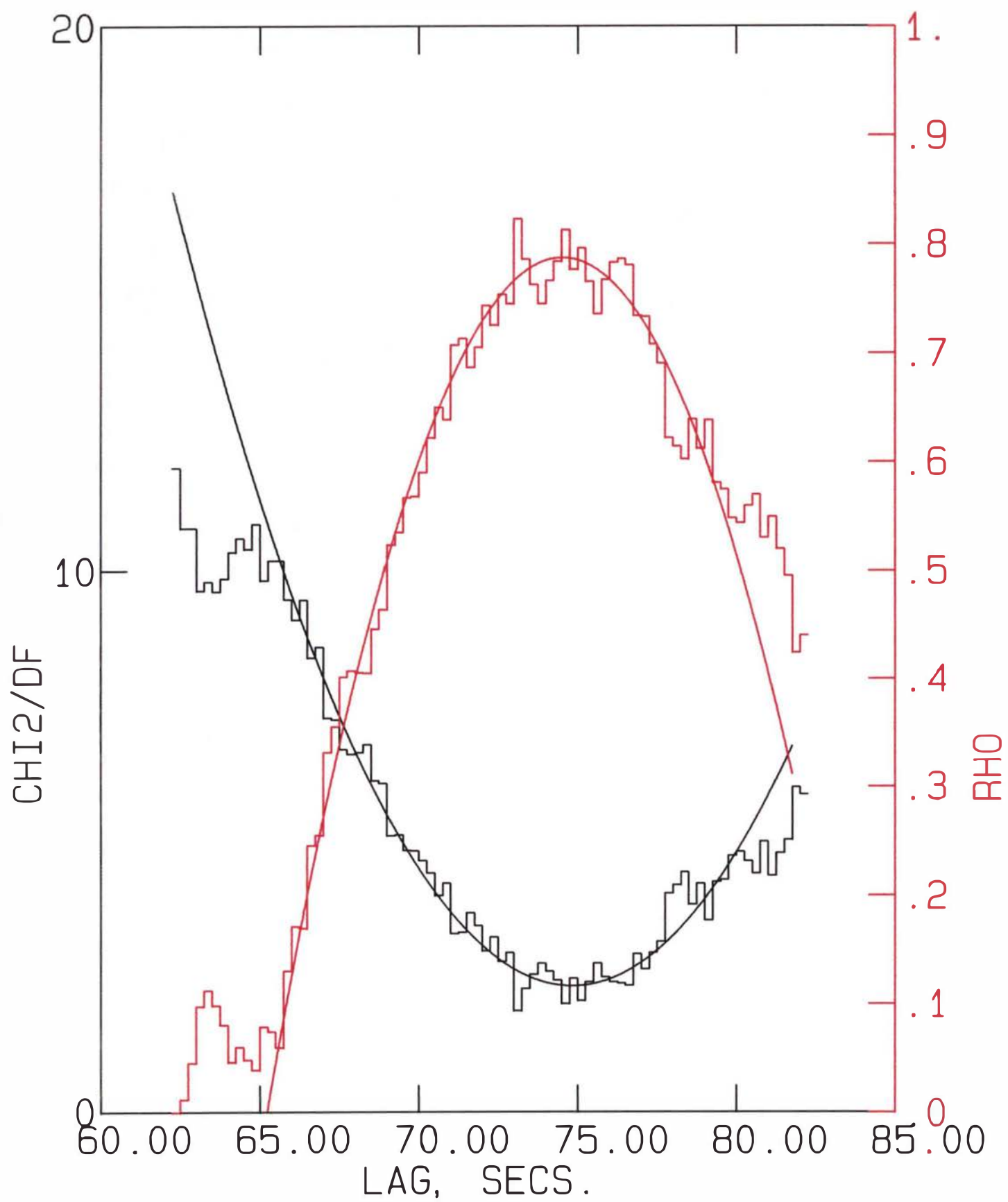
-ULYSSES RT CORRELATION

11/10/95

77679.282

20/ 2/98





ULYSSES RT

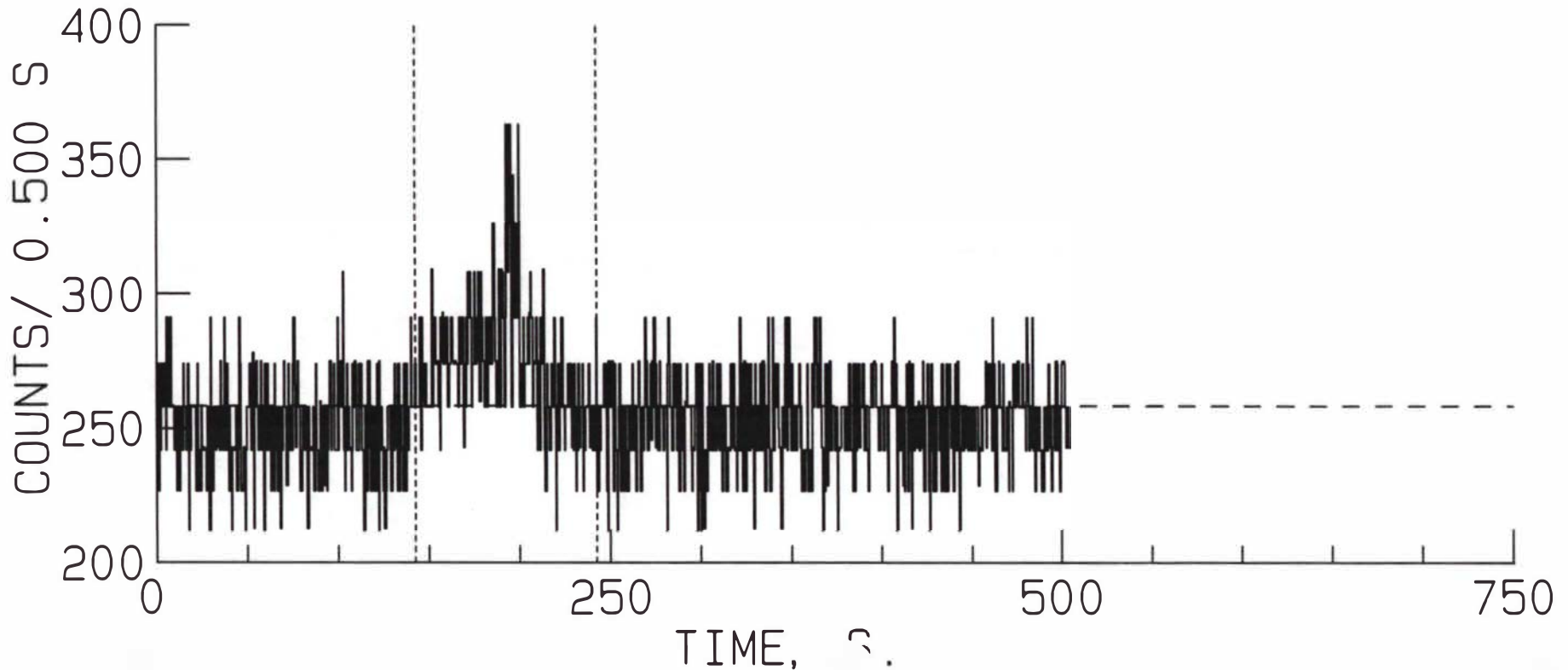
20 / 2 / 98

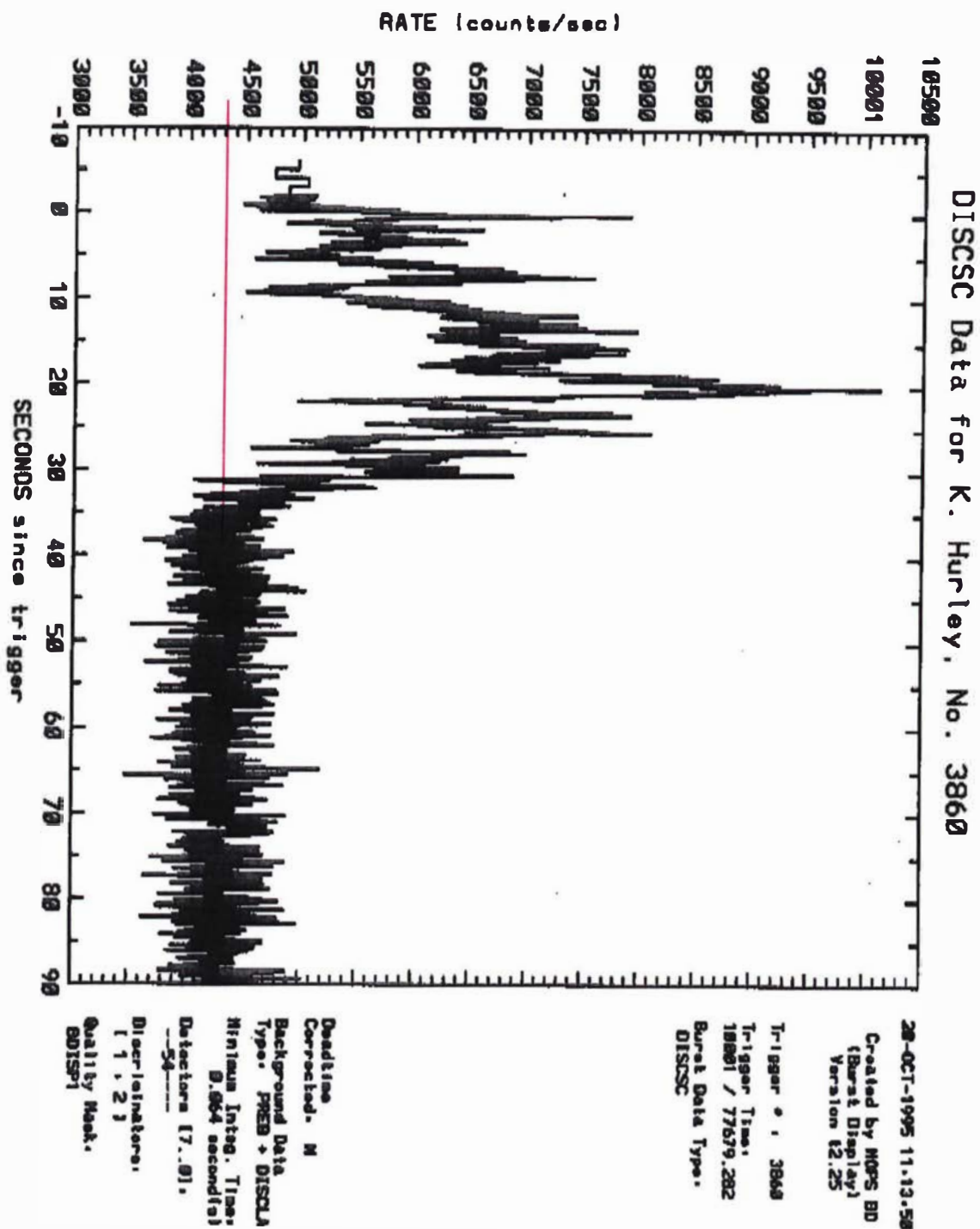
11/10/95 78912.014 s

0.250 S INTERVALS REGROUPED BY 2

21- 143 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





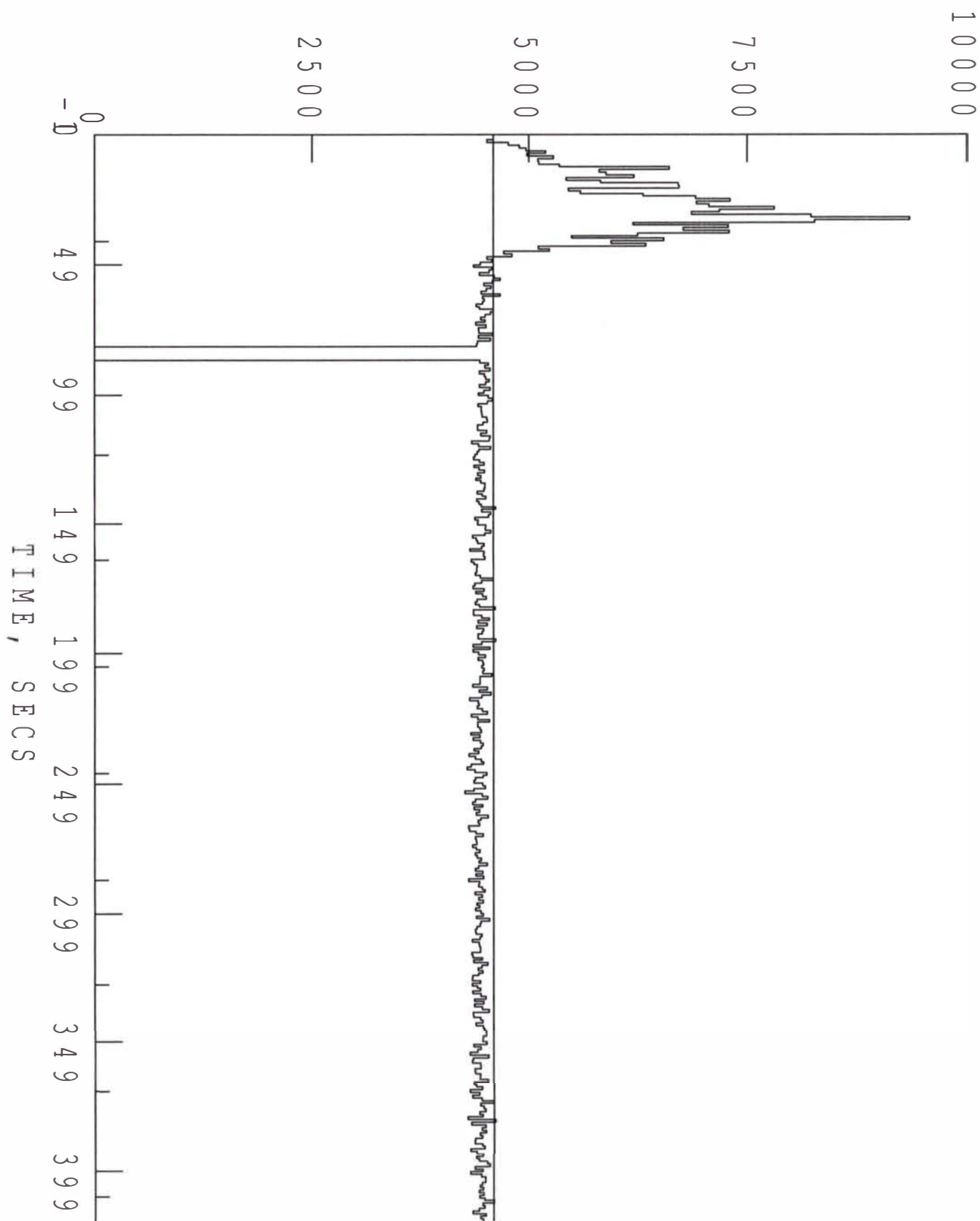
BACODINE

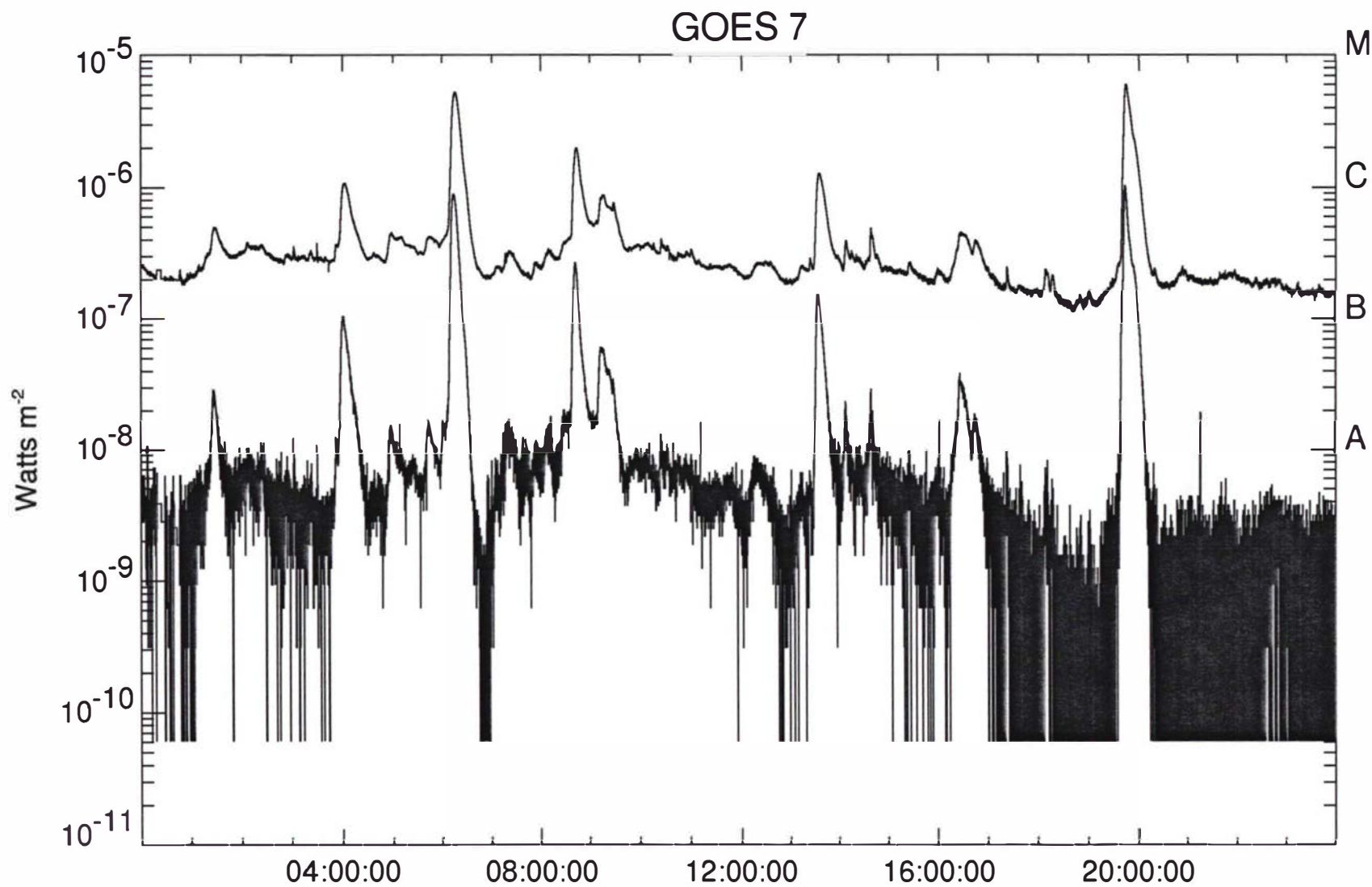
11/10/95

77668.017

25 - 100 keV

COUNTS/1.024 S





Data Start: 95/10/11, 0000:03

Plot created: 95/11/16, 1727

Channel

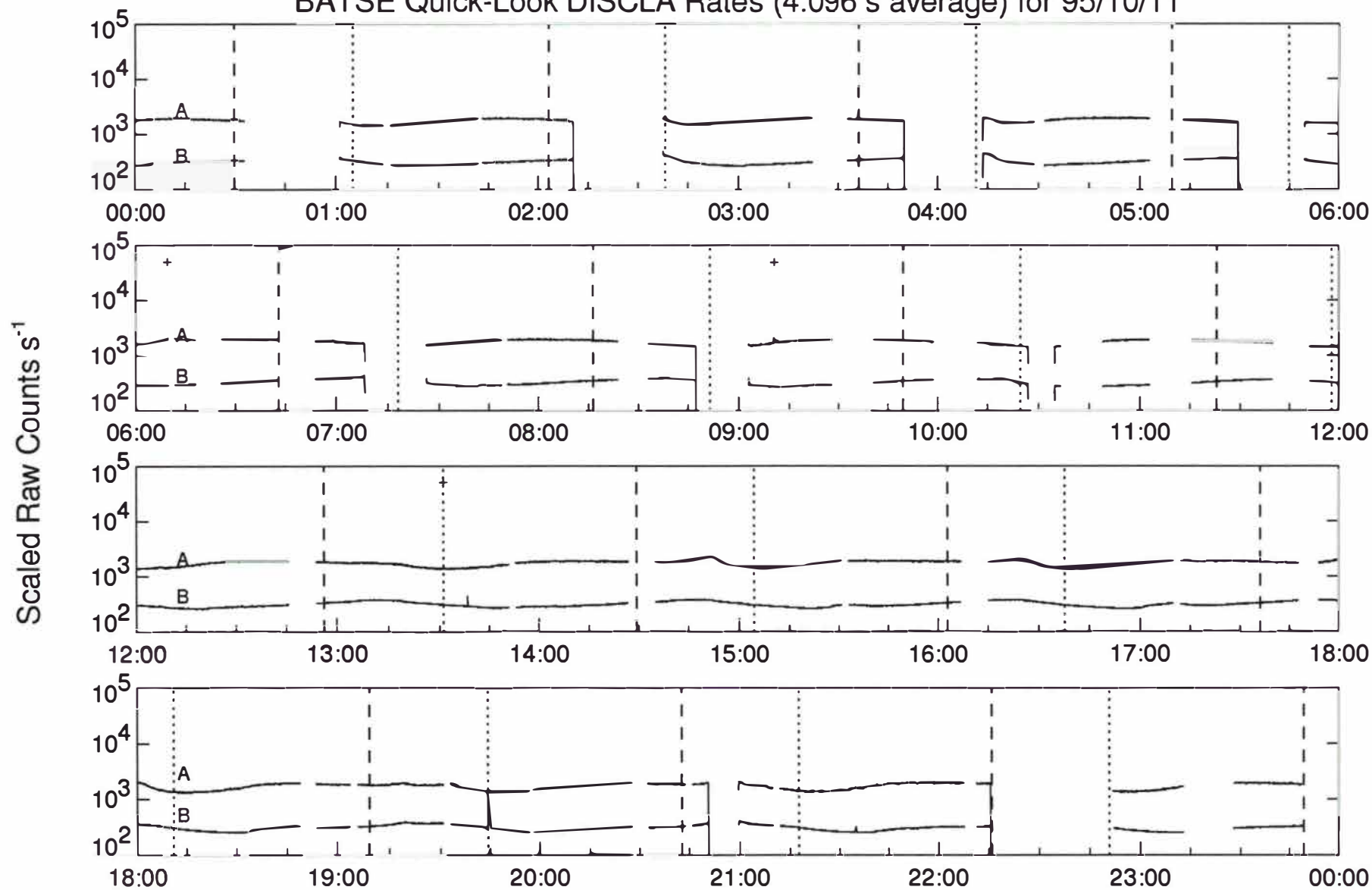
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/11

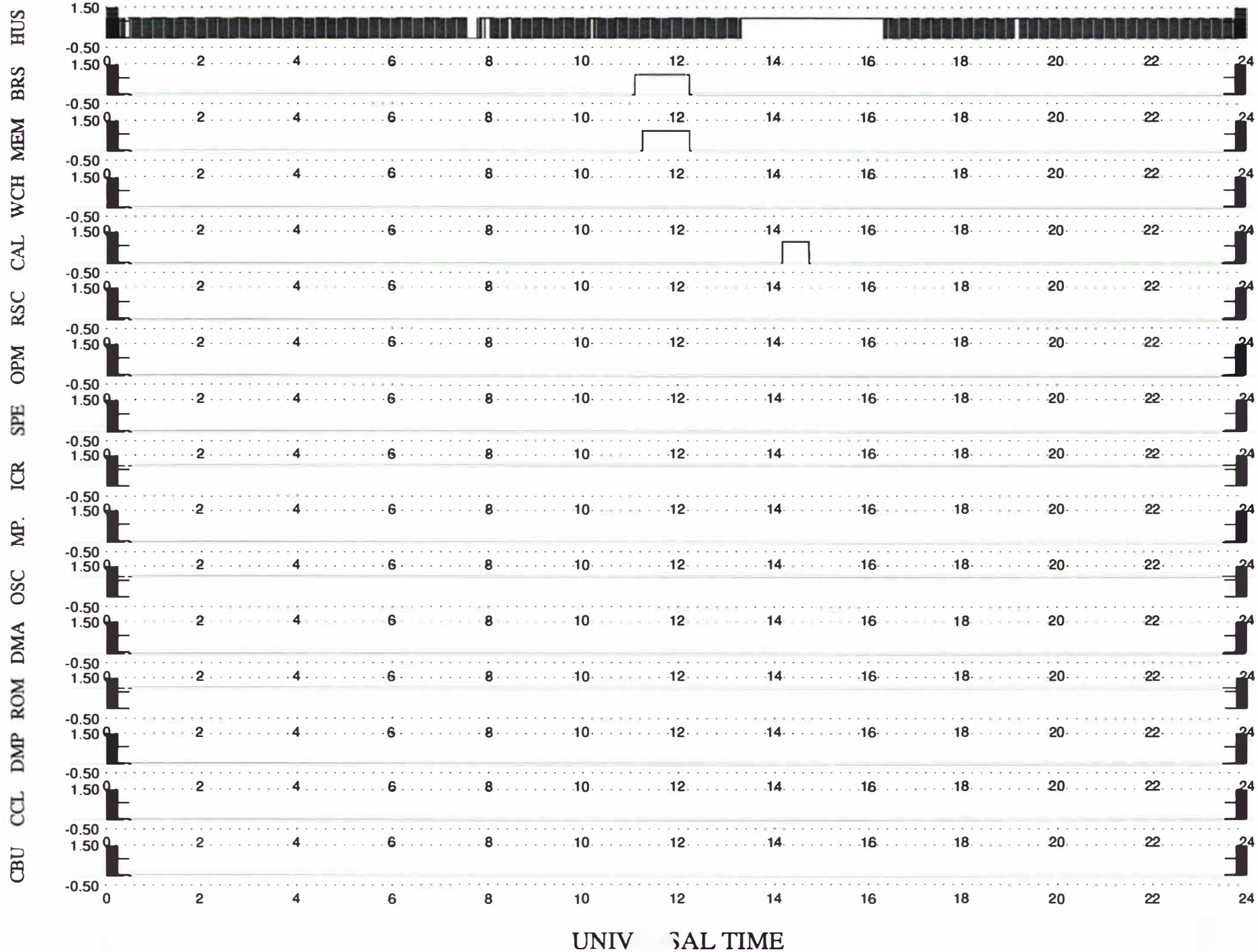


Current Time: 95/10/13, 1757 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

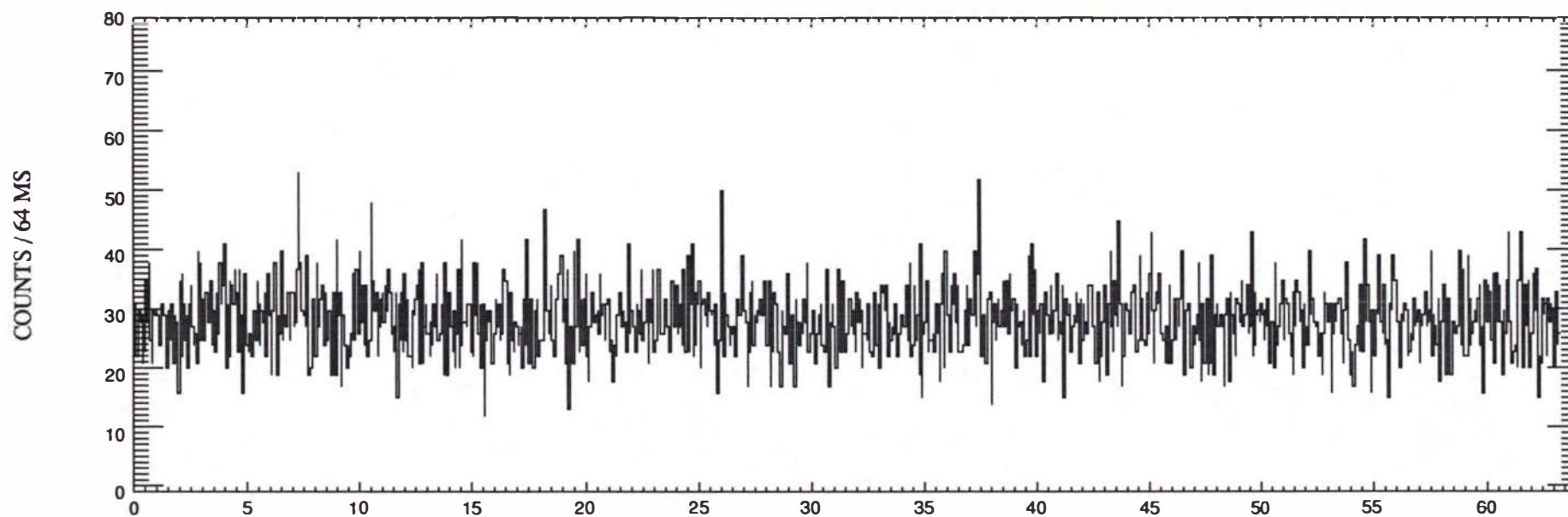
* Solar Burst Trigger
 + Solar Flare

1/26/96

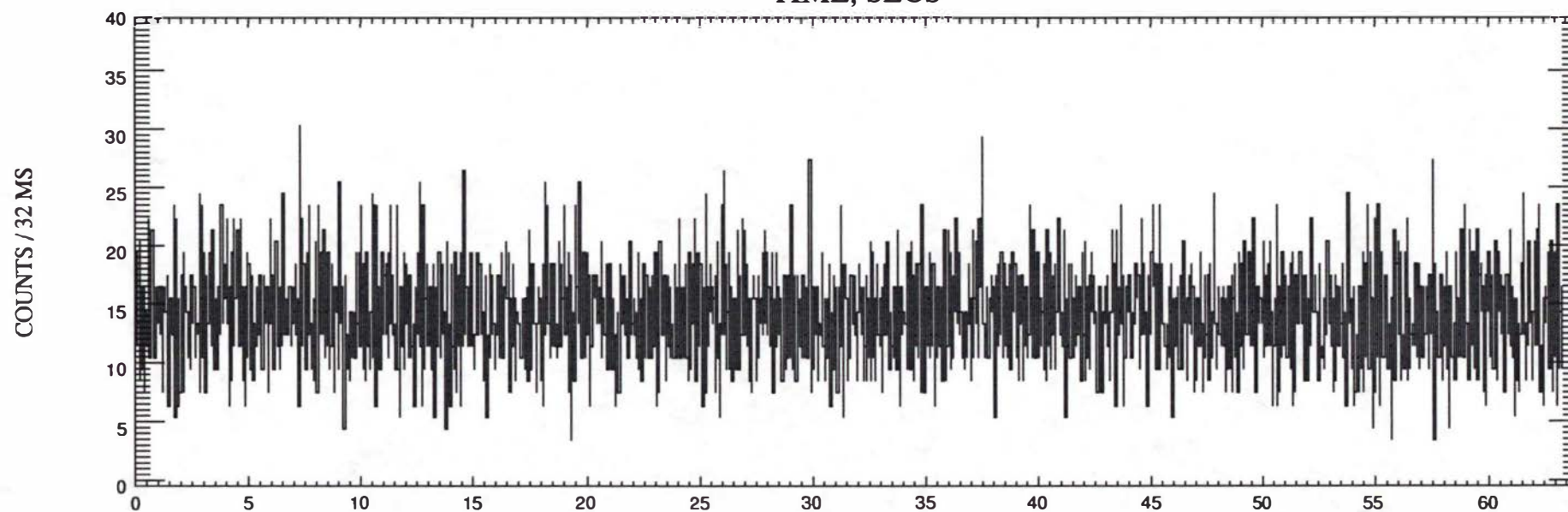


HUS 2A TRIGGERED DATA EDR day 284, year 1995
Burst Counter 1 at UT=10.988707054986 h=39559.345 s 10:59:19.345

1/26/96



TIME, SECS

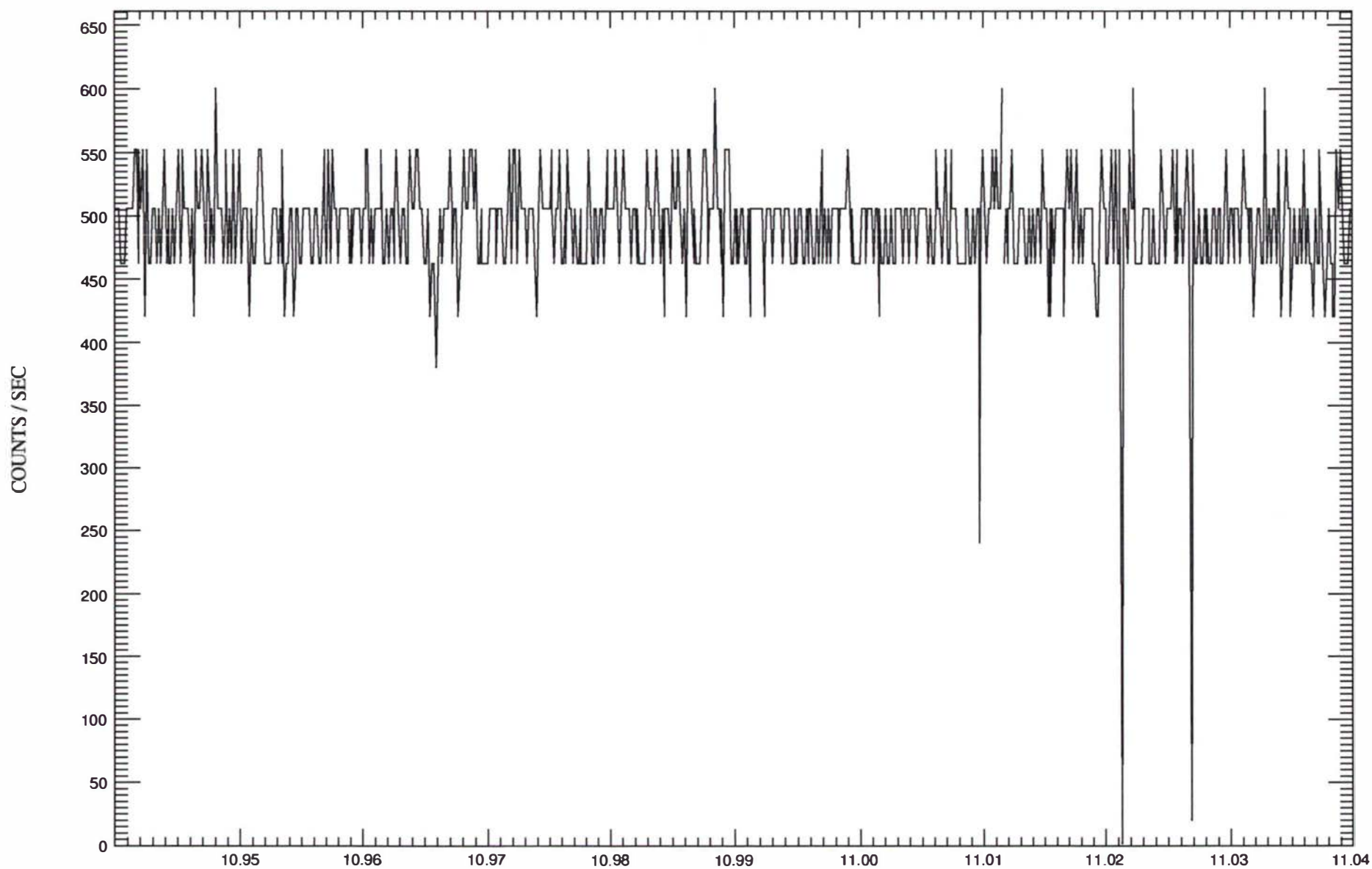


TIME, SECS

B# 1

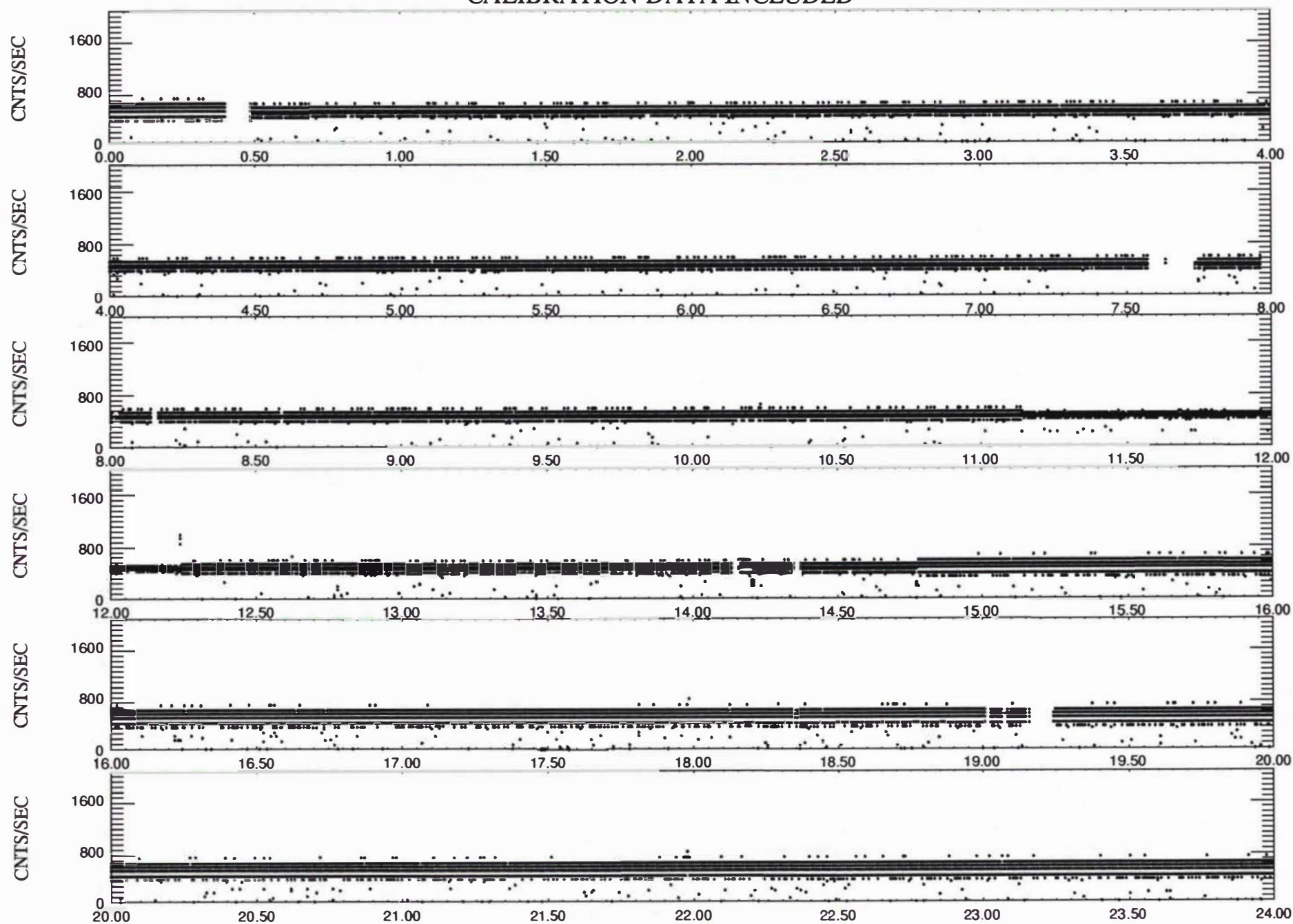
HUS 2A, MODE 1, NOT AVERAGED QEDR day 284, year 1995 to day 284, year 1995
CALIBRATION DATA INCLUDED

10/17/95

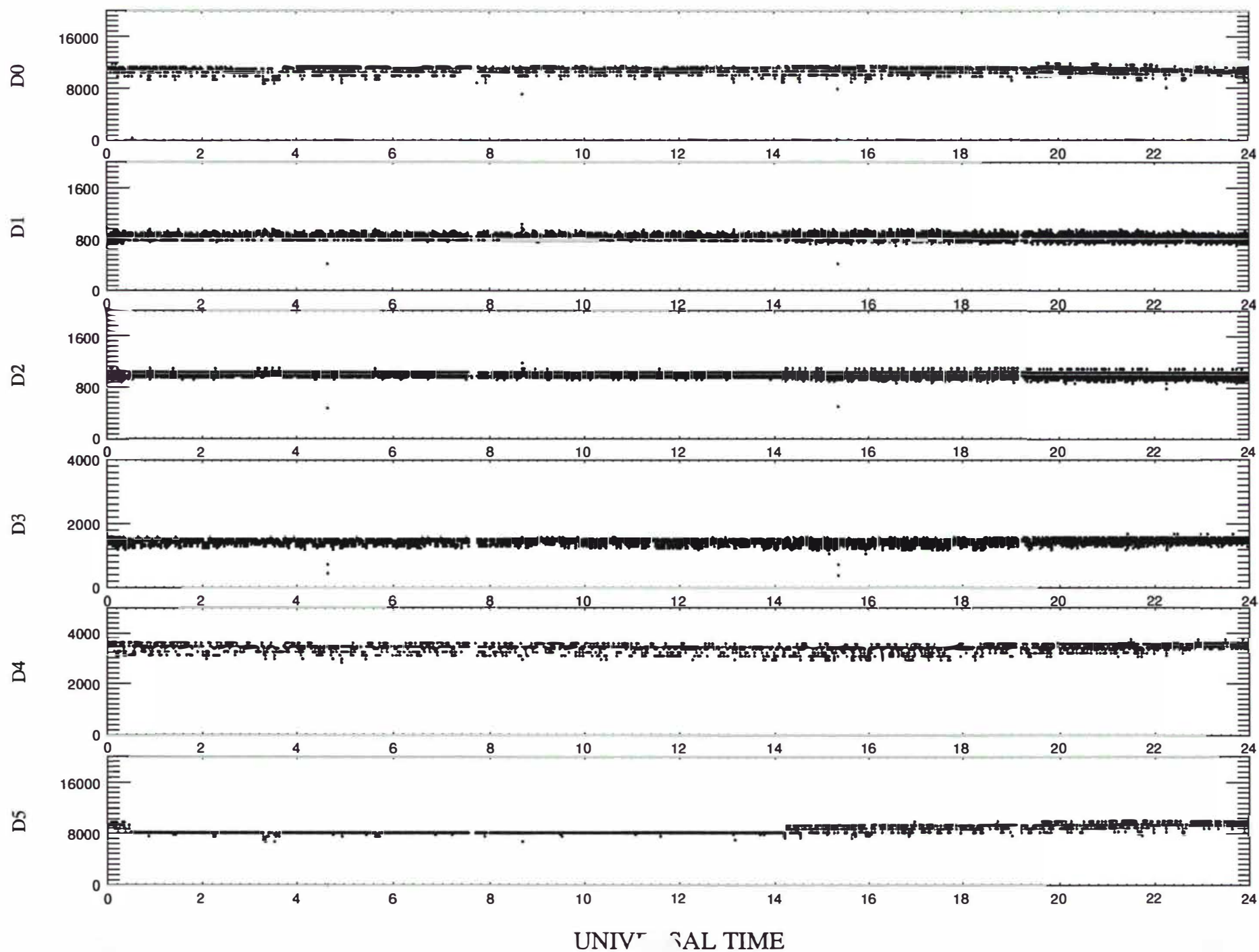


HUS 2A, MODE 1, NOT AVERAGED EDR day 284, year 1995 to day 284, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV SAL TIME



From HENZE@fender.msfc.nasa.gov Fri Oct 13 09:36 PDT 1995
From: HENZE@fender.msfc.nasa.gov
Date: Fri, 13 Oct 1995 11:36:16 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 03861

TIME: TJD=0002 SECONDS=21743

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

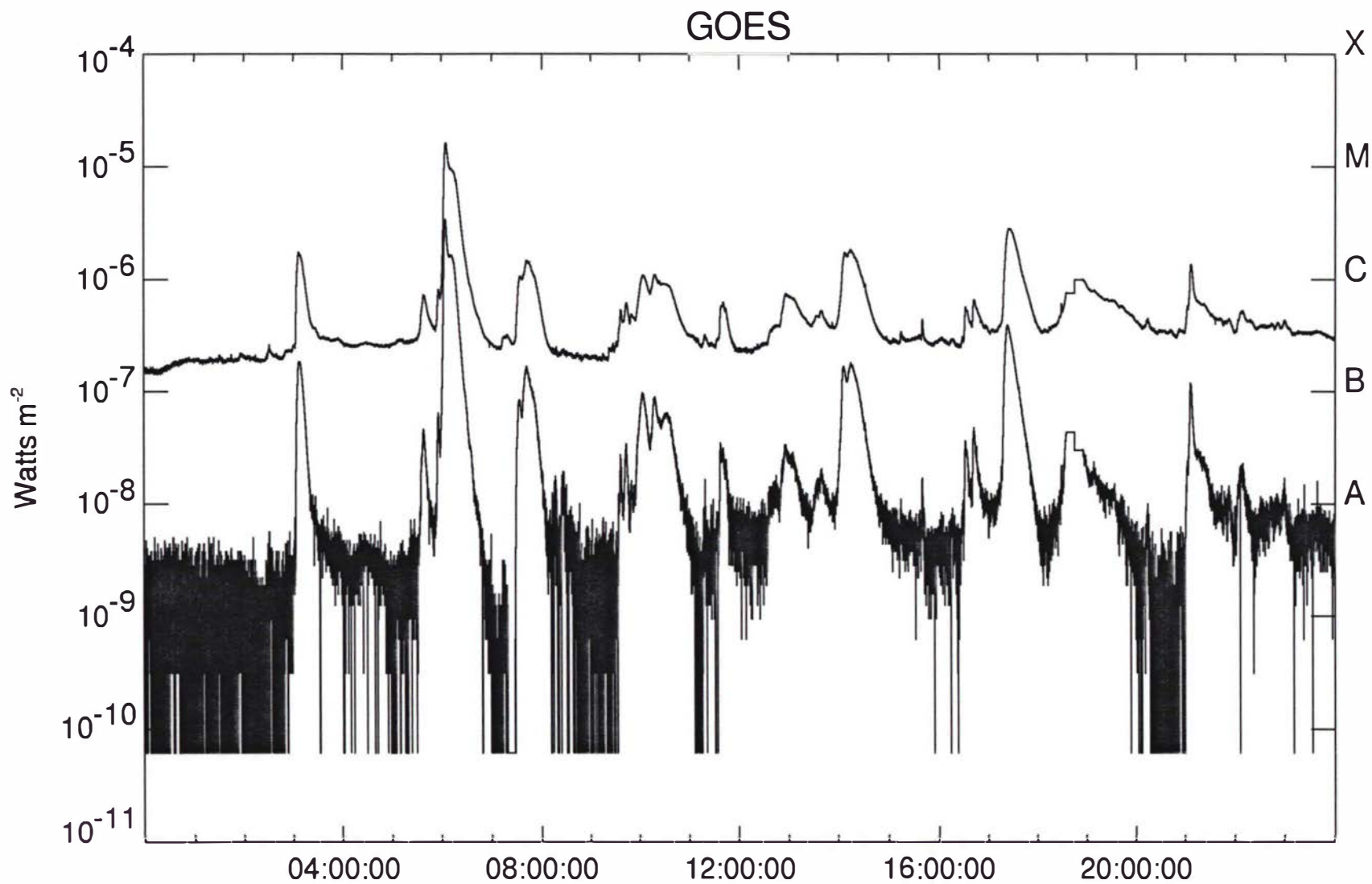
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=071.4 AZIMUTH=000.8 ERROR=002.2 DEGREES

COMMENTS:

GOES M1.5, OPTICAL SF FLARE. TRIGGER OCCURRED IN DATA GAP.
MAIN PULSE DUR. ~18 S IN BATSE DISCLA DATA. NOT VISIBLE ABOVE 100 KEV.



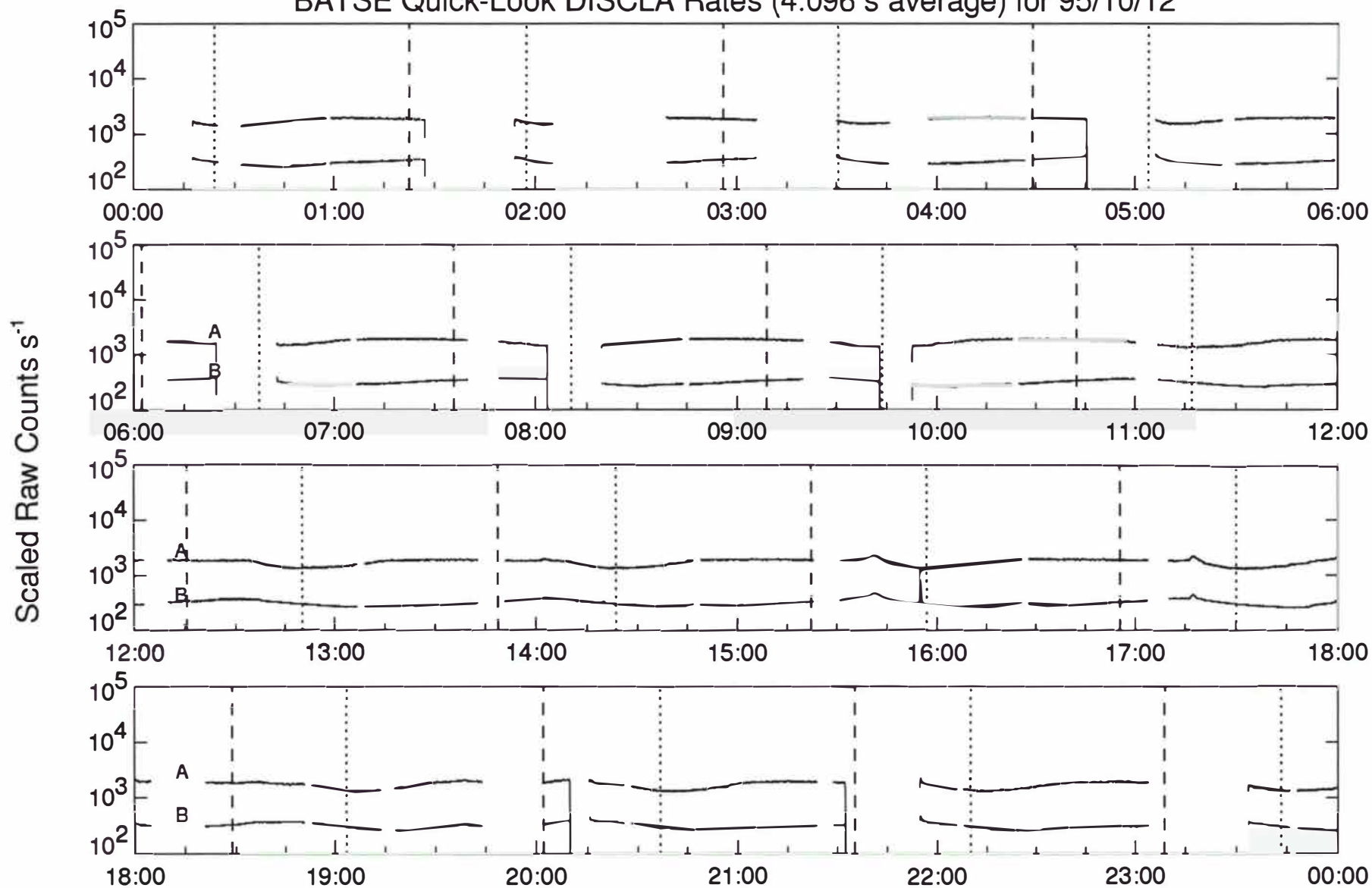
Data Start: 95/10/12, 0000:01

Plot created: 95/10/17, 1742

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 95/10/12



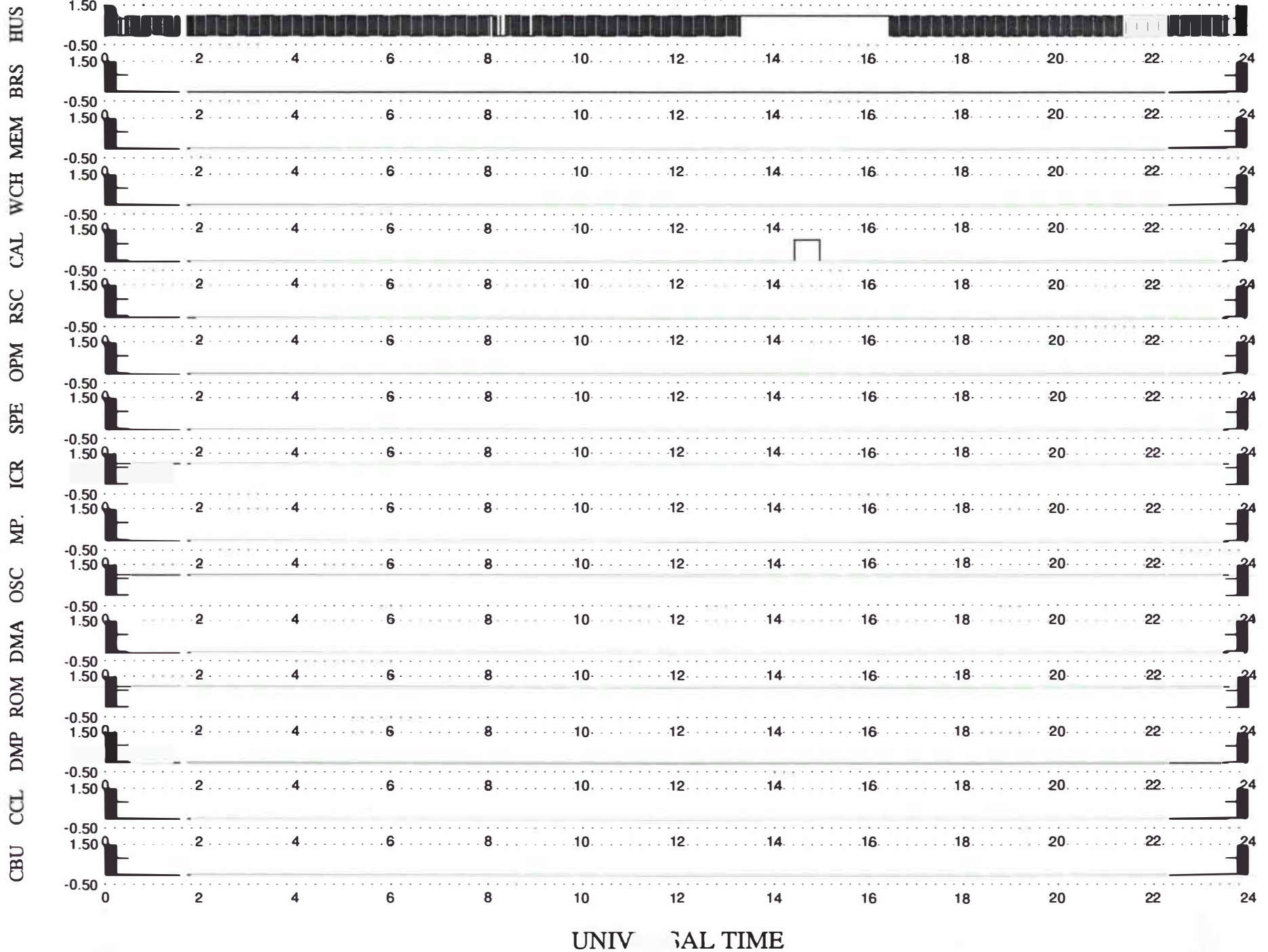
Current Time: 95/10/17, 1743 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

HUS MODES EDR day 285, year 1995 to day 285, year 1995
NO BURST (1)

1/26/96

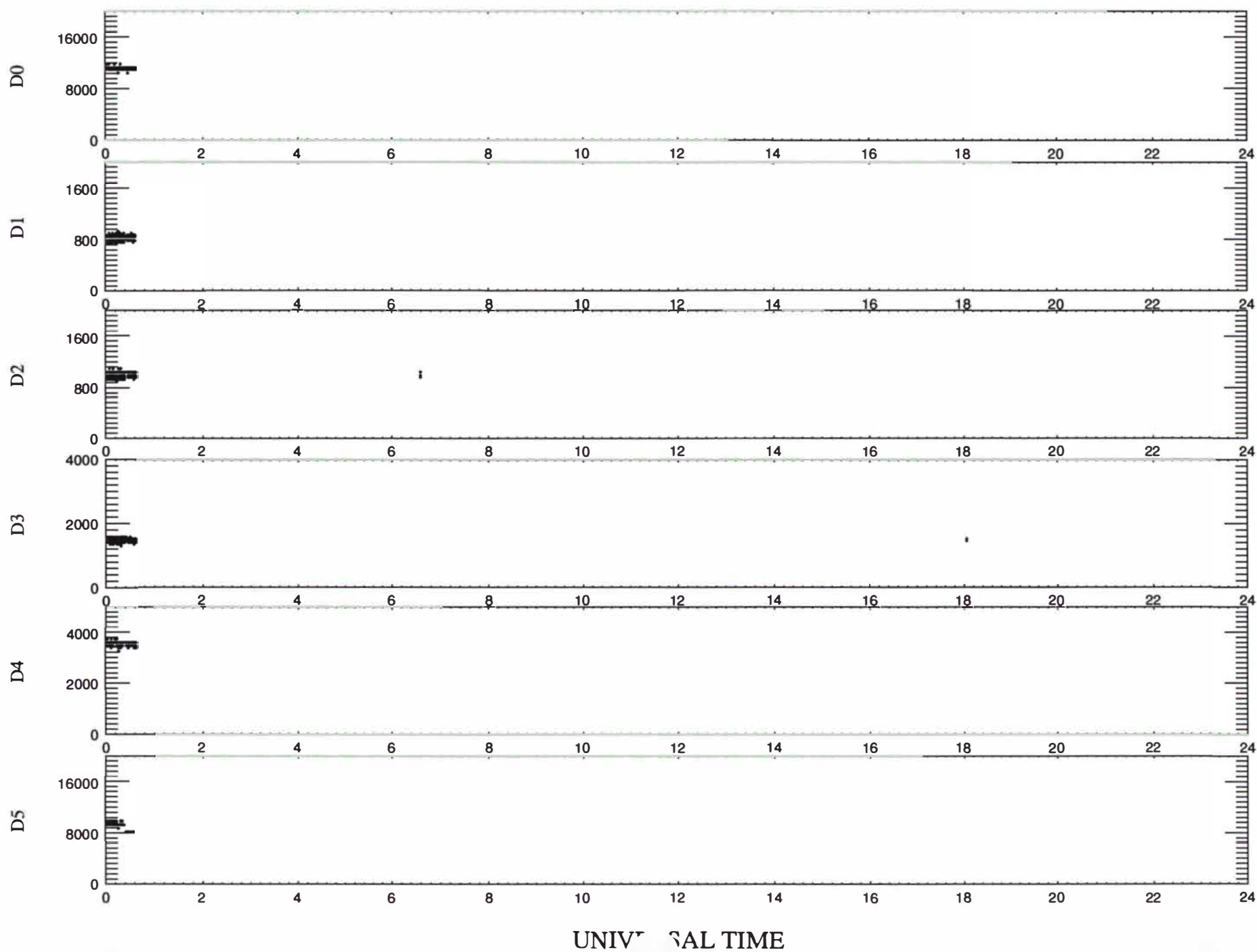


HUS 2A, MODE 1, NOT AVERAGED EDR day 285, year 1995 to day 285, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV 3AL TIME



From HENZE@fender.msfc.nasa.gov Mon Oct 16 12:32 PDT 1995
From: HENZE@fender.msfc.nasa.gov
Date: Mon, 16 Oct 1995 14:32:14 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 03862

TIME: TJD=0003 SECONDS=18069

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=078.0 AZIMUTH=359.2 ERROR=000.4 DEGREES

COMMENTS:

GOES M4.8, OPTICAL 1F. DUR. ~400S, MAX AT ~T+60 S.
NOT VISIBLE ABOVE 300 KEV.

From HENZE@fender.msfc.nasa.gov Mon Oct 16 12:38 PDT 1995
From: HENZE@fender.msfc.nasa.gov
Date: Mon, 16 Oct 1995 14:37:49 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 03863

TIME: TJD=0003 SECONDS=55119

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=079.4 AZIMUTH=000.9 ERROR=000.6 DEGREES

COMMENTS:

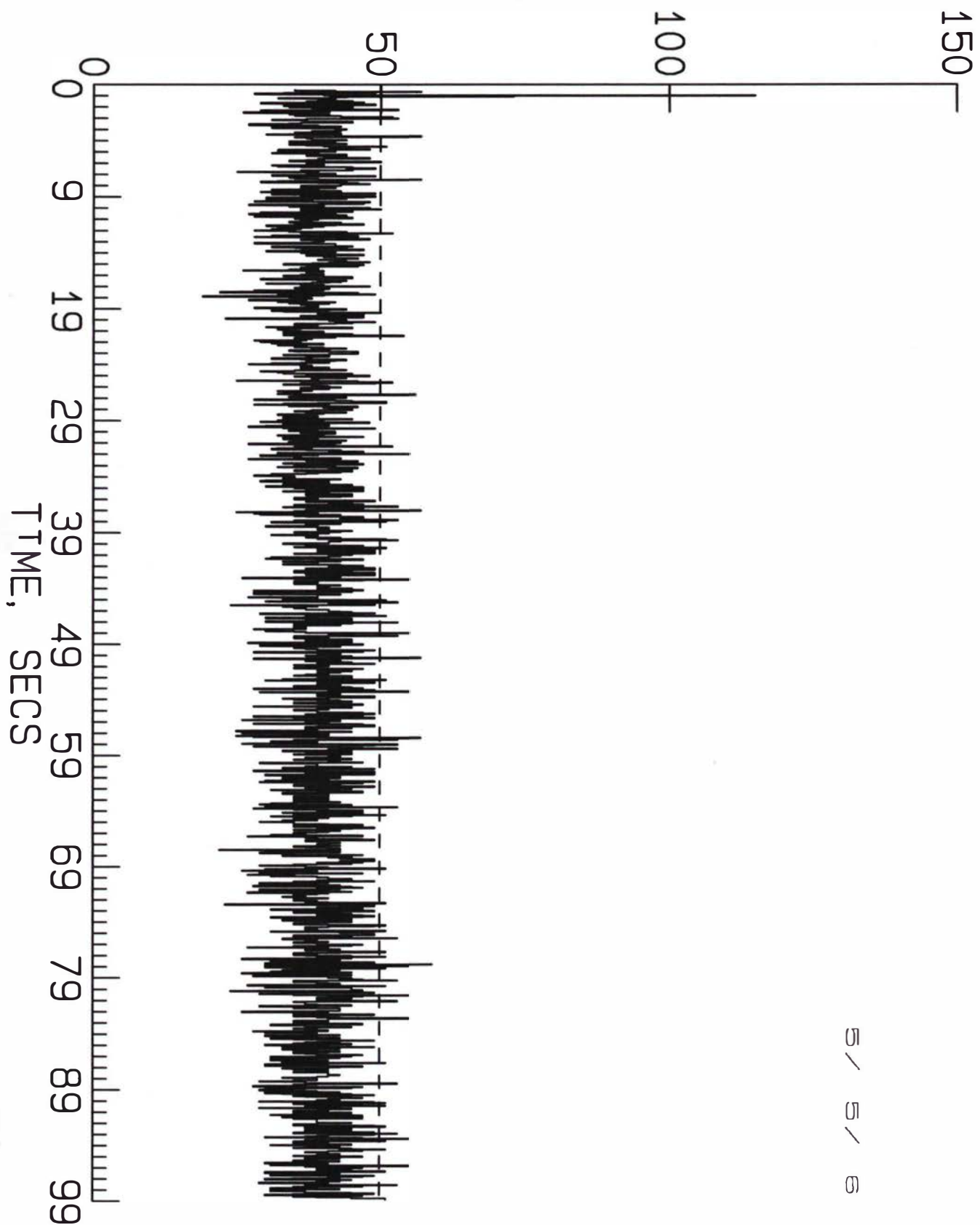
GOES C5.0, OPTICAL SF. DUR. ~170 S, MAX AT ~T+30 S.
NOT VISIBLE ABOVE 300 KEV.

KONUS

13/10/95 57097.290

50- 200 keV

COUNTS/0.064 S



5 / 5 / 5

95	7	1	117	23737	23737	3658
95	7	6	121	42735	42735	3662
95	7	11	123	13789	13789	3663
95	7	13	BGR	32133	32176	3664
95	7	30	128	76149	76124	3720
95	8	4	131	7135	07134	3734
95	8	4	133	45377	45376	3735
95	8	8	BGR	13023	12974	3745
95	8	9	136	85945	85945	3750
95	8	18	137	5065	05002	3765
95	8	22	140	13751	13749	3767
95	9	4	142	52692	52688	3776
95	9	9	145	85473	85452	3788
95	9	19	151	51465	51447	3806
95	9	21	152	20947	20947	3811
95	9	22	BGR	15495		
95	9	22	BGR	25929		
95	9	26	BGR	63919		
95	10	1	153	41907		
95	10	2	BGR	77583		3843
95	10	4	BGR	83974		
95	10	5	154	14842.112		
95	10	8	156	46287.863		
95	10	10	BGR	11774		
95	10	11	157	77693.094		3860
95	10	13	159	57097.299		
95	10	14	160	13108.167		
95	10	14	161	43561.3		
95	10	16	162	02484.285		3870
95	10	16	BGR	71607		3871
95	10	18	163	19832.069		
95	10	19	64	11712.625		
95	10	19	165	48244.594		3875
95	10	25	167	85239.738		
95	11	2	168	07085.879		
95	11	2	69	21209.015		3891
95	11	2	BGR	28693		
95	11	5	BGR	01745		
95	11	5	170	05868.077		3893
95	11	5	171	46827.808		
95	11	7	BGR	27298		
95	11	11	BGR	34960		
95	11	12	172	66495.244		
95	11	13	173	84358.872		3906
95	11	15	BGR	38929		
95	11	17	175	10123.762		
95	11	18	BGR	82560		
95	11	19	176	29831.402		3912
95	11	19	177	46457.519		
95	11	19		59448		
95	11	21		22280		
95	11	22	179	09841.38		
95	11	22	180	17107.738		
95	11	23	BGR	65408		
95	11	24	BGR	21266		3918
95	11	24	BGR	25132		

 -- T. L. Cline ----- LHEAVX::CLINE

From cline@lheavx.gsfc.nasa.gov Fri Jan 26 13:00 PST 1996
 Date: Fri, 26 Jan 1996 13:00:45 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: Improved list; same question.

Dear Kevin,
 I'm making a little progress here, tracking down these events. This is a slightly improved list, with a few more BATSE triggers identified. - TLC

Yr	Mn	Dy	Konus#	Konus Tzero	BATSE Tz, #	Ulysses
94	11	14	BGR	07360	07358 3283	- NO
94	11	19	4	70269.175	70250 3287	R I
94	11	21	6	62700.945	62697 3290	trig.
94	11	25	7	79470.156	79470 3295	R I
94	11	26	BGR	01246	01245 3296	
94	11	26	8	44557.952	44521 3298	trig.
94	11	26	BGR	60860	60861 3299	
94	11	26	9	71809.732	71798 3301	R I
94	11	27	10	52225.68	52217 3303	R I
94	11	28	BGR	56220	56217 3305	
94	12	28	28	27585.915	27581 3330	R I
94	12	29	29	82268.781	82258 3334	R I
95	1	4	31	26319.613	26319 3345	R I
95	1	11	33	17352.241	17263 3351	R I
95	1	11	34	44329	44310 3352	
95	1	17	BGR	05760	05761 3360	
95	1	18	BGR	44574	44589 3364	
95	2	7	BGR	02774	02781 3406	
95	2	8	45	07824	07824 3408	
95	2	10	47	08424	08421 3410	
95	2	11	48	08697	08697 3412	trig.
95	2	11	50	72469	72468 3415	
95	2	21	BGR	74701	74705 3436	
95	2	26	54	53351	53336 3442	
95	3	1	BGR	75731	75761 3448	
95	3	4	56	37661	37657 3453	
95	3	5	58	54309	54304 3458	
95	3	10	BGR	78388	78395 3464	
95	3	25	63	25841	25844 3480	
95	3	25	64	63392	63391 3481	
95	3	27	BGR	26323	26347 3485	
95	3	27	BGR	85672	85671 3486	
95	4	1	69	42647	42642 3488	
95	4	1	70	74635	74634 3489	
95	4	3	71	47985	47987 3491	
95	4	3	72	84828	84826 3492	
95	4	16	BGR	48420	48419 3509	
95	4	18	81	83793	83795 3512	
95	4	25	86	00923	00919 3523	
95	4	30	BGR	54224	54229 3527	
95	5	3	88	66971	66970 3537	
95	5	10	90	28083	28079 3569	
95	5	13	93	81706	81703 3571	
95	5	21	97	25161	25157 3588	
95	5	22	98	23898	23896 3590	
95	5	22	100	85280	85283 3593	
95	5	24	102	14902	14899 3598	
95	6	2	104	25592	25592 3618	
95	6	10	107	6849	06849 3637	
95	6	24	111	84124	84084 3648	
95	6	25	113	14626	14601 3649	
95	6	29	115	37033	37036 3654	
95	7	1	116	12762	12758 3657	

1 / 2 / 9 6

ULYSSES RT

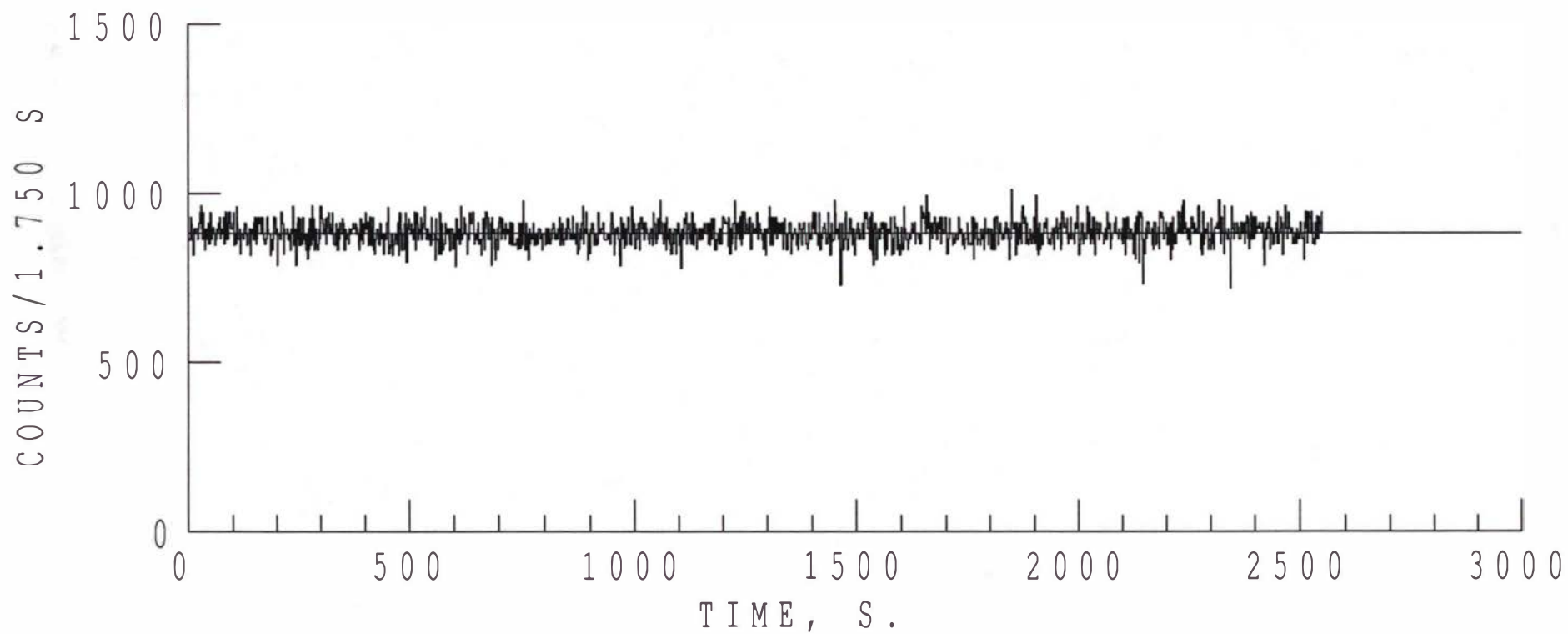
13/10/95 55692.230 s

0.250 S INTERVALS REGROUPED BY 7

0 - 0 keV

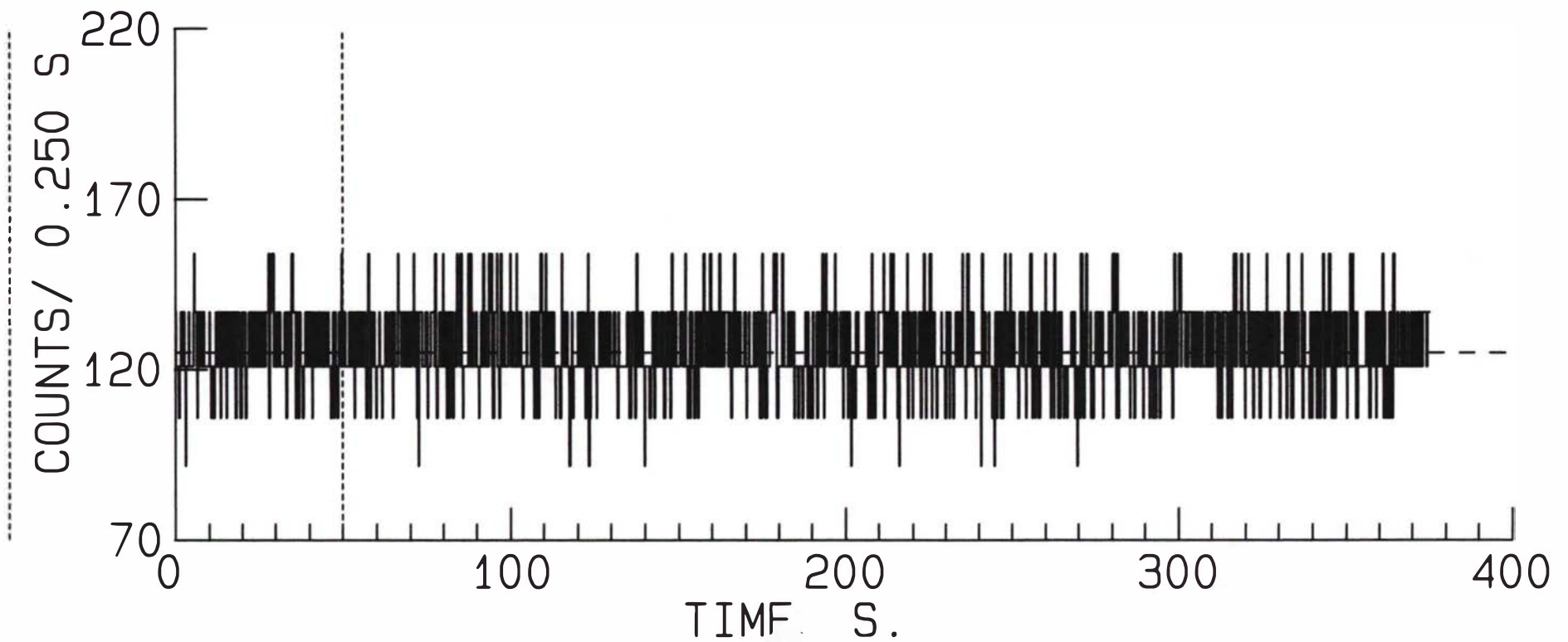
N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



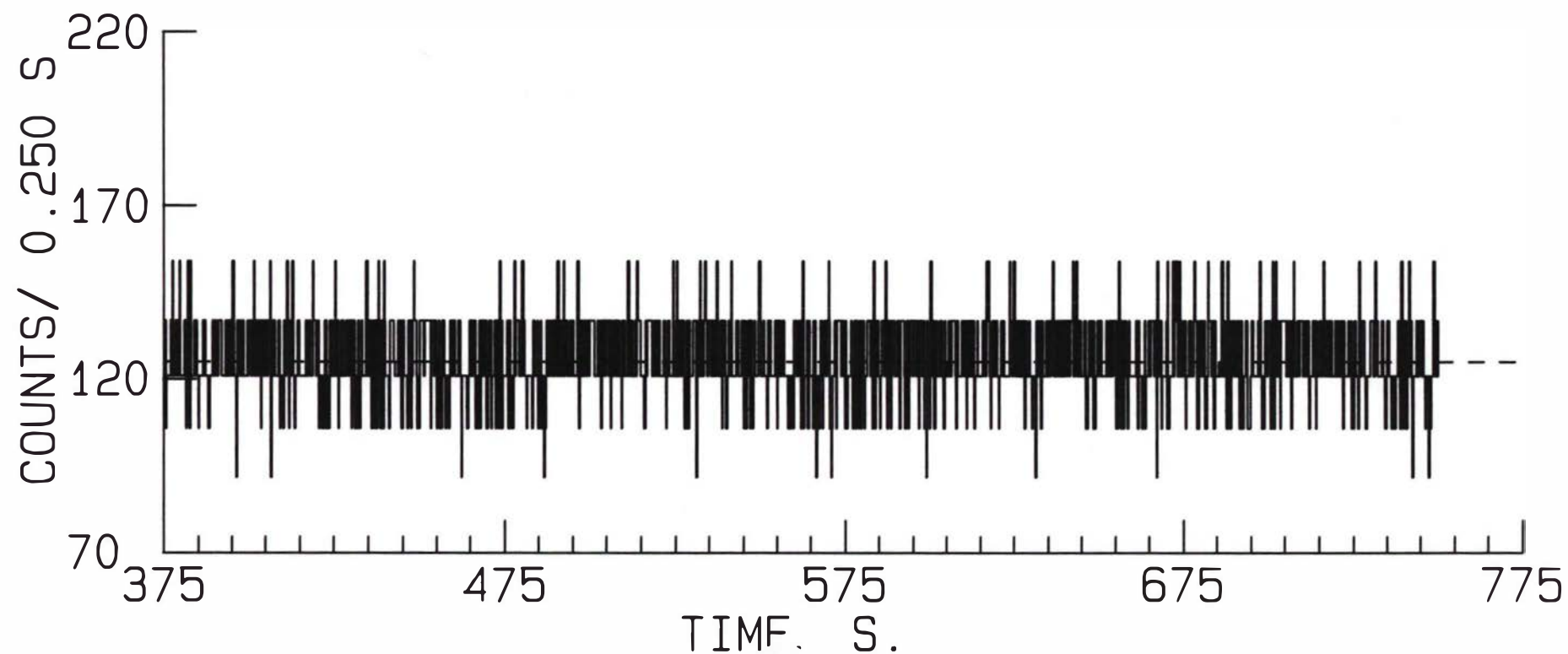
ULYSSES RT
13/10/95 55692.230 s
21- 143 keV

8 / 8 / 8



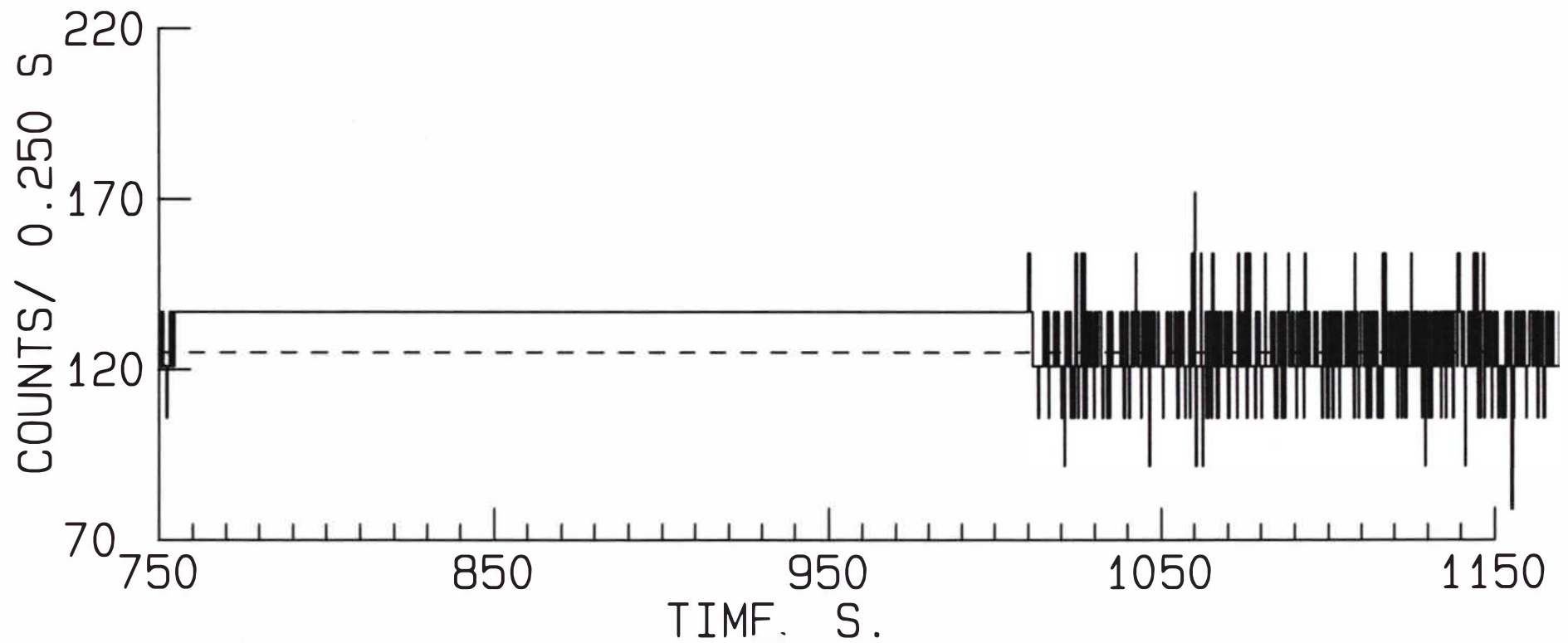
ULYSSES RT
13/10/95 55692.230 s
21- 143 keV

8 / 8 / 8



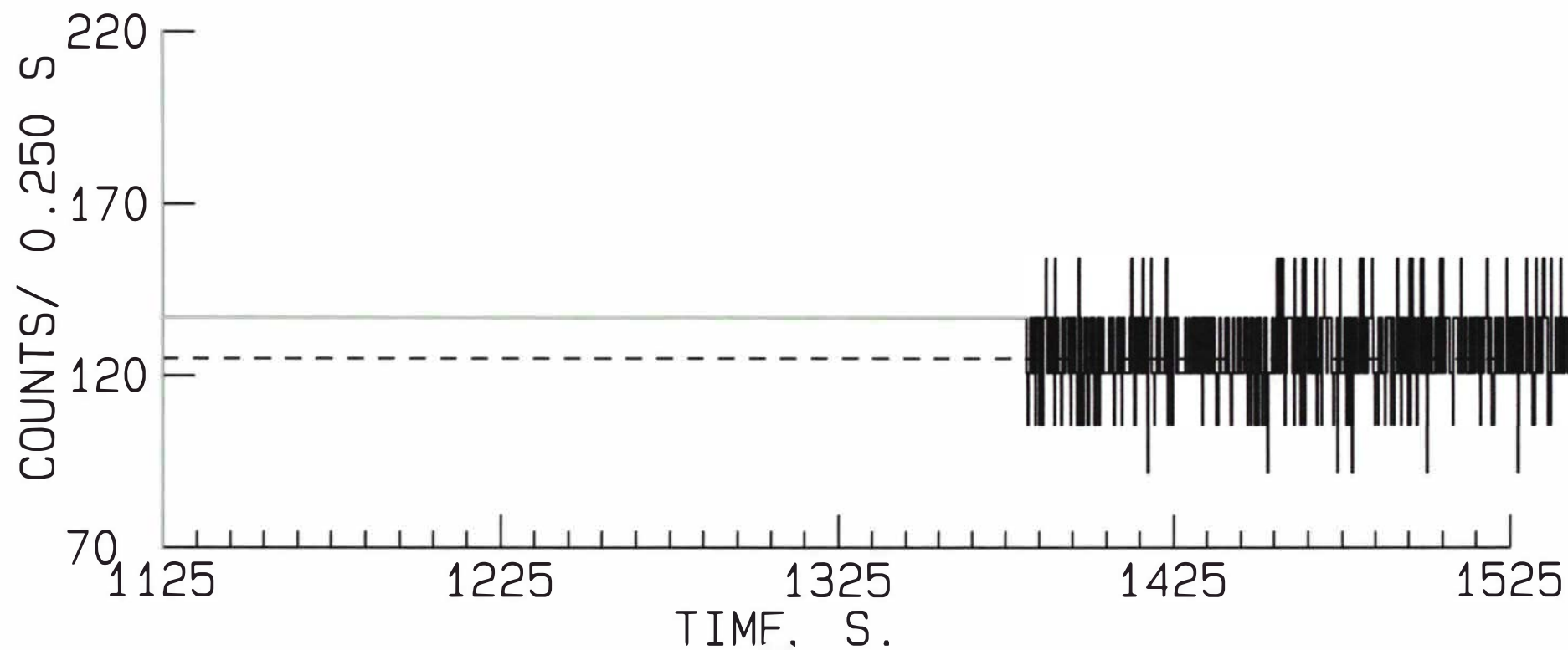
ULYSSES RT
13/10/95 55692.230 s
21- 143 keV

8/ 8/ 8



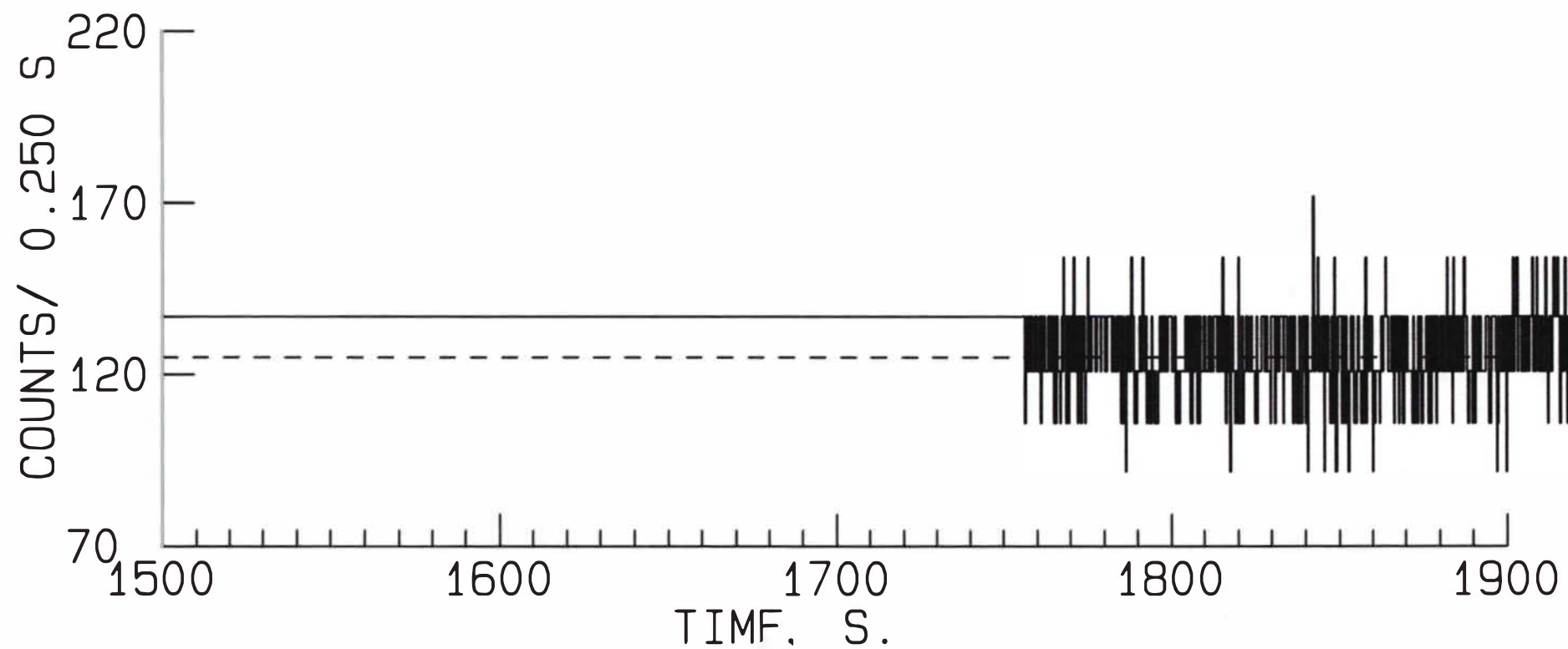
ULYSSES RT
13/10/95 55692.230 s
21- 143 keV

8 / 8 / 8



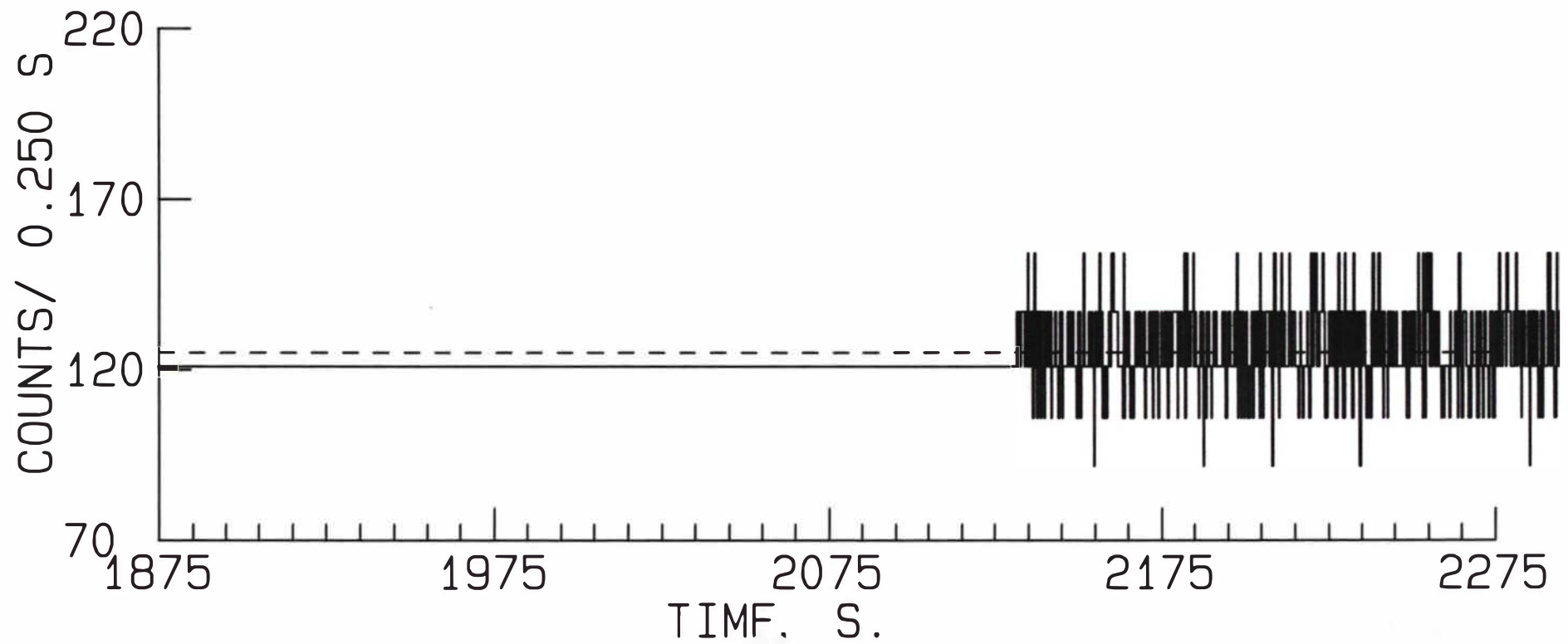
ULYSSES RT
13/10/95 55692.230 s
21- 143 keV

8 / 8 / 8



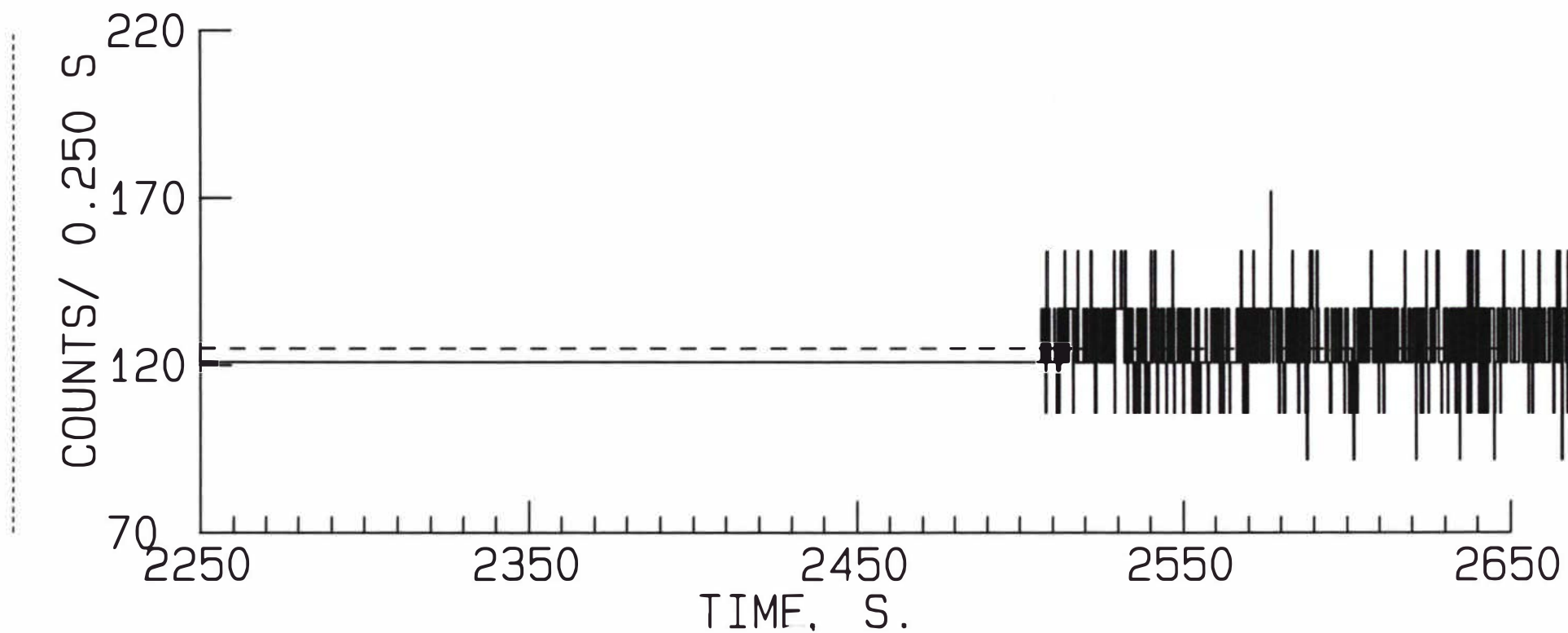
ULYSSES RT
13/10/95 55692.230 s
21- 143 keV

8 / 8 / 8



ULYSSES RT
13/10/95 55692.230 s
21- 143 keV

8 / 8 / 8



From rbruser@compTEL.unh.edu Fri Oct 13 16:43 PDT 1995
Subject: GRB951013: COMPTEL BURST POSITION NOTICE
From: burst@compTEL.unh.edu (UNH/COMPTEL Burst Group)
Date: Fri, 13 Oct 1995 19:33:51 -0400 (EDT)
To: burstmail@compTEL.unh.edu

NOTICE_HEAD: COMPTEL BURST POSITION NOTICE: GRB951013
NOTICE_TYPE: INITIAL
NOTICE_DATE: Fri Oct 13 23:33:51 GMT 1995
ORIG_SENDER: burst@compTEL.unh.edu

BURST_DATE : 10003 TJD; 13-Nov-1995
BURST_TIME : 83889.32 sec; 23:18:09.32 UT

NOTE01-----: Rapid COMPTEL localization of this burst
NOTE02-----: is not possible.
NOTE03-----: -----
NOTE04-----: Please DO NOT reply to this message!
NOTE05-----: Address questions to either:
NOTE06-----: Marc Kippen (rmkippen@unh.edu) or
NOTE07-----: Tom Harrison (tharris@nmsu.edu)

From HENZE@ssl.msfc.nasa.gov Mon Oct 16 12:50 PDT 1995
From: HENZE@ssl.msfc.nasa.gov
Date: Mon, 16 Oct 1995 14:50:39 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3864

BATSEARCH PROGRAM

BATSE BURST # 3864
EVENT OF 1995 OCT 13 DAY OF YEAR=286
EVENT CROSSING TIME AT BATSE : 83889. S. OR 23:18:09.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 253.000 49.000
BATSE PEAK COUNTING RATE: 5300 C/S

ND

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 13/10/ 95 IS:
RA= 206.669 DEC= 57.880 DIST= 2.778 AU
BATSE-ULYSSES DISTANCE = 415564/06. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=151.65 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1219.90 SECS.
CROSSING TIME AT ULYSSES IS 82669. S. OR 22:57:49 +/- 145.76 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 13/10/ 95 IS:
RA= 231.890 DEC= -19.440 DIST= 2.182 AU
MARS-BATSE DISTANCE = 326447968. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=109.02 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -354.94 SECS.
CROSSING TIME AT MARS IS 83534. S. OR 23:12:14 +/- 173.34 SECONDS

BATSE BURST TRIGGER

NO.: 03864

TIME: TJD=0003 SECONDS=83889

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=055.7 AZIMUTH=284.3 ERROR=005.7 DEGREES

COMMENTS:

SINGLE PULSE WITH SUBSTRUCTURE, DUR. ~2 S. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3864	951013	10003	83889	5300	253	+49	2

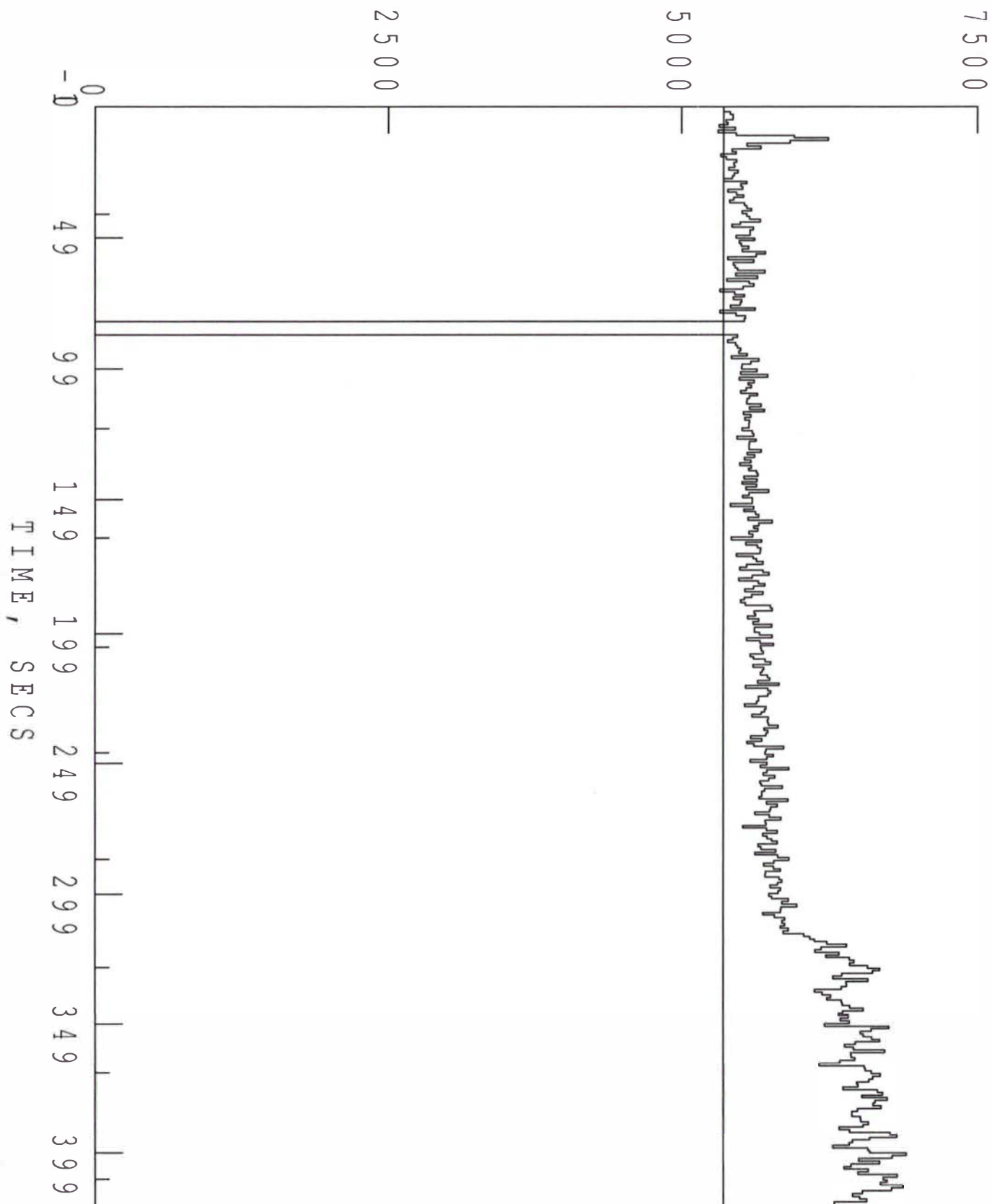
BACODINE

13/10/95

83877.553

25 - 100 keV

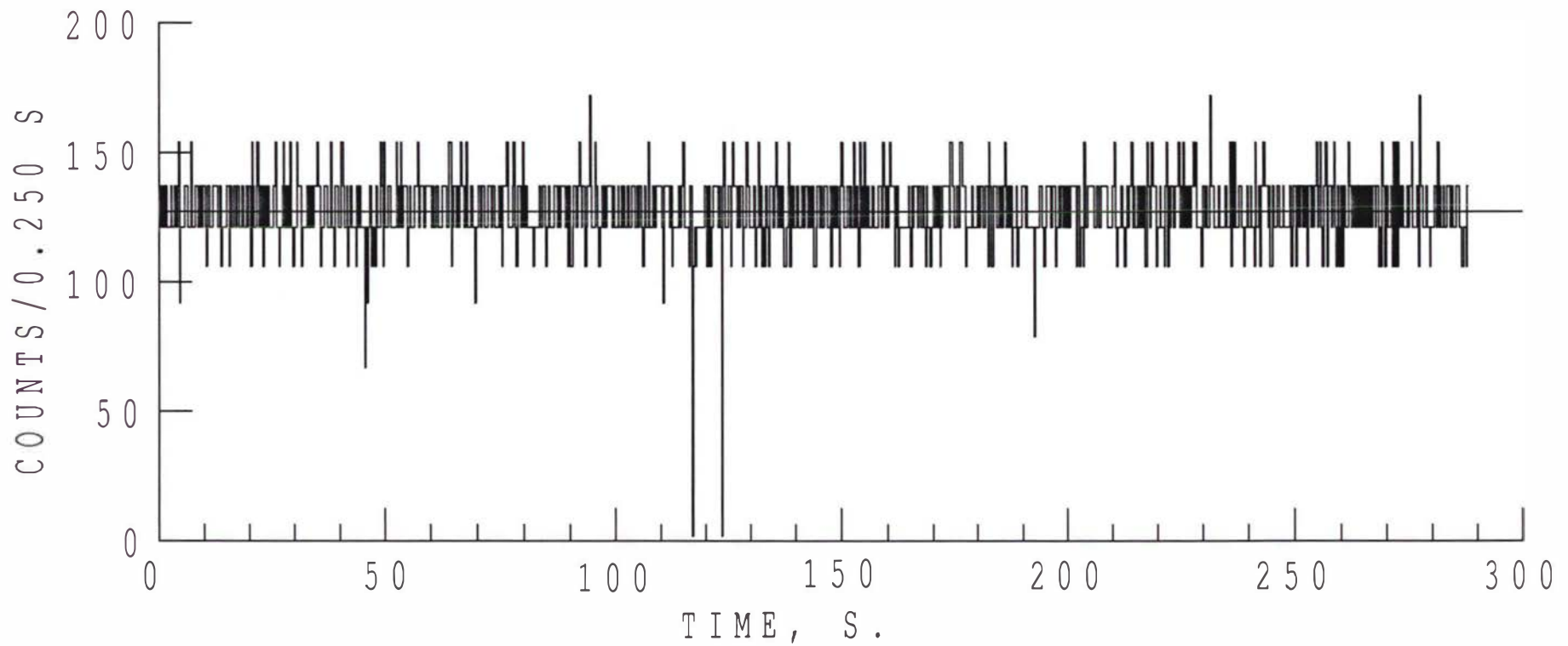
COUNTS/1.024 S

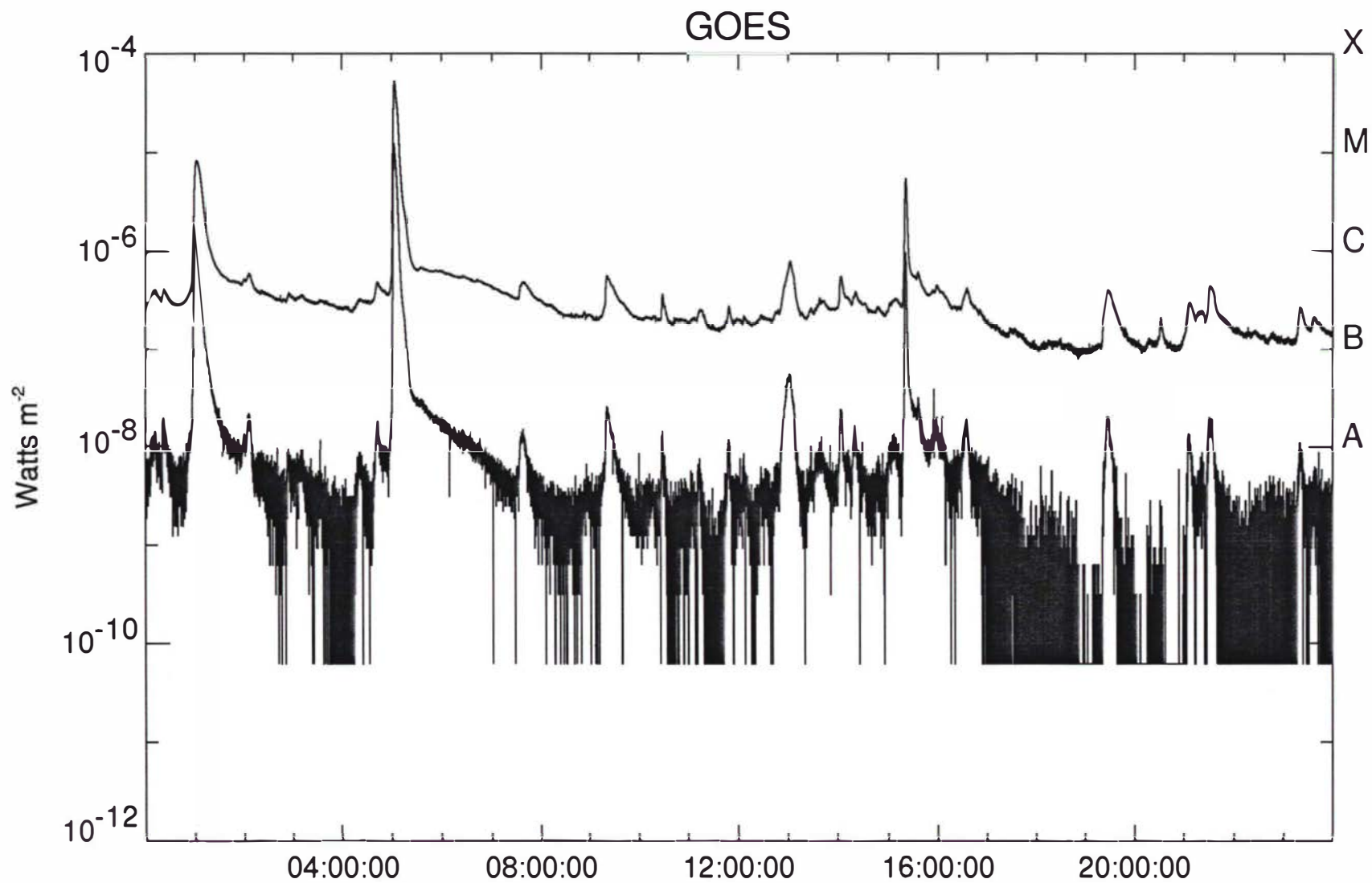


17/10/95

ULYSSES RT
13/10/95 82512.180 s
0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





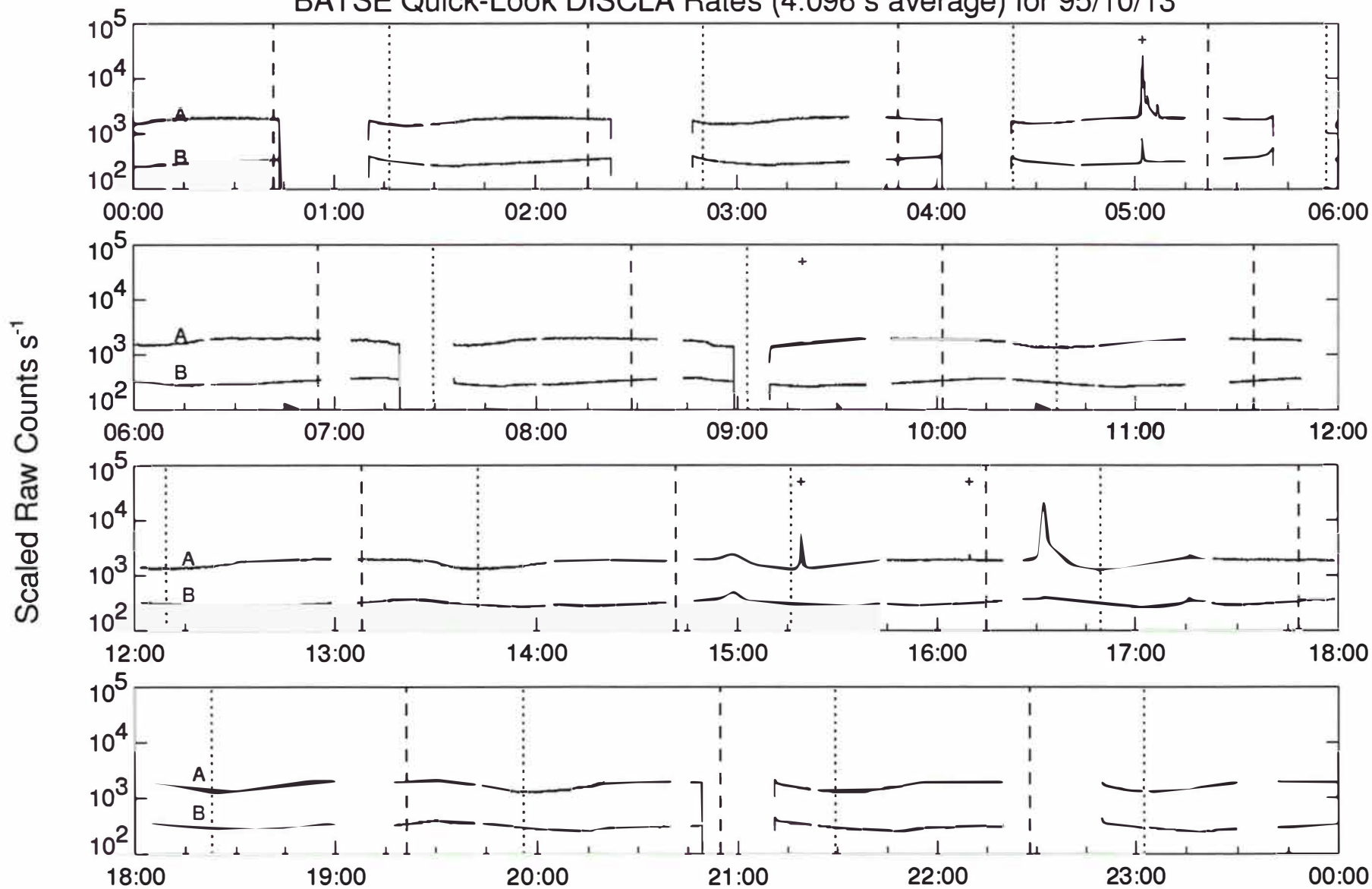
Data Start: 95/10/13, 0000:02

Plot created: 95/10/17, 1809

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 95/10/13



Current Time: 95/10/17, 1809 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

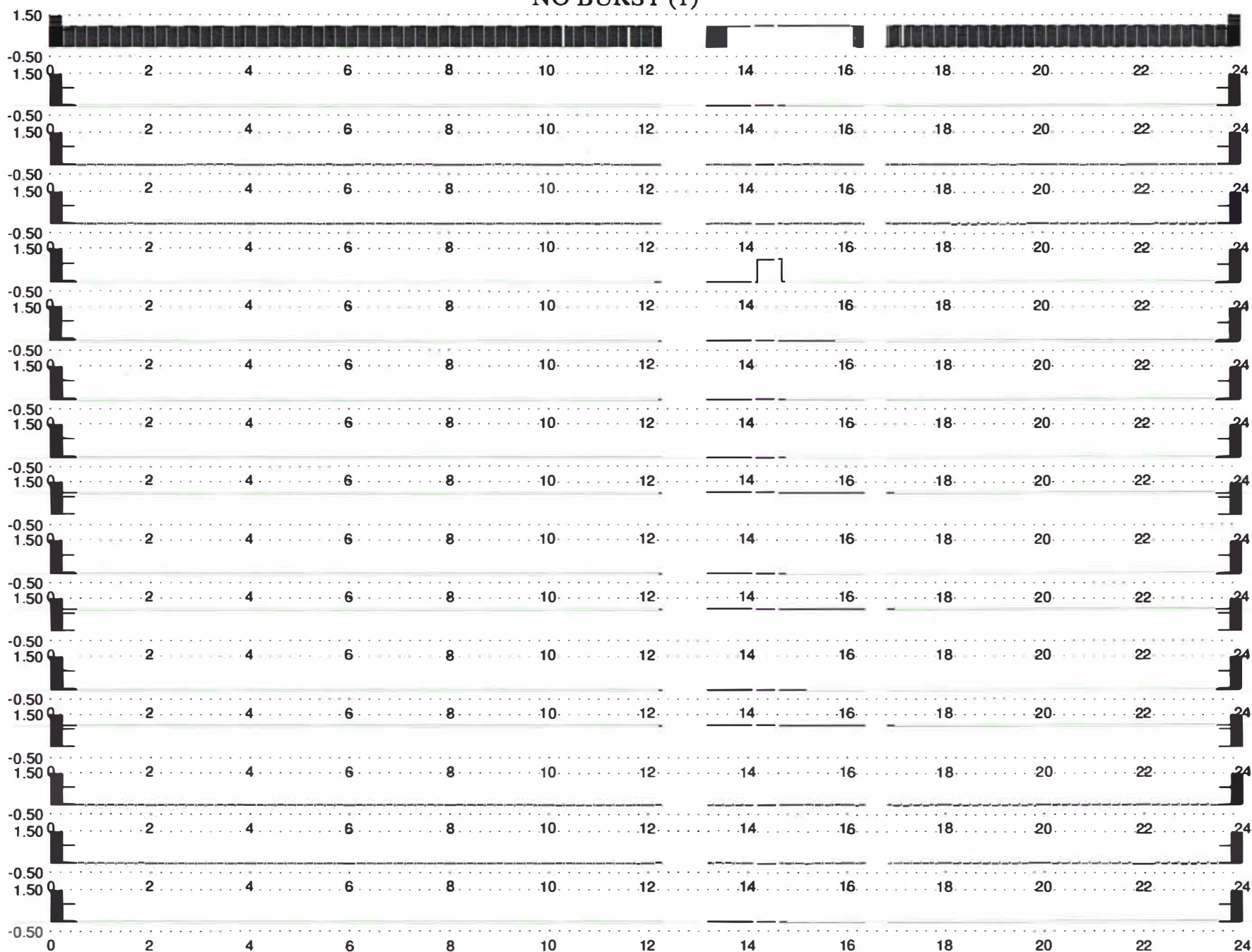
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

HUS MODES EDR day 286, year 1995 to day 286, year 1995 NO BURST (1)

1/26/96

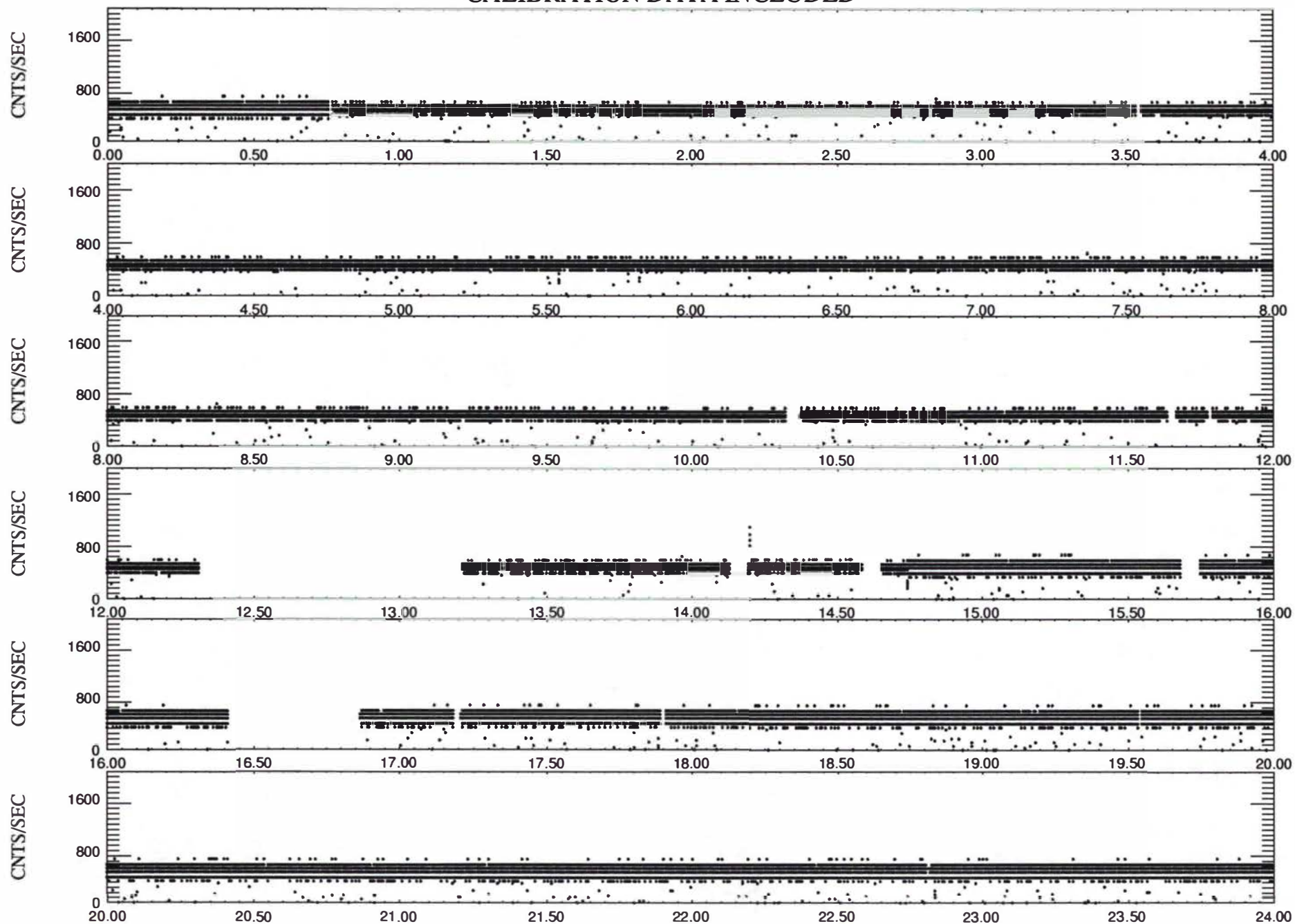
HUS
BRS
MEM
WCH
CAL
RSC
OPM
SPE
ICR
MP.
OSC
DMA
ROM
DMP
CCL
CBU



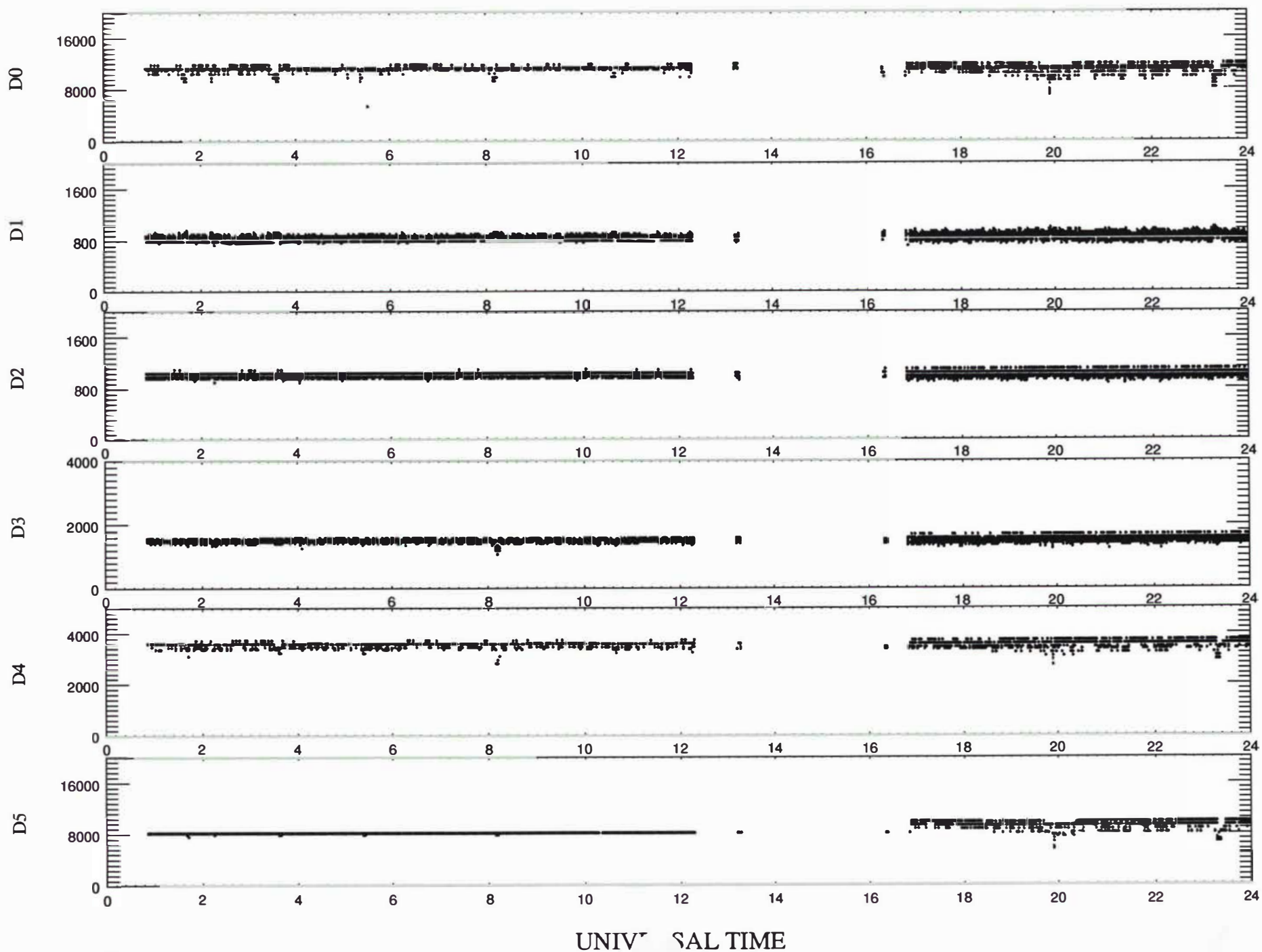
UNIV 3AL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 286, year 1995 to day 286, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV SAL TIME



Date: 2 Aug '08

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?

