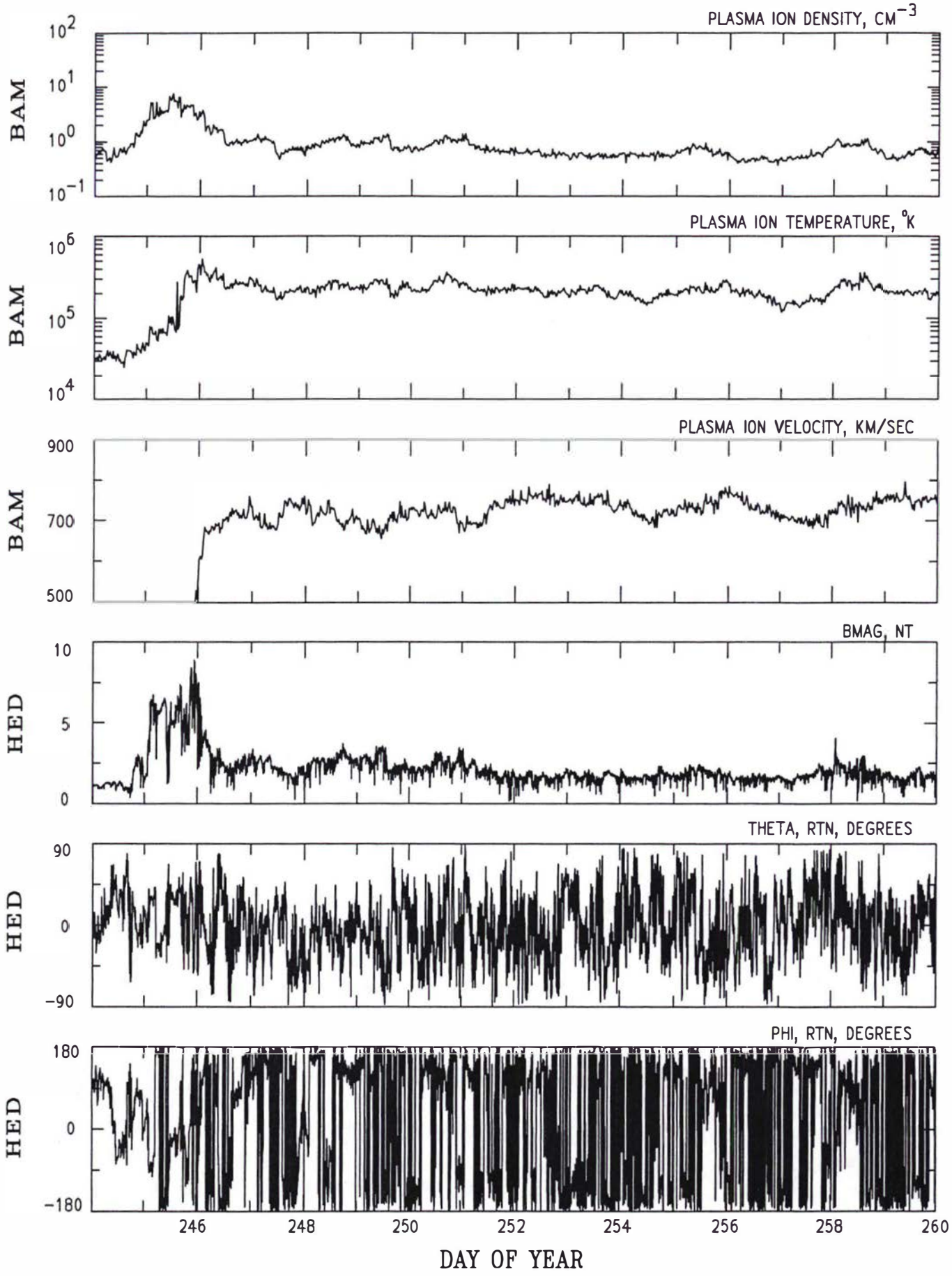
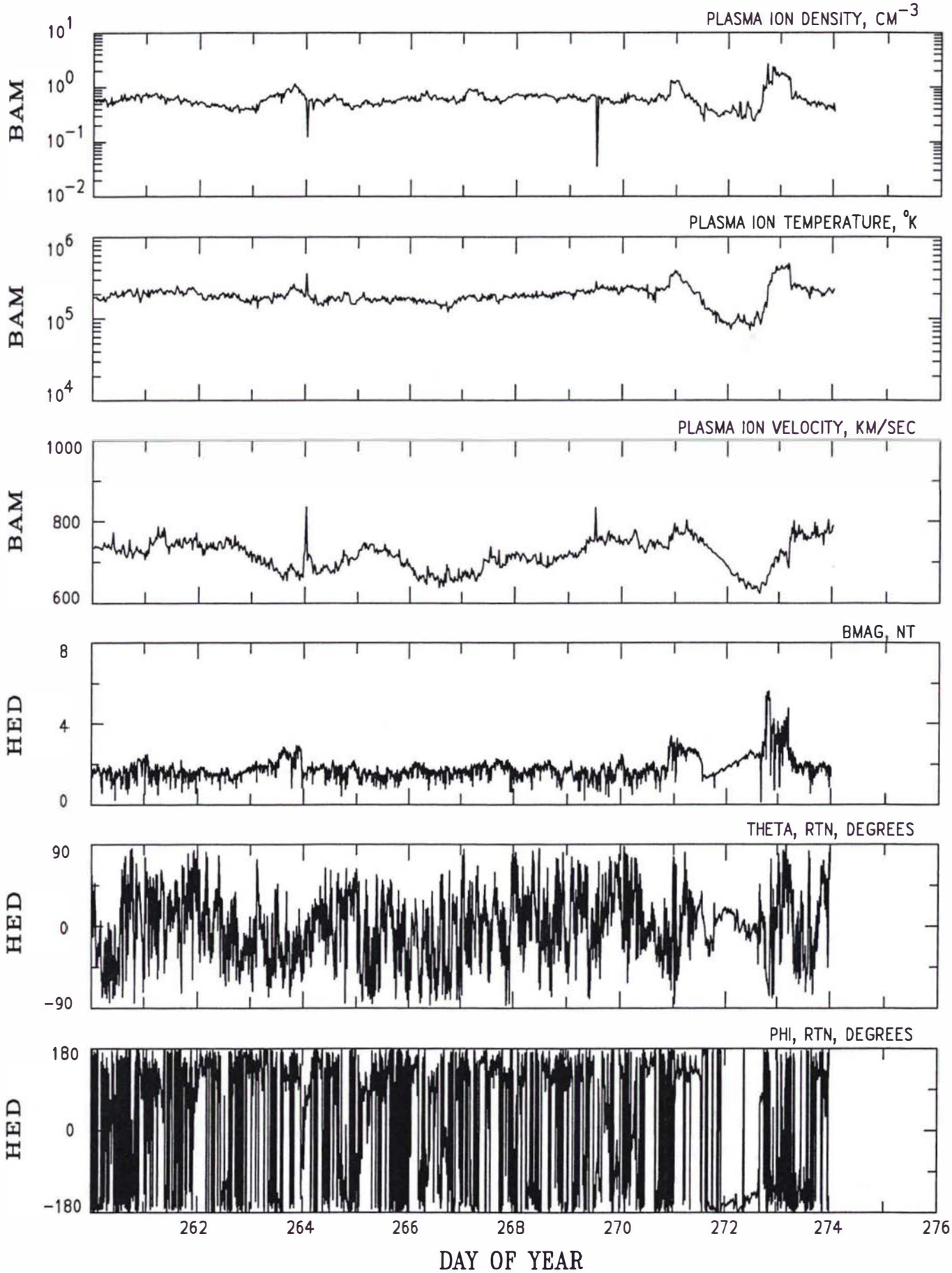
ULYSSES CDR – SOLAR WIND PLASMA AND MAGNETIC FIELD

01 244 SEP 1 00:00:00.000 – 01 260 SEP 17 00:00:00.000



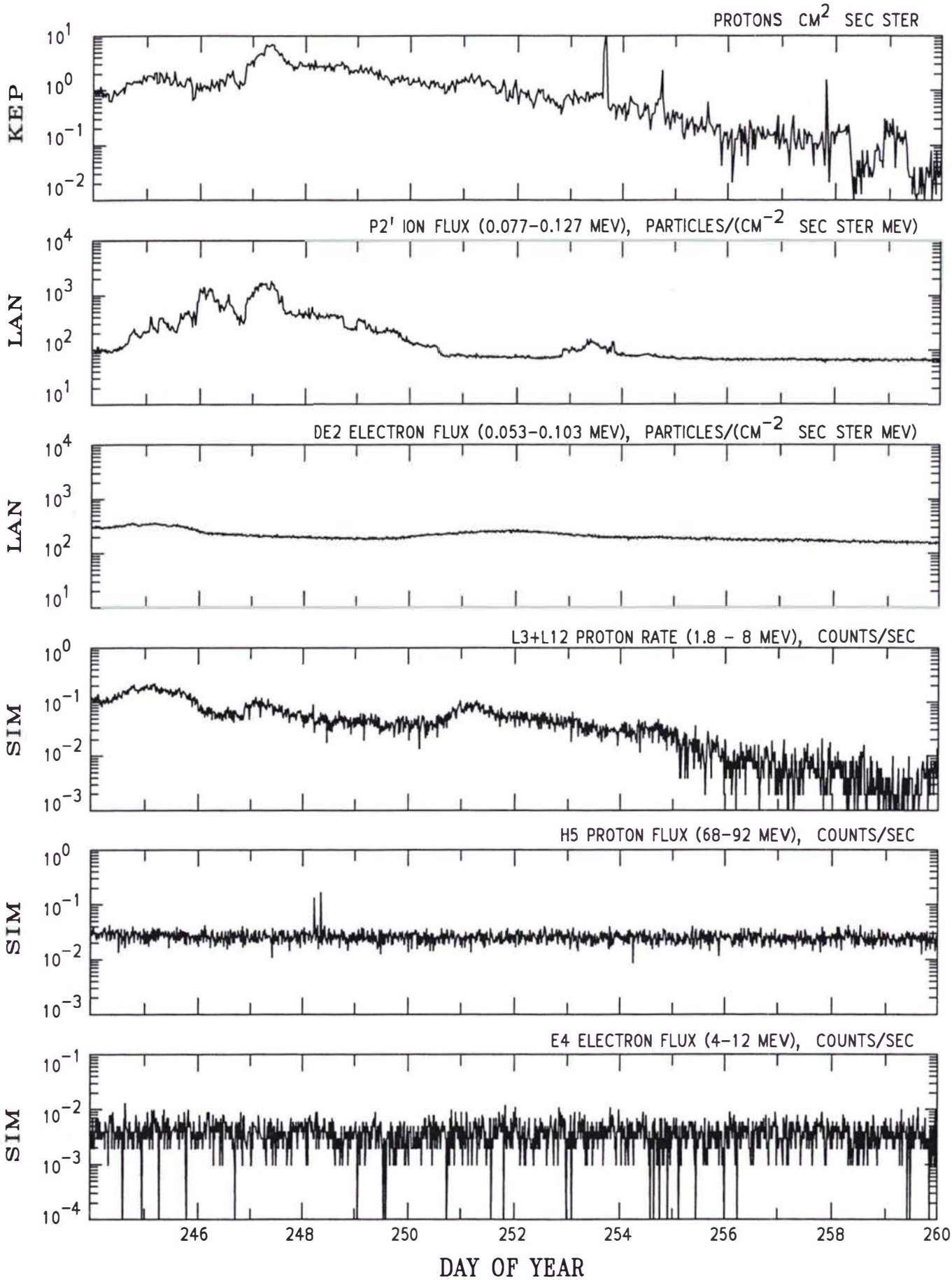
ULYSSES CDR – SOLAR WIND PLASMA AND MAGNETIC FIELD

01 260 SEP 17 00:00:00.000 – 01 276 OCT 3 00:00:00.000



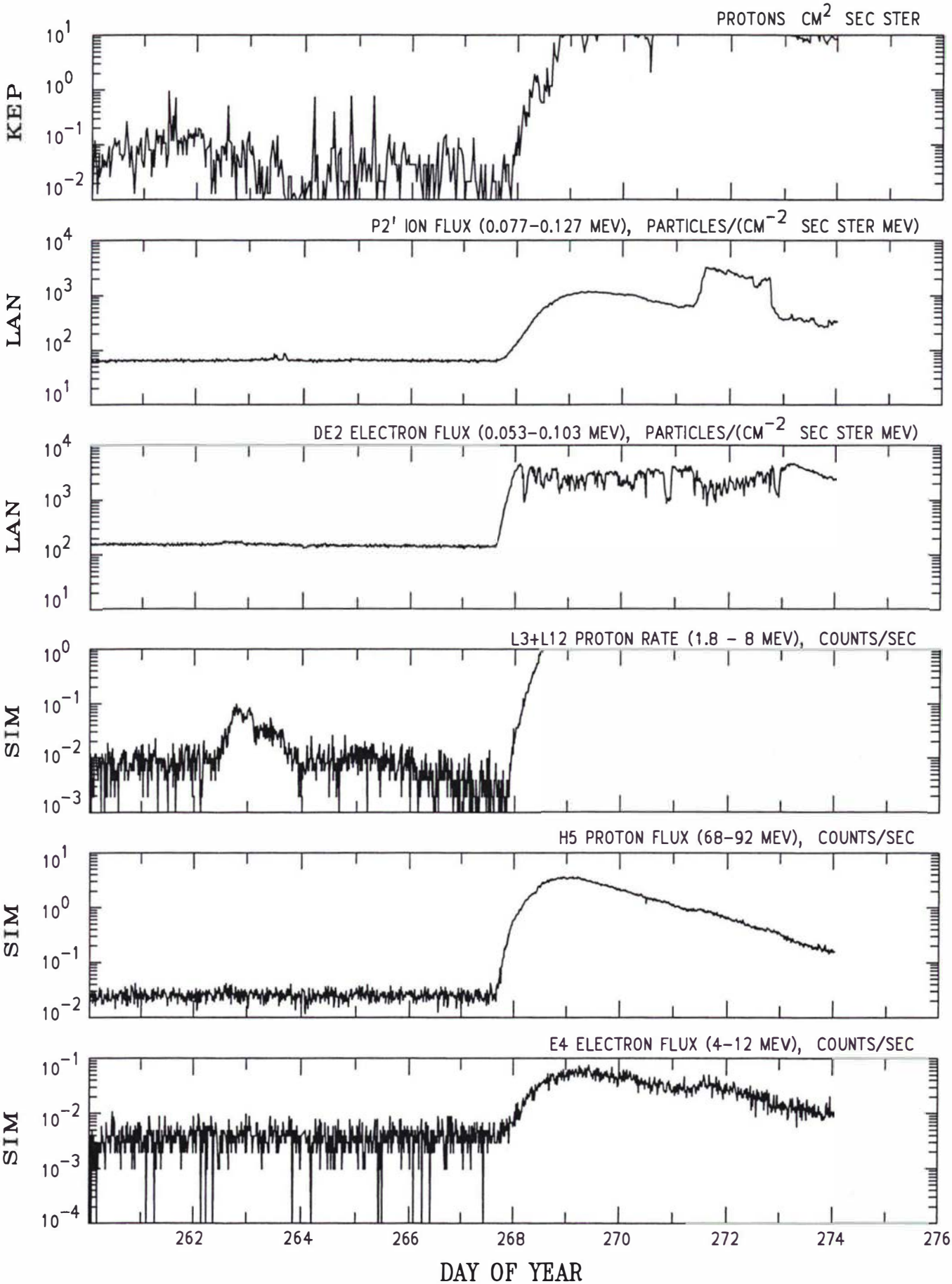
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

01 244 SEP 1 00:00:00.000 - 01 260 SEP 17 00:00:00.000



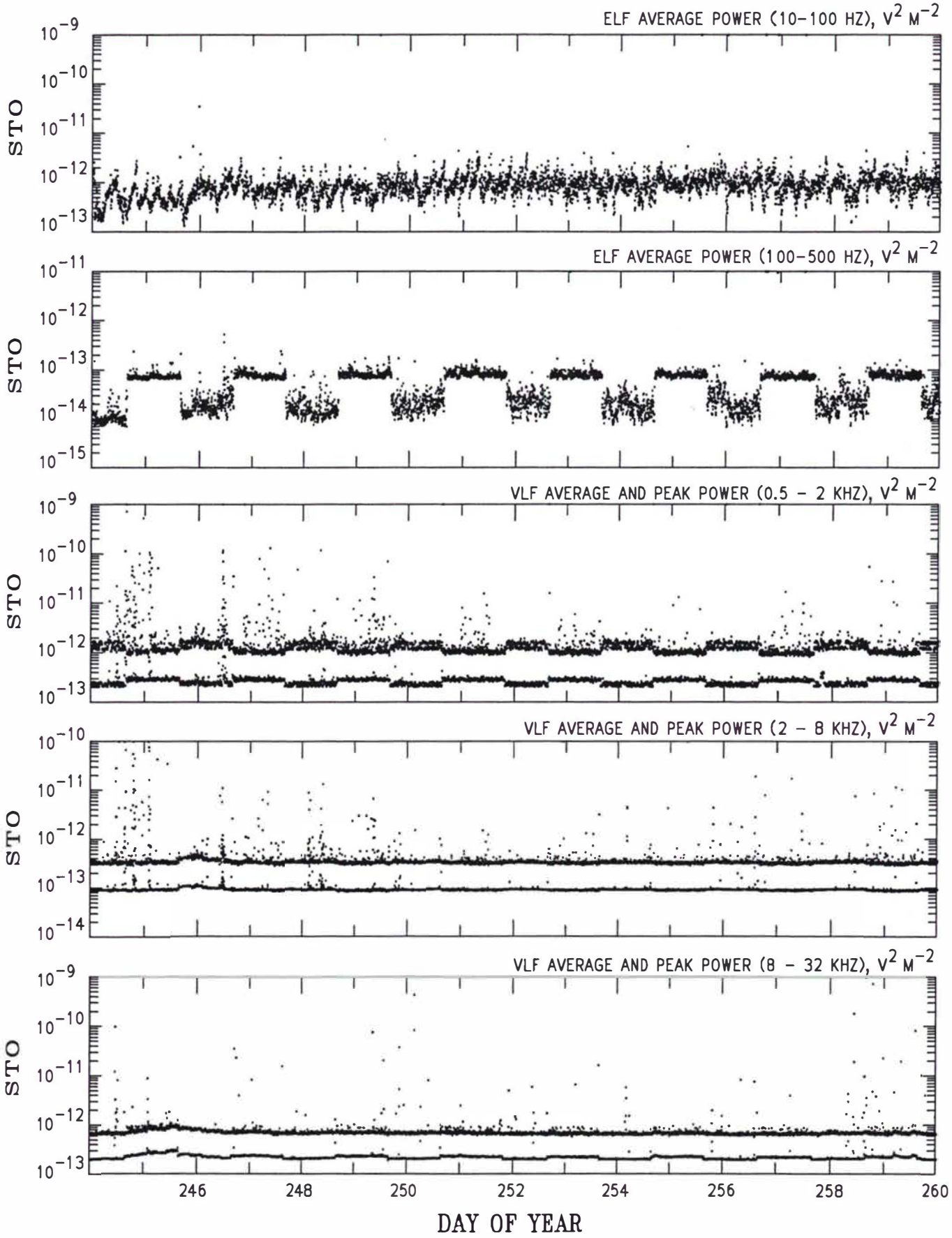
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

01 260 SEP 17 00:00:00.000 - 01 276 OCT 3 00:00:00.000



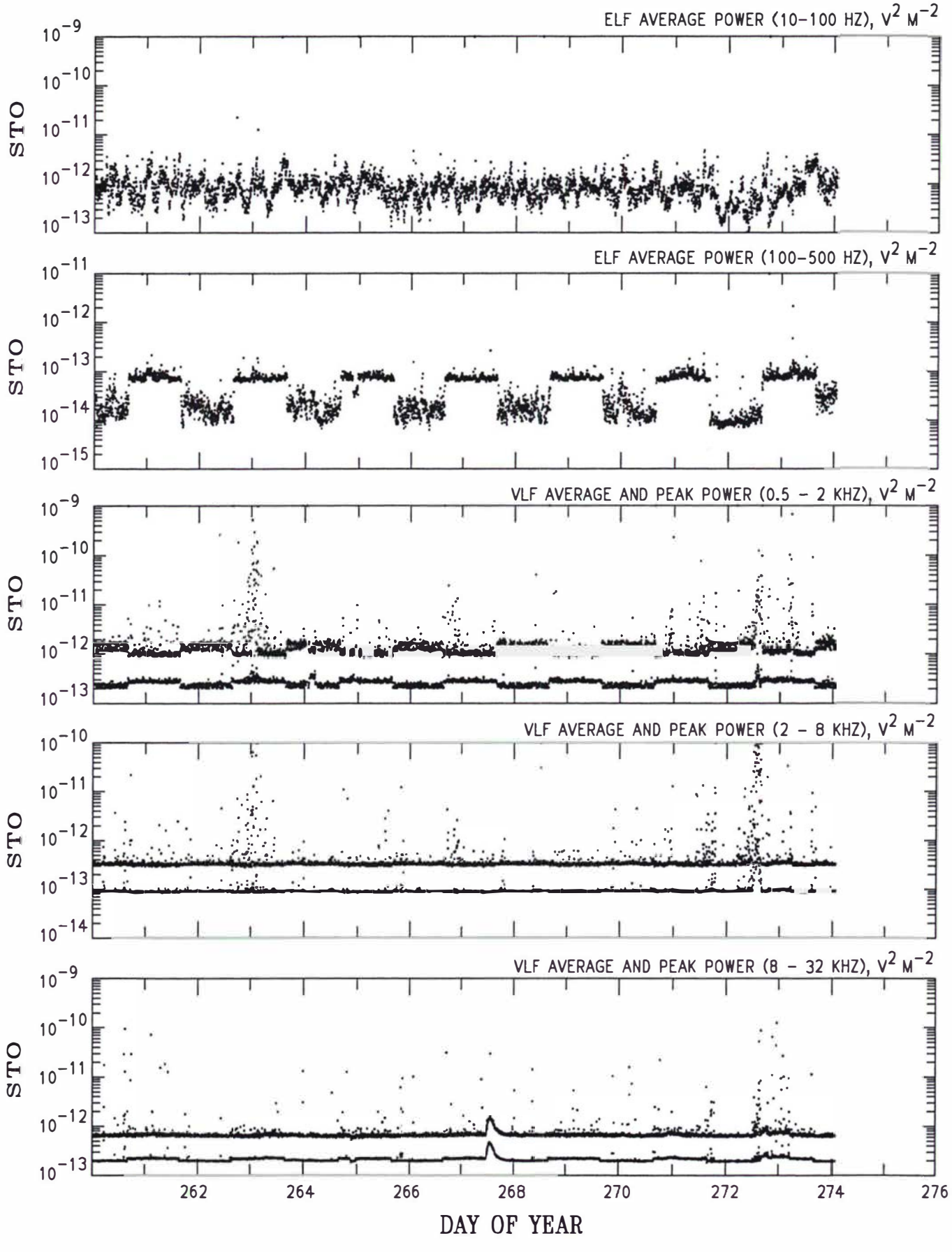
ULYSSES CDR - PLASMA WAVE

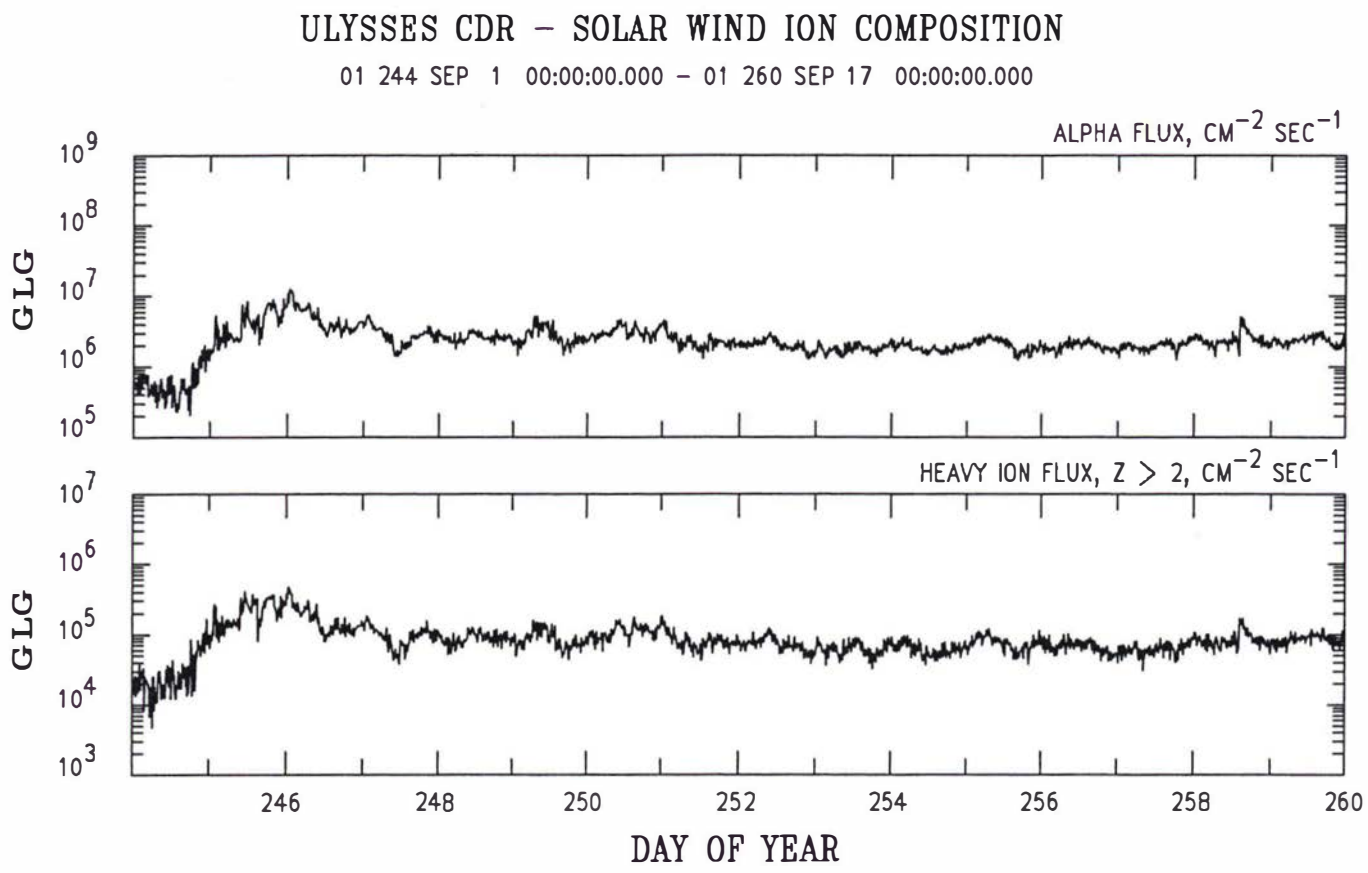
01 244 SEP 1 00:00:00.000 - 01 260 SEP 17 00:00:00.000



ULYSSES CDR - PLASMA WAVE

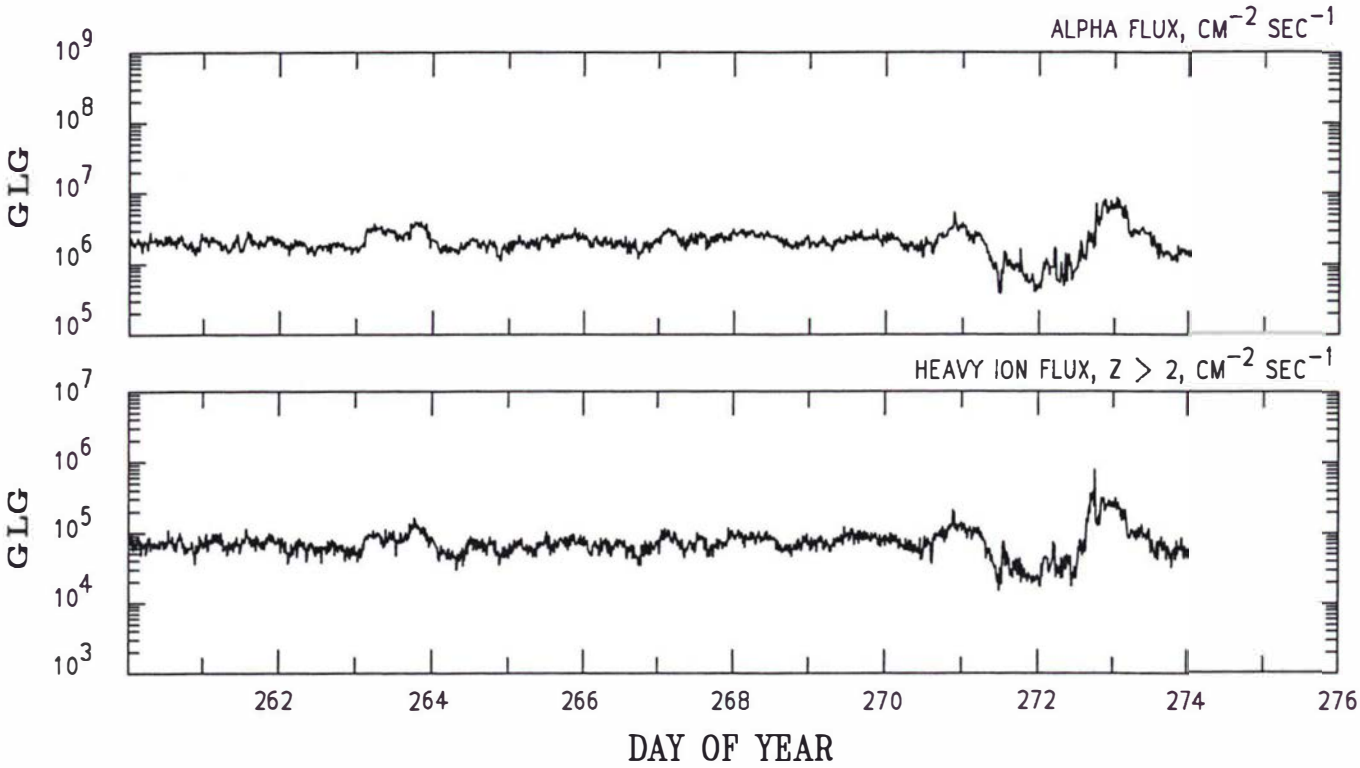
01 260 SEP 17 00:00:00.000 - 01 276 OCT 3 00:00:00.000




ULYSSES CDR – SOLAR WIND ION COMPOSITION
01 244 SEP 1 00:00:00.000 – 01 260 SEP 17 00:00:00.000
ALPHA FLUX, CM^{-2} SEC^{-1}
GLG
10^9
10^8
10^7
10^6
10^5
HEAVY ION FLUX, Z > 2, CM^{-2} SEC^{-1}
GLG
10^7
10^6
10^5
10^4
10^3
246
248
250
252
254
256
258
260
DAY OF YEAR

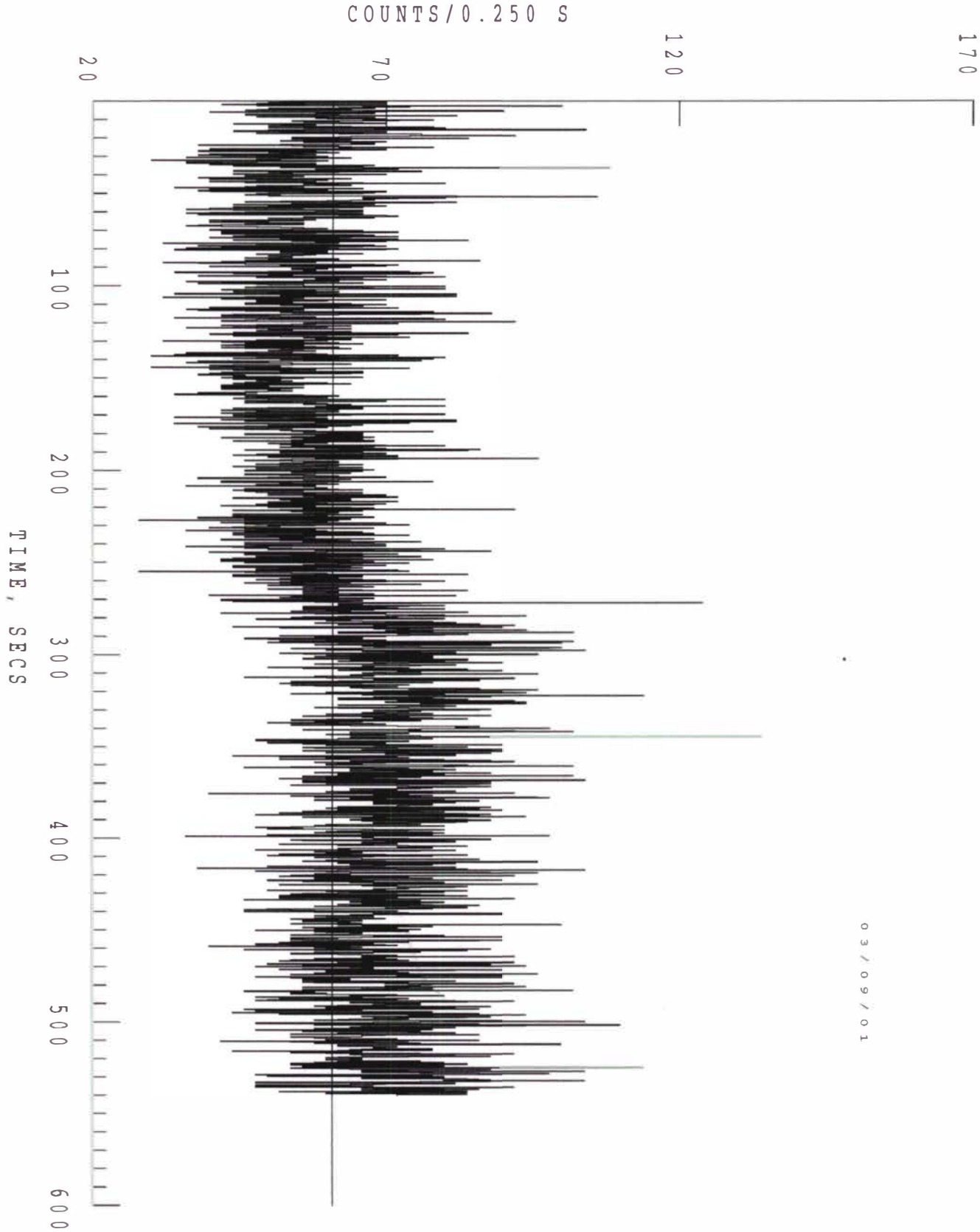
ULYSSES CDR – SOLAR WIND ION COMPOSITION

01 260 SEP 17 00:00:00.000 – 01 276 OCT 3 00:00:00.000



MS01 01/09/01 41870.510

50-3000 keV



MS01 20010901 41870

ULYSSES RT 04/09/01

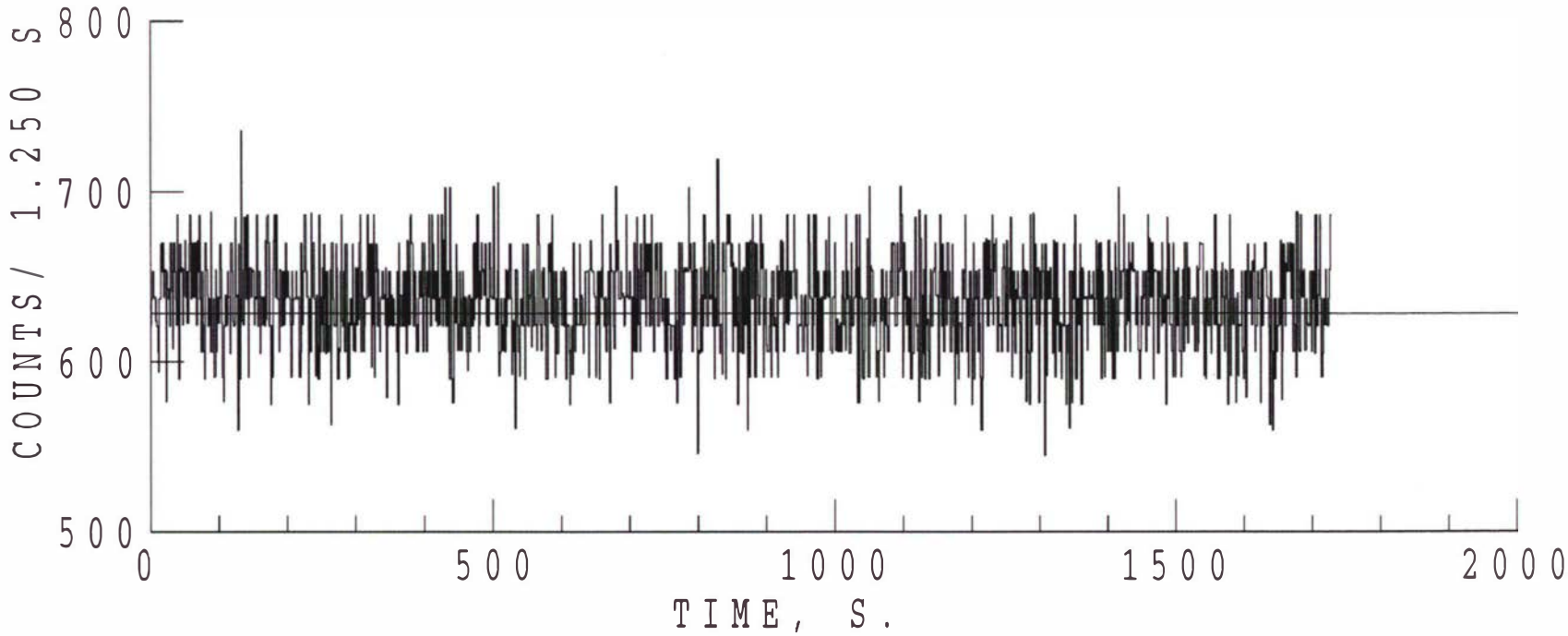
01/09/01 41004.125 s

0.250 S INTERVALS REGROUPED BY 5

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

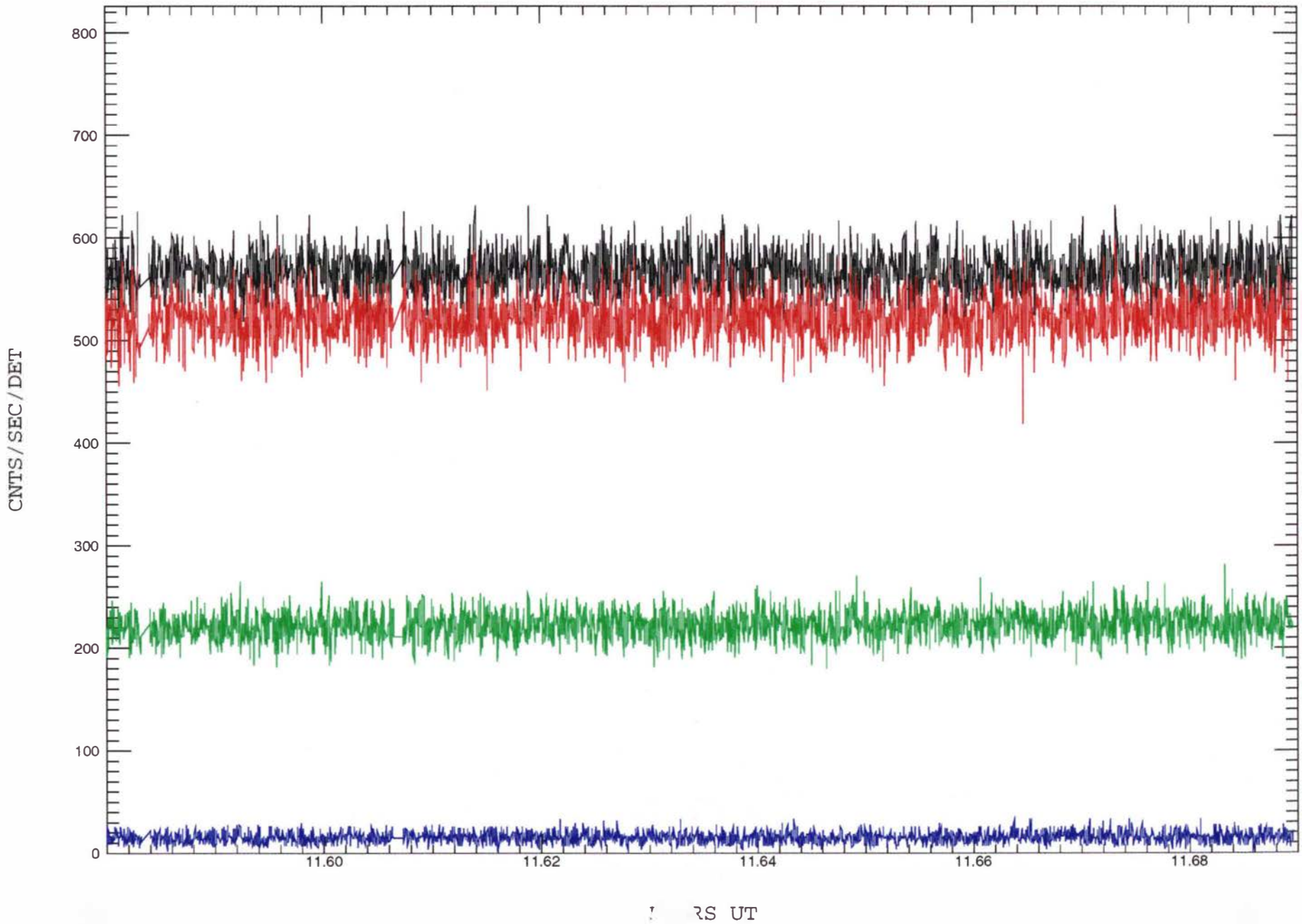


FREGATE SURVEY (TH) TIME HISTORY (AVG x1) -- DETECTORS 1-4 SUMMED (MS01_20010901_41870)

BEG TIME: 01/09/01 DOY 244 Julian 2452154.98250 UT = 11.580 11:34:48 (41688.000 secs) [sct = 0019 4a8b 791a 2c9c]
END TIME: 01/09/01 DOY 244 Julian 2452154.98708 UT = 11.690 11:41:24 (42084.000 secs) [sct = 0019 4a8b 90b4 a8ef]

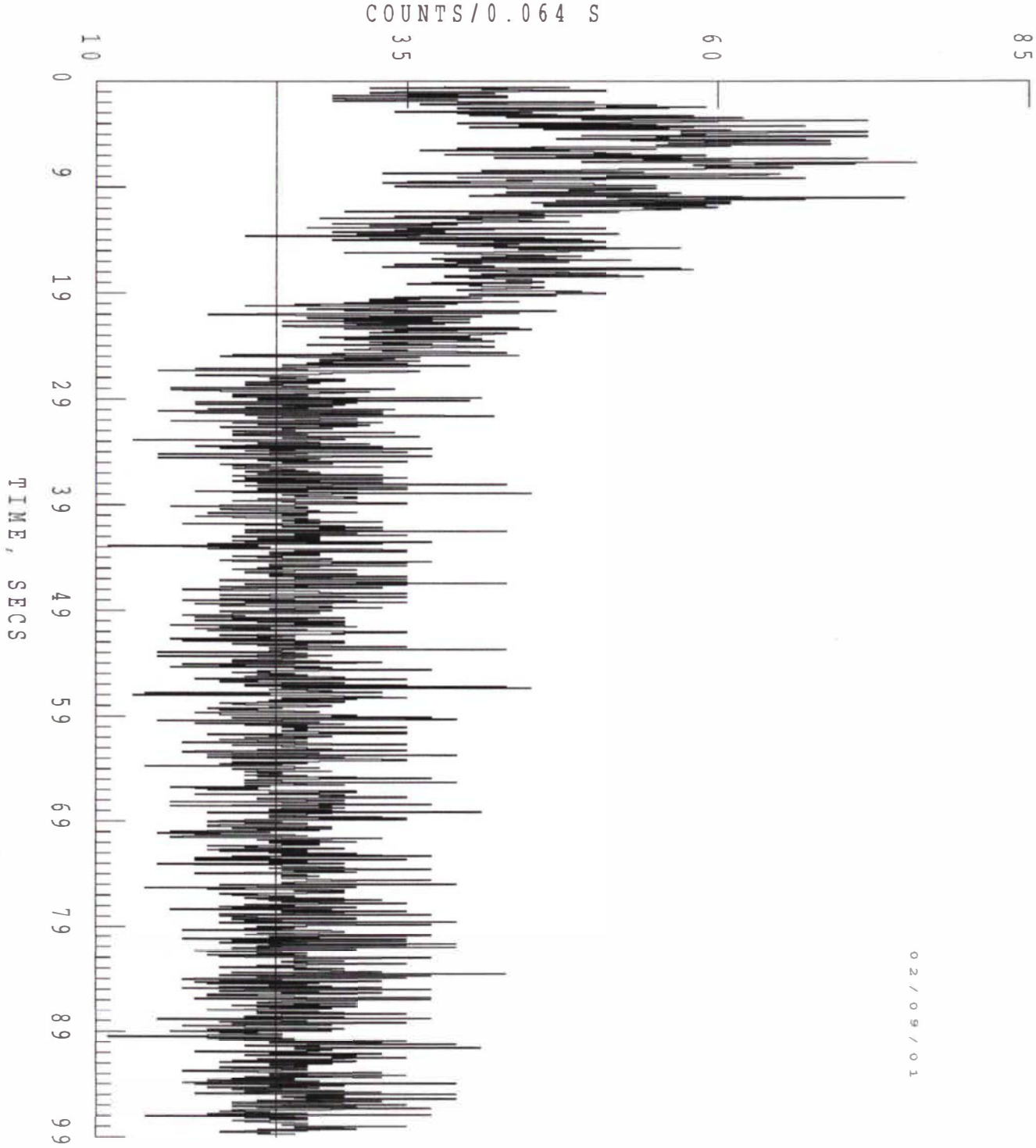
Chan 1:[E1=18 E2=103] Chan 2:[E3=18 E4=78] Chan 3:[E5=20 E6=510] Chan 4:[E6=510 ->]

