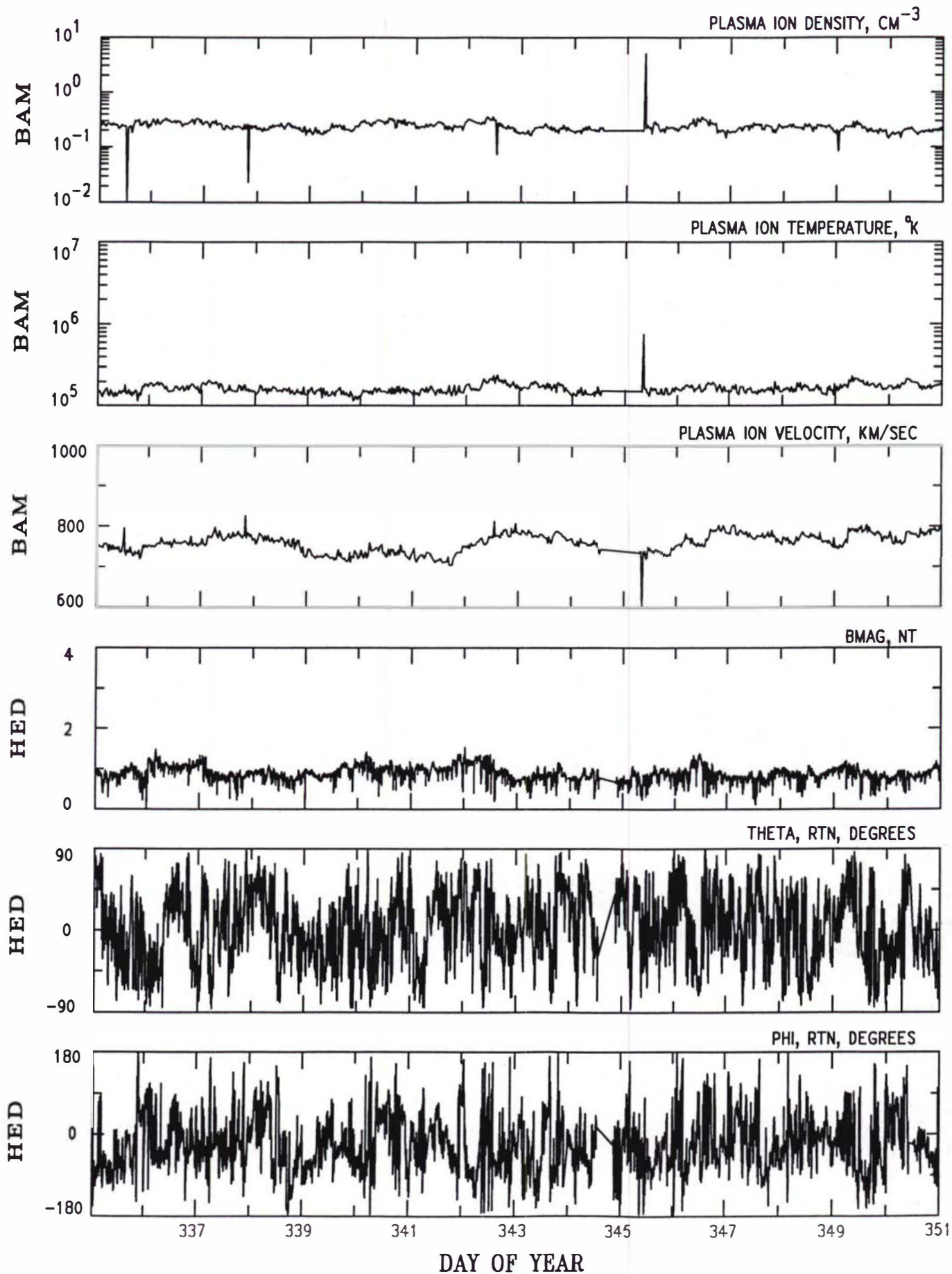


SUN

ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

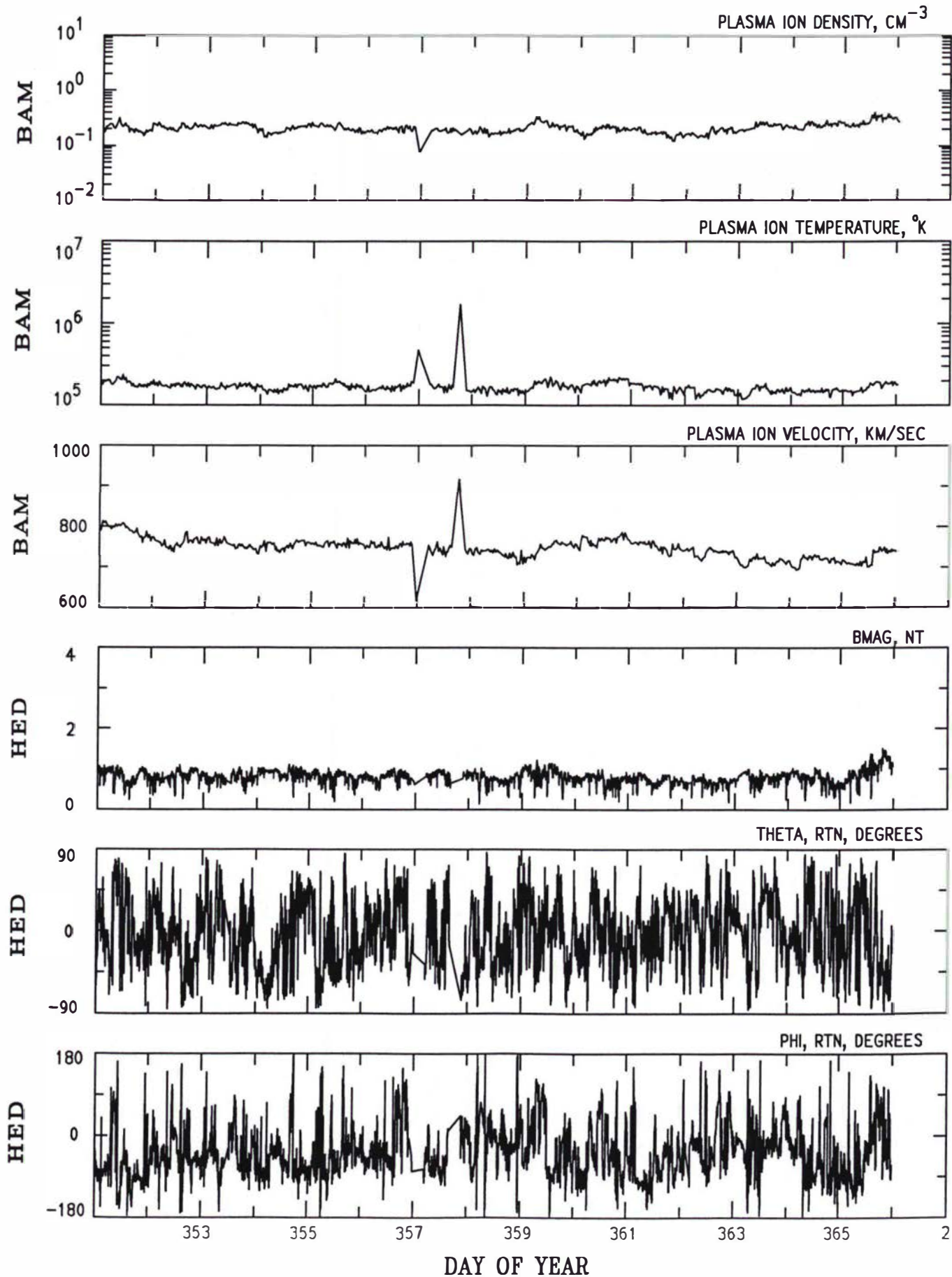
95 335 DEC 1 00:00:00.000 - 95 351 DEC 17 00:00:00.000



SUN

ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

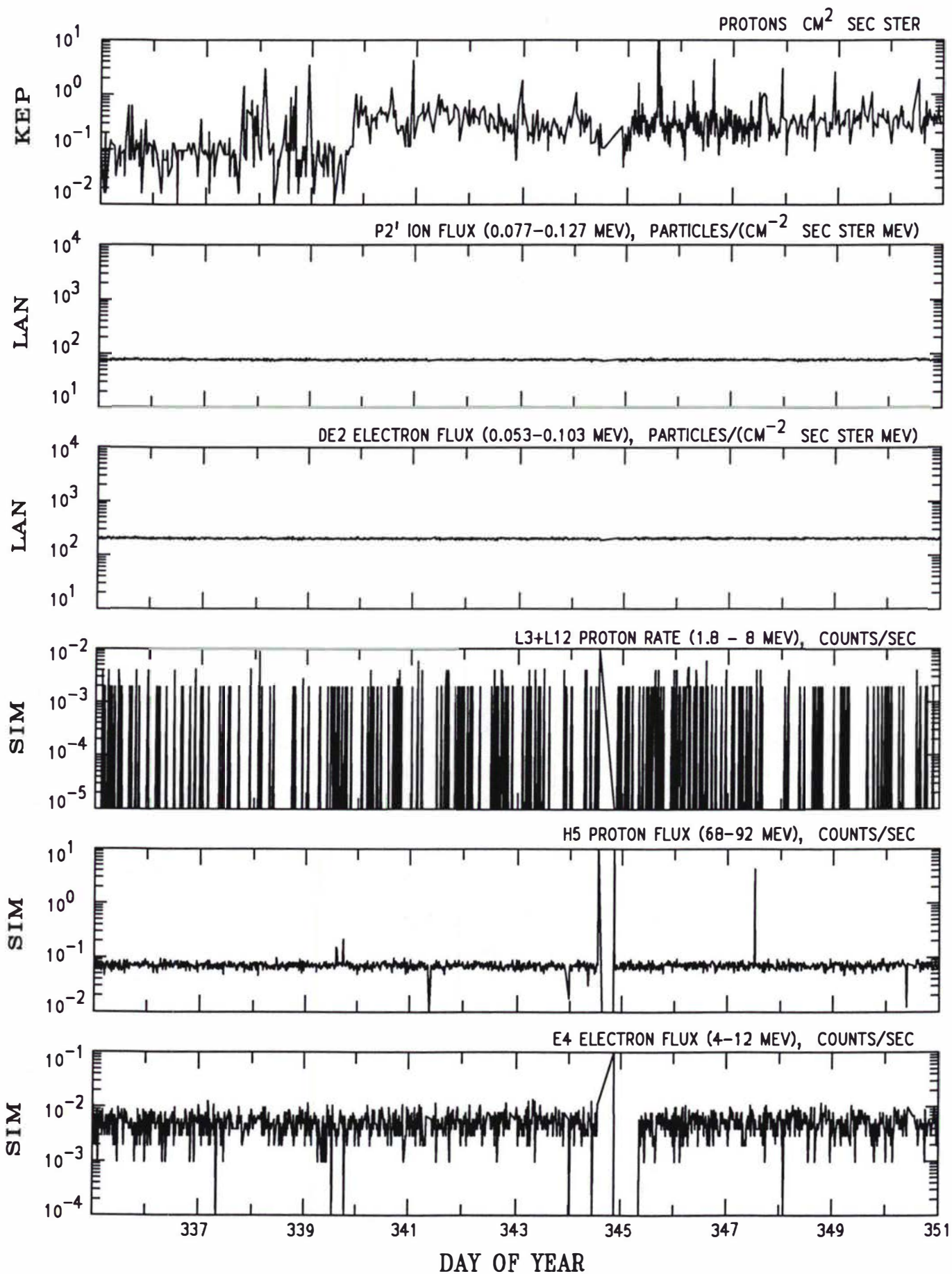
95 351 DEC 17 00:00:00.000 - 96 002 JAN 2 00:00:00.000



SUN

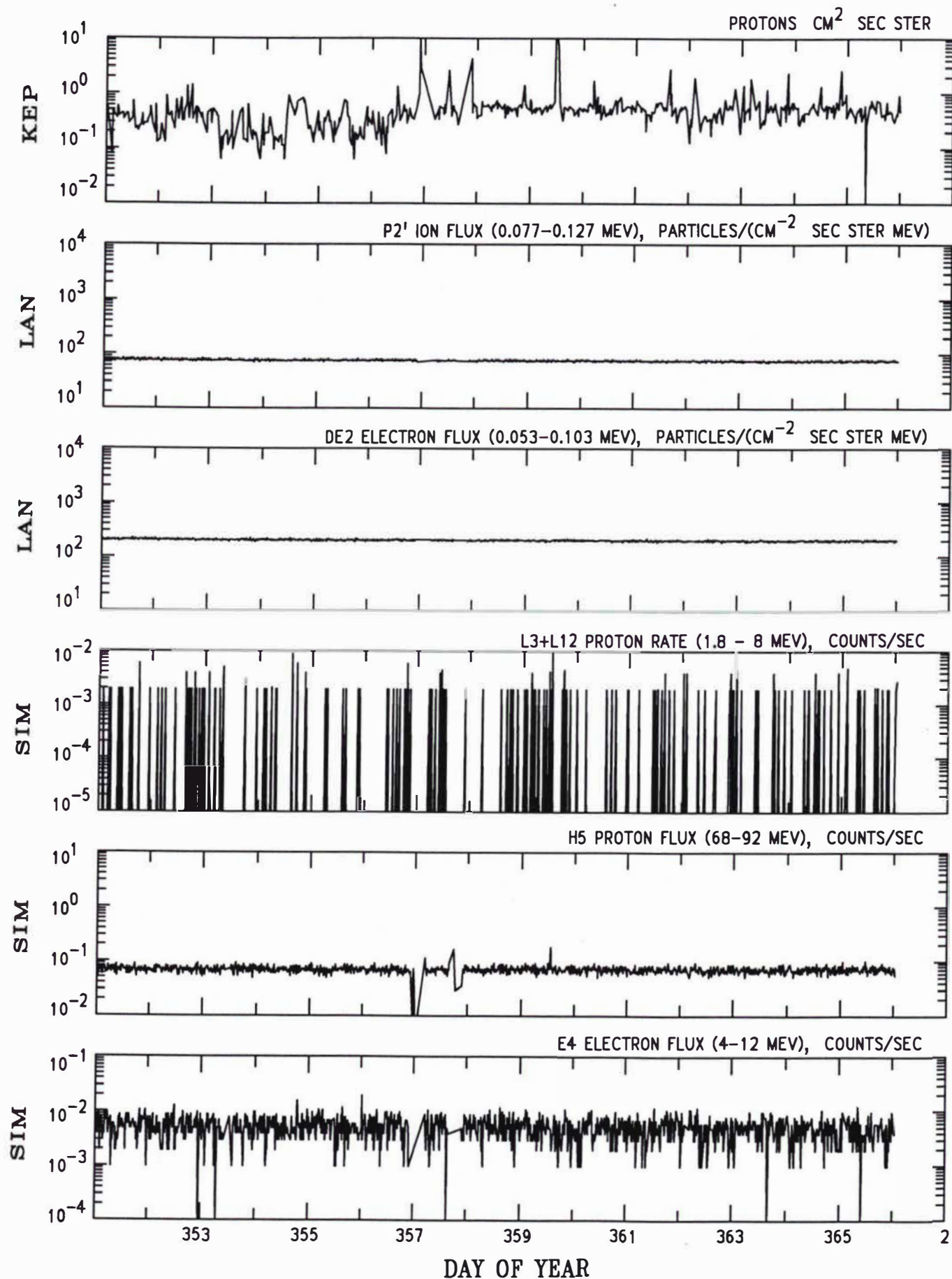
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

95 335 DEC 1 00:00:00.000 - 95 351 DEC 17 00:00:00.000



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

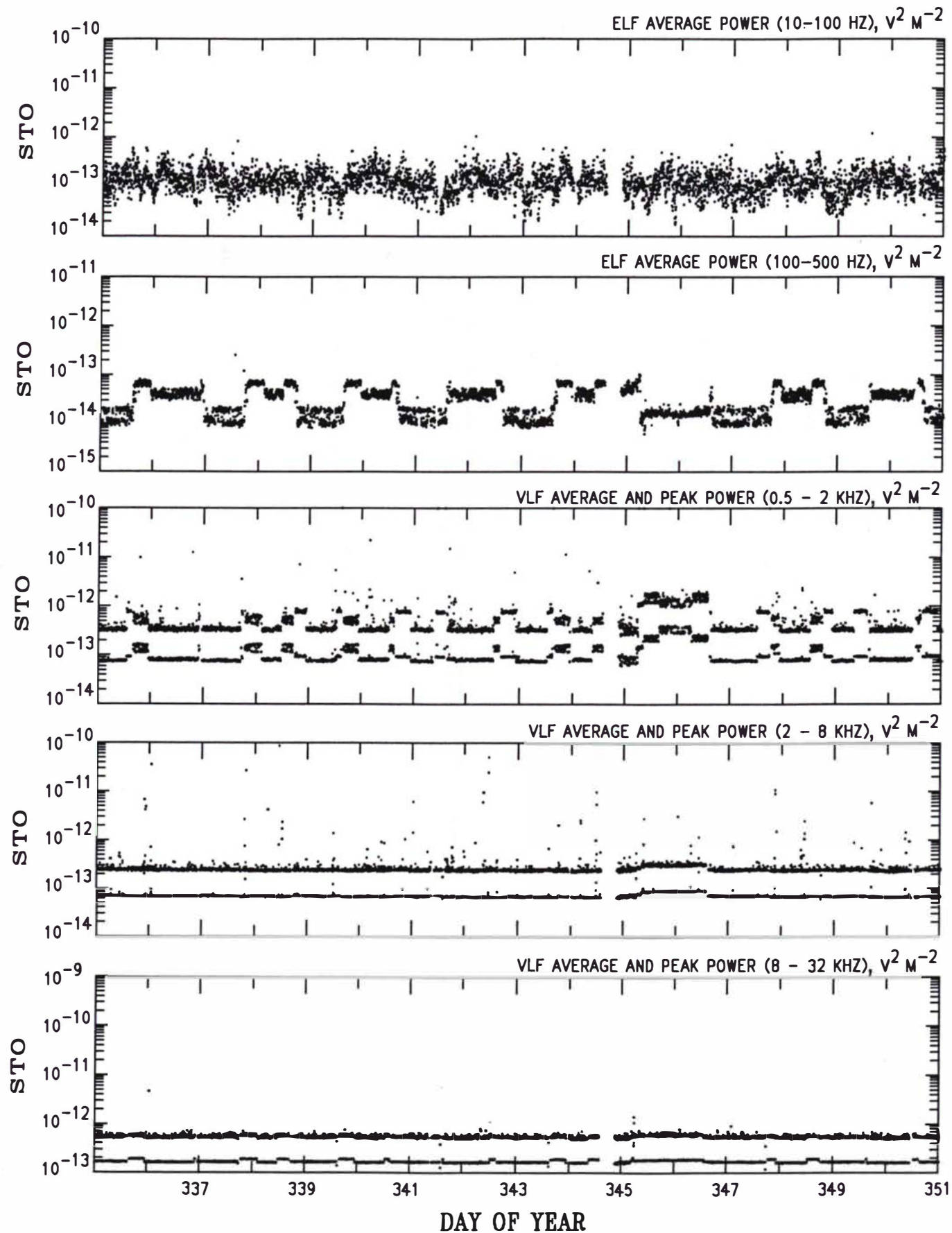
95 351 DEC 17 00:00:00.000 - 96 002 JAN 2 00:00:00.000



Scin

ULYSSES CDR - PLASMA WAVE

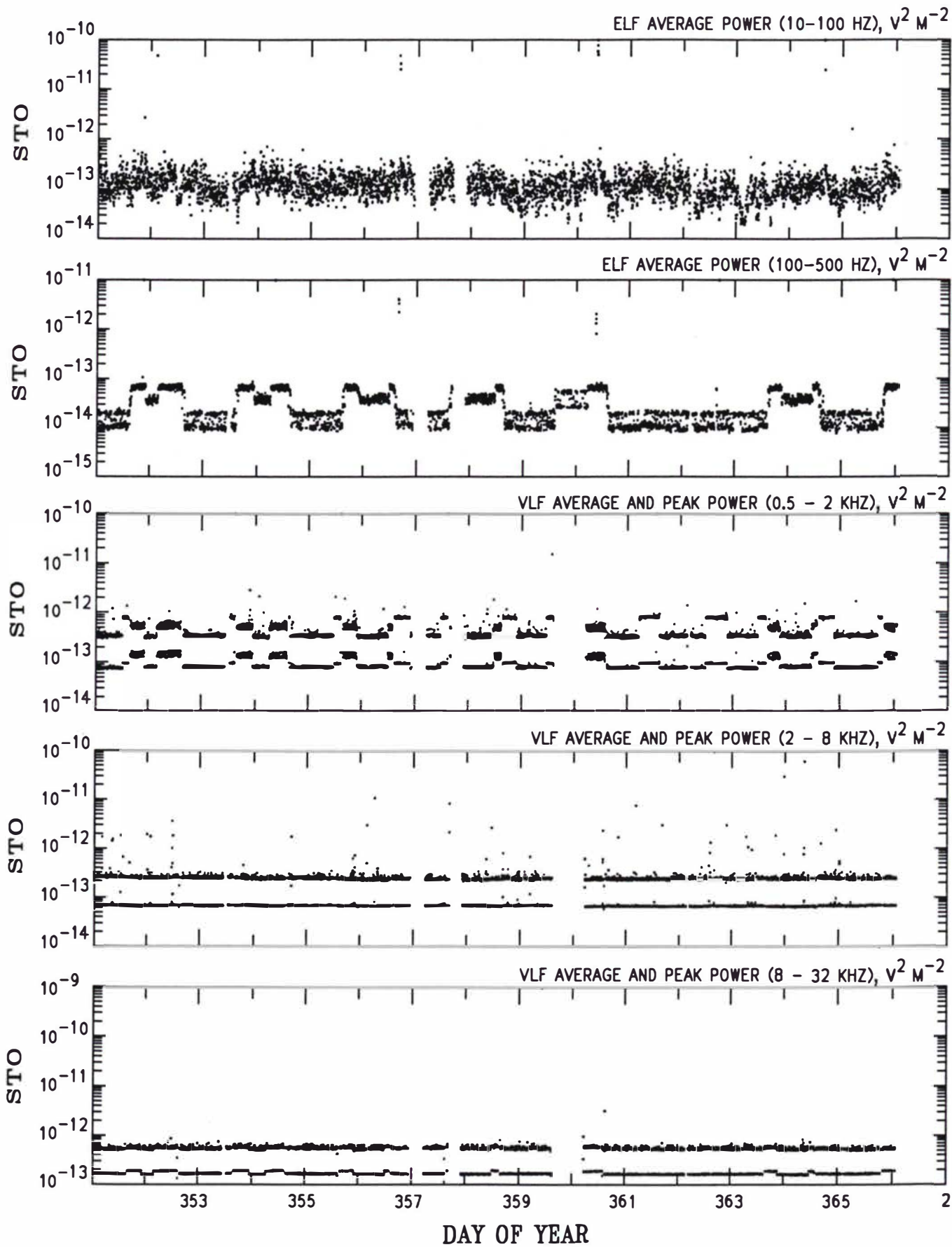
95 335 DEC 1 00:00:00.000 - 95 351 DEC 17 00:00:00.000



SUN

ULYSSES CDR - PLASMA WAVE

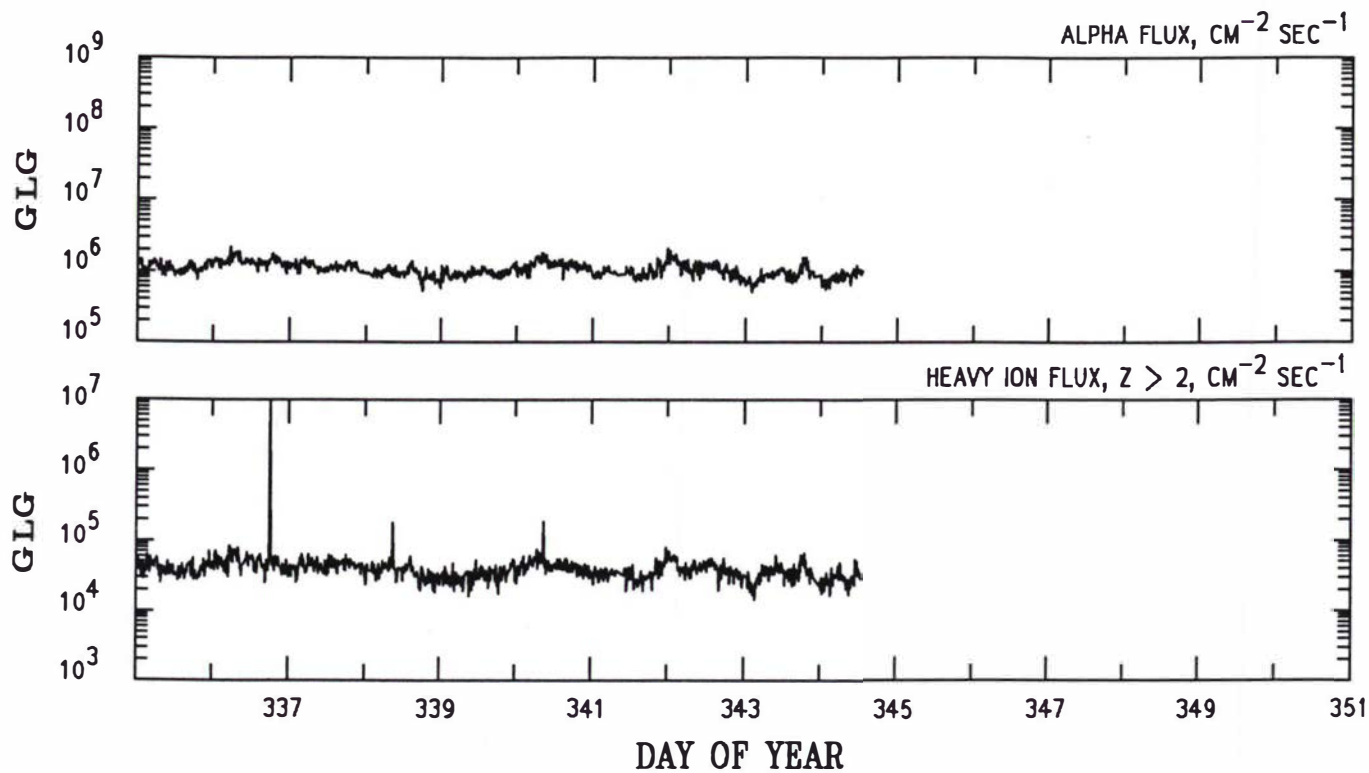
95 351 DEC 17 00:00:00.000 - 96 002 JAN 2 00:00:00.000



SUN

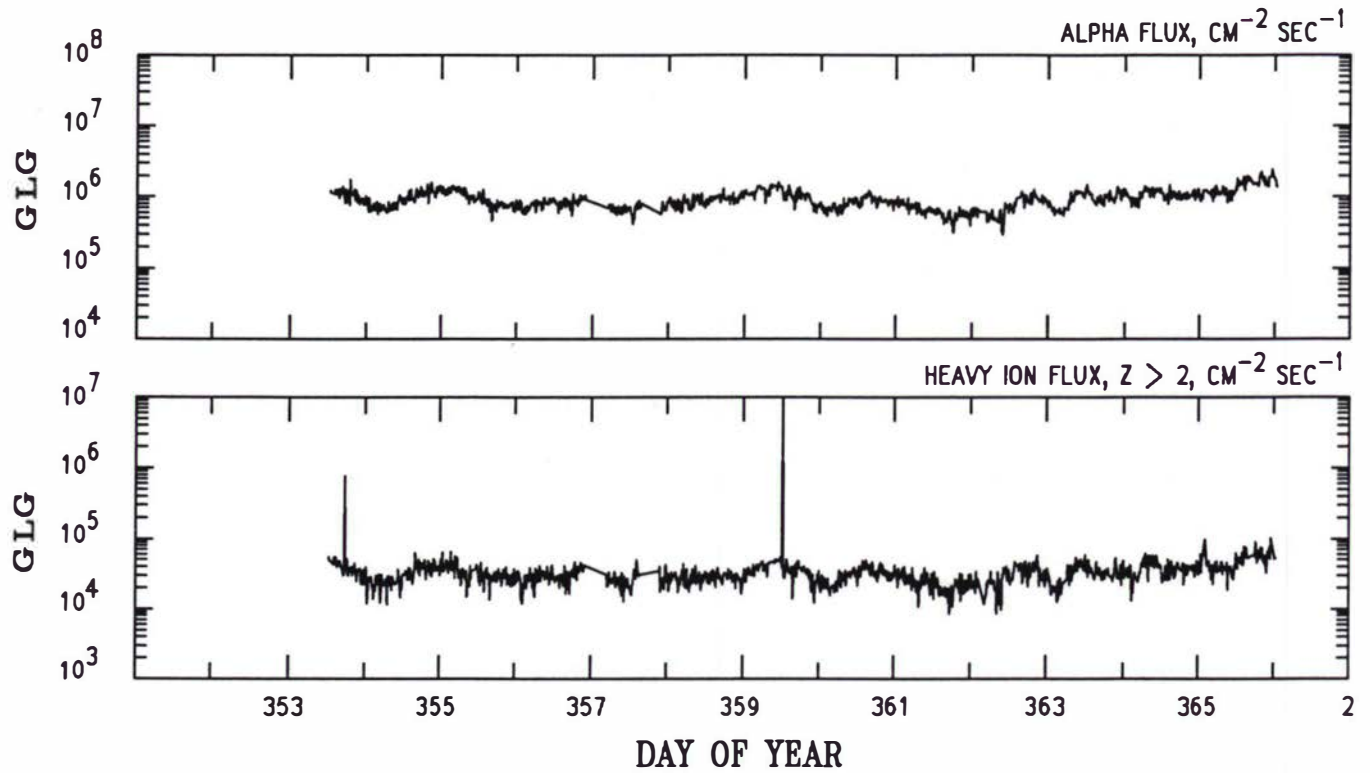
ULYSSES CDR - SOLAR WIND ION COMPOSITION

95 335 DEC 1 00:00:00.000 - 95 351 DEC 17 00:00:00.000

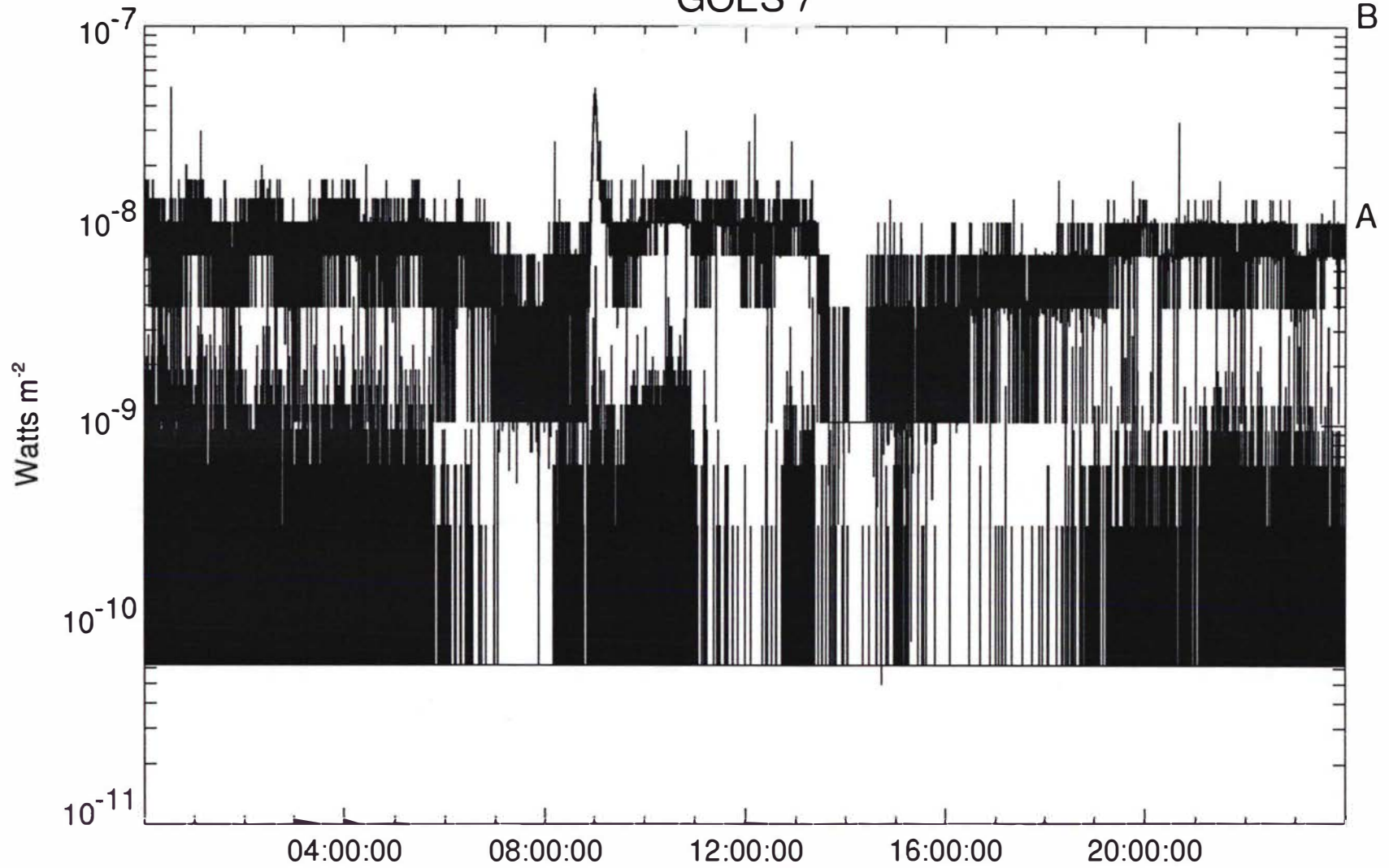


ULYSSES CDR - SOLAR WIND ION COMPOSITION

95 351 DEC 17 00:00:00.000 - 96 002 JAN 2 00:00:00.000



GOES 7



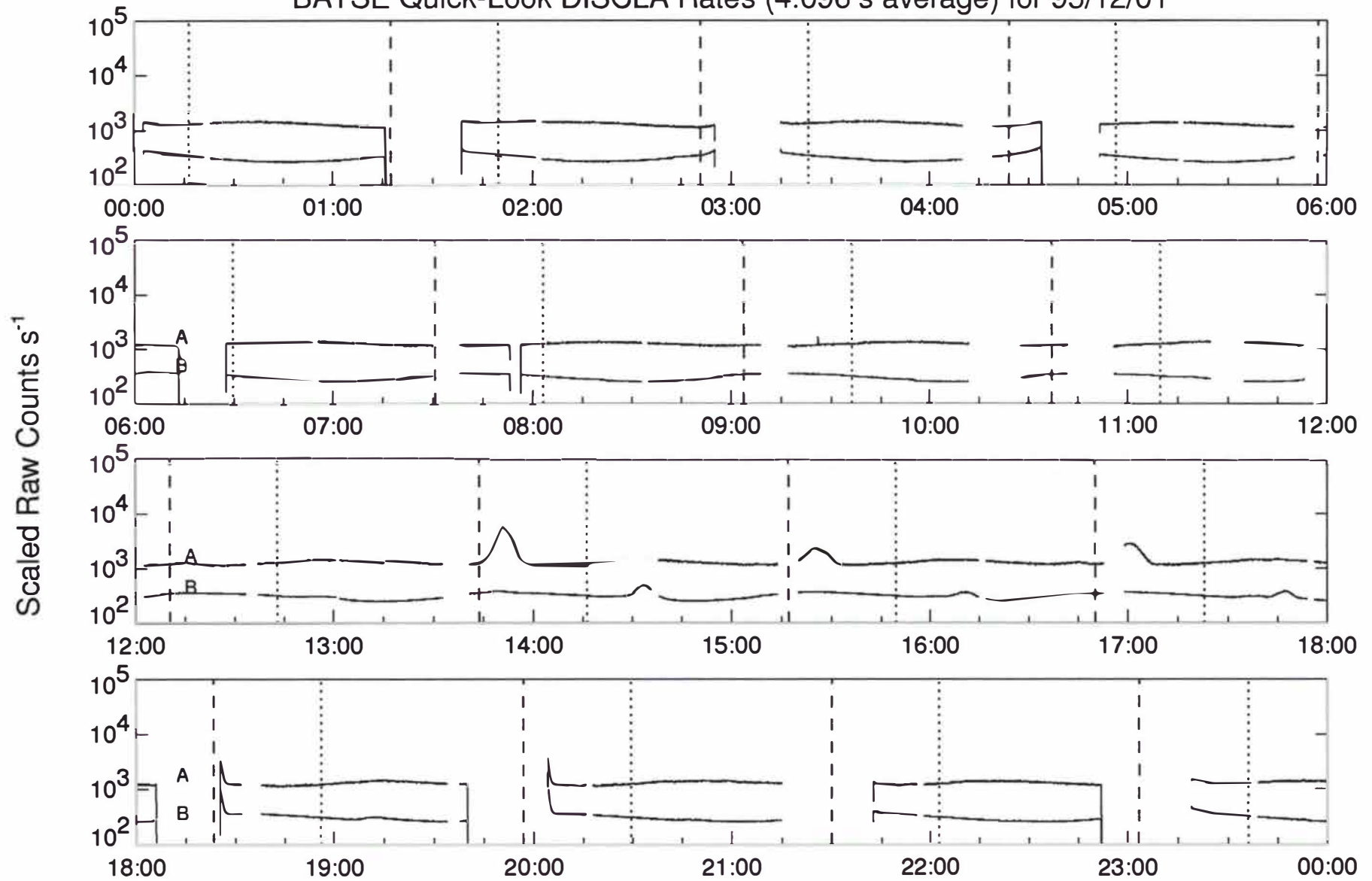
Data Start: 95/12/01, 0000:02

Plot created: 95/12/03, 0711

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 95/12/01



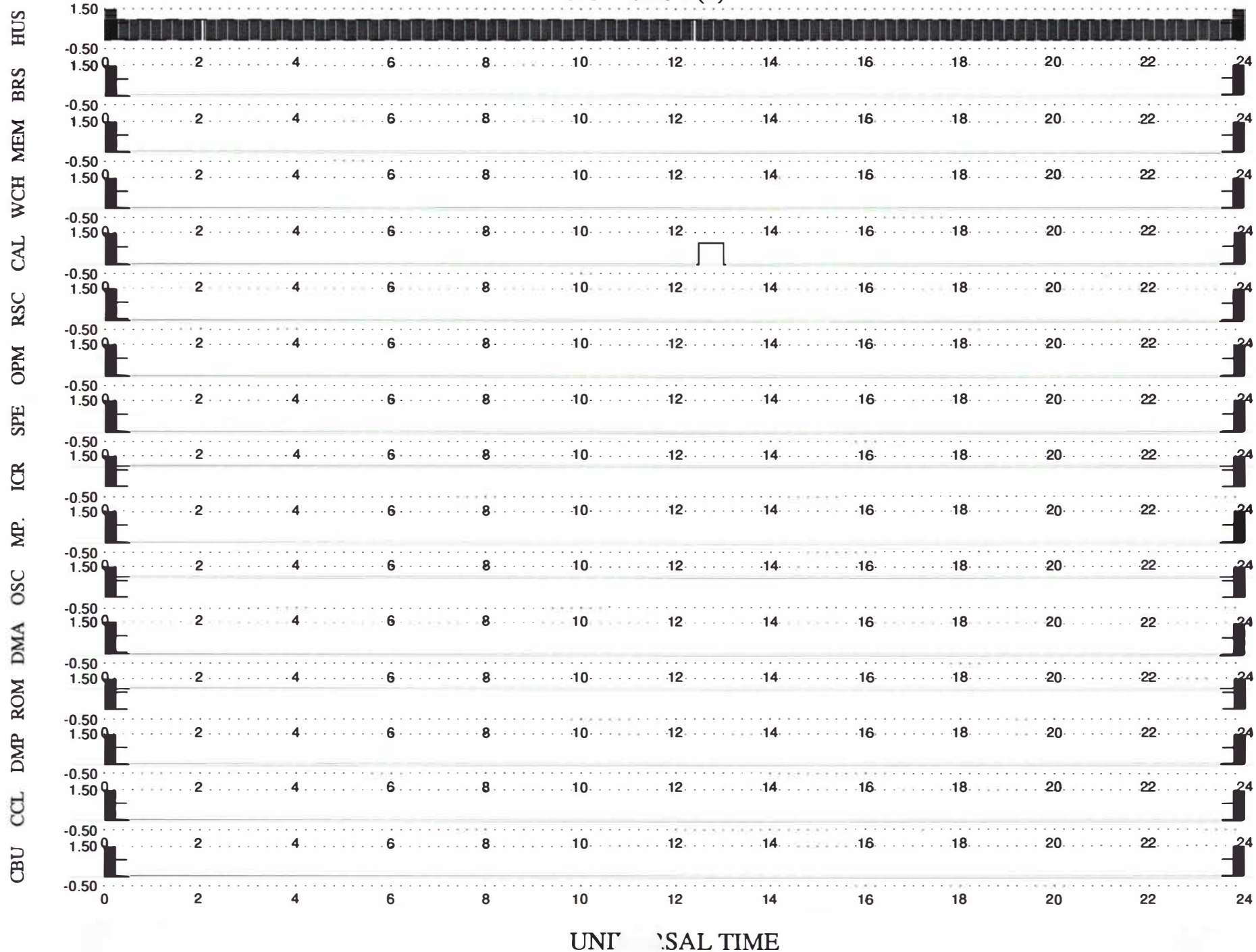
Current Time: 95/12/03, 0711 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

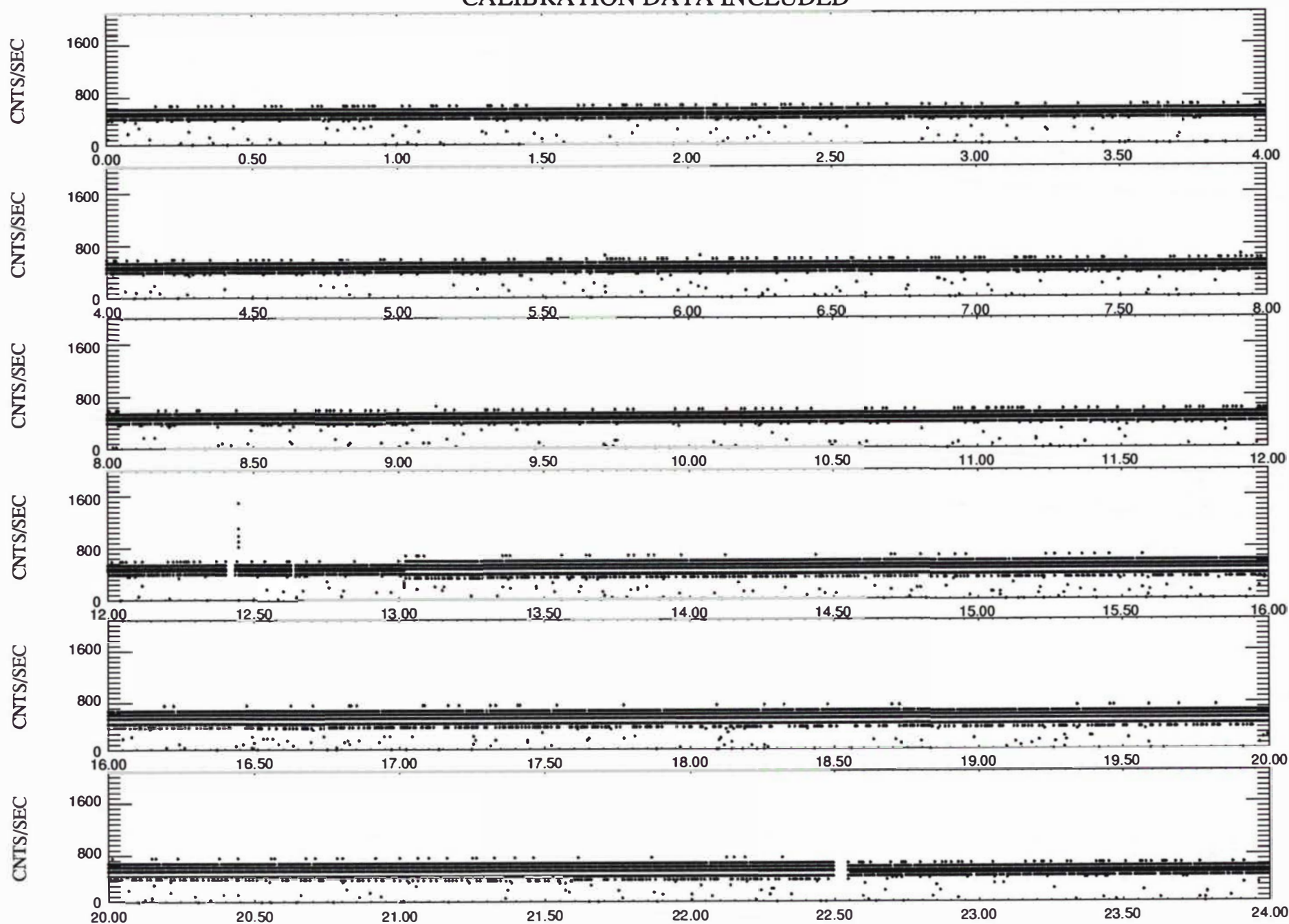
HUS MODES EDR day 335, year 1995 to day 335, year 1995
NO BURST (8)

4/1/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 335, year 1995 to day 335, year 1995
CALIBRATION DATA INCLUDED

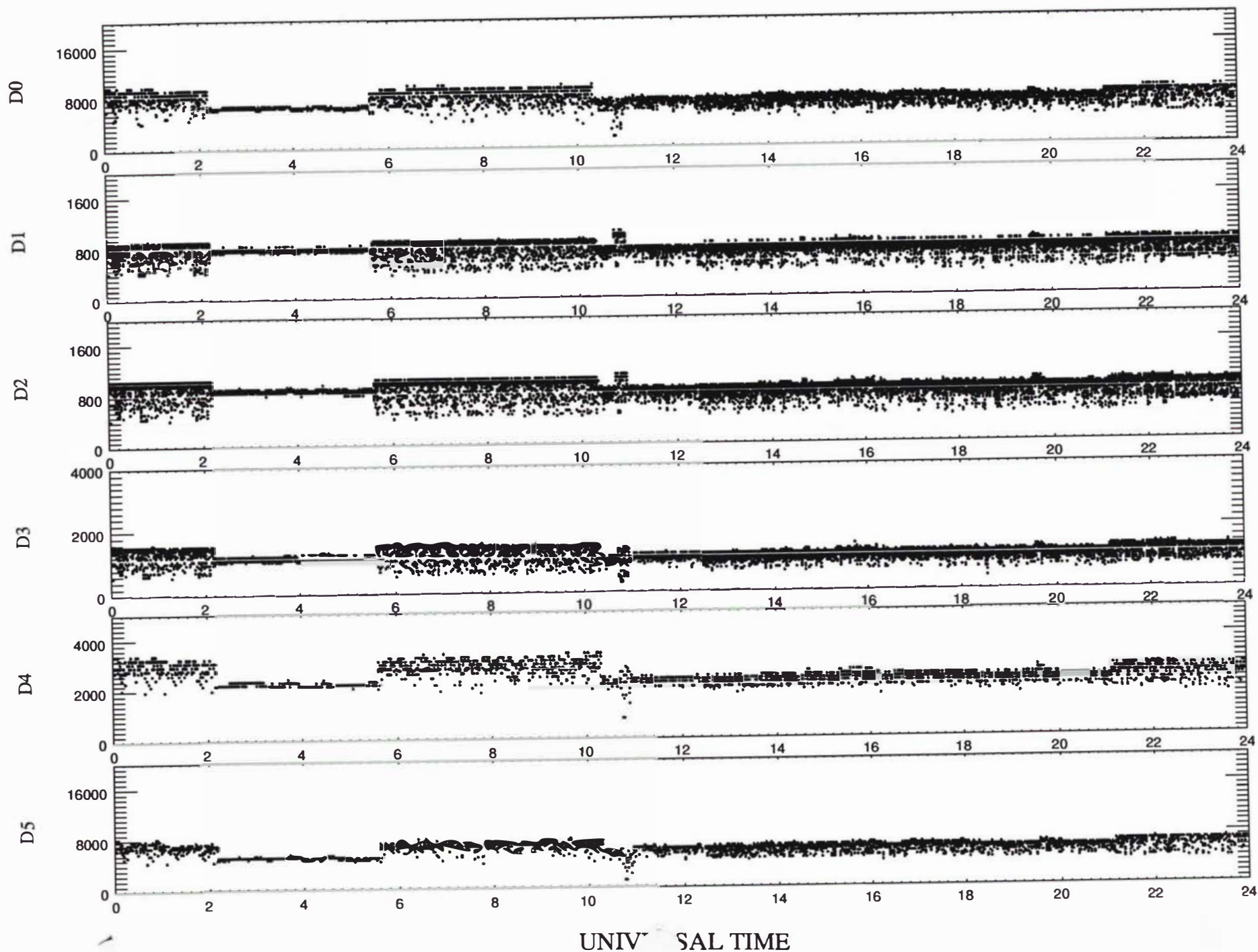
4/1/96



UNIVERSAL TIME

HUS 2B COUNTS / SEC QEDR day 335, year 1995 to day 335, year 1995

12/4/95



From HAGEDON@fender.msfc.nasa.gov Mon Dec 4 12:01 PST 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Mon, 4 Dec 1995 13:58:18 -0600 (CST)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3929

BATSEARCH PROGRAM

BATSE BURST # 3929
EVENT OF 1995 DEC 2 DAY OF YEAR=336
EVENT CROSSING TIME AT BATSE : 39100. S. OR 10:51:40.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 328.000 -36.000
BATSE PEAK COUNTING RATE: 15000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 2/12/ 95 IS:
RA= 220.709 DEC= 55.704 DIST= 2.856 AU
BATSE-ULYSSES DISTANCE = 427231269. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 51.60 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 885.09 SECS.
CROSSING TIME AT ULYSSES IS 39985. S. OR 11:06:25 +/- 257.35 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 2/12/ 95 IS:
RA= 271.182 DEC= -24.393 DIST= 2.293 AU
MARS-BATSE DISTANCE = 342994368. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=130.24 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -739.10 SECS.
CROSSING TIME AT MARS IS 38361. S. OR 10:39:20 +/- 140.40 SECONDS

BATSE BURST TRIGGER

NO.: 3929

TIME: TJD=0053 SECONDS=39100

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=48.5 AZIMUTH=79.3 ERROR=0.6 DEGREES

COMMENTS:

BURST. SINGLE PULSE WITH SUBSTRUCTURE. DUR.~30 SEC. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3929	951202	10053	39100	15000	328	-36	30

From cline@lheavx.gsfc.nasa.gov Fri Mar 29 08:40 PST 1996
 Date: Fri, 29 Mar 1996 08:40:19 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: Konus Event List augmentation

Dear Kevin,

This list includes Sergei's latest Konus-W (GGS-Wind) and Konus-A (Kosmos-2326) events, for comparison with Ulysses, BATSE, TGRS, etc. The times listed are prioritized for Konus-W (i.e., Konus-A time given if Konus-W doesn't trigger).

Yr	Mn	Dy	UT (Konus)	BATSE	Ulysses	Konus	TGRS	Notes
95	11	2	07085.879	?	?	168	no	
95	11	2	21209.015	3891	R I	169	345	
95	11	4	05868.077	3893	R I	170	BGR	
95	11	5	46827.808	?	?	171	no	
95	11	12	66495.244	?	R I	172	no	
95	11	13	84358.872	3906	R I	173	BGR	
95	11	17	10123.762	3909	?	175	no	
95	11	19	29831.402	3912	R I	176	348	
95	11	19	46457.519	?	?	177	BGR	
95	11	22	09841.38	?	?	179	no	
95	11	22	17107.738	?	?	180	349	
95	12	2	39101.744	?	?	195	BGR	
95	12	3	03988.18	?	?	196	360	
	12	8	19617.151	?	?	197	no	
	12	8	39452.057	?	?	198	no	
95	12	8	42467.634	?	?	199	BGR	
95	12	9	31349.607	?	?	200	BGR	
95	12	13	17849.683	?	?	201	362	
95	12	14	08657.847	?	?	202	no	
95	12	19	60679.732	?	?	203	no	
95	12	20	31883.56	?	?	204	BGR	
95	12	22	25203.254	?	?	no	?	= K-A t.
95	12	27	23005.042	?	?	218	375	
96	12	31	20231.668	?	?	219	no	
96	1	2	11650.996	?	?	220	no	
96	1	4	12521.062	?	?	221	no	
96	1	11	46524.53	?	?	222	no	
96	1	13	56024.261	?	?	228	no	
96	1	14	44104.737	?	?	233	384	+ K-A t.
96	1	15	31956.506	?	?	234	BGR	
96	1	17	57371.341	?	?	235	no	
96	1	19	34679.317	?	?	236	no	
96	1	19	45226.016	?	?	237	no	
96	1	20	36768.974	?	?	238	no	
96	1	24	03388.008	?	?	239	385	+ K-A t.
96	1	24	76096.911	?	?	BGR	?	= K-A t.
96	1	30	08756.848	?	?	240	no	
96	2	1	78530.582	?	?	241	?	+ K-A t.
96	2	2	50750.813	?	?	242	?	
	2	10	35198.959	?	?	247	?	
96	2	16	57796.347	?	?	BGR	?	= K-A t.
96	2	19	20589.684	?	?	BGR	?	= K-A t.
96	2	28	85760.241	?	?	249	?	
96	2	29	22445.141	?	?	250	?	

96	3	5	33645.352	?	?	251	?
96	3	12	35074.697	?	?	252	?
96	3	19	51992.828	?	?	253	?
96	3	21	76321.803	?	?	254	?
96	3	22	19642.728	?	?	255	?
96	3	24	80064.124	?	?	257	?
96	3	25	69892.978	?	?	258	?

--

TLC

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

Helio corr removed

Date: Feb 23 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ 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

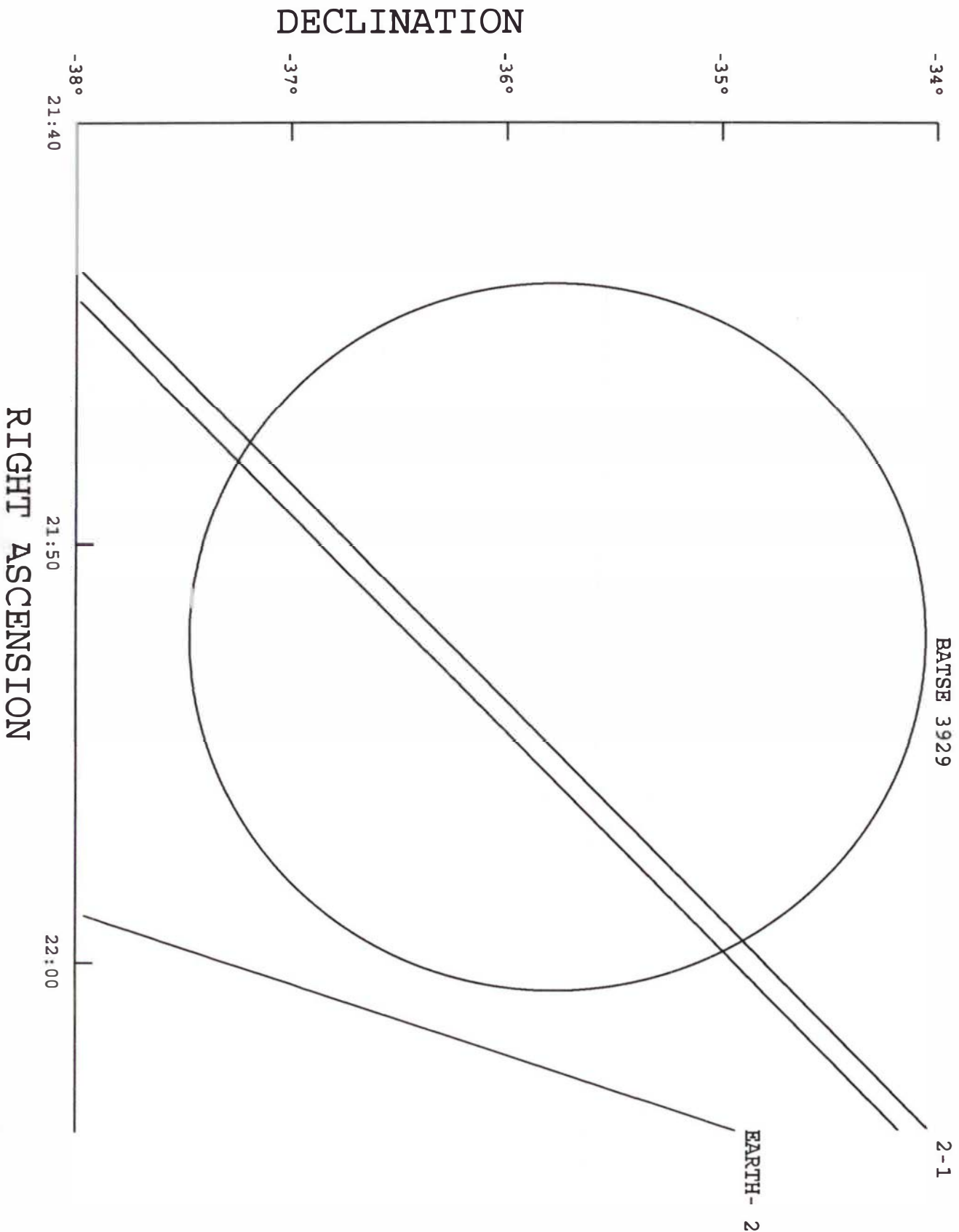
G=GALACTIC EQUATOR

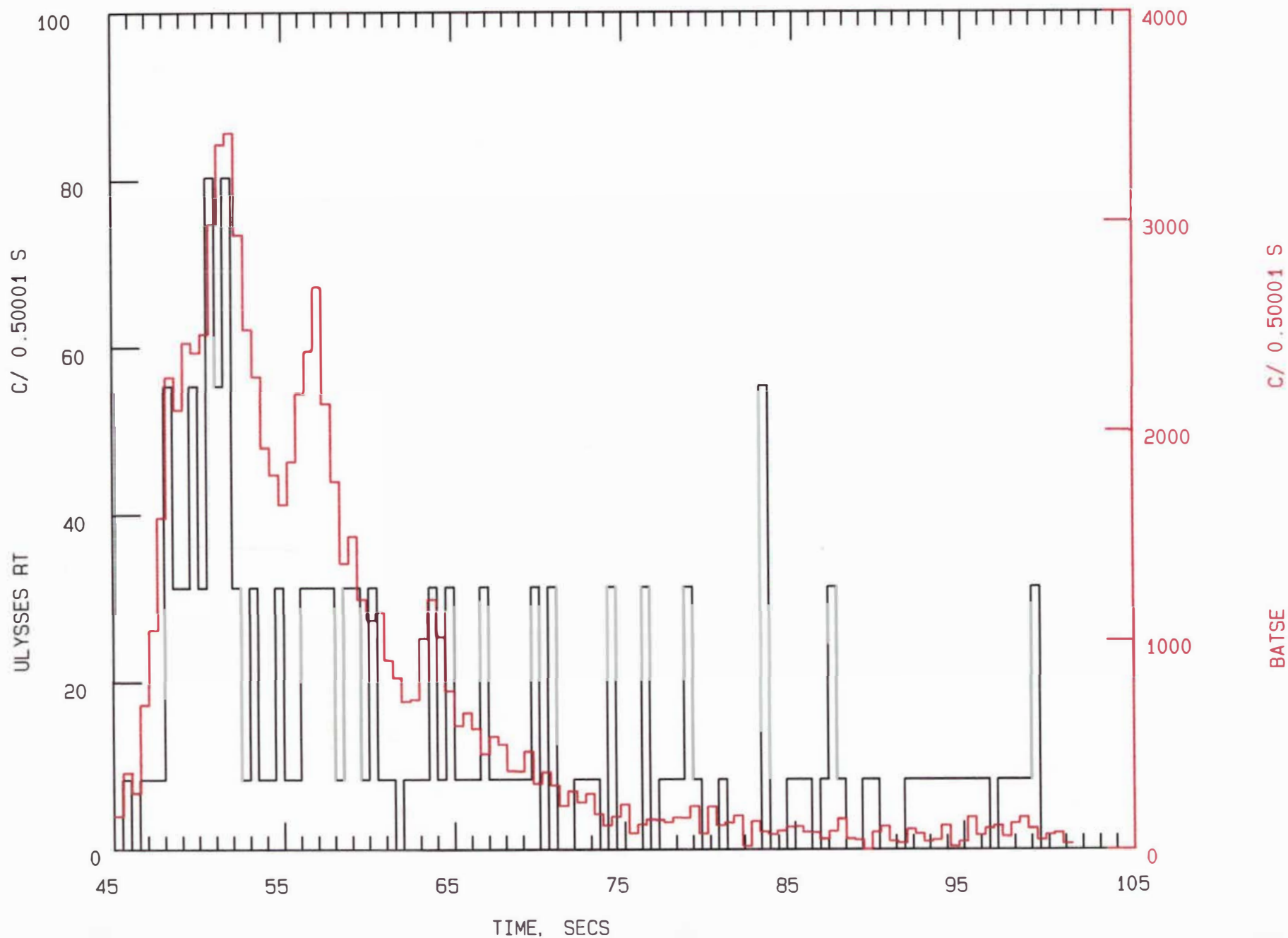
1 ULYSSES

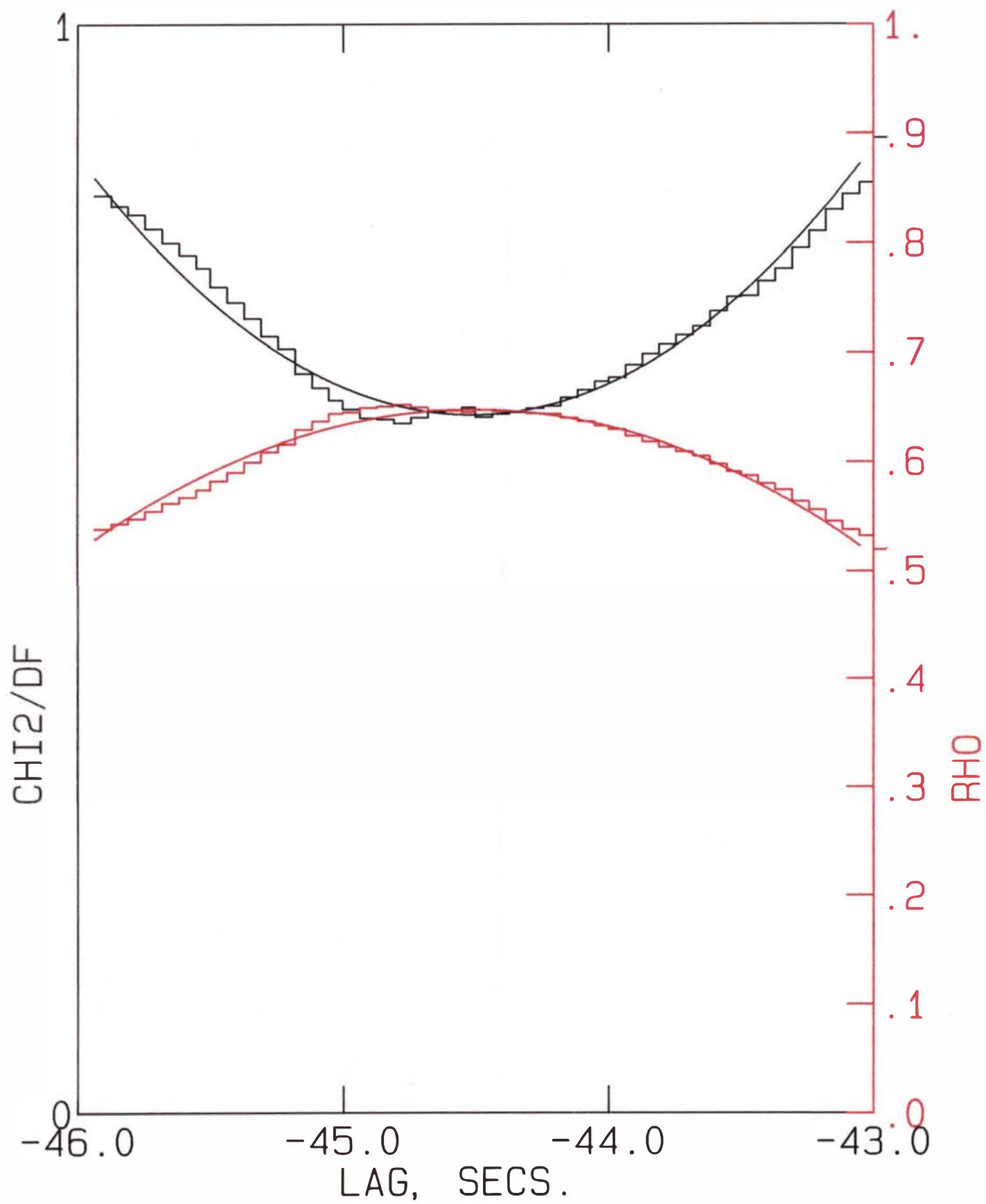
2 BATSE

EVENT OF DEC 2, 1995 11:05

23 / 2 / 98



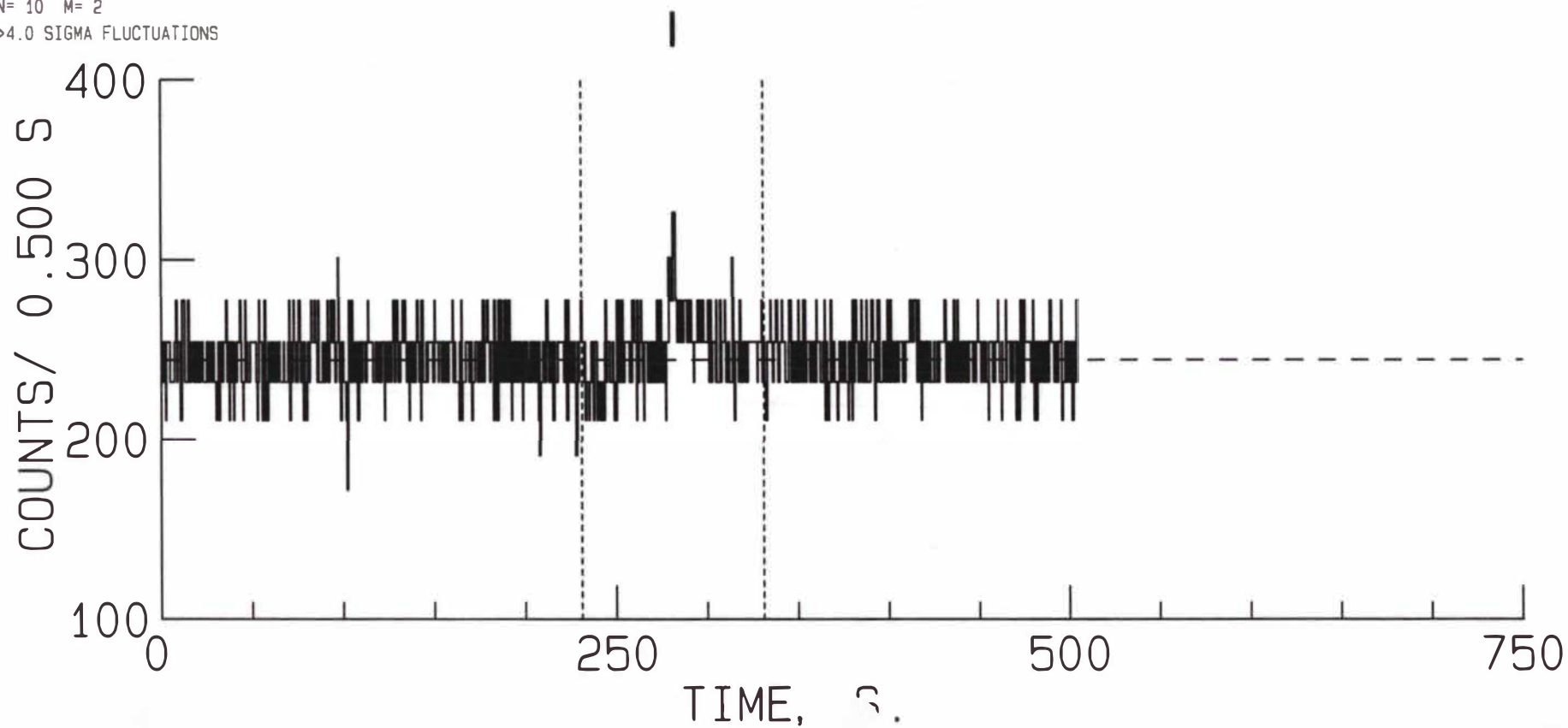




ULYSSES RT
2/12/95 39708.194 s
21- 144 keV

23 / 2 / 98

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



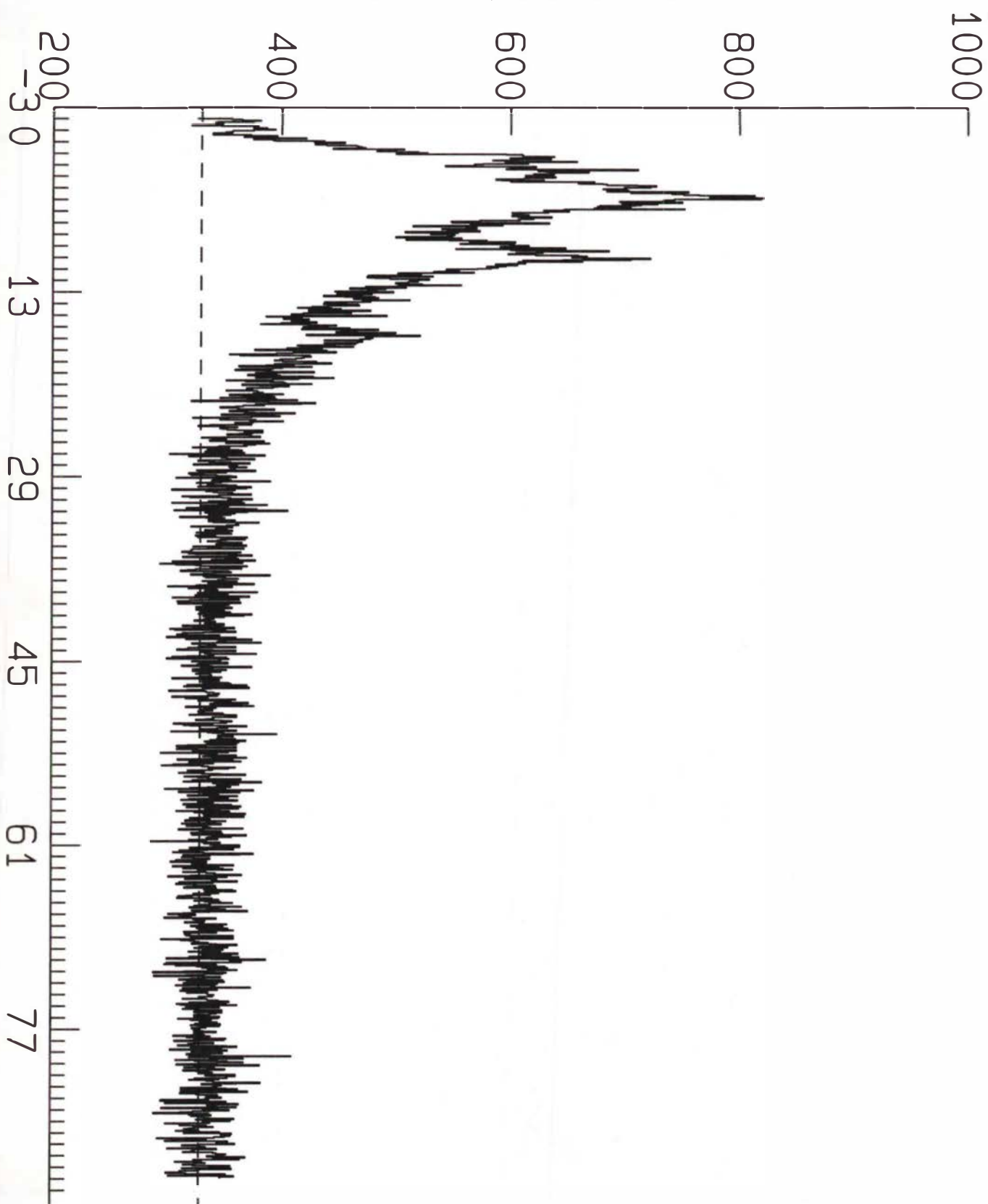
BATSE

02/12/95

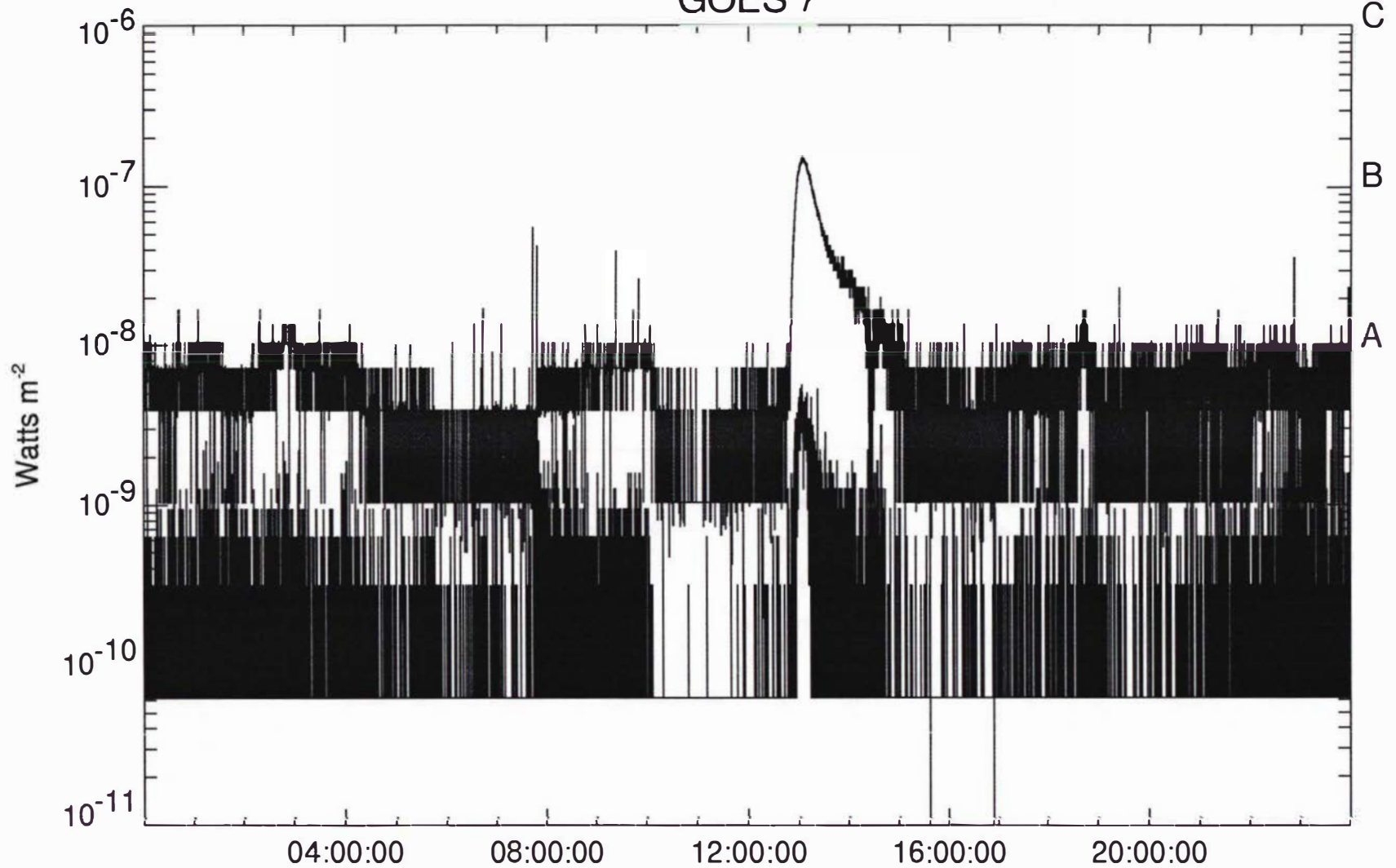
39100.082

25- 100 keV

COUNTS/0.064 S



GOES 7

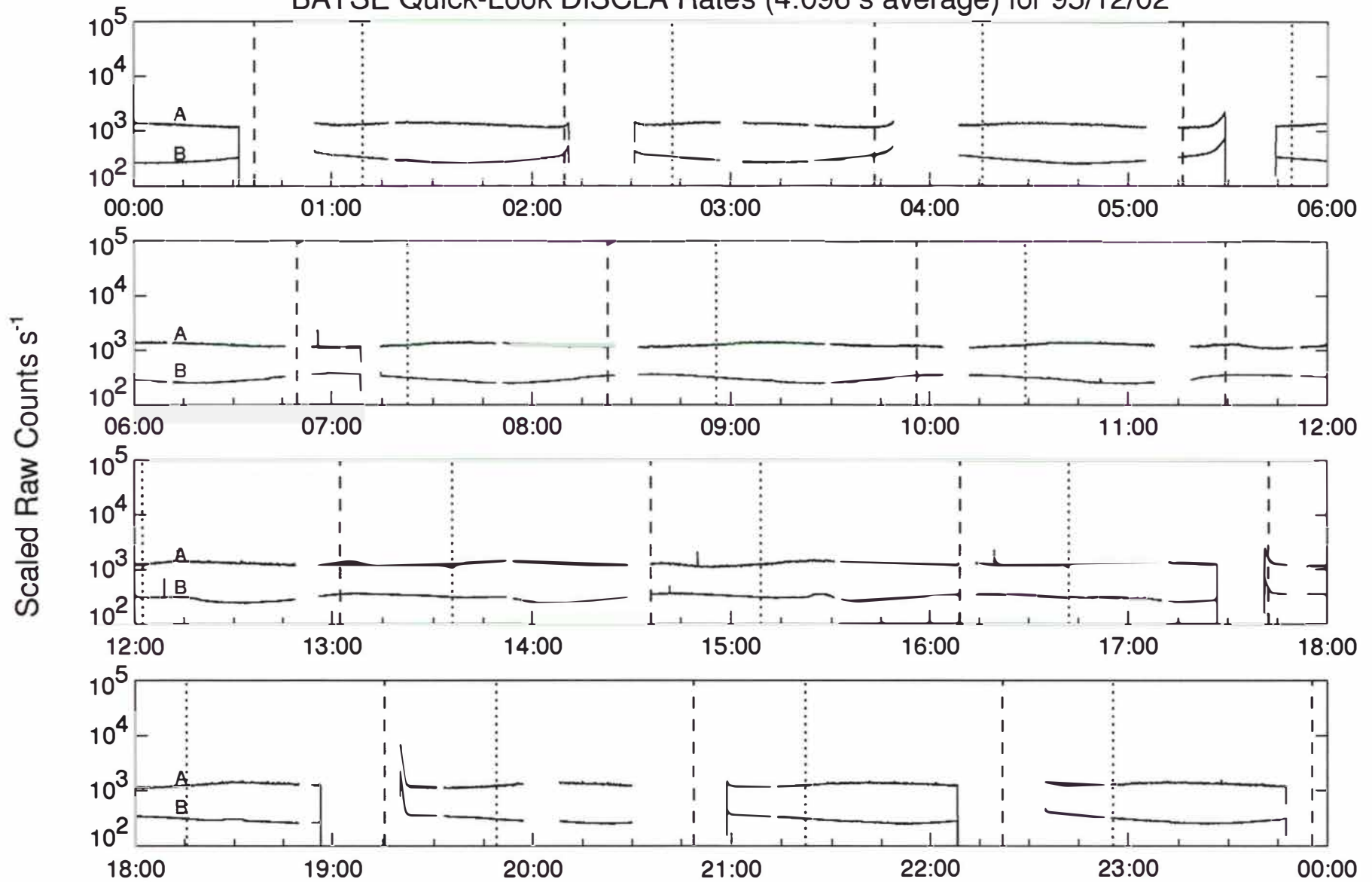


Data Start: 95/12/02, 0000:00

Plot created: 95/12/04, 0652

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 95/12/02



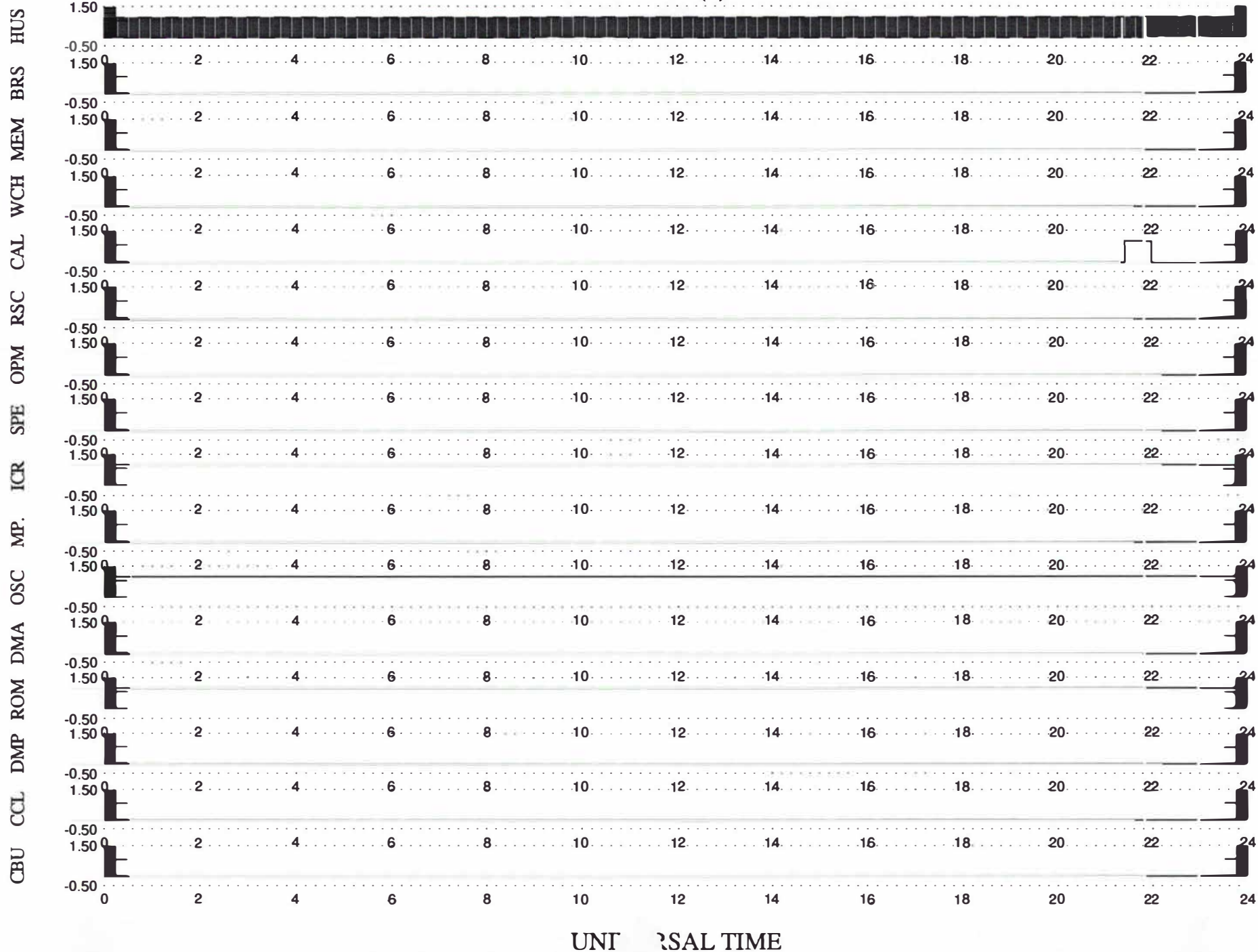
Current Time: 95/12/04, 0653 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

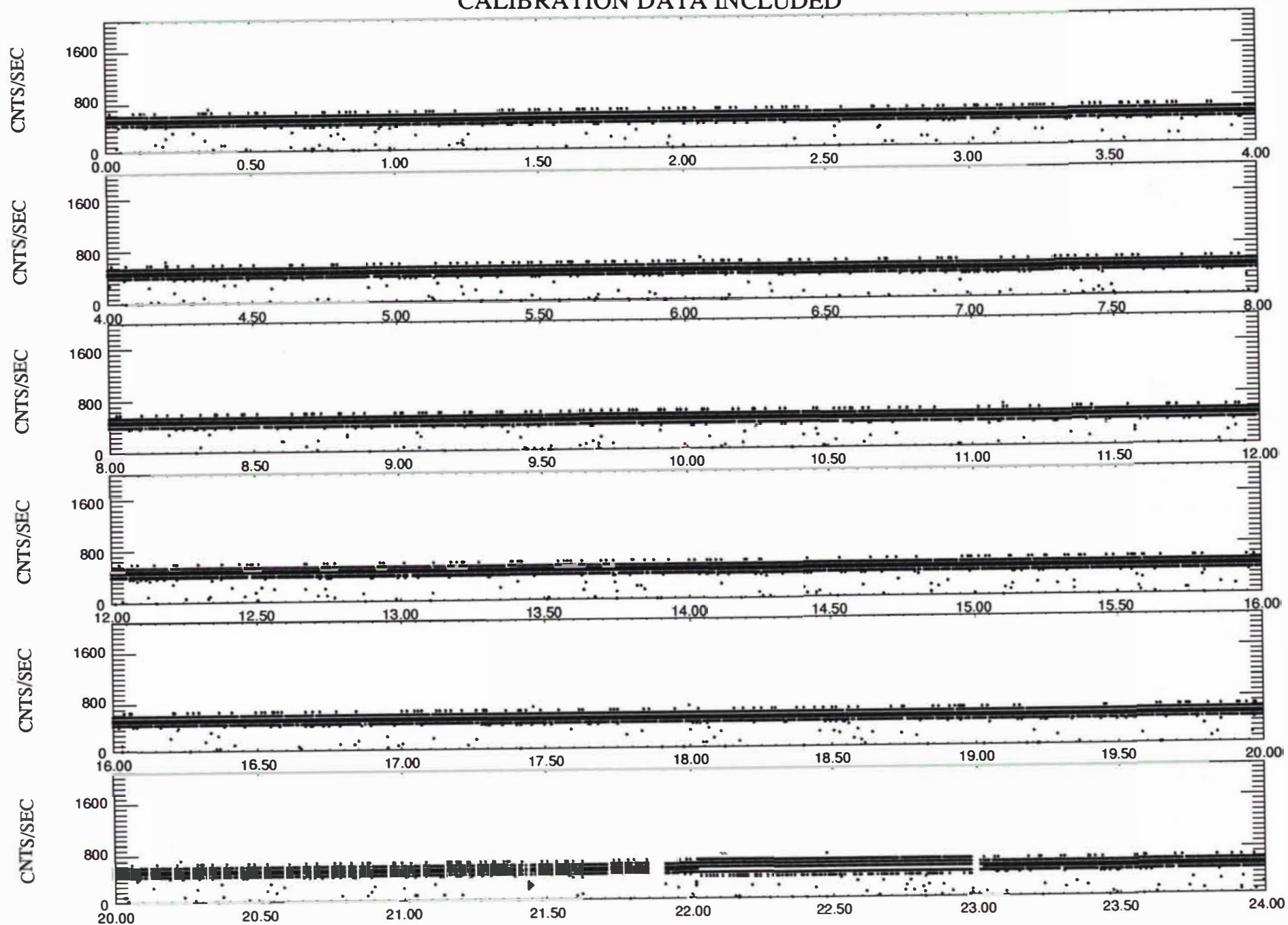
HUS MODES EDR day 336, year 1995 to day 336, year 1995 NO BURST (8)

4/1/96

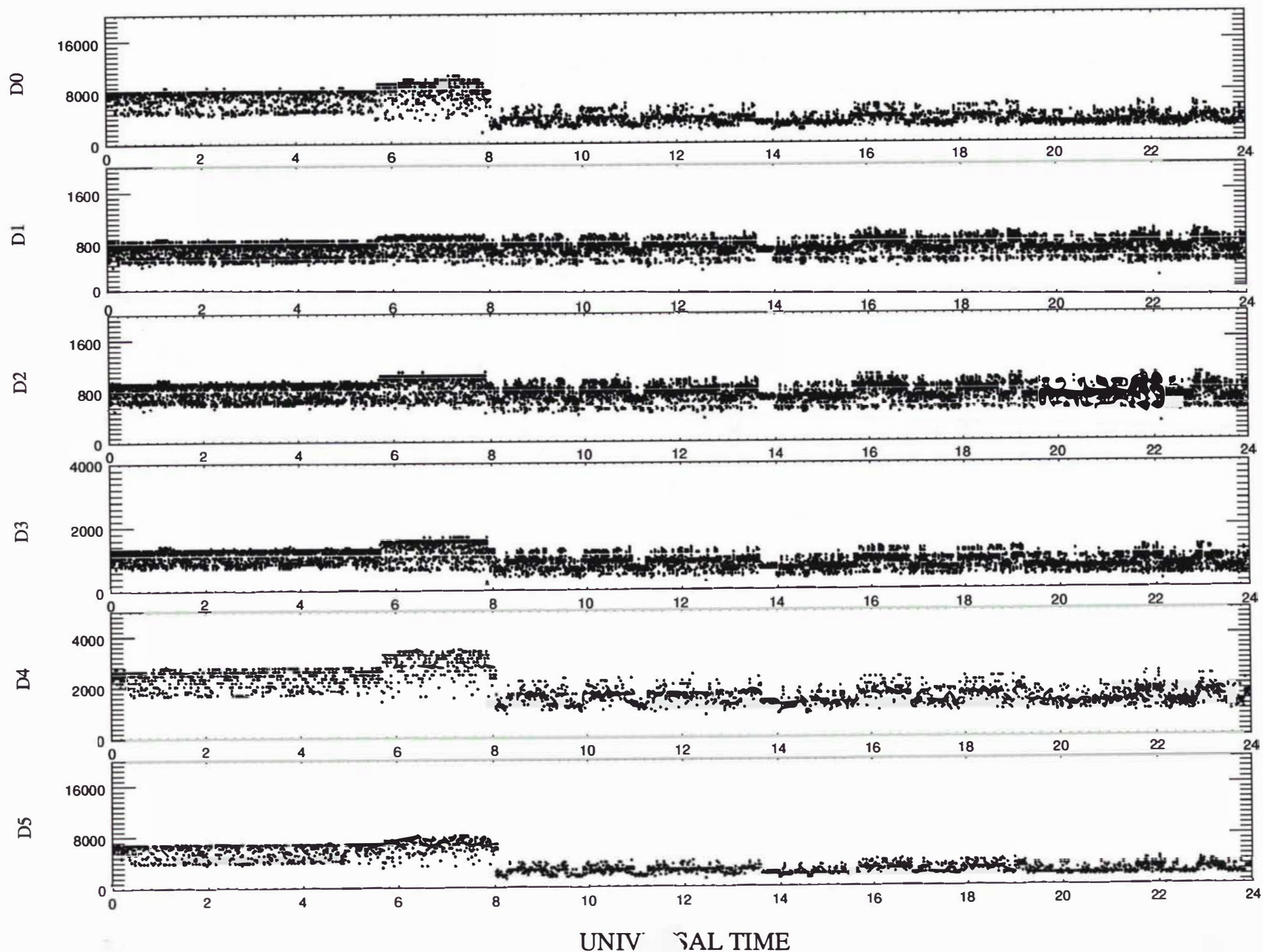


HUS 2A, MODE 1, NOT AVERAGED EDR day 336, year 1995 to day 336, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNIT: RSAL TIME



From DEAL@ssl.msfc.nasa.gov Mon Dec 4 12:53 PST 1995
Date: Mon, 4 Dec 1995 14:53:20 -0600 (CST)
From: DEAL@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3930

BATSEARCH PROGRAM

BATSE BURST # 3930
EVENT OF 1995 DEC 3 DAY OF YEAR=337
EVENT CROSSING TIME AT BATSE : 3988. S. OR 01:06:28.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 280.000 -19.000
BATSE PEAK COUNTING RATE: 34000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 3/12/ 95 IS:
RA= 220.839 DEC= 55.749 DIST= 2.855 AU
BATSE-ULYSSES DISTANCE = 427165249. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 90.21 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -5.26 SECS.
CROSSING TIME AT ULYSSES IS 3983. S. OR 01:06:22 +/- 297.30 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 3/12/ 95 IS:
RA= 272.015 DEC= -24.390 DIST= 2.294 AU
MARS-BATSE DISTANCE = 343222432. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=170.83 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1130.25 SECS.
CROSSING TIME AT MARS IS 2858. S. OR 00:47:37 +/- 14.50 SECONDS

BATSE BURST TRIGGER

NO.: 3930

TIME: TJD=0054 SECONDS=3988

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=65.3 AZIMUTH=28.1 ERROR=0.2 DEGREES

COMMENTS:

BURST LASTING ~ 60 S. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3930	951203	10054	03988	34000	280	-19	60



From cline@heavx.gsfc.nasa.gov Fri Mar 29 08:40 PST 1996
 Date: Fri, 29 Mar 1996 08:40:19 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@heavx.gsfc.nasa.gov (T L Cline)
 Subject: Konus Event List augmentation

Dear Kevin,

This list includes Sergei's latest Konus-W (GGS-Wind) and Konus-A (Kosmos-2326) events, for comparison with Ulysses, BATSE, TGRS, etc. The times listed are prioritized for Konus-W (i.e., Konus-A time given if Konus-W doesn't trigger).

Yr	Mn	Dy	UT (Konus)	BATSE	Ulysses	Konus	TGRS	Notes
95	11	2	07085.879	?	?	168	no	
95	11	2	21209.015	3891	R I	169	345	
95	11	4	05868.077	3893	R I	170	BGR	
95	11	5	46827.808	?	?	171	no	
95	11	12	66495.244	?	R I	172	no	
95	11	13	84358.872	3906	R I	173	BGR	
95	11	17	10123.762	3909	?	175	no	
95	11	19	29831.402	3912	R I	176	348	
95	11	19	46457.519	?	?	177	BGR	
95	11	22	09841.38	?	?	179	no	
95	11	22	17107.738	?	?	180	349	
95	12	2	39101.744	?	?	195	BGR	
95	12	3	03988.18	?	?	196	360	
	12	8	19617.151	?	?	197	no	
	12	8	39452.057	?	?	198	no	
95	12	8	42467.634	?	?	199	BGR	
95	12	9	31349.607	?	?	200	BGR	
95	12	13	17849.683	?	?	201	362	
95	12	14	08657.847	?	?	202	no	
95	12	19	60679.732	?	?	203	no	
95	12	20	31883.56	?	?	204	BGR	
95	12	22	25203.254	?	?	no	?	= K-A t.
95	12	27	23005.042	?	?	218	375	
96	12	31	20231.668	?	?	219	no	
96	1	2	11650.996	?	?	220	no	
96	1	4	12521.062	?	?	221	no	
96	1	11	46524.53	?	?	222	no	
96	1	13	56024.261	?	?	228	no	
96	1	14	44104.737	?	?	233	384	+ K-A t.
96	1	15	31956.506	?	?	234	BGR	
96	1	17	57371.341	?	?	235	no	
96	1	19	34679.317	?	?	236	no	
96	1	19	45226.016	?	?	237	no	
96	1	20	36768.974	?	?	238	no	
96	1	24	03388.008	?	?	239	385	+ K-A t.
96	1	24	76096.911	?	?	BGR	?	= K-A t.
96	1	30	08756.848	?	?	240	no	
96	2	1	78530.582	?	?	241	?	+ K-A t.
96	2	2	50750.813	?	?	242	?	
	2	10	35198.959	?	?	247	?	
96	2	16	57796.347	?	?	BGR	?	= K-A t.
96	2	19	20589.684	?	?	BGR	?	= K-A t.
96	2	28	85760.241	?	?	249	?	
96	2	29	22445.141	?	?	250	?	

96	3	5	33645.352	?	?	251	?
96	3	12	35074.697	?	?	252	?
96	3	19	51992.828	?	?	253	?
96	3	21	76321.803	?	?	254	?
96	3	22	19642.728	?	?	255	?
96	3	24	80064.124	?	?	257	?
96	3	25	69892.978	?	?	258	?

--

TLC

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

Helio corr removed

Date: Feb 23 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☐ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ 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

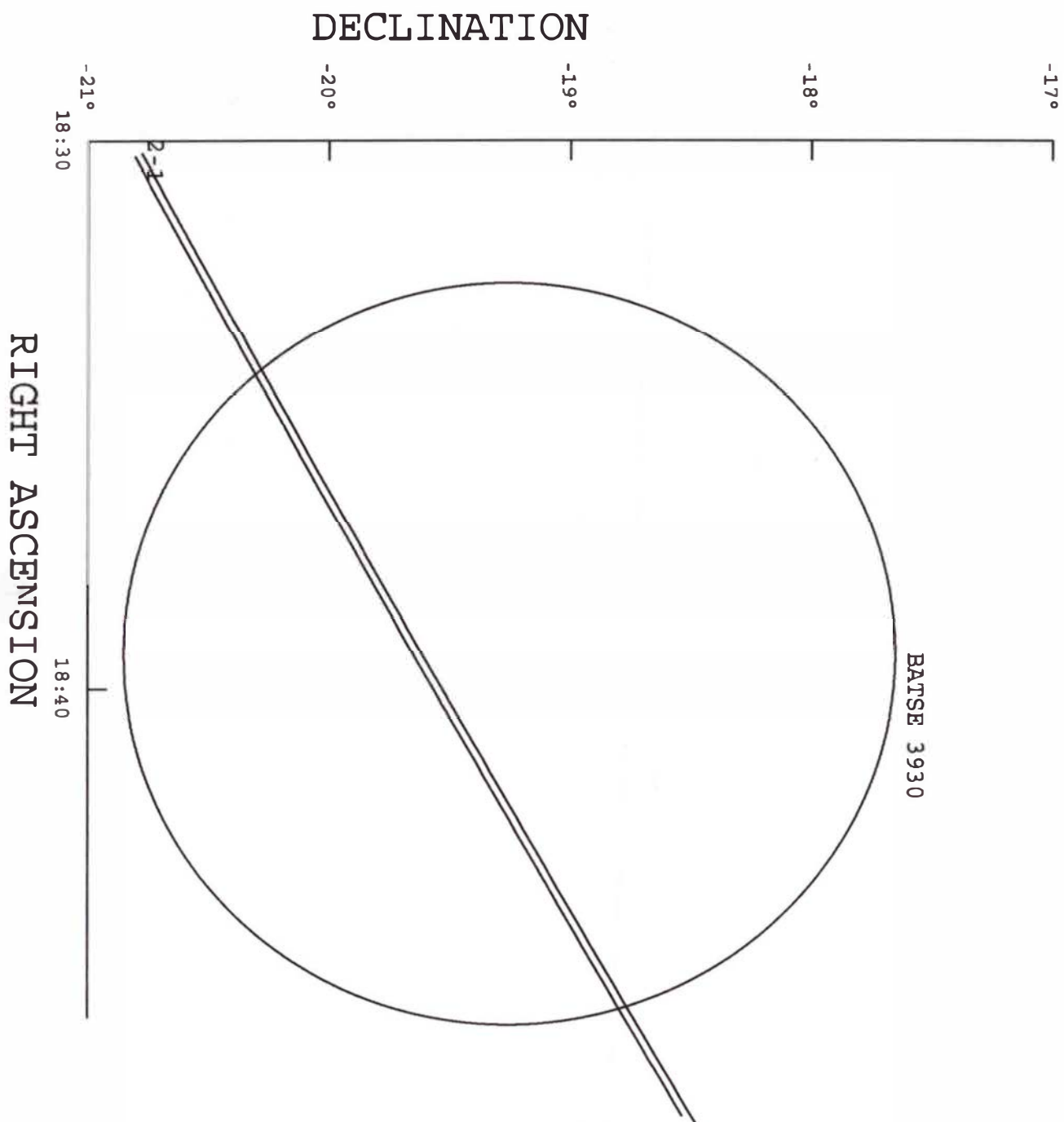
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF DEC 3, 1995 1:06

25/ 3/98



ULYSSES

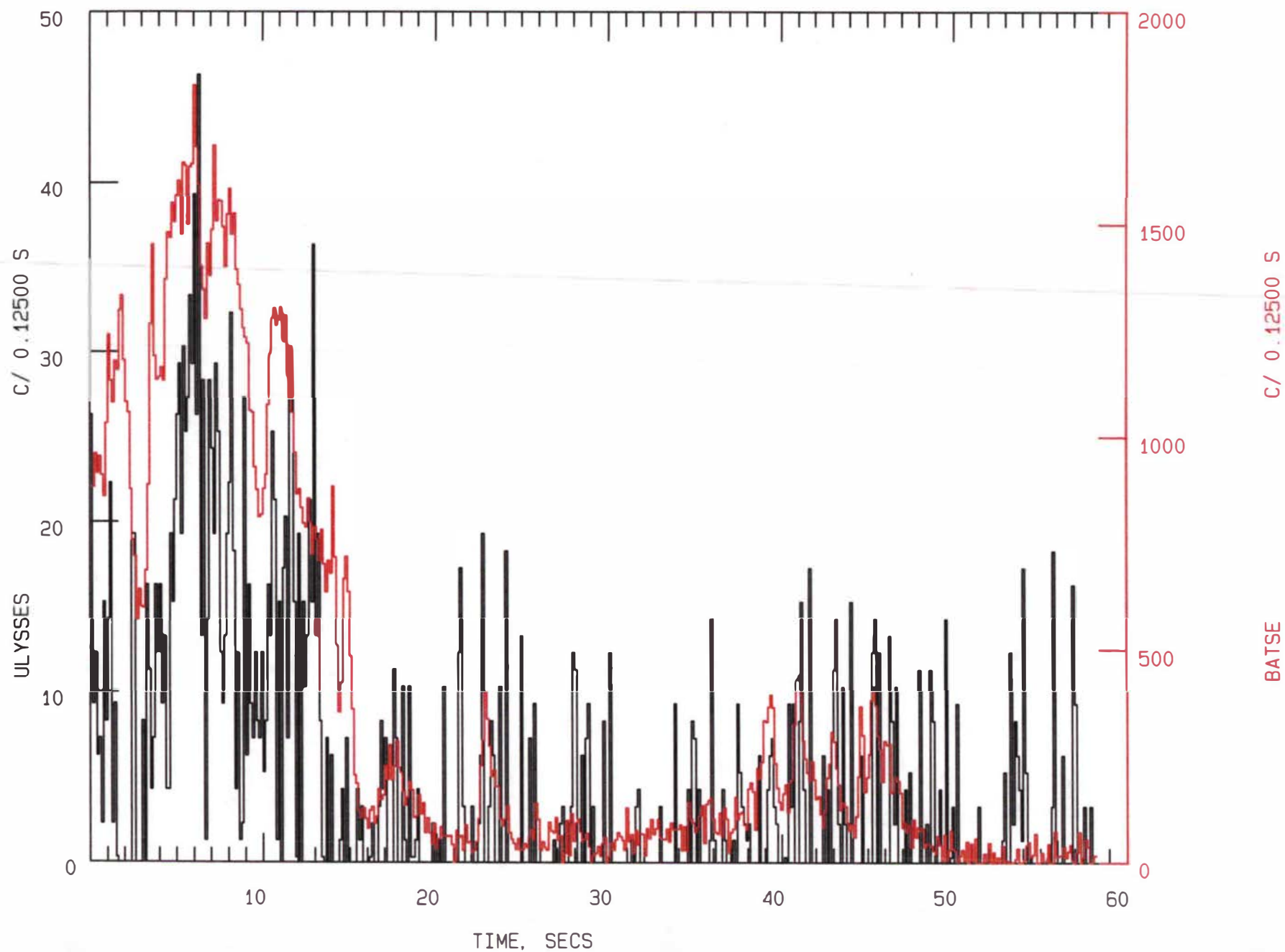
-BATSE

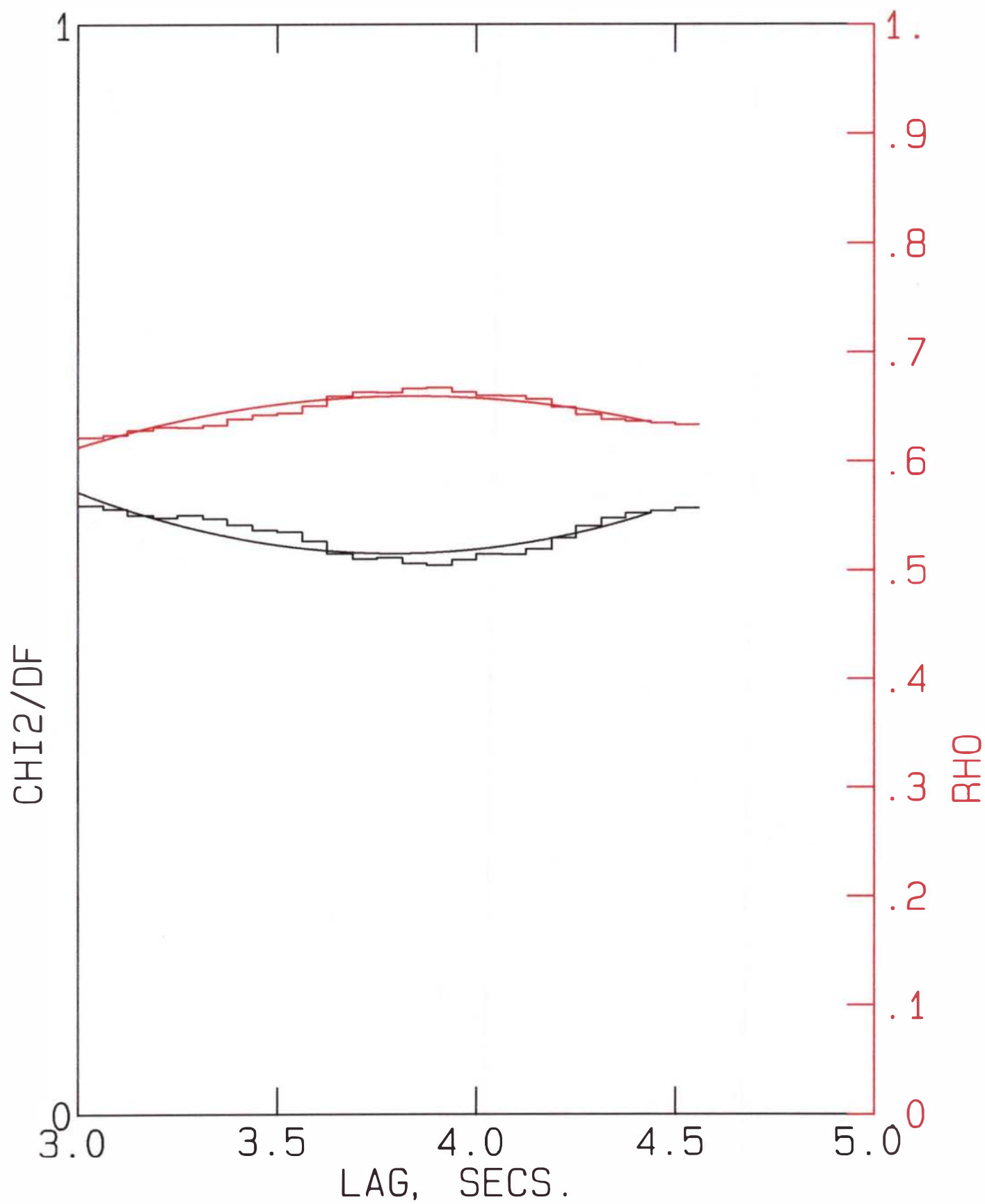
CORRELATION

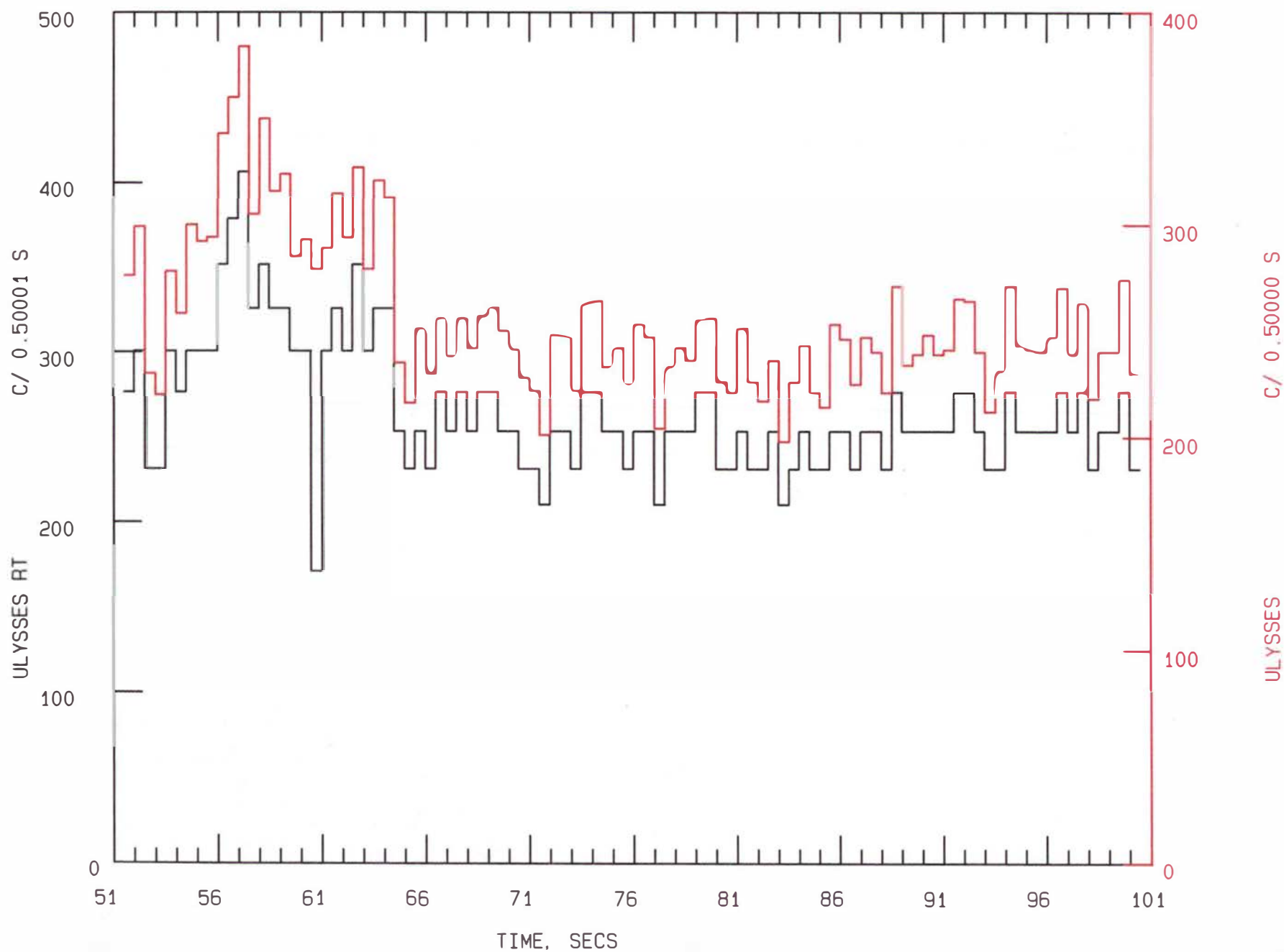
03/12/95

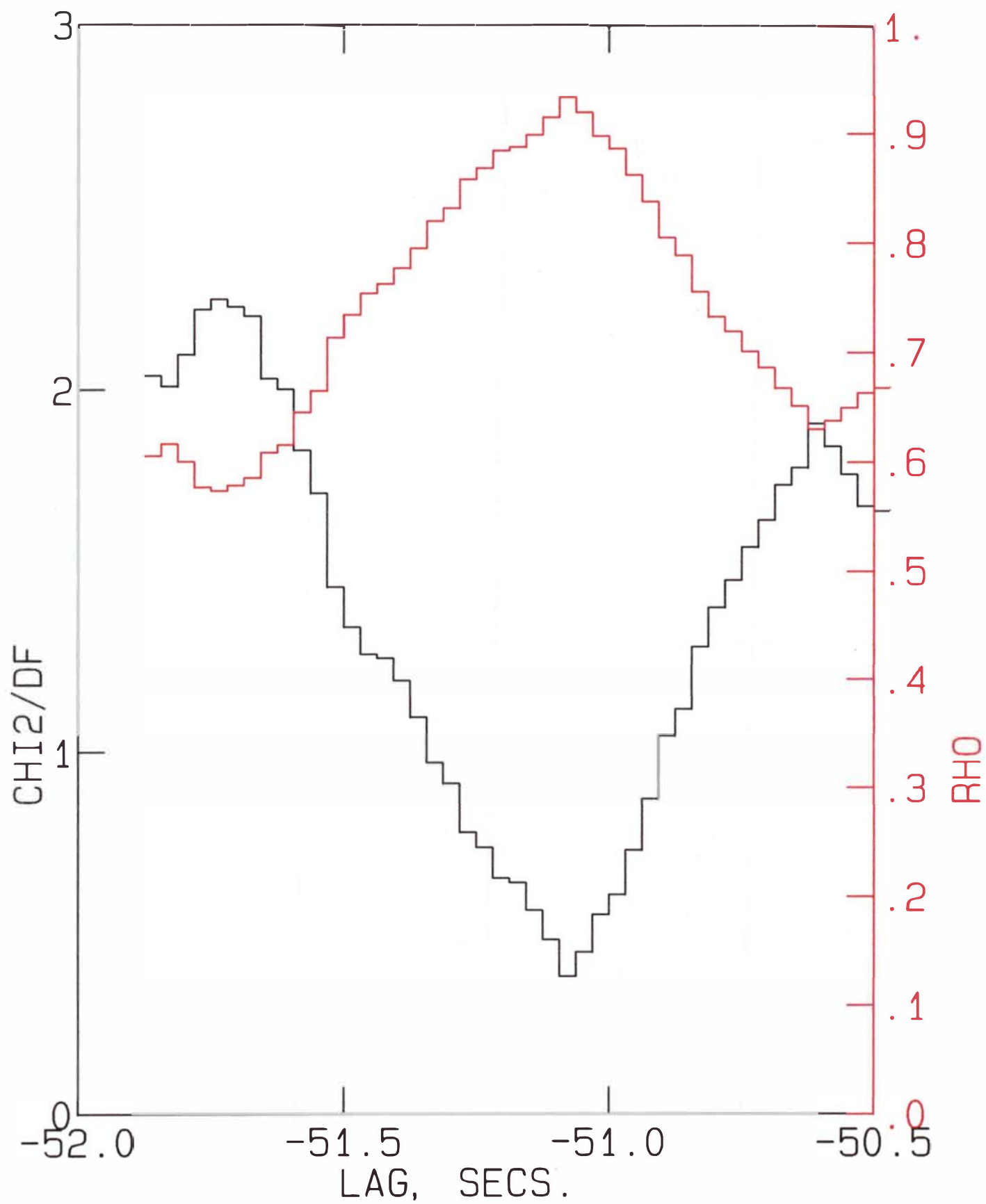
3996.102

25/ 3/98





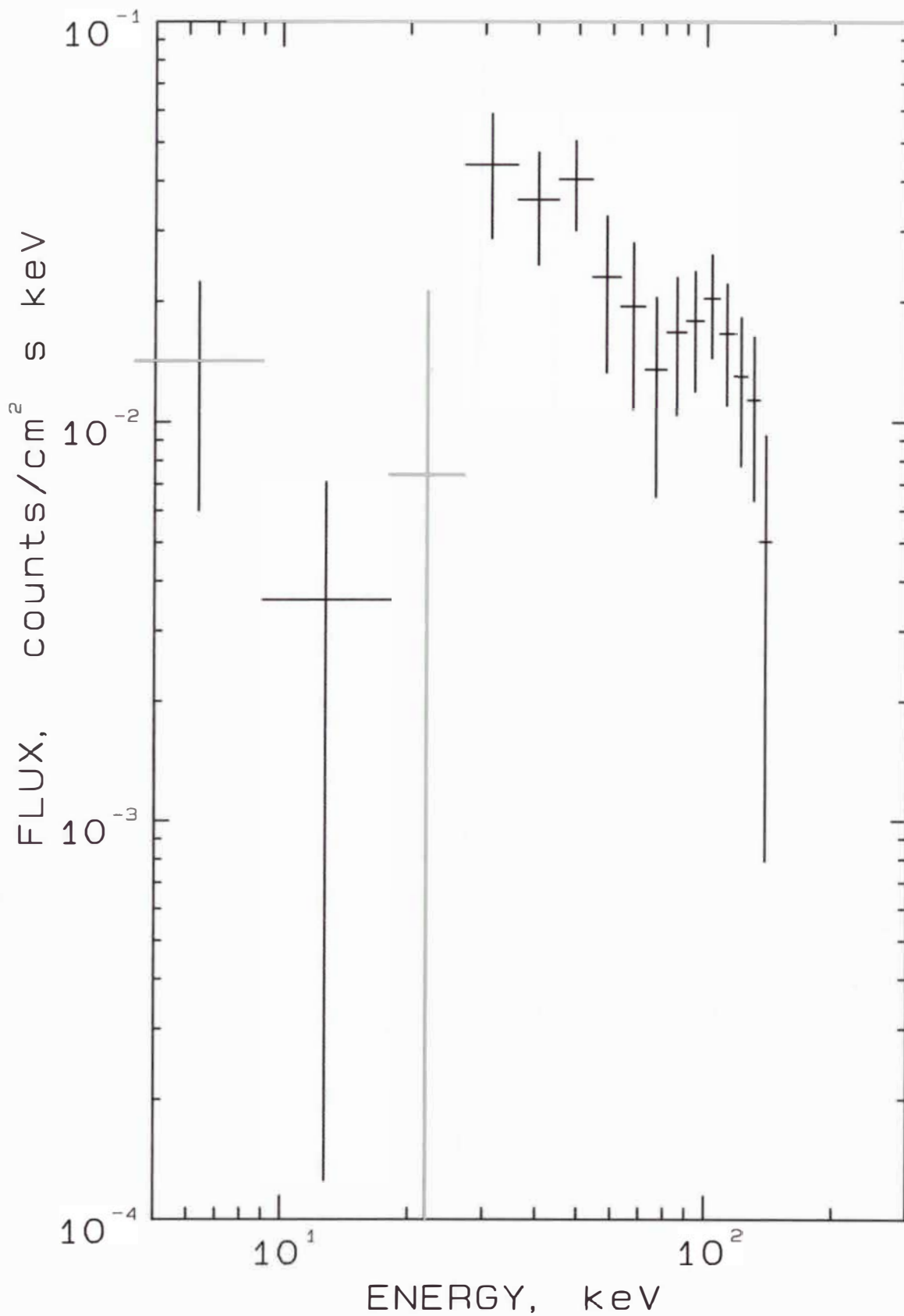




ULYSSES 03/12/95 3995.965

25/ 3/98

SPECTRUM INTEGRATED OVER 20.1 SECONDS, INTERVALS 2 TO 20



ULYSSES 03/12/95 3995.965 BURST SPECTRAL COUNT RATES

4- 17 keV

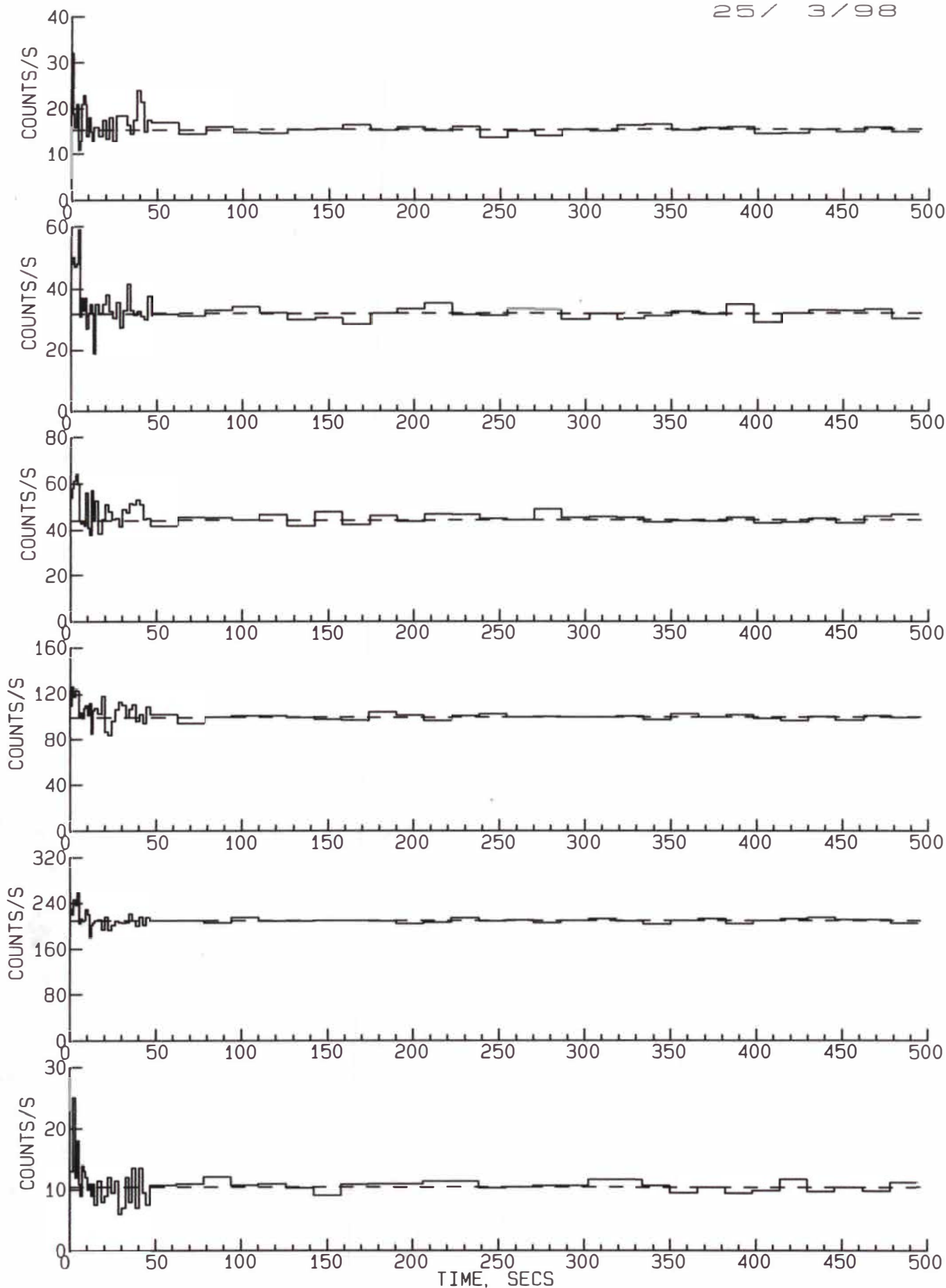
17- 44 keV

44- 71 keV

71- 98 keV

98-125 keV

125-143 keV



25 / 3 / 98

ULYSSES

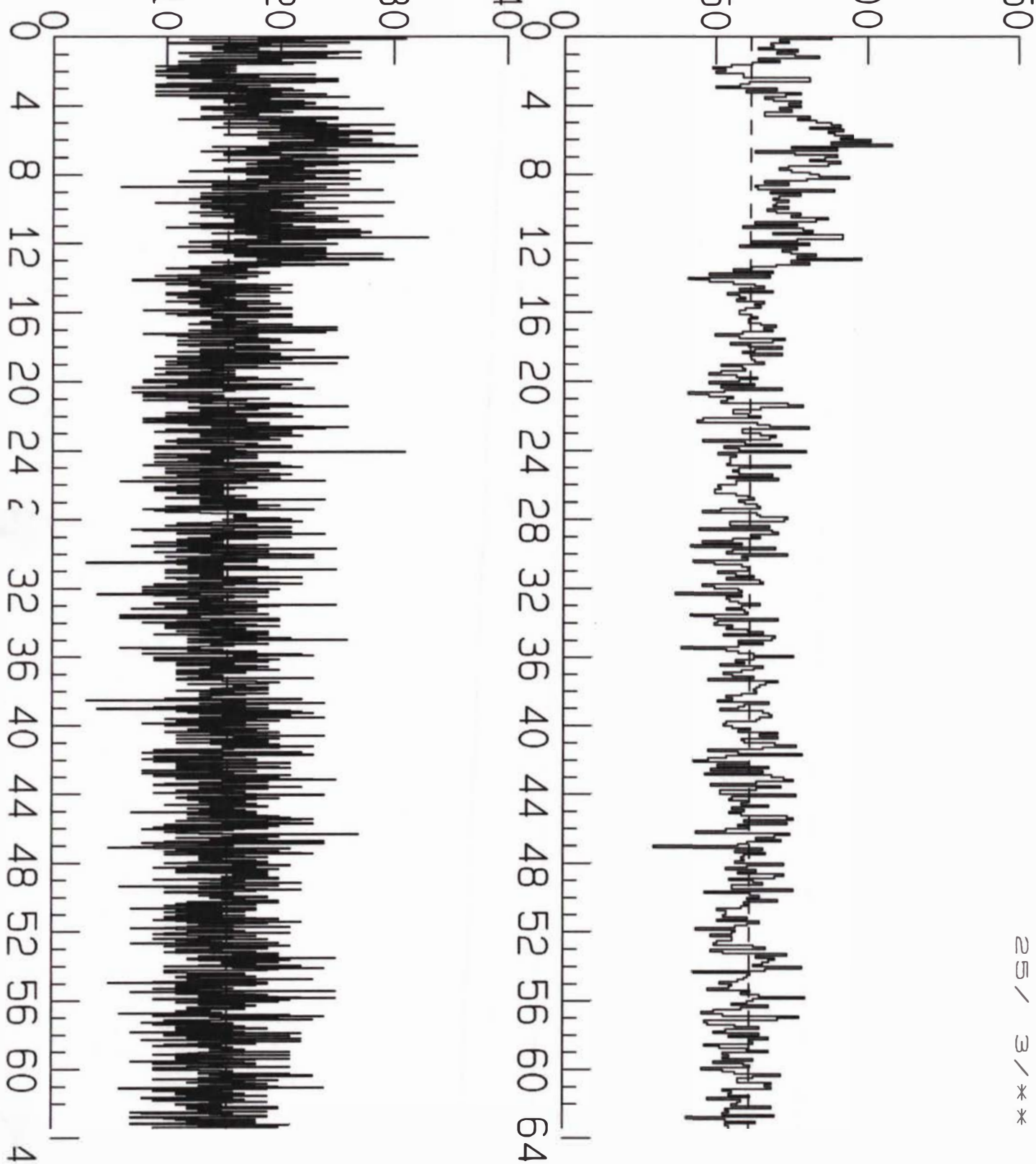
03/12/95

Ttrig= 3996.102

21- 143 keV

COUNTS/0.031 S

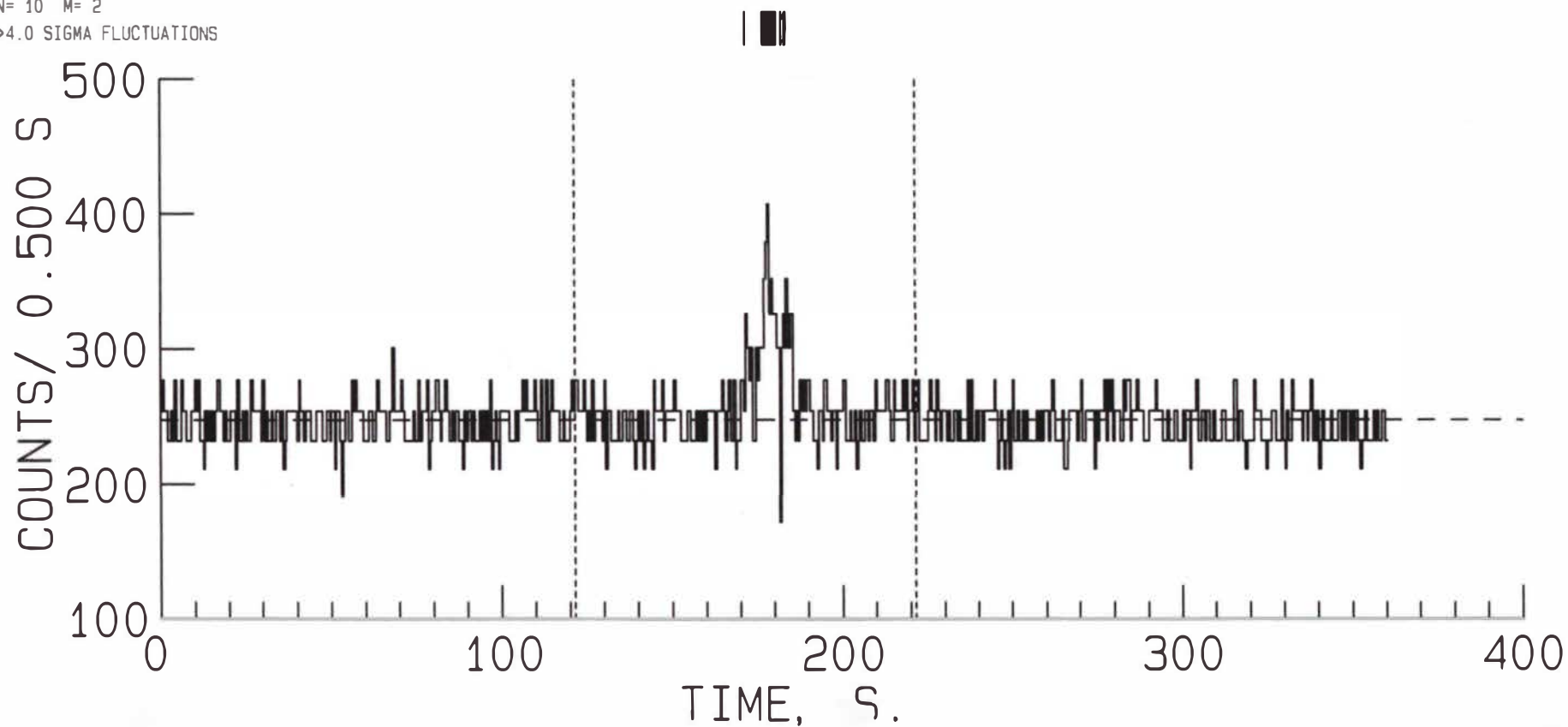
COUNTS/0.125 S



ULYSSES RT
3/12/95 3816.472 s
21- 143 keV

25 / 3 / 98

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



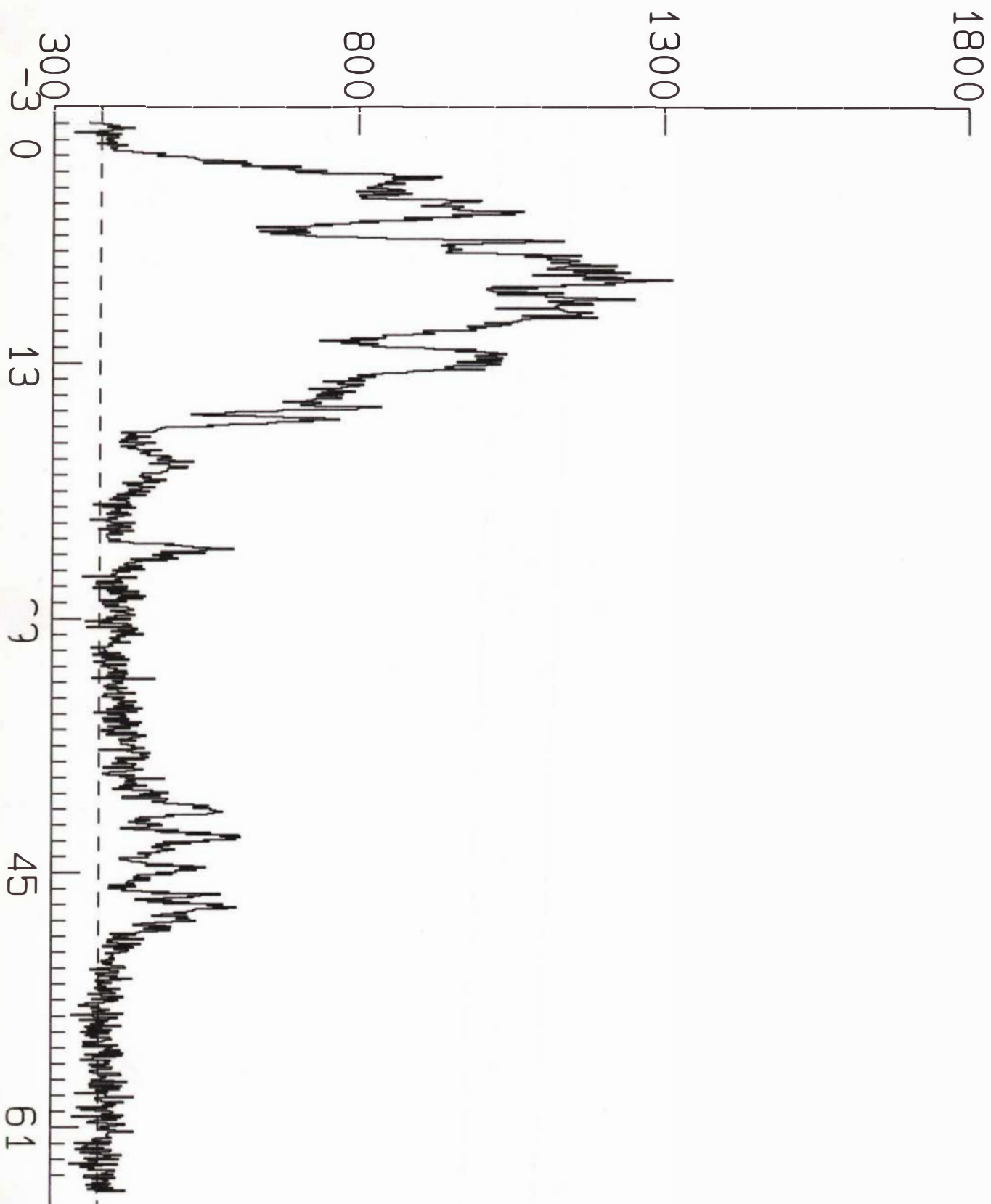
BATSE

03/12/95

3987.634

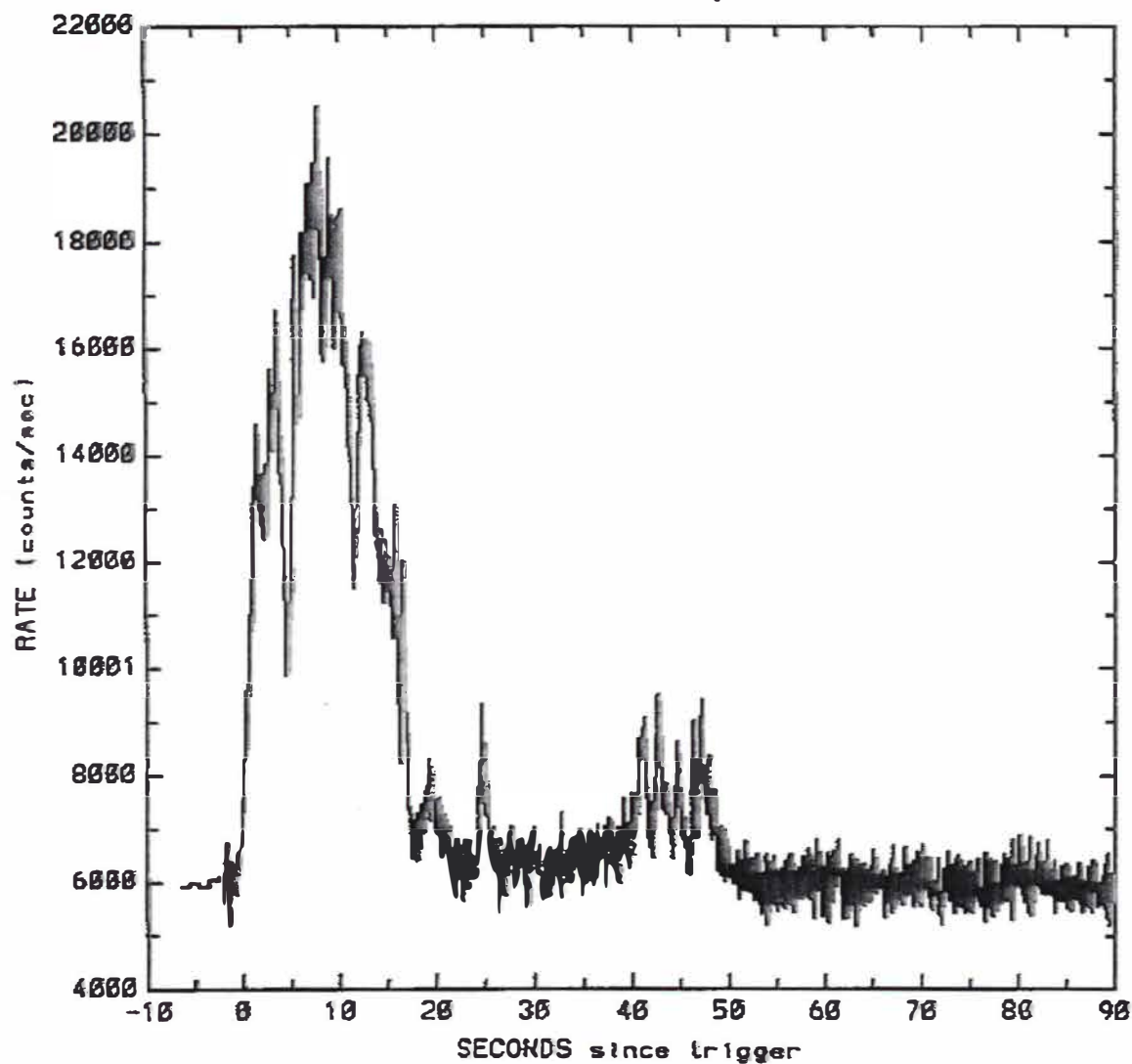
25- 100 keV

COUNTS/0.064 S

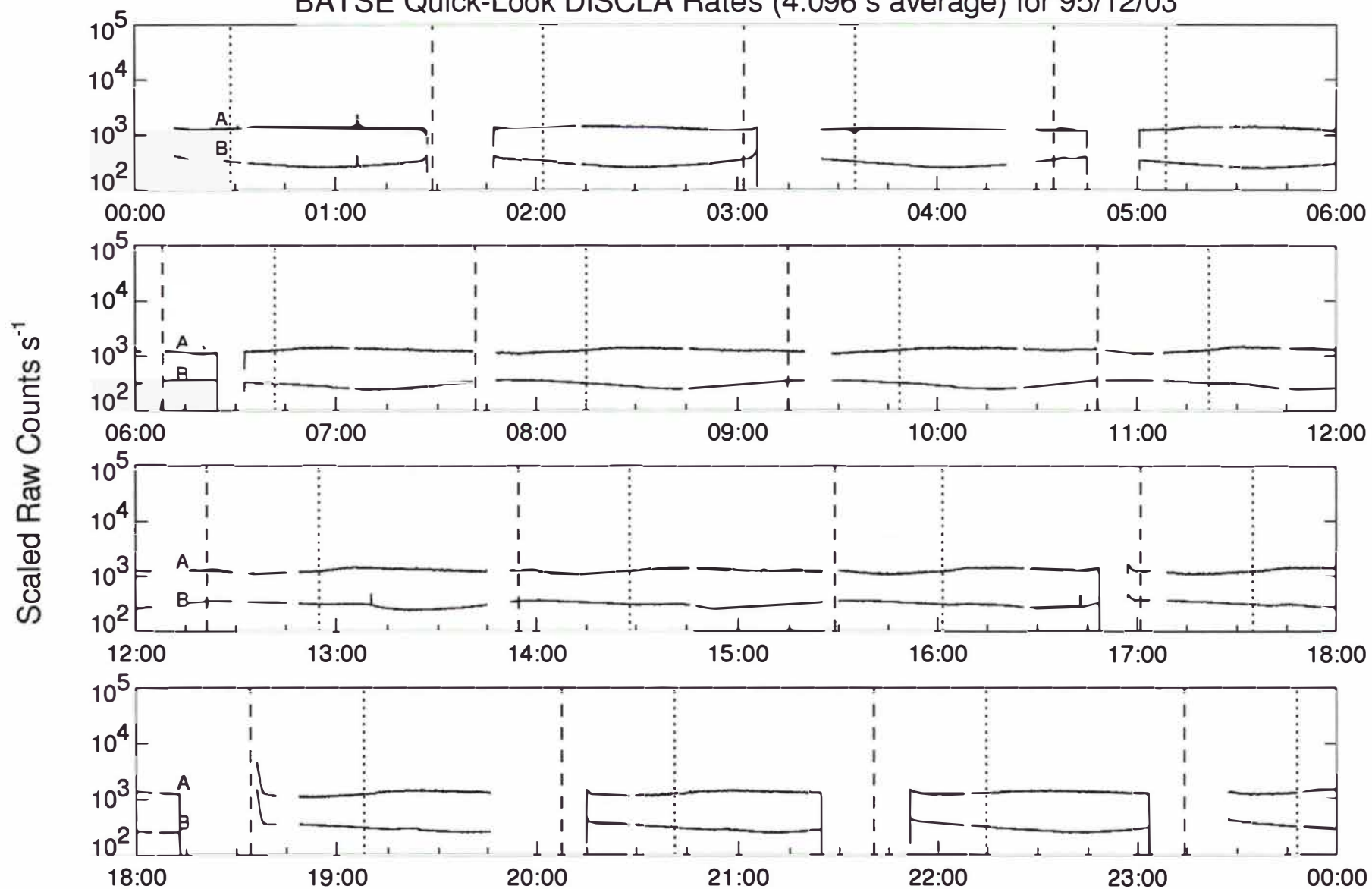


Dec 3 1995

DISCSC Data for K. Hurley. No. 3930



BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/12/03



Current Time: 95/12/05, 0653 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

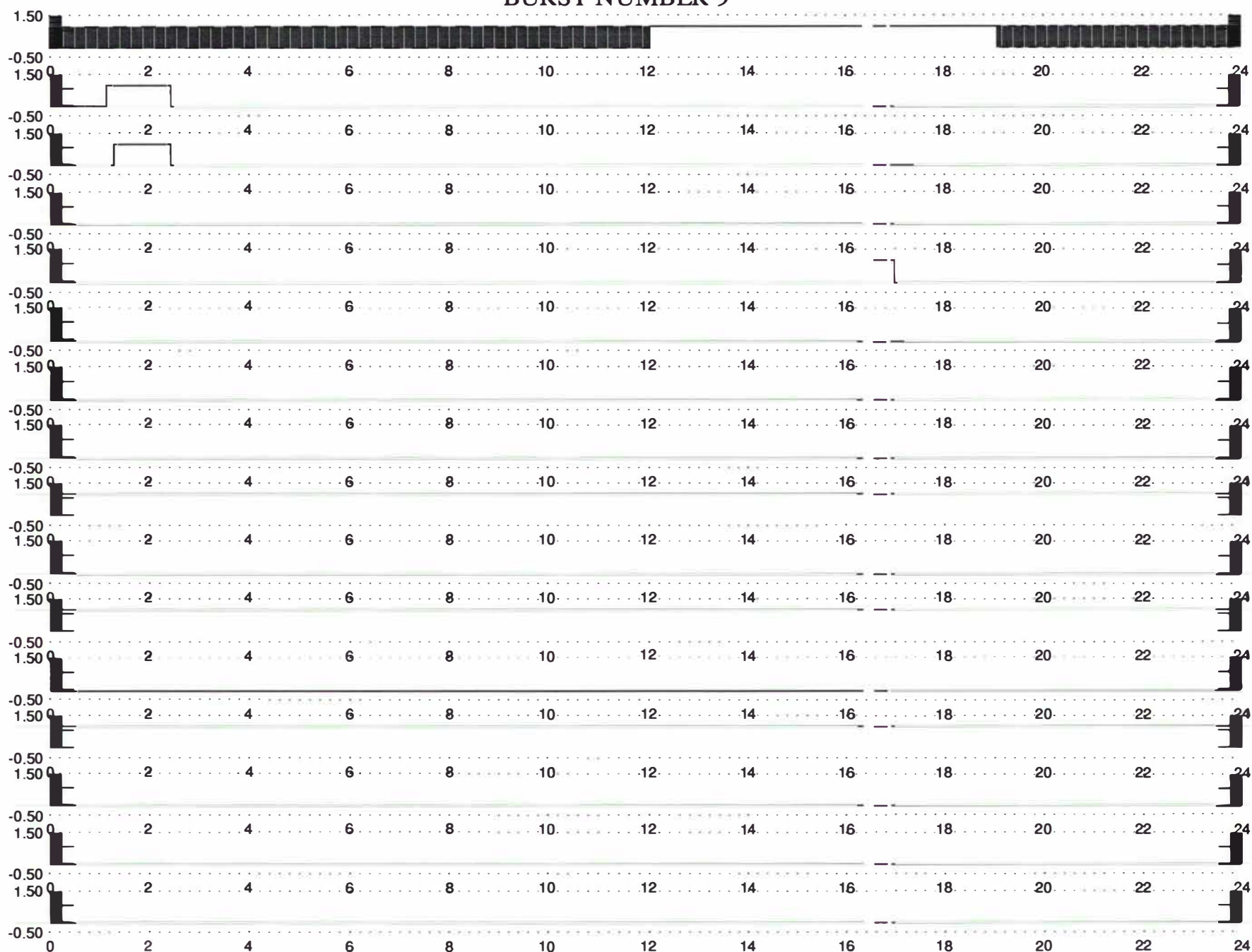
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

HUS MODES EDR day 337, year 1995 to day 337, year 1995 BURST NUMBER 9

4/1/96

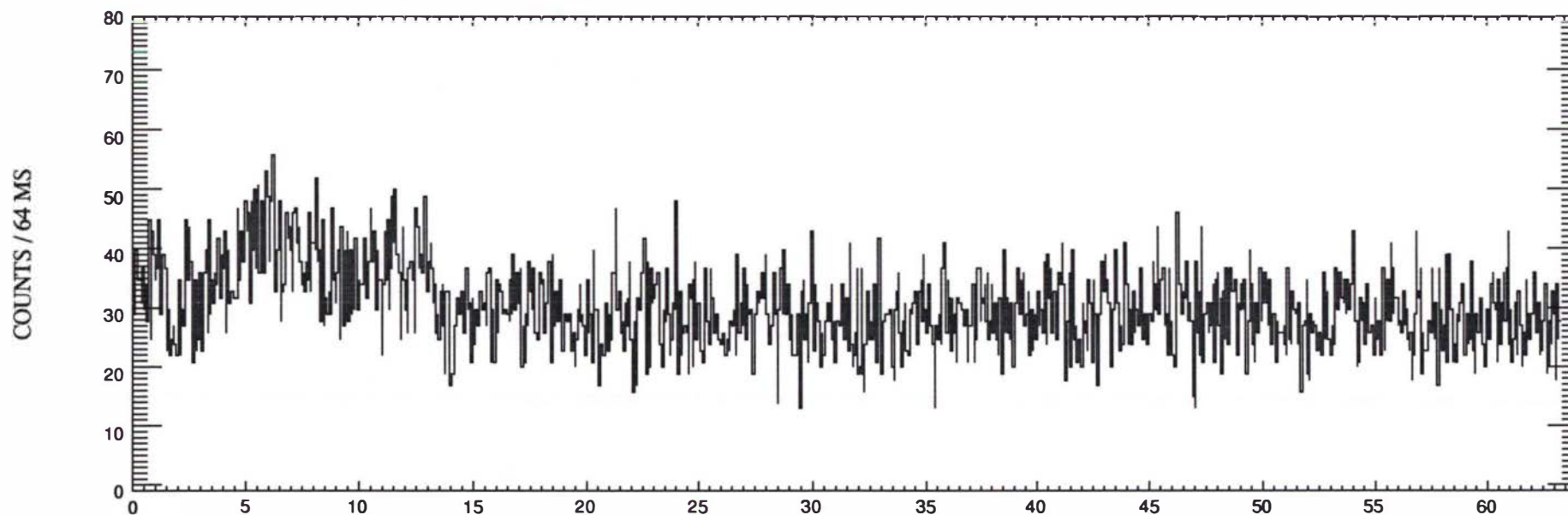
CBU CCL DMP ROM DMA OSC MP. ICR SPE OPM RSC CAL WCH MEM BRS HUS



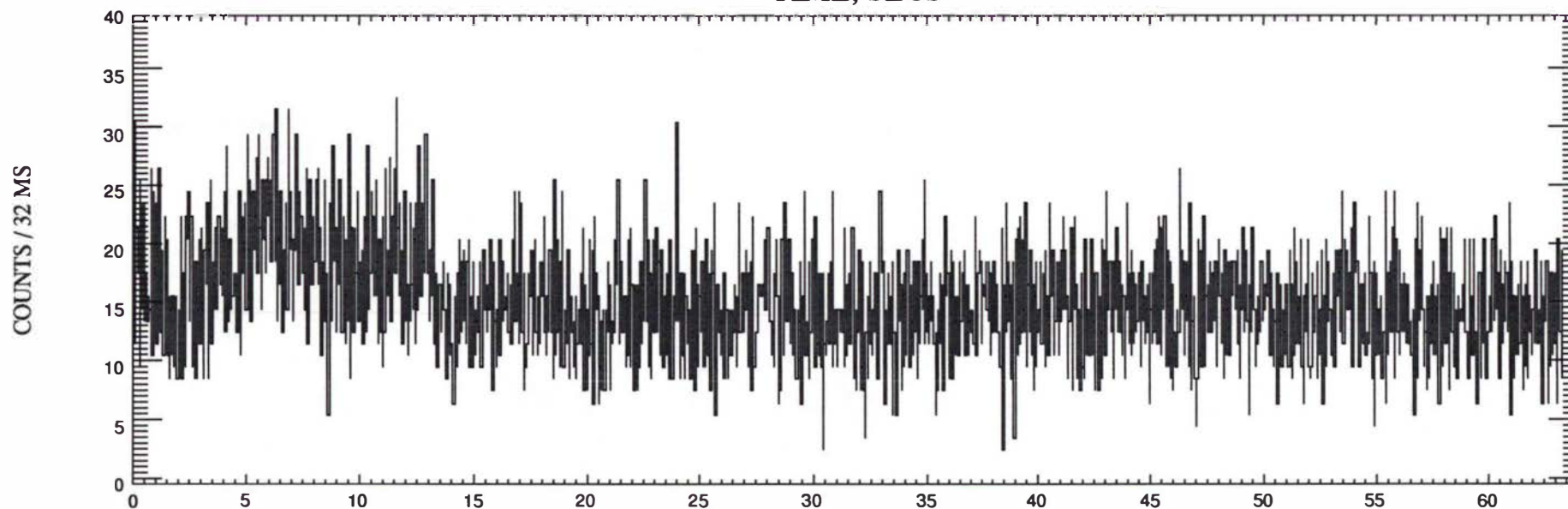
UNIT SIGNAL TIME

HUS 2A TRIGGERED DATA EDR day 337, year 1995
Burst Counter 9 at UT= 1.109990149604 h= 3995.965 s 01:06:35.965

4/1/96



TIME, SECS

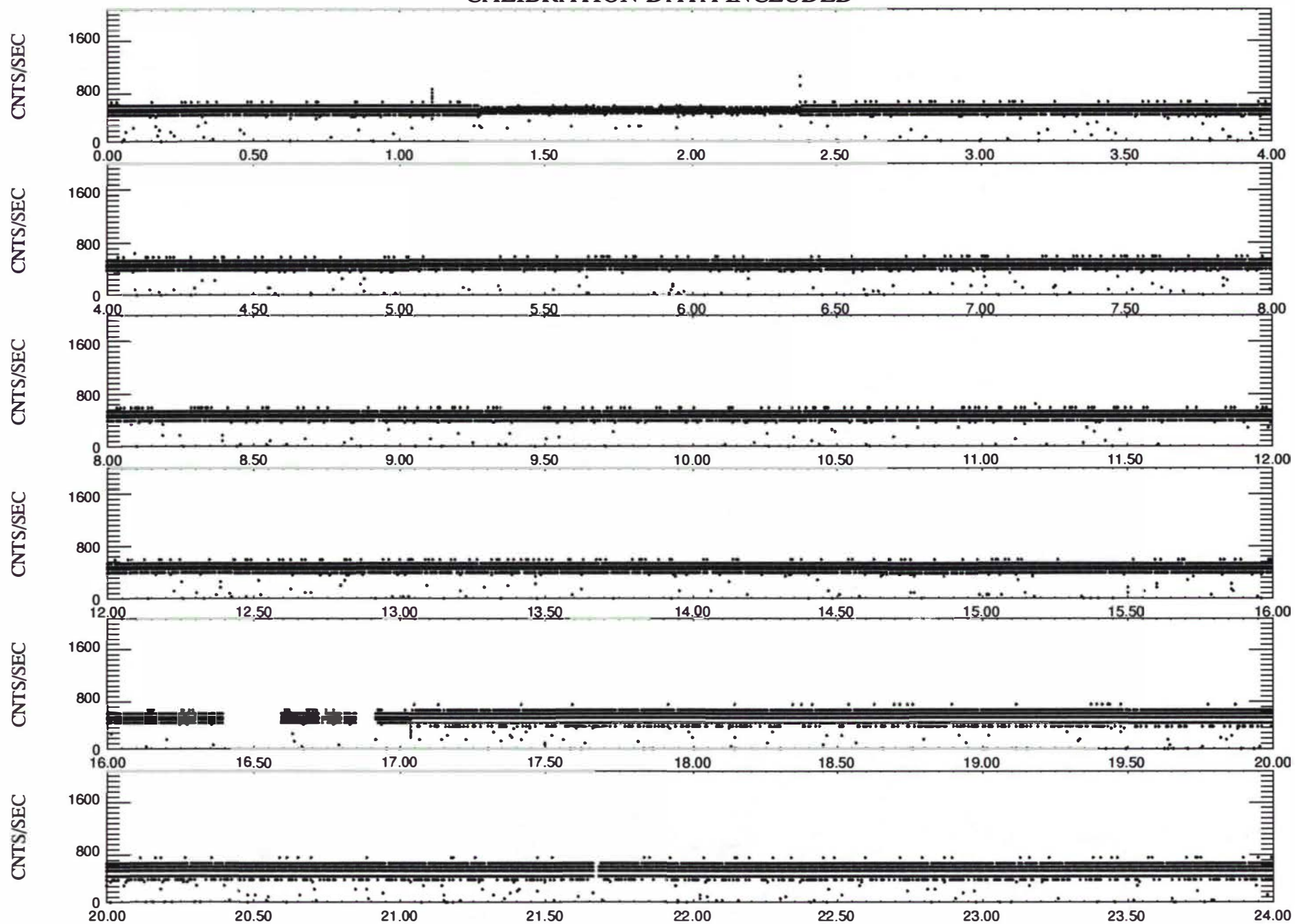


TIME, SECS

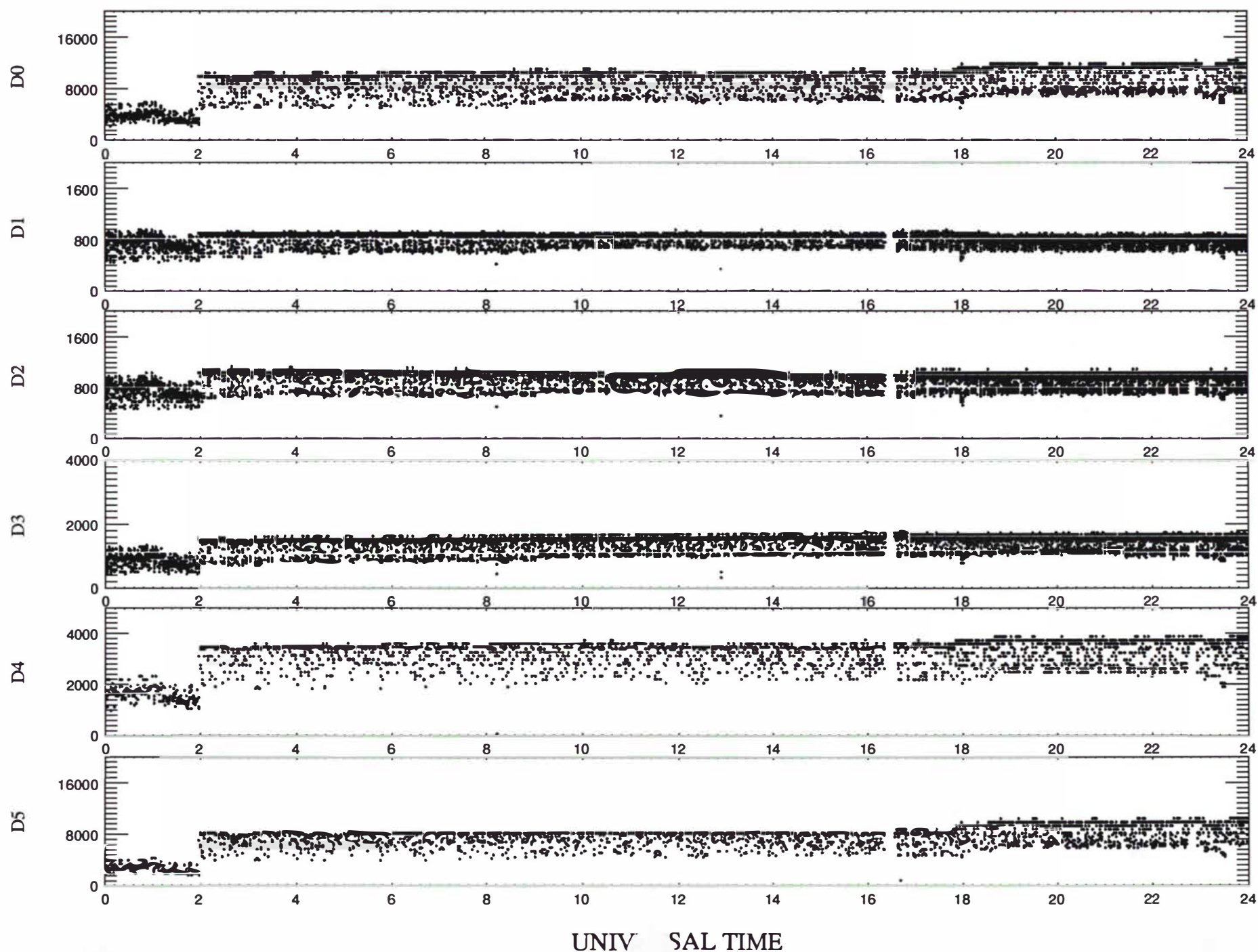
B# 1

HUS 2A, MODE 1, NOT AVERAGED EDR day 337, year 1995 to day 337, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNITSAL TIME



From DEAL@SSLLES.MSFC.NASA.GOV Thu Dec 7 09:54 PST 1995
From: DEAL@SSLLES.MSFC.NASA.GOV
Date: Thu, 7 Dec 1995 11:53:29 -0600 (CST)
To: burst@compTEL.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3931

TIME: TJD=0055 SECONDS=55266

TYPE: TGF SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=147.3 AZIMUTH=342.9 ERROR=10.0 DEGREES

COMMENTS:

TGF DURATION ~ 0.008 S. NOT VISIBLE BELOW 50 KEV.

HUS MODES EDR day 338, year 1995 to day 338, year 1995 NO BURST (9)

4/1/96

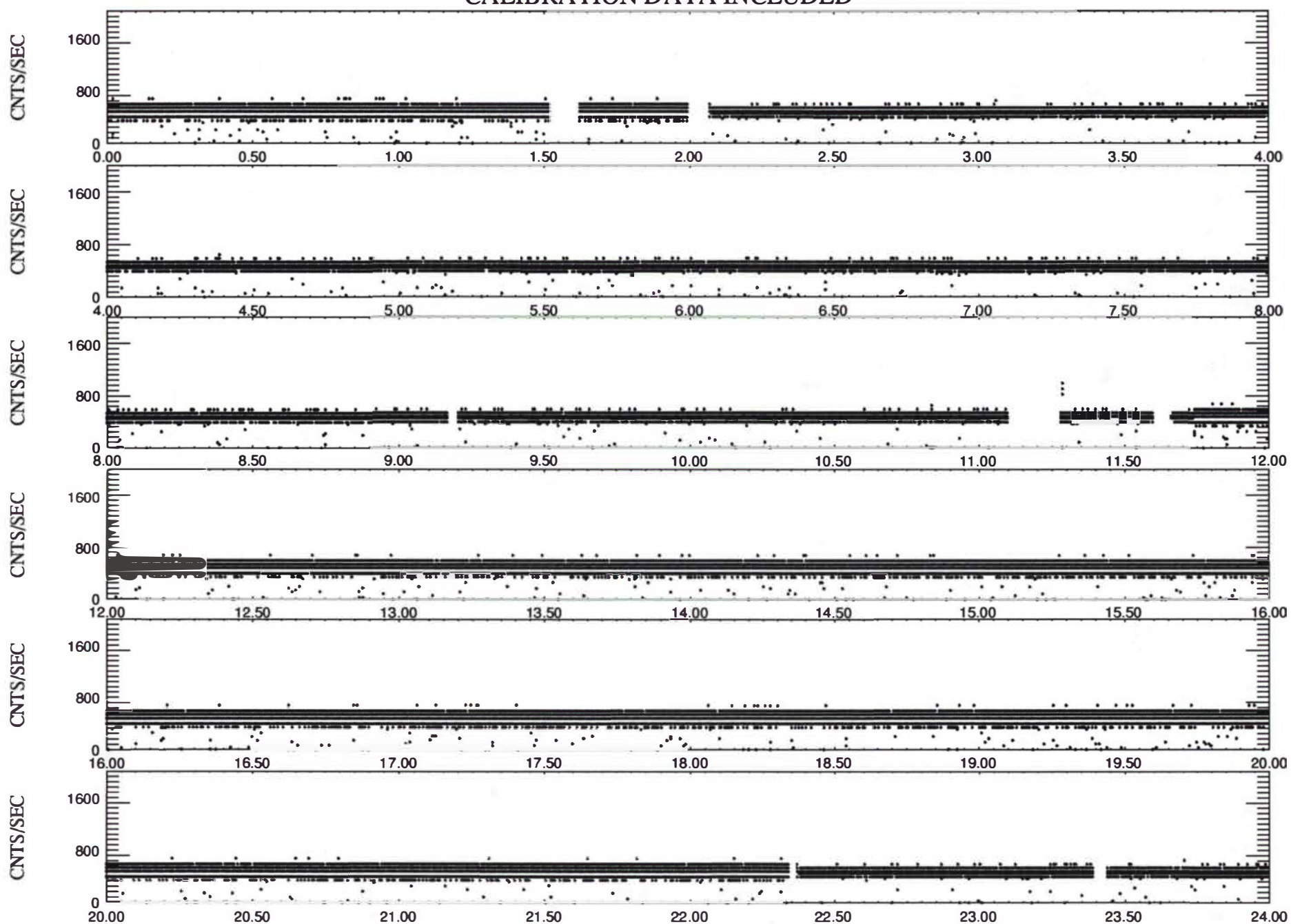
CBU CCL DMP ROM DMA OSC MP. ICR SPE OPM RSC CAL WCH MEM BRS HUS



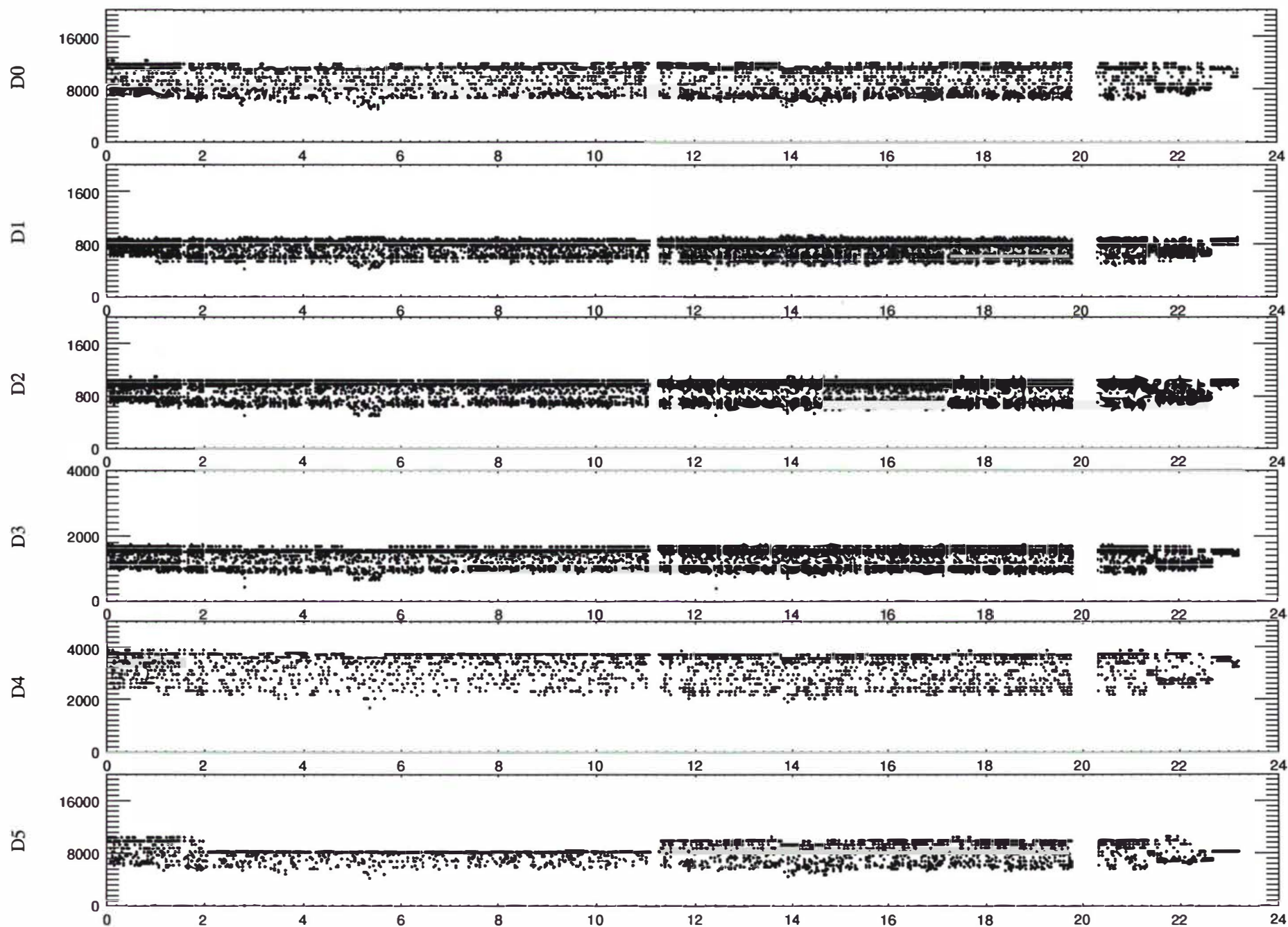
UNITSAL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR day 338, year 1995 to day 338, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNIVERSAL TIME



UNIT: SECAL TIME

From ULSFC@jplsp2.jpl.nasa.gov Wed Dec 6 17:01 PST 1995
Date: Wed, 6 Dec 1995 16:59:47 -0800 (PST)
From: Fernando Castro (reply to ULSSCI) <ULSFC@jplsp.jpl.nasa.gov>
To: KHURLEY@SUNSPOT.ssl.berkeley.edu
CC: ULSFC@jplsp.jpl.nasa.gov
Subject: Datation Test

Dear Dr. Hurley

Please be advised that the datation test took place as planned on 95.339. There was some sort of trouble with the ground configuration (I guess that the Ulysses NOPE will inform you about the details) which prevented us from performing the planned 12 bursts. 4 of them were not performed. The experiment was configured at 95.339.12:40:36 ETT, first possible burst on cmd at 95.339.16:05:00 ETT (followed by burst off 5 min. later) and repeated every 50 min. End of test and return to previous configuration at 95.339.22:40:00 ETT.

Regards,

Fernando Castro
Ulysses S/C Analyst

From DEAL@ssl.msfc.nasa.gov Fri Dec 8 13:24 PST 1995
Date: Fri, 8 Dec 1995 15:23:29 -0600 (CST)
From: DEAL@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3932

BATSEARCH PROGRAM

NO

BATSE BURST # 3932
EVENT OF 1995 DEC 5 DAY OF YEAR=339
EVENT CROSSING TIME AT BATSE : 21779. S. OR 06:02:59.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 258.000 -24.000
BATSE PEAK COUNTING RATE: 3300 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 5/12/ 95 IS:
RA= 221.311 DEC= 55.935 DIST= 2.854 AU
BATSE-ULYSSES DISTANCE = 426889504. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 94.21 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -104.52 SECS.
CROSSING TIME AT ULYSSES IS 21674. S. OR 06:01:14 +/- 294.97 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 5/12/ 95 IS:
RA= 273.684 DEC= -24.370 DIST= 2.297 AU
MARS-BATSE DISTANCE = 343669024. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=165.70 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1110.82 SECS.
CROSSING TIME AT MARS IS 20668. S. OR 05:44:28 +/- 32.30 SECONDS

BATSE BURST TRIGGER

NO.: 3932

TIME: TJD=0056 SECONDS=21779

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=86.2 AZIMUTH=25.7 ERROR=6.3 DEGREES

COMMENTS:

GRB WITH HARD SPECTRUM. DUR. ~ 0.2 S. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3932	951205	10056	21779	3300	258	-24	.2

12 / 12 / 95

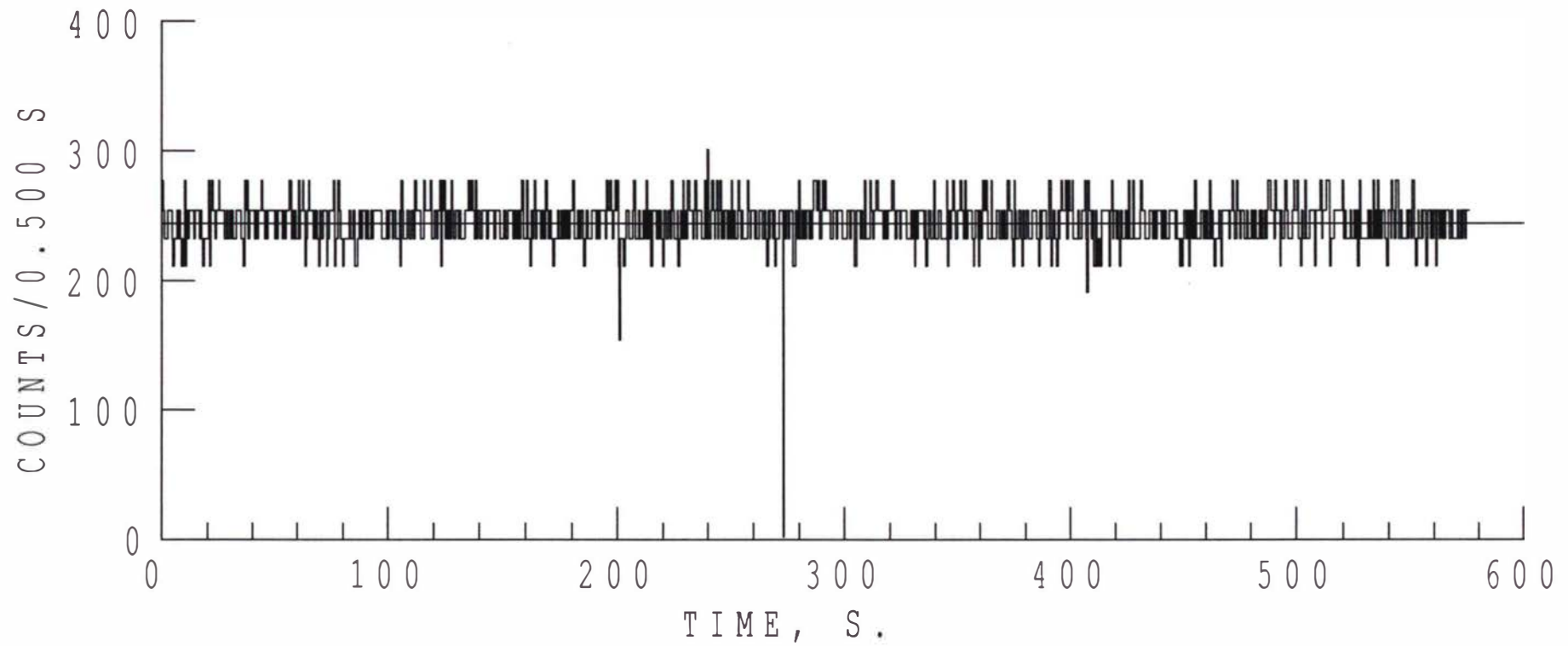
ULYSSES RT

5 / 12 / 95 21384.426 s

0 - 0 keV

W= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From HENZE@SSLLES.MSFC.NASA.GOV Thu Dec 7 09:27 PST 1995
From: HENZE@SSLLES.MSFC.NASA.GOV
Date: Thu, 7 Dec 1995 11:26:27 -0600 (CST)
To: burst@comptel.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov
X-Vmsmail-To: @mops\$send msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3933

TIME: TJD=0056 SECONDS=61871

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

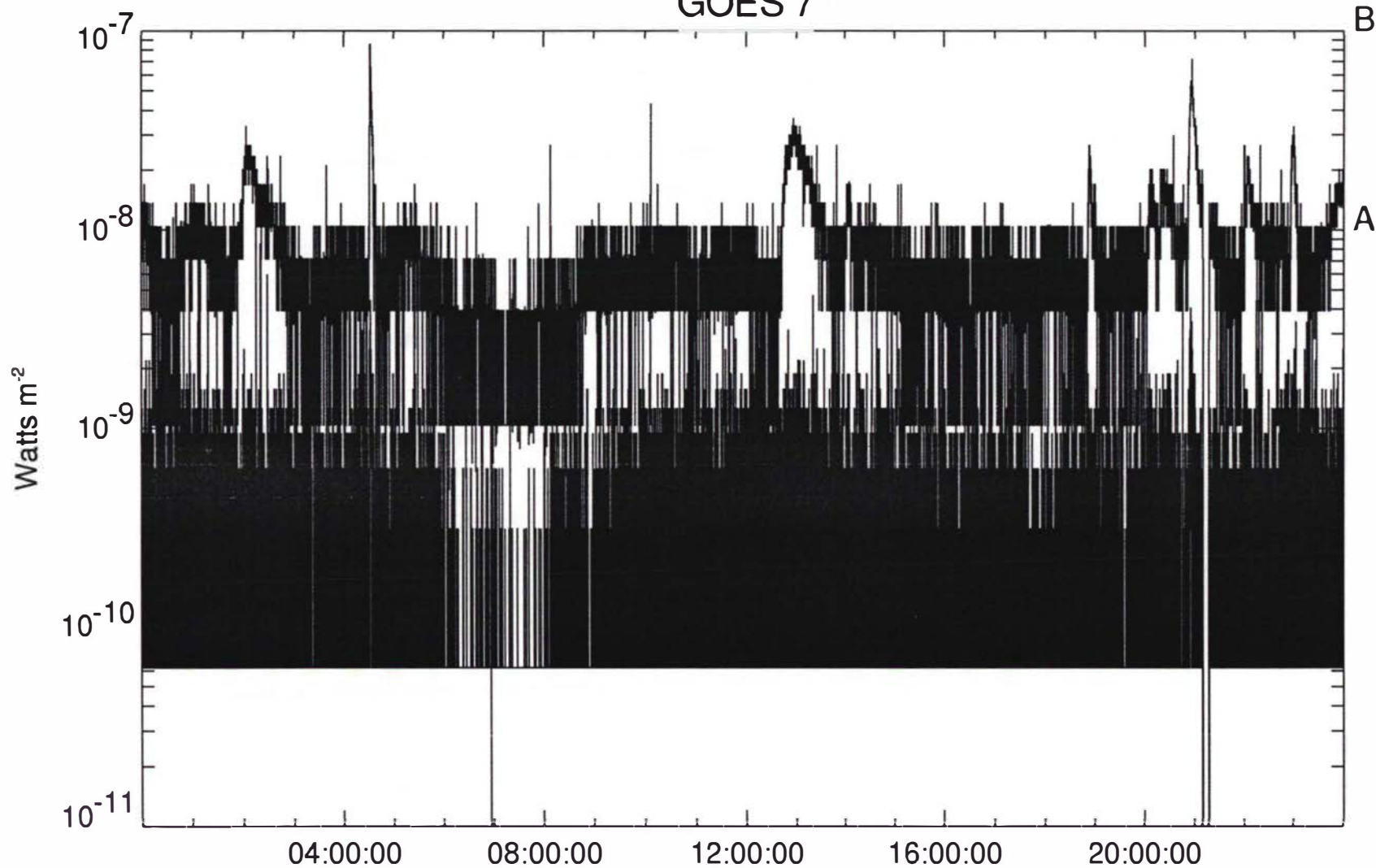
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

PARTICLE EVENT FOLLOWING SAA EXIT.

GOES 7



Data Start: 95/12/05, 0000:01

Plot created: 95/12/07, 0654

Channel

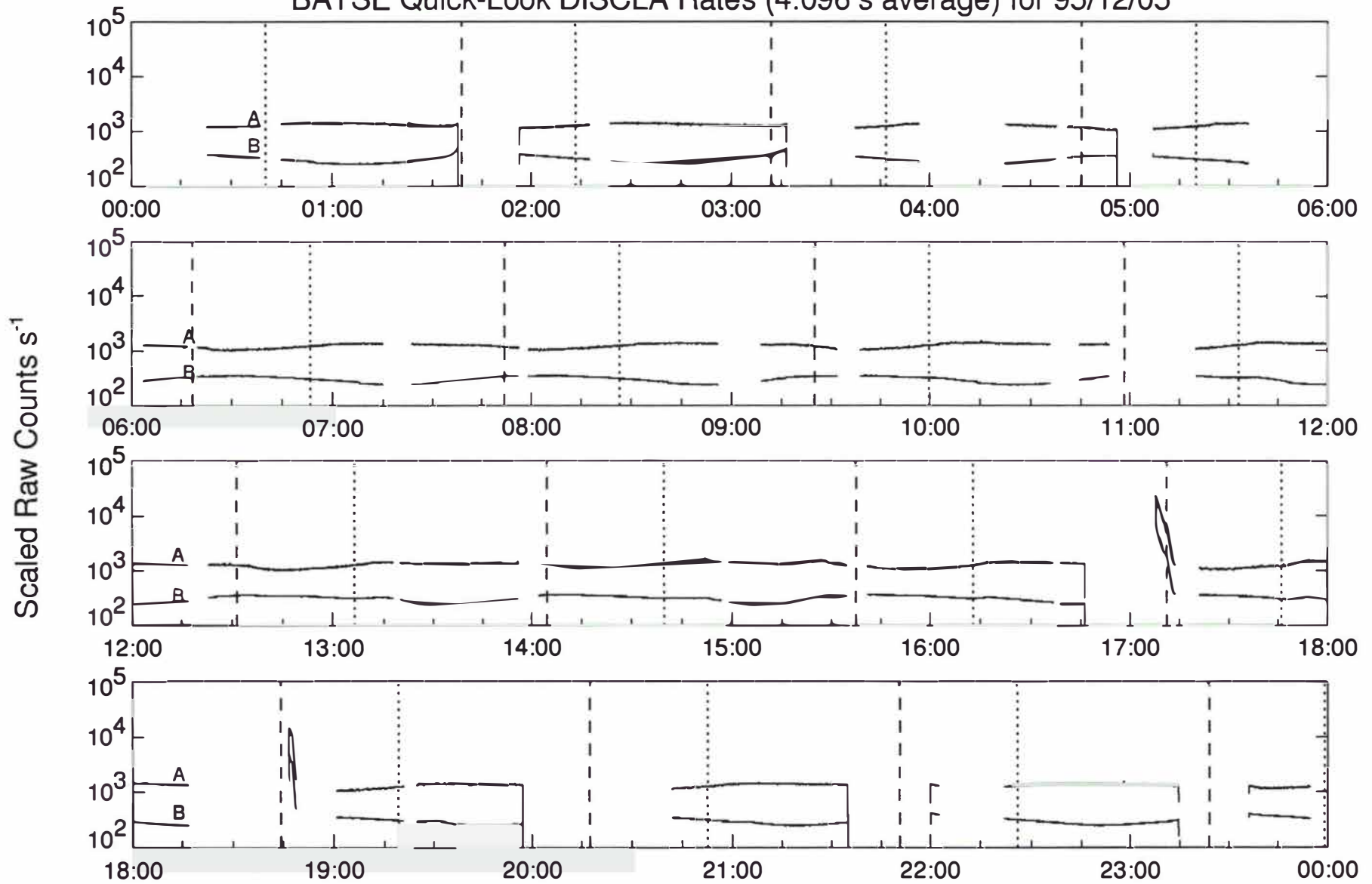
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/12/05



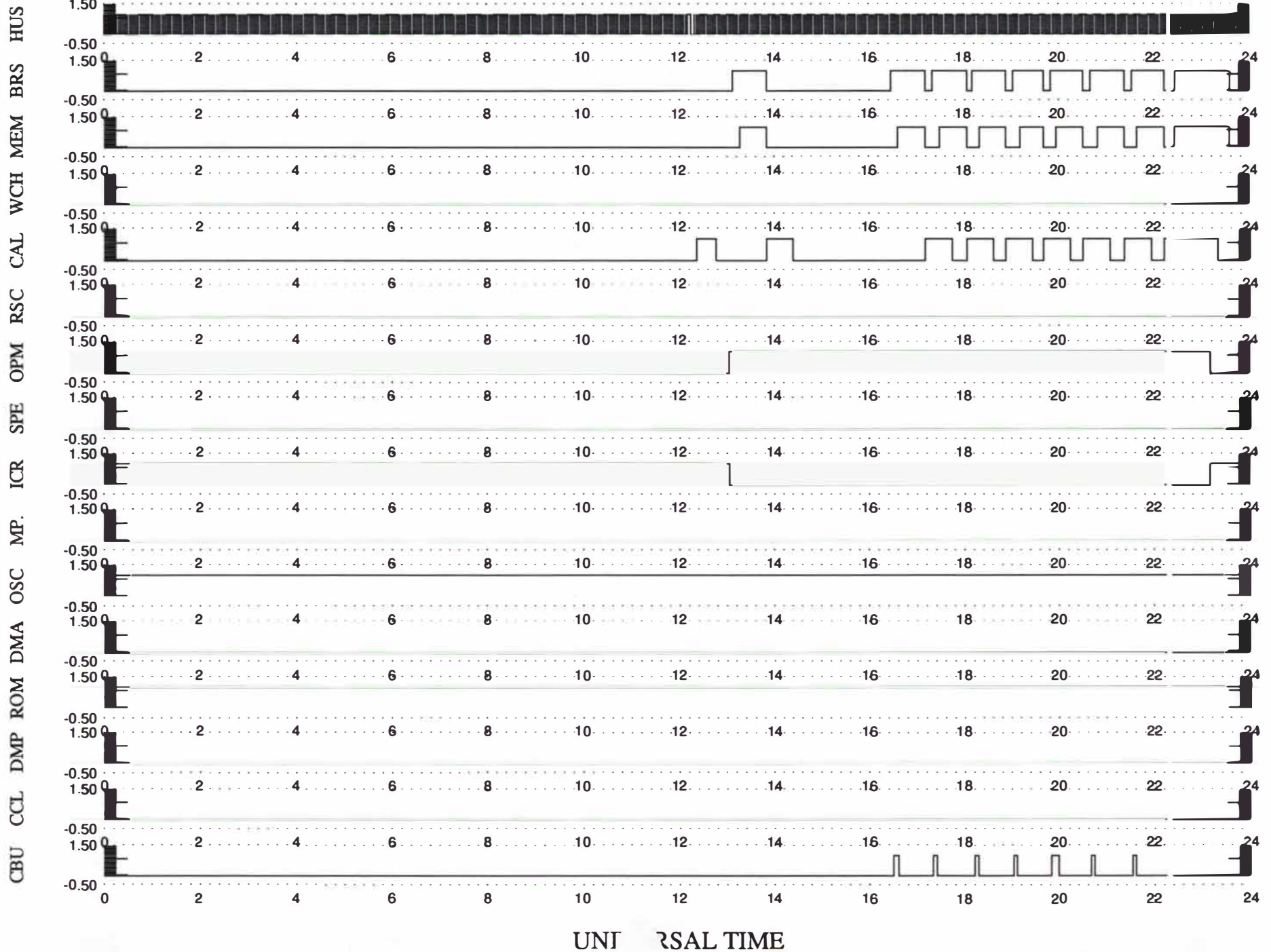
Current Time: 95/12/07, 0654 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

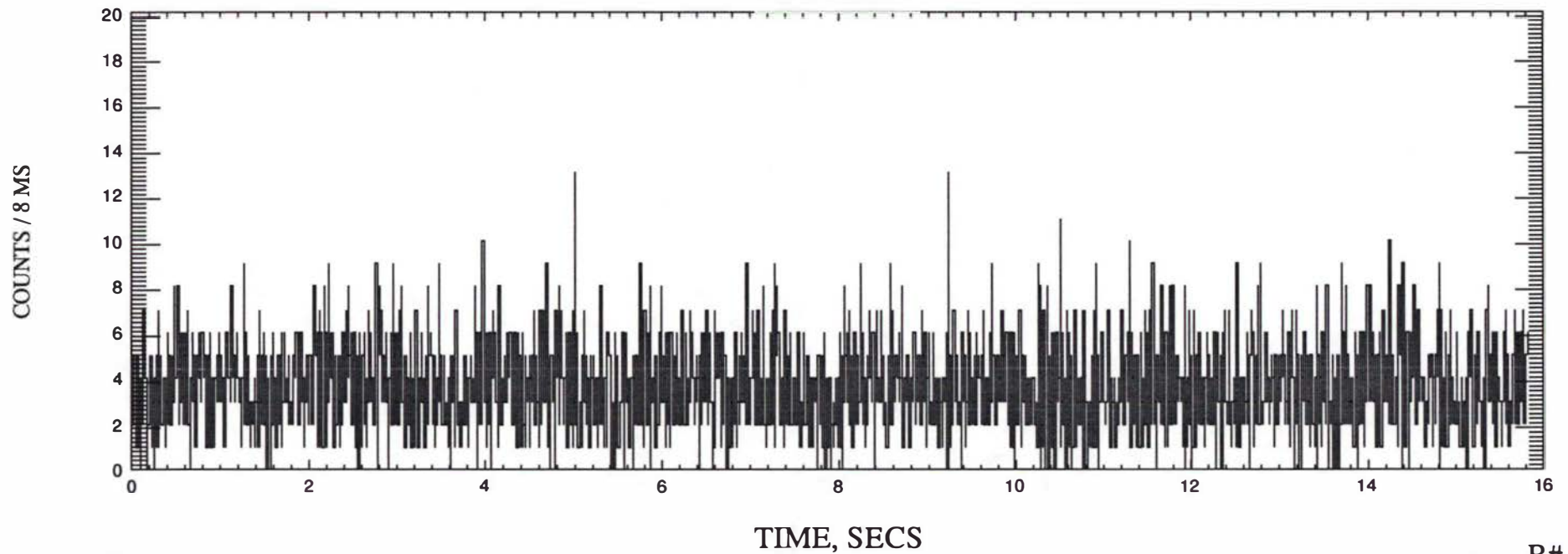
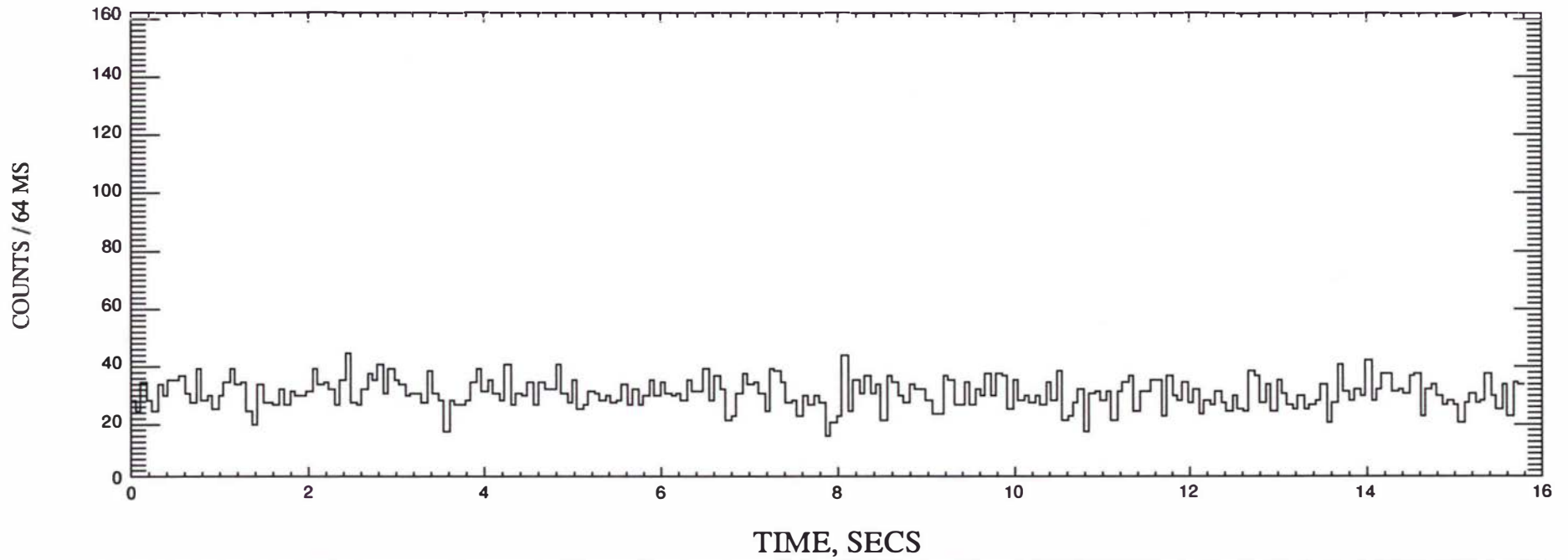
HUS MODES EDR day 339, year 1995 to day 339, year 1995
BURST NUMBER 10 - 15, 0 - 2

4/1/96



HUS 2A TRIGGERED DATA EDR day 339, year 1995
Burst Counter 10 at UT=13.109877963596 h=47195.561 s 13:06:35.561

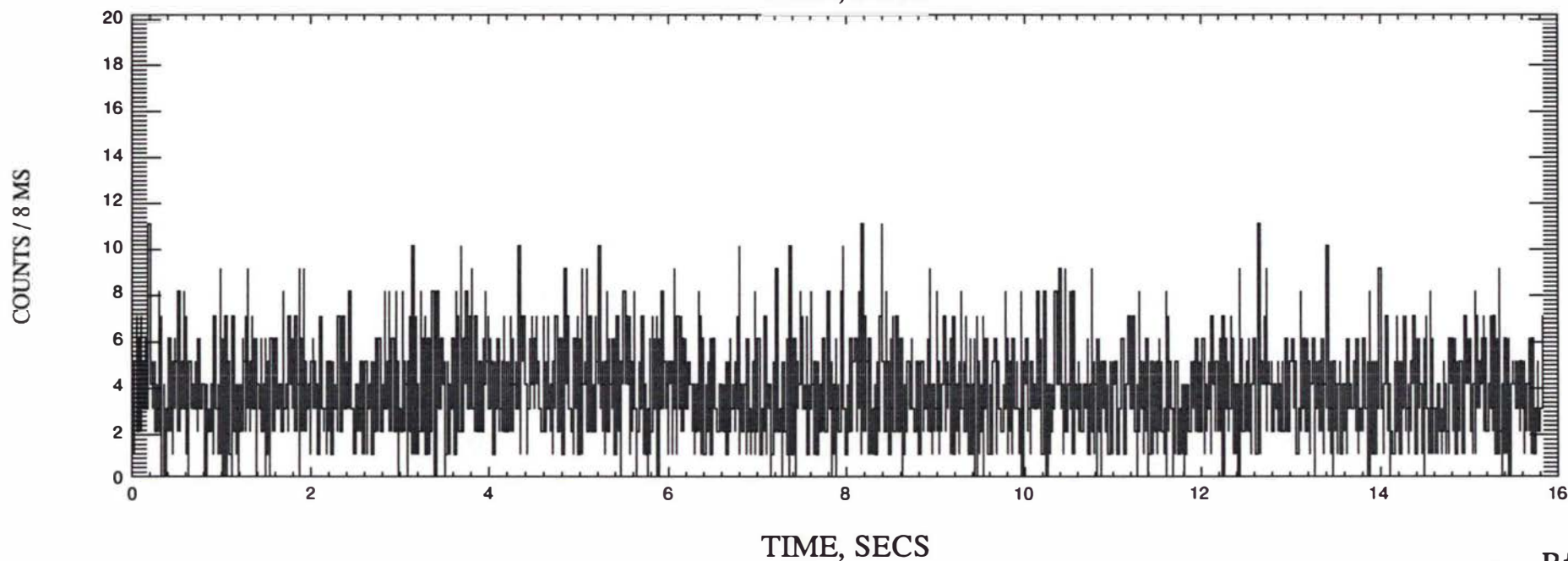
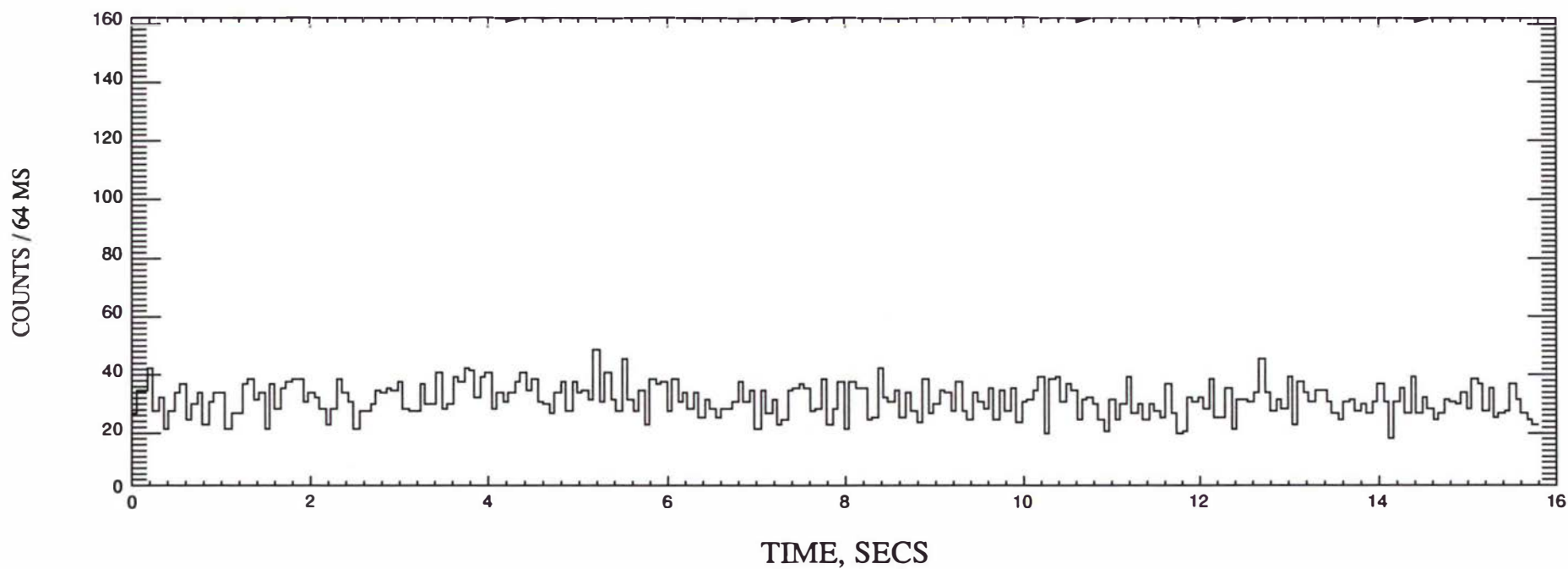
4/1/96



B# 1

HUS 2A TRIGGERED DATA EDR day 339, year 1995
Burst Counter 11 at UT=16.483102514479 h=59339.169 s 16:28:59.169

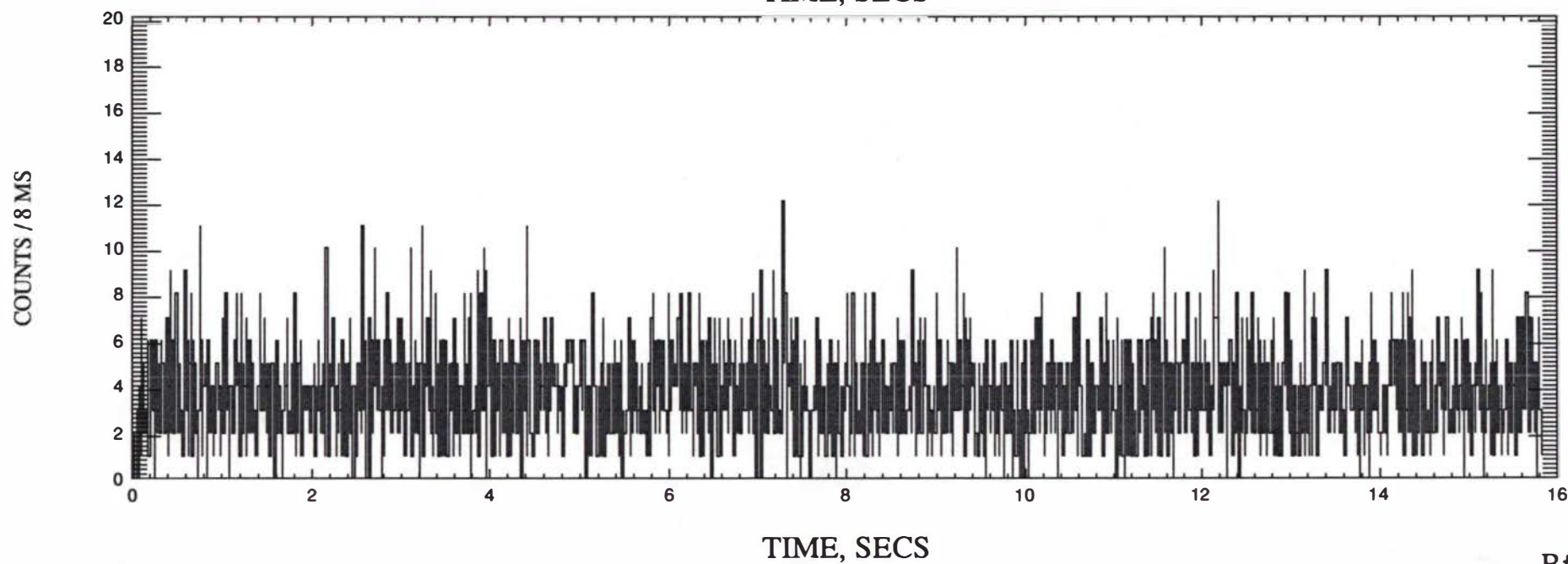
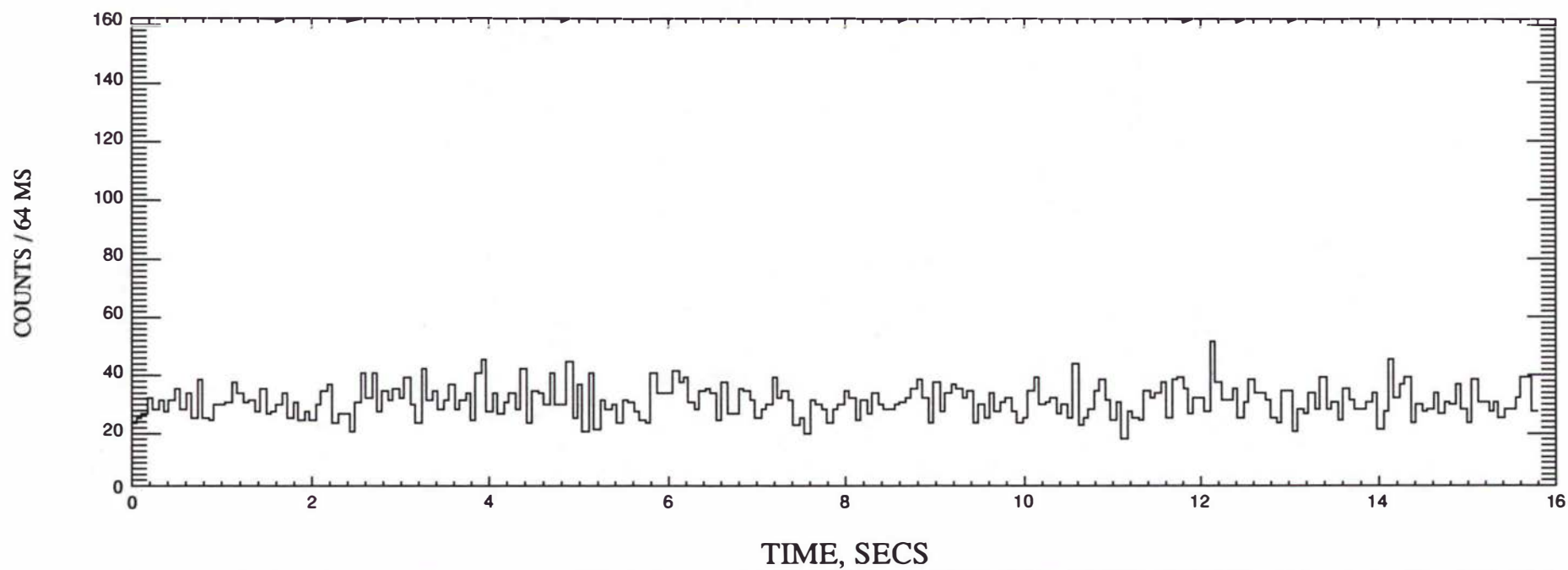
4/1/96



B# 2

HUS 2A TRIGGERED DATA EDR day 339, year 1995
Burst Counter 12 at UT=17.316449072096 h=62339.217 s 17:18:59.217

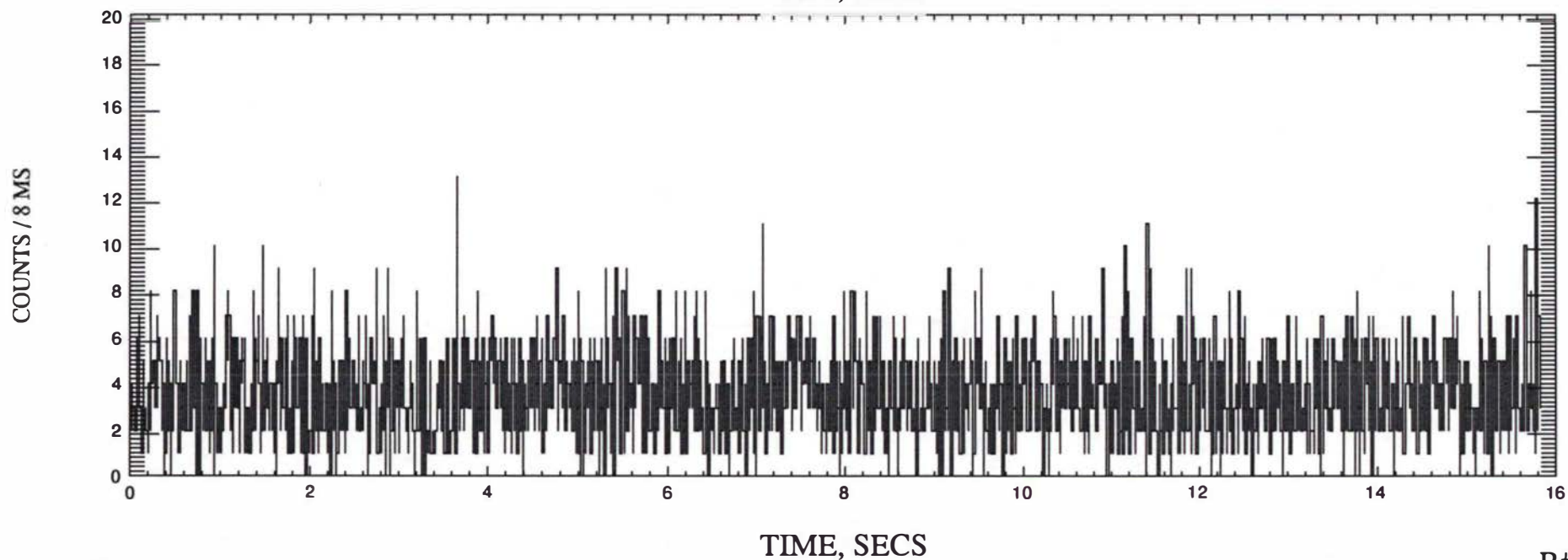
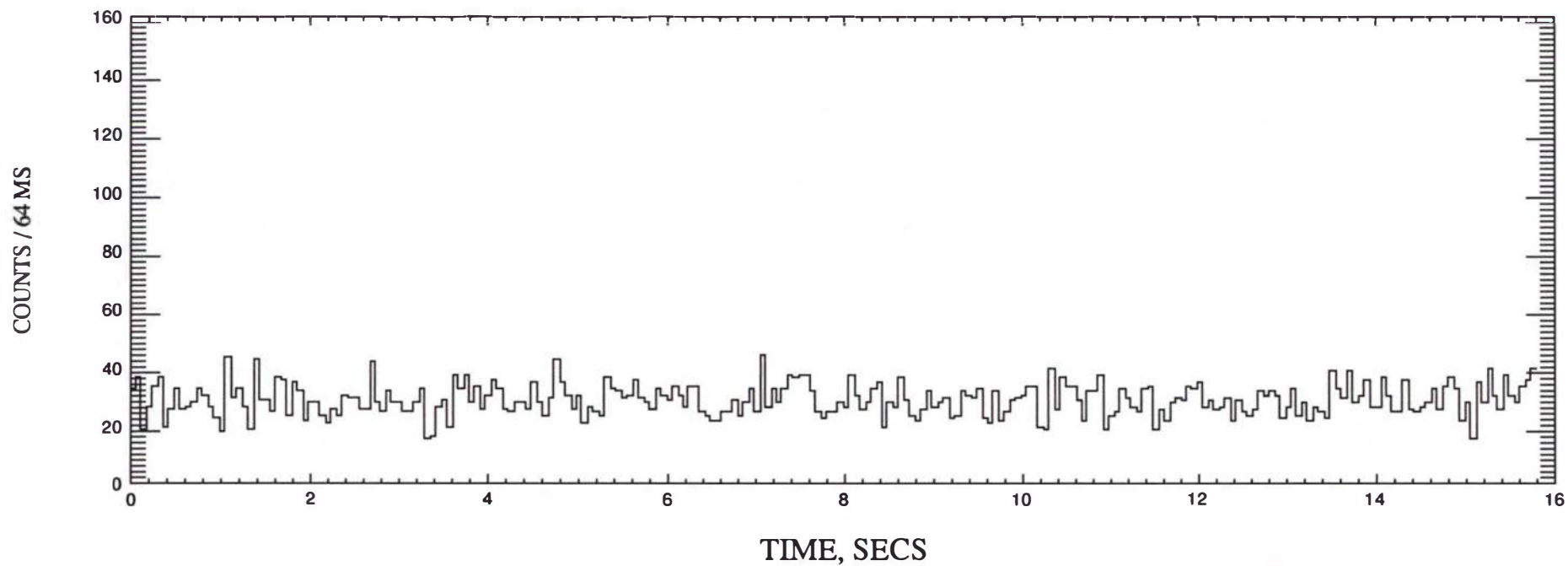
4/1/96



B# 3

HUS 2A TRIGGERED DATA EDR day 339, year 1995
Burst Counter 13 at UT=18.149760911730 h=65339.139 s 18:08:59.139

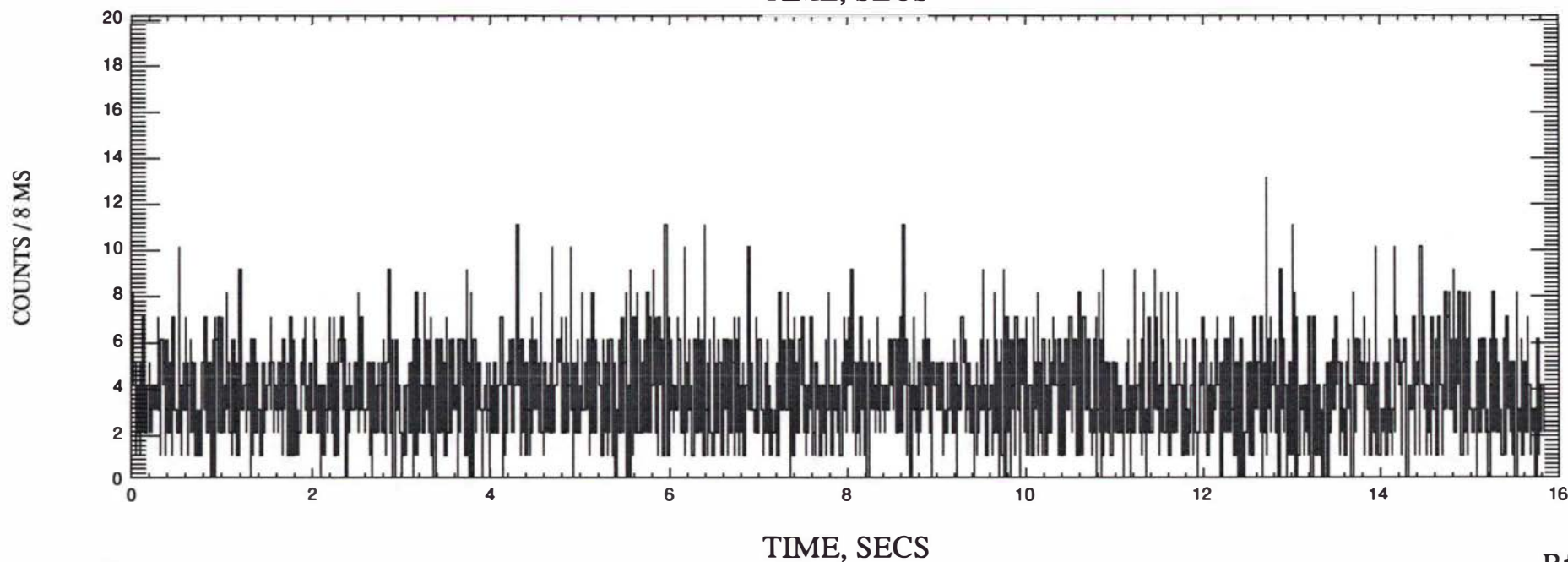
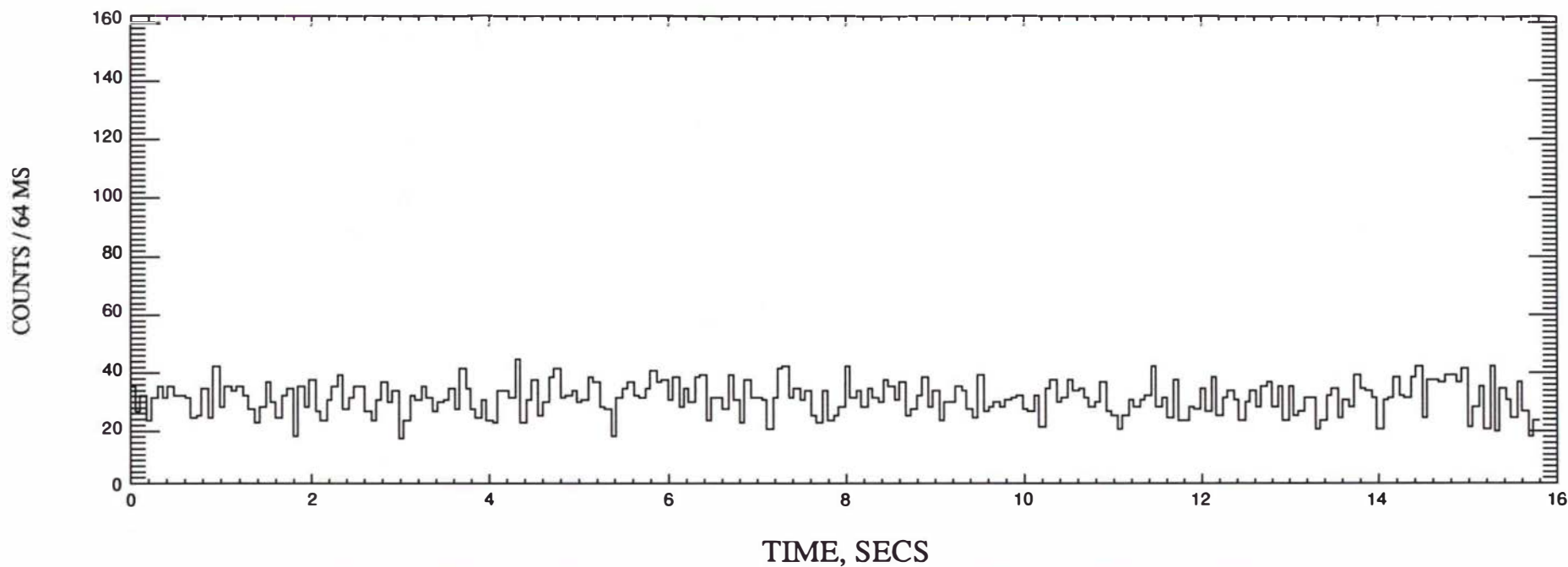
4/1/96



B# 4

HUS 2A TRIGGERED DATA EDR day 339, year 1995
Burst Counter 14 at UT=18.983107469347 h=68339.187 s 18:58:59.187

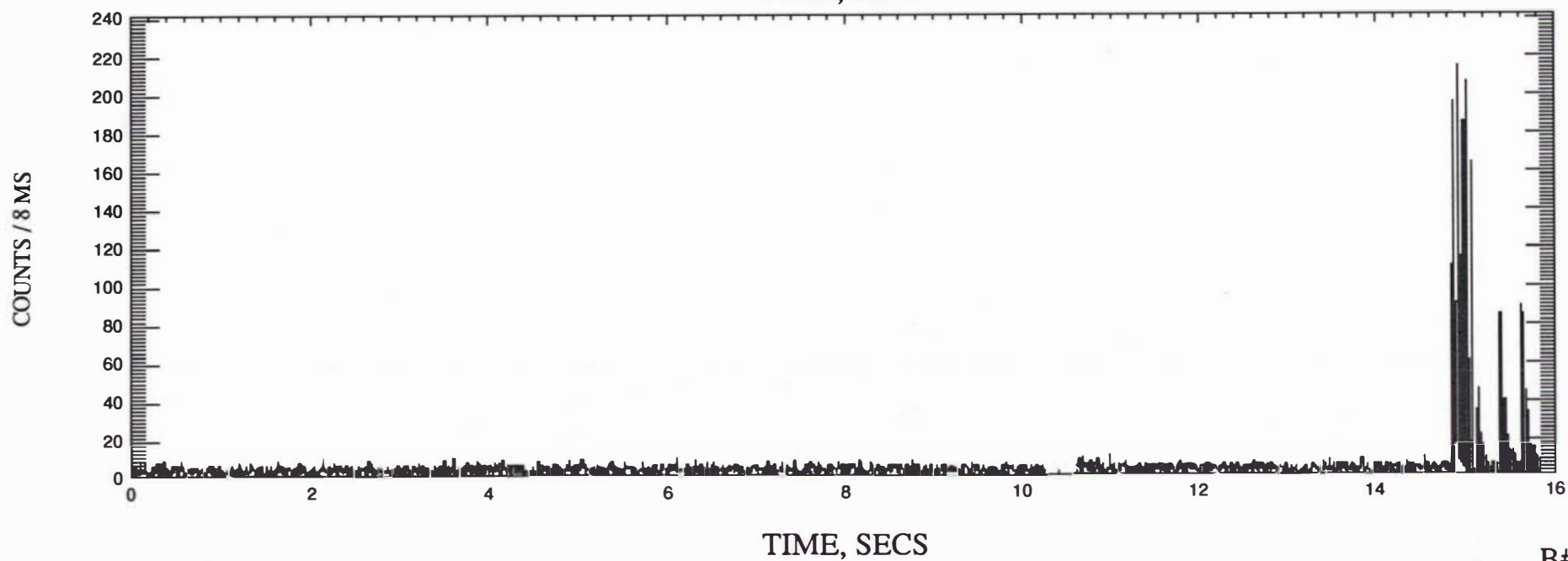
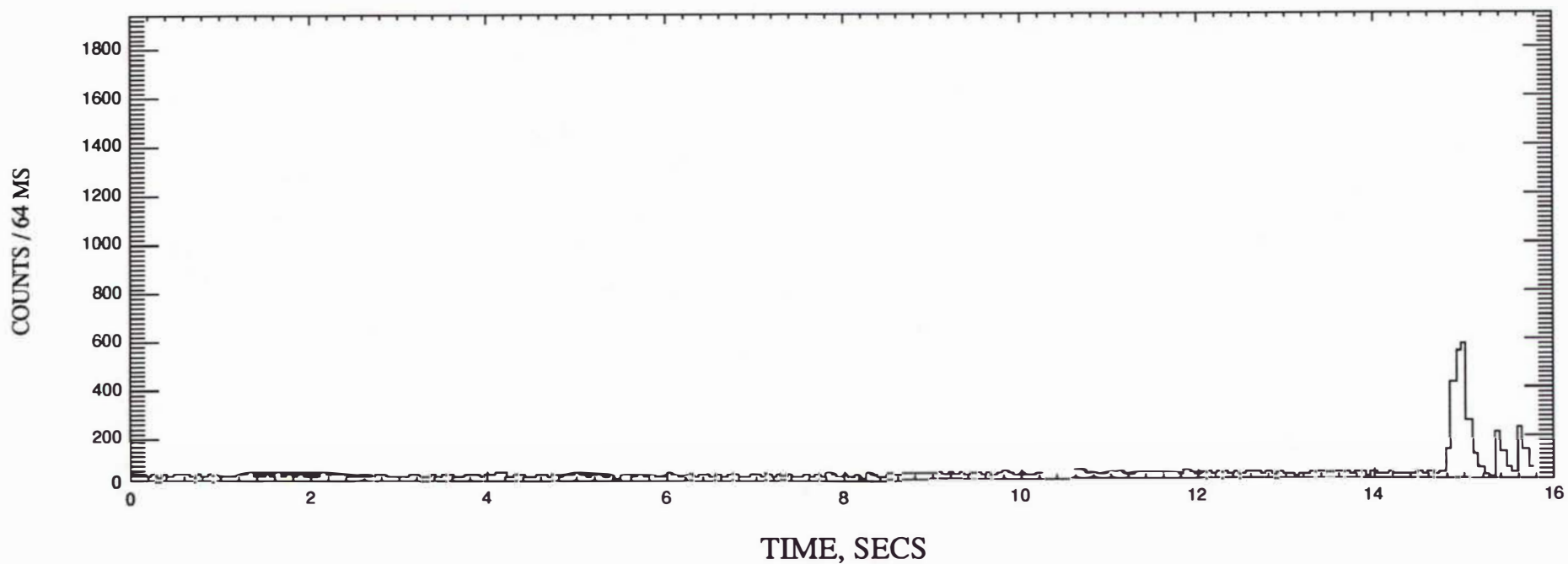
4/1/96



B# 5

HUS 2A TRIGGERED DATA EDR day 339, year 1995
Burst Counter 15 at UT=19.816452929179 h=71339.231 s 19:48:59.231

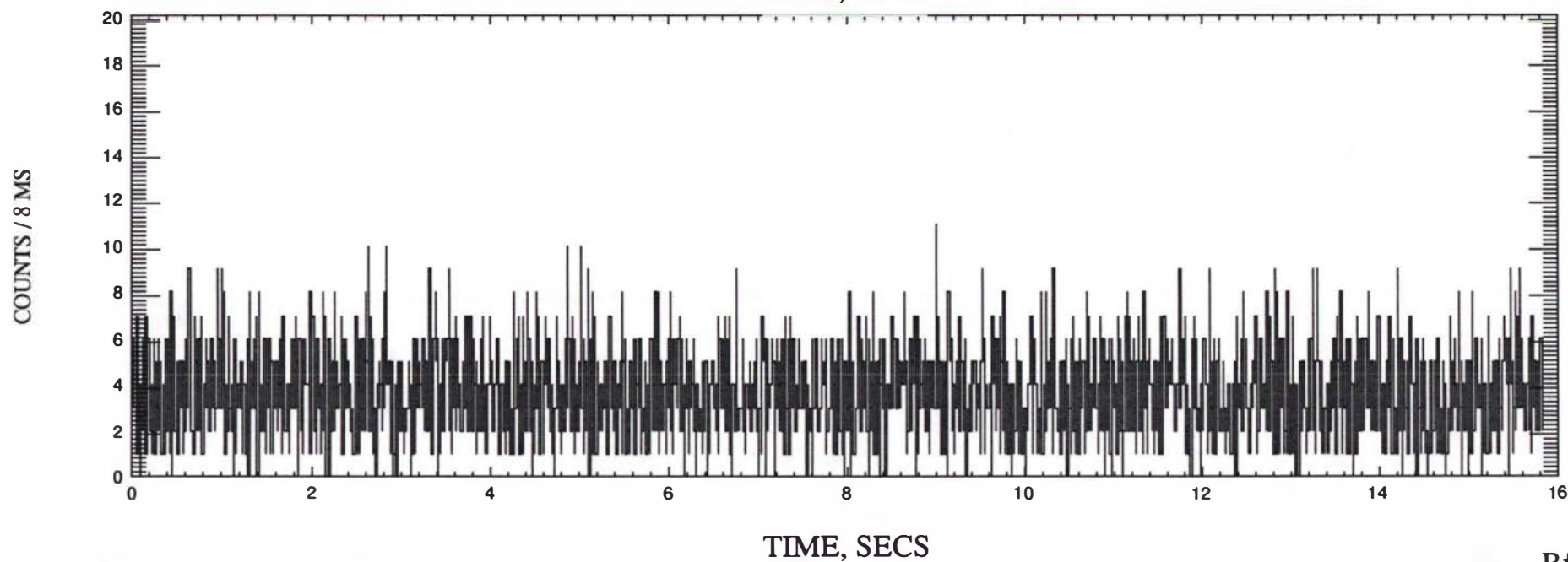
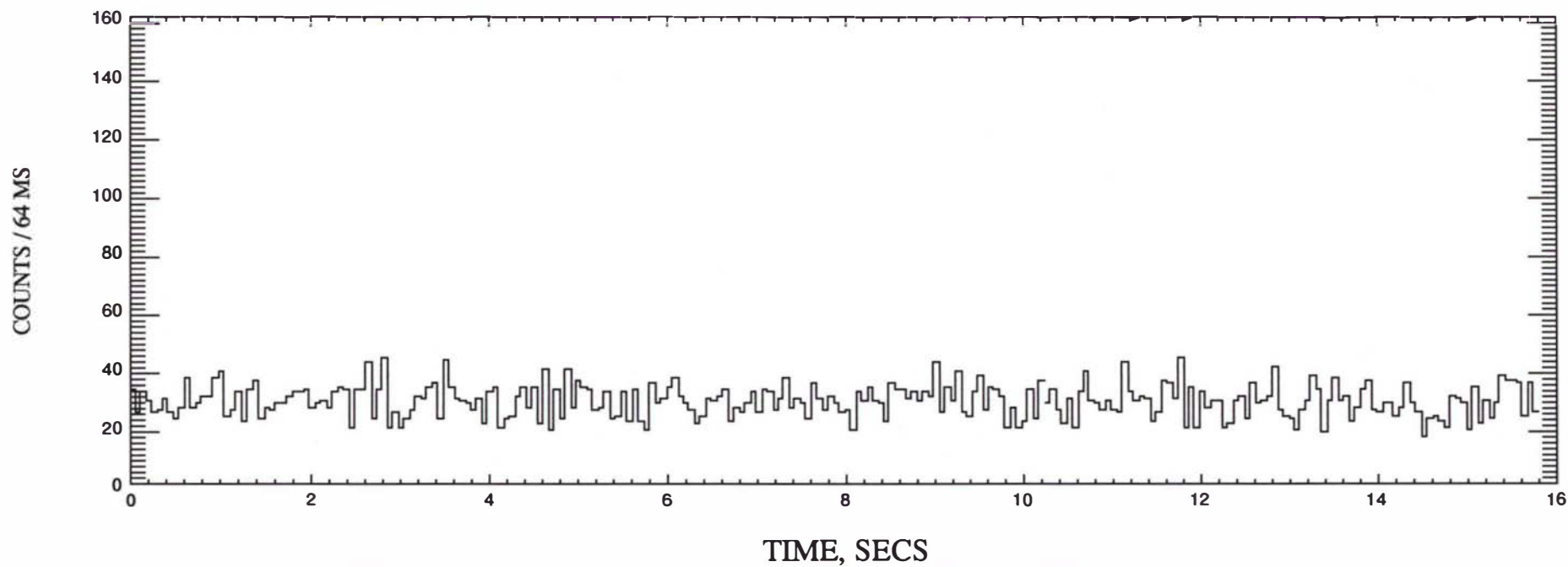
4/1/96



B# 6

HUS 2A TRIGGERED DATA EDR day 339, year 1995
Burst Counter 0 at UT=20.649765040080 h=74339.154 s 20:38:59.154

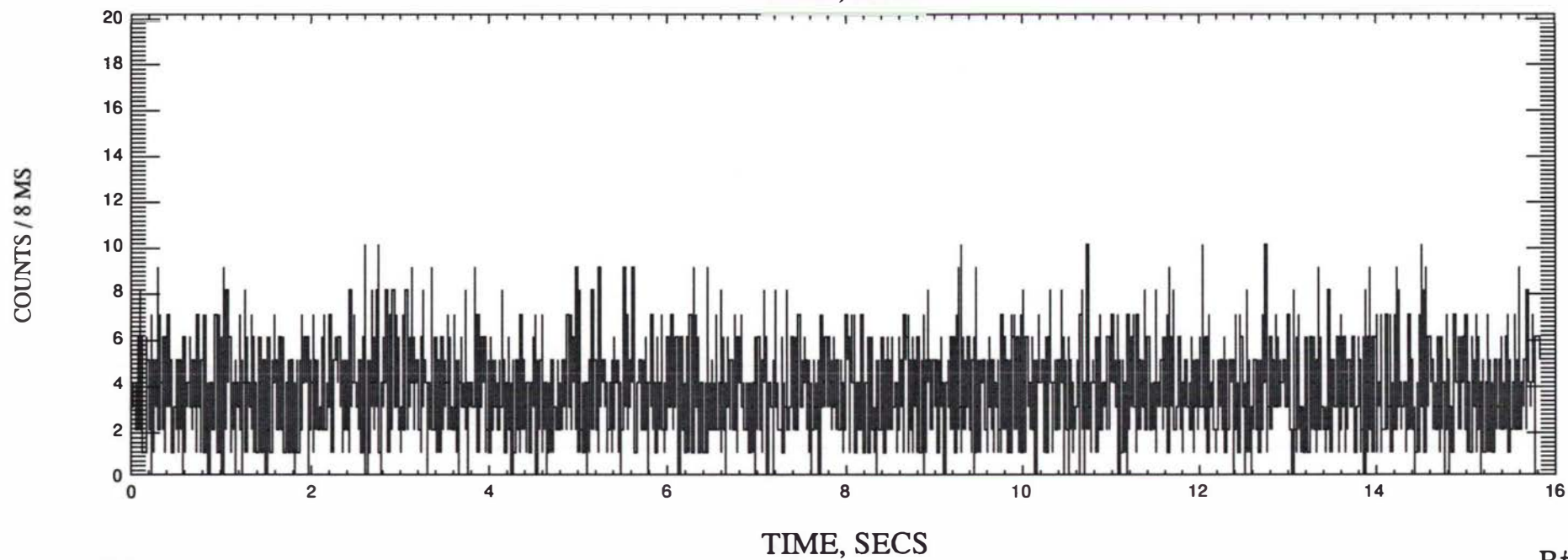
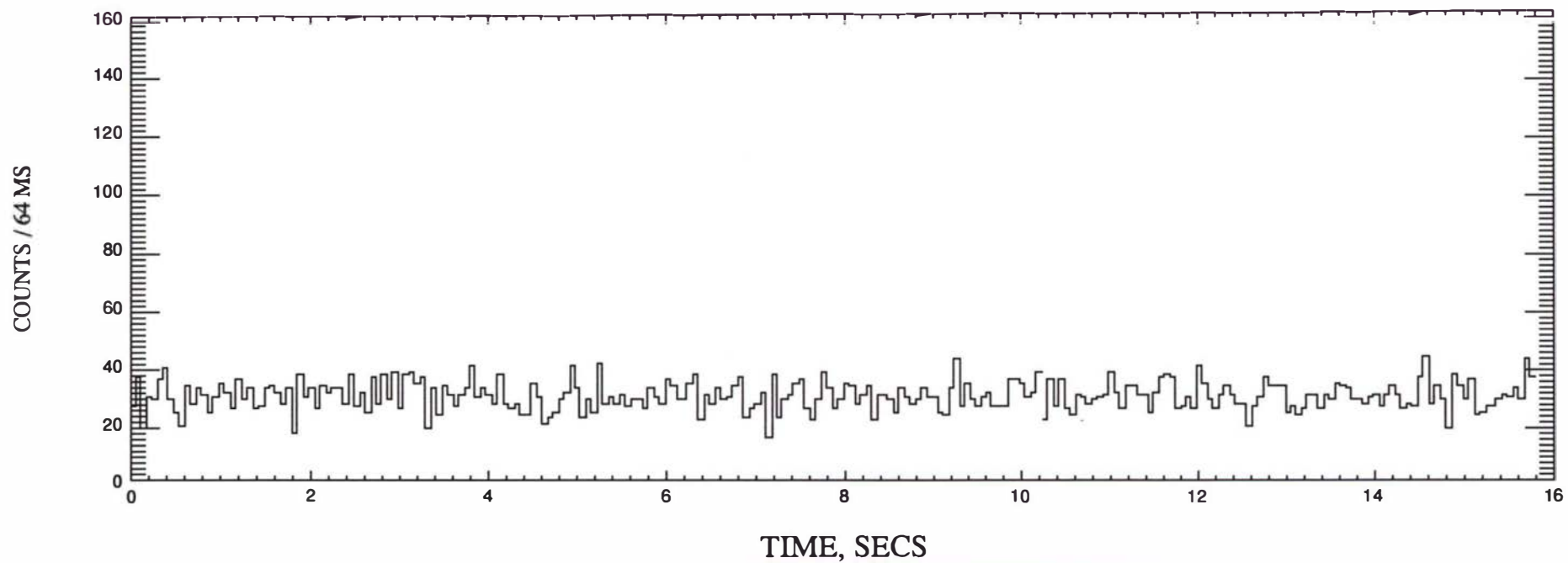
4/1/96



B# 7

HUS 2A TRIGGERED DATA EDR day 339, year 1995
Burst Counter 1 at UT=21.483076879713 h=77339.077 s 21:28:59.077

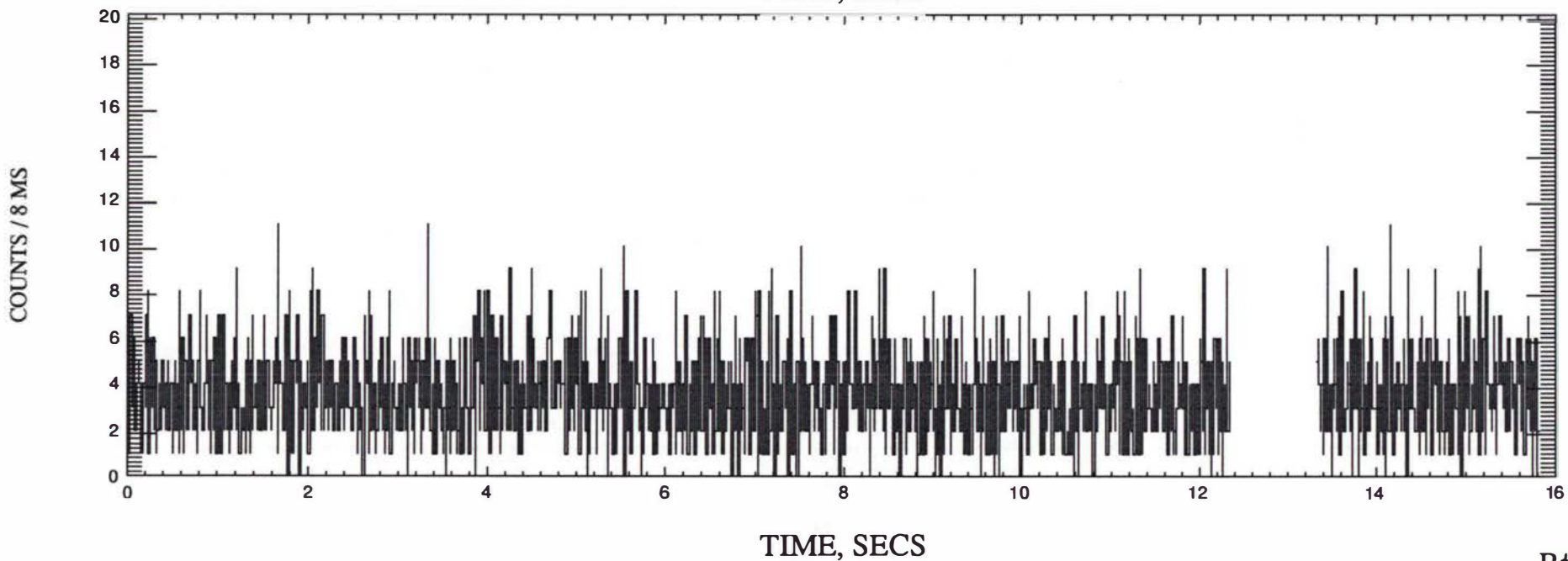
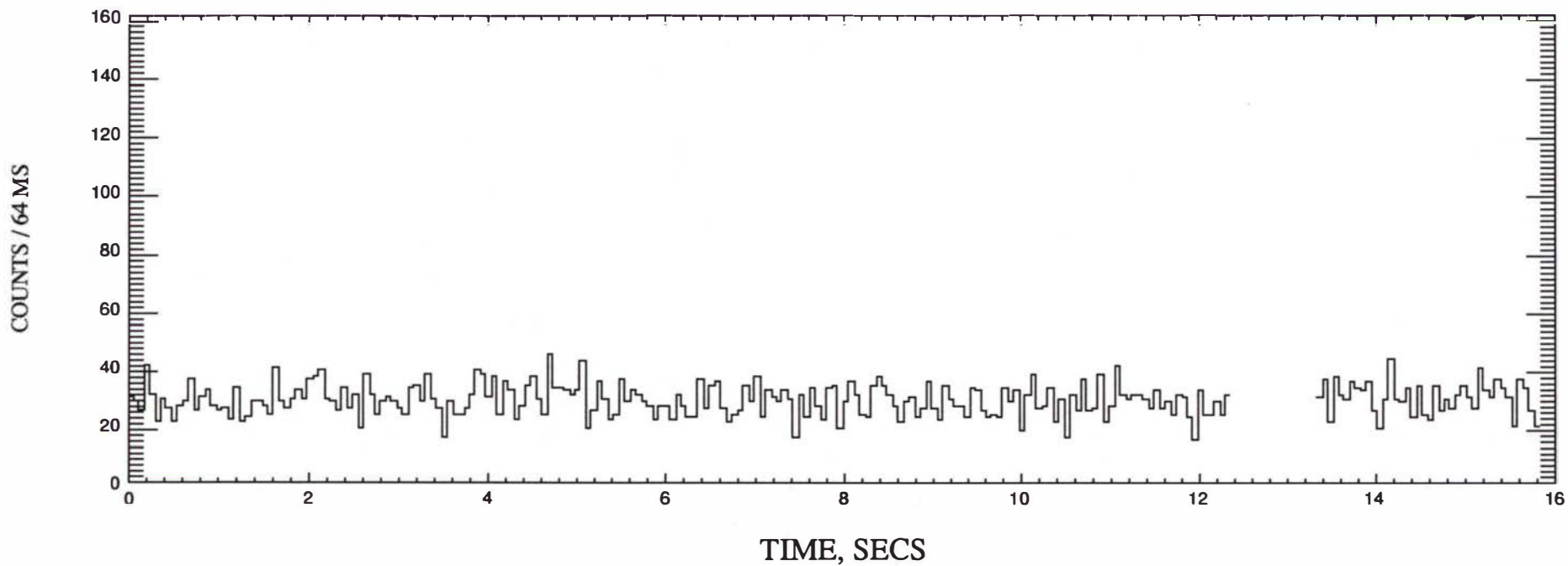
4/1/96



B# 8

HUS 2A TRIGGERED DATA EDR day 339, year 1995
Burst Counter 2 at UT=22.245310122172 h=80083.116 s 22:14:43.116

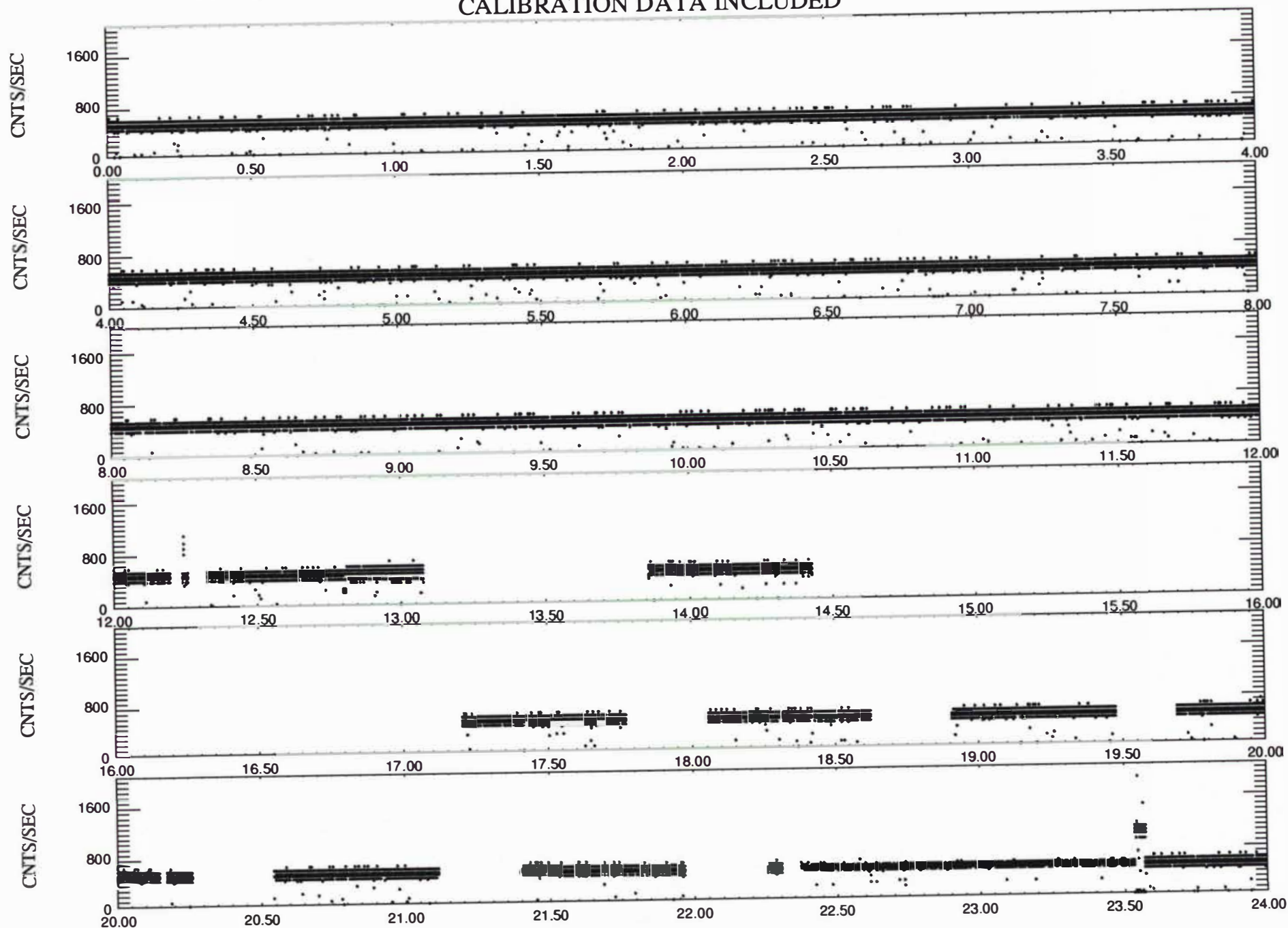
4/1/96



B# 9

HUS 2A, MODE 1, NOT AVERAGED EDR day 339, year 1995 to day 339, year 1995
 CALIBRATION DATA INCLUDED

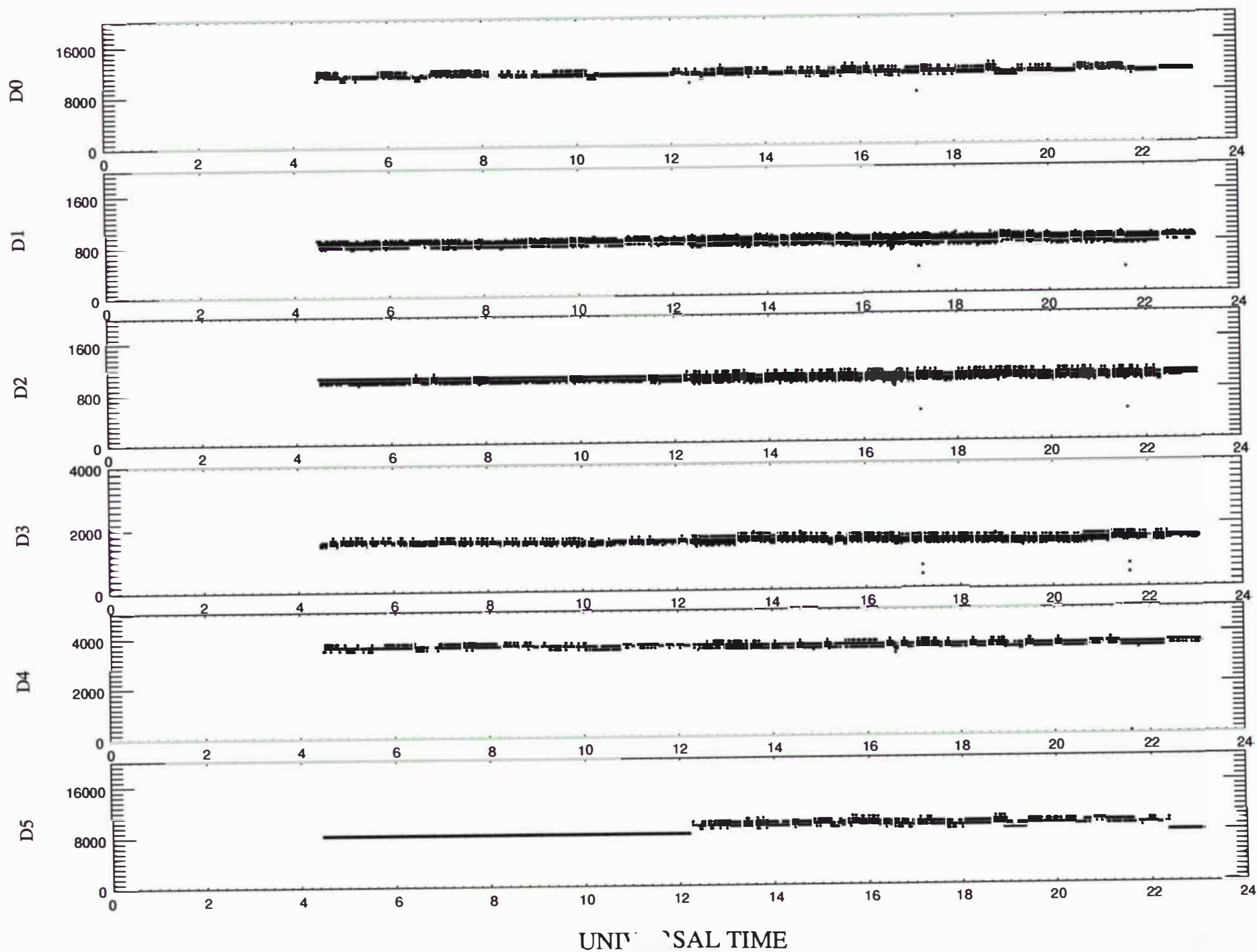
4/1/96



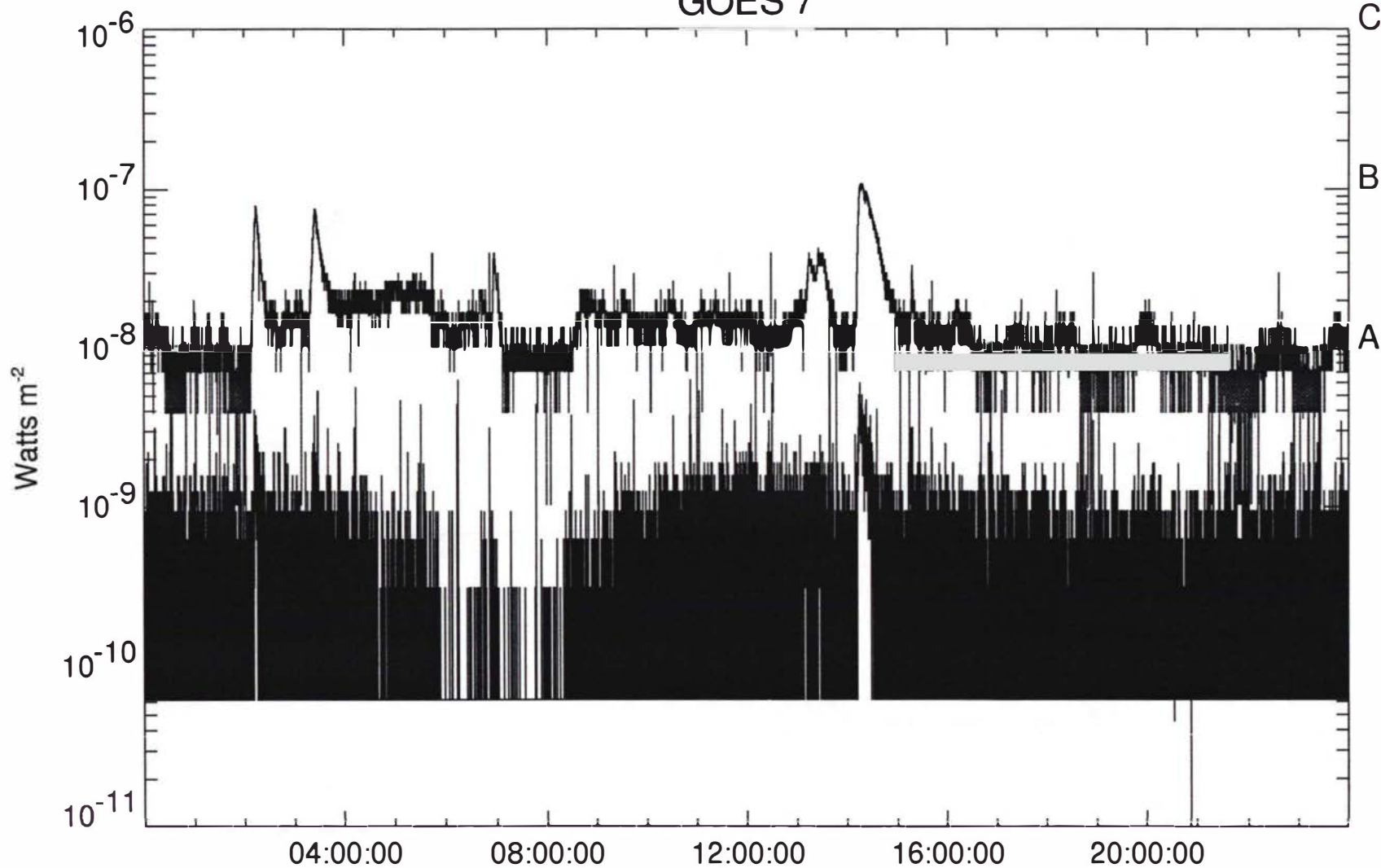
UNIVERSAL TIME

HUS 2B COUNTS / SEC QEDR day 339, year 1995 to day 339, year 1995

12/6/95



GOES 7



Data Start: 95/12/06, 0000:02

Plot created: 95/12/08, 0652

Channel

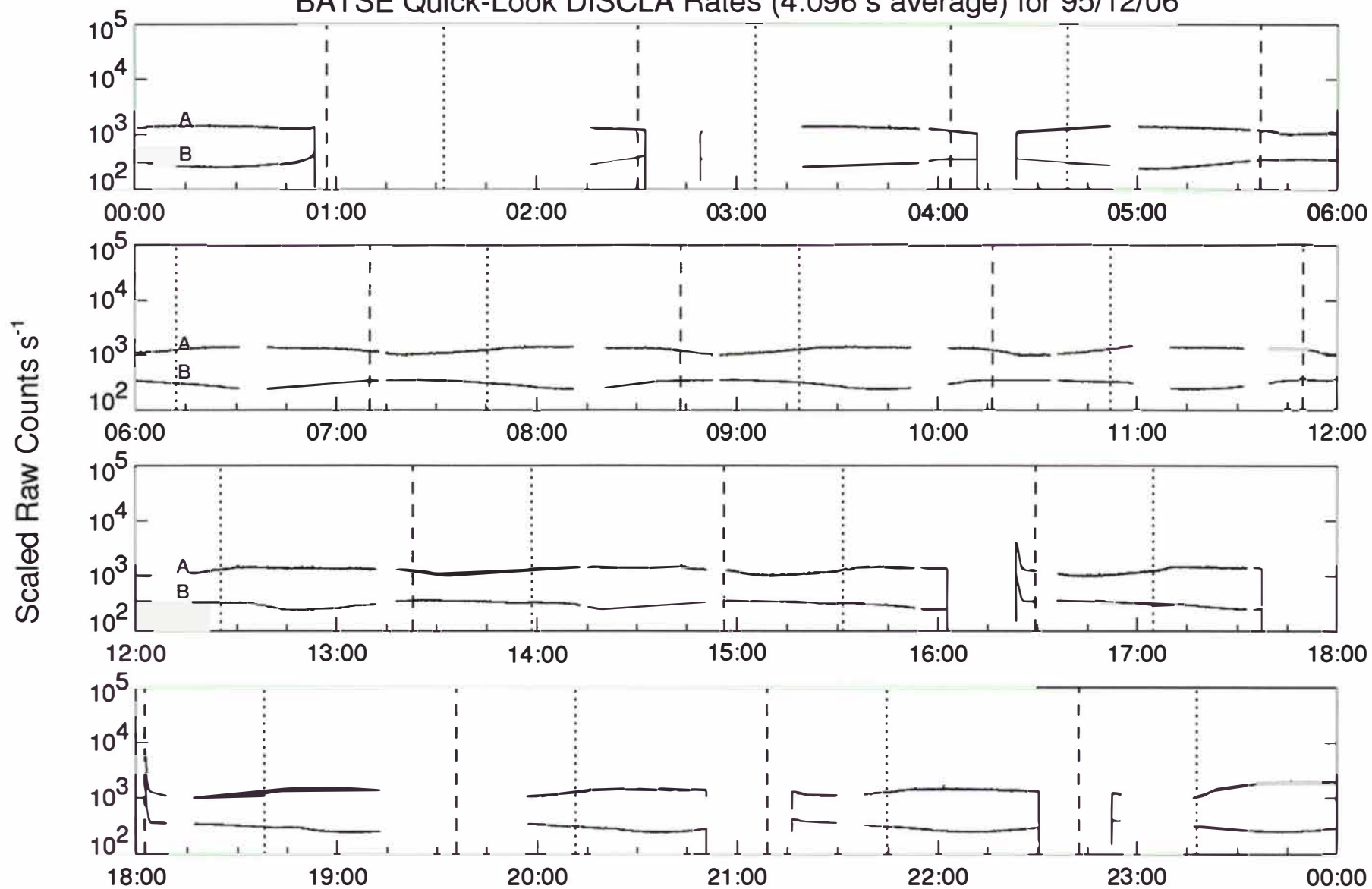
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/12/06



Current Time: 95/12/08, 0652 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

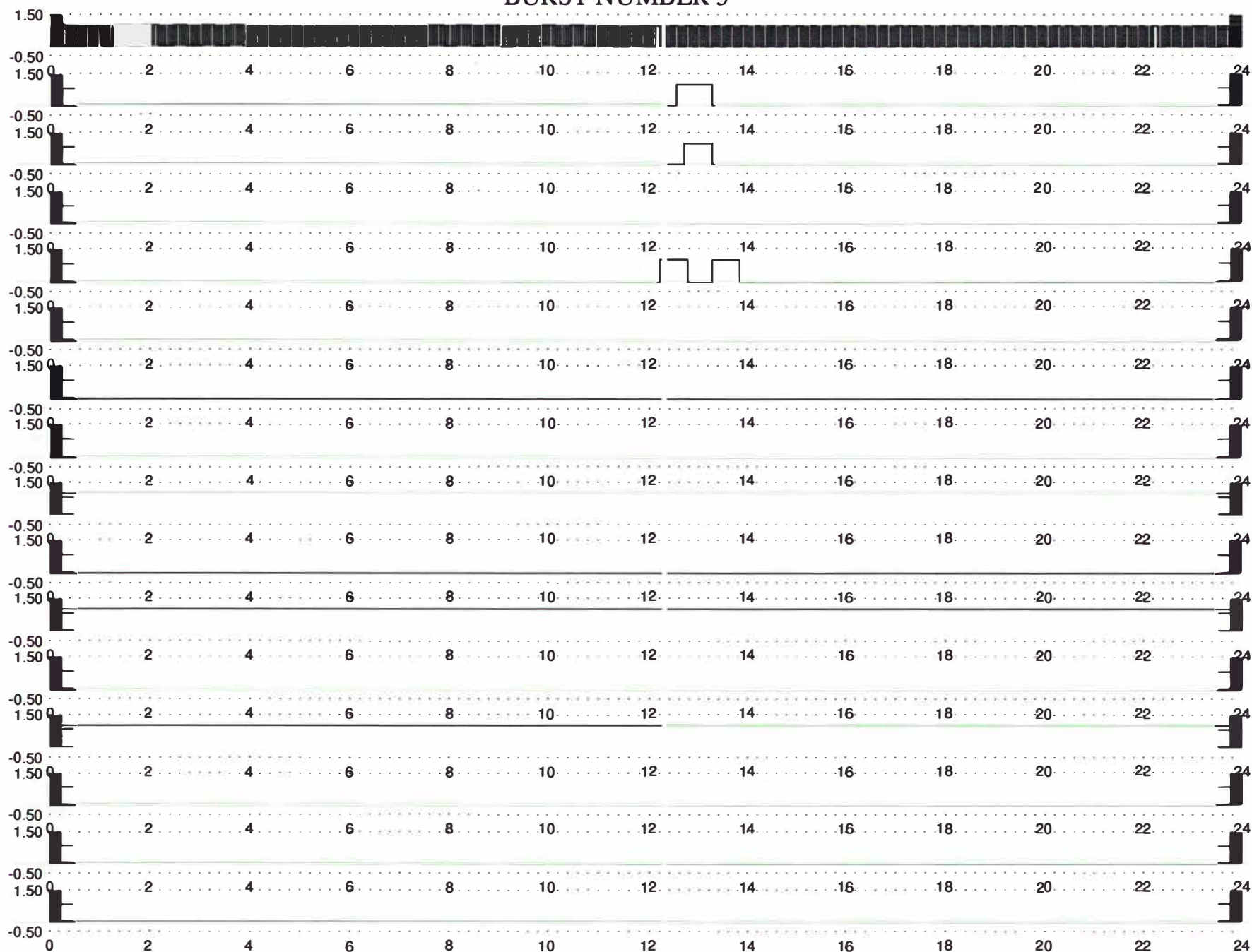
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

HUS MODES EDR day 340, year 1995 to day 340, year 1995 BURST NUMBER 3

4/1/96

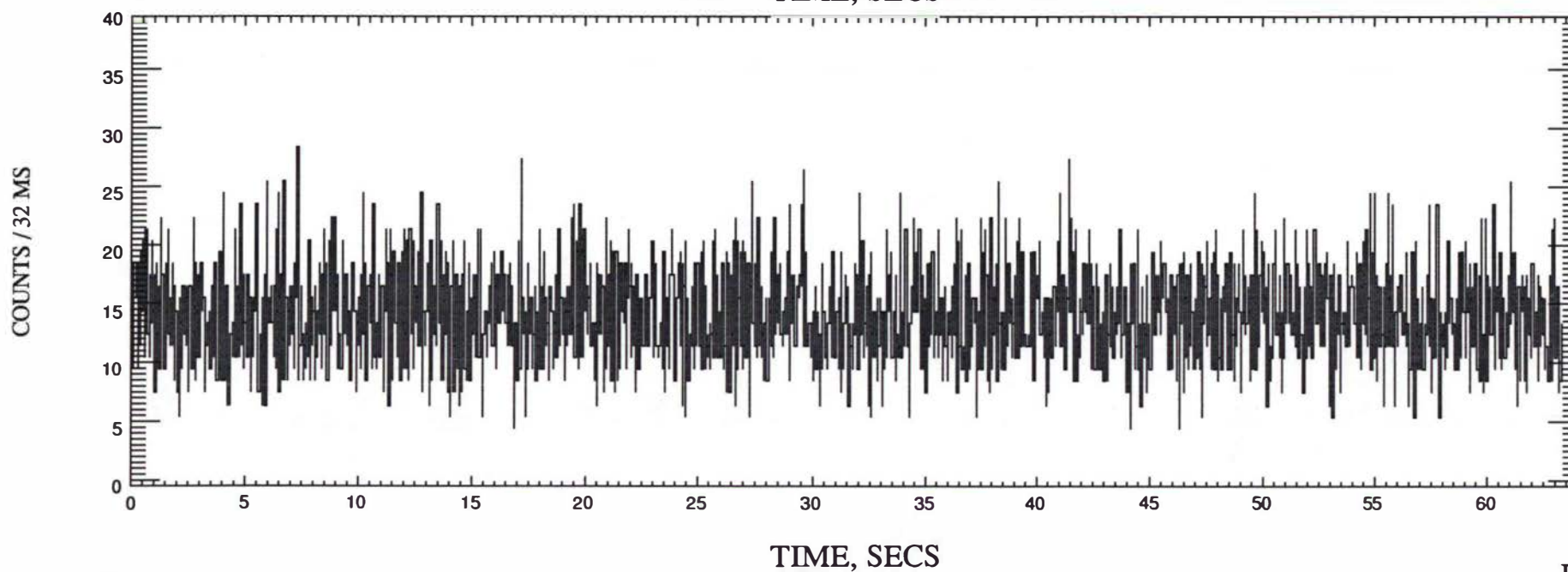
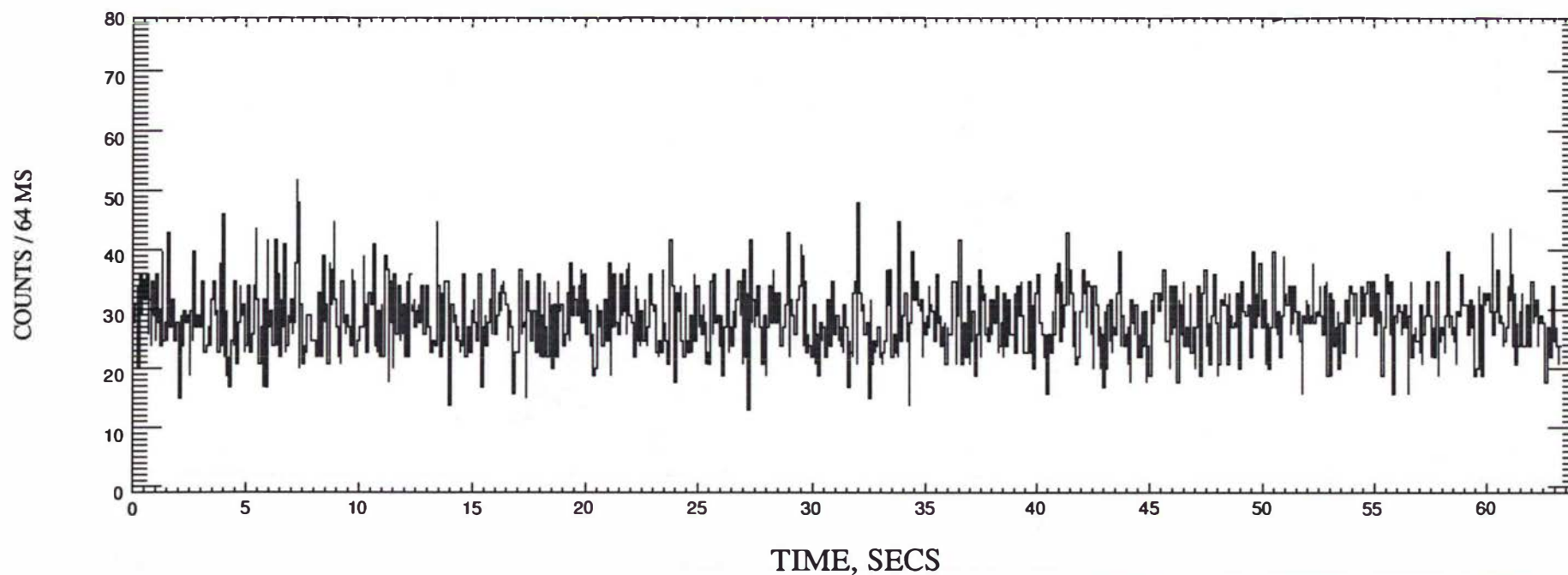
CBU CCL DMP ROM DMA OSC MP. ICR SPE OPM RSC CAL WCH MEM BRS HUS



UNITSAL TIME

HUS 2A TRIGGERED DATA EDR day 340, year 1995
Burst Counter 3 at UT=12.566320258247 h=45238.753 s 12:33:58.753

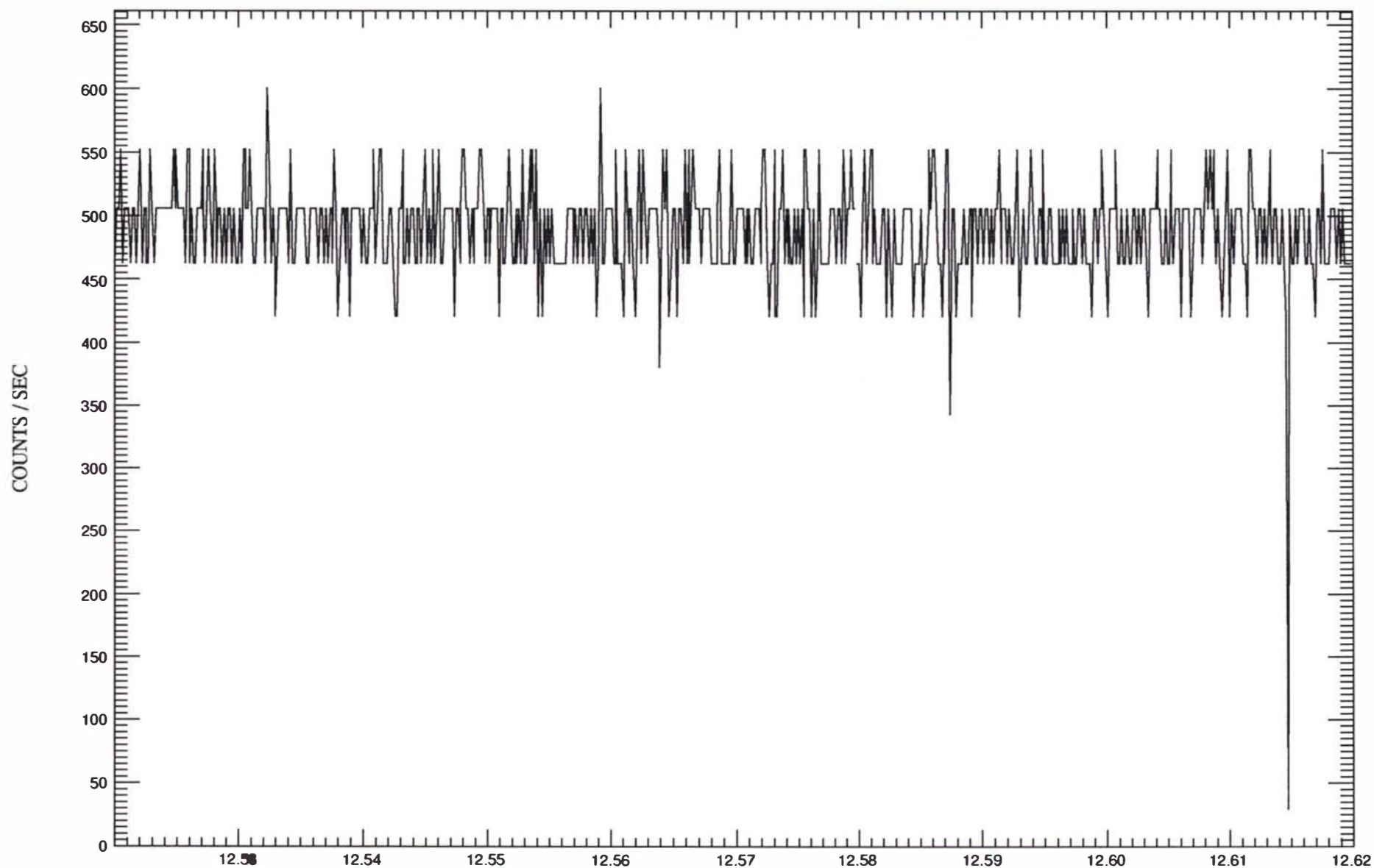
4/1/96



B# 1

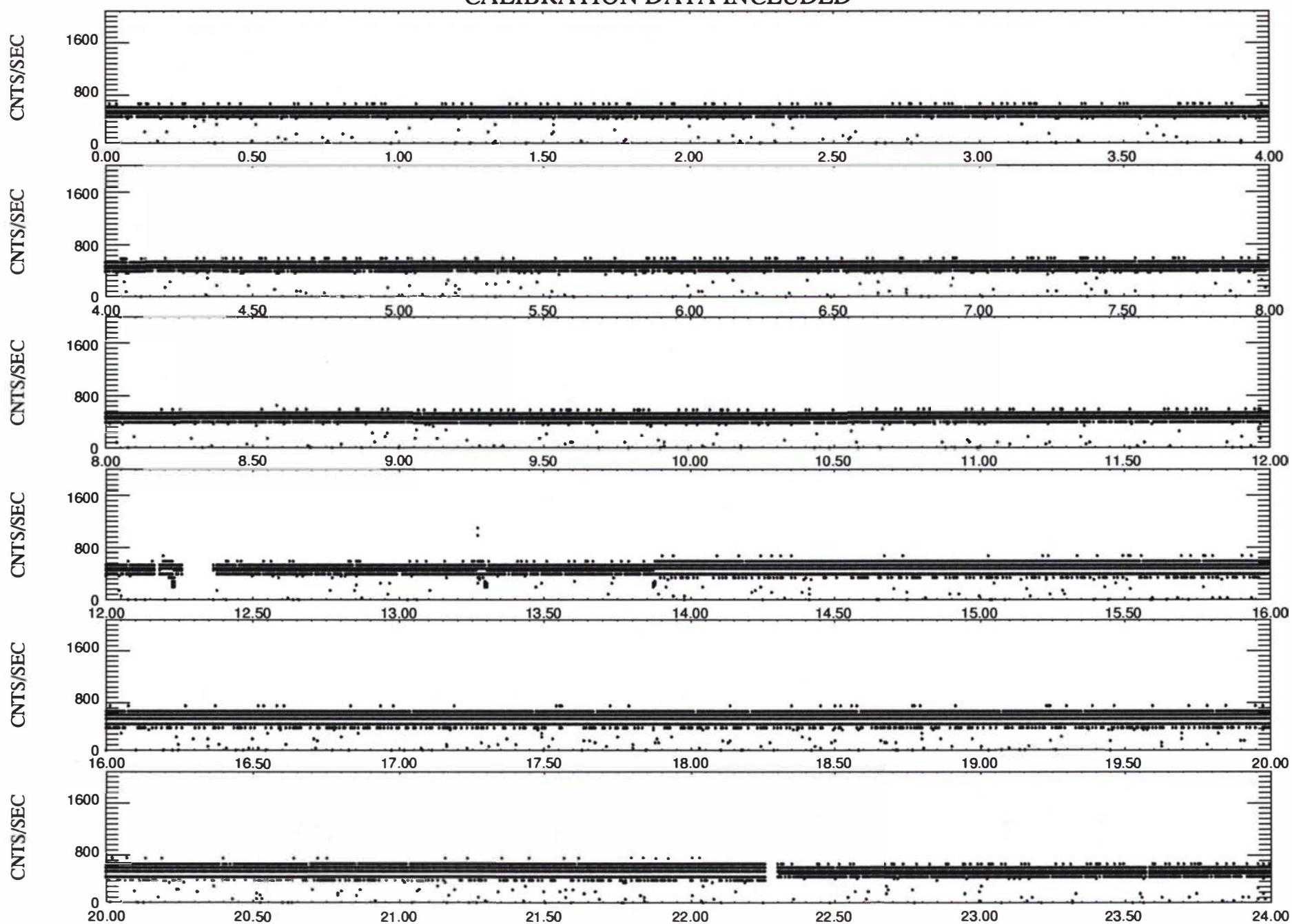
HUS 2A, MODE 1, NOT AVERAGED QEDR day 340, year 1995 to day 340, year 1995
CALIBRATION DATA INCLUDED

12/8/95

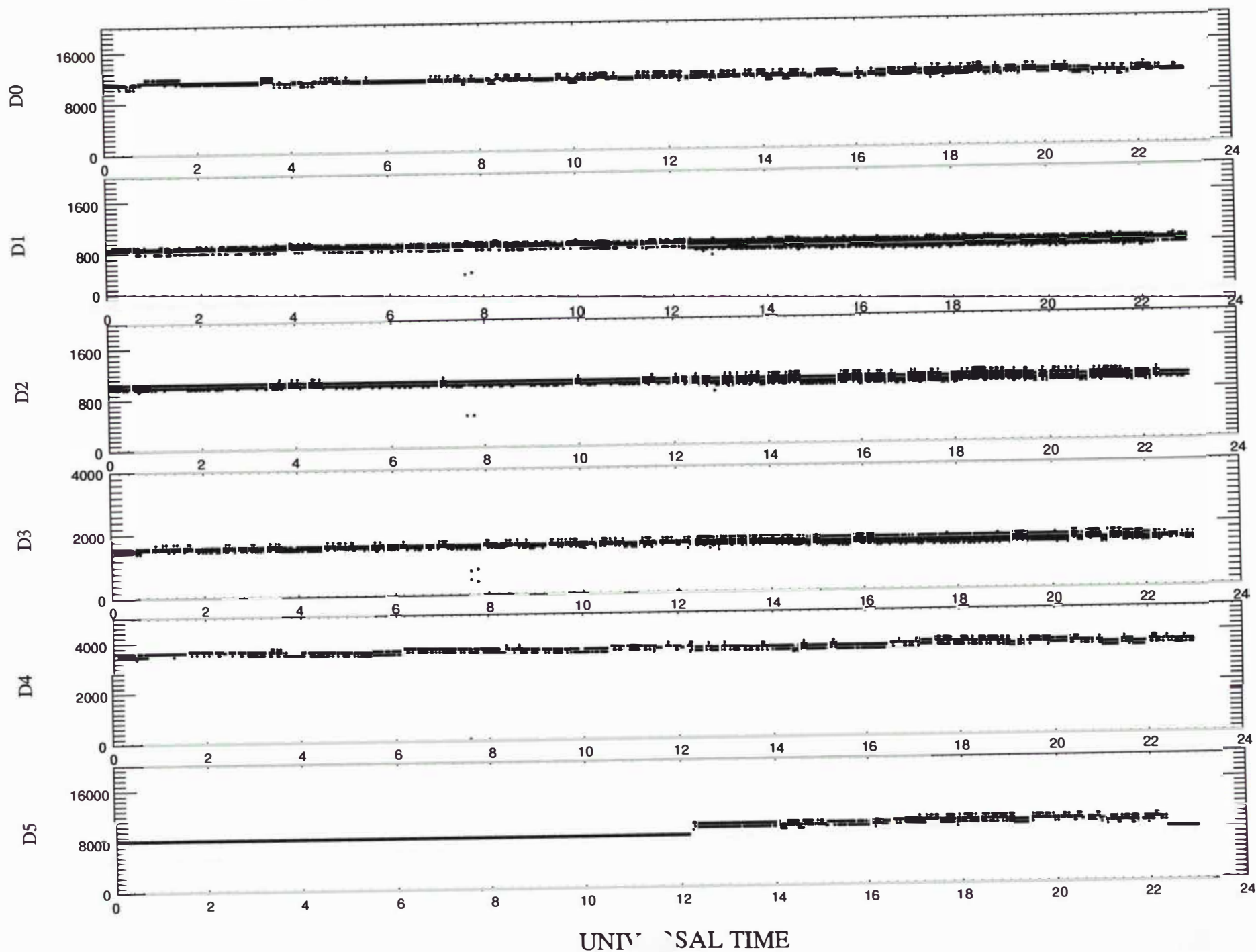


HUS 2A, MODE 1, NOT AVERAGED EDR day 340, year 1995 to day 340, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNITSAL TIME



From ulsdmt@jplsp.DNET.NASA.GOV Mon Mar 18 17:13 PST 1996
From: ulsdmt@jplsp.DNET.NASA.GOV
Date: Mon, 18 Mar 96 20:13:12 -0500
To: "khurley@sunspot.ssl.berkeley.edu"@east.DNET.NASA.GOV (SENT TO @LIST1)
Subject: Misplaced Major Frames in EDRs

Greetings,

We have identified an operations technique that produces data that will be improperly time tagged by the MGDS (telemetry system). Instances of EDR errors (major frames out of order) have been found in the CDROM archival products for December 1995 and January 1996. Errors will also be found in the still to be shipped February 1996 data.

When major frames are recorded but not transmitted during the next track, but are eventually downlinked with data from a succeeding day, the embedded SCLKs are 'assumed' to be incorrect by the frame syncer and are re-tagged with SCETs and SCLKs matching the adjacent (but newer) data.

For each major frame processed in this manner, a gap will exist, representing the time the data was actually acquired, and a major frame or realtime data, representing the time period the data now errently represents, will be replaced by the misplaced playback data.