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

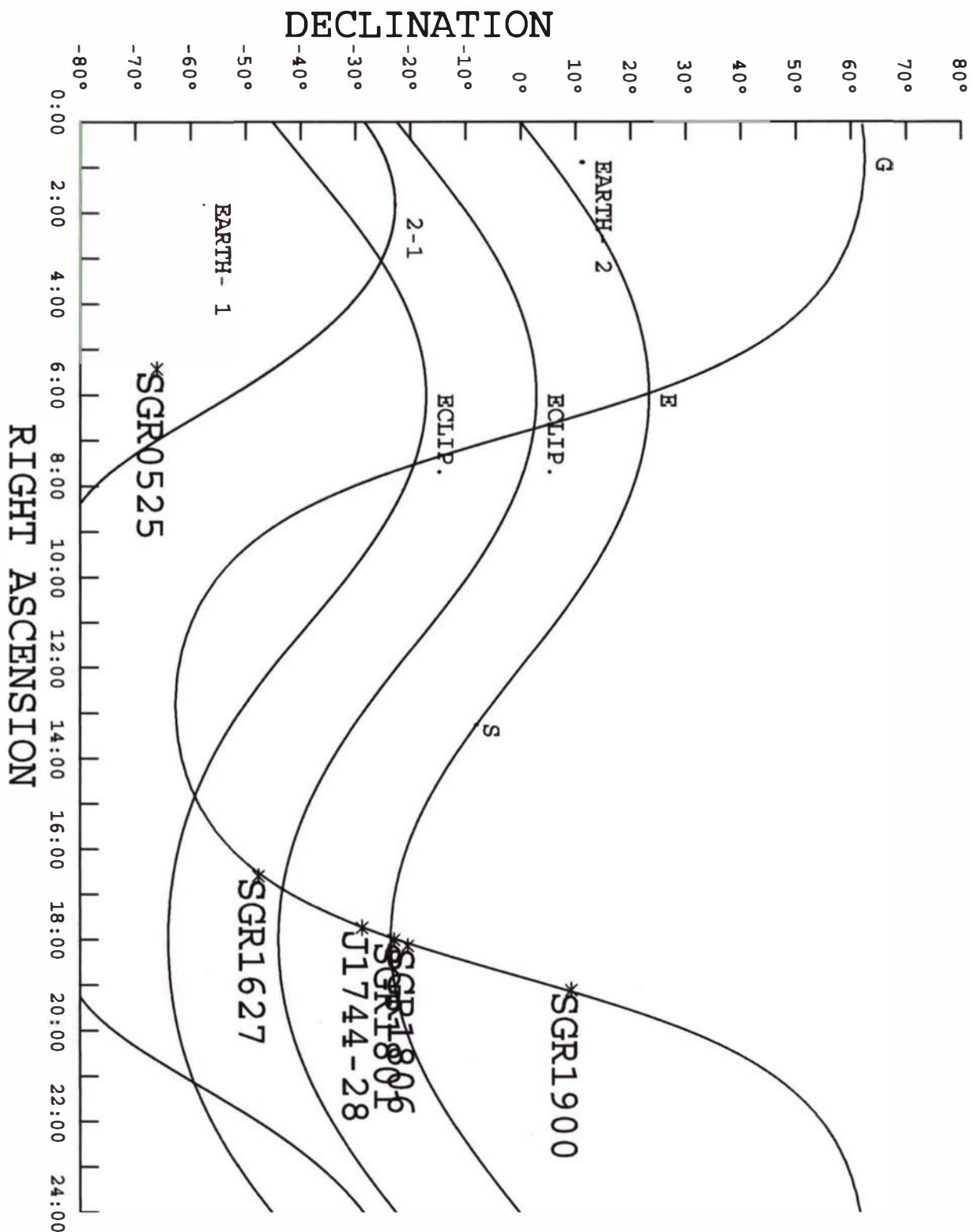
G=GALACTIC EQUATOR

1 ULYSSES

2 KONUS1

EVENT OF OCT 14, 1995 3:57

8 / 8 / 8



KONUS1

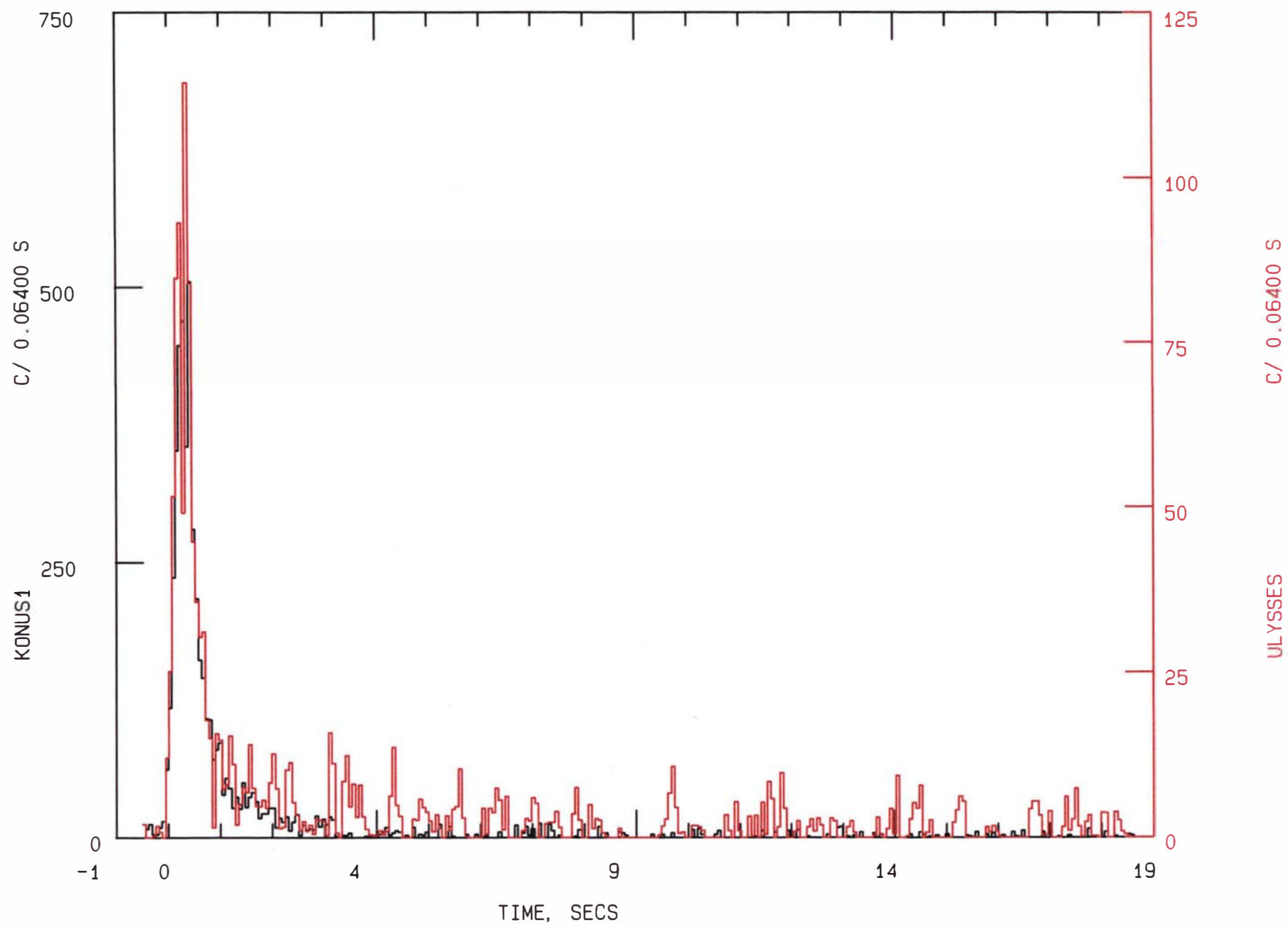
-ULYSSES

CORRELATION

14/10/95

13108.167

8/ 8/ 8



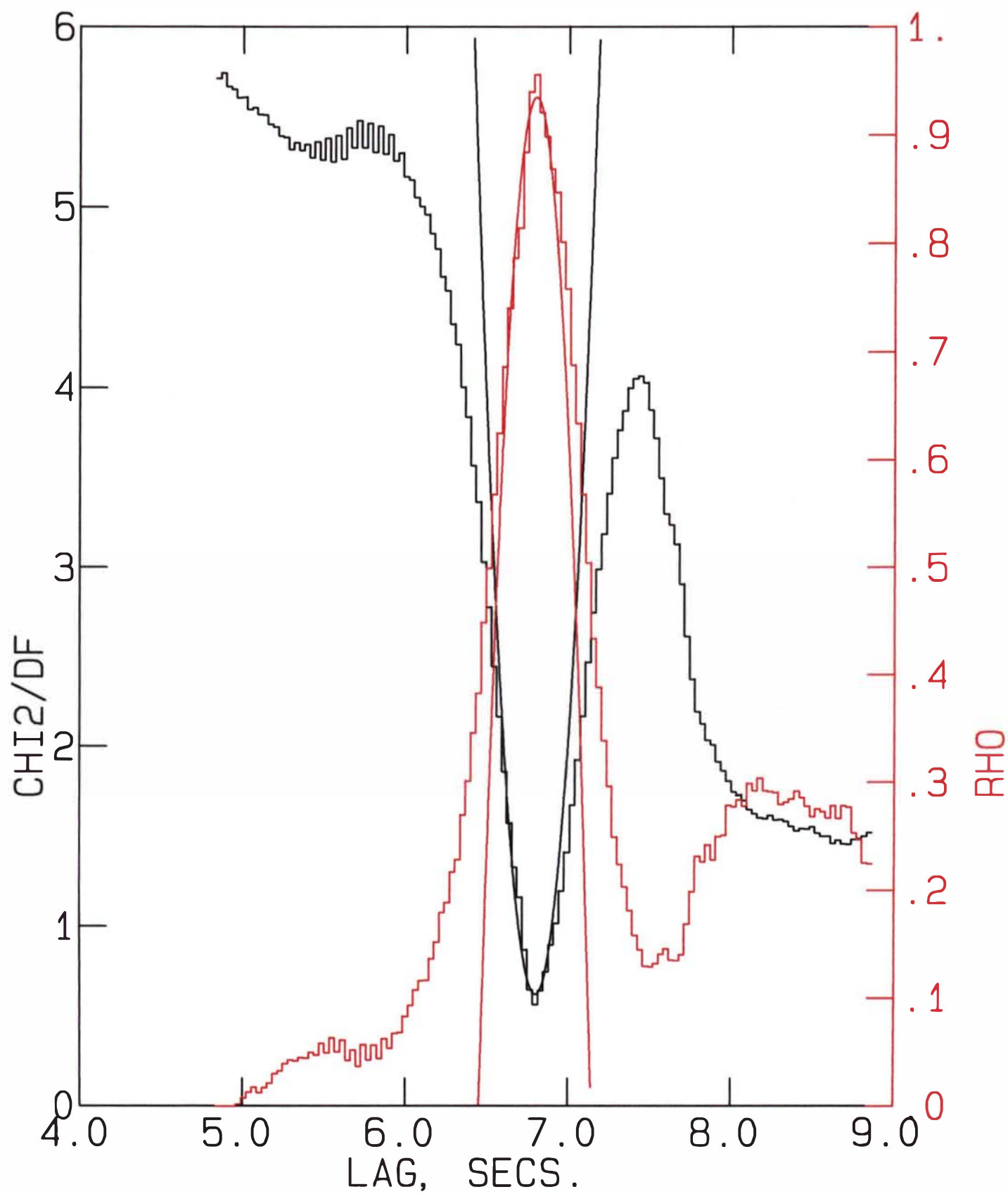
KONUS1

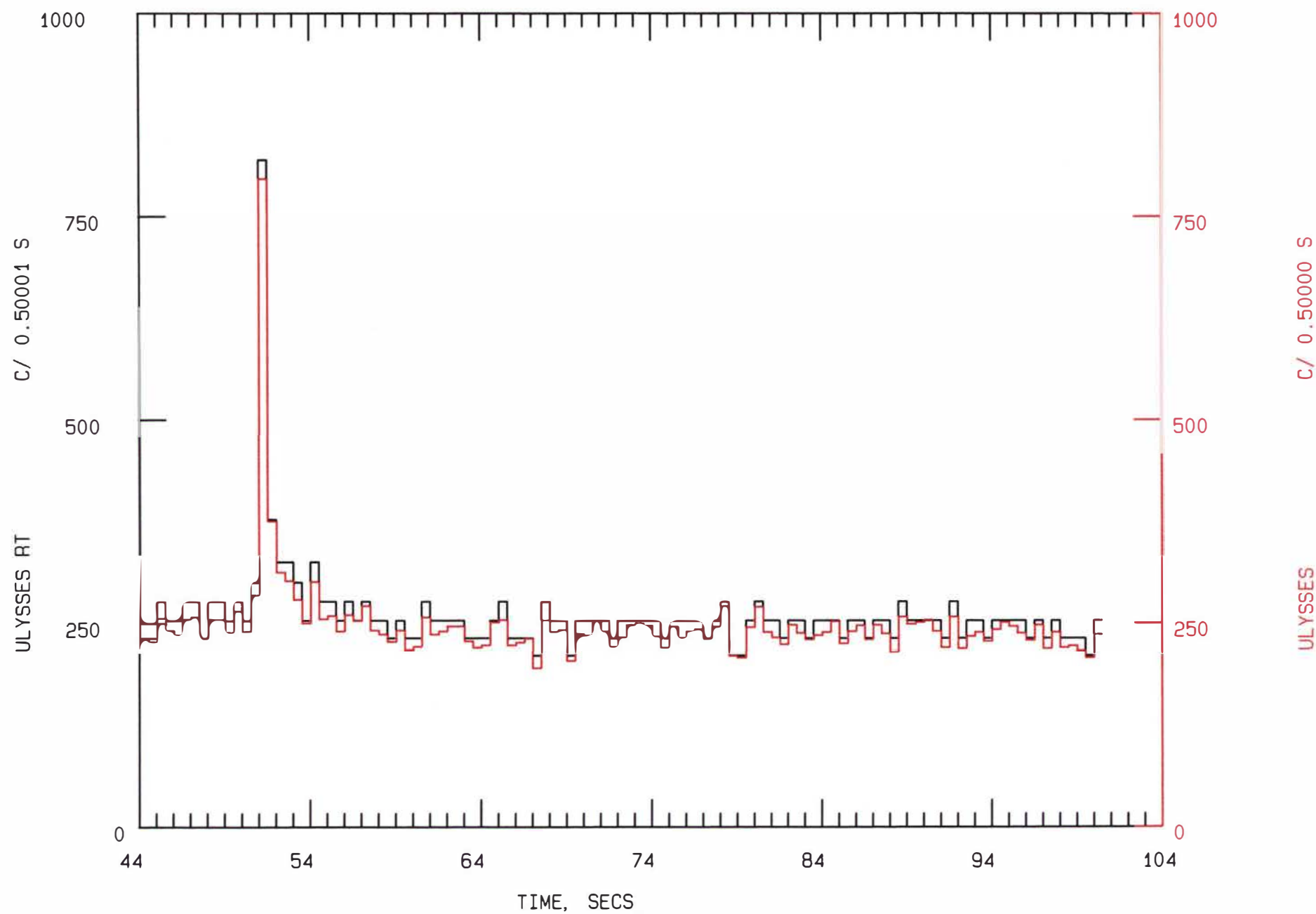
-ULYSSES

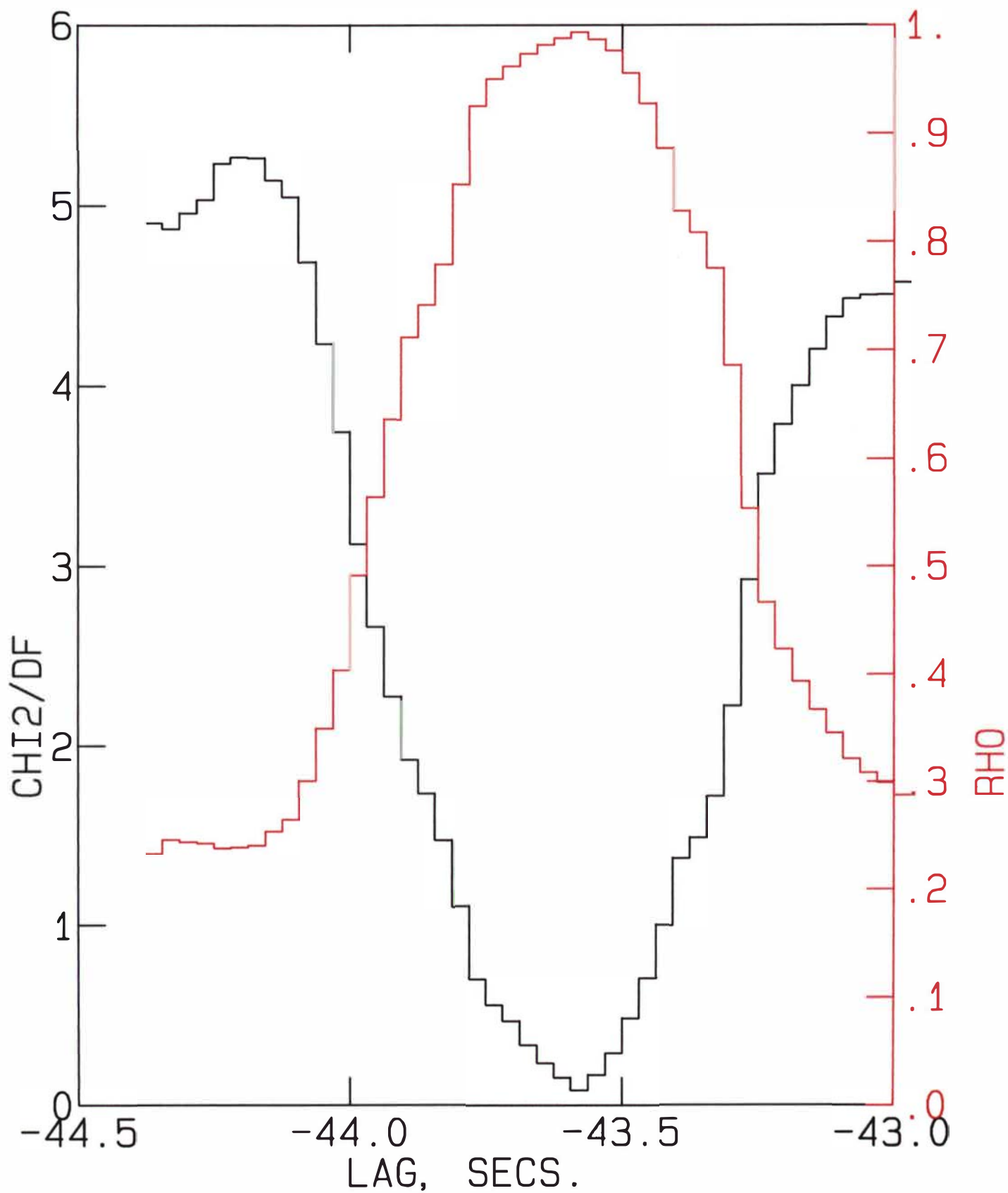
CORRELATION

14/10/95

13108.167





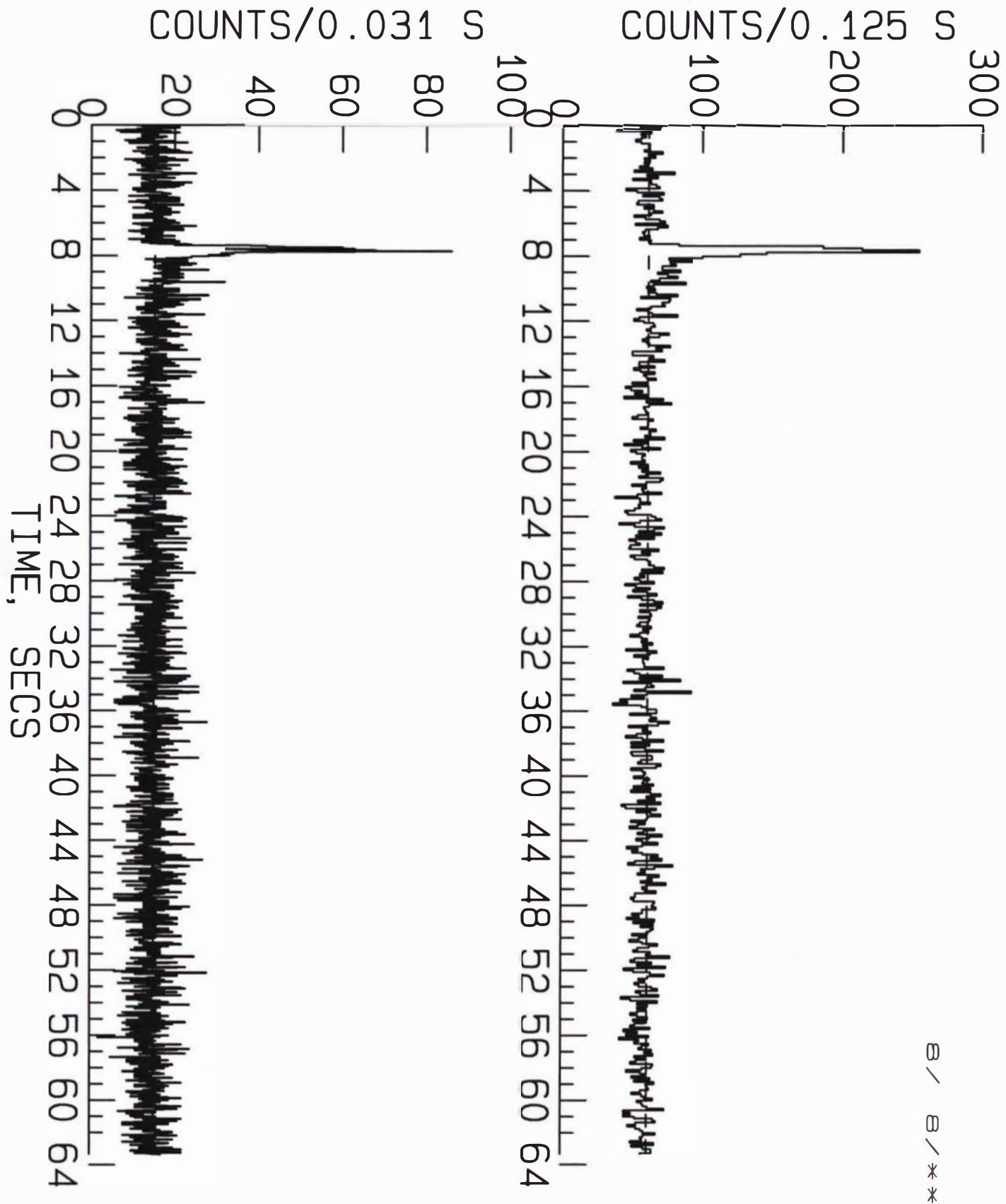


ULYSSES

14/10/95

Ttrig=14243.253

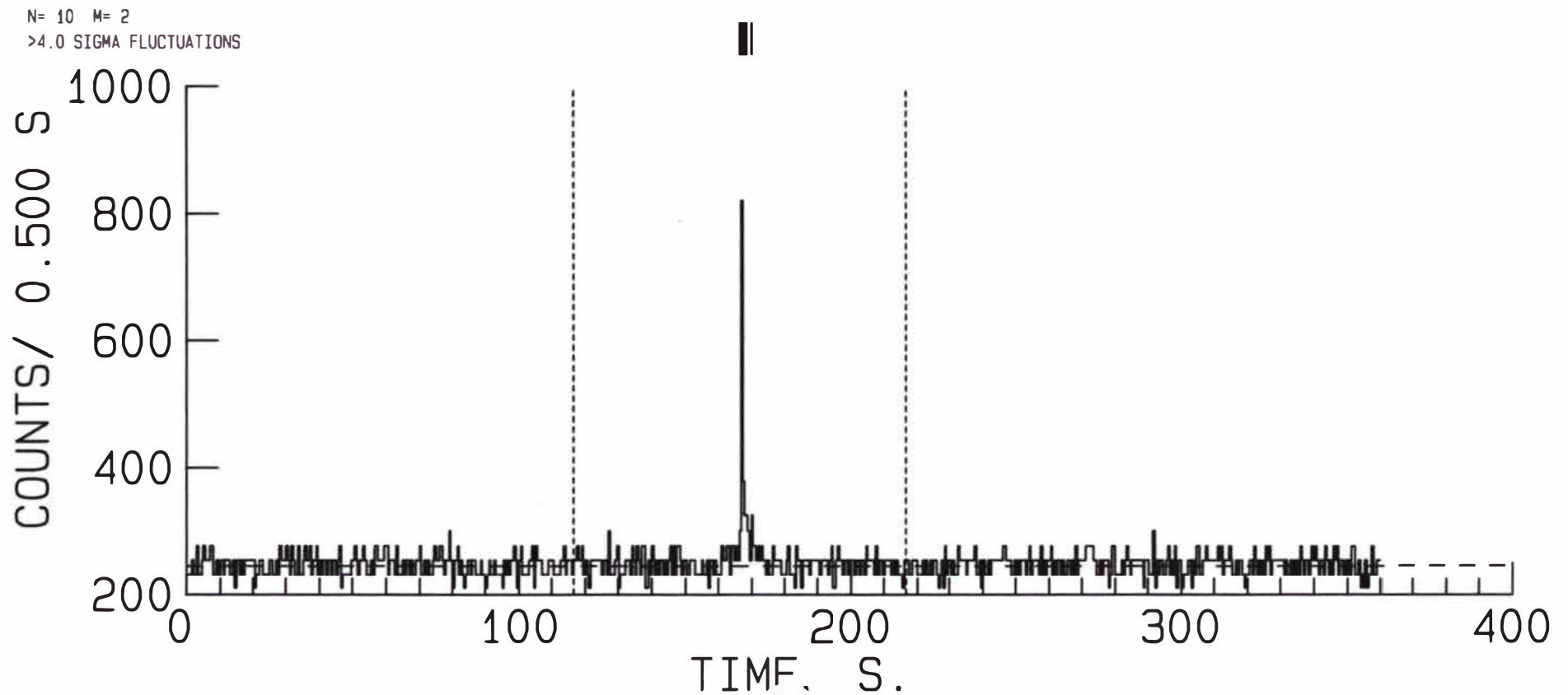
21- 144 keV



8 / 8 / **

ULYSSES RT
14/10/95 14076.217 s
21- 144 keV

8 / 8 / 8



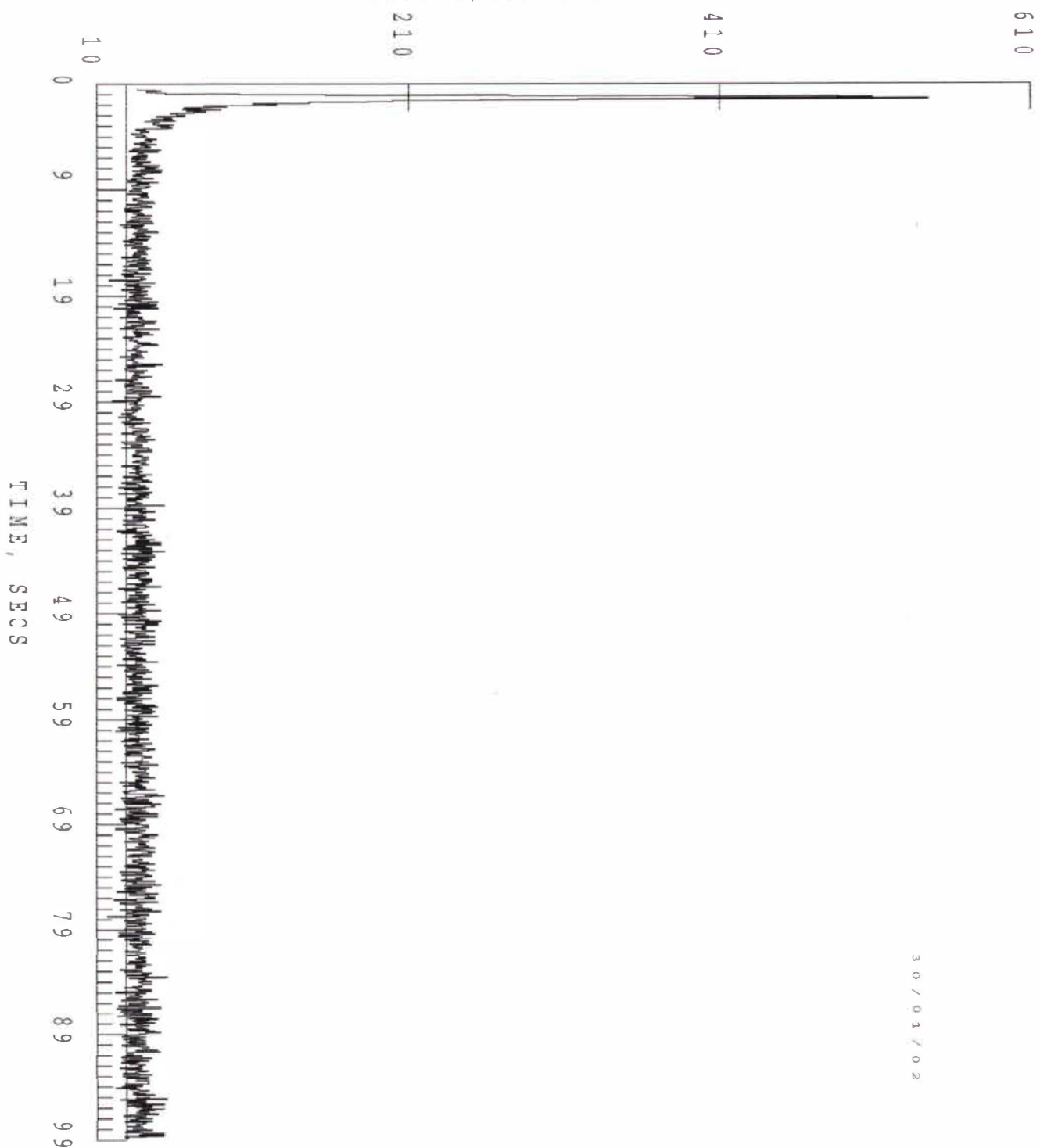
KONUS1

14/10/95

13108.167

50 - 200 keV

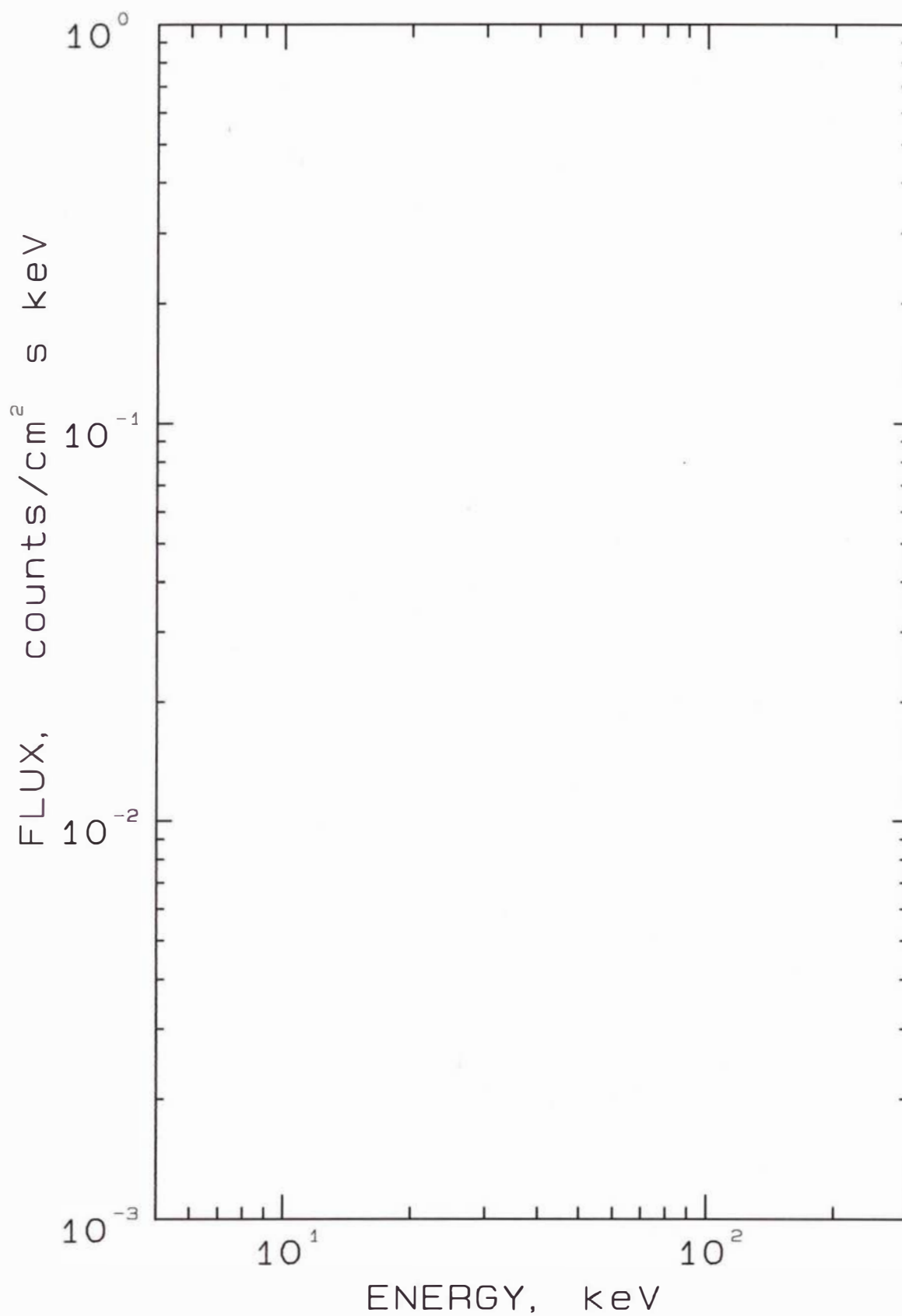
COUNTS/0.064 S



ULYSSES 14/10/95 14243.210

17/11/97

SPECTRUM INTEGRATED OVER 21.6 SECONDS, INTERVALS 2 TO 20



ULYSSES 14/10/95 14243.210 BURST SPECTRAL COUNT RATES

4- 17 keV

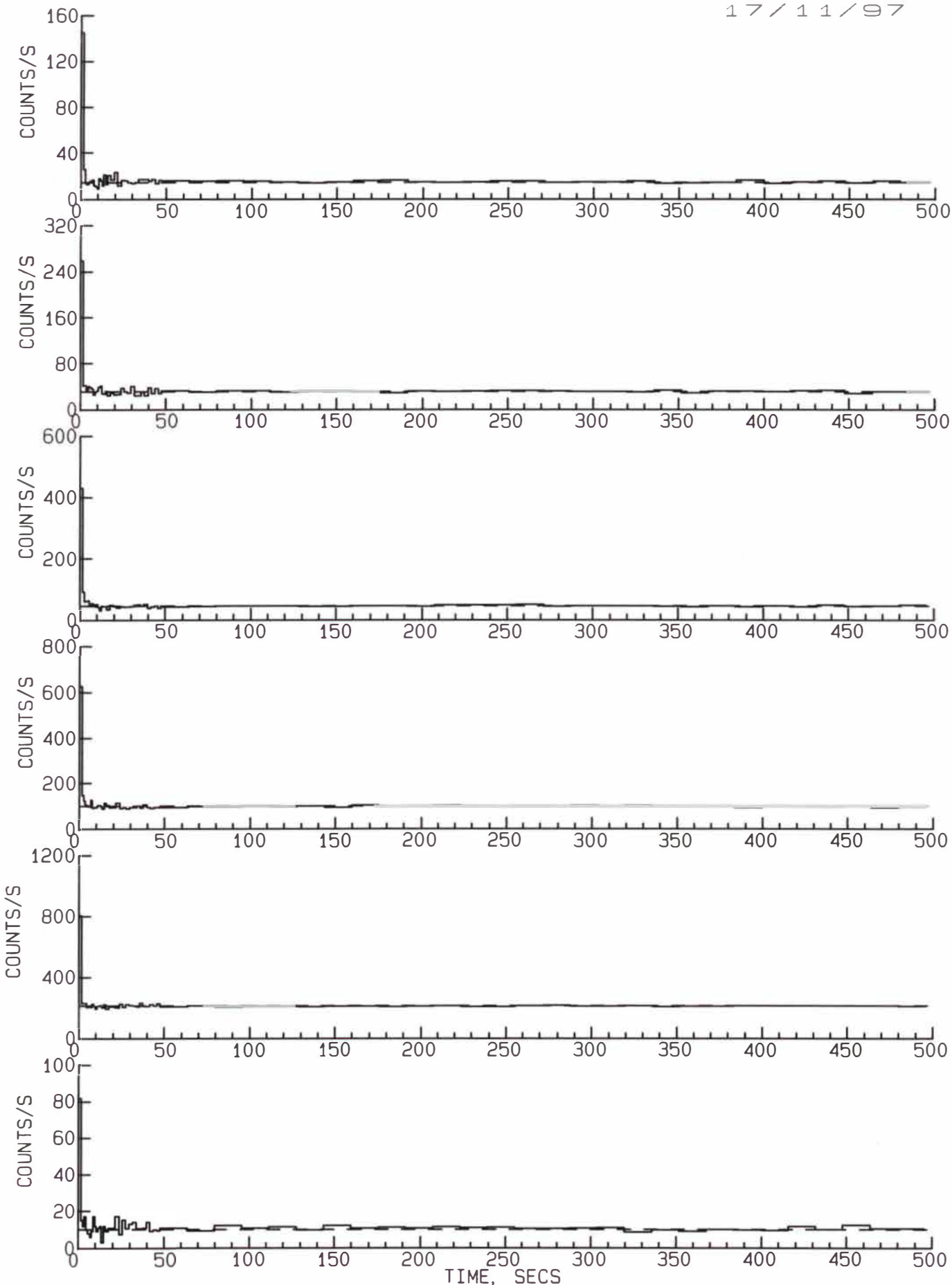
17- 44 keV

44- 71 keV

71- 98 keV

98-125 keV

125-143 keV



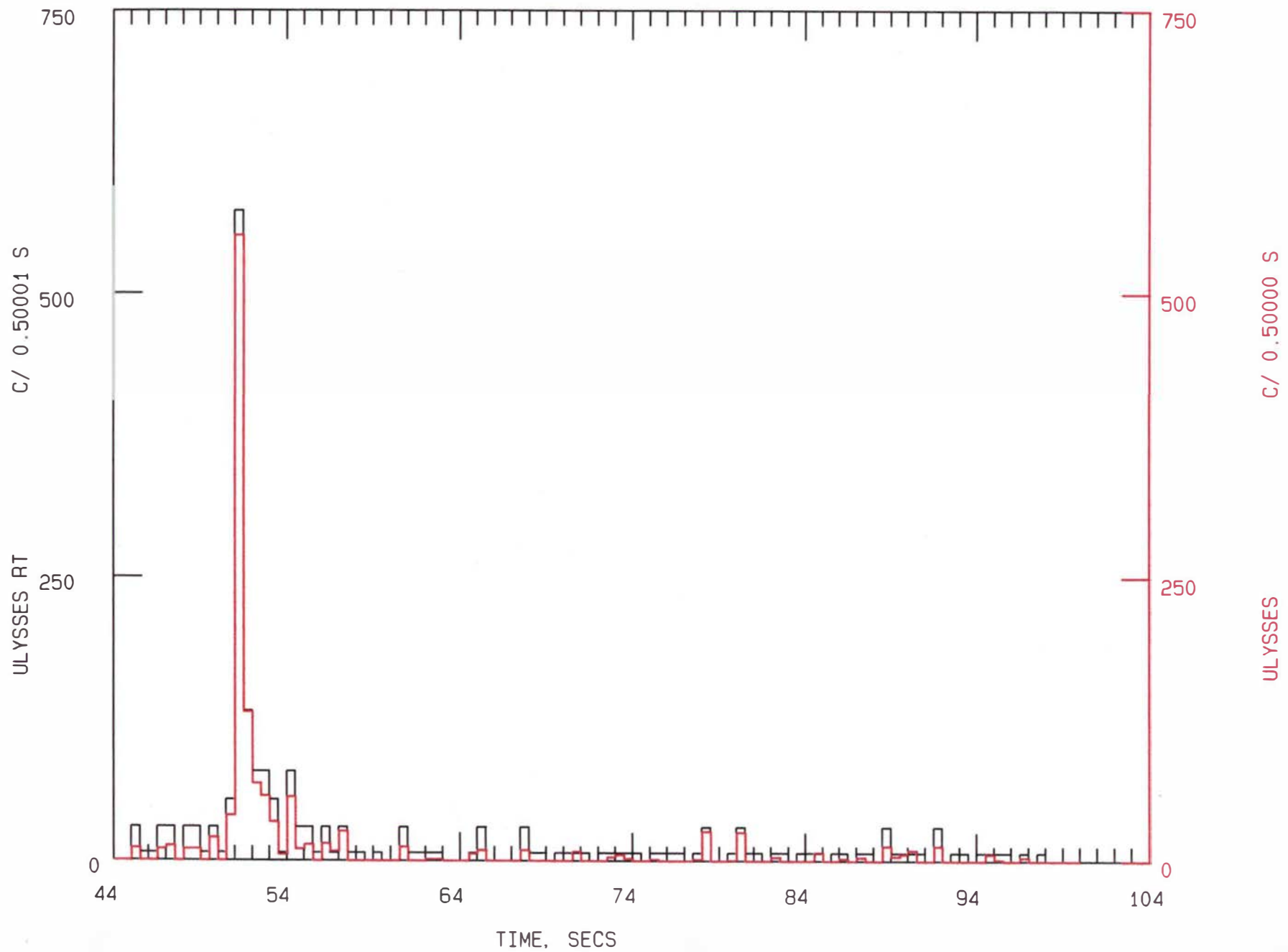
ULYSSES RT-ULYSSES

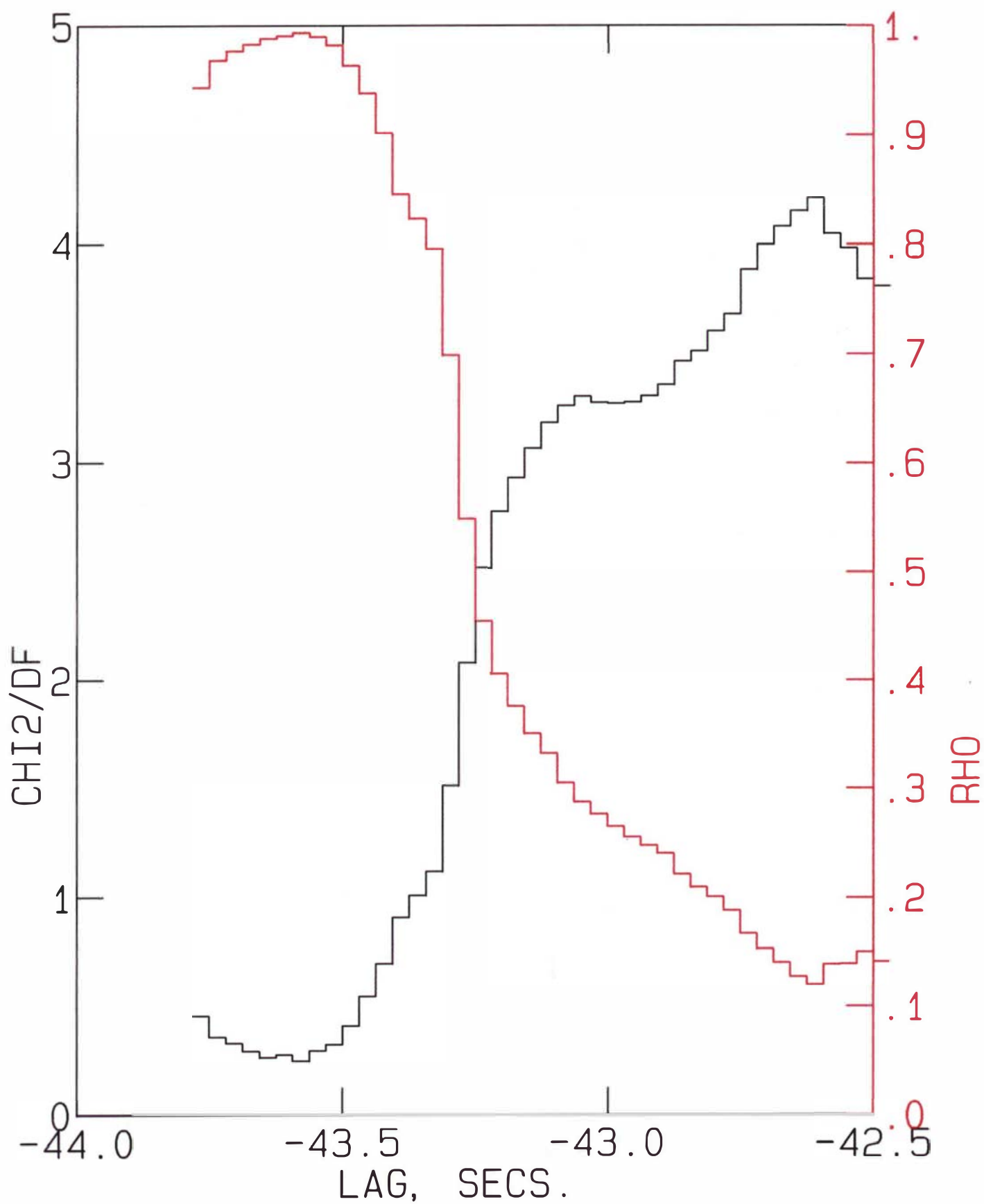
CORRELATION

14/10/95

14192.289

17/11/97





ULYSSES

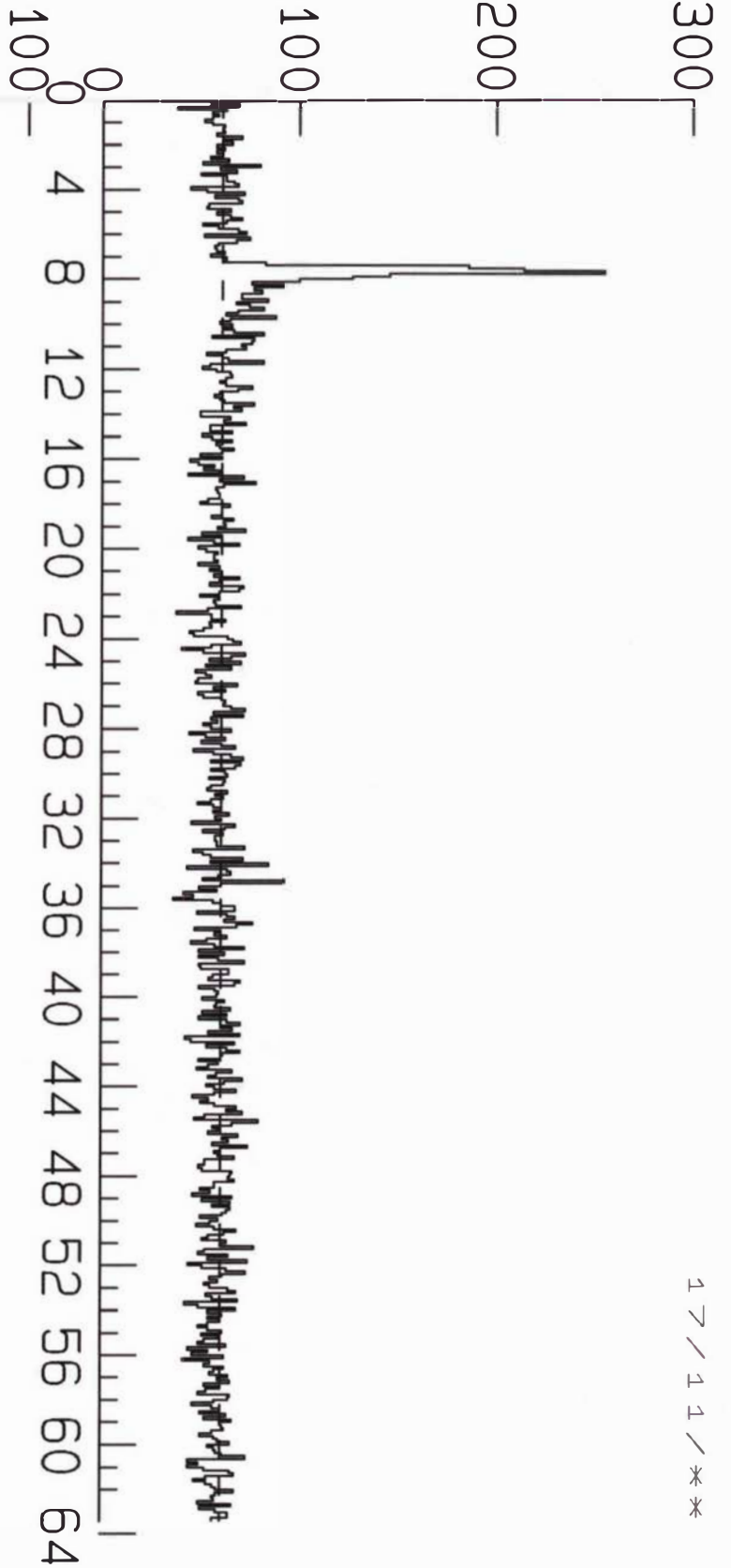
14/10/95

Ttrig=14243.290

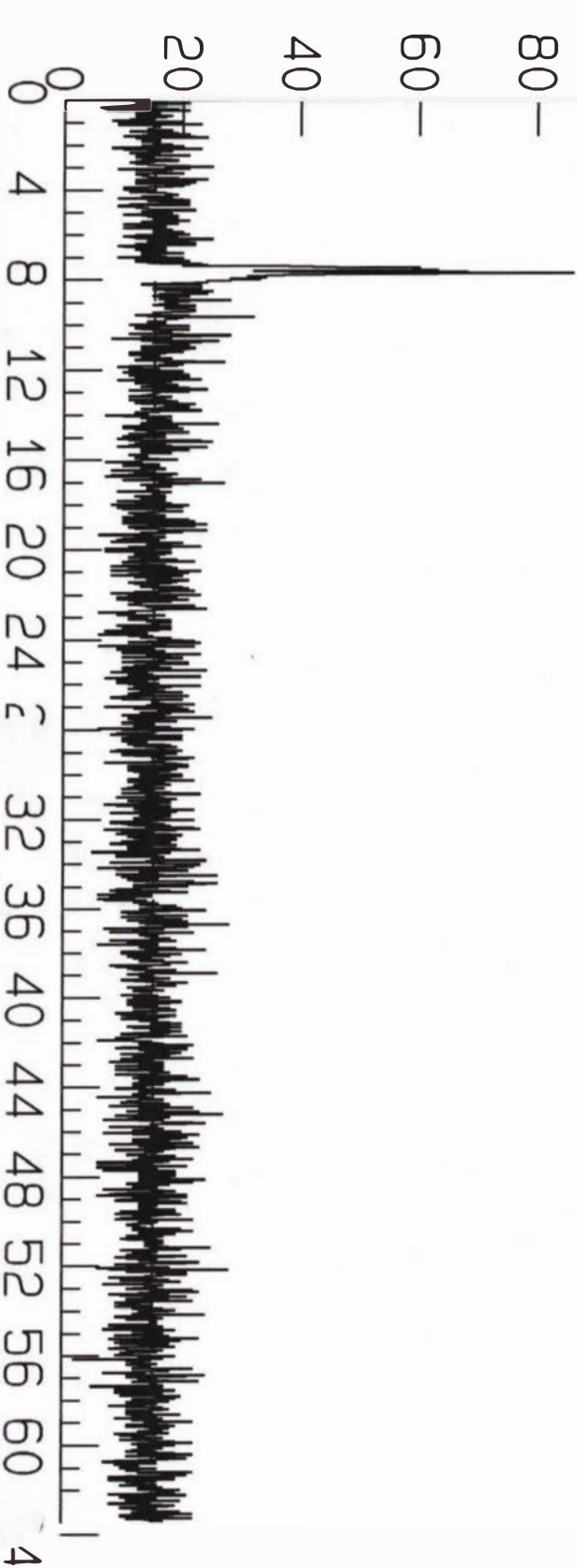
21- 144 keV

17/11**

COUNTS/0.125 S



COUNTS/0.031 S



ULYSSES RT

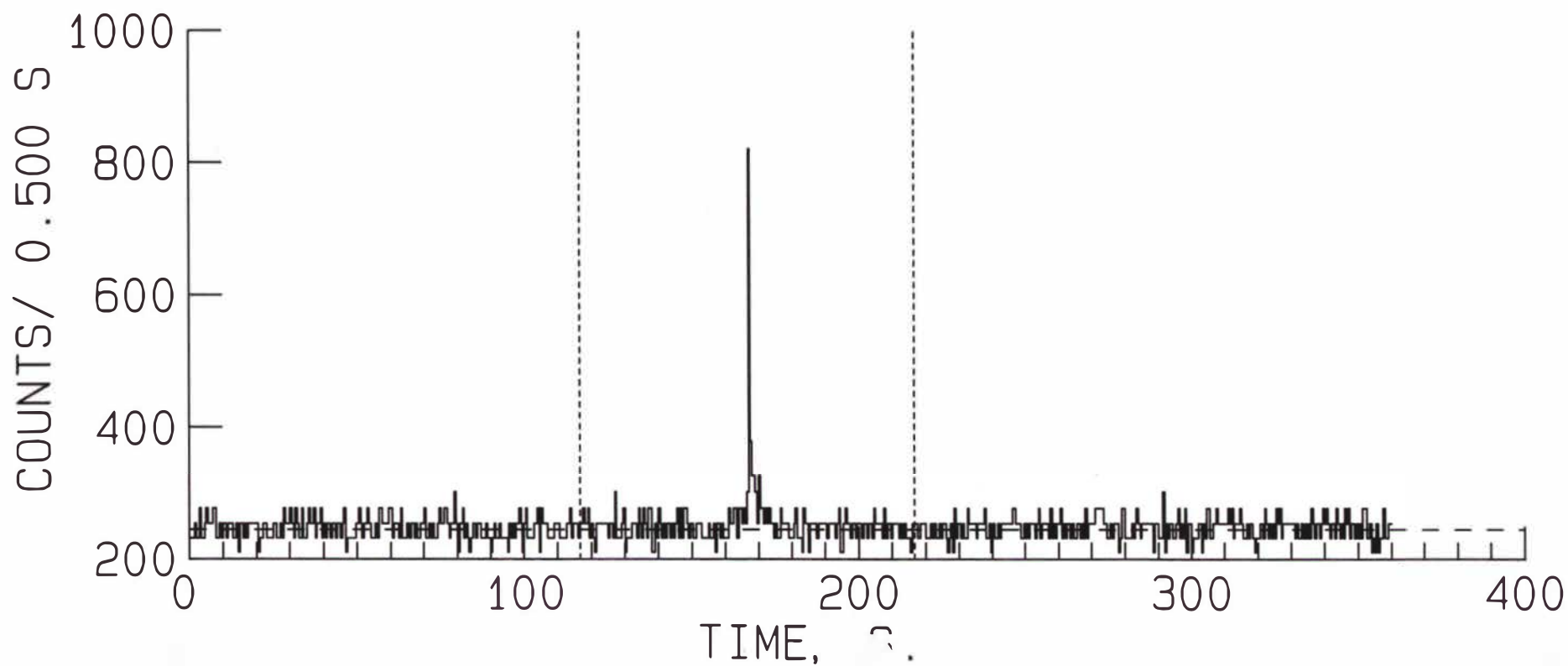
17/11/97

14/10/95 14076.217 s

21- 144 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From TERRELL@nisdp0.lanl.gov Tue Nov 14 13:57 PST 1995
From: TERRELL@nisdp0.lanl.gov
Date: Tue, 14 Nov 1995 14:57:54 -0700 (MST)
To: khurley@sunspot.ssl.berkeley.edu
Subject: DMSP GRB Detection, 1995 Oct 14

From: jterrell@lanl.gov (James Terrell, NIS-2 951114)
To: khurleyi@sunspot.ssl.berkeley.edu
CC:
Subj: DMSPaGRBSDetection, 1995 Oct 14

Kevin:

The fax graphs which I sent to you on 9 Nov omitted one fact of interest:
The position of DMSP 13 on 14 Oct at 13108 UT was at altitude 856 km, which
corresponds to a view out to 118.2 deg from the zenith at (108.0,0.8) right
ascension and declination (1995).

I will be out of town from tomorrow until 29 Nov--but please send me E-mail
if any interesting GRB occur.--Jim

95	7	1	117	23737	23737	3658
95	7	6	121	42735	42735	3662
95	7	11	123	13789	13789	3663
95	7	13	BGR	32133	32176	3664
95	7	30	128	76149	76124	3720
95	8	4	131	7135	07134	3734
95	8	4	133	45377	45376	3735
95	8	8	BGR	13023	12974	3745
95	8	9	136	85945	85945	3750
95	8	18	137	5065	05002	3765
95	8	22	140	13751	13749	3767
95	9	4	142	52692	52688	3776
95	9	9	145	85473	85452	3788
95	9	19	151	51465	51447	3806
95	9	21	152	20947	20947	3811
95	9	22	BGR	15495		
95	9	22	BGR	25929		
95	9	26	BGR	63919		
95	10	1	153	41907		
95	10	2	BGR	77583		3843
95	10	4	BGR	83974		
95	10	5	154	14842.112		
95	10	8	156	46287.863		
95	10	10	BGR	11774		
95	10	11	157	77693.094		3860
95	10	13	159	57097.299		
95	10	14	160	13108.167		
95	10	14	161	43561.3		
95	10	16	162	02484.285		3870
95	10	16	BGR	71607		3871
95	10	18	163	19832.069		
95	10	19	64	11712.625		
95	10	19	165	48244.594		3875
95	10	25	167	85239.738		
95	11	2	168	07085.879		
95	11	2	69	21209.015		3891
95	11	2	BGR	28693		
95	11	5	BGR	01745		
95	11	5	170	05868.077		3893
95	11	5	171	46827.808		
95	11	7	BGR	27298		
95	11	11	BGR	34960		
95	11	12	172	66495.244		
95	11	13	173	84358.872		3906
95	11	15	BGR	38929		
95	11	17	175	10123.762		
95	11	18	BGR	82560		
95	11	19	176	29831.402		3912
95	11	19	177	46457.519		
95	11	19		59448		
95	11	21		22280		
95	11	22	179	09841.38		
95	11	22	180	17107.738		
95	11	23	BGR	65408		
95	11	24	BGR	21266		3918
95	11	24	BGR	25132		

 -- T. L. Cline ----- LHEAVX::CLINE

From cline@lheavx.gsfc.nasa.gov Fri Jan 26 13:00 PST 1996
 Date: Fri, 26 Jan 1996 13:00:45 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: Improved list; same question.

Dear Kevin,
 I'm making a little progress here, tracking down these events. This is a slightly improved list, with a few more BATSE triggers identified. - TLC

Yr	Mn	Dy	Konus#	Konus Tzero	BATSE Tz, #	Ulysses
94	11	14	BGR	07360	07358 3283	- NO
94	11	19	4	70269.175	70250 3287	R I
94	11	21	6	62700.945	62697 3290	trig.
94	11	25	7	79470.156	79470 3295	R I
94	11	26	BGR	01246	01245 3296	
94	11	26	8	44557.952	44521 3298	trig.
94	11	26	BGR	60860	60861 3299	
94	11	26	9	71809.732	71798 3301	R I
94	11	27	10	52225.68	52217 3303	R I
94	11	28	BGR	56220	56217 3305	
94	12	28	28	27585.915	27581 3330	R I
94	12	29	29	82268.781	82258 3334	R I
95	1	4	31	26319.613	26319 3345	R I
95	1	11	33	17352.241	17263 3351	R I
95	1	11	34	44329	44310 3352	
95	1	17	BGR	05760	05761 3360	
95	1	18	BGR	44574	44589 3364	
95	2	7	BGR	02774	02781 3406	
95	2	8	45	07824	07824 3408	
95	2	10	47	08424	08421 3410	
95	2	11	48	08697	08697 3412	trig.
95	2	11	50	72469	72468 3415	
95	2	21	BGR	74701	74705 3436	
95	2	26	54	53351	53336 3442	
95	3	1	BGR	75731	75761 3448	
95	3	4	56	37661	37657 3453	
95	3	5	58	54309	54304 3458	
95	3	10	BGR	78388	78395 3464	
95	3	25	63	25841	25844 3480	
95	3	25	64	63392	63391 3481	
95	3	27	BGR	26323	26347 3485	
95	3	27	BGR	85672	85671 3486	
95	4	1	69	42647	42642 3488	
95	4	1	70	74635	74634 3489	
95	4	3	71	47985	47987 3491	
95	4	3	72	84828	84826 3492	
95	4	16	BGR	48420	48419 3509	
95	4	18	81	83793	83795 3512	
95	4	25	86	00923	00919 3523	
95	4	30	BGR	54224	54229 3527	
95	5	3	88	66971	66970 3537	
95	5	10	90	28083	28079 3569	
95	5	13	93	81706	81703 3571	
95	5	21	97	25161	25157 3588	
95	5	22	98	23898	23896 3590	
95	5	22	100	85280	85283 3593	
95	5	24	102	14902	14899 3598	
95	6	2	104	25592	25592 3618	
95	6	10	107	6849	06849 3637	
95	6	24	111	84124	84084 3648	
95	6	25	113	14626	14601 3649	
95	6	29	115	37033	37036 3654	
95	7	1	116	12762	12758 3657	

TO: KEVIN HURLEY, UCB, 510-643-8302

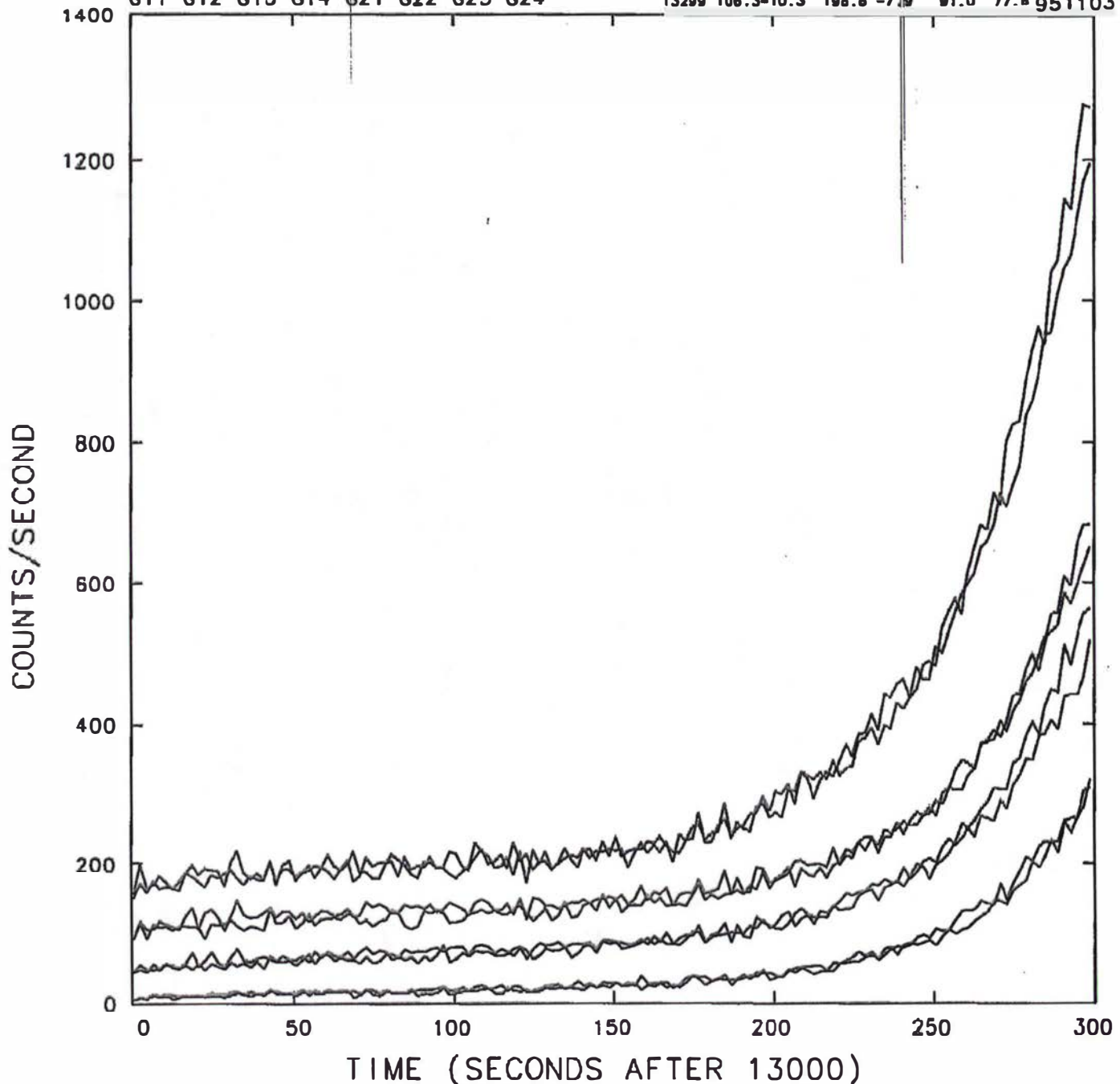
FROM: JIM TERRELL, LANL, 505-665-4414

11/9/95

DMSP13 1995 OCT 14 95287

G11 G12 G13 G14 G21 G22 G23 G24

UT	SCRA	DEC	SUNRA	DEC	ANGSUN	GHAA
13001	109.0	7.1	198.8	-7.9	90.7	76.4 C51014
13299	106.3-10.3	198.8	-7.9	91.0	77.6	951103



13108 (KOWUS)

DMSP13: (108.0°, 0.8°) 1995-
GRB NOT DETECTED

J. Terrell

From TERRELL@nisdp0.lanl.gov Tue Nov 7 15:30 PST 1995

From: TERRELL@nisdp0.lanl.gov

Date: Tue, 7 Nov 1995 16:30:49 -0700 (MST)

To: khurley@sunspot.ssl.berkeley.edu

Subject: dmsp grb

From: jterrell@lanl.gov (James Terrell, NIS-2, MS/D436) 951107

To: butterworth@lheavx.gsfc.nasa.gov, khurley@sunspot.ssl.berkeley.edu,
cline@lheavx.gsfc.nasa.gov, kmarar@isac.ernet.in,
scott@circe.gsfc.nasa.gov

CC:

Subj: DMSP GRB detections

DMSP13 detected an intense event 1995 October 11 beginning ~39520 UT, with peak at 39532 UT, probably corresponding to the Ulysses trigger at 39540. Another similar event was seen around 45550, so that perhaps both events are magnetospheric. DMSP12 was in a radiation belt at the time of the first event.

DMSP13 detected repeated bursts 1995 October 11 starting at 77644 UT (peak), followed by several other peaks, notably at 77664 and 77738 UT. This may correspond to the Konus and BATSE observations at 77640 UT. DMSP12 was in a radiation belt at these times.

DMSP13 did not detect the Konus (and Ulysses) event of 1995 October 14, 13108 UT. The non-detection may aid in locating the intense event.

DMSP12 was in a radiation belt at that time. --Jim

From BUTTERWORTH@LHEAVX.GSFC.NASA.GOV Wed Oct 18 10:20 PDT 1995
From: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Date: Wed, 18 Oct 1995 13:15:07 -0400 (EDT)
To: khurley@sunspot.ssl.berkeley.edu, kmarar@isac.ernet.in, jterrell@lanl.gov,
CLINE@LHEAVX.GSFC.NASA.GOV, scott@circe.gsfc.nasa.gov
CC: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Subject: report on 11 and 14 October events - Konus saw both

Hi Everyone,

Konus triggered on the 14th at 03:38:28.167. The event was intense for 0.5 seconds and lingered faintly for several seconds afterwards. Above 50keV the intense period had two peaks.

In contrast, the 11 October episode was one of the longest lasting GRBs I've seen in Konus data. It was bright for 50 seconds, but there was also renewed activity at 75 and 125 seconds, and there are signs of elevated flux levels out to 4 minutes after the trigger (at which point we entered read-out mode, with no more data taken for many minutes).

Paul.

From: LHEAVX::BUTTERWORTH 18-OCT-1995 12:40:33.98
To: @ULYSSES
CC: BUTTERWORTH
Subj: BTW - BATSE saw the 11 October event too.

Just scanned the BACODINE records, and BATSE had a trigger at 21.34 on the 11th - high southern declination, quite intense. No BATSE trigger near the Ulysses event on the 14th...

Paul.

From: LHEAVX::BUTTERWORTH 18-OCT-1995 12:28:03.65
To: @ULYSSES
CC: BUTTERWORTH
Subj: Konus (and TGRS) saw the 11 October burst, checking 14 October now

Hi Everyone,

Konus and TGRS saw the 11 October event. (The TGRS team asked me if Konus had seen it). I don't have the plots in front of me, but I recall that Konus saw it as an intense, long-lived (>50s) and complex event.

I'll go look at the data from the 16th now, and will report back within the hour.

Paul.

From: SMTP%"root@charybdis.ssl.berkeley.edu" 18-OCT-1995 11:54:21.14
To: BUTTERWORTH
CC:
Subj:

Date: Wed, 18 Oct 1995 07:20:37 -0700
From: root@charybdis.ssl.berkeley.edu (0000-Admin(0000))

From HAGEDON@fender.msfc.nasa.gov Mon Oct 16 11:15 PDT 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Mon, 16 Oct 1995 13:15:34 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 3865

TIME: TJD=0004 SECONDS=24924

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

GOES C5.2 SOLAR FLARE. 2 EPISODES WITH SUBSTRUCTURE. TOTAL DUR.~350 SEC.
NOT VISIBLE ABOVE 100 KEV.

From HAGEDON@fender.msfc.nasa.gov Mon Oct 16 11:29 PDT 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Mon, 16 Oct 1995 13:28:57 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3866

BATSEARCH PROGRAM

RI

BATSE BURST # 3866
EVENT OF 1995 OCT 14 DAY OF YEAR=287
EVENT CROSSING TIME AT BATSE : 43564. S. OR 12:06:04.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 168.000 -21.000
BATSE PEAK COUNTING RATE: 17500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 14/10/ 95 IS:
RA= 206.848 DEC= 57.794 DIST= 2.780 AU
BATSE-ULYSSES DISTANCE = 415903368. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 94.83 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -116.91 SECS.
CROSSING TIME AT ULYSSES IS 43447. S. OR 12:04:07 +/- 288.23 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 14/10/ 95 IS:
RA= 232.614 DEC= -19.621 DIST= 2.185 AU
MARS-BATSE DISTANCE = 326893760. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=119.82 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -542.30 SECS.
CROSSING TIME AT MARS IS 43022. S. OR 11:57:01 +/- 156.00 SECONDS

BATSE BURST TRIGGER

NO.: 3866

TIME: TJD=0004 SECONDS=43564

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=107.2 AZIMUTH=17.4 ERROR=1.2 DEGREES

COMMENTS:

BURST. SINGLE PULSE, FASTER RISE THAN DECAY. DUR.~8 SEC.
VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3866	951014	10004	43564	17500	168	-21	8

167.85 - 20.64

95	7	1	117	23737	23737	3658
95	7	6	121	42735	42735	3662
95	7	11	123	13789	13789	3663
95	7	13	BGR	32133	32176	3664
95	7	30	128	76149	76124	3720
95	8	4	131	7135	07134	3734
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95	8	9	136	85945	85945	3750
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95	9	21	152	20947	20947	3811
95	9	22	BGR	15495		
95	9	22	BGR	25929		
95	9	26	BGR	63919		
95	10	1	153	41907		
95	10	2	BGR	77583		3843
95	10	4	BGR	83974		
95	10	5	154	14842.112		
95	10	8	156	46287.863		
95	10	10	BGR	11774		
95	10	11	157	77693.094		3860
95	10	13	159	57097.299		
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95	10	14	161	43561.3		
95	10	16	162	02484.285		3870
95	10	16	BGR	71607		3871
95	10	18	163	19832.069		
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95	10	19	165	48244.594		3875
95	10	25	167	85239.738		
95	11	2	168	07085.879		
95	11	2	69	21209.015		3891
95	11	2	BGR	28693		
95	11	5	BGR	01745		
95	11	5	170	05868.077		3893
95	11	5	171	46827.808		
95	11	7	BGR	27298		
95	11	11	BGR	34960		
95	11	12	172	66495.244		
95	11	13	173	84358.872		3906
95	11	15	BGR	38929		
95	11	17	175	10123.762		
95	11	18	BGR	82560		
95	11	19	176	29831.402		3912
95	11	19	177	46457.519		
95	11	19		59448		
95	11	21		22280		
95	11	22	179	09841.38		
95	11	22	180	17107.738		
95	11	23	BGR	65408		
95	11	24	BGR	21266		3918
95	11	24	BGR	25132		

 -- T. L. Cline ----- LHEAVX::CLINE

From cline@lheavx.gsfc.nasa.gov Fri Jan 26 13:00 PST 1996
 Date: Fri, 26 Jan 1996 13:00:45 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: Improved list; same question.

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94	11	14	BGR	07360	07358	3283 - NO
94	11	19	4	70269.175	70250	3287 R I
94	11	21	6	62700.945	62697	3290 trig.
94	11	25	7	79470.156	79470	3295 R I
94	11	26	BGR	01246	01245	3296
94	11	26	8	44557.952	44521	3298 trig.
94	11	26	BGR	60860	60861	3299
94	11	26	9	71809.732	71798	3301 R I
94	11	27	10	52225.68	52217	3303 R I
94	11	28	BGR	56220	56217	3305
94	12	28	28	27585.915	27581	3330 R I
94	12	29	29	82268.781	82258	3334 R I
95	1	4	31	26319.613	26319	3345 R I
95	1	11	33	17352.241	17263	3351 R I
95	1	11	34	44329	44310	3352
95	1	17	BGR	05760	05761	3360
95	1	18	BGR	44574	44589	3364
95	2	7	BGR	02774	02781	3406
95	2	8	45	07824	07824	3408
95	2	10	47	08424	08421	3410
95	2	11	48	08697	08697	3412 trig.
95	2	11	50	72469	72468	3415
95	2	21	BGR	74701	74705	3436
95	2	26	54	53351	53336	3442
95	3	1	BGR	75731	75761	3448
95	3	4	56	37661	37657	3453
95	3	5	58	54309	54304	3458
95	3	10	BGR	78388	78395	3464
95	3	25	63	25841	25844	3480
95	3	25	64	63392	63391	3481
95	3	27	BGR	26323	26347	3485
95	3	27	BGR	85672	85671	3486
95	4	1	69	42647	42642	3488
95	4	1	70	74635	74634	3489
95	4	3	71	47985	47987	3491
95	4	3	72	84828	84826	3492
95	4	16	BGR	48420	48419	3509
95	4	18	81	83793	83795	3512
95	4	25	86	00923	00919	3523
95	4	30	BGR	54224	54229	3527
95	5	3	88	66971	66970	3537
95	5	10	90	28083	28079	3569
95	5	13	93	81706	81703	3571
95	5	21	97	25161	25157	3588
95	5	22	98	23898	23896	3590
95	5	22	100	85280	85283	3593
95	5	24	102	14902	14899	3598
95	6	2	104	25592	25592	3618
95	6	10	107	6849	06849	3637
95	6	24	111	84124	84084	3648
95	6	25	113	14626	14601	3649
95	6	29	115	37033	37036	3654
95	7	1	116	12762	12758	3657

Date:

July 8 '97

Helio corr removed

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

- ☒ ACCESS database updated?

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

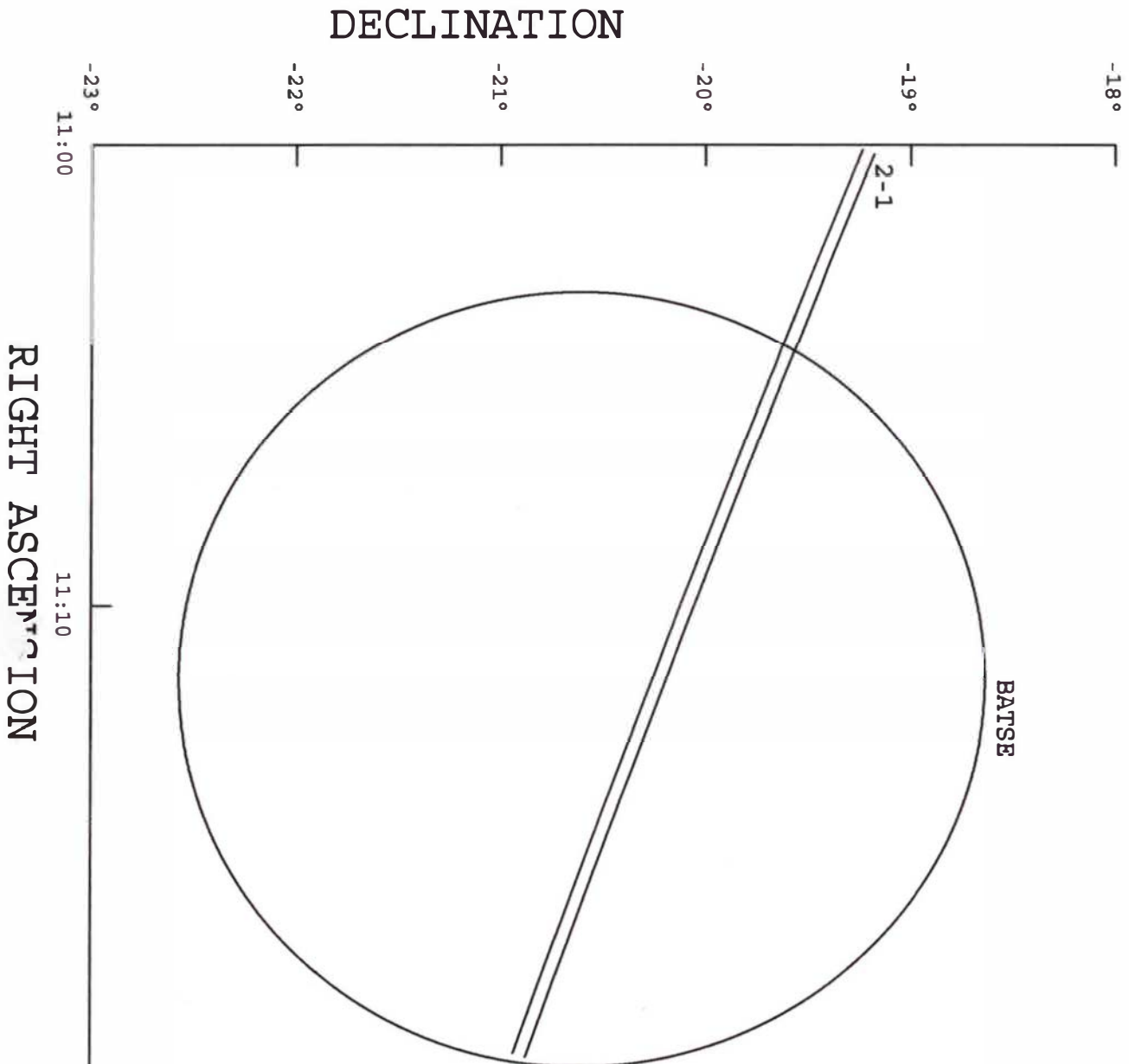
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF OCT 14, 1995 12:02

8 / 7/97



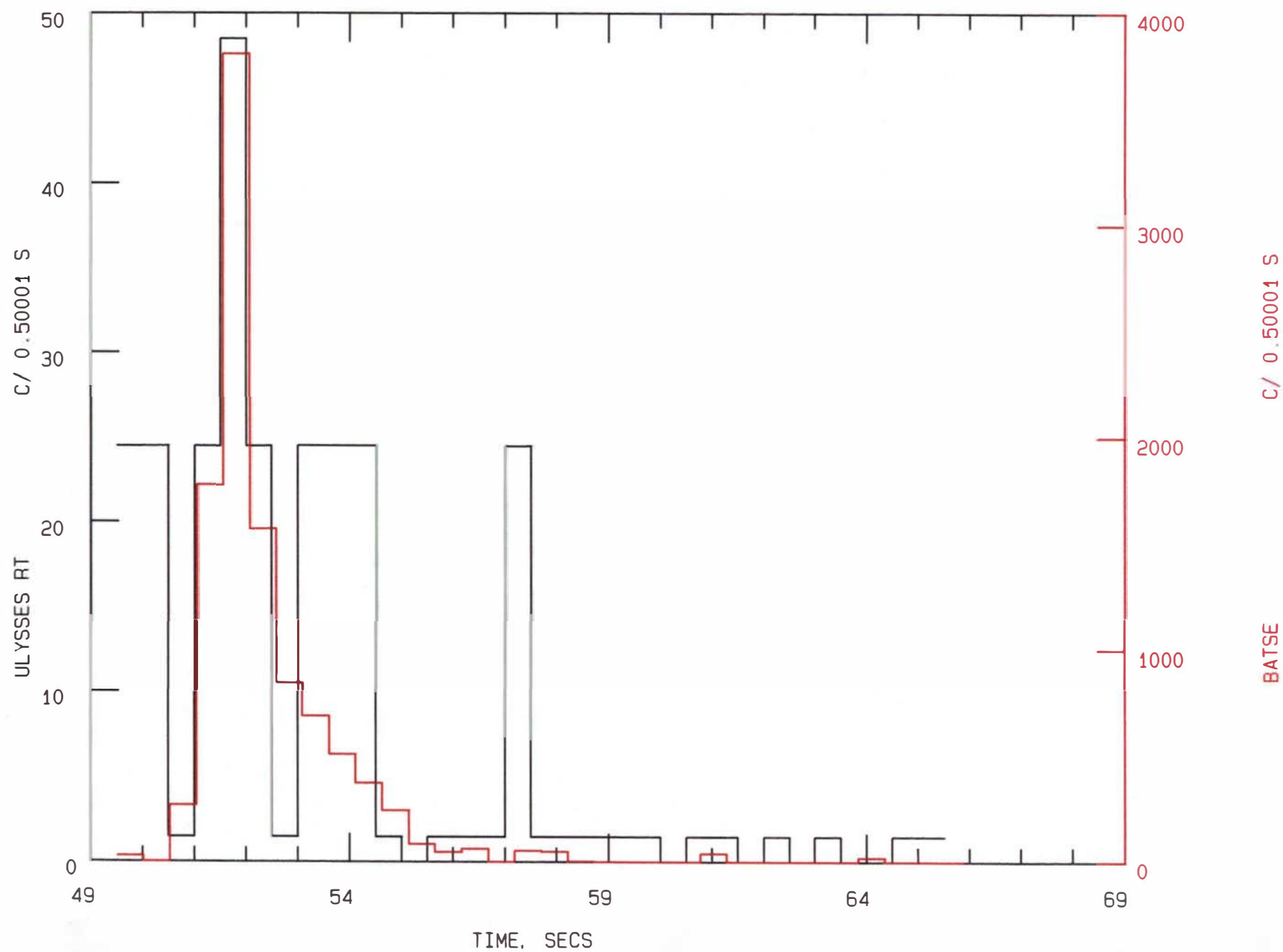
ULYSSES RT-BATSE

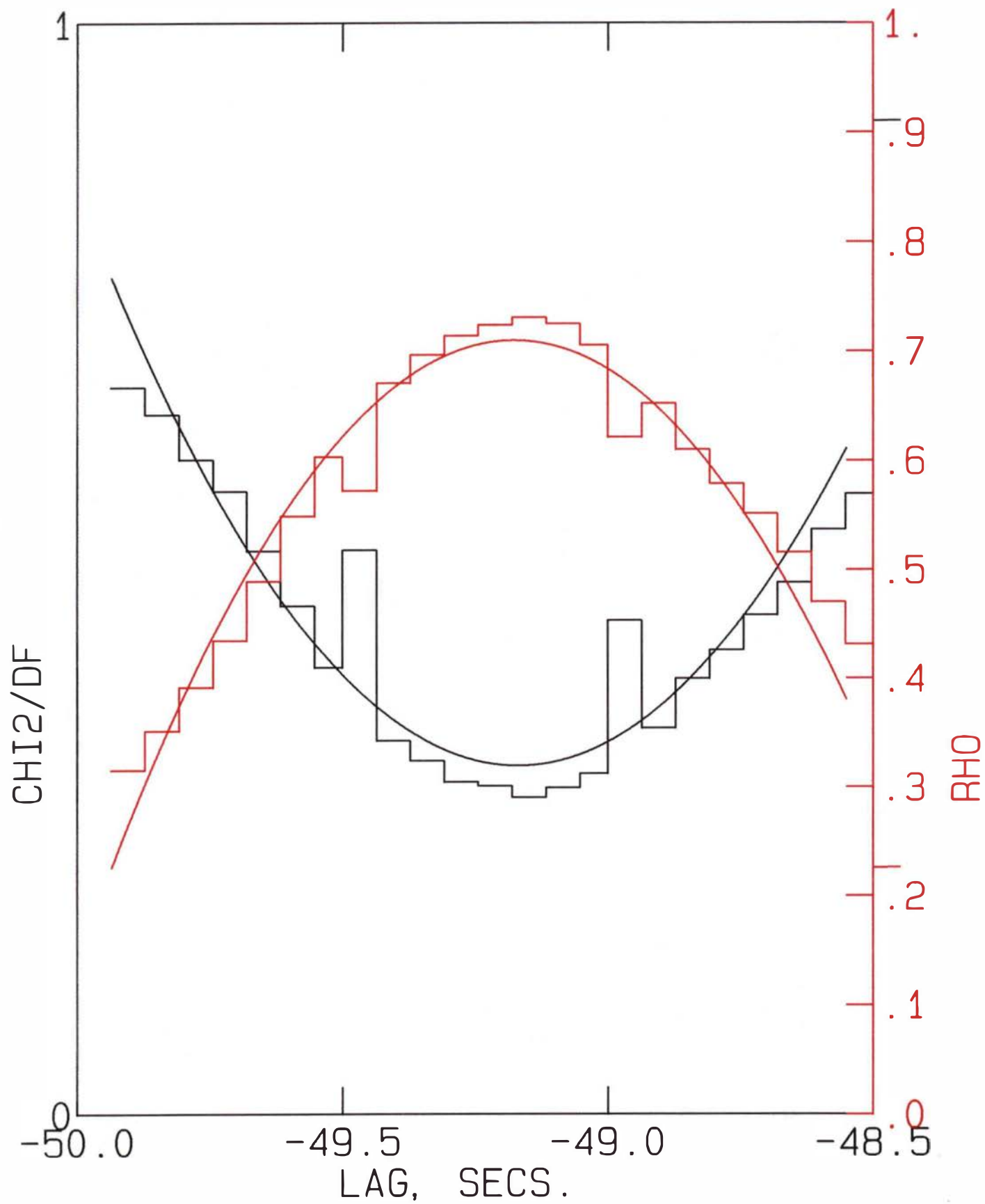
CORRELATION

14/10/95

43378.260

8/ 7/97





ULYSSES RT

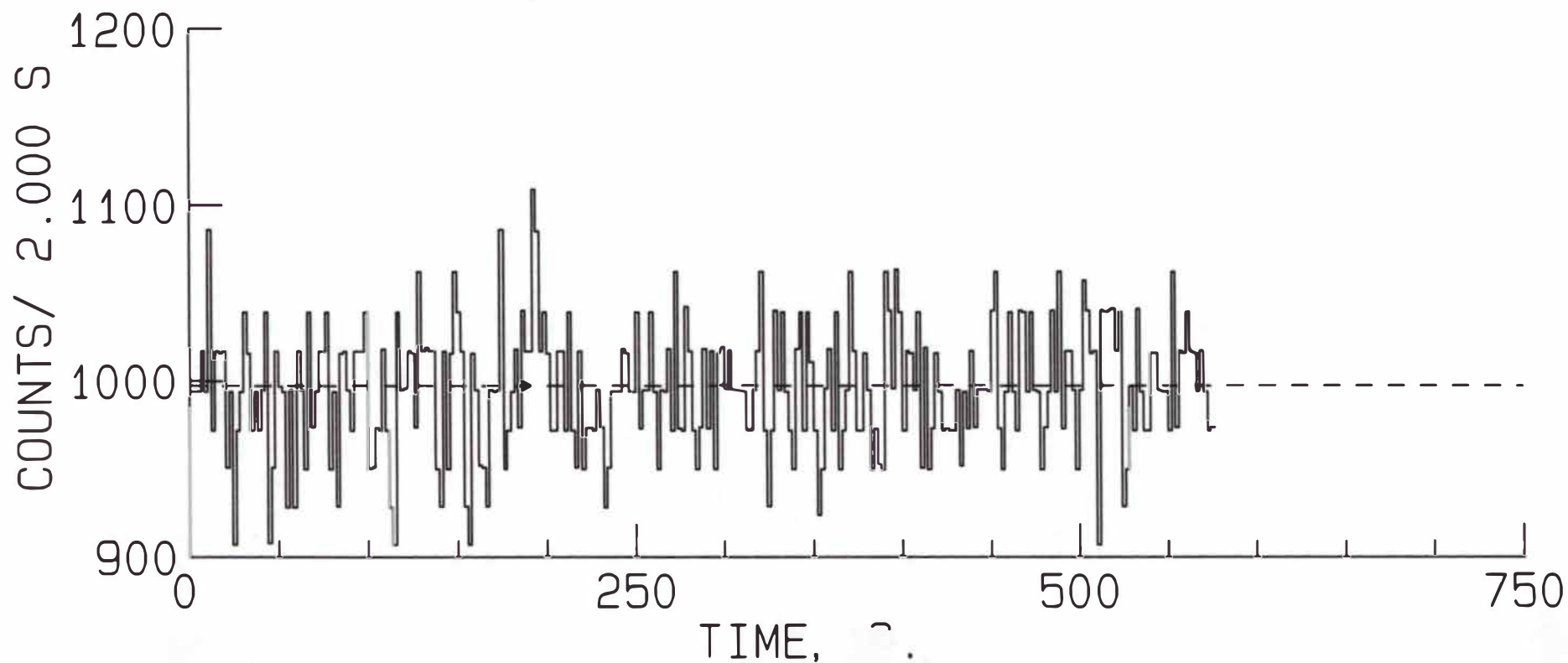
8 / 7 / 97

14/10/95 43236.201 s

0.500 S INTERVALS REGROUPED BY 4

21- 144 keV

N= 10 M= 1
>3.5 SIGMA FLUCTUATIONS



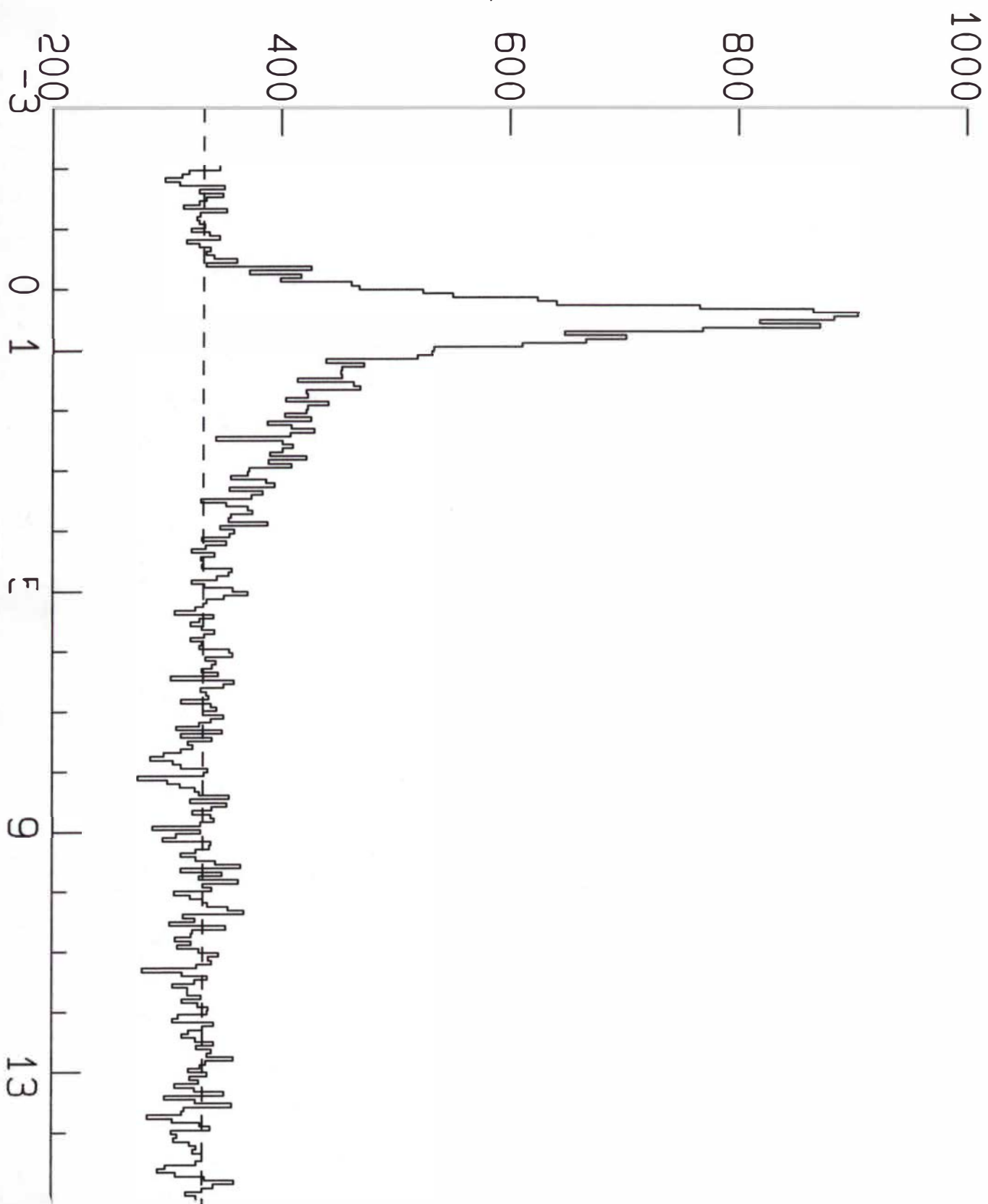
BATSE

14/10/95

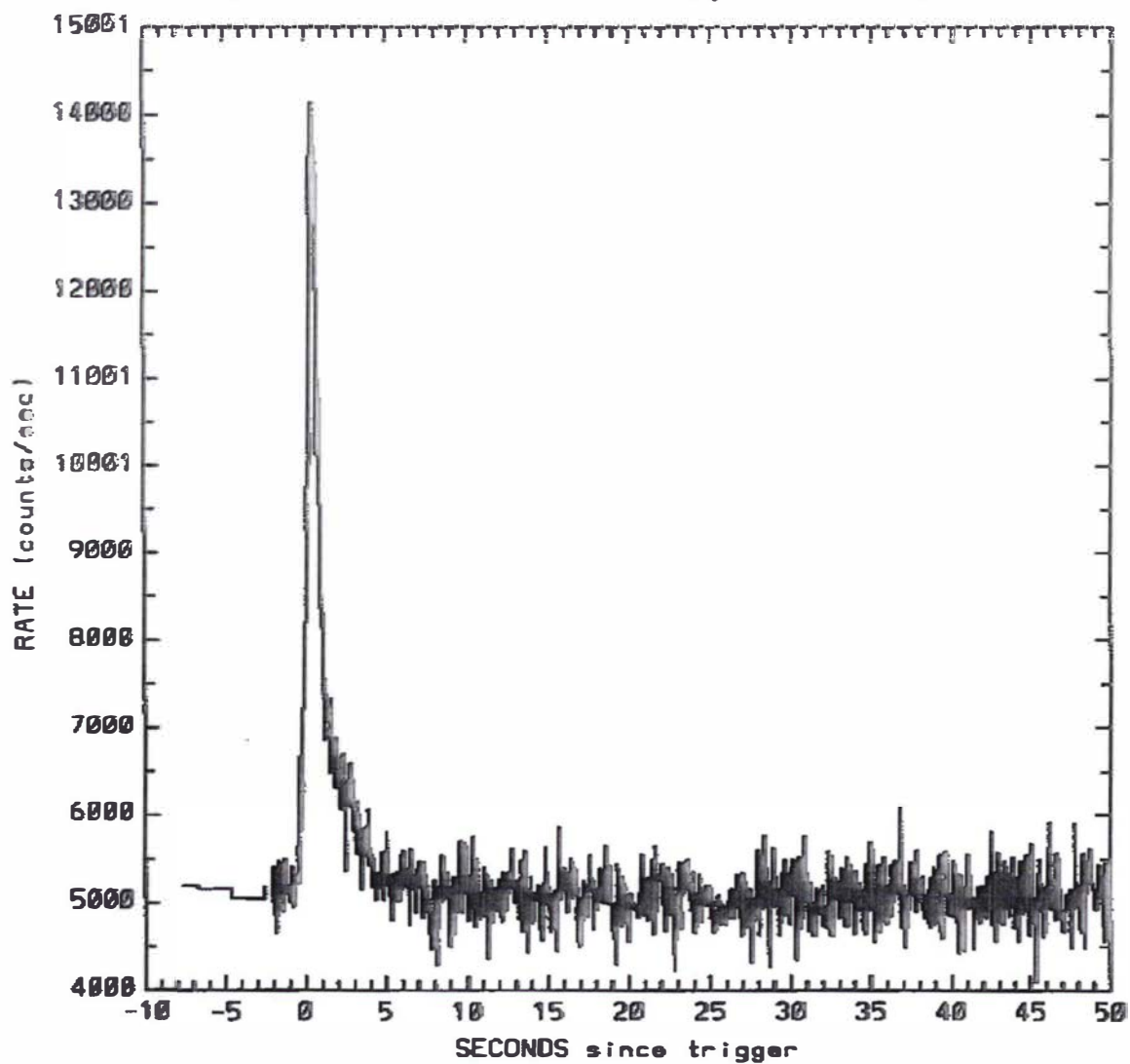
43564.210

25- 100 keV

COUNTS/0.064 S



DISCSC Data for K. Hurley, No. 3866



3-JUL-1997 11:13:15

Created by MQPS 80
(Burst Display)
Version t2.25

Trigger # 3866

Trigger Time:
18886 / 03560.210Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: PREB + DISCLAMinimum Integ. Time:
0.064 second(s)Detectors (7..0):
---3-1-Discriminators:
(1.2)Quality Mask:
BDISP1

From HAGEDON@fender.msfc.nasa.gov Mon Oct 16 11:30 PDT 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Mon, 16 Oct 1995 13:30:23 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3867

BATSEARCH PROGRAM

NO

BATSE BURST # 3867
EVENT OF 1995 OCT 14 DAY OF YEAR=287
EVENT CROSSING TIME AT BATSE : 82100. S. OR 22:48:20.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 319.000 38.000
BATSE PEAK COUNTING RATE: 9500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 14/10/ 95 IS:
RA= 206.999 DEC= 57.723 DIST= 2.782 AU
BATSE-ULYSSES DISTANCE = 416186746. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=111.28 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -503.77 SECS.
CROSSING TIME AT ULYSSES IS 81596. S. OR 22:39:56 +/- 266.94 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 14/10/ 95 IS:
RA= 232.614 DEC= -19.621 DIST= 2.185 AU
MARS-BATSE DISTANCE = 326893760. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 80.80 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 174.41 SECS.
CROSSING TIME AT MARS IS 82274. S. OR 22:51:14 +/- 189.52 SECONDS

BATSE BURST TRIGGER

NO.: 3867

TIME: TJD=0004 SECONDS=82100

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=56.0 AZIMUTH=225.8 ERROR=2.8 DEGREES

COMMENTS:

BURST. SINGLE SPIKE WITH SOME SUBSTRUCTURE. DUR.~1 SEC.
VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3867	951014	10004	82100	9500	319	+38	1

From rbruser@compTEL.unh.edu Sat Oct 14 16:14 PDT 1995
Subject: GRB951014: COMPTEL BURST POSITION NOTICE
From: burst@compTEL.unh.edu (UNH/COMPTEL Burst Group)
Date: Sat, 14 Oct 1995 19:05:09 -0400 (EDT)
To: burstmail@compTEL.unh.edu

NOTICE_HEAD: COMPTEL BURST POSITION NOTICE: GRB951014
NOTICE_TYPE: INITIAL
NOTICE_DATE: Sat Oct 14 23:05:09 GMT 1995
ORIG_SENDER: burst@compTEL.unh.edu

BURST_DATE : 10004 TJD; 14-Nov-1995
BURST_TIME : 82100.84 sec; 22:48:20.84 UT

NOTE01-----: Rapid COMPTEL localization of this burst
NOTE02-----: is not possible.
NOTE03-----: -----
NOTE04-----: Please DO NOT reply to this message!
NOTE05-----: Address questions to either:
NOTE06-----: Marc Kippen (rmkippen@unh.edu) or
NOTE07-----: Tom Harrison (tharriso@nmsu.edu)

17/10/95

ULYSSES RT

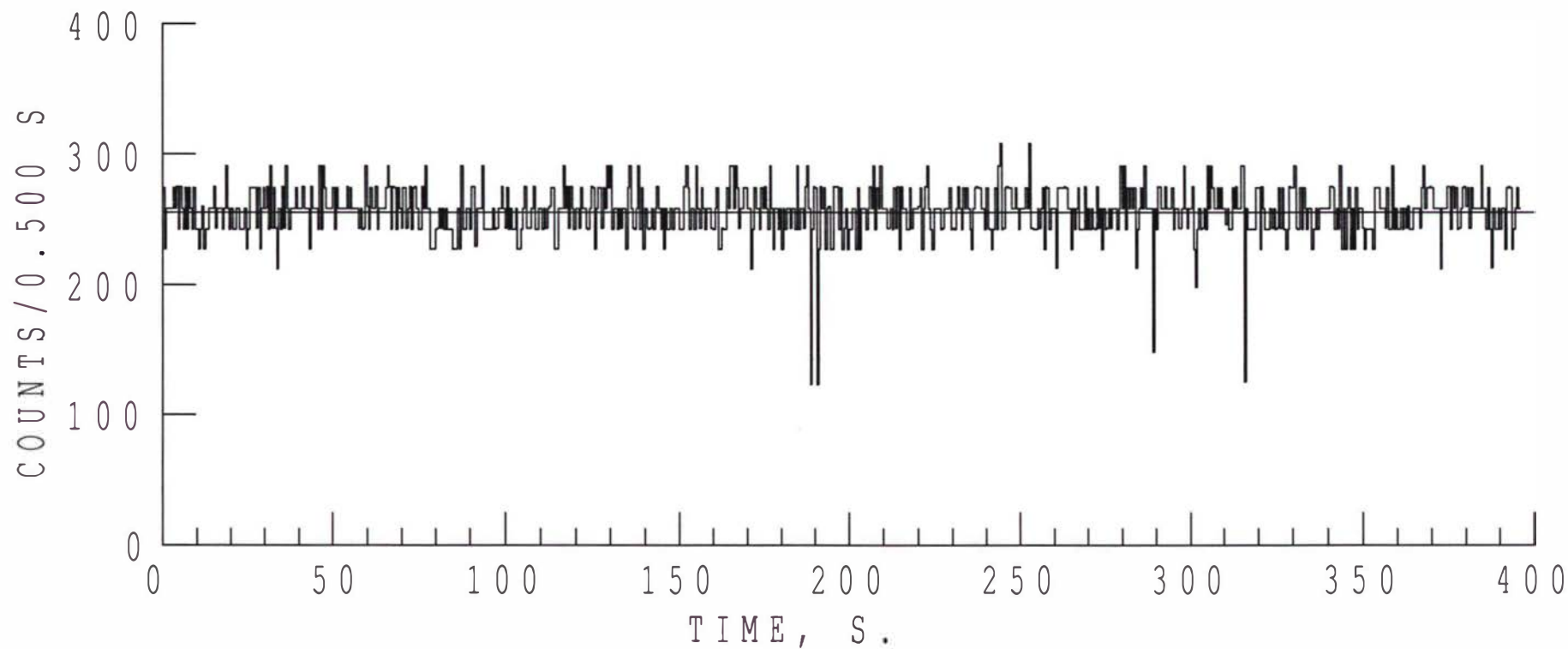
14/10/95 82080.094 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



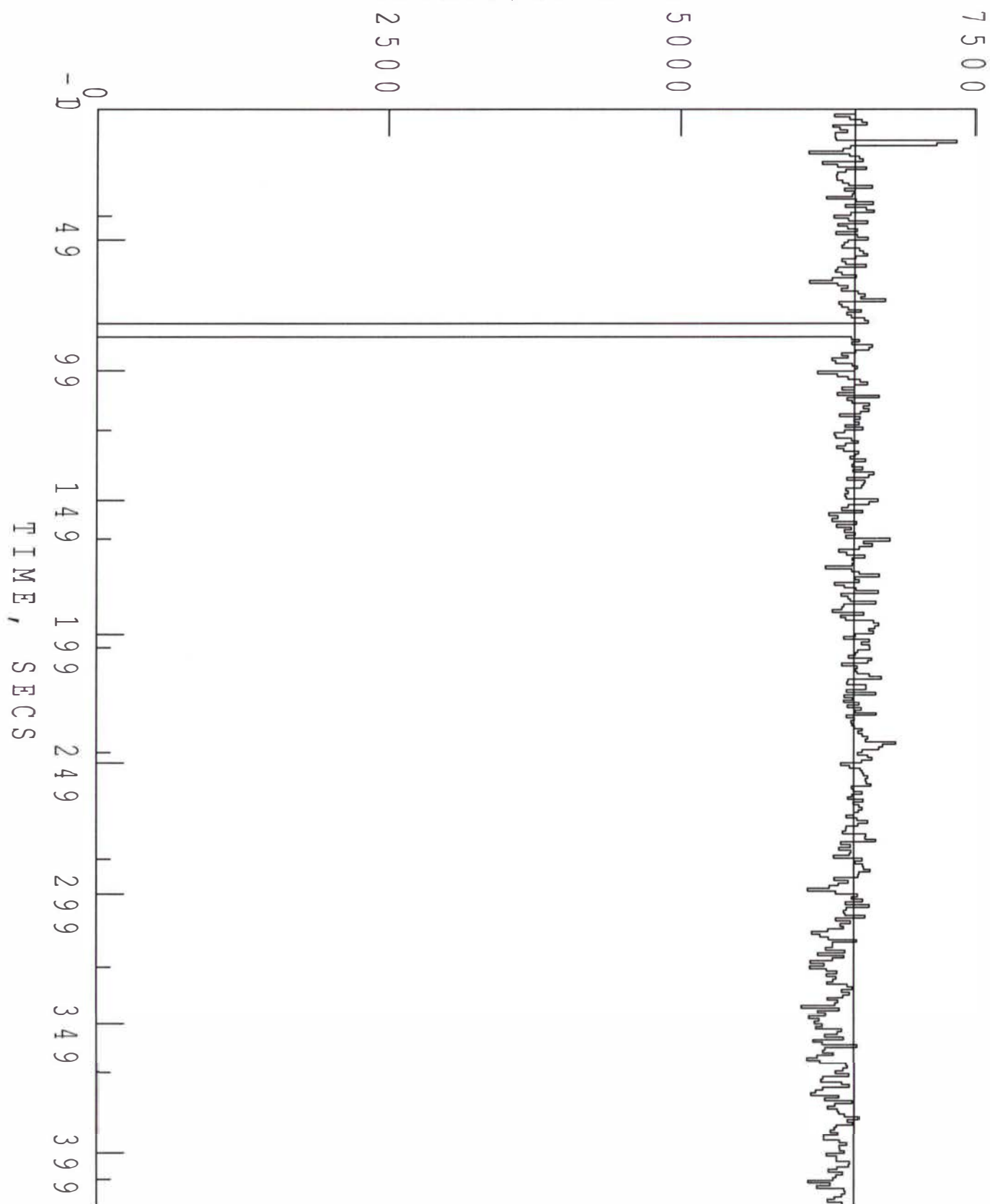
BACODINE

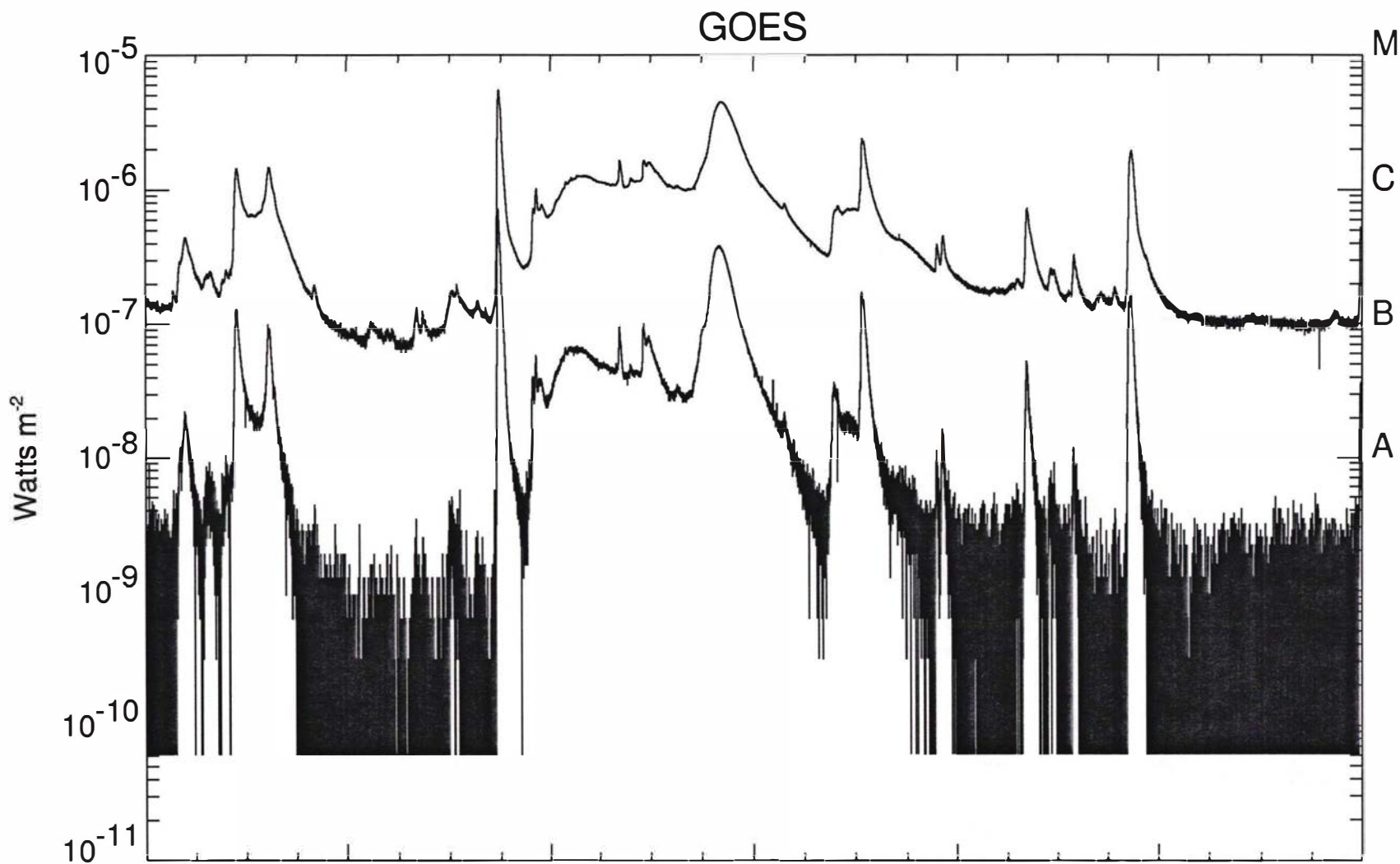
14/10/95

82088.625

25 - 100 keV

COUNTS/1.024 S





Data Start: 95/10/14, 0000:00

Plot created: 95/10/17, 1813

Channel

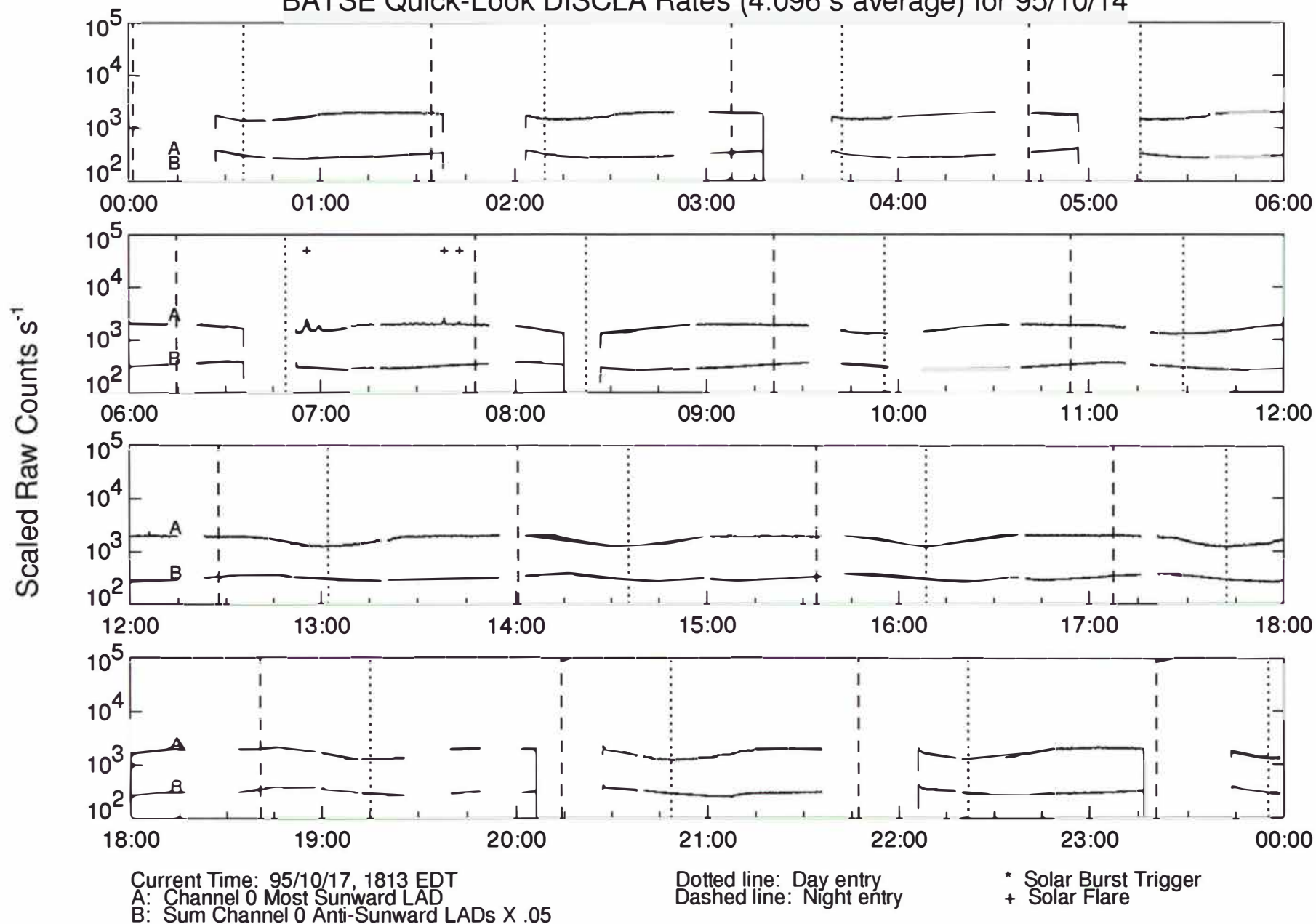
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