Channel 1 + 300 Channel 2 + 200 Channel 3 + 100 Channel 4 + 0



KONUS2 01/09/01 74488.115

50- 200 keV Solar



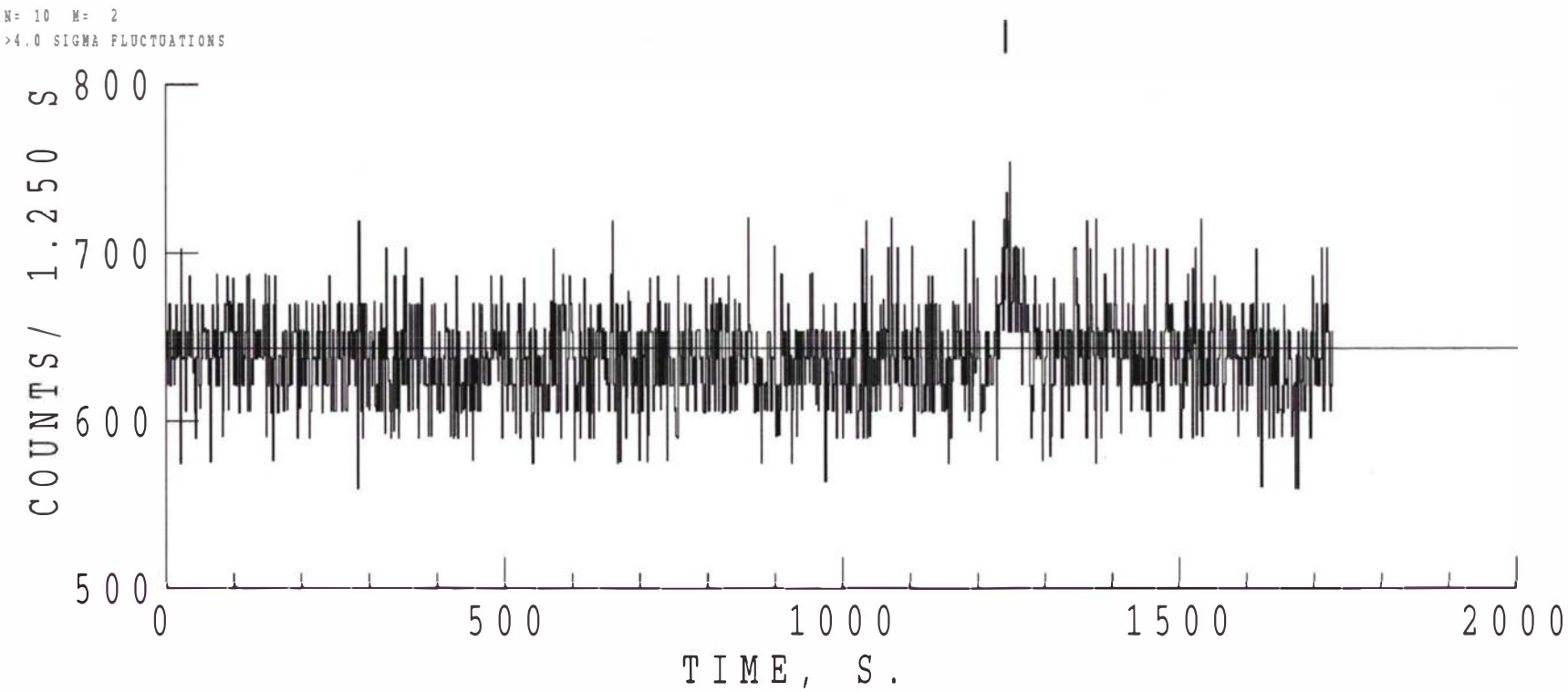
KONUS2 20010901 74488

ULYSSES RT 04/09/01

01/09/01 73620.195 s

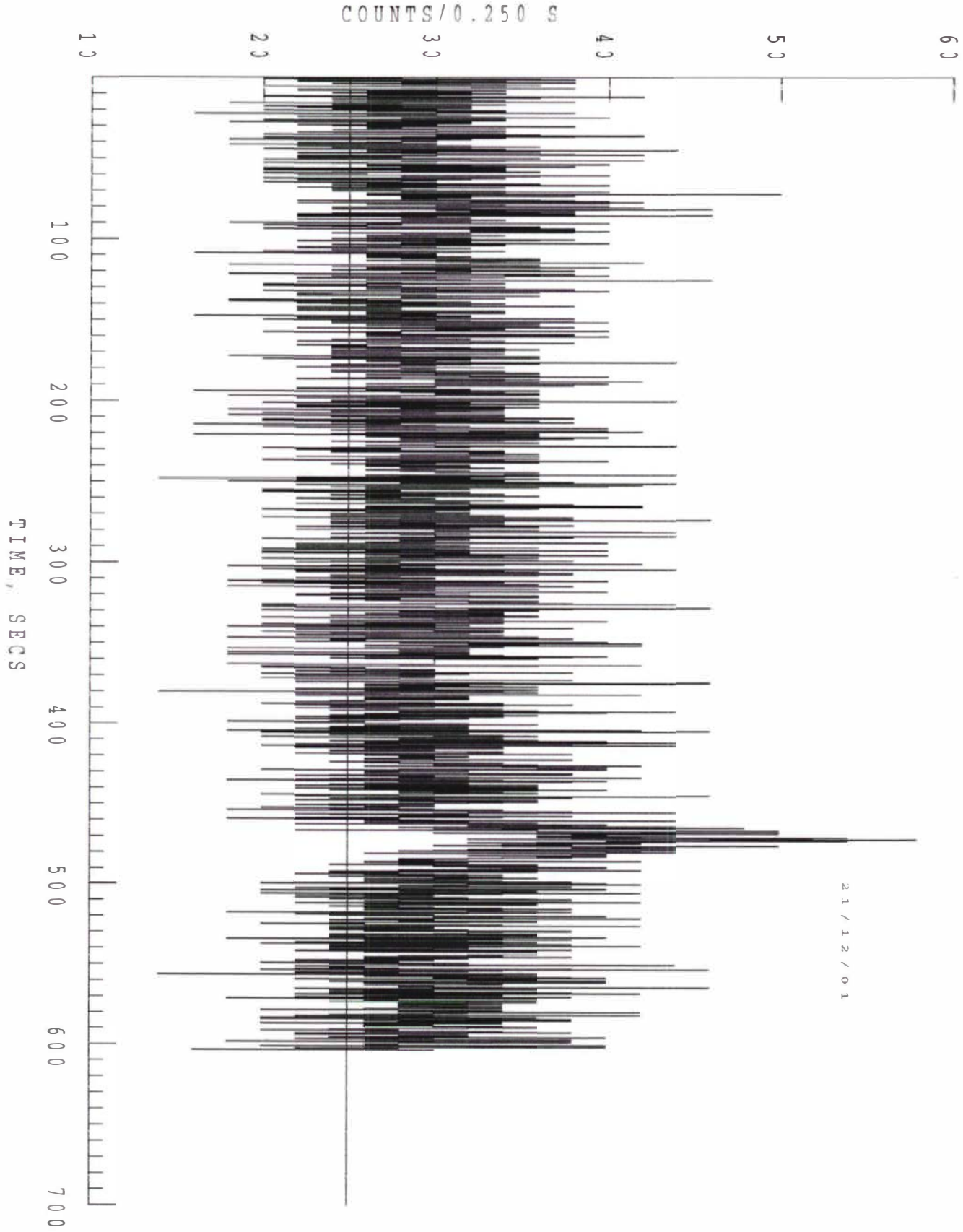
0.250 S INTERVALS REGROUPED BY 5

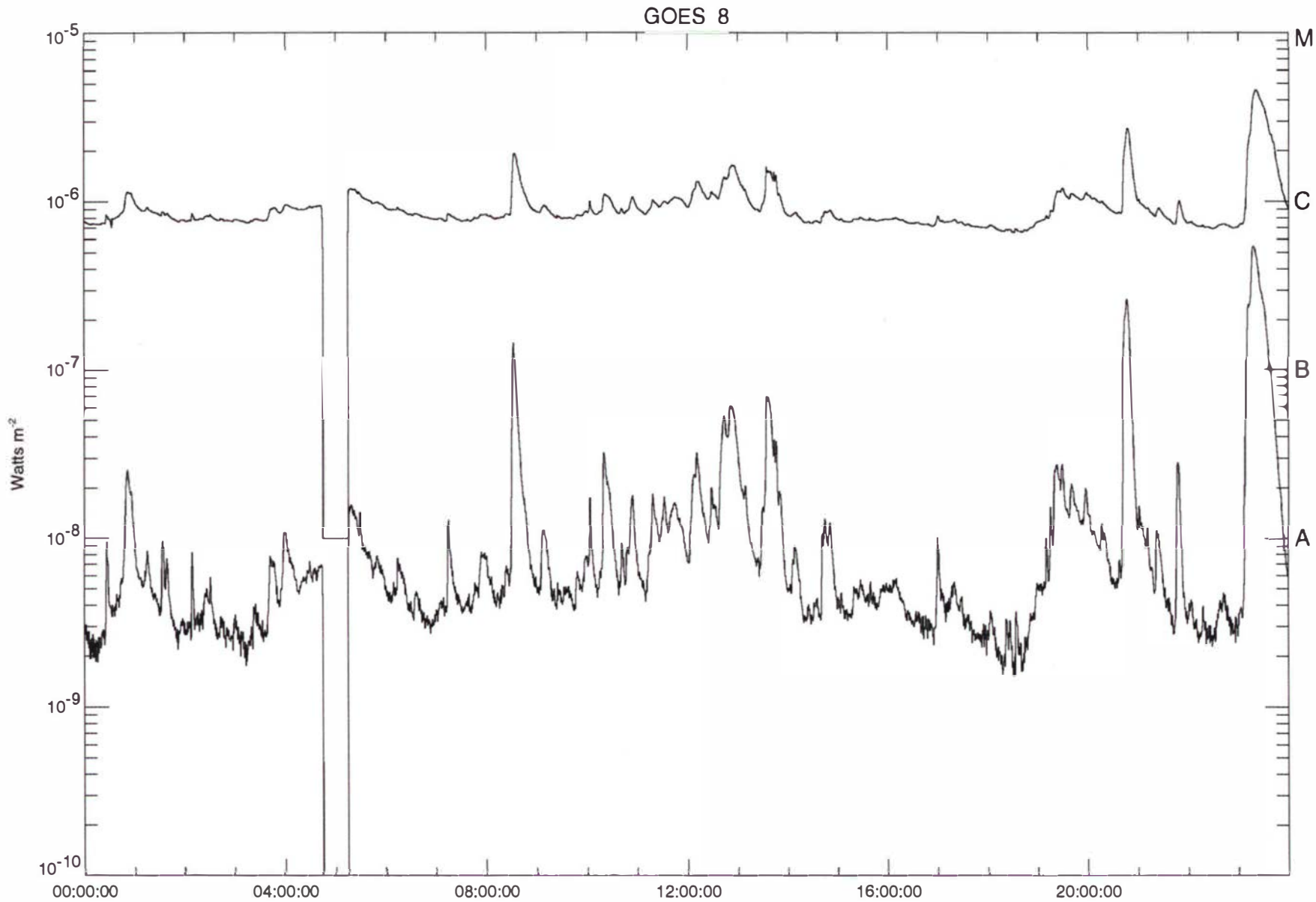
0- 0 keV



MS01 01/09/01 74242.249

50-3000 keV

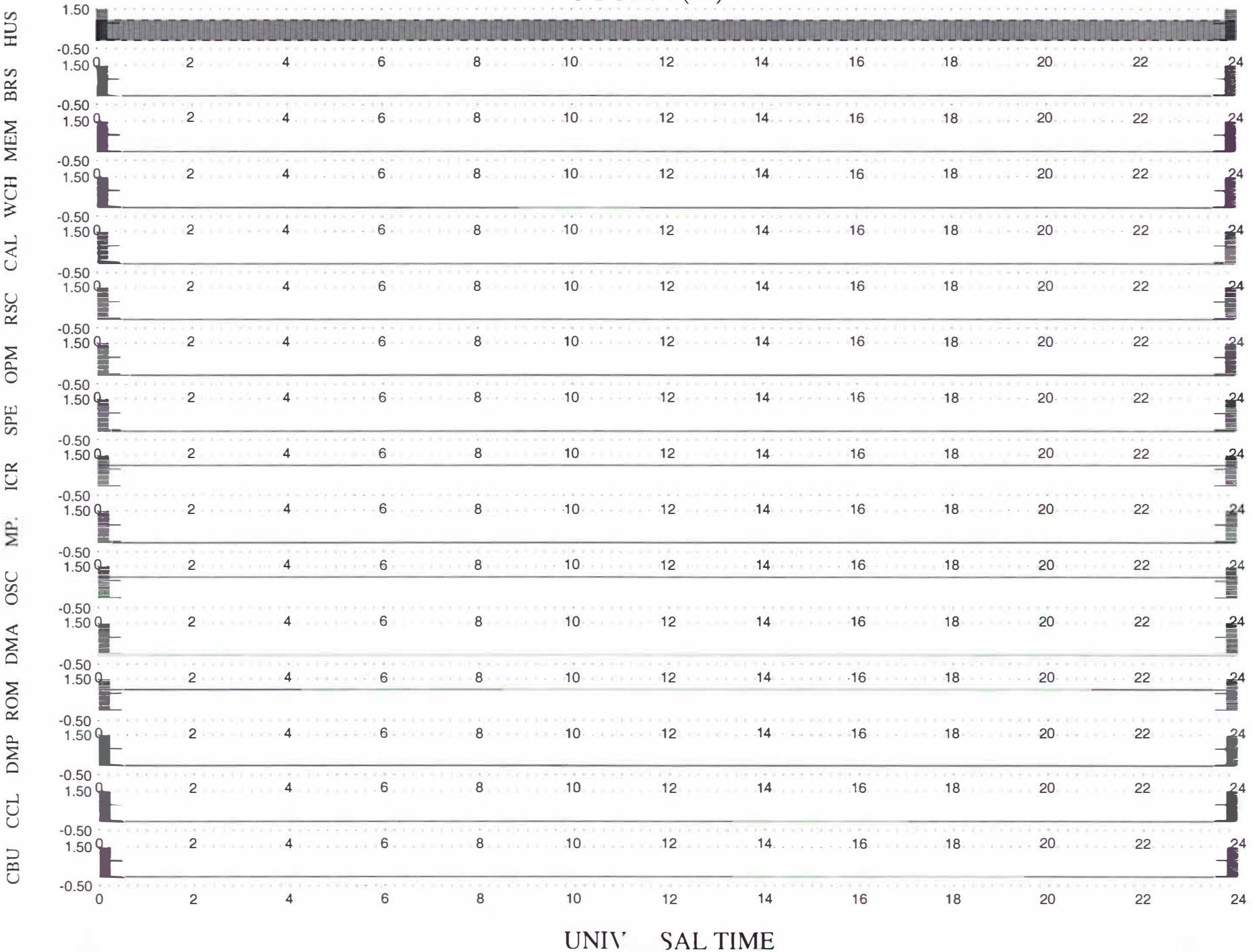




Data Start: 01/09/01, 0000:00 Plot created: 01/09/05, 0951
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

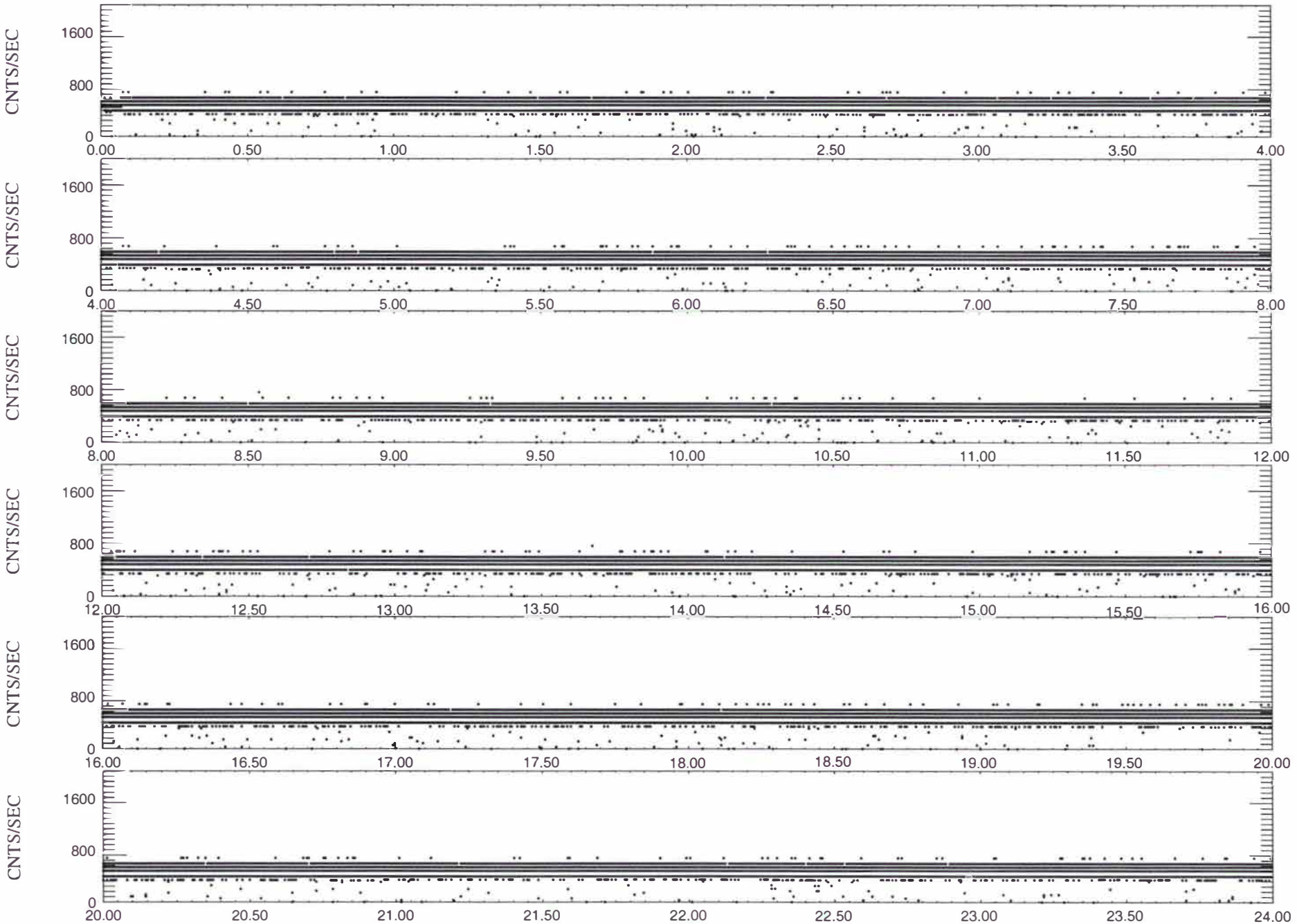
HUS MODES EDR day 244, year 2001 to day 244, year 2001 01/22/02

NO BURST (11)



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 01/09/2001 DOY = 244 01/22/02

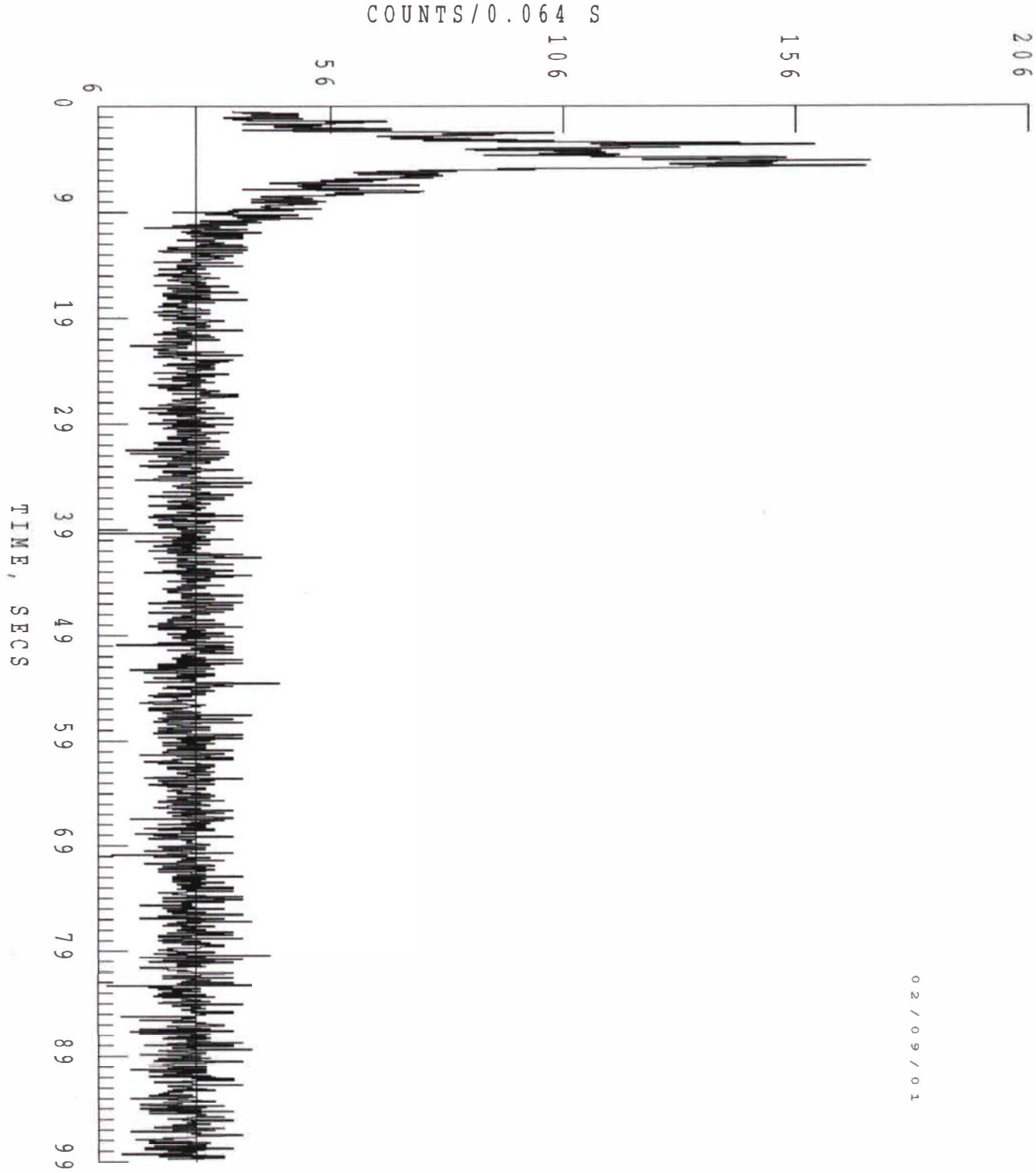
CALIBRATION DATA INCLUDED



UNIVERSAL TIME

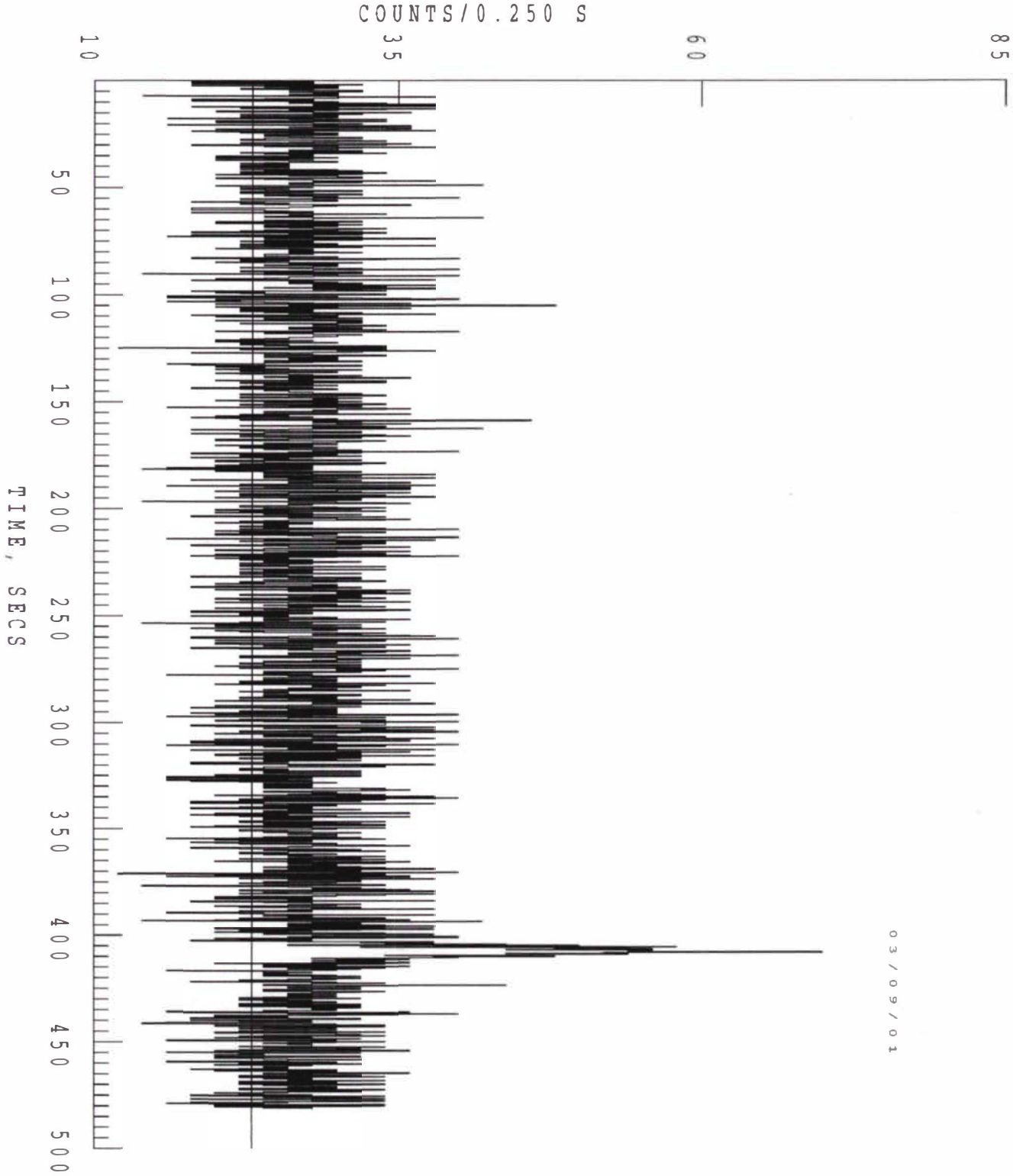
KONUS2 02/09/01 20615.109

50- 200 keV Solar



MS01 02/09/01 20386.761

50-3000 keV



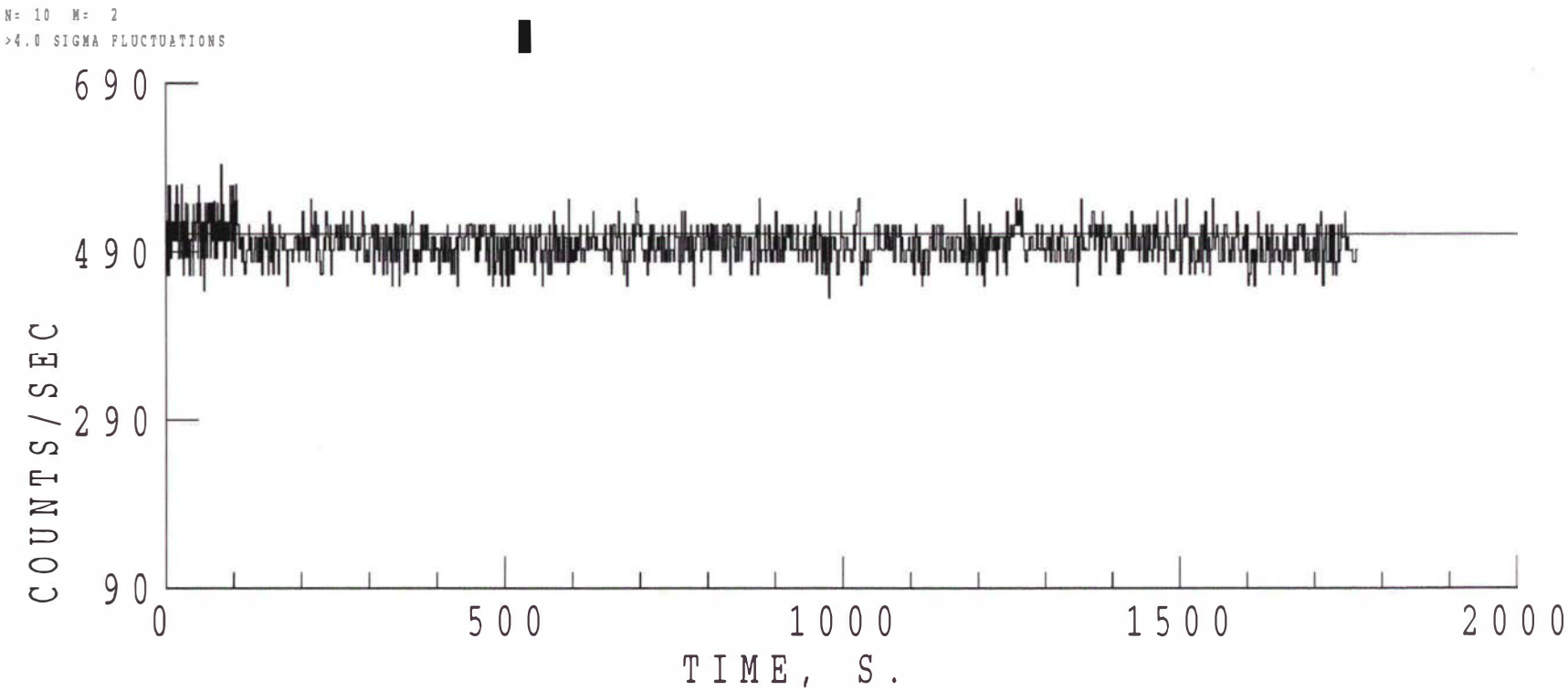
KONUS2 20010902 20615

ULYSSES RT 04/09/01

02/09/01 19728.016 s

INTERVALS REGROUPED BY 3

0- 0 keV

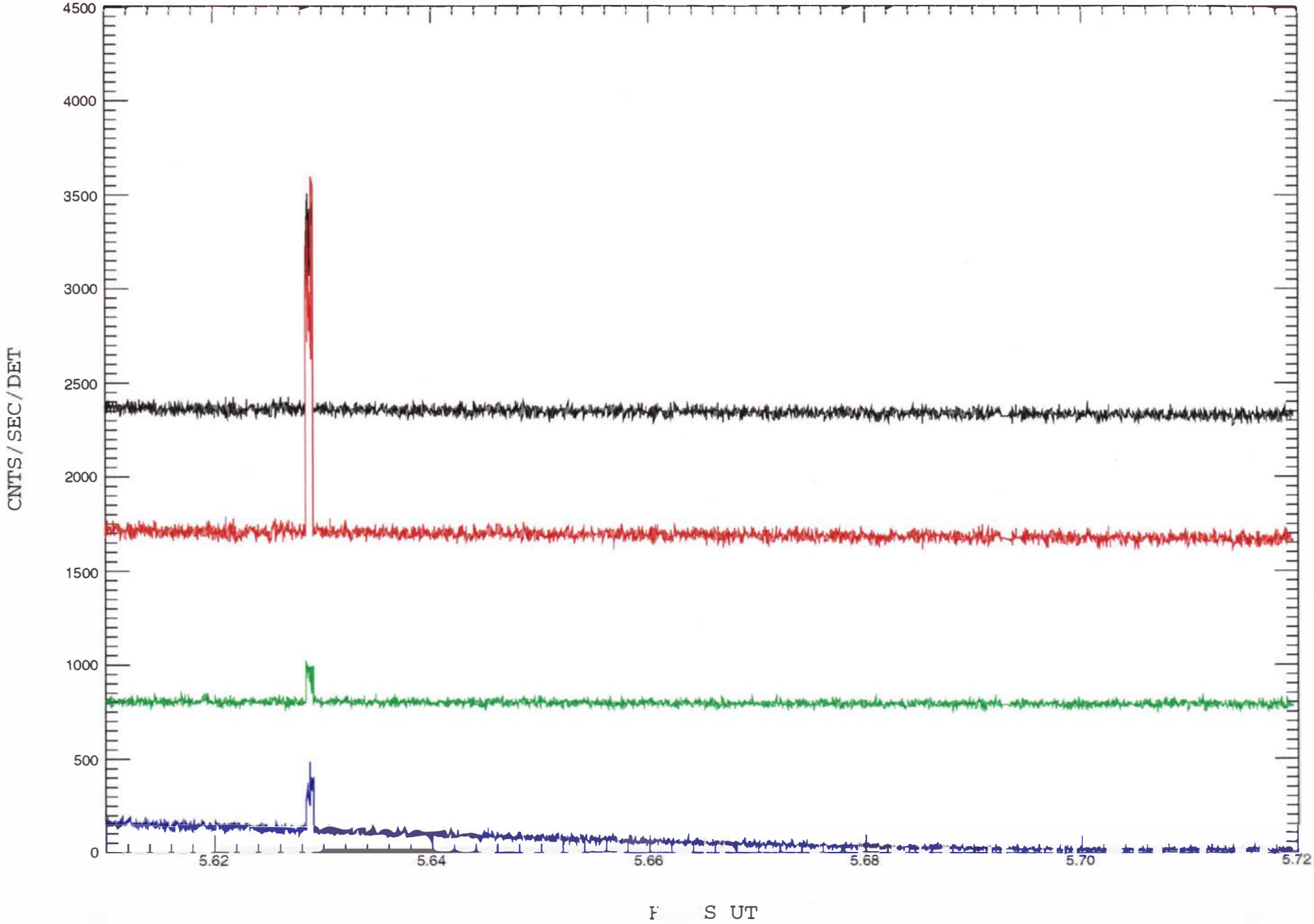


FREGATE SURVEY (TH) TIME HISTORY (AVG x1) -- DETECTORS 1-4 SUMMED (MS01_20010902_20386)

BEG TIME: 02/09/01 DOY 245 Julian 2452155.73375 UT = 05.610 05:36:36 (20196.000 secs) [sct = 0019 4a9a 95ec 80f6]
END TIME: 02/09/01 DOY 245 Julian 2452155.73833 UT = 05.720 05:43:12 (20592.000 secs) [sct = 0019 4a9a ad86 fd49]

Chan 1:[E1=18 E2=103] Chan 2:[E3=18 E4=78] Chan 3:[E5=20 E6=510] Chan 4:[E6=510 ->]