Yes. Confusing. See the attached memo detailing the times involved.

Approximately 17 such instances are known to have occured. The total time involved is about twenty minutes. Because the data loss is small and the cost of reprocessing would be so large, the Project has determined that it would be imprudent to reprocess.

For your information, however, we included a memo from Nigel Angold which itemizes each instance.

We thank Toni Galvin and Nigel for identifying the problem and assisting in the diagnosis.

Regards,

Joe

To: <ulsdmt@jplsp.jpl.nasa.gov>
From: Nigel Angold <nangold@jplsp2.jpl.nasa.gov>
Subject: Mis-corrected S/C clocks / SCETs
Cc: chris.leech@jpl.nasa.gov

I have looked at our recent tape recorder usage and predict that you will see major frames with mis-corrected spacecraft clocks / SCETs at the following times (give or take a few minutes):

1995:

~342.22:59 SCET	should be	~341.17:47 SCET
~347.22:39 SCET	should be	~346.16:46 SCET
~350.21:54 SCET	should be	~349.16:22 SCET
~355.22:14 SCET	should be	~354.15:42 SCET
~359.14:04 SCET	should be	~359.05:36 SCET
~360.14:59 SCET	should be	~359.00:20 SCET
~362.20:55 SCET	should be	~361.16:06 SCET

1996:

~001.02:45 SCET	should be	~364.23:12 SCET
~002.14:35 SCET	should be	~001.04:22 SCET
~029.19:35 SCET	should be	~028.13:43 SCET
~033.19:10 SCET	should be	~032.13:18 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~048.17:29 SCET	should be	~047.13:45 SCET
~054.08:59 SCET	should be	~053.11:46 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~039.18:34 SCET	should be	~038.12:14 SCET

We see data gaps for each of the correct times, so it looks like your theory of AMMOS mis-correcting times when there is carry-over data on the tape is correct.

I hope this is enough information. I would have to do a bit more calculation to get the approximate ERTs. Let me know if you want them.

Best regards,

Nigel

From DEAL@fender.msfc.nasa.gov Tue Dec 12 09:37 PST 1995
From: DEAL@fender.msfc.nasa.gov
Date: Tue, 12 Dec 1995 11:37:18 -0600 (CST)
To: burst@compel.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, butterworth@lheavx.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.: 3934

TIME: TJD=0058 SECONDS=31388

TYPE: UNKNOWN SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=92.5 AZIMUTH=180.4 ERROR=3.2 DEGREES

COMMENTS:

UNKNOWN EVENT. POSSIBLY A TGF.

*Reclassified as GRB, ~30 ms long,
by Briggs 2001*

BATSE # 3934 19951207 3138

ULYSSES RT

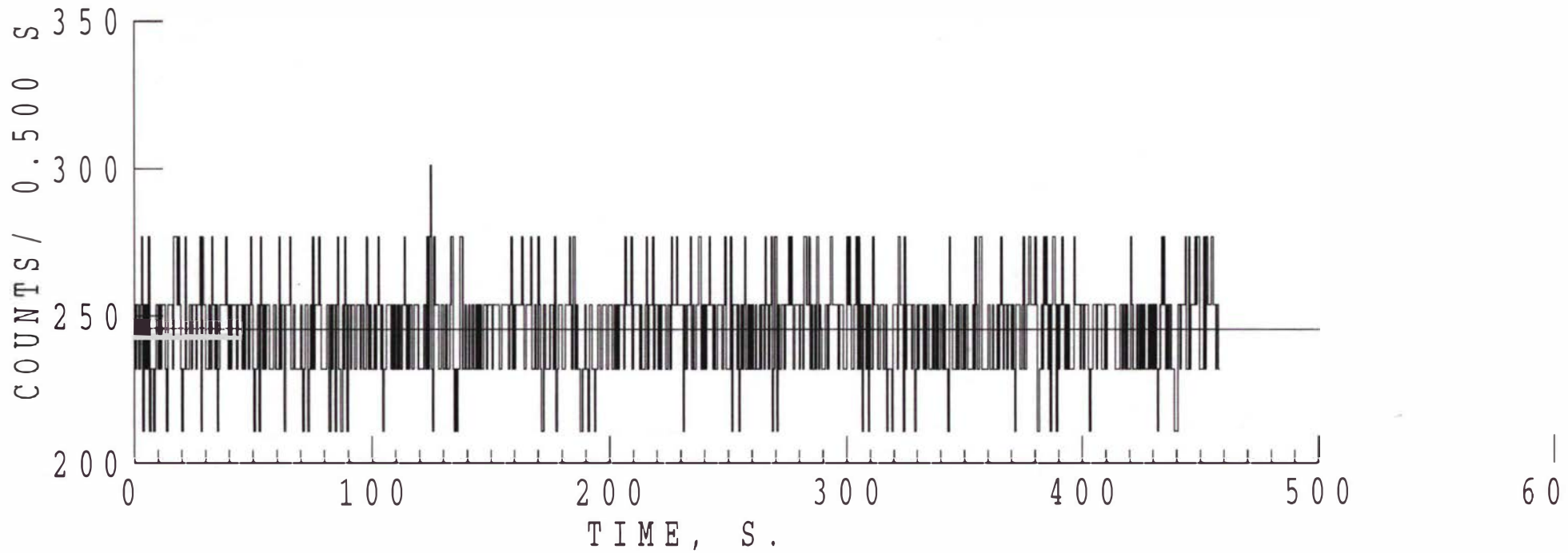
12 / 11 / 01

07 / 12 / 95 29916.240 s

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From DEAL@ssl.msfc.nasa.gov Mon Dec 11 10:55 PST 1995
Date: Mon, 11 Dec 1995 12:55:42 -0600 (CST)
From: DEAL@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3935

BATSEARCH PROGRAM

BATSE BURST # 3935
EVENT OF 1995 DEC 7 DAY OF YEAR=341
EVENT CROSSING TIME AT BATSE : 48491. S. OR 13:28:11.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 192.000 1.000
BATSE PEAK COUNTING RATE: 2900 C/S

NO

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 7/12/ 95 IS:
RA= 221.787 DEC= 56.154 DIST= 2.851 AU
BATSE-ULYSSES DISTANCE = 426555836. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=119.85 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -708.28 SECS.
CROSSING TIME AT ULYSSES IS 47783. S. OR 13:16:22 +/- 253.49 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 7/12/ 95 IS:
RA= 275.355 DEC= -24.332 DIST= 2.300 AU
MARS-BATSE DISTANCE = 344103520. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 95.64 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -112.75 SECS.
CROSSING TIME AT MARS IS 48378. S. OR 13:26:18 +/- 196.60 SECONDS

BATSE BURST TRIGGER

NO.: 3935

TIME: TJD=0058 SECONDS=48491

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=144.4 AZIMUTH=342.2 ERROR=8.0 DEGREES

COMMENTS:

BURST LASTING ~ 30 S. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3935	951207	10058	48491	2900	192	+01	30

12 / 12 / 95

ULYSSES RT

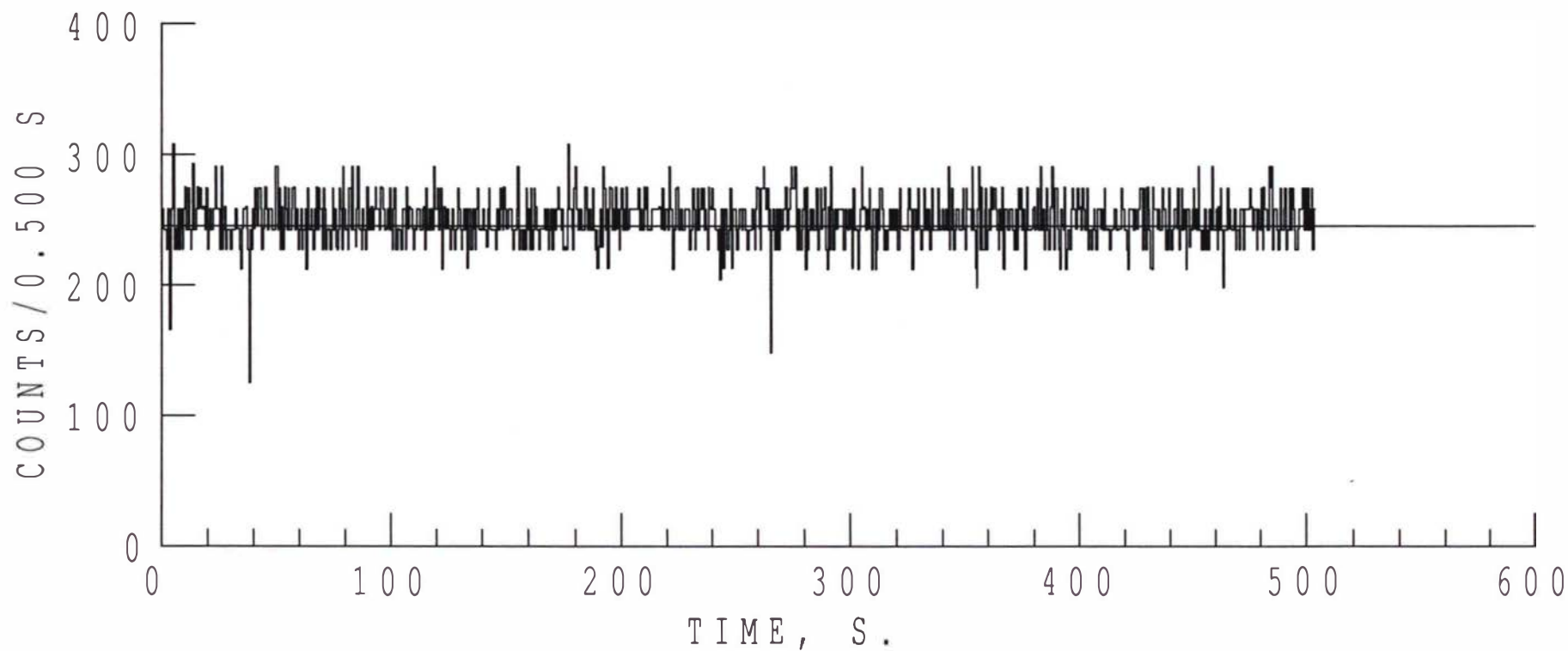
7 / 12 / 95 47520.012 s

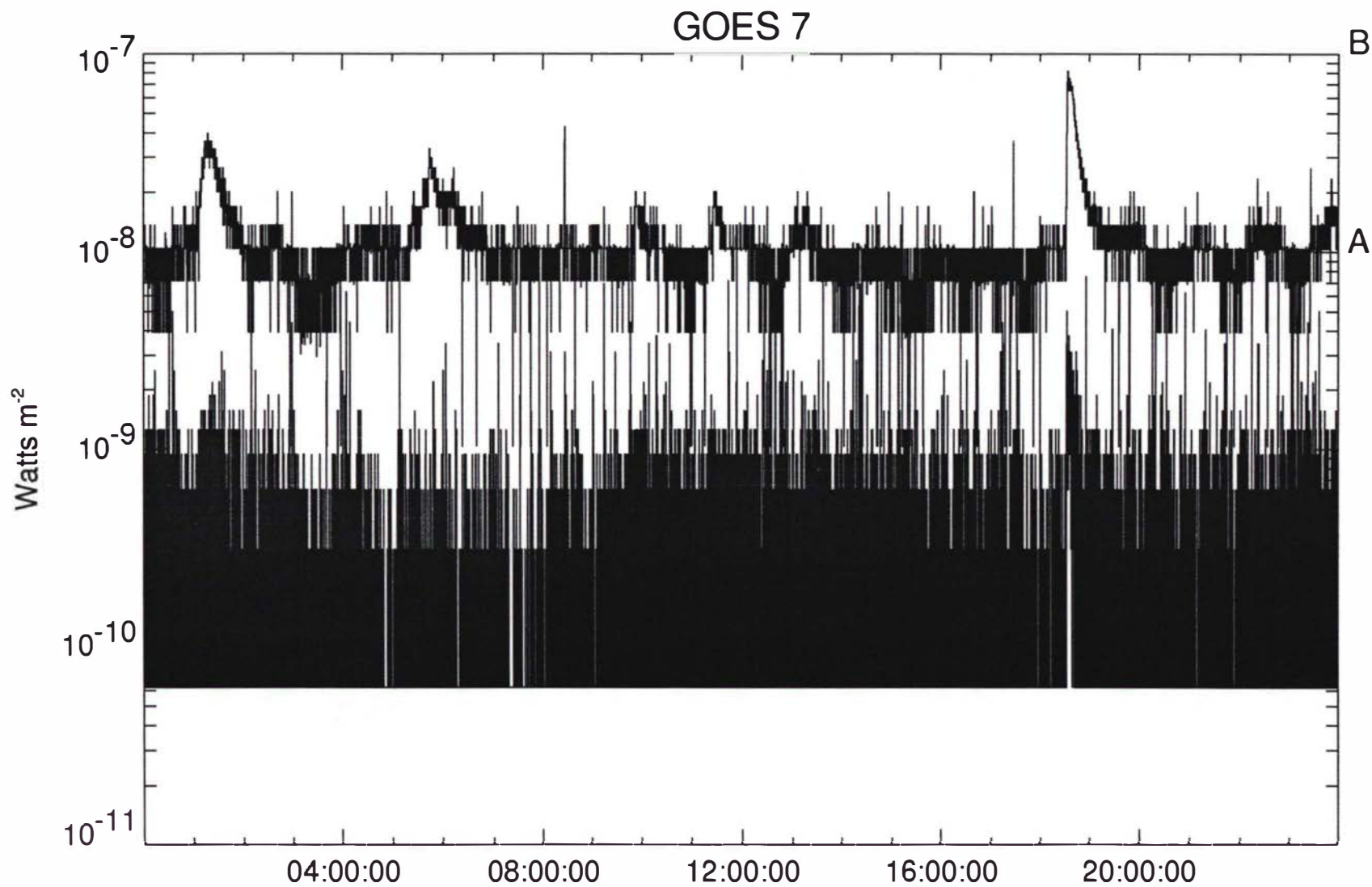
0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





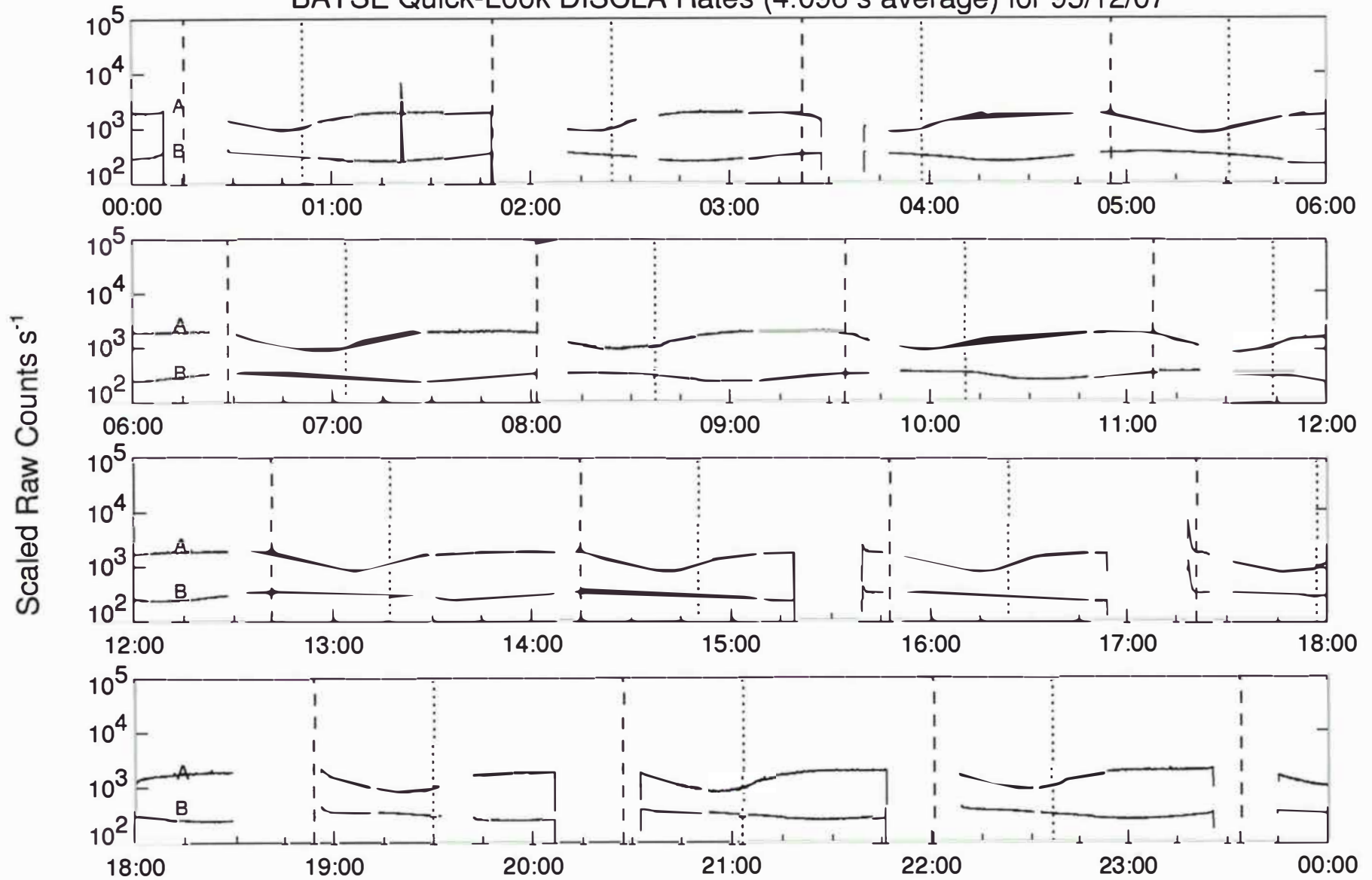
Data Start: 95/12/07, 0000:00

Plot created: 95/12/09, 0652

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 95/12/07



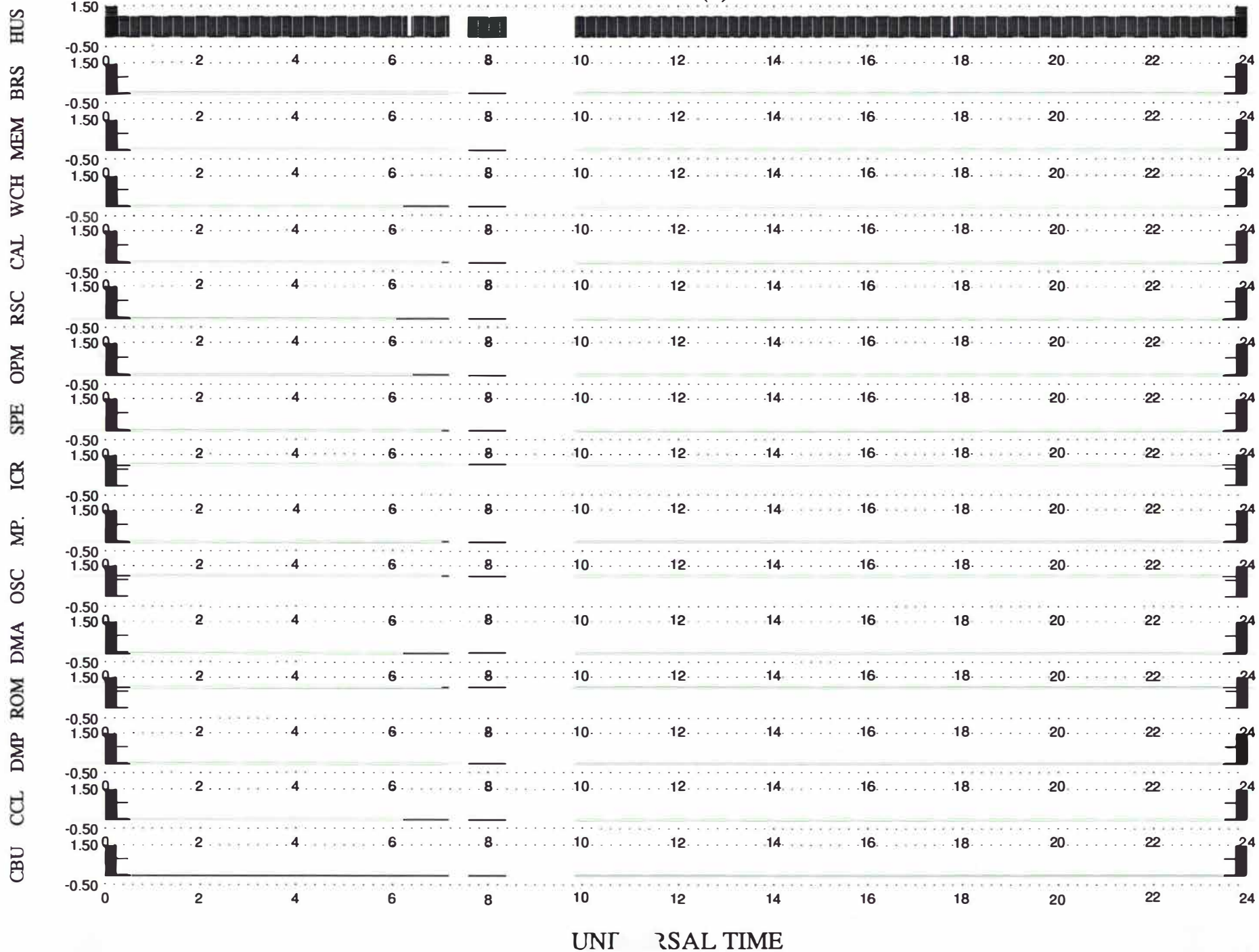
Current Time: 95/12/09, 0653 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

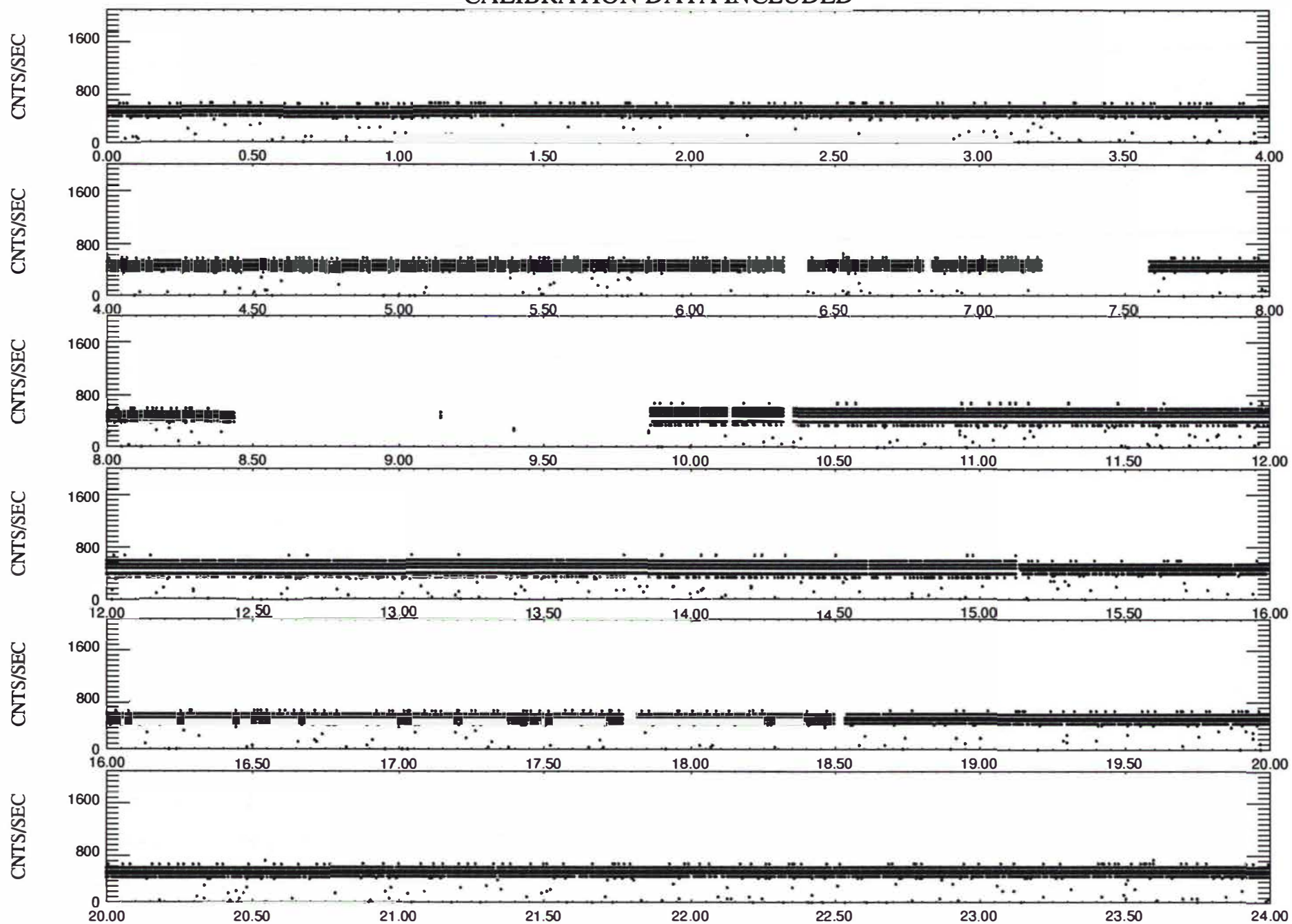
HUS MODES EDR day 341, year 1995 to day 341, year 1995 NO BURST (3)

4/1/96

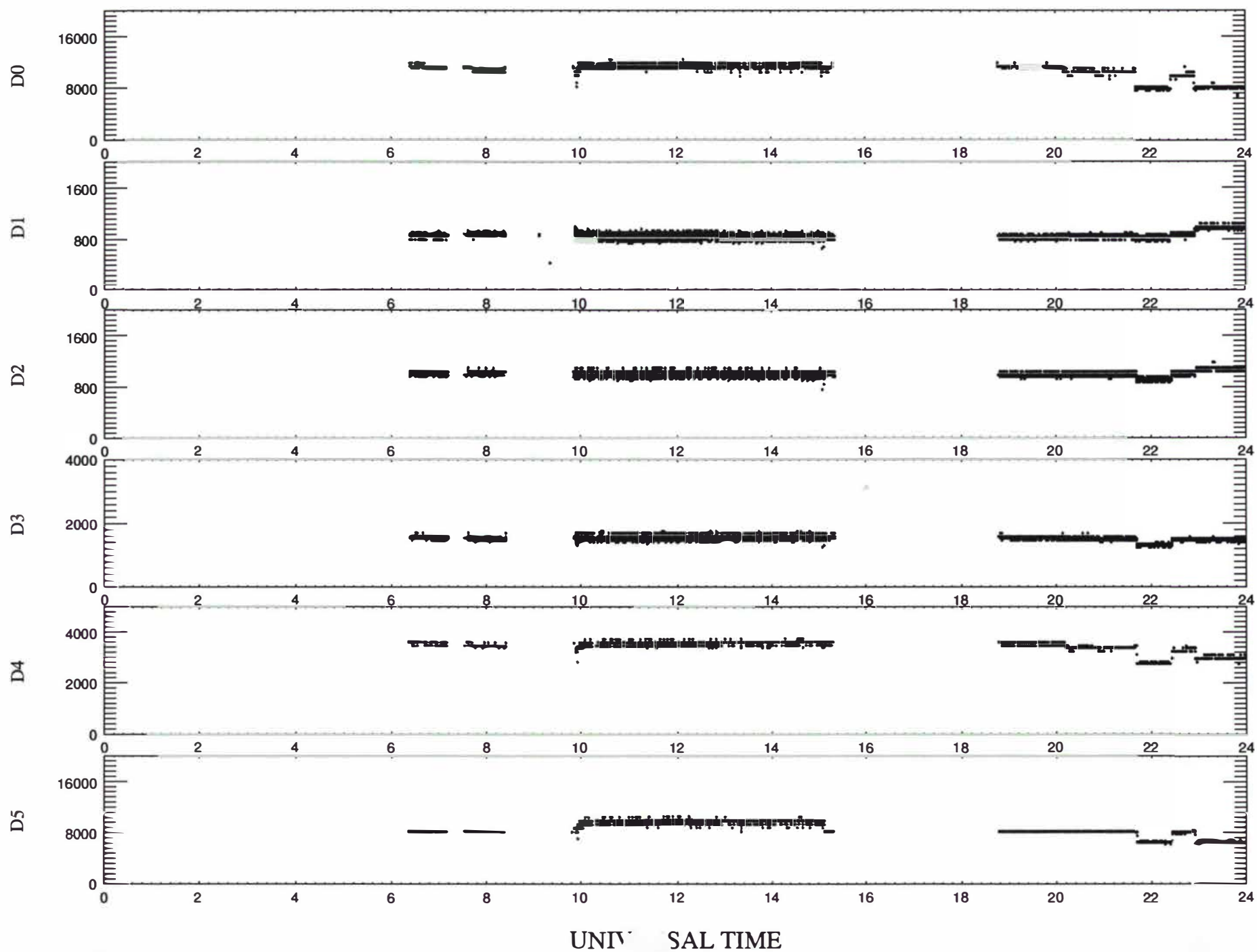


HUS 2A, MODE 1, NOT AVERAGED EDR day 341, year 1995 to day 341, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNL RSAL TIME



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

Kevin,

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

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

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

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

Regards,

Joe

The results are as follows:

ERRORS WITHIN YOUR BOUNDS:

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

OTHER ERRORS 'in the neighborhood':

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

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

From ulsdtmt@jplsp.DNET.NASA.GOV Mon Mar 18 17:13 PST 1996
From: ulsdtmt@jplsp.DNET.NASA.GOV
Date: Mon, 18 Mar 96 20:13:12 -0500
To: "khurley@sunspot.ssl.berkeley.edu"@east.DNET.NASA.GOV (SENT TO @LIST1)
Subject: Misplaced Major Frames in EDRs

Greetings,

We have identified an operations technique that produces data that will be improperly time tagged by the MGDS (telemetry system). Instances of EDR errors (major frames out of order) have been found in the CDROM archival products for December 1995 and January 1996. Errors will also be found in the still to be shipped February 1996 data.

When major frames are recorded but not transmitted during the next track, but are eventually downlinked with data from a succeeding day, the embedded SCLKs are 'assumed' to be incorrect by the frame syncer and are re-tagged with SCETs and SCLKs matching the adjacent (but newer) data.

For each major frame processed in this manner, a gap will exist, representing the time the data was actually acquired, and a major frame or realtime data, representing the time period the data now errently represents, will be replaced by the misplaced playback data.

Yes. Confusing. See the attached memo detailing the times involved.

Approximately 17 such instances are known to have occured. The total time involved is about twenty minutes. Because the data loss is small and the cost of reprocessing would be so large, the Project has determined that it would be imprudent to reprocess.

For your information, however, we included a memo from Nigel Angold which itemizes each instance.

We thank Toni Galvin and Nigel for identifying the problem and assisting in the diagnosis.

Regards,

Joe

To: <ulsdtmt@jplsp.jpl.nasa.gov>
From: Nigel Angold <nangold@jplsp2.jpl.nasa.gov>
Subject: Mis-corrected S/C clocks / SCETs
Cc: chris.leech@jpl.nasa.gov

I have looked at our recent tape recorder usage and predict that you will see major frames with mis-corrected spacecraft clocks / SCETs at the following times (give or take a few minutes):

1995:

~342.22:59 SCET	should be	~341.17:47 SCET
~347.22:39 SCET	should be	~346.16:46 SCET
~350.21:54 SCET	should be	~349.16:22 SCET
~355.22:14 SCET	should be	~354.15:42 SCET
~359.14:04 SCET	should be	~359.05:36 SCET
~360.14:59 SCET	should be	~359.00:20 SCET
~362.20:55 SCET	should be	~361.16:06 SCET

1996:

~001.02:45 SCET	should be	~364.23:12 SCET
~002.14:35 SCET	should be	~001.04:22 SCET
~029.19:35 SCET	should be	~028.13:43 SCET
~033.19:10 SCET	should be	~032.13:18 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~048.17:29 SCET	should be	~047.13:45 SCET
~054.08:59 SCET	should be	~053.11:46 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~039.18:34 SCET	should be	~038.12:14 SCET

We see data gaps for each of the correct times, so it looks like your theory of AMMOS mis-correcting times when there is carry-over data on the tape is correct.

I hope this is enough information. I would have to do a bit more calculation to get the approximate ERTs. Let me know if you want them.

Best regards,

Nigel

From HAGEDON@fender.msfc.nasa.gov Mon Dec 11 10:30 PST 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Mon, 11 Dec 1995 12:30:17 -0600 (CST)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3936

BATSEARCH PROGRAM

A

RI

BATSE BURST # 3936
EVENT OF 1995 DEC 8 DAY OF YEAR=342
EVENT CROSSING TIME AT BATSE : 19616. S. OR 05:26:56.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 353.000 70.000
BATSE PEAK COUNTING RATE: 20500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 8/12/ 95 IS:
RA= 221.921 DEC= 56.222 DIST= 2.851 AU
BATSE-ULYSSES DISTANCE = 426452543. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=131.00 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -933.32 SECS.
CROSSING TIME AT ULYSSES IS 18683. S. OR 05:11:22 +/- 222.20 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 8/12/ 95 IS:
RA= 276.191 DEC= -24.306 DIST= 2.302 AU
MARS-BATSE DISTANCE = 344316416. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 71.60 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 362.54 SECS.
CROSSING TIME AT MARS IS 19979. S. OR 05:32:58 +/- 194.71 SECONDS

BATSE BURST TRIGGER

NO.: 3936

TIME: TJD=0059 SECONDS=19616

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=59.1 AZIMUTH=216.0 ERROR=0.6 DEGREES

COMMENTS:

BURST. SINGLE PULSE WITH SUBSTRUCTURE. DUR.~3.5 SEC. WEAKLY VISIBLE
ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3936	951208	10059	19616	20500	353	+70	3.5

From cline@lheavx.gsfc.nasa.gov Fri Mar 29 08:40 PST 1996

Date: Fri, 29 Mar 1996 08:40:19 -0800

Mime-Version: 1.0

To: KHURLEY@sunspot.ssl.berkeley.edu

From: cline@lheavx.gsfc.nasa.gov (T L Cline)

Subject: Konus Event List augmentation

Dear Kevin,

This list includes Sergei's latest Konus-W (GGS-Wind) and Konus-A (Kosmos-2326) events, for comparison with Ulysses, BATSE, TGRS, etc. The times listed are prioritized for Konus-W (i.e., Konus-A time given if Konus-W doesn't trigger).

Yr	Mn	Dy	UT (Konus)	BATSE	Ulysses	Konus	TGRS	Notes
95	11	2	07085.879	?	?	168	no	
95	11	2	21209.015	3891	R I	169	345	
95	11	4	05868.077	3893	R I	170	BGR	
95	11	5	46827.808	?	?	171	no	
95	11	12	66495.244	?	R I	172	no	
95	11	13	84358.872	3906	R I	173	BGR	
95	11	17	10123.762	3909	?	175	no	
95	11	19	29831.402	3912	R I	176	348	
95	11	19	46457.519	?	?	177	BGR	
95	11	22	09841.38	?	?	179	no	
95	11	22	17107.738	?	?	180	349	
95	12	2	39101.744	?	?	195	BGR	
95	12	3	03988.18	?	?	196	360	
	12	8	19617.151	?	?	197	no	
	12	8	39452.057	?	?	198	no	
95	12	8	42467.634	?	?	199	BGR	
95	12	9	31349.607	?	?	200	BGR	
95	12	13	17849.683	?	?	201	362	
95	12	14	08657.847	?	?	202	no	
95	12	19	60679.732	?	?	203	no	
95	12	20	31883.56	?	?	204	BGR	
95	12	22	25203.254	?	?	no	?	= K-A t.
95	12	27	23005.042	?	?	218	375	
96	12	31	20231.668	?	?	219	no	
96	1	2	11650.996	?	?	220	no	
96	1	4	12521.062	?	?	221	no	
96	1	11	46524.53	?	?	222	no	
96	1	13	56024.261	?	?	228	no	
96	1	14	44104.737	?	?	233	384	+ K-A t.
96	1	15	31956.506	?	?	234	BGR	
96	1	17	57371.341	?	?	235	no	
96	1	19	34679.317	?	?	236	no	
96	1	19	45226.016	?	?	237	no	
96	1	20	36768.974	?	?	238	no	
96	1	24	03388.008	?	?	239	385	+ K-A t.
96	1	24	76096.911	?	?	BGR	?	= K-A t.
96	1	30	08756.848	?	?	240	no	
96	2	1	78530.582	?	?	241	?	+ K-A t.
96	2	2	50750.813	?	?	242	?	
	2	10	35198.959	?	?	247	?	
96	2	16	57796.347	?	?	BGR	?	= K-A t.
96	2	19	20589.684	?	?	BGR	?	= K-A t.
96	2	28	85760.241	?	?	249	?	
96	2	29	22445.141	?	?	250	?	

96	3	5	33645.352	?	?	251	?
96	3	12	35074.697	?	?	252	?
96	3	19	51992.828	?	?	253	?
96	3	21	76321.803	?	?	254	?
96	3	22	19642.728	?	?	255	?
96	3	24	80064.124	?	?	257	?
96	3	25	69892.978	?	?	258	?

--

TLC

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

Helio corr removed

Date: 23 Feb 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)? 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

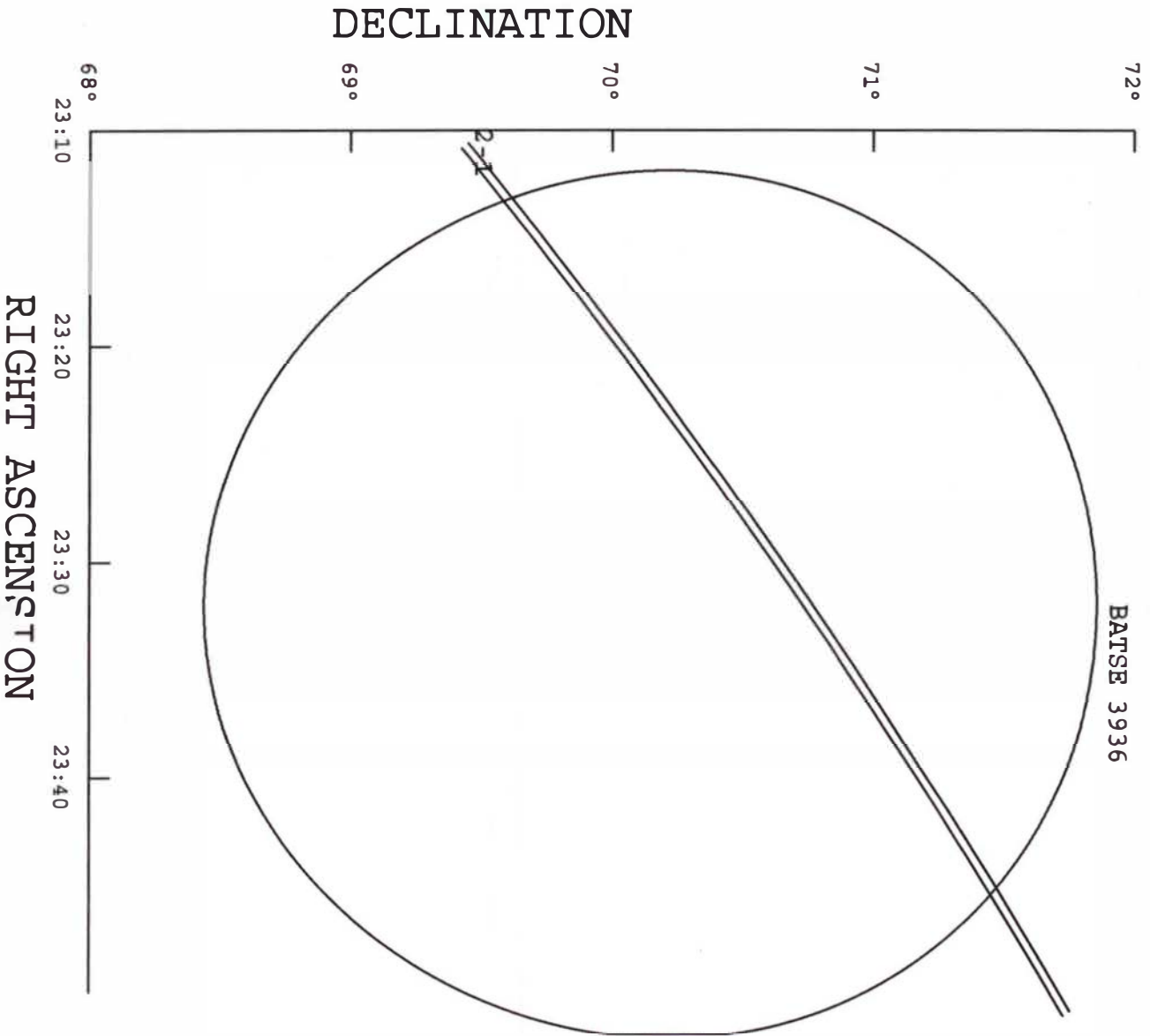
3. PVO Data

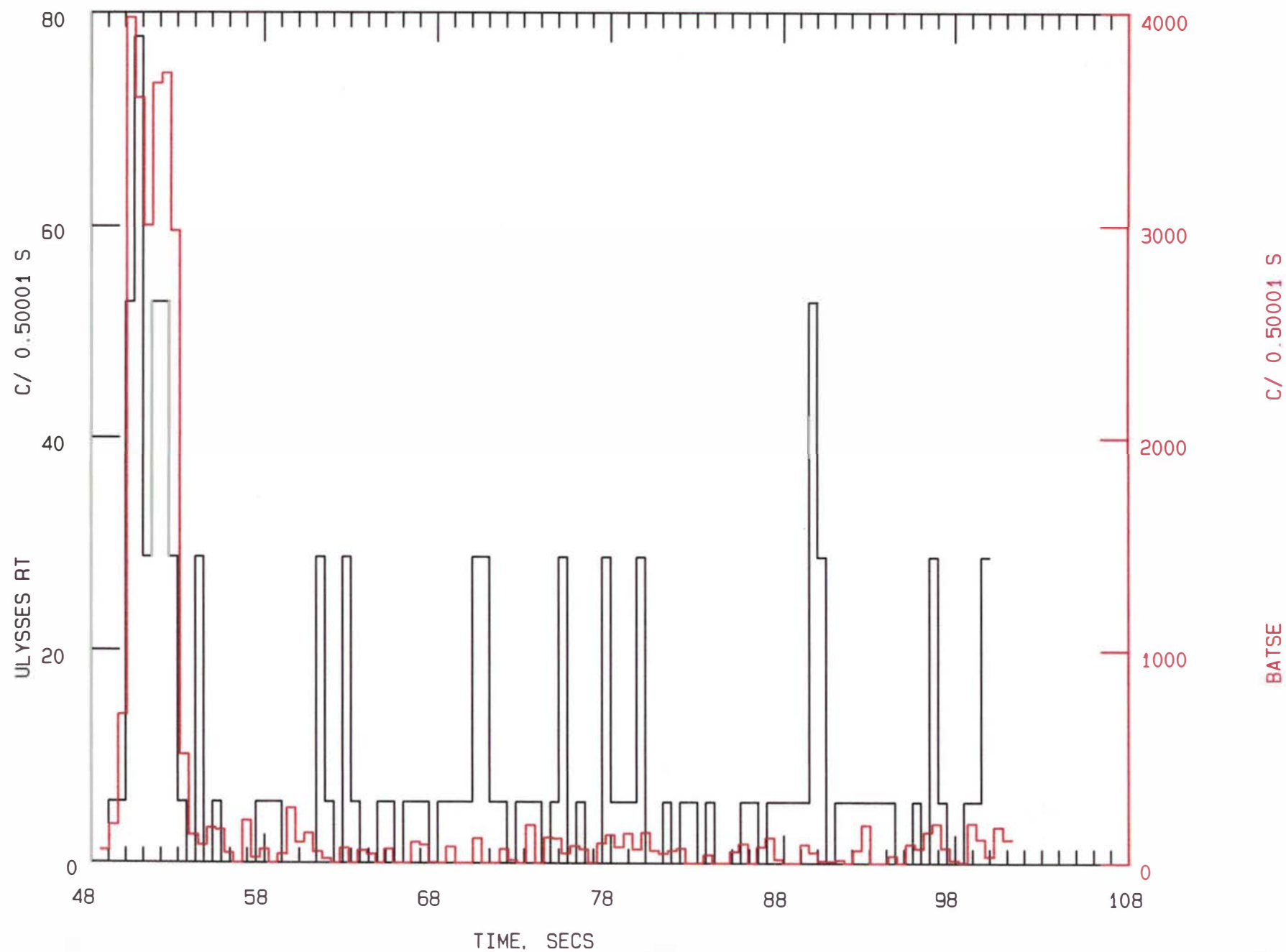
- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS database updated?

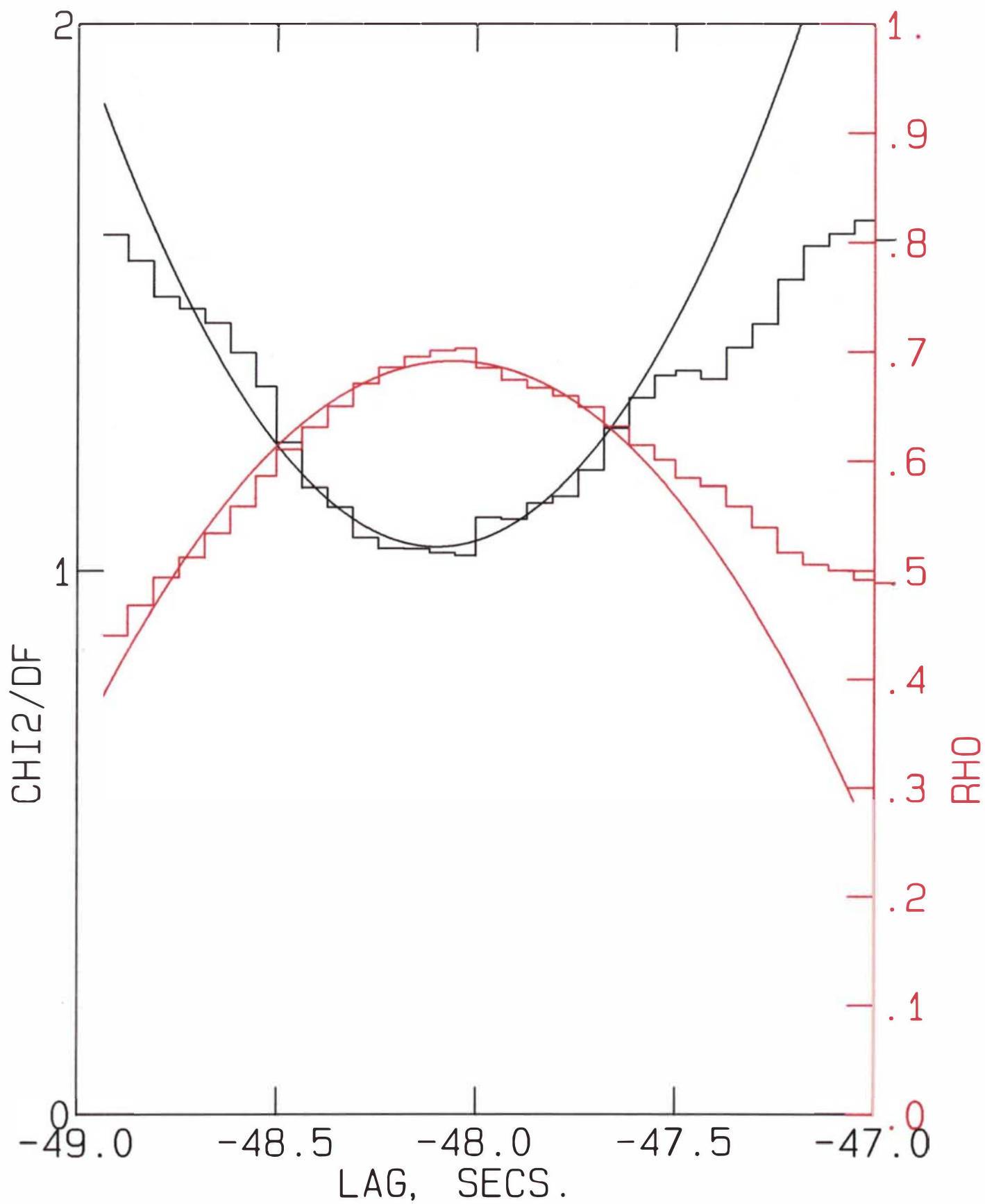
N-M = CORRELATION BETWEEN SATELLITES N AND M
 EARTH-N = EARTH AS SEEN FROM SATELLITE N
 S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
 1 ULYSSES 2 BATSE

EVENT OF DEC 8, 1995 5:10

23 / 2/98



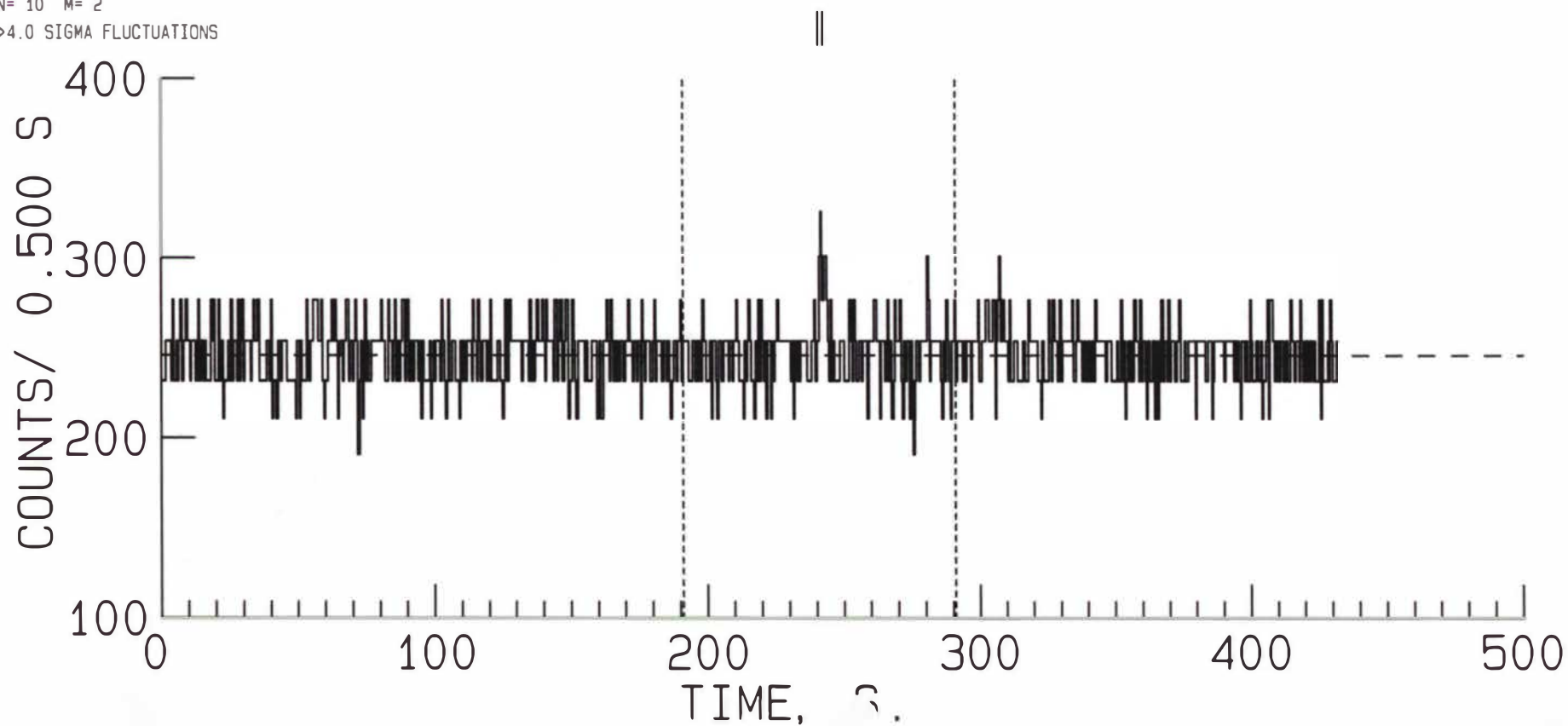




ULYSSES RT
8/12/95 18432.398 s
21- 144 keV

23 / 2 / 98

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



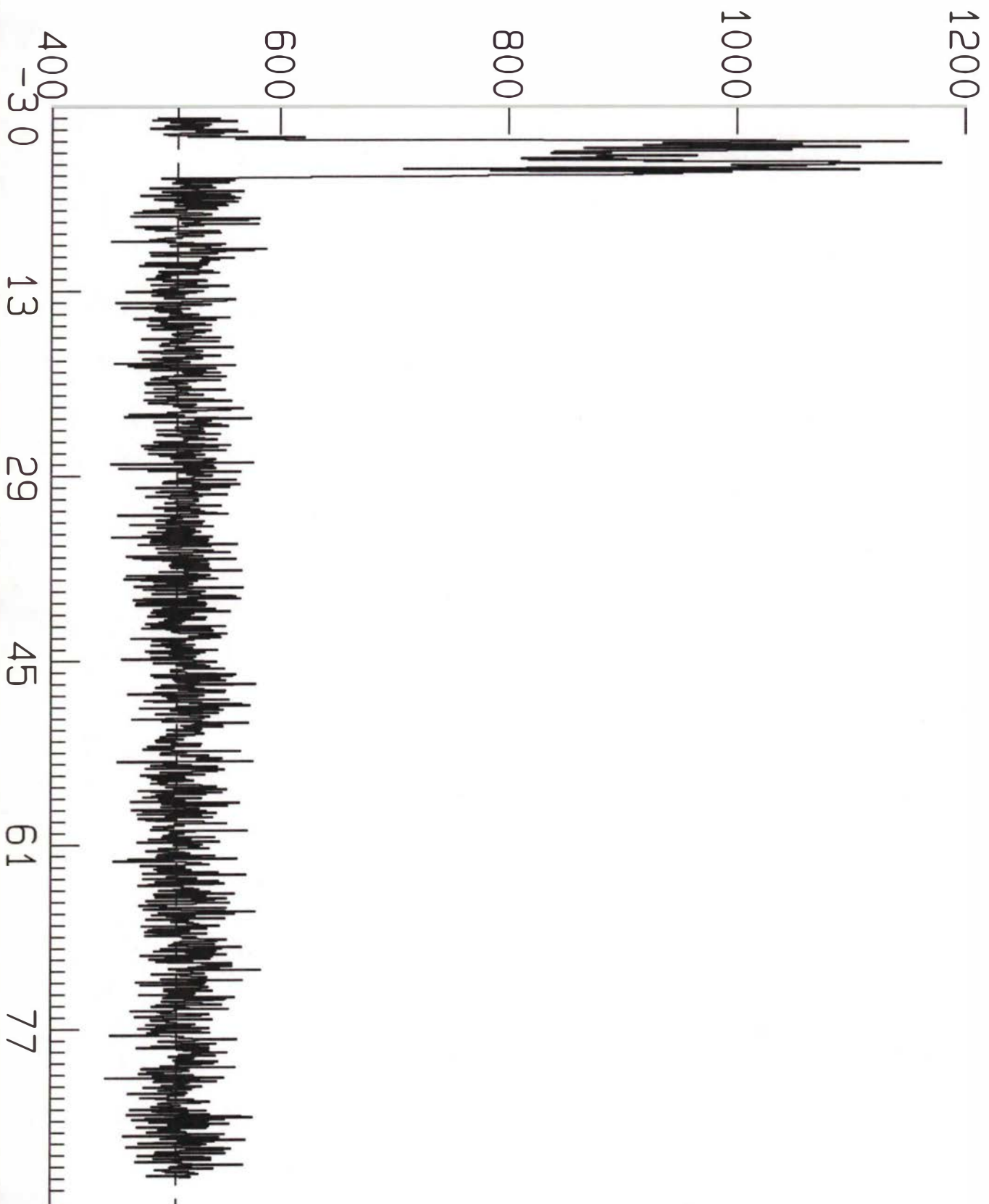
BATSE

08/12/95

19616.178

25- 100 keV

COUNTS/0.064 S



From cline@heavx.gsfc.nasa.gov Fri Mar 29 08:40 PST 1996

Date: Fri, 29 Mar 1996 08:40:19 -0800

Mime-Version: 1.0

To: KHURLEY@sunspot.ssl.berkeley.edu

From: cline@heavx.gsfc.nasa.gov (T L Cline)

Subject: Konus Event List augmentation

Dear Kevin,

This list includes Sergei's latest Konus-W (GGS-Wind) and Konus-A (Kosmos-2326) events, for comparison with Ulysses, BATSE, TGRS, etc. The times listed are prioritized for Konus-W (i.e., Konus-A time given if Konus-W doesn't trigger).

Yr	Mn	Dy	UT (Konus)	BATSE	Ulysses	Konus	TGRS	Notes
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95	11	2	21209.015	3891	R I	169	345	
95	11	4	05868.077	3893	R I	170	BGR	
95	11	5	46827.808	?	?	171	no	
95	11	12	66495.244	?	R I	172	no	
95	11	13	84358.872	3906	R I	173	BGR	
95	11	17	10123.762	3909	?	175	no	
95	11	19	29831.402	3912	R I	176	348	
95	11	19	46457.519	?	?	177	BGR	
95	11	22	09841.38	?	?	179	no	
95	11	22	17107.738	?	?	180	349	
95	12	2	39101.744	?	?	195	BGR	
95	12	3	03988.18	?	?	196	360	
	12	8	19617.151	?	?	197	no	
	12	8	39452.057	?	?	198	no	
95	12	8	42467.634	?	?	199	BGR	
95	12	9	31349.607	?	?	200	BGR	
95	12	13	17849.683	?	?	201	362	
95	12	14	08657.847	?	?	202	no	
95	12	19	60679.732	?	?	203	no	
95	12	20	31883.56	?	?	204	BGR	
95	12	22	25203.254	?	?	no	?	= K-A t.
95	12	27	23005.042	?	?	218	375	
96	12	31	20231.668	?	?	219	no	
96	1	2	11650.996	?	?	220	no	
96	1	4	12521.062	?	?	221	no	
96	1	11	46524.53	?	?	222	no	
96	1	13	56024.261	?	?	228	no	
96	1	14	44104.737	?	?	233	384	+ K-A t.
96	1	15	31956.506	?	?	234	BGR	
96	1	17	57371.341	?	?	235	no	
96	1	19	34679.317	?	?	236	no	
96	1	19	45226.016	?	?	237	no	
96	1	20	36768.974	?	?	238	no	
96	1	24	03388.008	?	?	239	385	+ K-A t.
96	1	24	76096.911	?	?	BGR	?	= K-A t.
96	1	30	08756.848	?	?	240	no	
96	2	1	78530.582	?	?	241	?	+ K-A t.
96	2	2	50750.813	?	?	242	?	
	2	10	35198.959	?	?	247	?	
96	2	16	57796.347	?	?	BGR	?	= K-A t.
96	2	19	20589.684	?	?	BGR	?	= K-A t.
96	2	28	85760.241	?	?	249	?	
96	2	29	22445.141	?	?	250	?	

96	3	5	33645.352	?	?	251	?
96	3	12	35074.697	?	?	252	?
96	3	19	51992.828	?	?	253	?
96	3	21	76321.803	?	?	254	?
96	3	22	19642.728	?	?	255	?
96	3	24	80064.124	?	?	257	?
96	3	25	69892.978	?	?	258	?

--

TLC

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

951025	23	40	39.738	S1	190	400	120	1.7	3	60	167	✓
951102	01	58	05.879	S2	260	320	50	<0.1	100	3	168	✓
951102	05	53	29.015	S2	700	1560	600	0.1	5	18	169	✓
951102	07	58	13	S1	320	80		4	6		BGR	✓
951105	00	29	05	S2	40	50		0.6	40		BGR	✓
951105	01	37	48.077	S2	140	340	80	0.6	2	22	170	✓
951105	13	00	27.808	S1	160	380	120	9	2	9	171	✓
951107	07	34	58	S1	20	50	20	2	90		BGR	✓
951111	09	42	40	S1	80	160	20	1.1	15		BGR	✓
951112	18	28	15.244	S2	540	690	220	0.2	14	84	172	✓
951113	23	25	58.872	S1	260	330	260	4.4	1	15	173	✓
951115	10	48	49	S1	70	180	80	3	12		BGR	✓
951117	02	48	43.762	S2	650	530	120	0.1	9	10	175	✓
951118	22	56	00	S2	20	90	100	0.15	6		BGR	✓
951119	08	17	11.402	S1	200	420	110	3	1.5	12	176	✓
951119	12	54	17.519	S1	110	220	340	1.7	3	4	177	✓
951119	16	30	48	S2	30	40	10	0.4	110		BGR	✓
951121	06	11	20	S1	20	70	10	2	45		BGR	✓
951122	02	44	01.380	S2	770	920		0.15	0.5	1.5	179	✓
951122	04	45	07.738	S1	280	430	160	12	35	22	180	✓
951123	18	10	08	S1	30	60	30	1	30		BGR	✓
951124	05	54	26	S2	50	140	50	0.15	30		BGR	✓
951124	06	58	52	S2	30	100		0.25	280		BGR	✓
951202	10	51	41.744	S1	200	500	220	2.4	2	25	195	✓
951203	01	06	28.180	S2	260	720	420	0.85	1	16	196	✓
951208	05	26	57.151	S2	320	740	190	<0.04	1	3.5	197	✓
951208	10	57	32.057	S1	290	260		7	52	6.5	198	✓
951208	11	47	47.634	S1	240	510	190	10	23	98	199	✓
951208	23	24	12	S1	100	90		>10	30		BGR	✓
951209	08	42	29.607	S1	150	450	160	6	6	14	200	✓
951213	04	57	29.683	S2	360	940	330	0.4	2	8	201	✓
951213	09	04	34	S2	300	90		<0.15	4.5		BGR	✓
951214	01	29	47	S2	15	100	30	1	30		BGR	✓
951214	02	24	17.847	S2	200	450	150	0.8	4	6	202	✓
951215	20	23	45	S2	60	70	15	<0.15	60		BGR	✓
951216	22	39	42	S2	160	110		0.1	6		BGR	✓
951218	07	59	48	S1	70	130	30	2.3	22		BGR	✓
951219	16	51	19.732	S2	430	850	920	<0.03	1	54	203	✓
951220	08	51	23.560	S2	100	320	180	1	2	8	204	✓
951221	08	23	18	S1	110	150	70	>15	15		BGR	✓
951222	21	00	21	S2	280			<0.1	16		BGR	✓
951225	09	14	16	S2	200			<0.3	50		BGR	✓
951225	09	34	14	S1	500	150	25	2.2	60		BGR	✓
951225	15	21	35	S2	210	170	40	0.1	100		BGR	✓
951225	22	51	08	S1	80	150	50	2.4	40		BGR	✓
951226	08	38	15	S2	60	100	50	0.15	9		BGR	✓
951227	06	23	25.042	S1	420	1200	320	1	1	1.5	218	✓
951227	21	59	20	S1	50	50		3	65		BGR	✓
951228	12	28	42	S2	70	80	40	<0.07	110		BGR	✓
951228	15	47	26	S2	80	170		0.9	17		BGR	✓
951231	05	37	11.668	S2	180	320	150	0.07	9	65	219	✓
951231	21	24	34	S2	100	25		<0.2	20		BGR	✓
960102	03	14	10.996	S1	140	300	80	1	1	0.2	220	✓
960102	20	20	53	S1	200	120	40	>9	25		BGR	✓
960104	03	28	41.062	S2	360	630	230	<0.05	2	28	221	✓
960105	16	04	30	S1	80	60		5	30		BGR	✓
960107	05	23	20	S2	30	100		0.5	230		BGR	✓
960107	19	03	28	S2	30	120	150	<0.1	32		BGR	✓
960109	23	11	31	S2	60	130	20	0.3	5		BGR	✓
960111	12	55	24.530	S2	1130	1280	190	0.2	0.5	6	222	✓
960113	15	33	44.261	S2	500	450	50	0.3	2	36	228	✓
960114	12	15	04.737	S1	4900	7200	1400	1.8	1	60	233	✓
960115	08	52	36.506	S1	380	360	60	10	1	7	234	✓
960115	12	50	15	S2	120	60		0.7	22		BGR	✓
960116	02	02	18	S2	140	170		0.15	17		BGR	✓
960117	15	56	11.341	S1	250	360	30	4	5	20	235	✓

NO

From cline@lheavx.gsfc.nasa.gov Fri Feb 2 05:41 PST 1996

Date: Fri, 2 Feb 1996 05:41:51 -0800

Mime-Version: 1.0

To: Bonnard.Teegarden@cesr.cnes.fr, KHURLEY@sunspot.ssl.berkeley.edu,
palmer@lheamail.gsfc.nasa.gov, seifert@lheamail.gsfc.nasa.gov

From: cline@lheavx.gsfc.nasa.gov (T L Cline)

Subject: For Your INFO

Dear Bonnard, Kevin, David, Helmut:

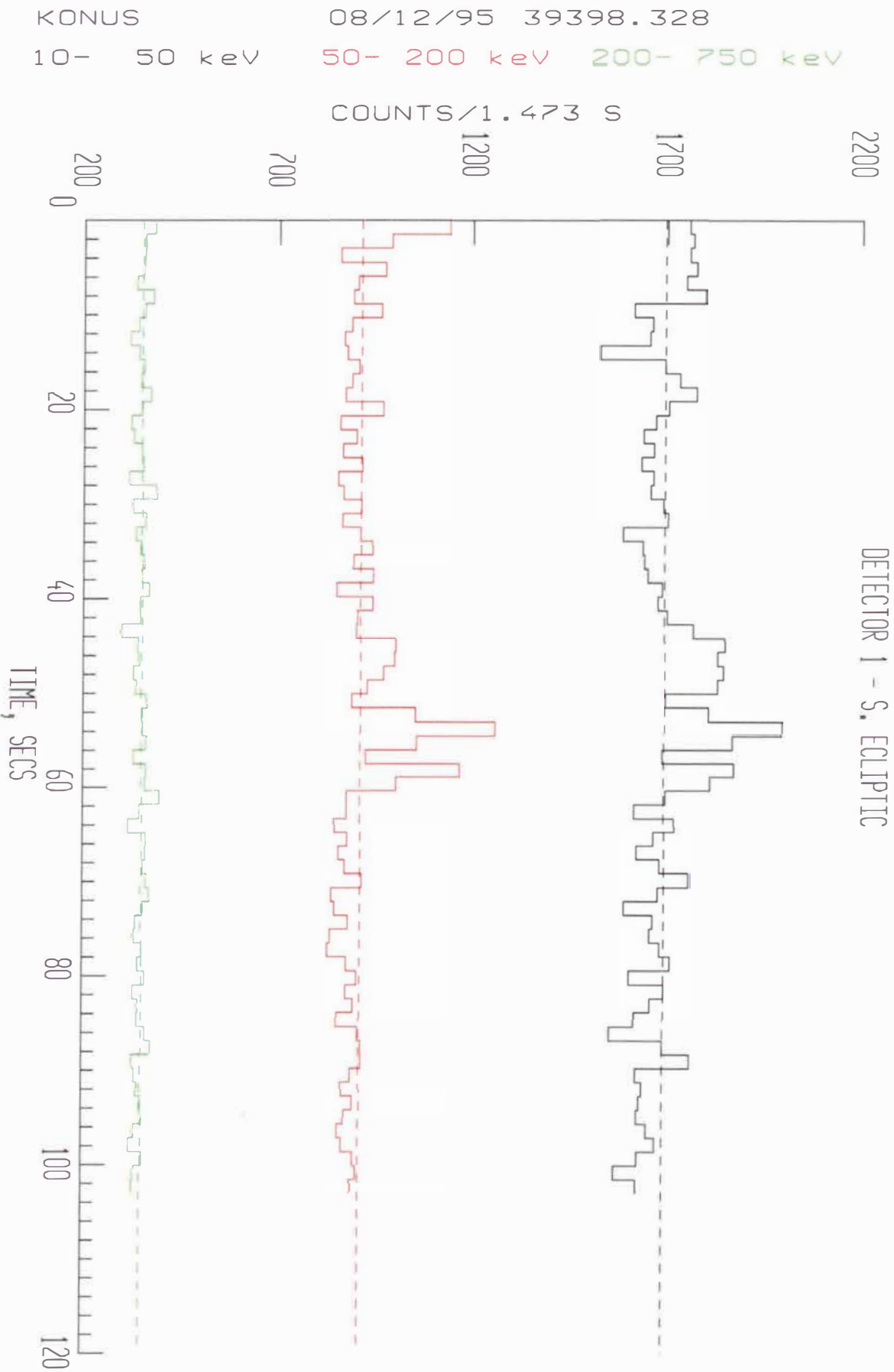
Here is Sergei Golenetskii's latest Konus burst list, for your information. Note that, including the non-triggered-mode 'BGR' events they confidently identify, there are over 300 events so far.

- TLC

DATE	Trigger T0 time (UT)	Sensor	KONUS-WIND		N(S1)/N(S2)		Duration		Trigger number
			Max counts per sec		G3	in G2	T<T0	T>T0	
			G1	G2					
941113	12 09 15	S1	145	85		2.5	115		BGR ✓
941114	02 02 40	S2	110	128	30	0.25	12		BGR ✓
941117	03 14 38.191	S2	406	550	74	0.17	40	5	2 ✓
941117	14 07 57	S2	150	140		<0.15	5		BGR ✓
941119	19 31 09.175	S2	370	703	160	0.23	7	20	4 ✓
941120	20 23 17.924	S1	215	328	30	>15	2	25	5 ✓
941121	17 25 00.945	S1	1652	1656	300	21	3	50	6 ✓
941125	22 04 30.156	S2	115	308	109	0.95	1.5	5	7 ✓
941126	00 20 46	S1	150	205	200	>14	18		BGR ✓
941126	12 22 37.952	S1	860	1430	330	4.2	40	45	8 ✓
941126	16 54 20	S1	55	75		>10	26		BGR ✓
941126	19 56 49.732	S1	290	390	211	6.7	20	26	9 ✓
941127	14 30 25.680	S2	200	400	95	0.17	8	7	10 ✓
941127	15 39 10	S1	210	57		2.7	260		BGR ✓
941128	15 37 00	S1	75	90	32	>15	55		BGR ✓
941205	23 33 40.074	S2	370	460	188	0.06	6	30	11 ✓
941207	22 10 32	S2	265	175		<0.2	7		BGR ✓
941210	03 10 52.523	S2	900	2350	1385	0.12	1	15	14 ✓
941214	17 03 51	S1	40	45	29	>6	12		BGR ✓
941214	05 38 45.226	S1	3479	1266	14	1.0	12	240	18 Sol
941221	07 44 08	S2	55	115	30	0.8	20		BGR ✓
941221	22 14 35.215	S1	260	496	165	1.5	55	11	19 ✓
941222	05 36 00.243	S2	334	1360	1066	0.36	7	105	20 ✓
941228	07 39 45.915	S1	300	637	519	4.4	5	90	28 ✓
941228	16 55 23	S2	40	36	23	0.25	25		BGR ✓
941229	12 58 05	S1	46	108	31	1.8	15		BGR ✓
941229	22 51 08.781	S2	396	381	140	0.09	7	25	29 ✓
941230	20 52 53	S1	74	117	52	8.4	158		BGR ✓
941230	23 43 44	S2	55	70	16	<0.2	4.5		BGR ✓
950104	07 18 39.613	S2	258	550	219	0.75	2.8	20	31 ✓
950104	09 00 58	S2	140	143	40	<0.1	25		BGR ✓
950110	06 02 15	S2	332	180		<0.1	3600		BGR ✓
950110	13 37 57.084	S2	234	422	213	0.05	38	100	32 ✓
950111	04 49 12.241	S1	586	620	100	>19	92	24	33 ✓
950111	12 18 49.196	S1	225	435	164	1.85	26	50	34 ✓
950112	07 45 37.120	S2	1305	1800	336	0.04	2.5	44	35 ✓
950113	05 59 13	S1	283	180	26	>10	52		BGR ✓
950113	17 38 32	S2	85	162	35	<0.06	75		BGR ✓
950114	01 00 38	S1	46	110		1.6	6		BGR ✓
950114	04 03 01	S2	23	76		0.5	70		BGR ✓
950114	07 30 30.766	S2	205	406	60	<0.05	1	100	36 ✓
950114	13 10 34.865	S1	1320	2828	516	3.1	1	10	37 ✓
950115	02 49 32	S2	40	47	34	<0.15	24		BGR ✓
950117	01 36 00	S2	56	82	42	0.2	108		BGR ✓
950118	12 22 54	S2	57	105	17	<0.1	35		BGR ✓
950125	14 51 52.253	S1	380	600	140	8.2	3.8	11	39 ✓

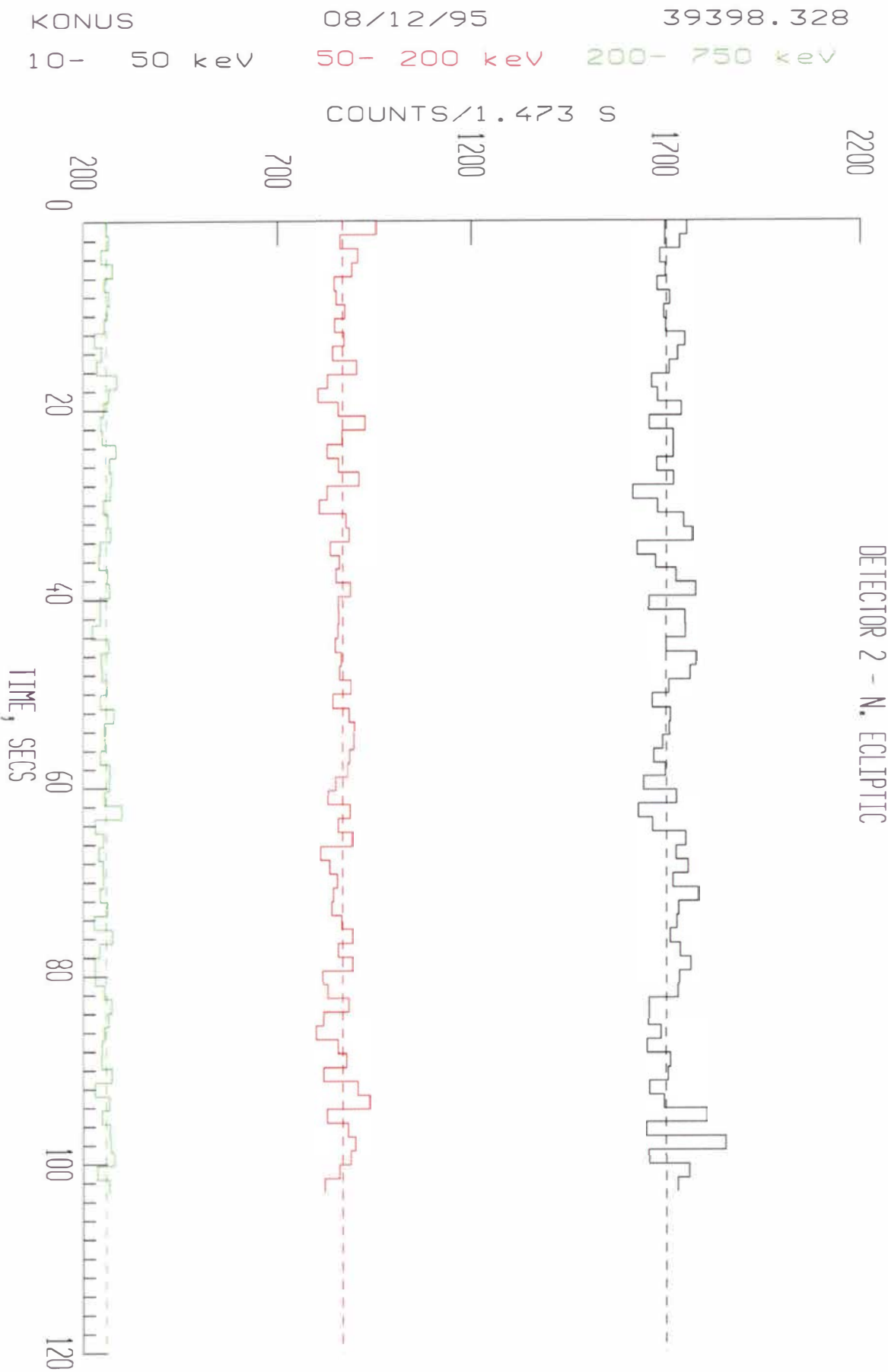
08/09/2011

DETECTOR 1 - S, ECLIP TIC



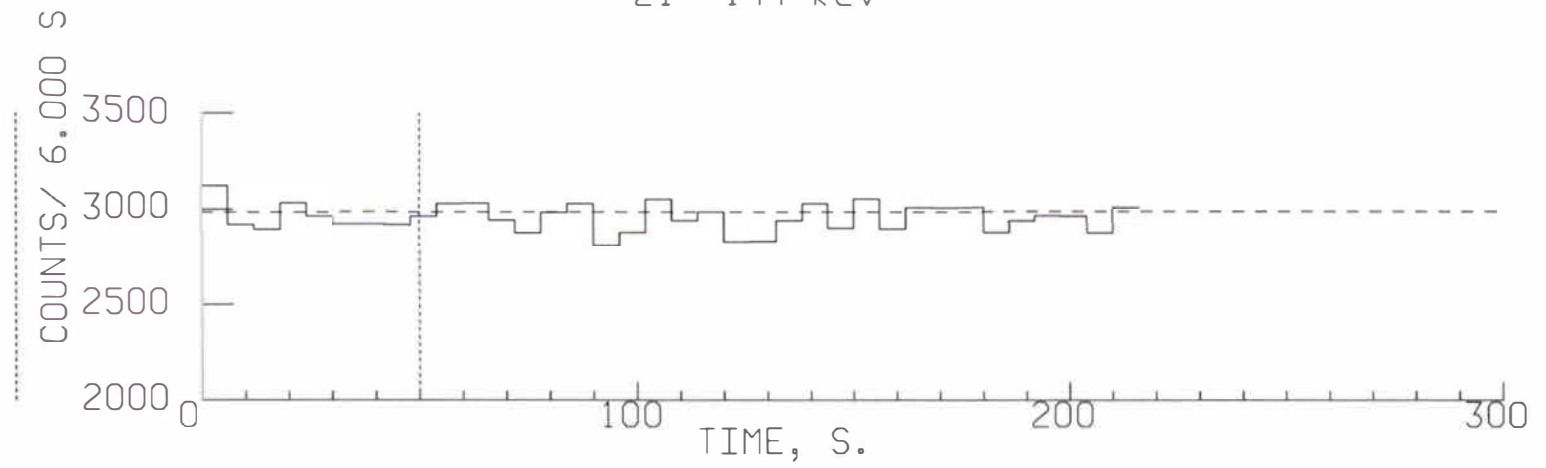
08/09/2011

DETECTOR 2 - N. ECLIPTEIC



ULYSSES RT
8/12/95 40896.246 s
0.500 S INTERVALS REGROUPED BY 12
21- 144 keV

8/ 9/11



KONUS 19951208 41002

ULYSSES RT

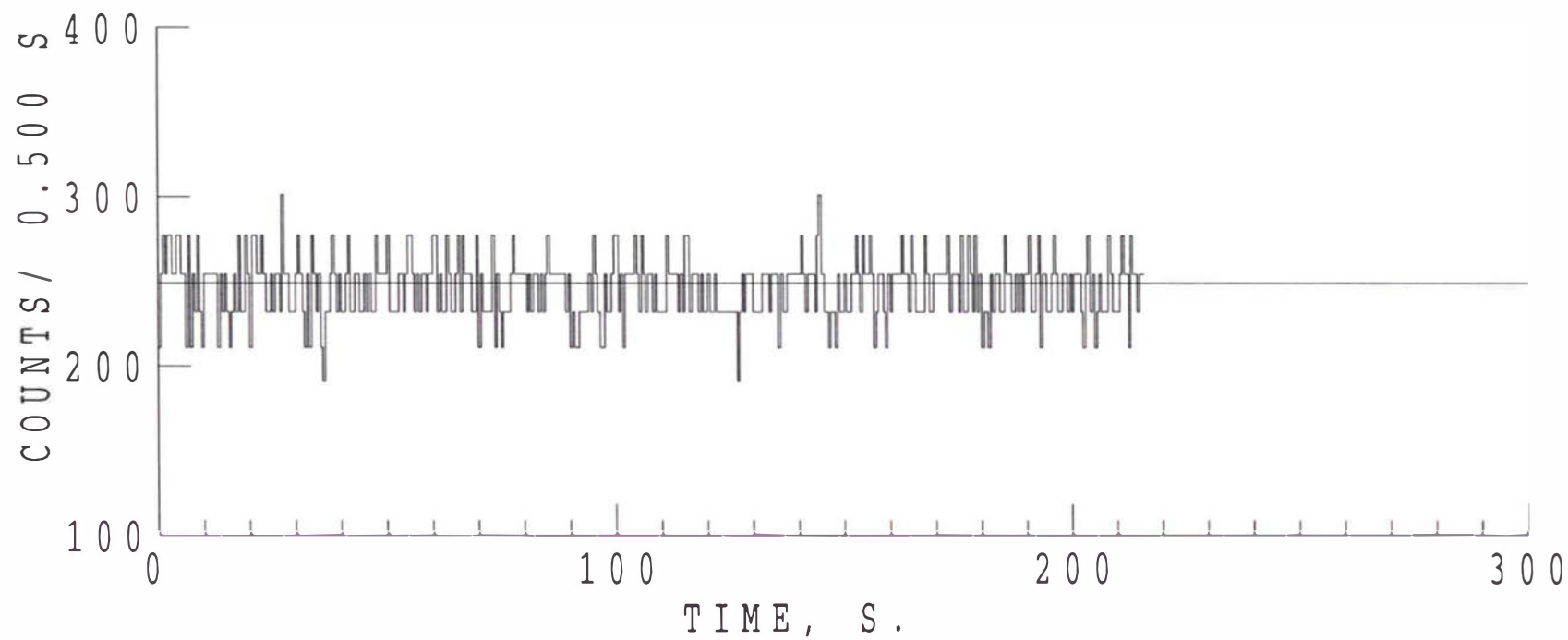
07/09/11

08/12/95 40896.246 s

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



K O N U S

2 2 / 2 / 9 6

U L Y S S E S R T

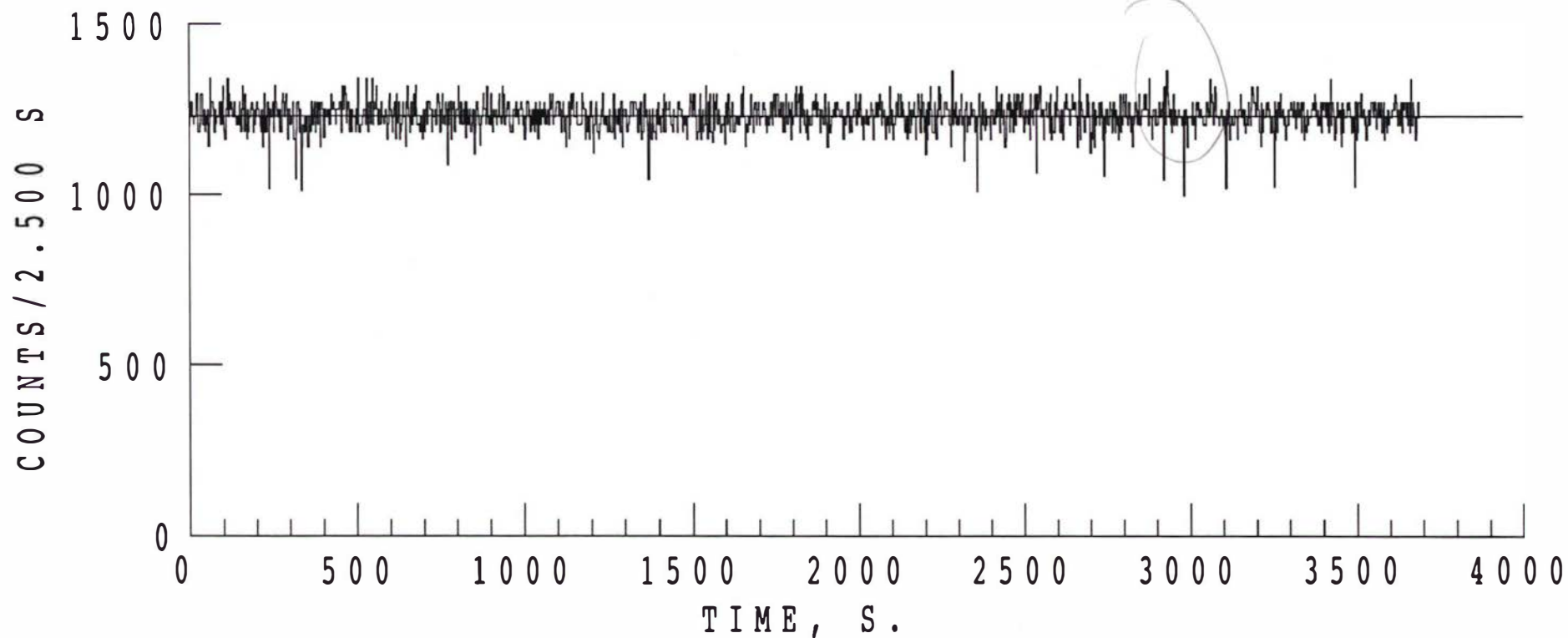
8 / 1 2 / 9 5 3 8 0 5 2 . 1 9 9 s

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

0 - 0 k e V

N = 10 M = 2

> 4.0 SIGMA FLUCTUATIONS



From HAGEDON@fender.msfc.nasa.gov Mon Dec 11 10:31 PST 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Mon, 11 Dec 1995 12:31:46 -0600 (CST)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3937

B

BATSEARCH PROGRAM

RI

BATSE BURST # 3937
EVENT OF 1995 DEC 8 DAY OF YEAR=342
EVENT CROSSING TIME AT BATSE : 42443. S. OR 11:47:23.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 58.000 -28.000
BATSE PEAK COUNTING RATE: 11200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 8/12/ 95 IS:
RA= 221.973 DEC= 56.250 DIST= 2.850 AU
BATSE-ULYSSES DISTANCE = 426410205. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 30.48 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1225.82 SECS.
CROSSING TIME AT ULYSSES IS 43669. S. OR 12:07:48 +/- 193.87 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 8/12/ 95 IS:
RA= 276.191 DEC= -24.306 DIST= 2.302 AU
MARS-BATSE DISTANCE = 344316416. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 63.95 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 504.43 SECS.
CROSSING TIME AT MARS IS 42947. S. OR 11:55:47 +/- 186.80 SECONDS

BATSE BURST TRIGGER

NO.: 3937

TIME: TJD=0059 SECONDS=42443

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=86.5 AZIMUTH=102.1 ERROR=4.6 DEGREES

COMMENTS:

BURST. COMPLEX EVENT WITH NUMEROUS PEAKS. TOTAL DUR.~140 SEC.
VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3937	951208	10059	42443	11200	058	-28	140

From cline@heavx.gsfc.nasa.gov Fri Mar 29 08:40 PST 1996
 Date: Fri, 29 Mar 1996 08:40:19 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@heavx.gsfc.nasa.gov (T L Cline)
 Subject: Konus Event List augmentation

Dear Kevin,

This list includes Sergei's latest Konus-W (GGS-Wind) and Konus-A (Kosmos-2326) events, for comparison with Ulysses, BATSE, TGRS, etc. The times listed are prioritized for Konus-W (i.e., Konus-A time given if Konus-W doesn't trigger).

Yr	Mn	Dy	UT (Konus)	BATSE	Ulysses	Konus	TGRS	Notes
95	11	2	07085.879	?	?	168	no	
95	11	2	21209.015	3891	R I	169	345	
95	11	4	05868.077	3893	R I	170	BGR	
95	11	5	46827.808	?	?	171	no	
95	11	12	66495.244	?	R I	172	no	
95	11	13	84358.872	3906	R I	173	BGR	
95	11	17	10123.762	3909	?	175	no	
95	11	19	29831.402	3912	R I	176	348	
95	11	19	46457.519	?	?	177	BGR	
95	11	22	09841.38	?	?	179	no	
95	11	22	17107.738	?	?	180	349	
95	12	2	39101.744	?	?	195	BGR	
95	12	3	03988.18	?	?	196	360	
	12	8	19617.151	?	?	197	no	
	12	8	39452.057	?	?	198	no	
95	12	8	42467.634	?	?	199	BGR	
95	12	9	31349.607	?	?	200	BGR	
95	12	13	17849.683	?	?	201	362	
95	12	14	08657.847	?	?	202	no	
95	12	19	60679.732	?	?	203	no	
95	12	20	31883.56	?	?	204	BGR	
95	12	22	25203.254	?	?	no	?	= K-A t.
95	12	27	23005.042	?	?	218	375	
96	12	31	20231.668	?	?	219	no	
96	1	2	11650.996	?	?	220	no	
96	1	4	12521.062	?	?	221	no	
96	1	11	46524.53	?	?	222	no	
96	1	13	56024.261	?	?	228	no	
96	1	14	44104.737	?	?	233	384	+ K-A t.
96	1	15	31956.506	?	?	234	BGR	
96	1	17	57371.341	?	?	235	no	
96	1	19	34679.317	?	?	236	no	
96	1	19	45226.016	?	?	237	no	
96	1	20	36768.974	?	?	238	no	
96	1	24	03388.008	?	?	239	385	+ K-A t.
96	1	24	76096.911	?	?	BGR	?	= K-A t.
96	1	30	08756.848	?	?	240	no	
96	2	1	78530.582	?	?	241	?	+ K-A t.
96	2	2	50750.813	?	?	242	?	
	2	10	35198.959	?	?	247	?	
96	2	16	57796.347	?	?	BGR	?	= K-A t.
96	2	19	20589.684	?	?	BGR	?	= K-A t.
96	2	28	85760.241	?	?	249	?	
96	2	29	22445.141	?	?	250	?	

96	3	5	33645.352	?	?	251	?
96	3	12	35074.697	?	?	252	?
96	3	19	51992.828	?	?	253	?
96	3	21	76321.803	?	?	254	?
96	3	22	19642.728	?	?	255	?
96	3	24	80064.124	?	?	257	?
96	3	25	69892.978	?	?	258	?

--

TLC

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

Helio corr removed

Date: Feb 25 '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 - batse TTS data*

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

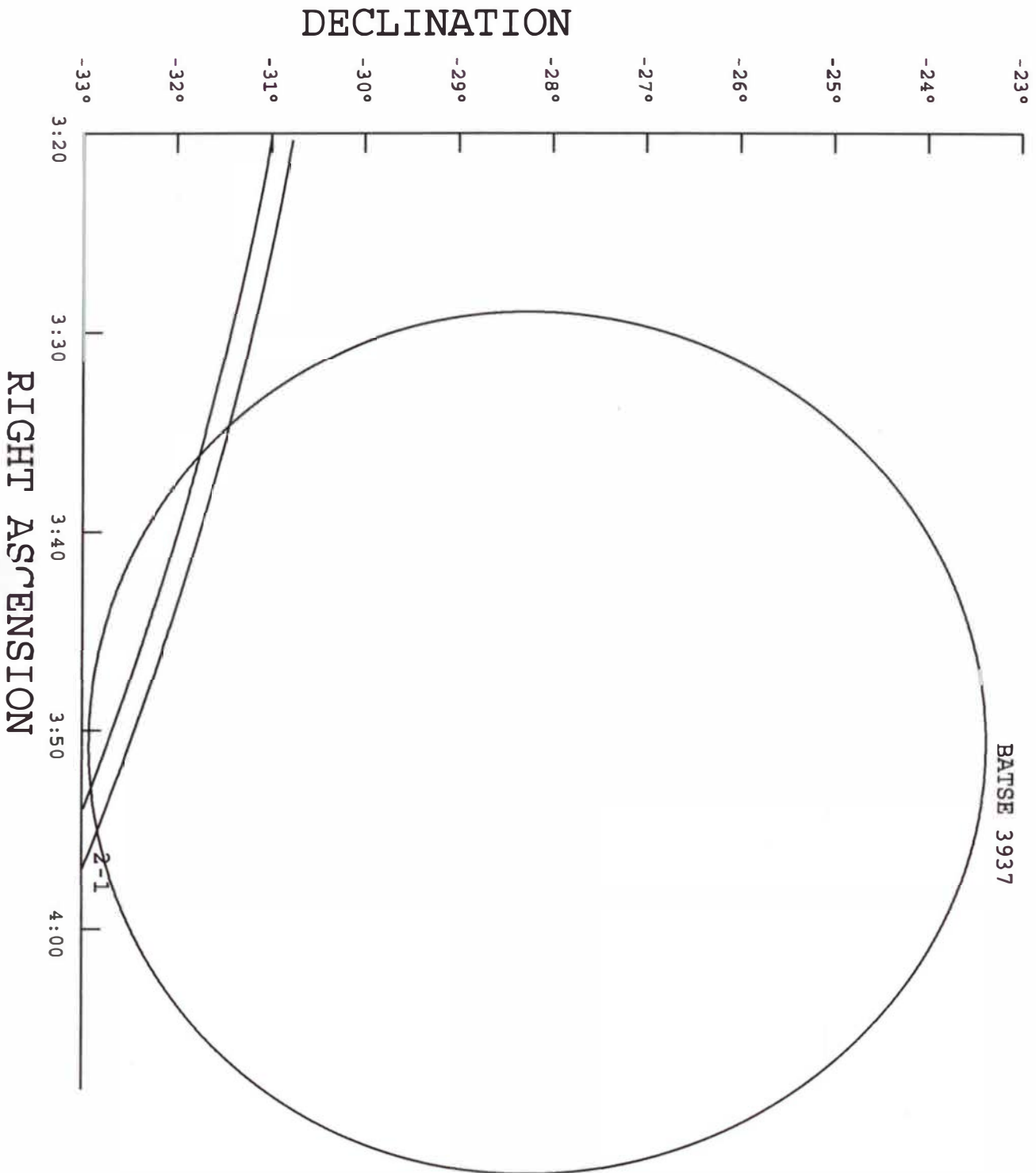
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF DEC 8, 1995 12:08

23 / 2 / 98



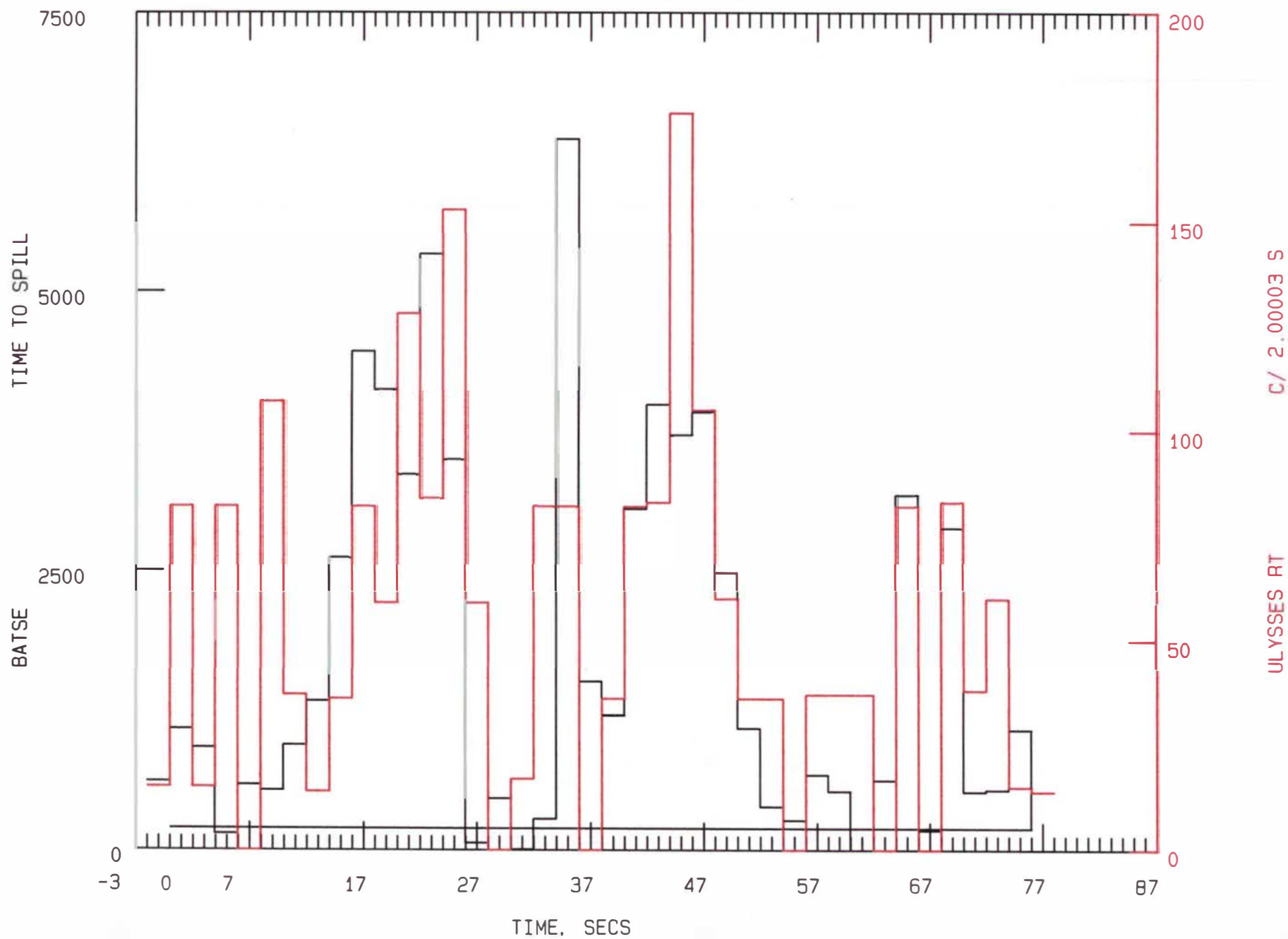
BATSE

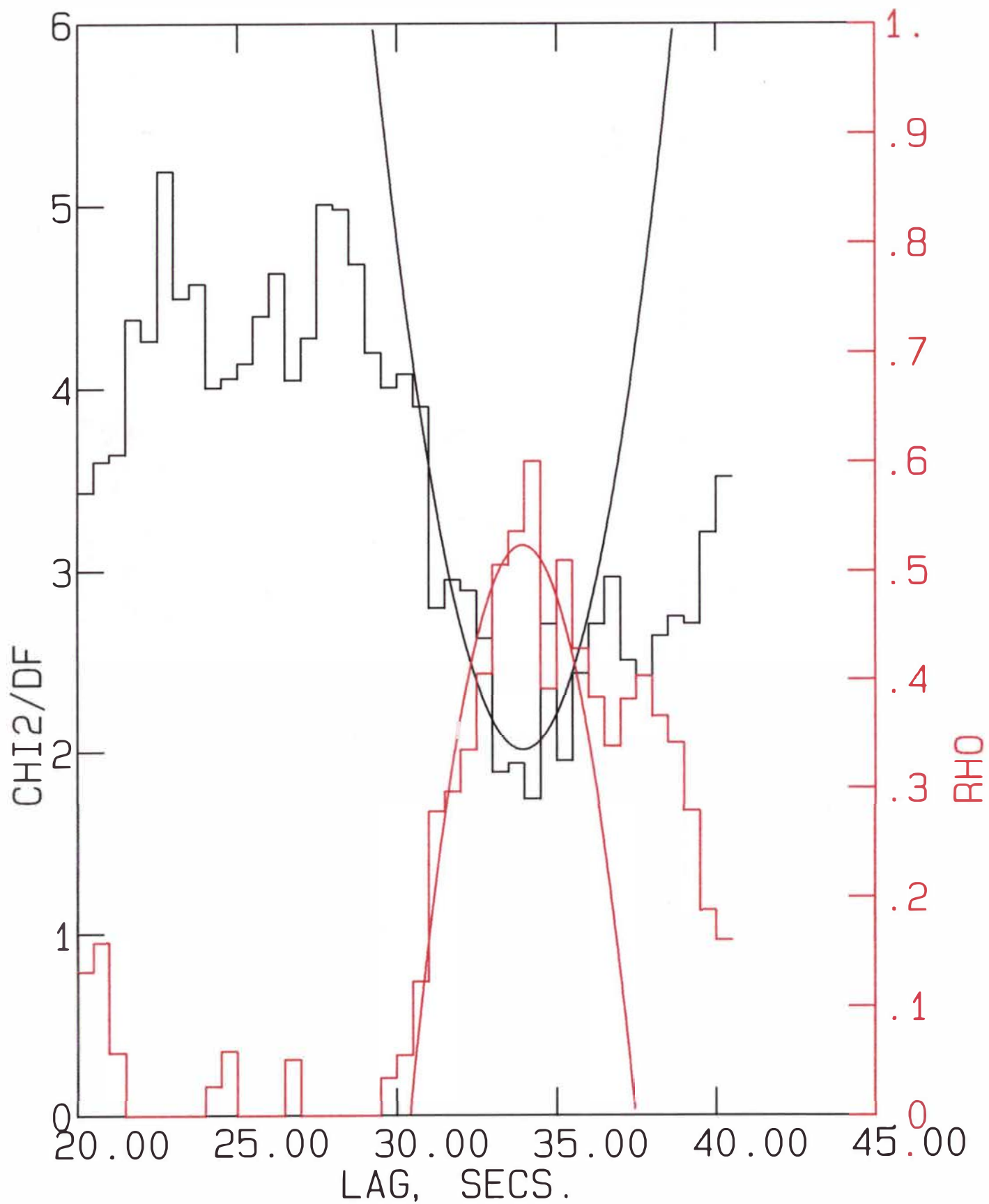
-ULYSSES RT CORRELATION

8/12/95

42443.186

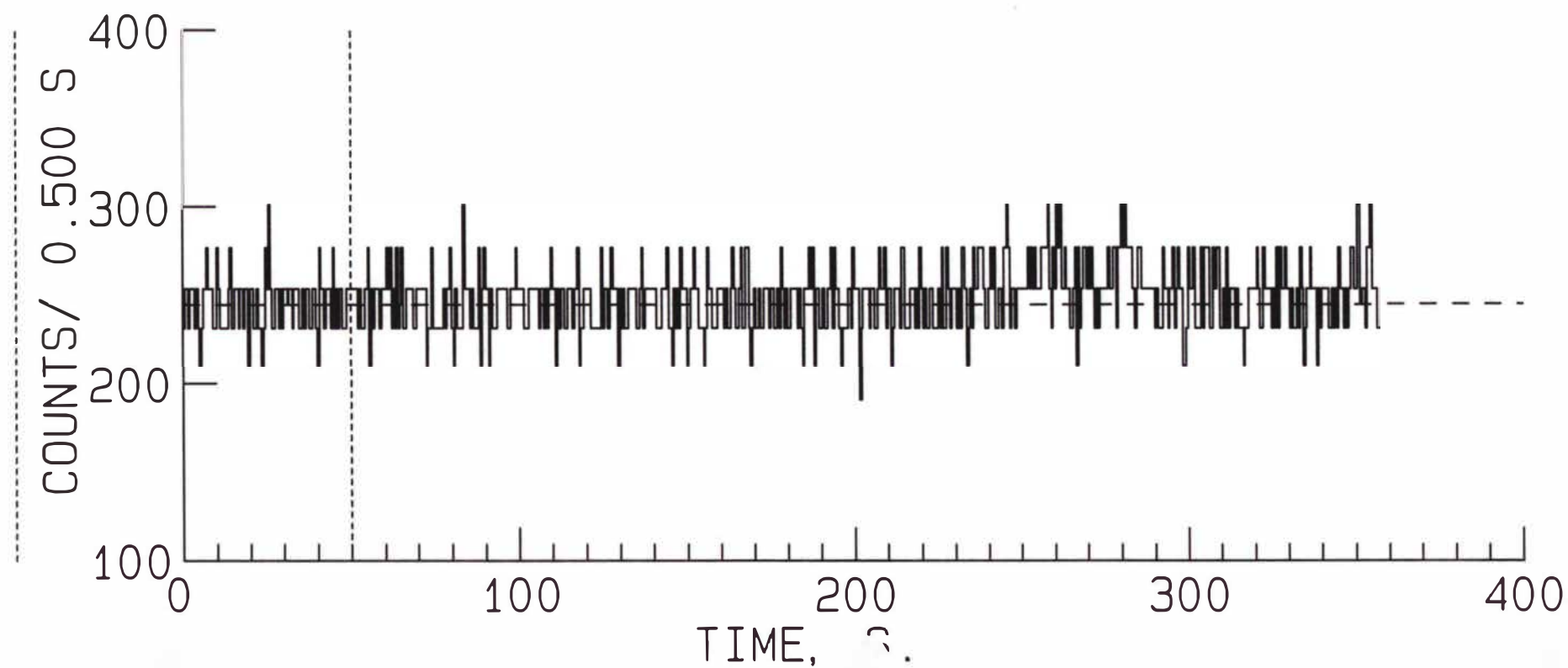
23/ 2/98





ULYSSES RT
8/12/95 43488.287 s
21- 144 keV

23 / 2 / 98



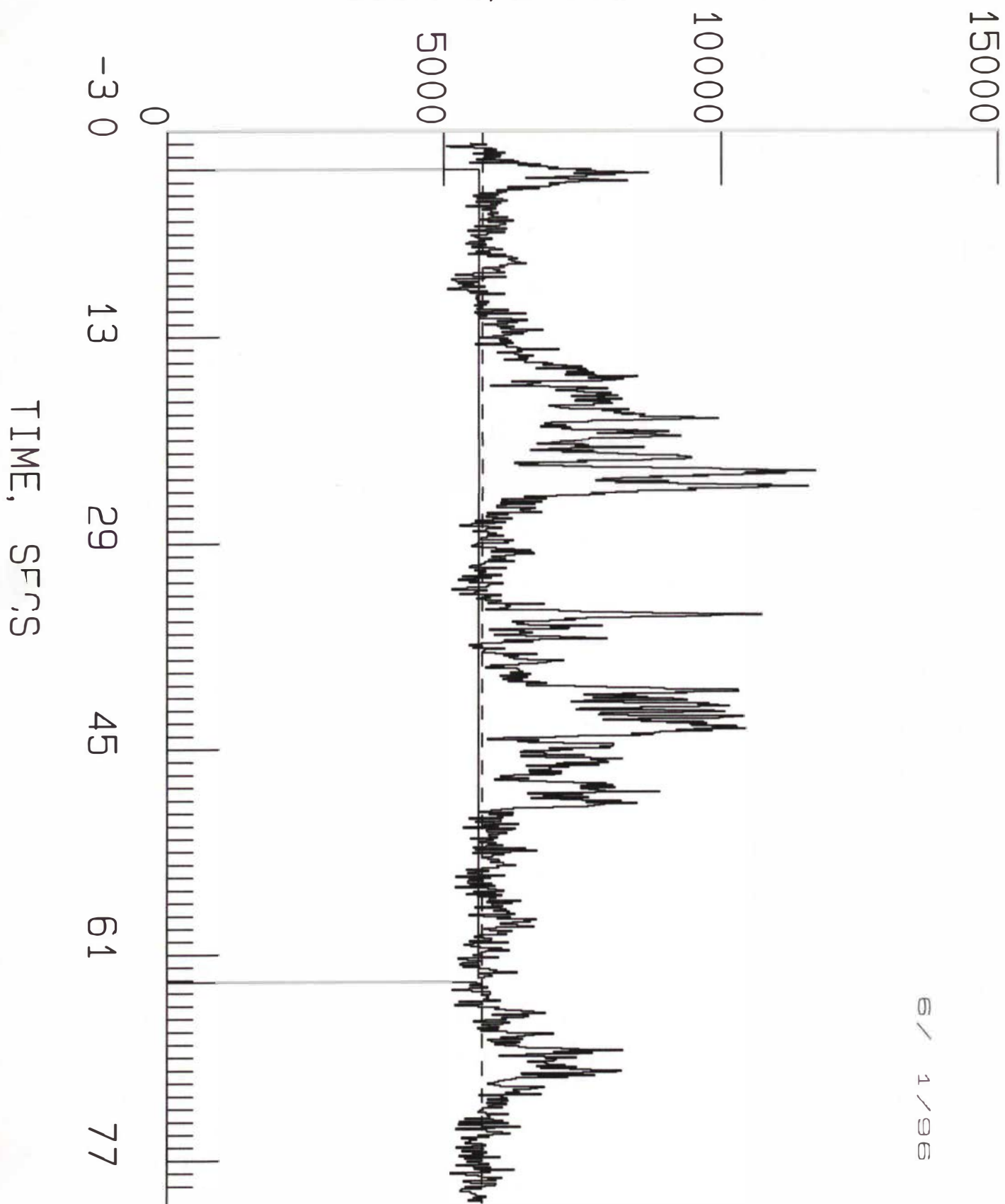
BATSE

08/12/95

42443.186

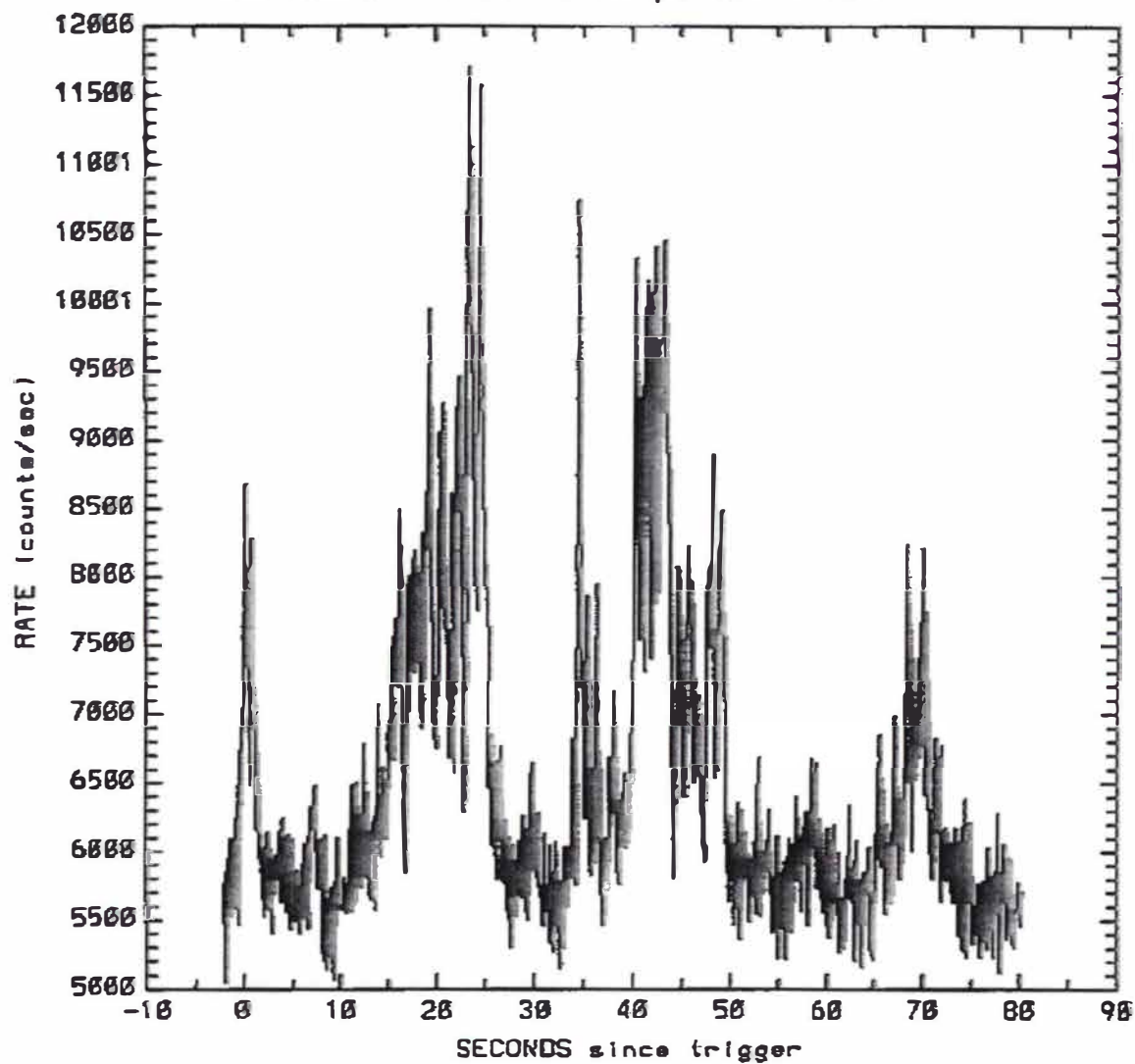
25- 100 keV

COUNTS/S TTS



Dec 8 1995 B

TTS Data for K. Hurley, No. 3937



14-DEC-1995 12:03:08

Created by KOPS BO
(Burst Display)
Version 12.25

Trigger # : 3937

Trigger Time:
10050 / 42443.186Burst Data Type:
TTS

Time Corrected: Y

Maximum Time Error:
0.07683 second(s)Deadtime
Corrected: N
Background Data
Type: PREB + DISCLA

Bln Count: 8

Detectors [7..6].
--54--10Discriminators:
(2 . 2)Quality Mask:
B01SP1

From HAGEDON@fender.msfc.nasa.gov Mon Dec 11 10:33 PST 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Mon, 11 Dec 1995 12:33:26 -0600 (CST)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3938

BATSEARCH PROGRAM

BATSE BURST # 3938
EVENT OF 1995 DEC 8 DAY OF YEAR=342
EVENT CROSSING TIME AT BATSE : 84253. S. OR 23:24:13.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 73.000 -69.000
BATSE PEAK COUNTING RATE: 3800 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 8/12/ 95 IS:
RA= 222.069 DEC= 56.301 DIST= 2.850 AU
BATSE-ULYSSES DISTANCE = 426332629. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 18.69 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1347.10 SECS.
CROSSING TIME AT ULYSSES IS 85600. S. OR 23:46:40 +/- 149.58 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 8/12/ 95 IS:
RA= 276.191 DEC= -24.306 DIST= 2.302 AU
MARS-BATSE DISTANCE = 344316416. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 94.82 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -96.55 SECS.
CROSSING TIME AT MARS IS 84156. S. OR 23:22:36 +/- 197.23 SECONDS

BATSE BURST TRIGGER

NO.: 3938

TIME: TJD=0059 SECONDS=84253

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=102.6 AZIMUTH=63.8 ERROR=2.0 DEGREES

COMMENTS:

BURST. SINGLE PULSE WITH SUBSTRUCTURE. DUR.~35 SEC. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3938	951208	10059	84253	3800	073	-69	35

Helio corr removed

Date: Feb 23 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☐ Final ephemeris used?
- ☐ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☐ 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

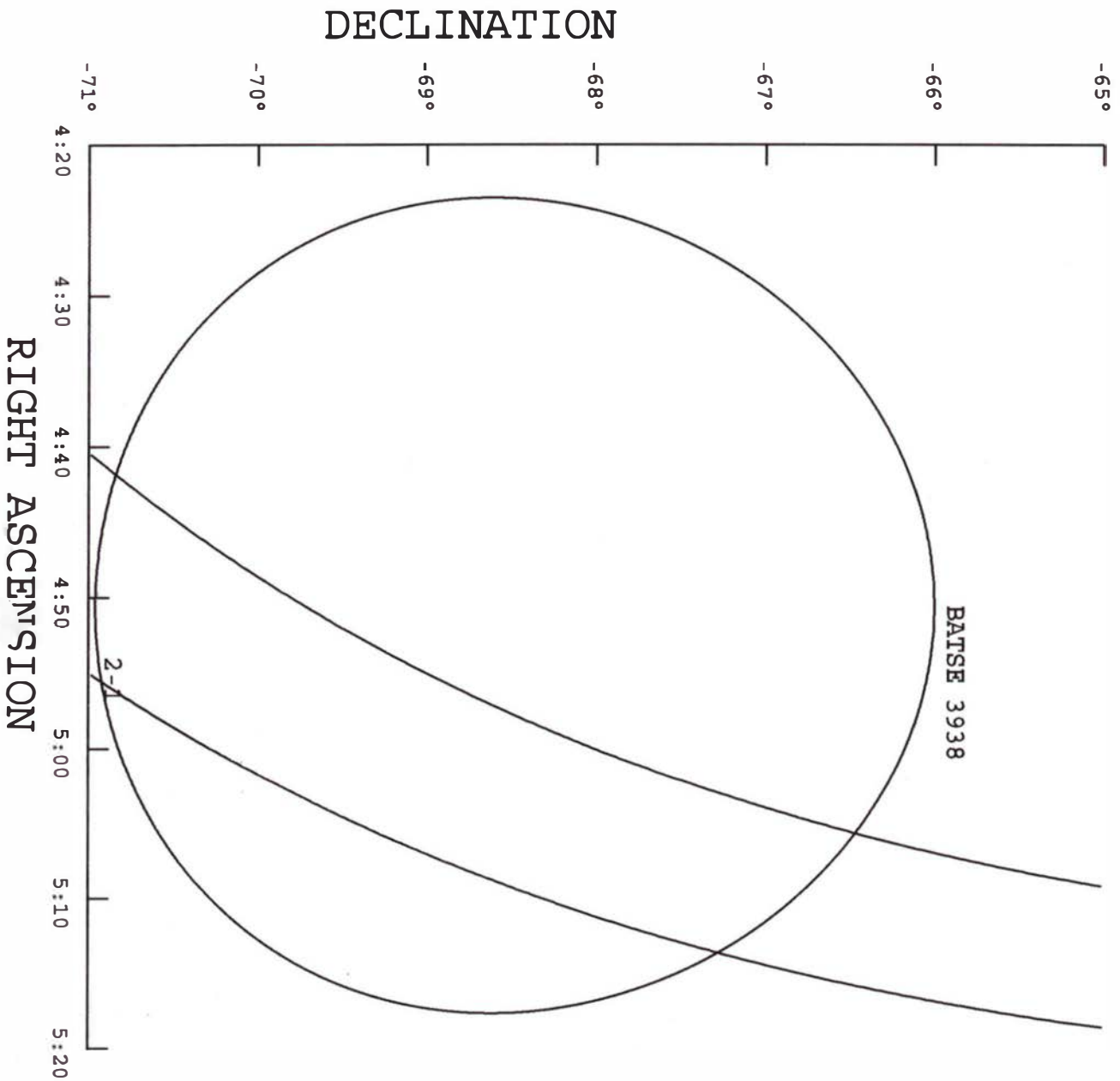
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF DEC 8, 1995 23:46

23 / 2/98



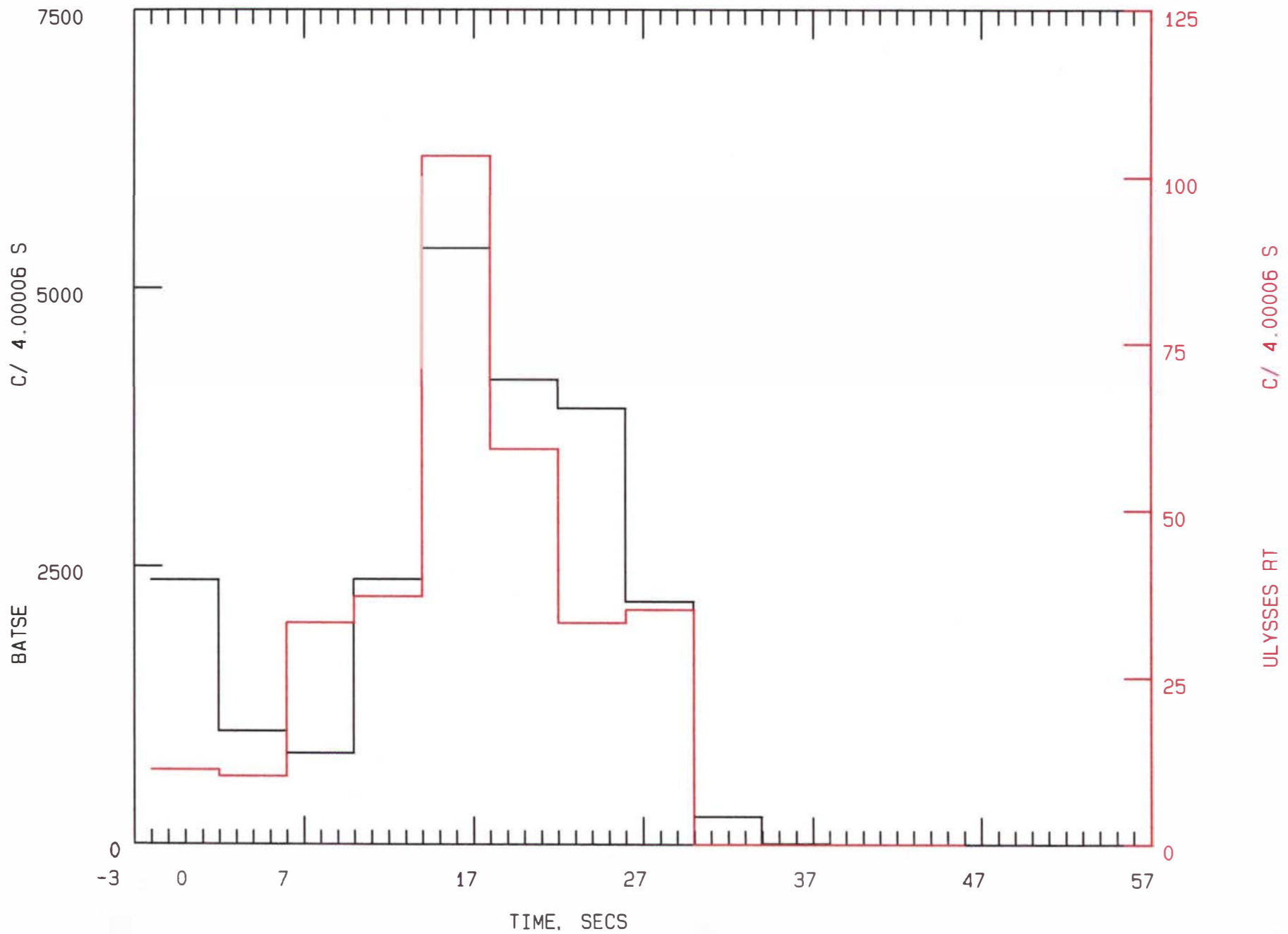
BATSE

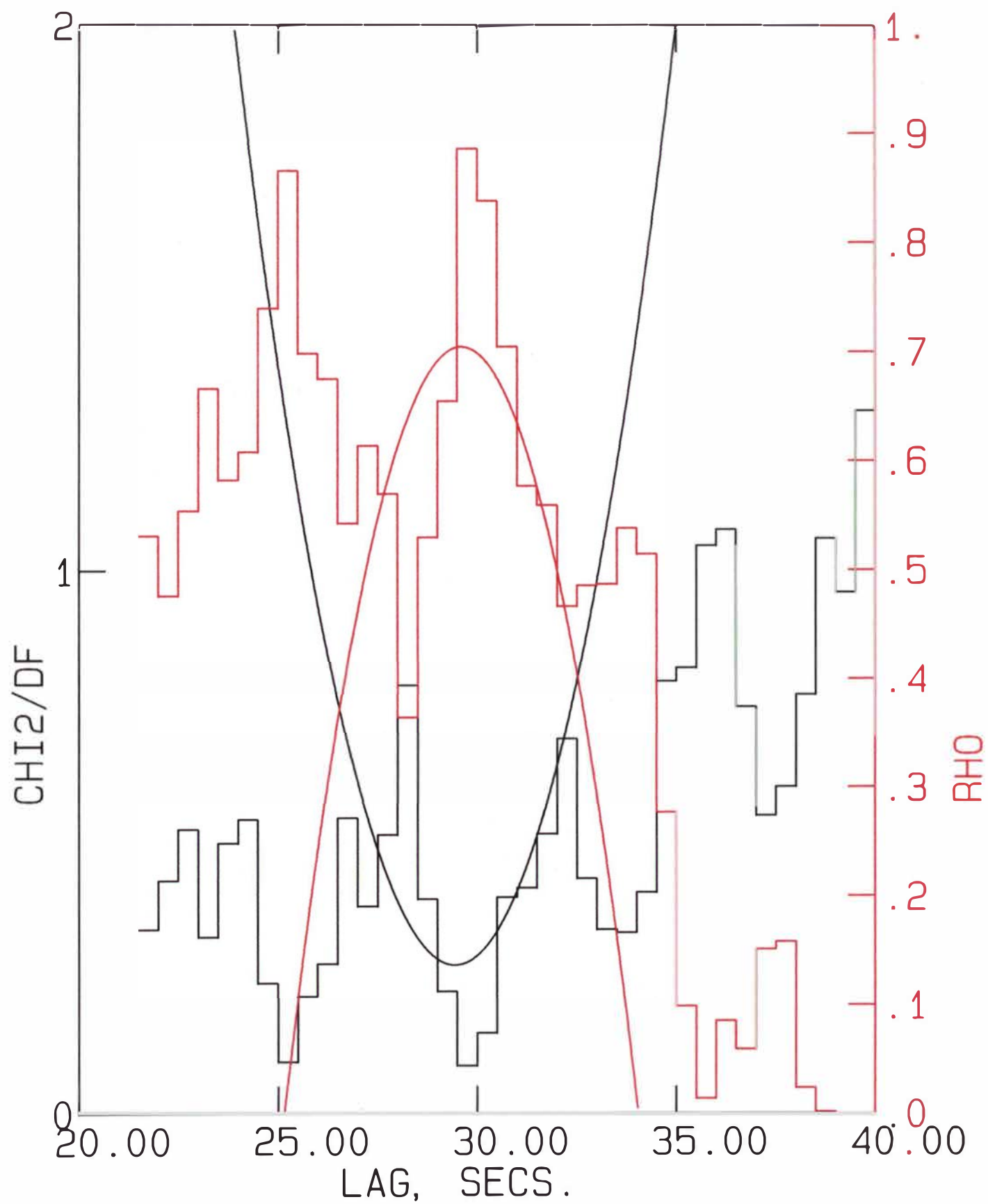
-ULYSSES RT CORRELATION

8/12/95

84253.362

23/ 2/98





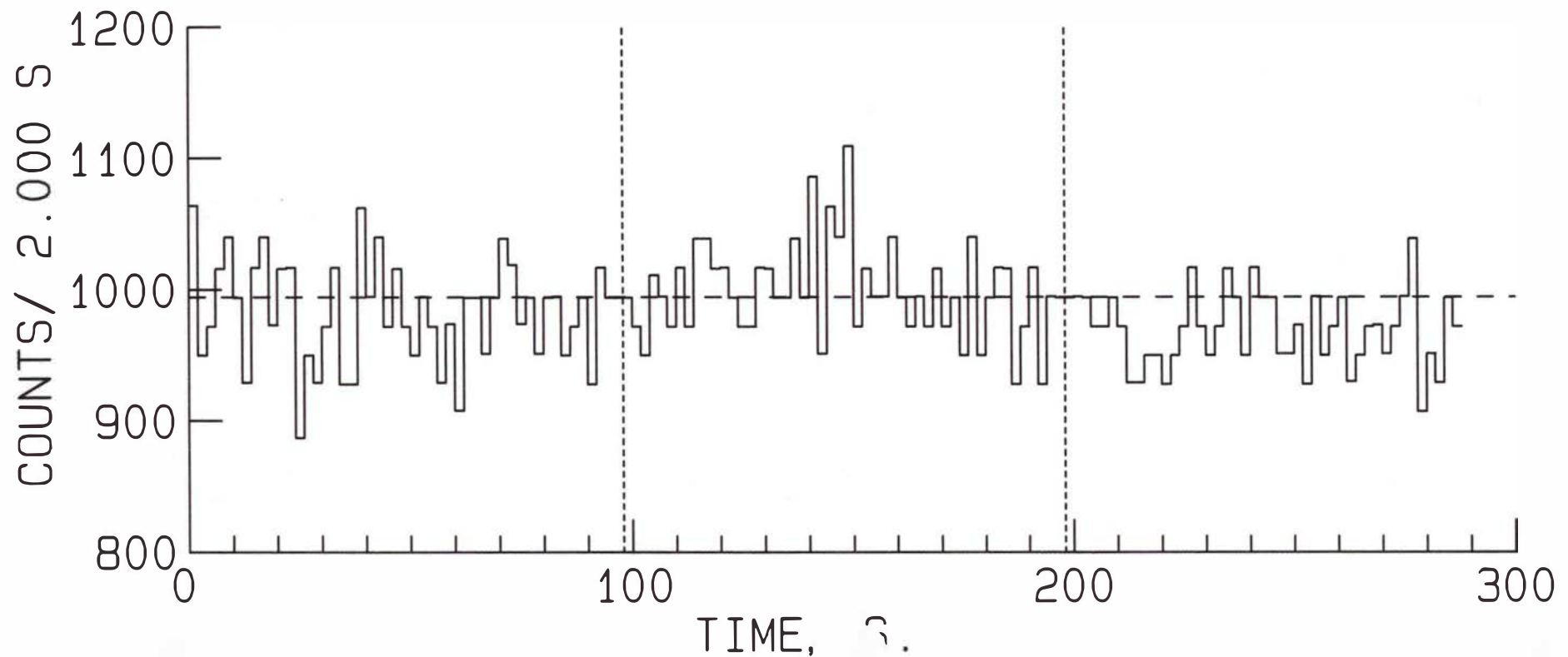
ULYSSES RT

23 / 2 / 98

8/12/95 85464.438 s

0.500 S INTERVALS REGROUPED BY 4

21- 144 keV



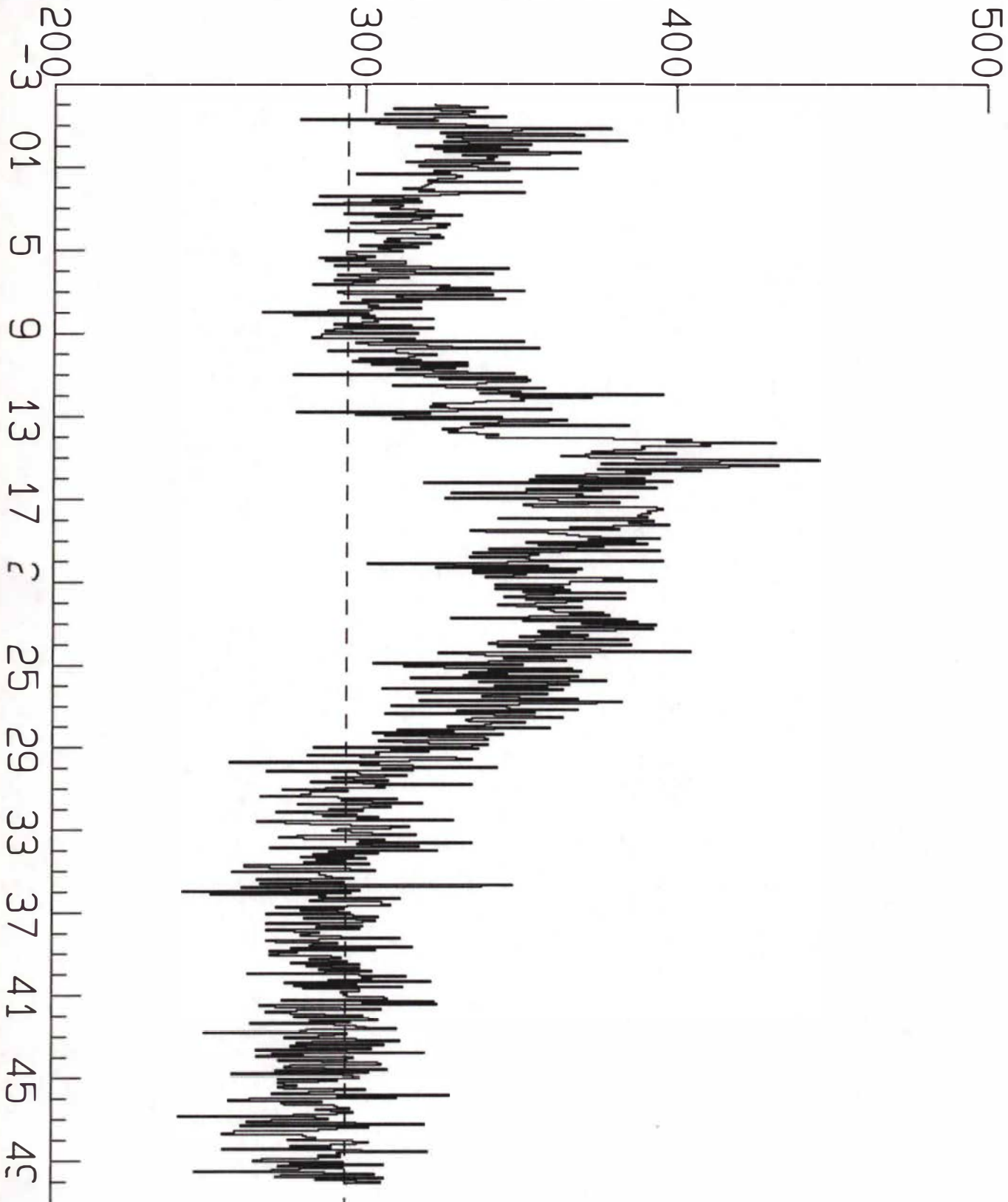
BATSE

08/12/95

84253.362

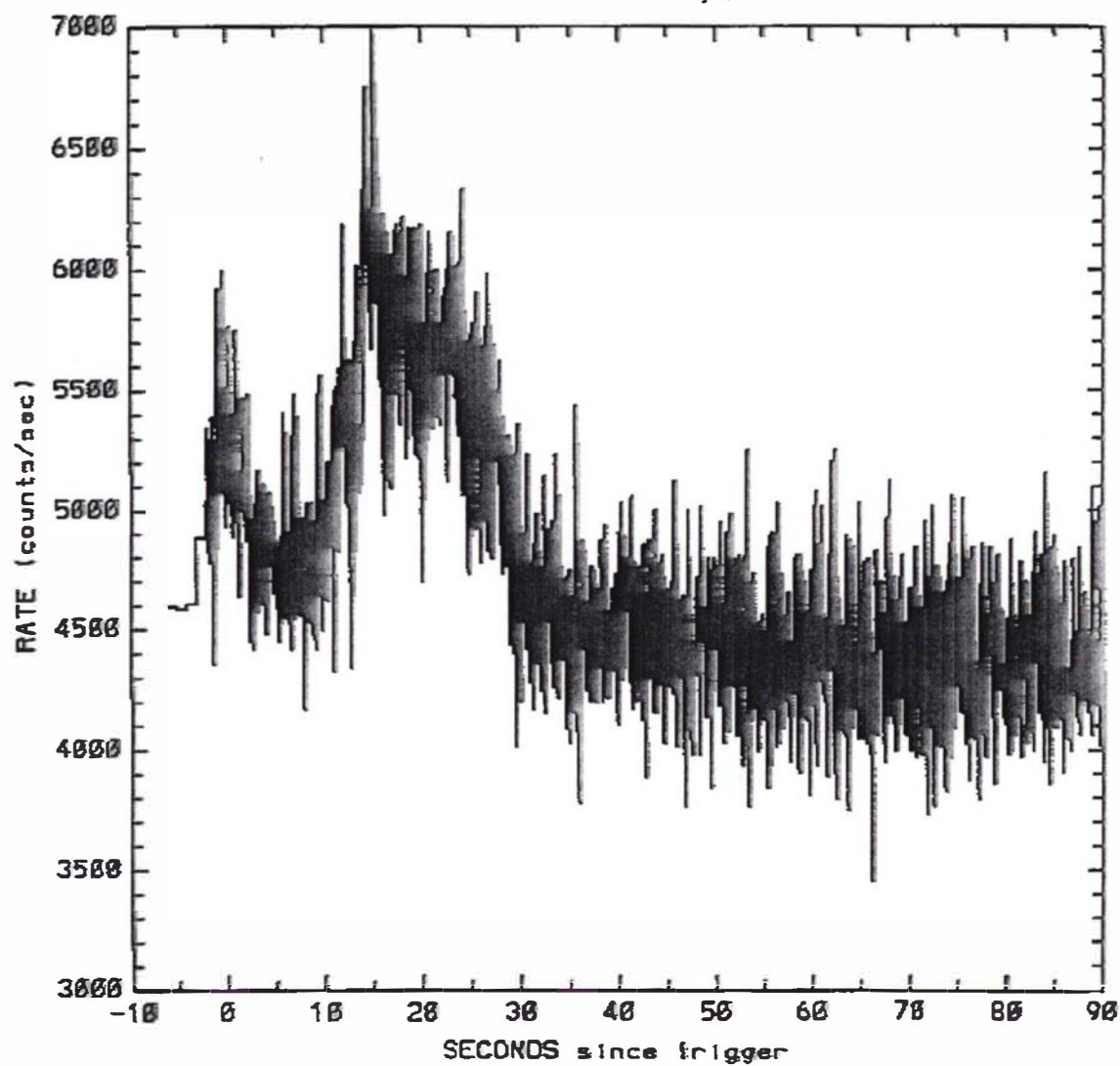
25- 100 keV

COUNTS/0.064 S



Dec 8 1995 C

DISCSC Data for K. Hurley, No. 3938



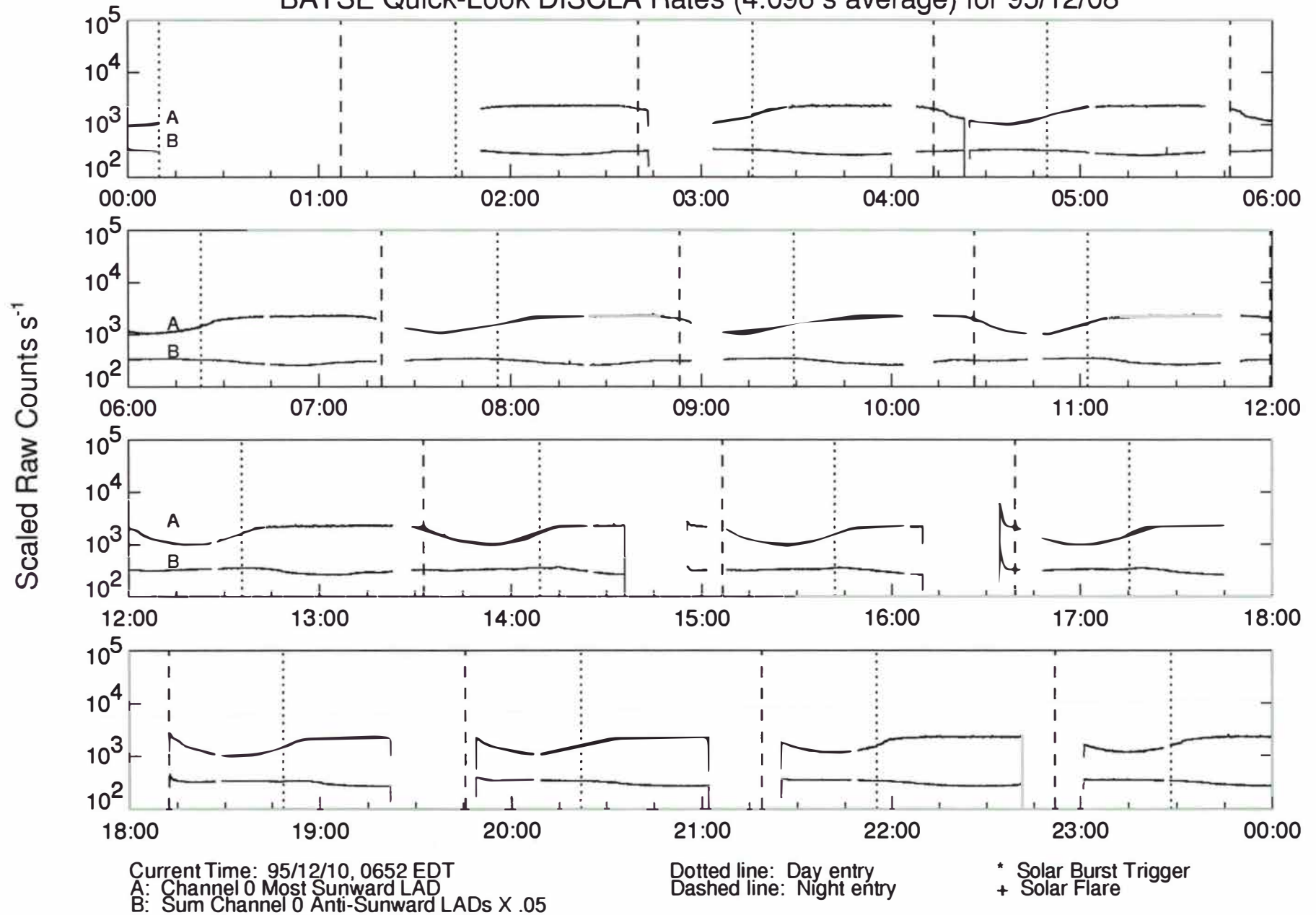
14-DEC-1995 11:58:16

Created by MOPS BD
(Burst Display)
Version 12.25

Trigger # = 3938

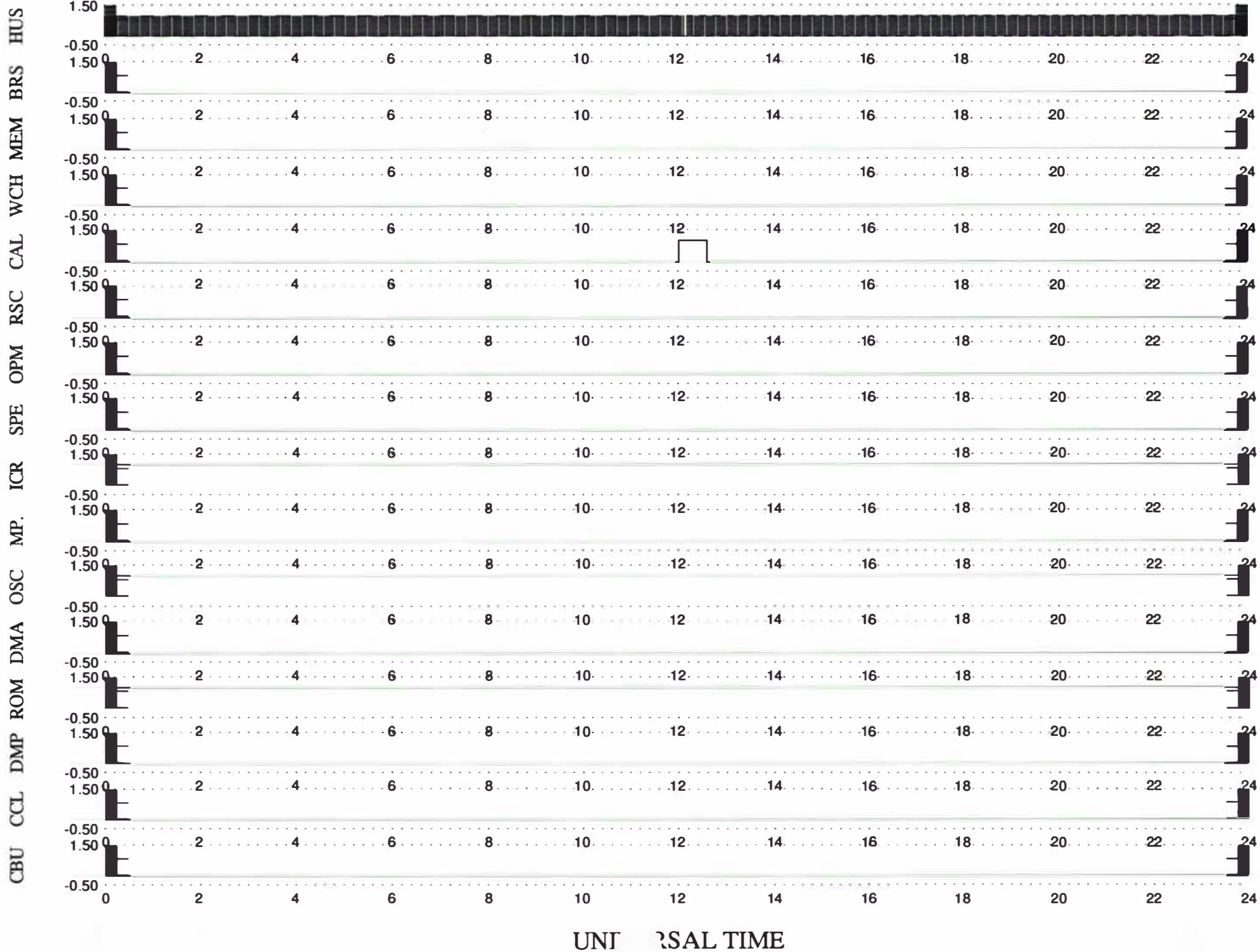
Trigger Time:
1995 / 84253.362Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: PREB + DISCLAMinimum Integ. Time:
6.664 secondsDetectors [7..8]:
-----10Discriminators:
[1 , 2]Quality Mask:
BOISP1

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/12/08



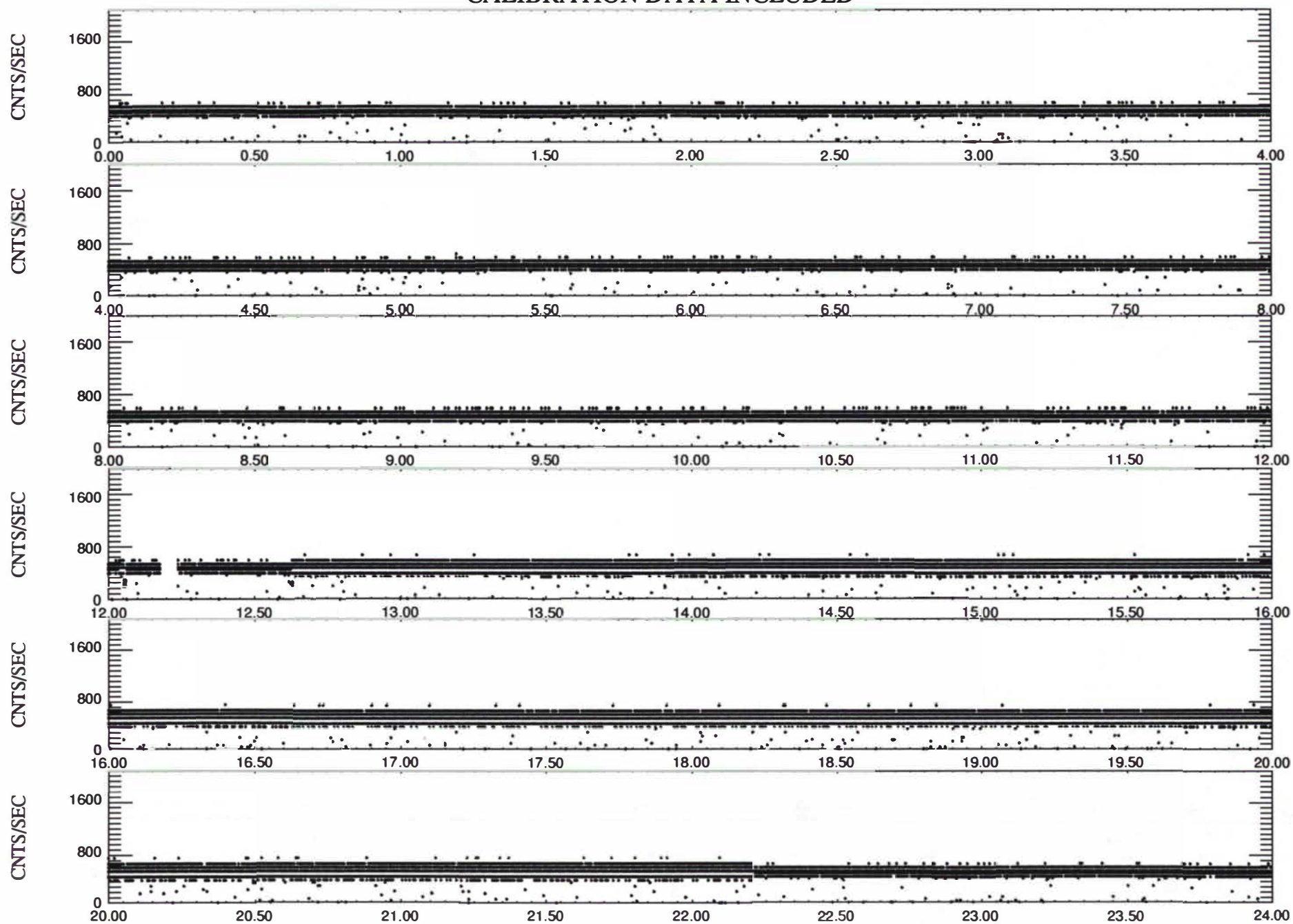
HUS MODES EDR day 342, year 1995 to day 342, year 1995 NO BURST (3)

4/1/96

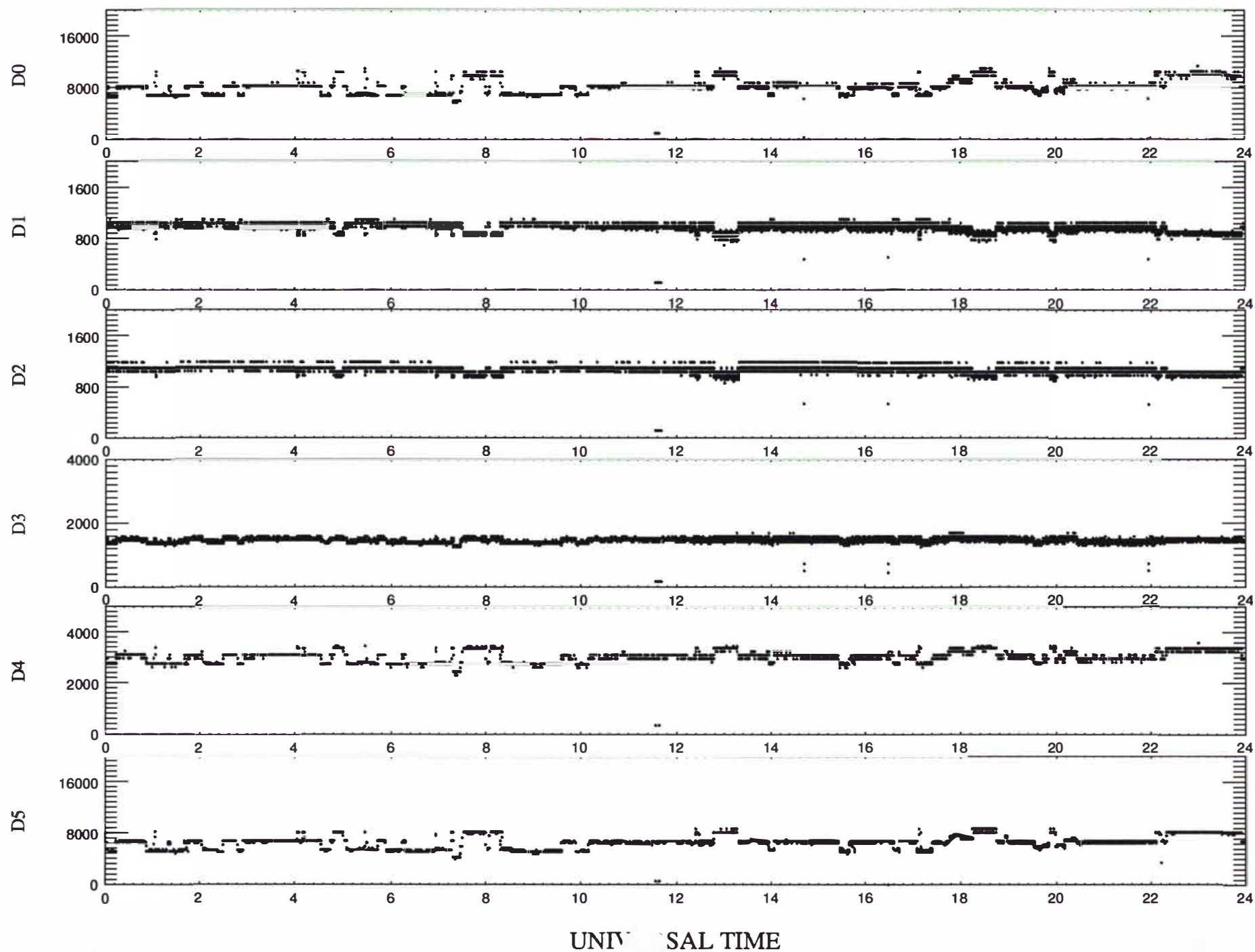


HUS 2A, MODE 1, NOT AVERAGED EDR day 342, year 1995 to day 342, year 1995
CALIBRATION DATA INCLUDED

4/1/96



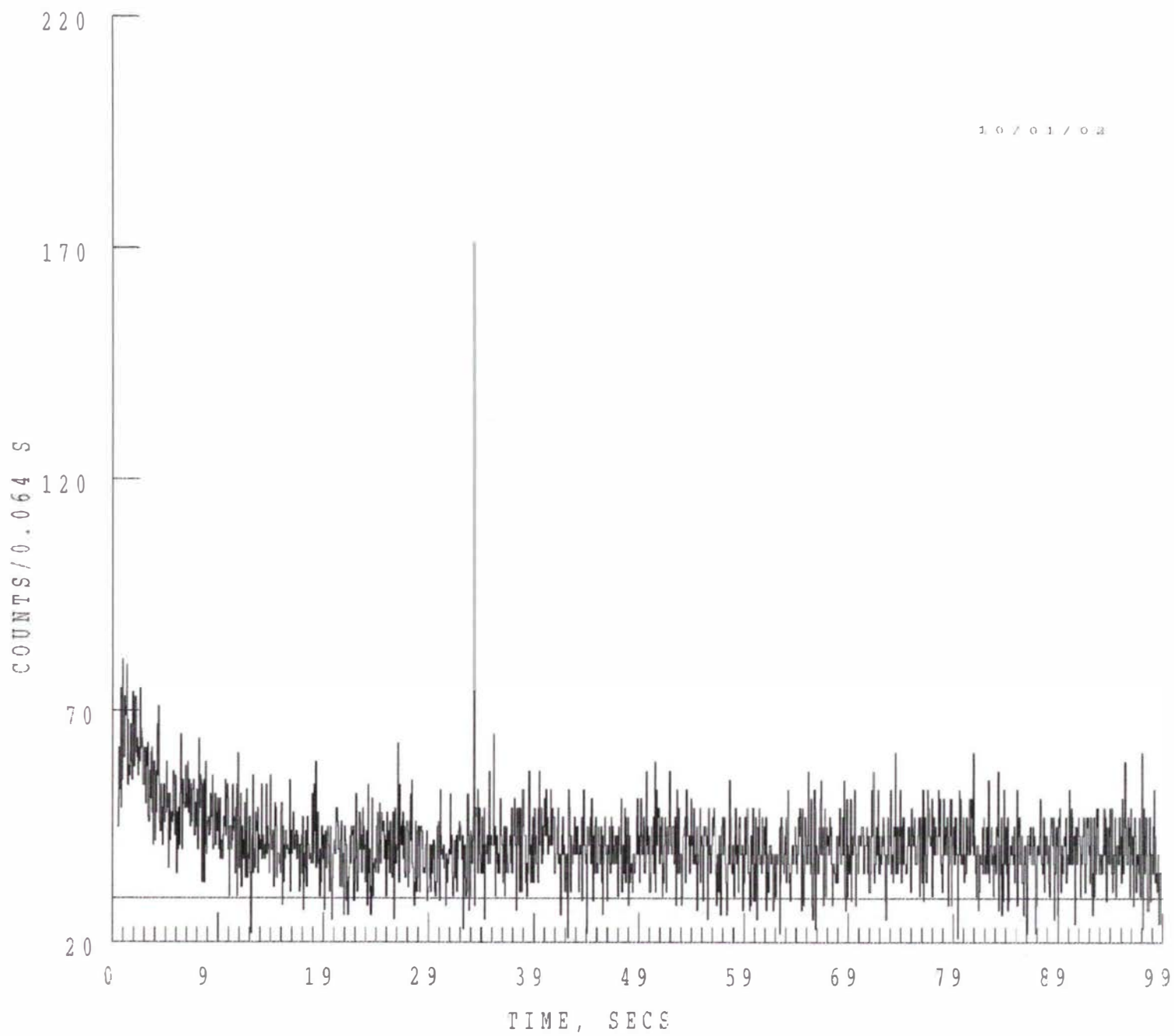
UNITSAL TIME



KONUS1

09/12/95 31349.607

50 200 keV



KONUS1

09/12/95

31349.607

EL = -59.2 → -39.2

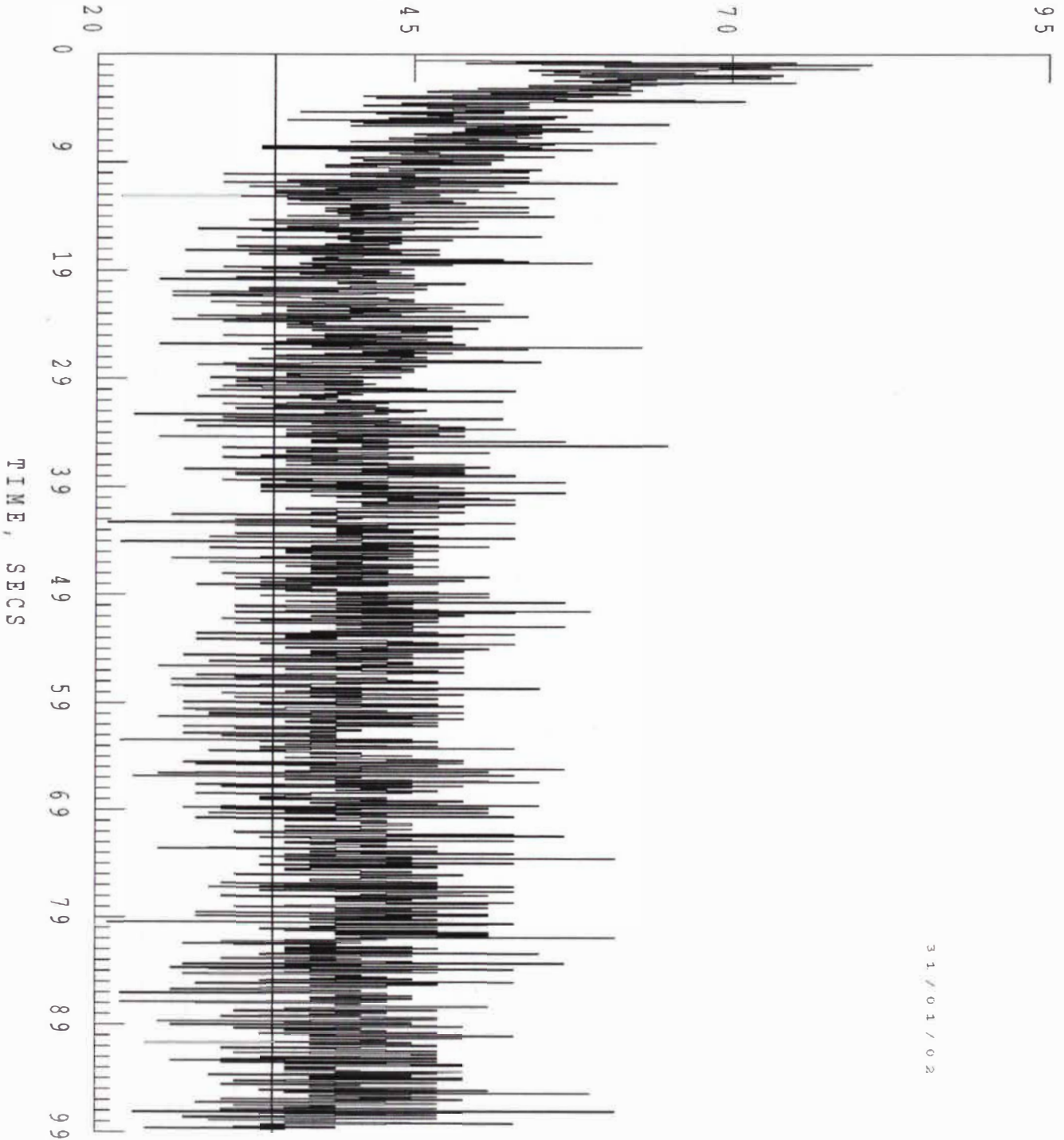
50 - 200 keV

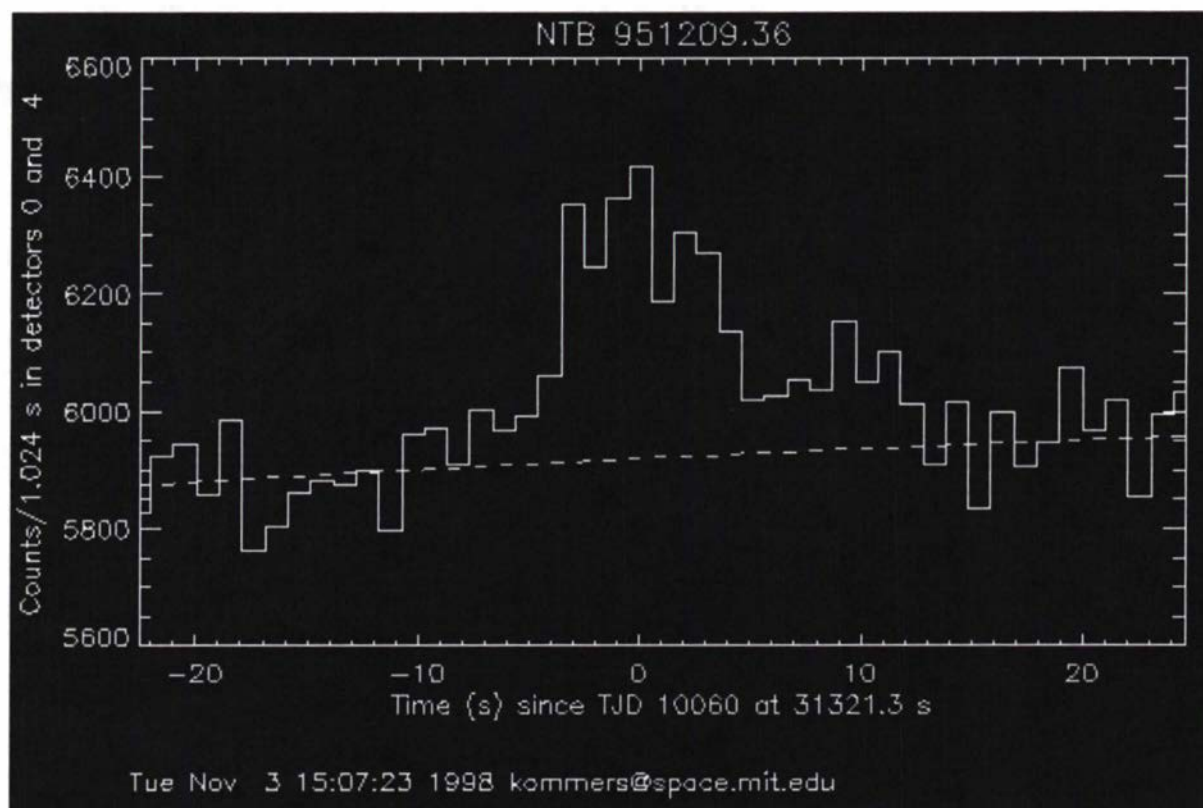
Konus burst at 31321 is

at $\alpha, \delta = 40.6, -35.7 =$

EL = -48

COUNTS/0.064 S





↑
Konus
event is
here; Konus
was a few
ls from Earth

KONUS1 19951209 31349

ULYSSES RT

31 / 01 / 02

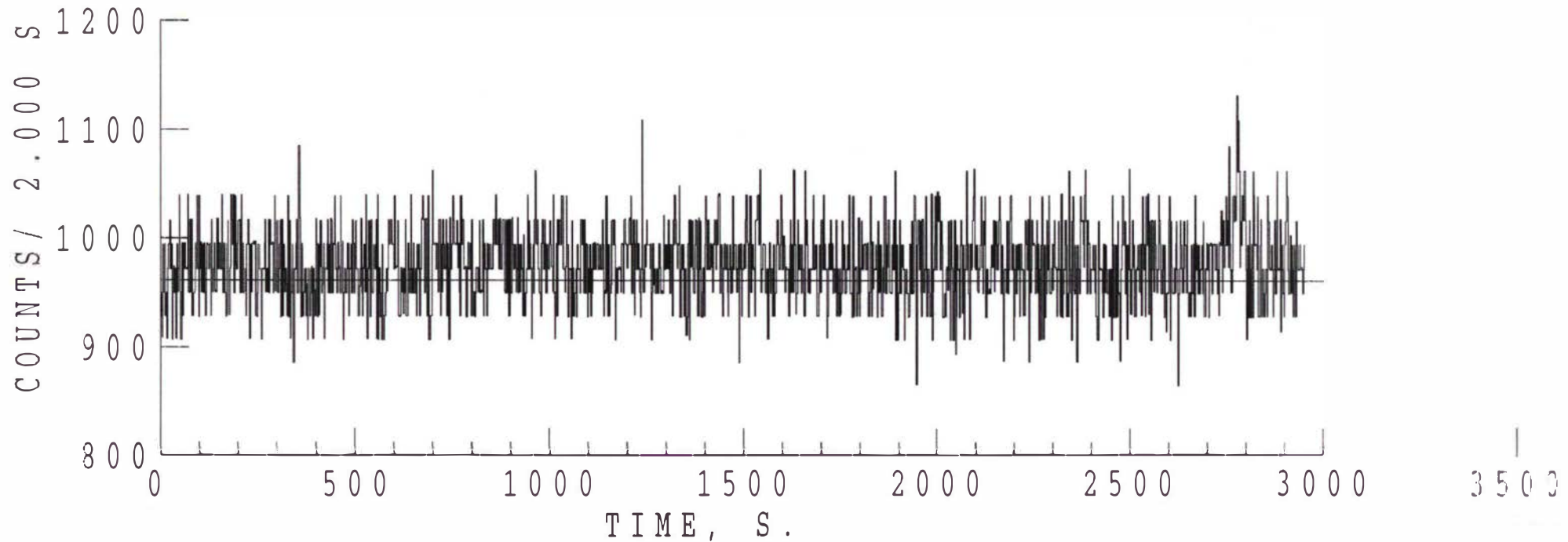
09 / 12 / 95 29880.414 s

0.500 S INTERVALS REGROUPED BY 4

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From DEAL@fender.msfc.nasa.gov Tue Dec 12 09:42 PST 1995
From: DEAL@fender.msfc.nasa.gov
Date: Tue, 12 Dec 1995 11:42:41 -0600 (CST)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3939

BATSEARCH PROGRAM

NO

BATSE BURST # 3939
EVENT OF 1995 DEC 9 DAY OF YEAR=343
EVENT CROSSING TIME AT BATSE : 70685. S. OR 19:38:05.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 139.000 2.000
BATSE PEAK COUNTING RATE: 9000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 9/12/ 95 IS:
RA= 222.233 DEC= 56.394 DIST= 2.849 AU
BATSE-ULYSSES DISTANCE = 426191386. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 95.41 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -133.98 SECS.
CROSSING TIME AT ULYSSES IS 70551. S. OR 19:35:51 +/- 293.68 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 9/12/ 95 IS:
RA= 277.028 DEC= -24.276 DIST= 2.303 AU
MARS-BATSE DISTANCE = 344526496. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 46.24 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 794.88 SECS.
CROSSING TIME AT MARS IS 71480. S. OR 19:51:19 +/- 156.17 SECONDS

BATSE BURST TRIGGER

NO.: 3939

TIME: TJD=0060 SECONDS=70685

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=156.4 AZIMUTH=166.7 ERROR=2.2 DEGREES

COMMENTS:

BURST LASTING ~ 5 S. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3939	951209	10060	70685	9000	139	+02	5

12 / 12 / 95

ULYSSES RT

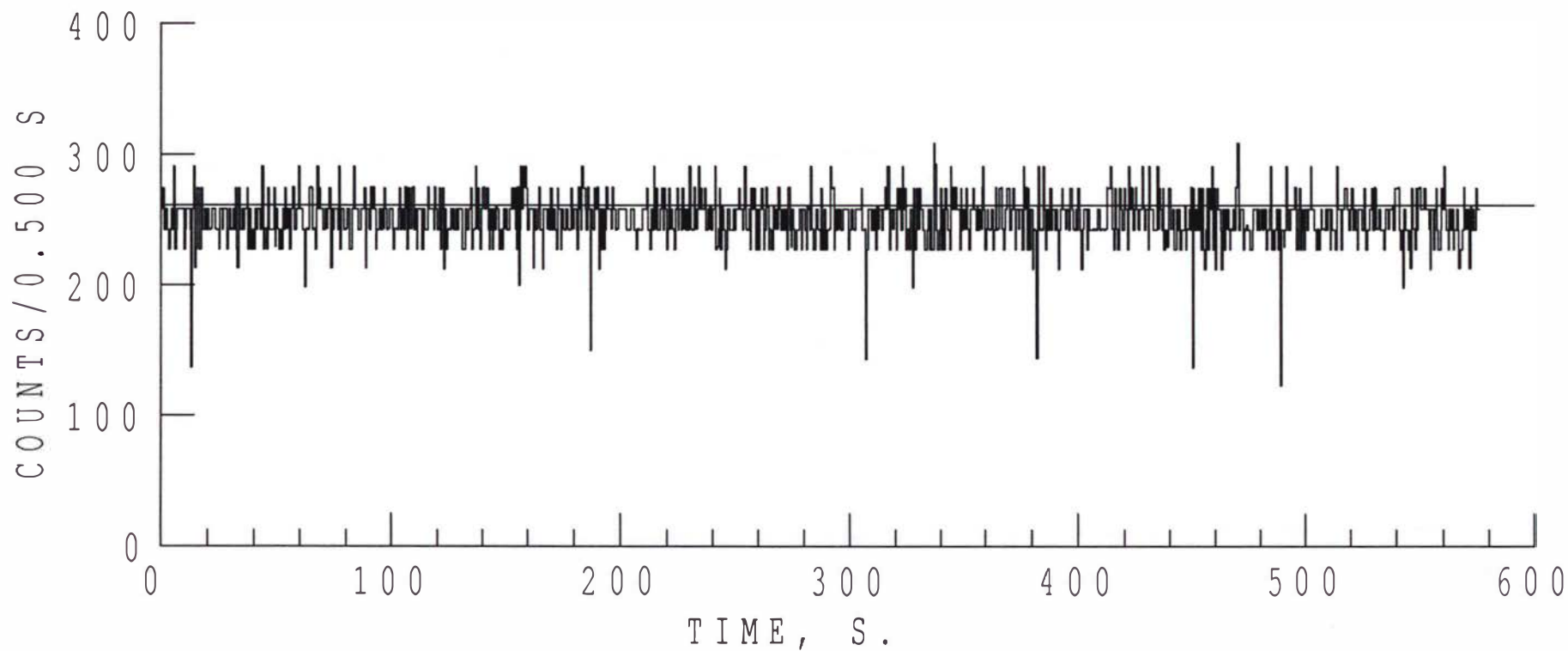
9 / 12 / 95 70272.039 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS

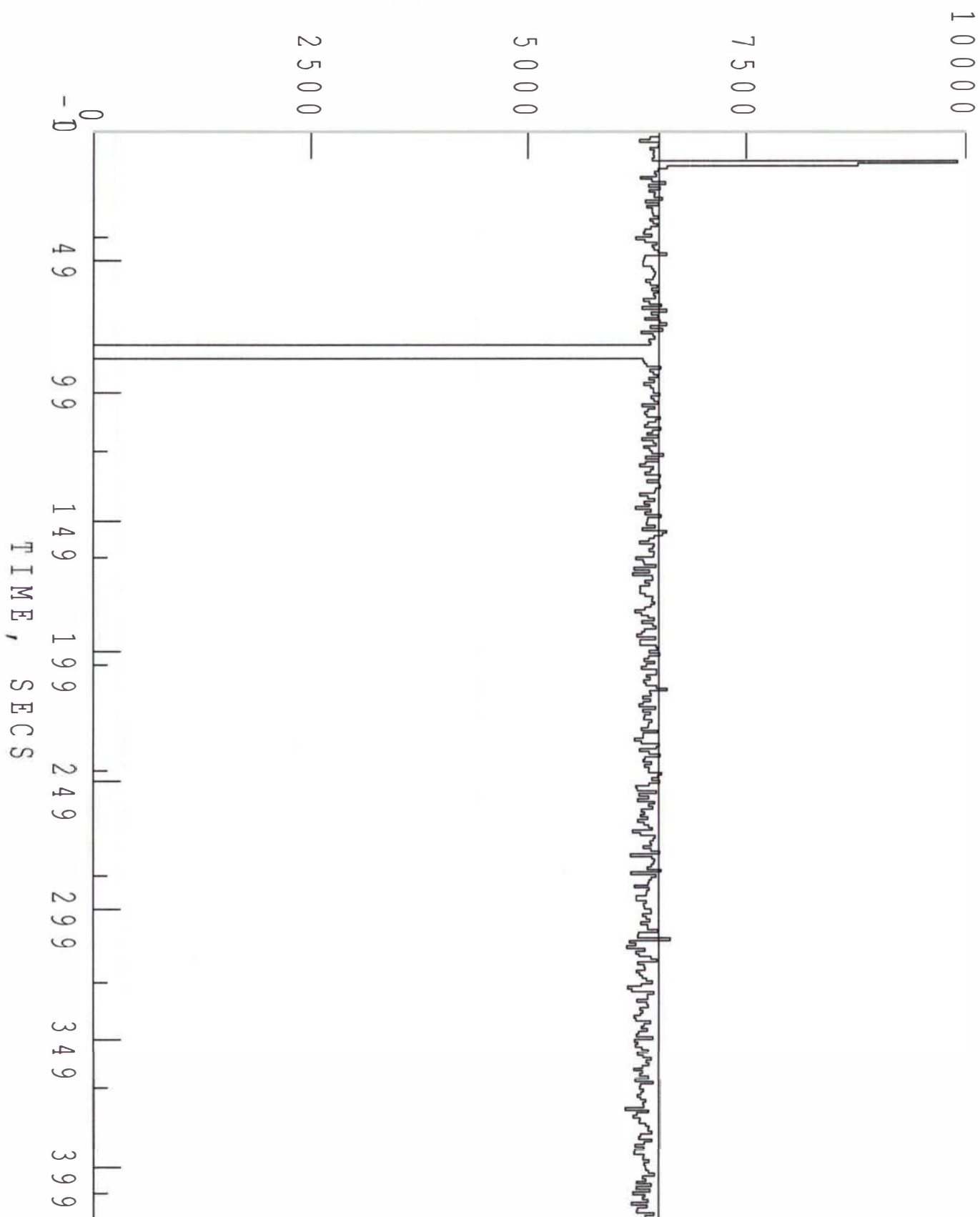


BACODINE

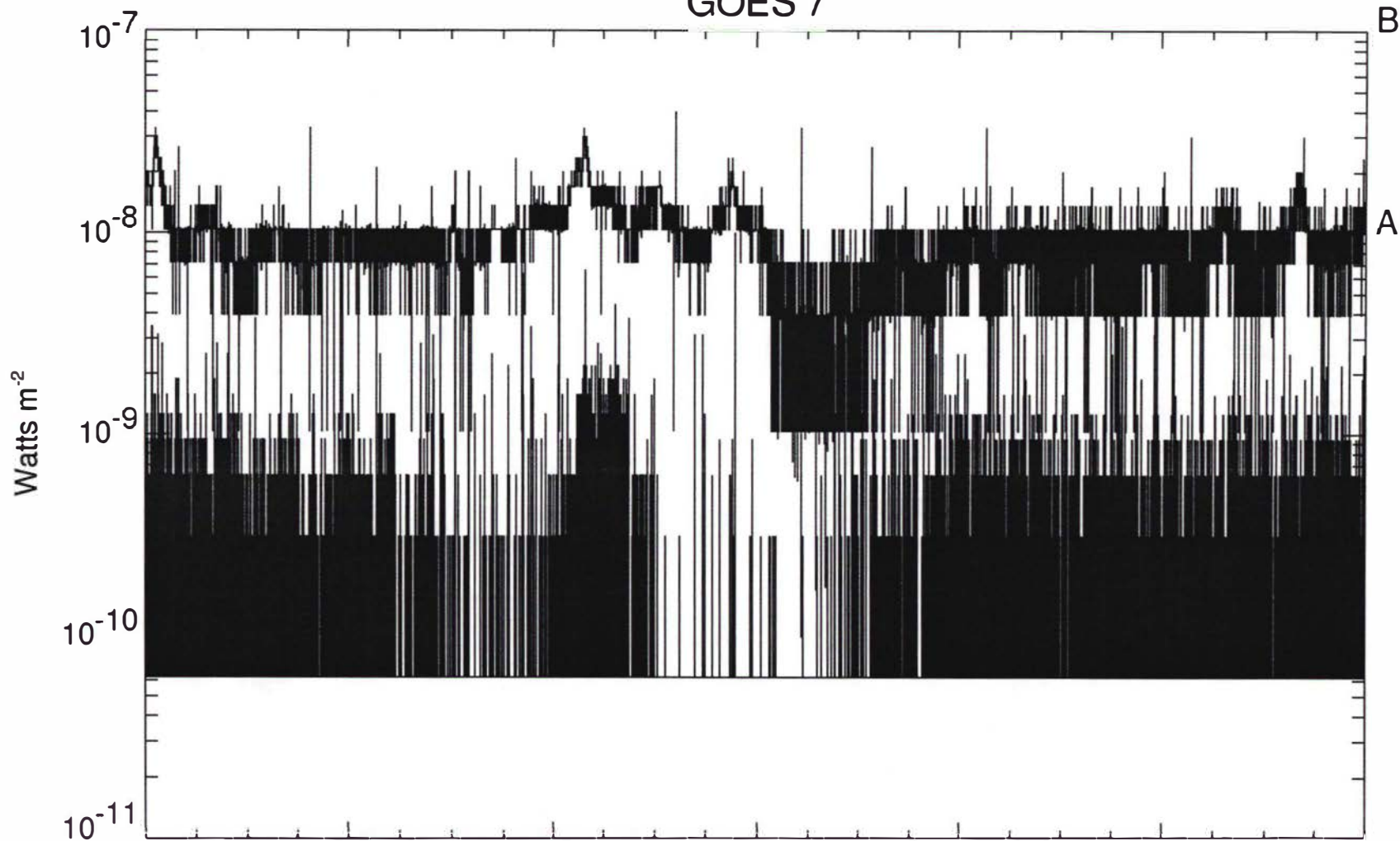
09/12/95

70675.121

25- 100 keV
COUNTS/1.024 S



GOES 7



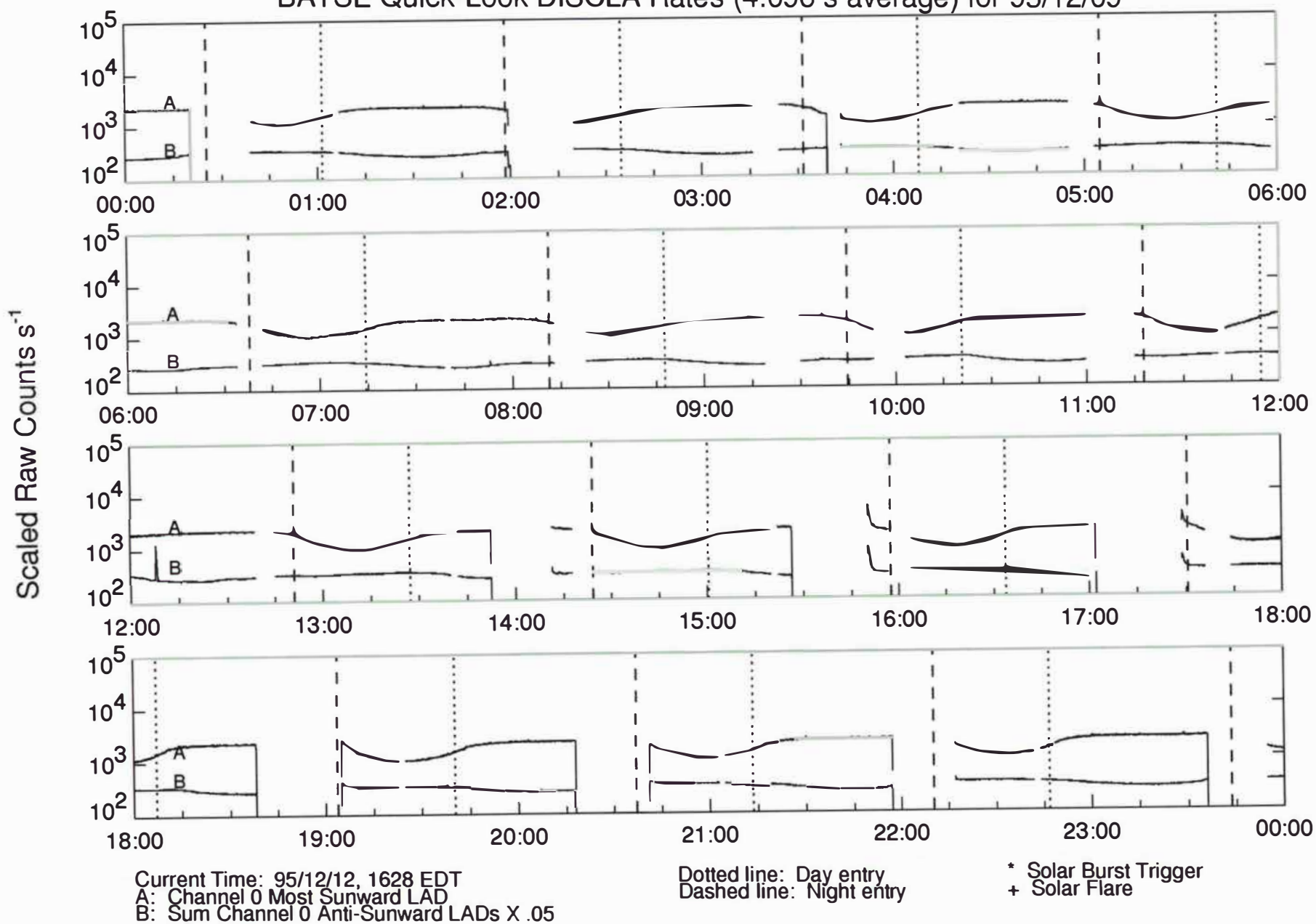
Data Start: 95/12/09, 0000:02

Plot created: 95/12/12, 1628

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

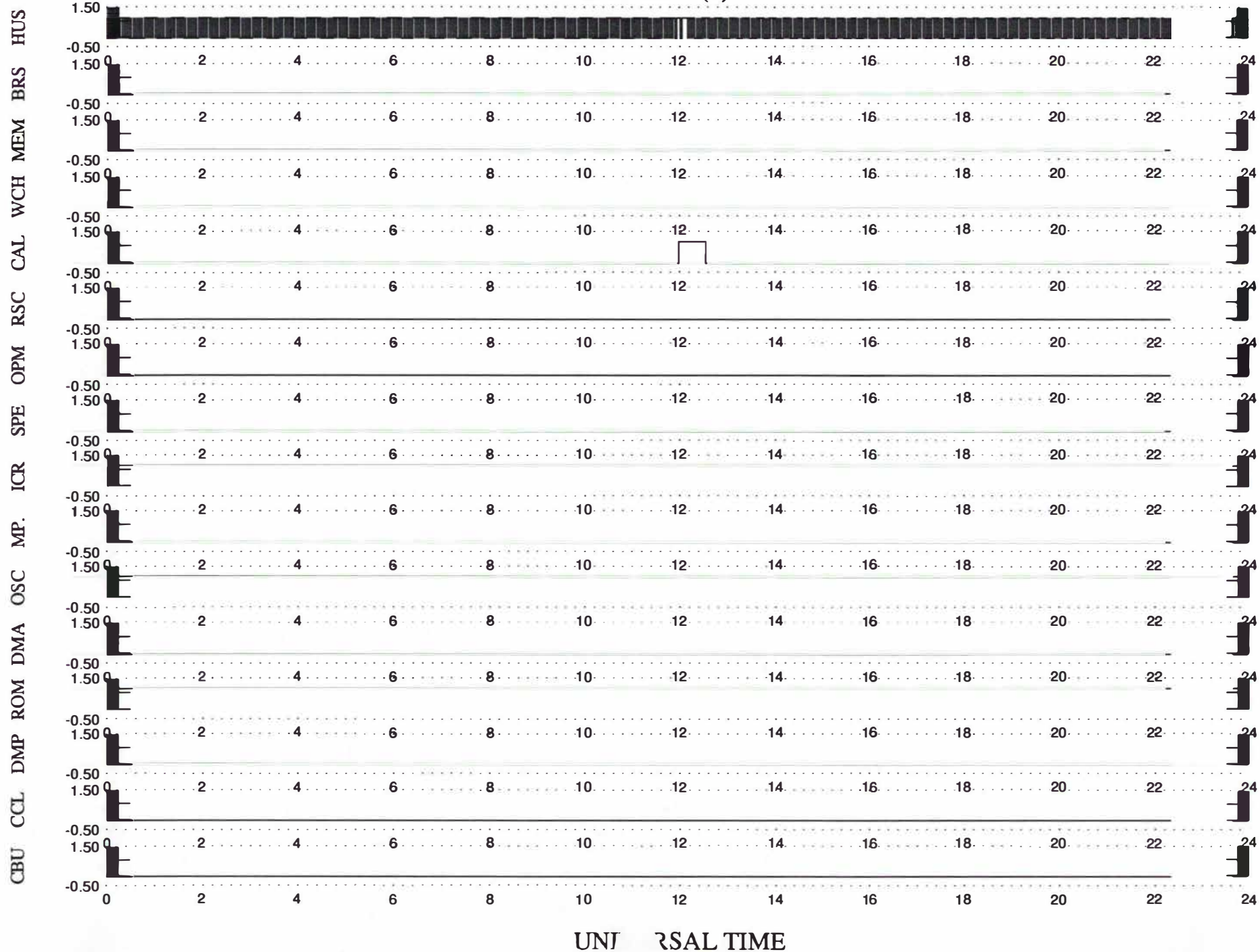
Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/12/09



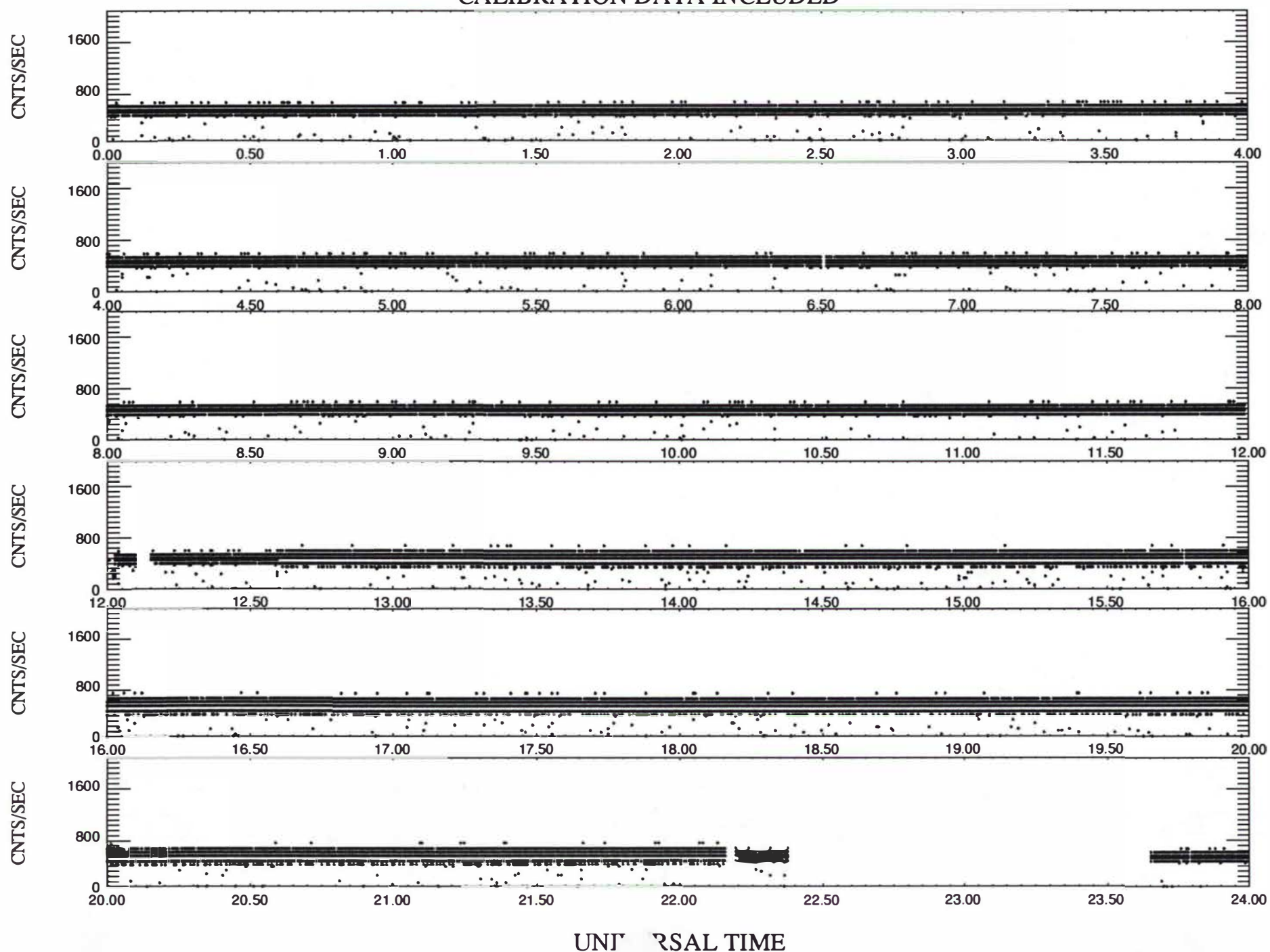
HUS MODES EDR day 343, year 1995 to day 343, year 1995 NO BURST (3)

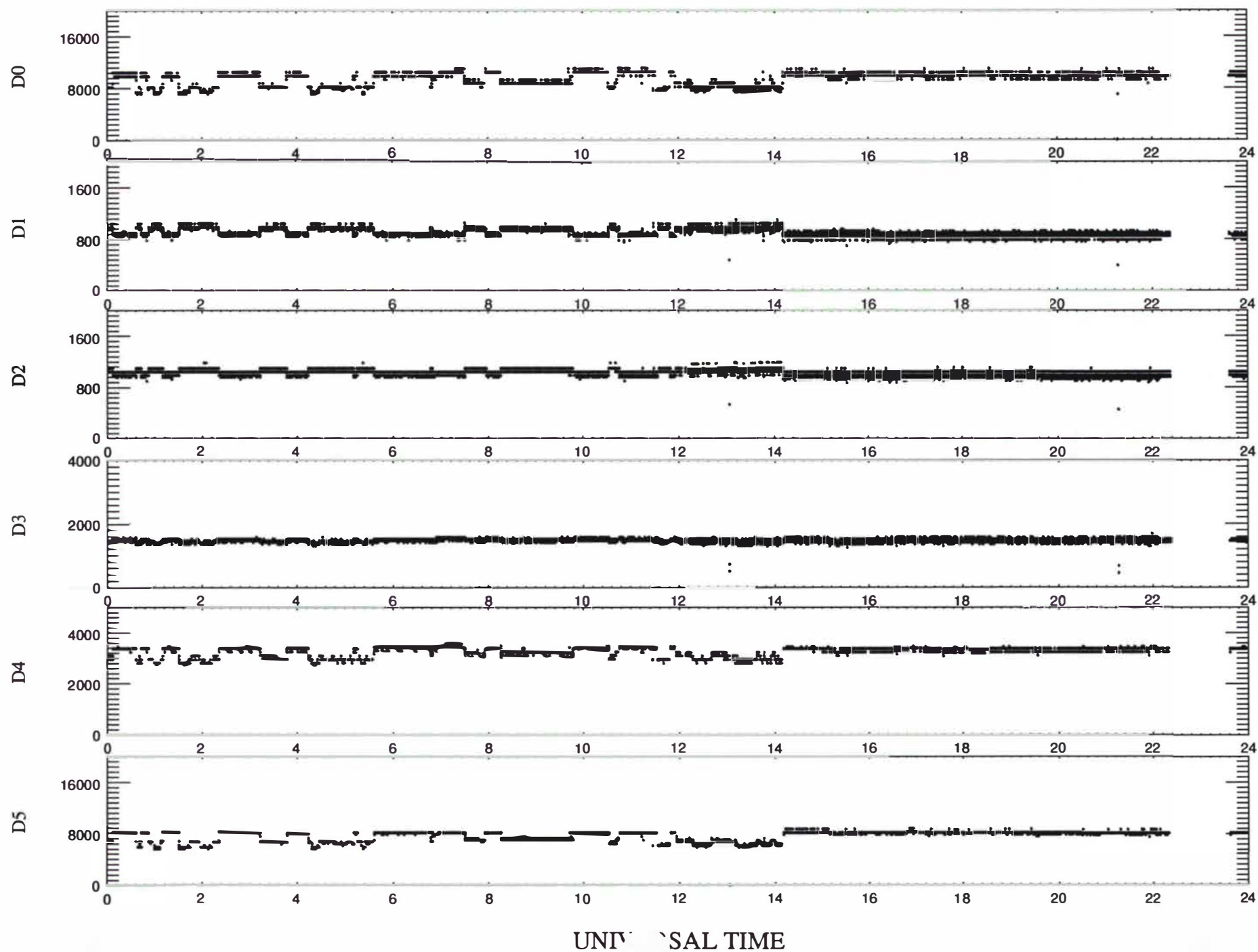
4/1/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 343, year 1995 to day 343, year 1995
CALIBRATION DATA INCLUDED

4/1/96





From ULSNA@jplsp2.jpl.nasa.gov Sun Dec 10 13:55 PST 1995
Date: Sun, 10 Dec 1995 13:54:47 -0800 (PST)
From: Nigel Angold <ULSNA@jplsp2.jpl.nasa.gov>
To: KHURLEY@SUNSPOT.ssl.berkeley.edu, "MPE::HUS"@jplsp2.jpl.nasa.gov
CC: ULSNA@jplsp2.jpl.nasa.gov
Subject: DNEL

Here is a copy of the Anomaly Report for today's DNEL.

Best Regards,

Nigel

ULYSSES SPACECRAFT ANOMALY REPORT

REPORT NUMBER: ULY038 DATE 10 December 1995
SUBJECT: DNEL6 / REC 7 RAISED BY Nigel Angold

INITIAL CONDITIONS

At 95.344.13:15 SCET during a tracking pass with DSS12, a DNEL was observed. REC followed, as expected, at 13:17 and telemetry was lost. The DNEL took place at the beginning of a planned manoeuvre when the LATCHING VALVE ON command executed on board the spacecraft.

ACTION TAKEN

Members of the Flight Control Team (FCT) were called out by the ACE and reconfiguration commenced at 14:11 with commands to re-establish the telemetry downlink. The DSS12 pass, scheduled to end at 15:45, was extended to 23:25 UTC (the SOHO project gave up time for us). A second FCT shift has been arranged for the following DSS61 pass (345.04:05-16:25 UTC) to continue reconfiguration activities.

Analysis of the manoeuvre showed that it was terminated by REC after six pulses. The planned number of pulses was 28. There is no urgency to perform an Earth-pointing manoeuvre because there is enough margin in the link budget to increase offpointing (due to the low Earth-spacecraft range).

The MAIN SWITCH ON command was transmitted at 17:20 UTC and verified on board at 17:45 SCET. Switch-on of payload converters commenced at 19:53.

FOLLOW UP ACTION

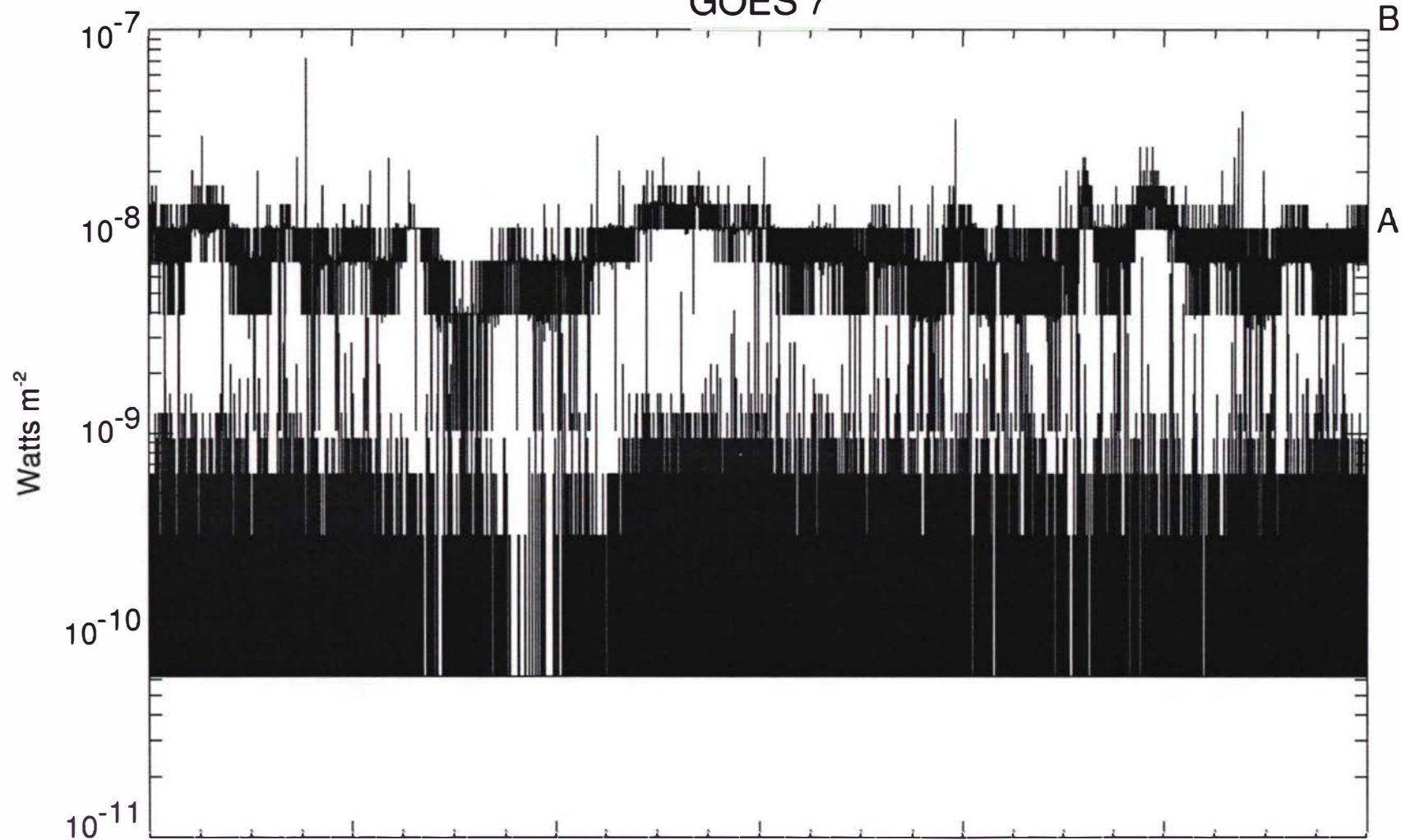
Reconfiguration of the payload will continue during the current DSS12 pass and following DSS61 pass. At the end of this time, it is hoped that all instruments will be in their pre-DNEL configurations except for SWICS, which will require further increases in its high voltage supply.

The AOCS will be switched back to its prime units (REC switched over to redundant units) before the next manoeuvre.

ATTACHMENTS

None

GOES 7



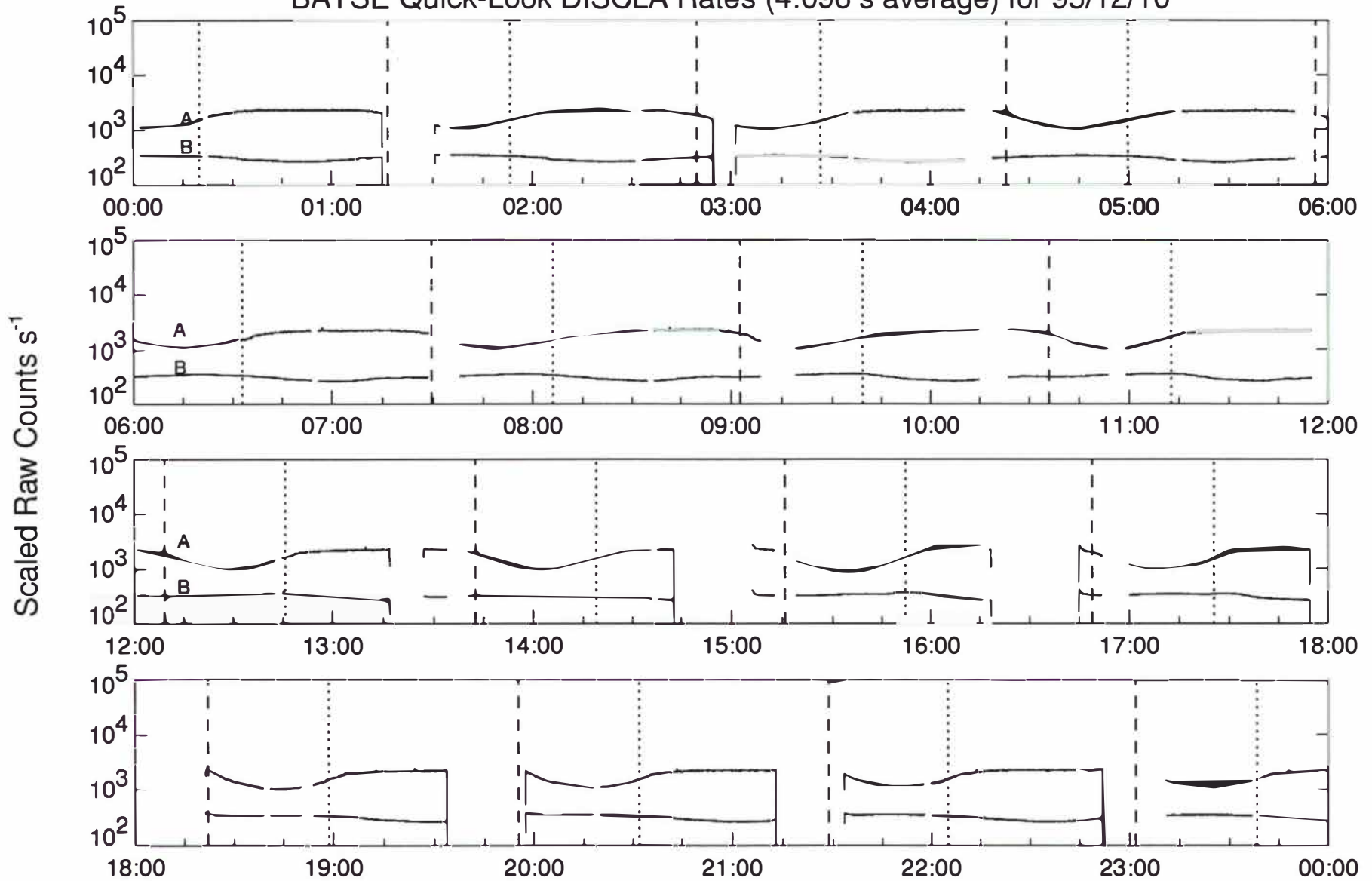
Data Start: 95/12/10, 0000:00

Plot created: 95/12/12, 0652

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 95/12/10



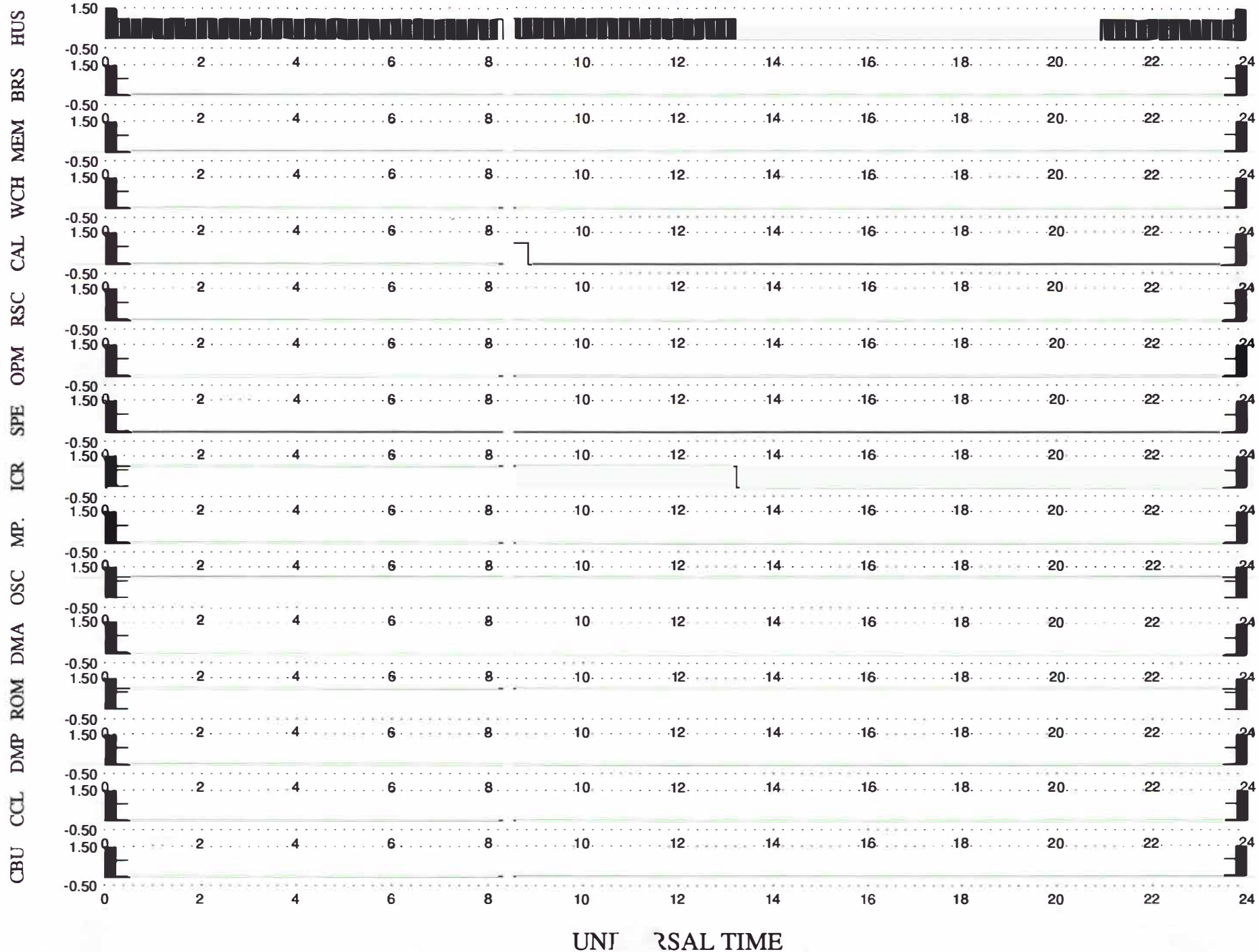
Current Time: 95/12/13, 1547 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

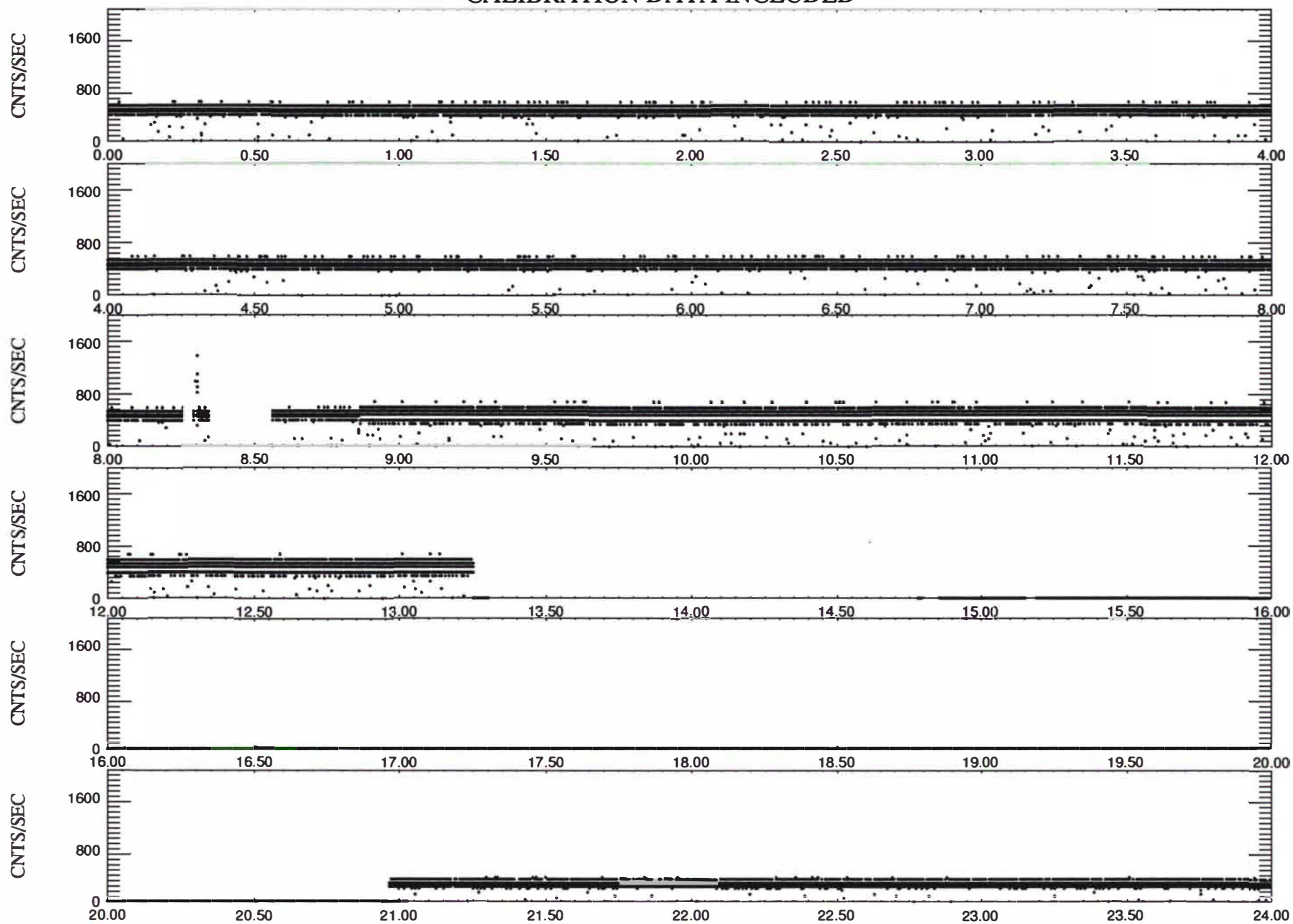
HUS MODES EDR day 344, year 1995 to day 344, year 1995 BURST NUMBER 0

4/1/96

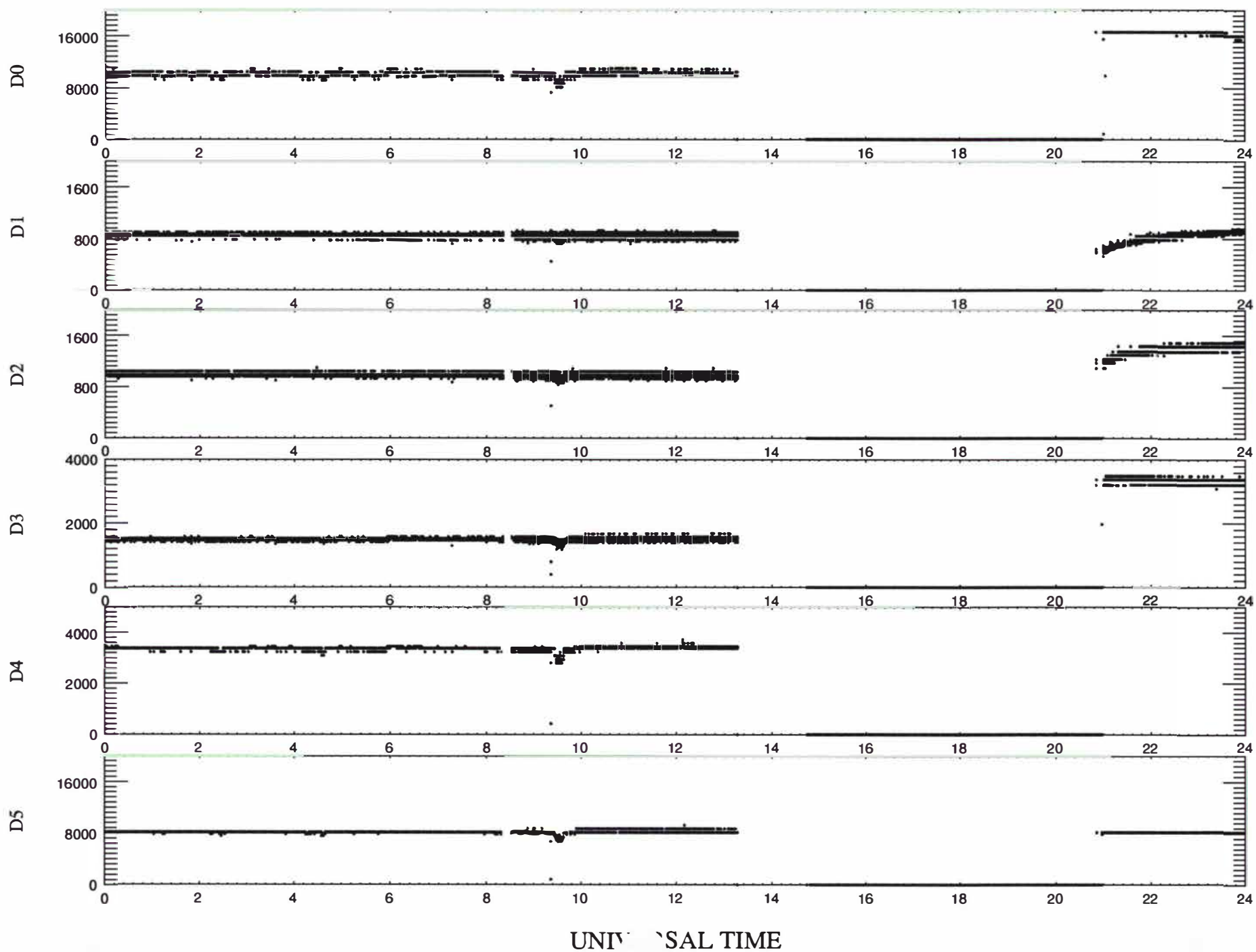


HUS 2A, MODE 1, NOT AVERAGED EDR day 344, year 1995 to day 344, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNITSAL TIME



From WOODSP@ssl.msfc.nasa.gov Wed Dec 13 09:27 PST 1995
From: WOODSP@ssl.msfc.nasa.gov
Date: Wed, 13 Dec 1995 11:27:00 -0600 (CST)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3940

BATSEARCH PROGRAM

NO

BATSE BURST # 3940
EVENT OF 1995 DEC 11 DAY OF YEAR=345
EVENT CROSSING TIME AT BATSE : 21359. S. OR 05:55:59.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 81.000 -19.000
BATSE PEAK COUNTING RATE: 11200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 11/12/ 95 IS:
RA= 222.503 DEC= 56.558 DIST= 2.847 AU
BATSE-ULYSSES DISTANCE = 425942998. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 47.20 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 965.40 SECS.
CROSSING TIME AT ULYSSES IS 22324. S. OR 06:12:04 +/- 245.64 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 11/12/ 95 IS:
RA= 278.704 DEC= -24.202 DIST= 2.306 AU
MARS-BATSE DISTANCE = 344938368. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 46.52 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 791.73 SECS.
CROSSING TIME AT MARS IS 22151. S. OR 06:09:10 +/- 156.97 SECONDS

BATSE BURST TRIGGER

NO.: 3940

TIME: TJD=0062 SECONDS=21359

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=105.9 AZIMUTH=115.2 ERROR=4.1 DEGREES

COMMENTS:

SHORT GRB WITH MULTIPLE PEAKS. DURATION ~ 0.7 SEC.
Marginally visible above 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3940	951211	10062	21359	11200	081	-19	.7

13 / 12 / 95

ULYSSES RT

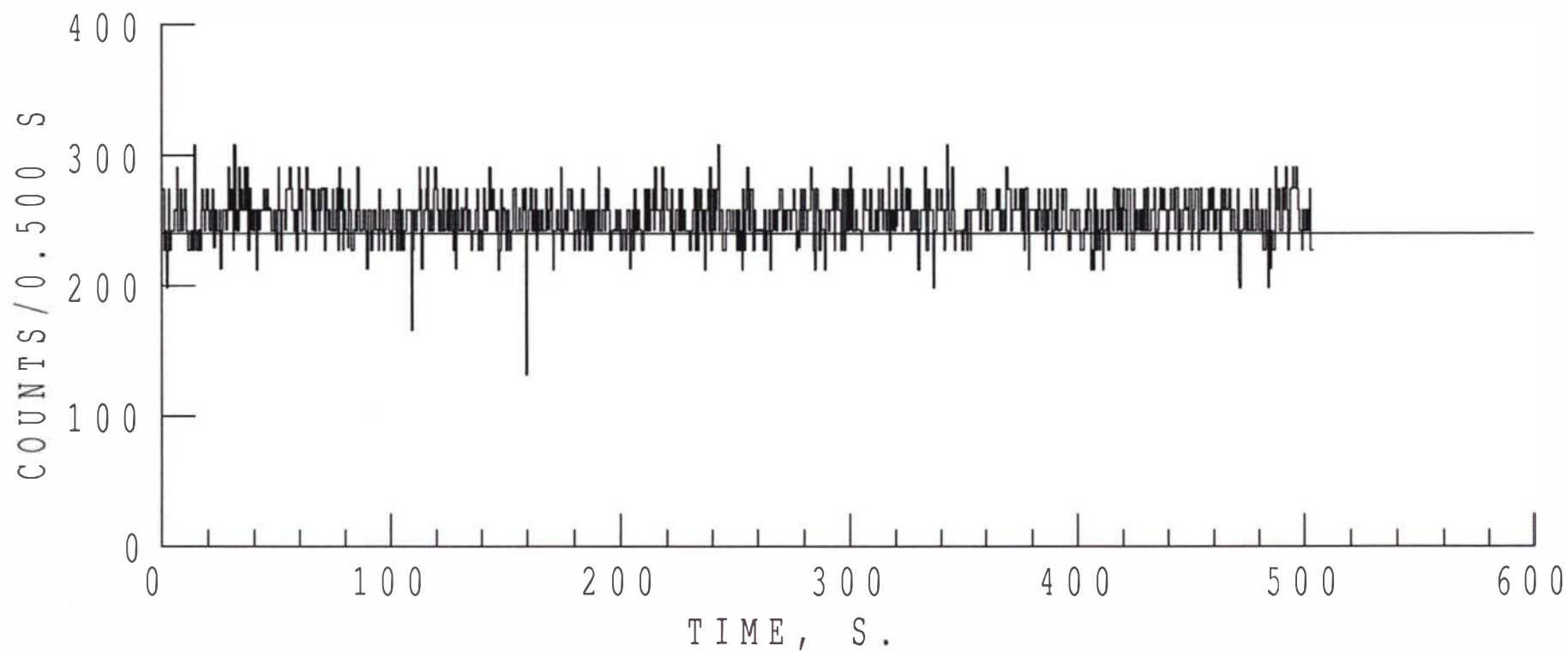
11 / 12 / 95 22068.225 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



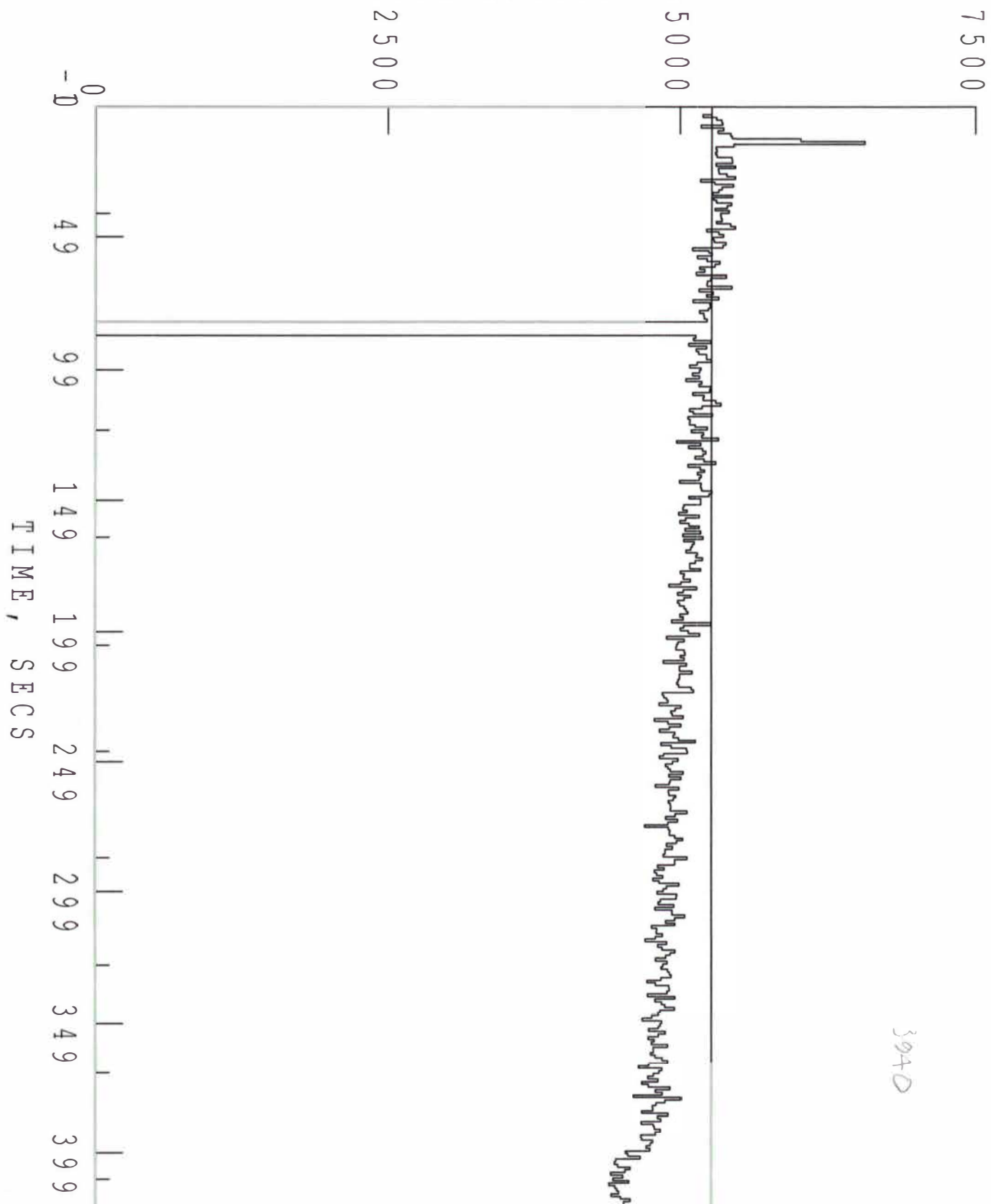
BACODINE

11/12/95

21346.993

25 - 100 keV

COUNTS/1.024 S



From WOODSP@SSLLES.MSFC.NASA.GOV Wed Dec 13 09:30 PST 1995
Date: Wed, 13 Dec 1995 11:29:54 -0600 (CST)
From: WOODSP@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3941

BATSEARCH PROGRAM

NO

BATSE BURST # 3941
EVENT OF 1995 DEC 11 DAY OF YEAR=345
EVENT CROSSING TIME AT BATSE : 49099. S. OR 13:38:19.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 67.000 26.000
BATSE PEAK COUNTING RATE: 1900 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 11/12/ 95 IS:
RA= 222.563 DEC= 56.596 DIST= 2.847 AU
BATSE-ULYSSES DISTANCE = 425885466. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 85.15 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 120.09 SECS.
CROSSING TIME AT ULYSSES IS 49219. S. OR 13:40:19 +/- 297.58 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 11/12/ 95 IS:
RA= 278.704 DEC= -24.202 DIST= 2.306 AU
MARS-BATSE DISTANCE = 344938368. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 28.70 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1009.27 SECS.
CROSSING TIME AT MARS IS 50108. S. OR 13:55:08 +/- 111.25 SECONDS

BATSE BURST TRIGGER

NO.: 3941

TIME: TJD=0062 SECONDS=49099

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=84.1 AZIMUTH=157.5 ERROR=5.2 DEGREES

COMMENTS:

GRB WITH SYMMETRIC TIME HISTORY. DURATION ~15 SEC.
NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3941	951211	10062	49099	1900	067	+26	15

13 / 12 / 95

ULYSSES RT

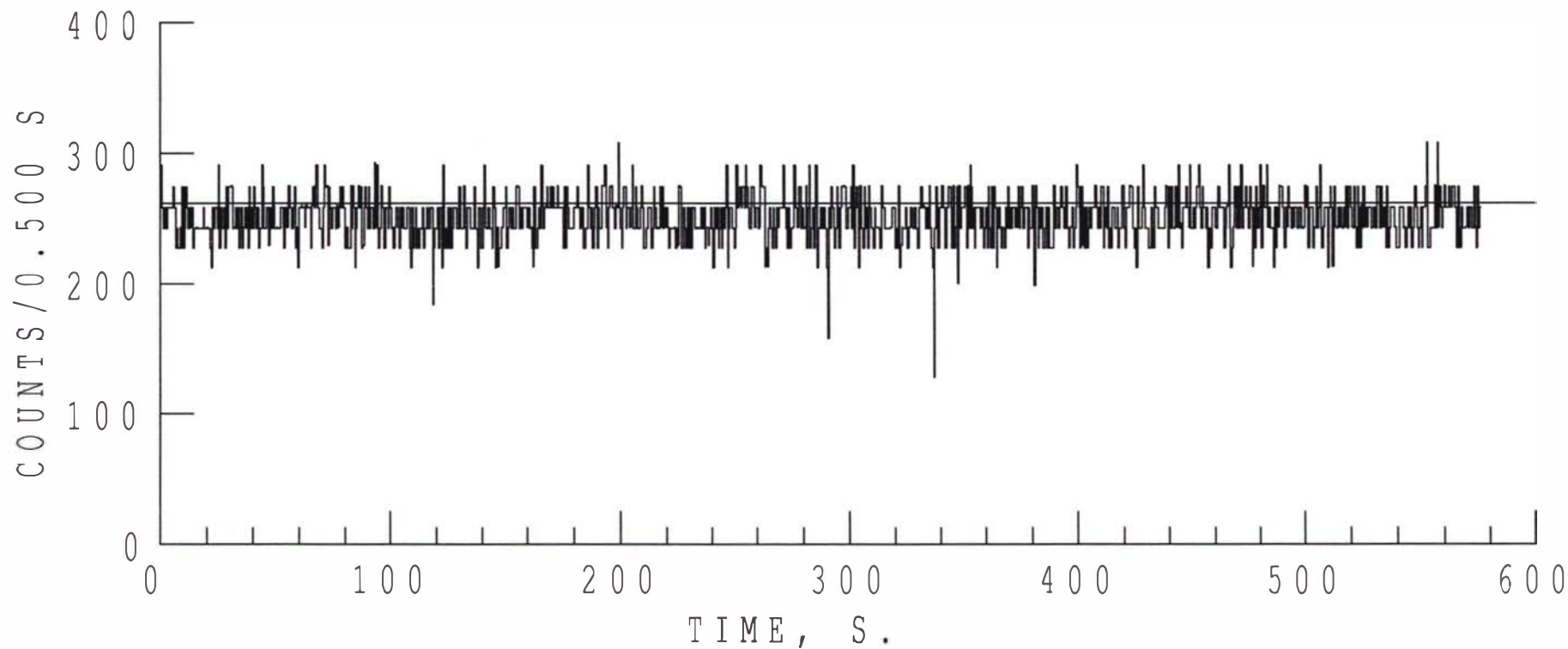
11 / 12 / 95 48924.137 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From HENZE@fender.msfc.nasa.gov Sat Dec 16 12:53 PST 1995
From: HENZE@fender.msfc.nasa.gov
Date: Sat, 16 Dec 1995 14:46:24 -0600 (CST)
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, butterworth@lheavx.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.: 3942

TIME: TJD=0062 SECONDS=78528

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

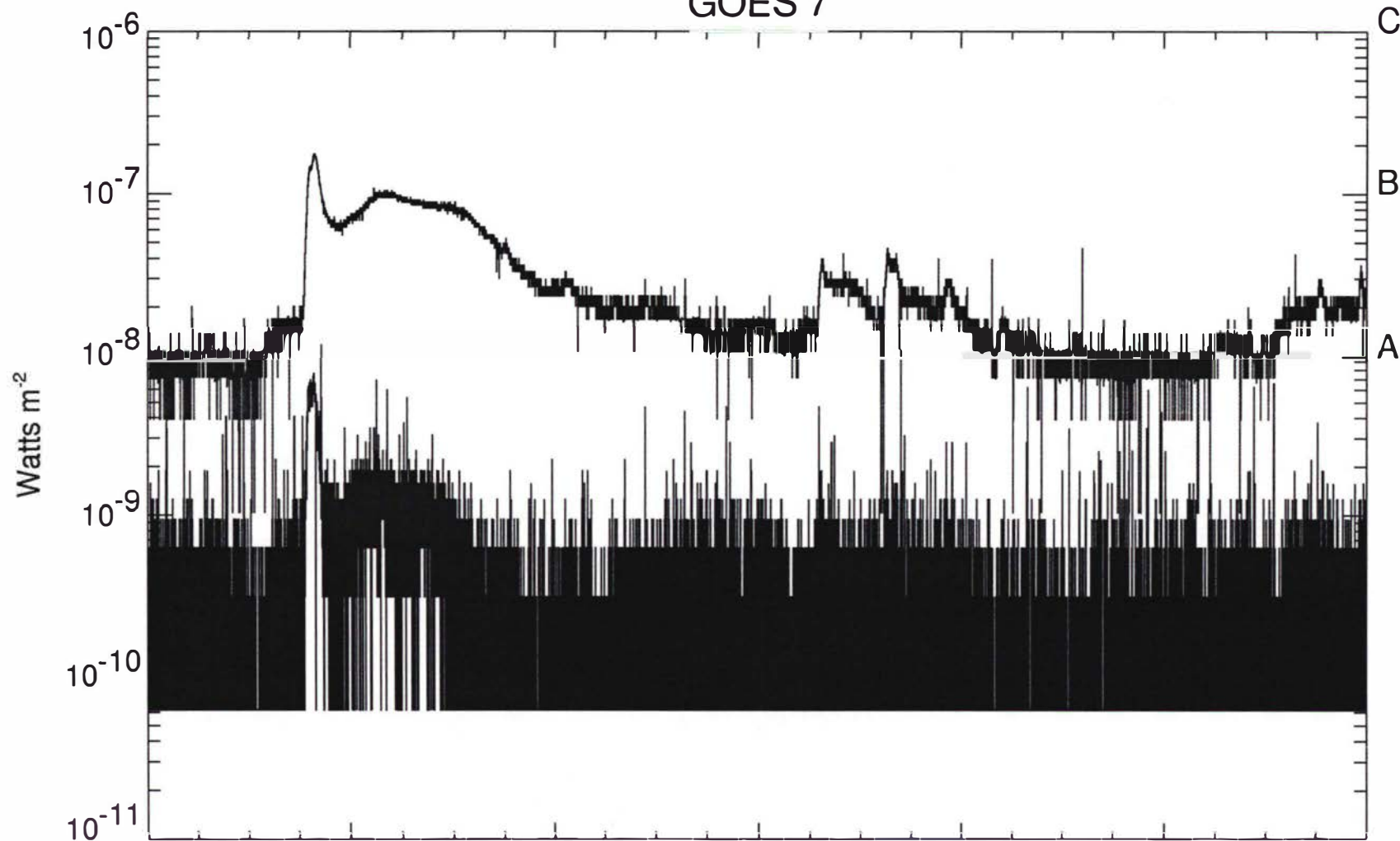
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=080.6 AZIMUTH=342.0 ERROR=005.8 DEGREES

COMMENTS:
NEW BATSE BURSTER.

GOES 7



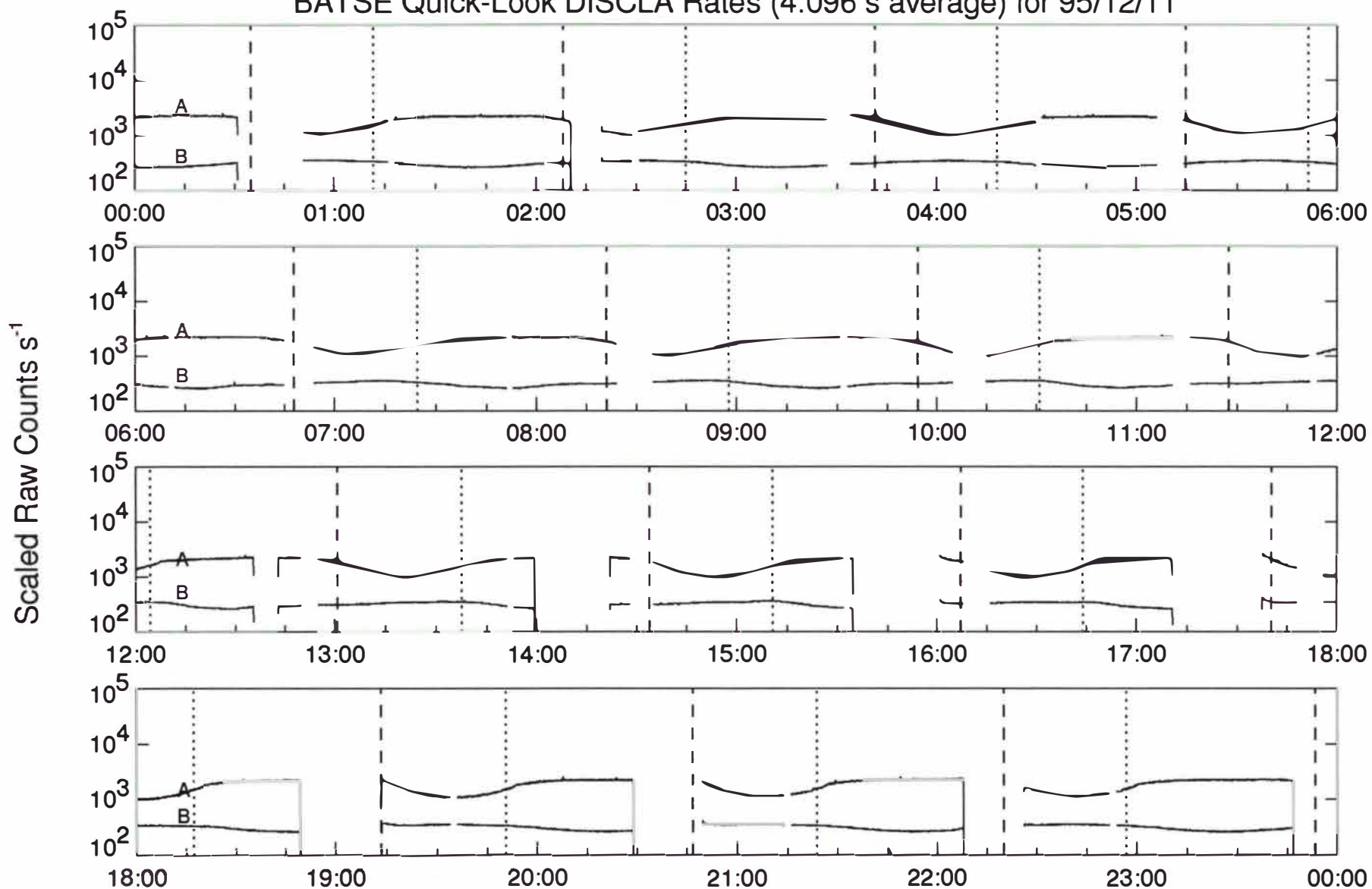
Data Start: 95/12/11, 0000:01

Plot created: 95/12/13, 0652

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 95/12/11



Current Time: 95/12/13, 0653 EDT

A: Channel 0 Most Sunward LAD

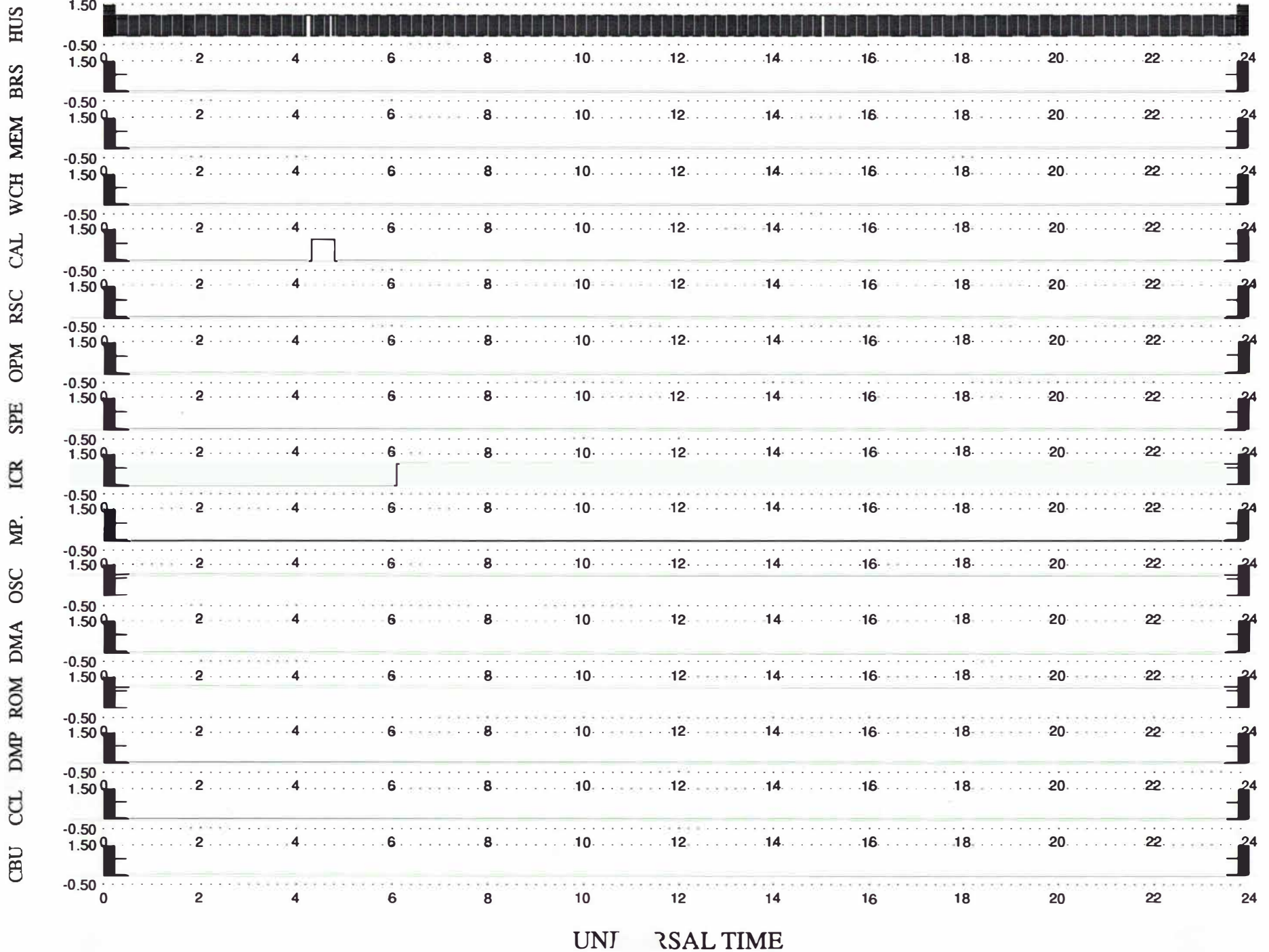
B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

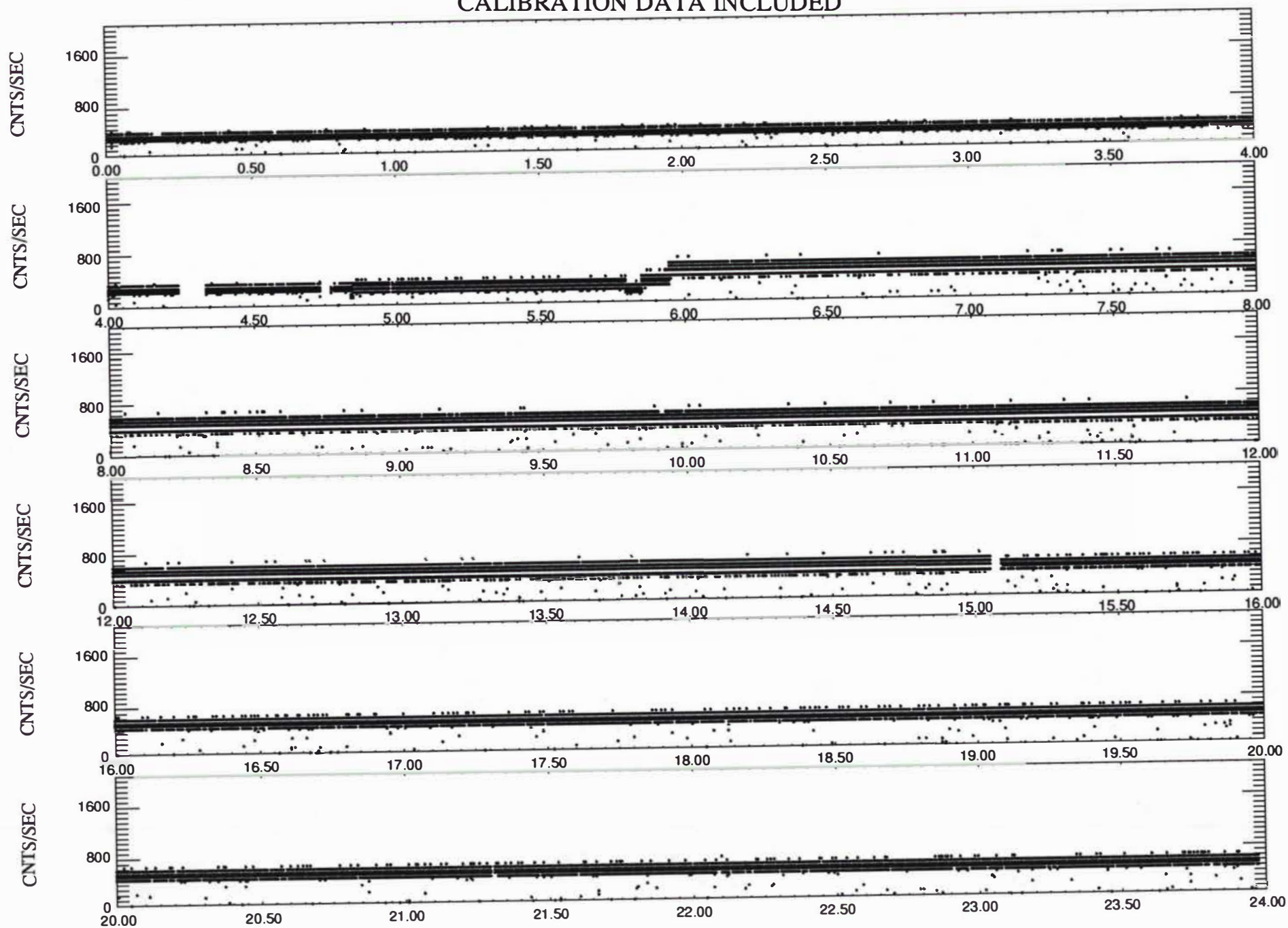
HUS MODES EDR day 345, year 1995 to day 345, year 1995
NO BURST (0)

4/1/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 345, year 1995 to day 345, year 1995
CALIBRATION DATA INCLUDED

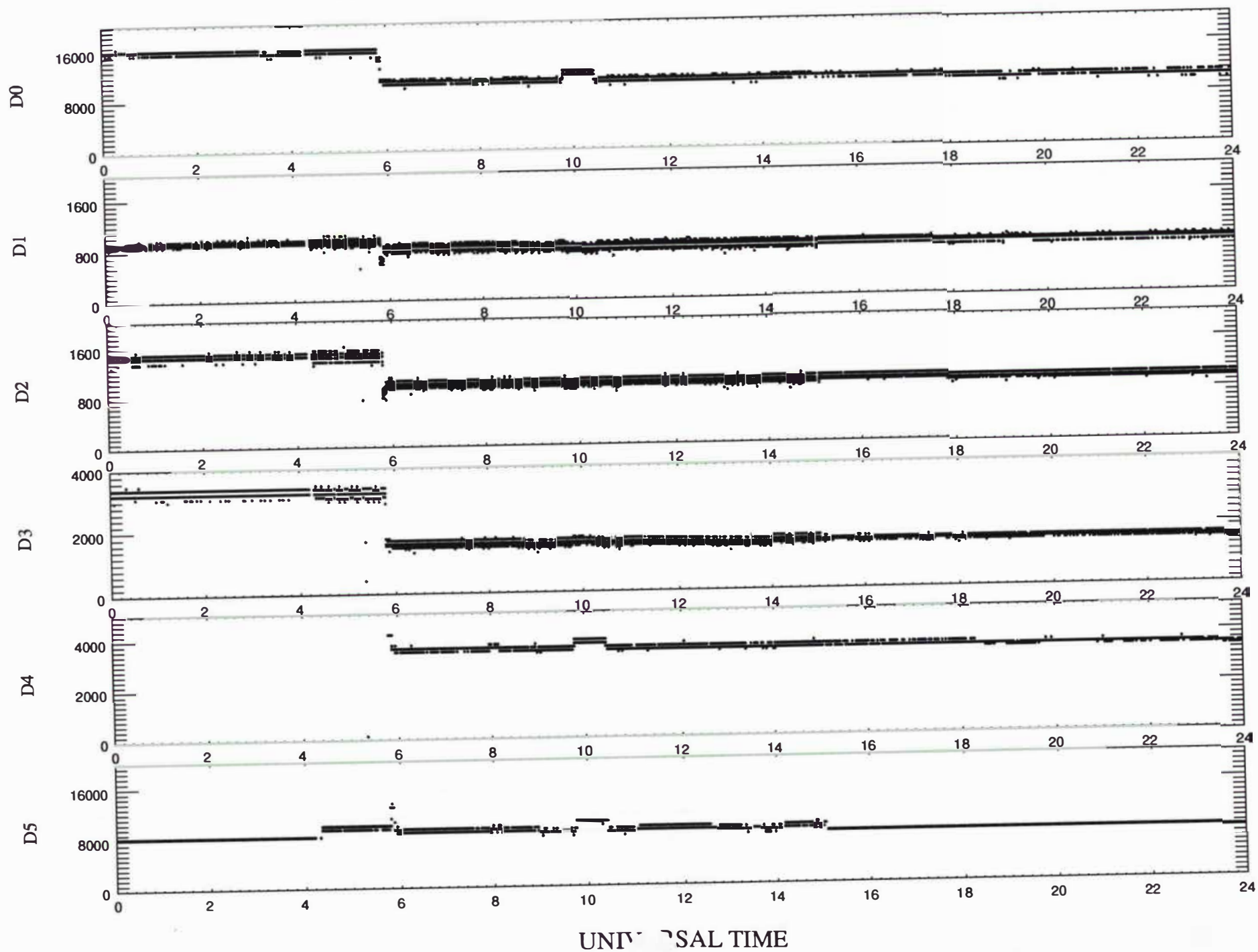
4/1/96



UNITSAL TIME

HUS 2B COUNTS / SEC QEDR day 345, year 1995 to day 345, year 1995

12/13/95



From ulsdmt@jplsp.DNET.NASA.GOV Mon Mar 18 17:13 PST 1996
From: ulsdmt@jplsp.DNET.NASA.GOV
Date: Mon, 18 Mar 96 20:13:12 -0500
To: "khurley@sunspot.ssl.berkeley.edu"@east.DNET.NASA.GOV (SENT TO @LIST1)
Subject: Misplaced Major Frames in EDRs

Greetings,

We have identified an operations technique that produces data that will be improperly time tagged by the MGDS (telemetry system). Instances of EDR errors (major frames out of order) have been found in the CDROM archival products for December 1995 and January 1996. Errors will also be found in the still to be shipped February 1996 data.

When major frames are recorded but not transmitted during the next track, but are eventually downlinked with data from a succeeding day, the embedded SCLKs are 'assumed' to be incorrect by the frame syncer and are re-tagged with SCETs and SCLKs matching the adjacent (but newer) data.

For each major frame processed in this manner, a gap will exist, representing the time the data was actually acquired, and a major frame or realtime data, representing the time period the data now errently represents, will be replaced by the misplaced playback data.

Yes. Confusing. See the attached memo detailing the times involved.

Approximately 17 such instances are known to have occured. The total time involved is about twenty minutes. Because the data loss is small and the cost of reprocessing would be so large, the Project has determined that it would be imprudent to reprocess.

For your information, however, we included a memo from Nigel Angold which itemizes each instance.

We thank Toni Galvin and Nigel for identifying the problem and assisting in the diagnosis.

Regards,

Joe

To: <ulsdmt@jplsp.jpl.nasa.gov>
From: Nigel Angold <nangold@jplsp2.jpl.nasa.gov>
Subject: Mis-corrected S/C clocks / SCETs
Cc: chris.leech@jpl.nasa.gov

I have looked at our recent tape recorder usage and predict that you will see major frames with mis-corrected spacecraft clocks / SCETs at the following times (give or take a few minutes):

1995:

~342.22:59 SCET	should be	~341.17:47 SCET
~347.22:39 SCET	should be	~346.16:46 SCET
~350.21:54 SCET	should be	~349.16:22 SCET
~355.22:14 SCET	should be	~354.15:42 SCET
~359.14:04 SCET	should be	~359.05:36 SCET
~360.14:59 SCET	should be	~359.00:20 SCET
~362.20:55 SCET	should be	~361.16:06 SCET

1996:

~001.02:45 SCET	should be	~364.23:12 SCET
~002.14:35 SCET	should be	~001.04:22 SCET
~029.19:35 SCET	should be	~028.13:43 SCET
~033.19:10 SCET	should be	~032.13:18 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~048.17:29 SCET	should be	~047.13:45 SCET
~054.08:59 SCET	should be	~053.11:46 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~039.18:34 SCET	should be	~038.12:14 SCET

We see data gaps for each of the correct times, so it looks like your theory of AMMOS mis-correcting times when there is carry-over data on the tape is correct.

I hope this is enough information. I would have to do a bit more calculation to get the approximate ERTs. Let me know if you want them.

Best regards,

Nigel

From HENZE@fender.msfc.nasa.gov Sat Dec 16 13:01 PST 1995
From: HENZE@fender.msfc.nasa.gov
Date: Sat, 16 Dec 1995 14:50:40 -0600 (CST)
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, butterworth@lheavx.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.: 3943

TIME: TJD=0063 SECONDS=05117

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=080.6 AZIMUTH=344.9 ERROR=003.8 DEGREES

COMMENTS:

NEW BATSE BURSTER

Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3944

TIME: TJD=0063 SECONDS=09183

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=079.1 AZIMUTH=343.1 ERROR=003.4 DEGREES

COMMENTS:

NEW BATSE BURSTER

Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3945

TIME: TJD=0063 SECONDS=13672

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=079.3 AZIMUTH=343.5 ERROR=007.2 DEGREES

COMMENTS:

NEW BATSE BURSTER

Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3946

TIME: TJD=0063 SECONDS=18901

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=077.2 AZIMUTH=339.1 ERROR=005.0 DEGREES

COMMENTS:

BATSE BURSTER

Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3947

TIME: TJD=0063 SECONDS=24356

TYPE: ACCIDEN SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

FLUCTUATION IN ICREASING BACKGROUND.

Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3948

TIME: TJD=0063 SECONDS=30277

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=078.3 AZIMUTH=341.6 ERROR=003.6 DEGREES

COMMENTS:

NEW BATSE BURSTER

Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3949

TIME: TJD=0063 SECONDS=35535

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=081.0 AZIMUTH=339.8 ERROR=004.2 DEGREES

COMMENTS:

NEW BATSE BURSTER

Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3950

TIME: TJD=0063 SECONDS=41261

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=083.4 AZIMUTH=346.5 ERROR=003.7 DEGREES

COMMENTS:

NEW BATSE BURSTER

Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3951

TIME: TJD=0063 SECONDS=85915

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=082.9 AZIMUTH=346.0 ERROR=002.8 DEGREES

COMMENTS:

NEW BATSE BURSTER

From khurley@sunspot Tue Dec 19 09:25 PST 1995
Date: Tue, 19 Dec 1995 08:12:08 -0800
From: khurley@sunspot (Kevin Hurley)
To: yosimori@rikkyo.ac.jp, khurley@sunspot
Subject: Yohkoh bursts

Dear Yoshimori-san,

The July 1 1995 event is confirmed by BATSE and Ulysses. July 4 1995 was observed by Ulysses and WIND/TGRS; a Yohkoh time history, with spacecraft coordinates, could provide a good localization for this event. The August 4 1995 burst was observed by Ulysses, BATSE, and WIND/KONUS. August 22 1995 was a BATSE/Ulysses burst.

On another subject, Ulysses triggered on a 32 ms long event on December 12 1995, around 07:54 UT at Ulysses. The spacecraft was 1400 light seconds from Earth. Did Yohkoh observe this one?

Best regards,

Kevin Hurley

From BUTTERWORTH@LHEAVX.GSFC.NASA.GOV Fri Dec 15 12:38 PST 1995
From: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Date: Fri, 15 Dec 1995 15:35:53 -0500 (EST)
To: khurley@sunspot.ssl.berkeley.edu, kmarar@isac.ernet.in, jterrell@lanl.gov,
CLINE@LHEAVX.GSFC.NASA.GOV, scott@rosserv.gsfc.nasa.gov,
TEEGARDEN@LHEAVX.GSFC.NASA.GOV
CC: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Subject: Konus did not see the 7:54UT 12 December Ulysses event

Hi Everyone,

Konus did not trigger on 12 Dec. The waiting mode data (integration time ~1.5s) contain no unusual features during the period of interest.

Paul.

ULYSSES GAMMA-RAY BURST NOT REPORTED BY BATSE:

Ulysses triggered on an intense, 32 ms long event December 12 1995 around 07:54 UT at Ulysses. The spacecraft was about 1400 light-seconds from Earth.

Was this event detected by anyone else?

CC: ulyssesbursts alias list
(barthelmy, butterworth, cline, marar, teegarden, 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: dmSP 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 isac.ernet.in!kmarar@vigyan.iisc.ernet.in Thu Dec 21 00:07 PST 1995

Date: Thu, 21 Dec 1995 11:14:33 +0000 (CUT)

From: kmarar@isac.ernet.in

X-Sender: kmarar@xsl6

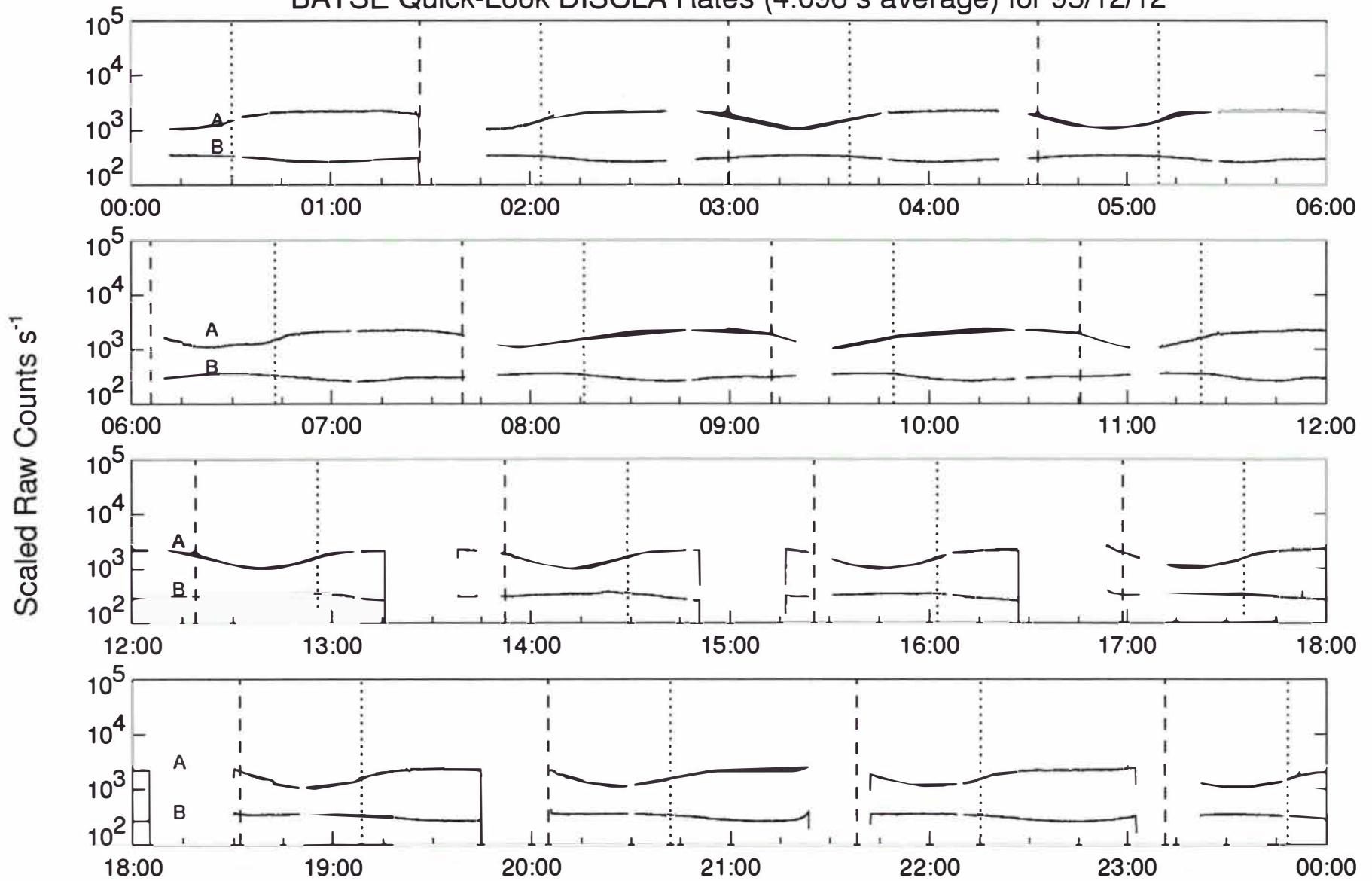
To: Hurley K <khurley@sunspot.ssl.berkeley.edu>

Subject: GRB dec 12

Mime-Version: 1.0

We did not record the Dec 12th event on SROSS-C2
Krishnan

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/12/12

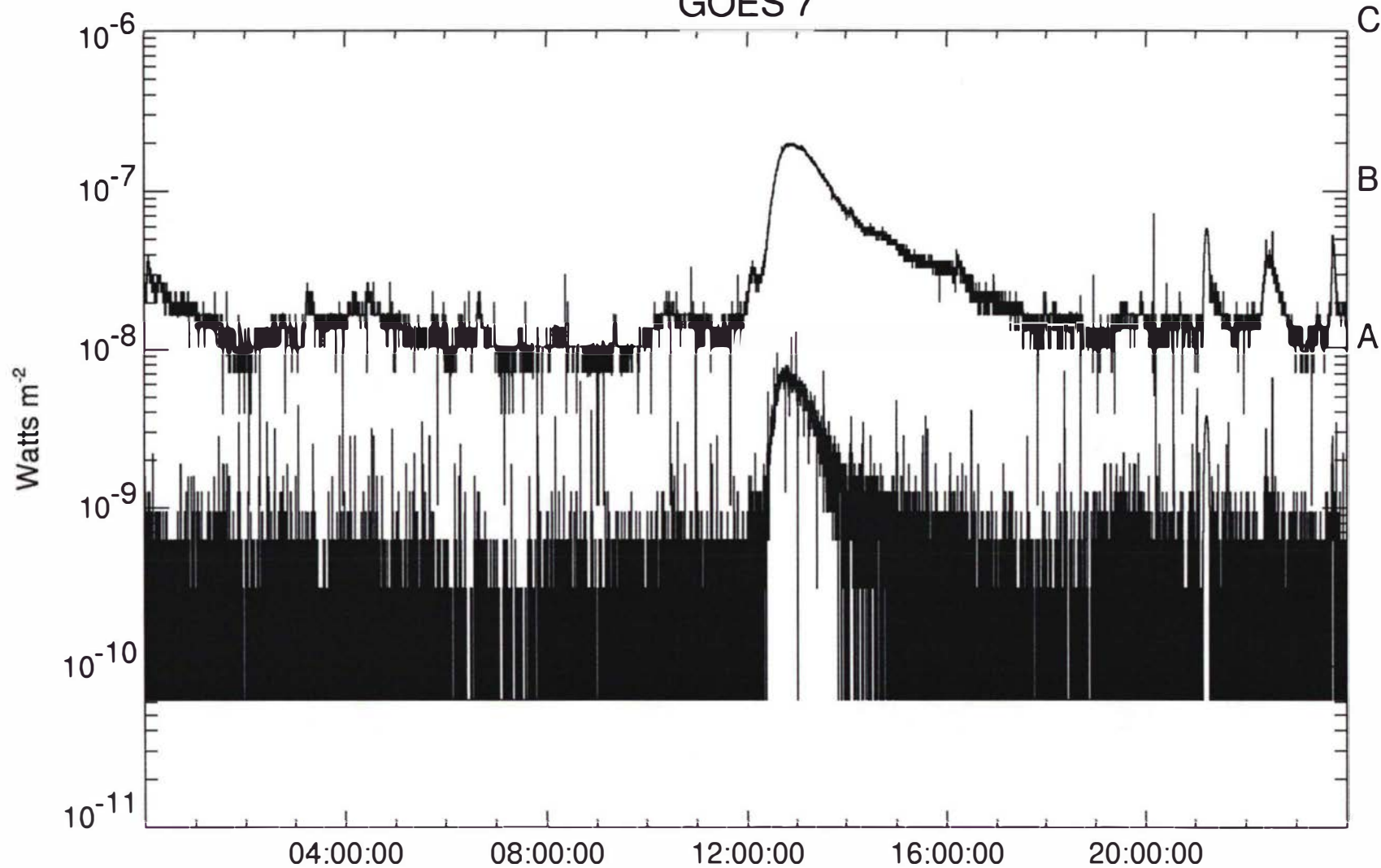


Current Time: 95/12/14, 0652 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

GOES 7



Data Start: 95/12/12, 0000:02

Plot created: 95/12/14, 0651

Channel

1 (1.0 - 8.0 Angstroms)

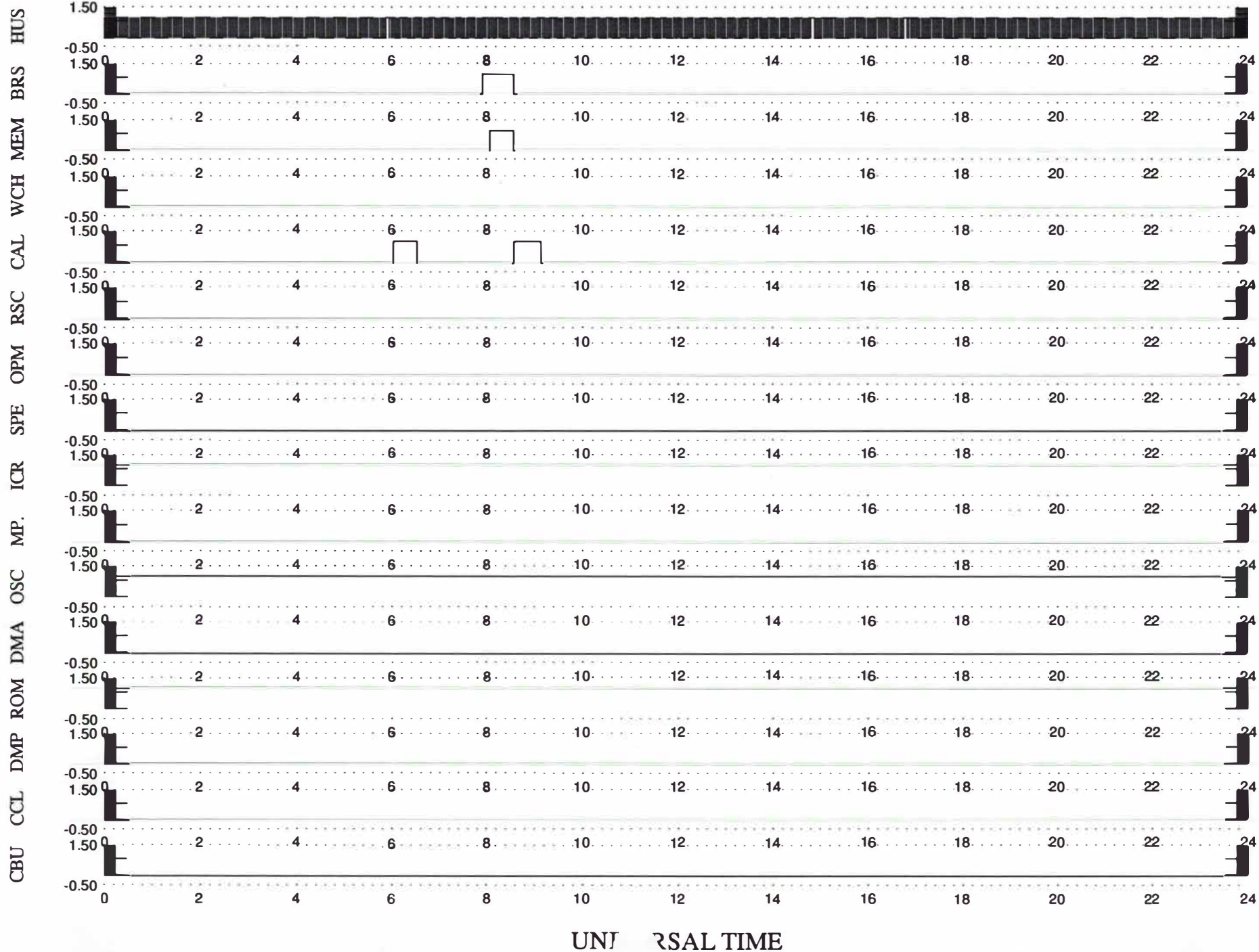
Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

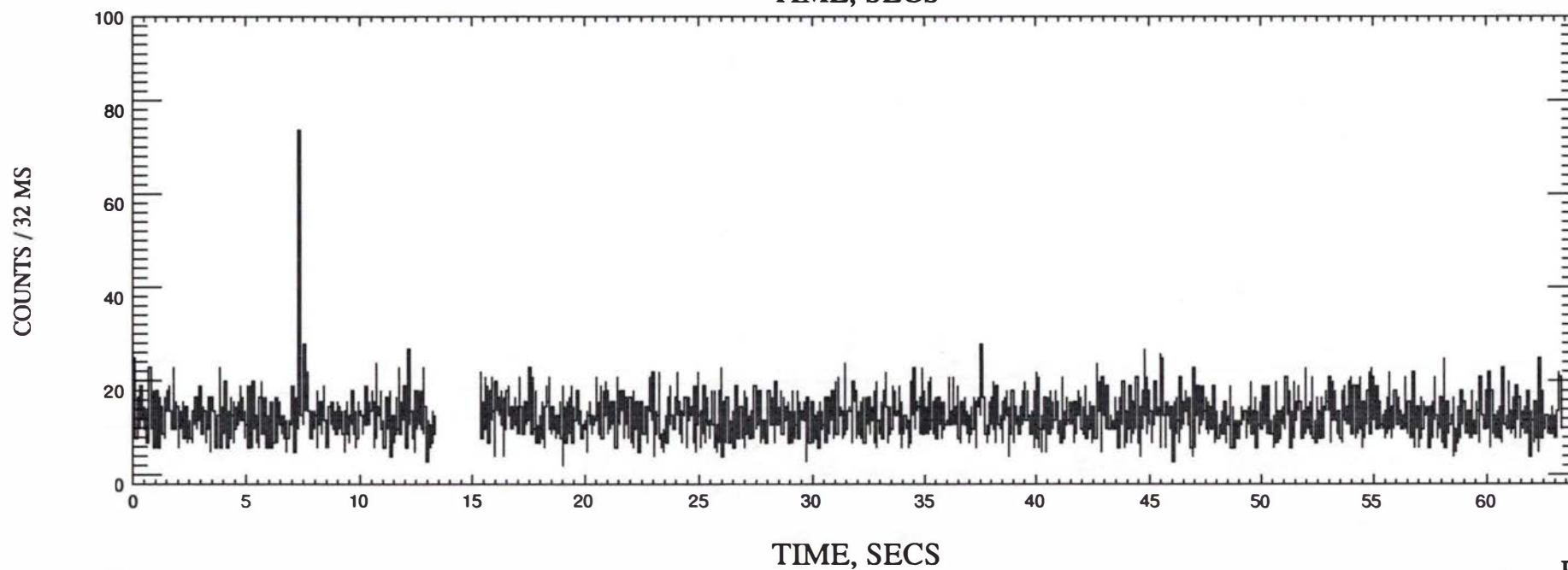
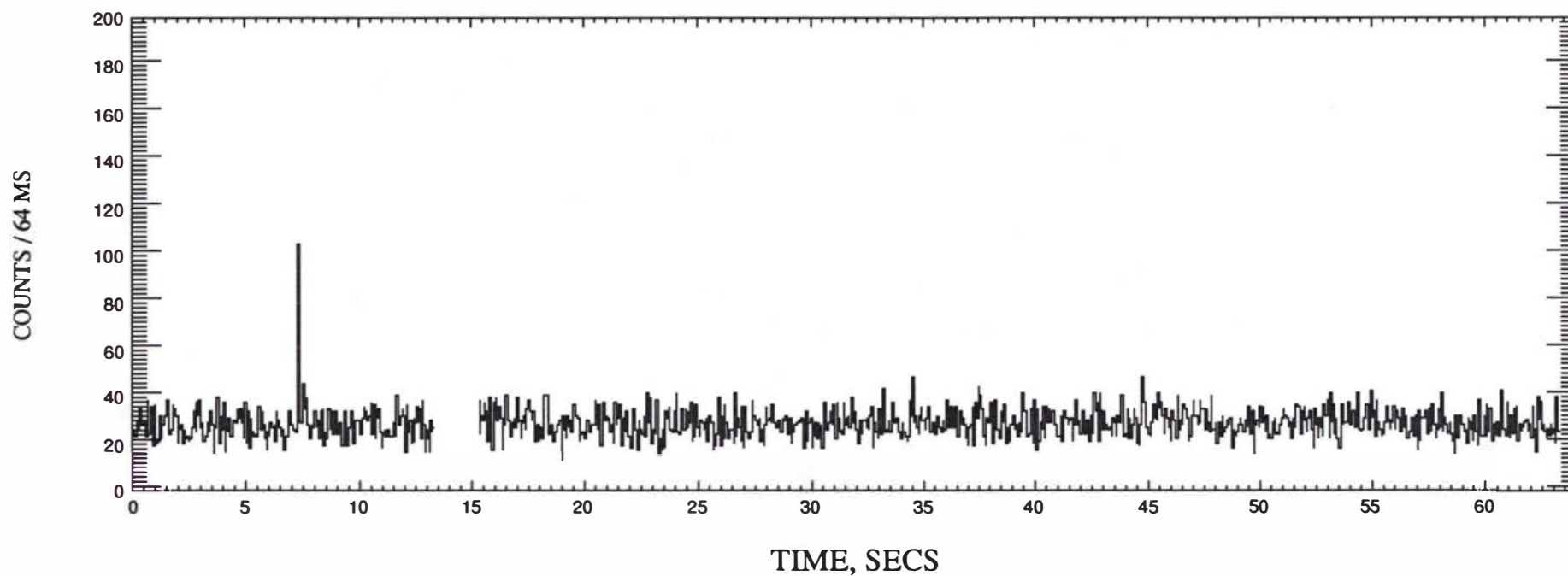
HUS MODES EDR day 346, year 1995 to day 346, year 1995 BURST NUMBER 1

4/1/96



HUS 2A TRIGGERED DATA EDR day 346, year 1995
Burst Counter 1 at UT= 7.902603878445 h=28449.374 s 07:54:09.374

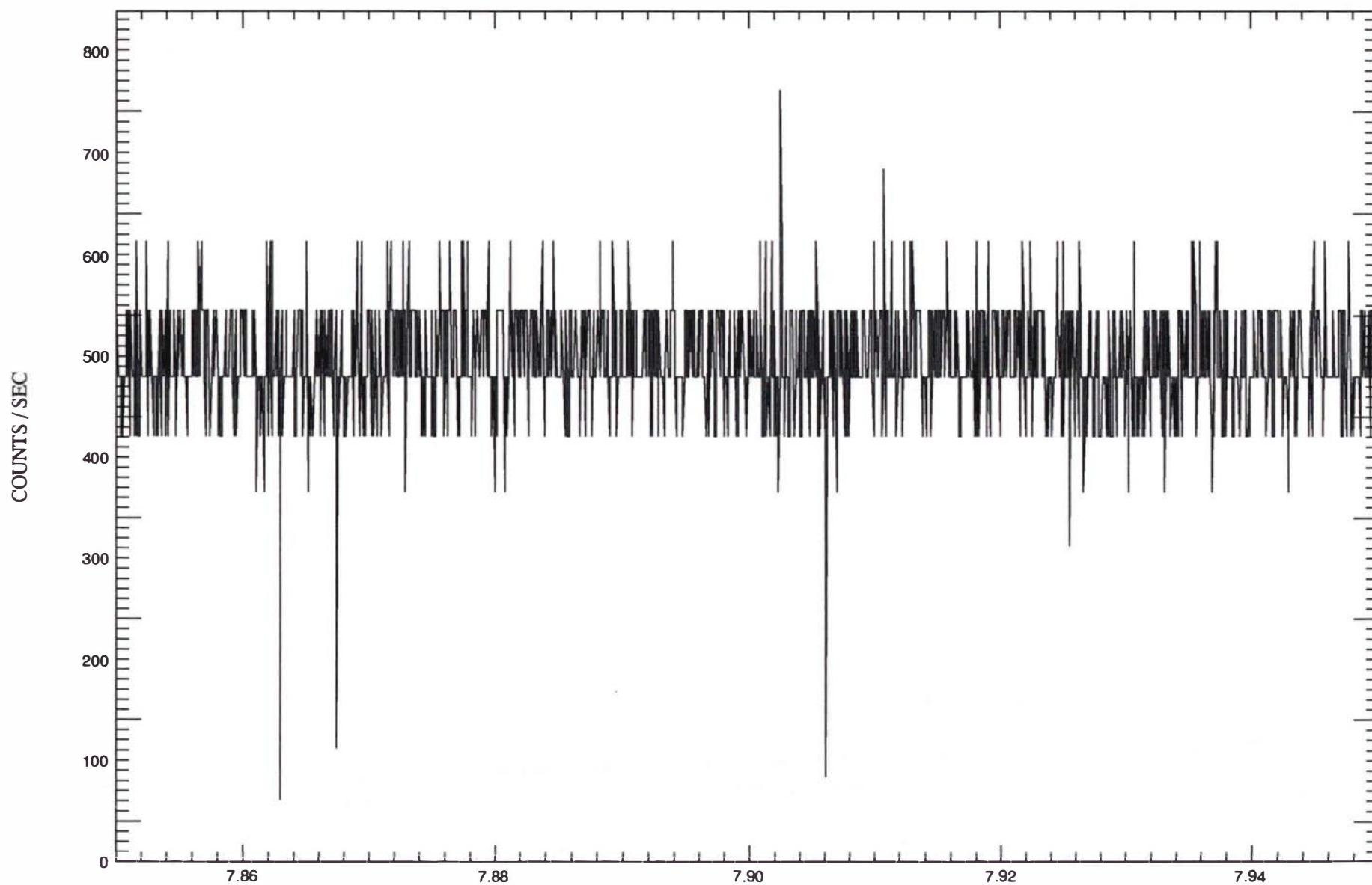
4/1/96



B# 1

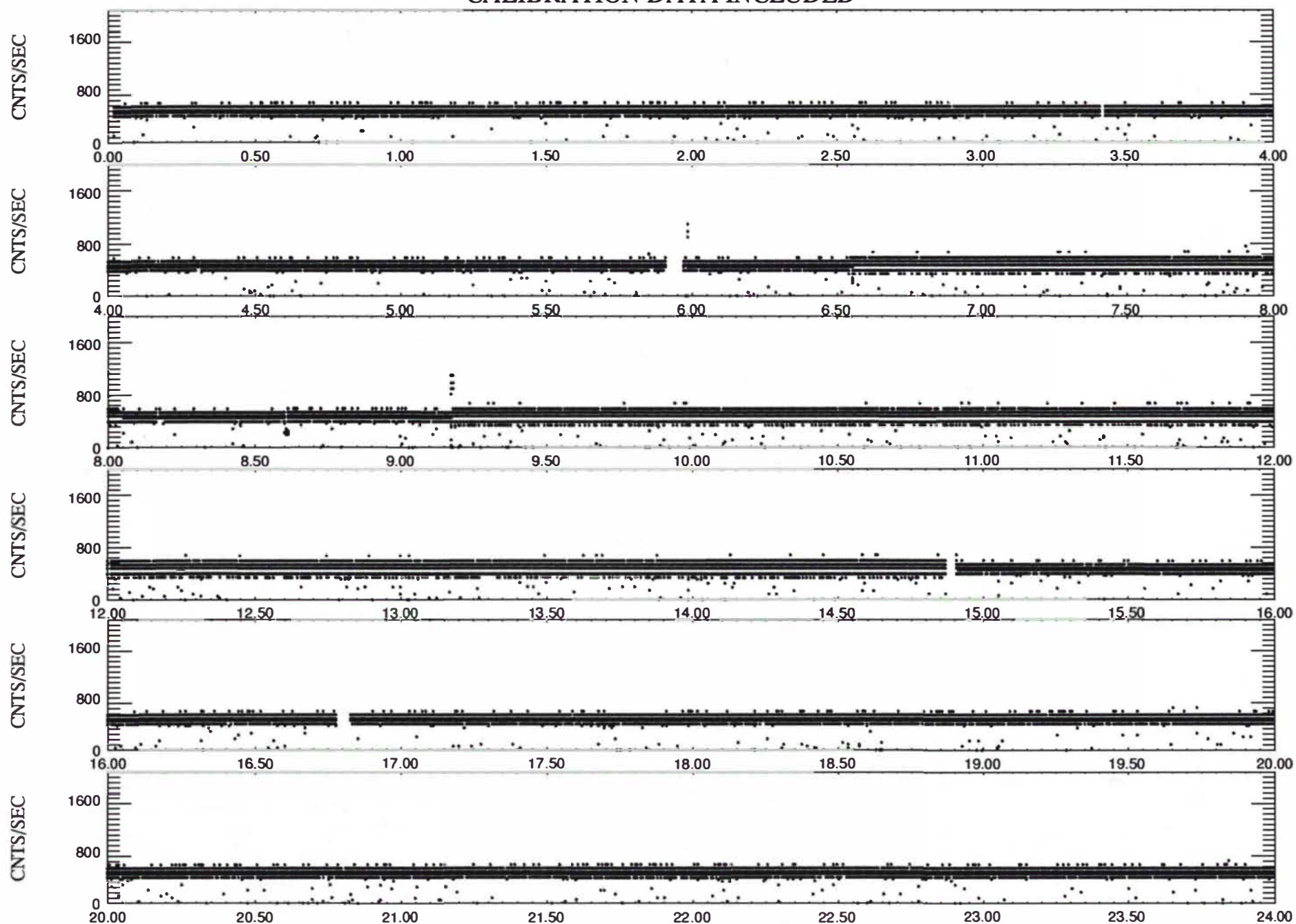
HUS 2A, MODE 1, NOT AVERAGED QEDR day 346, year 1995 to day 346, year 1995
CALIBRATION DATA INCLUDED

12/14/95



HUS 2A, MODE 1, NOT AVERAGED EDR day 346, year 1995 to day 346, year 1995
CALIBRATION DATA INCLUDED

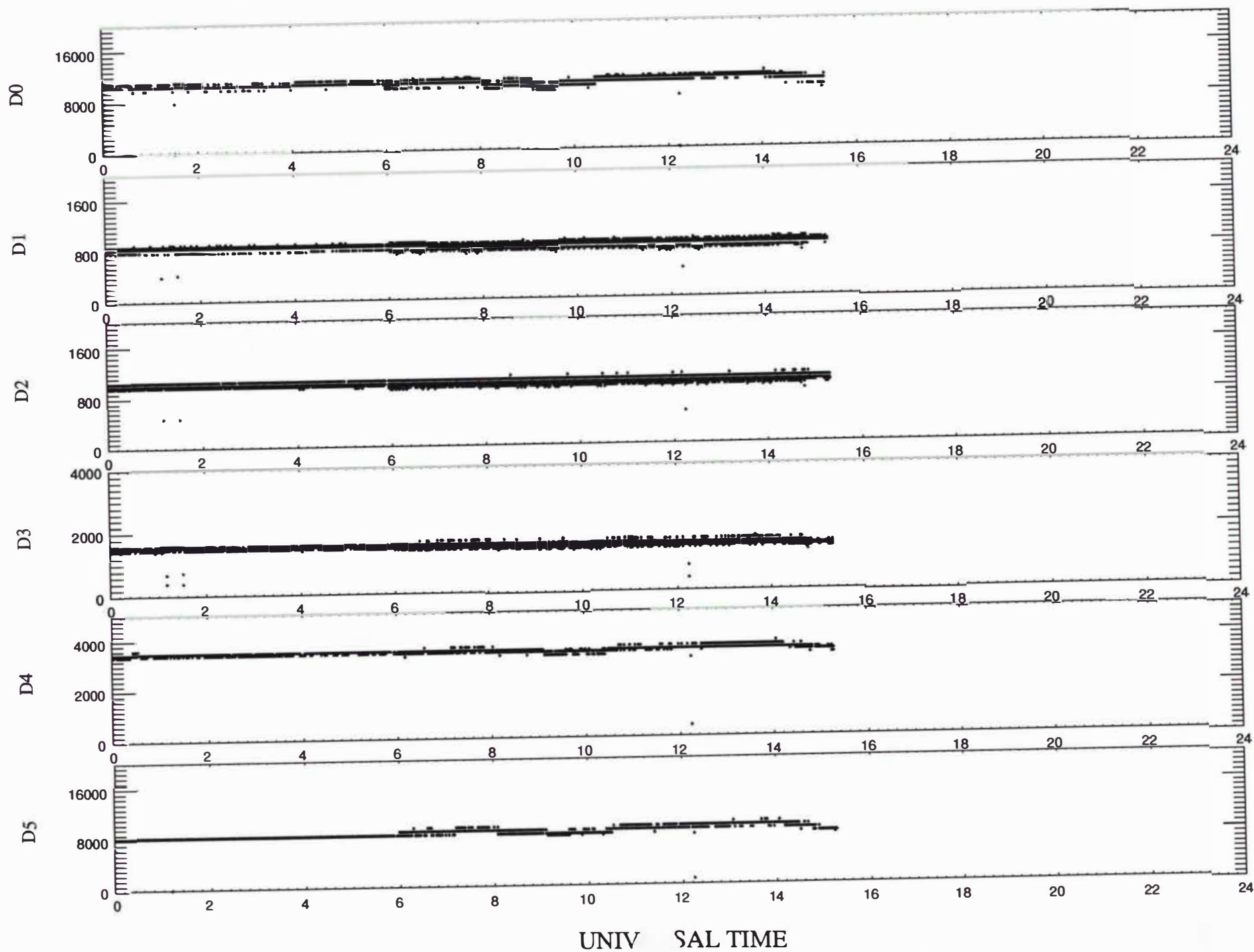
4/1/96



UNRSAL TIME

HUS 2B COUNTS / SEC QEDR day 346, year 1995 to day 346, year 1995

12/14/95



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

Kevin,

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

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

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

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

Regards,

Joe

The results are as follows:

ERRORS WITHIN YOUR BOUNDS:

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

HER ERRORS 'in the neighborhood':

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

From ulsdmt@jplsp.DNET.NASA.GOV Mon Mar 18 17:13 PST 1996
From: ulsdmt@jplsp.DNET.NASA.GOV
Date: Mon, 18 Mar 96 20:13:12 -0500
To: "khurley@sunspot.ssl.berkeley.edu"@east.DNET.NASA.GOV (SENT TO @LIST1)
Subject: Misplaced Major Frames in EDRs

Greetings,

We have identified an operations technique that produces data that will be improperly time tagged by the MGDS (telemetry system). Instances of EDR errors (major frames out of order) have been found in the CDROM archival products for December 1995 and January 1996. Errors will also be found in the still to be shipped February 1996 data.