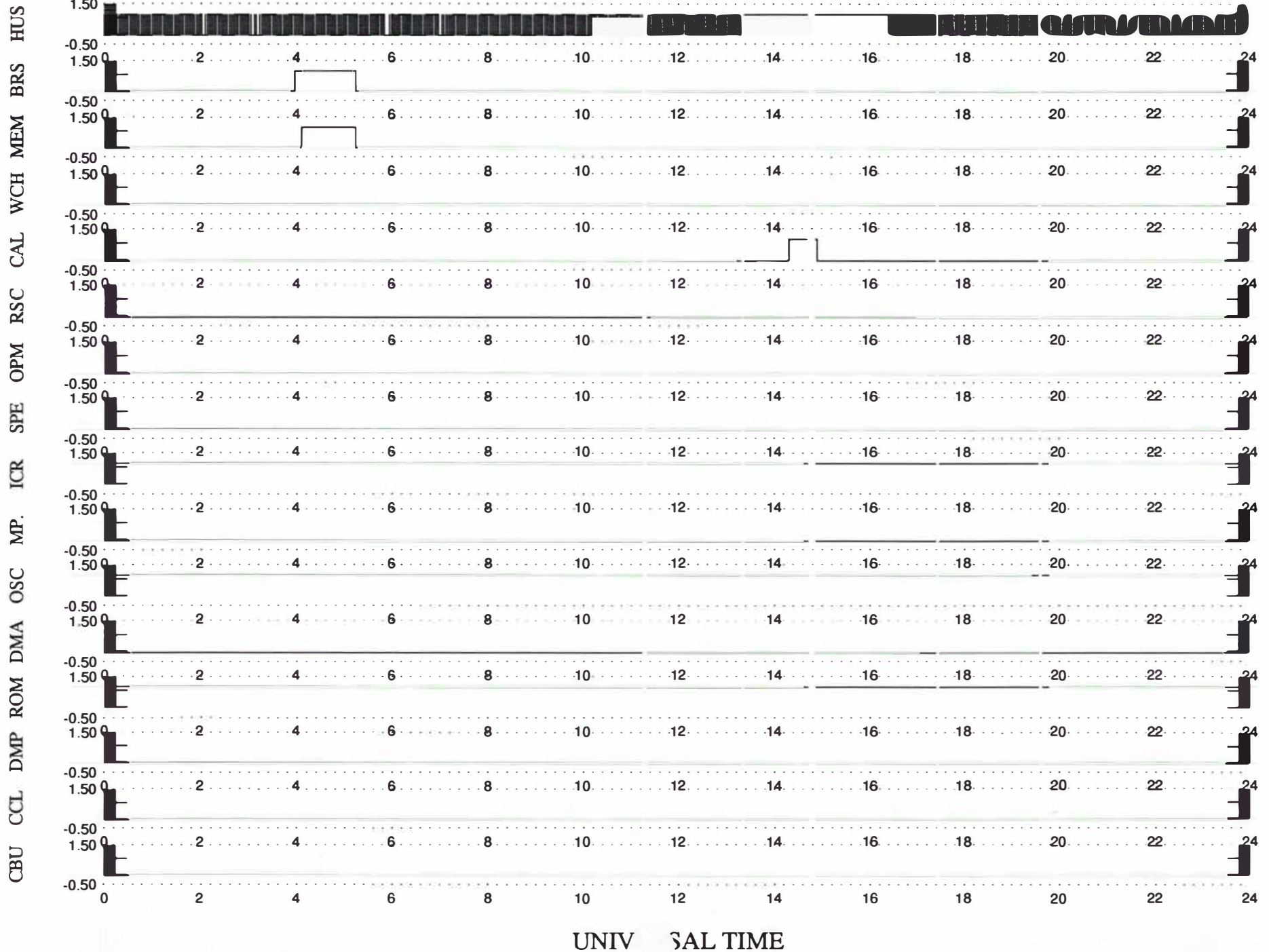
Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/14



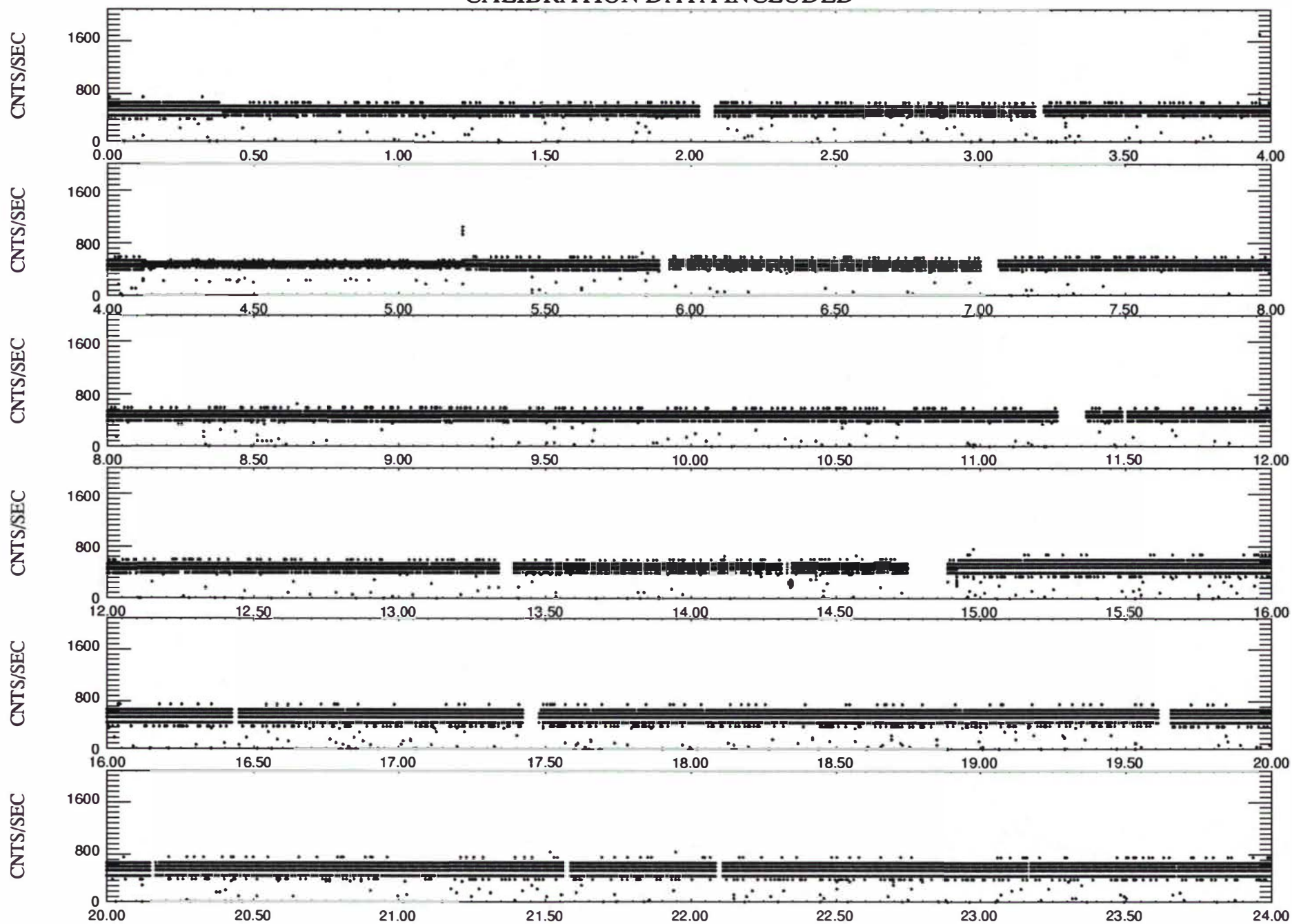
HUS MODES EDR day 287, year 1995 to day 287, year 1995
BURST NUMBER 2

1/26/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 287, year 1995 to day 287, year 1995
CALIBRATION DATA INCLUDED

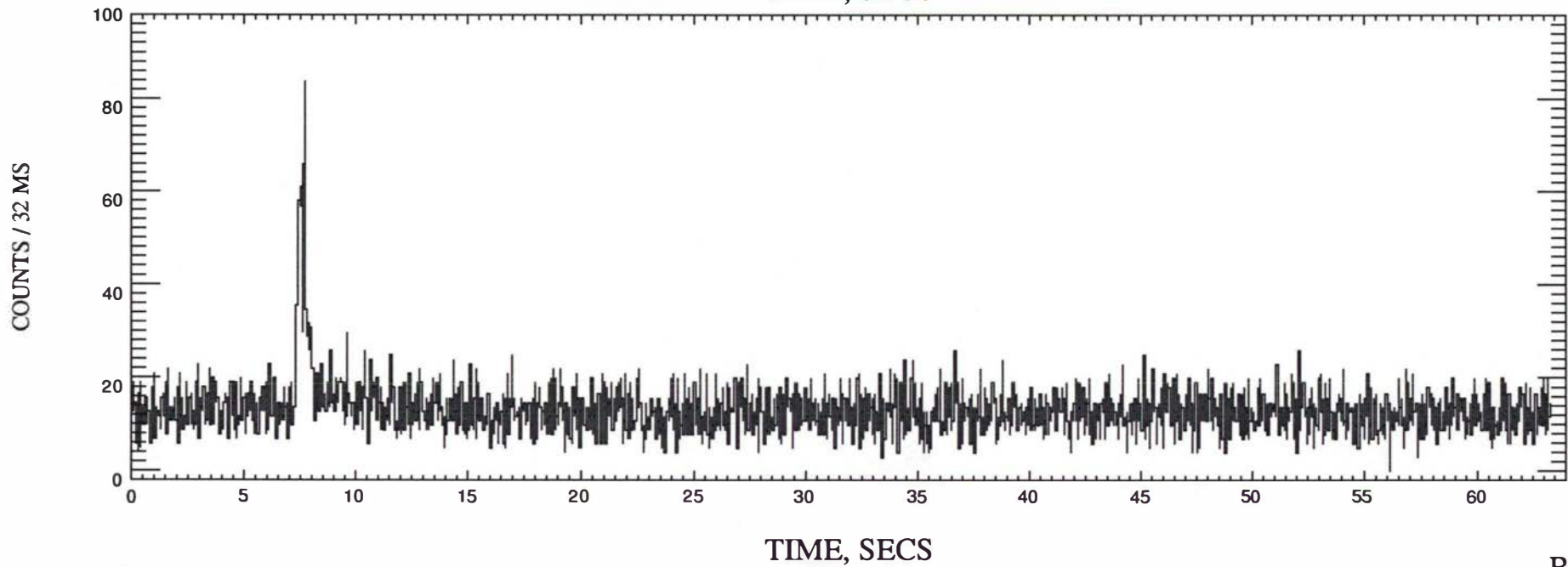
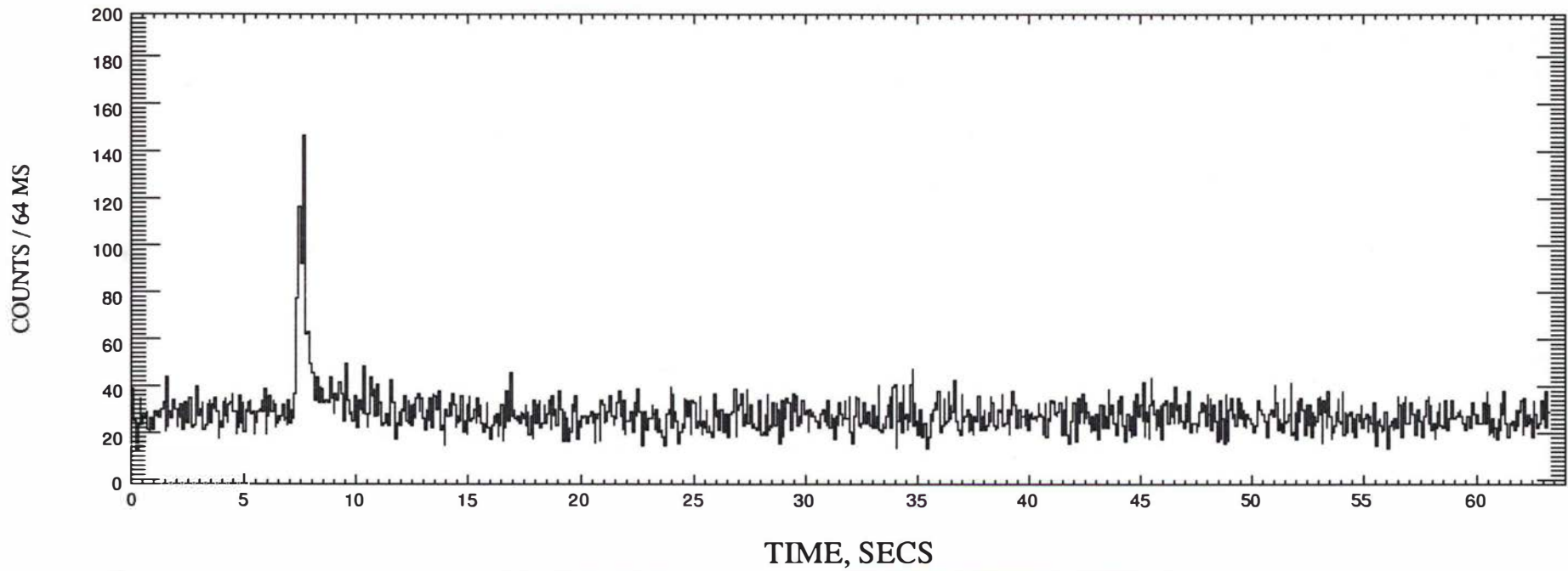
1/26/96

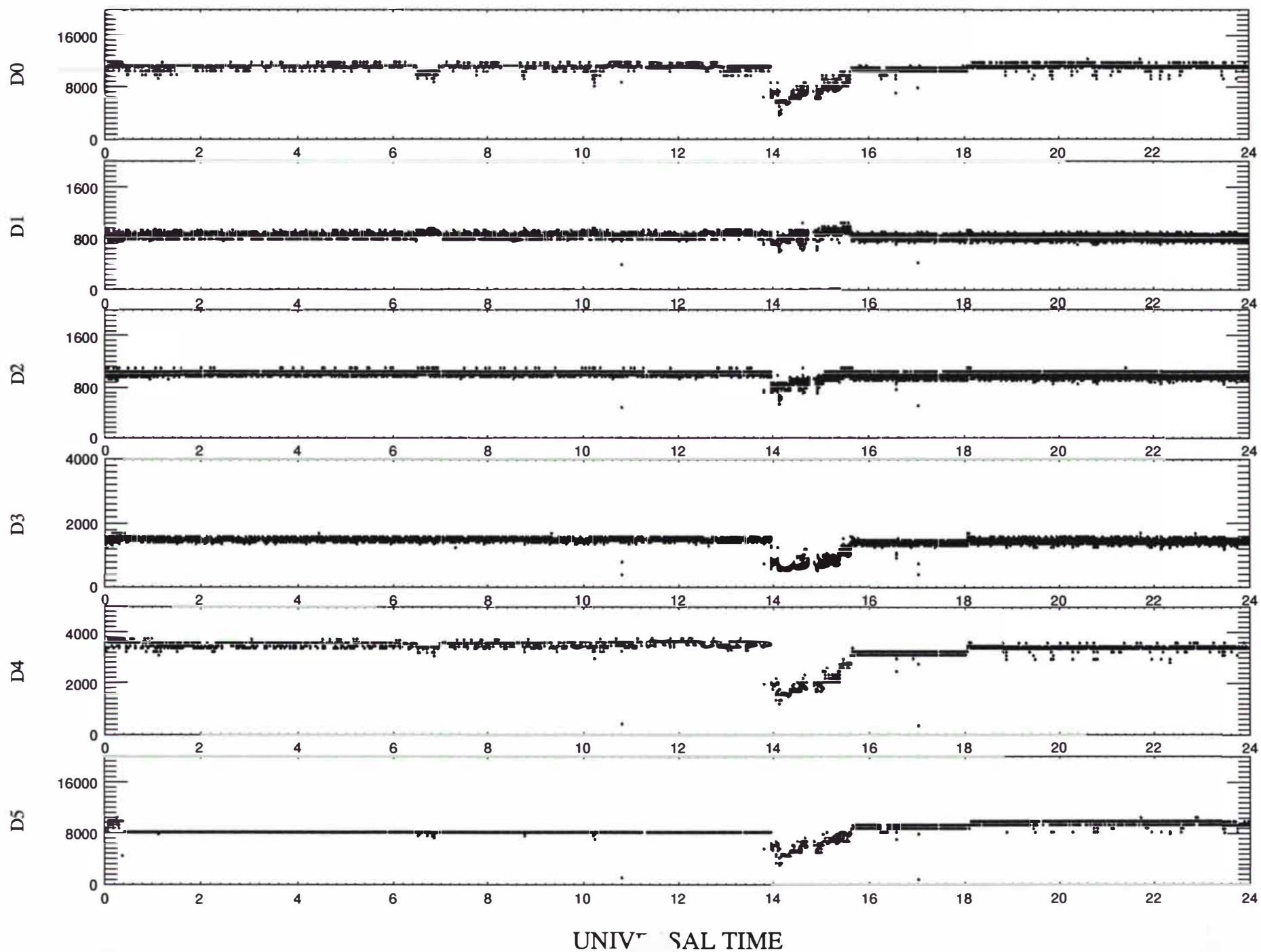


UNIV SAL TIME

HUS 2A TRIGGERED DATA EDR day 287, year 1995
Burst Counter 2 at UT= 3.956447147793 h=14243.210 s 03:57:23.210

1/26/96





From DEAL@ssl.msfc.nasa.gov Tue Oct 17 10:38 PDT 1995
Date: Tue, 17 Oct 1995 12:37:56 -0500 (CDT)
From: DEAL@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3868

BATSEARCH PROGRAM

BATSE BURST # 3868
EVENT OF 1995 OCT 15 DAY OF YEAR=288
EVENT CROSSING TIME AT BATSE : 46382. S. OR 12:53:02.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 155.000 10.000
BATSE PEAK COUNTING RATE: 6000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 15/10/ 95 IS:
RA= 207.197 DEC= 57.631 DIST= 2.784 AU
BATSE-ULYSSES DISTANCE = 416549983. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=118.02 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -652.81 SECS.
CROSSING TIME AT ULYSSES IS 45729. S. OR 12:42:09 +/- 253.04 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 15/10/ 95 IS:
RA= 233.341 DEC= -19.799 DIST= 2.188 AU
MARS-BATSE DISTANCE = 327334432. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 97.38 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -140.23 SECS.
CROSSING TIME AT MARS IS 46242. S. OR 12:50:41 +/- 185.87 SECONDS

BATSE BURST TRIGGER

NO.: 3868

TIME: TJD=1000 SECONDS=46382

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=122.0 AZIMUTH=344.3 ERROR=7.7 DEGREES

COMMENTS:

BURST LASTING ~ 0.2 S. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3868	951015	10005	46382	6000	155	+10	.2

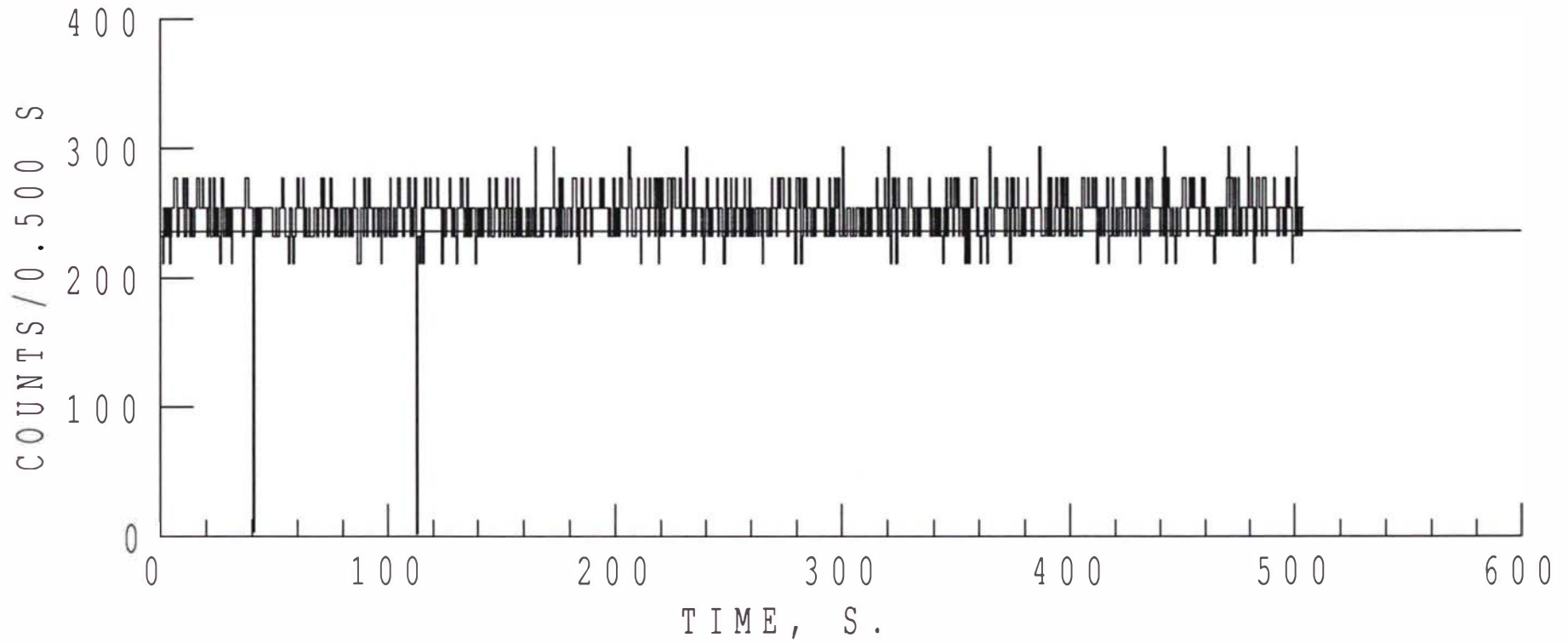
17/10/95

ULYSSES RT

15/10/95 45468.160 s

0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From DEAL@ssl.msfc.nasa.gov Tue Oct 17 10:36 PDT 1995
Date: Tue, 17 Oct 1995 12:36:23 -0500 (CDT)
From: DEAL@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3869

BATSEARCH PROGRAM

No

BATSE BURST # 3869
EVENT OF 1995 OCT 15 DAY OF YEAR=288
EVENT CROSSING TIME AT BATSE : 59258. S. OR 16:27:38.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 3.000 -12.000
BATSE PEAK COUNTING RATE: 4500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 15/10/ 95 IS:
RA= 207.247 DEC= 57.608 DIST= 2.785 AU
BATSE-ULYSSES DISTANCE = 416640971. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 49.21 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 907.99 SECS.
CROSSING TIME AT ULYSSES IS 60166. S. OR 16:42:45 +/- 246.46 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 15/10/ 95 IS:
RA= 233.341 DEC= -19.799 DIST= 2.188 AU
MARS-BATSE DISTANCE = 327334432. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 58.87 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 564.44 SECS.
CROSSING TIME AT MARS IS 59822. S. OR 16:37:02 +/- 170.84 SECONDS

BATSE BURST TRIGGER

NO.: 3869

TIME: TJD=1000 SECONDS=59258

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=85.2 AZIMUTH=162.5 ERROR=1.9 DEGREES

COMMENTS:

BURST LASTING ~ 11S. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3869	951015	10005	59258	4500	003	-12	11

ULYSSES RT

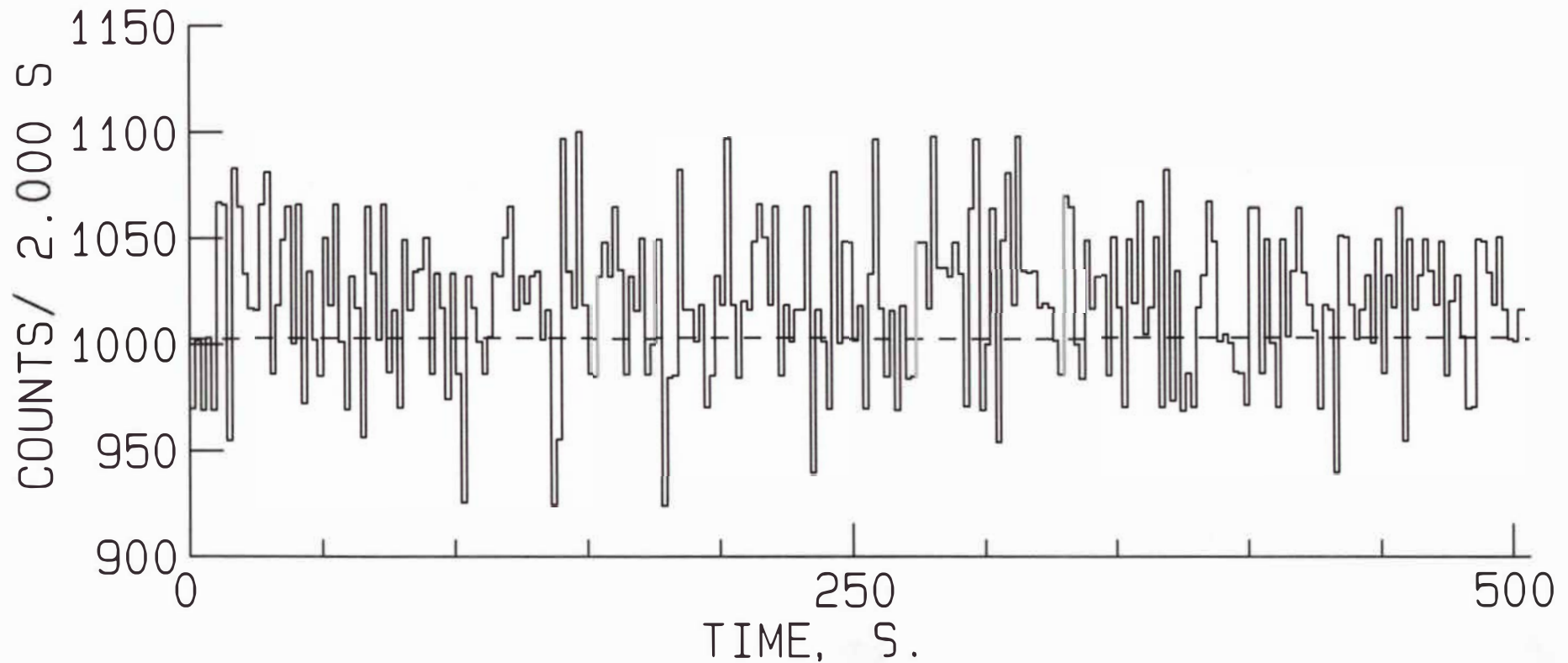
21 / 10 / 95

15/10/95 59904.153 s

0.250 S INTERVALS REGROUPED BY 8

21- 145 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



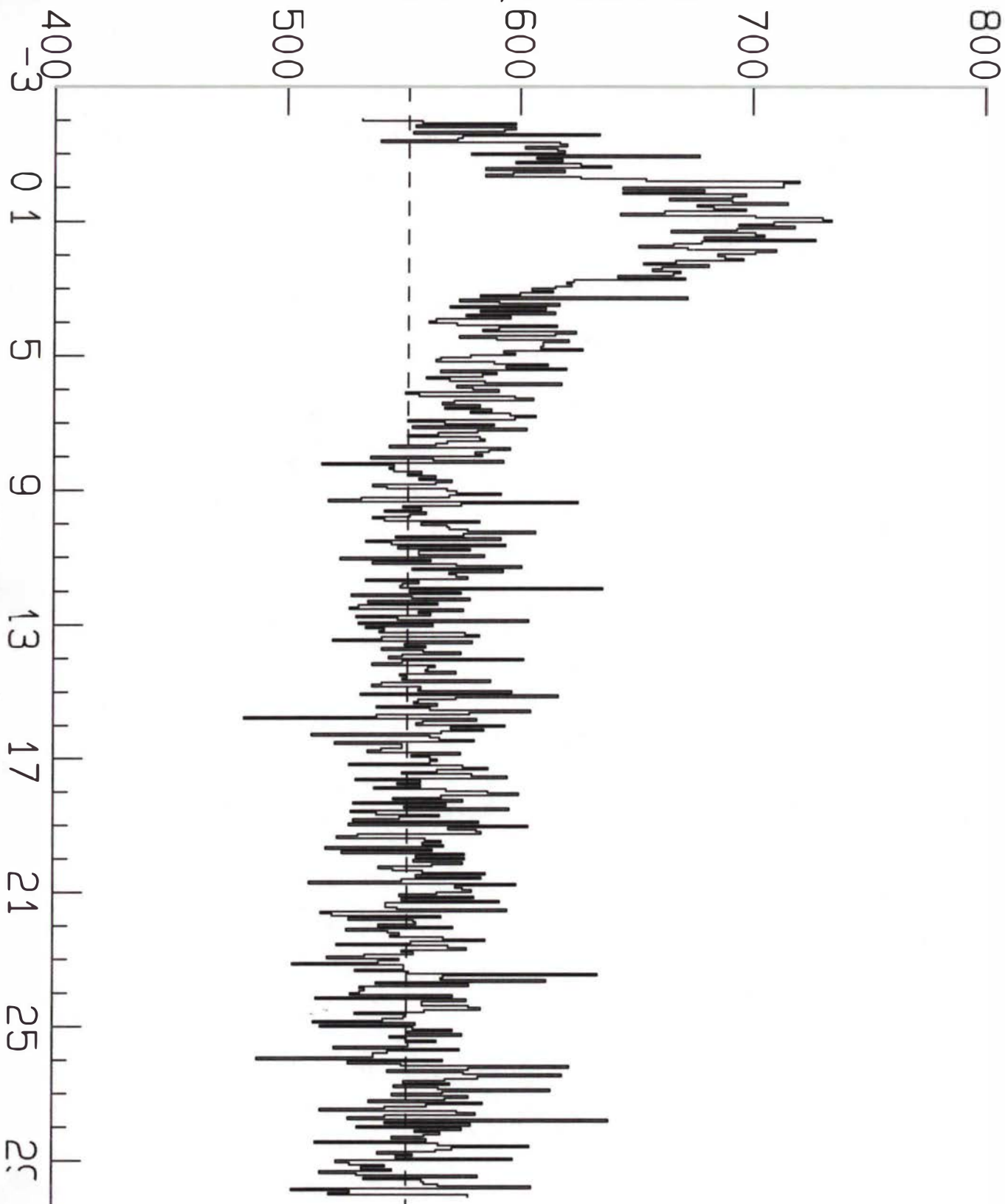
BATSE

15/10/95

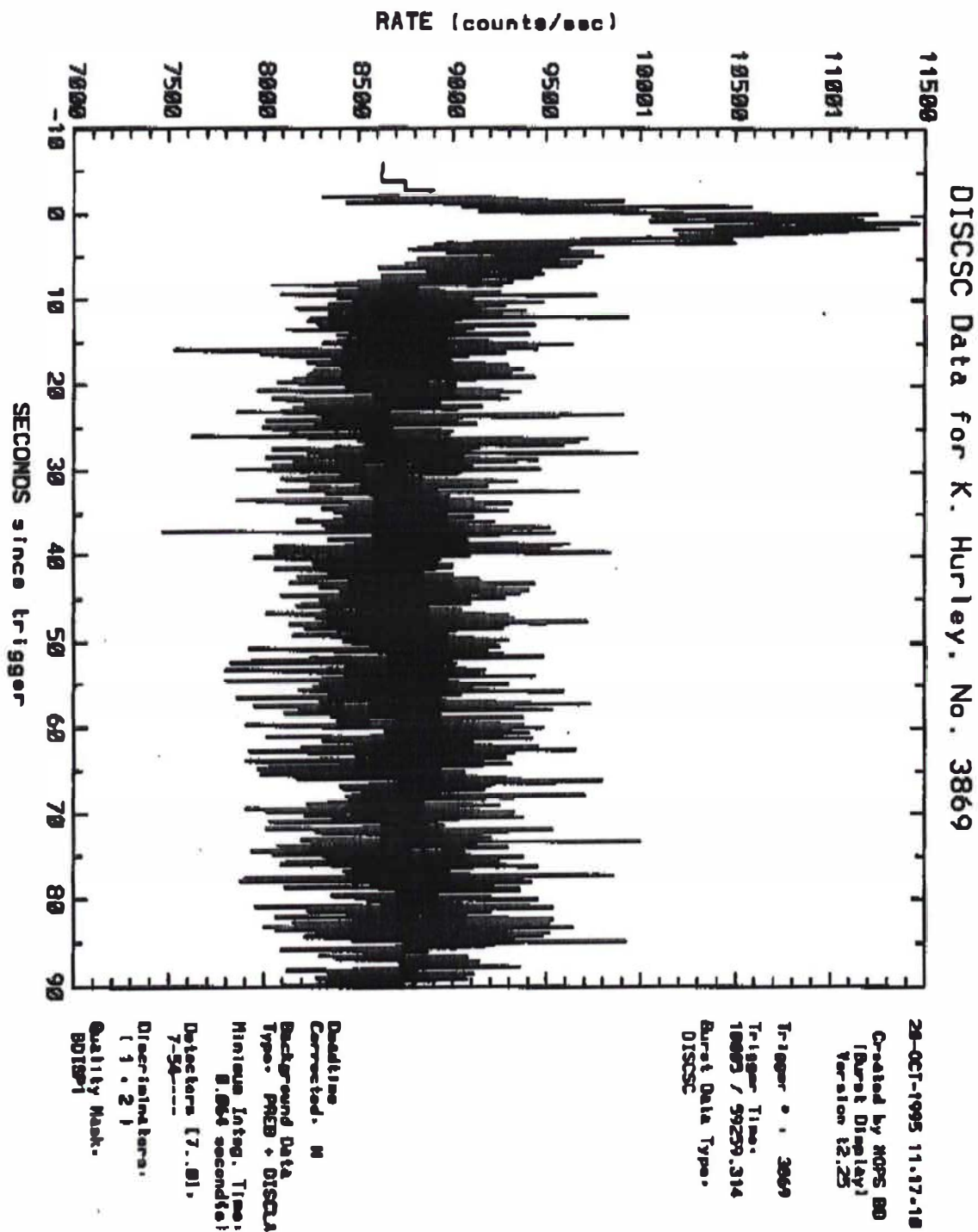
59259.314

25- 100 keV

COUNTS/0.064 S



21/10/95



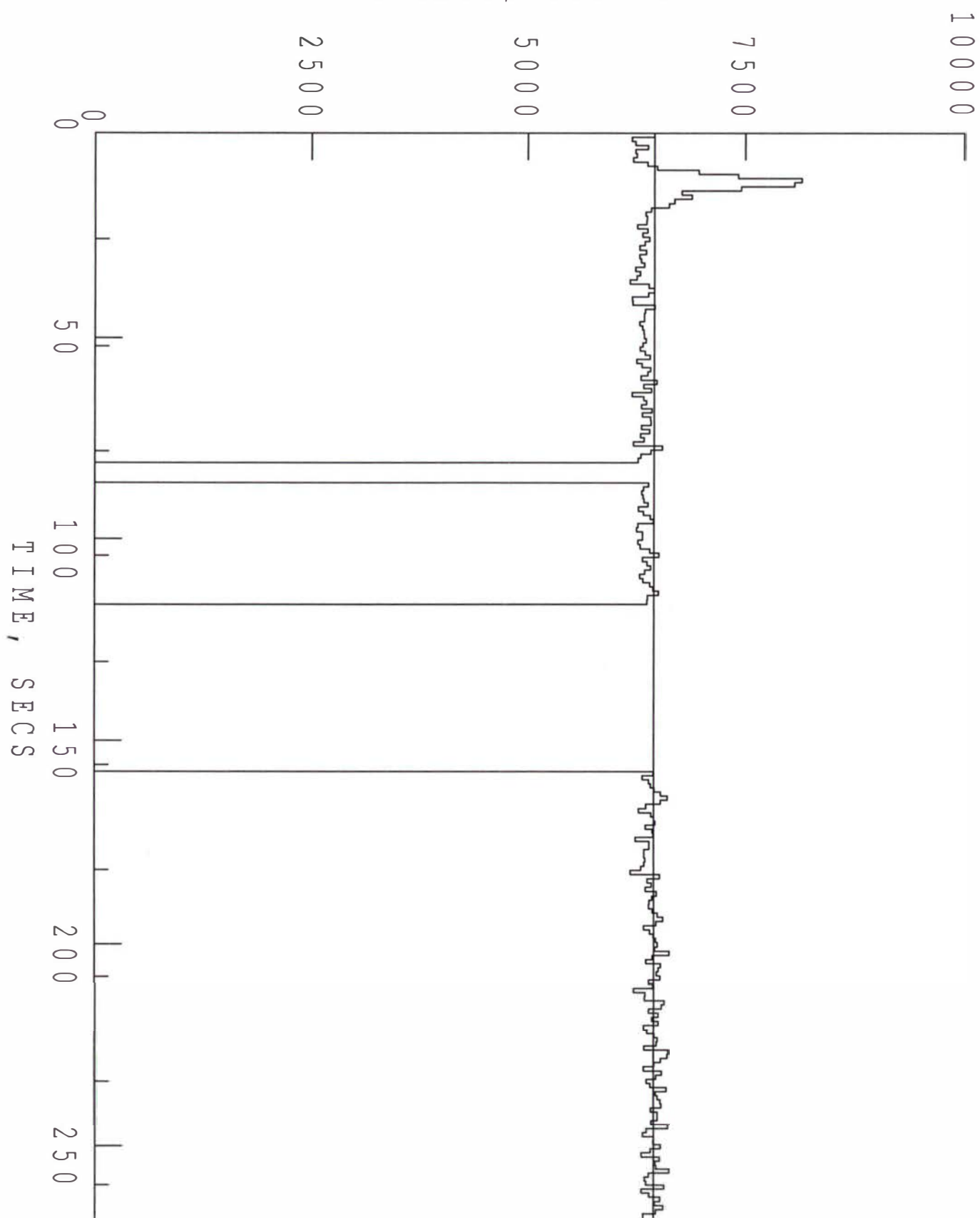
BACODINE

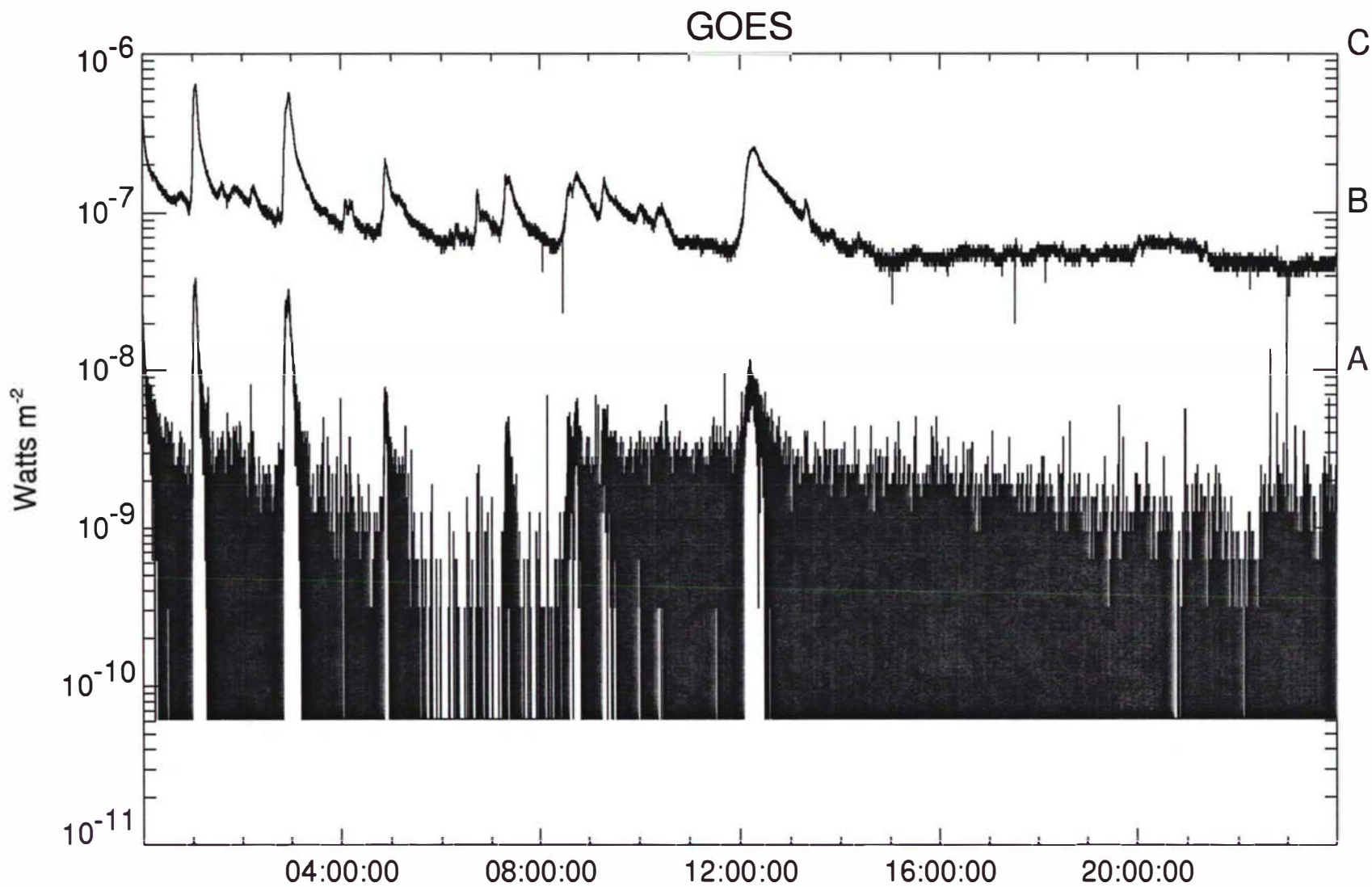
15/10/95

59248.305

25 - 100 keV

COUNTS/1.024 S





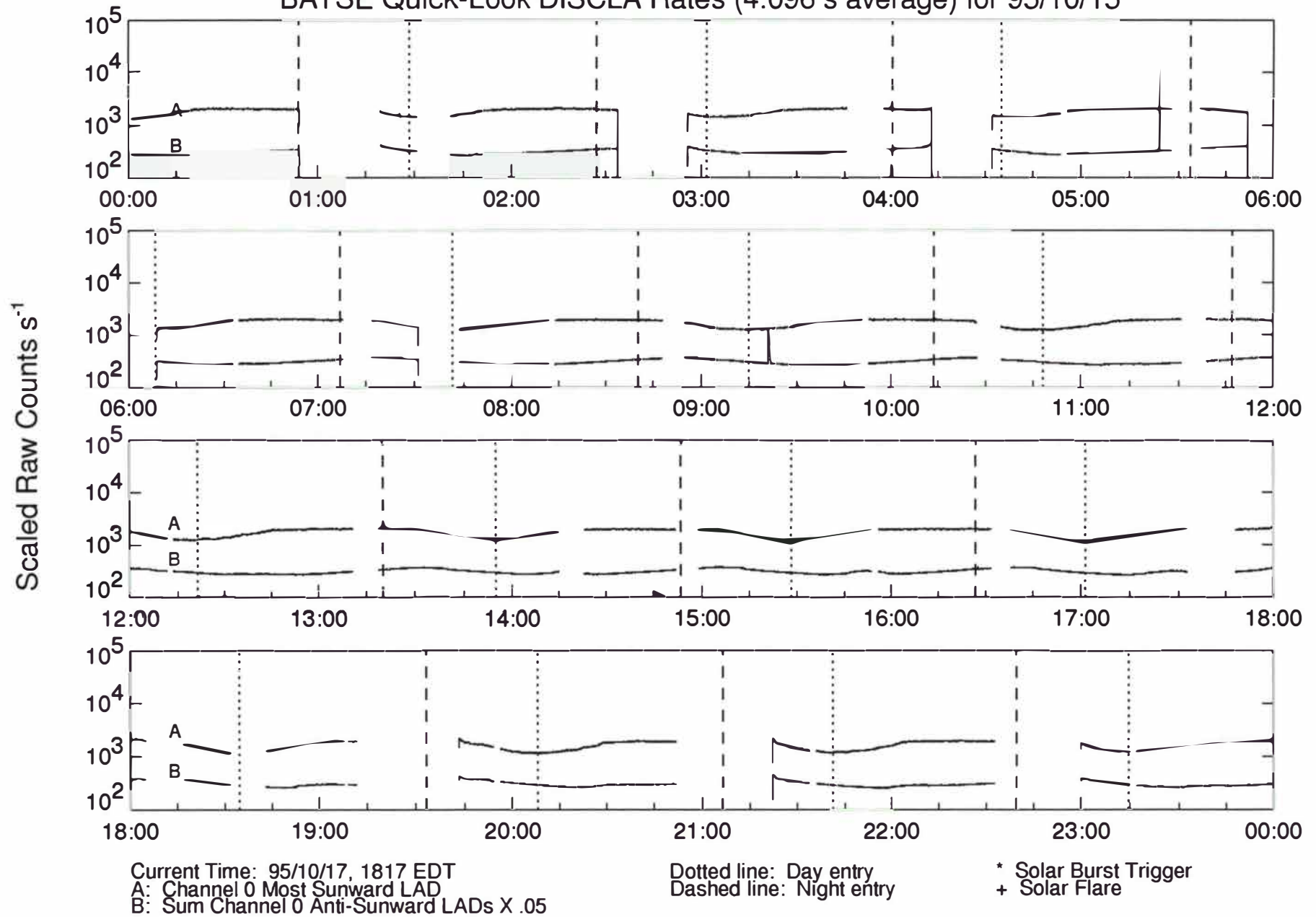
Data Start: 95/10/15, 0000:01

Plot created: 95/10/17, 1816

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

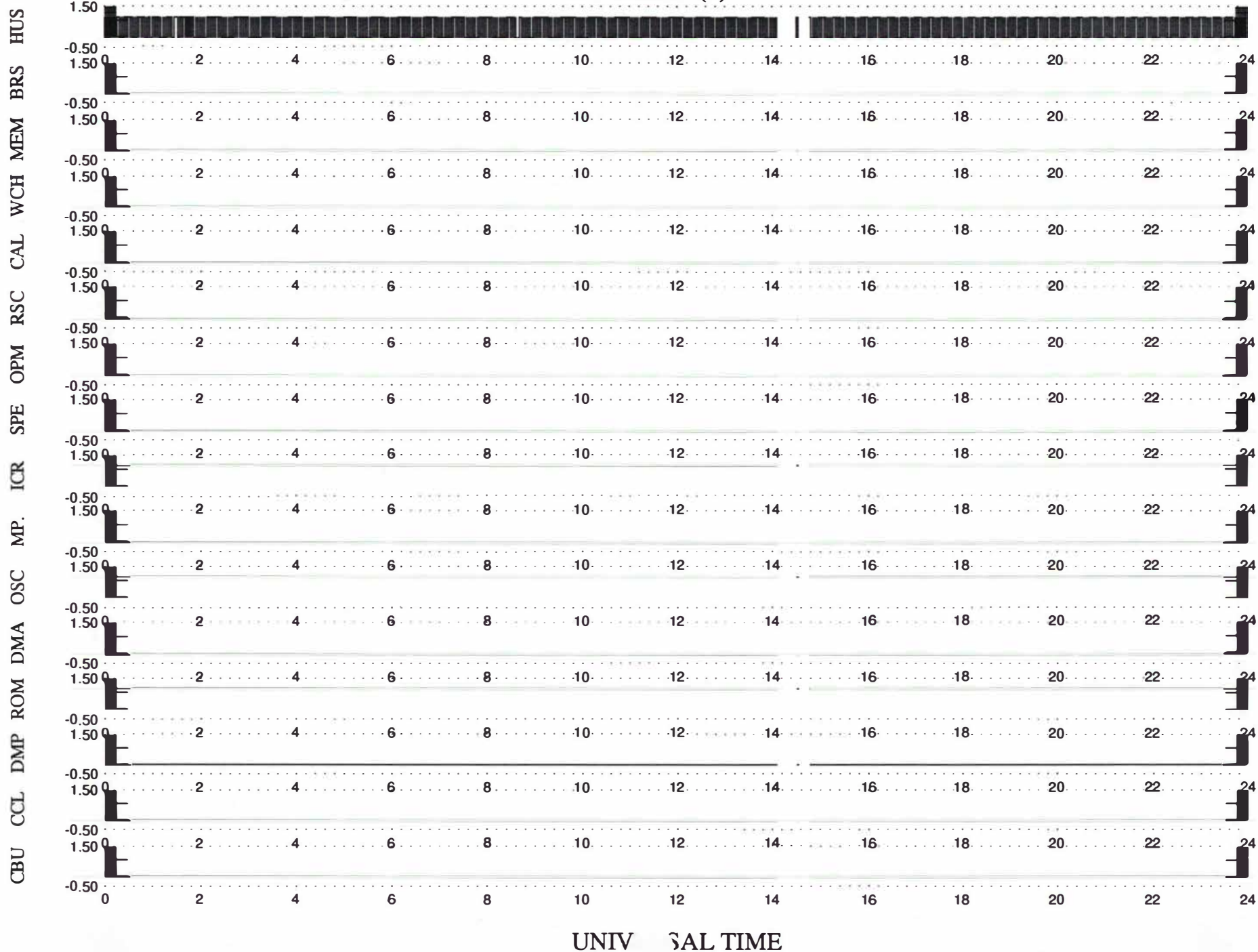
Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/15



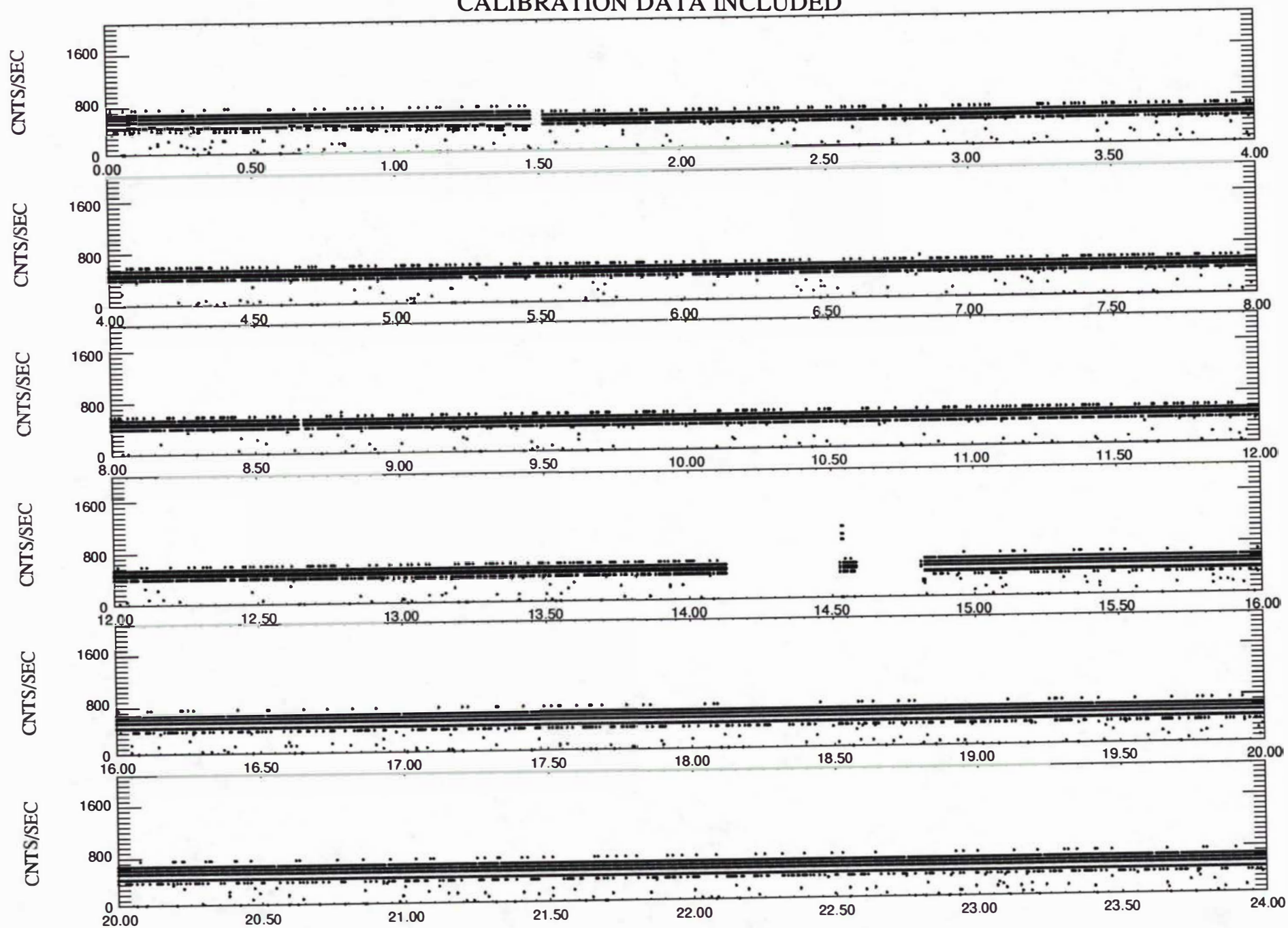
HUS MODES EDR day 288, year 1995 to day 288, year 1995
NO BURST (2)

1/26/96

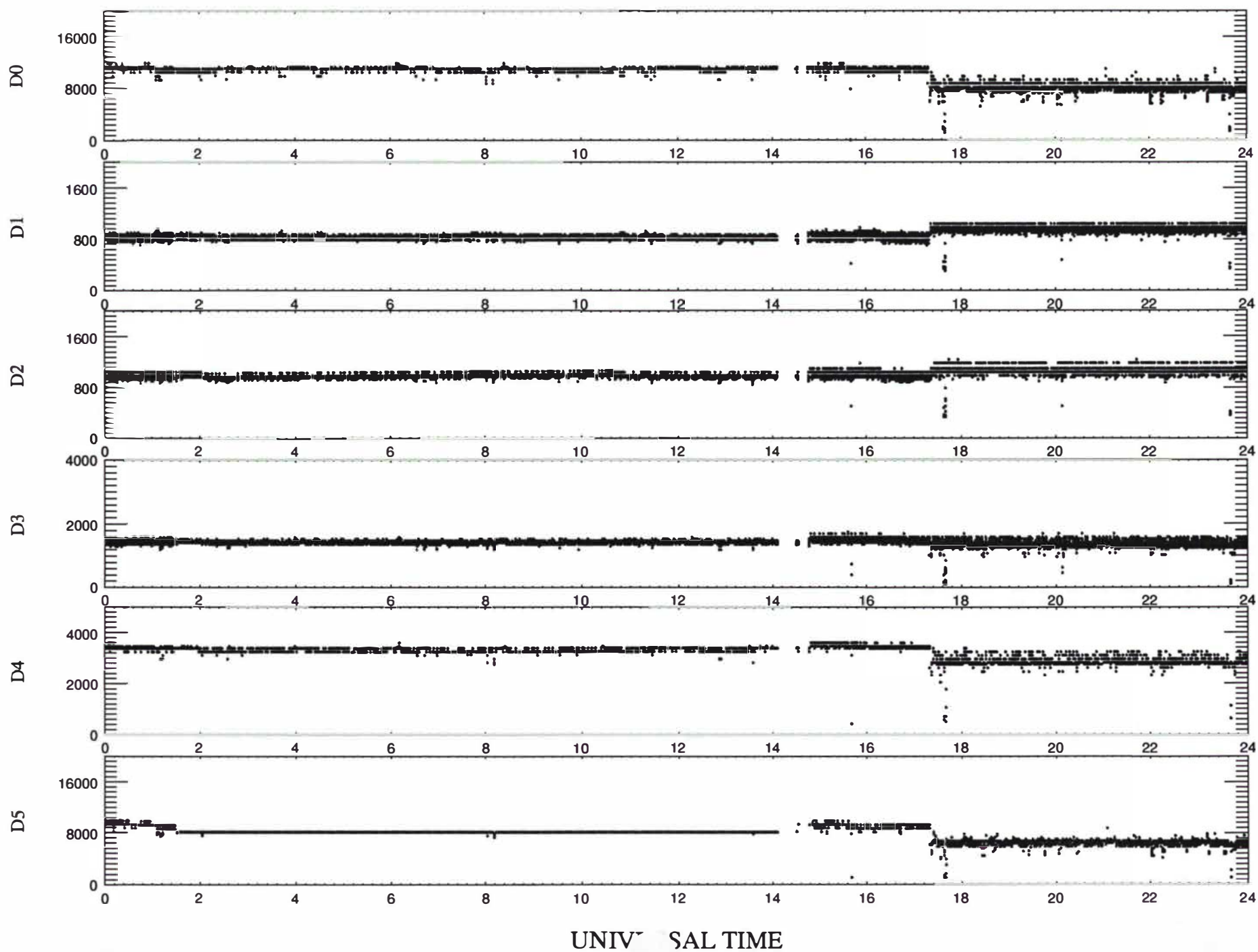


HUS 2A, MODE 1, NOT AVERAGED EDR day 288, year 1995 to day 288, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV SAL TIME



From WOODSP@ssl.msfc.nasa.gov Tue Oct 17 11:22 PDT 1995
Date: Tue, 17 Oct 1995 13:22:50 -0500 (CDT)
From: WOODSP@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3870

BATSEARCH PROGRAM

BATSE BURST # 3870
EVENT OF 1995 OCT 16 DAY OF YEAR=289
EVENT CROSSING TIME AT BATSE : 2481. S. OR 00:41:21.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 36.000 -25.000
BATSE PEAK COUNTING RATE: 47000 C/S

Trigger

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 16/10/ 95 IS:
RA= 207.363 DEC= 57.554 DIST= 2.786 AU
BATSE-ULYSSES DISTANCE = 416853334. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 33.14 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1164.34 SECS.
CROSSING TIME AT ULYSSES IS 3645. S. OR 01:00:45 +/- 199.65 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 16/10/ 95 IS:
RA= 234.071 DEC= -19.975 DIST= 2.191 AU
MARS-BATSE DISTANCE = 327770048. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 48.29 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 727.50 SECS.
CROSSING TIME AT MARS IS 3209. S. OR 00:53:28 +/- 152.74 SECONDS

BATSE BURST TRIGGER

NO.: 3870

TIME: TJD=1000 SECONDS=2481

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=114.5 AZIMUTH=145.7 ERROR=0.6 DEGREES

COMMENTS:

FRED with 12 sec duration. Visible above 300keV.
Bright burst (47000 counts/sec above background).

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3870	951016	10006	02481	47000	036	-25	12

95	7	1	117	23737	23737	3658
95	7	6	121	42735	42735	3662
95	7	11	123	13789	13789	3663
95	7	13	BGR	32133	32176	3664
95	7	30	128	76149	76124	3720
95	8	4	131	7135	07134	3734
95	8	4	133	45377	45376	3735
95	8	8	BGR	13023	12974	3745
95	8	9	136	85945	85945	3750
95	8	18	137	5065	05002	3765
95	8	22	140	13751	13749	3767
95	9	4	142	52692	52688	3776
95	9	9	145	85473	85452	3788
95	9	19	151	51465	51447	3806
95	9	21	152	20947	20947	3811
95	9	22	BGR	15495		
95	9	22	BGR	25929		
95	9	26	BGR	63919		
95	10	1	153	41907		
95	10	2	BGR	77583		3843
95	10	4	BGR	83974		
95	10	5	154	14842.112		
95	10	8	156	46287.863		
95	10	10	BGR	11774		
95	10	11	157	77693.094		3860
95	10	13	159	57097.299		
95	10	14	160	13108.167		
95	10	14	161	43561.3		
95	10	16	162	02484.285		3870
95	10	16	BGR	71607		3871
95	10	18	163	19832.069		
95	10	19	64	11712.625		
95	10	19	165	48244.594		3875
95	10	25	167	85239.738		
95	11	2	168	07085.879		
95	11	2	69	21209.015		3891
95	11	2	BGR	28693		
95	11	5	BGR	01745		
95	11	5	170	05868.077		3893
95	11	5	171	46827.808		
95	11	7	BGR	27298		
95	11	11	BGR	34960		
95	11	12	172	66495.244		
95	11	13	173	84358.872		3906
95	11	15	BGR	38929		
95	11	17	175	10123.762		
95	11	18	BGR	82560		
95	11	19	176	29831.402		3912
95	11	19	177	46457.519		
95	11	19		59448		
95	11	21		22280		
95	11	22	179	09841.38		
95	11	22	180	17107.738		
95	11	23	BGR	65408		
95	11	24	BGR	21266		3918
95	11	24	BGR	25132		

-- T. L. Cline ----- LHEAVX::CLINE

From cline@lheavx.gsfc.nasa.gov Fri Jan 26 13:00 PST 1996
 Date: Fri, 26 Jan 1996 13:00:45 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: Improved list; same question.

Dear Kevin,

I'm making a little progress here, tracking down these events. This is a slightly improved list, with a few more BATSE triggers identified. - TLC

Yr	Mn	Dy	Konus#	Konus Tzero	BATSE Tz, #	Ulysses
94	11	14	BGR	07360	07358 3283	- NO
94	11	19	4	70269.175	70250 3287	R I
94	11	21	6	62700.945	62697 3290	trig.
94	11	25	7	79470.156	79470 3295	R I
94	11	26	BGR	01246	01245 3296	
94	11	26	8	44557.952	44521 3298	trig.
94	11	26	BGR	60860	60861 3299	
94	11	26	9	71809.732	71798 3301	R I
94	11	27	10	52225.68	52217 3303	R I
94	11	28	BGR	56220	56217 3305	
94	12	28	28	27585.915	27581 3330	R I
94	12	29	29	82268.781	82258 3334	R I
95	1	4	31	26319.613	26319 3345	R I
95	1	11	33	17352.241	17263 3351	R I
95	1	11	34	44329	44310 3352	
95	1	17	BGR	05760	05761 3360	
95	1	18	BGR	44574	44589 3364	
95	2	7	BGR	02774	02781 3406	
95	2	8	45	07824	07824 3408	
95	2	10	47	08424	08421 3410	
95	2	11	48	08697	08697 3412	trig.
95	2	11	50	72469	72468 3415	
95	2	21	BGR	74701	74705 3436	
95	2	26	54	53351	53336 3442	
95	3	1	BGR	75731	75761 3448	
95	3	4	56	37661	37657 3453	
95	3	5	58	54309	54304 3458	
95	3	10	BGR	78388	78395 3464	
95	3	25	63	25841	25844 3480	
95	3	25	64	63392	63391 3481	
95	3	27	BGR	26323	26347 3485	
95	3	27	BGR	85672	85671 3486	
95	4	1	69	42647	42642 3488	
95	4	1	70	74635	74634 3489	
95	4	3	71	47985	47987 3491	
95	4	3	72	84828	84826 3492	
95	4	16	BGR	48420	48419 3509	
95	4	18	81	83793	83795 3512	
95	4	25	86	00923	00919 3523	
95	4	30	BGR	54224	54229 3527	
95	5	3	88	66971	66970 3537	
95	5	10	90	28083	28079 3569	
95	5	13	93	81706	81703 3571	
95	5	21	97	25161	25157 3588	
95	5	22	98	23898	23896 3590	
95	5	22	100	85280	85283 3593	
95	5	24	102	14902	14899 3598	
95	6	2	104	25592	25592 3618	
95	6	10	107	6849	06849 3637	
95	6	24	111	84124	84084 3648	
95	6	25	113	14626	14601 3649	
95	6	29	115	37033	37036 3654	
95	7	1	116	12762	12758 3657	

Date:

Feb 20 '98

Helio corr removed

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

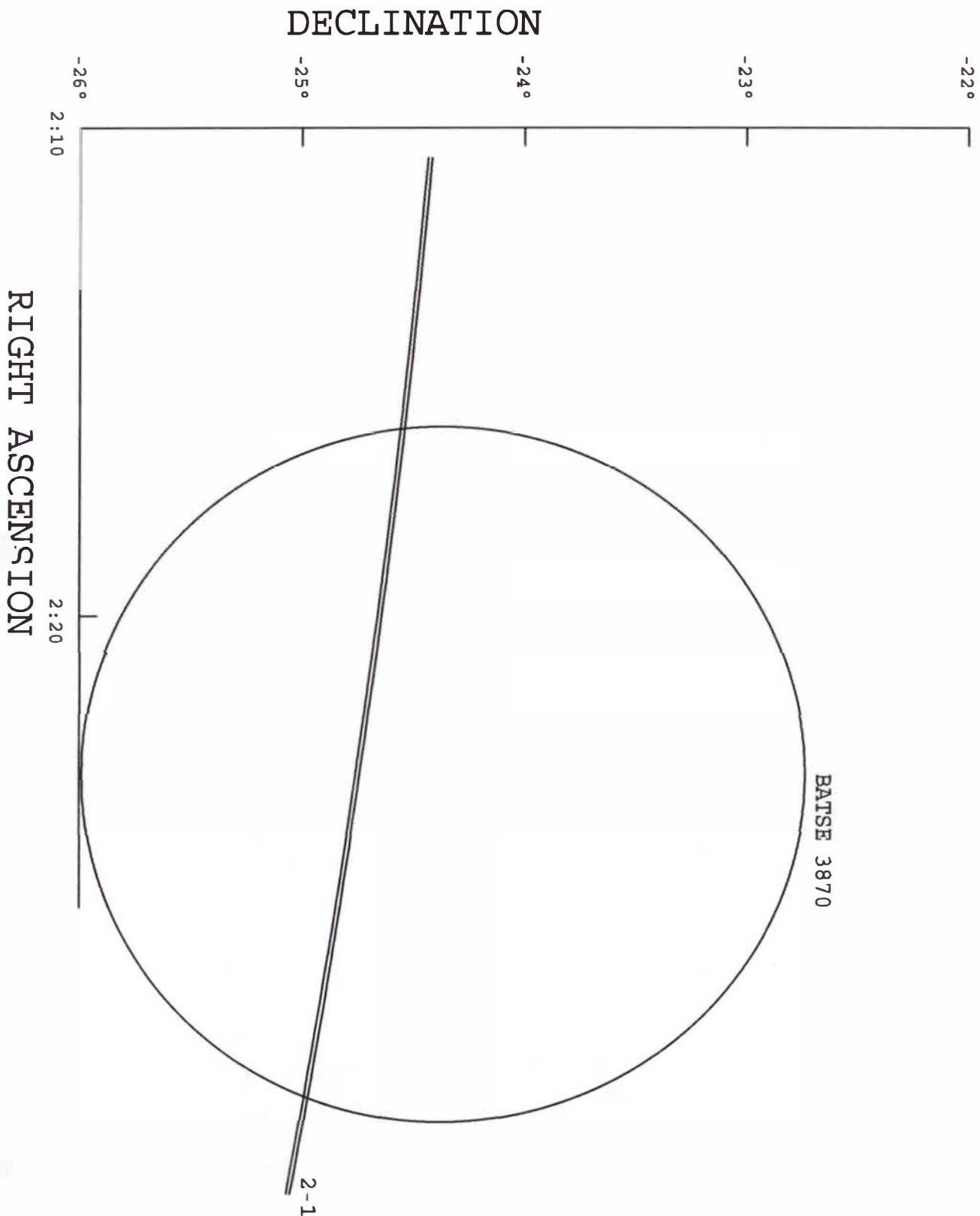
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF OCT 16, 1995 1:00

20 / 2/98



BATSE

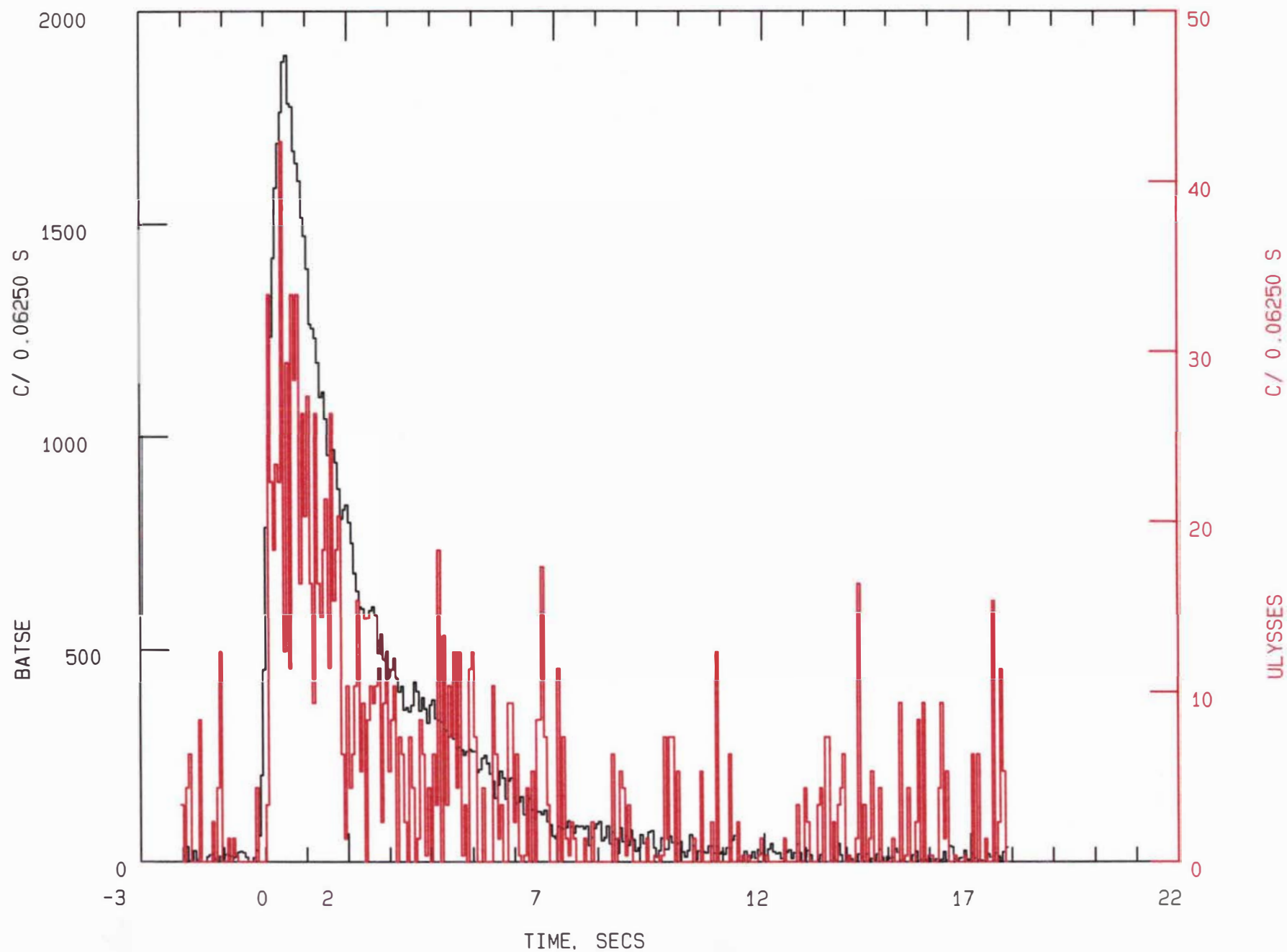
-ULYSSES

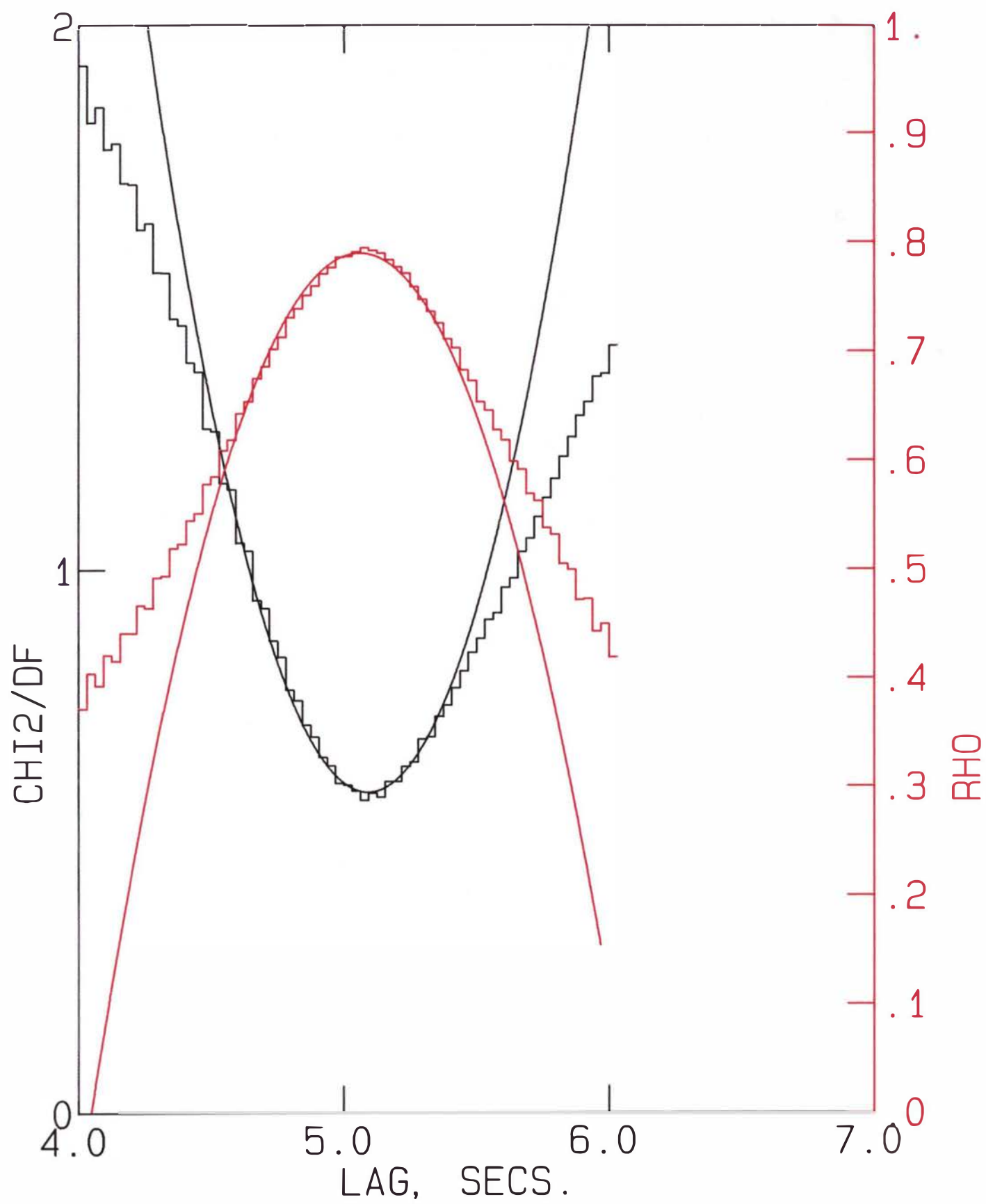
CORRELATION

16/10/95

2481.394

20/ 2/98





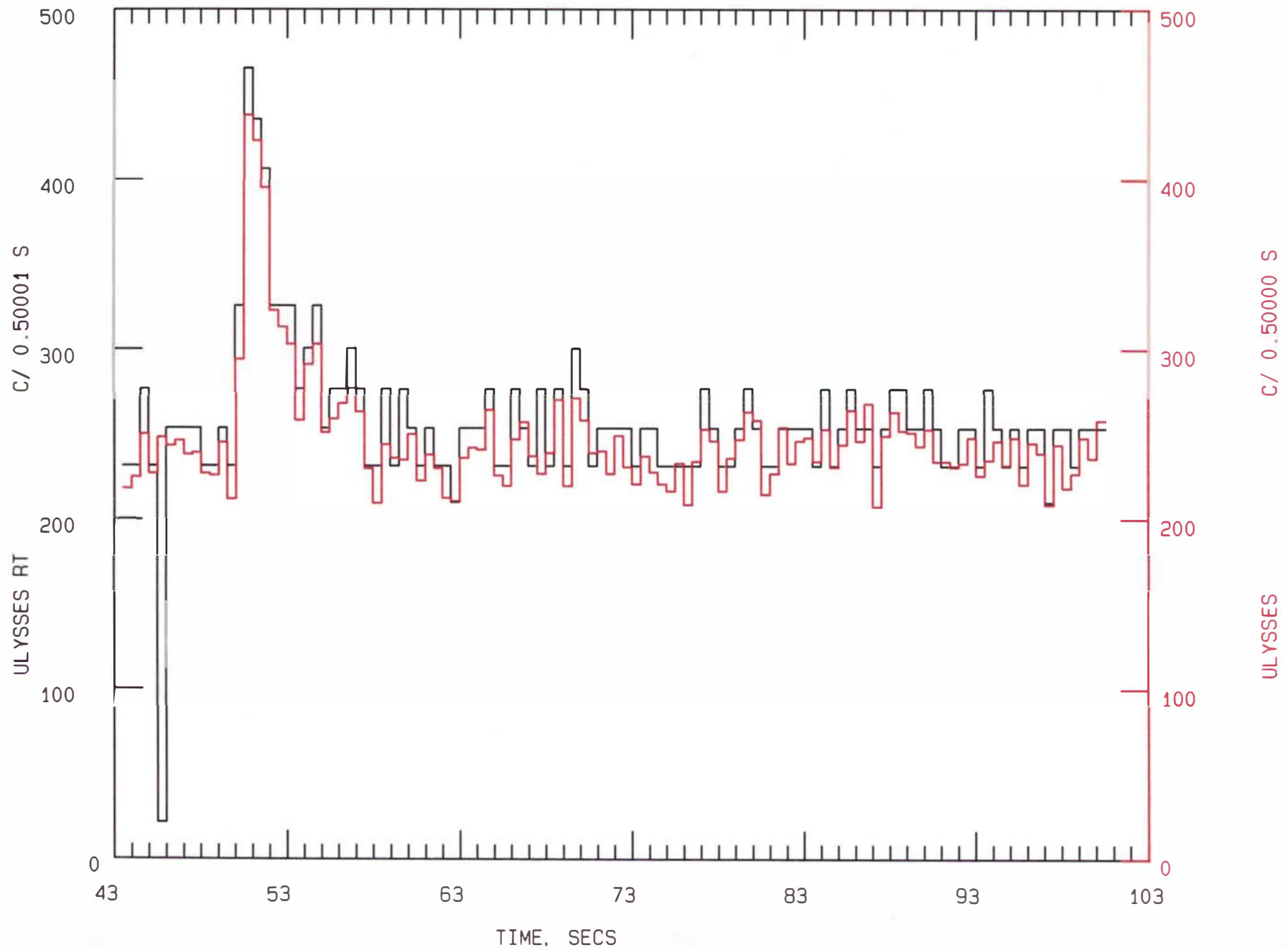
ULYSSES RT-ULYSSES

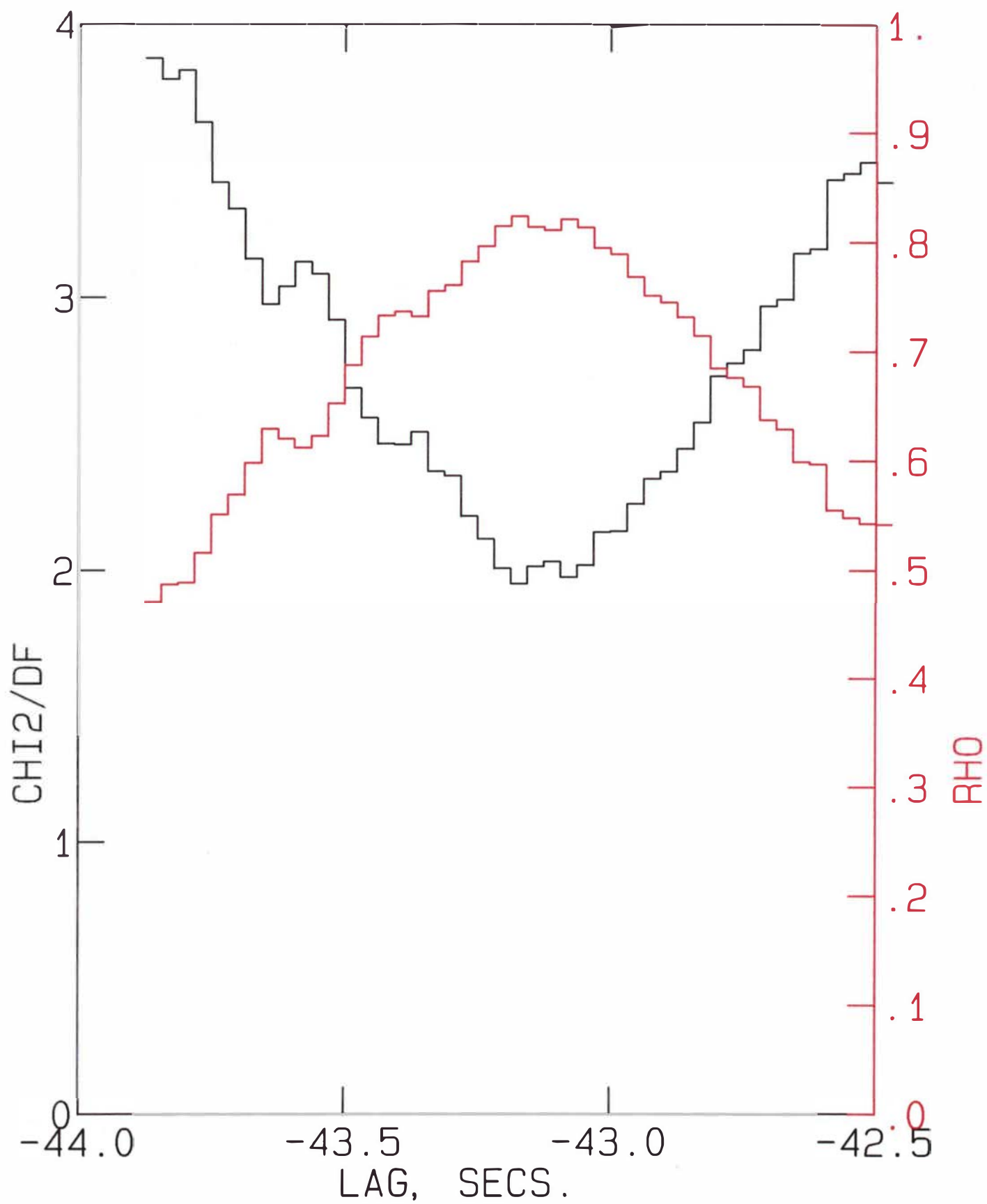
CORRELATION

16/10/95

3596.431

20/ 2/98

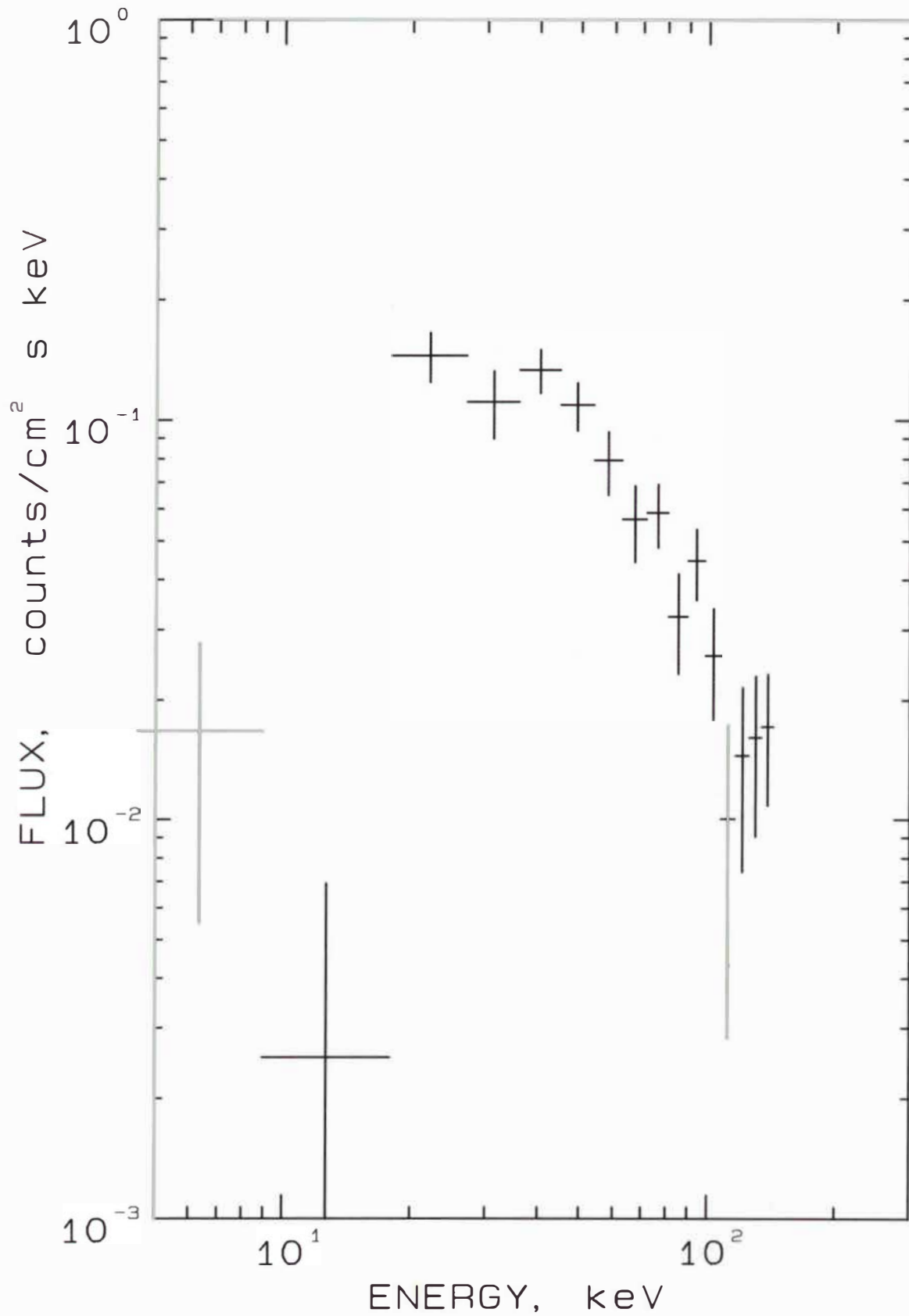




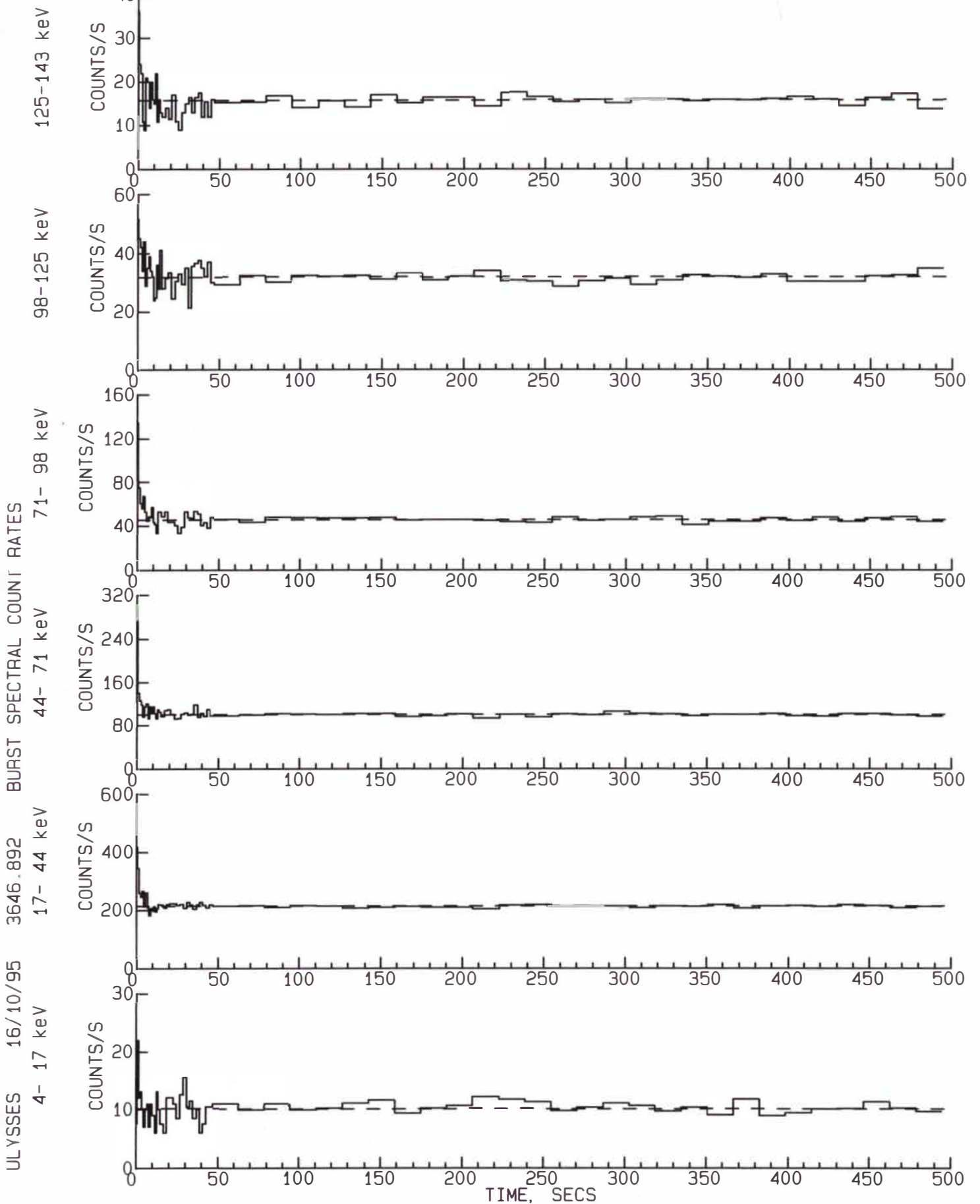
ULYSSES 16/10/95 3646.892

20/ 2/98

SPECTRUM INTEGRATED OVER 10.6 SECONDS, INTERVALS 2 TO 13



20 / 2 / 98



ULYSSES

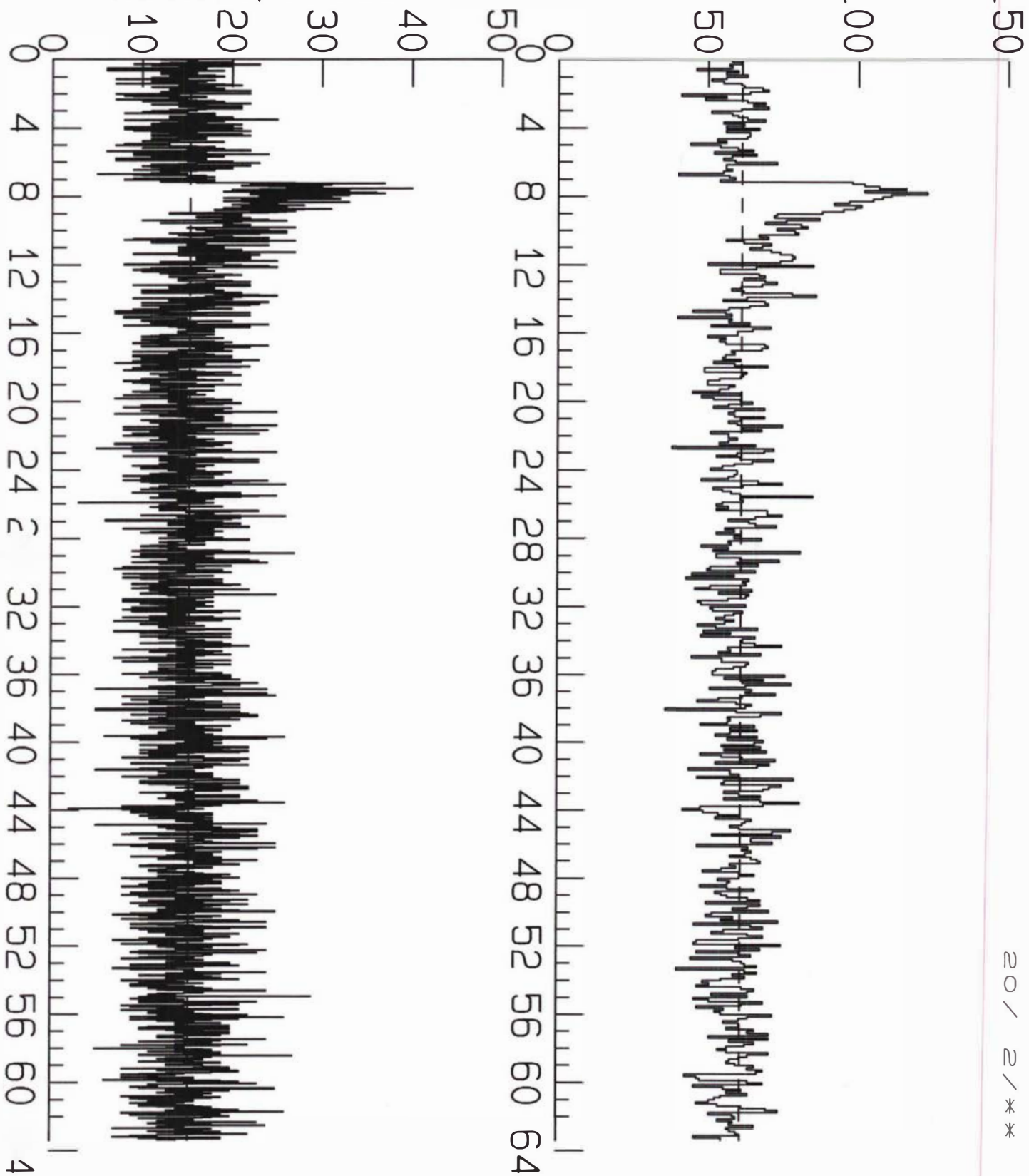
16/10/95

Ttrig= 3646.934

21- 143 keV

COUNTS/0.031 S

COUNTS/0.125 S



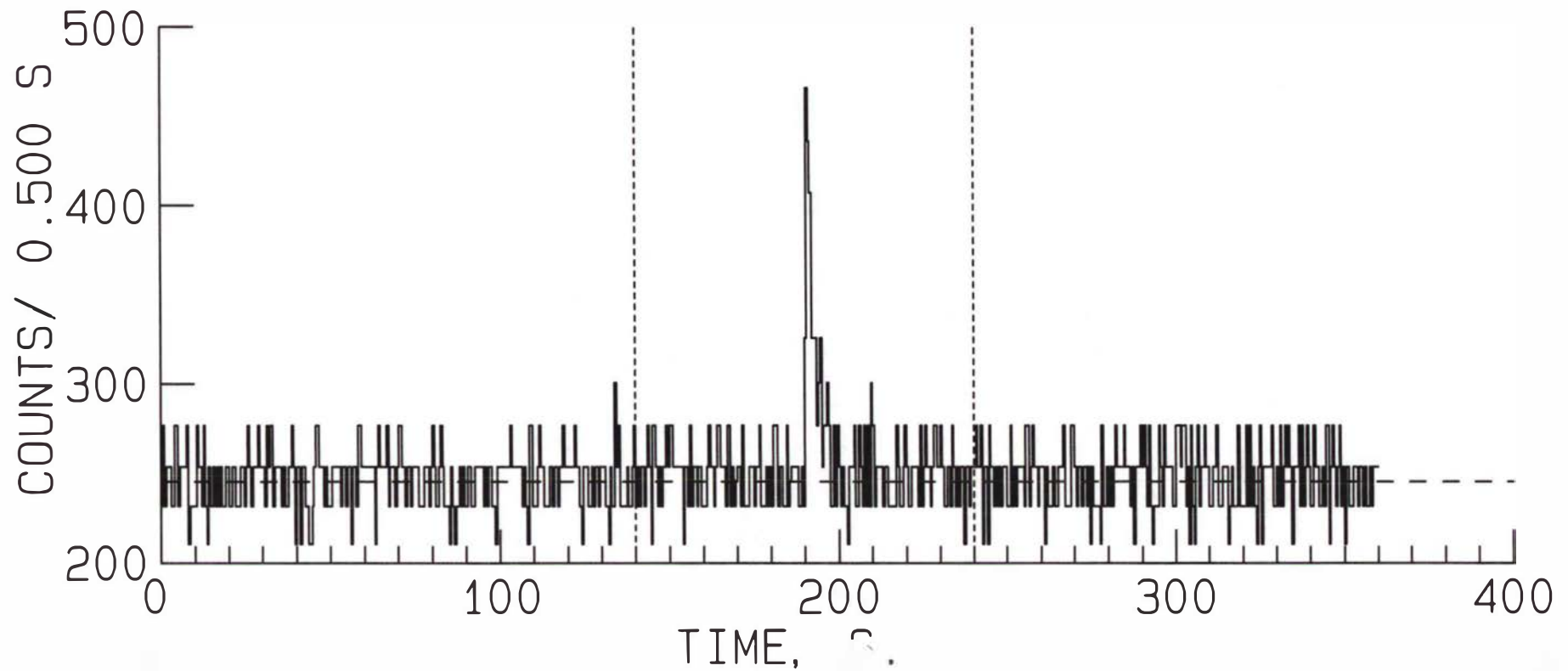
ULYSSES RT

20 / 2 / 98

16/10/95 3456.399 s

21- 143 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



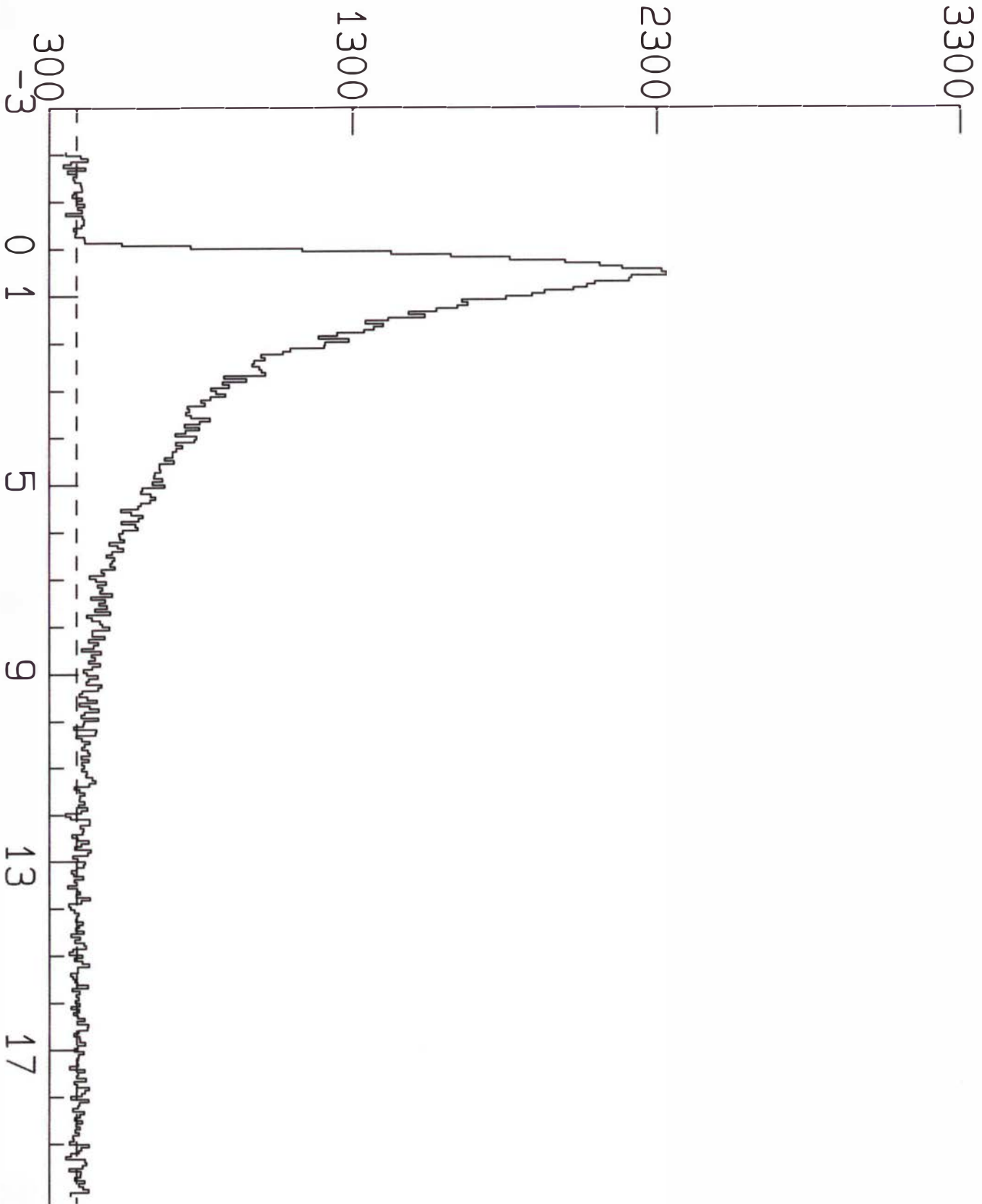
BATSE

16/10/95

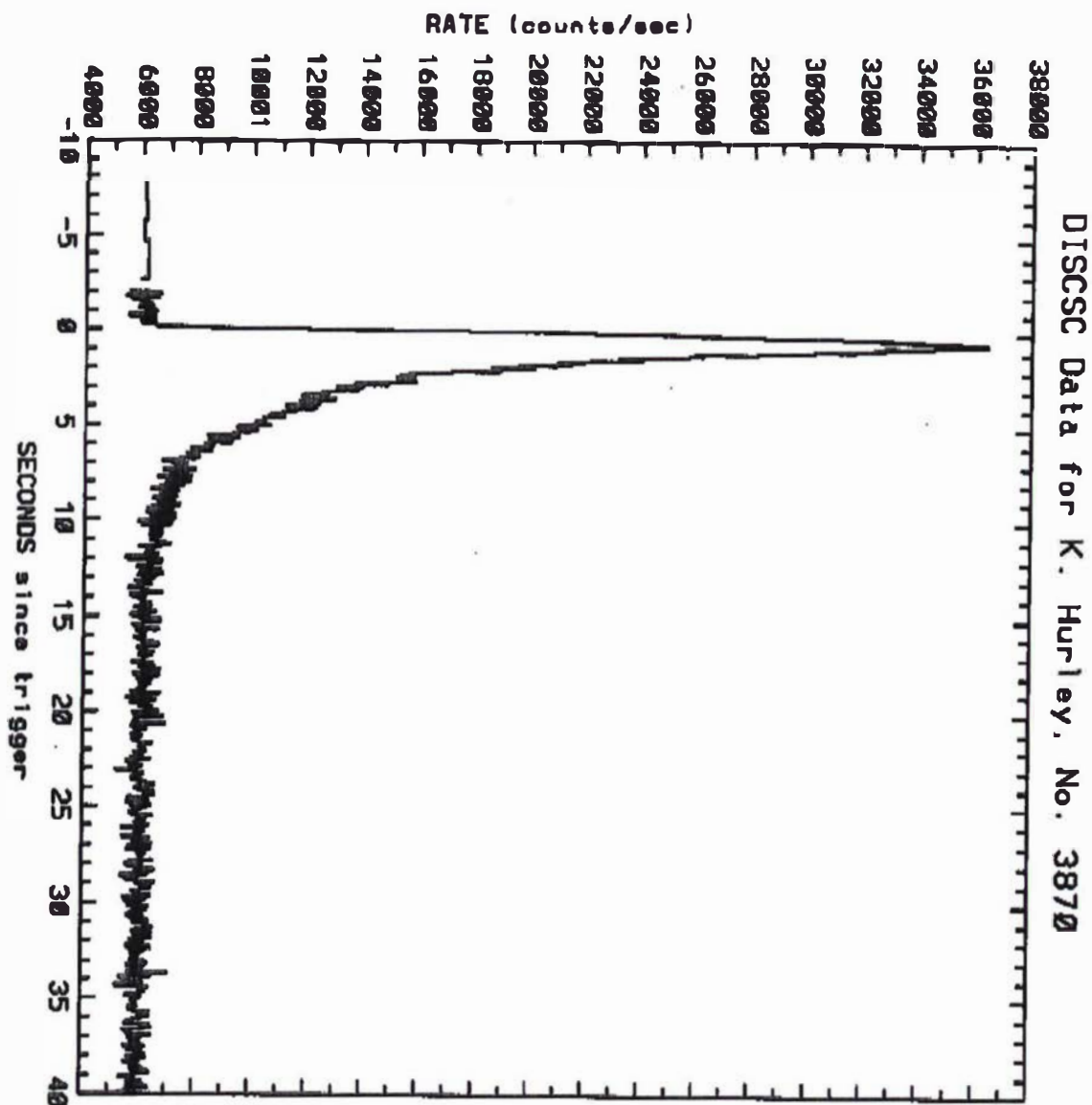
2481.394

25- 100 keV

COUNTS/0.064 S



21 / 10 / 95



28-OCT-1995 11:19:17

Created by MOPS BD
 (Burst Display)
 Version 12.25

Trigger # : 3870
 Trigger Time:
 10000 / 2401.394
 Burst Date Type:
 DISCSC

Deadtime
 Corrected: N
 Background Data
 Type: PREEB + DISCLA
 Minimum Integ. Time:
 0.064 seconds
 Detectors [7.8]:
 ---54---
 Discriminators:
 (1, 2)
 Quality Mask:
 80ISP1

From WOODSP@ssl.msfc.nasa.gov Tue Oct 17 11:24 PDT 1995
Date: Tue, 17 Oct 1995 13:24:36 -0500 (CDT)
From: WOODSP@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3871

BATSEARCH PROGRAM

BATSE BURST # 3871
EVENT OF 1995 OCT 16 DAY OF YEAR=289
EVENT CROSSING TIME AT BATSE : 71608. S. OR 19:53:28.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 119.000 -49.000
BATSE PEAK COUNTING RATE: 4500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 16/10/ 95 IS:
RA= 207.629 DEC= 57.434 DIST= 2.790 AU
BATSE-ULYSSES DISTANCE = 417332919. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 51.13 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 873.67 SECS.
CROSSING TIME AT ULYSSES IS 72482. S. OR 20:08:01 +/- 251.43 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 16/10/ 95 IS:
RA= 234.071 DEC= -19.975 DIST= 2.191 AU
MARS-BATSE DISTANCE = 327770048. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 89.80 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 3.79 SECS.
CROSSING TIME AT MARS IS 71612. S. OR 19:53:31 +/- 189.87 SECONDS

BATSE BURST TRIGGER

NO.: 3871

TIME: TJD=1000 SECONDS=71608

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=124.8 AZIMUTH=67.7 ERROR=2.27 DEGREES

COMMENTS:

GRB WITH 25 SEC DURATION. SMALL POSTCURSOR IS SEEN AT ABOUT 40 SEC
FROM TRIGGER TIME. VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3871	951016	10006	71608	4500	119	-49	25

95	7	1	117	23737	23737	3658
95	7	6	121	42735	42735	3662
95	7	11	123	13789	13789	3663
95	7	13	BGR	32133	32176	3664
95	7	30	128	76149	76124	3720
95	8	4	131	7135	07134	3734
95	8	4	133	45377	45376	3735
95	8	8	BGR	13023	12974	3745
95	8	9	136	85945	85945	3750
95	8	18	137	5065	05002	3765
95	8	22	140	13751	13749	3767
95	9	4	142	52692	52688	3776
95	9	9	145	85473	85452	3788
95	9	19	151	51465	51447	3806
95	9	21	152	20947	20947	3811
95	9	22	BGR	15495		
95	9	22	BGR	25929		
95	9	26	BGR	63919		
95	10	1	153	41907		
95	10	2	BGR	77583		3843
95	10	4	BGR	83974		
95	10	5	154	14842.112		
95	10	8	156	46287.863		
95	10	10	BGR	11774		
95	10	11	157	77693.094		3860
95	10	13	159	57097.299		
95	10	14	160	13108.167		
95	10	14	161	43561.3		
95	10	16	162	02484.285		3870
95	10	16	BGR	71607		3871
95	10	18	163	19832.069		
95	10	19	64	11712.625		
95	10	19	165	48244.594		3875
95	10	25	167	85239.738		
95	11	2	168	07085.879		
95	11	2	69	21209.015		3891
95	11	2	BGR	28693		
95	11	5	BGR	01745		
95	11	5	170	05868.077		3893
95	11	5	171	46827.808		
95	11	7	BGR	27298		
95	11	11	BGR	34960		
95	11	12	172	66495.244		
95	11	13	173	84358.872		3906
95	11	15	BGR	38929		
95	11	17	175	10123.762		
95	11	18	BGR	82560		
95	11	19	176	29831.402		3912
95	11	19	177	46457.519		
95	11	19		59448		
95	11	21		22280		
95	11	22	179	09841.38		
95	11	22	180	17107.738		
95	11	23	BGR	65408		
95	11	24	BGR	21266		3918
95	11	24	BGR	25132		

-- T. L. Cline ----- LHEAVX::CLINE

From cline@lheavx.gsfc.nasa.gov Fri Jan 26 13:00 PST 1996
 Date: Fri, 26 Jan 1996 13:00:45 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: Improved list; same question.