Channel 1 + 2100 Channel 2 + 1400 Channel 3 + 700 Channel 4 + 0

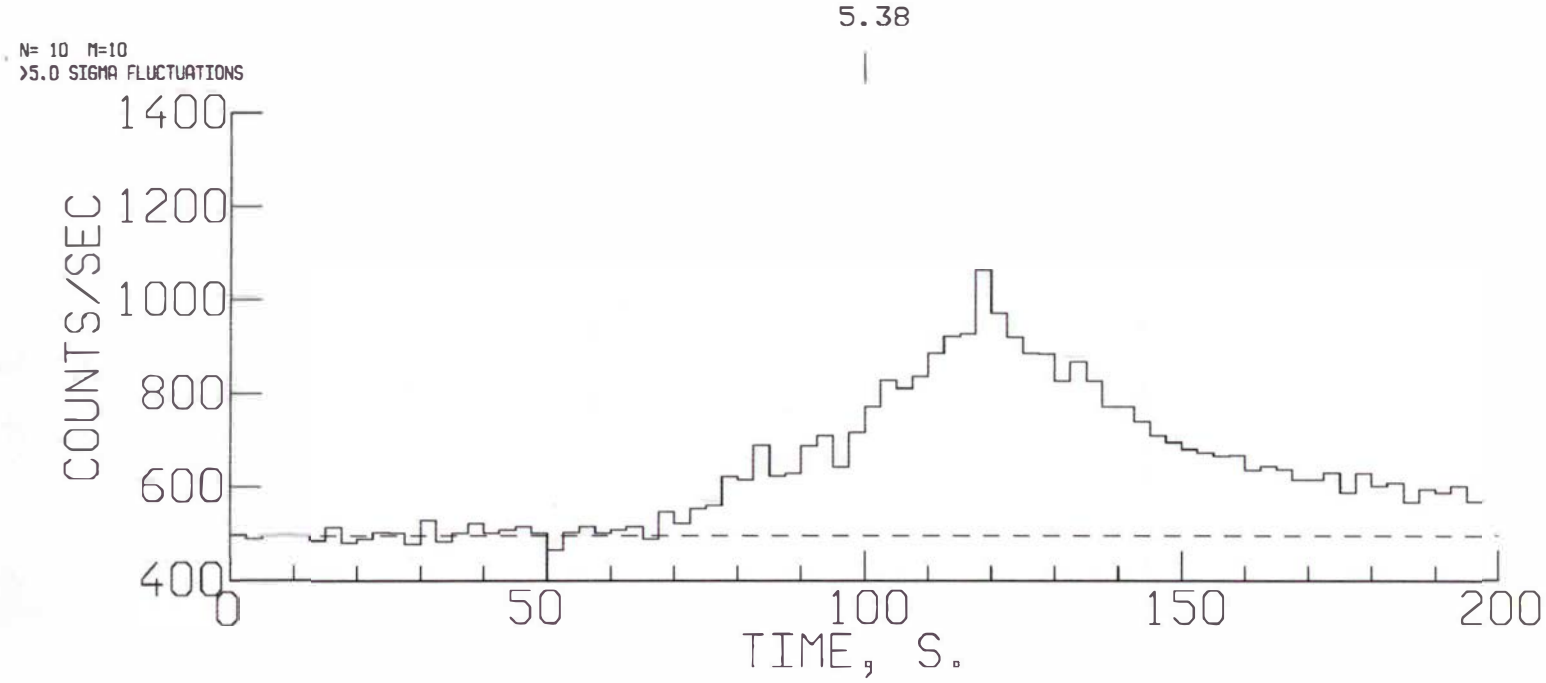


ULYSSES RT 8/ 9/ 1

2/ 9/ 1 33714.514 s

0.250 S INTERVALS REGROUPED BY 10

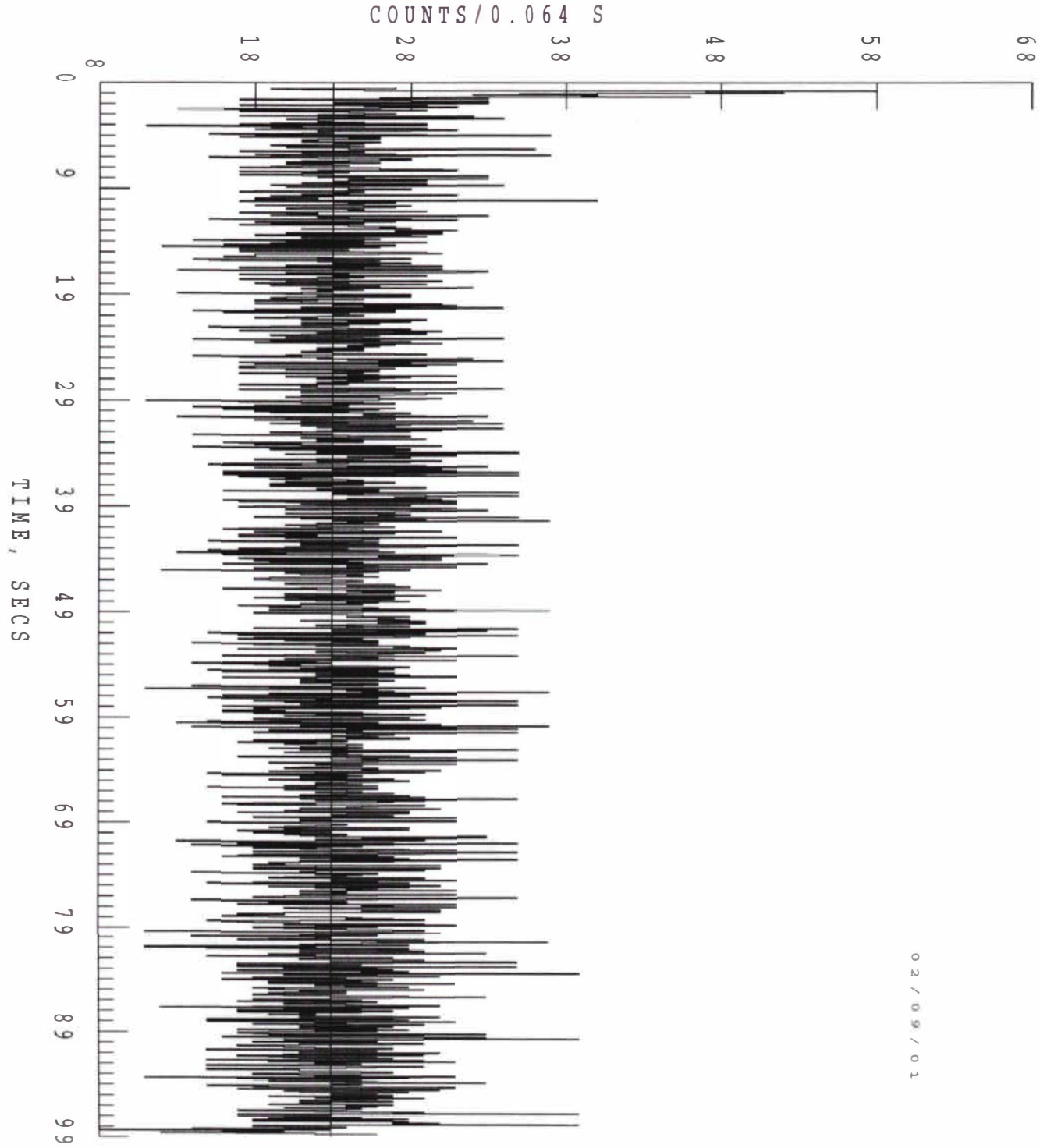
23- 155 keV



KONUS1 02/09/01 42114.822

50- 200 keV

GRB

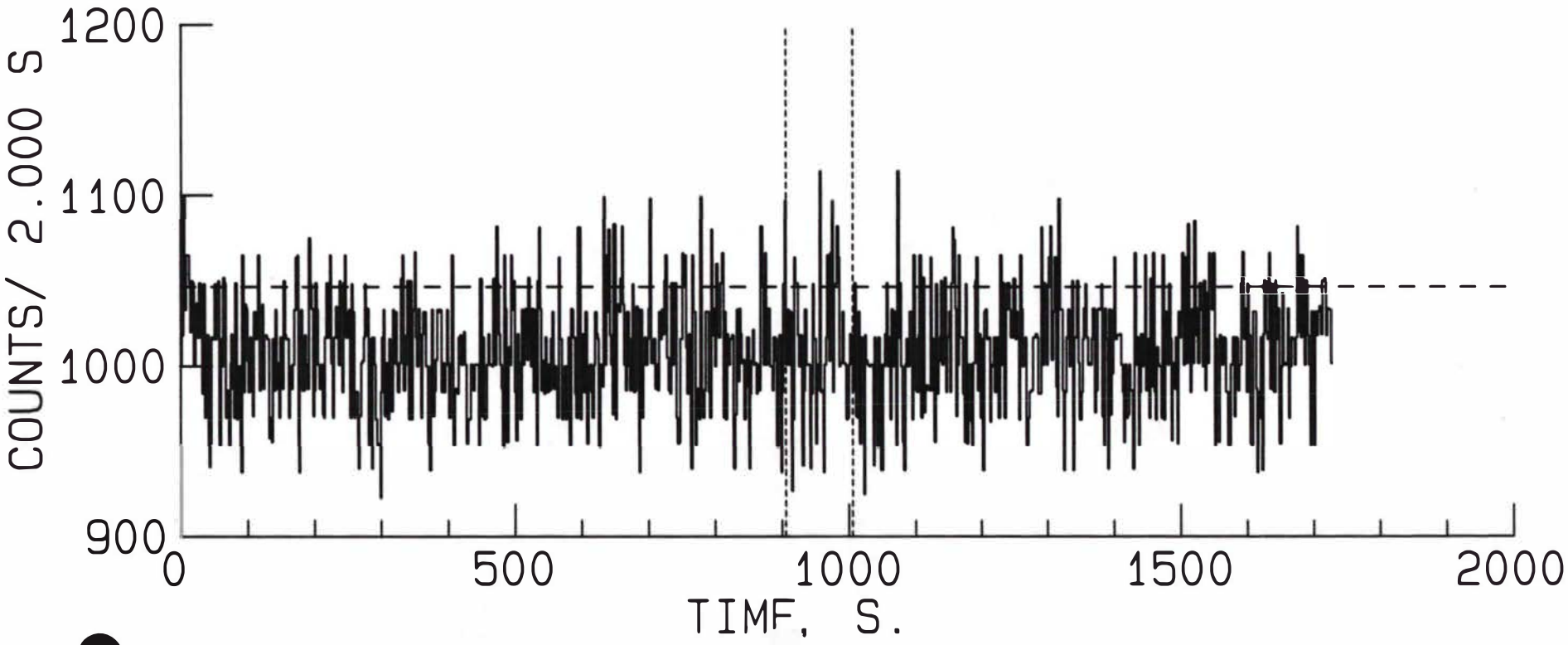


ULYSSES RT 17/ 5/ 4

2/ 9/ 1 41256.148 s

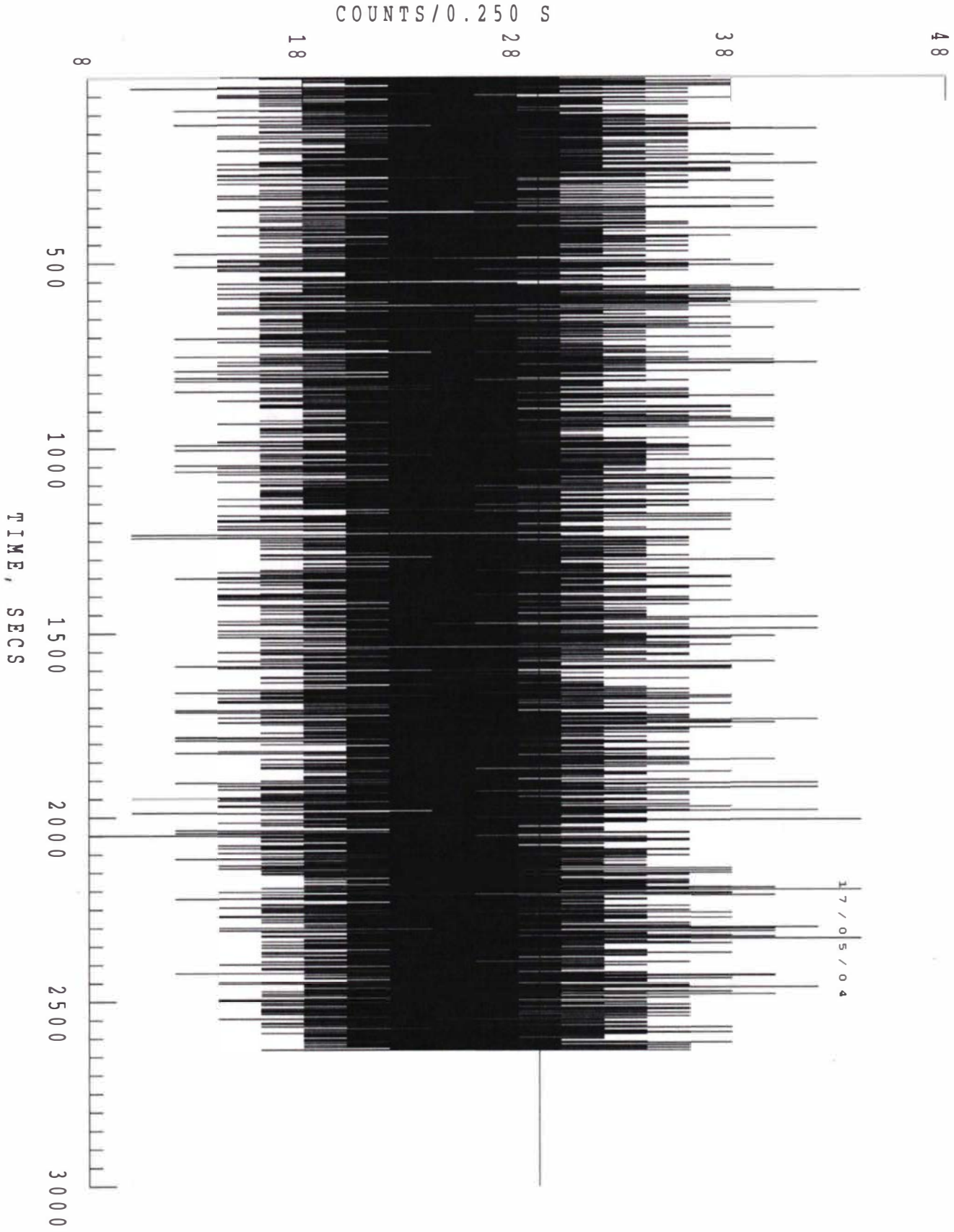
0.250 S INTERVALS REGROUPED BY 8

23- 153 keV

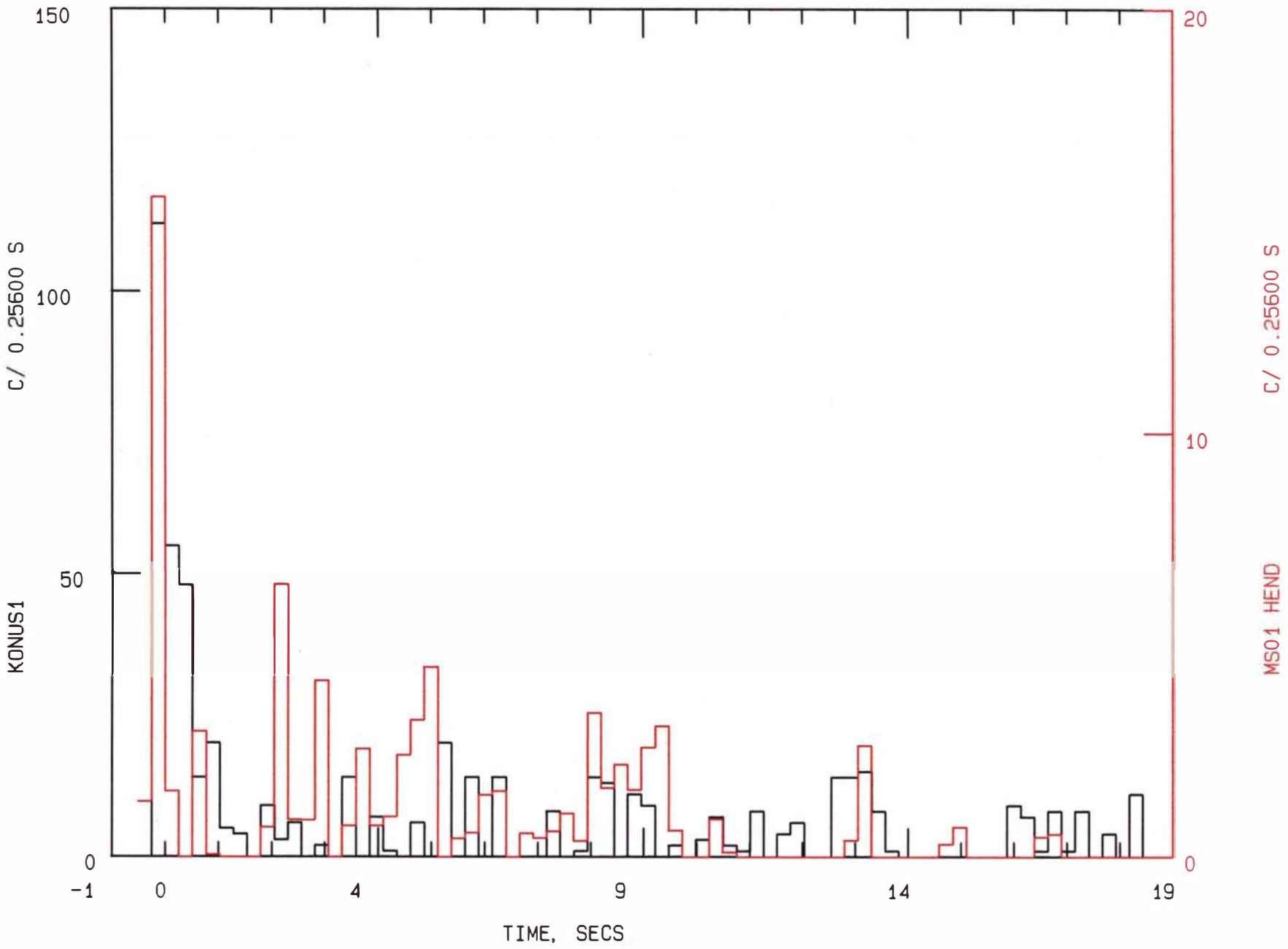


MS01 02/09/01 40791.594

50- 3000 keV

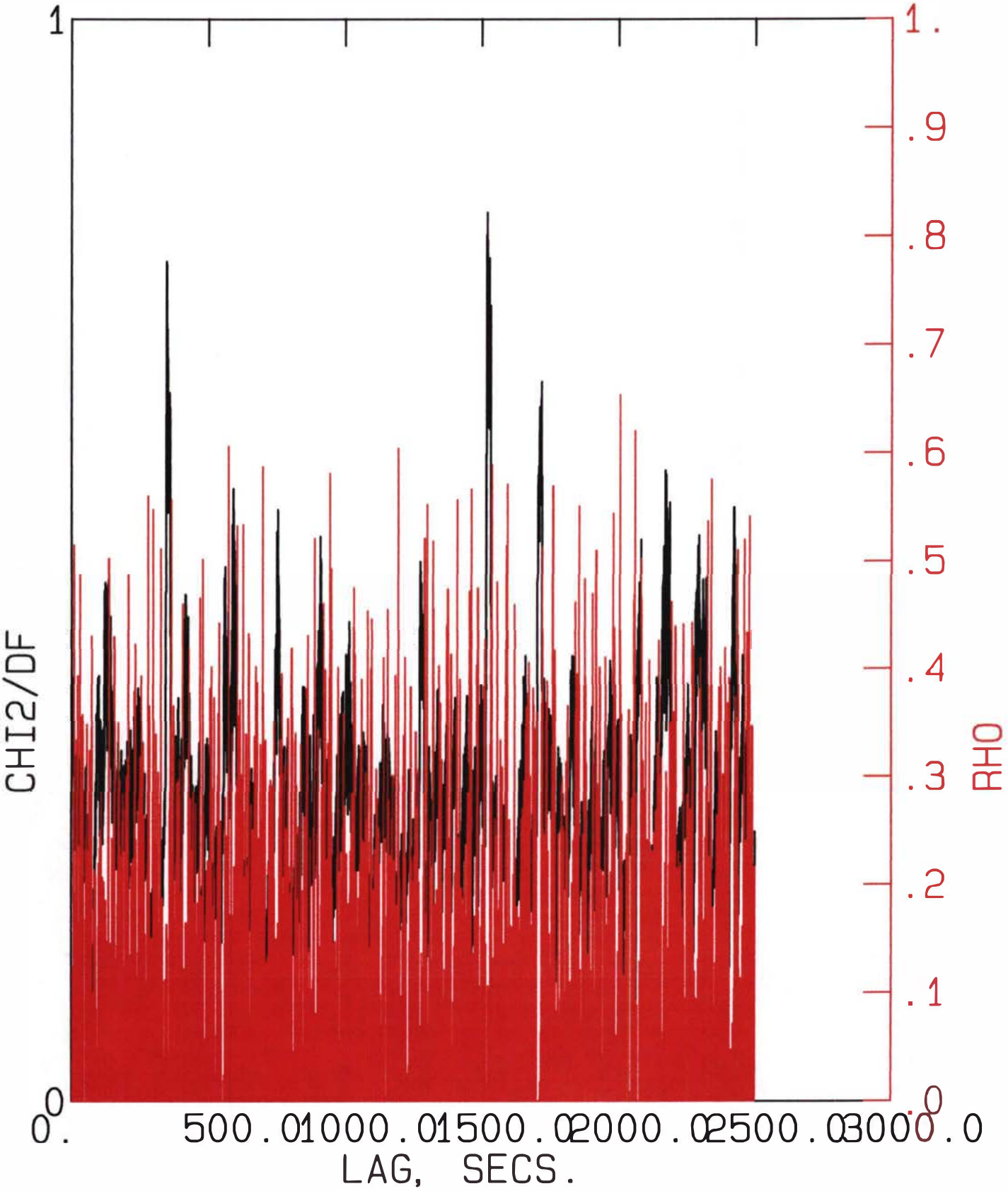


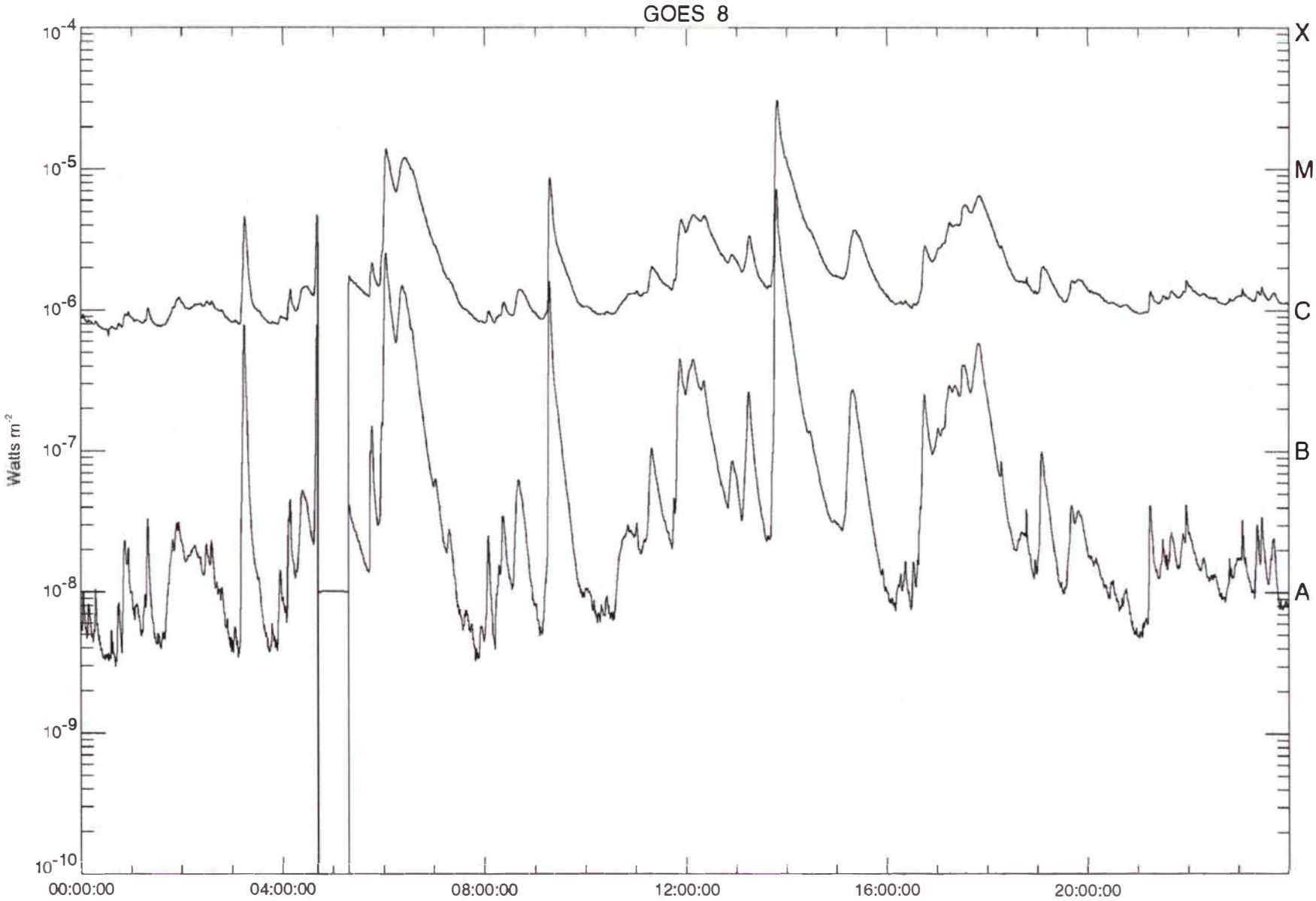
KONUS1 -MS01 HEND CORRELATION 02/09/01 42114.822 17/ 5/ 4



17/ 5/ 4

KONUS1 -MS01 HEND CORRELATION 02/09/01 42114.822

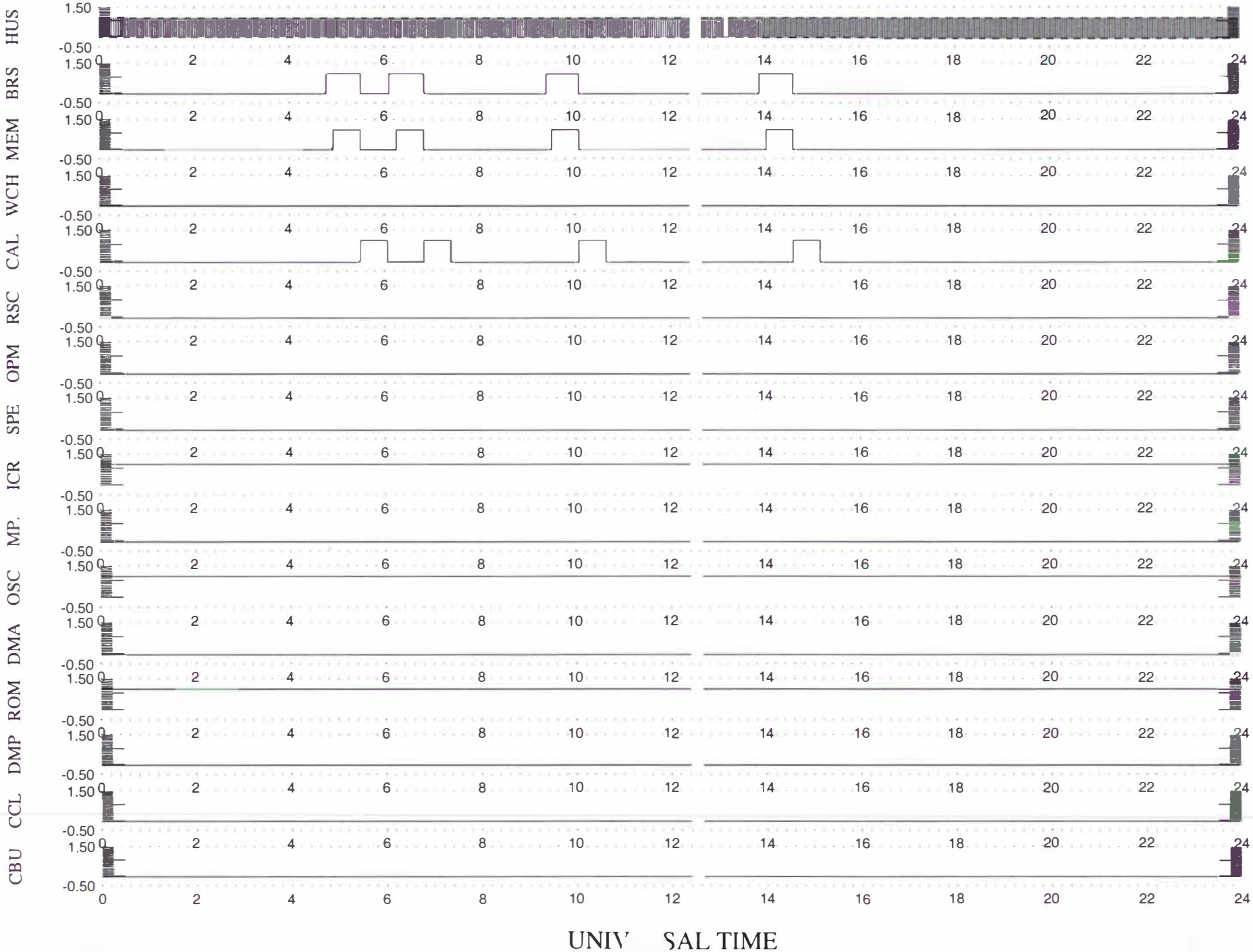




Data Start: 01/09/02, 0000:00 Plot created: 01/09/06, 0951
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

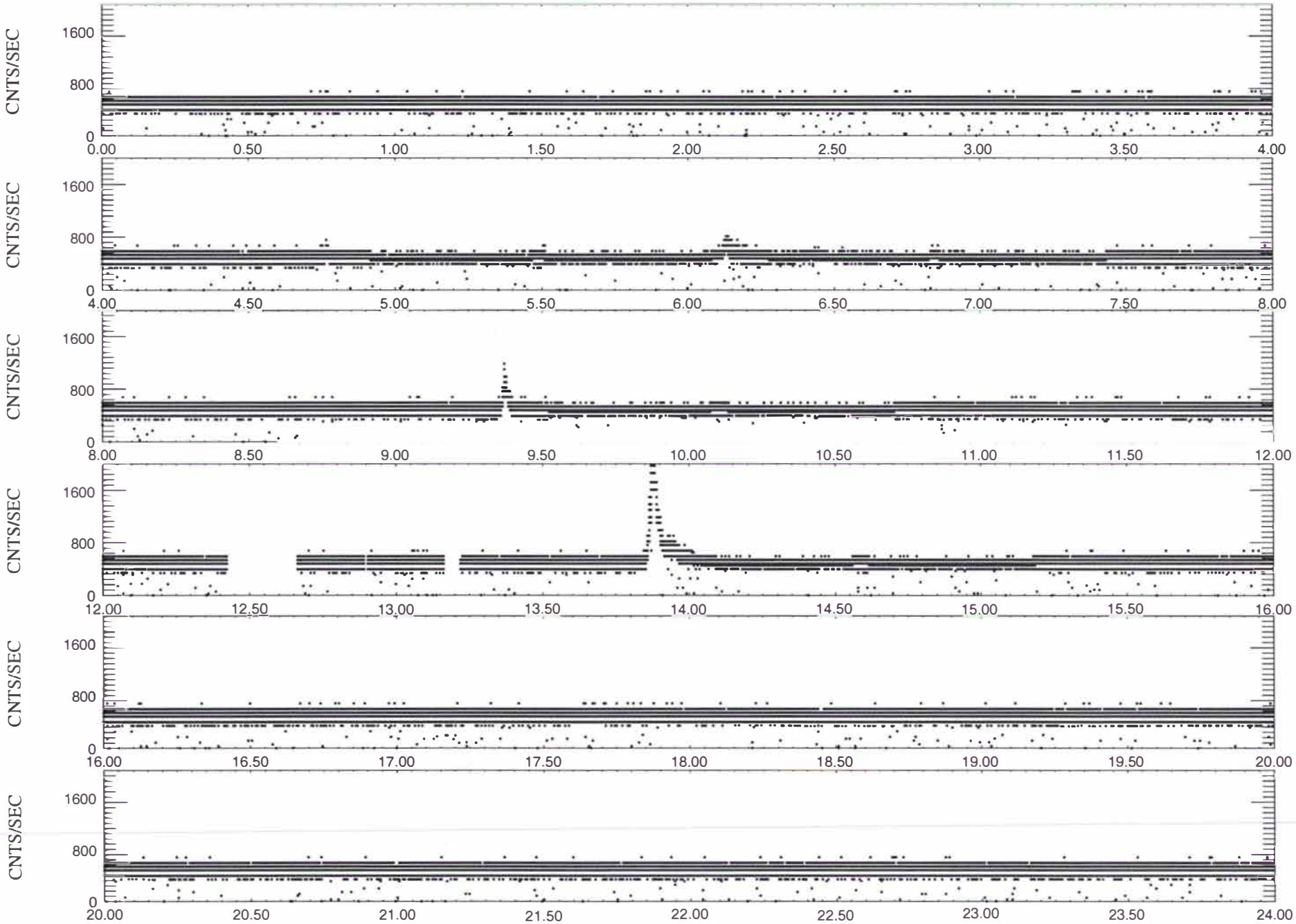
HUS MODES EDR day 245, year 2001 to day 245, year 2001 01/22/02

BURST NUMBER 12 - 15



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 02/09/2001 DOY = 245 01/22/02

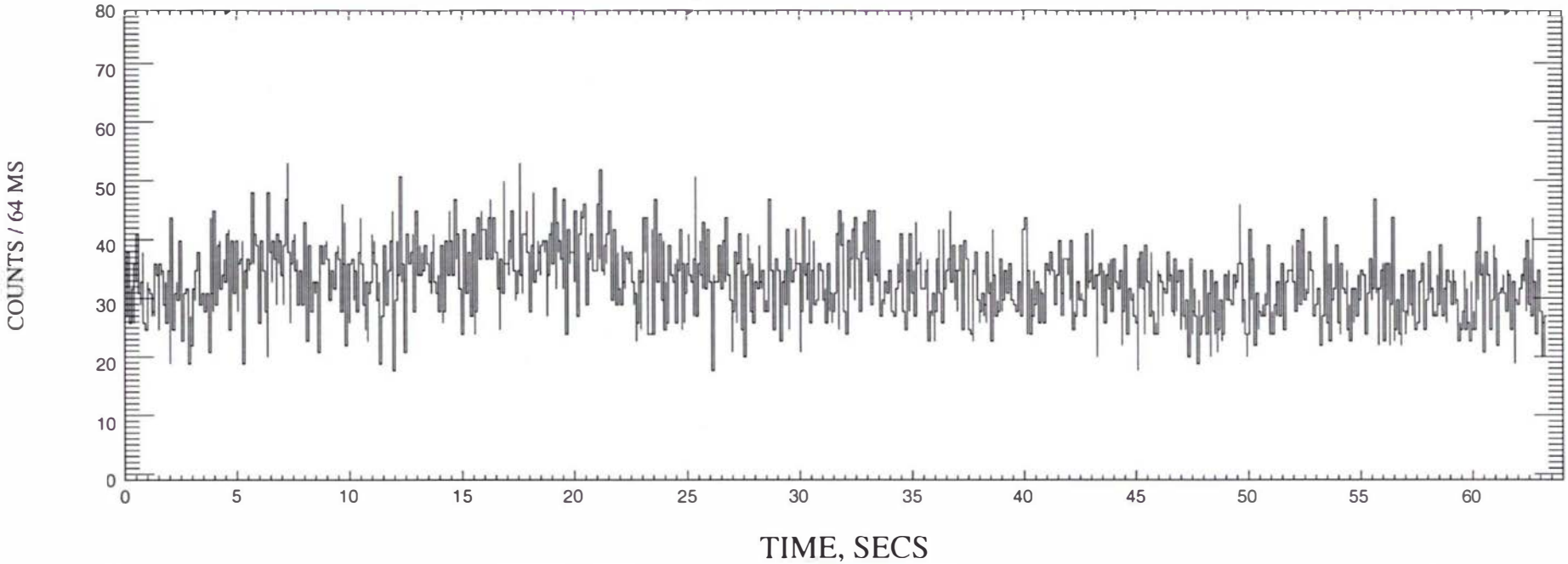
CALIBRATION DATA INCLUDED

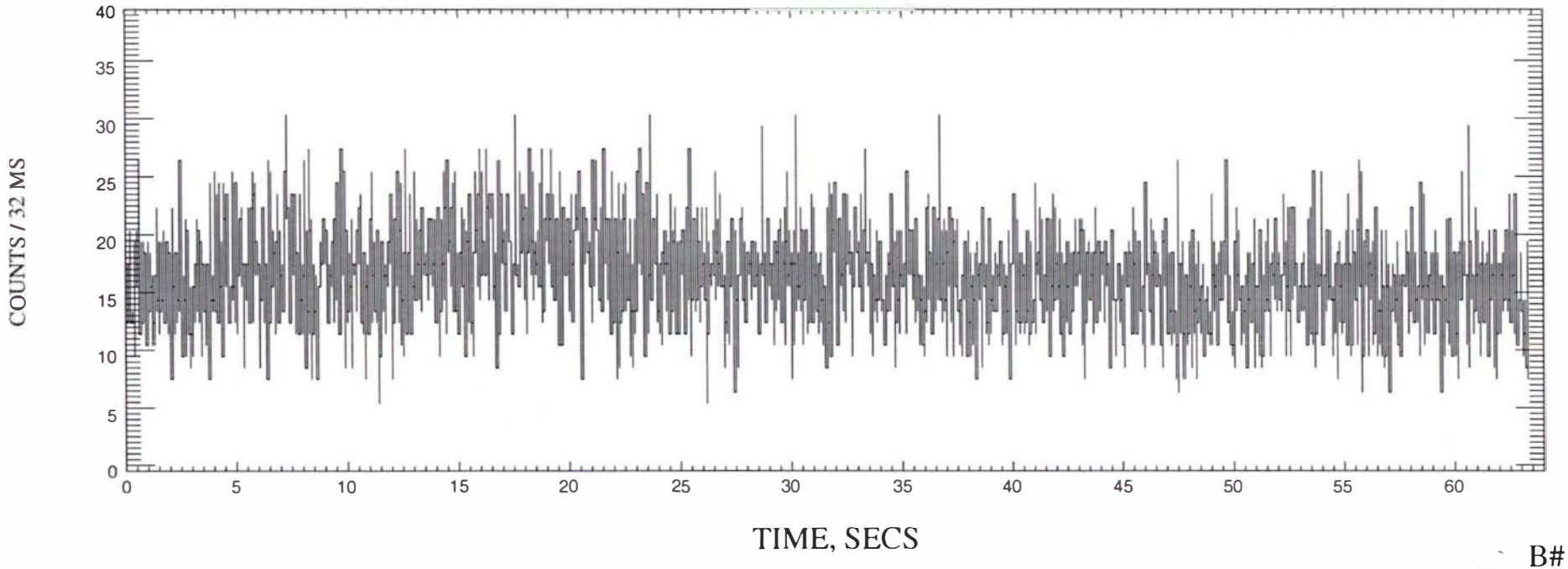


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 02/09/2001 DOY = 245 01/22/02

Burst Counter 12 at UT= 4.760582046509 h=17138.095 s 04:45:38.095

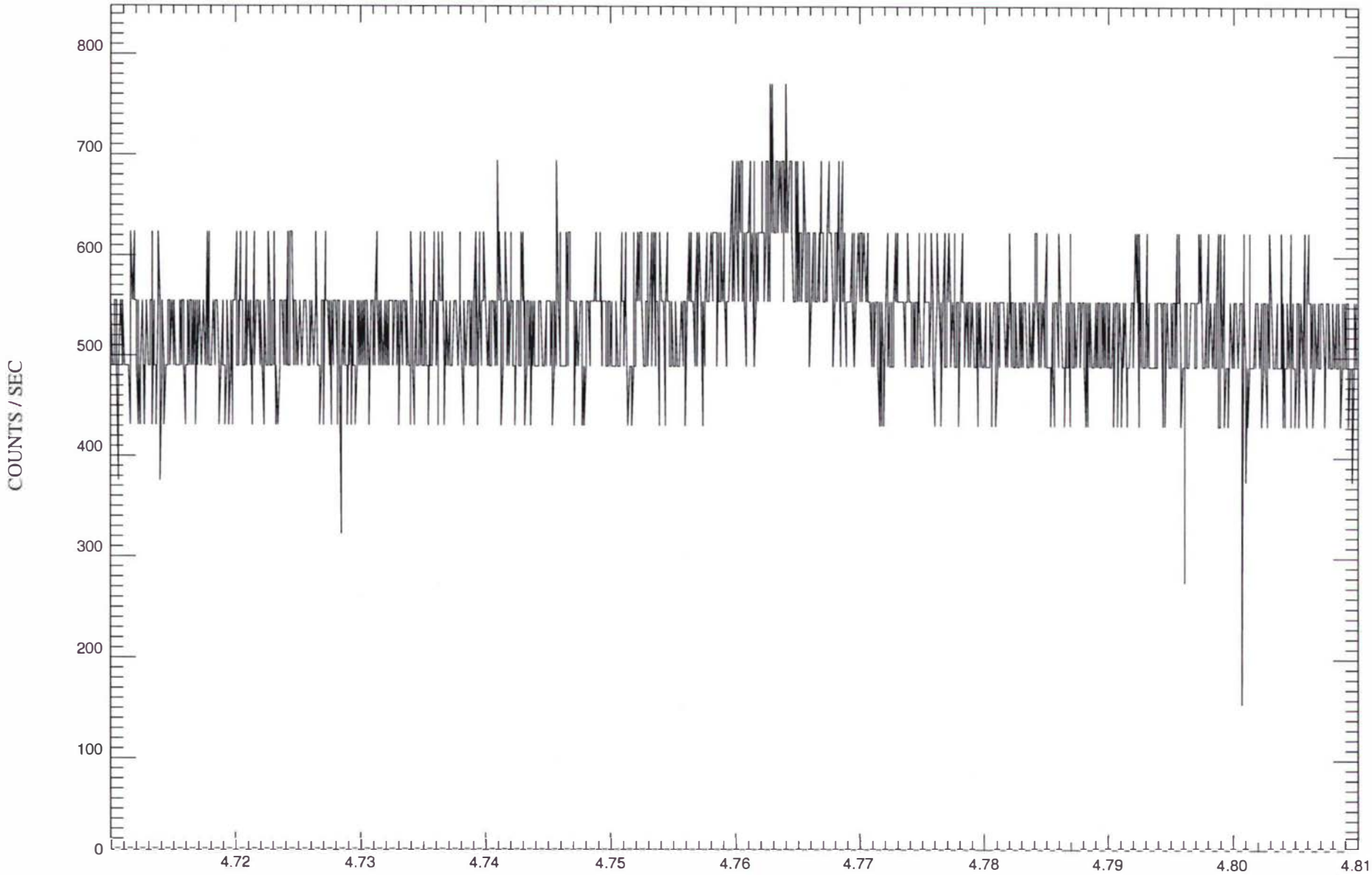




B# 1

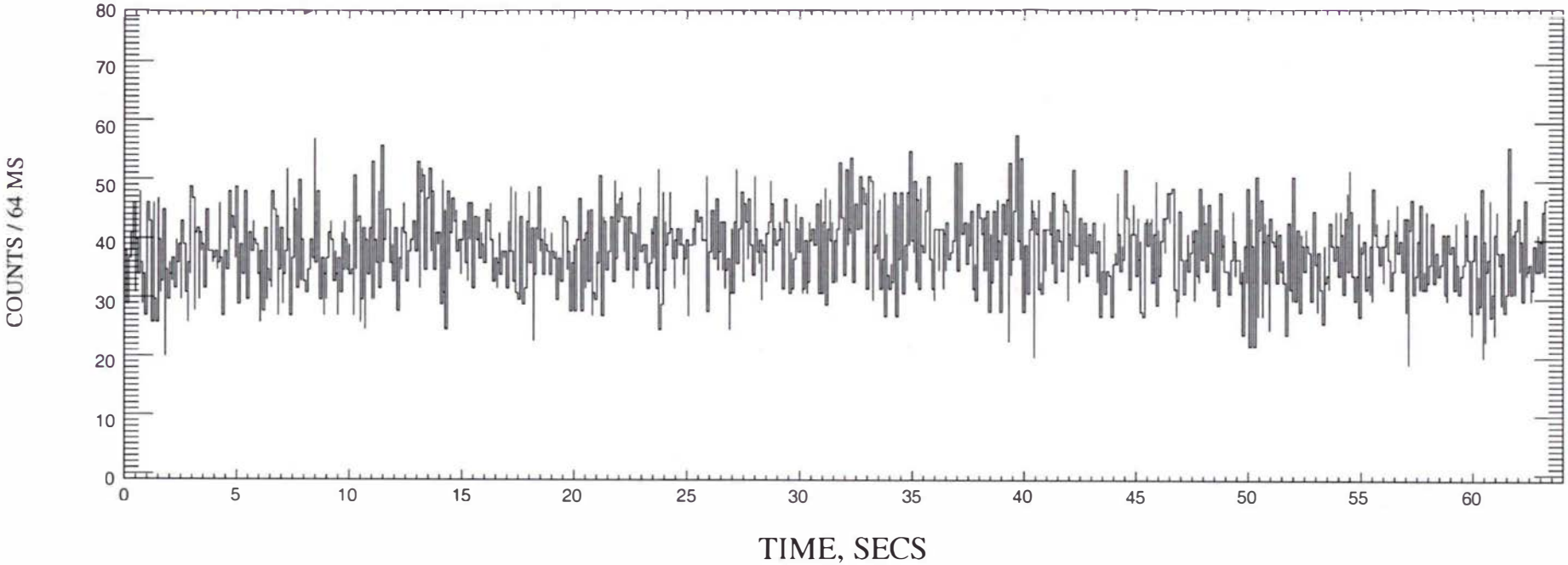
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 02/09/2001 DOY = 245 01/22/02

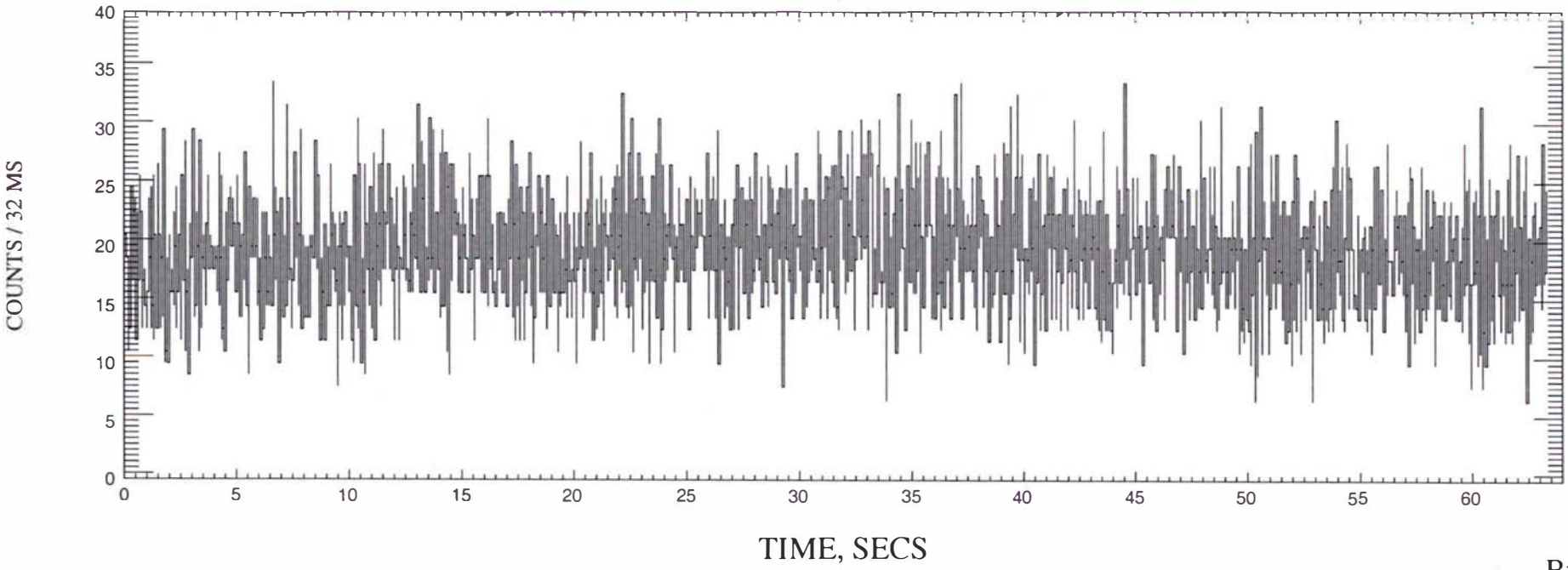
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 02/09/2001 DOY = 245 01/22/02

Burst Counter 13 at UT= 6.119772461785 h=22031.181 s 06:07:11.181

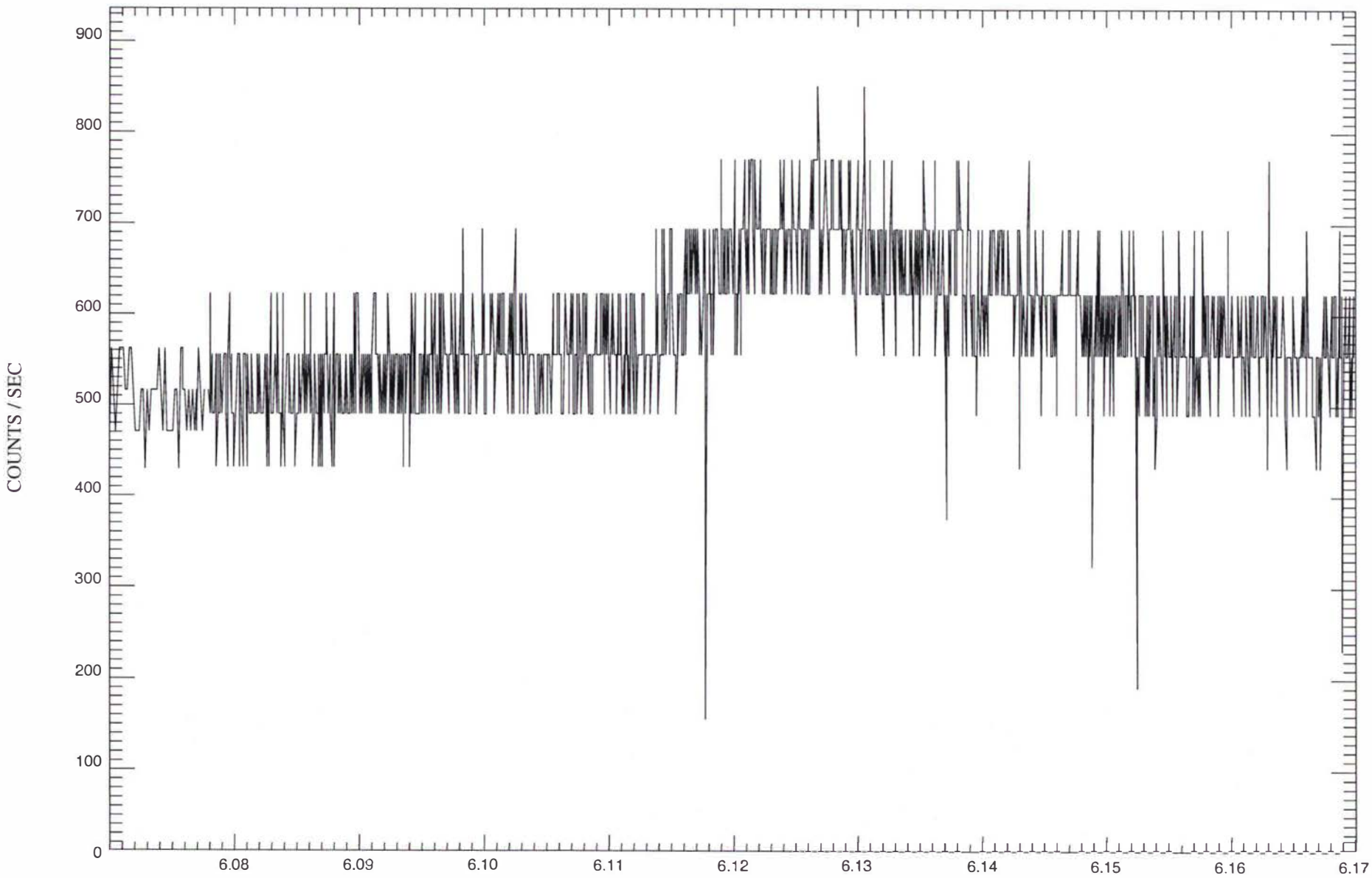




B# 2

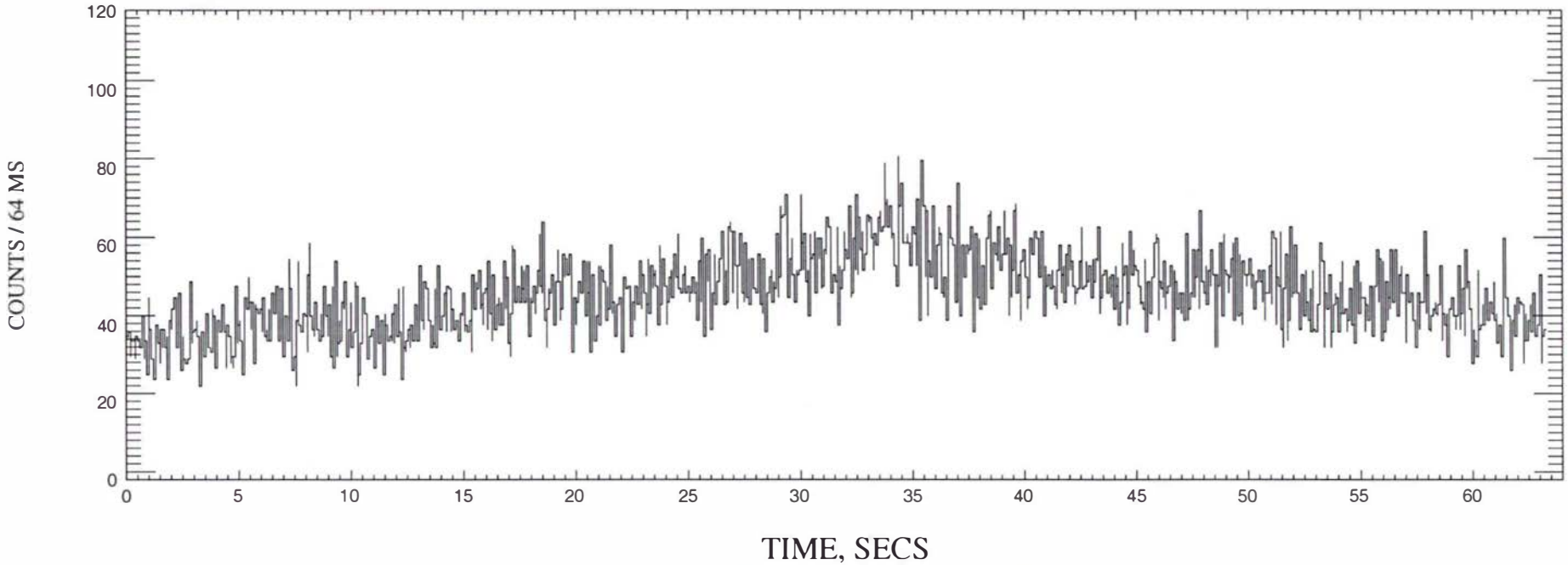
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 02/09/2001 DOY = 245 01/22/02

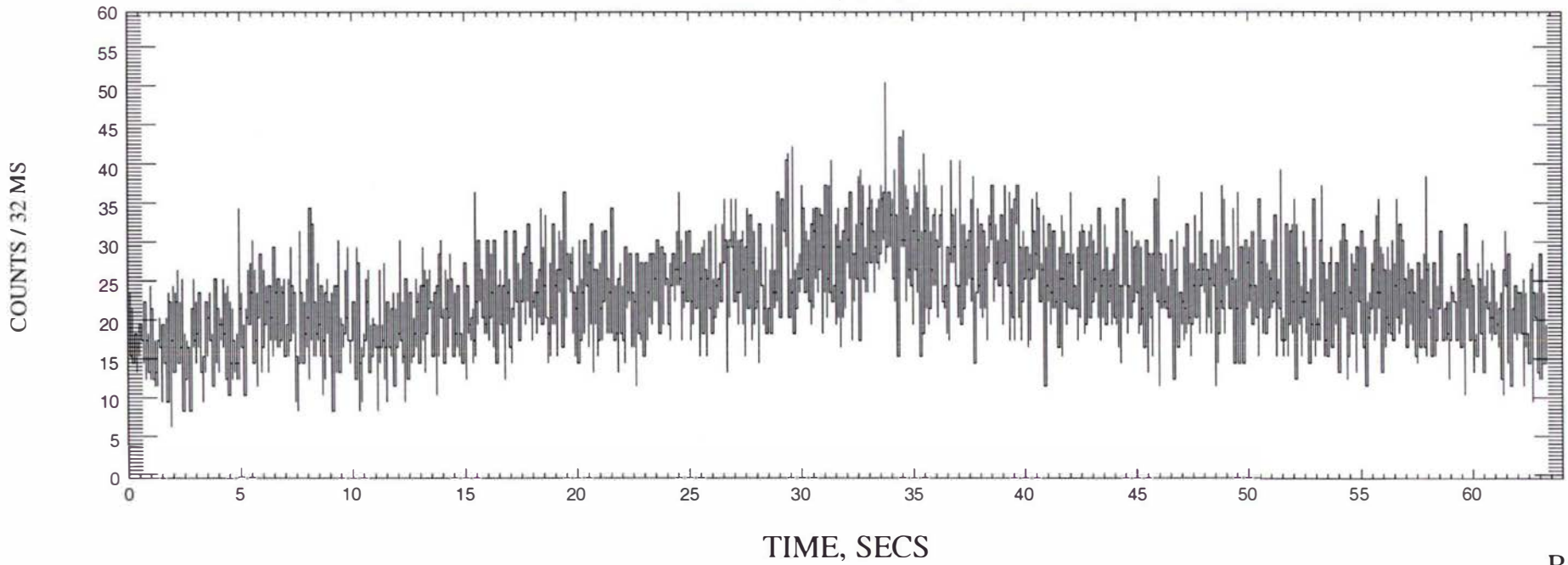
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 02/09/2001 DOY = 245 01/22/02