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For each major frame processed in this manner, a gap will exist, representing the time the data was actually acquired, and a major frame or realtime data, representing the time period the data now errently represents, will be replaced by the misplaced playback data.

Yes. Confusing. See the attached memo detailing the times involved.

Approximately 17 such instances are known to have occured. The total time involved is about twenty minutes. Because the data loss is small and the cost of reprocessing would be so large, the Project has determined that it would be imprudent to reprocess.

For your information, however, we included a memo from Nigel Angold which itemizes each instance.

We thank Toni Galvin and Nigel for identifying the problem and assisting in the diagnosis.

Regards,

Joe

To: <ulsdmt@jplsp.jpl.nasa.gov>
From: Nigel Angold <nangold@jplsp2.jpl.nasa.gov>
Subject: Mis-corrected S/C clocks / SCETs
Cc: chris.leech@jpl.nasa.gov

I have looked at our recent tape recorder usage and predict that you will see major frames with mis-corrected spacecraft clocks / SCETs at the following times (give or take a few minutes):

1995:

~342.22:59 SCET	should be	~341.17:47 SCET
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~359.14:04 SCET	should be	~359.05:36 SCET
~360.14:59 SCET	should be	~359.00:20 SCET
~362.20:55 SCET	should be	~361.16:06 SCET

1996:

~001.02:45 SCET	should be	~364.23:12 SCET
~002.14:35 SCET	should be	~001.04:22 SCET
~029.19:35 SCET	should be	~028.13:43 SCET
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~039.18:34 SCET	should be	~038.12:14 SCET
~048.17:29 SCET	should be	~047.13:45 SCET
~054.08:59 SCET	should be	~053.11:46 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~039.18:34 SCET	should be	~038.12:14 SCET

We see data gaps for each of the correct times, so it looks like your theory of AMMOS mis-correcting times when there is carry-over data on the tape is correct.

I hope this is enough information. I would have to do a bit more calculation to get the approximate ERTs. Let me know if you want them.

Best regards,

Nigel

From DEAL@SSLLES.MSFC.NASA.GOV Fri Dec 15 10:57 PST 1995
From: DEAL@SSLLES.MSFC.NASA.GOV
Date: Fri, 15 Dec 1995 12:55:50 -0600 (CST)
To: burst@comptel.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3952

TIME: TJD=0064 SECONDS=6683

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=145.0 AZIMUTH=303.7 ERROR=22.8 DEGREES

COMMENTS:
BATSE BURSTER

From DEAL@SSLLES.MSFC.NASA.GOV Fri Dec 15 10:58 PST 1995
From: DEAL@SSLLES.MSFC.NASA.GOV
Date: Fri, 15 Dec 1995 12:58:19 -0600 (CST)
To: burst@comptel.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3953

TIME: TJD=0064 SECONDS=11050

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=86.3 AZIMUTH=349.2 ERROR=5.8 DEGREES

COMMENTS:
BATSE BURSTER

From DEAL@ssl.msfc.nasa.gov Fri Dec 15 13:31 PST 1995
Date: Fri, 15 Dec 1995 15:31:18 -0600 (CST)
From: DEAL@SSLLES.MSFC.NASA.GOV
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3954

BATSEARCH PROGRAM

RI

BATSE BURST # 3954
EVENT OF 1995 DEC 13 DAY OF YEAR=347
EVENT CROSSING TIME AT BATSE : 17852. S. OR 04:57:32.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 284.000 -7.000
BATSE PEAK COUNTING RATE: 24000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 13/12/ 95 IS:
RA= 222.862 DEC= 56.800 DIST= 2.845 AU
BATSE-ULYSSES DISTANCE = 425581937. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 99.23 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -227.66 SECS.
CROSSING TIME AT ULYSSES IS 17624. S. OR 04:53:44 +/- 289.82 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 13/12/ 95 IS:
RA= 280.380 DEC= -24.109 DIST= 2.308 AU
MARS-BATSE DISTANCE = 345339424. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=162.54 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1098.87 SECS.
CROSSING TIME AT MARS IS 16753. S. OR 04:39:13 +/- 43.31 SECONDS

BATSE BURST TRIGGER

NO.: 3954

TIME: TJD=0064 SECONDS=17852

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=57.0 AZIMUTH=328.1 ERROR=0.6 DEGREES

COMMENTS:

BURST LASTING ~ 30 S. VISIBLE ABOVE 30 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
3954	951213	10064	17852	24000	284	-07	30

Helio corr removed

Date: Nov 7 '97

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

From cline@heavx.gsfc.nasa.gov Fri Mar 29 08:40 PST 1996
 Date: Fri, 29 Mar 1996 08:40:19 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@heavx.gsfc.nasa.gov (T L Cline)
 Subject: Konus Event List augmentation

Dear Kevin,

This list includes Sergei's latest Konus-W (GGS-Wind) and Konus-A (Kosmos-2326) events, for comparison with Ulysses, BATSE, TGRS, etc. The times listed are prioritized for Konus-W (i.e., Konus-A time given if Konus-W doesn't trigger).

Yr	Mn	Dy	UT (Konus)	BATSE	Ulysses	Konus	TGRS	Notes
95	11	2	07085.879	?	?	168	no	
95	11	2	21209.015	3891	R I	169	345	
95	11	4	05868.077	3893	R I	170	BGR	
95	11	5	46827.808	?	?	171	no	
95	11	12	66495.244	?	R I	172	no	
95	11	13	84358.872	3906	R I	173	BGR	
95	11	17	10123.762	3909	?	175	no	
95	11	19	29831.402	3912	R I	176	348	
95	11	19	46457.519	?	?	177	BGR	
95	11	22	09841.38	?	?	179	no	
95	11	22	17107.738	?	?	180	349	
95	12	2	39101.744	?	?	195	BGR	
95	12	3	03988.18	?	?	196	360	
	12	8	19617.151	?	?	197	no	
	12	8	39452.057	?	?	198	no	
95	12	8	42467.634	?	?	199	BGR	
95	12	9	31349.607	?	?	200	BGR	
95	12	13	17849.683	?	?	201	362	
95	12	14	08657.847	?	?	202	no	
95	12	19	60679.732	?	?	203	no	
95	12	20	31883.56	?	?	204	BGR	
95	12	22	25203.254	?	?	no	?	= K-A t.
95	12	27	23005.042	?	?	218	375	
96	12	31	20231.668	?	?	219	no	
96	1	2	11650.996	?	?	220	no	
96	1	4	12521.062	?	?	221	no	
96	1	11	46524.53	?	?	222	no	
96	1	13	56024.261	?	?	228	no	
96	1	14	44104.737	?	?	233	384	+ K-A t.
96	1	15	31956.506	?	?	234	BGR	
96	1	17	57371.341	?	?	235	no	
96	1	19	34679.317	?	?	236	no	
96	1	19	45226.016	?	?	237	no	
96	1	20	36768.974	?	?	238	no	
96	1	24	03388.008	?	?	239	385	+ K-A t.
96	1	24	76096.911	?	?	BGR	?	= K-A t.
96	1	30	08756.848	?	?	240	no	
96	2	1	78530.582	?	?	241	?	+ K-A t.
96	2	2	50750.813	?	?	242	?	
	2	10	35198.959	?	?	247	?	
96	2	16	57796.347	?	?	BGR	?	= K-A t.
96	2	19	20589.684	?	?	BGR	?	= K-A t.
96	2	28	85760.241	?	?	249	?	
96	2	29	22445.141	?	?	250	?	

96	3	5	33645.352	?	?	251	?
96	3	12	35074.697	?	?	252	?
96	3	19	51992.828	?	?	253	?
96	3	21	76321.803	?	?	254	?
96	3	22	19642.728	?	?	255	?
96	3	24	80064.124	?	?	257	?
96	3	25	69892.978	?	?	258	?

--

TLC

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

From yosimori@rikkyo.ac.jp Wed Jan 24 03:22 PST 1996
Return-Path: <yosimori@rikkyo.ac.jp>
Received: from ax252.rikkyo.ac.jp by sunspot.ssl.berkeley.edu (SMI-8.6/SMI-SVR4)
id DAA01902; Wed, 24 Jan 1996 03:22:15 -0800
Received: from ax251 (ax251 [150.93.16.251]) by ax252.rikkyo.ac.jp (8.6.8/3.4Wbeta3-ax252_01-00)
Received: by ax251 (1.38.193.4/3.4Wbeta3)
id AA17661; Wed, 24 Jan 1996 20:23:09 +0900
From: "M. Yoshimori" <yosimori@rikkyo.ac.jp>
Date: Wed, 24 Jan 1996 20:23:09 +0900
Message-Id: <9601241123.AA17661@ax251>
To: khurley@sunspot.ssl.berkeley.edu
Cc: yosimori@rikkyo.ac.jp
Subject: Locations of Yohkoh events
Content-Type: text
Content-Length: 817
X-Lines: 37
Status: RO

Dear Kevin,

Could you tell me the locations of the following Yohkoh GBD events, if you have them ?

1.	1991 Dec.21	06:17:00 UT
2.	1992 Feb.18	18:44:21 UT
3.	1992 Apr.06	02:45:25 UT
4.	1992 Apr.19	01:22:00 UT
5.	1992 Mar.19	16:30:00 UT
	1992 June17	05:29:00 UT
6.	1992 July01	19:39:00 UT
8.	1992 July11	16:09:17 UT
9.	1992 July31	17:07:42 UT
10.	1992 Aug.16	12:36:38 UT
11.	1992 Sep.03	23:29:05 UT
12.	1993 Jan.06	15:37:39 UT
13.	1994 Aug.26	20:55:20 UT
14.	1995 Mar.25	17:36:36 UT
15.	1995 Apr.03	13:19:51 UT
16.	1995 Apr.07	15:15:32 UT
17.	1995 July01	03:32:41 UT
18.	1995 July04	03:10:34 UT
19.	1995 Aug.04	01:58:56 UT

Next, we found a GBD-like event at 04:57:32 UT on 13 Dec. 1995.

Could you check whether it is real ?

Thank you for your cooperation..

Best regards,

Masato Yoshimori

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

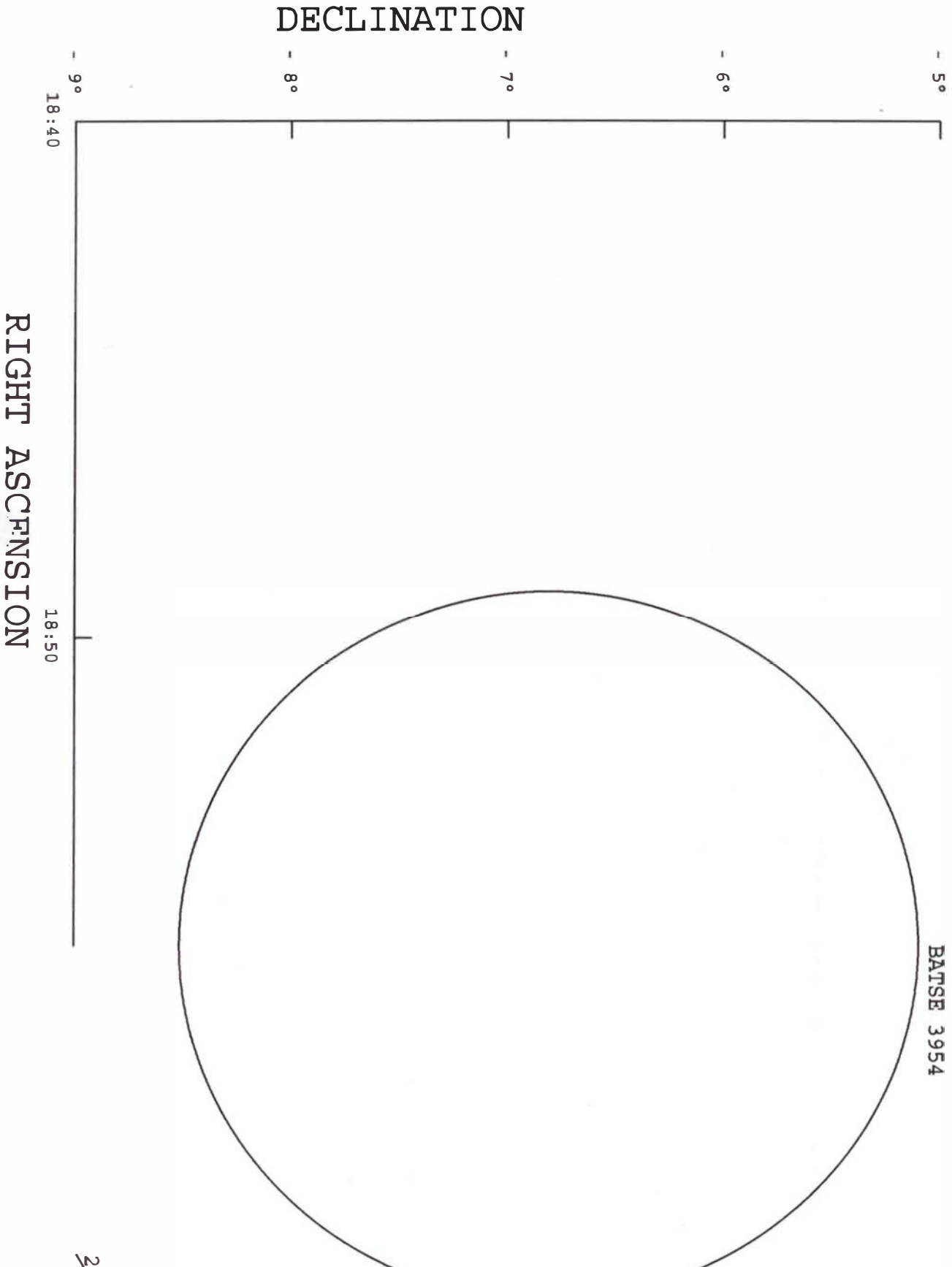
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF DEC 13, 1995 4:53

7/11/97



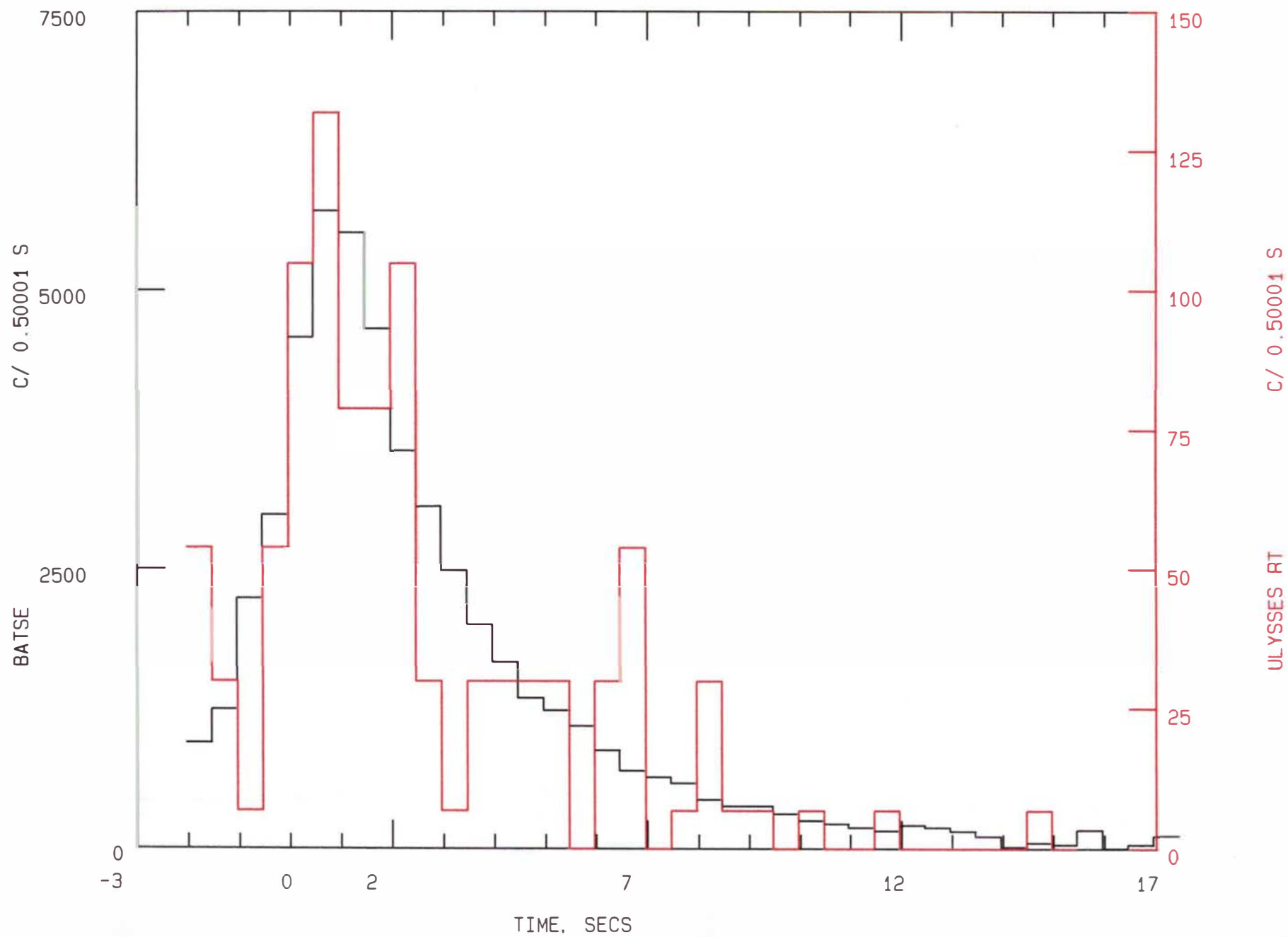
BATSE

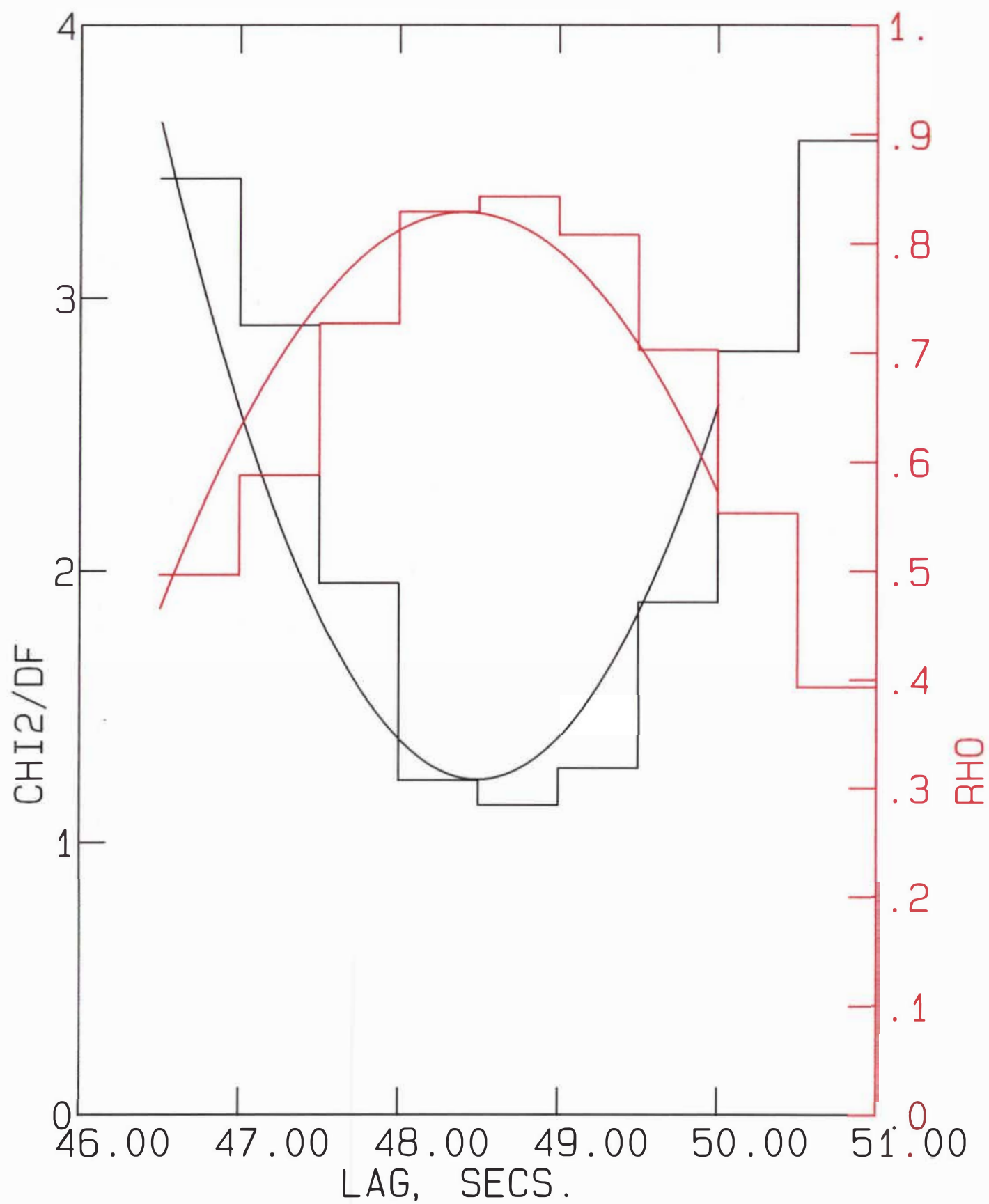
-ULYSSES RT CORRELATION

13/12/95

17852.082

7/11/97





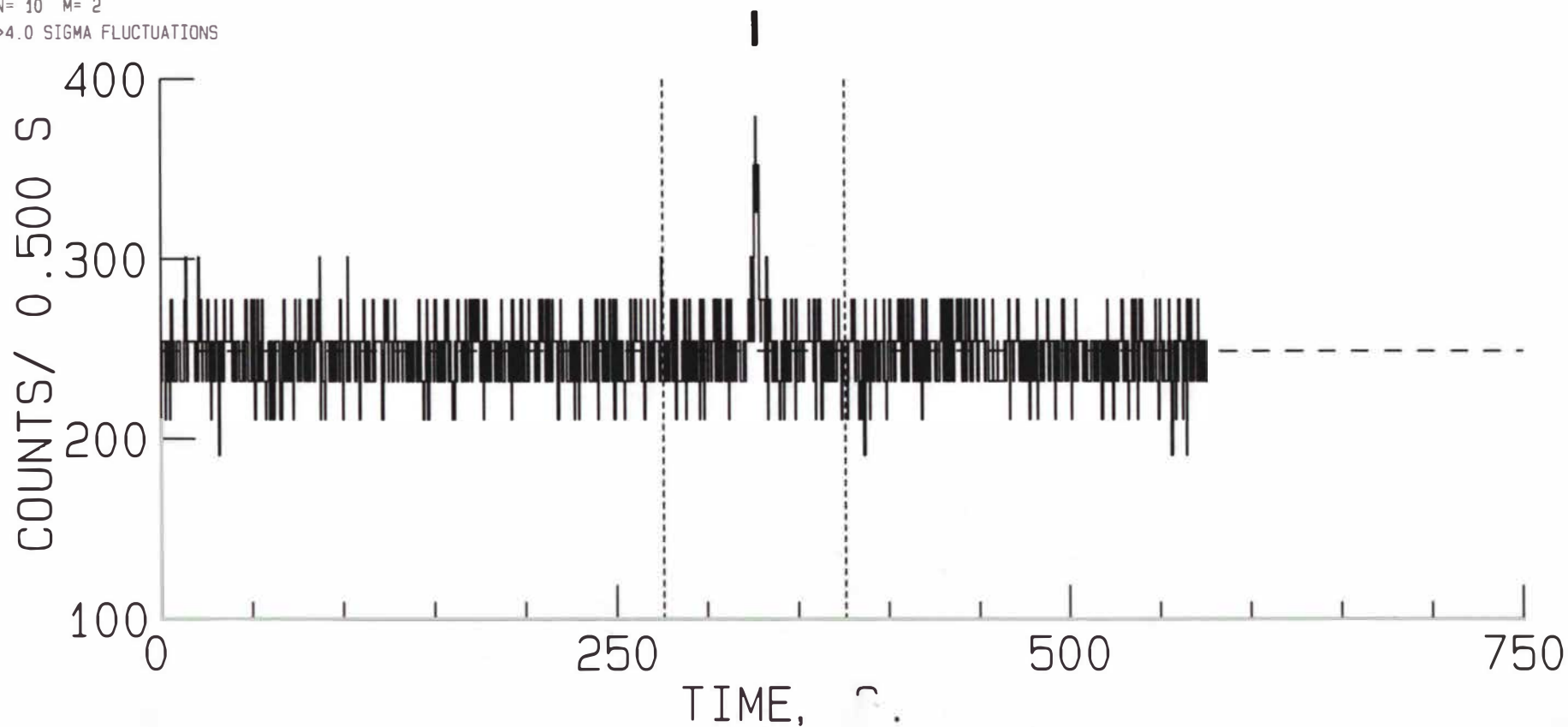
ULYSSES RT

7 / 1 1 / 97

13/12/95 17352.078 s

21- 143 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



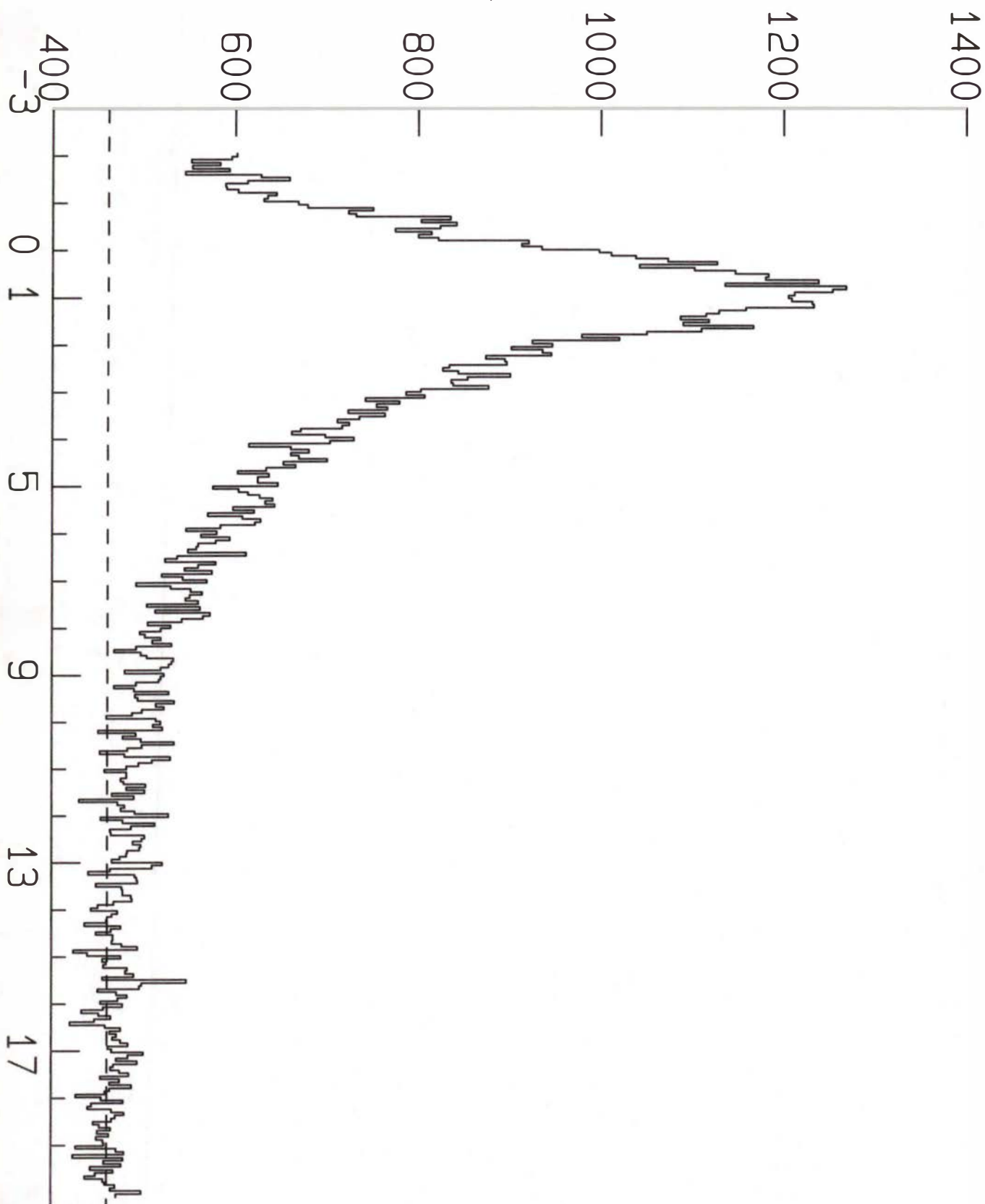
BATSE

13/12/95

17852.082

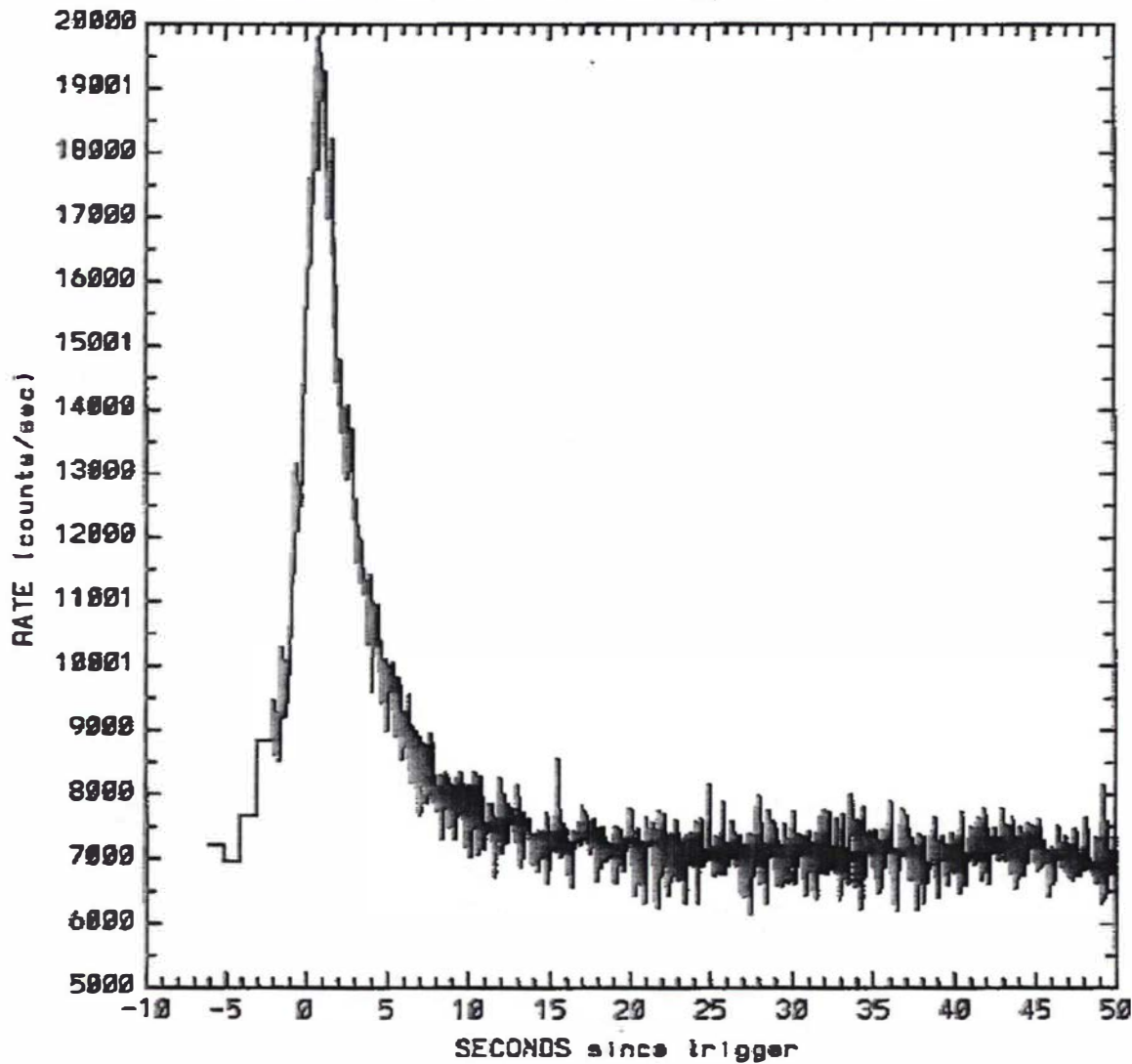
25- 100 keV

COUNTS/0.064 S



Dec 13 1995

DISCSC Data for K. Hurley, No. 3954



20-DEC-1995 19:43:56

Created by MOPS BD
(Burst Display)
Version 12.25

Trigger # . 3954

Trigger Time:
19864 / 17052.882Burst Data Type:
DISCSCDeadtime
Corrected. NBackground Data
Type. PREB + DISCLAMinimum Integ. Time:
0.064 secondsDetectors [7.0].
---32---Discriminators:
(1, 2)Quality Mask:
BOTSP1

951025	23	40	39.738	S1	190	400	120	1.7	3	60	167	✓
951102	01	58	05.879	S2	260	320	50	<0.1	100	3	168	✓
951102	05	53	29.015	S2	700	1560	600	0.1	5	18	169	✓
951102	07	58	13	S1	320	80		4	6		BGR	✓
951105	00	29	05	S2	40	50		0.6	40		BGR	✓
951105	01	37	48.077	S2	140	340	80	0.6	2	22	170	✓
951105	13	00	27.808	S1	160	380	120	9	2	9	171	✓
951107	07	34	58	S1	20	50	20	2	90		BGR	✓
951111	09	42	40	S1	80	160	20	1.1	15		BGR	✓
951112	18	28	15.244	S2	540	690	220	0.2	14	84	172	✓
951113	23	25	58.872	S1	260	330	260	4.4	1	15	173	✓
951115	10	48	49	S1	70	180	80	3	12		BGR	✓
951117	02	48	43.762	S2	650	530	120	0.1	9	10	175	✓
951118	22	56	00	S2	20	90	100	0.15	6		BGR	✓
951119	08	17	11.402	S1	200	420	110	3	1.5	12	176	✓
951119	12	54	17.519	S1	110	220	340	1.7	3	4	177	✓
951119	16	30	48	S2	30	40	10	0.4	110		BGR	✓
951121	06	11	20	S1	20	70	10	2	45		BGR	✓
951122	02	44	01.380	S2	770	920		0.15	0.5	1.5	179	✓
951122	04	45	07.738	S1	280	430	160	12	35	22	180	✓
951123	18	10	08	S1	30	60	30	1	30		BGR	✓
951124	05	54	26	S2	50	140	50	0.15	30		BGR	✓
951124	06	58	52	S2	30	100		0.25	280		BGR	✓
951202	10	51	41.744	S1	200	500	220	2.4	2	25	195	✓
951203	01	06	28.180	S2	260	720	420	0.85	1	16	196	✓
951208	05	26	57.151	S2	320	740	190	<0.04	1	3.5	197	✓
951208	10	57	32.057	S1	290	260		7	52	6.5	198	✓
951208	11	47	47.634	S1	240	510	190	10	23	98	199	✓
951208	23	24	12	S1	100	90		>10	30		BGR	✓
951209	08	42	29.607	S1	150	450	160	6	6	14	200	✓
951213	04	57	29.683	S2	360	940	330	0.4	2	8	201	✓
951213	09	04	34	S2	300	90		<0.15	4.5		BGR	✓
951214	01	29	47	S2	15	100	30	1	30		BGR	✓
951214	02	24	17.847	S2	200	450	150	0.8	4	6	202	✓
951215	20	23	45	S2	60	70	15	<0.15	60		BGR	✓
951216	22	39	42	S2	160	110		0.1	6		BGR	✓
951218	07	59	48	S1	70	130	30	2.3	22		BGR	✓
951219	16	51	19.732	S2	430	850	920	<0.03	1	54	203	✓
951220	08	51	23.560	S2	100	320	180	1	2	8	204	✓
951221	08	23	18	S1	110	150	70	>15	15		BGR	✓
951222	21	00	21	S2	280			<0.1	16		BGR	✓
951225	09	14	16	S2	200			<0.3	50		BGR	✓
951225	09	34	14	S1	500	150	25	2.2	60		BGR	✓
951225	15	21	35	S2	210	170	40	0.1	100		BGR	✓
951225	22	51	08	S1	80	150	50	2.4	40		BGR	✓
951226	08	38	15	S2	60	100	50	0.15	9		BGR	✓
951227	06	23	25.042	S1	420	1200	320	1	1	1.5	218	✓
951227	21	59	20	S1	50	50		3	65		BGR	✓
951228	12	28	42	S2	70	80	40	<0.07	110		BGR	✓
951228	15	47	26	S2	80	170		0.9	17		BGR	✓
951231	05	37	11.668	S2	180	320	150	0.07	9	65	219	✓
951231	21	24	34	S2	100	25		<0.2	20		BGR	✓
960102	03	14	10.996	S1	140	300	80	1	1	0.2	220	✓
960102	20	20	53	S1	200	120	40	>9	25		BGR	✓
960104	03	28	41.062	S2	360	630	230	<0.05	2	28	221	✓
960105	16	04	30	S1	80	60		5	30		BGR	✓
960107	05	23	20	S2	30	100		0.5	230		BGR	✓
960107	19	03	28	S2	30	120	150	<0.1	32		BGR	✓
960109	23	11	31	S2	60	130	20	0.3	5		BGR	✓
960111	12	55	24.530	S2	1130	1280	190	0.2	0.5	6	222	✓
960113	15	33	44.261	S2	500	450	50	0.3	2	36	228	✓
960114	12	15	04.737	S1	4900	7200	1400	1.8	1	60	233	✓
960115	08	52	36.506	S1	380	360	60	10	1	7	234	✓
960115	12	50	15	S2	120	60		0.7	22		BGR	✓
960116	02	02	18	S2	140	170		0.15	17		BGR	✓
960117	15	56	11.341	S1	250	360	30	4	5	20	235	✓

RE? NO

From cline@lheavx.gsfc.nasa.gov Fri Feb 2 05:41 PST 1996

Date: Fri, 2 Feb 1996 05:41:51 -0800

Mime-Version: 1.0

To: Bonnard.Teegarden@cesr.cnes.fr, KHURLEY@sunspot.ssl.berkeley.edu,
palmer@lheamail.gsfc.nasa.gov, seifert@lheamail.gsfc.nasa.gov

From: cline@lheavx.gsfc.nasa.gov (T L Cline)

Subject: For Your INFO

Dear Bonnard, Kevin, David, Helmut:

Here is Sergei Golenetskii's latest Konus burst list, for your information. Note that, including the non-triggered-mode 'BGR' events they confidently identify, there are over 300 events so far.

- TLC

DATE	Trigger T0 time (UT)	Sensor	KONUS-WIND		N(S1)/N(S2)		Duration		Trigger number
			Max counts per sec						
			G1	G2	G3	in G2	T<T0	T>T0	
941113	12 09 15	S1	145	85		2.5	115		BGR ✓
941114	02 02 40	S2	110	128	30	0.25	12		BGR ✓
941117	03 14 38.191	S2	406	550	74	0.17	40	5	2 ✓
941117	14 07 57	S2	150	140		<0.15	5		BGR ✓
941119	19 31 09.175	S2	370	703	160	0.23	7	20	4 ✓
941120	20 23 17.924	S1	215	328	30	>15	2	25	5 ✓
941121	17 25 00.945	S1	1652	1656	300	21	3	50	6 ✓
941125	22 04 30.156	S2	115	308	109	0.95	1.5	5	7 ✓
941126	00 20 46	S1	150	205	200	>14	18		BGR ✓
941126	12 22 37.952	S1	860	1430	330	4.2	40	45	8 ✓
941126	16 54 20	S1	55	75		>10	26		BGR ✓
941126	19 56 49.732	S1	290	390	211	6.7	20	26	9
941127	14 30 25.680	S2	200	400	95	0.17	8	7	10
941127	15 39 10	S1	210	57		2.7	260		BGR ✓
941128	15 37 00	S1	75	90	32	>15	55		BGR ✓
941205	23 33 40.074	S2	370	460	188	0.06	6	30	11 ✓
941207	22 10 32	S2	265	175		<0.2	7		BGR ✓
941210	03 10 52.523	S2	900	2350	1385	0.12	1	15	14 ✓
941214	17 03 51	S1	40	45	29	>6	12		BGR ✓
941214	05 38 45.226	S1	3479	1266	14	1.0	12	240	18 Sol
941221	07 44 08	S2	55	115	30	0.8	20		BGR
941221	22 14 35.215	S1	260	496	165	1.5	55	11	19 ✓
941222	05 36 00.243	S2	334	1360	1066	0.36	7	105	20 ✓
941228	07 39 45.915	S1	300	637	519	4.4	5	90	28
941228	16 55 23	S2	40	36	23	0.25	25		BGR ✓
941229	12 58 05	S1	46	108	31	1.8	15		BGR ✓
941229	22 51 08.781	S2	396	381	140	0.09	7	25	29 ✓
941230	20 52 53	S1	74	117	52	8.4	158		BGR ✓
941230	23 43 44	S2	55	70	16	<0.2	4.5		BGR ✓
950104	07 18 39.613	S2	258	550	219	0.75	2.8	20	31 ✓
950104	09 00 58	S2	140	143	40	<0.1	25		BGR ✓
950110	06 02 15	S2	332	180		<0.1	3600		BGR
950110	13 37 57.084	S2	234	422	213	0.05	38	100	32 ✓
950111	04 49 12.241	S1	586	620	100	>19	92	24	33 ✓
950111	12 18 49.196	S1	225	435	164	1.85	26	50	34 ✓
950112	07 45 37.120	S2	1305	1800	336	0.04	2.5	44	35 ✓
950113	05 59 13	S1	283	180	26	>10	52		BGR ✓
950113	17 38 32	S2	85	162	35	<0.06	75		BGR ✓
950114	01 00 38	S1	46	110		1.6	6		BGR ✓
950114	04 03 01	S2	23	76		0.5	70		BGR ✓
950114	07 30 30.766	S2	205	406	60	<0.05	1	100	36 ✓
950114	13 10 34.865	S1	1320	2828	516	3.1	1	10	37 ✓
950115	02 49 32	S2	40	47	34	<0.15	24		BGR ✓
950117	01 36 00	S2	56	82	42	0.2	108		BGR ✓
950118	12 22 54	S2	57	105	17	<0.1	35		BGR ✓
950125	14 51 52.253	S1	380	600	140	8.2	3.8	11	39

KONUS

ULYSSES RT

27 / 01 / 00

13 / 12 / 95 31212.293 s

0.500 S INTERVALS REGROUPED BY 4

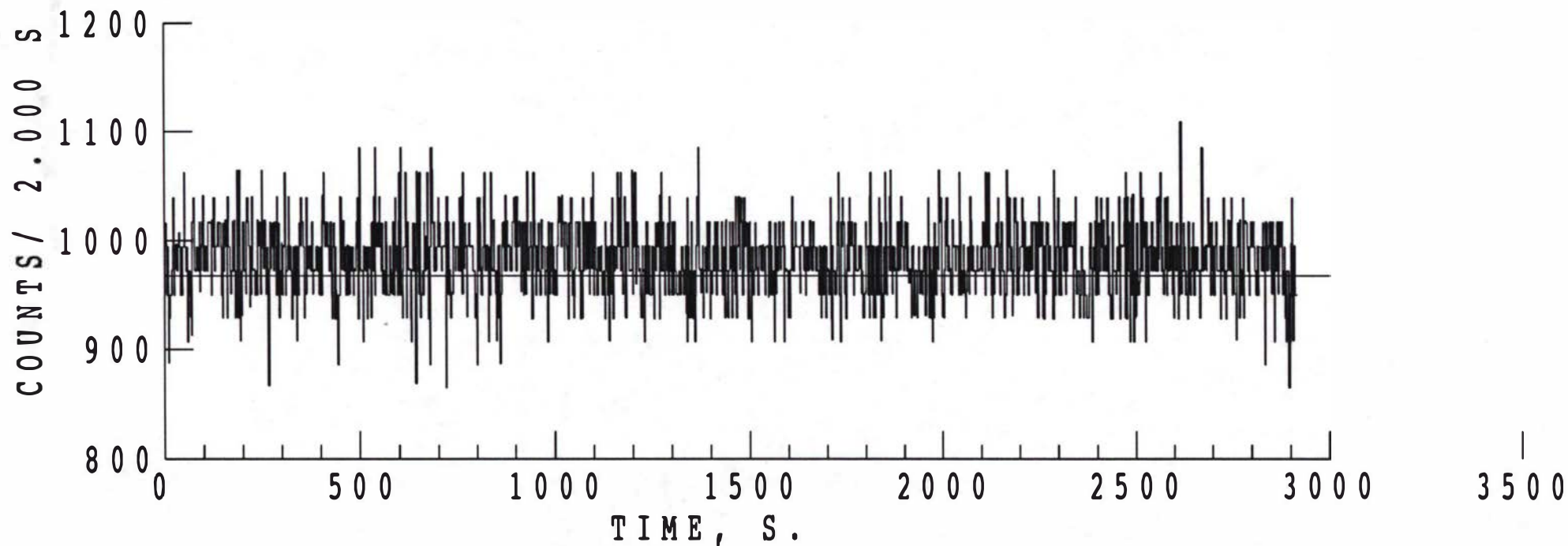
0 - 0 keV

N= 10 M= 10

>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From DEAL@SSLLES.MSFC.NASA.GOV Fri Dec 15 11:09 PST 1995
From: DEAL@SSLLES.MSFC.NASA.GOV
Date: Fri, 15 Dec 1995 13:07:49 -0600 (CST)
To: burst@comptel.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3955

TIME: TJD=0064 SECONDS=28271

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=75.2 AZIMUTH=297.9 ERROR=16.2 DEGREES

COMMENTS:
BATSE BURSTER

BATSE BURST TRIGGER

NO.: 3956

TIME: TJD=0064 SECONDS=41434

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=78.2 AZIMUTH=338.0 ERROR=7.4 DEGREES

COMMENTS:
BATSE BURSTER

BATSE BURST TRIGGER

NO.: 3957

TIME: TJD=0064 SECONDS=44743

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=85.6 AZIMUTH=336.8 ERROR=17.3 DEGREES

COMMENTS:
BATSE BURSTER

BATSE BURST TRIGGER

NO.: 3958

TIME: TJD=0064 SECONDS=56054

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=59.9 AZIMUTH=339.2 ERROR=19.4 DEGREES

COMMENTS:
BATSE BURSTER

BATSE BURST TRIGGER

NO.: 3959

TIME: TJD=0064 SECONDS=61343

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=77.4 AZIMUTH=347.0 ERROR=9.1 DEGREES

COMMENTS:
BATSE BURSTER

BATSE BURST TRIGGER

NO.: 3960

TIME: TJD=0064 SECONDS=66636

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=82.5 AZIMUTH=300.2 ERROR=16.1 DEGREES

COMMENTS:
BATSE BURSTER

BATSE BURST TRIGGER

NO.: 3961

TIME: TJD=0064 SECONDS=72162

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=74.4 AZIMUTH=339.8 ERROR=8.4 DEGREES

COMMENTS:
BATSE BURSTER

BATSE BURST TRIGGER

NO.: 3962

TIME: TJD=0064 SECONDS=78332

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=90.9 AZIMUTH=338.0 ERROR=17.34 DEGREES

COMMENTS:
BATSE BURSTER

BATSE BURST TRIGGER

NO.: 3963

TIME: TJD=0064 SECONDS=84654

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL: N

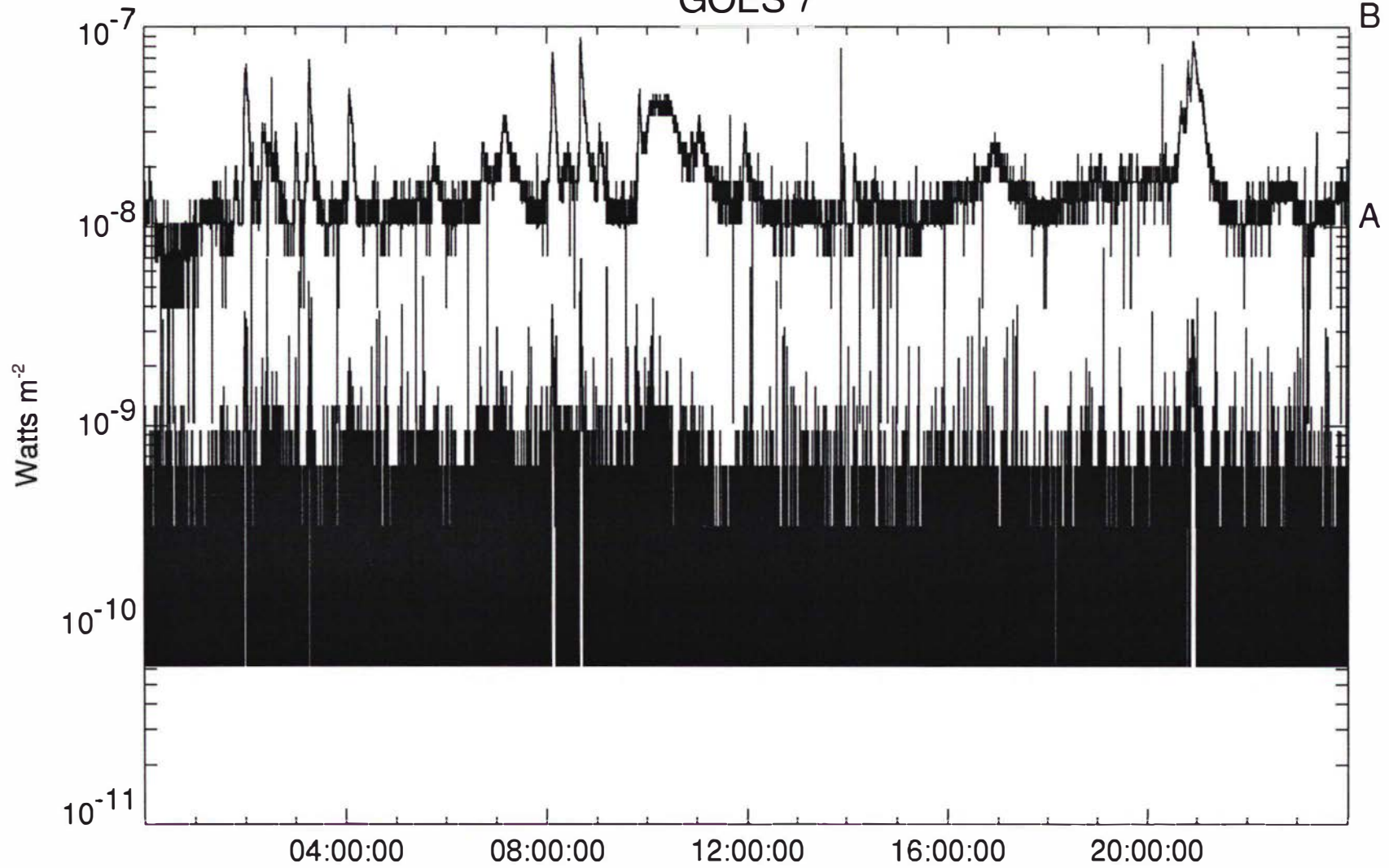
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=69.2 AZIMUTH=310.7 ERROR=23.9 DEGREES

COMMENTS:
BATSE BURSTER

GOES 7

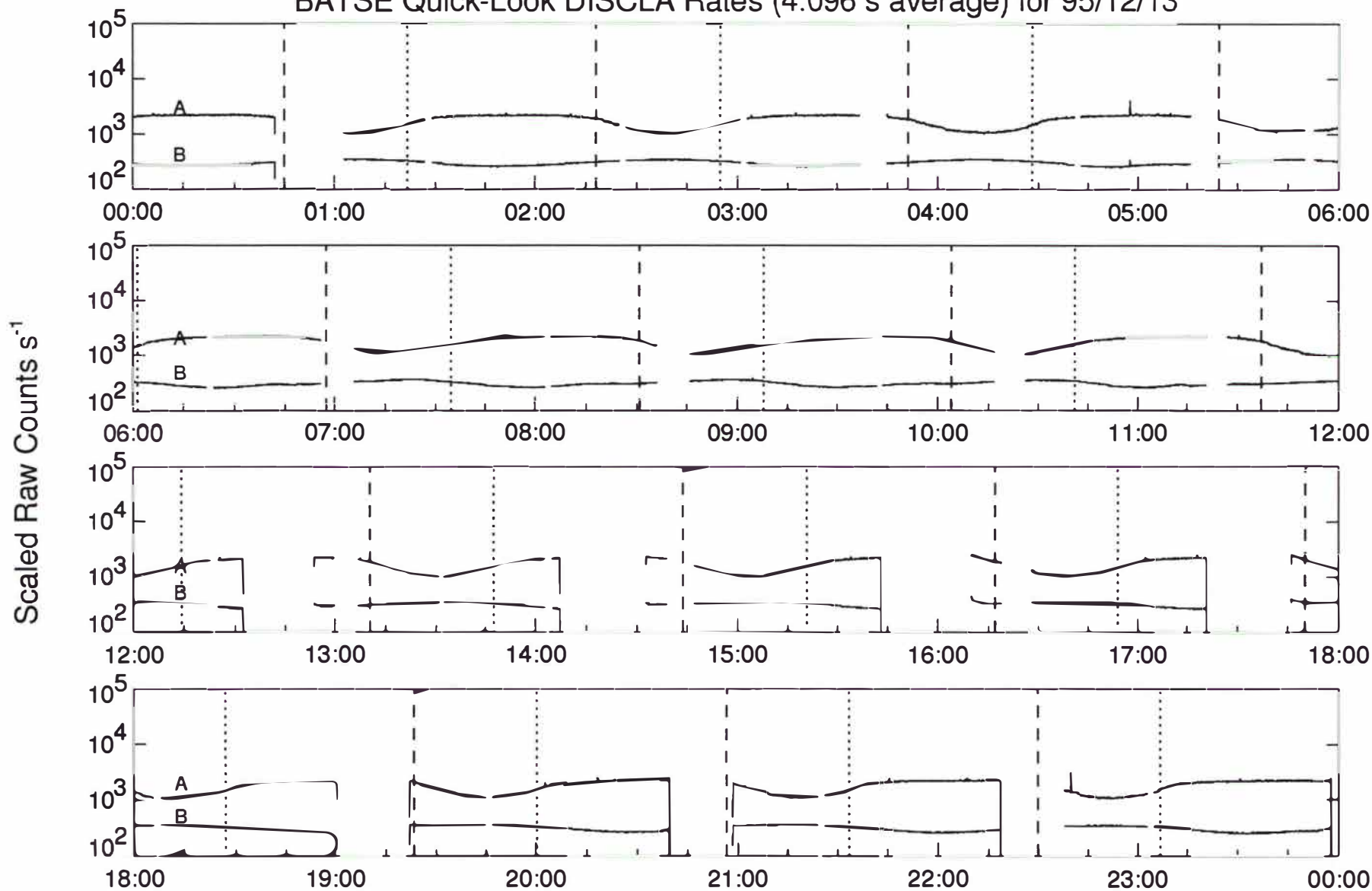


Data Start: 95/12/13, 0000:00

Plot created: 95/12/15, 0651

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 95/12/13



Current Time: 95/12/15, 0652 EDT

A: Channel 0 Most Sunward LAD

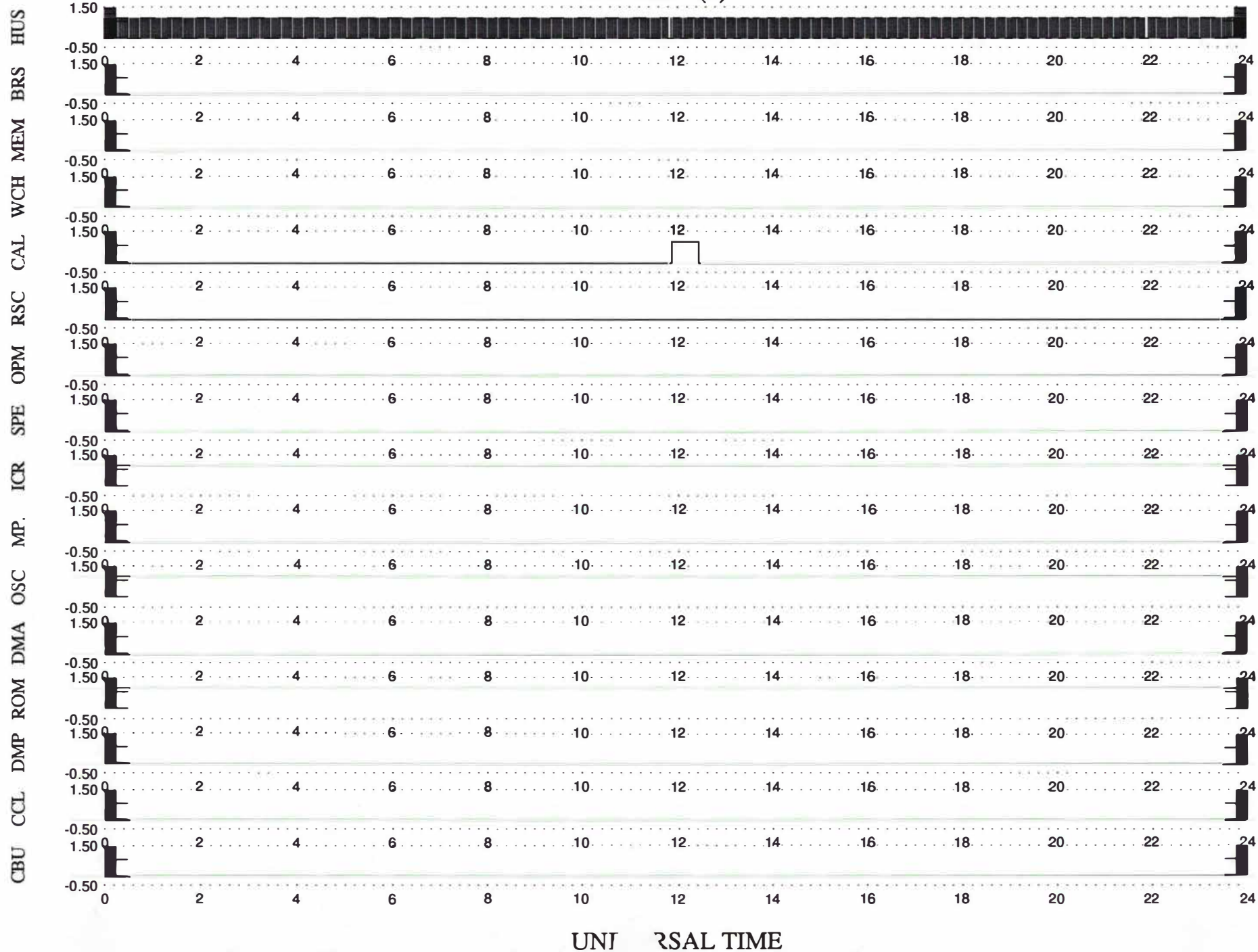
B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

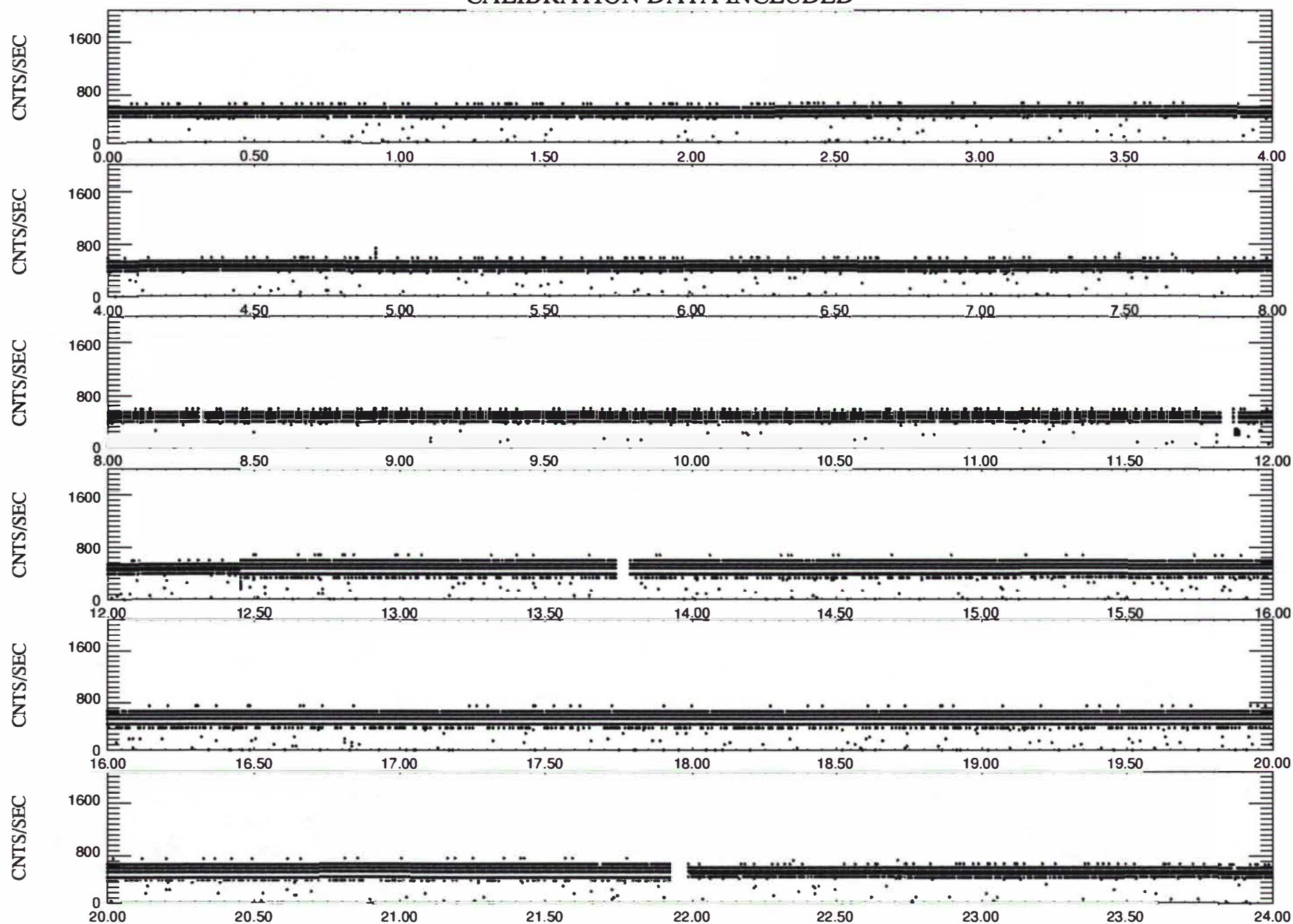
4/1/96

NO BURST (1)



HUS 2A, MODE 1, NOT AVERAGED EDR day 347, year 1995 to day 347, year 1995
CALIBRATION DATA INCLUDED

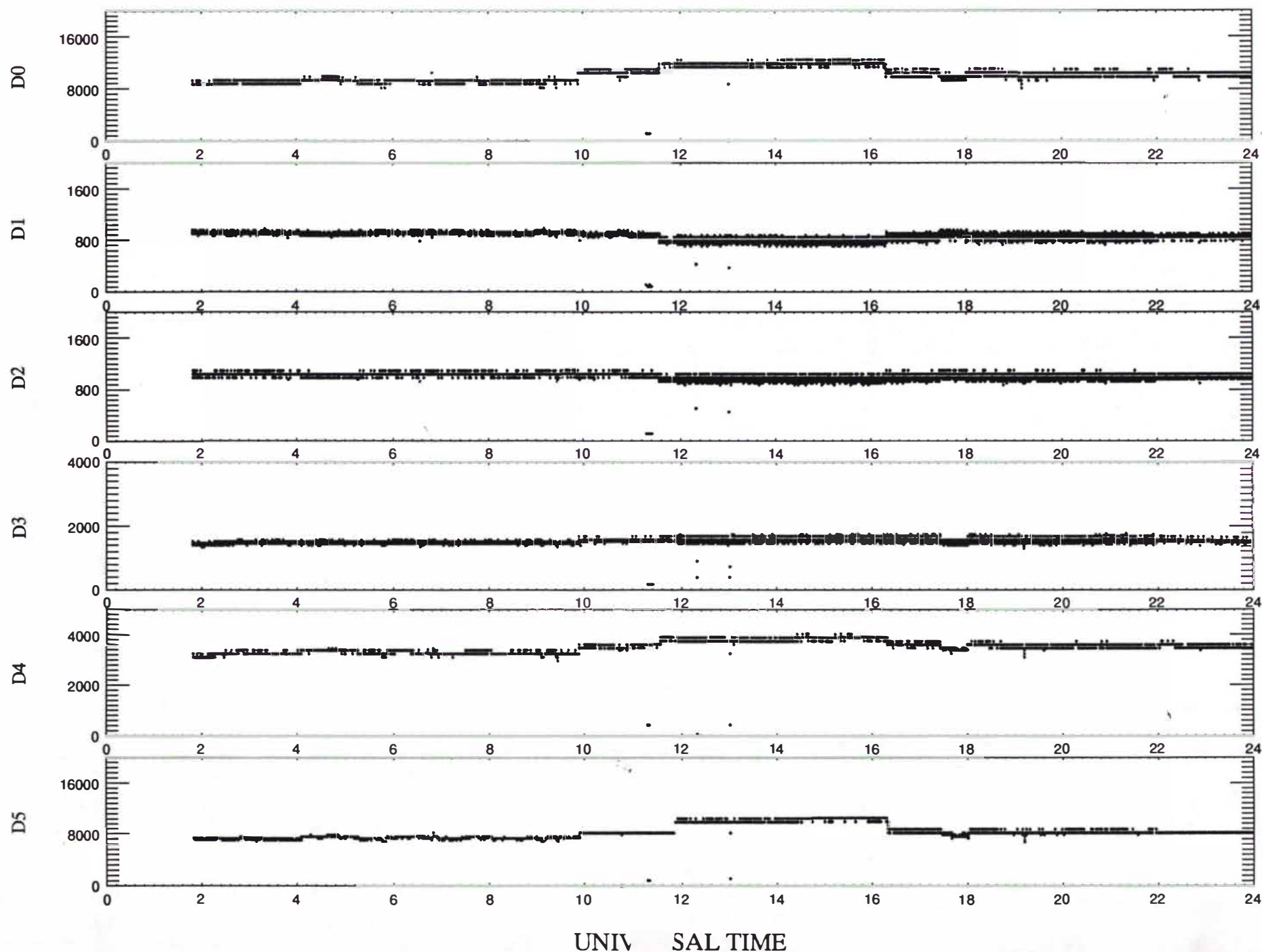
4/1/96



UNIVERSAL TIME

HUS 2B COUNTS / SEC QEDR day 347, year 1995 to day 347, year 1995

12/15/95



951025	23	40	39.738	S1	190	400	120	1.7	3	60	167	✓
951102	01	58	05.879	S2	260	320	50	<0.1	100	3	168	✓
951102	05	53	29.015	S2	700	1560	600	0.1	5	18	169	✓
951102	07	58	13	S1	320	80		4	6		BGR	✓
951105	00	29	05	S2	40	50		0.6	40		BGR	✓
951105	01	37	48.077	S2	140	340	80	0.6	2	22	170	✓
951105	13	00	27.808	S1	160	380	120	9	2	9	171	✓
951107	07	34	58	S1	20	50	20	2	90		BGR	✓
951111	09	42	40	S1	80	160	20	1.1	15		BGR	✓
951112	18	28	15.244	S2	540	690	220	0.2	14	84	172	
951113	23	25	58.872	S1	260	330	260	4.4	1	15	173	✓
951115	10	48	49	S1	70	180	80	3	12		BGR	✓
951117	02	48	43.762	S2	650	530	120	0.1	9	10	175	✓
951118	22	56	00	S2	20	90	100	0.15	6		BGR	✓
951119	08	17	11.402	S1	200	420	110	3	1.5	12	176	✓
951119	12	54	17.519	S1	110	220	340	1.7	3	4	177	✓
951119	16	30	48	S2	30	40	10	0.4	110		BGR	✓
951121	06	11	20	S1	20	70	10	2	45		BGR	✓
951122	02	44	01.380	S2	770	920		0.15	0.5	1.5	179	✓
951122	04	45	07.738	S1	280	430	160	12	35	22	180	✓
951123	18	10	08	S1	30	60	30	1	30		BGR	✓
951124	05	54	26	S2	50	140	50	0.15	30		BGR	✓
951124	06	58	52	S2	30	100		0.25	280		BGR	✓
951202	10	51	41.744	S1	200	500	220	2.4	2	25	195	
951203	01	06	28.180	S2	260	720	420	0.85	1	16	196	
951208	05	26	57.151	S2	320	740	190	<0.04	1	3.5	197	
951208	10	57	32.057	S1	290	260		7	52	6.5	198	
951208	11	47	47.634	S1	240	510	190	10	23	98	199	
951208	23	24	12	S1	100	90		>10	30		BGR	
951209	08	42	29.607	S1	150	450	160	6	6	14	200	
951213	04	57	29.683	S2	360	940	330	0.4	2	8	201	
951213	09	04	34	S2	300	90		<0.15	4.5		BGR	
951214	01	29	47	S2	15	100	30	1	30		BGR	
951214	02	24	17.847	S2	200	450	150	0.8	4	6	202	
951215	20	23	45	S2	60	70	15	<0.15	60		BGR	
951216	22	39	42	S2	160	110		0.1	6		BGR	
951218	07	59	48	S1	70	130	30	2.3	22		BGR	
951219	16	51	19.732	S2	430	850	920	<0.03	1	54	203	
951220	08	51	23.560	S2	100	320	180	1	2	8	204	
951221	08	23	18	S1	110	150	70	>15	15		BGR	
951222	21	00	21	S2	280			<0.1	16		BGR	
951225	09	14	16	S2	200			<0.3	50		BGR	
951225	09	34	14	S1	500	150	25	2.2	60		BGR	
951225	15	21	35	S2	210	170	40	0.1	100		BGR	
951225	22	51	08	S1	80	150	50	2.4	40		BGR	
951226	08	38	15	S2	60	100	50	0.15	9		BGR	
951227	06	23	25.042	S1	420	1200	320	1	1	1.5	218	
951227	21	59	20	S1	50	50		3	65		BGR	
951228	12	28	42	S2	70	80	40	<0.07	110		BGR	
951228	15	47	26	S2	80	170		0.9	17		BGR	
951231	05	37	11.668	S2	180	320	150	0.07	9	65	219	
951231	21	24	34	S2	100	25		<0.2	20		BGR	
960102	03	14	10.996	S1	140	300	80	1	1	0.2	220	
960102	20	20	53	S1	200	120	40	>9	25		BGR	
960104	03	28	41.062	S2	360	630	230	<0.05	2	28	221	
960105	16	04	30	S1	80	60		5	30		BGR	
960107	05	23	20	S2	30	100		0.5	230		BGR	
960107	19	03	28	S2	30	120	150	<0.1	32		BGR	
960109	23	11	31	S2	60	130	20	0.3	5		BGR	
960111	12	55	24.530	S2	1130	1280	190	0.2	0.5	6	222	
960113	15	33	44.261	S2	500	450	50	0.3	2	36	228	
960114	12	15	04.737	S1	4900	7200	1400	1.8	1	60	233	
960115	08	52	36.506	S1	380	360	60	10	1	7	234	
960115	12	50	15	S2	120	60		0.7	22		BGR	
960116	02	02	18	S2	140	170		0.15	17		BGR	
960117	15	56	11.341	S1	250	360	30	4	5	20	235	

RI

From cline@lheavx.gsfc.nasa.gov Fri Feb 2 05:41 PST 1996

Date: Fri, 2 Feb 1996 05:41:51 -0800

Mime-Version: 1.0

To: Bonnard.Teegarden@cesr.cnes.fr, KHURLEY@sunspot.ssl.berkeley.edu,
palmer@lheamail.gsfc.nasa.gov, seifert@lheamail.gsfc.nasa.gov

From: cline@lheavx.gsfc.nasa.gov (T L Cline)

Subject: For Your INFO

Dear Bonnard, Kevin, David, Helmut:

Here is Sergei Golenetskii's latest Konus burst list, for your information. Note that, including the non-triggered-mode 'BGR' events they confidently identify, there are over 300 events so far.

- TLC

DATE	Trigger T0 time (UT)		Sensor	KONUS-WIND		N(S1)/N(S2)		Duration		Trigger number
				Max counts per sec		G3	in G2	T<T0	T>T0	
				G1	G2					
941113	12	09 15	S1	145	85		2.5	115		BGR ✓
941114	02	02 40	S2	110	128	30	0.25	12		BGR ✓
941117	03	14 38.191	S2	406	550	74	0.17	40	5	2 ✓
941117	14	07 57	S2	150	140		<0.15	5		BGR ✓
941119	19	31 09.175	S2	370	703	160	0.23	7	20	4 ✓
941120	20	23 17.924	S1	215	328	30	>15	2	25	5 ✓
941121	17	25 00.945	S1	1652	1656	300	21	3	50	6 ✓
941125	22	04 30.156	S2	115	308	109	0.95	1.5	5	7 ✓
941126	00	20 46	S1	150	205	200	>14	18		BGR ✓
941126	12	22 37.952	S1	860	1430	330	4.2	40	45	8 ✓
941126	16	54 20	S1	55	75		>10	26		BGR ✓
941126	19	56 49.732	S1	290	390	211	6.7	20	26	9
941127	14	30 25.680	S2	200	400	95	0.17	8	7	10 ✓
941127	15	39 10	S1	210	57		2.7	260		BGR ✓
941128	15	37 00	S1	75	90	32	>15	55		BGR ✓
941205	23	33 40.074	S2	370	460	188	0.06	6	30	11 ✓
941207	22	10 32	S2	265	175		<0.2	7		BGR ✓
941210	03	10 52.523	S2	900	2350	1385	0.12	1	15	14 ✓
941214	17	03 51	S1	40	45	29	>6	12		BGR ✓
941214	05	38 45.226	S1	3479	1266	14	1.0	12	240	18 Sol
941221	07	44 08	S2	55	115	30	0.8	20		BGR ✓
941221	22	14 35.215	S1	260	496	165	1.5	55	11	19 ✓
941222	05	36 00.243	S2	334	1360	1066	0.36	7	105	20 ✓
941228	07	39 45.915	S1	300	637	519	4.4	5	90	28 ✓
941228	16	55 23	S2	40	36	23	0.25	25		BGR ✓
941229	12	58 05	S1	46	108	31	1.8	15		BGR ✓
941229	22	51 08.781	S2	396	381	140	0.09	7	25	29 ✓
941230	20	52 53	S1	74	117	52	8.4	158		BGR ✓
941230	23	43 44	S2	55	70	16	<0.2	4.5		BGR ✓
950104	07	18 39.613	S2	258	550	219	0.75	2.8	20	31 ✓
950104	09	00 58	S2	140	143	40	<0.1	25		BGR ✓
950110	06	02 15	S2	332	180		<0.1	3600		BGR
950110	13	37 57.084	S2	234	422	213	0.05	38	100	32 ✓
950111	04	49 12.241	S1	586	620	100	>19	92	24	33 ✓
950111	12	18 49.196	S1	225	435	164	1.85	26	50	34 ✓
950112	07	45 37.120	S2	1305	1800	336	0.04	2.5	44	35 ✓
950113	05	59 13	S1	283	180	26	>10	52		BGR ✓
950113	17	38 32	S2	85	162	35	<0.06	75		BGR ✓
950114	01	00 38	S1	46	110		1.6	6		BGR ✓
950114	04	03 01	S2	23	76		0.5	70		BGR ✓
950114	07	30 30.766	S2	205	406	60	<0.05	1	100	36 ✓
950114	13	10 34.865	S1	1320	2828	516	3.1	1	10	37 ✓
950115	02	49 32	S2	40	47	34	<0.15	24		BGR ✓
950117	01	36 00	S2	56	82	42	0.2	108		BGR ✓
950118	12	22 54	S2	57	105	17	<0.1	35		BGR ✓
950125	14	51 52.253	S1	380	600	140	8.2	3.8	11	39

KONUS 19951214 05096

ULYSSES RT

07/09/11

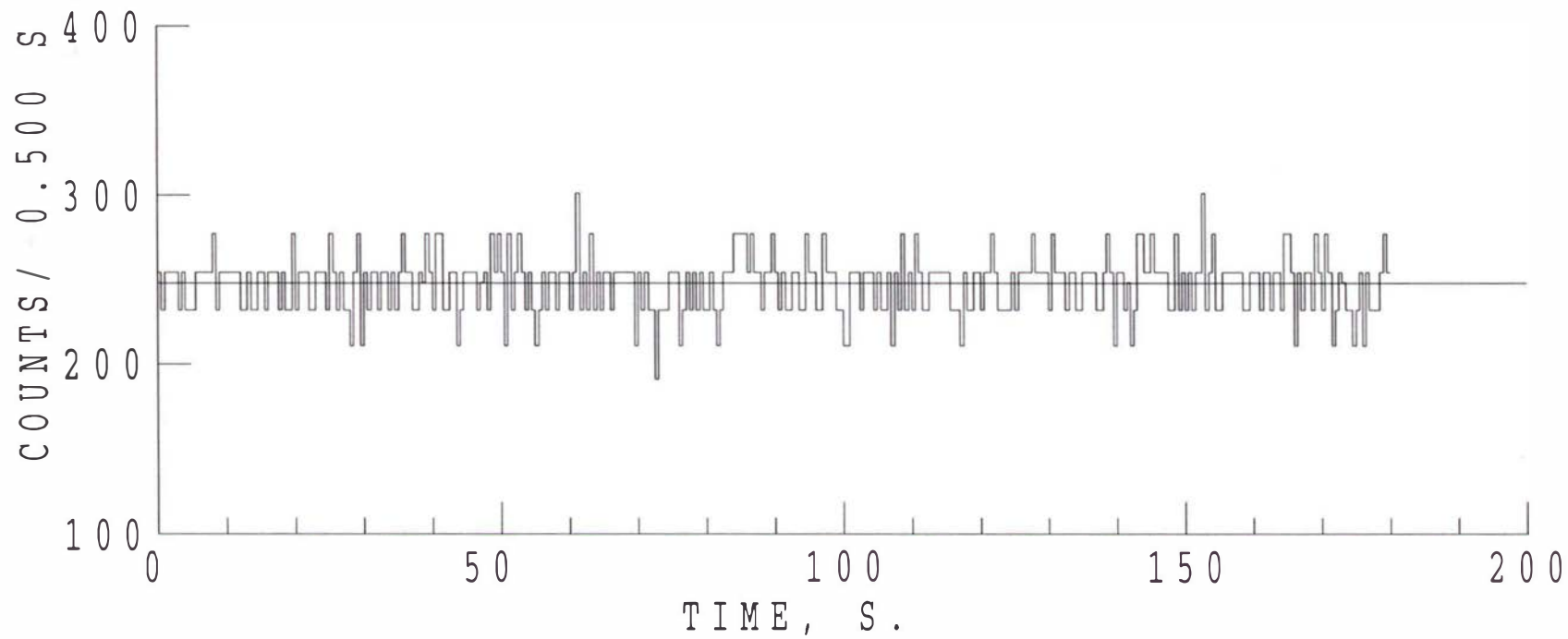
14/12/95 5004.225 s

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

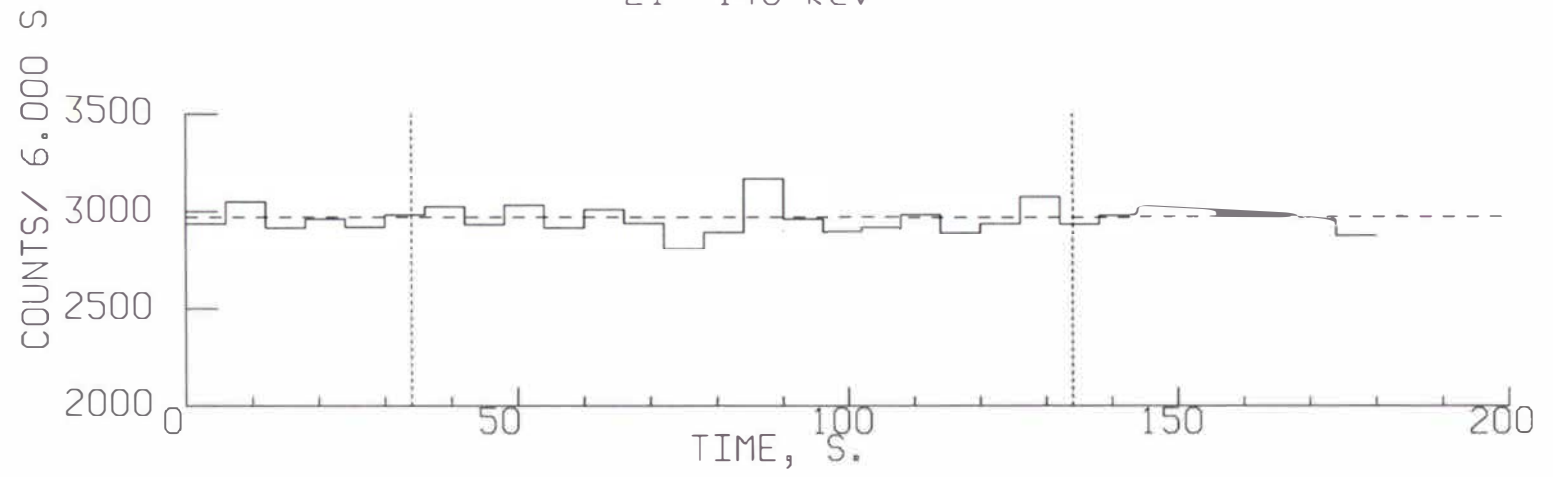


N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



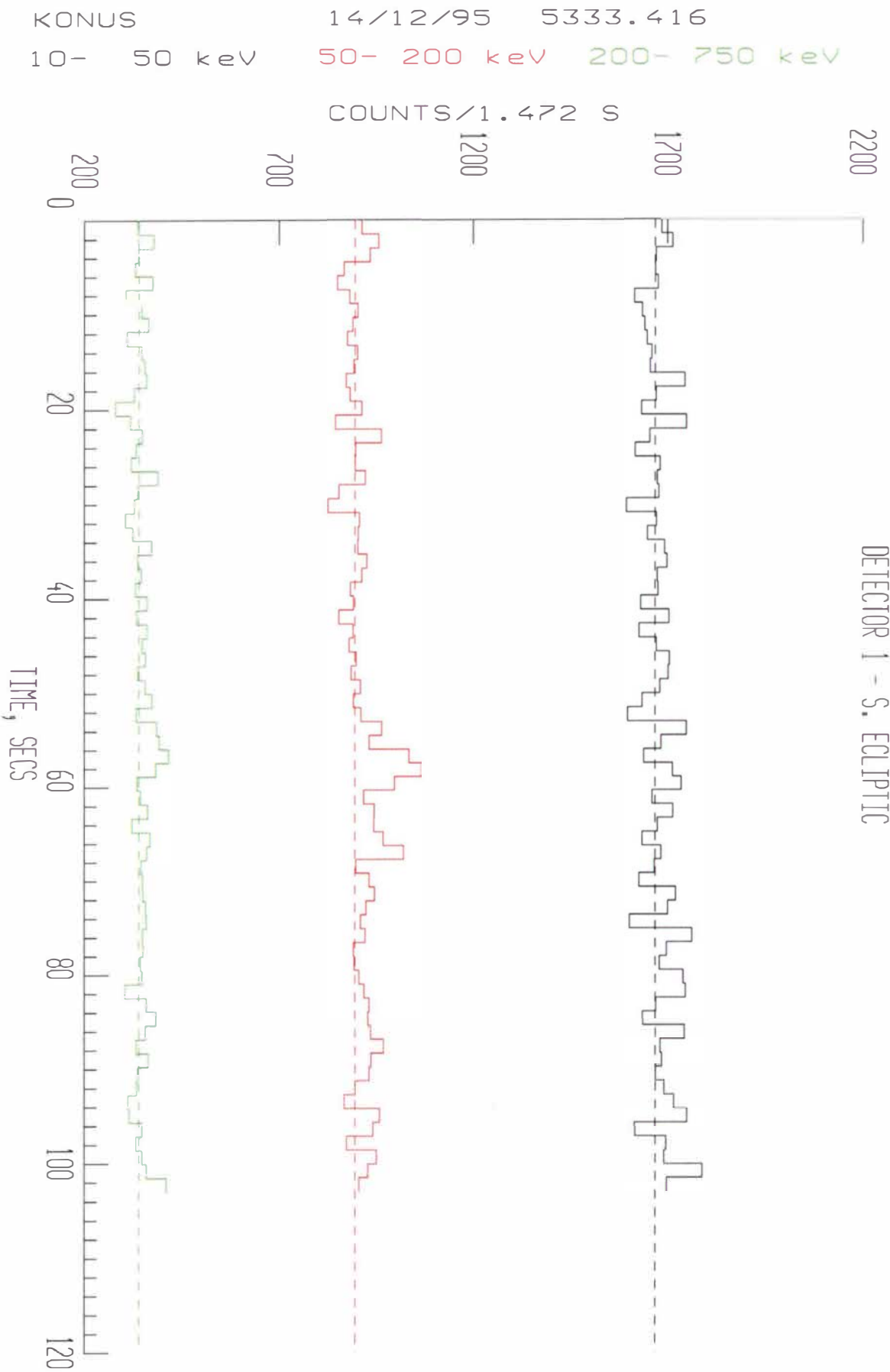
ULYSSES RT
14/12/95 5004.225 s
0.500 S INTERVALS REGROUPED BY 12
21- 145 keV

8/ 9/11



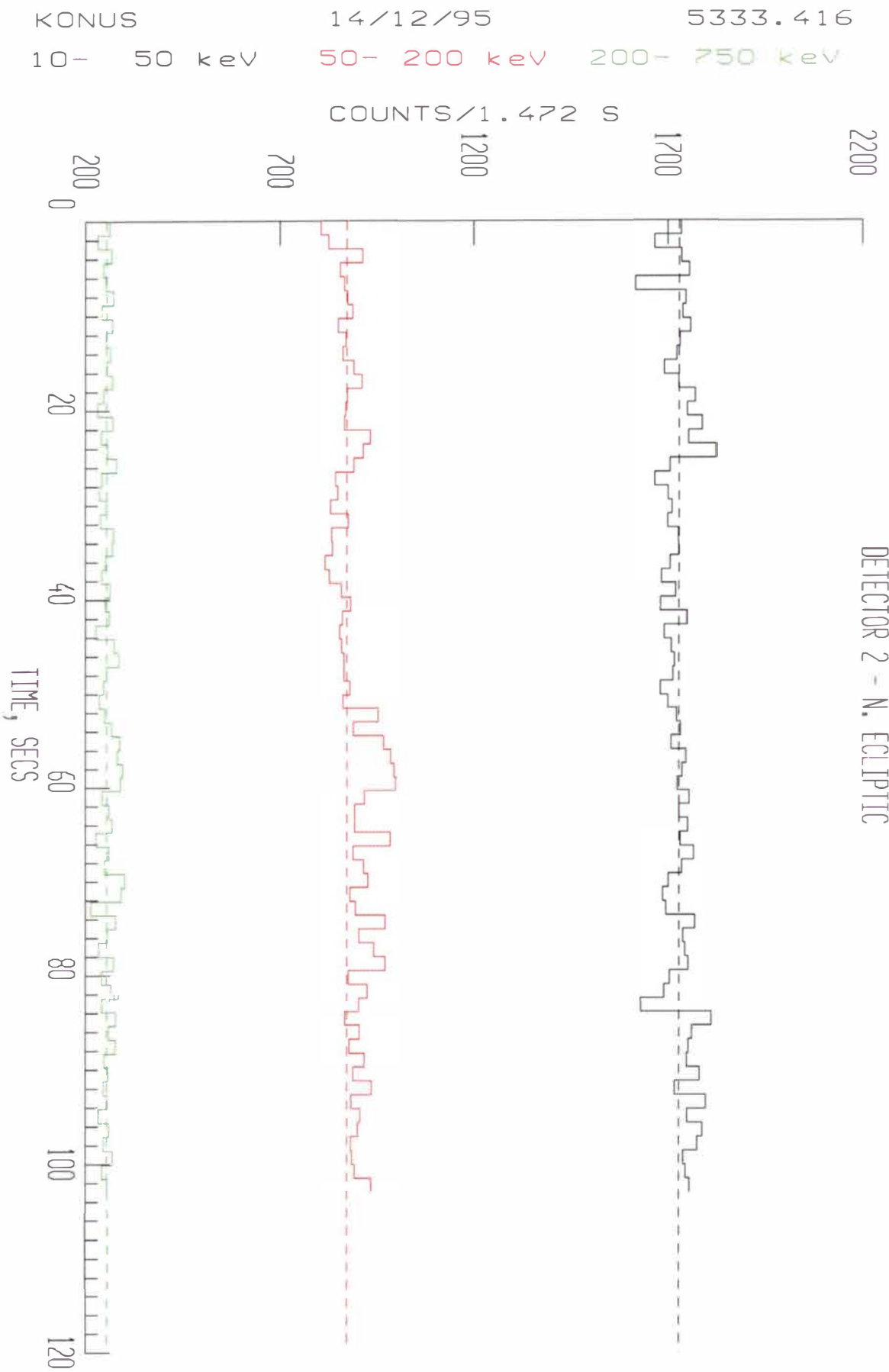
08/09/2011

DETECTOR 1 - S. ECLIPSE



08/09/2011

DETECTOR 2 - N. ECLIPSE



K O N U S

2 2 / 2 / 9 6

U L Y S S E S R T

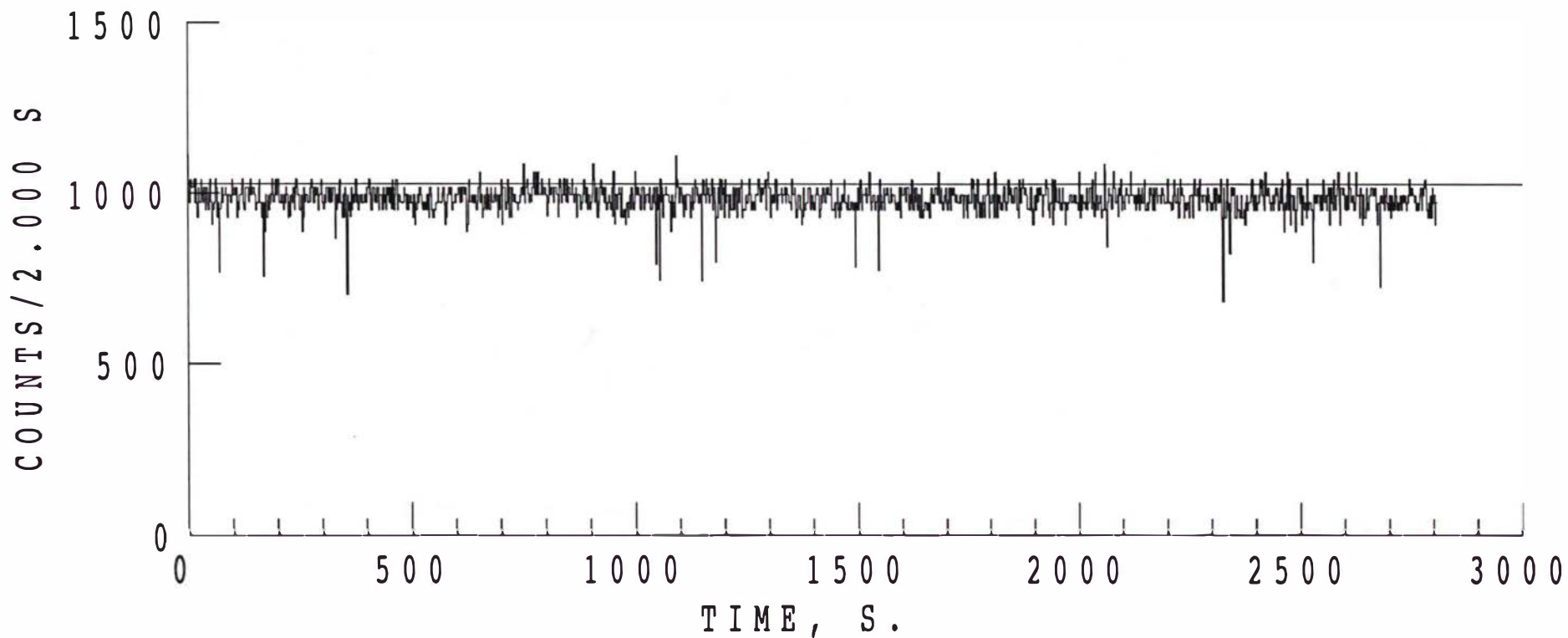
1 4 / 1 2 / 9 5 3 9 9 6 . 2 0 9 s

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

0 - 0 k e V

N = 10 M = 2

> 4.0 SIGMA FLUCTUATIONS



From WOODSP@SSLLES.MSFC.NASA.GOV Fri Dec 15 14:19 PST 1995
From: WOODSP@SSLLES.MSFC.NASA.GOV
Date: Fri, 15 Dec 1995 16:19:13 -0600 (CST)
To: burst@comptel.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov
X-Vmsmail-To: @mops\$send msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3964

TIME: TJD=0065 SECONDS=5033

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=77.5 AZIMUTH=340.0 ERROR=4.2 DEGREES

COMMENTS:

BATSE BURSTER.

Date: Sep 8 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

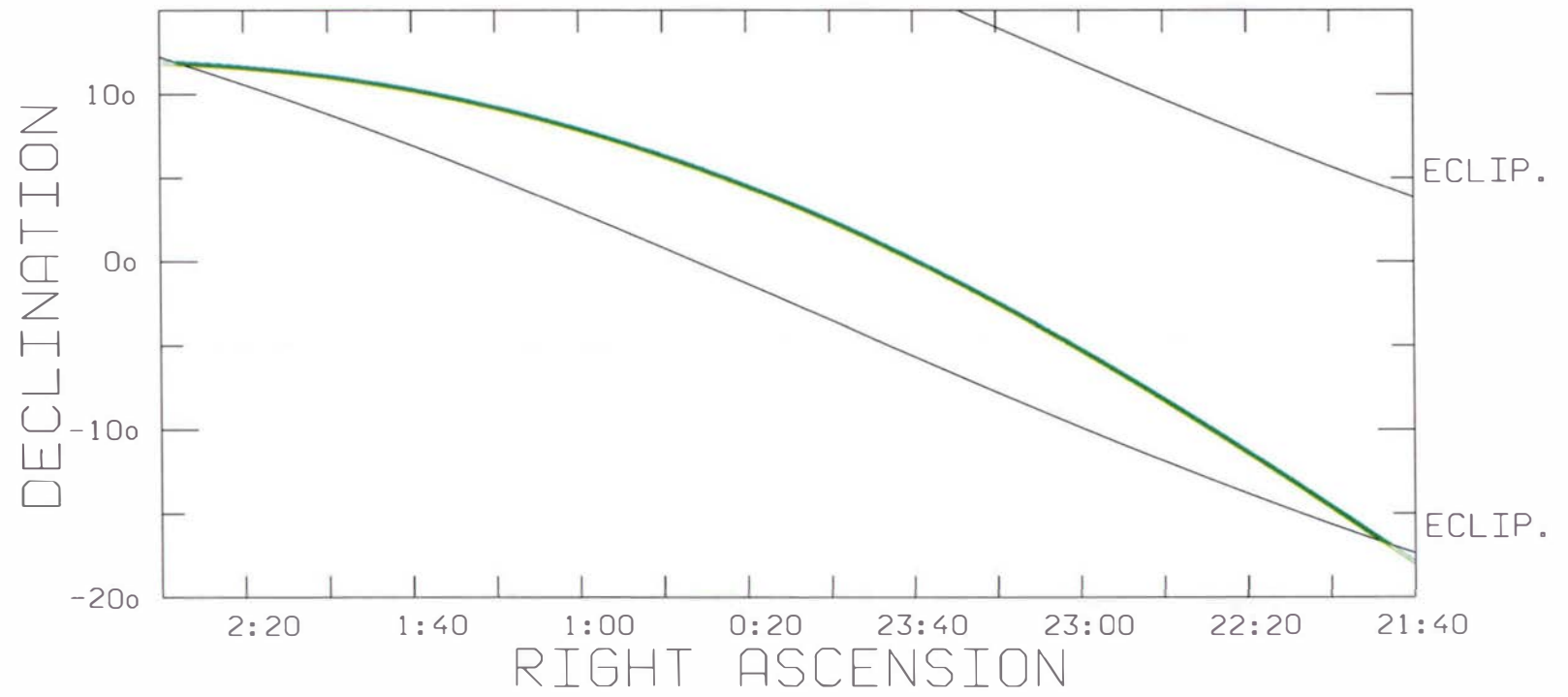
- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☐ Is the order of the data in CORREL such that a vernier is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

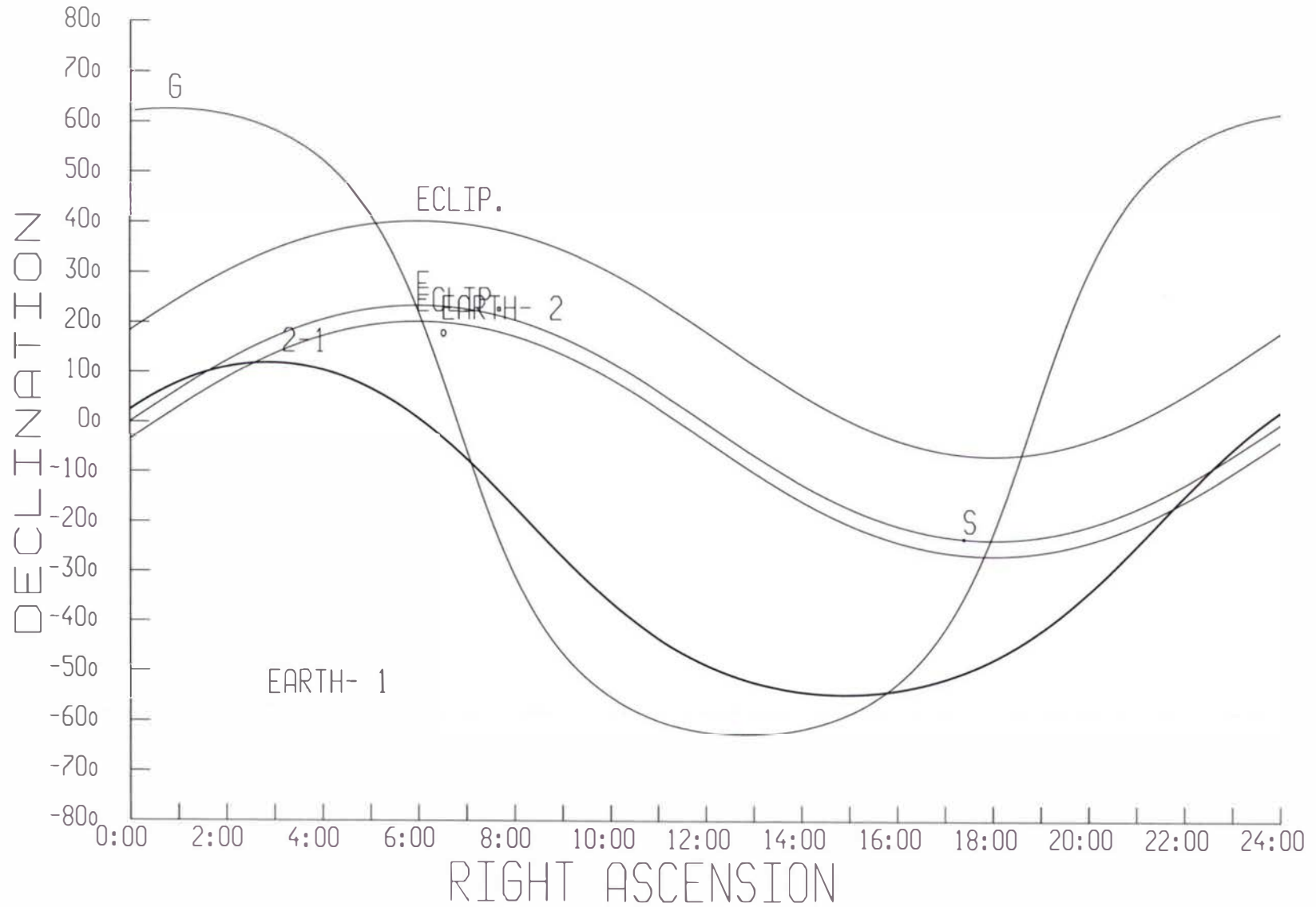
- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS and MBL databases updated with identical times?

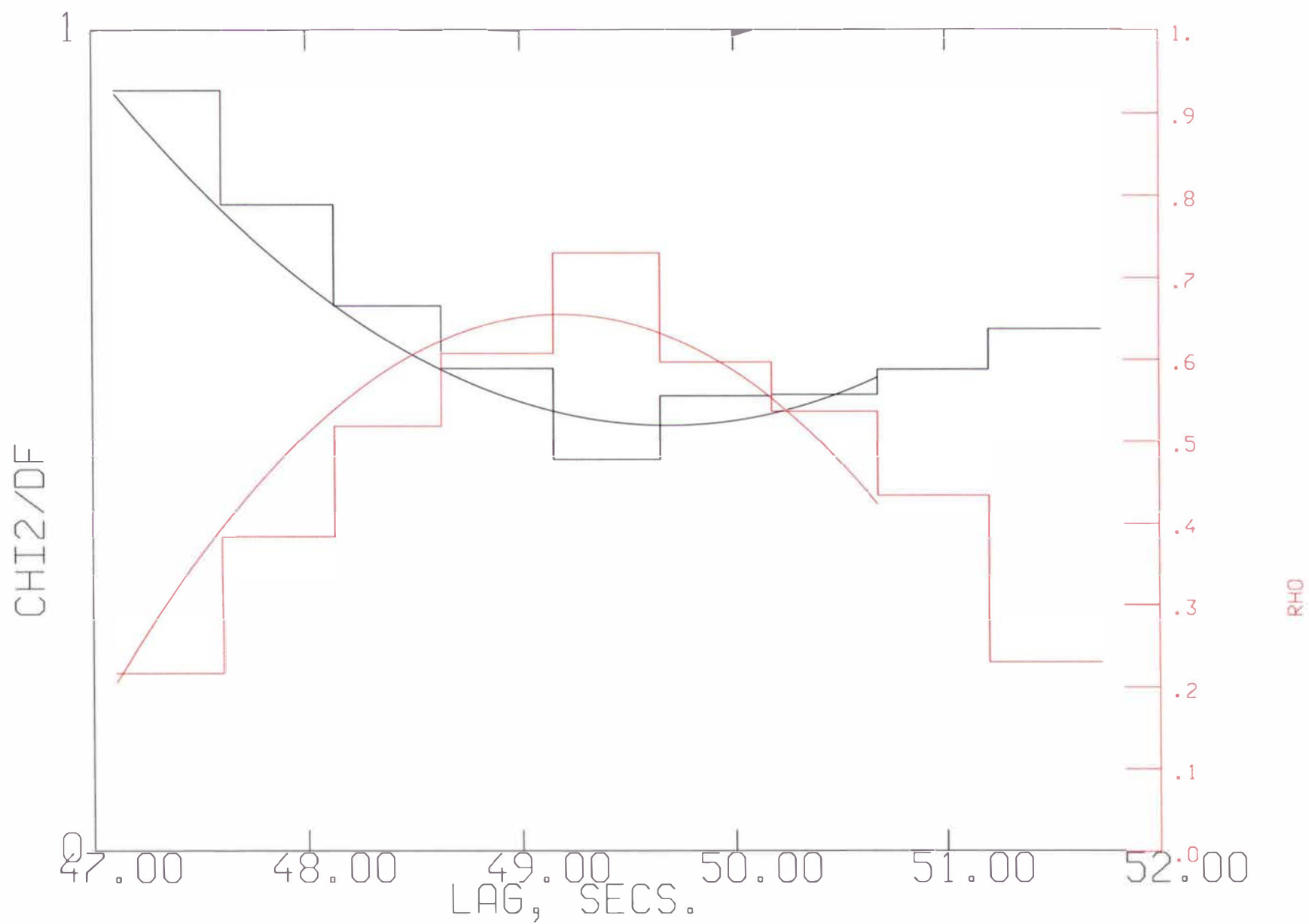


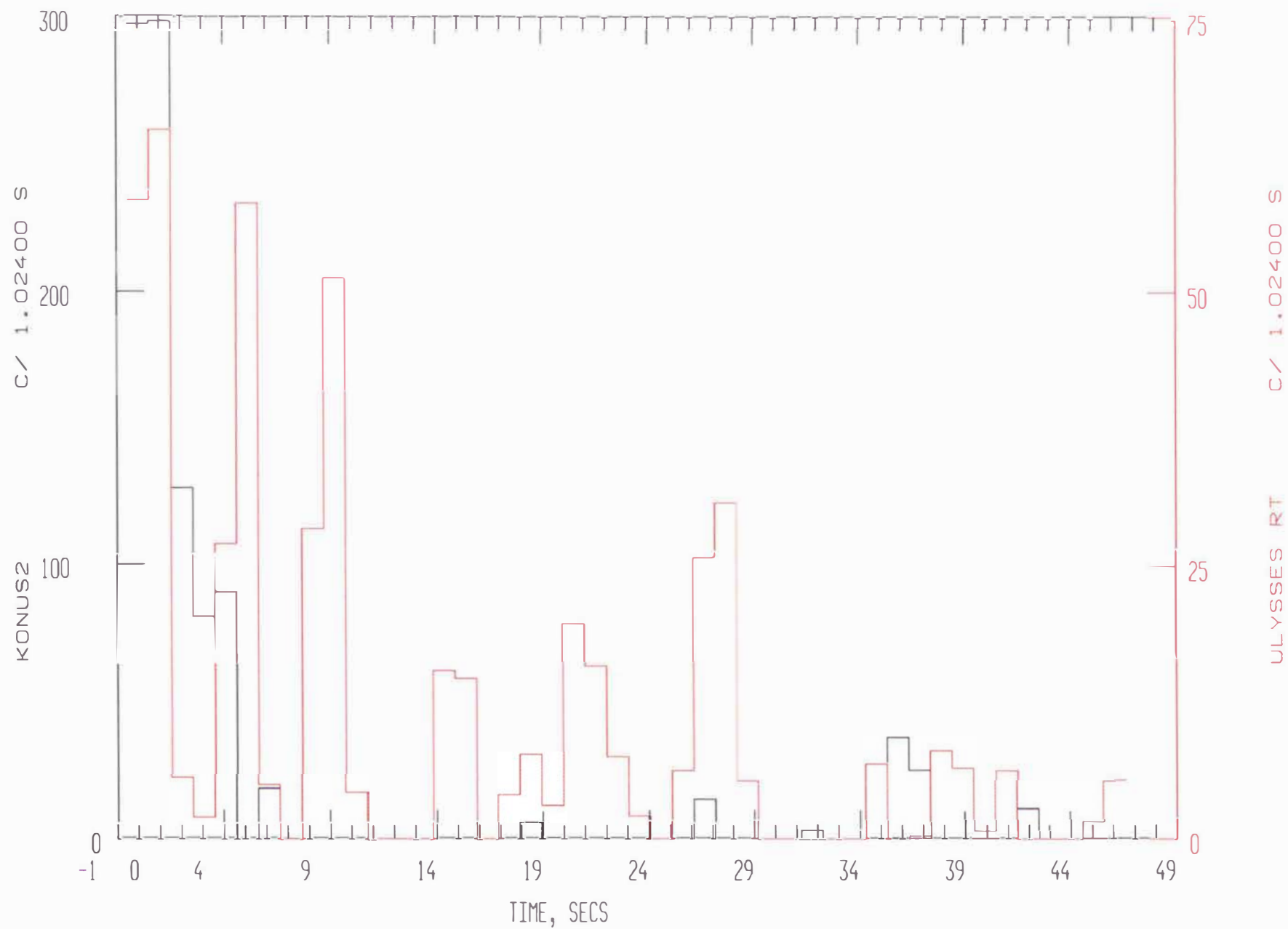
EVENT OF DEC 14, 1995 2:32

08/09/2011

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 19951214 09200

ULYSSES RT

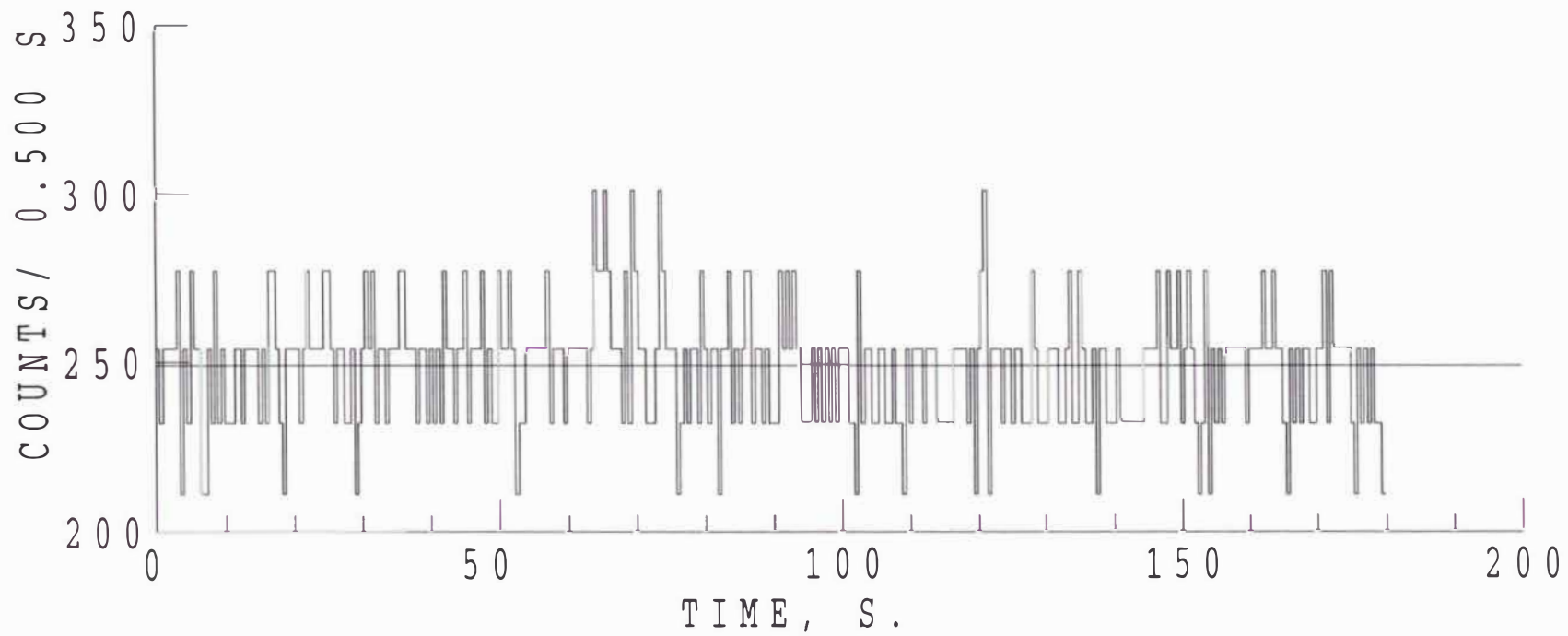
07/09/11

14/12/95 9108.288 s

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

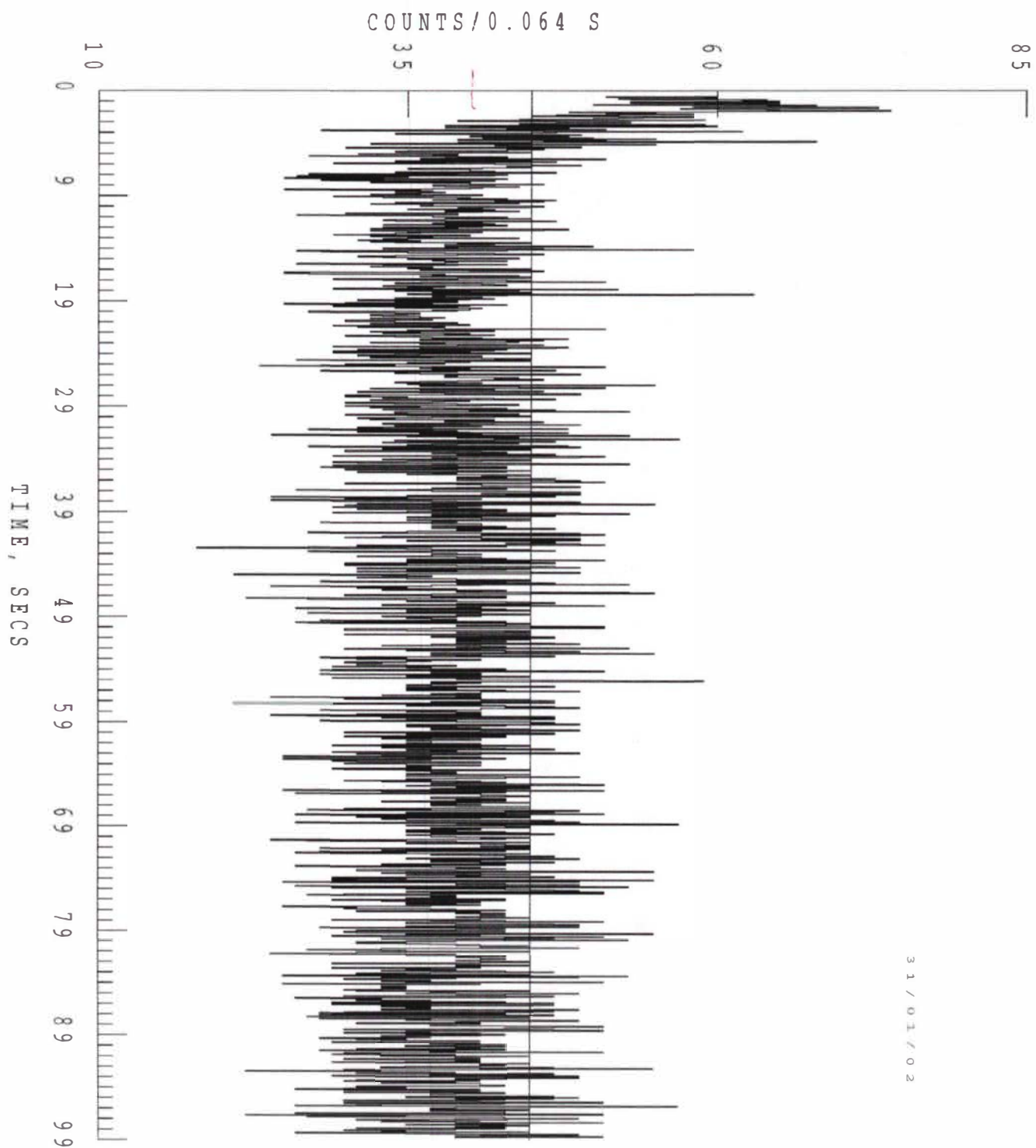


KONUS2

14/12/95

8657.847

50 - 200 keV



31/01/02

KONUS2 19951214 08657

ULYSSES RT

31 / 01 / 02

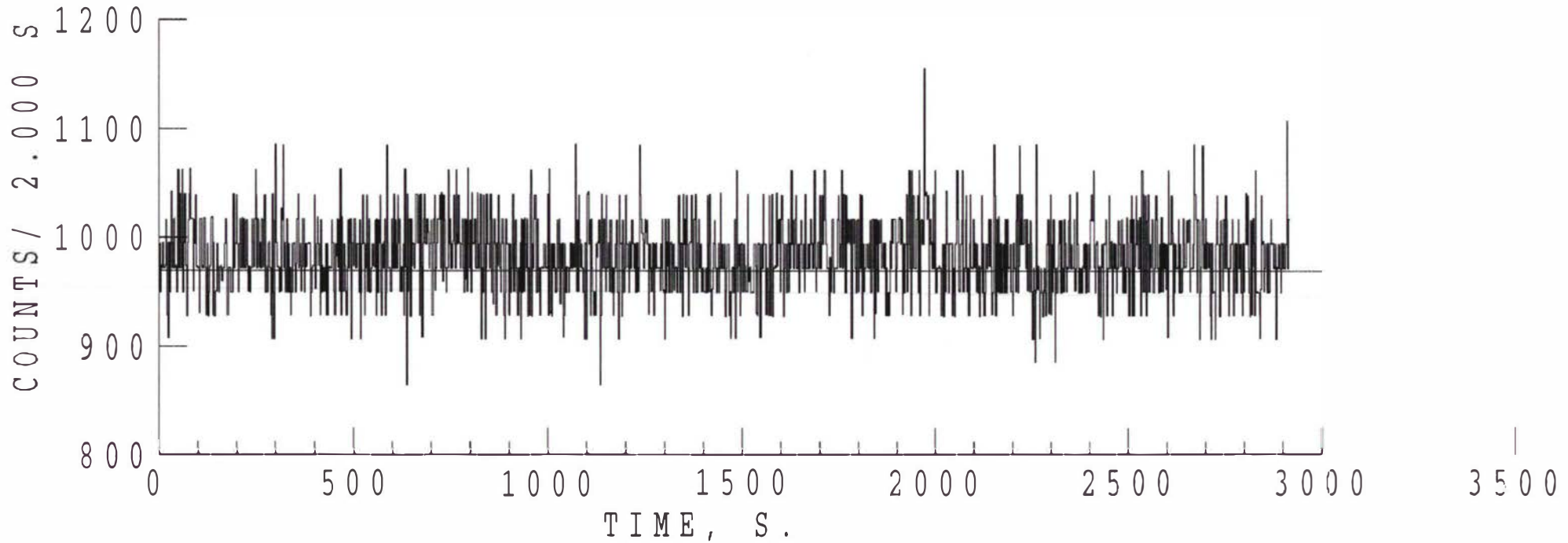
14 / 12 / 95 7200.257 s

0.500 S INTERVALS REGROUPED BY 4

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From WOODSP@SSLLES.MSFC.NASA.GOV Fri Dec 15 14:17 PST 1995
From: WOODSP@SSLLES.MSFC.NASA.GOV
Date: Fri, 15 Dec 1995 16:17:27 -0600 (CST)
To: burst@compTEL.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3965

TIME: TJD=0065 SECONDS=9191

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=79.6 AZIMUTH=342.9 ERROR=3.7 DEGREES

COMMENTS:

BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 3966

TIME: TJD=0065 SECONDS=14436

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=79.1 AZIMUTH=341.1 ERROR=3.6 DEGREES

COMMENTS:

BATSE BURSTER. VISIBLE ABOVE 50 KEV.

BATSE BURST TRIGGER

NO.: 3967

TIME: TJD=0065 SECONDS=19351

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=81.5 AZIMUTH=345.2 ERROR=3.7 DEGREES

COMMENTS:

BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 3968

TIME: TJD=0065 SECONDS=27756

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=79.7 AZIMUTH=347.1 ERROR=4.0 DEGREES

COMMENTS:

BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 3969

TIME: TJD=0065 SECONDS=32093

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=80.4 AZIMUTH=342.3 ERROR=4.7 DEGREES

COMMENTS:

BATSE BURSTER. VISIBLE ABOVE 50 KEV.

BATSE BURST TRIGGER

NO.: 3970

TIME: TJD=0065 SECONDS=44236

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=77.6 AZIMUTH=342.6 ERROR=4.2 DEGREES

COMMENTS:

BATSE BURSTER. VISIBLE ABOVE 50 KEV

BATSE BURST TRIGGER

NO.: 3971

TIME: TJD=0065 SECONDS=58332

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
CYG X-1 RISE.

BATSE BURST TRIGGER

NO.: 3972

TIME: TJD=0065 SECONDS=63932

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
CYG X-1 RISE.

BATSE BURST TRIGGER

NO.: 3973

TIME: TJD=0065 SECONDS=70090

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=10.1 AZIMUTH=352.8 ERROR=2.8 DEGREES

COMMENTS:
BATSE BURSTER. MARGINALLY VISIBLE ABOVE 50 KEV.

BATSE BURST TRIGGER

NO.: 3974

TIME: TJD=0065 SECONDS=75210

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=11.0 AZIMUTH=353.2 ERROR=2.3 DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 3975

TIME: TJD=0065 SECONDS=82543

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=9.9 AZIMUTH=335.6 ERROR=5.6 DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 3976

TIME: TJD=0065 SECONDS=86343

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

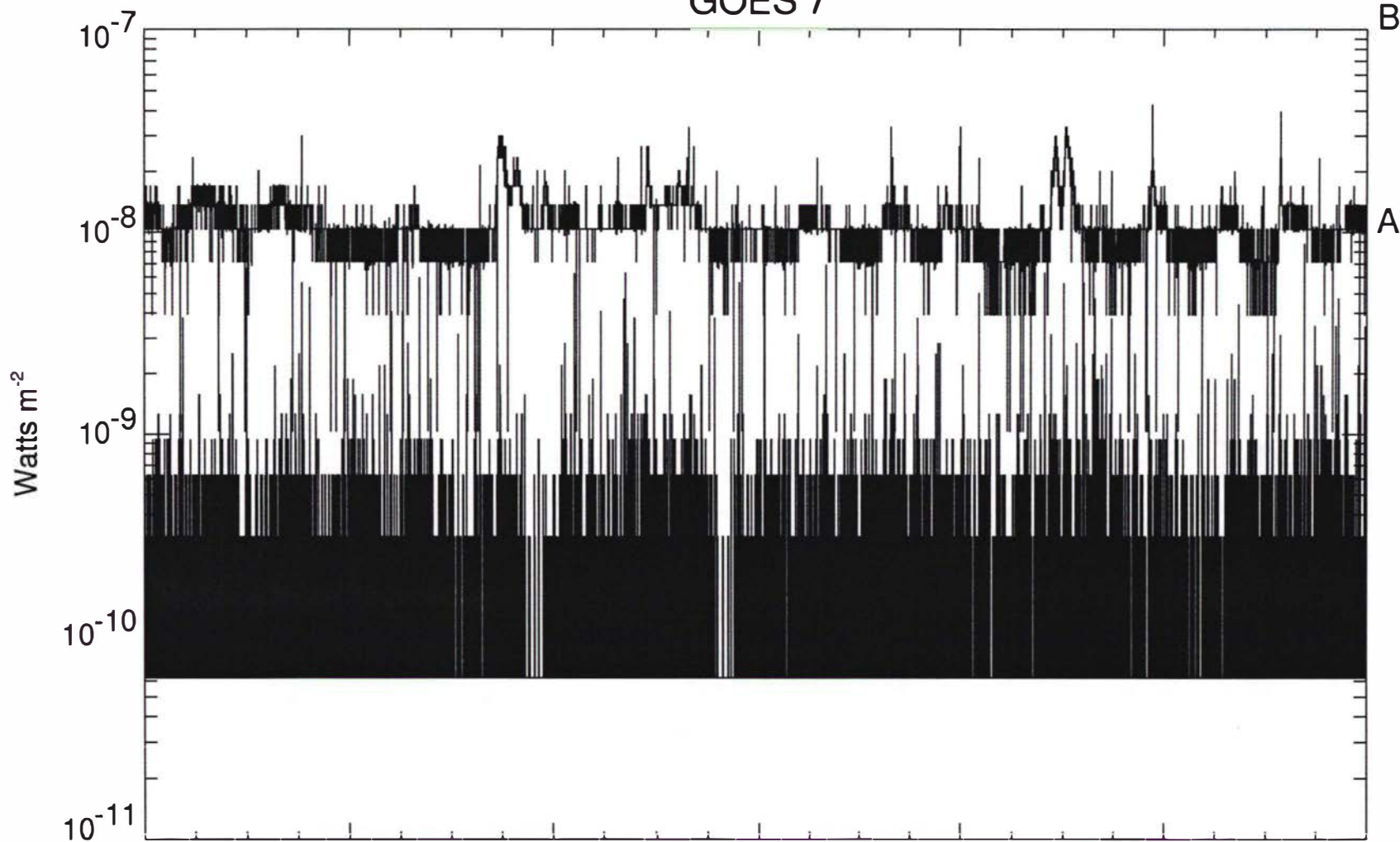
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
CYG X-1 RISE.

GOES 7



Data Start: 95/12/14, 0000:01

Plot created: 95/12/16, 0651

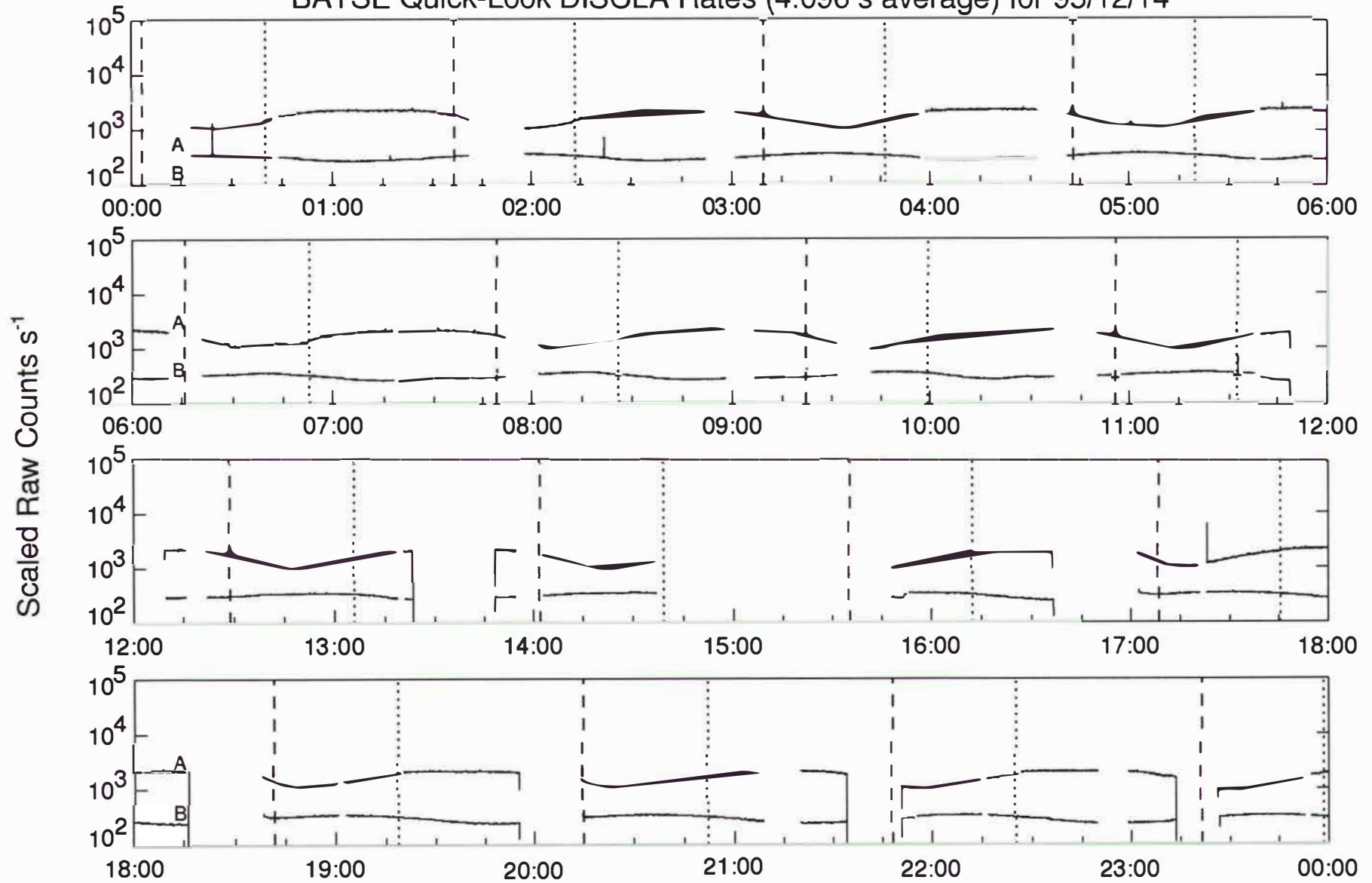
Channel 1 (1.0 - 8.0 Angstroms)

Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/12/14



Current Time: 95/12/16, 0652 EDT

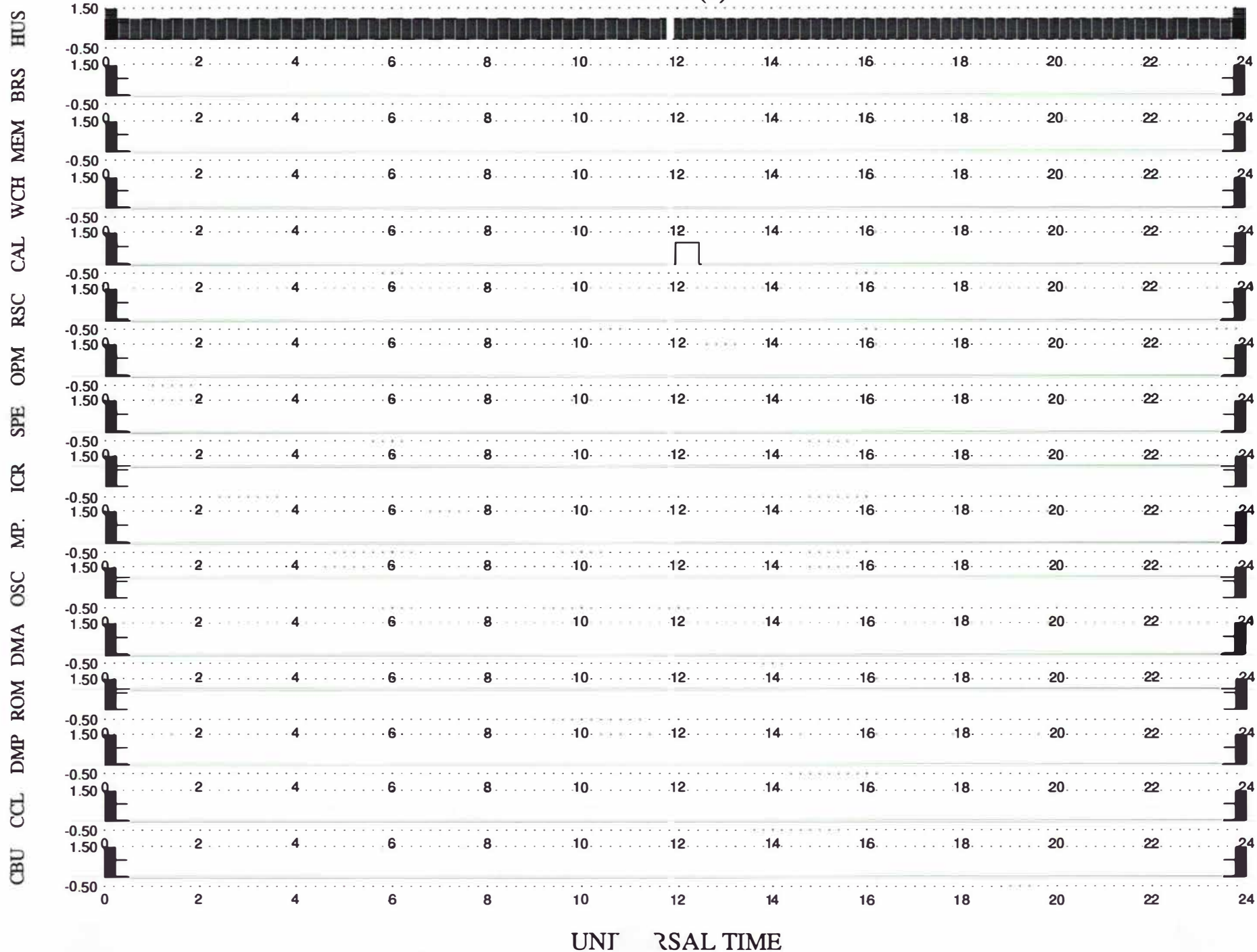
A: Channel 0 Most Sunward LAD

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

Dotted line: Day entry
Dashed line: Night entry

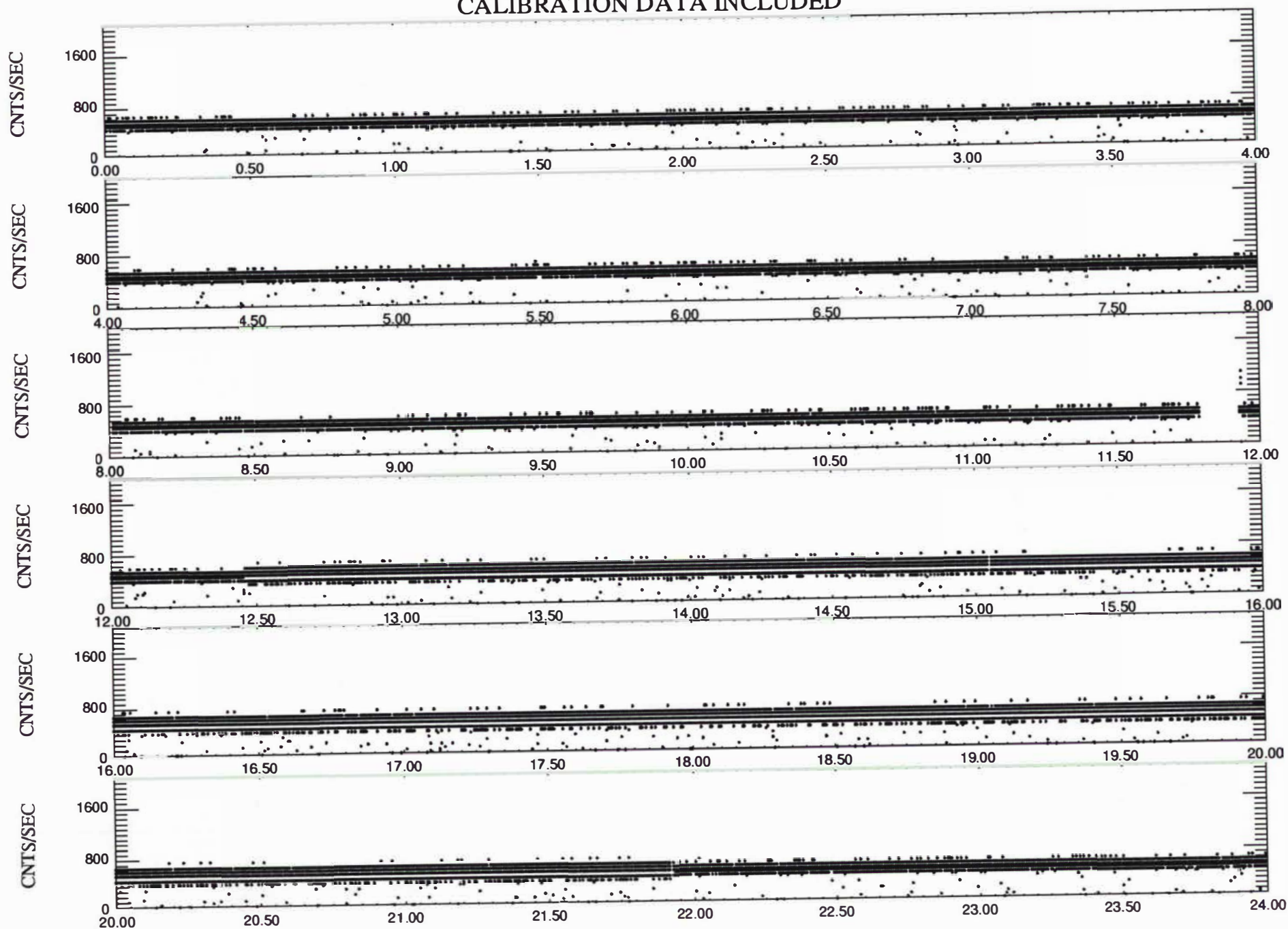
* Solar Burst Trigger
+ Solar Flare

4/1/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 348, year 1995 to day 348, year 1995
CALIBRATION DATA INCLUDED

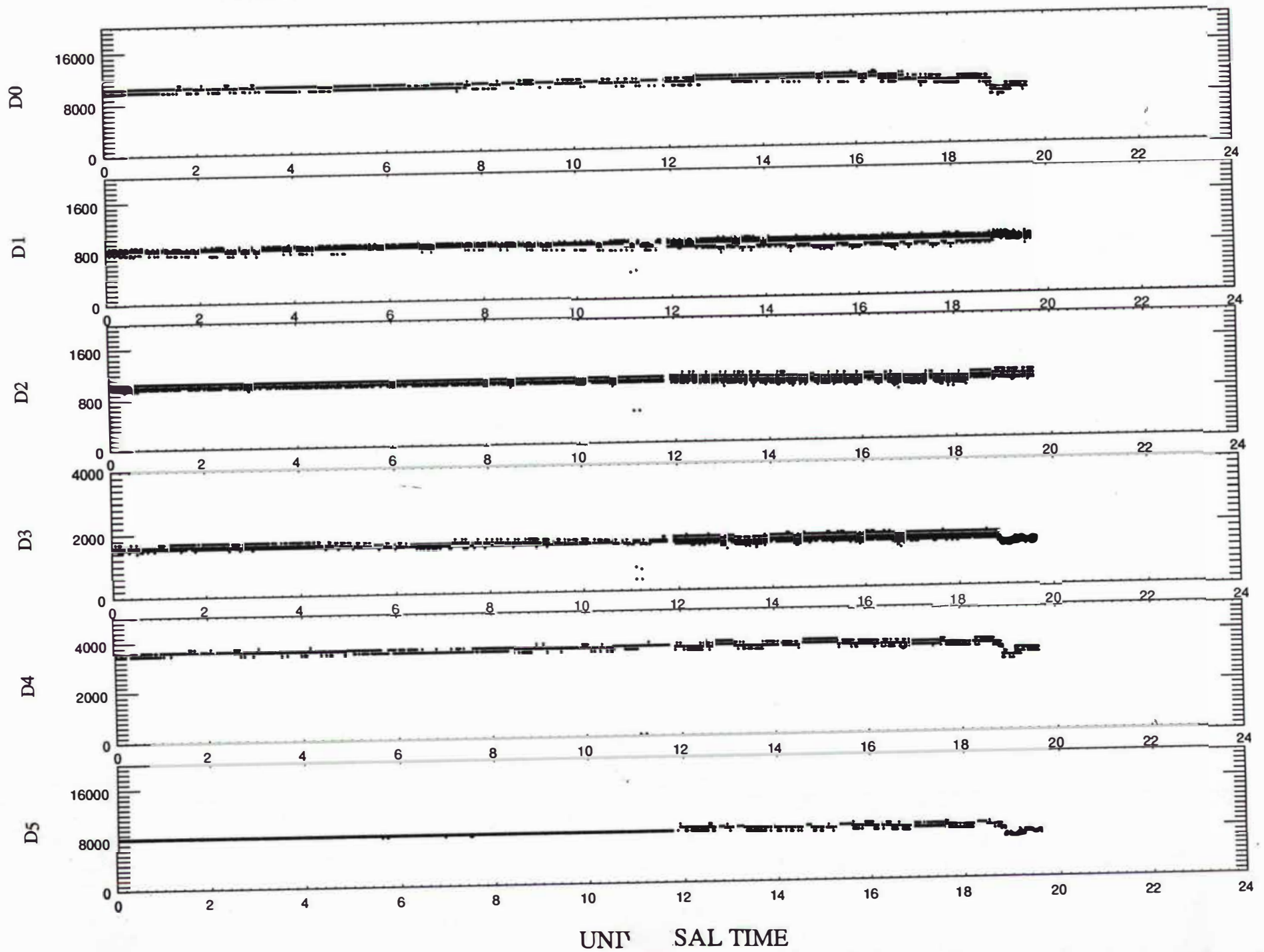
4/1/96



UNIVERSAL TIME

HUS 2B COUNTS / SEC QEDR day 348, year 1995 to day 348, year 1995

12/15/95



From ulsdmt@jplsp.DNET.NASA.GOV Mon Mar 18 17:13 PST 1996
From: ulsdmt@jplsp.DNET.NASA.GOV
Date: Mon, 18 Mar 96 20:13:12 -0500
To: "khurley@sunspot.ssl.berkeley.edu"@east.DNET.NASA.GOV (SENT TO @LIST1)
Subject: Misplaced Major Frames in EDRs

Greetings,

We have identified an operations technique that produces data that will be improperly time tagged by the MGDS (telemetry system). Instances of EDR errors (major frames out of order) have been found in the CDROM archival products for December 1995 and January 1996. Errors will also be found in the still to be shipped February 1996 data.

When major frames are recorded but not transmitted during the next track, but are eventually downlinked with data from a succeeding day, the embedded SCLKs are 'assumed' to be incorrect by the frame syncer and are re-tagged with SCETs and SCLKs matching the adjacent (but newer) data.

For each major frame processed in this manner, a gap will exist, representing the time the data was actually acquired, and a major frame or realtime data, representing the time period the data now errently represents, will be replaced by the misplaced playback data.

Yes. Confusing. See the attached memo detailing the times involved.

Approximately 17 such instances are known to have occured. The total time involved is about twenty minutes. Because the data loss is small and the cost of reprocessing would be so large, the Project has determined that it would be imprudent to reprocess.

For your information, however, we included a memo from Nigel Angold which itemizes each instance.

We thank Toni Galvin and Nigel for identifying the problem and assisting in the diagnosis.

Regards,

Joe

To: <ulsdmt@jplsp.jpl.nasa.gov>
From: Nigel Angold <nangold@jplsp2.jpl.nasa.gov>
Subject: Mis-corrected S/C clocks / SCETs
Cc: chris.leech@jpl.nasa.gov

I have looked at our recent tape recorder usage and predict that you will see major frames with mis-corrected spacecraft clocks / SCETs at the following times (give or take a few minutes):

1995:

~342.22:59 SCET	should be	~341.17:47 SCET
~347.22:39 SCET	should be	~346.16:46 SCET
~350.21:54 SCET	should be	~349.16:22 SCET
~355.22:14 SCET	should be	~354.15:42 SCET
~359.14:04 SCET	should be	~359.05:36 SCET
~360.14:59 SCET	should be	~359.00:20 SCET
~362.20:55 SCET	should be	~361.16:06 SCET

1996:

~001.02:45 SCET	should be	~364.23:12 SCET
~002.14:35 SCET	should be	~001.04:22 SCET
~029.19:35 SCET	should be	~028.13:43 SCET
~033.19:10 SCET	should be	~032.13:18 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~048.17:29 SCET	should be	~047.13:45 SCET
~054.08:59 SCET	should be	~053.11:46 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~039.18:34 SCET	should be	~038.12:14 SCET

We see data gaps for each of the correct times, so it looks like your theory of AMMOS mis-correcting times when there is carry-over data on the tape is correct.

I hope this is enough information. I would have to do a bit more calculation to get the approximate ERTs. Let me know if you want them.

Best regards,

Nigel

From WOODSP@SSLLES.MSFC.NASA.GOV Wed Dec 20 12:59 PST 1995
Date: Wed, 20 Dec 1995 14:59:00 -0600 (CST)
From: WOODSP@ssl.msfc.nasa.gov
To: burst@comptel.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, "15733::SCHAEFER"@ssl.msfc.nasa.gov
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3980

TIME: TJD=1006 SECONDS=16715

TYPE: TRANSIE

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
CYG X-1 RISE.

From "GIBSON::WOODS"@SSLLES.MSFC.NASA.GOV Tue Jan 2 12:00 PST 1996
From: "GIBSON::WOODS"@SSLLES.MSFC.NASA.GOV
Date: Tue, 2 Jan 1996 14:00:07 -0600 (CST)
To: khurley@sunspot.ssl.berkeley.edu
X-Vmsmail-To: SSL::SMTP%"khurley@sunspot.ssl.berkeley.edu"
Subject: RE: burst messages

Kevin
I made a careless error when entering the TJD. You are right in assuming the date to be 0066 for at least some of the triggers. I do not recall exactly which triggers were sent with the wrong date attached but I can tell you which triggers occurred on a particular day -- for 10065 triggers 3964 - 3976 -- for 10066 triggers 3977 - 3994. If you need more information, buzz me back. Sorry for the inconvenience.
Pete

BATSE BURST TRIGGER

NO.: 3984

TIME: TJD=1006 SECONDS=31980

TYPE: NOISE

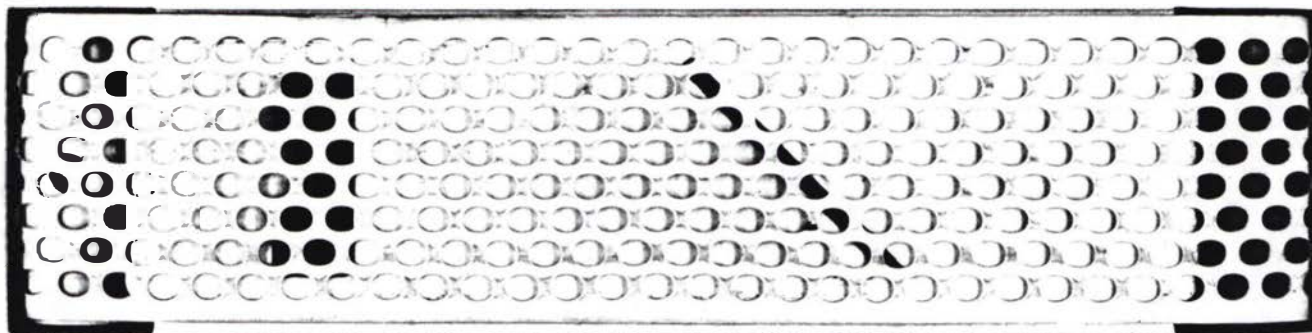
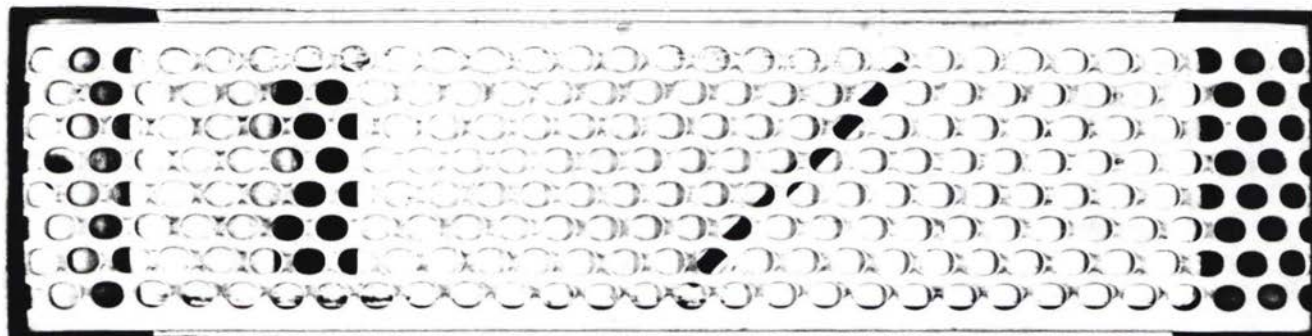
SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
NOISE



951025	23	40	39.738	S1	190	400	120	1.7	3	60	167	✓
951102	01	58	05.879	S2	260	320	50	<0.1	100	3	168	✓
951102	05	53	29.015	S2	700	1560	600	0.1	5	18	169	✓
951102	07	58	13	S1	320	80		4	6		BGR	✓
951105	00	29	05	S2	40	50		0.6	40		BGR	✓
951105	01	37	48.077	S2	140	340	80	0.6	2	22	170	✓
951105	13	00	27.808	S1	160	380	120	9	2	9	171	✓
951107	07	34	58	S1	20	50	20	2	90		BGR	✓
951111	09	42	40	S1	80	160	20	1.1	15		BGR	✓
951112	18	28	15.244	S2	540	690	220	0.2	14	84	172	✓
951113	23	25	58.872	S1	260	330	260	4.4	1	15	173	✓
951115	10	48	49	S1	70	180	80	3	12		BGR	✓
951117	02	48	43.762	S2	650	530	120	0.1	9	10	175	✓
951118	22	56	00	S2	20	90	100	0.15	6		BGR	✓
951119	08	17	11.402	S1	200	420	110	3	1.5	12	176	✓
951119	12	54	17.519	S1	110	220	340	1.7	3	4	177	✓
951119	16	30	48	S2	30	40	10	0.4	110		BGR	✓
951121	06	11	20	S1	20	70	10	2	45		BGR	✓
951122	02	44	01.380	S2	770	920		0.15	0.5	1.5	179	✓
951122	04	45	07.738	S1	280	430	160	12	35	22	180	✓
951123	18	10	08	S1	30	60	30	1	30		BGR	✓
951124	05	54	26	S2	50	140	50	0.15	30		BGR	✓
951124	06	58	52	S2	30	100		0.25	280		BGR	✓
951202	10	51	41.744	S1	200	500	220	2.4	2	25	195	✓
951203	01	06	28.180	S2	260	720	420	0.85	1	16	196	✓
951208	05	26	57.151	S2	320	740	190	<0.04	1	3.5	197	✓
951208	10	57	32.057	S1	290	260		7	52	6.5	198	✓
951208	11	47	47.634	S1	240	510	190	10	23	98	199	✓
951208	23	24	12	S1	100	90		>10	30		BGR	✓
951209	08	42	29.607	S1	150	450	160	6	6	14	200	✓
951213	04	57	29.683	S2	360	940	330	0.4	2	8	201	✓
951213	09	04	34	S2	300	90		<0.15	4.5		BGR	✓
951214	01	29	47	S2	15	100	30	1	30		BGR	✓
951214	02	24	17.847	S2	200	450	150	0.8	4	6	202	✓
951215	20	23	45	S2	60	70	15	<0.15	60		BGR	✓
951216	22	39	42	S2	160	110		0.1	6		BGR	✓
951218	07	59	48	S1	70	130	30	2.3	22		BGR	✓
951219	16	51	19.732	S2	430	850	920	<0.03	1	54	203	✓
951220	08	51	23.560	S2	100	320	180	1	2	8	204	✓
951221	08	23	18	S1	110	150	70	>15	15		BGR	✓
951222	21	00	21	S2	280			<0.1	16		BGR	✓
951225	09	14	16	S2	200			<0.3	50		BGR	✓
951225	09	34	14	S1	500	150	25	2.2	60		BGR	✓
951225	15	21	35	S2	210	170	40	0.1	100		BGR	✓
951225	22	51	08	S1	80	150	50	2.4	40		BGR	✓
951226	08	38	15	S2	60	100	50	0.15	9		BGR	✓
951227	06	23	25.042	S1	420	1200	320	1	1	1.5	218	✓
951227	21	59	20	S1	50	50		3	65		BGR	✓
951228	12	28	42	S2	70	80	40	<0.07	110		BGR	✓
951228	15	47	26	S2	80	170		0.9	17		BGR	✓
951231	05	37	11.668	S2	180	320	150	0.07	9	65	219	✓
951231	21	24	34	S2	100	25		<0.2	20		BGR	✓
960102	03	14	10.996	S1	140	300	80	1	1	0.2	220	✓
960102	20	20	53	S1	200	120	40	>9	25		BGR	✓
960104	03	28	41.062	S2	360	630	230	<0.05	2	28	221	✓
960105	16	04	30	S1	80	60		5	30		BGR	✓
960107	05	23	20	S2	30	100		0.5	230		BGR	✓
960107	19	03	28	S2	30	120	150	<0.1	32		BGR	✓
960109	23	11	31	S2	60	130	20	0.3	5		BGR	✓
960111	12	55	24.530	S2	1130	1280	190	0.2	0.5	6	222	✓
960113	15	33	44.261	S2	500	450	50	0.3	2	36	228	✓
960114	12	15	04.737	S1	4900	7200	1400	1.8	1	60	233	✓
960115	08	52	36.506	S1	380	360	60	10	1	7	234	✓
960115	12	50	15	S2	120	60		0.7	22		BGR	✓
960116	02	02	18	S2	140	170		0.15	17		BGR	✓
960117	15	56	11.341	S1	250	360	30	4	5	20	235	✓

NO

From cline@lheavx.gsfc.nasa.gov Fri Feb 2 05:41 PST 1996
 Date: Fri, 2 Feb 1996 05:41:51 -0800
 Mime-Version: 1.0
 To: Bonnard.Teegarden@cesr.cnes.fr, KHURLEY@sunspot.ssl.berkeley.edu,
 palmer@lheamail.gsfc.nasa.gov, seifert@lheamail.gsfc.nasa.gov
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: For Your INFO

Dear Bonnard, Kevin, David, Helmut:

Here is Sergei Golenetskii's latest Konus burst list, for your information. Note that, including the non-triggered-mode 'BGR' events they confidently identify, there are over 300 events so far.

- TLC

DATE	Trigger T0 time (UT)	Sensor	KONUS-WIND		N(S1)/N(S2)		Duration		Trigger number
			Max counts per sec						
			G1	G2	G3	in G2	T<T0	T>T0	
941113	12 09 15	S1	145	85		2.5	115		BGR ✓
941114	02 02 40	S2	110	128	30	0.25	12		BGR ✓
941117	03 14 38.191	S2	406	550	74	0.17	40	5	2 ✓
941117	14 07 57	S2	150	140		<0.15	5		BGR ✓
941119	19 31 09.175	S2	370	703	160	0.23	7	20	4 ✓
941120	20 23 17.924	S1	215	328	30	>15	2	25	5 ✓
941121	17 25 00.945	S1	1652	1656	300	21	3	50	6 ✓
941125	22 04 30.156	S2	115	308	109	0.95	1.5	5	7 ✓
941126	00 20 46	S1	150	205	200	>14	18		BGR ✓
941126	12 22 37.952	S1	860	1430	330	4.2	40	45	8 ✓
941126	16 54 20	S1	55	75		>10	26		BGR ✓
941126	19 56 49.732	S1	290	390	211	6.7	20	26	9 ✓
941127	14 30 25.680	S2	200	400	95	0.17	8	7	10 ✓
941127	15 39 10	S1	210	57		2.7	260		BGR ✓
941128	15 37 00	S1	75	90	32	>15	55		BGR ✓
941205	23 33 40.074	S2	370	460	188	0.06	6	30	11 ✓
941207	22 10 32	S2	265	175		<0.2	7		BGR ✓
941210	03 10 52.523	S2	900	2350	1385	0.12	1	15	14 ✓
941214	17 03 51	S1	40	45	29	>6	12		BGR ✓
941214	05 38 45.226	S1	3479	1266	14	1.0	12	240	18 Sol
941221	07 44 08	S2	55	115	30	0.8	20		BGR ✓
941221	22 14 35.215	S1	260	496	165	1.5	55	11	19 ✓
941222	05 36 00.243	S2	334	1360	1066	0.36	7	105	20 ✓
941228	07 39 45.915	S1	300	637	519	4.4	5	90	28 ✓
941228	16 55 23	S2	40	36	23	0.25	25		BGR ✓
941229	12 58 05	S1	46	108	31	1.8	15		BGR ✓
941229	22 51 08.781	S2	396	381	140	0.09	7	25	29 ✓
941230	20 52 53	S1	74	117	52	8.4	158		BGR ✓
941230	23 43 44	S2	55	70	16	<0.2	4.5		BGR ✓
950104	07 18 39.613	S2	258	550	219	0.75	2.8	20	31 ✓
950104	09 00 58	S2	140	143	40	<0.1	25		BGR ✓
950110	06 02 15	S2	332	180		<0.1	3600		BGR ✓
950110	13 37 57.084	S2	234	422	213	0.05	38	100	32 ✓
950111	04 49 12.241	S1	586	620	100	>19	92	24	33 ✓
950111	12 18 49.196	S1	225	435	164	1.85	26	50	34 ✓
950112	07 45 37.120	S2	1305	1800	336	0.04	2.5	44	35 ✓
950113	05 59 13	S1	283	180	26	>10	52		BGR ✓
950113	17 38 32	S2	85	162	35	<0.06	75		BGR ✓
950114	01 00 38	S1	46	110		1.6	6		BGR ✓
950114	04 03 01	S2	23	76		0.5	70		BGR ✓
950114	07 30 30.766	S2	205	406	60	<0.05	1	100	36 ✓
950114	13 10 34.865	S1	1320	2828	516	3.1	1	10	37 ✓
950115	02 49 32	S2	40	47	34	<0.15	24		BGR ✓
950117	01 36 00	S2	56	82	42	0.2	108		BGR ✓
950118	12 22 54	S2	57	105	17	<0.1	35		BGR ✓
950125	14 51 52.253	S1	380	600	140	8.2	3.8	11	39 ✓

K O N U S

2 2 / 2 / 9 6

U L Y S S E S R T

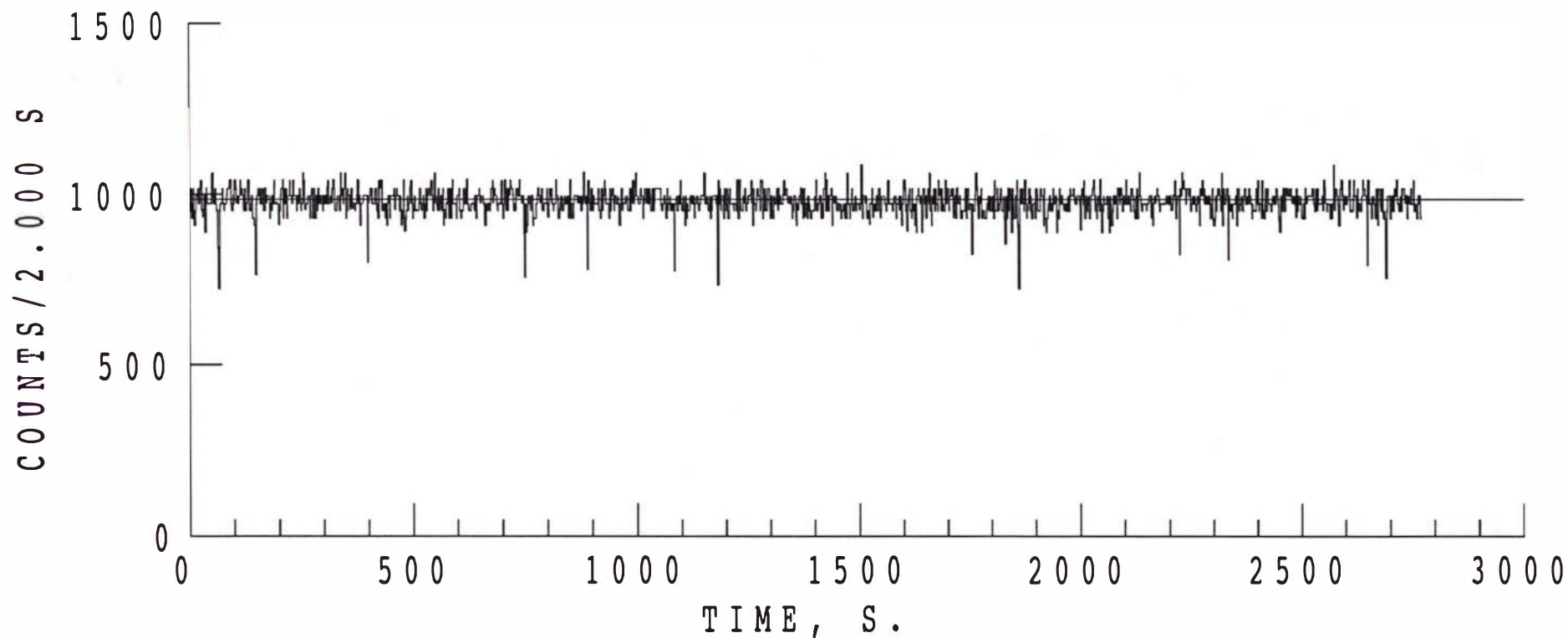
1 5 / 1 2 / 9 5 7 2 0 3 6 . 1 0 2 s

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 WOODSP@SSLLES.MSFC.NASA.GOV Wed Dec 20 12:06 PST 1995
Date: Wed, 20 Dec 1995 14:06:21 -0600 (CST)
From: WOODSP@ssl.msfc.nasa.gov
To: burst@comptel.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, "15733::SCHAEFER"@ssl.msfc.nasa.gov
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3993

TIME: TJD=1006 SECONDS=78824

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

BATSE BURSTER.

BATSE BURST TRIGGER .

NO.: 3994

TIME: TJD=1006 SECONDS=84787

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 3996

TIME: TJD=1006 SECONDS=8702

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

CYG X-1.

BATSE BURST TRIGGER

NO.: 3998

TIME: TJD=1006 SECONDS=24654

TYPE: PARTICL

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

PARTICLE EVENT.

BATSE BURST TRIGGER

NO.: 4001

TIME: TJD=1006 SECONDS=42318

TYPE: TRANSIE

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

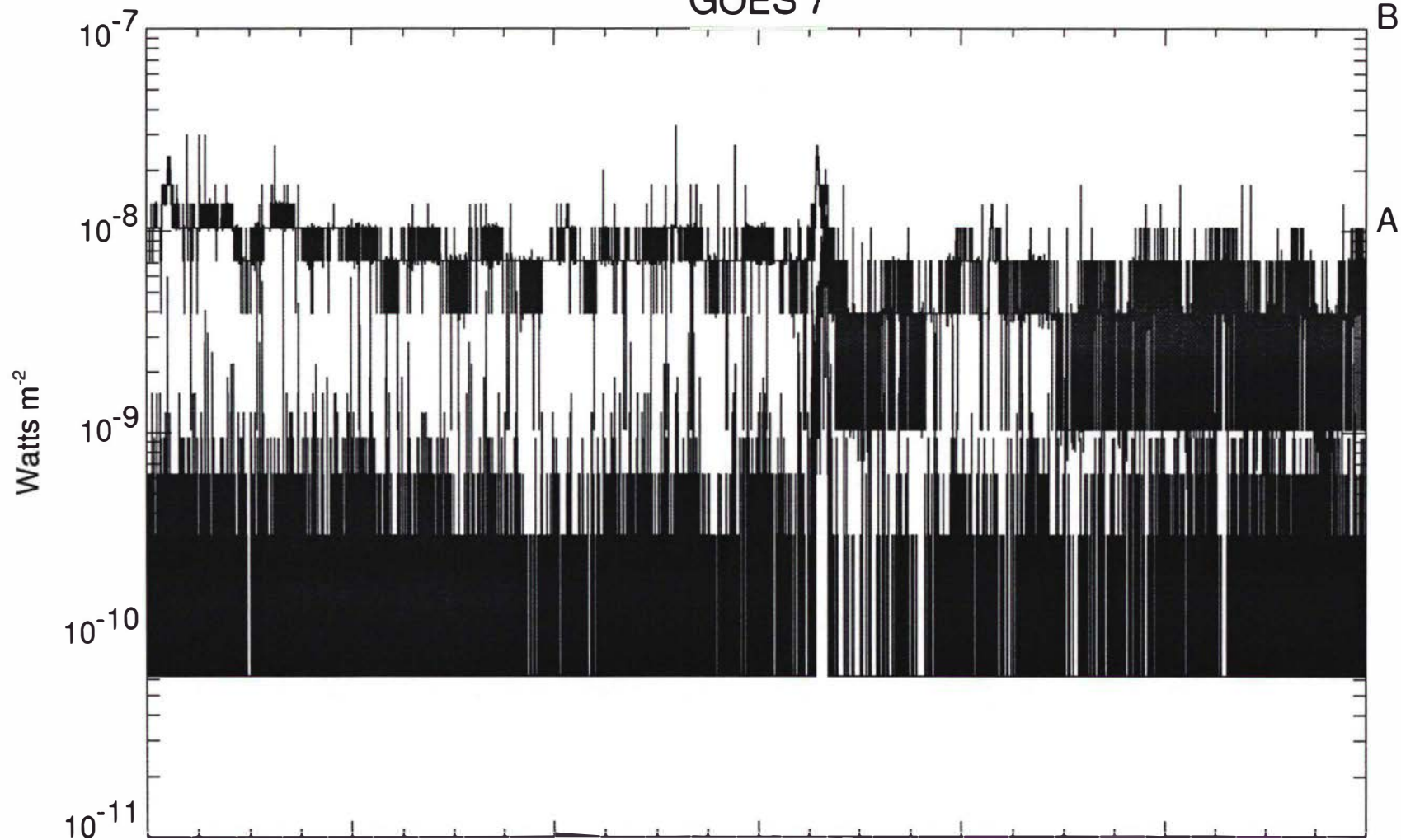
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

CYG X-1 RISE.

GOES 7



Data Start: 95/12/15, 0000:02

Plot created: 95/12/17, 0651

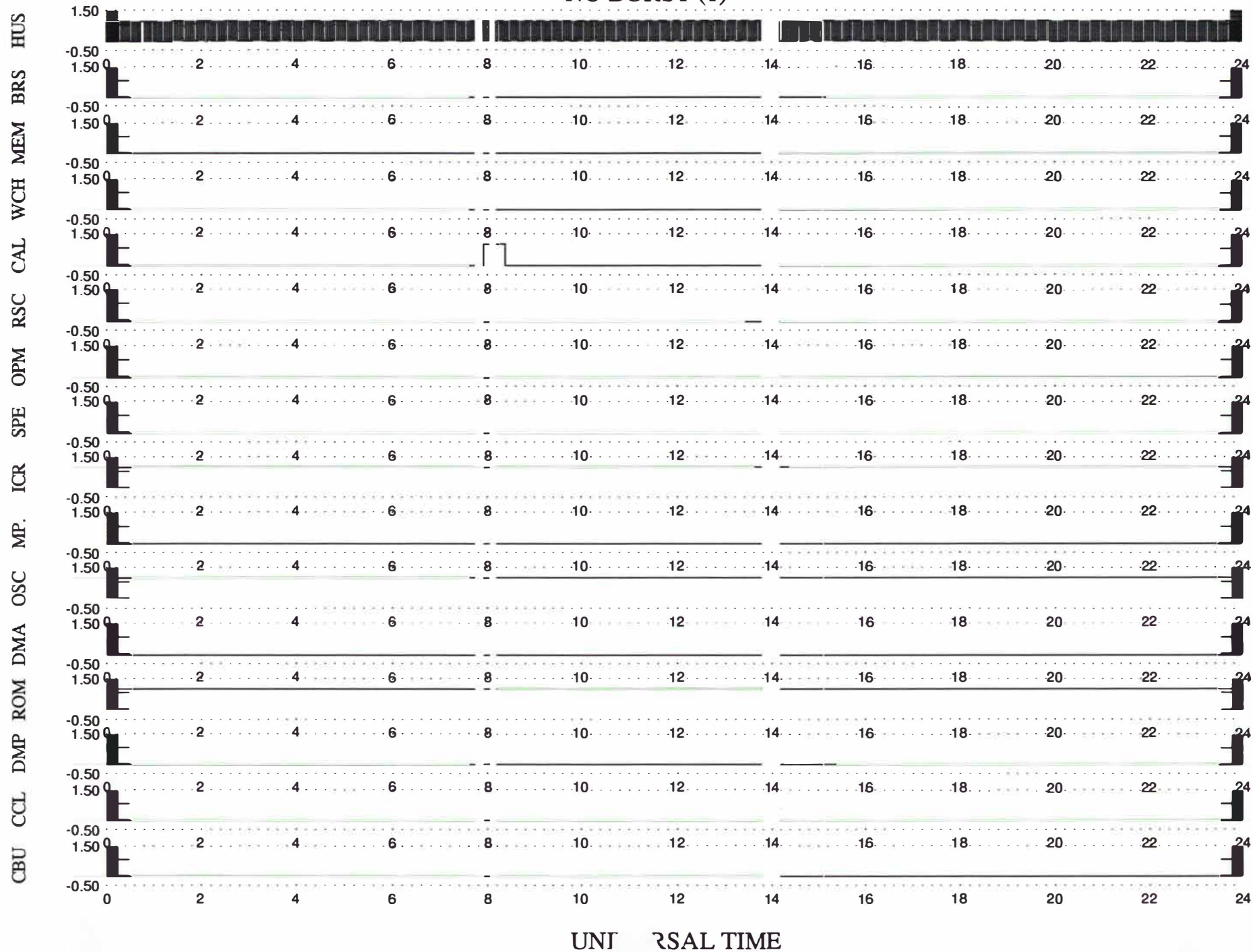
Channel 1 (1.0 - 8.0 Angstroms)

Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms)

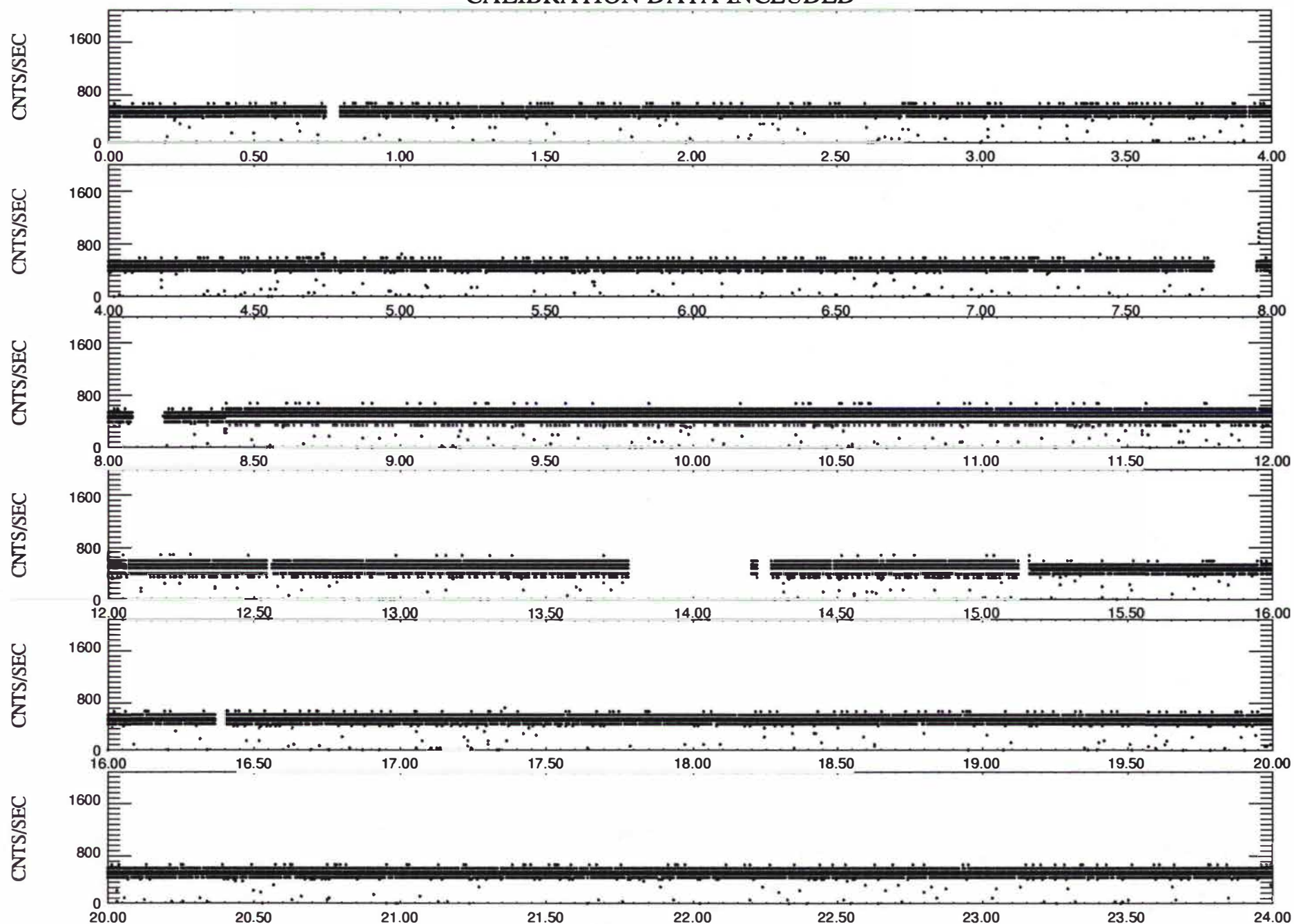
Background not subtracted

4/1/96

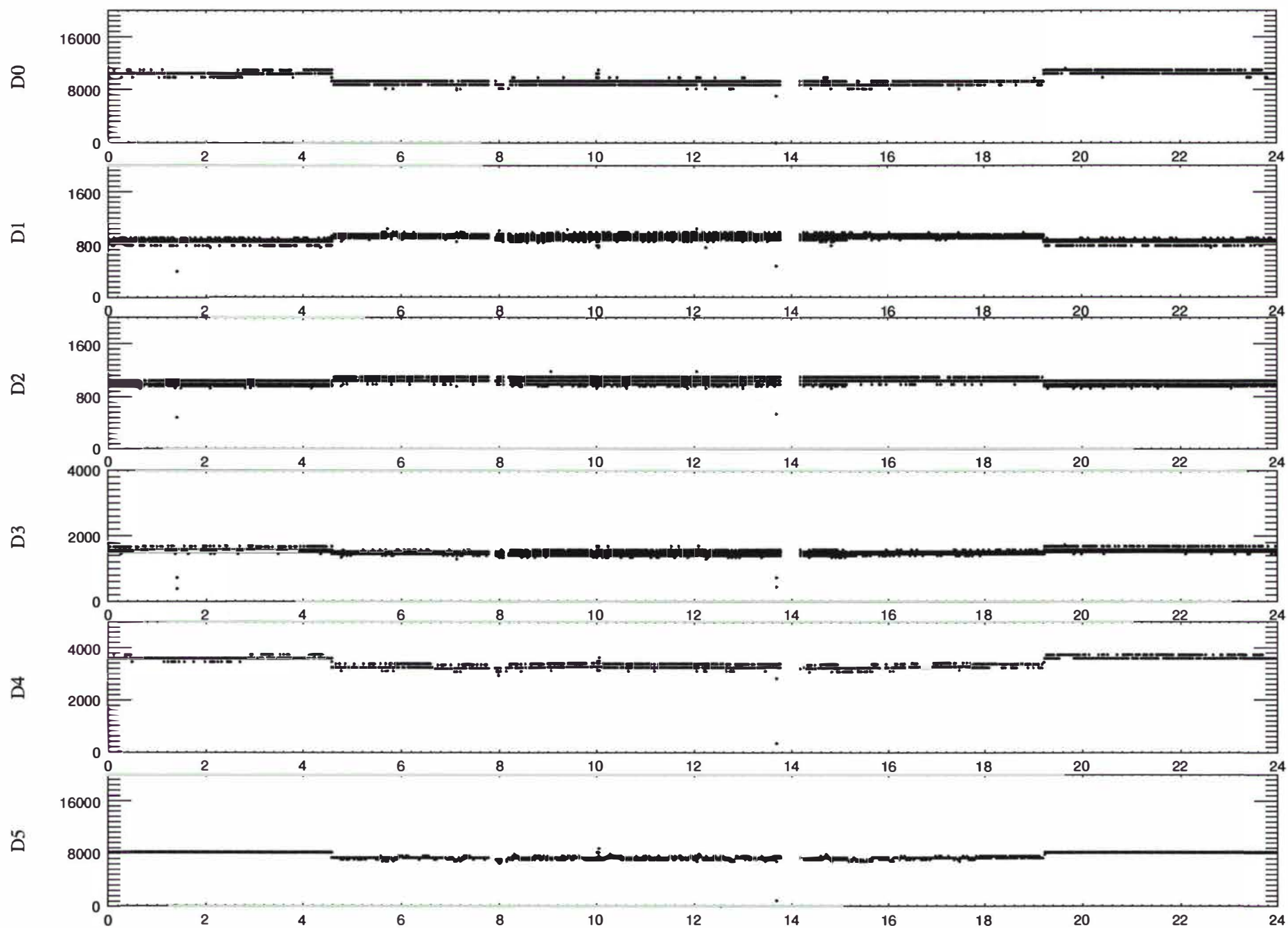


HUS 2A, MODE 1, NOT AVERAGED EDR day 349, year 1995 to day 349, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNRSAL TIME



From: ulsdmt@jplsp.DNET.NASA.GOV Mon Mar 18 17:13 PST 1996
From: ulsdmt@jplsp.DNET.NASA.GOV
Date: Mon, 18 Mar 96 20:13:12 -0500
To: "khurley@sunspot.ssl.berkeley.edu"@east.DNET.NASA.GOV (SENT TO @LIST1)
Subject: Misplaced Major Frames in EDRs

Greetings,

We have identified an operations technique that produces data that will be improperly time tagged by the MGDS (telemetry system). Instances of EDR errors (major frames out of order) have been found in the CDROM archival products for December 1995 and January 1996. Errors will also be found in the still to be shipped February 1996 data.

When major frames are recorded but not transmitted during the next track, but are eventually downlinked with data from a succeeding day, the embedded SCLKs are 'assumed' to be incorrect by the frame syncer and are re-tagged with SCETs and SCLKs matching the adjacent (but newer) data.

For each major frame processed in this manner, a gap will exist, representing the time the data was actually acquired, and a major frame or realtime data, representing the time period the data now errently represents, will be replaced by the misplaced playback data.

Yes. Confusing. See the attached memo detailing the times involved.

Approximately 17 such instances are known to have occured. The total time involved is about twenty minutes. Because the data loss is small and the cost of reprocessing would be so large, the Project has determined that it would be imprudent to reprocess.

For your information, however, we included a memo from Nigel Angold which itemizes each instance.

We thank Toni Galvin and Nigel for identifying the problem and assisting in the diagnosis.

Regards,

Joe

To: <ulsdmt@jplsp.jpl.nasa.gov>
From: Nigel Angold <nangold@jplsp2.jpl.nasa.gov>
Subject: Mis-corrected S/C clocks / SCETs
Cc: chris.leech@jpl.nasa.gov

I have looked at our recent tape recorder usage and predict that you will see major frames with mis-corrected spacecraft clocks / SCETs at the following times (give or take a few minutes):

1995:

~342.22:59 SCET	should be	~341.17:47 SCET
~347.22:39 SCET	should be	~346.16:46 SCET
~350.21:54 SCET	should be	~349.16:22 SCET
~355.22:14 SCET	should be	~354.15:42 SCET
~359.14:04 SCET	should be	~359.05:36 SCET
~360.14:59 SCET	should be	~359.00:20 SCET
~362.20:55 SCET	should be	~361.16:06 SCET

1996:

~001.02:45 SCET	should be	~364.23:12 SCET
~002.14:35 SCET	should be	~001.04:22 SCET
~029.19:35 SCET	should be	~028.13:43 SCET
~033.19:10 SCET	should be	~032.13:18 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~048.17:29 SCET	should be	~047.13:45 SCET
~054.08:59 SCET	should be	~053.11:46 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~039.18:34 SCET	should be	~038.12:14 SCET

We see data gaps for each of the correct times, so it looks like your theory of AMMOS mis-correcting times when there is carry-over data on the tape is correct.

I hope this is enough information. I would have to do a bit more calculation to get the approximate ERTs. Let me know if you want them.

Best regards,

Nigel

951025	23	40	39.738	S1	190	400	120	1.7	3	60	167	✓
951102	01	58	05.879	S2	260	320	50	<0.1	100	3	168	✓
951102	05	53	29.015	S2	700	1560	600	0.1	5	18	169	✓
951102	07	58	13	S1	320	80		4	6		BGR	✓
951105	00	29	05	S2	40	50		0.6	40		BGR	✓
951105	01	37	48.077	S2	140	340	80	0.6	2	22	170	✓
951105	13	00	27.808	S1	160	380	120	9	2	9	171	✓
951107	07	34	58	S1	20	50	20	2	90		BGR	✓
951111	09	42	40	S1	80	160	20	1.1	15		BGR	✓
951112	18	28	15.244	S2	540	690	220	0.2	14	84	172	✓
951113	23	25	58.872	S1	260	330	260	4.4	1	15	173	✓
951115	10	48	49	S1	70	180	80	3	12		BGR	✓
951117	02	48	43.762	S2	650	530	120	0.1	9	10	175	✓
951118	22	56	00	S2	20	90	100	0.15	6		BGR	✓
951119	08	17	11.402	S1	200	420	110	3	1.5	12	176	✓
951119	12	54	17.519	S1	110	220	340	1.7	3	4	177	✓
951119	16	30	48	S2	30	40	10	0.4	110		BGR	✓
951121	06	11	20	S1	20	70	10	2	45		BGR	✓
951122	02	44	01.380	S2	770	920		0.15	0.5	1.5	179	✓
951122	04	45	07.738	S1	280	430	160	12	35	22	180	✓
951123	18	10	08	S1	30	60	30	1	30		BGR	✓
951124	05	54	26	S2	50	140	50	0.15	30		BGR	✓
951124	06	58	52	S2	30	100		0.25	280		BGR	✓
951202	10	51	41.744	S1	200	500	220	2.4	2	25	195	✓
951203	01	06	28.180	S2	260	720	420	0.85	1	16	196	✓
951208	05	26	57.151	S2	320	740	190	<0.04	1	3.5	197	✓
951208	10	57	32.057	S1	290	260		7	52	6.5	198	✓
951208	11	47	47.634	S1	240	510	190	10	23	98	199	✓
951208	23	24	12	S1	100	90		>10	30		BGR	✓
951209	08	42	29.607	S1	150	450	160	6	6	14	200	✓
951213	04	57	29.683	S2	360	940	330	0.4	2	8	201	✓
951213	09	04	34	S2	300	90		<0.15	4.5		BGR	✓
951214	01	29	47	S2	15	100	30	1	30		BGR	✓
951214	02	24	17.847	S2	200	450	150	0.8	4	6	202	✓
951215	20	23	45	S2	60	70	15	<0.15	60		BGR	✓
951216	22	39	42	S2	160	110		0.1	6		BGR	✓
951218	07	59	48	S1	70	130	30	2.3	22		BGR	✓
951219	16	51	19.732	S2	430	850	920	<0.03	1	54	203	✓
951220	08	51	23.560	S2	100	320	180	1	2	8	204	✓
951221	08	23	18	S1	110	150	70	>15	15		BGR	✓
951222	21	00	21	S2	280			<0.1	16		BGR	✓
951225	09	14	16	S2	200			<0.3	50		BGR	✓
951225	09	34	14	S1	500	150	25	2.2	60		BGR	✓
951225	15	21	35	S2	210	170	40	0.1	100		BGR	✓
951225	22	51	08	S1	80	150	50	2.4	40		BGR	✓
951226	08	38	15	S2	60	100	50	0.15	9		BGR	✓
951227	06	23	25.042	S1	420	1200	320	1	1	1.5	218	✓
951227	21	59	20	S1	50	50		3	65		BGR	✓
951228	12	28	42	S2	70	80	40	<0.07	110		BGR	✓
951228	15	47	26	S2	80	170		0.9	17		BGR	✓
951231	05	37	11.668	S2	180	320	150	0.07	9	65	219	✓
951231	21	24	34	S2	100	25		<0.2	20		BGR	✓
960102	03	14	10.996	S1	140	300	80	1	1	0.2	220	✓
960102	20	20	53	S1	200	120	40	>9	25		BGR	✓
960104	03	28	41.062	S2	360	630	230	<0.05	2	28	221	✓
960105	16	04	30	S1	80	60		5	30		BGR	✓
960107	05	23	20	S2	30	100		0.5	230		BGR	✓
960107	19	03	28	S2	30	120	150	<0.1	32		BGR	✓
960109	23	11	31	S2	60	130	20	0.3	5		BGR	✓
960111	12	55	24.530	S2	1130	1280	190	0.2	0.5	6	222	✓
960113	15	33	44.261	S2	500	450	50	0.3	2	36	228	✓
960114	12	15	04.737	S1	4900	7200	1400	1.8	1	60	233	✓
960115	08	52	36.506	S1	380	360	60	10	1	7	234	✓
960115	12	50	15	S2	120	60		0.7	22		BGR	✓
960116	02	02	18	S2	140	170		0.15	17		BGR	✓
960117	15	56	11.341	S1	250	360	30	4	5	20	235	✓

From cline@lheavx.gsfc.nasa.gov Fri Feb 2 05:41 PST 1996

Date: Fri, 2 Feb 1996 05:41:51 -0800

Mime-Version: 1.0

To: Bonnard.Teegarden@cesr.cnes.fr, KHURLEY@sunspot.ssl.berkeley.edu,
palmer@lheamail.gsfc.nasa.gov, seifert@lheamail.gsfc.nasa.gov

From: cline@lheavx.gsfc.nasa.gov (T L Cline)

Subject: For Your INFO

Dear Bonnard, Kevin, David, Helmut:

Here is Sergei Golenetskii's latest Konus burst list, for your information. Note that, including the non-triggered-mode 'BGR' events they confidently identify, there are over 300 events so far.

- TLC

DATE	Trigger T0 time (UT)	Sensor	KONUS-WIND		N(S1)/N(S2)		Duration		Trigger number
			Max counts	per sec					
			G1	G2	G3	in G2	T<T0	T>T0	
941113	12 09 15	S1	145	85		2.5	115		BGR ✓
941114	02 02 40	S2	110	128	30	0.25	12		BGR ✓
941117	03 14 38.191	S2	406	550	74	0.17	40	5	2 ✓
941117	14 07 57	S2	150	140		<0.15	5		BGR ✓
941119	19 31 09.175	S2	370	703	160	0.23	7	20	4 ✓
941120	20 23 17.924	S1	215	328	30	>15	2	25	5 ✓
941121	17 25 00.945	S1	1652	1656	300	21	3	50	6 ✓
941125	22 04 30.156	S2	115	308	109	0.95	1.5	5	7 ✓
941126	00 20 46	S1	150	205	200	>14	18		BGR ✓
941126	12 22 37.952	S1	860	1430	330	4.2	40	45	8 ✓
941126	16 54 20	S1	55	75		>10	26		BGR ✓
941126	19 56 49.732	S1	290	390	211	6.7	20	26	9 ✓
941127	14 30 25.680	S2	200	400	95	0.17	8	7	10 ✓
941127	15 39 10	S1	210	57		2.7	260		BGR ✓
941128	15 37 00	S1	75	90	32	>15	55		BGR ✓
941205	23 33 40.074	S2	370	460	188	0.06	6	30	11 ✓
941207	22 10 32	S2	265	175		<0.2	7		BGR ✓
941210	03 10 52.523	S2	900	2350	1385	0.12	1	15	14 ✓
941214	17 03 51	S1	40	45	29	>6	12		BGR ✓
941214	05 38 45.226	S1	3479	1266	14	1.0	12	240	18 Sol
941221	07 44 08	S2	55	115	30	0.8	20		BGR ✓
941221	22 14 35.215	S1	260	496	165	1.5	55	11	19 ✓
941222	05 36 00.243	S2	334	1360	1066	0.36	7	105	20 ✓
941228	07 39 45.915	S1	300	637	519	4.4	5	90	28 ✓
941228	16 55 23	S2	40	36	23	0.25	25		BGR ✓
941229	12 58 05	S1	46	108	31	1.8	15		BGR ✓
941229	22 51 08.781	S2	396	381	140	0.09	7	25	29 ✓
941230	20 52 53	S1	74	117	52	8.4	158		BGR ✓
941230	23 43 44	S2	55	70	16	<0.2	4.5		BGR ✓
950104	07 18 39.613	S2	258	550	219	0.75	2.8	20	31 ✓
950104	09 00 58	S2	140	143	40	<0.1	25		BGR ✓
950110	06 02 15	S2	332	180		<0.1	3600		BGR ✓
950110	13 37 57.084	S2	234	422	213	0.05	38	100	32 ✓
950111	04 49 12.241	S1	586	620	100	>19	92	24	33 ✓
950111	12 18 49.196	S1	225	435	164	1.85	26	50	34 ✓
950112	07 45 37.120	S2	1305	1800	336	0.04	2.5	44	35 ✓
950113	05 59 13	S1	283	180	26	>10	52		BGR ✓
950113	17 38 32	S2	85	162	35	<0.06	75		BGR ✓
950114	01 00 38	S1	46	110		1.6	6		BGR ✓
950114	04 03 01	S2	23	76		0.5	70		BGR ✓
950114	07 30 30.766	S2	205	406	60	<0.05	1	100	36 ✓
950114	13 10 34.865	S1	1320	2828	516	3.1	1	10	37 ✓
950115	02 49 32	S2	40	47	34	<0.15	24		BGR ✓
950117	01 36 00	S2	56	82	42	0.2	108		BGR ✓
950118	12 22 54	S2	57	105	17	<0.1	35		BGR ✓
950125	14 51 52.253	S1	380	600	140	8.2	3.8	11	39 ✓

K O N U S

2 2 / 2 / 9 6

U L Y S S E S R T

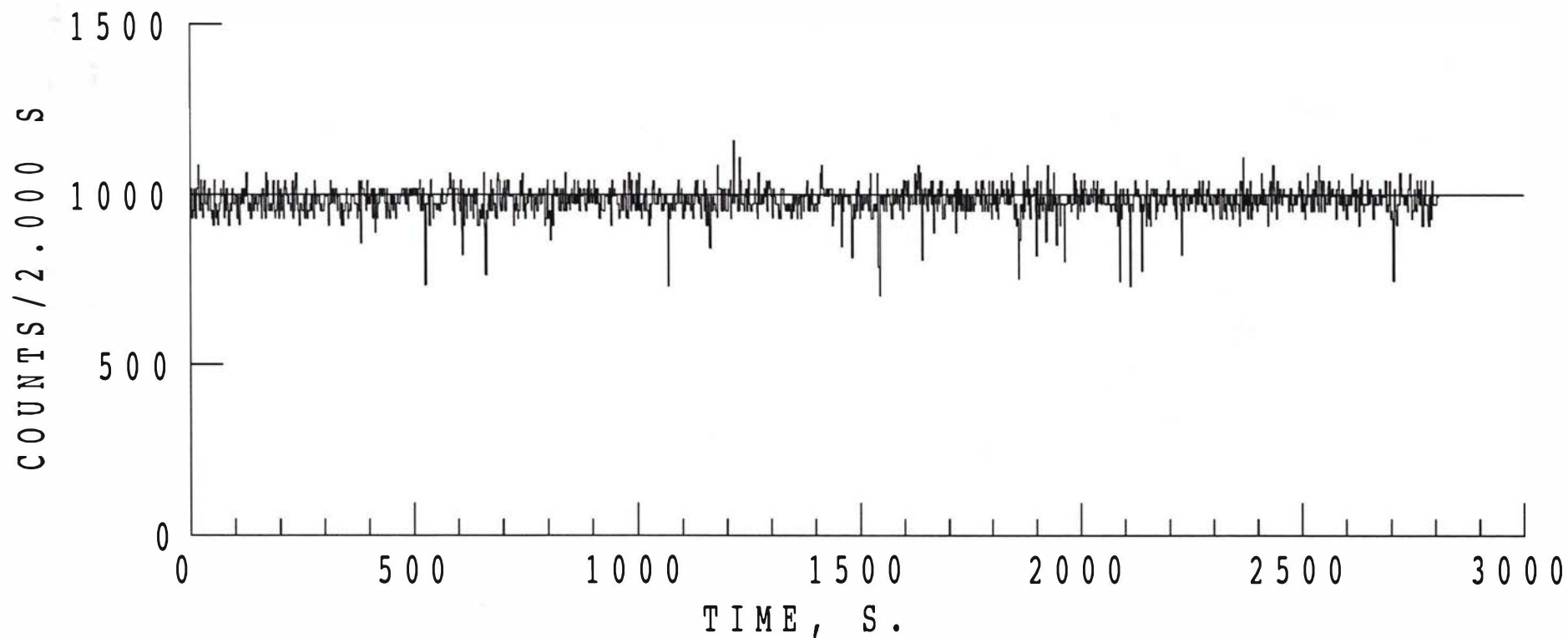
1 6 / 1 2 / 9 5 8 0 1 7 2 . 0 6 2 s

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

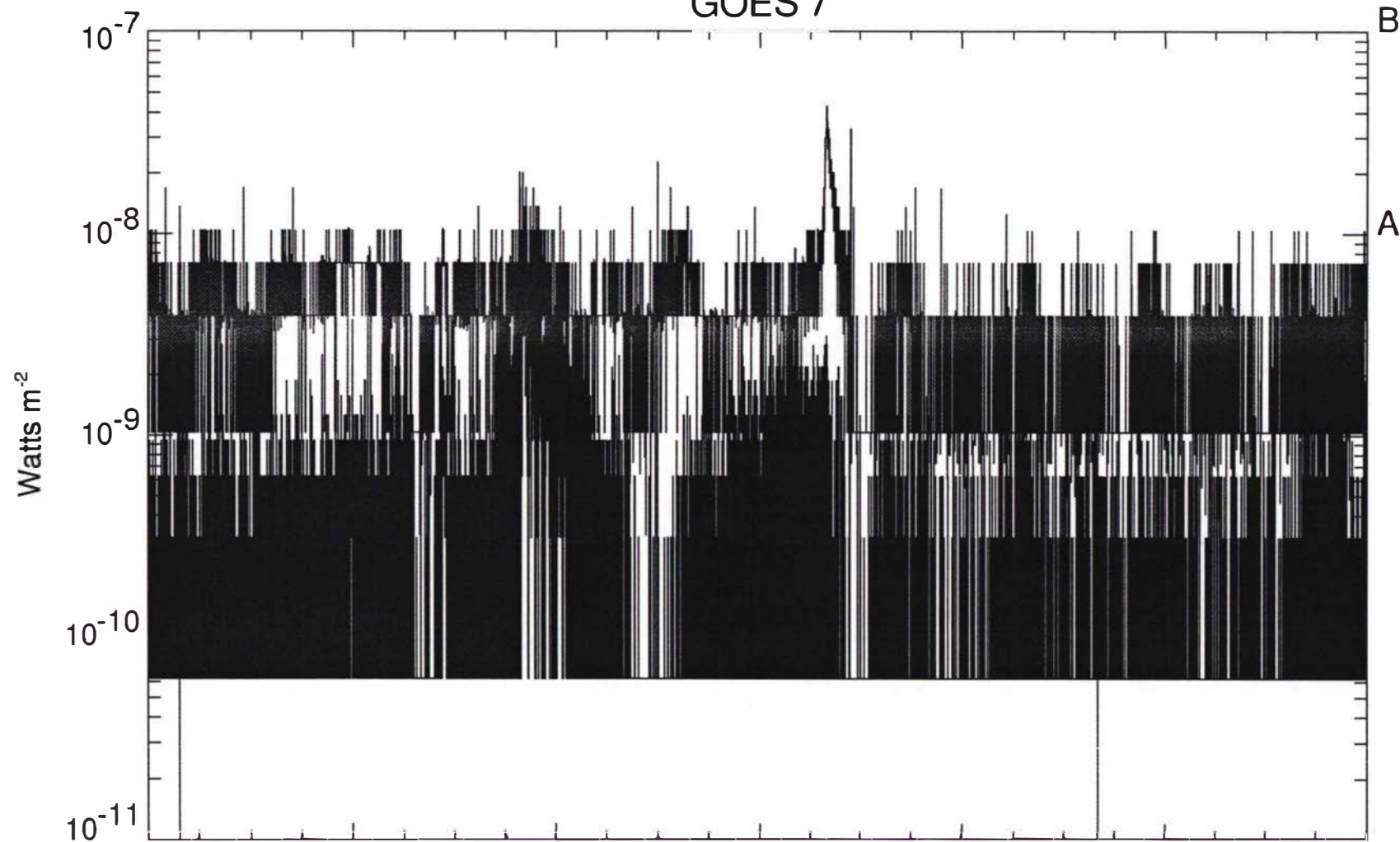
0 - 0 k e V

N = 10 M = 2

> 4.0 SIGMA FLUCTUATIONS



GOES 7



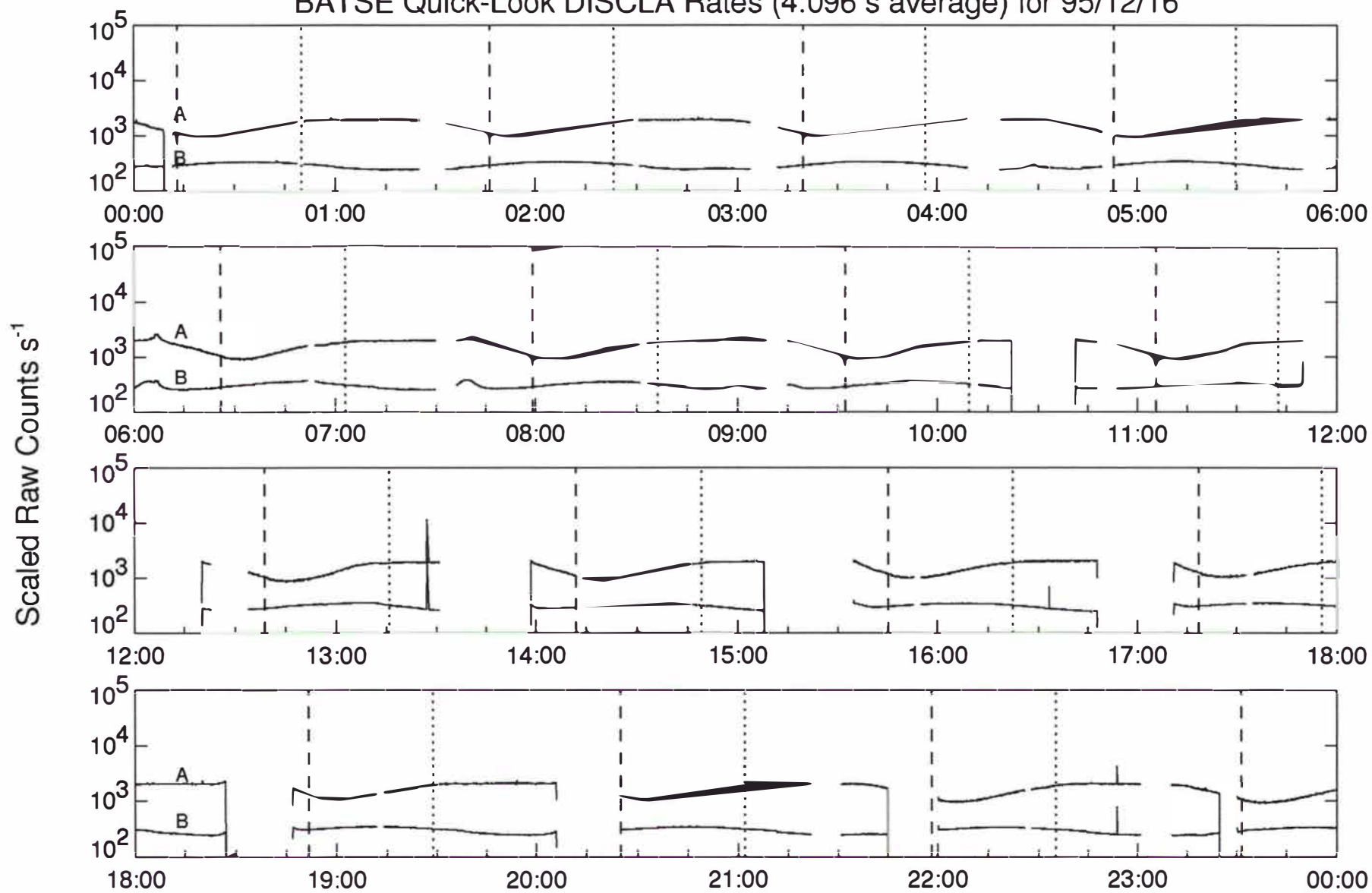
Data Start: 95/12/16, 0000:00

Plot created: 95/12/18, 0651

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 95/12/16



Current Time: 95/12/18, 0651 EDT

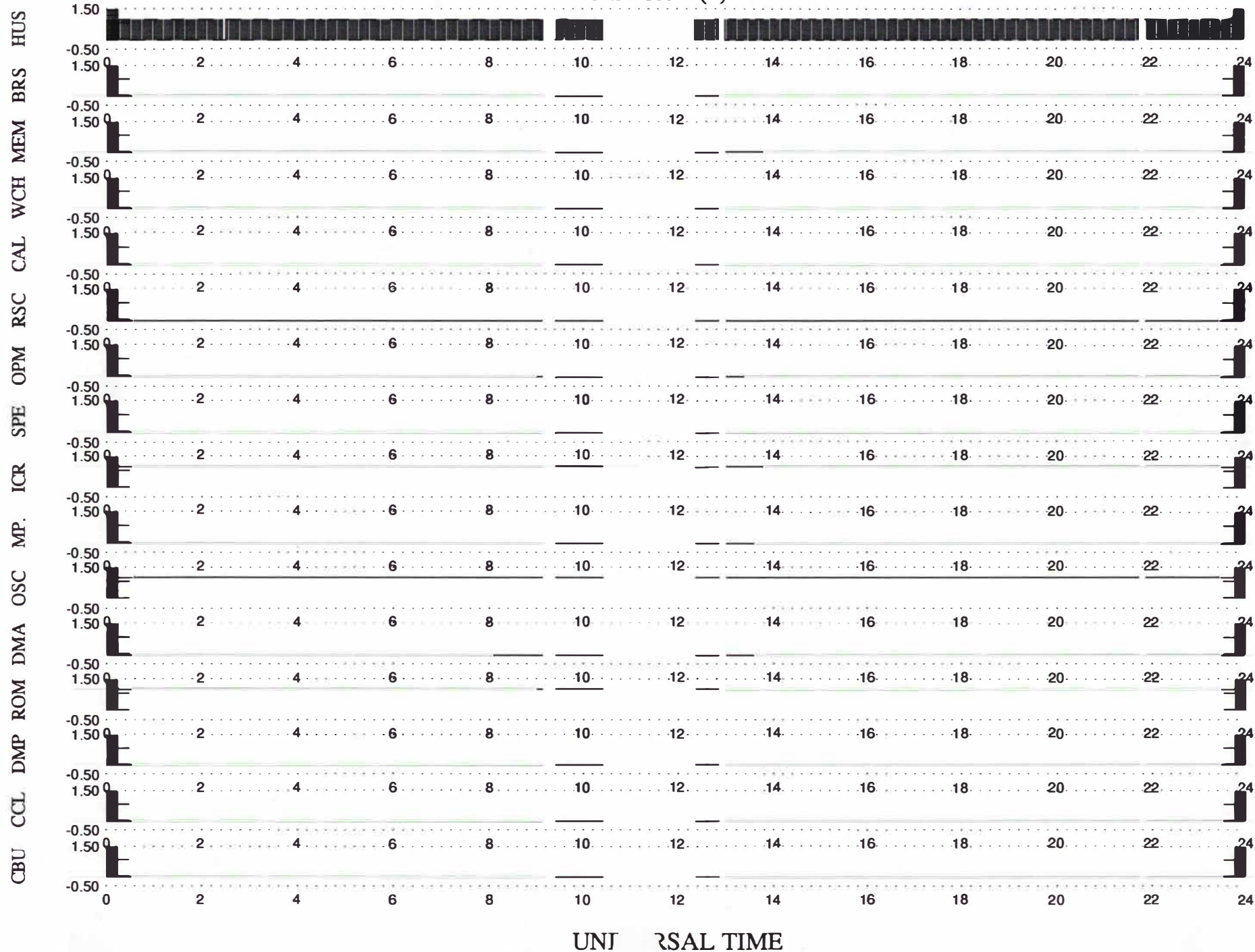
A: Channel 0 Most Sunward LAD

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

Dotted line: Day entry
Dashed line: Night entry

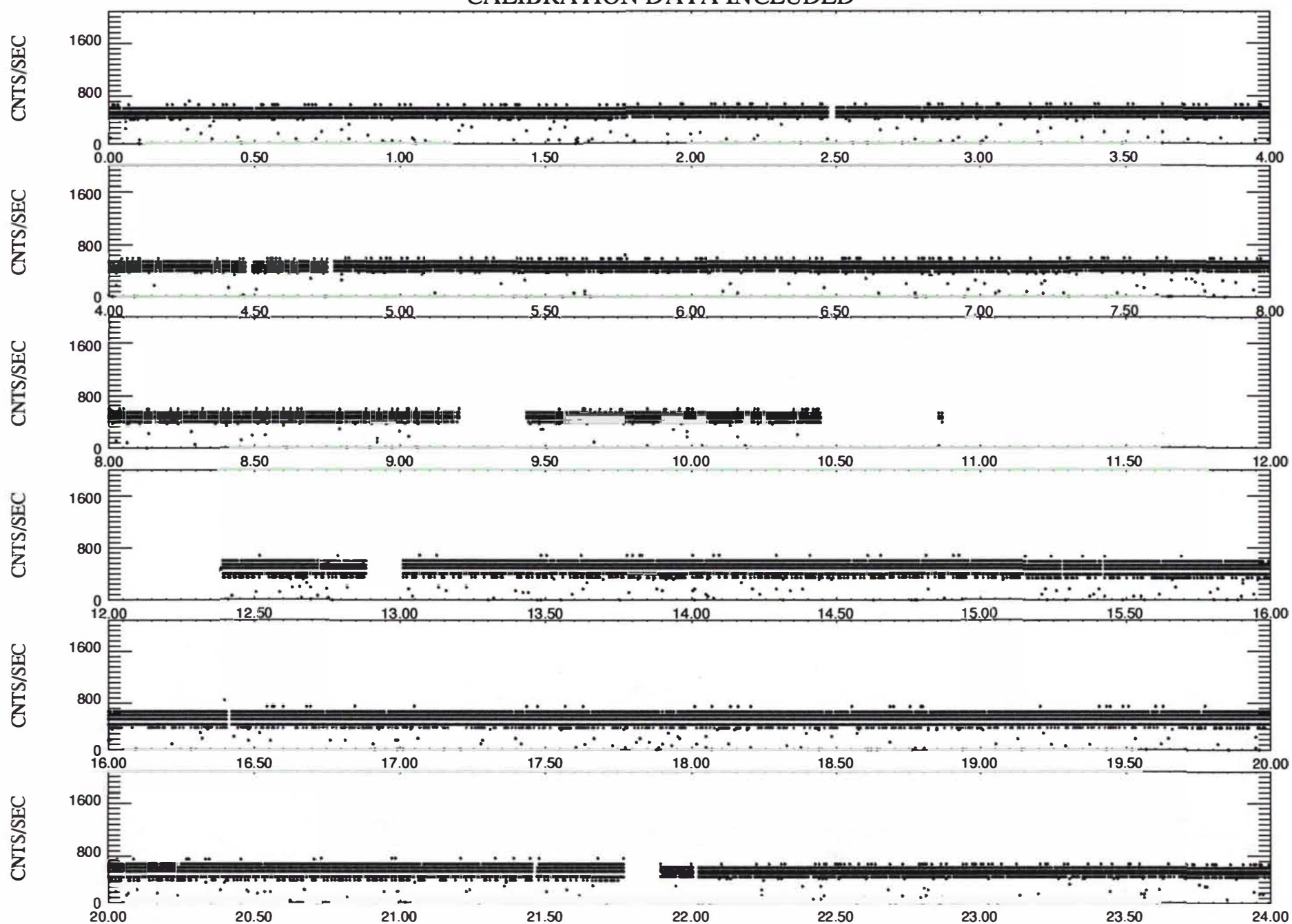
* Solar Burst Trigger
+ Solar Flare

4/1/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 350, year 1995 to day 350, year 1995
CALIBRATION DATA INCLUDED

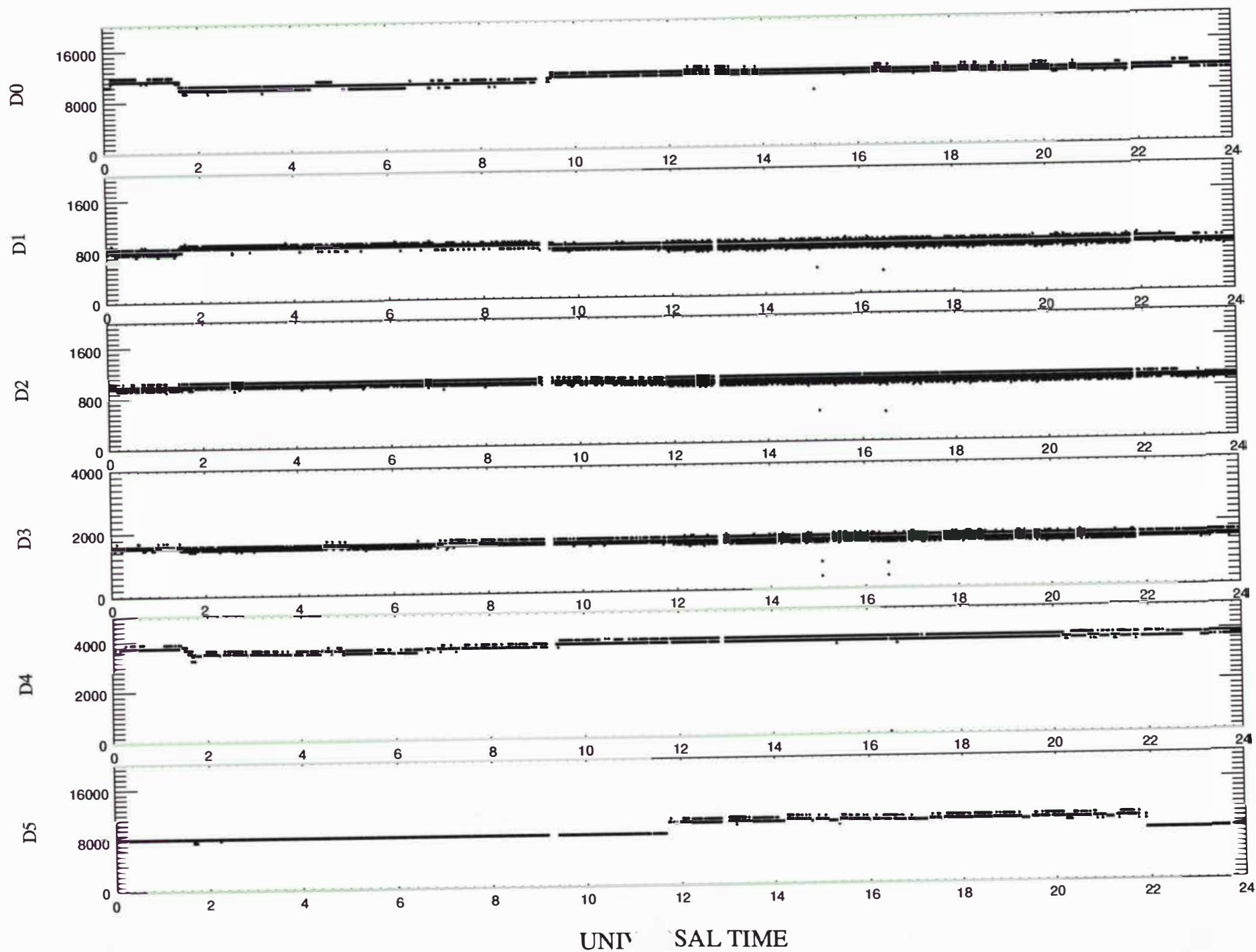
4/1/96



UNITSAL TIME

HUS 2B COUNTS / SEC QEDR day 350, year 1995 to day 350, year 1995

12/18/95



From HAGEDON@fender.msfc.nasa.gov Tue Dec 19 08:26 PST 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Tue, 19 Dec 1995 10:25:54 -0600 (CST)
To: burst@comptel.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, butterworth@lheavx.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.: 4007 - 4010

TIME: TJD=0068 SECONDS=07130

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=9.6 AZIMUTH=17.6 ERROR=11.2 DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4008

TIME: TJD=0068 SECONDS=11397

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

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SCO X-1 RISE.

BATSE BURST TRIGGER

NO.: 4009

TIME: TJD=0068 SECONDS=17949

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=11.2 AZIMUTH=47.1 ERROR=5.0 DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4010

TIME: TJD=0068 SECONDS=25642

TYPE: TRANSIE

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=11.7 AZIMUTH=86.7 ERROR=7.8 DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4011

TIME: TJD=0068 SECONDS=28296

TYPE: ACCIDEN

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
FLUCTUATION IN BACKGROUND.

BATSE BURST TRIGGER

NO.: 4012 - 4016

TIME: TJD=0068 SECONDS=36086

TYPE: TRANSIE

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=5.2 AZIMUTH=353.5 ERROR=3.5 DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4013

TIME: TJD=0068 SECONDS=41862

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=11.0 AZIMUTH=18.2 ERROR=2.5 DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4014

TIME: TJD=0068 SECONDS=51584

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=7.6 AZIMUTH=332.4 ERROR=2.8 DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4015

TIME: TJD=0068 SECONDS=57072

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=10.8 AZIMUTH=345.4 ERROR=2.9 DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4016

TIME: TJD=0068 SECONDS=63001

TYPE: TRANSIE

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=8.2 AZIMUTH=343.2 ERROR=2.7 DEGREES

COMMENTS:

BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4017

TIME: TJD=0068 SECONDS=73516

TYPE: CYG X-1

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

CYG X-1 RISE.

BATSE BURST TRIGGER

NO.: 4018

TIME: TJD=0068 SECONDS=78848

TYPE: TRANSIE

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

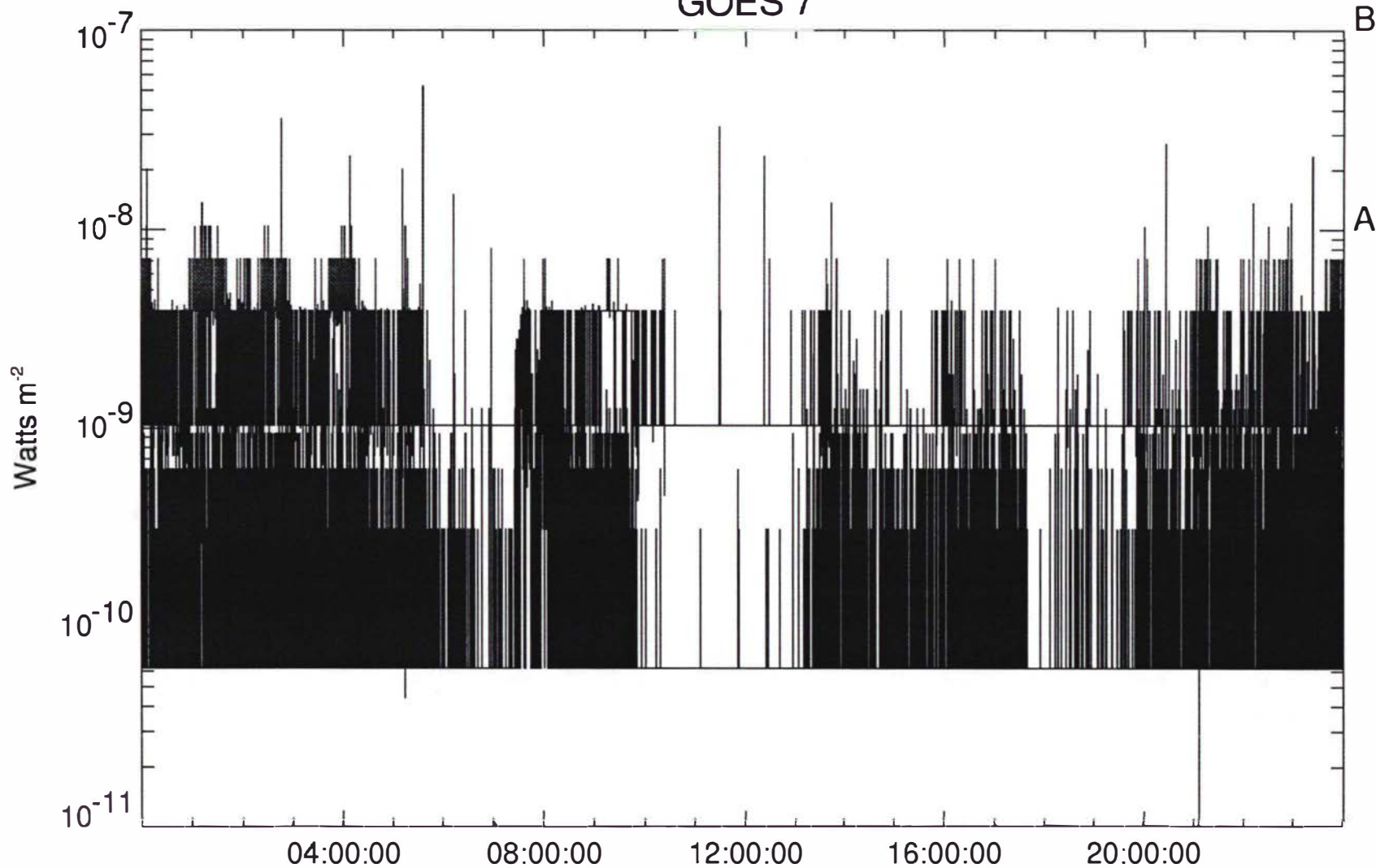
INTENSITY: COUNTS/CM2

LOCATION: ZENITH=10.5 AZIMUTH=2.7 ERROR=6.3 DEGREES

COMMENTS:

BATSE BURSTER.

GOES 7



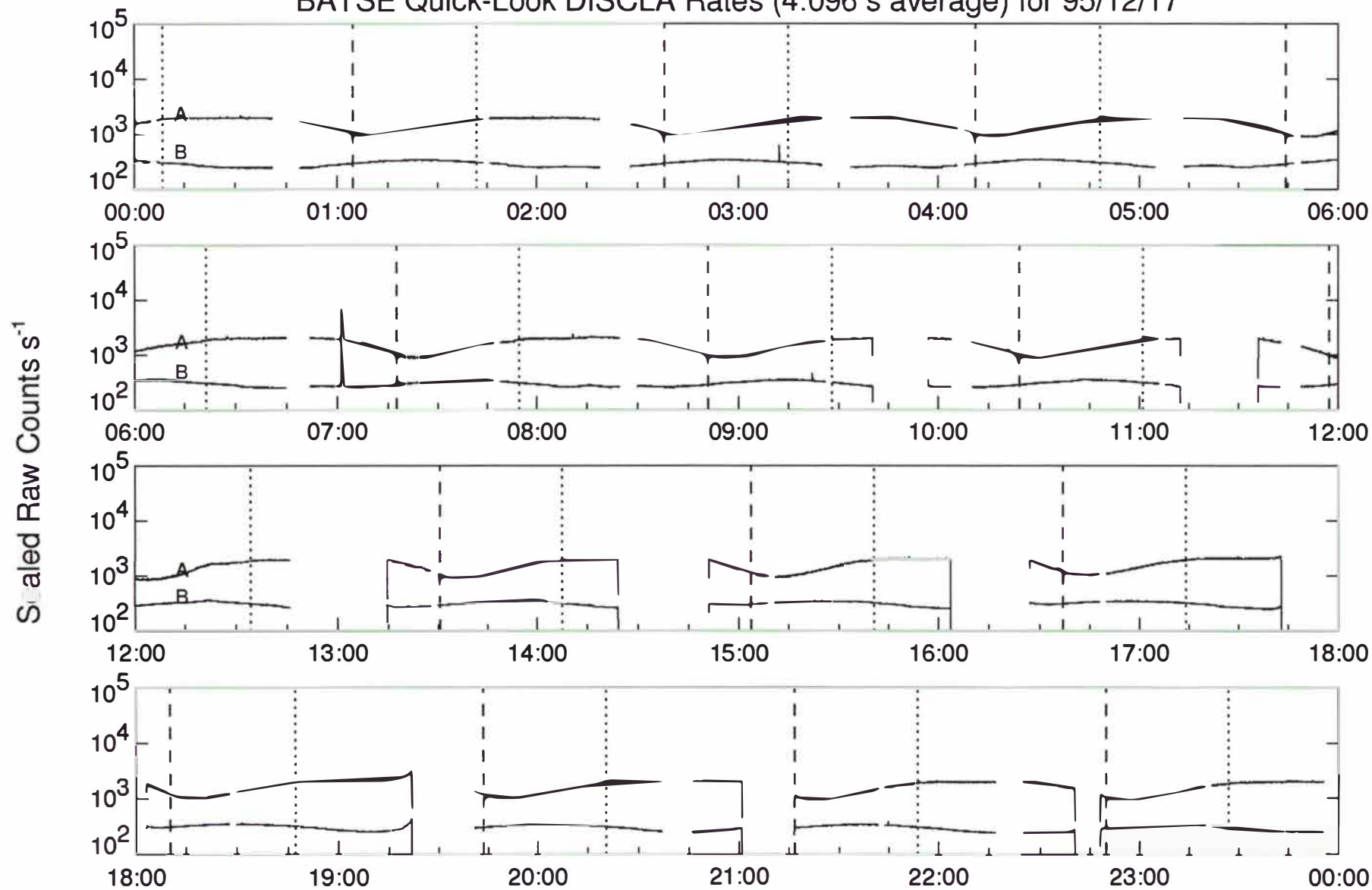
Data Start: 95/12/17, 0000:01

Plot created: 95/12/19, 0651

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 95/12/17



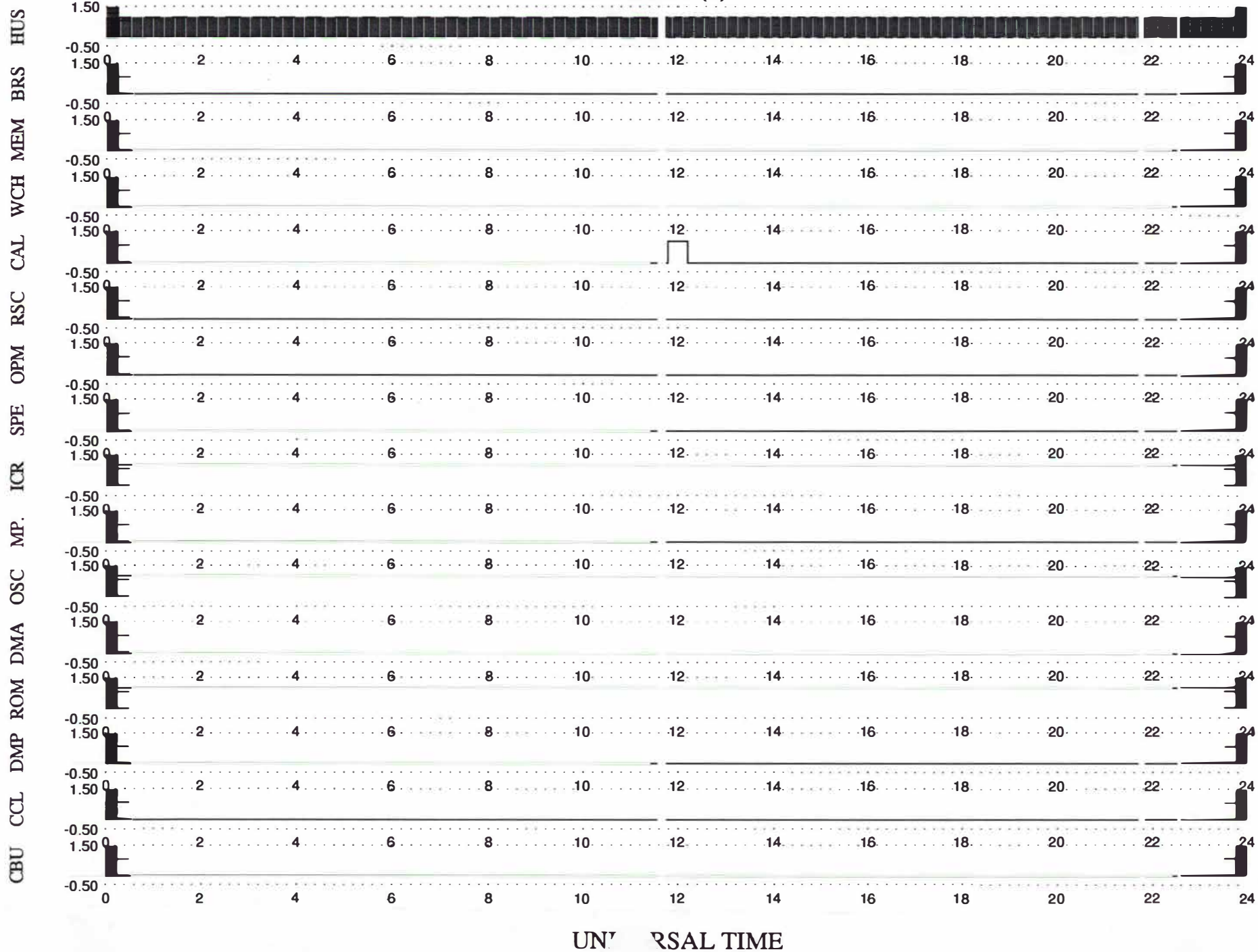
Current Time: 95/12/19, 0651 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

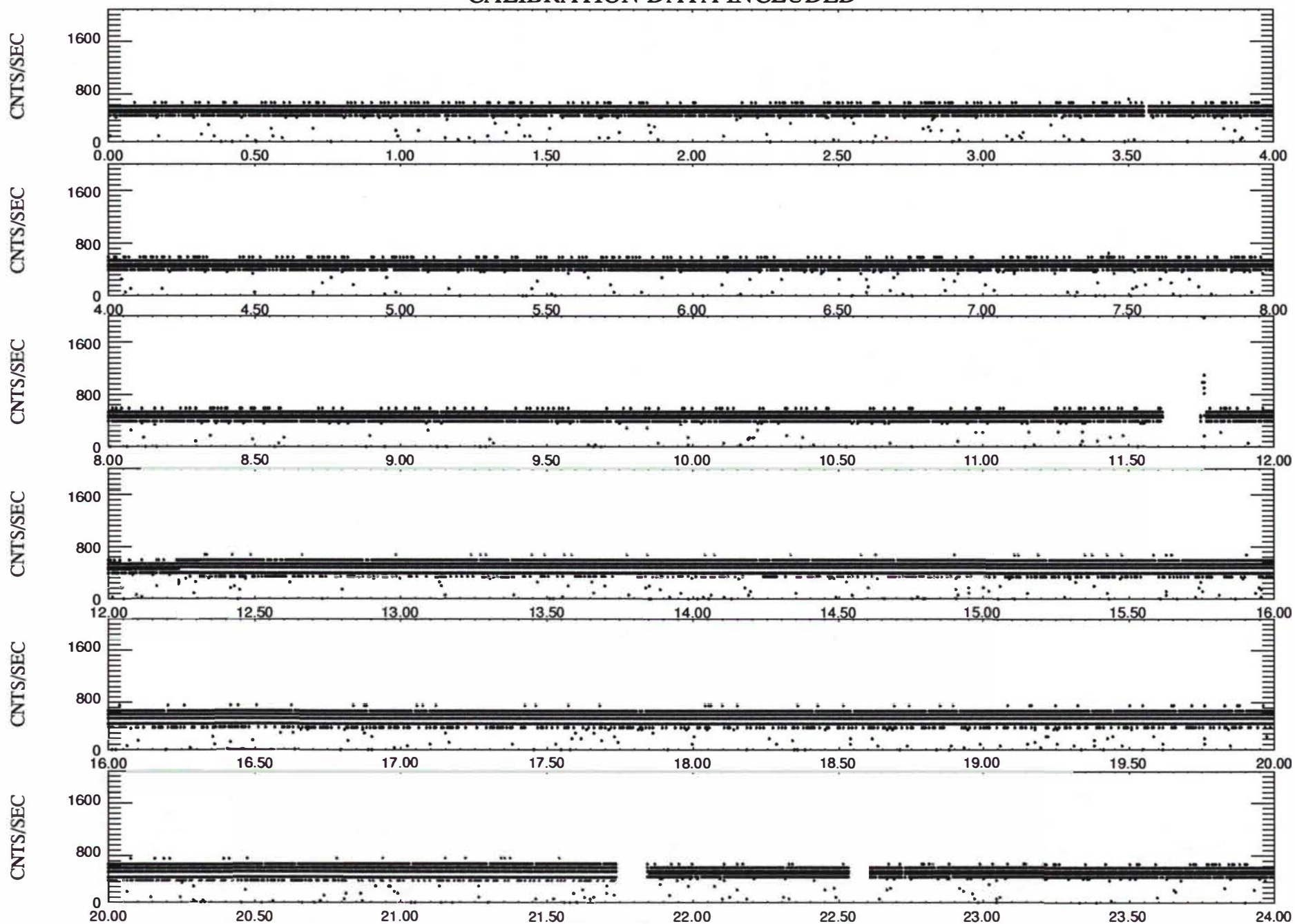
HUS MODES EDR day 351, year 1995 to day 351, year 1995 NO BURST (1)

4/1/96

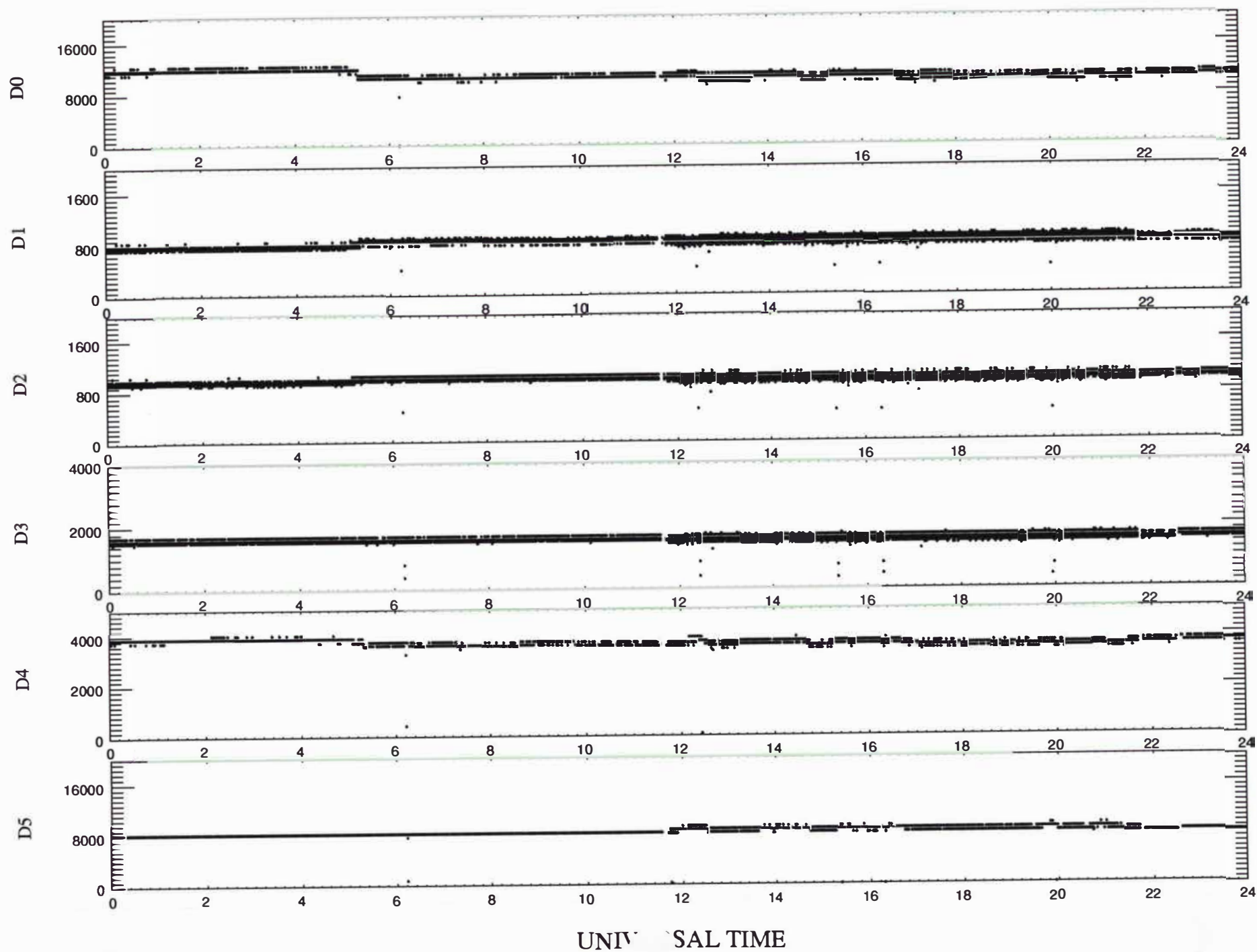


HUS 2A, MODE 1, NOT AVERAGED EDR day 351, year 1995 to day 351, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNITSAL TIME



From DEAL@SSLLES.MSFC.NASA.GOV Wed Dec 20 13:21 PST 1995
From: DEAL@SSLLES.MSFC.NASA.GOV
Date: Wed, 20 Dec 1995 15:21:35 -0600 (CST)
To: burst@comptel.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 4020

TIME: TJD=0069 SECONDS=4138

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=9.1 AZIMUTH=342.0 ERROR=3.3 DEGREES

COMMENTS:
BATSE BURSTER

BATSE BURST TRIGGER

NO.: 4021

TIME: TJD=0069 SECONDS=9782

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
BACKGROUND FLUCTUATION

BATSE BURST TRIGGER

NO.: 4022

TIME: TJD=0069 SECONDS=17740

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=6.3 AZIMUTH=5.5 ERROR=3.1 DEGREES

COMMENTS:
BATSE BURSTER

BATSE BURST TRIGGER

NO.: 4023

TIME: TJD=0069 SECONDS=23741

TYPE: TRANSIE

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=6.2 AZIMUTH=16.4 ERROR=4.2 DEGREES

COMMENTS:

BATSE BURSTER

BATSE BURST TRIGGER

NO.: 4024

TIME: TJD=0069 SECONDS=27098

TYPE:

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

BACKGROUND FLUCTUATION

Date: Oct 18 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. BATSE Data

- ☐ BATSE ephemeris for T_0 ? N/A
- ☐ Error circle position and radius from public catalog used? N/A
- ☐ If MER data were used, is a 30 ms systematic error included?

3. NEAR Data

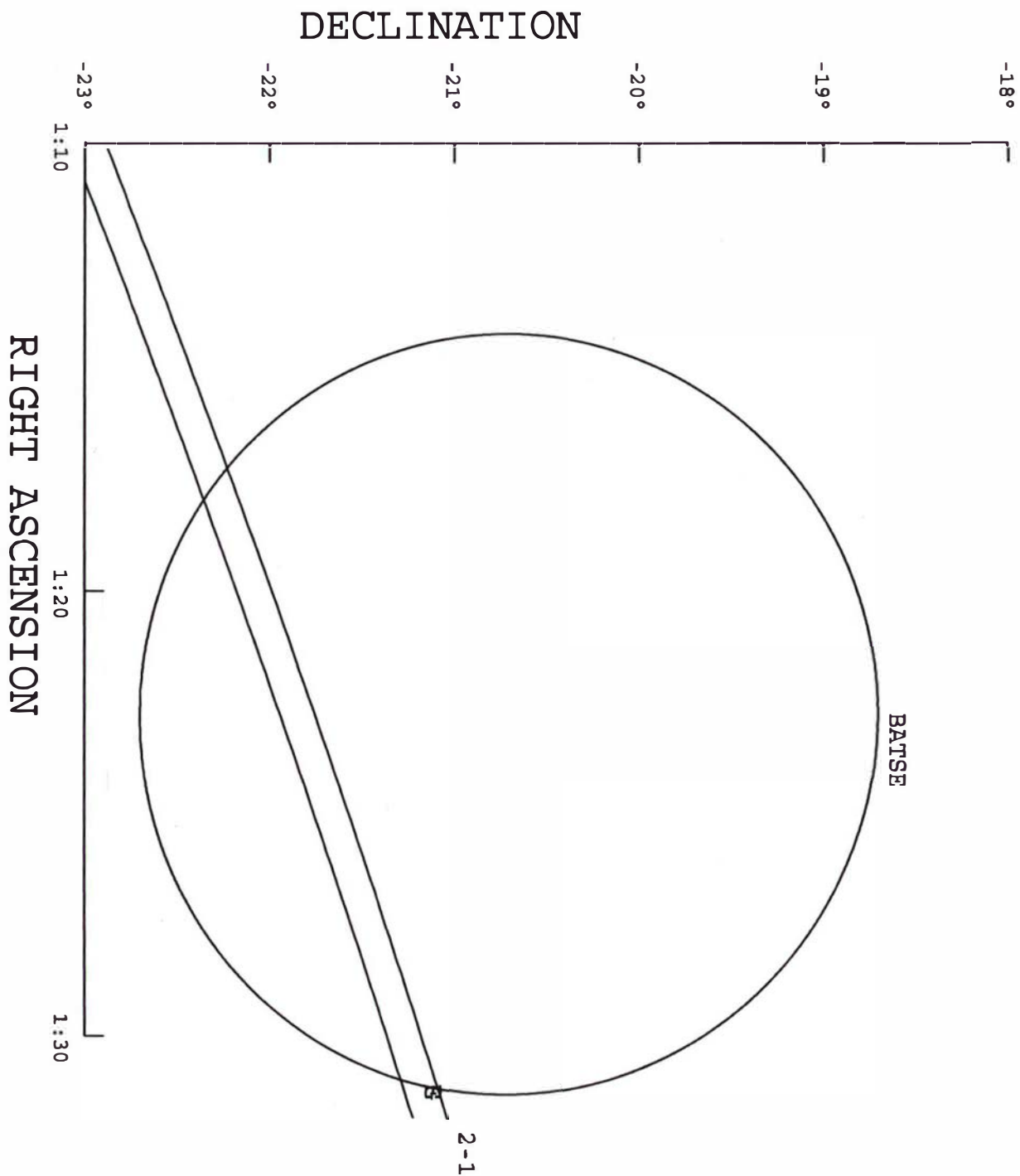
- ☐ Final, correct time used? (Files postmarked vwX@bocc1, from from Teresa Sheets, postmarked May 2 1999 or later have the correct time; files on website have incorrect times)
- ☐ BATSE >100 keV data used for NEAR correlation?

- ☒ 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 DEC 18, 1995 7:59

18/10/ 2



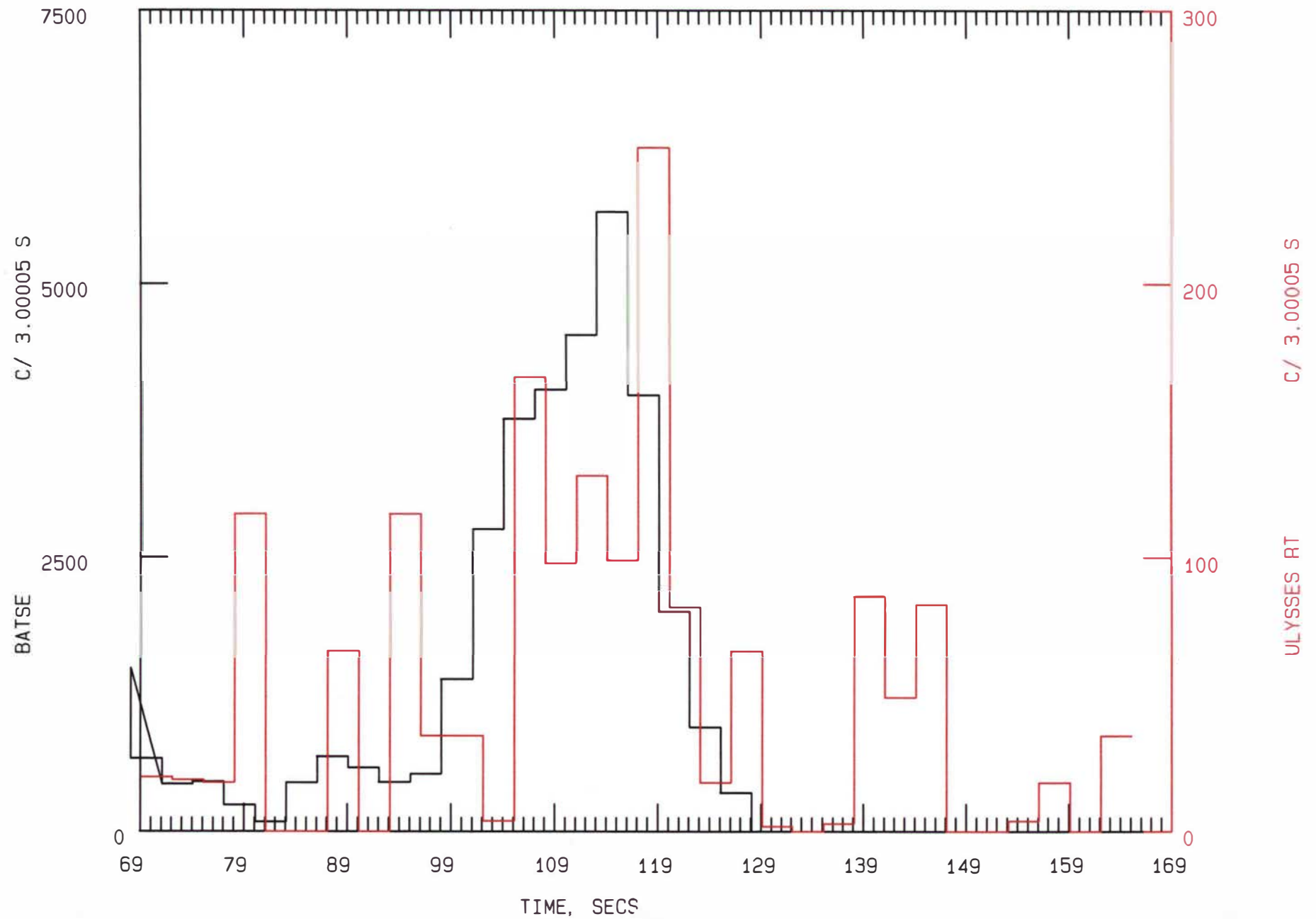
BATSE

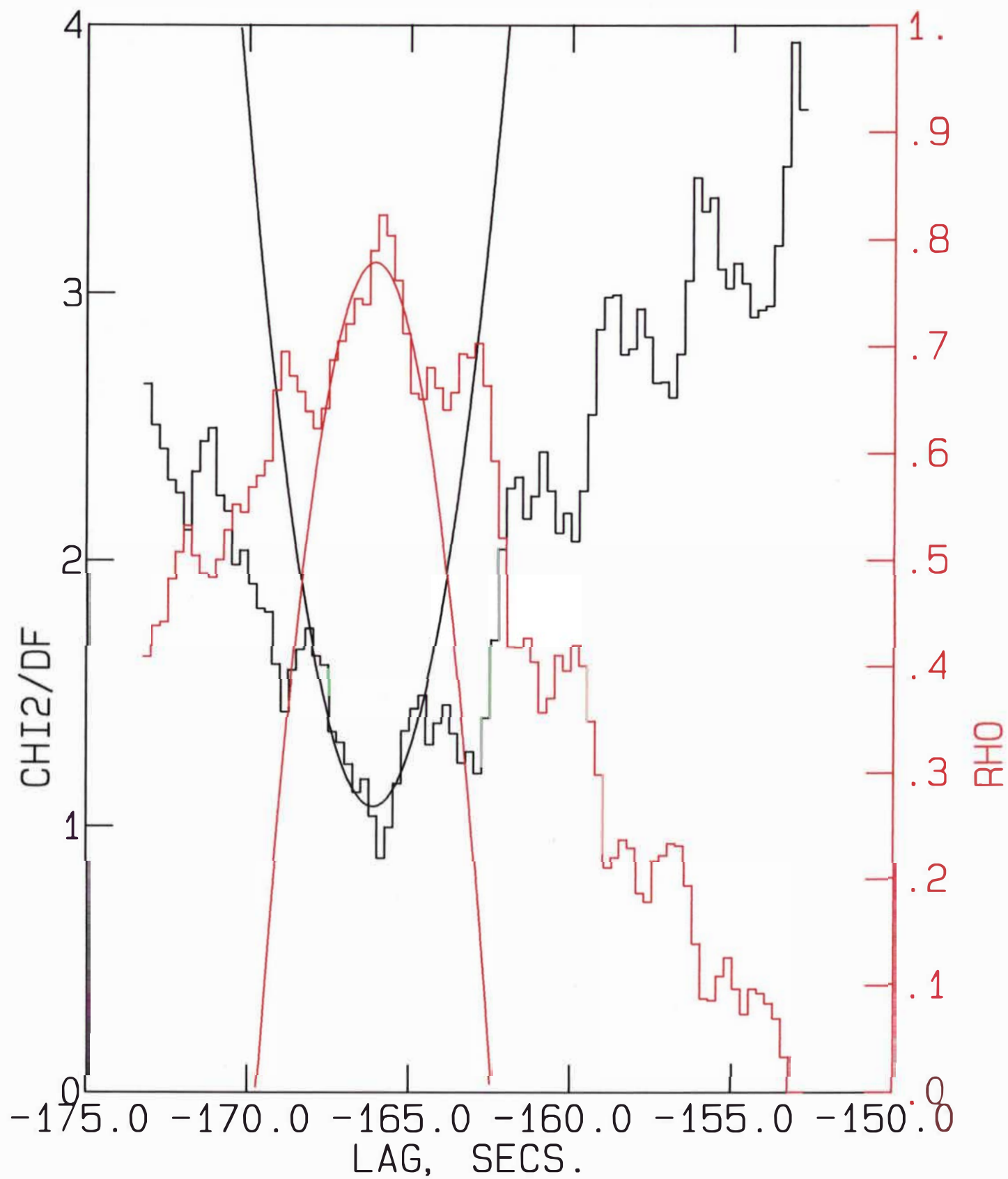
-ULYSSES RT CORRELATION

18/12/95

28744.882

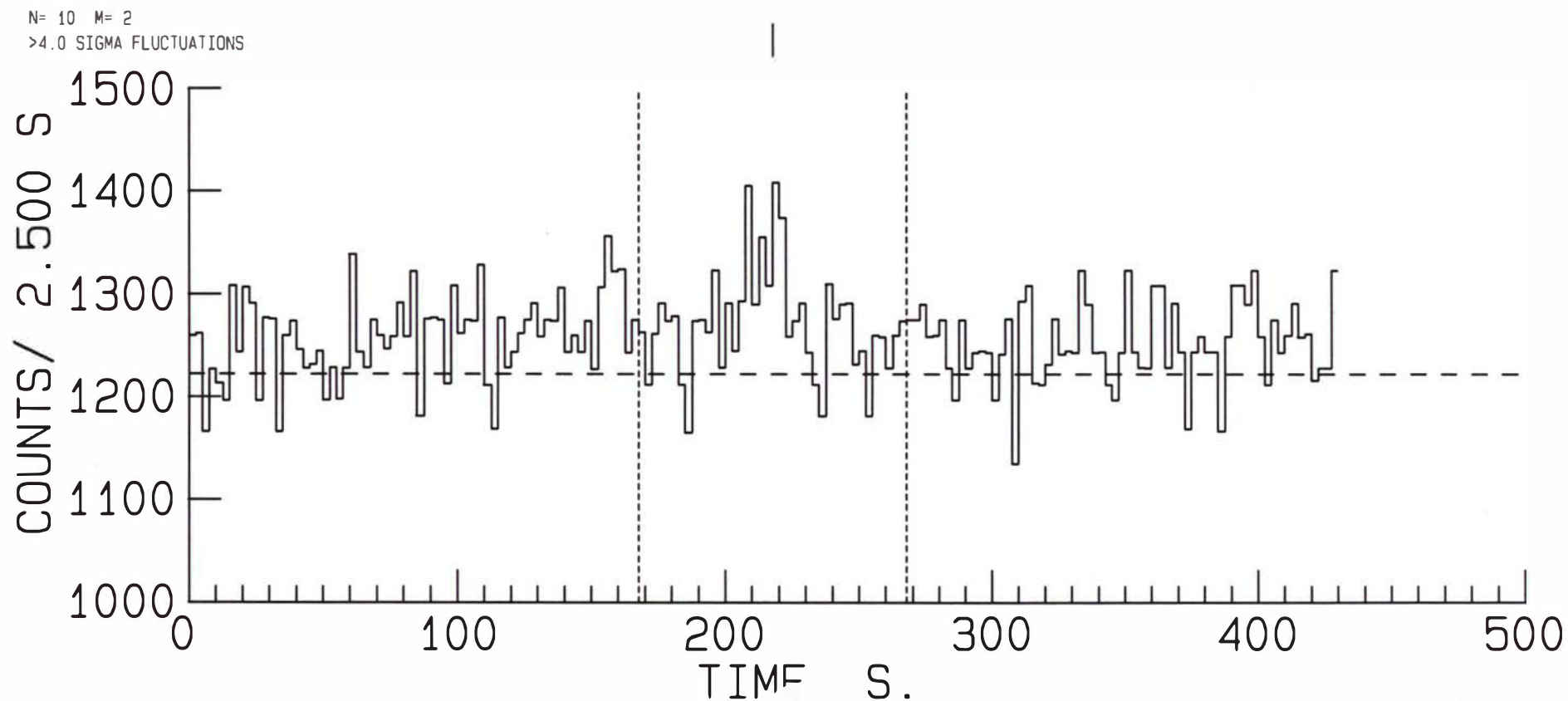
18/10/ 2





ULYSSES RT
18/12/95 29736.217 s
0.250 S INTERVALS REGROUPED BY 10
21- 144 keV

18/10/ 2



951025	23	40	39.738	S1	190	400	120	1.7	3	60	167	✓
951102	01	58	05.879	S2	260	320	50	<0.1	100	3	168	✓
951102	05	53	29.015	S2	700	1560	600	0.1	5	18	169	✓
951102	07	58	13	S1	320	80		4	6		BGR	✓
951105	00	29	05	S2	40	50		0.6	40		BGR	✓
951105	01	37	48.077	S2	140	340	80	0.6	2	22	170	
951105	13	00	27.808	S1	160	380	120	9	2	9	171	✓
951107	07	34	58	S1	20	50	20	2	90		BGR	✓
951111	09	42	40	S1	80	160	20	1.1	15		BGR	✓
951112	18	28	15.244	S2	540	690	220	0.2	14	84	172	
951113	23	25	58.872	S1	260	330	260	4.4	1	15	173	✓
951115	10	48	49	S1	70	180	80	3	12		BGR	✓
951117	02	48	43.762	S2	650	530	120	0.1	9	10	175	-
951118	22	56	00	S2	20	90	100	0.15	6		BGR	✓
951119	08	17	11.402	S1	200	420	110	3	1.5	12	176	✓
951119	12	54	17.519	S1	110	220	340	1.7	3	4	177	✓
951119	16	30	48	S2	30	40	10	0.4	110		BGR	✓
951121	06	11	20	S1	20	70	10	2	45		BGR	✓
951122	02	44	01.380	S2	770	920		0.15	0.5	1.5	179	✓
951122	04	45	07.738	S1	280	430	160	12	35	22	180	✓
951123	18	10	08	S1	30	60	30	1	30		BGR	✓
951124	05	54	26	S2	50	140	50	0.15	30		BGR	✓
951124	06	58	52	S2	30	100		0.25	280		BGR	✓
951202	10	51	41.744	S1	200	500	220	2.4	2	25	195	
951203	01	06	28.180	S2	260	720	420	0.85	1	16	196	
951208	05	26	57.151	S2	320	740	190	<0.04	1	3.5	197	
951208	10	57	32.057	S1	290	260		7	52	6.5	198	
951208	11	47	47.634	S1	240	510	190	10	23	98	199	
951208	23	24	12	S1	100	90		>10	30		BGR	
951209	08	42	29.607	S1	150	450	160	6	6	14	200	
951213	04	57	29.683	S2	360	940	330	0.4	2	8	201	
951213	09	04	34	S2	300	90		<0.15	4.5		BGR	
951214	01	29	47	S2	15	100	30	1	30		BGR	
951214	02	24	17.847	S2	200	450	150	0.8	4	6	202	
951215	20	23	45	S2	60	70	15	<0.15	60		BGR	
951216	22	39	42	S2	160	110		0.1	6		BGR	
951218	07	59	48	S1	70	130	30	2.3	22		BGR	
951219	16	51	19.732	S2	430	850	920	<0.03	1	54	203	
951220	08	51	23.560	S2	100	320	180	1	2	8	204	
951221	08	23	18	S1	110	150	70	>15	15		BGR	
951222	21	00	21	S2	280			<0.1	16		BGR	
951225	09	14	16	S2	200			<0.3	50		BGR	
951225	09	34	14	S1	500	150	25	2.2	60		BGR	
951225	15	21	35	S2	210	170	40	0.1	100		BGR	
951225	22	51	08	S1	80	150	50	2.4	40		BGR	
951226	08	38	15	S2	60	100	50	0.15	9		BGR	
951227	06	23	25.042	S1	420	1200	320	1	1	1.5	218	
951227	21	59	20	S1	50	50		3	65		BGR	
951228	12	28	42	S2	70	80	40	<0.07	110		BGR	
951228	15	47	26	S2	80	170		0.9	17		BGR	
951231	05	37	11.668	S2	180	320	150	0.07	9	65	219	
951231	21	24	34	S2	100	25		<0.2	20		BGR	
960102	03	14	10.996	S1	140	300	80	1	1	0.2	220	
960102	20	20	53	S1	200	120	40	>9	25		BGR	
960104	03	28	41.062	S2	360	630	230	<0.05	2	28	221	
960105	16	04	30	S1	80	60		5	30		BGR	
960107	05	23	20	S2	30	100		0.5	230		BGR	
960107	19	03	28	S2	30	120	150	<0.1	32		BGR	
960109	23	11	31	S2	60	130	20	0.3	5		BGR	
960111	12	55	24.530	S2	1130	1280	190	0.2	0.5	6	222	
960113	15	33	44.261	S2	500	450	50	0.3	2	36	228	
960114	12	15	04.737	S1	4900	7200	1400	1.8	1	60	233	
960115	08	52	36.506	S1	380	360	60	10	1	7	234	
960115	12	50	15	S2	120	60		0.7	22		BGR	
960116	02	02	18	S2	140	170		0.15	17		BGR	
960117	15	56	11.341	S1	250	360	30	4	5	20	235	

RT

From cline@lheavx.gsfc.nasa.gov Fri Feb 2 05:41 PST 1996

Date: Fri, 2 Feb 1996 05:41:51 -0800

Mime-Version: 1.0

To: Bonnard.Teegarden@cesr.cnes.fr, KHURLEY@sunspot.ssl.berkeley.edu,
palmer@lheamail.gsfc.nasa.gov, seifert@lheamail.gsfc.nasa.gov

From: cline@lheavx.gsfc.nasa.gov (T L Cline)

Subject: For Your INFO

Dear Bonnard, Kevin, David, Helmut:

Here is Sergei Golenetskii's latest Konus burst list, for your information. Note that, including the non-triggered-mode 'BGR' events they confidently identify, there are over 300 events so far.