Dear Kevin,

I'm making a little progress here, tracking down these events. This is a slightly improved list, with a few more BATSE triggers identified. - TLC

Yr	Mn	Dy	Konus#	Konus Tzero	BATSE Tz, #	Ulysses
94	11	14	BGR	07360	07358 3283	- NO
94	11	19	4	70269.175	70250 3287	R I
94	11	21	6	62700.945	62697 3290	trig.
94	11	25	7	79470.156	79470 3295	R I
94	11	26	BGR	01246	01245 3296	
94	11	26	8	44557.952	44521 3298	trig.
94	11	26	BGR	60860	60861 3299	
94	11	26	9	71809.732	71798 3301	R I
94	11	27	10	52225.68	52217 3303	R I
94	11	28	BGR	56220	56217 3305	
94	12	28	28	27585.915	27581 3330	R I
94	12	29	29	82268.781	82258 3334	R I
95	1	4	31	26319.613	26319 3345	R I
95	1	11	33	17352.241	17263 3351	R I
95	1	11	34	44329	44310 3352	
95	1	17	BGR	05760	05761 3360	
95	1	18	BGR	44574	44589 3364	
95	2	7	BGR	02774	02781 3406	
95	2	8	45	07824	07824 3408	
95	2	10	47	08424	08421 3410	
95	2	11	48	08697	08697 3412	trig.
95	2	11	50	72469	72468 3415	
95	2	21	BGR	74701	74705 3436	
95	2	26	54	53351	53336 3442	
95	3	1	BGR	75731	75761 3448	
95	3	4	56	37661	37657 3453	
95	3	5	58	54309	54304 3458	
95	3	10	BGR	78388	78395 3464	
95	3	25	63	25841	25844 3480	
95	3	25	64	63392	63391 3481	
95	3	27	BGR	26323	26347 3485	
95	3	27	BGR	85672	85671 3486	
95	4	1	69	42647	42642 3488	
95	4	1	70	74635	74634 3489	
95	4	3	71	47985	47987 3491	
95	4	3	72	84828	84826 3492	
95	4	16	BGR	48420	48419 3509	
95	4	18	81	83793	83795 3512	
95	4	25	86	00923	00919 3523	
95	4	30	BGR	54224	54229 3527	
95	5	3	88	66971	66970 3537	
95	5	10	90	28083	28079 3569	
95	5	13	93	81706	81703 3571	
95	5	21	97	25161	25157 3588	
95	5	22	98	23898	23896 3590	
95	5	22	100	85280	85283 3593	
95	5	24	102	14902	14899 3598	
95	6	2	104	25592	25592 3618	
95	6	10	107	6849	06849 3637	
95	6	24	111	84124	84084 3648	
95	6	25	113	14626	14601 3649	
95	6	29	115	37033	37036 3654	
95	7	1	116	12762	12758 3657	

Helio corr removed
Date: Feb 20 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

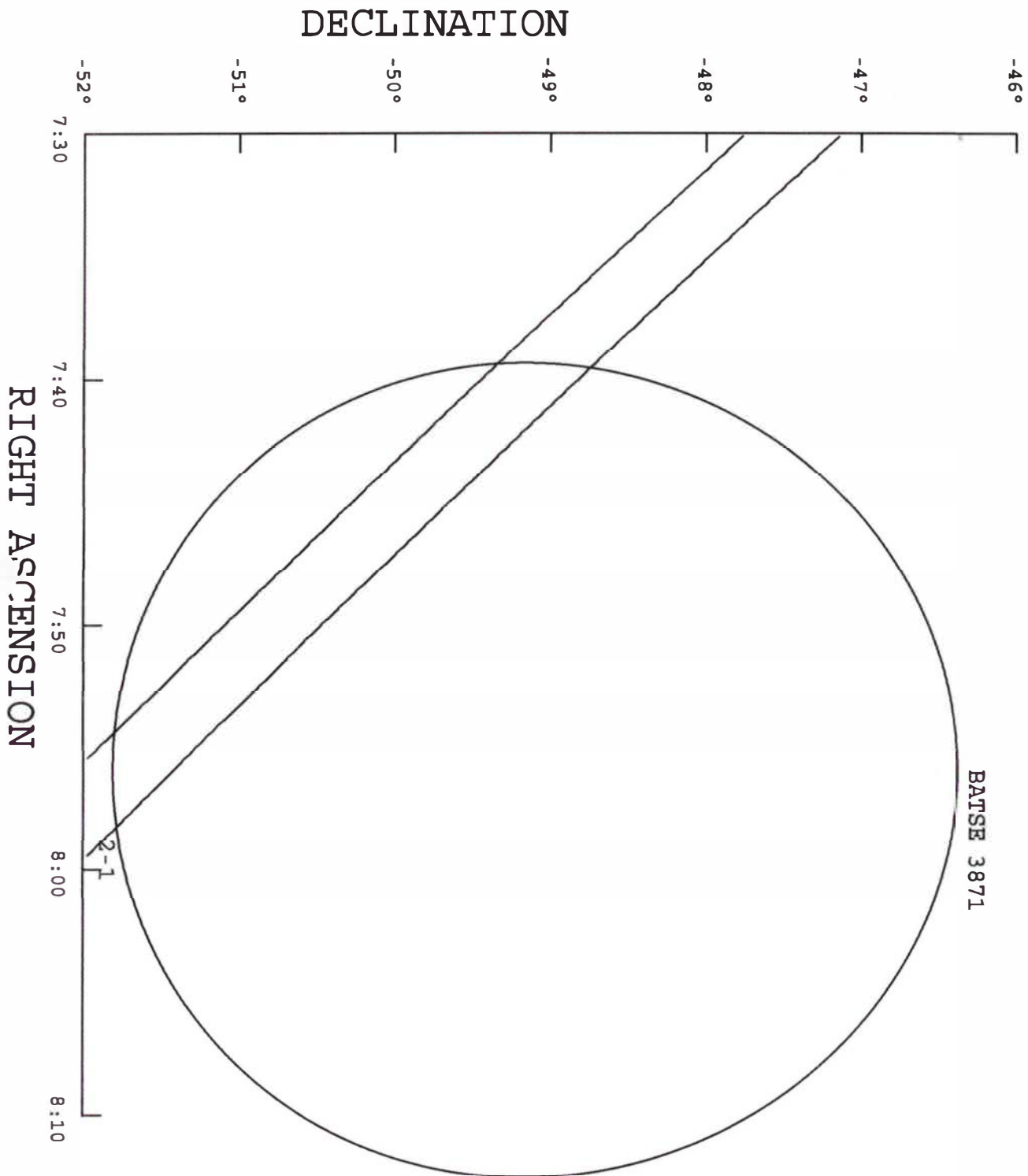
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF OCT 16, 1995 20:07

20 / 2/98



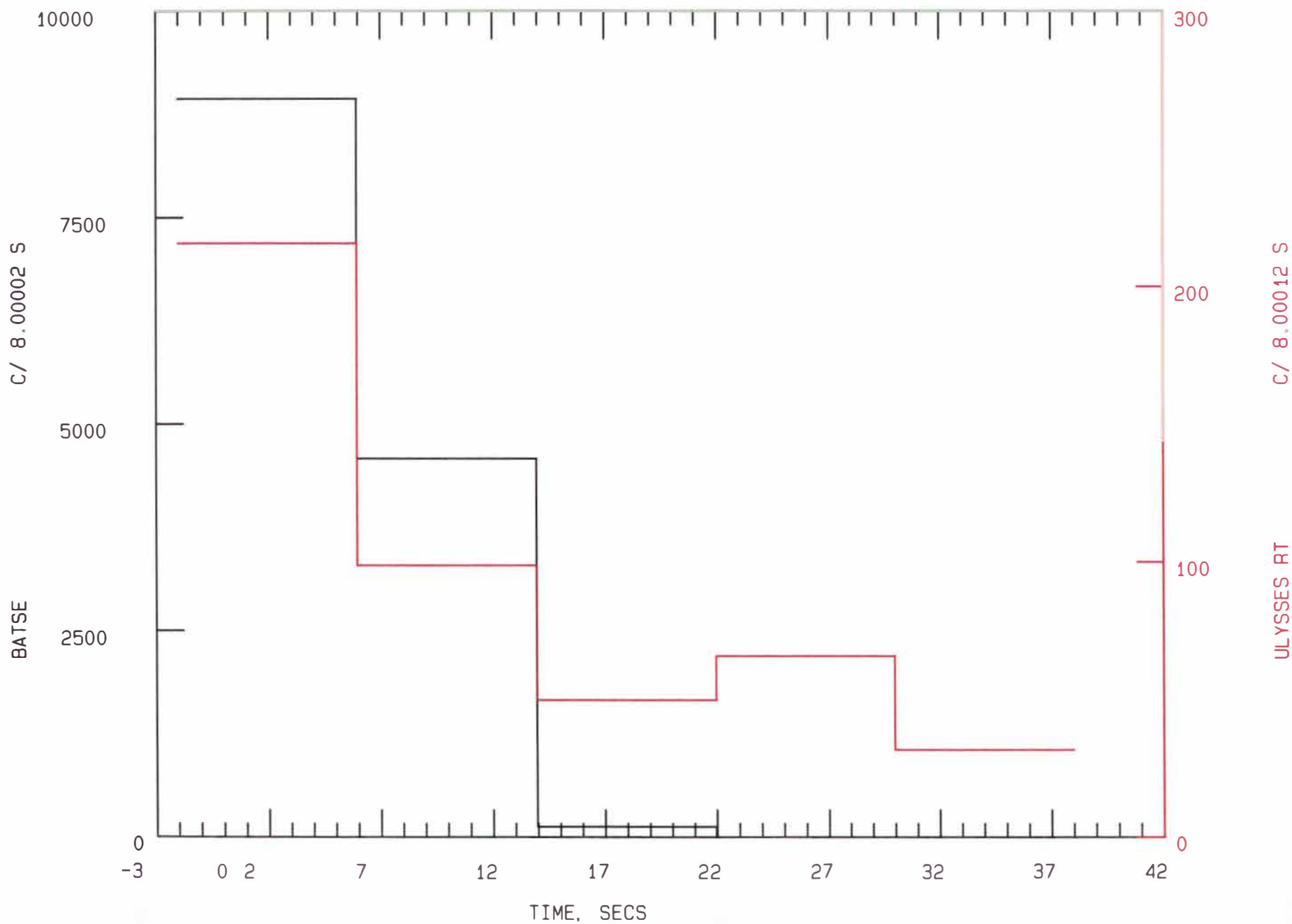
BATSE

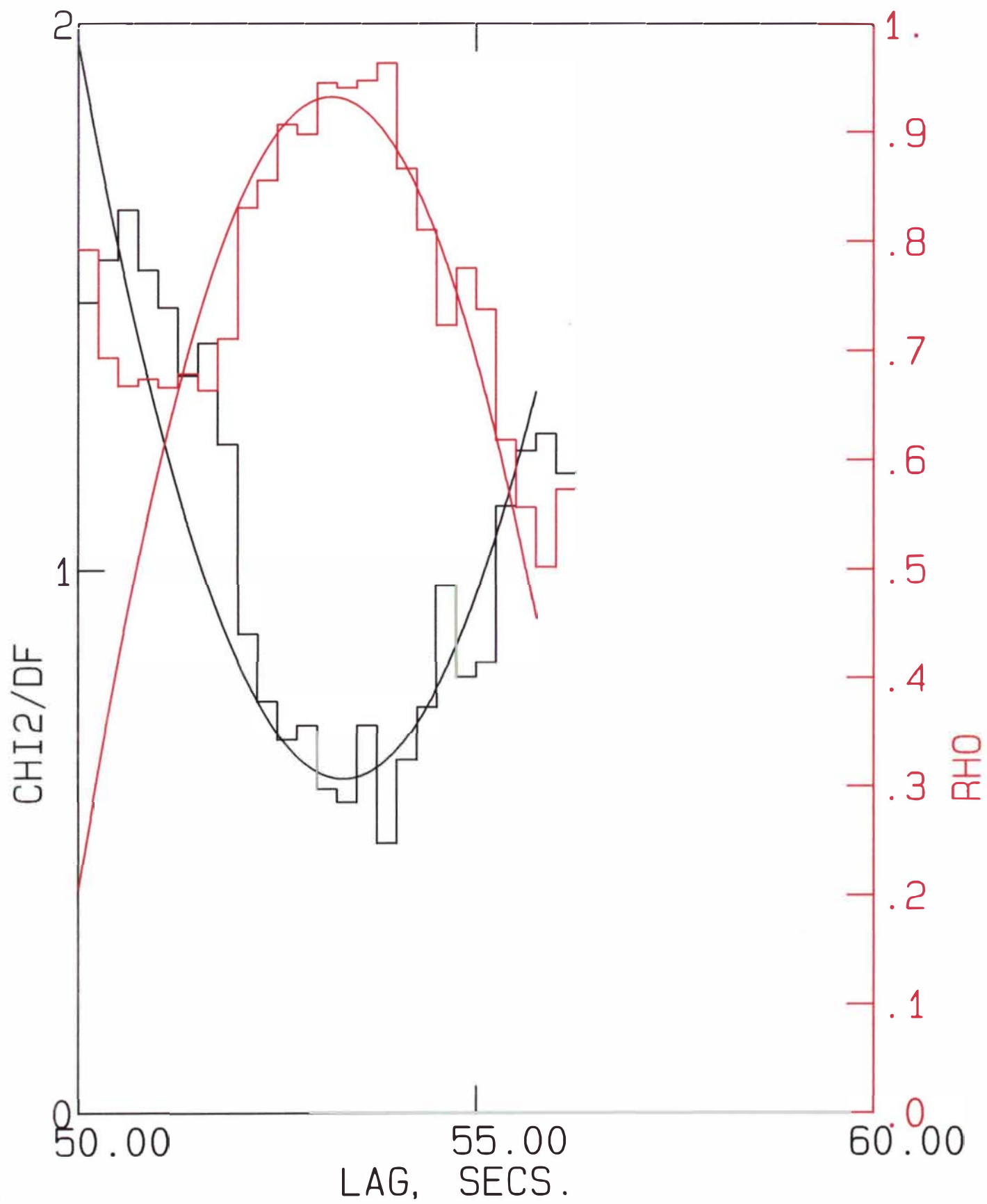
-ULYSSES RT CORRELATION

16/10/95

71608.754

20/ 2/98





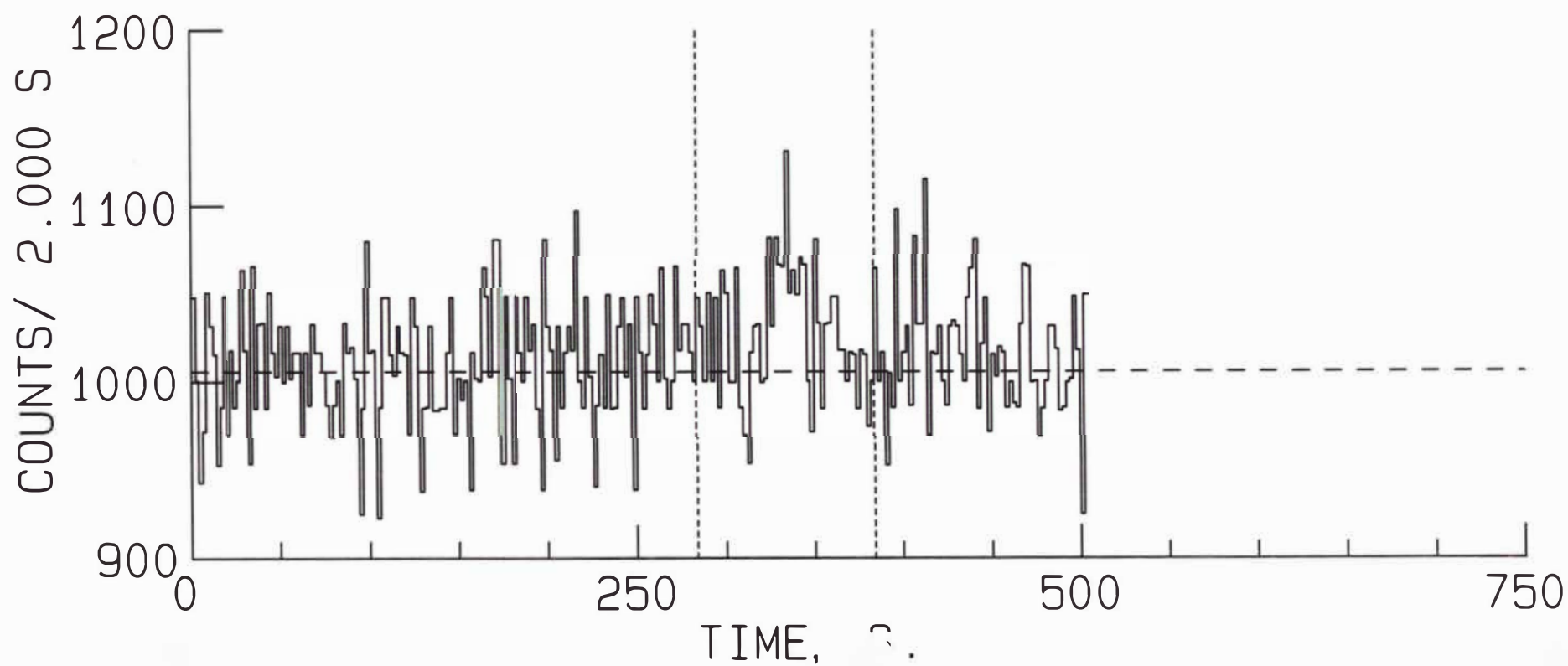
ULYSSES RT

20 / 2 / 98

16/10/95 72180.032 s

0.250 S INTERVALS REGROUPED BY 8

21- 143 keV



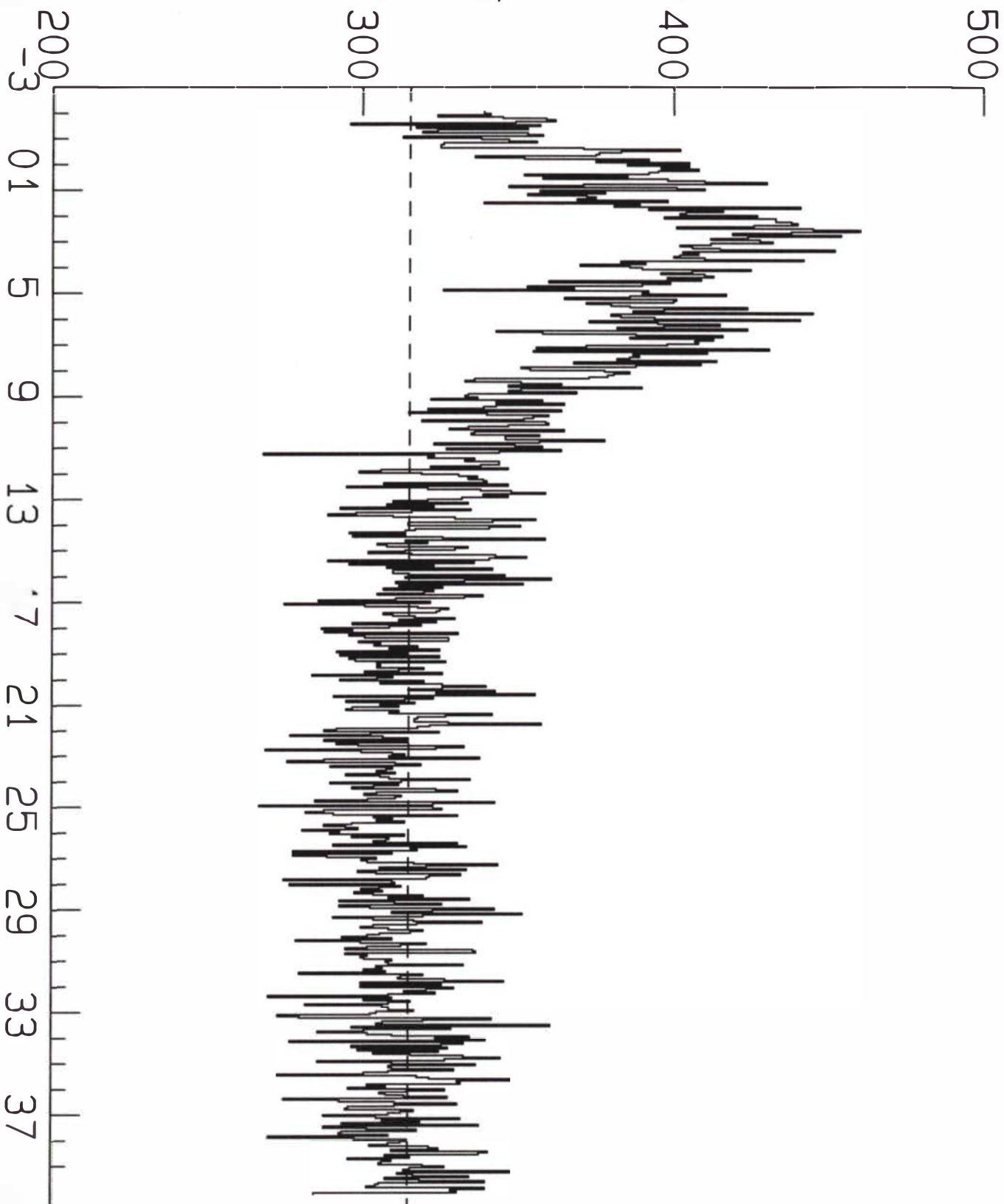
BATSE

16/10/95

71608.754

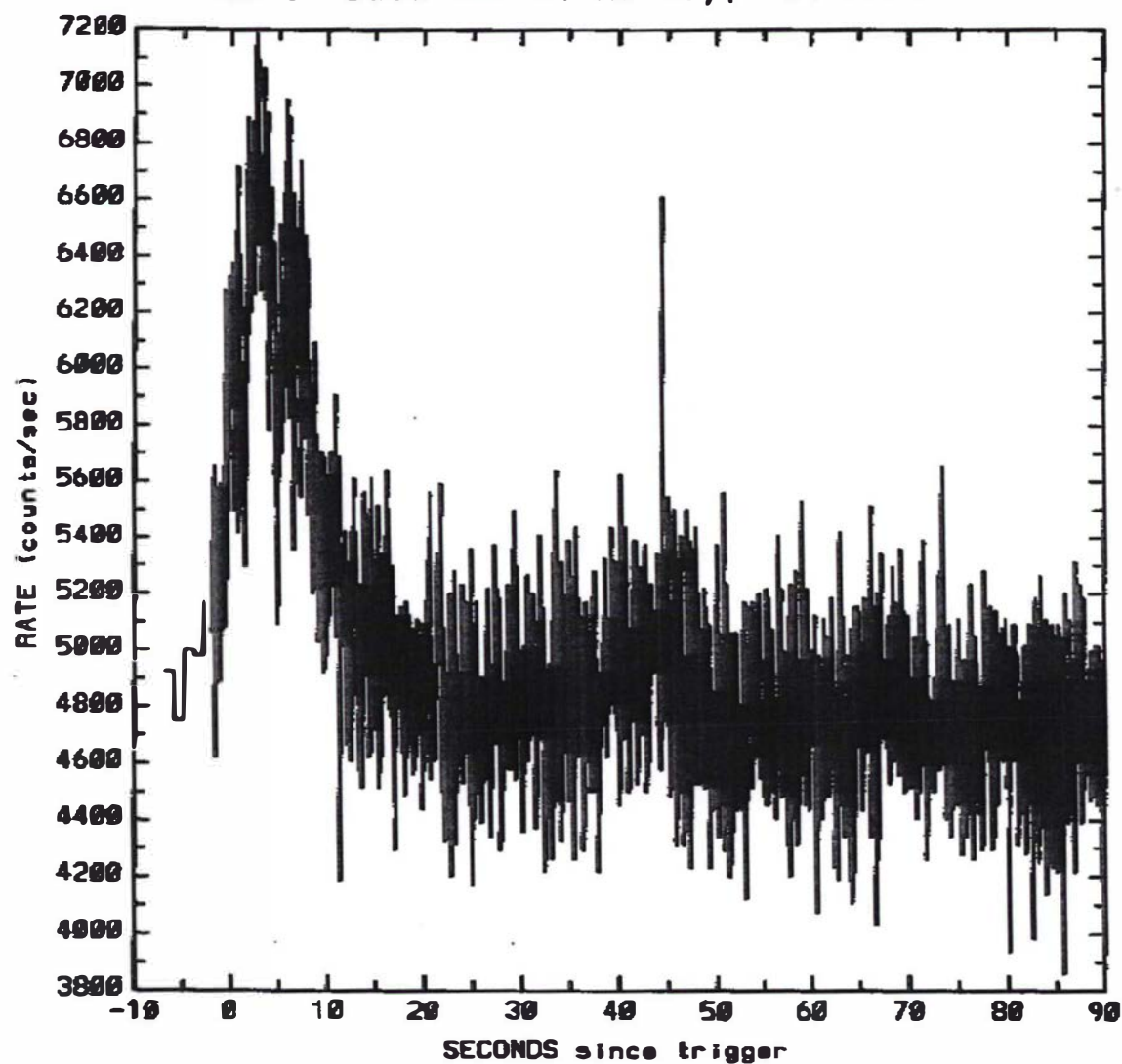
25- 100 keV

COUNTS/0.064 S



21/10/95

DISCSC Data for K. Hurley, No. 3871



28-OCT-1995 11:21:16

Created by HOPS 80
(Burst Display)
Version t2.25

Trigger # . 3871

Trigger Time:
18896 / 71688.754Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: PREB + DISCLAMinimum Integ. Time:
0.064 second(s)Detectors (7..0).
--5--1-Discriminators:
(1 . 2)Quality Mask:
8DISP1

From WOODSP@SSLLES.MSFC.NASA.GOV Thu Oct 19 09:17 PDT 1995
From: WOODSP@SSLLES.MSFC.NASA.GOV
Date: Thu, 19 Oct 1995 11:16:40 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
 "LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
 "LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
 "15733::SCHAEFER"@SSLLES.MSFC.NASA.GOV, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3872

TIME: TJD=1000 SECONDS=84988

TYPE: SAA ENT SOLAR FLARE TRIGGER SIGNAL:

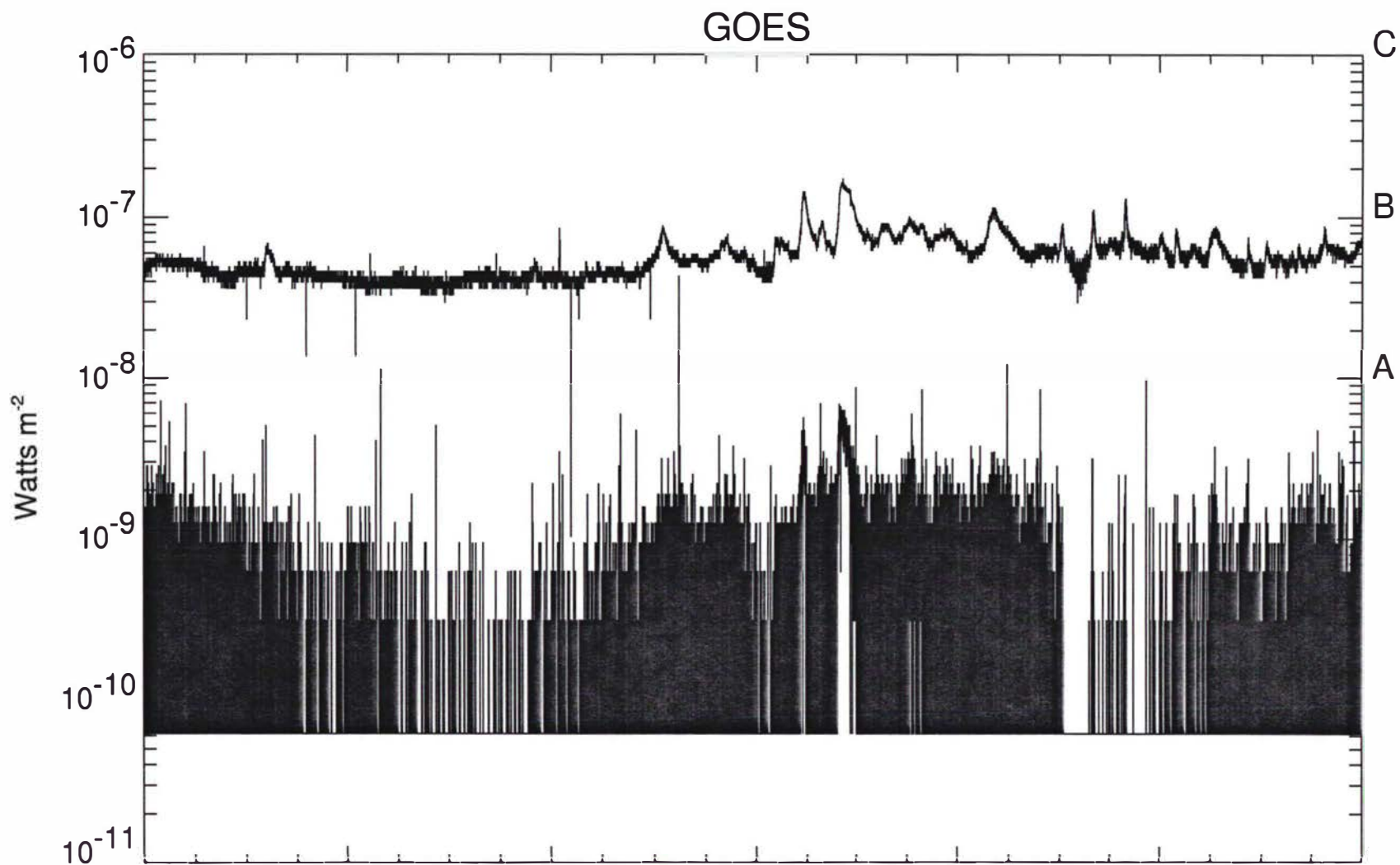
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SAA ENTRY (PARTICLE EVENT)



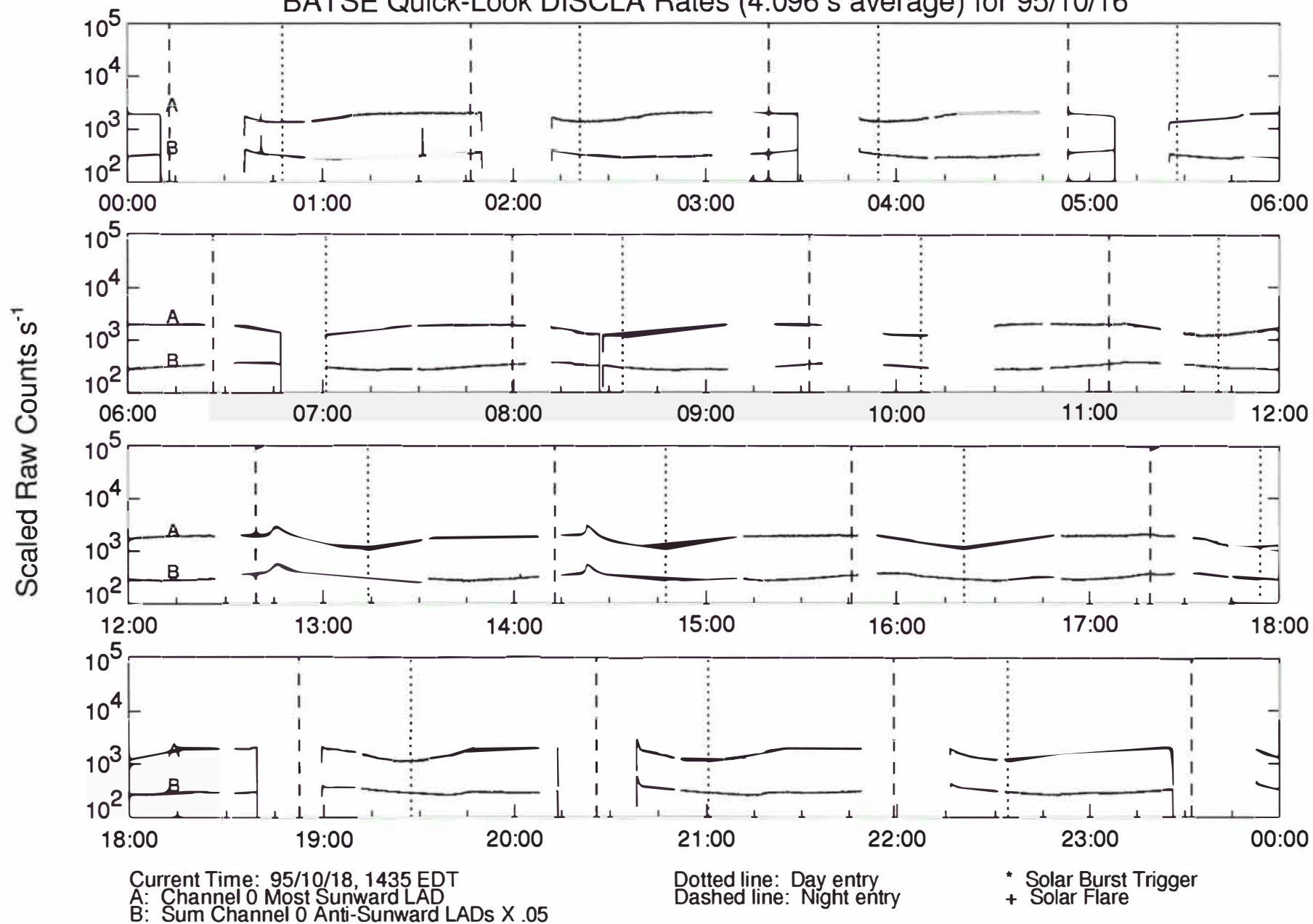
Data Start: 95/10/16, 0000:02

Plot created: 95/10/18, 1435

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

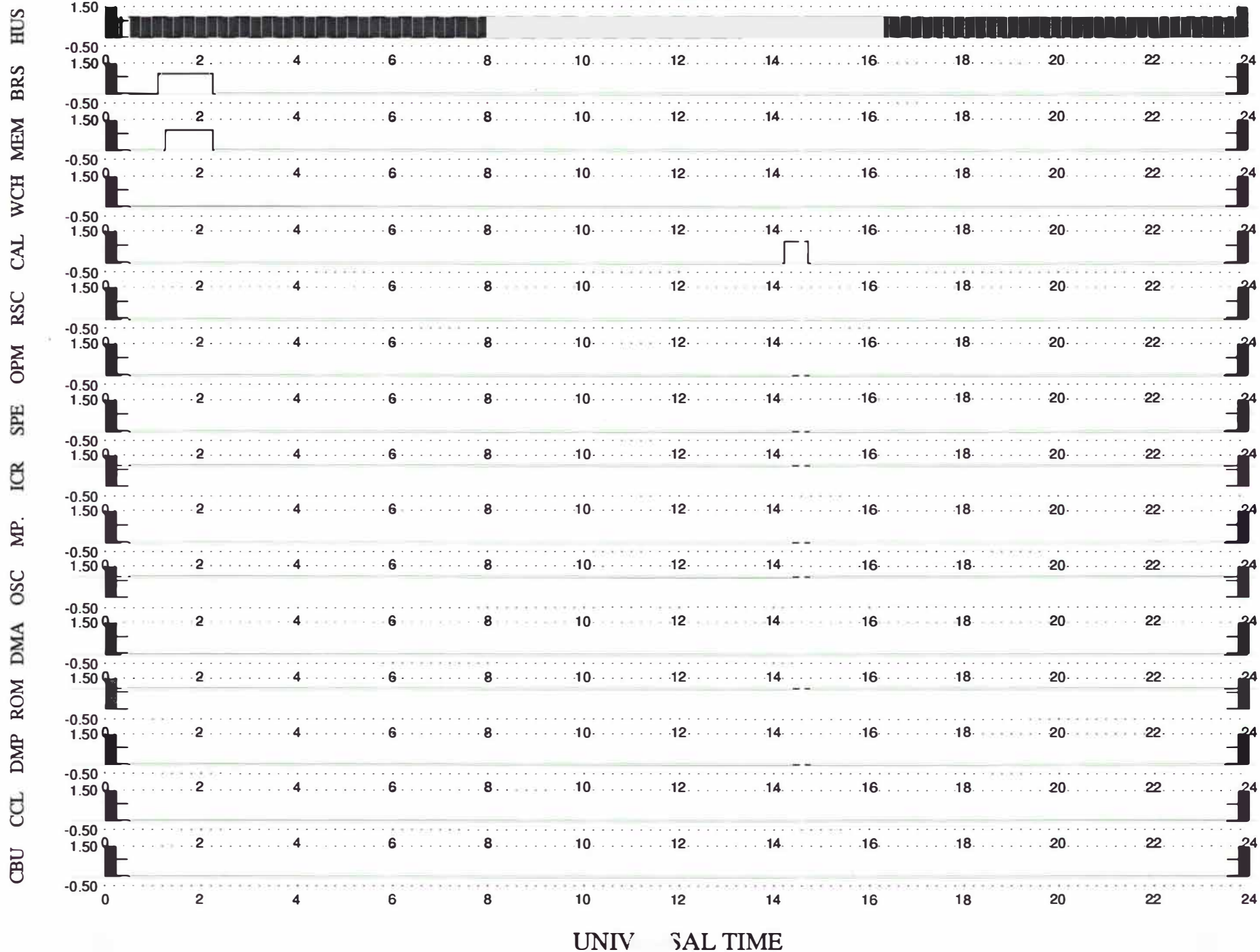
2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/16



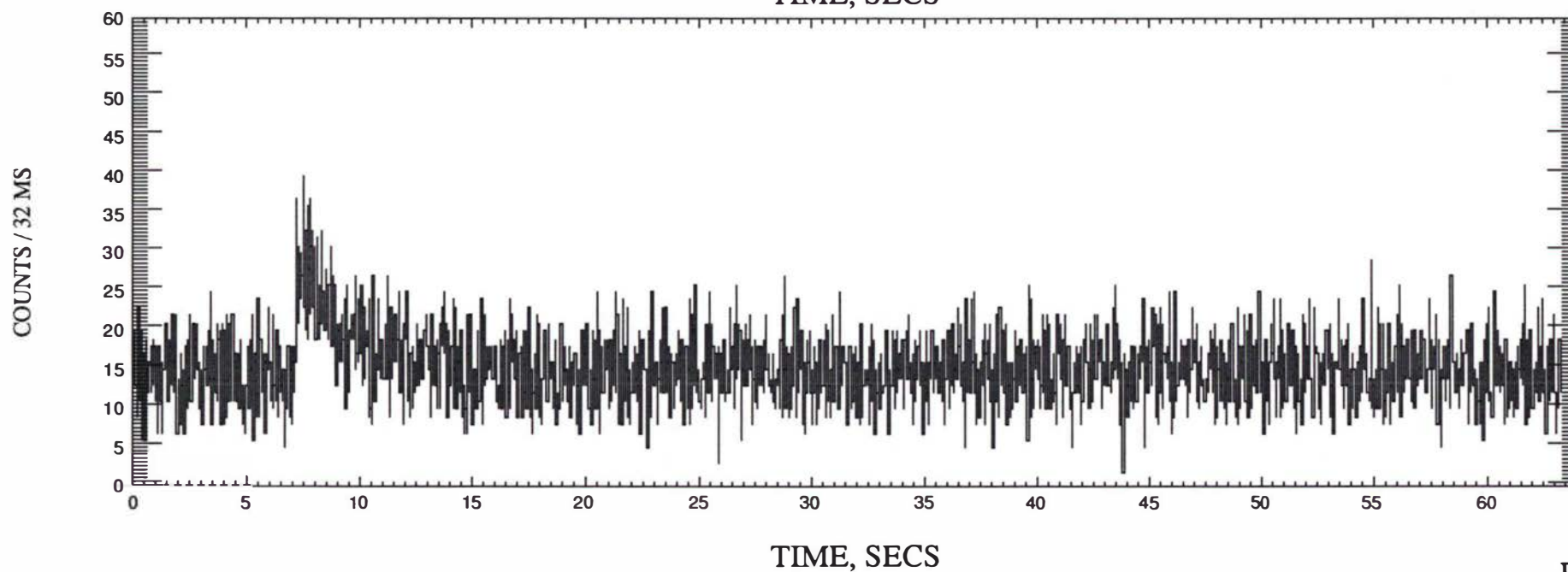
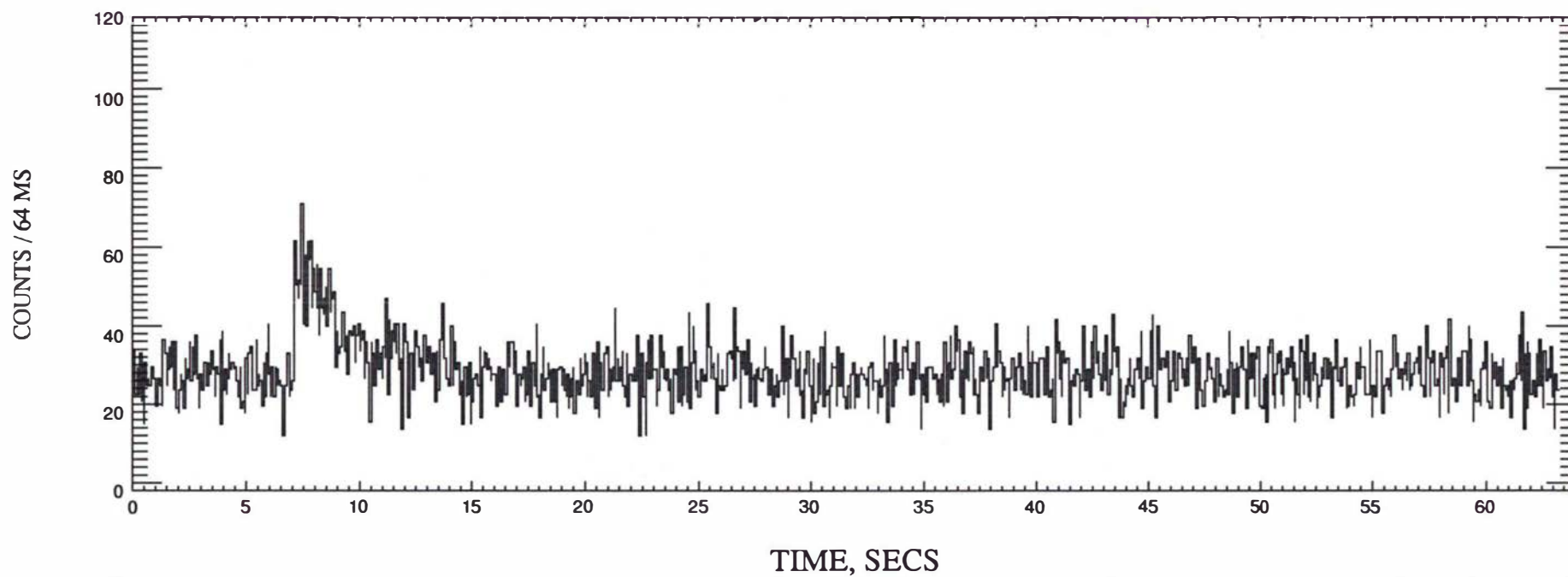
HUS MODES EDR day 289, year 1995 to day 289, year 1995
BURST NUMBER 3

1/26/96



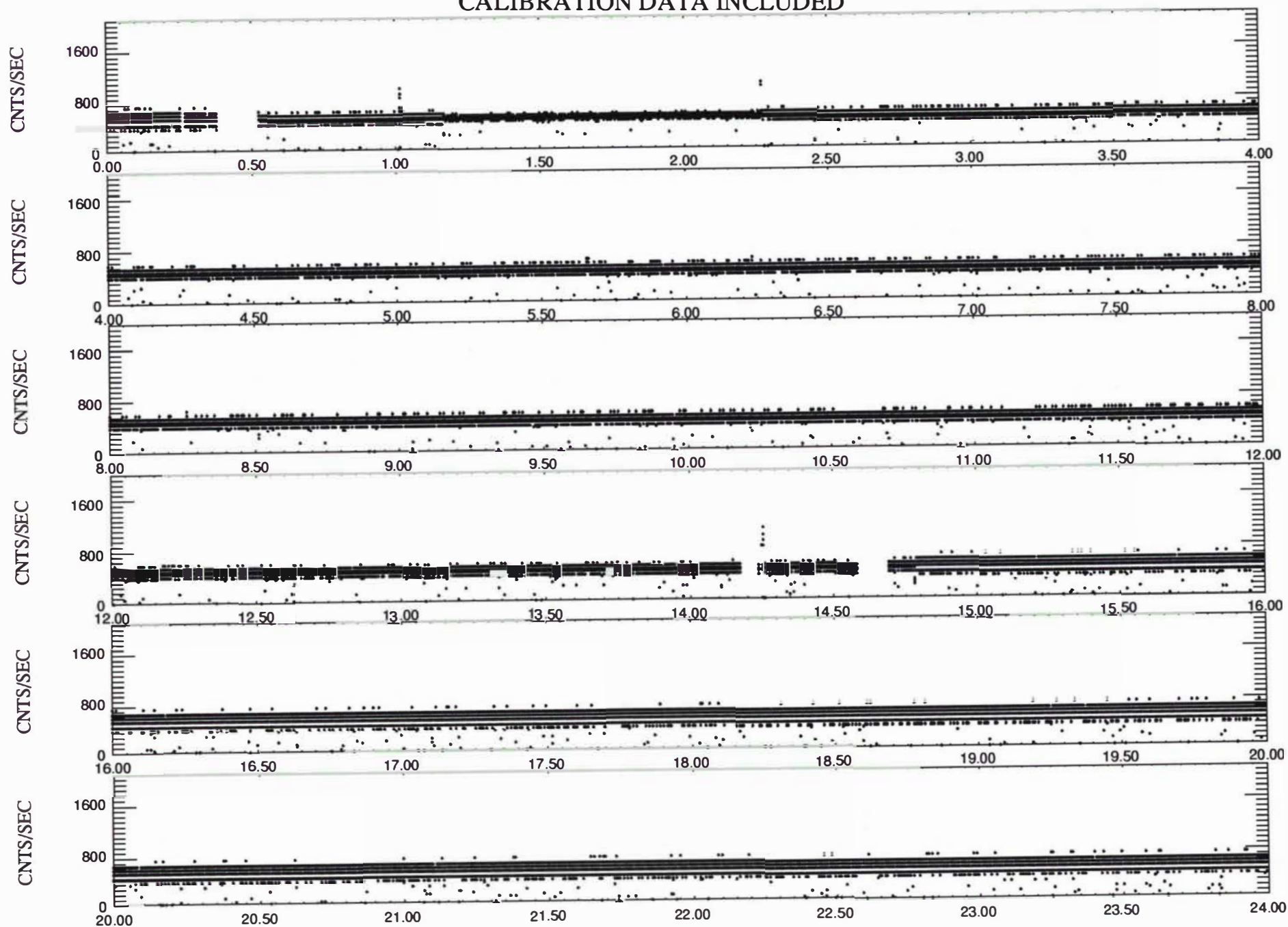
HUS 2A TRIGGERED DATA EDR day 289, year 1995
Burst Counter 3 at UT= 1.013025546604 h= 3646.892 s 01:00:46.892

1/26/96

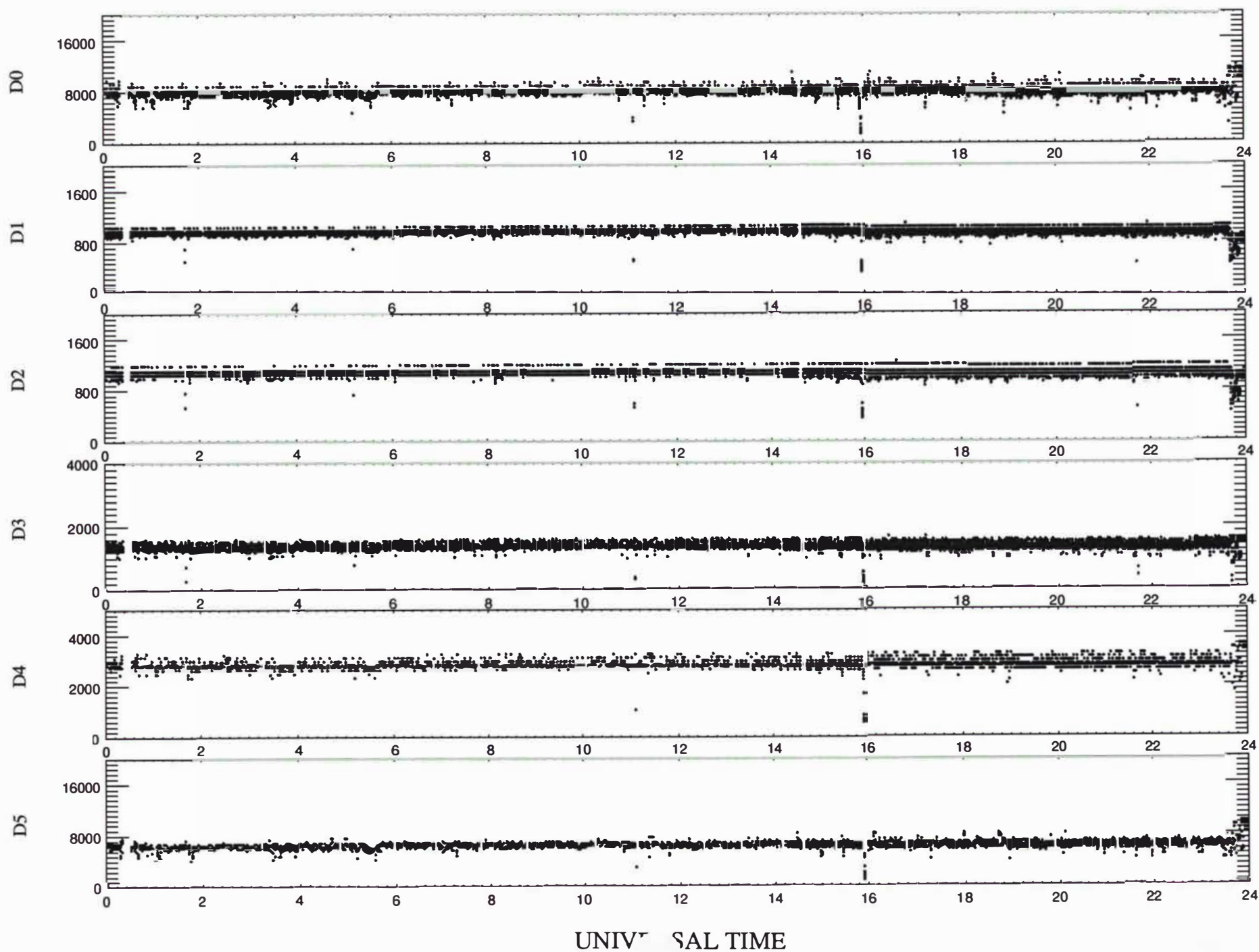


HUS 2A, MODE 1, NOT AVERAGED EDR day 289, year 1995 to day 289, year 1995
CALIBRATION DATA INCLUDED

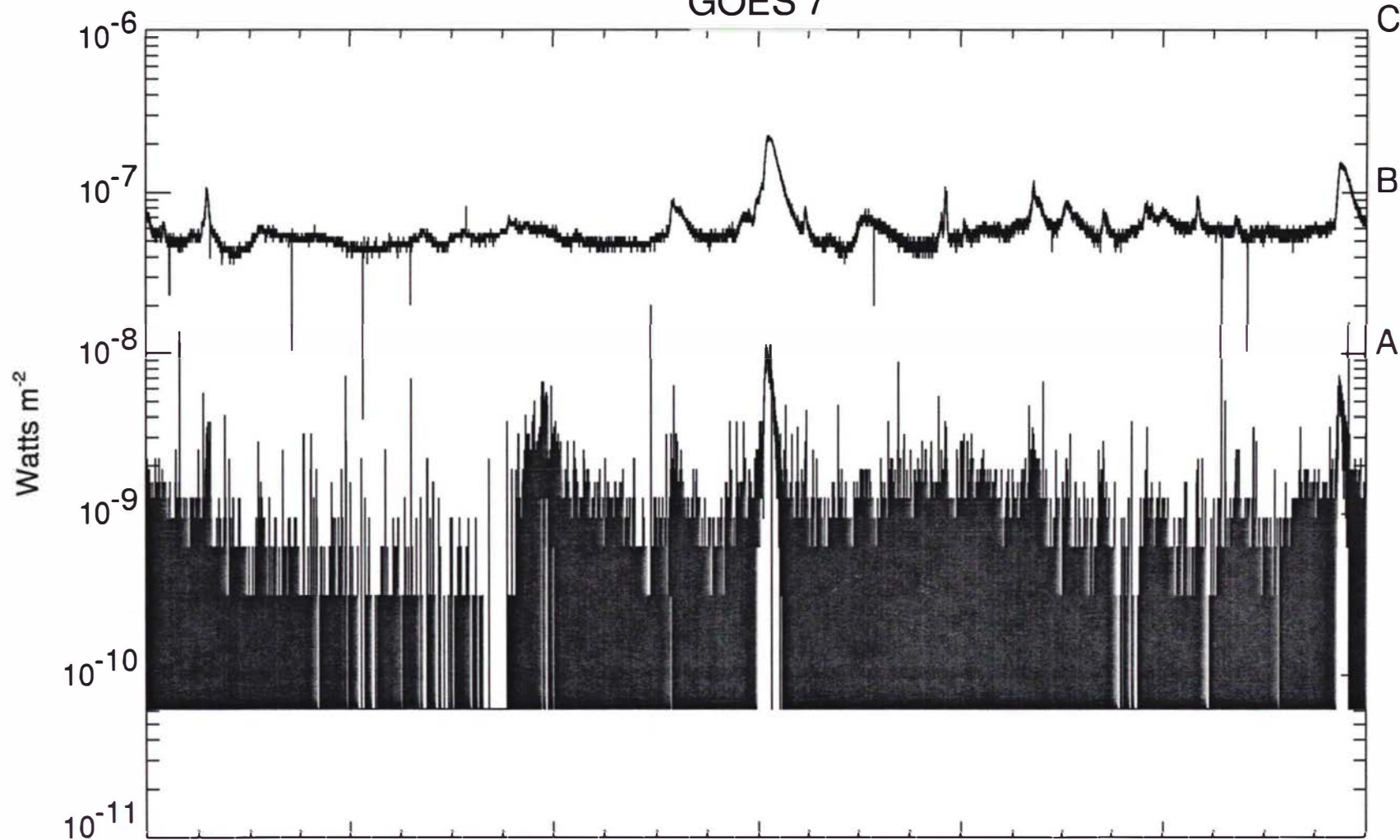
1/26/96



UNIV SAL TIME



GOES 7



Data Start: 95/10/17, 0000:00

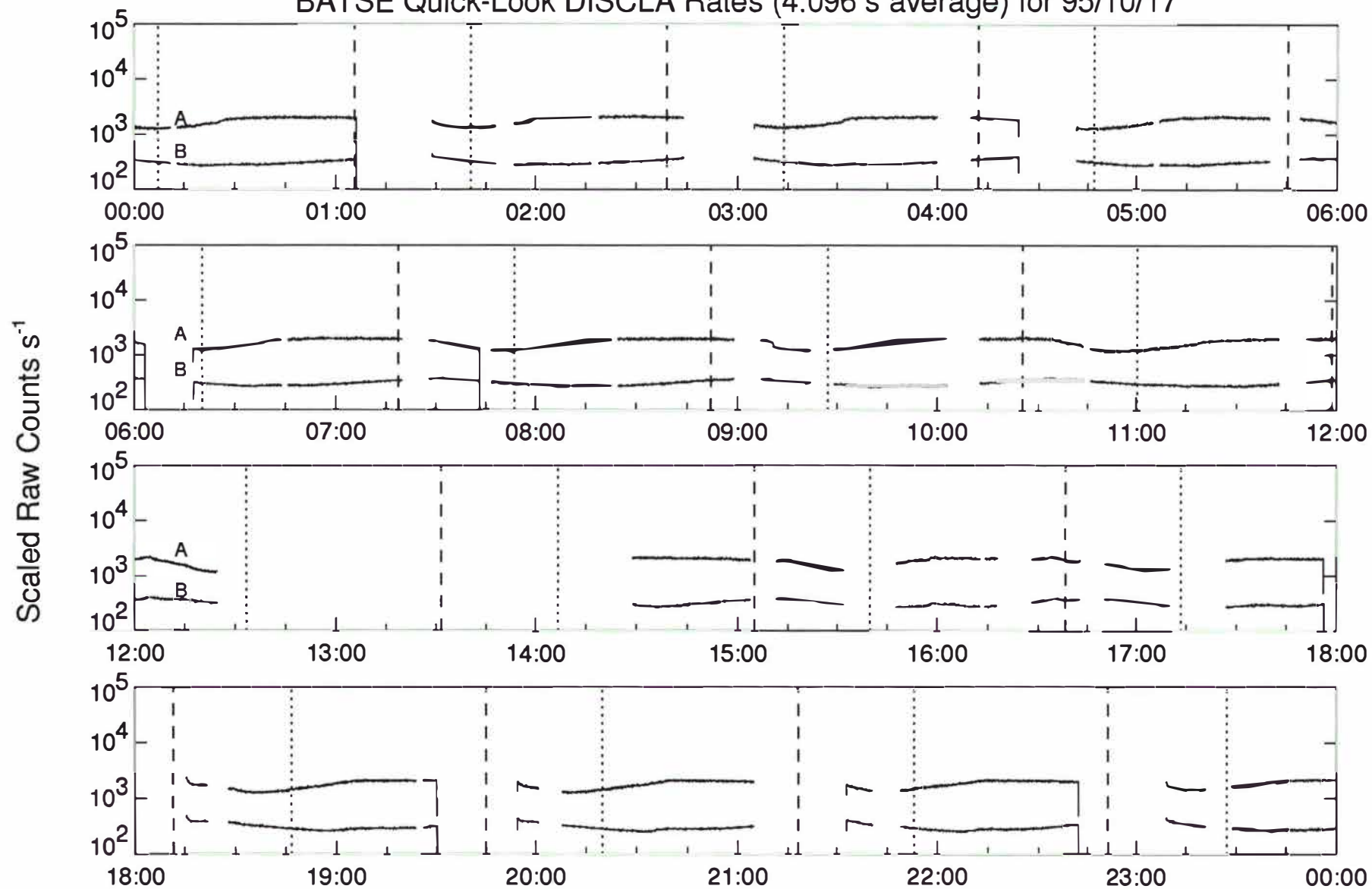
Plot created: 95/11/16, 2035

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 95/10/17



Current Time: 95/11/16, 2035 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

KONUS1

17/10/95

1029.820

50 - 200 keV

COUNTS/0.064 S

09/03/11

TIME, SECS

KONUS HRES 19951017 01029

TRIGGER TIME: 17/10/95 DOY 290 Julian 2450008.51191 UT = 00.286 00:17:09 (01029.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

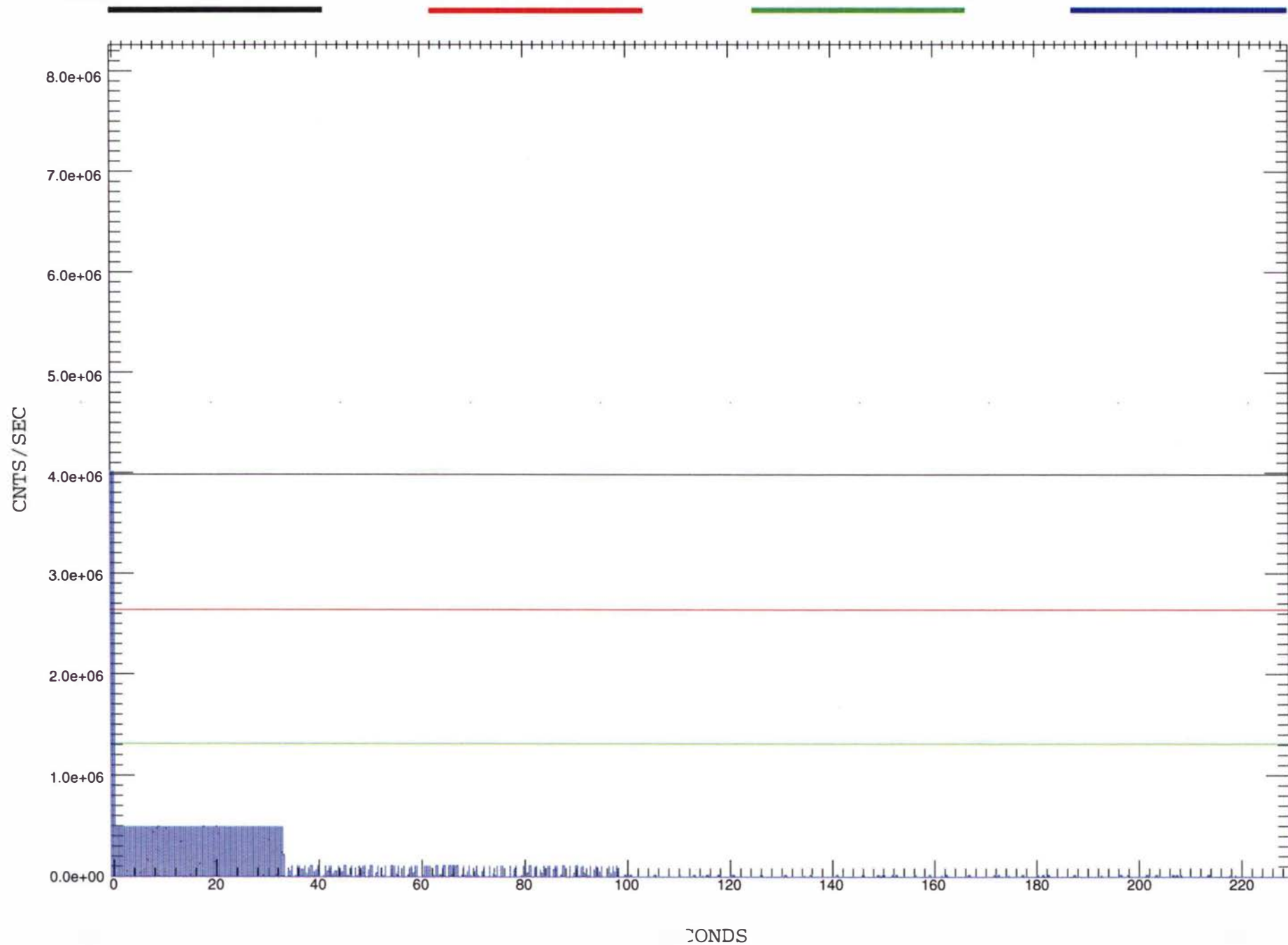
Chan 4 : [> 10 MeV]

Channel 1 + 4007400

Channel 2 + 2671600

Channel 3 + 1335800

Channel 4 + 0



KONUS1 19951017 01029

ULYSSES RT

09/03/11

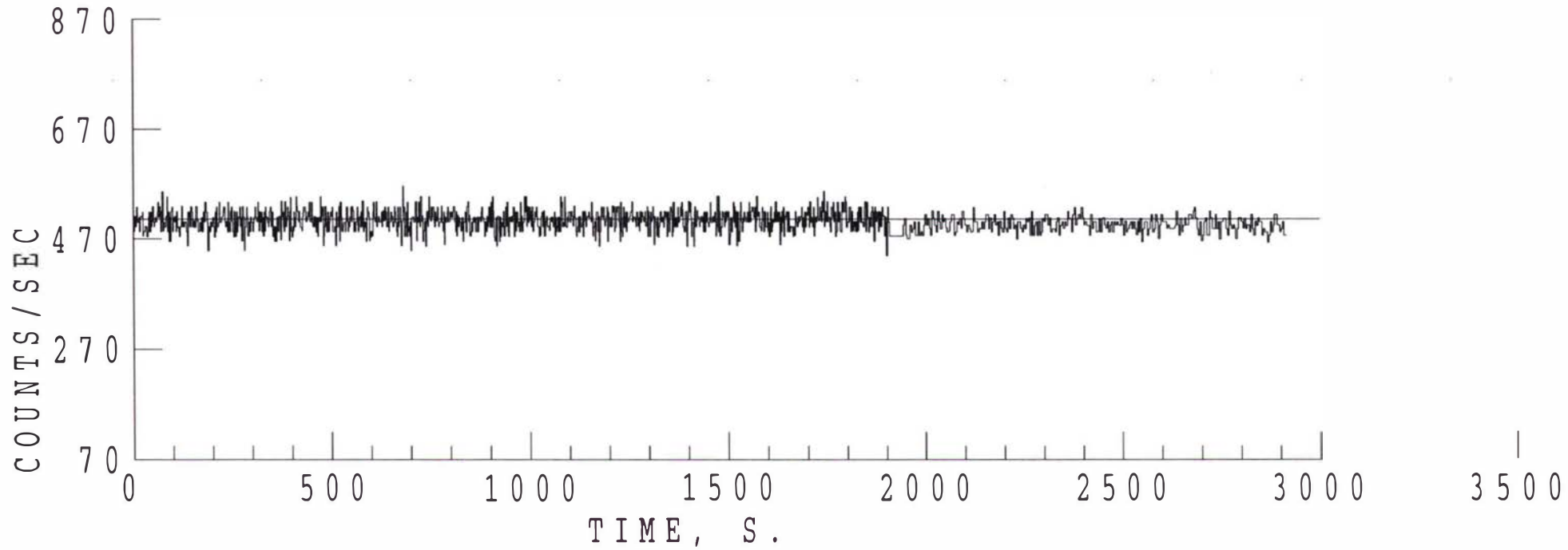
16/10/95 85968.008 s

INTERVALS REGROUPED BY 7

0 - 0 keV

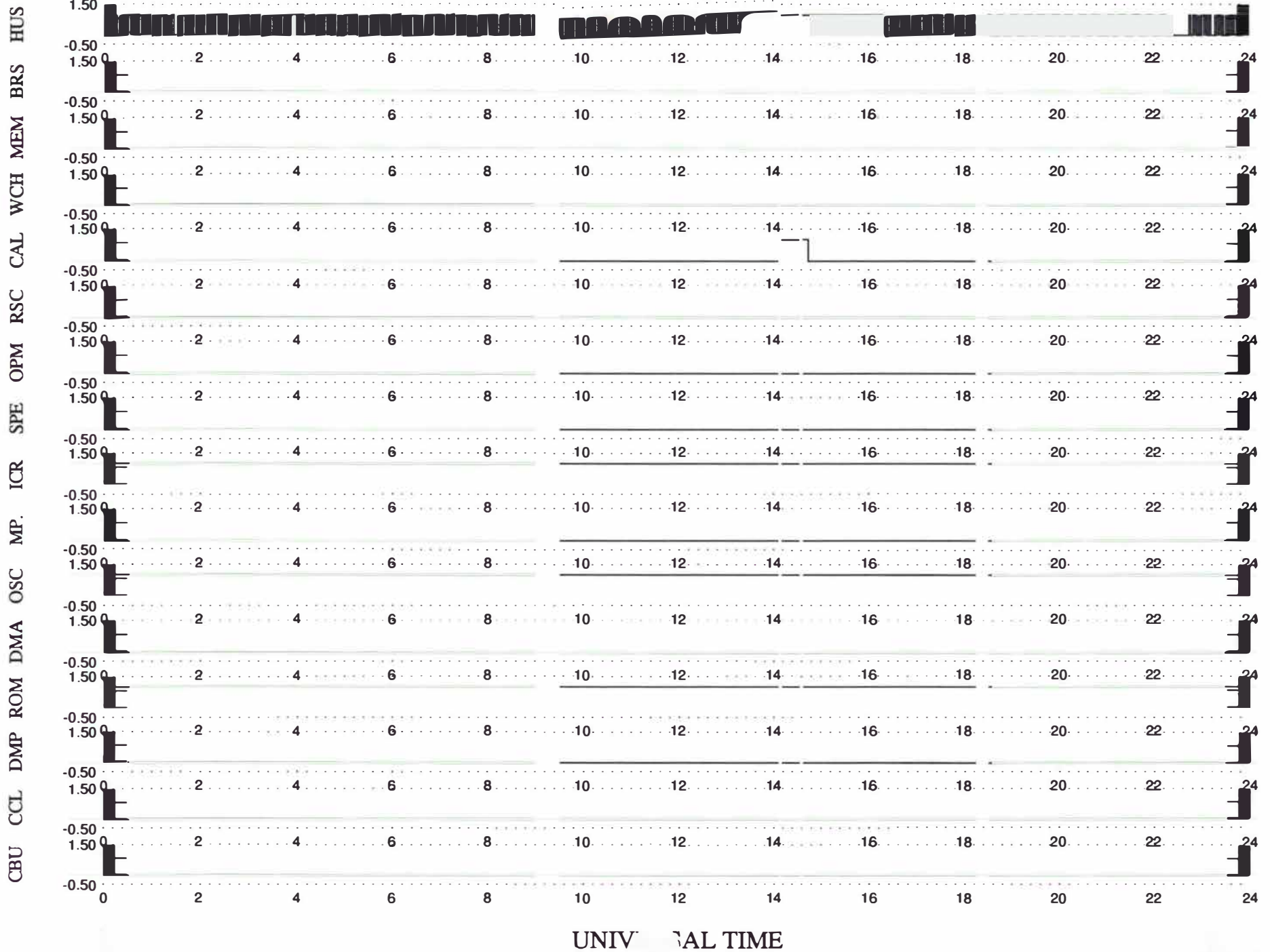
N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



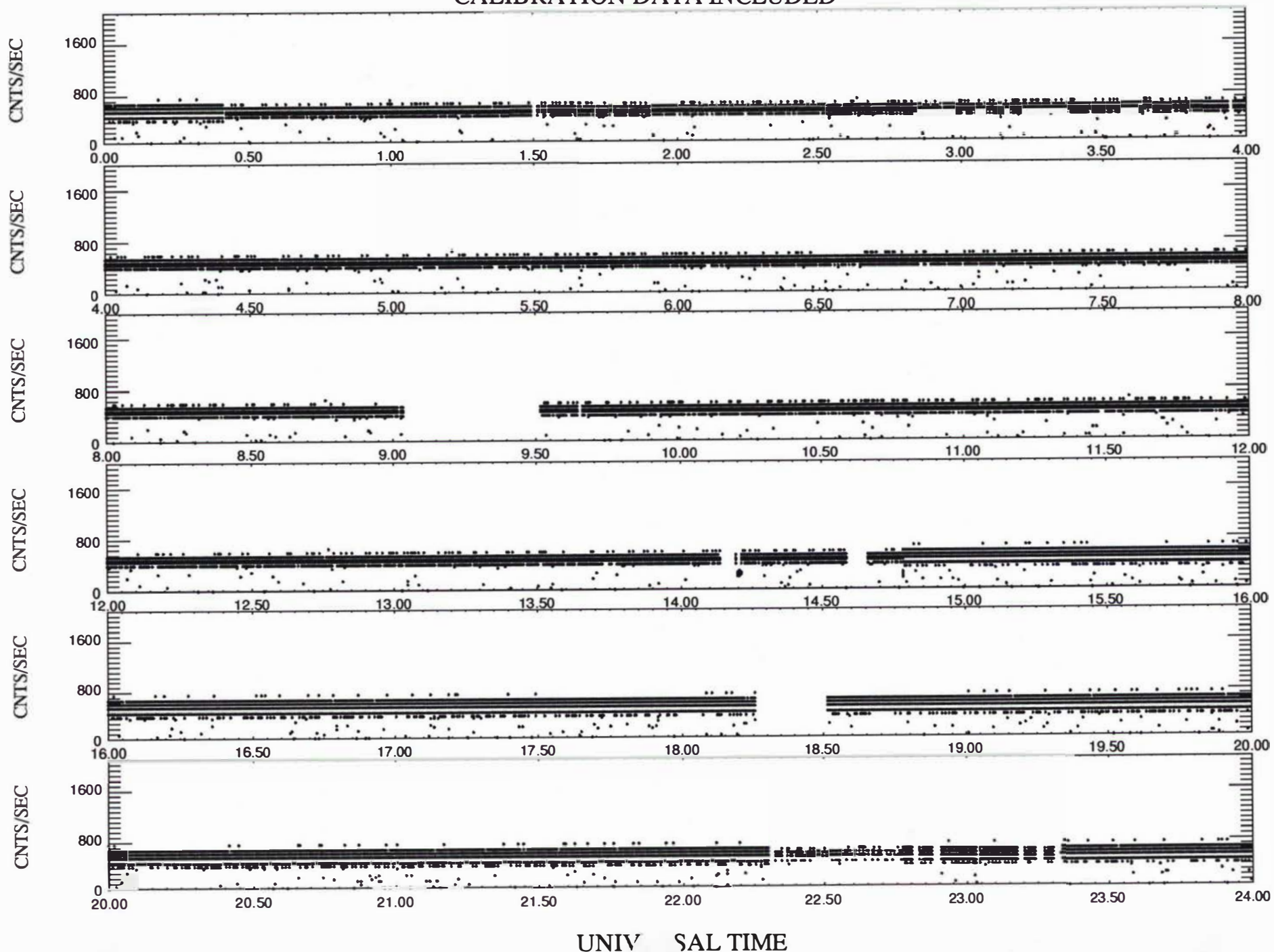
HUS MODES EDR day 290, year 1995 to day 290, year 1995 NO BURST (3)

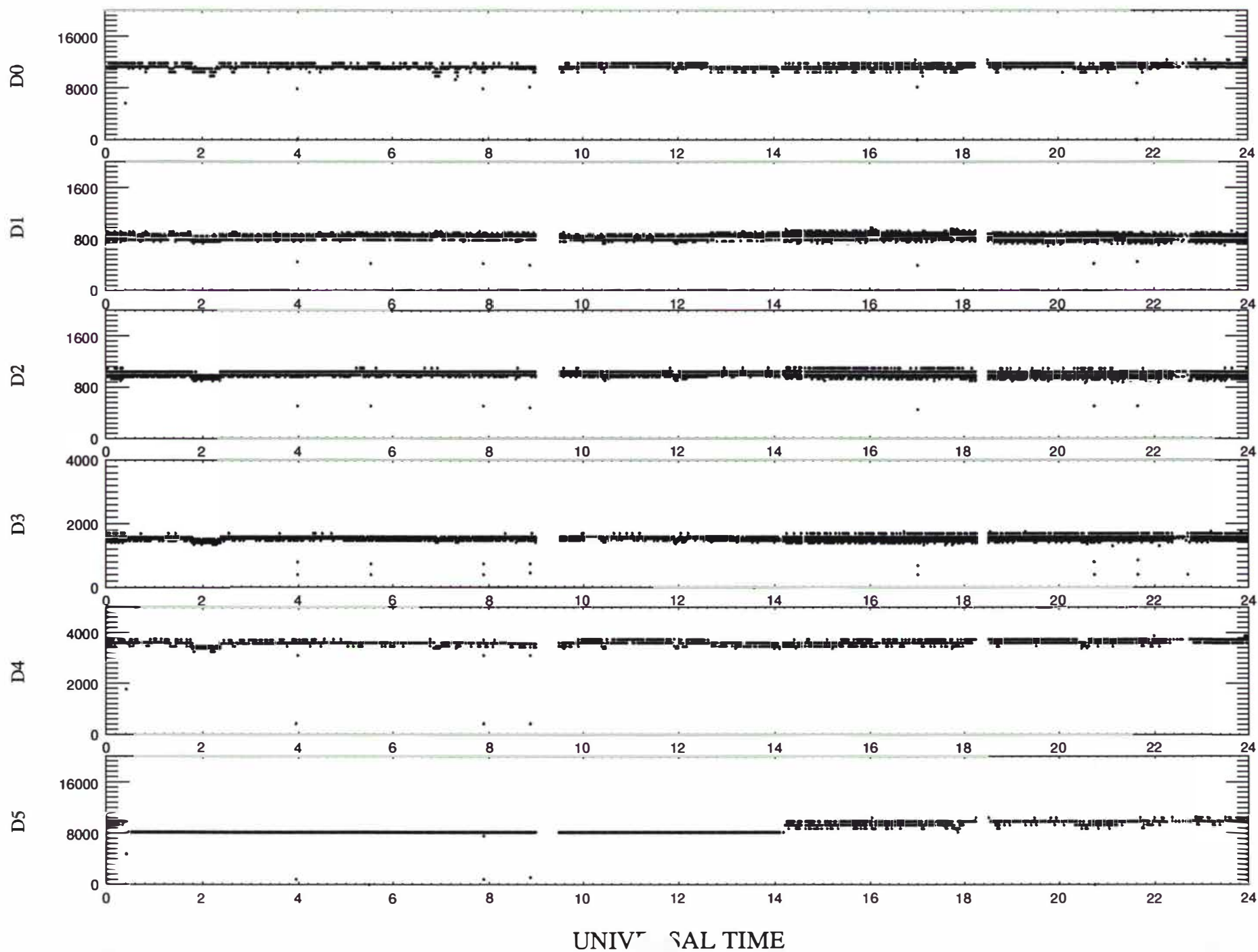
1/26/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 290, year 1995 to day 290, year 1995
CALIBRATION DATA INCLUDED

1/26/96





Date: Sep 7 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

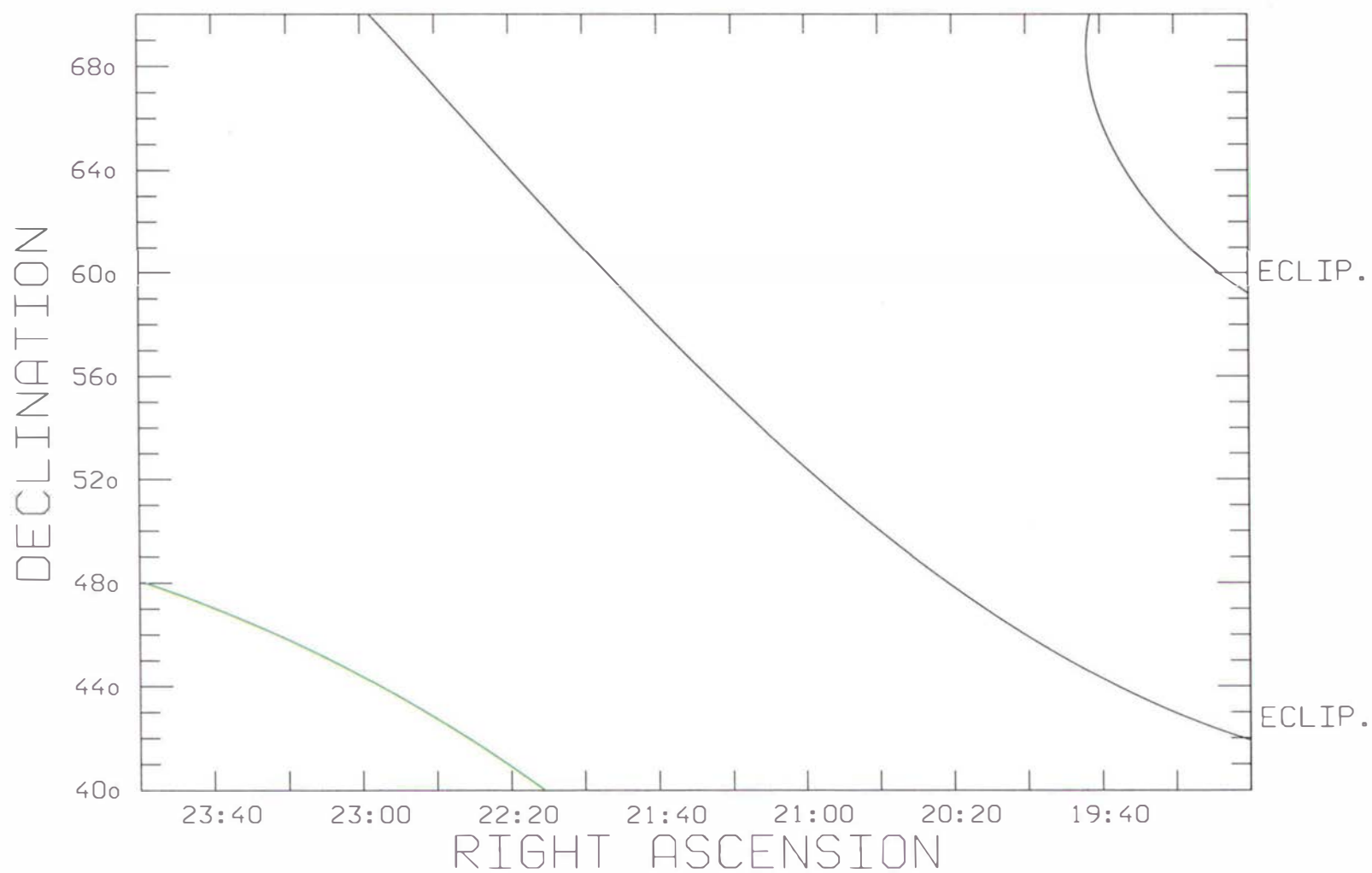
- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☒ Is the order of the data in CORREL such that a vernier is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

2. BATSE Data

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

3. PVO Data

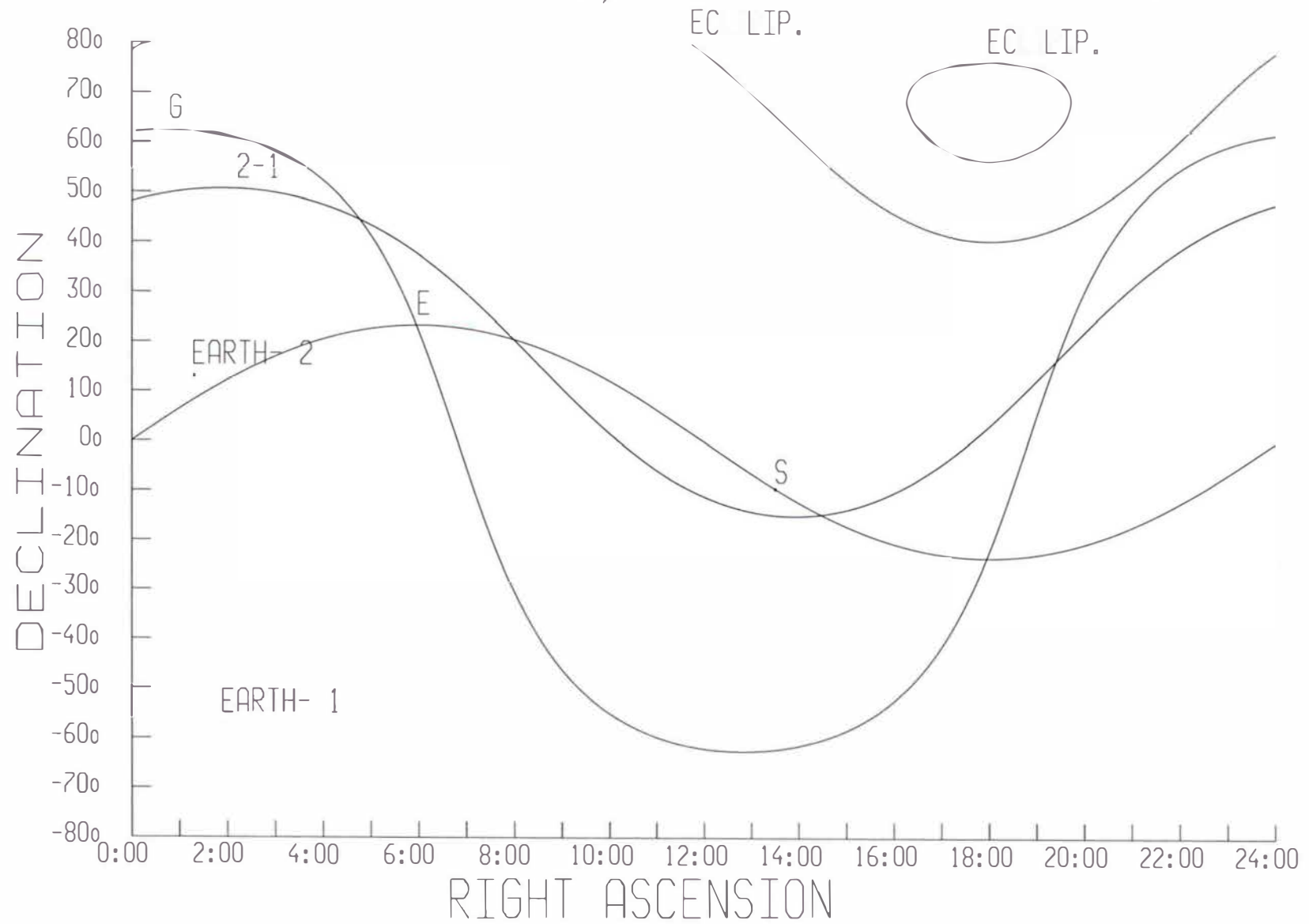
- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS and MBL databases updated with identical times?

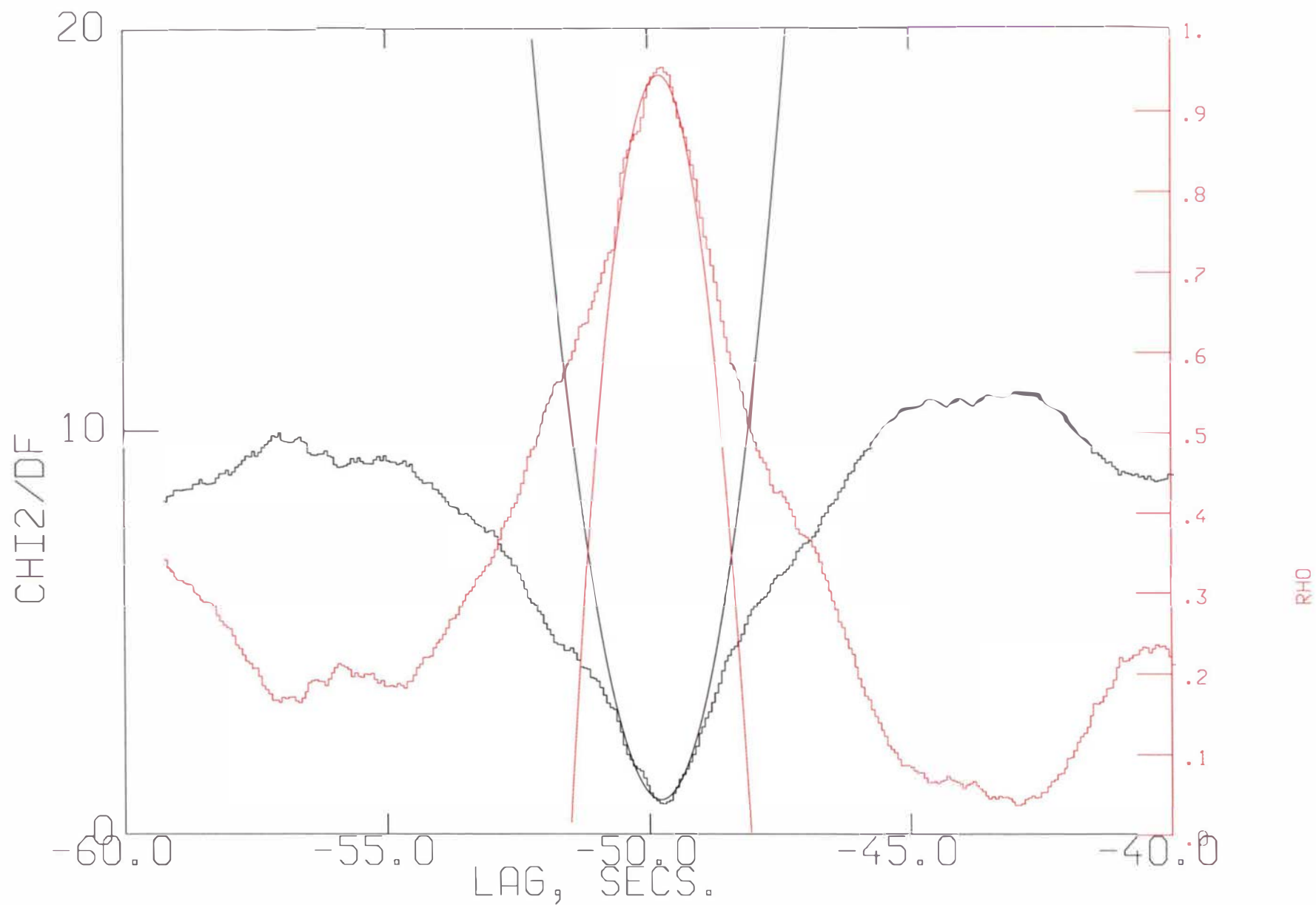


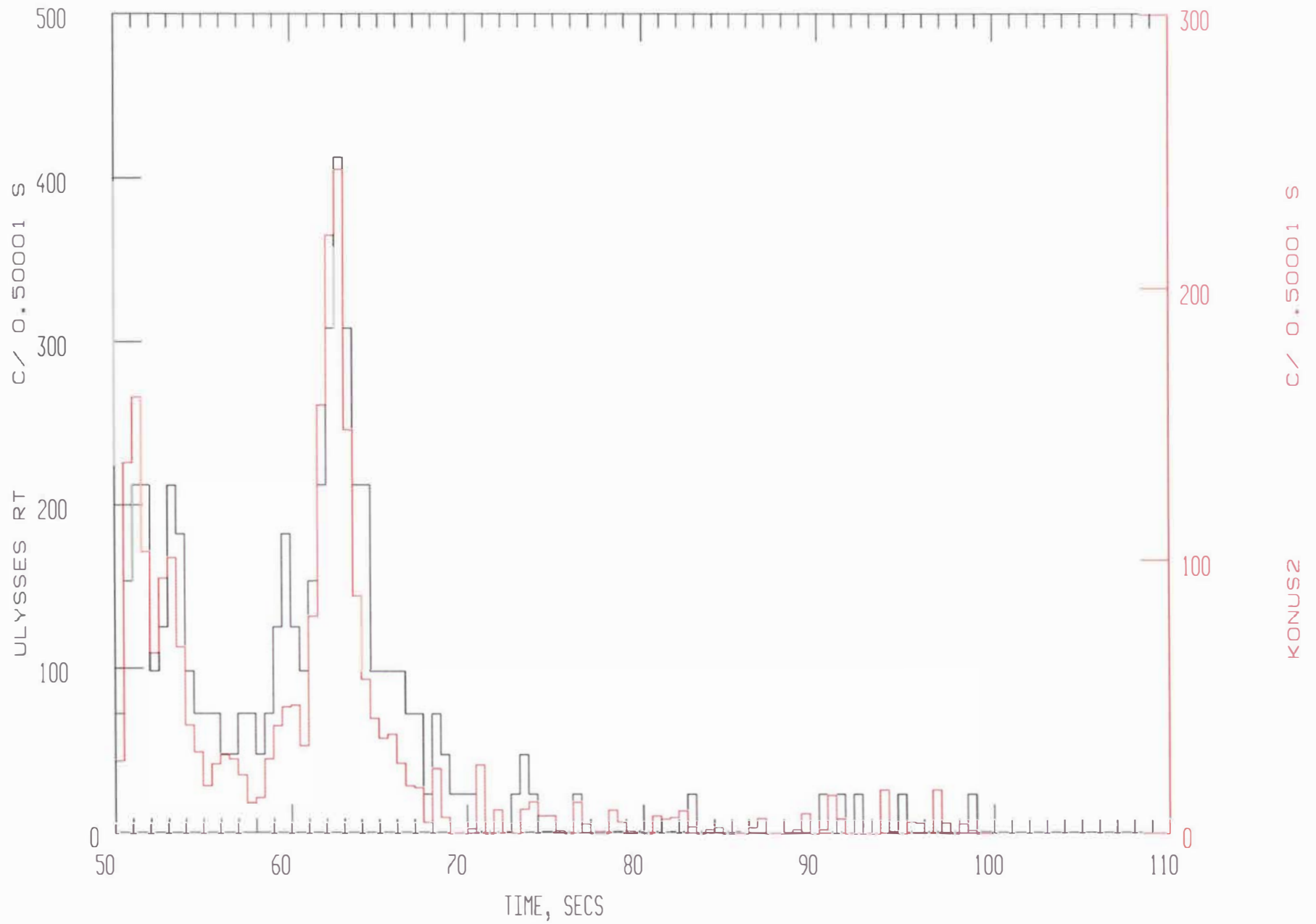
EVENT OF OCT 18, 1995 5:22

07/09/2011

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 KONUS2







KONUS 19951018 19405

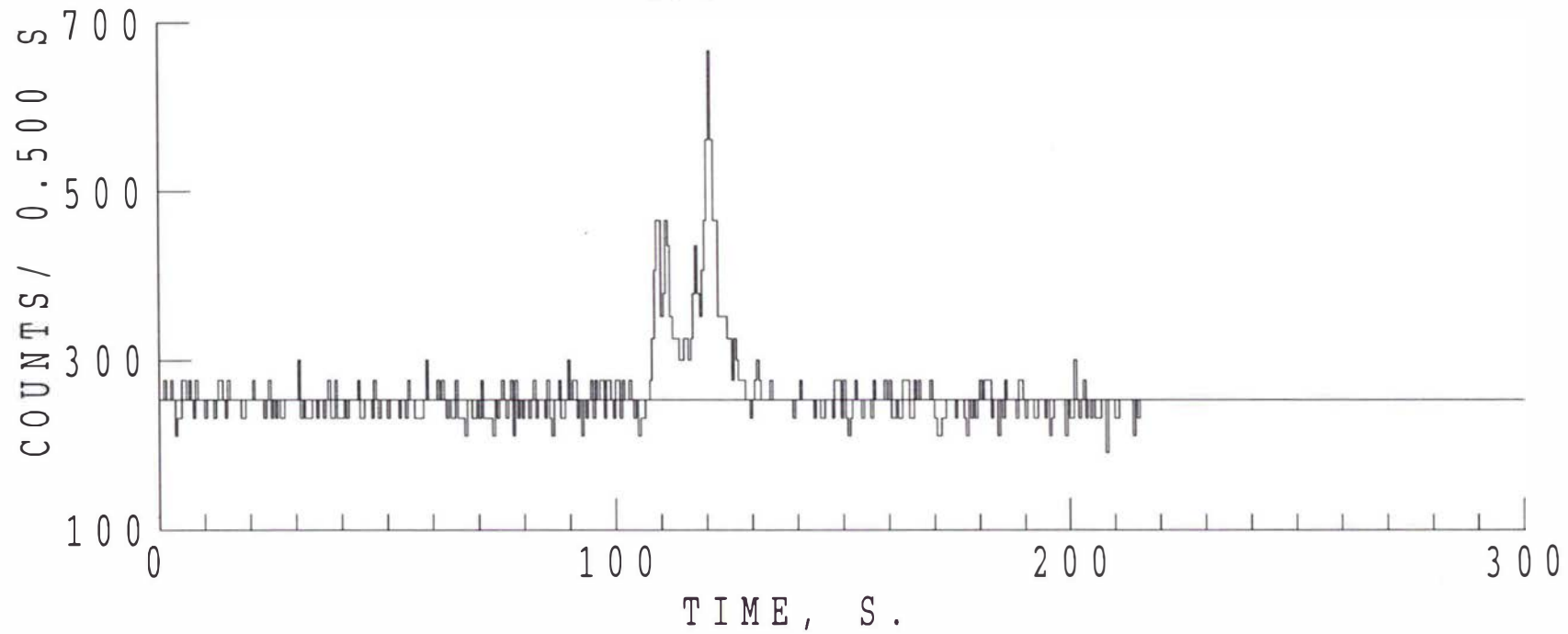
ULYSSES RT

01/09/11

18/10/95 19296.451 s

0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

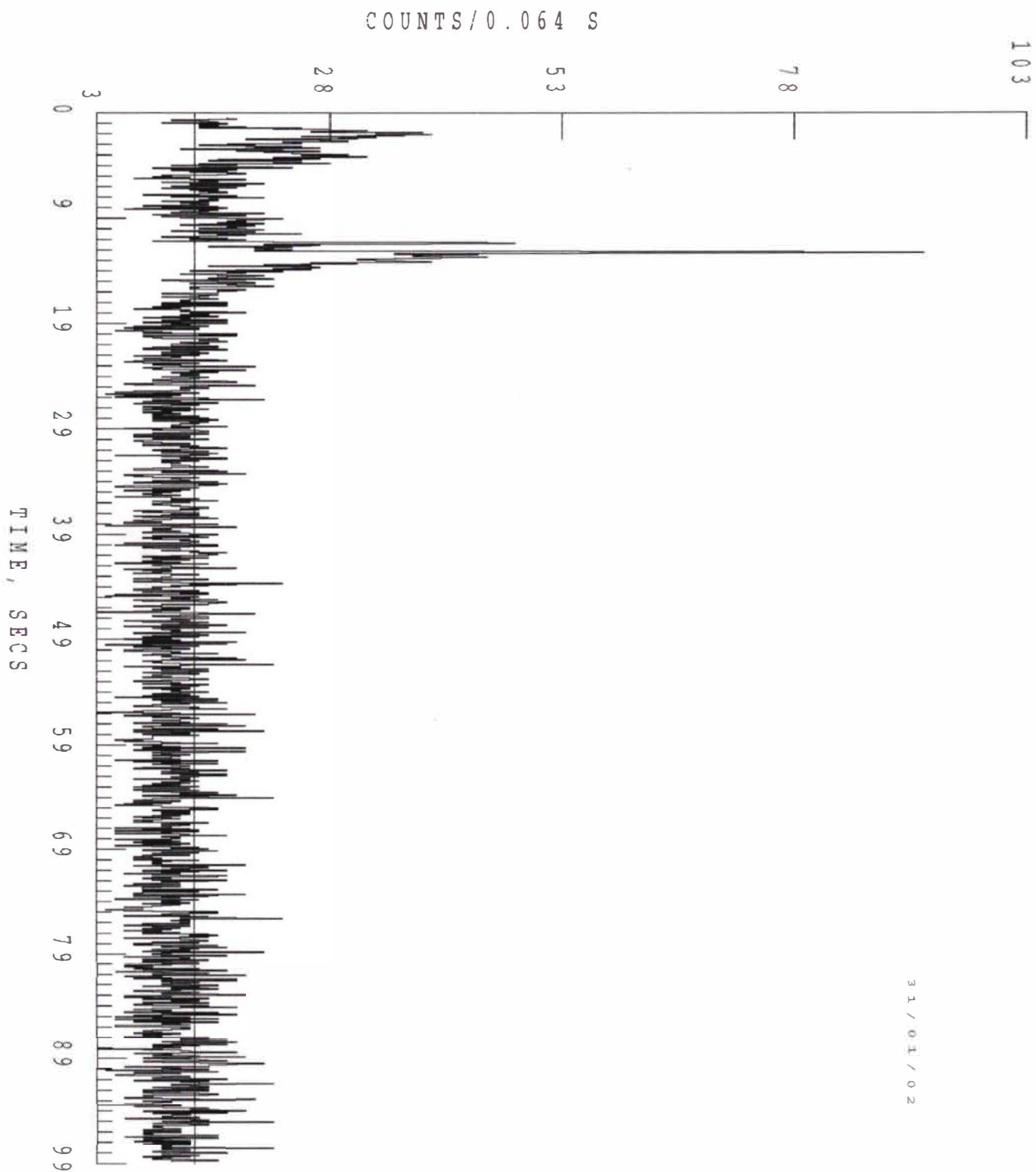


KONUS2

18/10/95

19832.069

50 - 200 keV



From HENZE@fender.msfc.nasa.gov Fri Oct 20 09:59 PDT 1995
From: HENZE@fender.msfc.nasa.gov
Date: Fri, 20 Oct 1995 11:59:22 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 03872

TIME: TJD=0008 SECONDS=84988

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

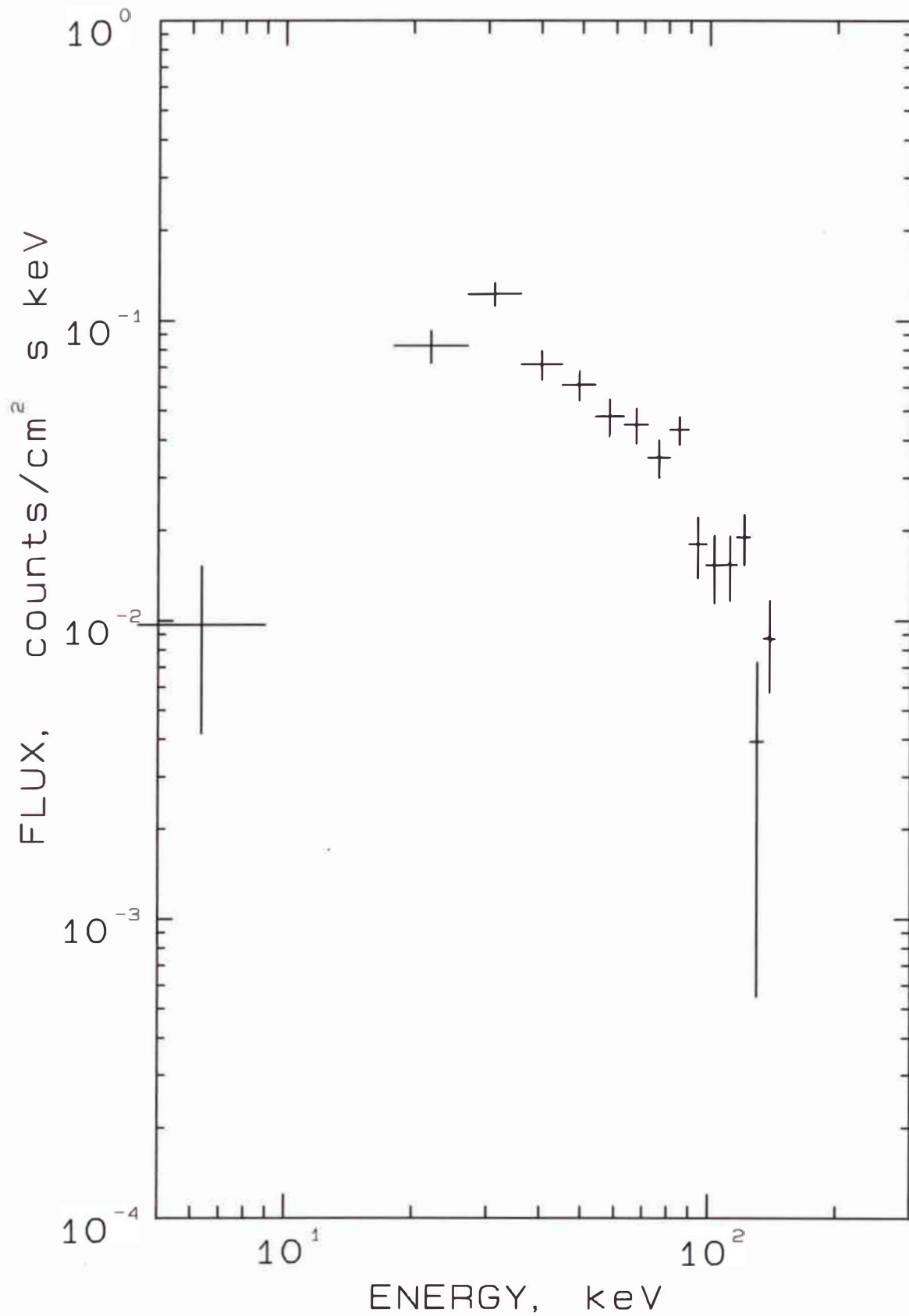
COMMENTS:

SAA ENTRY. (REPEAT OF EARLIER MESSAGE TO CORRECT 4-DIGIT VERSION OF TJD.

ULYSSES 18/10/95 19405.312

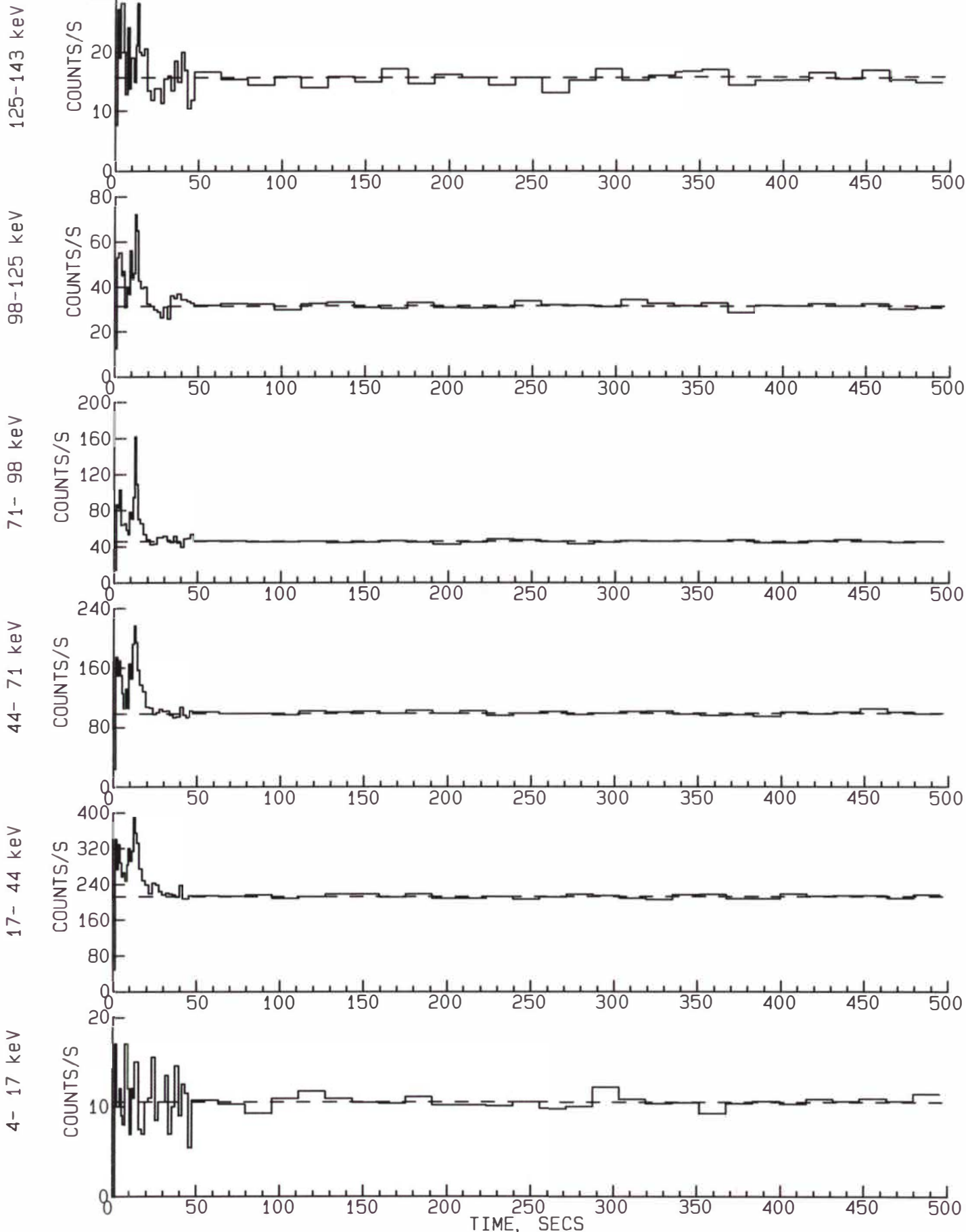
17/11/97

SPECTRUM INTEGRATED OVER 63.2 SECONDS, INTERVALS 2 TO 34



ULYSSES 18/10/95 19405.312 BURST SPECTRAL COUNT RATES

17 / 11 / 97



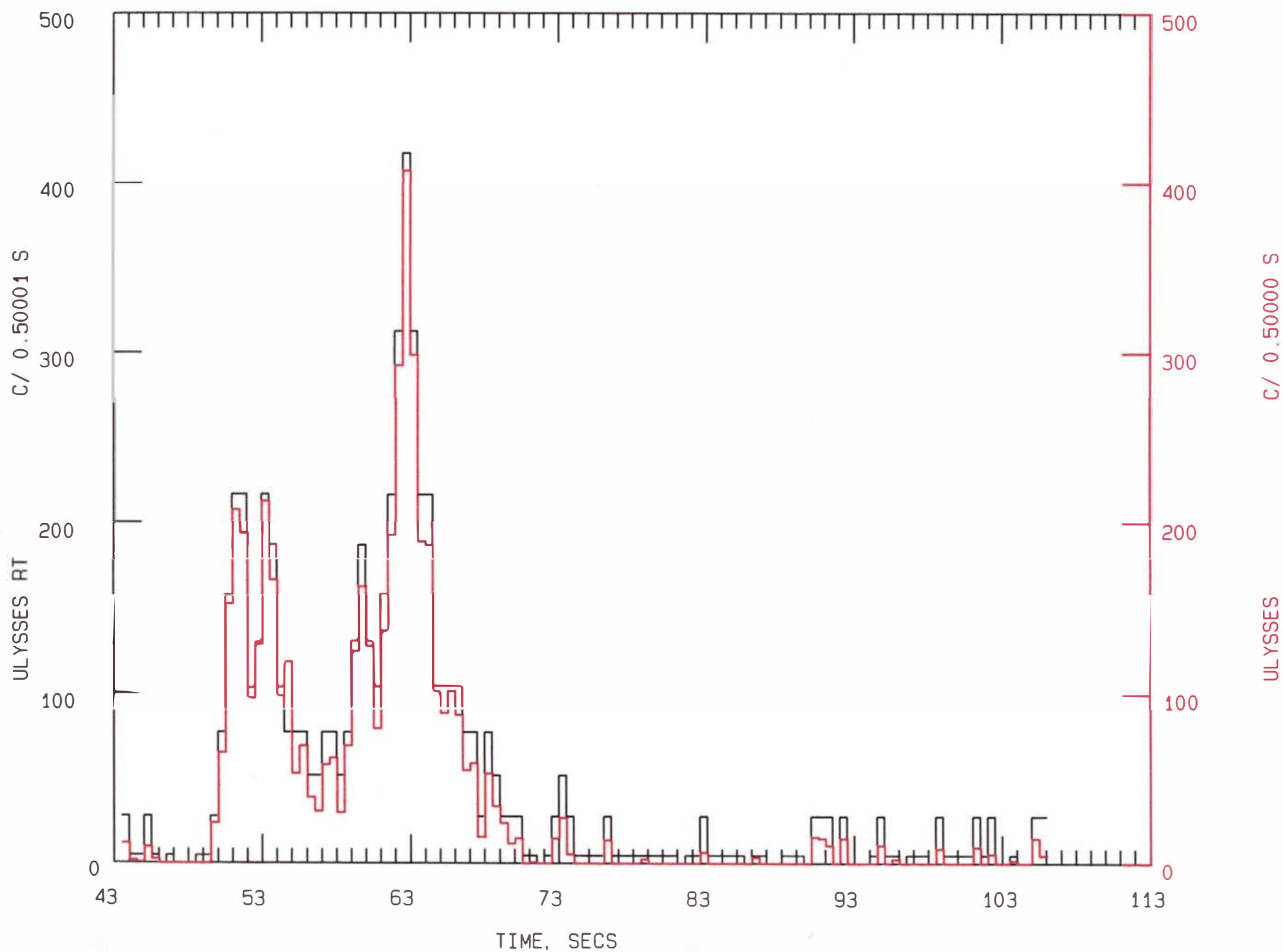
ULYSSES RT-ULYSSES

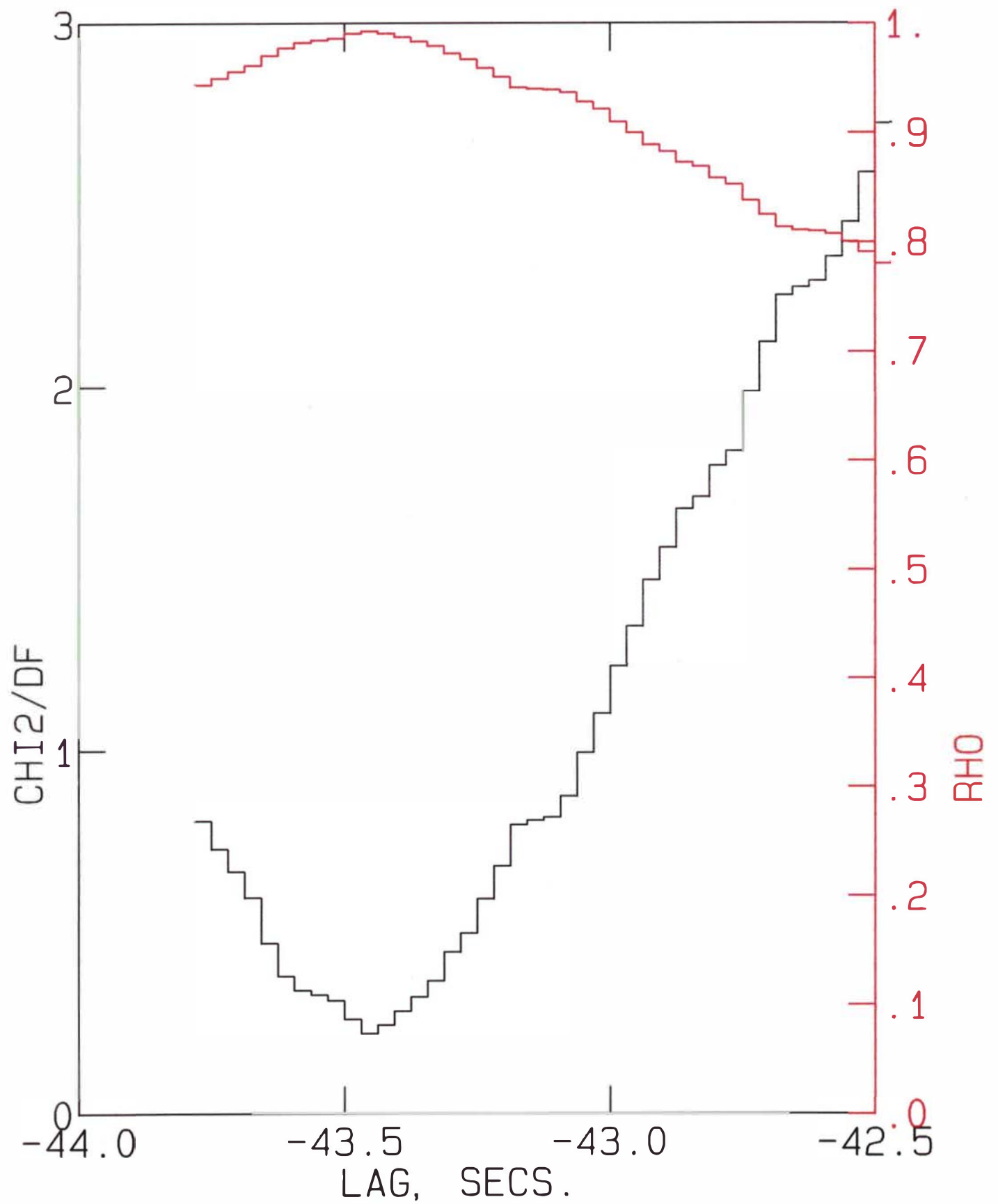
CORRELATION

18/10/95

19354.506

17/11/97





ULYSSES

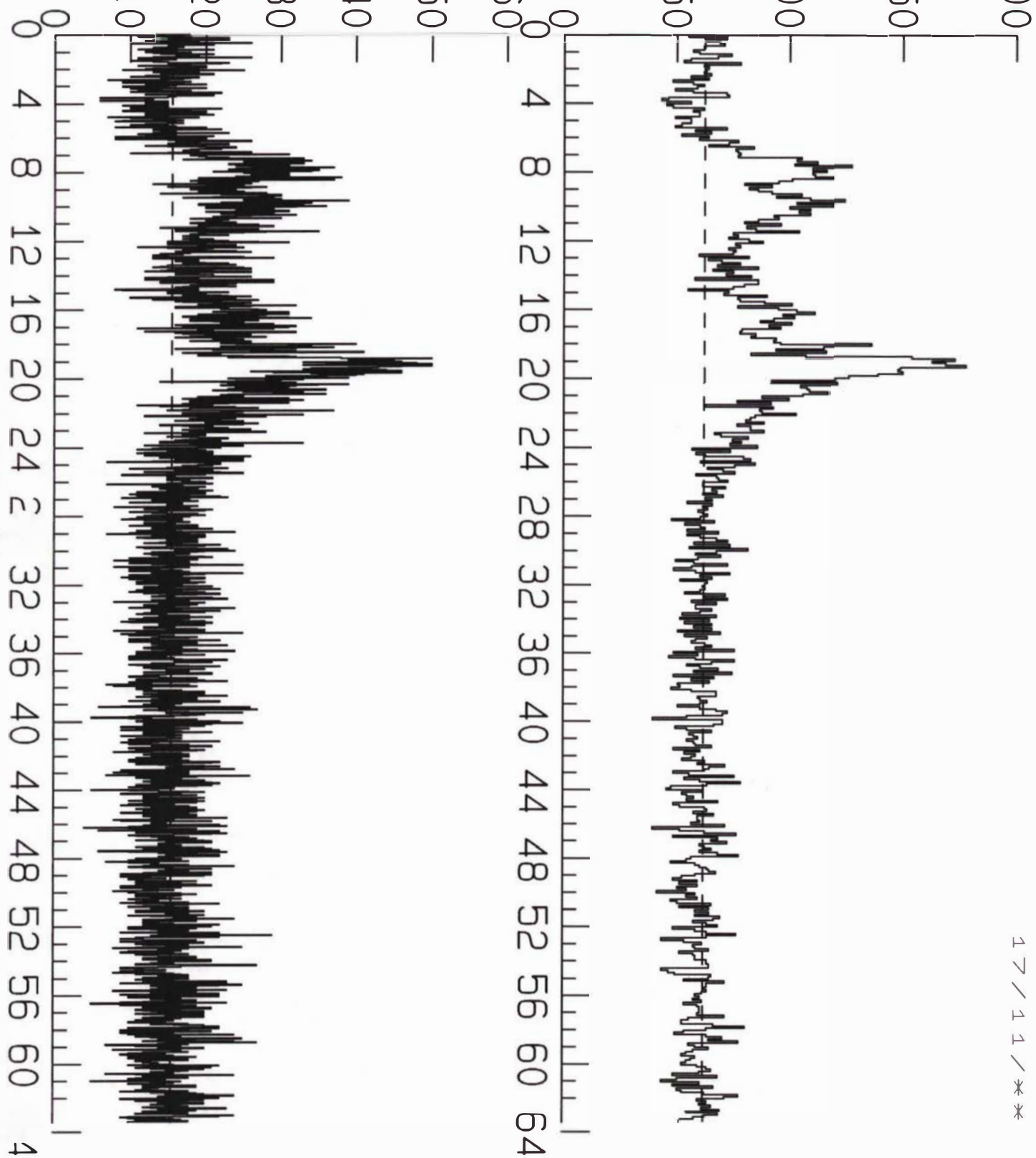
18/10/95

Ttrig=19405.368

21- 143 keV

COUNTS/0.031 S

COUNTS/0.125 S



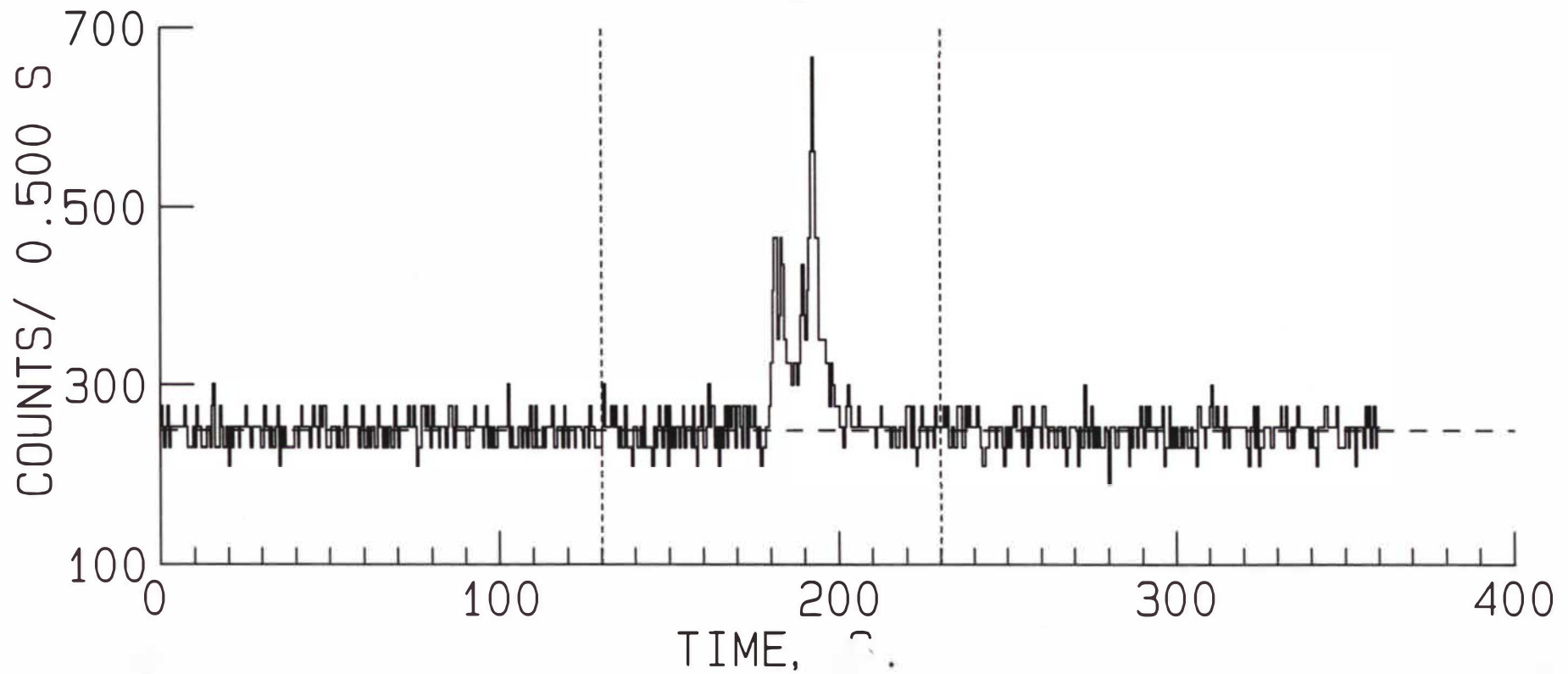
ULYSSES RT

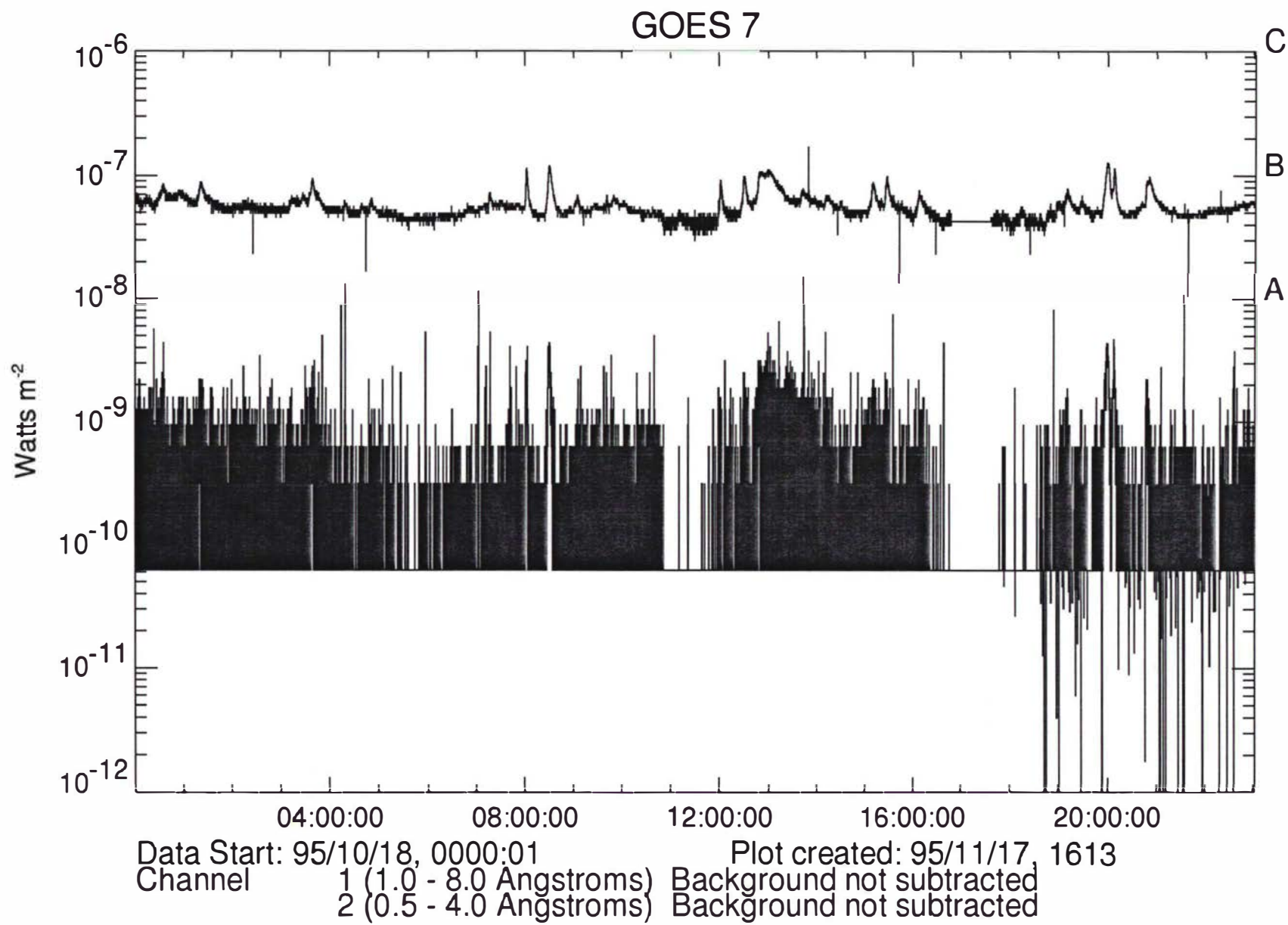
17 / 11 / 97

18/10/95 19224.452 s

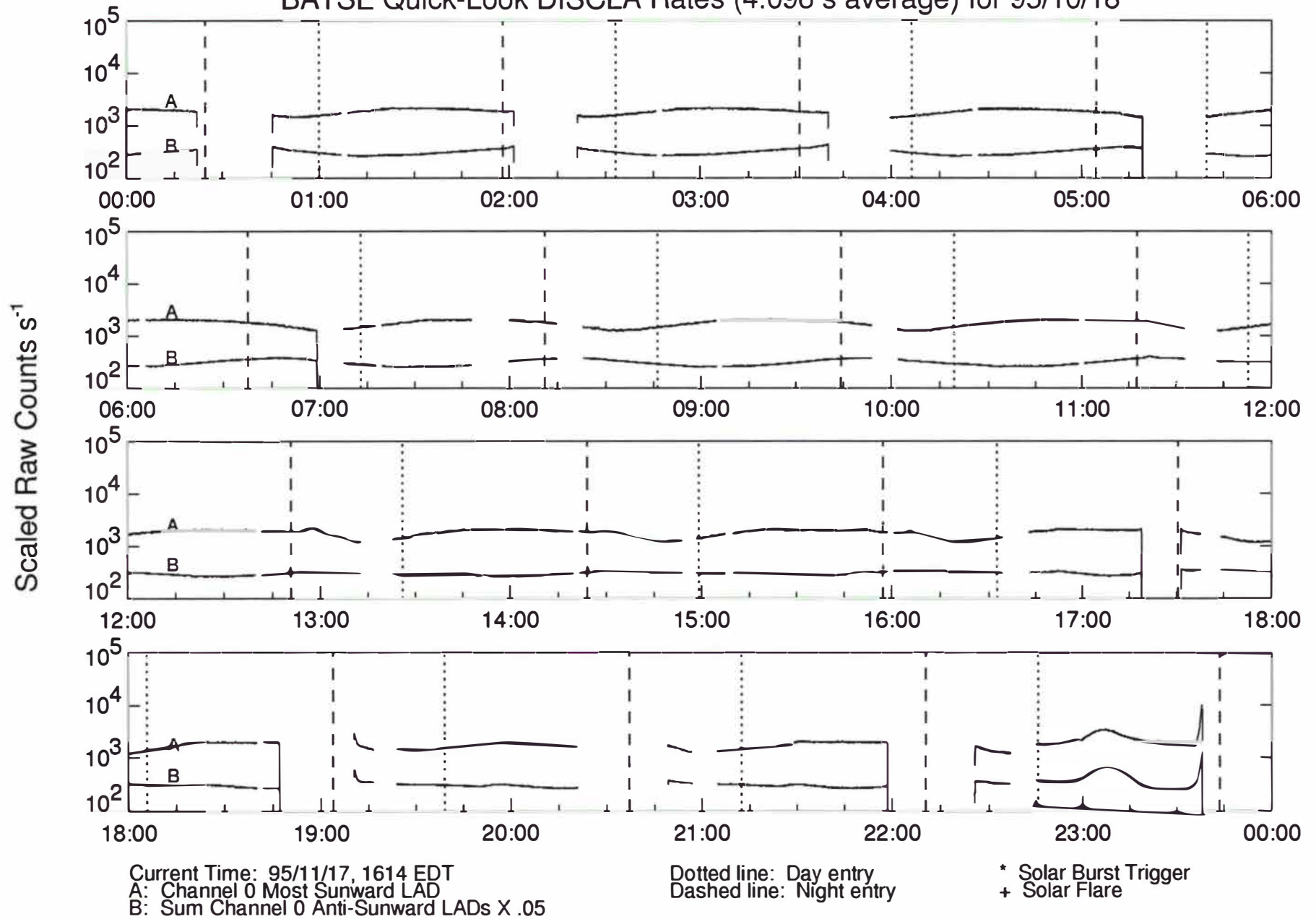
21- 143 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