Burst Counter 14 at UT= 9.362987501356 h=33706.755 s 09:21:46.755

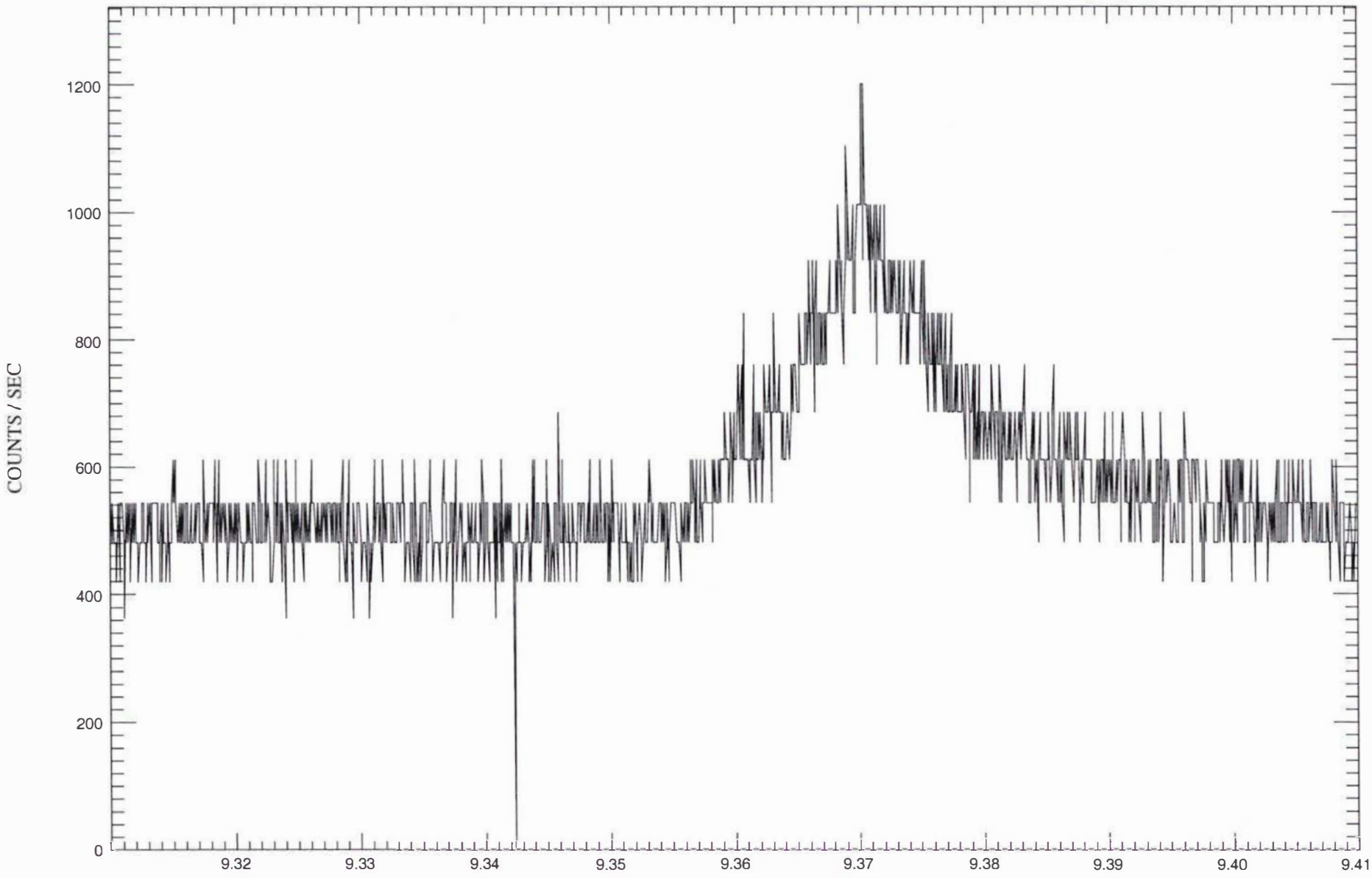




B# 3

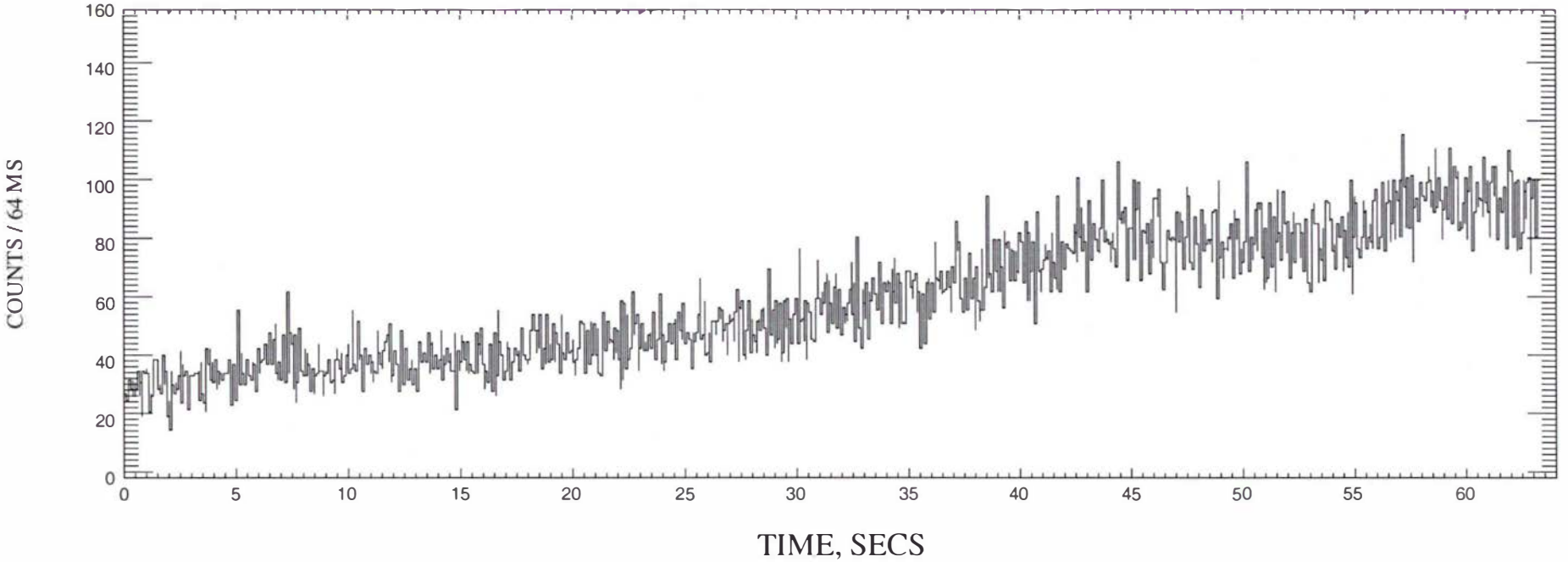
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 02/09/2001 DOY = 245 01/22/02

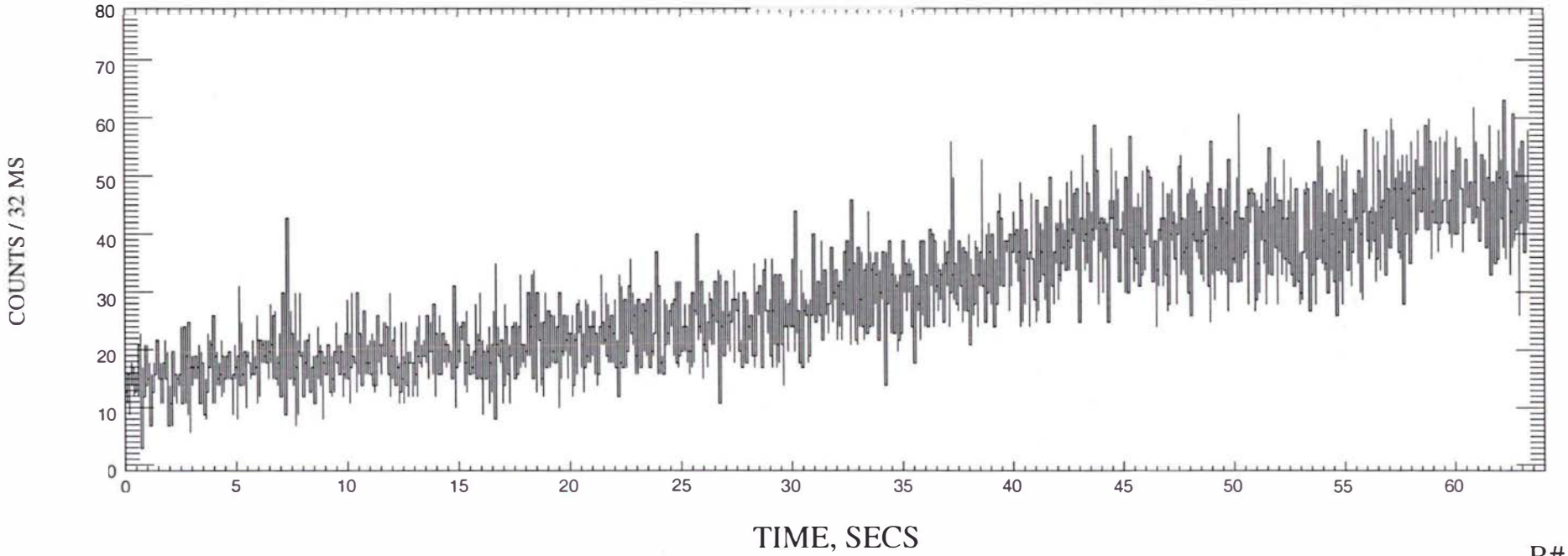
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 02/09/2001 DOY = 245 01/22/02

Burst Counter 15 at UT=13.851873185900 h=49866.743 s 13:51:06.743

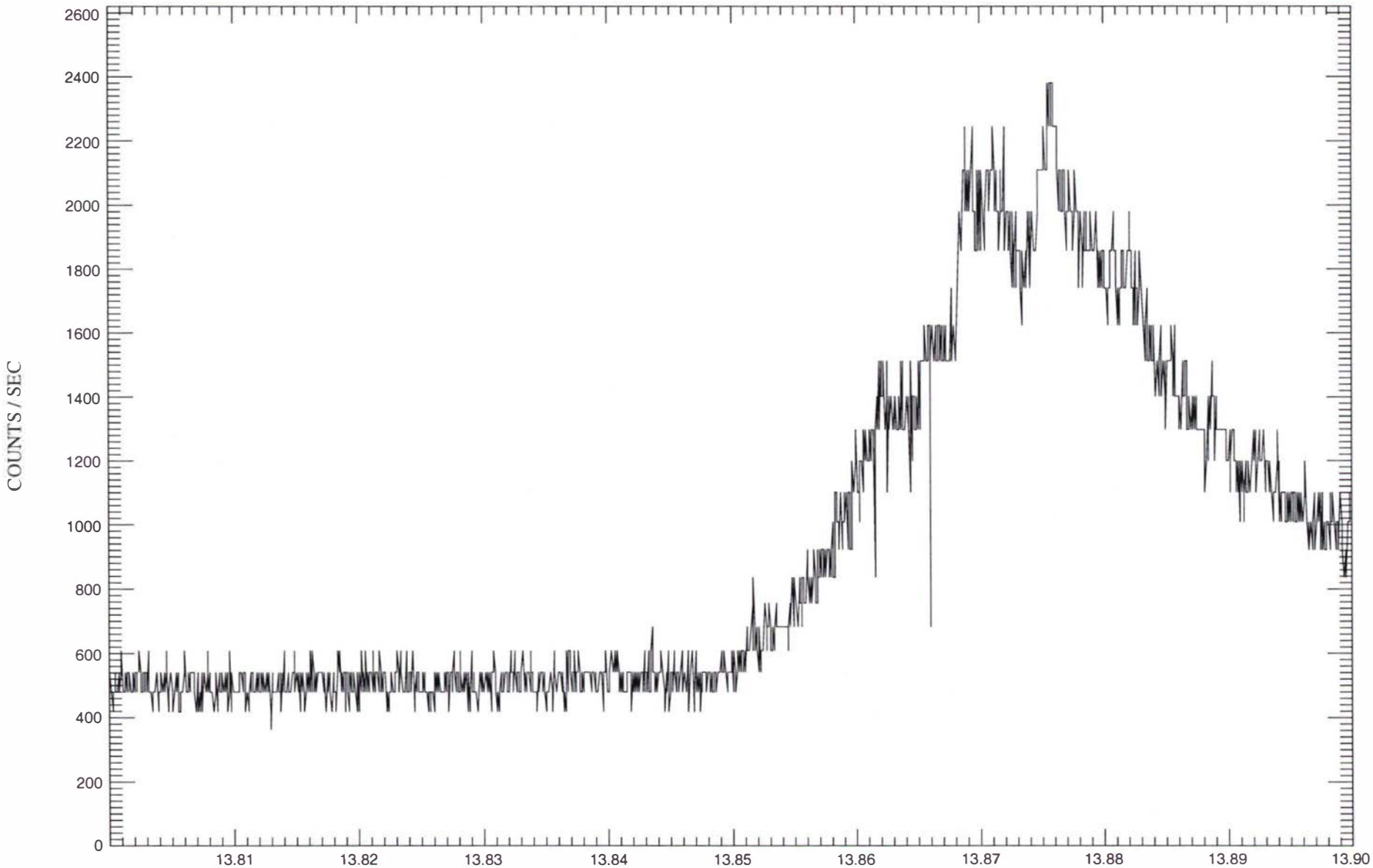




B# 4

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 02/09/2001 DOY = 245 01/22/02

CALIBRATION DATA INCLUDED

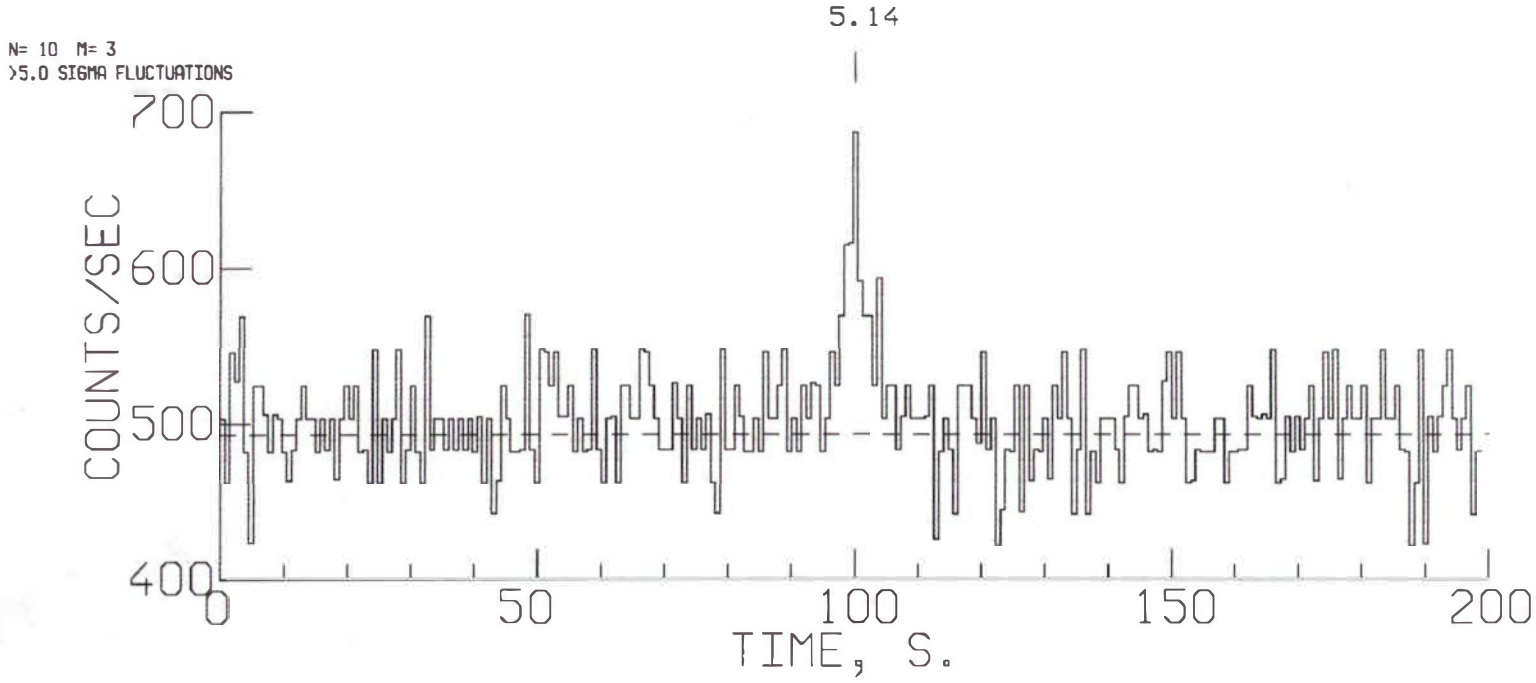


ULYSSES RT 8/ 9/ 1

3/ 9/ 1 20723.244 s

0.250 S INTERVALS REGROUPED BY 3

23- 155 keV

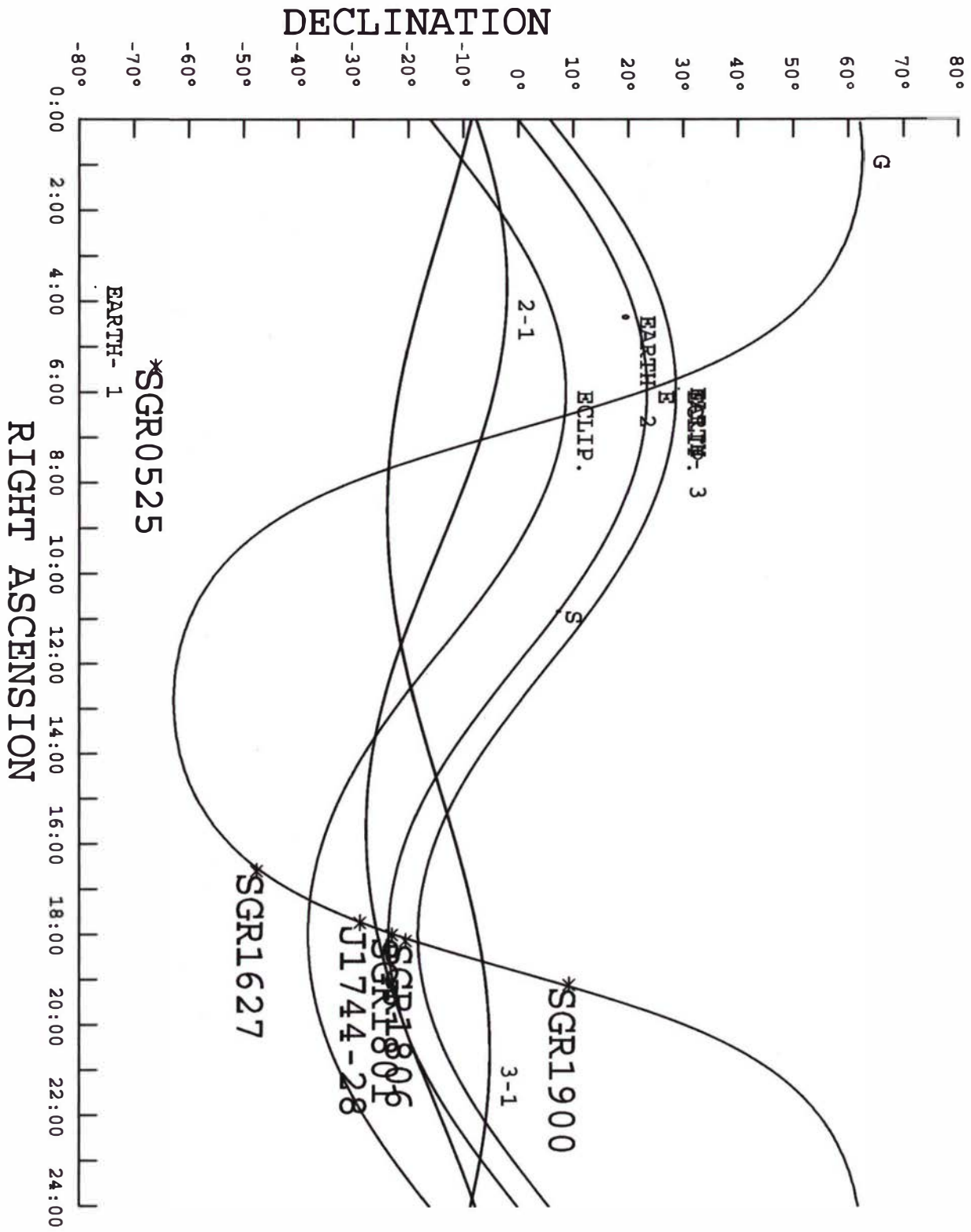


N-M = CORRELATION BETWEEN SATELLITES N AND M

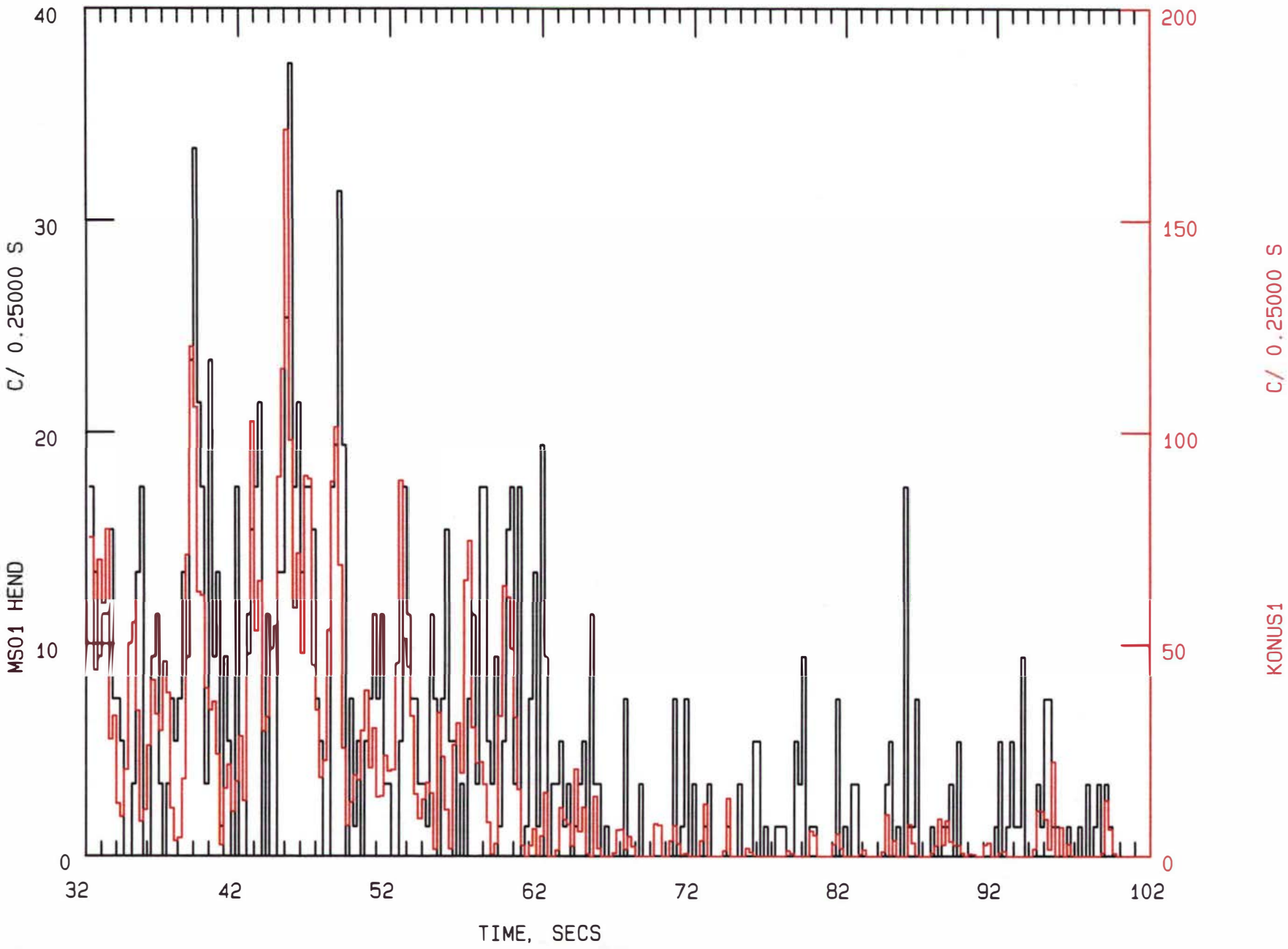
EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN E=ECLIPTIC G=GALACTIC EQUATOR

1 ULYSSES 2 KONUS1 3 MO

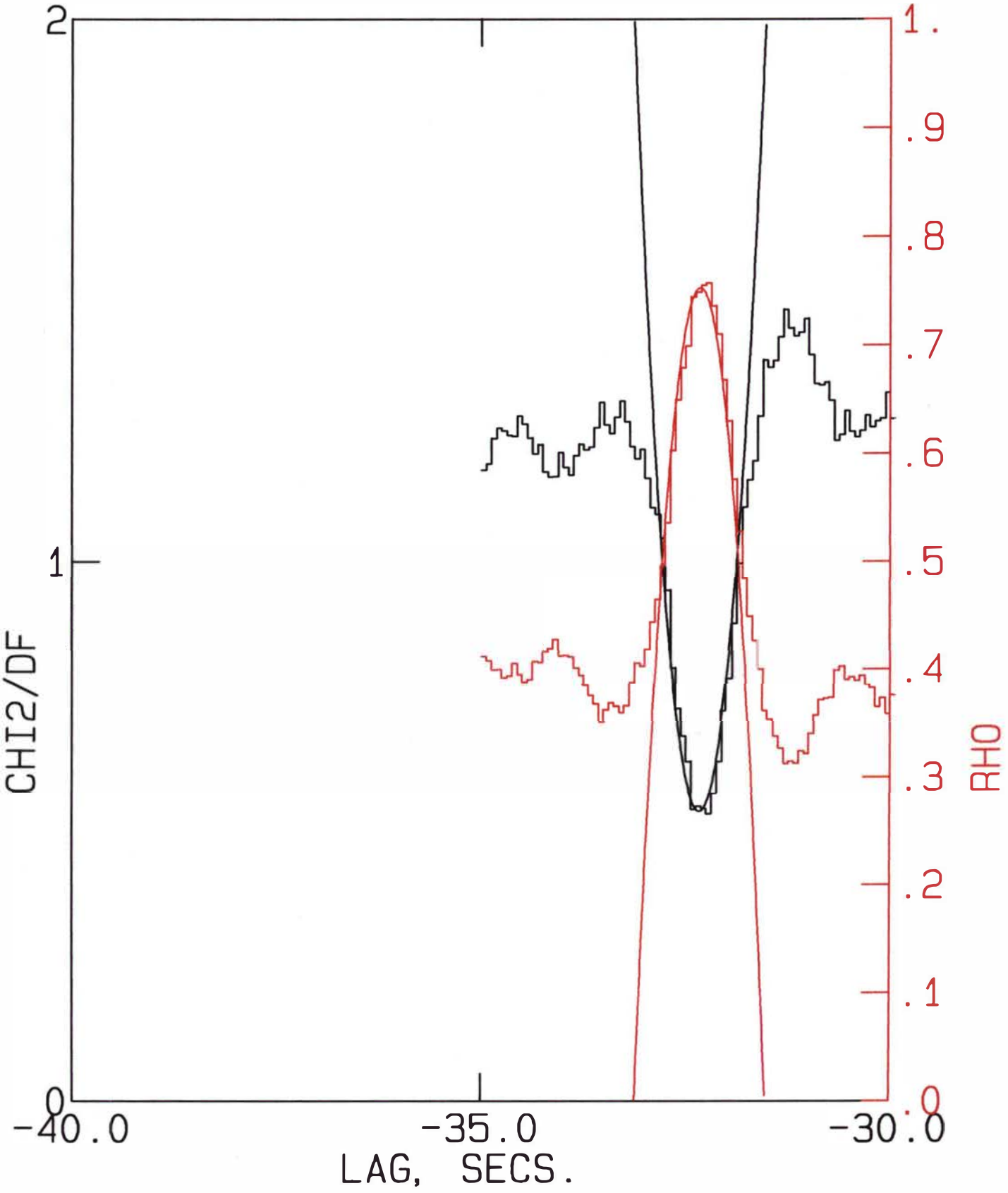


MS01 HEND -KONUS1 CORRELATION 03/09/01 34181.456 17/ 5/ 4

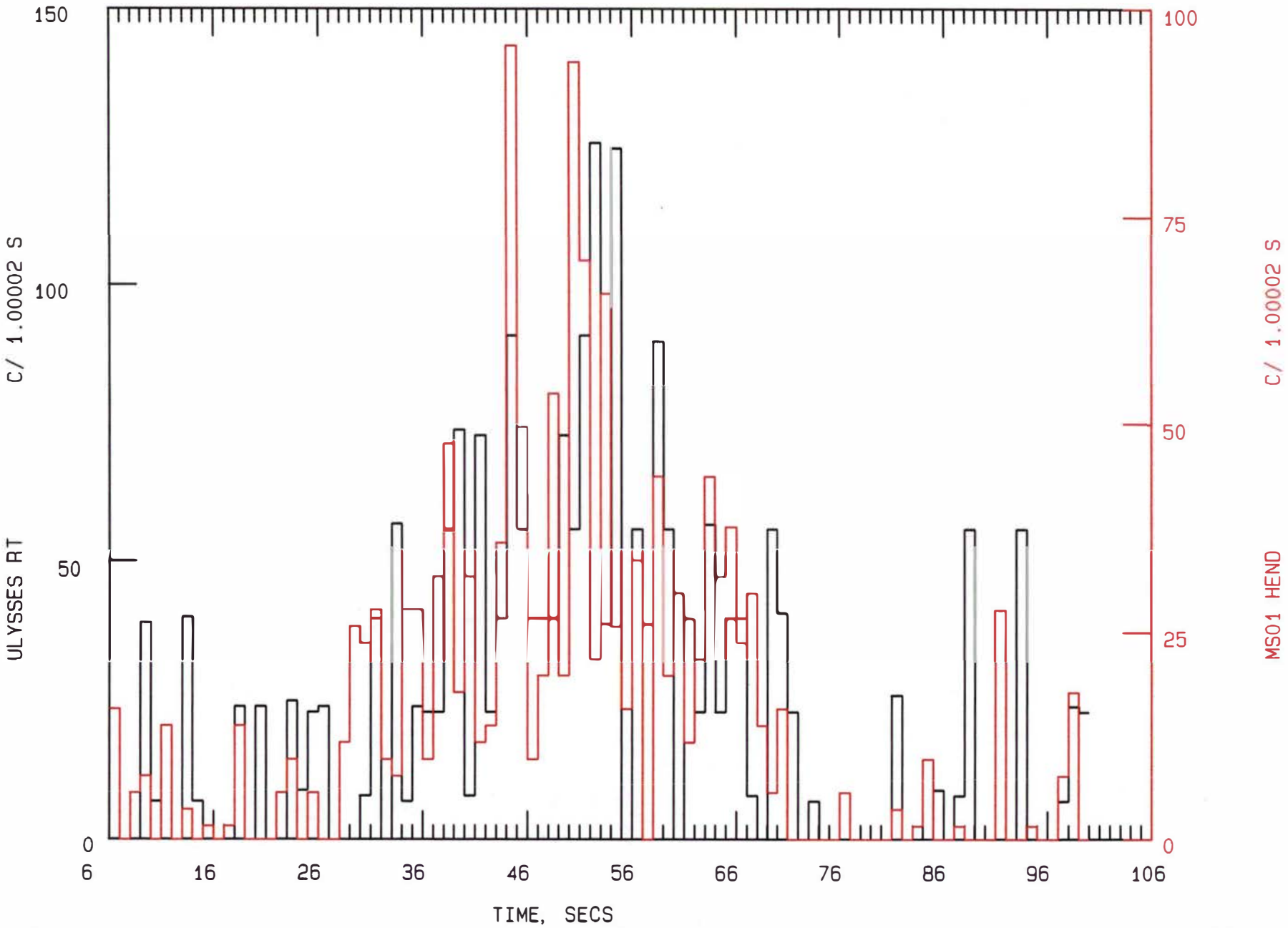


17/ 5/ 4

MS01 HEND -KONUS1 CORRELATION 03/09/01 34181.456

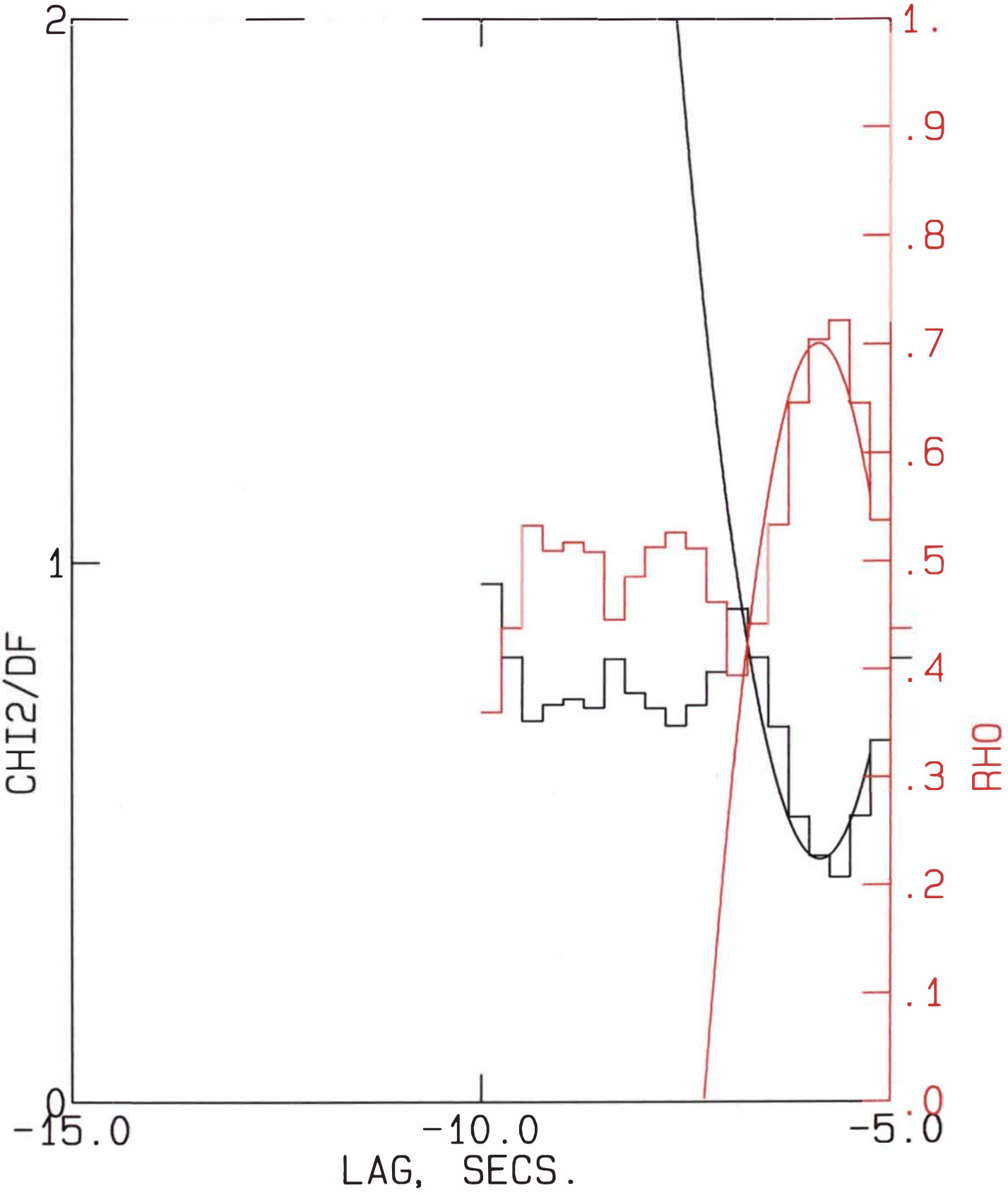


ULYSSES RT-MS01 HEND CORRELATION 3/ 9/01 34415.225 17/ 5/ 4

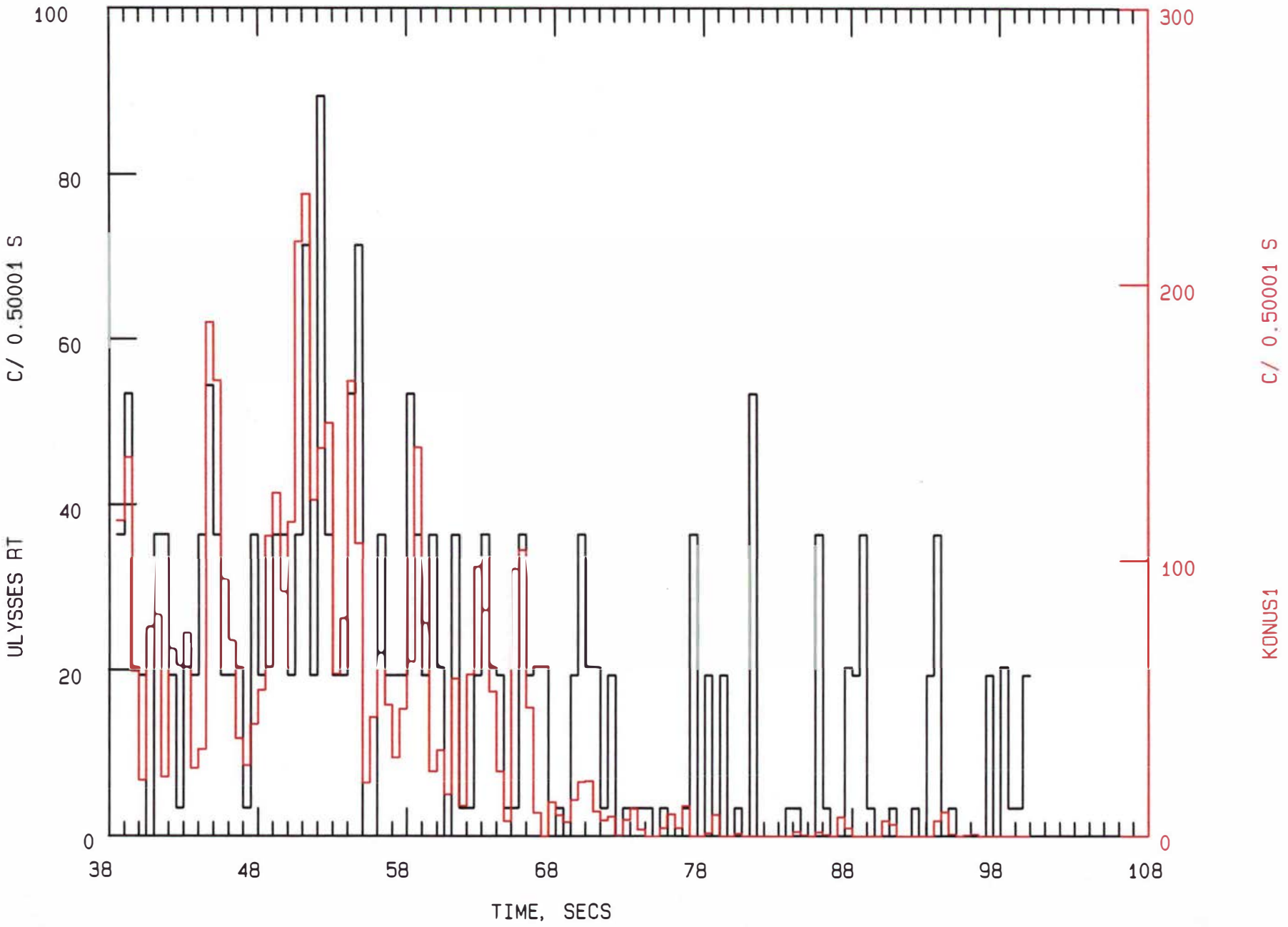


17/ 5/ 4

ULYSSES RT-MS01 HEND CORRELATION 3/ 9/01 34415.225

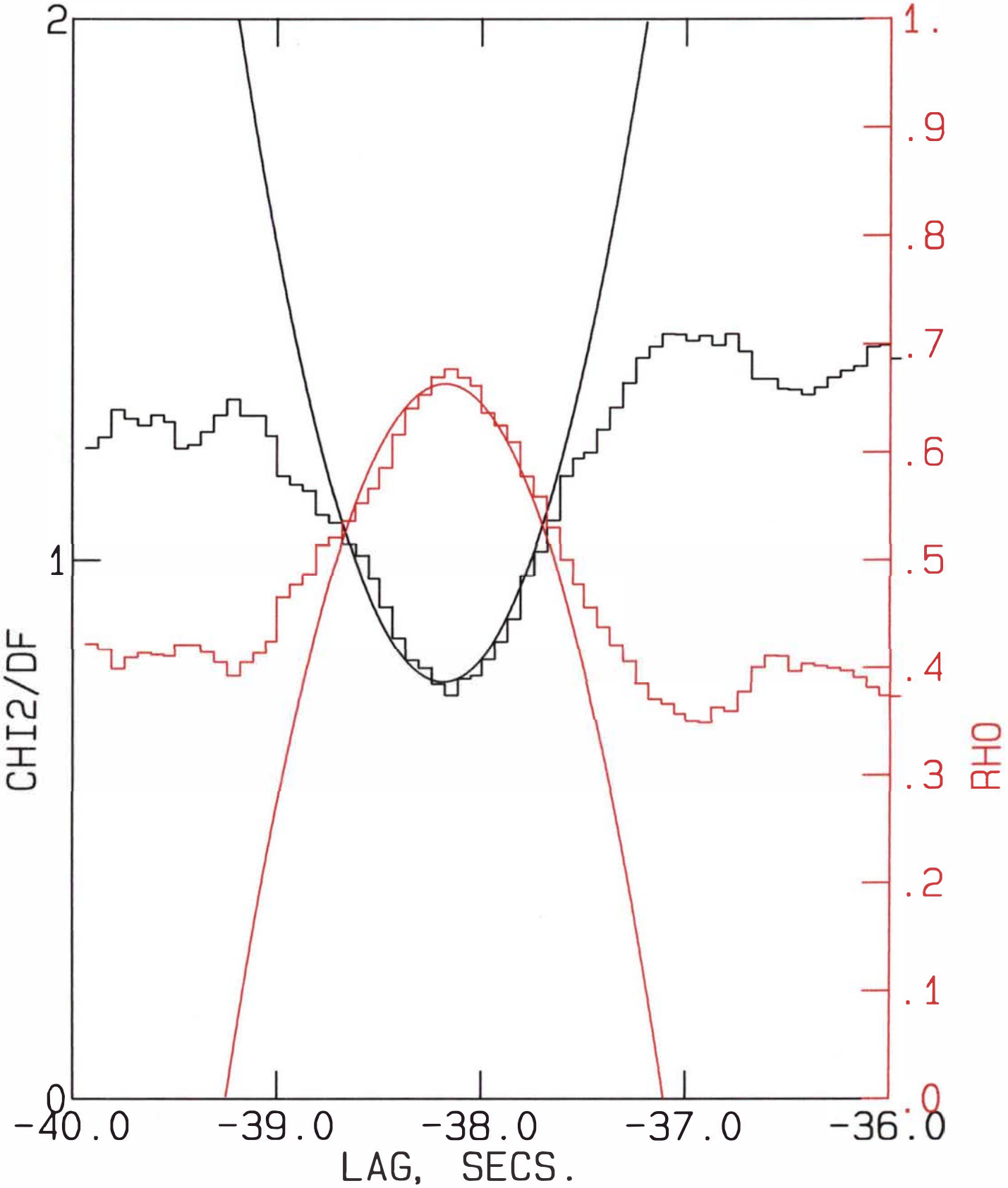


ULYSSES RT-KONUS1 CORRELATION 3/ 9/01 34415.225 17/ 5/ 4



17/ 5/ 4

ULYSSES RT-KONUS1 CORRELATION 3/ 9/01 34415.225

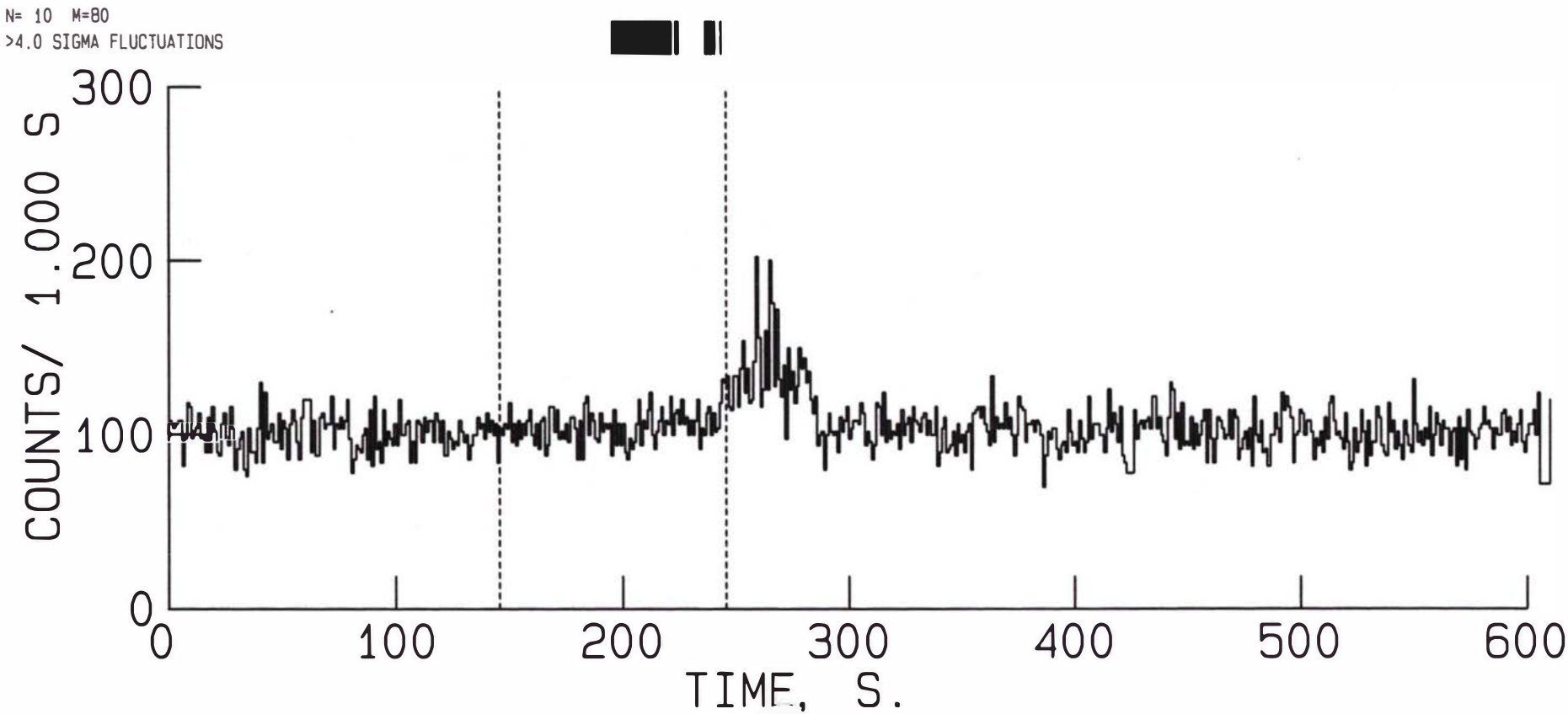


MS01 HEND 17/05/04

03/09/01 33961.465 s

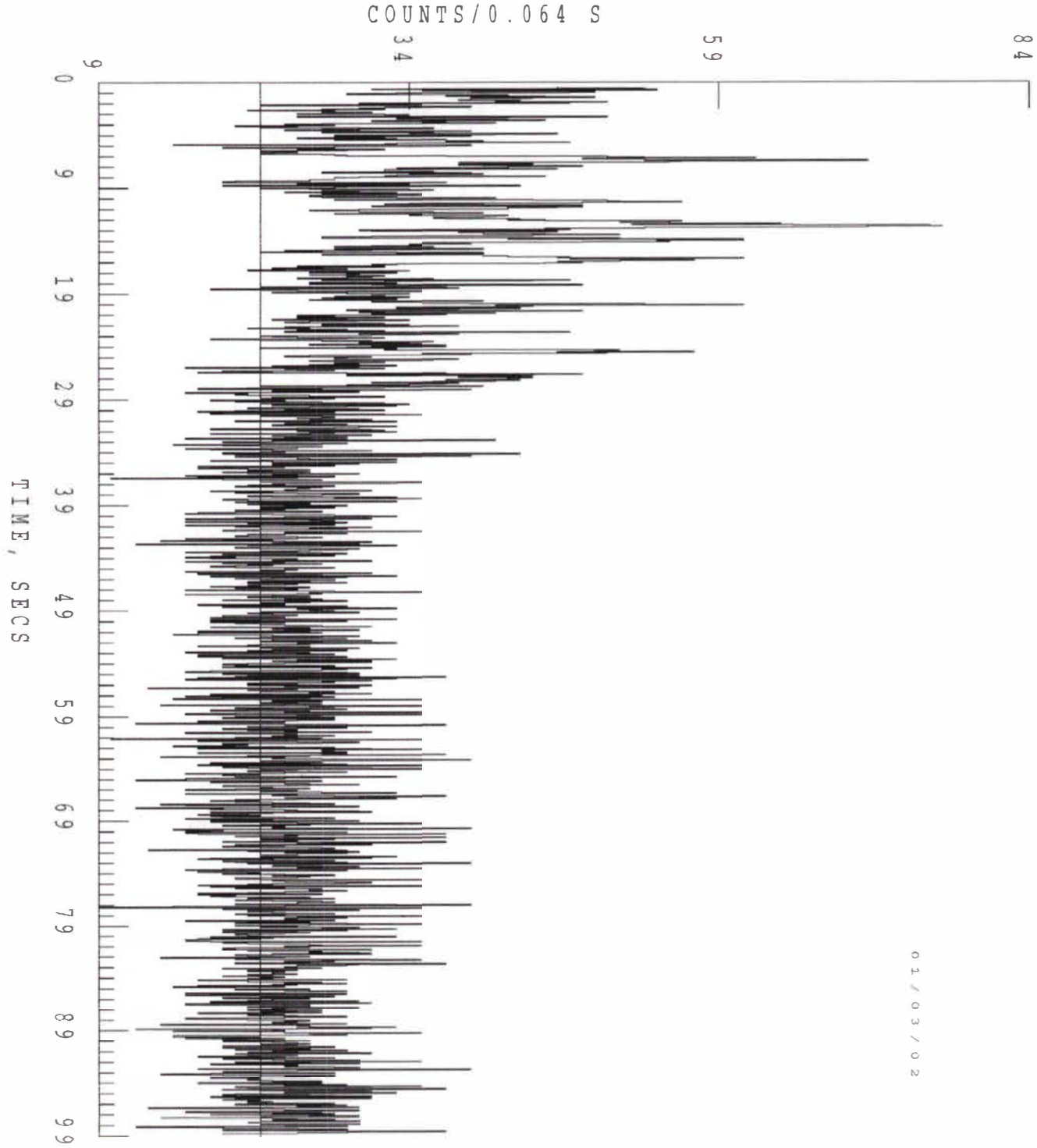
0.250 S INTERVALS REGROUPED BY 4

50-3000 keV



KONUS1 03/09/01 34244.584

50- 200 keV GRB



Date: Aug 24 2007

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

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

2. For Konus events

☑ Konus ecliptic latitude used with latest calibration?