- TLC

DATE	Trigger T0 time (UT)		Sensor	KONUS-WIND		N(S1)/N(S2)		Duration		Trigger number
				Max counts per sec		G3	in G2	T<T0	T>T0	
				G1	G2					
941113	12	09 15	S1	145	85		2.5	115		BGR ✓
941114	02	02 40	S2	110	128	30	0.25	12		BGR ✓
941117	03	14 38.191	S2	406	550	74	0.17	40	5	2 ✓
941117	14	07 57	S2	150	140		<0.15	5		BGR ✓
941119	19	31 09.175	S2	370	703	160	0.23	7	20	4 ✓
941120	20	23 17.924	S1	215	328	30	>15	2	25	5 ✓
941121	17	25 00.945	S1	1652	1656	300	21	3	50	6 ✓
941125	22	04 30.156	S2	115	308	109	0.95	1.5	5	7 ✓
941126	00	20 46	S1	150	205	200	>14	18		BGR ✓
941126	12	22 37.952	S1	860	1430	330	4.2	40	45	8 ✓
941126	16	54 20	S1	55	75		>10	26		BGR ✓
941126	19	56 49.732	S1	290	390	211	6.7	20	26	9
941127	14	30 25.680	S2	200	400	95	0.17	8	7	10 ✓
941127	15	39 10	S1	210	57		2.7	260		BGR ✓
941128	15	37 00	S1	75	90	32	>15	55		BGR ✓
941205	23	33 40.074	S2	370	460	188	0.06	6	30	11 ✓
941207	22	10 32	S2	265	175		<0.2	7		BGR ✓
941210	03	10 52.523	S2	900	2350	1385	0.12	1	15	14 ✓
941214	17	03 51	S1	40	45	29	>6	12		BGR ✓
941214	05	38 45.226	S1	3479	1266	14	1.0	12	240	18 Sol
941221	07	44 08	S2	55	115	30	0.8	20		BGR ✓
941221	22	14 35.215	S1	260	496	165	1.5	55	11	19 ✓
941222	05	36 00.243	S2	334	1360	1066	0.36	7	105	20 ✓
941228	07	39 45.915	S1	300	637	519	4.4	5	90	28 ✓
941228	16	55 23	S2	40	36	23	0.25	25		BGR ✓
941229	12	58 05	S1	46	108	31	1.8	15		BGR ✓
941229	22	51 08.781	S2	396	381	140	0.09	7	25	29 ✓
941230	20	52 53	S1	74	117	52	8.4	158		BGR ✓
941230	23	43 44	S2	55	70	16	<0.2	4.5		BGR ✓
950104	07	18 39.613	S2	258	550	219	0.75	2.8	20	31 ✓
950104	09	00 58	S2	140	143	40	<0.1	25		BGR ✓
950110	06	02 15	S2	332	180		<0.1	3600		BGR
950110	13	37 57.084	S2	234	422	213	0.05	38	100	32 ✓
950111	04	49 12.241	S1	586	620	100	>19	92	24	33 ✓
950111	12	18 49.196	S1	225	435	164	1.85	26	50	34 ✓
950112	07	45 37.120	S2	1305	1800	336	0.04	2.5	44	35 ✓
950113	05	59 13	S1	283	180	26	>10	52		BGR ✓
950113	17	38 32	S2	85	162	35	<0.06	75		BGR ✓
950114	01	00 38	S1	46	110		1.6	6		BGR ✓
950114	04	03 01	S2	23	76		0.5	70		BGR ✓
950114	07	30 30.766	S2	205	406	60	<0.05	1	100	36 ✓
950114	13	10 34.865	S1	1320	2828	516	3.1	1	10	37 ✓
950115	02	49 32	S2	40	47	34	<0.15	24		BGR ✓
950117	01	36 00	S2	56	82	42	0.2	108		BGR ✓
950118	12	22 54	S2	57	105	17	<0.1	35		BGR ✓
950125	14	51 52.253	S1	380	600	140	8.2	3.8	11	39

K O N U S

2 2 / 2 / 9 6

U L Y S S E S R T

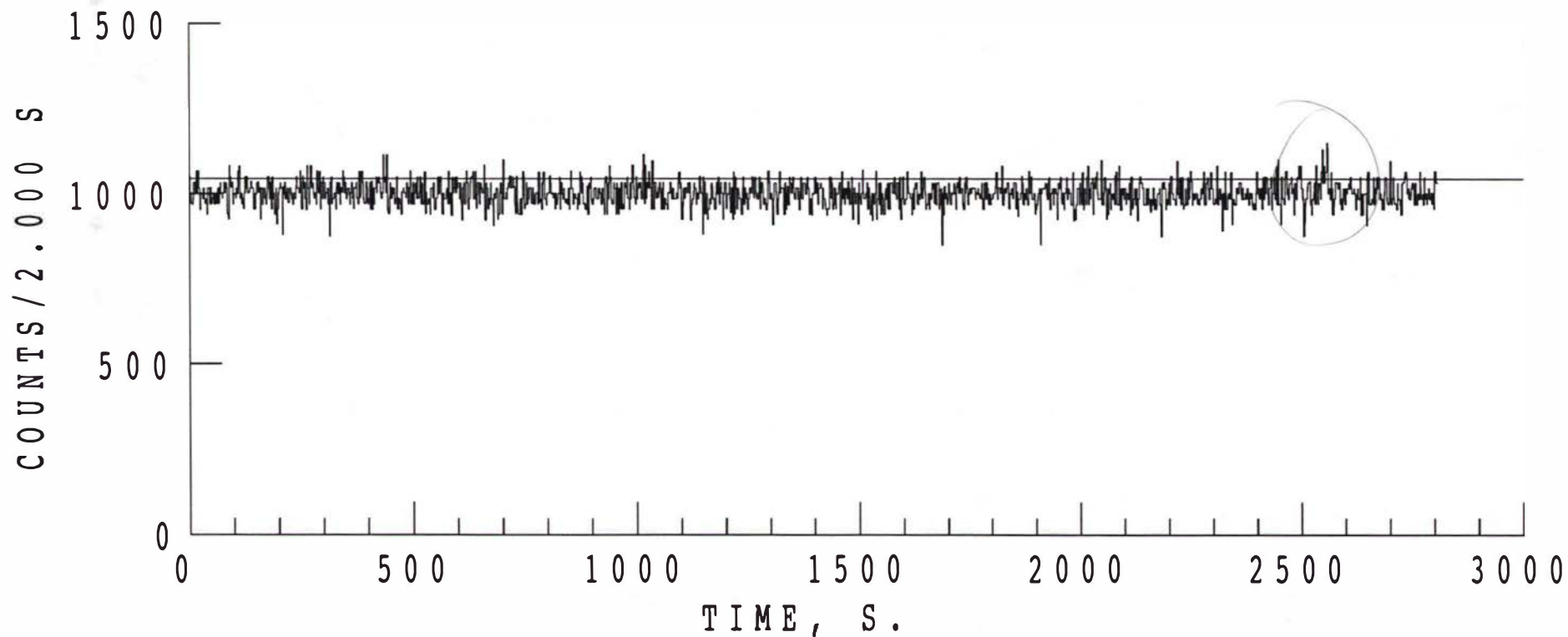
1 8 / 1 2 / 9 5 2 7 3 9 6 . 1 8 0 s

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 8

0 - 0 k e V

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From DEAL@SSLLES.MSFC.NASA.GOV Wed Dec 20 13:38 PST 1995
From: DEAL@SSLLES.MSFC.NASA.GOV
Date: Wed, 20 Dec 1995 15:37:44 -0600 (CST)
To: burst@compTEL.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 4026

TIME: TJD=0069 SECONDS=45688

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=2.4 AZIMUTH=14.6 ERROR=2.8 DEGREES

COMMENTS:

BATSE BURSTER

BATSE BURST TRIGGER

NO.: 4027

TIME: TJD=0069 SECONDS=66078

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=17.7 AZIMUTH=339.5 ERROR=6.5 DEGREES

COMMENTS:

BATSE BURSTER

BATSE BURST TRIGGER

NO.: 4030

TIME: TJD=0069 SECONDS=84131

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

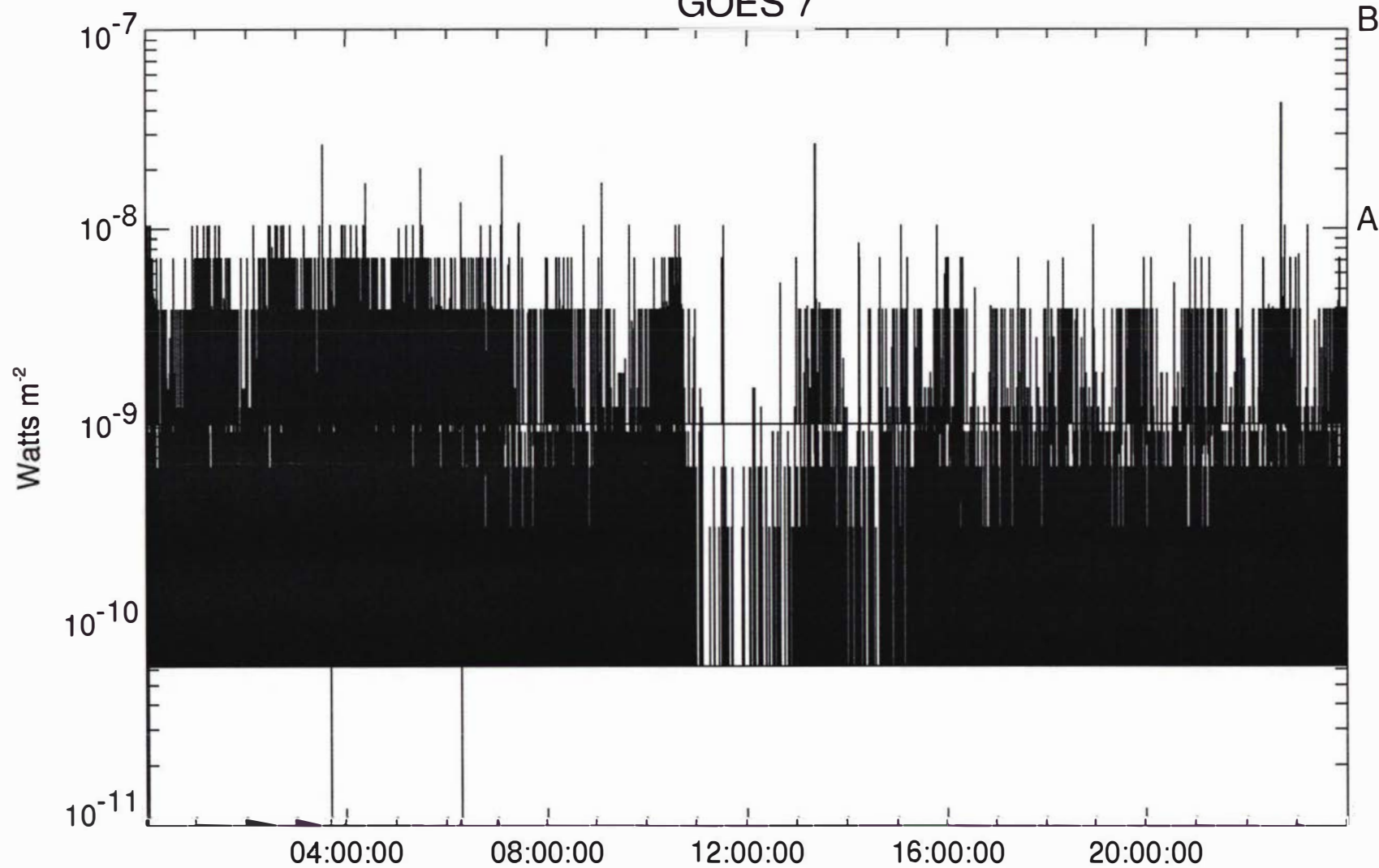
INTENSITY: COUNTS/CM2

LOCATION: ZENITH=6.7 AZIMUTH=344.9 ERROR=2.6 DEGREES

COMMENTS:

BATSE BURSTER

GOES 7

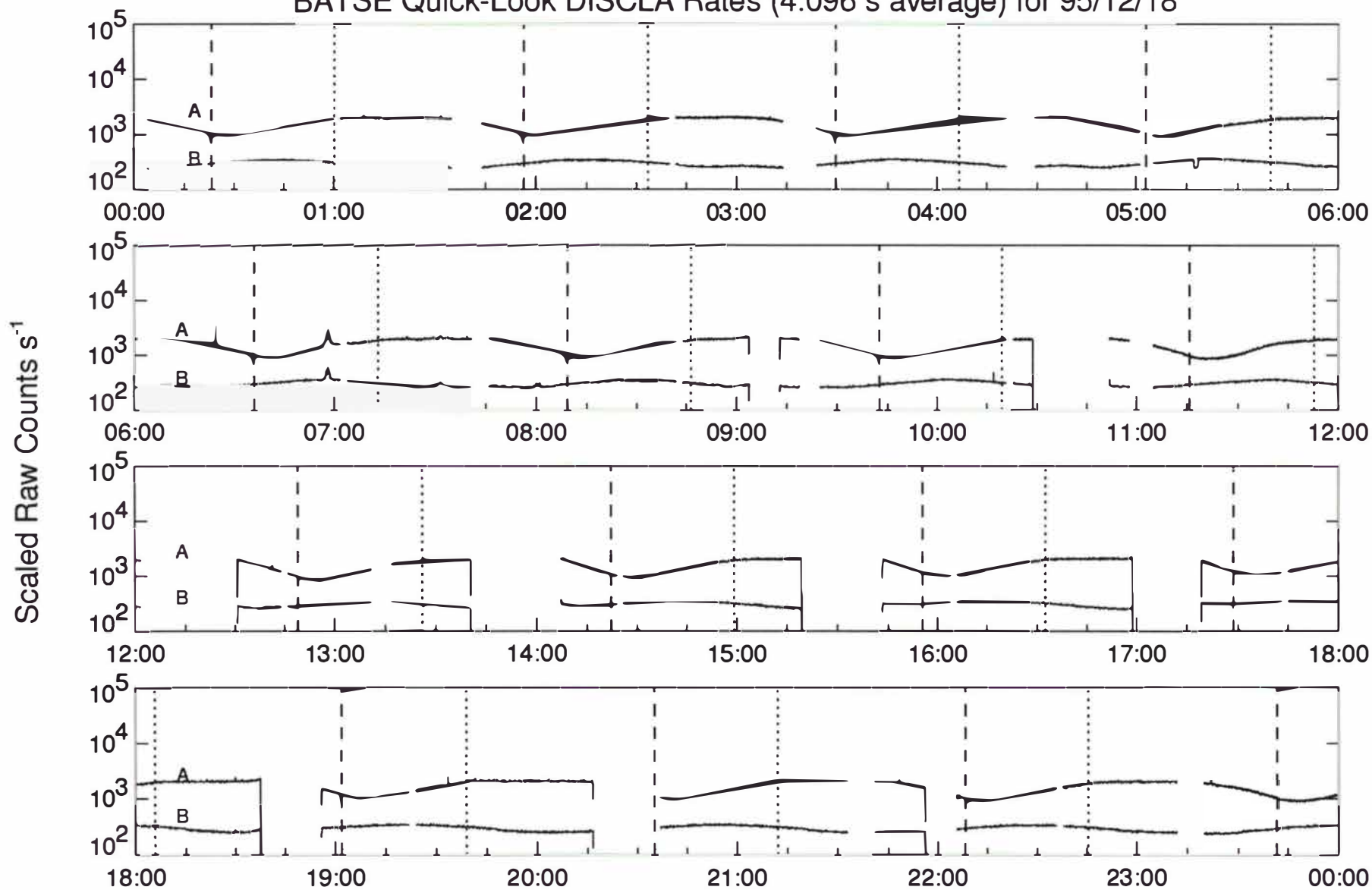


Data Start: 95/12/18, 0000:03

Plot created: 95/12/20, 0651

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 95/12/18



Current Time: 95/12/20, 0652 EDT

A: Channel 0 Most Sunward LAD

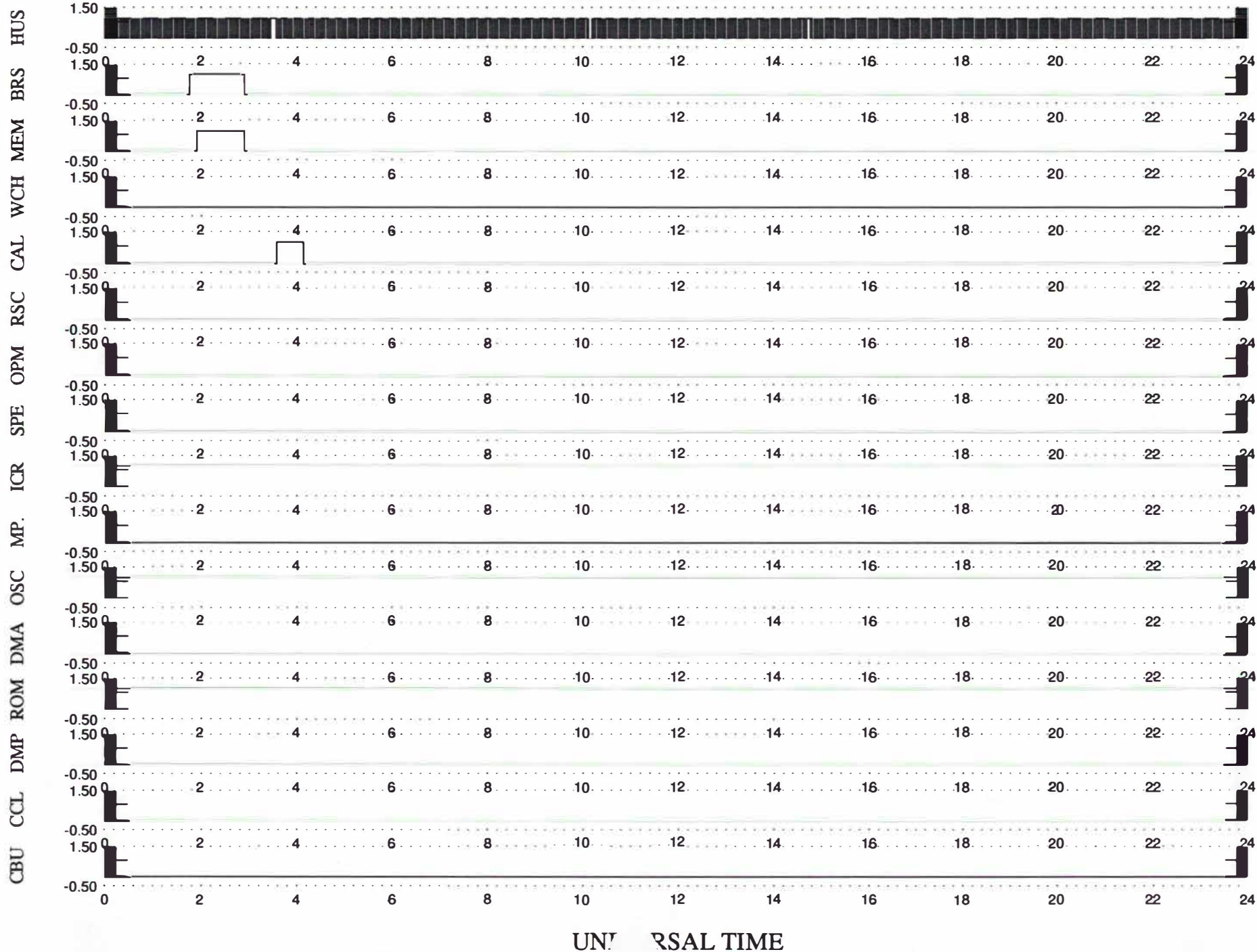
B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

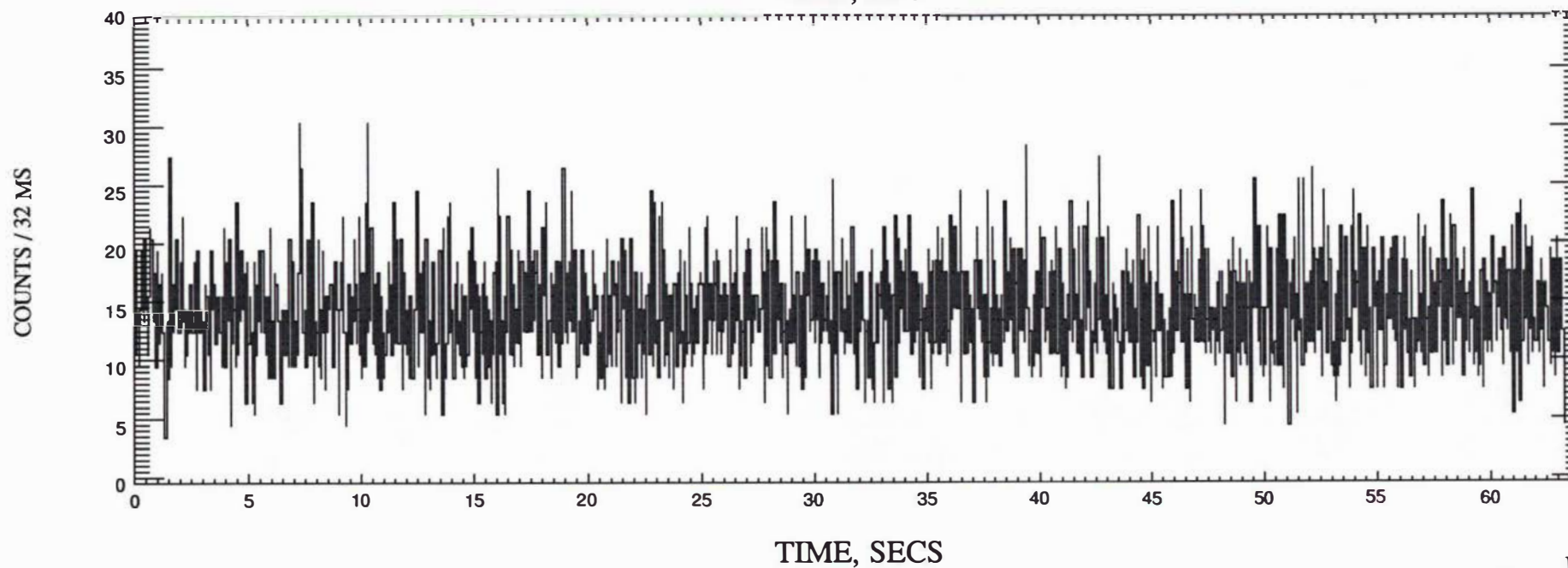
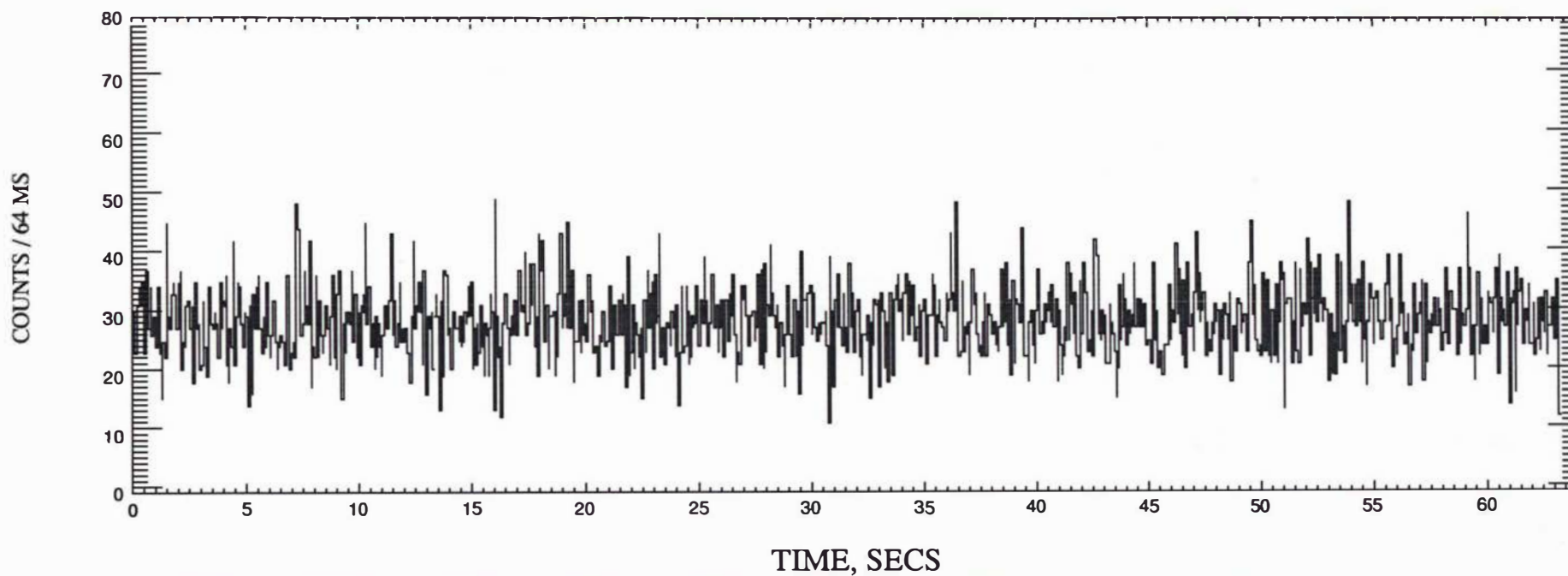
HUS MODES EDR day 352, year 1995 to day 352, year 1995 BURST NUMBER 2

4/1/96



HUS 2A TRIGGERED DATA EDR day 352, year 1995
Burst Counter 2 at UT= 1.628496733771 h= 5862.588 s 01:37:42.588

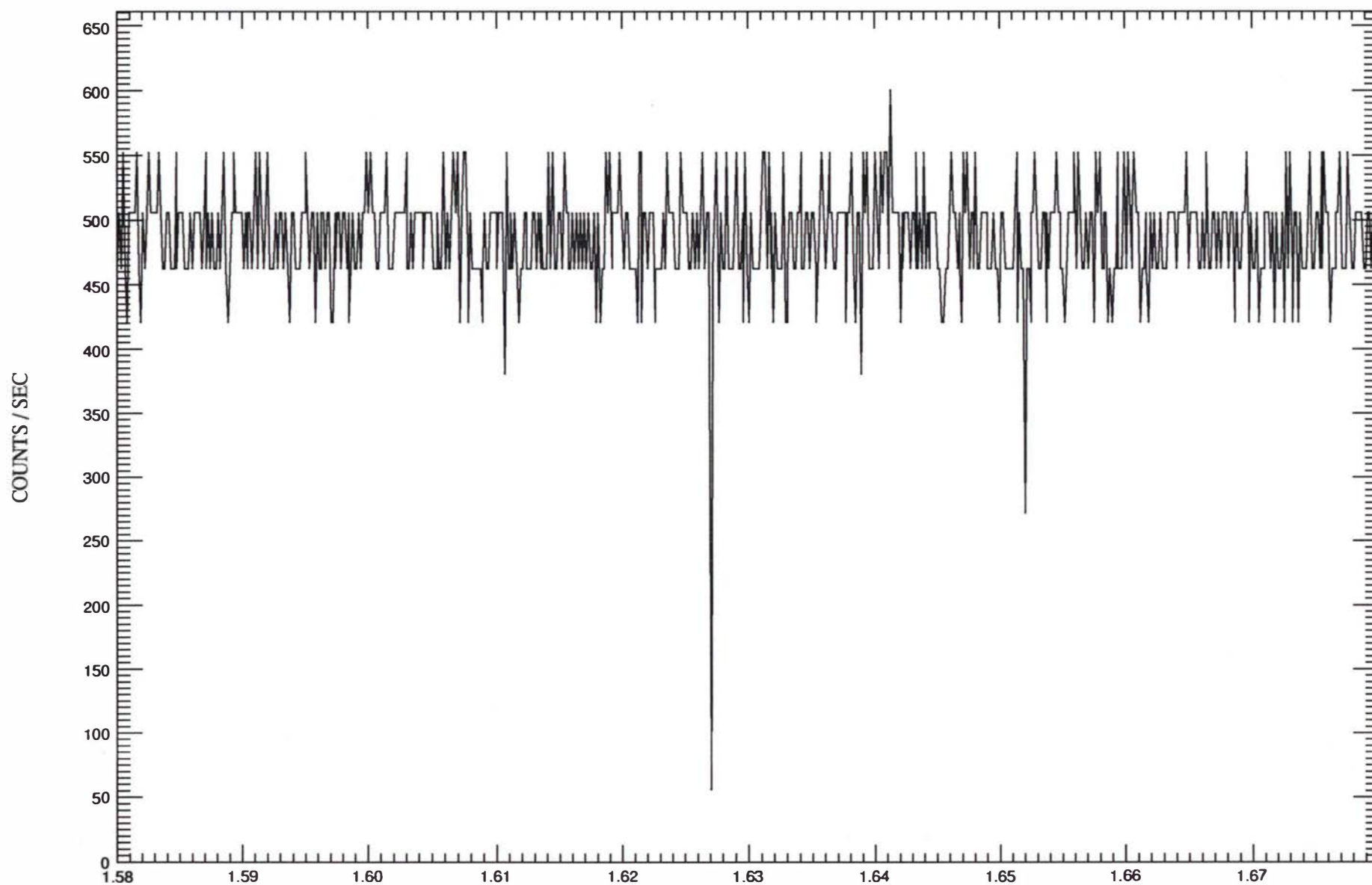
4/1/96



B# 1

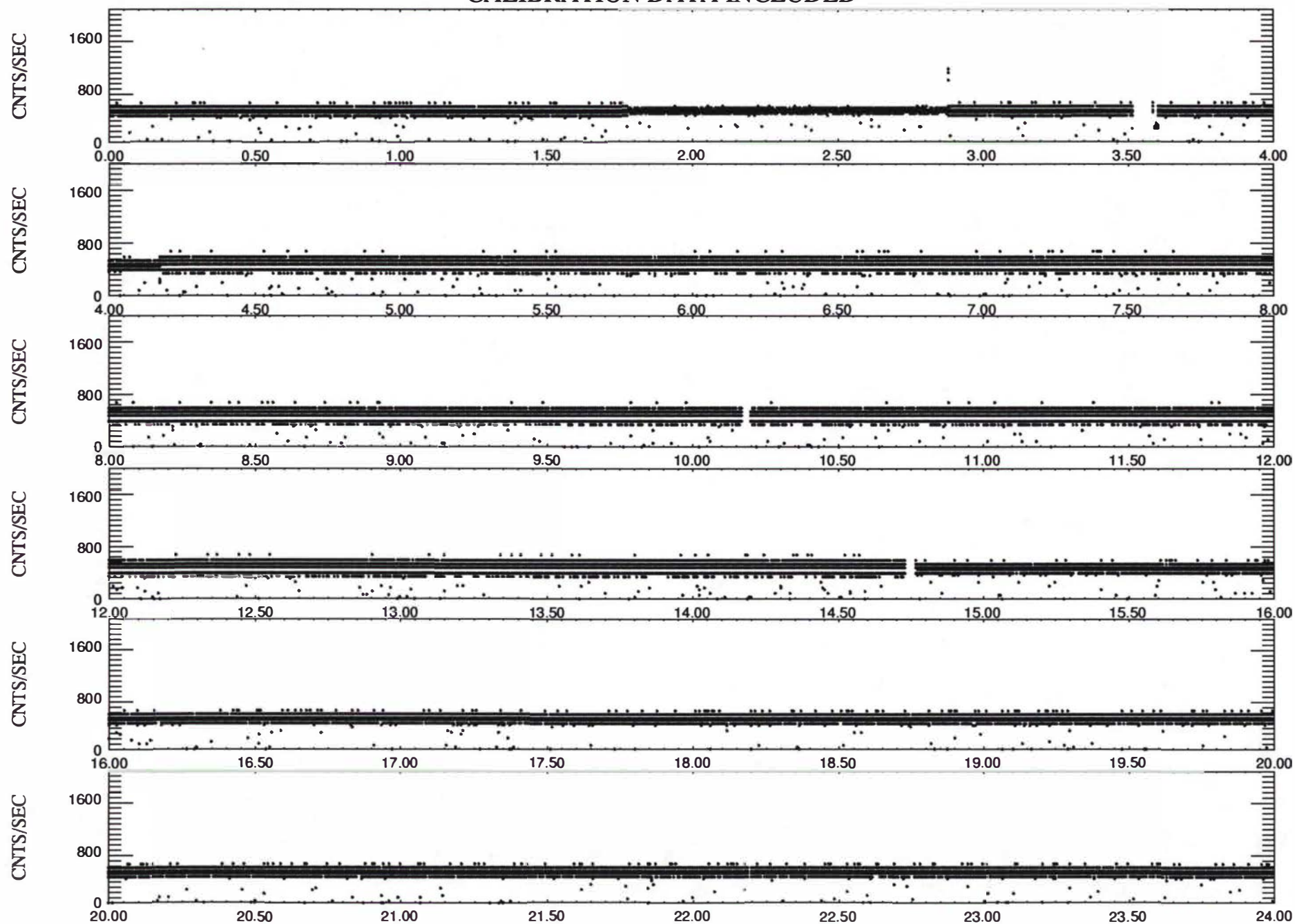
HUS 2A, MODE 1, NOT AVERAGED QEDR day 352, year 1995 to day 352, year 1995
CALIBRATION DATA INCLUDED

12/19/95

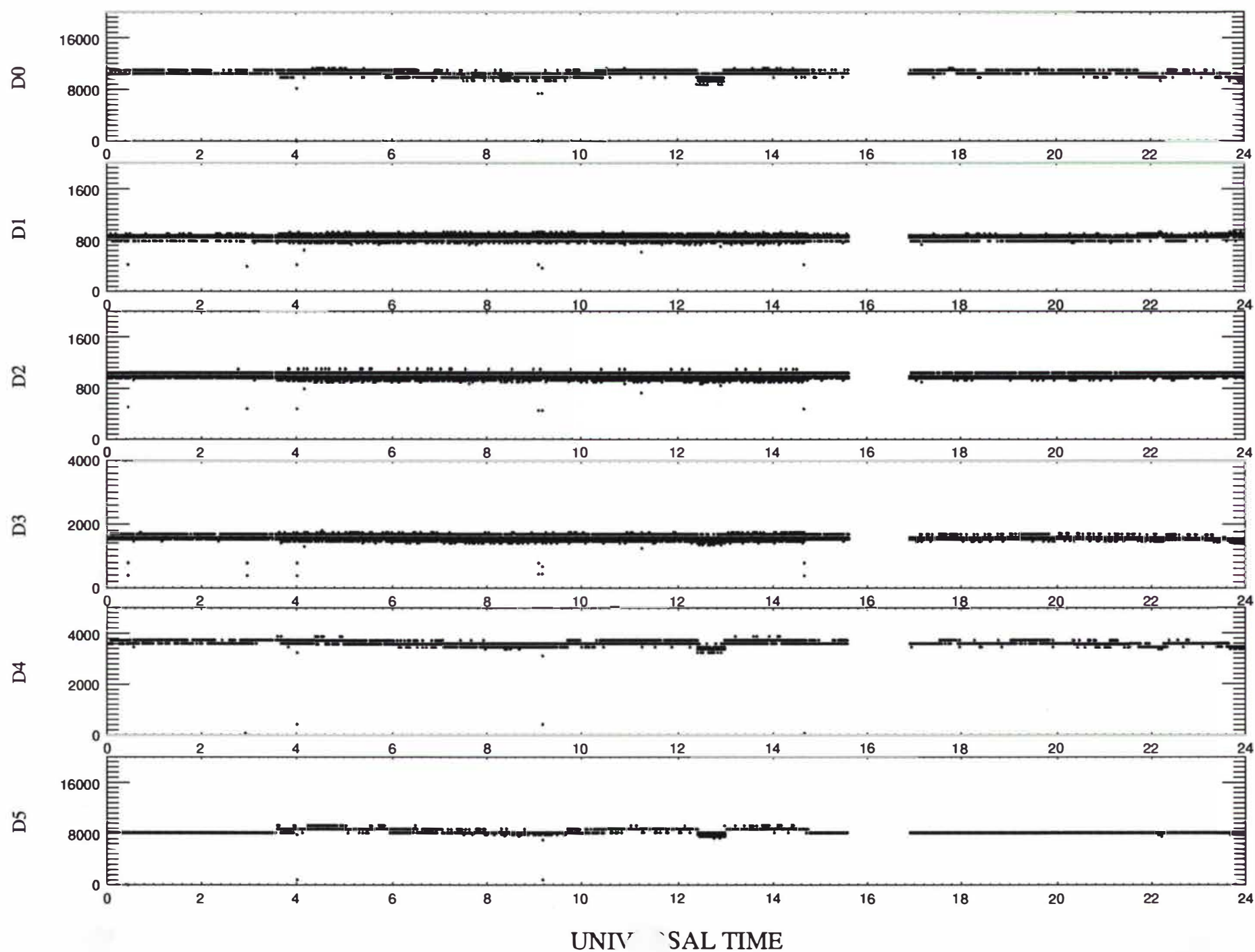


HUS 2A, MODE 1, NOT AVERAGED EDR day 352, year 1995 to day 352, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNIVERSAL TIME



From HAGEDON@SSLLES.MSFC.NASA.GOV Thu Dec 21 10:43 PST 1995
Date: Thu, 21 Dec 1995 12:42:29 -0600 (CST)
From: HAGEDON@ssl.msfc.nasa.gov
To: burst@compTEL.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, "15733::SCHAEFER"@ssl.msfc.nasa.gov
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 4031

TIME: TJD=0070 SECONDS=01864

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4032

TIME: TJD=0070 SECONDS=07185

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4033

TIME: TJD=0070 SECONDS=14144

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4034

TIME: TJD=0070 SECONDS=23820

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4035

TIME: TJD=0070 SECONDS=30057

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4036

TIME: TJD=0070 SECONDS=37876

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
BATSE BURSTSER.

BATSE BURST TRIGGER

NO.: 4037

TIME: TJD=0070 SECONDS=46541

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4038

TIME: TJD=0070 SECONDS=57127

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
BATSE BURSTER.

From HAGEDON@fender.msfc.nasa.gov Thu Dec 21 11:33 PST 1995
From: HAGEDON@fender.msfc.nasa.gov
Date: Thu, 21 Dec 1995 13:33:18 -0600 (CST)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 4039

BATSEARCH PROGRAM

BATSE BURST # 4039
EVENT OF 1995 DEC 19 DAY OF YEAR=353
EVENT CROSSING TIME AT BATSE : 60678. S. OR 16:51:18.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 241.000 61.000
BATSE PEAK COUNTING RATE: 37000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 19/12/ 95 IS:
RA= 224.024 DEC= 57.625 DIST= 2.837 AU
BATSE-ULYSSES DISTANCE = 424359186. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=170.73 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1397.04 SECS.
CROSSING TIME AT ULYSSES IS 59281. S. OR 16:28:00 +/- 68.35 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 19/12/ 95 IS:
RA= 285.413 DEC= -23.723 DIST= 2.316 AU
MARS-BATSE DISTANCE = 346478016. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 88.00 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 40.25 SECS.
CROSSING TIME AT MARS IS 60718. S. OR 16:51:58 +/- 201.14 SECONDS

BATSE BURST TRIGGER

NO.: 4039

TIME: TJD=0070 SECONDS=60678

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=87.5 AZIMUTH=225.2 ERROR=0.7 DEGREES

COMMENTS:

BURST. FAST RISE, SLOWER DECAY WITH LOTS OF SUBSTRUCTURE. DUR.~110 SEC.
VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
4039	951219	10070	60678	37000	241	+61	110

From cline@heavx.gsfc.nasa.gov Fri Mar 29 08:40 PST 1996
 Date: Fri, 29 Mar 1996 08:40:19 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@heavx.gsfc.nasa.gov (T L Cline)
 Subject: Konus Event List augmentation

Dear Kevin,

This list includes Sergei's latest Konus-W (GGS-Wind) and Konus-A (Kosmos-2326) events, for comparison with Ulysses, BATSE, TGRS, etc. The times listed are prioritized for Konus-W (i.e., Konus-A time given if Konus-W doesn't trigger).

Yr	Mn	Dy	UT (Konus)	BATSE	Ulysses	Konus	TGRS	Notes
95	11	2	07085.879	?	?	168	no	
95	11	2	21209.015	3891	R I	169	345	
95	11	4	05868.077	3893	R I	170	BGR	
95	11	5	46827.808	?	?	171	no	
95	11	12	66495.244	?	R I	172	no	
95	11	13	84358.872	3906	R I	173	BGR	
95	11	17	10123.762	3909	?	175	no	
95	11	19	29831.402	3912	R I	176	348	
95	11	19	46457.519	?	?	177	BGR	
95	11	22	09841.38	?	?	179	no	
95	11	22	17107.738	?	?	180	349	
95	12	2	39101.744	?	?	195	BGR	
95	12	3	03988.18	?	?	196	360	
	12	8	19617.151	?	?	197	no	
	12	8	39452.057	?	?	198	no	
95	12	8	42467.634	?	?	199	BGR	
95	12	9	31349.607	?	?	200	BGR	
95	12	13	17849.683	?	?	201	362	
95	12	14	08657.847	?	?	202	no	
95	12	19	60679.732	?	?	203	no	
95	12	20	31883.56	?	?	204	BGR	
95	12	22	25203.254	?	?	no	?	= K-A t.
95	12	27	23005.042	?	?	218	375	
96	12	31	20231.668	?	?	219	no	
96	1	2	11650.996	?	?	220	no	
96	1	4	12521.062	?	?	221	no	
96	1	11	46524.53	?	?	222	no	
96	1	13	56024.261	?	?	228	no	
96	1	14	44104.737	?	?	233	384	+ K-A t.
96	1	15	31956.506	?	?	234	BGR	
96	1	17	57371.341	?	?	235	no	
96	1	19	34679.317	?	?	236	no	
96	1	19	45226.016	?	?	237	no	
96	1	20	36768.974	?	?	238	no	
96	1	24	03388.008	?	?	239	385	+ K-A t.
96	1	24	76096.911	?	?	BGR	?	= K-A t.
96	1	30	08756.848	?	?	240	no	
96	2	1	78530.582	?	?	241	?	+ K-A t.
96	2	2	50750.813	?	?	242	?	
	2	10	35198.959	?	?	247	?	
	2	16	57796.347	?	?	BGR	?	= K-A t.
96	2	19	20589.684	?	?	BGR	?	= K-A t.
96	2	28	85760.241	?	?	249	?	
96	2	29	22445.141	?	?	250	?	

96	3	5	33645.352	?	?	251	?
96	3	12	35074.697	?	?	252	?
96	3	19	51992.828	?	?	253	?
96	3	21	76321.803	?	?	254	?
96	3	22	19642.728	?	?	255	?
96	3	24	80064.124	?	?	257	?
96	3	25	69892.978	?	?	258	?

--

TLC

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

Help corr removed

Date: Feb 23 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☐ Final ephemeris used?
- ☐ Final, CDROM data used?
- ☐ Were data checked by Joe Springer for 0.5 s errors?
- ☒ 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 starts

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

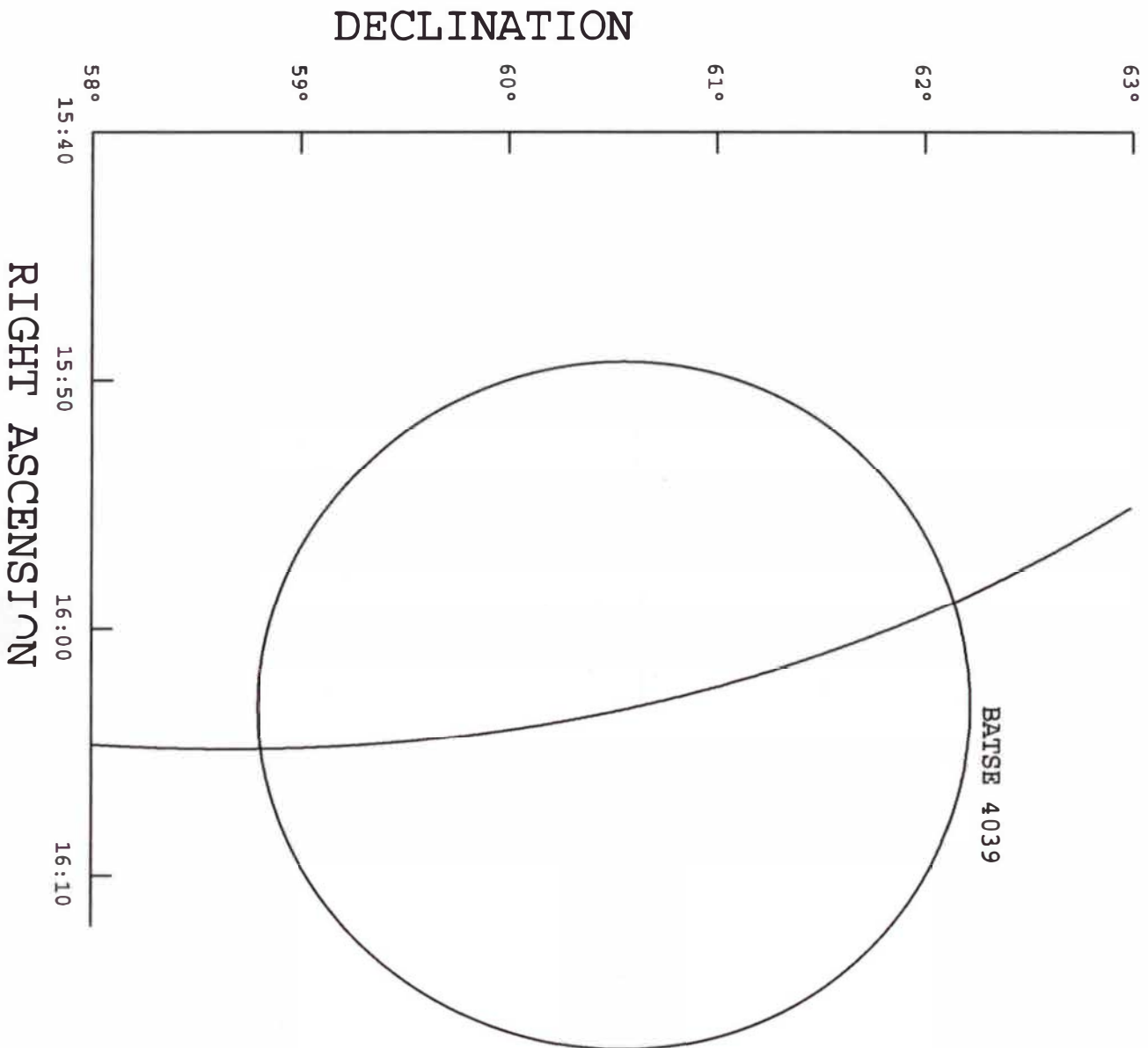
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF DEC 19, 1995 16:27

23 / 2/98



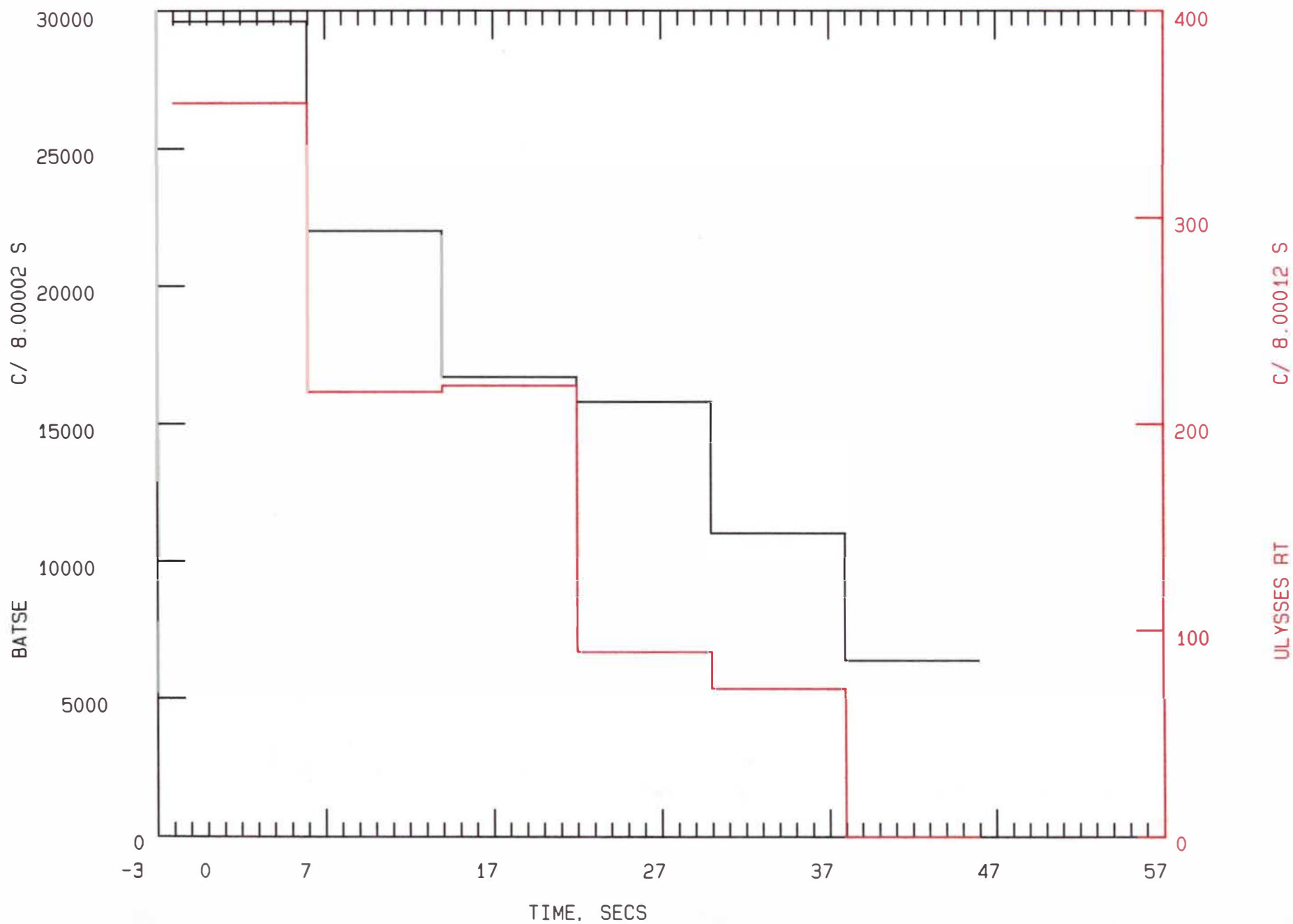
BATSE

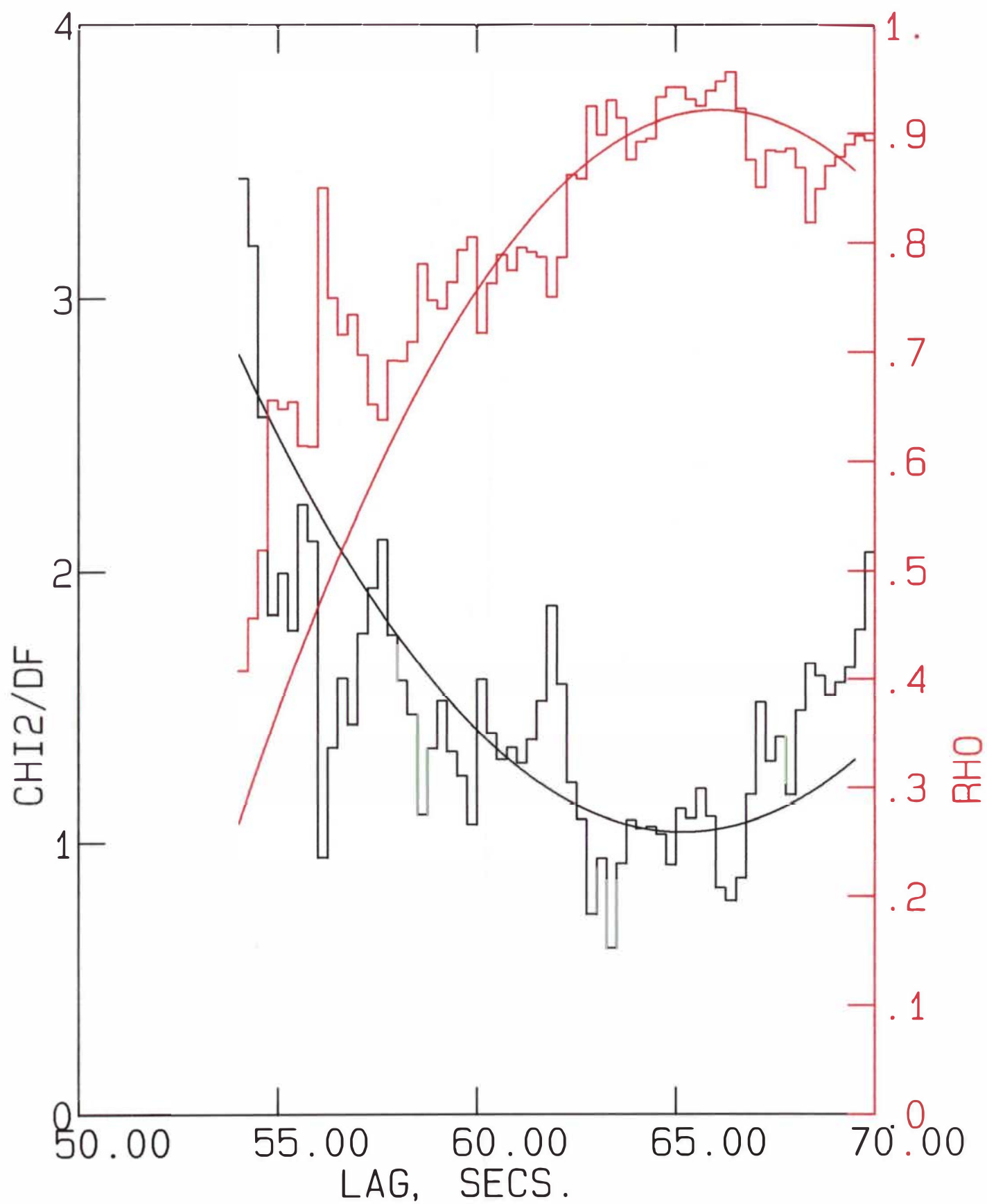
-ULYSSES RT CORRELATION

19/12/95

60679.730

23/ 2/98





ULYSSES RT

23 / 2 / 98

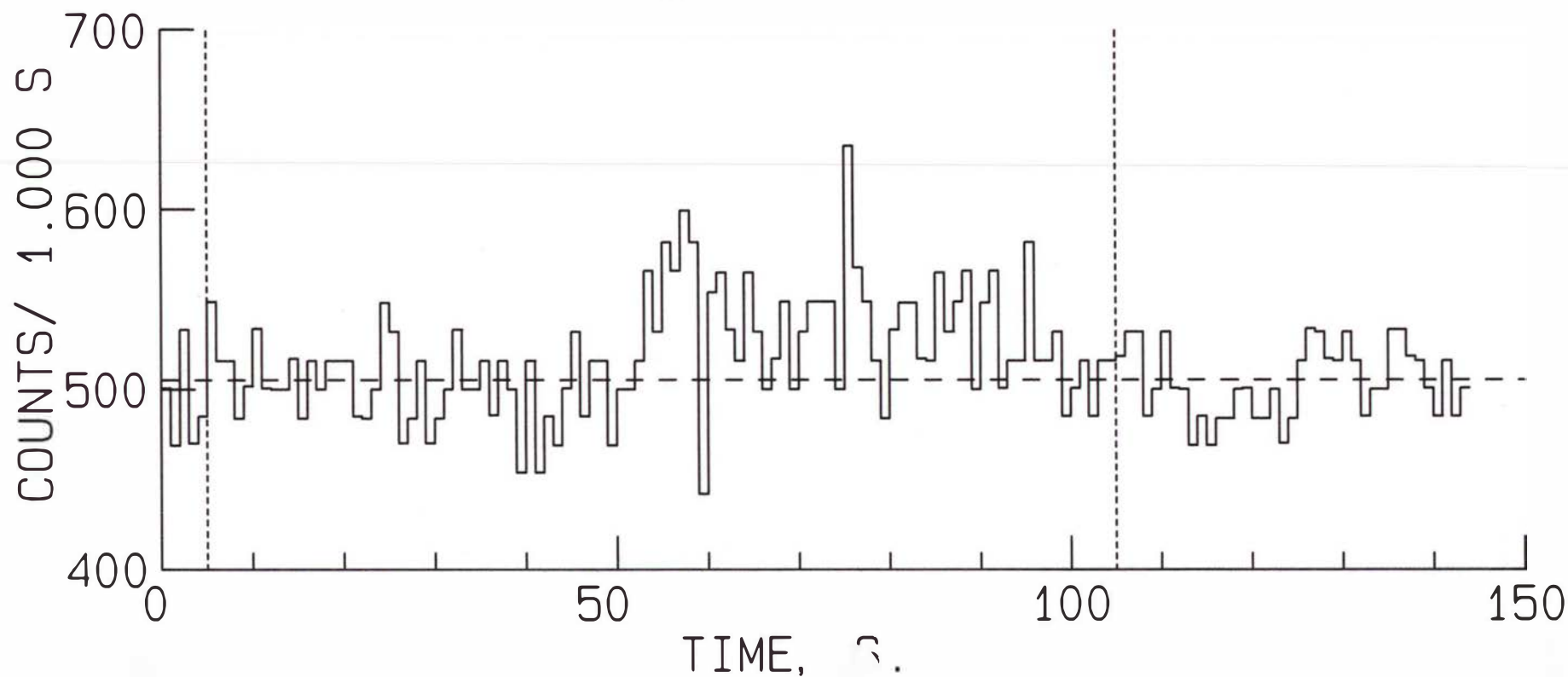
19/12/95 59220.195 s

0.250 S INTERVALS REGROUPED BY 4

21- 144 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

|||



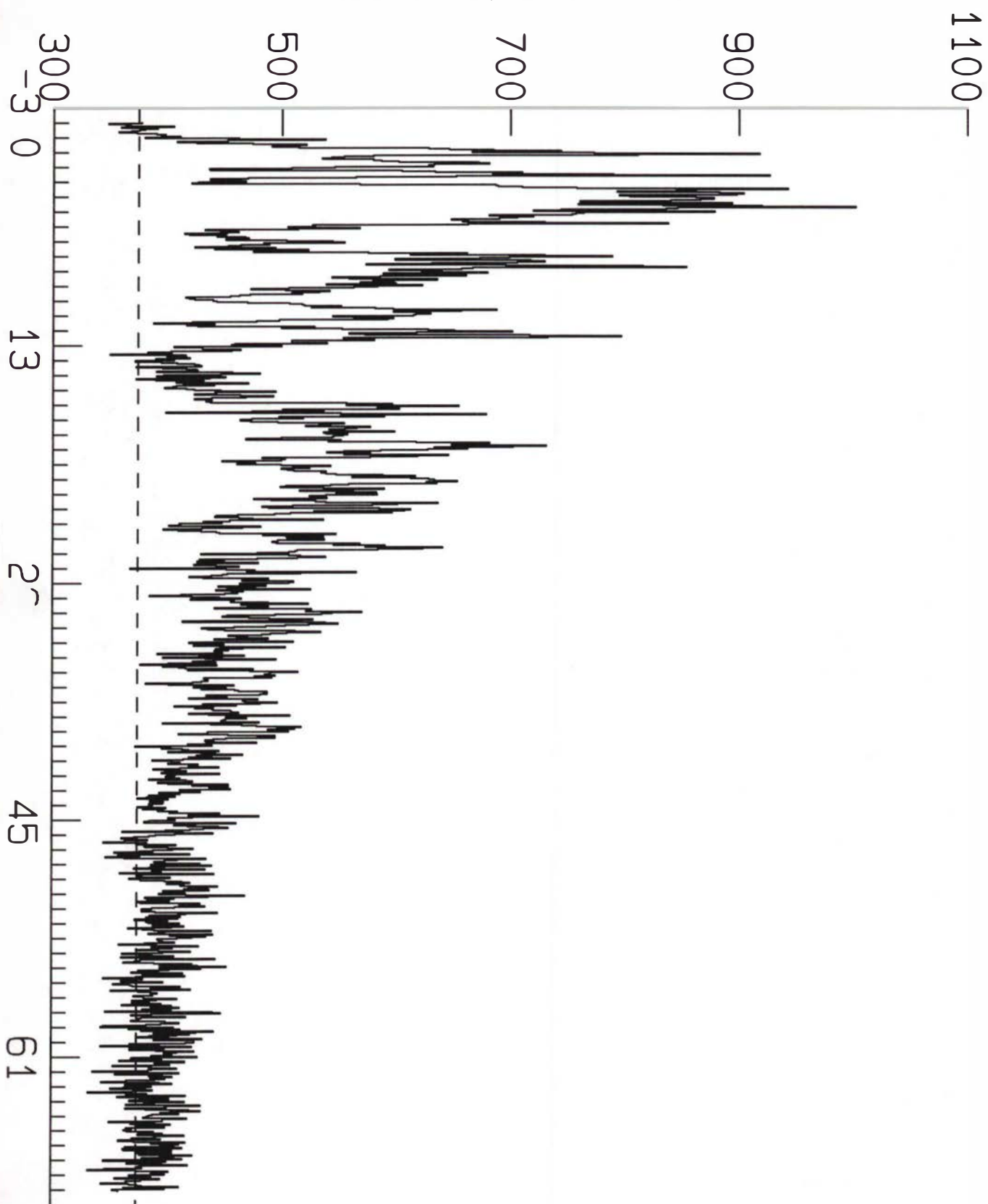
BATSE

19/12/95

60679.730

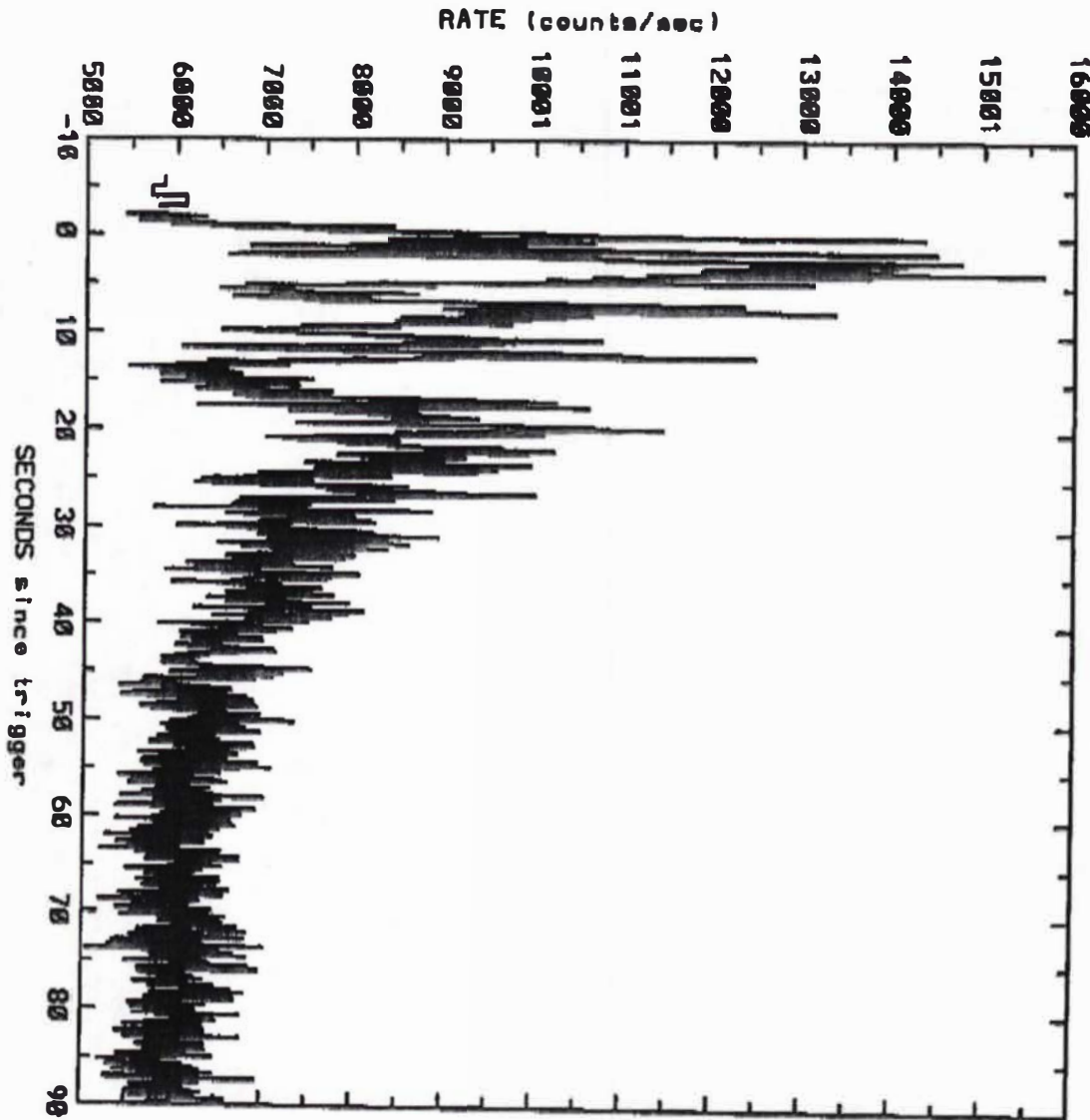
25- 100 keV

COUNTS/0.064 S



Dec 19 1995

DISCSC Data for K. Hurley. No. 4039



12-JAN-1996 16:42:67

Created by NCRS BD
(Burst Display)
Version 12.23

Trigger 2 = 4039
Trigger Time:
18078 / 66679.738
Burst Data Type:
DISCSC

Deadtime
Corrected: N
Background Data
Type: PREB + DISCLA
Minimum Integ. Time:
8.064 seconds
Detectors [7.6],
76-----
Discriminators:
[1, 2]
Quality Mask:
801801

From HAGEDON@SSLLES.MSFC.NASA.GOV Thu Dec 21 11:17 PST 1995
Date: Thu, 21 Dec 1995 13:16:58 -0600 (CST)
From: HAGEDON@ssl.msfc.nasa.gov
To: burst@comptel.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, "15733::SCHAEFER"@ssl.msfc.nasa.gov
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 4040

TIME: TJD=0070 SECONDS=75066

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4041

TIME: TJD=0070 SECONDS=79878

TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
BATSE BURSTER.

BATSE BURST TRIGGER

NO.: 4042

TIME: TJD=0070 SECONDS=85099

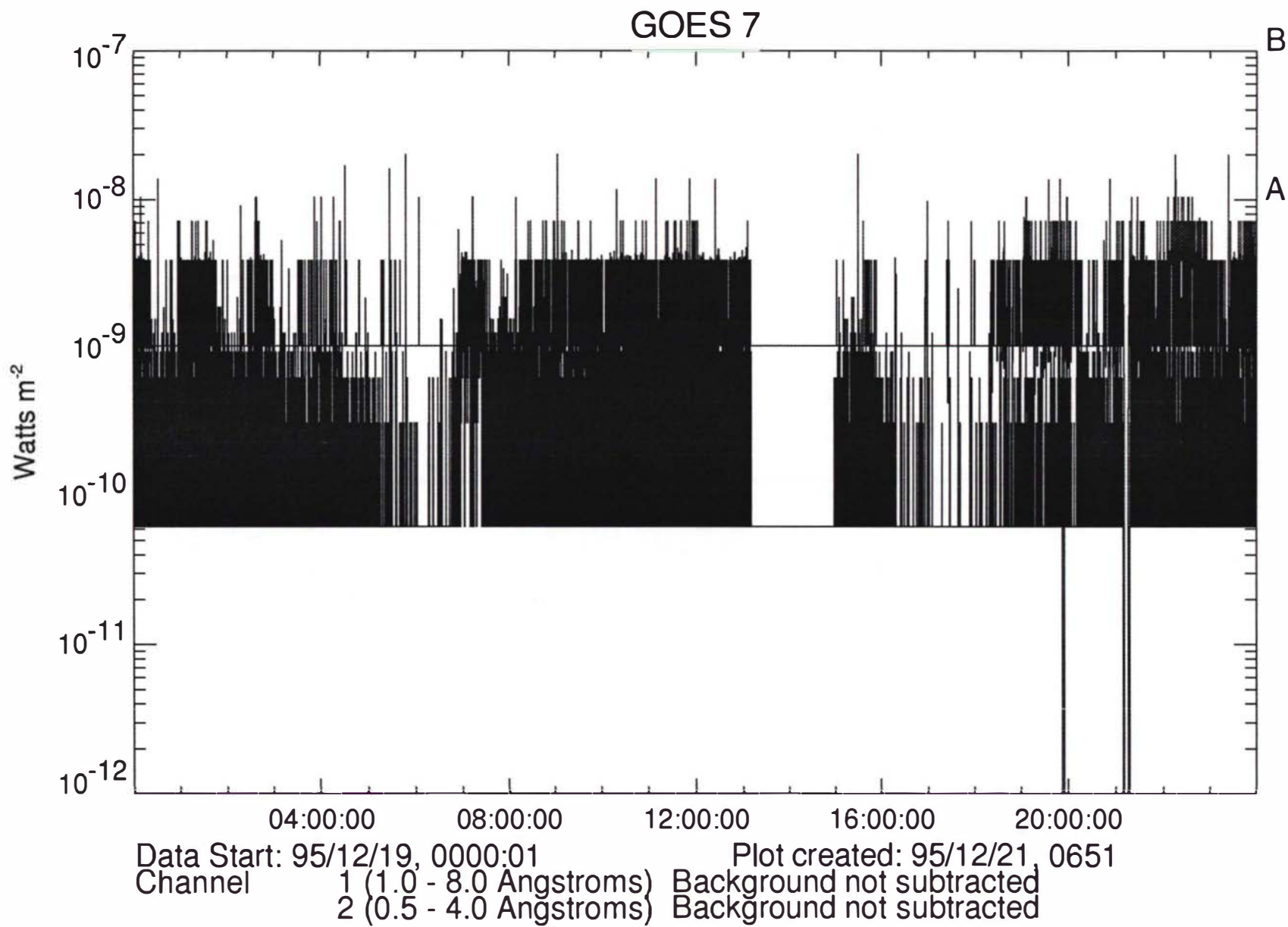
TYPE: TRANSIE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

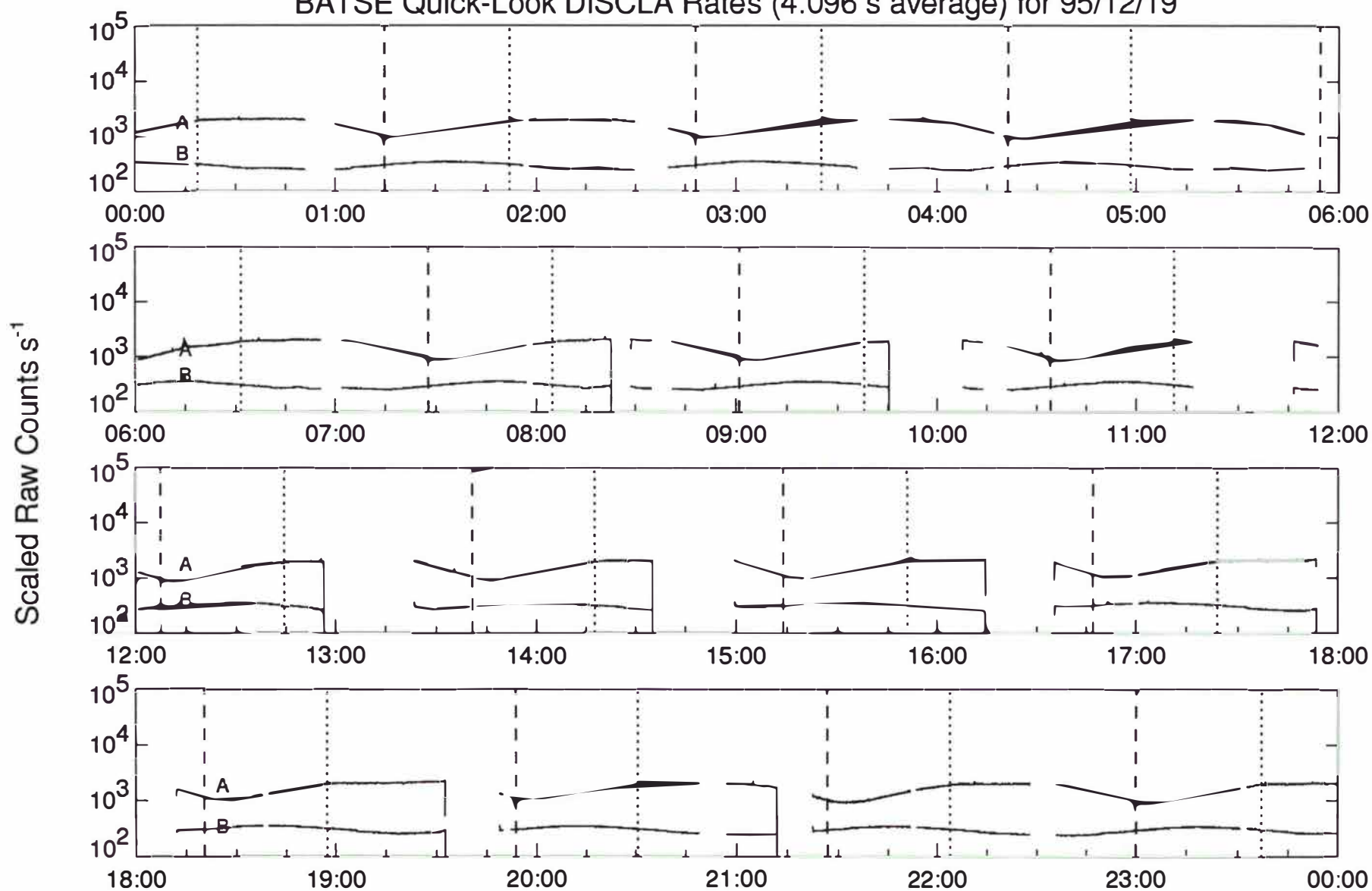
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
BATSE BURSTER.



BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/12/19



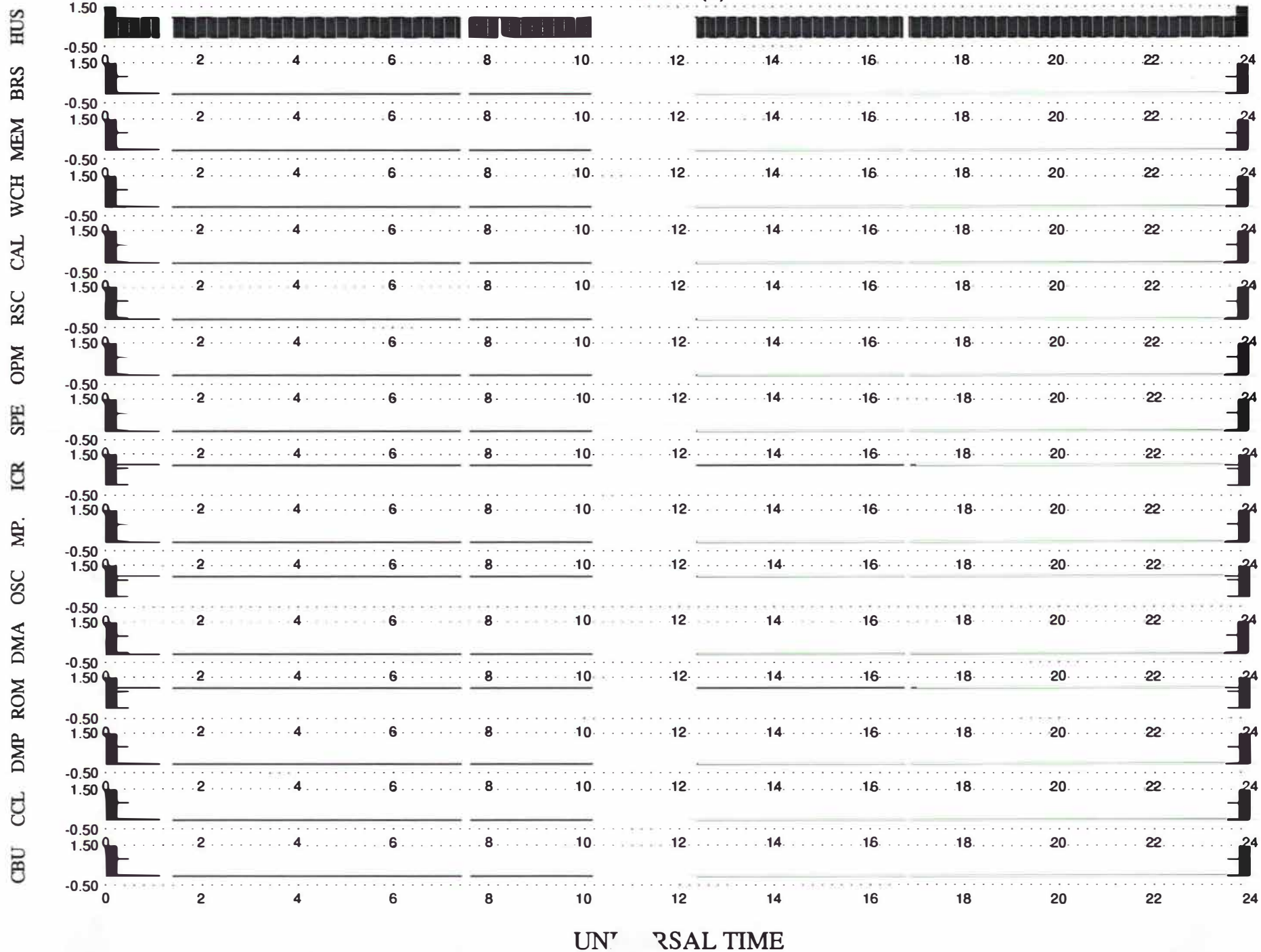
Current Time: 95/12/21, 0651 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

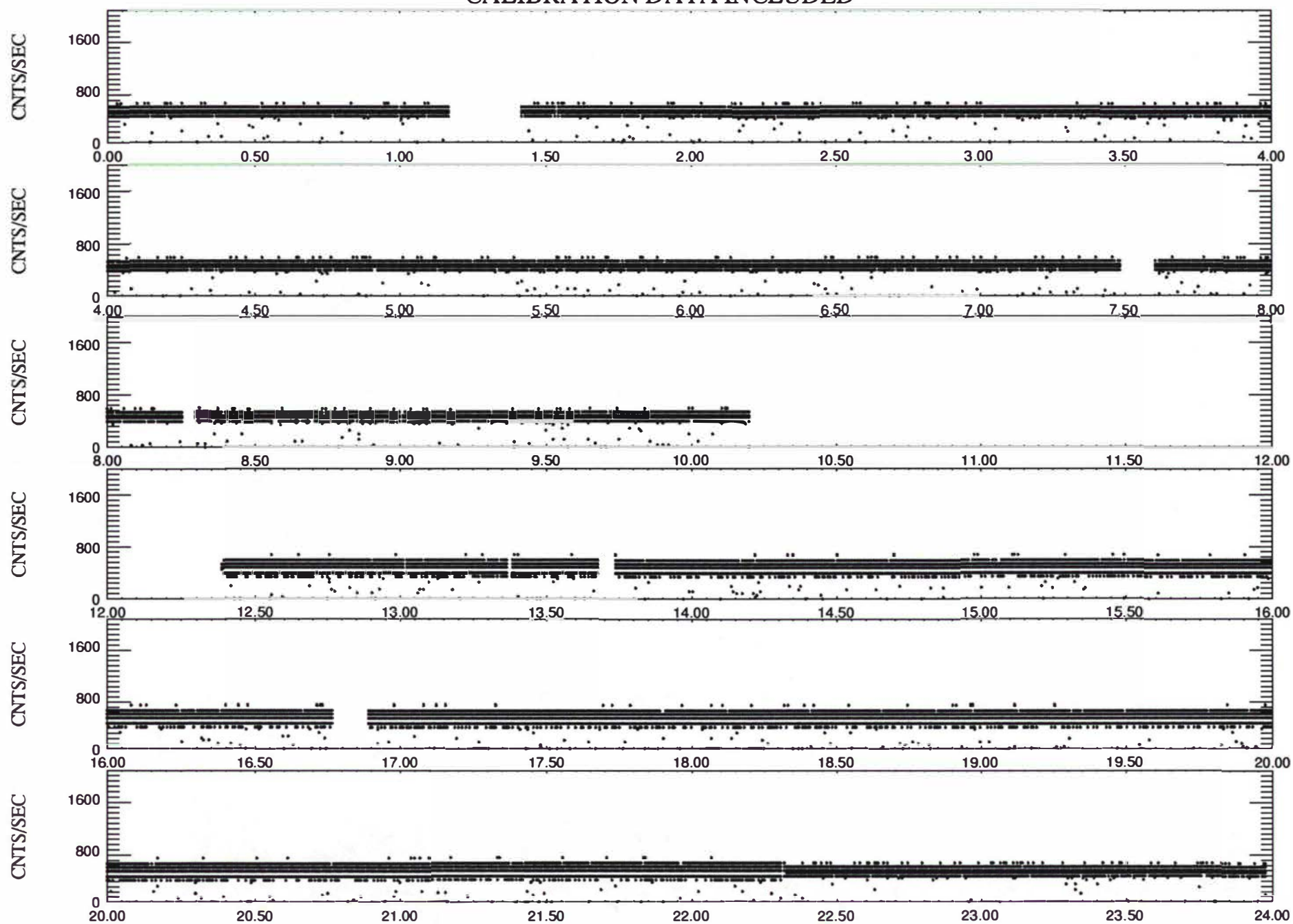
HUS MODES EDR day 353, year 1995 to day 353, year 1995
NO BURST (2)

4/1/96

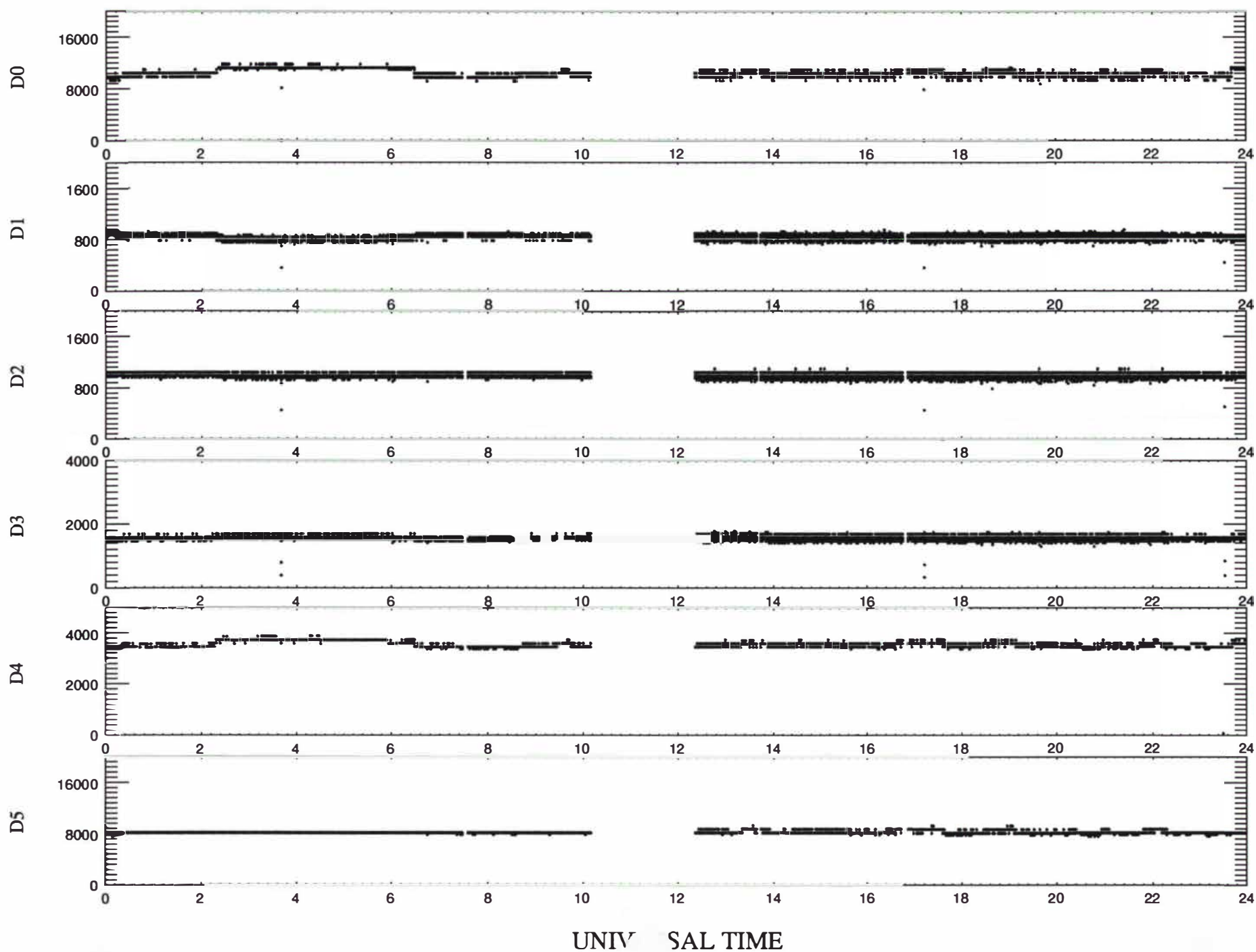


HUS 2A, MODE 1, NOT AVERAGED EDR day 353, year 1995 to day 353, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNIVERSAL TIME



From ulsdmt@jplsp.DNET.NASA.GOV Mon Mar 18 17:13 PST 1996
From: ulsdmt@jplsp.DNET.NASA.GOV
Date: Mon, 18 Mar 96 20:13:12 -0500
To: "khurley@sunspot.ssl.berkeley.edu"@east.DNET.NASA.GOV (SENT TO @LIST1)
Subject: Misplaced Major Frames in EDRs

Greetings,

We have identified an operations technique that produces data that will be improperly time tagged by the MGDS (telemetry system). Instances of EDR errors (major frames out of order) have been found in the CDROM archival products for December 1995 and January 1996. Errors will also be found in the still to be shipped February 1996 data.

When major frames are recorded but not transmitted during the next track, but are eventually downlinked with data from a succeeding day, the embedded SCLKs are 'assumed' to be incorrect by the frame syncer and are re-tagged with SCETs and SCLKs matching the adjacent (but newer) data.

For each major frame processed in this manner, a gap will exist, representing the time the data was actually acquired, and a major frame or realtime data, representing the time period the data now errently represents, will be replaced by the misplaced playback data.

Yes. Confusing. See the attached memo detailing the times involved.

Approximately 17 such instances are known to have occured. The total time involved is about twenty minutes. Because the data loss is small and the cost of reprocessing would be so large, the Project has determined that it would be imprudent to reprocess.

For your information, however, we included a memo from Nigel Angold which itemizes each instance.

We thank Toni Galvin and Nigel for identifying the problem and assisting in the diagnosis.

Regards,

Joe

To: <ulsdmt@jplsp.jpl.nasa.gov>
From: Nigel Angold <nangold@jplsp2.jpl.nasa.gov>
Subject: Mis-corrected S/C clocks / SCETs
Cc: chris.leech@jpl.nasa.gov

I have looked at our recent tape recorder usage and predict that you will see major frames with mis-corrected spacecraft clocks / SCETs at the following times (give or take a few minutes):

1995:

~342.22:59 SCET	should be	~341.17:47 SCET
~347.22:39 SCET	should be	~346.16:46 SCET
~350.21:54 SCET	should be	~349.16:22 SCET
~355.22:14 SCET	should be	~354.15:42 SCET
~359.14:04 SCET	should be	~359.05:36 SCET
~360.14:59 SCET	should be	~359.00:20 SCET
~362.20:55 SCET	should be	~361.16:06 SCET

1996:

~001.02:45 SCET	should be	~364.23:12 SCET
~002.14:35 SCET	should be	~001.04:22 SCET
~029.19:35 SCET	should be	~028.13:43 SCET
~033.19:10 SCET	should be	~032.13:18 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~048.17:29 SCET	should be	~047.13:45 SCET
~054.08:59 SCET	should be	~053.11:46 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~039.18:34 SCET	should be	~038.12:14 SCET

We see data gaps for each of the correct times, so it looks like your theory of AMMOS mis-correcting times when there is carry-over data on the tape is correct.

I hope this is enough information. I would have to do a bit more calculation to get the approximate ERTs. Let me know if you want them.

Best regards,

Nigel

From HENZE@fender.msfc.nasa.gov Fri Dec 22 11:29 PST 1995
From: HENZE@fender.msfc.nasa.gov
Date: Fri, 22 Dec 1995 13:29:28 -0600 (CST)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 4048

BATSEARCH PROGRAM

BATSE BURST # 4048
EVENT OF 1995 DEC 20 DAY OF YEAR=354
EVENT CROSSING TIME AT BATSE : 31881. S. OR 08:51:21.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 105.000 23.000
BATSE PEAK COUNTING RATE: 18000 C/S

RI

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 20/12/ 95 IS:
RA= 224.143 DEC= 57.710 DIST= 2.836 AU
BATSE-ULYSSES DISTANCE = 424233173. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 95.21 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -128.53 SECS.
CROSSING TIME AT ULYSSES IS 31752. S. OR 08:49:12 +/- 292.71 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 20/12/ 95 IS:
RA= 286.251 DEC= -23.643 DIST= 2.317 AU
MARS-BATSE DISTANCE = 346658368. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 1.32 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1156.02 SECS.
CROSSING TIME AT MARS IS 33037. S. OR 09:10:37 +/- 22.17 SECONDS

BATSE BURST TRIGGER

NO.: 4048

TIME: TJD=0071 SECONDS=31881

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=166.9 AZIMUTH=299.4 ERROR=000.5 DEGREES

COMMENTS:

GRB. TOTAL DUR. ~17 S. VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
4048	951220	10071	31881	18000	105	+23	17



From cline@heavx.gsfc.nasa.gov Fri Mar 29 08:40 PST 1996
 Date: Fri, 29 Mar 1996 08:40:19 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@heavx.gsfc.nasa.gov (T L Cline)
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96	1	4	12521.062	?	?	221	no	
96	1	11	46524.53	?	?	222	no	
96	1	13	56024.261	?	?	228	no	
96	1	14	44104.737	?	?	233	384	+ K-A t.
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96	1	17	57371.341	?	?	235	no	
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96	1	19	45226.016	?	?	237	no	
96	1	20	36768.974	?	?	238	no	
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	2	10	35198.959	?	?	247	?	
96	2	16	57796.347	?	?	BGR	?	= K-A t.
96	2	19	20589.684	?	?	BGR	?	= K-A t.
96	2	28	85760.241	?	?	249	?	
96	2	29	22445.141	?	?	250	?	

96	3	5	33645.352	?	?	251	?
96	3	12	35074.697	?	?	252	?
96	3	19	51992.828	?	?	253	?
96	3	21	76321.803	?	?	254	?
96	3	22	19642.728	?	?	255	?
96	3	24	80064.124	?	?	257	?
96	3	25	69892.978	?	?	258	?

--

TLC

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

Helio corr removed

Date: Feb 23 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ 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

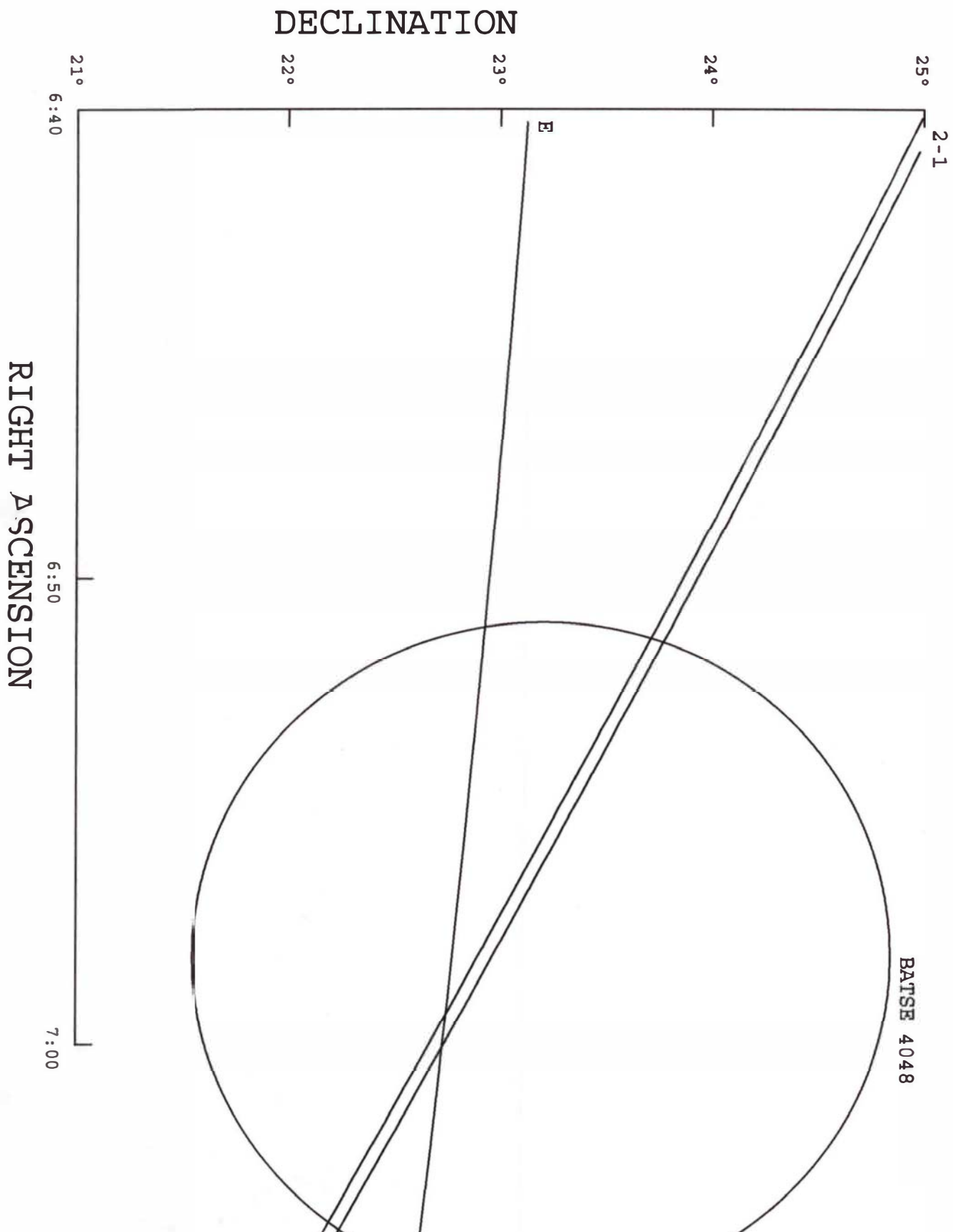
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF DEC 20, 1995 8:48

23 / 2 / 98



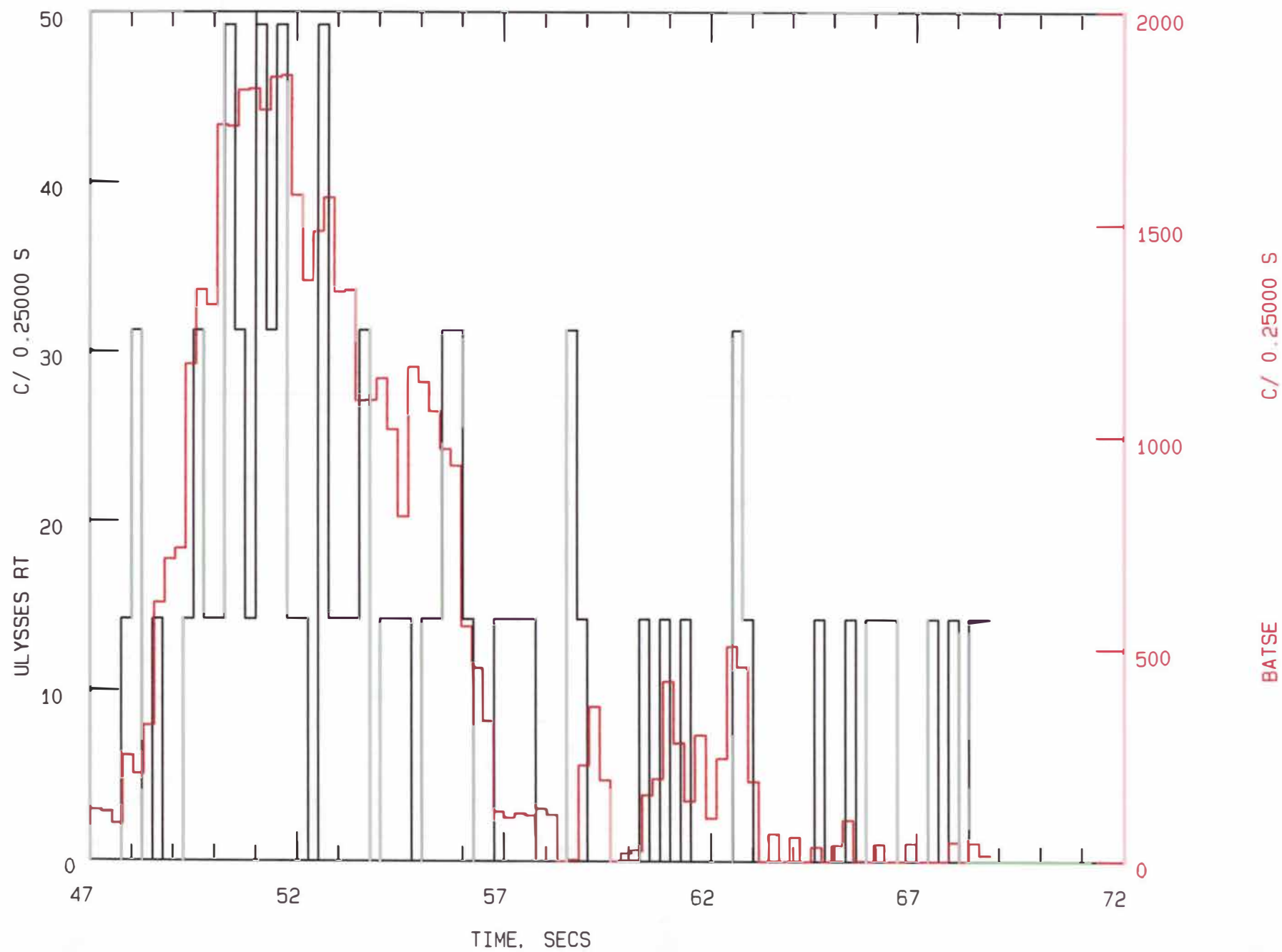
ULYSSES RT-BATSE

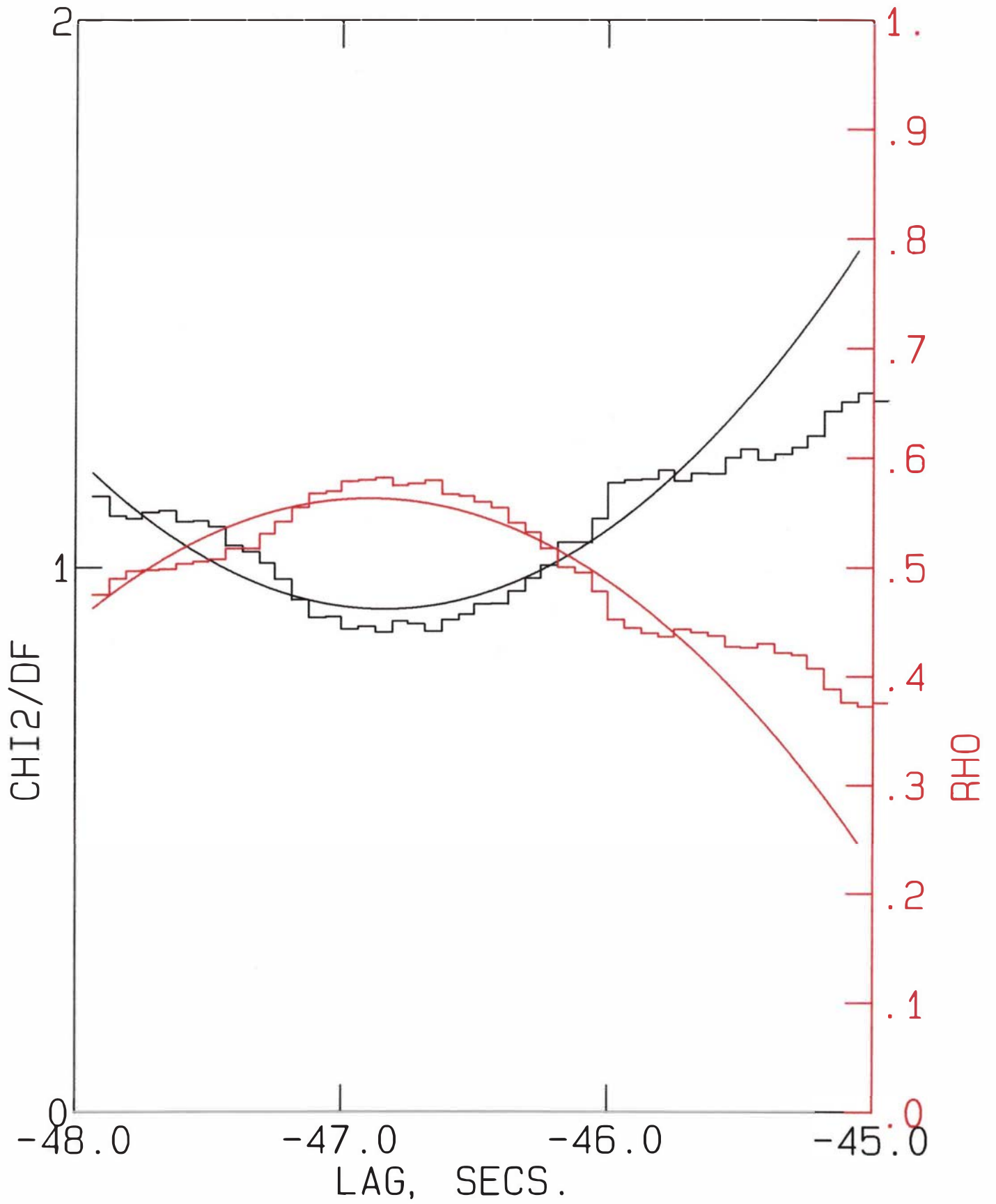
CORRELATION

20/12/95

31714.150

23/ 2/98





ULYSSES RT

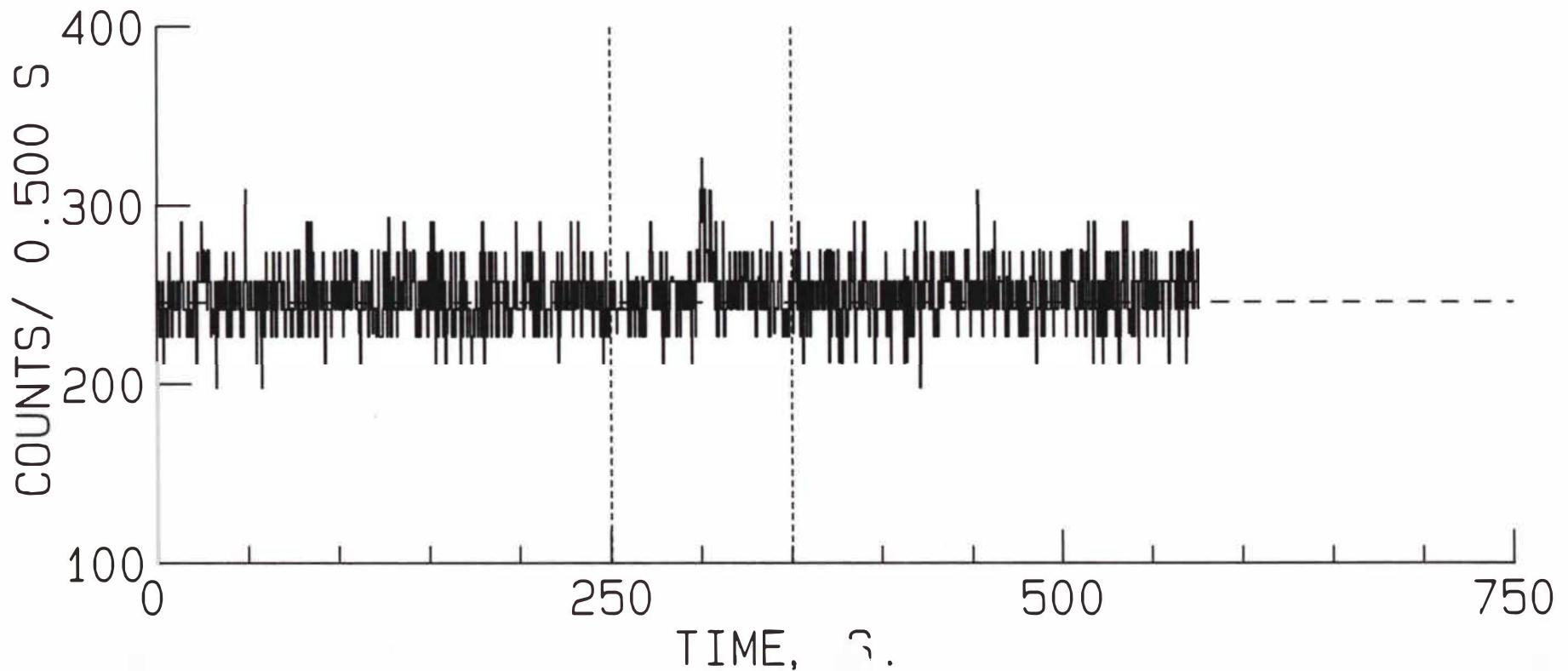
23 / 2 / 98

20/12/95 31464.080 s

0.250 S INTERVALS REGROUPED BY 2

21- 144 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



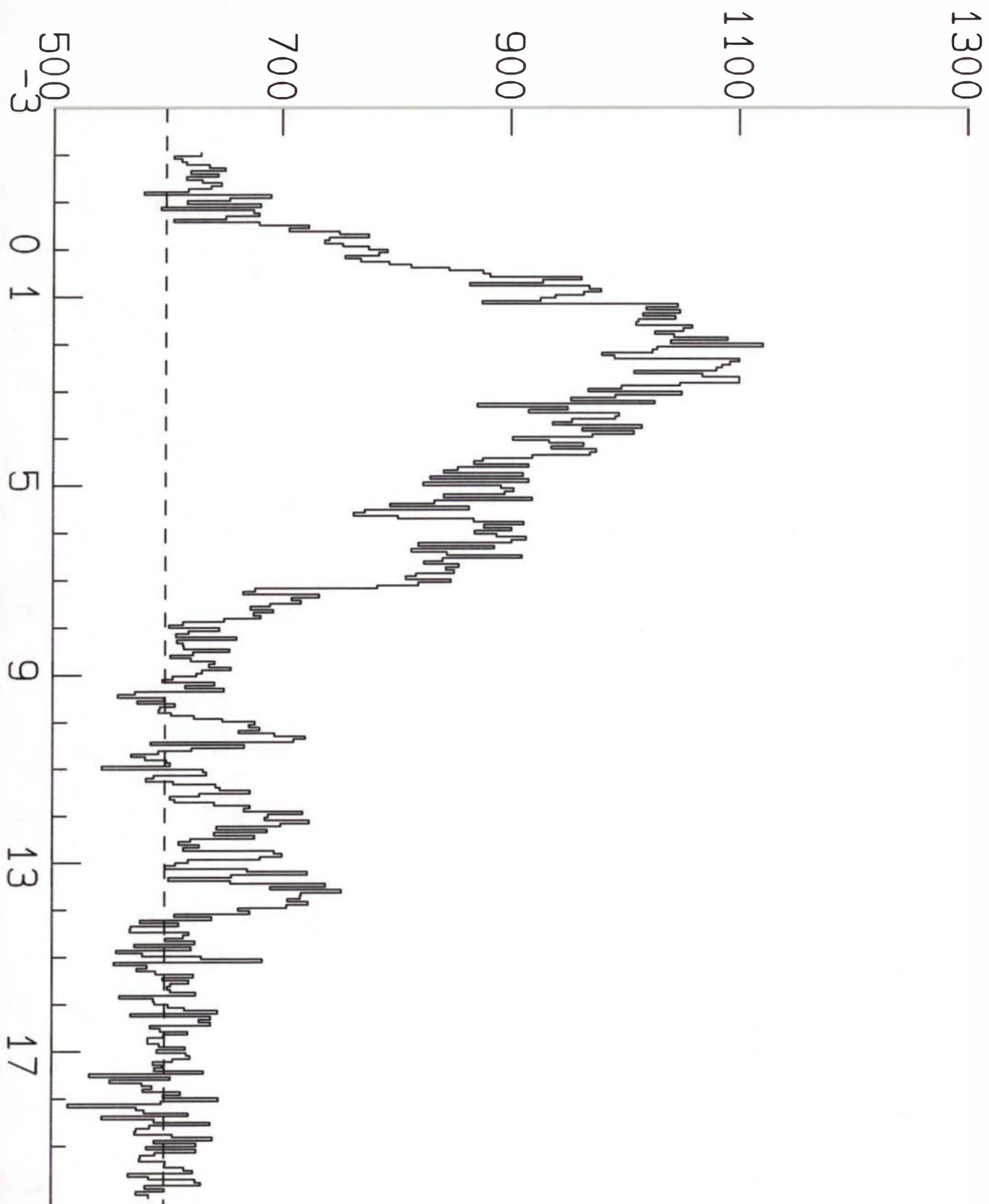
BATSE

20/12/95

31881.906

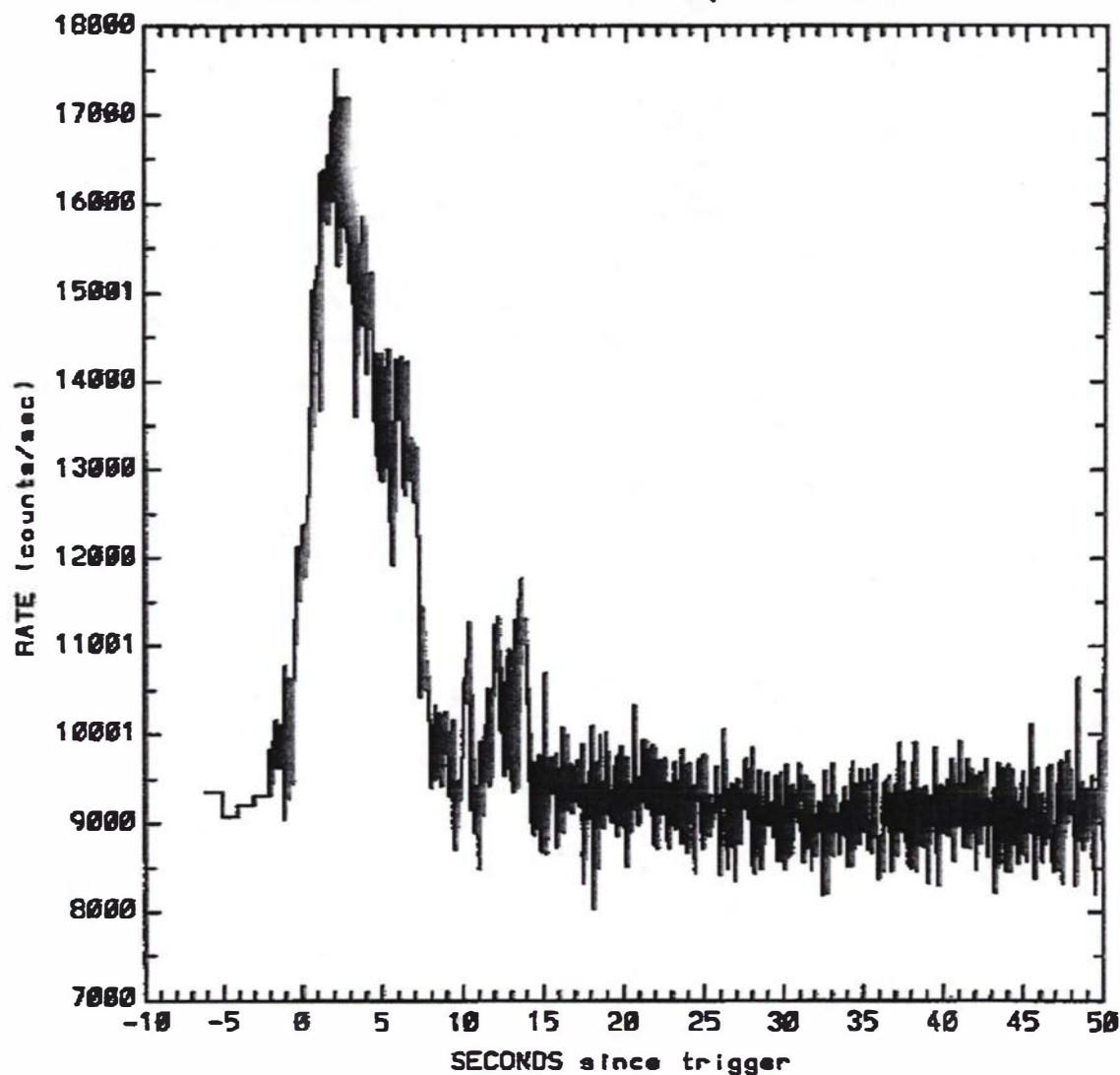
25- 100 keV

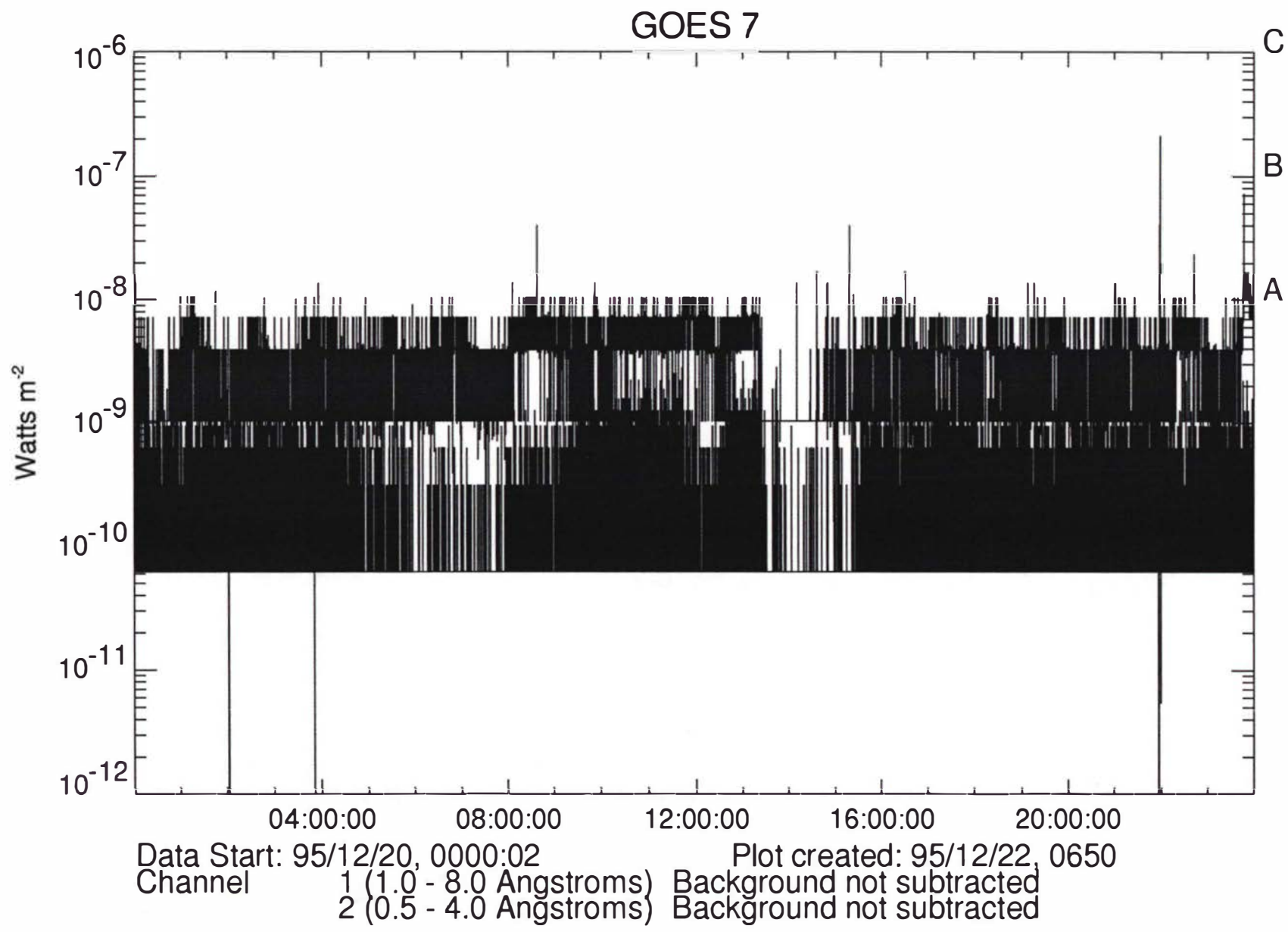
COUNTS/0.064 S



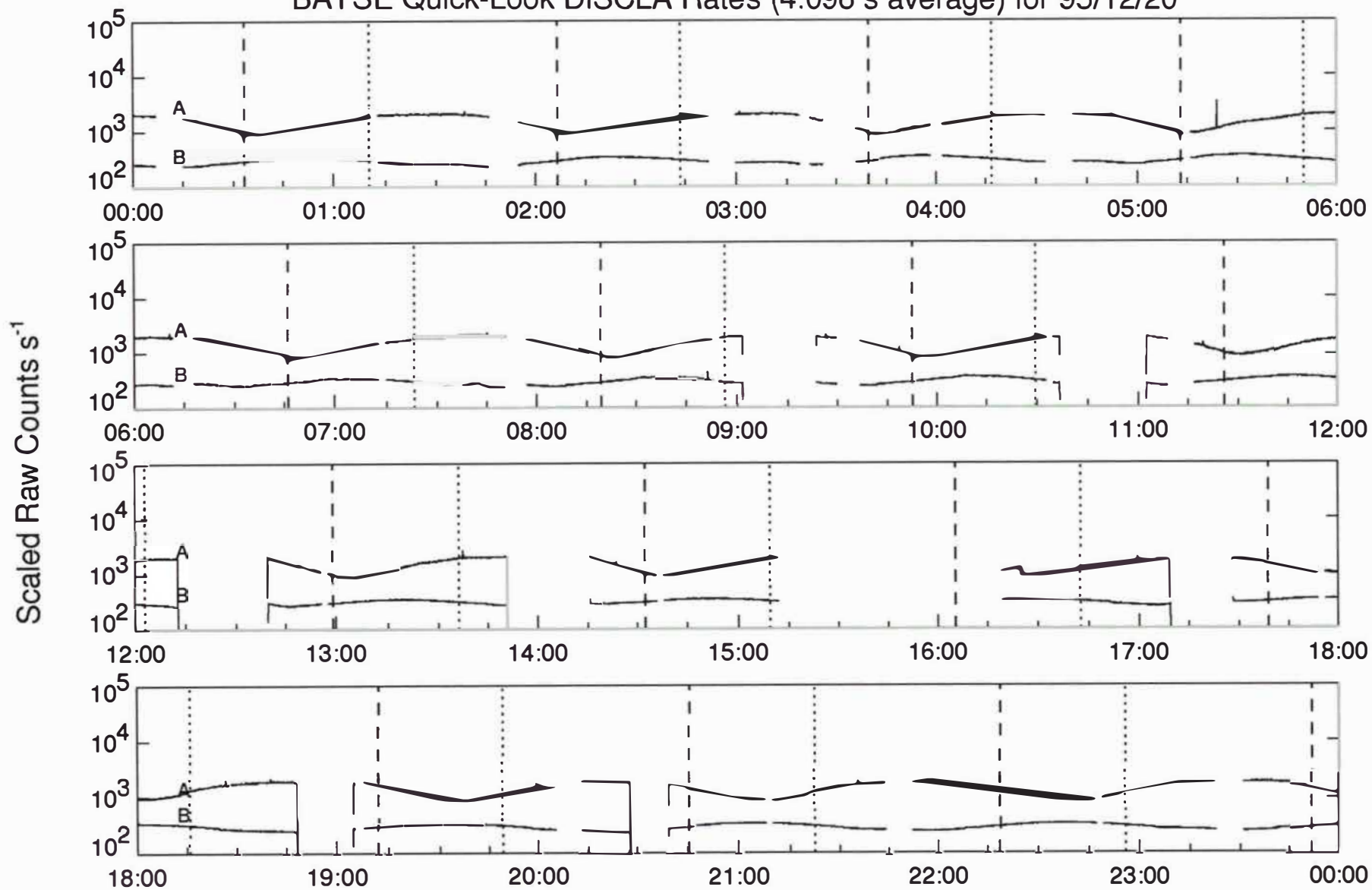
Dec 20 1995

DISCSC Data for K. Hurley, No. 4048





BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/12/20



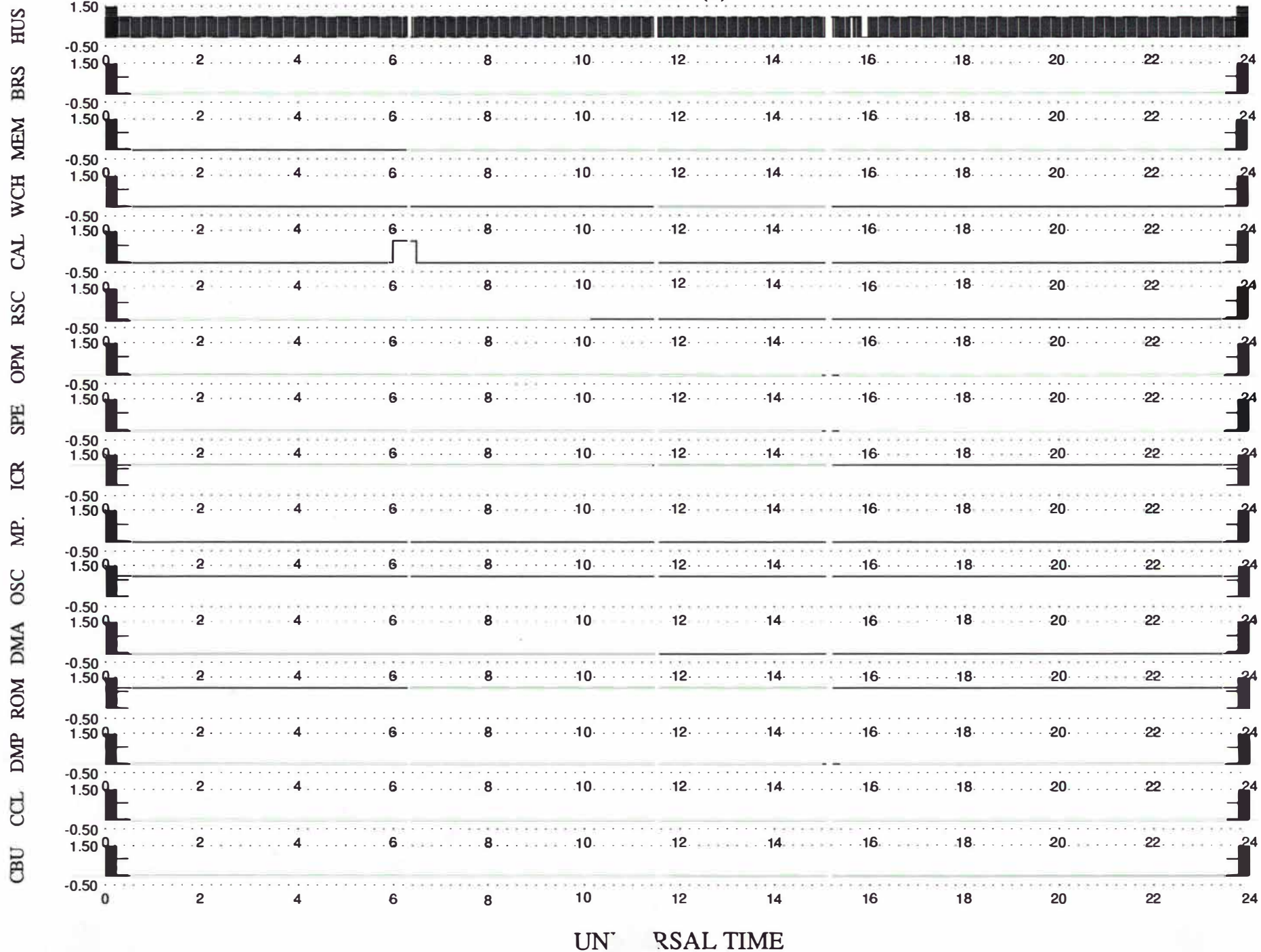
Current Time: 95/12/22, 0651 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

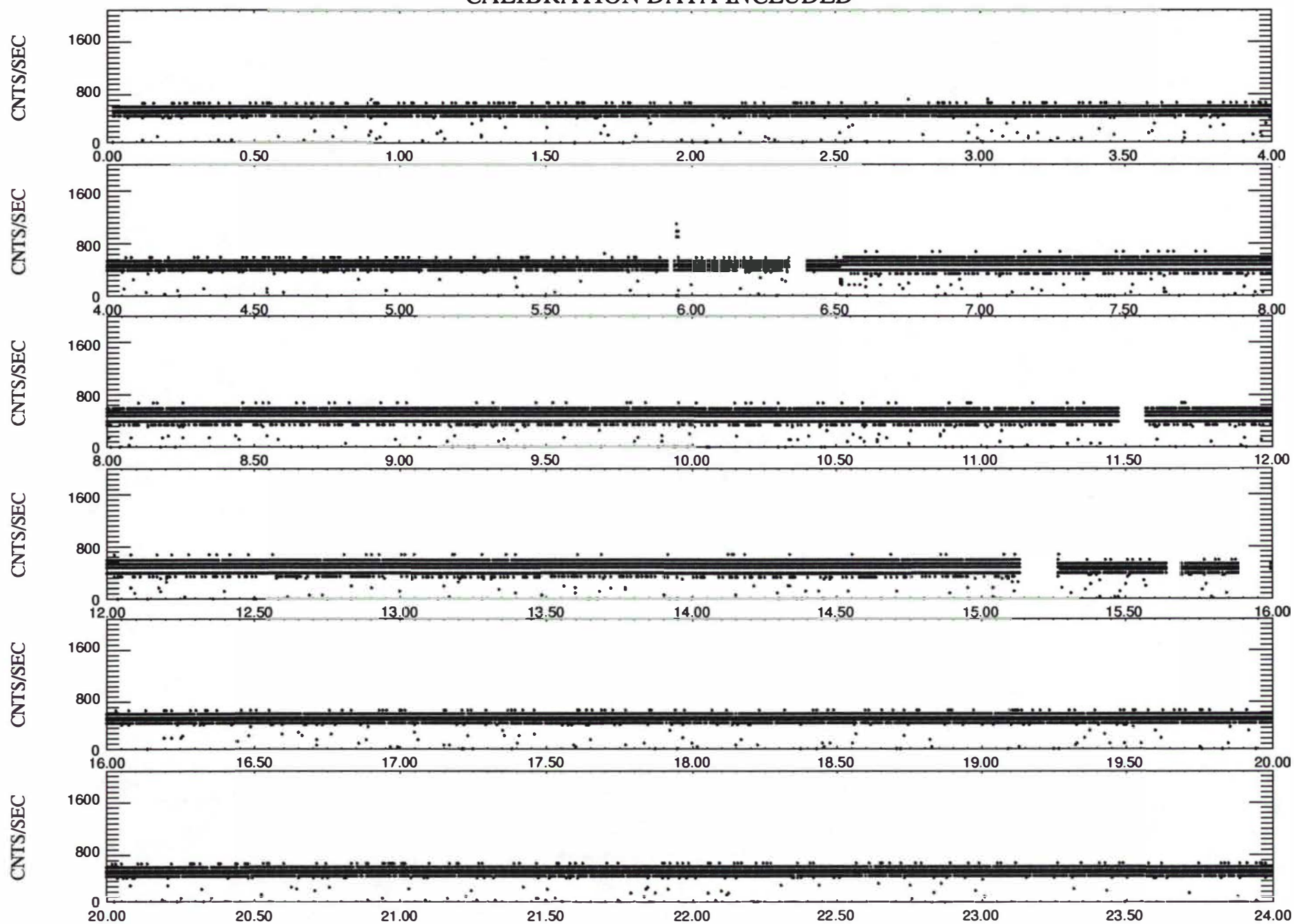
HUS MODES EDR day 354, year 1995 to day 354, year 1995 NO BURST (2)

4/1/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 354, year 1995 to day 354, year 1995
CALIBRATION DATA INCLUDED

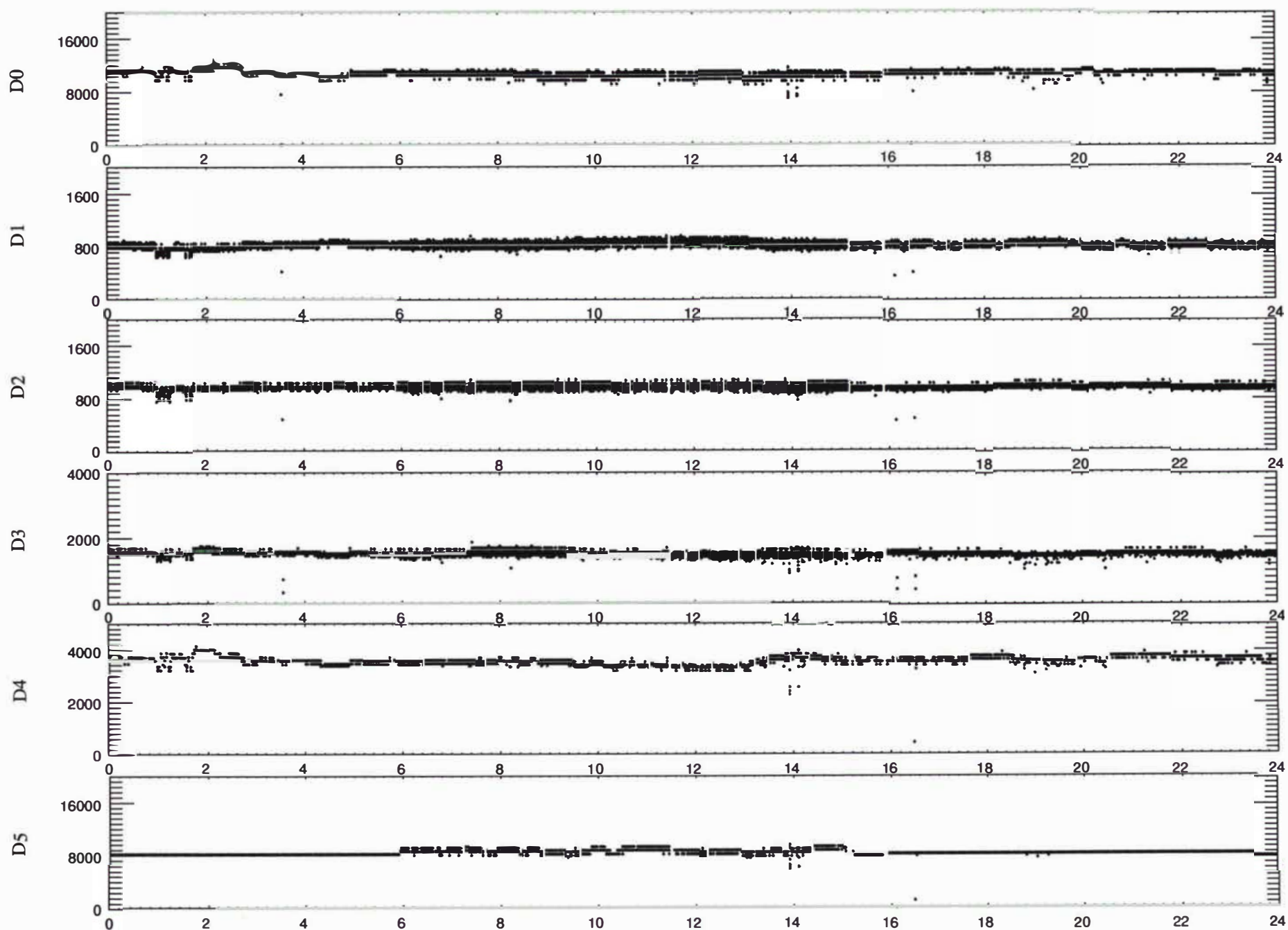
4/1/96



UNIVERSAL TIME

HUS 2B COUNTS / SEC QEDR day 354, year 1995 to day 354, year 1995

12/28/95



UNIV. AL TIME

From ulsdtmt@jplsp.DNET.NASA.GOV Mon Mar 18 17:13 PST 1996
From: ulsdtmt@jplsp.DNET.NASA.GOV
Date: Mon, 18 Mar 96 20:13:12 -0500
To: "khurley@sunspot.ssl.berkeley.edu"@east.DNET.NASA.GOV (SENT TO @LIST1)
Subject: Misplaced Major Frames in EDRs

Greetings,

We have identified an operations technique that produces data that will be improperly time tagged by the MGDS (telemetry system). Instances of EDR errors (major frames out of order) have been found in the CDRom archival products for December 1995 and January 1996. Errors will also be found in the still to be shipped February 1996 data.

When major frames are recorded but not transmitted during the next track, but are eventually downlinked with data from a succeeding day, the embedded SCLKs are 'assumed' to be incorrect by the frame syncer and are re-tagged with SCETs and SCLKs matching the adjacent (but newer) data.

For each major frame processed in this manner, a gap will exist, representing the time the data was actually acquired, and a major frame or realtime data, representing the time period the data now errently represents, will be replaced by the misplaced playback data.

Yes. Confusing. See the attached memo detailing the times involved.

Approximately 17 such instances are known to have occured. The total time involved is about twenty minutes. Because the data loss is small and the cost of reprocessing would be so large, the Project has determined that it would be imprudent to reprocess.

For your information, however, we included a memo from Nigel Angold which itemizes each instance.

We thank Toni Galvin and Nigel for identifying the problem and assisting in the diagnosis.

Regards,

Joe

To: <ulsdtmt@jplsp.jpl.nasa.gov>
From: Nigel Angold <nangold@jplsp2.jpl.nasa.gov>
Subject: Mis-corrected S/C clocks / SCETs
Cc: chris.leech@jpl.nasa.gov

I have looked at our recent tape recorder usage and predict that you will see major frames with mis-corrected spacecraft clocks / SCETs at the following times (give or take a few minutes):

1995:

~342.22:59 SCET	should be	~341.17:47 SCET
~347.22:39 SCET	should be	~346.16:46 SCET
~350.21:54 SCET	should be	~349.16:22 SCET
~355.22:14 SCET	should be	~354.15:42 SCET
~359.14:04 SCET	should be	~359.05:36 SCET
~360.14:59 SCET	should be	~359.00:20 SCET
~362.20:55 SCET	should be	~361.16:06 SCET

1996:

~001.02:45 SCET	should be	~364.23:12 SCET
~002.14:35 SCET	should be	~001.04:22 SCET
~029.19:35 SCET	should be	~028.13:43 SCET
~033.19:10 SCET	should be	~032.13:18 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~048.17:29 SCET	should be	~047.13:45 SCET
~054.08:59 SCET	should be	~053.11:46 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~039.18:34 SCET	should be	~038.12:14 SCET

We see data gaps for each of the correct times, so it looks like your theory of AMMOS mis-correcting times when there is carry-over data on the tape is correct.

I hope this is enough information. I would have to do a bit more calculation to get the approximate ERTs. Let me know if you want them.

Best regards,

Nigel

From HENZE@SSLLES.MSFC.NASA.GOV Tue Dec 26 11:01 PST 1995
Date: Tue, 26 Dec 1995 13:00:58 -0600 (CST)
From: HENZE@ssl.msfc.nasa.gov
To: burst@comptel.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@ssl.msfc.nasa.gov,
"LHEAVX::BARTHELMY"@ssl.msfc.nasa.gov, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov, "15733::SCHAEFER"@ssl.msfc.nasa.gov
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 4071

TIME: TJD=0073 SECONDS=01950

TYPE: CRAB SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
CRAB OCCULTATION RISE.

951025	23	40	39.738	S1	190	400	120	1.7	3	60	167	✓
951102	01	58	05.879	S2	260	320	50	<0.1	100	3	168	✓
951102	05	53	29.015	S2	700	1560	600	0.1	5	18	169	✓
951102	07	58	13	S1	320	80		4	6		BGR	✓
951105	00	29	05	S2	40	50		0.6	40		BGR	✓
951105	01	37	48.077	S2	140	340	80	0.6	2	22	170	✓
951105	13	00	27.808	S1	160	380	120	9	2	9	171	✓
951107	07	34	58	S1	20	50	20	2	90		BGR	✓
951111	09	42	40	S1	80	160	20	1.1	15		BGR	✓
951112	18	28	15.244	S2	540	690	220	0.2	14	84	172	
951113	23	25	58.872	S1	260	330	260	4.4	1	15	173	✓
951115	10	48	49	S1	70	180	80	3	12		BGR	✓
951117	02	48	43.762	S2	650	530	120	0.1	9	10	175	-
951118	22	56	00	S2	20	90	100	0.15	6		BGR	✓
951119	08	17	11.402	S1	200	420	110	3	1.5	12	176	✓
951119	12	54	17.519	S1	110	220	340	1.7	3	4	177	✓
951119	16	30	48	S2	30	40	10	0.4	110		BGR	✓
951121	06	11	20	S1	20	70	10	2	45		BGR	✓
951122	02	44	01.380	S2	770	920		0.15	0.5	1.5	179	✓
951122	04	45	07.738	S1	280	430	160	12	35	22	180	✓
951123	18	10	08	S1	30	60	30	1	30		BGR	✓
951124	05	54	26	S2	50	140	50	0.15	30		BGR	✓
951124	06	58	52	S2	30	100		0.25	280		BGR	✓
951202	10	51	41.744	S1	200	500	220	2.4	2	25	195	
951203	01	06	28.180	S2	260	720	420	0.85	1	16	196	
951208	05	26	57.151	S2	320	740	190	<0.04	1	3.5	197	
951208	10	57	32.057	S1	290	260		7	52	6.5	198	
951208	11	47	47.634	S1	240	510	190	10	23	98	199	
951208	23	24	12	S1	100	90		>10	30		BGR	
951209	08	42	29.607	S1	150	450	160	6	6	14	200	
951213	04	57	29.683	S2	360	940	330	0.4	2	8	201	
951213	09	04	34	S2	300	90		<0.15	4.5		BGR	
951214	01	29	47	S2	15	100	30	1	30		BGR	
951214	02	24	17.847	S2	200	450	150	0.8	4	6	202	
951215	20	23	45	S2	60	70	15	<0.15	60		BGR	
951216	22	39	42	S2	160	110		0.1	6		BGR	
951218	07	59	48	S1	70	130	30	2.3	22		BGR	
951219	16	51	19.732	S2	430	850	920	<0.03	1	54	203	
951220	08	51	23.560	S2	100	320	180	1	2	8	204	
951221	08	23	18	S1	110	150	70	>15	15		BGR	
951222	21	00	21	S2	280			<0.1	16		BGR	
951225	09	14	16	S2	200			<0.3	50		BGR	
951225	09	34	14	S1	500	150	25	2.2	60		BGR	
951225	15	21	35	S2	210	170	40	0.1	100		BGR	
951225	22	51	08	S1	80	150	50	2.4	40		BGR	
951226	08	38	15	S2	60	100	50	0.15	9		BGR	
951227	06	23	25.042	S1	420	1200	320	1	1	1.5	218	
951227	21	59	20	S1	50	50		3	65		BGR	
951228	12	28	42	S2	70	80	40	<0.07	110		BGR	
951228	15	47	26	S2	80	170		0.9	17		BGR	
951231	05	37	11.668	S2	180	320	150	0.07	9	65	219	
951231	21	24	34	S2	100	25		<0.2	20		BGR	
960102	03	14	10.996	S1	140	300	80	1	1	0.2	220	
960102	20	20	53	S1	200	120	40	>9	25		BGR	
960104	03	28	41.062	S2	360	630	230	<0.05	2	28	221	
960105	16	04	30	S1	80	60		5	30		BGR	
960107	05	23	20	S2	30	100		0.5	230		BGR	
960107	19	03	28	S2	30	120	150	<0.1	32		BGR	
960109	23	11	31	S2	60	130	20	0.3	5		BGR	
960111	12	55	24.530	S2	1130	1280	190	0.2	0.5	6	222	
960113	15	33	44.261	S2	500	450	50	0.3	2	36	228	
960114	12	15	04.737	S1	4900	7200	1400	1.8	1	60	233	
960115	08	52	36.506	S1	380	360	60	10	1	7	234	
960115	12	50	15	S2	120	60		0.7	22		BGR	
960116	02	02	18	S2	140	170		0.15	17		BGR	
960117	15	56	11.341	S1	250	360	30	4	5	20	235	

RI?

From cline@lheavx.gsfc.nasa.gov Fri Feb 2 05:41 PST 1996
 Date: Fri, 2 Feb 1996 05:41:51 -0800
 Mime-Version: 1.0
 To: Bonnard.Teegarden@cesr.cnes.fr, KHURLEY@sunspot.ssl.berkeley.edu,
 palmer@lheamail.gsfc.nasa.gov, seifert@lheamail.gsfc.nasa.gov
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: For Your INFO

Dear Bonnard, Kevin, David, Helmut:

Here is Sergei Golenetskii's latest Konus burst list, for your information. Note that, including the non-triggered-mode 'BGR' events they confidently identify, there are over 300 events so far.
 - TLC

DATE	Trigger T0 time (UT)	Sensor	KONUS-WIND		N(S1)/N(S2)		Duration		Trigger number
			Max counts per sec		G3 in G2		T<T0 T>T0		
			G1	G2	G3	in G2	T<T0	T>T0	
941113	12 09 15	S1	145	85		2.5	115		BGR ✓
941114	02 02 40	S2	110	128	30	0.25	12		BGR ✓
941117	03 14 38.191	S2	406	550	74	0.17	40	5	2 ✓
941117	14 07 57	S2	150	140		<0.15	5		BGR ✓
941119	19 31 09.175	S2	370	703	160	0.23	7	20	4 ✓
941120	20 23 17.924	S1	215	328	30	>15	2	25	5 ✓
941121	17 25 00.945	S1	1652	1656	300	21	3	50	6 ✓
941125	22 04 30.156	S2	115	308	109	0.95	1.5	5	7 ✓
941126	00 20 46	S1	150	205	200	>14	18		BGR ✓
941126	12 22 37.952	S1	860	1430	330	4.2	40	45	8 ✓
941126	16 54 20	S1	55	75		>10	26		BGR ✓
941126	19 56 49.732	S1	290	390	211	6.7	20	26	9 ✓
941127	14 30 25.680	S2	200	400	95	0.17	8	7	10 ✓
941127	15 39 10	S1	210	57		2.7	260		BGR ✓
941128	15 37 00	S1	75	90	32	>15	55		BGR ✓
941205	23 33 40.074	S2	370	460	188	0.06	6	30	11 ✓
941207	22 10 32	S2	265	175		<0.2	7		BGR ✓
941210	03 10 52.523	S2	900	2350	1385	0.12	1	15	14 ✓
941214	17 03 51	S1	40	45	29	>6	12		BGR ✓
941214	05 38 45.226	S1	3479	1266	14	1.0	12	240	18 Sol
941221	07 44 08	S2	55	115	30	0.8	20		BGR ✓
941221	22 14 35.215	S1	260	496	165	1.5	55	11	19 ✓
941222	05 36 00.243	S2	334	1360	1066	0.36	7	105	20 ✓
941228	07 39 45.915	S1	300	637	519	4.4	5	90	28 ✓
941228	16 55 23	S2	40	36	23	0.25	25		BGR ✓
941229	12 58 05	S1	46	108	31	1.8	15		BGR ✓
941229	22 51 08.781	S2	396	381	140	0.09	7	25	29 ✓
941230	20 52 53	S1	74	117	52	8.4	158		BGR ✓
941230	23 43 44	S2	55	70	16	<0.2	4.5		BGR ✓
950104	07 18 39.613	S2	258	550	219	0.75	2.8	20	31 ✓
950104	09 00 58	S2	140	143	40	<0.1	25		BGR ✓
950110	06 02 15	S2	332	180		<0.1	3600		BGR ✓
950110	13 37 57.084	S2	234	422	213	0.05	38	100	32 ✓
950111	04 49 12.241	S1	586	620	100	>19	92	24	33 ✓
950111	12 18 49.196	S1	225	435	164	1.85	26	50	34 ✓
950112	07 45 37.120	S2	1305	1800	336	0.04	2.5	44	35 ✓
950113	05 59 13	S1	283	180	26	>10	52		BGR ✓
950113	17 38 32	S2	85	162	35	<0.06	75		BGR ✓
950114	01 00 38	S1	46	110		1.6	6		BGR ✓
950114	04 03 01	S2	23	76		0.5	70		BGR ✓
950114	07 30 30.766	S2	205	406	60	<0.05	1	100	36 ✓
950114	13 10 34.865	S1	1320	2828	516	3.1	1	10	37 ✓
950115	02 49 32	S2	40	47	34	<0.15	24		BGR ✓
950117	01 36 00	S2	56	82	42	0.2	108		BGR ✓
950118	12 22 54	S2	57	105	17	<0.1	35		BGR ✓
950125	14 51 52.253	S1	380	600	140	8.2	3.8	11	39 ✓

Date: Sep 8 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

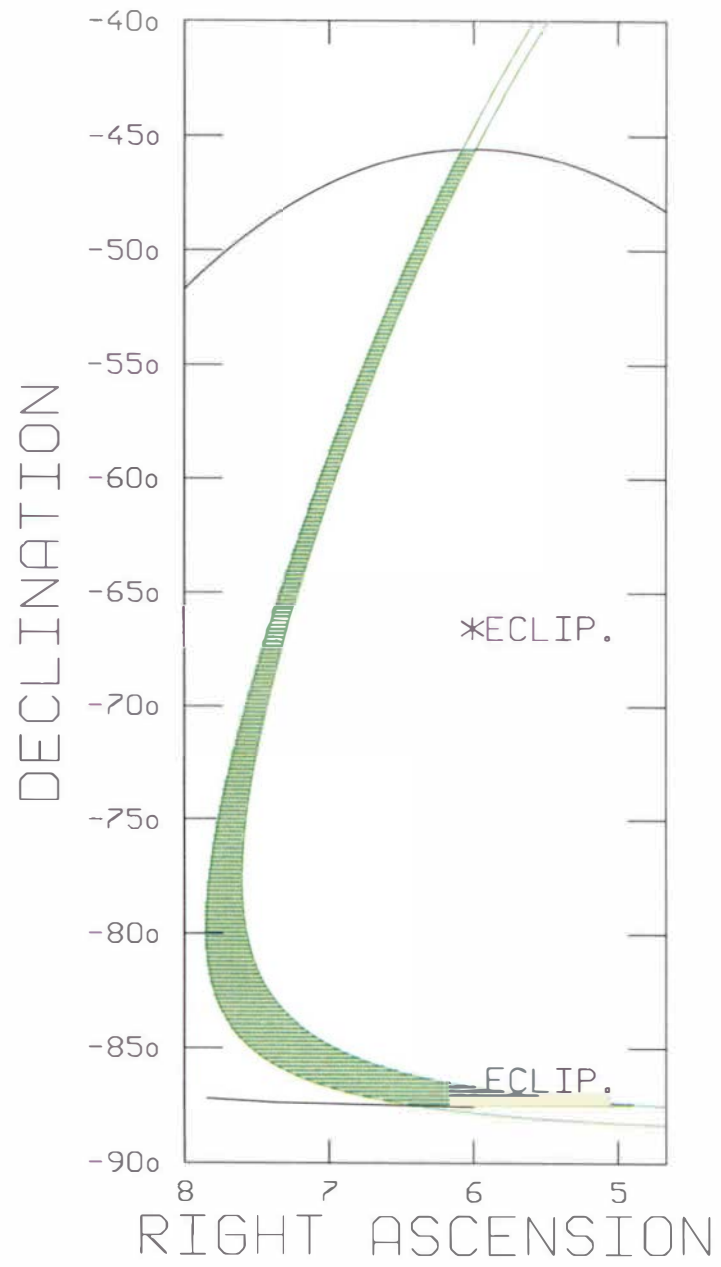
- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☒ Is the order of the data in CORREL such that a vernier is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

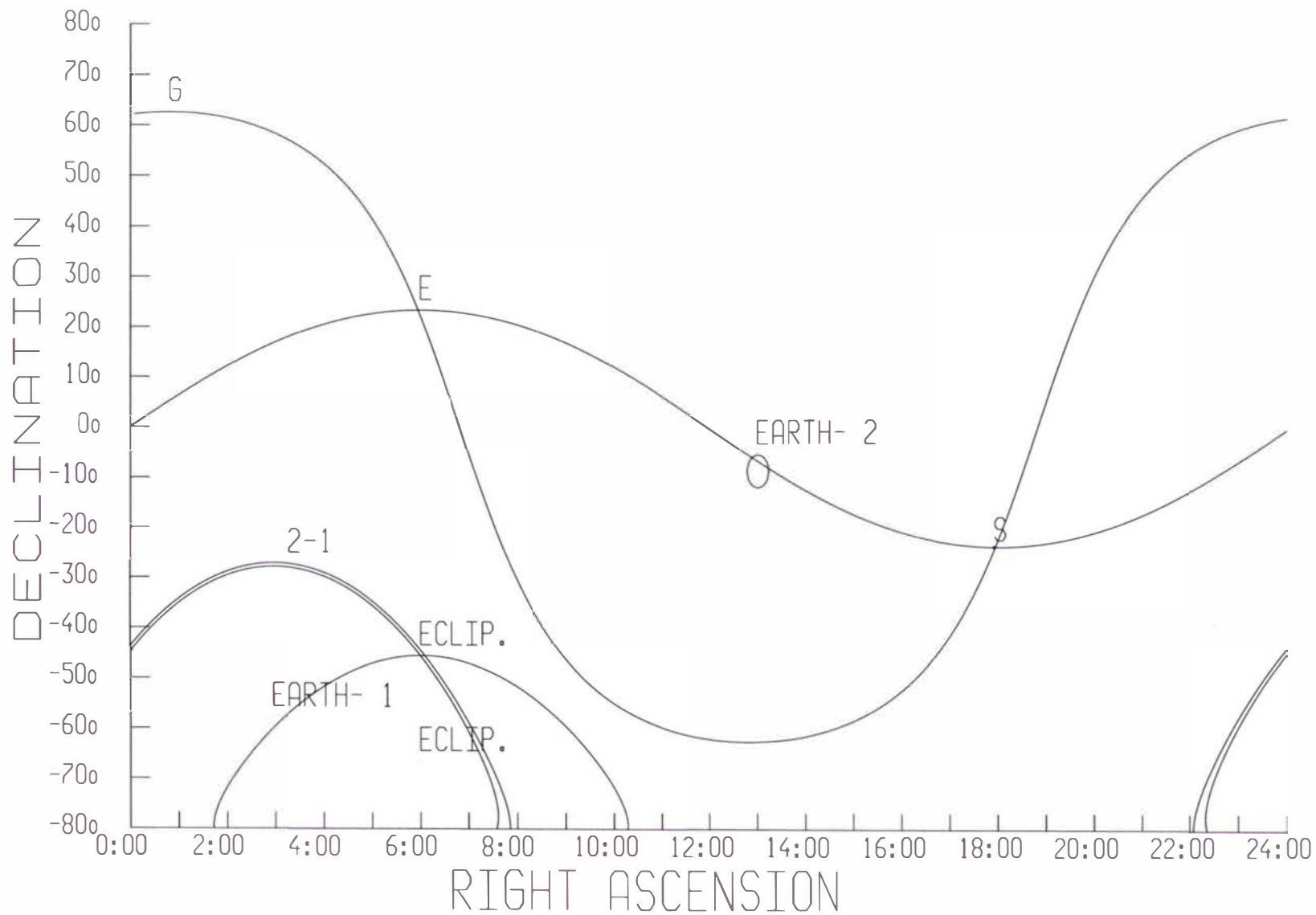
- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS and MBL databases updated with identical times?

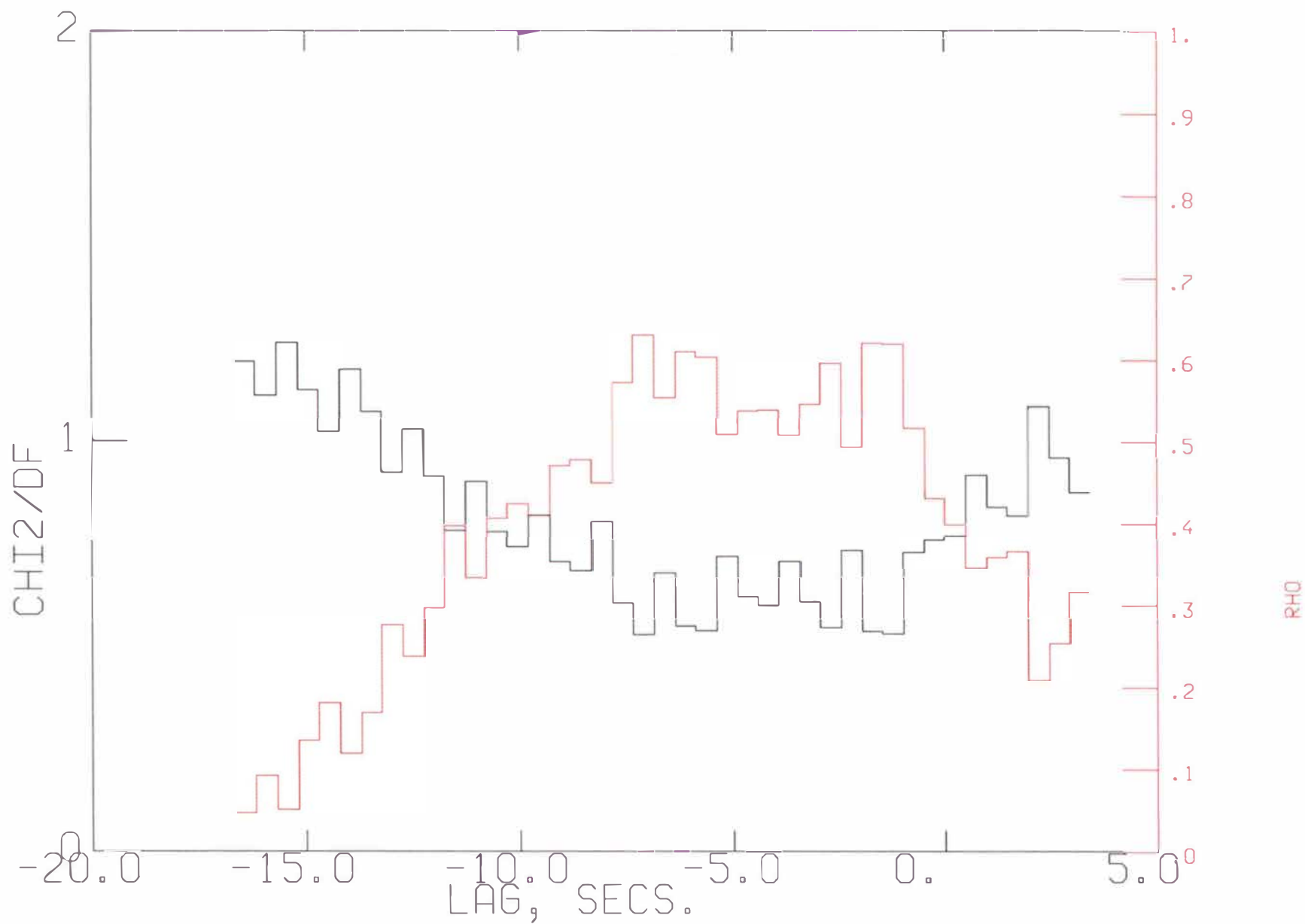


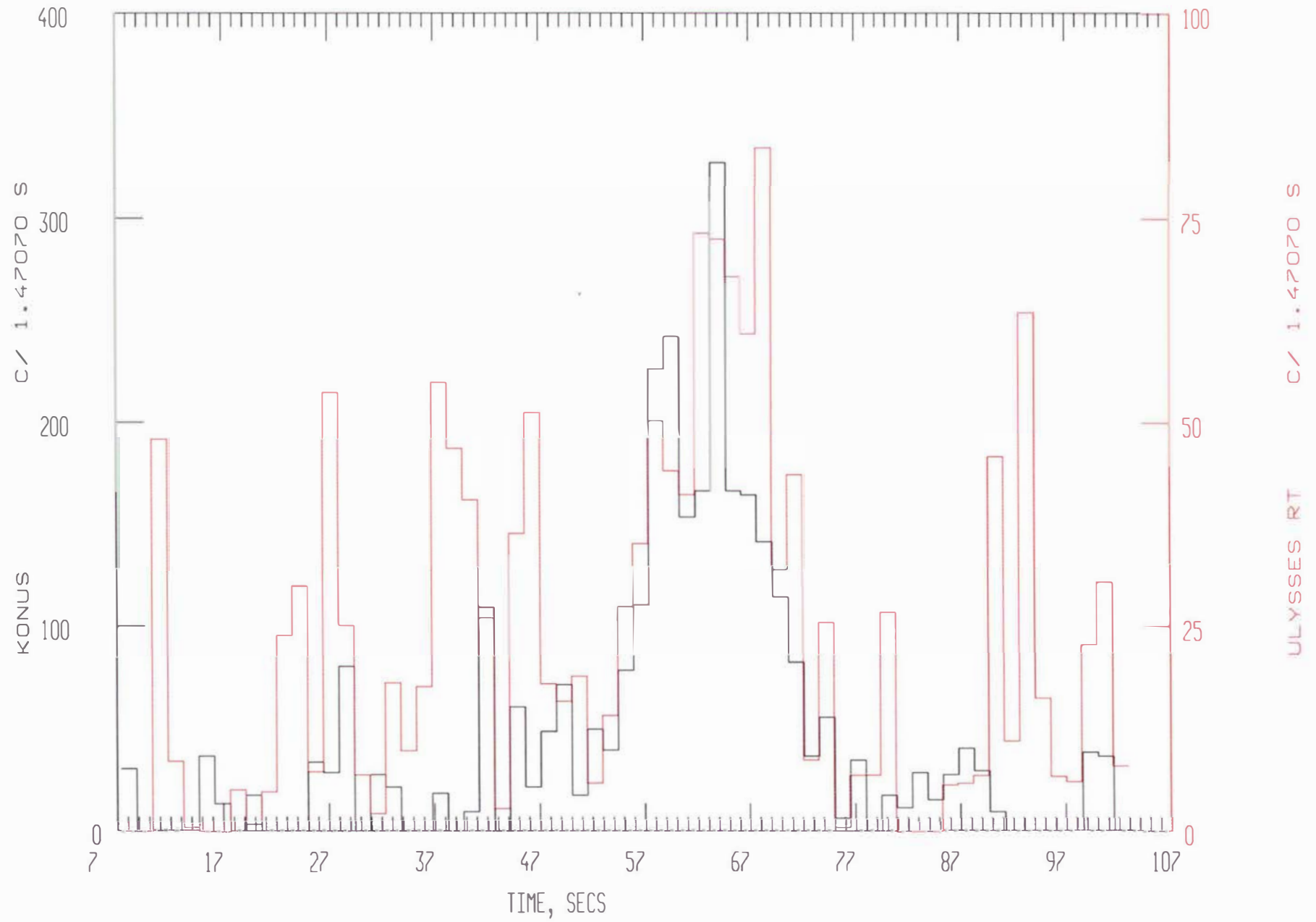
EVENT OF DEC 21, 1995 8:42

08/09/2011

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 KONUS

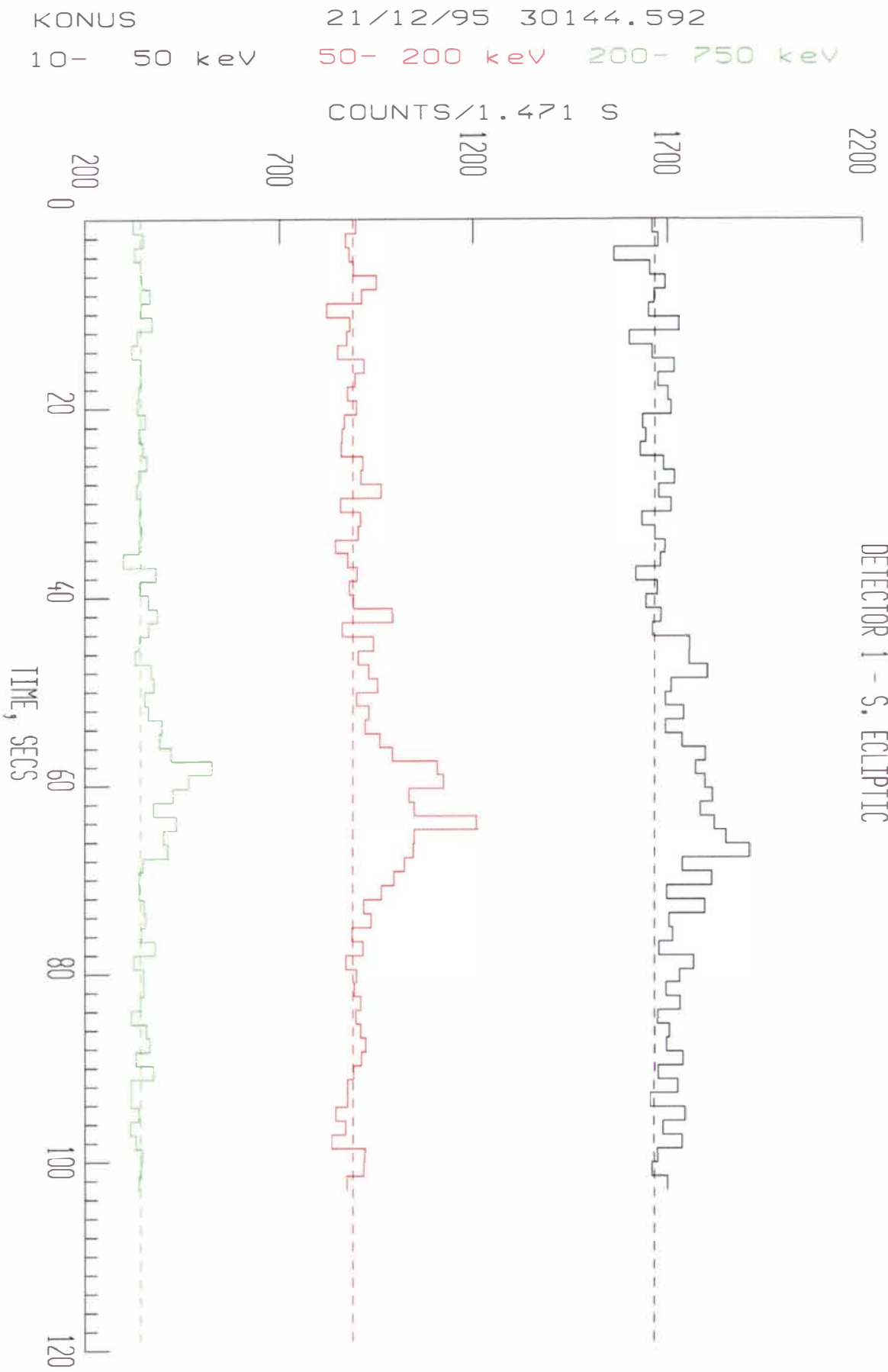






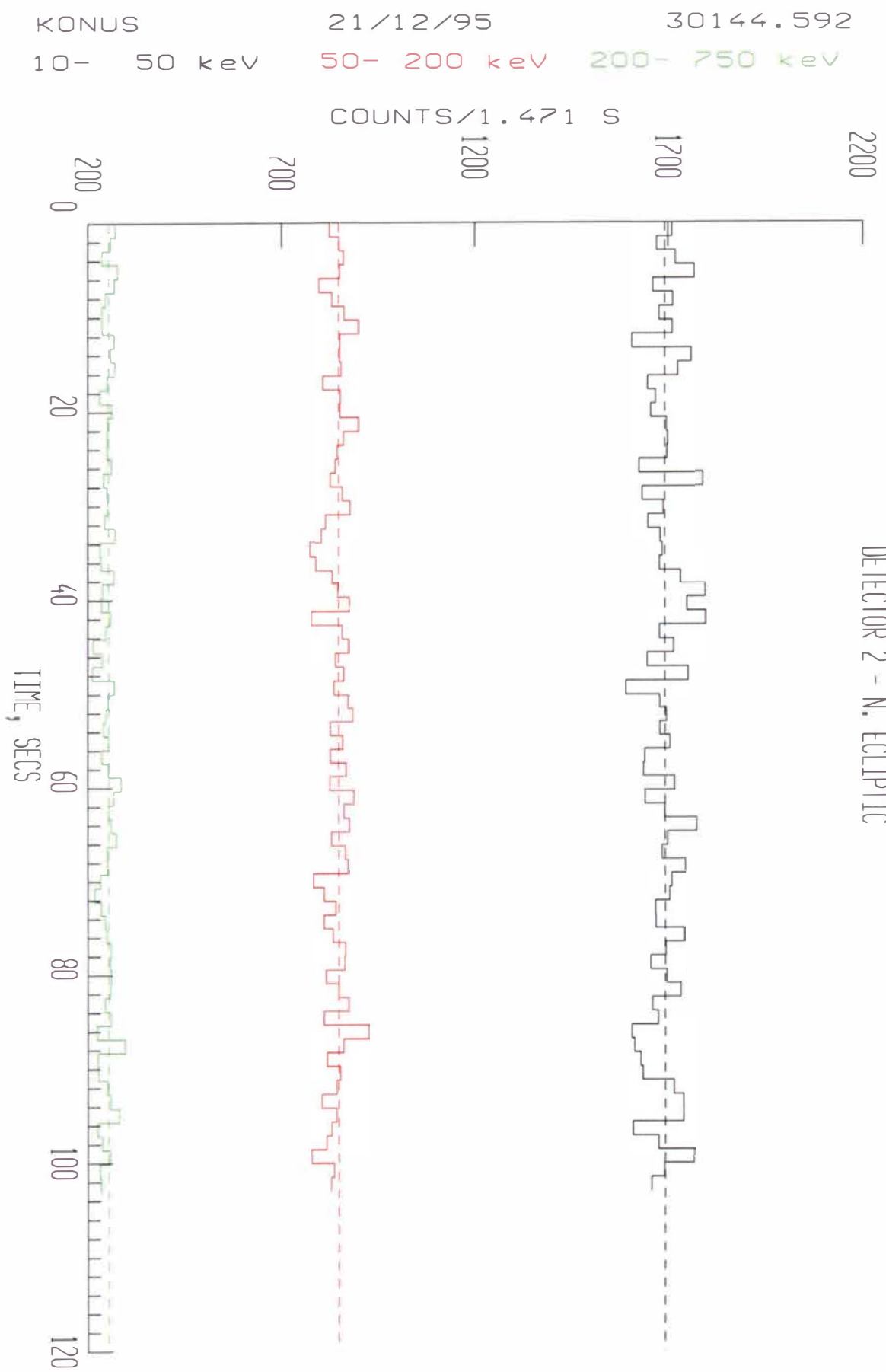
08/09/2011

DETECTOR 1 - S, ECLIPSE



08/09/2011

DETECTOR 2 - N. ECLIPTEIC



KONUS 19951221 31450

ULYSSES RT

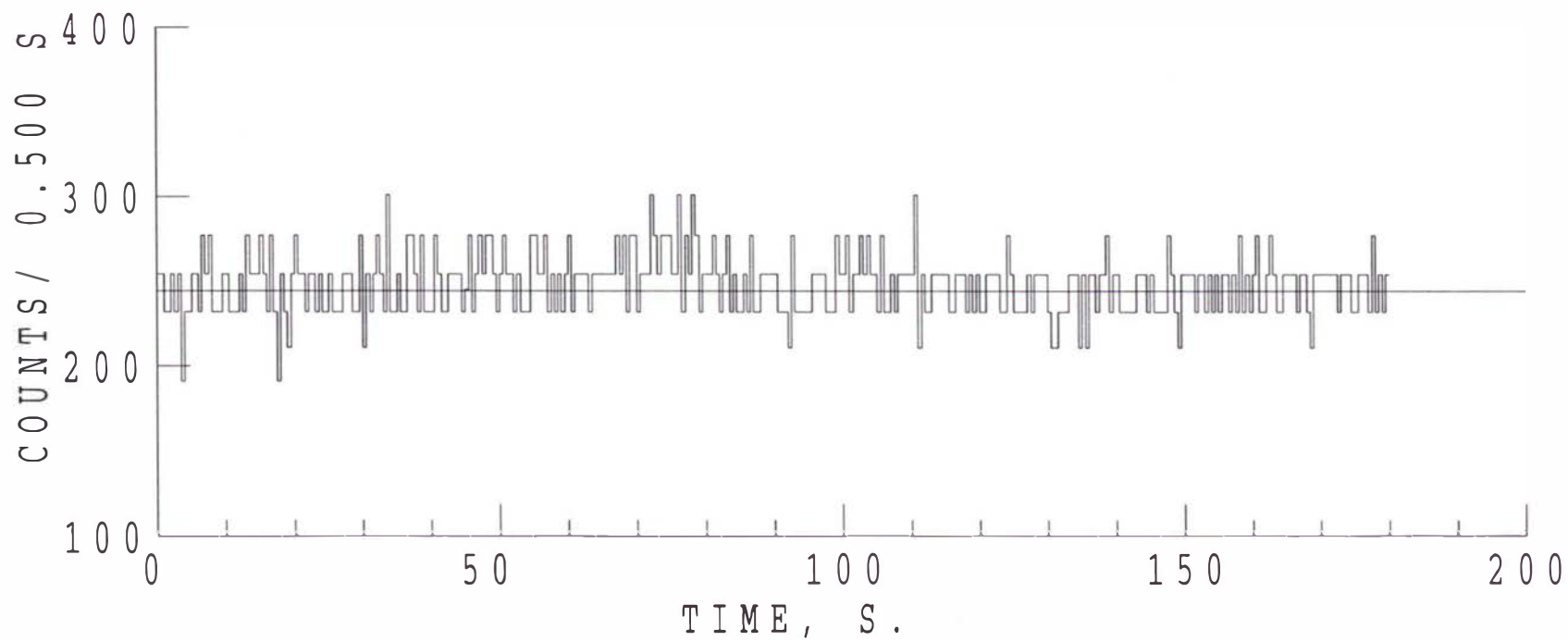
07/09/11

21/12/95 31356.389 s

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



K O N U S

2 2 / 2 / 9 6

U L Y S S E S R T

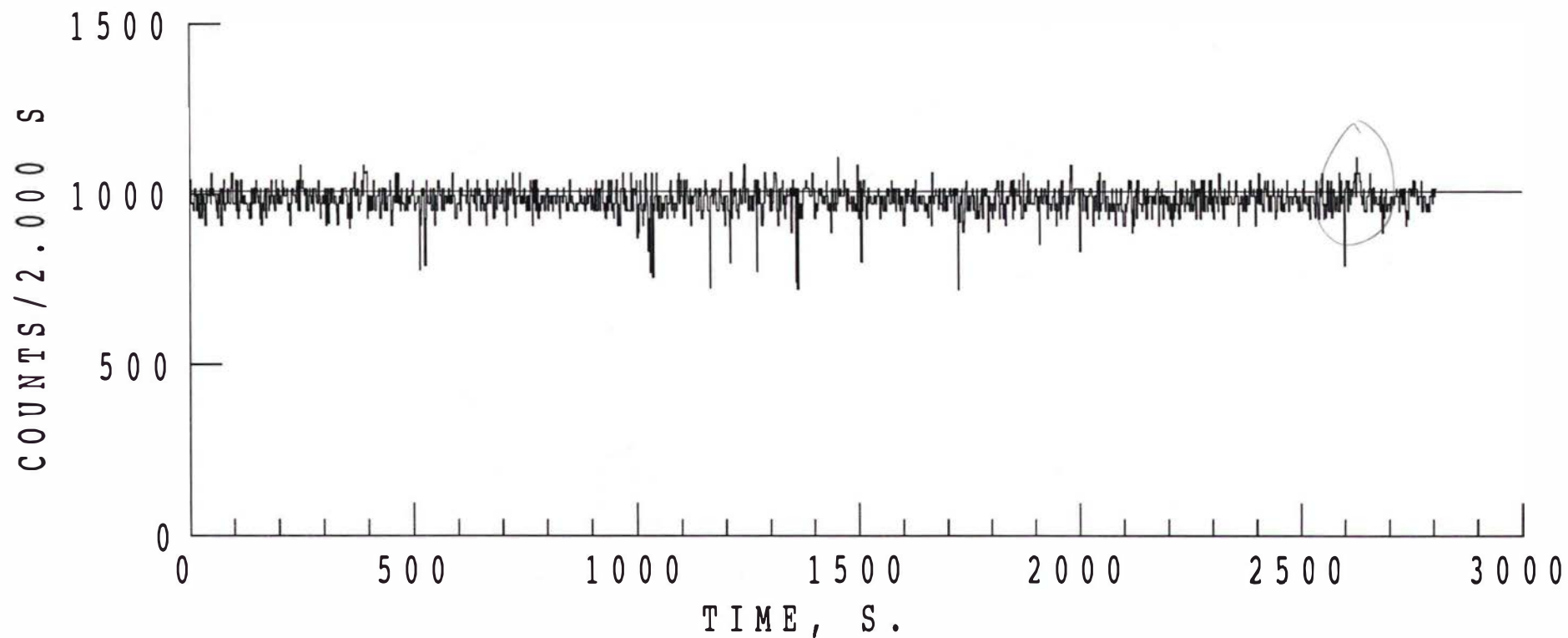
2 1 / 1 2 / 9 5 2 8 8 0 0 . 3 4 8 s

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

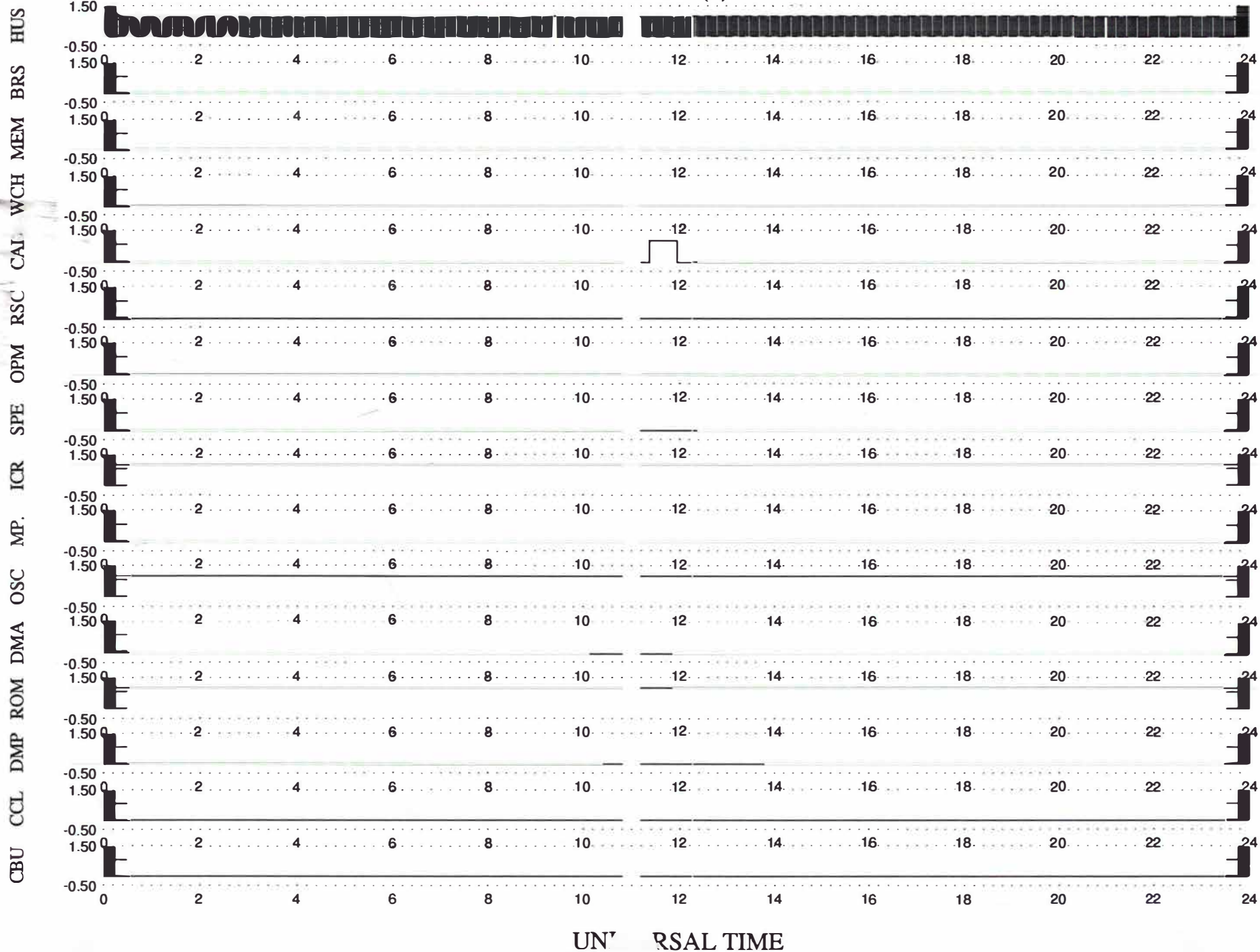
N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



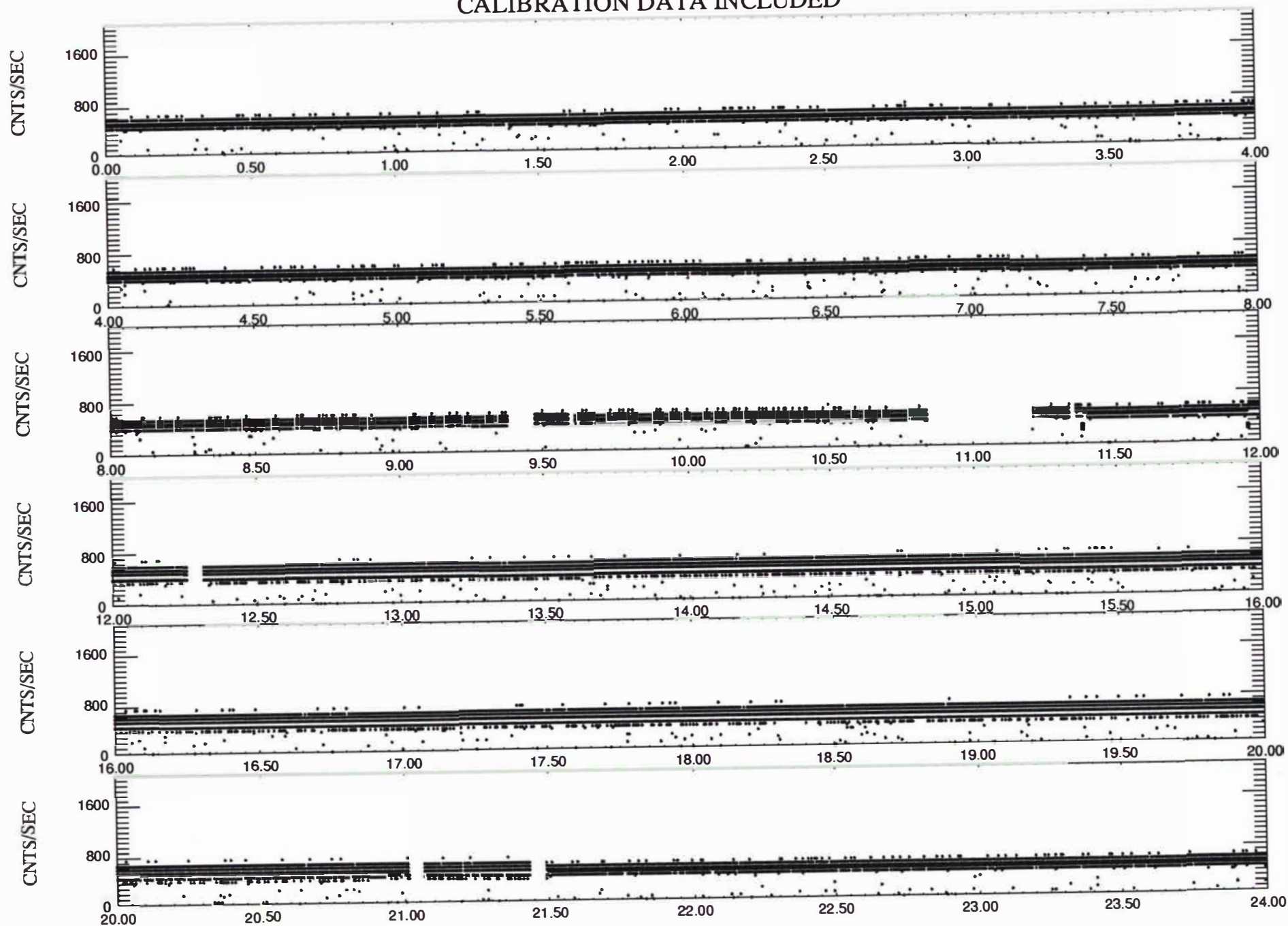
HUS MODES EDR day 355, year 1995 to day 355, year 1995 NO BURST (2)

4/1/96

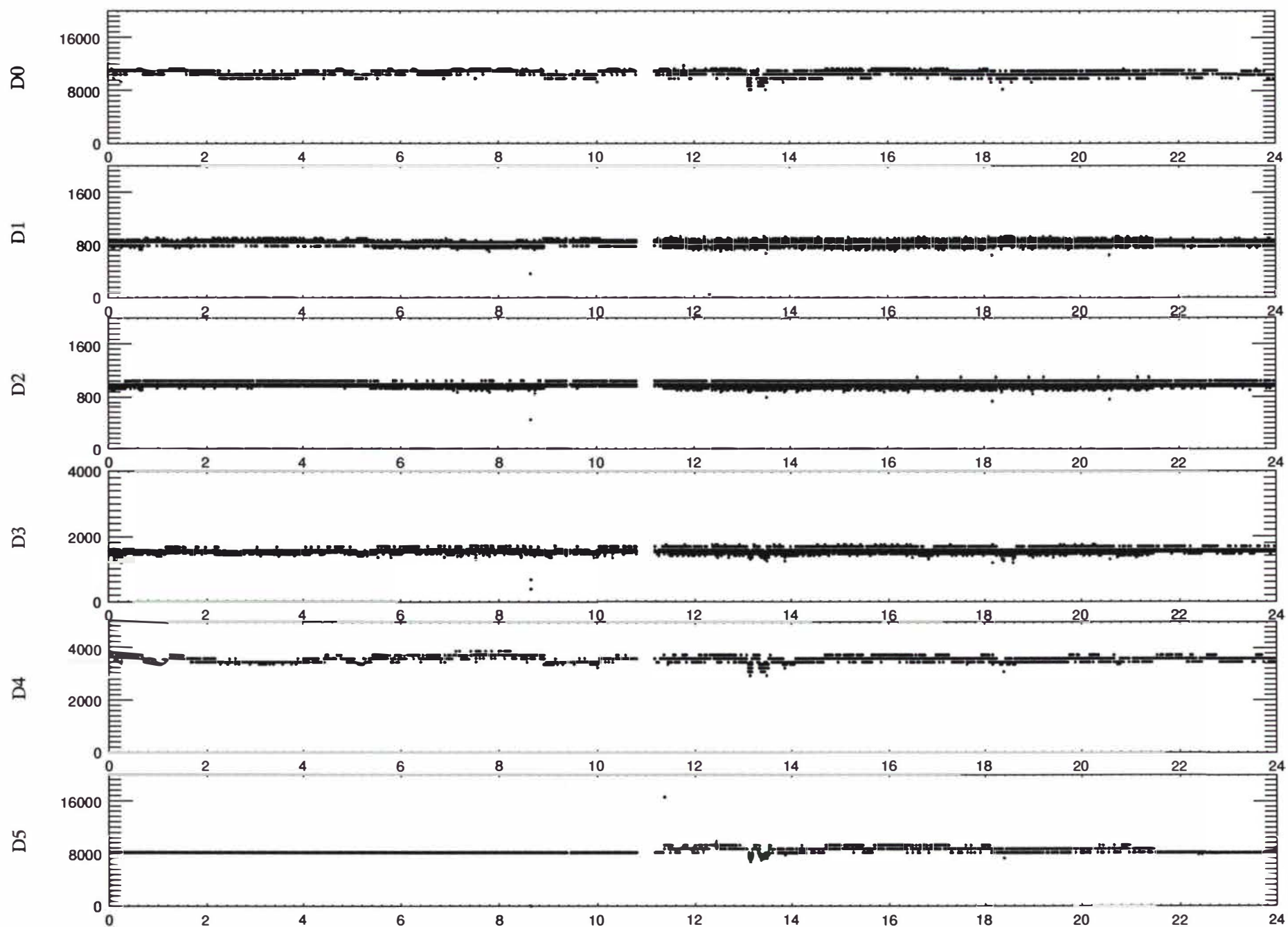


HUS 2A, MODE 1, NOT AVERAGED EDR day 355, year 1995 to day 355, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNIFORM TIME



UNIVERSAL TIME

KONUS-A

ULYSSES RT

15 / 02 / 00

22 / 12 / 95 23724.076 s

0.500 S INTERVALS REGROUPED BY 4

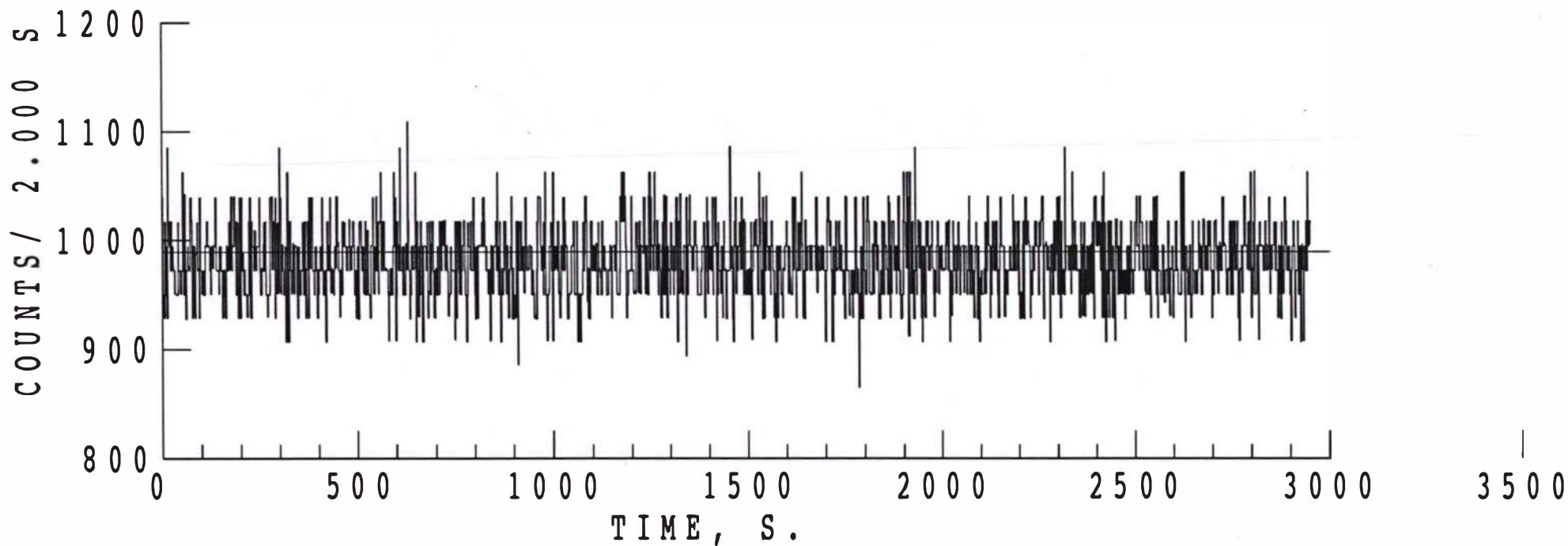
0 - 0 keV

N= 10 M= 10

>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From cline@lheavx.gsfc.nasa.gov Fri Mar 29 08:40 PST 1996
 Date: Fri, 29 Mar 1996 08:40:19 -0800
 Mime-Version: 1.0
 To: KHURLEY@sunspot.ssl.berkeley.edu
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: Konus Event List augmentation

Dear Kevin,

This list includes Sergei's latest Konus-W (GGS-Wind) and Konus-A (Kosmos-2326) events, for comparison with Ulysses, BATSE, TGRS, etc. The times listed are prioritized for Konus-W (i.e., Konus-A time given if Konus-W doesn't trigger).

Yr	Mn	Dy	UT (Konus)	BATSE	Ulysses	Konus	TGRS	Notes
95	11	2	07085.879	?	?	168	no	
95	11	2	21209.015	3891	R I	169	345	
95	11	4	05868.077	3893	R I	170	BGR	
95	11	5	46827.808	?	?	171	no	
95	11	12	66495.244	?	R I	172	no	
95	11	13	84358.872	3906	R I	173	BGR	
95	11	17	10123.762	3909	?	175	no	
95	11	19	29831.402	3912	R I	176	348	
95	11	19	46457.519	?	?	177	BGR	
95	11	22	09841.38	?	?	179	no	
95	11	22	17107.738	?	?	180	349	
95	12	2	39101.744	?	?	195	BGR	
95	12	3	03988.18	?	?	196	360	
	12	8	19617.151	?	?	197	no	
	12	8	39452.057	?	?	198	no	
95	12	8	42467.634	?	?	199	BGR	
95	12	9	31349.607	?	?	200	BGR	
95	12	13	17849.683	?	?	201	362	
95	12	14	08657.847	?	?	202	no	
95	12	19	60679.732	?	?	203	no	
95	12	20	31883.56	?	?	204	BGR	
95	12	22	25203.254	?	?	no	?	= K-A t.
95	12	27	23005.042	?	?	218	375	
96	12	31	20231.668	?	?	219	no	
96	1	2	11650.996	?	?	220	no	
96	1	4	12521.062	?	?	221	no	
96	1	11	46524.53	?	?	222	no	
96	1	13	56024.261	?	?	228	no	
96	1	14	44104.737	?	?	233	384	+ K-A t.
96	1	15	31956.506	?	?	234	BGR	
96	1	17	57371.341	?	?	235	no	
96	1	19	34679.317	?	?	236	no	
96	1	19	45226.016	?	?	237	no	
96	1	20	36768.974	?	?	238	no	
96	1	24	03388.008	?	?	239	385	+ K-A t.
96	1	24	76096.911	?	?	BGR	?	= K-A t.
96	1	30	08756.848	?	?	240	no	
96	2	1	78530.582	?	?	241	?	+ K-A t.
96	2	2	50750.813	?	?	242	?	
	2	10	35198.959	?	?	247	?	
96	2	16	57796.347	?	?	BGR	?	= K-A t.
96	2	19	20589.684	?	?	BGR	?	= K-A t.
96	2	28	85760.241	?	?	249	?	
96	2	29	22445.141	?	?	250	?	

96	3	5	33645.352	?	?	251	?
96	3	12	35074.697	?	?	252	?
96	3	19	51992.828	?	?	253	?
96	3	21	76321.803	?	?	254	?
96	3	22	19642.728	?	?	255	?
96	3	24	80064.124	?	?	257	?
96	3	25	69892.978	?	?	258	?

--

TLC

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

951025	23	40	39.738	S1	190	400	120	1.7	3	60	167 ✓
951102	01	58	05.879	S2	260	320	50	<0.1	100	3	168 ✓
951102	05	53	29.015	S2	700	1560	600	0.1	5	18	169 ✓
951102	07	58	13	S1	320	80		4	6		BGR ✓
951105	00	29	05	S2	40	50		0.6	40		BGR ✓
951105	01	37	48.077	S2	140	340	80	0.6	2	22	170 ✓
951105	13	00	27.808	S1	160	380	120	9	2	9	171 ✓
951107	07	34	58	S1	20	50	20	2	90		BGR ✓
951111	09	42	40	S1	80	160	20	1.1	15		BGR ✓
951112	18	28	15.244	S2	540	690	220	0.2	14	84	172 ✓
951113	23	25	58.872	S1	260	330	260	4.4	1	15	173 ✓
951115	10	48	49	S1	70	180	80	3	12		BGR ✓
951117	02	48	43.762	S2	650	530	120	0.1	9	10	175 ✓
951118	22	56	00	S2	20	90	100	0.15	6		BGR ✓
951119	08	17	11.402	S1	200	420	110	3	1.5	12	176 ✓
951119	12	54	17.519	S1	110	220	340	1.7	3	4	177 ✓
951119	16	30	48	S2	30	40	10	0.4	110		BGR ✓
951121	06	11	20	S1	20	70	10	2	45		BGR ✓
951122	02	44	01.380	S2	770	920		0.15	0.5	1.5	179 ✓
951122	04	45	07.738	S1	280	430	160	12	35	22	180 ✓
951123	18	10	08	S1	30	60	30	1	30		BGR ✓
951124	05	54	26	S2	50	140	50	0.15	30		BGR ✓
951124	06	58	52	S2	30	100		0.25	280		BGR ✓
951202	10	51	41.744	S1	200	500	220	2.4	2	25	195 ✓
951203	01	06	28.180	S2	260	720	420	0.85	1	16	196 ✓
951208	05	26	57.151	S2	320	740	190	<0.04	1	3.5	197 ✓
951208	10	57	32.057	S1	290	260		7	52	6.5	198 ✓
951208	11	47	47.634	S1	240	510	190	10	23	98	199 ✓
951208	23	24	12	S1	100	90		>10	30		BGR ✓
951209	08	42	29.607	S1	150	450	160	6	6	14	200 ✓
951213	04	57	29.683	S2	360	940	330	0.4	2	8	201 ✓
951213	09	04	34	S2	300	90		<0.15	4.5		BGR ✓
951214	01	29	47	S2	15	100	30	1	30		BGR ✓
951214	02	24	17.847	S2	200	450	150	0.8	4	6	202 ✓
951215	20	23	45	S2	60	70	15	<0.15	60		BGR ✓
951216	22	39	42	S2	160	110		0.1	6		BGR ✓
951218	07	59	48	S1	70	130	30	2.3	22		BGR ✓
951219	16	51	19.732	S2	430	850	920	<0.03	1	54	203 ✓
951220	08	51	23.560	S2	100	320	180	1	2	8	204 ✓
951221	08	23	18	S1	110	150	70	>15	15		BGR ✓
951222	21	00	21	S2	280			<0.1	16		BGR ✓
951225	09	14	16	S2	200			<0.3	50		BGR ✓
951225	09	34	14	S1	500	150	25	2.2	60		BGR ✓
951225	15	21	35	S2	210	170	40	0.1	100		BGR ✓
951225	22	51	08	S1	80	150	50	2.4	40		BGR ✓
951226	08	38	15	S2	60	100	50	0.15	9		BGR ✓
951227	06	23	25.042	S1	420	1200	320	1	1	1.5	218 ✓
951227	21	59	20	S1	50	50		3	65		BGR ✓
951228	12	28	42	S2	70	80	40	<0.07	110		BGR ✓
951228	15	47	26	S2	80	170		0.9	17		BGR ✓
951231	05	37	11.668	S2	180	320	150	0.07	9	65	219 ✓
951231	21	24	34	S2	100	25		<0.2	20		BGR ✓
960102	03	14	10.996	S1	140	300	80	1	1	0.2	220 ✓
960102	20	20	53	S1	200	120	40	>9	25		BGR ✓
960104	03	28	41.062	S2	360	630	230	<0.05	2	28	221 ✓
960105	16	04	30	S1	80	60		5	30		BGR ✓
960107	05	23	20	S2	30	100		0.5	230		BGR ✓
960107	19	03	28	S2	30	120	150	<0.1	32		BGR ✓
960109	23	11	31	S2	60	130	20	0.3	5		BGR ✓
960111	12	55	24.530	S2	1130	1280	190	0.2	0.5	6	222 ✓
960113	15	33	44.261	S2	500	450	50	0.3	2	36	228 ✓
960114	12	15	04.737	S1	4900	7200	1400	1.8	1	60	233 ✓
960115	08	52	36.506	S1	380	360	60	10	1	7	234 ✓
960115	12	50	15	S2	120	60		0.7	22		BGR ✓
960116	02	02	18	S2	140	170		0.15	17		BGR ✓
960117	15	56	11.341	S1	250	360	30	4	5	20	235 ✓

70

From cline@lheavx.gsfc.nasa.gov Fri Feb 2 05:41 PST 1996
 Date: Fri, 2 Feb 1996 05:41:51 -0800
 Mime-Version: 1.0
 To: Bonnard.Teegarden@cesr.cnes.fr, KHURLEY@sunspot.ssl.berkeley.edu,
 palmer@lheamail.gsfc.nasa.gov, seifert@lheamail.gsfc.nasa.gov
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: For Your INFO

Dear Bonnard, Kevin, David, Helmut:

Here is Sergei Golenetskii's latest Konus burst list, for your information. Note that, including the non-triggered-mode 'BGR' events they confidently identify, there are over 300 events so far.
 - TLC

DATE	Trigger T0 time (UT)	Sensor	KONUS-WIND		N(S1)/N(S2)		Duration		Trigger number
			Max counts per sec		G3 in G2		T<T0 T>T0		
			G1	G2	G3	in G2	T<T0	T>T0	
941113	12 09 15	S1	145	85		2.5	115		BGR ✓
941114	02 02 40	S2	110	128	30	0.25	12		BGR ✓
941117	03 14 38.191	S2	406	550	74	0.17	40	5	2 ✓
941117	14 07 57	S2	150	140		<0.15	5		BGR
941119	19 31 09.175	S2	370	703	160	0.23	7	20	4 ✓
941120	20 23 17.924	S1	215	328	30	>15	2	25	5 ✓
941121	17 25 00.945	S1	1652	1656	300	21	3	50	6 ✓
941125	22 04 30.156	S2	115	308	109	0.95	1.5	5	7 ✓
941126	00 20 46	S1	150	205	200	>14	18		BGR ✓
941126	12 22 37.952	S1	860	1430	330	4.2	40	45	8 ✓
941126	16 54 20	S1	55	75		>10	26		BGR
941126	19 56 49.732	S1	290	390	211	6.7	20	26	9
941127	14 30 25.680	S2	200	400	95	0.17	8	7	10
941127	15 39 10	S1	210	57		2.7	260		BGR ✓
941128	15 37 00	S1	75	90	32	>15	55		BGR ✓
941205	23 33 40.074	S2	370	460	188	0.06	6	30	11 ✓
941207	22 10 32	S2	265	175		<0.2	7		BGR ✓
941210	03 10 52.523	S2	900	2350	1385	0.12	1	15	14 ✓
941214	17 03 51	S1	40	45	29	>6	12		BGR ✓
941214	05 38 45.226	S1	3479	1266	14	1.0	12	240	18 Sol
941221	07 44 08	S2	55	115	30	0.8	20		BGR
941221	22 14 35.215	S1	260	496	165	1.5	55	11	19 ✓
941222	05 36 00.243	S2	334	1360	1066	0.36	7	105	20 ✓
941228	07 39 45.915	S1	300	637	519	4.4	5	90	28 ✓
941228	16 55 23	S2	40	36	23	0.25	25		BGR ✓
941229	12 58 05	S1	46	108	31	1.8	15		BGR ✓
941229	22 51 08.781	S2	396	381	140	0.09	7	25	29 ✓
941230	20 52 53	S1	74	117	52	8.4	158		BGR ✓
941230	23 43 44	S2	55	70	16	<0.2	4.5		BGR ✓
950104	07 18 39.613	S2	258	550	219	0.75	2.8	20	31 ✓
950104	09 00 58	S2	140	143	40	<0.1	25		BGR ✓
950110	06 02 15	S2	332	180		<0.1	3600		BGR
950110	13 37 57.084	S2	234	422	213	0.05	38	100	32 ✓
950111	04 49 12.241	S1	586	620	100	>19	92	24	33 ✓
950111	12 18 49.196	S1	225	435	164	1.85	26	50	34 ✓
950112	07 45 37.120	S2	1305	1800	336	0.04	2.5	44	35 ✓
950113	05 59 13	S1	283	180	26	>10	52		BGR ✓
950113	17 38 32	S2	85	162	35	<0.06	75		BGR ✓
950114	01 00 38	S1	46	110		1.6	6		BGR ✓
950114	04 03 01	S2	23	76		0.5	70		BGR ✓
950114	07 30 30.766	S2	205	406	60	<0.05	1	100	36 ✓
950114	13 10 34.865	S1	1320	2828	516	3.1	1	10	37 ✓
950115	02 49 32	S2	40	47	34	<0.15	24		BGR ✓
950117	01 36 00	S2	56	82	42	0.2	108		BGR ✓
950118	12 22 54	S2	57	105	17	<0.1	35		BGR ✓
950125	14 51 52.253	S1	380	600	140	8.2	3.8	11	39

K O N U S

2 2 / 2 / 9 6

U L Y S S E S R T

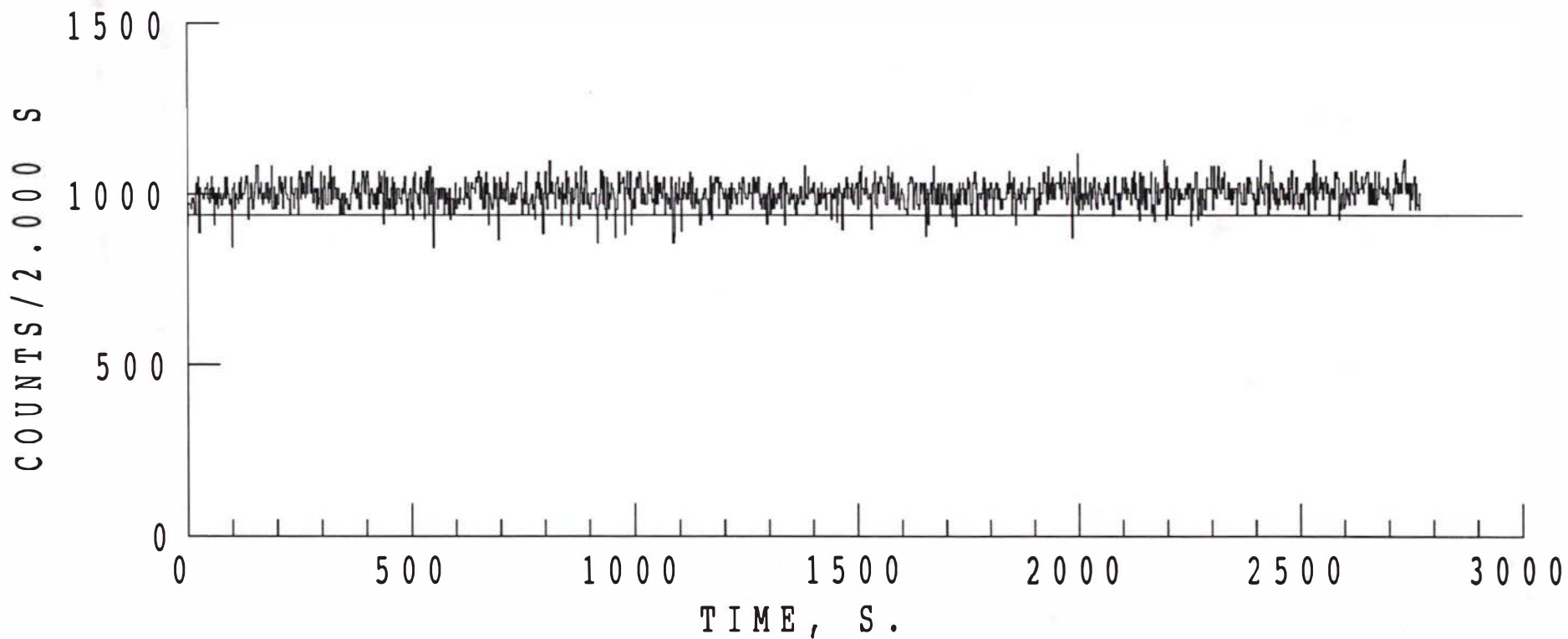
2 2 / 1 2 / 9 5 7 4 2 3 2 . 0 9 4 s

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 8

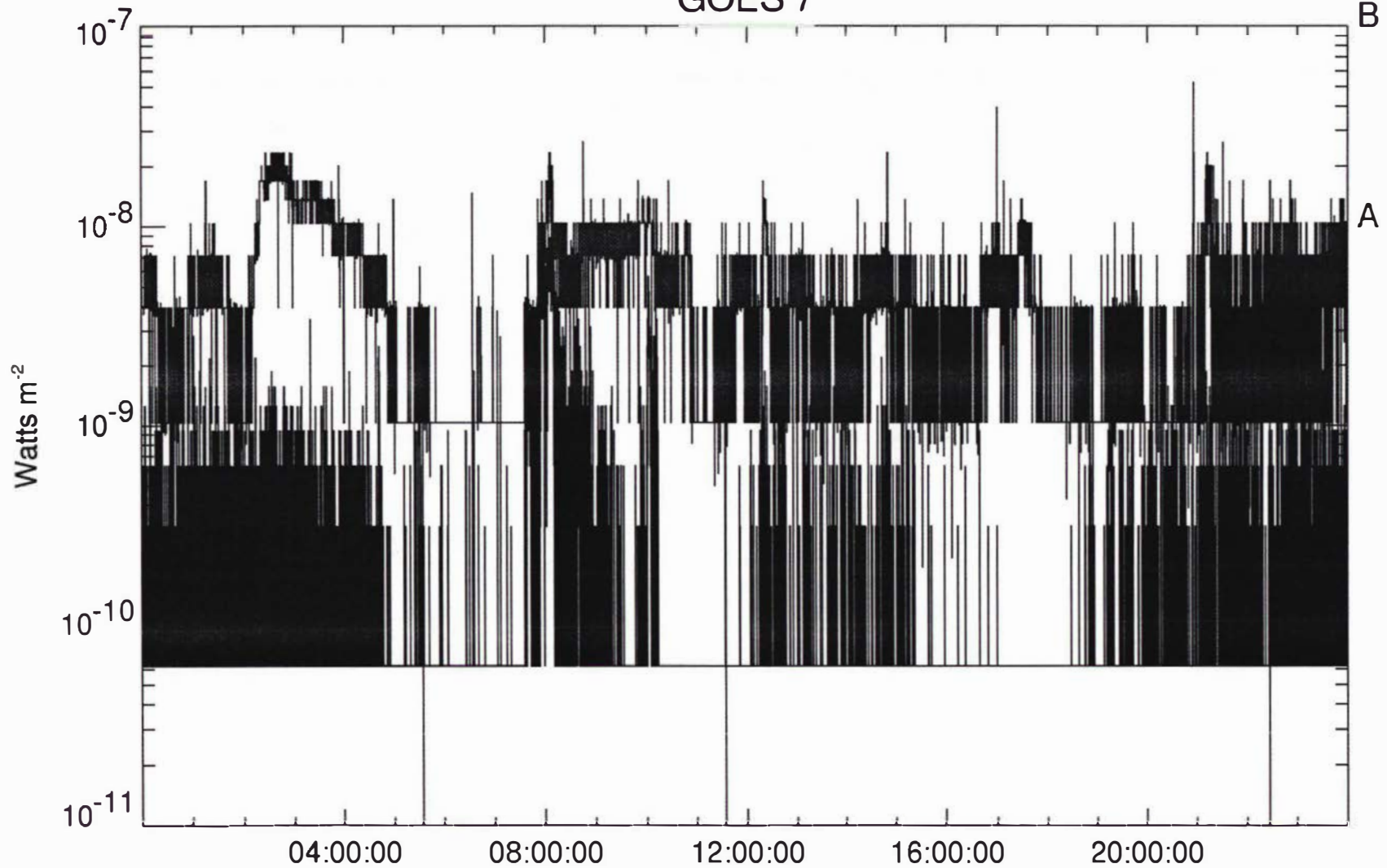
0 - 0 k e V

M= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



GOES 7



Data Start: 95/12/22, 0000:01

Plot created: 95/12/24, 0650

Channel

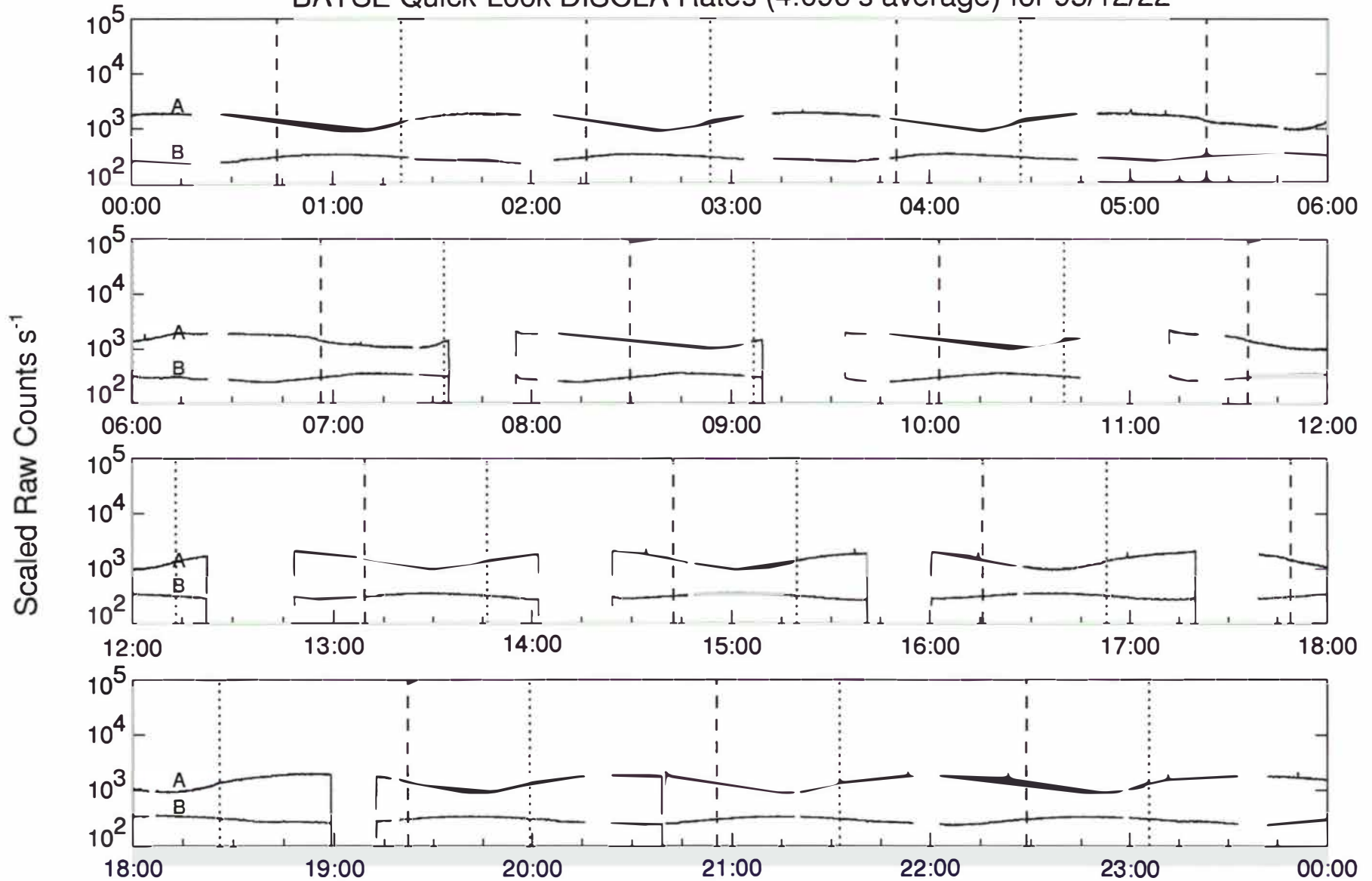
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/12/22



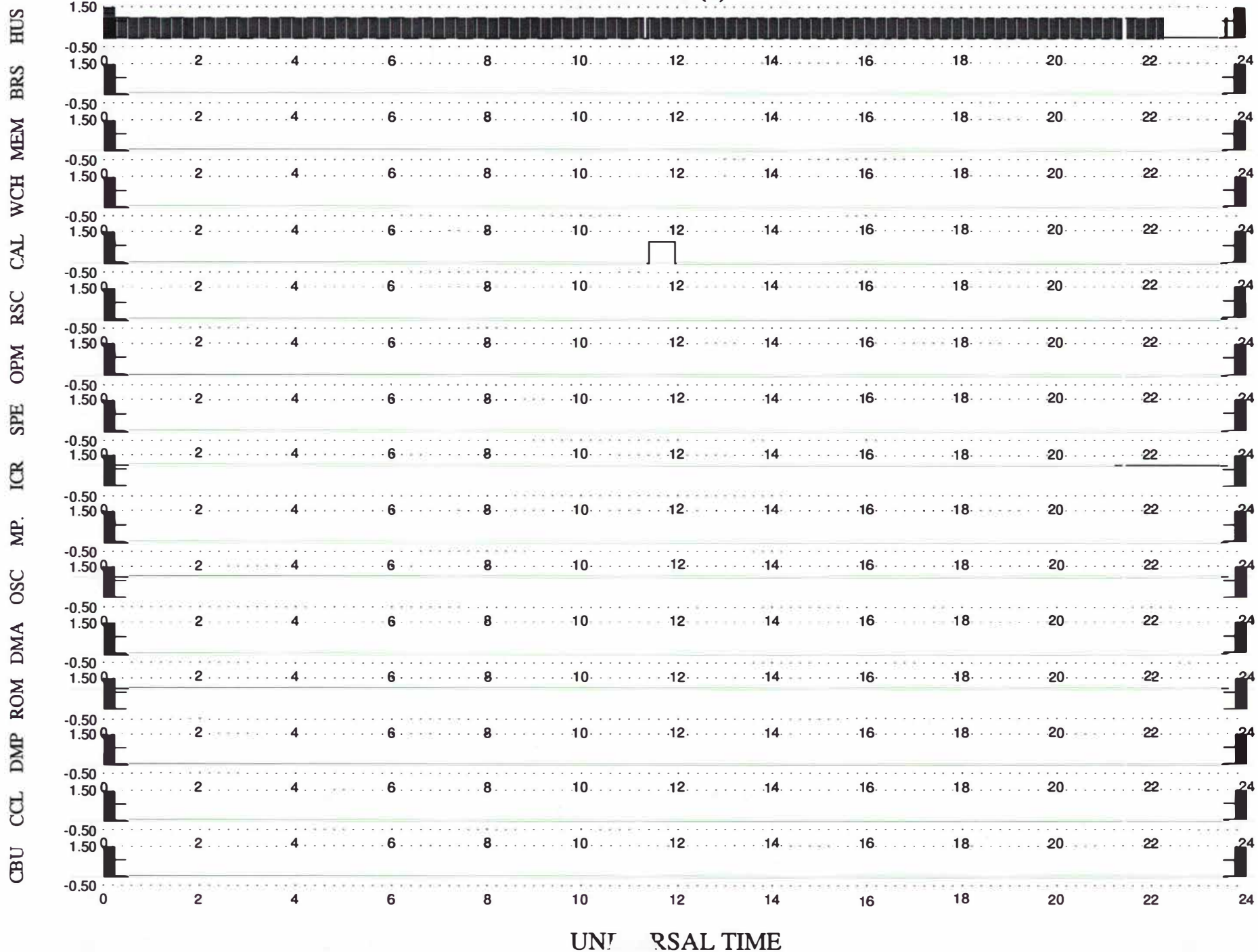
Current Time: 95/12/24, 0651 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

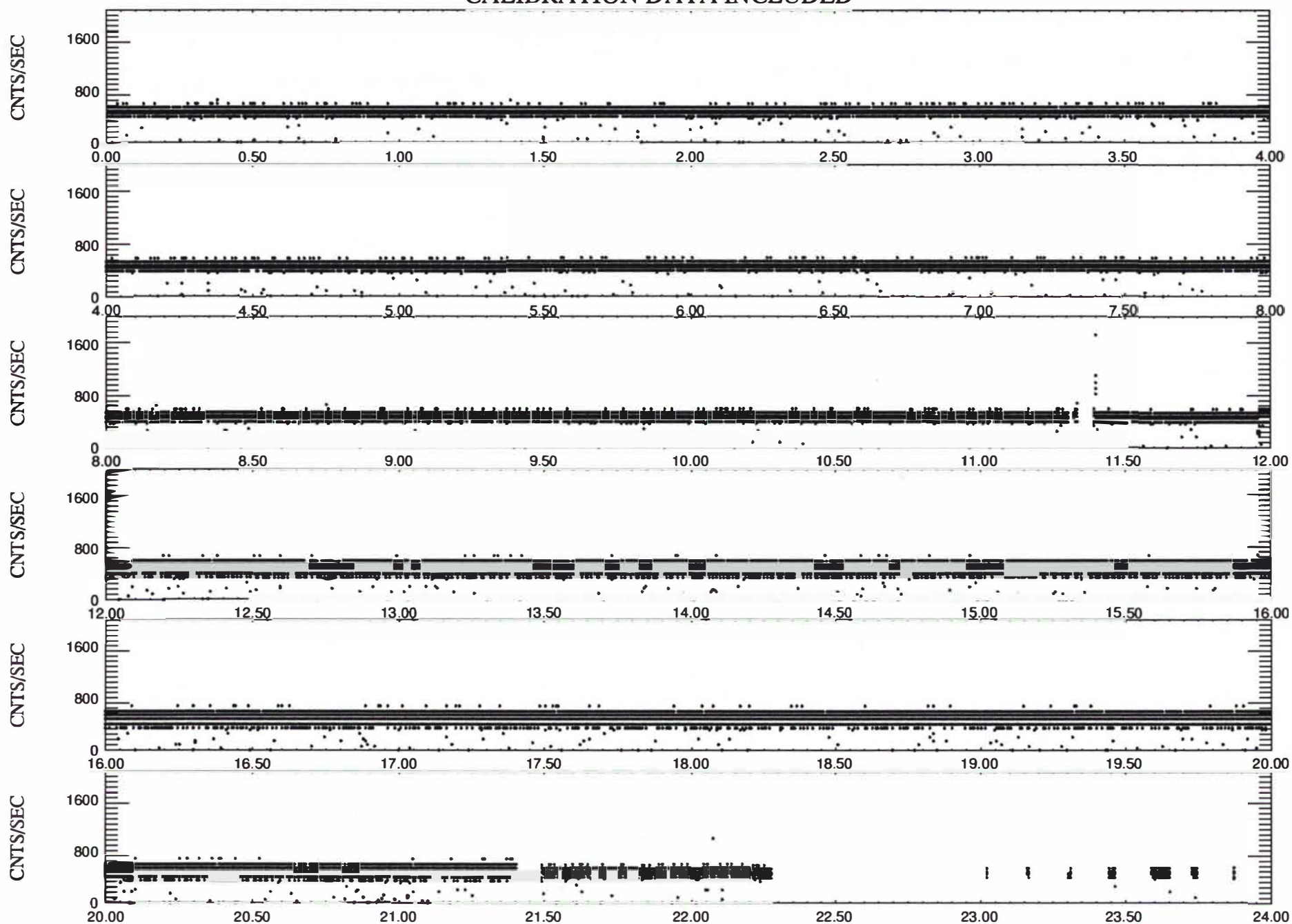
HUS MODES EDR day 356, year 1995 to day 356, year 1995
NO BURST (2)

4/1/96

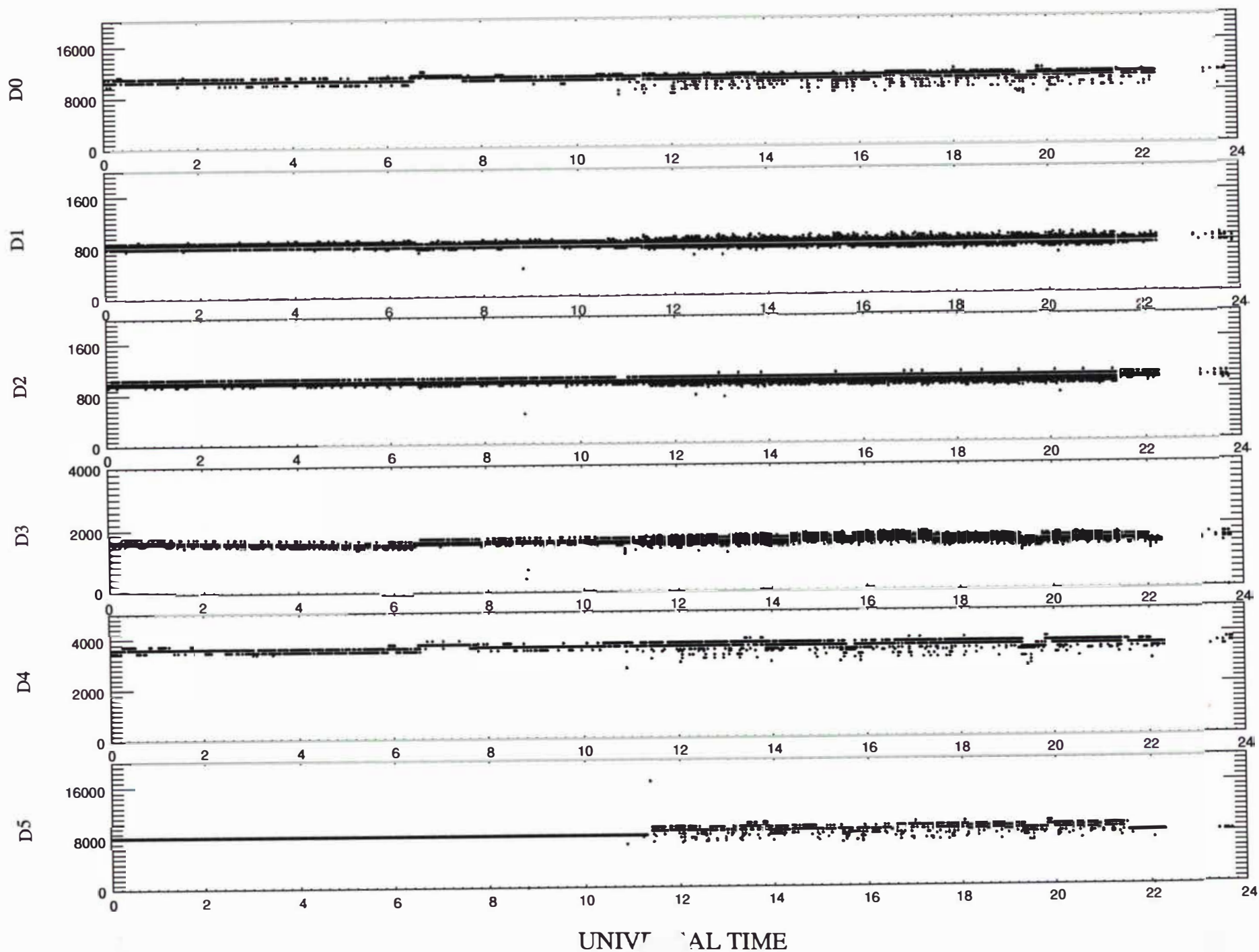


HUS 2A, MODE 1, NOT AVERAGED EDR day 356, year 1995 to day 356, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNIVERSAL TIME



From HENZE@fender.msfc.nasa.gov Thu Dec 28 15:02 PST 1995
From: HENZE@fender.msfc.nasa.gov
Date: Thu, 28 Dec 1995 17:01:31 -0600 (CST)
To: burst@comptel.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, butterworth@lheavx.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.: 4097

TIME: TJD=0075 SECONDS=18083

TYPE: FLUCTUA SOLAR FLARE TRIGGER SIGNAL:N

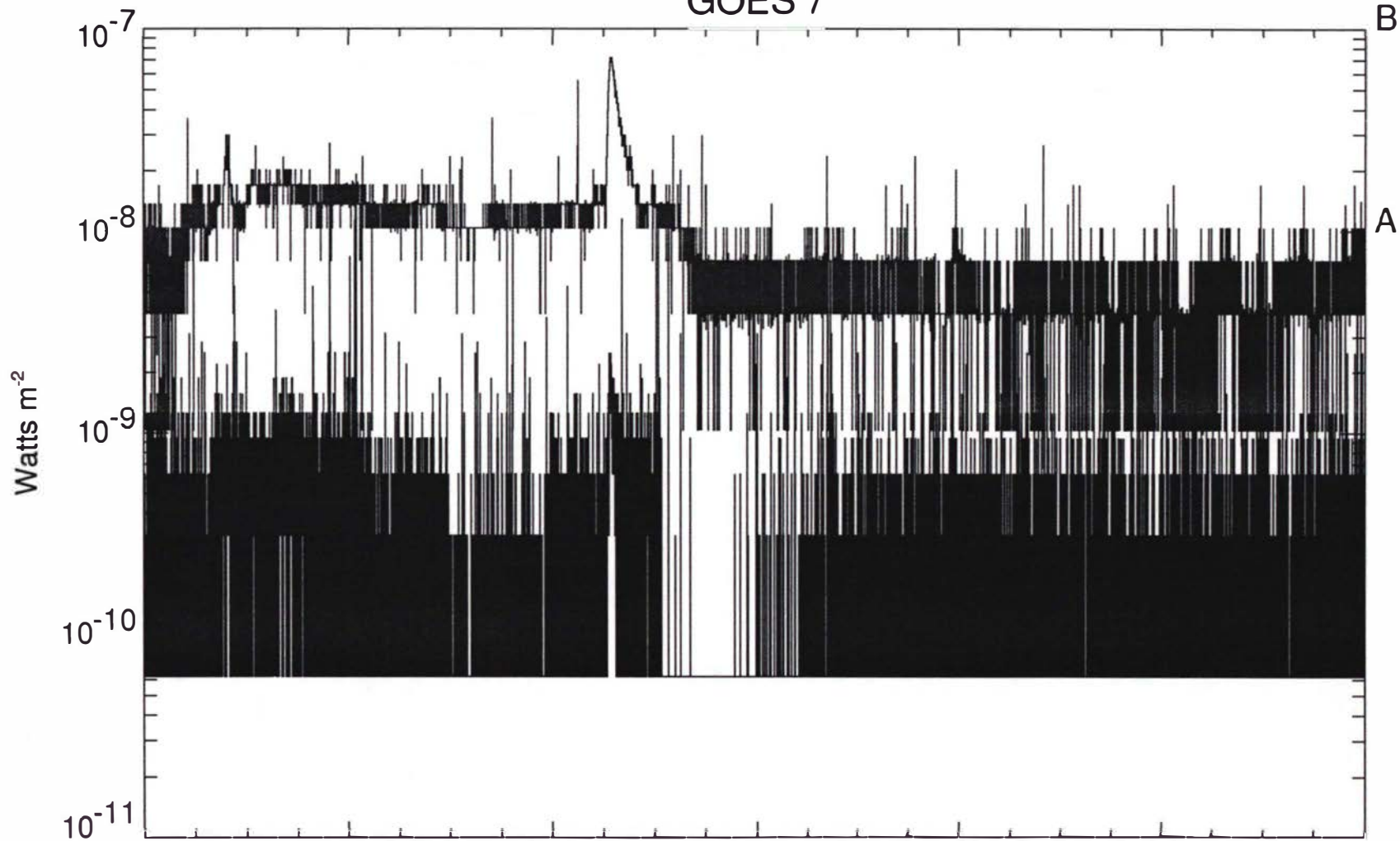
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
BACKGROUND FLUCTUATION.

GOES 7



Data Start: 95/12/23, 0000:02

Plot created: 95/12/25, 0650

Channel

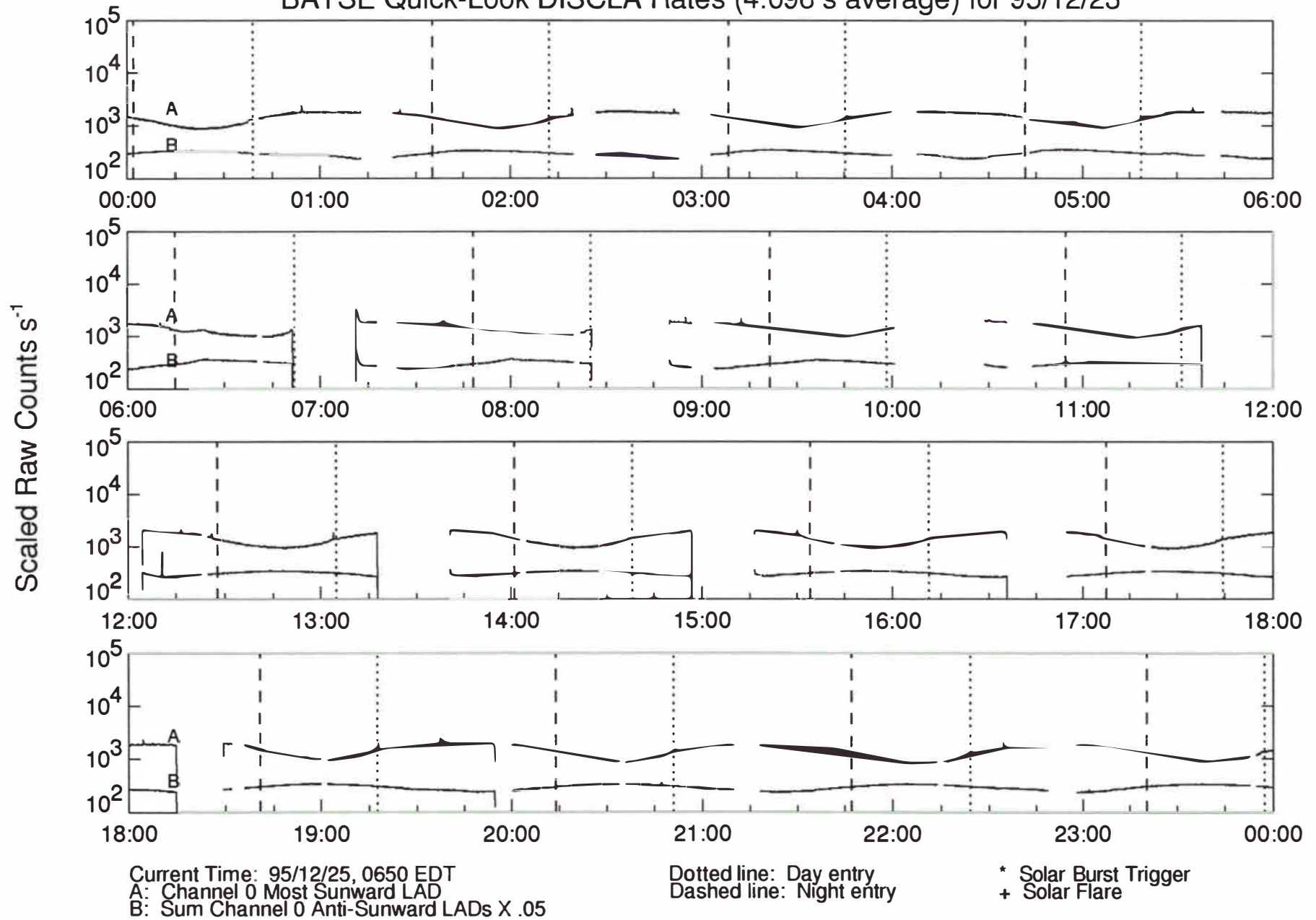
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

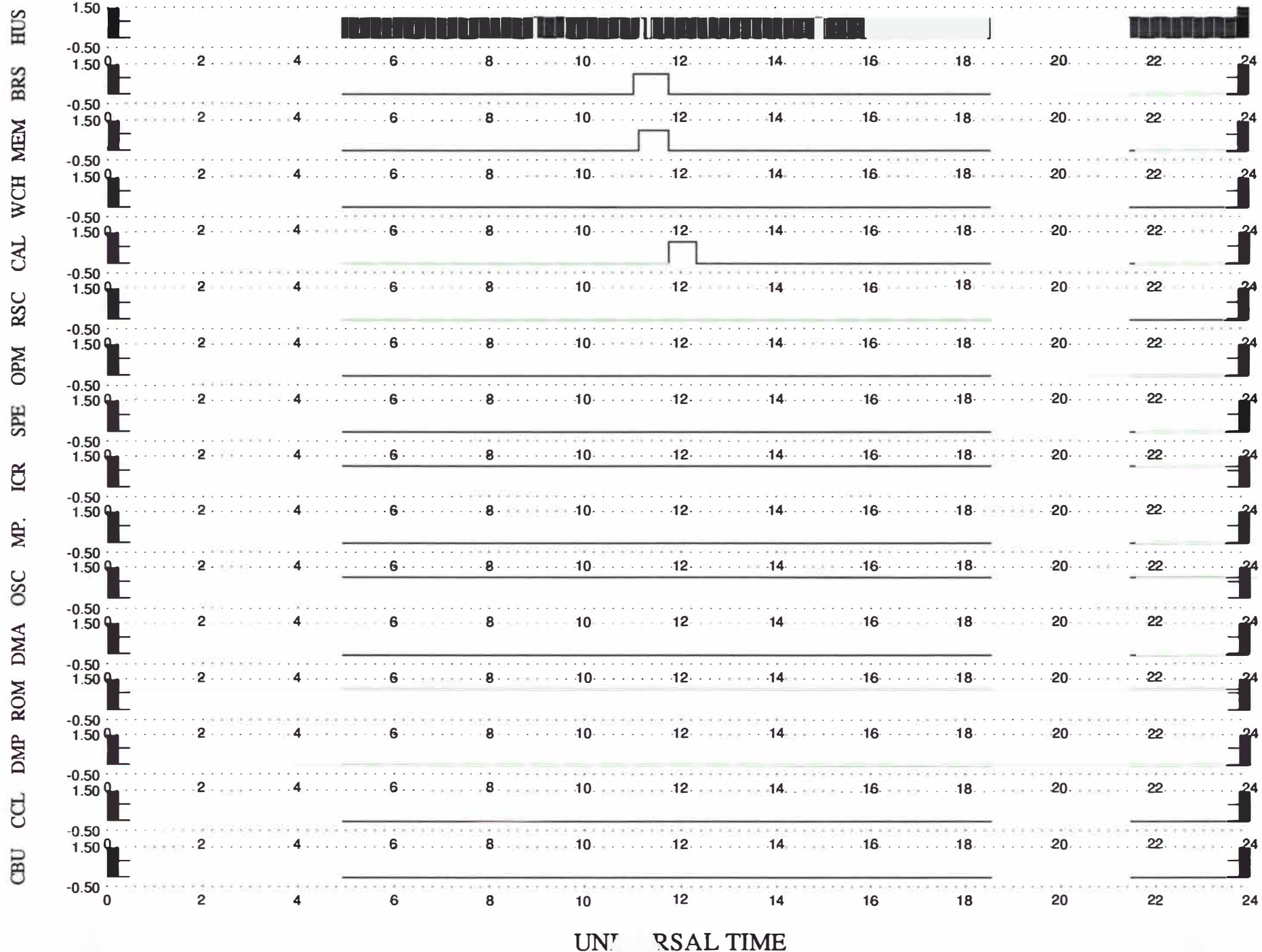
Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/12/23



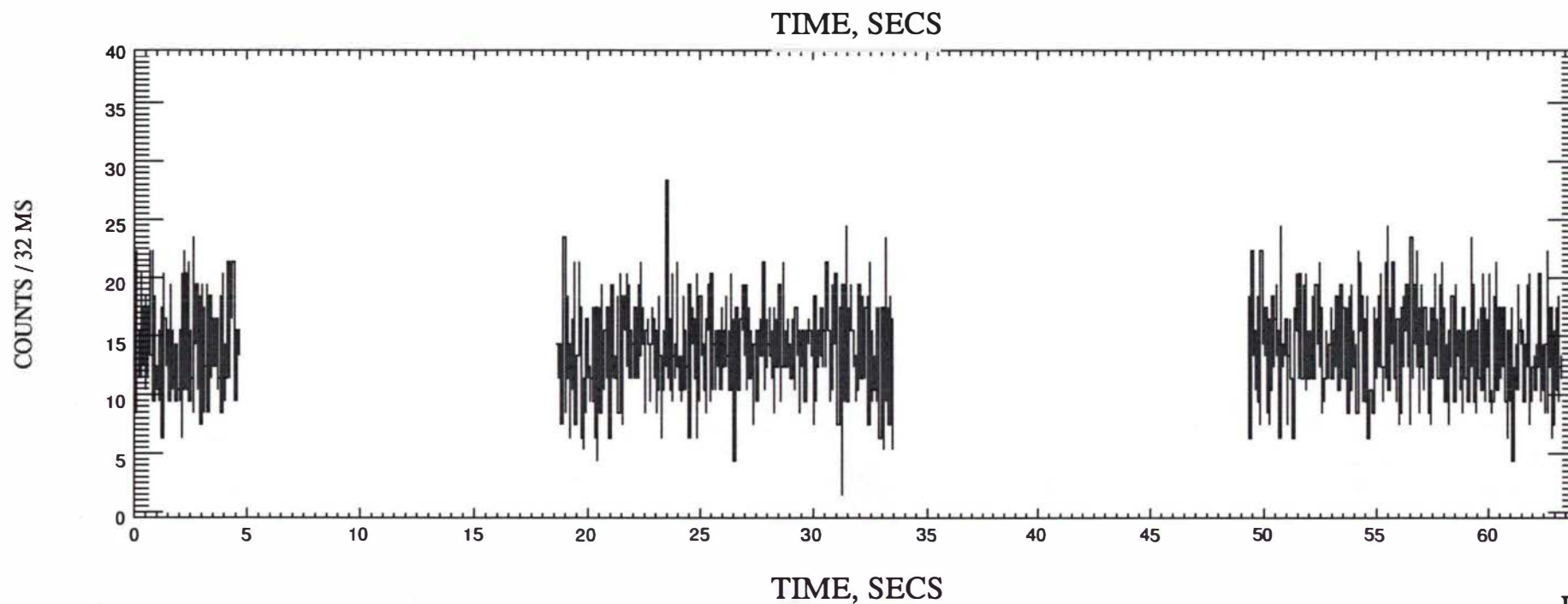
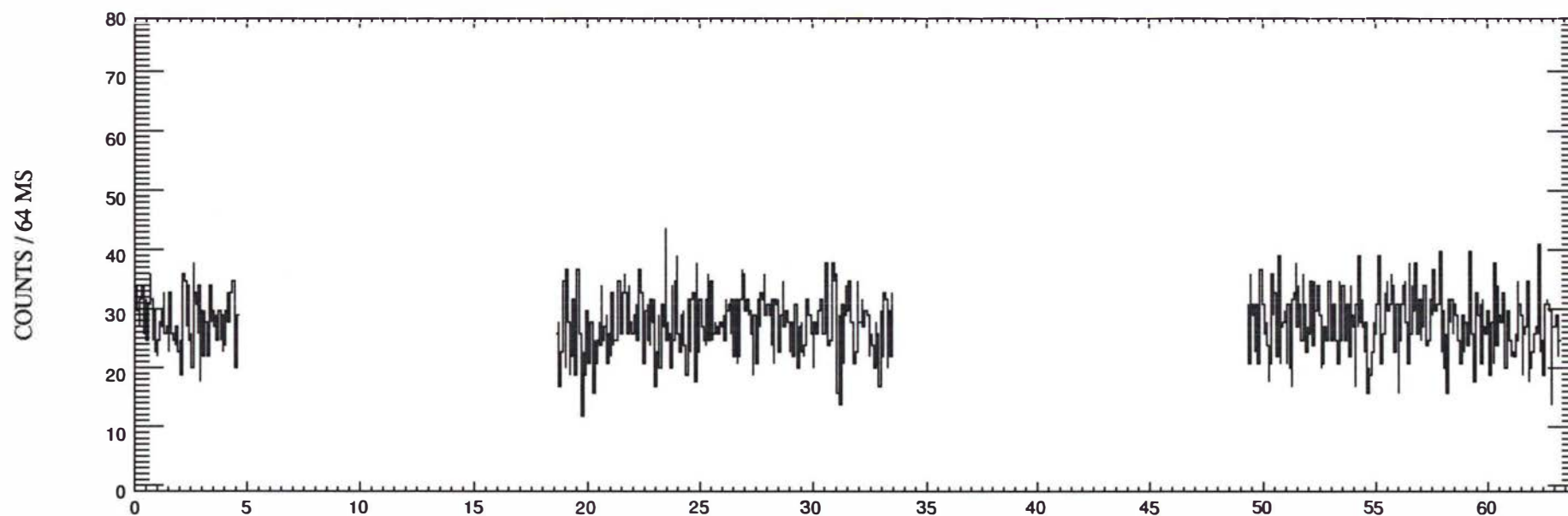
HUS MODES EDR day 357, year 1995 to day 357, year 1995 BURST NUMBER 3

4/1/96



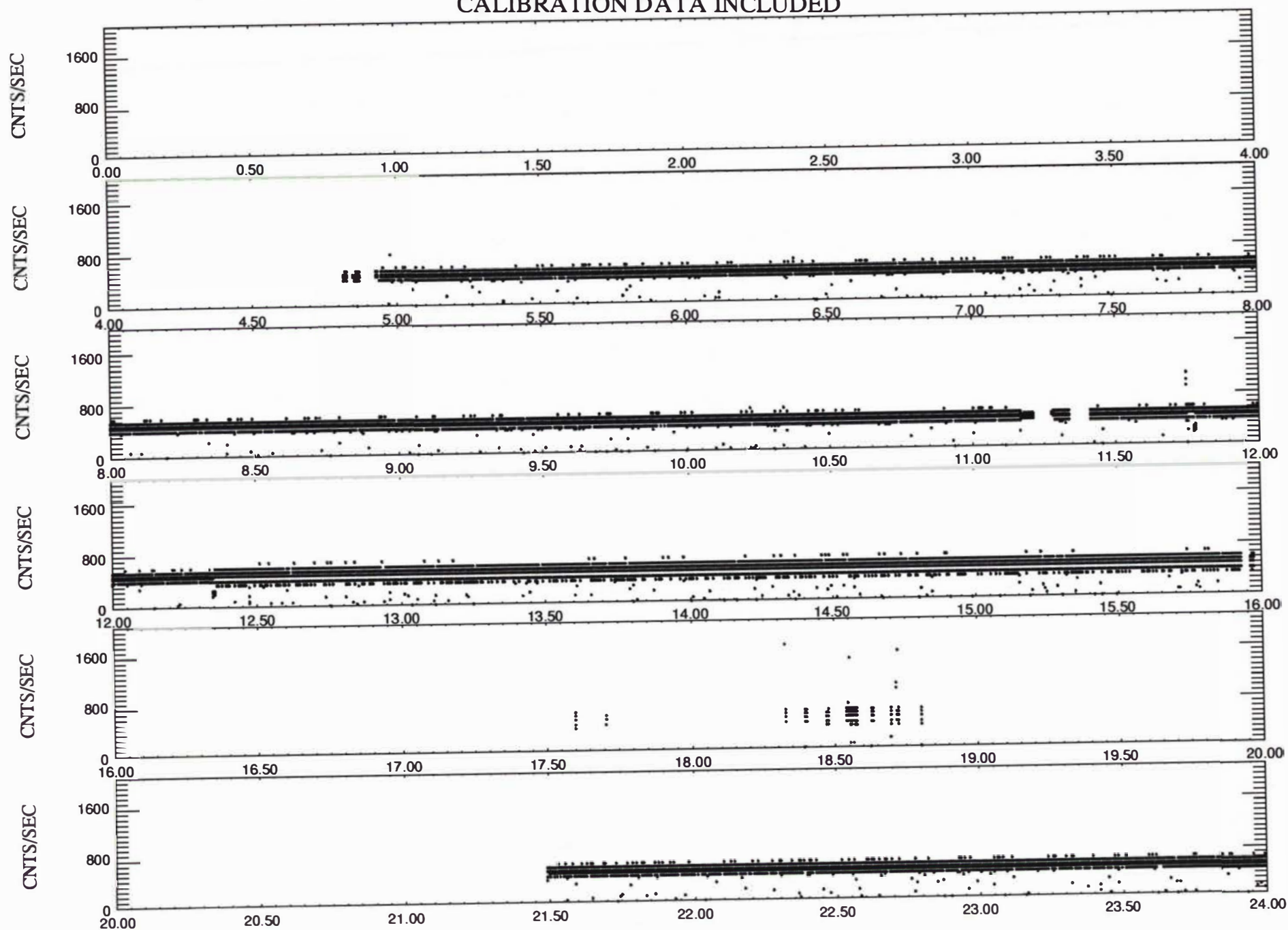
HUS 2A TRIGGERED DATA EDR day 357, year 1995
Burst Counter 3 at UT=11.000867008633 h=39603.121 s 11:00:03.121

4/1/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 357, year 1995 to day 357, year 1995
CALIBRATION DATA INCLUDED

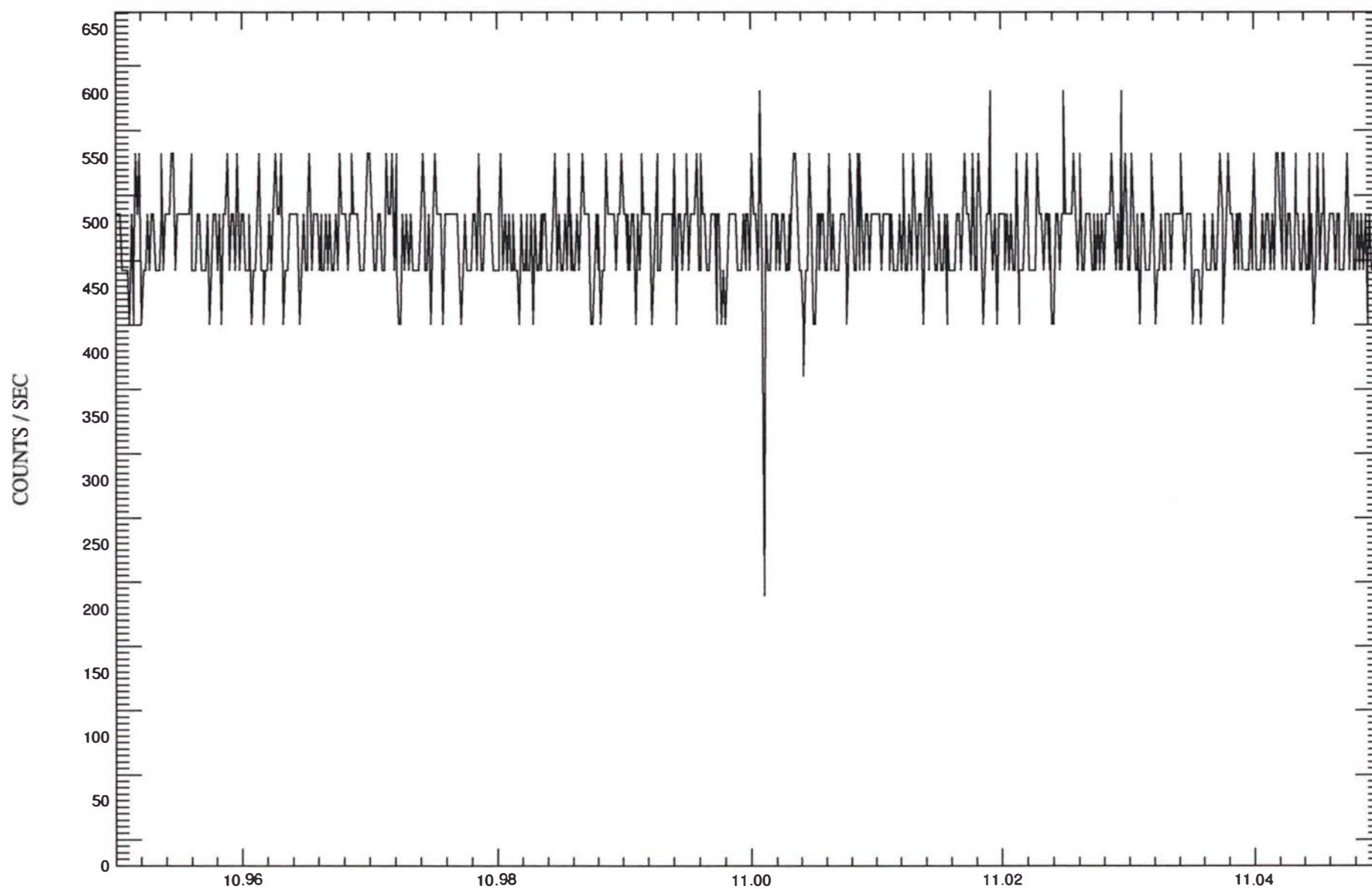
4/1/96

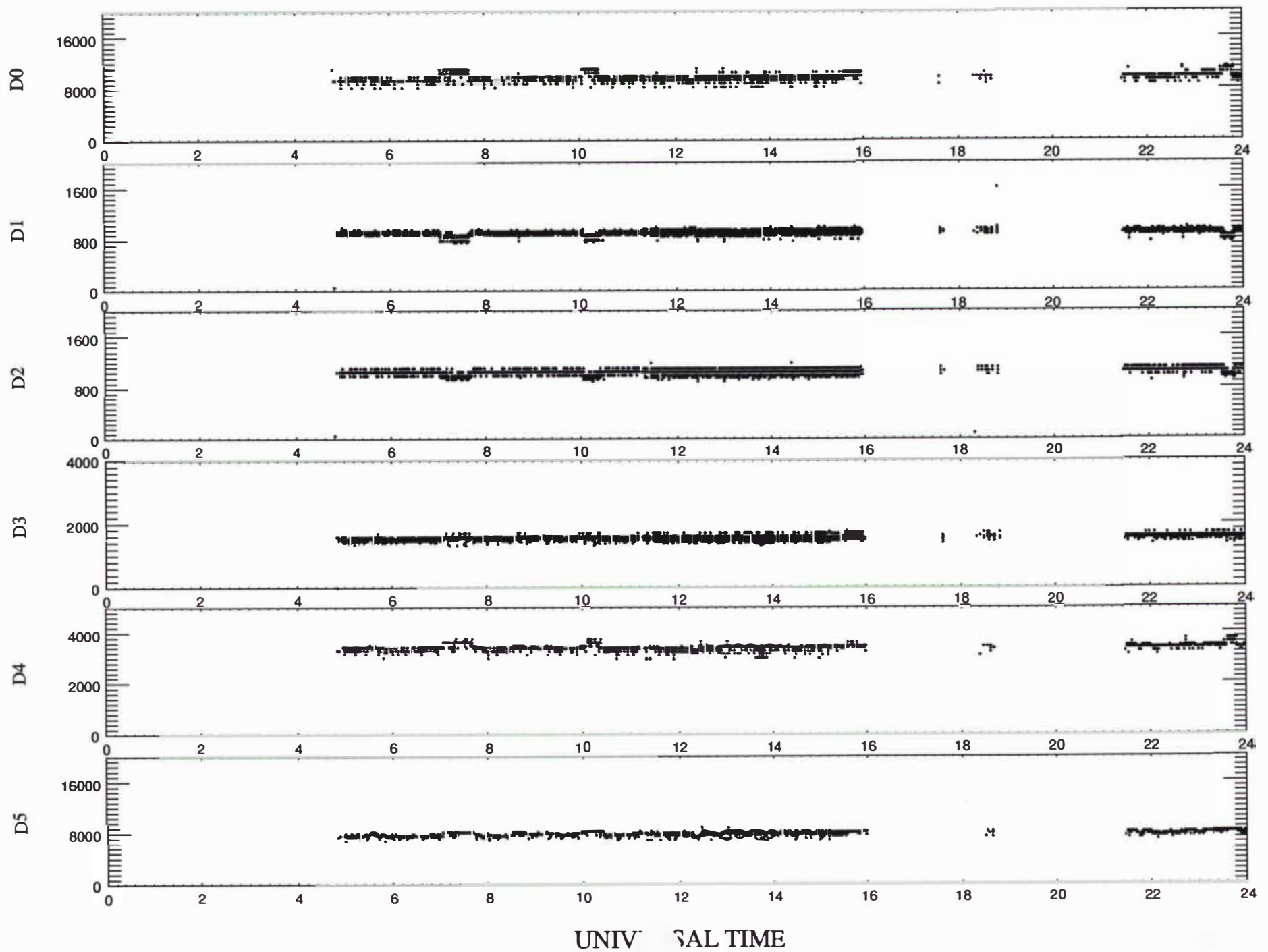


UNIVERSAL TIME

HUS 2A, MODE 1, NOT AVERAGED QEDR day 357, year 1995 to day 357, year 1995
CALIBRATION DATA INCLUDED

12/28/95





From HENZE@fender.msfc.nasa.gov Fri Jan 5 15:20 PST 1996
From: HENZE@fender.msfc.nasa.gov
Date: Fri, 5 Jan 1996 17:20:00 -0600 (CST)
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 4095

BATSEARCH PROGRAM

No

BATSE BURST # 4095
EVENT OF 1995 DEC 24 DAY OF YEAR=358
EVENT CROSSING TIME AT BATSE : 6841. S. OR 01:54:01.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 226.000 -36.000
BATSE PEAK COUNTING RATE: 2000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 24/12/ 95 IS:
RA= 224.619 DEC= 58.645 DIST= 2.828 AU
BATSE-ULYSSES DISTANCE = 423096809. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 85.35 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 114.47 SECS.
CROSSING TIME AT ULYSSES IS 6955. S. OR 01:55:55 +/- 295.95 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 24/12/ 95 IS:
RA= 289.602 DEC= -23.277 DIST= 2.322 AU
MARS-BATSE DISTANCE = 347353024. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=124.24 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -651.96 SECS.
CROSSING TIME AT MARS IS 6189. S. OR 01:43:09 +/- 156.39 SECONDS

BATSE BURST TRIGGER

NO.: 4095

TIME: TJD=0075 SECONDS=06841

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=048.5 AZIMUTH=341.5 ERROR=009.0 DEGREES

COMMENTS:

PROBABLE GRB. SINGLE SPIKE, DUR. ~4 S. NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
4095	951224	10075	06841	2000	226	-36	4

5 / 1 / 96

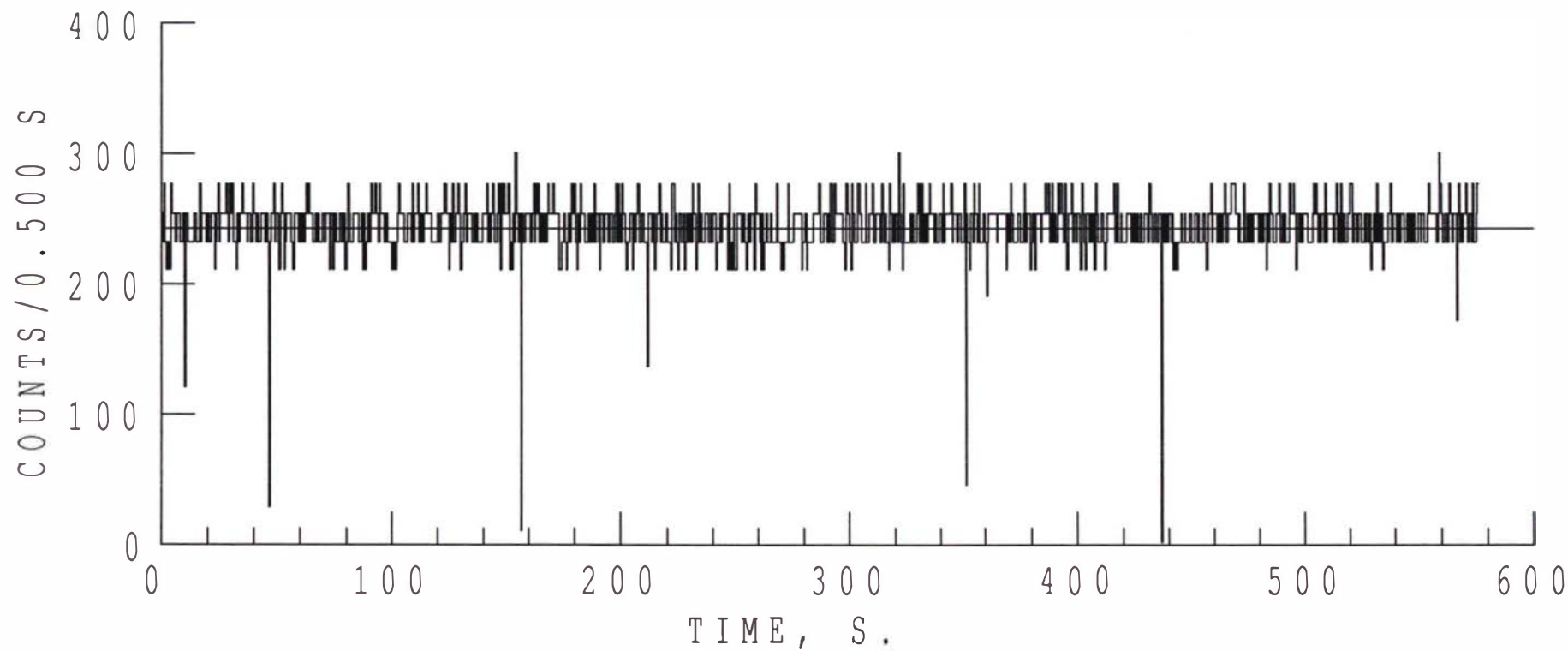
ULYSSES RT

24 / 12 / 95 6660.439 s

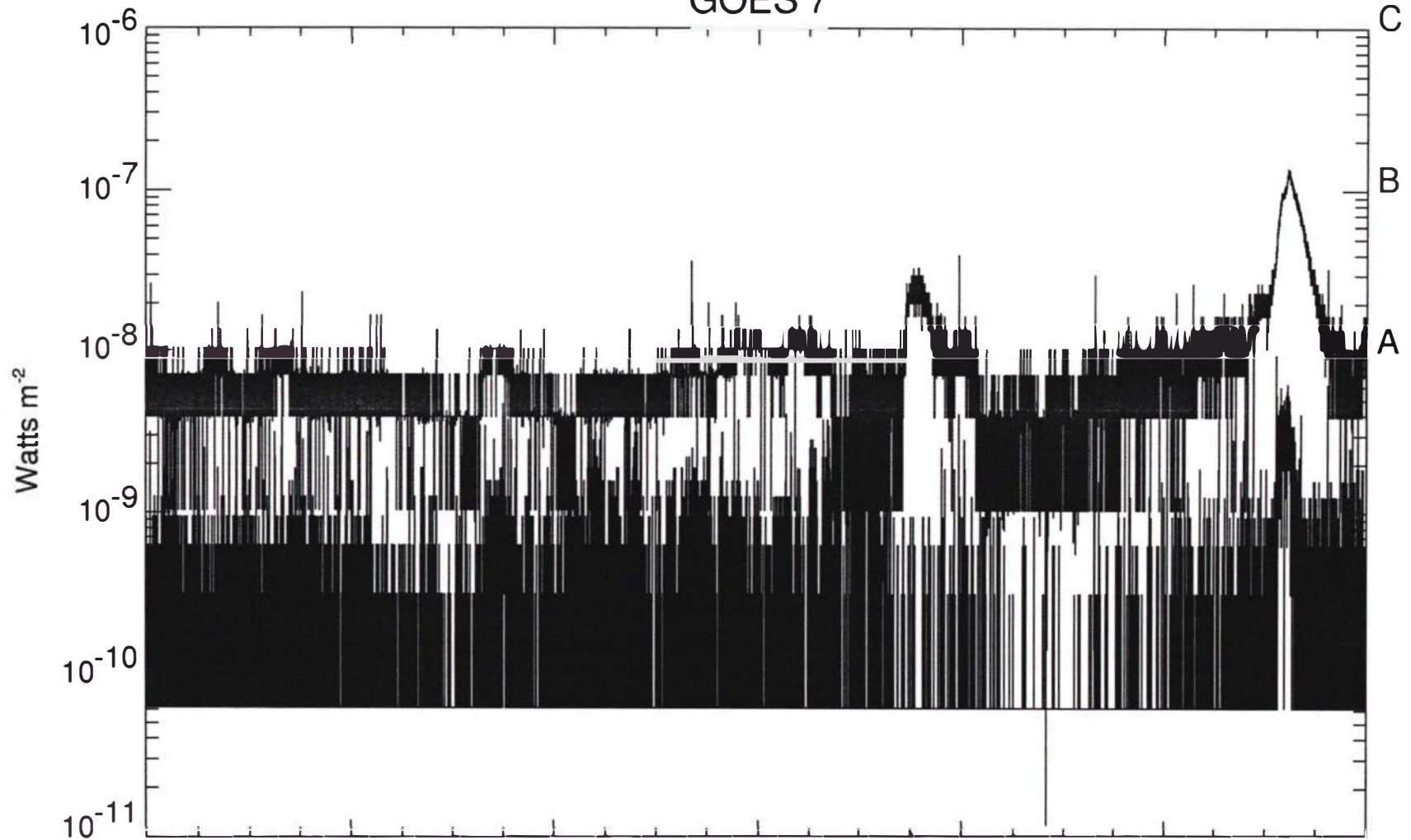
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



GOES 7



Data Start: 95/12/24, 0000:00

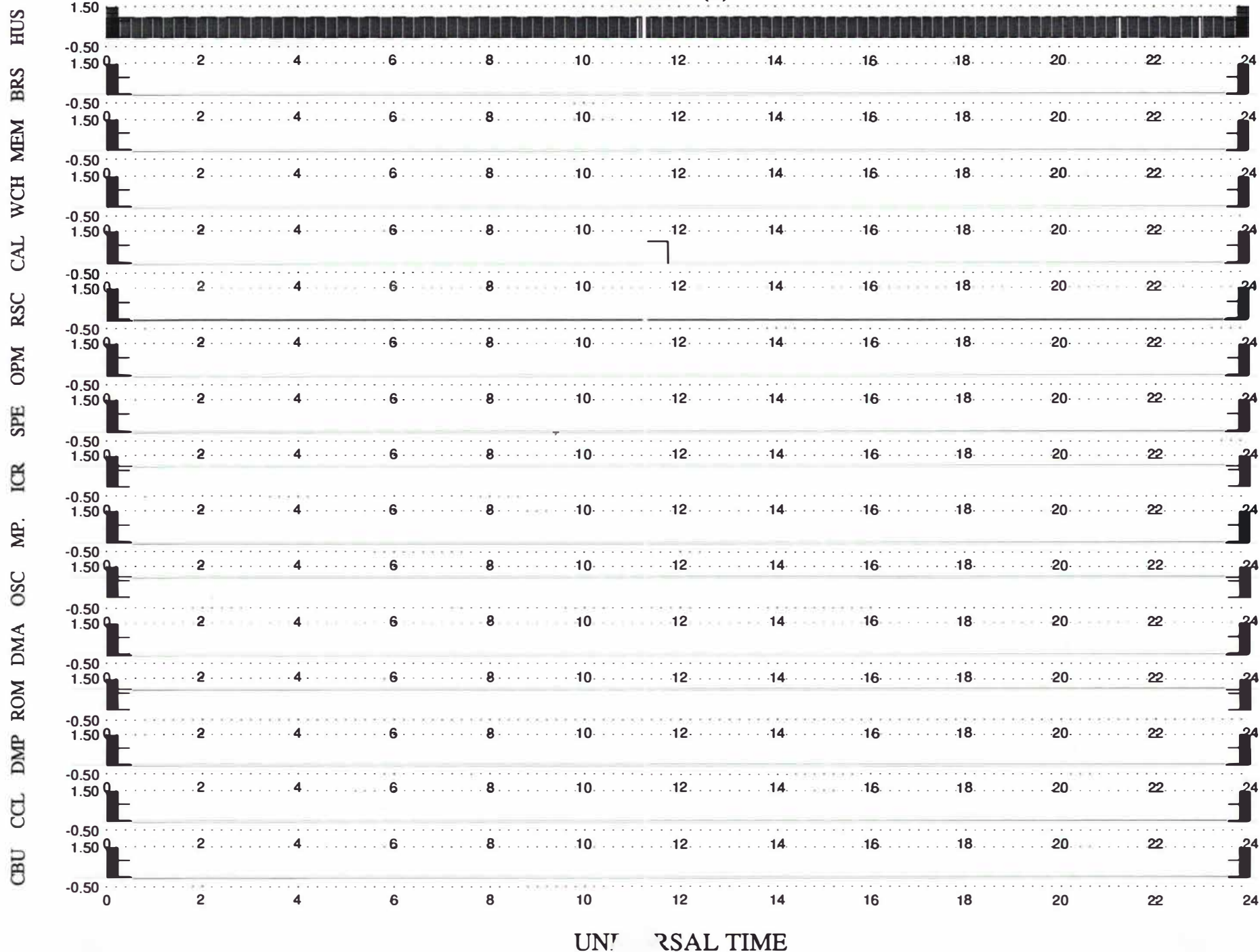
Plot created: 95/12/26, 0650

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

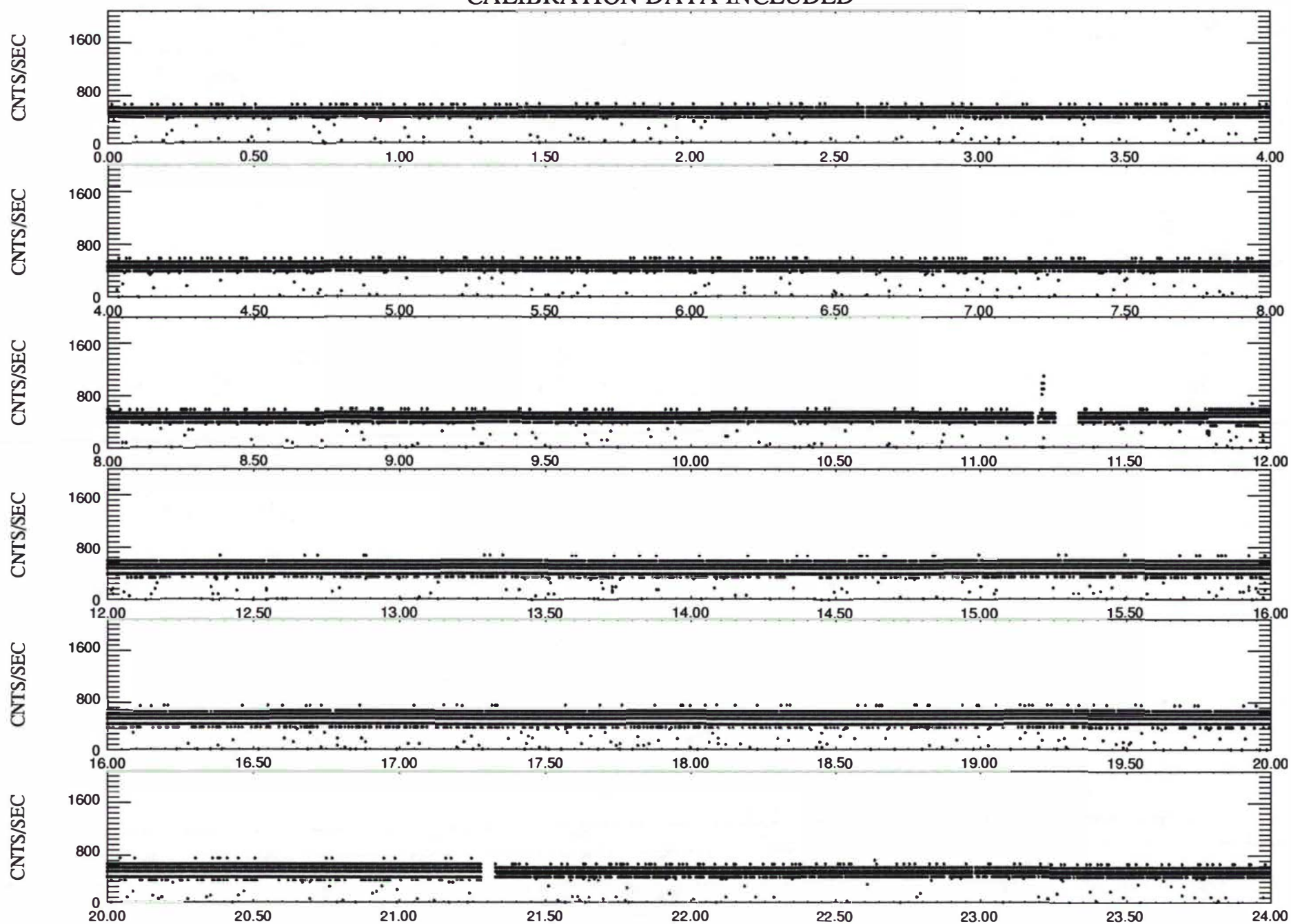
HUS MODES EDR day 358, year 1995 to day 358, year 1995 NO BURST (3)

4/1/96

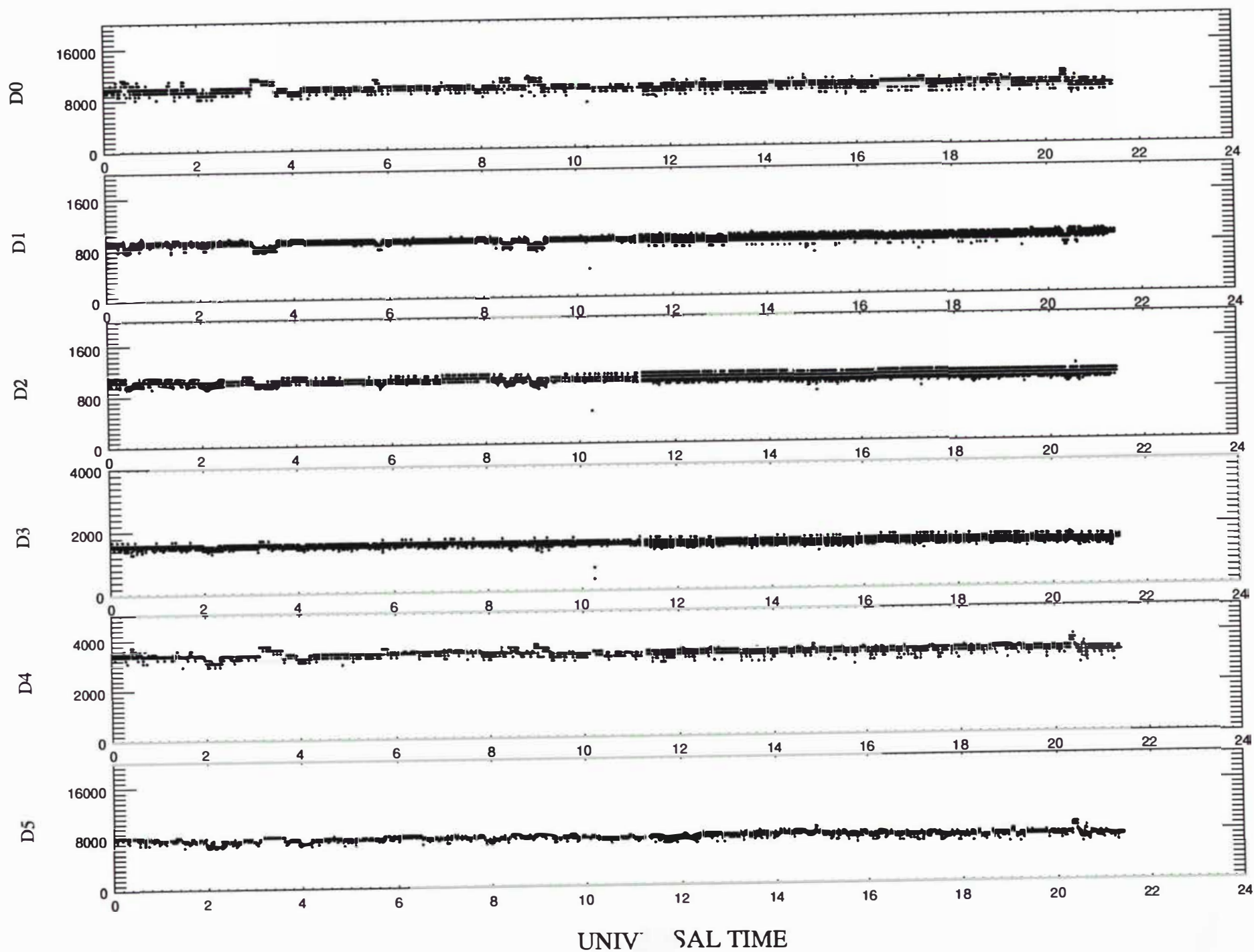


HUS 2A, MODE 1, NOT AVERAGED EDR day 358, year 1995 to day 358, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNIVERSAL TIME



From ulsdtmt@jplsp.DNET.NASA.GOV Mon Mar 18 17:13 PST 1996
From: ulsdtmt@jplsp.DNET.NASA.GOV
Date: Mon, 18 Mar 96 20:13:12 -0500
To: "khurley@sunspot.ssl.berkeley.edu"@east.DNET.NASA.GOV (SENT TO @LIST1)
Subject: Misplaced Major Frames in EDRs

Greetings,

We have identified an operations technique that produces data that will be improperly time tagged by the MGDS (telemetry system). Instances of EDR errors (major frames out of order) have been found in the CDROM archival products for December 1995 and January 1996. Errors will also be found in the still to be shipped February 1996 data.

When major frames are recorded but not transmitted during the next track, but are eventually downlinked with data from a succeeding day, the embedded SCLKs are 'assumed' to be incorrect by the frame syncer and are re-tagged with SCETs and SCLKs matching the adjacent (but newer) data.

For each major frame processed in this manner, a gap will exist, representing the time the data was actually acquired, and a major frame or realtime data, representing the time period the data now errently represents, will be replaced by the misplaced playback data.

Yes. Confusing. See the attached memo detailing the times involved.

Approximately 17 such instances are known to have occured. The total time involved is about twenty minutes. Because the data loss is small and the cost of reprocessing would be so large, the Project has determined that it would be imprudent to reprocess.

For your information, however, we included a memo from Nigel Angold which itemizes each instance.

We thank Toni Galvin and Nigel for identifying the problem and assisting in the diagnosis.

Regards,

Joe

To: <ulsdtmt@jplsp.jpl.nasa.gov>
From: Nigel Angold <nangold@jplsp2.jpl.nasa.gov>
Subject: Mis-corrected S/C clocks / SCETs
Cc: chris.leech@jpl.nasa.gov

I have looked at our recent tape recorder usage and predict that you will see major frames with mis-corrected spacecraft clocks / SCETs at the following times (give or take a few minutes):

1995:

~342.22:59 SCET	should be	~341.17:47 SCET
~347.22:39 SCET	should be	~346.16:46 SCET
~350.21:54 SCET	should be	~349.16:22 SCET
~355.22:14 SCET	should be	~354.15:42 SCET
~359.14:04 SCET	should be	~359.05:36 SCET
~360.14:59 SCET	should be	~359.00:20 SCET
~362.20:55 SCET	should be	~361.16:06 SCET

1996:

~001.02:45 SCET	should be	~364.23:12 SCET
~002.14:35 SCET	should be	~001.04:22 SCET
~029.19:35 SCET	should be	~028.13:43 SCET
~033.19:10 SCET	should be	~032.13:18 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~048.17:29 SCET	should be	~047.13:45 SCET
~054.08:59 SCET	should be	~053.11:46 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~039.18:34 SCET	should be	~038.12:14 SCET

We see data gaps for each of the correct times, so it looks like your theory of AMMOS mis-correcting times when there is carry-over data on the tape is correct.

I hope this is enough information. I would have to do a bit more calculation to get the approximate ERTs. Let me know if you want them.

Best regards,

Nigel

From HENZE@fender.msfc.nasa.gov Thu Dec 28 15:05 PST 1995
From: HENZE@fender.msfc.nasa.gov
Date: Thu, 28 Dec 1995 17:04:31 -0600 (CST)
To: burst@compTEL.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@fender.msfc.nasa.gov, LHEAVXBARTHELMY@fender.msfc.nasa.gov,
scott@circe.gsfc.nasa.gov, butterworth@lheavx.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.: 4125

TIME: TJD=0077 SECONDS=33868

TYPE: FLUCTUA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

FLUCTUATION IN BACKGROUND OR A SOURCE SHORTLY AFTER RISE.

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 yyddd's from your list in the range 94258-96229 or Sep 15, 1994 to August 16, 1996.