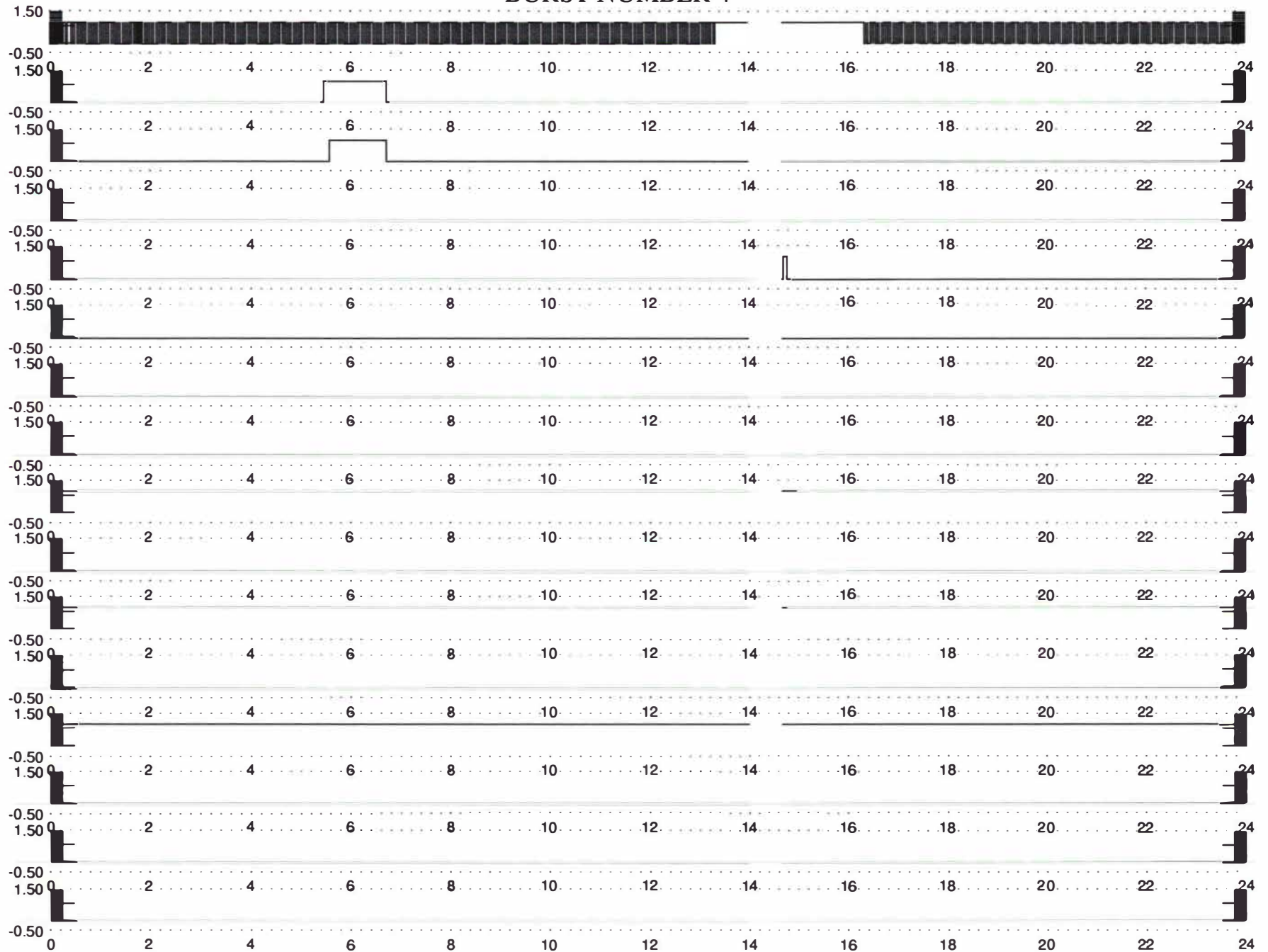
BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/18



HUS MODES EDR day 291, year 1995 to day 291, year 1995
BURST NUMBER 4

1/26/96

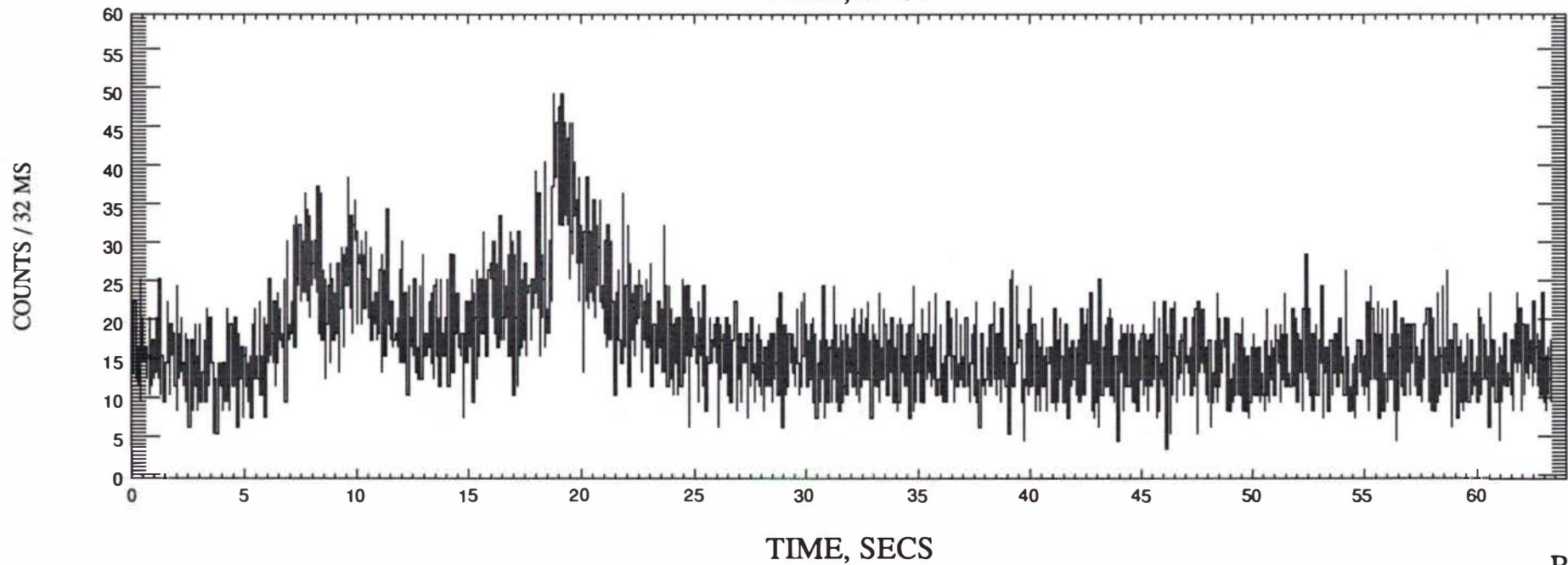
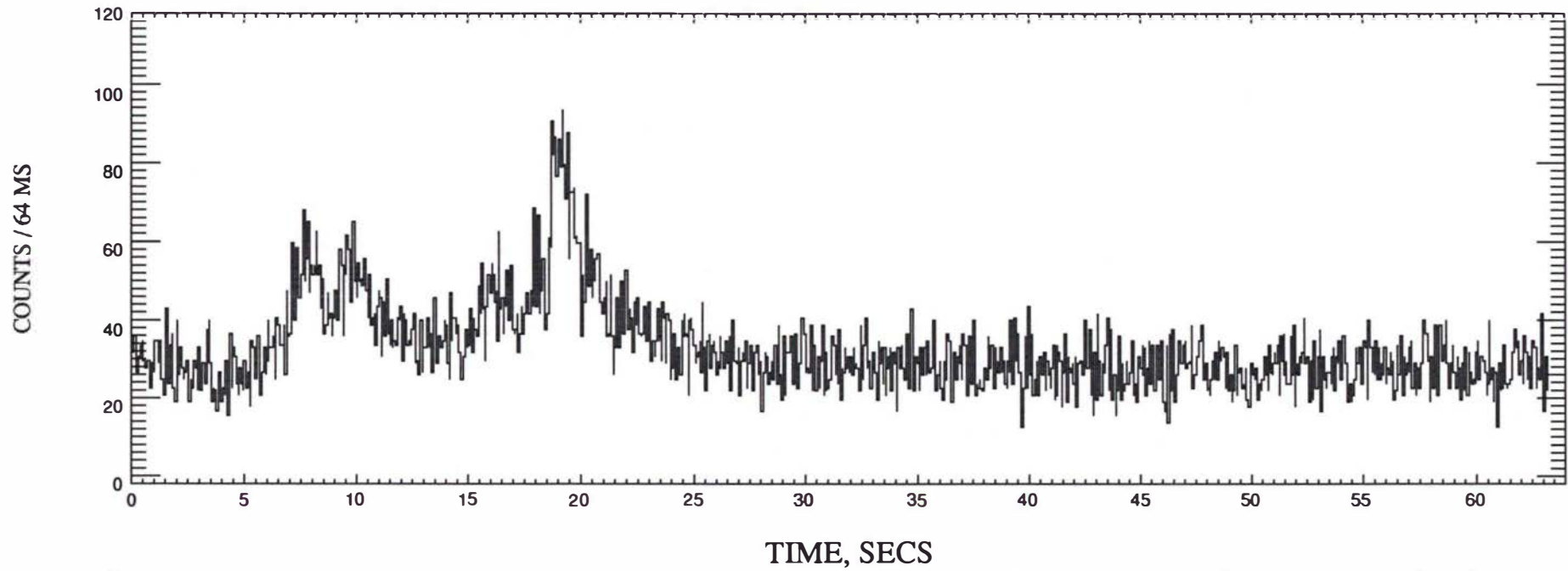
HUS
BRS
MEM
WCH
CAL
RSC
OPM
SPE
ICR
MP.
OSC
DMA
ROM
DMP
CCL
CBU



UNIV VAL TIME

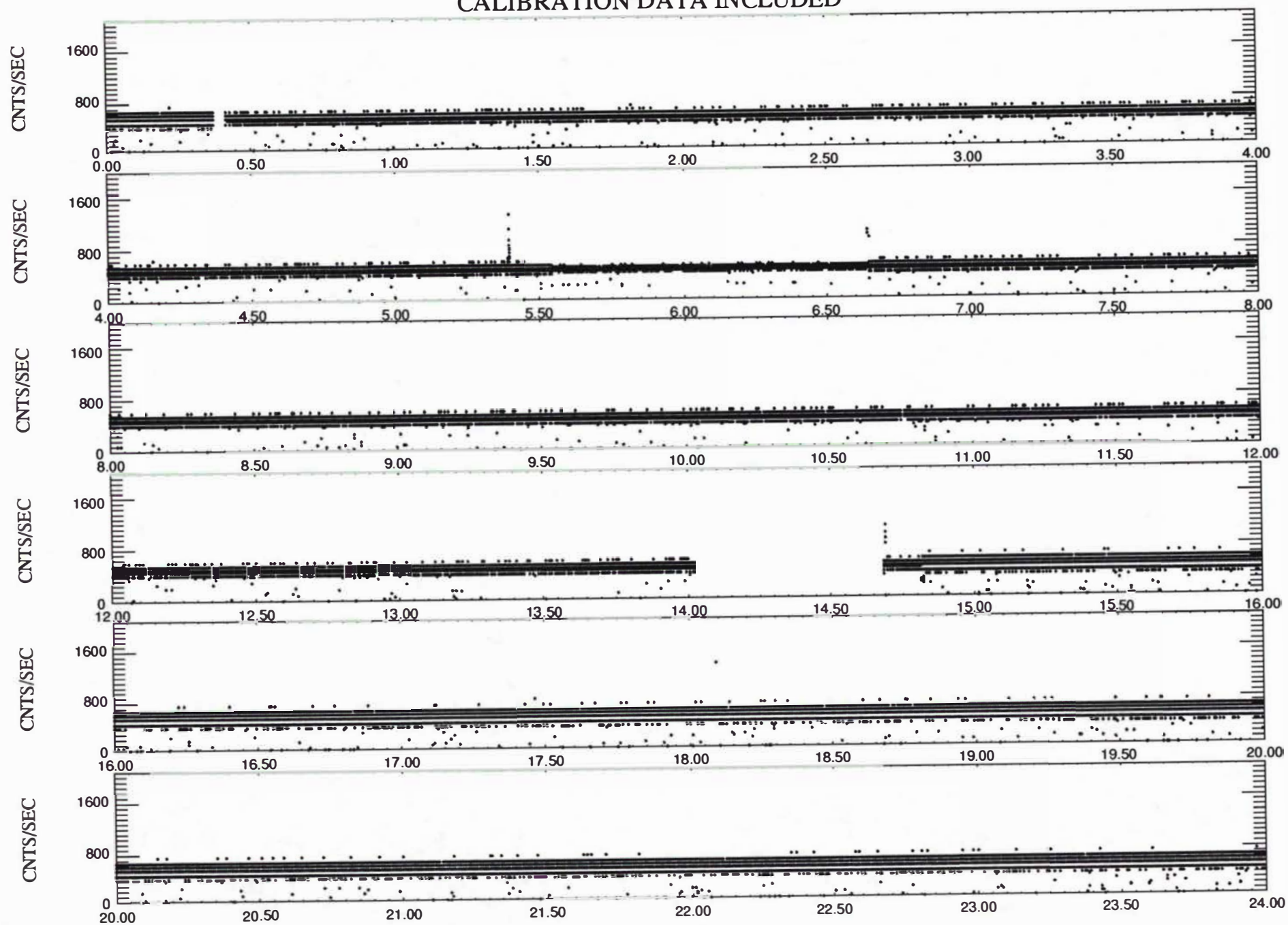
HUS 2A TRIGGERED DATA EDR day 291, year 1995
Burst Counter 4 at UT= 5.390364545186 h=19405.312 s 05:23:25.312

1/26/96

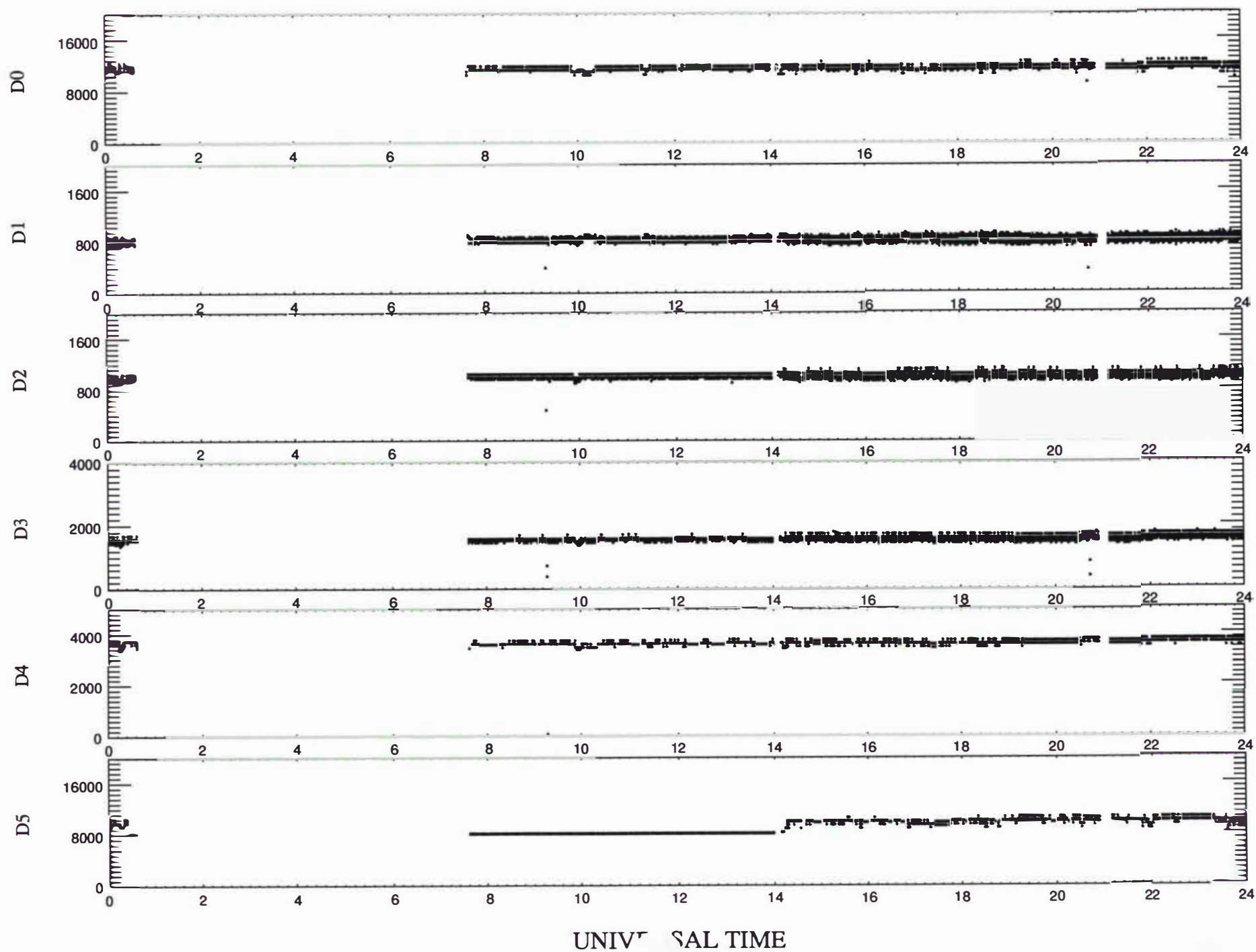


HUS 2A, MODE 1, NOT AVERAGED EDR day 291, year 1995 to day 291, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV. CAL TIME



KONUS1

19/10/95

10761.206

50 - 200 keV

COUNTS/0.064 S

09/03/11

TIME, SECS

KONUS HRES 19951019 10761

TRIGGER TIME: 19/10/95 DOY 292 Julian 2450010.62455 UT = 02.989 02:59:21 (10761.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

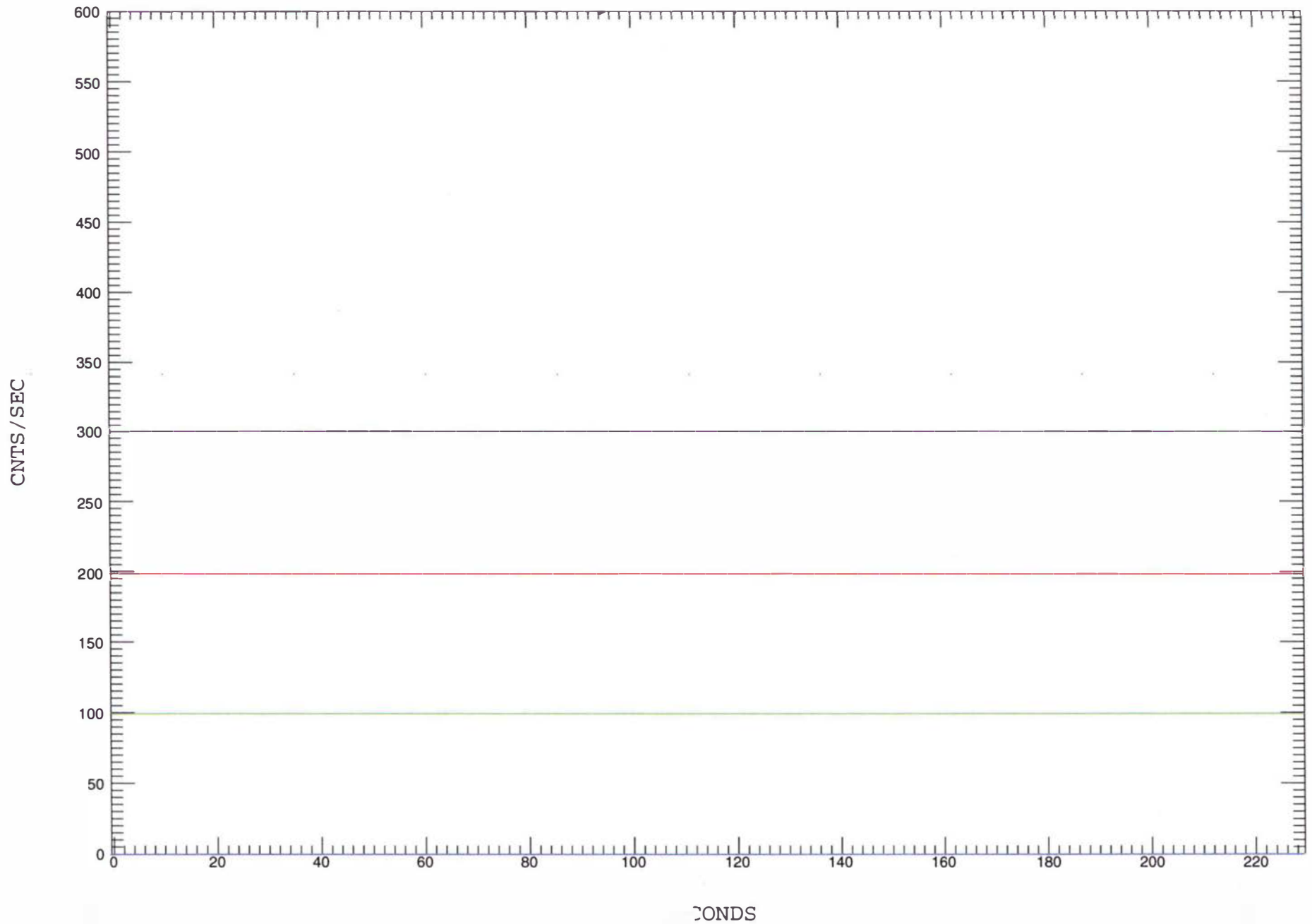
Chan 4 : [> 10 MeV]

Channel 1 + 300

Channel 2 + 200

Channel 3 + 100

Channel 4 + 0



Date: Sep 6 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

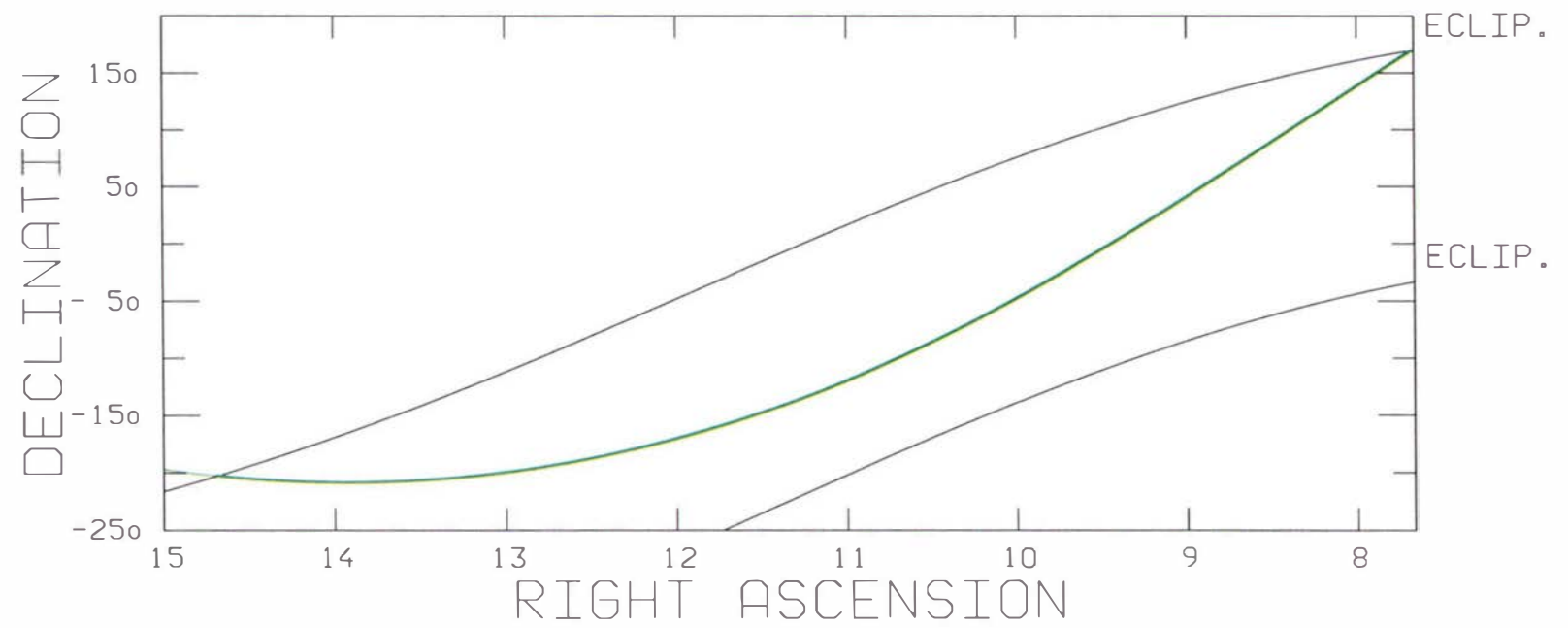
- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☒ Is the order of the data in CORREL such that a vernier is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

2. BATSE Data

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

3. PVO Data

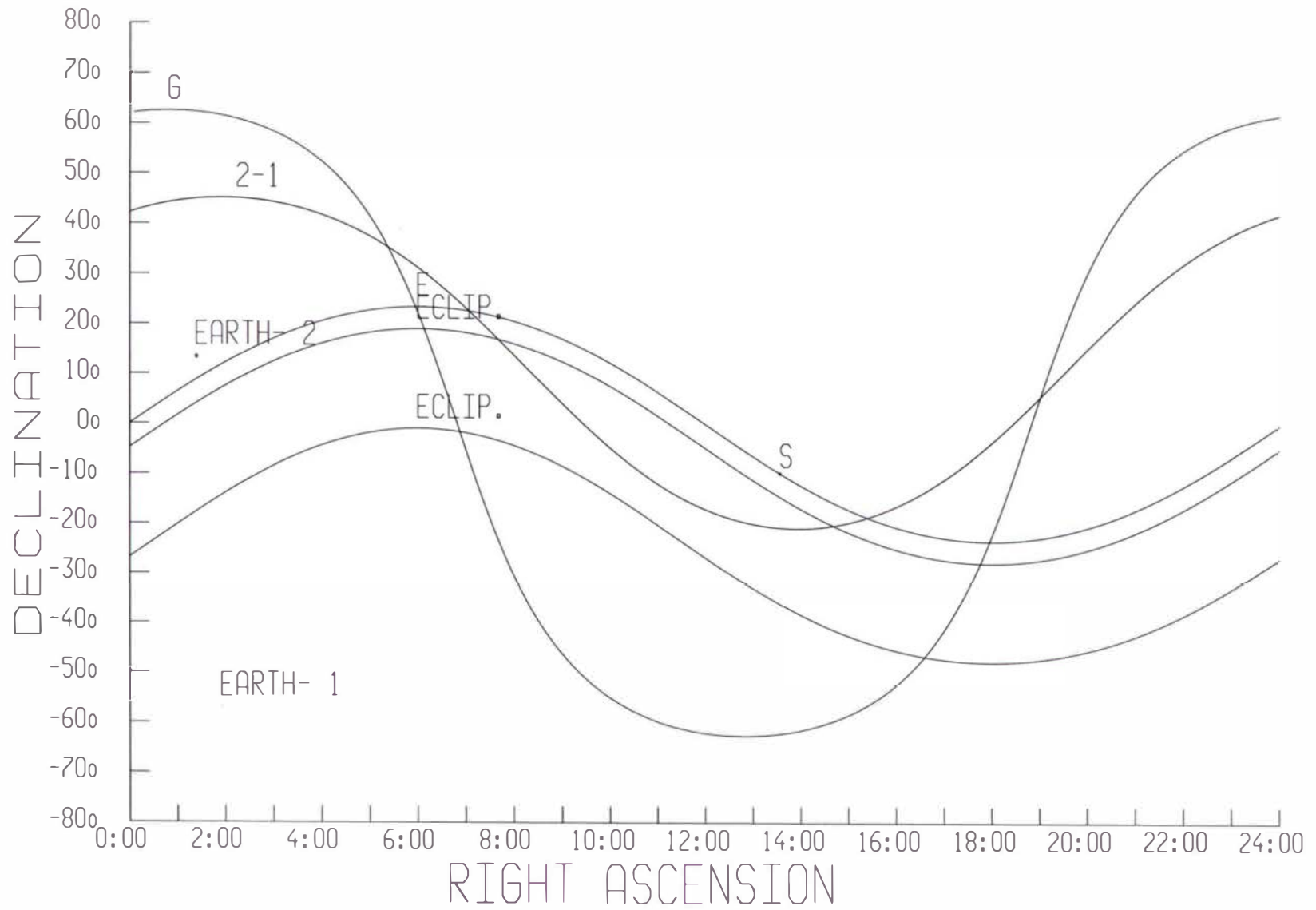
- ☐ Ephemeris of PVO used (not Venus)?
 - ☐ 2000 coordinates used?
 - ☐ Geocentric time used?
-
- ☒ ACCESS and MBL databases updated with identical times?

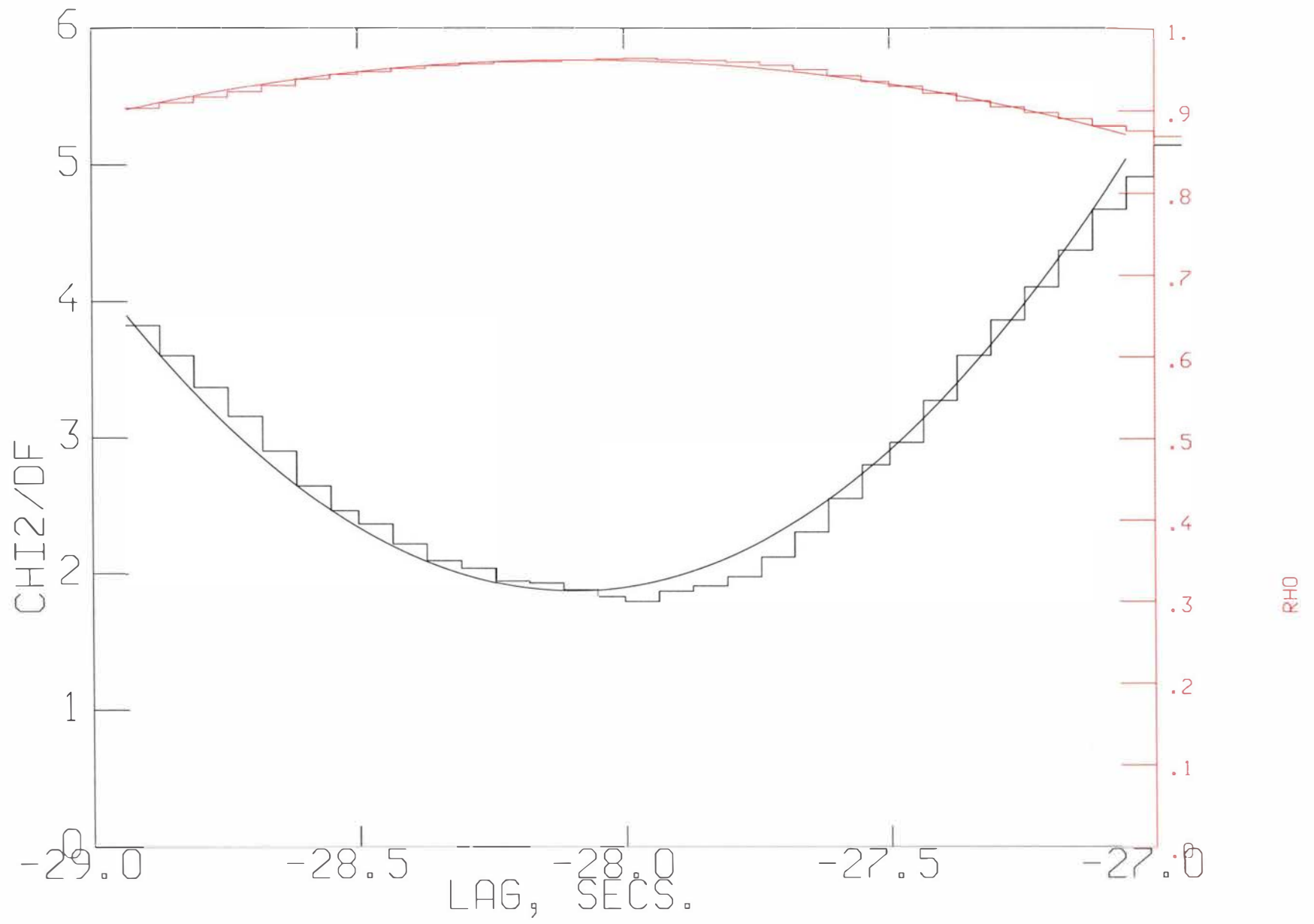


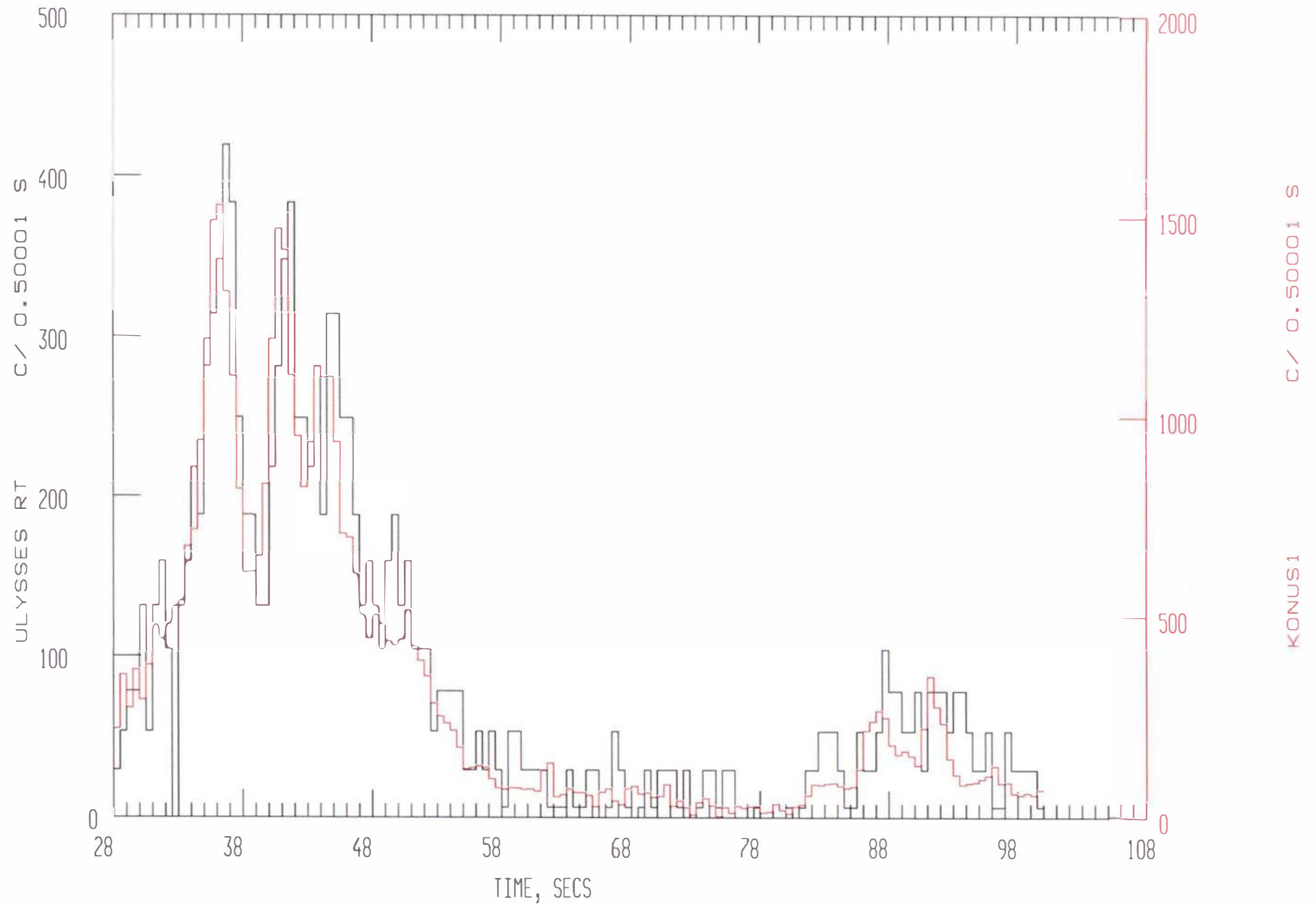
EVENT OF OCT 19, 1995 3:09

06/09/2011

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 19951019 11424

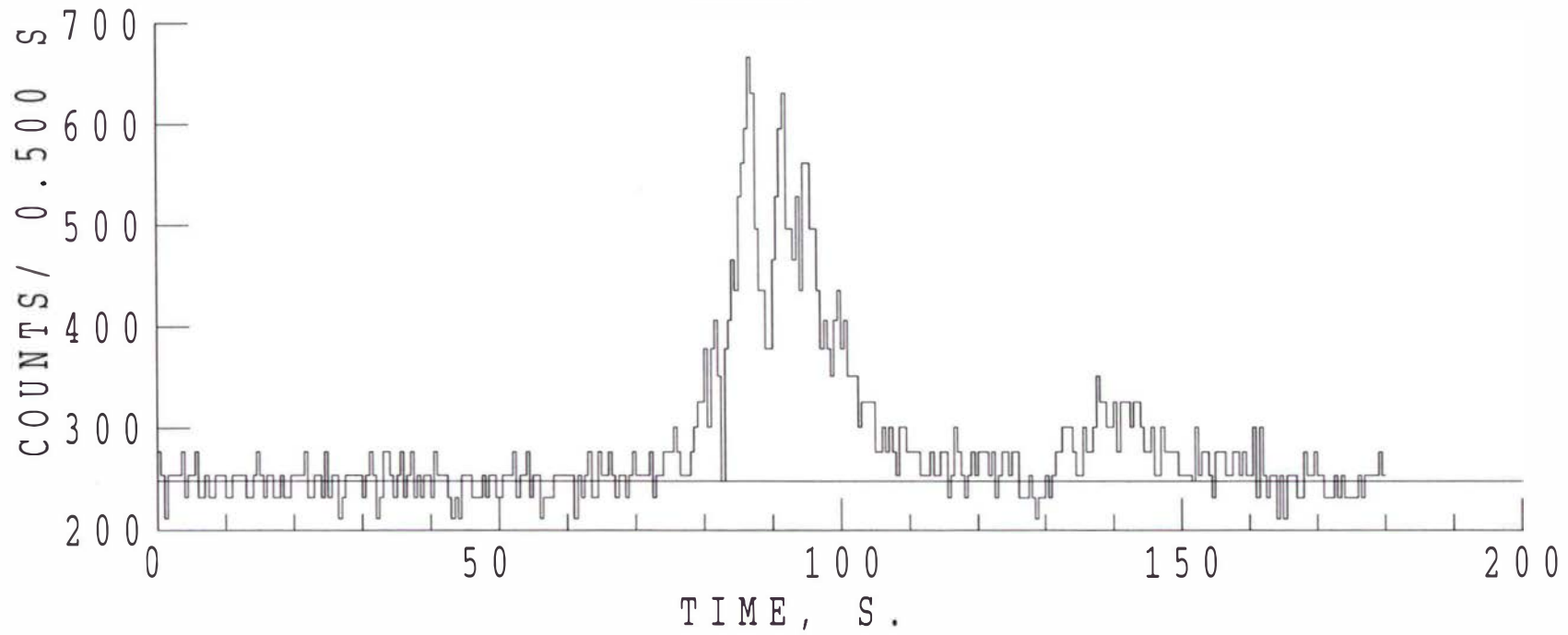
ULYSSES RT

01/09/11

19/10/95 11340.223 s

0 - 0 keV

N= 10 K= 2
>4.0 SIGMA FLUCTUATIONS



KONUS1 19951019 10761

ULYSSES RT

09 / 03 / 11

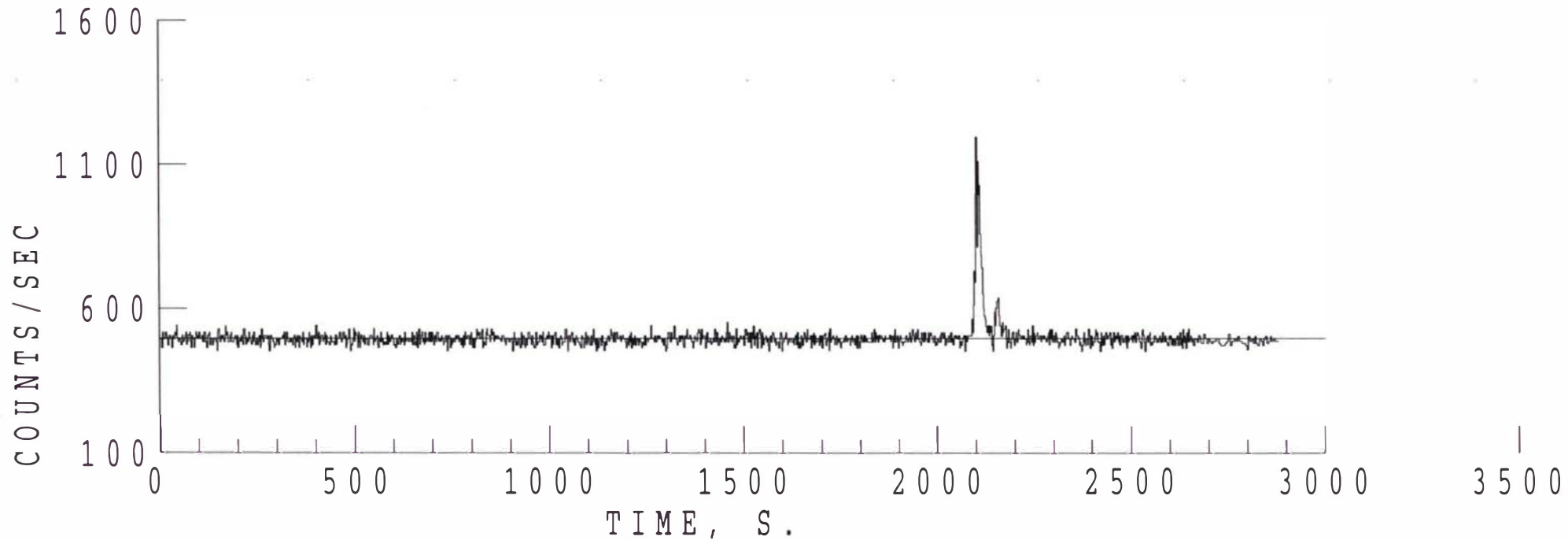
19/10/95 9324.190 s

INTERVALS REGROUPED BY 4

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

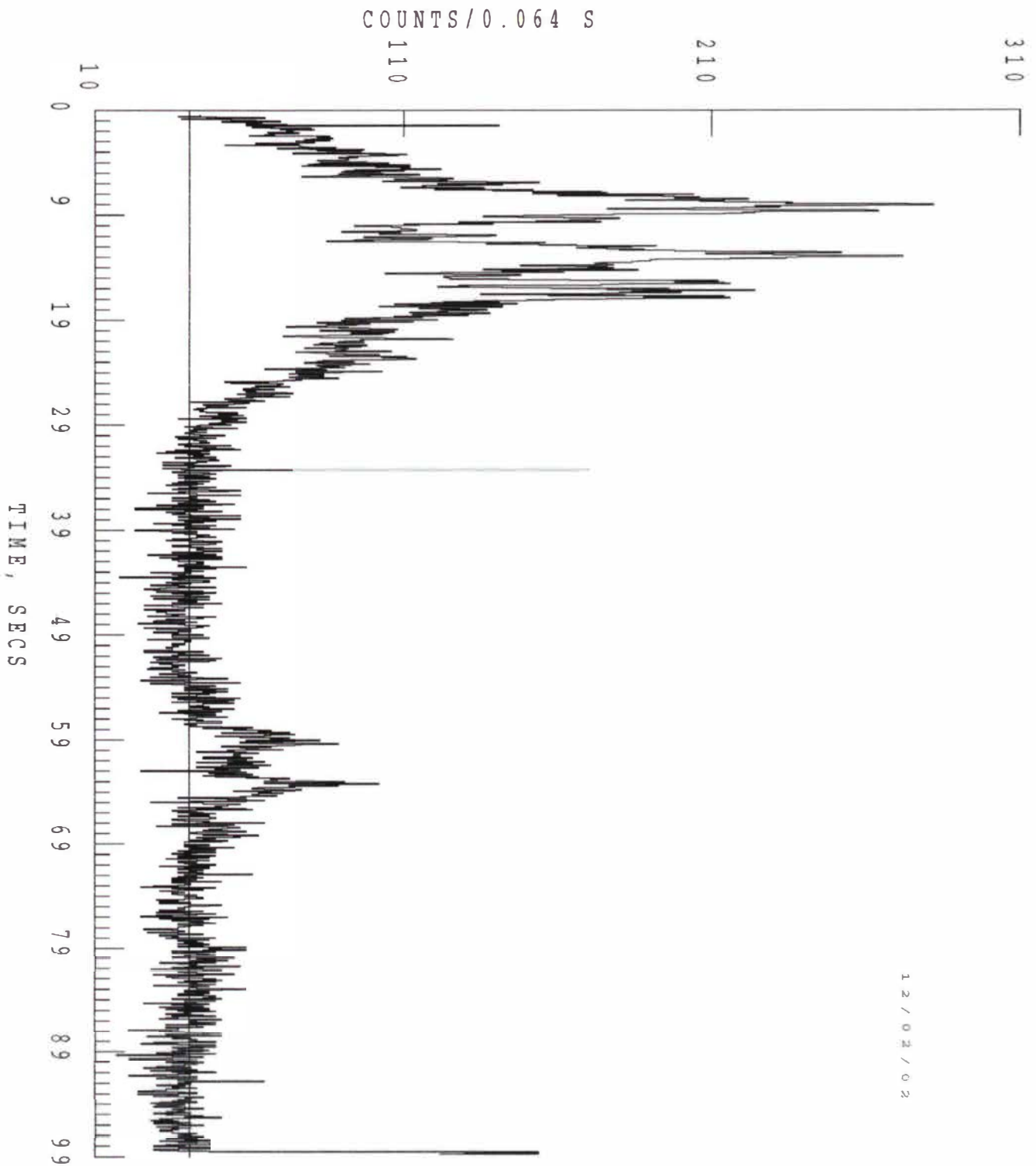


KONUS1

19/10/95

11712.625

50 - 200 keV



KONUS1 19951019 11712

ULYSSES RT

12 / 02 / 02

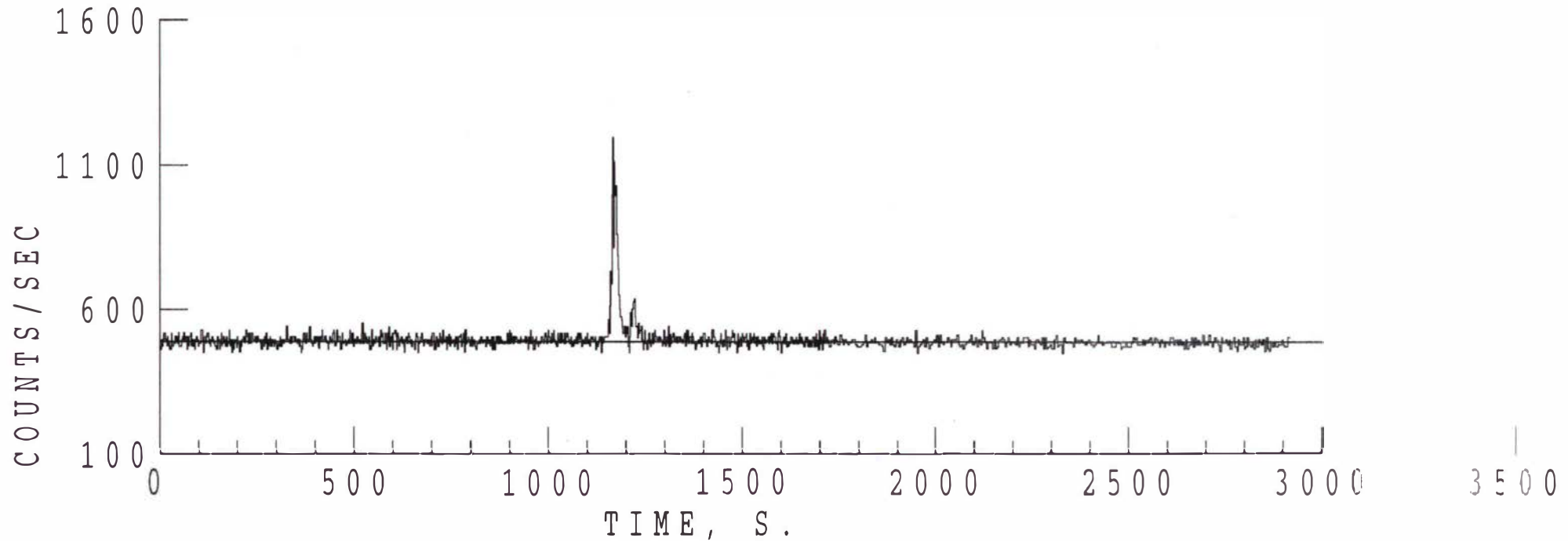
19/10/95 10260.207 s

INTERVALS REGROUPED BY 4

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

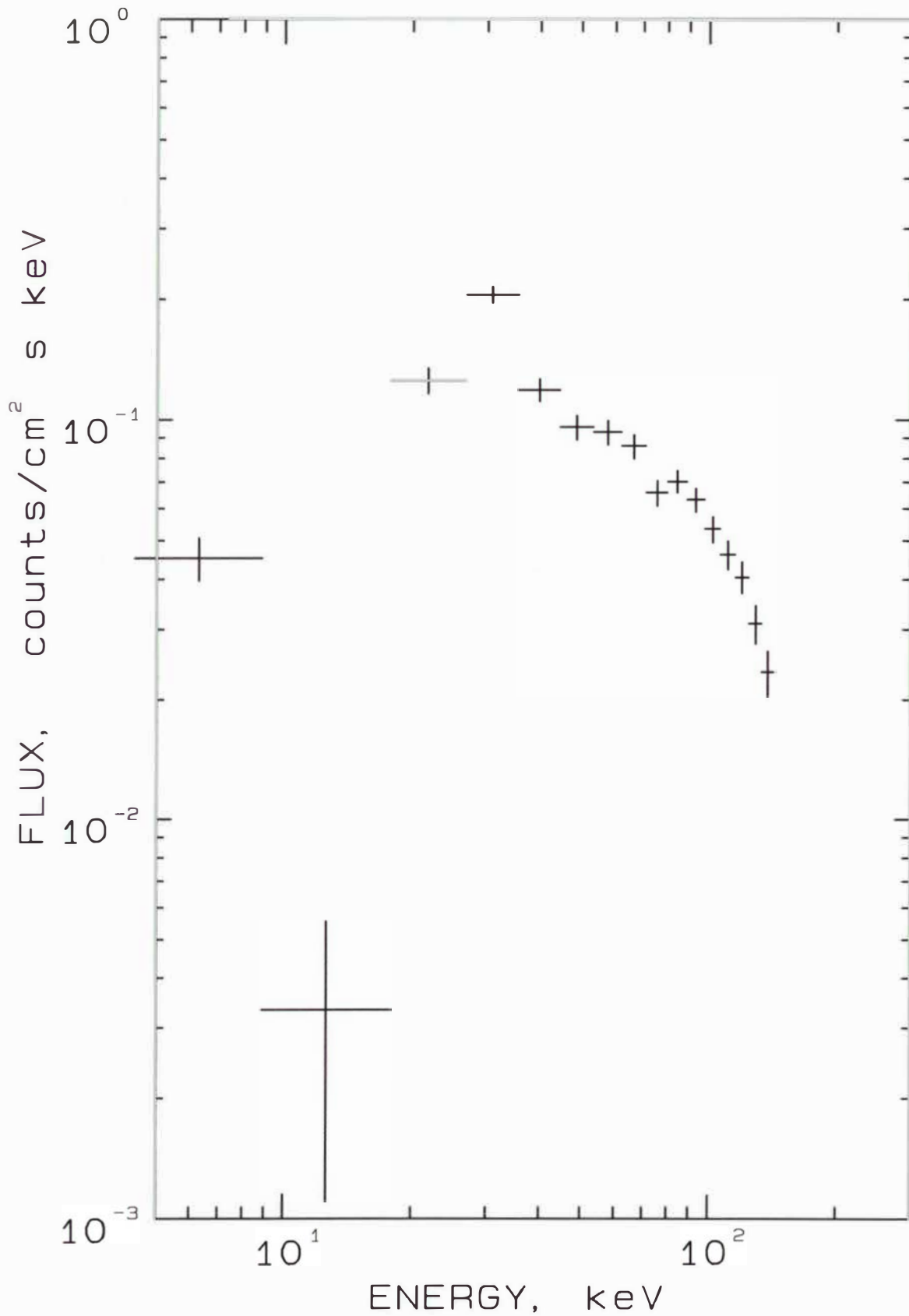
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



ULYSSES 19/10/95 11423.958

17/11/97

SPECTRUM INTEGRATED OVER 78.8 SECONDS, INTERVALS 2 TO 35



ULYSSES 19/10/95 11423.958 BURST SPECTRAL COUNT RATES

4- 17 keV

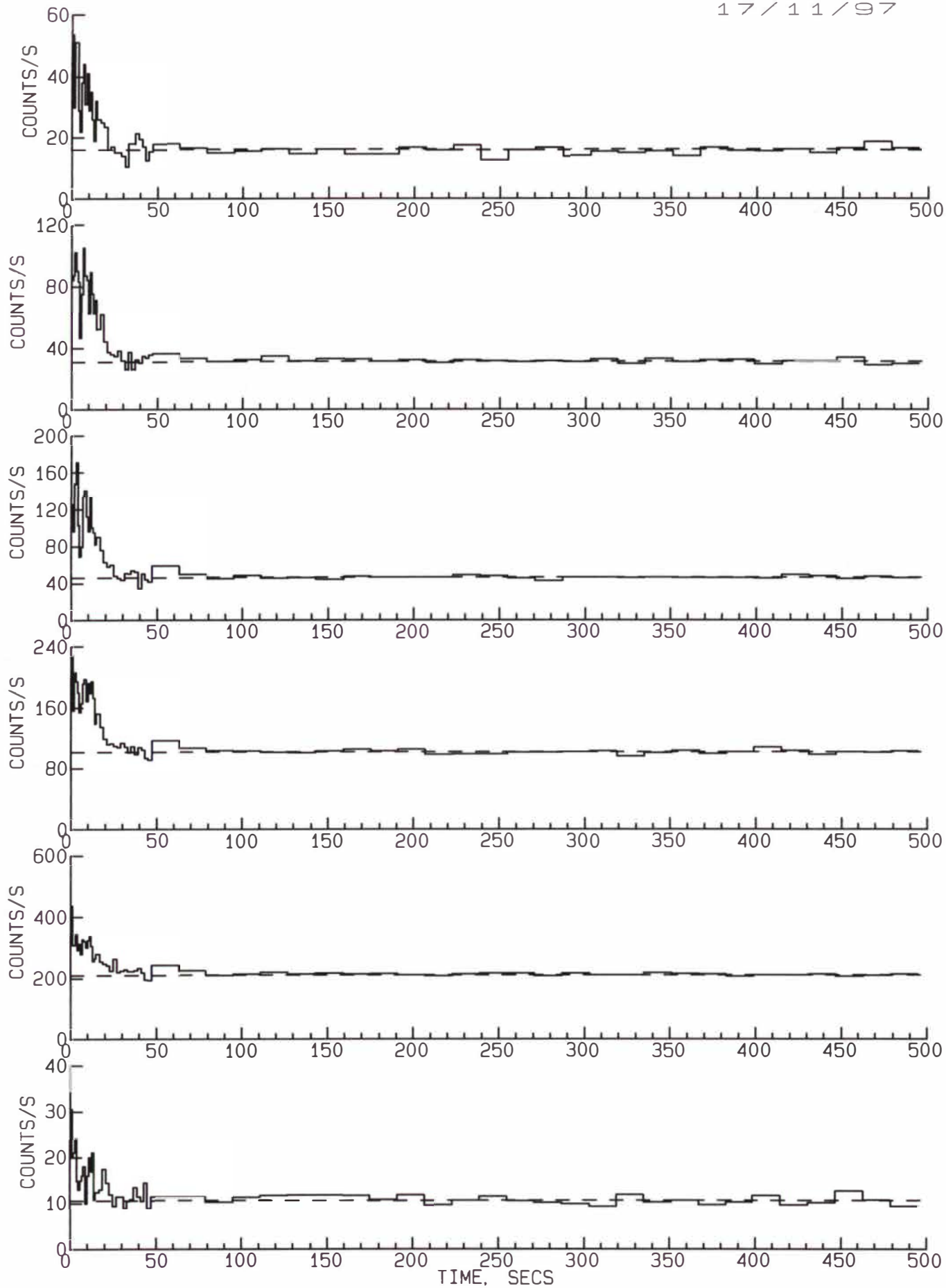
17- 44 keV

44- 71 keV

71- 98 keV

98-124 keV

124-142 keV



17 / 11 / 97

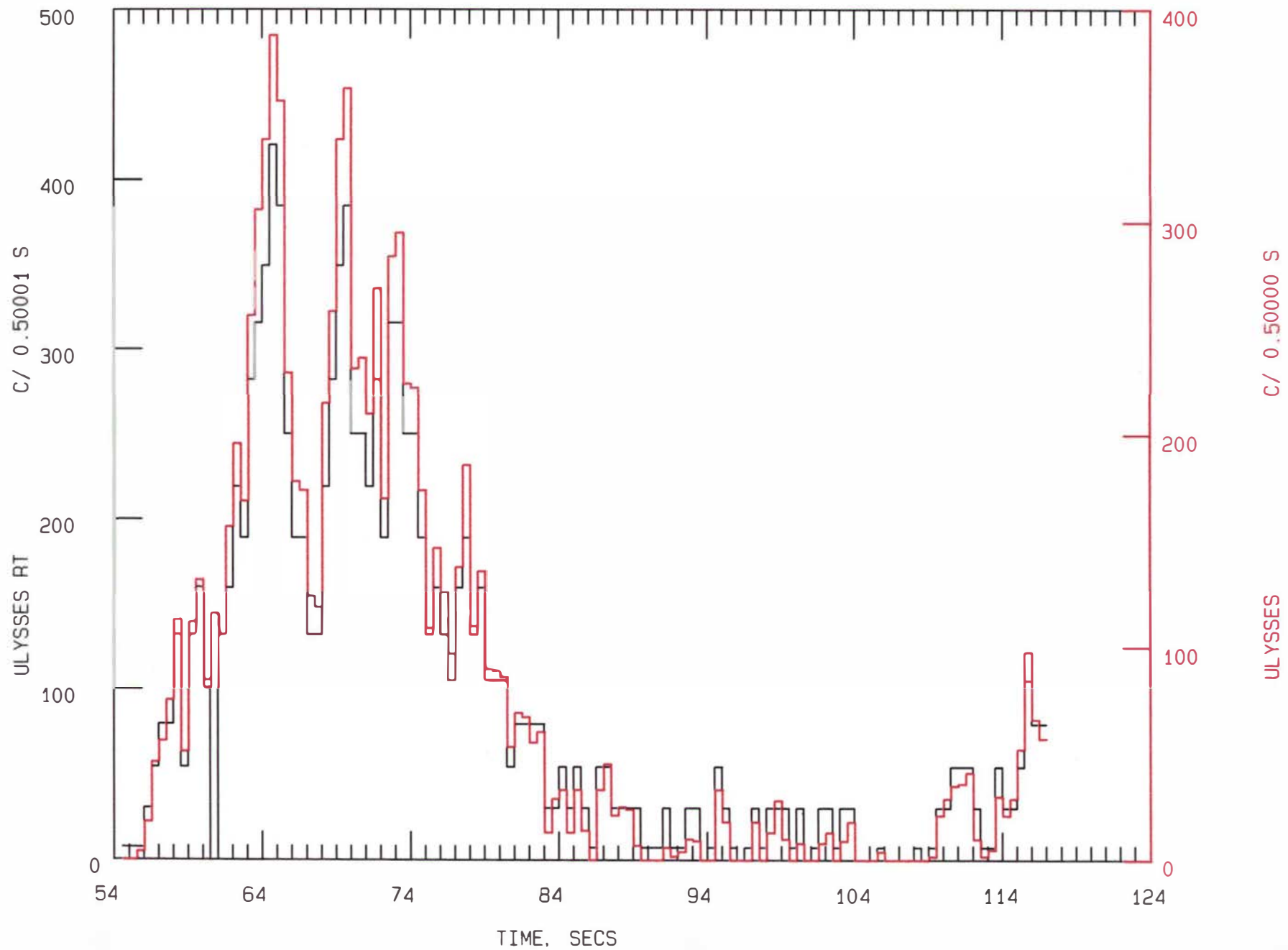
ULYSSES RT-ULYSSES

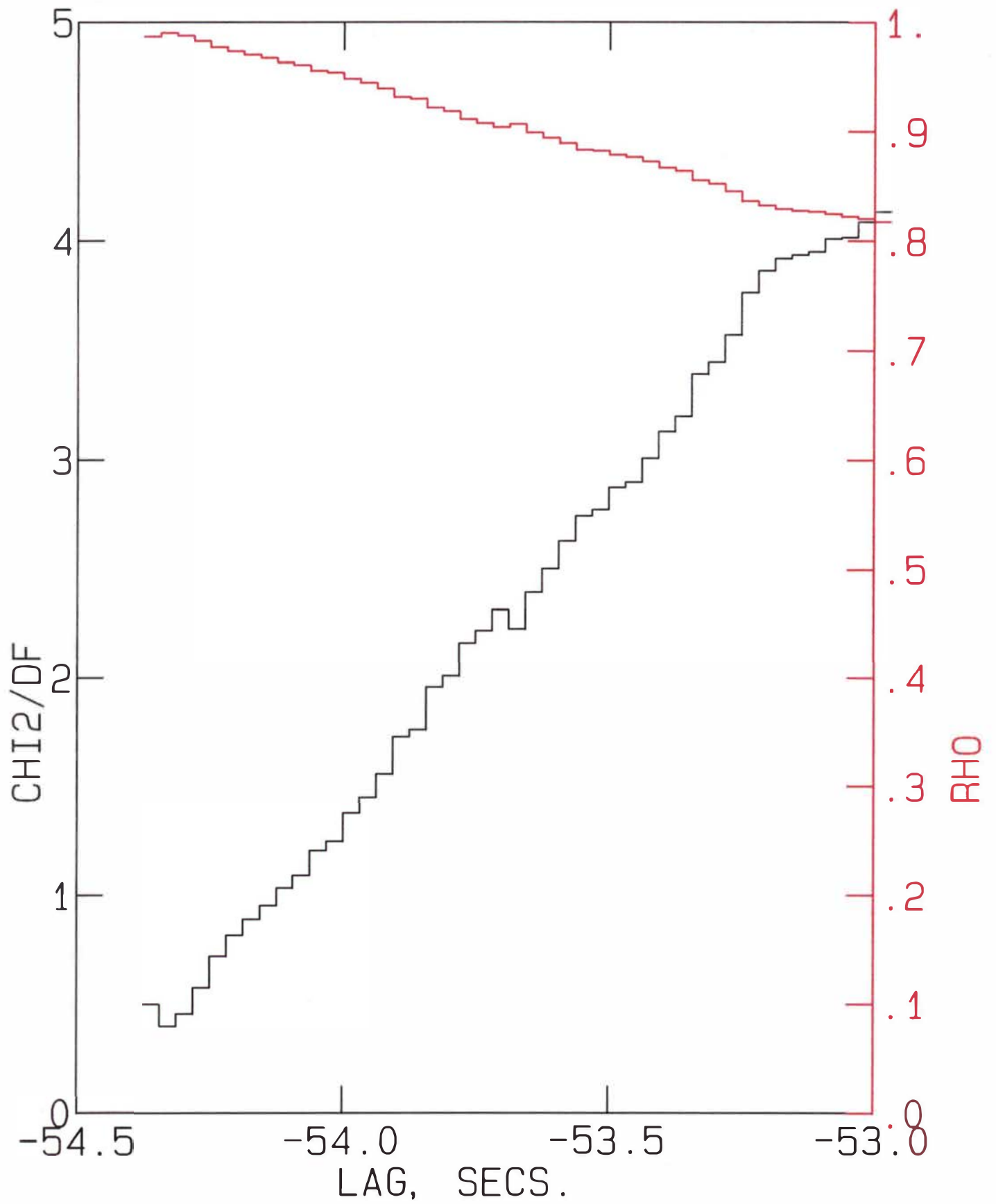
CORRELATION

19/10/95

11362.279

17/11/97





ULYSSES

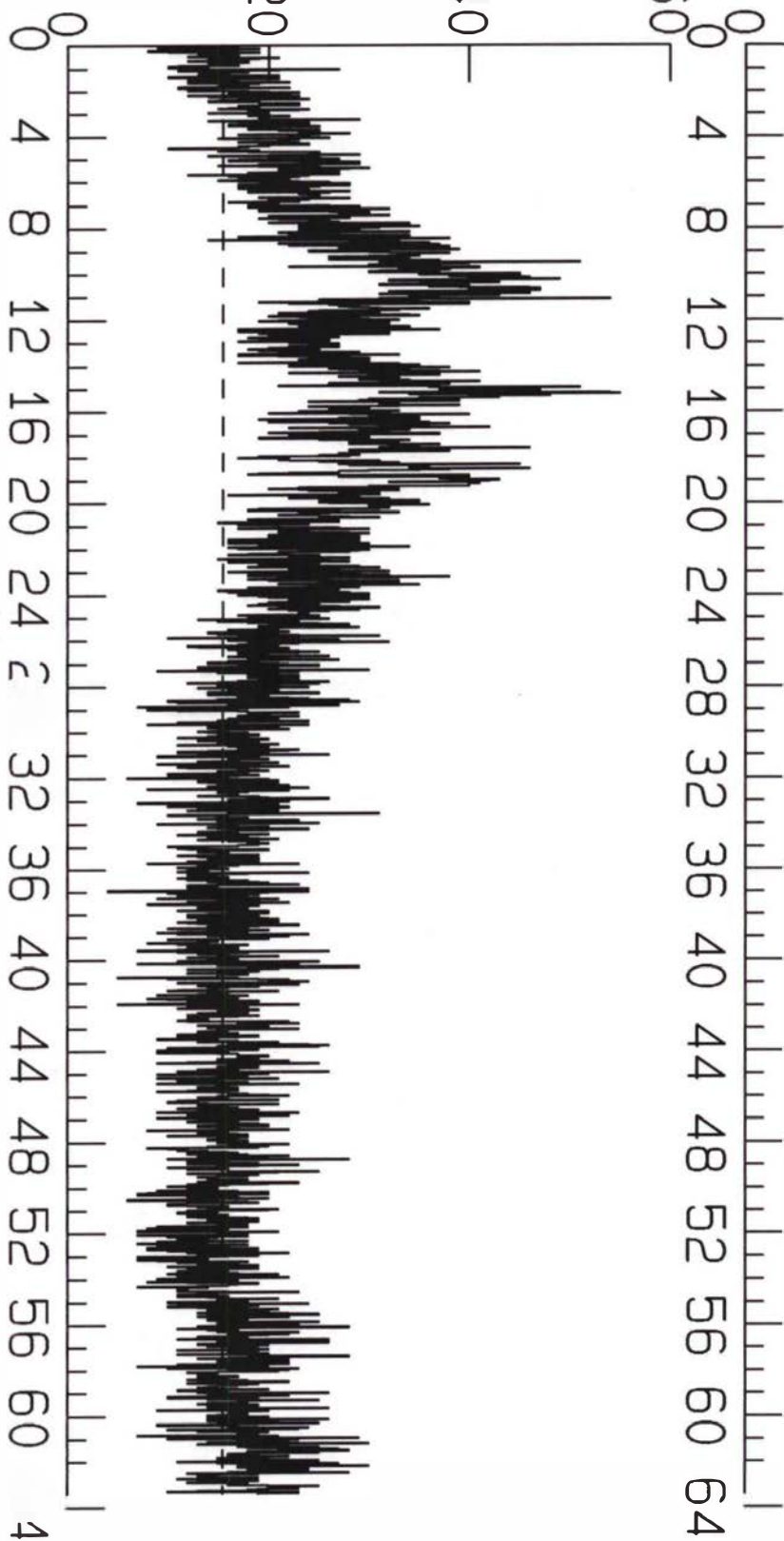
19/10/95

Ttrig=11424.024

21- 143 keV

COUNTS/0.031 S

COUNTS/0.125 S



17/11**

ULYSSES RT

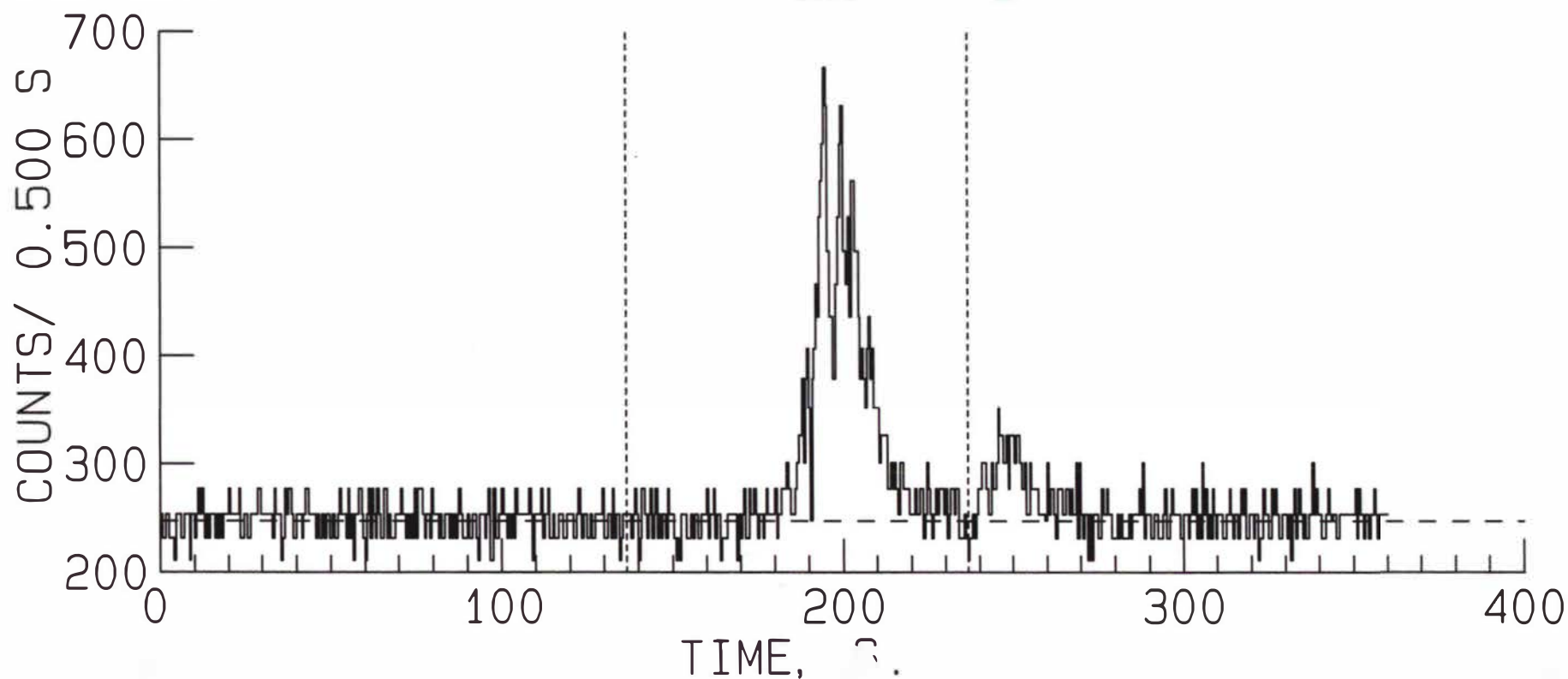
17/11/97

19/10/95 11232.223 s

21- 143 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From HAGEDON@fender.msfc.nasa.gov Fri Oct 20 08:14 PDT 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Fri, 20 Oct 1995 10:14:31 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 3873

TIME: TJD=0009 SECONDS=16140

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY.

From HAGEDON@fender.msfc.nasa.gov Fri Oct 20 08:17 PDT 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Fri, 20 Oct 1995 10:16:49 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 3874

TIME: TJD=0009 SECONDS=37942

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

From HAGEDON@fender.msfc.nasa.gov Fri Oct 20 09:33 PDT 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Fri, 20 Oct 1995 11:33:42 -0500 (CDT)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3875

BATSEARCH PROGRAM

RT

BATSE BURST # 3875
EVENT OF 1995 OCT 19 DAY OF YEAR=292
EVENT CROSSING TIME AT BATSE : 48244. S. OR 13:24:04.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 162.000 -88.000
BATSE PEAK COUNTING RATE: 12800 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 19/10/ 95 IS:
RA= 208.529 DEC= 57.046 DIST= 2.800 AU
BATSE-ULYSSES DISTANCE = 418888838. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 34.36 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1153.49 SECS.
CROSSING TIME AT ULYSSES IS 49397. S. OR 13:43:17 +/- 204.42 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 19/10/ 95 IS:
RA= 236.278 DEC= -20.486 DIST= 2.200 AU
MARS-BATSE DISTANCE = 329046400. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=111.02 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -393.61 SECS.
CROSSING TIME AT MARS IS 47850. S. OR 13:17:30 +/- 171.90 SECONDS

BATSE BURST TRIGGER

NO.: 3875

TIME: TJD=0009 SECONDS=48244

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=103.4 AZIMUTH=256.2 ERROR=1.8 DEGREES

COMMENTS:

BURST. SINGLE PULSE. FASTER RISE THAN DECAY. DUR. ~6 SEC. POSSIBLE
EXTENDED EMISSION TO ~T+15 SEC. WEAKLY VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3875	951019	10009	48244	12800	162	-88	6

95	7	1	117	23737	23737	3658
95	7	6	121	42735	42735	3662
95	7	11	123	13789	13789	3663
95	7	13	BGR	32133	32176	3664
95	7	30	128	76149	76124	3720
95	8	4	131	7135	07134	3734
95	8	4	133	45377	45376	3735
95	8	8	BGR	13023	12974	3745
95	8	9	136	85945	85945	3750
95	8	18	137	5065	05002	3765
95	8	22	140	13751	13749	3767
95	9	4	142	52692	52688	3776
95	9	9	145	85473	85452	3788
95	9	19	151	51465	51447	3806
95	9	21	152	20947	20947	3811
95	9	22	BGR	15495		
95	9	22	BGR	25929		
95	9	26	BGR	63919		
95	10	1	153	41907		
95	10	2	BGR	77583		3843
95	10	4	BGR	83974		
95	10	5	154	14842.112		
95	10	8	156	46287.863		
95	10	10	BGR	11774		
95	10	11	157	77693.094		3860
95	10	13	159	57097.299		
95	10	14	160	13108.167		
95	10	14	161	43561.3		
95	10	16	162	02484.285		3870
95	10	16	BGR	71607		3871
95	10	18	163	19832.069		
95	10	19	64	11712.625		
95	10	19	165	48244.594		3875
95	10	25	167	85239.738		
95	11	2	168	07085.879		
95	11	2	69	21209.015		3891
95	11	2	BGR	28693		
95	11	5	BGR	01745		
95	11	5	170	05868.077		3893
95	11	5	171	46827.808		
95	11	7	BGR	27298		
95	11	11	BGR	34960		
95	11	12	172	66495.244		
95	11	13	173	84358.872		3906
95	11	15	BGR	38929		
95	11	17	175	10123.762		
95	11	18	BGR	82560		
95	11	19	176	29831.402		3912
95	11	19	177	46457.519		
95	11	19		59448		
95	11	21		22280		
95	11	22	179	09841.38		
95	11	22	180	17107.738		
95	11	23	BGR	65408		
95	11	24	BGR	21266		3918
95	11	24	BGR	25132		

 -- T. L. Cline ----- LHEAVX::CLINE

From cline@lheavx.gsfc.nasa.gov Fri Jan 26 13:00 PST 1996
 Date: Fri, 26 Jan 1996 13:00:45 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: Improved list; same question.

Dear Kevin,

I'm making a little progress here, tracking down these events. This is a slightly improved list, with a few more BATSE triggers identified. - TLC

Yr	Mn	Dy	Konus#	Konus Tzero	BATSE Tz, #	Ulysses
94	11	14	BGR	07360	07358	3283 - NO
94	11	19	4	70269.175	70250	3287 R I
94	11	21	6	62700.945	62697	3290 trig.
94	11	25	7	79470.156	79470	3295 R I
94	11	26	BGR	01246	01245	3296
94	11	26	8	44557.952	44521	3298 trig.
94	11	26	BGR	60860	60861	3299
94	11	26	9	71809.732	71798	3301 R I
94	11	27	10	52225.68	52217	3303 R I
94	11	28	BGR	56220	56217	3305
94	12	28	28	27585.915	27581	3330 R I
94	12	29	29	82268.781	82258	3334 R I
95	1	4	31	26319.613	26319	3345 R I
95	1	11	33	17352.241	17263	3351 R I
95	1	11	34	44329	44310	3352
95	1	17	BGR	05760	05761	3360
95	1	18	BGR	44574	44589	3364
95	2	7	BGR	02774	02781	3406
95	2	8	45	07824	07824	3408
95	2	10	47	08424	08421	3410
95	2	11	48	08697	08697	3412 trig.
95	2	11	50	72469	72468	3415
95	2	21	BGR	74701	74705	3436
95	2	26	54	53351	53336	3442
95	3	1	BGR	75731	75761	3448
95	3	4	56	37661	37657	3453
95	3	5	58	54309	54304	3458
95	3	10	BGR	78388	78395	3464
95	3	25	63	25841	25844	3480
95	3	25	64	63392	63391	3481
95	3	27	BGR	26323	26347	3485
95	3	27	BGR	85672	85671	3486
95	4	1	69	42647	42642	3488
95	4	1	70	74635	74634	3489
95	4	3	71	47985	47987	3491
95	4	3	72	84828	84826	3492
95	4	16	BGR	48420	48419	3509
95	4	18	81	83793	83795	3512
95	4	25	86	00923	00919	3523
95	4	30	BGR	54224	54229	3527
95	5	3	88	66971	66970	3537
95	5	10	90	28083	28079	3569
95	5	13	93	81706	81703	3571
95	5	21	97	25161	25157	3588
95	5	22	98	23898	23896	3590
95	5	22	100	85280	85283	3593
95	5	24	102	14902	14899	3598
95	6	2	104	25592	25592	3618
95	6	10	107	6849	06849	3637
95	6	24	111	84124	84084	3648
95	6	25	113	14626	14601	3649
95	6	29	115	37033	37036	3654
95	7	1	116	12762	12758	3657

Hello corr removed

Date: Feb 20 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

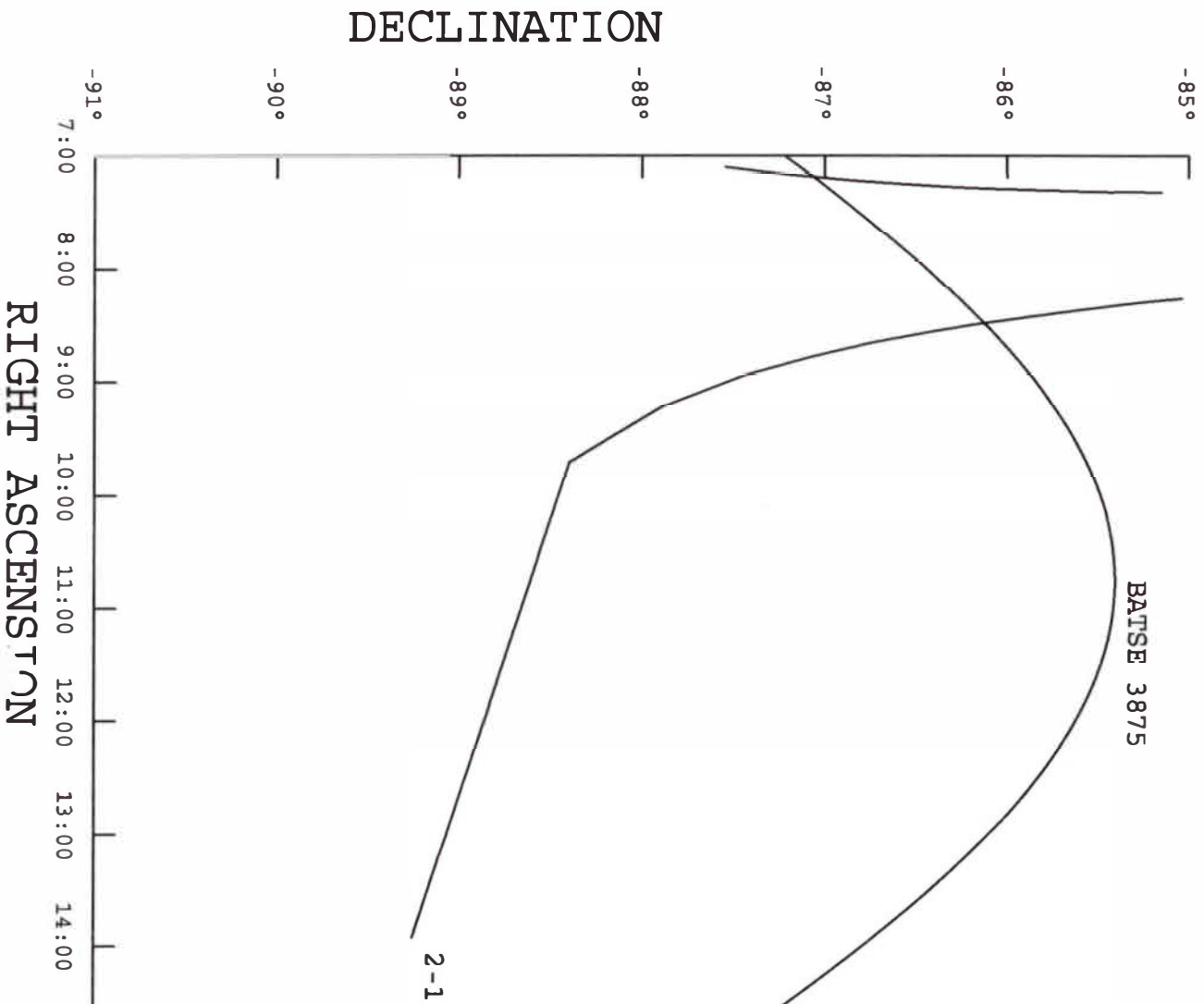
3. PVO Data

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

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

EVENT OF OCT 19, 1995 13:42

20 / 2/98



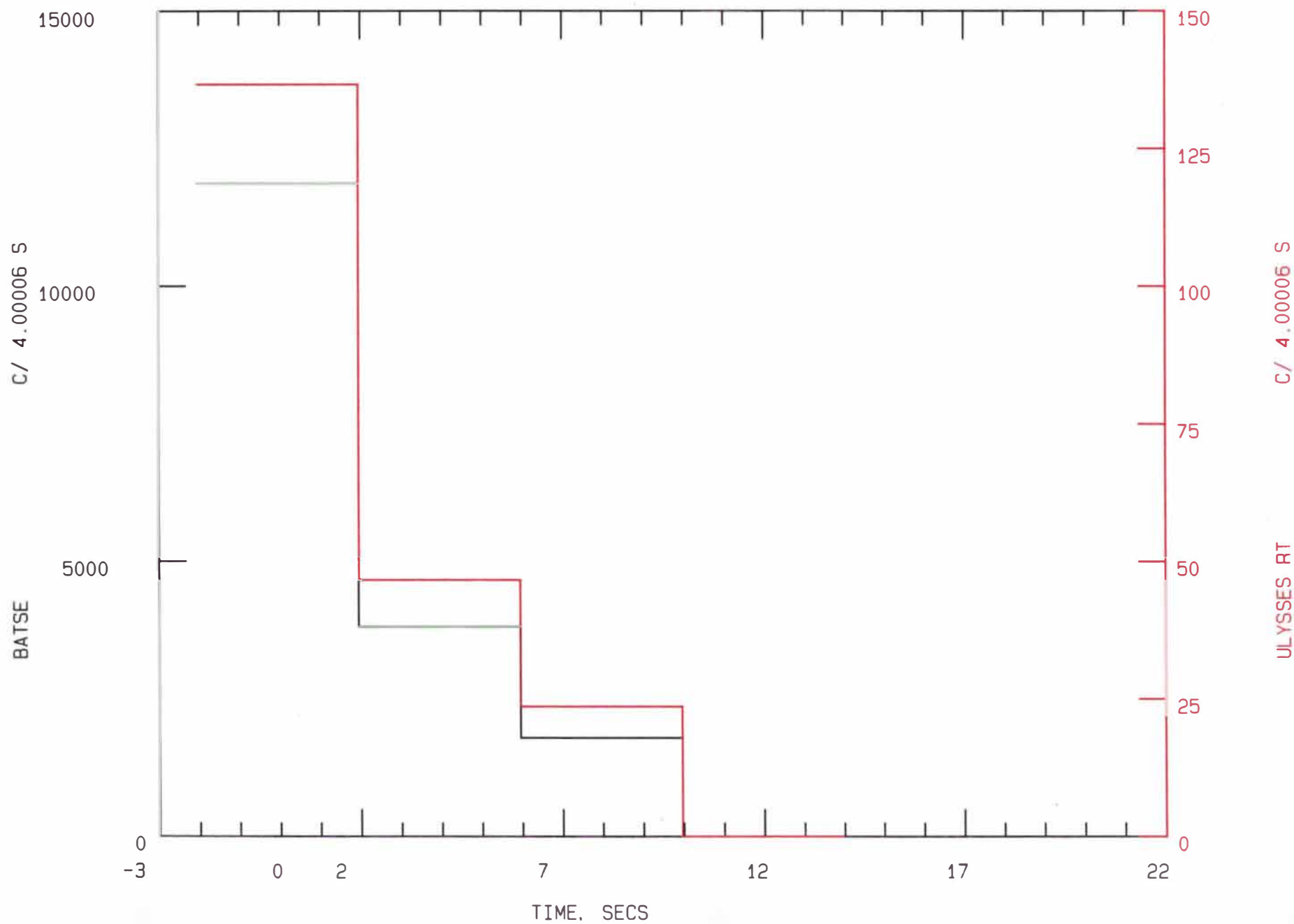
BATSE

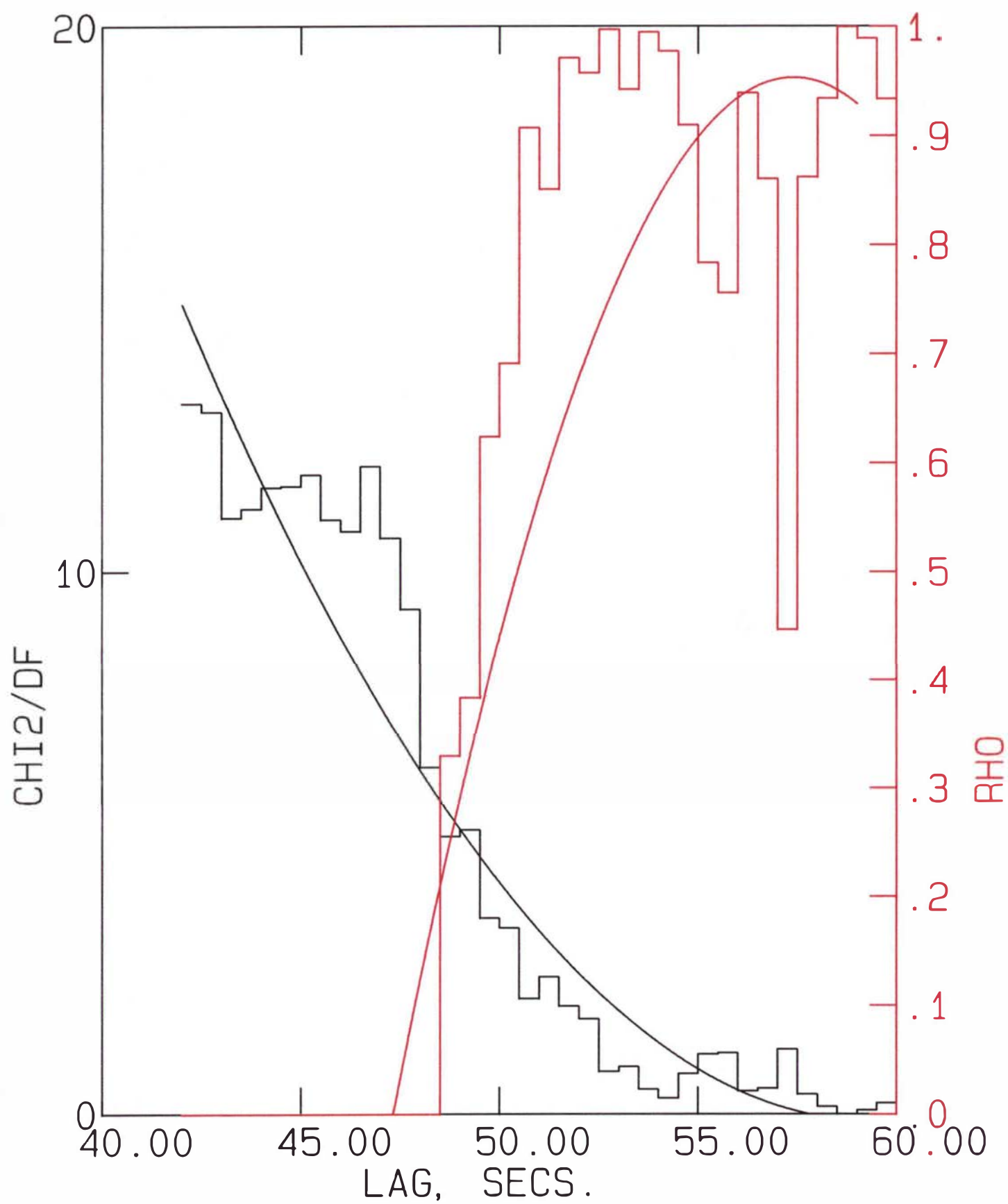
-ULYSSES RT CORRELATION

19/10/95

48244.722

20/ 2/98





ULYSSES RT

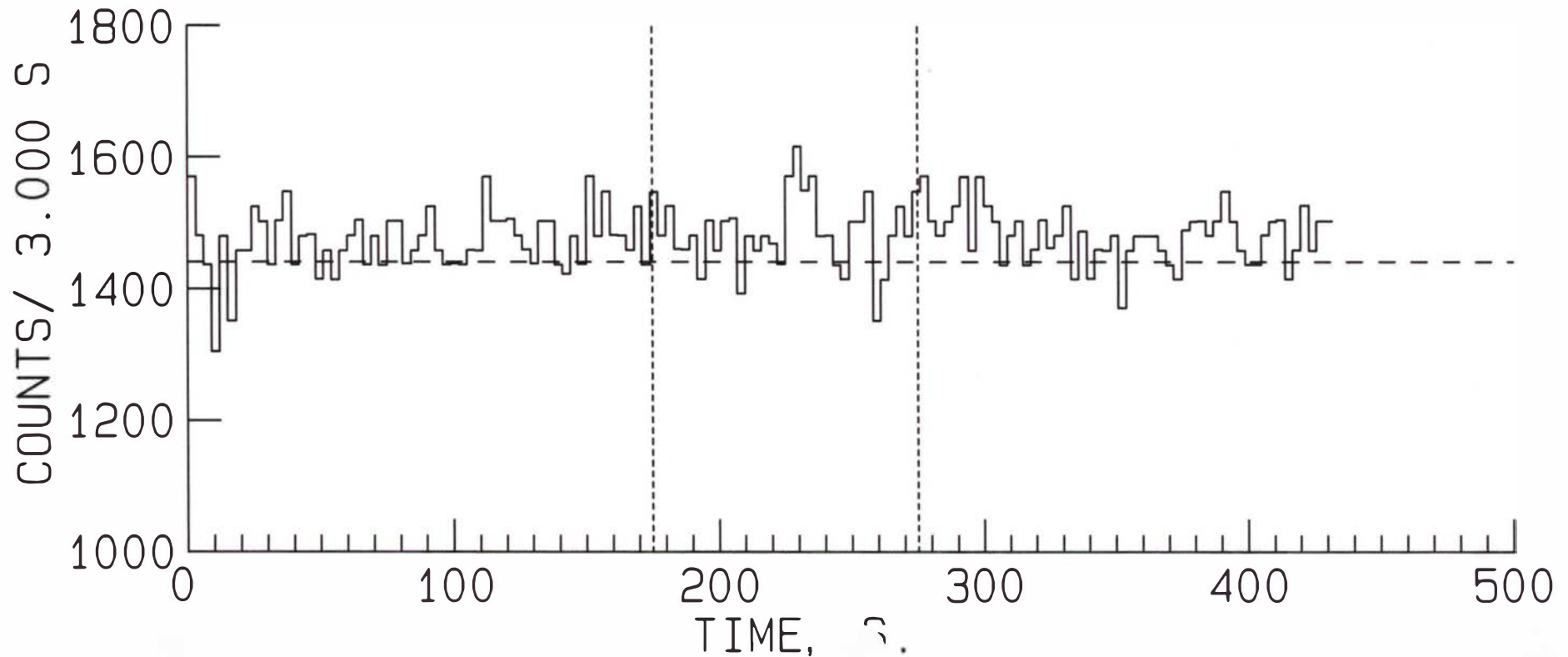
20 / 2 / 98

19/10/95 49176.335 s

0.500 S INTERVALS REGROUPED BY 6

21- 143 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



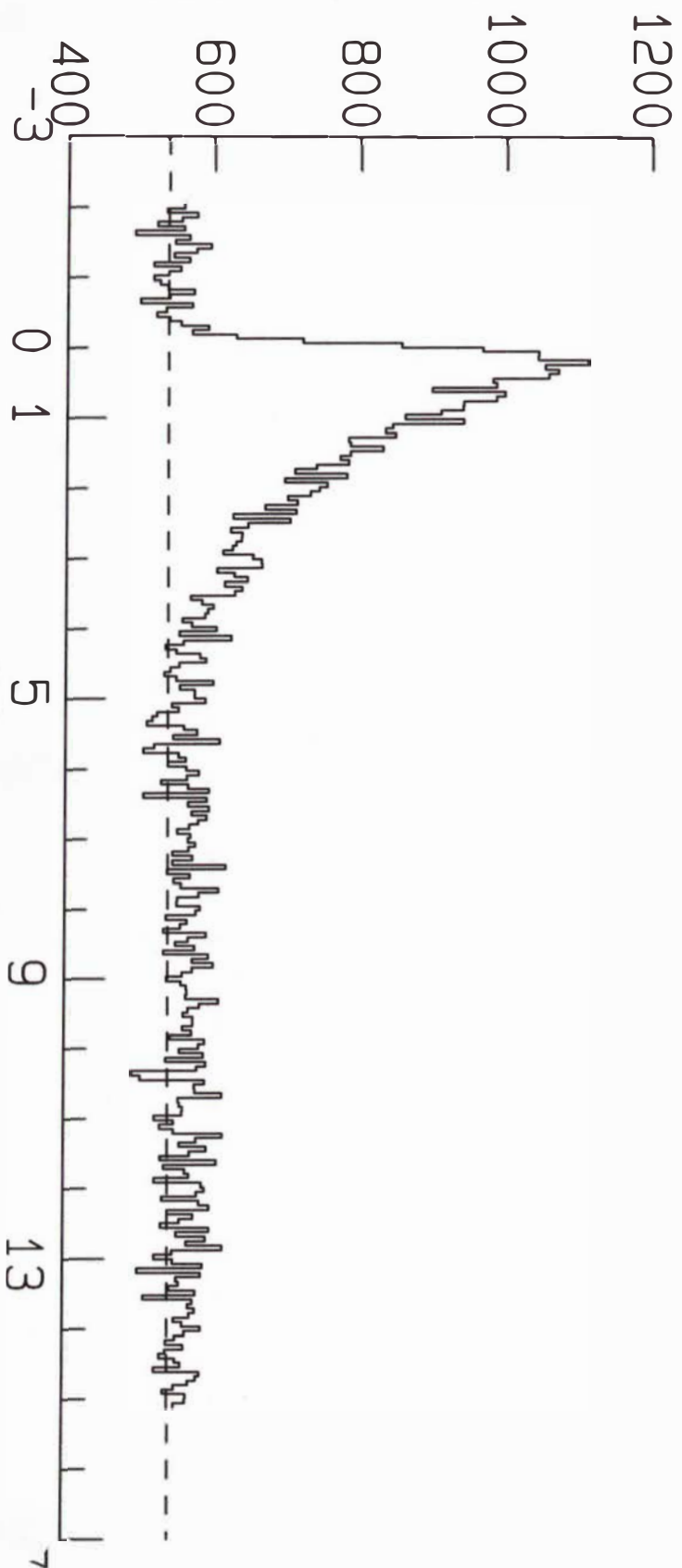
BATSE

19/10/95

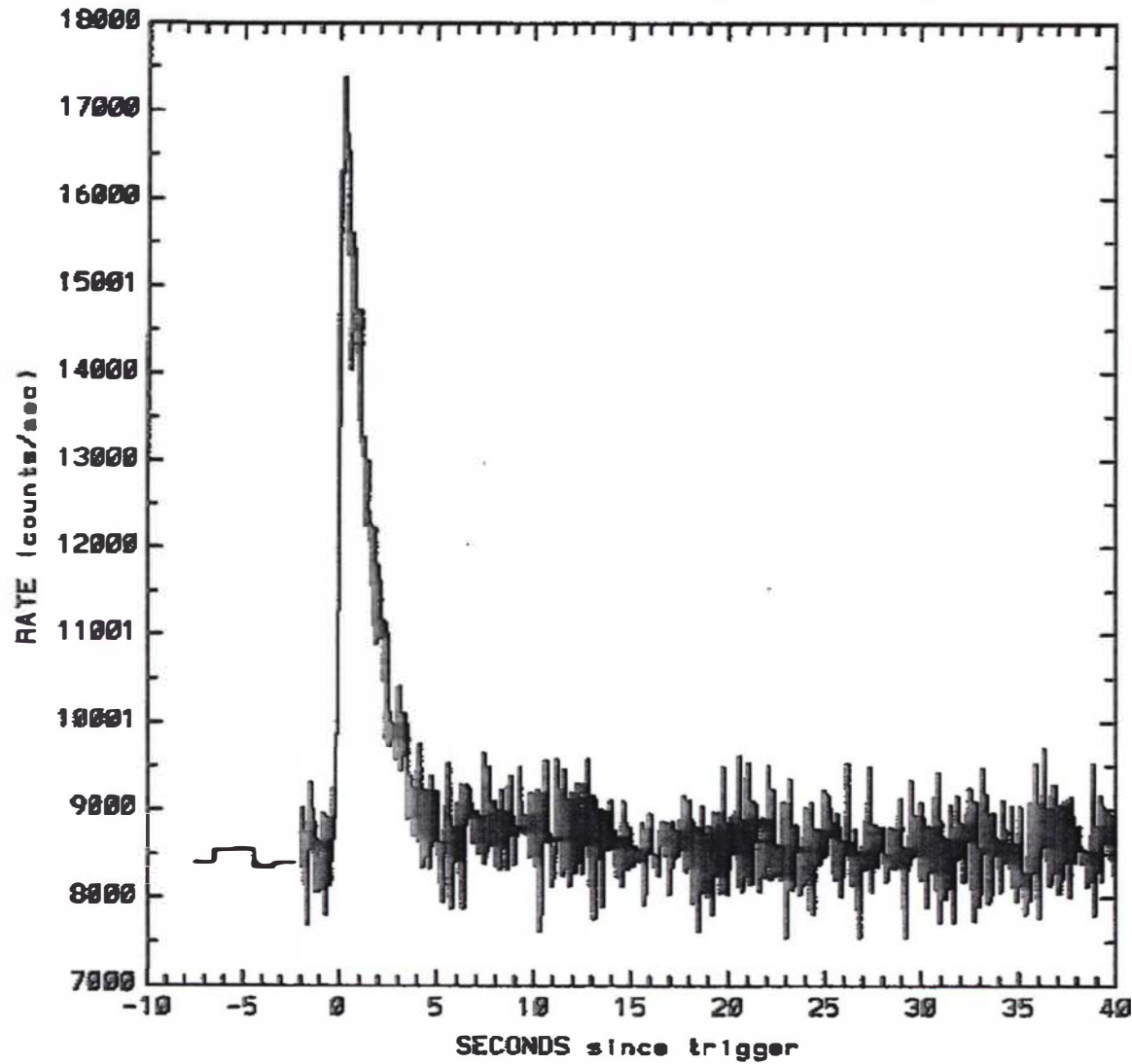
48244.722

25- 100 keV

COUNTS/0.064 S



DISCSC Data for K. Hurley, No. 3875



9-NOV-1995 10:09.14

Created by MOPS 80
(Burst Display)
Version 12.25

Trigger # . 3875

Trigger Time:
1995 / 48244.722Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: PREB + DISCLAMinimum Integ. Time:
0.064 secondsDetectors [7..8]:
76--3---Discriminators:
[1 . 2]Quality Mask:
BDISP1

From HAGEDON@fender.msfc.nasa.gov Fri Oct 20 08:20 PDT 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Fri, 20 Oct 1995 10:19:43 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 3876

TIME: TJD=0009 SECONDS=57642

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT.