2. For Odyssey events

☐ Was CHECKMO run to eliminate data gaps?

☐ Did the Odyssey ephemeris correspond to the event time? (When there is data in the database, the ephemeris is for the start of record, usually ~1320 s prior to the request time; when there is no data in the database, the ephemeris is for the request time in the e-mail, so the request time in mosearch should be equal to the GRB time. Note that the time in the return e-mail will be ~1320 s prior to the time requested, in the line "no HEND data…")

☐ Was Mars-blocking used?

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

☐ GRS database searched for triggered data? Database data between August 2005 and January 2006 should be re-extracted, due to timing errors. (E-mailed data should be OK).

☐ GRS and HEND data cross-correlated to check timing?

2. For 3 or More Spacecraft events

☑ Σ 3Δt's calculated, and/or BMAPSUM executed?

3. For INTEGRAL events

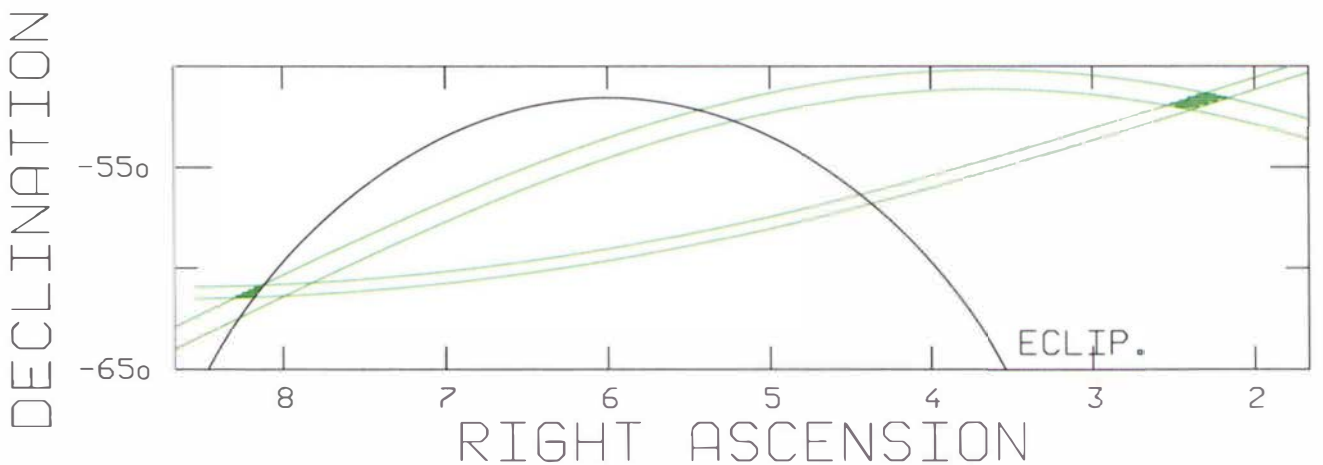
☐ INTEGRAL SPI-ACS website checked for bursts that weren't transmitted automatically?

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

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

☑ ACCESS and MBL4 databases updated?

GRB010903 ~84415 S 08/07/2011

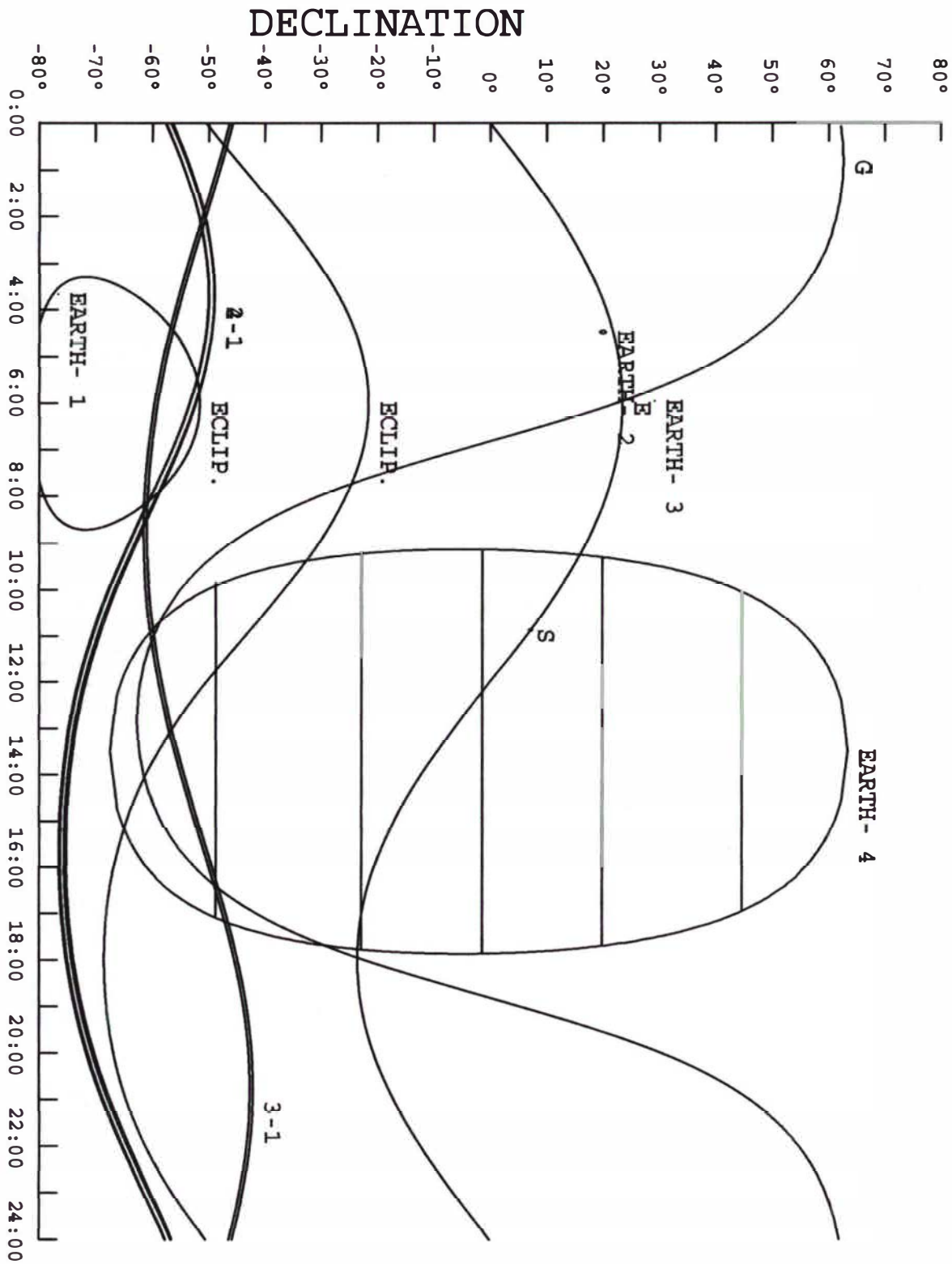


N-M = CORRELATION BETWEEN SATELLITES N AND M

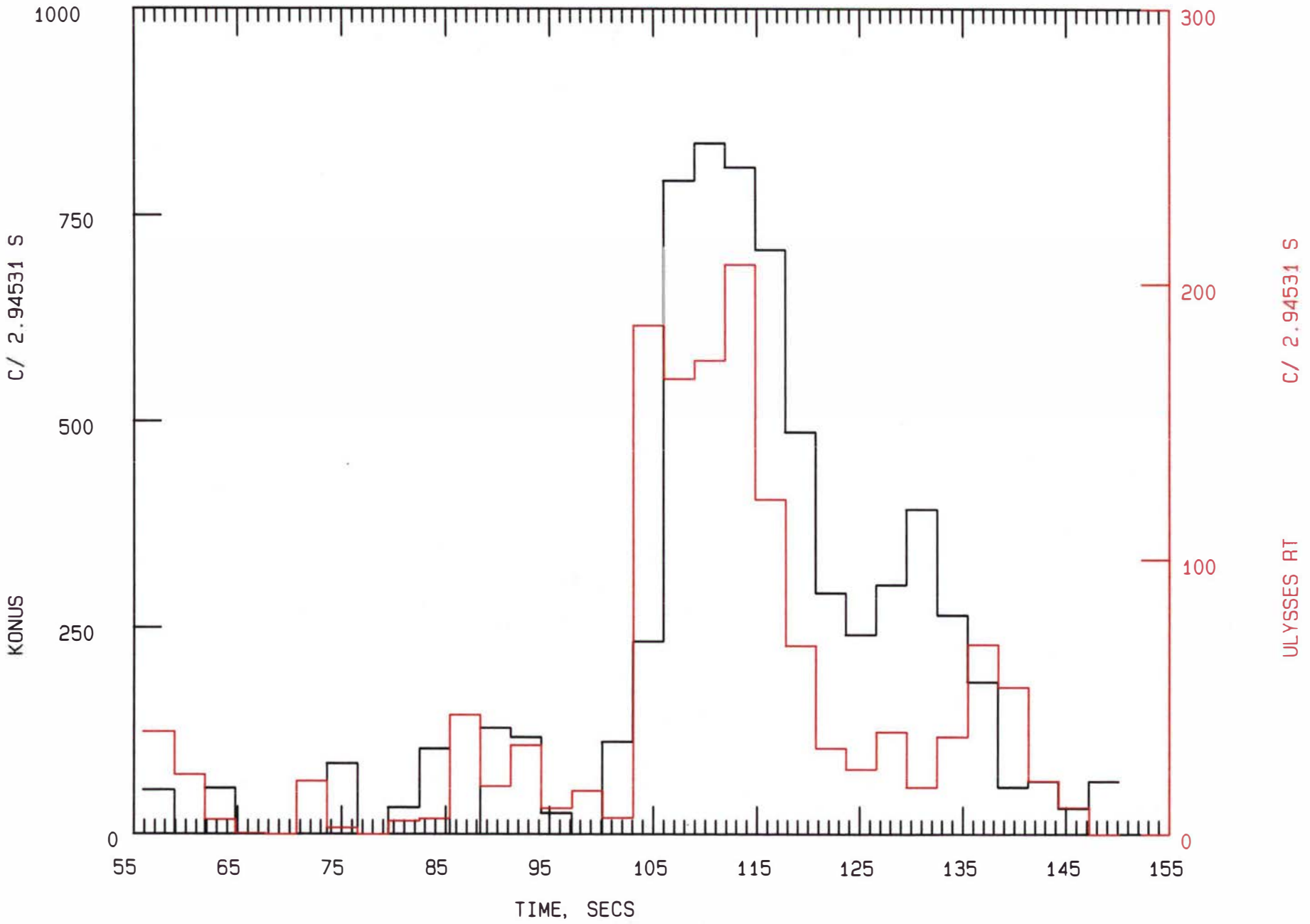
EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN E=ECLIPTIC G=GALACTIC EQUATOR

1 ULYSSES 2 KONUS 3 MO 4 HETE

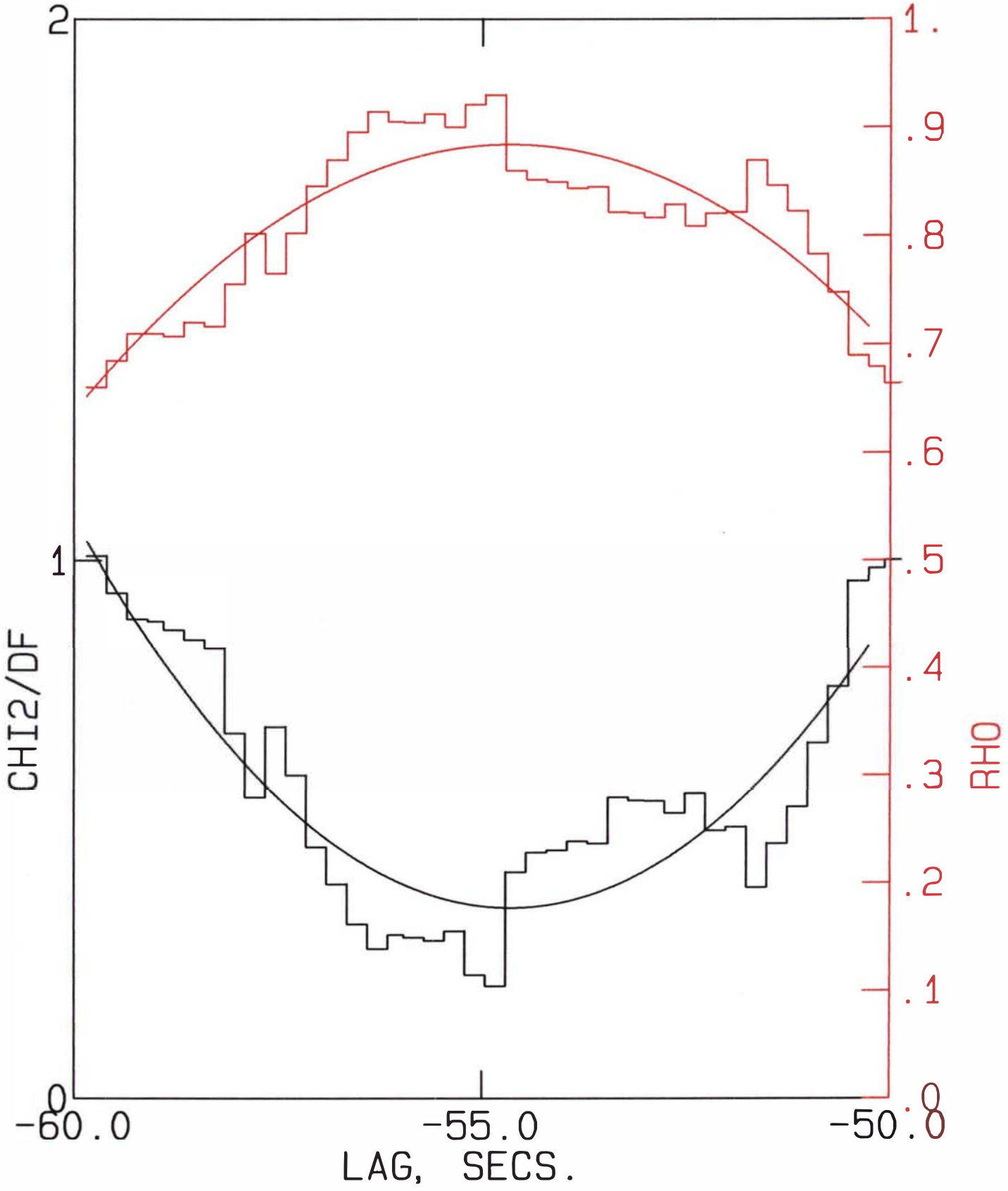


KONUS -ULYSSES RT CORRELATION 03/09/01 84368.445 19/ 5/ 4

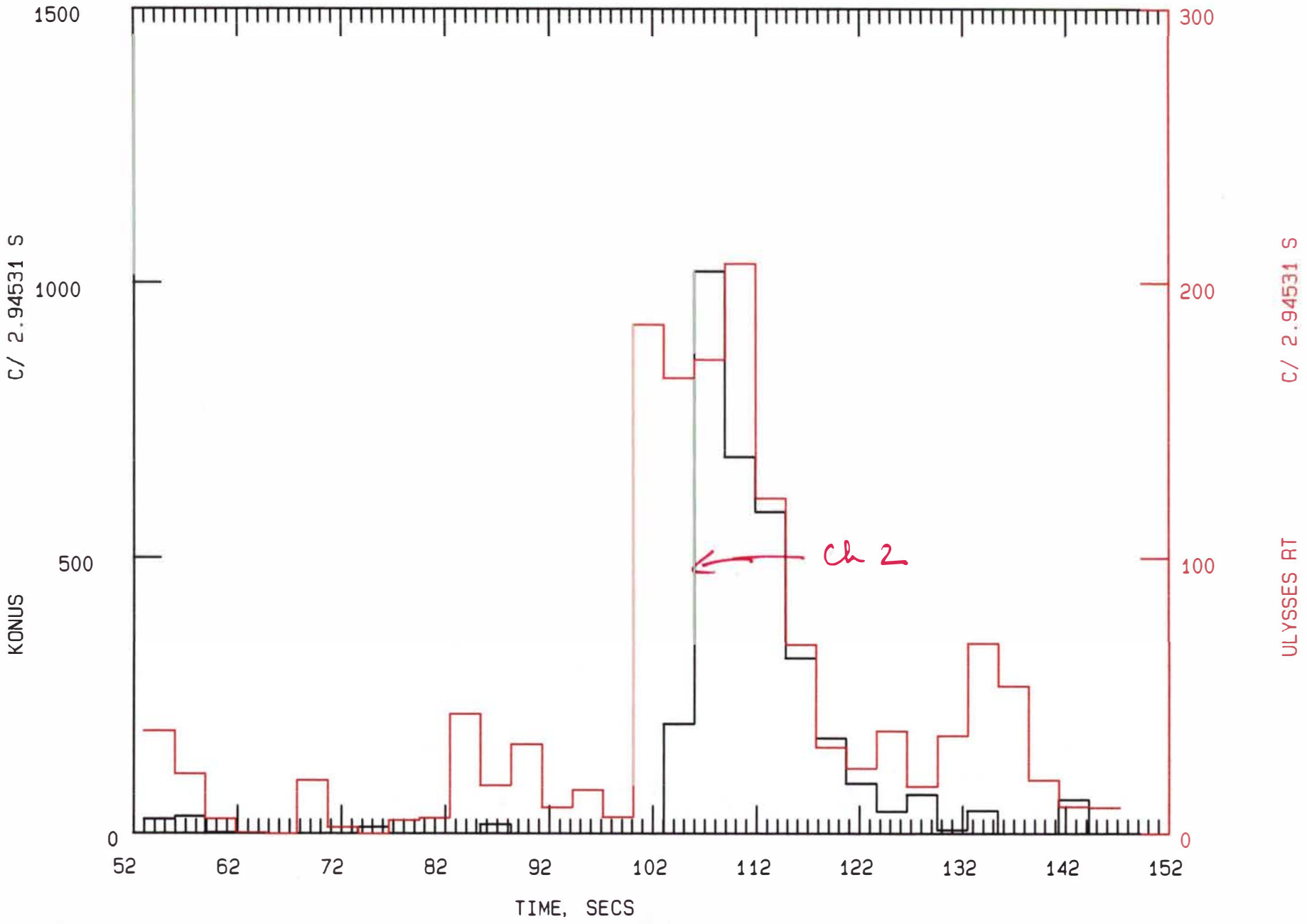


19/ 5/ 4

KONUS -ULYSSES RT CORRELATION 03/09/01 84368.445

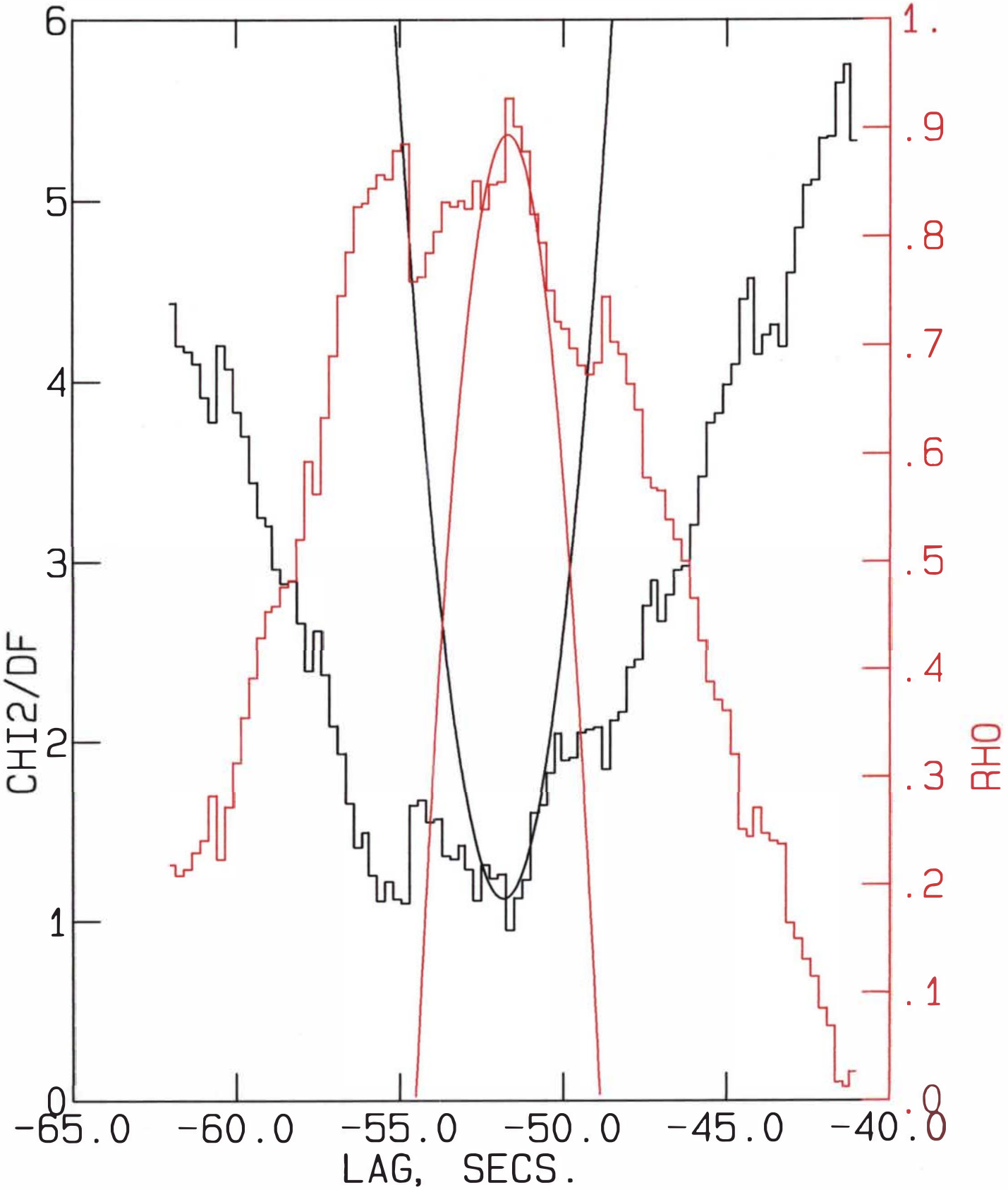


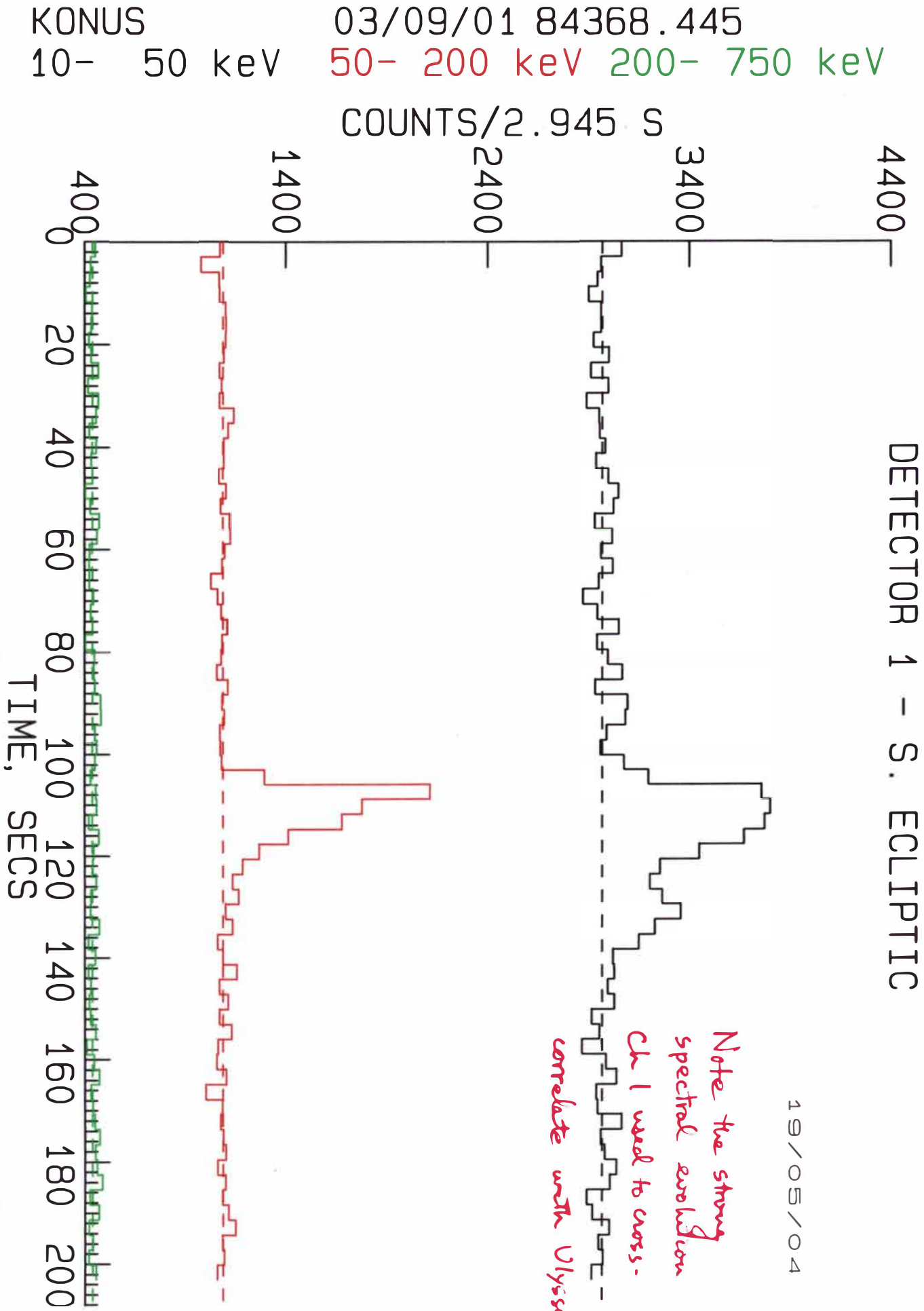
KONUS -ULYSSES RT CORRELATION 03/09/01 84368.445 19/ 5/ 4

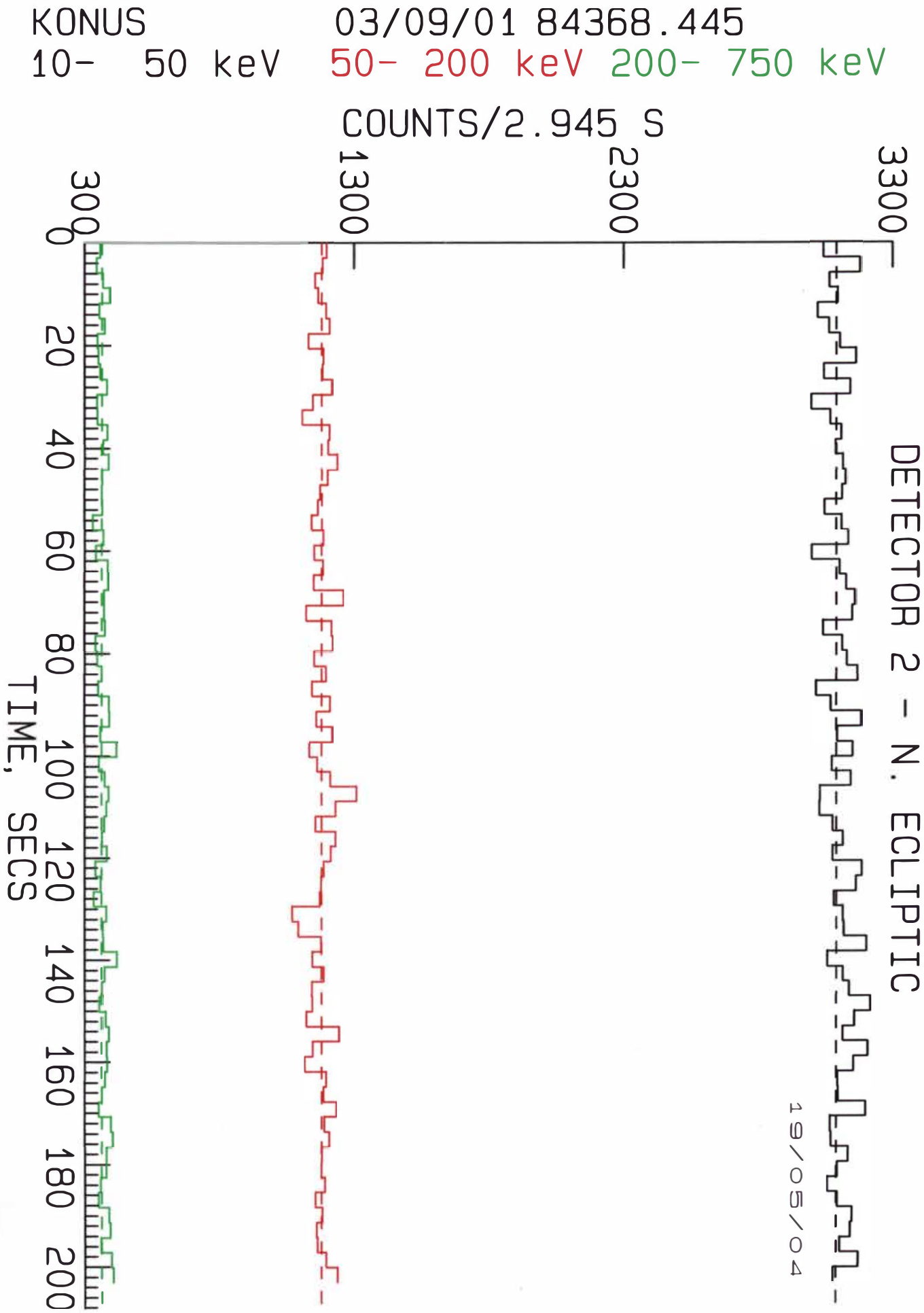


19/ 5/ 4

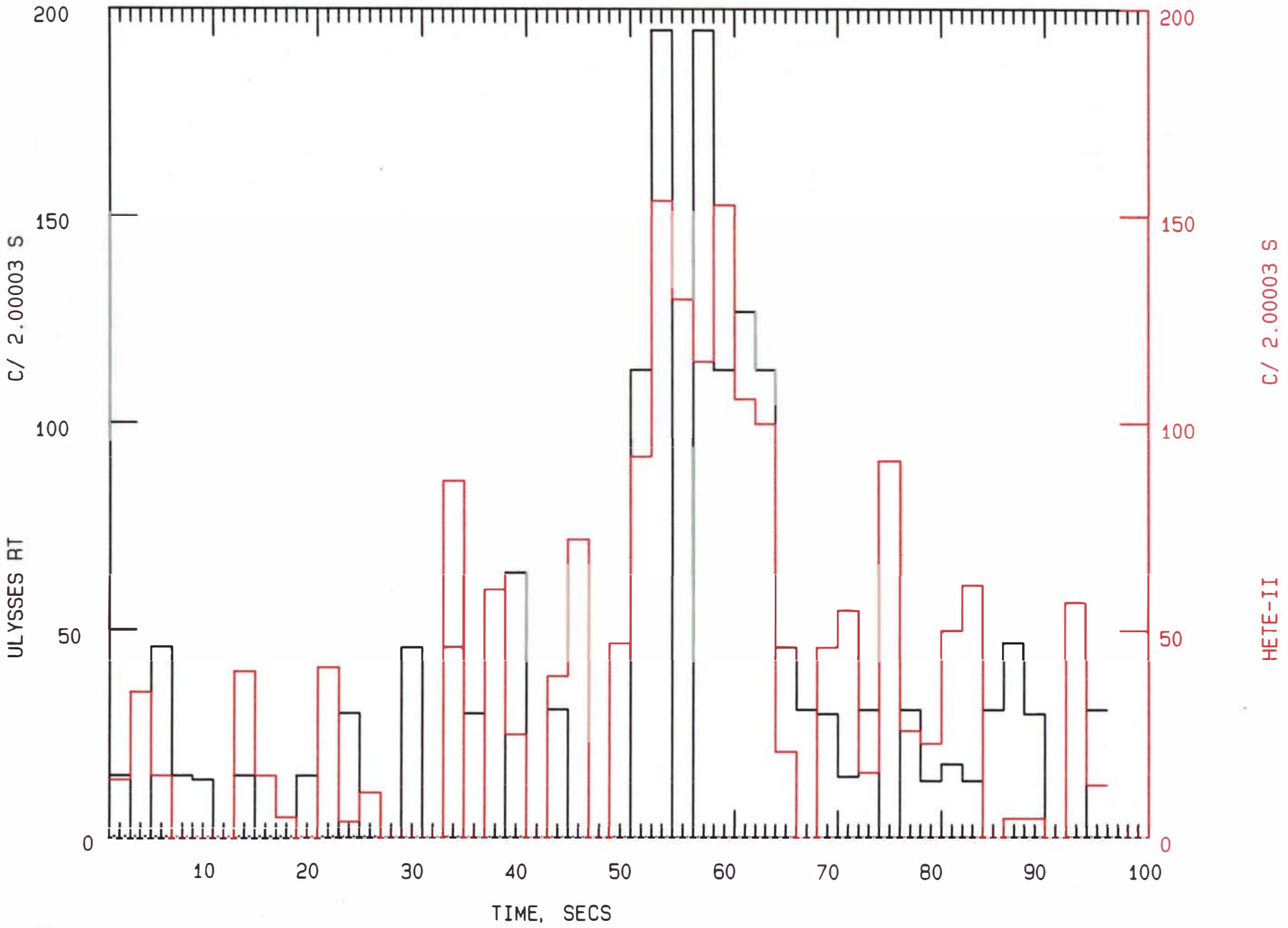
KONUS -ULYSSES RT CORRELATION 03/09/01 84368.445



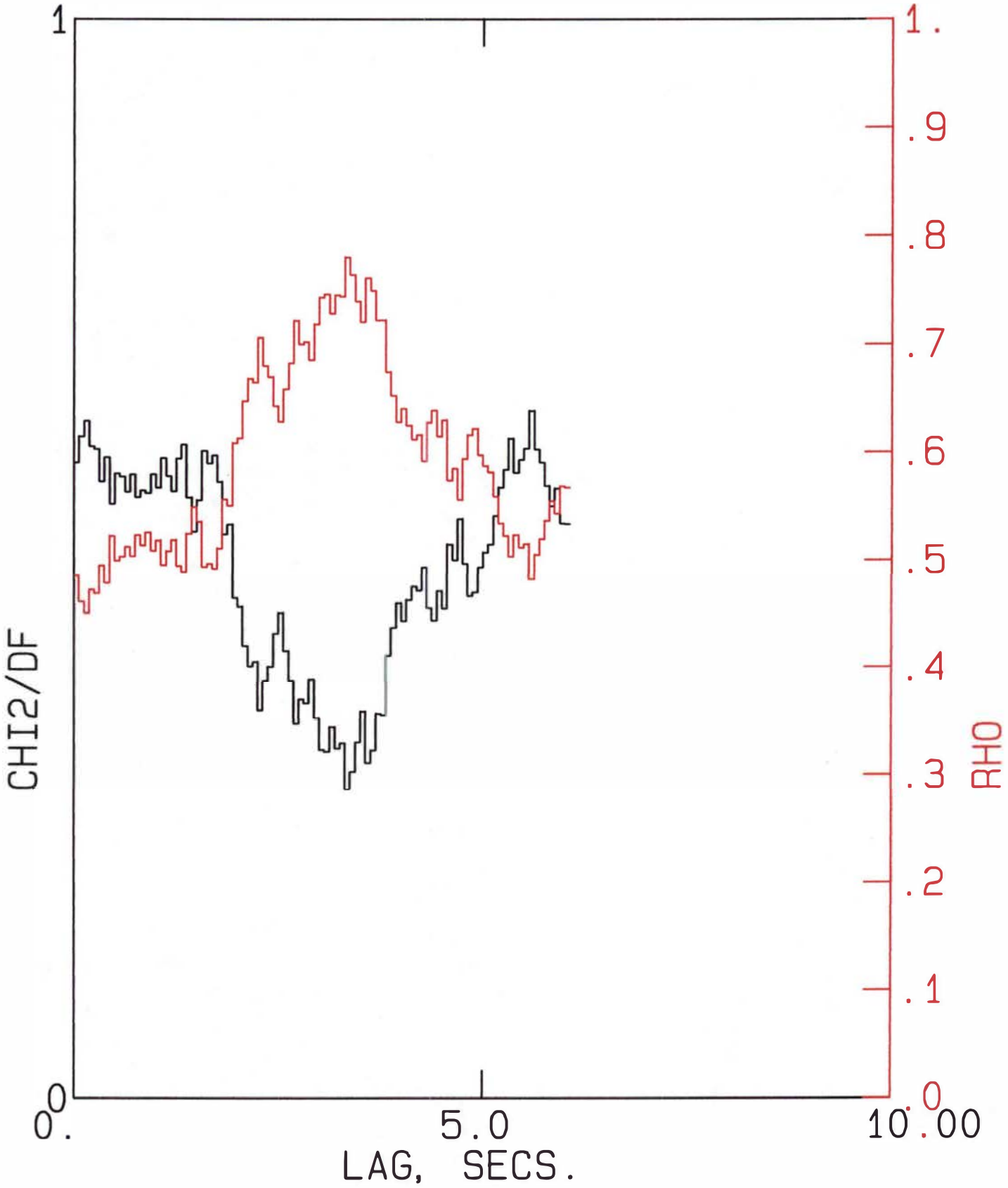

KONUS
03/09/01 84368.445
10- 50 keV
50- 200 keV
200- 750 keV
COUNTS/2.945 S
4400
3400
2400
1400
400
0
20
40
60
80
100
120
140
160
180
200
TIME, SECS
DETECTOR 1 - S. ECLIPTIC
19/05/04
Note the strong spectral evolution
Ch 1 used to cross-correlate with Ulysses


KONUS
03/09/01 84368.445
10- 50 keV
50- 200 keV
200- 750 keV
COUNTS/2.945 S
3300
2300
1300
300
0
20
40
60
80
100
120
140
160
180
200
TIME, SECS
DETECTOR 2 - N. ECLIPTIC
19/05/04