Using yyddd's 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 problem

e94321_2A1_02.91_03.58.ascii.diff.Z
e94324_2A1_20.05_20.72.ascii.diff.Z
e94331_2A1_15.32_15.99.ascii.diff.Z
e94356_2A1_05.27_05.93.ascii.diff.Z
e94356_2A1_07.32_07.44.ascii.diff.Z
e95013_2A1_05.65_06.32.ascii.diff.Z
e95042_2A1_02.31_02.45.ascii.diff.Z
e95042_2A1_04.10_04.76.ascii.diff.Z
e95076_2A1_20.14_20.81.ascii.diff.Z
e95091_2A1_20.66_20.80.ascii.diff.Z
e95135_2A1_06.08_06.74.ascii.diff.Z
e95176_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

951025	23	40	39.738	S1	190	400	120	1.7	3	60	167 ✓
951102	01	58	05.879	S2	260	320	50	<0.1	100	3	168 ✓
951102	05	53	29.015	S2	700	1560	600	0.1	5	18	169 ✓
951102	07	58	13	S1	320	80		4	6		BGR ✓
951105	00	29	05	S2	40	50		0.6	40		BGR ✓
951105	01	37	48.077	S2	140	340	80	0.6	2	22	170 ✓
951105	13	00	27.808	S1	160	380	120	9	2	9	171 ✓
951107	07	34	58	S1	20	50	20	2	90		BGR ✓
951111	09	42	40	S1	80	160	20	1.1	15		BGR ✓
951112	18	28	15.244	S2	540	690	220	0.2	14	84	172 ✓
951113	23	25	58.872	S1	260	330	260	4.4	1	15	173 ✓
951115	10	48	49	S1	70	180	80	3	12		BGR ✓
951117	02	48	43.762	S2	650	530	120	0.1	9	10	175 -
951118	22	56	00	S2	20	90	100	0.15	6		BGR ✓
951119	08	17	11.402	S1	200	420	110	3	1.5	12	176 ✓
951119	12	54	17.519	S1	110	220	340	1.7	3	4	177 ✓
951119	16	30	48	S2	30	40	10	0.4	110		BGR ✓
951121	06	11	20	S1	20	70	10	2	45		BGR ✓
951122	02	44	01.380	S2	770	920		0.15	0.5	1.5	179 ✓
951122	04	45	07.738	S1	280	430	160	12	35	22	180 ✓
951123	18	10	08	S1	30	60	30	1	30		BGR ✓
951124	05	54	26	S2	50	140	50	0.15	30		BGR ✓
951124	06	58	52	S2	30	100		0.25	280		BGR ✓
951202	10	51	41.744	S1	200	500	220	2.4	2	25	195
951203	01	06	28.180	S2	260	720	420	0.85	1	16	196
951208	05	26	57.151	S2	320	740	190	<0.04	1	3.5	197
951208	10	57	32.057	S1	290	260		7	52	6.5	198
951208	11	47	47.634	S1	240	510	190	10	23	98	199
951208	23	24	12	S1	100	90		>10	30		BGR
951209	08	42	29.607	S1	150	450	160	6	6	14	200
951213	04	57	29.683	S2	360	940	330	0.4	2	8	201
951213	09	04	34	S2	300	90		<0.15	4.5		BGR
951214	01	29	47	S2	15	100	30	1	30		BGR
951214	02	24	17.847	S2	200	450	150	0.8	4	6	202
951215	20	23	45	S2	60	70	15	<0.15	60		BGR
951216	22	39	42	S2	160	110		0.1	6		BGR
951218	07	59	48	S1	70	130	30	2.3	22		BGR
951219	16	51	19.732	S2	430	850	920	<0.03	1	54	203
951220	08	51	23.560	S2	100	320	180	1	2	8	204
951221	08	23	18	S1	110	150	70	>15	15		BGR
951222	21	00	21	S2	280			<0.1	16		BGR
951225	09	14	16	S2	200			<0.3	50		BGR
951225	09	34	14	S1	500	150	25	2.2	60		BGR
951225	15	21	35	S2	210	170	40	0.1	100		BGR
951225	22	51	08	S1	80	150	50	2.4	40		BGR
951226	08	38	15	S2	60	100	50	0.15	9		BGR
951227	06	23	25.042	S1	420	1200	320	1	1	1.5	218
951227	21	59	20	S1	50	50		3	65		BGR
951228	12	28	42	S2	70	80	40	<0.07	110		BGR
951228	15	47	26	S2	80	170		0.9	17		BGR
951231	05	37	11.668	S2	180	320	150	0.07	9	65	219
951231	21	24	34	S2	100	25		<0.2	20		BGR
960102	03	14	10.996	S1	140	300	80	1	1	0.2	220
960102	20	20	53	S1	200	120	40	>9	25		BGR
960104	03	28	41.062	S2	360	630	230	<0.05	2	28	221
960105	16	04	30	S1	80	60		5	30		BGR
960107	05	23	20	S2	30	100		0.5	230		BGR
960107	19	03	28	S2	30	120	150	<0.1	32		BGR
960109	23	11	31	S2	60	130	20	0.3	5		BGR
960111	12	55	24.530	S2	1130	1280	190	0.2	0.5	6	222
960113	15	33	44.261	S2	500	450	50	0.3	2	36	228
960114	12	15	04.737	S1	4900	7200	1400	1.8	1	60	233
960115	08	52	36.506	S1	380	360	60	10	1	7	234
960115	12	50	15	S2	120	60		0.7	22		BGR
960116	02	02	18	S2	140	170		0.15	17		BGR
960117	15	56	11.341	S1	250	360	30	4	5	20	235

RF

From cline@lheavx.gsfc.nasa.gov Fri Feb 2 05:41 PST 1996
 Date: Fri, 2 Feb 1996 05:41:51 -0800
 Mime-Version: 1.0
 To: Bonnard.Teegarden@cesr.cnes.fr, KHURLEY@sunspot.ssl.berkeley.edu,
 palmer@lheamail.gsfc.nasa.gov, seifert@lheamail.gsfc.nasa.gov
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: For Your INFO

Dear Bonnard, Kevin, David, Helmut:

Here is Sergei Golenetskii's latest Konus burst list, for your information. Note that, including the non-triggered-mode 'BGR' events they confidently identify, there are over 300 events so far.
 - TLC

DATE	Trigger T0 time (UT)	Sensor	KONUS-WIND		N(S1)/N(S2)		Duration		Trigger number
			Max counts per sec		G3	in G2	T<T0	T>T0	
			G1	G2					
941113	12 09 15	S1	145	85		2.5	115		BGR ✓
941114	02 02 40	S2	110	128	30	0.25	12		BGR ✓
941117	03 14 38.191	S2	406	550	74	0.17	40	5	2 ✓
941117	14 07 57	S2	150	140		<0.15	5		BGR ✓
941119	19 31 09.175	S2	370	703	160	0.23	7	20	4 ✓
941120	20 23 17.924	S1	215	328	30	>15	2	25	5 ✓
941121	17 25 00.945	S1	1652	1656	300	21	3	50	6 ✓
941125	22 04 30.156	S2	115	308	109	0.95	1.5	5	7 ✓
941126	00 20 46	S1	150	205	200	>14	18		BGR ✓
941126	12 22 37.952	S1	860	1430	330	4.2	40	45	8 ✓
941126	16 54 20	S1	55	75		>10	26		BGR ✓
941126	19 56 49.732	S1	290	390	211	6.7	20	26	9 ✓
941127	14 30 25.680	S2	200	400	95	0.17	8	7	10 ✓
941127	15 39 10	S1	210	57		2.7	260		BGR ✓
941128	15 37 00	S1	75	90	32	>15	55		BGR ✓
941205	23 33 40.074	S2	370	460	188	0.06	6	30	11 ✓
941207	22 10 32	S2	265	175		<0.2	7		BGR ✓
941210	03 10 52.523	S2	900	2350	1385	0.12	1	15	14 ✓
941214	17 03 51	S1	40	45	29	>6	12		BGR ✓
941214	05 38 45.226	S1	3479	1266	14	1.0	12	240	18 Sol
941221	07 44 08	S2	55	115	30	0.8	20		BGR
941221	22 14 35.215	S1	260	496	165	1.5	55	11	19 ✓
941222	05 36 00.243	S2	334	1360	1066	0.36	7	105	20 ✓
941228	07 39 45.915	S1	300	637	519	4.4	5	90	28 ✓
941228	16 55 23	S2	40	36	23	0.25	25		BGR ✓
941229	12 58 05	S1	46	108	31	1.8	15		BGR ✓
941229	22 51 08.781	S2	396	381	140	0.09	7	25	29 ✓
941230	20 52 53	S1	74	117	52	8.4	158		BGR ✓
941230	23 43 44	S2	55	70	16	<0.2	4.5		BGR ✓
950104	07 18 39.613	S2	258	550	219	0.75	2.8	20	31 ✓
950104	09 00 58	S2	140	143	40	<0.1	25		BGR ✓
950110	06 02 15	S2	332	180		<0.1	3600		BGR
950110	13 37 57.084	S2	234	422	213	0.05	38	100	32 ✓
950111	04 49 12.241	S1	586	620	100	>19	92	24	33 ✓
950111	12 18 49.196	S1	225	435	164	1.85	26	50	34 ✓
950112	07 45 37.120	S2	1305	1800	336	0.04	2.5	44	35 ✓
950113	05 59 13	S1	283	180	26	>10	52		BGR ✓
950113	17 38 32	S2	85	162	35	<0.06	75		BGR ✓
950114	01 00 38	S1	46	110		1.6	6		BGR ✓
950114	04 03 01	S2	23	76		0.5	70		BGR ✓
950114	07 30 30.766	S2	205	406	60	<0.05	1	100	36 ✓
950114	13 10 34.865	S1	1320	2828	516	3.1	1	10	37 ✓
950115	02 49 32	S2	40	47	34	<0.15	24		BGR ✓
950117	01 36 00	S2	56	82	42	0.2	108		BGR ✓
950118	12 22 54	S2	57	105	17	<0.1	35		BGR ✓
950125	14 51 52.253	S1	380	600	140	8.2	3.8	11	39

KONUS 19951225 34160

ULYSSES RT

07/09/11

25/12/95 34056.164 s

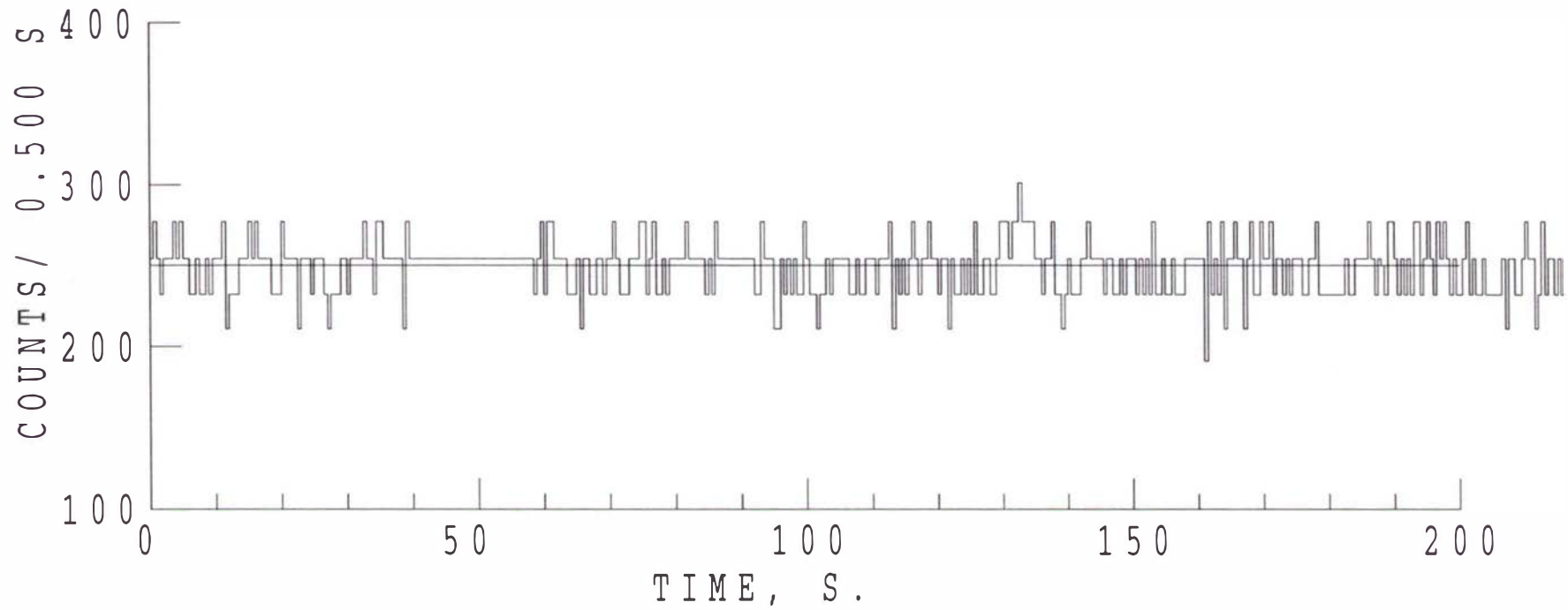
0 - 0 keV

N= 10 M= 10

>4.0 SIGMA FLUCTUATIONS

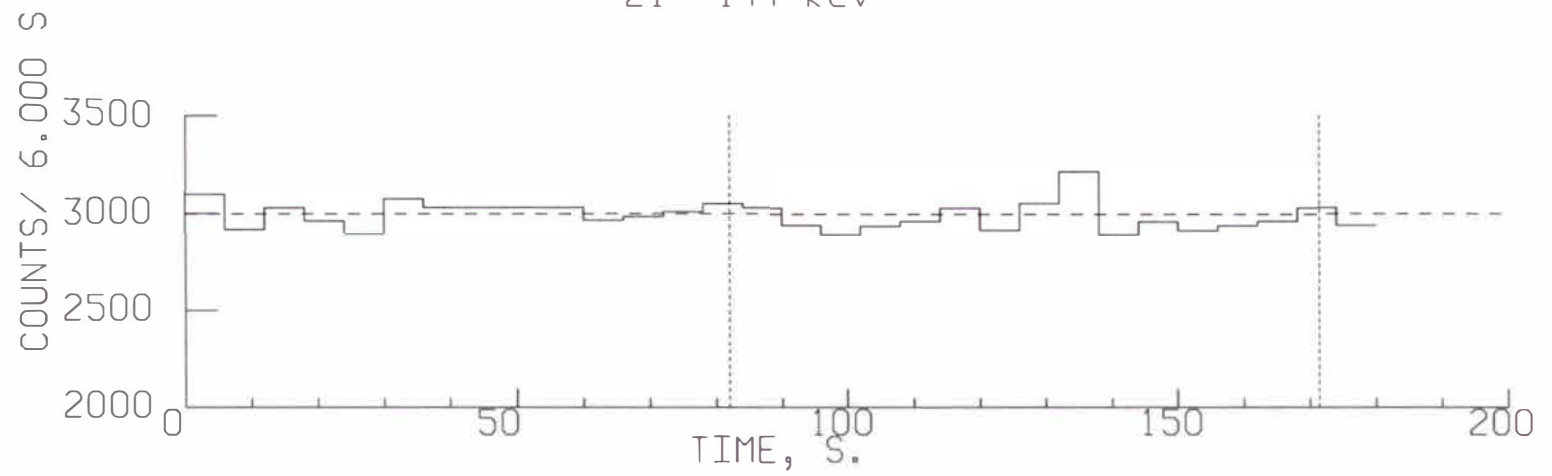
N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



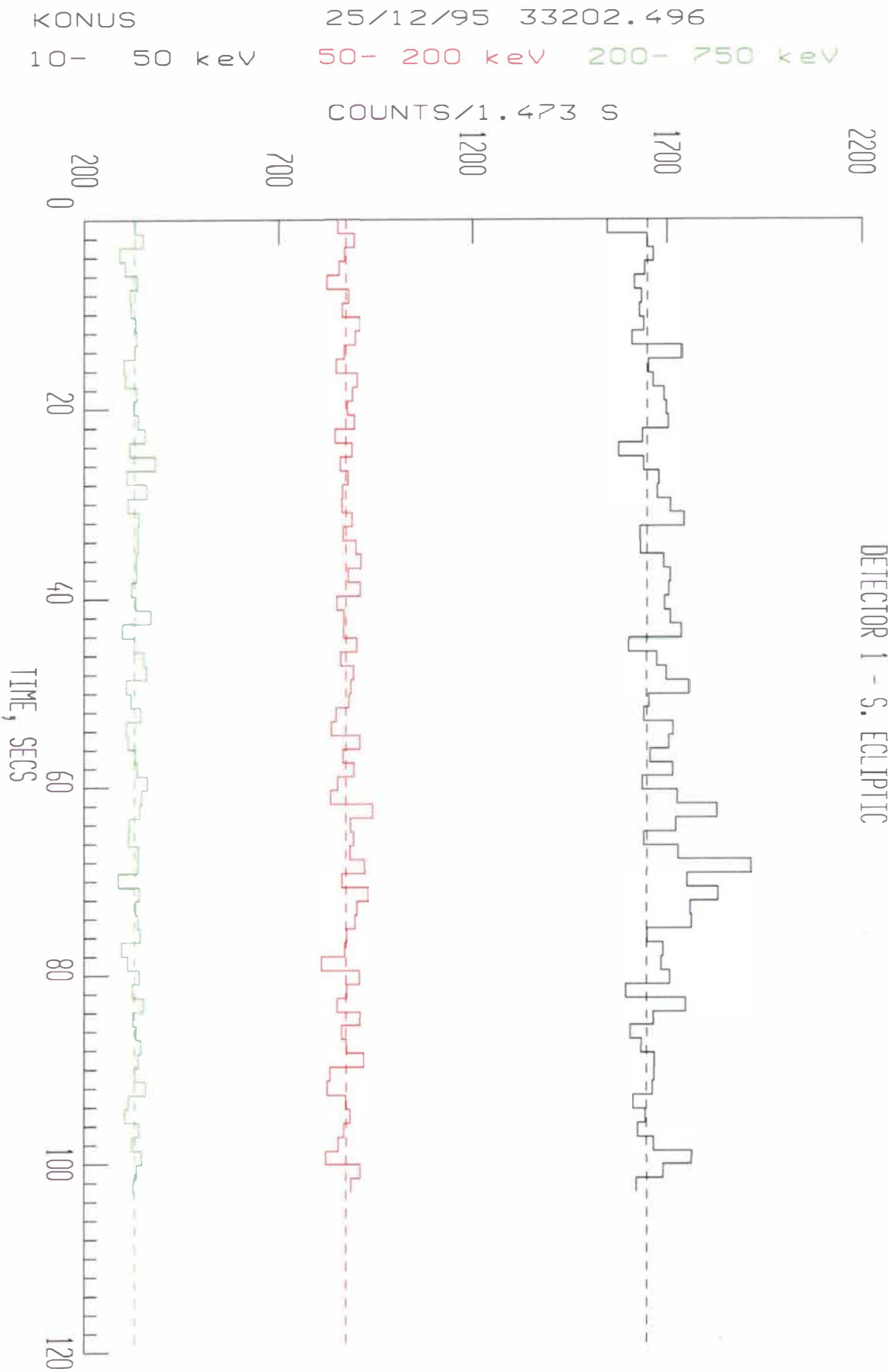
ULYSSES RT
25/12/95 34056.164 s
0.500 S INTERVALS REGROUPED BY 12
21- 144 keV

8 / 9 / 11

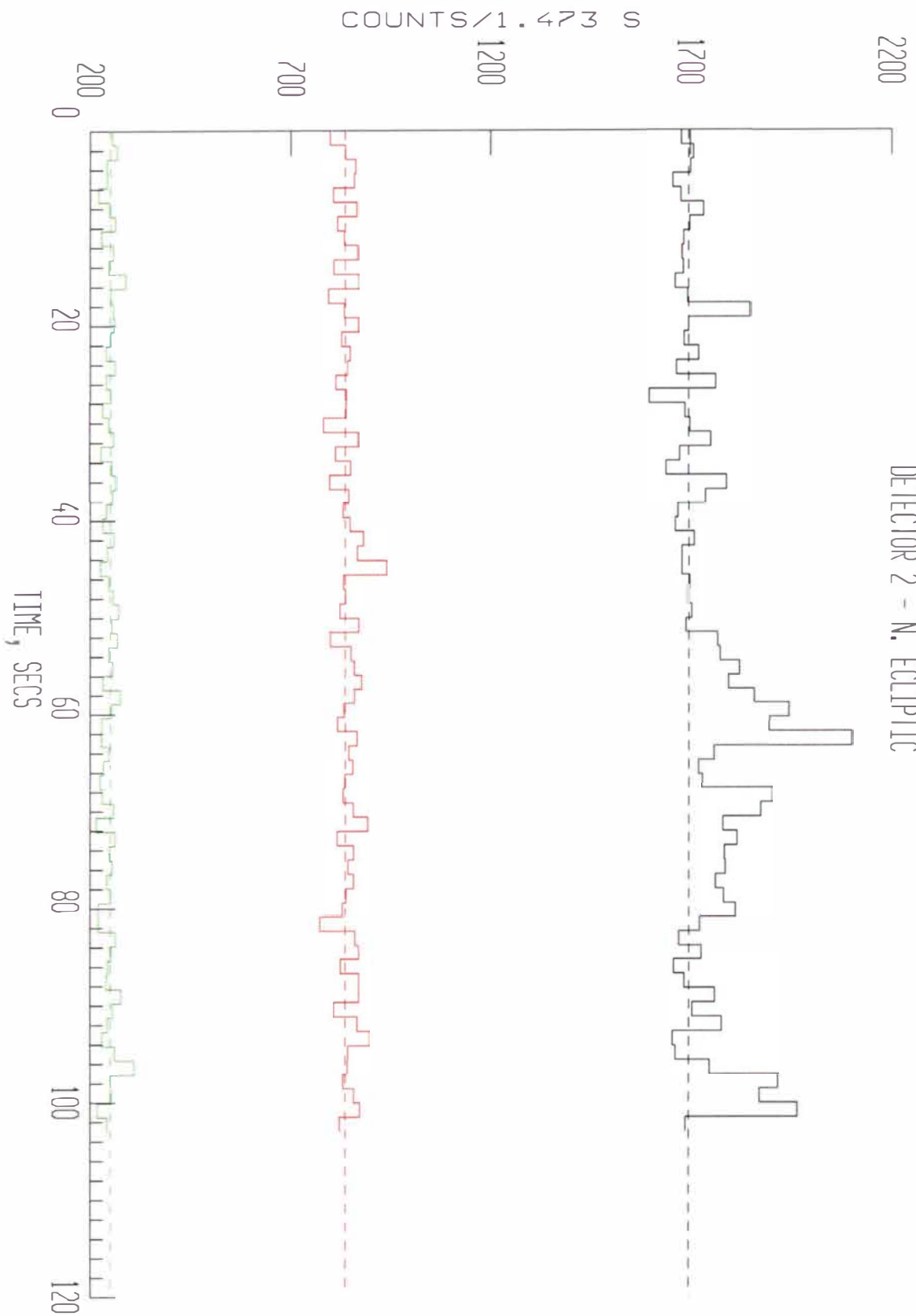


08/09/2011

DETECTOR 1 - S. ECLIPSE



KONUS 25/12/95 33202.496
10- 50 keV 50- 200 keV 200- 750 keV



KONUS 19951225 34148

ULYSSES RT

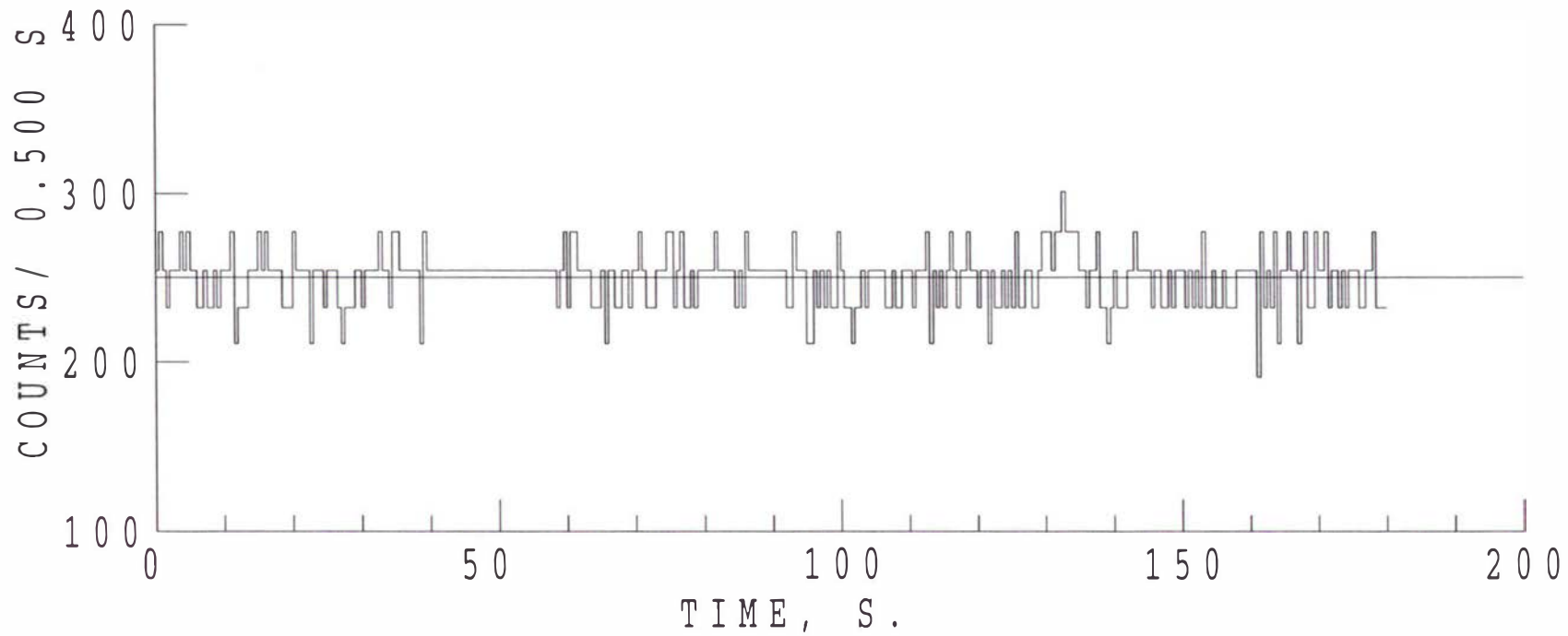
07/09/11

25/12/95 34056.164 s

0 - 0 keV

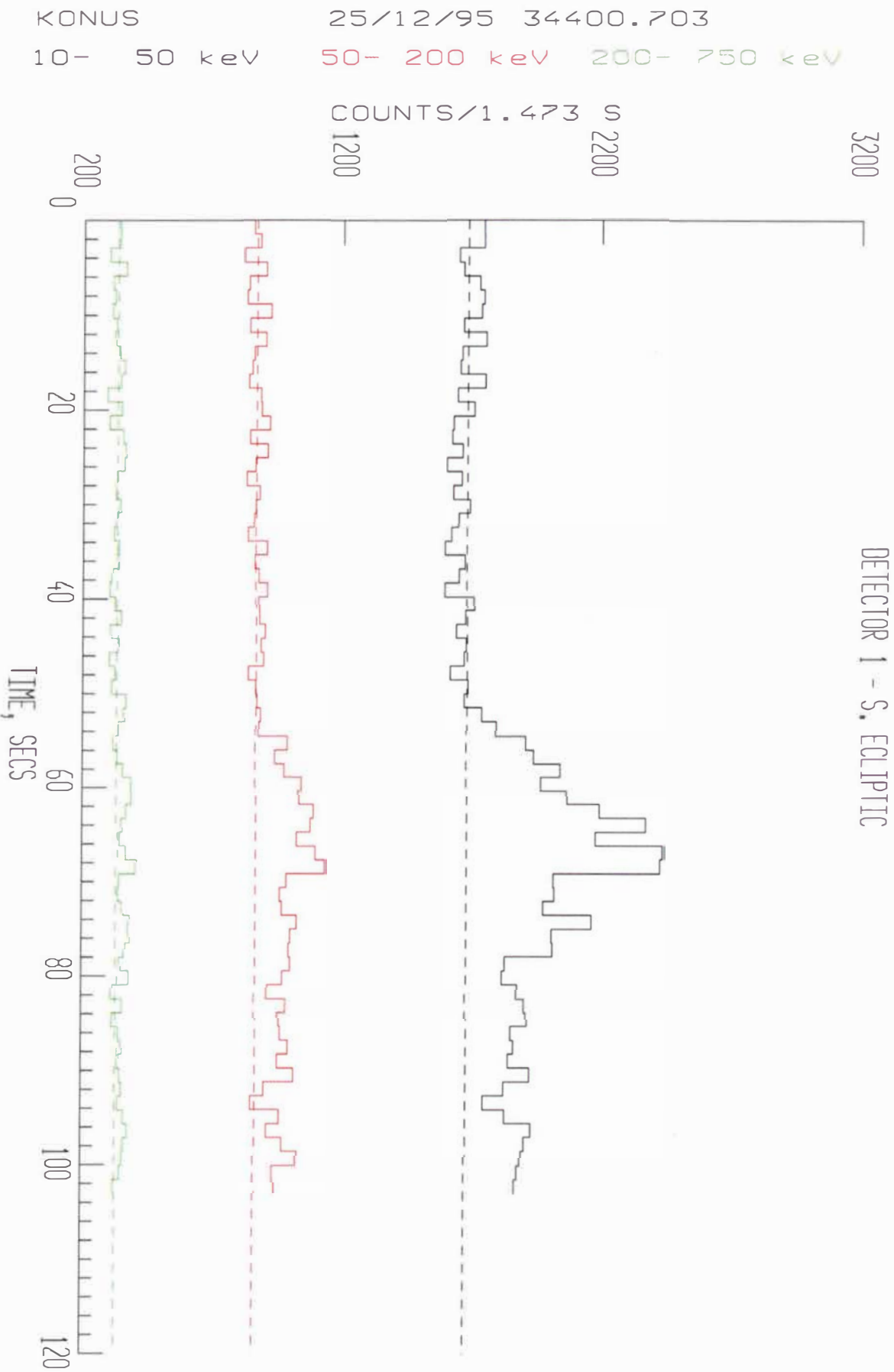
N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

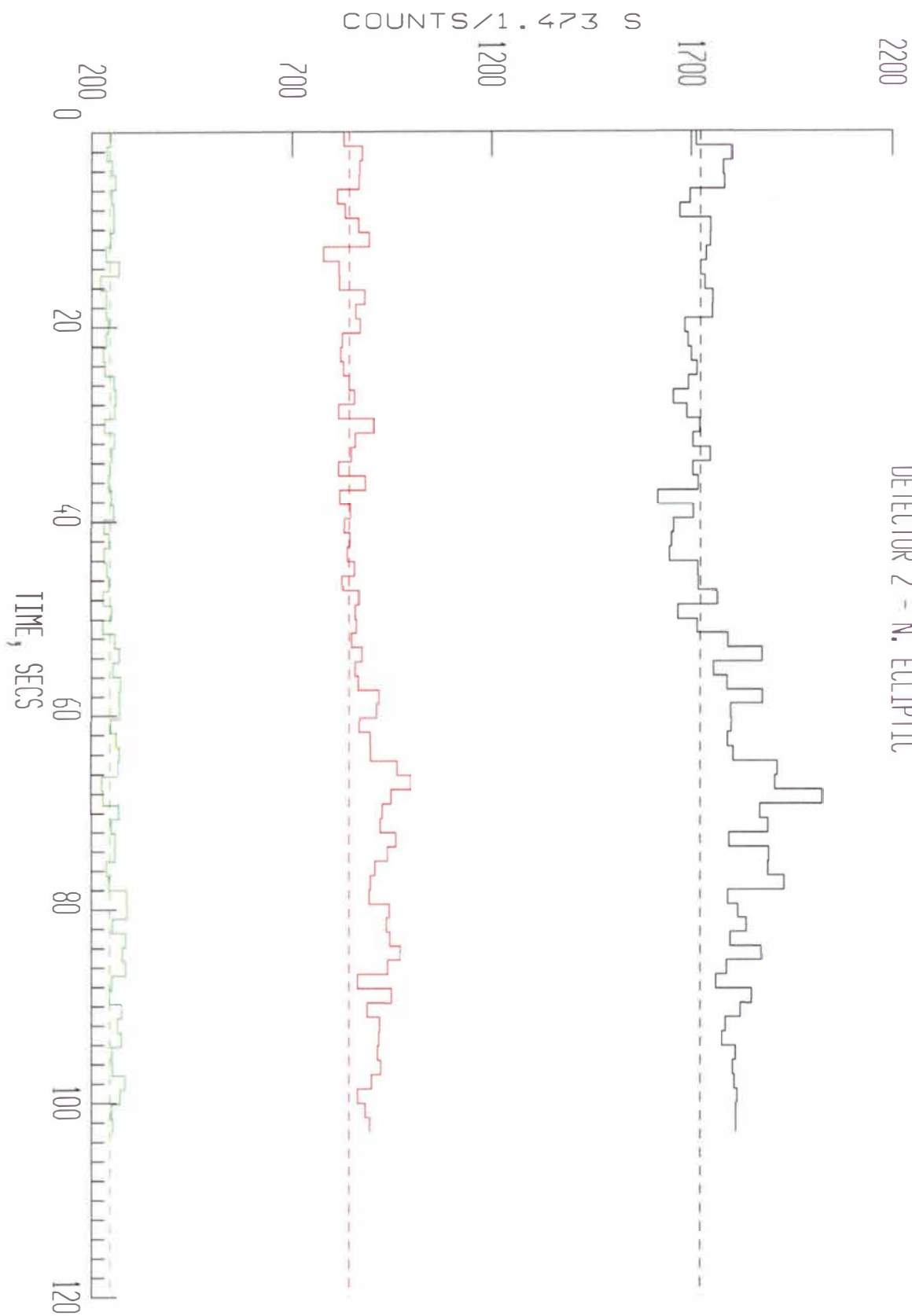


08/09/2011

DETECTOR 1 - S, ECLIPSE

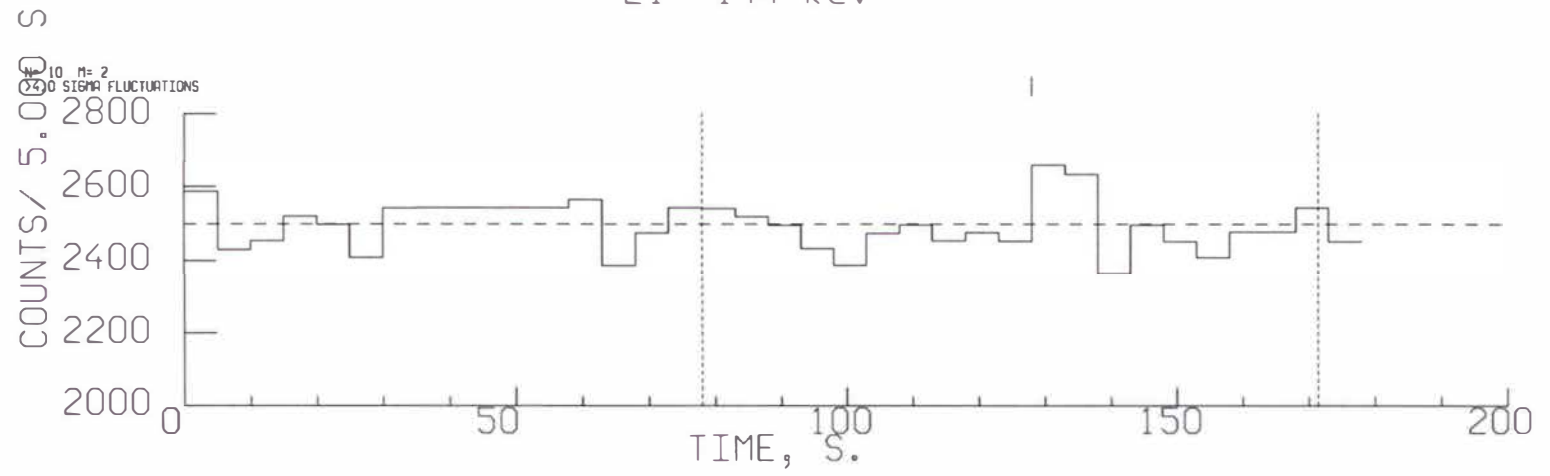


KONUS 25/12/95 34400.703
10- 50 keV 50- 200 keV 200- 750 keV



ULYSSES RT
25/12/95 34056.164 s
0.500 S INTERVALS REGROUPED BY 10
21- 144 keV

8 / 9 / 11



K O N U S

2 2 / 2 / 9 6

U L Y S S E S R T

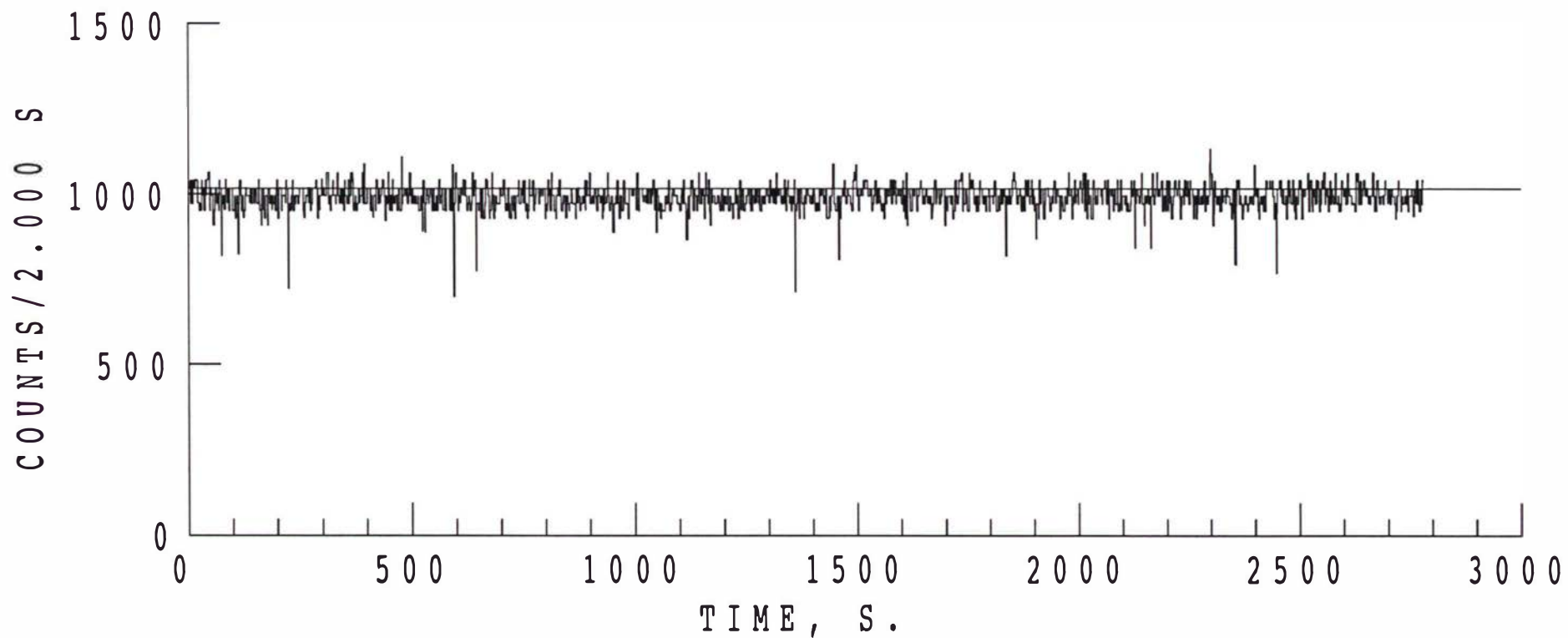
2 5 / 1 2 / 9 5 3 1 8 6 0 . 1 3 3 s

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



951025	23	40	39.738	S1	190	400	120	1.7	3	60	167	✓
951102	01	58	05.879	S2	260	320	50	<0.1	100	3	168	✓
951102	05	53	29.015	S2	700	1560	600	0.1	5	18	169	✓
951102	07	58	13	S1	320	80		4	6		BGR	✓
951105	00	29	05	S2	40	50		0.6	40		BGR	✓
951105	01	37	48.077	S2	140	340	80	0.6	2	22	170	✓
951105	13	00	27.808	S1	160	380	120	9	2	9	171	✓
951107	07	34	58	S1	20	50	20	2	90		BGR	✓
951111	09	42	40	S1	80	160	20	1.1	15		BGR	✓
951112	18	28	15.244	S2	540	690	220	0.2	14	84	172	✓
951113	23	25	58.872	S1	260	330	260	4.4	1	15	173	✓
951115	10	48	49	S1	70	180	80	3	12		BGR	✓
951117	02	48	43.762	S2	650	530	120	0.1	9	10	175	✓
951118	22	56	00	S2	20	90	100	0.15	6		BGR	✓
951119	08	17	11.402	S1	200	420	110	3	1.5	12	176	✓
951119	12	54	17.519	S1	110	220	340	1.7	3	4	177	✓
951119	16	30	48	S2	30	40	10	0.4	110		BGR	✓
951121	06	11	20	S1	20	70	10	2	45		BGR	✓
951122	02	44	01.380	S2	770	920		0.15	0.5	1.5	179	✓
951122	04	45	07.738	S1	280	430	160	12	35	22	180	✓
951123	18	10	08	S1	30	60	30	1	30		BGR	✓
951124	05	54	26	S2	50	140	50	0.15	30		BGR	✓
951124	06	58	52	S2	30	100		0.25	280		BGR	✓
951202	10	51	41.744	S1	200	500	220	2.4	2	25	195	✓
951203	01	06	28.180	S2	260	720	420	0.85	1	16	196	✓
951208	05	26	57.151	S2	320	740	190	<0.04	1	3.5	197	✓
951208	10	57	32.057	S1	290	260		7	52	6.5	198	✓
951208	11	47	47.634	S1	240	510	190	10	23	98	199	✓
951208	23	24	12	S1	100	90		>10	30		BGR	✓
951209	08	42	29.607	S1	150	450	160	6	6	14	200	✓
951213	04	57	29.683	S2	360	940	330	0.4	2	8	201	✓
951213	09	04	34	S2	300	90		<0.15	4.5		BGR	✓
951214	01	29	47	S2	15	100	30	1	30		BGR	✓
951214	02	24	17.847	S2	200	450	150	0.8	4	6	202	✓
951215	20	23	45	S2	60	70	15	<0.15	60		BGR	✓
951216	22	39	42	S2	160	110		0.1	6		BGR	✓
951218	07	59	48	S1	70	130	30	2.3	22		BGR	✓
951219	16	51	19.732	S2	430	850	920	<0.03	1	54	203	✓
951220	08	51	23.560	S2	100	320	180	1	2	8	204	✓
951221	08	23	18	S1	110	150	70	>15	15		BGR	✓
951222	21	00	21	S2	280			<0.1	16		BGR	✓
951225	09	14	16	S2	200			<0.3	50		BGR	✓
951225	09	34	14	S1	500	150	25	2.2	60		BGR	✓
951225	15	21	35	S2	210	170	40	0.1	100		BGR	✓
951225	22	51	08	S1	80	150	50	2.4	40		BGR	✓
951226	08	38	15	S2	60	100	50	0.15	9		BGR	✓
951227	06	23	25.042	S1	420	1200	320	1	1	1.5	218	✓
951227	21	59	20	S1	50	50		3	65		BGR	✓
951228	12	28	42	S2	70	80	40	<0.07	110		BGR	✓
951228	15	47	26	S2	80	170		0.9	17		BGR	✓
951231	05	37	11.668	S2	180	320	150	0.07	9	65	219	✓
951231	21	24	34	S2	100	25		<0.2	20		BGR	✓
960102	03	14	10.996	S1	140	300	80	1	1	0.2	220	✓
960102	20	20	53	S1	200	120	40	>9	25		BGR	✓
960104	03	28	41.062	S2	360	630	230	<0.05	2	28	221	✓
960105	16	04	30	S1	80	60		5	30		BGR	✓
960107	05	23	20	S2	30	100		0.5	230		BGR	✓
960107	19	03	28	S2	30	120	150	<0.1	32		BGR	✓
960109	23	11	31	S2	60	130	20	0.3	5		BGR	✓
960111	12	55	24.530	S2	1130	1280	190	0.2	0.5	6	222	✓
960113	15	33	44.261	S2	500	450	50	0.3	2	36	228	✓
960114	12	15	04.737	S1	4900	7200	1400	1.8	1	60	233	✓
960115	08	52	36.506	S1	380	360	60	10	1	7	234	✓
960115	12	50	15	S2	120	60		0.7	22		BGR	✓
960116	02	02	18	S2	140	170		0.15	17		BGR	✓
960117	15	56	11.341	S1	250	360	30	4	5	20	235	✓

RI?

From cline@lheavx.gsfc.nasa.gov Fri Feb 2 05:41 PST 1996

Date: Fri, 2 Feb 1996 05:41:51 -0800

Mime-Version: 1.0

To: Bonnard.Teegarden@cesr.cnes.fr, KHURLEY@sunspot.ssl.berkeley.edu,
palmer@lheamail.gsfc.nasa.gov, seifert@lheamail.gsfc.nasa.gov

From: cline@lheavx.gsfc.nasa.gov (T L Cline)

Subject: For Your INFO

Dear Bonnard, Kevin, David, Helmut:

Here is Sergei Golenetskii's latest Konus burst list, for your information. Note that, including the non-triggered-mode 'BGR' events they confidently identify, there are over 300 events so far.

- TLC

DATE	Trigger T0 time (UT)	Sensor	KONUS-WIND		N(S1)/N(S2)		Duration		Trigger number
			Max counts per sec		G3 in G2		T<T0 T>T0		
			G1	G2	G3	in G2	T<T0	T>T0	
941113	12 09 15	S1	145	85		2.5	115		BGR ✓
941114	02 02 40	S2	110	128	30	0.25	12		BGR ✓
941117	03 14 38.191	S2	406	550	74	0.17	40	5	2 ✓
941117	14 07 57	S2	150	140		<0.15	5		BGR ✓
941119	19 31 09.175	S2	370	703	160	0.23	7	20	4 ✓
941120	20 23 17.924	S1	215	328	30	>15	2	25	5 ✓
941121	17 25 00.945	S1	1652	1656	300	21	3	50	6 ✓
941125	22 04 30.156	S2	115	308	109	0.95	1.5	5	7 ✓
941126	00 20 46	S1	150	205	200	>14	18		BGR ✓
941126	12 22 37.952	S1	860	1430	330	4.2	40	45	8 ✓
941126	16 54 20	S1	55	75		>10	26		BGR ✓
941126	19 56 49.732	S1	290	390	211	6.7	20	26	9
941127	14 30 25.680	S2	200	400	95	0.17	8	7	10
941127	15 39 10	S1	210	57		2.7	260		BGR ✓
941128	15 37 00	S1	75	90	32	>15	55		BGR ✓
941205	23 33 40.074	S2	370	460	188	0.06	6	30	11 ✓
941207	22 10 32	S2	265	175		<0.2	7		BGR ✓
941210	03 10 52.523	S2	900	2350	1385	0.12	1	15	14 ✓
941214	17 03 51	S1	40	45	29	>6	12		BGR ✓
941214	05 38 45.226	S1	3479	1266	14	1.0	12	240	18 Sol
941221	07 44 08	S2	55	115	30	0.8	20		BGR
941221	22 14 35.215	S1	260	496	165	1.5	55	11	19 ✓
941222	05 36 00.243	S2	334	1360	1066	0.36	7	105	20 ✓
941228	07 39 45.915	S1	300	637	519	4.4	5	90	28
941228	16 55 23	S2	40	36	23	0.25	25		BGR ✓
941229	12 58 05	S1	46	108	31	1.8	15		BGR ✓
941229	22 51 08.781	S2	396	381	140	0.09	7	25	29 ✓
941230	20 52 53	S1	74	117	52	8.4	158		BGR ✓
941230	23 43 44	S2	55	70	16	<0.2	4.5		BGR ✓
950104	07 18 39.613	S2	258	550	219	0.75	2.8	20	31 ✓
950104	09 00 58	S2	140	143	40	<0.1	25		BGR ✓
950110	06 02 15	S2	332	180		<0.1	3600		BGR
950110	13 37 57.084	S2	234	422	213	0.05	38	100	32 ✓
950111	04 49 12.241	S1	586	620	100	>19	92	24	33 ✓
950111	12 18 49.196	S1	225	435	164	1.85	26	50	34 ✓
950112	07 45 37.120	S2	1305	1800	336	0.04	2.5	44	35 ✓
950113	05 59 13	S1	283	180	26	>10	52		BGR ✓
950113	17 38 32	S2	85	162	35	<0.06	75		BGR ✓
950114	01 00 38	S1	46	110		1.6	6		BGR ✓
950114	04 03 01	S2	23	76		0.5	70		BGR ✓
950114	07 30 30.766	S2	205	406	60	<0.05	1	100	36 ✓
950114	13 10 34.865	S1	1320	2828	516	3.1	1	10	37 ✓
950115	02 49 32	S2	40	47	34	<0.15	24		BGR ✓
950117	01 36 00	S2	56	82	42	0.2	108		BGR ✓
950118	12 22 54	S2	57	105	17	<0.1	35		BGR ✓
950125	14 51 52.253	S1	380	600	140	8.2	3.8	11	39

K O N U S

2 2 / 2 / 9 6

U L Y S S E S R T

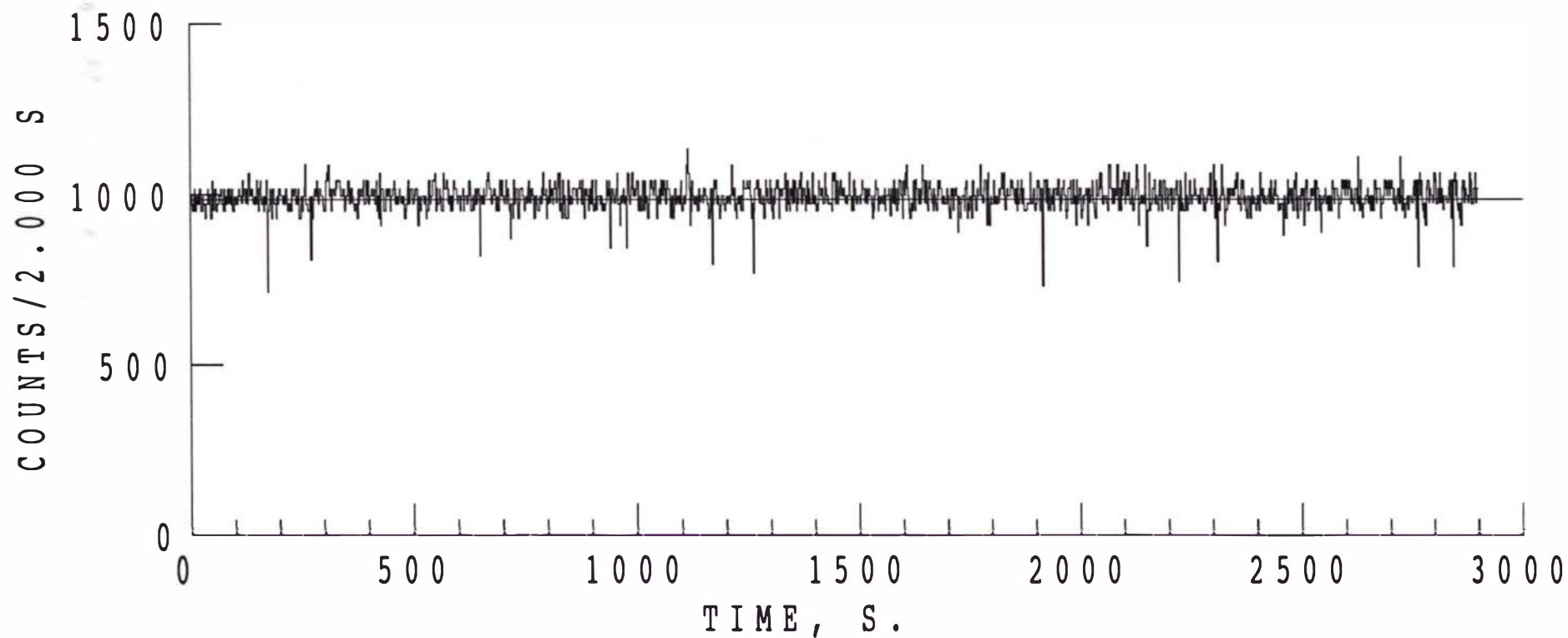
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0 . 5 0 0 S I N T E R V A L S R E G R O U P E D B Y 4

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M= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



951025	23	40	39.738	S1	190	400	120	1.7	3	60	167	✓
951102	01	58	05.879	S2	260	320	50	<0.1	100	3	168	✓
951102	05	53	29.015	S2	700	1560	600	0.1	5	18	169	✓
951102	07	58	13	S1	320	80		4	6		BGR	✓
951105	00	29	05	S2	40	50		0.6	40		BGR	✓
951105	01	37	48.077	S2	140	340	80	0.6	2	22	170	✓
951105	13	00	27.808	S1	160	380	120	9	2	9	171	✓
951107	07	34	58	S1	20	50	20	2	90		BGR	✓
951111	09	42	40	S1	80	160	20	1.1	15		BGR	✓
951112	18	28	15.244	S2	540	690	220	0.2	14	84	172	✓
951113	23	25	58.872	S1	260	330	260	4.4	1	15	173	✓
951115	10	48	49	S1	70	180	80	3	12		BGR	✓
951117	02	48	43.762	S2	650	530	120	0.1	9	10	175	-
951118	22	56	00	S2	20	90	100	0.15	6		BGR	✓
951119	08	17	11.402	S1	200	420	110	3	1.5	12	176	✓
951119	12	54	17.519	S1	110	220	340	1.7	3	4	177	✓
951119	16	30	48	S2	30	40	10	0.4	110		BGR	-
951121	06	11	20	S1	20	70	10	2	45		BGR	-
951122	02	44	01.380	S2	770	920		0.15	0.5	1.5	179	-
951122	04	45	07.738	S1	280	430	160	12	35	22	180	✓
951123	18	10	08	S1	30	60	30	1	30		BGR	✓
951124	05	54	26	S2	50	140	50	0.15	30		BGR	✓
951124	06	58	52	S2	30	100		0.25	280		BGR	✓
951202	10	51	41.744	S1	200	500	220	2.4	2	25	195	✓
951203	01	06	28.180	S2	260	720	420	0.85	1	16	196	✓
951208	05	26	57.151	S2	320	740	190	<0.04	1	3.5	197	✓
951208	10	57	32.057	S1	290	260		7	52	6.5	198	✓
951208	11	47	47.634	S1	240	510	190	10	23	98	199	✓
951208	23	24	12	S1	100	90		>10	30		BGR	✓
951209	08	42	29.607	S1	150	450	160	6	6	14	200	✓
951213	04	57	29.683	S2	360	940	330	0.4	2	8	201	✓
951213	09	04	34	S2	300	90		<0.15	4.5		BGR	✓
951214	01	29	47	S2	15	100	30	1	30		BGR	✓
951214	02	24	17.847	S2	200	450	150	0.8	4	6	202	✓
951215	20	23	45	S2	60	70	15	<0.15	60		BGR	✓
951216	22	39	42	S2	160	110		0.1	6		BGR	✓
951218	07	59	48	S1	70	130	30	2.3	22		BGR	✓
951219	16	51	19.732	S2	430	850	920	<0.03	1	54	203	✓
951220	08	51	23.560	S2	100	320	180	1	2	8	204	✓
951221	08	23	18	S1	110	150	70	>15	15		BGR	✓
951222	21	00	21	S2	280			<0.1	16		BGR	✓
951225	09	14	16	S2	200			<0.3	50		BGR	✓
951225	09	34	14	S1	500	150	25	2.2	60		BGR	✓
951225	15	21	35	S2	210	170	40	0.1	100		BGR	✓
951225	22	51	08	S1	80	150	50	2.4	40		BGR	✓
951226	08	38	15	S2	60	100	50	0.15	9		BGR	✓
951227	06	23	25.042	S1	420	1200	320	1	1	1.5	218	✓
951227	21	59	20	S1	50	50		3	65		BGR	✓
951228	12	28	42	S2	70	80	40	<0.07	110		BGR	✓
951228	15	47	26	S2	80	170		0.9	17		BGR	✓
951231	05	37	11.668	S2	180	320	150	0.07	9	65	219	✓
951231	21	24	34	S2	100	25		<0.2	20		BGR	✓
960102	03	14	10.996	S1	140	300	80	1	1	0.2	220	✓
960102	20	20	53	S1	200	120	40	>9	25		BGR	✓
960104	03	28	41.062	S2	360	630	230	<0.05	2	28	221	✓
960105	16	04	30	S1	80	60		5	30		BGR	✓
960107	05	23	20	S2	30	100		0.5	230		BGR	✓
960107	19	03	28	S2	30	120	150	<0.1	32		BGR	✓
960109	23	11	31	S2	60	130	20	0.3	5		BGR	✓
960111	12	55	24.530	S2	1130	1280	190	0.2	0.5	6	222	✓
960113	15	33	44.261	S2	500	450	50	0.3	2	36	228	✓
960114	12	15	04.737	S1	4900	7200	1400	1.8	1	60	233	✓
960115	08	52	36.506	S1	380	360	60	10	1	7	234	✓
960115	12	50	15	S2	120	60		0.7	22		BGR	✓
960116	02	02	18	S2	140	170		0.15	17		BGR	✓
960117	15	56	11.341	S1	250	360	30	4	5	20	235	✓

RI

From cline@lheavx.gsfc.nasa.gov Fri Feb 2 05:41 PST 1996
 Date: Fri, 2 Feb 1996 05:41:51 -0800
 Mime-Version: 1.0
 To: Bonnard.Teegarden@cesr.cnes.fr, KHURLEY@sunspot.ssl.berkeley.edu,
 palmer@lheamail.gsfc.nasa.gov, seifert@lheamail.gsfc.nasa.gov
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: For Your INFO

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 - TLC

DATE	Trigger T0 time (UT)	Sensor	KONUS-WIND		N(S1)/N(S2)		Duration		Trigger number
			Max counts per sec						
			G1	G2	G3	in G2	T<T0	T>T0	
941113	12 09 15	S1	145	85		2.5	115		BGR ✓
941114	02 02 40	S2	110	128	30	0.25	12		BGR ✓
941117	03 14 38.191	S2	406	550	74	0.17	40	5	2 ✓
941117	14 07 57	S2	150	140		<0.15	5		BGR ✓
941119	19 31 09.175	S2	370	703	160	0.23	7	20	4 ✓
941120	20 23 17.924	S1	215	328	30	>15	2	25	5 ✓
941121	17 25 00.945	S1	1652	1656	300	21	3	50	6 ✓
941125	22 04 30.156	S2	115	308	109	0.95	1.5	5	7 ✓
941126	00 20 46	S1	150	205	200	>14	18		BGR ✓
941126	12 22 37.952	S1	860	1430	330	4.2	40	45	8 ✓
941126	16 54 20	S1	55	75		>10	26		BGR ✓
941126	19 56 49.732	S1	290	390	211	6.7	20	26	9 ✓
941127	14 30 25.680	S2	200	400	95	0.17	8	7	10 ✓
941127	15 39 10	S1	210	57		2.7	260		BGR ✓
941128	15 37 00	S1	75	90	32	>15	55		BGR ✓
941205	23 33 40.074	S2	370	460	188	0.06	6	30	11 ✓
941207	22 10 32	S2	265	175		<0.2	7		BGR ✓
941210	03 10 52.523	S2	900	2350	1385	0.12	1	15	14 ✓
941214	17 03 51	S1	40	45	29	>6	12		BGR ✓
941214	05 38 45.226	S1	3479	1266	14	1.0	12	240	18 Sol
941221	07 44 08	S2	55	115	30	0.8	20		BGR ✓
941221	22 14 35.215	S1	260	496	165	1.5	55	11	19 ✓
941222	05 36 00.243	S2	334	1360	1066	0.36	7	105	20 ✓
941228	07 39 45.915	S1	300	637	519	4.4	5	90	28 ✓
941228	16 55 23	S2	40	36	23	0.25	25		BGR ✓
941229	12 58 05	S1	46	108	31	1.8	15		BGR ✓
941229	22 51 08.781	S2	396	381	140	0.09	7	25	29 ✓
941230	20 52 53	S1	74	117	52	8.4	158		BGR ✓
941230	23 43 44	S2	55	70	16	<0.2	4.5		BGR ✓
950104	07 18 39.613	S2	258	550	219	0.75	2.8	20	31 ✓
950104	09 00 58	S2	140	143	40	<0.1	25		BGR ✓
950110	06 02 15	S2	332	180		<0.1	3600		BGR ✓
950110	13 37 57.084	S2	234	422	213	0.05	38	100	32 ✓
950111	04 49 12.241	S1	586	620	100	>19	92	24	33 ✓
950111	12 18 49.196	S1	225	435	164	1.85	26	50	34 ✓
950112	07 45 37.120	S2	1305	1800	336	0.04	2.5	44	35 ✓
950113	05 59 13	S1	283	180	26	>10	52		BGR ✓
950113	17 38 32	S2	85	162	35	<0.06	75		BGR ✓
950114	01 00 38	S1	46	110		1.6	6		BGR ✓
950114	04 03 01	S2	23	76		0.5	70		BGR ✓
950114	07 30 30.766	S2	205	406	60	<0.05	1	100	36 ✓
950114	13 10 34.865	S1	1320	2828	516	3.1	1	10	37 ✓
950115	02 49 32	S2	40	47	34	<0.15	24		BGR ✓
950117	01 36 00	S2	56	82	42	0.2	108		BGR ✓
950118	12 22 54	S2	57	105	17	<0.1	35		BGR ✓
950125	14 51 52.253	S1	380	600	140	8.2	3.8	11	39 ✓

Date: Sep 15 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

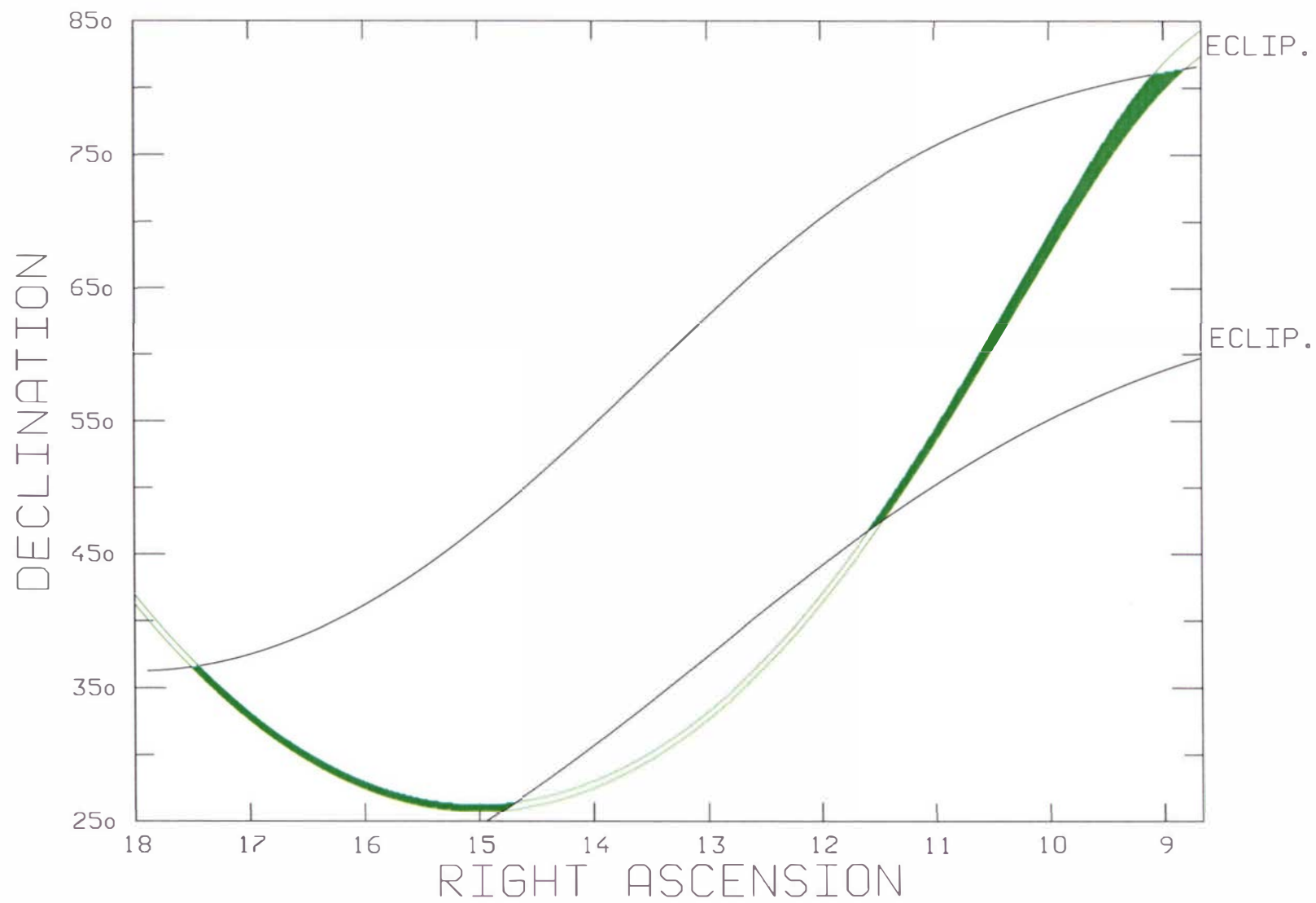
- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☒ Is the order of the data in CORREL such that a vernier is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

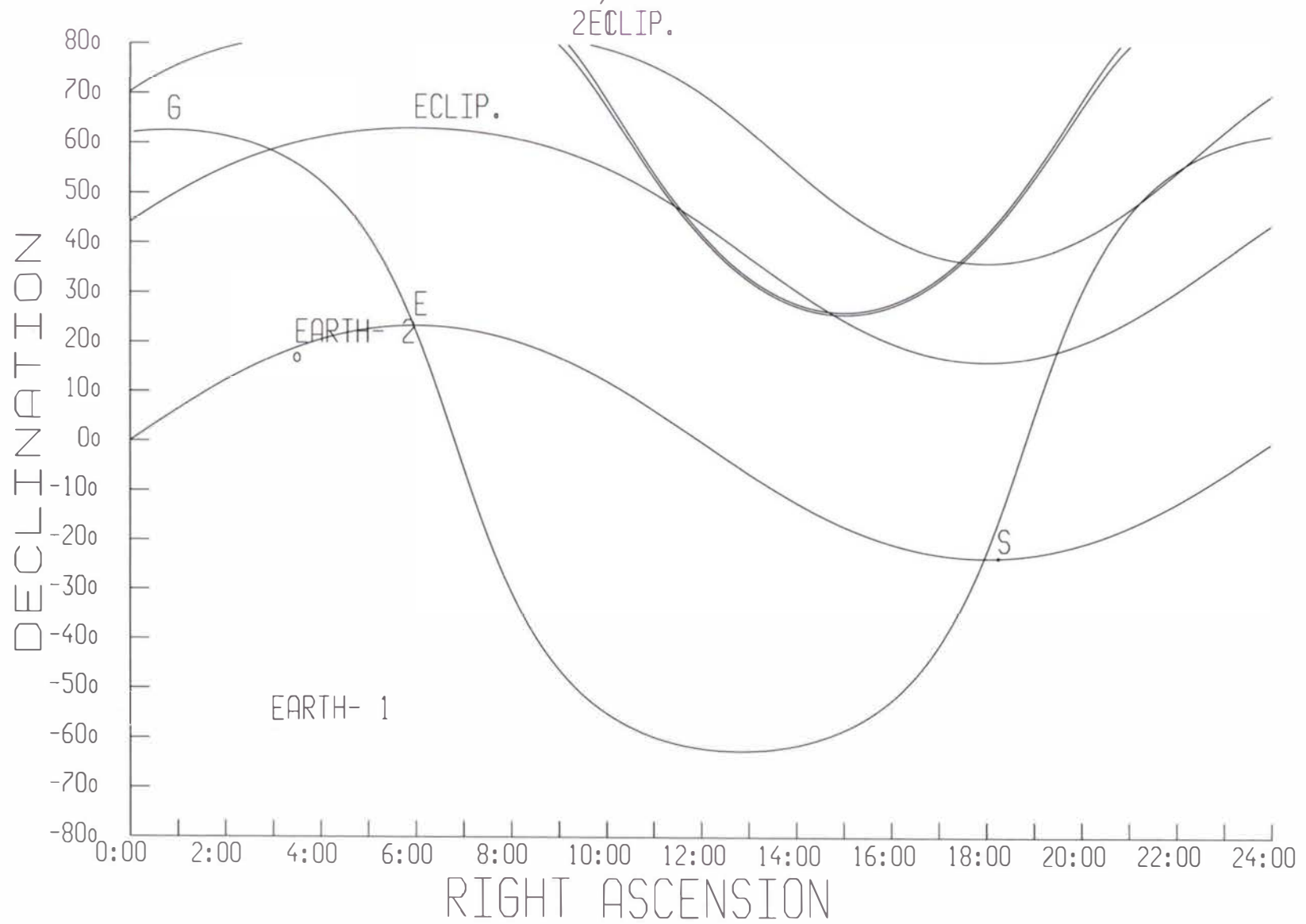
- ☐ Ephemeris of PVO used (not Venus)?
 - ☐ 2000 coordinates used?
 - ☐ Geocentric time used?
-
- ☒ ACCESS and MBL databases updated with identical times?

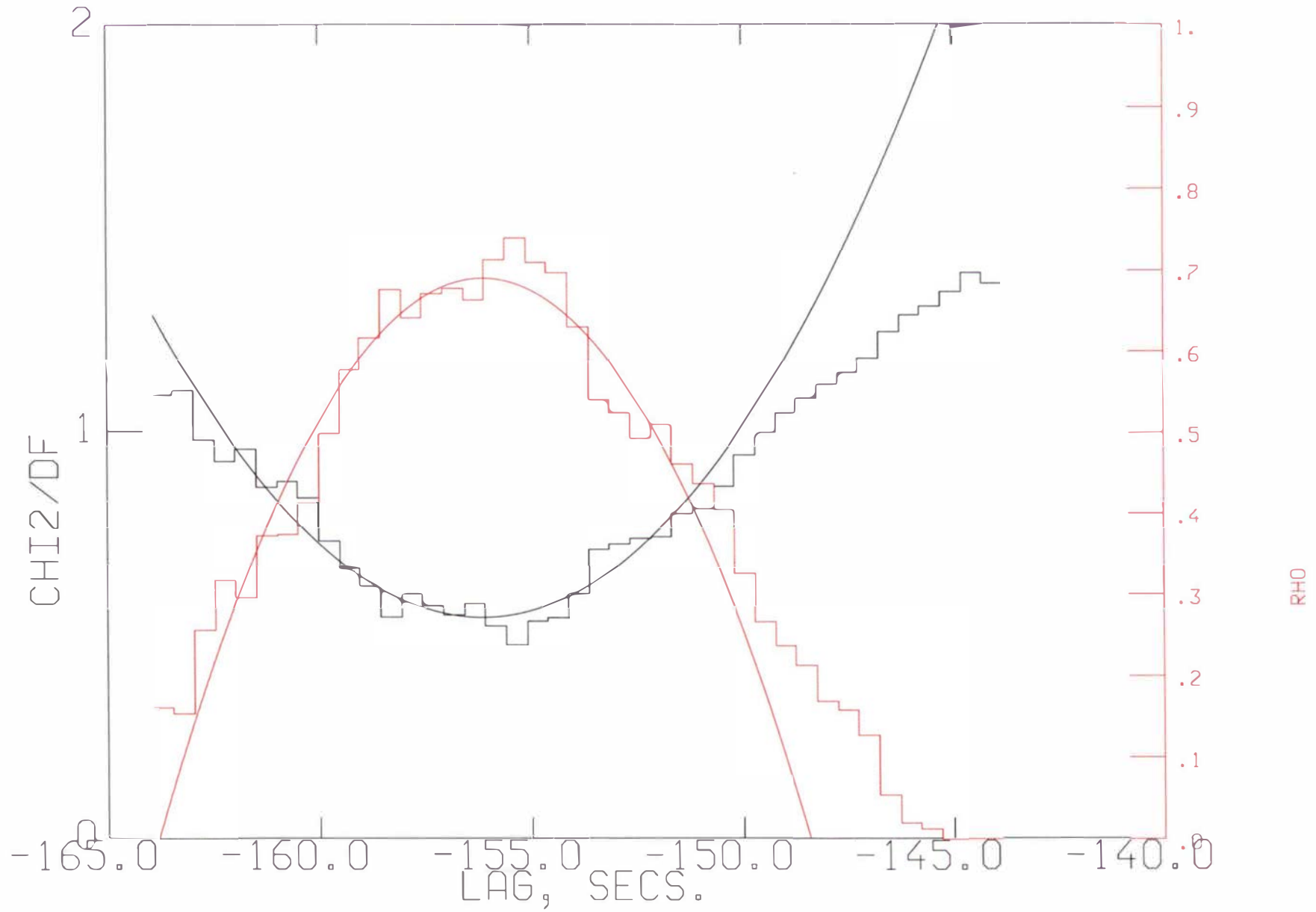


EVENT OF DEC 25, 1995 15:00

15/09/2011

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





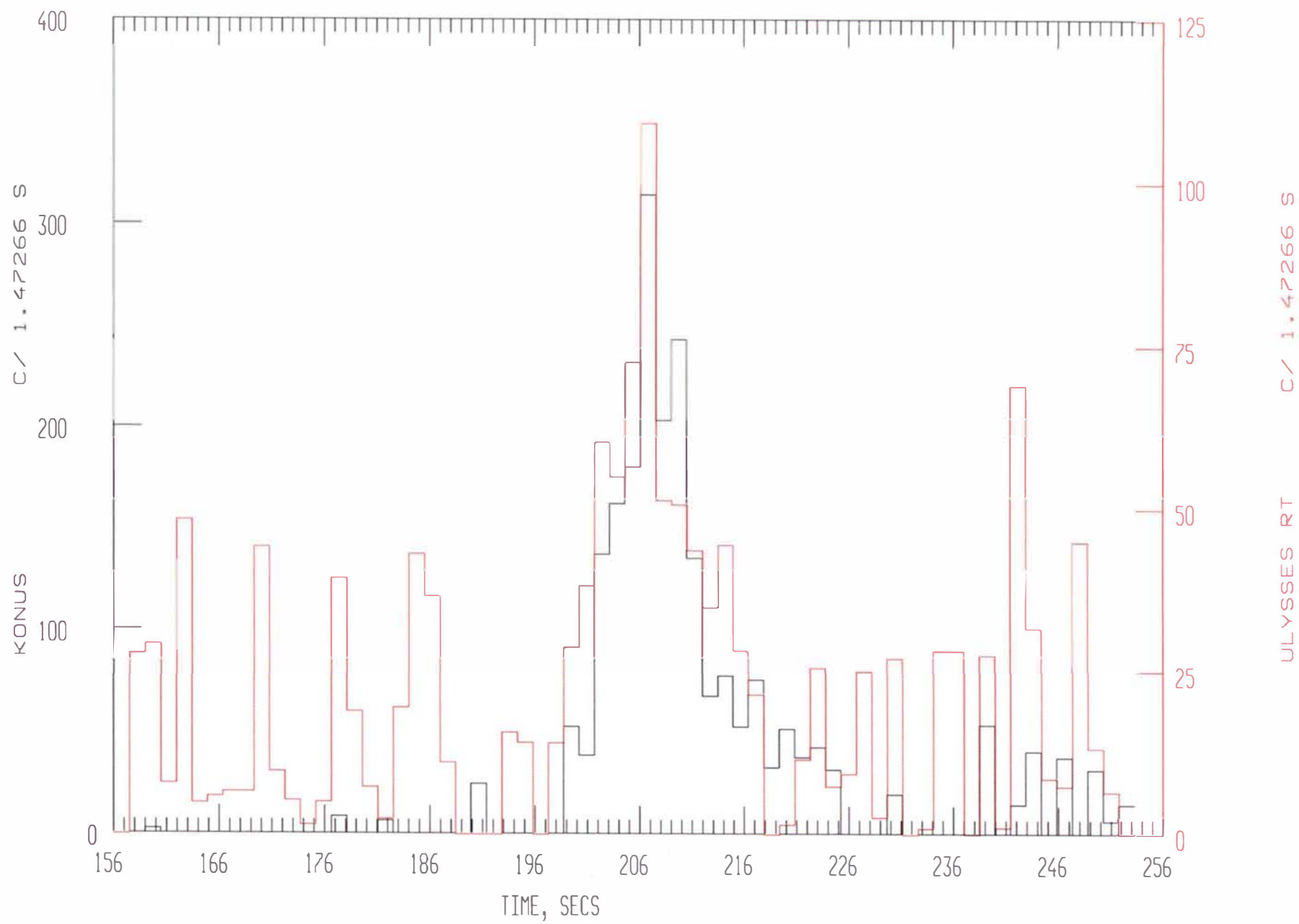
KONUS

-ULYSSES RT CORRELATION

25/12/95

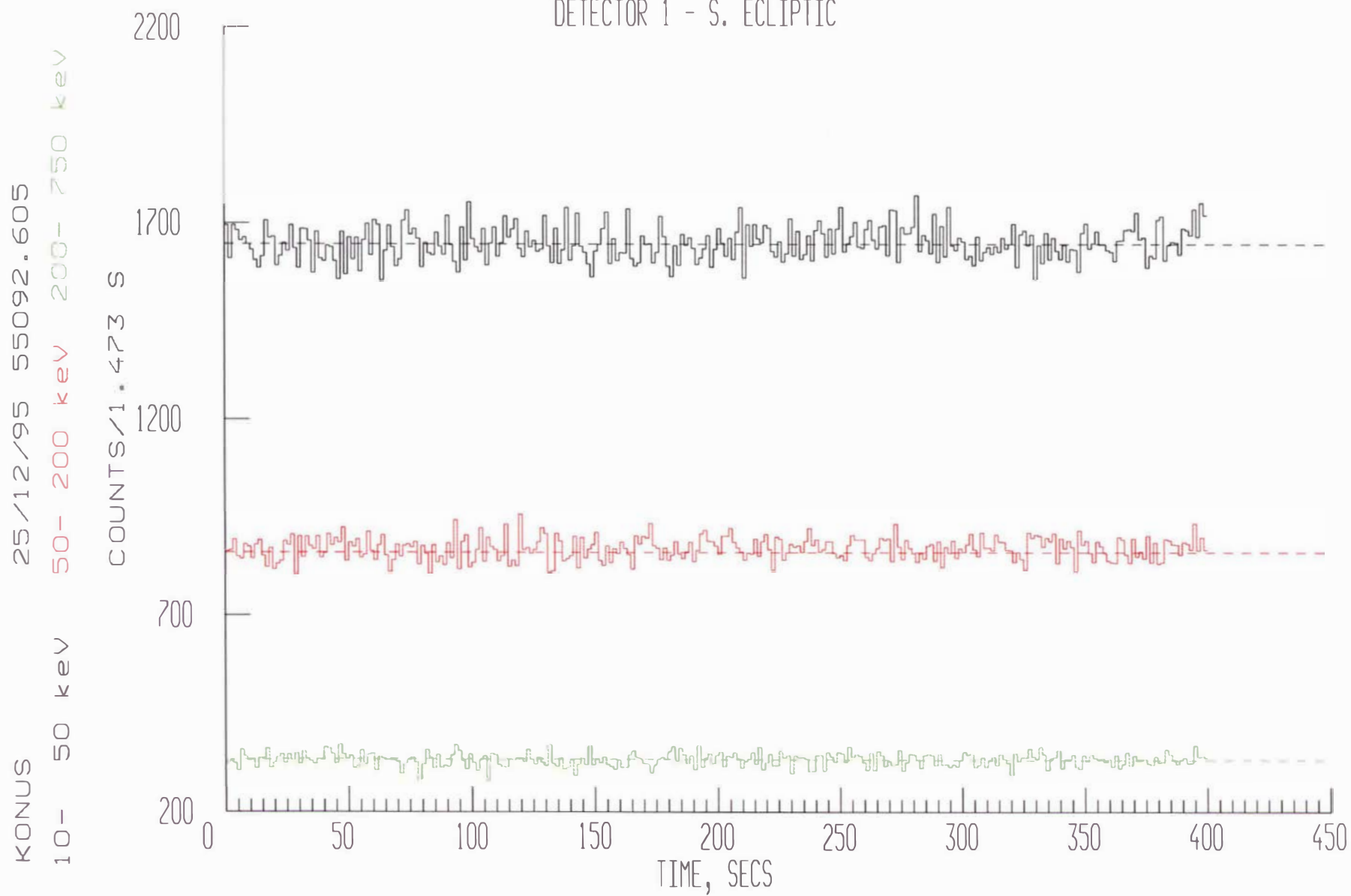
55092.605

15/ 9/11



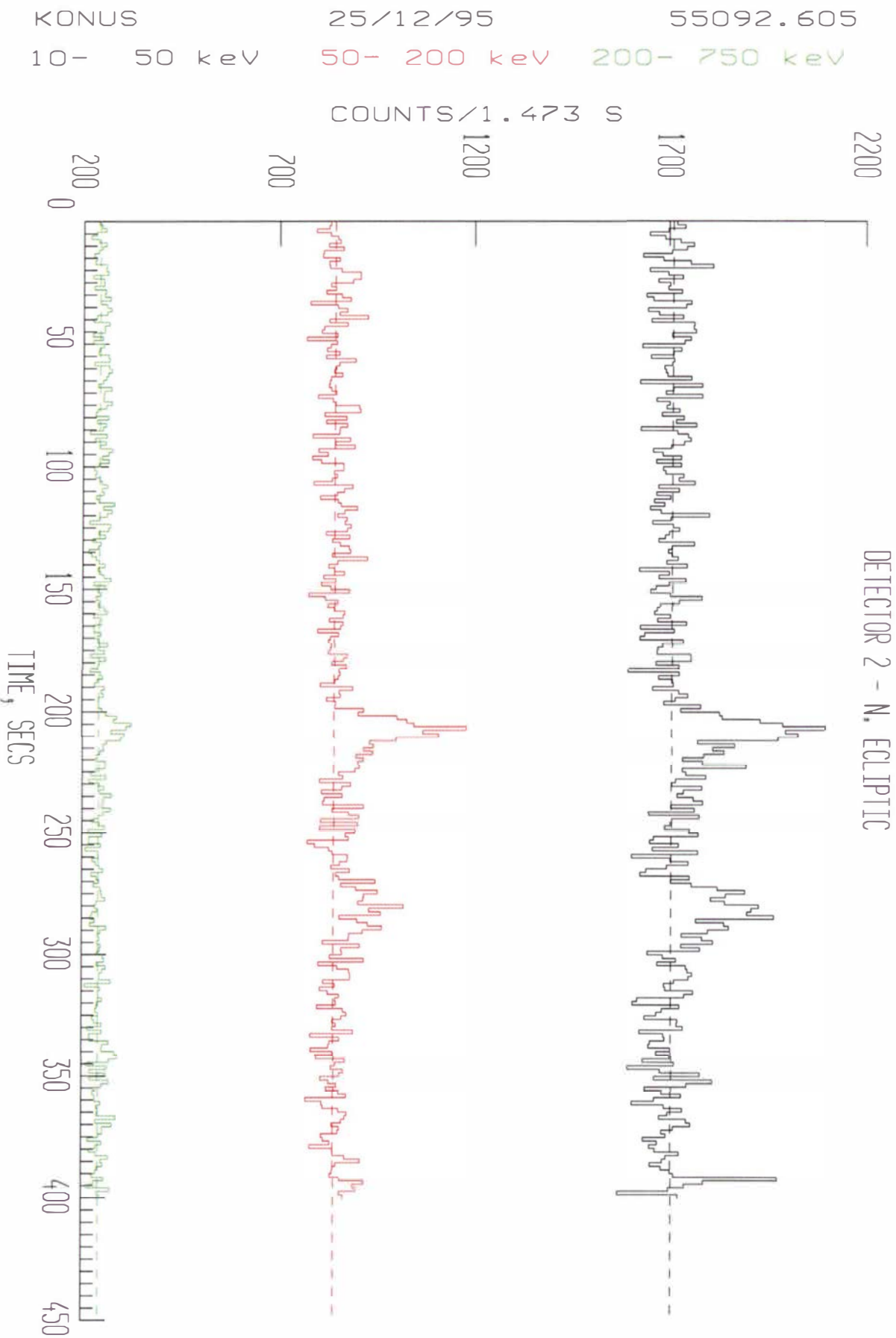
15/09/2011

DETECTOR 1 - S. ECLIPTIC



15/09/2011

DETECTOR 2 - N, ECLIPTEIC



KONUS 19951225 54142

ULYSSES RT

07/09/11

25/12/95 54036.465 s

0 - 0 keV

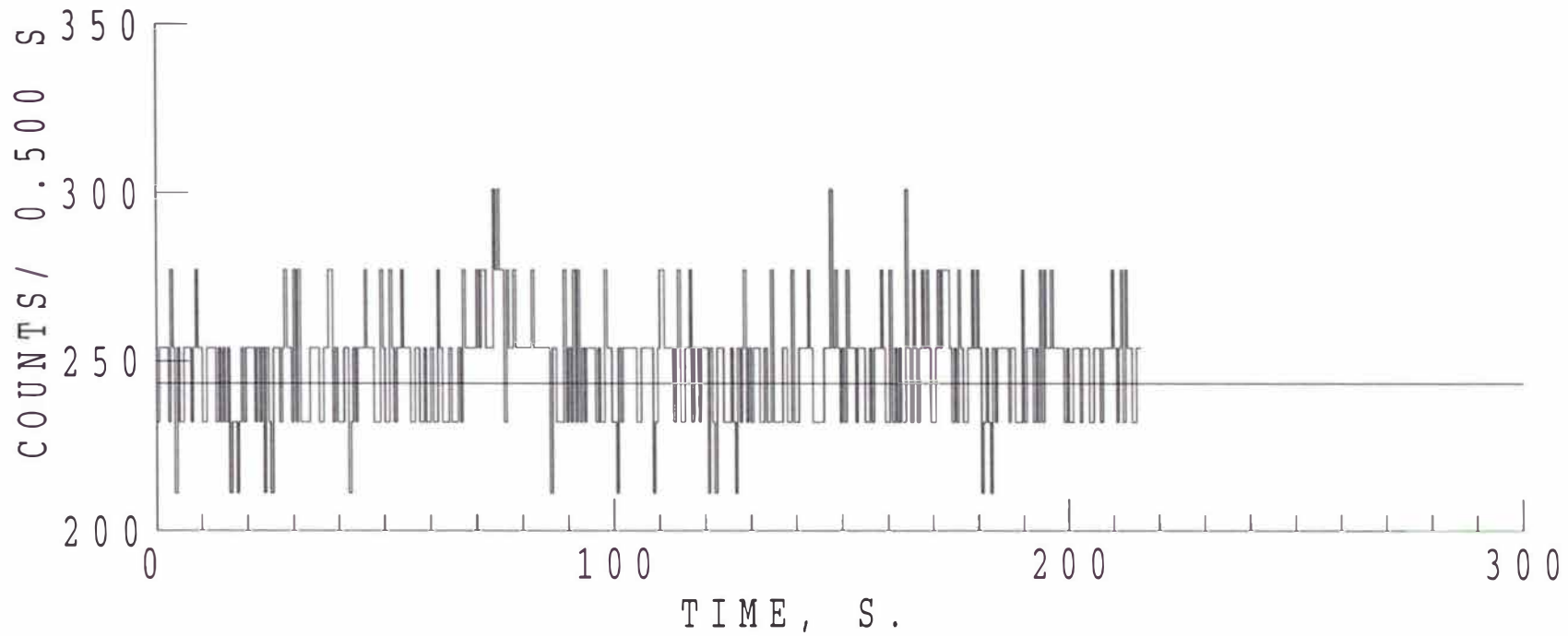
N= 10 M= 10

>4.0 SIGMA FLUCTUATIONS



N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



K O N U S

2 2 / 2 / 9 6

U L Y S S E S R T

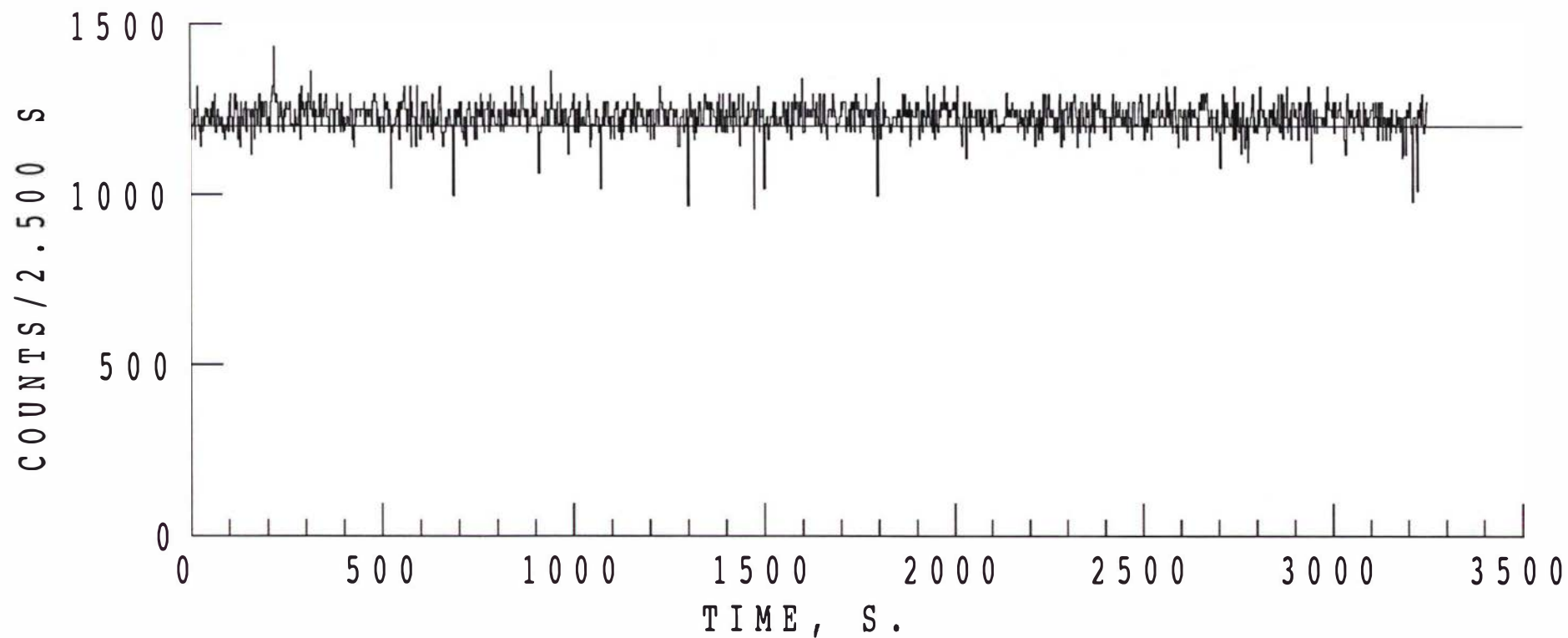
2 5 / 1 2 / 9 5 5 3 8 9 2 . 4 6 5 s

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 5

0 - 0 k e V

N = 10 M = 2

> 4.0 SIGMA FLUCTUATIONS



951025	23	40	39.738	S1	190	400	120	1.7	3	60	167 ✓
951102	01	58	05.879	S2	260	320	50	<0.1	100	3	168 ✓
951102	05	53	29.015	S2	700	1560	600	0.1	5	18	169 ✓
951102	07	58	13	S1	320	80		4	6		BGR ✓
951105	00	29	05	S2	40	50		0.6	40		BGR ✓
951105	01	37	48.077	S2	140	340	80	0.6	2	22	170 ✓
951105	13	00	27.808	S1	160	380	120	9	2	9	171 ✓
951107	07	34	58	S1	20	50	20	2	90		BGR ✓
951111	09	42	40	S1	80	160	20	1.1	15		BGR ✓
951112	18	28	15.244	S2	540	690	220	0.2	14	84	172
951113	23	25	58.872	S1	260	330	260	4.4	1	15	173 ✓
951115	10	48	49	S1	70	180	80	3	12		BGR ✓
951117	02	48	43.762	S2	650	530	120	0.1	9	10	175 -
951118	22	56	00	S2	20	90	100	0.15	6		BGR ✓
951119	08	17	11.402	S1	200	420	110	3	1.5	12	176 ✓
951119	12	54	17.519	S1	110	220	340	1.7	3	4	177 ✓
951119	16	30	48	S2	30	40	10	0.4	110		BGR ✓
951121	06	11	20	S1	20	70	10	2	45		BGR ✓
951122	02	44	01.380	S2	770	920		0.15	0.5	1.5	179 ✓
951122	04	45	07.738	S1	280	430	160	12	35	22	180 ✓
951123	18	10	08	S1	30	60	30	1	30		BGR ✓
951124	05	54	26	S2	50	140	50	0.15	30		BGR ✓
951124	06	58	52	S2	30	100		0.25	280		BGR ✓
951202	10	51	41.744	S1	200	500	220	2.4	2	25	195
951203	01	06	28.180	S2	260	720	420	0.85	1	16	196
951208	05	26	57.151	S2	320	740	190	<0.04	1	3.5	197
951208	10	57	32.057	S1	290	260		7	52	6.5	198
951208	11	47	47.634	S1	240	510	190	10	23	98	199
951208	23	24	12	S1	100	90		>10	30		BGR
951209	08	42	29.607	S1	150	450	160	6	6	14	200
951213	04	57	29.683	S2	360	940	330	0.4	2	8	201
951213	09	04	34	S2	300	90		<0.15	4.5		BGR
951214	01	29	47	S2	15	100	30	1	30		BGR
951214	02	24	17.847	S2	200	450	150	0.8	4	6	202
951215	20	23	45	S2	60	70	15	<0.15	60		BGR
951216	22	39	42	S2	160	110		0.1	6		BGR
951218	07	59	48	S1	70	130	30	2.3	22		BGR
951219	16	51	19.732	S2	430	850	920	<0.03	1	54	203
951220	08	51	23.560	S2	100	320	180	1	2	8	204
951221	08	23	18	S1	110	150	70	>15	15		BGR
951222	21	00	21	S2	280			<0.1	16		BGR
951225	09	14	16	S2	200			<0.3	50		BGR
951225	09	34	14	S1	500	150	25	2.2	60		BGR
951225	15	21	35	S2	210	170	40	0.1	100		BGR
951225	22	51	08	S1	80	150	50	2.4	40		BGR
951226	08	38	15	S2	60	100	50	0.15	9		BGR
951227	06	23	25.042	S1	420	1200	320	1	1	1.5	218
951227	21	59	20	S1	50	50		3	65		BGR
951228	12	28	42	S2	70	80	40	<0.07	110		BGR
951228	15	47	26	S2	80	170		0.9	17		BGR
951231	05	37	11.668	S2	180	320	150	0.07	9	65	219
951231	21	24	34	S2	100	25		<0.2	20		BGR
960102	03	14	10.996	S1	140	300	80	1	1	0.2	220
960102	20	20	53	S1	200	120	40	>9	25		BGR
960104	03	28	41.062	S2	360	630	230	<0.05	2	28	221
960105	16	04	30	S1	80	60		5	30		BGR
960107	05	23	20	S2	30	100		0.5	230		BGR
960107	19	03	28	S2	30	120	150	<0.1	32		BGR
960109	23	11	31	S2	60	130	20	0.3	5		BGR
960111	12	55	24.530	S2	1130	1280	190	0.2	0.5	6	222
960113	15	33	44.261	S2	500	450	50	0.3	2	36	228
960114	12	15	04.737	S1	4900	7200	1400	1.8	1	60	233
960115	08	52	36.506	S1	380	360	60	10	1	7	234
960115	12	50	15	S2	120	60		0.7	22		BGR
960116	02	02	18	S2	140	170		0.15	17		BGR
960117	15	56	11.341	S1	250	360	30	4	5	20	235

From cline@lheavx.gsfc.nasa.gov Fri Feb 2 05:41 PST 1996
 Date: Fri, 2 Feb 1996 05:41:51 -0800
 Mime-Version: 1.0
 To: Bonnard.Teegarden@cesr.cnes.fr, KHURLEY@sunspot.ssl.berkeley.edu,
 palmer@lheamail.gsfc.nasa.gov, seifert@lheamail.gsfc.nasa.gov
 From: cline@lheavx.gsfc.nasa.gov (T L Cline)
 Subject: For Your INFO

Dear Bonnard, Kevin, David, Helmut:

Here is Sergei Golenetskii's latest Konus burst list, for your information. Note that, including the non-triggered-mode 'BGR' events they confidently identify, there are over 300 events so far.
 - TLC

DATE	Trigger T0 time (UT)		Sensor	KONUS-WIND		N(S1)/N(S2)		Duration		Trigger number	
				Max counts per sec							
				G1	G2	G3	in G2	T<T0	T>T0		
941113	12	09	15	S1	145	85		2.5	115		BGR ✓
941114	02	02	40	S2	110	128	30	0.25	12		BGR ✓
941117	03	14	38.191	S2	406	550	74	0.17	40	5	2 ✓
941117	14	07	57	S2	150	140		<0.15	5		BGR ✓
941119	19	31	09.175	S2	370	703	160	0.23	7	20	4 ✓
941120	20	23	17.924	S1	215	328	30	>15	2	25	5 ✓
941121	17	25	00.945	S1	1652	1656	300	21	3	50	6 ✓
941125	22	04	30.156	S2	115	308	109	0.95	1.5	5	7 ✓
941126	00	20	46	S1	150	205	200	>14	18		BGR ✓
941126	12	22	37.952	S1	860	1430	330	4.2	40	45	8 ✓
941126	16	54	20	S1	55	75		>10	26		BGR ✓
941126	19	56	49.732	S1	290	390	211	6.7	20	26	9
941127	14	30	25.680	S2	200	400	95	0.17	8	7	10
941127	15	39	10	S1	210	57		2.7	260		BGR ✓
941128	15	37	00	S1	75	90	32	>15	55		BGR ✓
941205	23	33	40.074	S2	370	460	188	0.06	6	30	11 ✓
941207	22	10	32	S2	265	175		<0.2	7		BGR ✓
941210	03	10	52.523	S2	900	2350	1385	0.12	1	15	14 ✓
941214	17	03	51	S1	40	45	29	>6	12		BGR ✓
941214	05	38	45.226	S1	3479	1266	14	1.0	12	240	18 Sol
941221	07	44	08	S2	55	115	30	0.8	20		BGR ✓
941221	22	14	35.215	S1	260	496	165	1.5	55	11	19 ✓
941222	05	36	00.243	S2	334	1360	1066	0.36	7	105	20 ✓
941228	07	39	45.915	S1	300	637	519	4.4	5	90	28
941228	16	55	23	S2	40	36	23	0.25	25		BGR ✓
941229	12	58	05	S1	46	108	31	1.8	15		BGR ✓
941229	22	51	08.781	S2	396	381	140	0.09	7	25	29 ✓
941230	20	52	53	S1	74	117	52	8.4	158		BGR ✓
941230	23	43	44	S2	55	70	16	<0.2	4.5		BGR ✓
950104	07	18	39.613	S2	258	550	219	0.75	2.8	20	31 ✓
950104	09	00	58	S2	140	143	40	<0.1	25		BGR ✓
950110	06	02	15	S2	332	180		<0.1	3600		BGR
950110	13	37	57.084	S2	234	422	213	0.05	38	100	32 ✓
950111	04	49	12.241	S1	586	620	100	>19	92	24	33 ✓
950111	12	18	49.196	S1	225	435	164	1.85	26	50	34 ✓
950112	07	45	37.120	S2	1305	1800	336	0.04	2.5	44	35 ✓
950113	05	59	13	S1	283	180	26	>10	52		BGR ✓
950113	17	38	32	S2	85	162	35	<0.06	75		BGR ✓
950114	01	00	38	S1	46	110		1.6	6		BGR ✓
950114	04	03	01	S2	23	76		0.5	70		BGR ✓
950114	07	30	30.766	S2	205	406	60	<0.05	1	100	36
950114	13	10	34.865	S1	1320	2828	516	3.1	1	10	37 ✓
950115	02	49	32	S2	40	47	34	<0.15	24		BGR ✓
950117	01	36	00	S2	56	82	42	0.2	108		BGR ✓
950118	12	22	54	S2	57	105	17	<0.1	35		BGR ✓
950125	14	51	52.253	S1	380	600	140	8.2	3.8	11	39

Date: Sep 8 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

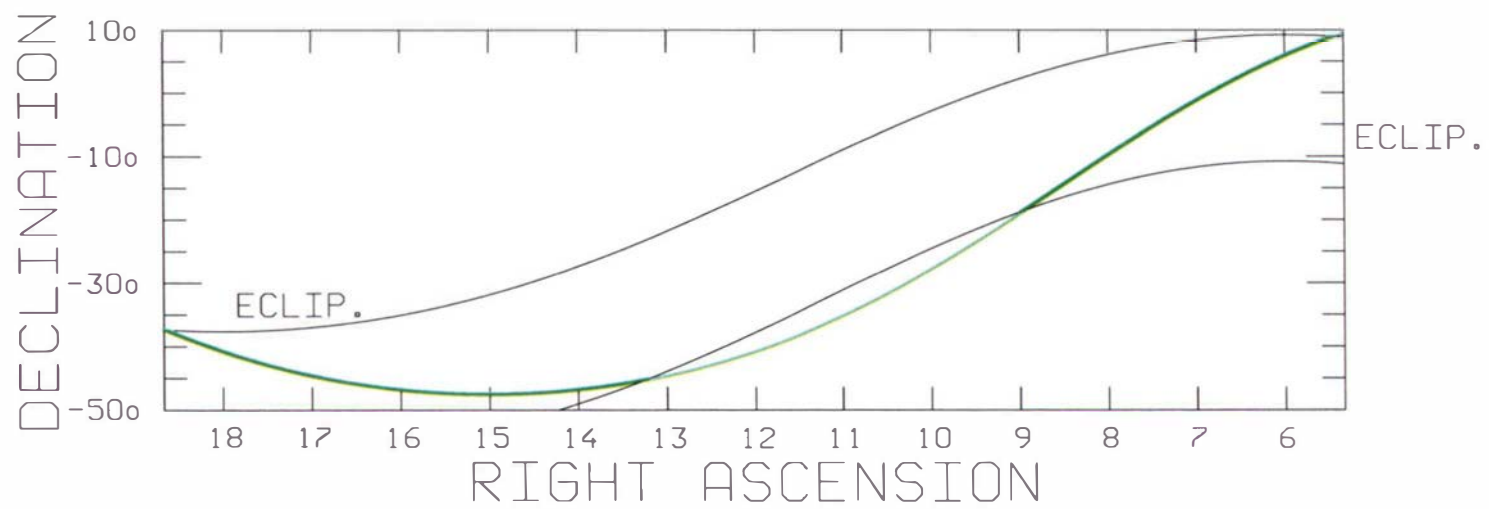
- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☒ Is the order of the data in CORREL such that a vernier is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

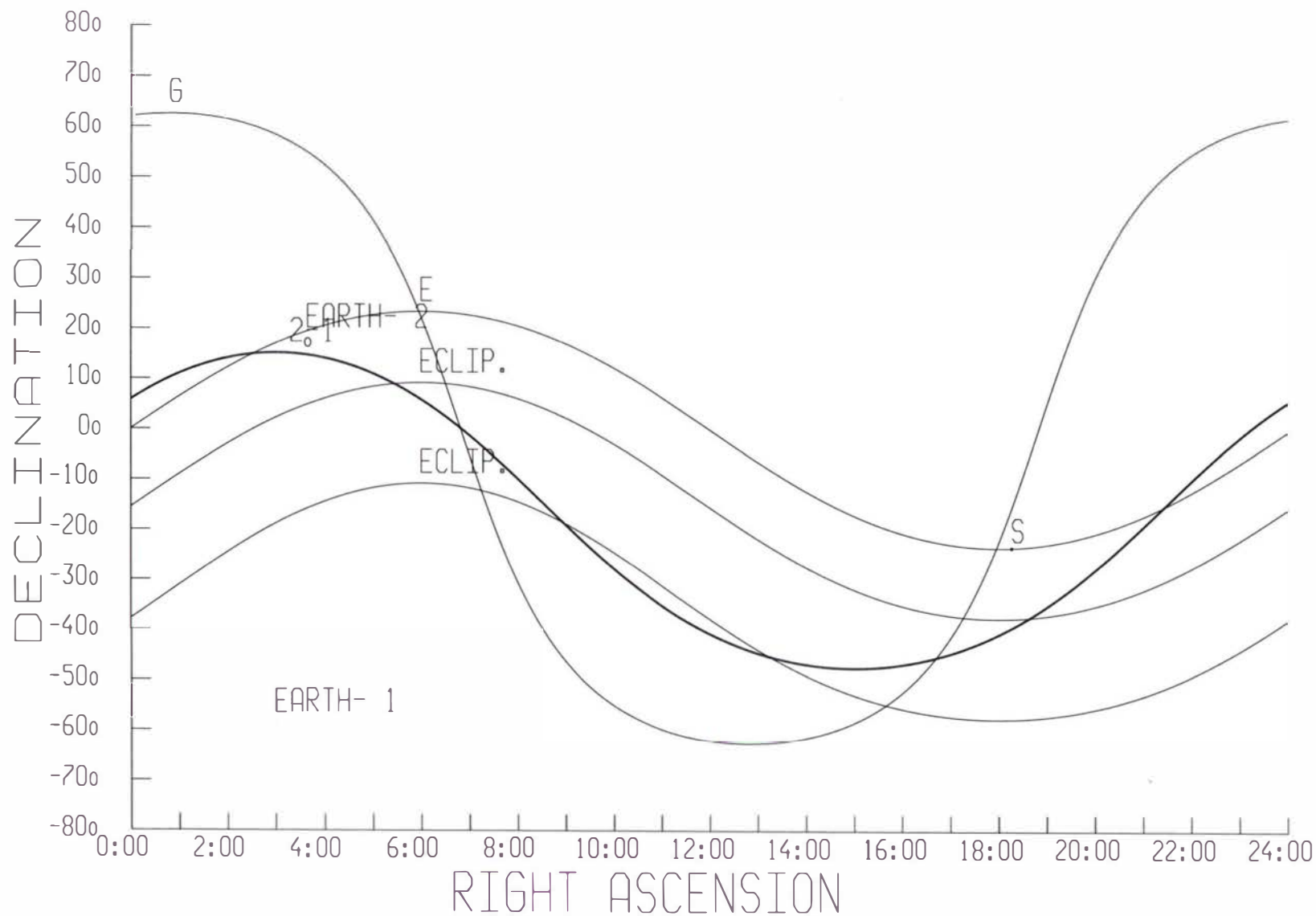
- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS and MBL databases updated with identical times?



EVENT OF DEC 25, 1995 22:56

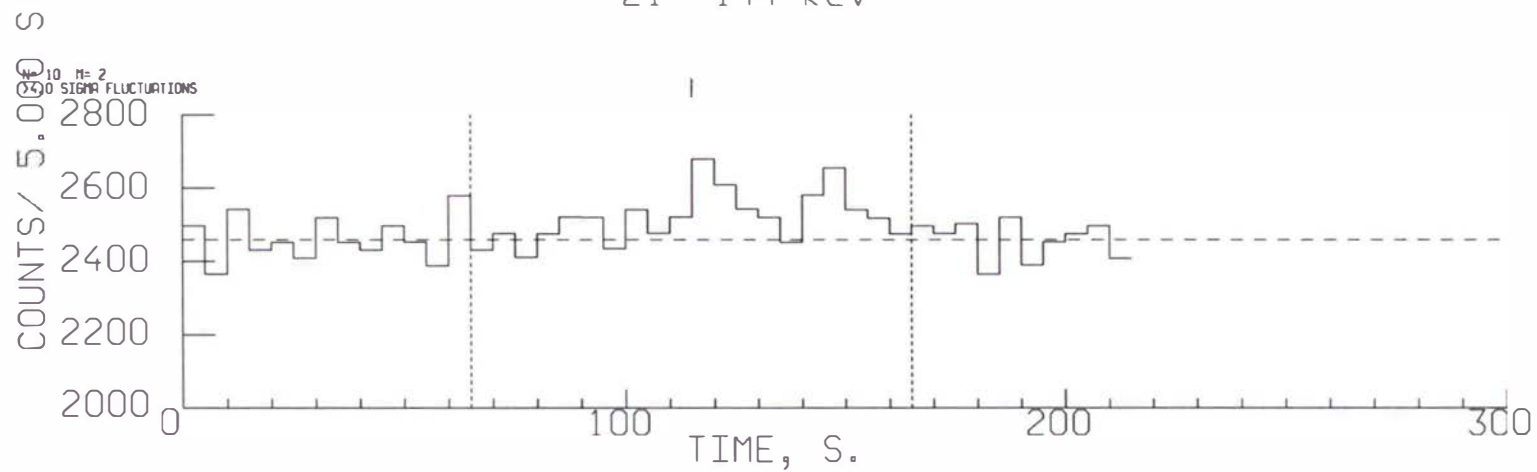
08/09/2011

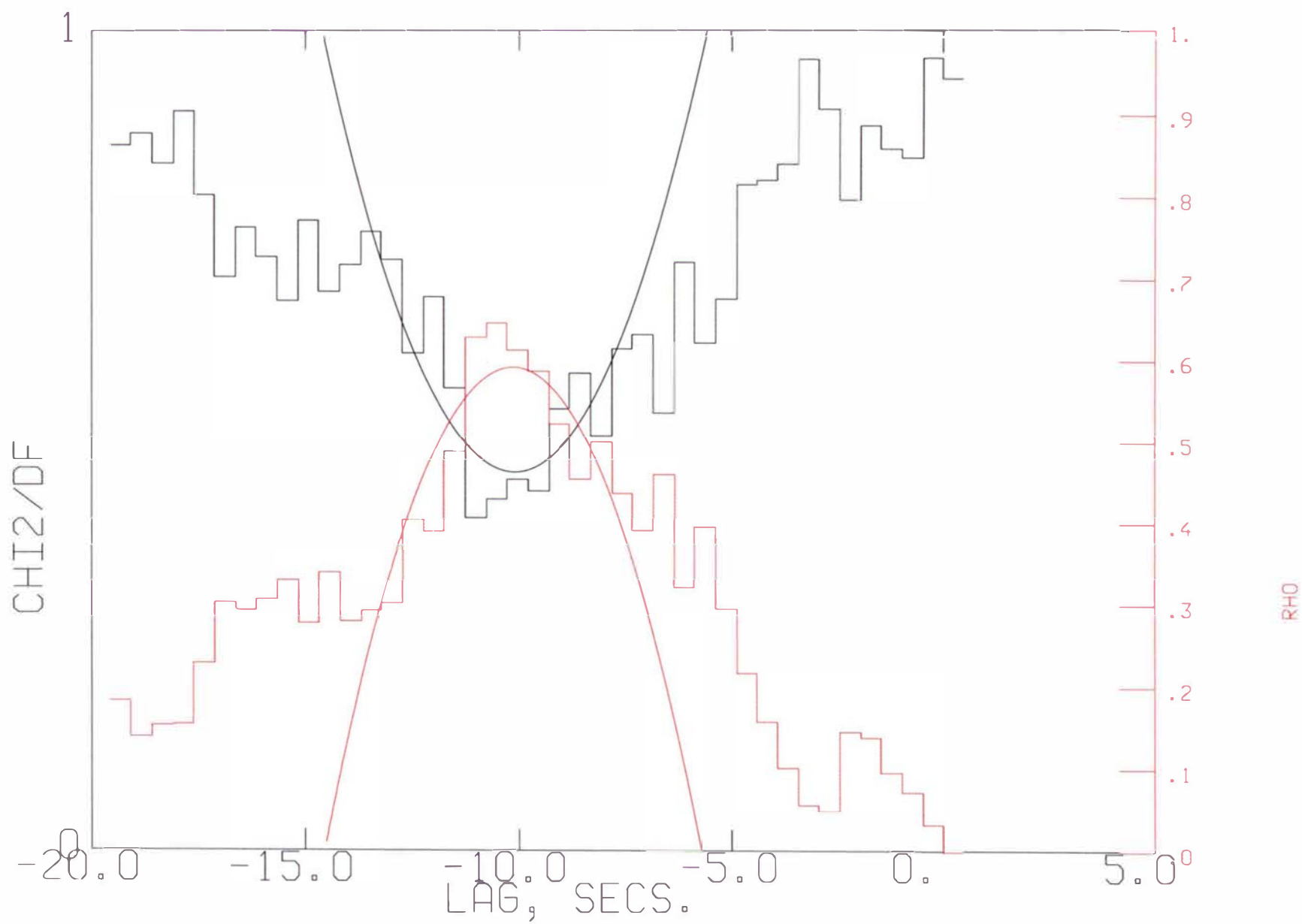
N-M = CORRELATION BETWEEN SATELLITES N AND M
 EARTH-N = EARTH AS SEEN FROM SATELLITE N
 S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
 1 ULYSSES 2 KONUS

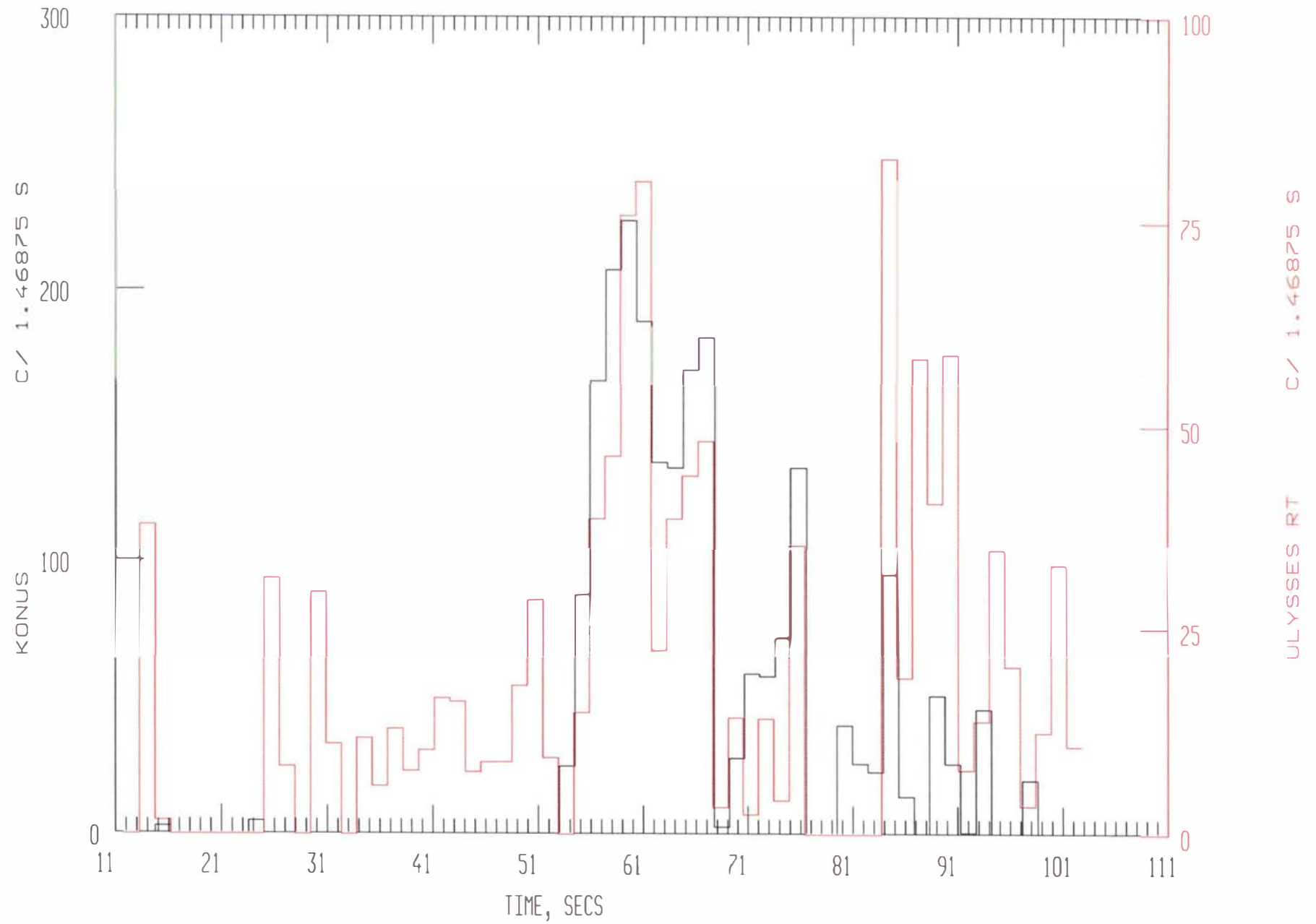


ULYSSES RT
25/12/95 82548.398 s
0.500 S INTERVALS REGROUPED BY 10
21- 144 keV

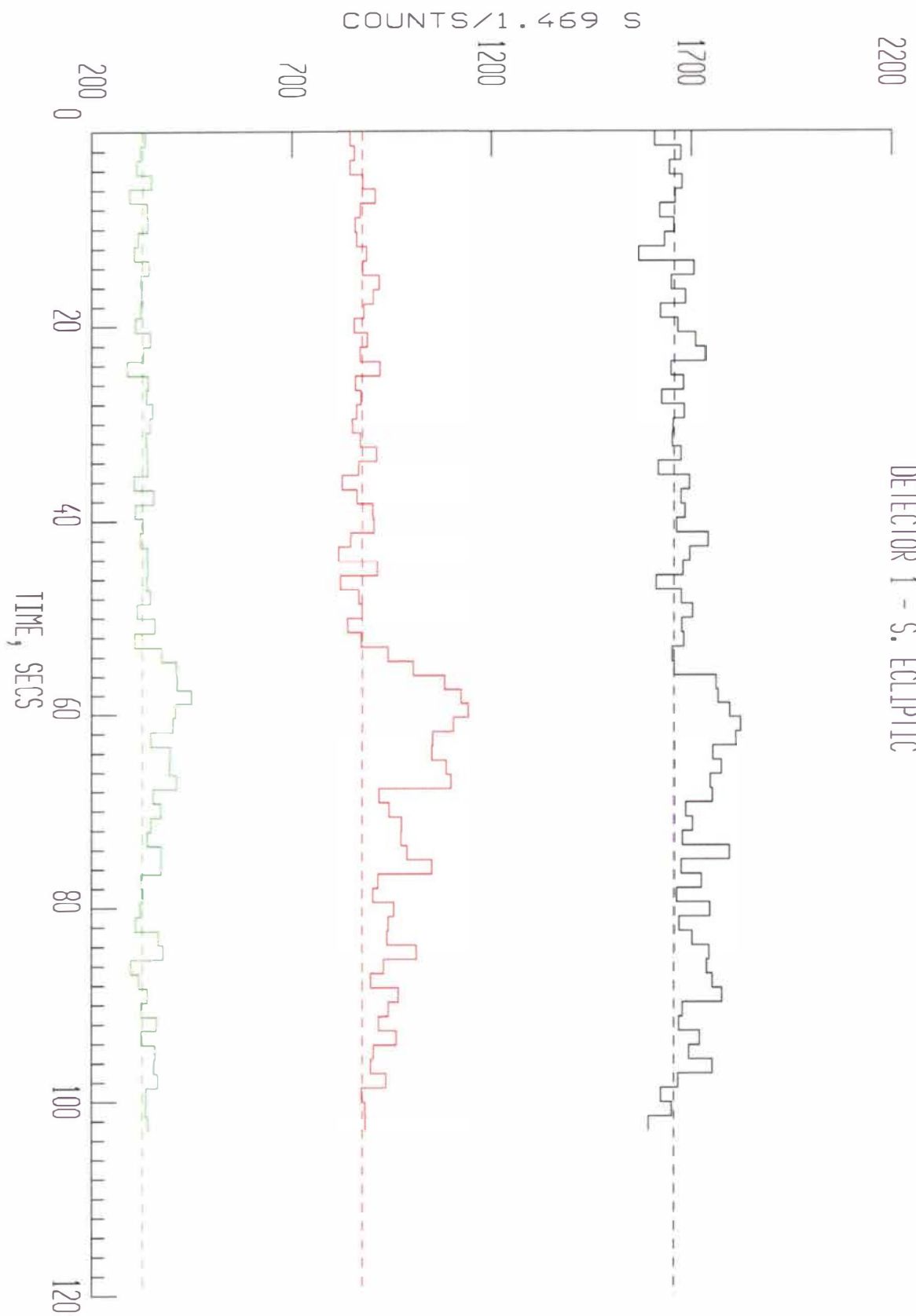
8 / 9 / 11





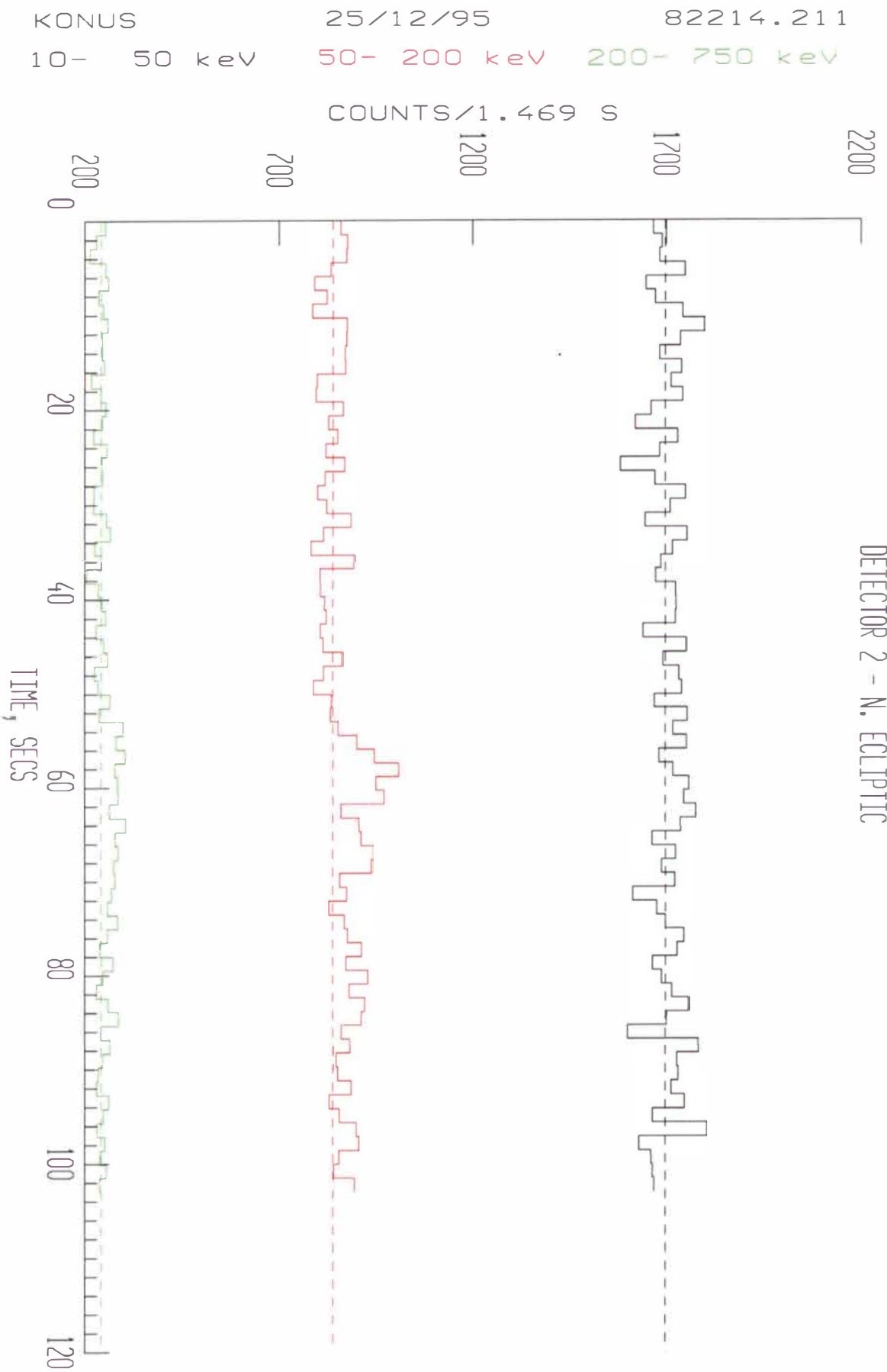


KONUS 25/12/95 82214.211
10- 50 keV 50- 200 keV 200- 750 keV



08/09/2011

DETECTOR 2 - N. ECLIPSE



KONUS 19951225 82656

ULYSSES RT

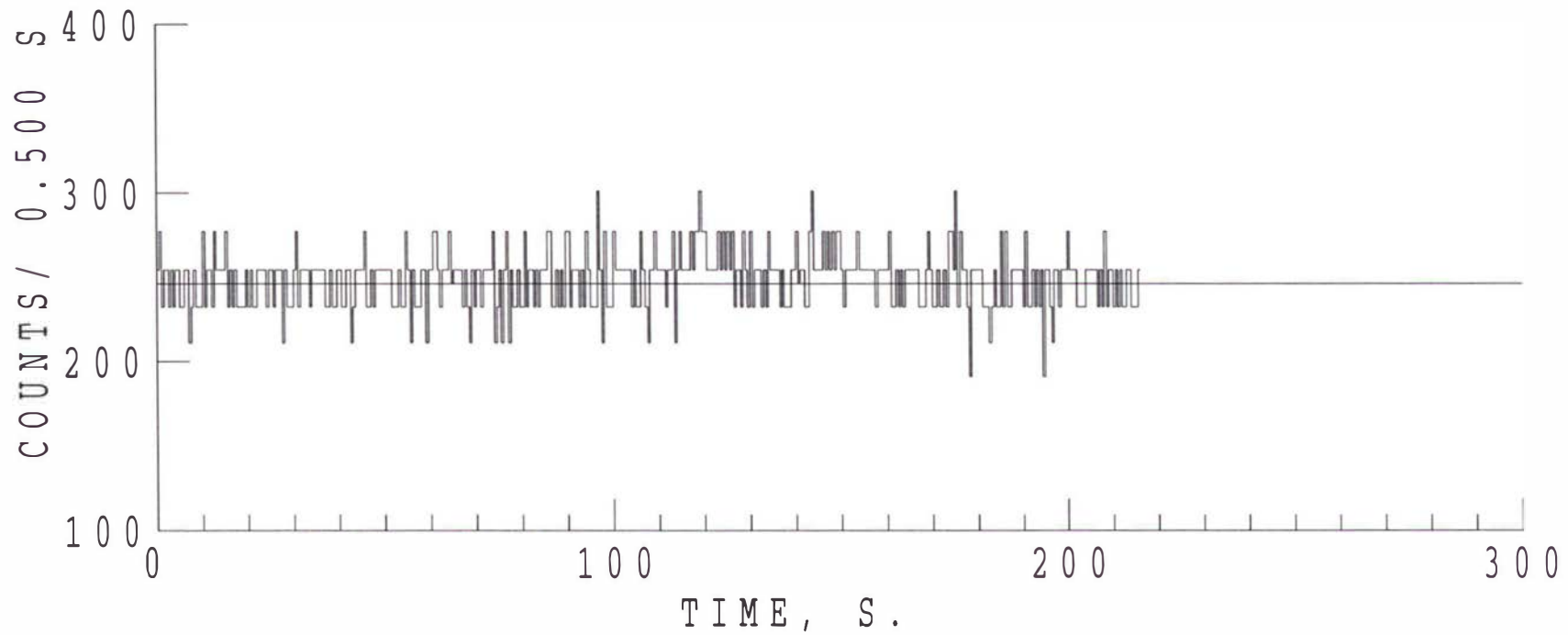
07/09/11

25/12/95 82548.398 s

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



K O N U S

2 2 / 2 / 9 6

U L Y S S E S R T

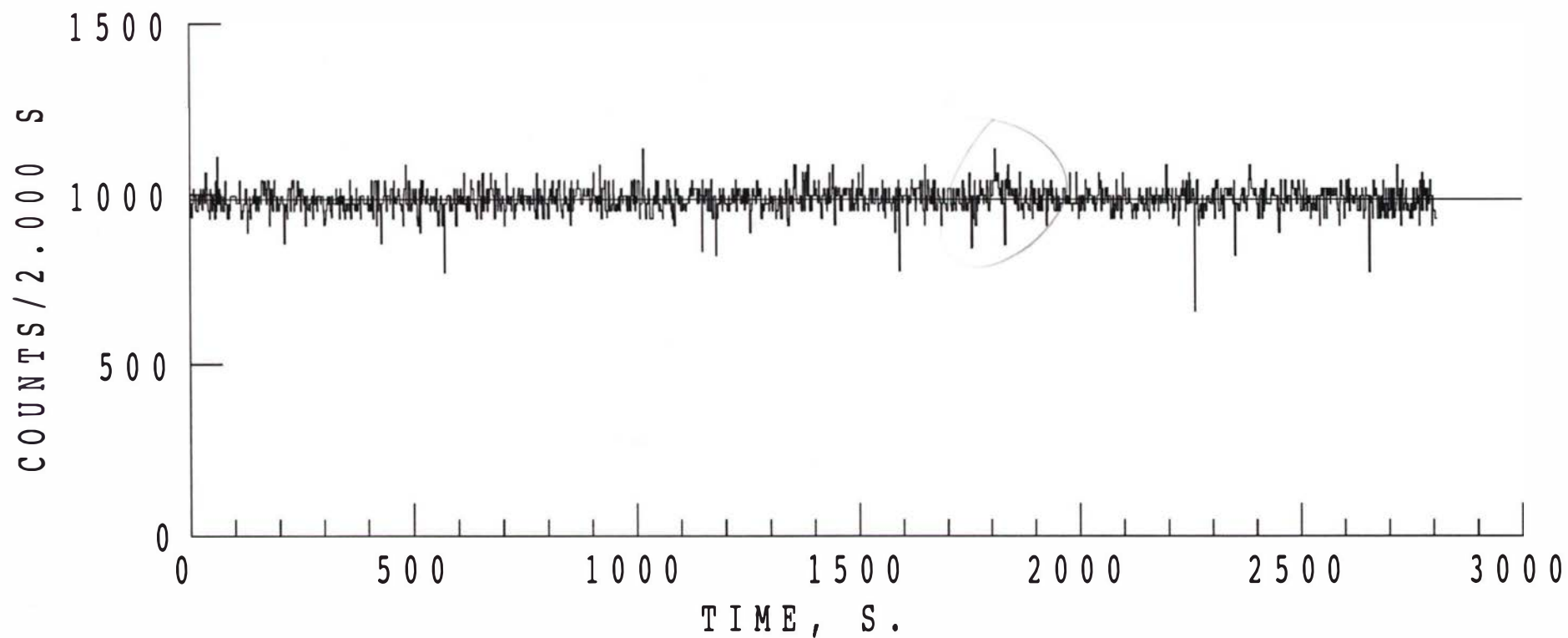
2 5 / 1 2 / 9 5 8 0 8 5 6 . 3 7 5 s

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

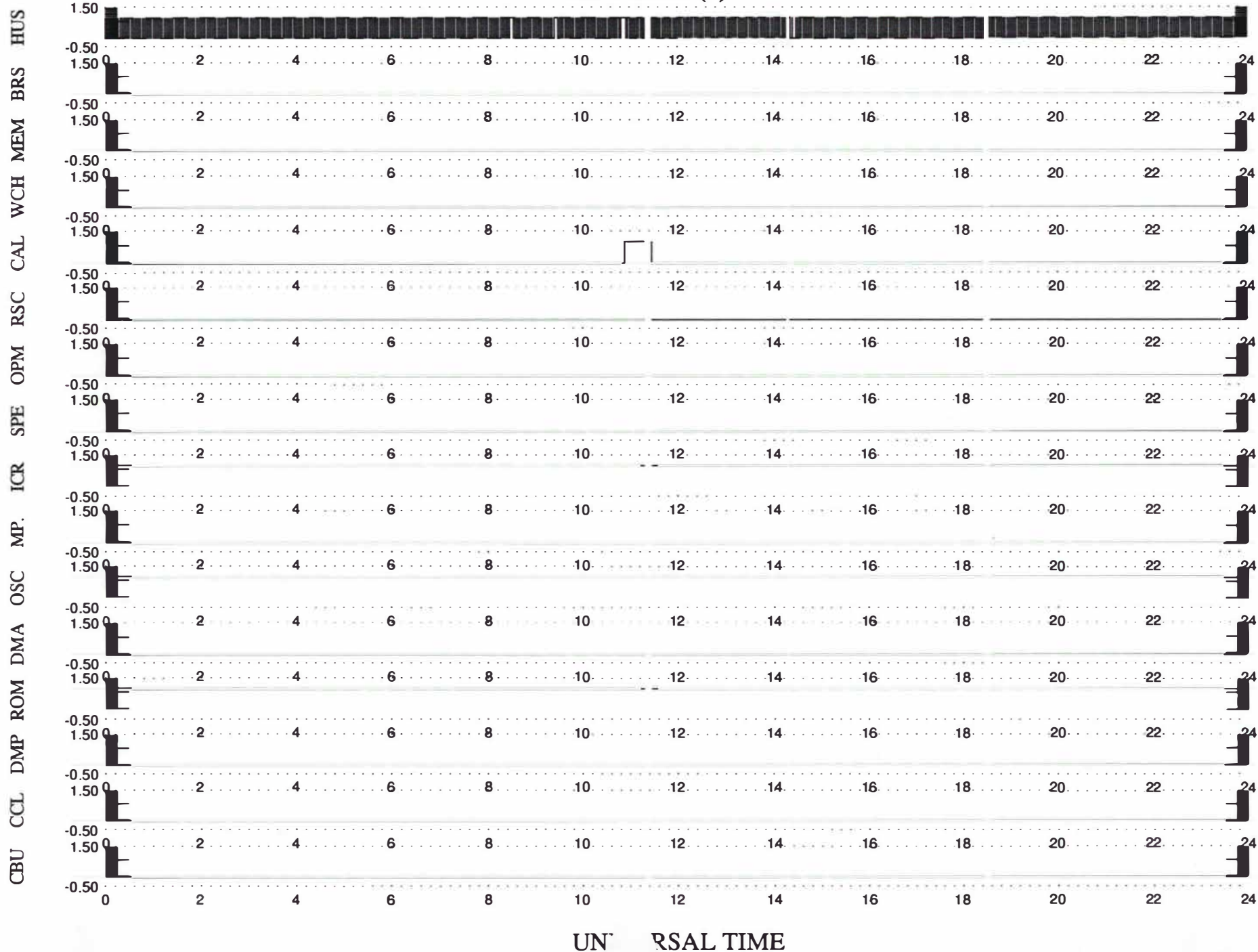
W= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



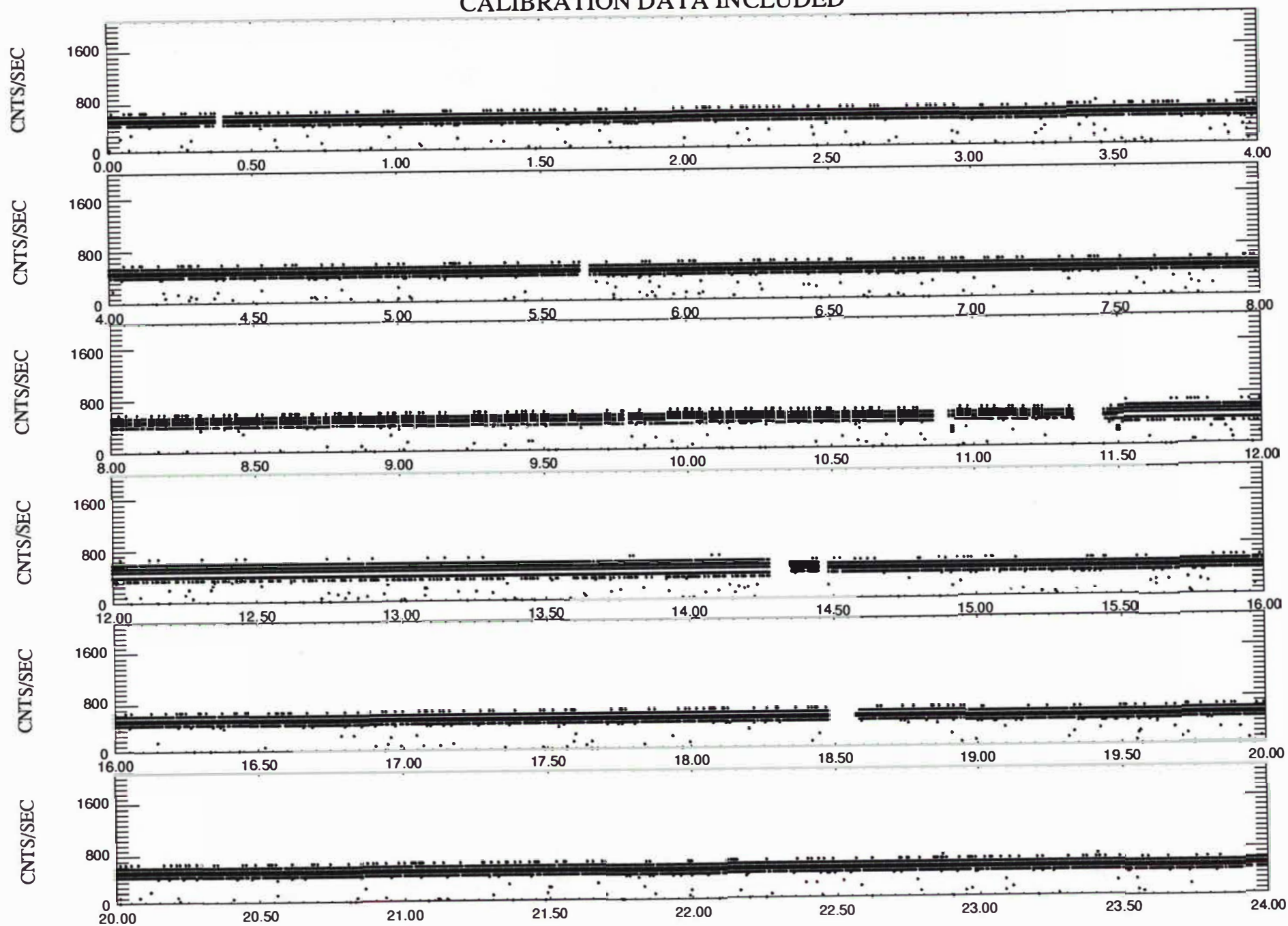
HUS MODES EDR day 359, year 1995 to day 359, year 1995
NO BURST (3)

4/1/96

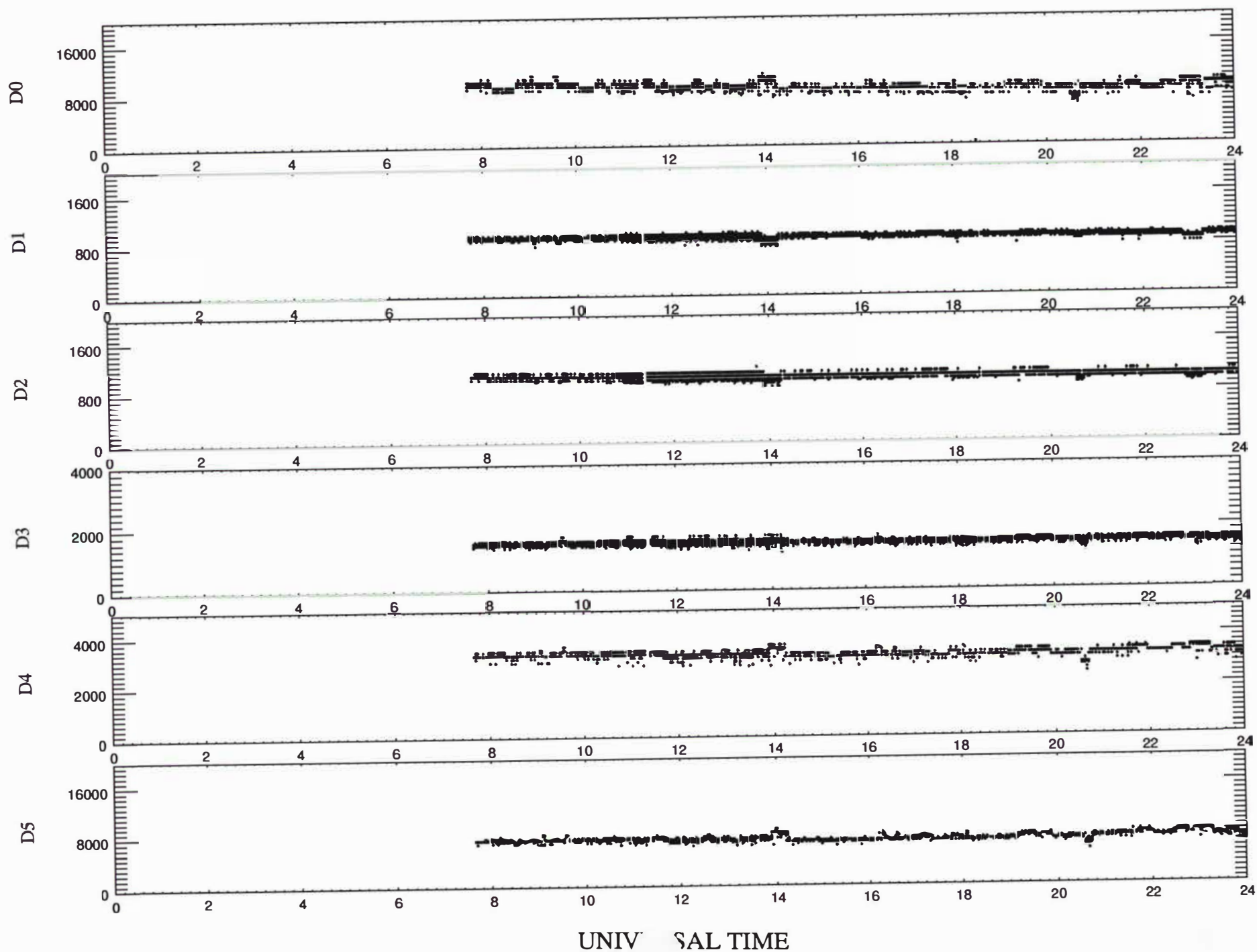


HUS 2A, MODE 1, NOT AVERAGED EDR day 359, year 1995 to day 359, year 1995
CALIBRATION DATA INCLUDED

4/1/96



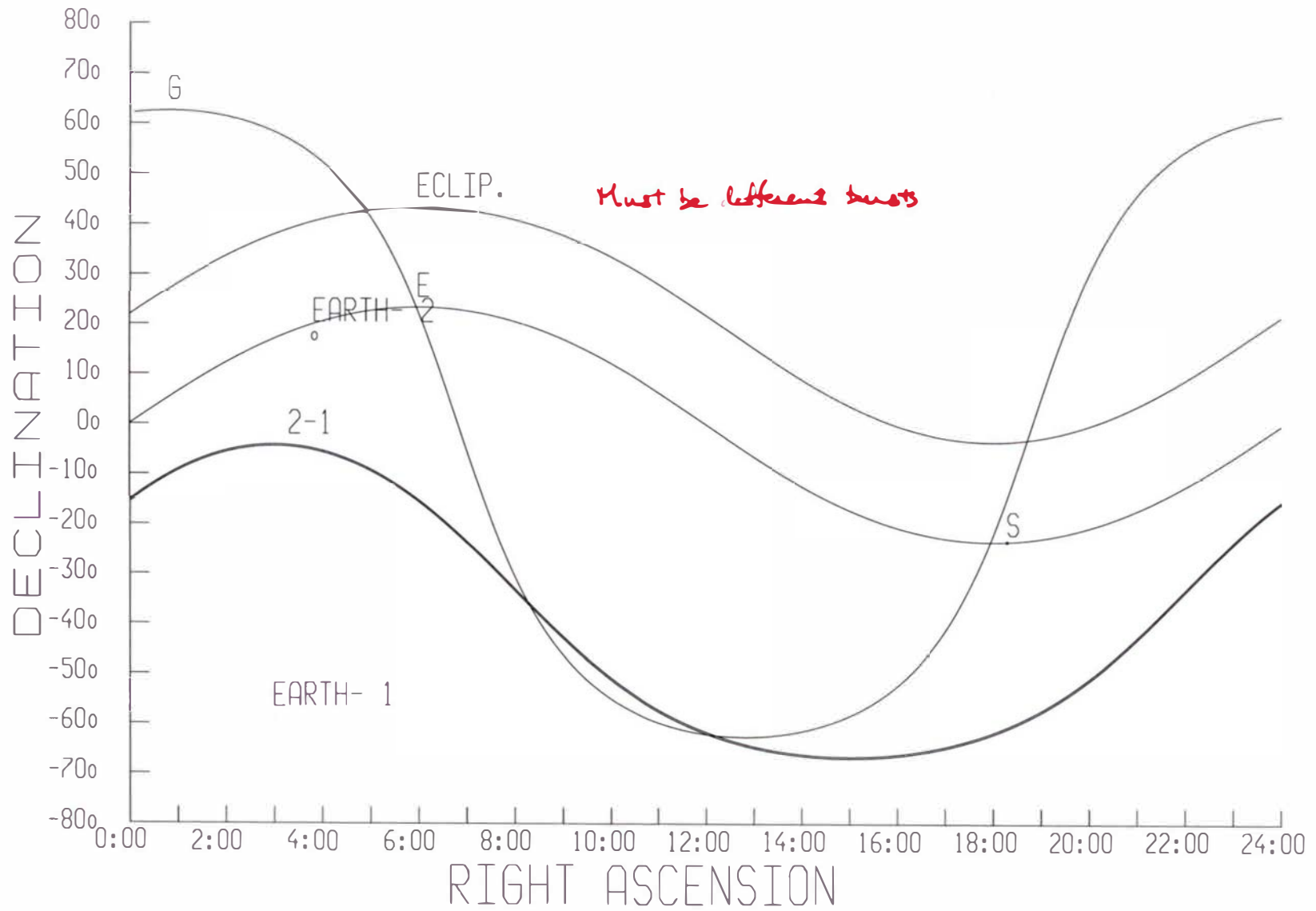
UNIVERSAL TIME

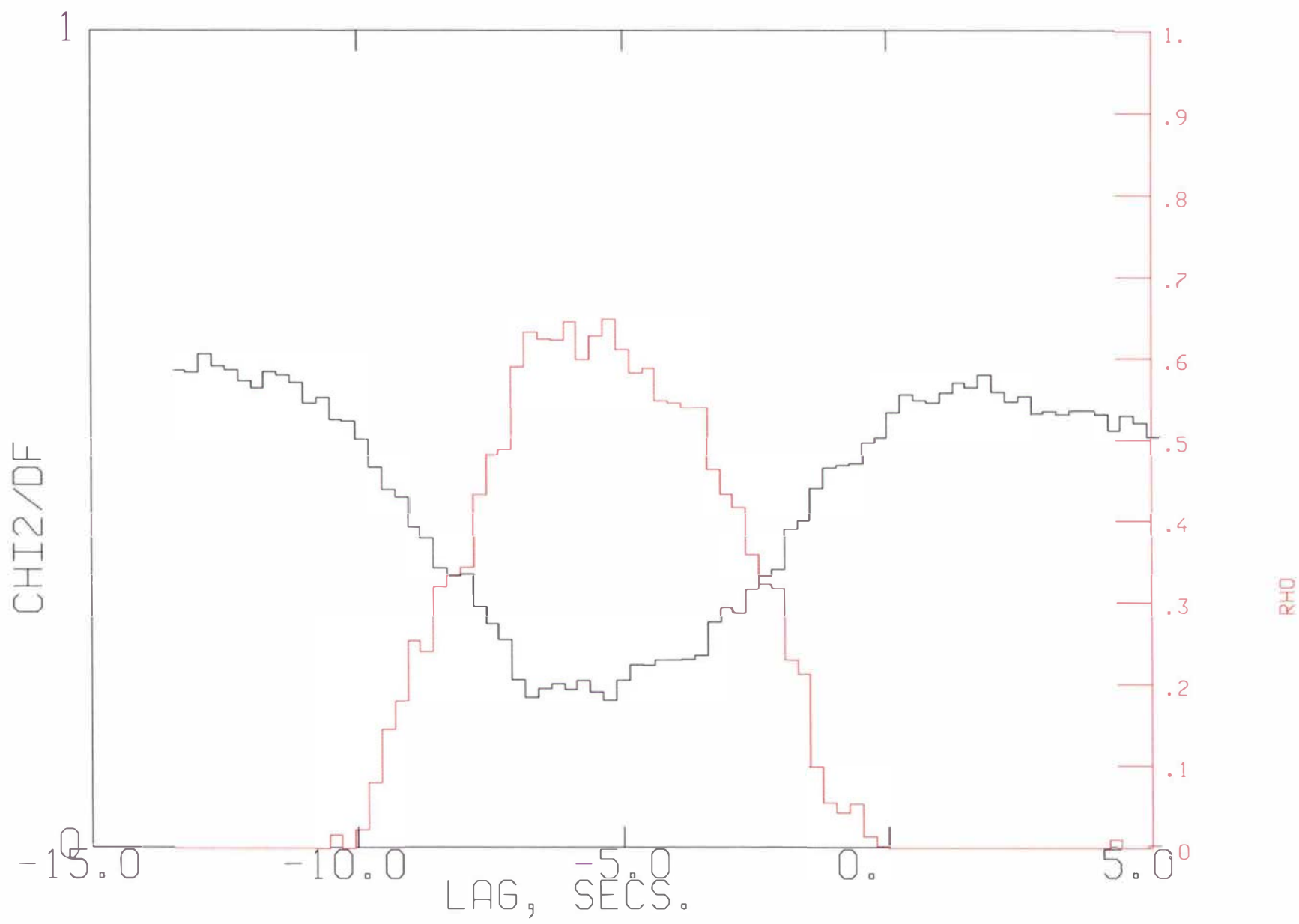


EVENT OF DEC 26, 1995 8:51

12/09/2011

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 KONUS





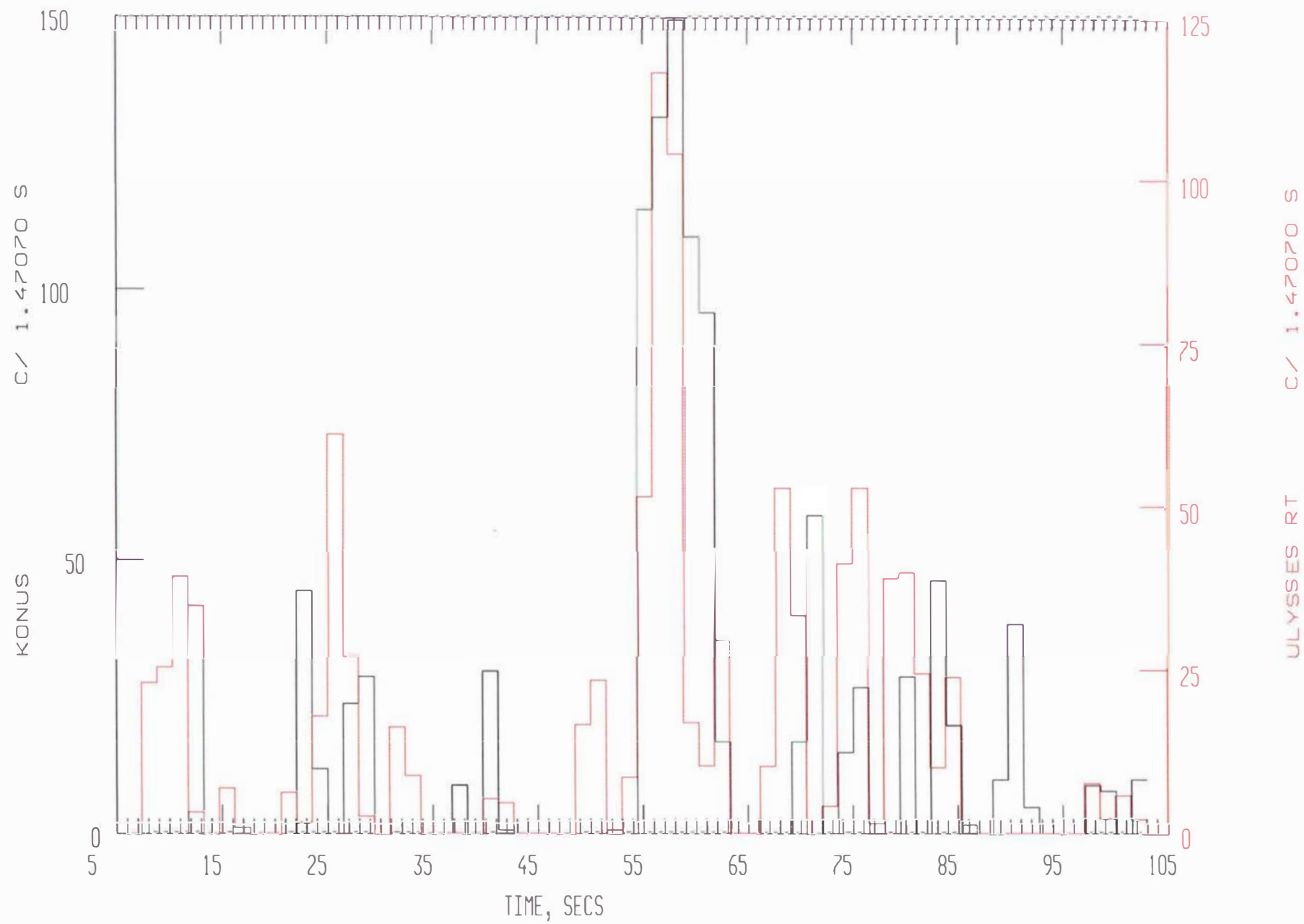
KONUS

-ULYSSES RT CORRELATION

26/12/95

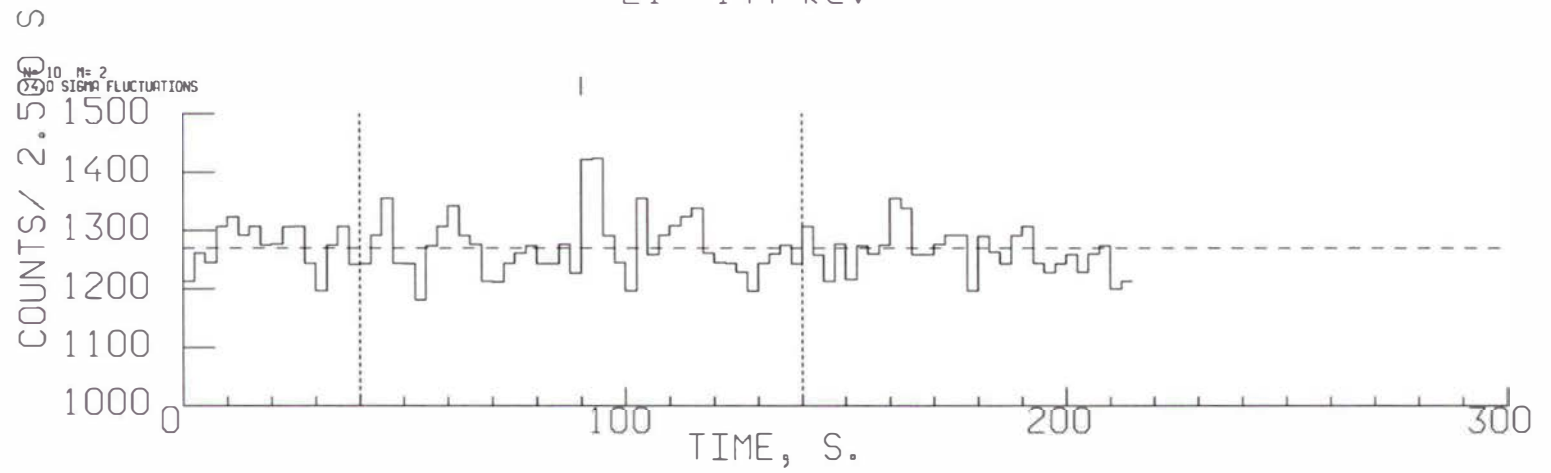
31040.639

8/ 9/11

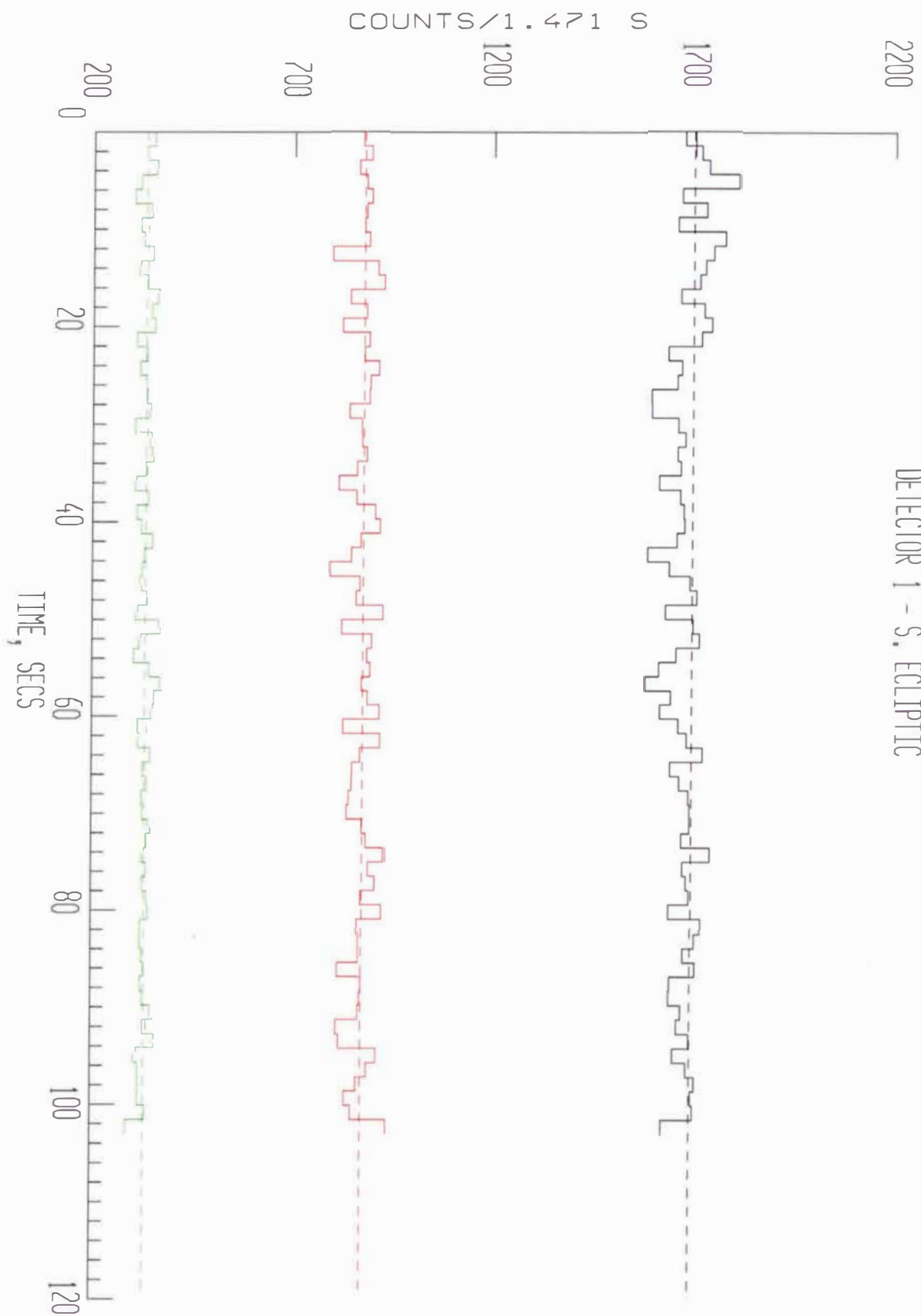


ULYSSES RT
26/12/95 31824.191 s
0.250 S INTERVALS REGROUPED BY 10
21- 144 keV

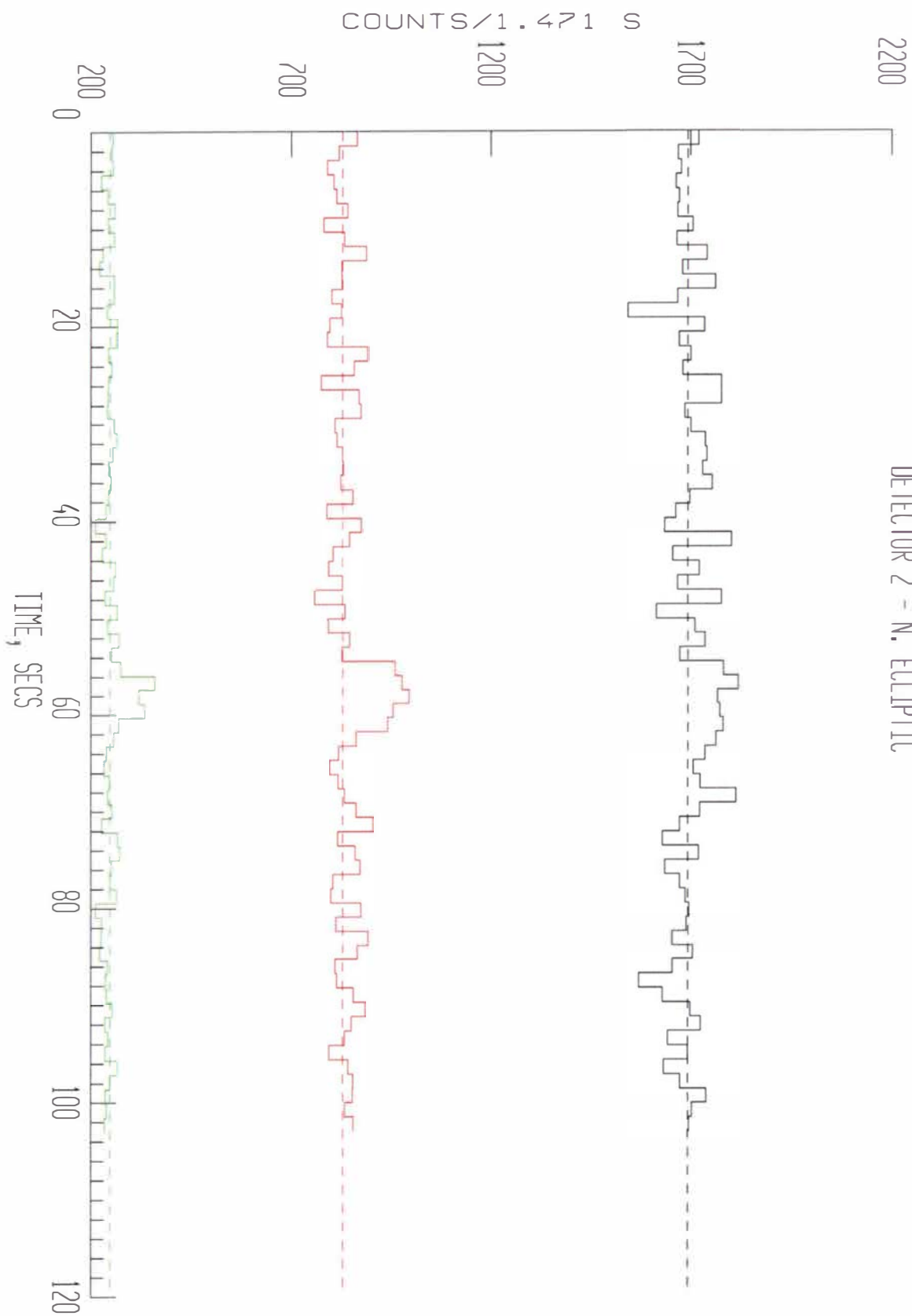
8/ 9/11



KONUS 26/12/95 31040.639
10- 50 keV 50- 200 keV 200- 750 keV



KONUS 26/12/95 31040.639
10- 50 keV 50- 200 keV 200- 750 keV



KONUS 19951226 31928

ULYSSES RT

07/09/11

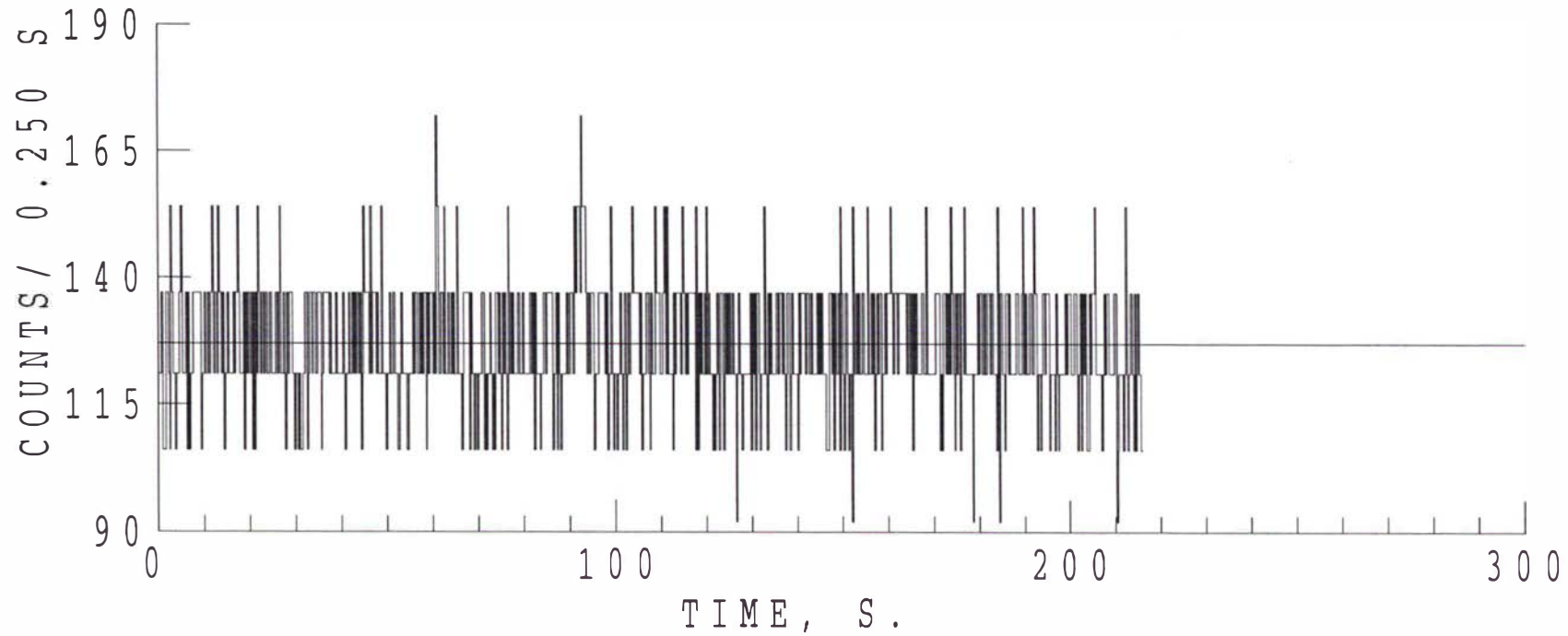
26/12/95 31824.191 s

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

I

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



KONUS

ULYSSES RT

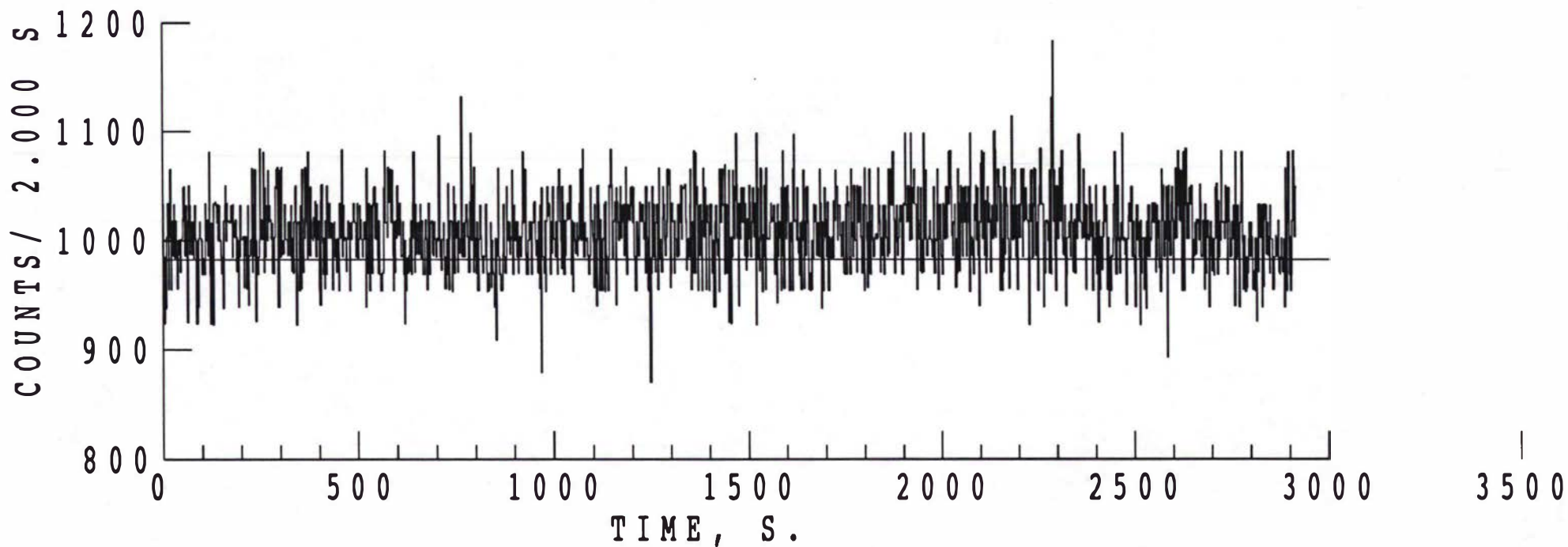
27 / 01 / 00

26 / 12 / 95 29628.156 s

0.250 S INTERVALS REGROUPED BY 8

0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From ulsdmt@jplsp.DNET.NASA.GOV Mon Mar 18 17:13 PST 1996
From: ulsdmt@jplsp.DNET.NASA.GOV
Date: Mon, 18 Mar 96 20:13:12 -0500
To: "khurley@sunspot.ssl.berkeley.edu"@east.DNET.NASA.GOV (SENT TO @LIST1)
Subject: Misplaced Major Frames in EDRs

Greetings,

We have identified an operations technique that produces data that will be improperly time tagged by the MGDS (telemetry system). Instances of EDR errors (major frames out of order) have been found in the CDROM archival products for December 1995 and January 1996. Errors will also be found in the still to be shipped February 1996 data.

When major frames are recorded but not transmitted during the next track, but are eventually downlinked with data from a succeeding day, the embedded SCLKs are 'assumed' to be incorrect by the frame syncer and are re-tagged with SCETs and SCLKs matching the adjacent (but newer) data.

For each major frame processed in this manner, a gap will exist, representing the time the data was actually acquired, and a major frame or realtime data, representing the time period the data now errently represents, will be replaced by the misplaced playback data.

Yes. Confusing. See the attached memo detailing the times involved.

Approximately 17 such instances are known to have occured. The total time involved is about twenty minutes. Because the data loss is small and the cost of reprocessing would be so large, the Project has determined that it would be imprudent to reprocess.

For your information, however, we included a memo from Nigel Angold which itemizes each instance.

We thank Toni Galvin and Nigel for identifying the problem and assisting in the diagnosis.

Regards,

Joe

To: <ulsdmt@jplsp.jpl.nasa.gov>
From: Nigel Angold <nangold@jplsp2.jpl.nasa.gov>
Subject: Mis-corrected S/C clocks / SCETs
Cc: chris.leech@jpl.nasa.gov

I have looked at our recent tape recorder usage and predict that you will see major frames with mis-corrected spacecraft clocks / SCETs at the following times (give or take a few minutes):

1995:

~342.22:59 SCET	should be	~341.17:47 SCET
~347.22:39 SCET	should be	~346.16:46 SCET
~350.21:54 SCET	should be	~349.16:22 SCET
~355.22:14 SCET	should be	~354.15:42 SCET
~359.14:04 SCET	should be	~359.05:36 SCET
~360.14:59 SCET	should be	~359.00:20 SCET
~362.20:55 SCET	should be	~361.16:06 SCET

1996:

~001.02:45 SCET	should be	~364.23:12 SCET
~002.14:35 SCET	should be	~001.04:22 SCET
~029.19:35 SCET	should be	~028.13:43 SCET
~033.19:10 SCET	should be	~032.13:18 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~048.17:29 SCET	should be	~047.13:45 SCET
~054.08:59 SCET	should be	~053.11:46 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~039.18:34 SCET	should be	~038.12:14 SCET

We see data gaps for each of the correct times, so it looks like your theory of AMMOS mis-correcting times when there is carry-over data on the tape is correct.

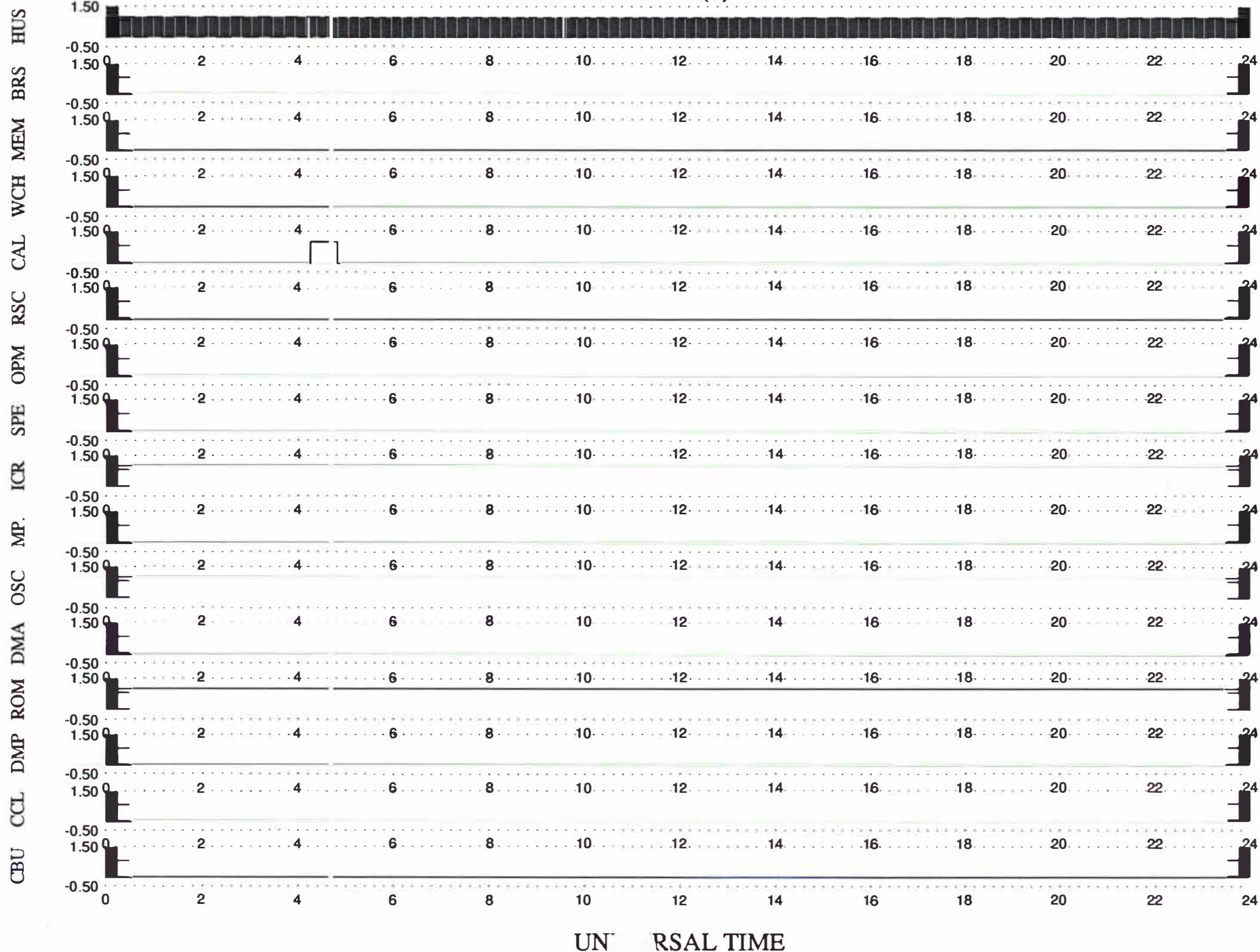
I hope this is enough information. I would have to do a bit more calculation to get the approximate ERTs. Let me know if you want them.

Best regards,

Nigel

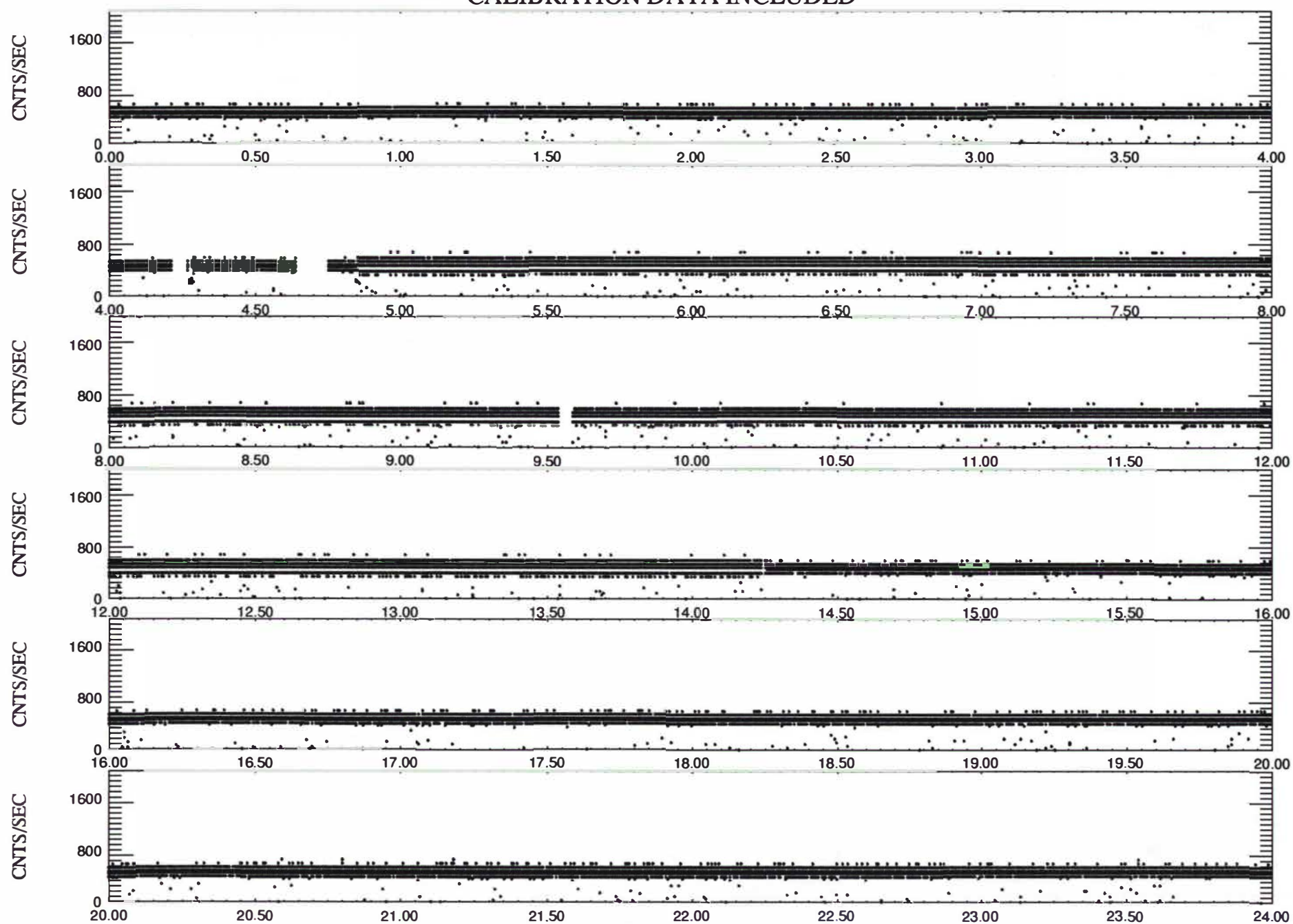
HUS MODES EDR day 360, year 1995 to day 360, year 1995 NO BURST (3)

4/1/96

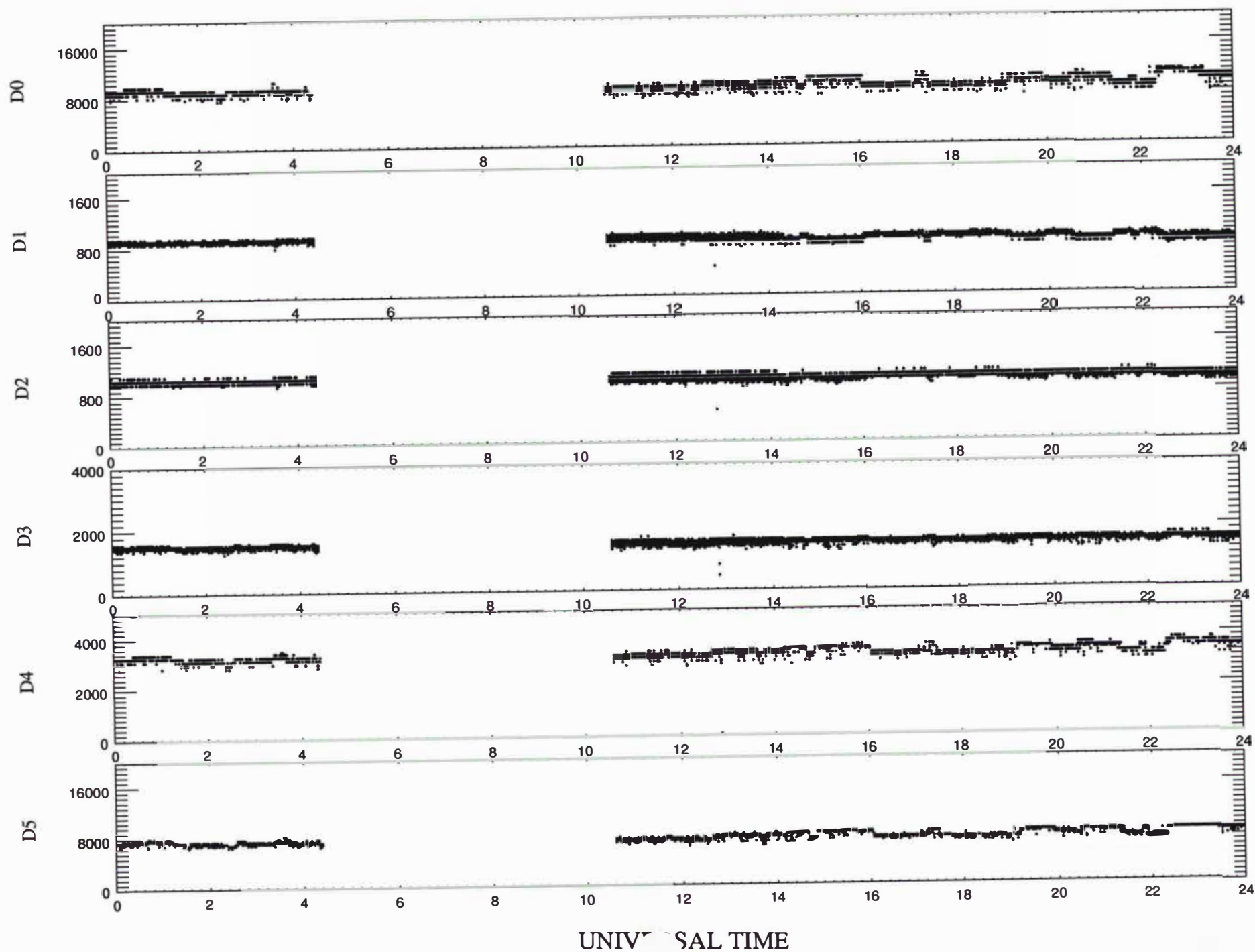


HUS 2A, MODE 1, NOT AVERAGED EDR day 360, year 1995 to day 360, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNIVERSAL TIME



From ulsdmt@jplsp.DNET.NASA.GOV Mon Mar 18 17:13 PST 1996
From: ulsdmt@jplsp.DNET.NASA.GOV
Date: Mon, 18 Mar 96 20:13:12 -0500
To: "khurley@sunspot.ssl.berkeley.edu"@east.DNET.NASA.GOV (SENT TO @LIST1)
Subject: Misplaced Major Frames in EDRs

Greetings,

We have identified an operations technique that produces data that will be improperly time tagged by the MGDS (telemetry system). Instances of EDR errors (major frames out of order) have been found in the CDROM archival products for December 1995 and January 1996. Errors will also be found in the still to be shipped February 1996 data.

When major frames are recorded but not transmitted during the next track, but are eventually downlinked with data from a succeeding day, the embedded SCLKs are 'assumed' to be incorrect by the frame syncer and are re-tagged with SCETs and SCLKs matching the adjacent (but newer) data.

For each major frame processed in this manner, a gap will exist, representing the time the data was actually acquired, and a major frame or realtime data, representing the time period the data now errently represents, will be replaced by the misplaced playback data.

Yes. Confusing. See the attached memo detailing the times involved.

Approximately 17 such instances are known to have occured. The total time involved is about twenty minutes. Because the data loss is small and the cost of reprocessing would be so large, the Project has determined that it would be imprudent to reprocess.

For your information, however, we included a memo from Nigel Angold which itemizes each instance.

We thank Toni Galvin and Nigel for identifying the problem and assisting in the diagnosis.

Regards,

Joe

To: <ulsdmt@jplsp.jpl.nasa.gov>
From: Nigel Angold <nangold@jplsp2.jpl.nasa.gov>
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Cc: chris.leech@jpl.nasa.gov

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~360.14:59 SCET	should be	~359.00:20 SCET
~362.20:55 SCET	should be	~361.16:06 SCET

1996:

~001.02:45 SCET	should be	~364.23:12 SCET
~002.14:35 SCET	should be	~001.04:22 SCET
~029.19:35 SCET	should be	~028.13:43 SCET
~033.19:10 SCET	should be	~032.13:18 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~048.17:29 SCET	should be	~047.13:45 SCET
~054.08:59 SCET	should be	~053.11:46 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~039.18:34 SCET	should be	~038.12:14 SCET

We see data gaps for each of the correct times, so it looks like your theory of AMMOS mis-correcting times when there is carry-over data on the tape is correct.

I hope this is enough information. I would have to do a bit more calculation to get the approximate ERTs. Let me know if you want them.

Best regards,

Nigel

From BUTTERWORTH@LHEAVX.GSFC.NASA.GOV Wed Jan 3 09:22 PST 1996
From: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Date: Wed, 3 Jan 1996 12:07:07 -0500 (EST)
To: khurley@sunspot.ssl.berkeley.edu, kmarar@isac.ernet.in, jterrell@lanl.gov,
yosimori@rikkyo.ac.jp, CLINE@LHEAVX.GSFC.NASA.GOV,
scott@rosserv.gsfc.nasa.gov, TEEGARDEN@LHEAVX.GSFC.NASA.GOV
CC: BUTTERWORTH@LHEAVX.GSFC.NASA.GOV
Subject: Konus saw the December 27 06:20 UT event detected by Ulysses

Hi Everyone,

Konus triggered in the South-facing detector at 06:23:25. The event was hard (barely visible below 50 keV) and lasted about 3 seconds, with several separate pulses.

Paul.

Date: Wed, 3 Jan 1996 06:29:40 -0800
From: khurley@sunspot.ssl.berkeley.edu (Kevin Hurley)
Message-Id: <9601031429.AA01127@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@lheamail.gsfc.nasa.gov,
teegarden@lheavx.gsfc.nasa.gov, yosimori@rikkyo.ac.jp

ULYSSES GAMMA-RAY BURST NOT REPORTED BY BATSE:

Ulysses triggered on an moderately intense, 5s long event December 27 1995 around 06:20 UT at Ulysses. The spacecraft was about 1400 light-seconds from Earth.

Was this event detected by anyone else?

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

From TERRELL@nisd00.lanl.gov Mon Feb 5 14:18 PST 1996
From: TERRELL@nisd00.lanl.gov
Date: Mon, 5 Feb 1996 15:18:05 -0700 (MST)
To: khurley@sunspot.ssl.berkeley.edu
Subject: dmmp 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

Date: Sep 9 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

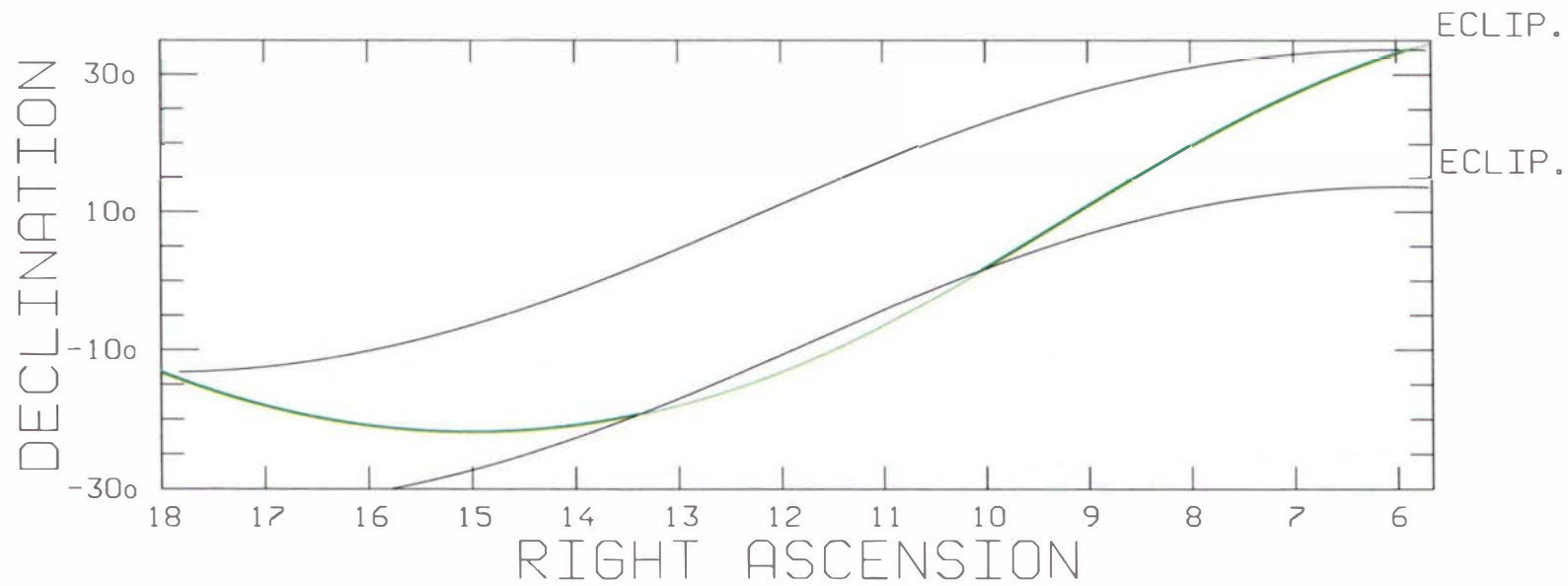
- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☒ Is the order of the data in CORREL such that a vernier is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

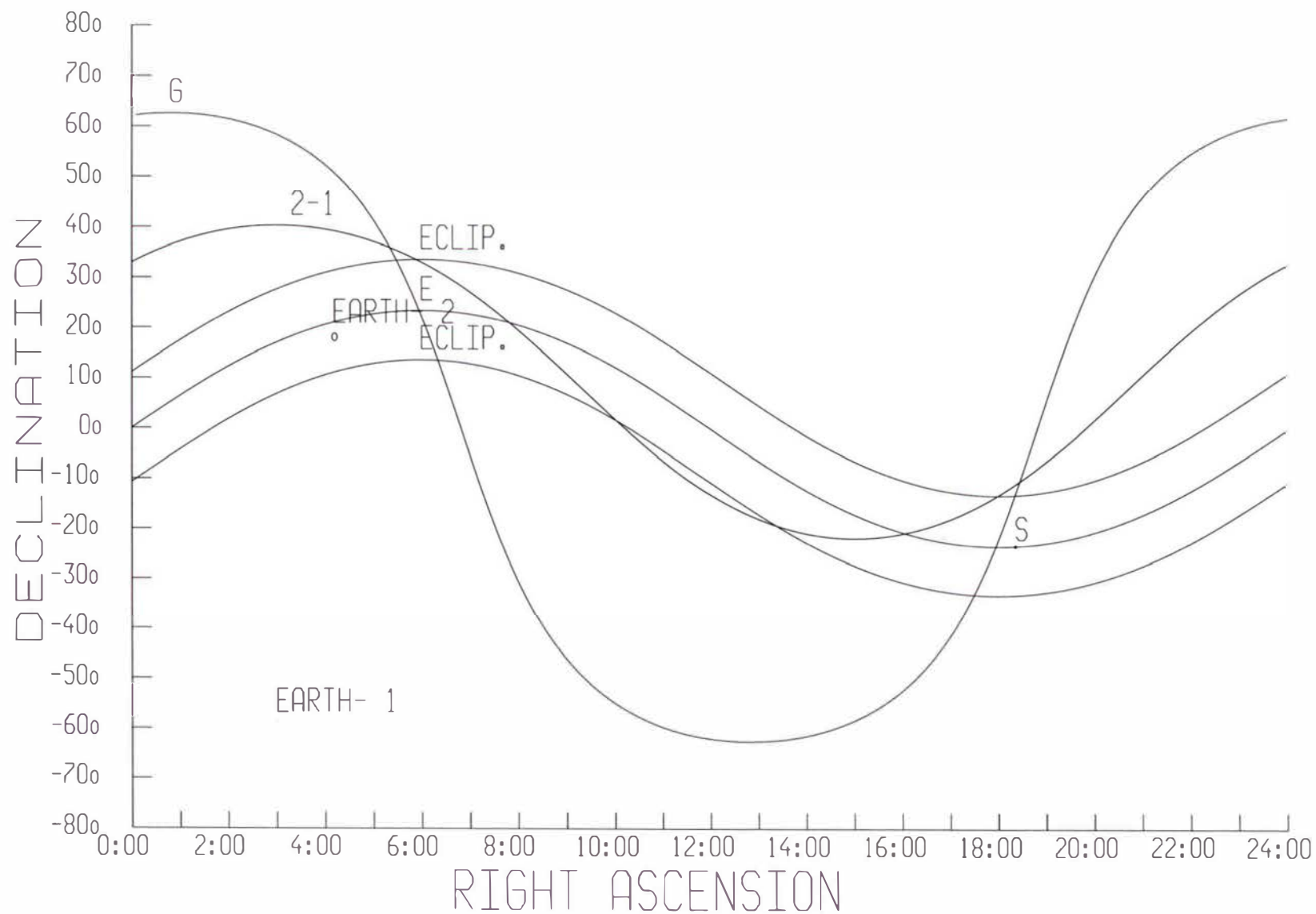
- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS and MBL databases updated with identical times?

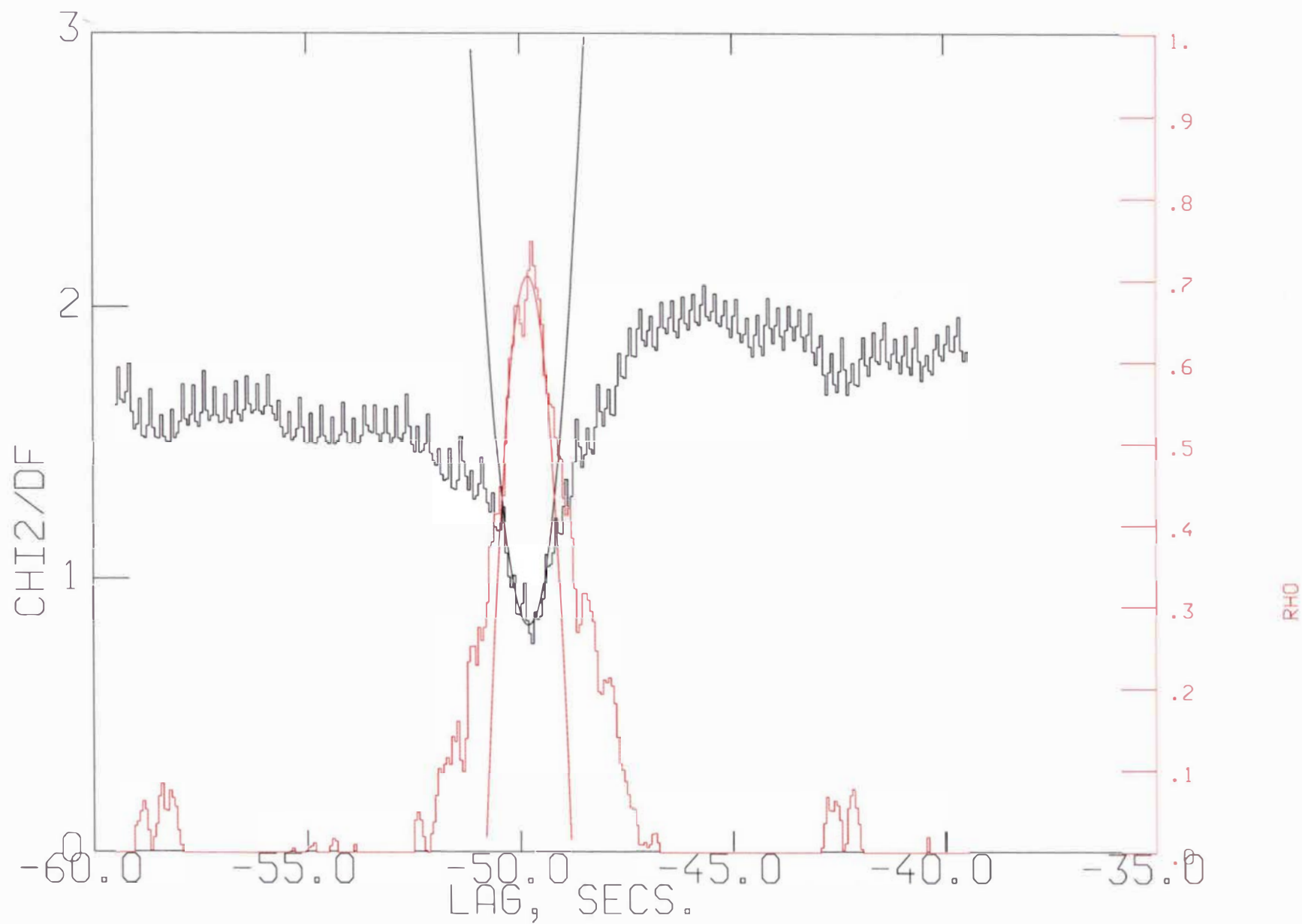


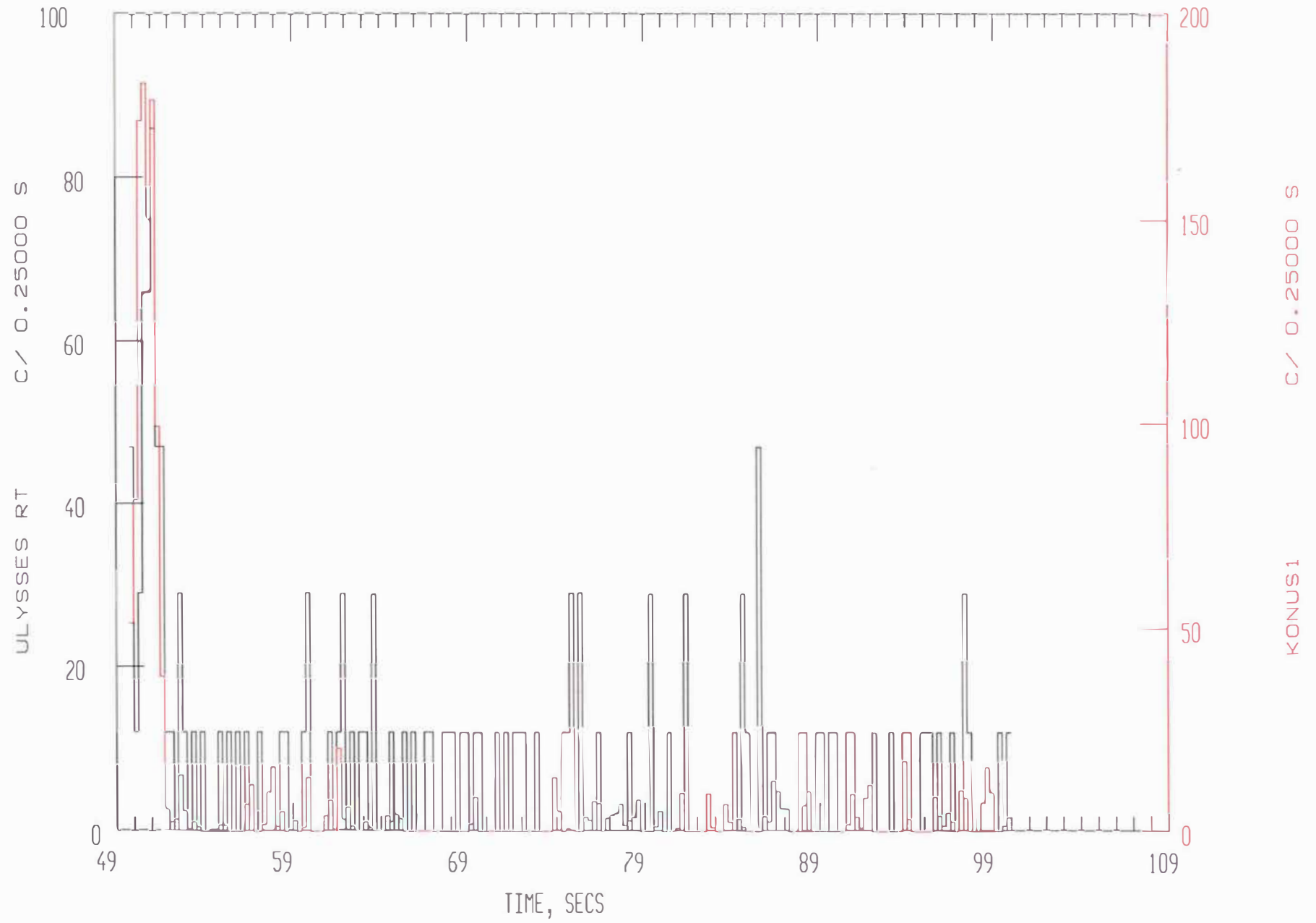
EVENT OF DEC 27, 1995 6:18

09/09/2011

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 19951227 22779

ULYSSES RT

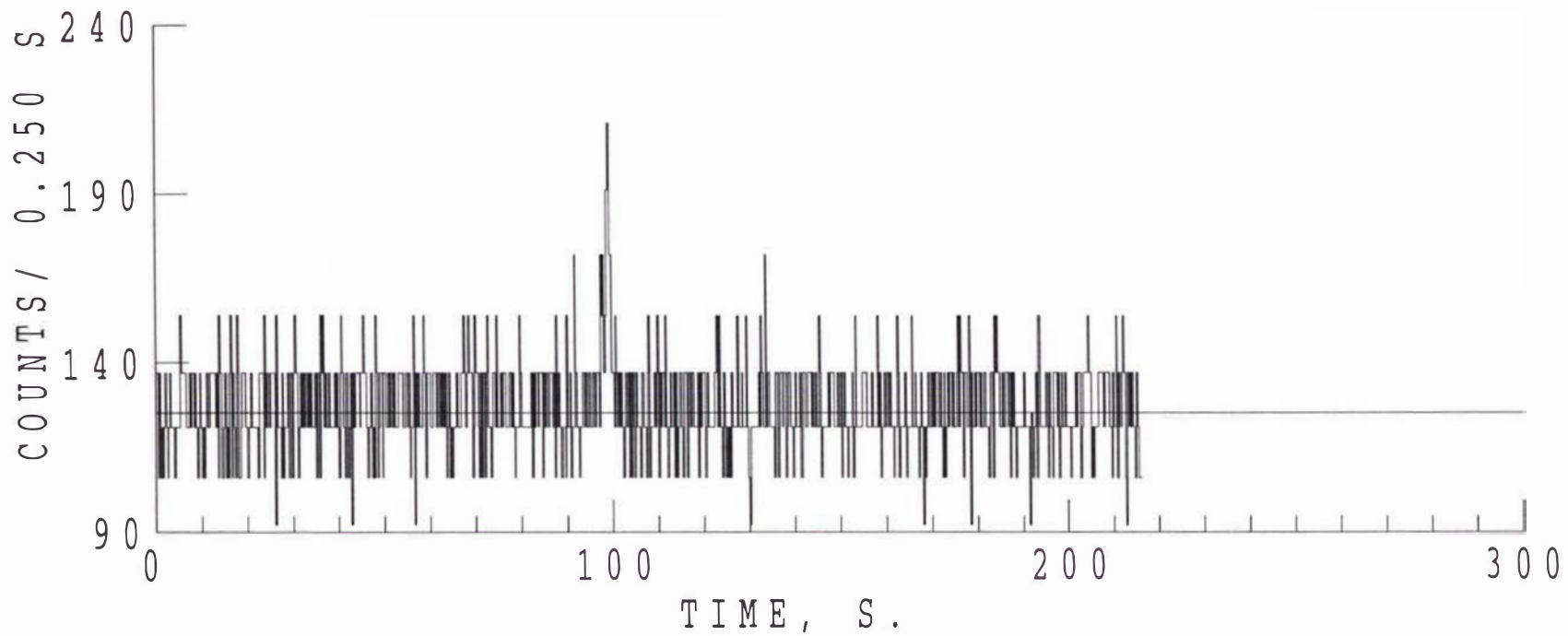
07/09/11

27/12/95 22680.111 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



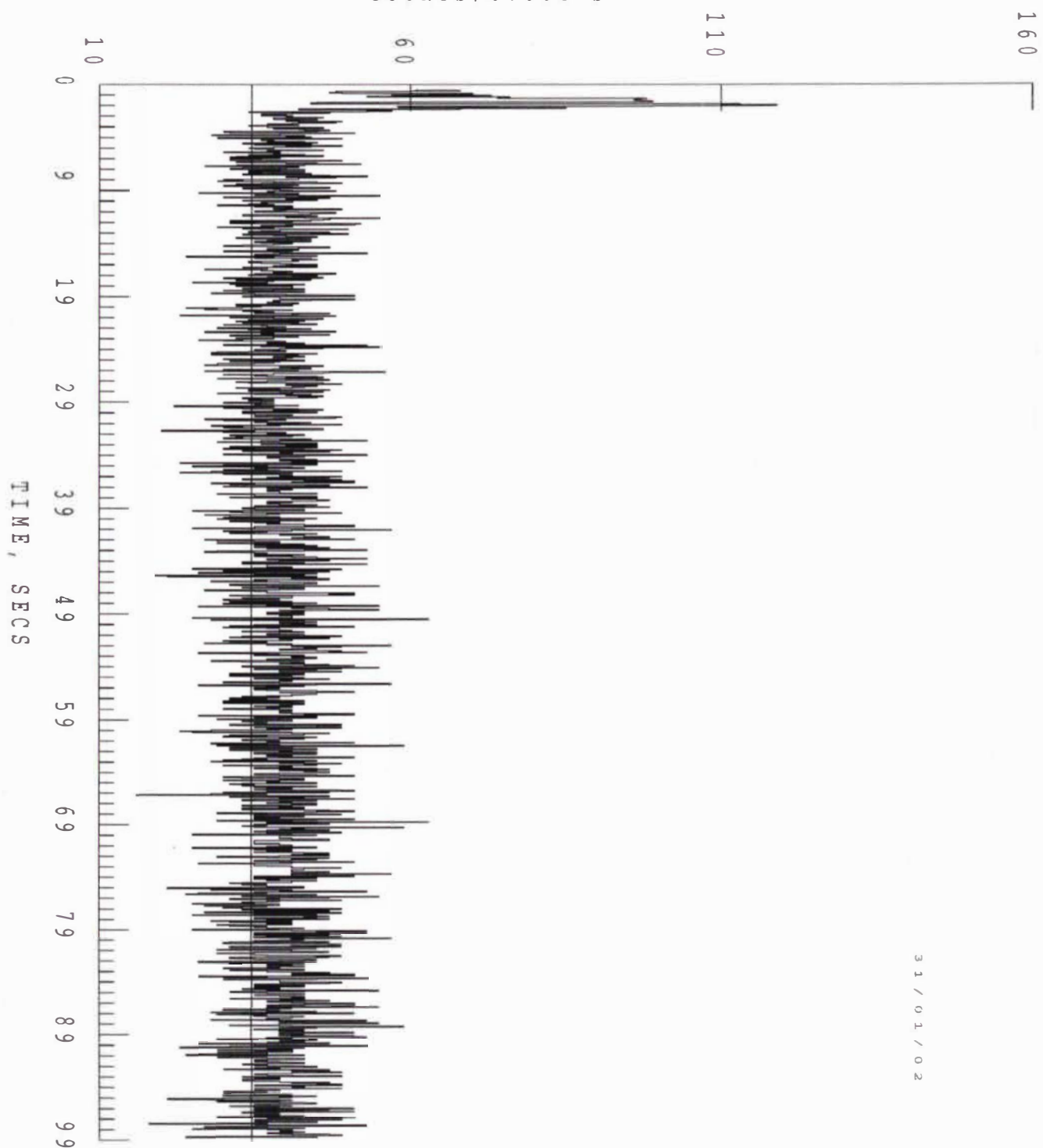
KONUS1

27/12/95

23005.042

50 - 200 keV

COUNTS/0.064 S

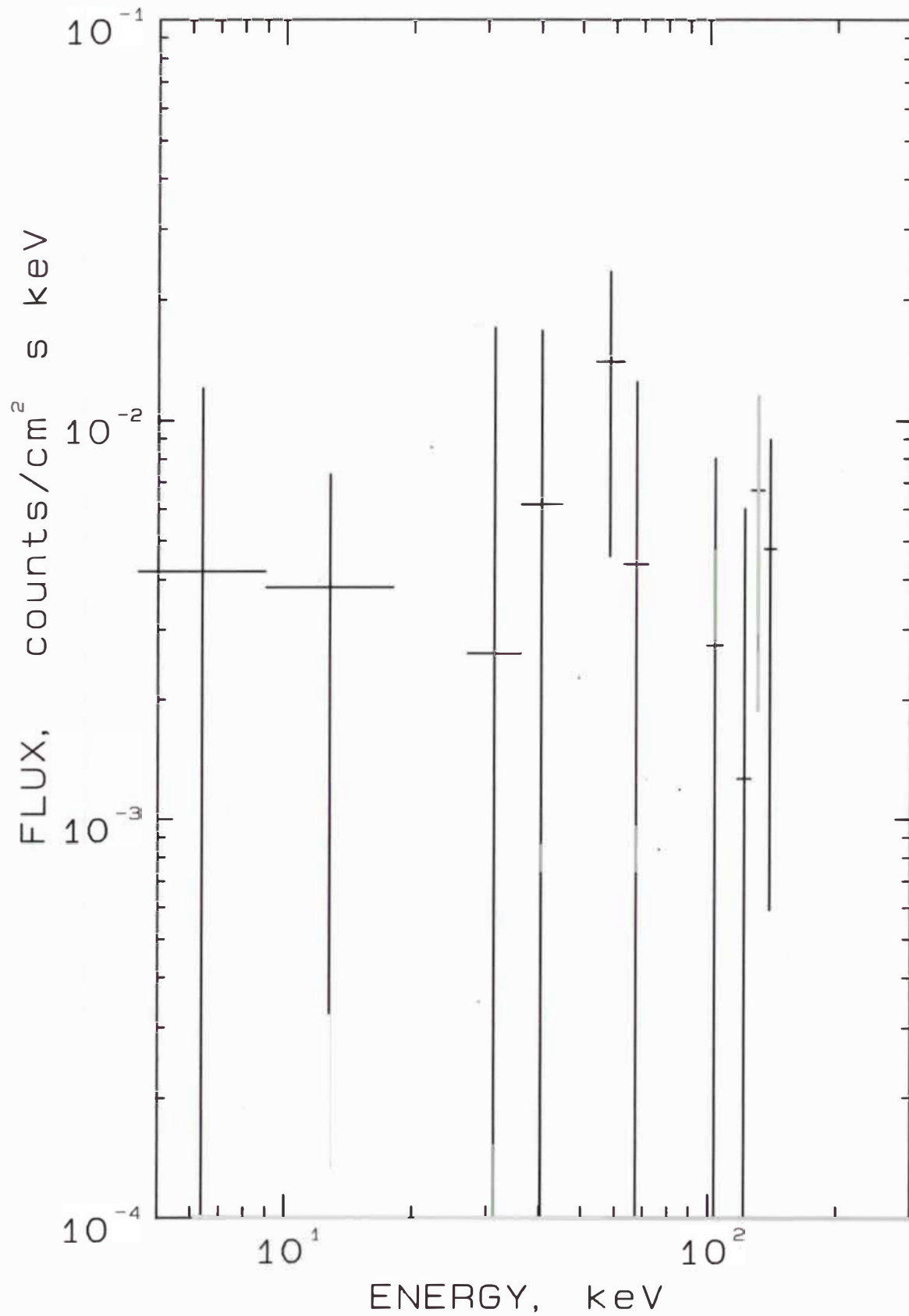


31/01/02

ULYSSES 27/12/95 22779.355

18/11/97

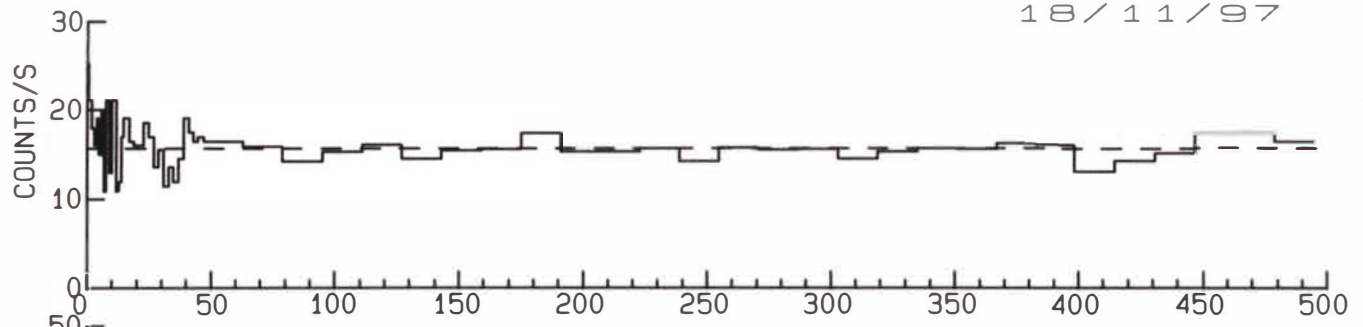
SPECTRUM INTEGRATED OVER 20.8 SECONDS, INTERVALS 2 TO 20



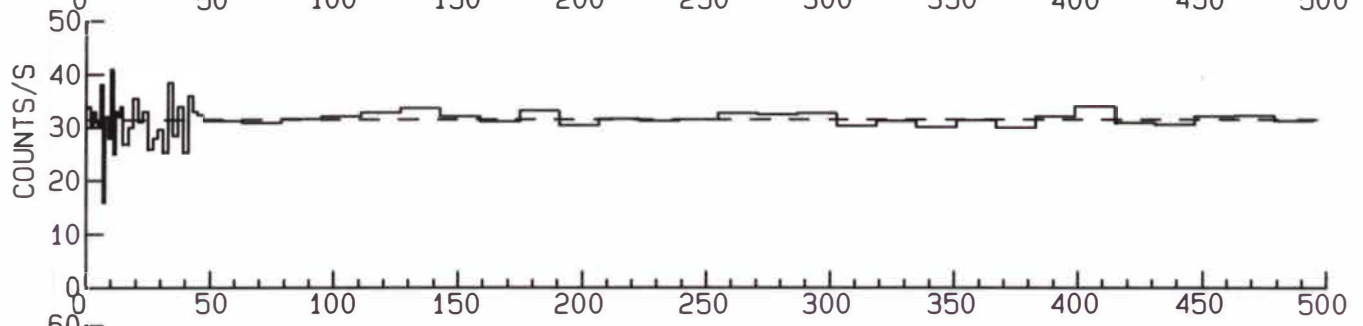
ULYSSES 27/12/95 22779.355 BURST SPECTRAL COUNT RATES

18/11/97

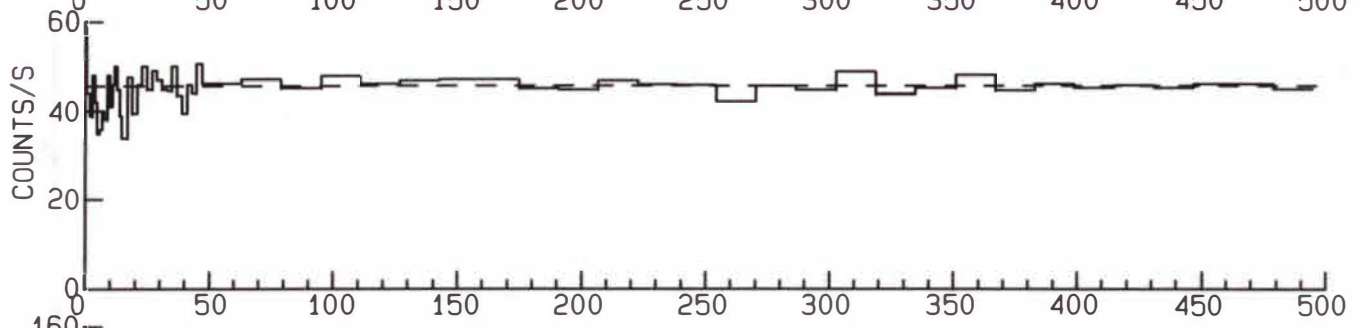
125-143 keV



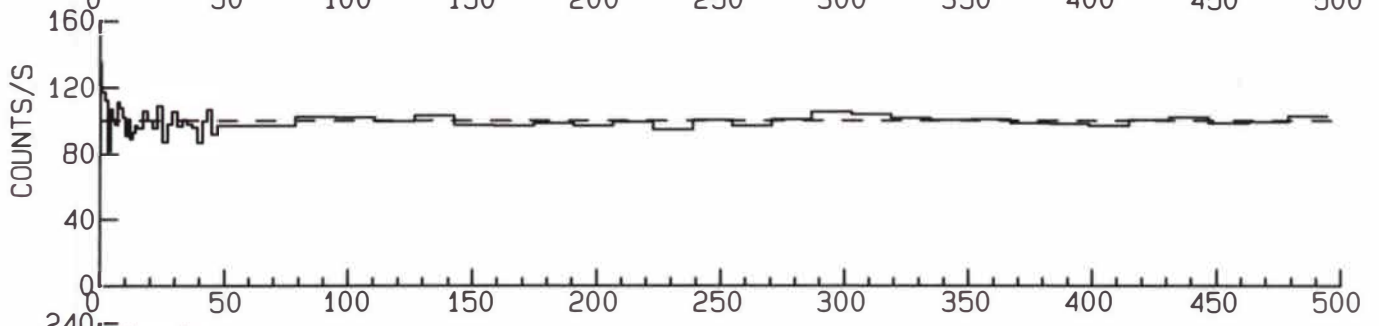
98-125 keV



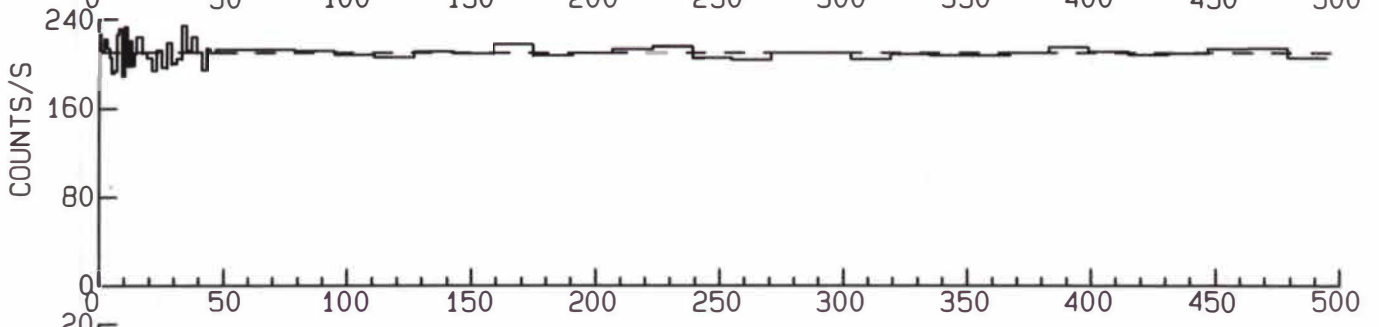
71-98 keV



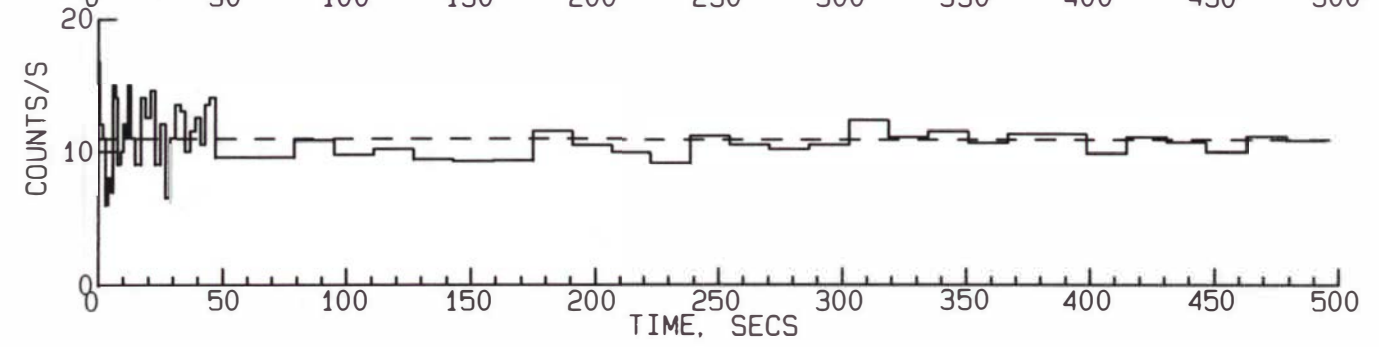
44-71 keV



17-44 keV



4-17 keV



TIME, SECS

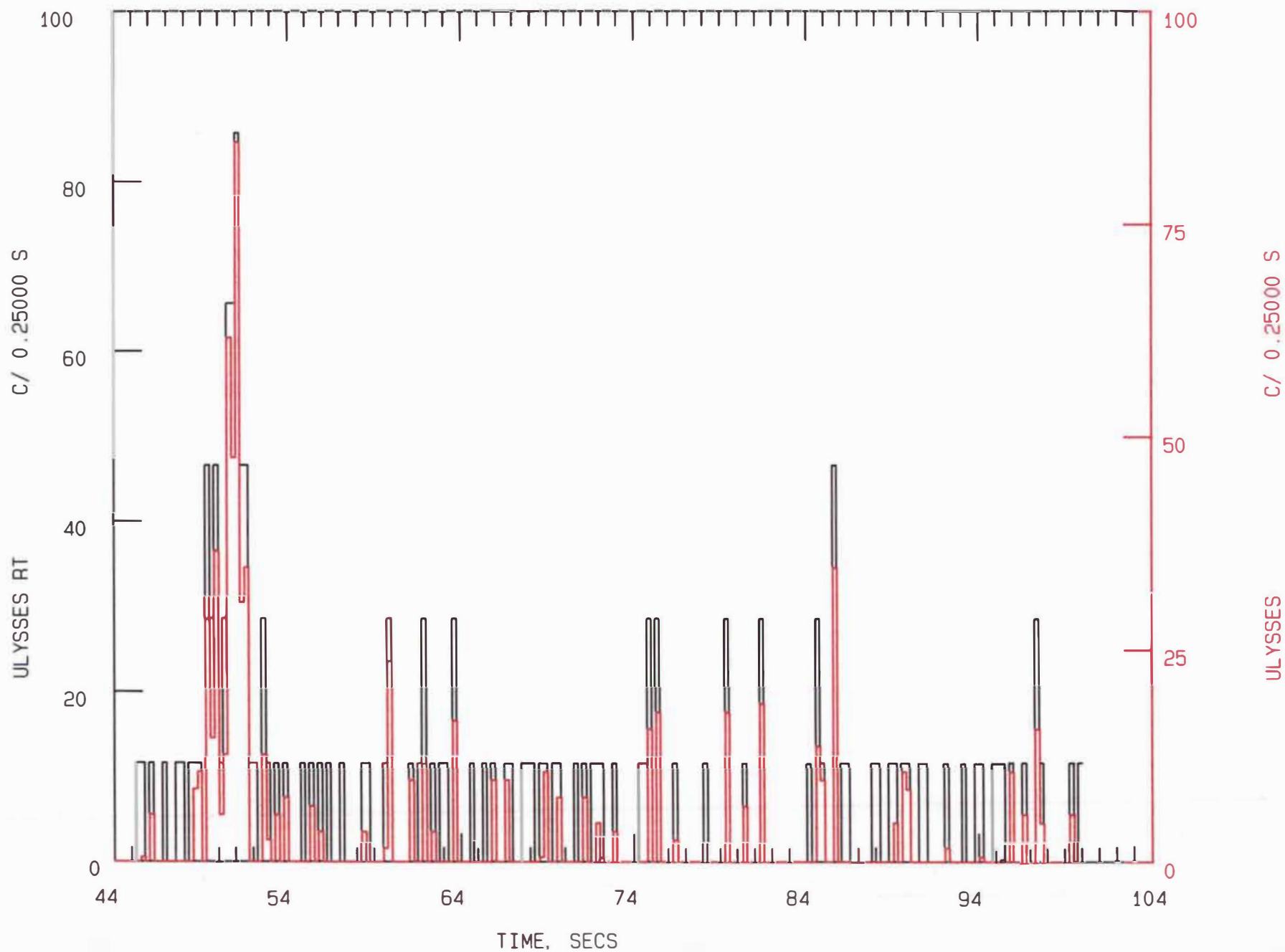
ULYSSES RT-ULYSSES

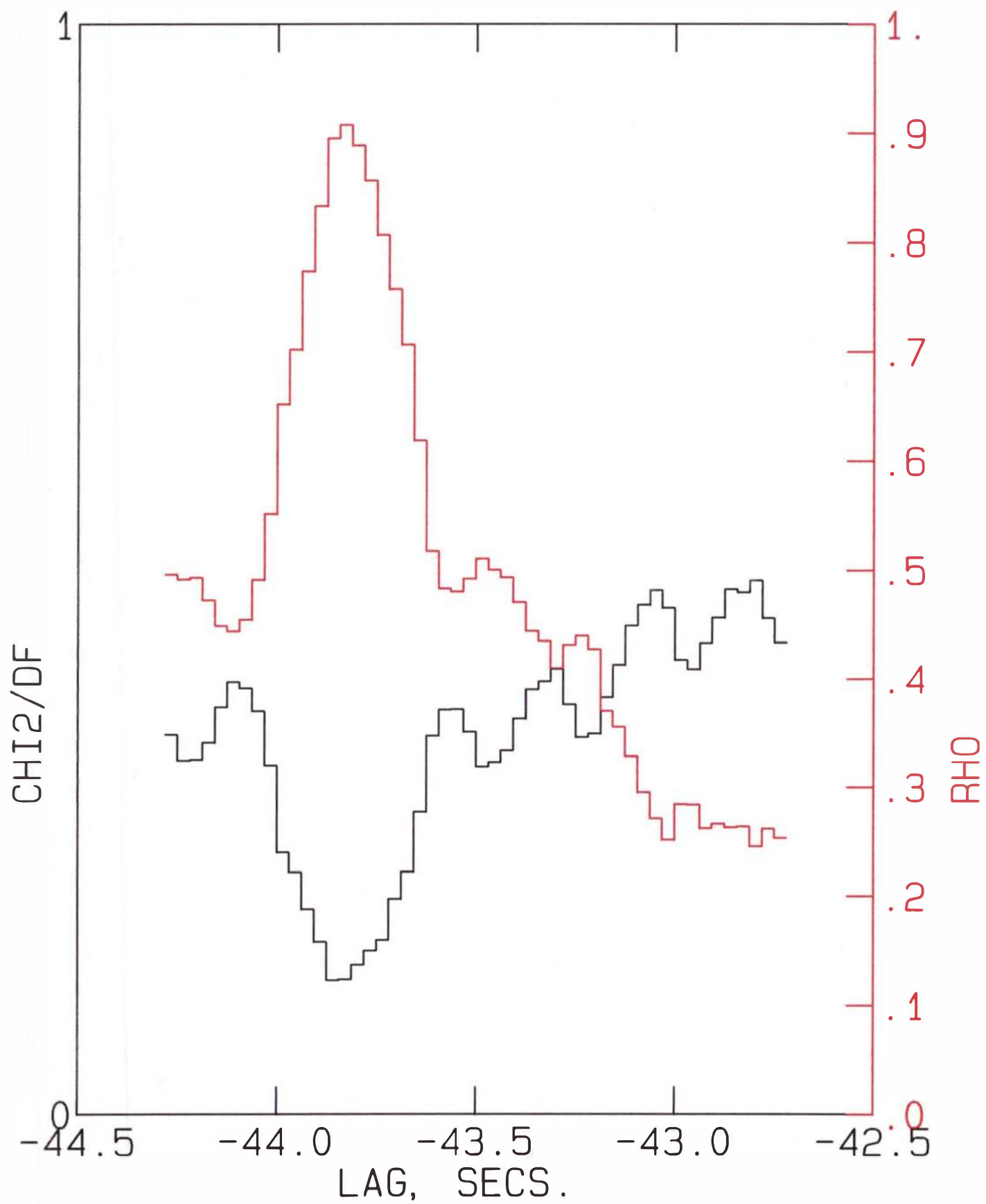
CORRELATION

27/12/95

22728.179

18/11/97





ULYSSES

27/12/95

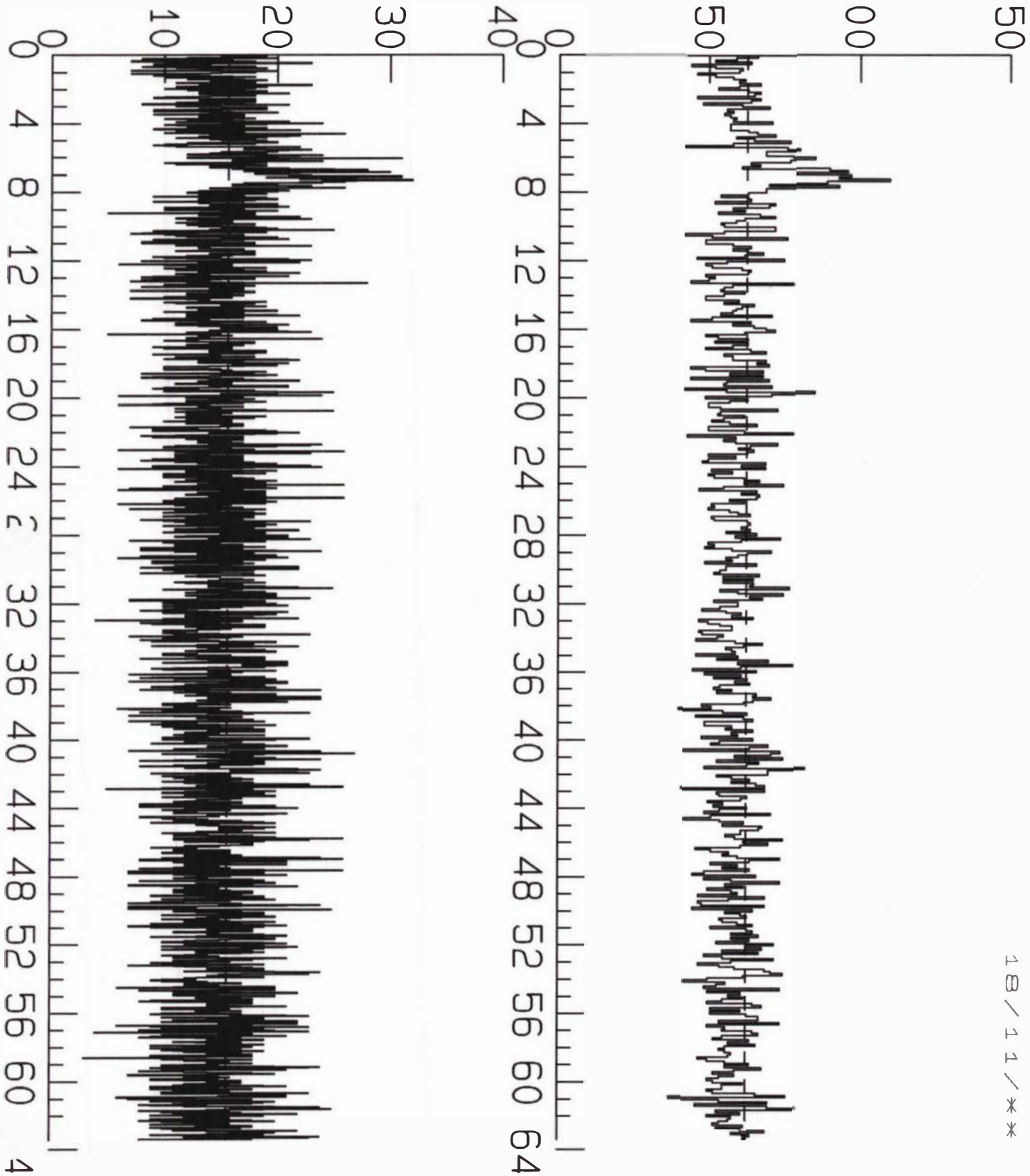
Ttrig=22779.426

0- 0 keV

COUNTS/0.031 S

COUNTS/0.125 S

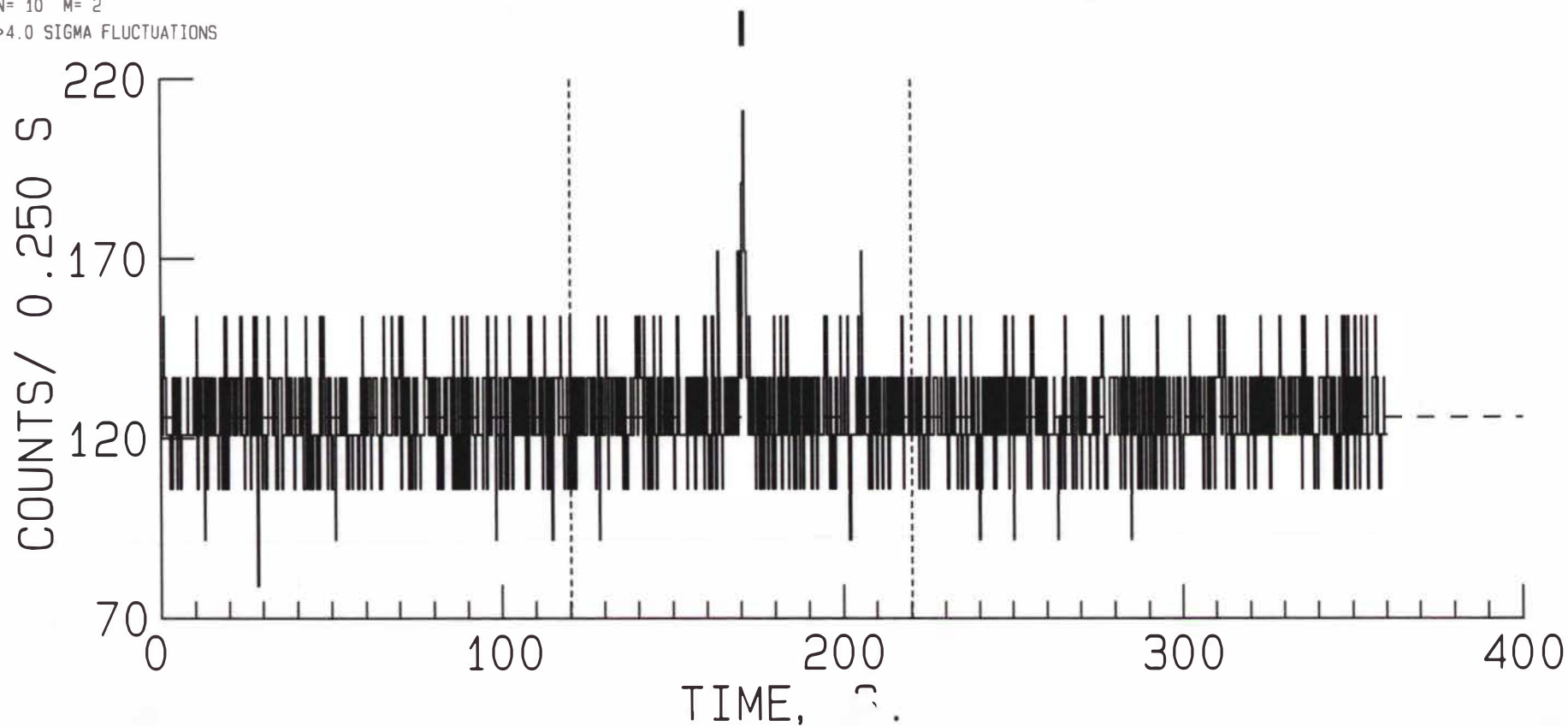
18/11/88



ULYSSES RT
27/12/95 22608.112 s
21- 144 keV

18 / 11 / 97

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



KONUS

ULYSSES RT

27 / 01 / 00

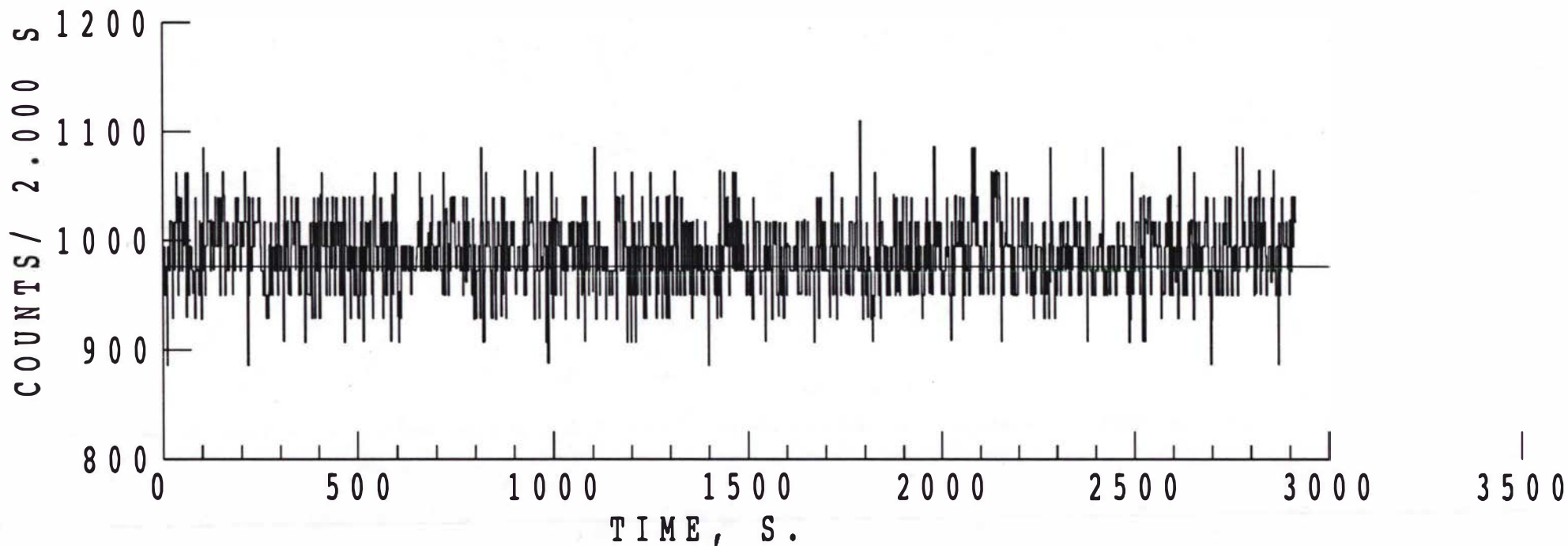
27 / 12 / 95 77688.445 s

0.500 S INTERVALS REGROUPED BY 4

0 - 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From HENZE@SSLLES.MSFC.NASA.GOV Fri Dec 29 13:54 PST 1995
Date: Fri, 29 Dec 1995 15:54:38 -0600 (CST)
From: HENZE@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 4146

BATSEARCH PROGRAM

RT

BATSE BURST # 4146
EVENT OF 1995 DEC 27 DAY OF YEAR=361
EVENT CROSSING TIME AT BATSE : 79200. S. OR 22:00:00.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 69.000 2.000
BATSE PEAK COUNTING RATE: 3200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 27/12/ 95 IS:
RA= 225.494 DEC= 58.670 DIST= 2.826 AU
BATSE-ULYSSES DISTANCE = 422810792. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 63.47 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 630.02 SECS.
CROSSING TIME AT ULYSSES IS 79830. S. OR 22:10:30 +/- 278.64 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 27/12/ 95 IS:
RA= 292.108 DEC= -22.955 DIST= 2.325 AU
MARS-BATSE DISTANCE = 347846784. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 46.73 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 795.32 SECS.
CROSSING TIME AT MARS IS 79995. S. OR 22:13:15 +/- 158.75 SECONDS

BATSE BURST TRIGGER

NO.: 4146

TIME: TJD=0078 SECONDS=79200

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=162.4 AZIMUTH=108.2 ERROR=001.9 DEGREES

COMMENTS:

SINGLE PULSE WITH MUCH SUBSTRUCTURE. TOTAL DUR. ~40 S.
NOT VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
4146	951227	10078	79200	3200	069	+02	40

EL = -19.8

EL of Korus event is

~~-34.2 to -16.2~~

~~-40.5 to -20.5~~

Korus time is 79160, duration 65s

Helio corr removed

Date: Feb 23 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ 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

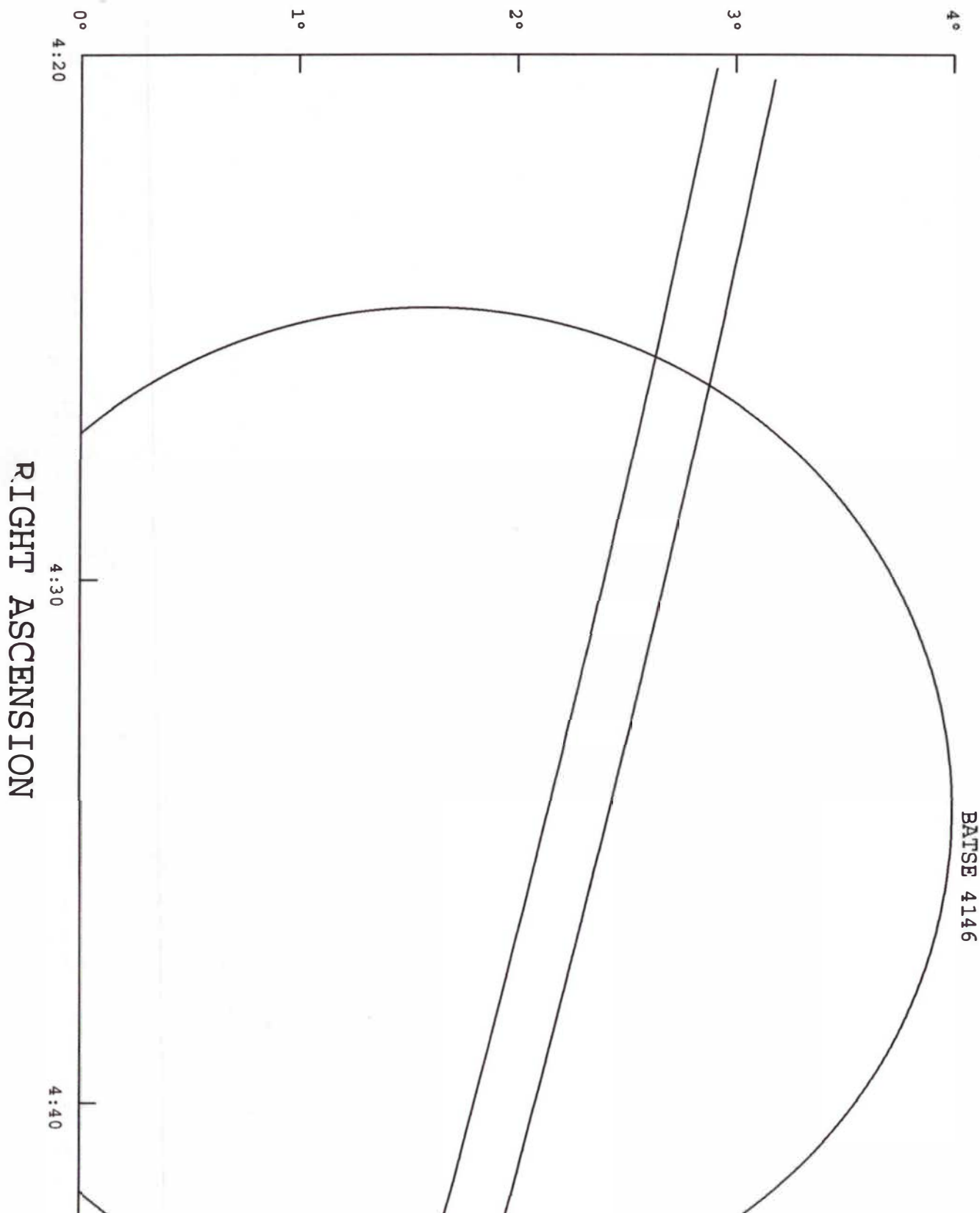
1 ULYSSES

2 BATSE

EL ~ -18°

KOMU EL is ~ -10 to +10

DECLINATION



EVENT OF DEC 27, 1995 22:09

23/ 2/98

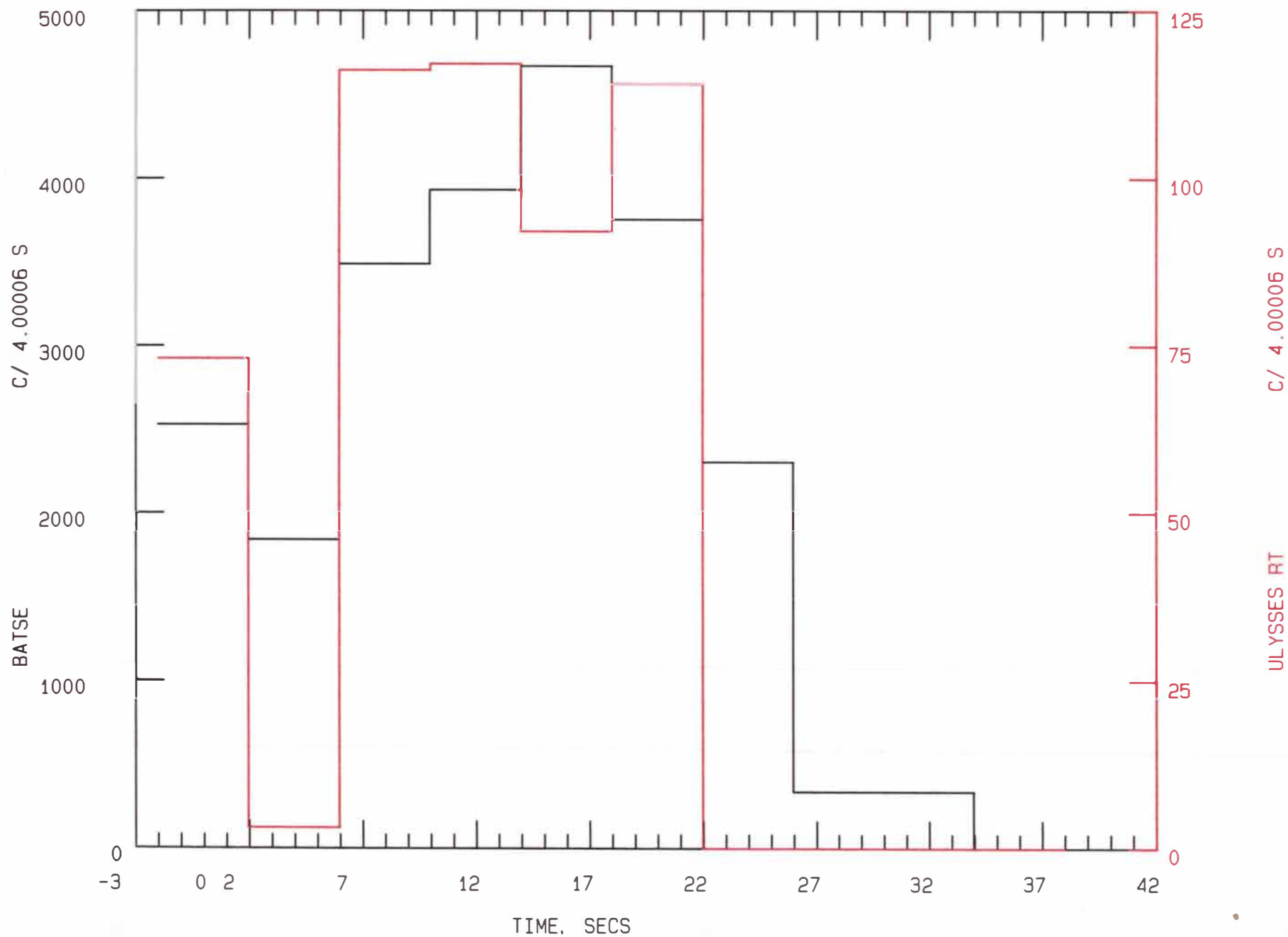
BATSE

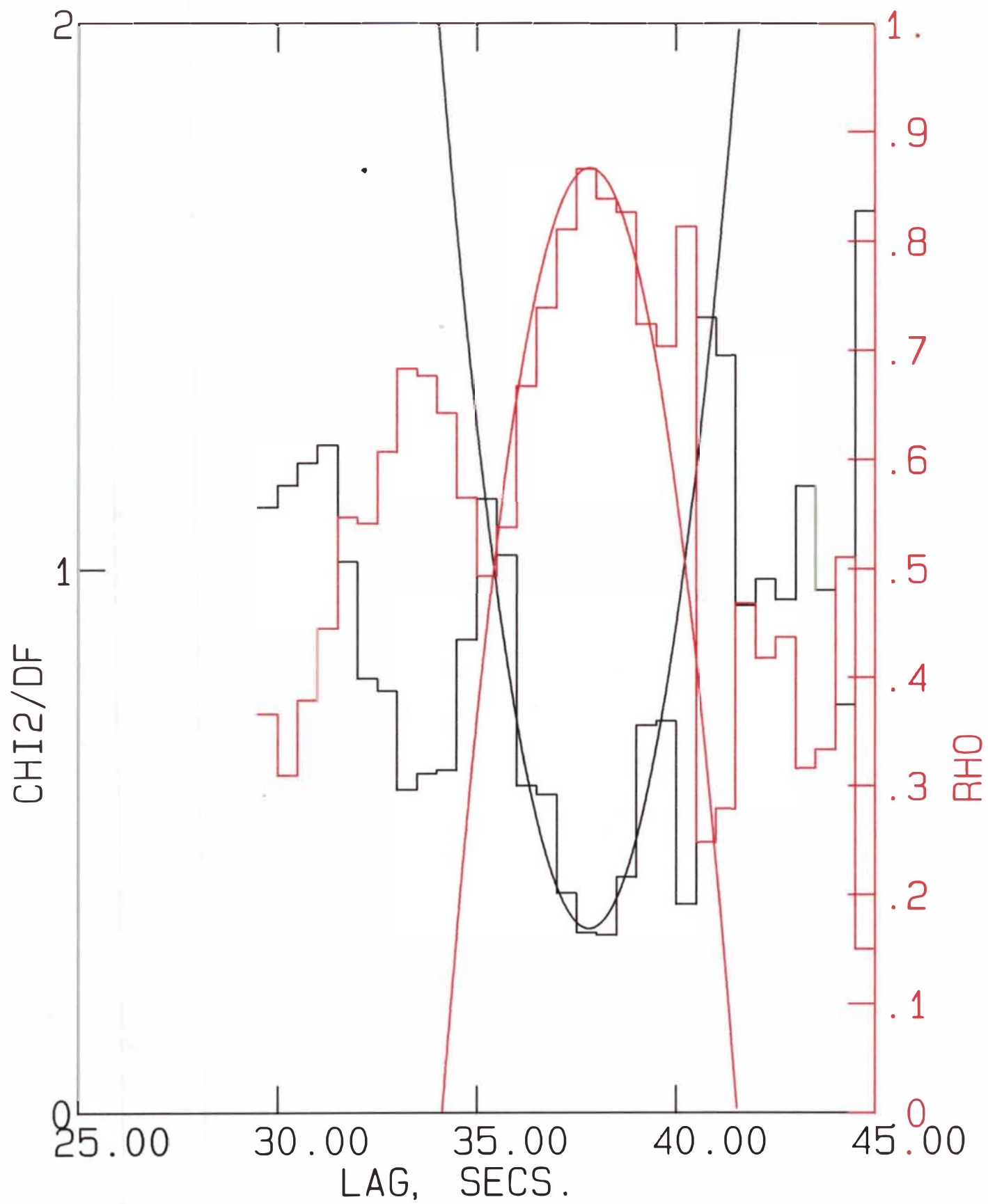
-ULYSSES RT CORRELATION

27/12/95

79200.946

23/ 2/98





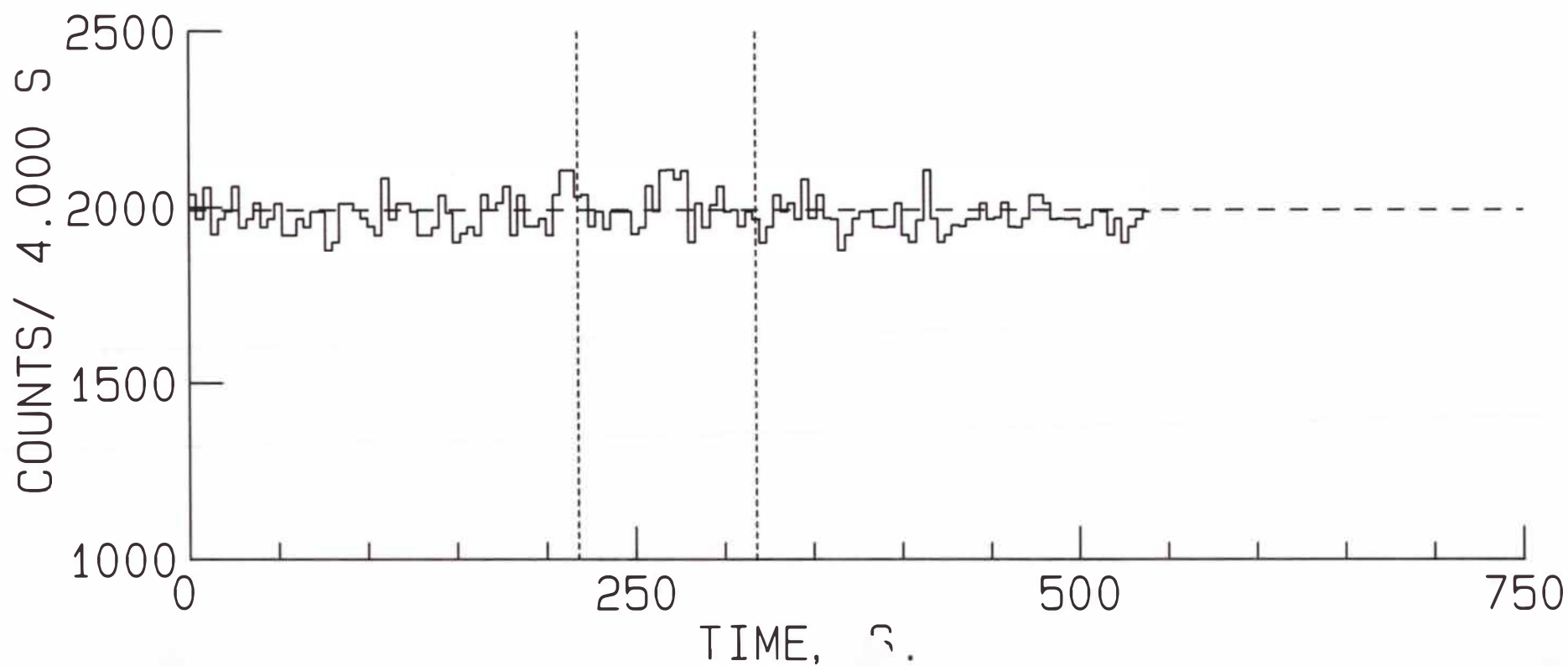
ULYSSES RT

23 / 2 / 98

27/12/95 79560.475 s

0.500 S INTERVALS REGROUPED BY 8

21- 144 keV



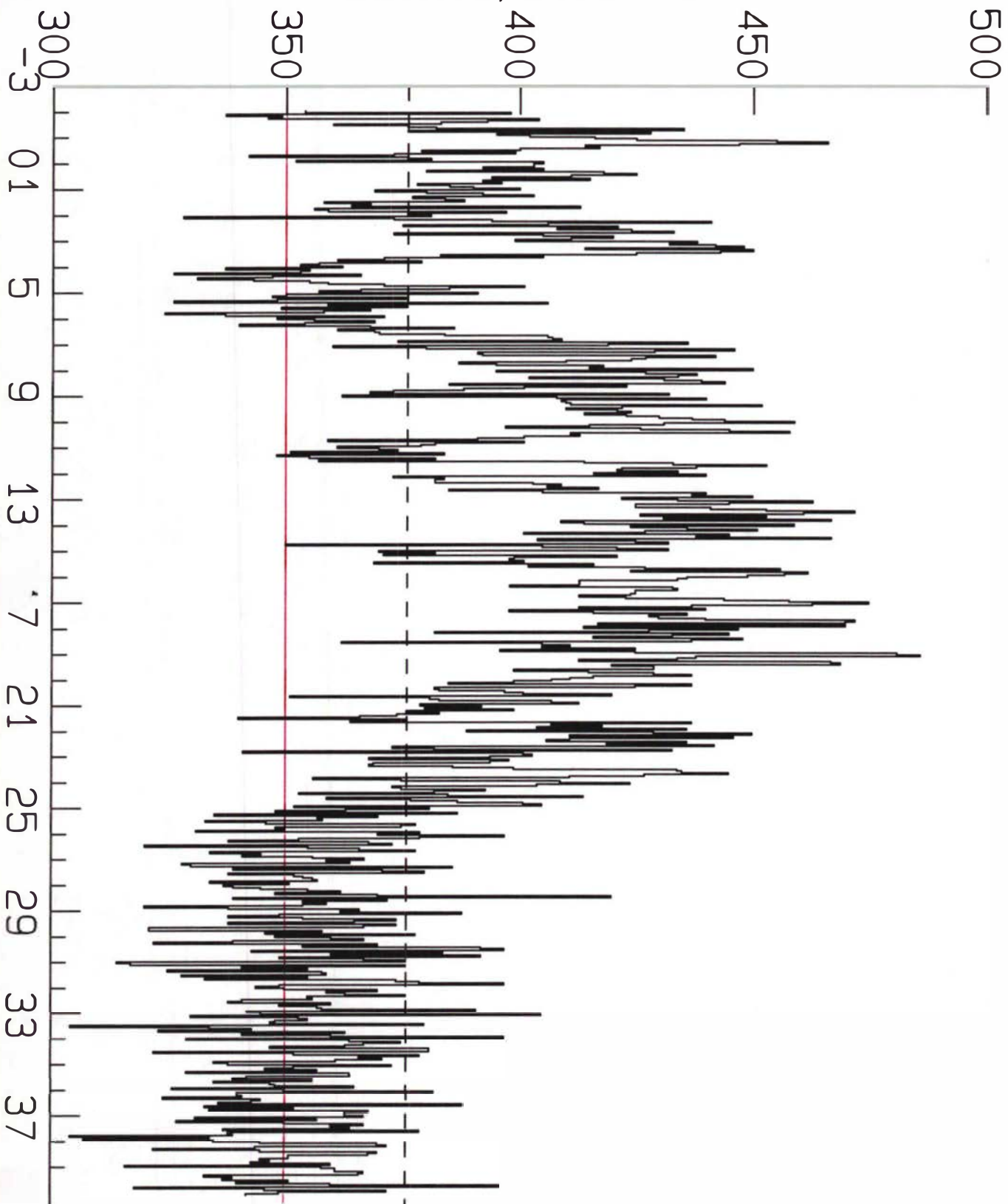
BATSE

27/12/95

79200.946

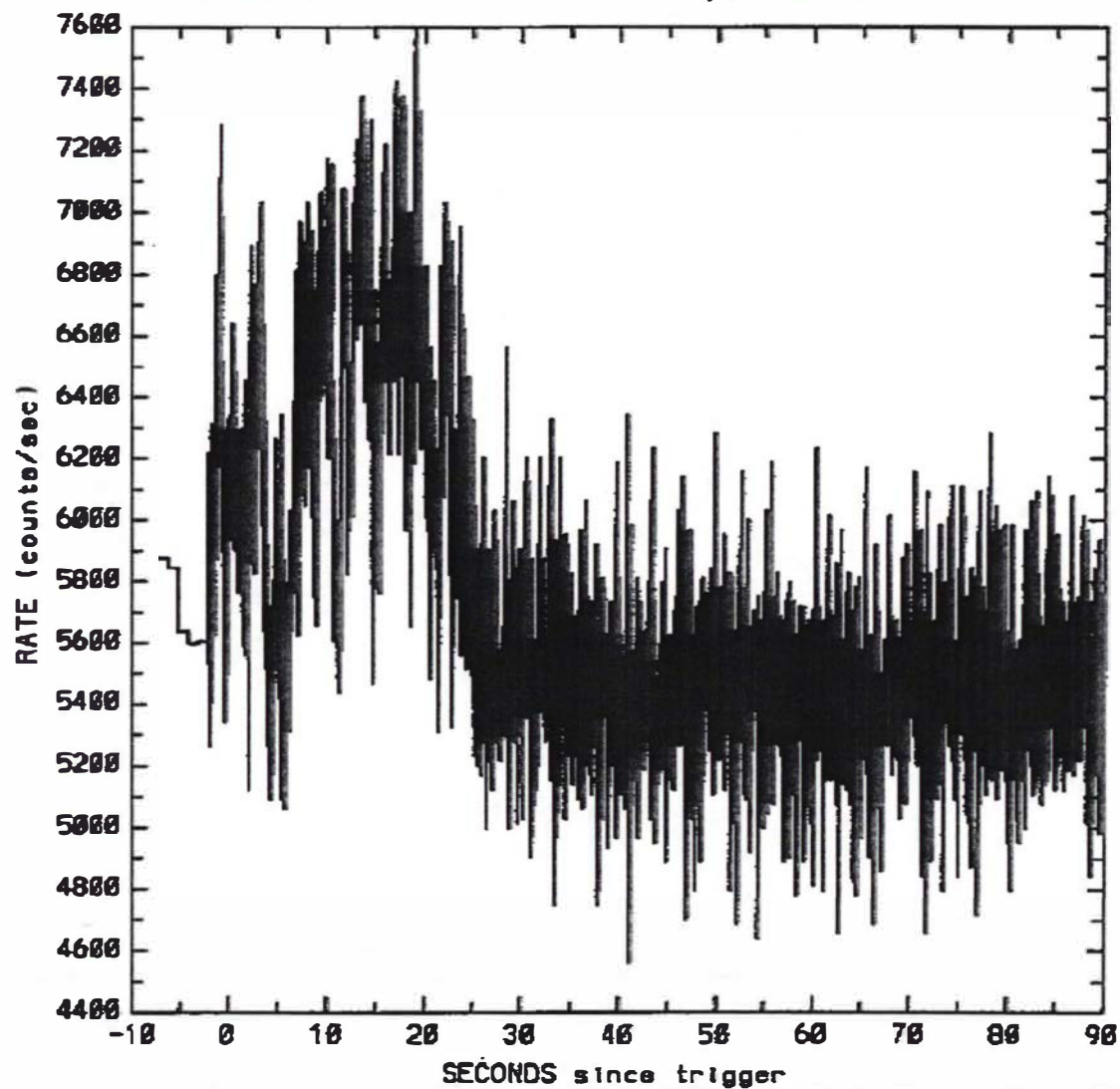
25- 100 keV

COUNTS/0.064 S



Dec 27 1995

DISCSC Data for K. Hurley, No. 4146



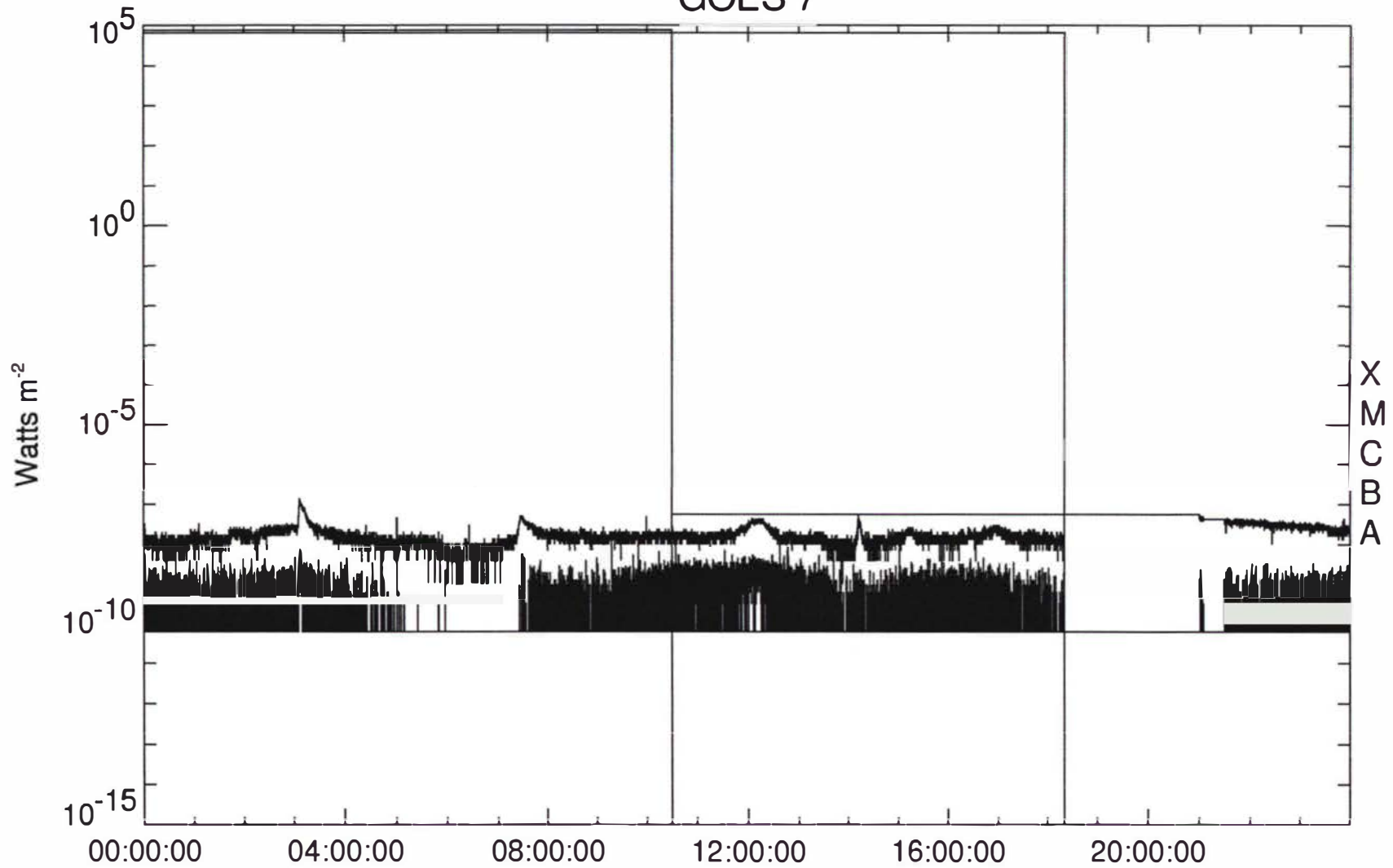
12-JAN-1996 18:52:58

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

Trigger = . 4146

Trigger Time:
18878 / 74288.946Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: PREB + DISCLAMinimum Integ. Time:
0.064 (seconds)Detectors [7..8].
--5--1-Discriminators:
[1 , 2]Quality Mask:
80[SP1

GOES 7



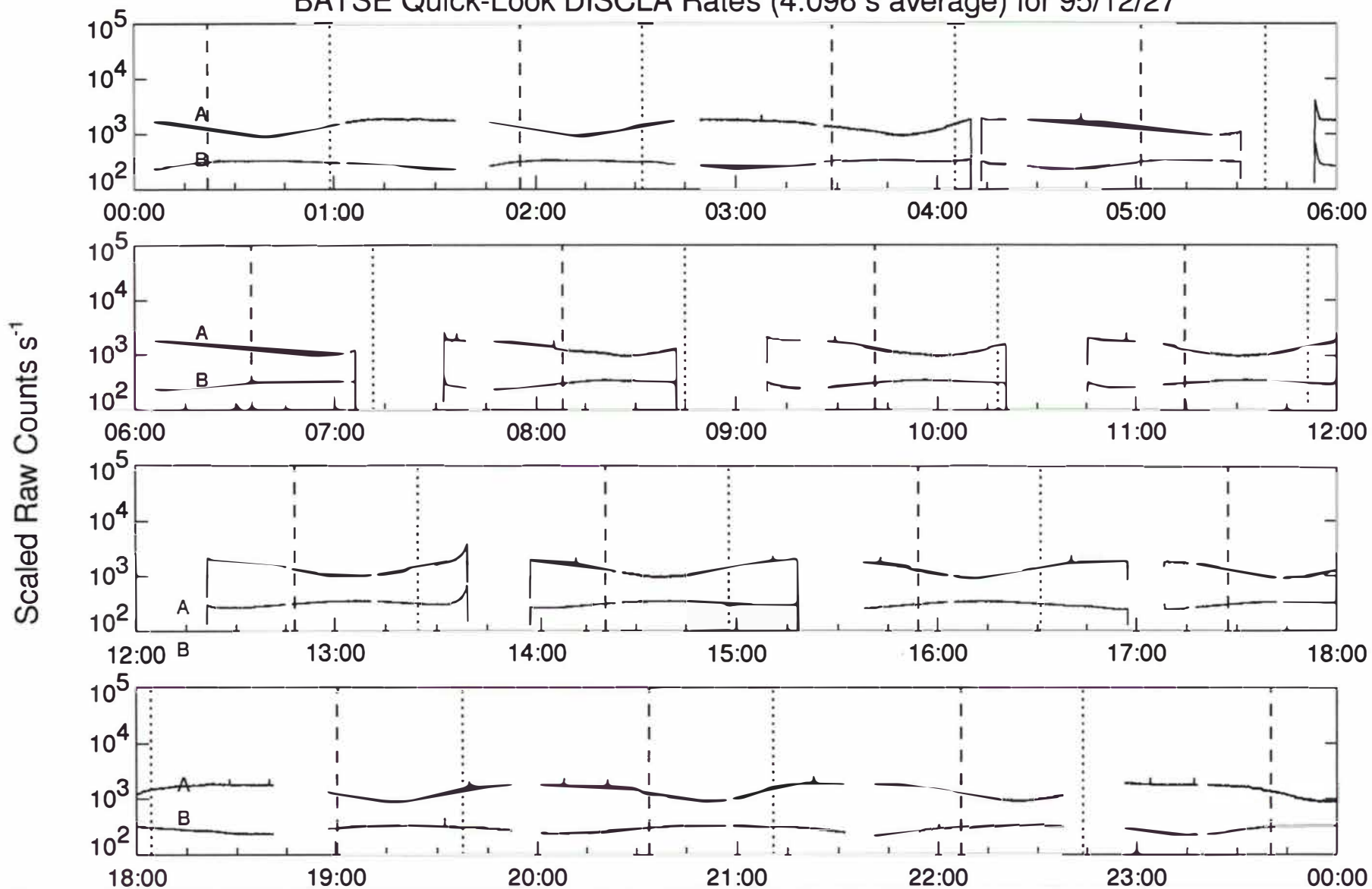
Data Start: 95/12/27, 0000:00

Plot created: 95/12/29, 0654

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 95/12/27



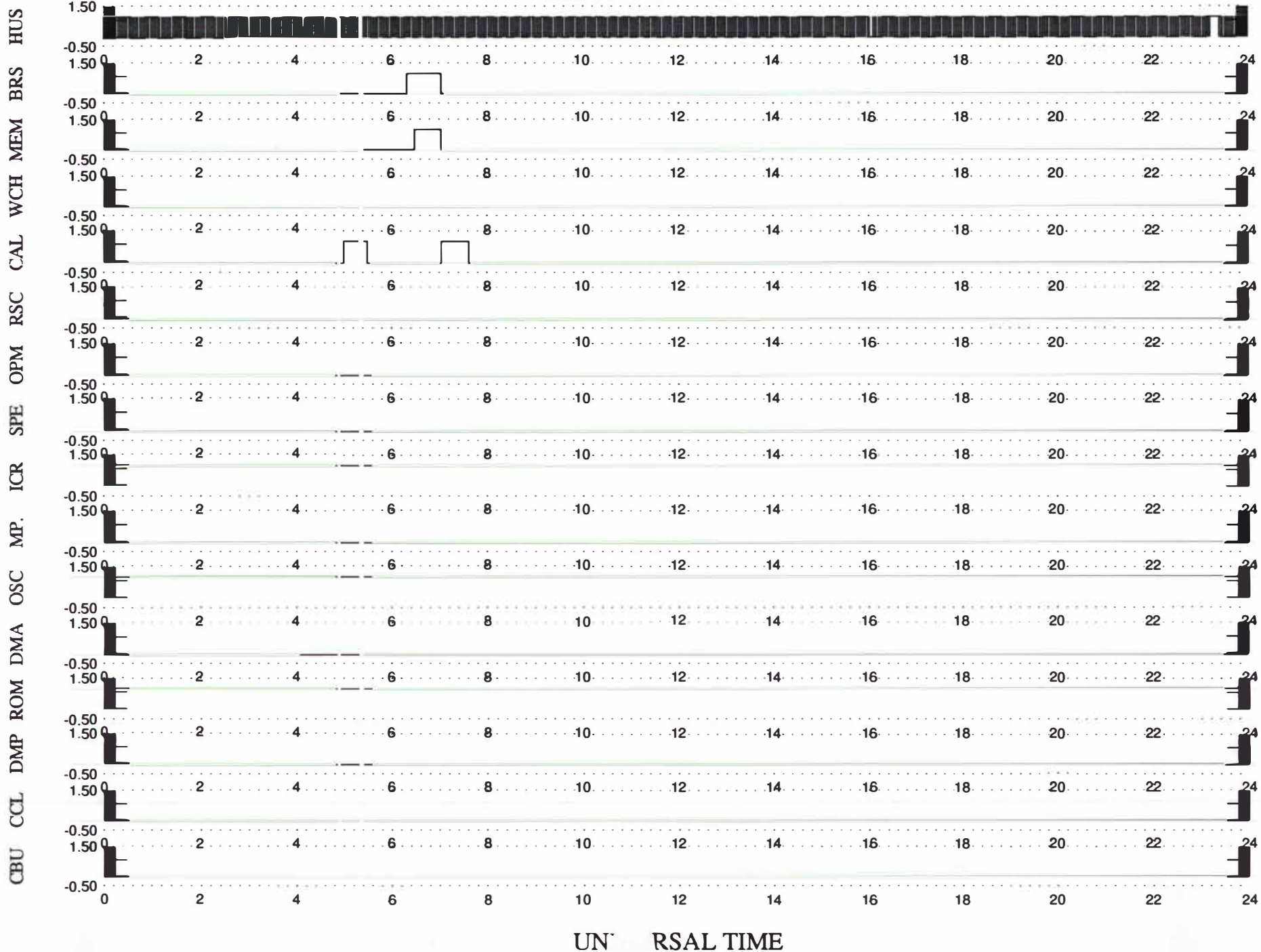
Current Time: 95/12/29, 0655 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

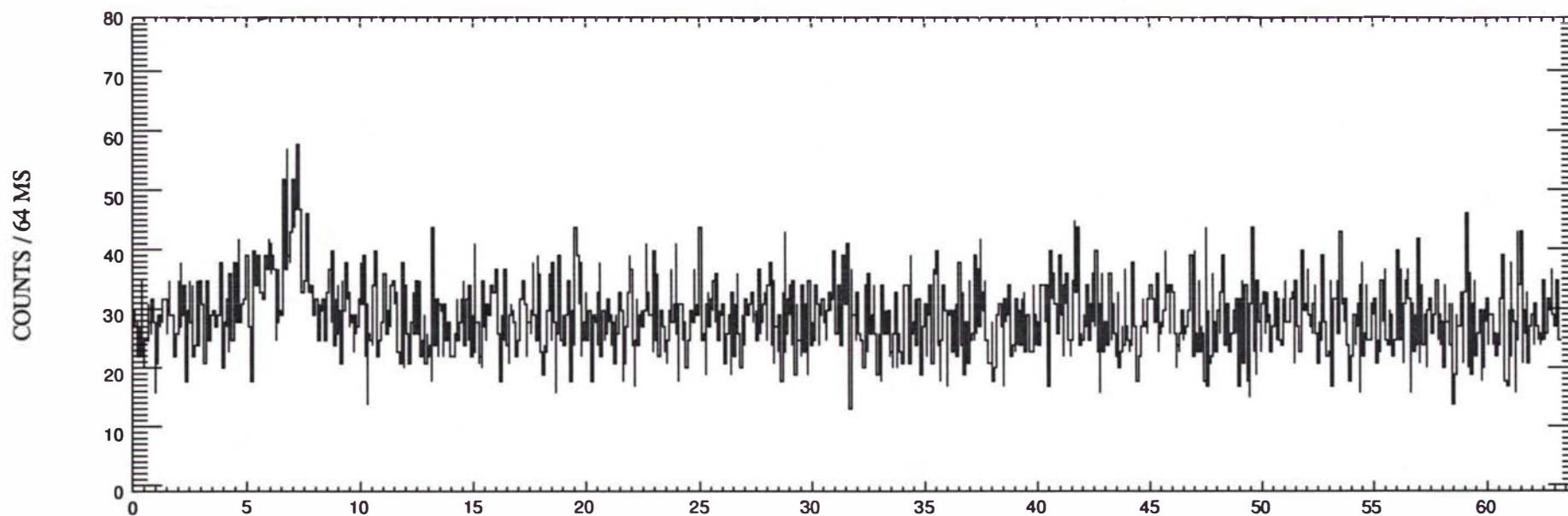
HUS MODES EDR day 361, year 1995 to day 361, year 1995 BURST NUMBER 4

4/1/96

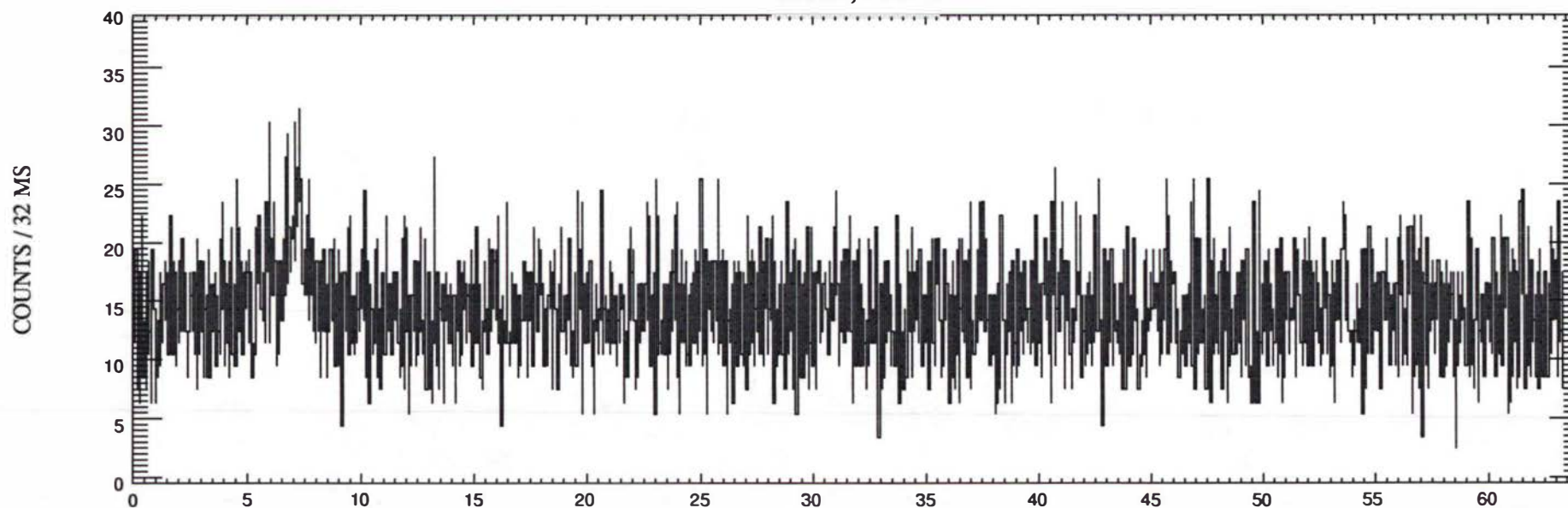


HUS 2A TRIGGERED DATA EDR day 361, year 1995
Burst Counter 4 at UT= 6.327598601447 h=22779.355 s 06:19:39.355

4/1/96



TIME, SECS

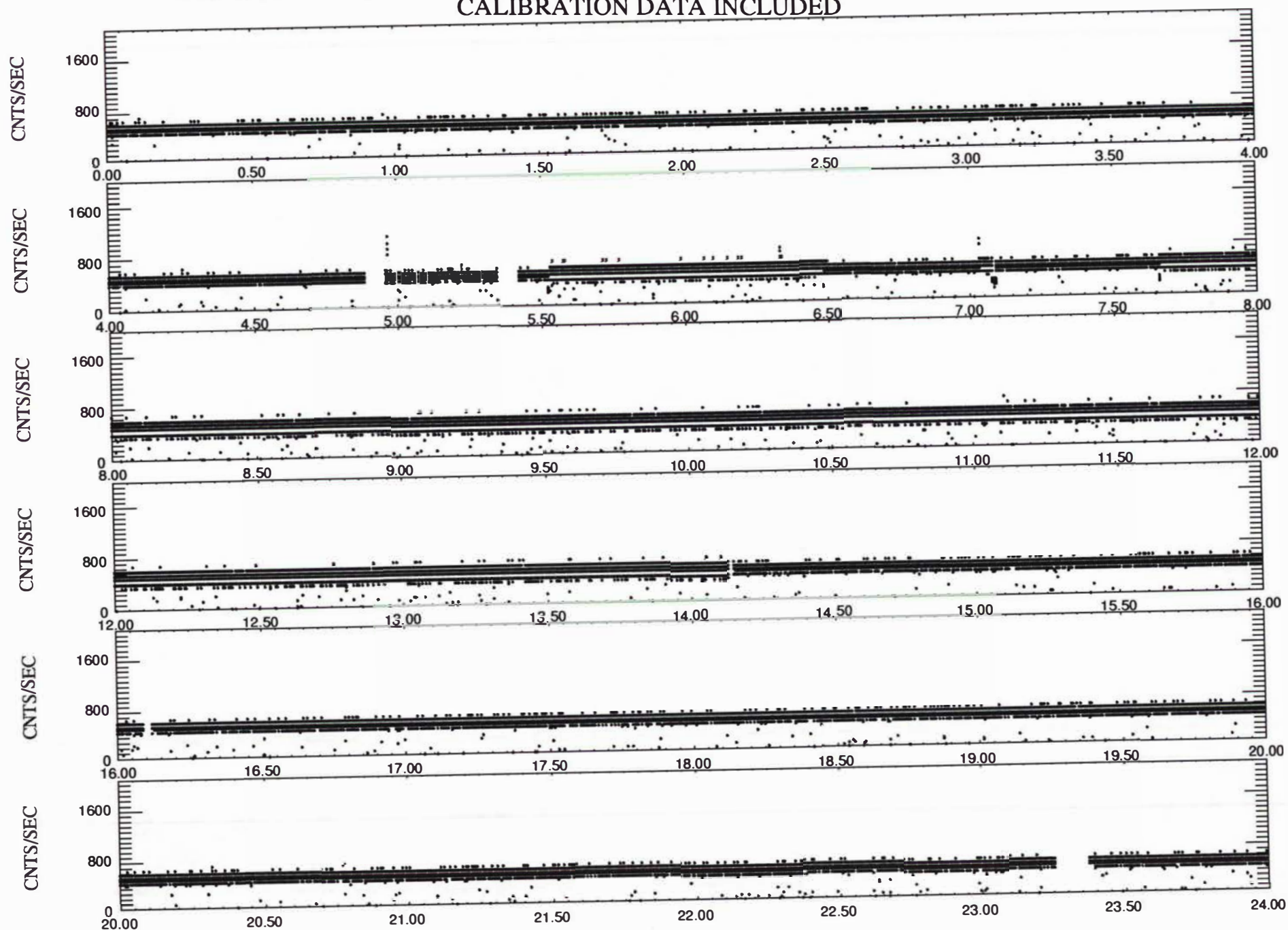


TIME, SECS

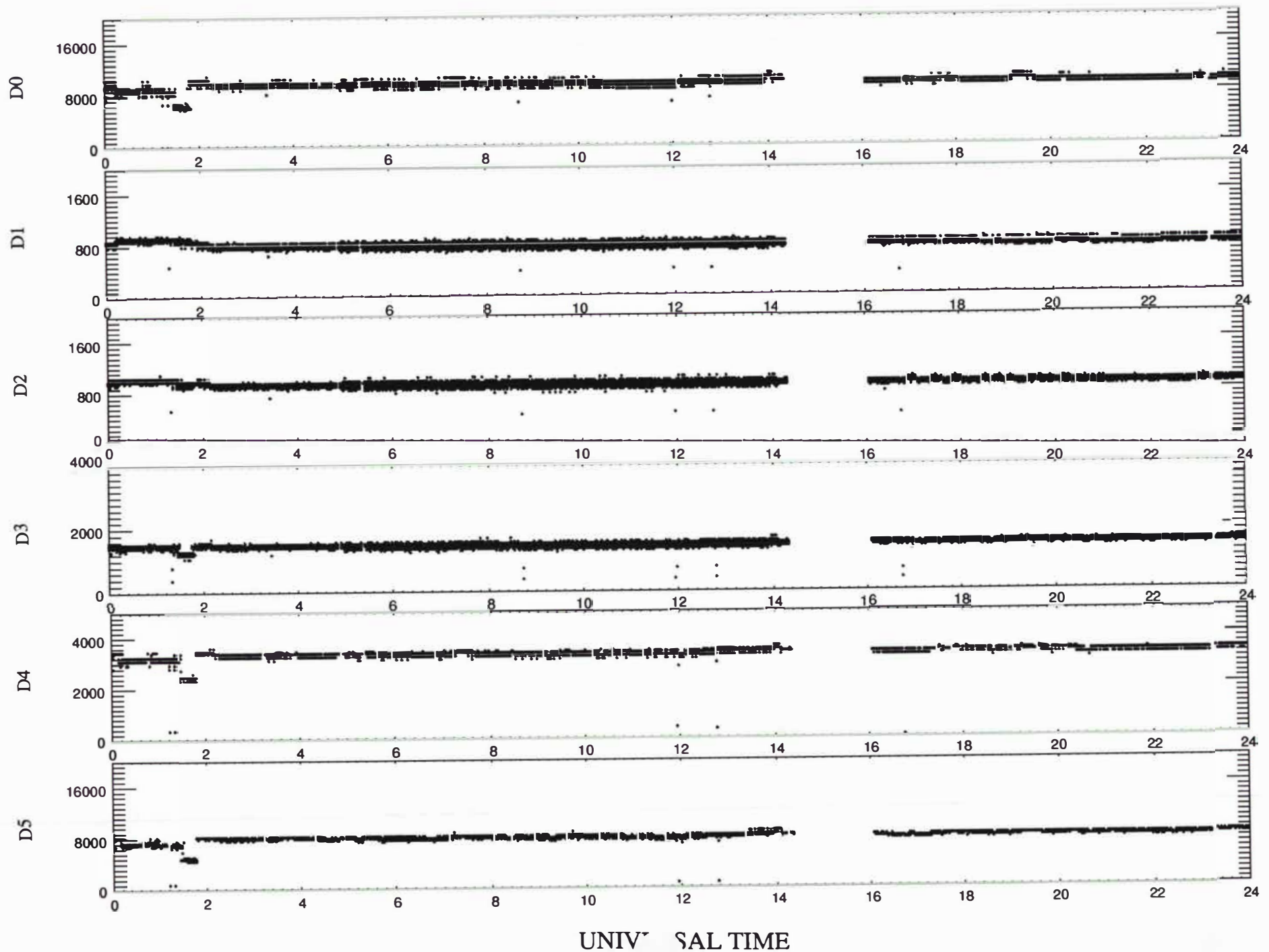
B# 1

HUS 2A, MODE 1, NOT AVERAGED EDR day 361, year 1995 to day 361, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UN TRSAL TIME



From ulsdmt@jplsp.DNET.NASA.GOV Mon Mar 18 17:13 PST 1996
From: ulsdmt@jplsp.DNET.NASA.GOV
Date: Mon, 18 Mar 96 20:13:12 -0500
To: "khurley@sunspot.ssl.berkeley.edu"@east.DNET.NASA.GOV (SENT TO @LIST1)
Subject: Misplaced Major Frames in EDRs

Greetings,

We have identified an operations technique that produces data that will be improperly time tagged by the MGDS (telemetry system). Instances of EDR errors (major frames out of order) have been found in the CDROM archival products for December 1995 and January 1996. Errors will also be found in the still to be shipped February 1996 data.