KONUS1

19/10/95

50442.487

50 - 200 keV

COUNTS/0.064 S

09/03/11

TIME, SECS

KONUS HRES 19951019 50442

TRIGGER TIME: 19/10/95 DOY 292 Julian 2450011.08382 UT = 14.012 14:00:42 (50442.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

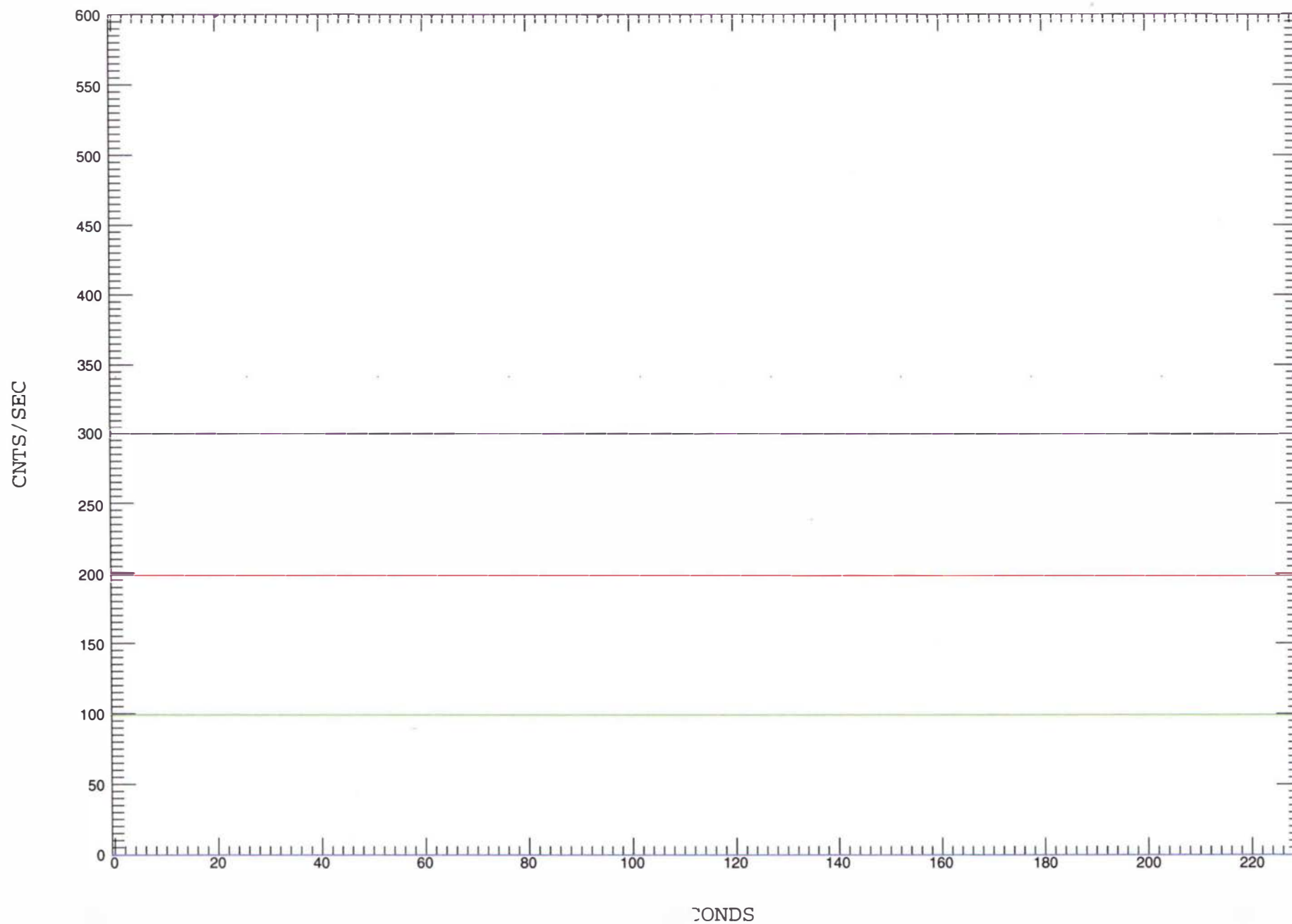
Chan 4 : [> 10 MeV]

Channel 1 + 300

Channel 2 + 200

Channel 3 + 100

Channel 4 + 0



KONUS1 19951019 50442

ULYSSES RT

09 / 03 / 11

19 / 10 / 95 48996.328 s

INTERVALS REGROUPED BY 4

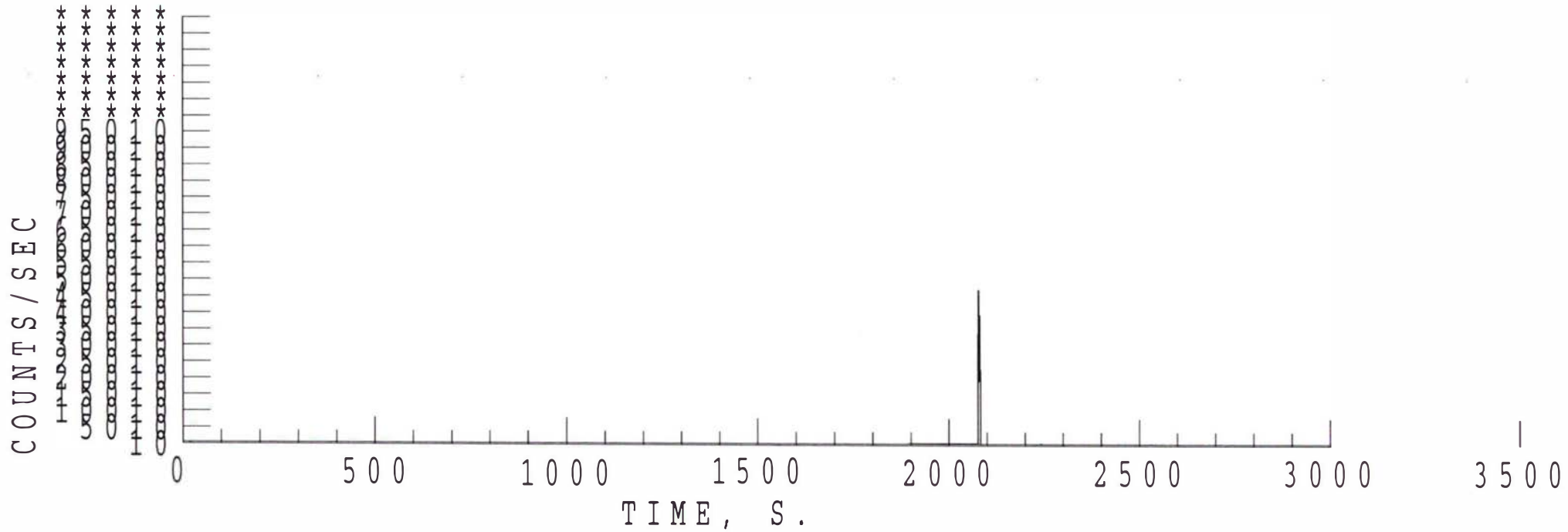
0 - 0 keV

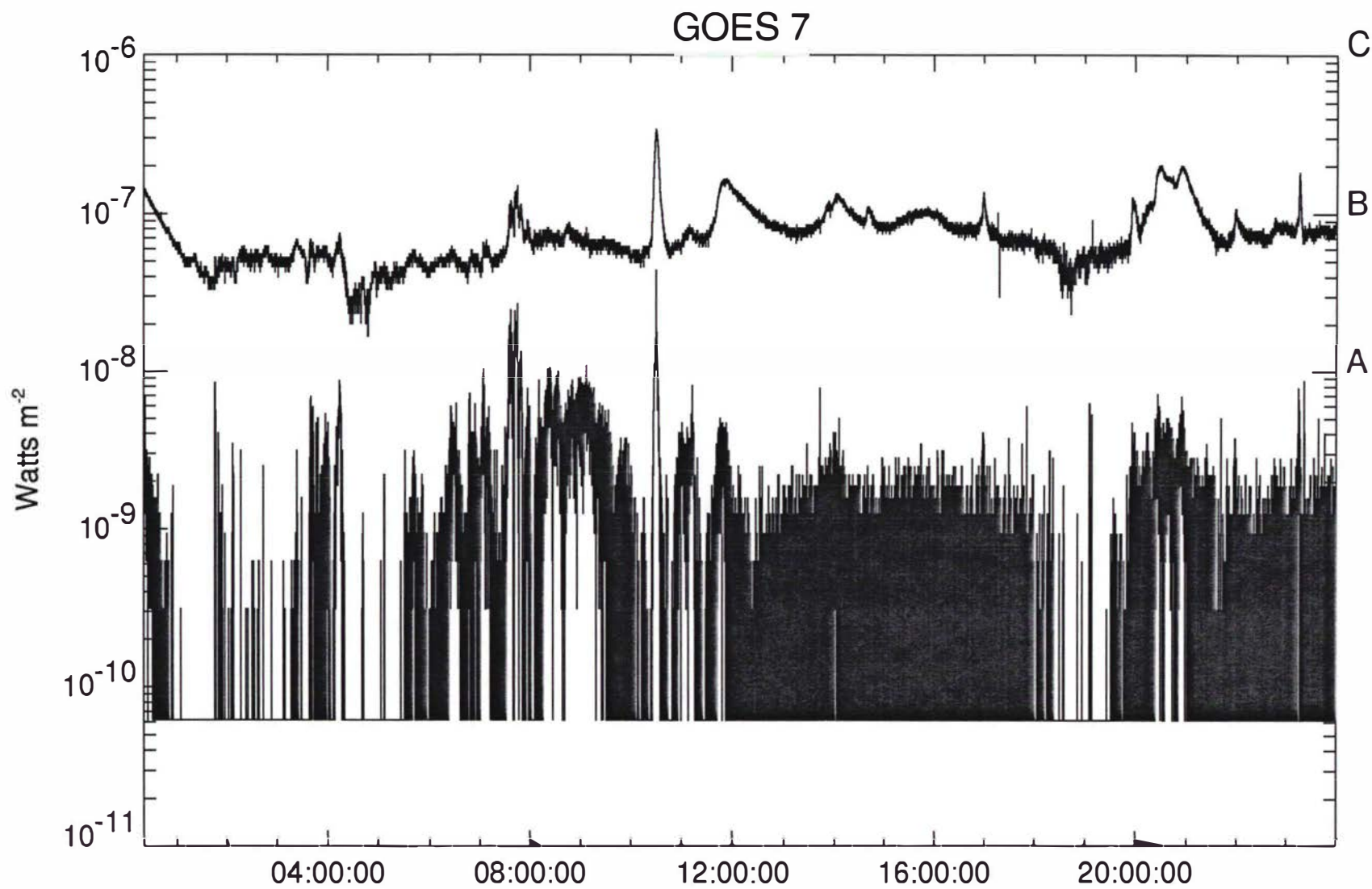
N= 10 M= 10

>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





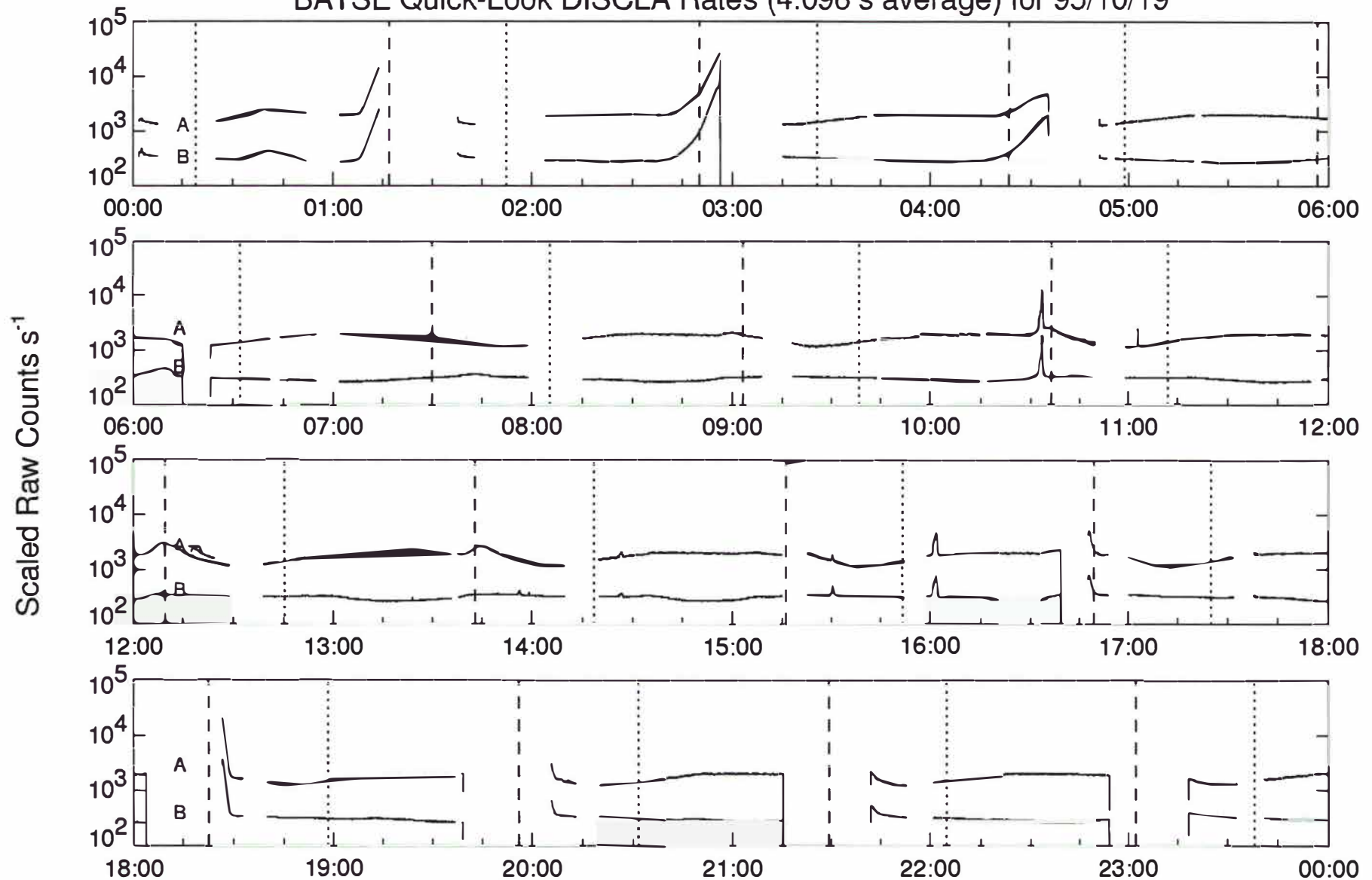
Data Start: 95/10/19, 0020:26

Plot created: 95/11/17, 1635

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 95/10/19



Current Time: 95/11/17, 1635 EDT

A: Channel 0 Most Sunward LAD

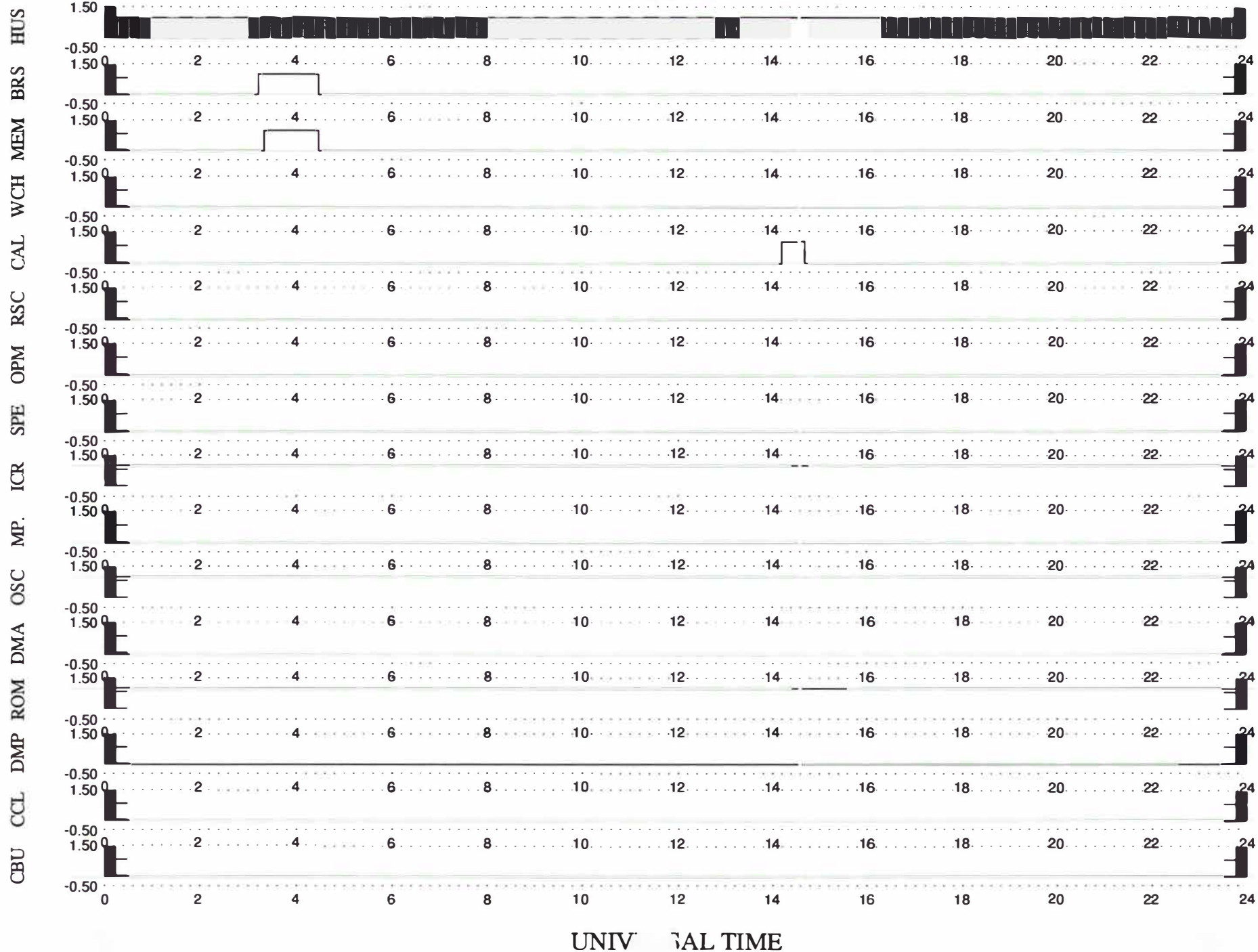
B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

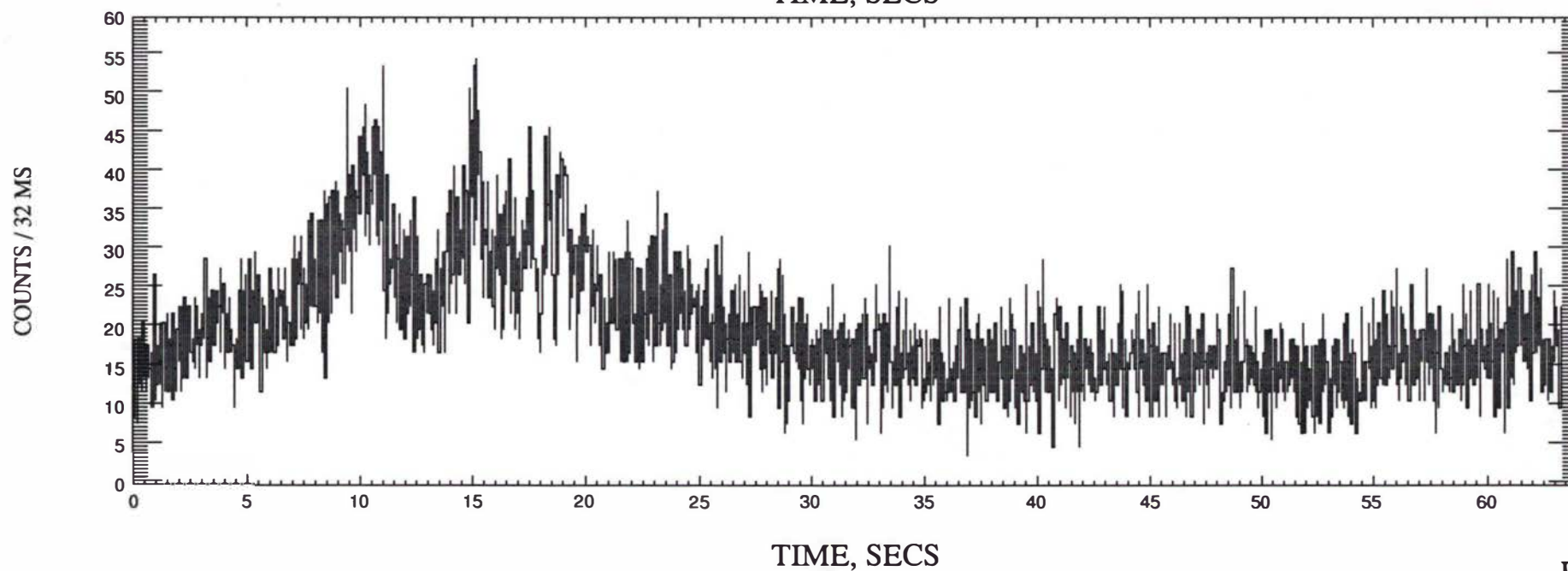
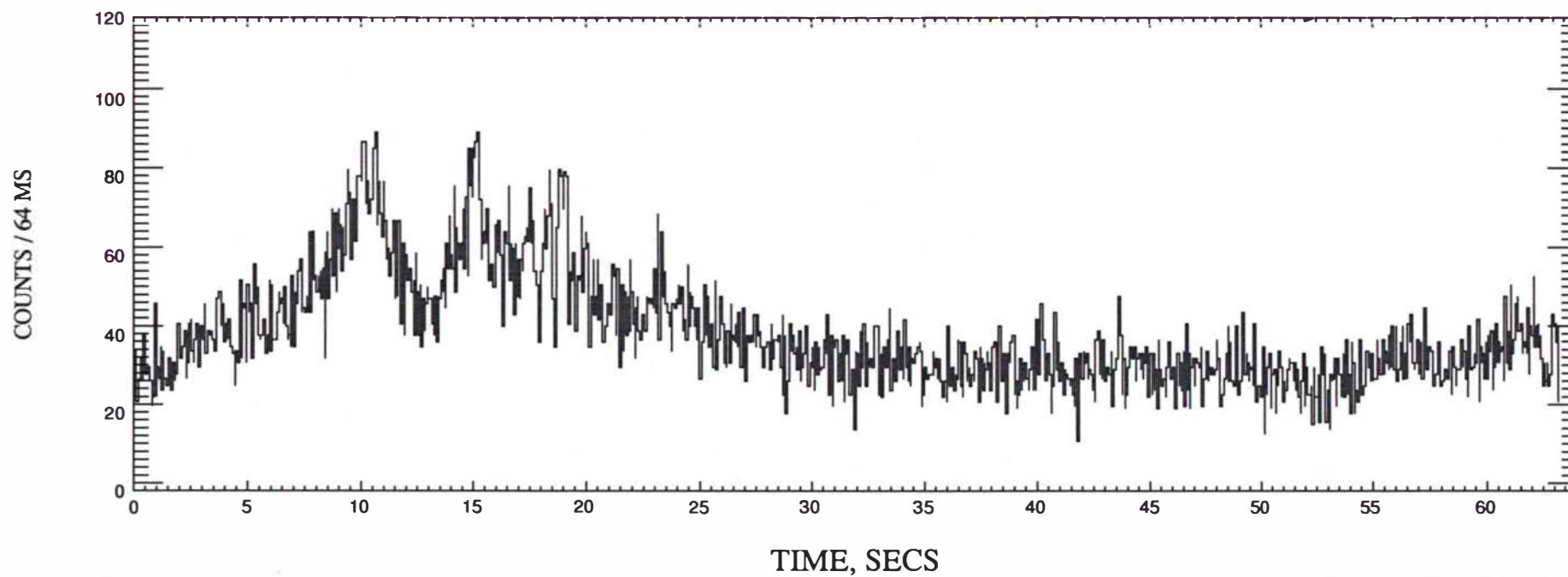
HUS MODES EDR day 292, year 1995 to day 292, year 1995 BURST NUMBER 5

1/26/96



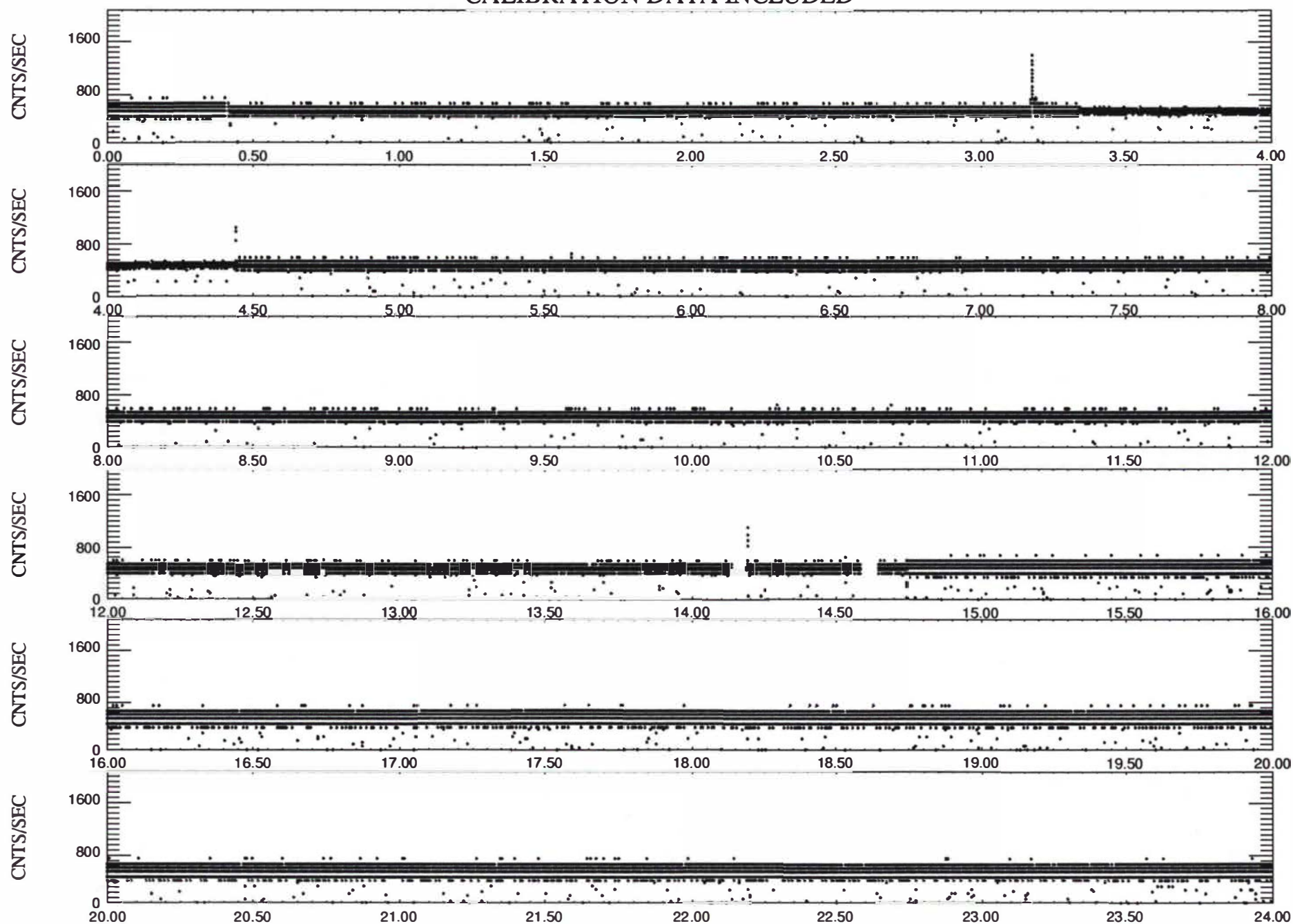
HUS 2A TRIGGERED DATA EDR day 292, year 1995
Burst Counter 5 at UT= 3.173321736654 h=11423.958 s 03:10:23.958

1/26/96

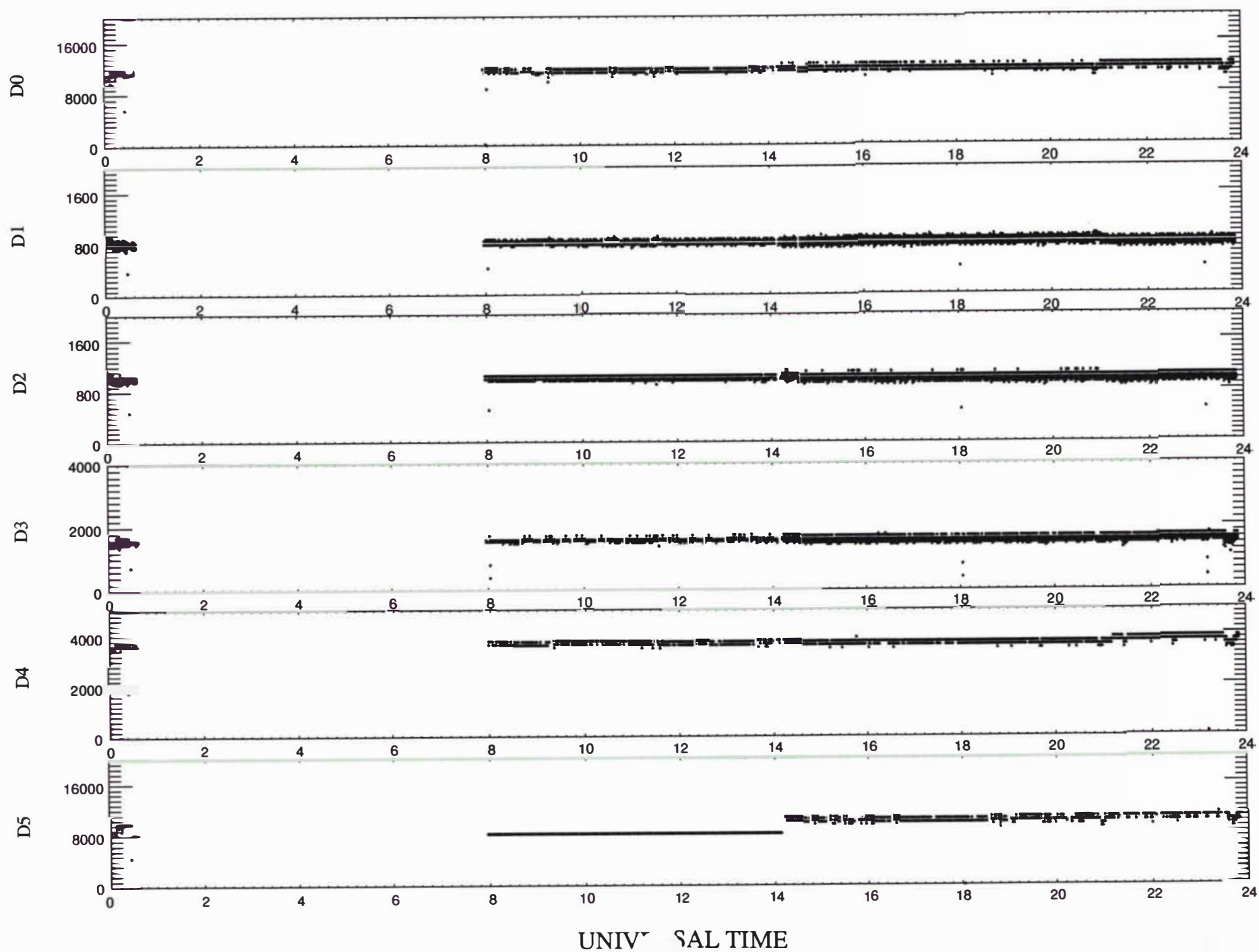


HUS 2A, MODE 1, NOT AVERAGED EDR day 292, year 1995 to day 292, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV TIME



From WOODSP@SSLLES.MSFC.NASA.GOV Mon Oct 23 16:40 PDT 1995
From: WOODSP@SSLLES.MSFC.NASA.GOV
Date: Mon, 23 Oct 1995 18:39:33 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@SSLLES.MSFC.NASA.GOV, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3877

TIME: TJD=0010 SECONDS=21068

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=121.6 AZIMUTH=338.0 ERROR=0.3 DEGREES

COMMENTS:

GOES M1.5 SOLAR FLARE OPT SF

1.4
 $Z_m = 7.4 \text{ cm} = 1205$

HUS DATA

$\cdot 055 \text{ cm/s}$
 $\cdot 012$

5 / 3 / 96

ULYSSES RT

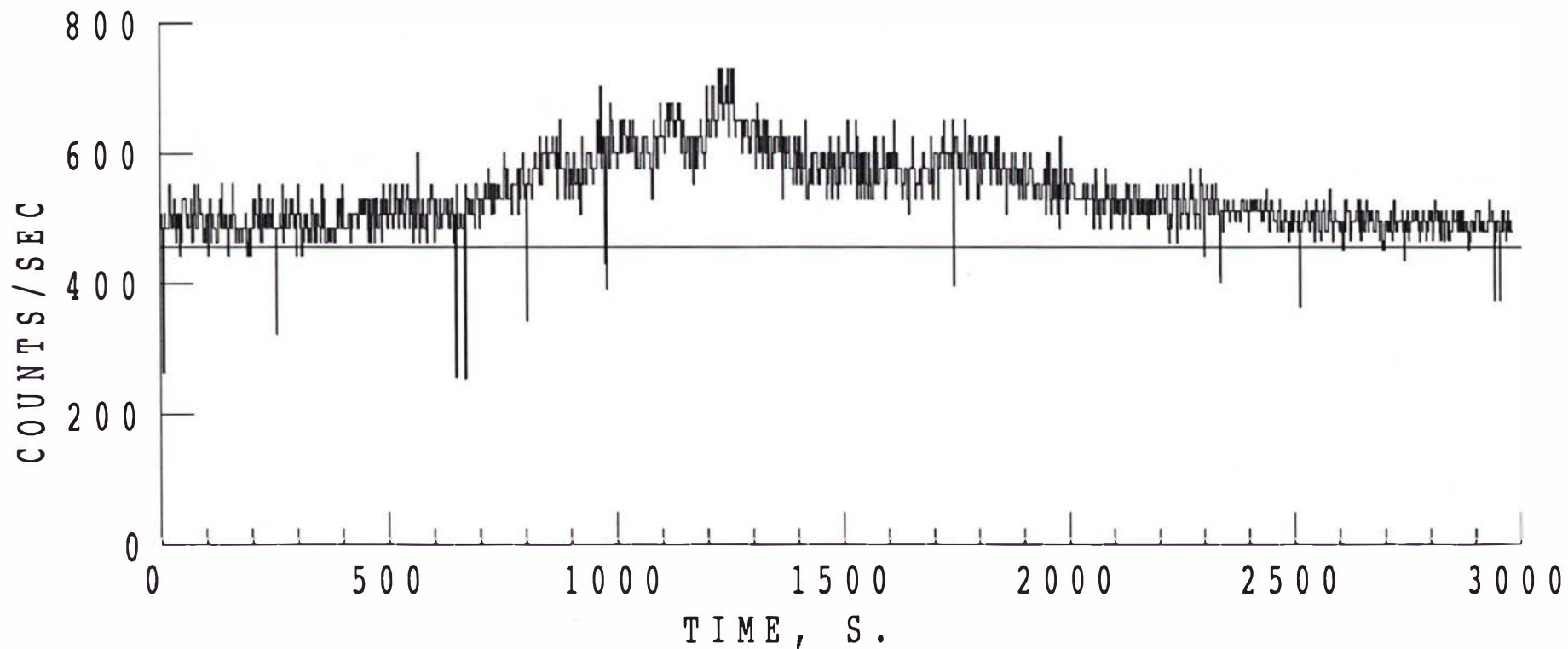
20/10/95 21600.283 s

1.008 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From WOODSP@SSLLES.MSFC.NASA.GOV Mon Oct 23 16:43 PDT 1995
From: WOODSP@SSLLES.MSFC.NASA.GOV
Date: Mon, 23 Oct 1995 18:42:52 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@SSLLES.MSFC.NASA.GOV, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3878

TIME: TJD=0010 SECONDS=35584

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLES

From WOODSP@ssl.msfc.nasa.gov Mon Oct 23 16:51 PDT 1995
Date: Mon, 23 Oct 1995 18:51:14 -0500 (CDT)
From: WOODSP@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3879

BATSEARCH PROGRAM

BATSE BURST # 3879
EVENT OF 1995 OCT 20 DAY OF YEAR=293
EVENT CROSSING TIME AT BATSE : 43074. S. OR 11:57:54.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 356.000 7.000
BATSE PEAK COUNTING RATE: 5500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 20/10/ 95 IS:
RA= 208.836 DEC= 56.920 DIST= 2.803 AU
BATSE-ULYSSES DISTANCE = 419396136. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 69.32 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 493.93 SECS.
CROSSING TIME AT ULYSSES IS 43568. S. OR 12:06:07 +/- 284.74 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 20/10/ 95 IS:
RA= 237.019 DEC= -20.651 DIST= 2.202 AU
MARS-BATSE DISTANCE = 329461664. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 60.46 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 541.77 SECS.
CROSSING TIME AT MARS IS 43616. S. OR 12:06:55 +/- 174.23 SECONDS

BATSE BURST TRIGGER

NO.: 3879

TIME: TJD=0010 SECONDS=43074

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=84.0 AZIMUTH=158.6 ERROR=1.4 DEGREES

COMMENTS:

GRB WITH 2 DISTINCT PEAKS. DURATION ~12 SEC. NOT VISIBLE
ABOVE 300KEV.

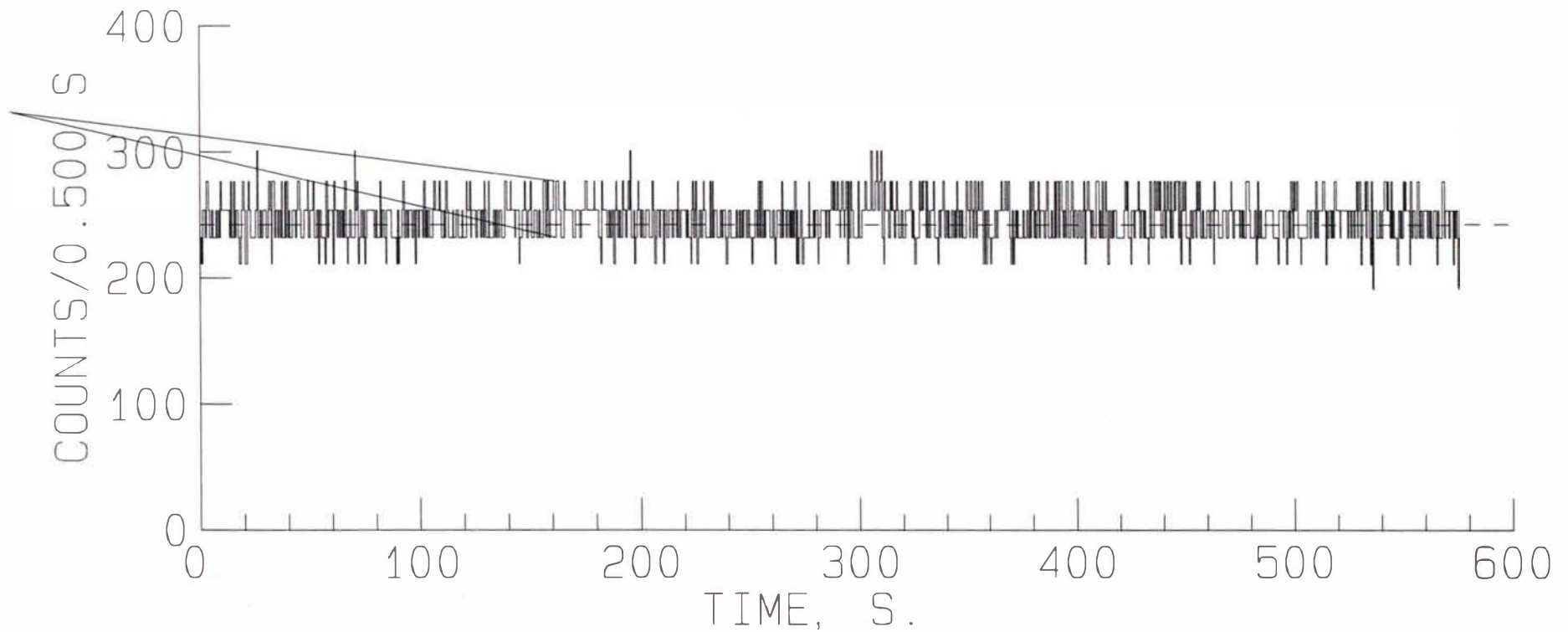
BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3879	951020	10010	43074	5500	356	+07	12

BATSE BURST# 3879

7 / 2 / 96

ULYSSES RT
20/10/95 43272.133 s
0- 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



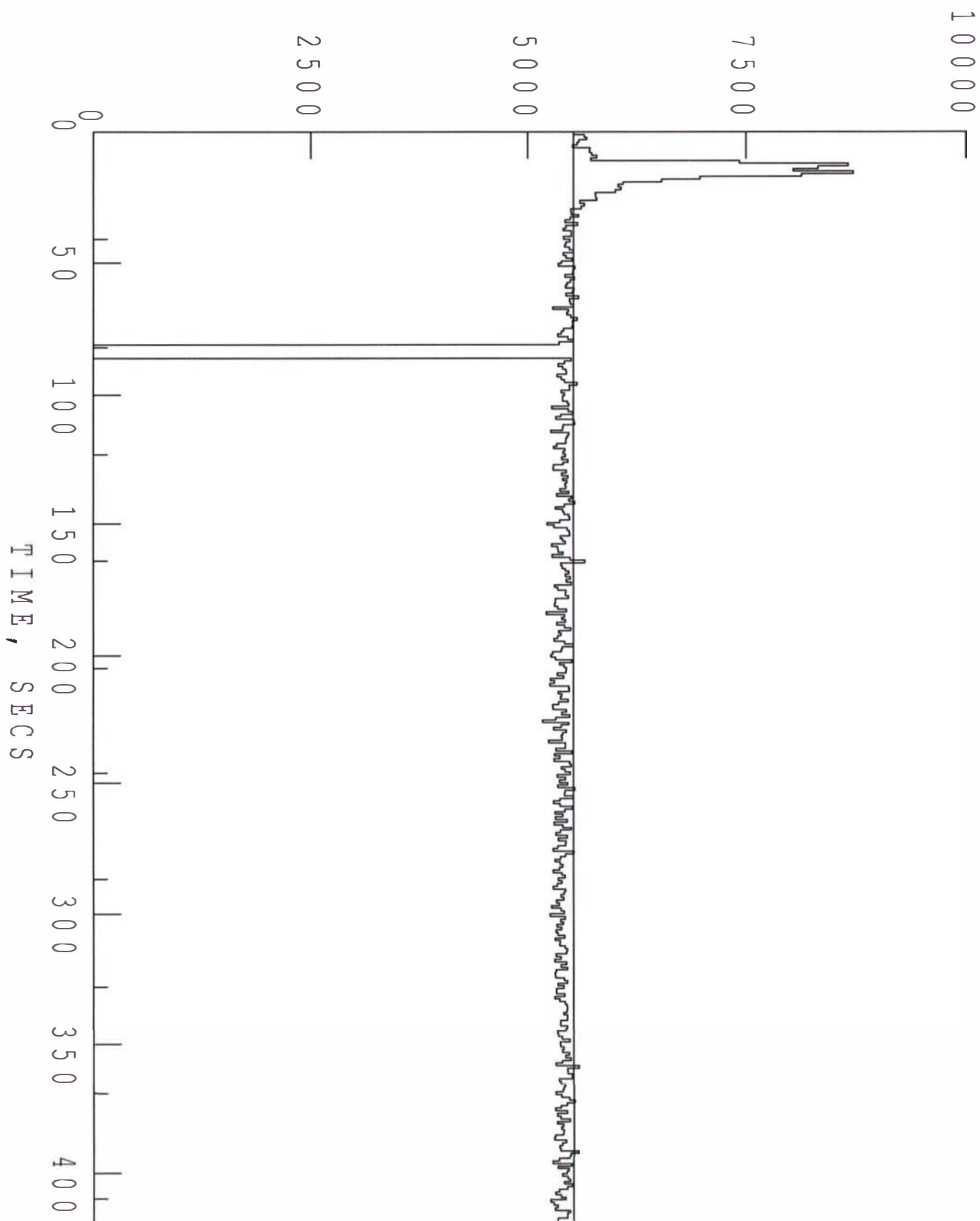
BACODINE

20/10/95

43061.937

25 - 100 keV

COUNTS/1.024 S



From WOODSP@SSLLES.MSFC.NASA.GOV Mon Oct 23 16:52 PDT 1995
From: WOODSP@SSLLES.MSFC.NASA.GOV
Date: Mon, 23 Oct 1995 18:48:39 -0500 (CDT)
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@SSLLES.MSFC.NASA.GOV, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3880

TIME: TJD=0010 SECONDS=57819

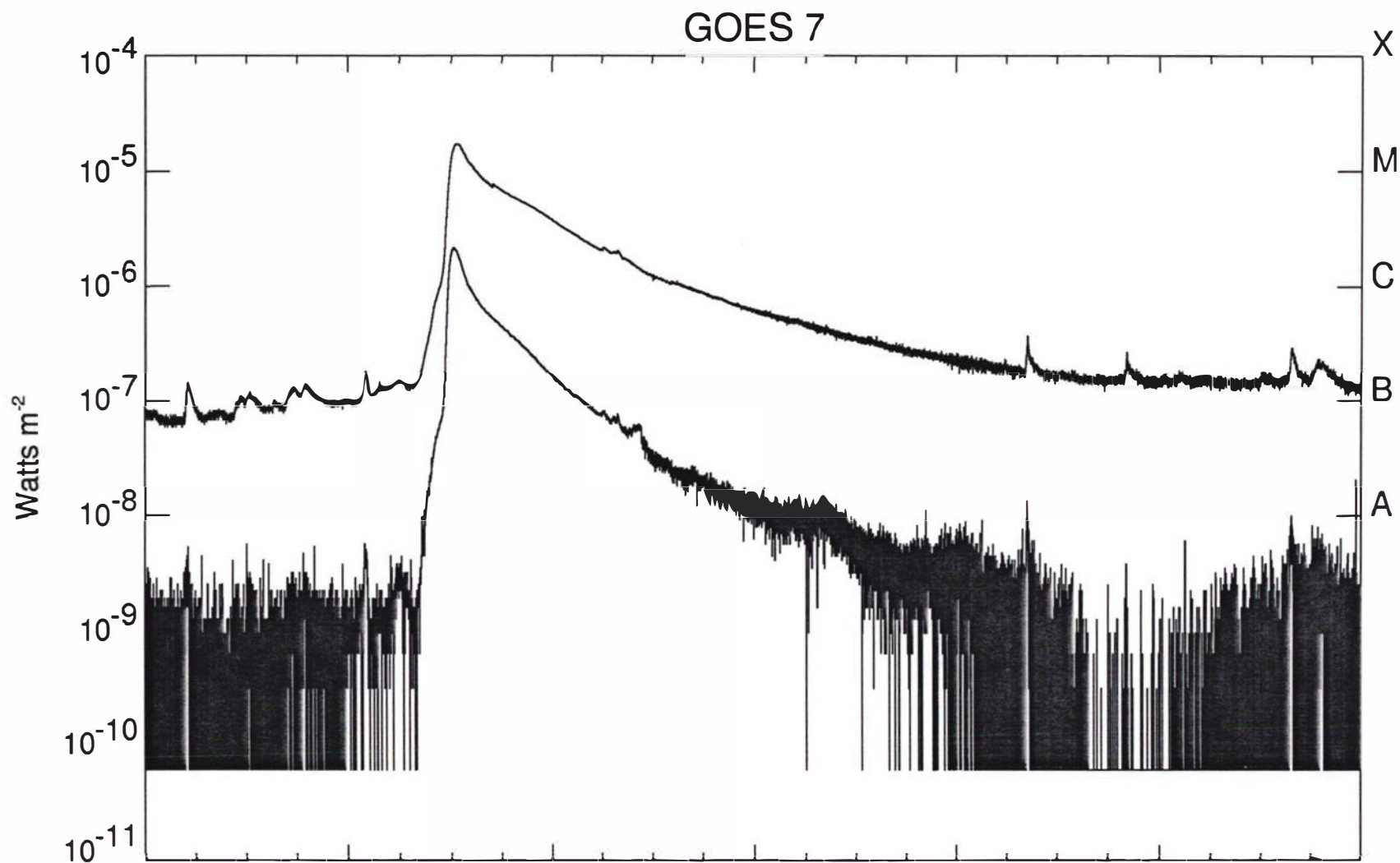
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT.



Data Start: 95/10/20, 0000:00

Plot created: 95/11/17, 1646

Channel

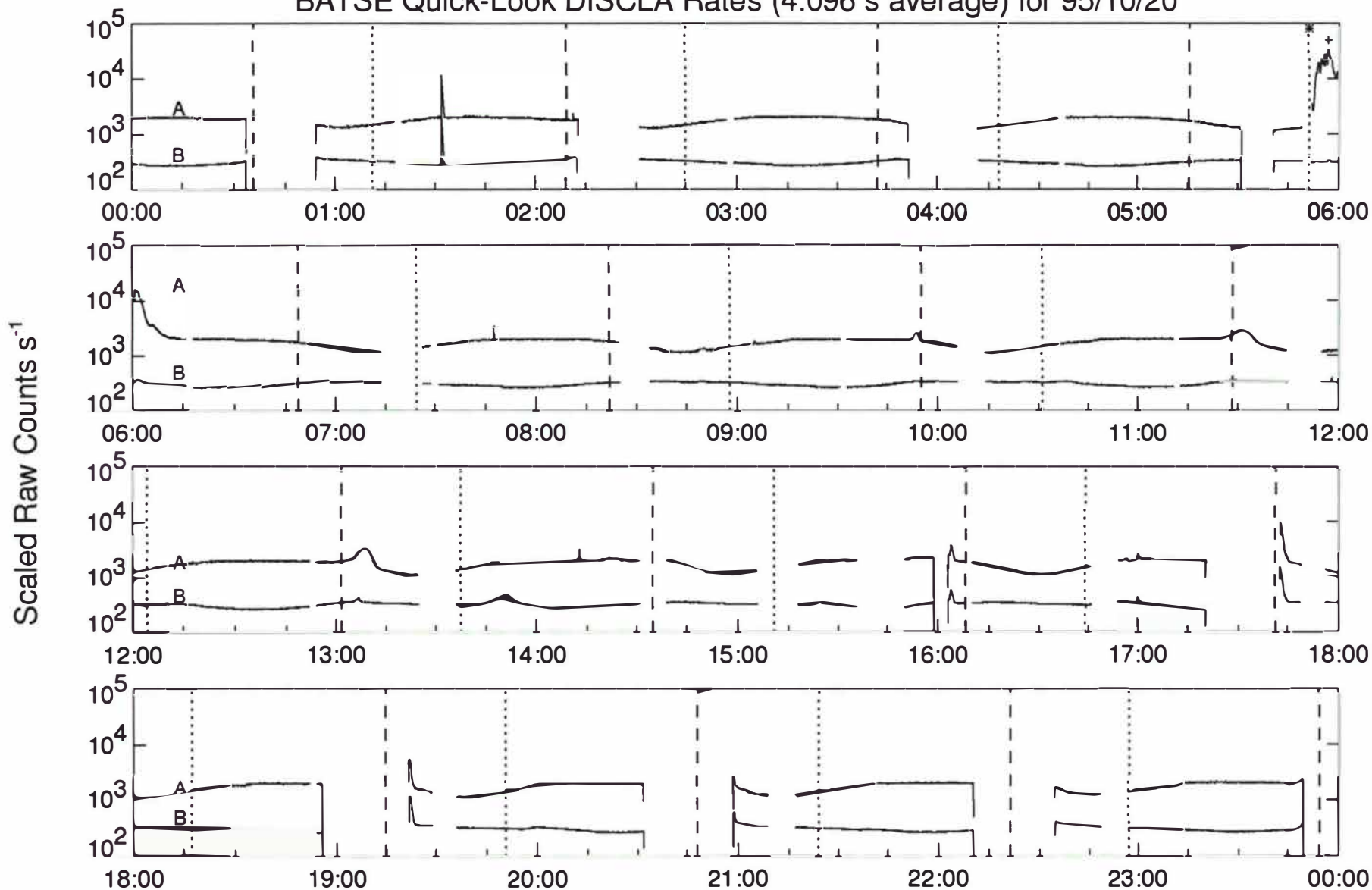
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/20



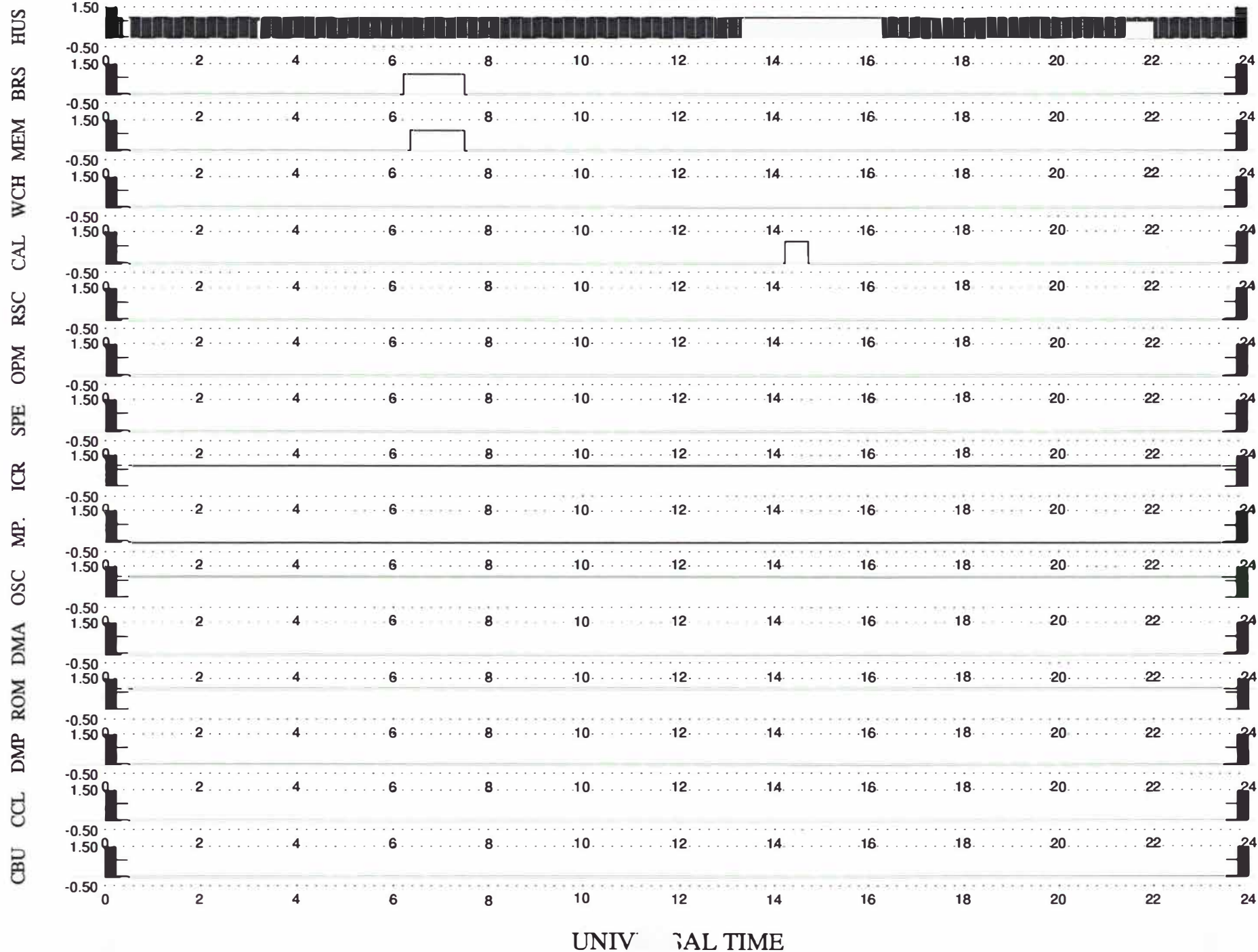
Current Time: 95/11/17, 1647 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

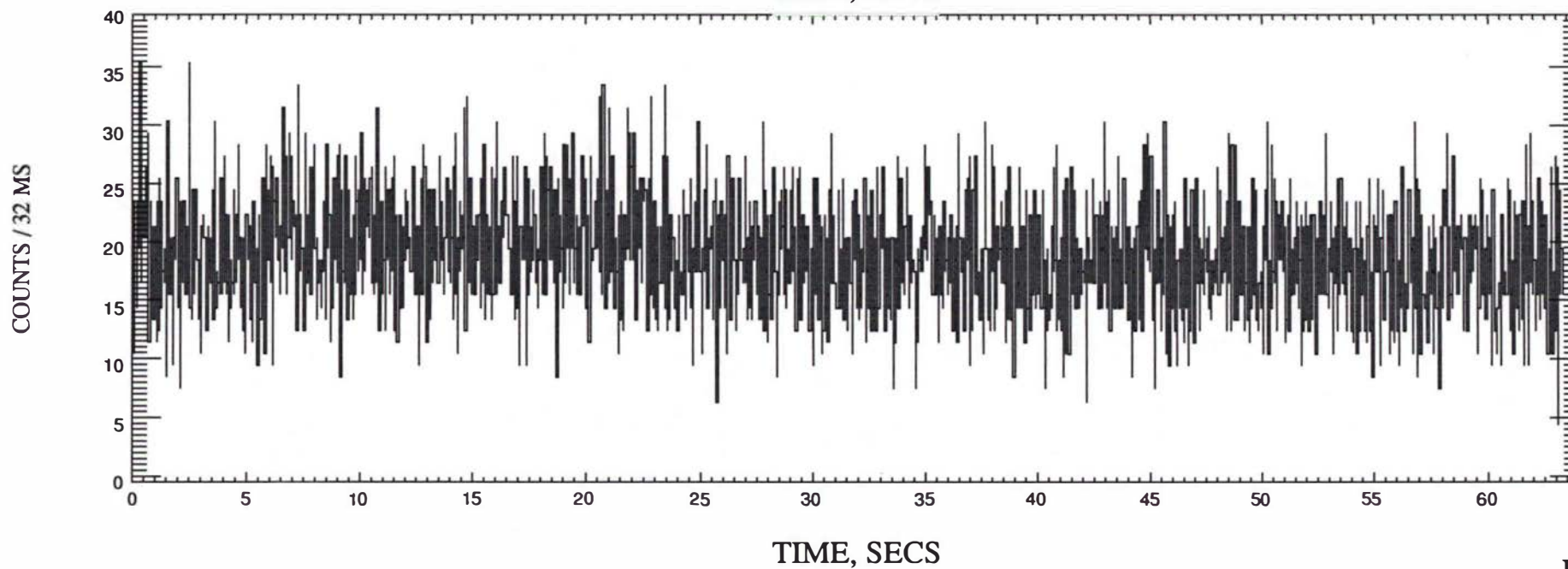
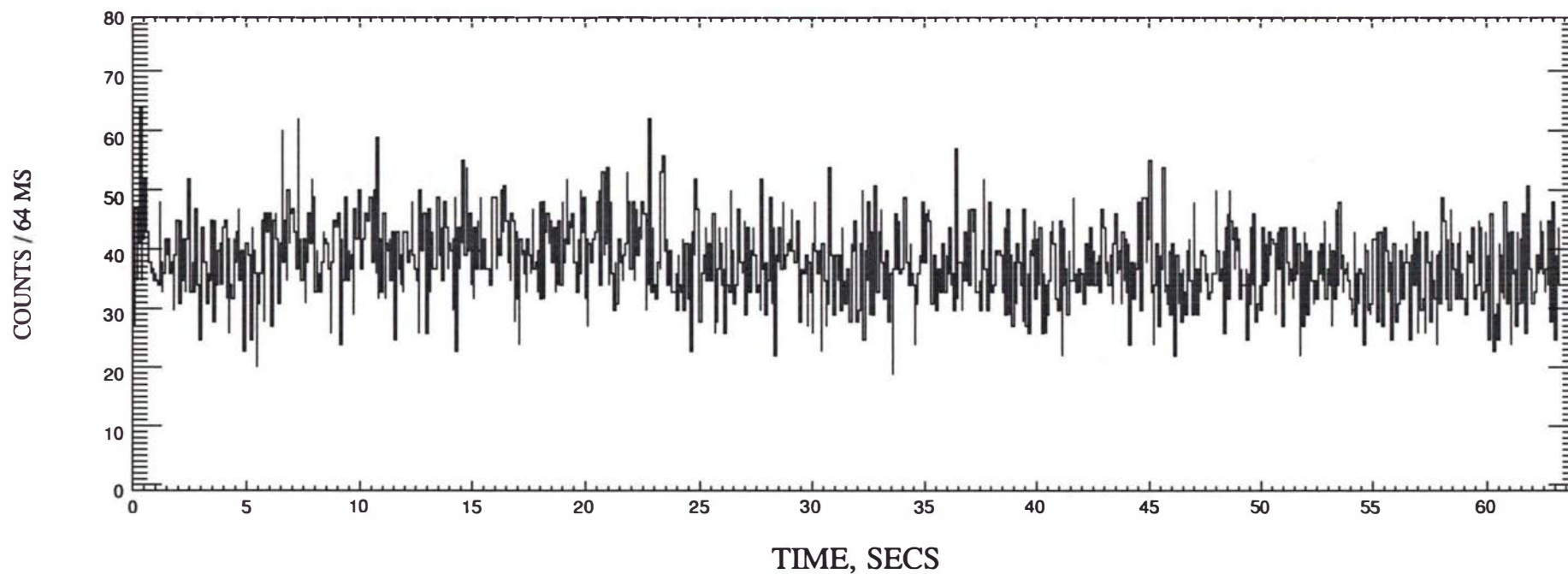
HUS MODES EDR day 293, year 1995 to day 293, year 1995 BURST NUMBER 6

1/26/96



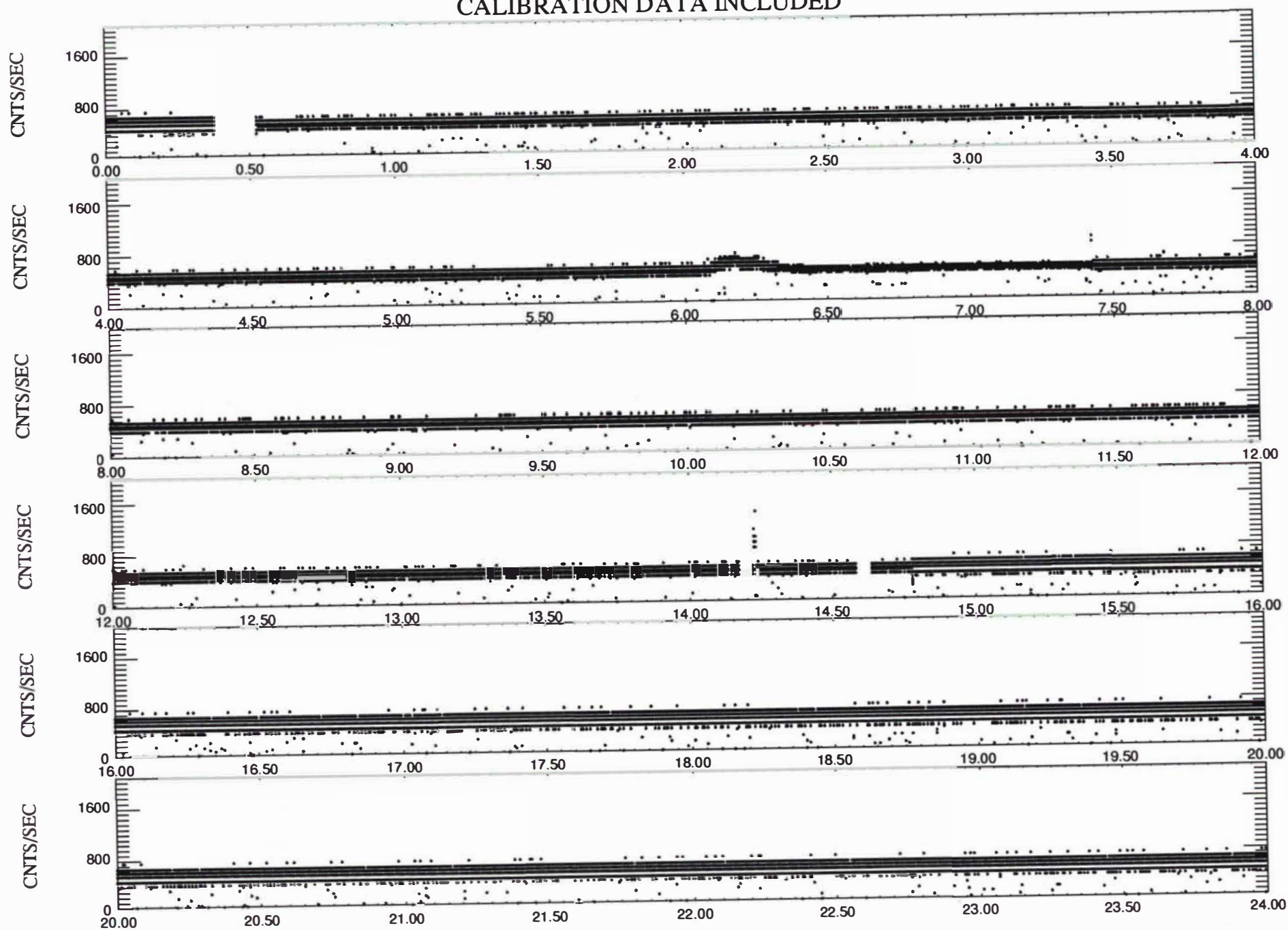
HUS 2A TRIGGERED DATA EDR day 293, year 1995
Burst Counter 6 at UT= 6.169347699483 h=22209.652 s 06:10:09.652

1/26/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 293, year 1995 to day 293, year 1995
CALIBRATION DATA INCLUDED

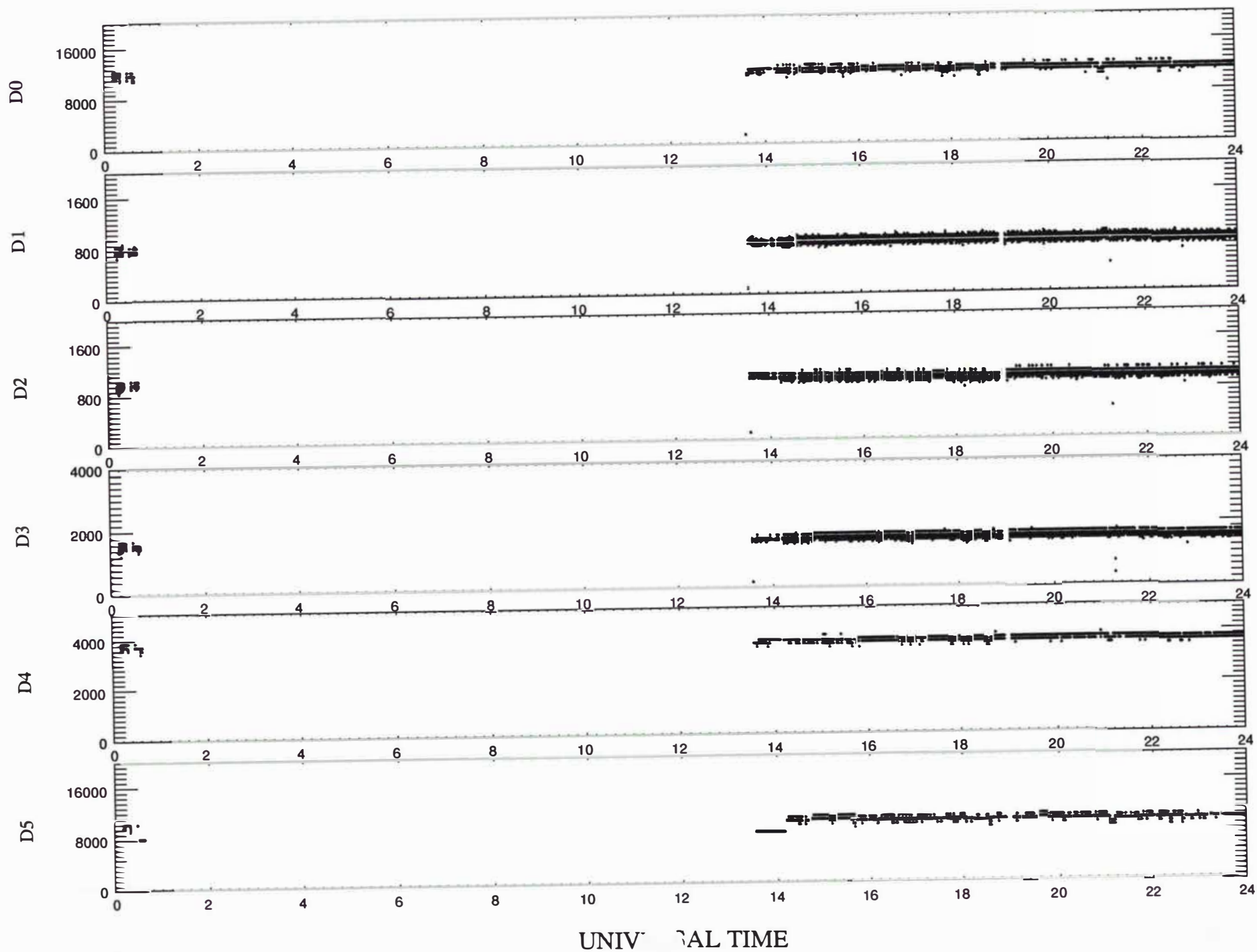
1/26/96



UNIV. TIME

HUS 2B COUNTS / SEC QEDR day 293, year 1995 to day 293, year 1995

10/23/95



From SAHI@SSLLES.MSFC.NASA.GOV Tue Oct 24 11:57 PDT 1995
Date: Tue, 24 Oct 1995 13:57:26 -0500 (CDT)
From: SAHI@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@ssl.msfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3881

TIME: TJD=0011 SECONDS=55244

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

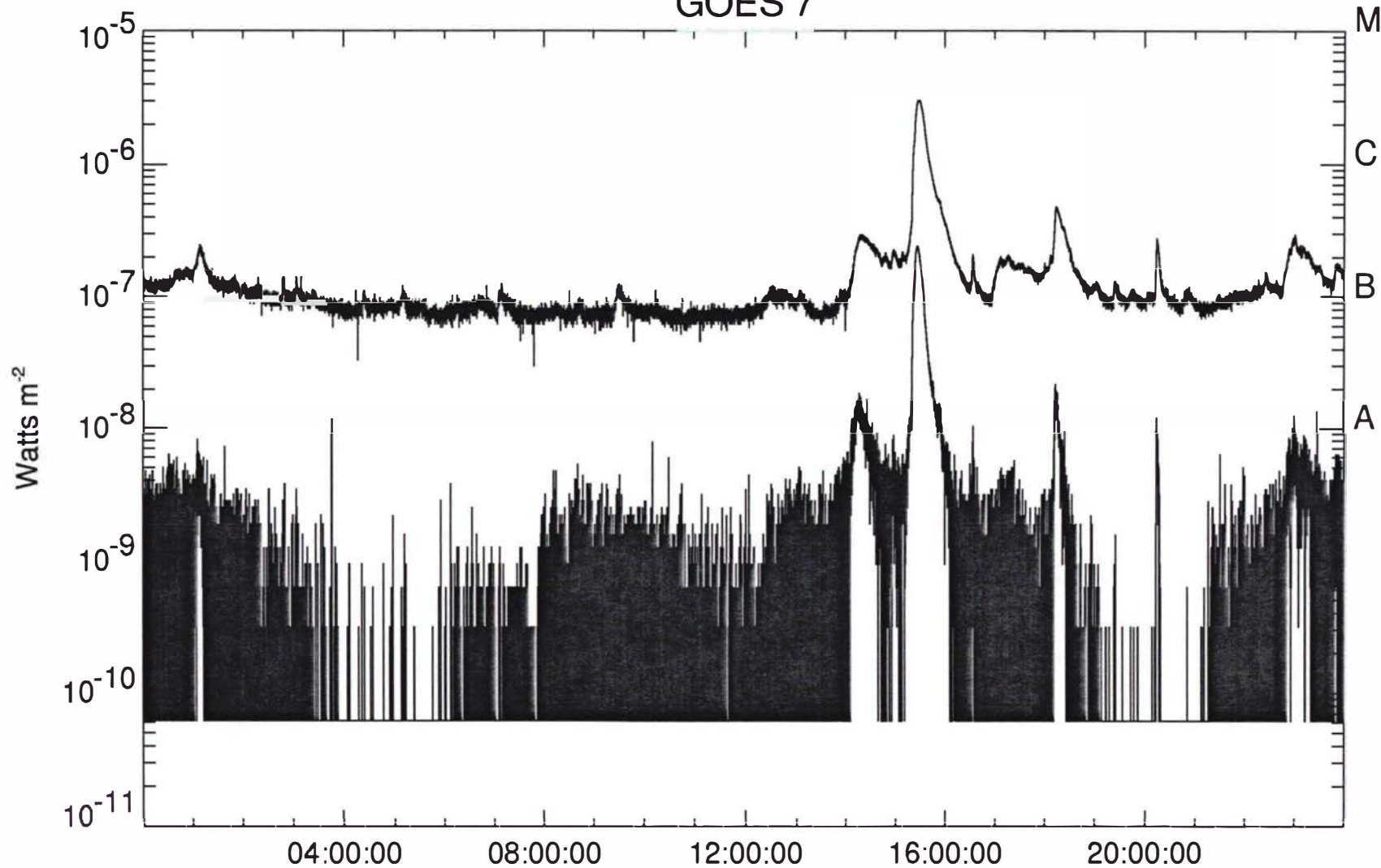
INTENSITY: COUNTS/CM2

LOCATION: ZENITH=119.6 AZIMUTH=334.8 ERROR=1.4 DEGREES

COMMENTS:

Corrected message for 3881: first one had wrong TJD.
SOLAR FLARE. GOES C3.0 SF, DUR.~75 SEC. NOT VISIBLE ABOVE 100 KEV.

GOES 7



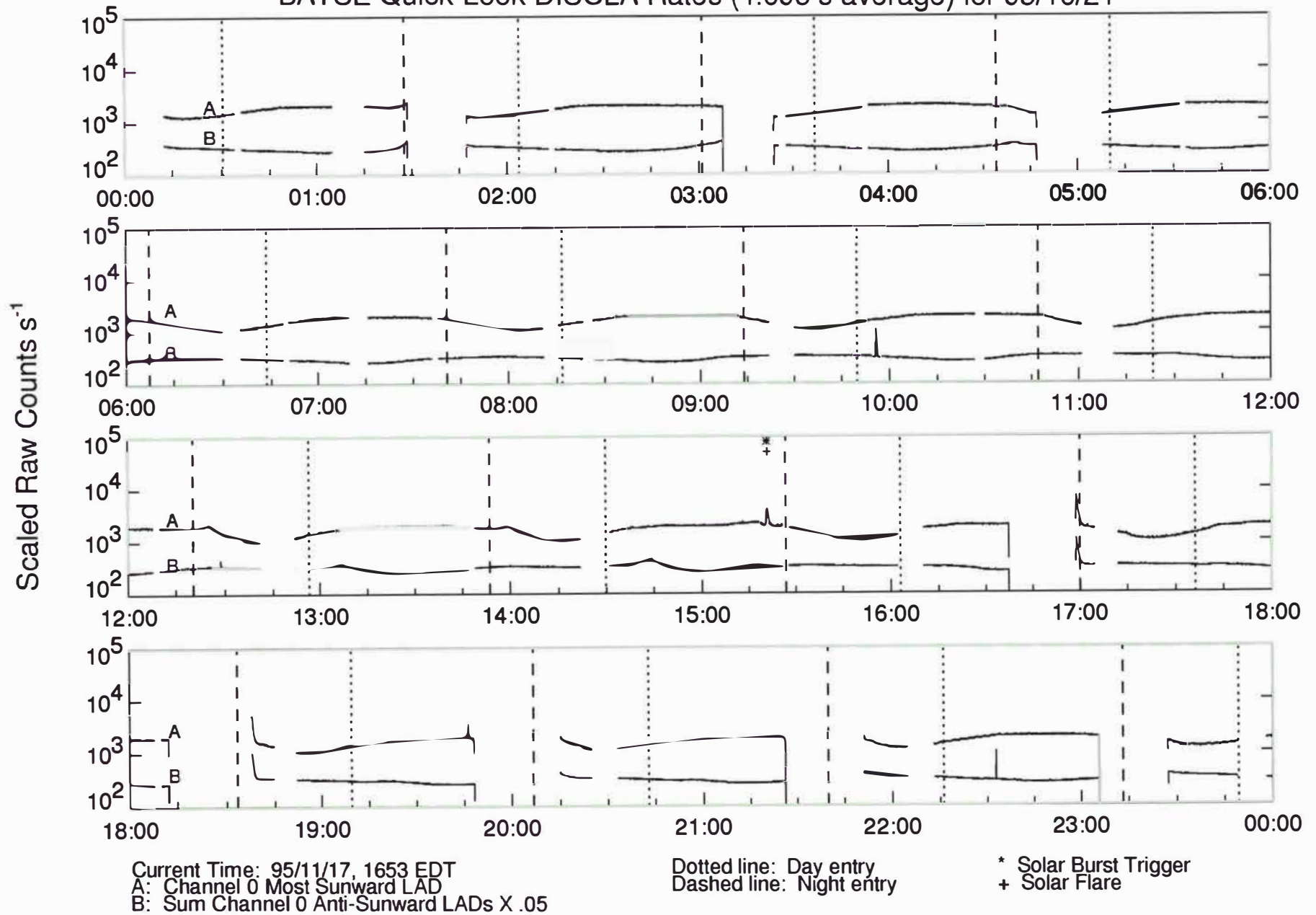
Data Start: 95/10/21, 0000:01

Plot created: 95/11/17, 1652

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

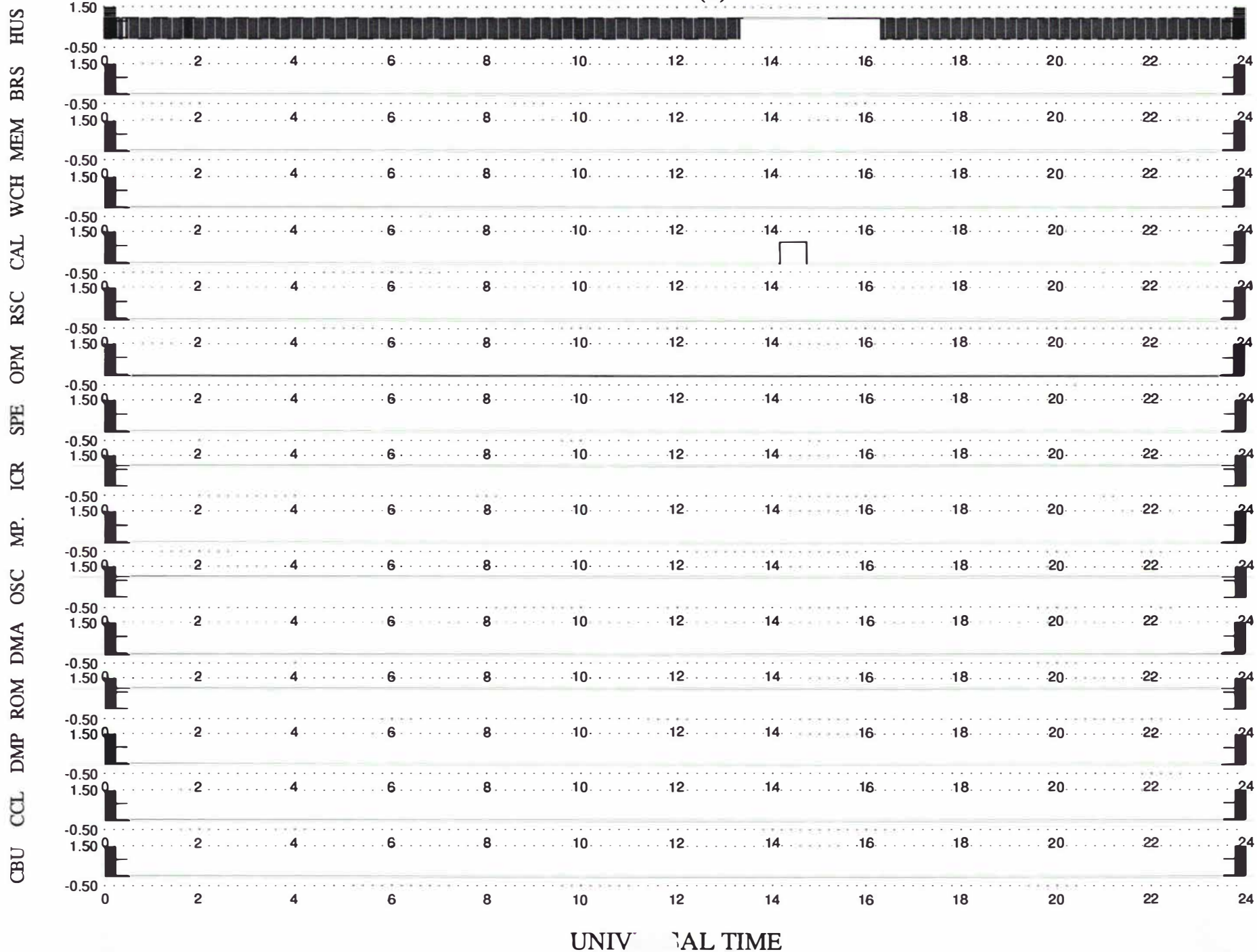
Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/21



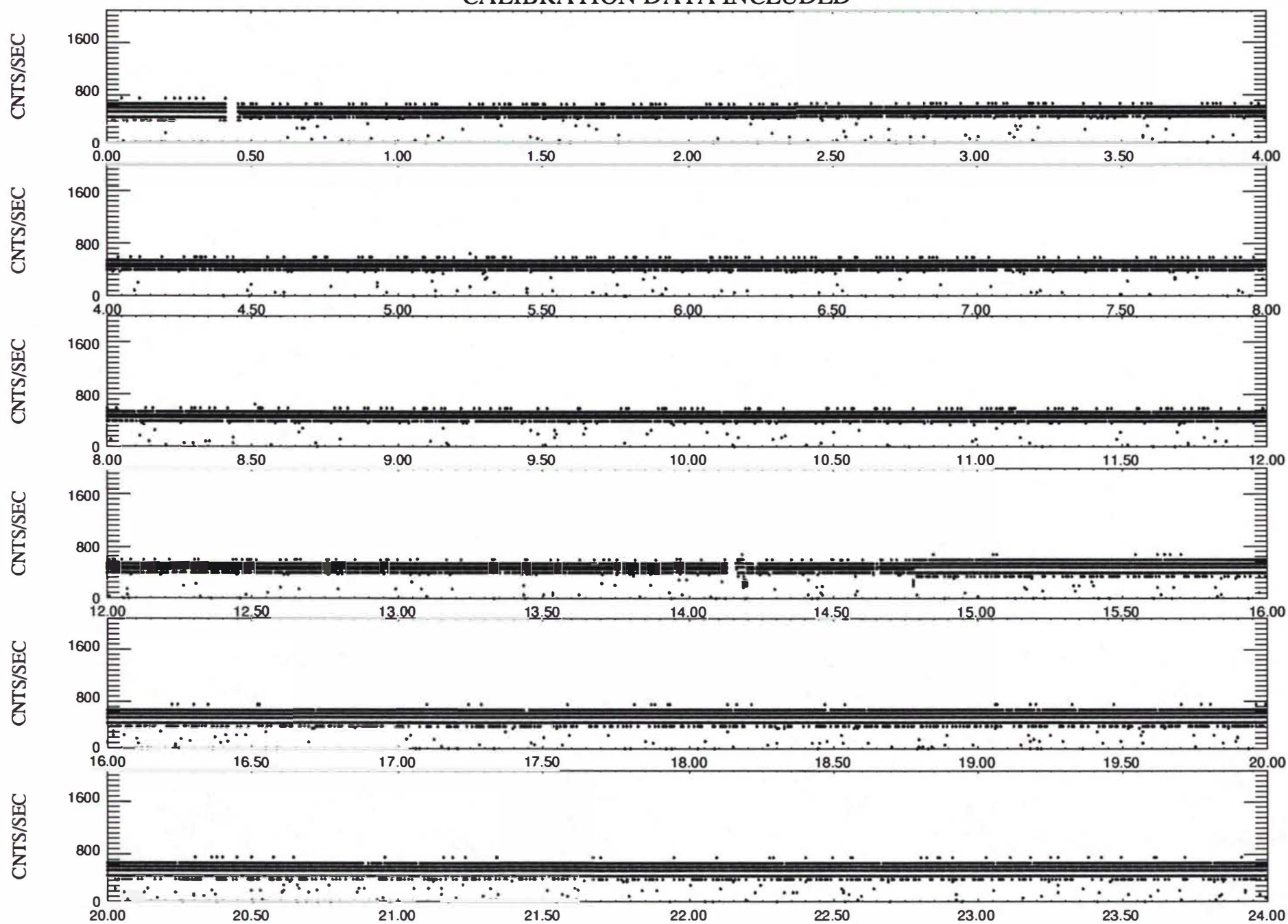
HUS MODES EDR day 294, year 1995 to day 294, year 1995
NO BURST (6)

1/26/96

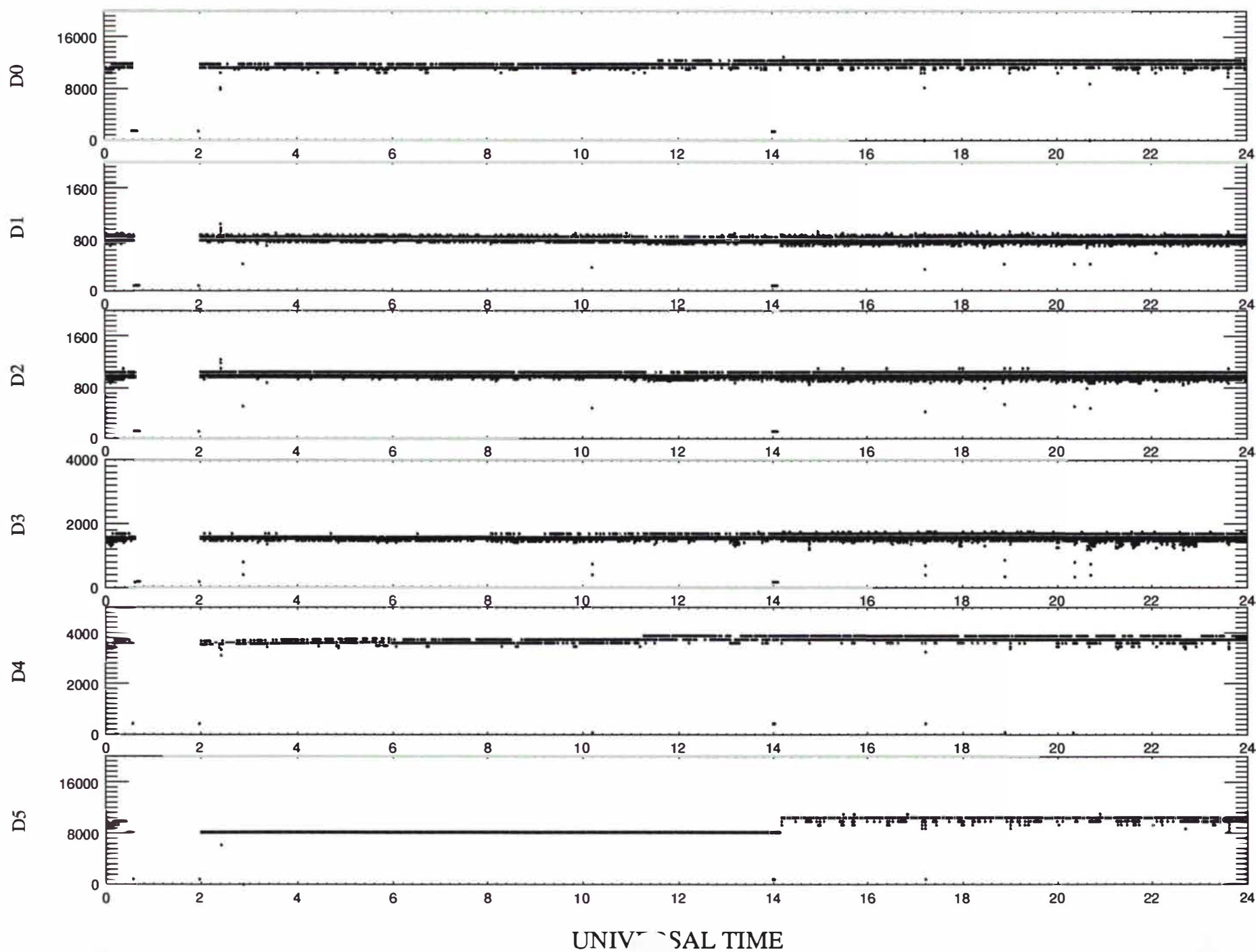


HUS 2A, MODE 1, NOT AVERAGED EDR day 294, year 1995 to day 294, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV TIME



From BUTTERWORTH@LHEAVX.GSFC.NASA.GOV Thu Nov 2 10:16 PST 1995
From: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Date: Thu, 2 Nov 1995 13:16:02 -0500 (EST)
To: khurley@sunspot.ssl.berkeley.edu, kmarar@isac.ernet.in, jterrell@lanl.gov,
CLINE@LHEAVX.GSFC.NASA.GOV, scott@circe.gsfc.nasa.gov
CC: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Subject: Konus saw nothing corresponding to the Ulysses events on October 22 and 31

Konus didn't trigger on either day. The waiting-mode counts (which are integrated in 3 second intervals and so would downplay much shorter events) are untroubled throughout both corresponding periods (apart from regular Vela X-1 pulsations below 50keV in the south-facing detector). Paul.

From: SMTP%"khurley@sunspot.ssl.berkeley.edu" 2-NOV-1995 11:28:30.56
To: BUTTERWORTH
CC:
Subj:

Date: Thu, 2 Nov 1995 06:37:14 -0800
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <9511021437.AA04879@charybdis.>
To: butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
jterrell@lanl.gov, khurley@sunspot.ssl.berkeley.edu,
kmarar@isac.ernet.in, scott@xtelab.gsfc.nasa.gov

ULYSSES GAMMA-RAY BURSTS NOT REPORTED BY BATSE:

Ulysses triggered on a weak, 32 ms long event October 22 1995 around 09:05 UT at Ulysses. The spacecraft was about 1400 light-seconds from Earth.

Ulysses triggered on an intense, 32 ms long event October 31 1995 around 01:22 UT at Ulysses. The spacecraft was about 1400 light-seconds from Earth.

These events could be particle-induced, or real.

Were these events detected by anyone else?

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

From TERRELL@nisdp0.lanl.gov Mon Feb 5 14:18 PST 1996

From: TERRELL@nisdp0.lanl.gov

Date: Mon, 5 Feb 1996 15:18:05 -0700 (MST)

To: khurley@sunspot.ssl.berkeley.edu

Subject: dmstp grb detections

From: jterrell@lanl.gov (James Terrell) 960205

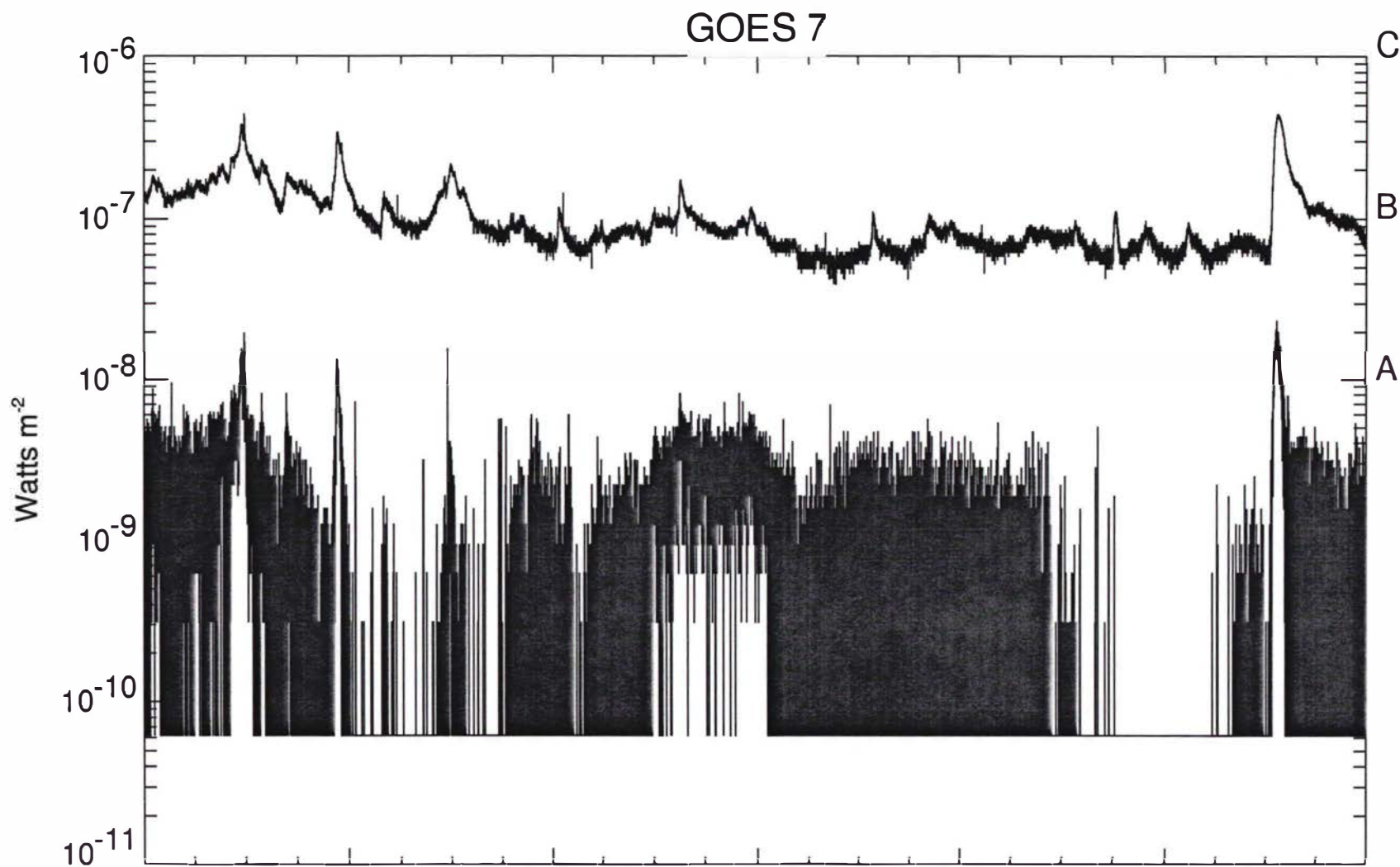
To: khurley@sunspot.ssl.berkeley.edu, butterworth@lheavx.gsfc.nasa.gov,
cline@lheavx.gsfc.nasa.gov, kmarar@isac.ernet.in,
scott@circe.gsfc.nasa.gov, teegarden@lheavx.gsfc.nasa.gov

Subj: DMSP GRB detections (or non-detections)

DMSP 12 and 13 did not detect the ULYSSES grb of Oct 22 1995 at 09:05 UT.
nor the ULYSSES event of Oct 31 at 01:22. In any such case, of course,
a weak detection might be missed, with 2800 seconds of data to scan.

DMSP 13 apparently made a weak detection of the intense ULYSSES event of Dec 12 at 07:54 UT,
with a peak 2-sec count of 30/sec at 29651.5 UT, not totally convincing. DMSP 12
saw nothing above background.

DMSP 13 also did not detect the KONUS event of Dec 27 at 23005 UT. DMSP 12 had a
weak (50/sec) peak at 22996.2 UT. Since it was soft (<100 keV) and not quite at the
right time it may be of no interest.---JIM TERRELL 960205



Data Start: 95/10/22, 0000:02

Plot created: 95/11/17, 1659

Channel

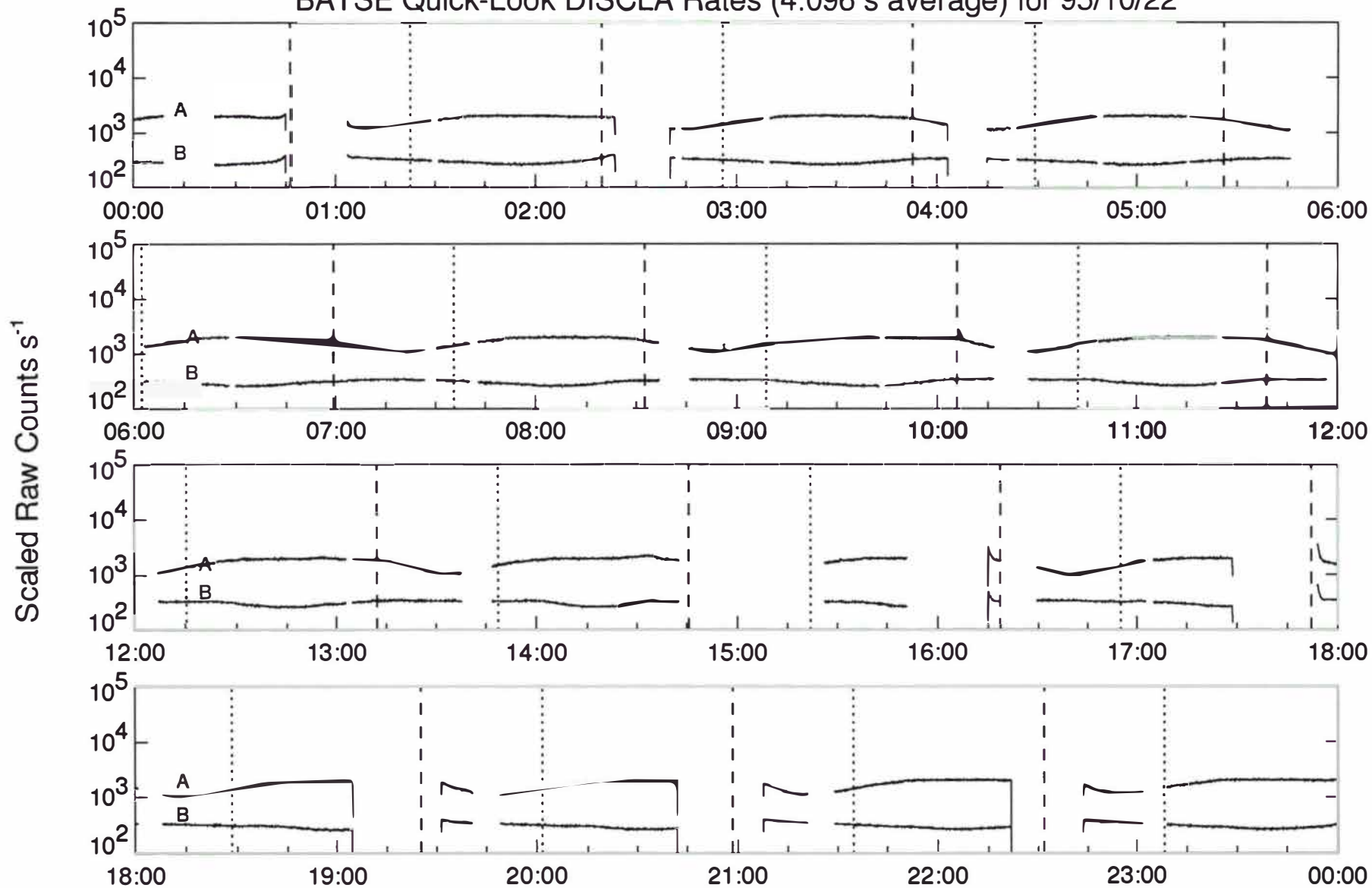
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/22



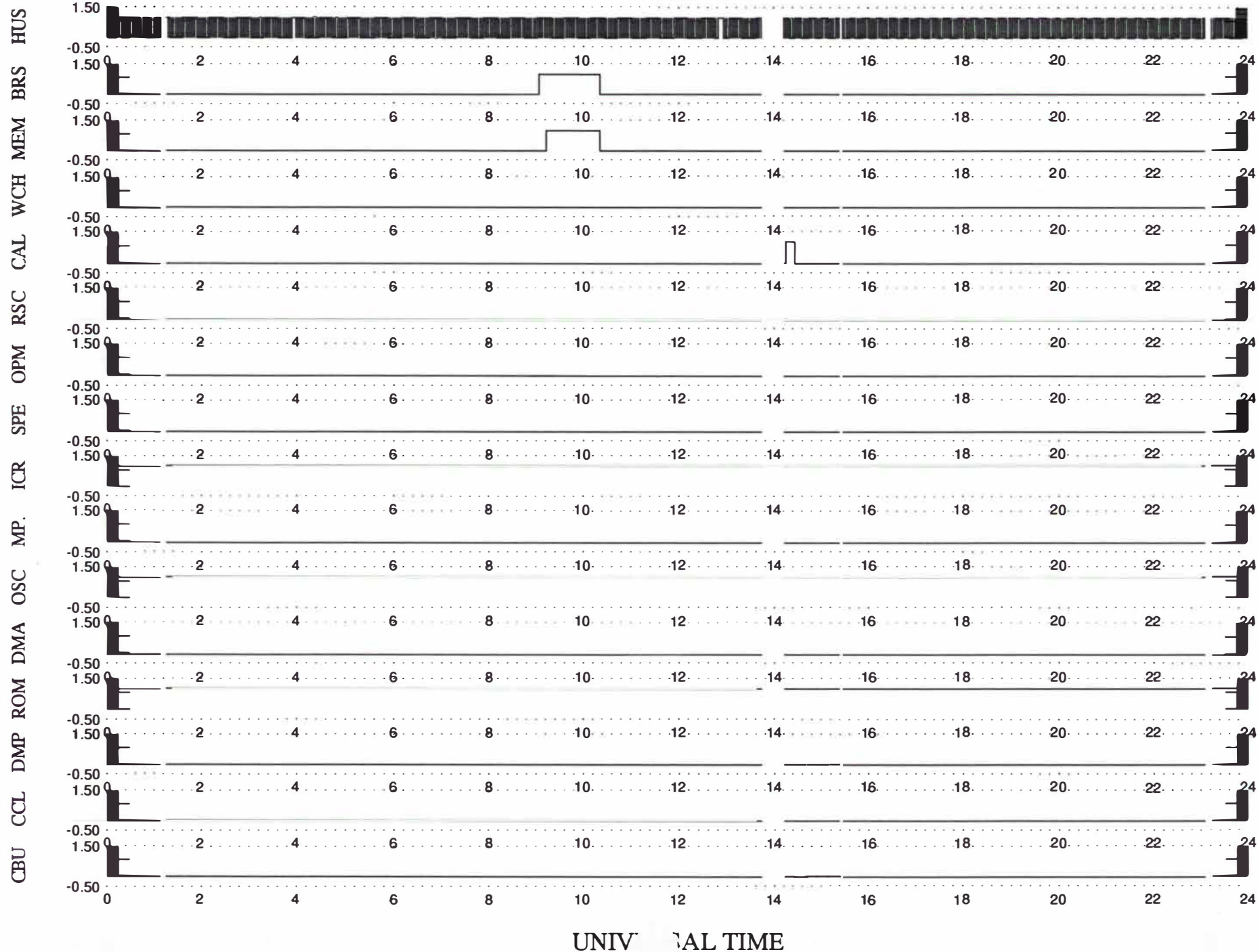
Current Time: 95/11/17, 1659 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

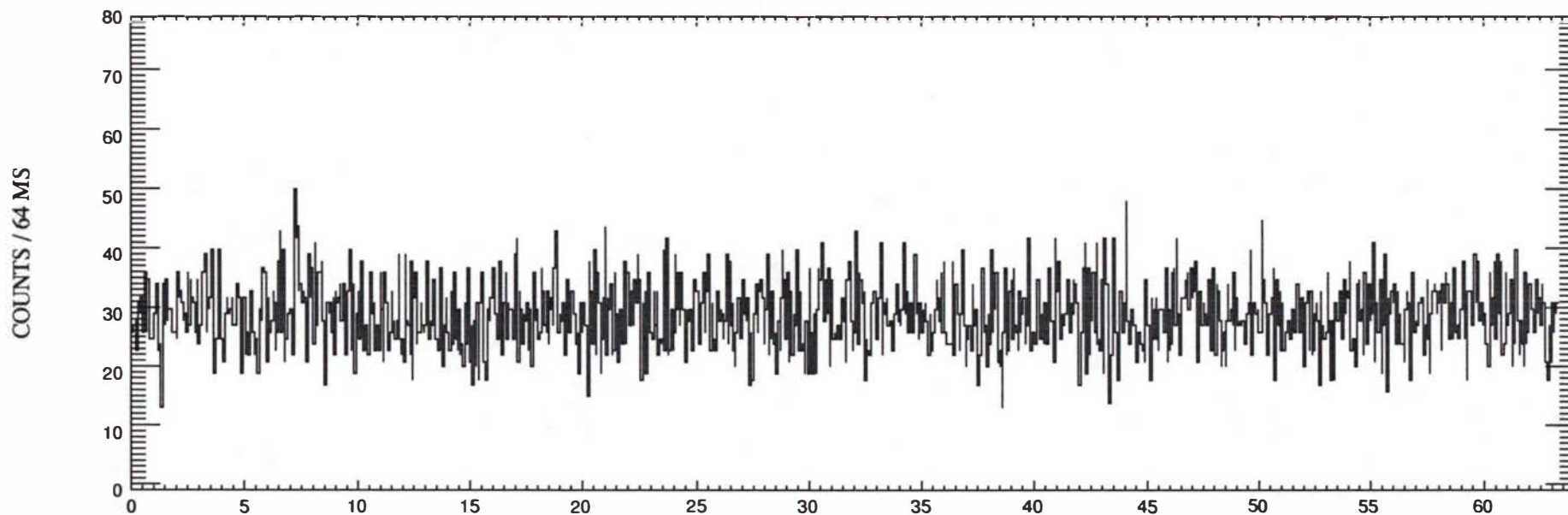
HUS MODES EDR day 295, year 1995 to day 295, year 1995
BURSTNUMBER 7

1/26/96

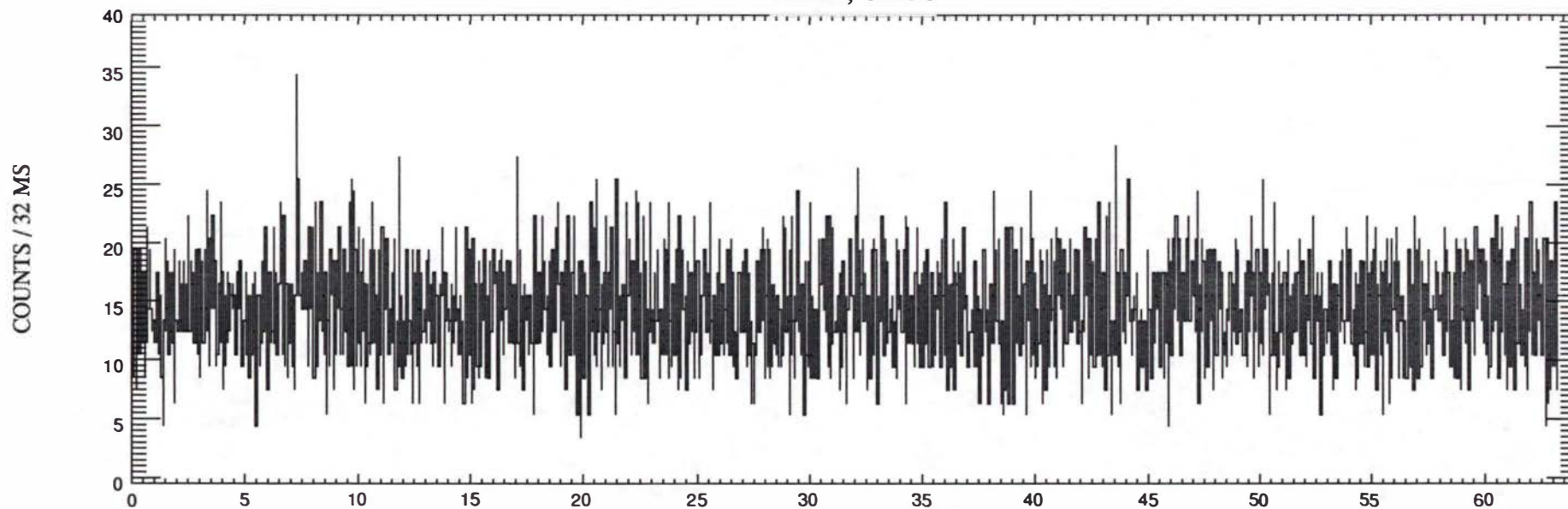


HUS 2A TRIGGERED DATA EDR day 295, year 1995
Burst Counter 7 at UT= 9.086492919922 h=32711.375 s 09:05:11.375

1/26/96



TIME, SECS

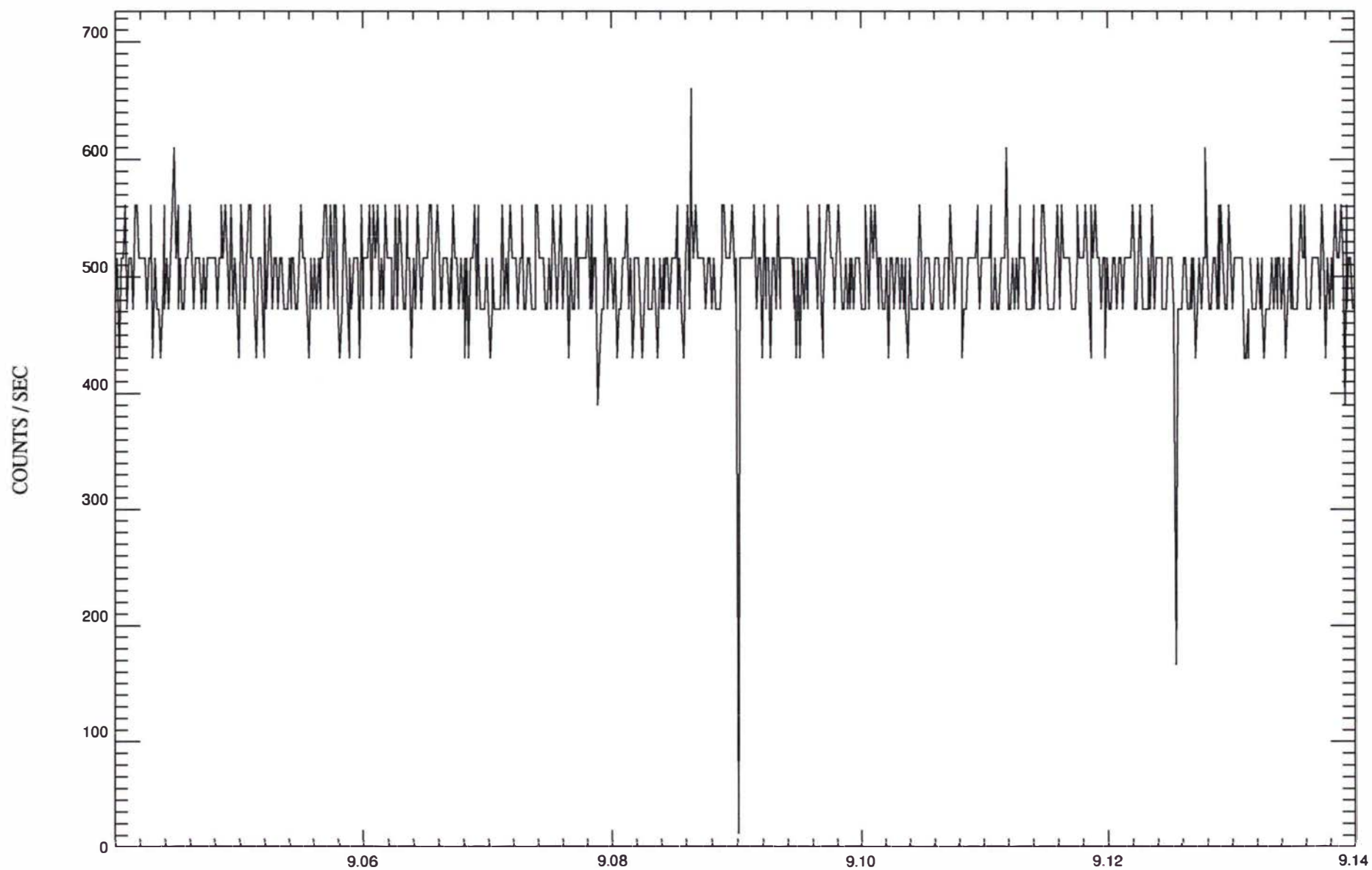


TIME, SECS

B# 1

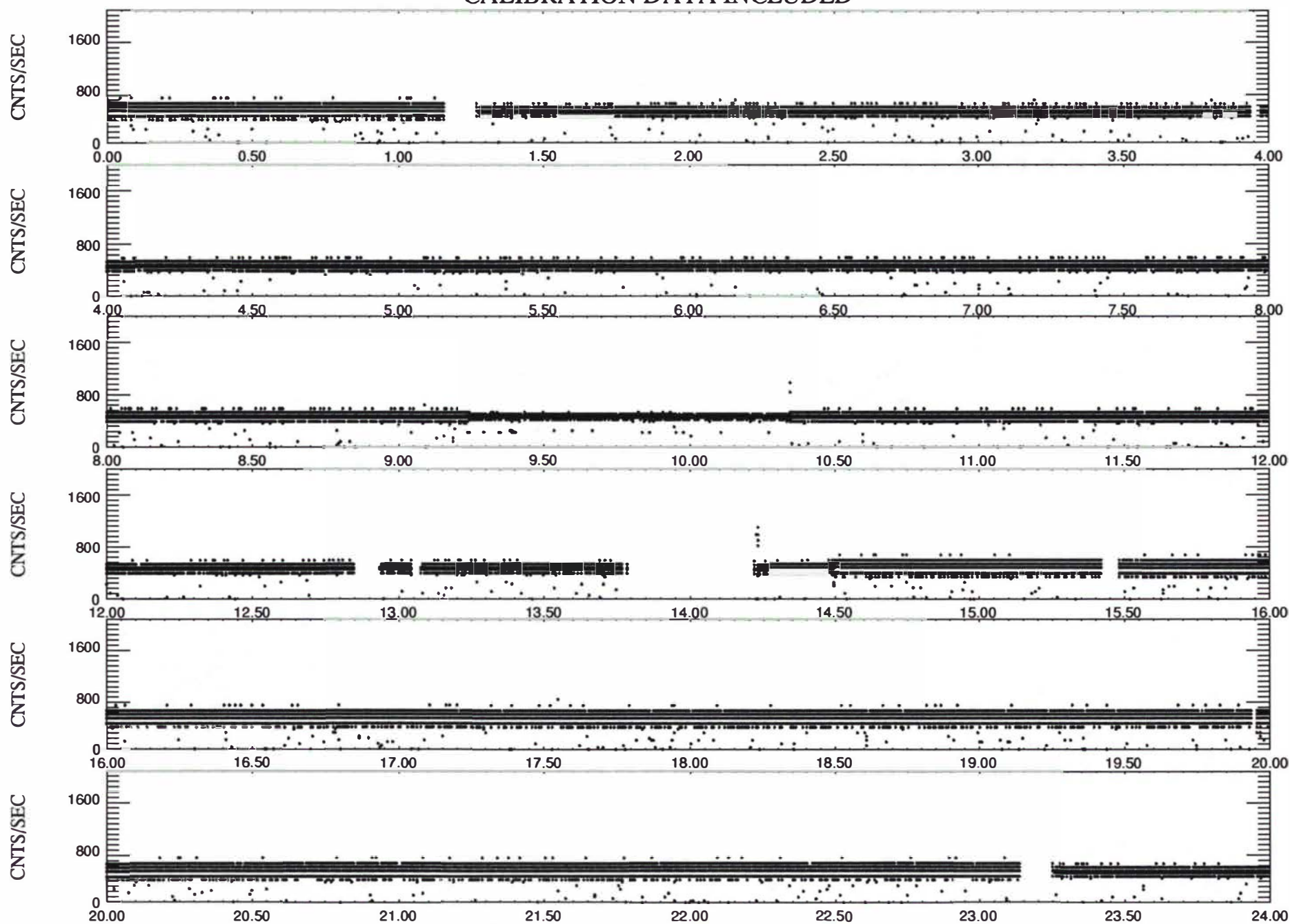
HUS 2A, MODE 1, NOT AVERAGED QEDR day 295, year 1995 to day 295, year 1995
CALIBRATION DATA INCLUDED

10/26/95

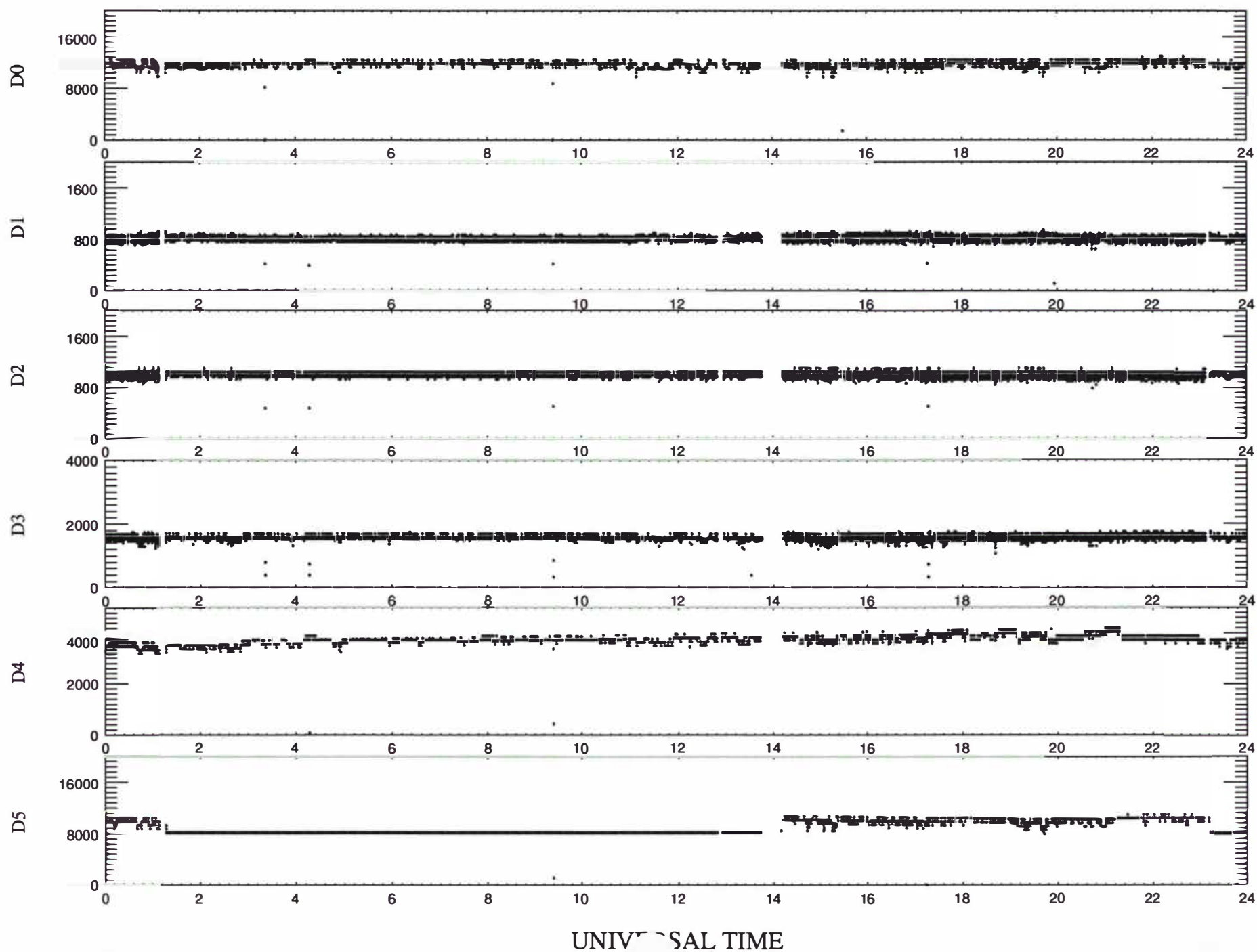


HUS 2A, MODE 1, NOT AVERAGED EDR day 295, year 1995 to day 295, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV CAL TIME



From MIZZELL@fender.msfc.nasa.gov Tue Oct 24 10:23 PDT 1995
From: MIZZELL@fender.msfc.nasa.gov
Date: Tue, 24 Oct 1995 12:23:02 -0500 (CDT)
To: burst@compel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, 15733SCHAEFER@fender.msfc.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.: 3882

TIME: TJD=0013 SECONDS=41991

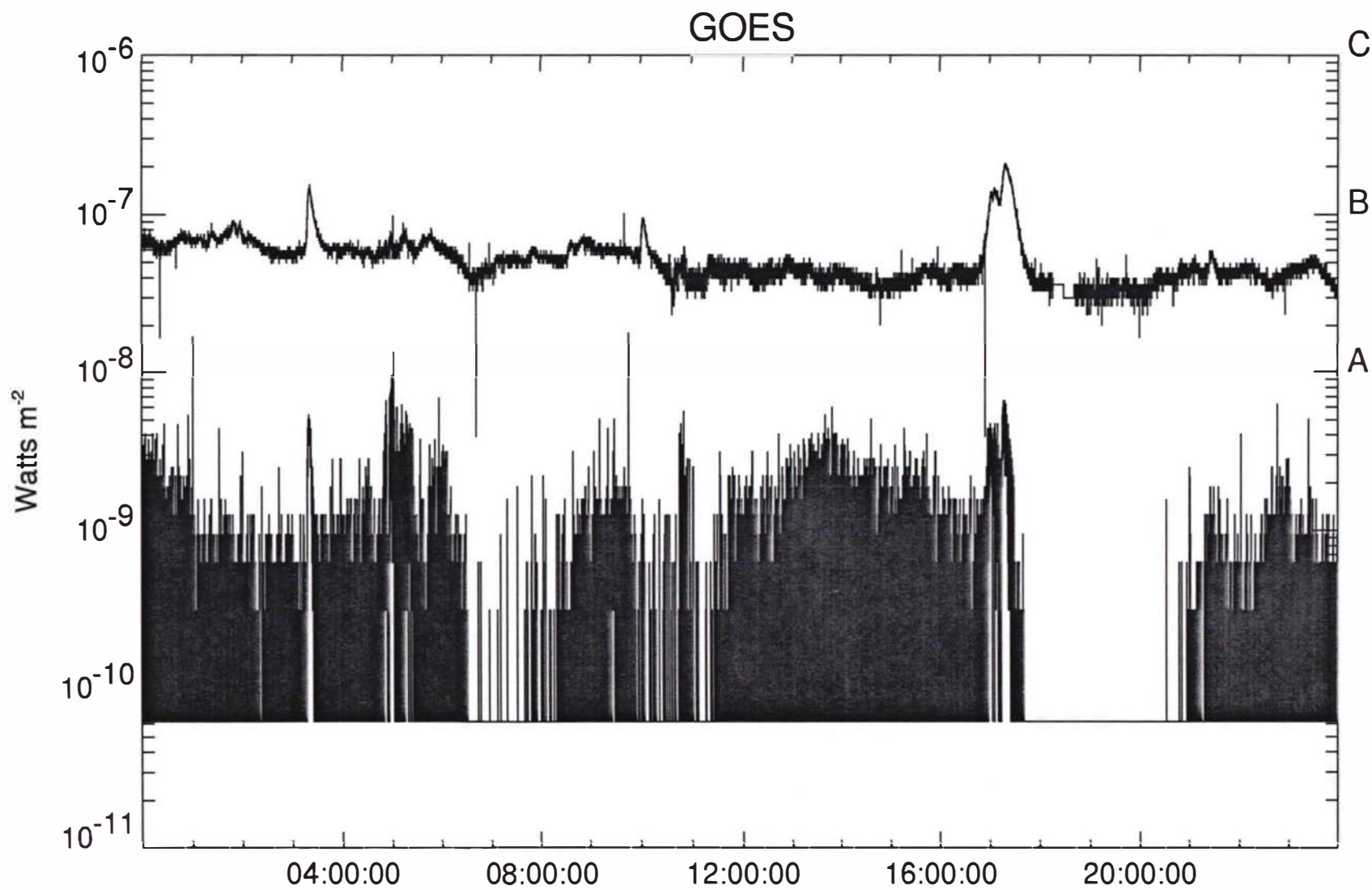
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
PARTICLE EVENT.



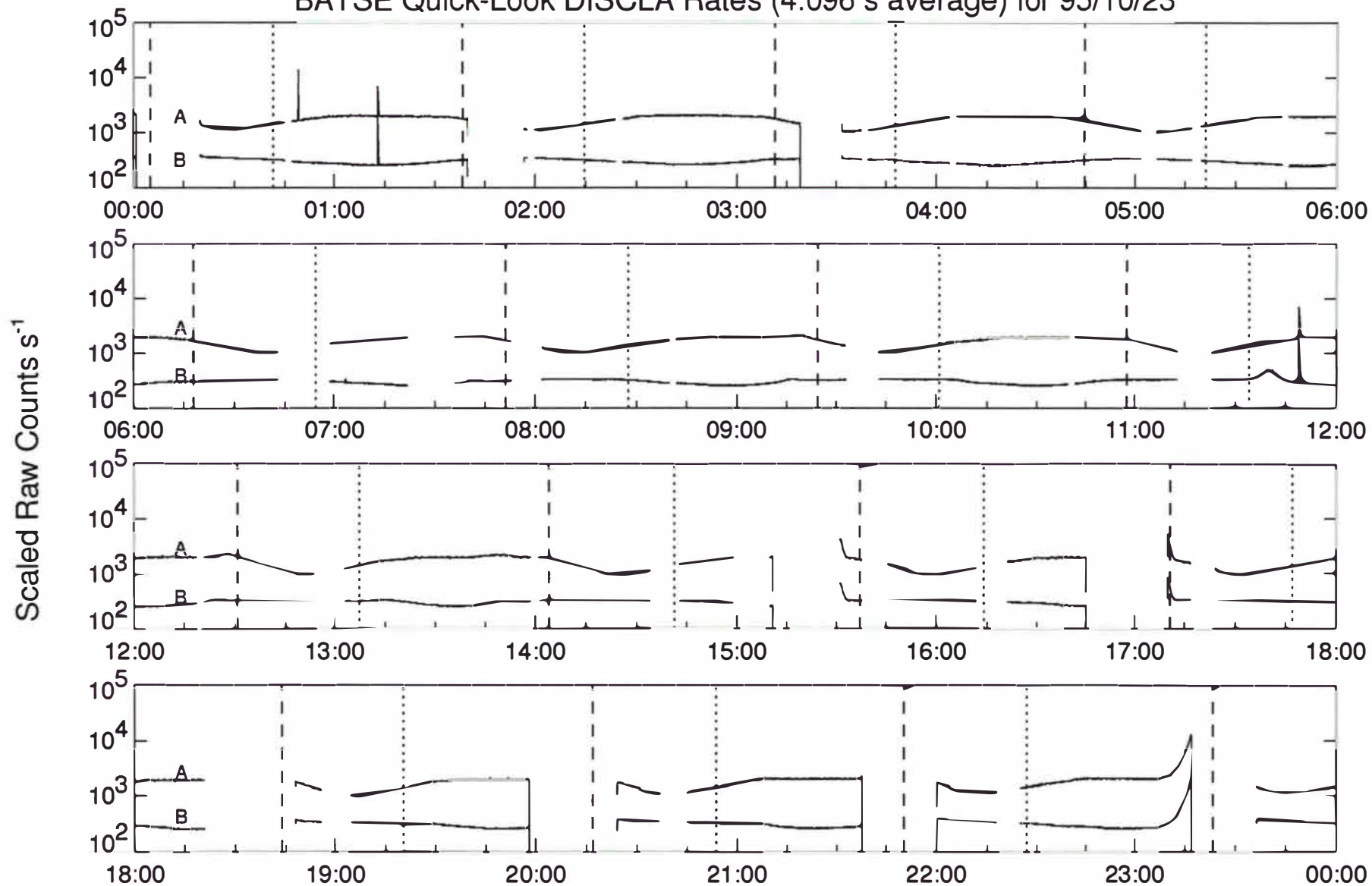
Data Start: 95/10/23, 0000:00

Plot created: 95/10/26, 1939

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 95/10/23



Current Time: 95/10/26, 1939 EDT

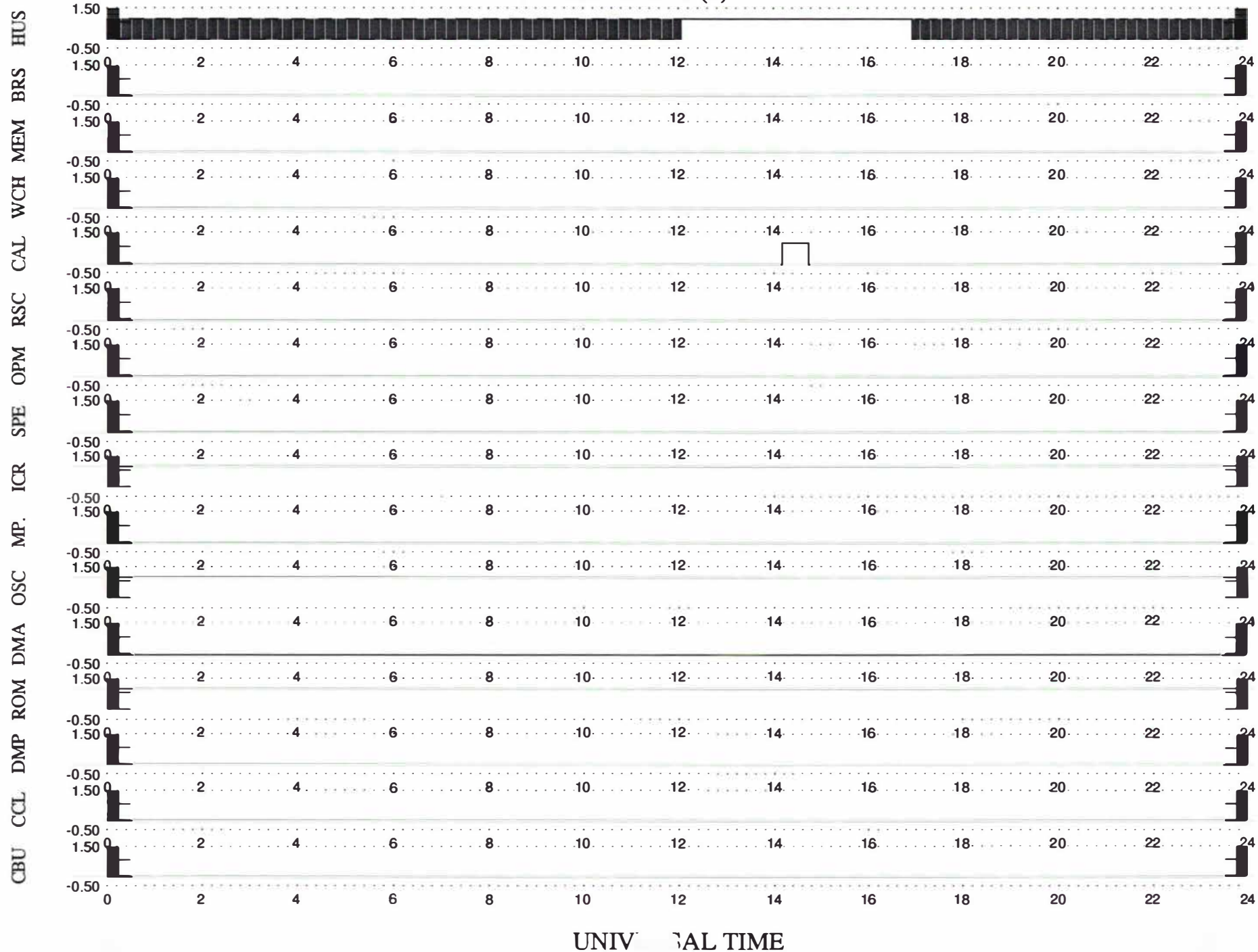
A: Channel 0 Most Sunward LAD

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

Dotted line: Day entry
Dashed line: Night entry

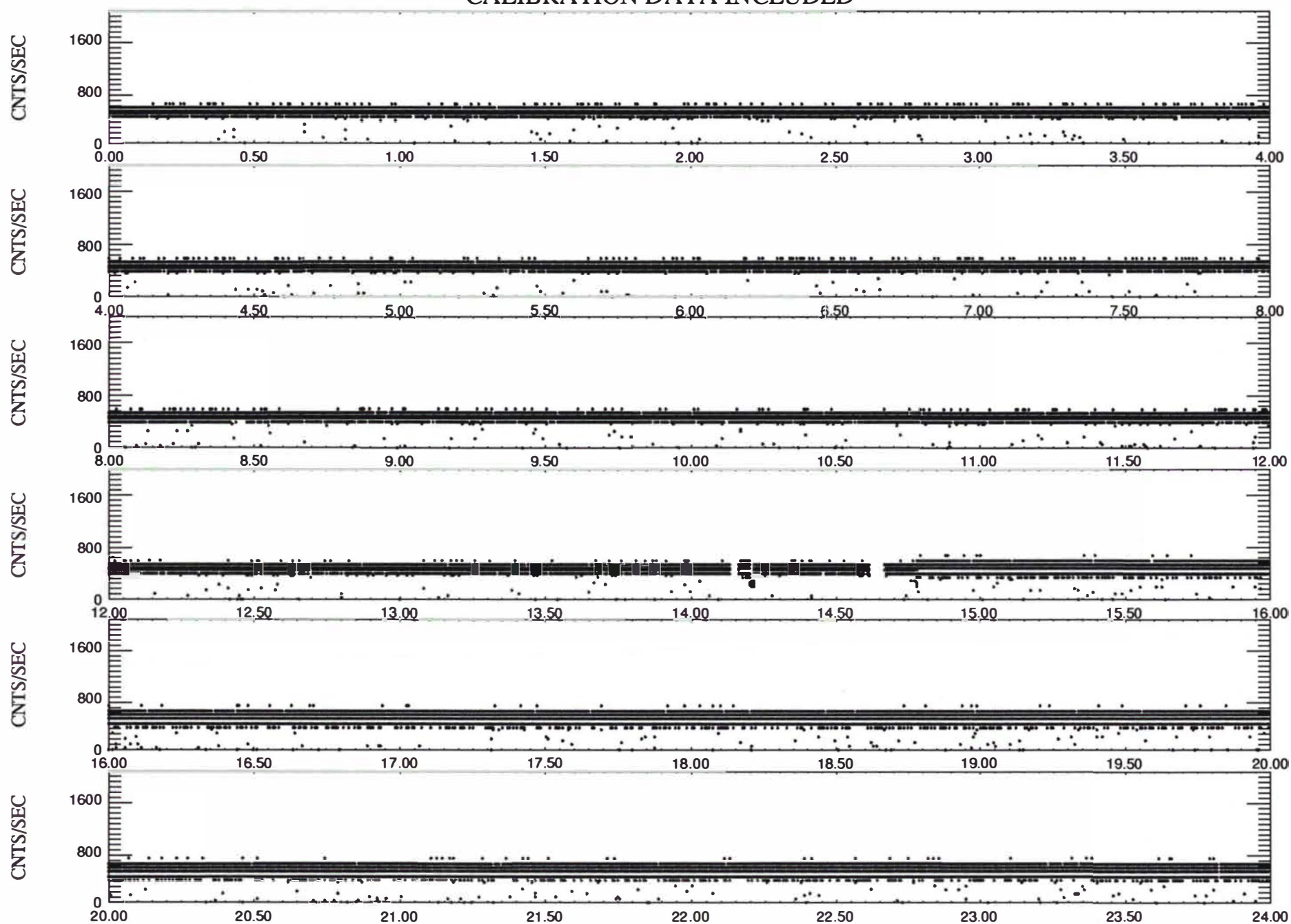
* Solar Burst Trigger
+ Solar Flare

1/26/96

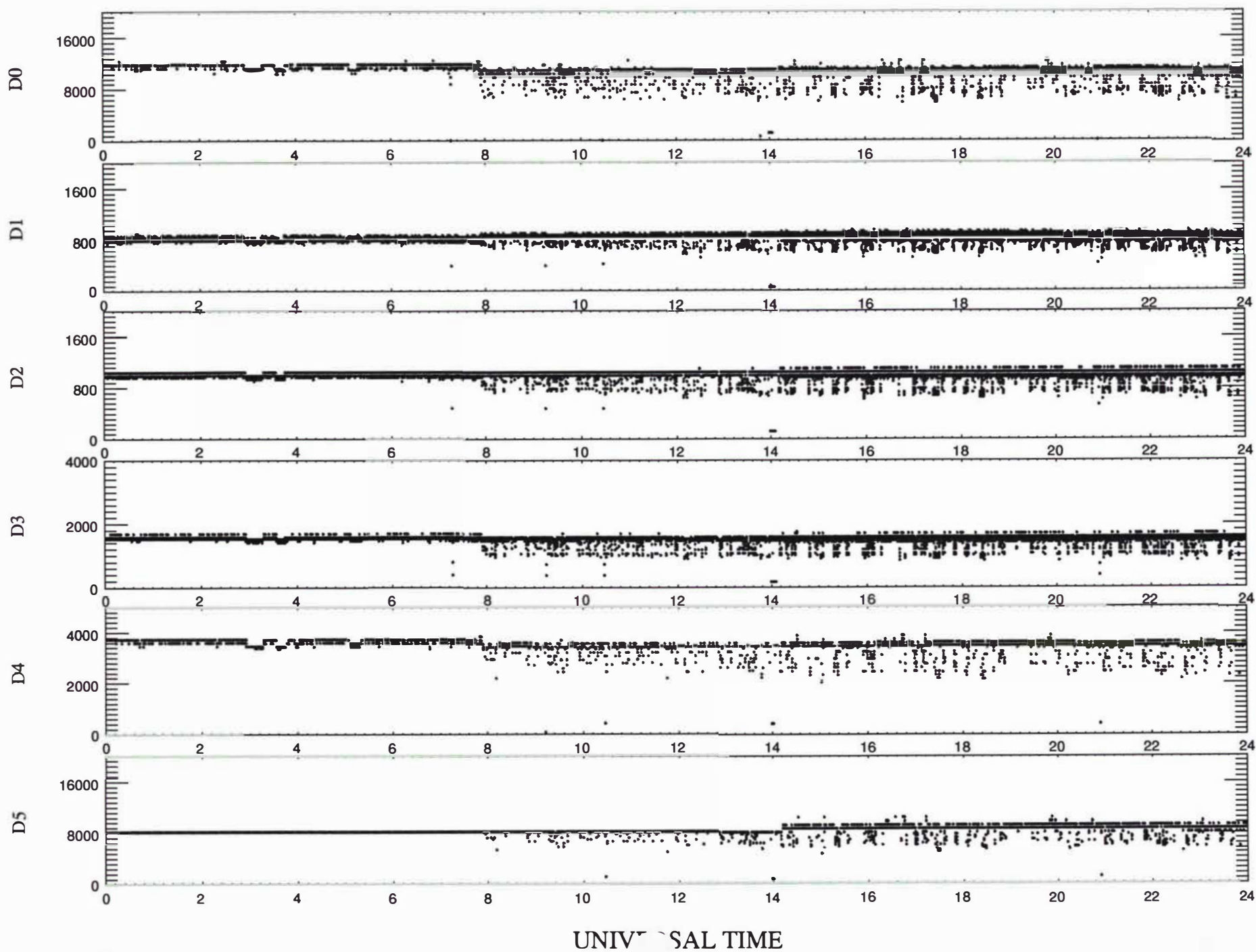


HUS 2A, MODE 1, NOT AVERAGED EDR day 296, year 1995 to day 296, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV. TIME



From SAHI@SSLLES.MSFC.NASA.GOV Thu Oct 26 05:22 PDT 1995
Date: Thu, 26 Oct 1995 7:22:11 -0500 (CDT)
From: SAHI@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@ssl.msfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3883

TIME: TJD=0014 SECONDS=3456

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY.