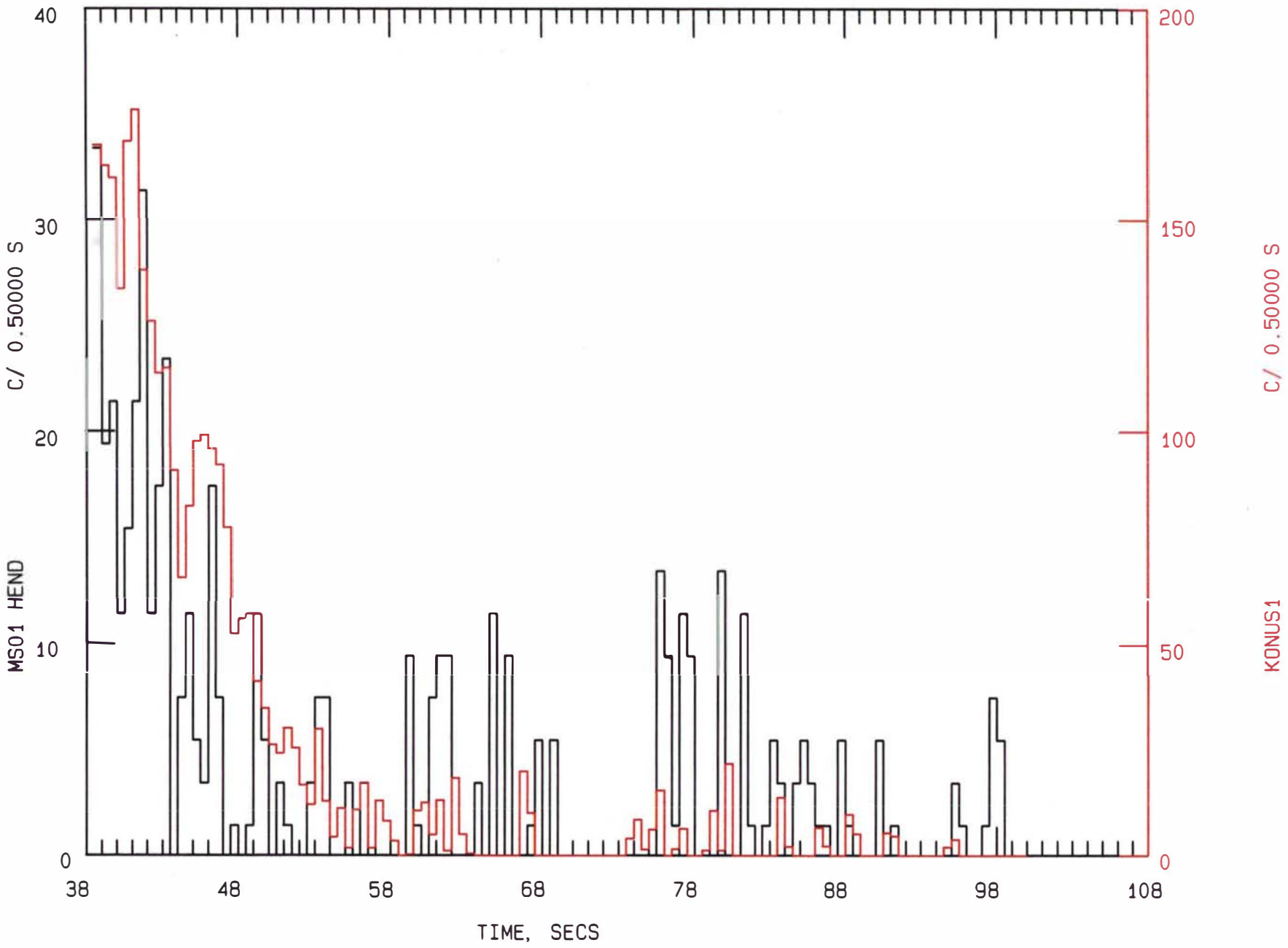
ULYSSES RT-HETE-II CORRELATION 3/ 9/01 85154.102 18/ 5/ 4



ULYSSES RT-HETE-II CORRELATION 3/ 9/01 85154.102

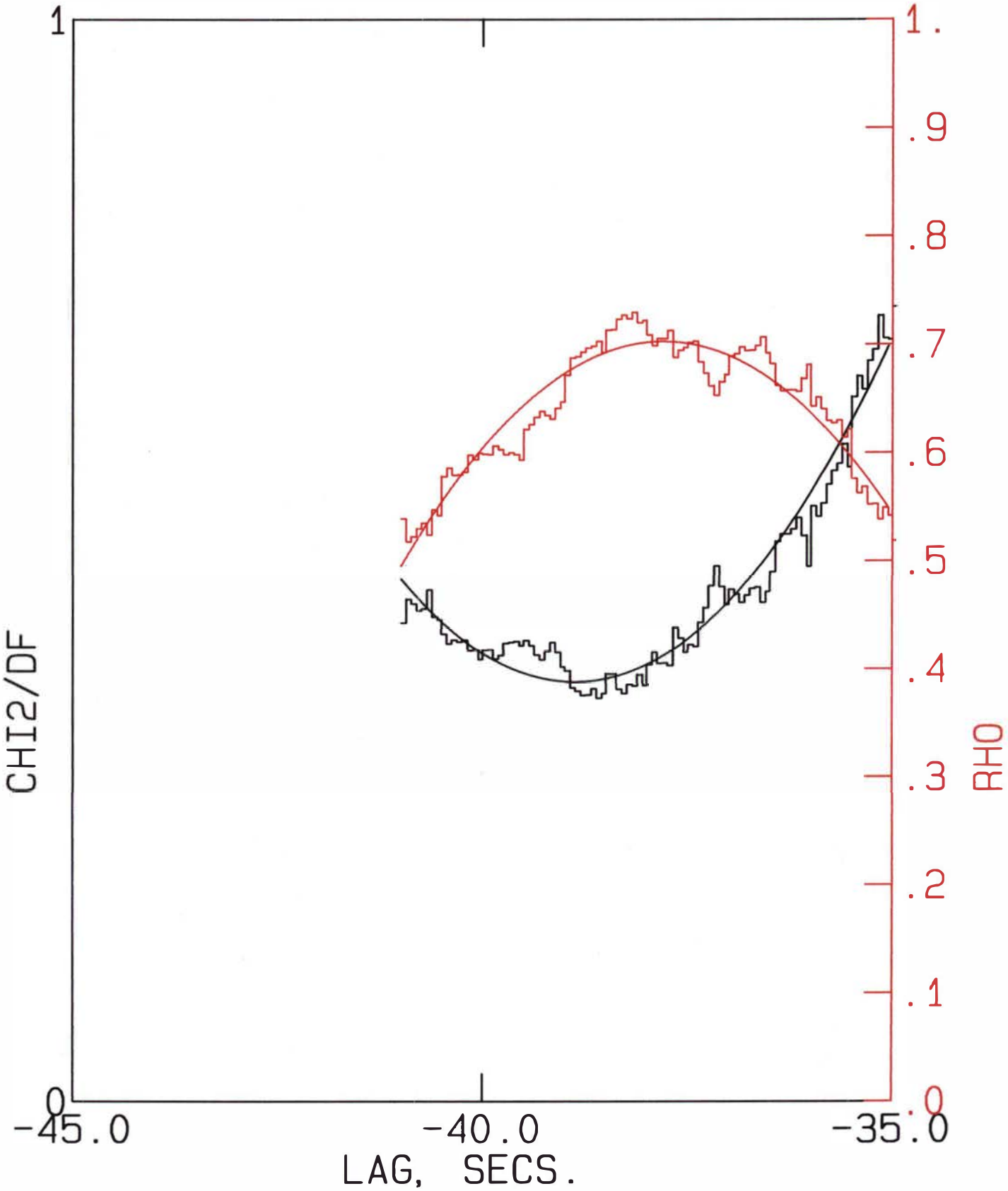


MS01 HEND -KONUS1 CORRELATION 03/09/01 84413.832 17/ 5/ 4

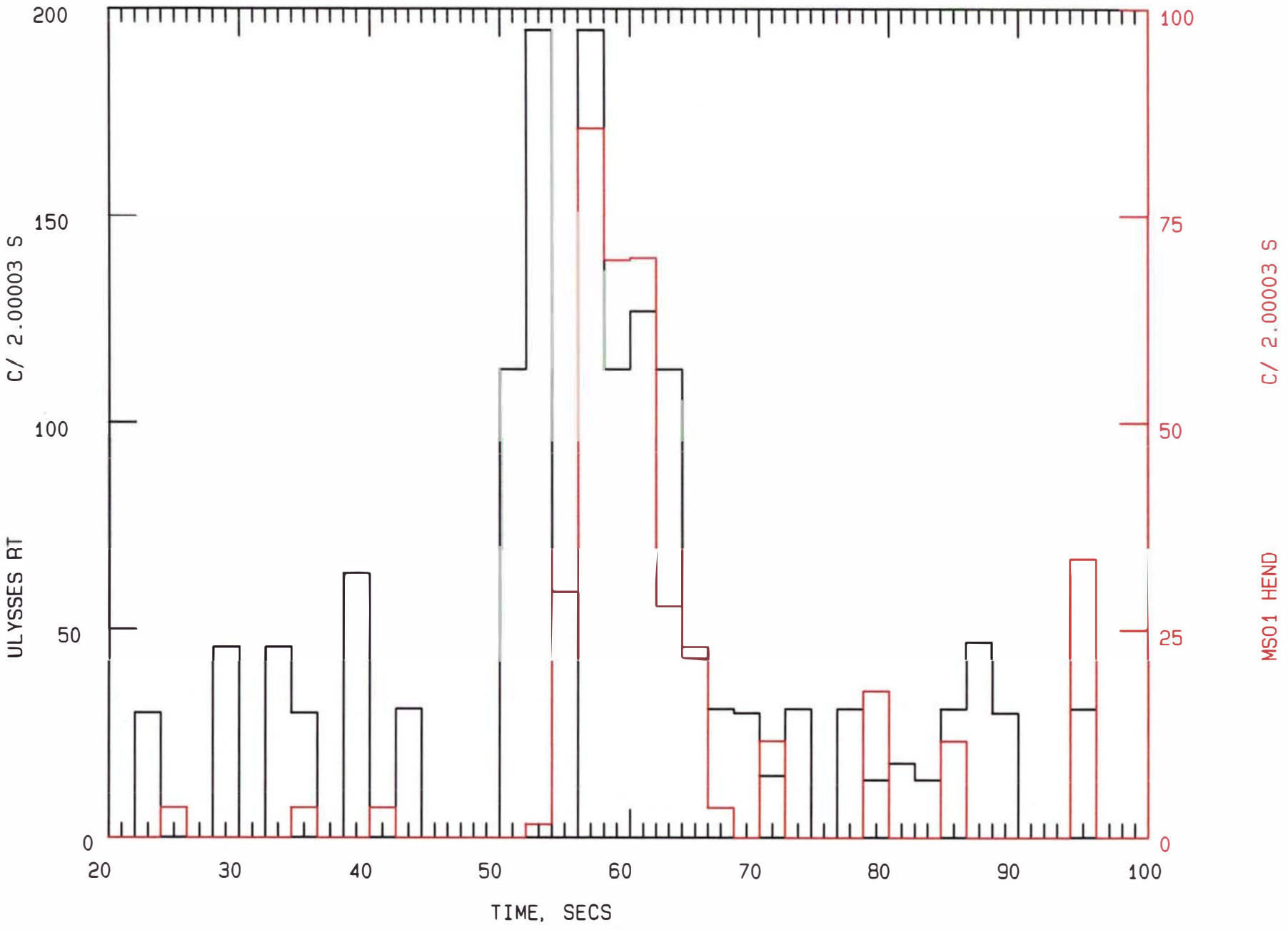


17/ 5/ 4

MS01 HEND -KONUS1 CORRELATION 03/09/01 84413.832

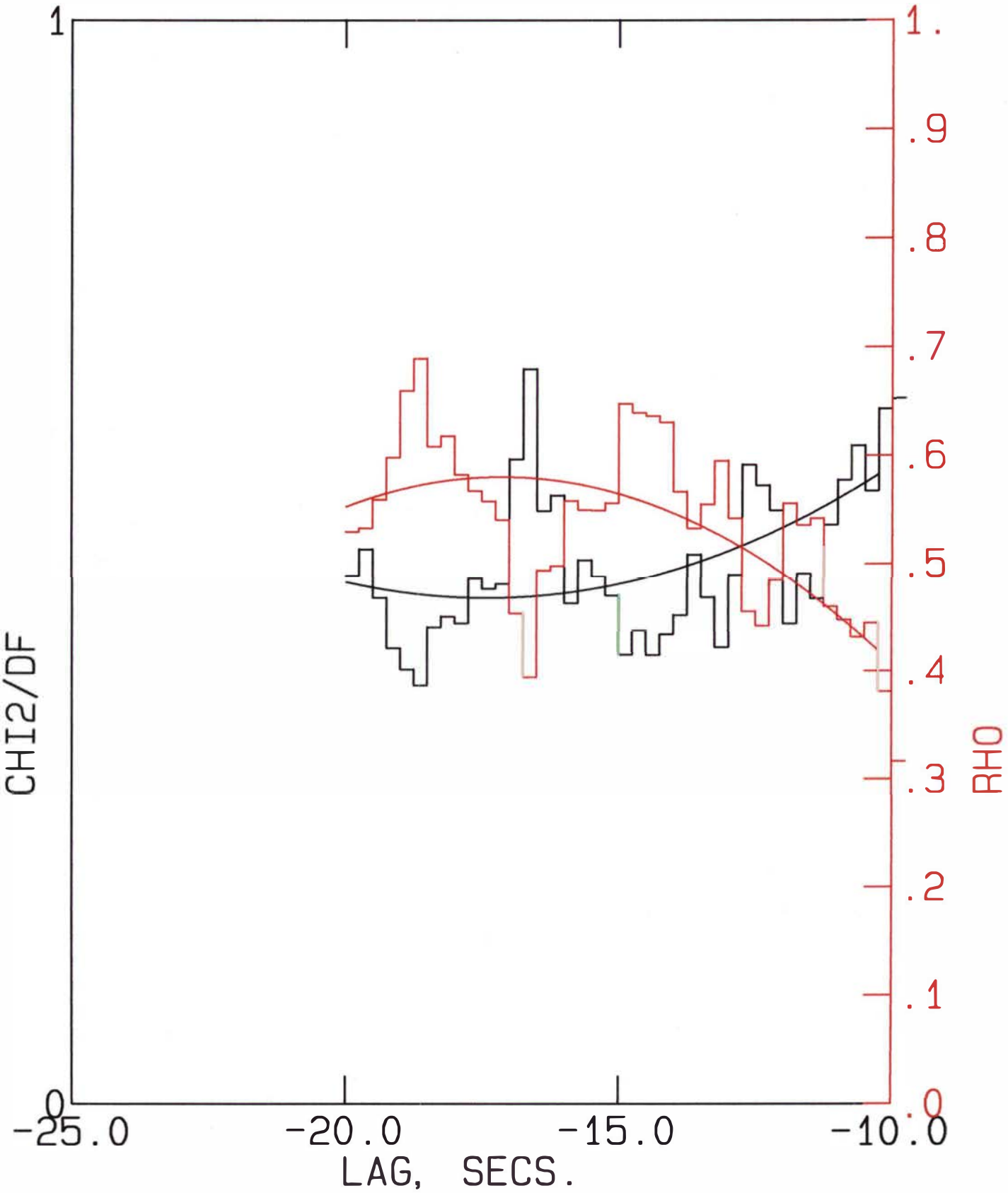


ULYSSES RT-MS01 HEND CORRELATION 3/ 9/01 85154.102 17/ 5/ 4



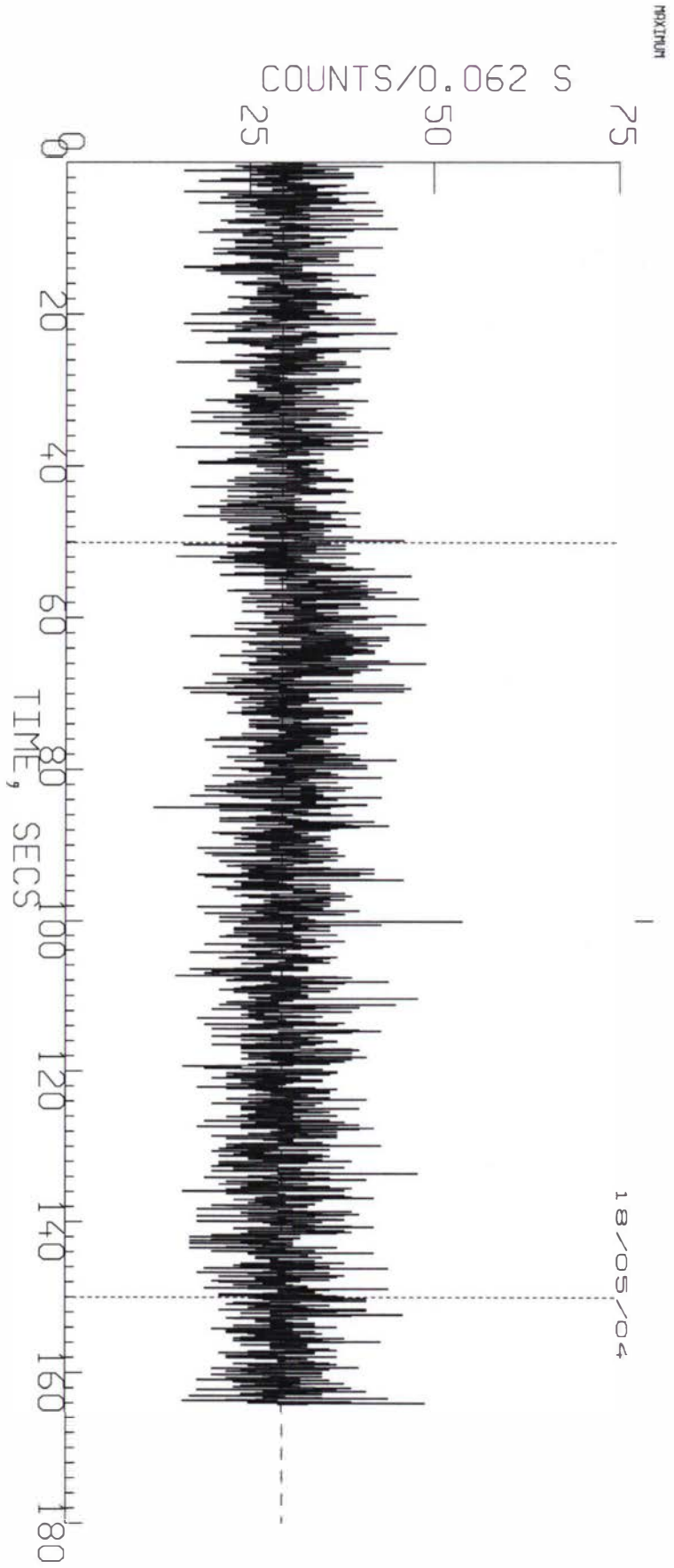
17/ 5/ 4

ULYSSES RT-MS01 HEND CORRELATION 3/ 9/01 85154.102

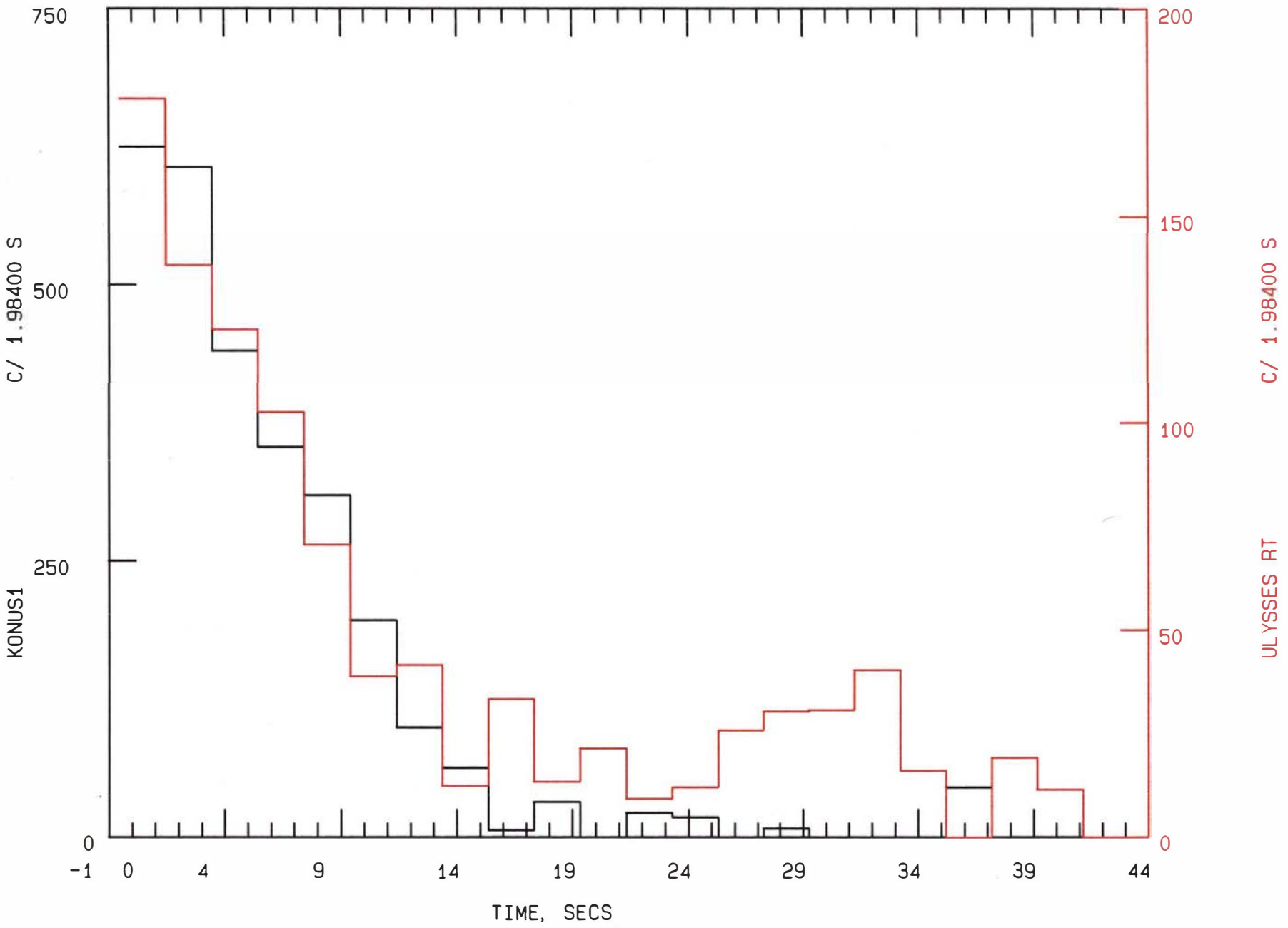


HETE-II 03/09/01 84419.382

18- 510 keV

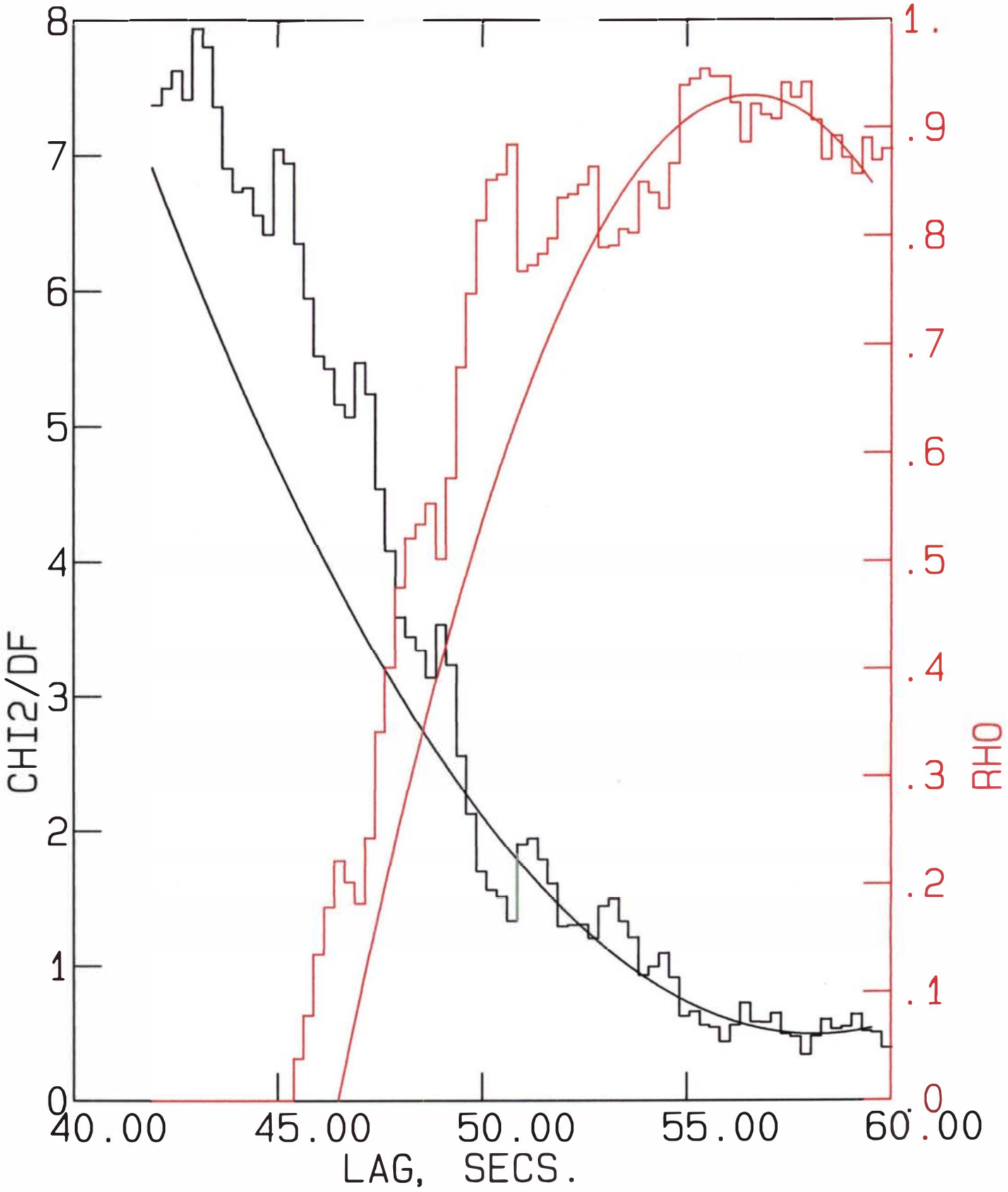


KONUS1 -ULYSSES RT CORRELATION 03/09/01 84474.447 17/ 5/ 4



17/ 5/ 4

KONUS1 -ULYSSES RT CORRELATION 03/09/01 84474.447



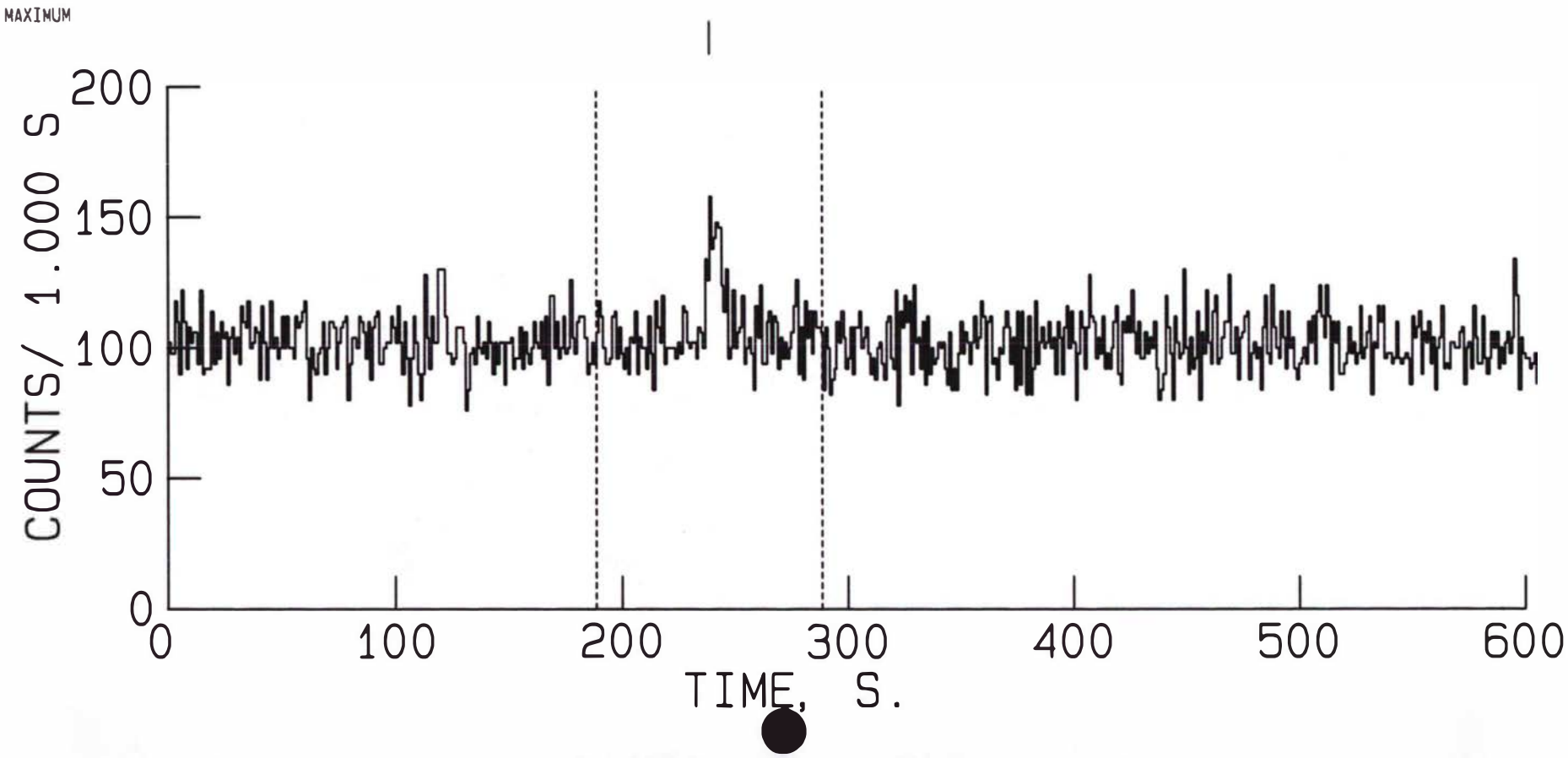
MS01 HEND

17/05/04

03/09/01 84213.844 s

0.250 S INTERVALS REGROUPED BY 4

50-3000 keV



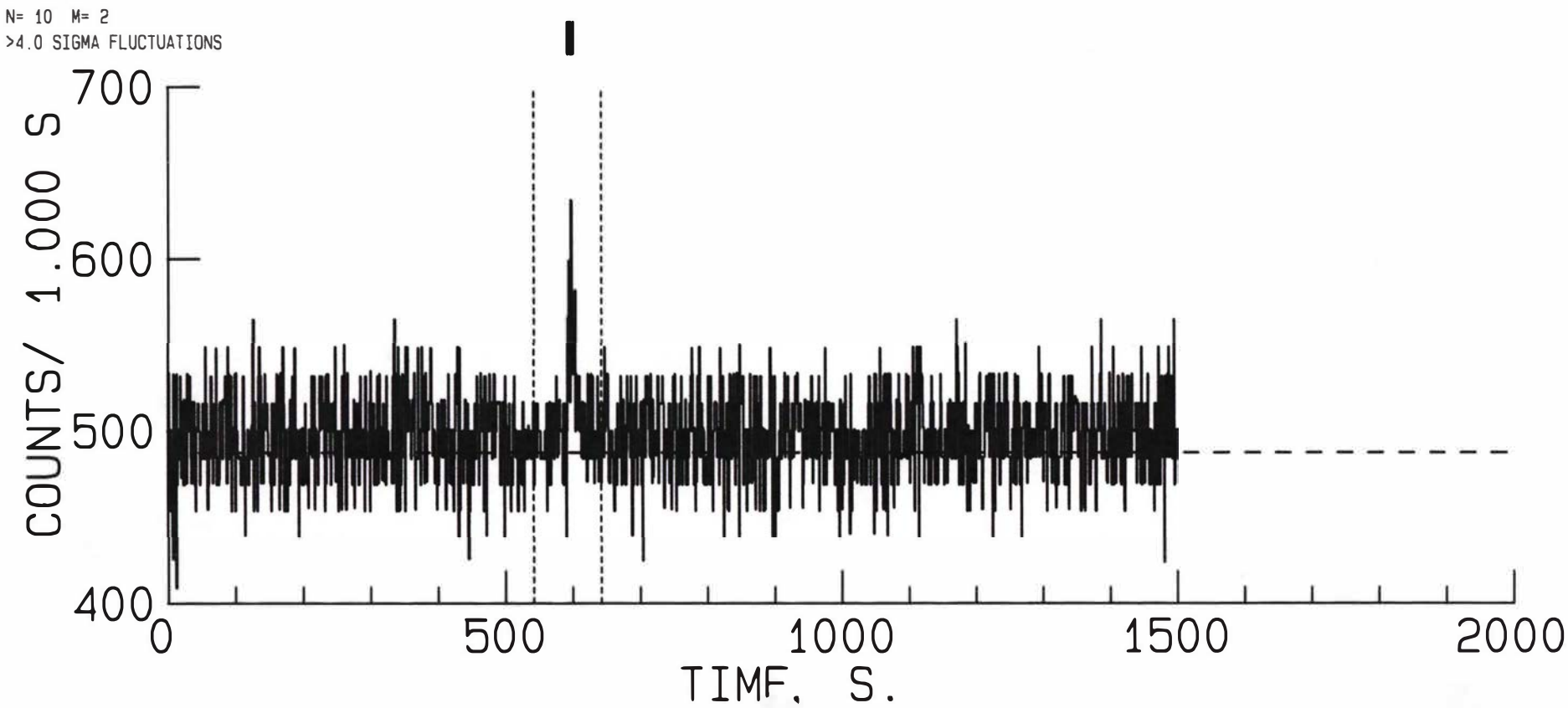
ULYSSES RT

17/ 5/ 4

3/ 9/ 1 84612.852 s

0.250 S INTERVALS REGROUPED BY 4

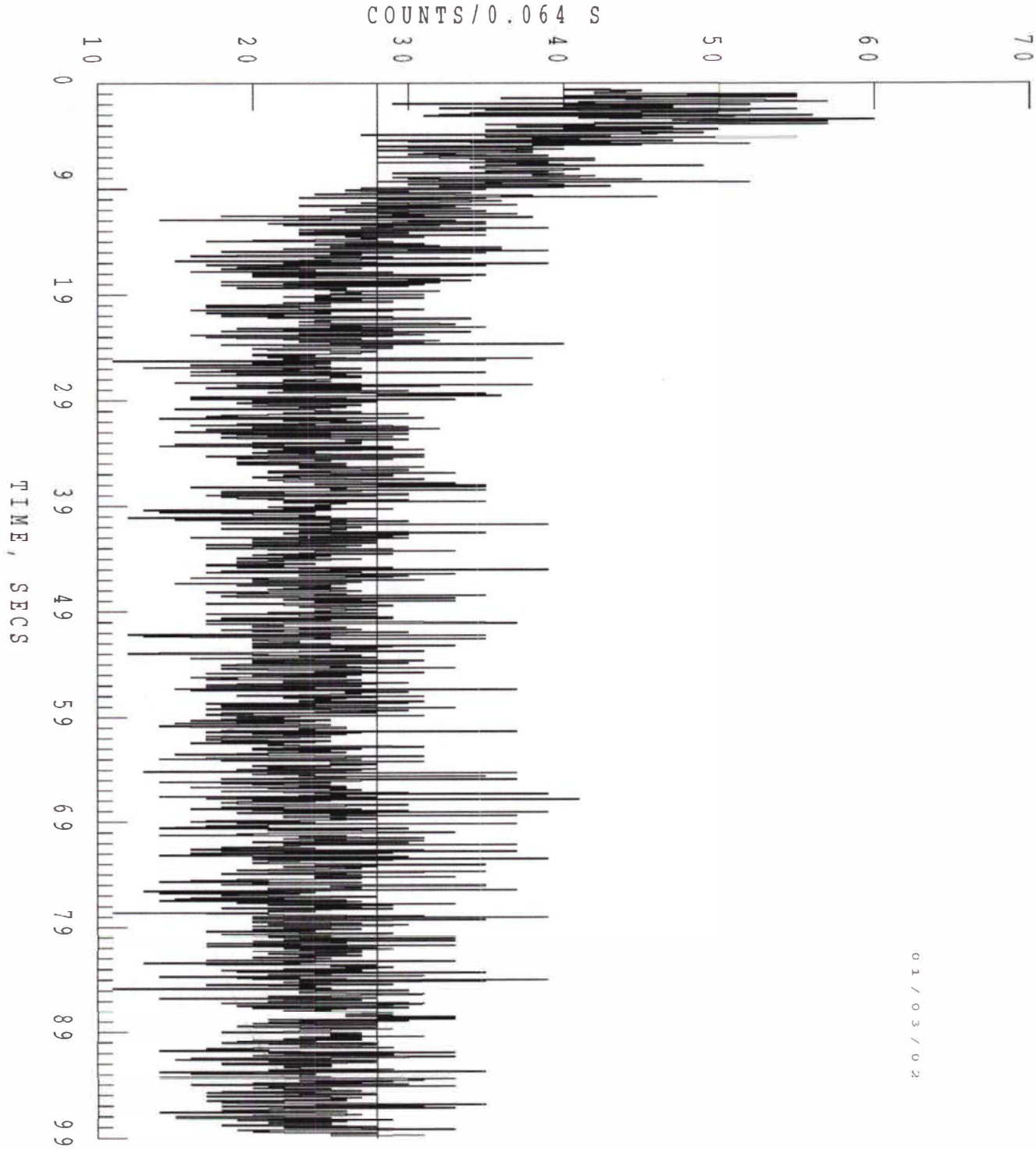
22- 153 keV



KONUS1 03/09/01 84474.447

50- 200 keV

GRB



01/03/02

FREGATE BURST #1748 TIME HISTORY -- DETECTORS 1-4 SUMMED

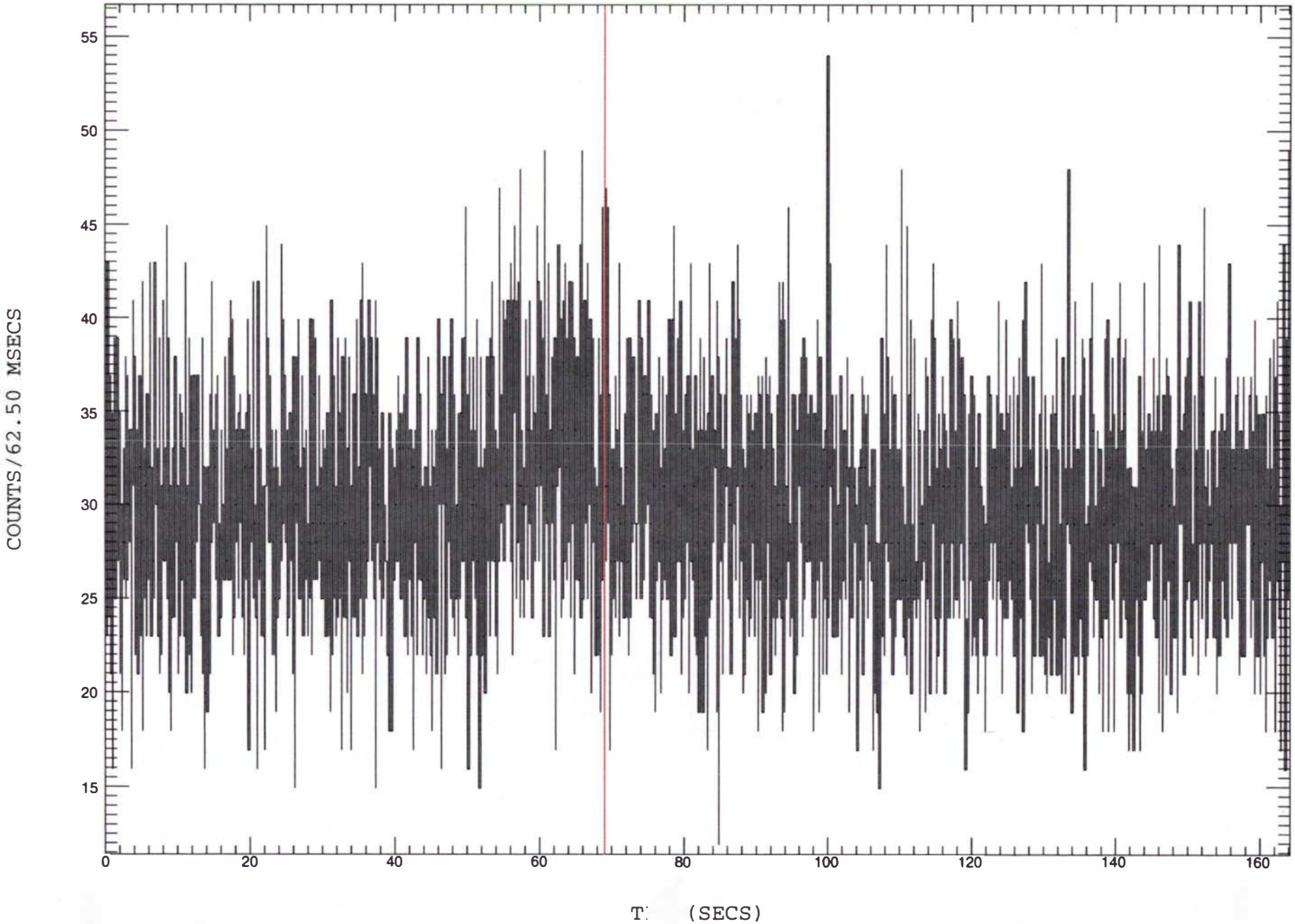
03/09/01 DOY 246 Julian 2452157.47788

TRIGGERED BY FREGATE UT = 23:28:08 (84488.63 secs) [sct = 0019 4abd abe9 9823]

PLOT STARTING TIME UT = 23:26:59 (84419.38 secs) [sct = 0019 4abd a7c8 e50a]

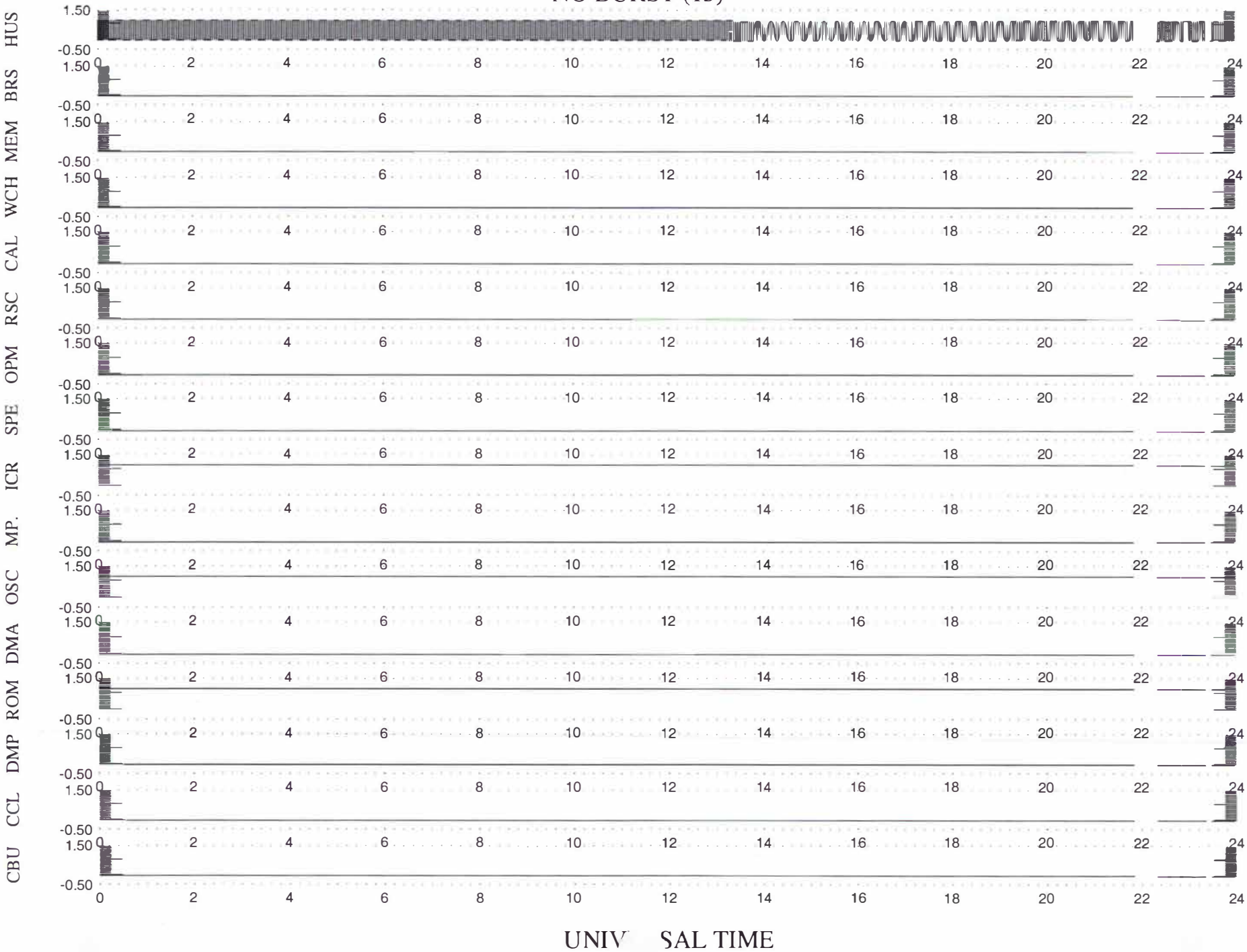
BACKGRND SAMPLED FROM UT = 23:27:37 (84457.87 secs) [sct = 0019 4abd aa14 3823]

BIN WIDTH 62.50 msecs INTEGRATED OVER CHANS. 25-150



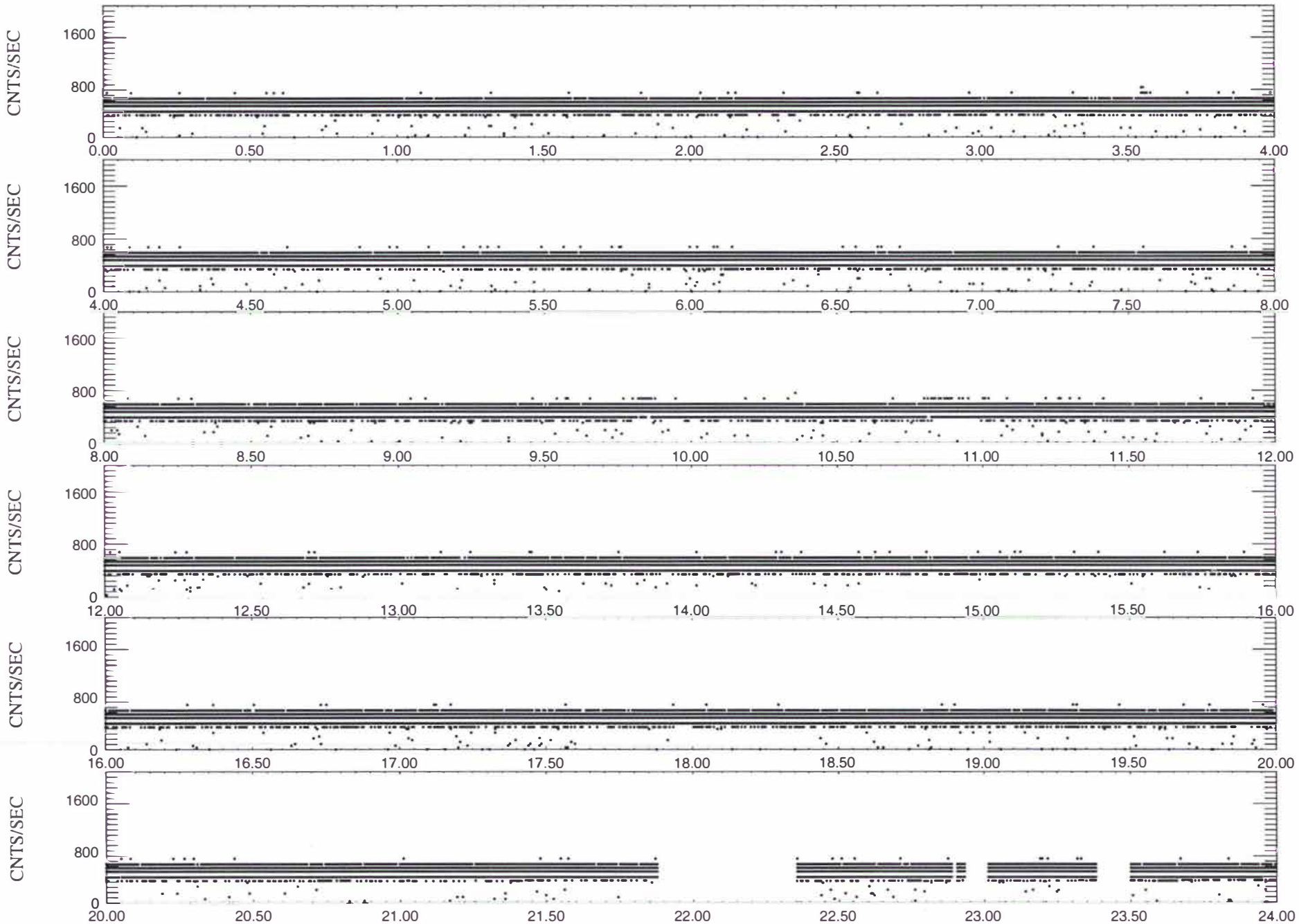
HUS MODES EDR day 246, year 2001 to day 246, year 2001 01/22/02

NO BURST (15)



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 03/09/2001 DOY = 246 01/22/02

CALIBRATION DATA INCLUDED



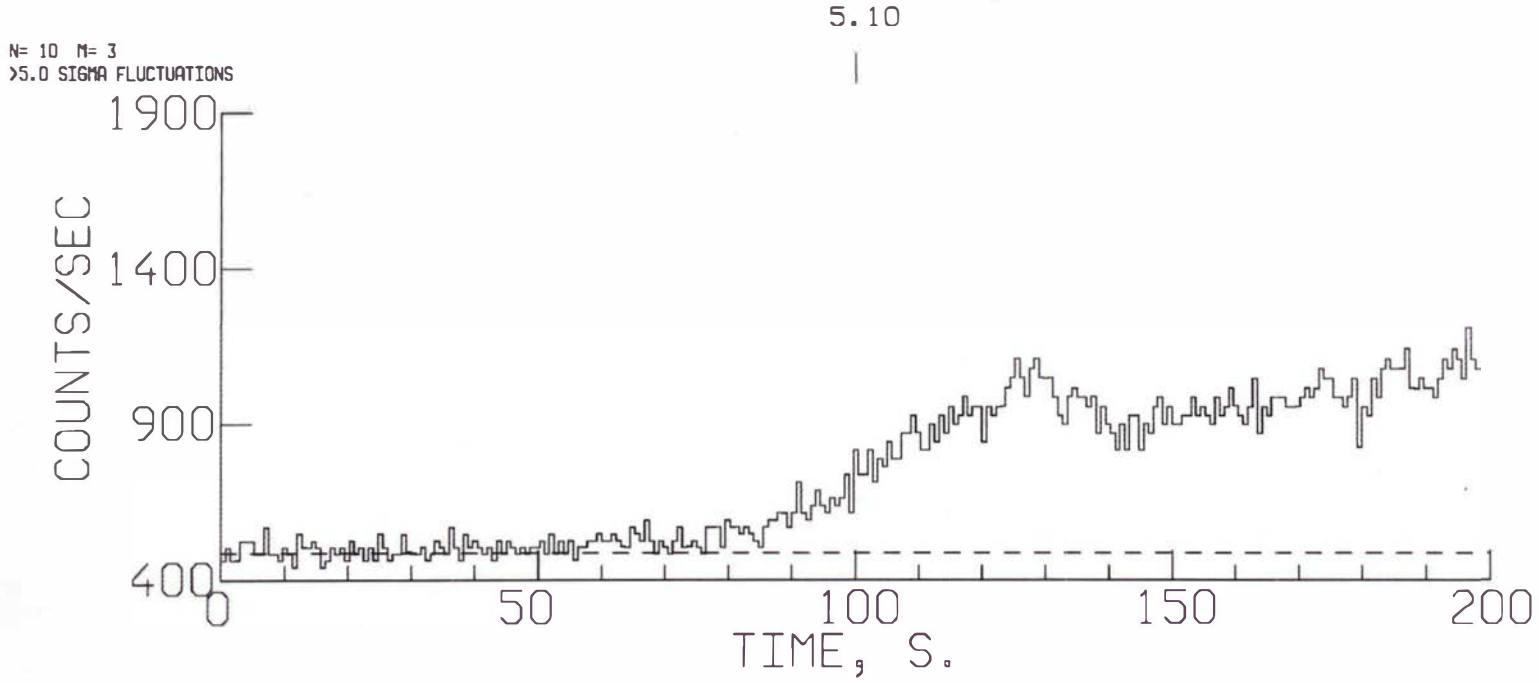
UNIVERSAL TIME

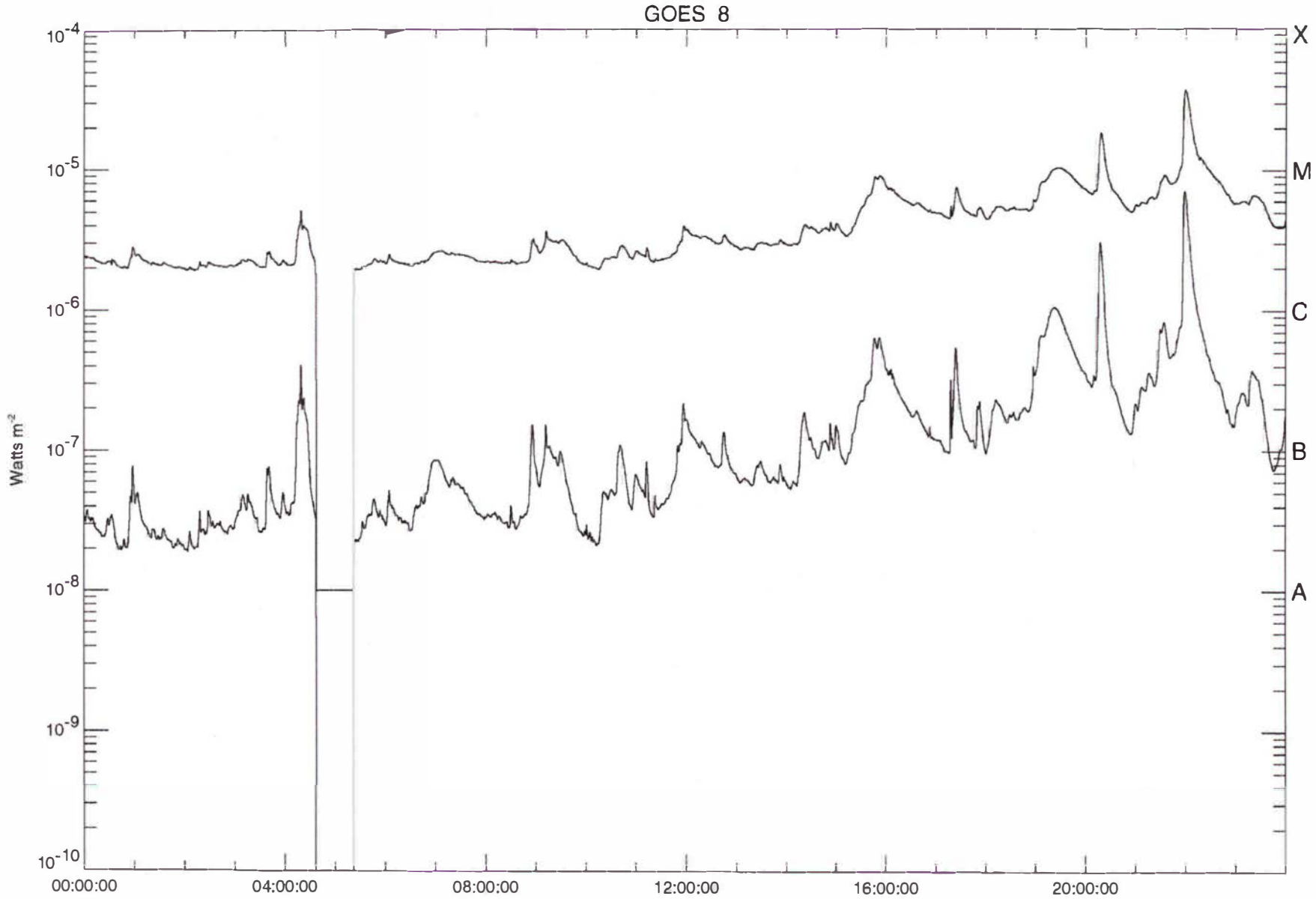
ULYSSES RT 9/ 9/ 1

4/ 9/ 1 79308.004 s

0.250 S INTERVALS REGROUPED BY 3

23- 155 keV

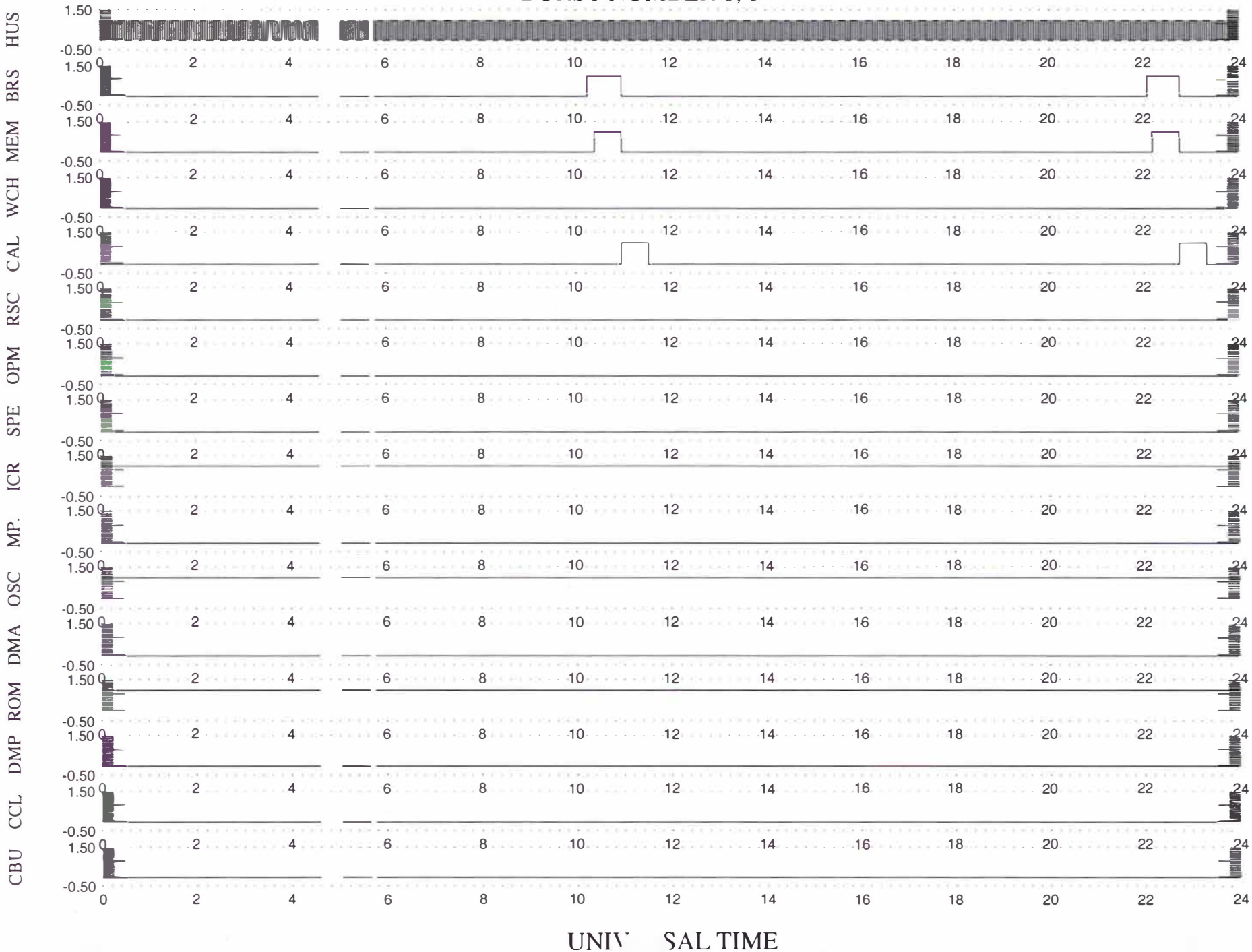




Data Start: 01/09/04, 0000:00
Plot created: 01/09/08, 0951
Channel
1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