When major frames are recorded but not transmitted during the next track, but are eventually downlinked with data from a succeeding day, the embedded SCLKs are 'assumed' to be incorrect by the frame syncer and are re-tagged with SCETs and SCLKs matching the adjacent (but newer) data.

For each major frame processed in this manner, a gap will exist, representing the time the data was actually acquired, and a major frame or realtime data, representing the time period the data now errently represents, will be replaced by the misplaced playback data.

Yes. Confusing. See the attached memo detailing the times involved.

Approximately 17 such instances are known to have occured. The total time involved is about twenty minutes. Because the data loss is small and the cost of reprocessing would be so large, the Project has determined that it would be imprudent to reprocess.

For your information, however, we included a memo from Nigel Angold which itemizes each instance.

We thank Toni Galvin and Nigel for identifying the problem and assisting in the diagnosis.

Regards,

Joe

To: <ulsdmt@jplsp.jpl.nasa.gov>
From: Nigel Angold <nangold@jplsp2.jpl.nasa.gov>
Subject: Mis-corrected S/C clocks / SCETs
Cc: chris.leech@jpl.nasa.gov

I have looked at our recent tape recorder usage and predict that you will see major frames with mis-corrected spacecraft clocks / SCETs at the following times (give or take a few minutes):

1995:

~342.22:59 SCET	should be	~341.17:47 SCET
~347.22:39 SCET	should be	~346.16:46 SCET
~350.21:54 SCET	should be	~349.16:22 SCET
~355.22:14 SCET	should be	~354.15:42 SCET
~359.14:04 SCET	should be	~359.05:36 SCET
~360.14:59 SCET	should be	~359.00:20 SCET
~362.20:55 SCET	should be	~361.16:06 SCET

1996:

~001.02:45 SCET	should be	~364.23:12 SCET
~002.14:35 SCET	should be	~001.04:22 SCET
~029.19:35 SCET	should be	~028.13:43 SCET
~033.19:10 SCET	should be	~032.13:18 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~048.17:29 SCET	should be	~047.13:45 SCET
~054.08:59 SCET	should be	~053.11:46 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~039.18:34 SCET	should be	~038.12:14 SCET

We see data gaps for each of the correct times, so it looks like your theory of AMMOS mis-correcting times when there is carry-over data on the tape is correct.

I hope this is enough information. I would have to do a bit more calculation to get the approximate ERTs. Let me know if you want them.

Best regards,

Nigel

Date: Sep 15 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

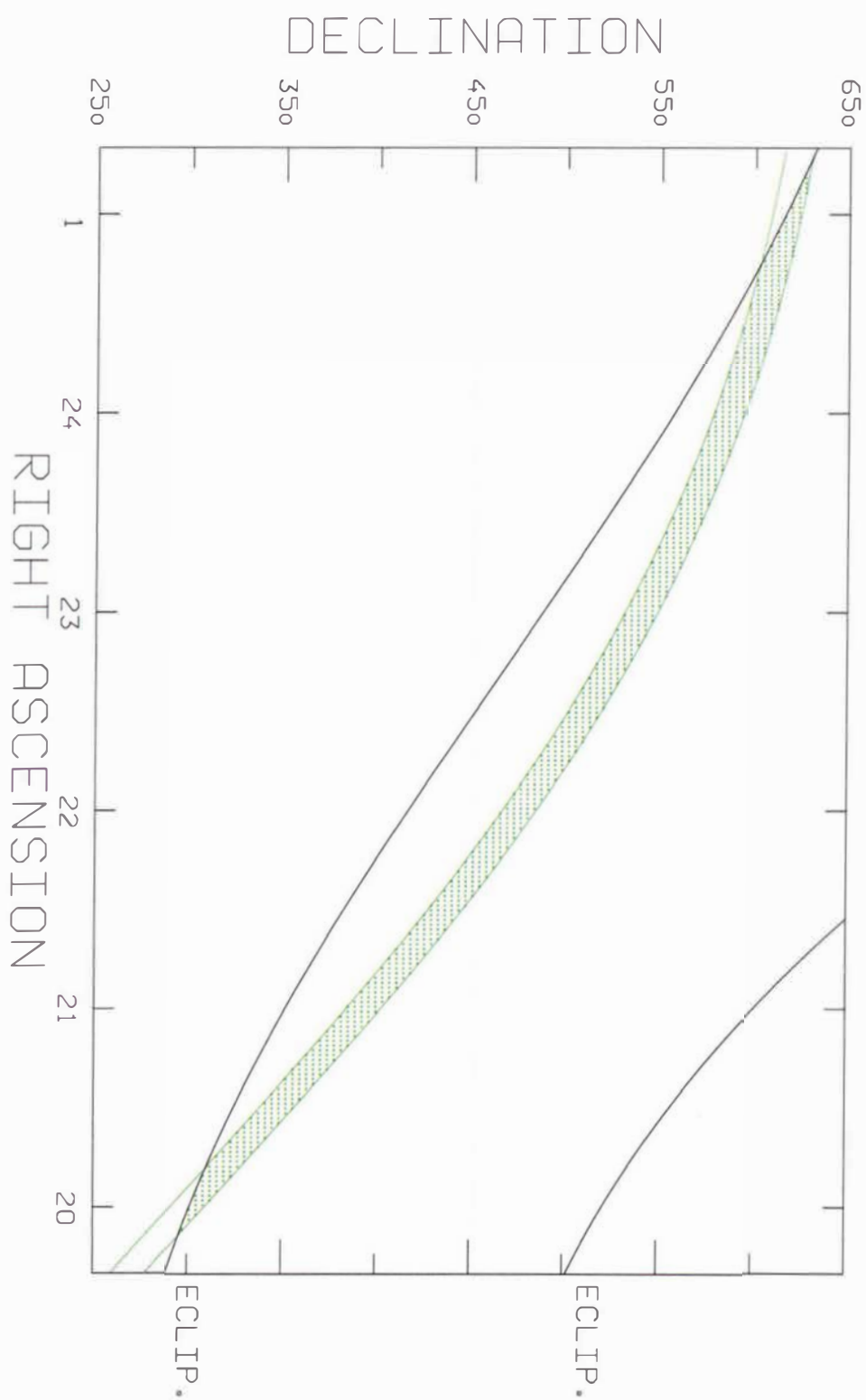
- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☒ Is the order of the data in CORREL such that a vernier is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

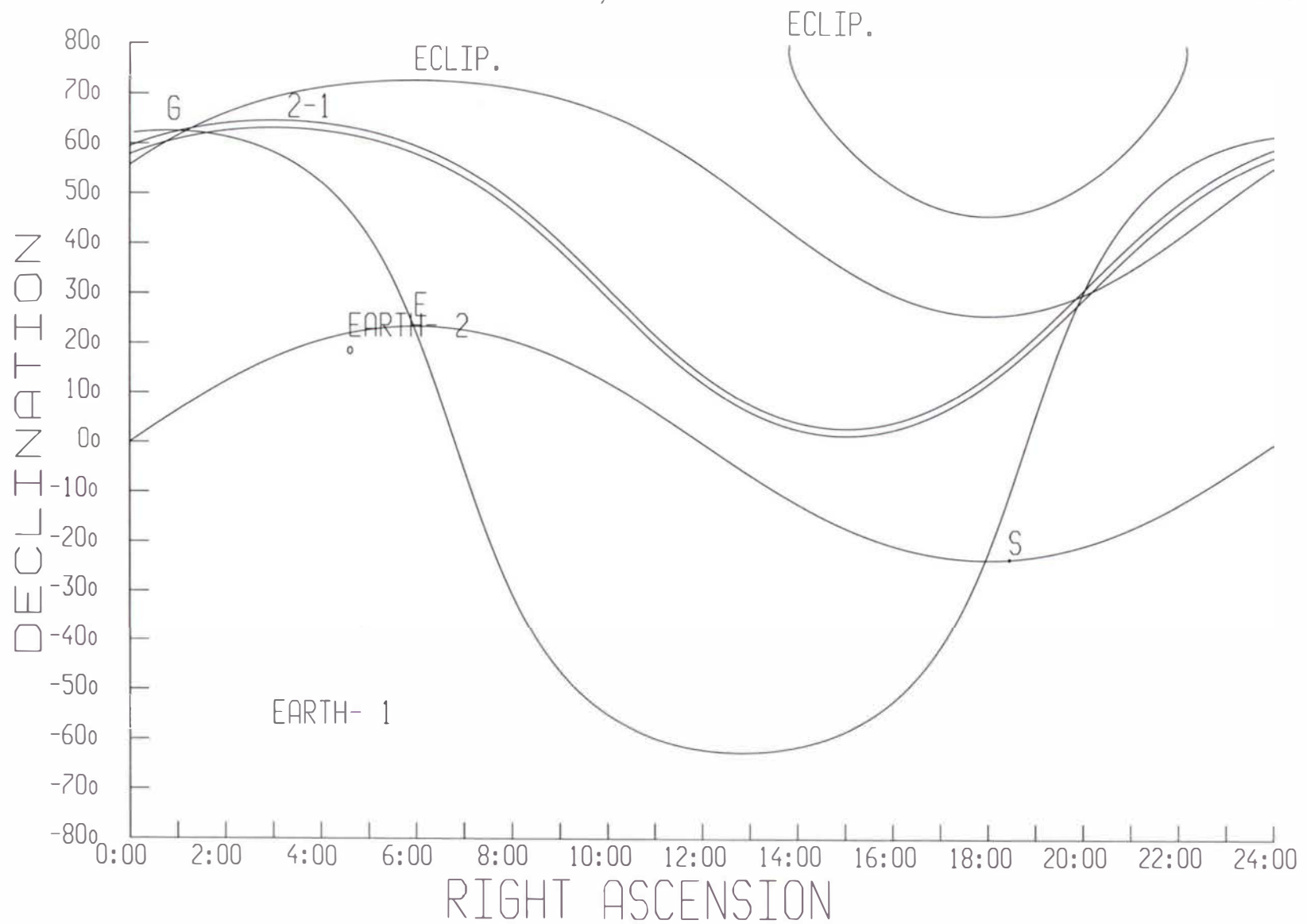
- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS and MBL databases updated with identical times?

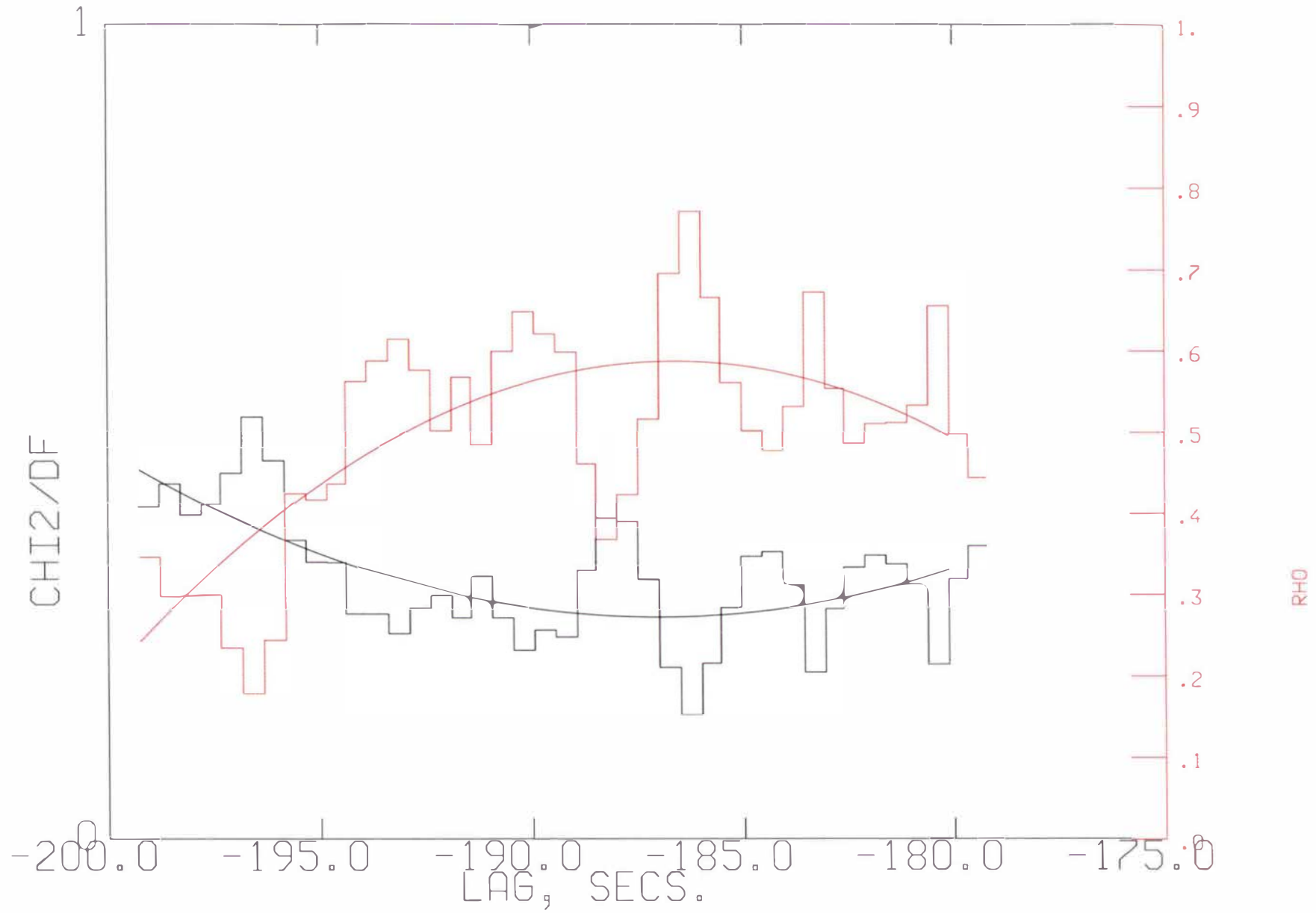


EVENT OF DEC 28, 1995 12:15

15/09/2011

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





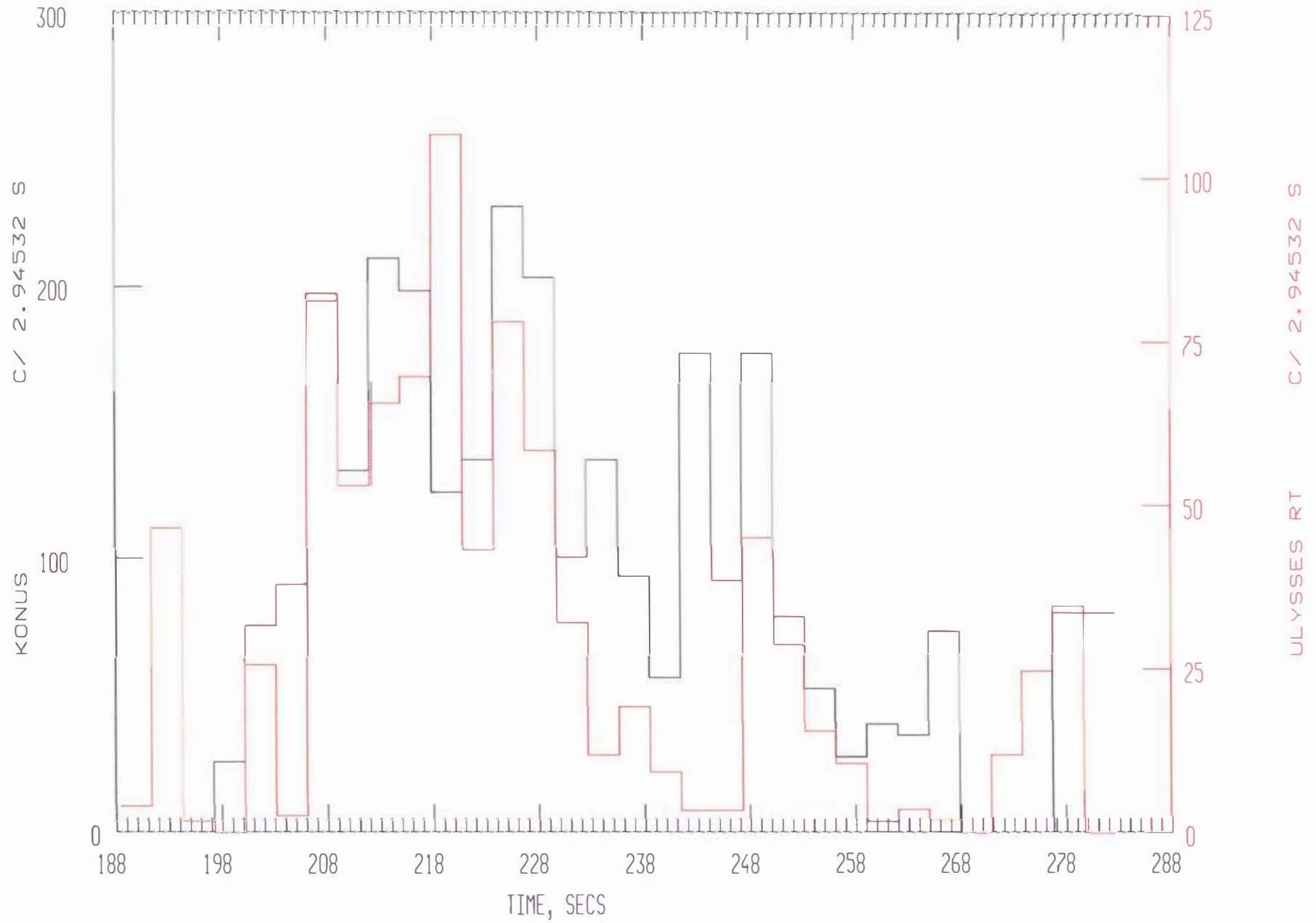
KONUS

-ULYSSES RT CORRELATION

28/12/95

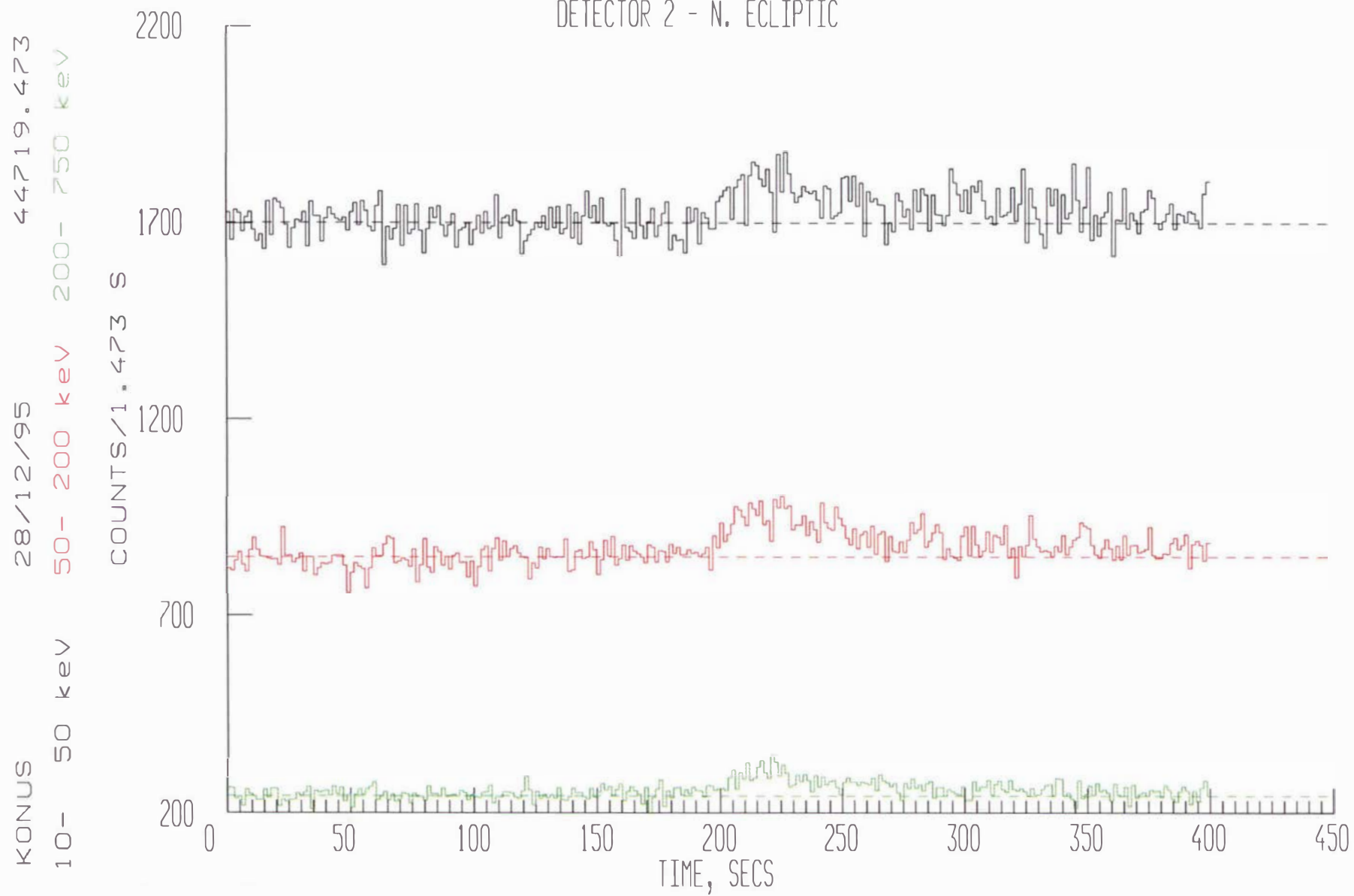
44719.473

15/ 9/11



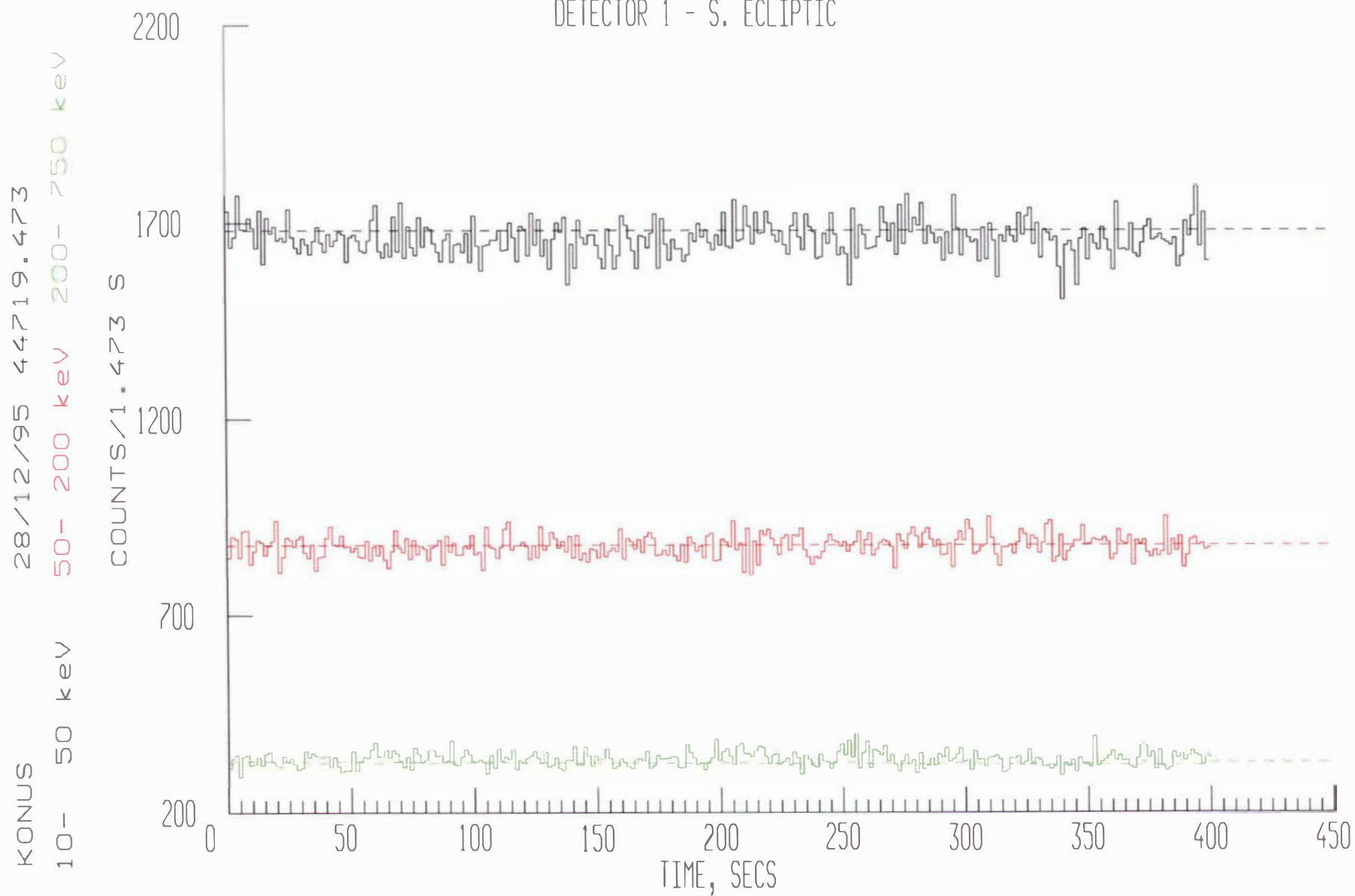
15/09/2011

DETECTOR 2 - N. ECLIPTIC



15/09/2011

DETECTOR 1 - S. ECLIPTIC



951025	23	40	39.738	S1	190	400	120	1.7	3	60	167	✓
951102	01	58	05.879	S2	260	320	50	<0.1	100	3	168	✓
951102	05	53	29.015	S2	700	1560	600	0.1	5	18	169	✓
951102	07	58	13	S1	320	80		4	6		BGR	✓
951105	00	29	05	S2	40	50		0.6	40		BGR	✓
951105	01	37	48.077	S2	140	340	80	0.6	2	22	170	✓
951105	13	00	27.808	S1	160	380	120	9	2	9	171	✓
951107	07	34	58	S1	20	50	20	2	90		BGR	✓
951111	09	42	40	S1	80	160	20	1.1	15		BGR	✓
951112	18	28	15.244	S2	540	690	220	0.2	14	84	172	✓
951113	23	25	58.872	S1	260	330	260	4.4	1	15	173	✓
951115	10	48	49	S1	70	180	80	3	12		BGR	✓
951117	02	48	43.762	S2	650	530	120	0.1	9	10	175	✓
951118	22	56	00	S2	20	90	100	0.15	6		BGR	✓
951119	08	17	11.402	S1	200	420	110	3	1.5	12	176	✓
951119	12	54	17.519	S1	110	220	340	1.7	3	4	177	✓
951119	16	30	48	S2	30	40	10	0.4	110		BGR	✓
951121	06	11	20	S1	20	70	10	2	45		BGR	✓
951122	02	44	01.380	S2	770	920		0.15	0.5	1.5	179	✓
951122	04	45	07.738	S1	280	430	160	12	35	22	180	✓
951123	18	10	08	S1	30	60	30	1	30		BGR	✓
951124	05	54	26	S2	50	140	50	0.15	30		BGR	✓
951124	06	58	52	S2	30	100		0.25	280		BGR	✓
951202	10	51	41.744	S1	200	500	220	2.4	2	25	195	✓
951203	01	06	28.180	S2	260	720	420	0.85	1	16	196	✓
951208	05	26	57.151	S2	320	740	190	<0.04	1	3.5	197	✓
951208	10	57	32.057	S1	290	260		7	52	6.5	198	✓
951208	11	47	47.634	S1	240	510	190	10	23	98	199	✓
951208	23	24	12	S1	100	90		>10	30		BGR	✓
951209	08	42	29.607	S1	150	450	160	6	6	14	200	✓
951213	04	57	29.683	S2	360	940	330	0.4	2	8	201	✓
951213	09	04	34	S2	300	90		<0.15	4.5		BGR	✓
951214	01	29	47	S2	15	100	30	1	30		BGR	✓
951214	02	24	17.847	S2	200	450	150	0.8	4	6	202	✓
951215	20	23	45	S2	60	70	15	<0.15	60		BGR	✓
951216	22	39	42	S2	160	110		0.1	6		BGR	✓
951218	07	59	48	S1	70	130	30	2.3	22		BGR	✓
951219	16	51	19.732	S2	430	850	920	<0.03	1	54	203	✓
951220	08	51	23.560	S2	100	320	180	1	2	8	204	✓
951221	08	23	18	S1	110	150	70	>15	15		BGR	✓
951222	21	00	21	S2	280			<0.1	16		BGR	✓
951225	09	14	16	S2	200			<0.3	50		BGR	✓
951225	09	34	14	S1	500	150	25	2.2	60		BGR	✓
951225	15	21	35	S2	210	170	40	0.1	100		BGR	✓
951225	22	51	08	S1	80	150	50	2.4	40		BGR	✓
951226	08	38	15	S2	60	100	50	0.15	9		BGR	✓
951227	06	23	25.042	S1	420	1200	320	1	1	1.5	218	✓
951227	21	59	20	S1	50	50		3	65		BGR	✓
951228	12	28	42	S2	70	80	40	<0.07	110		BGR	✓
951228	15	47	26	S2	80	170		0.9	17		BGR	✓
951231	05	37	11.668	S2	180	320	150	0.07	9	65	219	✓
951231	21	24	34	S2	100	25		<0.2	20		BGR	✓
960102	03	14	10.996	S1	140	300	80	1	1	0.2	220	✓
960102	20	20	53	S1	200	120	40	>9	25		BGR	✓
960104	03	28	41.062	S2	360	630	230	<0.05	2	28	221	✓
960105	16	04	30	S1	80	60		5	30		BGR	✓
960107	05	23	20	S2	30	100		0.5	230		BGR	✓
960107	19	03	28	S2	30	120	150	<0.1	32		BGR	✓
960109	23	11	31	S2	60	130	20	0.3	5		BGR	✓
960111	12	55	24.530	S2	1130	1280	190	0.2	0.5	6	222	✓
960113	15	33	44.261	S2	500	450	50	0.3	2	36	228	✓
960114	12	15	04.737	S1	4900	7200	1400	1.8	1	60	233	✓
960115	08	52	36.506	S1	380	360	60	10	1	7	234	✓
960115	12	50	15	S2	120	60		0.7	22		BGR	✓
960116	02	02	18	S2	140	170		0.15	17		BGR	✓
960117	15	56	11.341	S1	250	360	30	4	5	20	235	✓

100

From cline@lheavx.gsfc.nasa.gov Fri Feb 2 05:41 PST 1996

Date: Fri, 2 Feb 1996 05:41:51 -0800

Mime-Version: 1.0

To: Bonnard.Teegarden@cesr.cnes.fr, KHURLEY@sunspot.ssl.berkeley.edu,
palmer@lheamail.gsfc.nasa.gov, seifert@lheamail.gsfc.nasa.gov

From: cline@lheavx.gsfc.nasa.gov (T L Cline)

Subject: For Your INFO

Dear Bonnard, Kevin, David, Helmut:

Here is Sergei Golenetskii's latest Konus burst list, for your information. Note that, including the non-triggered-mode 'BGR' events they confidently identify, there are over 300 events so far.

- TLC

DATE	Trigger T0 time (UT)	Sensor	KONUS-WIND		N(S1)/N(S2)		Duration		Trigger number
			Max counts per sec				T<T0	T>T0	
			G1	G2	G3	in G2			
941113	12 09 15	S1	145	85		2.5	115		BGR ✓
941114	02 02 40	S2	110	128	30	0.25	12		BGR ✓
941117	03 14 38.191	S2	406	550	74	0.17	40	5	2 ✓
941117	14 07 57	S2	150	140		<0.15	5		BGR
941119	19 31 09.175	S2	370	703	160	0.23	7	20	4 ✓
941120	20 23 17.924	S1	215	328	30	>15	2	25	5 ✓
941121	17 25 00.945	S1	1652	1656	300	21	3	50	6 ✓
941125	22 04 30.156	S2	115	308	109	0.95	1.5	5	7 ✓
941126	00 20 46	S1	150	205	200	>14	18		BGR ✓
941126	12 22 37.952	S1	860	1430	330	4.2	40	45	8 ✓
941126	16 54 20	S1	55	75		>10	26		BGR
941126	19 56 49.732	S1	290	390	211	6.7	20	26	9
941127	14 30 25.680	S2	200	400	95	0.17	8	7	10
941127	15 39 10	S1	210	57		2.7	260		BGR ✓
941128	15 37 00	S1	75	90	32	>15	55		BGR ✓
941205	23 33 40.074	S2	370	460	188	0.06	6	30	11 ✓
941207	22 10 32	S2	265	175		<0.2	7		BGR
941210	03 10 52.523	S2	900	2350	1385	0.12	1	15	14 ✓
941214	17 03 51	S1	40	45	29	>6	12		BGR
941214	05 38 45.226	S1	3479	1266	14	1.0	12	240	18 Sol
941221	07 44 08	S2	55	115	30	0.8	20		BGR
941221	22 14 35.215	S1	260	496	165	1.5	55	11	19 ✓
941222	05 36 00.243	S2	334	1360	1066	0.36	7	105	20 ✓
941228	07 39 45.915	S1	300	637	519	4.4	5	90	28
941228	16 55 23	S2	40	36	23	0.25	25		BGR ✓
941229	12 58 05	S1	46	108	31	1.8	15		BGR ✓
941229	22 51 08.781	S2	396	381	140	0.09	7	25	29 ✓
941230	20 52 53	S1	74	117	52	8.4	158		BGR ✓
941230	23 43 44	S2	55	70	16	<0.2	4.5		BGR ✓
950104	07 18 39.613	S2	258	550	219	0.75	2.8	20	31 ✓
950104	09 00 58	S2	140	143	40	<0.1	25		BGR ✓
950110	06 02 15	S2	332	180		<0.1	3600		BGR
950110	13 37 57.084	S2	234	422	213	0.05	38	100	32 ✓
950111	04 49 12.241	S1	586	620	100	>19	92	24	33 ✓
950111	12 18 49.196	S1	225	435	164	1.85	26	50	34 ✓
950112	07 45 37.120	S2	1305	1800	336	0.04	2.5	44	35 ✓
950113	05 59 13	S1	283	180	26	>10	52		BGR ✓
950113	17 38 32	S2	85	162	35	<0.06	75		BGR ✓
950114	01 00 38	S1	46	110		1.6	6		BGR ✓
950114	04 03 01	S2	23	76		0.5	70		BGR ✓
950114	07 30 30.766	S2	205	406	60	<0.05	1	100	36 ✓
950114	13 10 34.865	S1	1320	2828	516	3.1	1	10	37 ✓
950115	02 49 32	S2	40	47	34	<0.15	24		BGR ✓
950117	01 36 00	S2	56	82	42	0.2	108		BGR ✓
950118	12 22 54	S2	57	105	17	<0.1	35		BGR ✓
950125	14 51 52.253	S1	380	600	140	8.2	3.8	11	39

KONUS 19951228 44224

ULYSSES RT

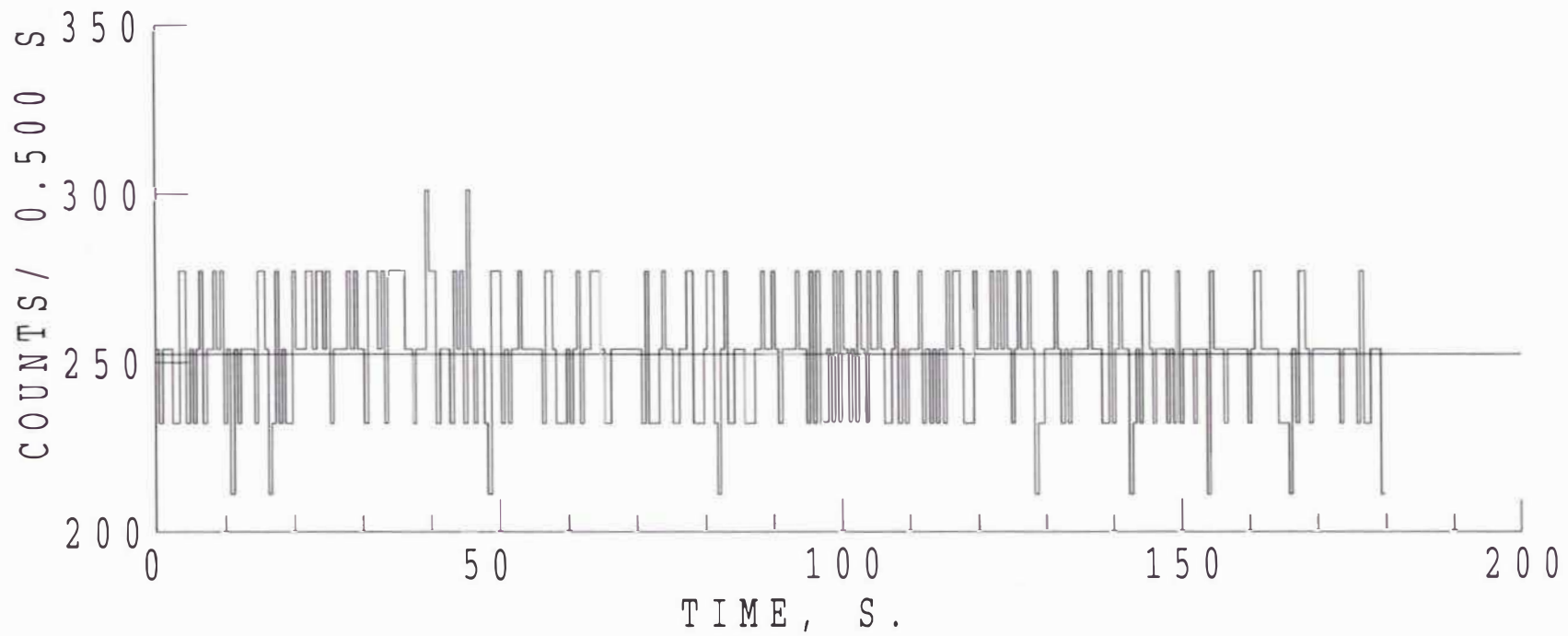
07/09/11

28/12/95 44136.242 s

0 - 0 keV

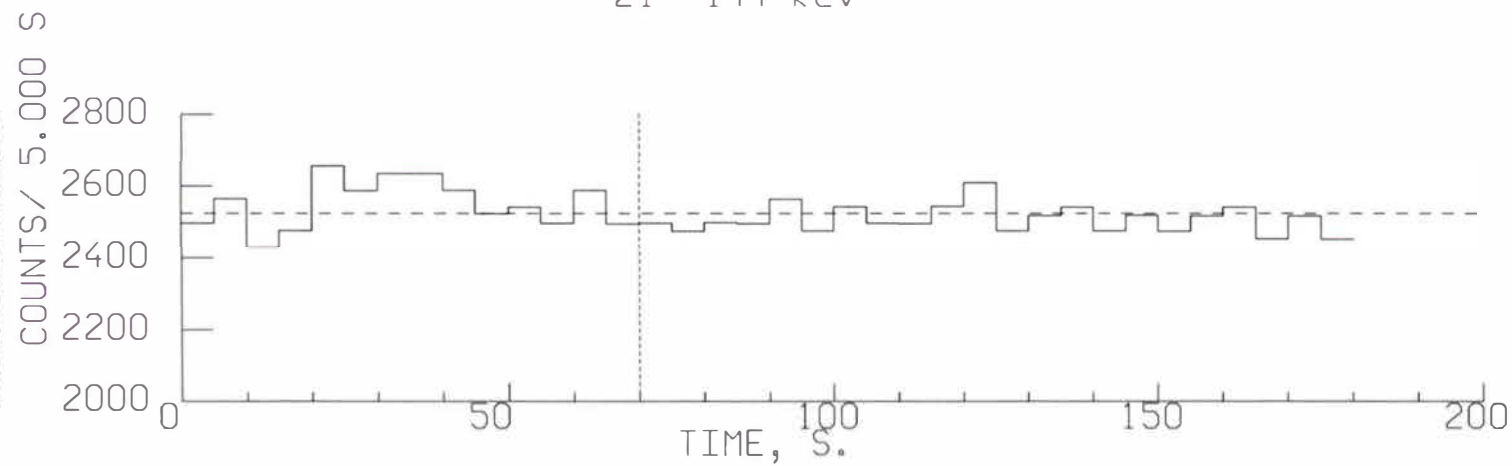
N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



ULYSSES RT
28/12/95 44136.242 s
0.500 S INTERVALS REGROUPED BY 10
21- 144 keV

9/ 9/11



KONUS

22 / 2 / 96

ULYSSES RT

28 / 12 / 95 43524.488 s

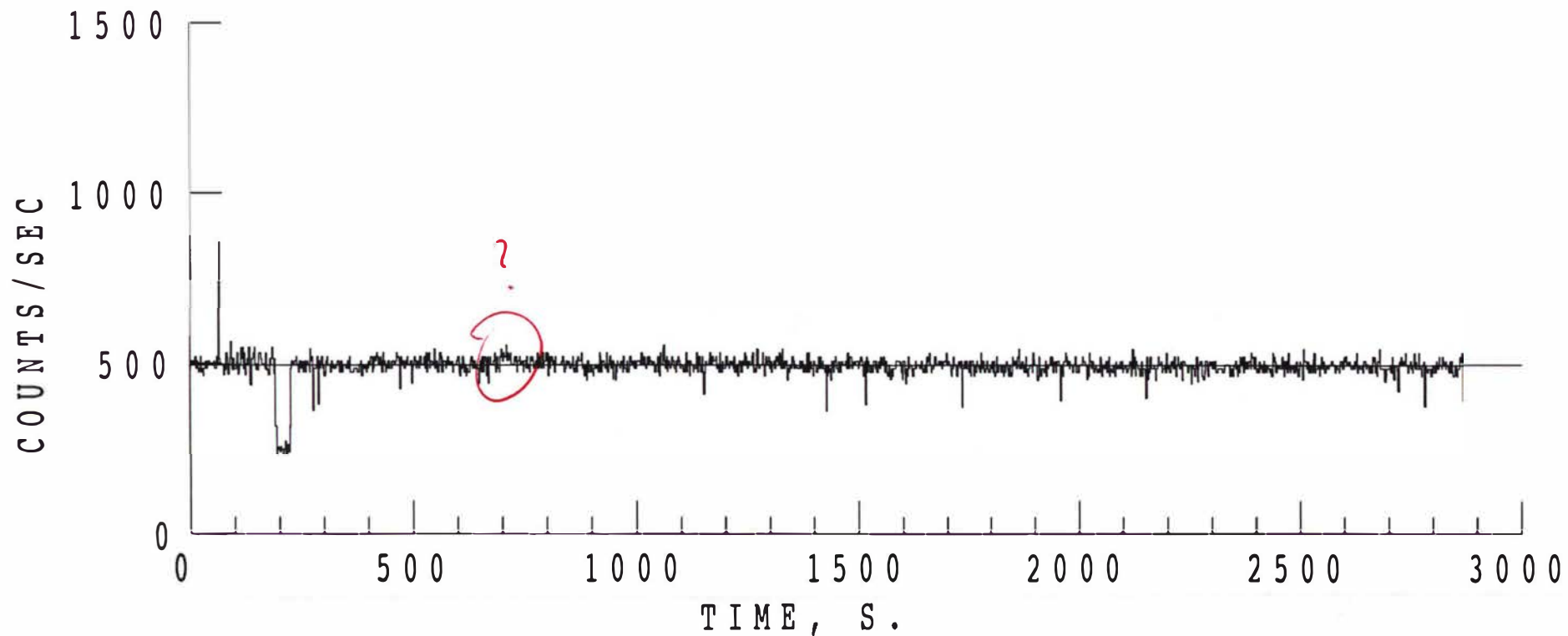
0.500 S INTERVALS REGROUPED BY 4

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS

I



From HENZE@SSLLES.MSFC.NASA.GOV Fri Dec 29 13:56 PST 1995
Date: Fri, 29 Dec 1995 15:56:04 -0600 (CST)
From: HENZE@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 4157

BATSEARCH PROGRAM

BATSE BURST # 4157
EVENT OF 1995 DEC 28 DAY OF YEAR=362
EVENT CROSSING TIME AT BATSE : 56846. S. OR 15:47:26.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 93.000 28.000
BATSE PEAK COUNTING RATE: 7400 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 28/12/ 95 IS:
RA= 225.627 DEC= 58.764 DIST= 2.825 AU
BATSE-ULYSSES DISTANCE = 422671119. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 95.24 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -128.79 SECS.
CROSSING TIME AT ULYSSES IS 56717. S. OR 15:45:17 +/- 291.80 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 28/12/ 95 IS:
RA= 292.943 DEC= -22.840 DIST= 2.326 AU
MARS-BATSE DISTANCE = 348006464. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 18.71 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1099.48 SECS.
CROSSING TIME AT MARS IS 57945. S. OR 16:05:45 +/- 81.35 SECONDS

BATSE BURST TRIGGER

NO.: 4157

TIME: TJD=0079 SECONDS=56846

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=154.7 AZIMUTH=219.9 ERROR=000.8 DEGREES

COMMENTS:

TWO PULSES, TOTAL DUR. ~30 S. FIRST PULSE HARDER, WEAKLY VISIBLE ABOVE 300 KEV.

BATSE #	Date	TJD	SoD	Max ct/s	RA	Dec	Dur (s)
4157	951228	10079	56846	7400	093	+28	30

RT data files which may contain ~ 0.5 s timing error because they follow a trigger

2 hour time range from beginning of burst that extract falls in: DATA USED ?

b02:0126	extract	beg time:0244	e91270_2A1_02.73_02.84.ascii.Z	N
b03:0219	extract	beg time:0244	e91270_2A1_02.73_02.84.ascii.Z	N
b01:0121	extract	beg time:0310	e91360_2A1_03.16_03.37.ascii.Z	N
0:0932	extract	beg time:1025	e92010_2A1_10.42_10.48.ascii.Z	Y (TRIGGER)
1:0845	extract	beg time:1015	e92058_2A1_10.25_10.75.ascii.Z	N &
b01:0609	extract	beg time:0723	e92111_2A1_07.38_07.54.ascii.Z	N
b01:0629	extract	beg time:0634	e92174_2A1_06.57_06.87.ascii.Z	N
b01:0541	extract	beg time:0549	e92190_2A1_5.76_5.90.ascii.Z	Y (SGR 1300)
b02:2032	extract	beg time:2058	e92205_2A1_20.97_22.66.ascii.Z	Y (TRIGGER)
b01:1202	extract	beg time:1240	e92209_2A1_12.67_12.85.ascii.Z	N
b01:1717	extract	beg time:1831	e92213_2A1_18.51_18.82.ascii.Z	N
b01:1142	extract	beg time:1301	e92303_2A1_13.02_13.28.ascii	Y
b03:0736	extract	beg time:0844	q92313_2A1_8.70_8.96.ascii.Z	N
b03:0736	extract	beg time:0844	e92313_2A1_08.74_09.02.ascii.Z	N
b14:1730	extract	beg time:1905	q92314_2A1_19.08_19.30.ascii.Z	N
b15:1825	extract	beg time:1905	q92314_2A1_19.08_19.30.ascii.Z	N
b02:0156	extract	beg time:0344	e92315_2A1_3.10_3.36.ascii.Z	N
b03:0322	extract	beg time:0344	e92315_2A1_3.10_3.36.ascii.Z	N
b06:0819	extract	beg time:0844	e92315_2A1_8.71_8.85.ascii.Z	N
b08:1211	extract	beg time:1340	e92315_2A1_13.66_13.96.ascii.Z	N
b08:1211	extract	beg time:1344	e92315_2A1_13.74_14.03.ascii.Z	N
b02:0600	extract	beg time:0644	e92316_2A1_6.76_7.04.ascii.Z	N
b02:0135	extract	beg time:0329	e93012_2A1_3.50_3.72.ascii.Z	Y
b03:0227	extract	beg time:0329	e93012_2A1_3.50_3.72.ascii.Z	Y
b04:0315	extract	beg time:0329	e93012_2A1_3.50_3.72.ascii.Z	Y
b01:1105	extract	beg time:1150	q93077_2A1_11.83_12.05.ascii.Z	Y
b01:0745	extract	beg time:0756	q93096_2A1_7.71_7.85.ascii.Z	Y (TRIGGER)
b01:0745	extract	beg time:0856	q93096_2A1_8.40_8.50.ascii.Z	N
1:1445	extract	beg time:1530	e93126_2A1_15.50_15.65.ascii.Z	N
1:1445	extract	beg time:1548	e93126_2A1_15.80_15.95.ascii.Z	N
b01:0334	extract	beg time:0434	e93265_2A1_04.56_04.64.ascii.Z	N
b01:0900	extract	beg time:0943	e93272_2A1_09.71_09.98.ascii.Z	Y (SGR 1806)
b01:1654	extract	beg time:1707	e93287_2A1_17.11_17.37.ascii.Z	Y
b01:2215	extract	beg time:2240	e93294_2A1_22.67_22.85.ascii.Z	N
b01:0824	extract	beg time:0840	e93303_2A1_08.66_08.81.ascii.Z	N
b01:0352	extract	beg time:0510	e93318_2A1_05.17_05.42.ascii.Z	N
b01:0641	extract	beg time:0824	e93340_2A1_08.40_08.61.ascii.Z	N
b02:0602	extract	beg time:0733	e94026_2A1_07.55_07.71.ascii.Z	N
b05:1140	extract	beg time:1240	e94044_2A1_12.66_12.76.ascii.Z	Y
b01:0204	extract	beg time:0326	e94047_2A1_03.44_03.62.ascii.Z	N
b01:0113	extract	beg time:0124	e94049_2A1_01.40_02.50.ascii.Z	N
b03:1943	extract	beg time:2123	e94058_2A1_21.38_21.49.ascii.Z	N
b01:0346	extract	beg time:0505	e94061_2A1_05.08_05.25.ascii.Z	Y (Trigger; but RT data probably used)
b01:0047	extract	beg time:0128	e94062_2A1_01.47_01.63.ascii.Z	N
b01:2113	extract	beg time:2142	e94202_2A1_21.70_21.98.ascii.Z	N
b01:2113	extract	beg time:2144	e94202_2A1_21.74_22.14.ascii.Z	N
b01:1047	extract	beg time:1143	e94242_2A1_11.71_11.86.ascii.Z	N
b01:0647	extract	beg time:0728	e94298_2A1_07.47_07.51.ascii.Z	N
b01:0128	extract	beg time:0241	e94299_2A1_02.68_02.80.ascii.Z	Y
b09:1148	extract	beg time:1348	e94321_2A1_13.80_14.47.ascii.Z	N
b10:1238	extract	beg time:1348	e94321_2A1_13.80_14.47.ascii.Z	N
b11:1328	extract	beg time:1348	e94321_2A1_13.80_14.47.ascii.Z	N
b01:1952	extract	beg time:2040	e94326_2A1_20.66_20.78.ascii.Z	N
b01:0223	extract	beg time:0406	e95042_2A1_04.10_04.76.ascii.Z	N
1:0640	extract	beg time:0740	e95072_2A1_07.67_07.81.ascii.Z	N
1:0144	extract	beg time:0158	e95216_2A1_01.96_02.09.ascii.Z	Y (Trigger)
b02:1628	extract	beg time:1718	e95339_2A1_17.30_17.45.ascii.Z	N
b03:1718	extract	beg time:1718	e95339_2A1_17.30_17.45.ascii.Z	N
b01:1124	extract	beg time:1205	e95362_2A1_12.09_12.87.ascii.Z	N

b04:1343	extract	beg	time:1540	e95362_2A1_15.67_15.84.ascii.Z	Y
b04:1343	extract	beg	time:1541	e95362_2A1_15.69_15.85.ascii.Z	Y
b05:1516	extract	beg	time:1540	e95362_2A1_15.67_15.84.ascii.Z	Y
b05:1516	extract	beg	time:1541	e95362_2A1_15.69_15.85.ascii.Z	Y
b01:0053	extract	beg	time:0251	e96002_2A1_02.85_03.62.ascii	N
b02:0216	extract	beg	time:0251	e96002_2A1_02.85_03.62.ascii	N
b20:1956	extract	beg	time:2041	e96002_2A1_20.68_20.76.ascii	N
b20:1956	extract	beg	time:2041	e96002_2A1_20.69_20.76.ascii	N
b02:0128	extract	beg	time:0305	e96004_2A1_03.09_03.87.ascii.Z	N
b03:0235	extract	beg	time:0305	e96004_2A1_03.09_03.87.ascii.Z	N
b05:1621	extract	beg	time:1656	e96006_2A1_16.93_17.08.ascii.Z	N
b01:0116	extract	beg	time:0150	e96007_2A1_01.84_01.95.ascii	N
b01:0116	extract	beg	time:0152	e96007_2A1_01.87_01.99.ascii	N
b01:1819	extract	beg	time:1935	e96028_2A1_19.59_19.87.ascii.Z	Y
b01:0208	extract	beg	time:0233	e96030_2A1_02.55_02.66.ascii.Z	Y
b01:0208	extract	beg	time:0235	e96030_2A1_02.58_02.73.ascii.Z	Y
b01:0208	extract	beg	time:0235	e96030_2A1_02.59_02.73.ascii.Z	Y
b01:0849	extract	beg	time:0949	qp96032_2A1_09.81_09.94.ascii.Z	Y
b02:2011	extract	beg	time:2144	qp96032_2A1_21.74_21.90.ascii.Z	Y
b01:1929	extract	beg	time:2049	qp96051_2A1_20.82_20.85.ascii.Z	N
b01:1929	extract	beg	time:2049	qp96051_2A1_20.82_20.86.ascii.Z	N
b01:1529	extract	beg	time:1719	qp96094_2A1_17.32_17.48.ascii.Z	N
b01:1529	extract	beg	time:1722	qp96094_2A1_17.36_17.52.ascii.Z	N
b01:1652	extract	beg	time:1752	qp96168_2A1_17.87_17.97.ascii.Z	N
b01:1652	extract	beg	time:1755	qp96168_2A1_17.91_18.05.ascii.Z	N

*Annulus changed;
but it was not circulated*

(GR 1744 - MAYBE USED FOR NETSYN?)

"	"	"
"	"	"
"	"	"
"	"	"

Helio corr removed

Date: *Feb 23 '98*

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☐ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ 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

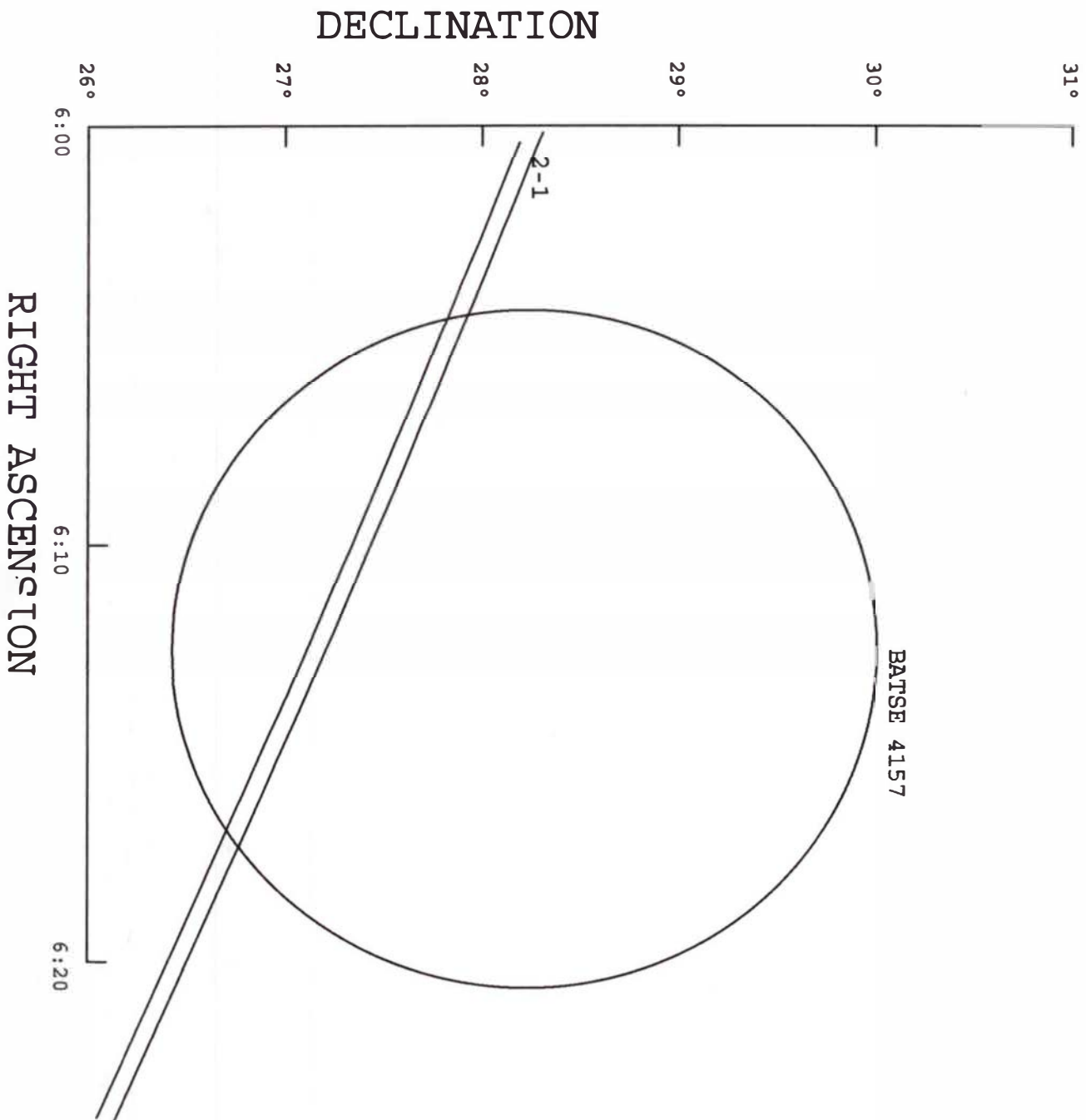
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF DEC 28, 1995 15:44

23 / 2/98



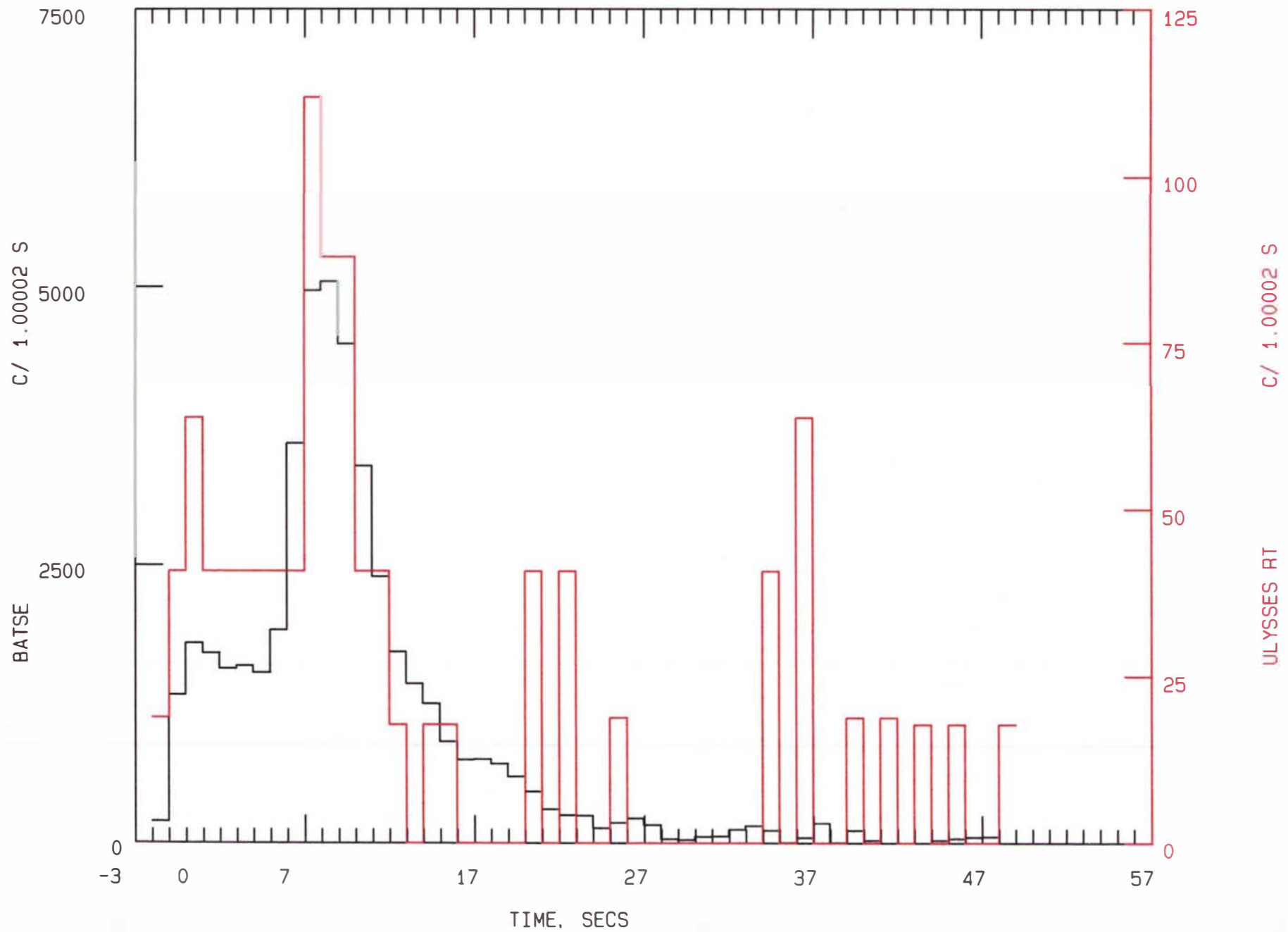
BATSE

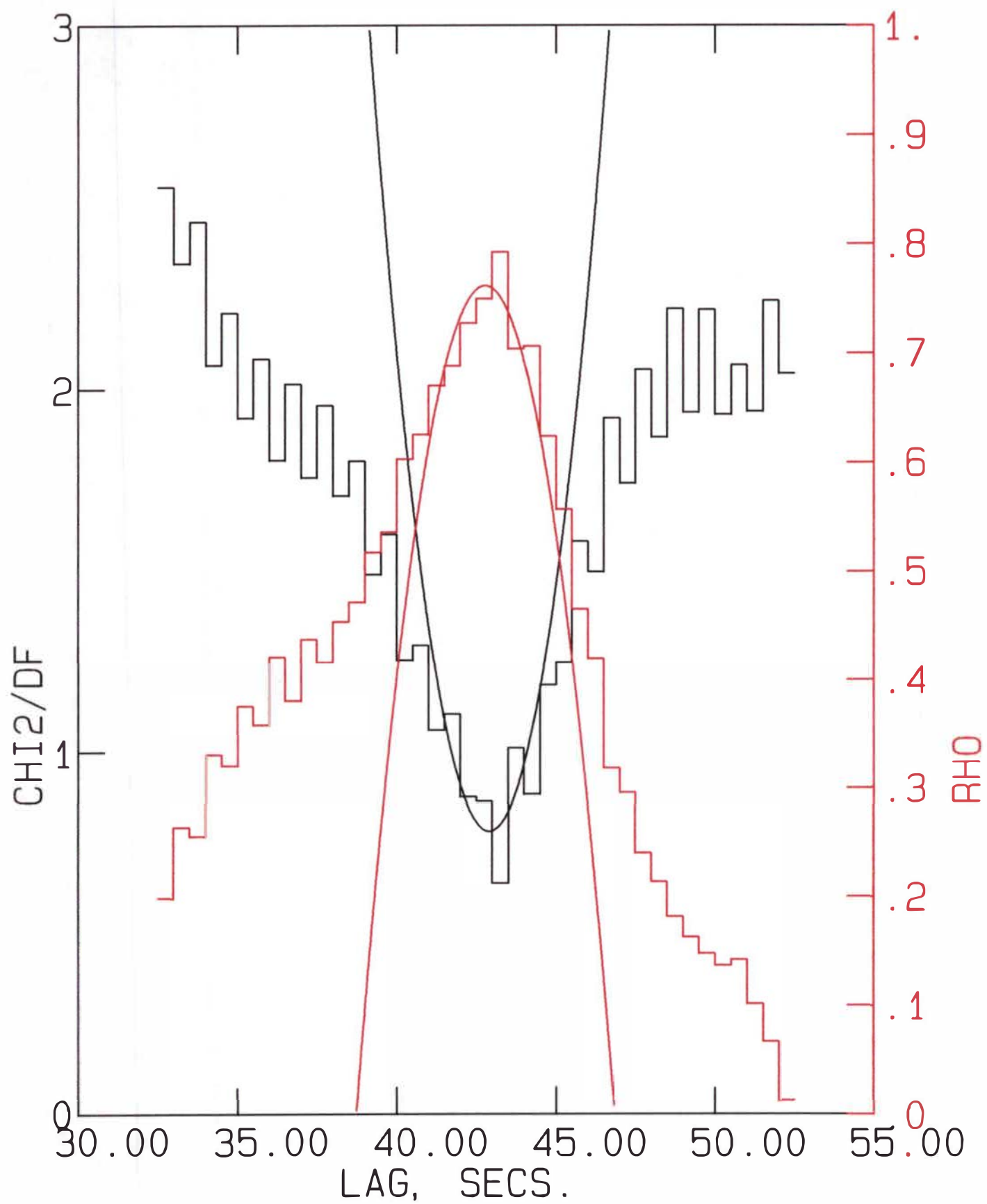
-ULYSSES RT CORRELATION

28/12/95

56846.002

23/ 2/98





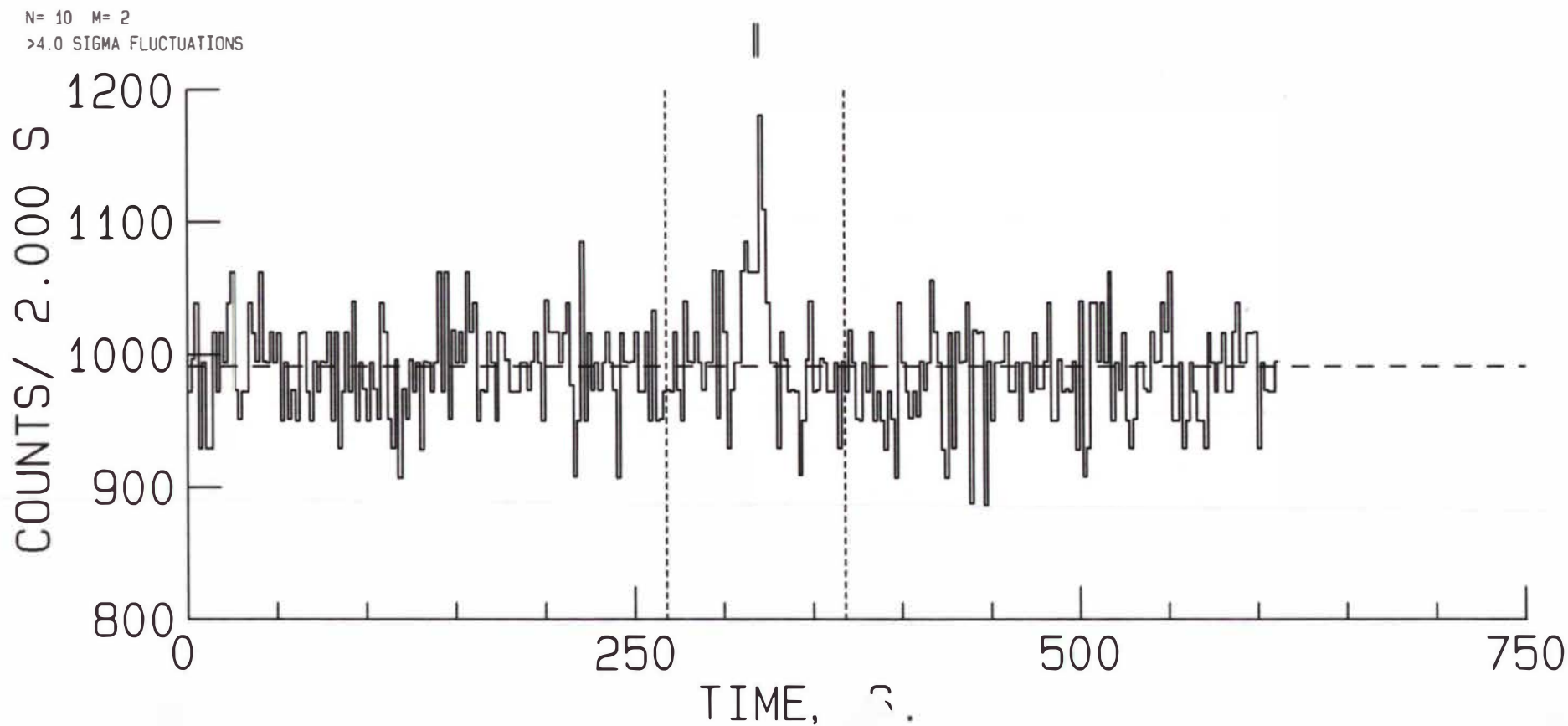
ULYSSES RT

23 / 2 / 98

28/12/95 56412.432 s

0.500 S INTERVALS REGROUPED BY 4

21- 144 keV



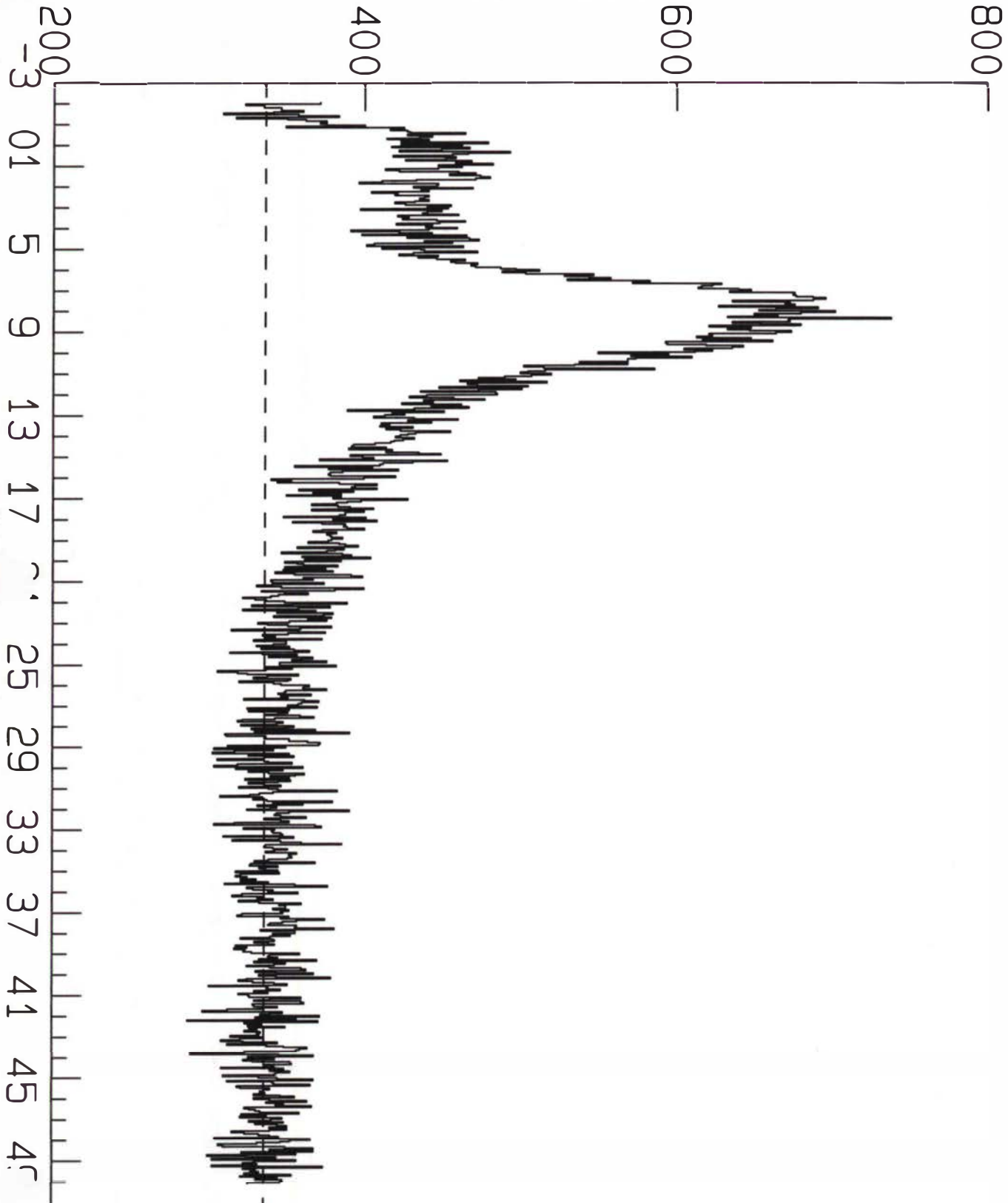
BATSE

28/12/95

56846.002

25- 100 keV

COUNTS/0.064 S



From khurley@sunspot Thu Dec 21 08:50 PST 1995
Date: Thu, 21 Dec 1995 07:33:02 -0800
From: khurley@sunspot (Kevin Hurley)
To: ULSSCI@JPLSP.SPAN.nasa.gov, khurley@sunspot
Subject: GRB commands

Dear Nigel,

Please send the following commands to the GRB experiment:

Z018 05B7
Z018 0ED6

These commands are for the low level discriminator burst reference value and sample time, and for the medium level discriminator burst reference value and sample time, respectively. After acceptance of these commands, the sample times and counts required for trigger will be 0.125 seconds, 88 counts for the low level discriminator, and 2.0 seconds, 944 counts for the medium level discriminator. Confirmation can be found in words E031=20, E032=2, E034=0, E035=59.

Until further notice, these commands should be used to reconfigure the experiment after turnoff or DNEL.

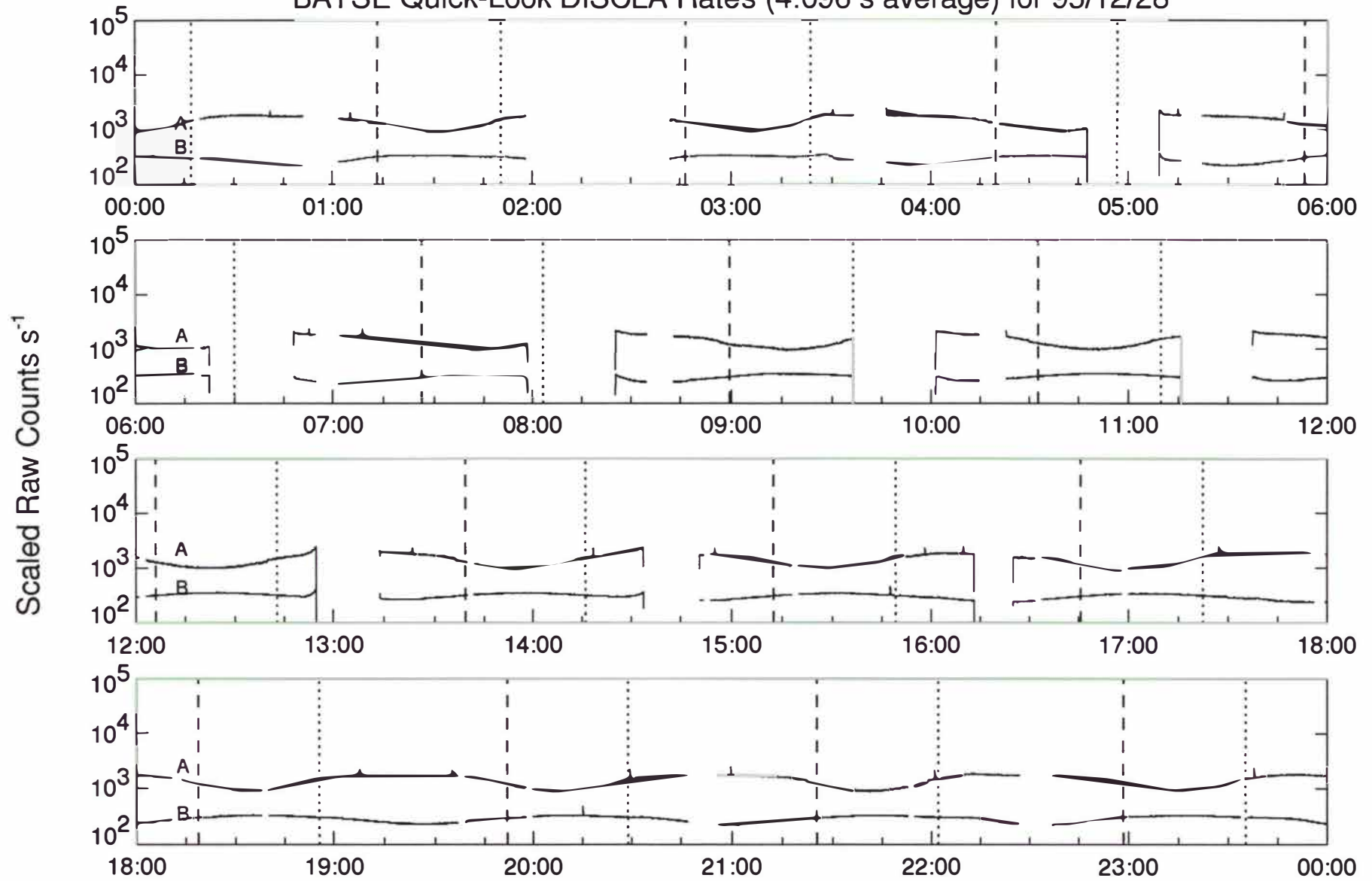
Regards,

Kevin Hurley

From ulsmg@jplsp2.span.nasa.gov Thu Dec 21 11:37 PST 1995
Date: Thu, 21 Dec 95 11:28:41 PST
From: Peggy Greutert (reply to ULSSCI) <ulsmg@jplsp2.span.nasa.gov>
To: "khurley@sunspot.ssl.berkeley.edu"@mg.nsi.net
Cc: ulsmg@jplsp2.span.nasa.gov
Subject: RE: GRB commands

Acknowledge the receipt of your message date/time :21 DEC 1995 08:48:56
Commands will be sent DOY 362.

BATSE Quick-Look DISCLA Rates (4.096 s average) for 95/12/28



Current Time: 95/12/30, 0655 EDT

A: Channel 0 Most Sunward LAD

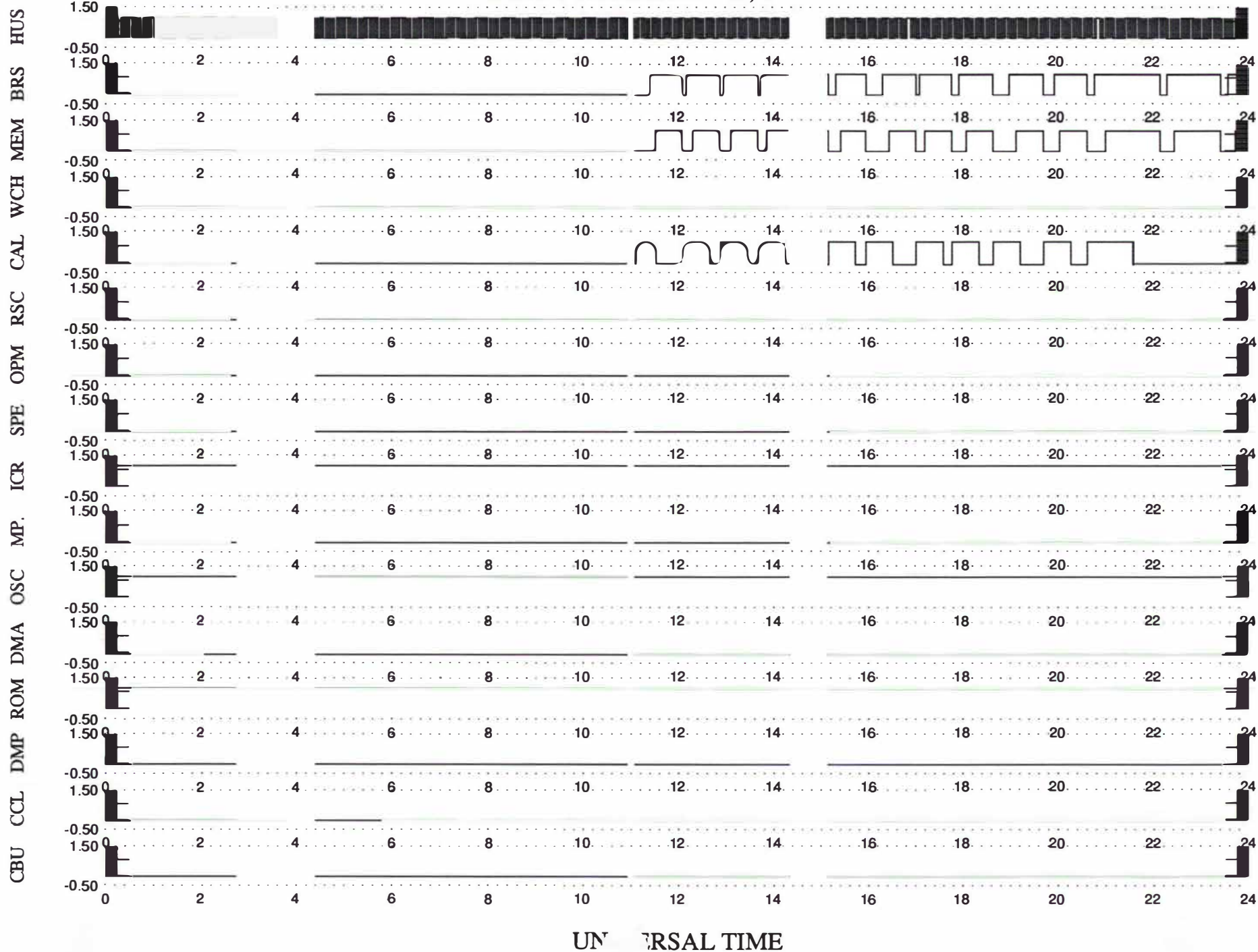
B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

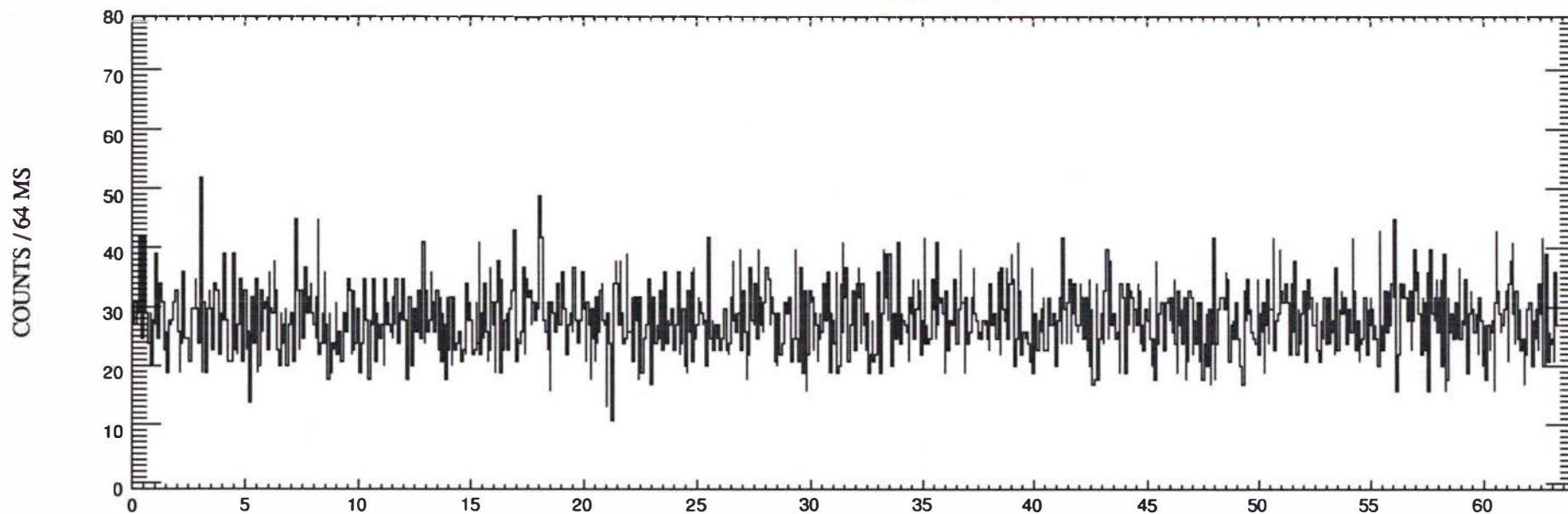
HUS MODES EDR day 362, year 1995 to day 362, year 1995 BURST NUMBER 5 - 15, 0 - 2

4/1/96

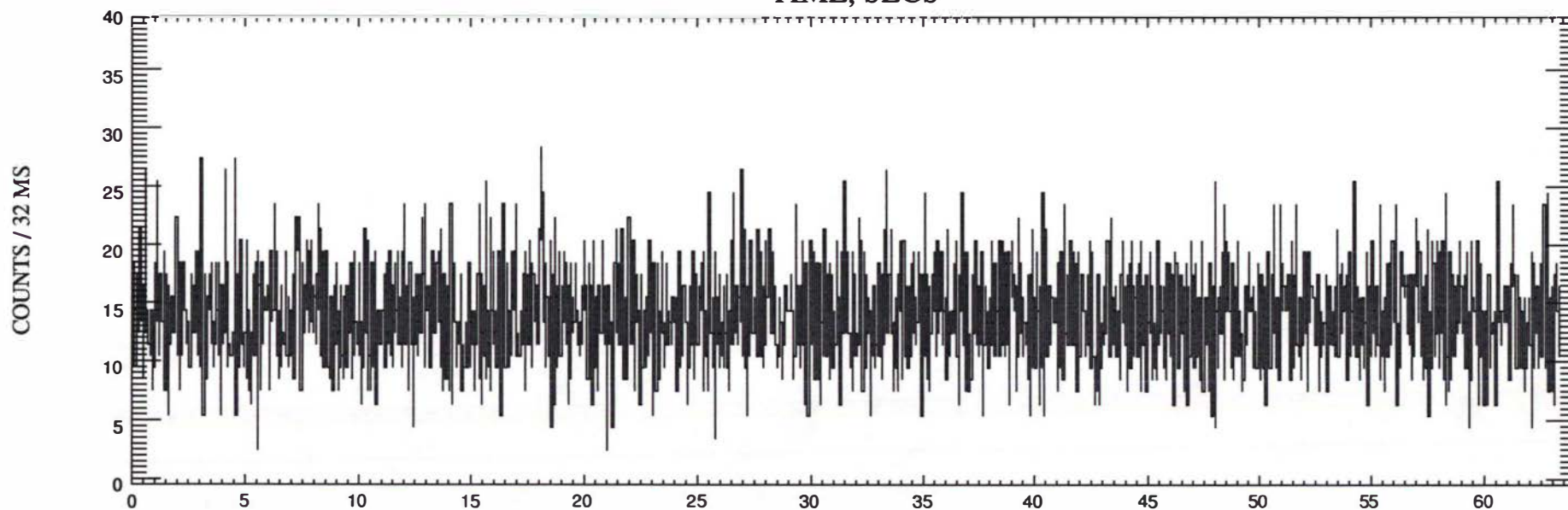


HUS 2A TRIGGERED DATA EDR day 362, year 1995
Burst Counter 5 at UT=11.402552040948 h=41049.187 s 11:24:09.187

4/1/96



TIME, SECS

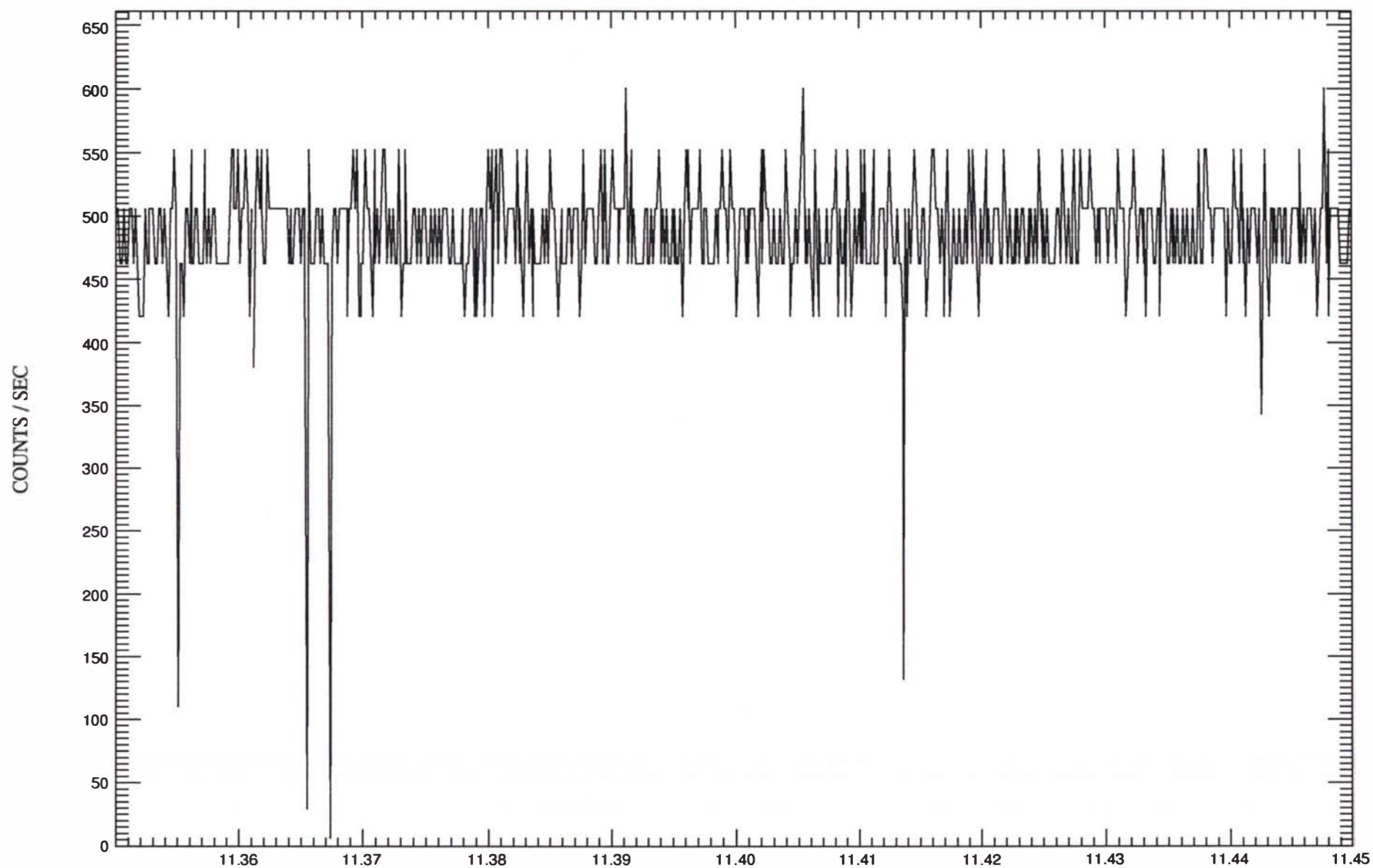


TIME, SECS

B# 1

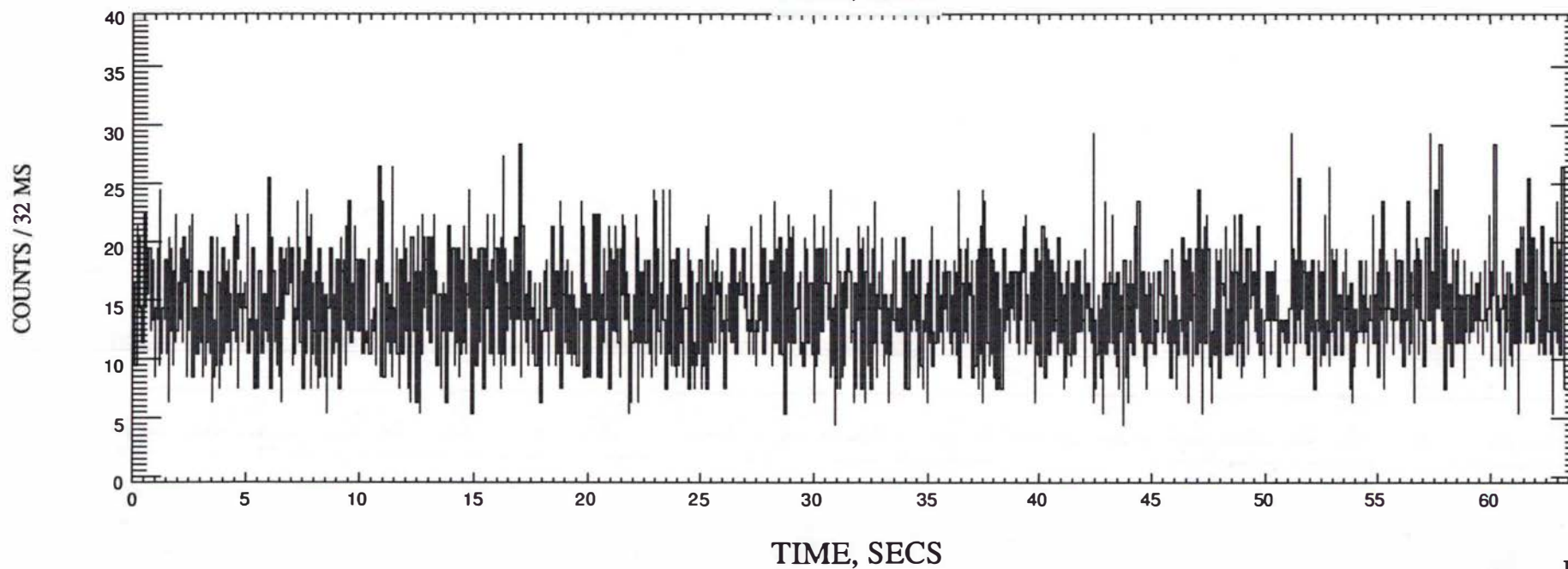
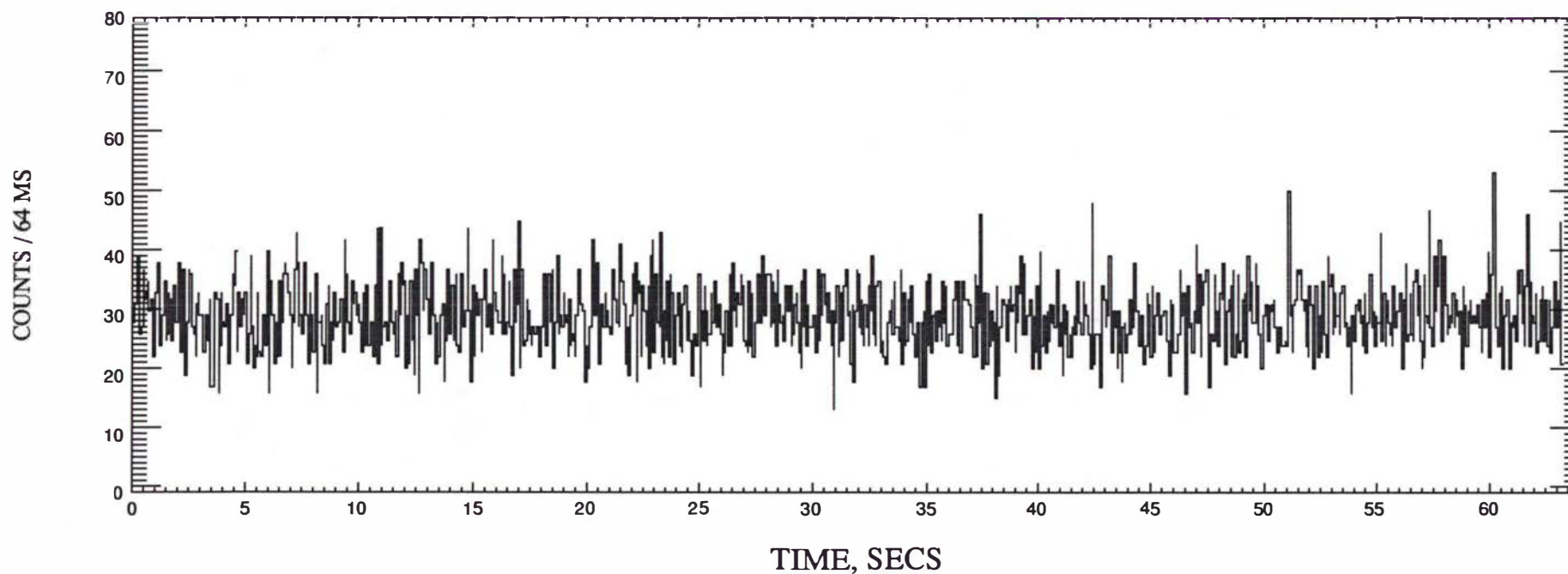
HUS 2A, MODE 1, NOT AVERAGED QEDR day 362, year 1995 to day 362, year 1995
CALIBRATION DATA INCLUDED

1/2/96



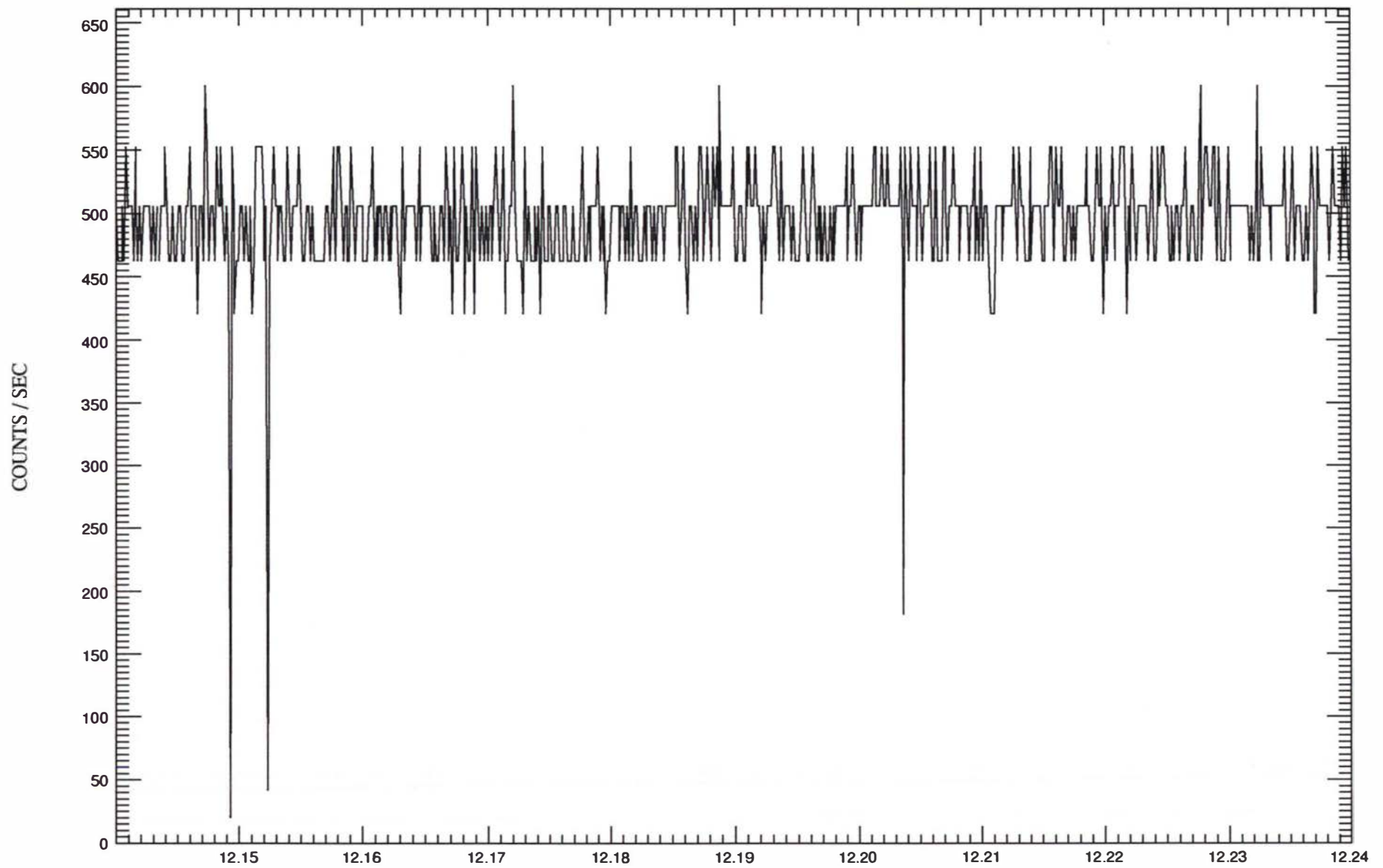
HUS 2A TRIGGERED DATA EDR day 362, year 1995
Burst Counter 6 at UT=12.187459725274 h=43874.855 s 12:11:14.855

4/1/96



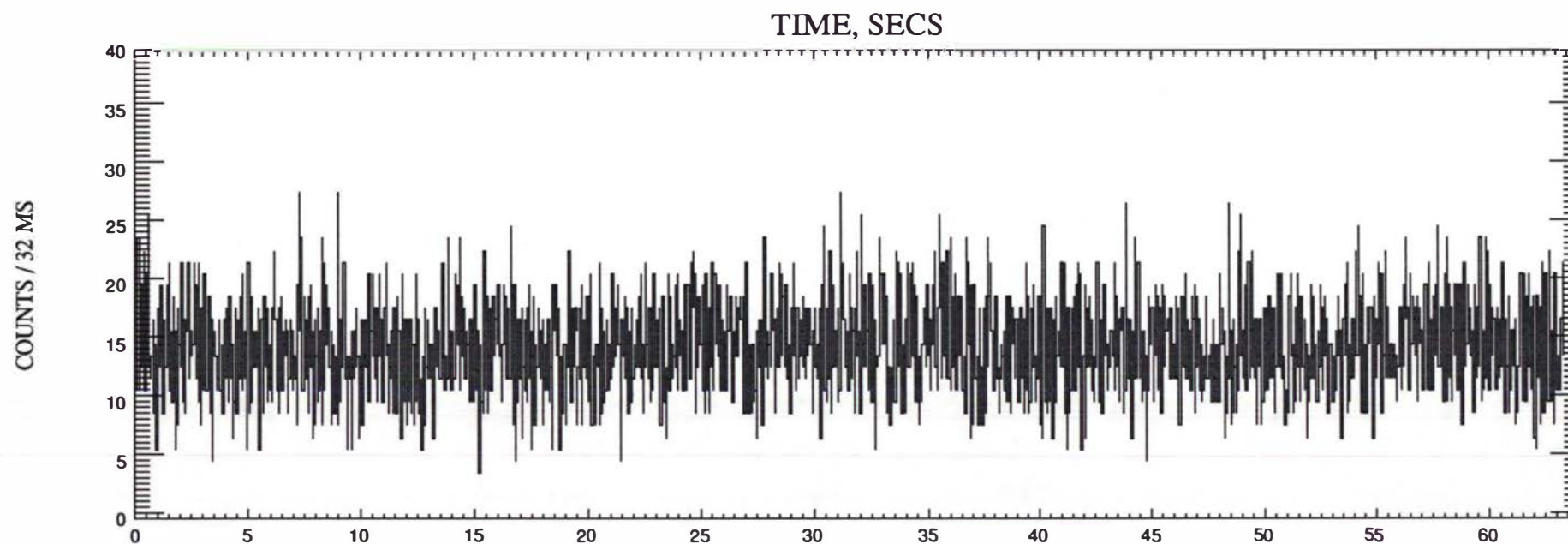
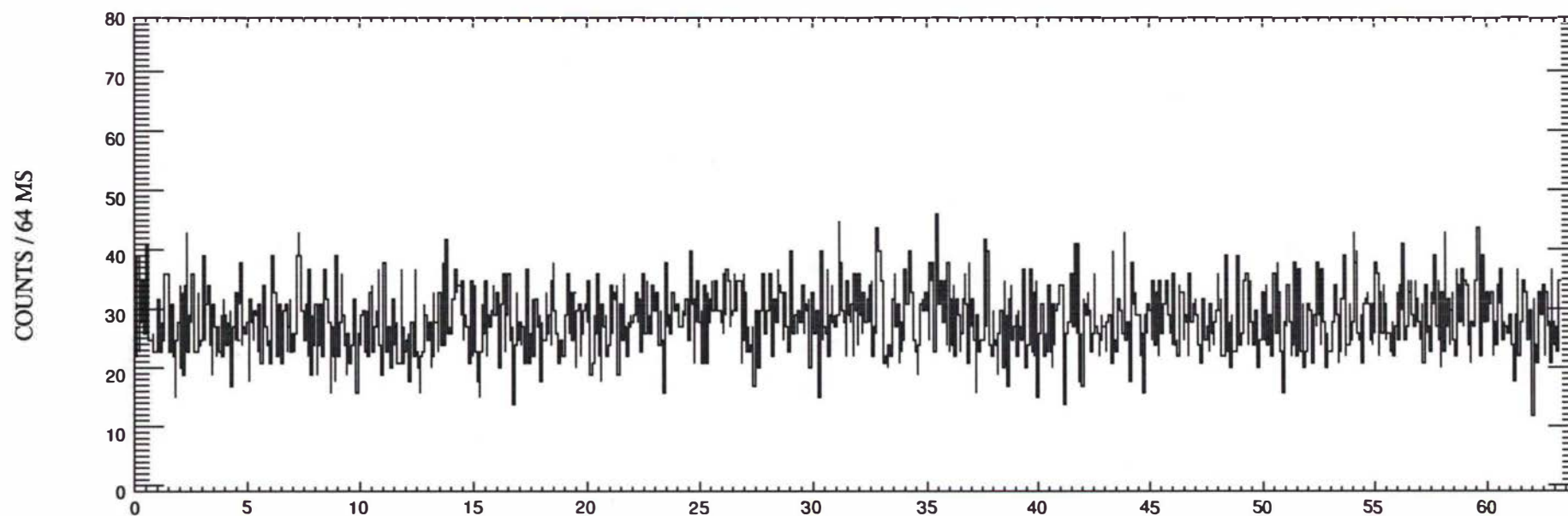
HUS 2A, MODE 1, NOT AVERAGED QEDR day 362, year 1995 to day 362, year 1995
CALIBRATION DATA INCLUDED

1/2/96



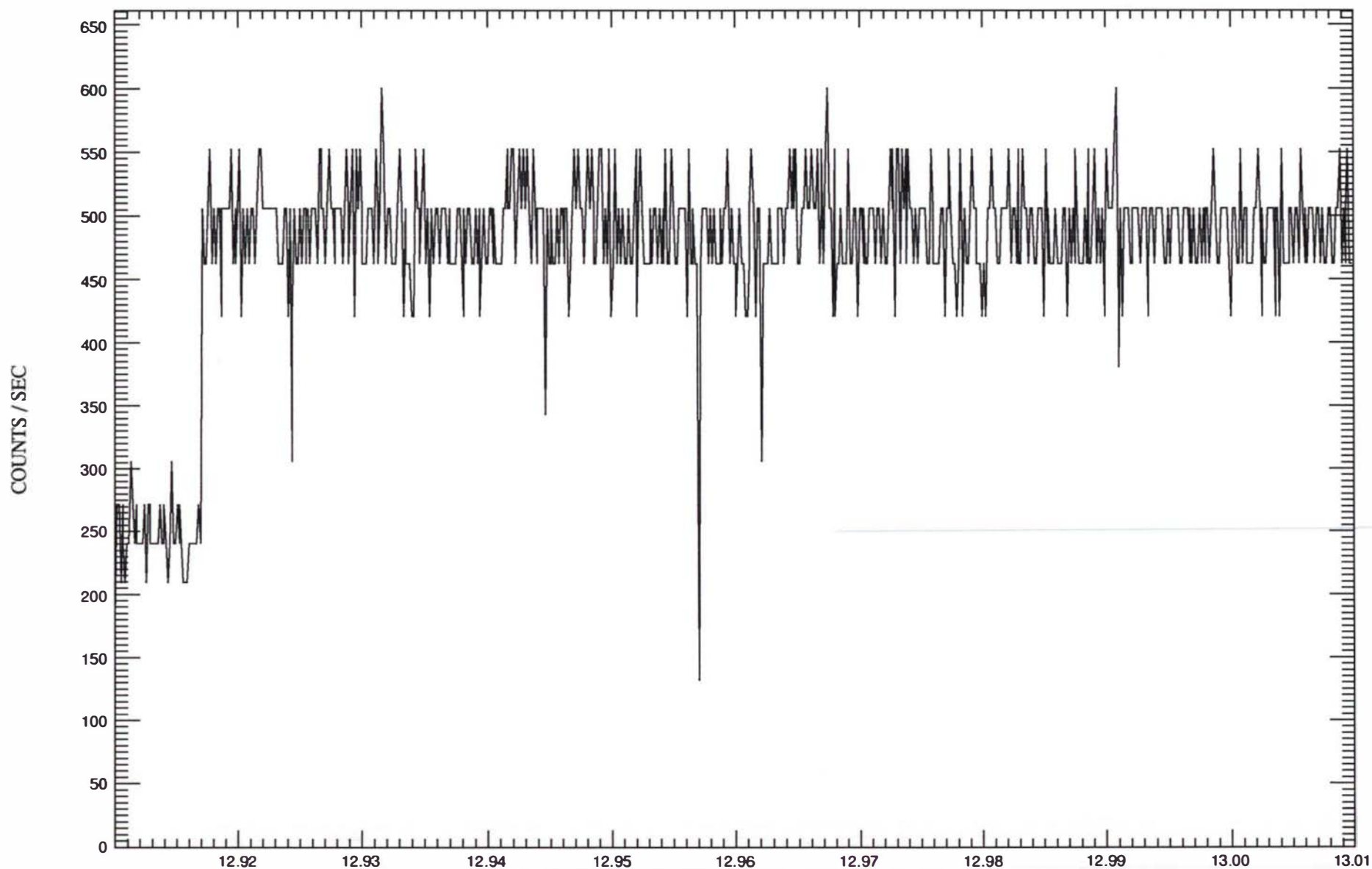
HUS 2A TRIGGERED DATA EDR day 362, year 1995
Burst Counter 7 at UT=12.959624354045 h=46654.648 s 12:57:34.648

4/1/96



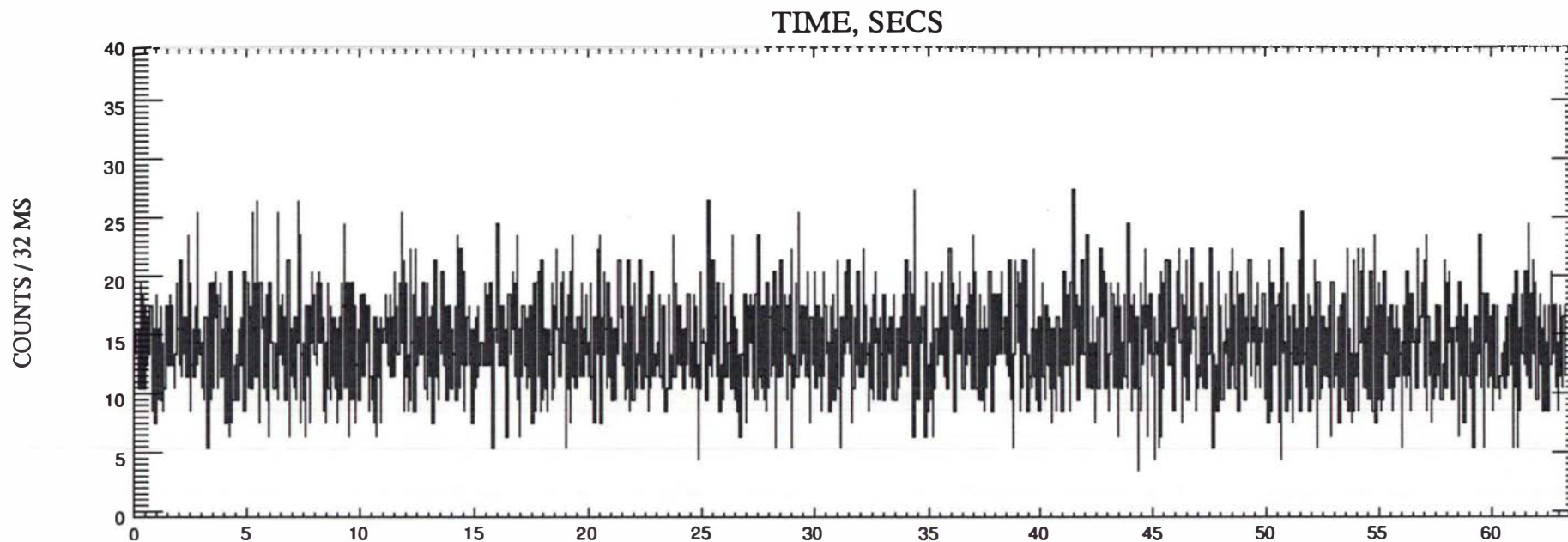
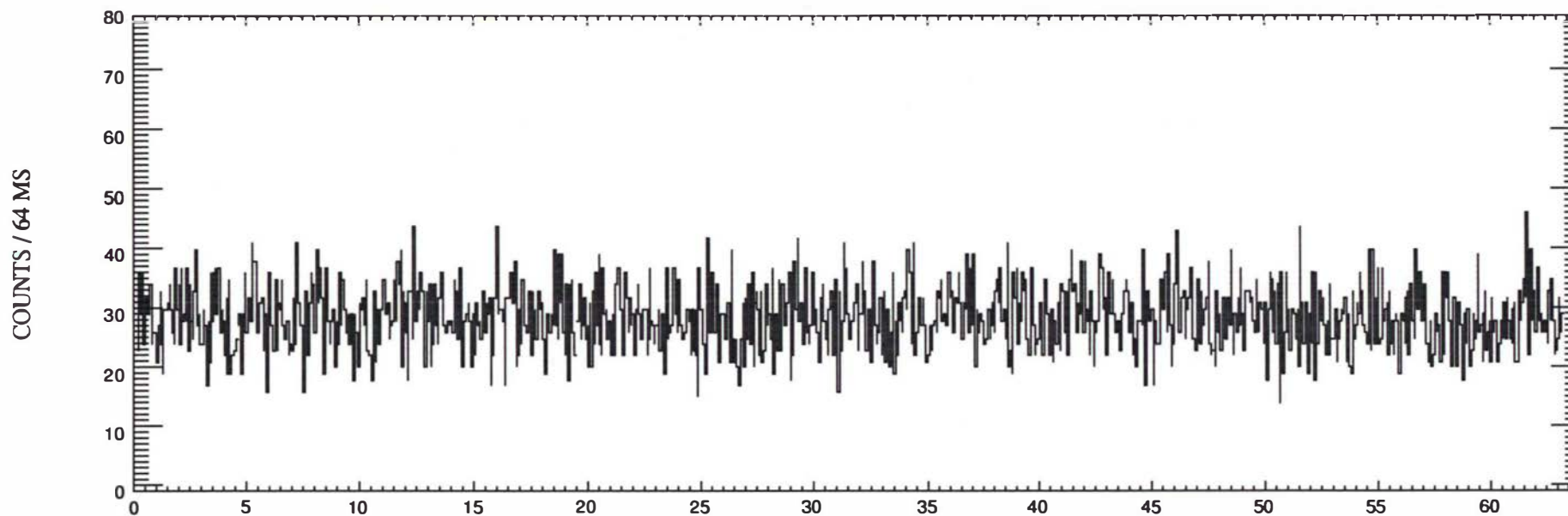
HUS 2A, MODE 1, NOT AVERAGED QEDR day 362, year 1995 to day 362, year 1995
CALIBRATION DATA INCLUDED

1/2/96



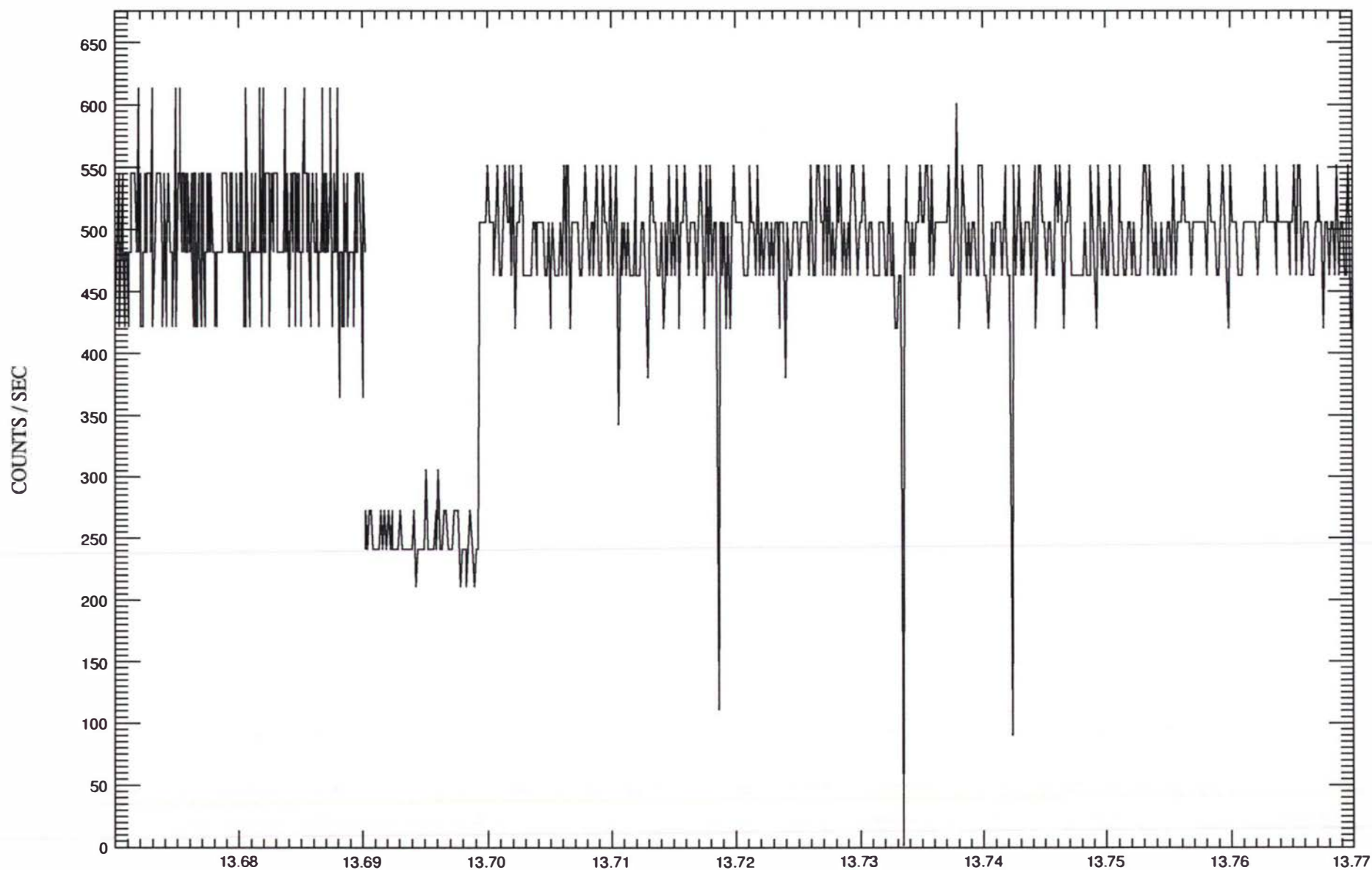
HUS 2A TRIGGERED DATA EDR day 362, year 1995
Burst Counter 8 at UT=13.718805041843 h=49387.698 s 13:43:07.698

4/1/96



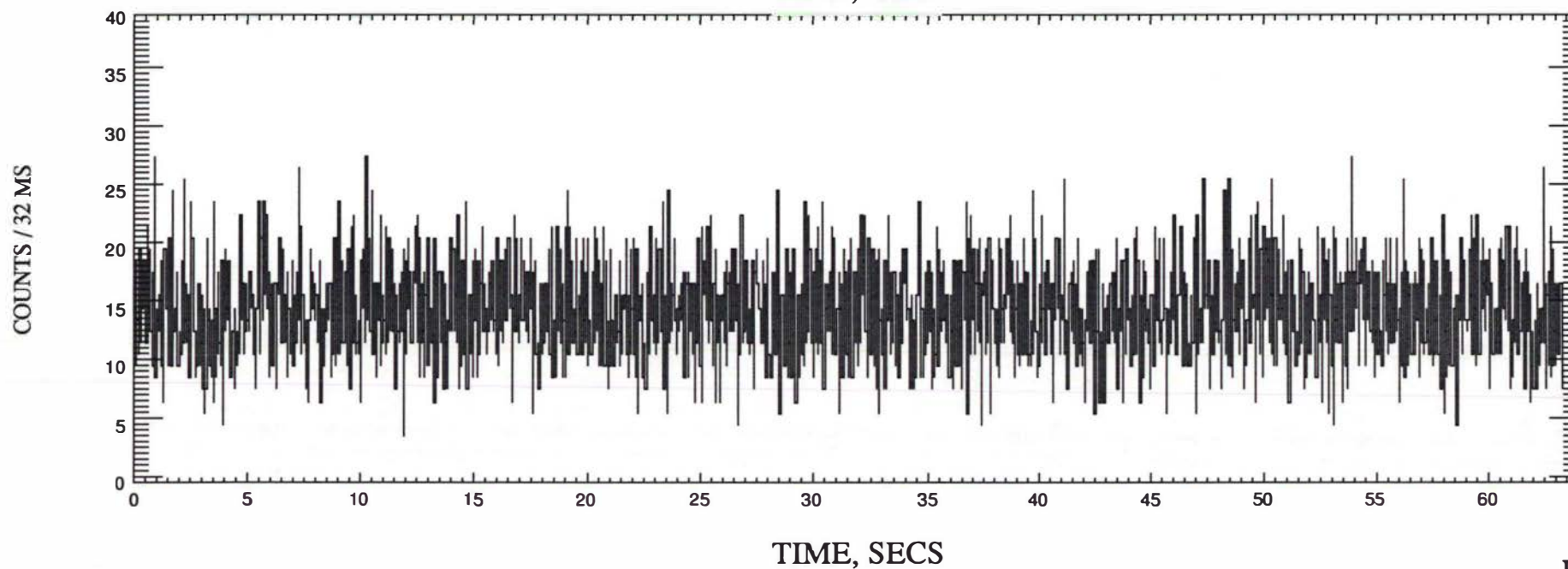
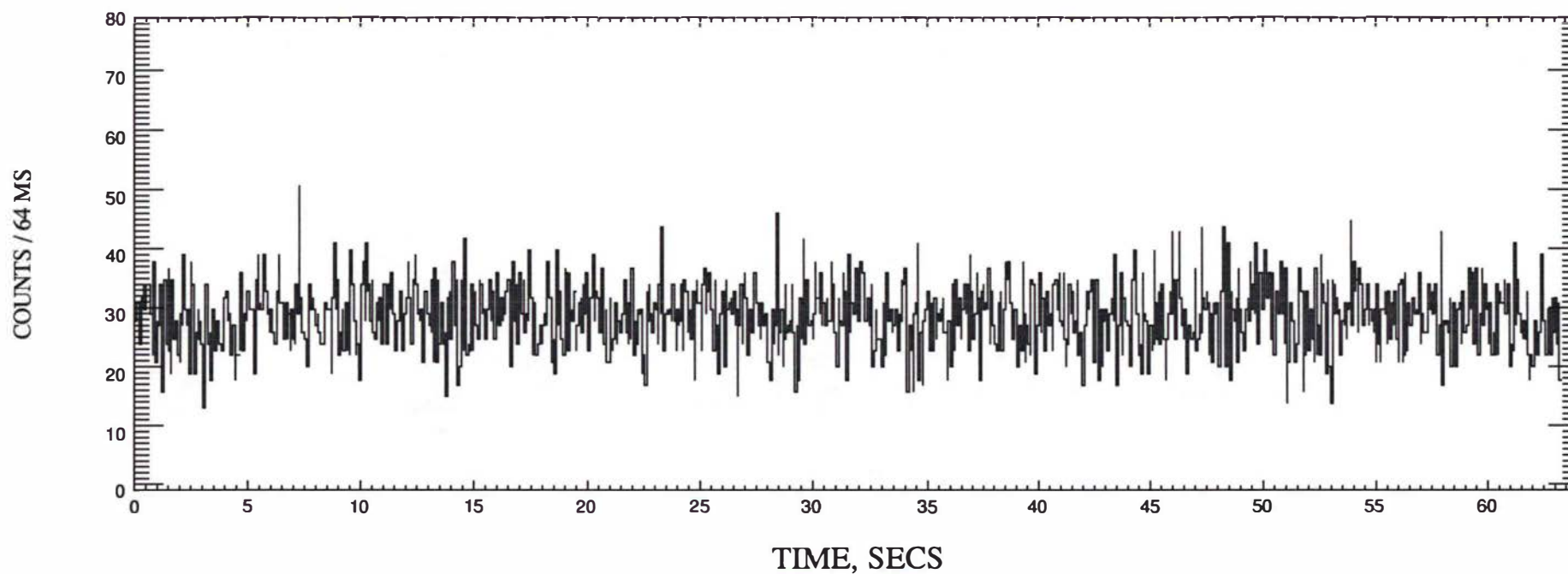
HUS 2A, MODE 1, NOT AVERAGED QEDR day 362, year 1995 to day 362, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A TRIGGERED DATA EDR day 362, year 1995
Burst Counter 10 at UT=15.268444900513 h=54966.402 s 15:16:06.402

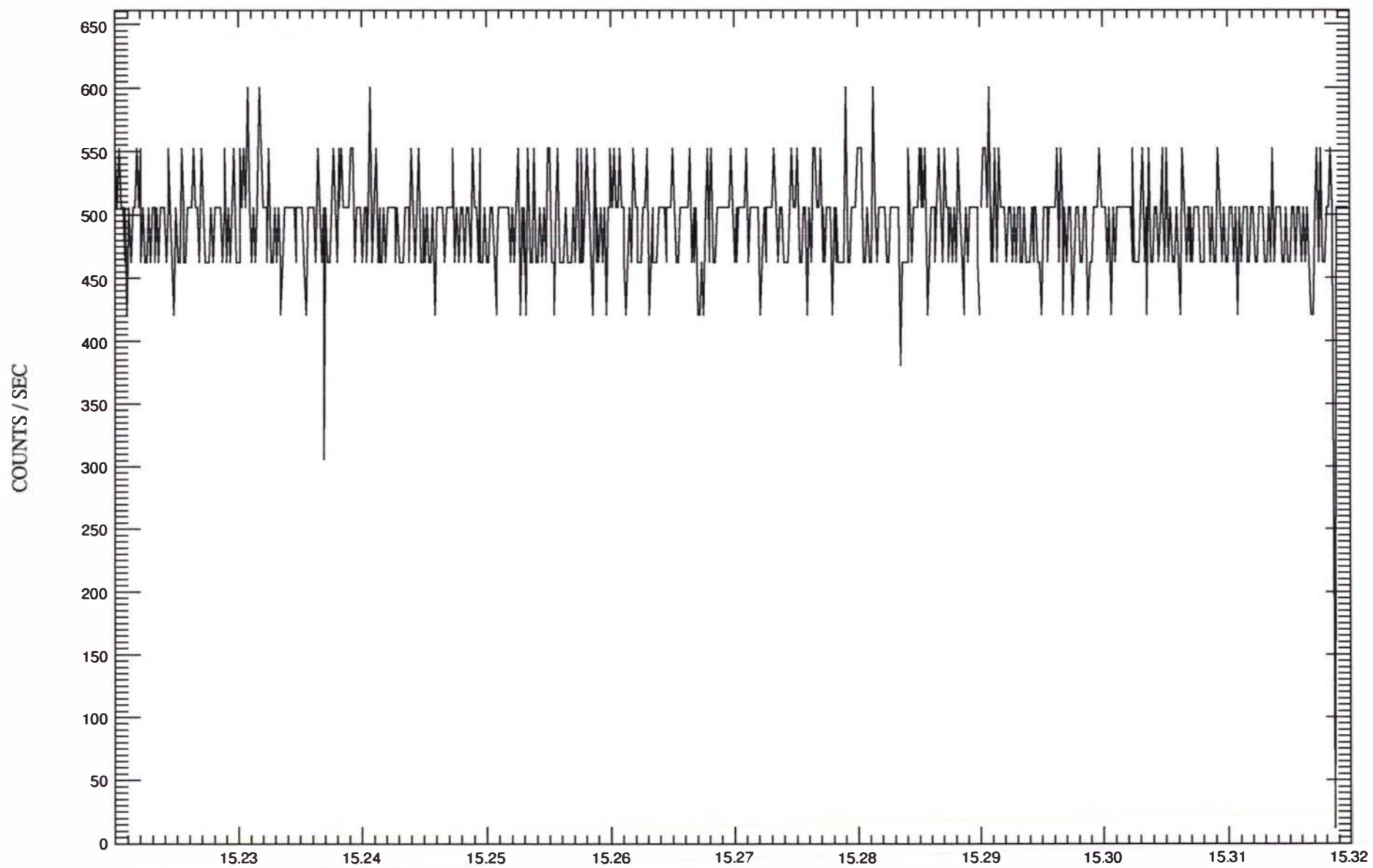
4/1/96



B# 5

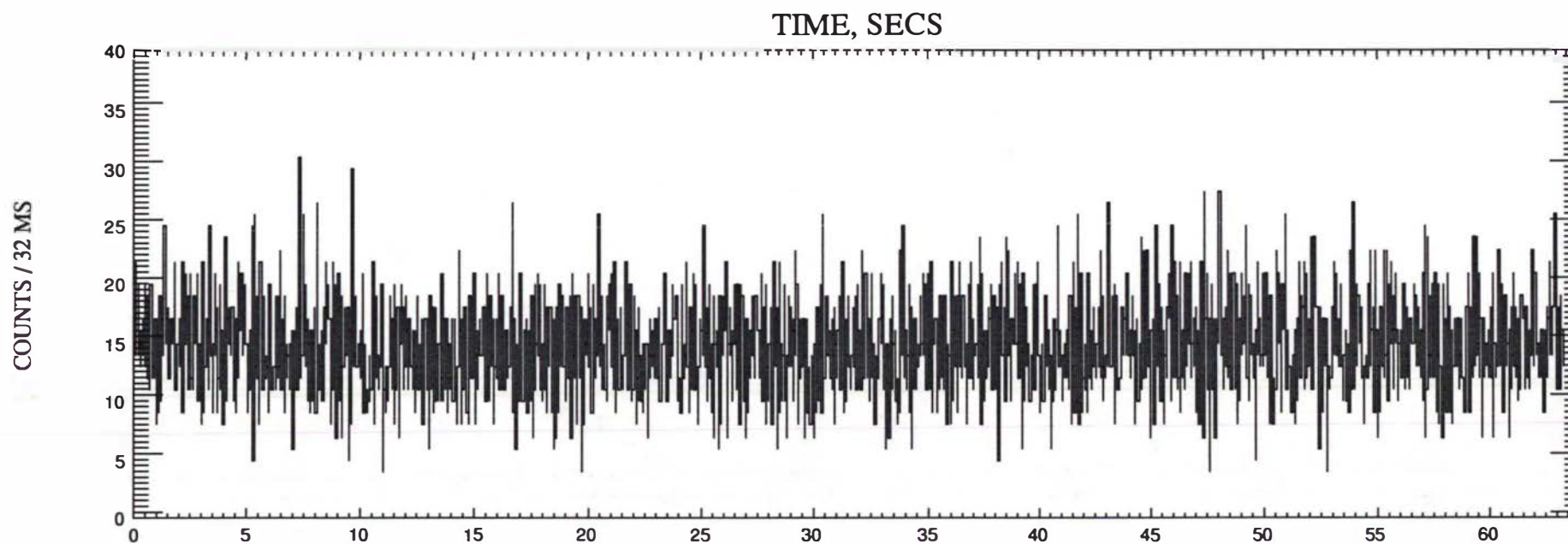
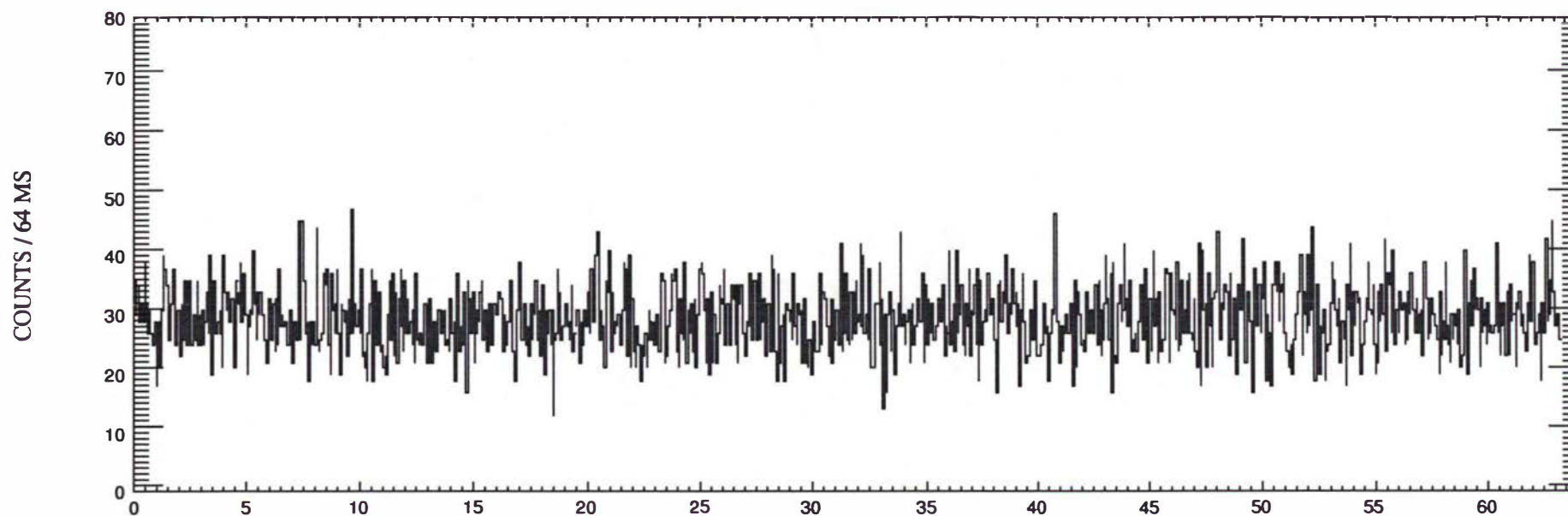
HUS 2A, MODE 1, NOT AVERAGED QEDR day 362, year 1995 to day 362, year 1995
CALIBRATION DATA INCLUDED

1/2/96



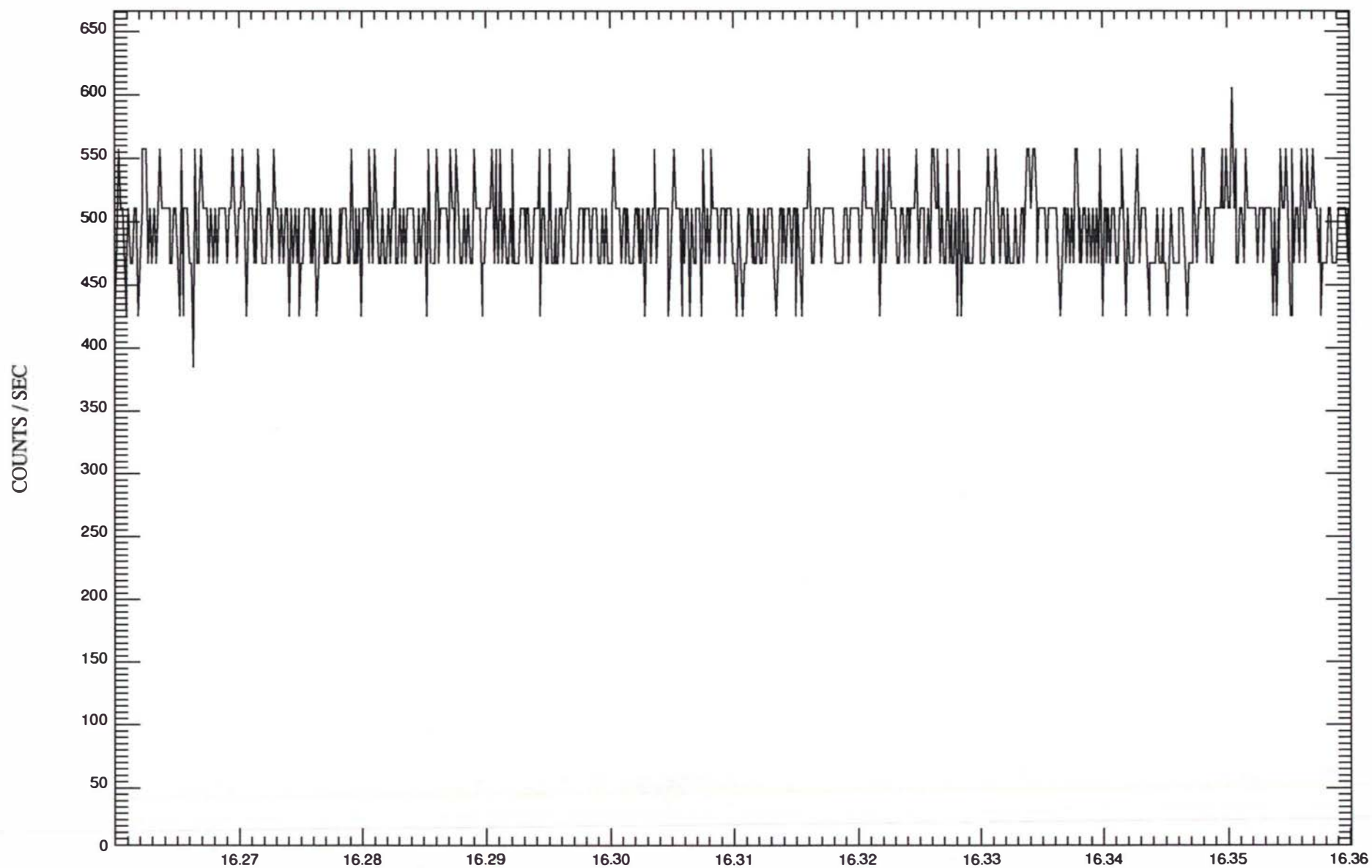
HUS 2A TRIGGERED DATA EDR day 362, year 1995
Burst Counter 11 at UT=16.309293314616 h=58713.456 s 16:18:33.456

4/1/96



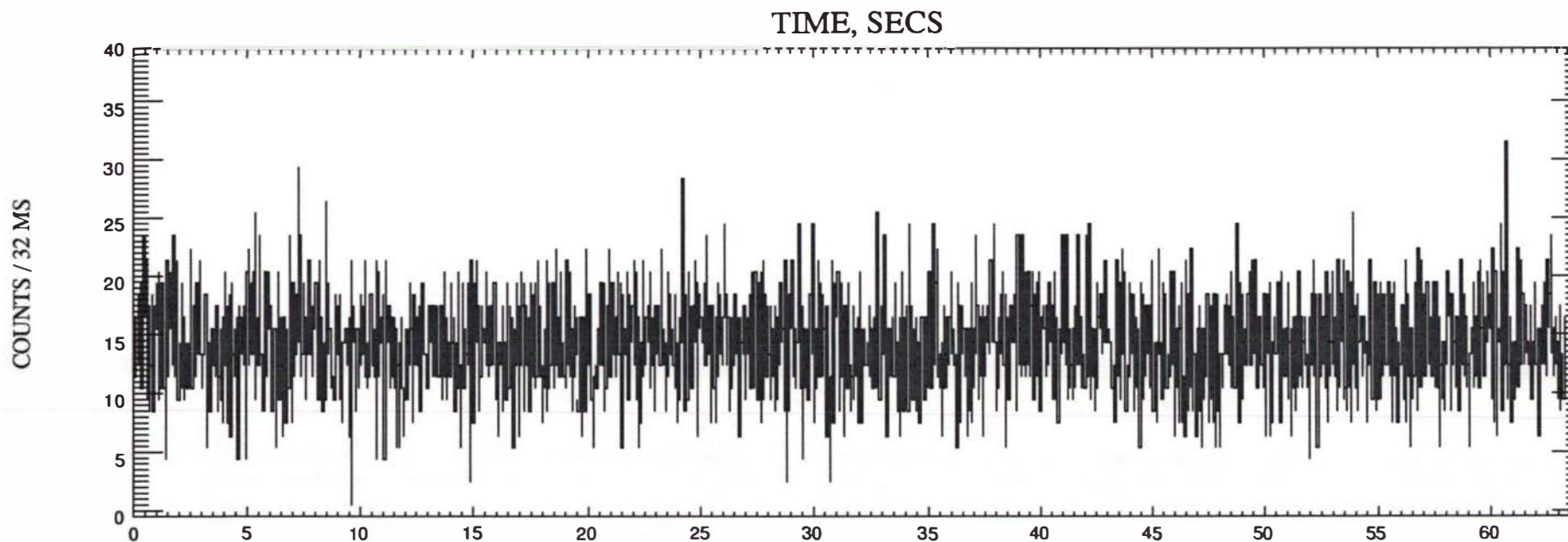
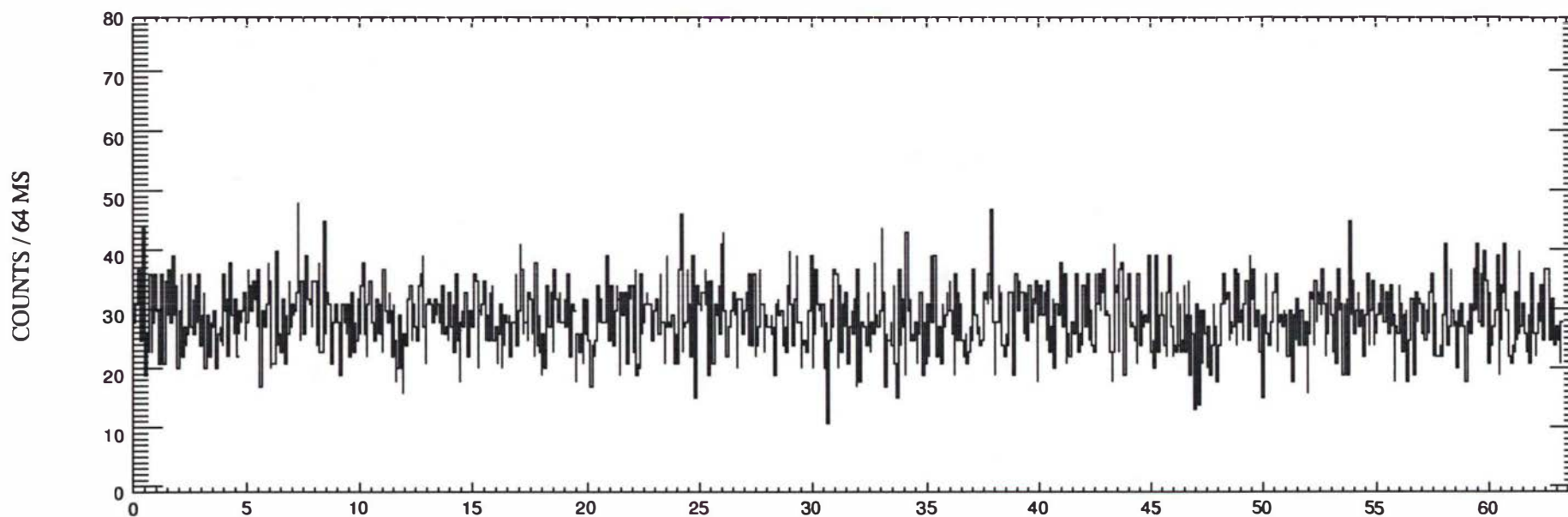
HUS 2A, MODE 1, NOT AVERAGED QEDR day 362, year 1995 to day 362, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A TRIGGERED DATA EDR day 362, year 1995
Burst Counter 12 at UT=17.081909332275 h=61494.874 s 17:04:54.874

4/1/96

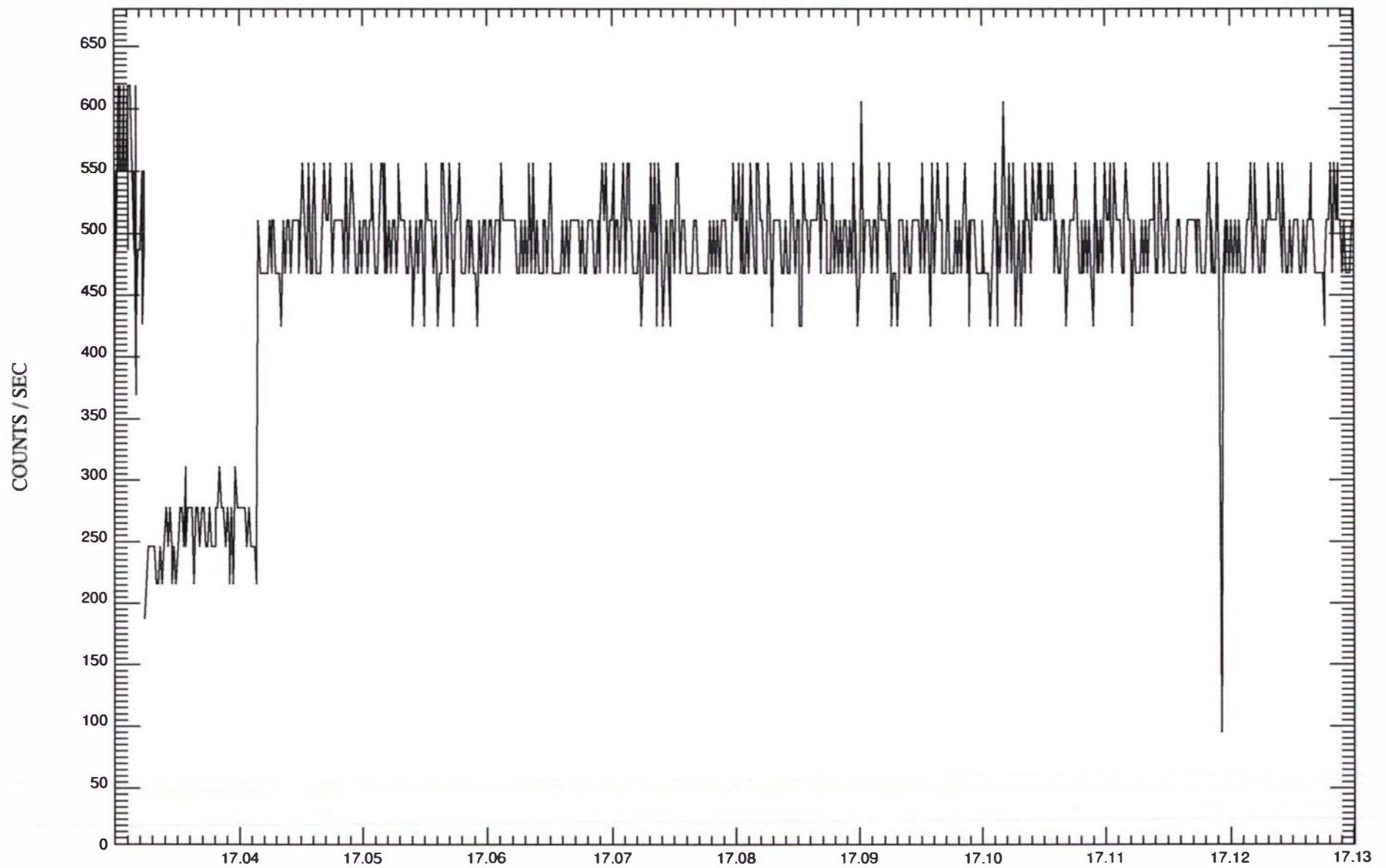


TIME, SECS

B# 7

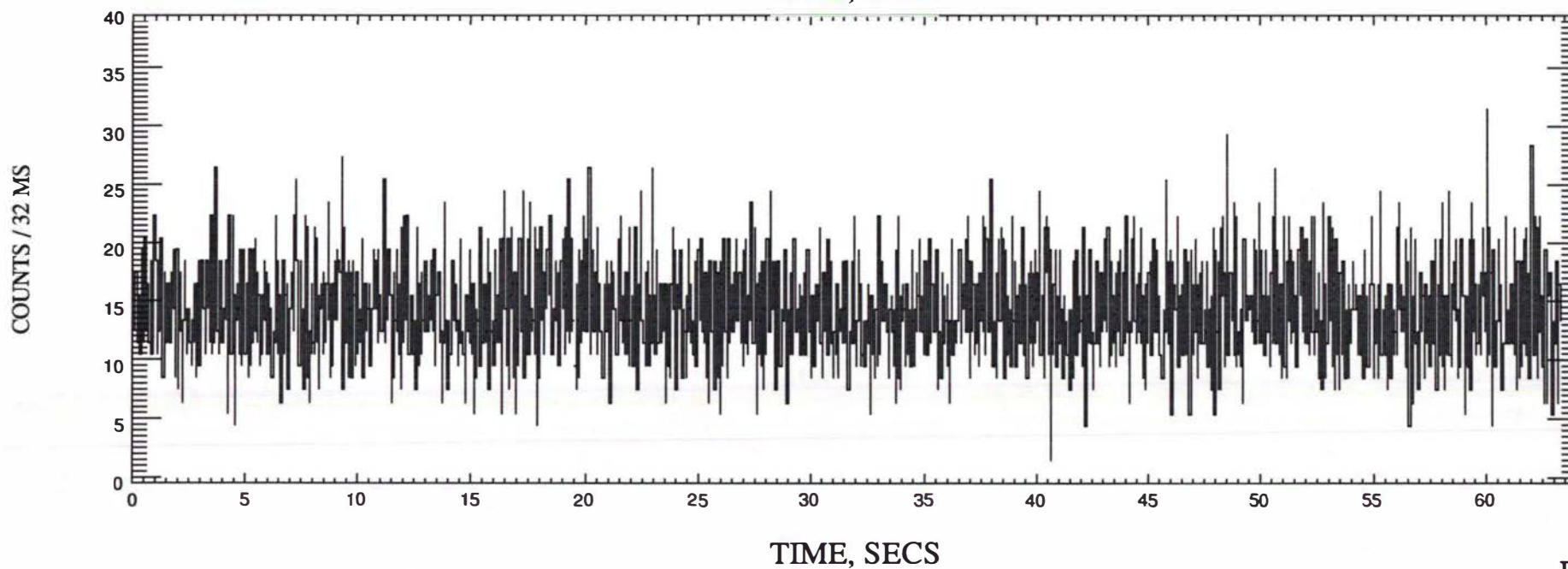
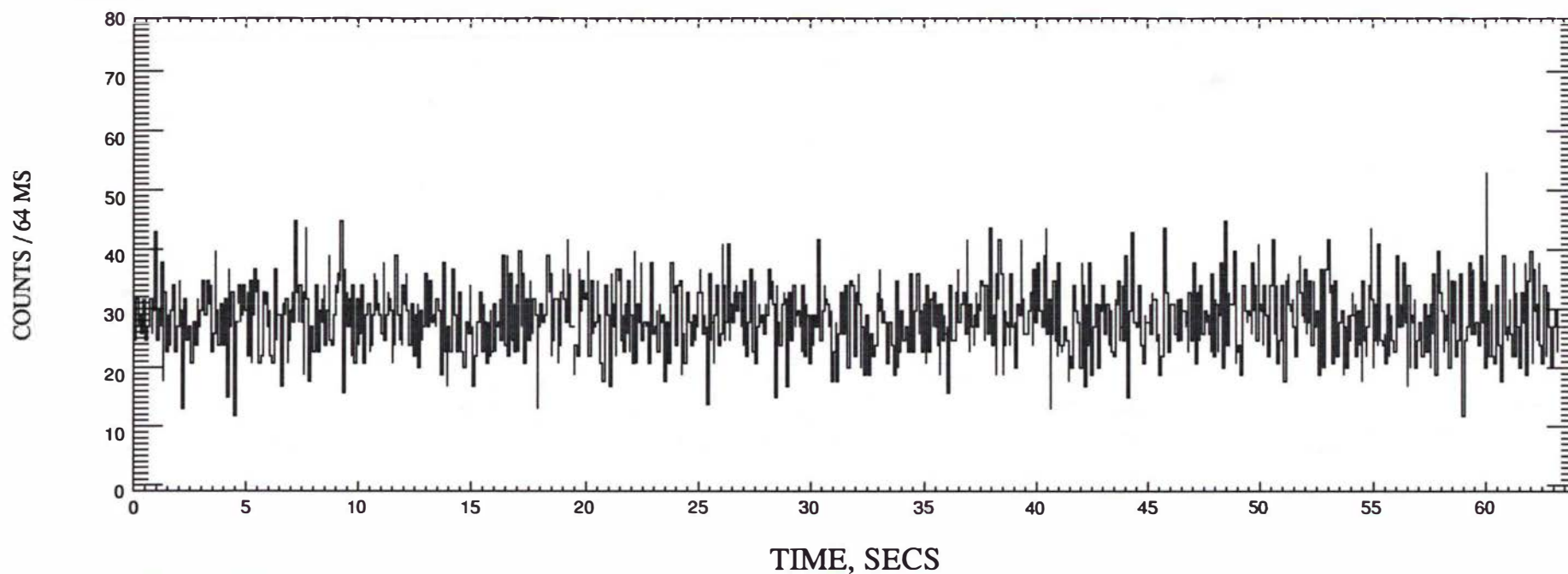
HUS 2A, MODE 1, NOT AVERAGED QEDR day 362, year 1995 to day 362, year 1995
CALIBRATION DATA INCLUDED

1/2/96



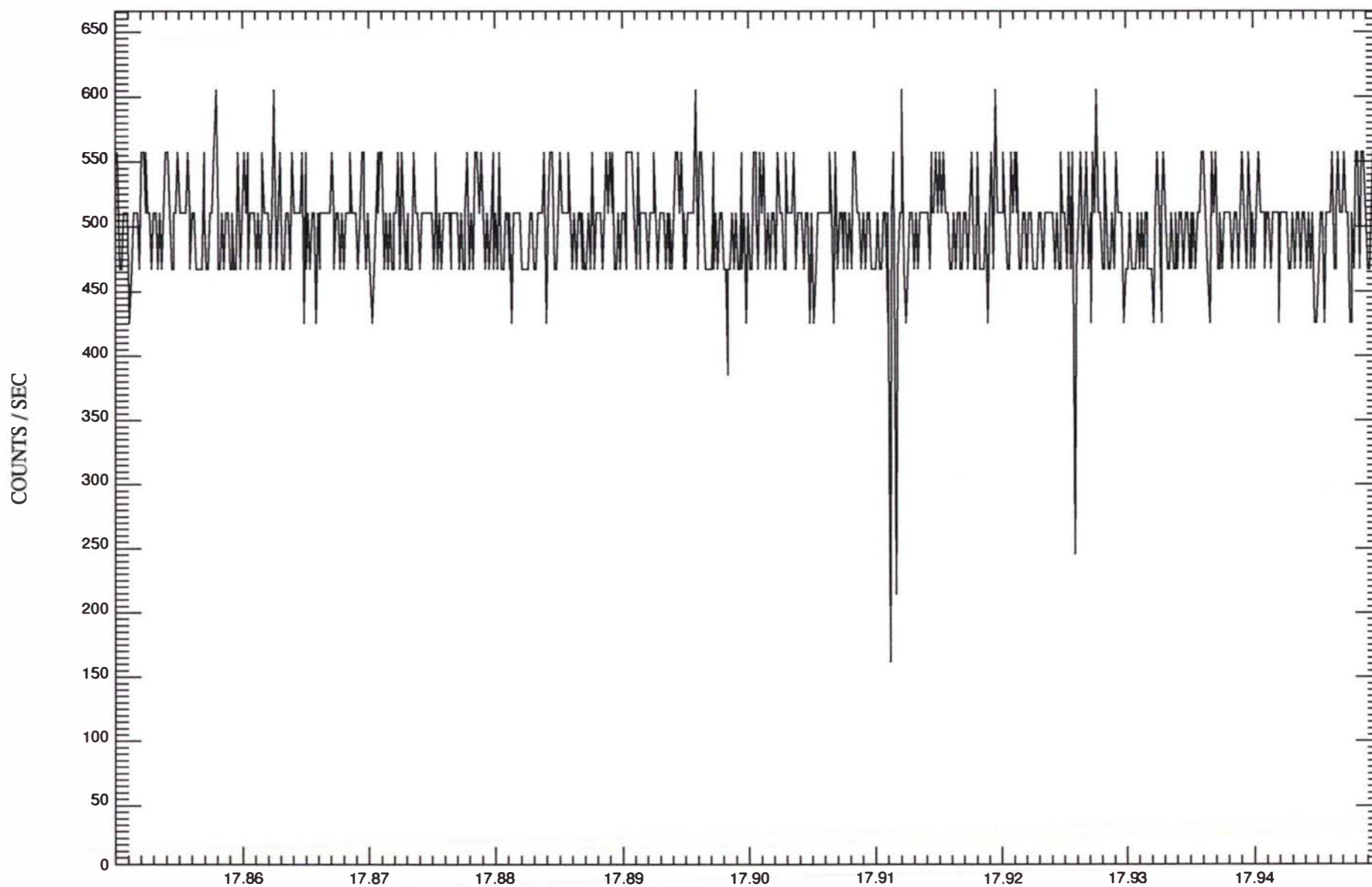
HUS 2A TRIGGERED DATA EDR day 362, year 1995
Burst Counter 13 at UT=17.903137537638 h=64451.295 s 17:54:11.295

4/1/96



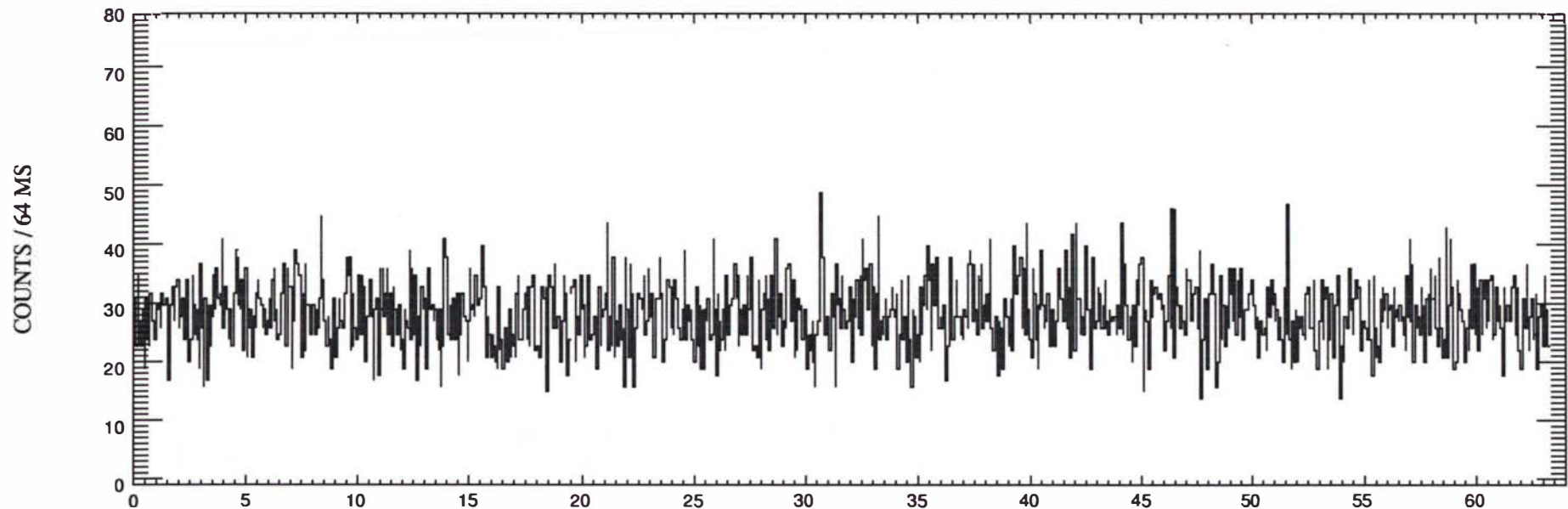
HUS 2A, MODE 1, NOT AVERAGED QEDR day 362, year 1995 to day 362, year 1995
CALIBRATION DATA INCLUDED

1/2/96

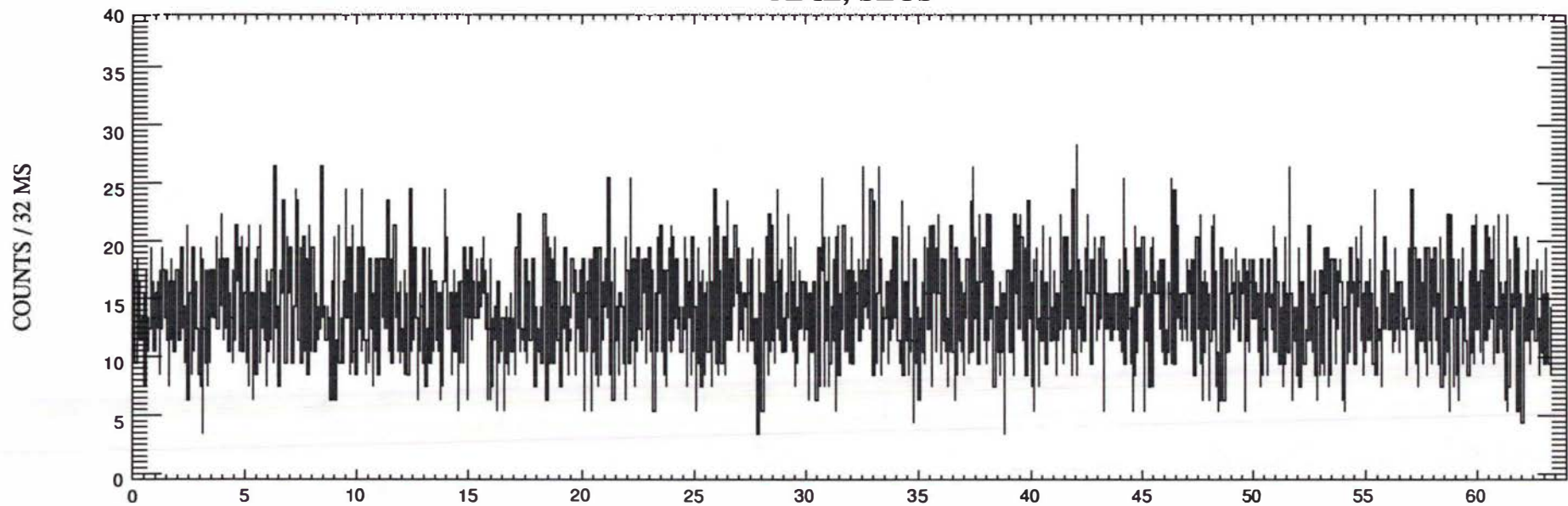


HUS 2A TRIGGERED DATA EDR day 362, year 1995
Burst Counter 14 at UT=18.986452310350 h=68351.228 s 18:59:11.228

4/1/96



TIME, SECS

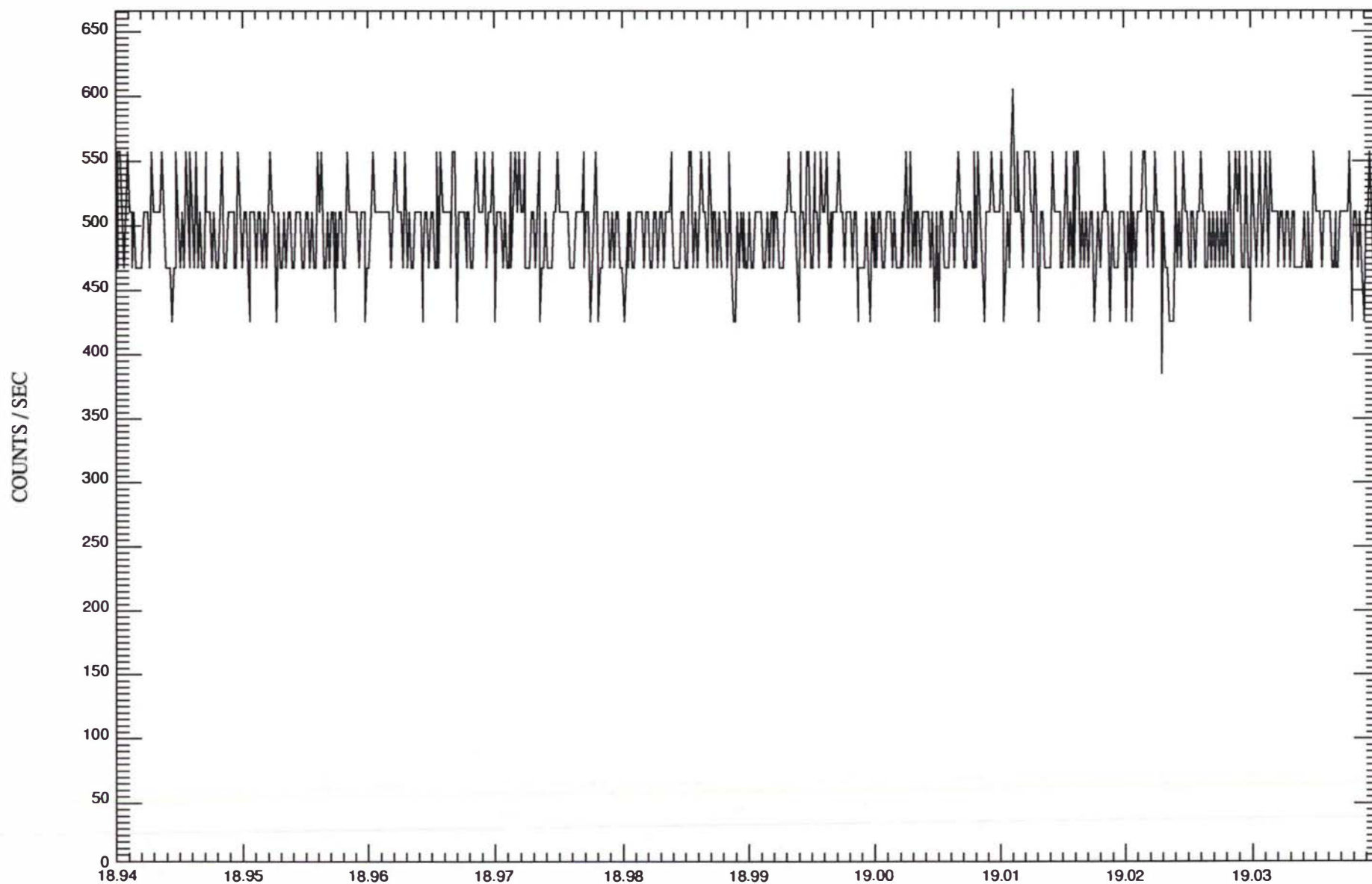


TIME, SECS

B# 9

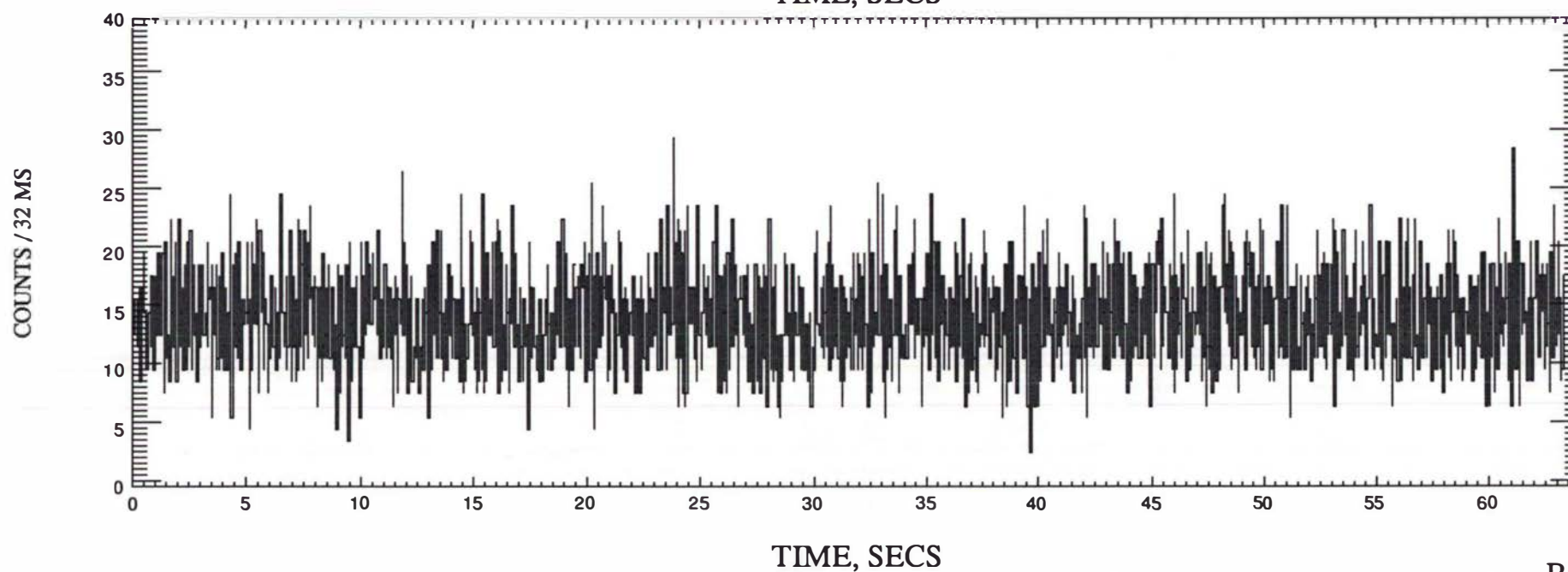
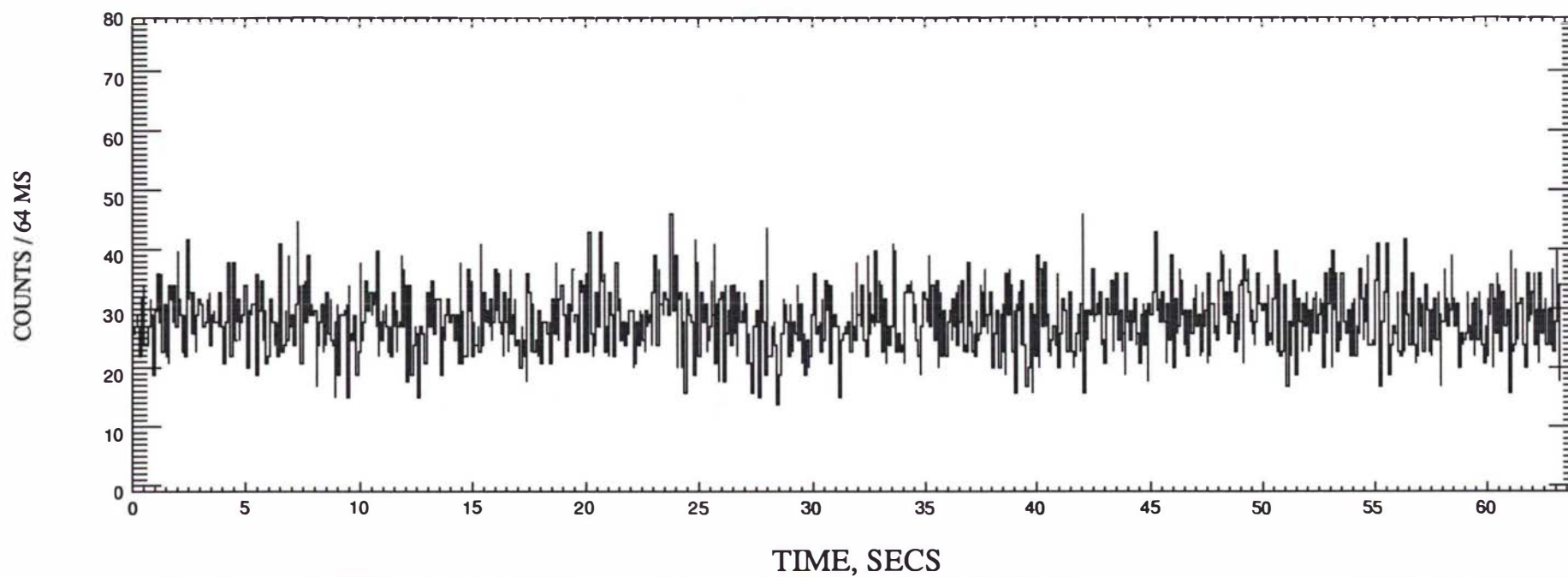
HUS 2A, MODE 1, NOT AVERAGED QEDR day 362, year 1995 to day 362, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A TRIGGERED DATA EDR day 362, year 1995
Burst Counter 15 at UT=19.911535758972 h=71681.529 s 19:54:41.529

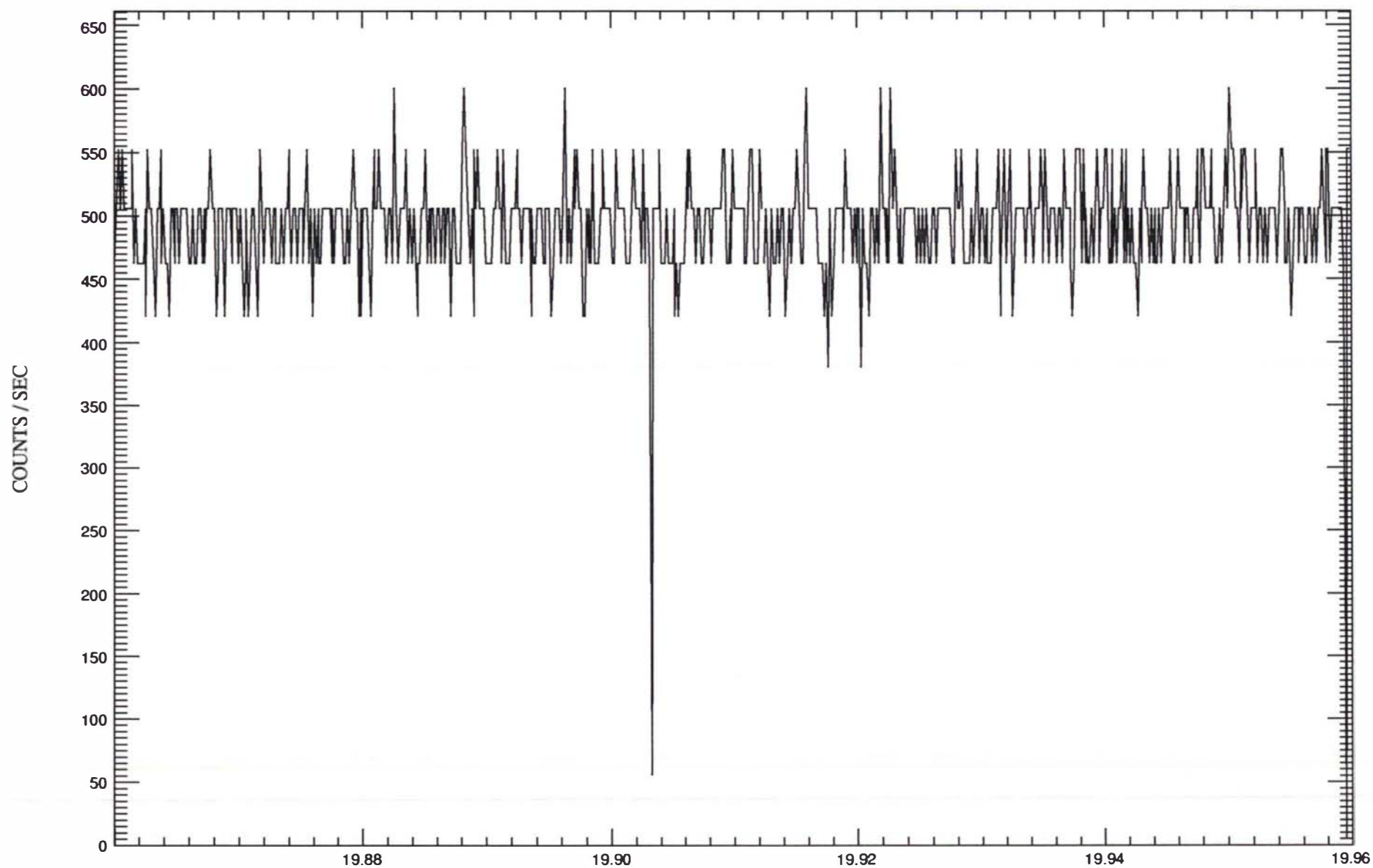
4/1/96



B# 10

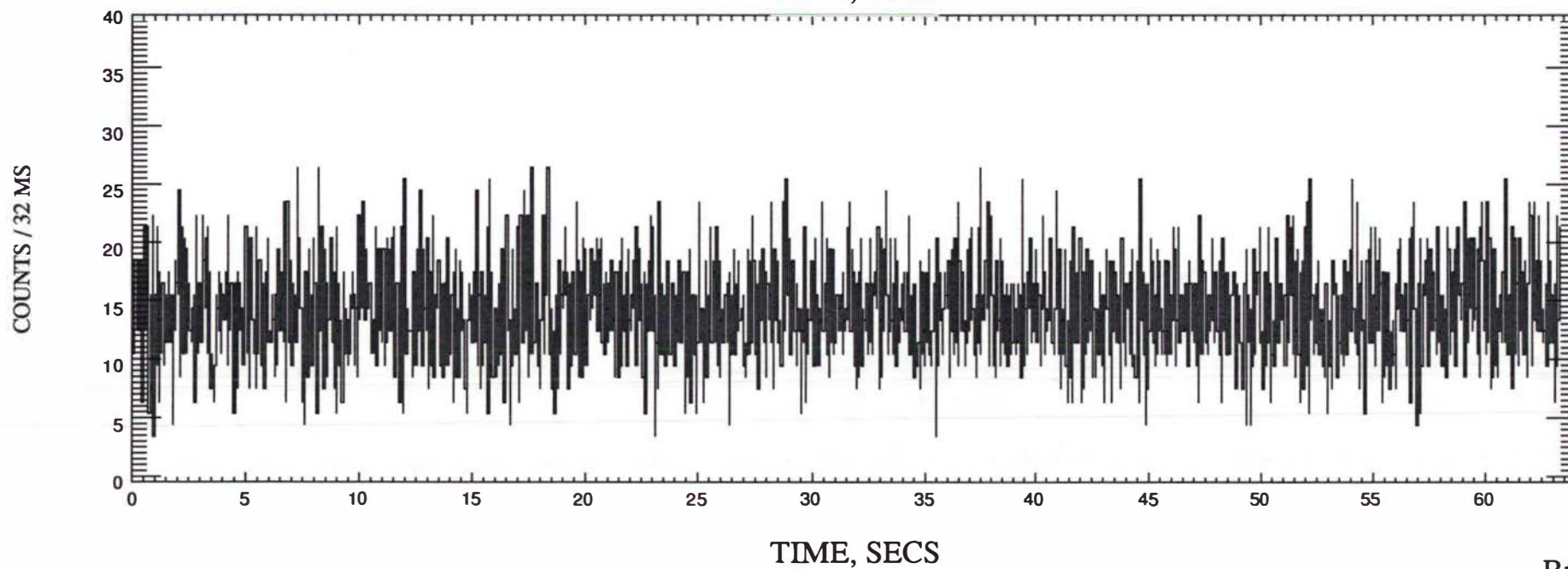
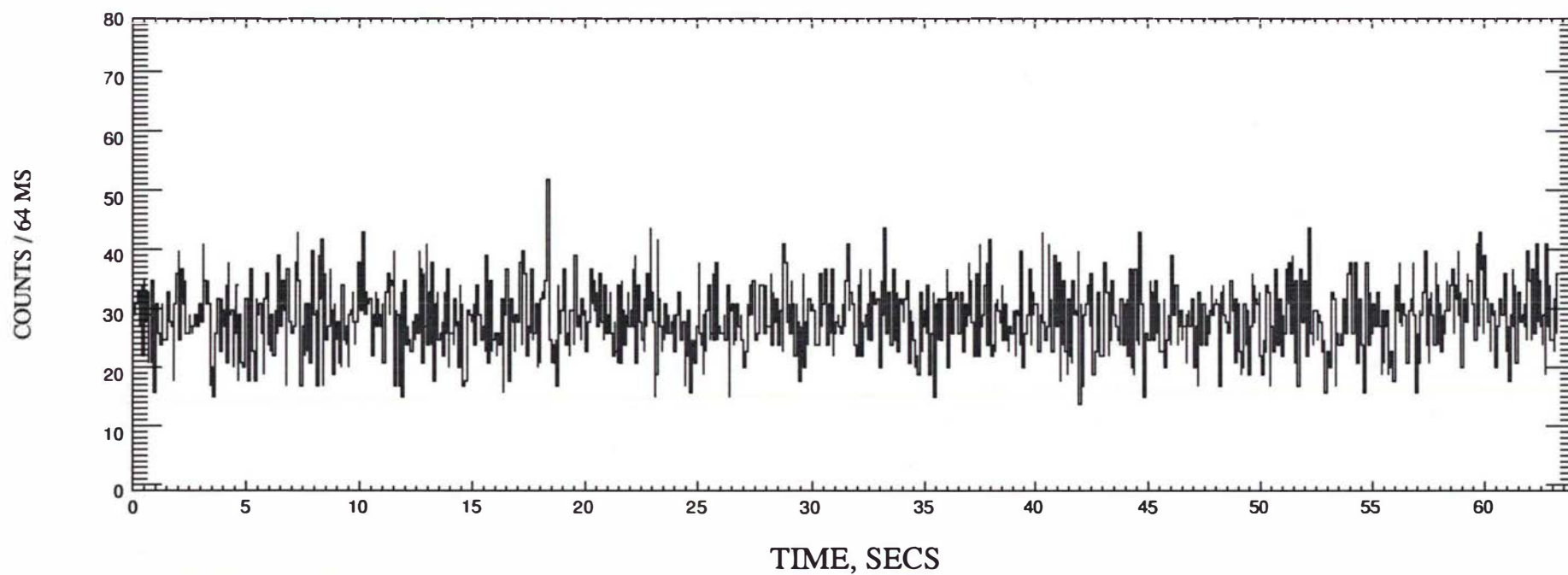
HUS 2A, MODE 1, NOT AVERAGED QEDR day 362, year 1995 to day 362, year 1995
CALIBRATION DATA INCLUDED

1/2/96



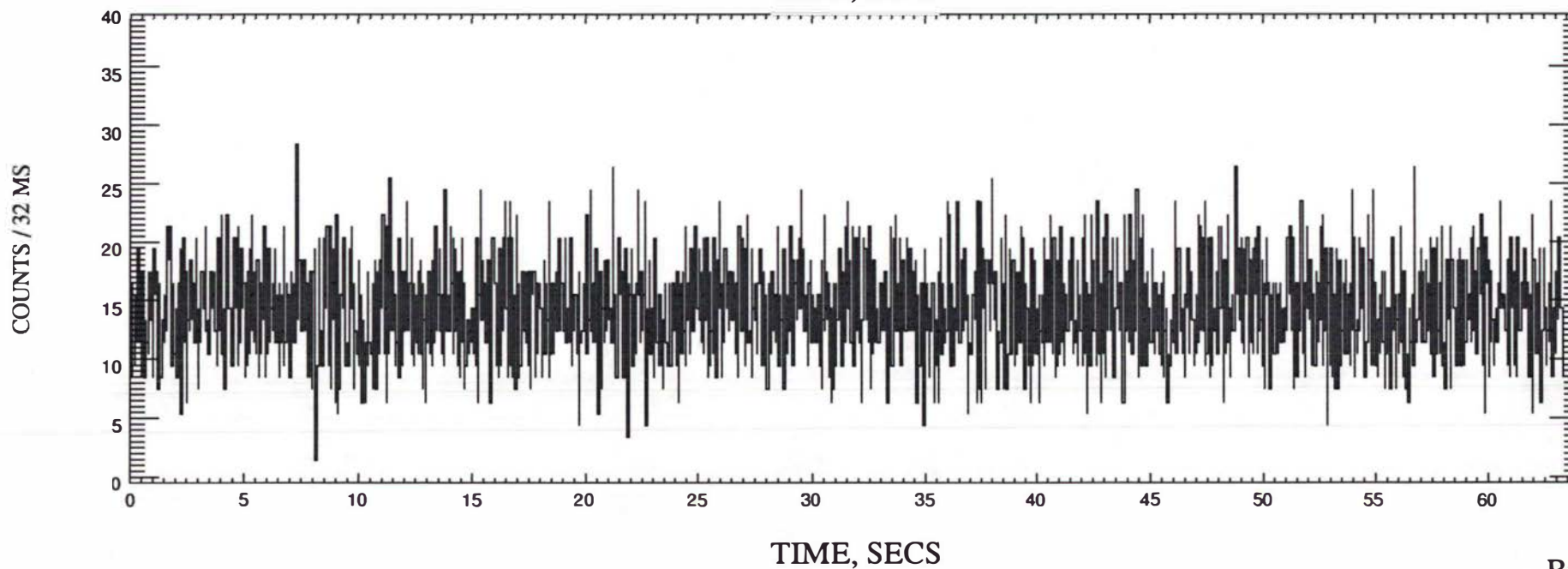
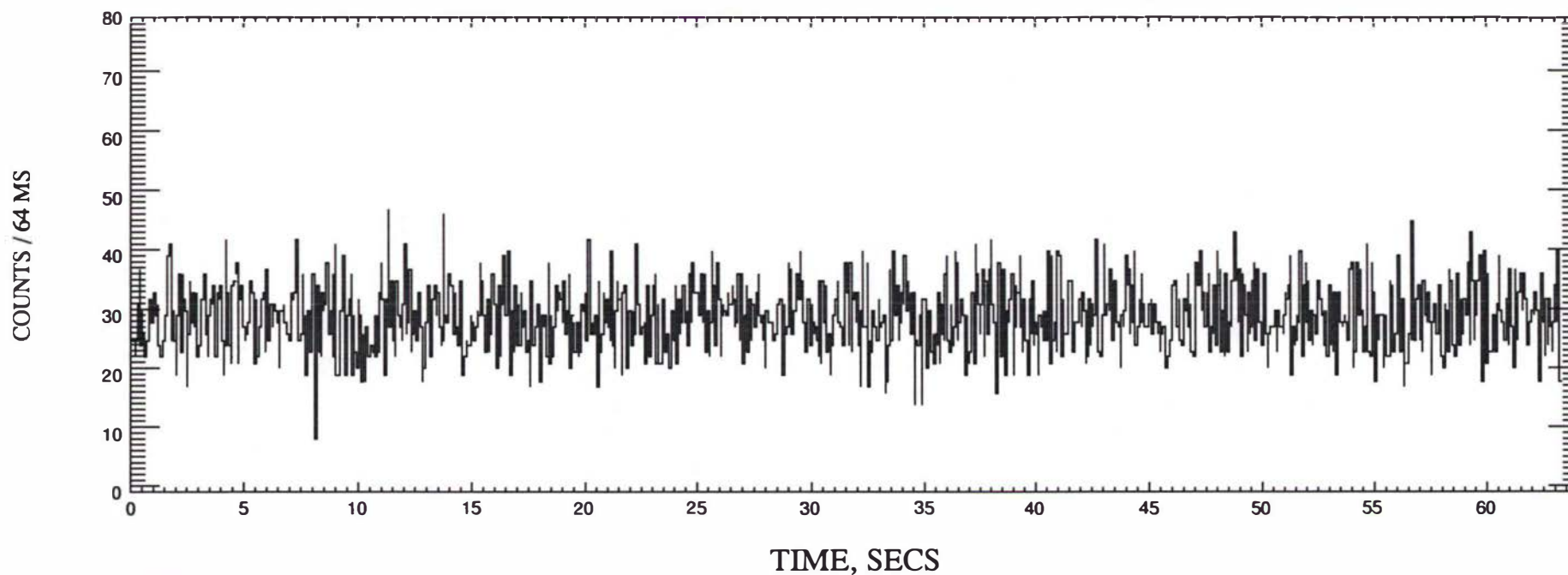
HUS 2A TRIGGERED DATA EDR day 362, year 1995
Burst Counter 0 at UT=20.789222297668 h=74841.200 s 20:47:21.200

4/1/96



HUS 2A TRIGGERED DATA EDR day 362, year 1995
Burst Counter 1 at UT=22.180876596239 h=79851.156 s 22:10:51.156

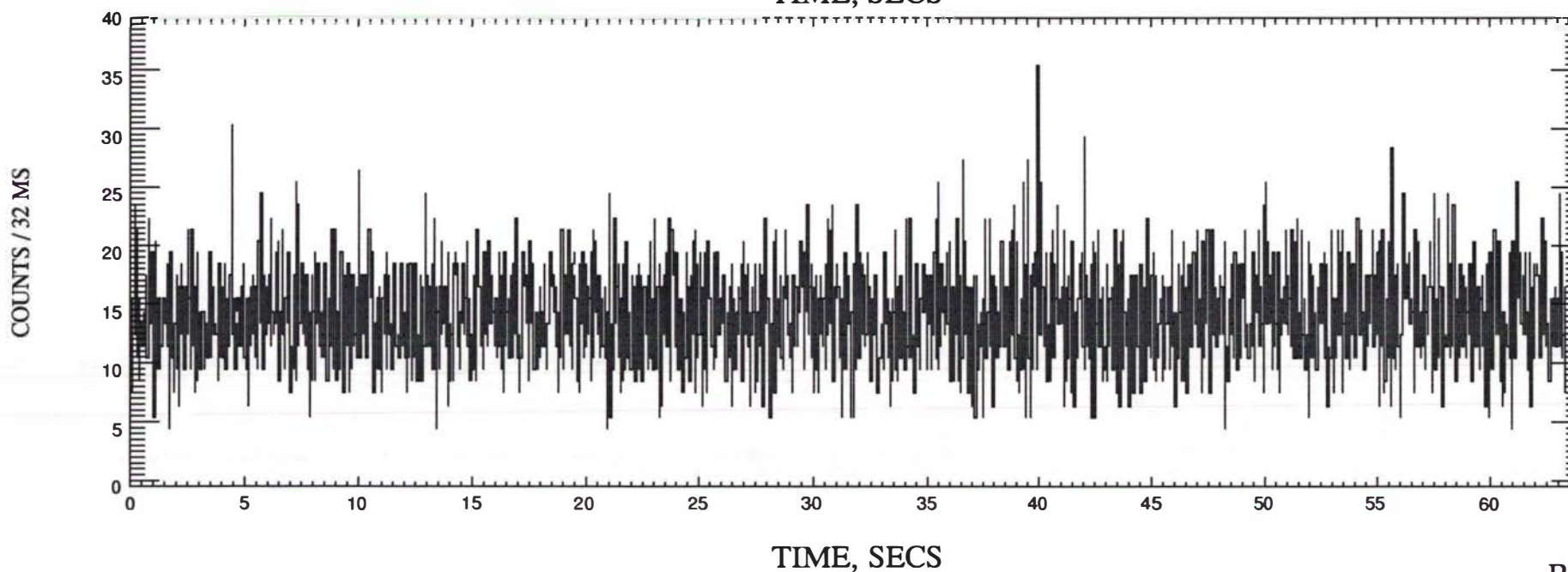
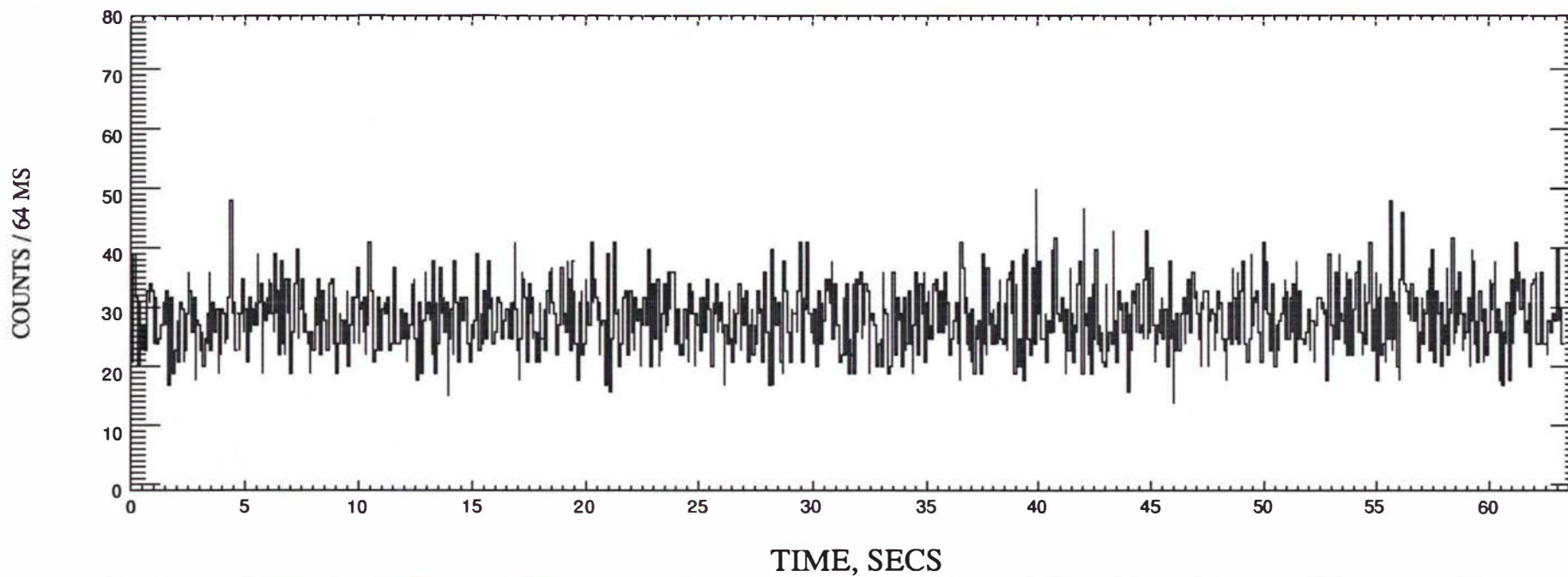
4/1/96



B# 12

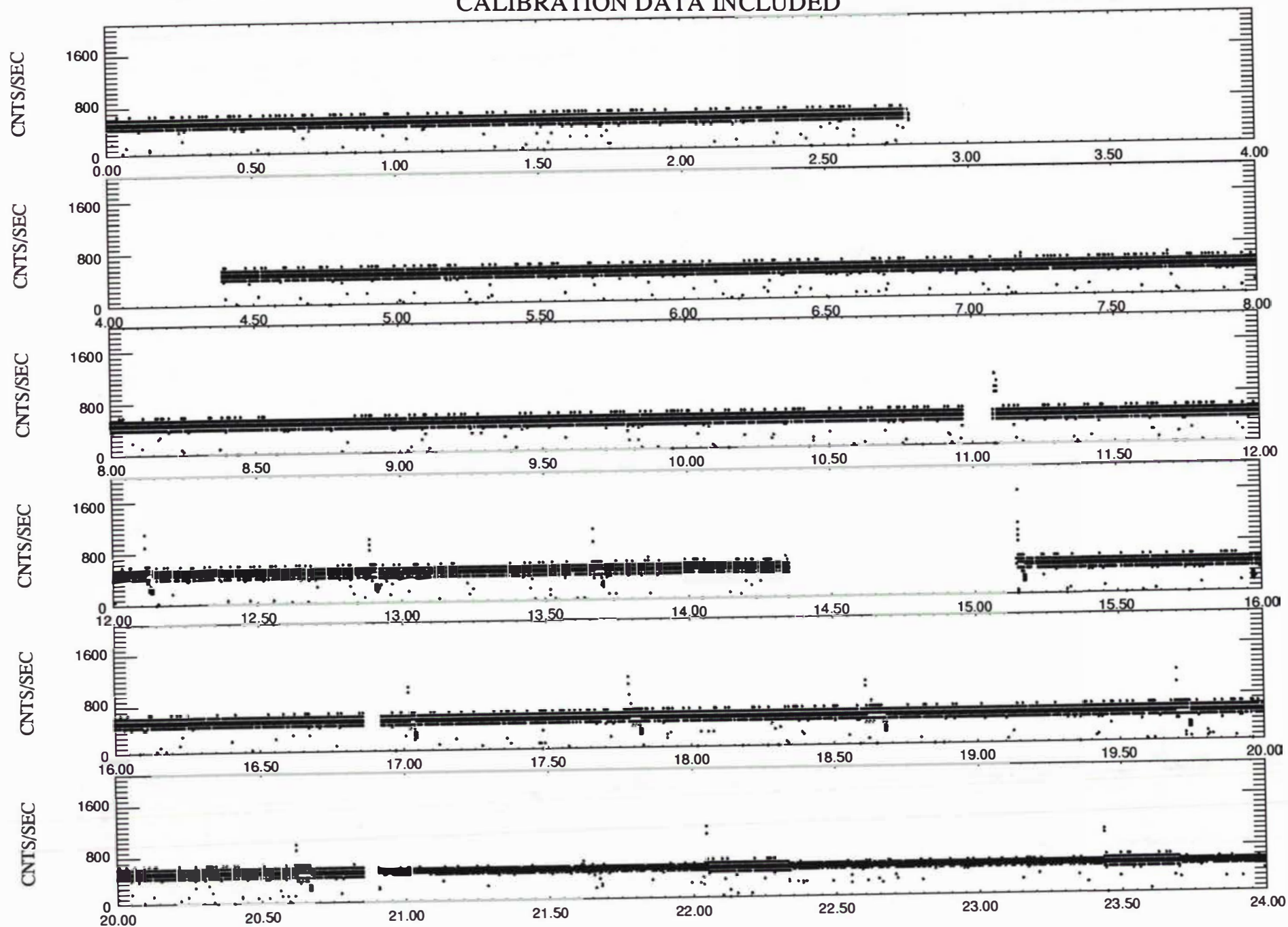
HUS 2A TRIGGERED DATA EDR day 362, year 1995
Burst Counter 2 at UT=23.544507098728 h=84760.226 s 23:32:40.226

4/1/96

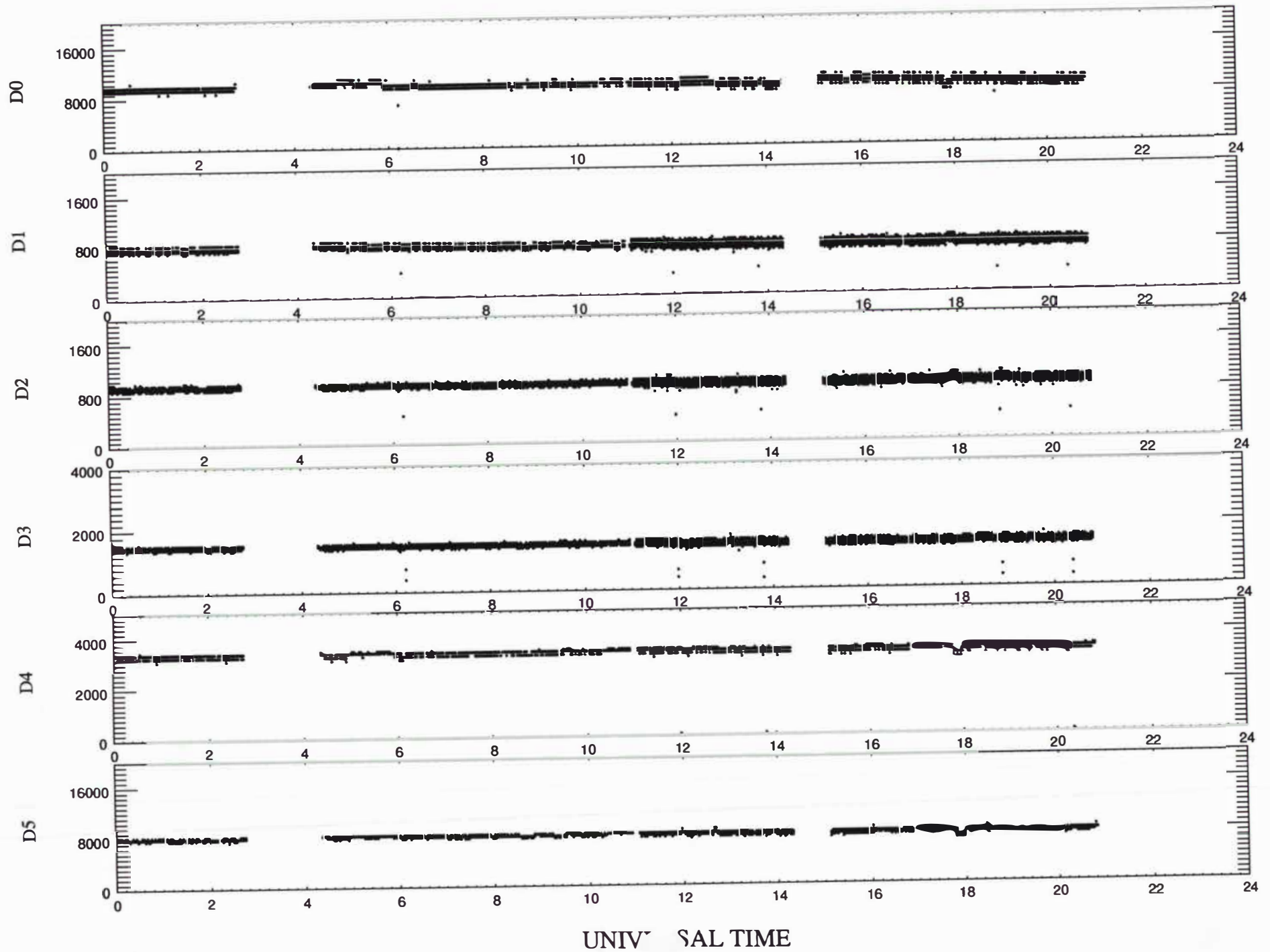


HUS 2A, MODE 1, NOT AVERAGED EDR day 362, year 1995 to day 362, year 1995
CALIBRATION DATA INCLUDED

4/1/96



UNIVERSAL TIME



From HENZE@SSLLES.MSFC.NASA.GOV Tue Jan 2 10:06 PST 1996
From: HENZE@SSLLES.MSFC.NASA.GOV
Date: Tue, 2 Jan 1996 12:06:09 -0600 (CST)
To: burst@comptel.sr.unh.edu, grobad@vmprofs.estec.esa.nl,
"LHEAVX::CLINE"@SSLLES.MSFC.NASA.GOV,
"LHEAVX::BARTHELMY"@SSLLES.MSFC.NASA.GOV, scott@circe.gsfc.nasa.gov,
butterworth@lheavx.gsfc.nasa.gov
X-Vmsmail-To: @mops\$send_msg:BURST_SPAN.DIS
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 4182

TIME: TJD=0081 SECONDS=69833

TYPE: PHOSPHO SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

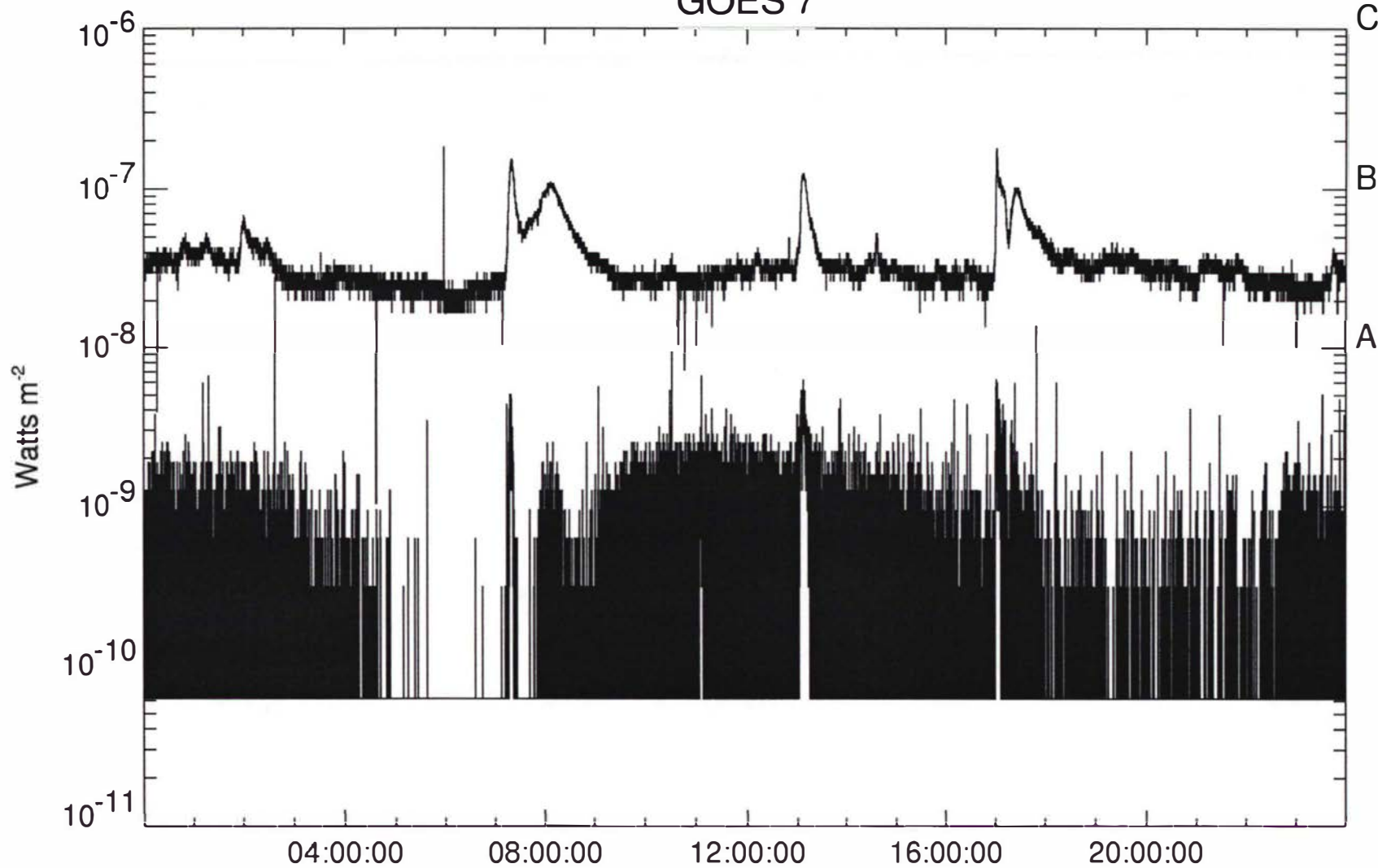
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

PROBABLY TWO WEAK NOT-COINCIDENT PHOSPHORESCENCE SPIKES WITHIN SAME 1.024 S
INTERVAL.

GOES 7



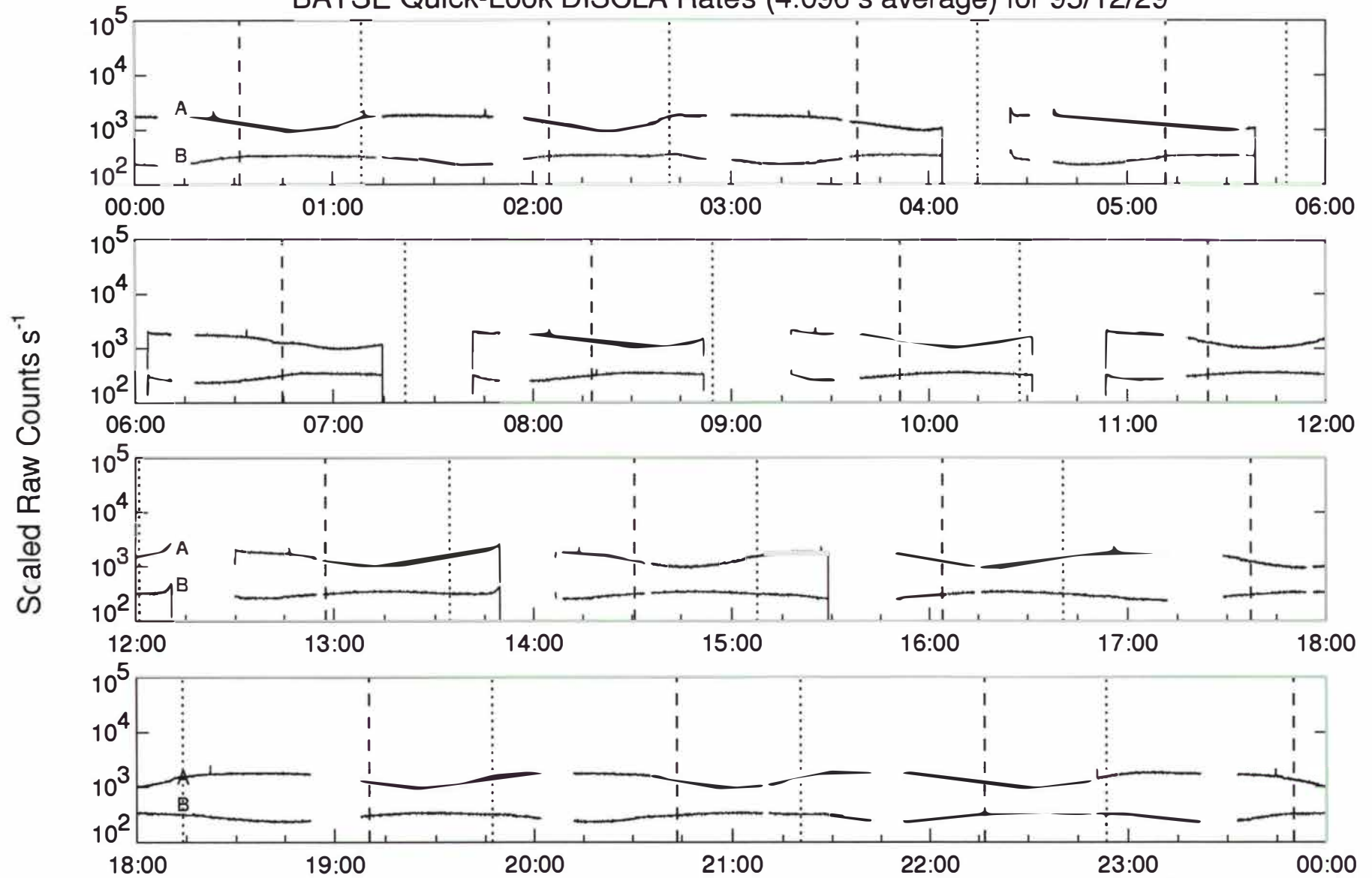
Data Start: 95/12/29, 0000:02

Plot created: 95/12/31, 0654

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 95/12/29



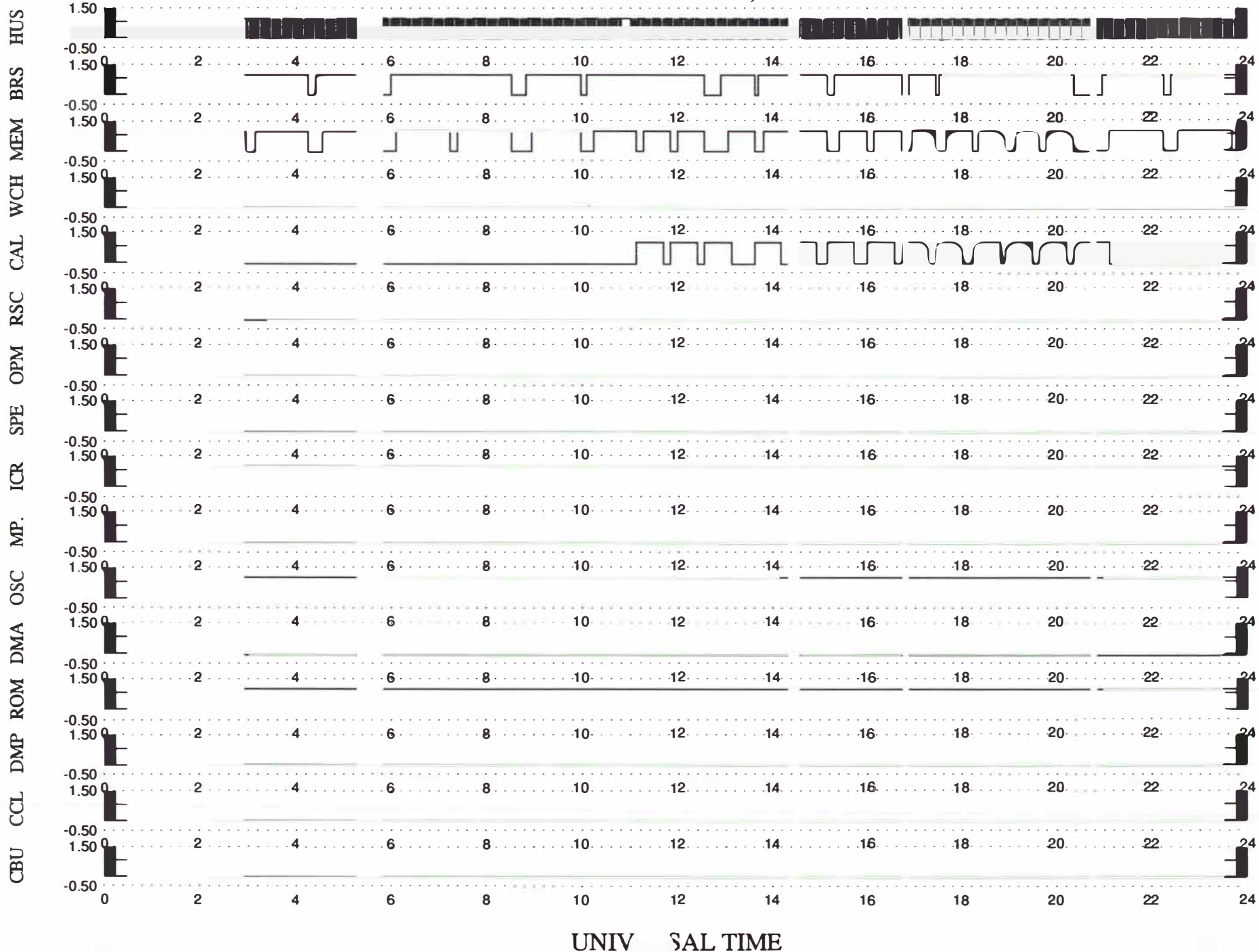
Current Time: 95/12/31, 0655 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

HUS MODES QEDR day 363, year 1995 to day 363, year 1995
BURST NUMBER 5 - 15, 0 - 8

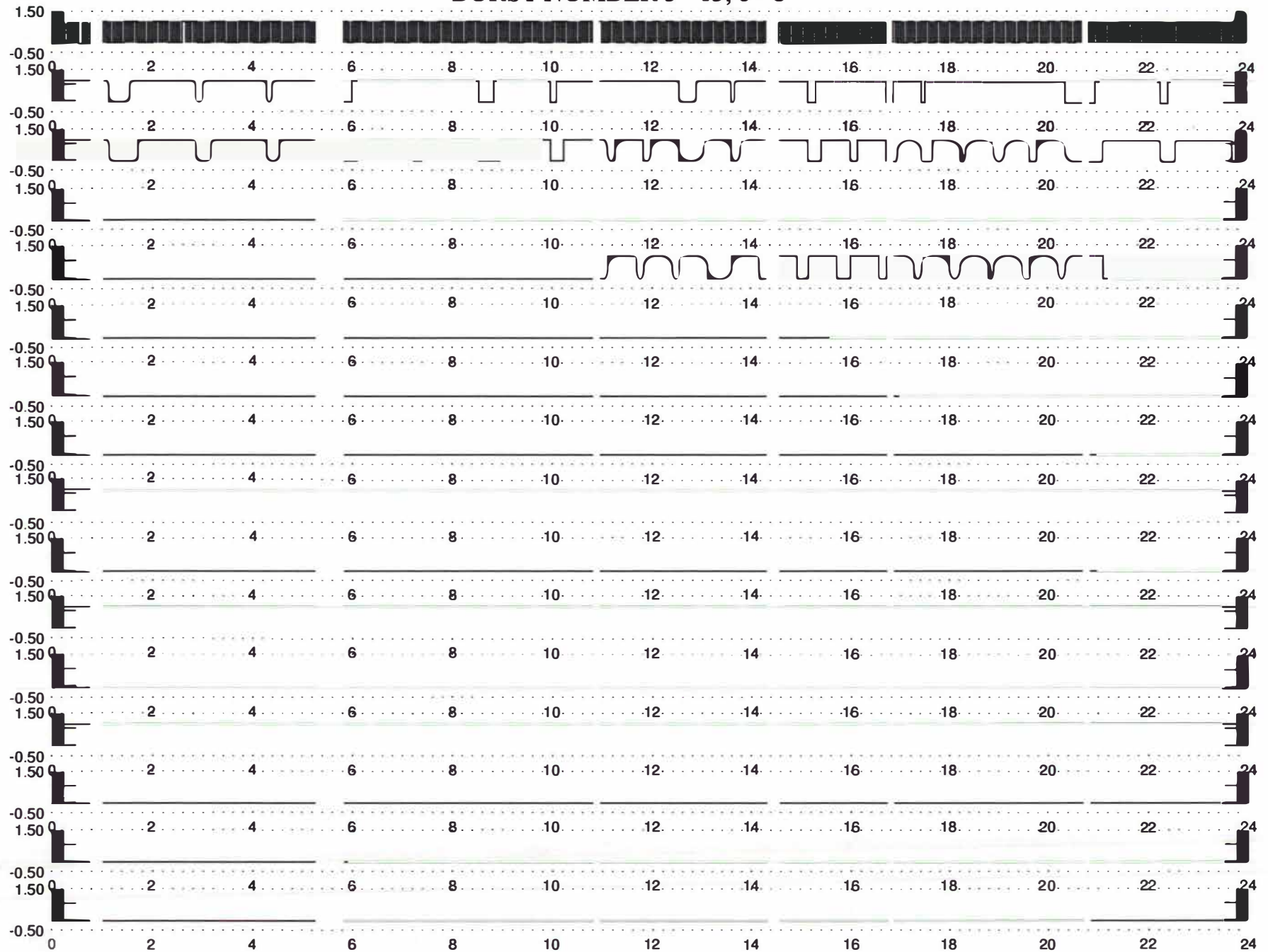
1/2/96



HUS MODES EDR day 363, year 1995 to day 363, year 1995 BURST NUMBER 3 - 15, 0 - 8

4/1/96

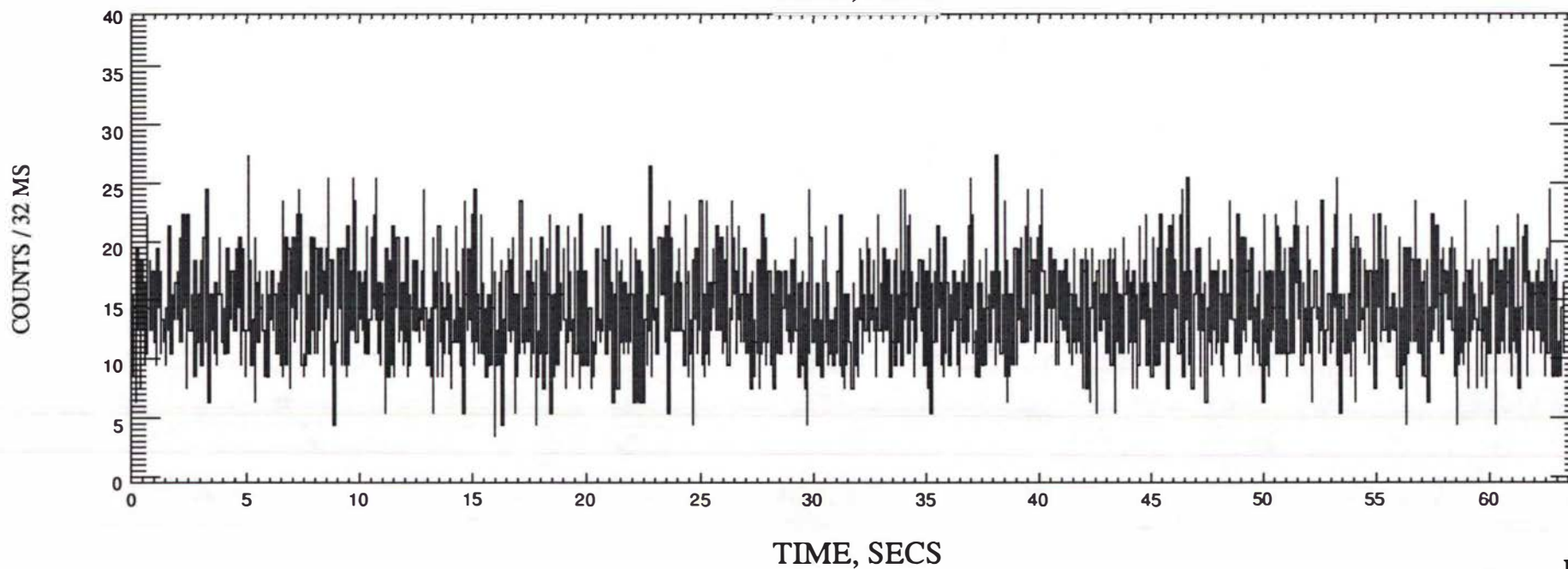
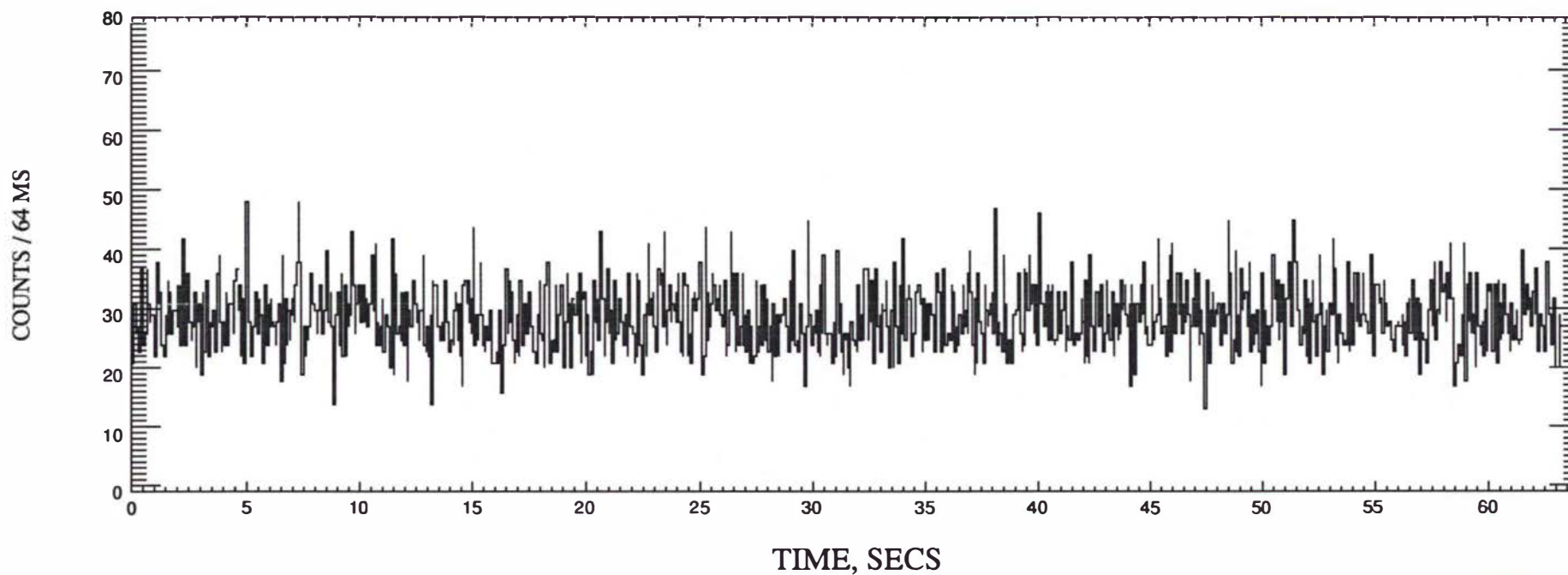
CBU CCL DMP ROM DMA OSC MP. ICR SPE OPM RSC CAL WCH MEM BRS HUS



UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 3 at UT= 1.516551153395 h= 5459.584 s 01:30:59.584

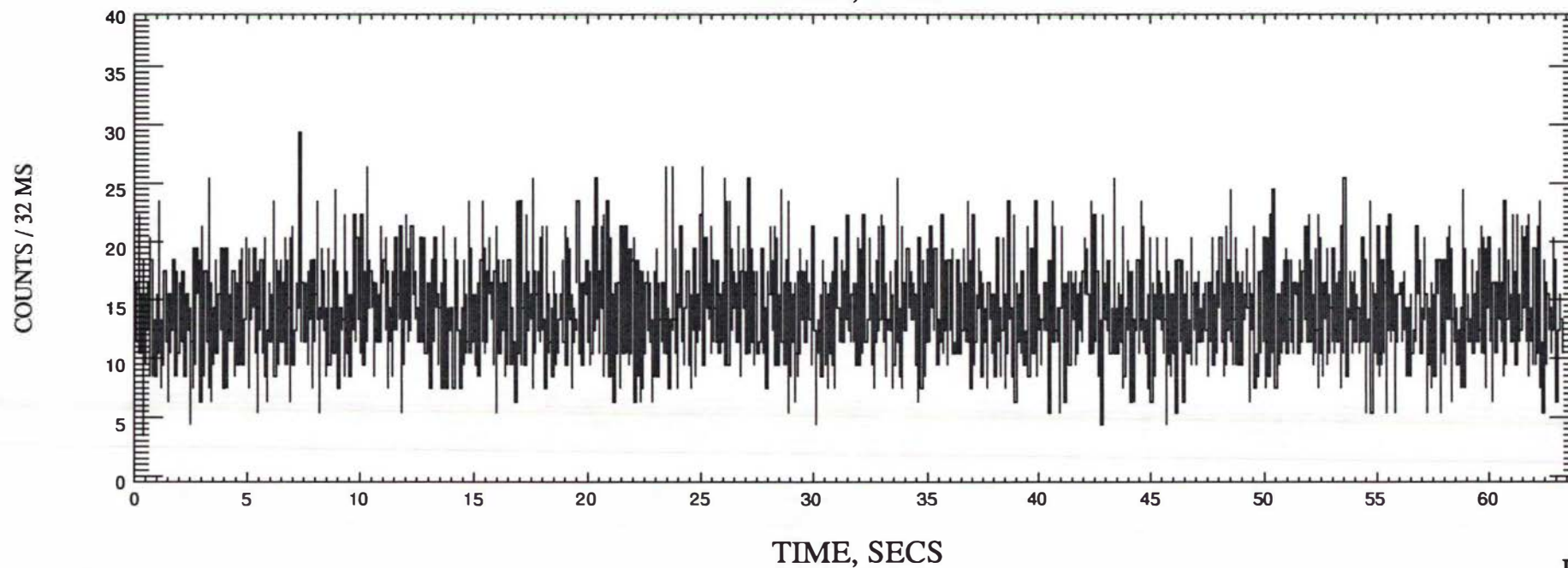
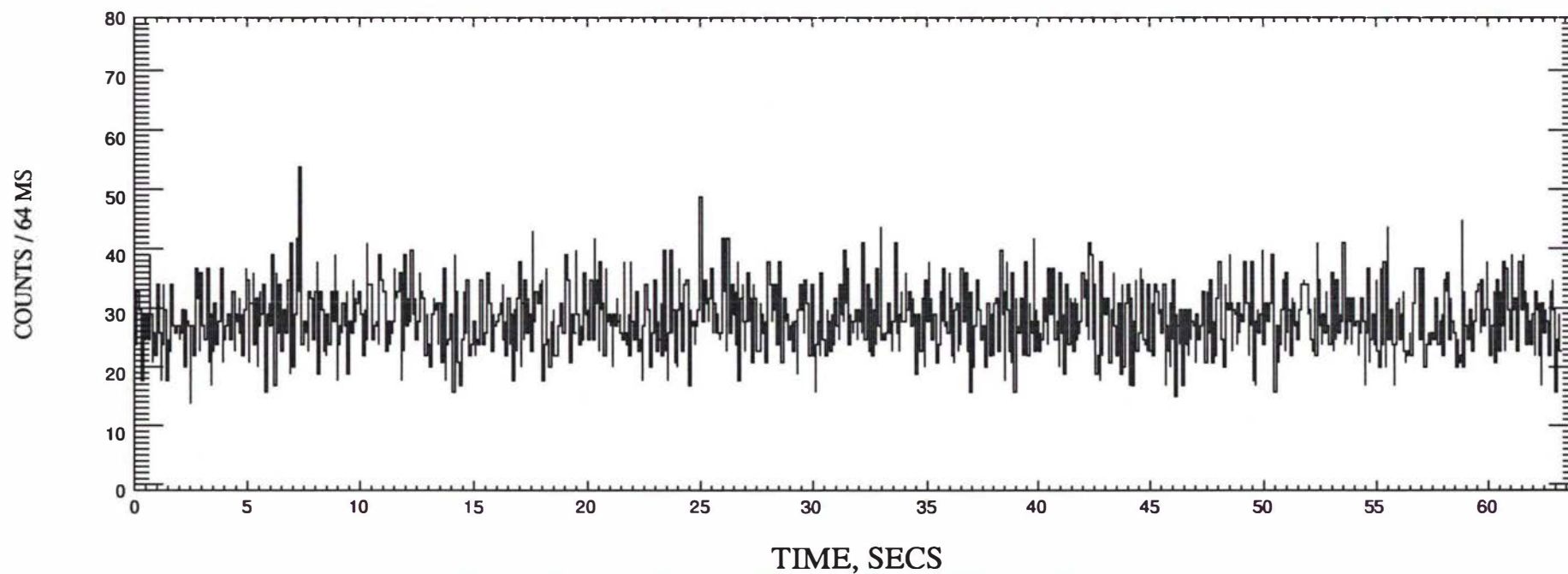
4/1/96



B# 1

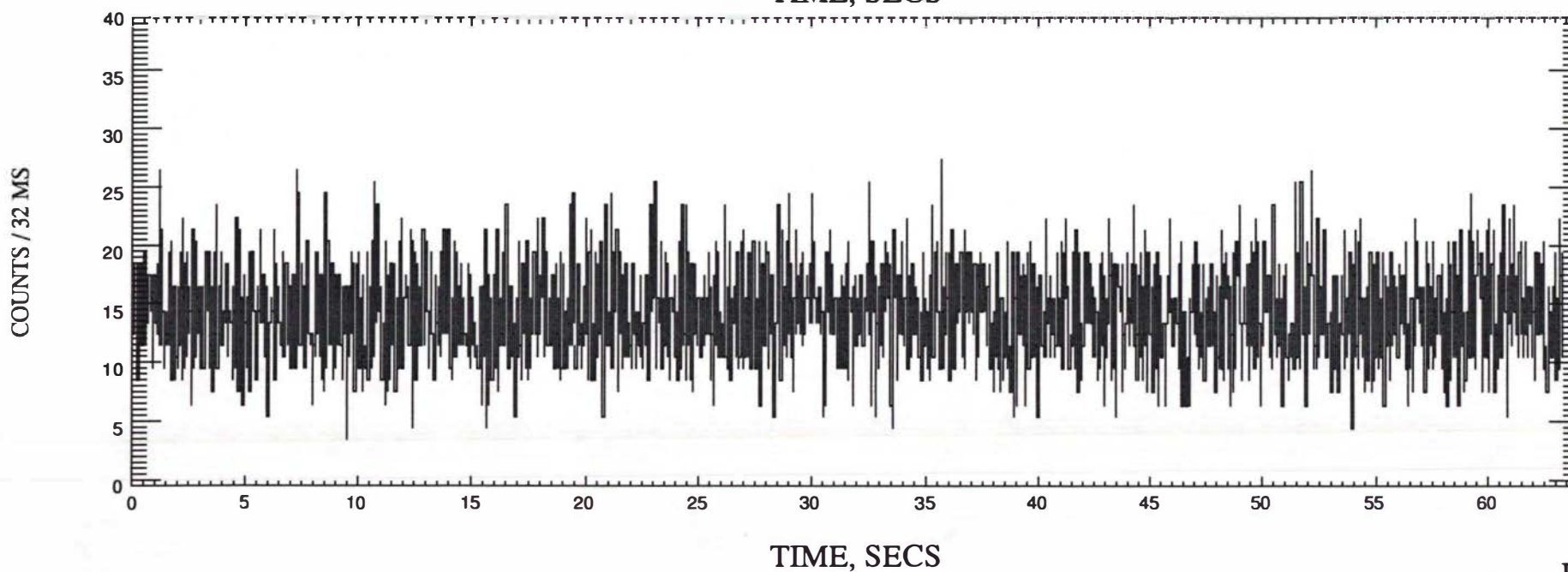
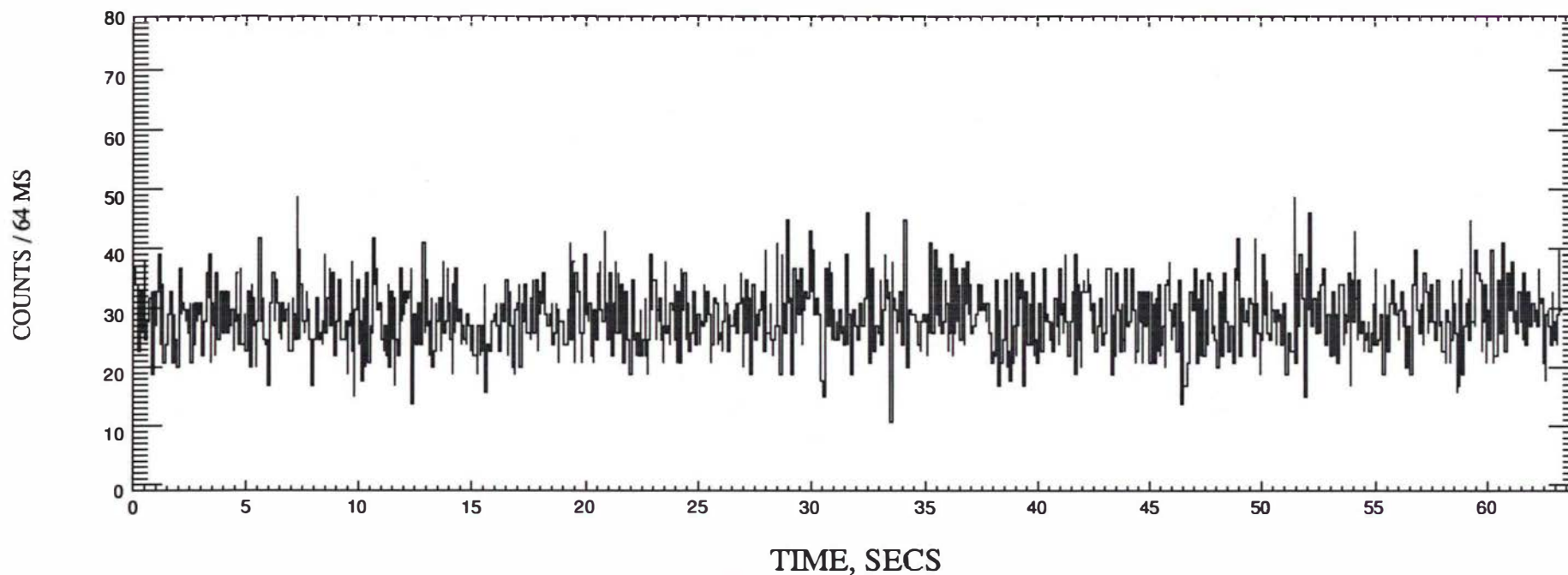
HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 4 at UT= 2.938794924418 h=10579.662 s 02:56:19.662

4/1/96



HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 5 at UT= 4.395587302314 h=15824.114 s 04:23:44.114

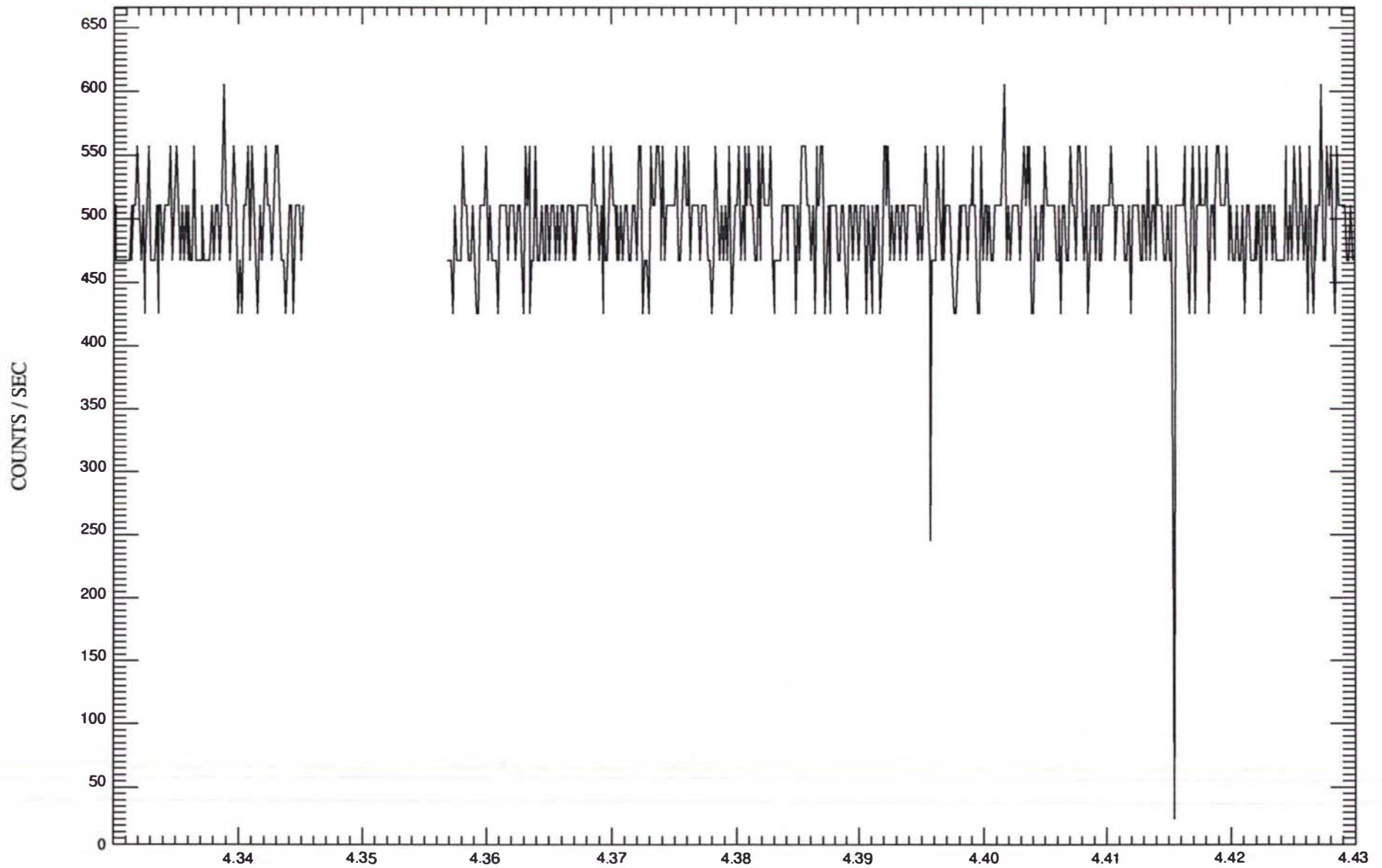
4/1/96



B# 3

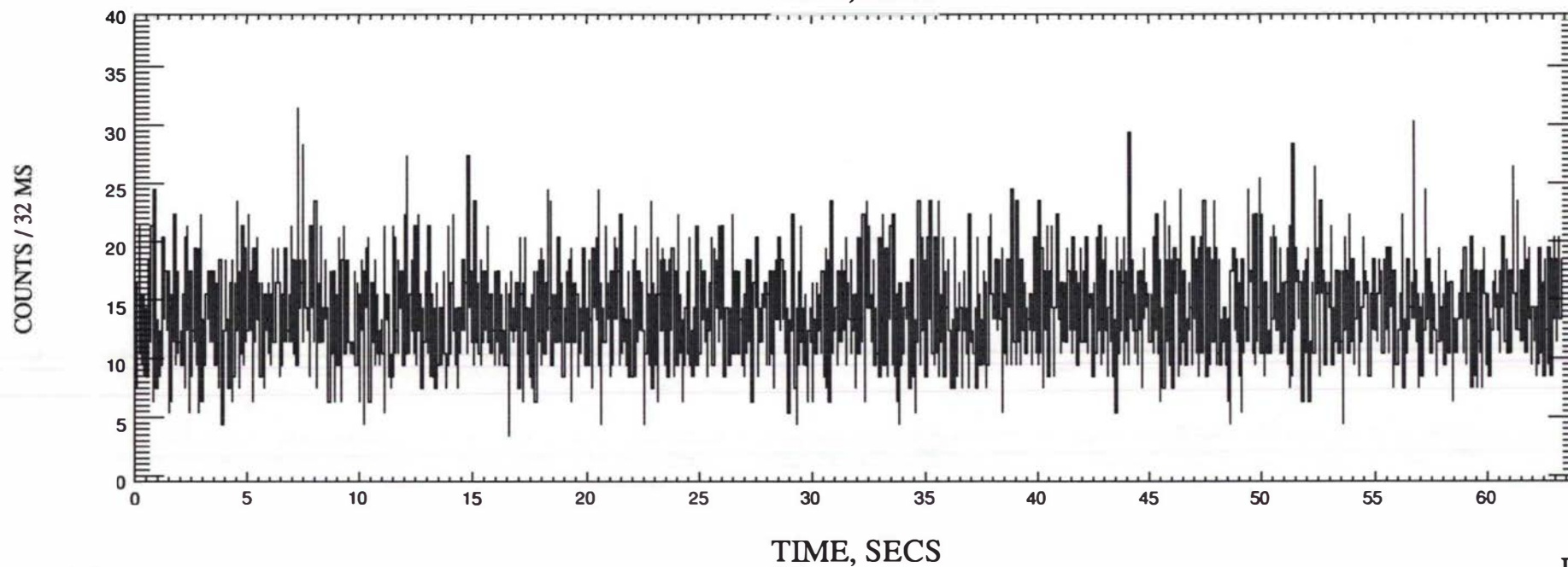
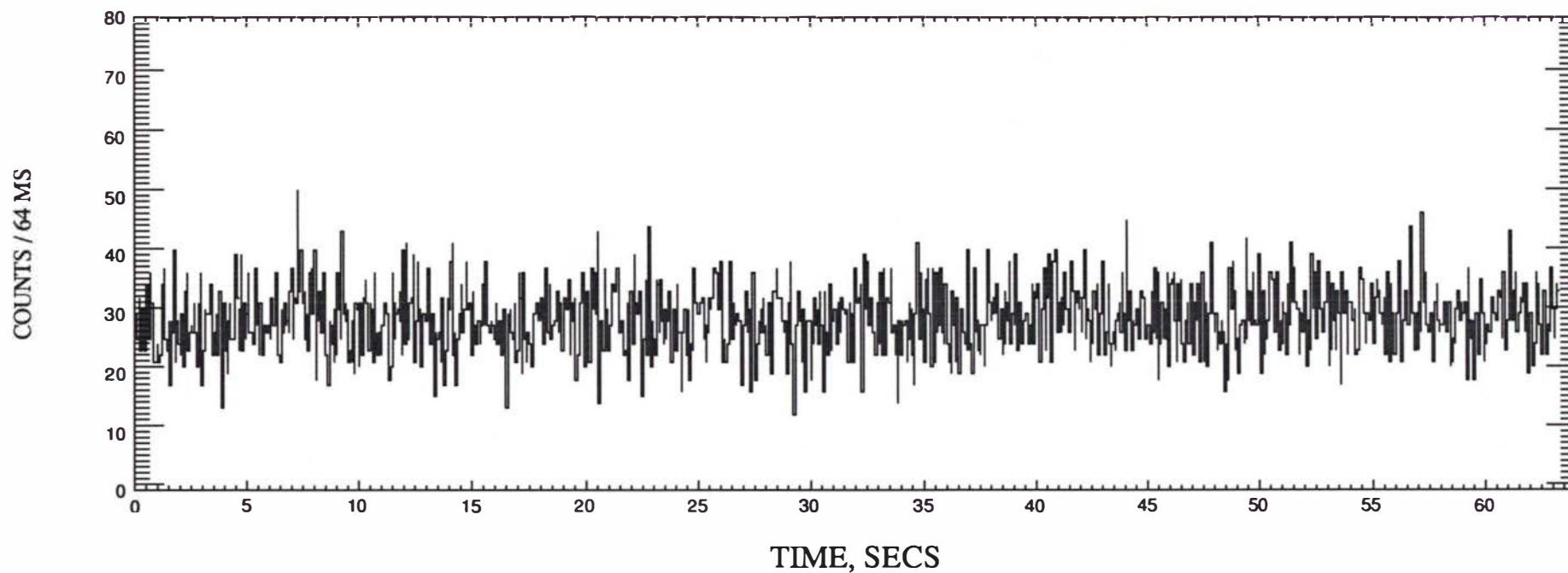
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96



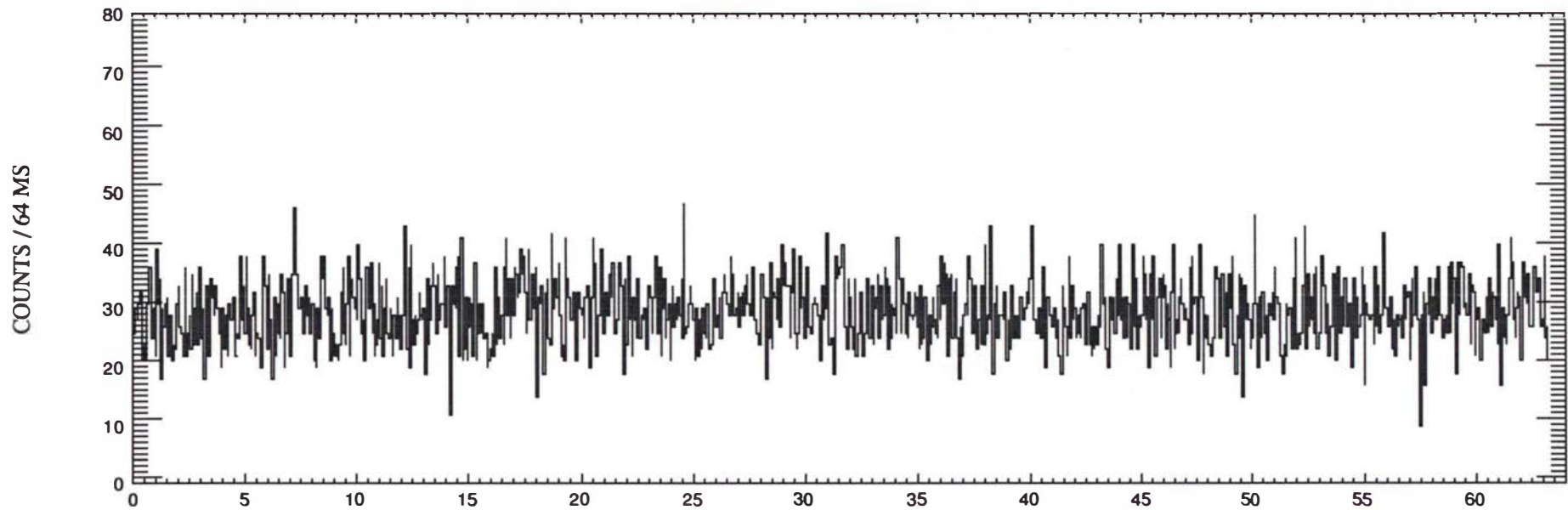
HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 6 at UT= 5.913701015049 h=21289.324 s 05:54:49.324

4/1/96

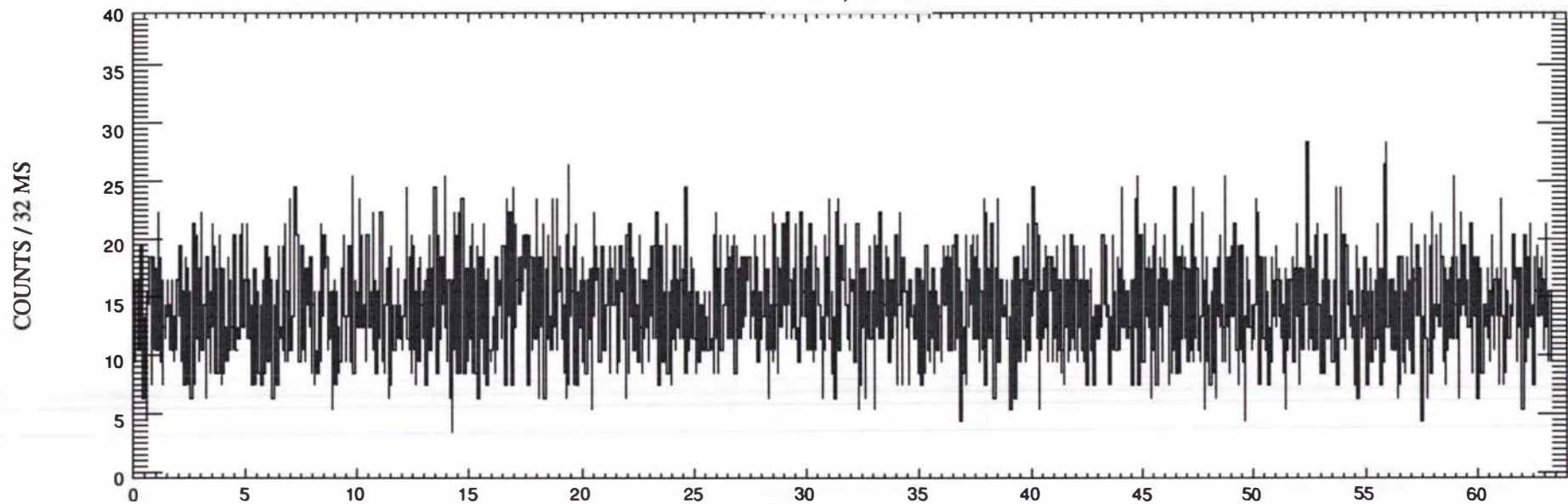


HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 7 at UT= 7.196322131687 h=25906.760 s 07:11:46.760

4/1/96



TIME, SECS

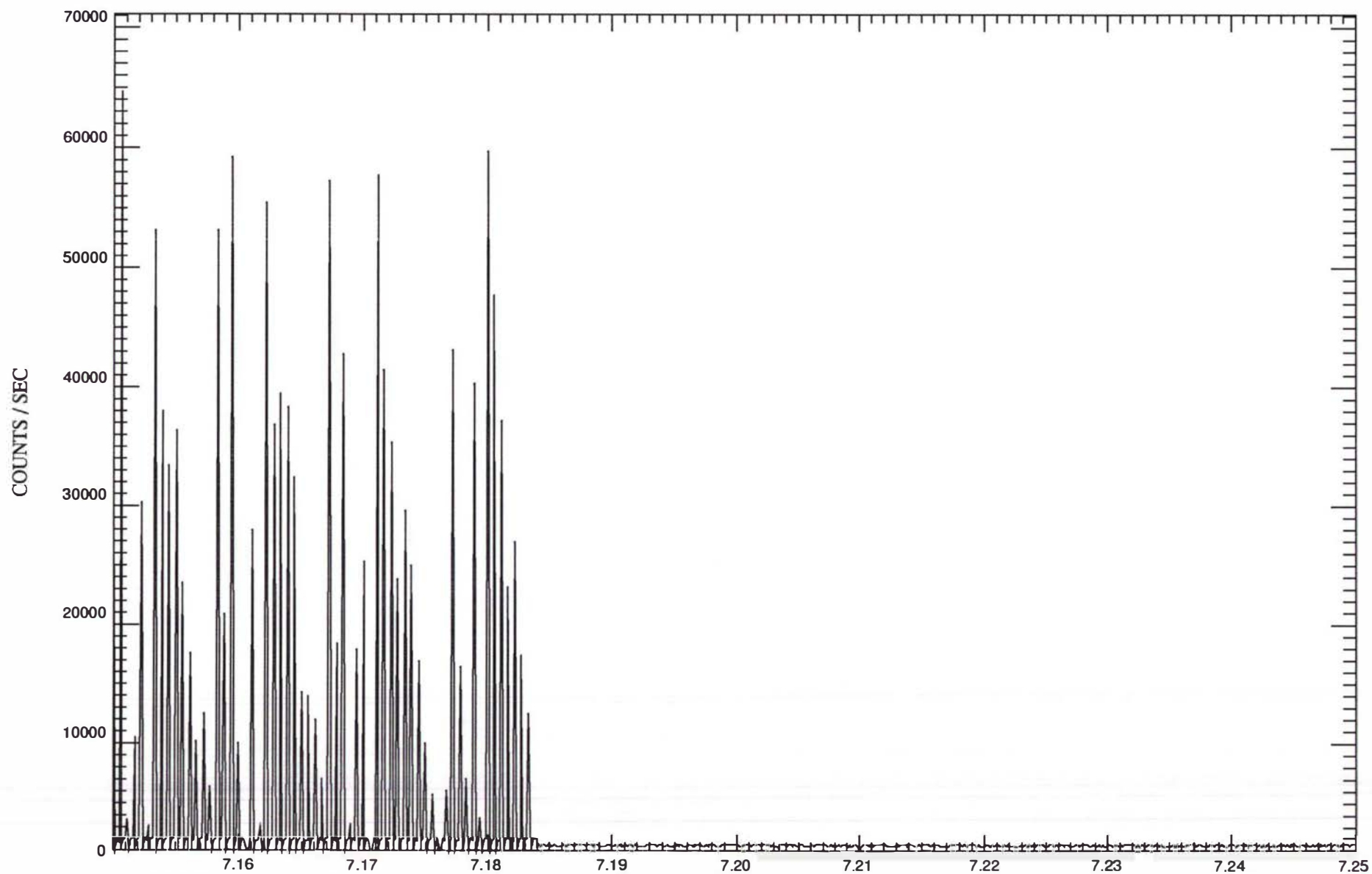


TIME, SECS

B# 5

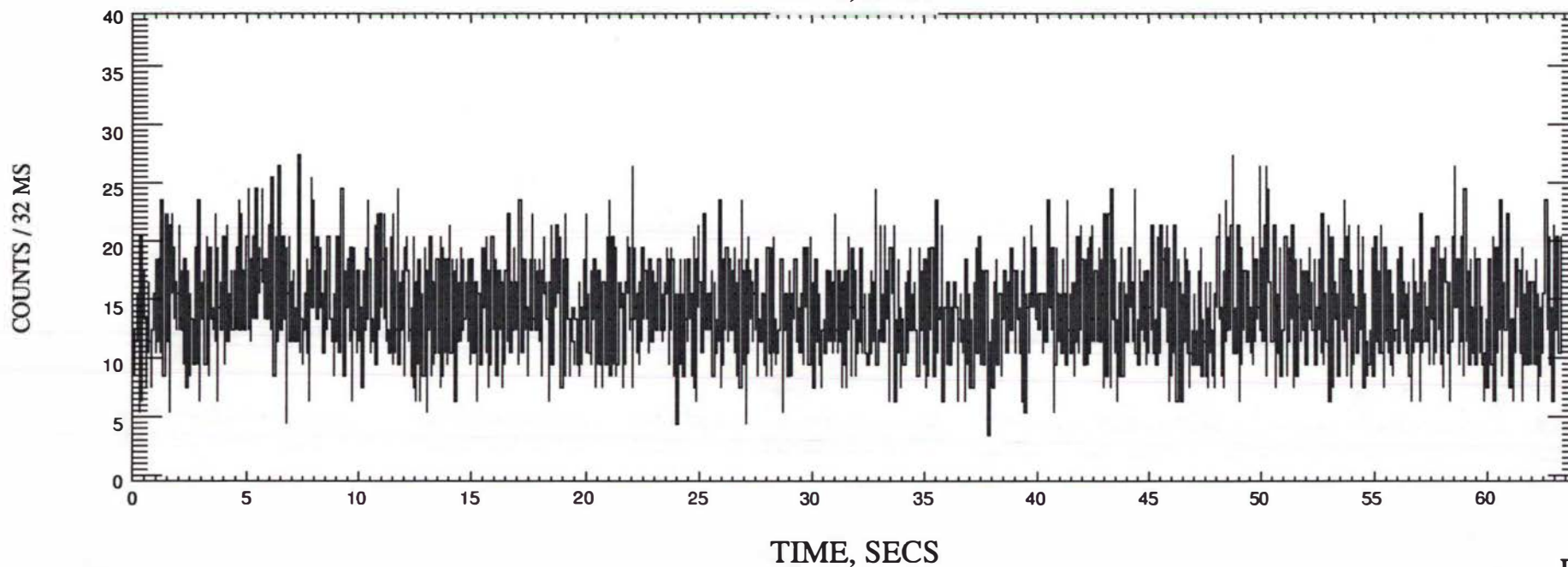
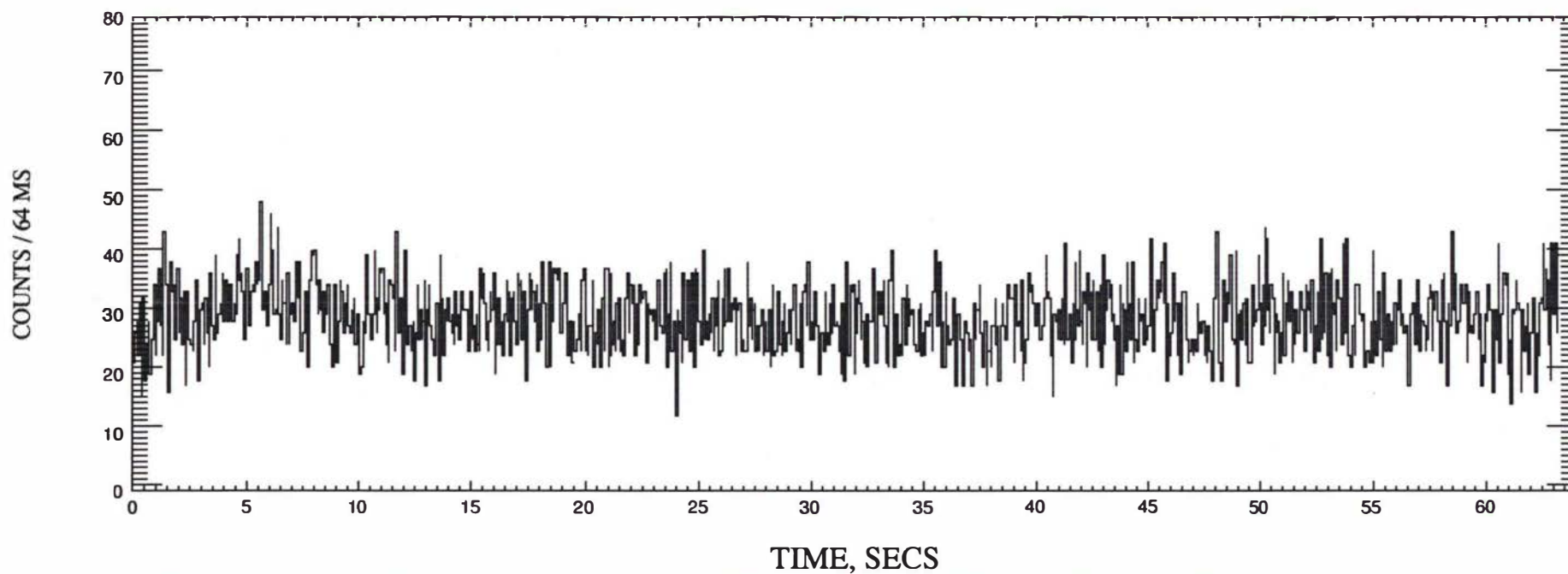
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96



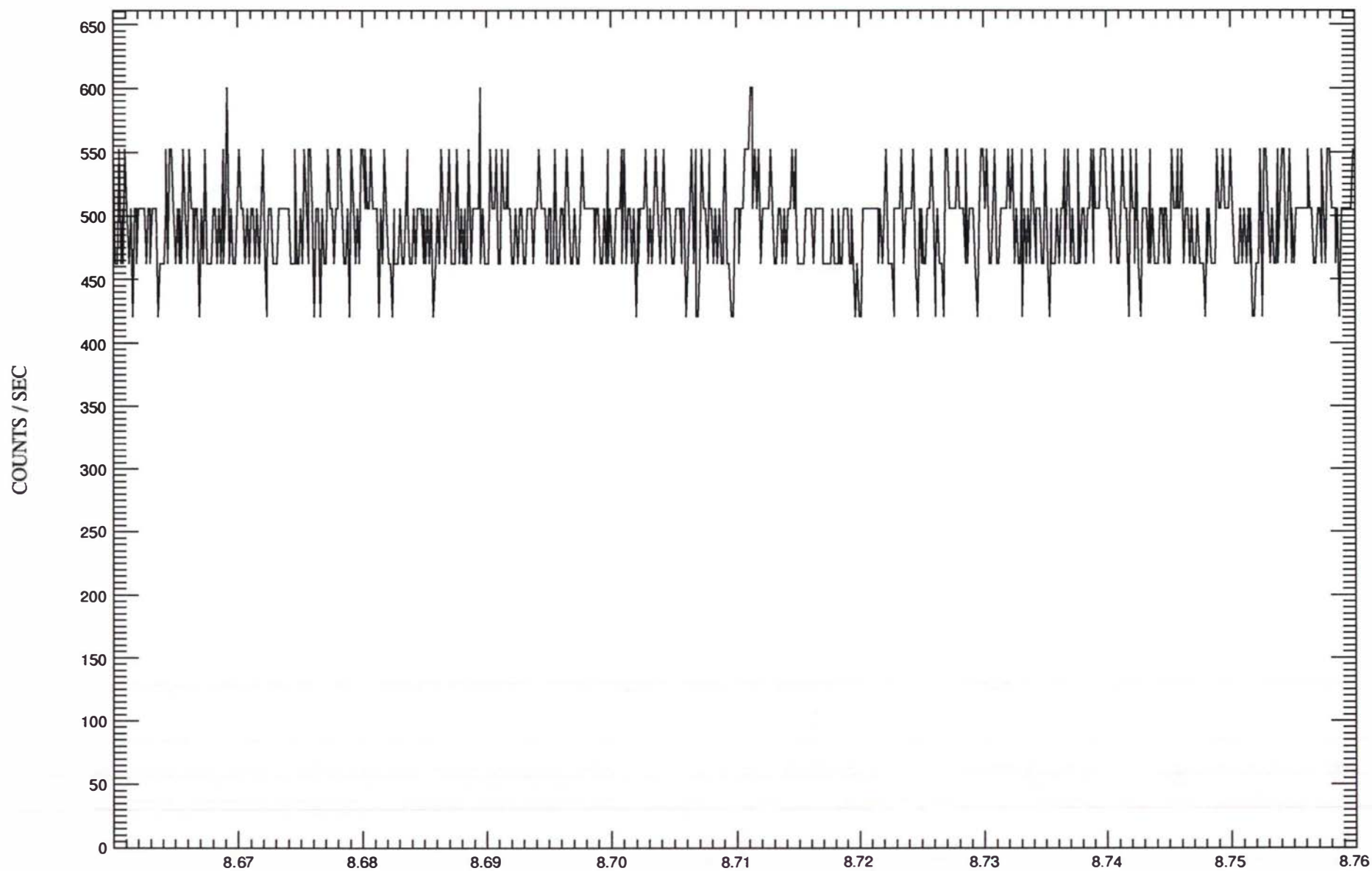
HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 8 at UT= 8.711729948256 h=31362.228 s 08:42:42.228

4/1/96



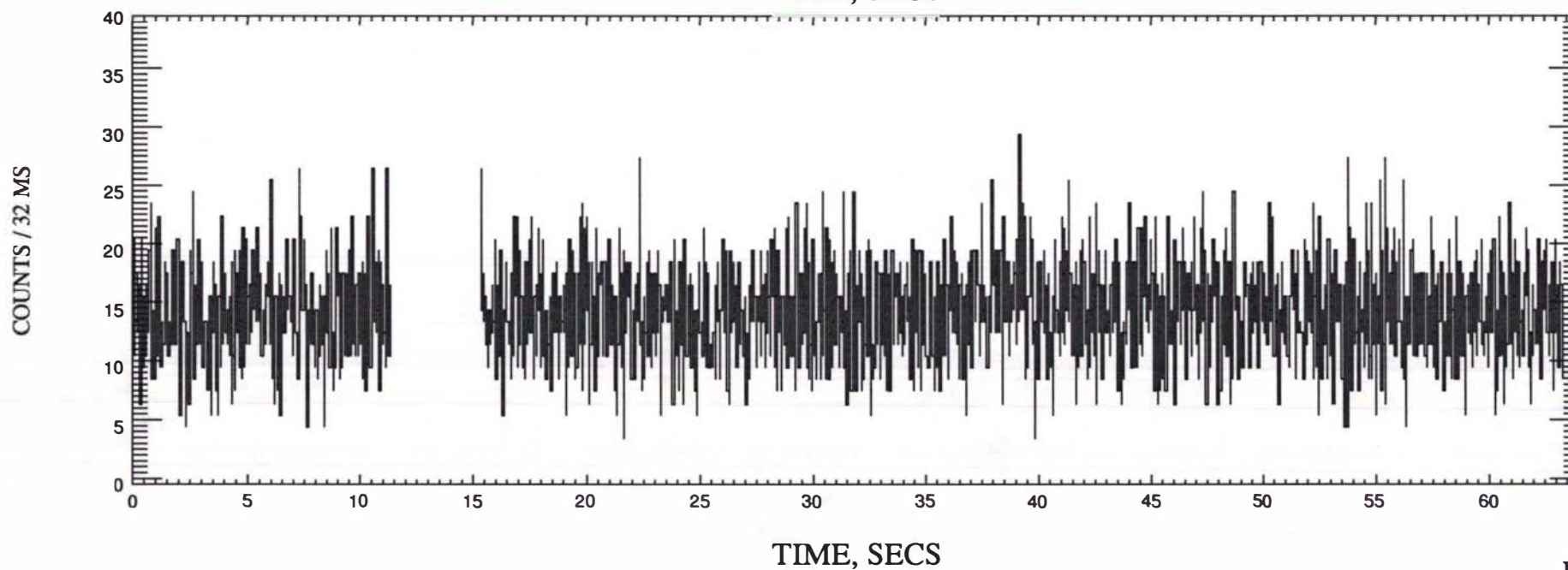
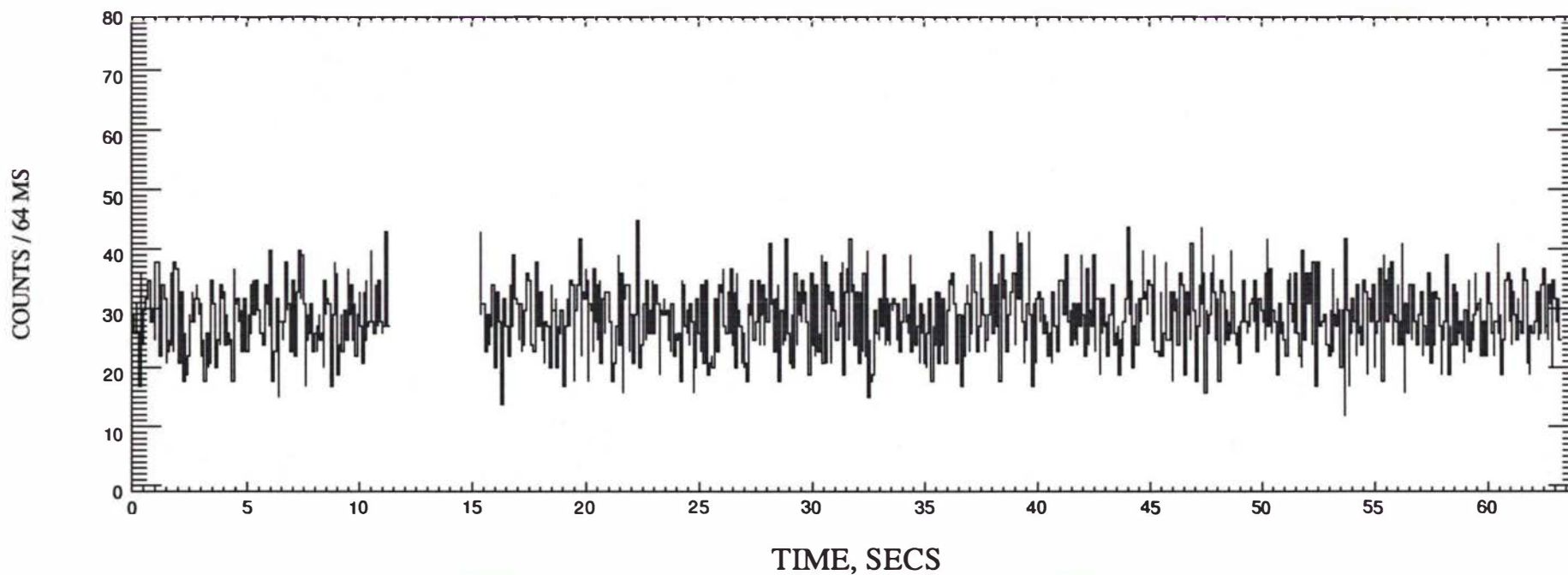
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 9 at UT=10.083450728522 h=36300.423 s 10:05:00.423