From SAHI@SSLLES.MSFC.NASA.GOV Thu Oct 26 05:25 PDT 1995
Date: Thu, 26 Oct 1995 7:24:50 -0500 (CDT)
From: SAHI@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
"15733::SCHAEFER"@ssl.msfc.nasa.gov, band@cass09.ucsd.edu
X-Vmsmail-To: @mops\$send msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3884

TIME: TJD=0014 SECONDS=44935

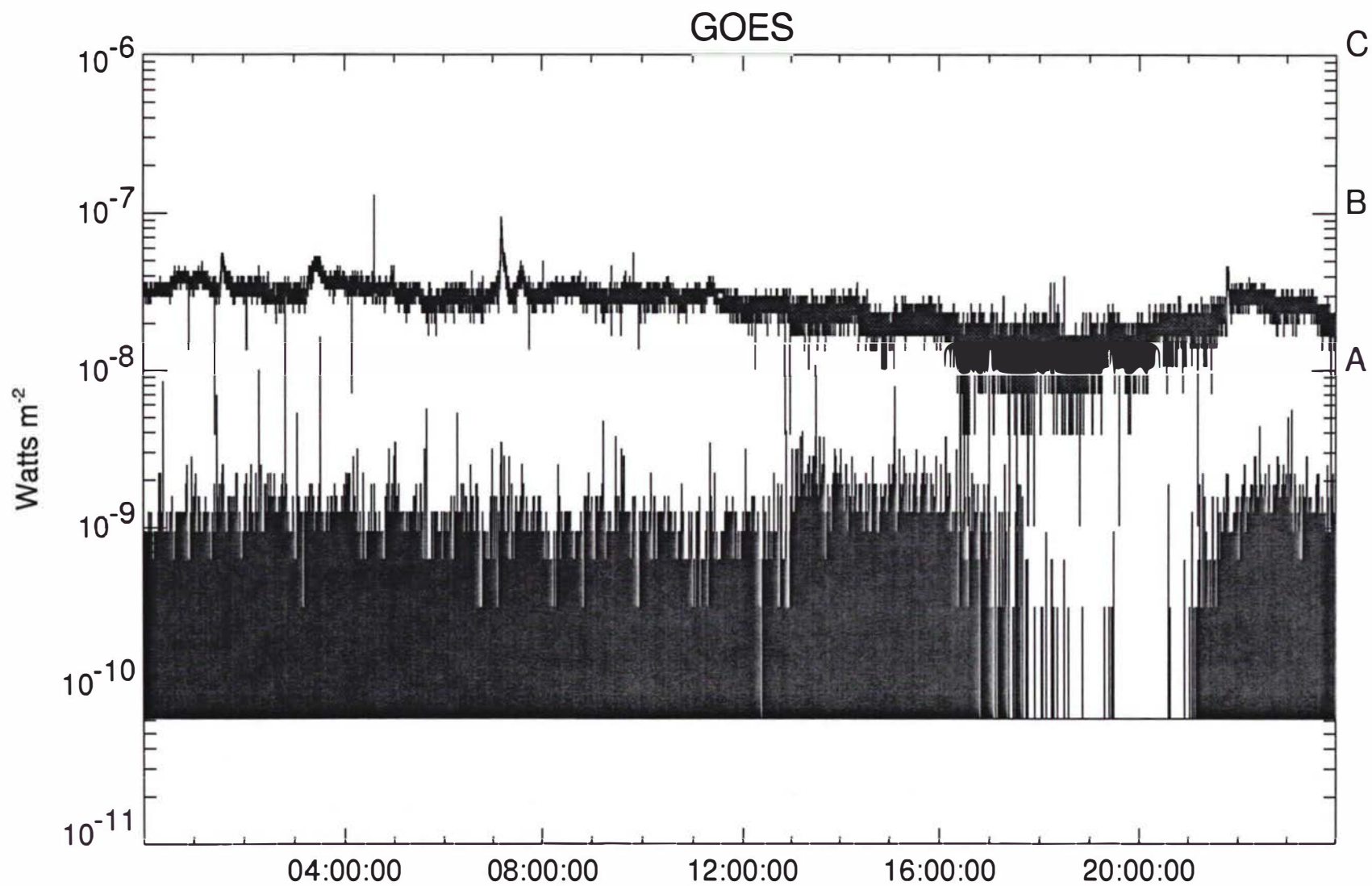
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

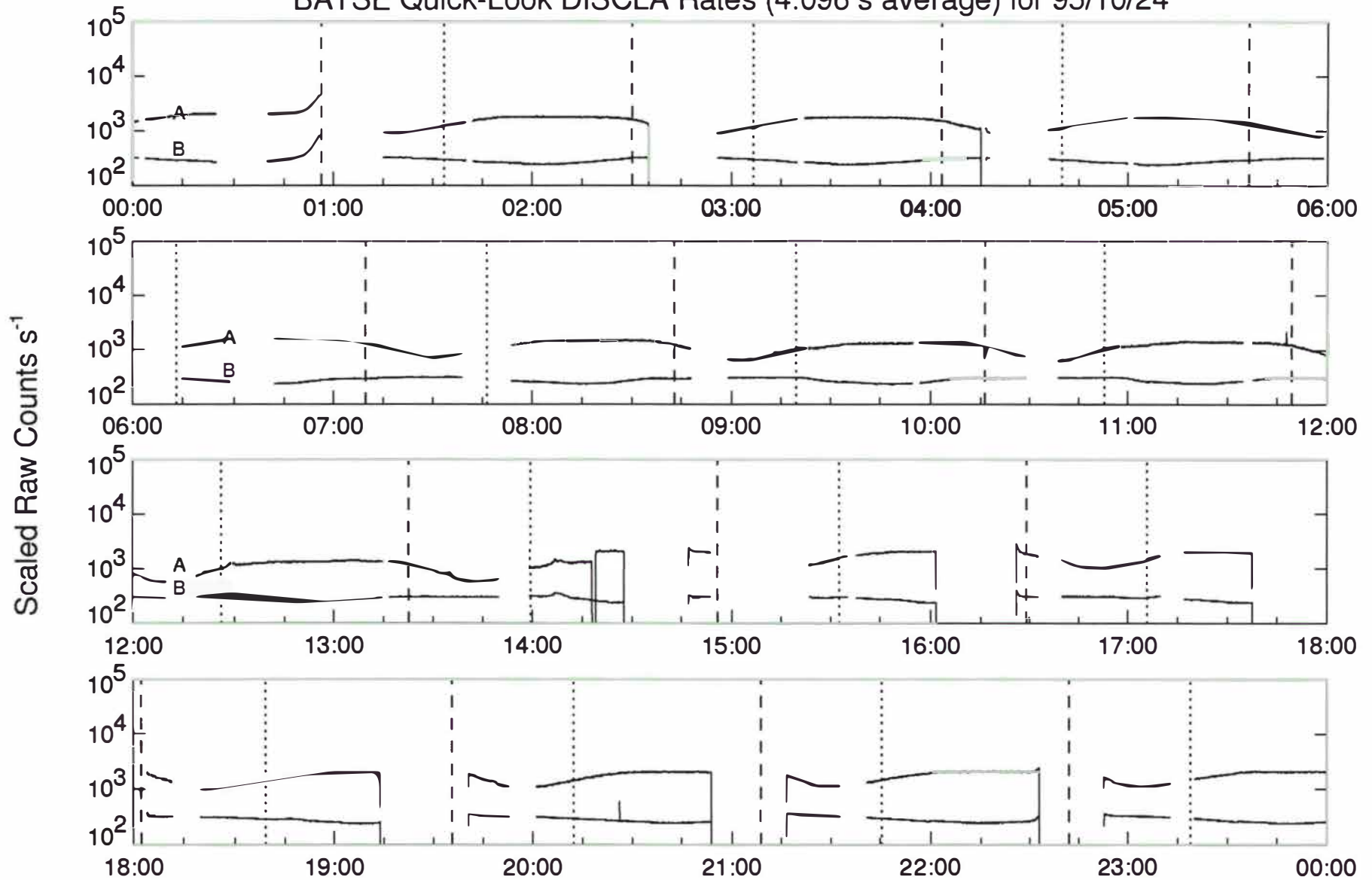
COMMENTS:
ELECTRON EVENT.



Data Start: 95/10/24, 0000:01 Plot created: 95/10/26, 1906

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 95/10/24



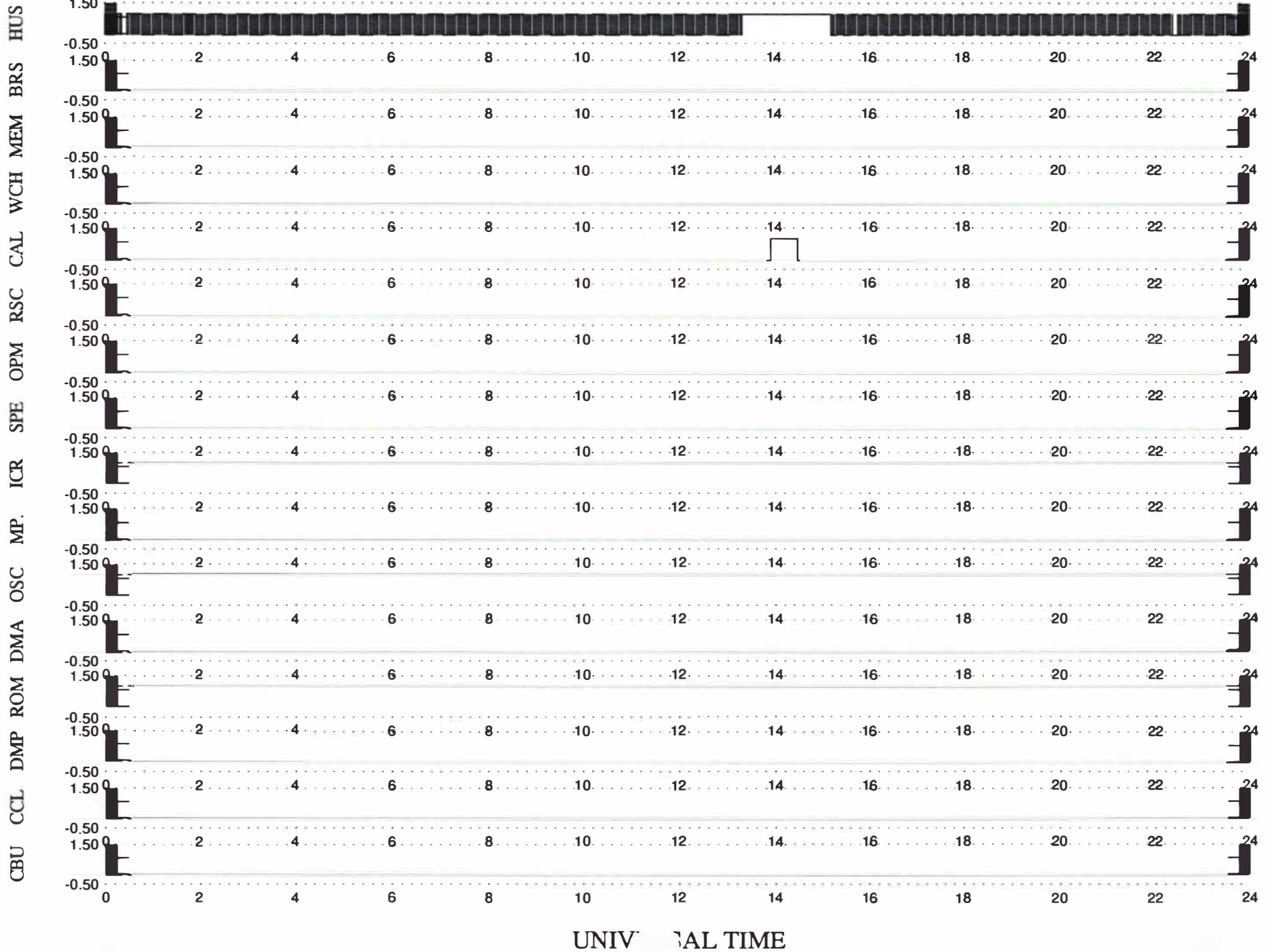
Current Time: 95/10/26, 1906 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

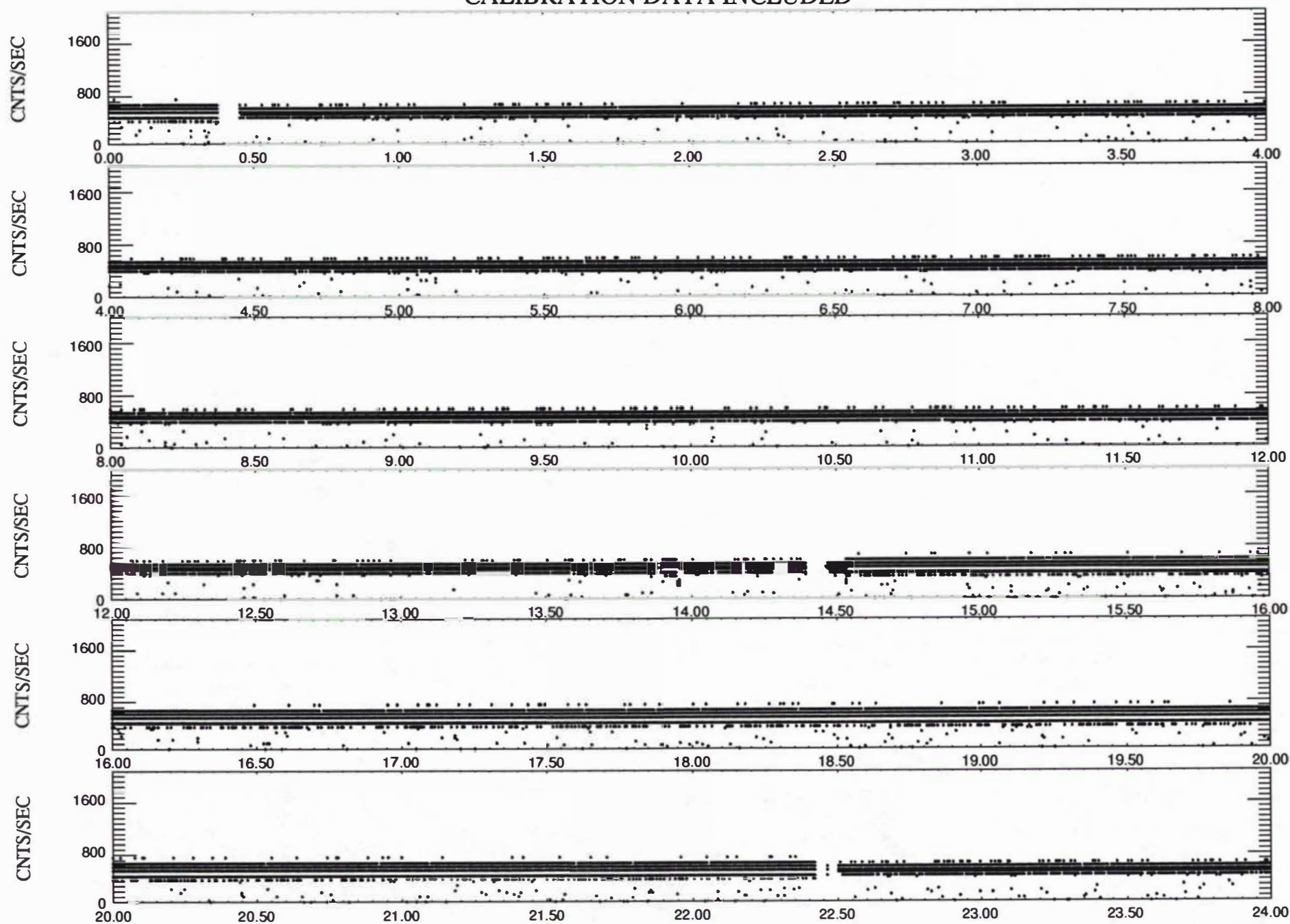
HUS MODES EDR day 297, year 1995 to day 297, year 1995
NO BURST (7)

1/26/96

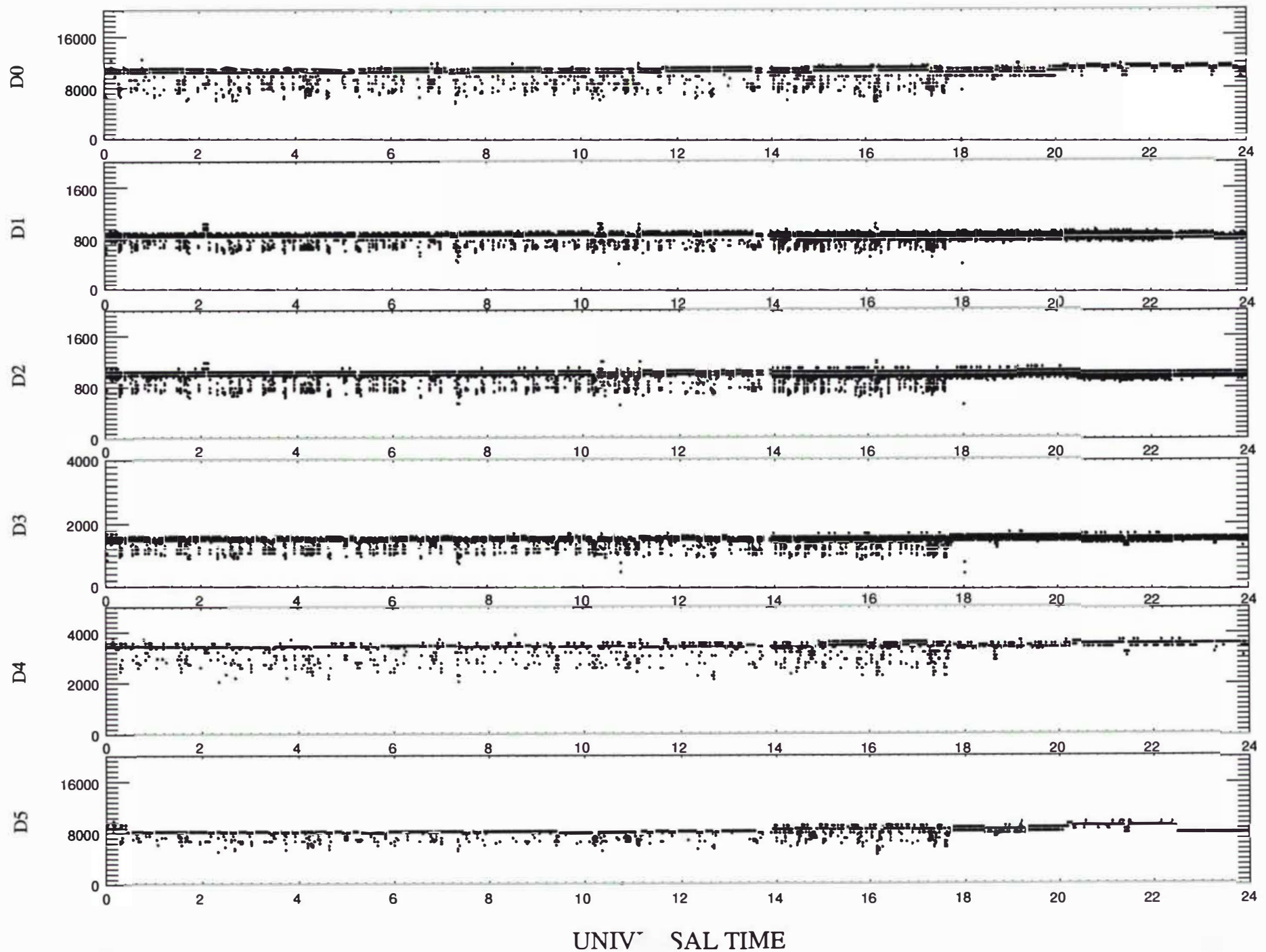


HUS 2A, MODE 1, NOT AVERAGED EDR day 297, year 1995 to day 297, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV. TIME



Date: Sep 6 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

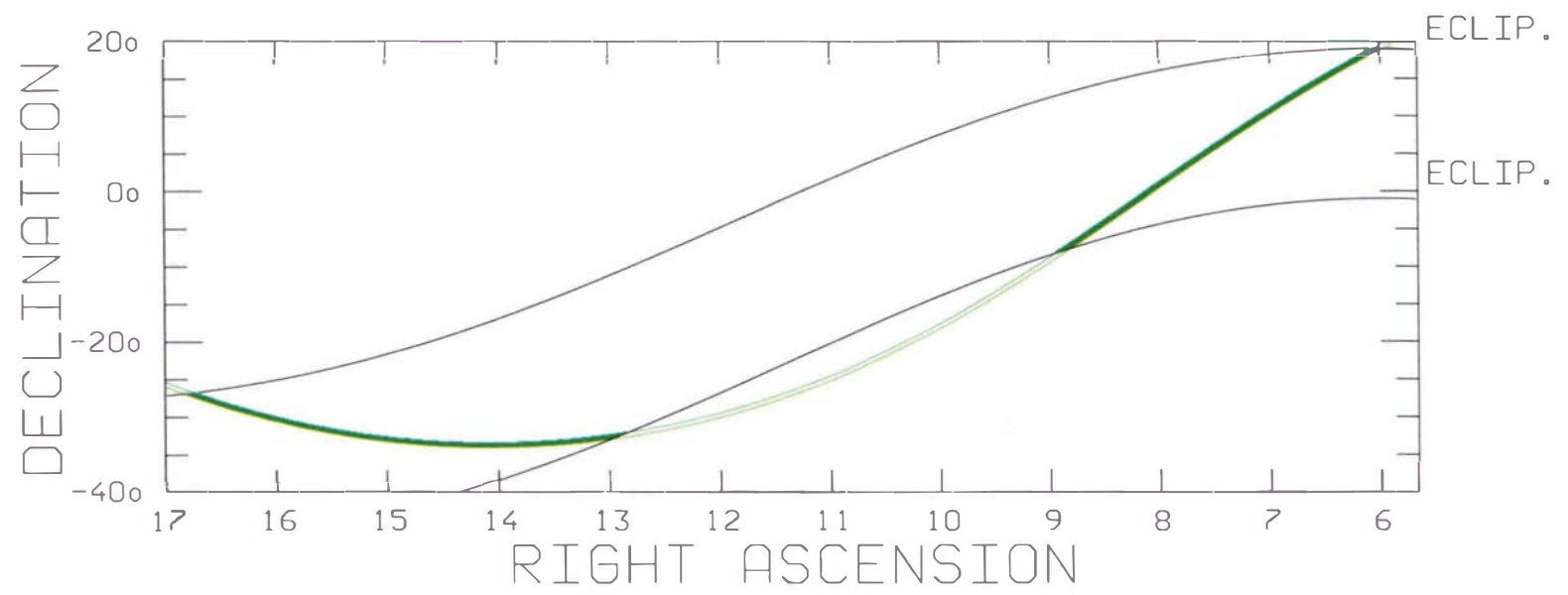
- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☒ Is the order of the data in CORREL such that a vernier is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

2. BATSE Data

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

3. PVO Data

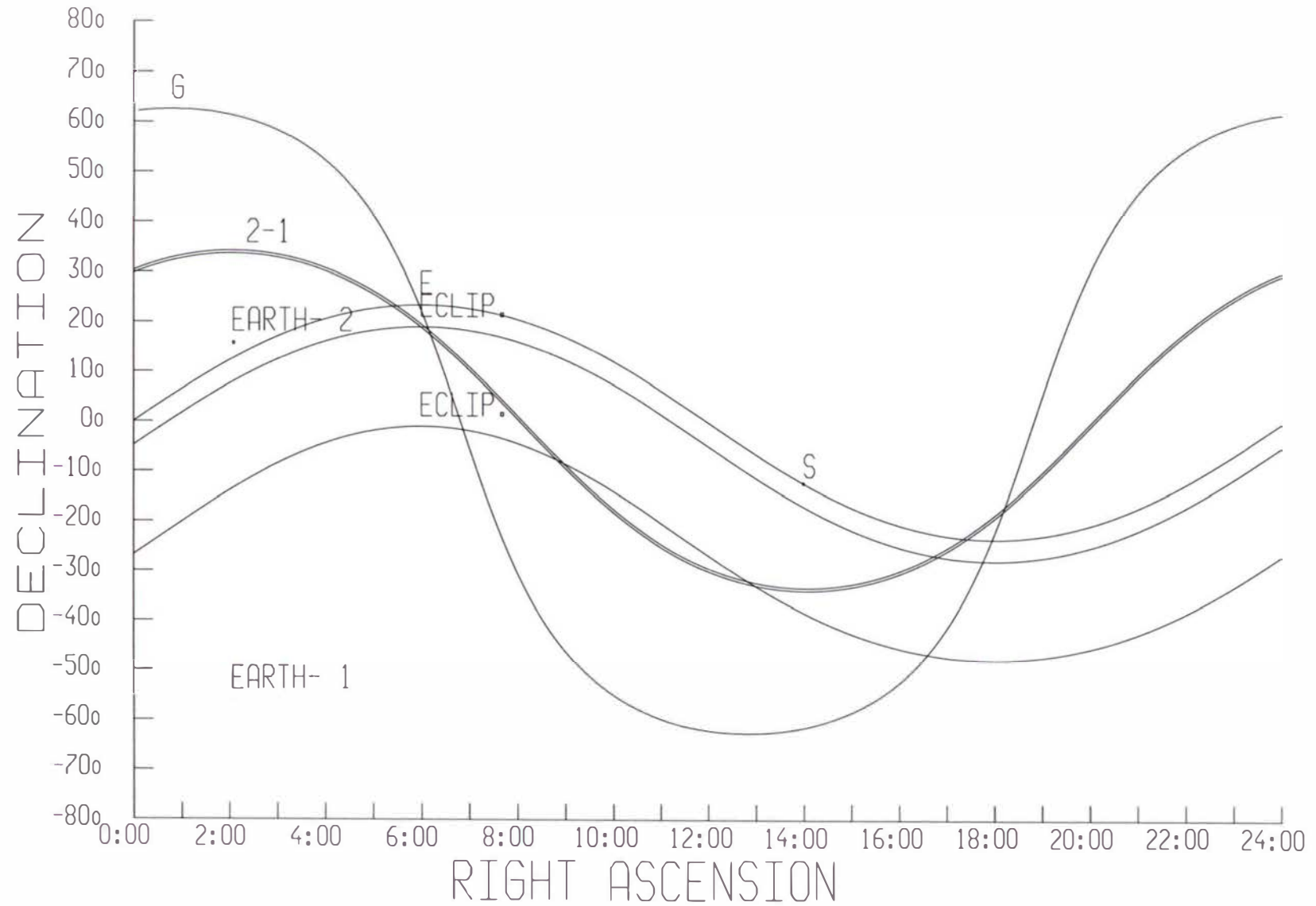
- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS and MBL databases updated with identical times?

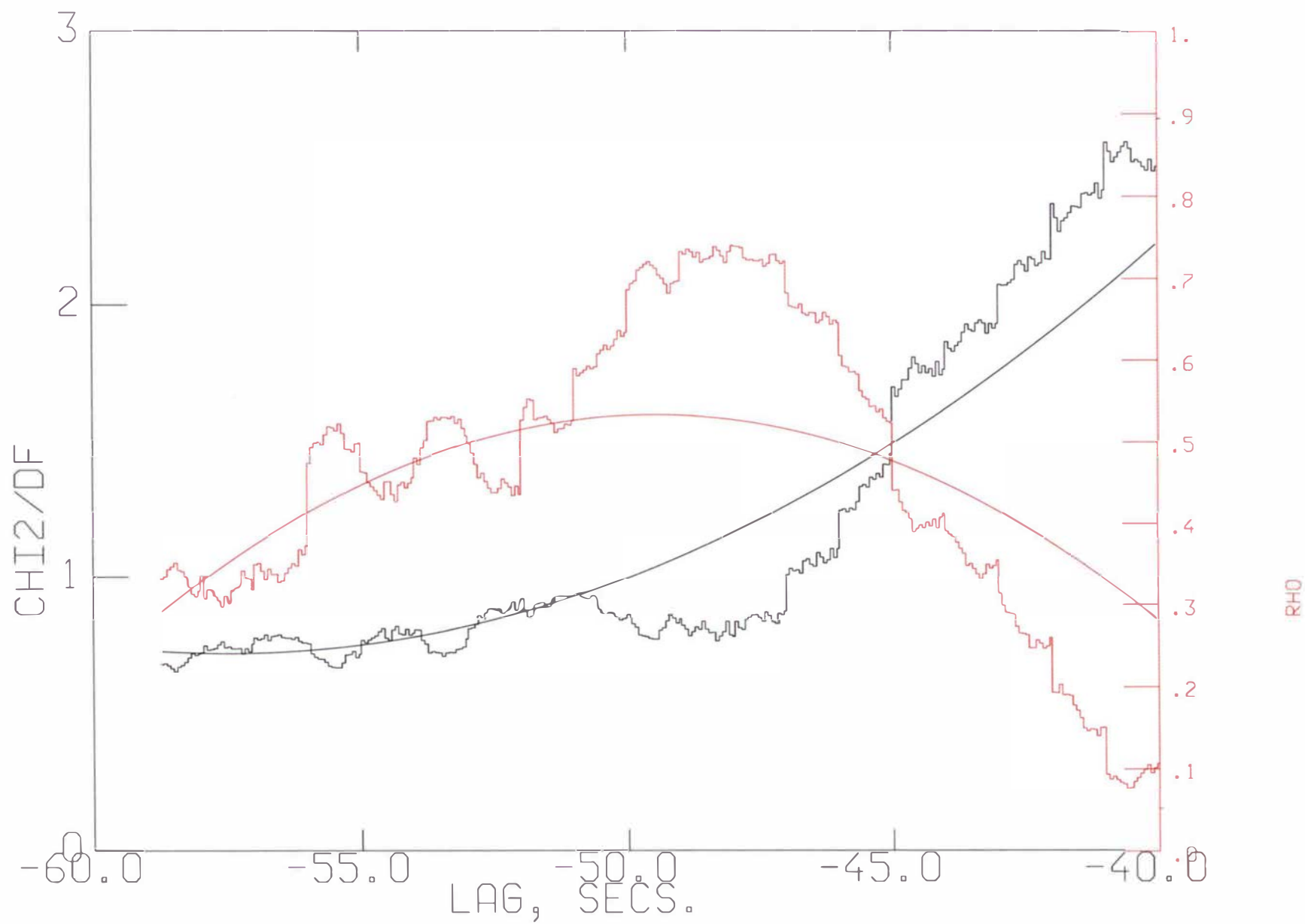


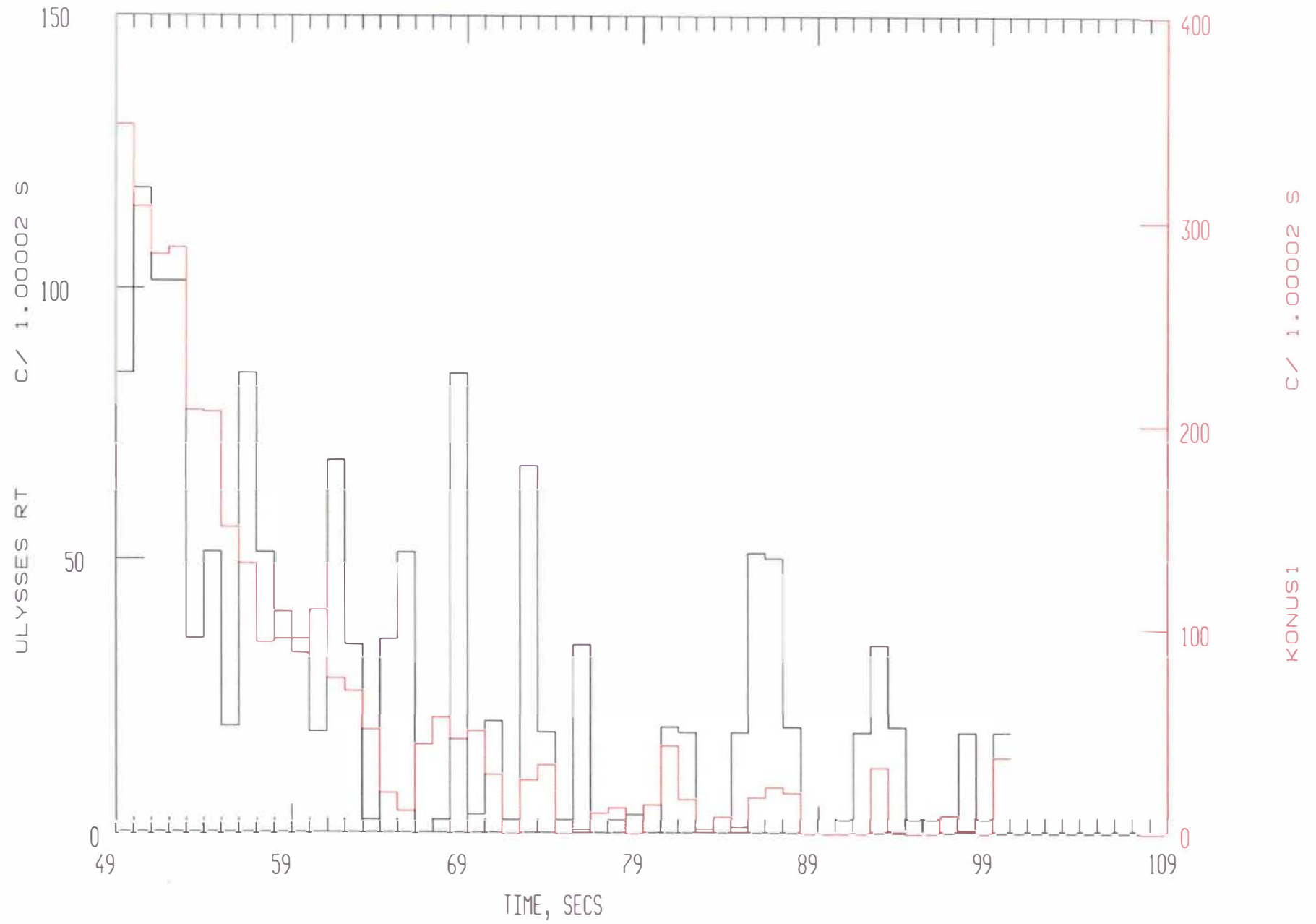
EVENT OF OCT 25, 1995 23:39

06/09/2011

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







KONUS 19951025 85272

ULYSSES RT

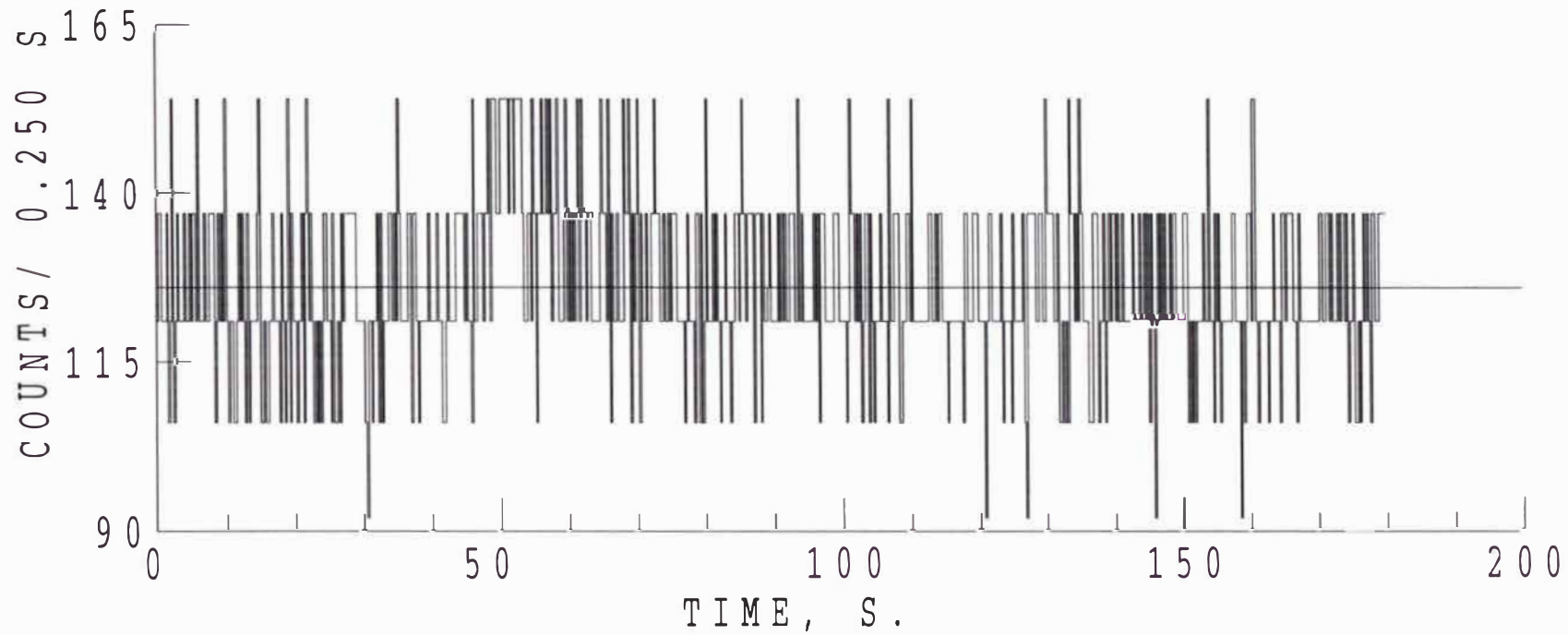
01 / 09 / 11

25 / 10 / 95 85176.039 s

0 - 0 keV

M= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

M= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

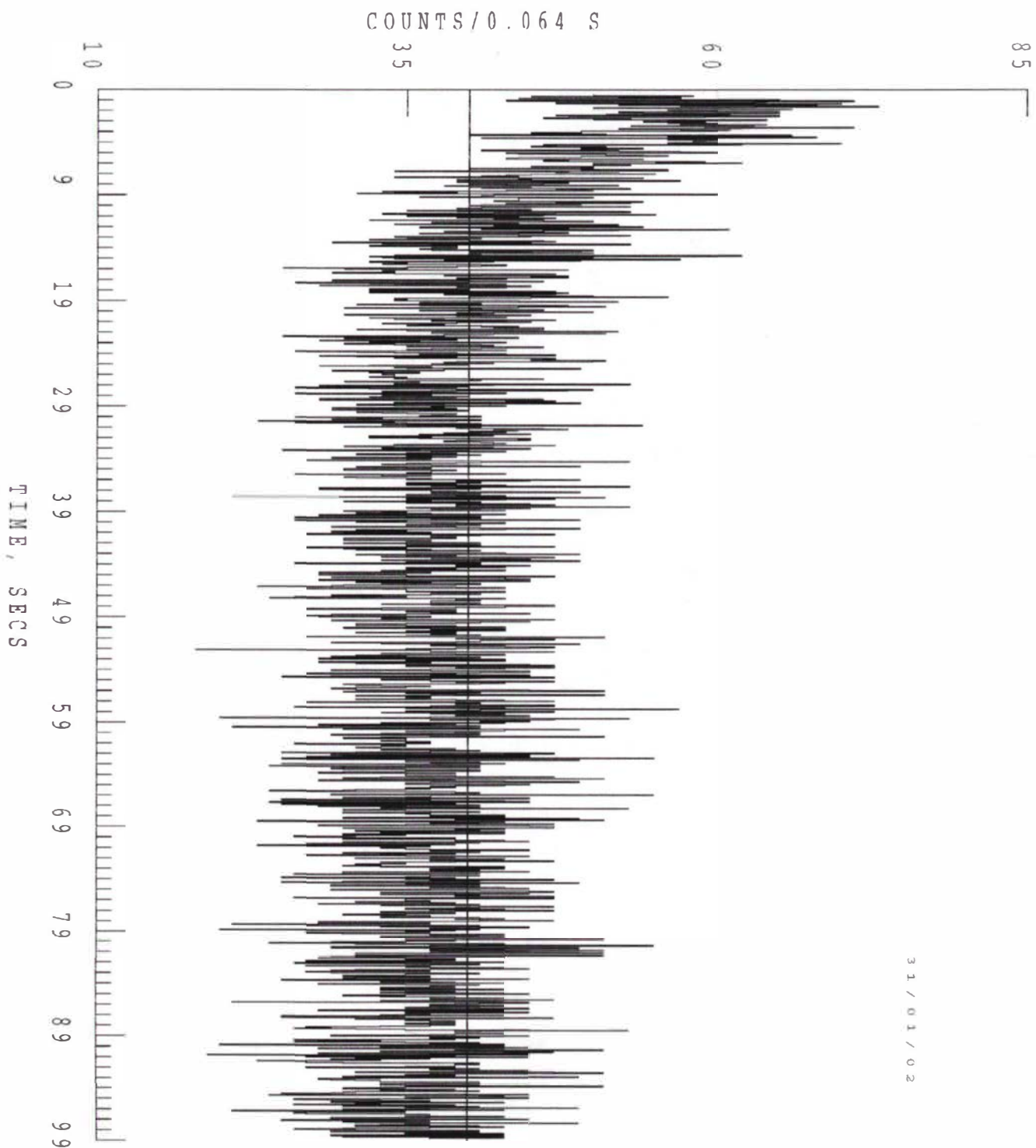


KONUS1

25/10/95

85239.738

50 - 200 keV



KONUS1 19951025 85239

ULYSSES RT

31 / 01 / 02

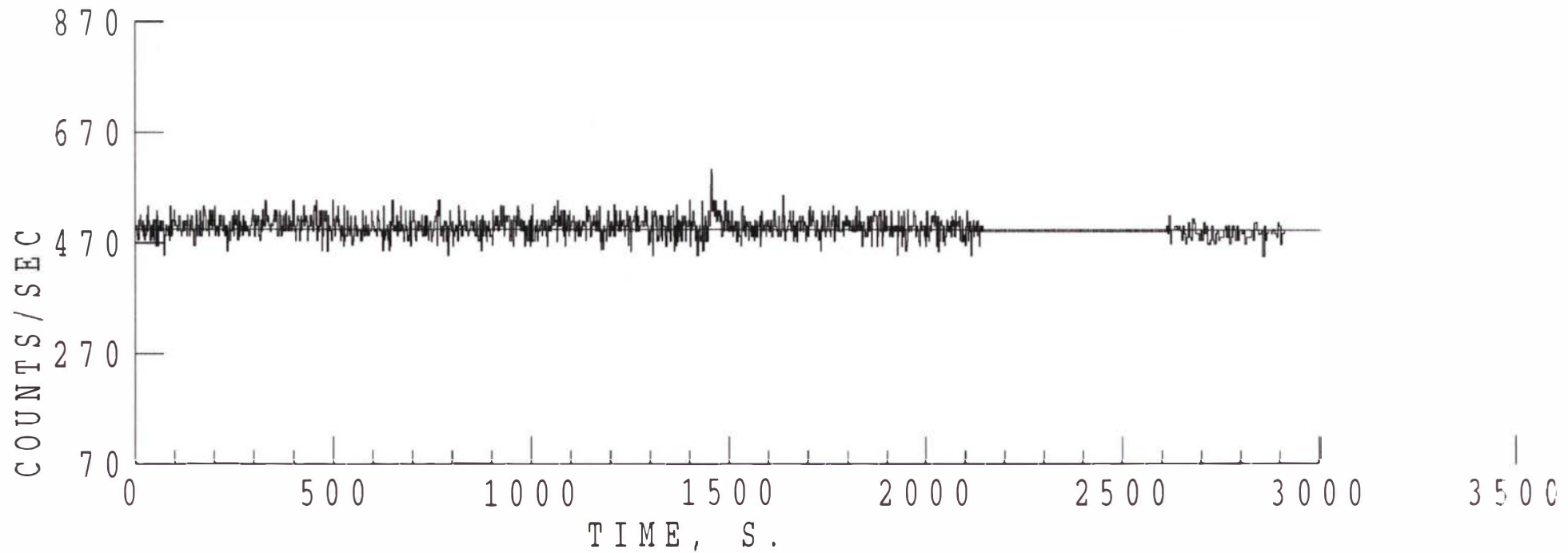
25/10/95 83772.016 s

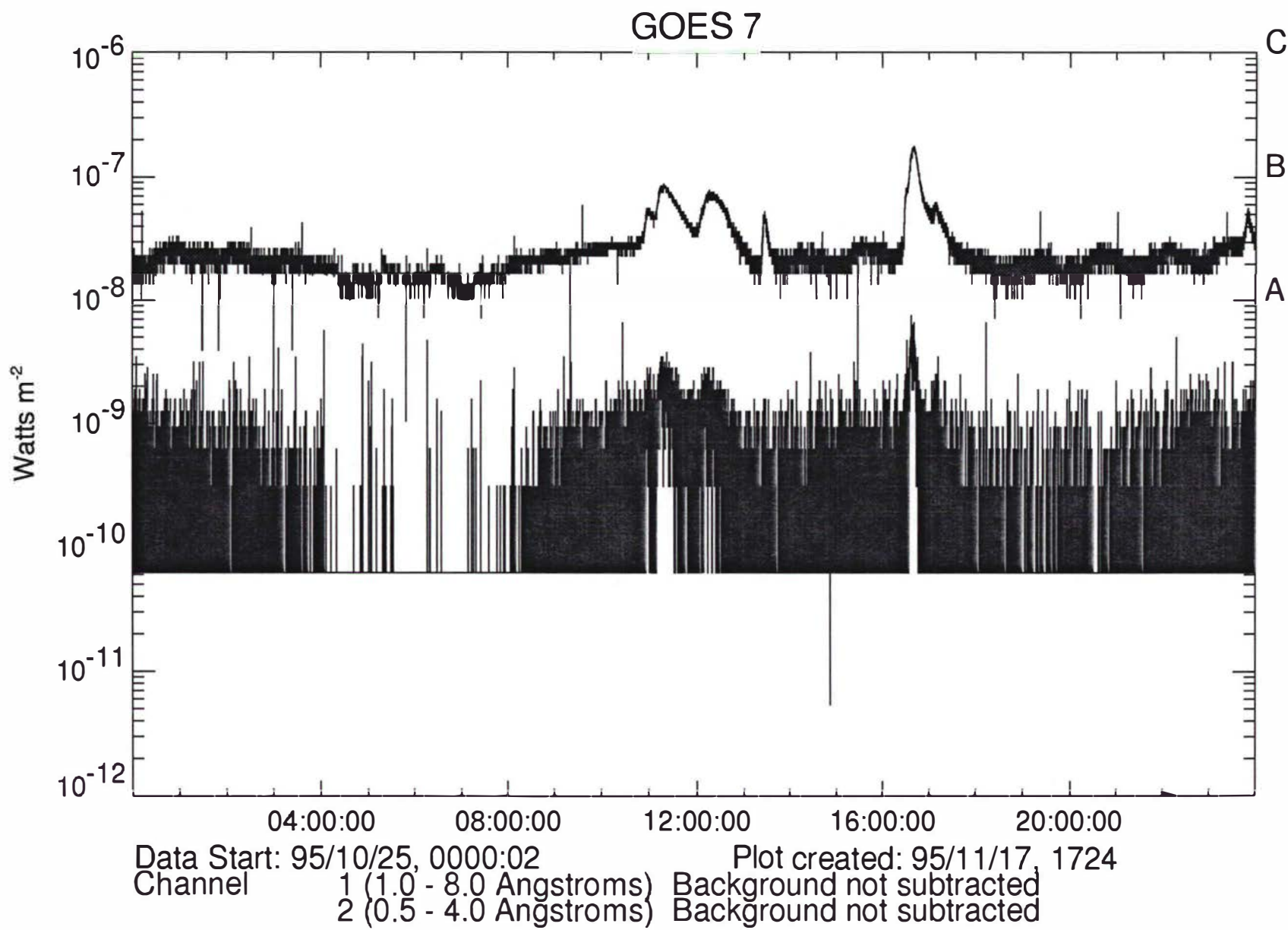
INTERVALS REGROUPED BY 7

0 - 0 keV

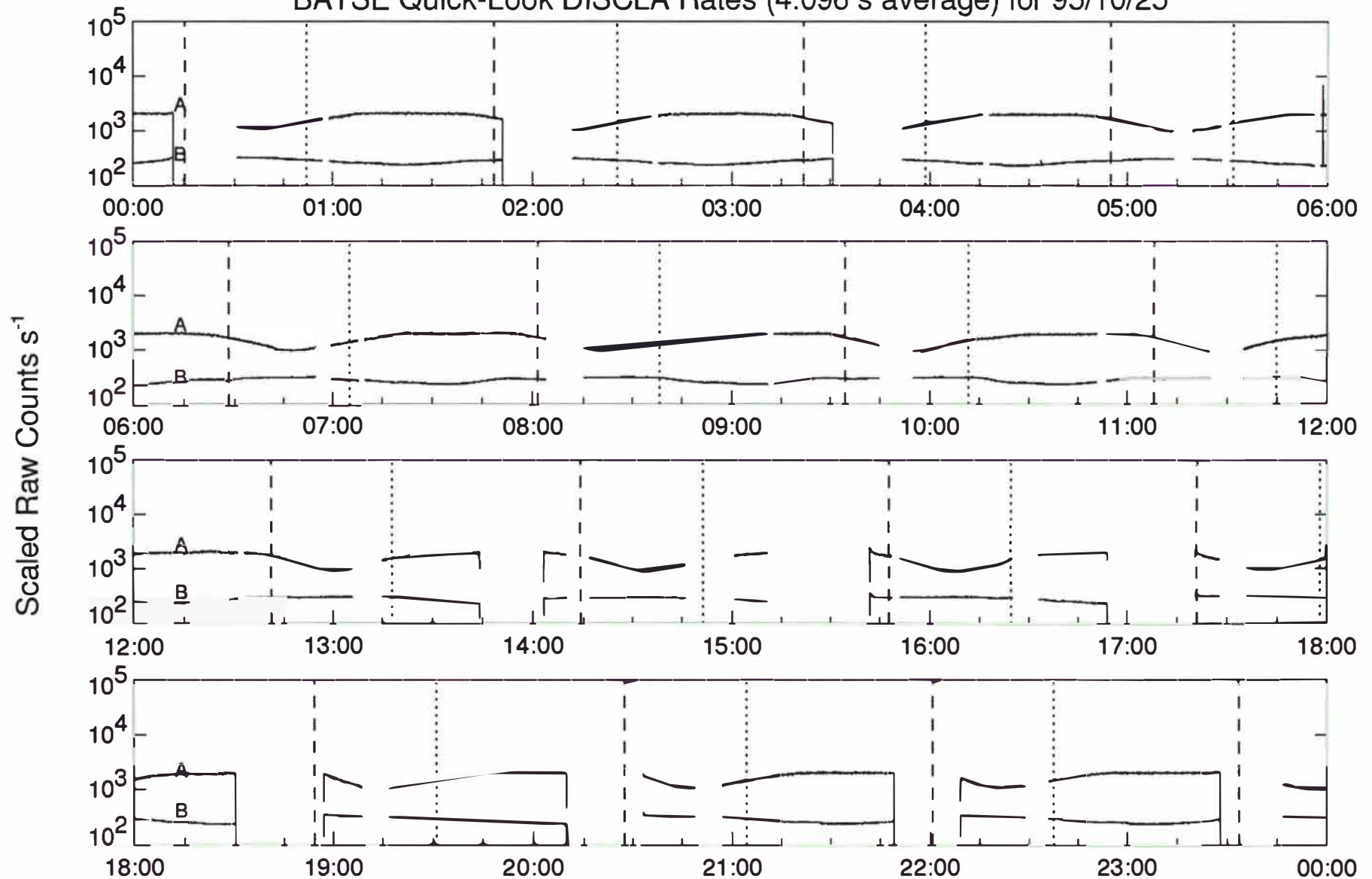
N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/25



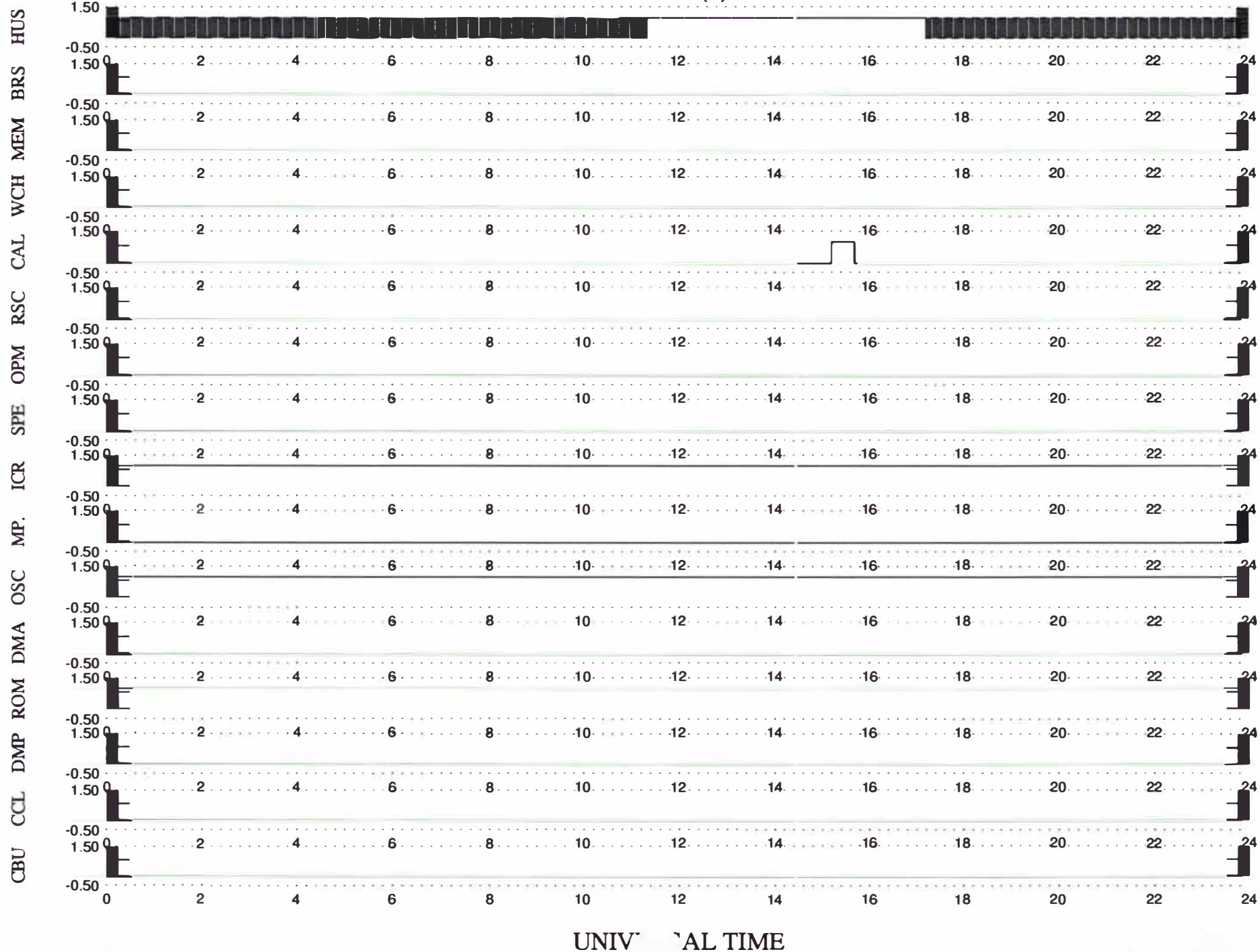
Current Time: 95/11/17, 1725 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

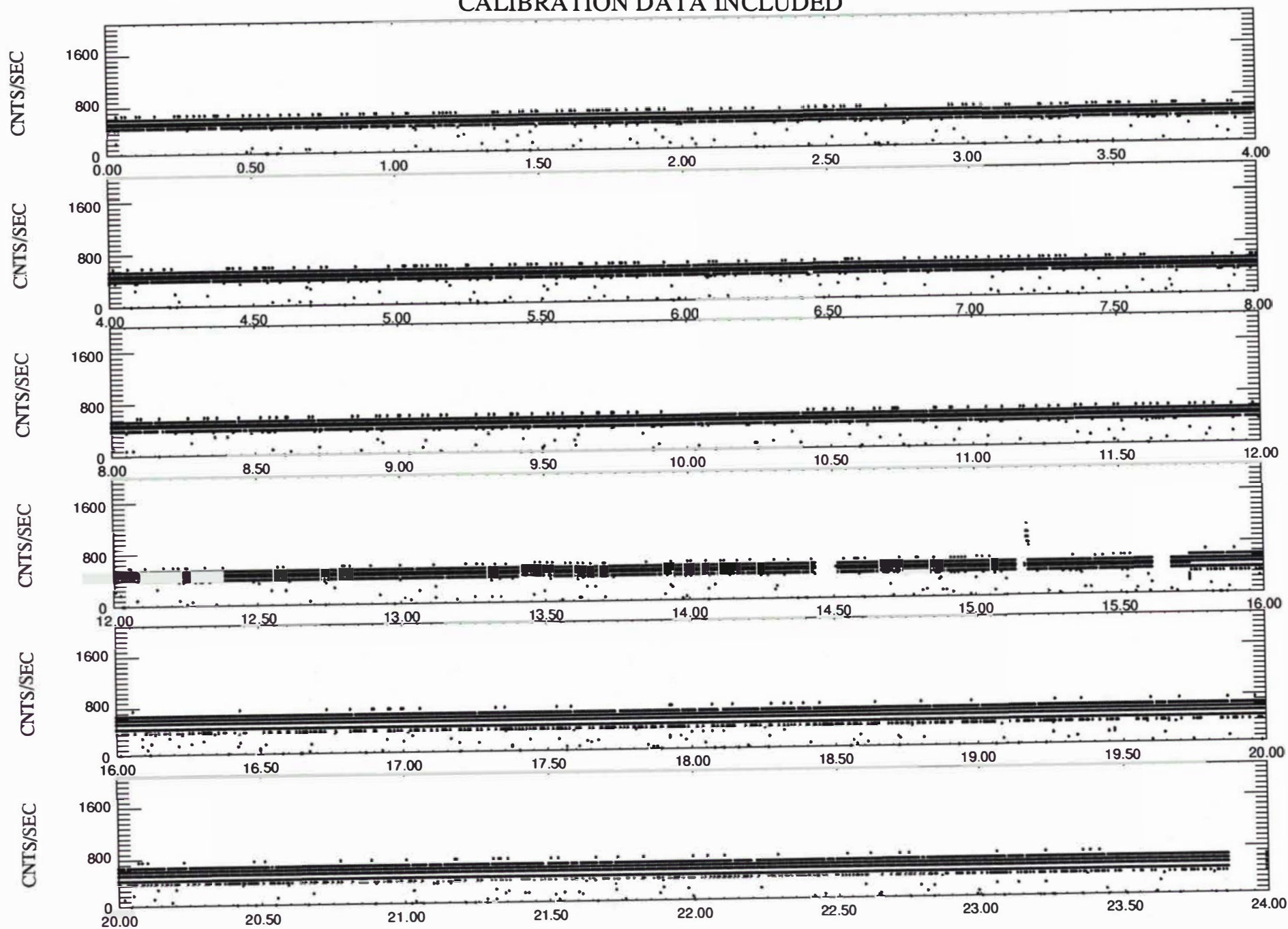
HUS MODES EDR day 298, year 1995 to day 298, year 1995 NO BURST (7)

1/26/96

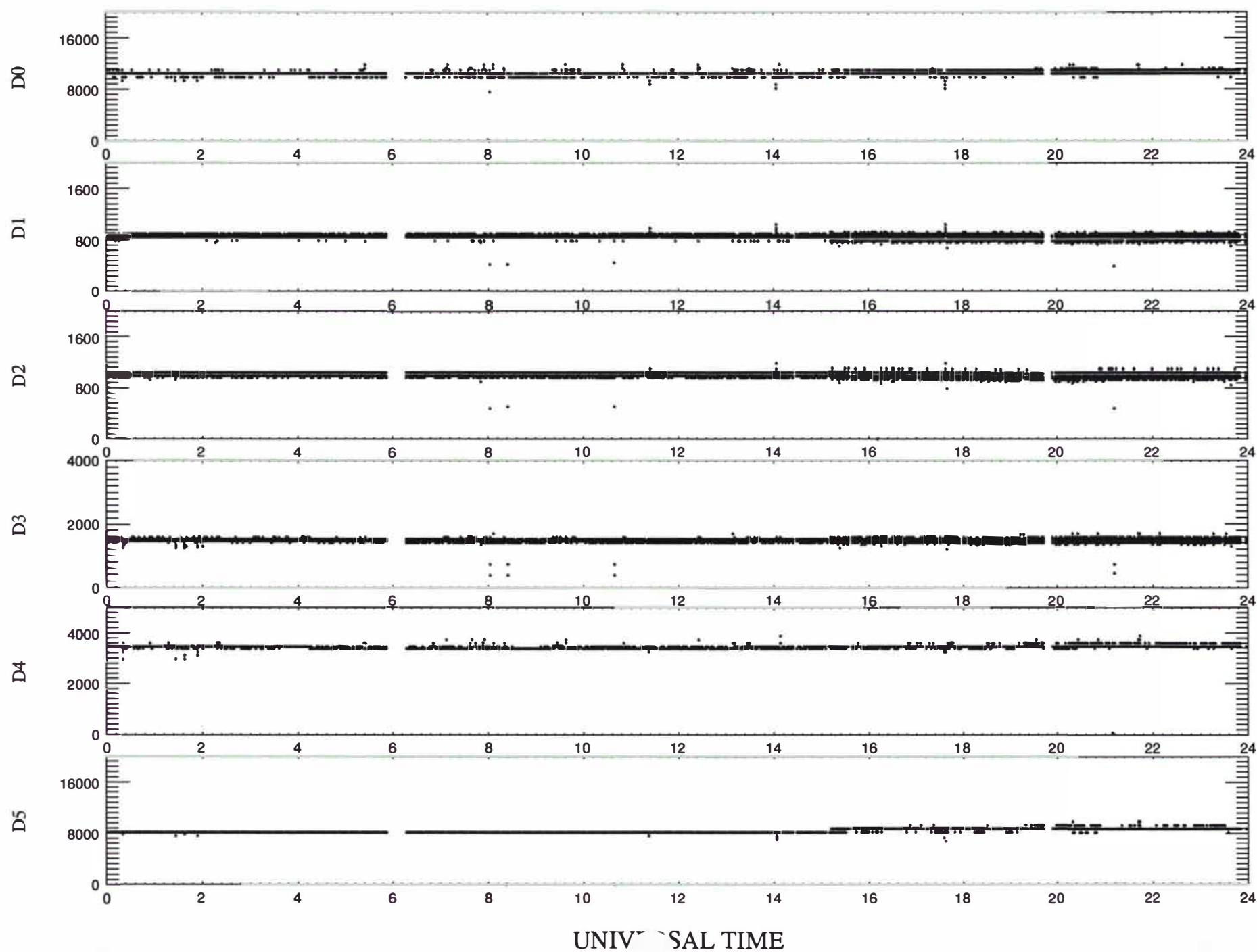


HUS 2A, MODE 1, NOT AVERAGED EDR day 298, year 1995 to day 298, year 1995
CALIBRATION DATA INCLUDED

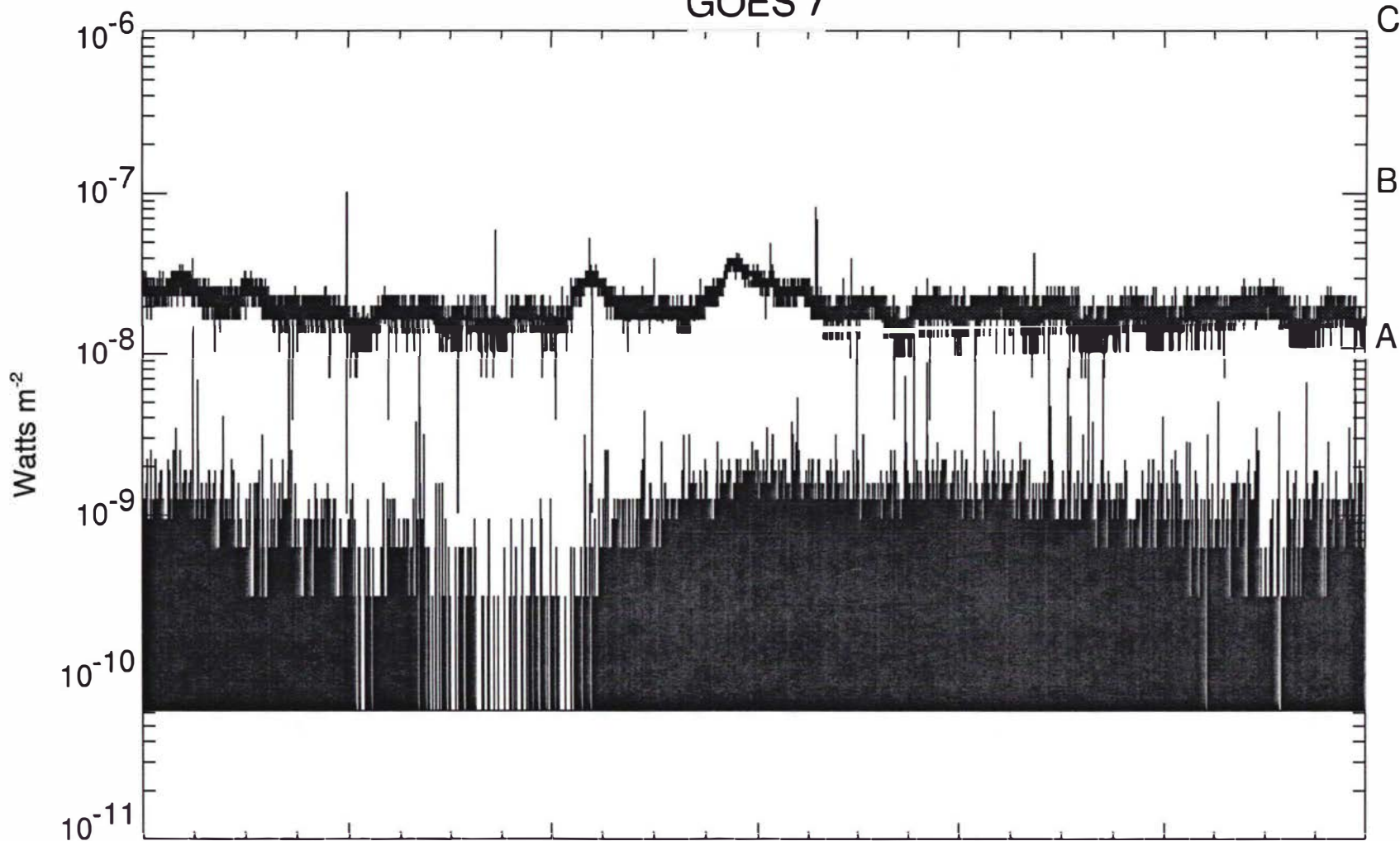
1/26/96



UNIV CAL TIME



GOES 7



Data Start: 95/10/26, 0000:00

Plot created: 95/11/17, 1812

Channel

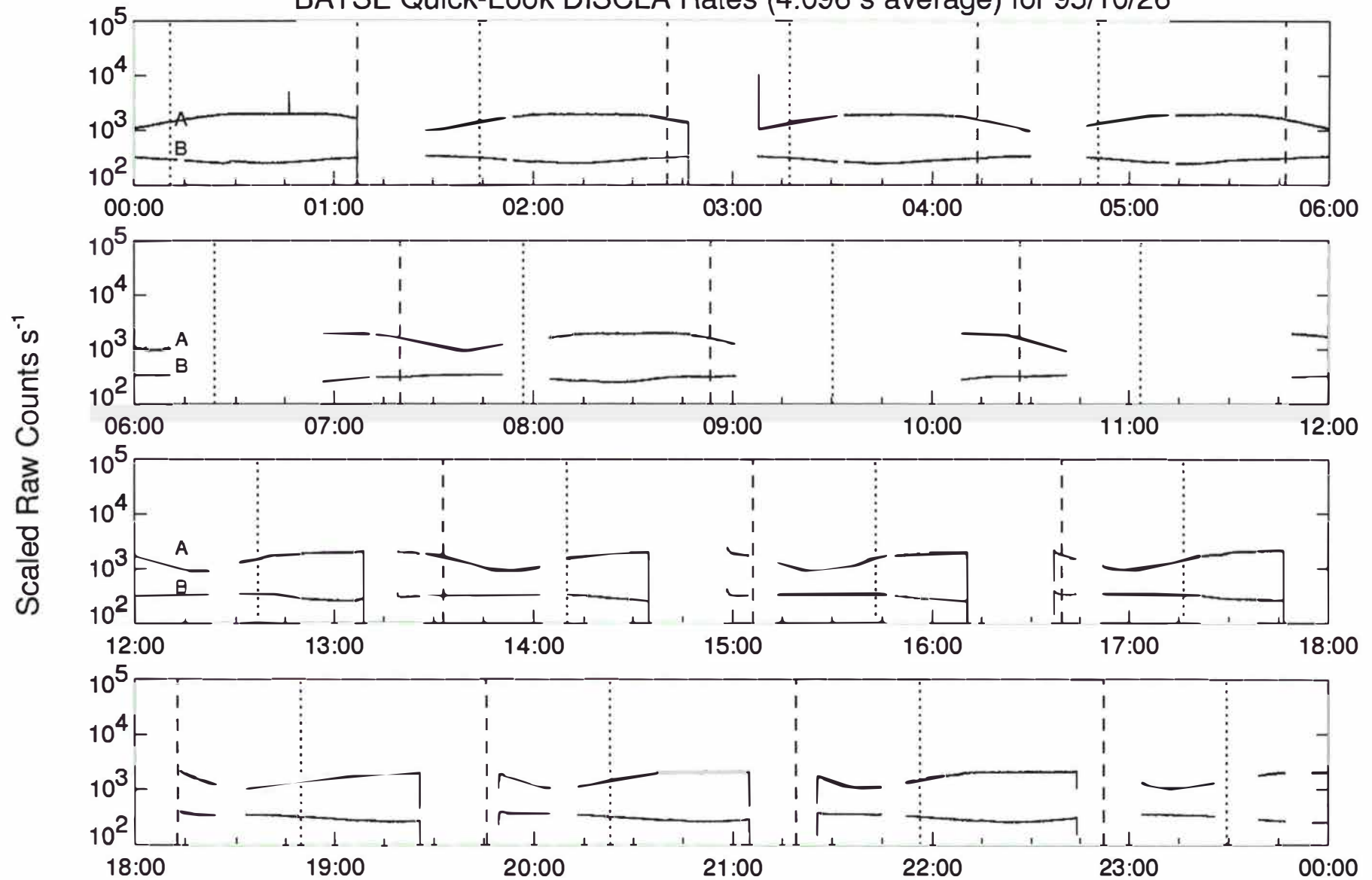
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/26



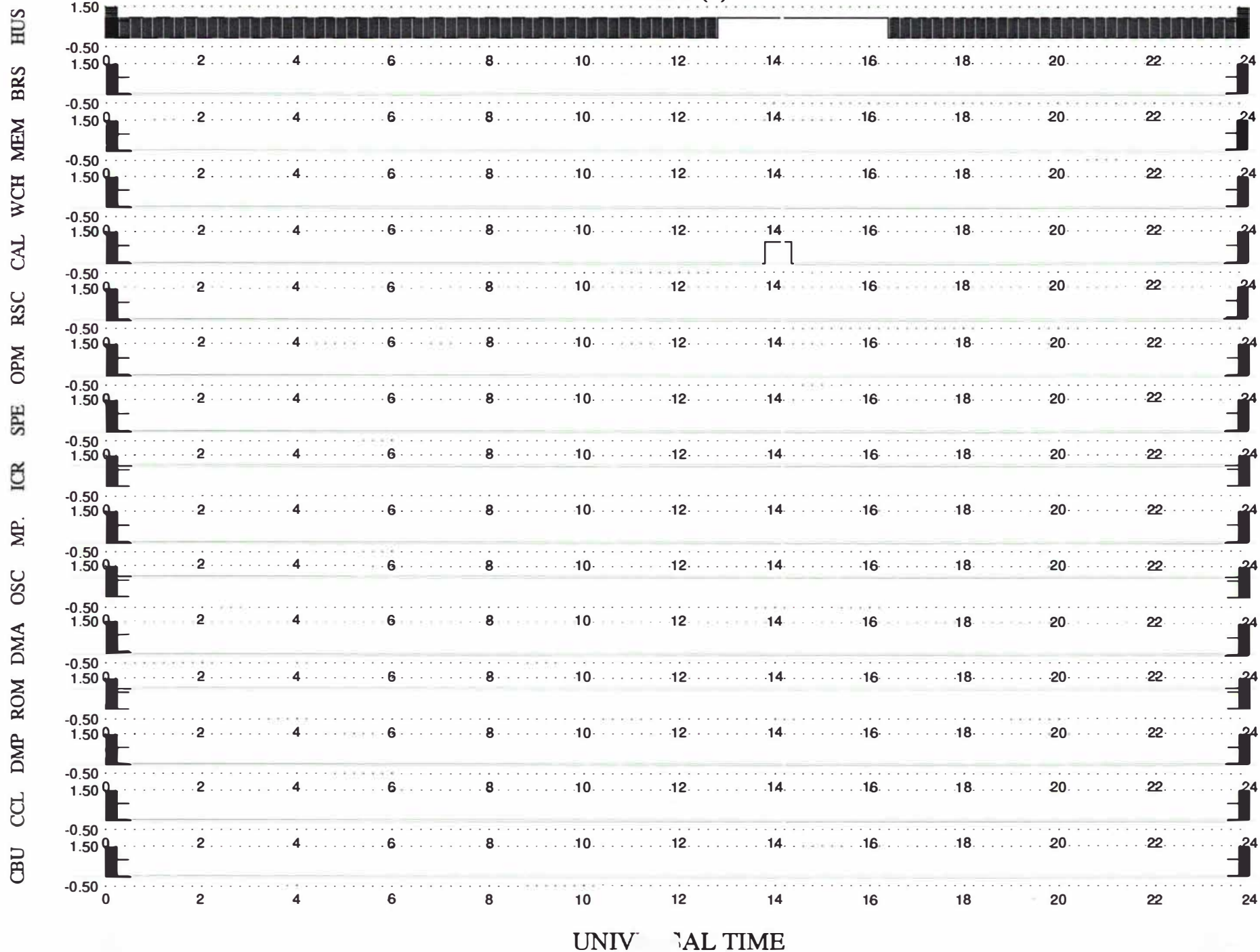
Current Time: 95/11/17, 1812 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

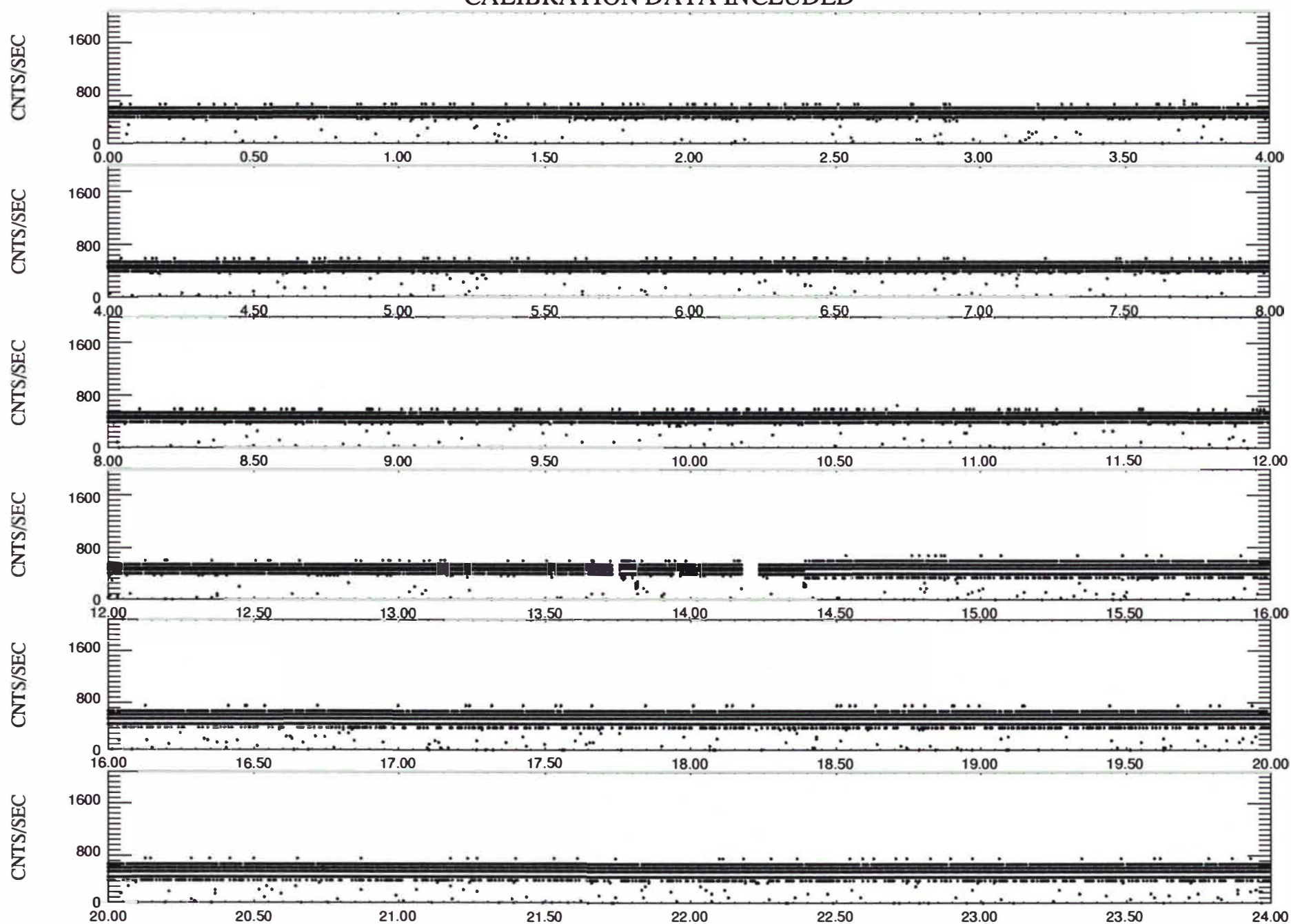
HUS MODES EDR day 299, year 1995 to day 299, year 1995 NO BURST (7)

1/26/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 299, year 1995 to day 299, year 1995
CALIBRATION DATA INCLUDED

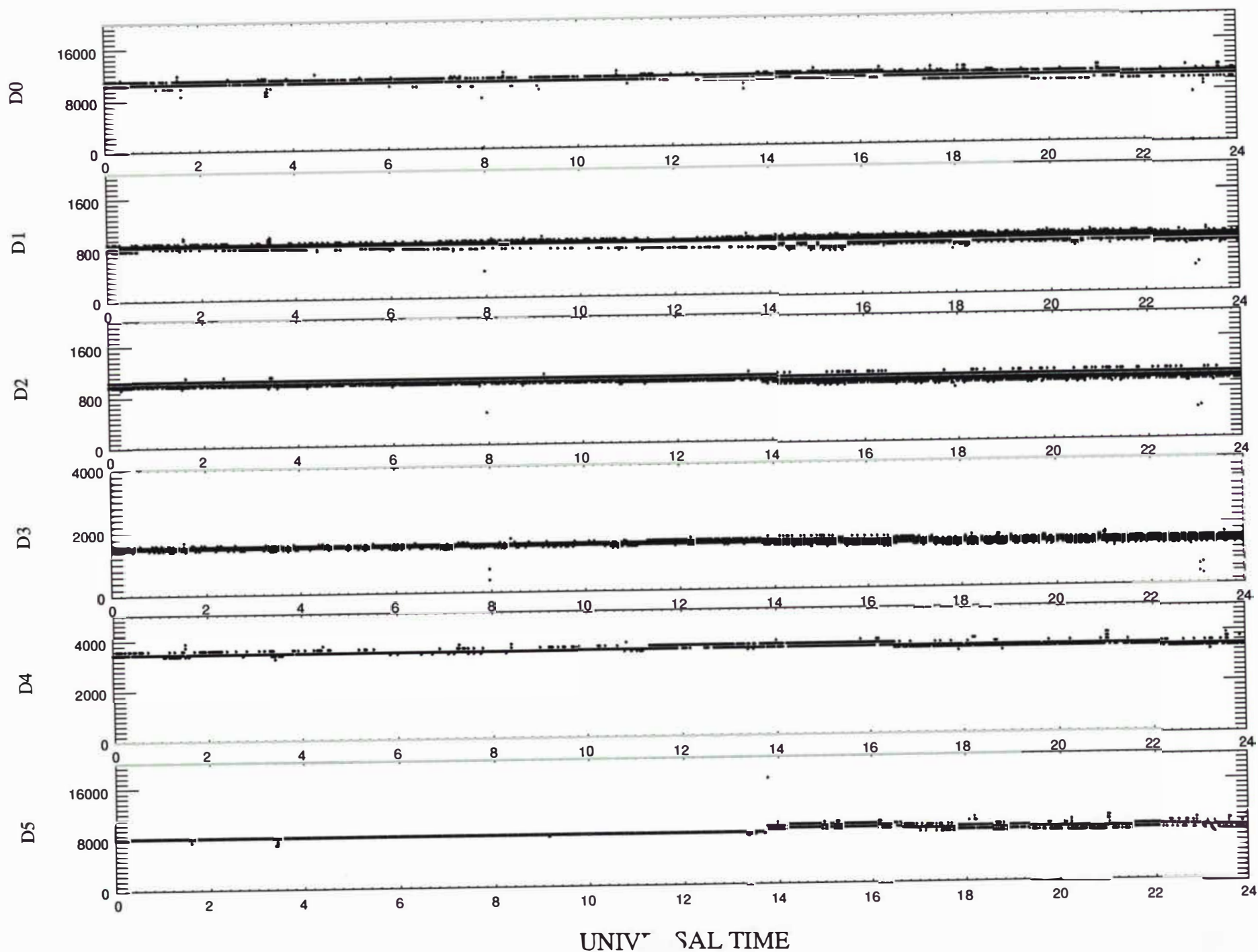
1/26/96

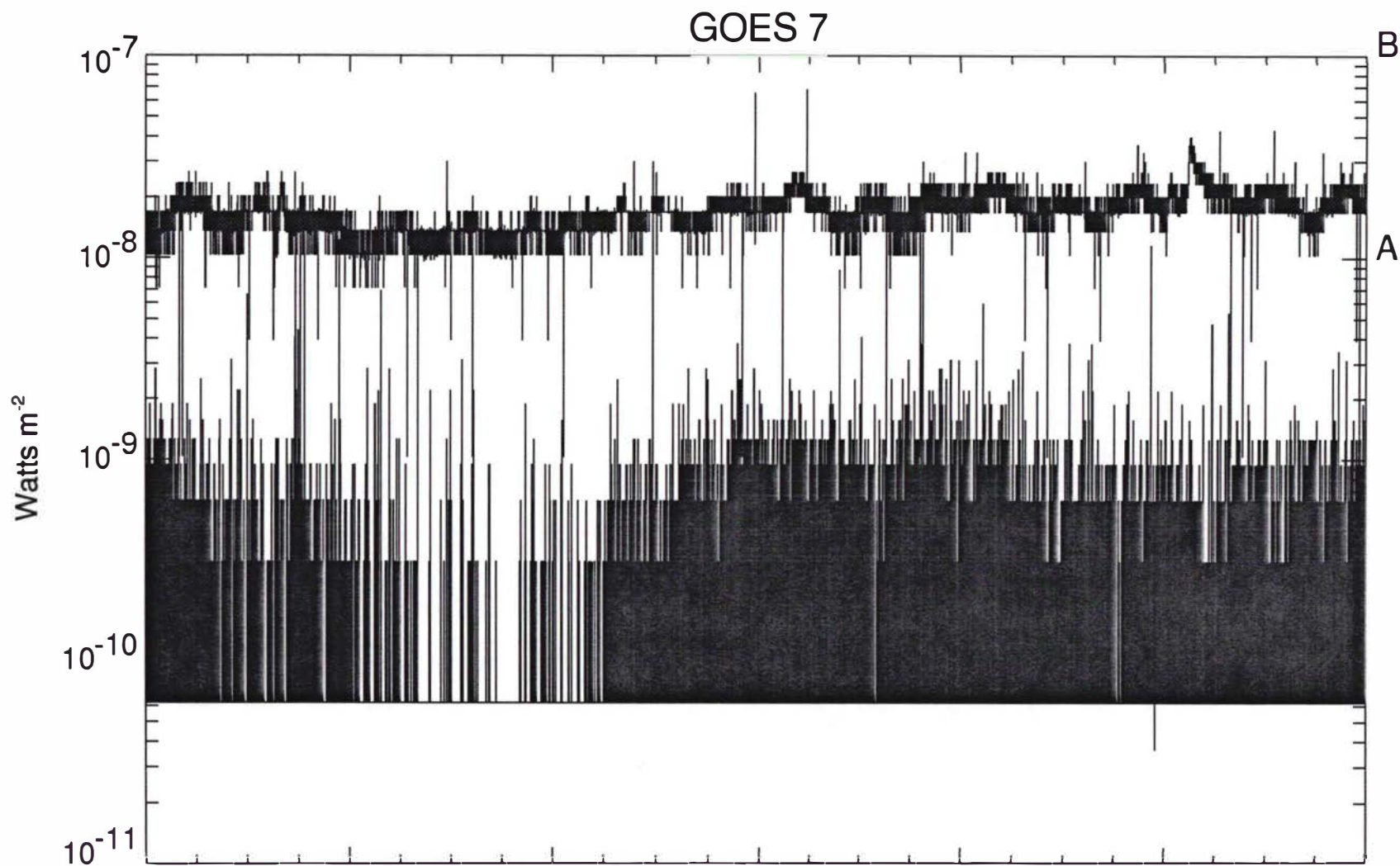


UNIV. TIME

HUS 2B COUNTS / SEC QEDR day 299, year 1995 to day 299, year 1995

10/30/95





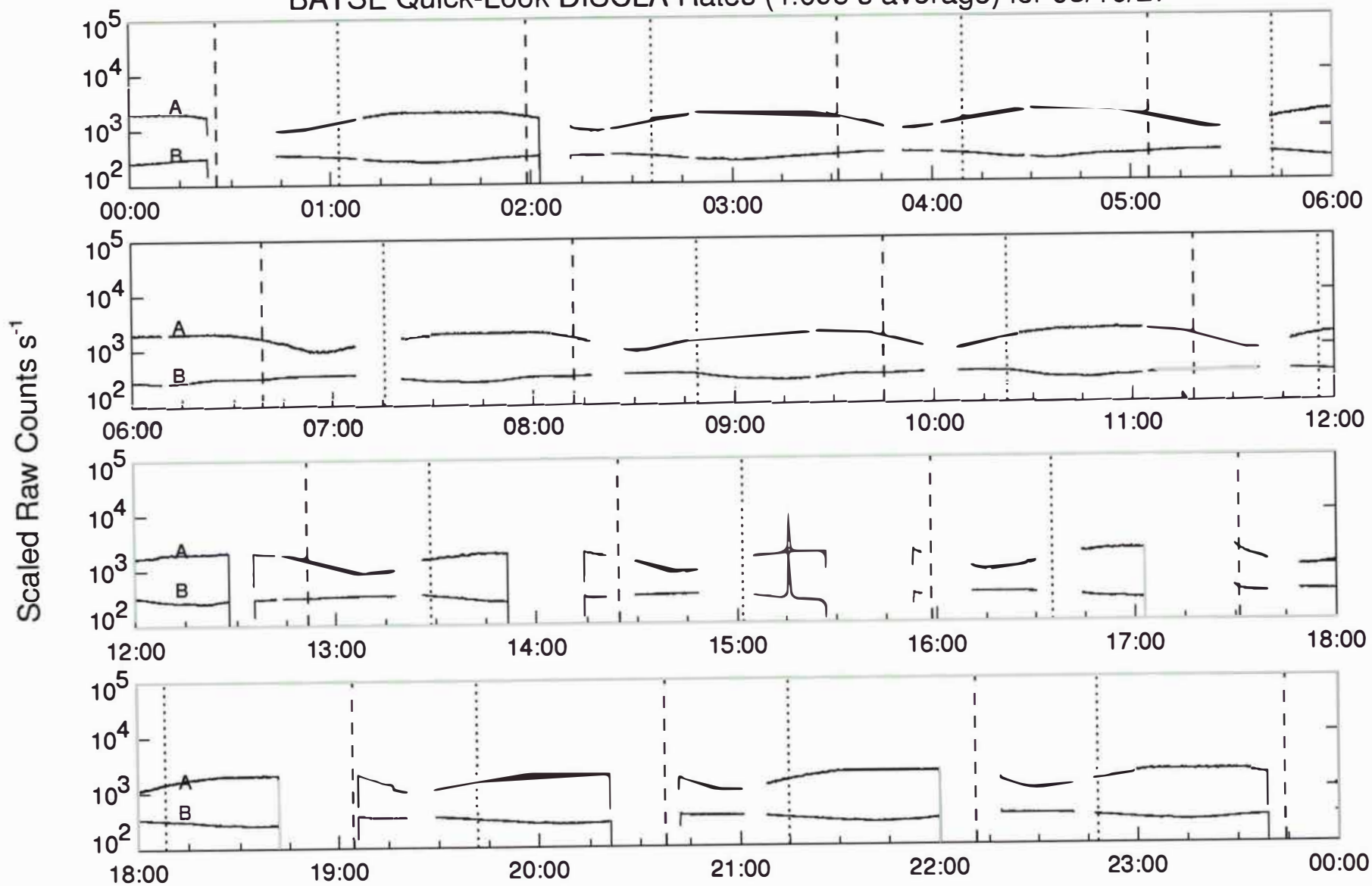
Data Start: 95/10/27, 0000:01

Plot created: 95/10/30, 1435

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 95/10/27



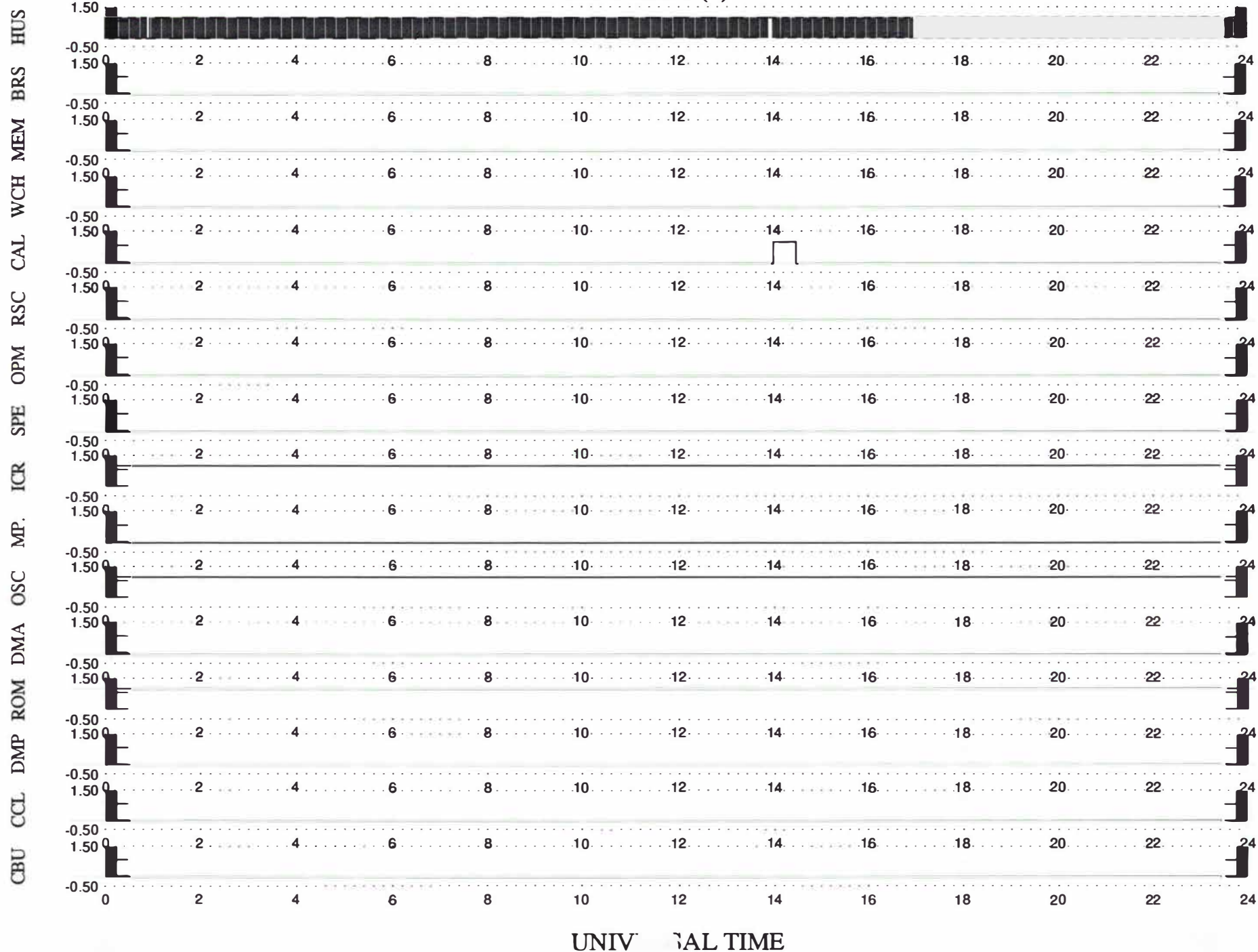
Current Time: 95/10/30, 1436 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

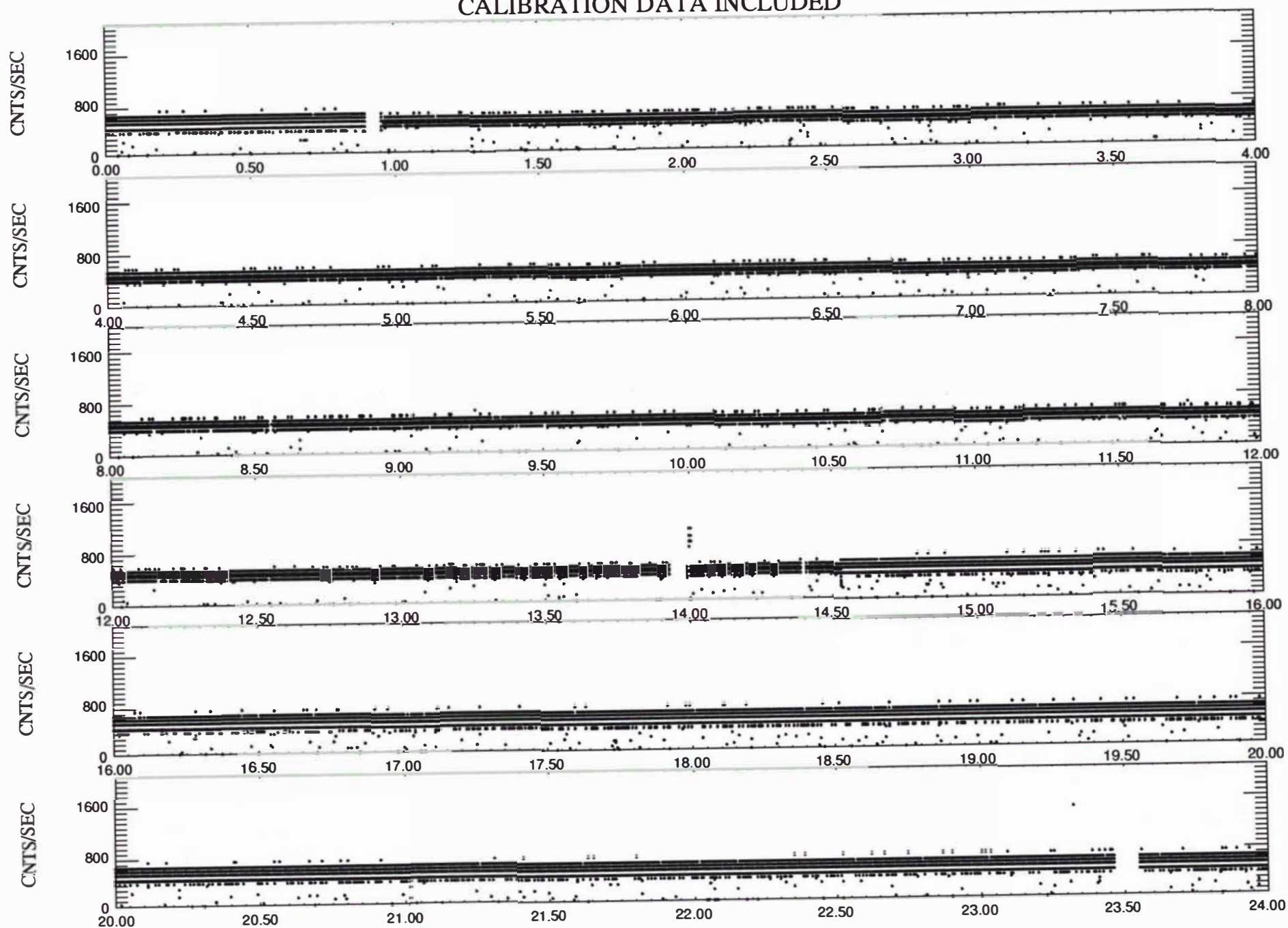
HUS MODES EDR day 300, year 1995 to day 300, year 1995
NO BURST (7)

1/26/96

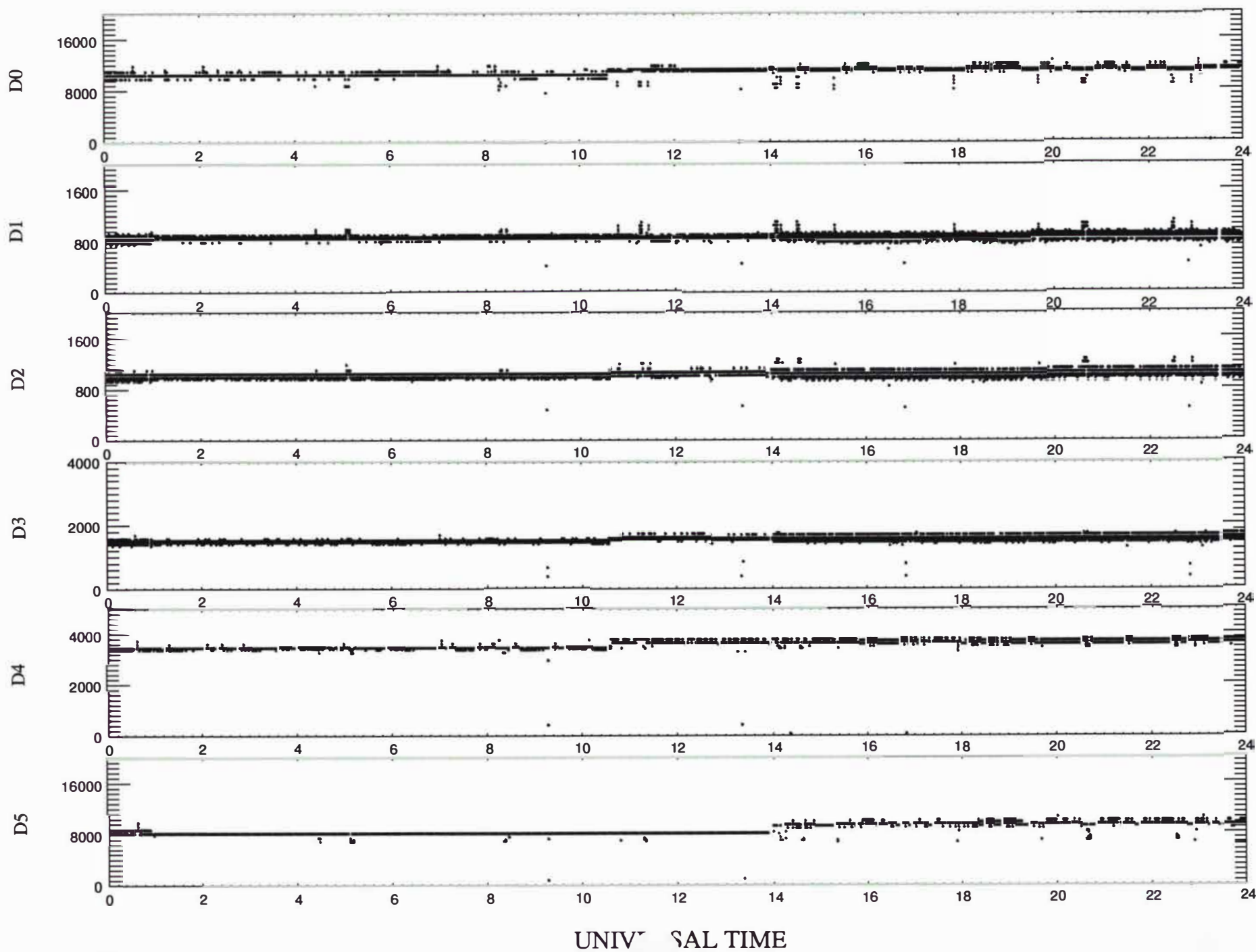


HUS 2A, MODE 1, NOT AVERAGED EDR day 300, year 1995 to day 300, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV CAL TIME



From DEAL@ssl.msfc.nasa.gov Mon Oct 30 10:22 PST 1995
Date: Mon, 30 Oct 1995 12:22:52 -0600 (CST)
From: DEAL@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3885

NO

BATSEARCH PROGRAM

BATSE BURST # 3885
EVENT OF 1995 OCT 28 DAY OF YEAR=301
EVENT CROSSING TIME AT BATSE : 5396. S. OR 01:29:56.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 258.000 24.000
BATSE PEAK COUNTING RATE: 1000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 28/10/ 95 IS:
RA= 211.230 DEC= 56.062 DIST= 2.827 AU
BATSE-ULYSSES DISTANCE = 422910304. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=133.38 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -968.82 SECS.
CROSSING TIME AT ULYSSES IS 4427. S. OR 01:13:47 +/- 213.31 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 28/10/ 95 IS:
RA= 243.051 DEC= -21.860 DIST= 2.223 AU
MARS-BATSE DISTANCE = 332599776. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=131.89 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -740.79 SECS.
CROSSING TIME AT MARS IS 4655. S. OR 01:17:35 +/- 132.14 SECONDS

BATSE BURST TRIGGER

NO.: 3885

TIME: TJD=0018 SECONDS=5396

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=142.5 AZIMUTH=68.7 ERROR=11.6 DEGREES

COMMENTS:

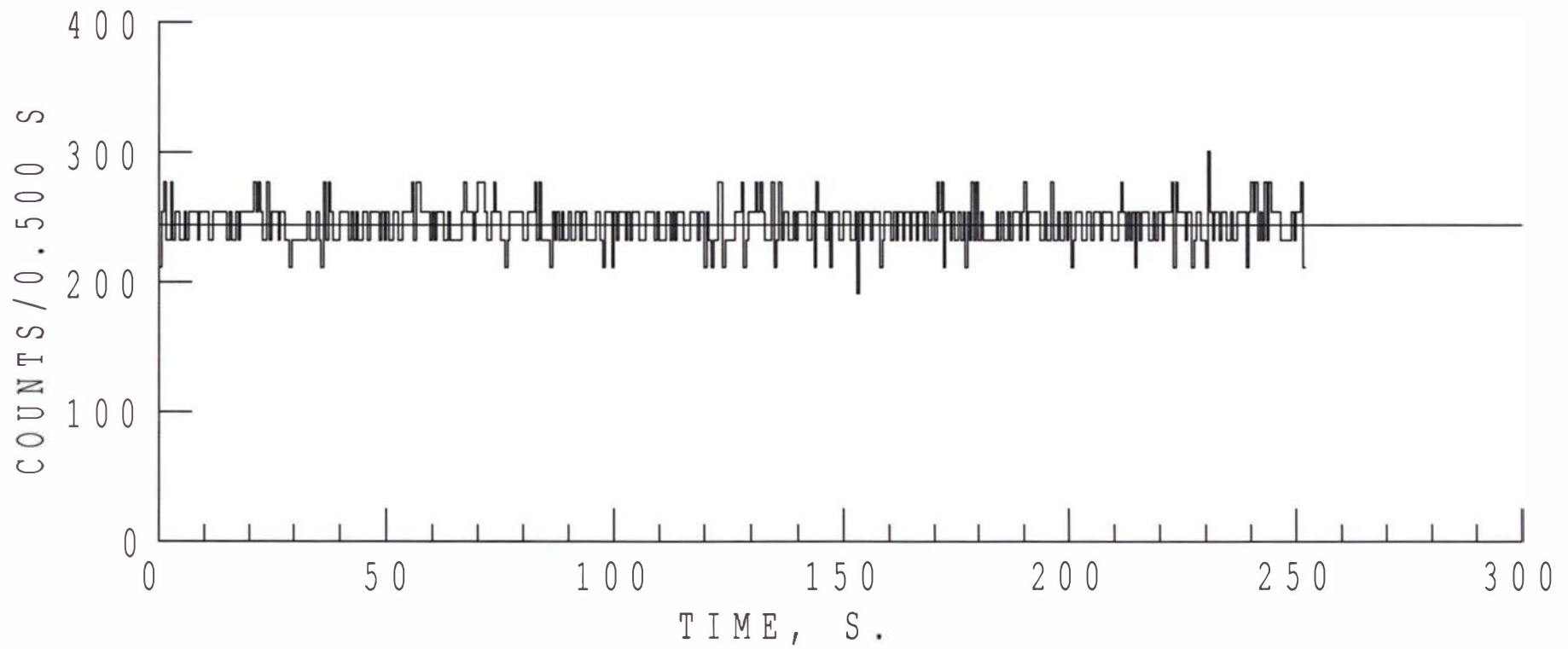
BURST LASTING ~ 10S. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3885	951028	10018	05396	1000	258	+24	10

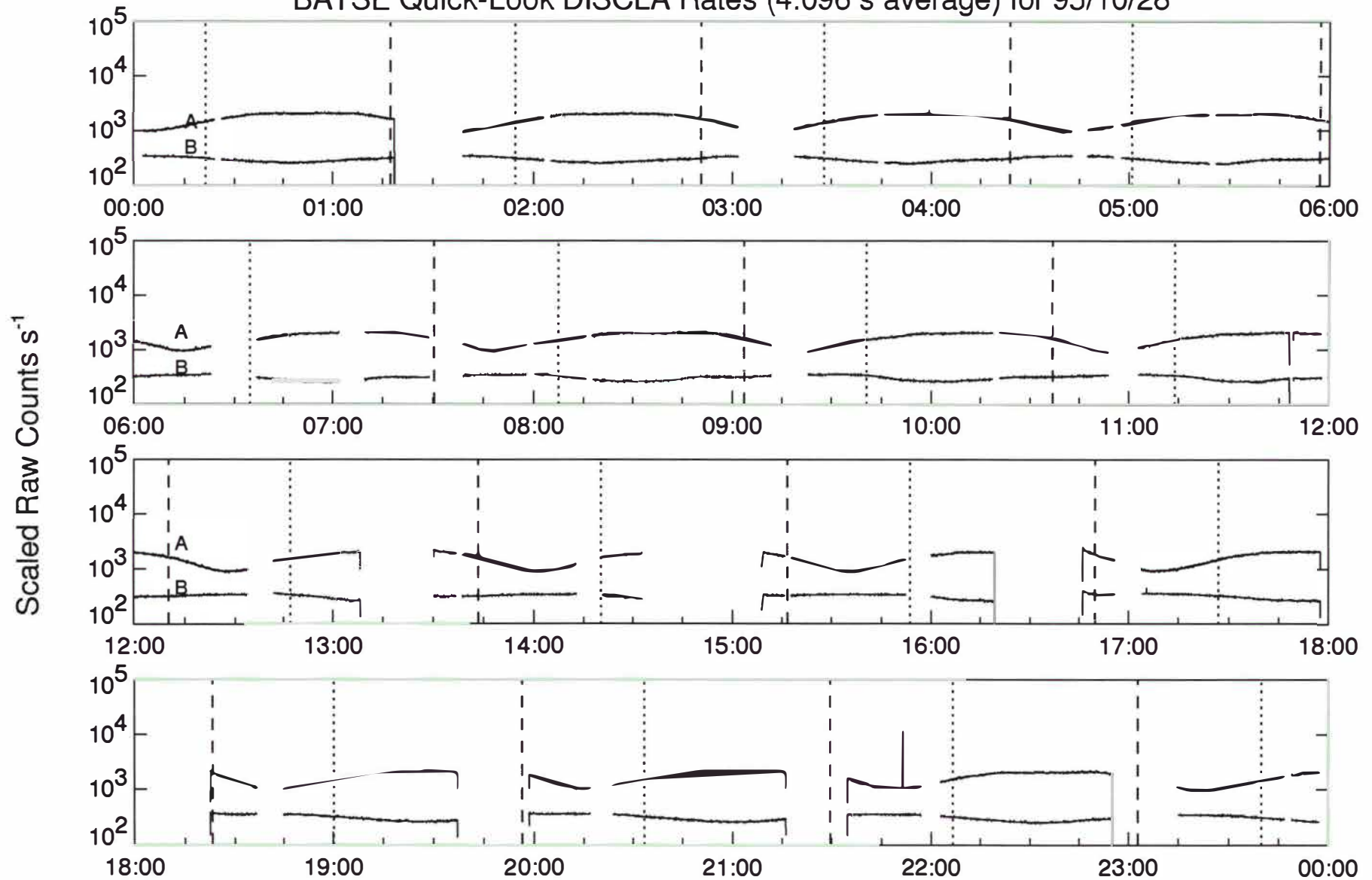
1 / 11 / 95

ULYSSES RT
28/10/95 4536.166 s
0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/28



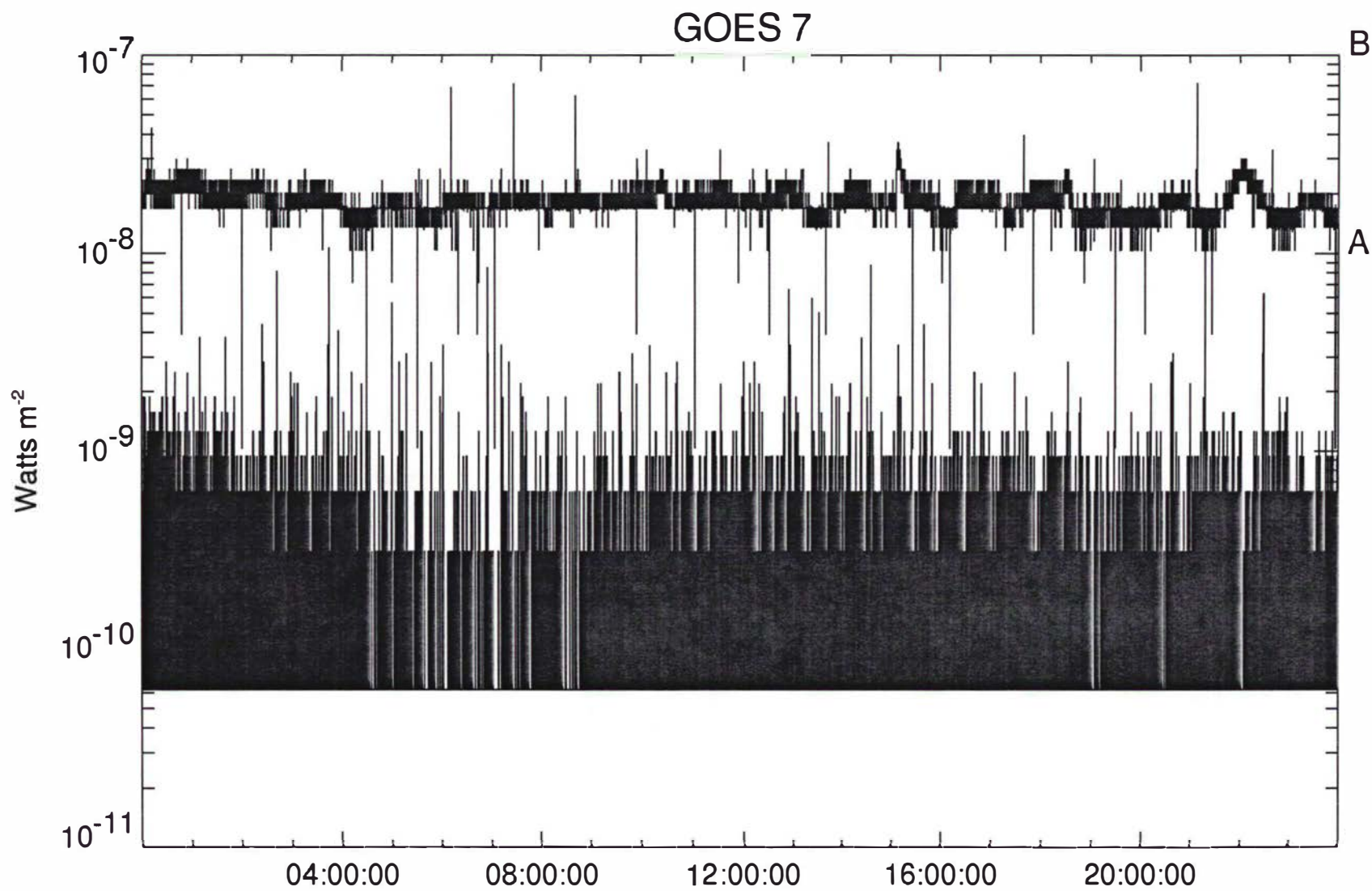
Current Time: 95/11/17, 1818 EDT

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: 95/10/28, 0000:02

Plot created: 95/11/17, 1818

Channel 1 (1.0 - 8.0 Angstroms)