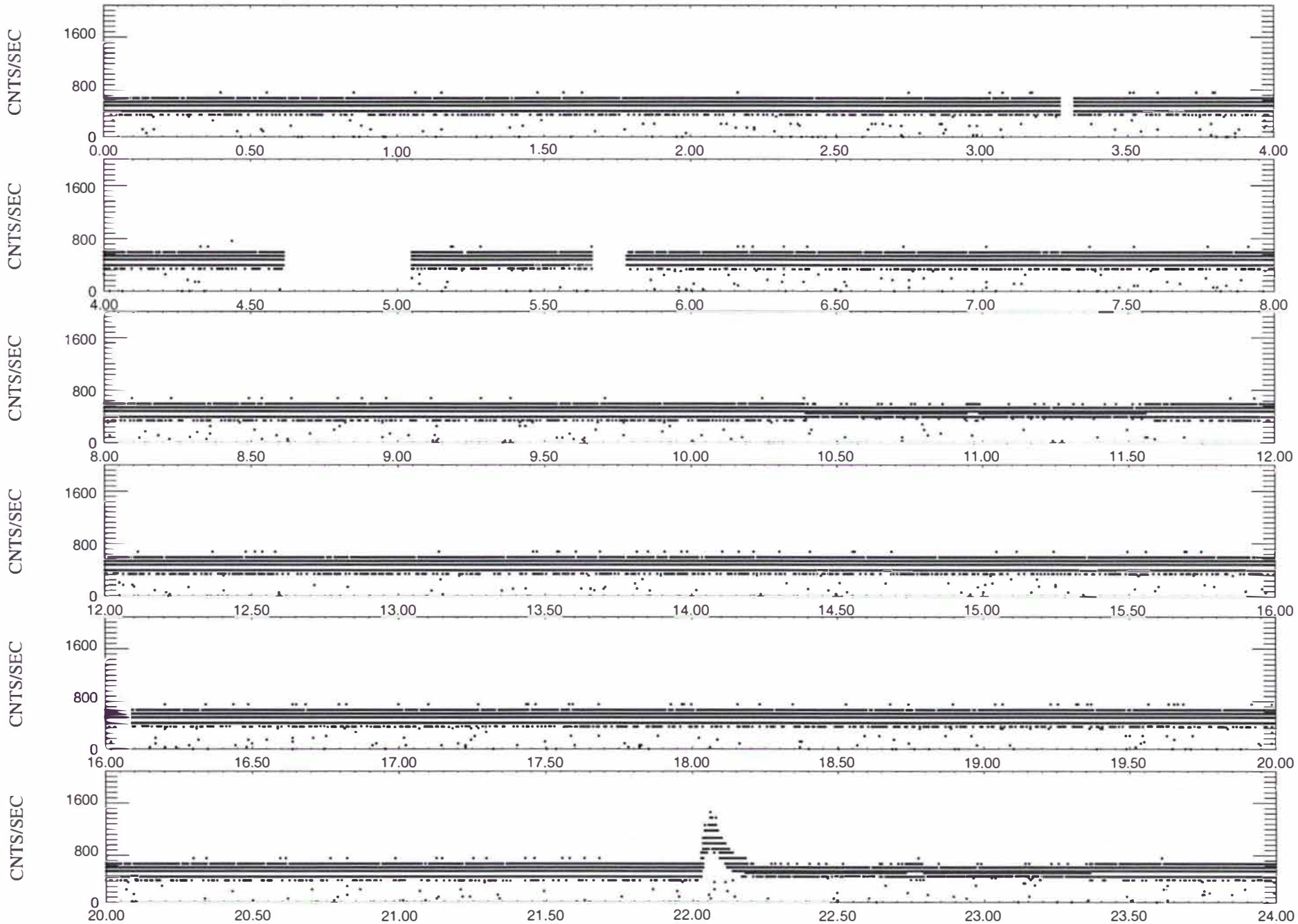
HUS MODES EDR day 247, year 2001 to day 247, year 2001 01/22/02

BURST NUMBER 0, 1



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 04/09/2001 DOY = 247 01/22/02

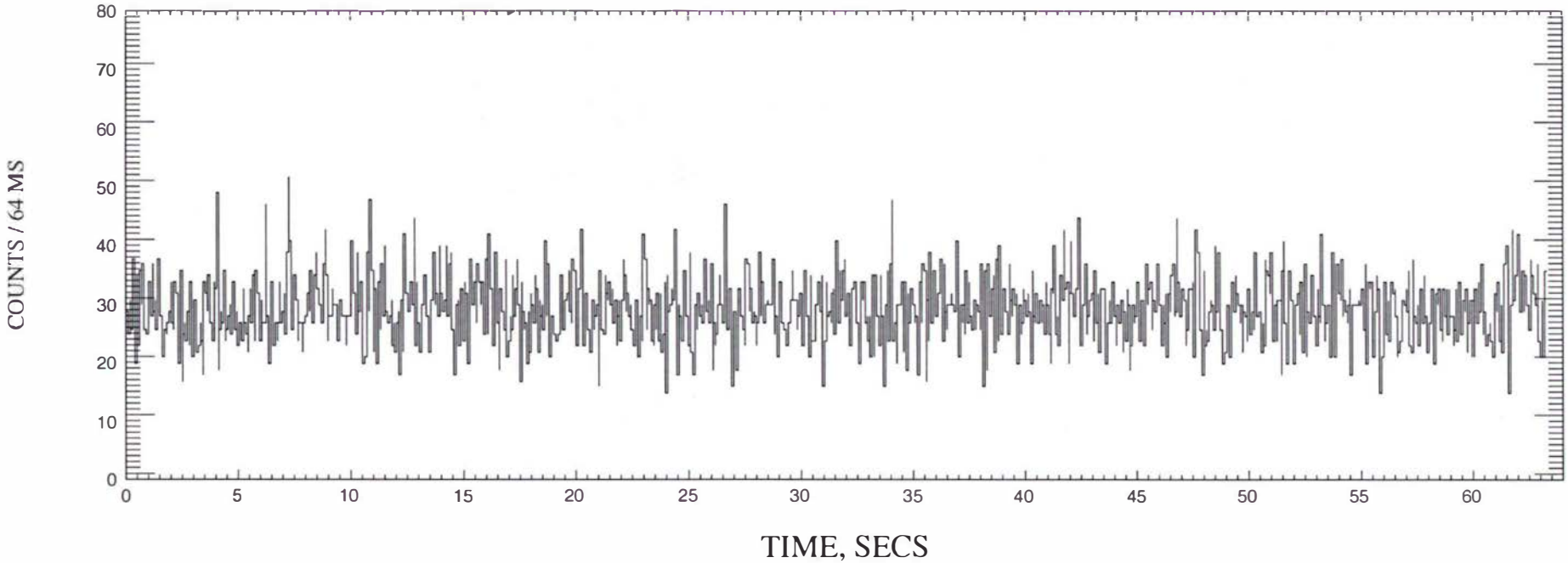
CALIBRATION DATA INCLUDED

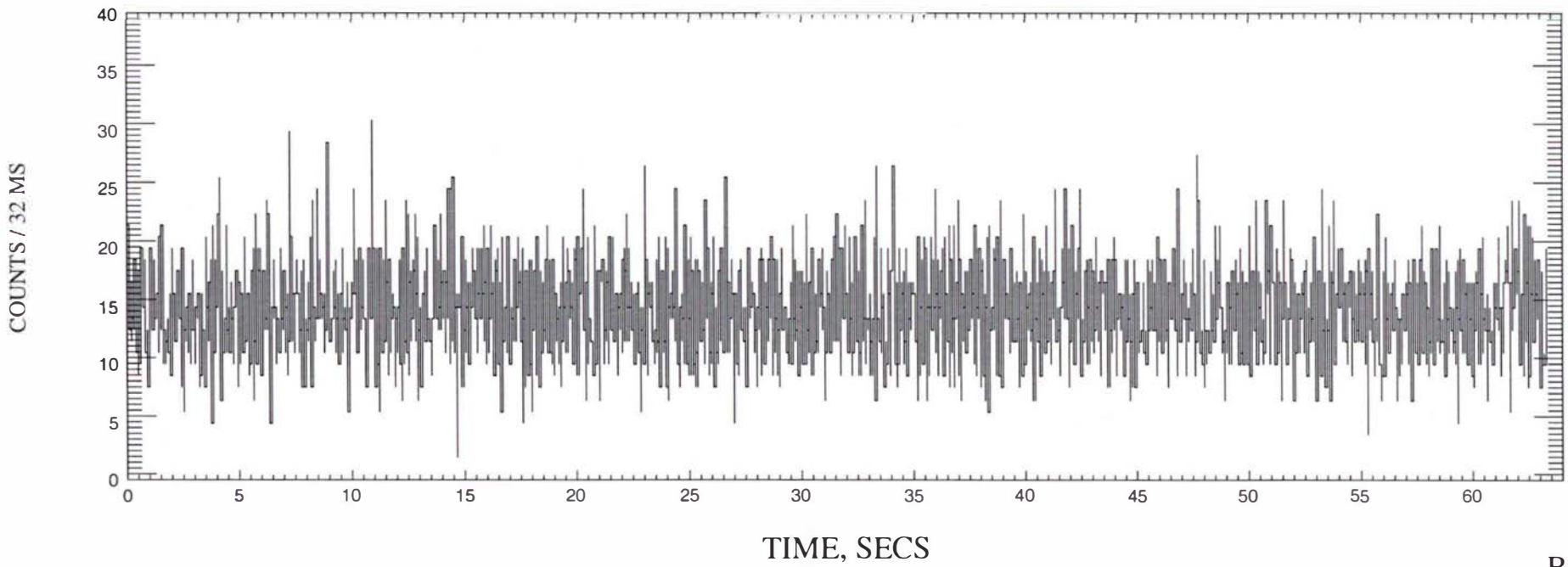


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 04/09/2001 DOY = 247 01/22/02

Burst Counter 0 at UT=10.239273189969 h=36861.383 s 10:14:21.383

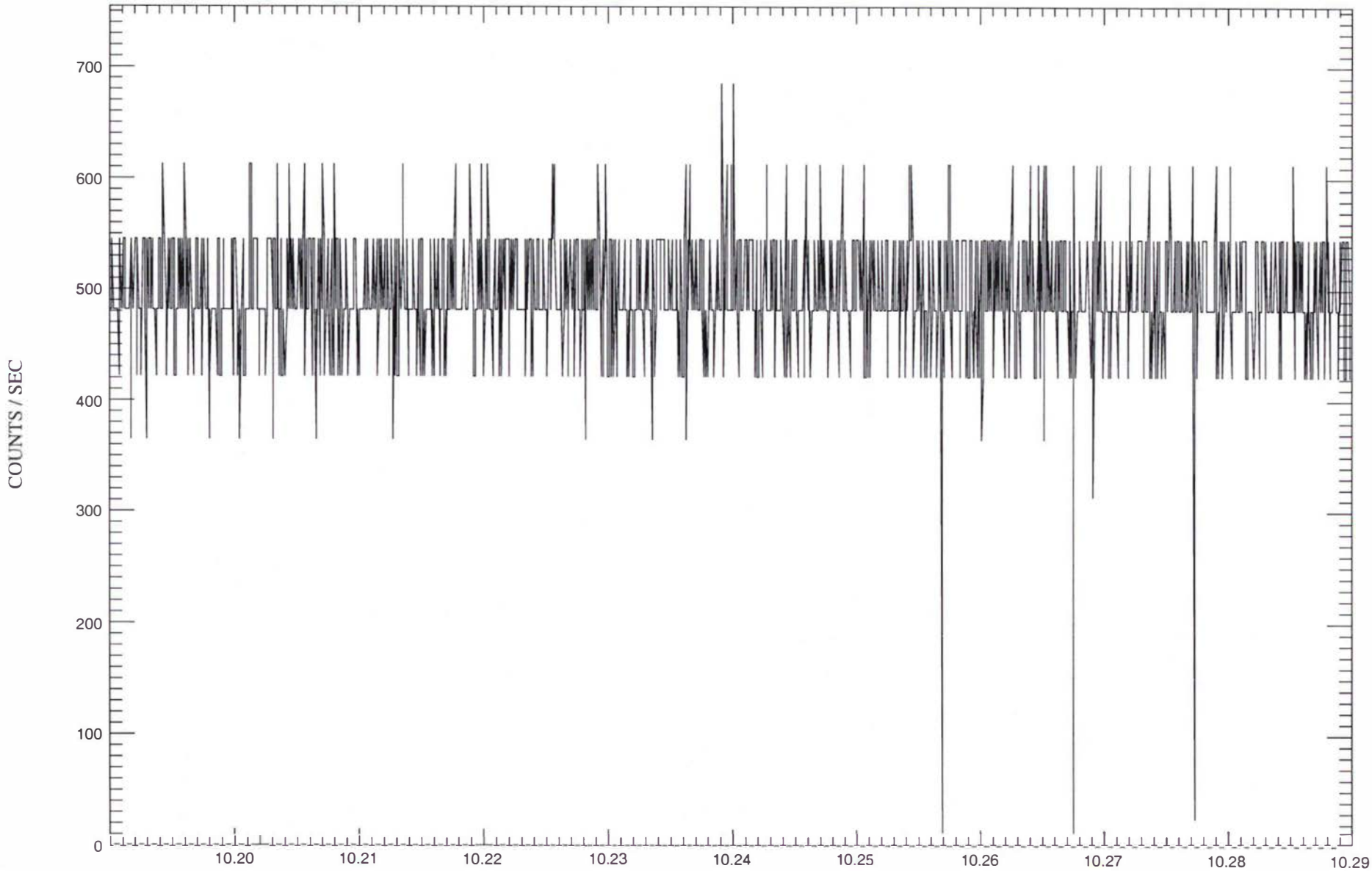




B# 1

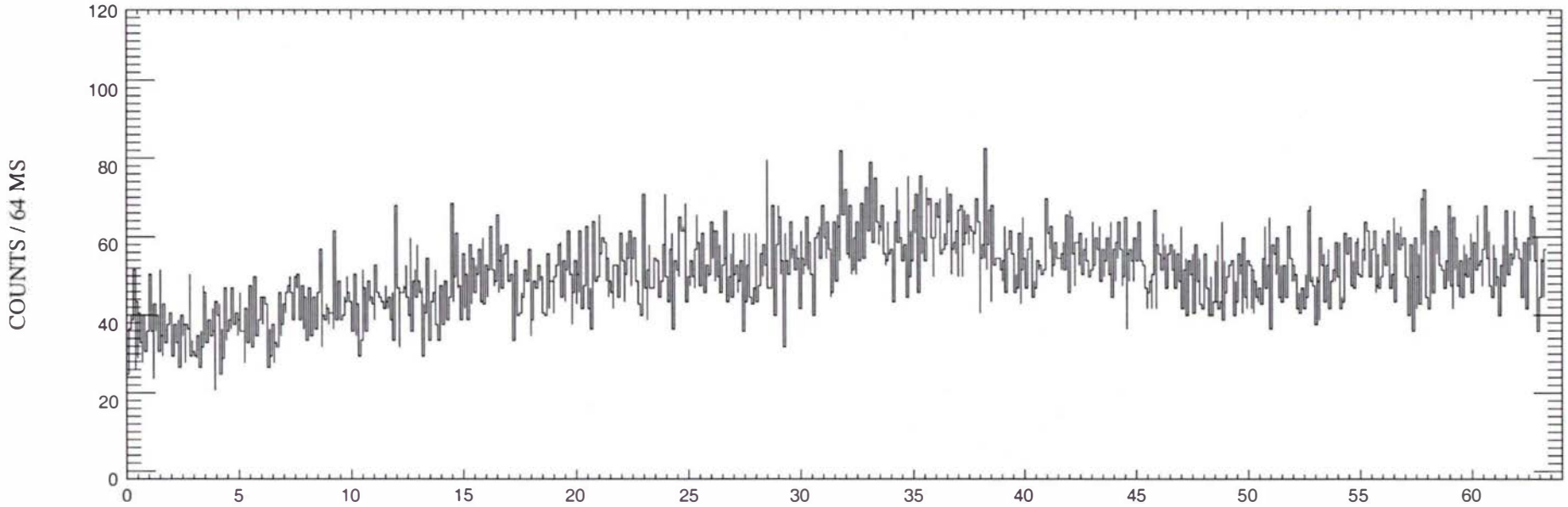
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 04/09/2001 DOY = 247 01/22/02

CALIBRATION DATA INCLUDED

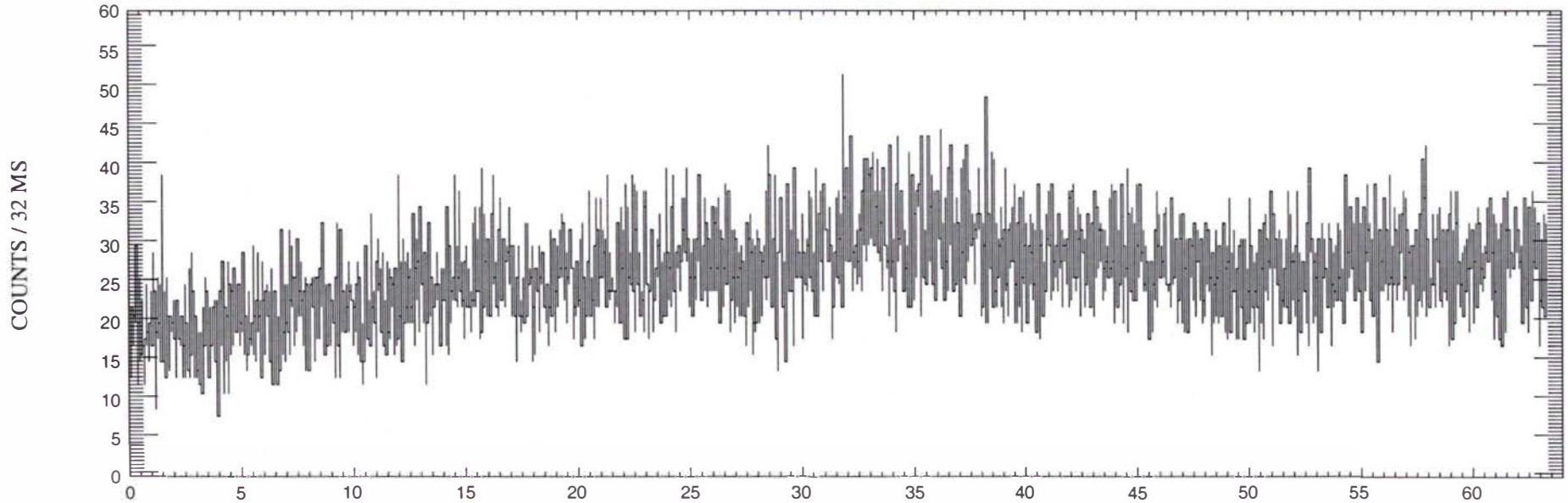


HUS 2A TRIGGERED DATA EDR DMY = 04/09/2001 DOY = 247 01/22/02

Burst Counter 1 at UT=22.030033069187 h=79308.11 9 s 22:01:48.119



TIME, SECS

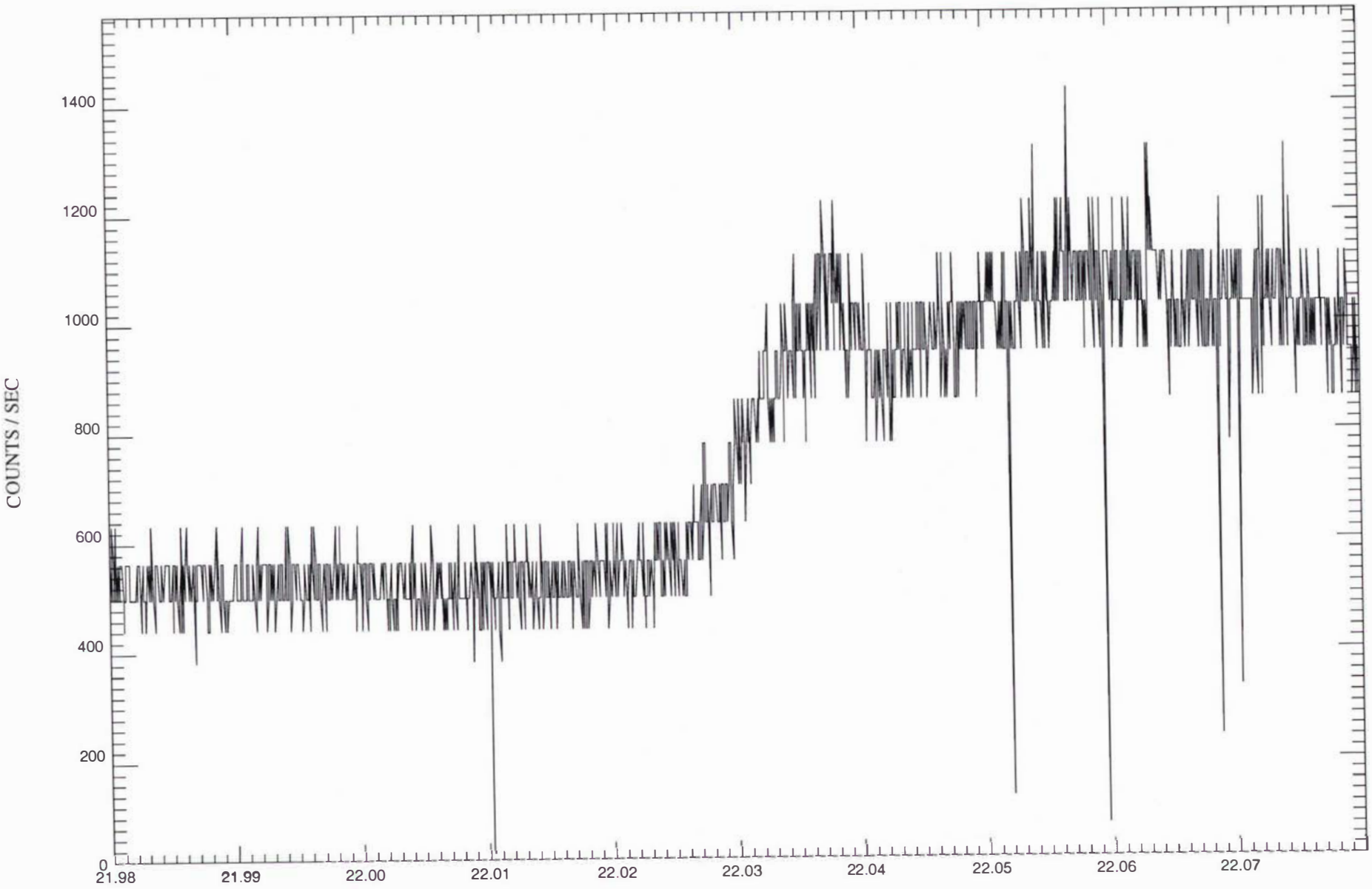


TIME, SECS

B# 2

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 04/09/2001 DOY = 247 01/22/02

CALIBRATION DATA INCLUDED



From guidorzi@fe.infn.it Wed Sep 5 10:58 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
Date: Wed, 5 Sep 2001 19:50:04 +0200 (MET DST)

ikGRB[286] #LSs: 1 Good HRR: 0
SW Trigger Time (OBT): 63125.000
UTC: Wed, 05 Sep 2001 14:31:27:77072

Nsig(trg):	4.1	12.6	2.3	1.1	2.0	5.3	1.8	2.0
Nsig(pfl):	4.1	15.1	2.3	0.0	3.2	5.6	1.8	0.0
Bkg lev. :	874	1242	809	716	960	1061	943	965
ChiSq R. :	1.141	1.437	1.119	0.997	1.045	1.358	1.012	1.035
Peak fl. :	120	532	67	0	99	182	55	0
Error :	43.3	55.1	41.1	0.0	45.0	48.1	44.1	0.0
Fluence :	626	9976	67	0	382	3488	55	0
Error :	113.5	294.9	41.1	0.0	117.7	266.6	44.1	0.0

Dur (s) :	10.00	47.00	1.00	0.00		
Abundance:	7	32	1	0		
H. Ratio :	0.611	0.350	0.819	-1.000		
HR Ratio :	1.746	0.746	-1.000	0.427	-1.000	-1.000
HR W-ave :	0.355	+/- 0.028				

SAX 20010905 52287

ULYSSES RT 06/09/01

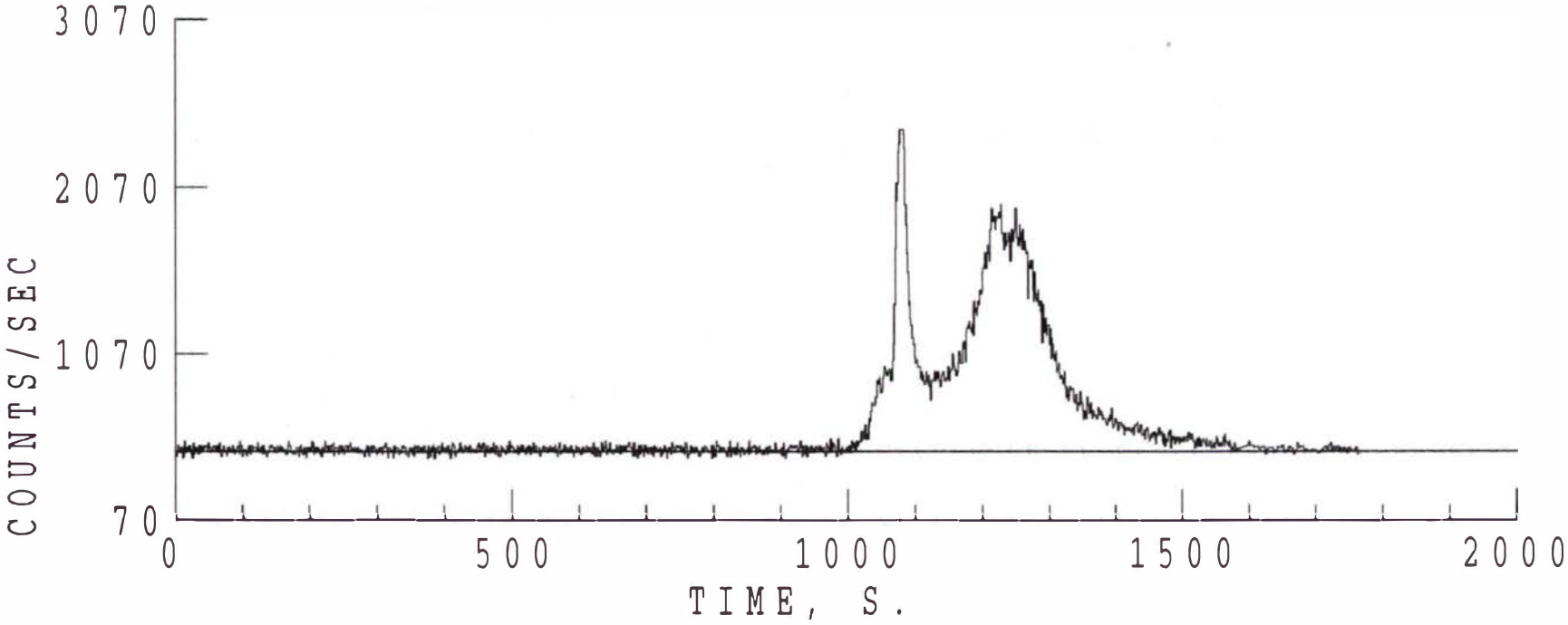
05/09/01 51408.016 s

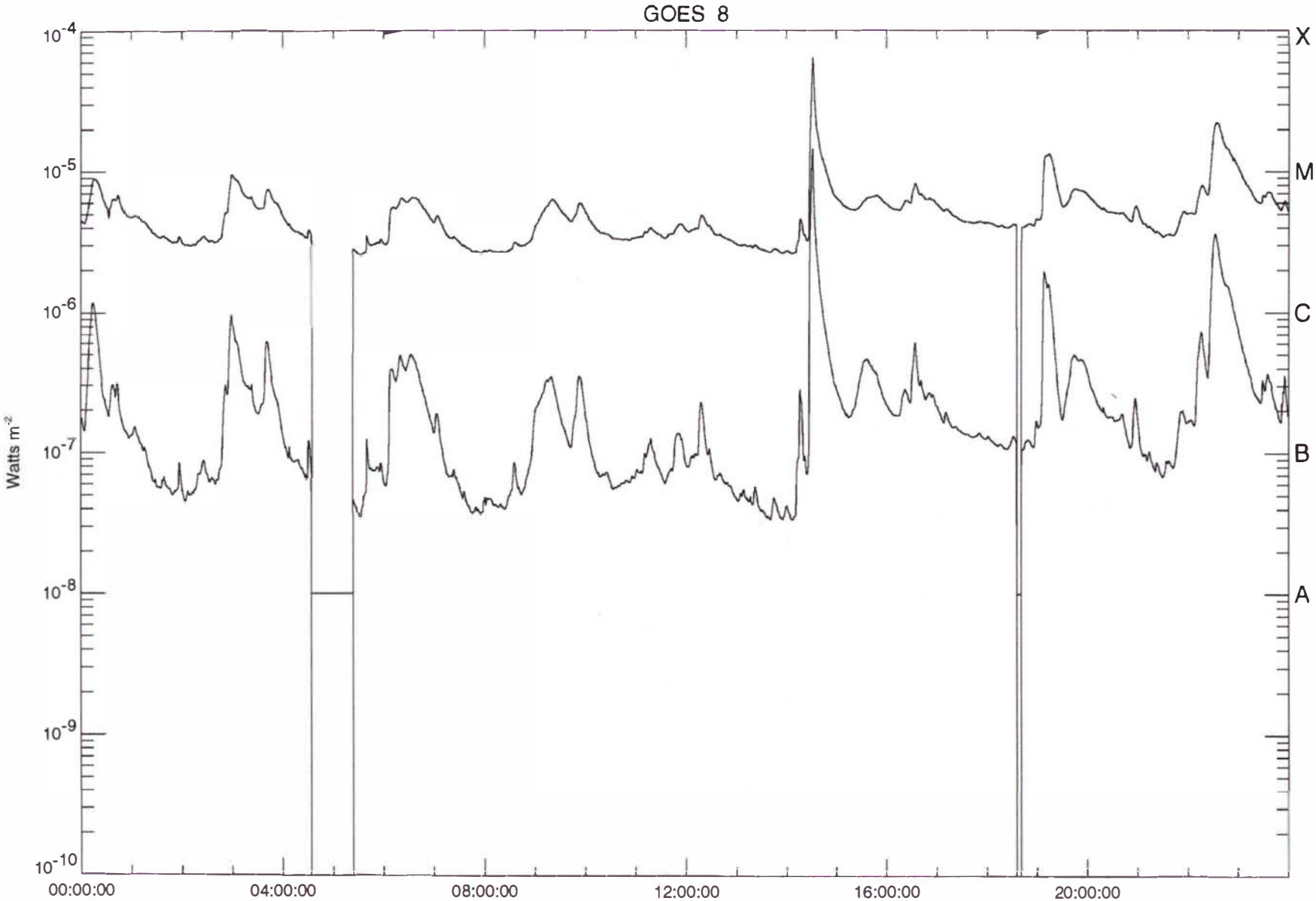
INTERVALS REGROUPED BY 5

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

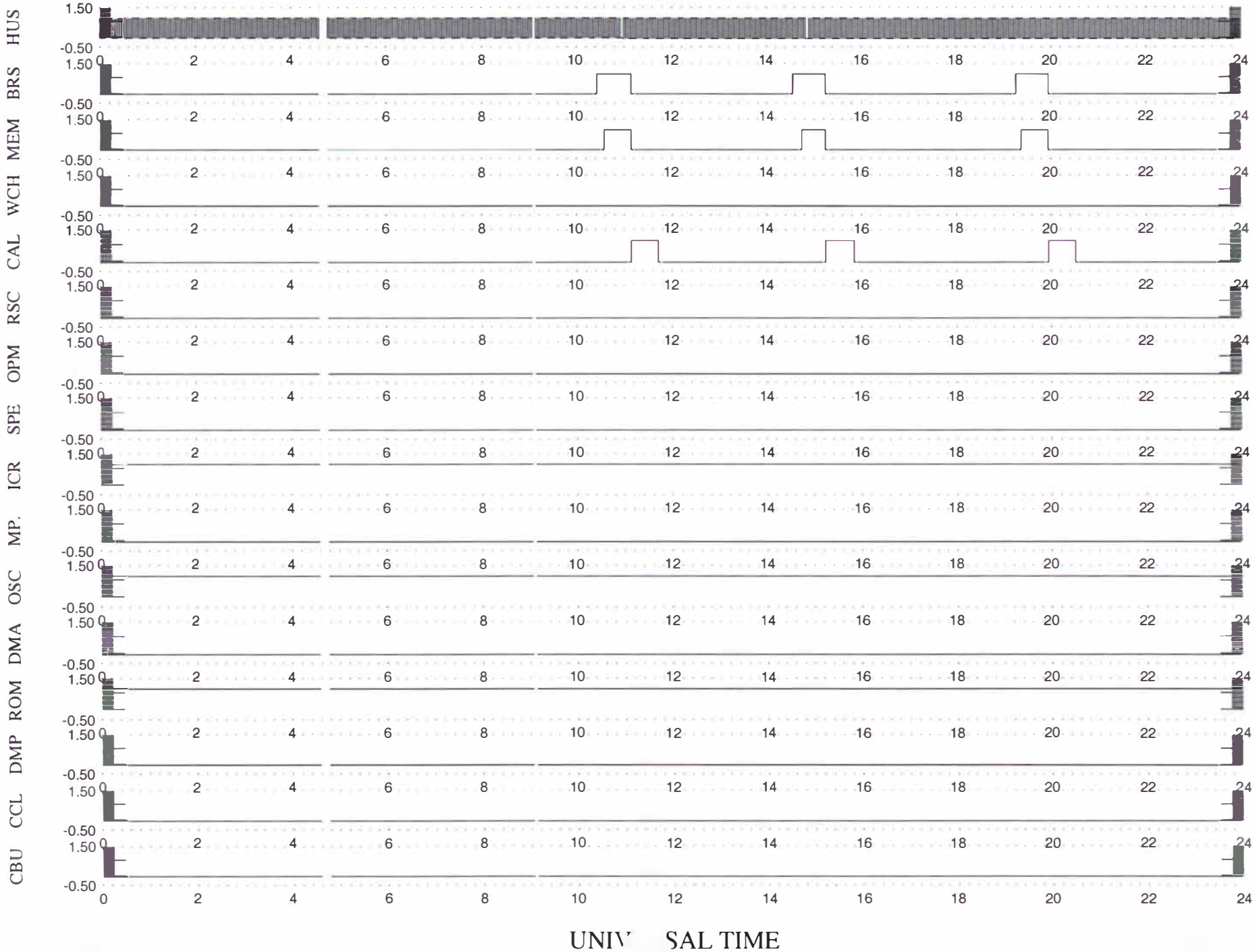




Data Start: 01/09/05, 0000:00 Plot created: 01/09/09, 0956
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

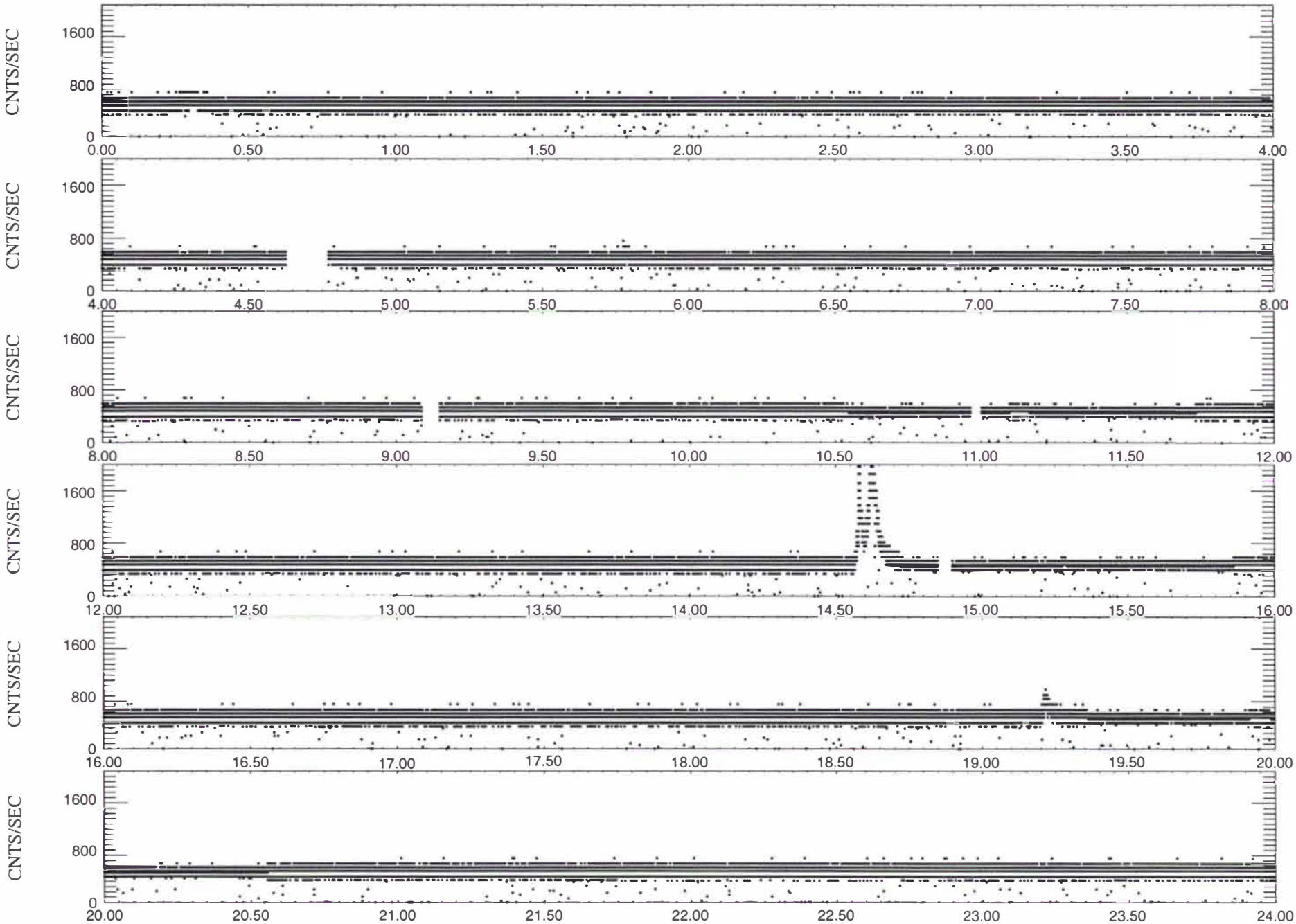
HUS MODES EDR day 248, year 2001 to day 248, year 2001 01/22/02

BURST NUMBER 2 - 4



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 05/09/2001 DOY = 248 01/22/02

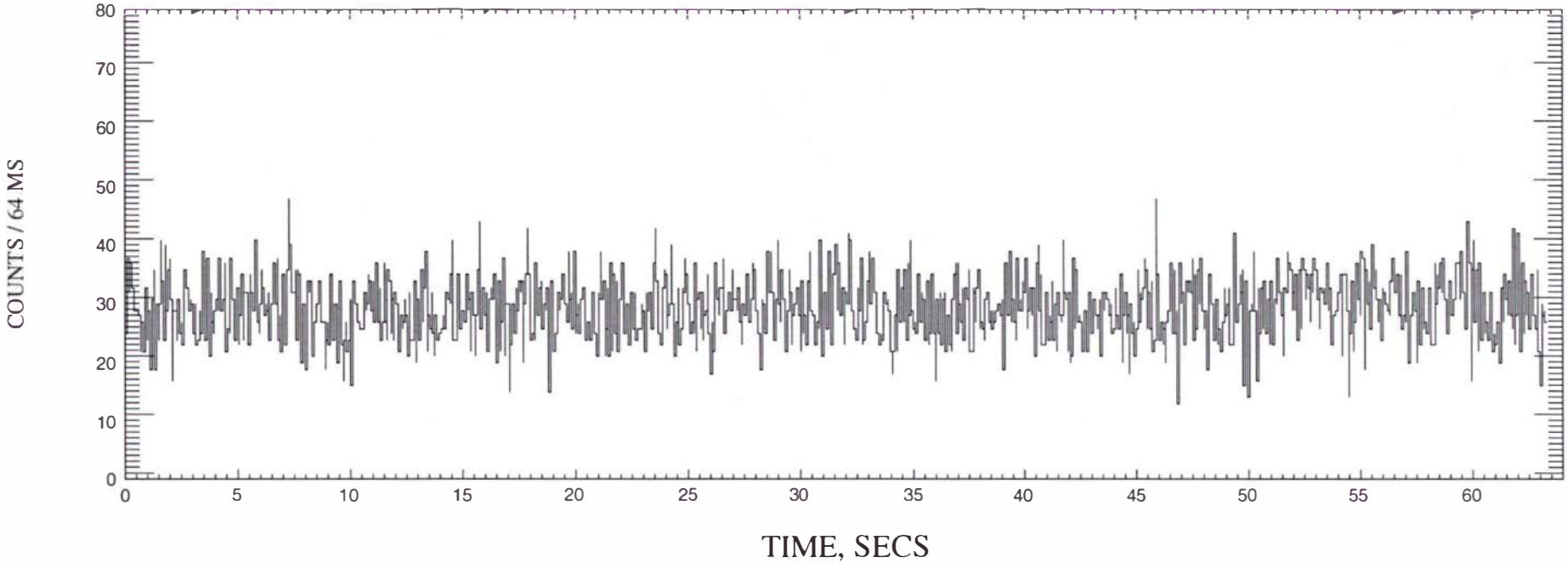
CALIBRATION DATA INCLUDED

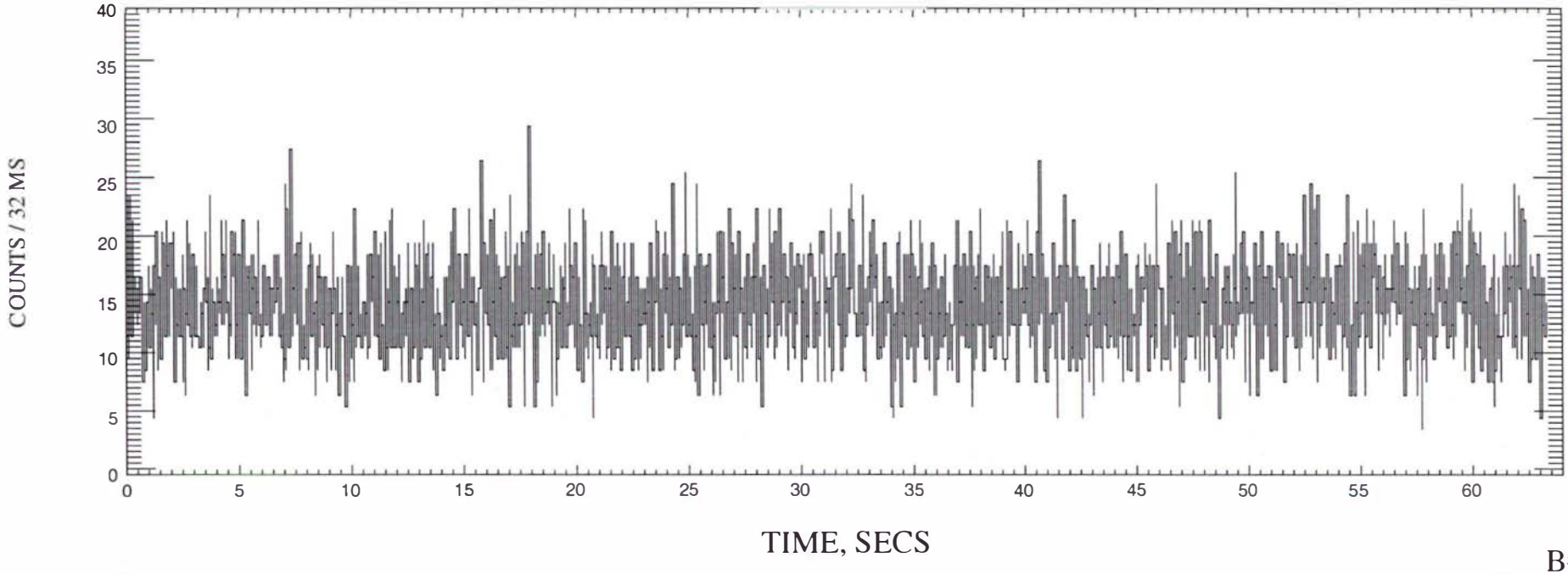


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 05/09/2001 DOY = 248 01/22/02