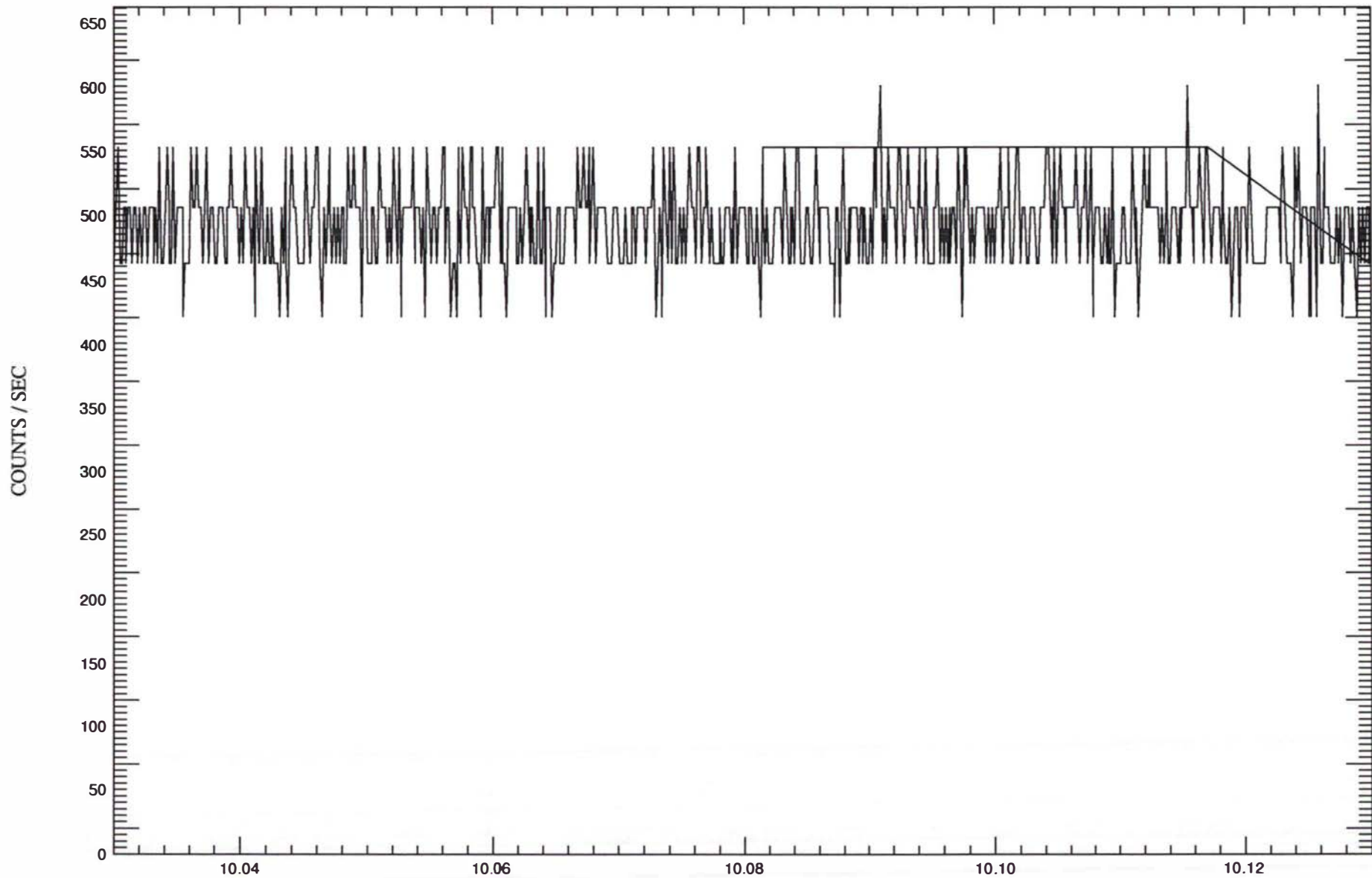
4/1/96



B# 7

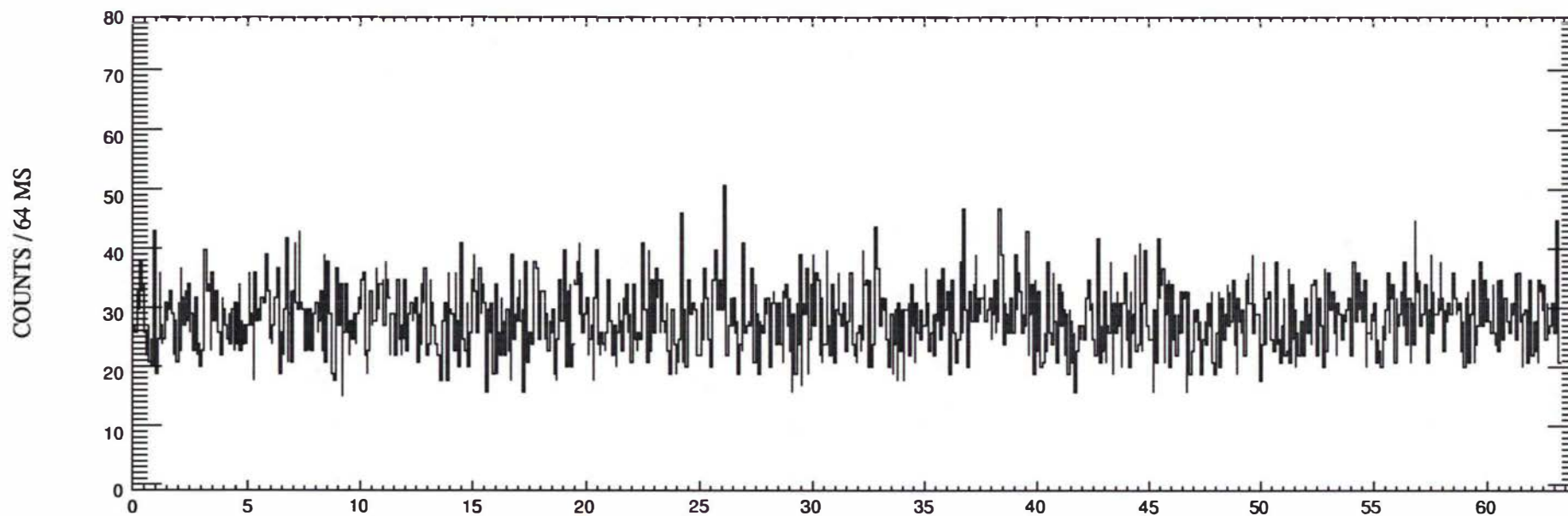
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96

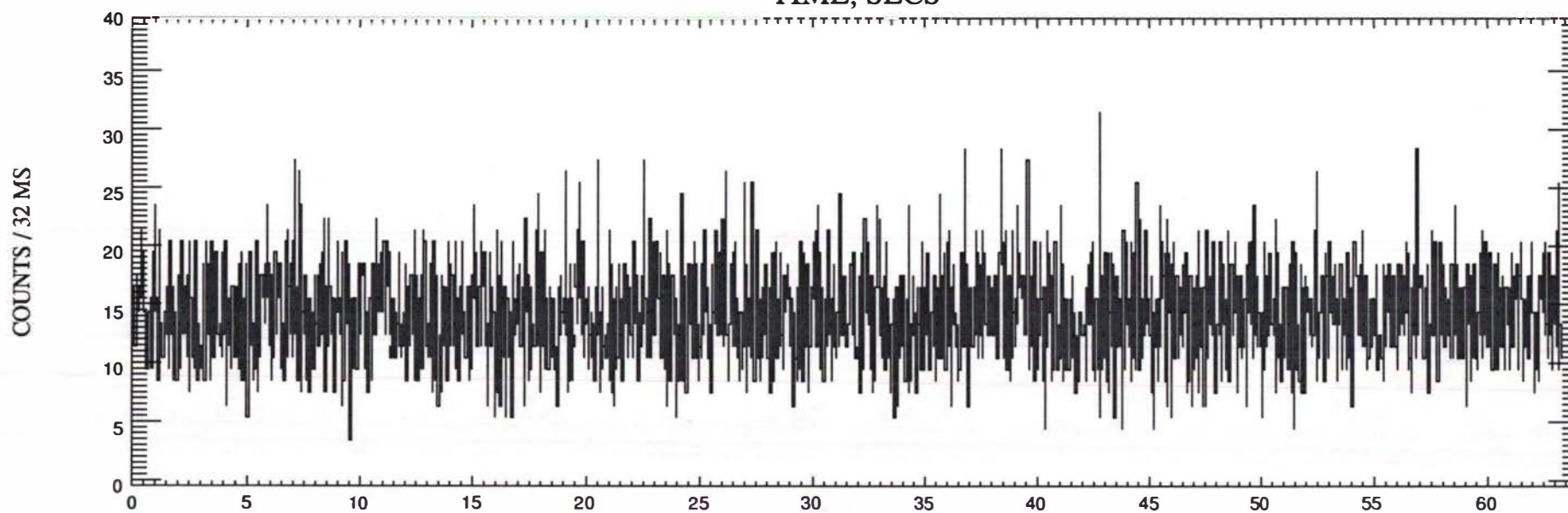


HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 10 at UT=11.112842695448 h=40006.234 s 11:06:46.234

4/1/96



TIME, SECS

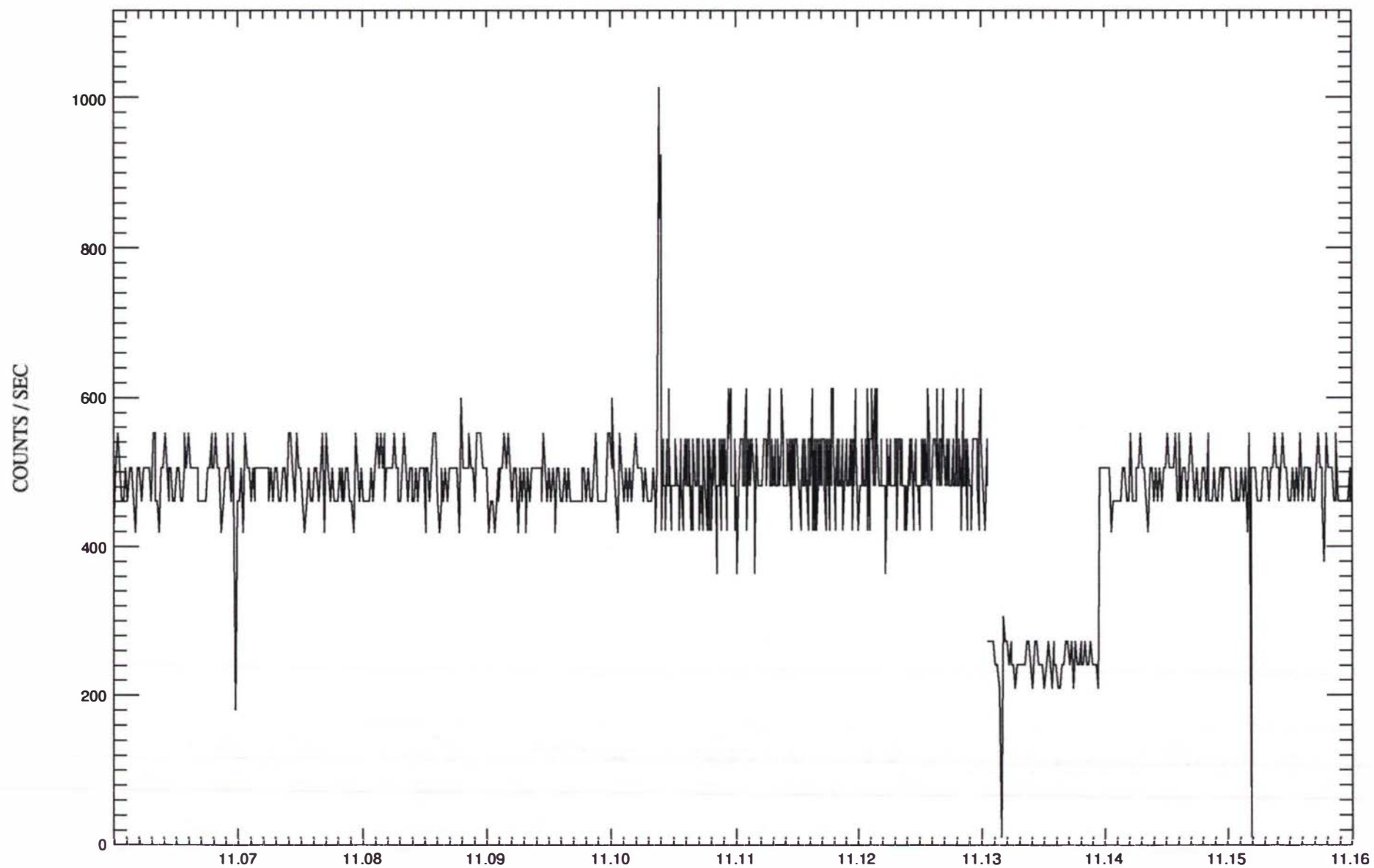


TIME, SECS

B# 8

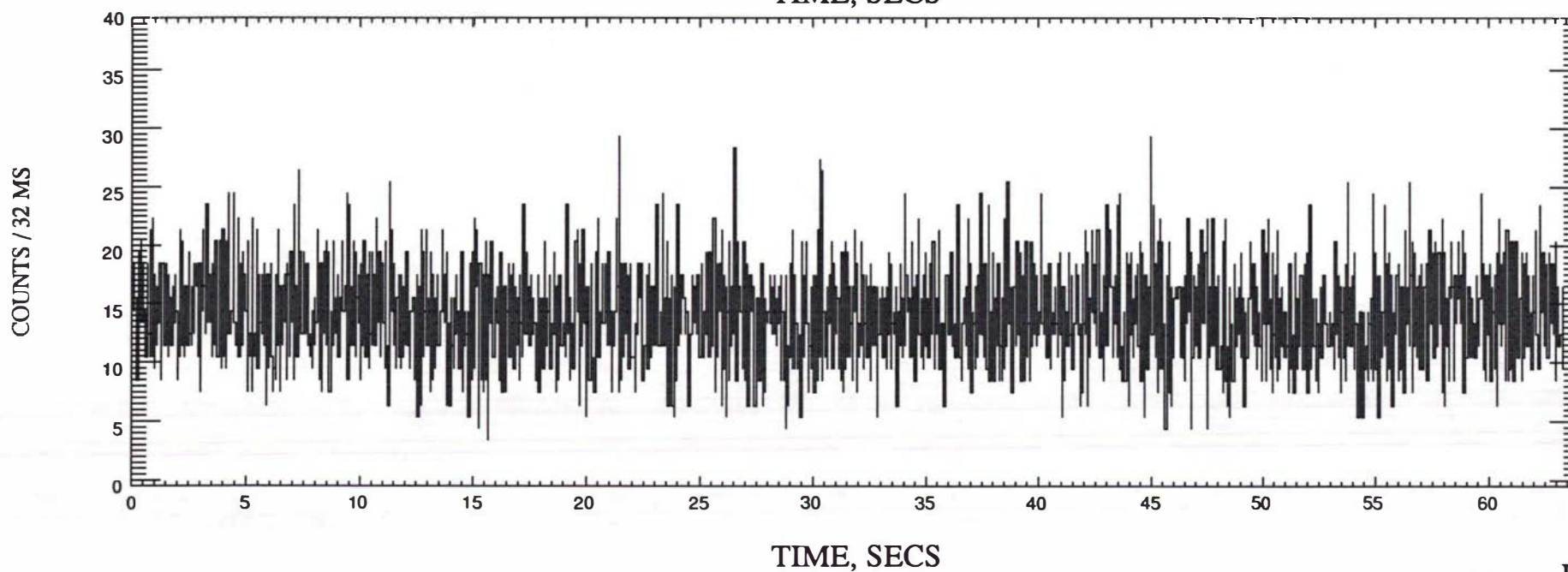
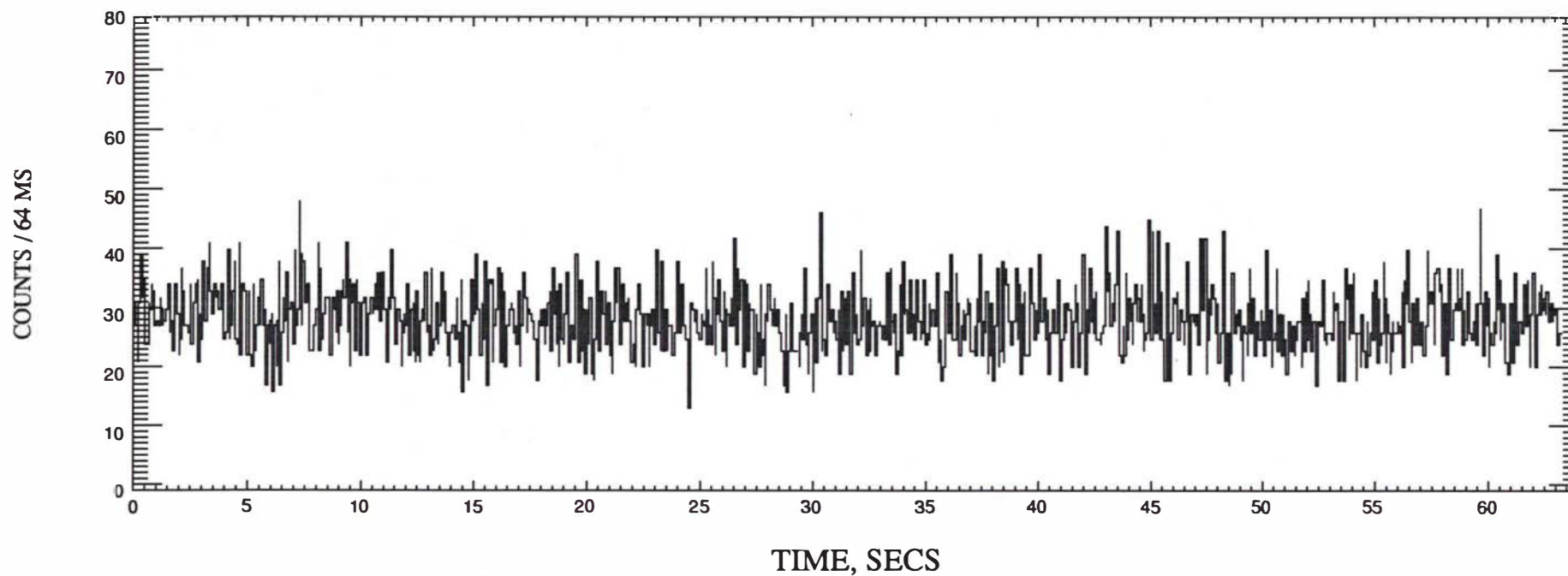
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96



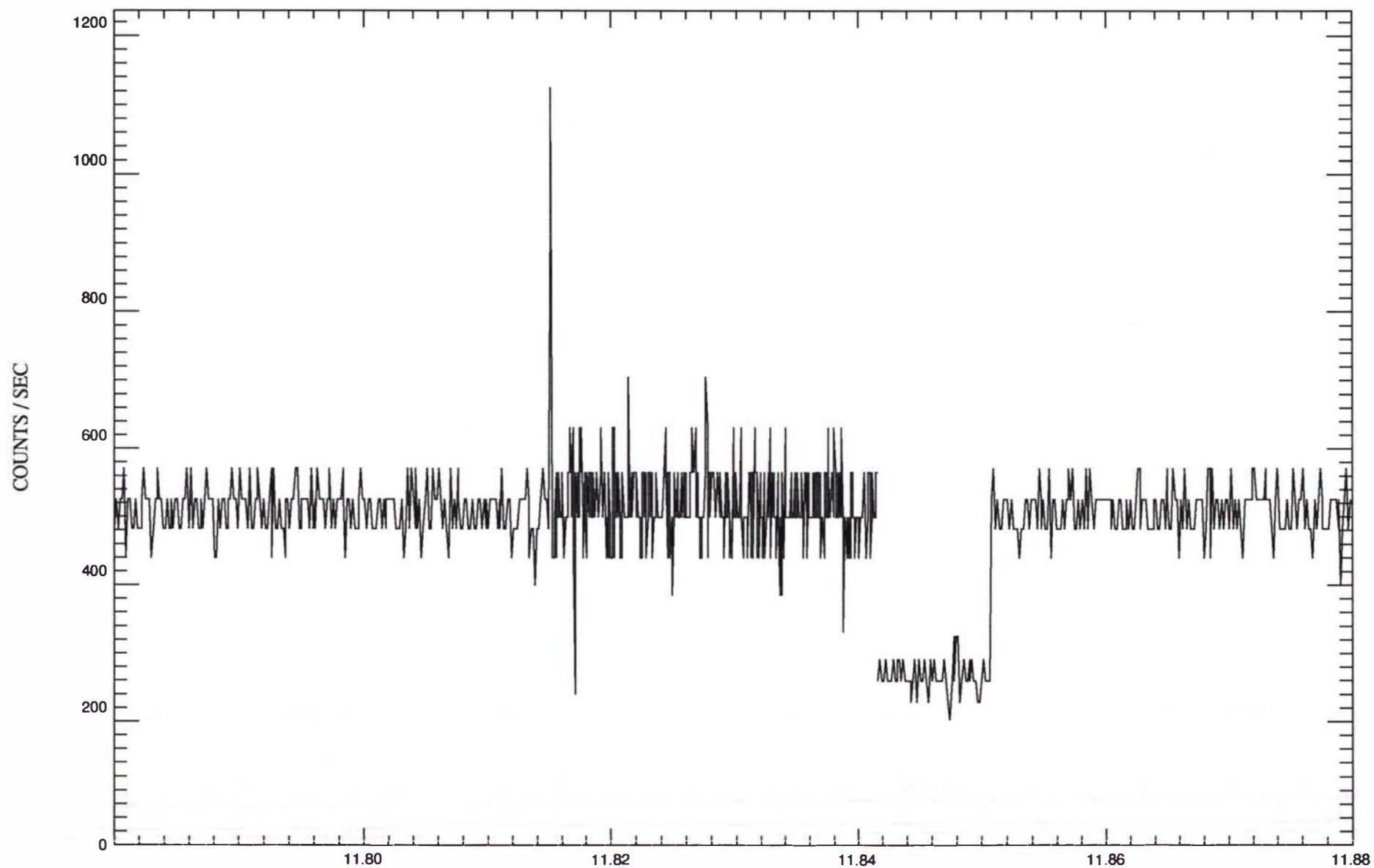
HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 11 at UT=11.827679858738 h=42579.647 s 11:49:39.647

4/1/96



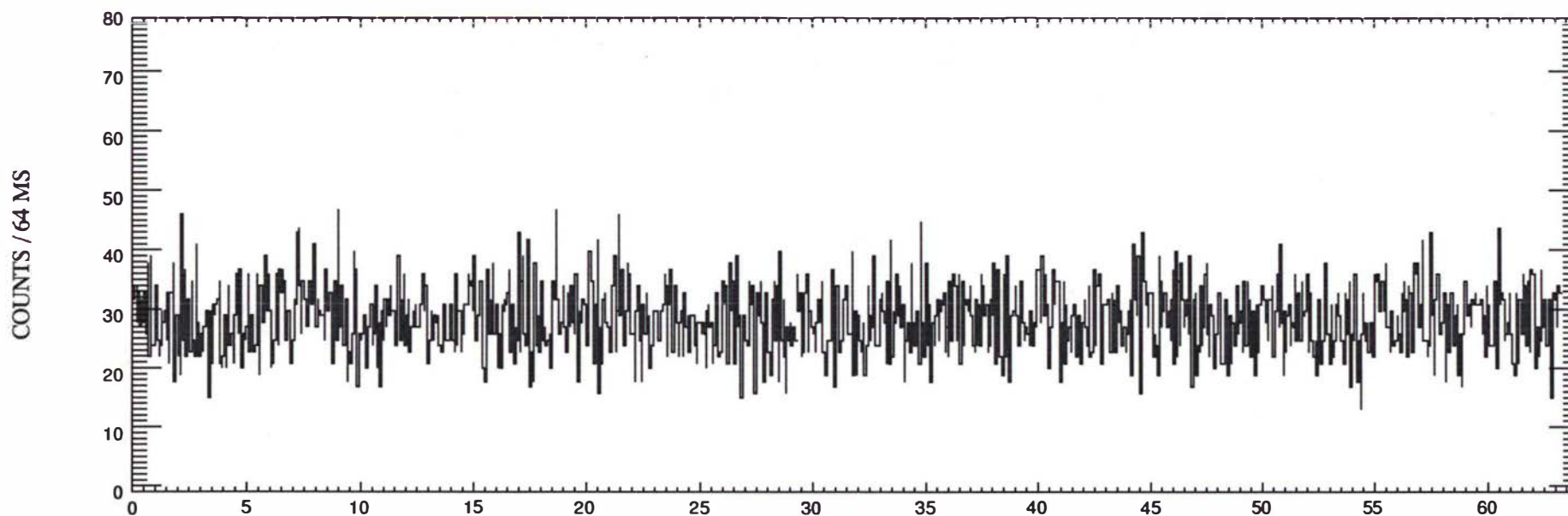
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96

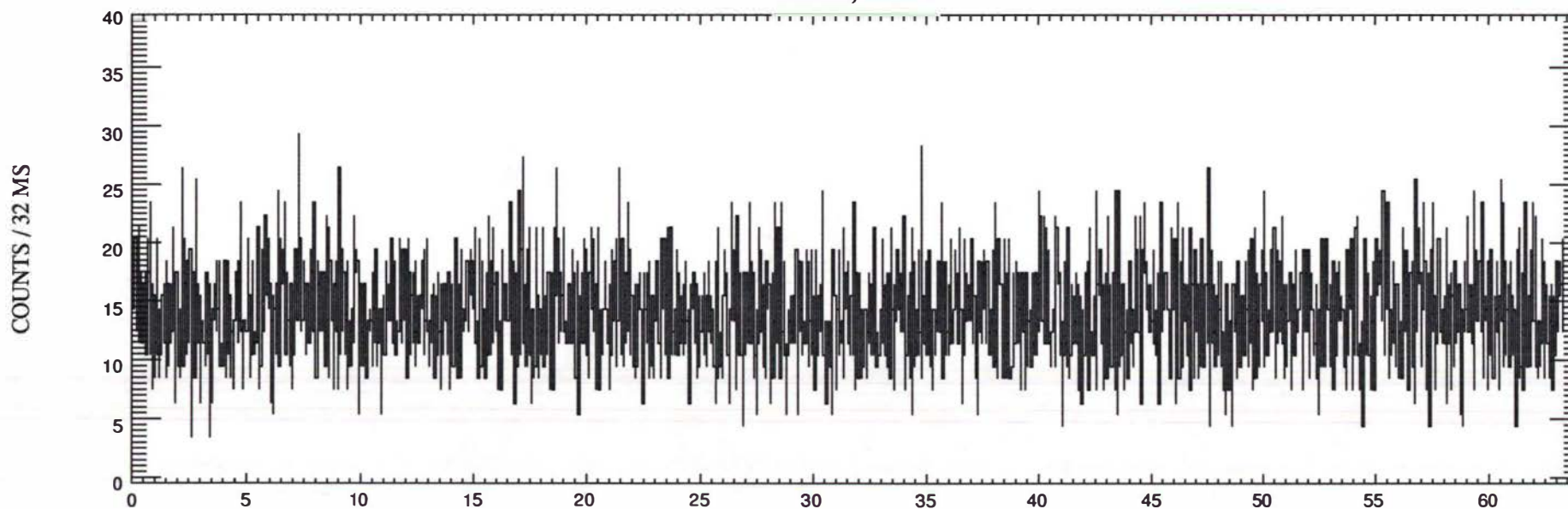


HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 12 at UT=12.856163902283 h=46282.190 s 12:51:22.190

4/1/96



TIME, SECS

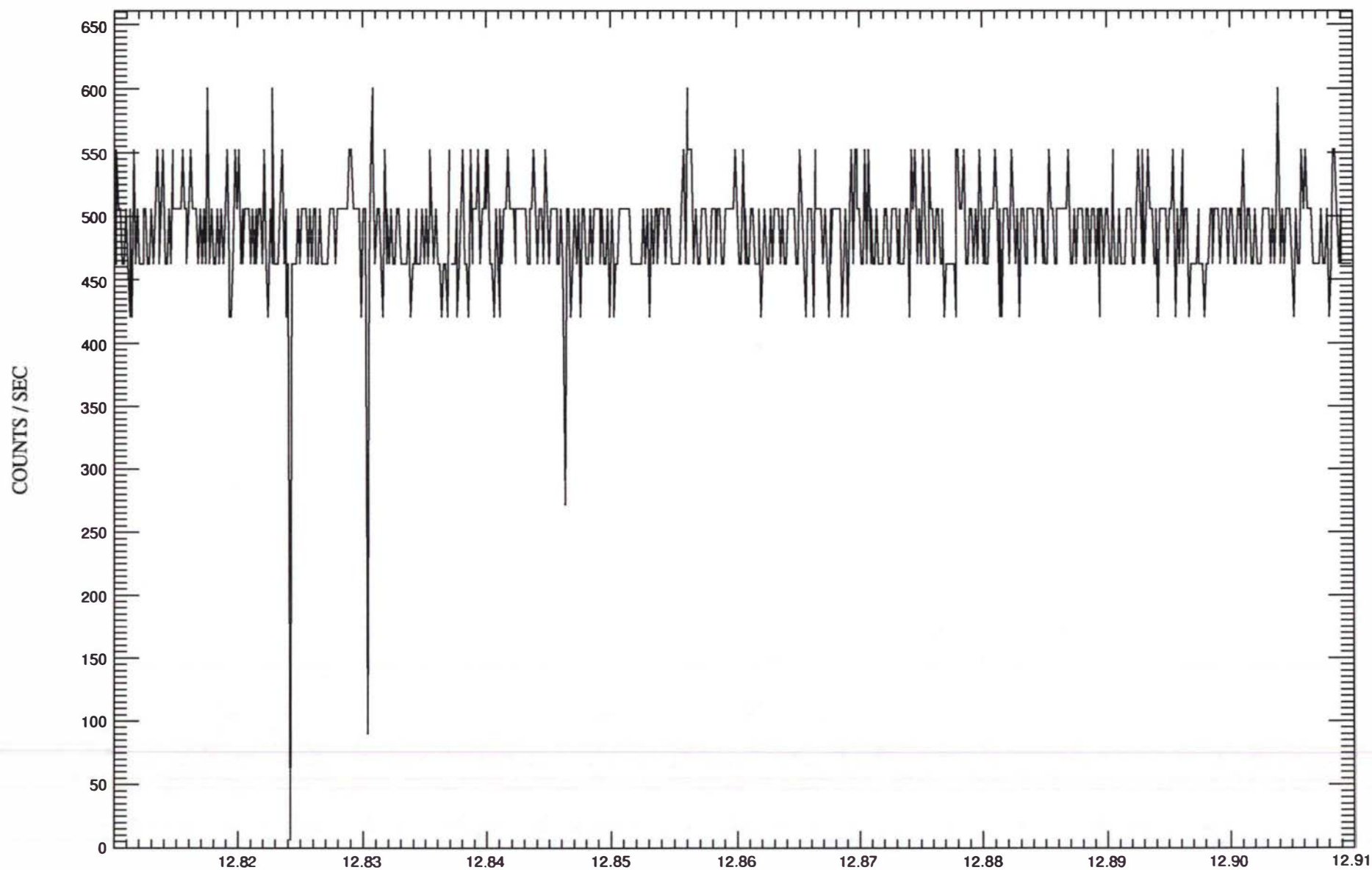


TIME, SECS

B# 10

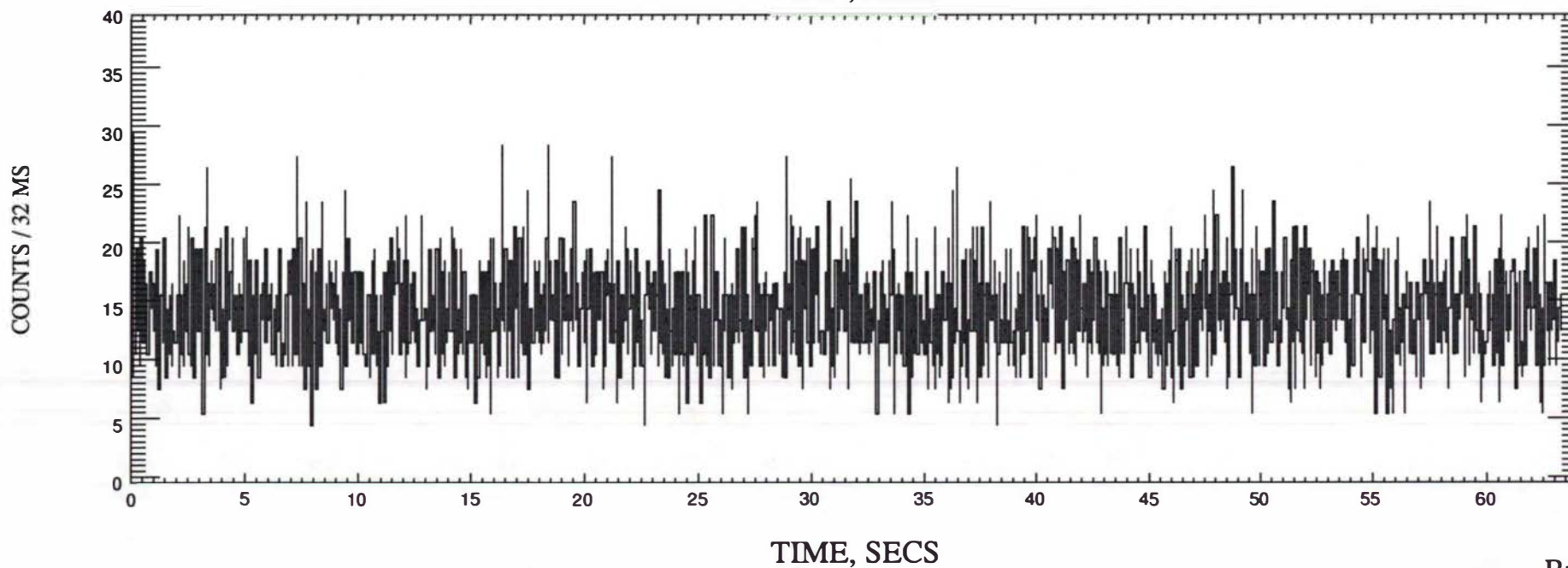
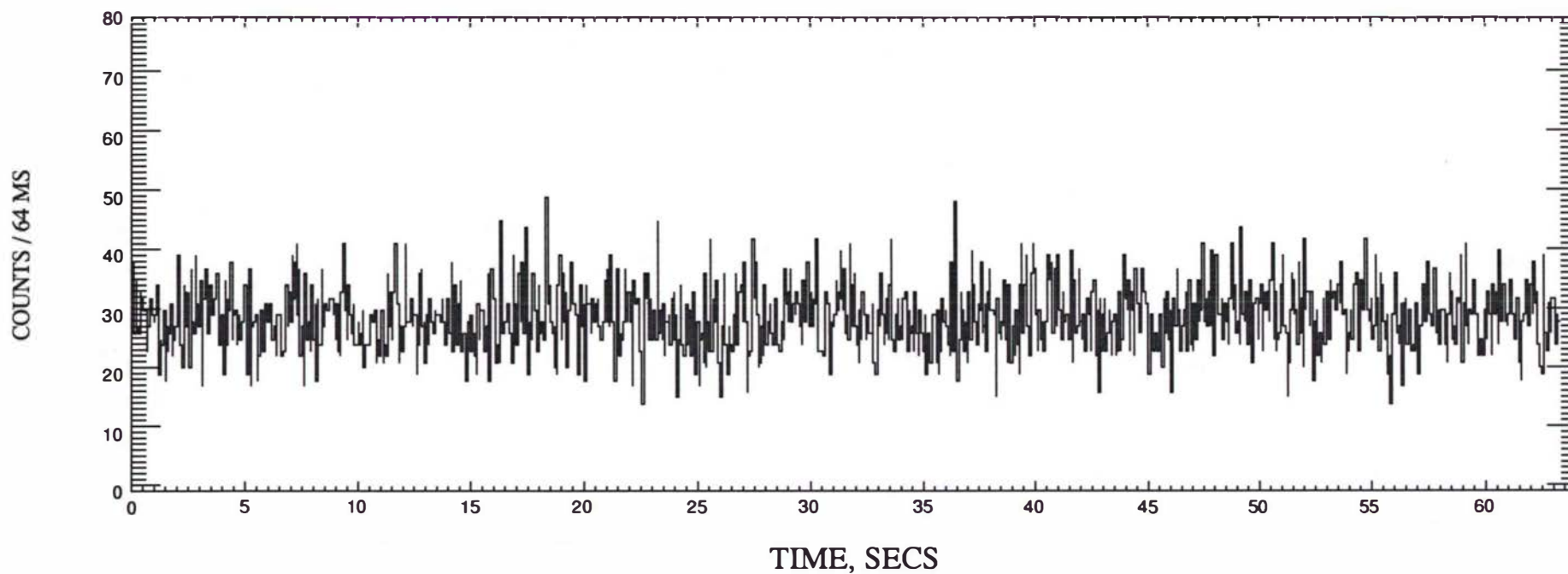
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 13 at UT=13.657117593553 h=49165.623 s 13:39:25.623

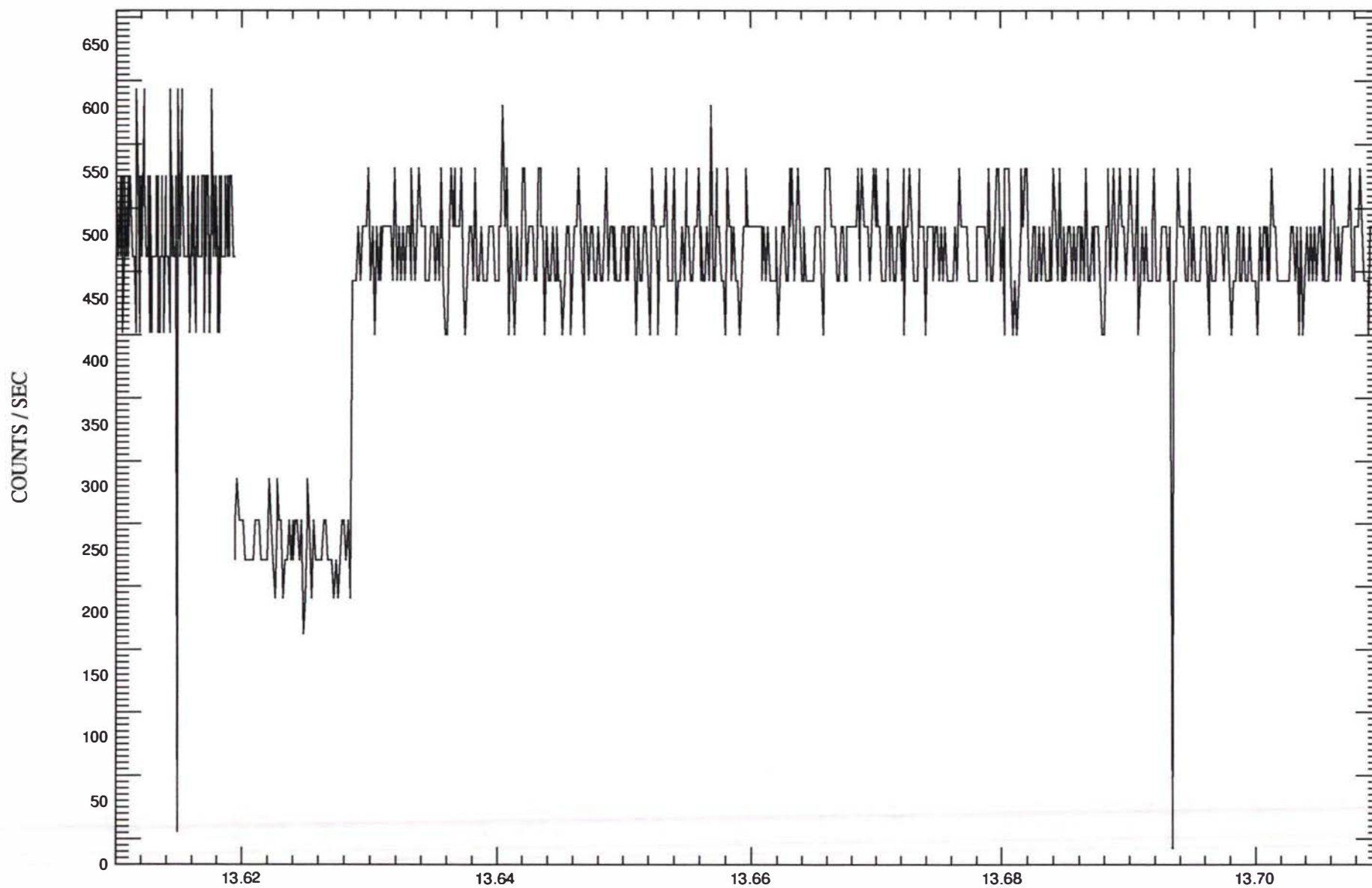
4/1/96



B# 11

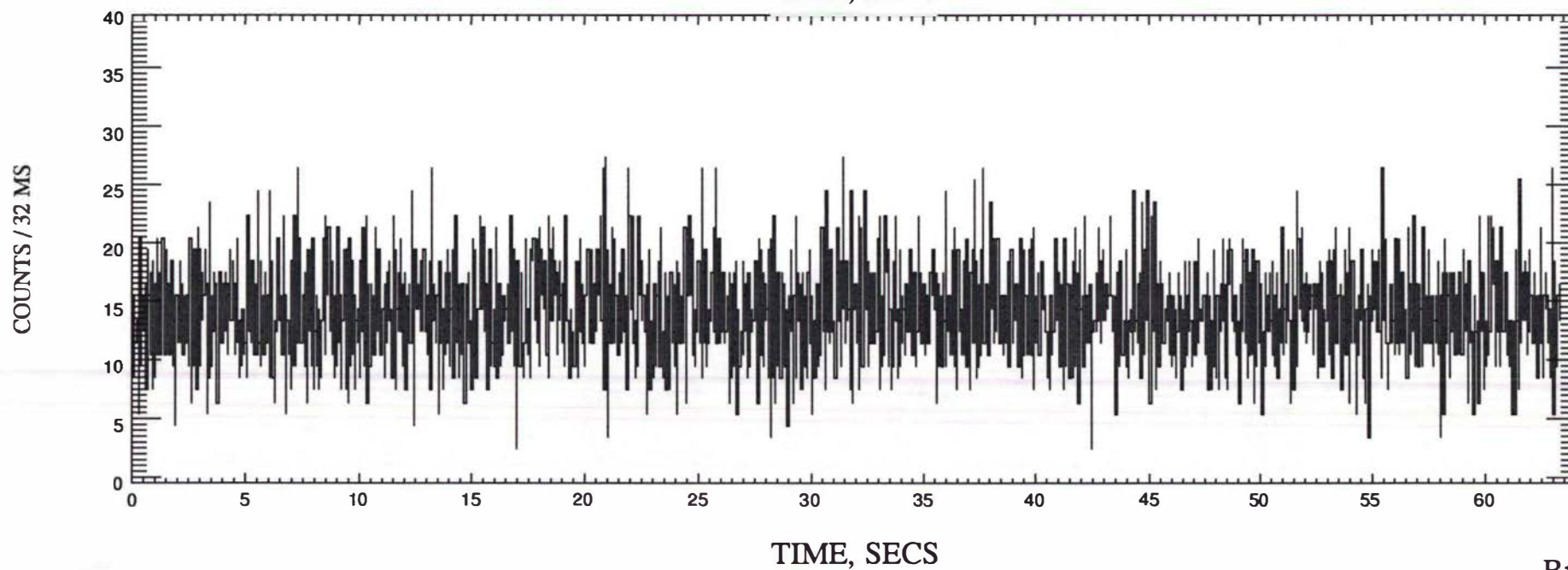
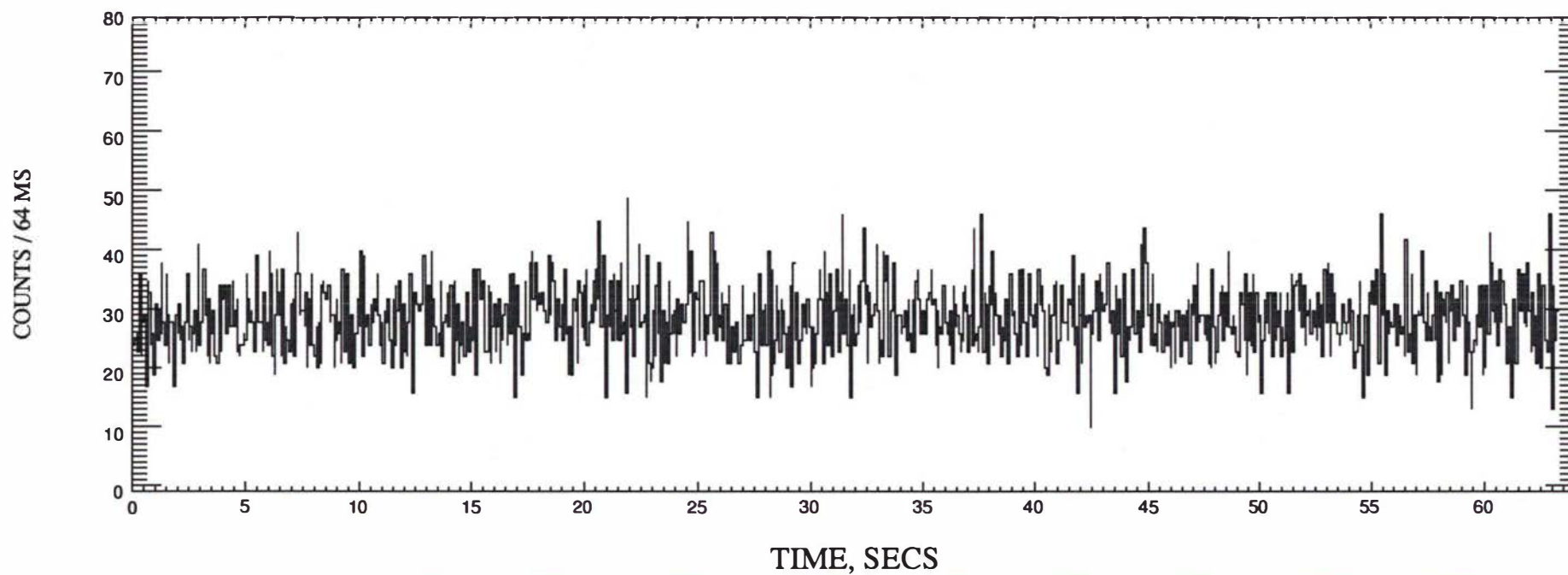
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 15 at UT=15.289225705465 h=55041.213 s 15:17:21.213

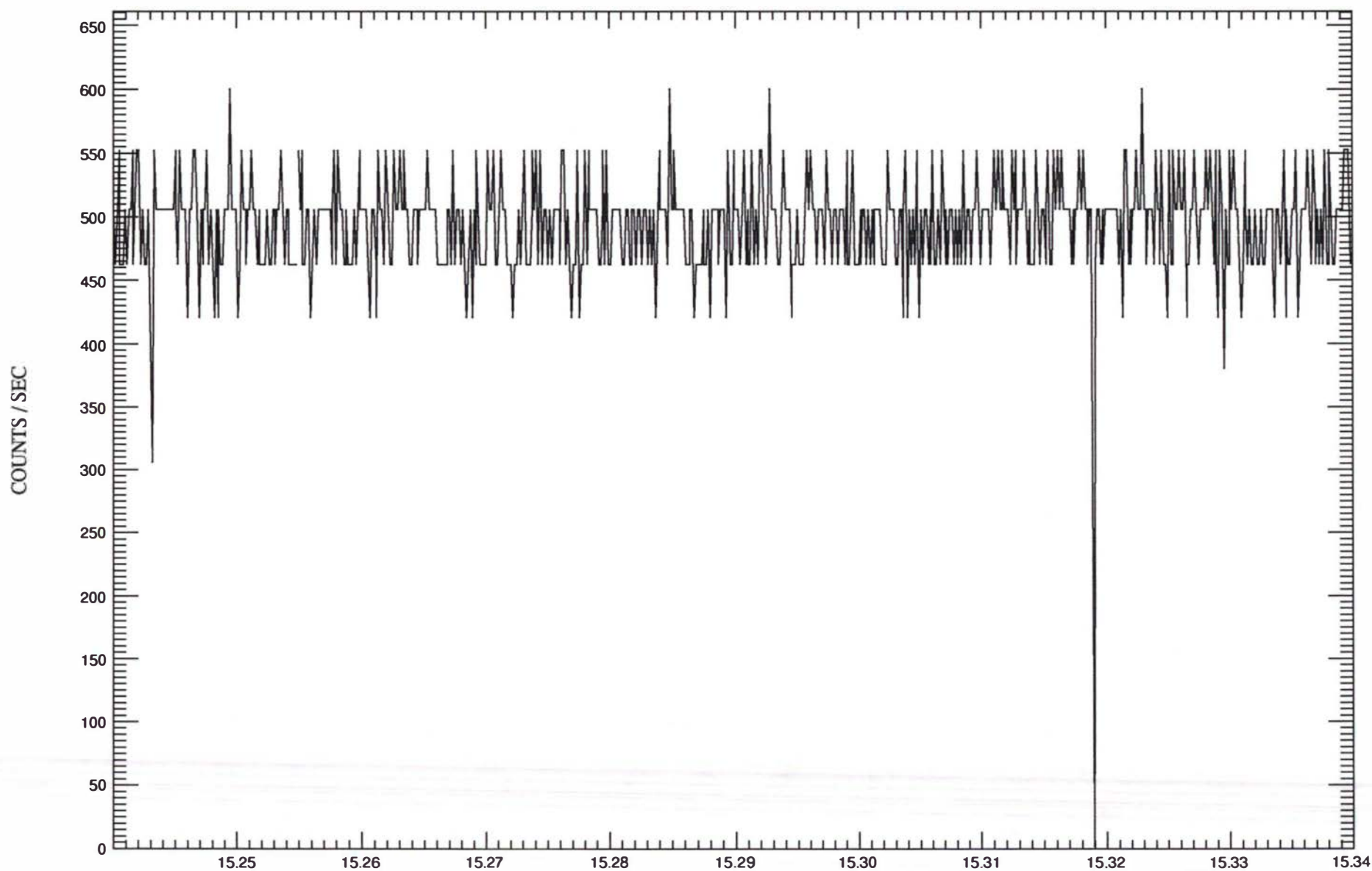
4/1/96



B# 12

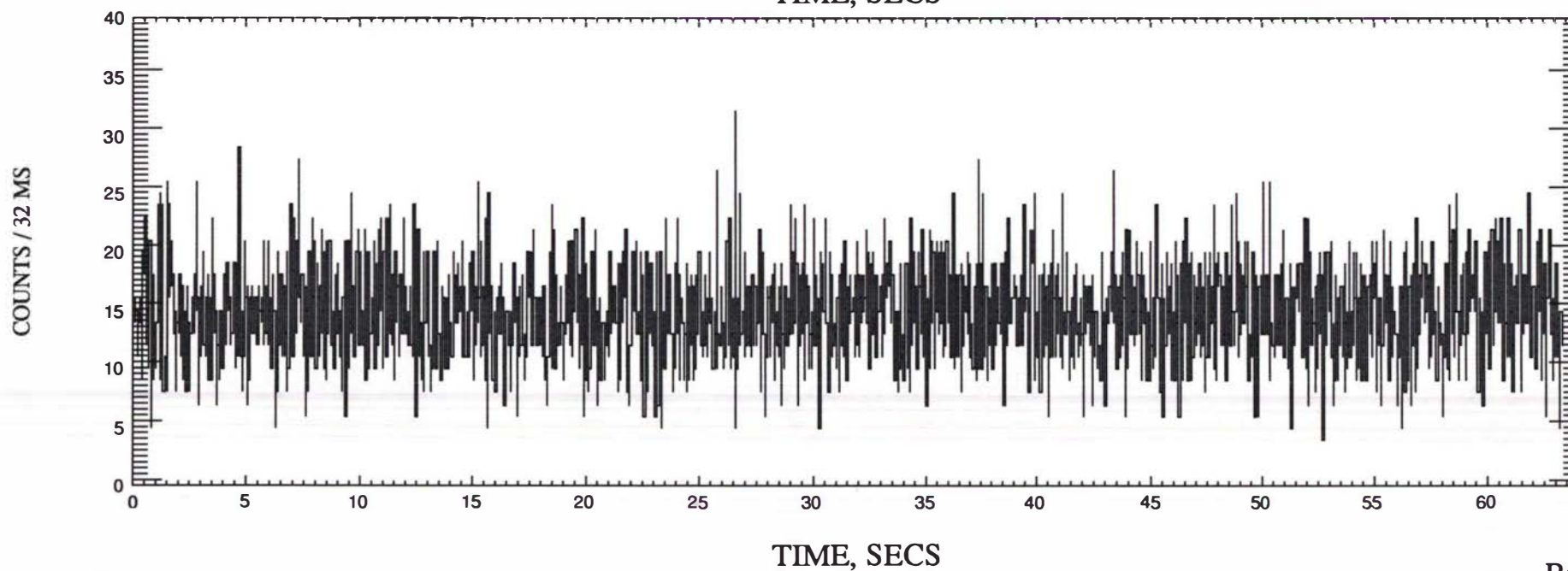
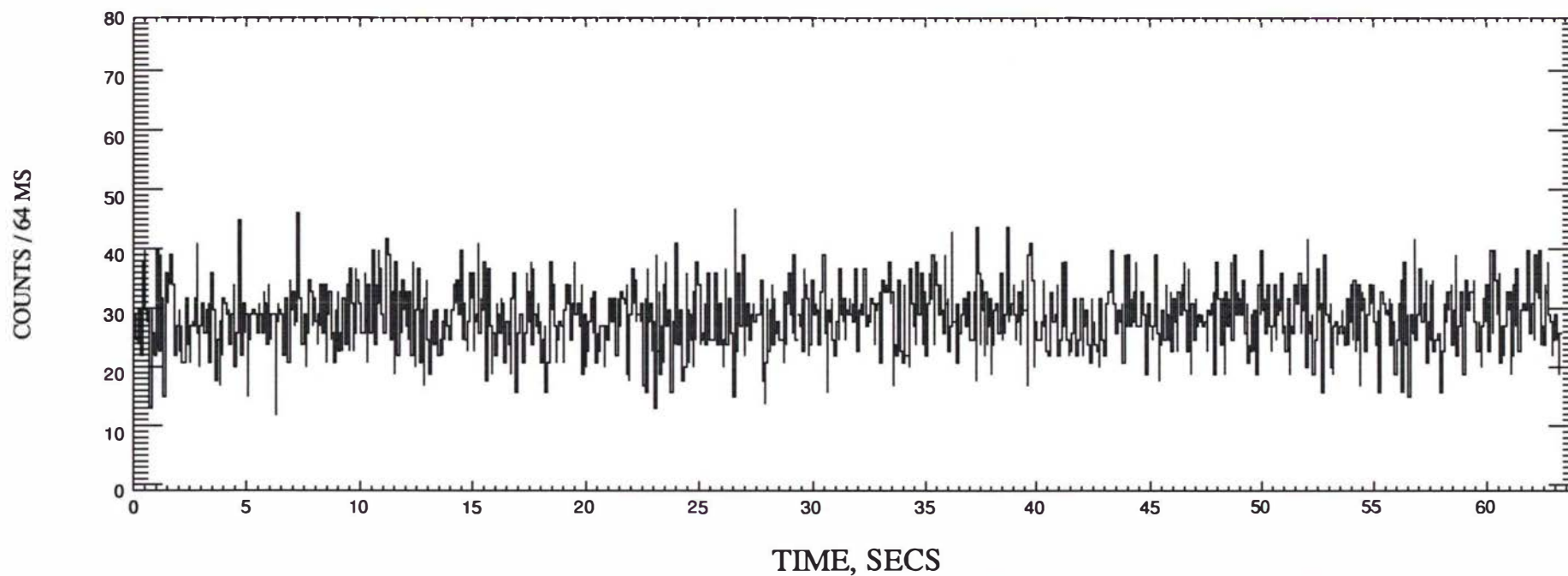
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 0 at UT=16.013298975627 h=57647.876 s 16:00:47.876

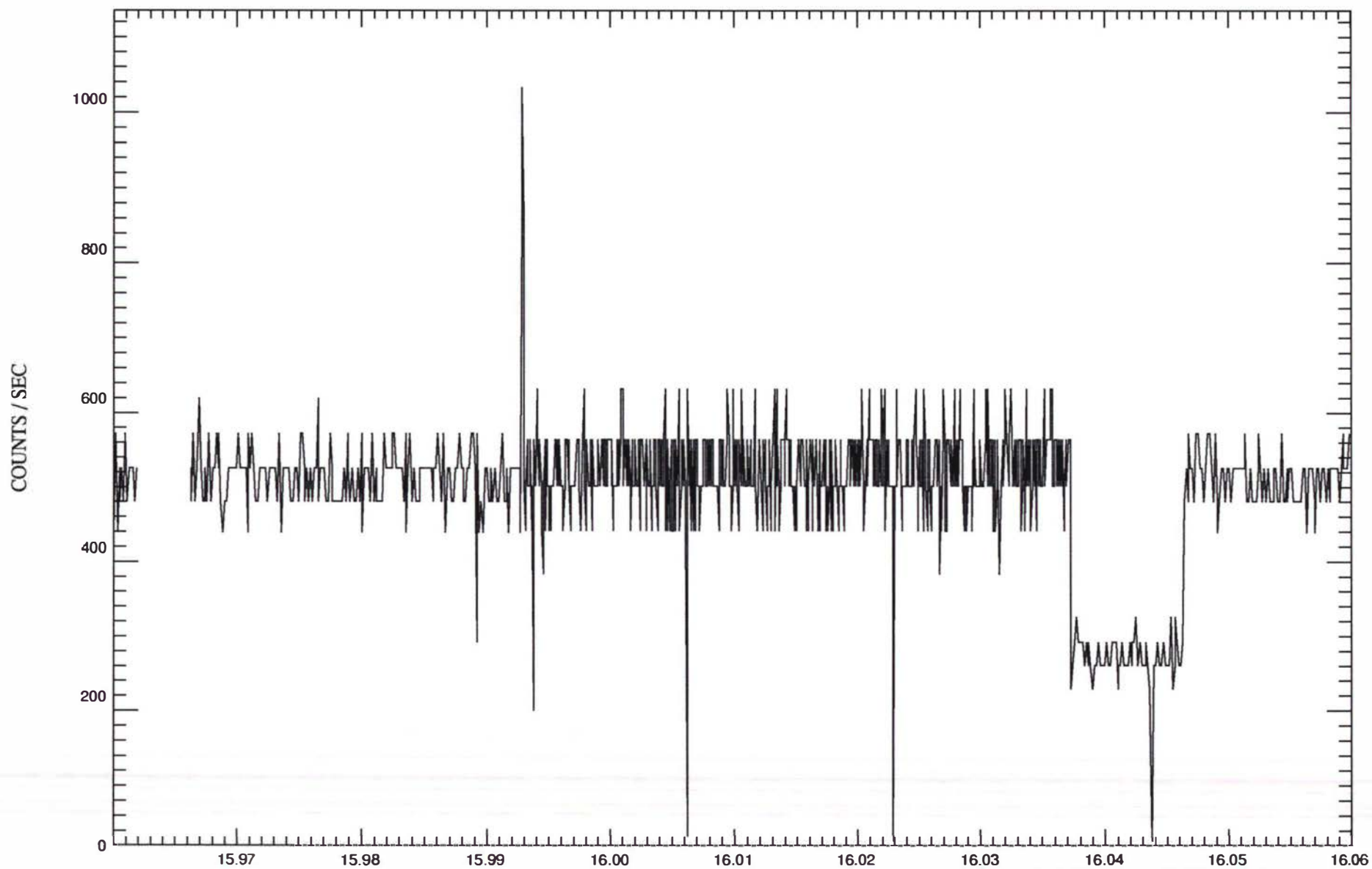
4/1/96



B# 13

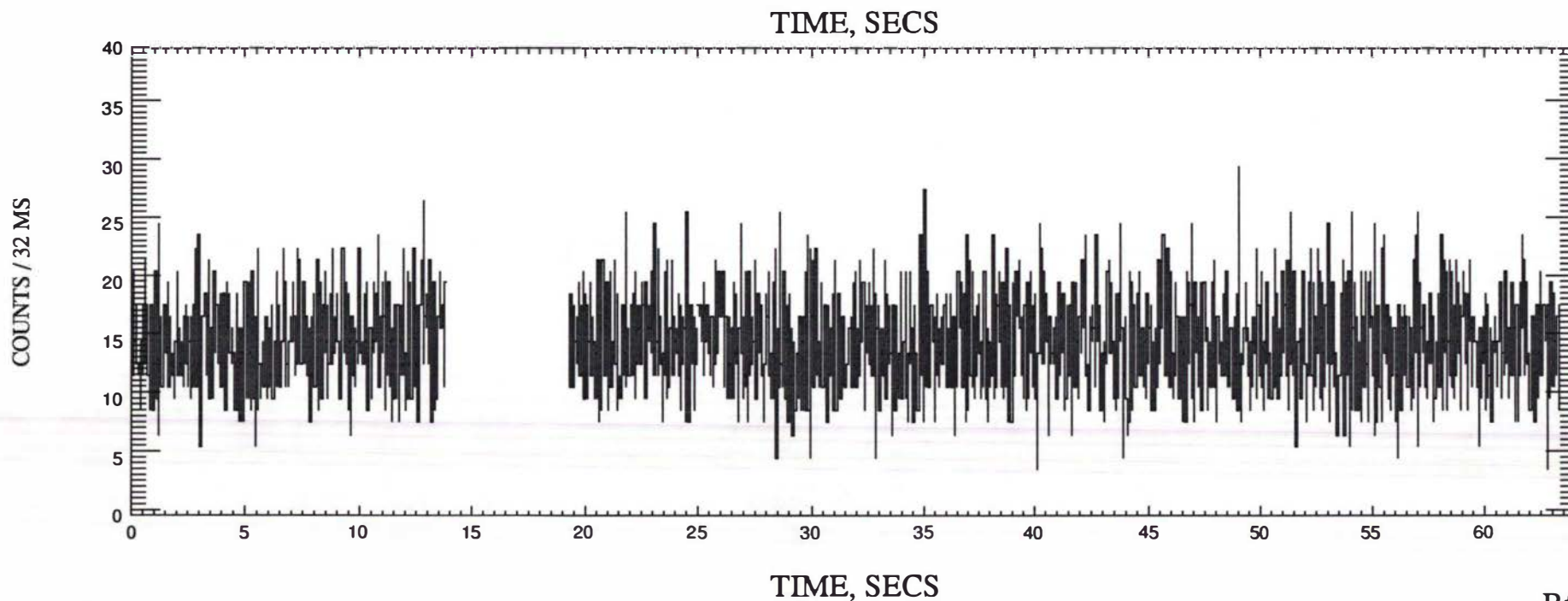
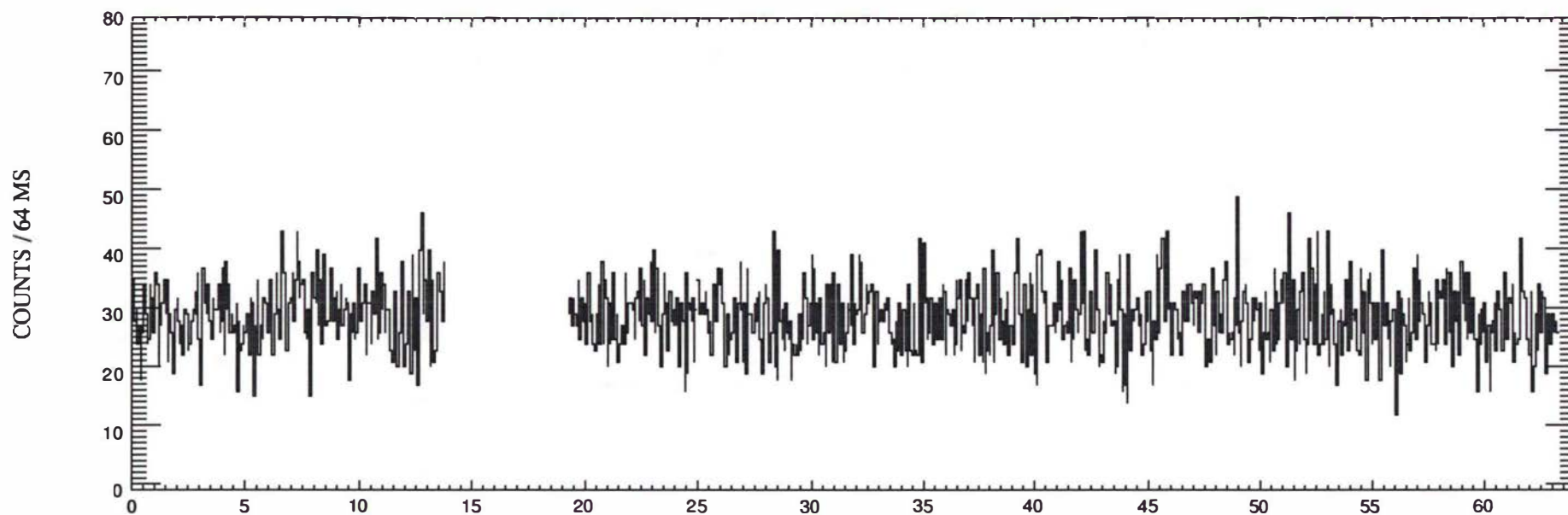
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 1 at UT=16.759039993286 h=60332.544 s 16:45:32.544

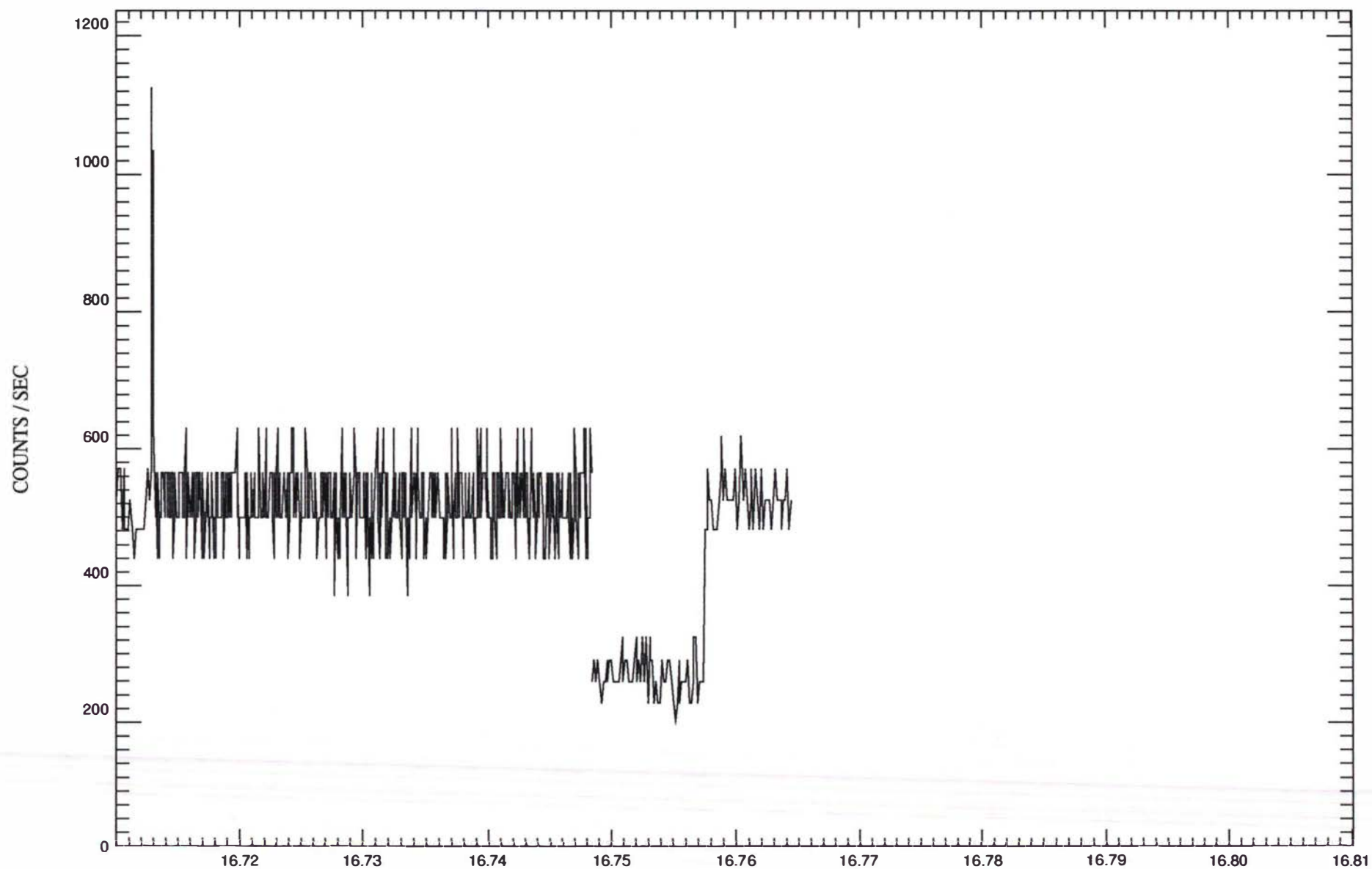
4/1/96



B# 14

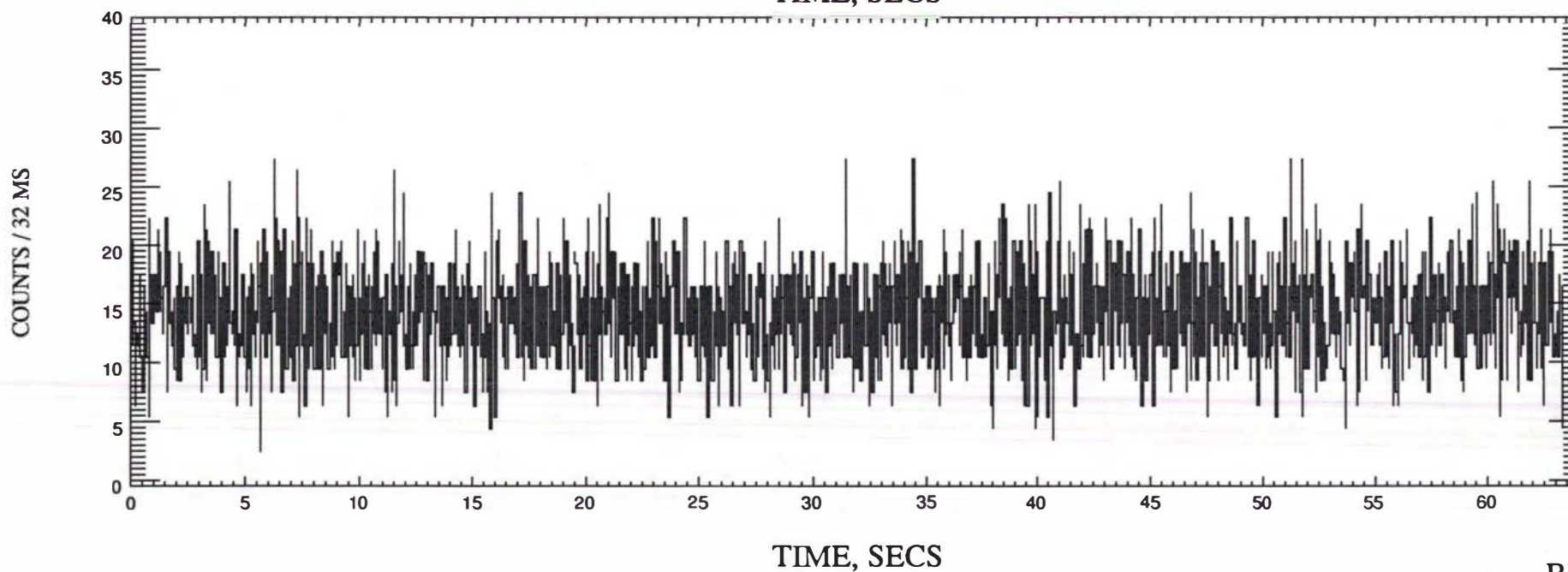
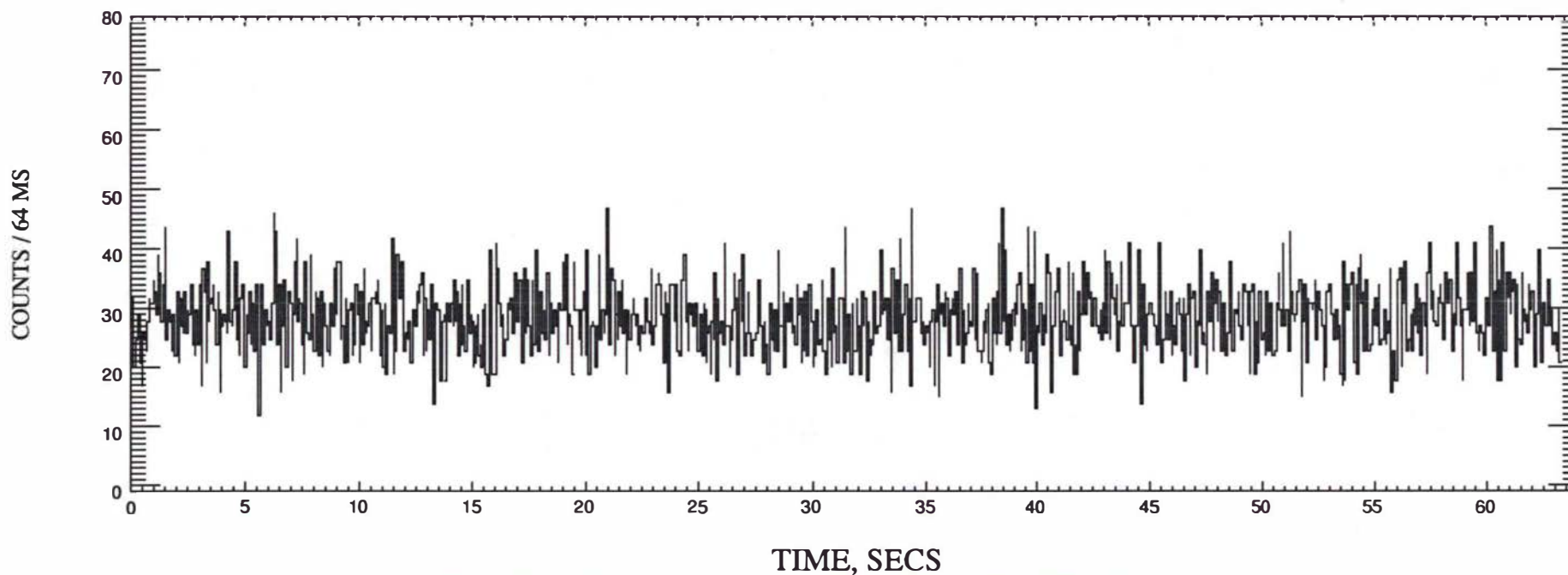
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 2 at UT=17.477937219408 h=62920.574 s 17:28:40.574

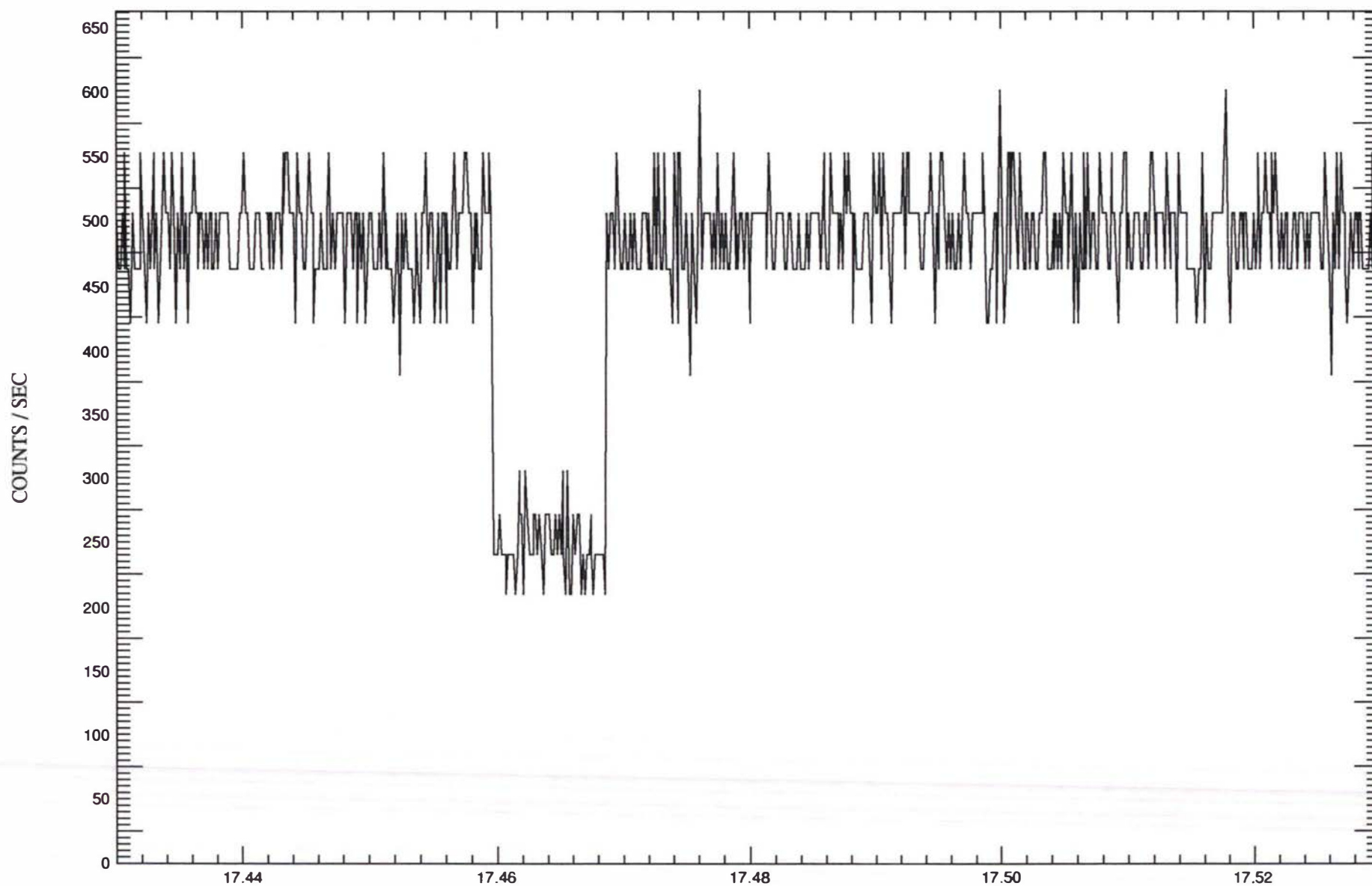
4/1/96



B# 15

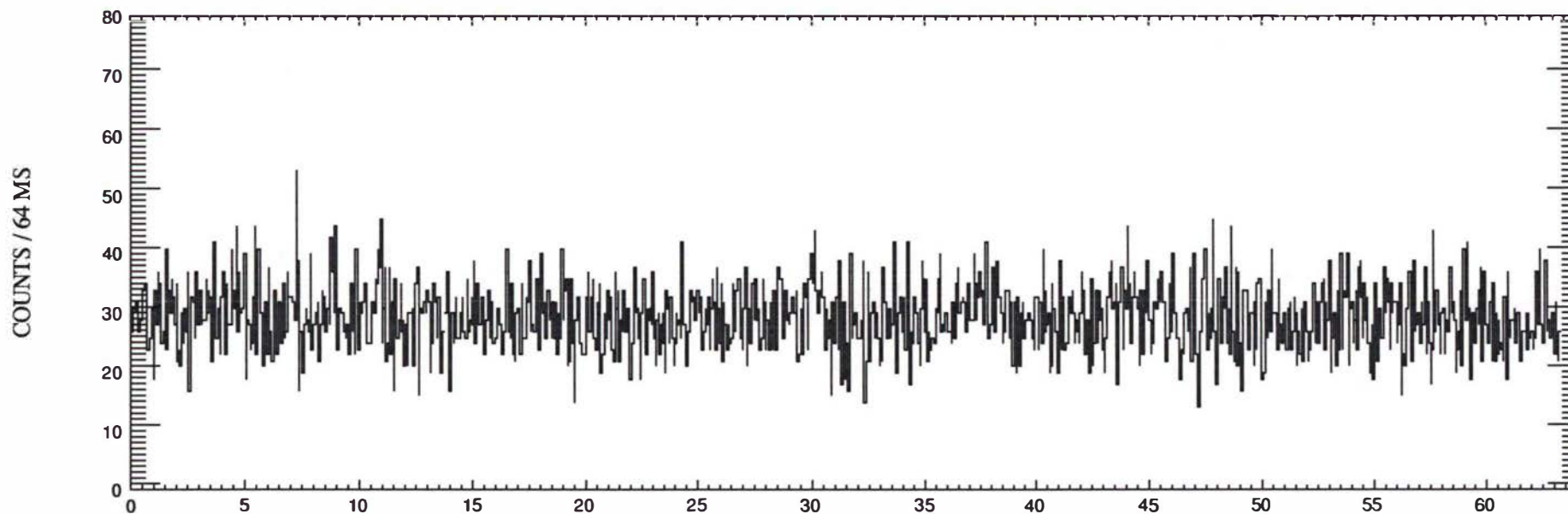
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96

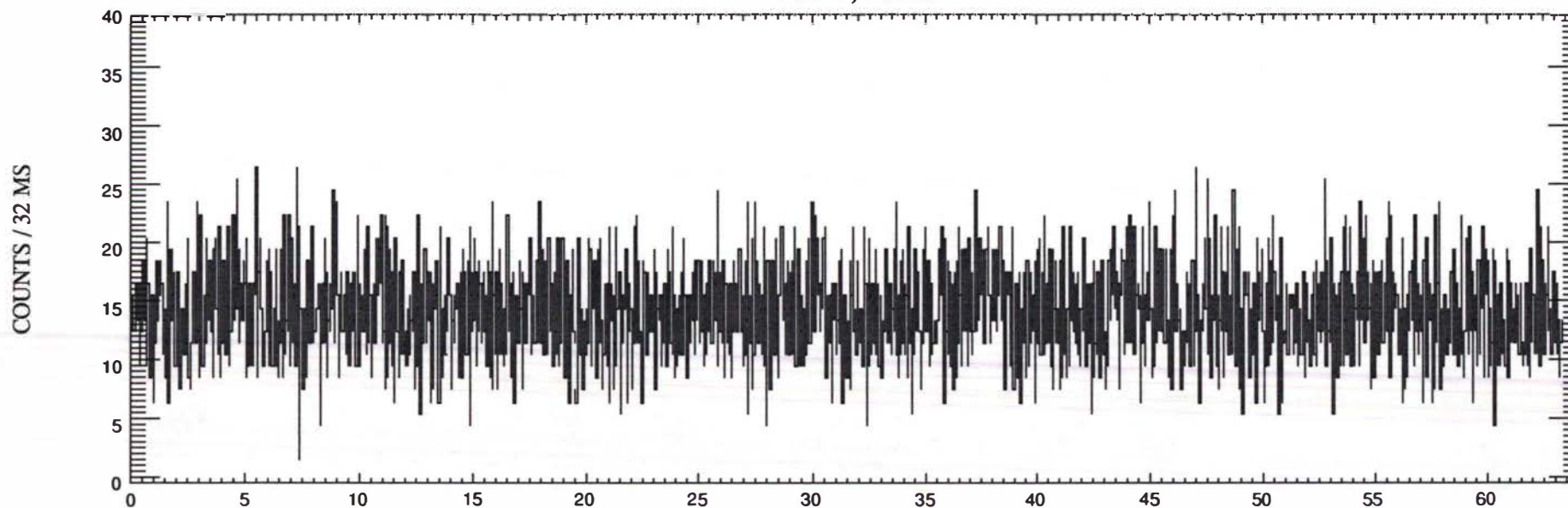


HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 3 at UT=18.212116826375 h=65563.621 s 18:12:43.621

4/1/96



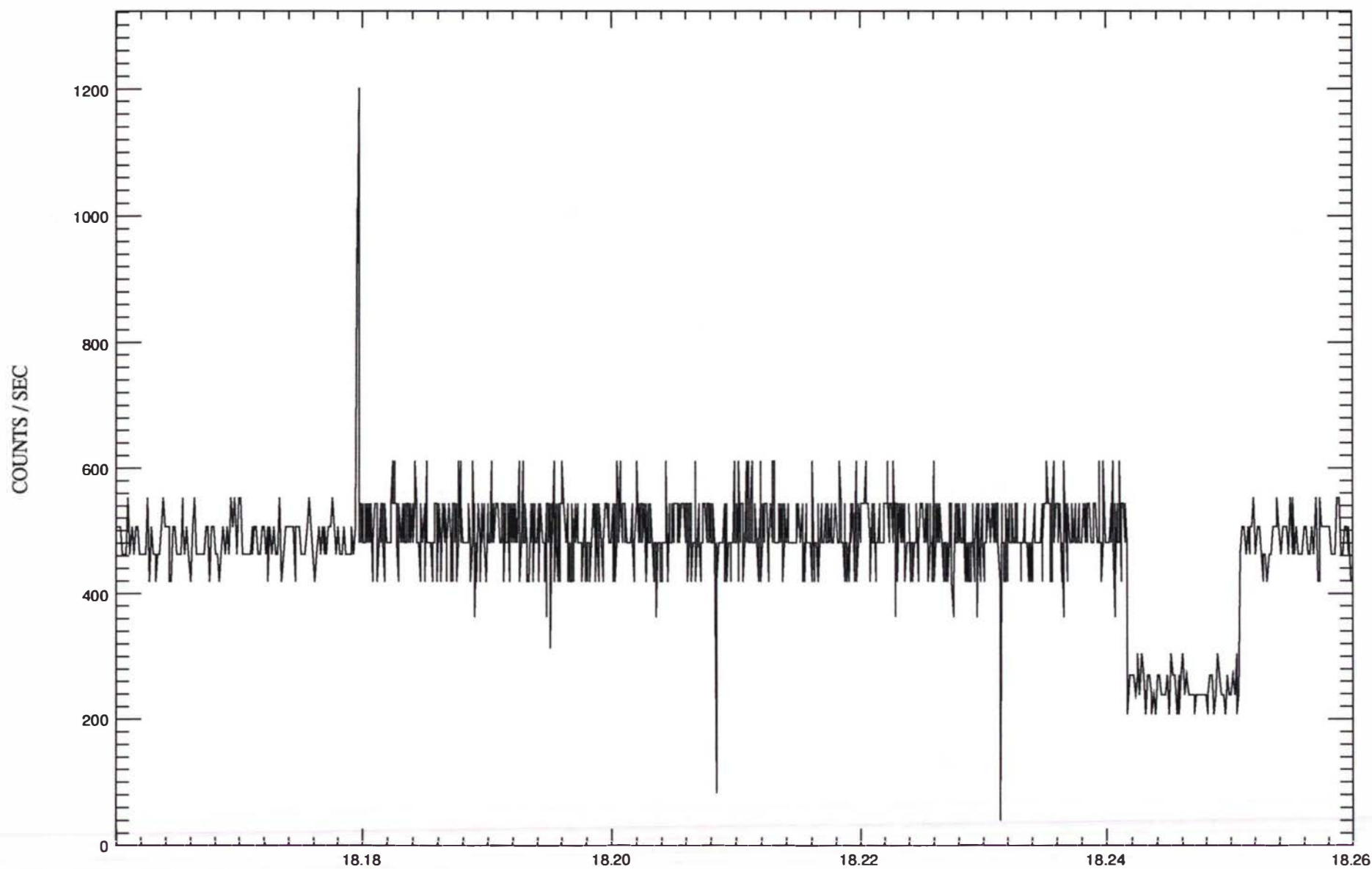
TIME, SECS



TIME, SECS

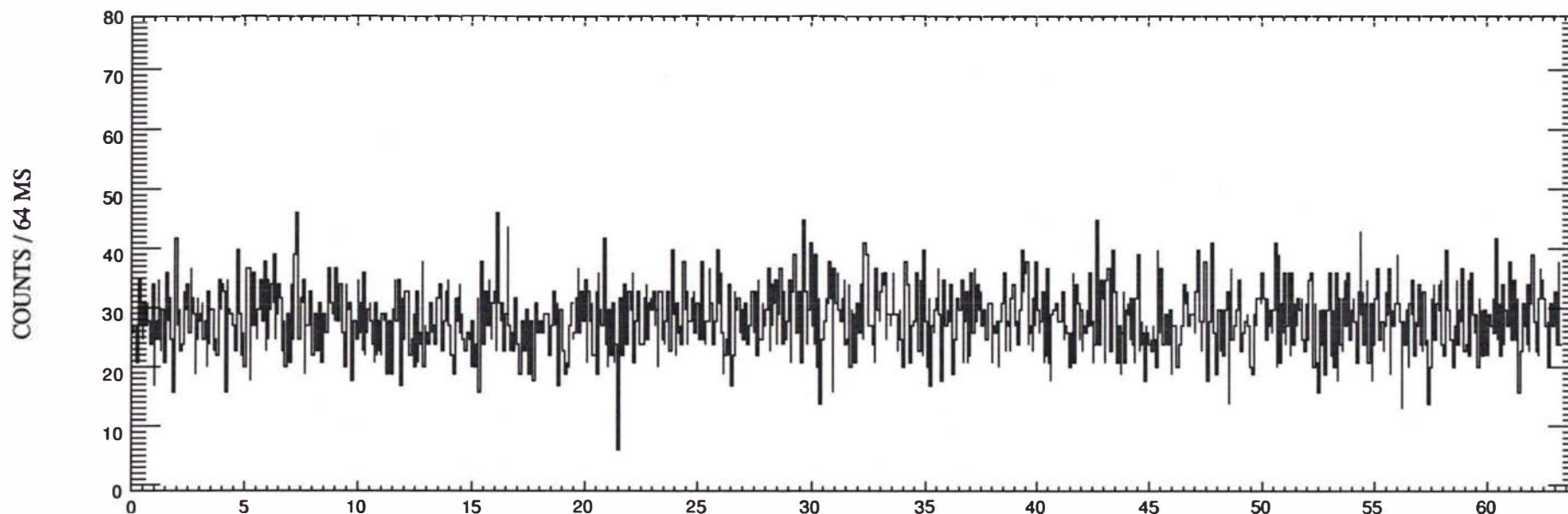
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96

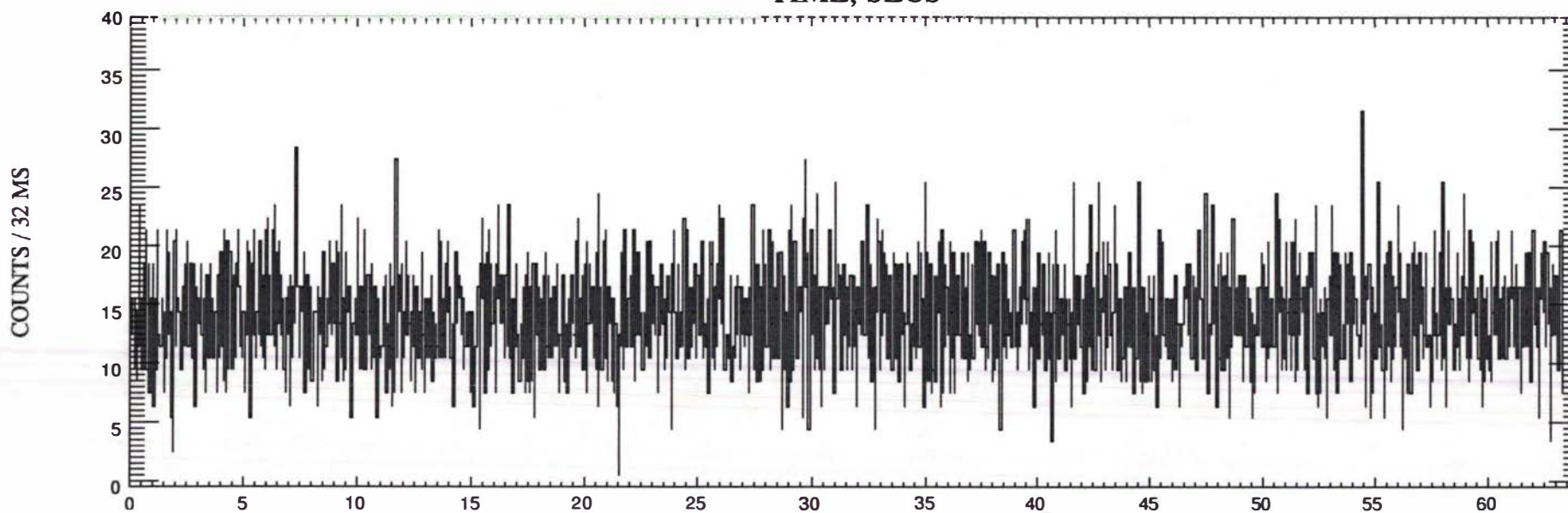


HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 4 at UT=18.952715708415 h=68229.777 s 18:57:09.777

4/1/96



TIME, SECS

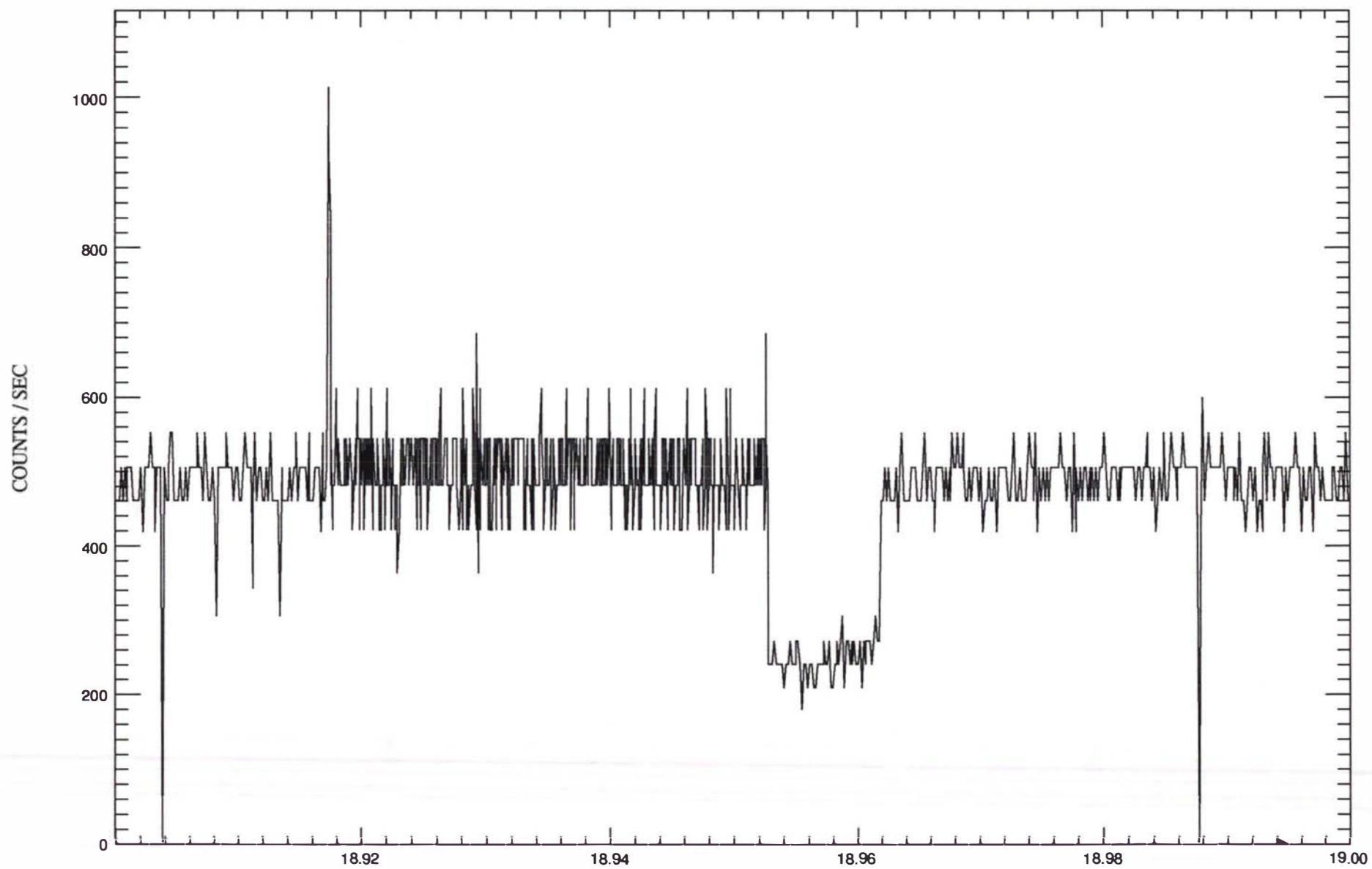


TIME, SECS

B# 17

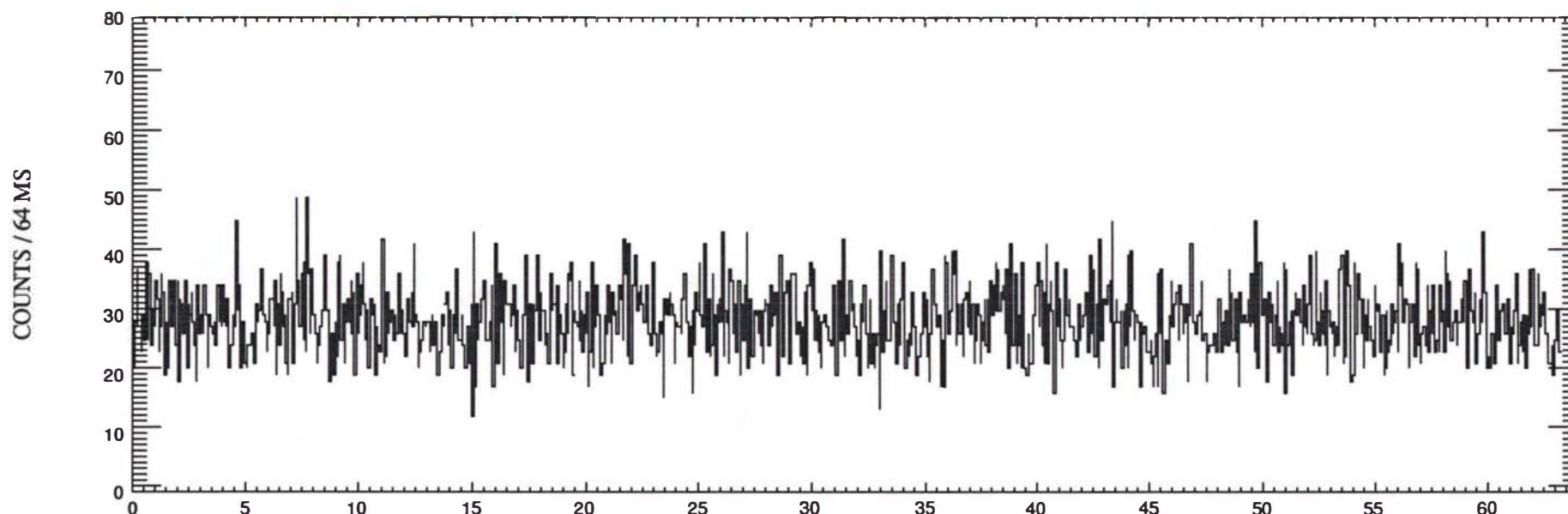
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96

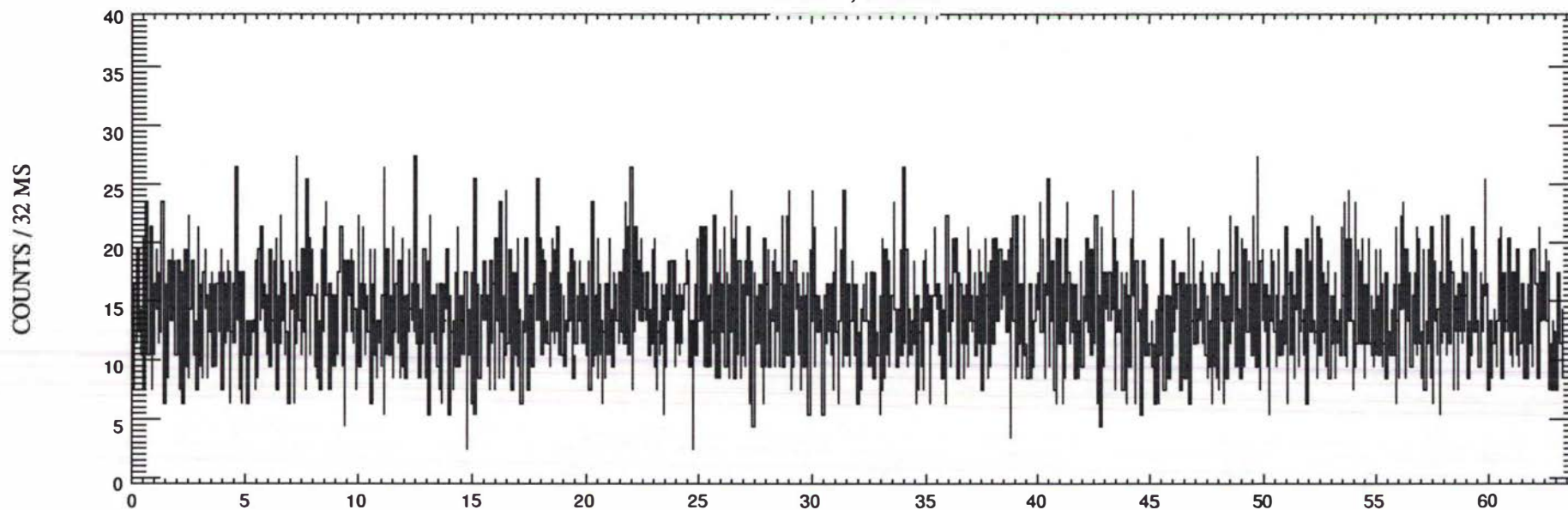


HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 5 at UT=19.658561986287 h=70770.823 s 19:39:30.823

4/1/96



TIME, SECS

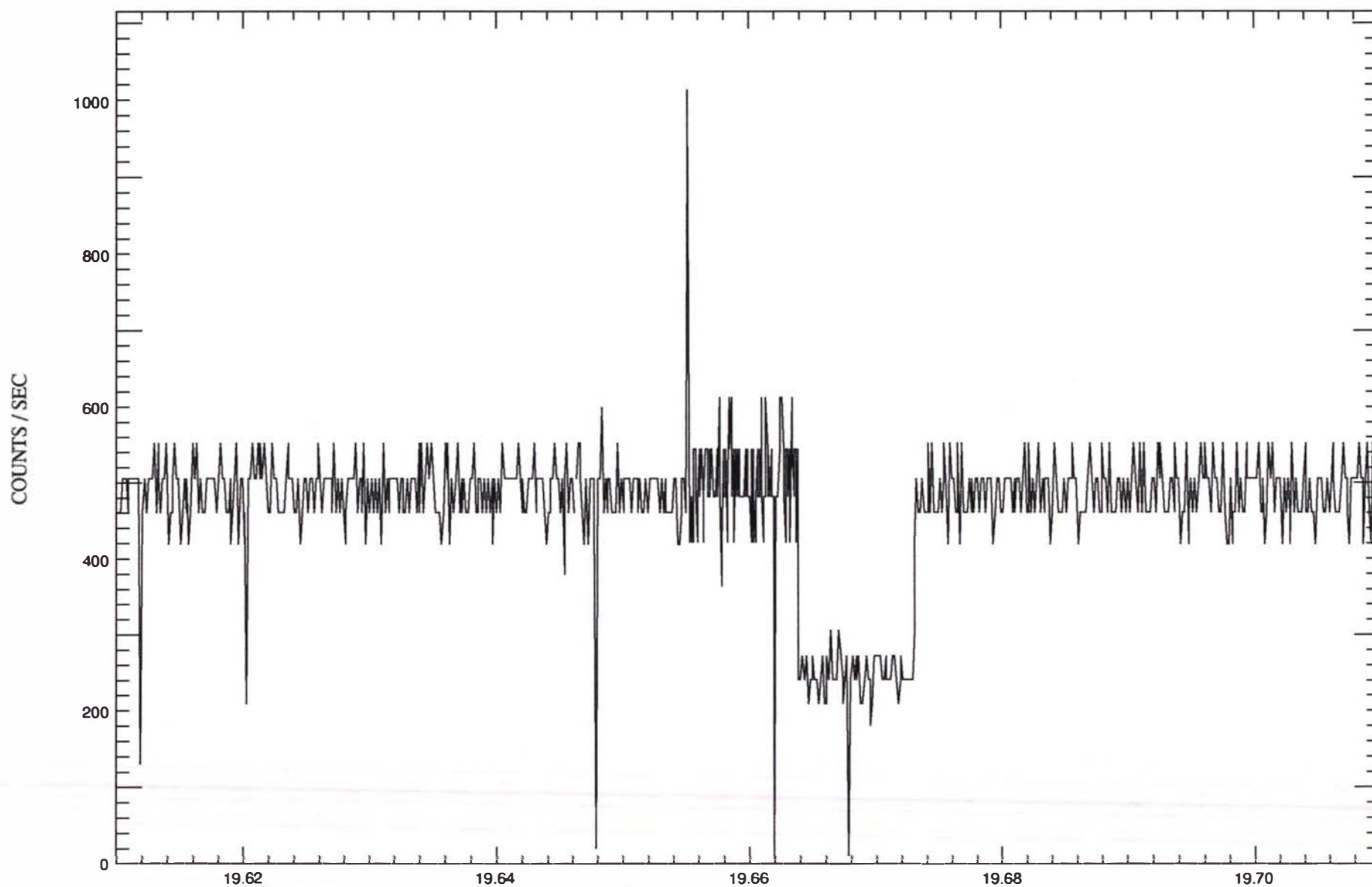


TIME, SECS

B# 18

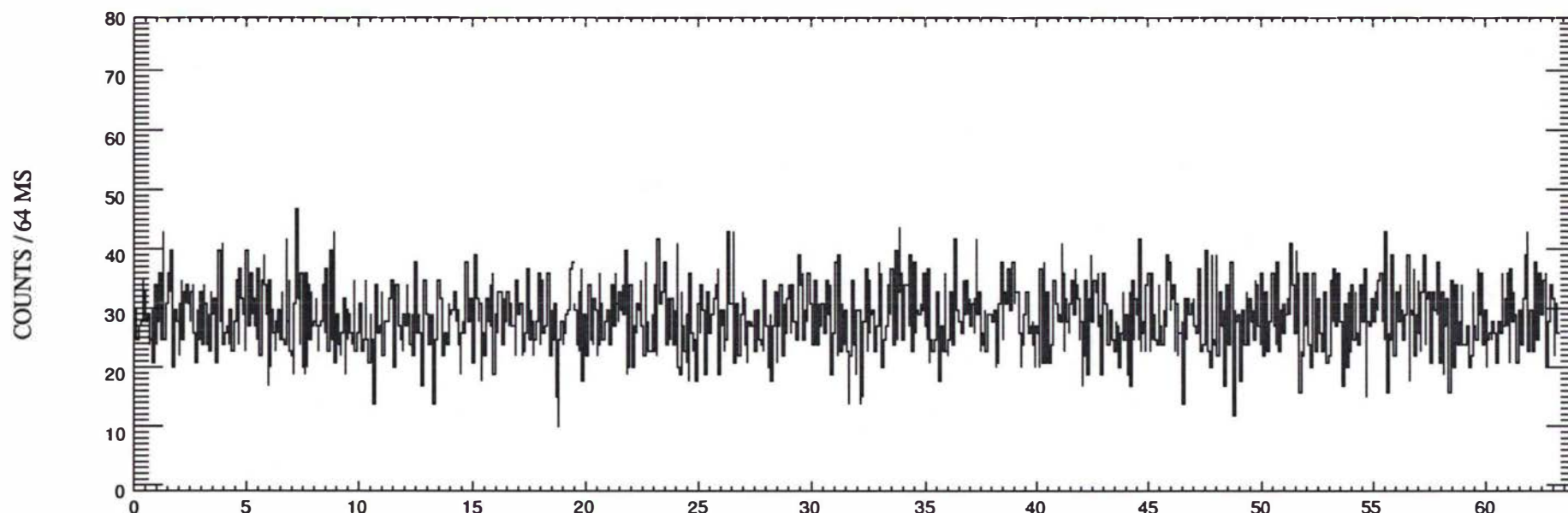
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96

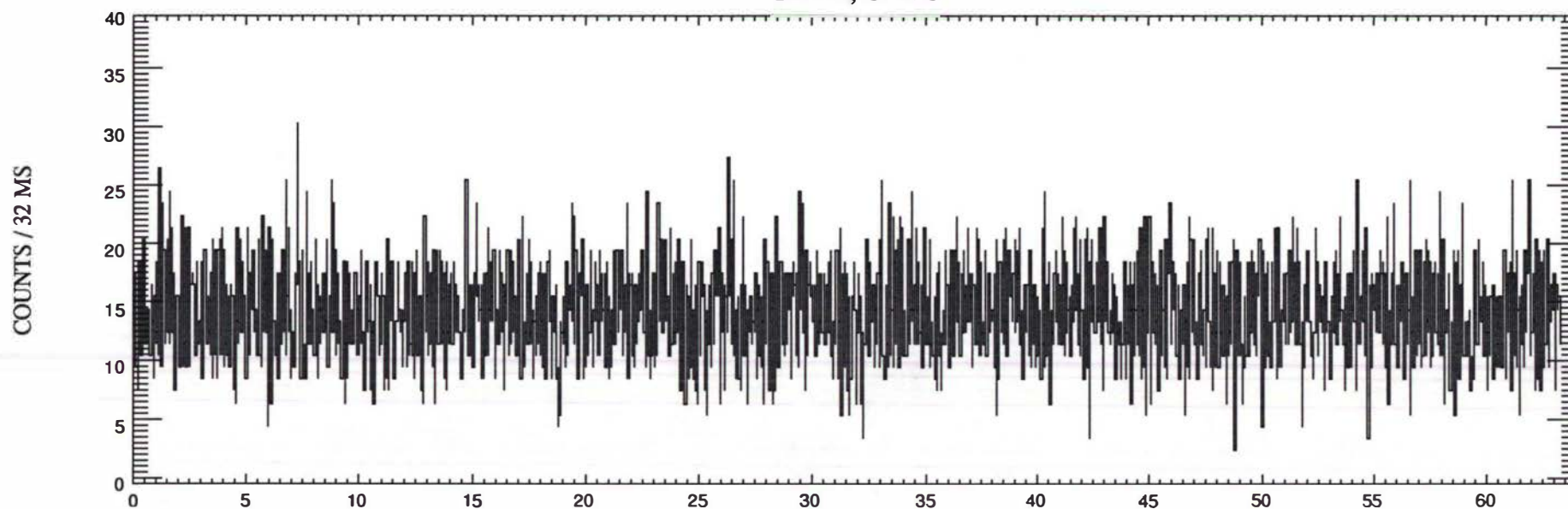


HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 6 at UT=20.888965492249 h=75200.276 s 20:53:20.276

4/1/96



TIME, SECS

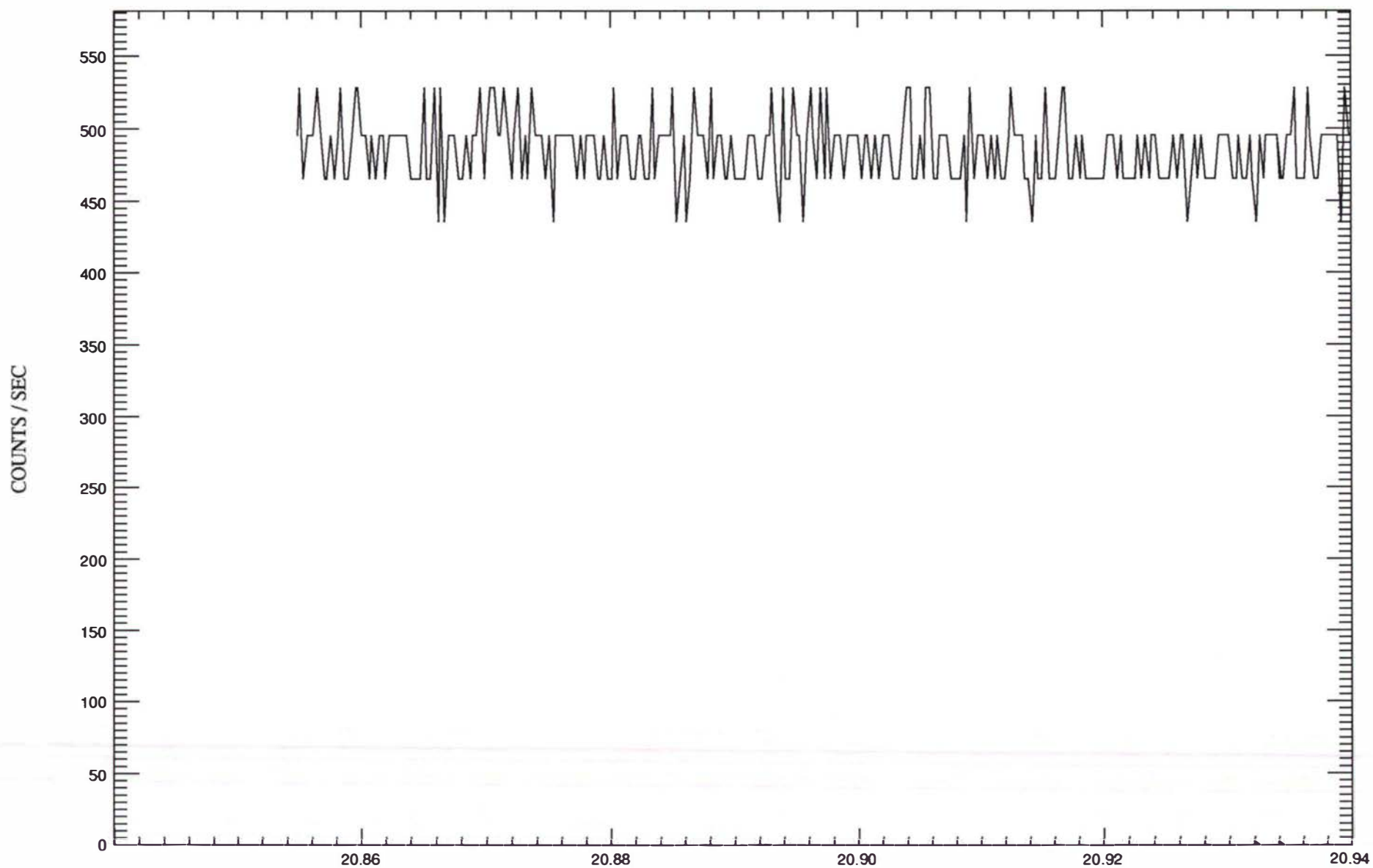


TIME, SECS

B# 19

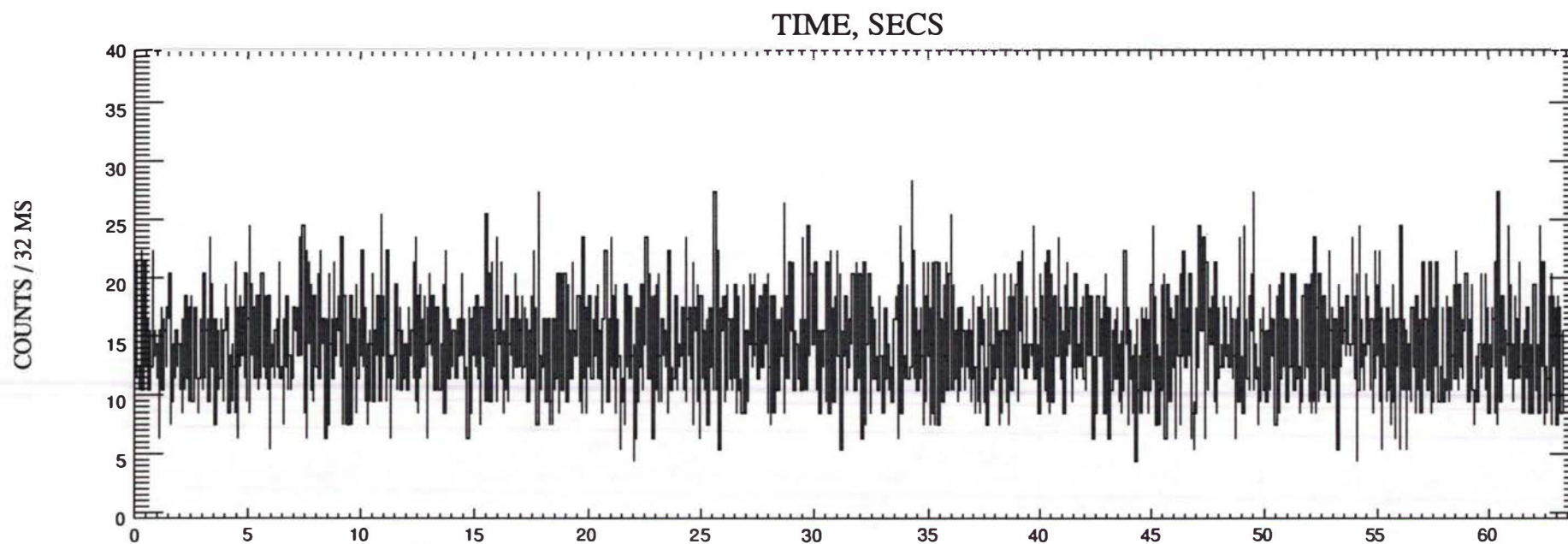
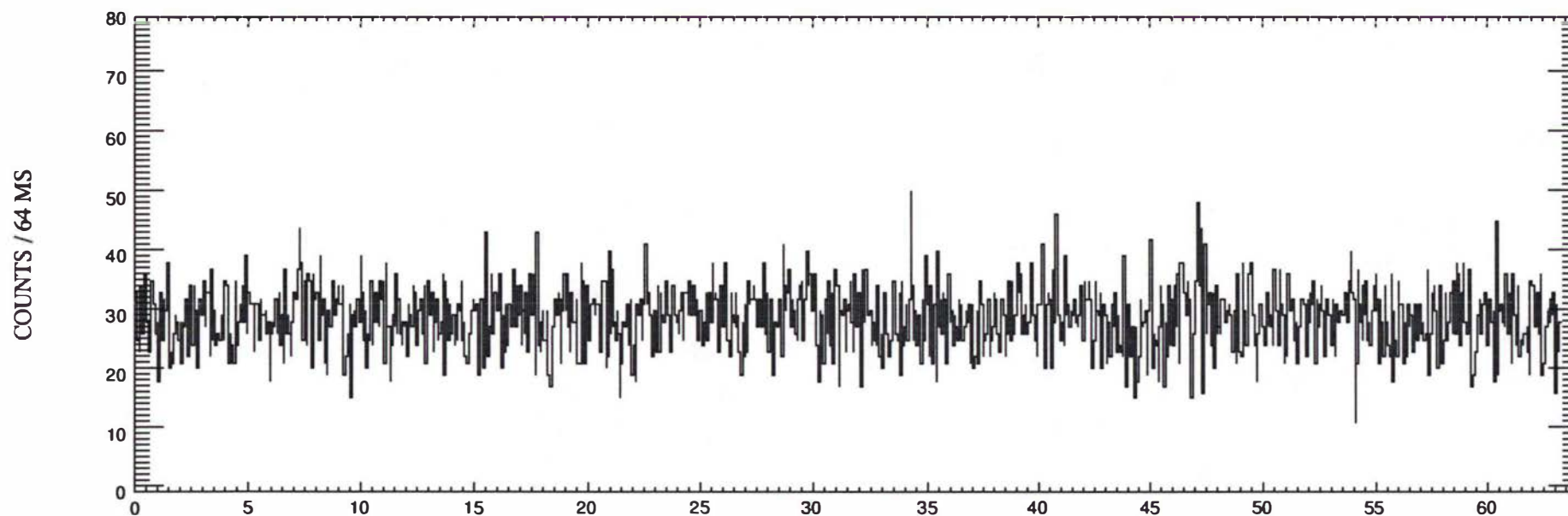
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96



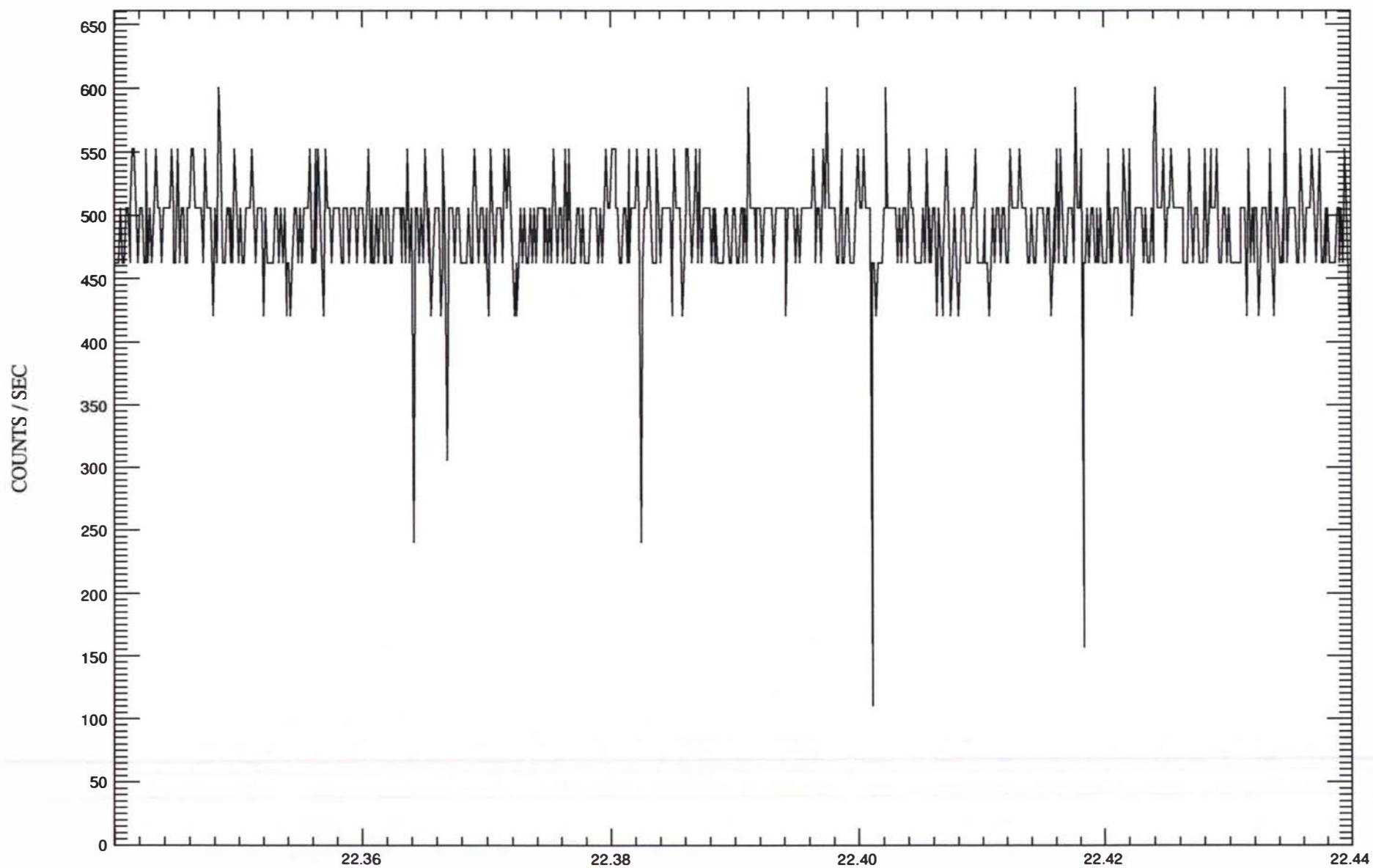
HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 7 at UT=22.391380704244 h=80608.971 s 22:23:28.971

4/1/96



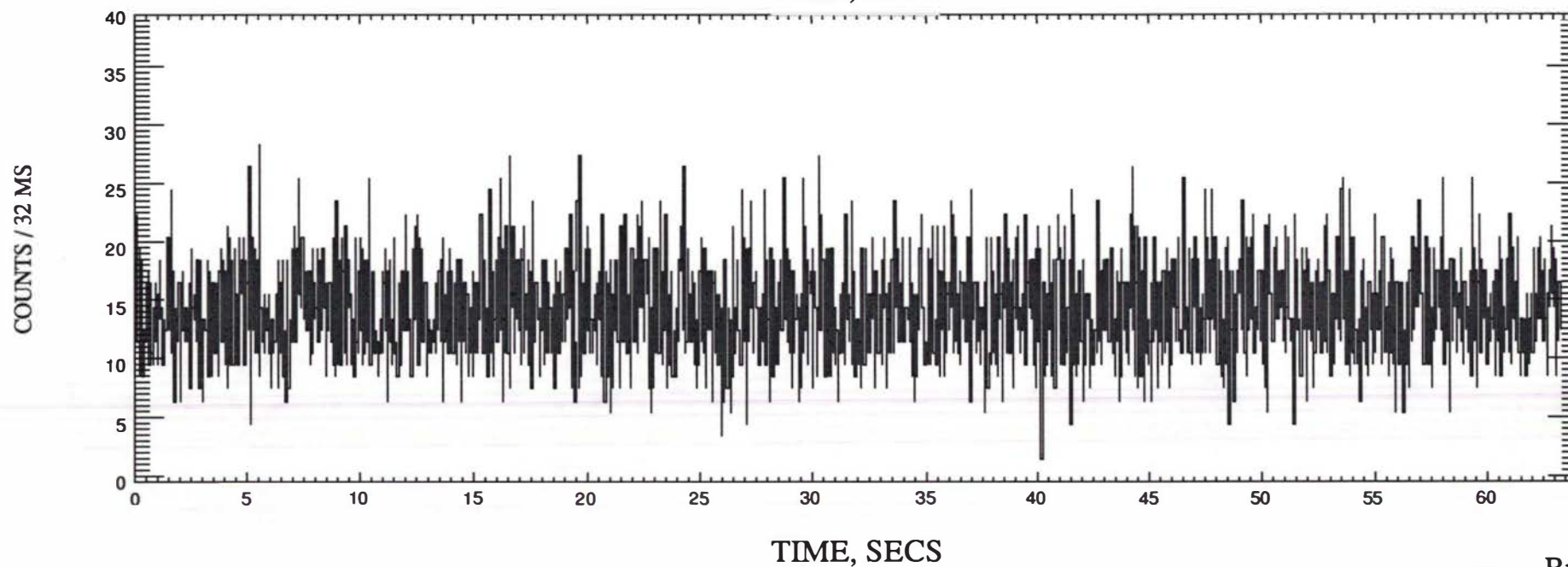
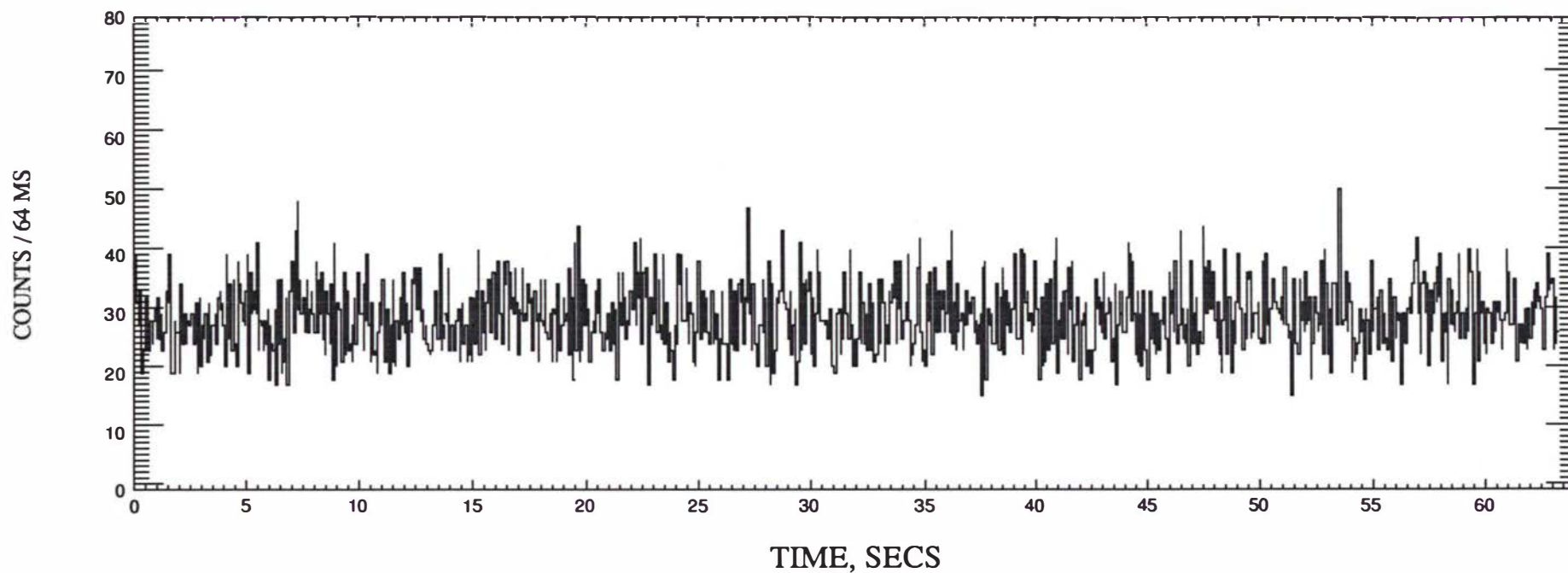
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96



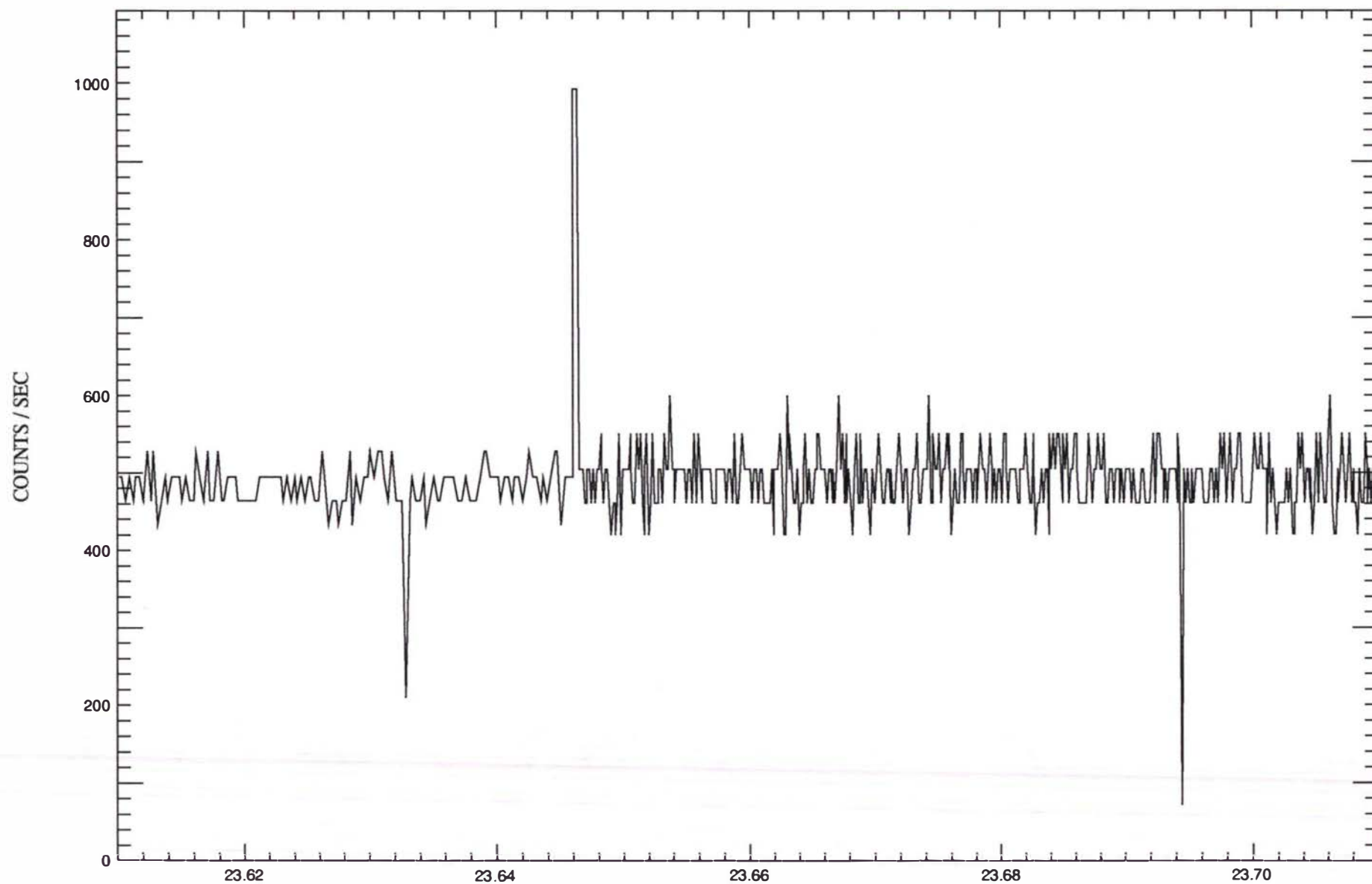
HUS 2A TRIGGERED DATA EDR day 363, year 1995
Burst Counter 8 at UT=23.663203481038 h=85187.533 s 23:39:47.533

4/1/96



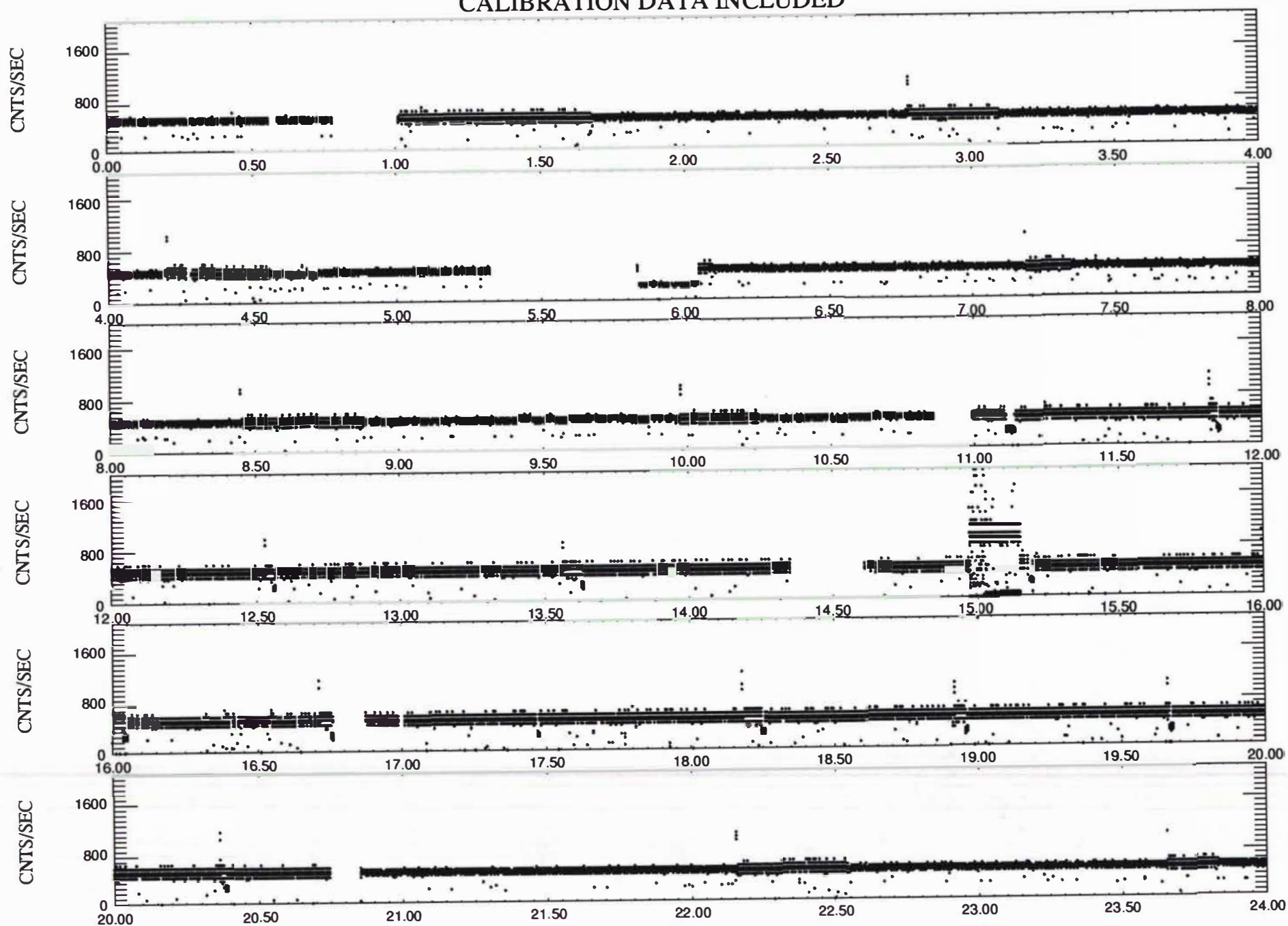
HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

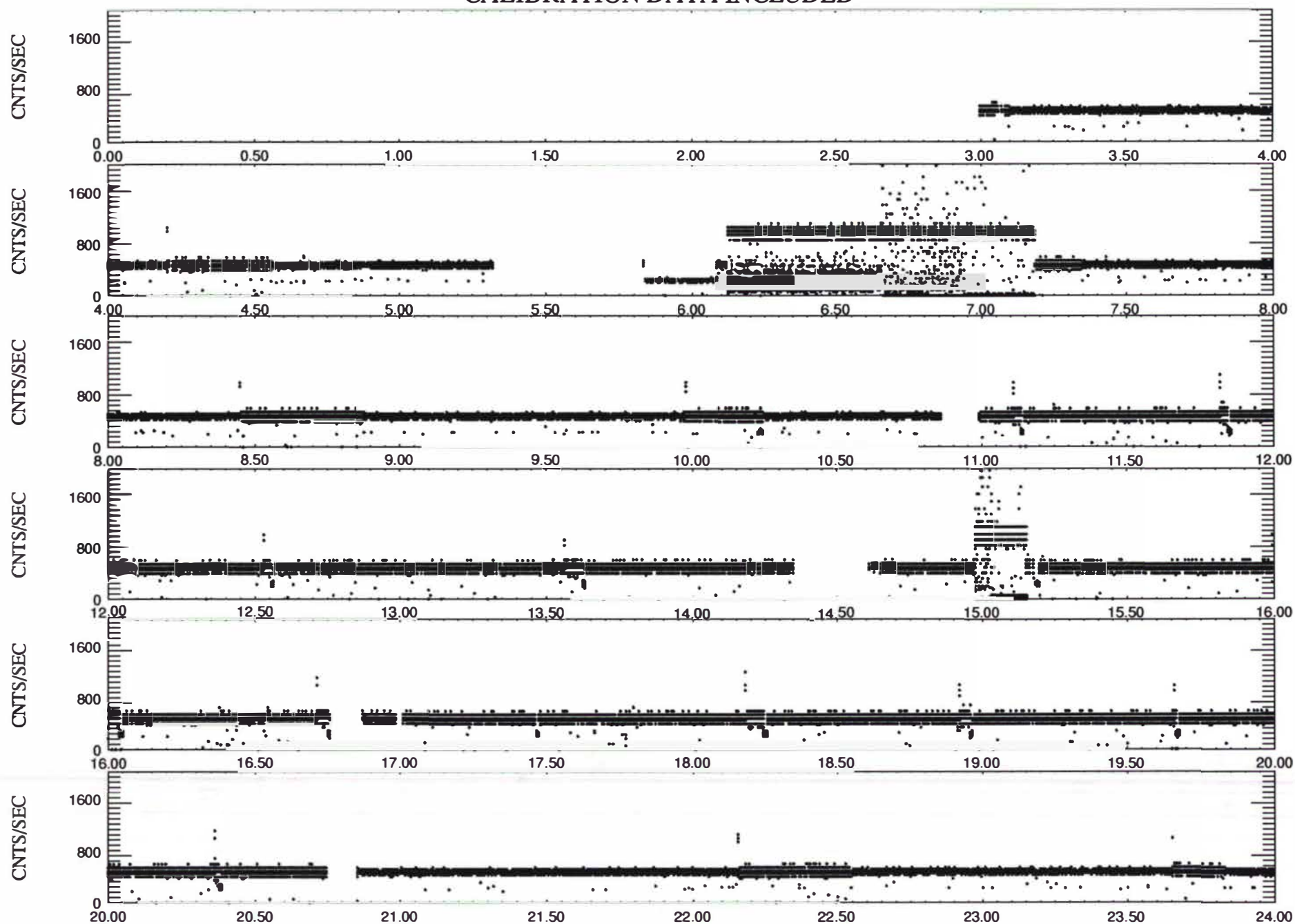
4/1/96



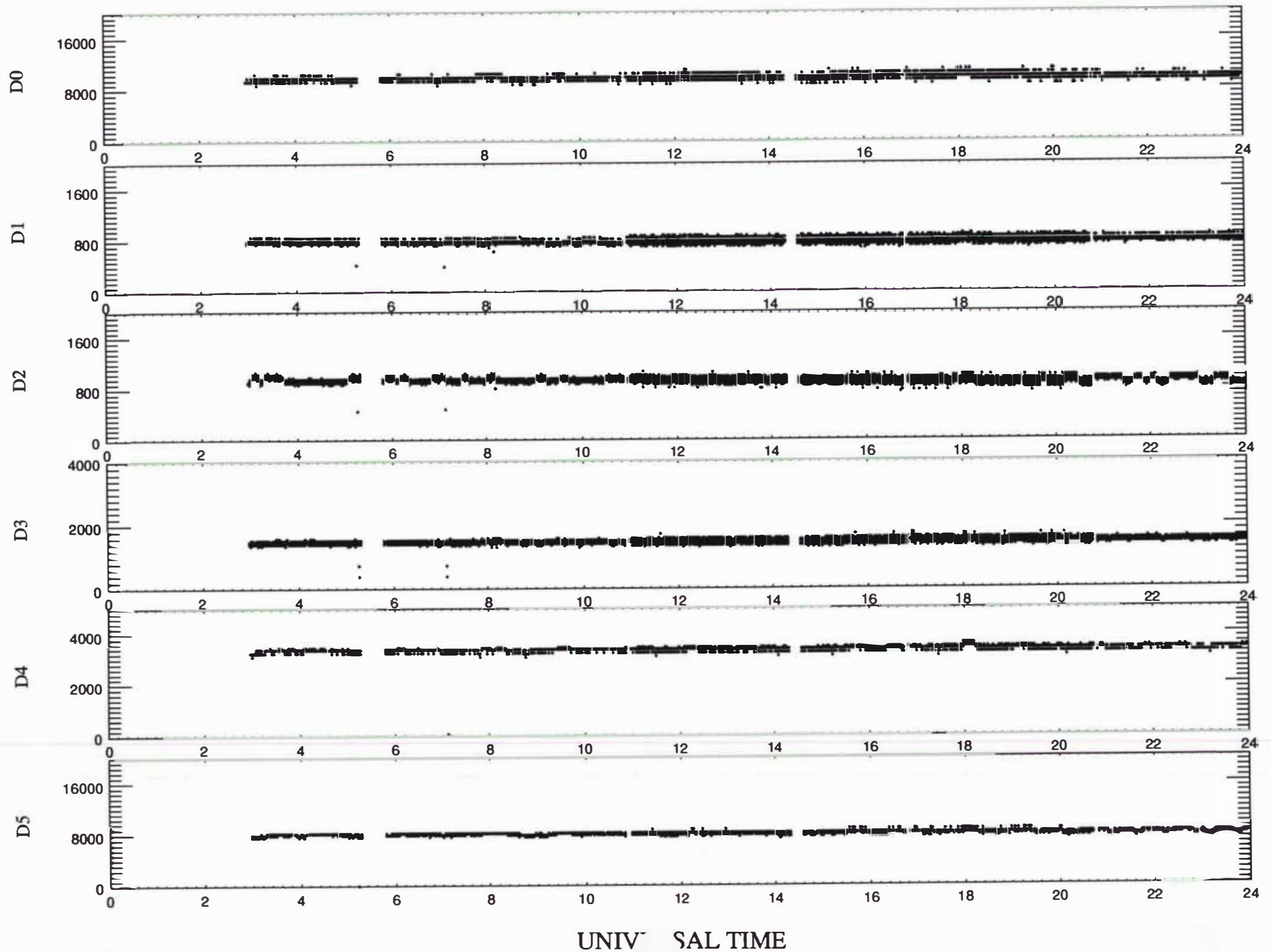
UNIVERSAL TIME

HUS 2A, MODE 1, NOT AVERAGED QEDR day 363, year 1995 to day 363, year 1995
CALIBRATION DATA INCLUDED

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UNIV SAL TIME



1996:

~001.02:45 SCET	should be	~364.23:12 SCET
~002.14:35 SCET	should be	~001.04:22 SCET
~029.19:35 SCET	should be	~028.13:43 SCET
~033.19:10 SCET	should be	~032.13:18 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~048.17:29 SCET	should be	~047.13:45 SCET
~054.08:59 SCET	should be	~053.11:46 SCET
~039.18:34 SCET	should be	~038.12:14 SCET
~039.18:34 SCET	should be	~038.12:14 SCET

We see data gaps for each of the correct times, so it looks like your theory of AMMOS mis-correcting times when there is carry-over data on the tape is correct.

I hope this is enough information. I would have to do a bit more calculation to get the approximate ERTs. Let me know if you want them.

Best regards,

Nigel

From ulsdtmt@jplsp.DNET.NASA.GOV Mon Mar 18 17:13 PST 1996
From: ulsdtmt@jplsp.DNET.NASA.GOV
Date: Mon, 18 Mar 96 20:13:12 -0500
To: "khurley@sunspot.ssl.berkeley.edu"@east.DNET.NASA.GOV (SENT TO @LIST1)
Subject: Misplaced Major Frames in EDRs

Greetings,

We have identified an operations technique that produces data that will be improperly time tagged by the MGDS (telemetry system). Instances of EDR errors (major frames out of order) have been found in the CDROM archival products for December 1995 and January 1996. Errors will also be found in the still to be shipped February 1996 data.

When major frames are recorded but not transmitted during the next track, but are eventually downlinked with data from a succeeding day, the embedded SCLKs are 'assumed' to be incorrect by the frame syncer and are re-tagged with SCETs and SCLKs matching the adjacent (but newer) data.

For each major frame processed in this manner, a gap will exist, representing the time the data was actually acquired, and a major frame or realtime data, representing the time period the data now errently represents, will be replaced by the misplaced playback data.

Yes. Confusing. See the attached memo detailing the times involved.

Approximately 17 such instances are known to have occured. The total time involved is about twenty minutes. Because the data loss is small and the cost of reprocessing would be so large, the Project has determined that it would be imprudent to reprocess.

For your information, however, we included a memo from Nigel Angold which itemizes each instance.

We thank Toni Galvin and Nigel for identifying the problem and assisting in the diagnosis.

Regards,

Joe

To: <ulsdtmt@jplsp.jpl.nasa.gov>
From: Nigel Angold <nangold@jplsp2.jpl.nasa.gov>
Subject: Mis-corrected S/C clocks / SCETs
Cc: chris.leech@jpl.nasa.gov

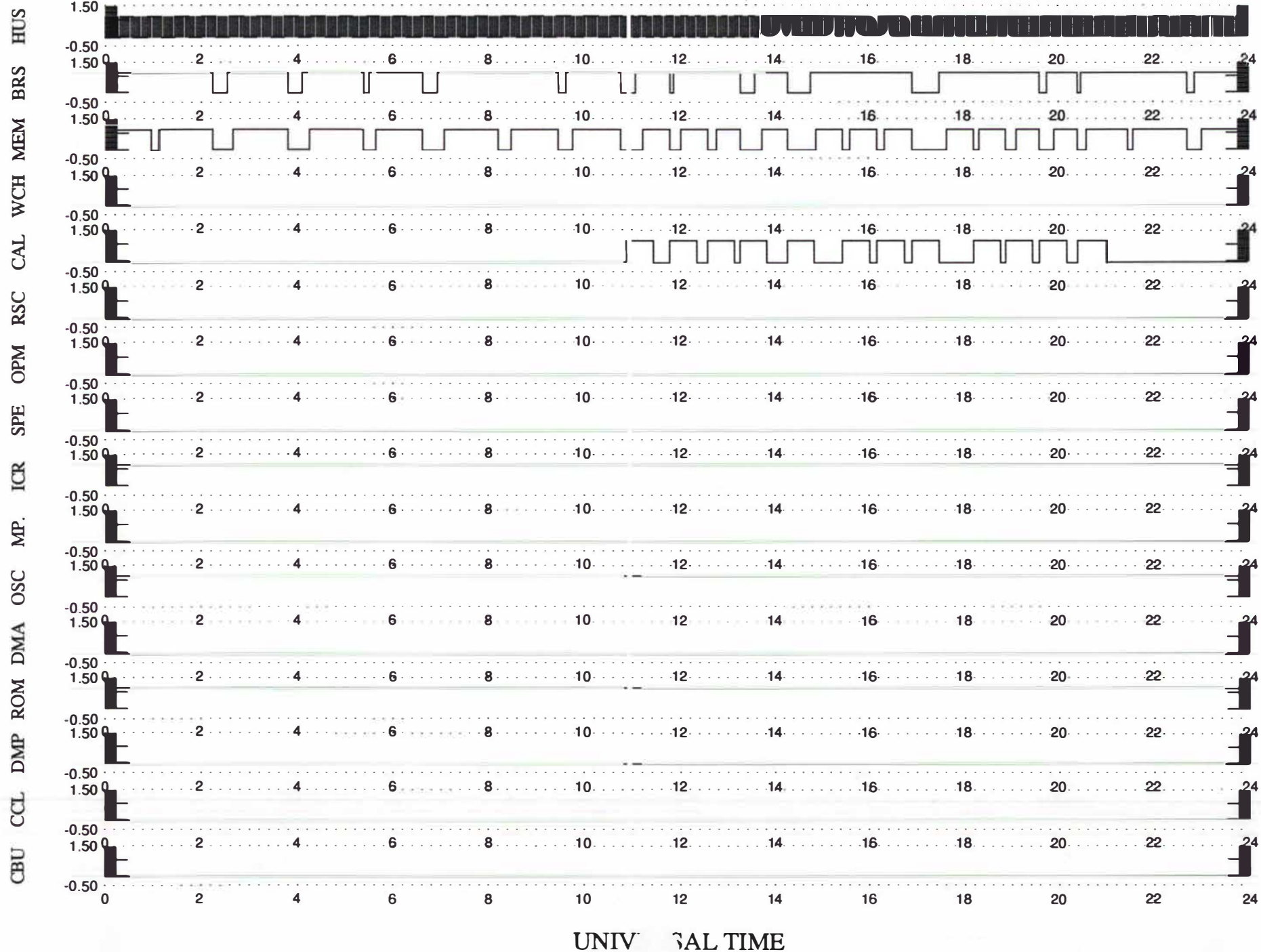
I have looked at our recent tape recorder usage and predict that you will see major frames with mis-corrected spacecraft clocks / SCETs at the following times (give or take a few minutes):

1995:

~342.22:59 SCET	should be	~341.17:47 SCET
~347.22:39 SCET	should be	~346.16:46 SCET
~350.21:54 SCET	should be	~349.16:22 SCET
~355.22:14 SCET	should be	~354.15:42 SCET
~359.14:04 SCET	should be	~359.05:36 SCET
~360.14:59 SCET	should be	~359.00:20 SCET
~362.20:55 SCET	should be	~361.16:06 SCET

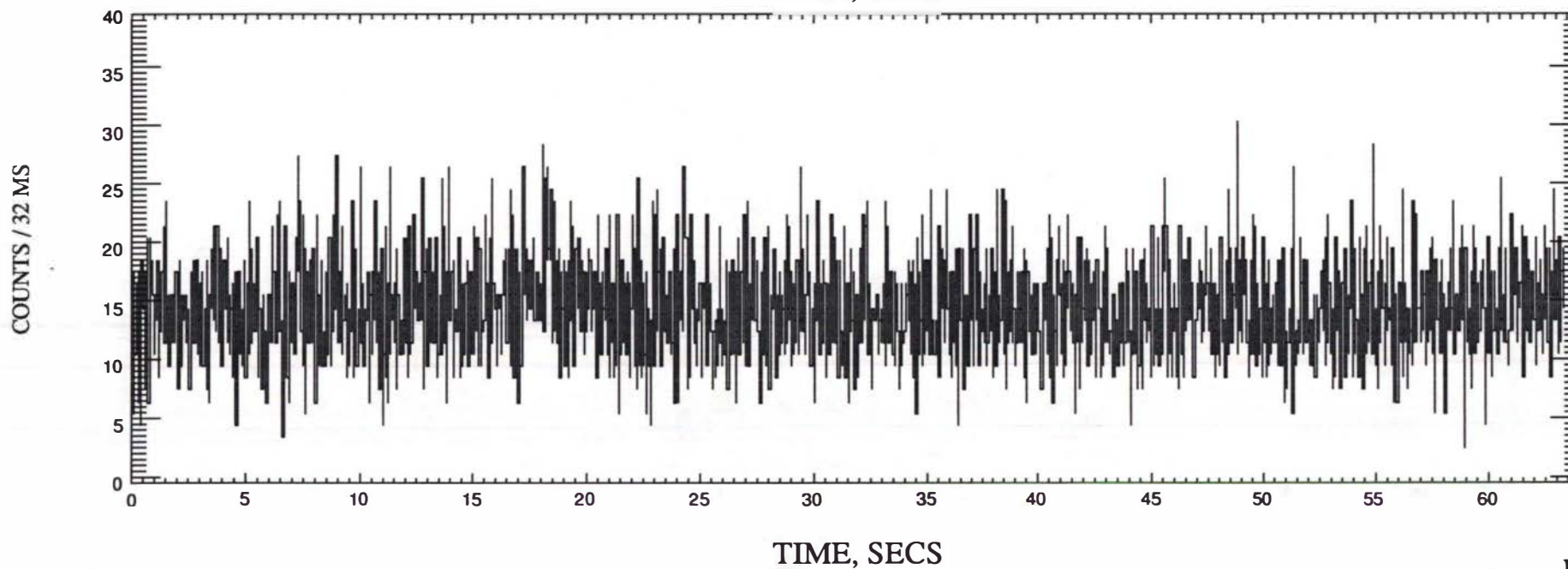
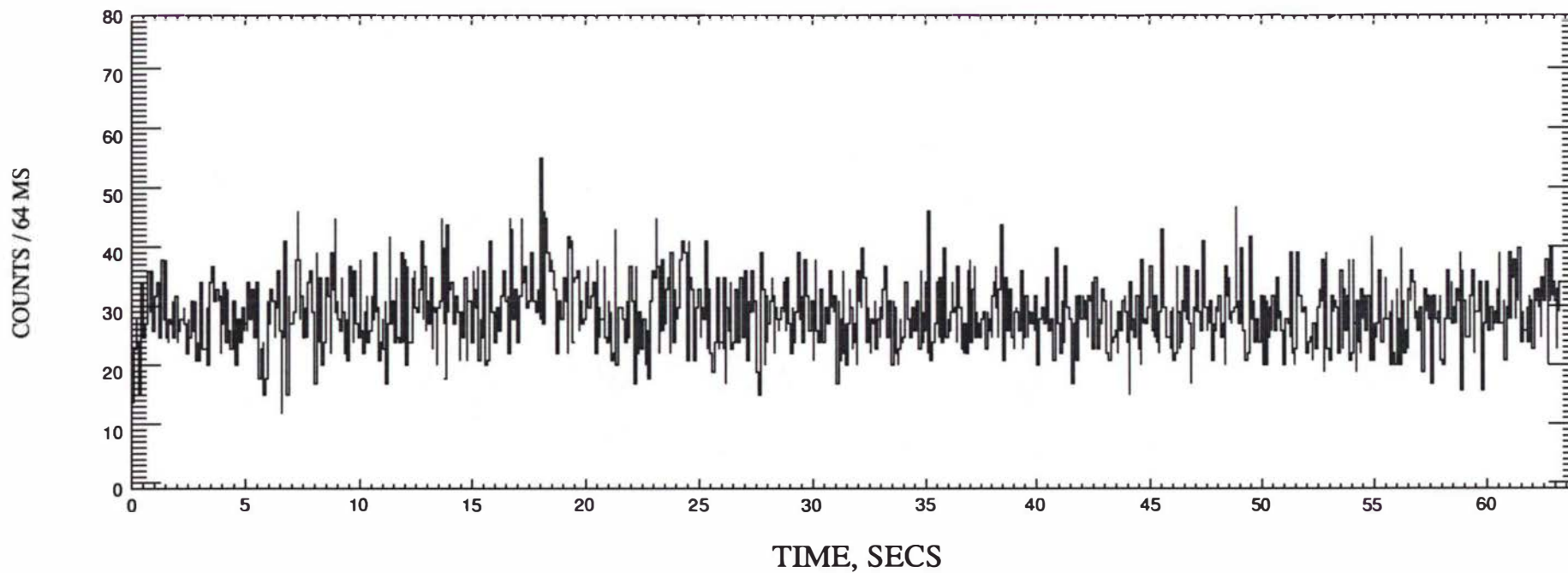
HUS MODES EDR day 364, year 1995 to day 364, year 1995
BURST NUMBER 9 - 15, 0 - 13

4/1/96



HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 9 at UT= 0.949336153666 h= 3417.610 s 00:56:57.610

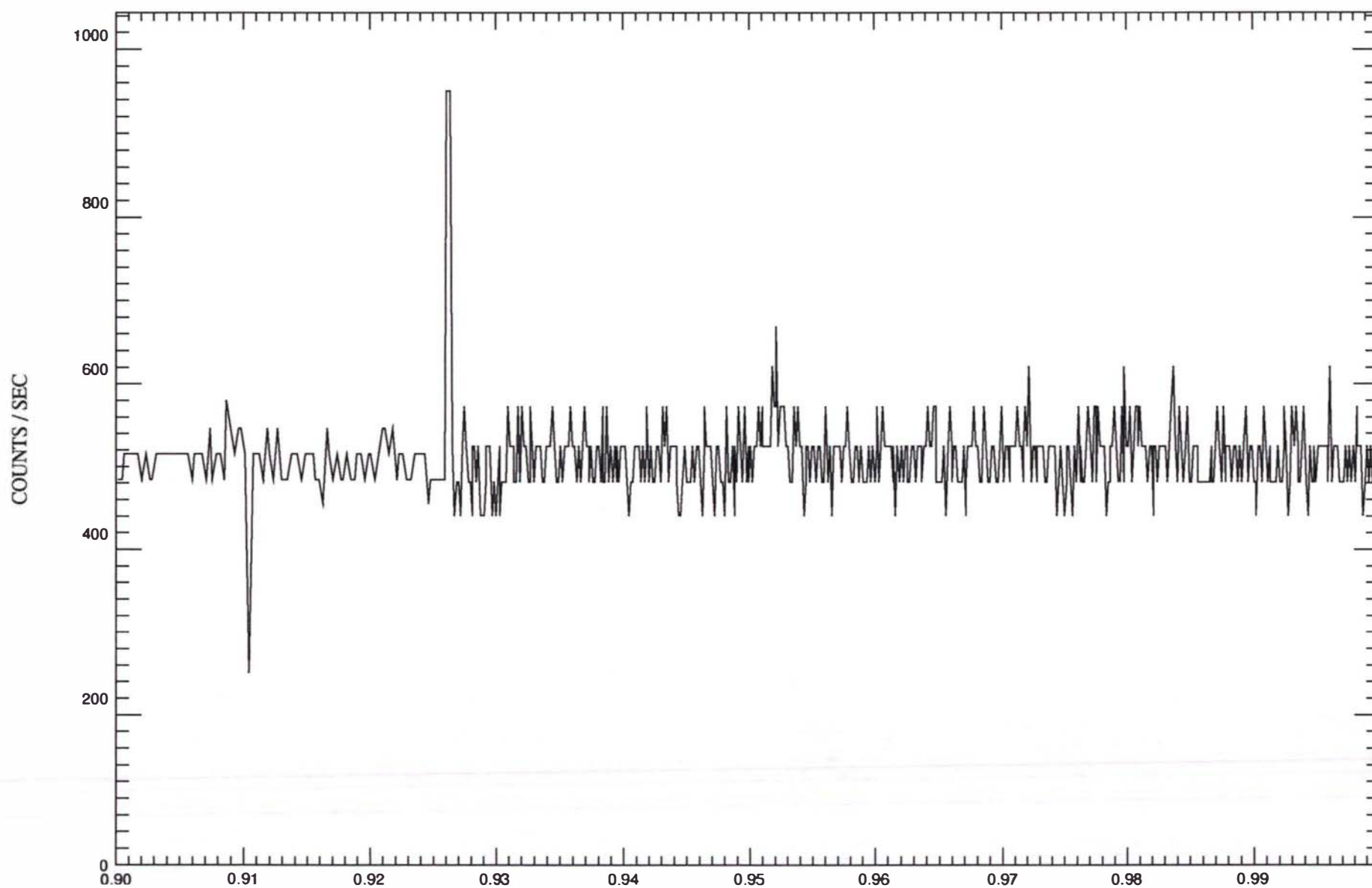
4/1/96



B# 1

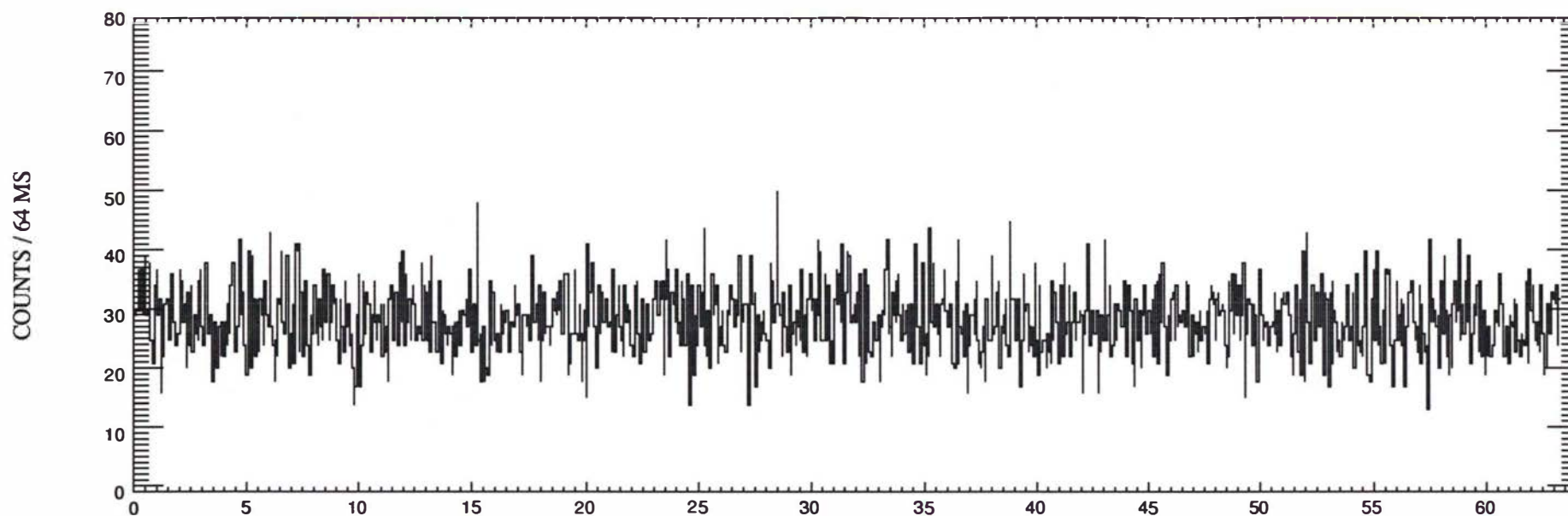
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

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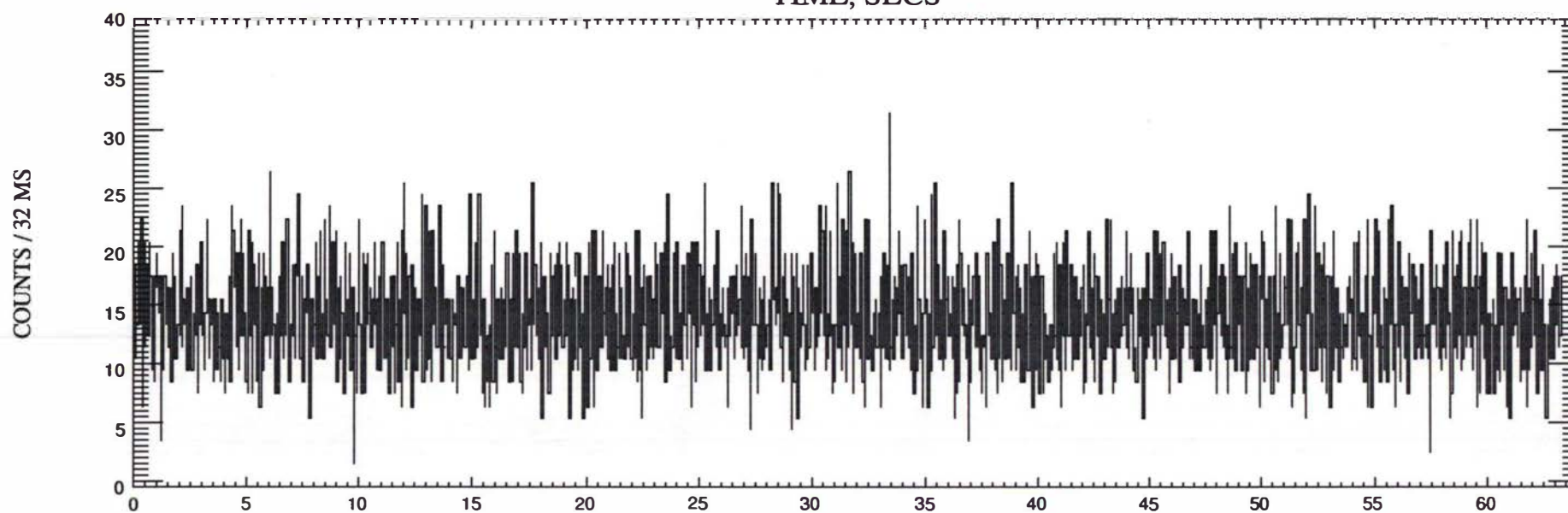


HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 10 at UT= 2.502137633430 h= 9007.695 s 02:30:07.695

4/1/96



TIME, SECS

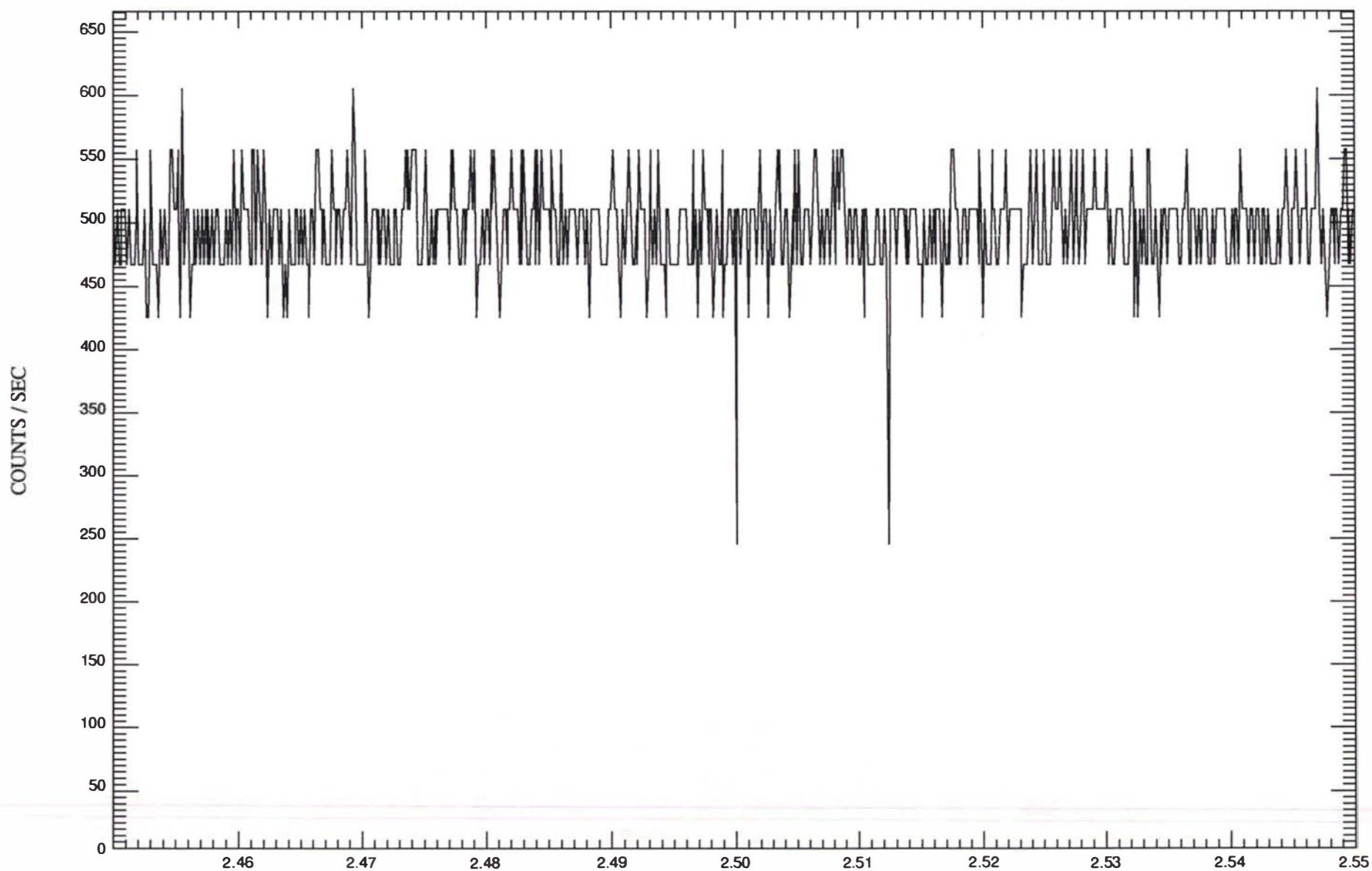


TIME, SECS

B# 2

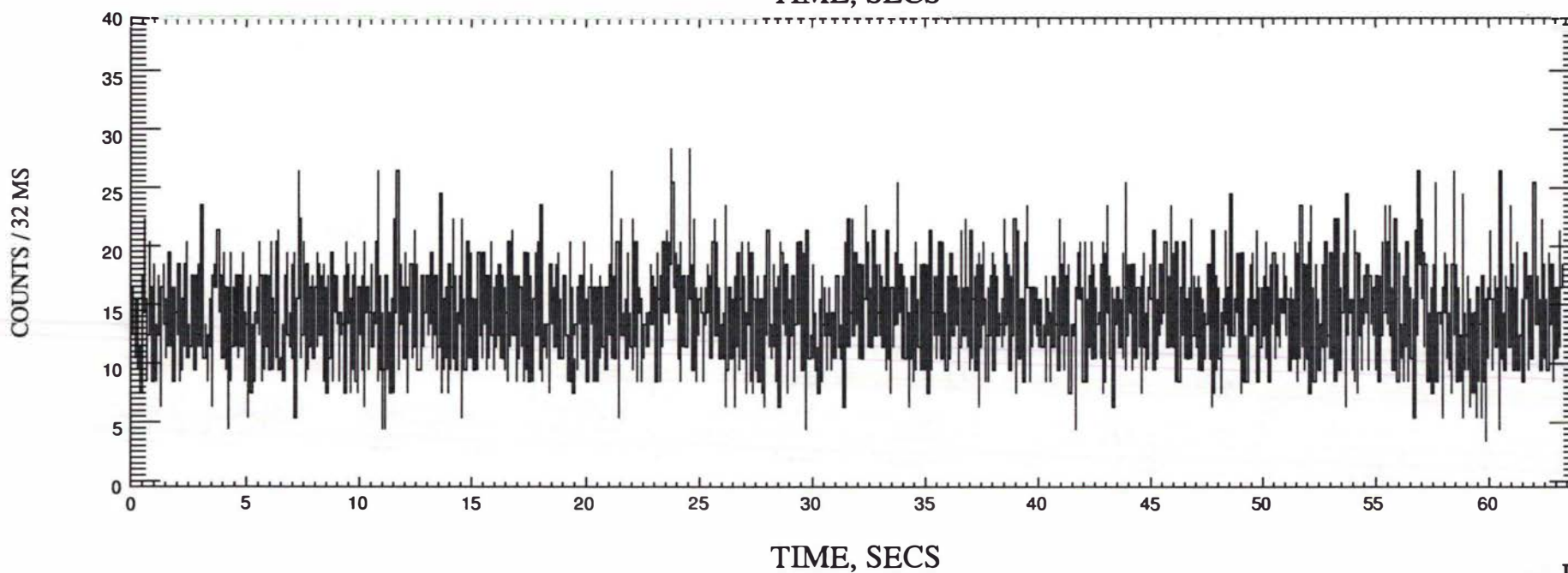
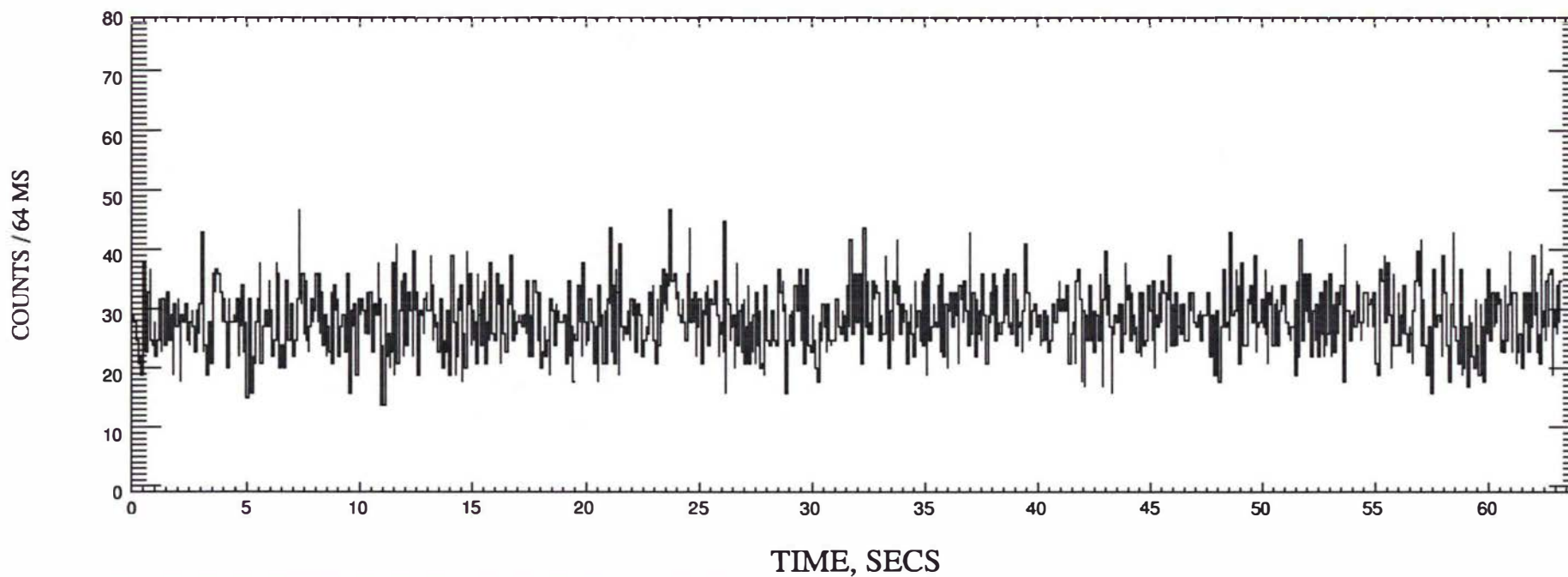
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

1/2/96



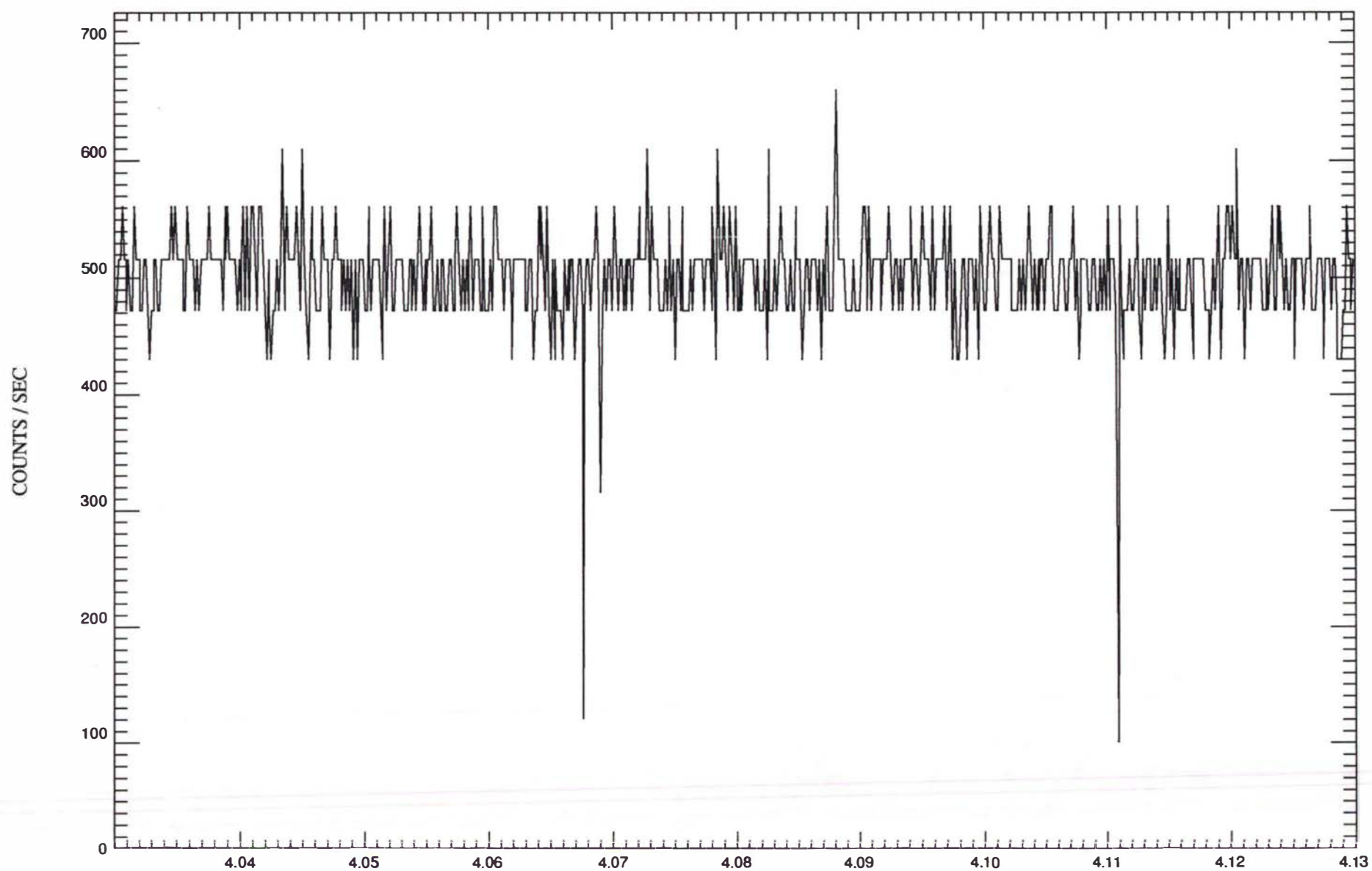
HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 11 at UT= 4.083654386732 h=14701.156 s 04:05:01.156

4/1/96



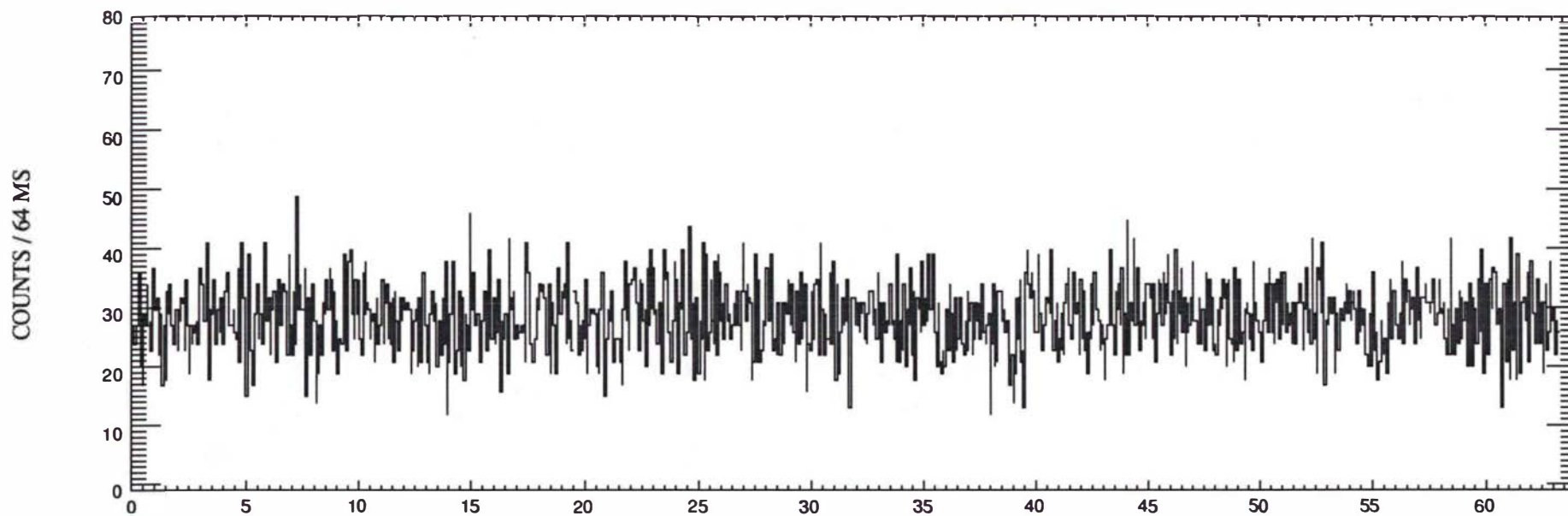
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

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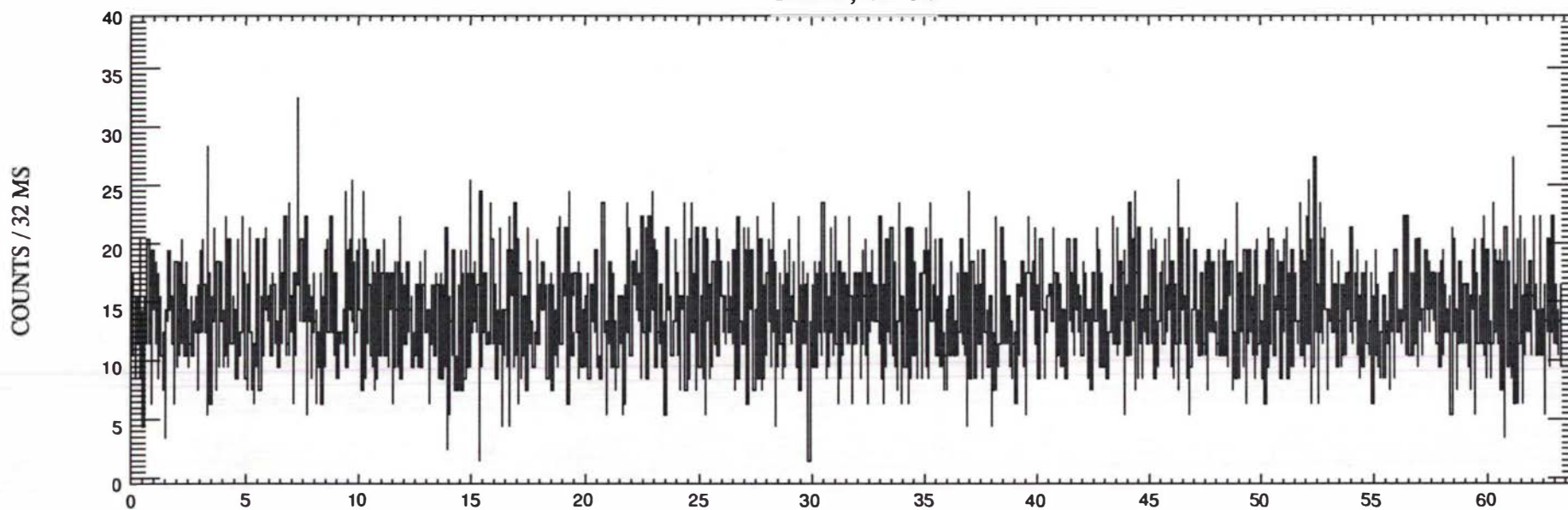


HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 12 at UT= 5.407145987617 h=19465.726 s 05:24:25.726

4/1/96



TIME, SECS

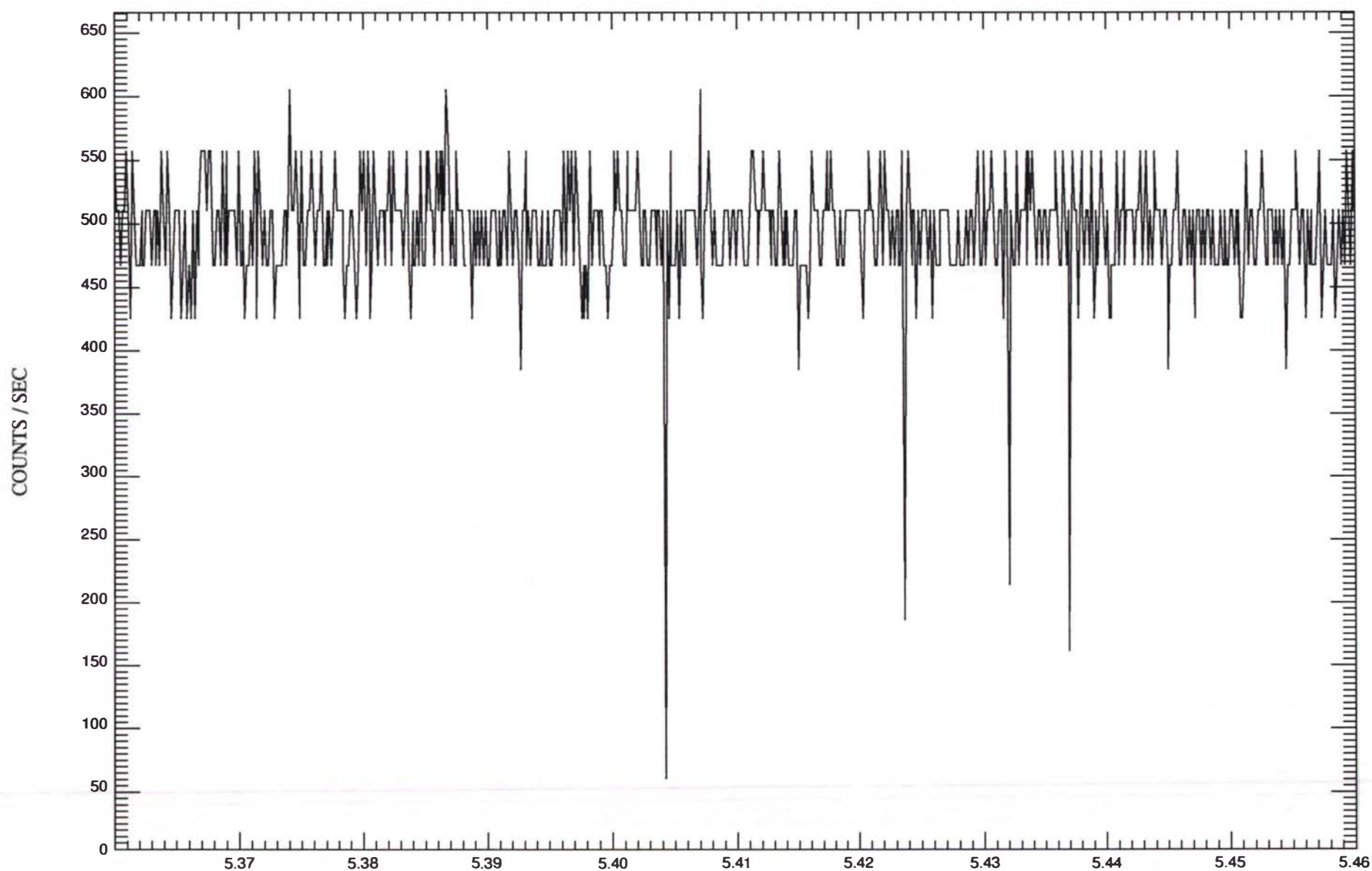


TIME, SECS

B# 4

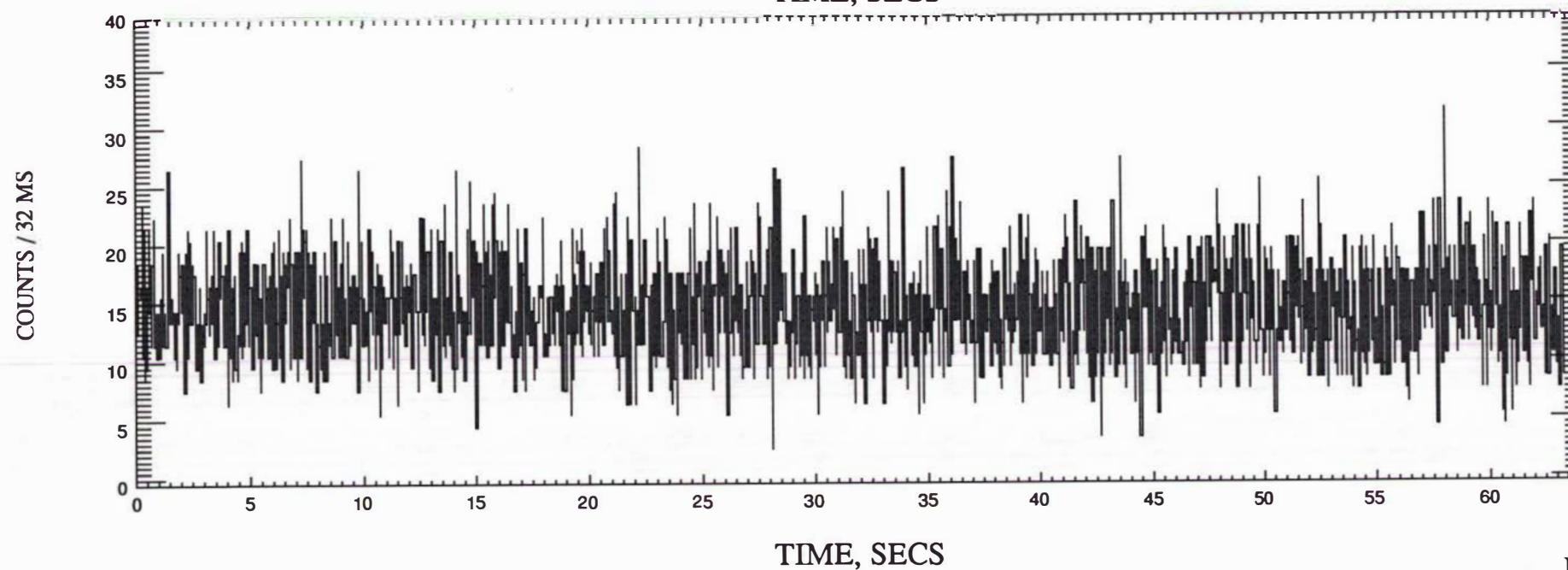
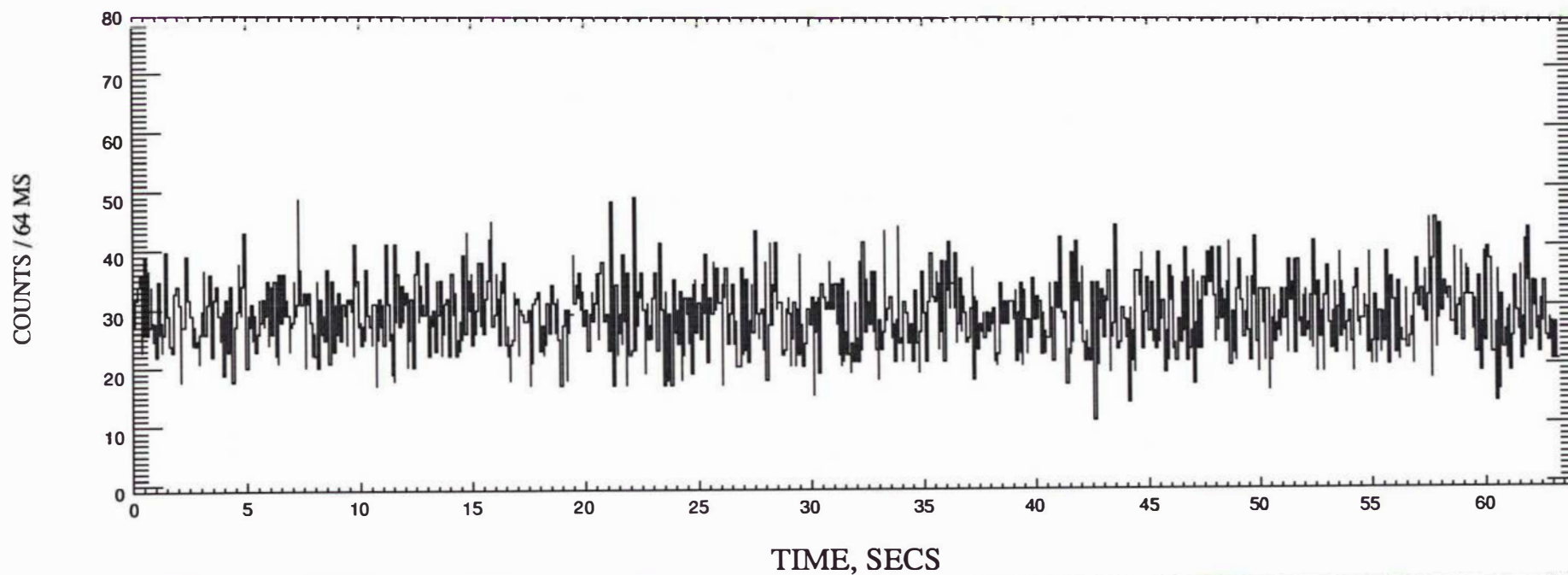
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

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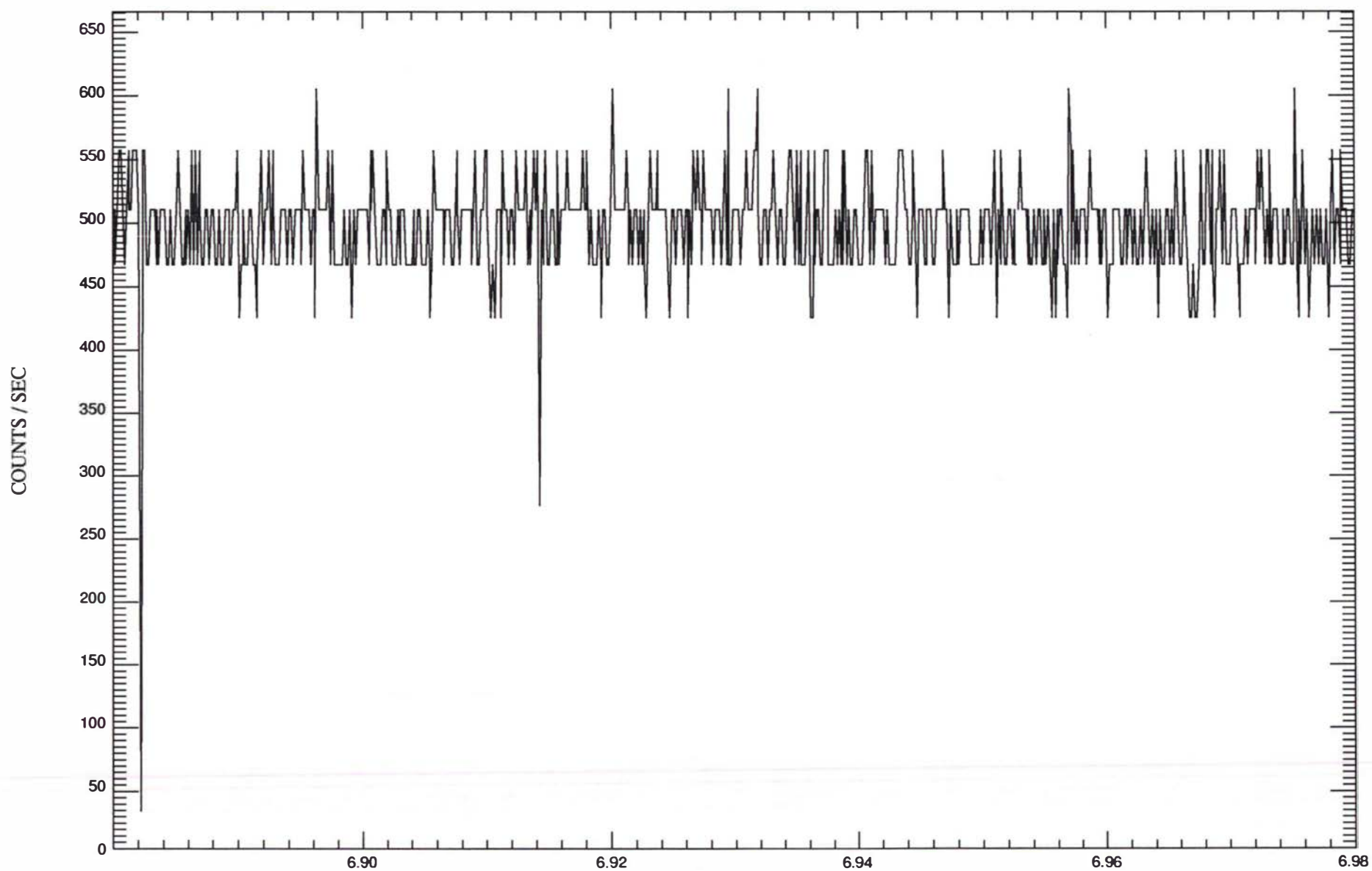
HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 13 at UT= 6.929496091207 h=24946.186 s 06:55:46.186

4/1/96



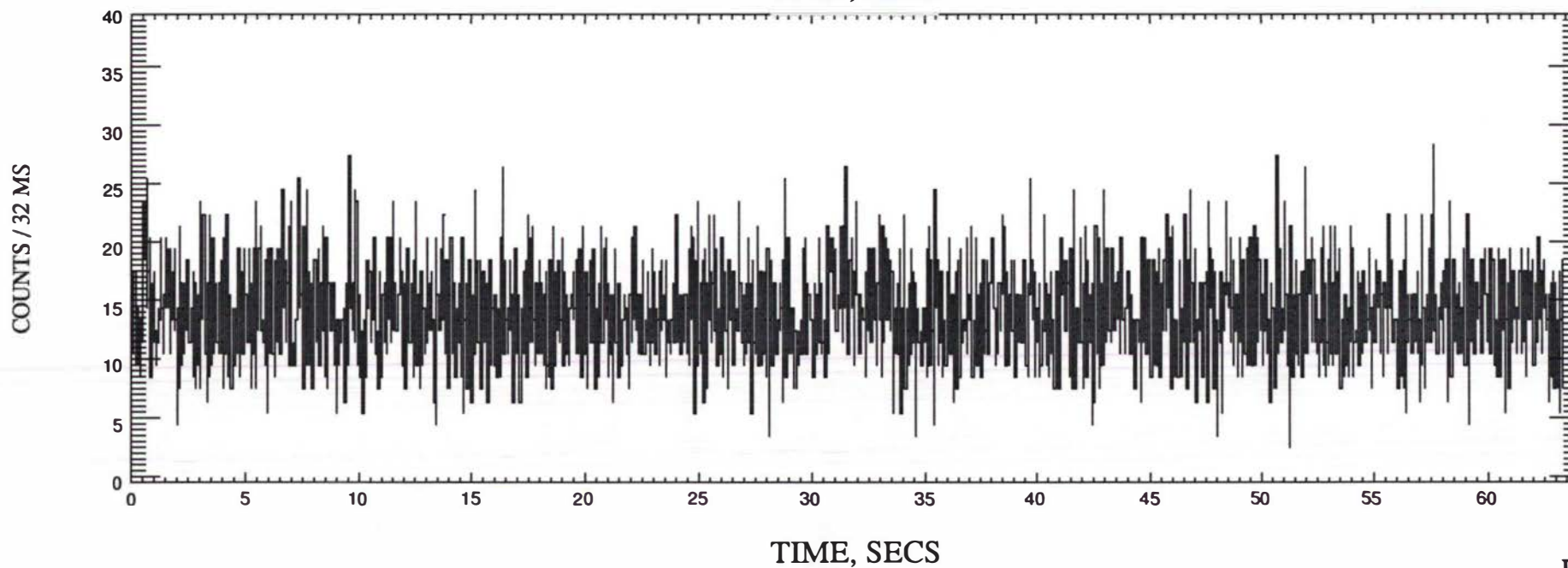
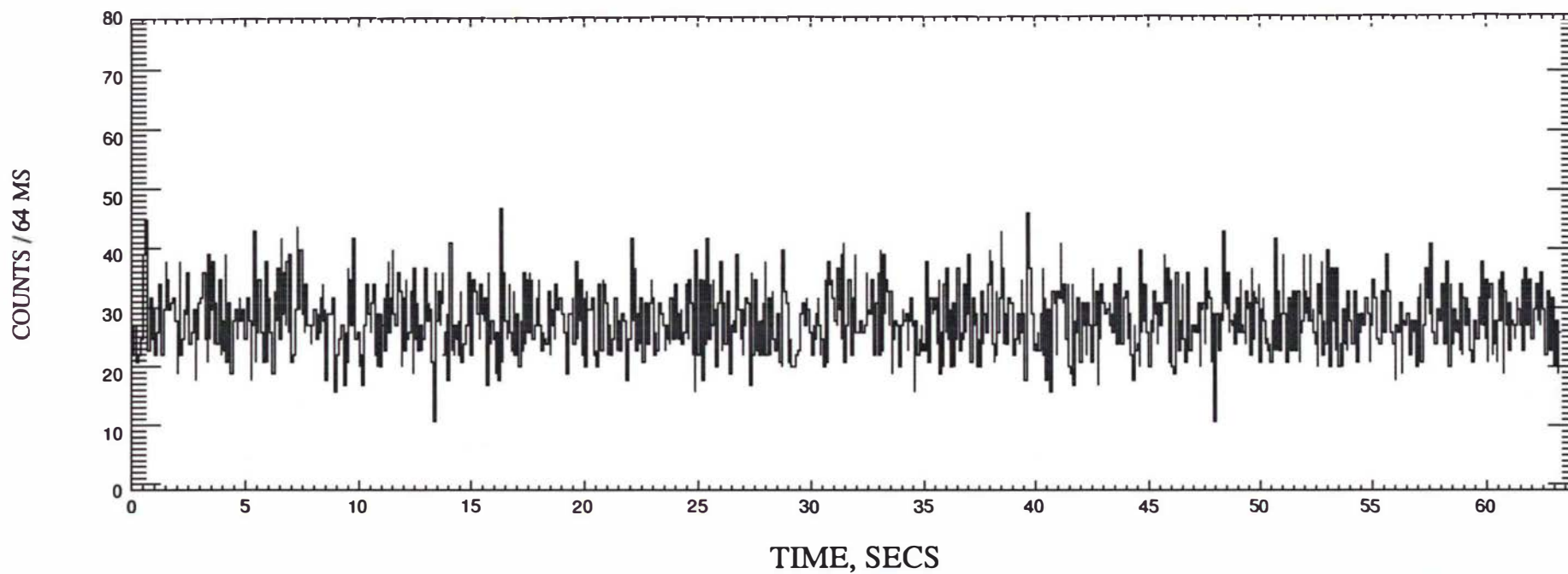
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

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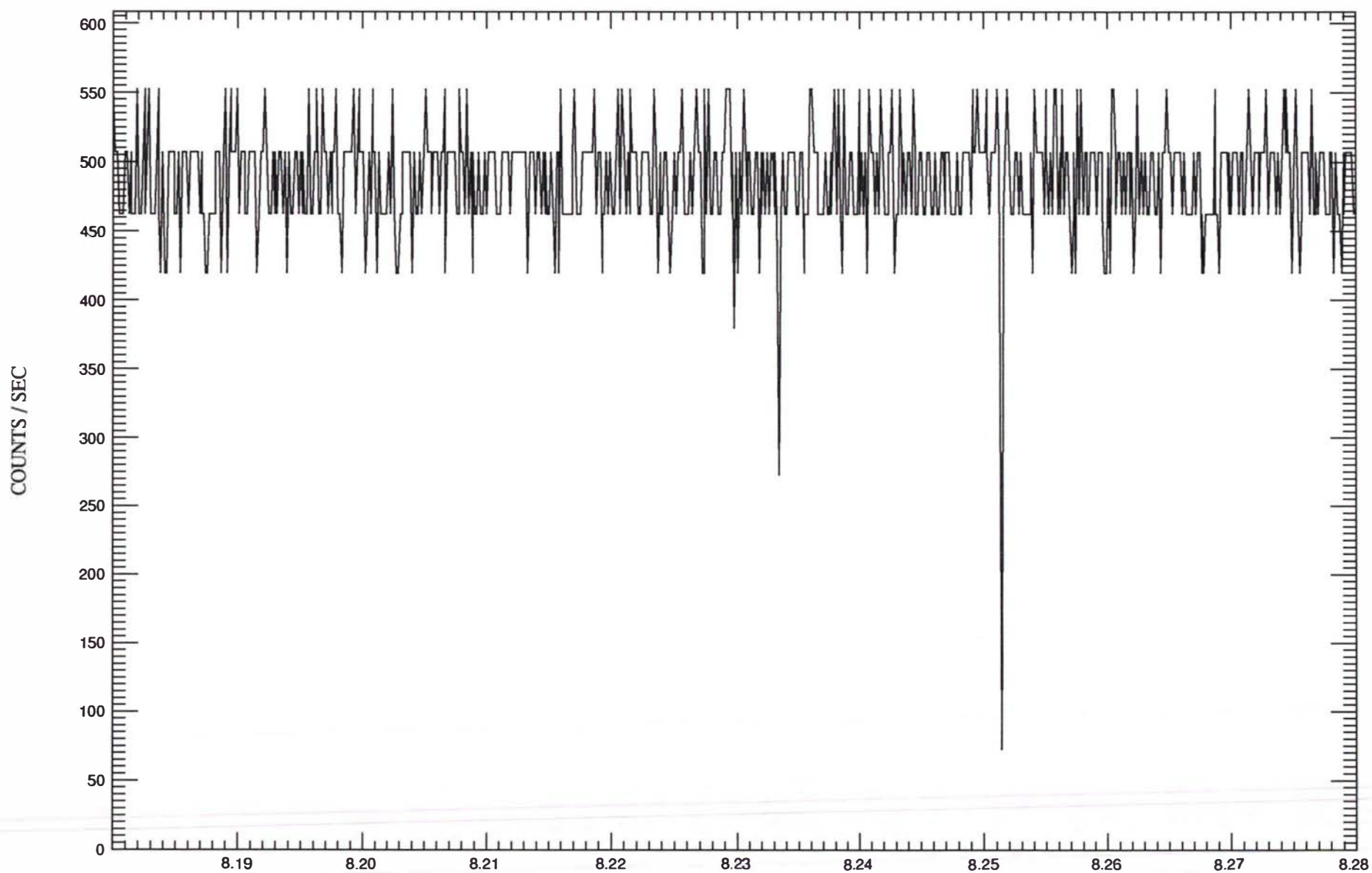
HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 14 at UT= 8.229482934740 h=29626.139 s 08:13:46.139

4/1/96



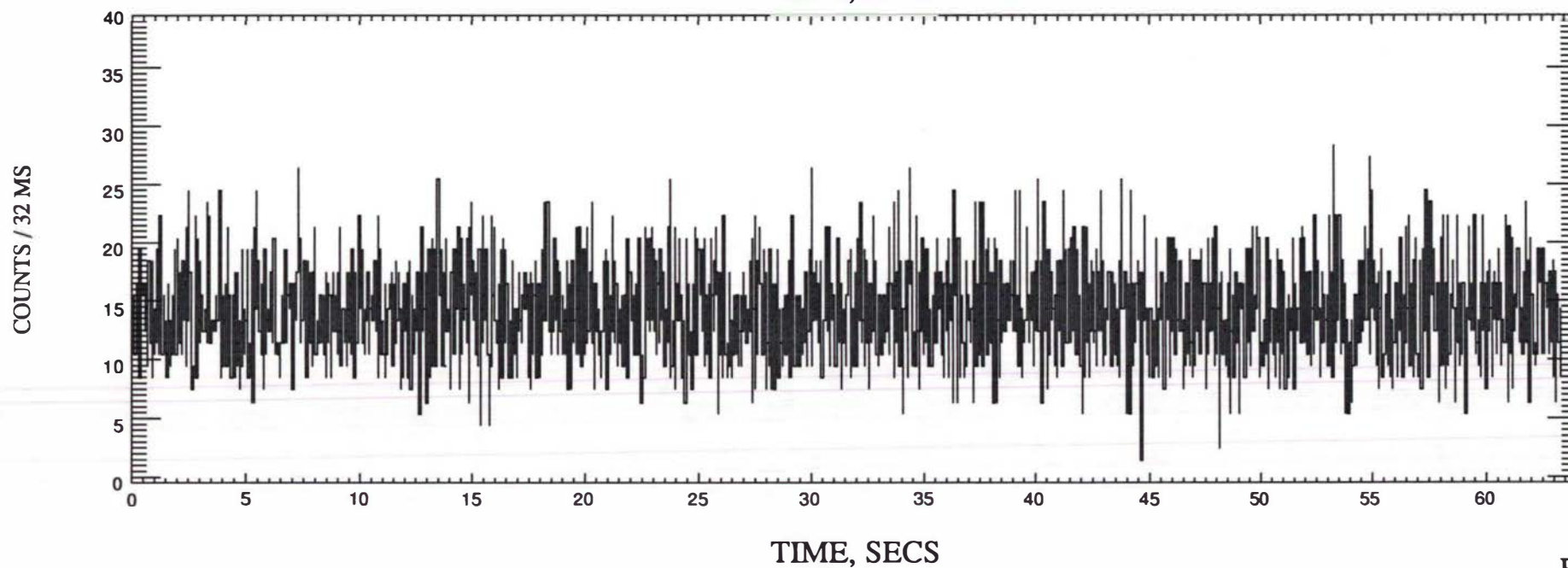
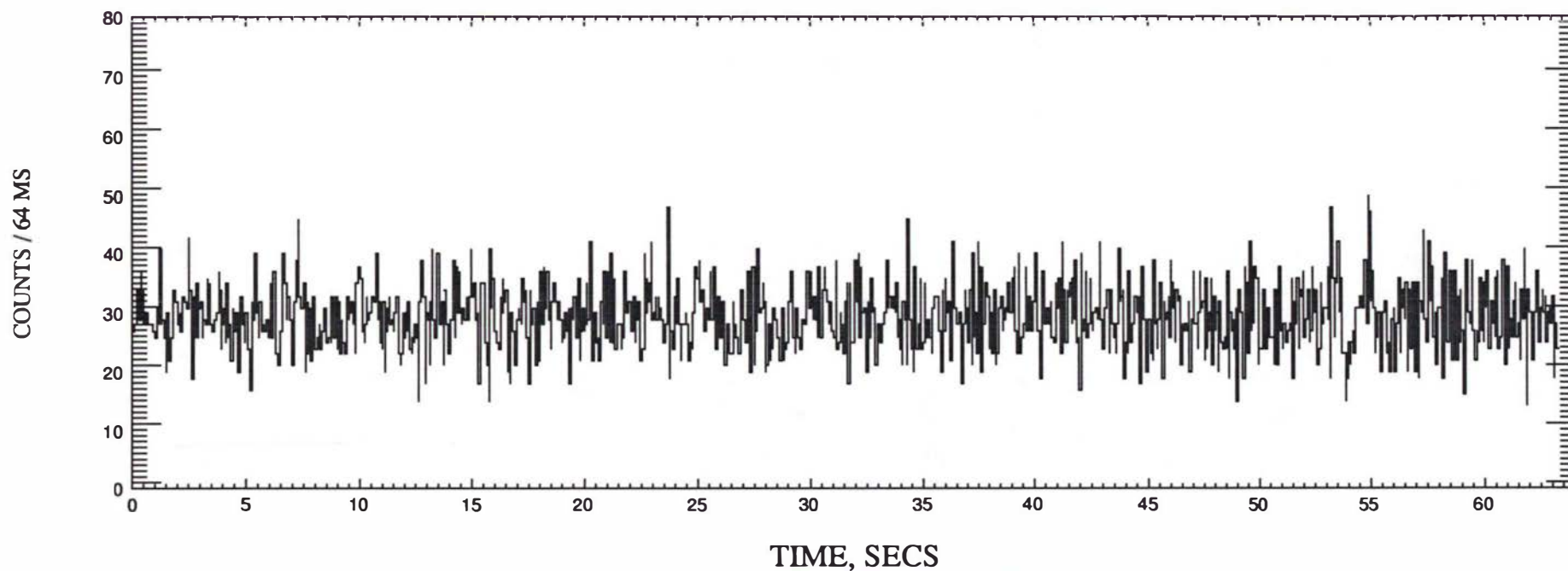
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 15 at UT= 9.530300920275 h=34309.083 s 09:31:49.083

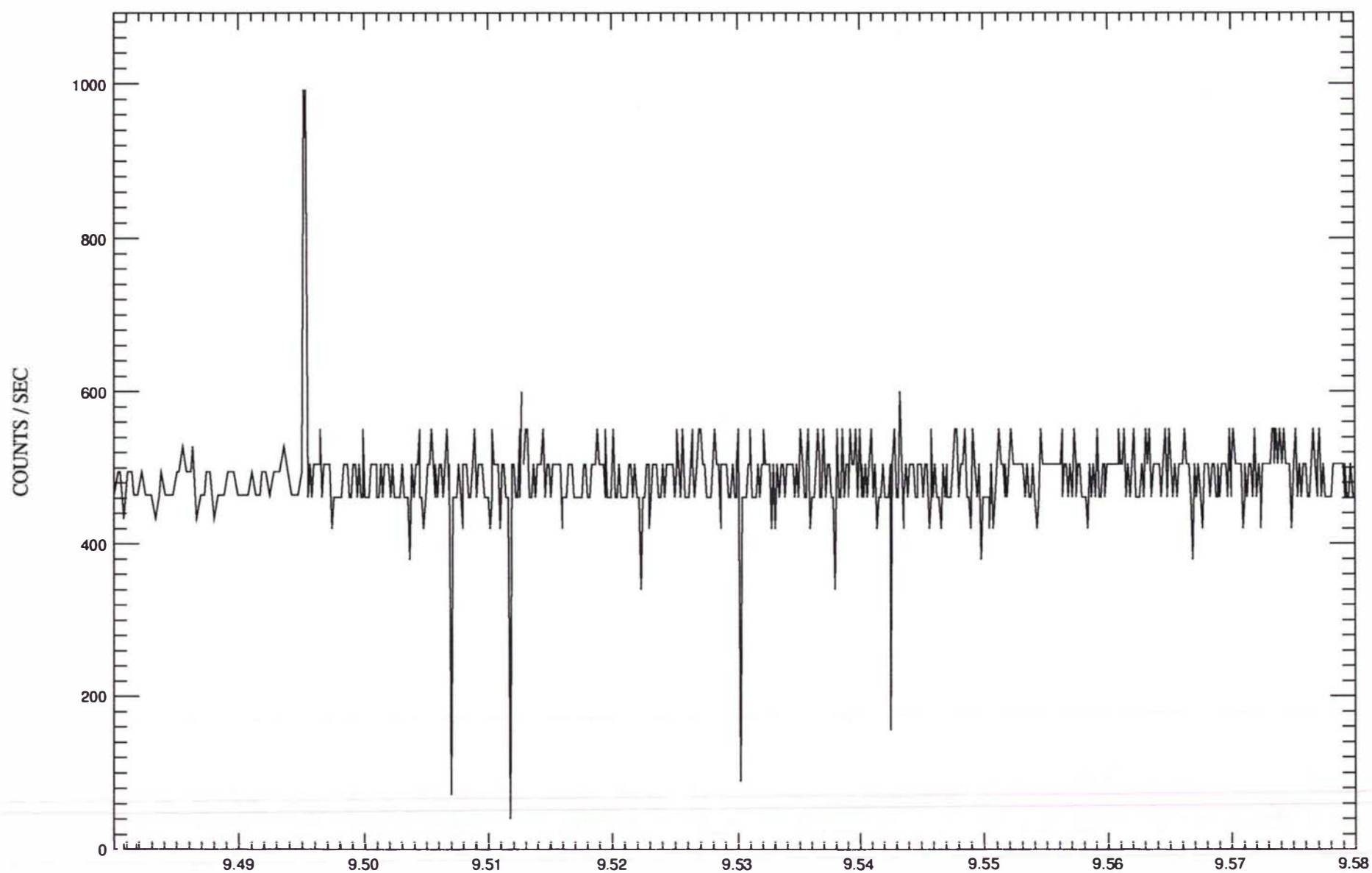
4/1/96



B# 7

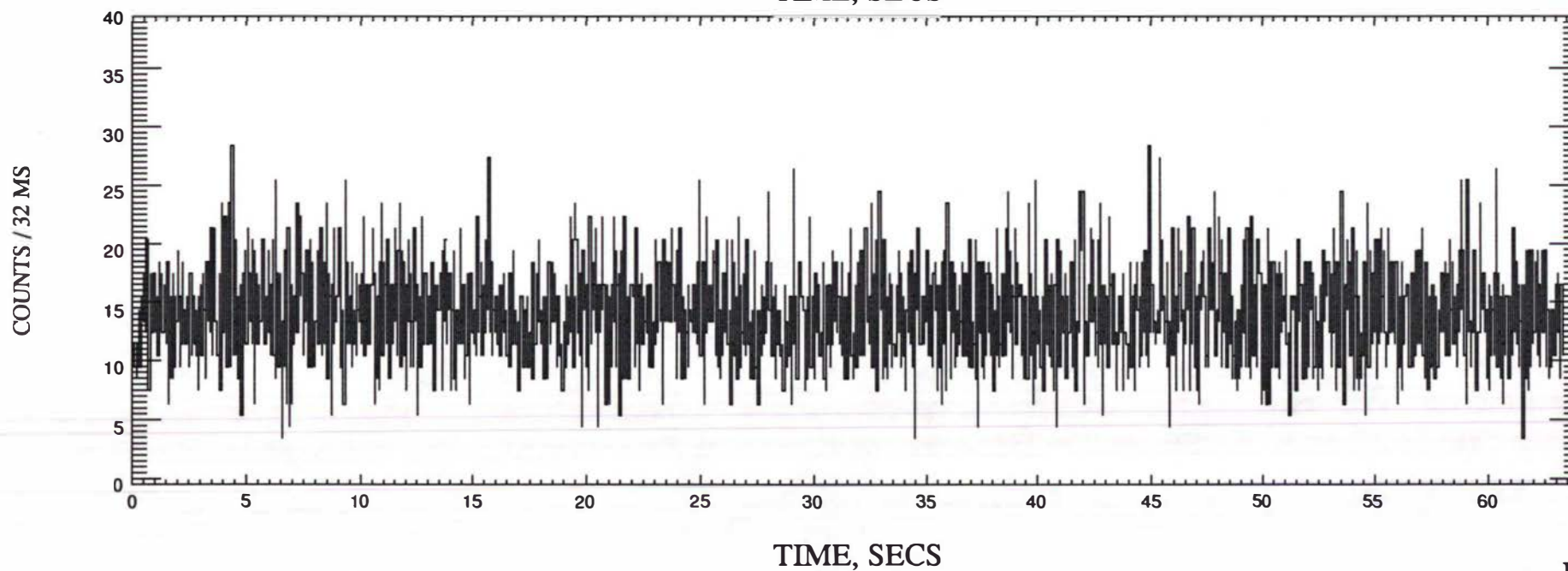
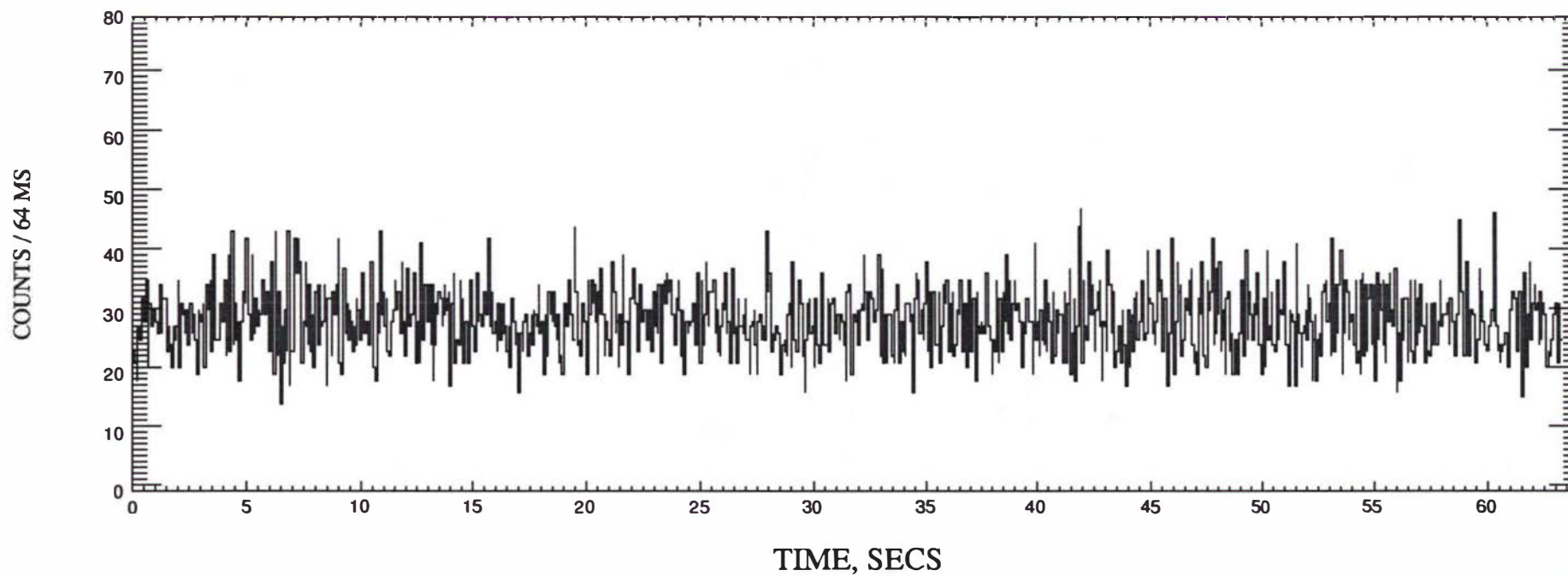
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

1/2/96



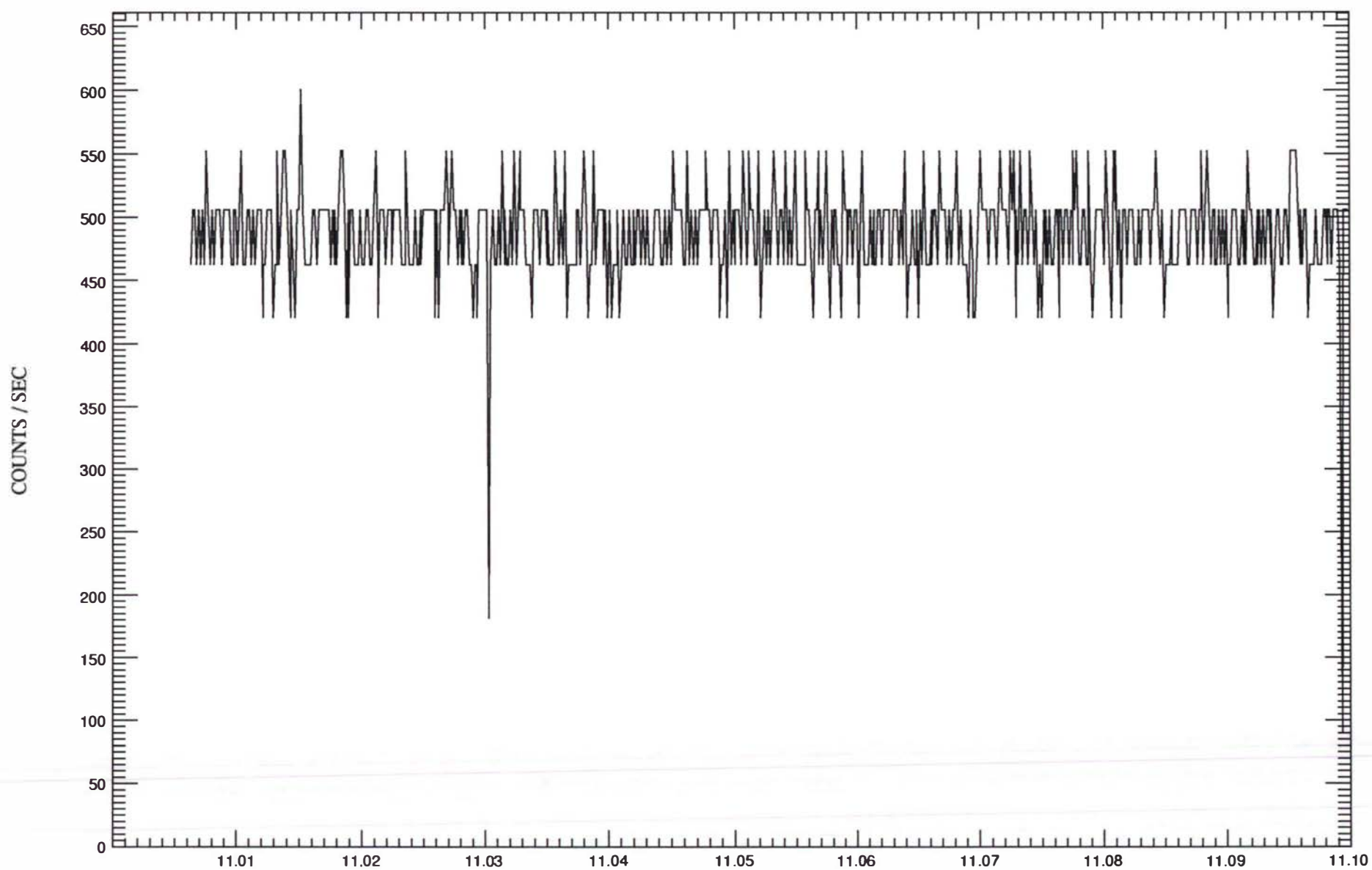
HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 0 at UT=11.046365212335 h=39766.915 s 11:02:46.915

4/1/96



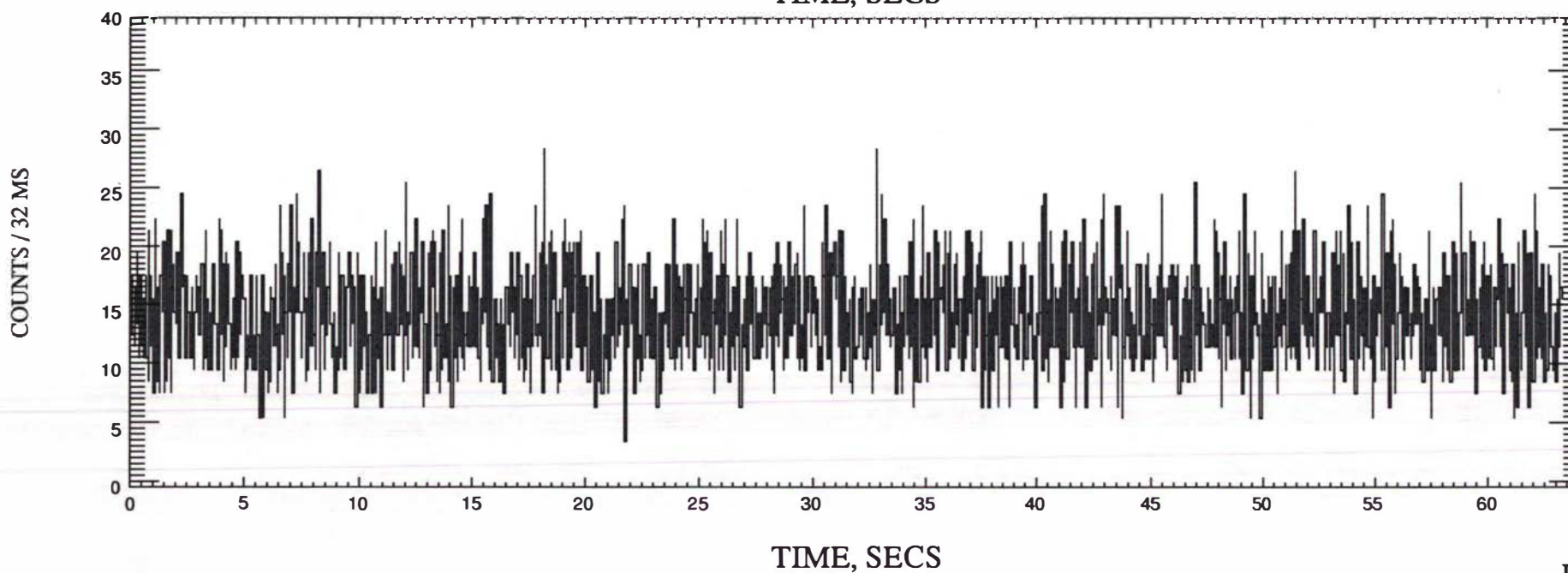
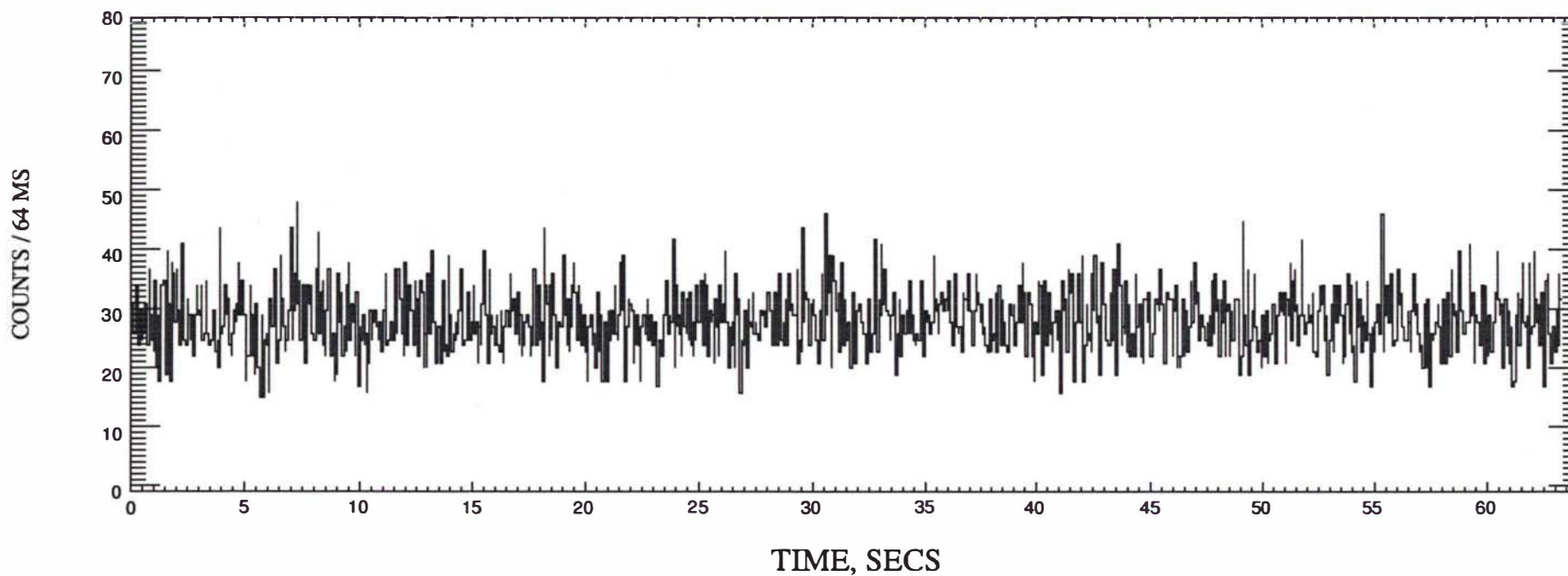
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

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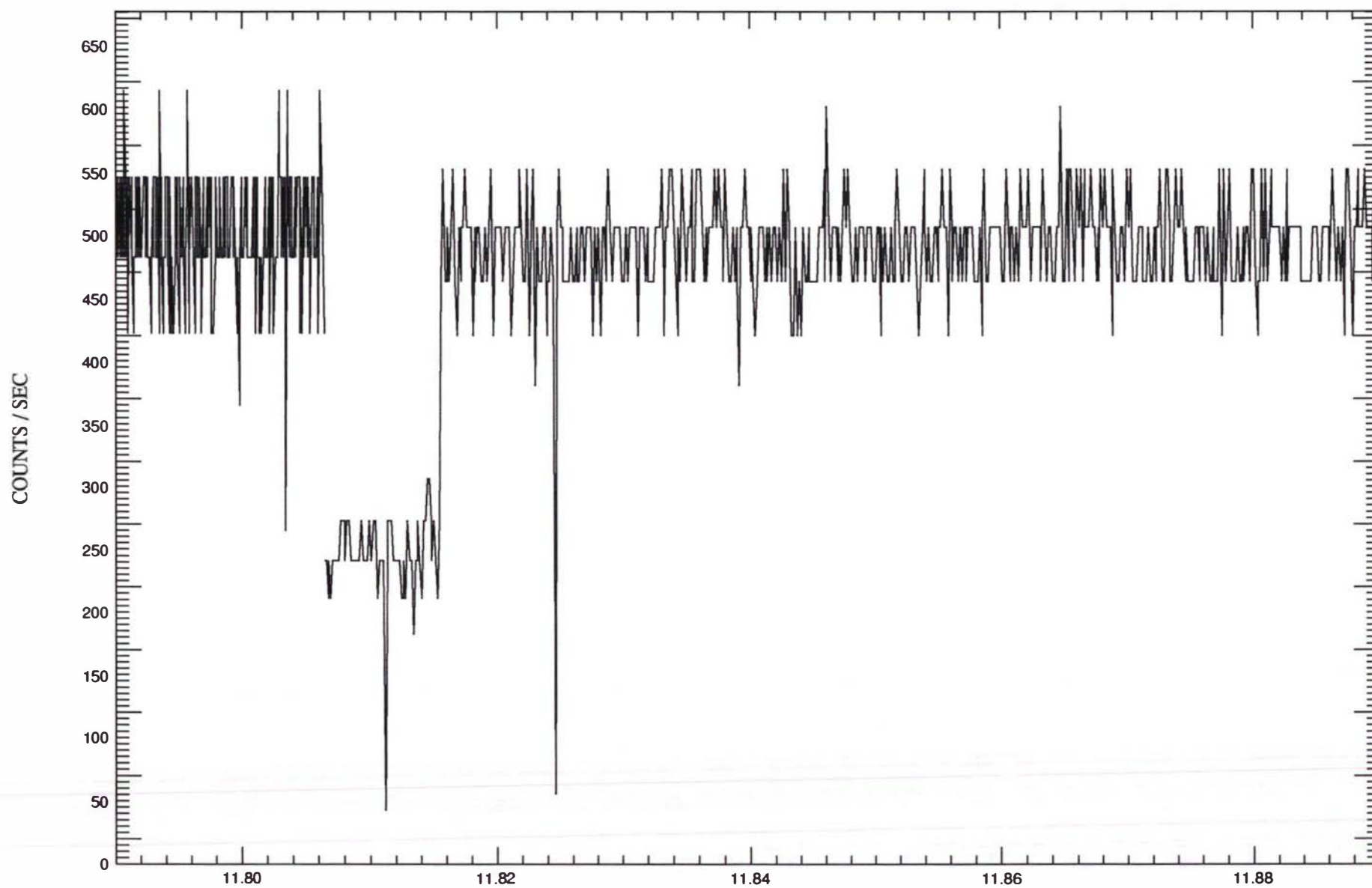
HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 1 at UT=11.839745118883 h=42623.082 s 11:50:23.082

4/1/96



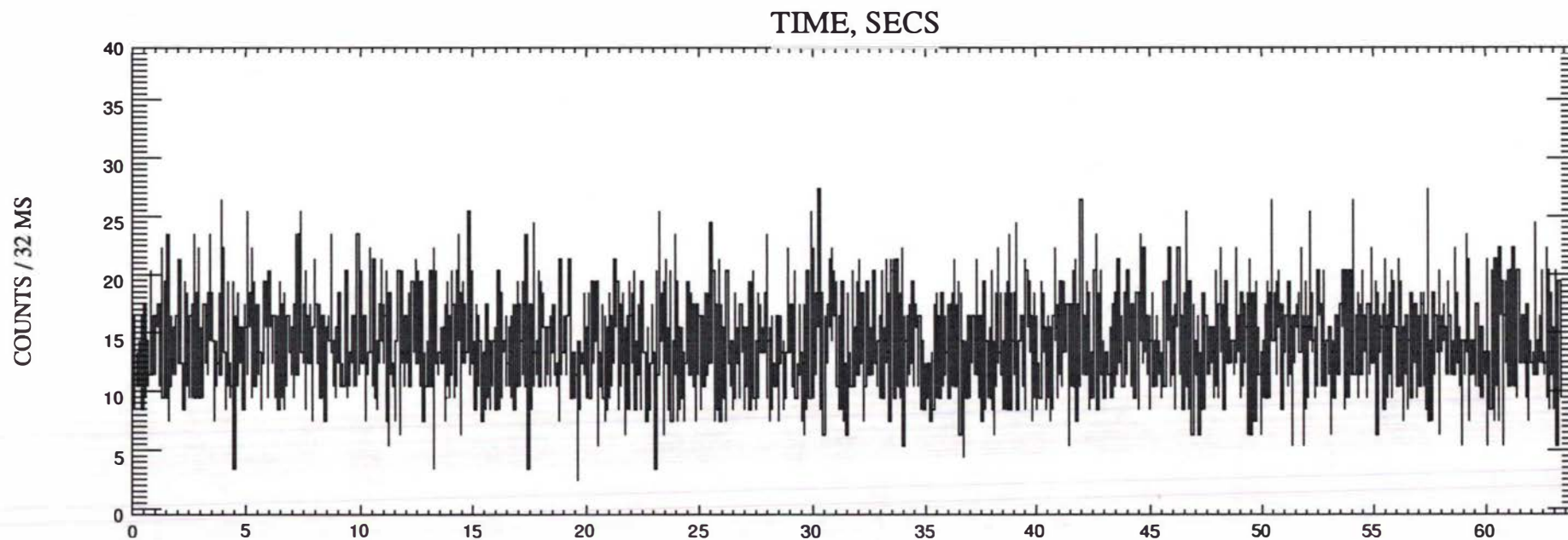
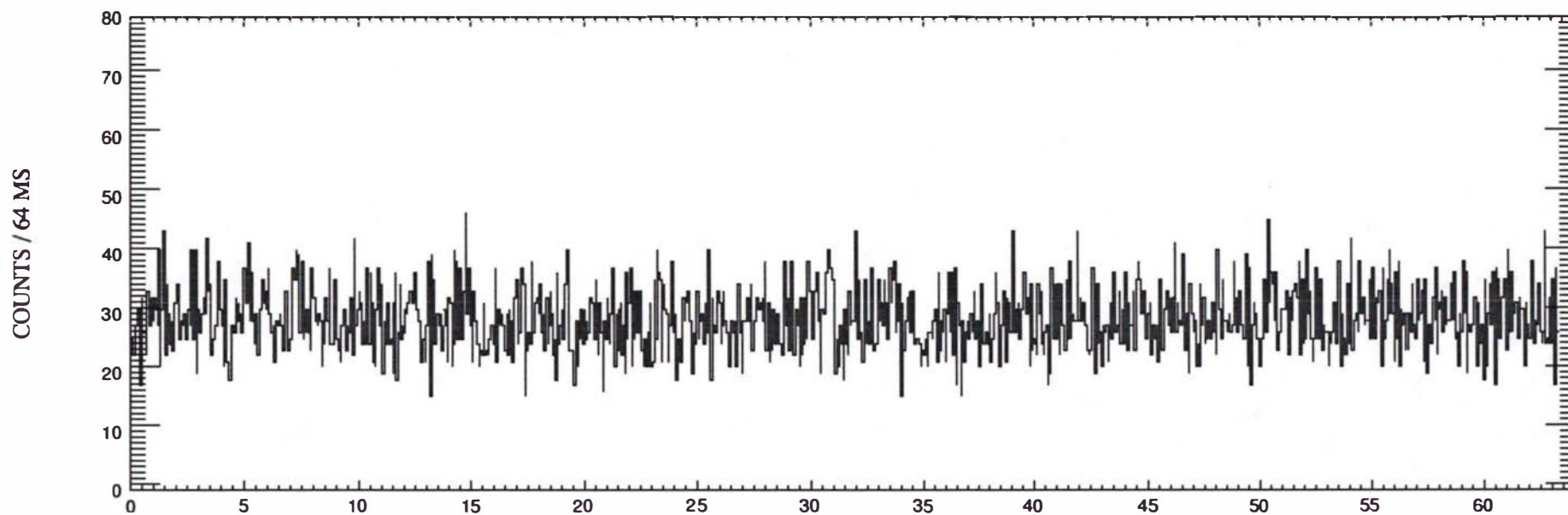
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 2 at UT=12.587985055712 h=45316.746 s 12:35:16.746

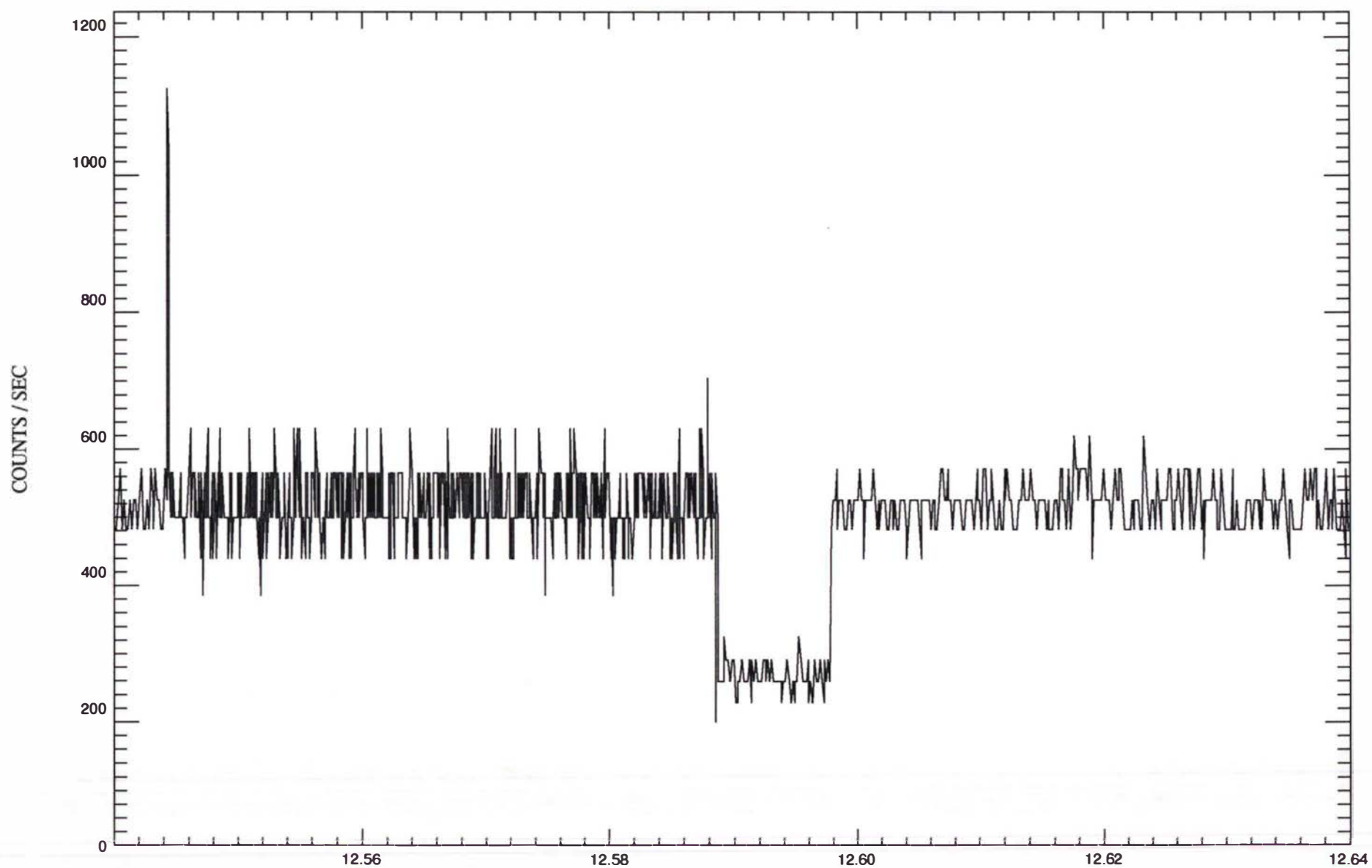
4/1/96



B# 10

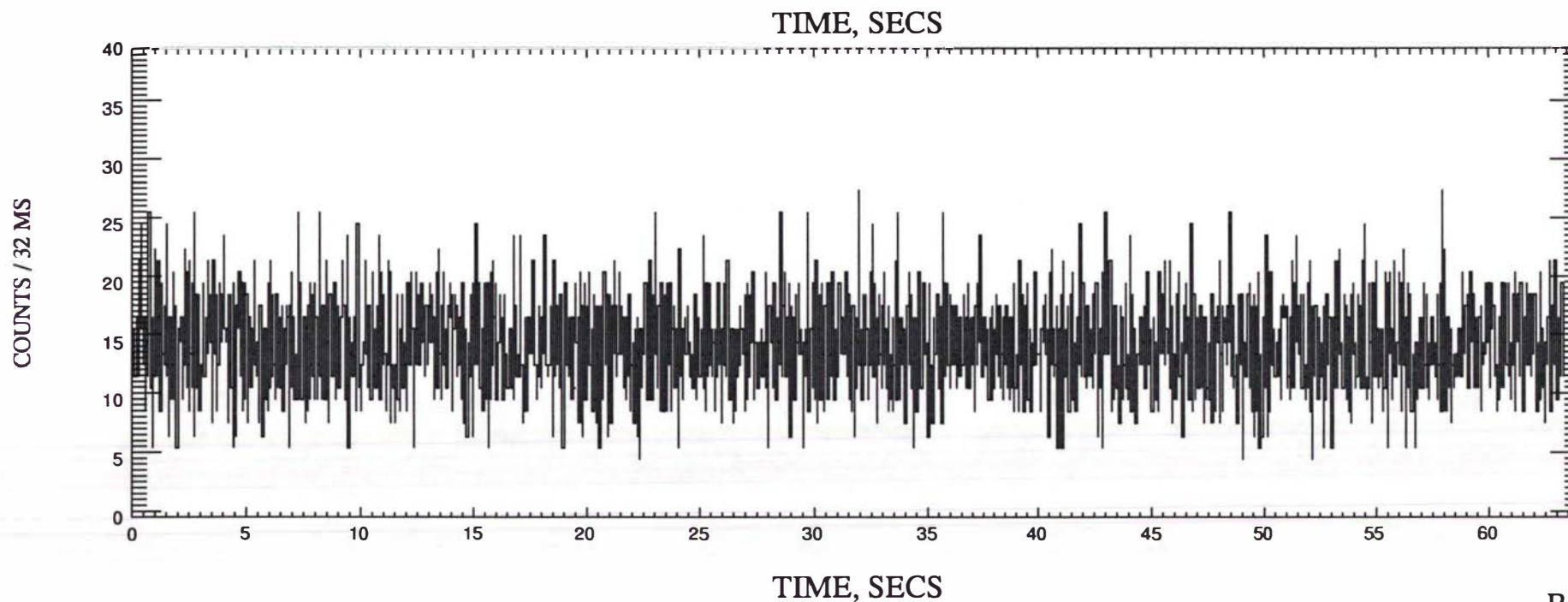
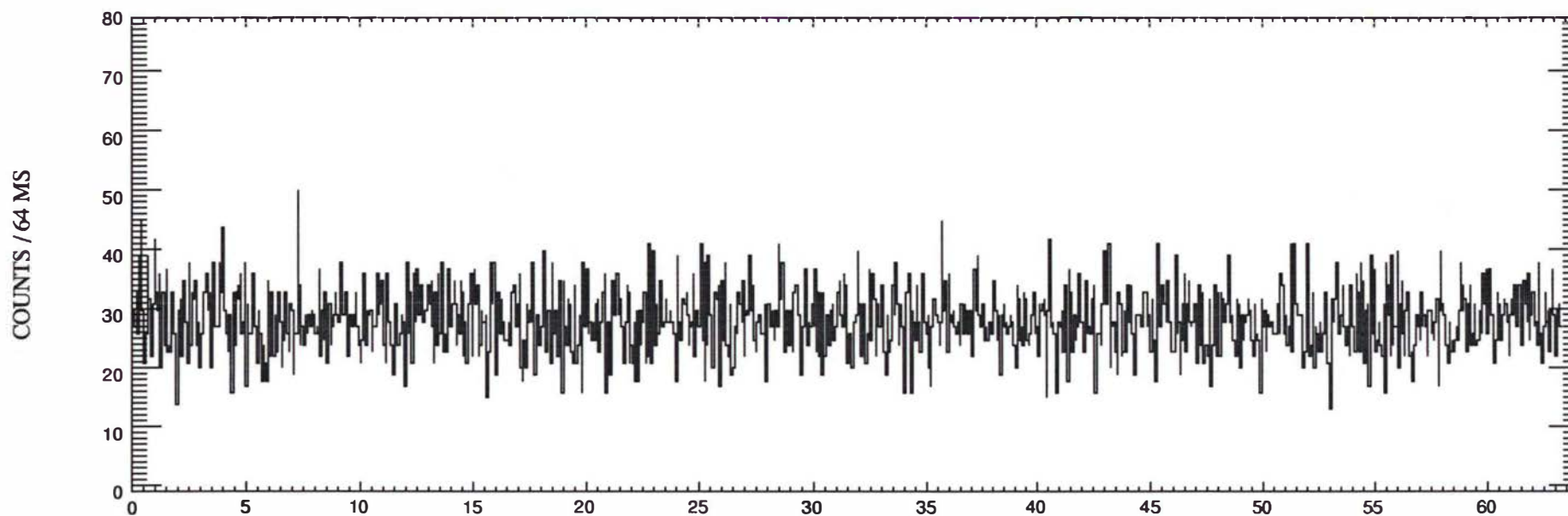
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

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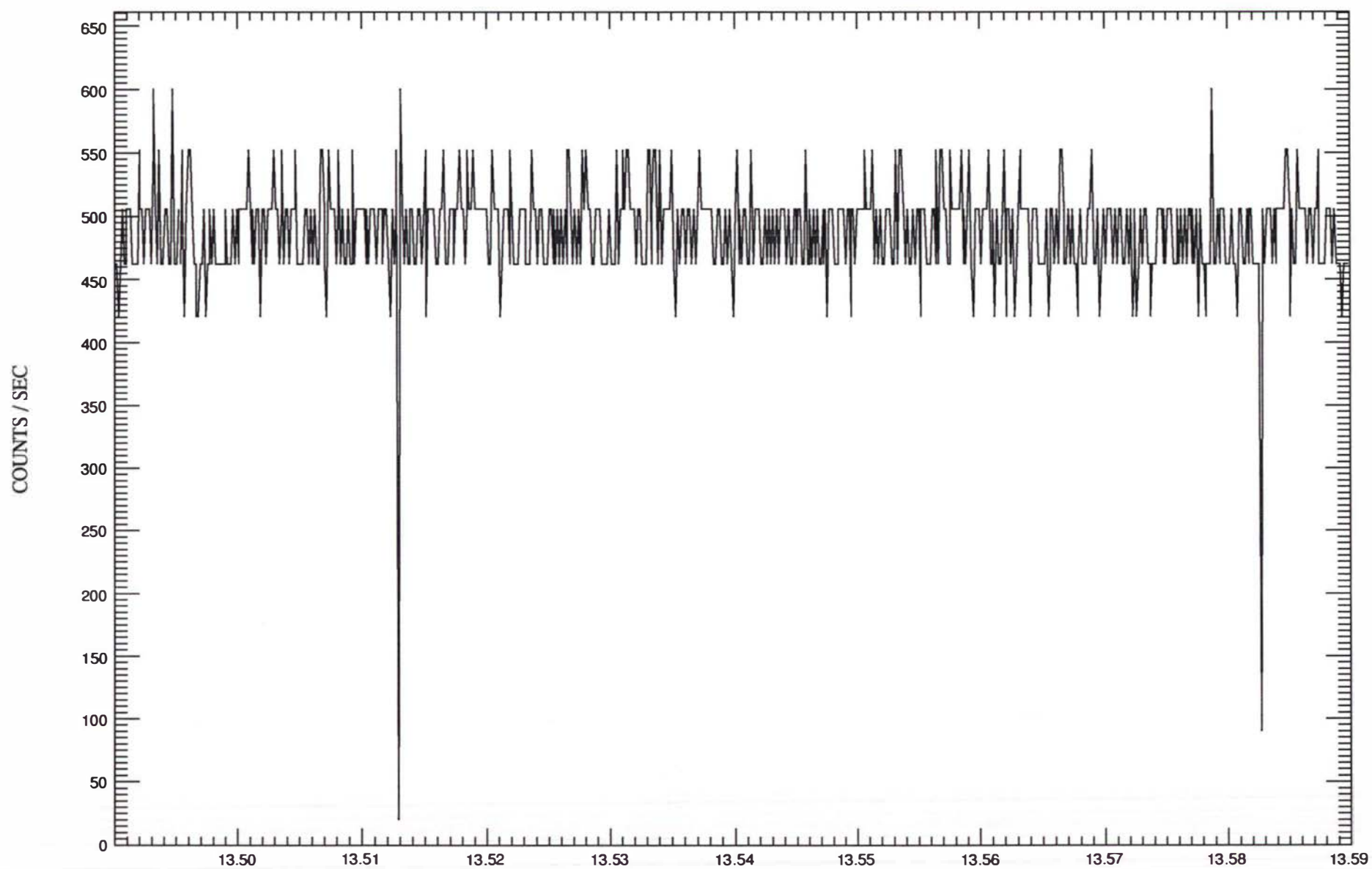
HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 3 at UT=13.535916807387 h=48729.301 s 13:32:09.301

4/1/96



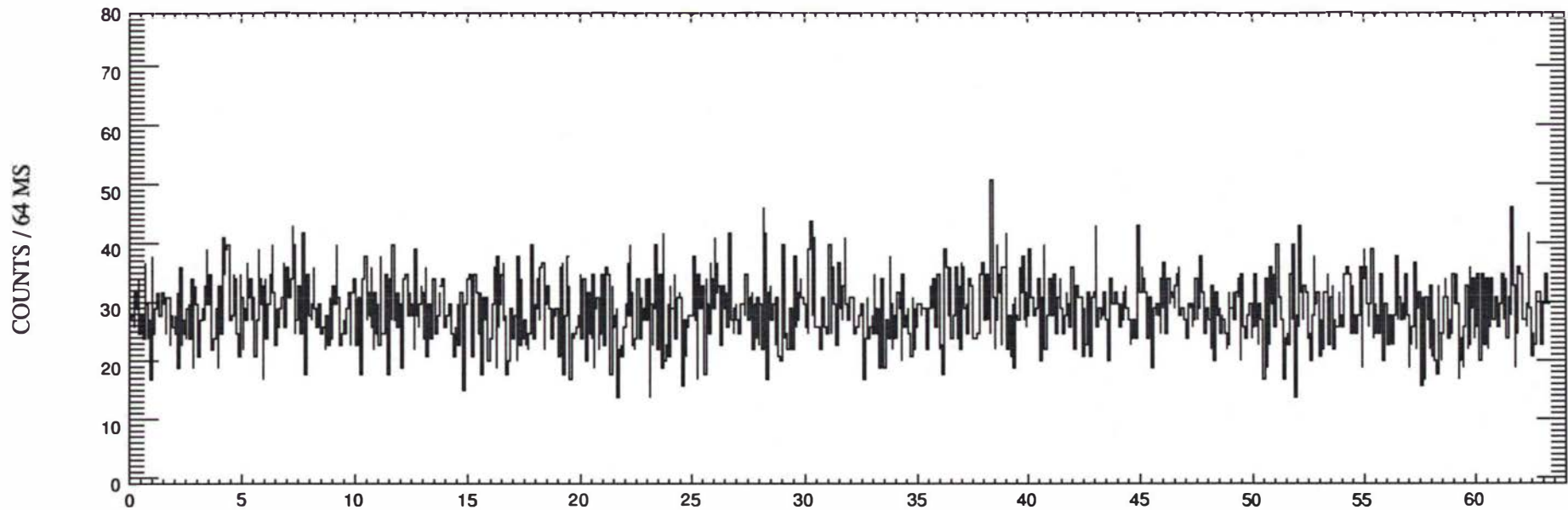
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

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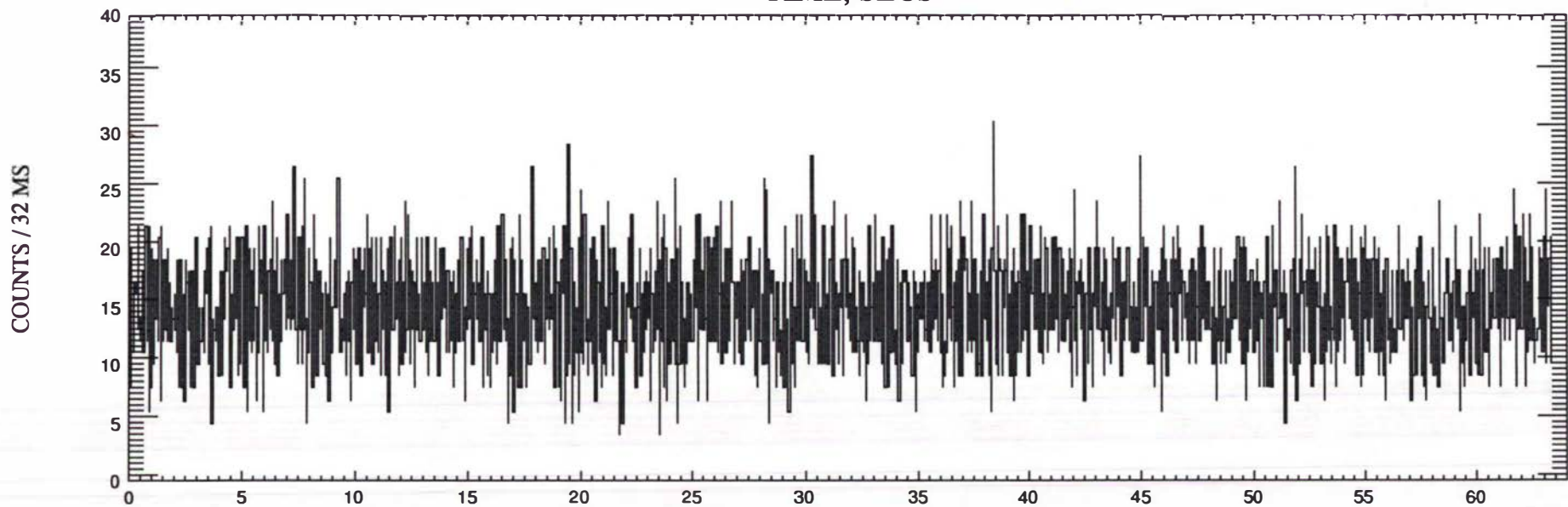


HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 4 at UT=14.778921233283 h=53204.116 s 14:46:44.116

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TIME, SECS

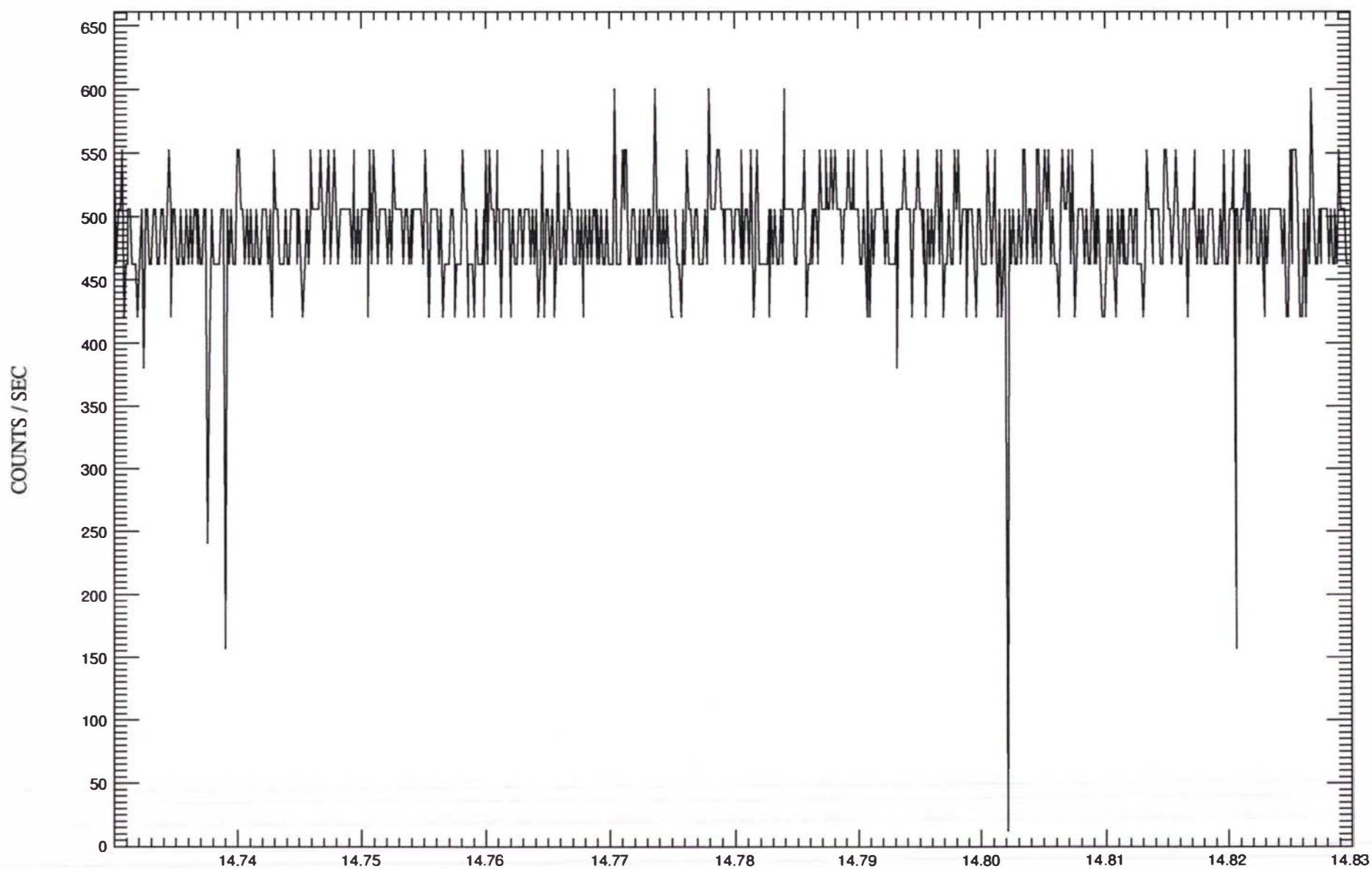


TIME, SECS

B# 12

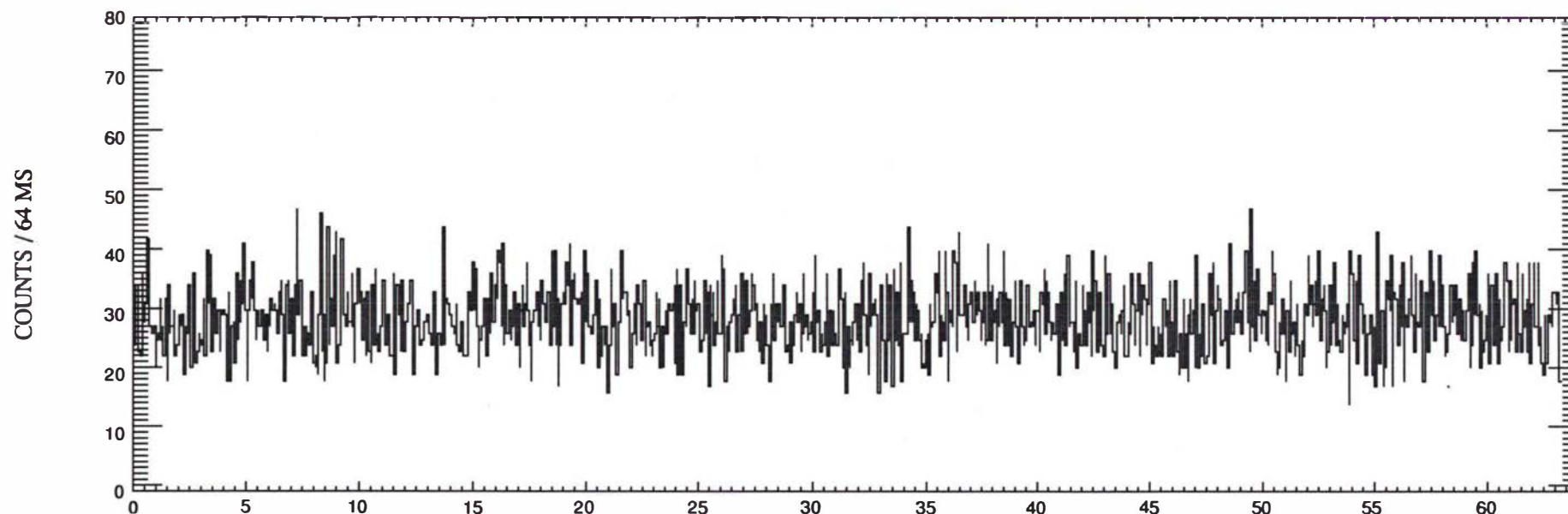
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

1/2/96

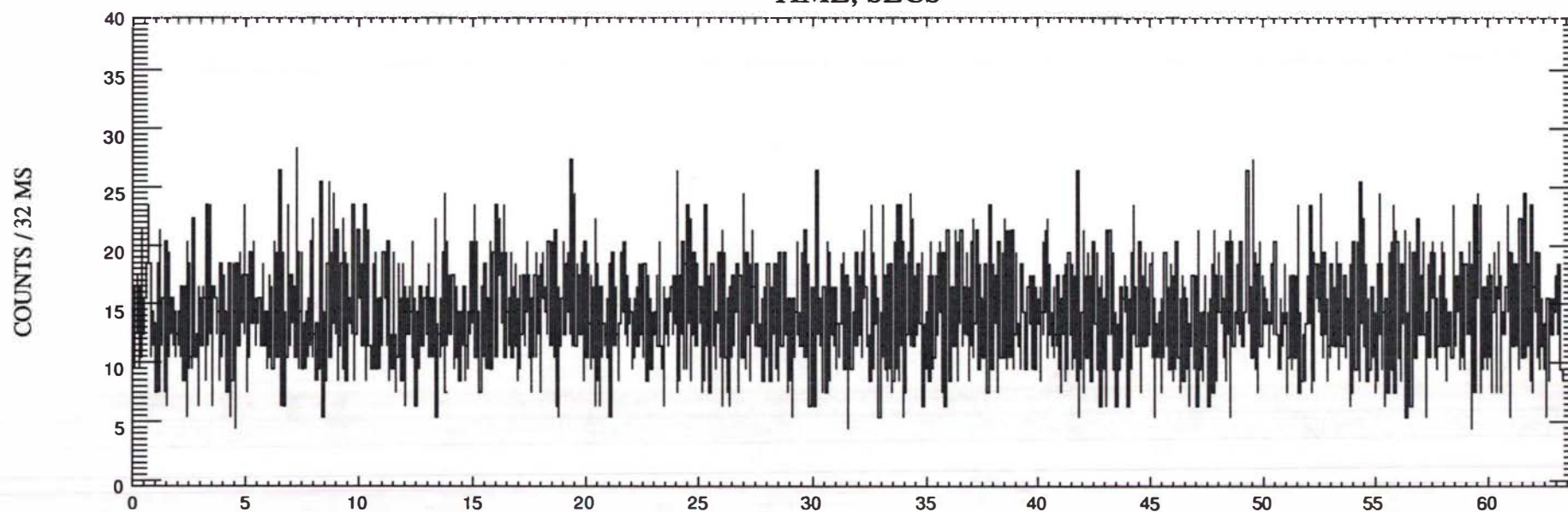


HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 5 at UT=15.489034004211 h=55760.522 s 15:29:20.522