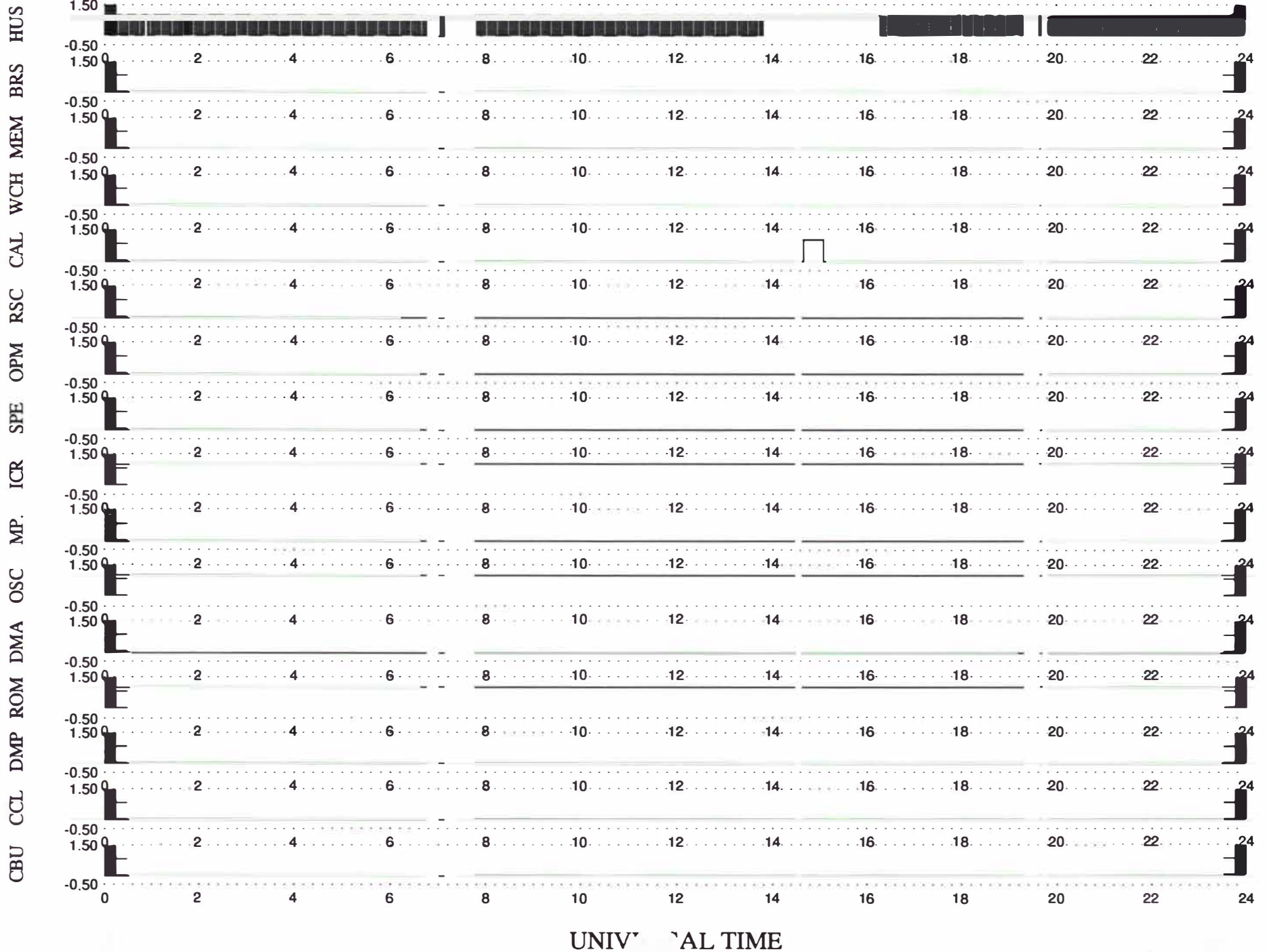
Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms)

Background not subtracted

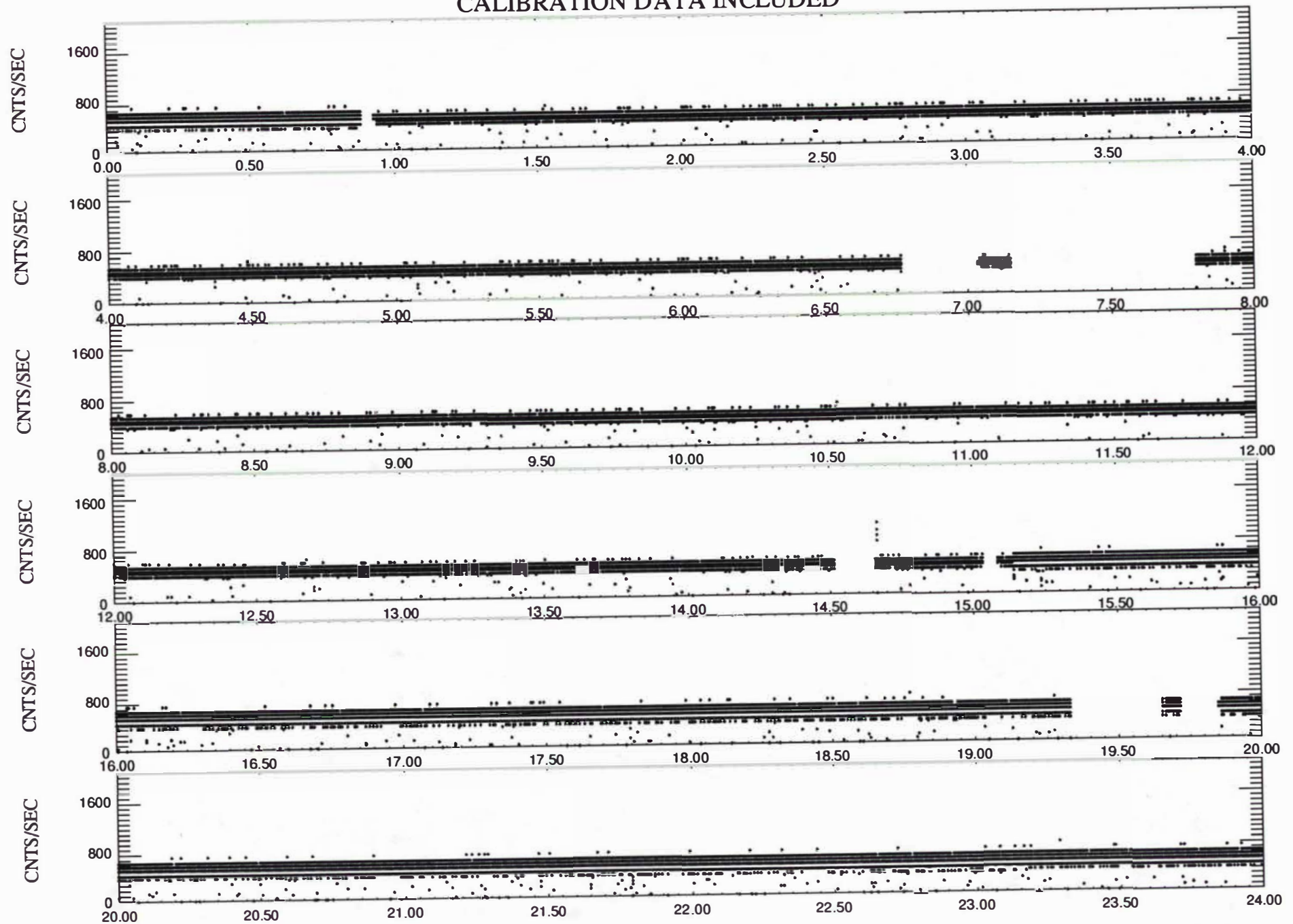
HUS MODES EDR day 301, year 1995 to day 301, year 1995 NO BURST (7)

1/26/96

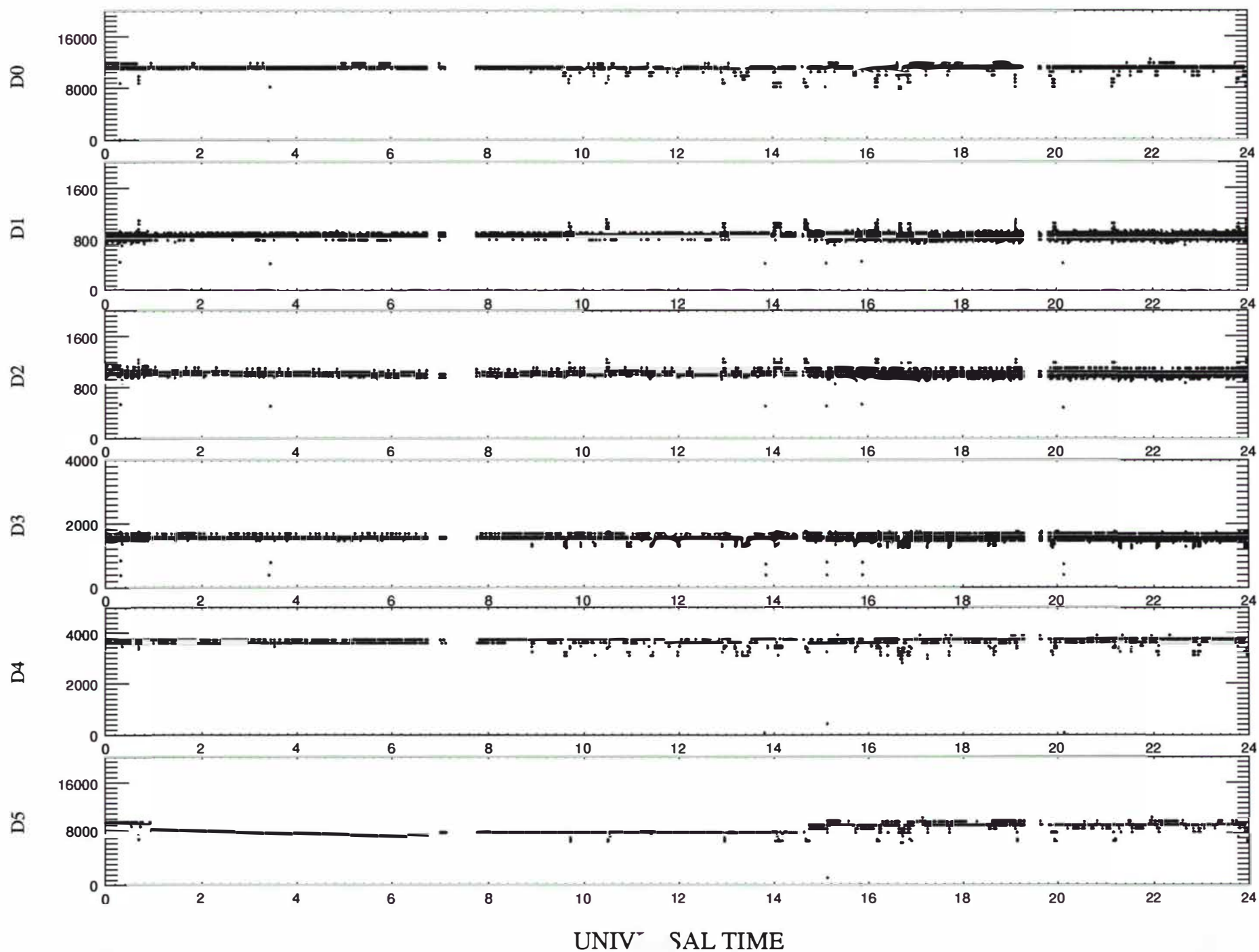


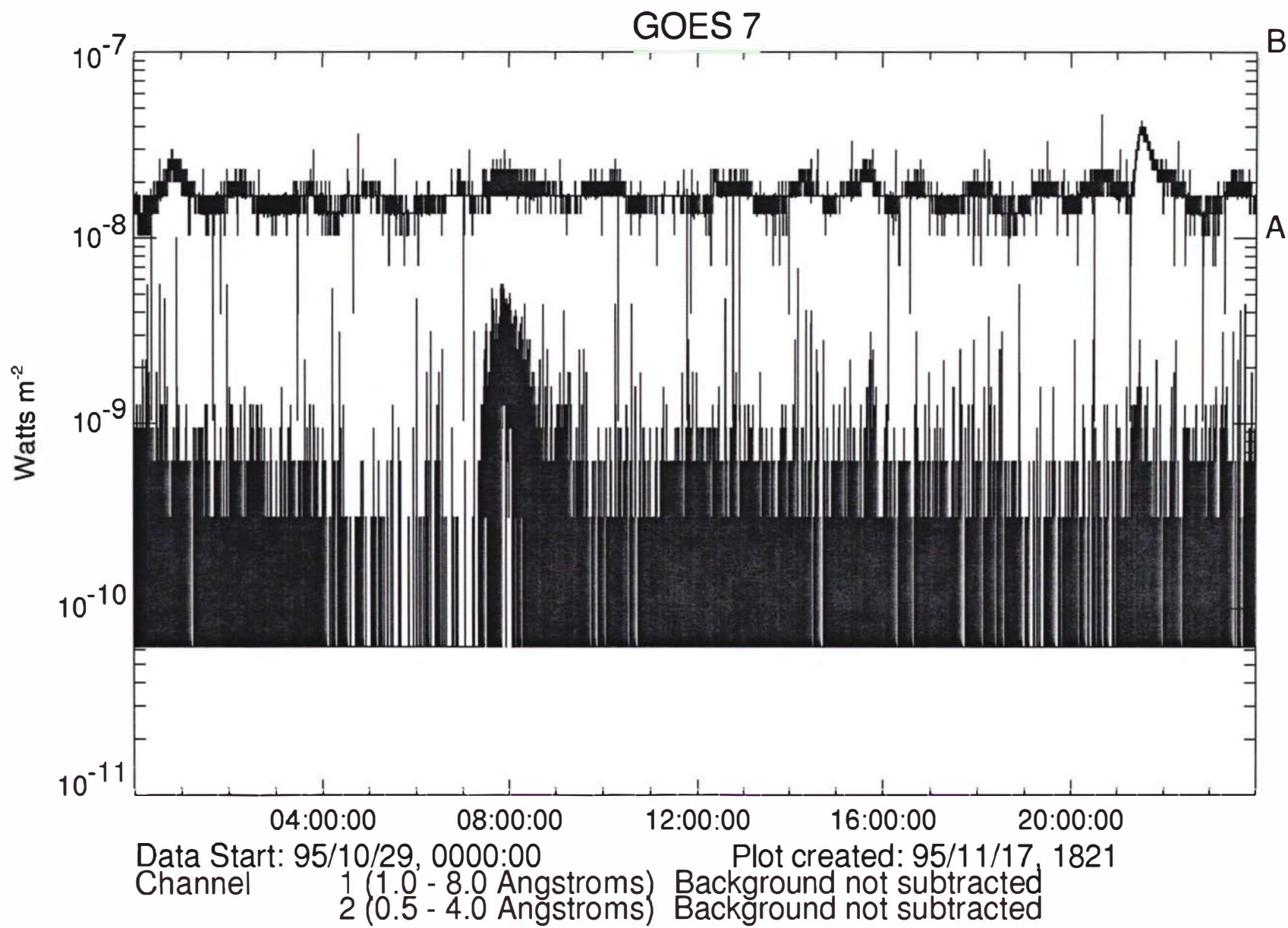
HUS 2A, MODE 1, NOT AVERAGED EDR day 301, year 1995 to day 301, year 1995
CALIBRATION DATA INCLUDED

1/26/96

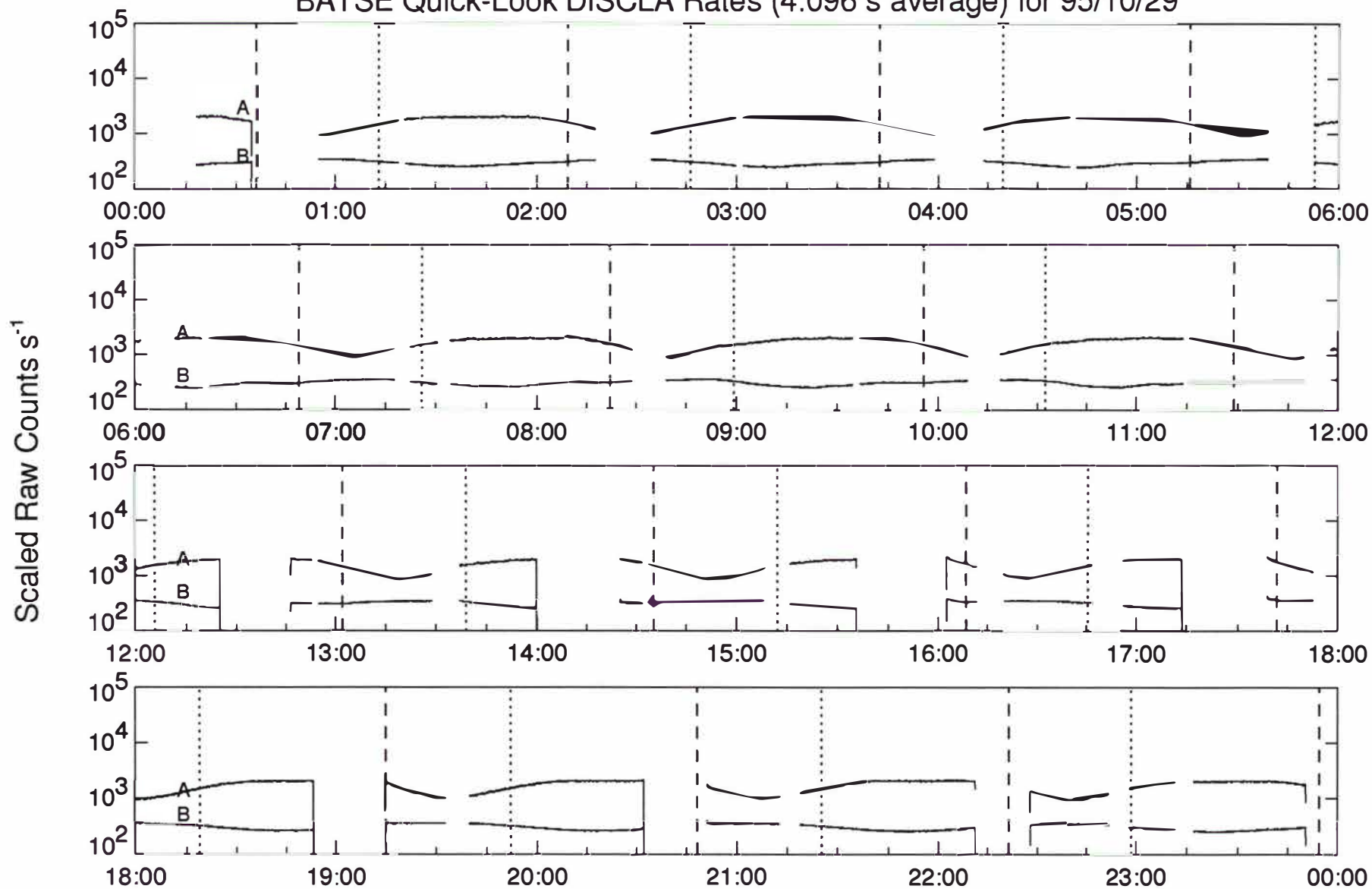


UNIV. CAL TIME





BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/29



Current Time: 95/11/17, 1822 EDT

A: Channel 0 Most Sunward LAD

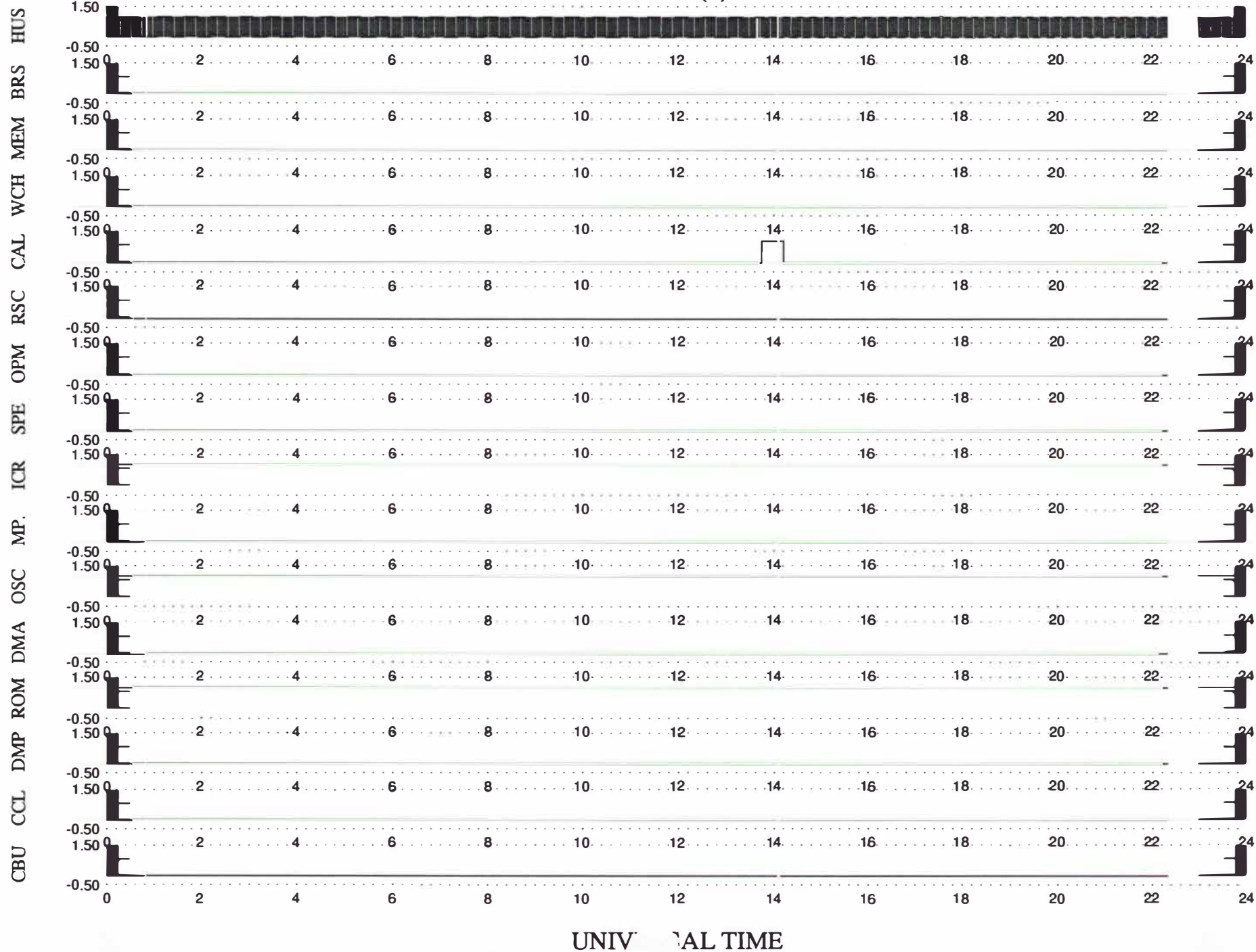
B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

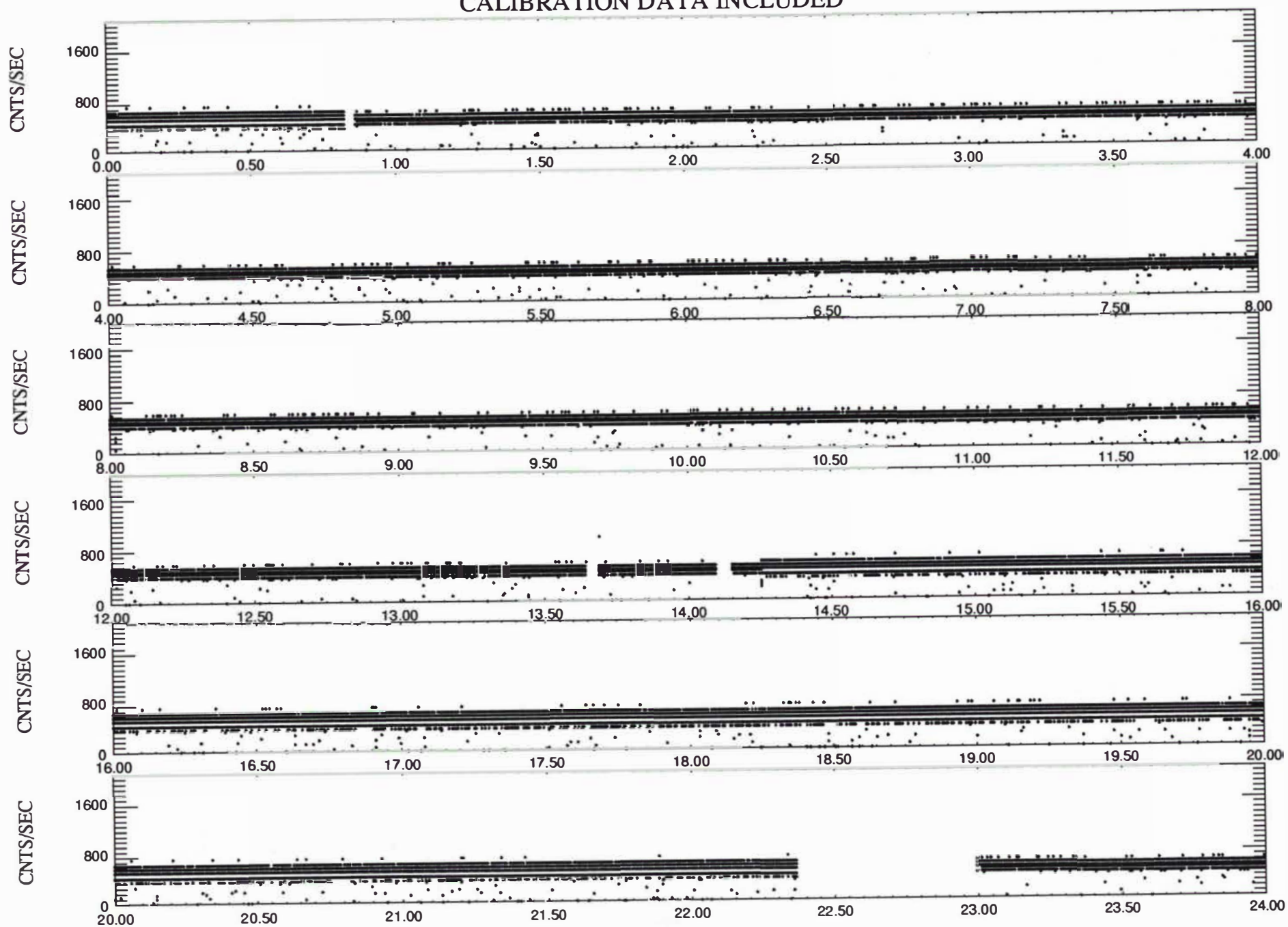
HUS MODES EDR day 302, year 1995 to day 302, year 1995 NO BURST (7)

1/26/96

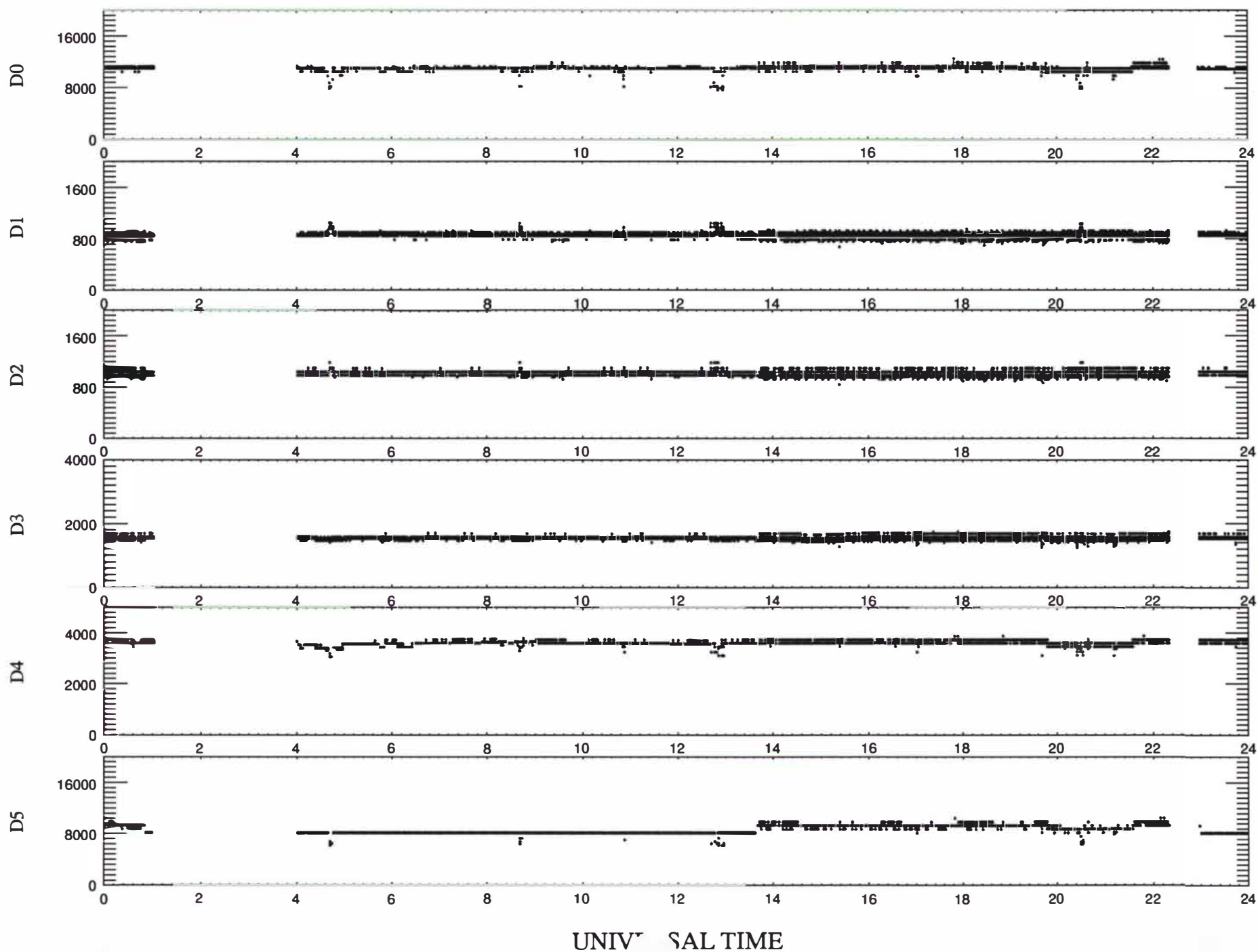


HUS 2A, MODE 1, NOT AVERAGED EDR day 302, year 1995 to day 302, year 1995
CALIBRATION DATA INCLUDED

1/26/96



UNIV'AL TIME



From WOODSP@ssl.msfc.nasa.gov Tue Oct 31 10:44 PST 1995
Date: Tue, 31 Oct 1995 12:44:26 -0600 (CST)
From: WOODSP@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3886

BATSEARCH PROGRAM

NO

BATSE BURST # 3886
EVENT OF 1995 OCT 30 DAY OF YEAR=303
EVENT CROSSING TIME AT BATSE : 19598. S. OR 05:26:38.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 126.000 35.000
BATSE PEAK COUNTING RATE: 8000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 30/10/ 95 IS:
RA= 211.892 DEC= 55.867 DIST= 2.832 AU
BATSE-ULYSSES DISTANCE = 423732545. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=120.51 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -717.58 SECS.
CROSSING TIME AT ULYSSES IS 18880. S. OR 05:14:40 +/- 250.52 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 30/10/ 95 IS:
RA= 244.586 DEC= -22.131 DIST= 2.228 AU
MARS-BATSE DISTANCE = 333333856. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 54.61 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 643.95 SECS.
CROSSING TIME AT MARS IS 20242. S. OR 05:37:21 +/- 167.15 SECONDS

BATSE BURST TRIGGER

NO.: 3886

TIME: TJD=0020 SECONDS=19598

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=44.9 AZIMUTH=20.6 ERROR=3.1 DEGREES

COMMENTS:

GRB WITH 2 PEAKS. VISIBLE ABOVE 300KEV. TOTAL DURATION ~ 14SEC.
1ST PEAK ~3.5SEC. 2ND PEAK ~6SEC.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3886	951030	10020	19598	8000	126	+35	14

From HUDEC@cf4.harvard.edu Thu Jan 18 18:03 PST 1996
From: "RENE HUDEC" <HUDEC@cf4.harvard.edu>
To: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Date: Thu, 18 Jan 1996 21:03:21 EST
Subject: Re: BATSE 3888

Dear Kevin:

thanks for 3888 info. What about trigger 3886? The OT detected it just between these two triggers.

I am now working on IPN3 localizations here at Harvard, for one month. Alberto Castro Tirado has sent one student to work here with me. Are there some improvements or changes in your IPN3 list provided me two years ago or so? Also small positional shifts and/or error boxes size changes may be rather important for us since some plates are rather deep with fine scales and we cannot investigate large areas around the position.

I'll be here until Feb 10.

Best regards

Rene

ULYSSES RT

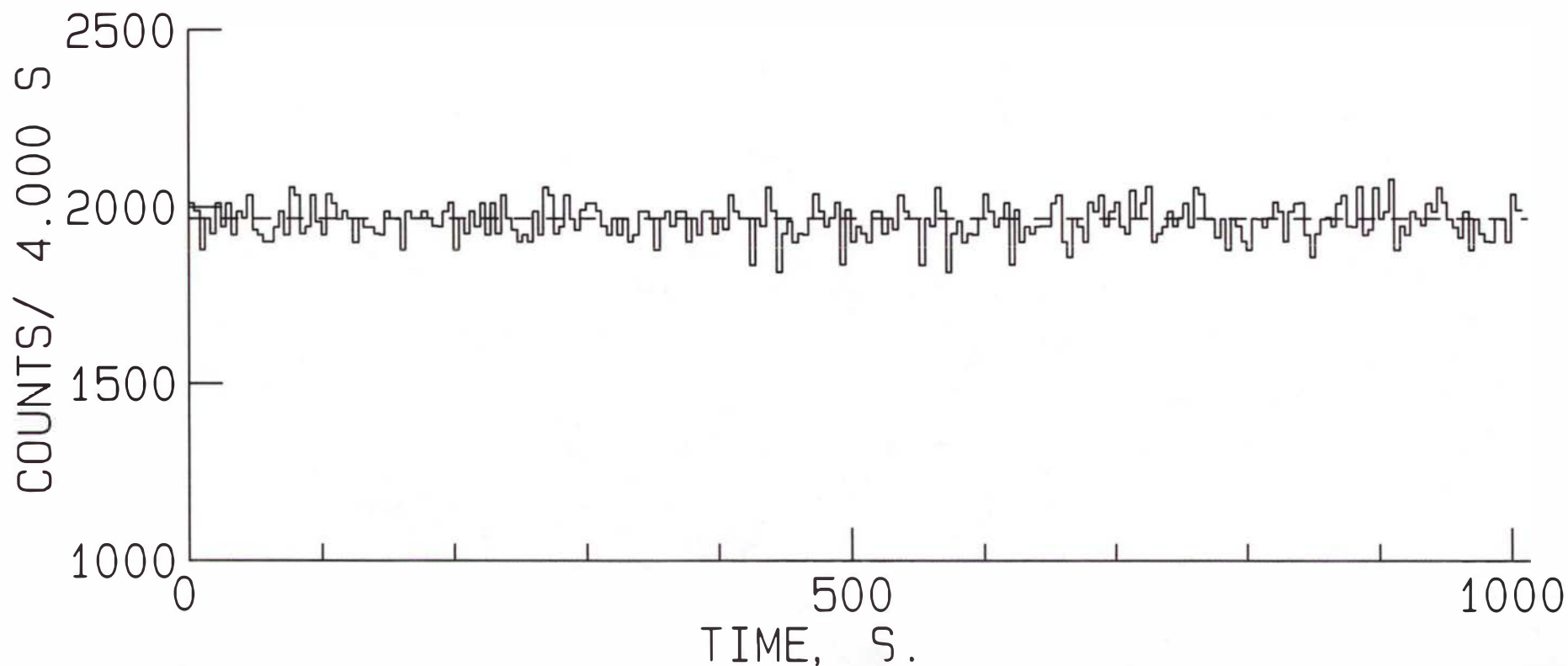
19 / 1 / 96

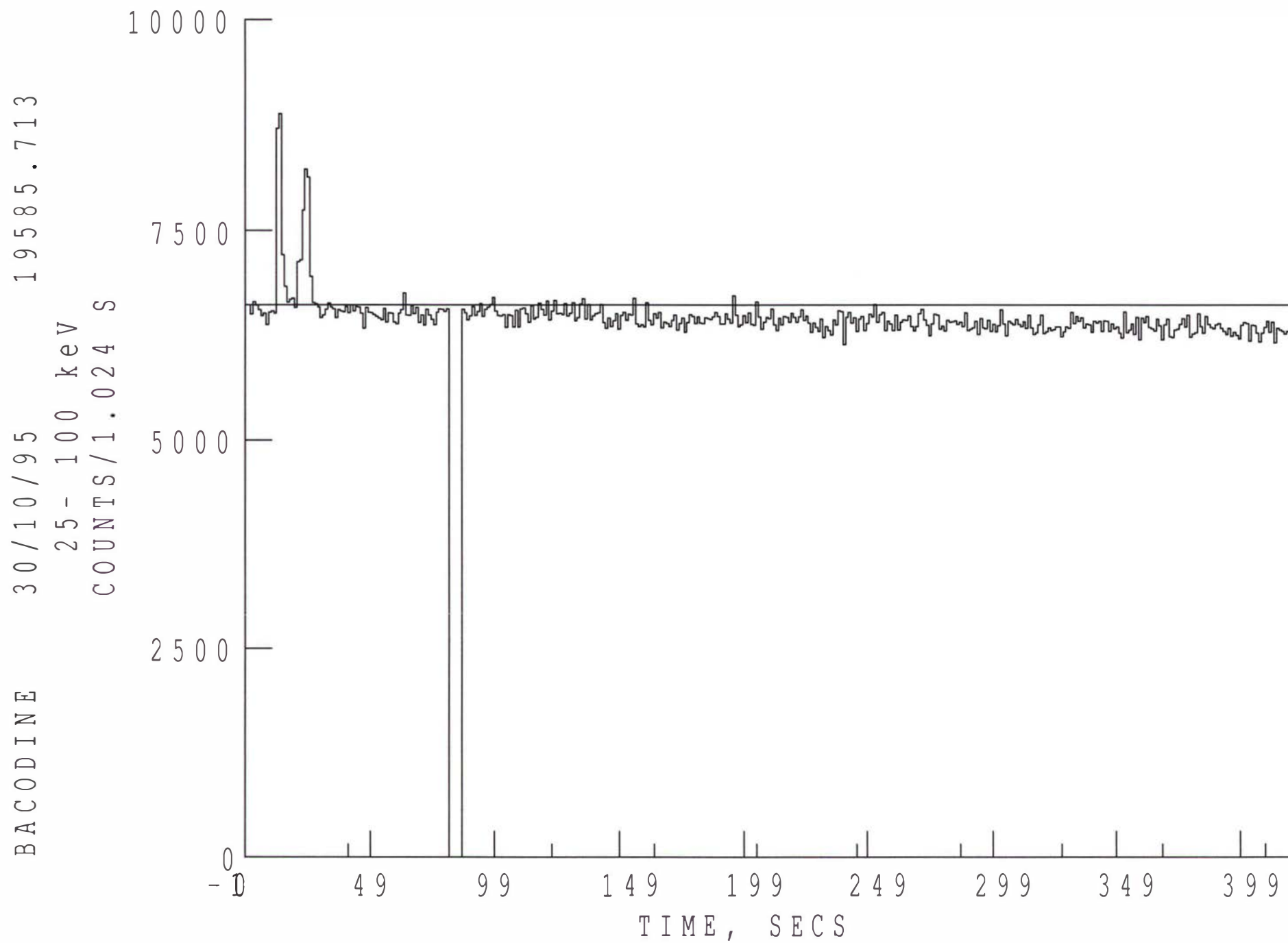
30/10/95 18612.183 s

0.500 S INTERVALS REGROUPED BY 8

21- 141 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





From scott@rosserv.gsfc.nasa.gov Fri Jan 19 15:00 PST 1996
From: Scott Barthelmy <scott@rosserv.gsfc.nasa.gov>
Subject: Re: BATSE 3886
To: rhudec@cfa.harvard.edu
Date: Fri, 19 Jan 1996 17:59:54 -0500 (EST)
Cc: cline@lheavx.gsfc.nasa.gov, gehrels@lheavx.gsfc.nasa.gov,
scott@rosserv.gsfc.nasa.gov, butterworth@lheavx.gsfc.nasa.gov,
jryan@unh.edu, jmacri@6865.dnet.nasa.gov, bmcnamar@nmsu.edu,
rmkippen@unh.edu, neils@unh.edu,
khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit

Rene,

19 Jan 96

As I explained in my earlier email, the COMPTEL people retracted their location for BATSE trigger 3888. While it was enough to trigger the automated processing system (see emails attached below) it was not strong enough to produce a valid location. See Marc Kippen's email below. I have attached the emails I got from COMPTEL & Kippen for that trigger.

--scott

////////////////////////////////////
> Dear Kevin:
>
> Ok, thank you. This was actually the observation for trigger 3888 and
> the OT position is consistent with the COMPTEL position we have got.
> There is however relatively large discrepancy between the COMPTEL
> position centered on 2000.00 92.44 and 27.25, the BACODINE position
> centered on 85.10 and 20.31 and Huntsville position centered on 85.49
> and 21.54..
> There is an OT on the plate taken by our EON network at the Rozhen Observatory,
> Bulgaria, about 16 h after the burst, reaching about 15.5 mag on a
> deep plate with limit 18.5. Its position is consistent with COMPTEL
> position we have but less consistent with the Huntsville
> localization for the same trigger.
> We would be very glad for any comments explaining the COMPTEL/BATSE
> position discrepancy for the trigger 3888 GRB951030, 41021 sec.
>
>
> Regards Rene
>
> I am temporarily here at HCO until Feb 10.
>

> //////////////////////////////////////
> From rbruser@compTEL.unh.edu Mon Oct 30 06:47:58 1995
> From: burst@compTEL.unh.edu (UNH/COMPTEL Burst Group)
> Date: Mon, 30 Oct 1995 06:41:44 -0500 (EST)
> Reply-To: burst@compTEL.unh.edu
> To: burstmail@compTEL.unh.edu
>
> NOTICE_HEAD: COMPTEL BURST POSITION NOTICE: GRB951030
> NOTICE_TYPE: UPDATE1 (includes error contour points)
> NOTICE_DATE: Mon Oct 30 11:41:44 GMT 1995
> ORIG_SENDER: burst@compTEL.unh.edu
> RBR_VERSION: SRCRBR version 2.0-COMPASS
> *****
> BURST_DATE : 10020 TJD; 30-Oct-1995
> BURST_TIME : 41020.59 sec; 11:23:40.59 UT
> -----
> BURST_SCZEN: 16.62 deg
> BURST_SCAZI: 320.78 deg


```

> BURST_CLASS: WEAK      (Approx 20 events)
> BURST_DETEC: WEAK      (Approx 3.8 sigma)
> *****
> COORD_J2000: [RAsc      Decl] [RAsc      Decl]
> =====
> MAXPOS_J20 : [ 92.44d  27.25d] [ 6h09m45s  27d15'16"]
> -----
> ERRBOX1_J20: [ 93.13d  30.98d] [ 6h12m31s  30d58'56"]
> ERRBOX2_J20: [ 88.71d  25.99d] [ 5h54m50s  25d59'35"]
> ERRBOX3_J20: [ 94.86d  21.55d] [ 6h19m27s  21d32'56"]
> ERRBOX4_J20: [ 99.35d  26.33d] [ 6h37m25s  26d19'44"]
> *****
> COORD_B1950: [RAsc      Decl] [RAsc      Decl]
> =====
> MAXPOS_B50 : [ 91.68d  27.27d] [ 6h06m43s  27d15'55"]
> -----
> ERRBOX1_B50: [ 92.35d  31.00d] [ 6h09m23s  30d59'48"]
> ERRBOX2_B50: [ 87.96d  25.99d] [ 5h51m50s  25d59'06"]
> ERRBOX3_B50: [ 94.14d  21.57d] [ 6h16m33s  21d34'19"]
> ERRBOX4_B50: [ 98.60d  26.37d] [ 6h34m25s  26d22'29"]
> -----
> NOTE01-----: Error box indicates 2-sigma statistical
> NOTE02-----: confidence limits only.
> NOTE03-----:
> NOTE04-----: Please DO NOT reply to this message!
> NOTE05-----: Address questions to either:
> NOTE06-----: Marc Kippen (rmkippen@unh.edu) or
> NOTE07-----: Tom Harrison (tharriso@nmsu.edu)
> *****

```

> Burst location uncertainty contour (2-sigma) follows.

> 50 contour points, J2000 coordinates in deg

	IP	RAsc	Decl	IP	RAsc	Decl
>	01	96.23	28.75	26	90.77	24.77
>	02	95.83	28.94	27	91.20	24.71
>	03	95.43	29.13	28	91.64	24.64
>	04	95.03	29.33	29	92.07	24.65
>	05	94.60	29.46	30	92.51	24.64
>	06	94.14	29.46	31	92.94	24.57
>	07	93.68	29.48	32	93.37	24.50
>	08	93.22	29.44	33	93.80	24.48
>	09	92.78	29.35	34	94.24	24.44
>	10	92.34	29.24	35	94.68	24.36
>	11	91.97	29.00	36	95.10	24.25
>	12	91.65	28.74	37	95.50	24.09
>	13	91.39	28.41	38	95.94	24.00
>	14	91.04	28.18	39	96.39	23.96
>	15	90.68	27.97	40	96.85	23.97
>	16	90.31	27.76	41	97.25	24.17
>	17	89.99	27.50	42	97.47	24.44
>	18	89.80	27.18	43	97.59	24.76
>	19	89.70	26.84	44	97.38	25.41
>	20	89.67	26.48	45	97.43	26.03
>	21	89.74	26.13	46	97.69	26.62
>	22	89.82	25.79	47	97.77	26.96
>	23	89.99	25.47	48	97.72	27.31
>	24	90.14	25.16	49	97.18	27.81
>	25	90.35	24.86	50	96.75	28.32

```

> -----
> ///////////////////////////////////////////////////////////////////
> From mkippen@comptel.sr.unh.edu Mon Nov 13 14:39 EST 1995
> Subject: Re: GRB951030_41020 sec
> To: burstmail@comptel.sr.unh.edu
> Date: Mon, 13 Nov 1995 14:40:35 -0500 (EST)
> From: "R. Marc Kippen -- UNH-CGRO-COMPTTEL" <marc.kippen@unh.edu>

```

> Cc: mkippen@comptel.sr.unh.edu (R Marc Kippen)

>

> Dear BCN network member:

11/13/95

>

> Upon examining the full set of data for GRB951030 (41020 sec, TRIG

> 3888), it appears that COMPTel did not, in fact, detect this burst.

> The error box which was distributed shortly after the BACODINE trigger

> by our automatic system should be disregarded as it is unrelated to

> the burst.

>

> Unfortunately, "false alarms" of this type could happen again in the

> future. Such is the trade-off between location speed and identification

> accuracy. I will, however, attempt to make adjustments sooner in the

> future through the use of more timely follow-up messages.

>

> Sorry for the inconvenience,

> Marc Kippen / UNH

From mkippen@comptel.sr.unh.edu Mon Nov 13 11:42 PST 1995
Subject: Re: GRB951030_41020 sec
To: burstmail@comptel.sr.unh.edu
Date: Mon, 13 Nov 1995 14:40:35 -0500 (EST)
From: "R. Marc Kippen -- UNH-CGRO-COMPTEL" <marc.kippen@unh.edu>
Cc: mkippen@comptel.sr.unh.edu (R Marc Kippen)
Mime-Version: 1.0
Content-Transfer-Encoding: 7bit

Dear BCN network member:

11/13/95

Upon examining the full set of data for GRB951030 (41020 sec, TRIG 3888), it appears that COMPTEL did not, in fact, detect this burst. The error box which was distributed shortly after the BACODINE trigger by our automatic system should be disregarded as it is unrelated to the burst.

Unfortunately, "false alarms" of this type could happen again in the future. Such is the trade-off between location speed and identification accuracy. I will, however, attempt to make adjustments sooner in the future through the use of more timely follow-up messages.

Sorry for the inconvenience,

Marc Kippen / UNH

From rbruser@compTEL.unh.edu Sun Oct 29 21:52 PST 1995
Subject: GRB951030: COMPTEL BURST POSITION NOTICE
From: burst@compTEL.unh.edu (UNH/COMPTEL Burst Group)
Date: Mon, 30 Oct 1995 00:42:53 -0500 (EST)
To: burstmail@compTEL.unh.edu

NOTICE_HEAD: COMPTEL BURST POSITION NOTICE: GRB951030

NOTICE_TYPE: INITIAL

NOTICE_DATE: Mon Oct 30 05:42:53 GMT 1995

ORIG_SENDER: burst@compTEL.unh.edu

RBR_VERSION: SRCRBR version 2.0-COMPASS

BURST_DATE : 10020 TJD; 30-Oct-1995

BURST_TIME : 19597.55 sec; 05:26:37.55 UT

NOTE01-----: Rapid COMPTEL localization of this burst

NOTE02-----: is not possible.

NOTE03-----: -----

NOTE04-----: Please DO NOT reply to this message!

NOTE05-----: Address questions to either:

NOTE06-----: Marc Kippen (rmkippen@unh.edu) or

NOTE07-----: Tom Harrison (tharriso@nmsu.edu)

From lhanlon@bermuda.ucd.ie Sat Nov 4 02:03 PST 1995
Date: Wed, 1 Nov 95 13:02:00 GMT
From: lhanlon@bermuda.ucd.ie (Lorraine Hanlon)
To: Khurley@sunspot.ssl.berkeley.edu
Subject: burst

Hello Kevin,
Could you tell me if there will be an IPN arc for GRB951030, the weak burst that COMPTEL was able to image? If so, could you send me the coordinates of the extrema...the error box is a bit big, but this is the first candidate we have had in 18 months, so we have already started WSRT observations.
Thanks a lot,
Lorraine

--

Physics Department, University College, Belfield, Dublin 4, Ireland
Tel: +353-1-7062214/2202 Fax: +353-1-2837275
E-mail: lhanlon@bermuda.ucd.ie

From khurley@sunspot Sat Nov 4 10:02 PST 1995
Date: Sat, 4 Nov 1995 07:59:28 -0800
From: khurley@sunspot (Kevin Hurley)
To: lhanlon@bermuda.ucd.ie
Subject: burst on Oct 30
Cc: khurley@sunspot

Dear Lorraine,

We had coverage and good data for this period, but did not detect it. It's probably one of those very hard spectra events which doesn't put out much at lower energies.

Kevin

From MIZZELL@fender.msfc.nasa.gov Tue Nov 7 09:34 PST 1995
From: MIZZELL@fender.msfc.nasa.gov
Date: Tue, 7 Nov 1995 11:34:34 -0600 (CST)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3887

BATSEARCH PROGRAM

BATSE BURST # 3887
EVENT OF 1995 OCT 30 DAY OF YEAR=303
EVENT CROSSING TIME AT BATSE : 31179. S. OR 08:39:39.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 106.000 19.000
BATSE PEAK COUNTING RATE: 3000 C/S

NO

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 30/10/ 95 IS:
RA= 211.933 DEC= 55.856 DIST= 2.833 AU
BATSE-ULYSSES DISTANCE = 423780161. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 97.11 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -174.95 SECS.
CROSSING TIME AT ULYSSES IS 31004. S. OR 08:36:44 +/- 290.88 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 30/10/ 95 IS:
RA= 244.586 DEC= -22.131 DIST= 2.228 AU
MARS-BATSE DISTANCE = 333333856. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 38.78 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 866.71 SECS.
CROSSING TIME AT MARS IS 32046. S. OR 08:54:05 +/- 134.08 SECONDS

BATSE BURST TRIGGER

NO.: 3887

TIME: TJD=0020 SECONDS=31179

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=23 AZIMUTH=359 ERROR=12.3 DEGREES

COMMENTS:

ORIGINAL MESSAGE CLASSIFIED THIS TRIGGER AS A PARTICLE EVENT.
AFTER FURTHER REVIEW, IT HAS BEEN CLASSIFIED A BURST.
THERE ARE TWO EPISODES WITH A TOTAL DURATION OF ABOUT 230 SEC.
THE SECOND EPISODE HAS FINE STRUCTURE. NEITHER EPISODE IS
VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3887	951030	10020	31179	3000	106	+19	230

7 / 11 / 95

ULYSSES RT

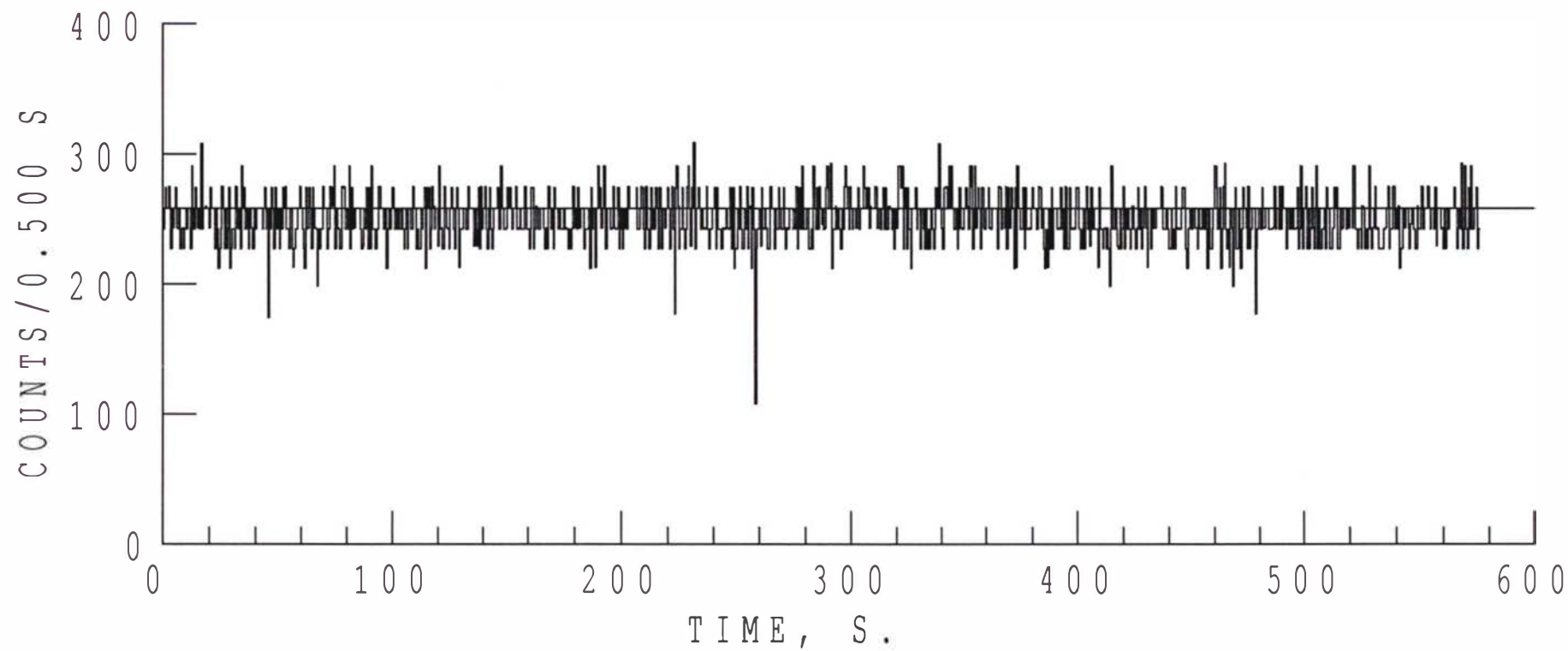
30/10/95 30708.131 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From WOODSP@ssl.msfc.nasa.gov Tue Oct 31 10:46 PST 1995
Date: Tue, 31 Oct 1995 12:46:34 -0600 (CST)
From: WOODSP@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3888

BATSEARCH PROGRAM

No

BATSE BURST # 3888
EVENT OF 1995 OCT 30 DAY OF YEAR=303
EVENT CROSSING TIME AT BATSE : 41020. S. OR 11:23:40.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 86.000 22.000
BATSE PEAK COUNTING RATE: 24000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 30/10/ 95 IS:
RA= 211.967 DEC= 55.847 DIST= 2.833 AU
BATSE-ULYSSES DISTANCE = 423820822. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 90.25 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -6.05 SECS.
CROSSING TIME AT ULYSSES IS 41014. S. OR 11:23:33 +/- 295.35 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 30/10/ 95 IS:
RA= 244.586 DEC= -22.131 DIST= 2.228 AU
MARS-BATSE DISTANCE = 333333856. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 19.83 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1045.96 SECS.
CROSSING TIME AT MARS IS 42066. S. OR 11:41:05 +/- 81.37 SECONDS

BATSE BURST TRIGGER

NO.: 3888

TIME: TJD=0020 SECONDS=41020

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=8.4 AZIMUTH=50.4 ERROR=3.8 DEGREES

COMMENTS:

SHORT GRB WITH SMALL PRECURSOR. DURATION ~1.2 SEC.
VISIBLE ABOVE 300KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3888	951030	10020	41020	24000	086	+22	1.2

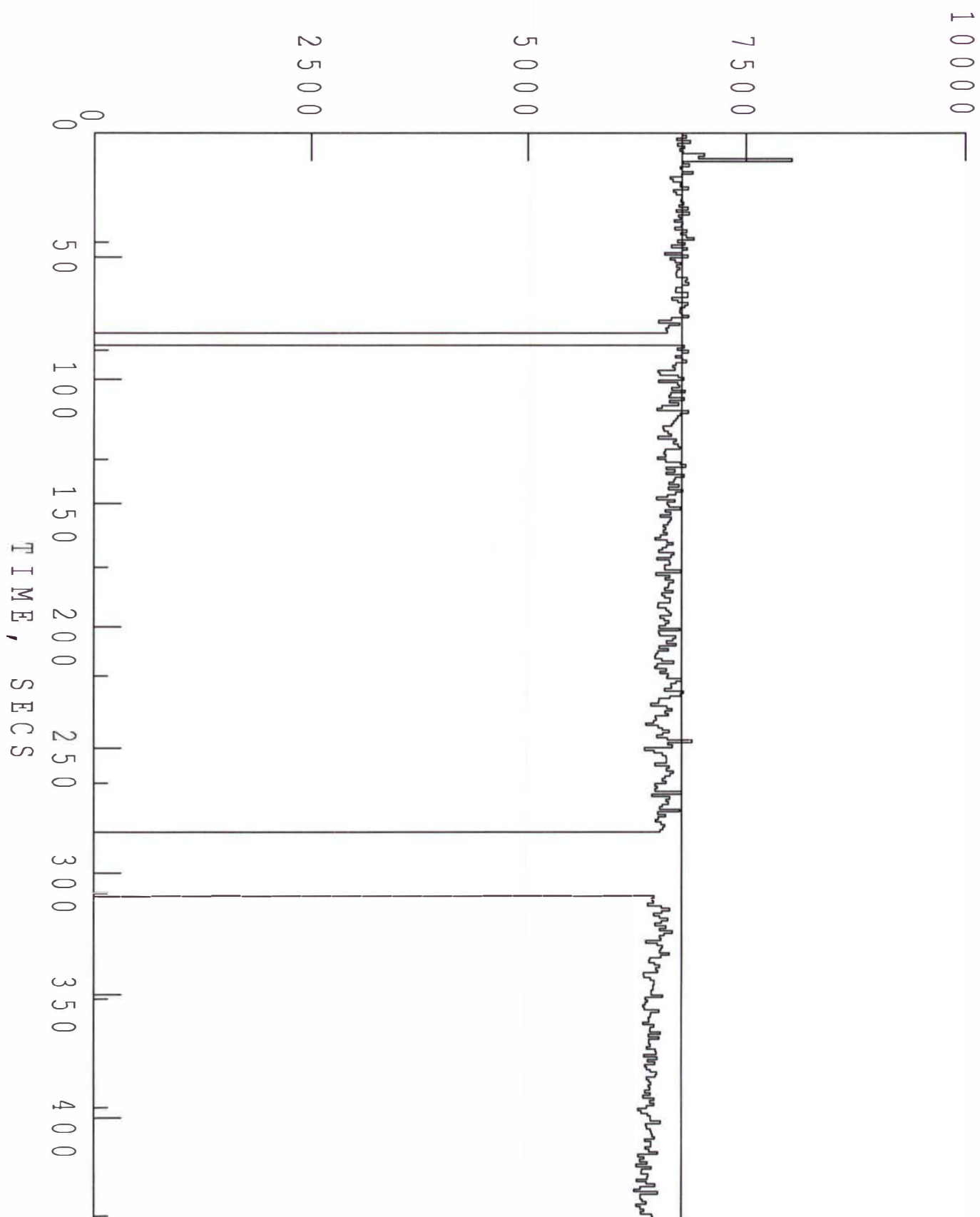
BACODINE

30/10/95

41009.841

25 - 100 keV

COUNTS/1.024 S



From HUDEC@cf4.harvard.edu Thu Jan 18 07:00 PST 1996
From: "RENE HUDEC" <HUDEC@cf4.harvard.edu>
To: scott@rosserv.gsfc.nasa.gov
Date: Thu, 18 Jan 1996 10:00:07 EST
Subject: GRB
Cc: khurley@sunspot.ssl.berkeley.edu

Hi Scott and Kevin,
we have a positive OT detection for GRB951030 on the 2m Rozhen
telescope. The plate was taken on Oct 31, 1995, at 02:55 UT, and the
object is roughly at 2000.0 06h18m59s +27deg13'33'' $\pm$ 2 arcmin.
Please check the position with recent GRB localization and let me
know ASAP whether this is consistent or not.

I am here at Harvard till Feb 10, working on precise IPN3 positions.

Regards Rene

From scott@rosserv.gsfc.nasa.gov Thu Jan 18 11:31 PST 1996
From: Scott Barthelmy <scott@rosserv.gsfc.nasa.gov>
Subject: Re: GRB
To: HUDEC@cf4.harvard.edu (RENE HUDEC)
Date: Thu, 18 Jan 1996 14:31:33 -0500 (EST)
Cc: cline@tgrs.gsfc.nasa.gov, gehrels@lheavx.gsfc.nasa.gov,
scott@rosserv.gsfc.nasa.gov, butterworth@lheavx.gsfc.nasa.gov
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit

Rene,

18 Jan 96

Here is all I have for the two GRBs.

For trigger 3886:

BACO Time: 19597.5 sod, 951030
BACO Initial location: RA=112.44 Dec=35.44
BACO MAXBC location: RA=115.97 Dec=34.64
Huntsville location: RA= 125.964196 Dec= 35.352215
RA: +08h 23m 51s Dec: +35d 21' 08"
Huntsville uncertainty: 3.1deg statistical, 1.6deg systematic.
Huntsville description: GRB with 2 peaks. Seen above 300.
Total duration ~14SEC. 1st peak ~3.5sec.
2nd peak ~6sec

For trigger 3888:

BACO Time: 41020.6 sod, 951030
BACO Initial location: RA=83.26 Dec=15.96
BACO MAXBC location: RA=85.10 Dec=20.31
Huntsville location: RA= 85.489187 Dec= 21.535754
RA: +05h 41m 57s Dec: +21d 32' 09"
Huntsville uncertainty: 3.8deg statistical, 1.6deg systematic.
Huntsville description: Short GRB with a precursor; Dur=~1.2sec,
Seen above 300keV

All RA,Dec's are in J2000 epoch.

For completeness,

Your OT location: RA=94.75 Dec=27.23

This is all the information I have on these two triggers.
COMPTEL initially thought they imaged 3888, but they retracted
their published location about a week later (it was too weak).
I never got any IPN information K.Hurley for either GRB.

For your analysis, I would suggest that the Huntsville locations
are the best. Also, the quadratic combination of the statistical and
systematic errors will geive the total 1sigma error on the Huntsville
location. BACODINE was 11deg & 6deg off (respectively) from Huntsville.
Please keep me informed about the results of your analysis.

Sincerely,
Scott

////////////////////////////////////
> Hi Scott:
> Ok, please check both for trigger 3886 and 3888. The object is about
> 15.5 mag on the very deep plate (18.mag limit). Still, it may be just
> a new flare star or something like this.
>
> Regards Rene

ULYSSES RT

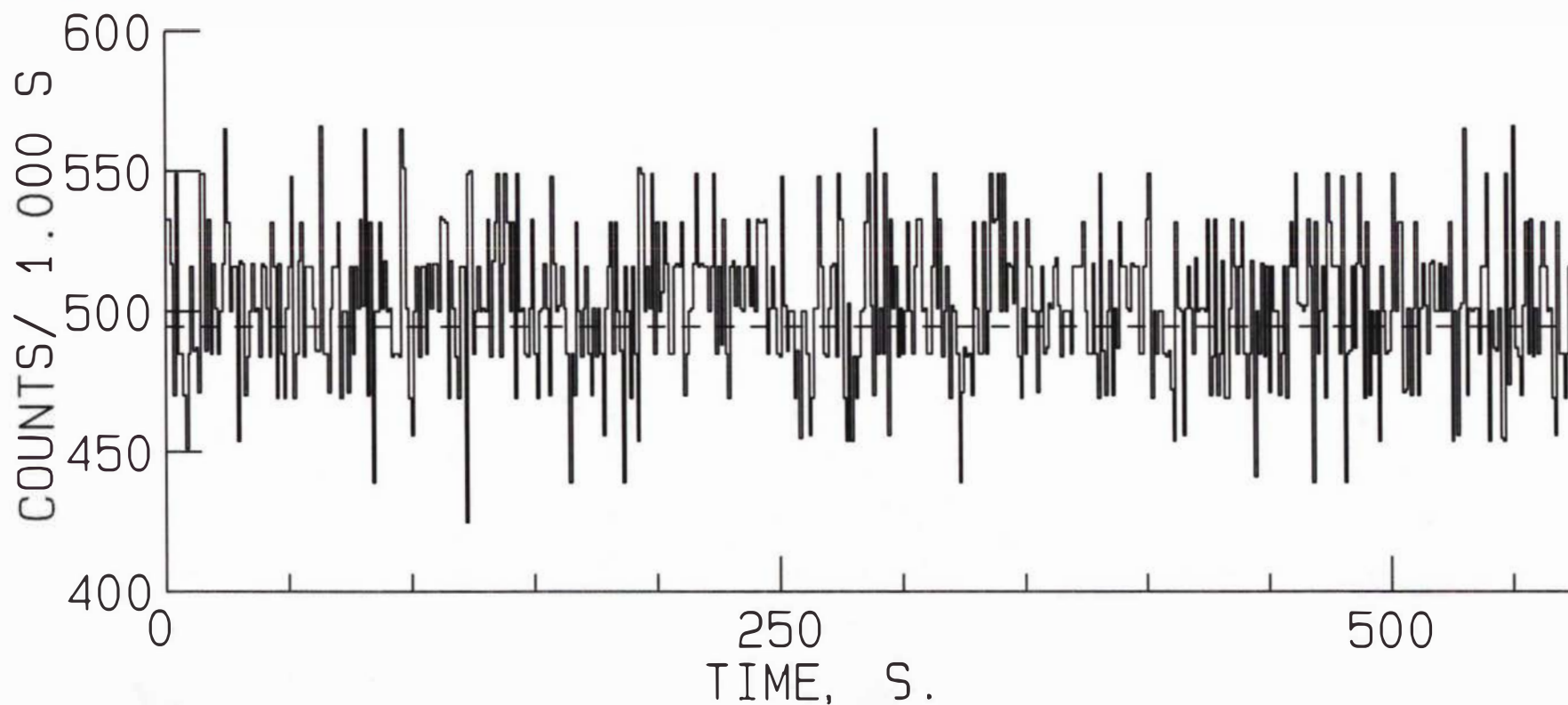
18 / 1 / 96

30/10/95 40716.041 s

0.250 S INTERVALS REGROUPED BY 4

21- 141 keV

N= 10 M= 1
>3.0 SIGMA FLUCTUATIONS



From rbruser@compstel.unh.edu Mon Oct 30 03:42 PST 1995
Subject: GRB951030: COMPTTEL BURST POSITION NOTICE
From: burst@compstel.unh.edu (UNH/COMPTTEL Burst Group)
Date: Mon, 30 Oct 1995 06:41:44 -0500 (EST)
To: burstmail@compstel.unh.edu

NOTICE_HEAD: COMPTTEL BURST POSITION NOTICE: GRB951030
NOTICE_TYPE: UPDATE1 (includes error contour points)
NOTICE_DATE: Mon Oct 30 11:41:44 GMT 1995
ORIG_SENDER: burst@compstel.unh.edu
RBR_VERSION: SRCRBR version 2.0-COMPASS

BURST_DATE : 10020 TJD; 30-Oct-1995
BURST_TIME : 41020.59 sec; 11:23:40.59 UT

BURST_SCZEN: 16.62 deg
BURST_SCAZI: 320.78 deg
BURST_CLASS: WEAK (Approx 20 events)
BURST_DETEC: WEAK (Approx 3.8 sigma)

COORD_J2000: [RAsc Decl] [RAsc Decl]
=====

MAXPOS_J20	[RAsc	Decl]	[RAsc	Decl]
	[92.44d	27.25d]	[6h09m45s	27d15'16"]

ERRBOX1_J20: [93.13d 30.98d] [6h12m31s 30d58'56"]
ERRBOX2_J20: [88.71d 25.99d] [5h54m50s 25d59'35"]
ERRBOX3_J20: [94.86d 21.55d] [6h19m27s 21d32'56"]
ERRBOX4_J20: [99.35d 26.33d] [6h37m25s 26d19'44"]

COORD_B1950: [RAsc Decl] [RAsc Decl]
=====

MAXPOS_B50	[RAsc	Decl]	[RAsc	Decl]
	[91.68d	27.27d]	[6h06m43s	27d15'55"]

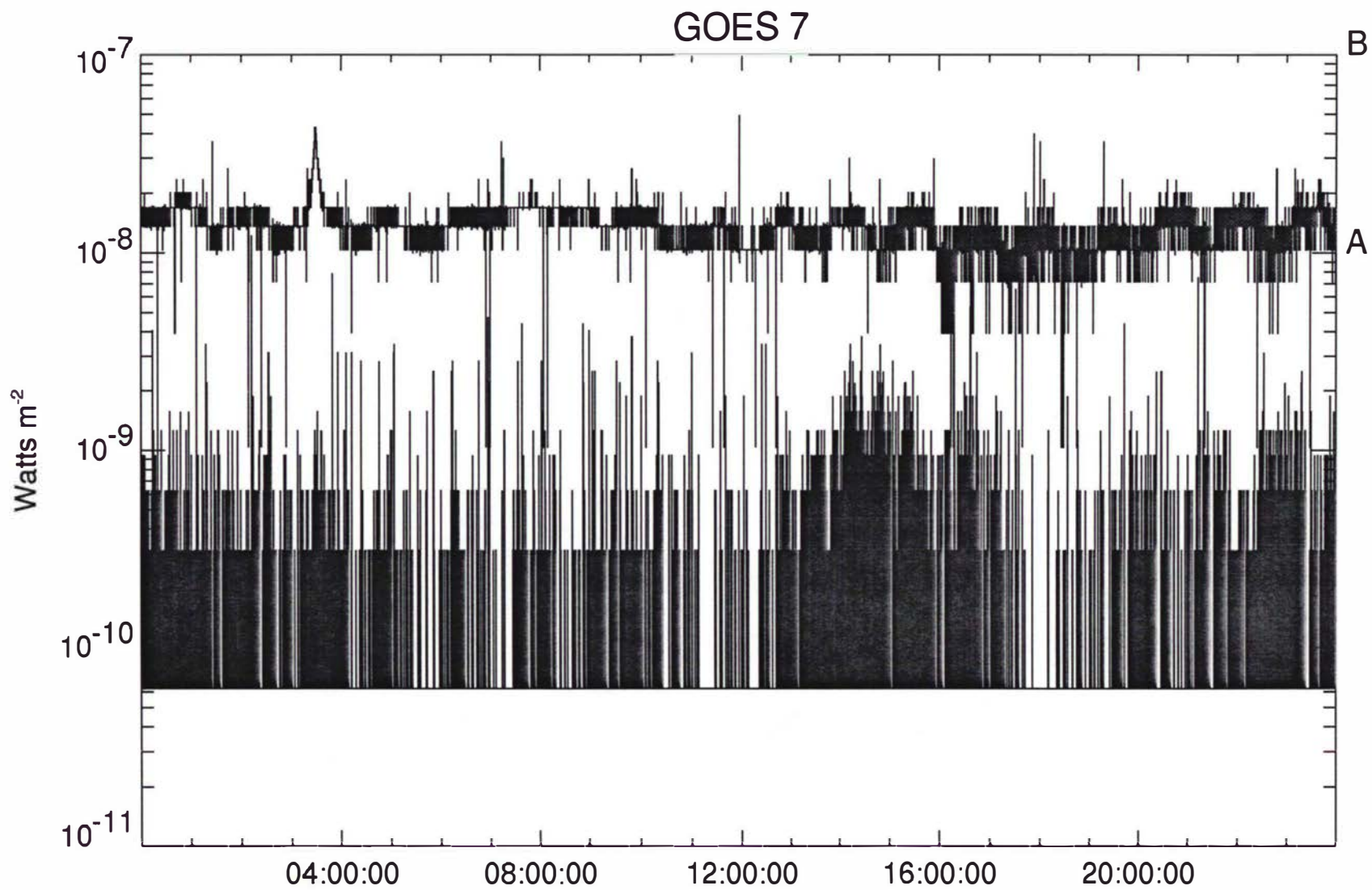
ERRBOX1_B50: [92.35d 31.00d] [6h09m23s 30d59'48"]
ERRBOX2_B50: [87.96d 25.99d] [5h51m50s 25d59'06"]
ERRBOX3_B50: [94.14d 21.57d] [6h16m33s 21d34'19"]
ERRBOX4_B50: [98.60d 26.37d] [6h34m25s 26d22'29"]
=====

NOTE01-----: Error box indicates 2-sigma statistical
NOTE02-----: confidence limits only.
NOTE03-----: -----
NOTE04-----: Please DO NOT reply to this message!
NOTE05-----: Address questions to either:
NOTE06-----: Marc Kippen (rmkippen@unh.edu) or
NOTE07-----: Tom Harrison (tharriso@nmsu.edu)

Burst location uncertainty contour (2-sigma) follows.
50 contour points, J2000 coordinates in deg

IP	RAsc	Decl	IP	RAsc	Decl
01	96.23	28.75	26	90.77	24.77
02	95.83	28.94	27	91.20	24.71
03	95.43	29.13	28	91.64	24.64
04	95.03	29.33	29	92.07	24.65
05	94.60	29.46	30	92.51	24.64
06	94.14	29.46	31	92.94	24.57
07	93.68	29.48	32	93.37	24.50
08	93.22	29.44	33	93.80	24.48
09	92.78	29.35	34	94.24	24.44
10	92.34	29.24	35	94.68	24.36
11	91.97	29.00	36	95.10	24.25
12	91.65	28.74	37	95.50	24.09
13	91.39	28.41	38	95.94	24.00
14	91.04	28.18	39	96.39	23.96
15	90.68	27.97	40	96.85	23.97
16	90.31	27.76	41	97.25	24.17

17	89.99	27.50	42	97.47	24.44
18	89.80	27.18	43	97.59	24.76
19	89.70	26.84	44	97.38	25.41
20	89.67	26.48	45	97.43	26.03
21	89.74	26.13	46	97.69	26.62
22	89.82	25.79	47	97.77	26.96
23	89.99	25.47	48	97.72	27.31
24	90.14	25.16	49	97.18	27.81
25	90.35	24.86	50	96.75	28.32



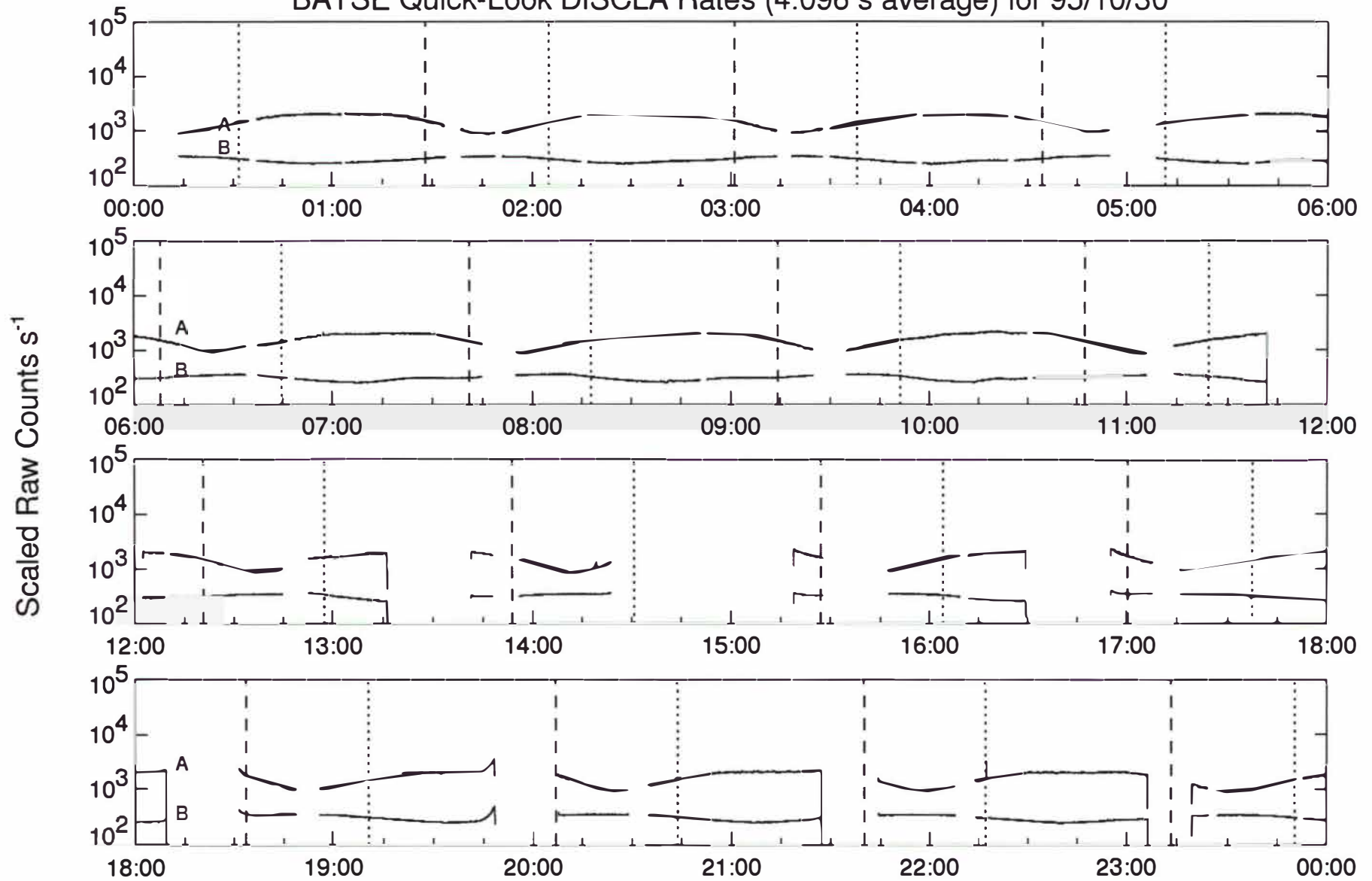
Data Start: 95/10/30, 0000:01

Plot created: 95/11/17, 1825

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 95/10/30



Current Time: 95/11/17, 1825 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

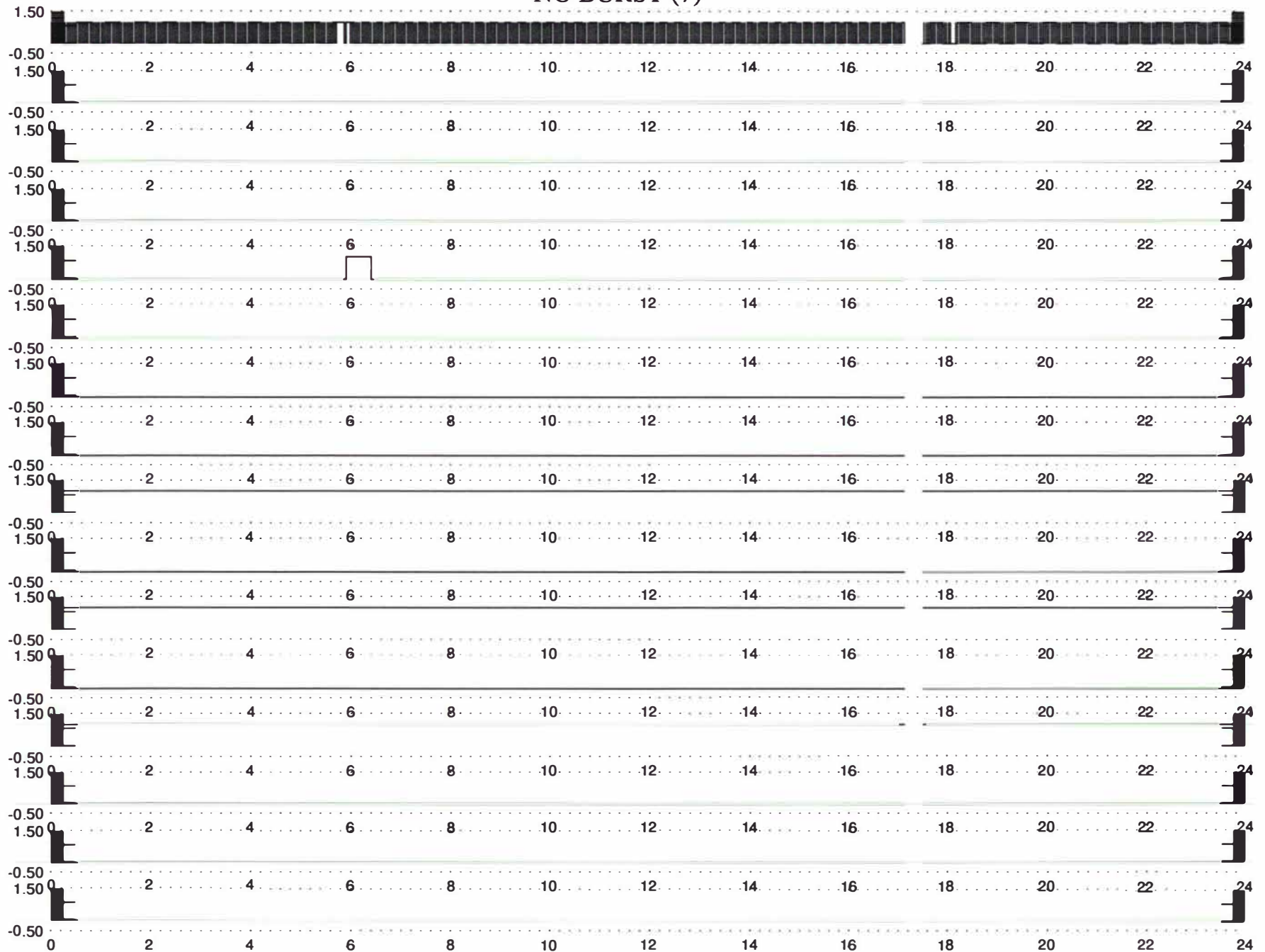
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

HUS MODES EDR day 303, year 1995 to day 303, year 1995
NO BURST (7)

1/26/96

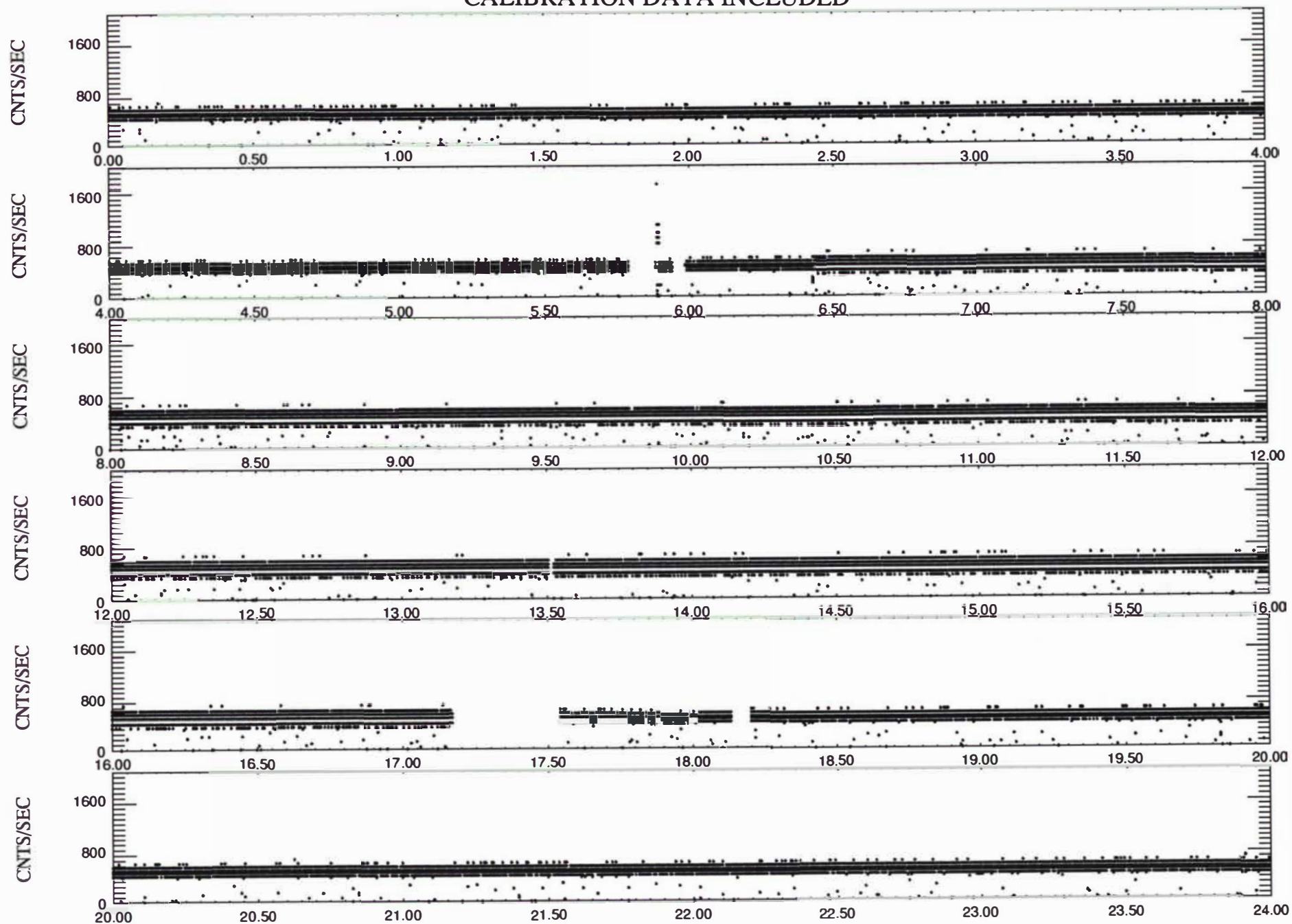
HUS
BRS
MEM
WCH
CAL
RSC
OPM
SPE
ICR
MP.
OSC
DMA
ROM
DMP
CCL
CBU



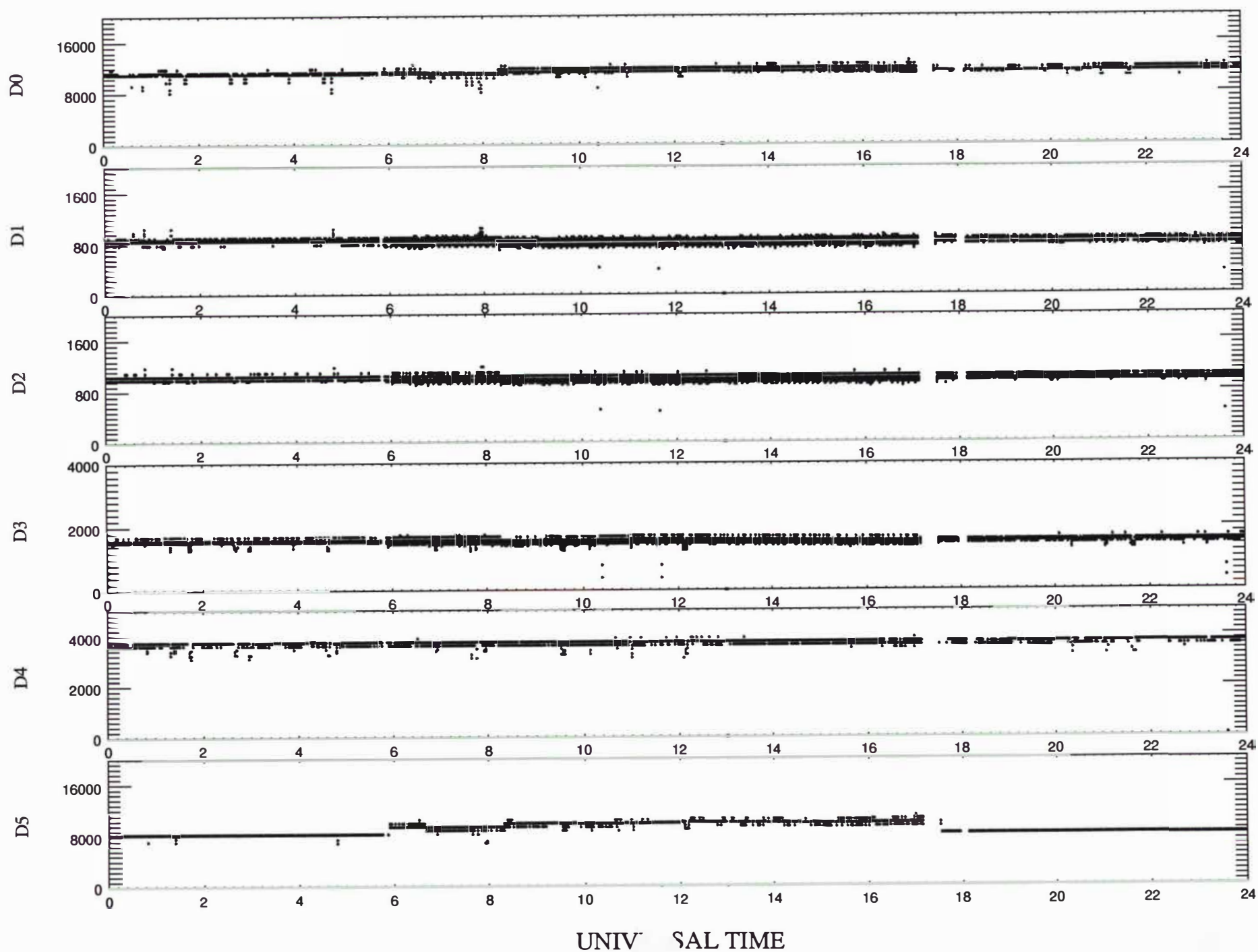
UNIV VAL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 303, year 1995 to day 303, year 1995
CALIBRATION DATA INCLUDED

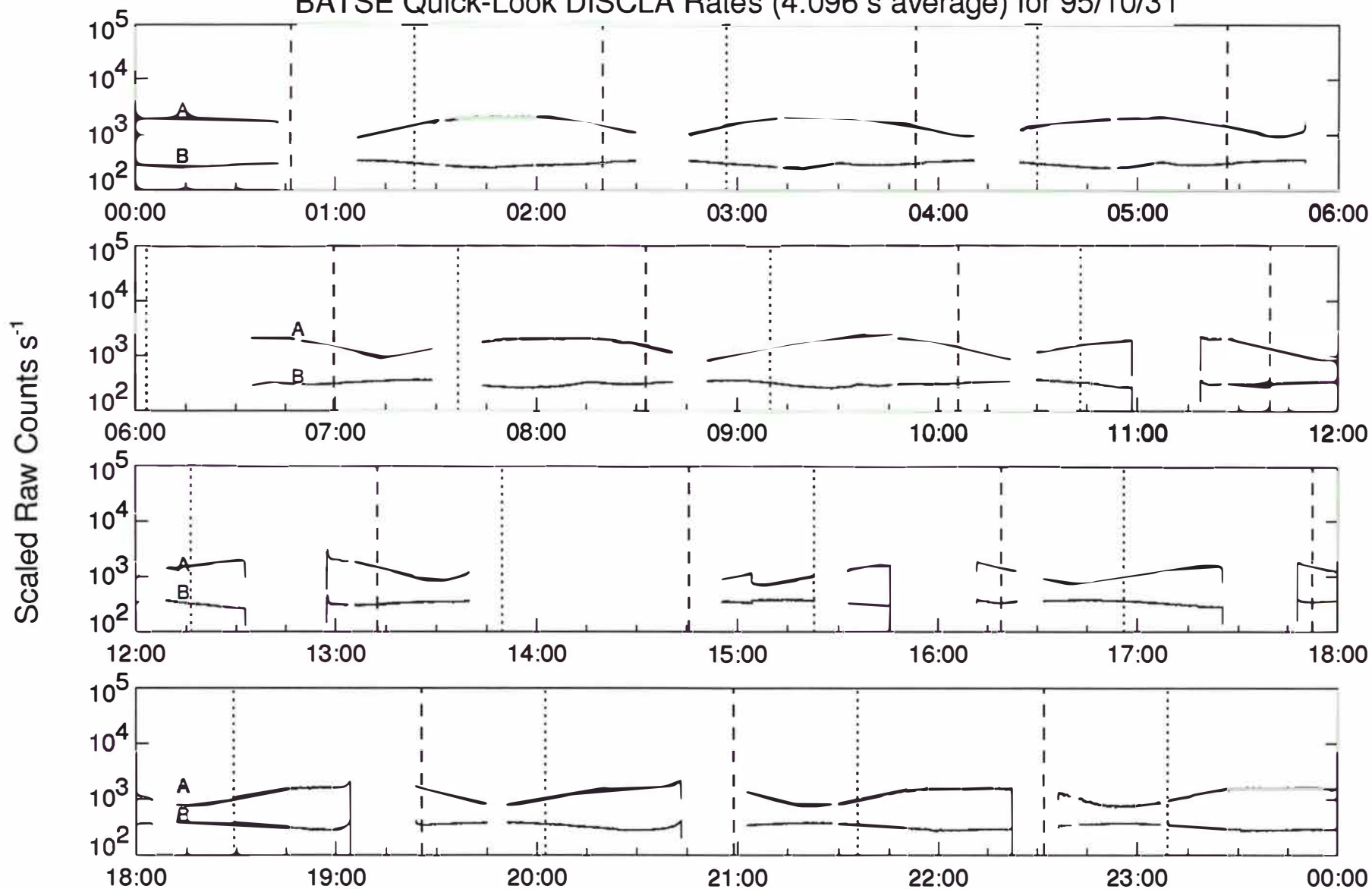
1/26/96



UNIV. CAL TIME



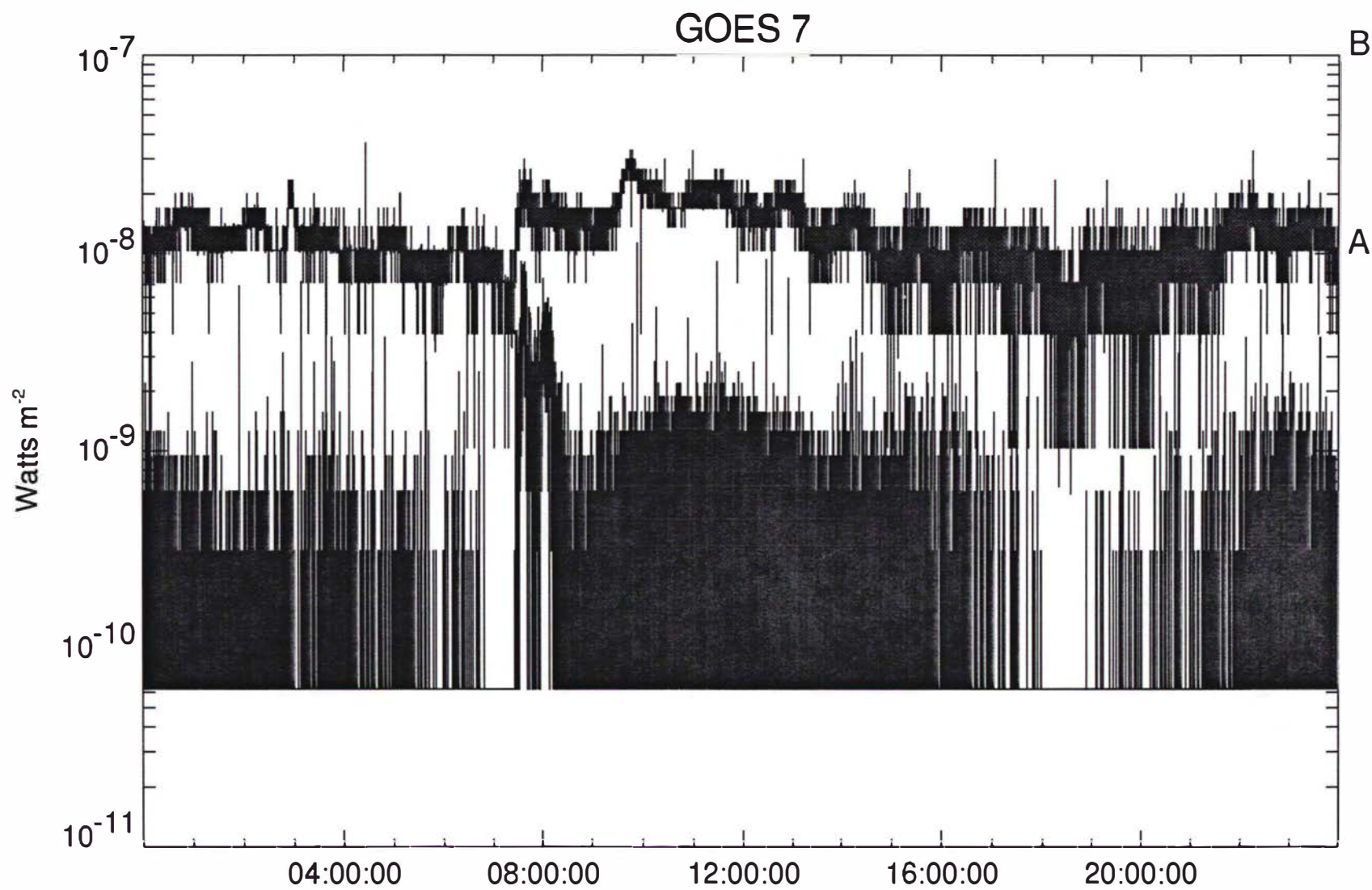
BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/10/31



Current Time: 95/11/17, 1829 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: 95/10/31, 0000:03

Plot created: 95/11/17, 1828

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

From TERRELL@nisdp0.lanl.gov Mon Feb 5 14:18 PST 1996

From: TERRELL@nisdp0.lanl.gov

Date: Mon, 5 Feb 1996 15:18:05 -0700 (MST)

To: khurley@sunspot.ssl.berkeley.edu

Subject: dmstp grb detections

From: jterrell@lanl.gov (James Terrell) 960205

To: khurley@sunspot.ssl.berkeley.edu, butterworth@lheavx.gsfc.nasa.gov,
cline@lheavx.gsfc.nasa.gov, kmarar@isac.ernet.in,
scott@circe.gsfc.nasa.gov, teegarden@lheavx.gsfc.nasa.gov

Subj: DMSP GRB detections (or non-detections)

DMSP 12 and 13 did not detect the ULYSSES grb of Oct 22 1995 at 09:05 UT.
nor the ULYSSES event of Oct 31 at 01:22. In any such case, of course,
a weak detection might be missed, with 2800 seconds of data to scan.

DMSP 13 apparently made a weak detection of the intense ULYSSES event of Dec 12 at 07:54 UT,
with a peak 2-sec count of 30/sec at 29651.5 UT, not totally convincing. DMSP 12
saw nothing above background.

DMSP 13 also did not detect the KONUS event of Dec 27 at 23005 UT. DMSP 12 had a
weak (50/sec) peak at 22996.2 UT. Since it was soft (<100 keV) and not quite at the
right time it may be of no interest.---JIM TERRELL 960205

From BUTTERWORTH@LHEAVX.GSFC.NASA.GOV Thu Nov 2 10:16 PST 1995
From: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Date: Thu, 2 Nov 1995 13:16:02 -0500 (EST)
To: khurley@sunspot.ssl.berkeley.edu, kmarar@isac.ernet.in, jterrell@lanl.gov,
CLINE@LHEAVX.GSFC.NASA.GOV, scott@circe.gsfc.nasa.gov
CC: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Subject: Konus saw nothing corresponding to the Ulysses events on October 22 and 31

Konus didn't trigger on either day. The waiting-mode counts (which are integrated in 3 second intervals and so would downplay much shorter events) are untroubled throughout both corresponding periods (apart from regular Vela X-1 pulsations below 50keV in the south-facing detector). Paul.

From: SMTP%"khurley@sunspot.ssl.berkeley.edu" 2-NOV-1995 11:28:30.56
To: BUTTERWORTH
CC:
Subj:

Date: Thu, 2 Nov 1995 06:37:14 -0800
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <9511021437.AA04879@charybdis.>
To: butterworth@lheavx.gsfc.nasa.gov, cline@lheavx.gsfc.nasa.gov,
jterrell@lanl.gov, khurley@sunspot.ssl.berkeley.edu,
kmarar@isac.ernet.in, scott@xtelab.gsfc.nasa.gov

ULYSSES GAMMA-RAY BURSTS NOT REPORTED BY BATSE:

Ulysses triggered on a weak, 32 ms long event October 22 1995 around 09:05 UT at Ulysses. The spacecraft was about 1400 light-seconds from Earth.

Ulysses triggered on an intense, 32 ms long event October 31 1995 around 01:22 UT at Ulysses. The spacecraft was about 1400 light-seconds from Earth.

These events could be particle-induced, or real.

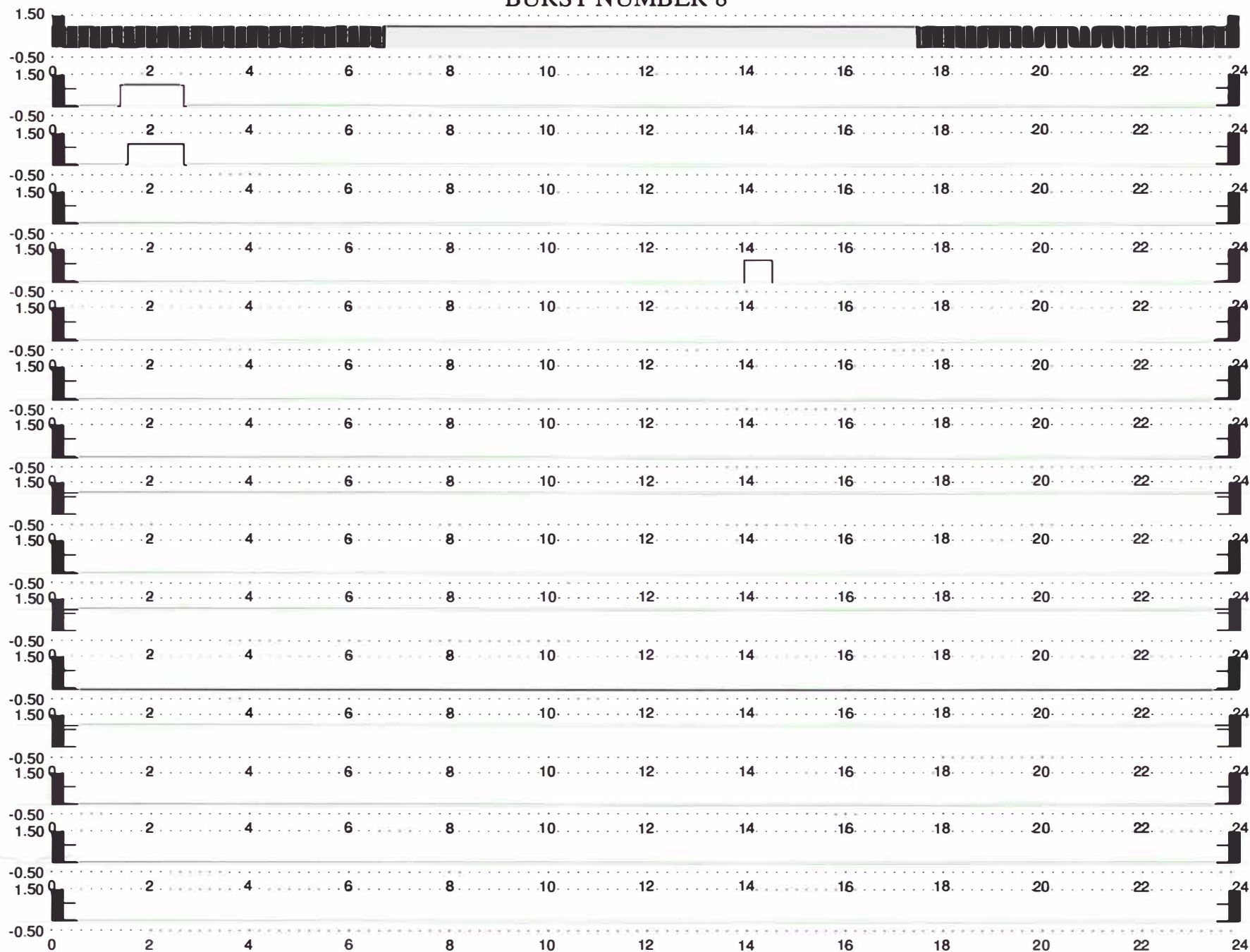
Were these events detected by anyone else?

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

HUS MODES EDR day 304, year 1995 to day 304, year 1995 BURST NUMBER 8

1/26/96

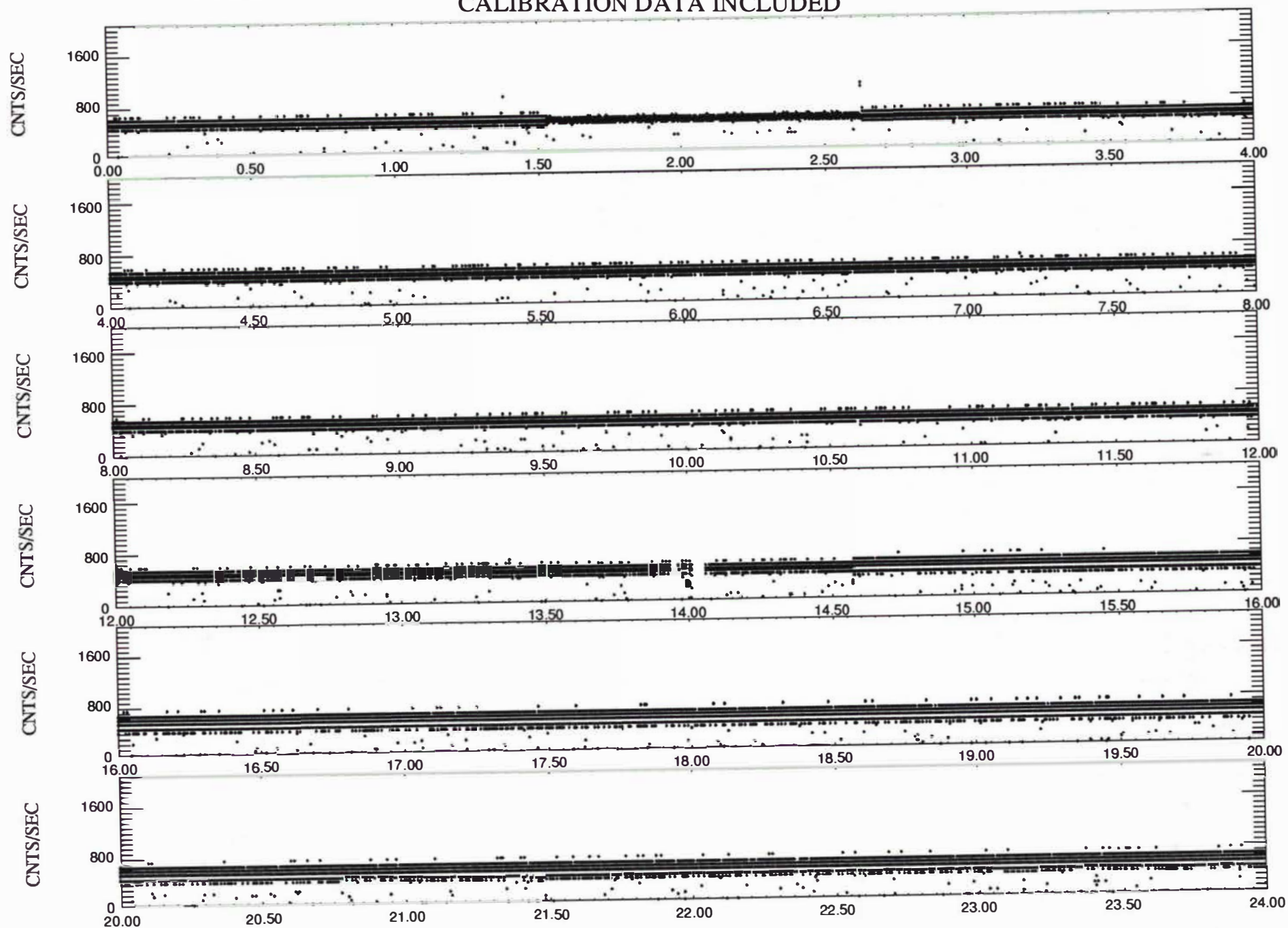
HUS
BRS
MEM
WCH
CAL
RSC
OPM
SPE
ICR
MP.
OSC
DMA
ROM
DMP
CCL
CBU



UNIV VAL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 304, year 1995 to day 304, year 1995
CALIBRATION DATA INCLUDED

1/26/96



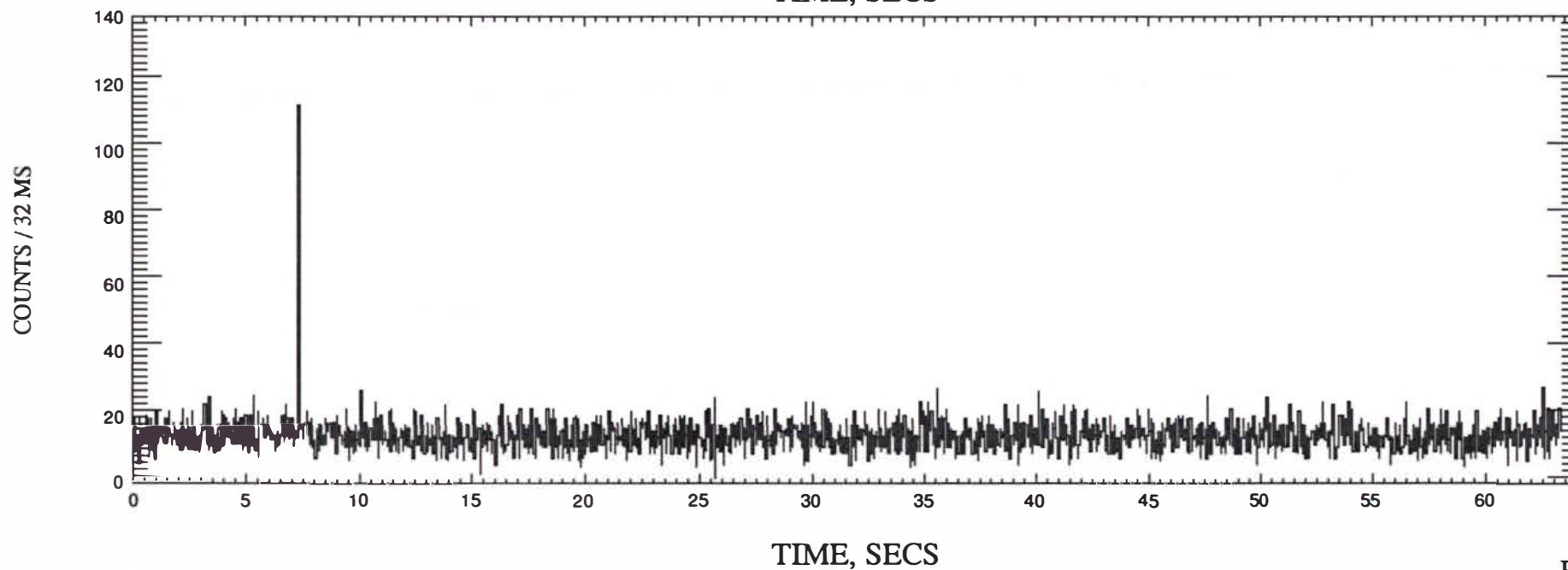
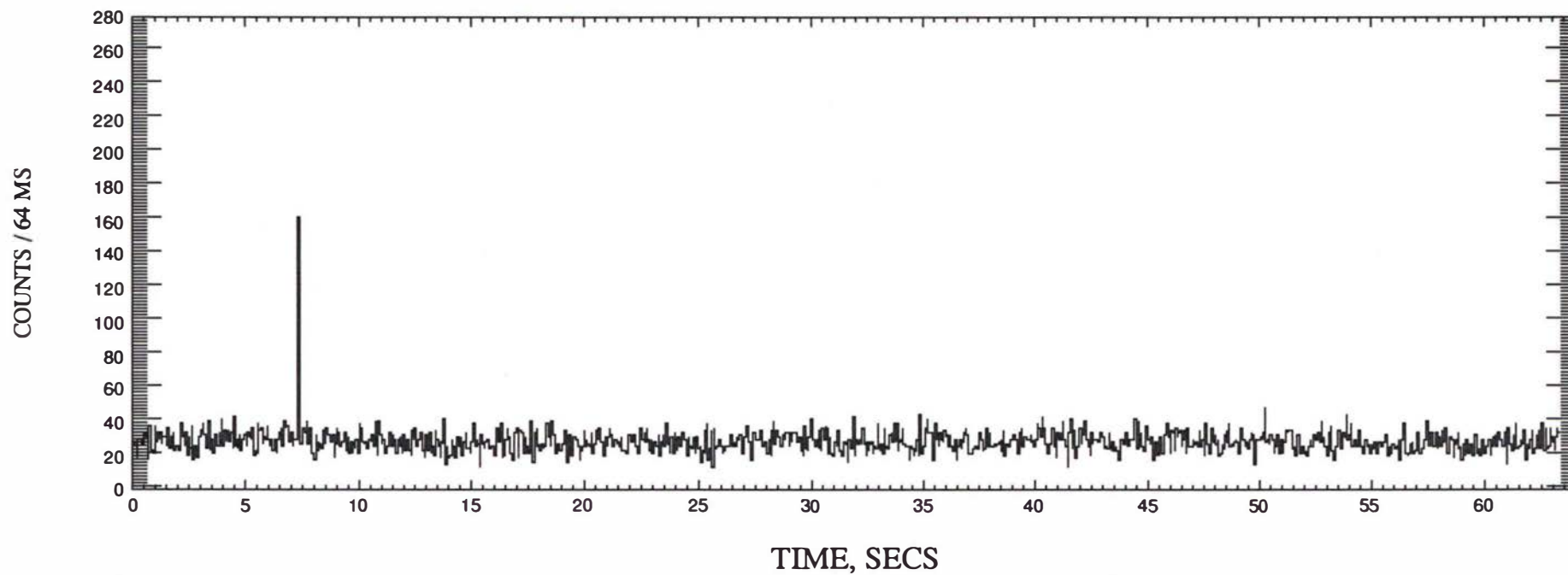
UNIV. TIME

1911

1911

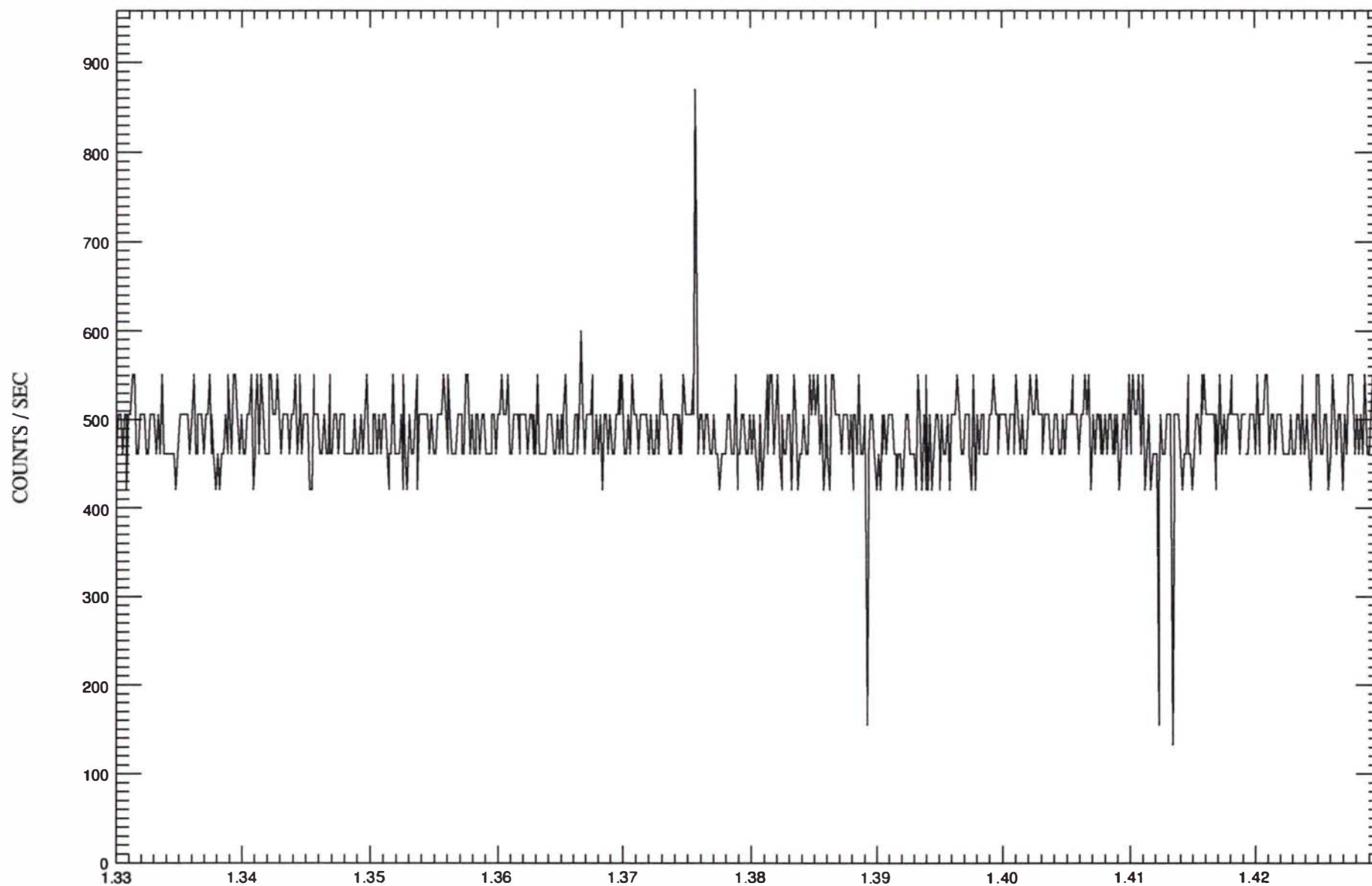
HUS 2A TRIGGERED DATA EDR day 304, year 1995
Burst Counter 8 at UT= 1.375802769131 h= 4952.890 s 01:22:32.890

1/26/96



HUS 2A, MODE 1, NOT AVERAGED QEDR day 304, year 1995 to day 304, year 1995
CALIBRATION DATA INCLUDED

11/1/95



6. $\frac{1}{2} \times \frac{2}{3} = \frac{1}{3}$ $\frac{1}{3} \times \frac{3}{4} = \frac{1}{4}$ $\frac{1}{4} \times \frac{4}{5} = \frac{1}{5}$ $\frac{1}{5} \times \frac{5}{6} = \frac{1}{6}$