4/1/96



TIME, SECS

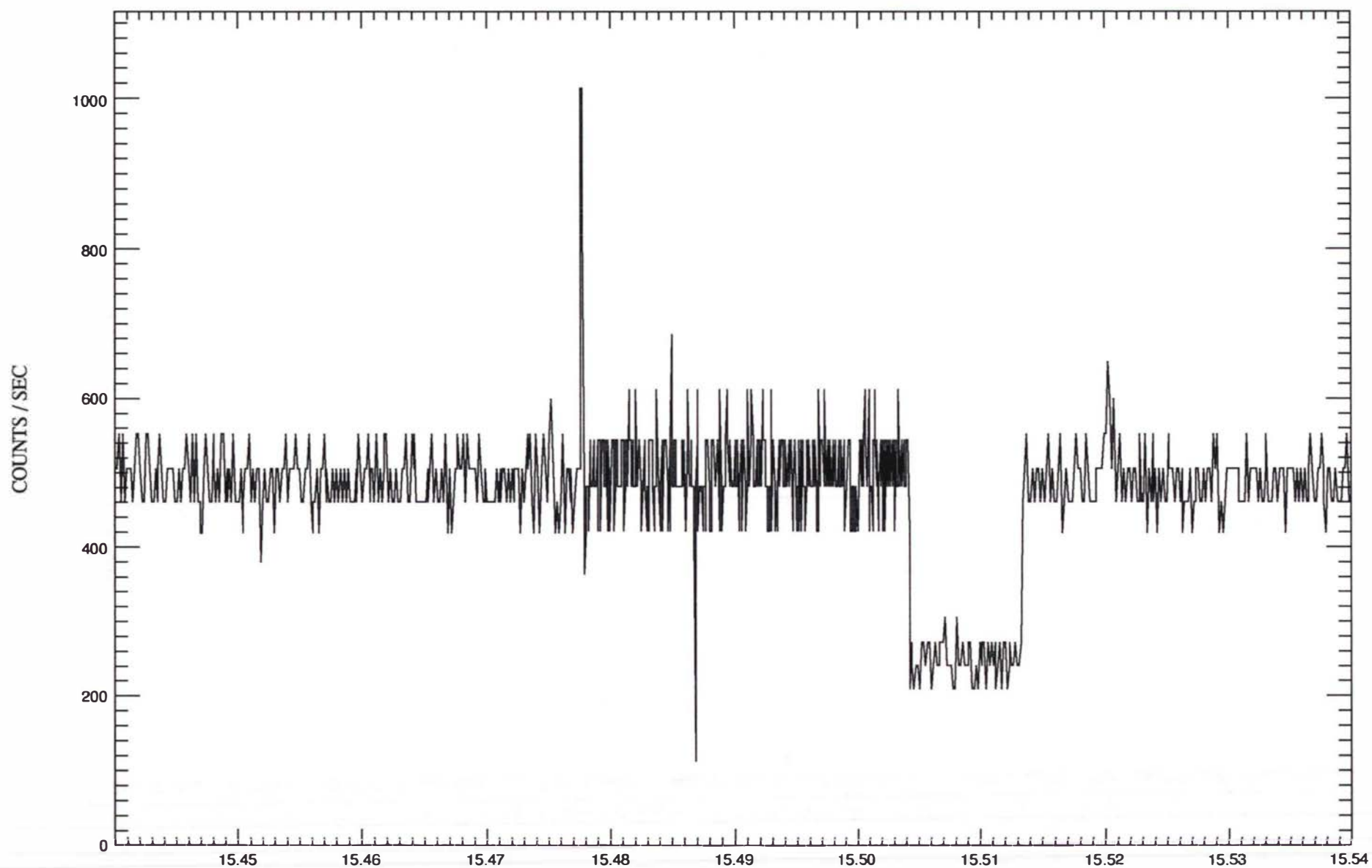


TIME, SECS

B# 13

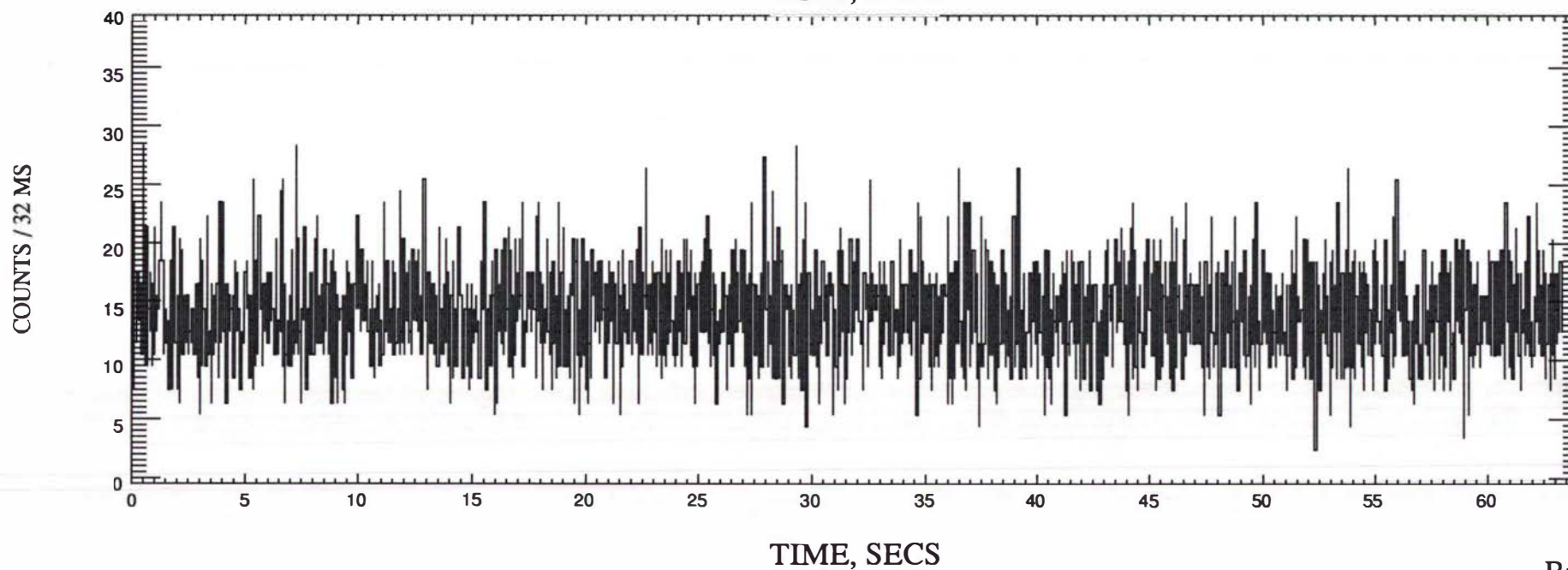
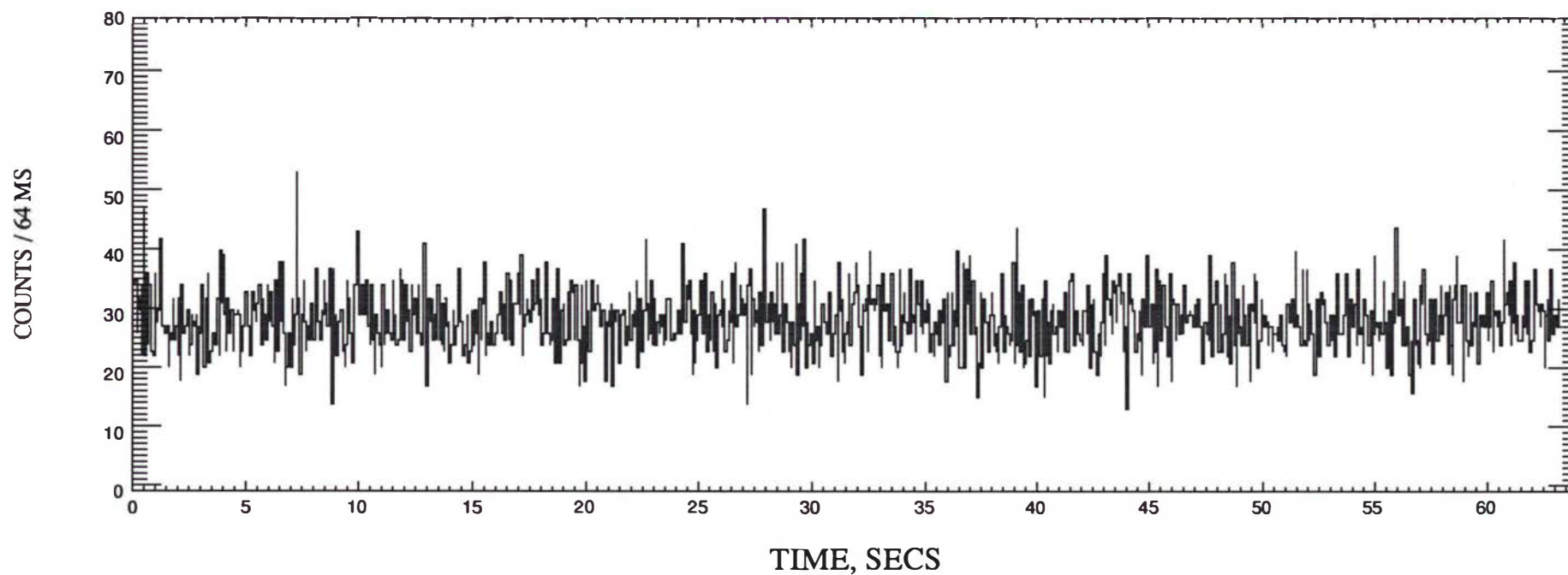
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 6 at UT=16.189741388957 h=58283.069 s 16:11:23.069

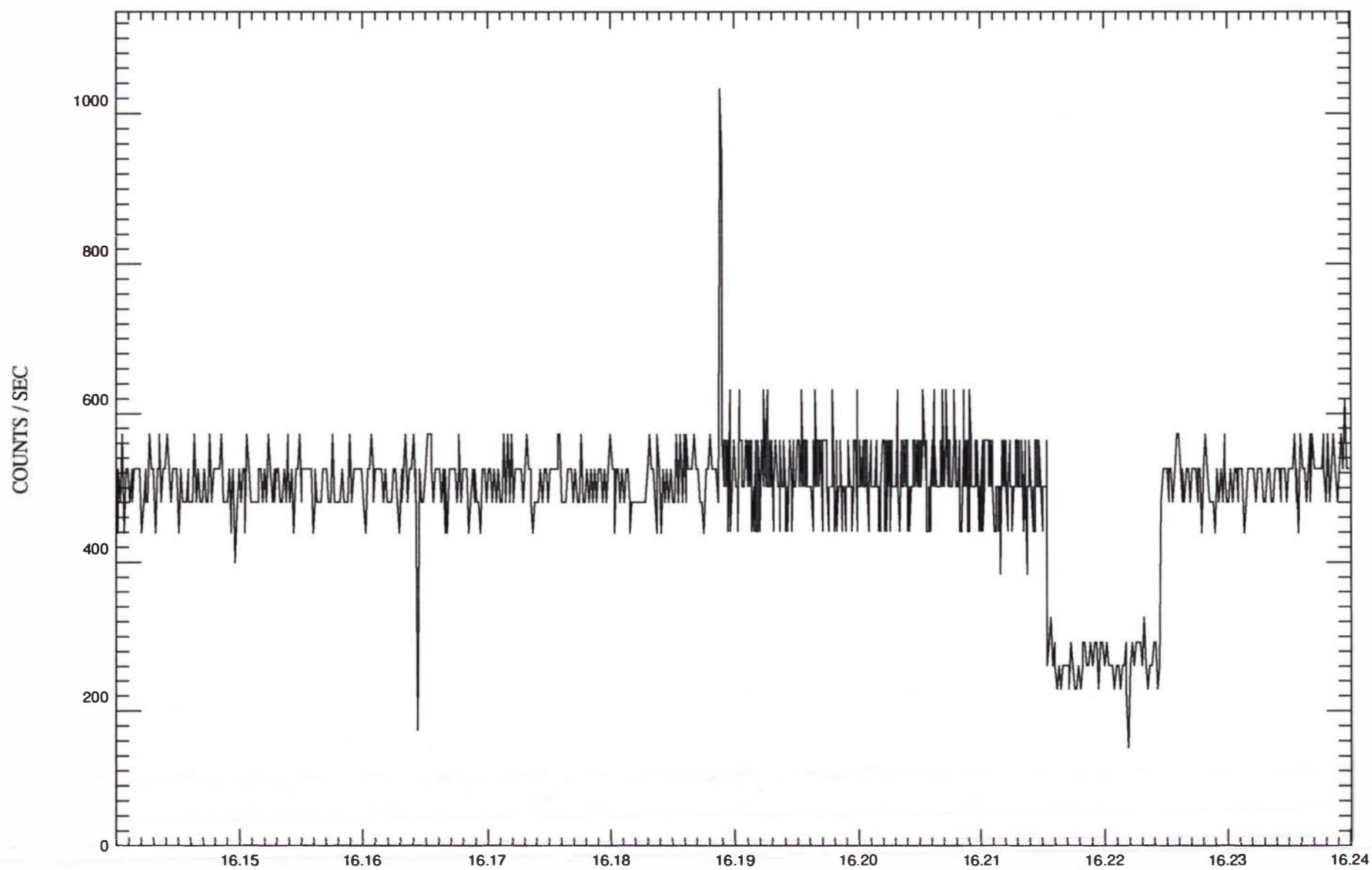
4/1/96



B# 14

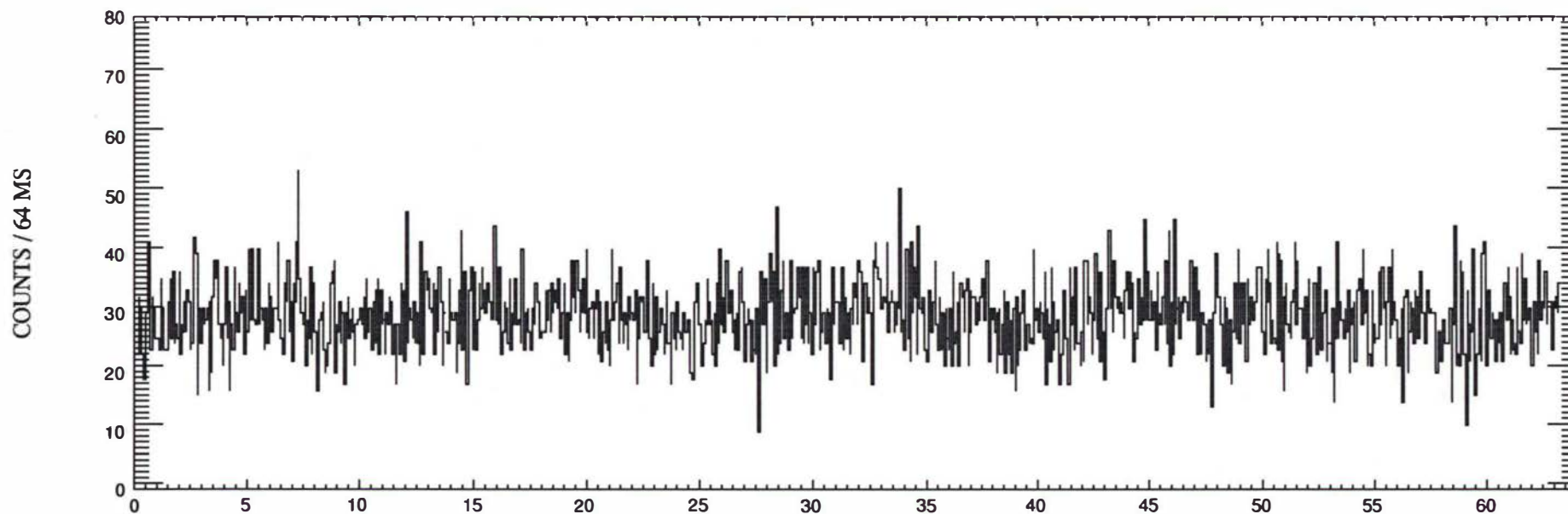
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

1/2/96

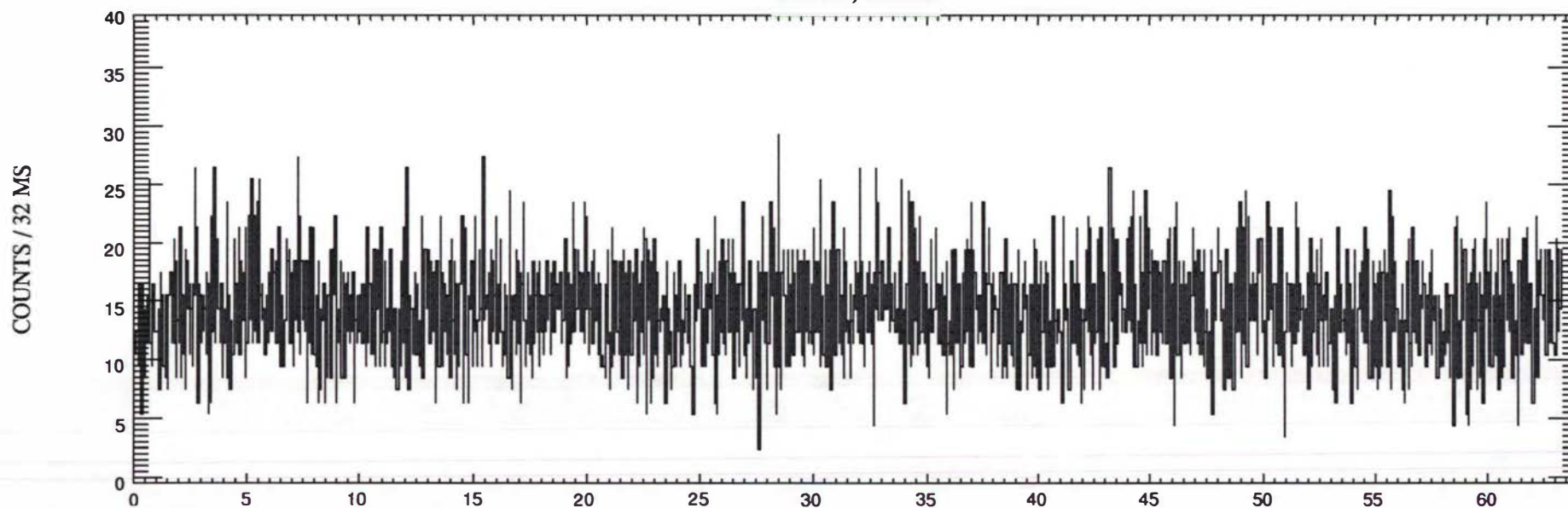


HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 7 at UT=17.488406617906 h=62958.264 s 17:29:18.264

4/1/96



TIME, SECS

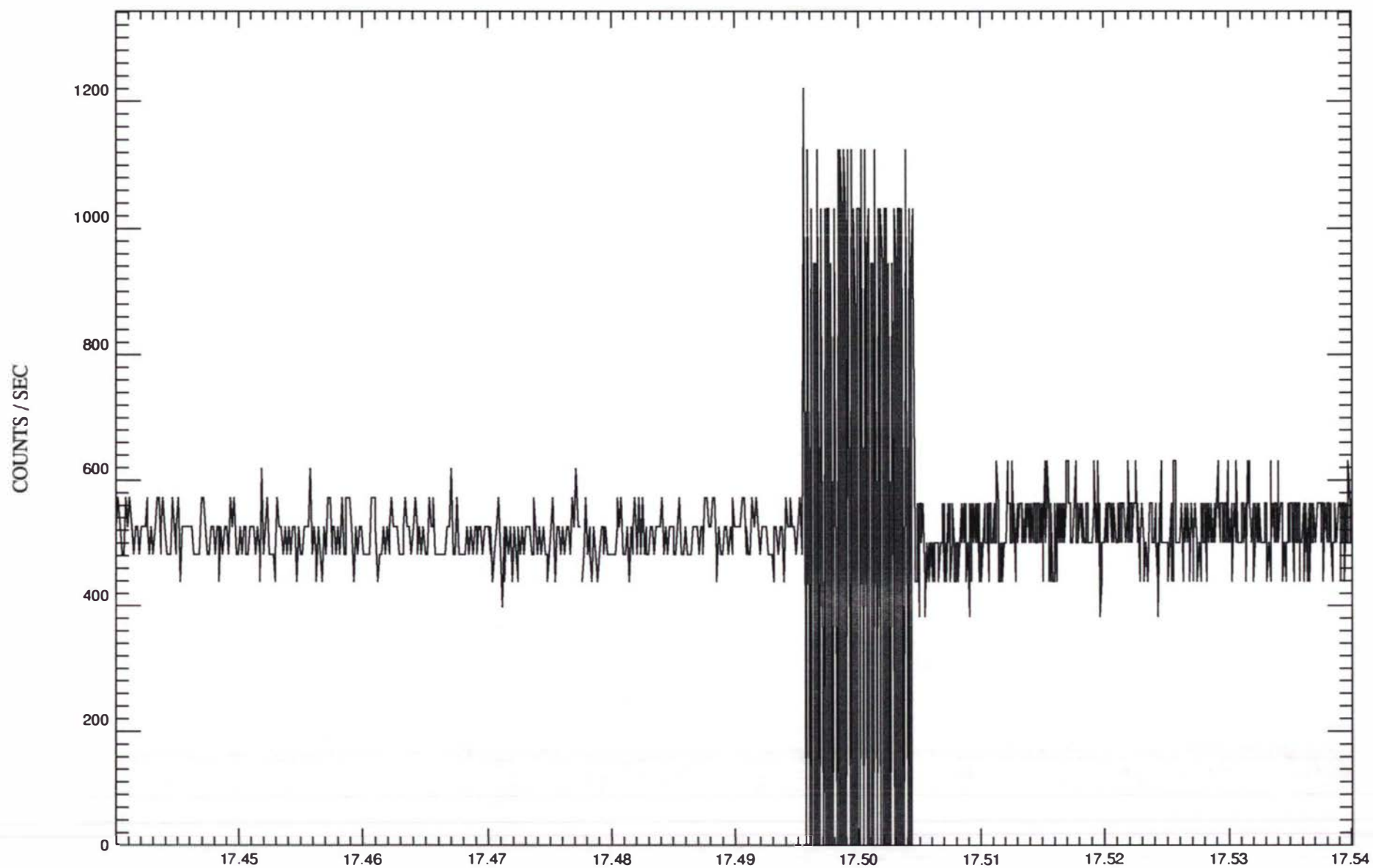


TIME, SECS

B# 15

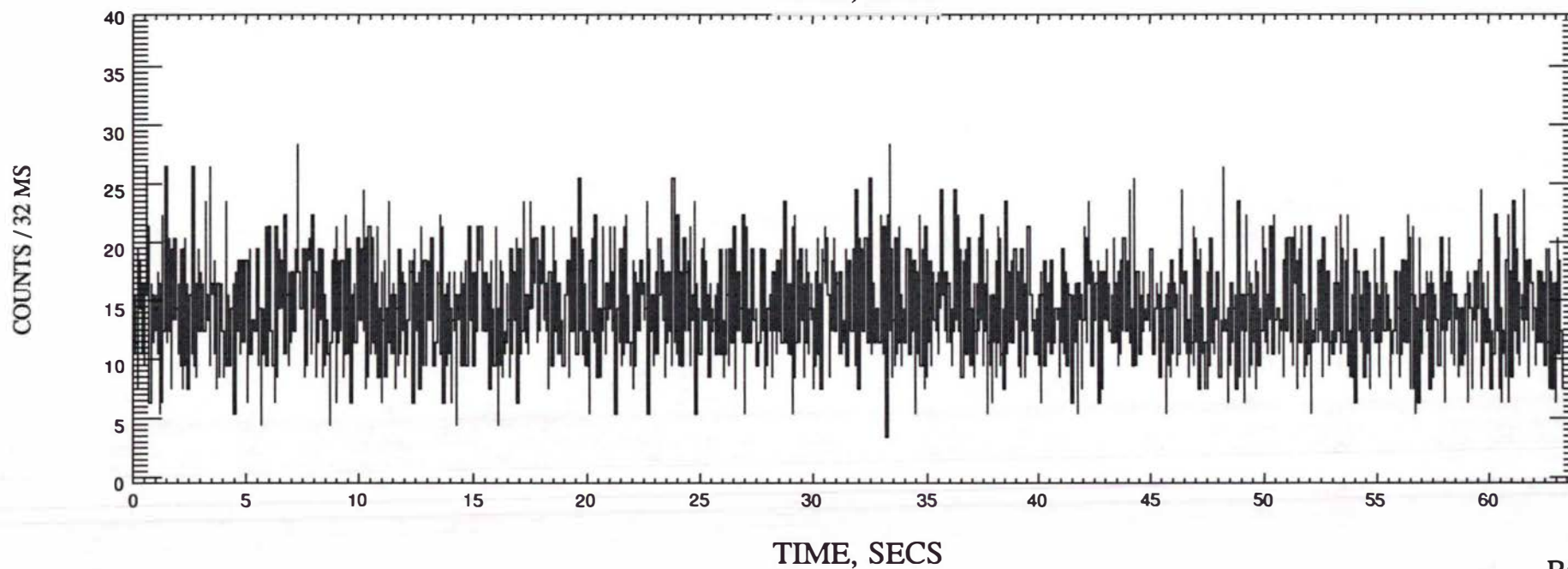
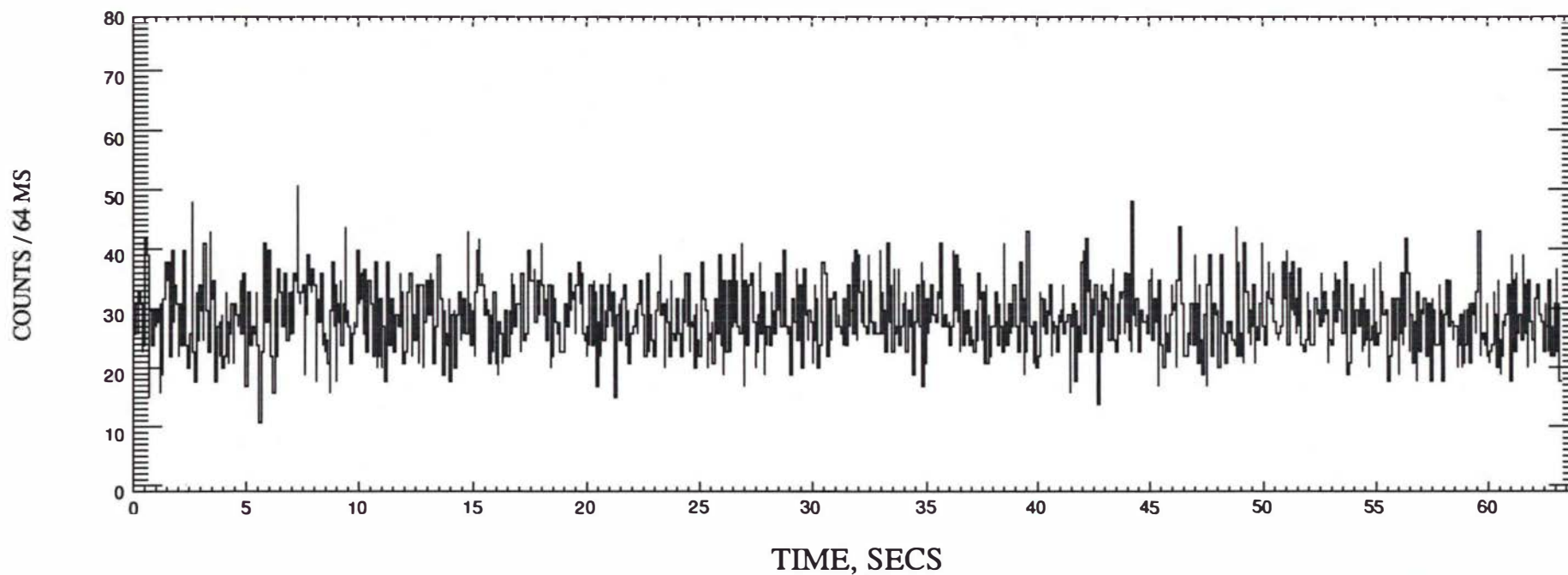
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

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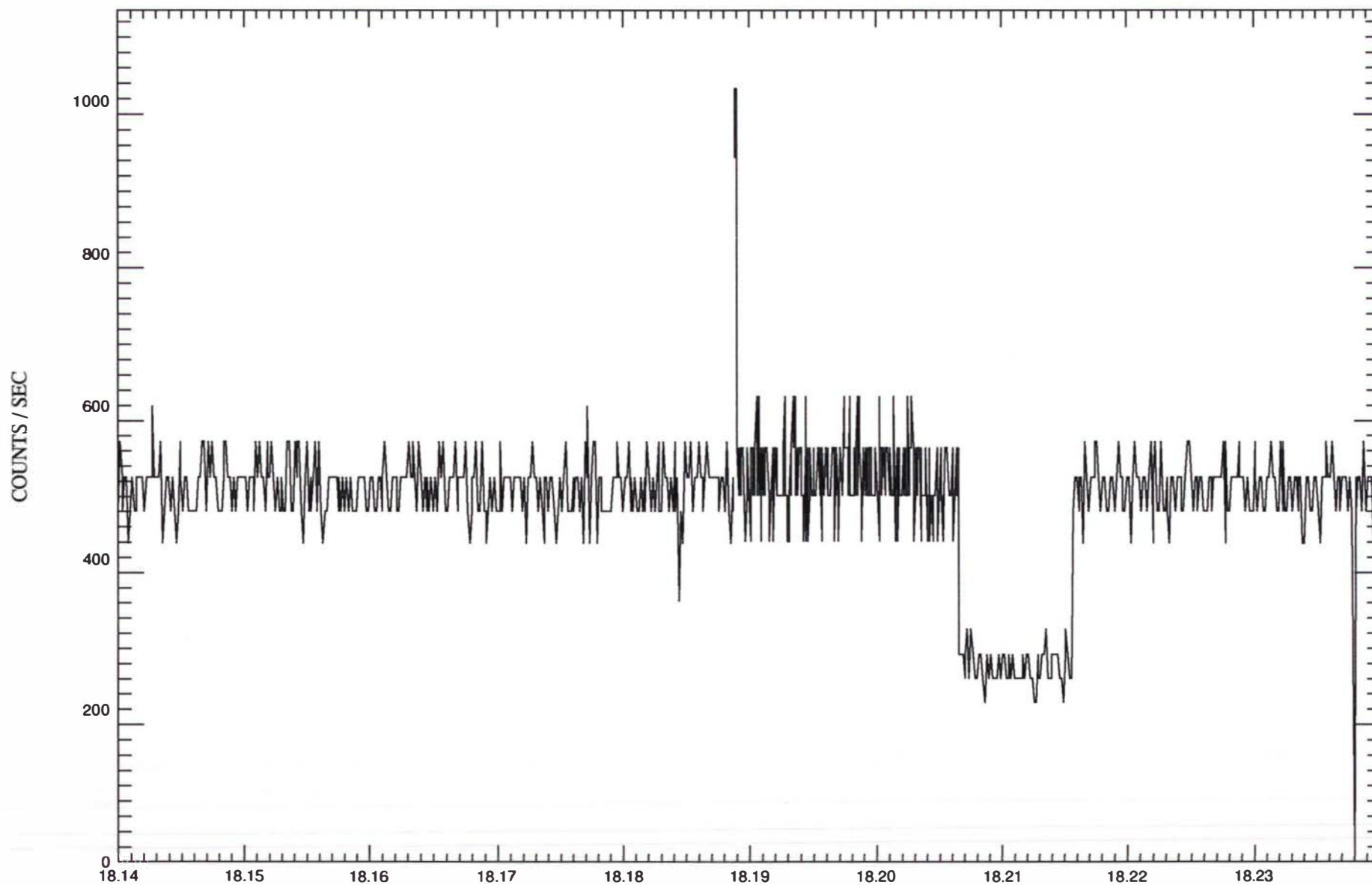
HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 8 at UT=18.190639610291 h=65486.303 s 18:11:26.303

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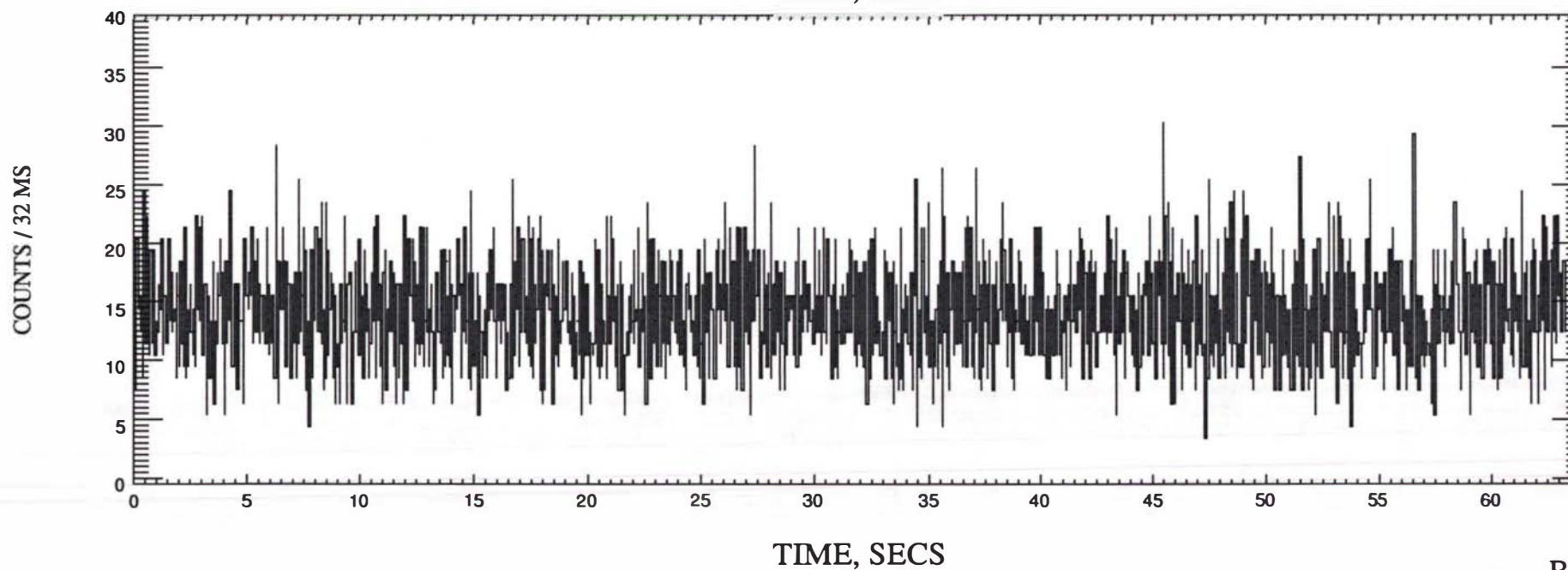
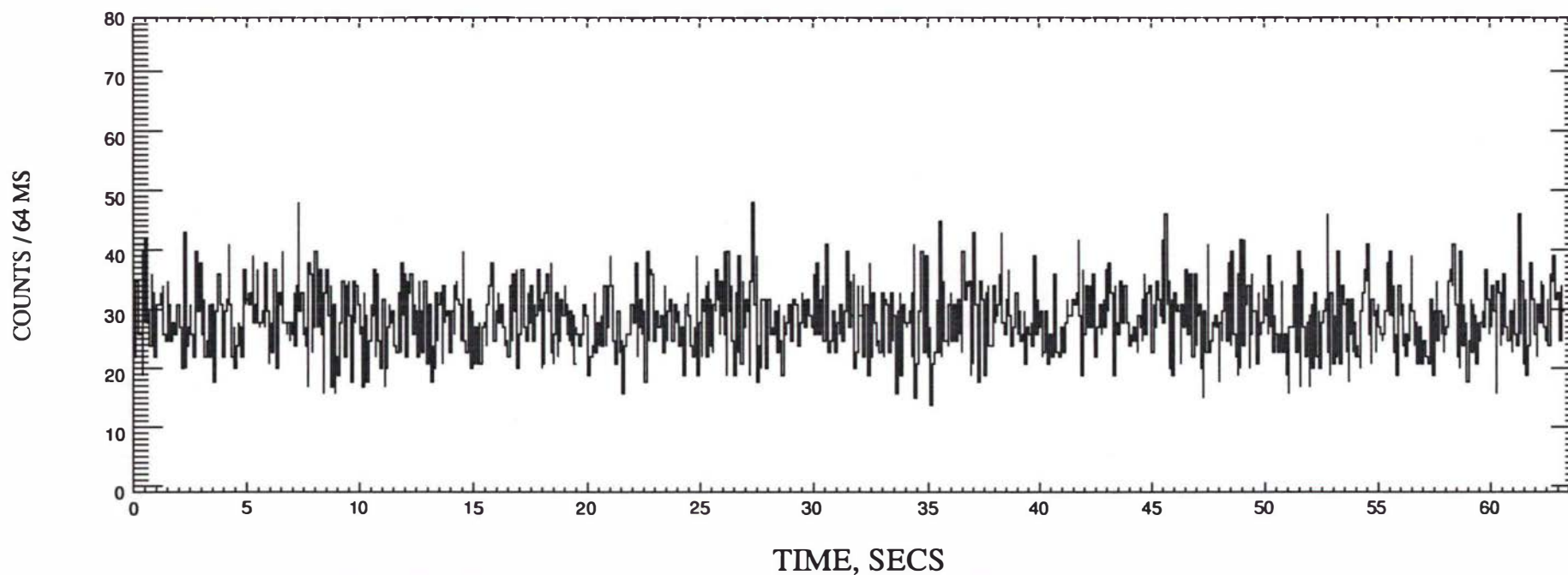
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

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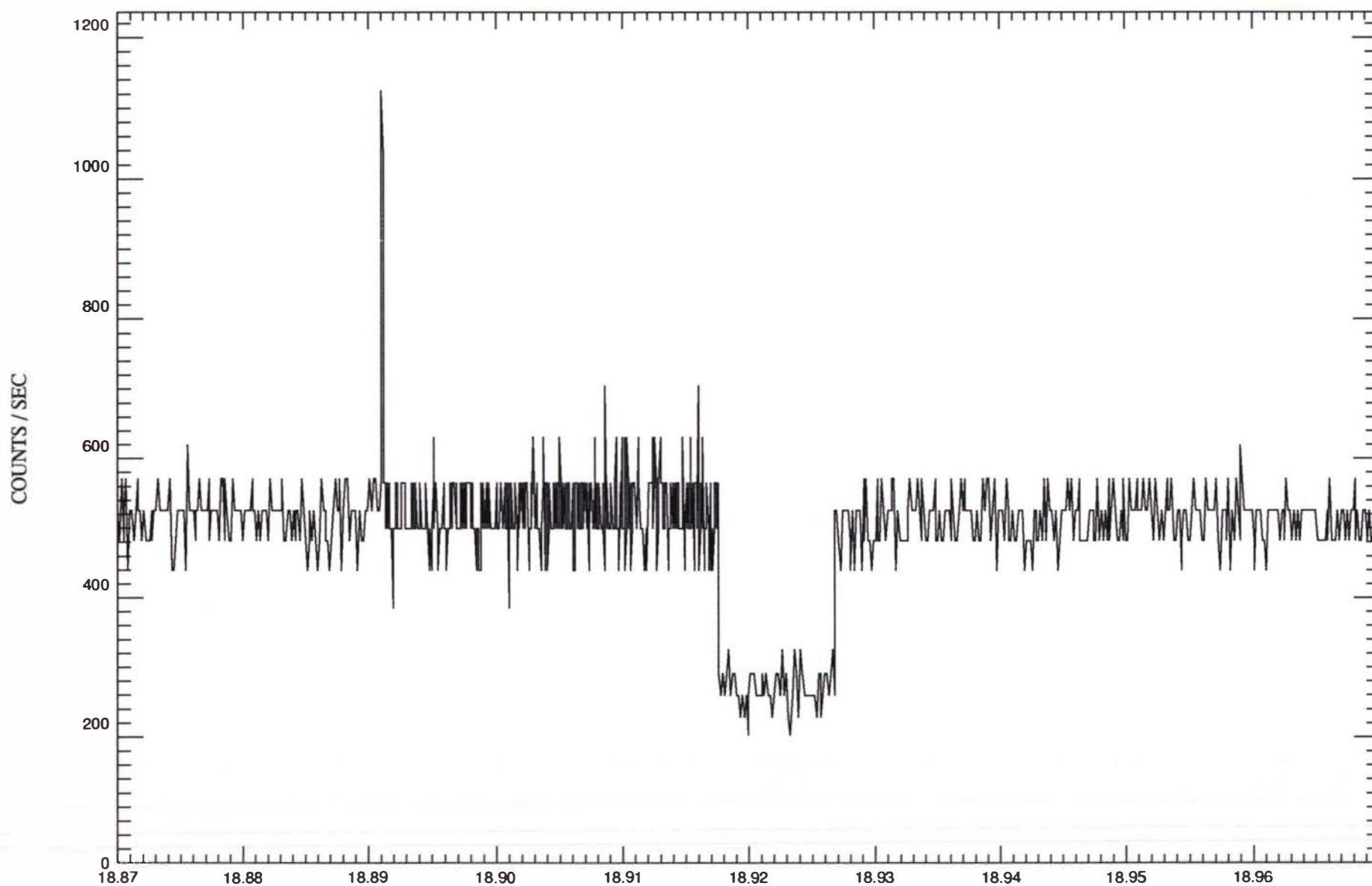
HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 9 at UT=18.916067051358 h=68097.841 s 18:54:57.841

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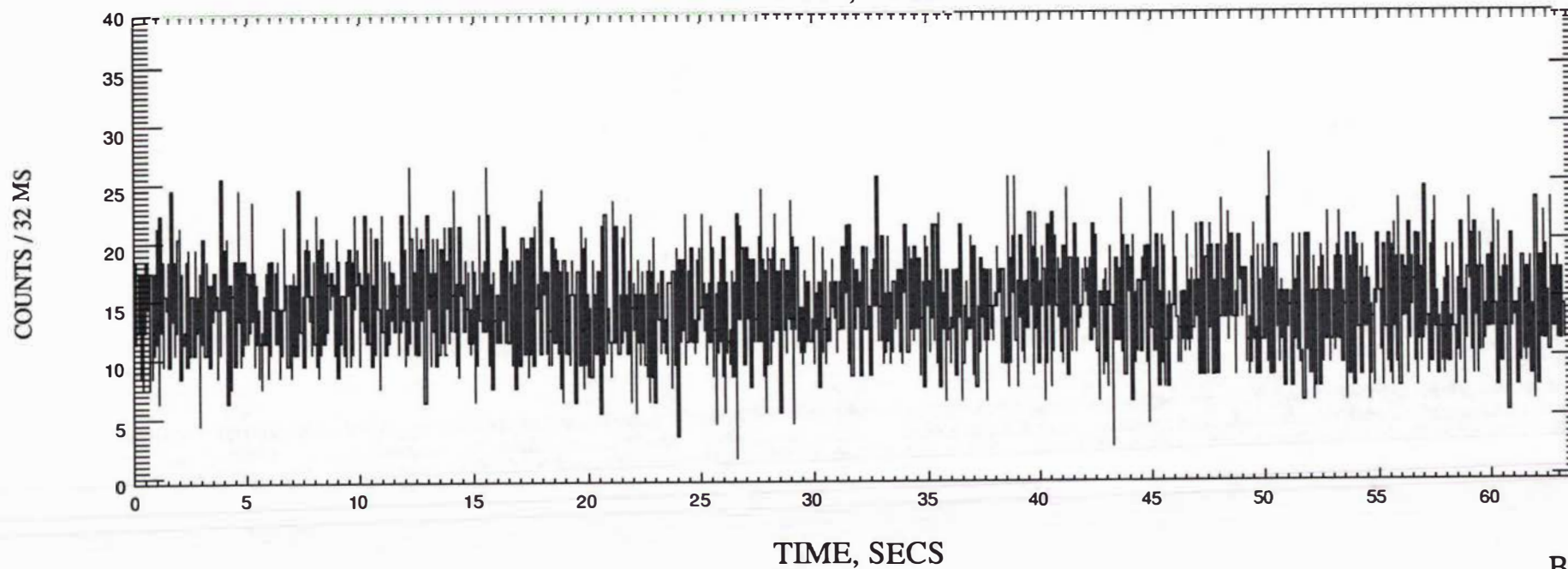
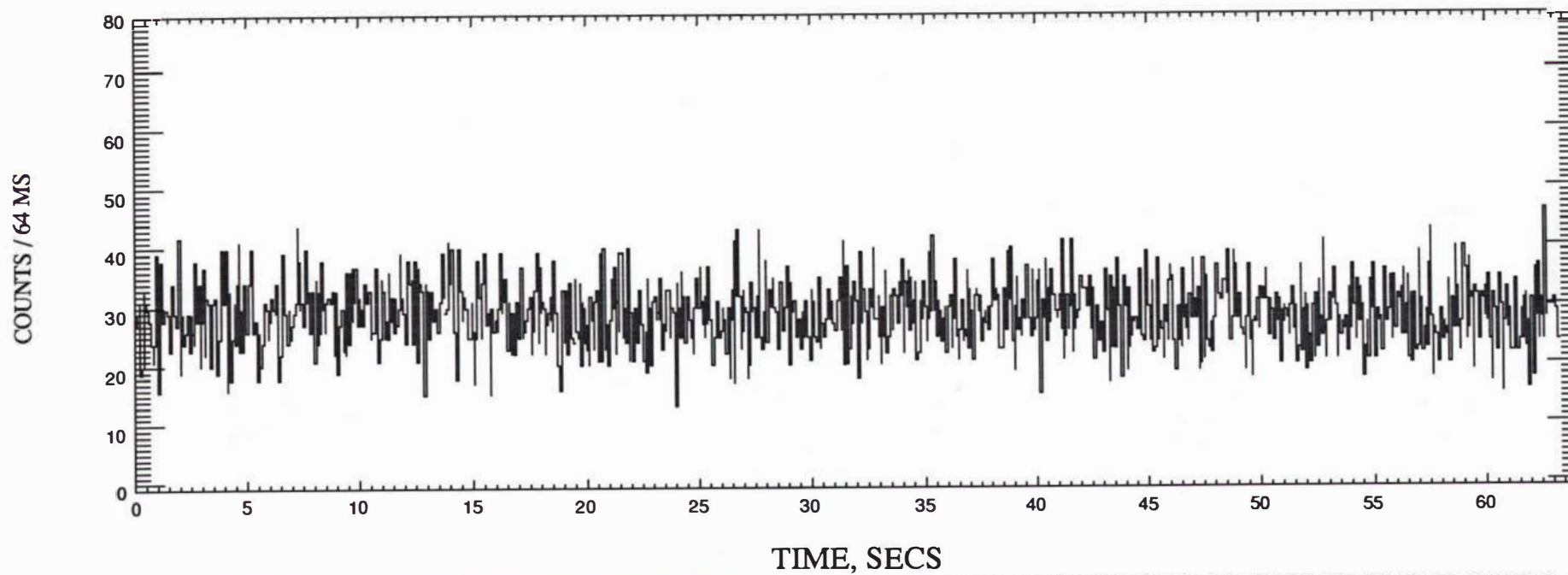
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 10 at UT=19.700316090054 h=70921.138 s 19:42:01.138

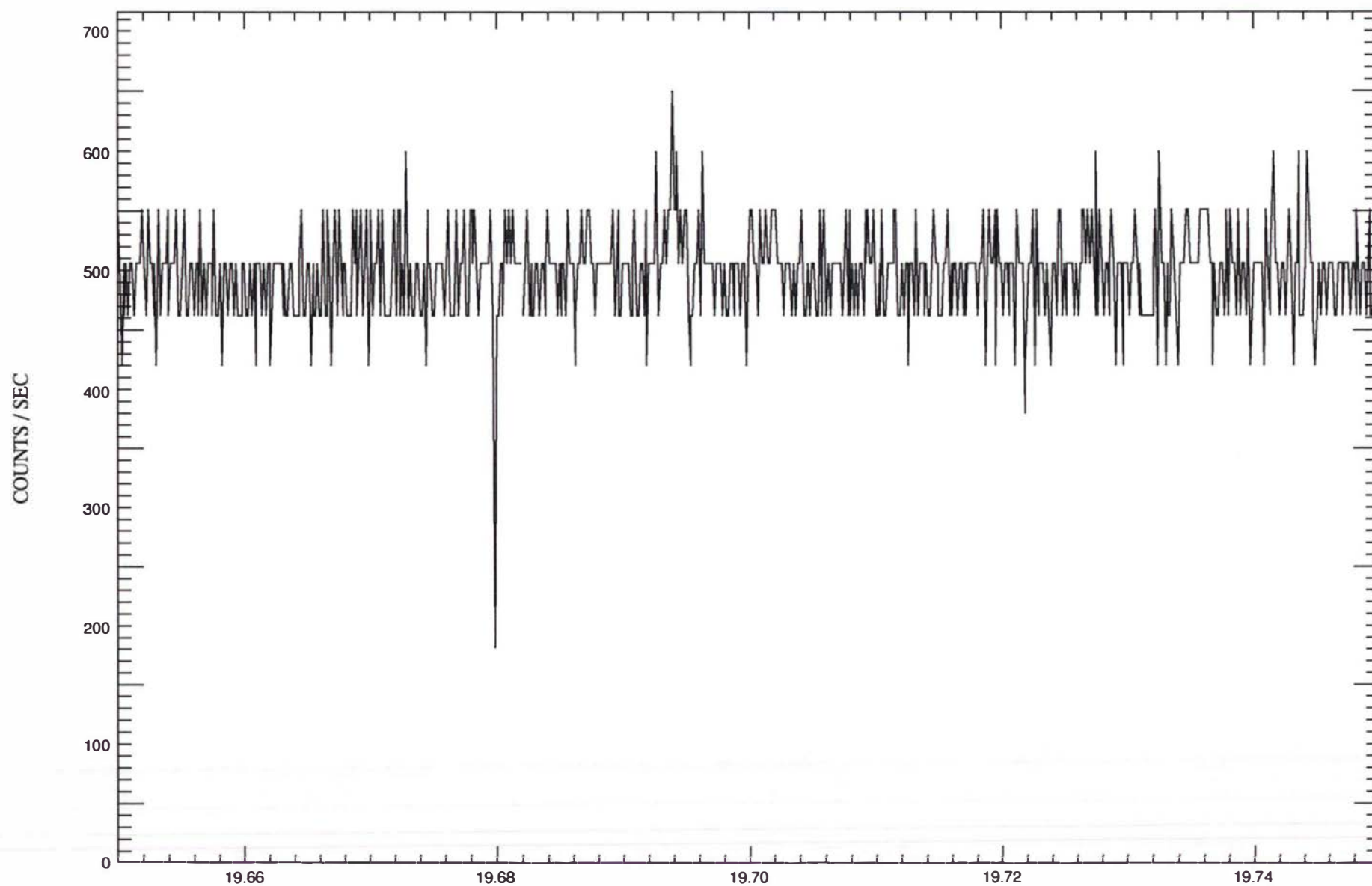
4/1/96



B# 18

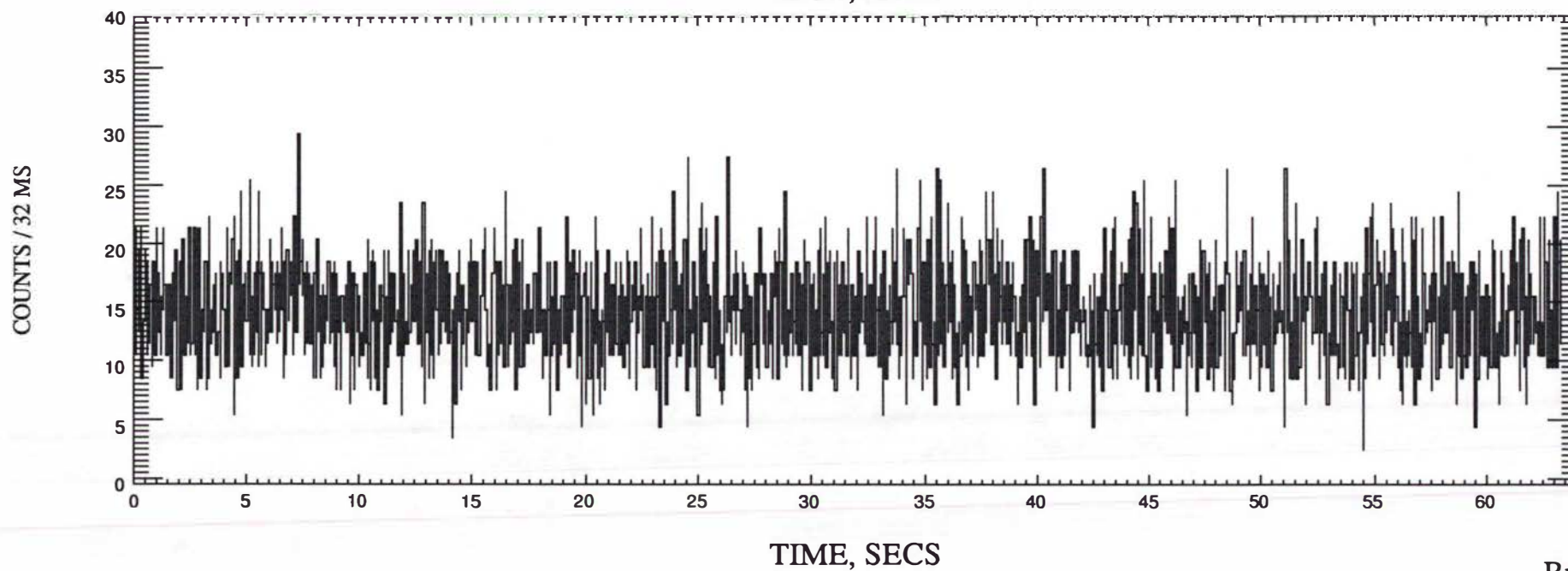
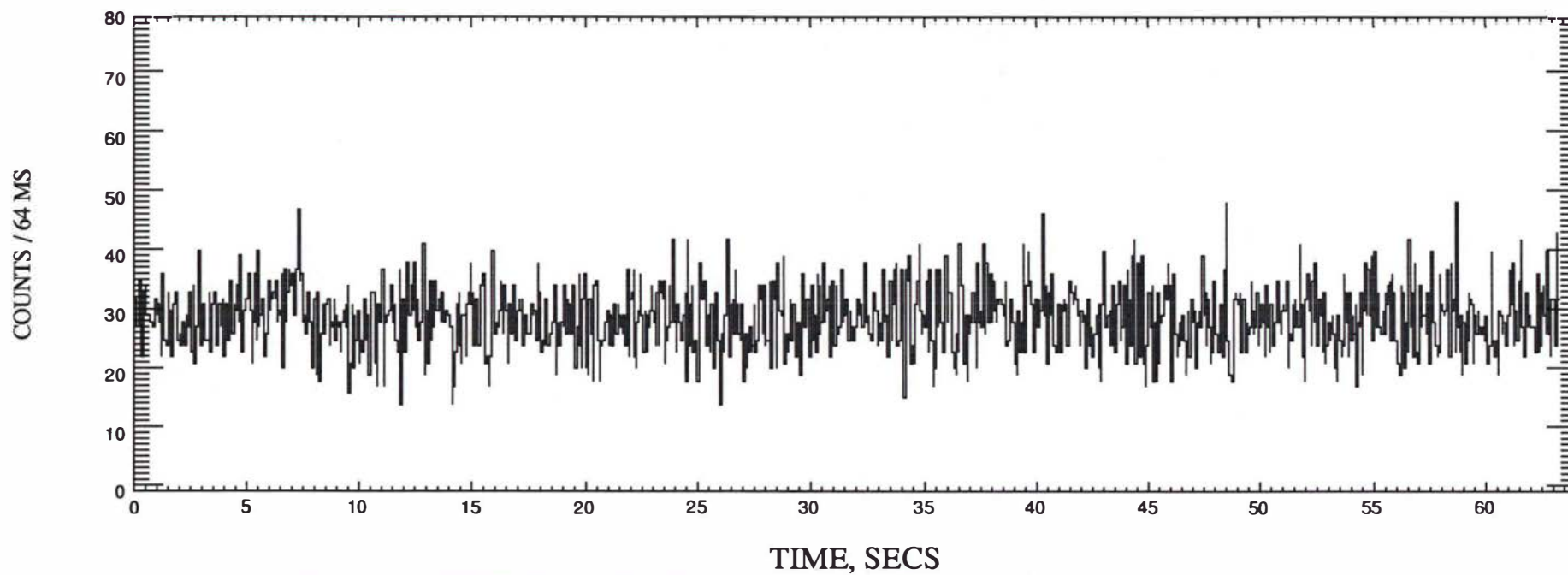
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

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HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 11 at UT=20.451299086677 h=73624.677 s 20:27:04.677

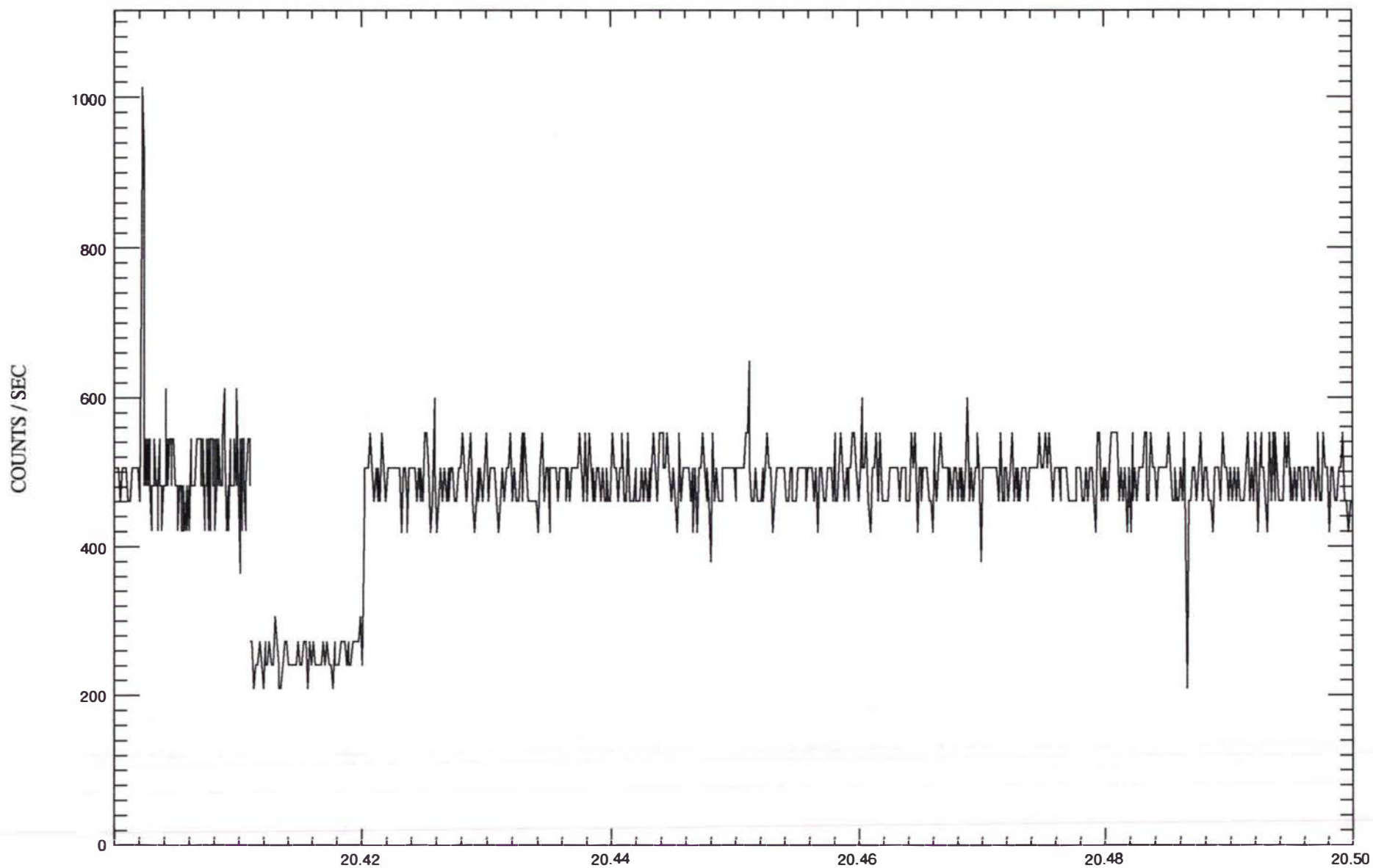
4/1/96



B# 19

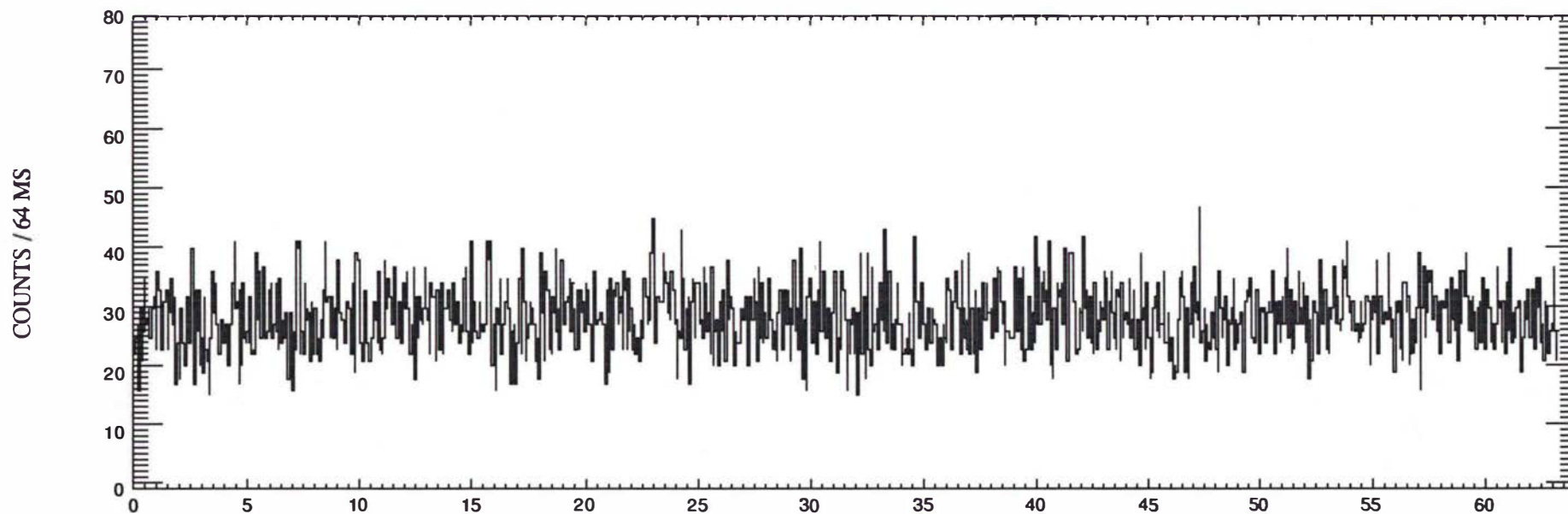
HUS 2A, MODE 1, NOT AVERAGED QEDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

1/2/96

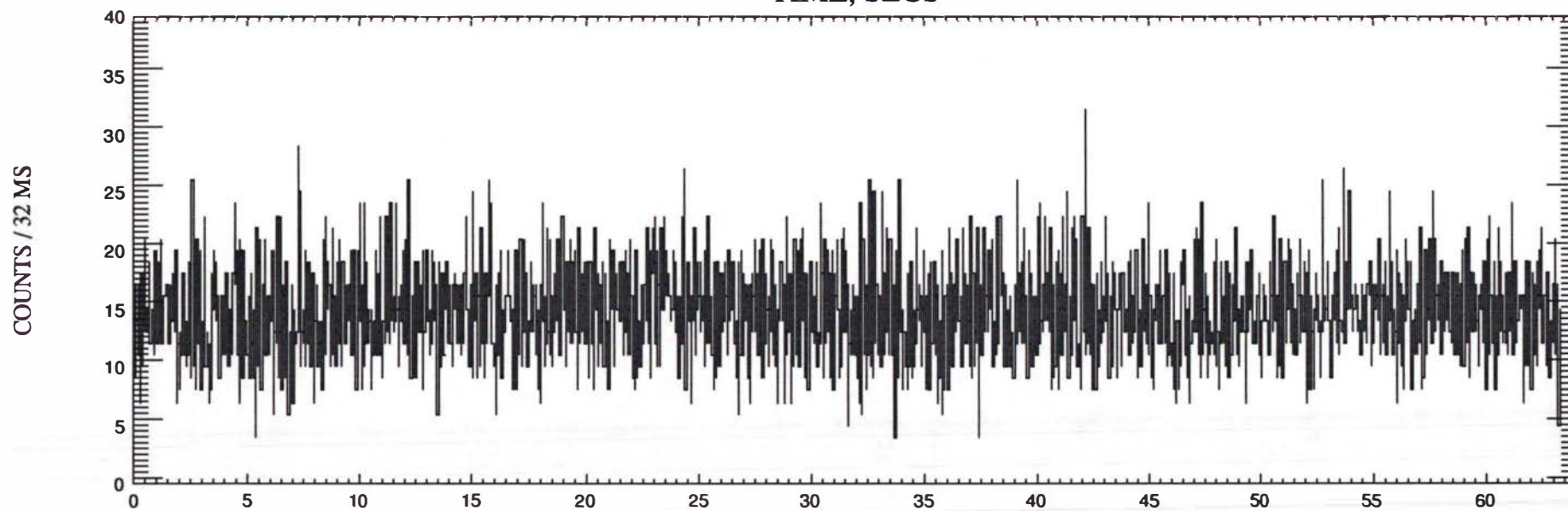


HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 12 at UT=21.436485625373 h=77171.348 s 21:26:11.348

4/1/96



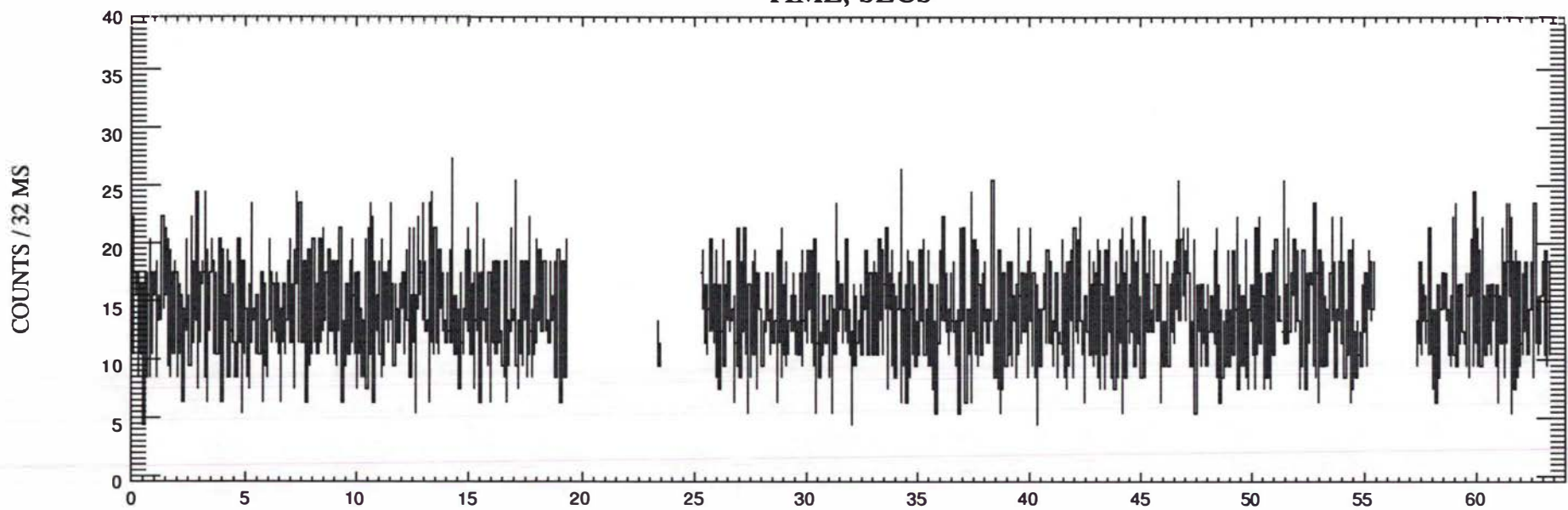
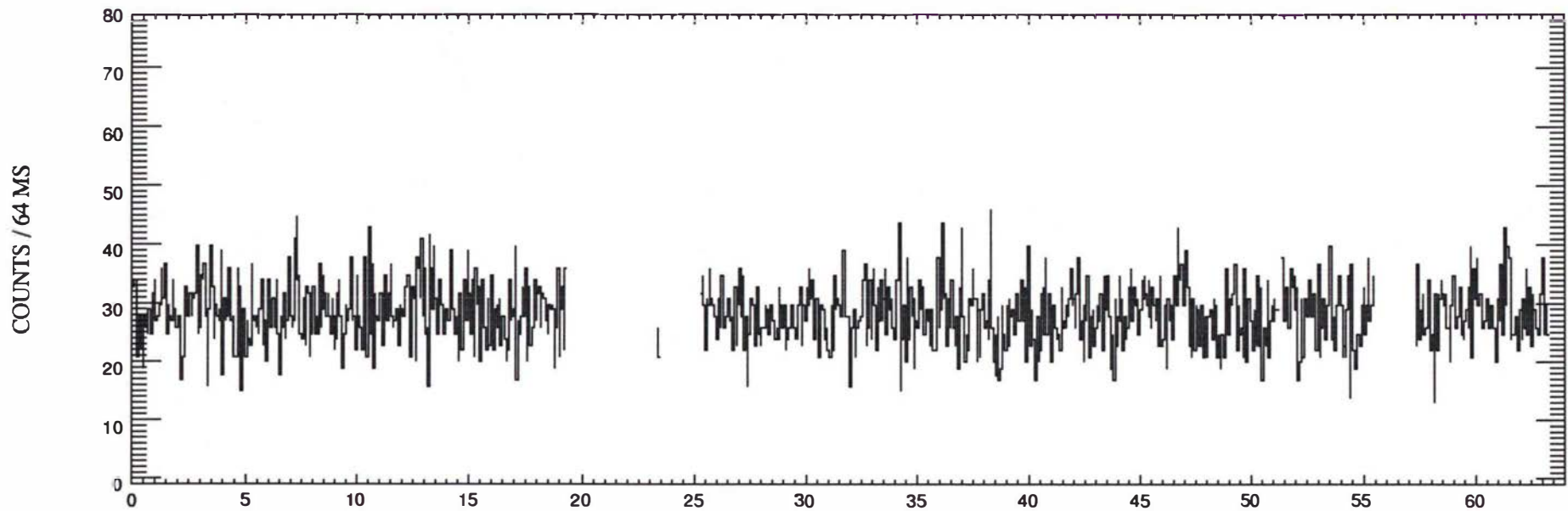
TIME, SECS



B# 20

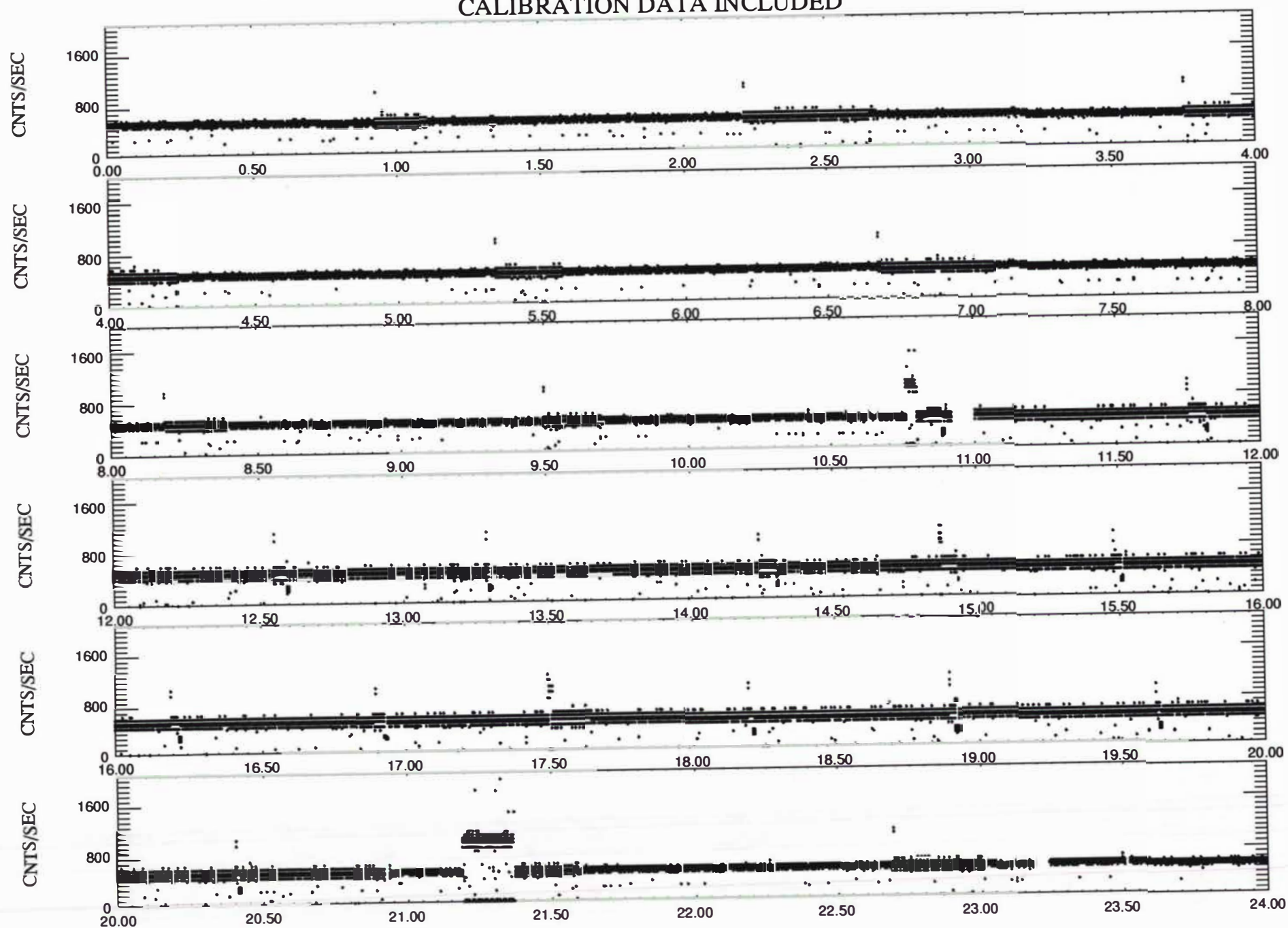
HUS 2A TRIGGERED DATA EDR day 364, year 1995
Burst Counter 13 at UT=22.853000225491 h=82270.801 s 22:51:10.801

4/1/96



HUS 2A, MODE 1, NOT AVERAGED EDR day 364, year 1995 to day 364, year 1995
CALIBRATION DATA INCLUDED

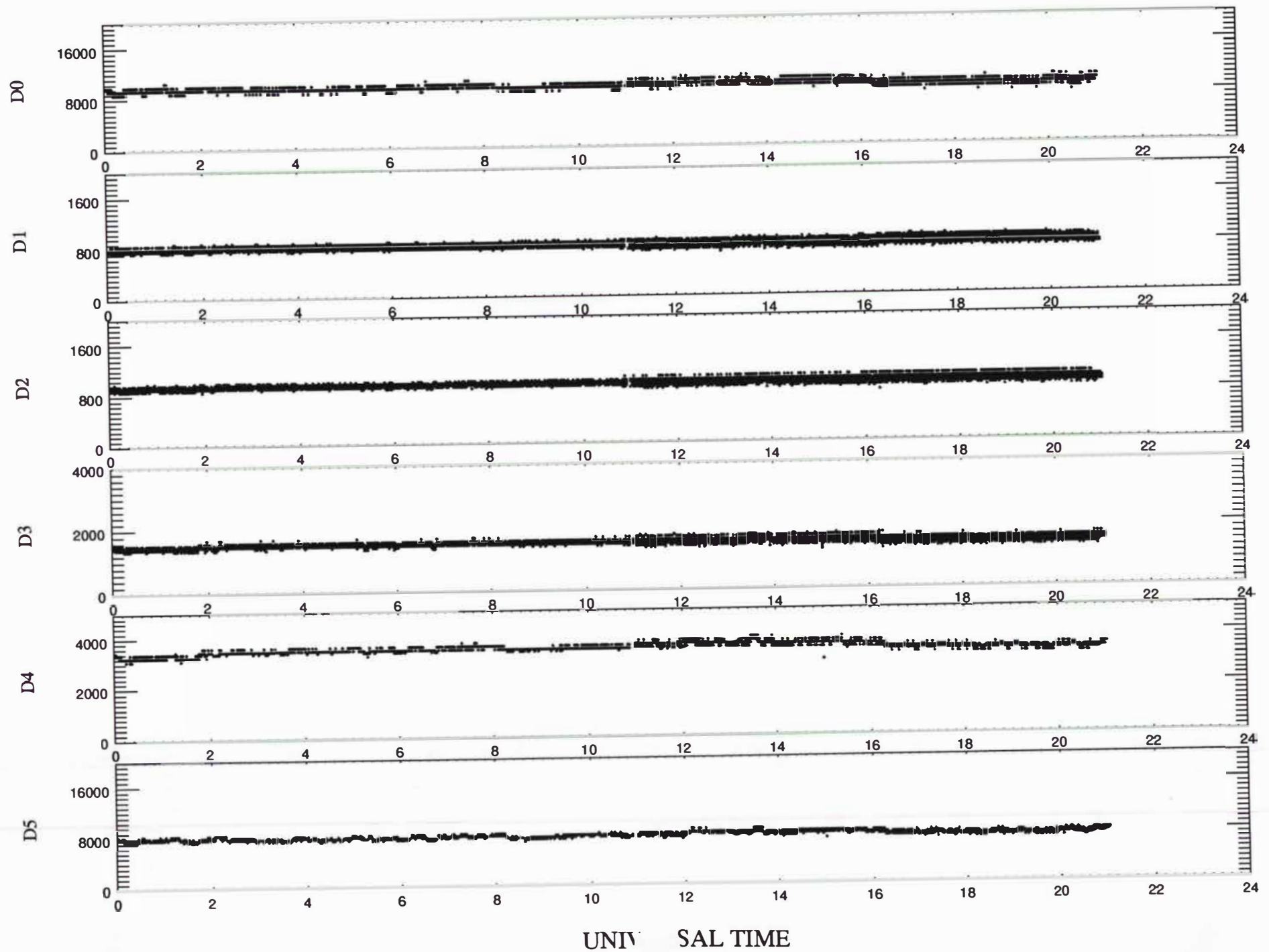
4/1/96



UNIVERSAL TIME

HUS 2B COUNTS / SEC QEDR day 364, year 1995 to day 364, year 1995

1/2/96



From WAINWRIGHT@ISTP2.GSFC.NASA.GOV Mon Dec 18 12:48 PST 1995
Date: Mon, 18 Dec 1995 20:48:07 GMT
From: "John Wainwright, WIND/POLAR FOT. 301-286-0724" <WAINWRIGHT@ISTP1.GSFC.NASA.GOV>
To: "LHEAVX::ROSENVINGE"@ISTP1.GSFC.NASA.GOV,
 "LHEAVX::REAMES"@ISTP1.GSFC.NASA.GOV,
 "SAMPX2::WALPOLE"@ISTP1.GSFC.NASA.GOV, BERNIE@ROSSERV.GSFC.NASA.GOV,
 "LHEAVX::CLINE"@ISTP1.GSFC.NASA.GOV,
 "LHEAVX::STILWELL"@ISTP1.GSFC.NASA.GOV
CC: WAINWRIGHT@ISTP1.GSFC.NASA.GOV
X-Vmsmail-To: @WIND.DIS
X-Vmsmail-Cc: WAINWRIGHT
Subject: Leaf second adjustment of s/c clock

A leap second adjustment to GMT will occur on December 31.
Adjustment of the spacecraft clock will occur on January 1,
1996. Starting at 00:08:00, the s/c clock will be adjusted
in 10 increments of 100 msec. each, at 10 min. intervals.
This will be accomplished from the stored command table.

Date: Sep 2 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

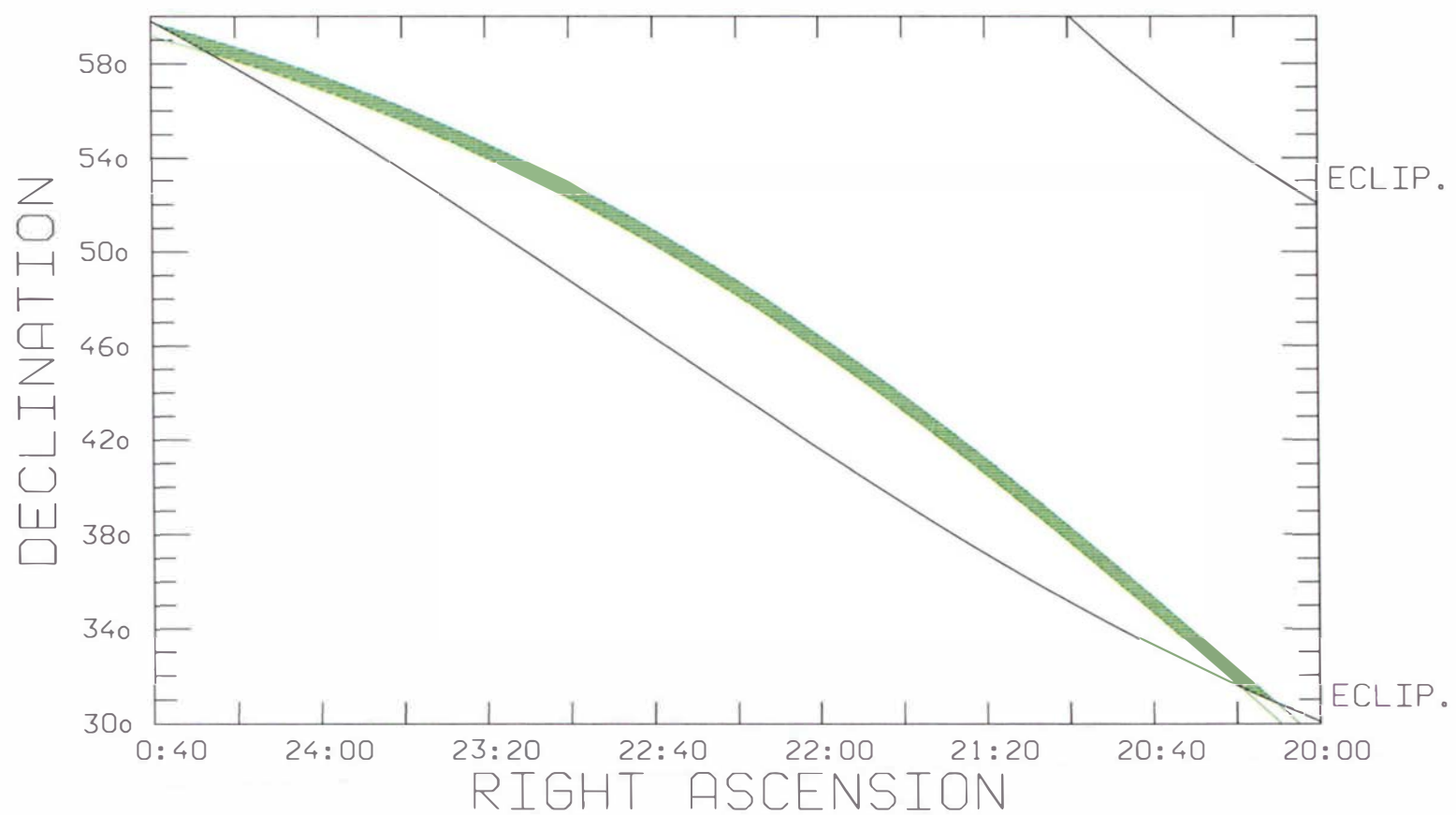
- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☒ Were data checked by Joe Springer for 0.5 s errors?
- ☒ If a 2 spacecraft triangulation, was Ulysses time corrected for aberration?
- ☒ Is the order of the data in CORREL such that a vernier is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

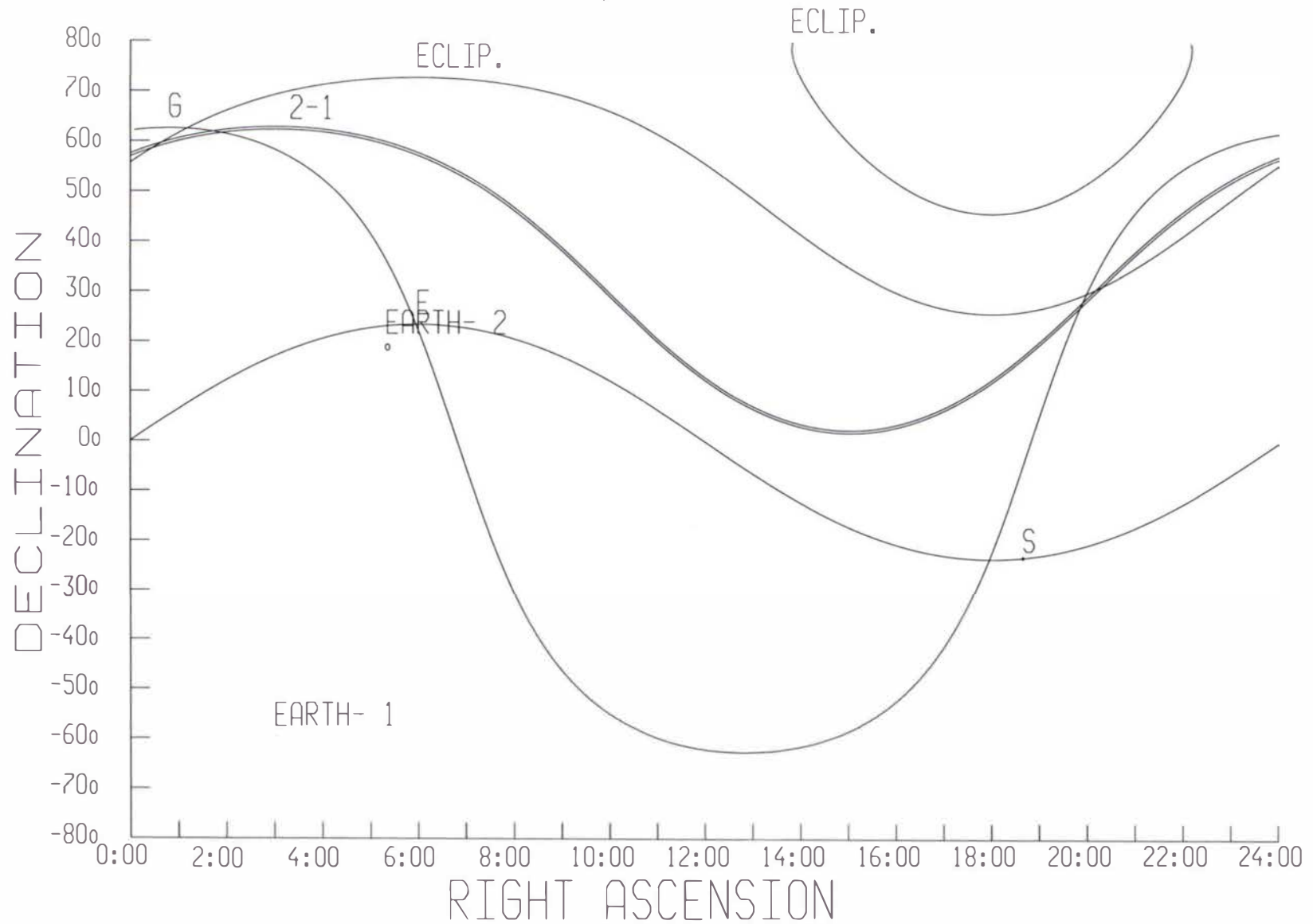
- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?
- ☒ ACCESS and MBL databases updated with identical times?

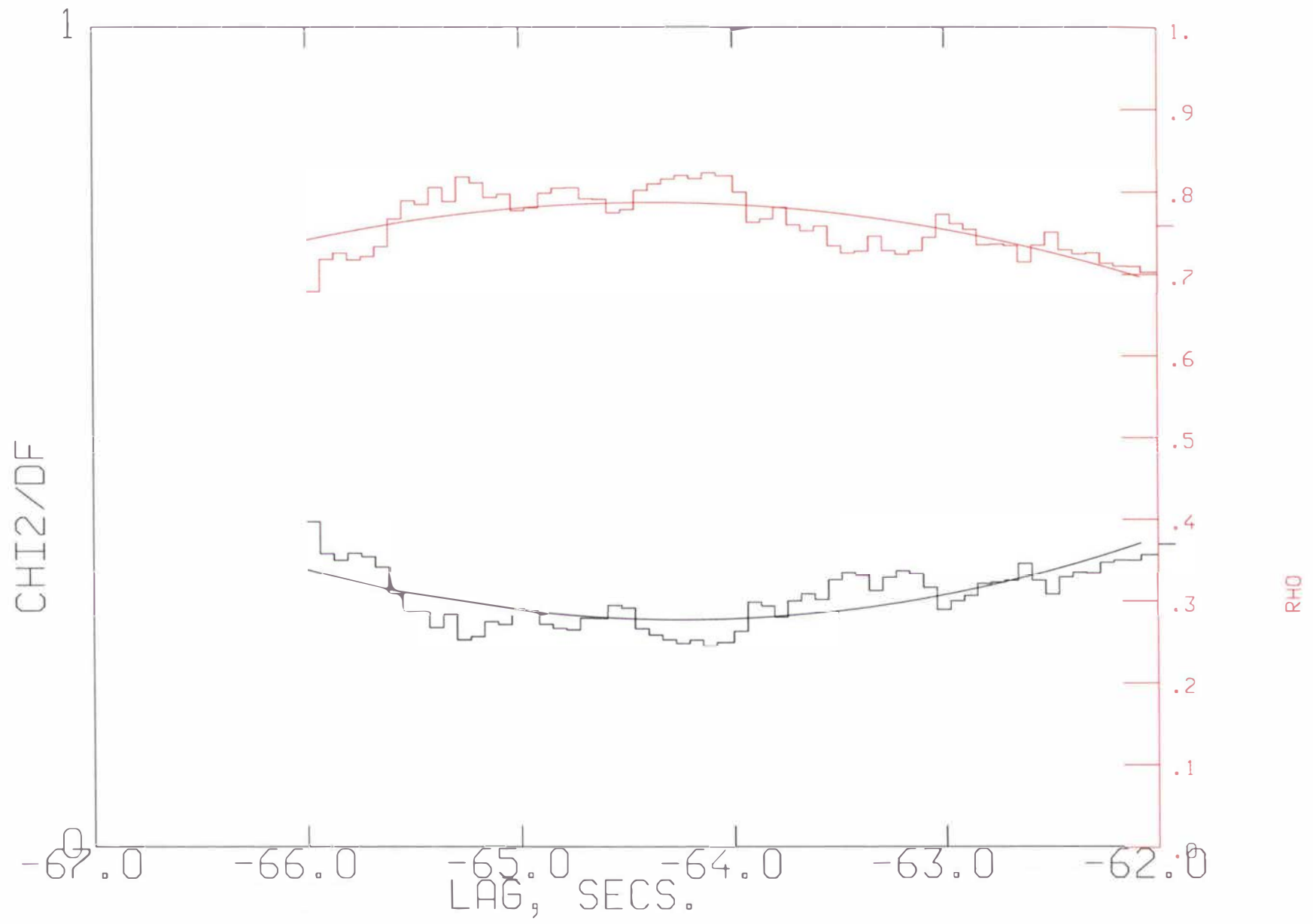


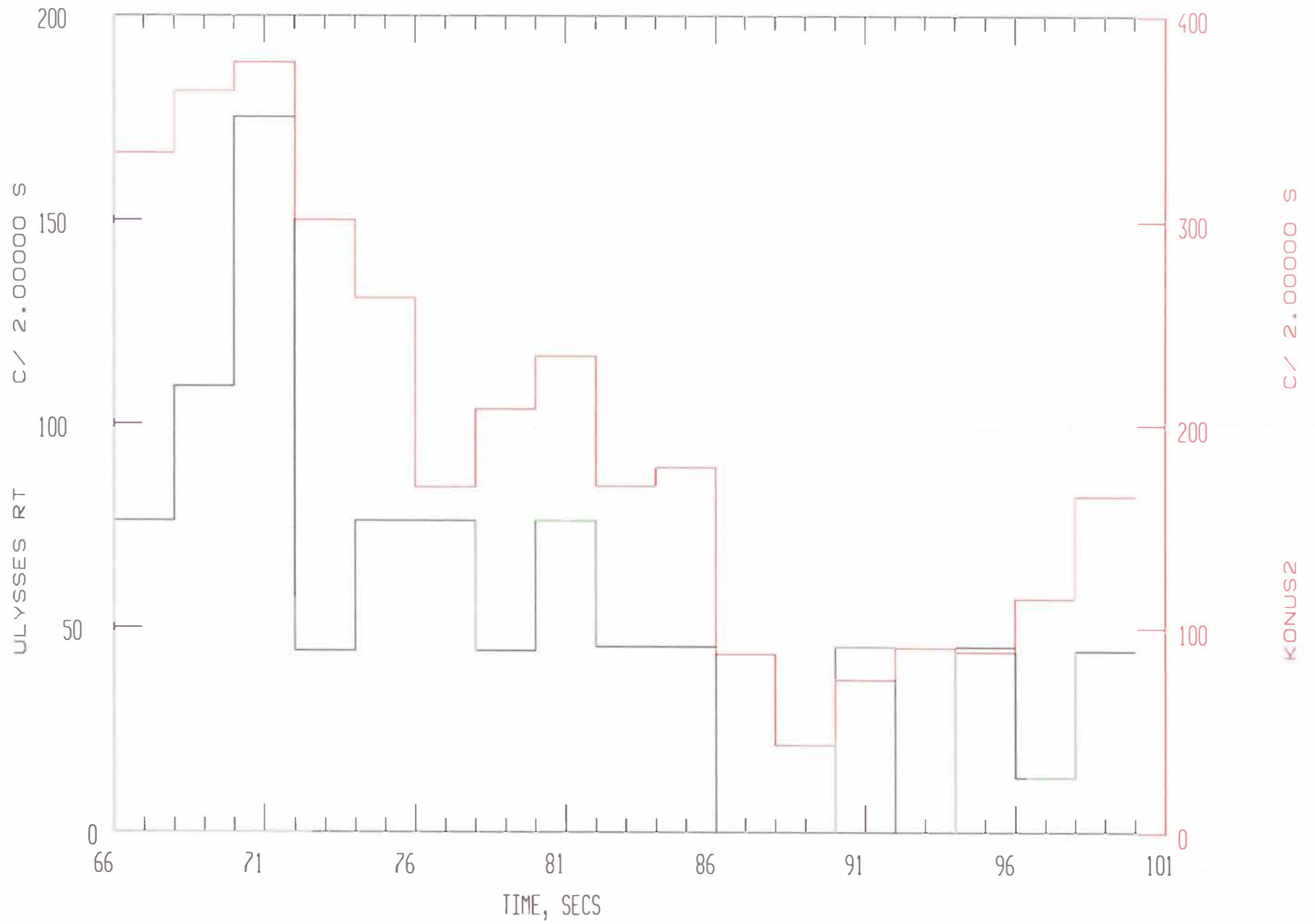
EVENT OF DEC 31, 1995 5:23

09/09/2011

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 19951231 19492

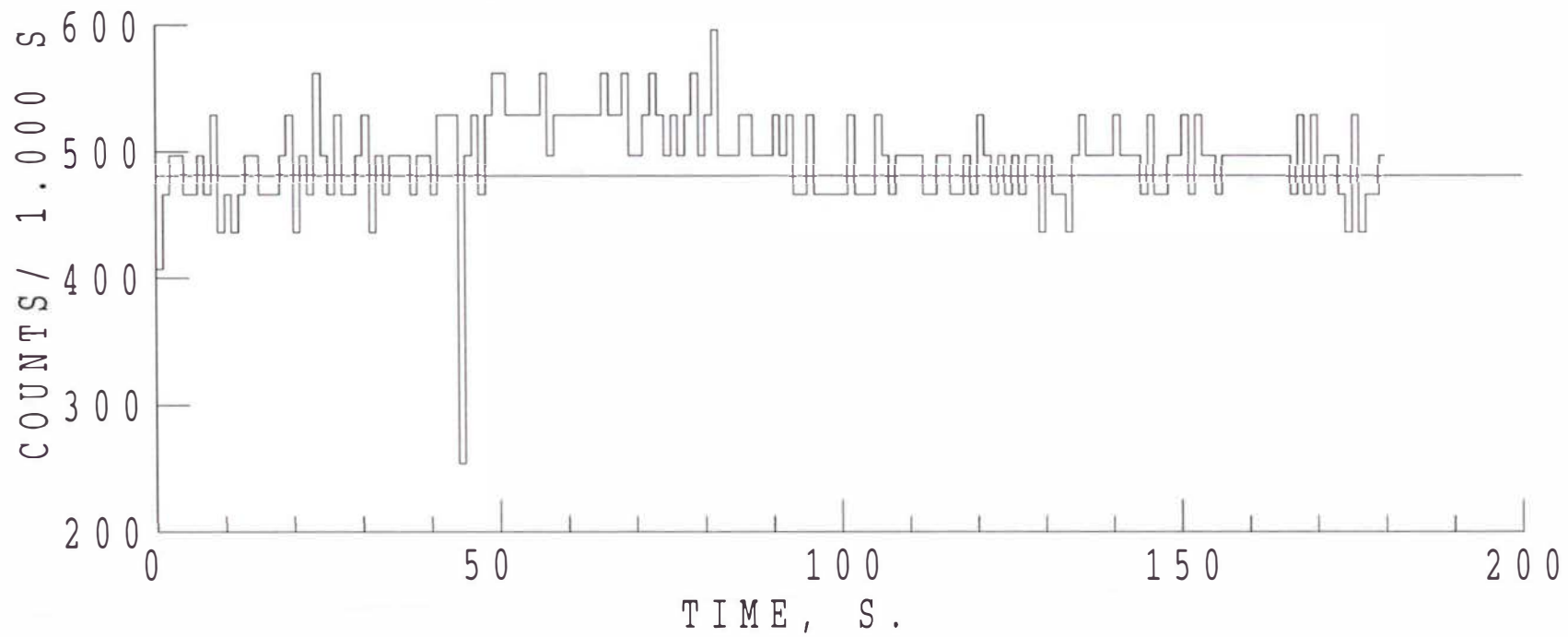
ULYSSES RT

07 / 09 / 11

31/12/95 19404.295 s

0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

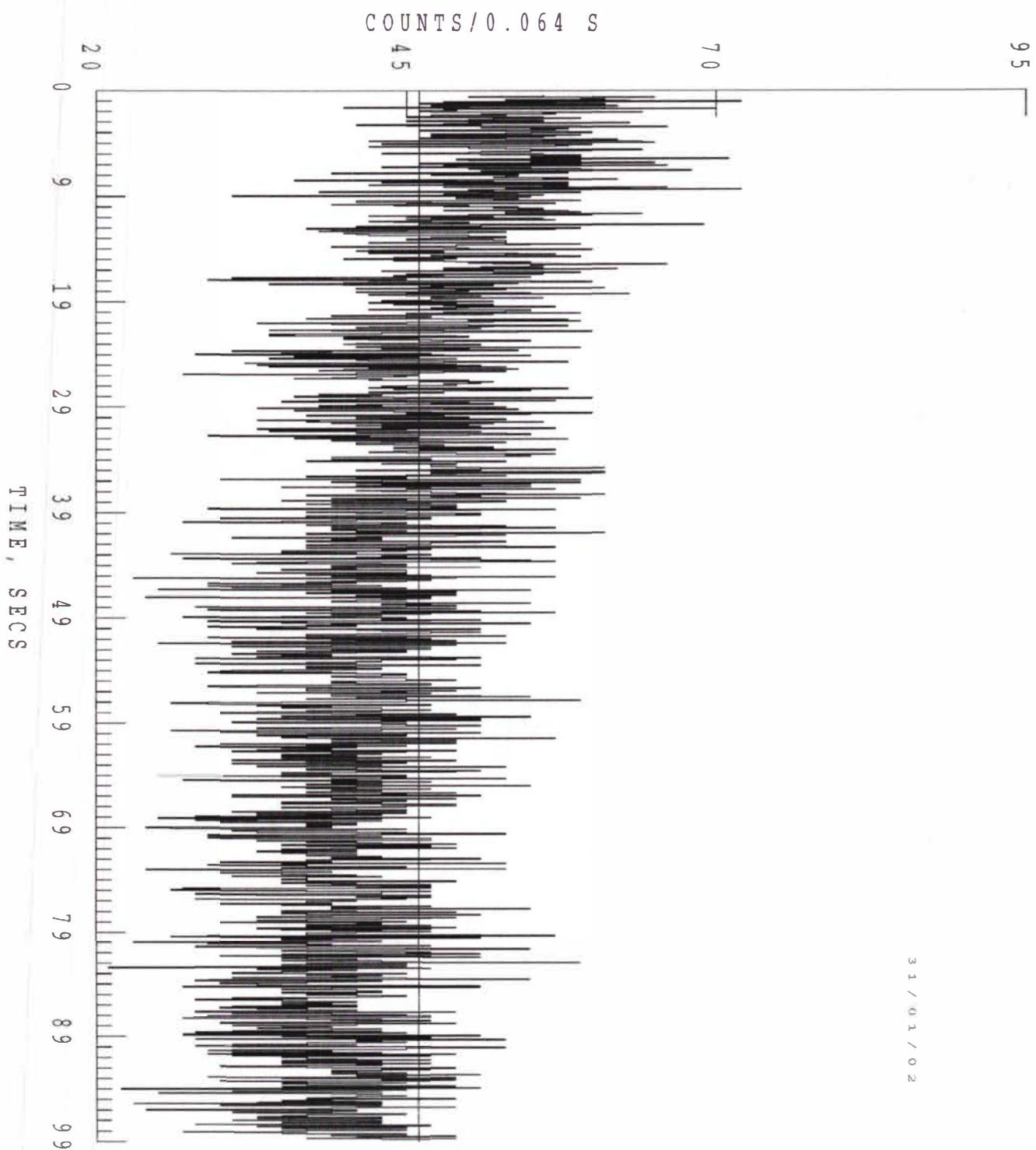


KONUS2

31/12/95

20231.668

50 - 200 keV



31/01/02

KONUS2 19951231 20231

ULYSSES RT

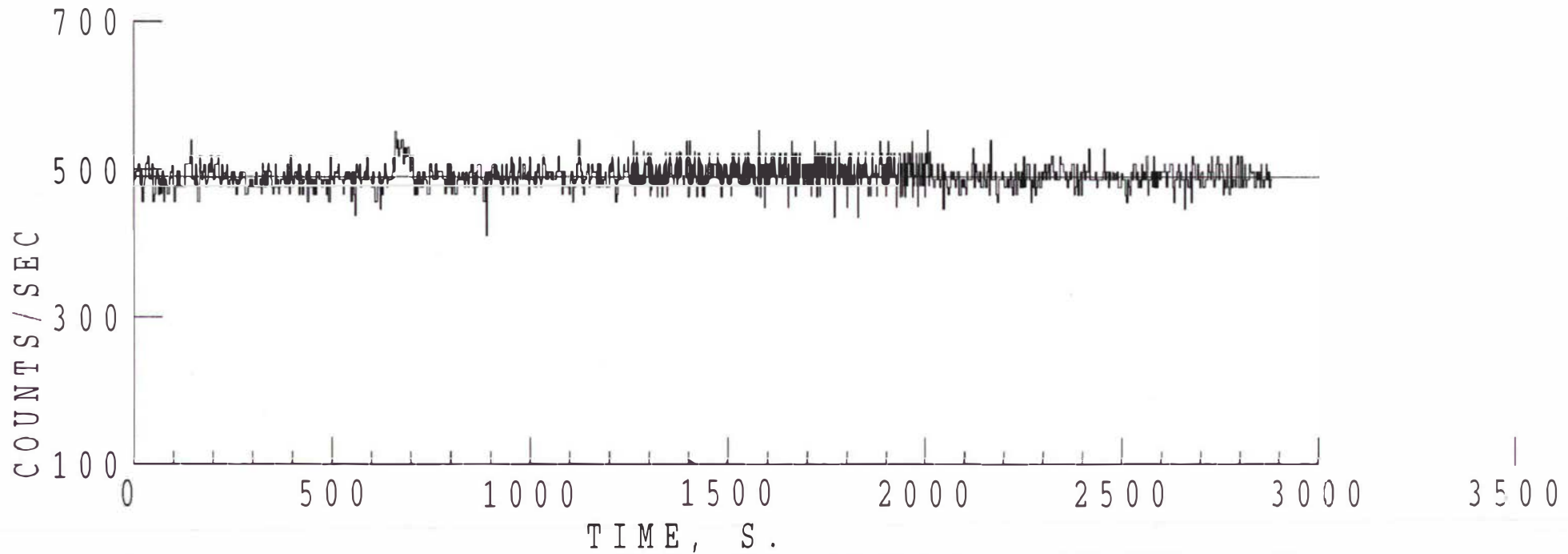
31 / 01 / 02

31 / 12 / 95 18792.285 s

INTERVALS REGROUPED BY 3

0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



KONUS

27 / 01 / 00

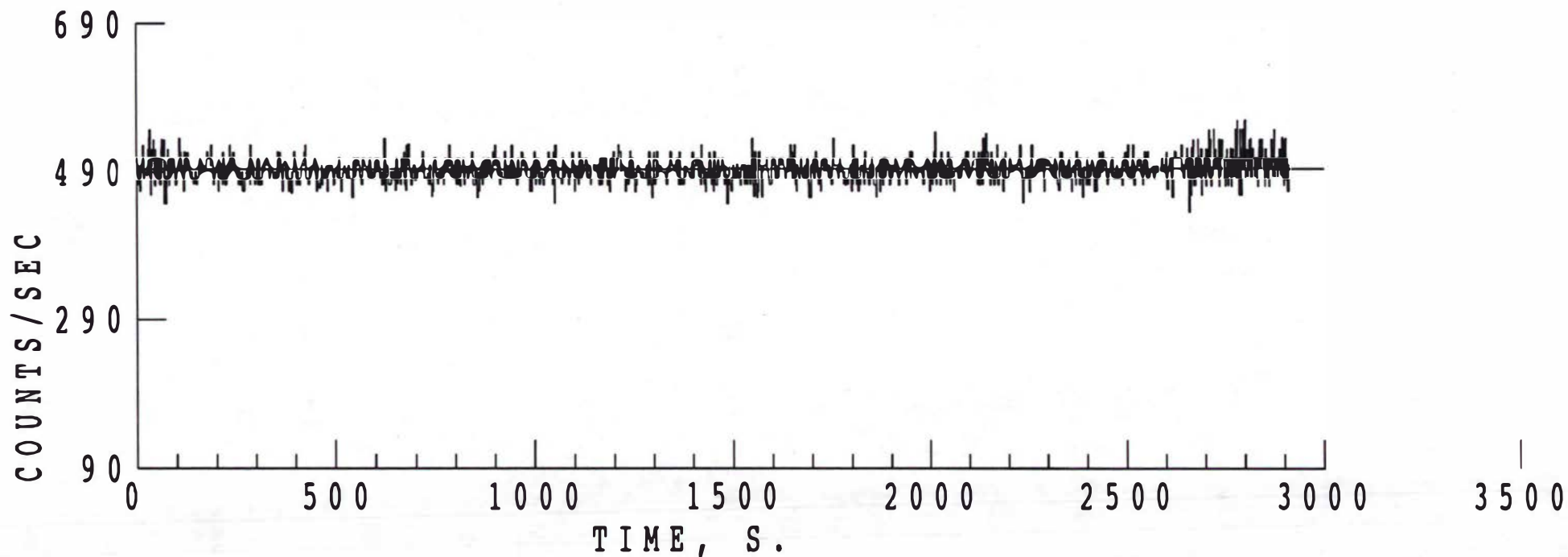
ULYSSES RT

31 / 12 / 95 75600.148 s

INTERVALS REGROUPED BY 5

0 - 0 keV

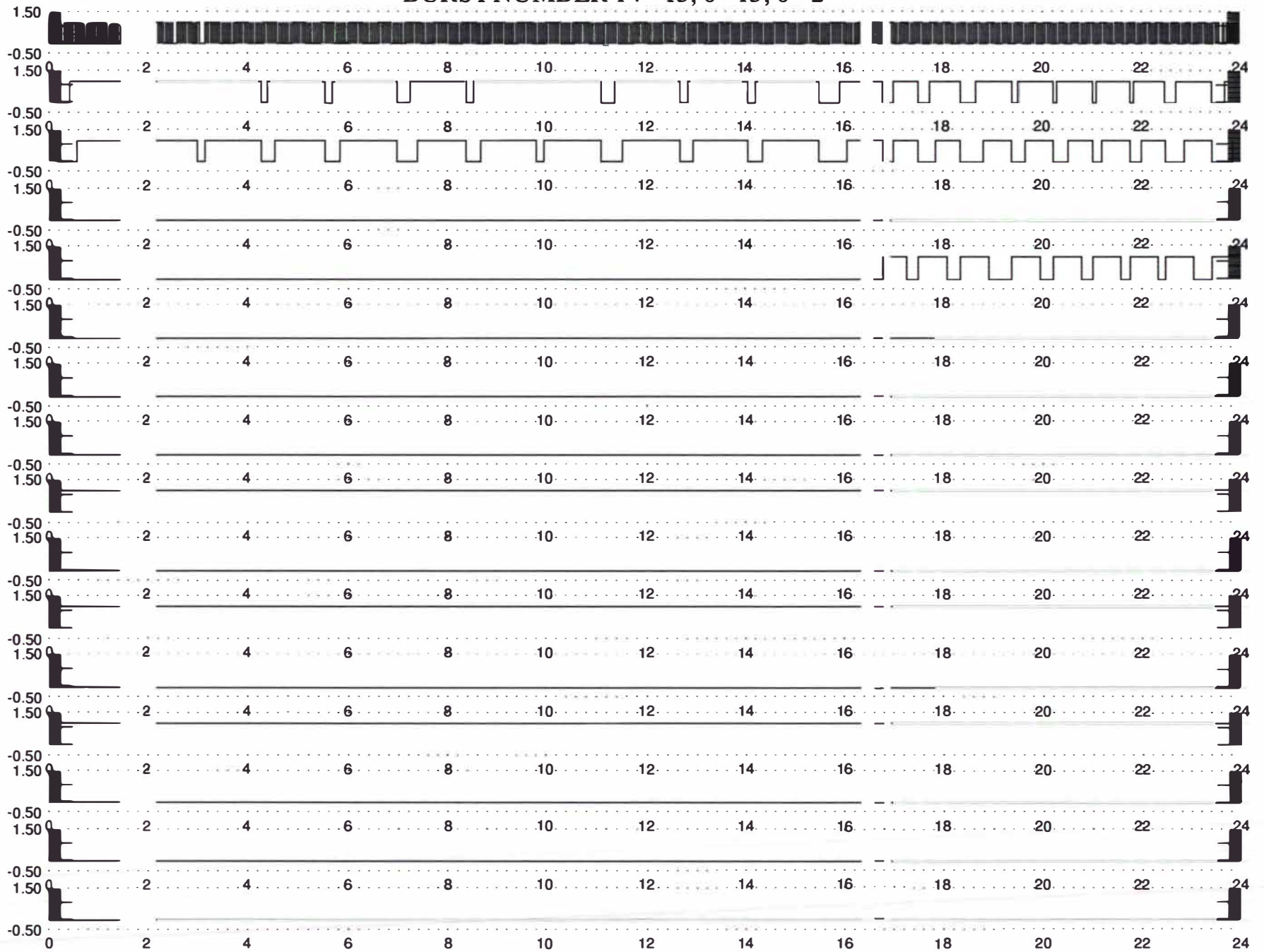
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



HUS MODES EDR day 365, year 1995 to day 365, year 1995
BURSTNUMBER 14 - 15, 0 - 15, 0 - 2

4/30/96

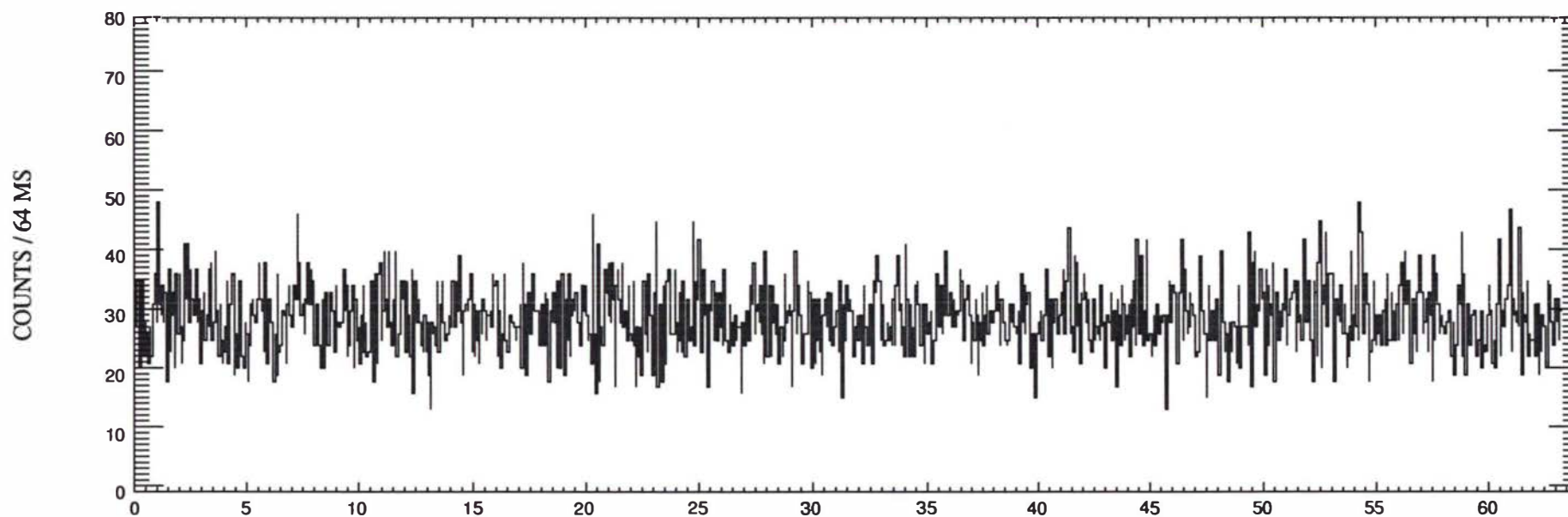
CBU CCL DMP ROM DMA OSC MP. ICR SPE OPM RSC CAL WCH MEM BRS HUS



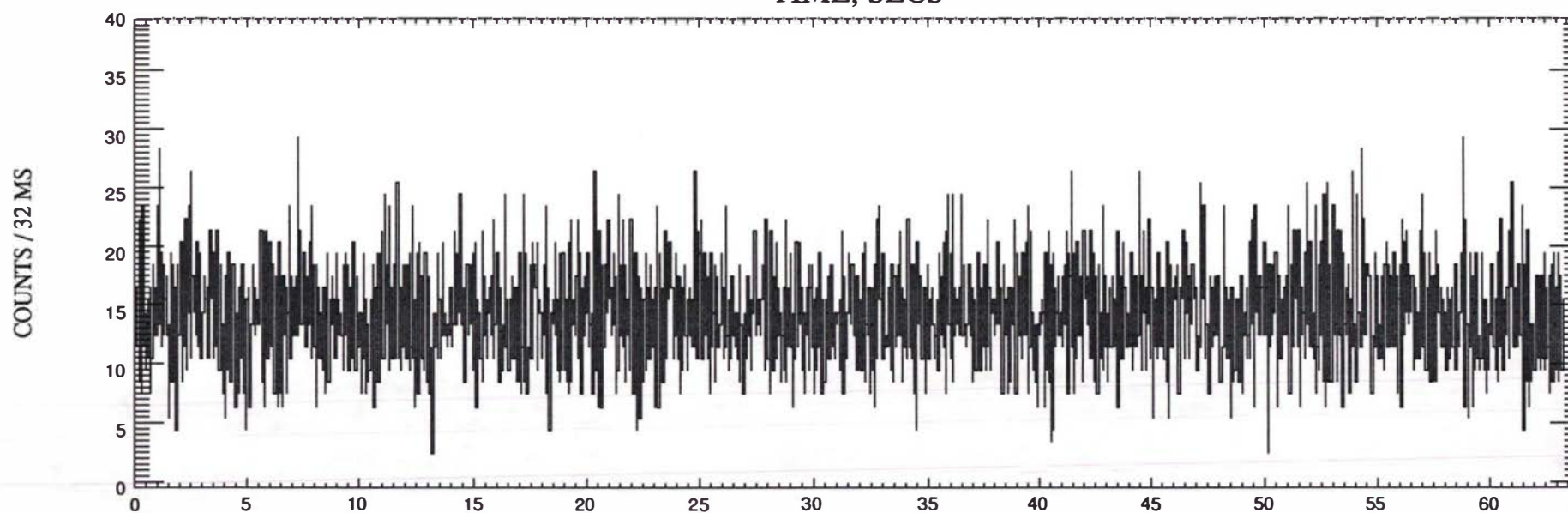
UNIV AL TIME

HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 1 at UT= 4.304820370144 h=15497.353 s 04:18:17.353

1/2/96



TIME, SECS

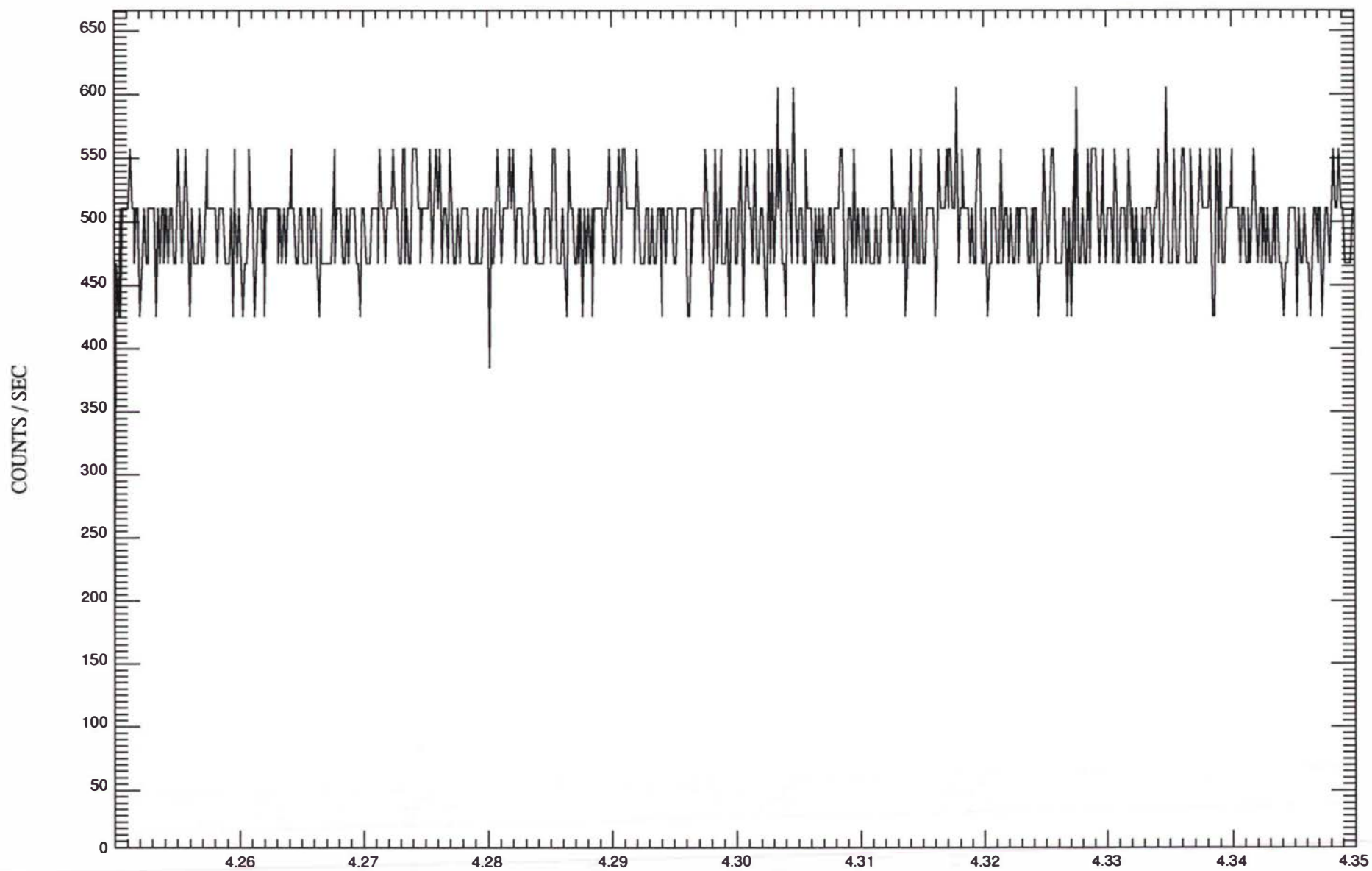


TIME, SECS

B# 2

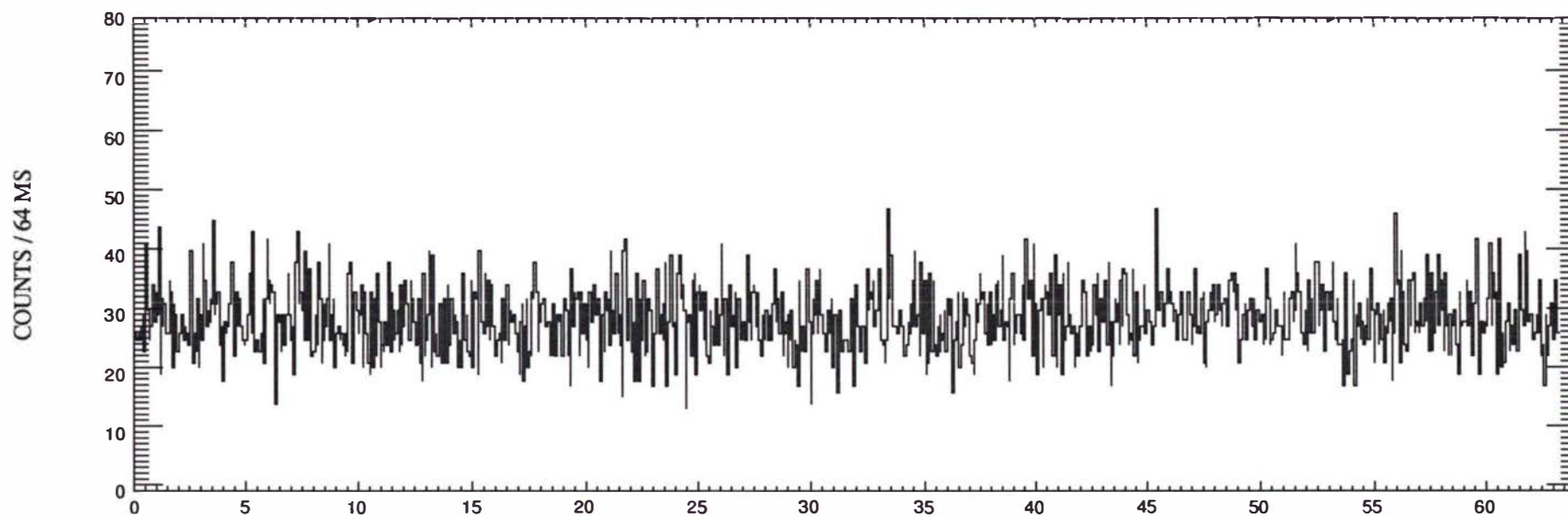
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96

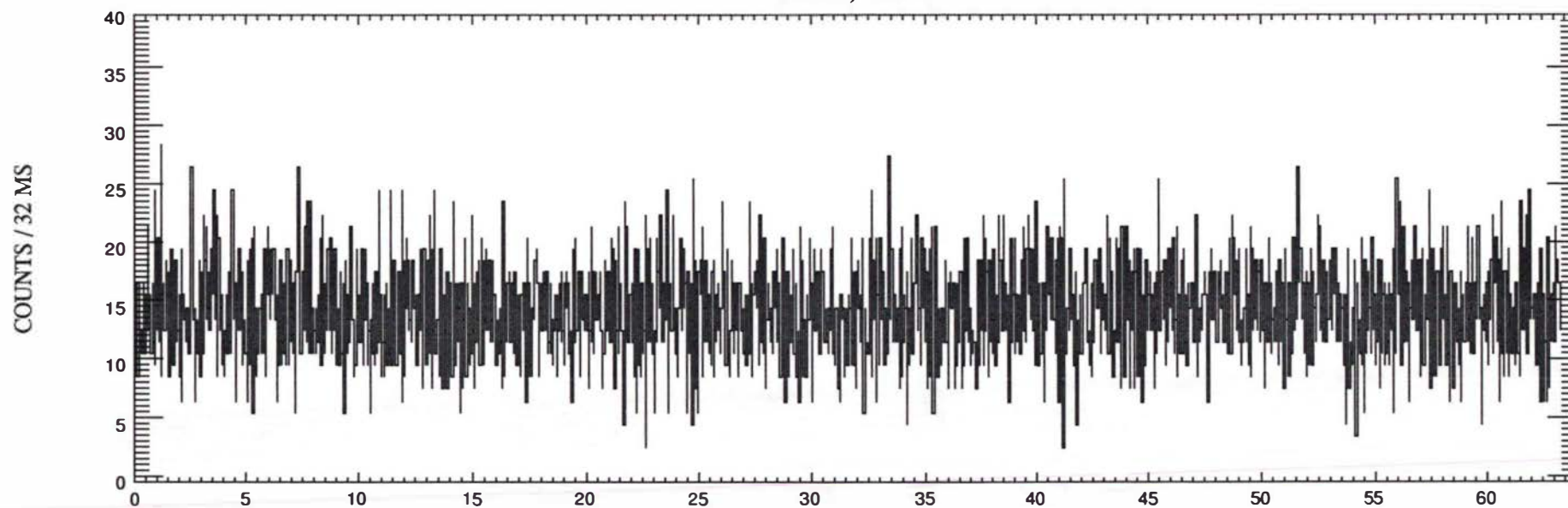


HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 2 at UT= 5.630742539300 h=20270.673 s 05:37:50.673

1/2/96



TIME, SECS

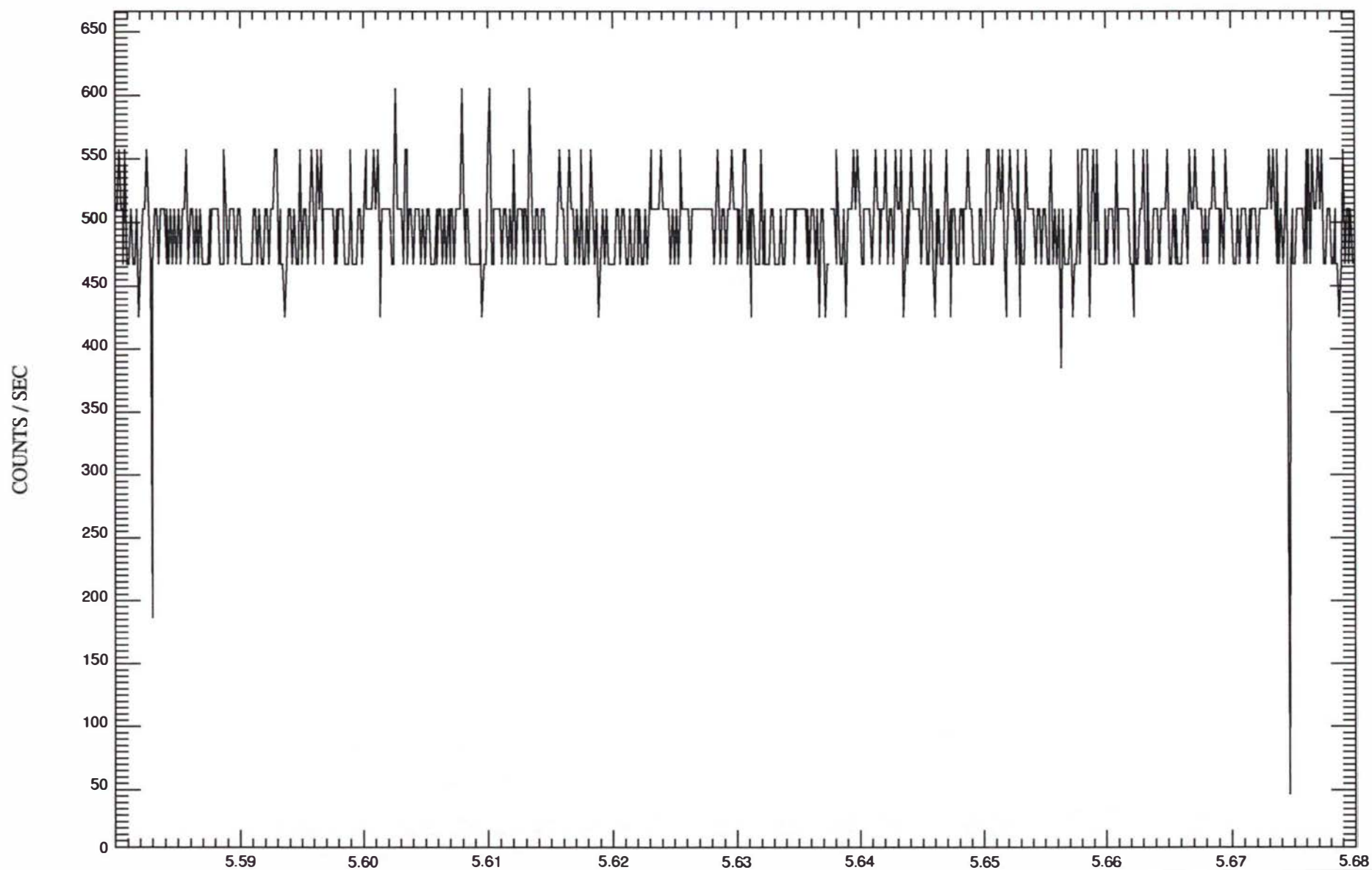


TIME, SECS

B# 3

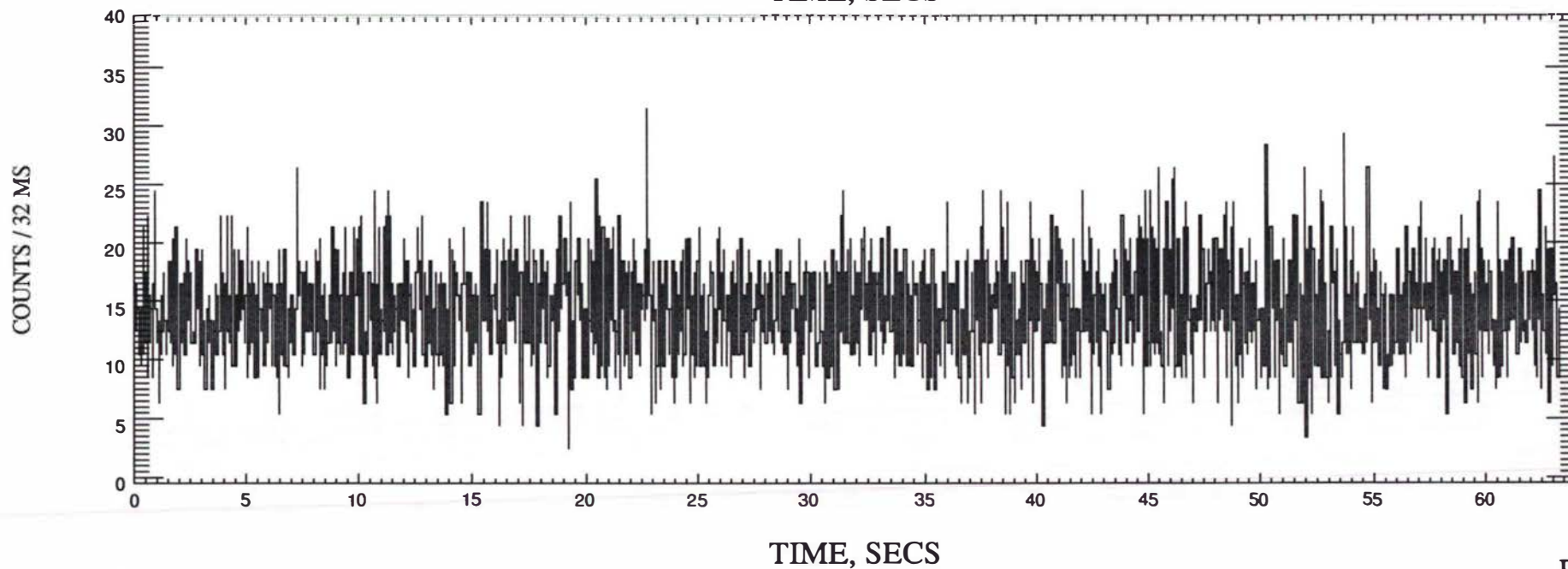
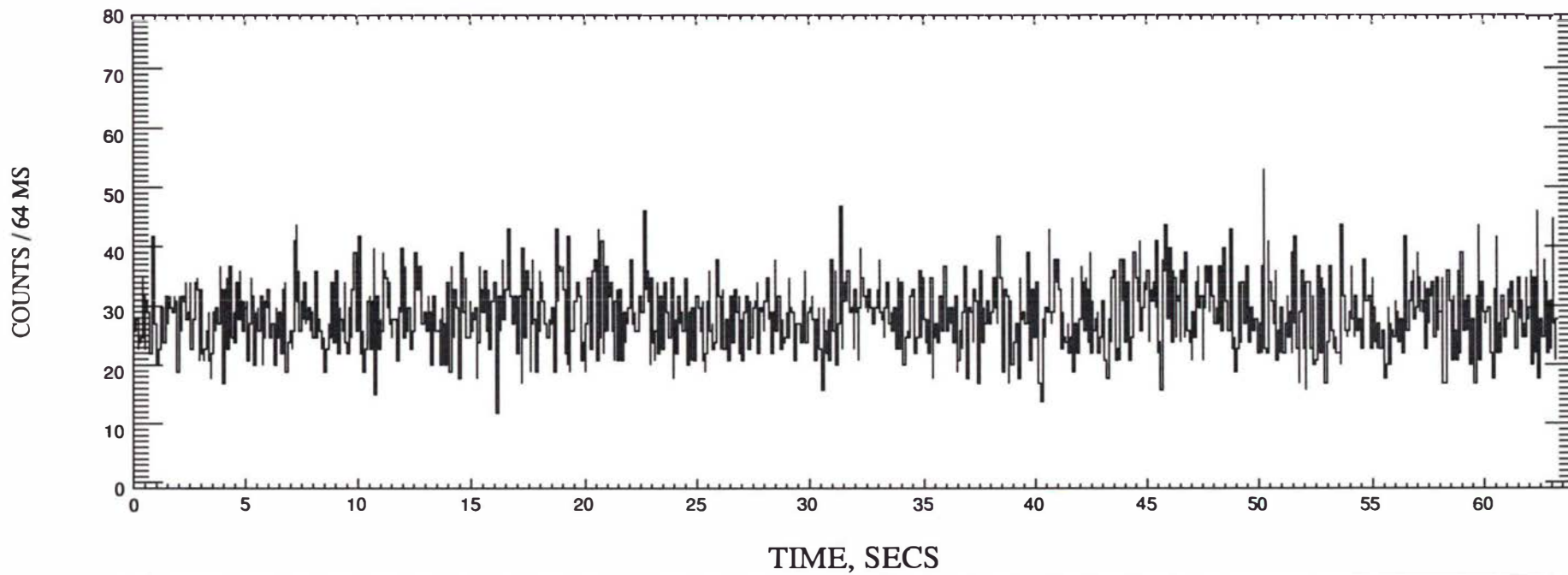
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96



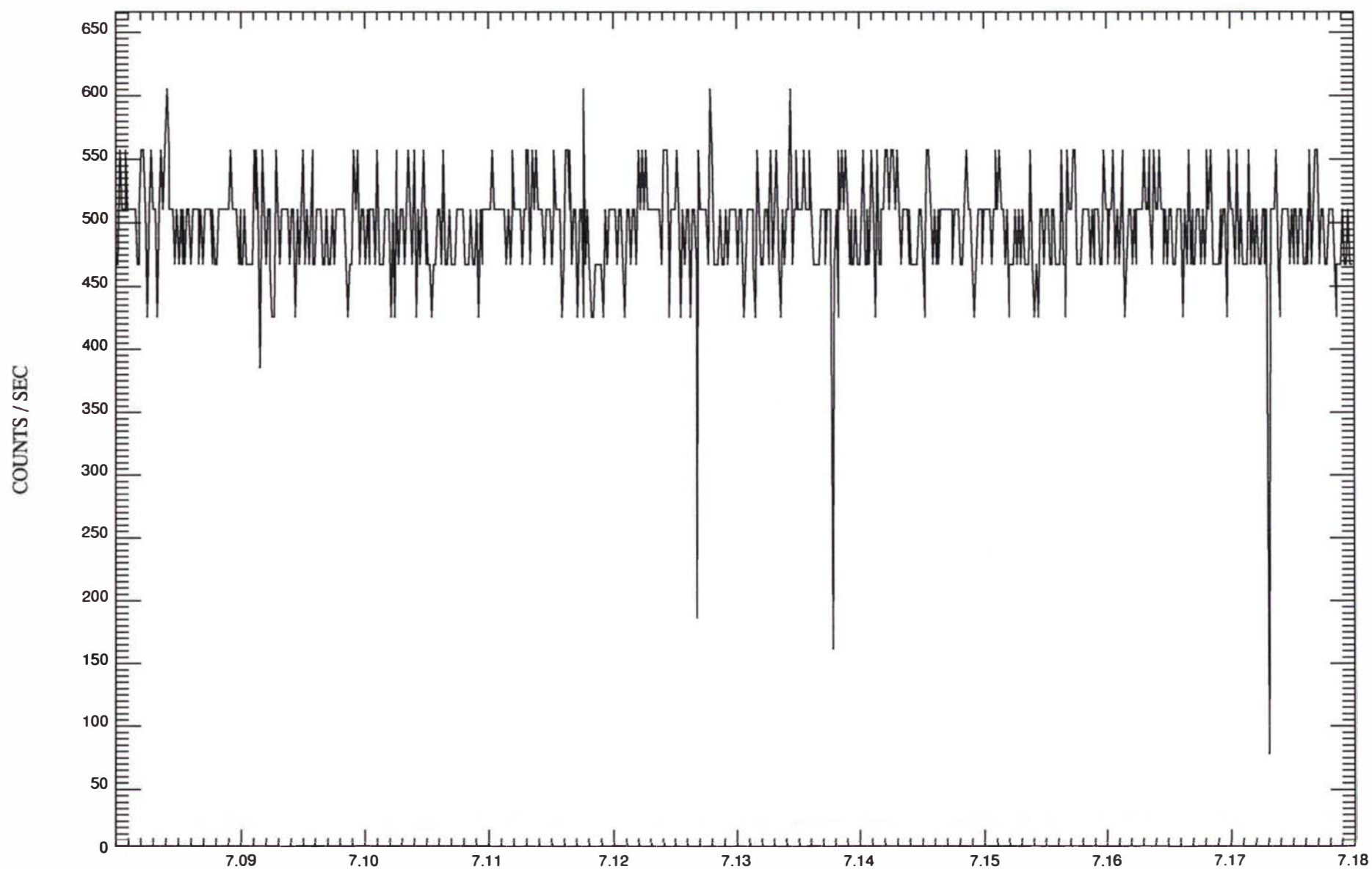
HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 3 at UT= 7.131877352397 h=25674.758 s 07:07:54.758

1/2/96



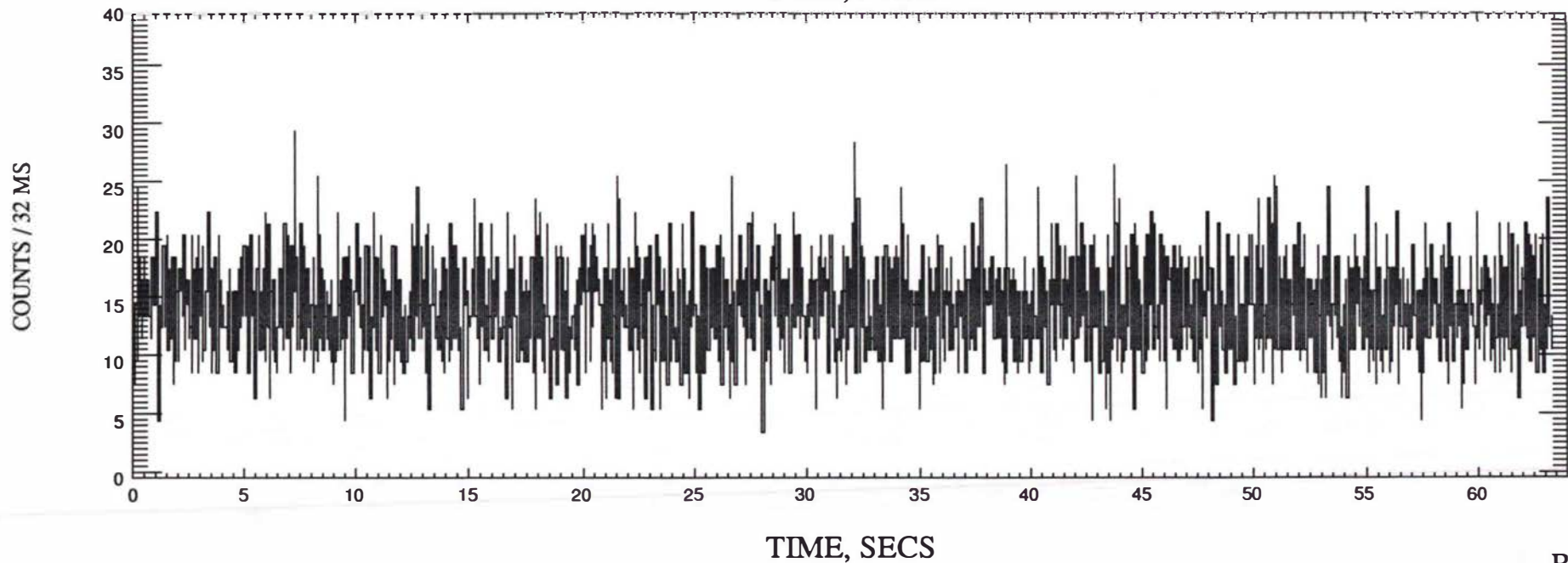
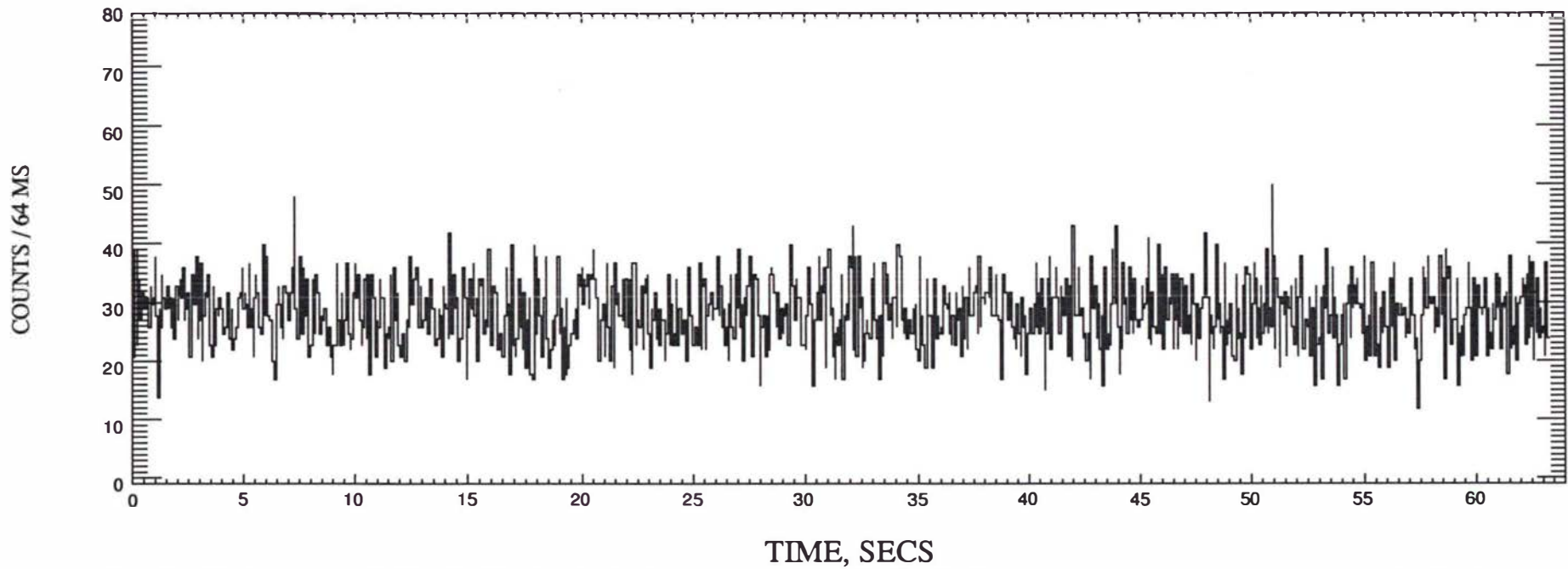
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96



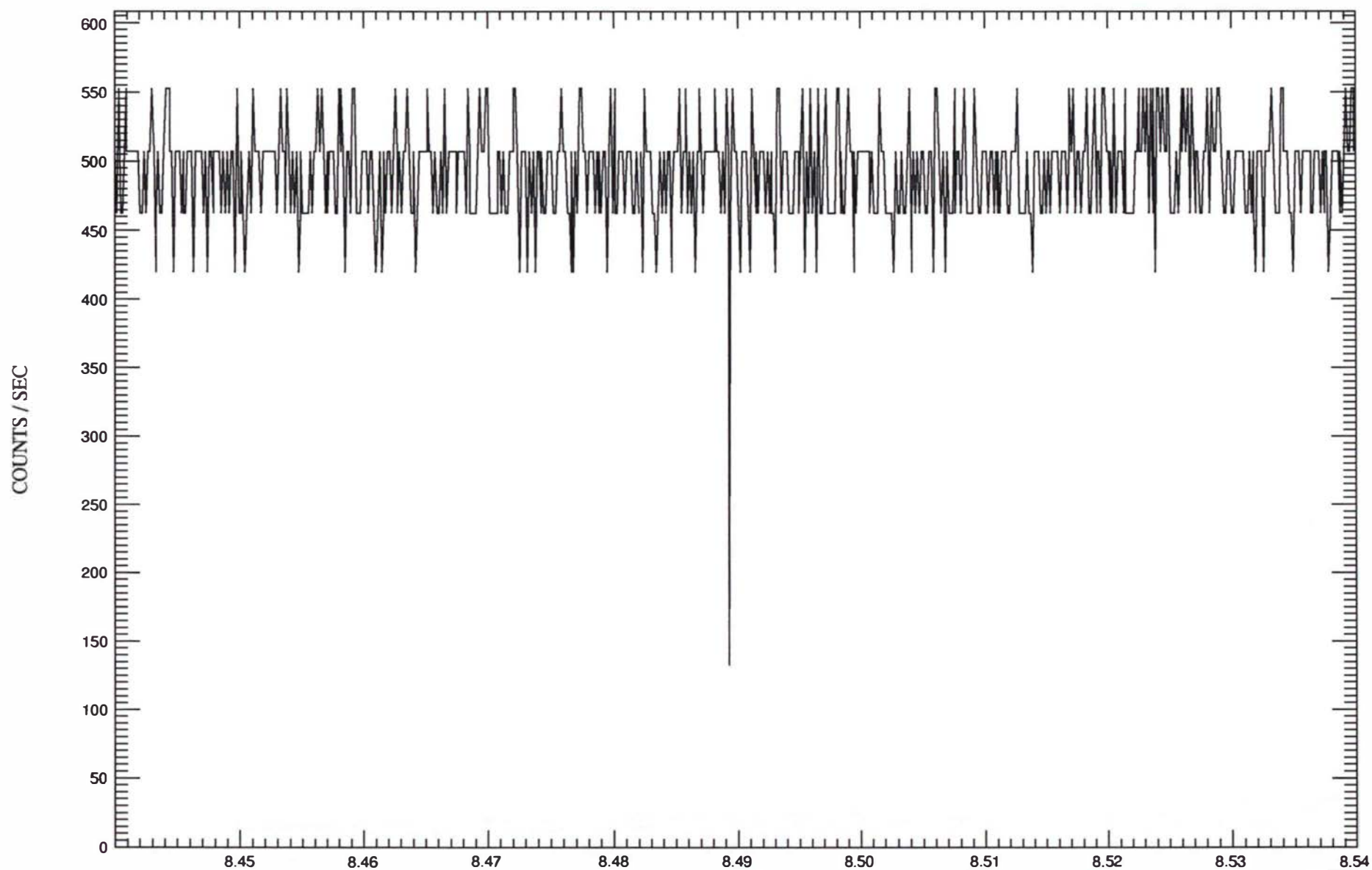
HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 4 at UT= 8.489848132663 h=30563.453 s 08:29:23.453

1/2/96



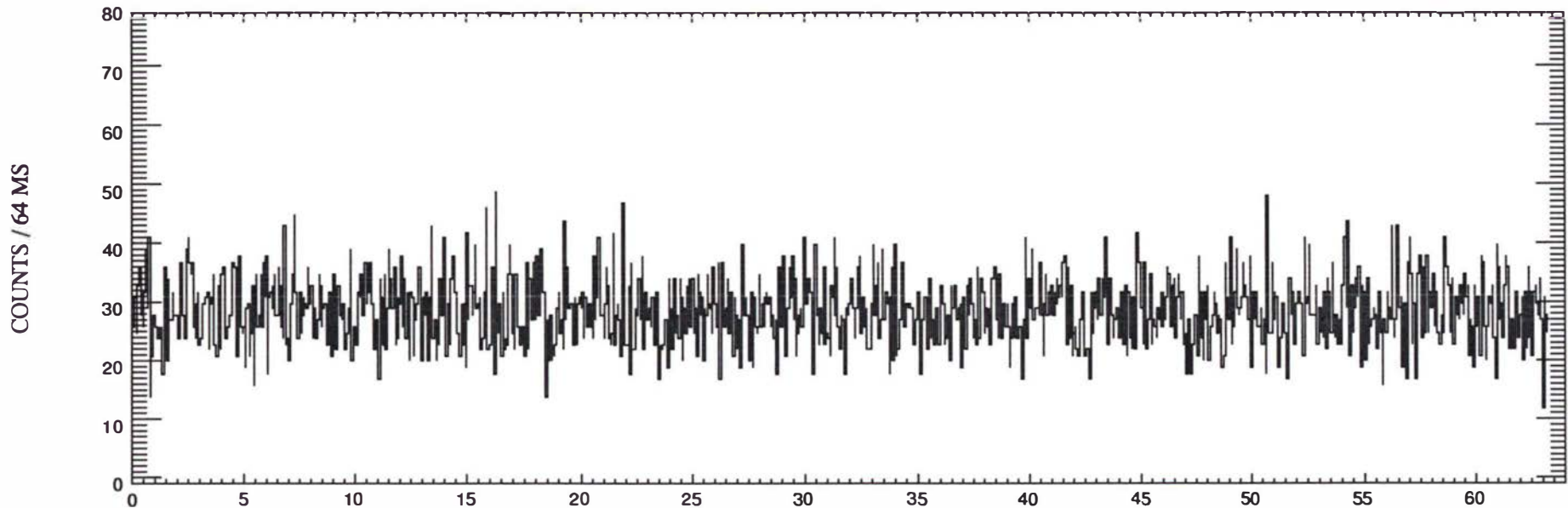
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96

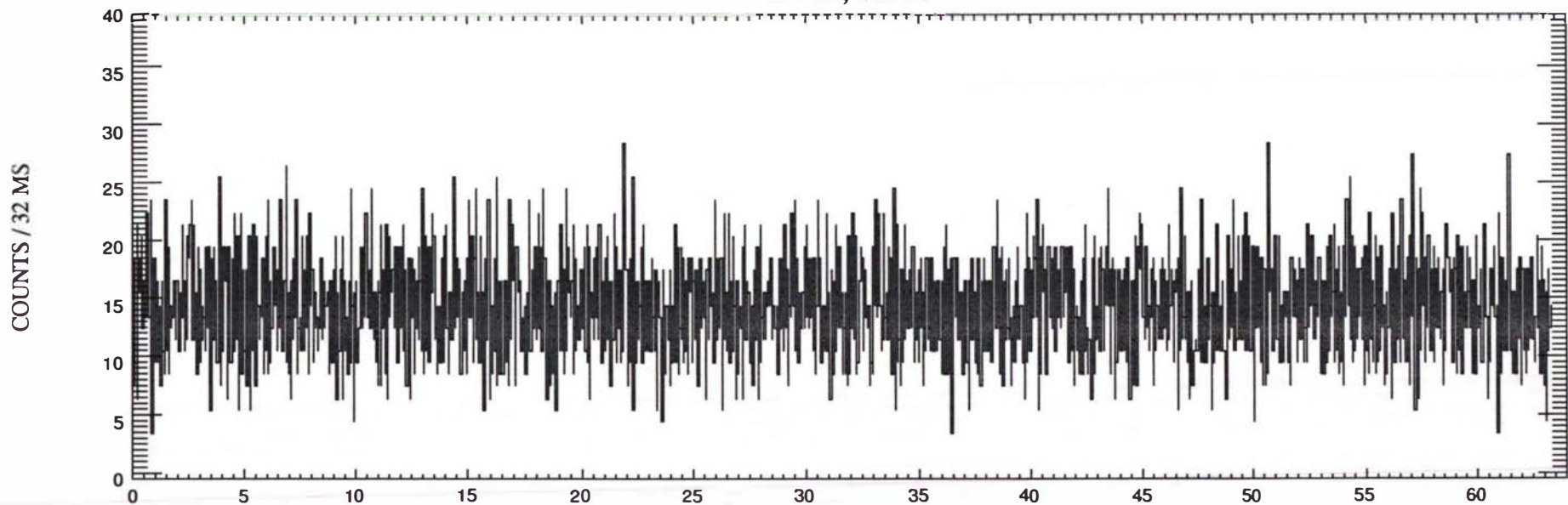


HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 5 at UT= 9.793617524041 h=35257.023 s 09:47:37.023

1/2/96



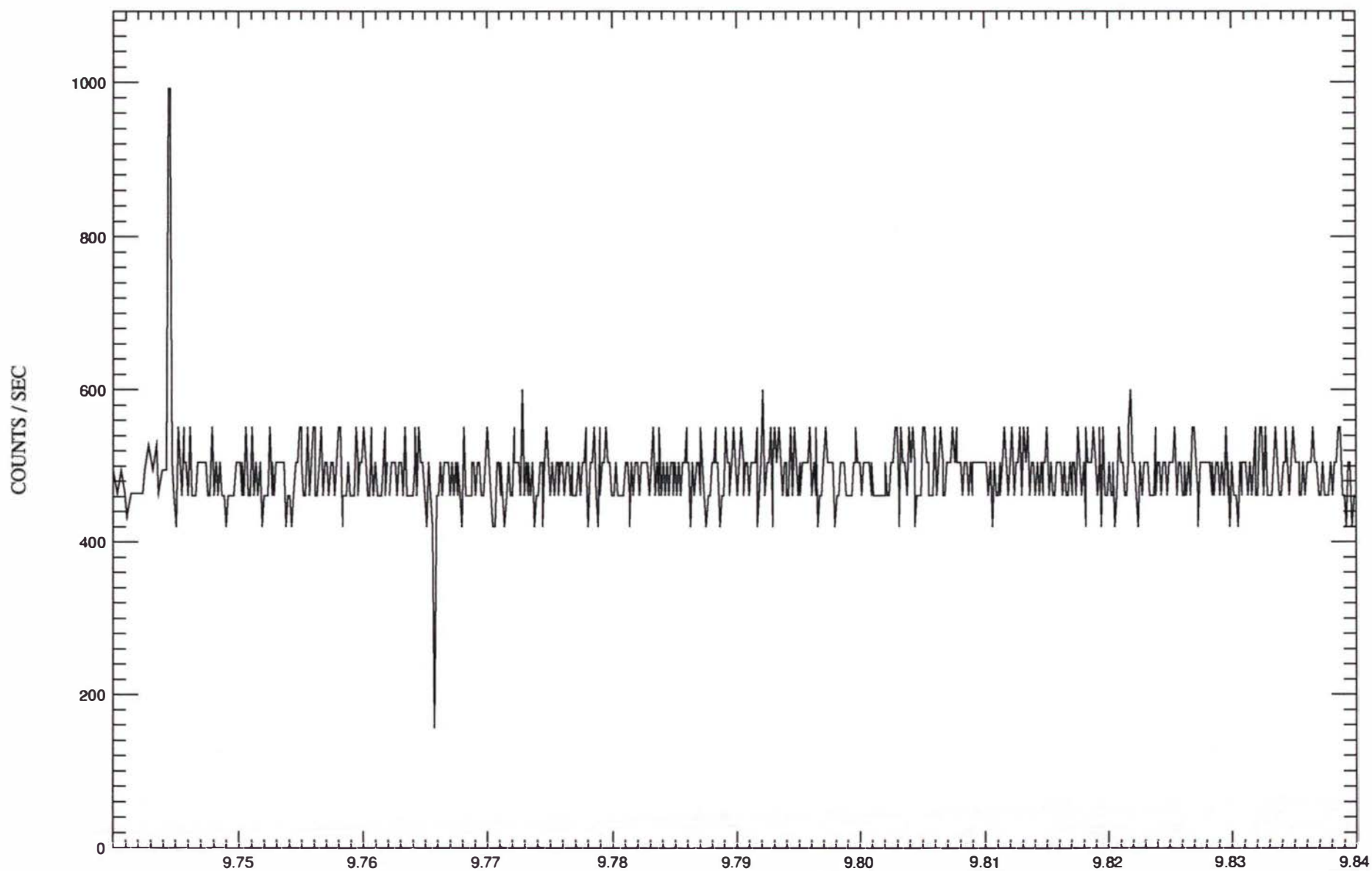
TIME, SECS



TIME, SECS

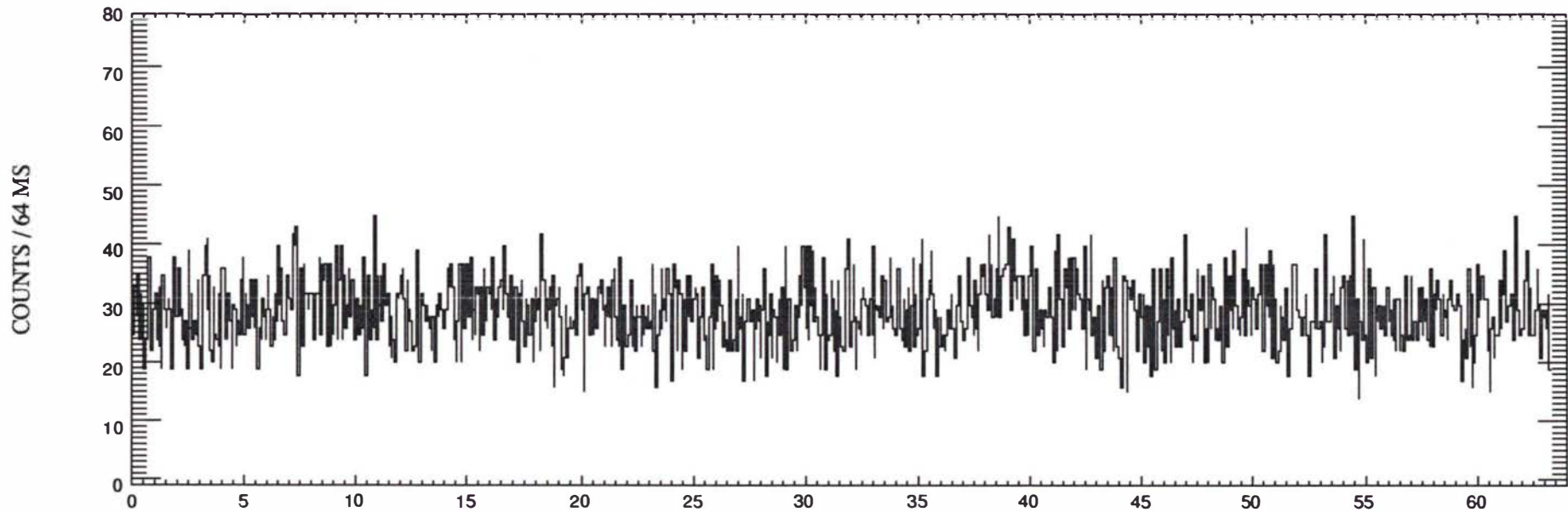
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96

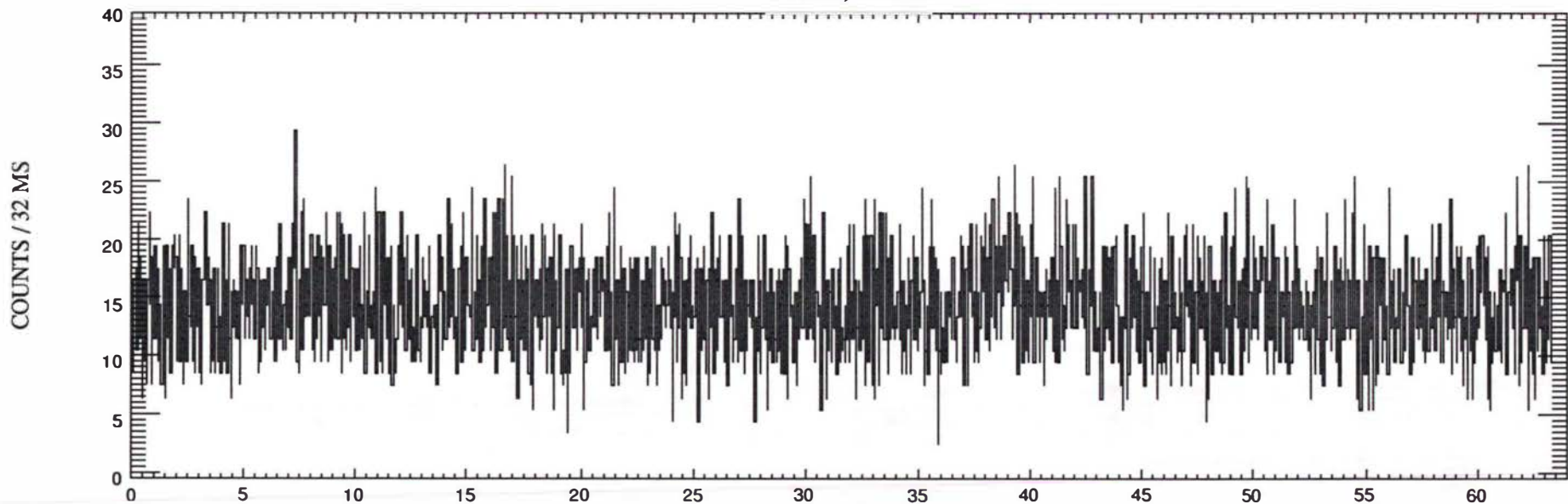


HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 6 at UT=11.307460670471 h=40706.858 s 11:18:26.858

1/2/96



TIME, SECS

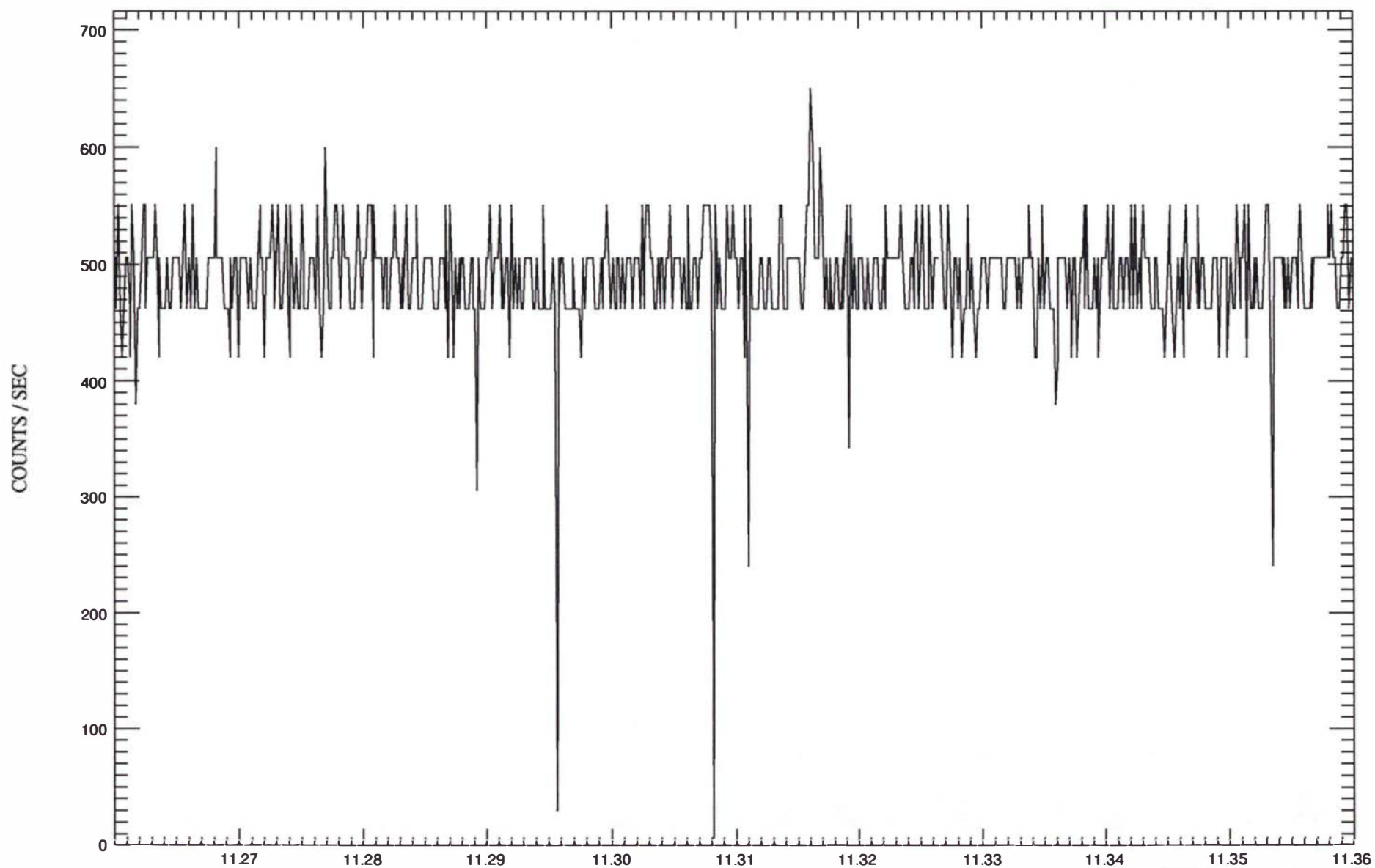


TIME, SECS

B# 7

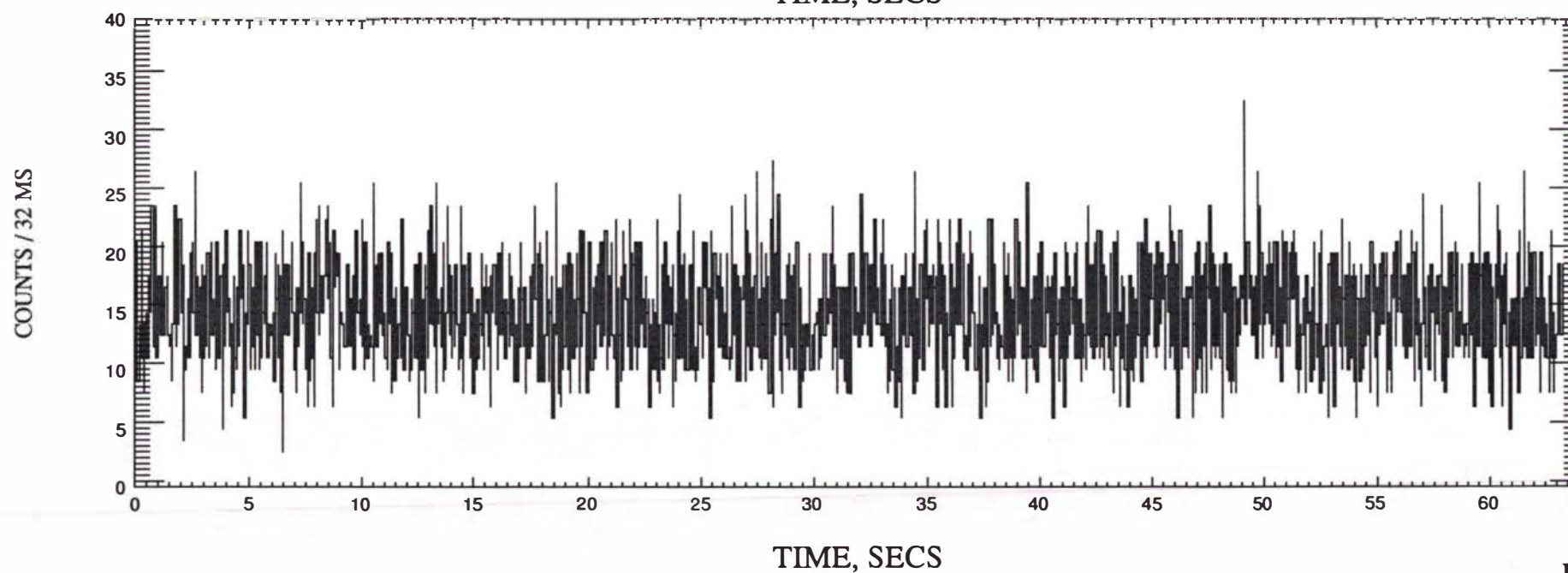
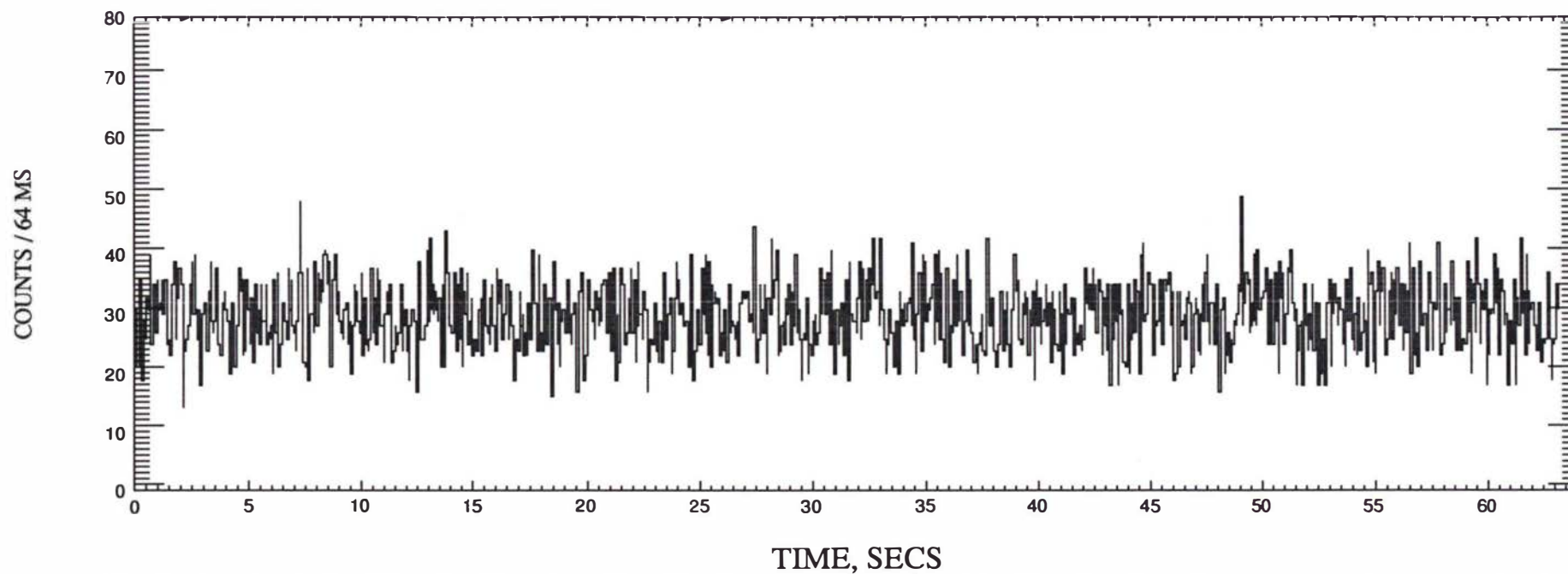
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96



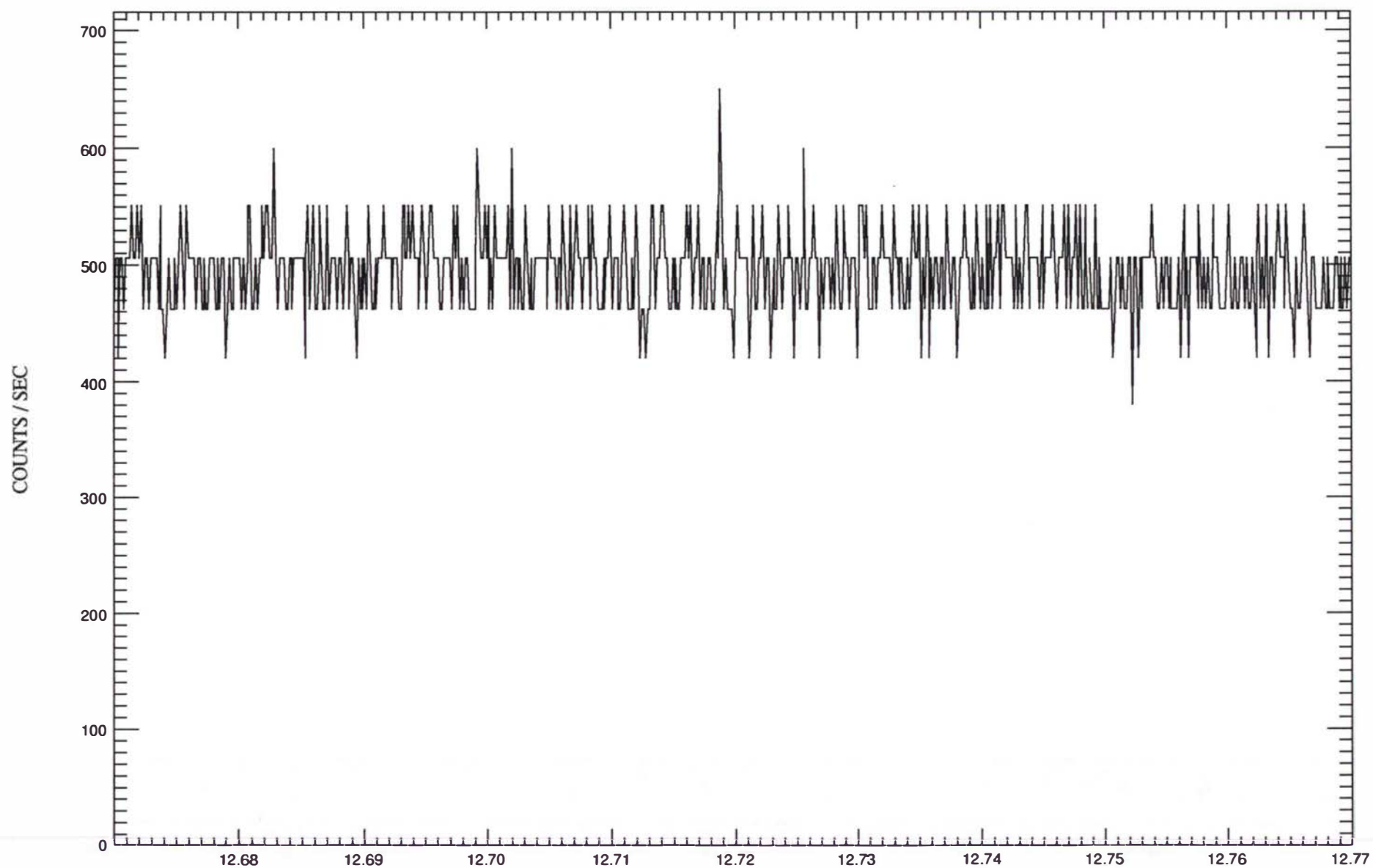
HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 7 at UT=12.718732219272 h=45787.436 s 12:43:07.436

1/2/96



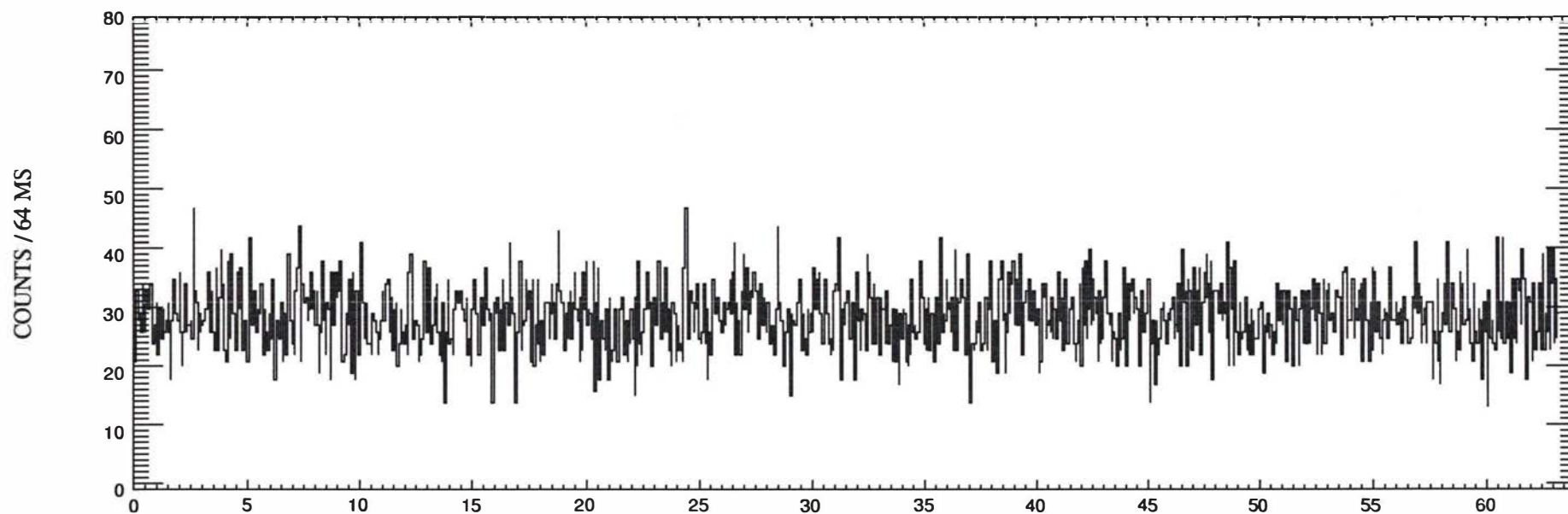
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96

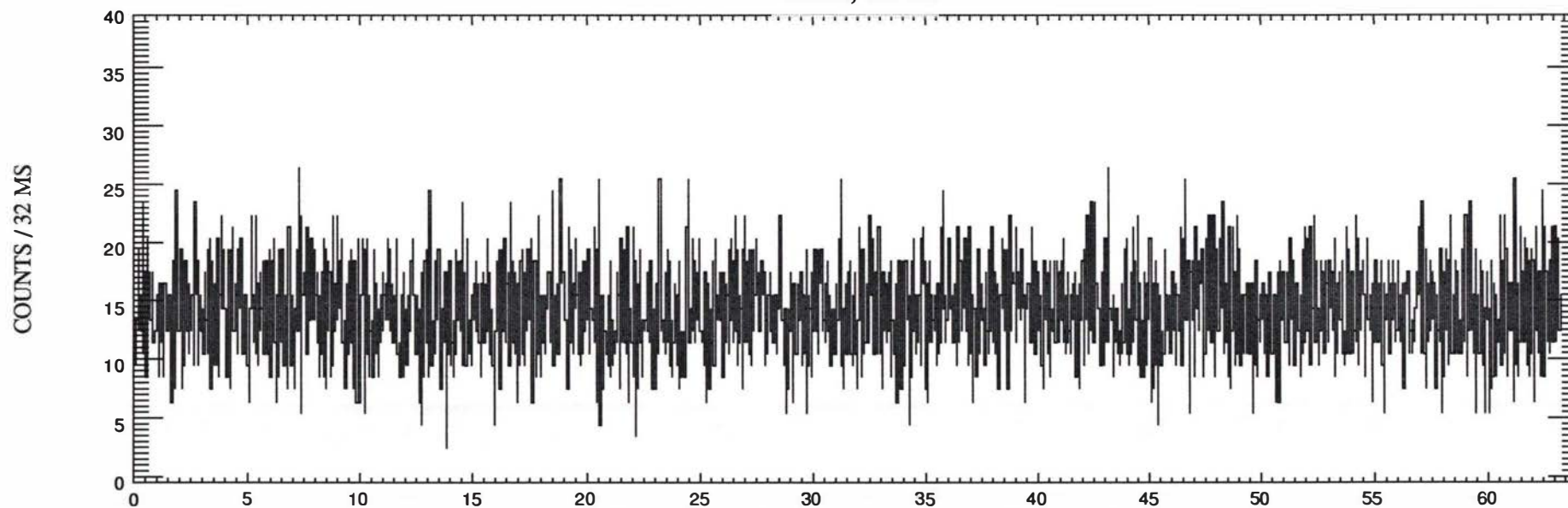


HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 8 at UT=14.150524597168 h=50941.889 s 14:09:01.889

1/2/96



TIME, SECS

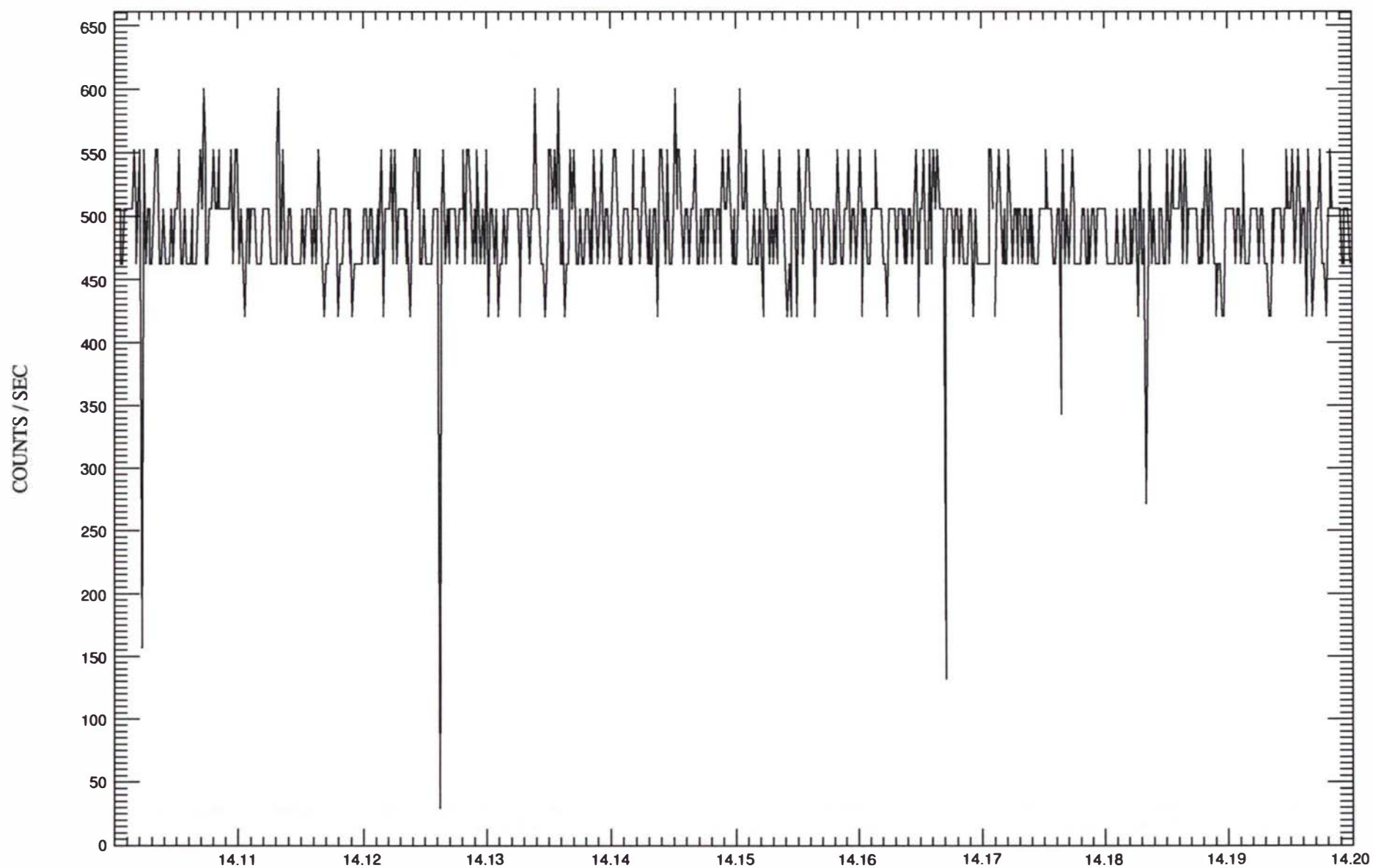


TIME, SECS

B# 9

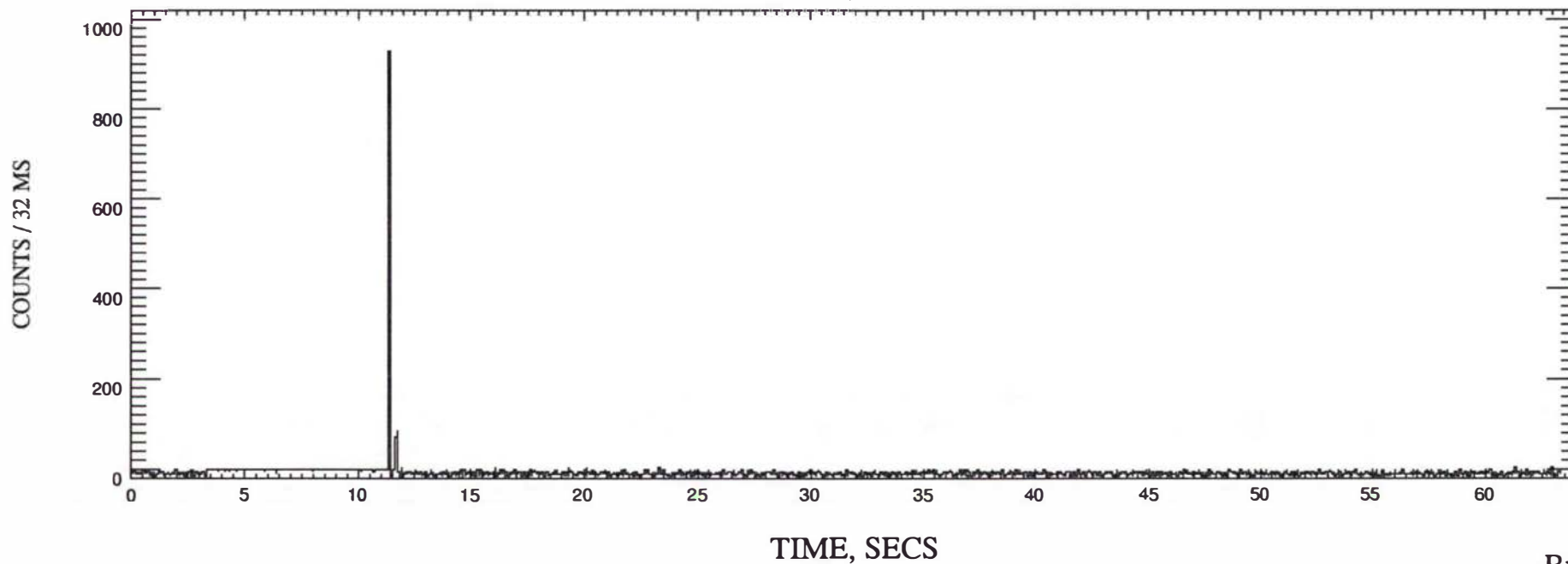
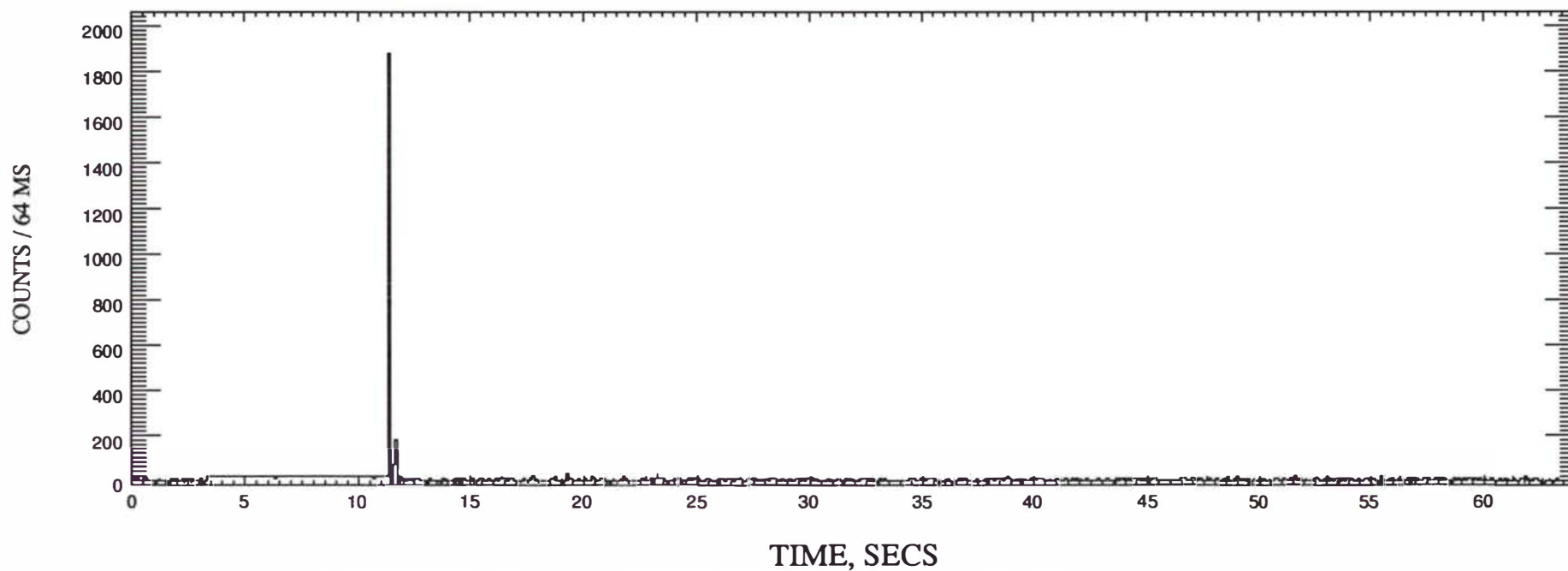
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96



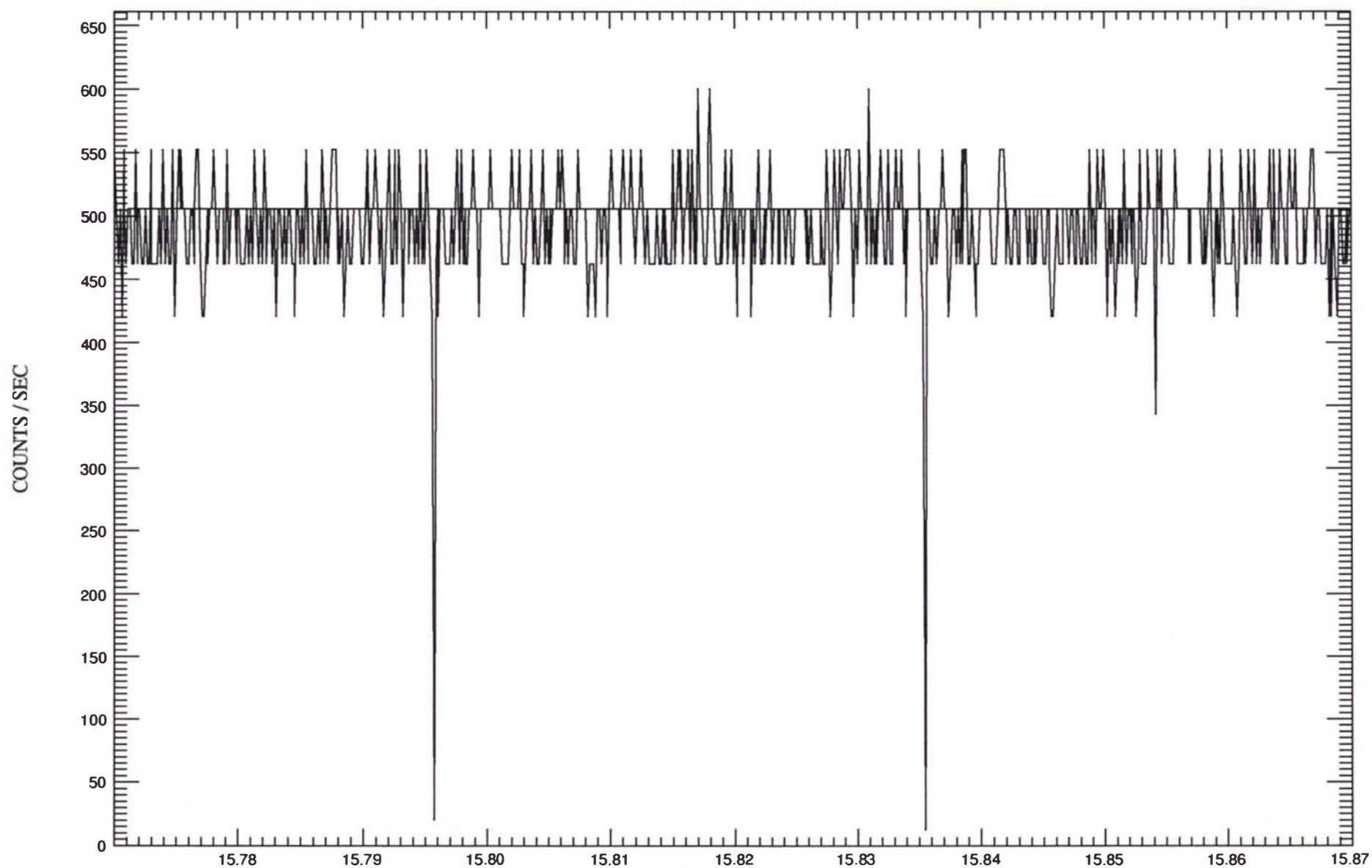
HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 9 at UT=15.822080942790 h=56959.491 s 15:49:19.491

1/2/96



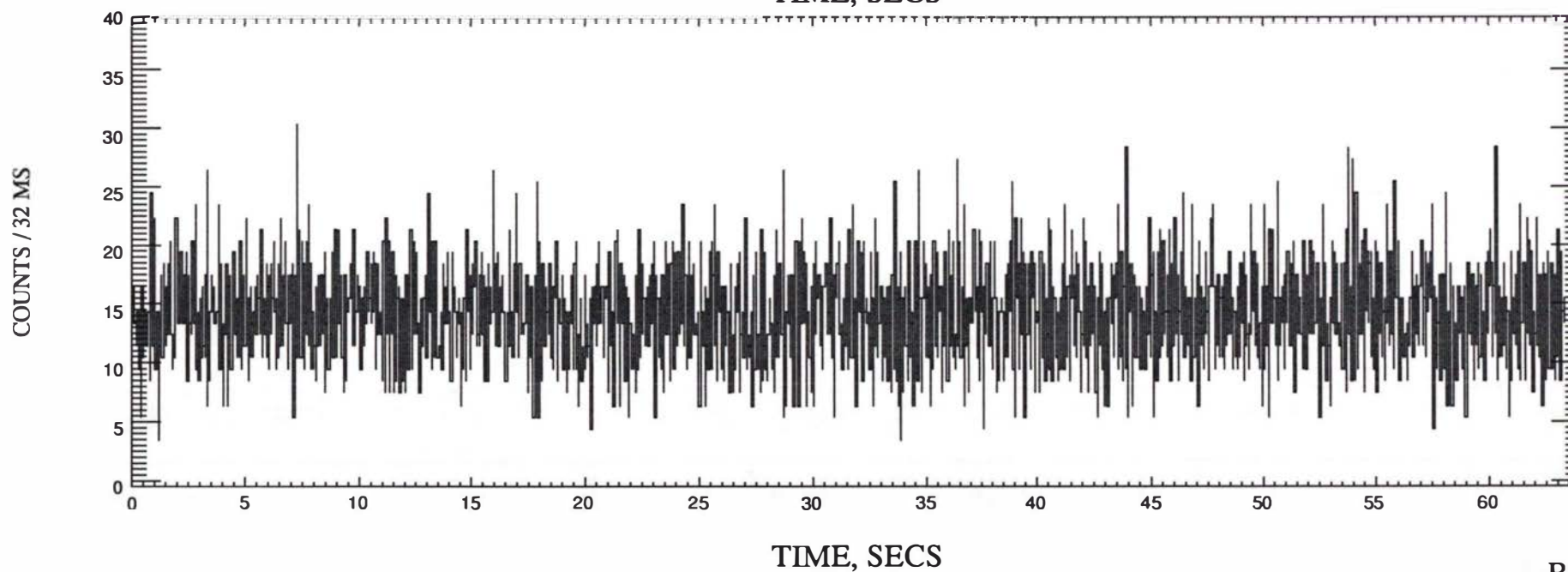
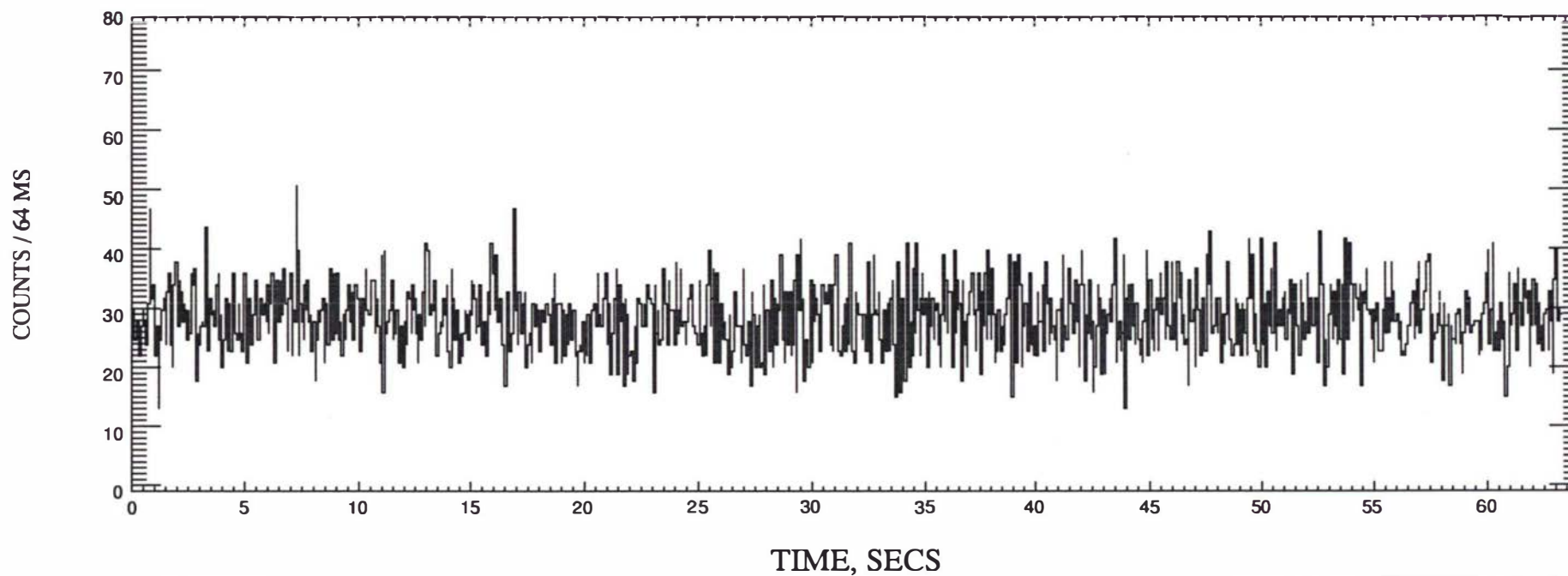
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96



HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 10 at UT=16.685598750644 h=60068.156 s 16:41:08.156

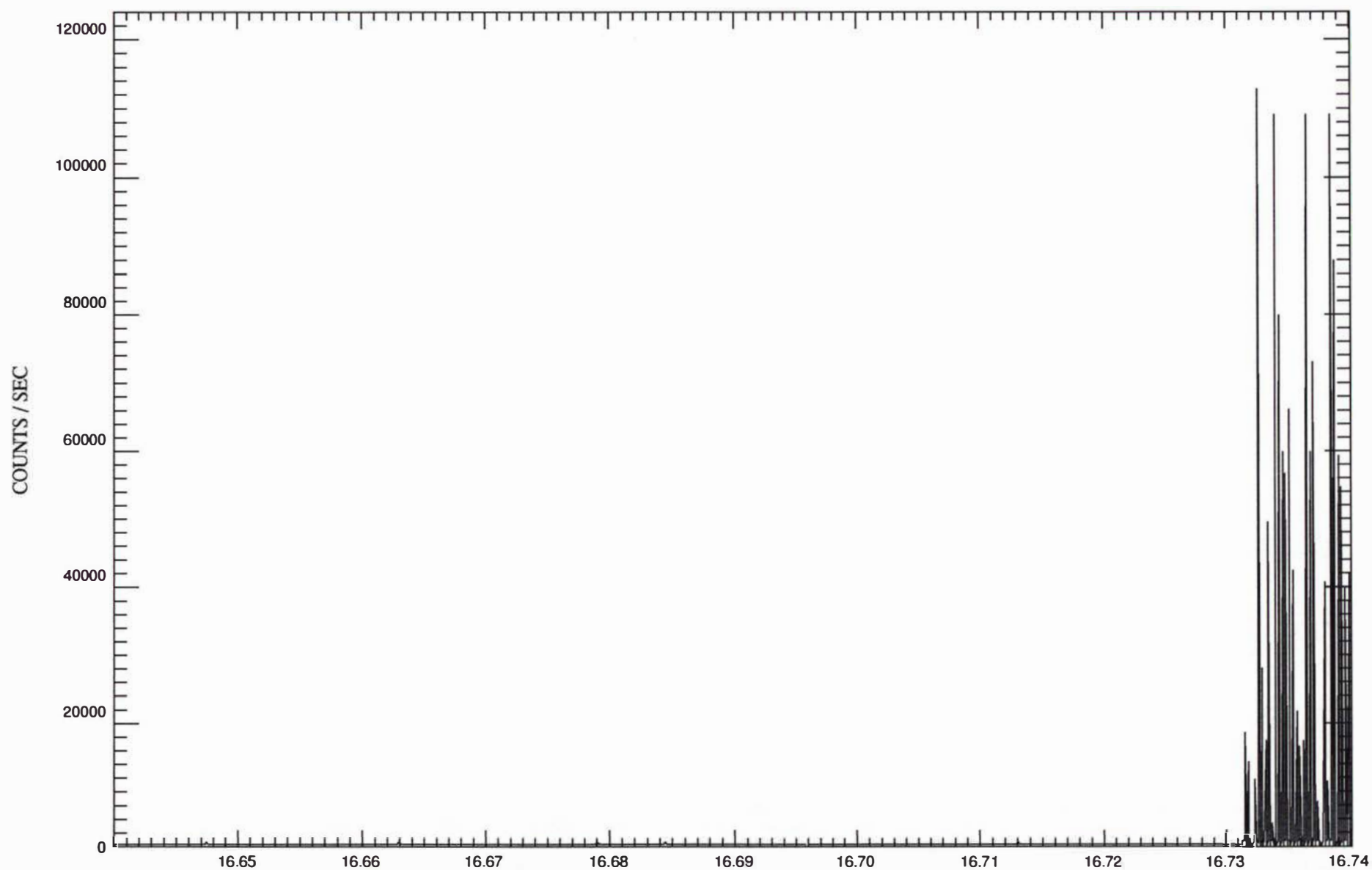
1/2/96



B# 11

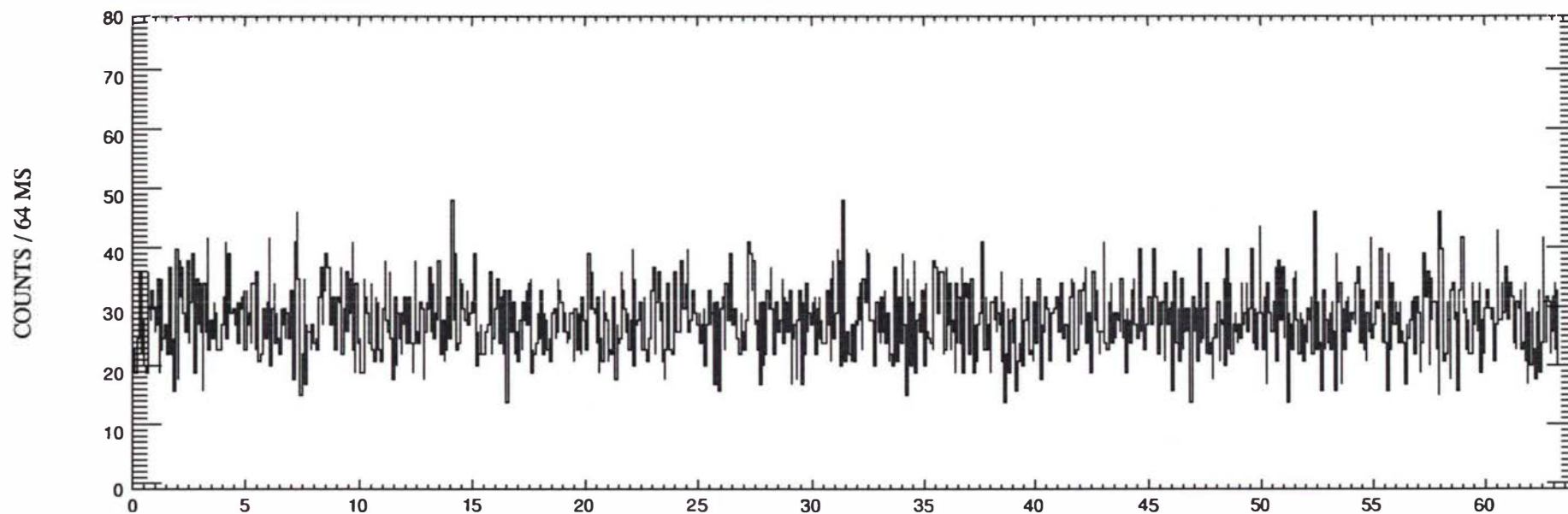
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96

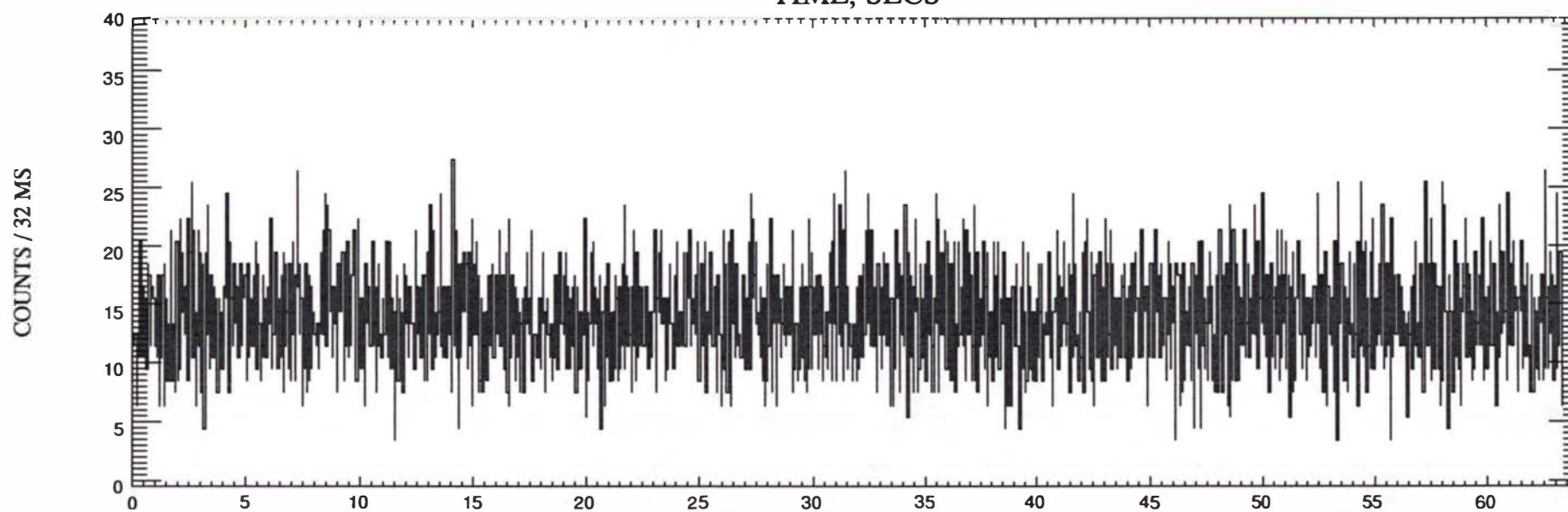


HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 11 at UT=17.677280392117 h=63638.209 s 17:40:38.209

1/2/96



TIME, SECS

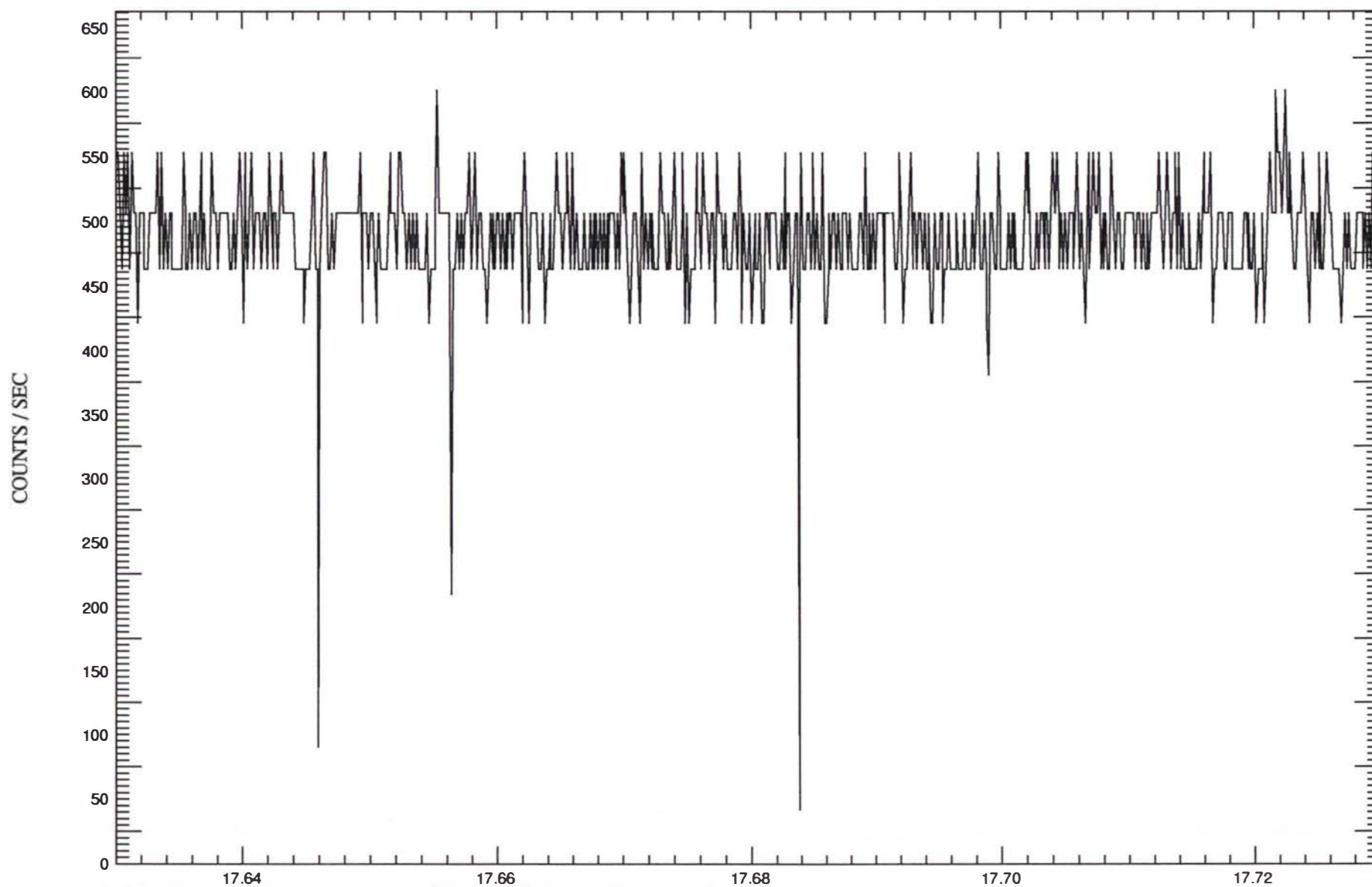


TIME, SECS

B# 12

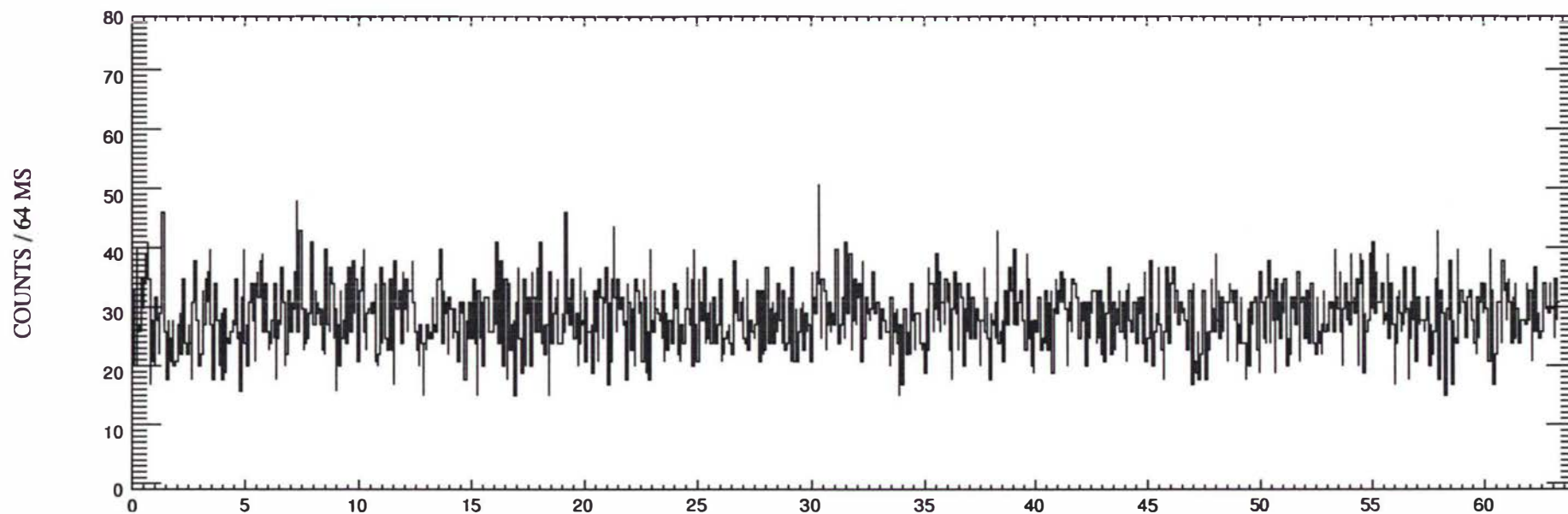
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96

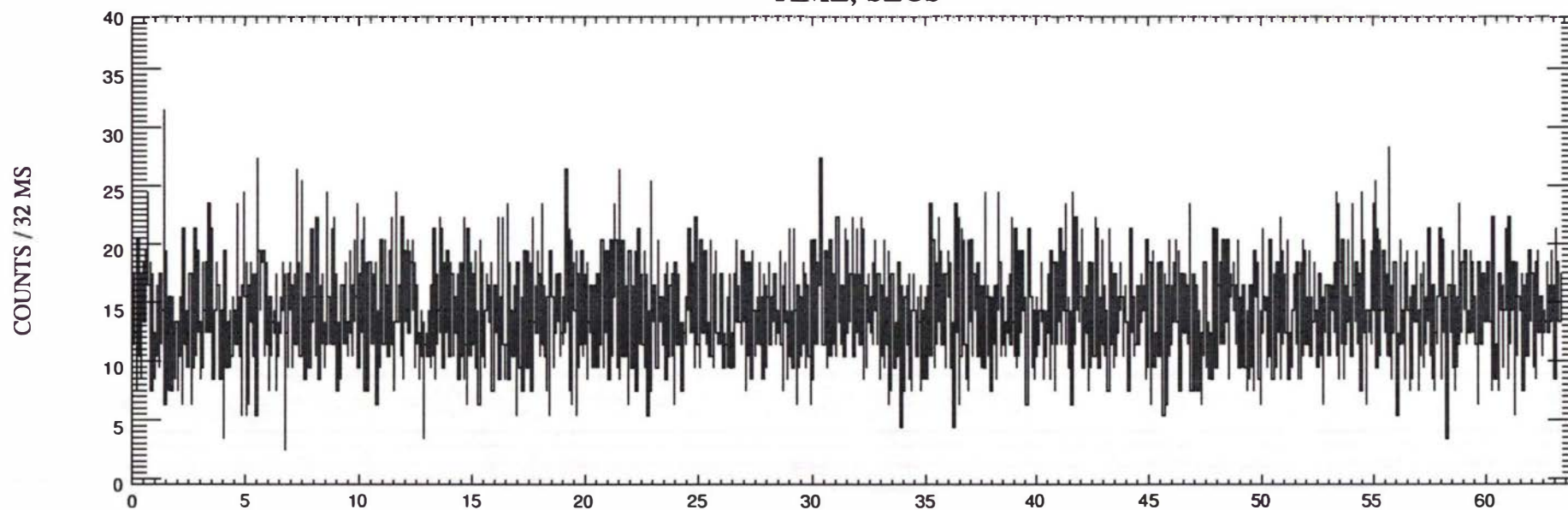


HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 12 at UT=18.612711062961 h=67005.760 s 18:36:45.760

1/2/96



TIME, SECS

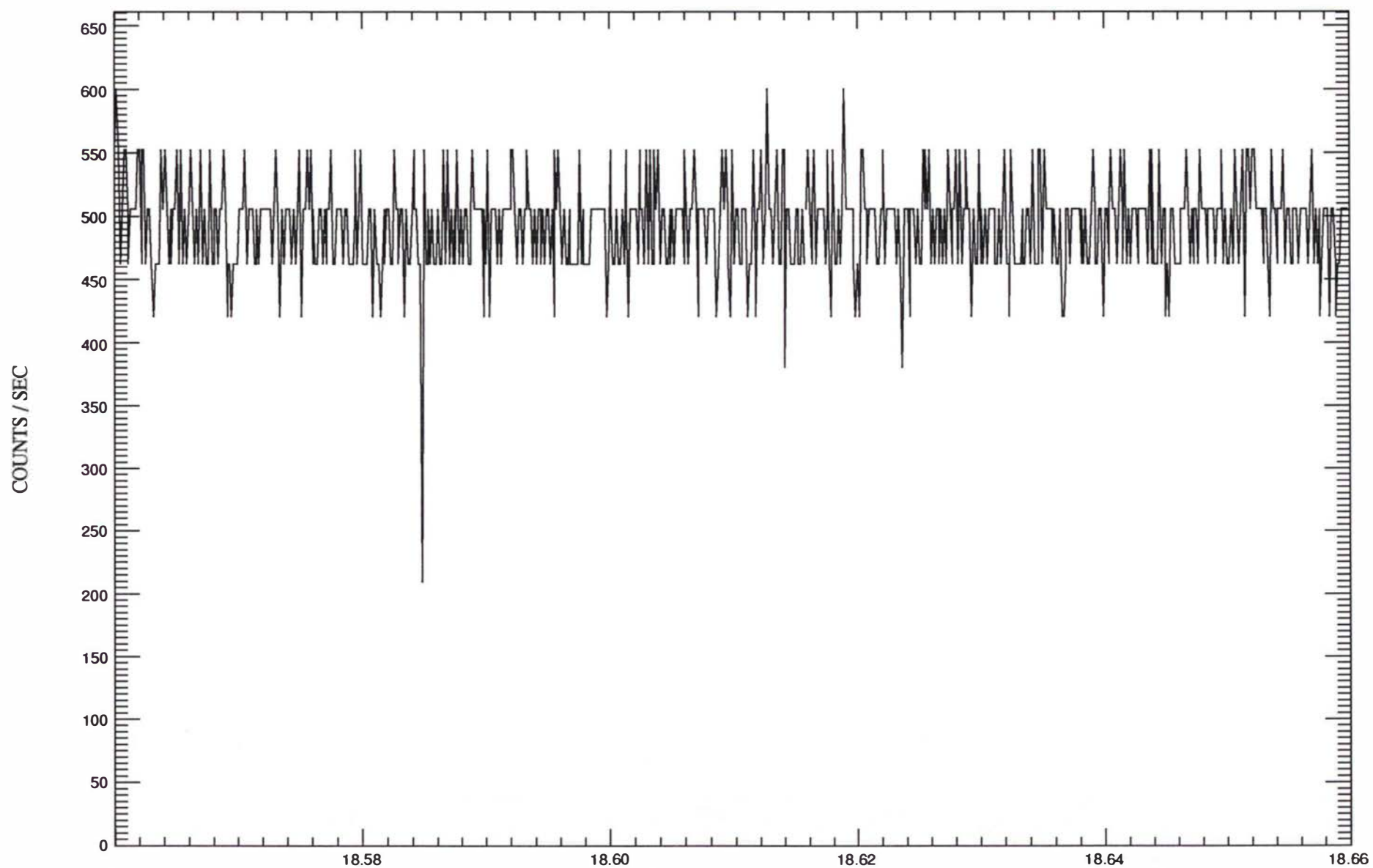


TIME, SECS

B# 13

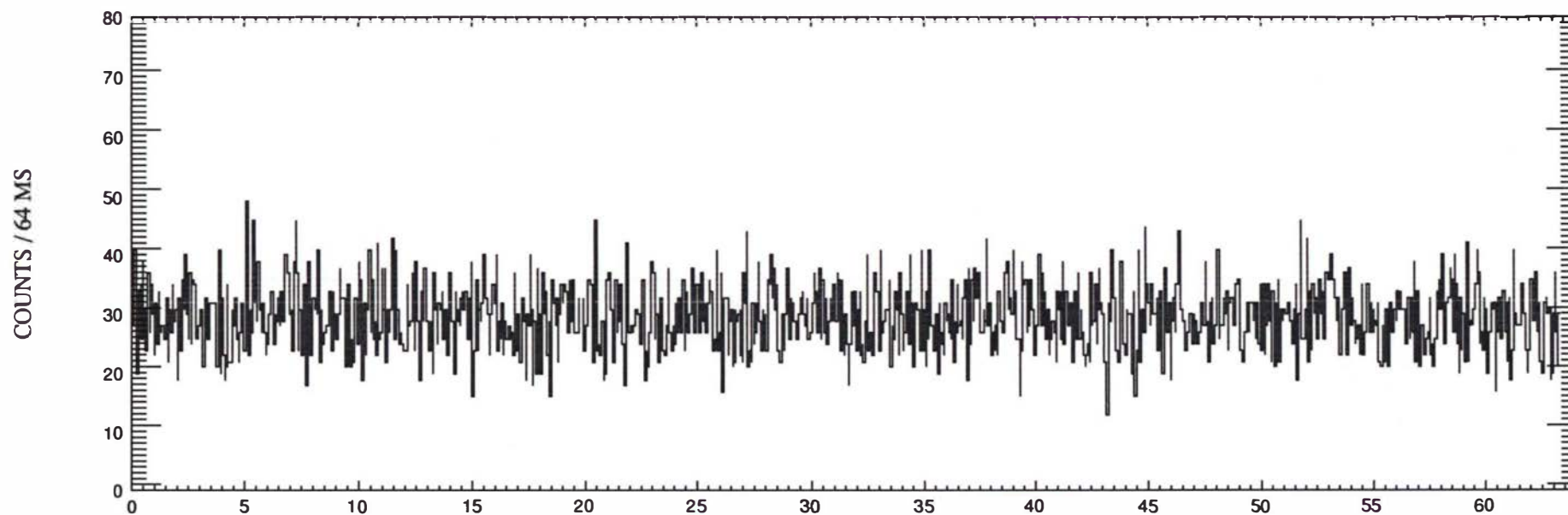
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96

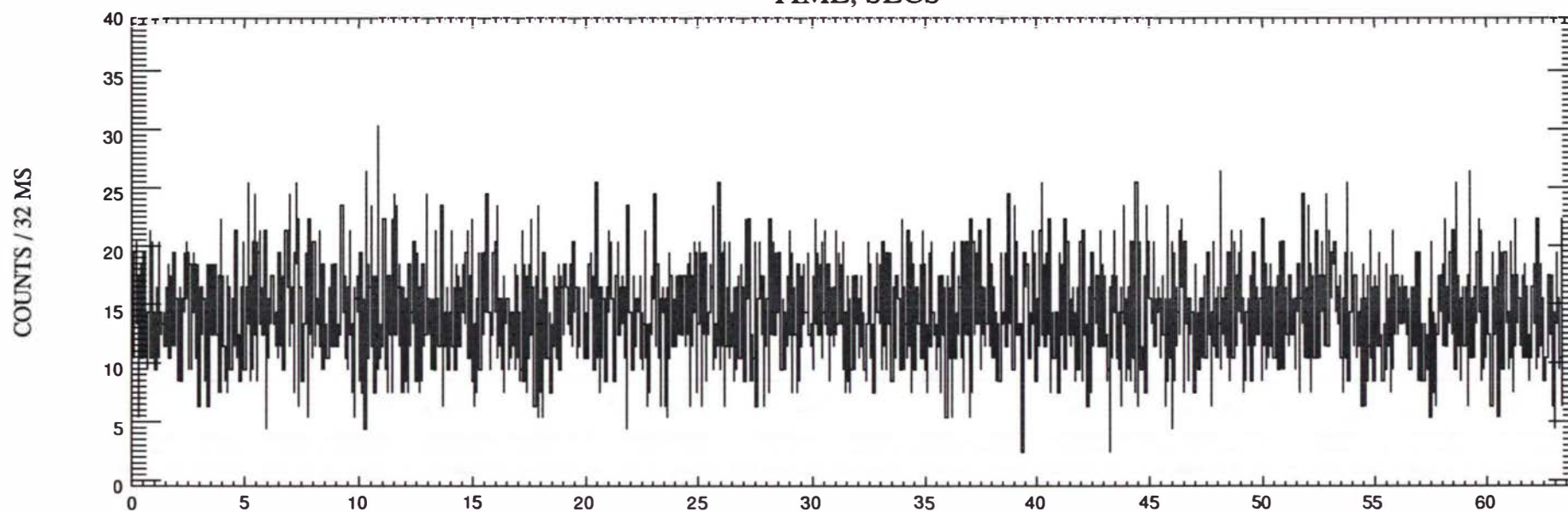


HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 13 at UT=19.513802549574 h=70249.689 s 19:30:49.689

1/2/96



TIME, SECS

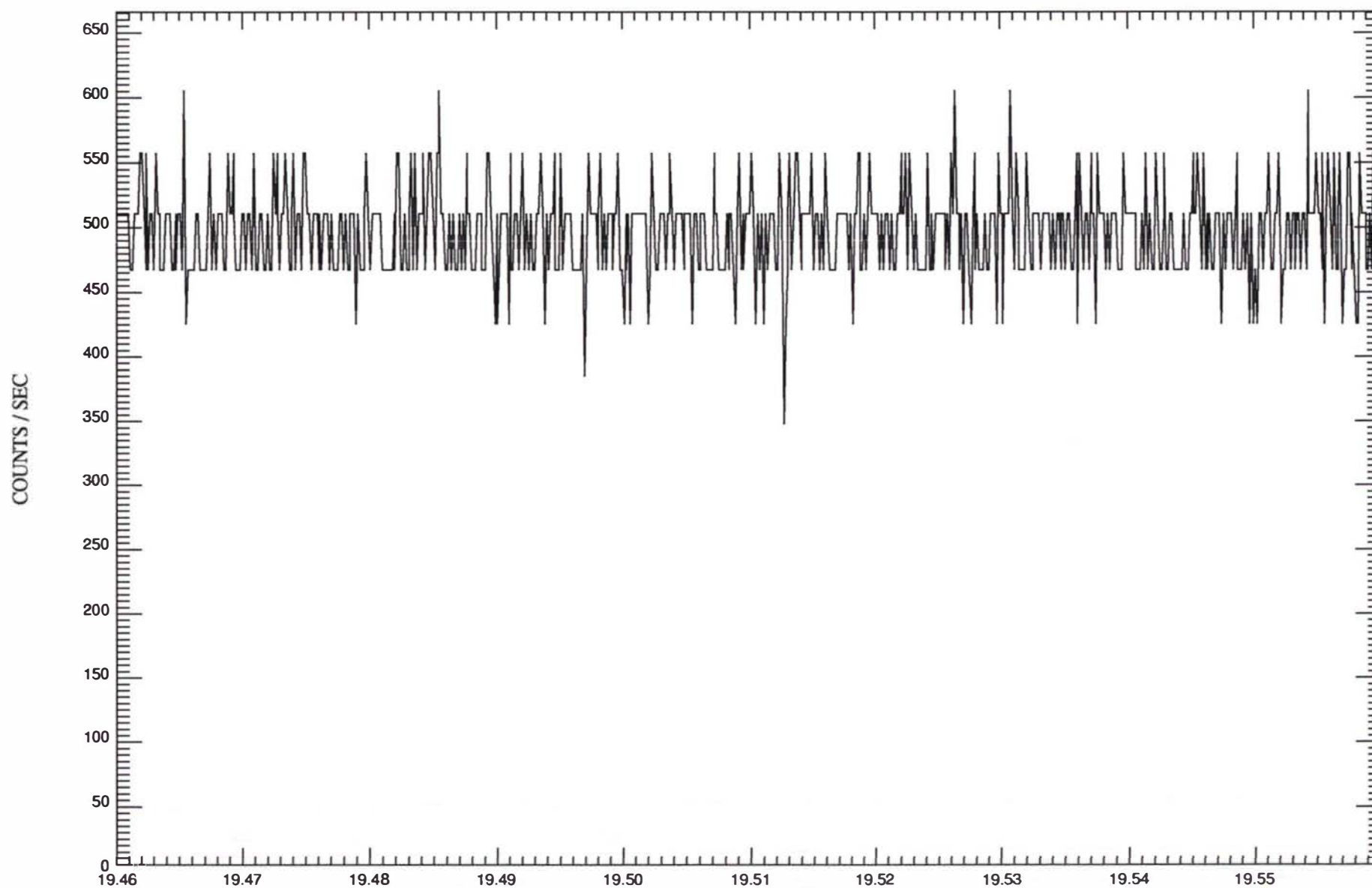


TIME, SECS

B# 14

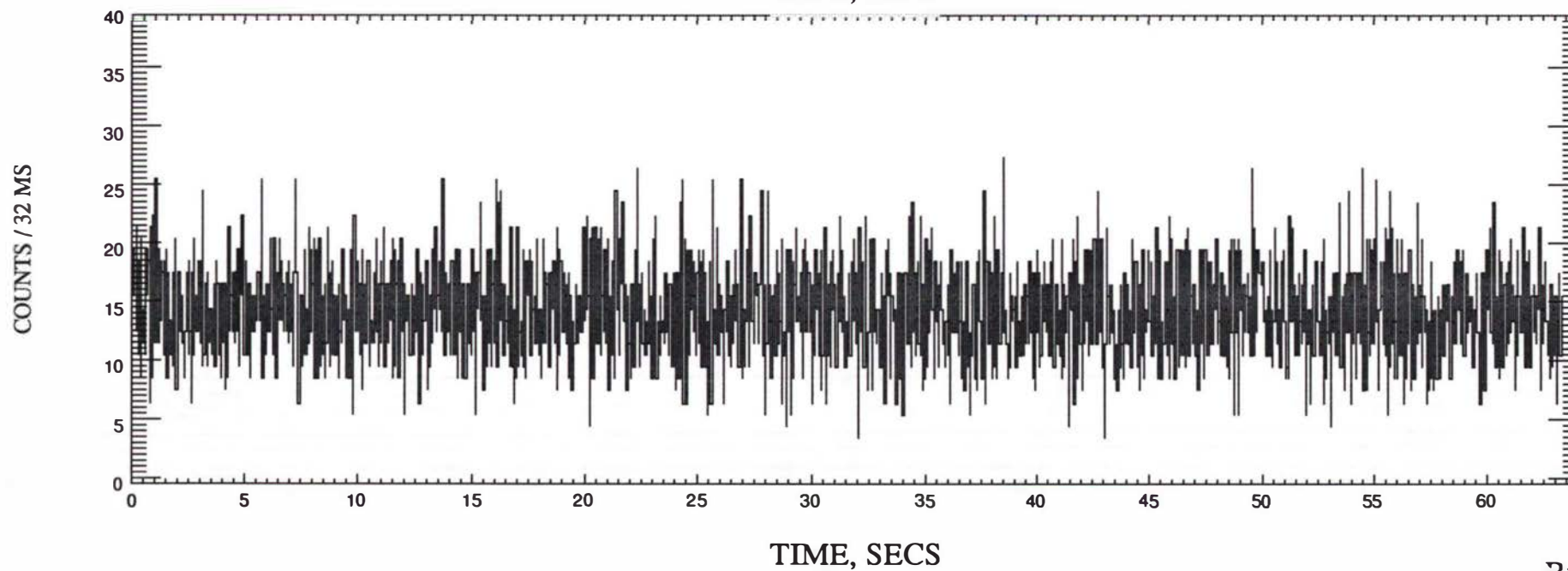
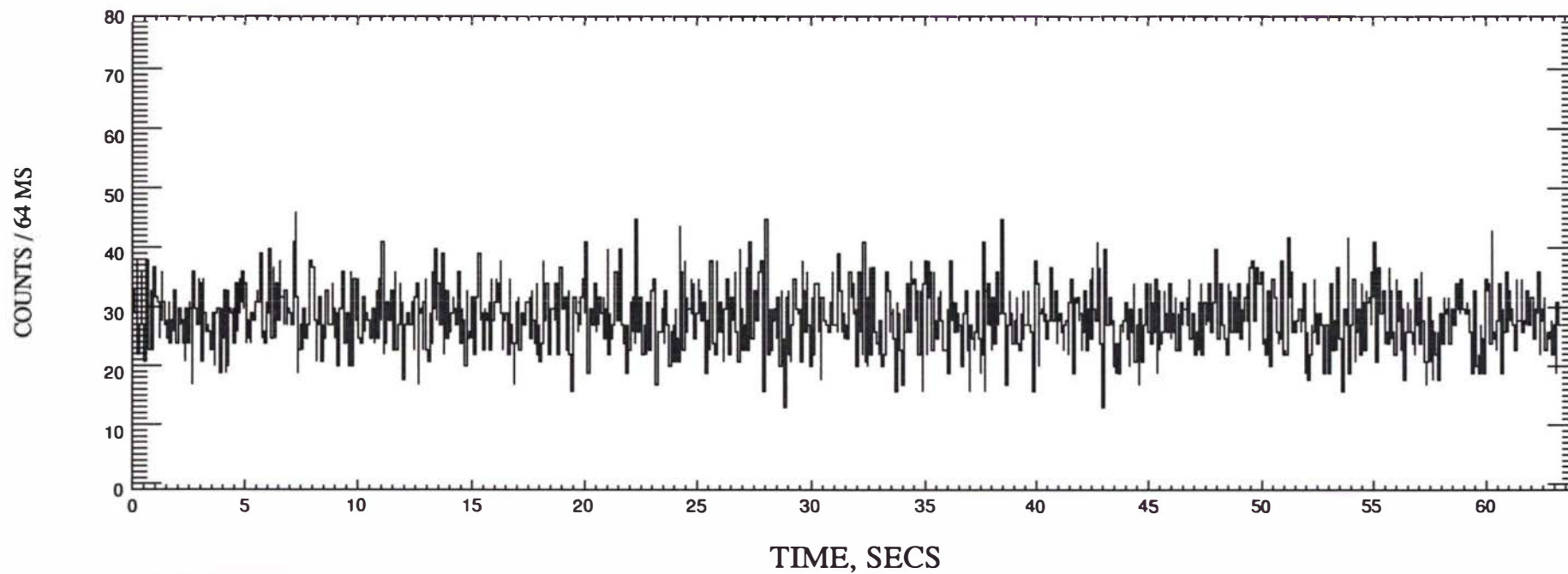
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96



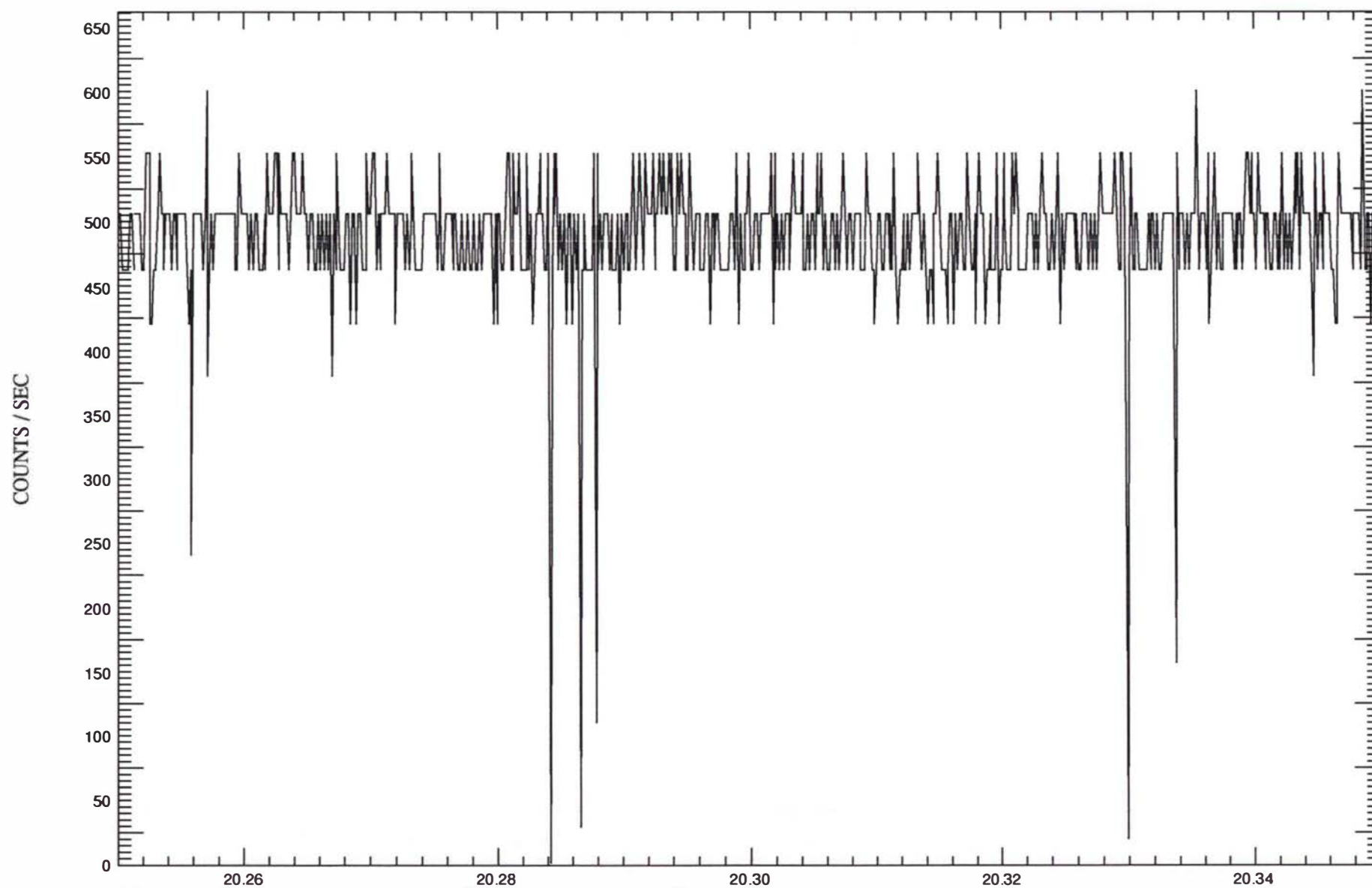
HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 14 at UT=20.301833063761 h=73086.599 s 20:18:06.599

1/2/96



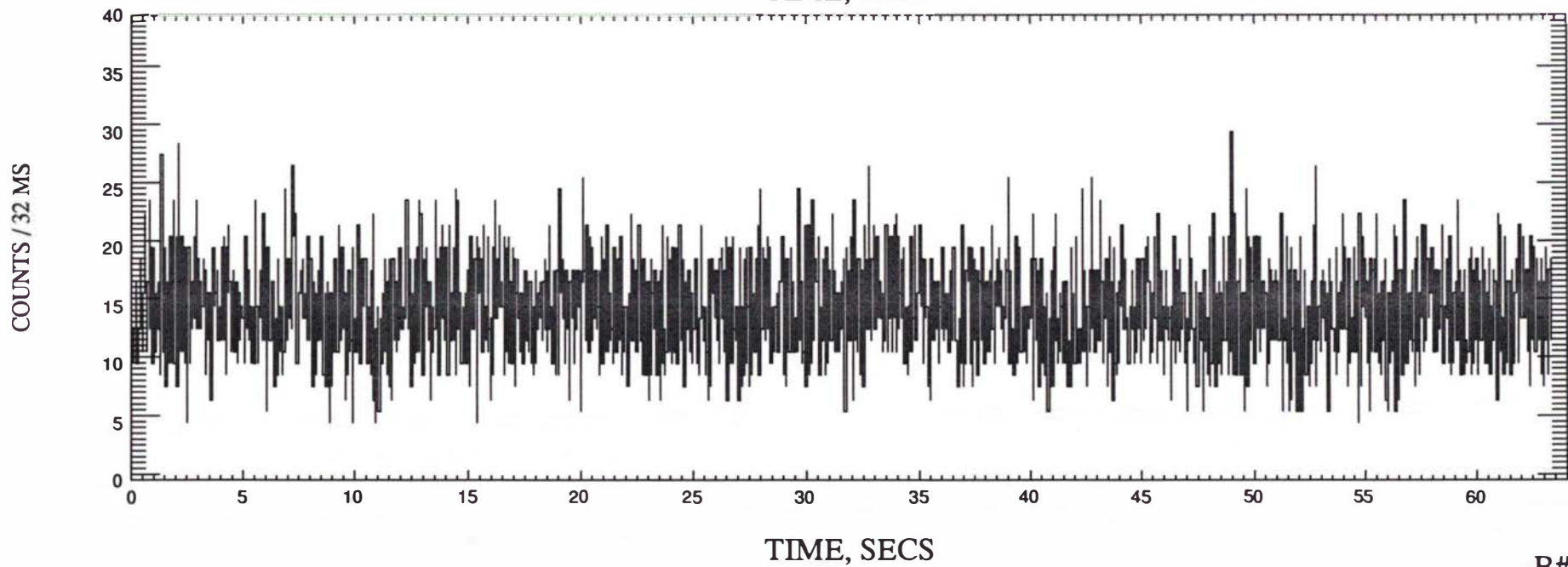
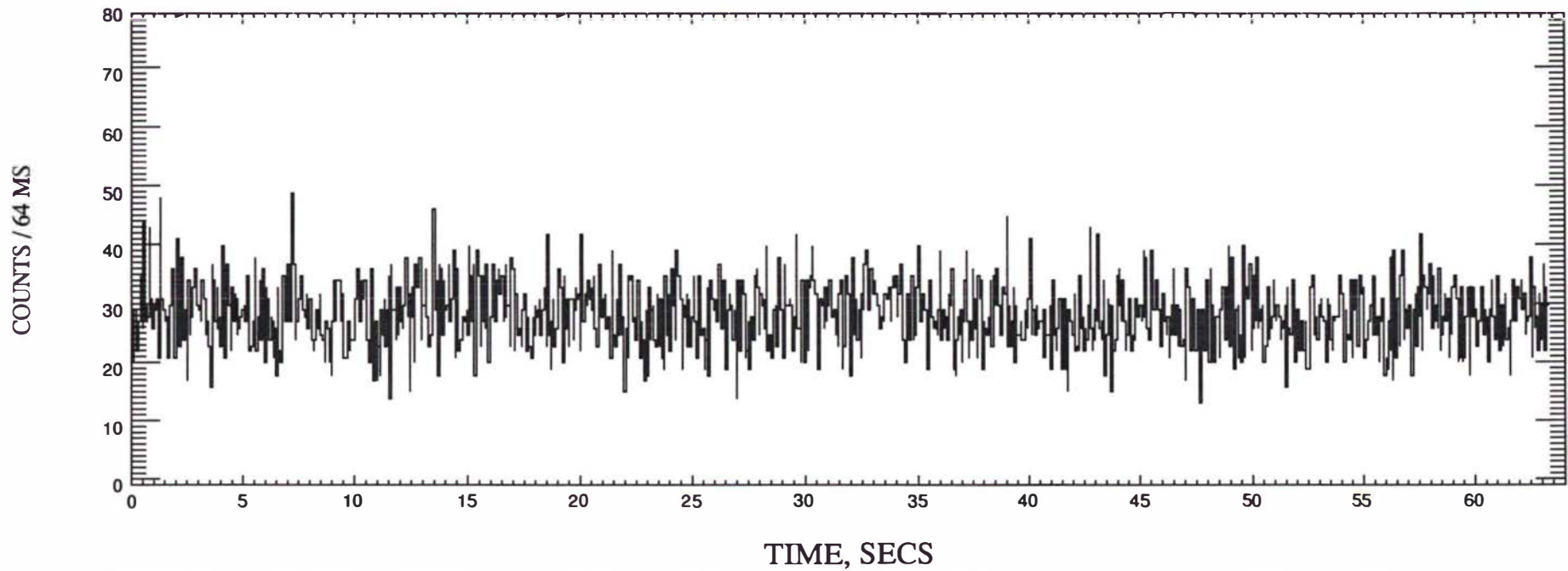
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96



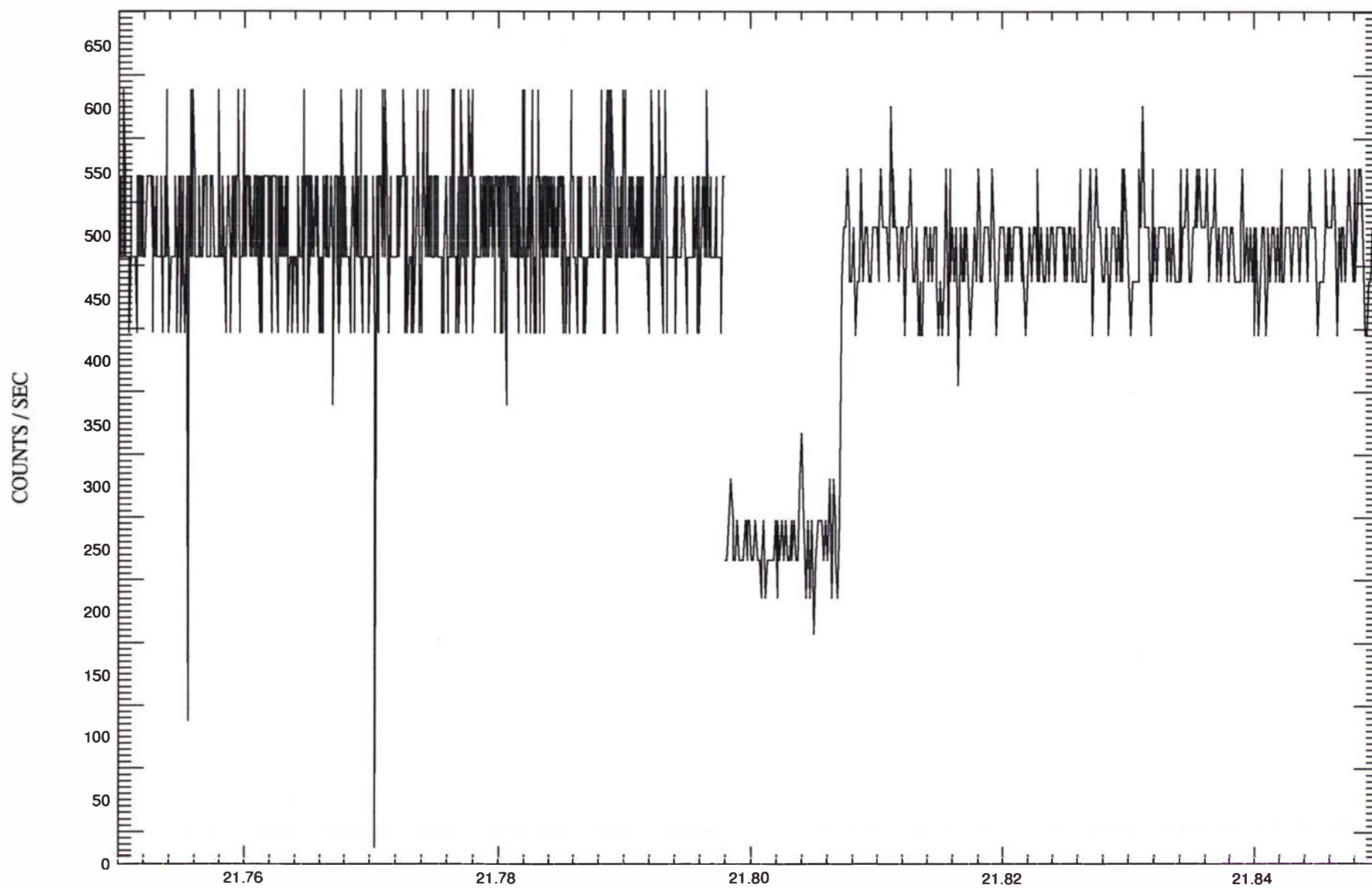
HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 0 at UT=21.804148432414 h=78494.934 s 21:48:14.934

1/2/96



HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96

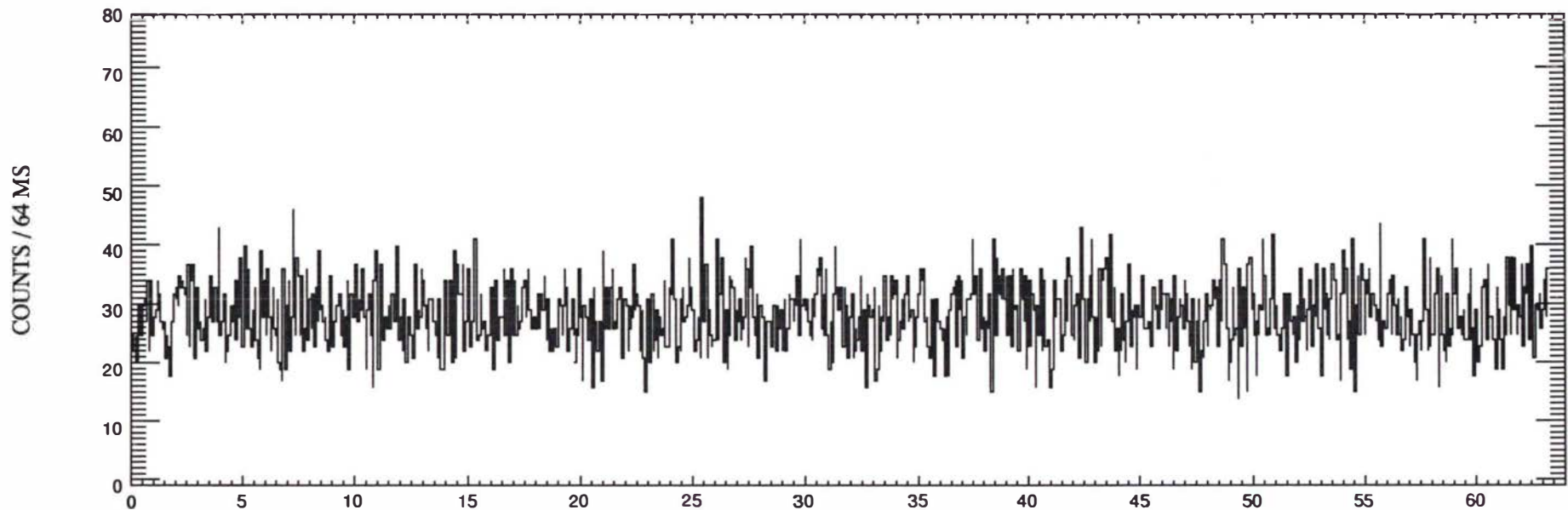


1. The first part of the report is a summary of the work done during the year.

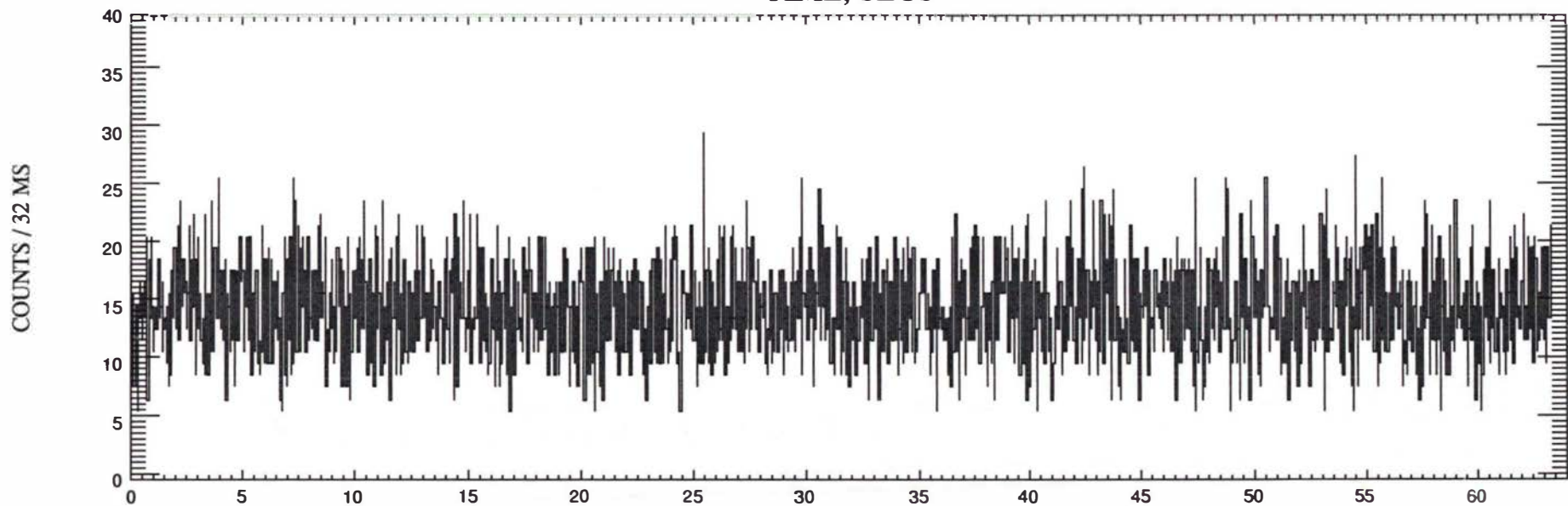
15/10/62

HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 1 at UT=22.715758582221 h=81776.731 s 22:42:56.731

1/2/96



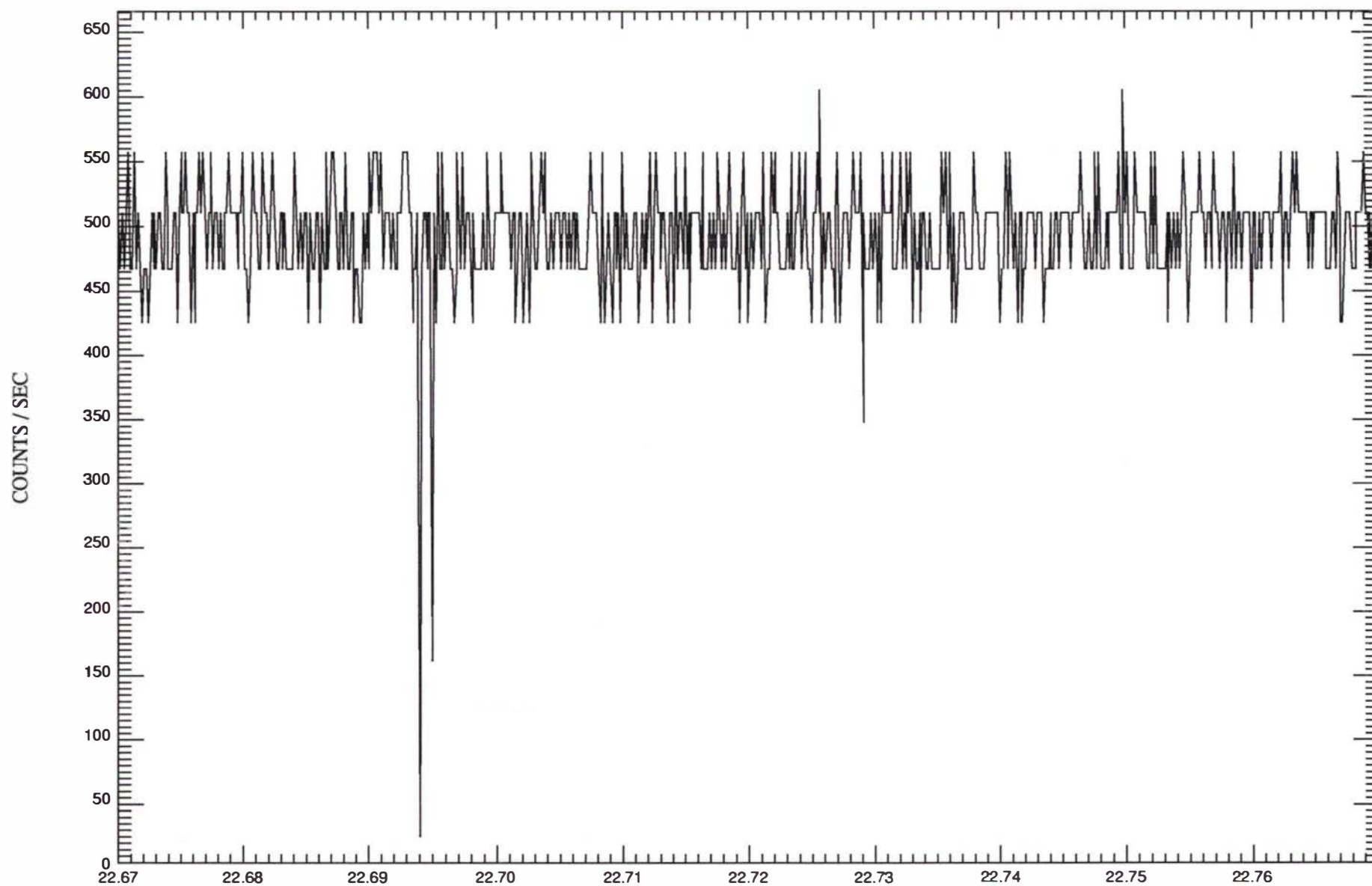
TIME, SECS



TIME, SECS

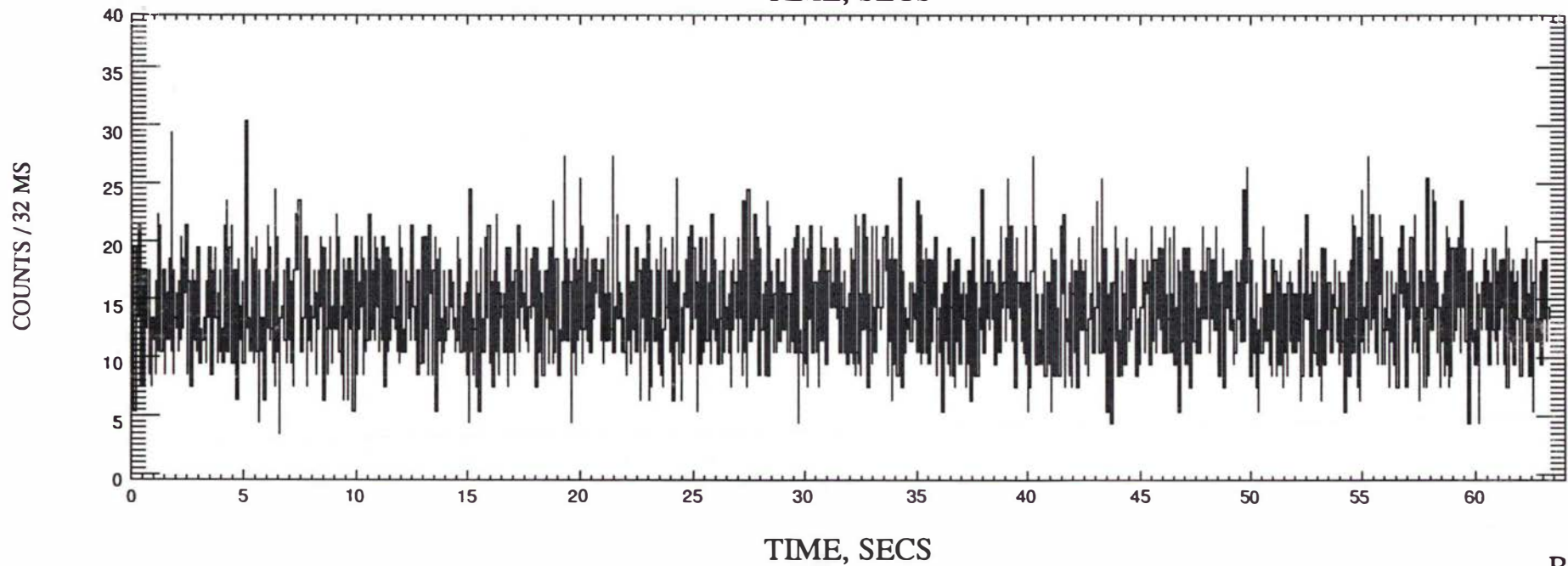
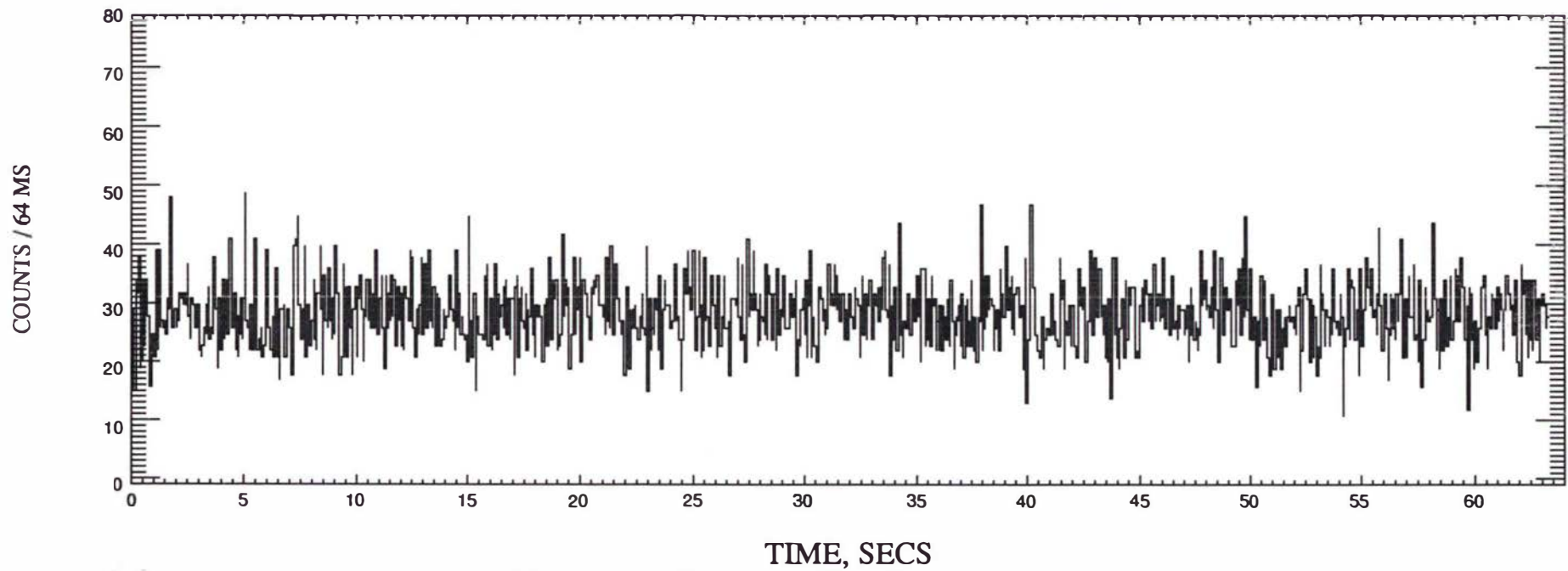
HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96

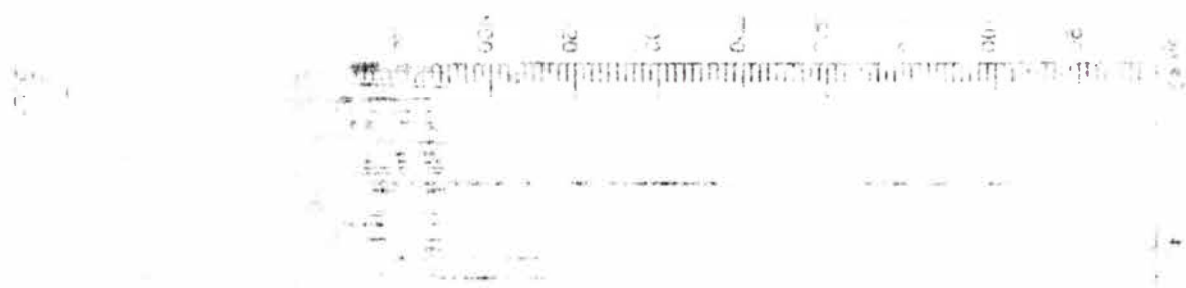


HUS 2A TRIGGERED DATA QEDR day 365, year 1995
Burst Counter 0 at UT=23.470387412177 h=84493.395 s 23:28:13.395

1/2/96

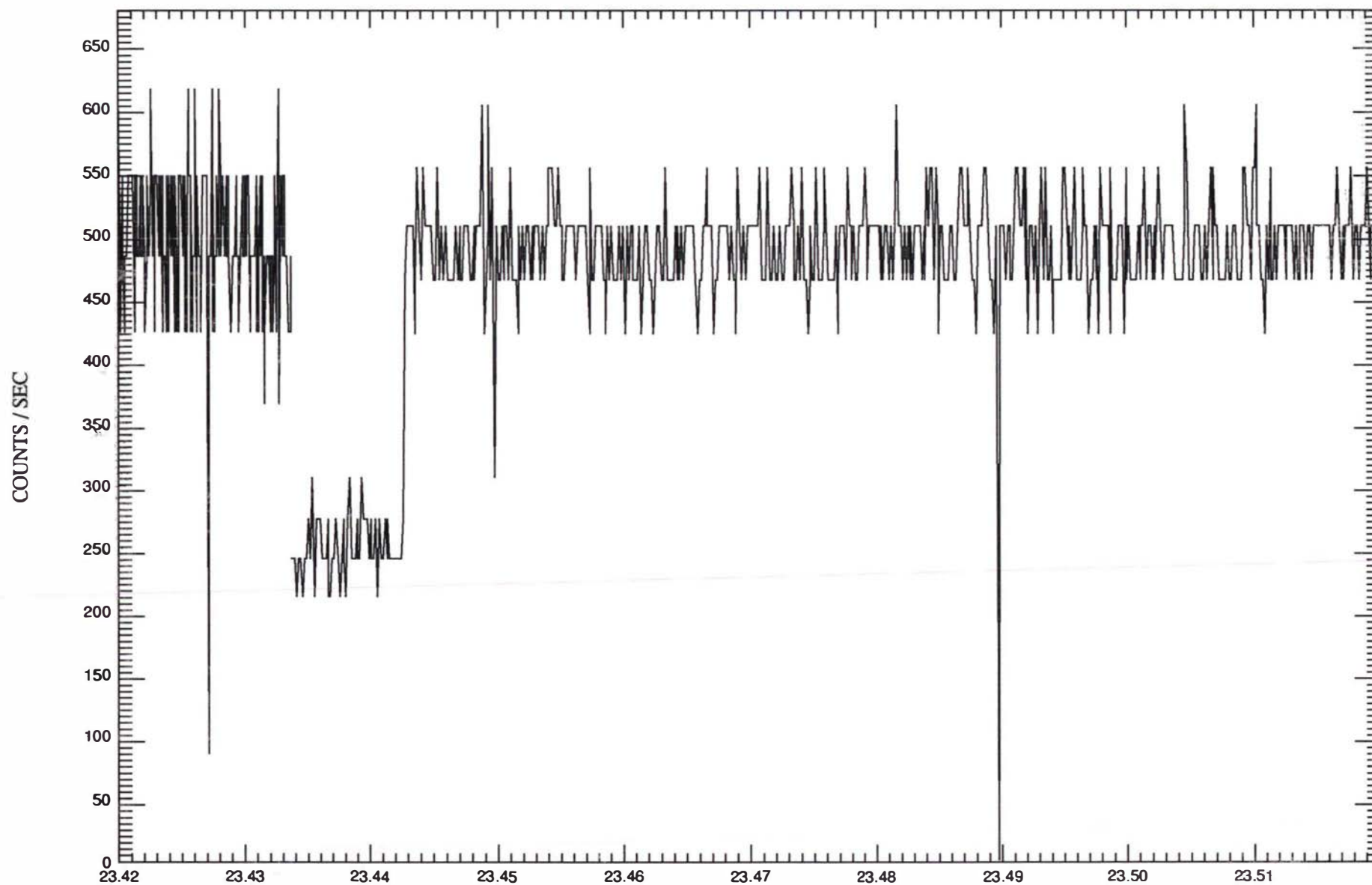


B# 1



HUS 2A, MODE 1, NOT AVERAGED QEDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

1/2/96



256711

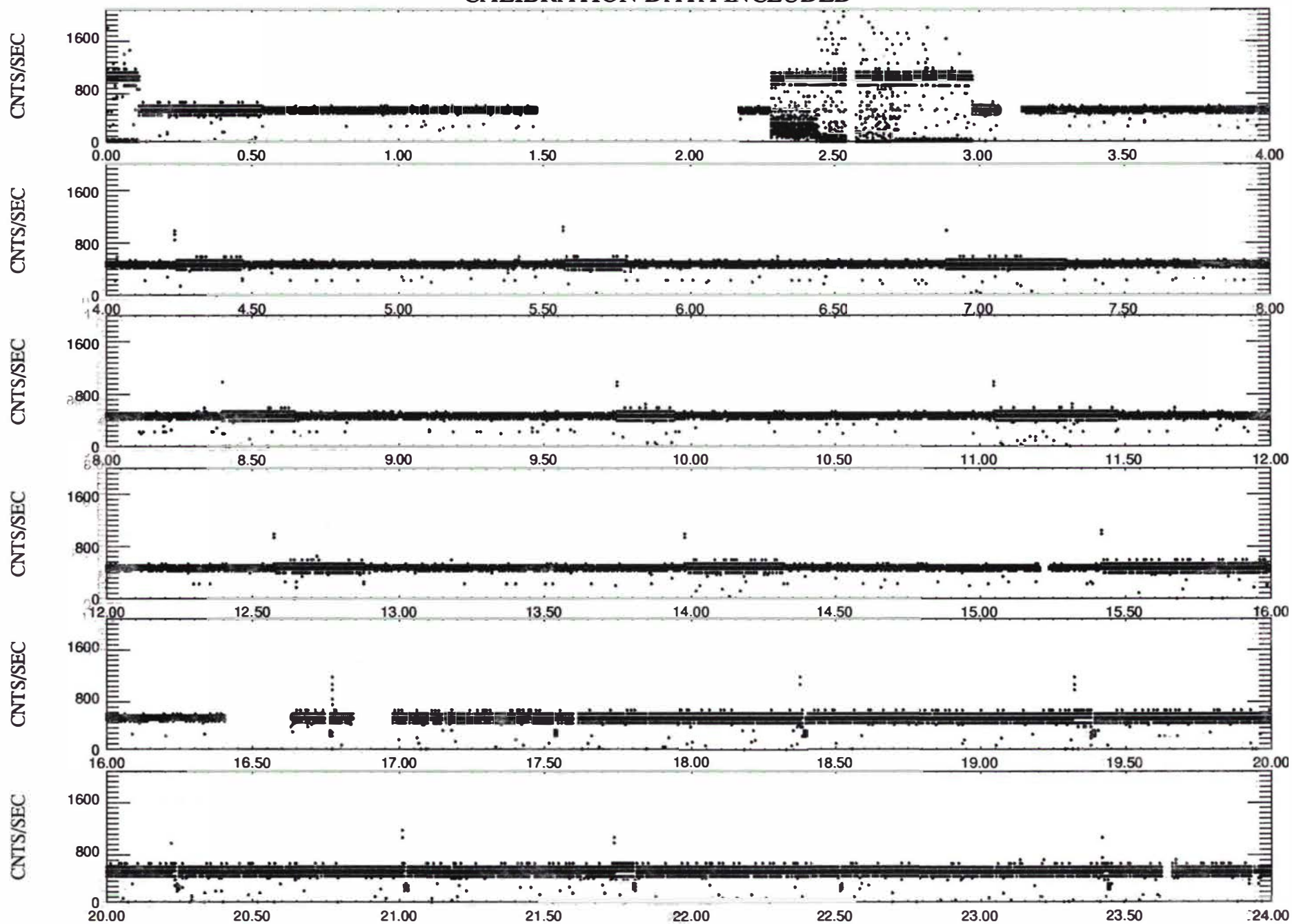
1000

(27)

$$\mathcal{M}_{\text{eff}} = \mathcal{M}_{\text{eff}}^{\text{eff}}$$


HUS 2A, MODE 1, NOT AVERAGED EDR day 365, year 1995 to day 365, year 1995
CALIBRATION DATA INCLUDED

4/30/96



UNIV. TIME

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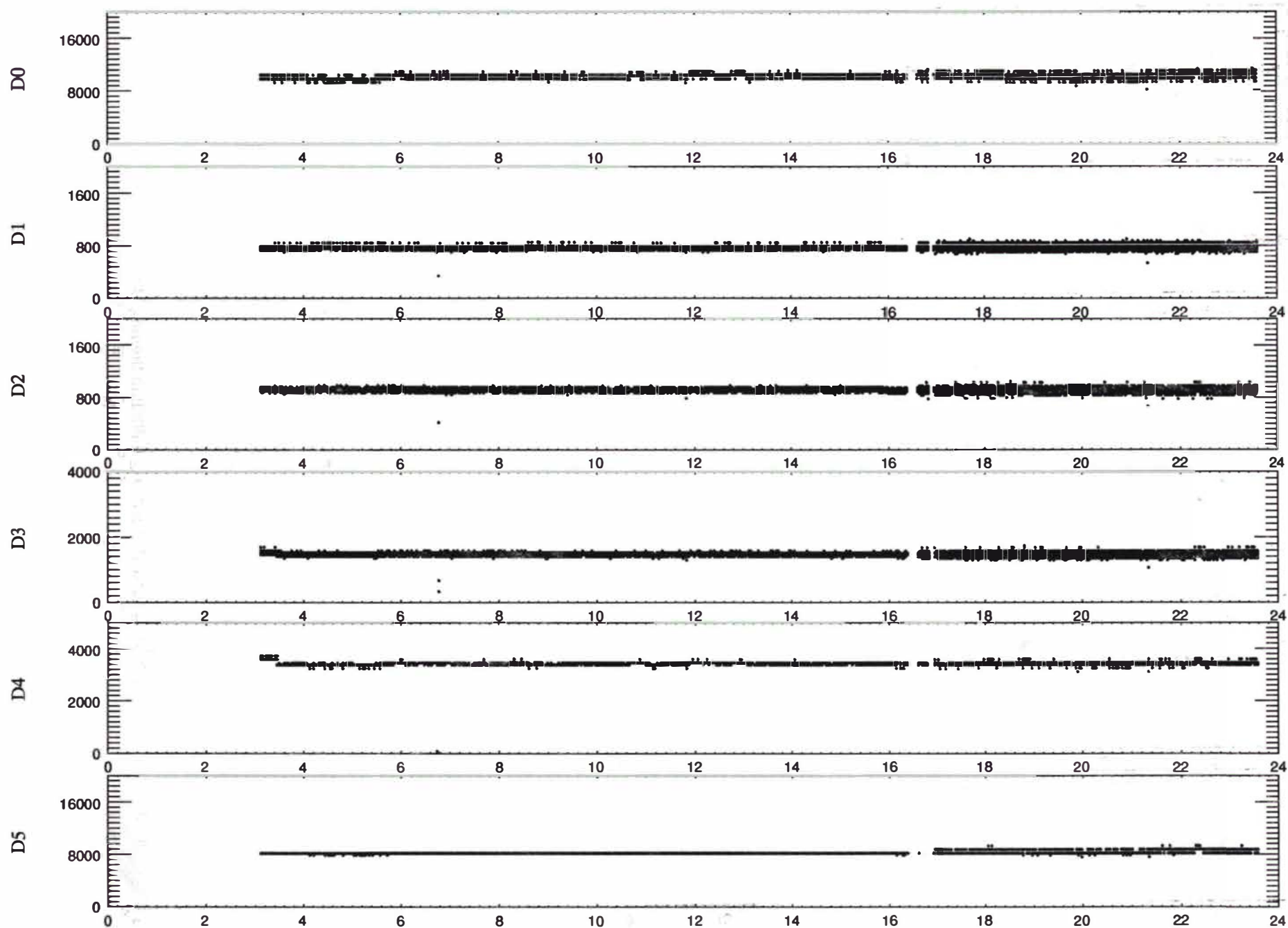
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HUS 2B COUNTS / SEC QEDR day 365, year 1995 to day 365, year 1995

1/2/96



UNIV SAL TIME