Burst Counter 2 at UT=10.392643072340 h=37413.515 s 10:23:33.515

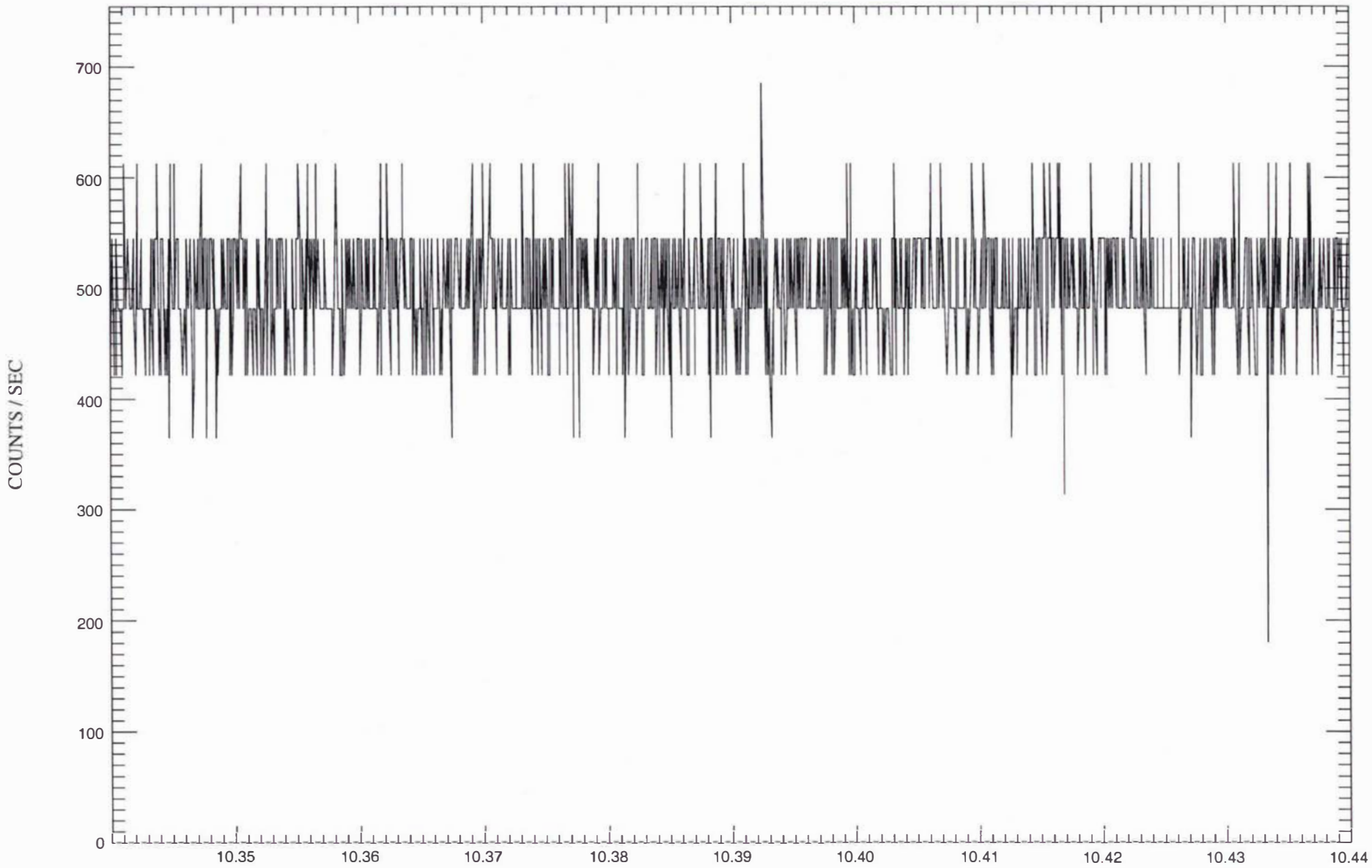




B# 1

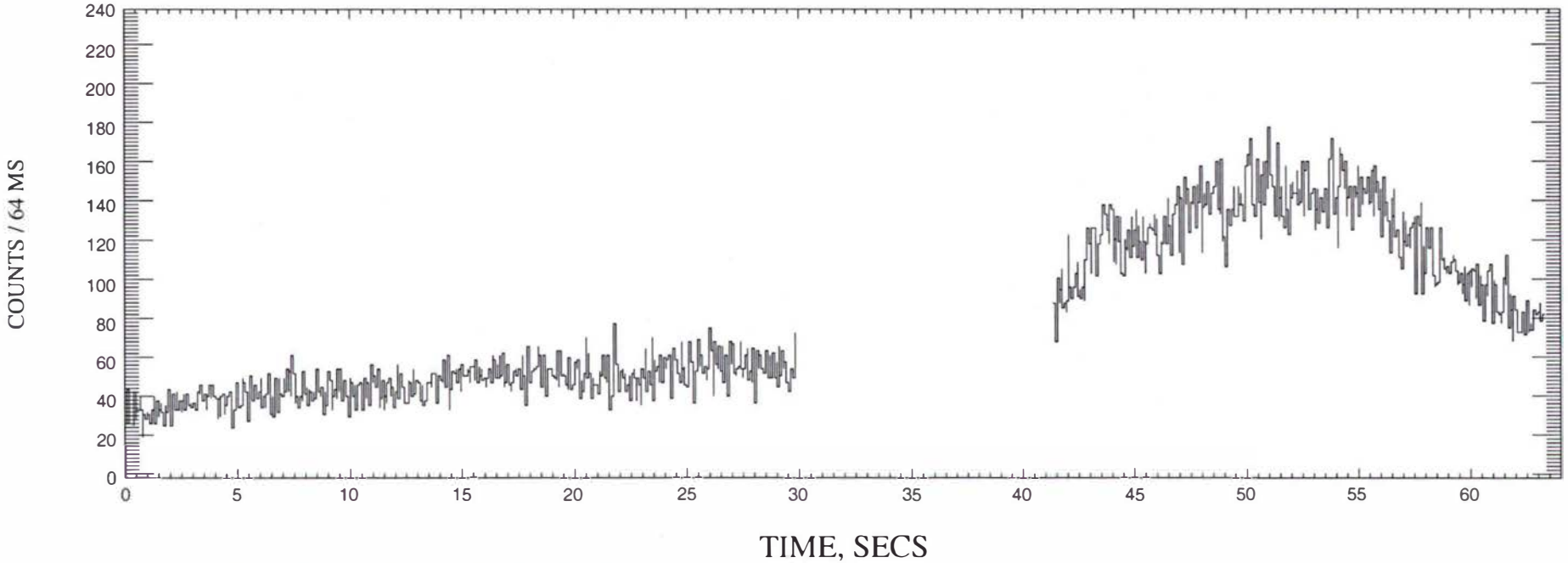
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 05/09/2001 DOY = 248 01/22/02

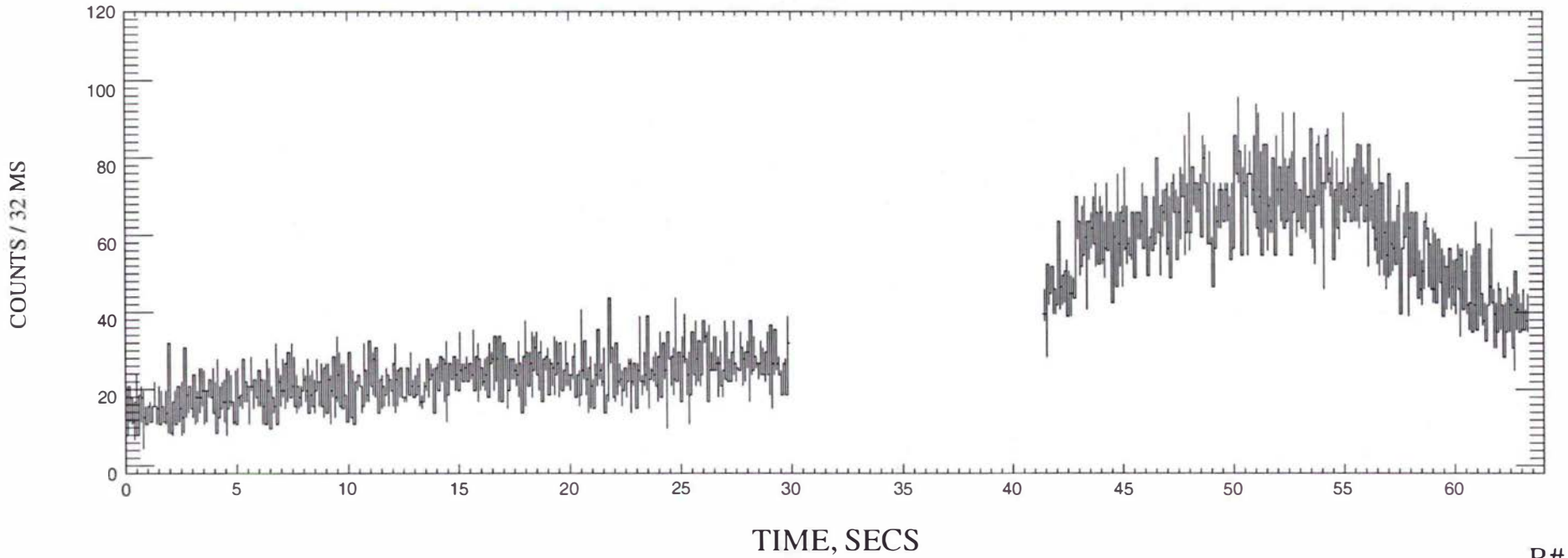
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 05/09/2001 DOY = 248 01/22/02

Burst Counter 3 at UT=14.567645017836 h=52443.522 s 14:34:03.522

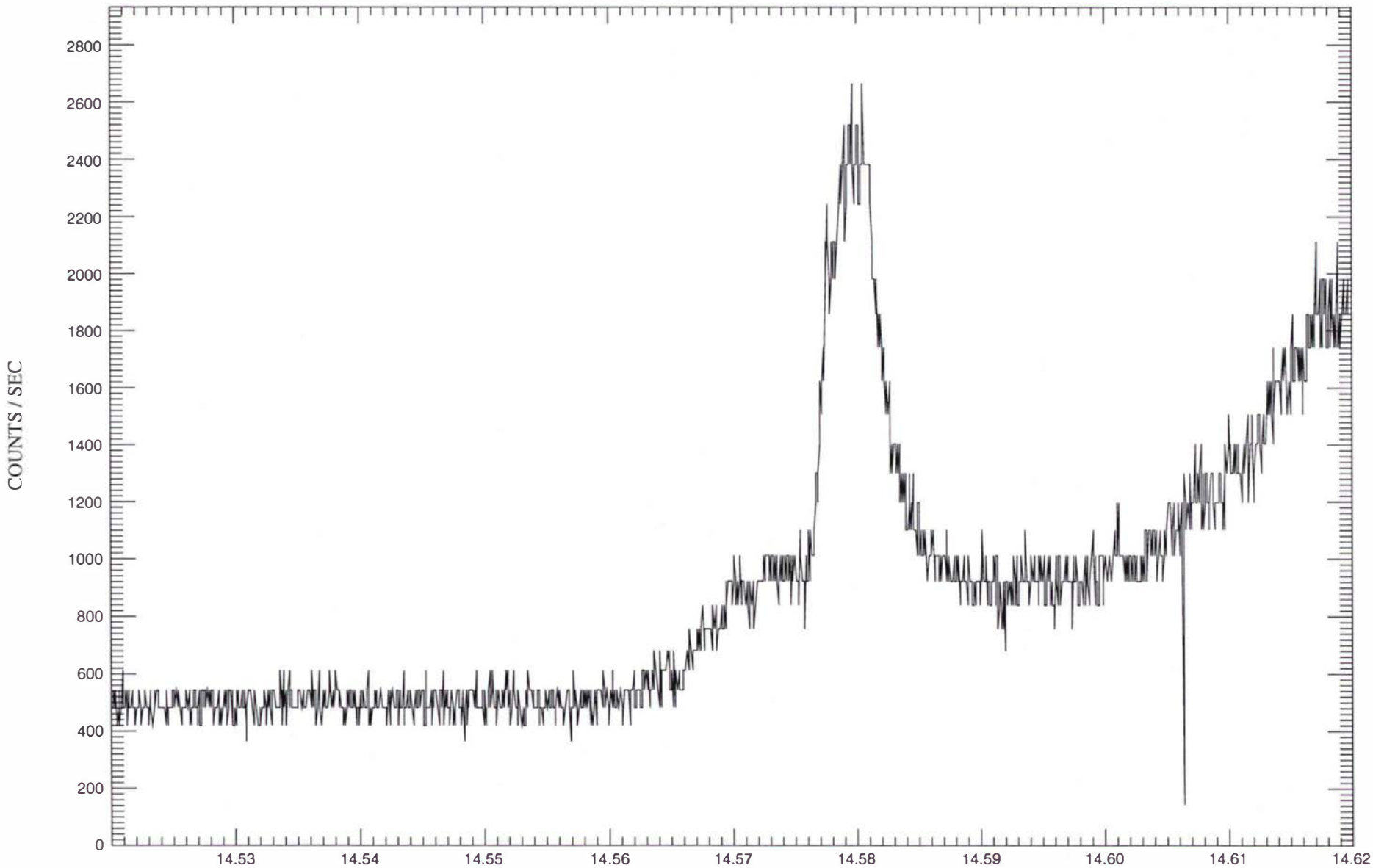




B# 2

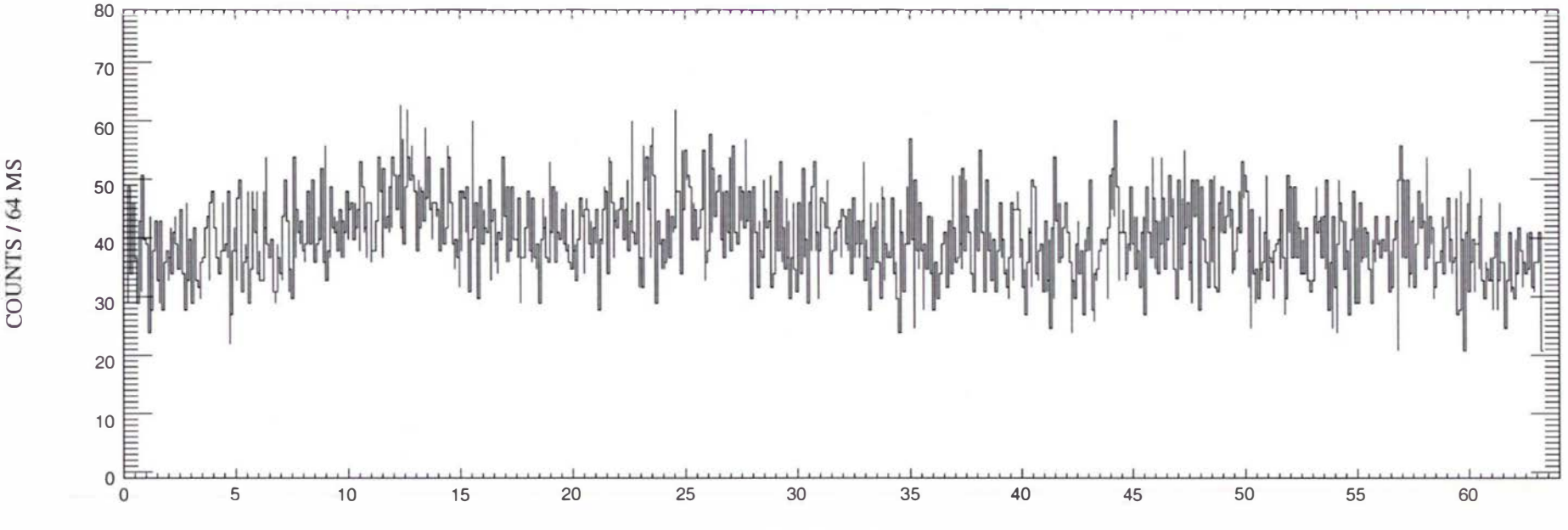
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 05/09/2001 DOY = 248 01/22/02

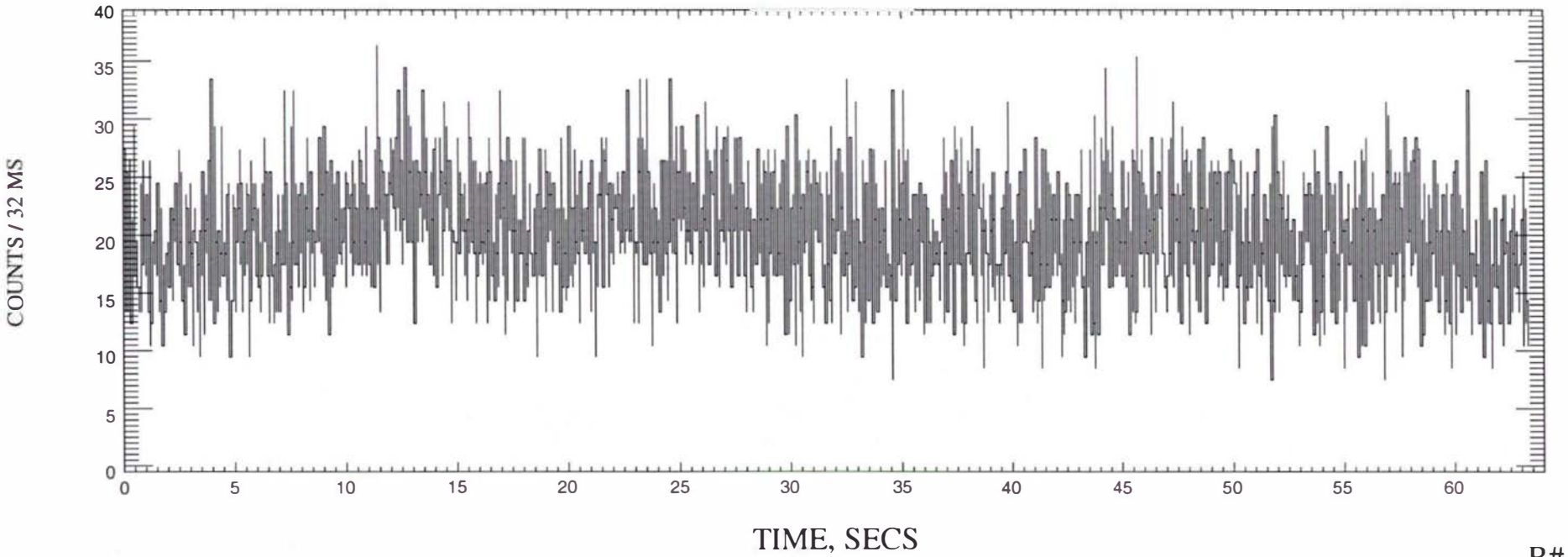
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 05/09/2001 DOY = 248 01/22/02

Burst Counter 4 at UT=19.208941531711 h=69152.190 s 19:12:32.190

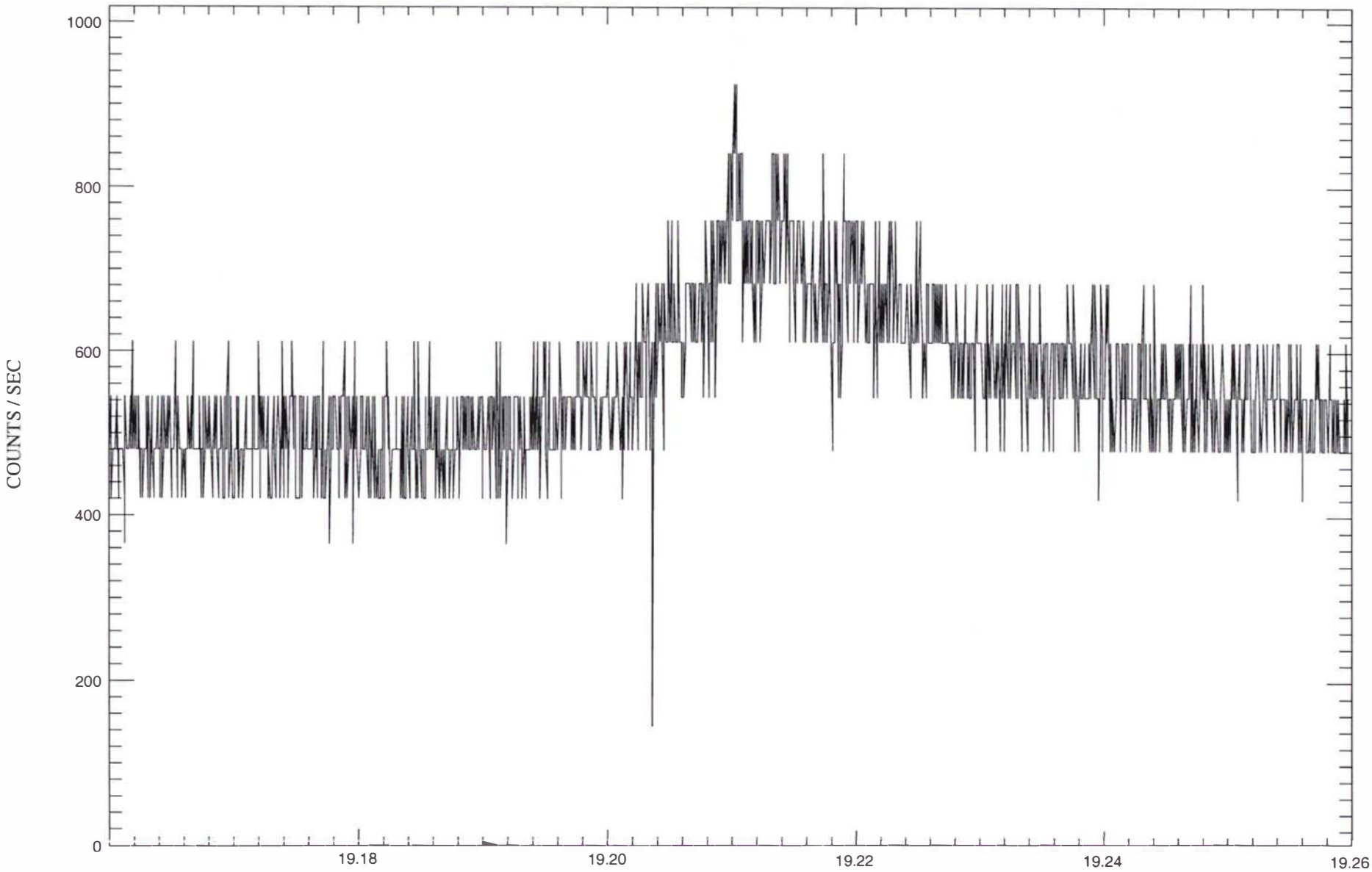




B# 3

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 05/09/2001 DOY = 248 01/22/02

CALIBRATION DATA INCLUDED



From guidorzi@fe.infn.it Thu Sep 6 09:28 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
`te: Thu, 6 Sep 2001 18:20:04 +0200 (MET DST)

ıkGRB[287] #LSs: 1 Good HRR: 3
SW Trigger Time (OBT): 9972.999
UTC: Thu, 06 Sep 2001 12:10:07:74078

Nsig(trg):	2.8	1.8	2.5	3.5	4.7	4.0	5.1	4.5
Nsig(pfl):	3.2	0.0	4.2	3.5	5.6	0.0	6.8	4.5
Bkg lev. :	756	844	764	674	815	864	815	874
ChiSq R. :	0.866	0.786	1.200	1.248	0.973	0.923	0.907	1.030
Peak fl. :	88	0	117	90	161	0	193	134
Error :	40.1	0.0	40.7	38.0	42.4	0.0	42.8	43.5
Fluence :	241	0	256	171	422	0	491	266
Error :	69.3	0.0	69.8	53.7	73.1	0.0	73.5	61.5

Dur (s) :	3.00	0.00	3.00	2.00		
Abundance:	3	0	3	2		
H. Ratio :	1.755	-1.000	1.916	1.555		
HR Ratio :	-1.000	0.916	1.128	-1.000	-1.000	1.232
HR W-ave :	1.745	+/- 0.345				

SAX 20010906 43807

ULYSSES RT 06/09/01

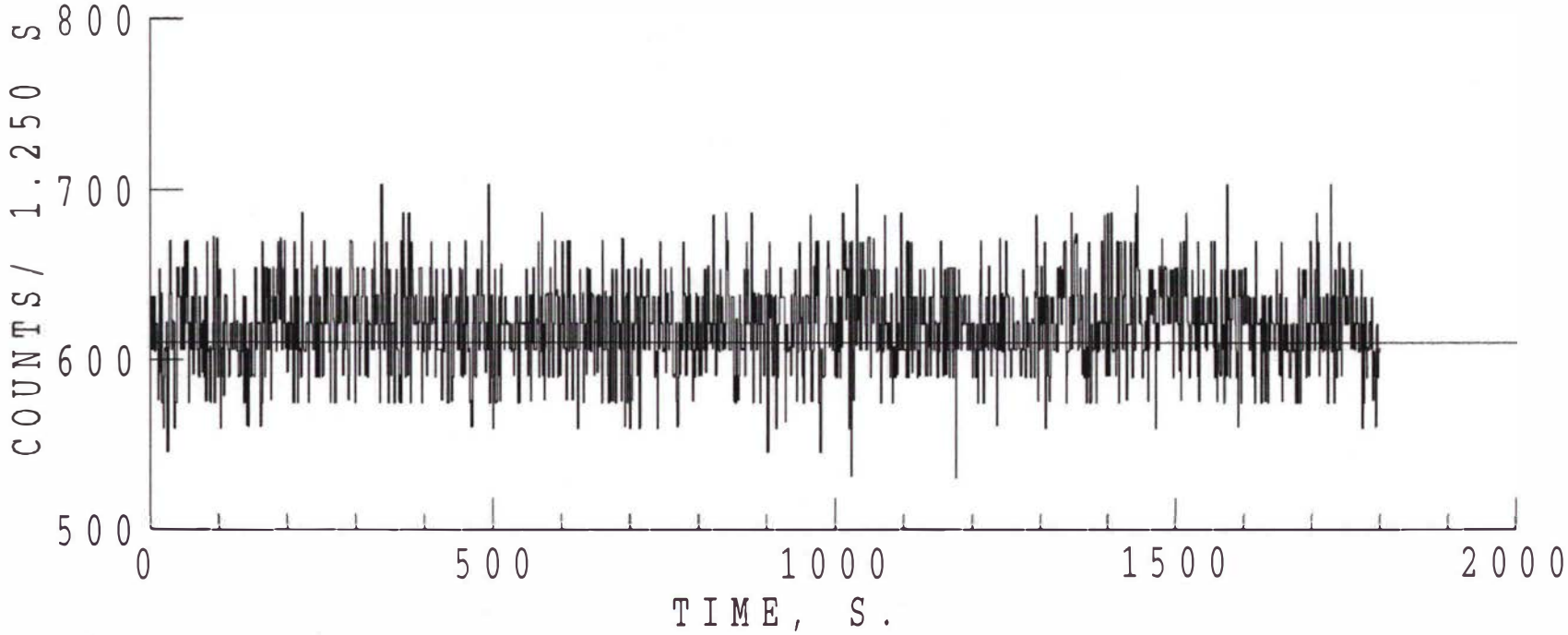
06/09/01 42912.113 s

0.250 S INTERVALS REGROUPED BY 5

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

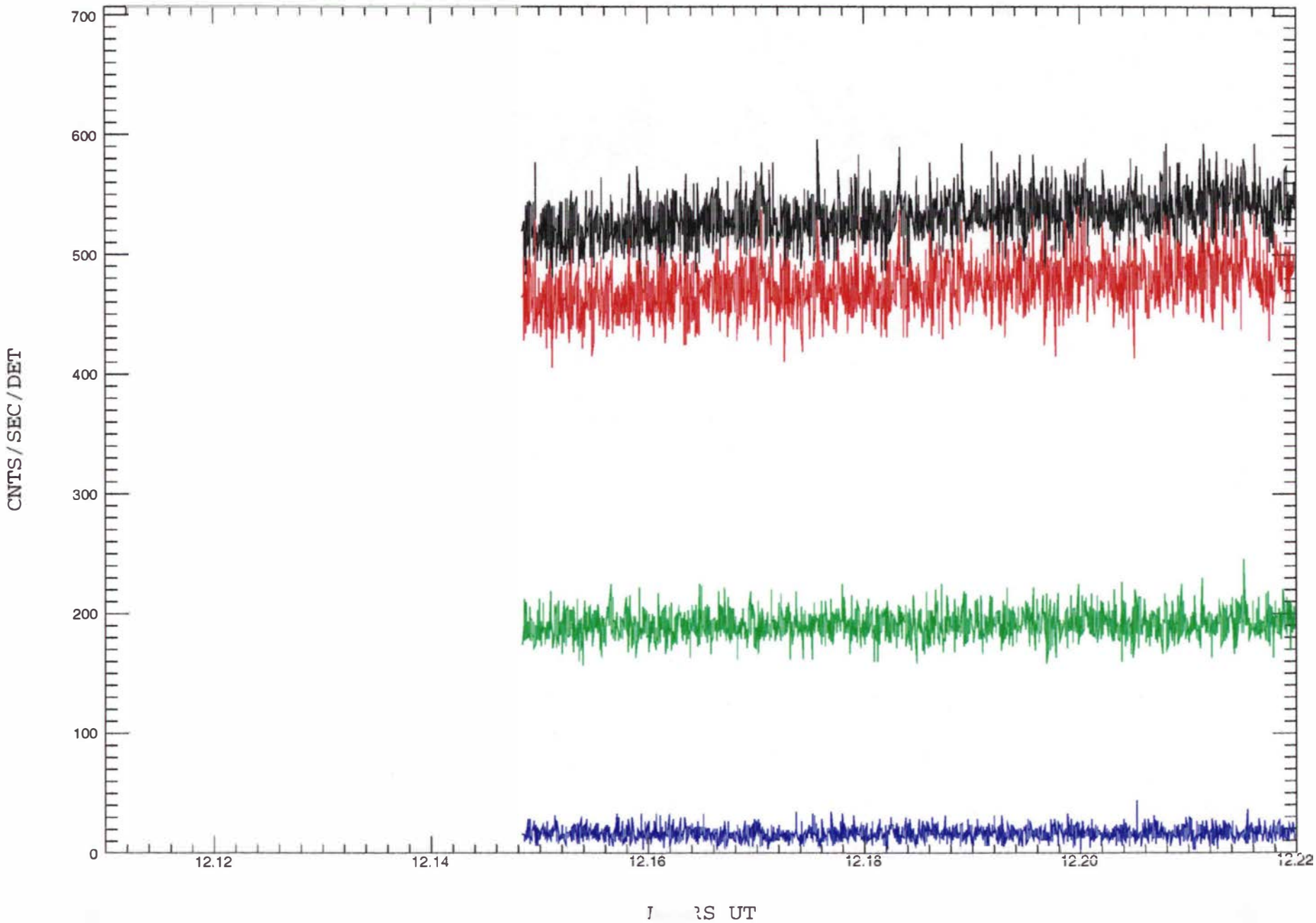


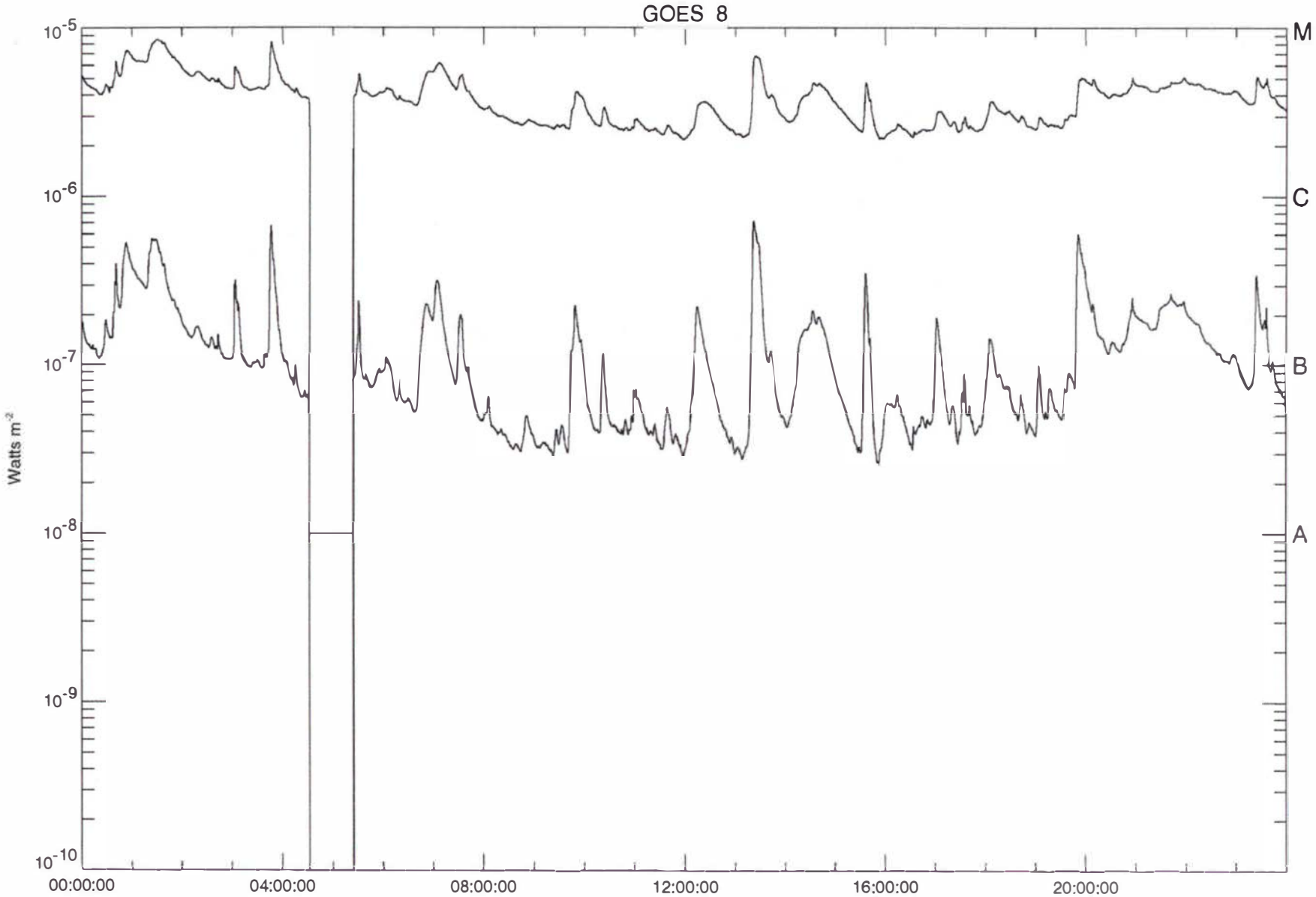
FREGATE SURVEY (TH) TIME HISTORY (AVG x1) -- DETECTORS 1-4 SUMMED (SAX_20010906_43807)

BEG TIME: 06/09/01 DOY 249 Julian 2452160.00458 UT = 12.110 12:06:36 (43596.000 secs) [sct = 0019 4af0 800e 7e8d]
END TIME: 06/09/01 DOY 249 Julian 2452160.00917 UT = 12.220 12:13:12 (43992.000 secs) [sct = 0019 4af0 97a8 fae0]

Chan 1:[E1=18 E2=103] Chan 2:[E3=18 E4=78] Chan 3:[E5=20 E6=510] Chan 4:[E6=510 ->]

Channel 1 + 300 Channel 2 + 200 Channel 3 + 100 Channel 4 + 0

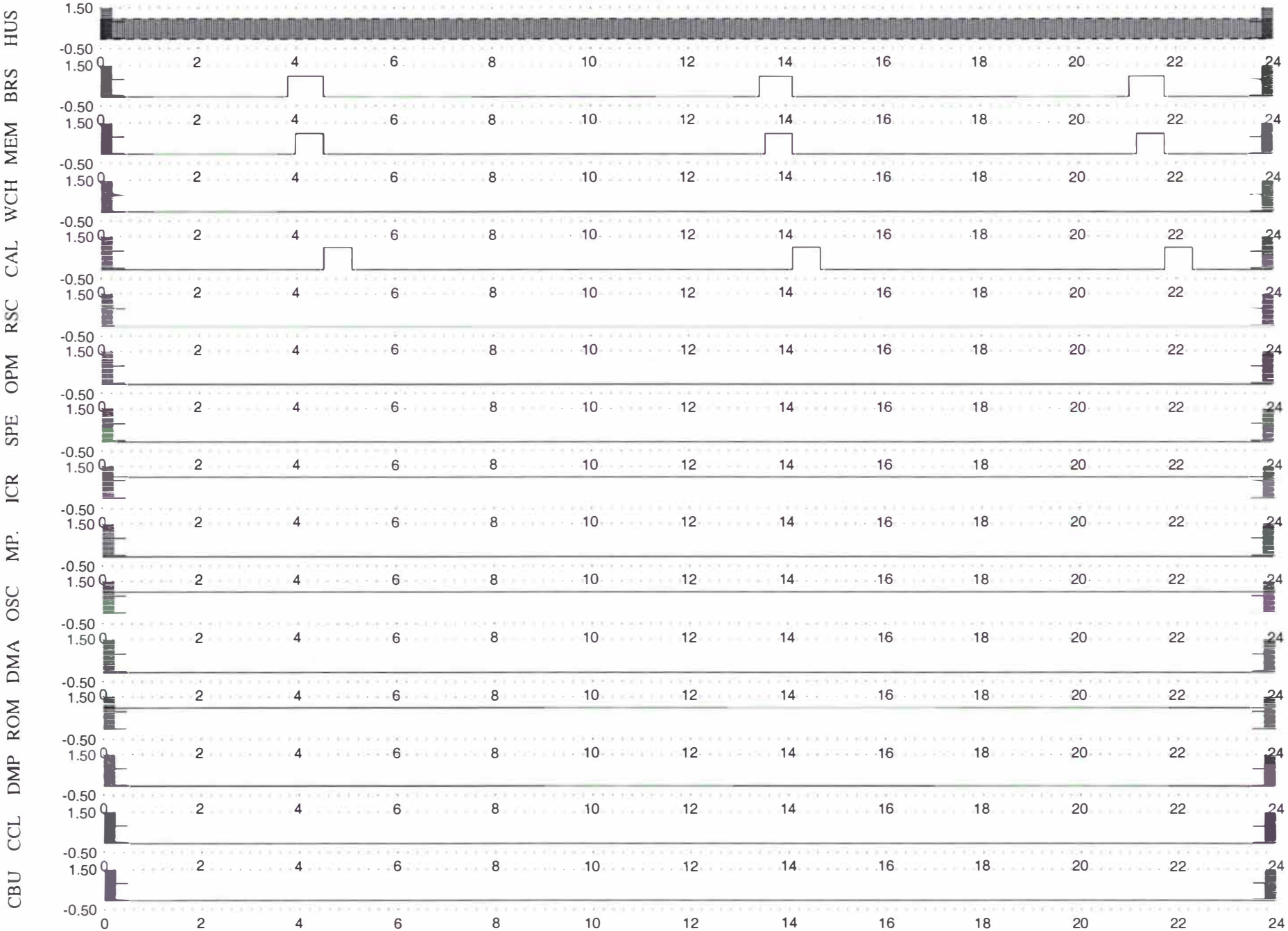




Data Start: 01/09/06, 0000:00 Plot created: 01/09/10, 0951
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

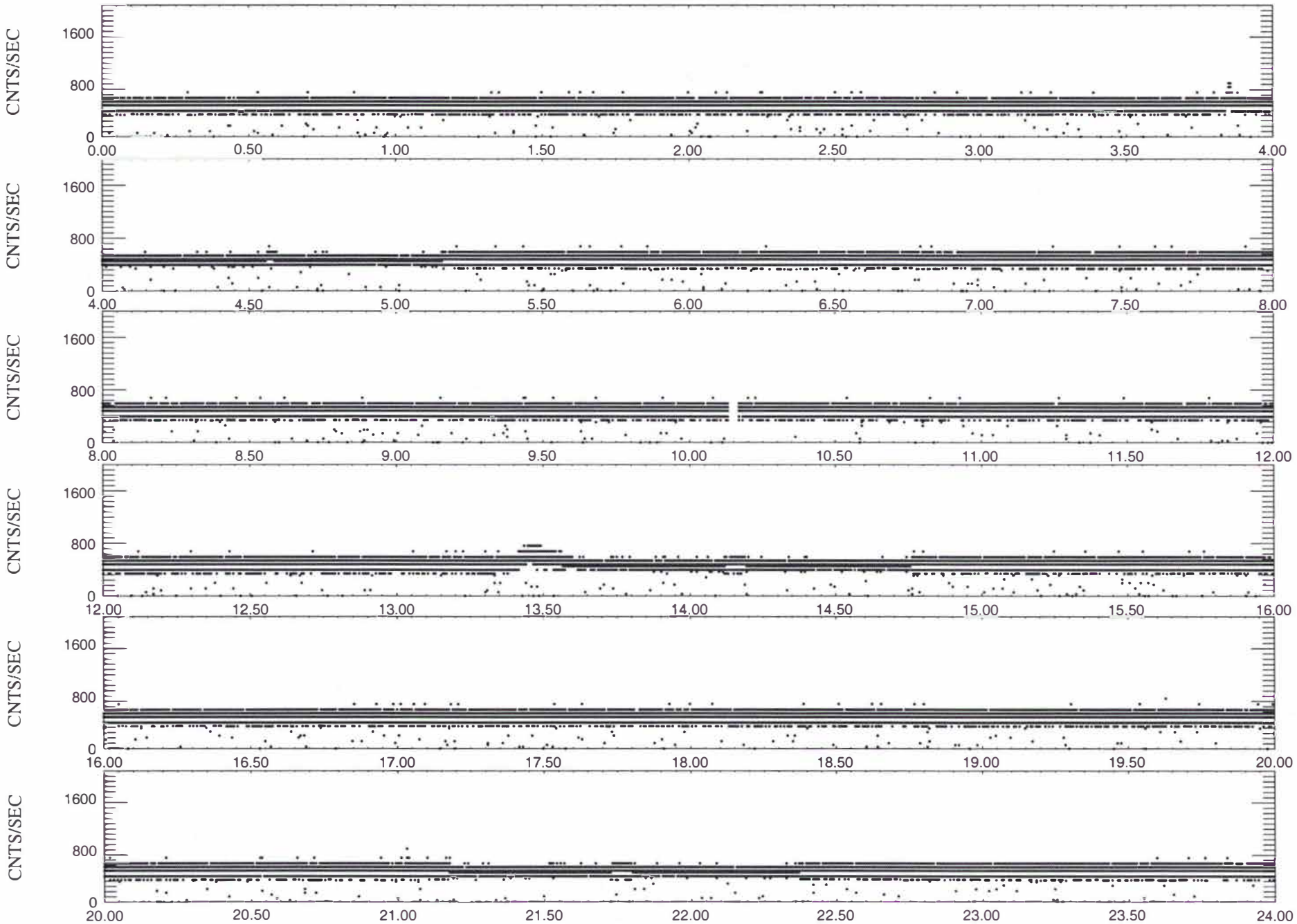
HUS MODES EDR day 249, year 2001 to day 249, year 2001 01/22/02

BURST NUMBER 5 - 7



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 06/09/2001 DOY = 249 01/22/02

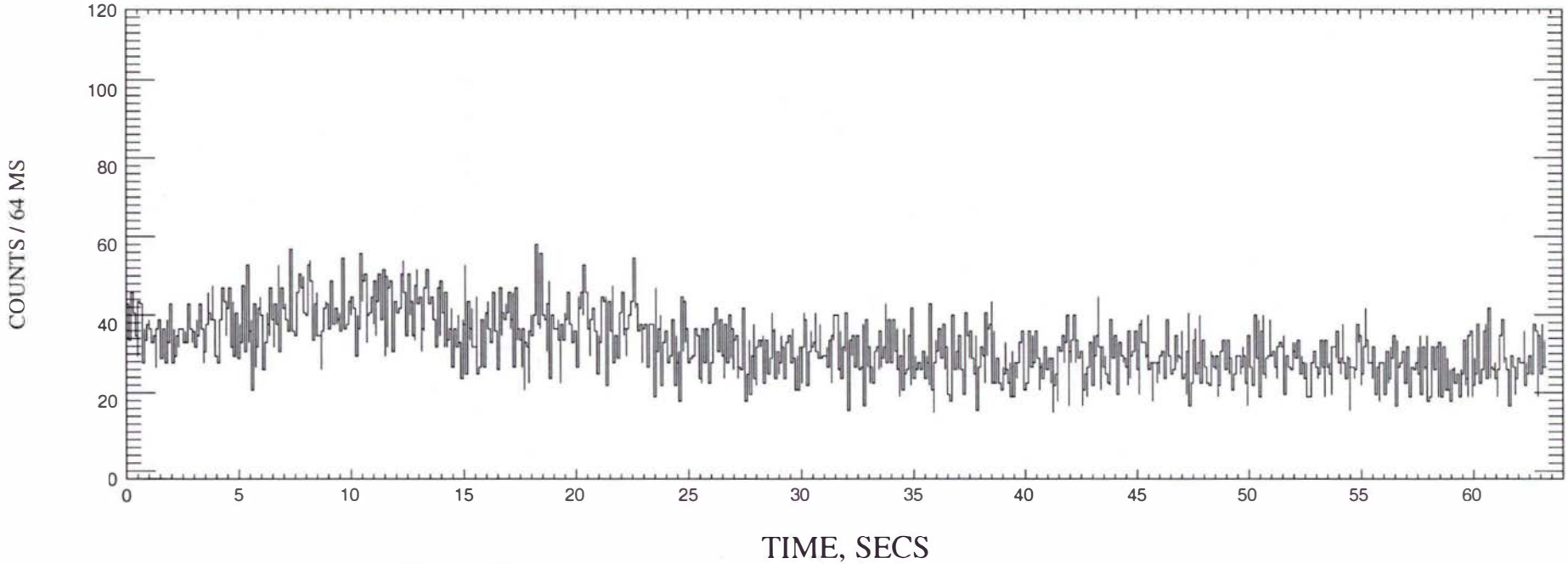
CALIBRATION DATA INCLUDED

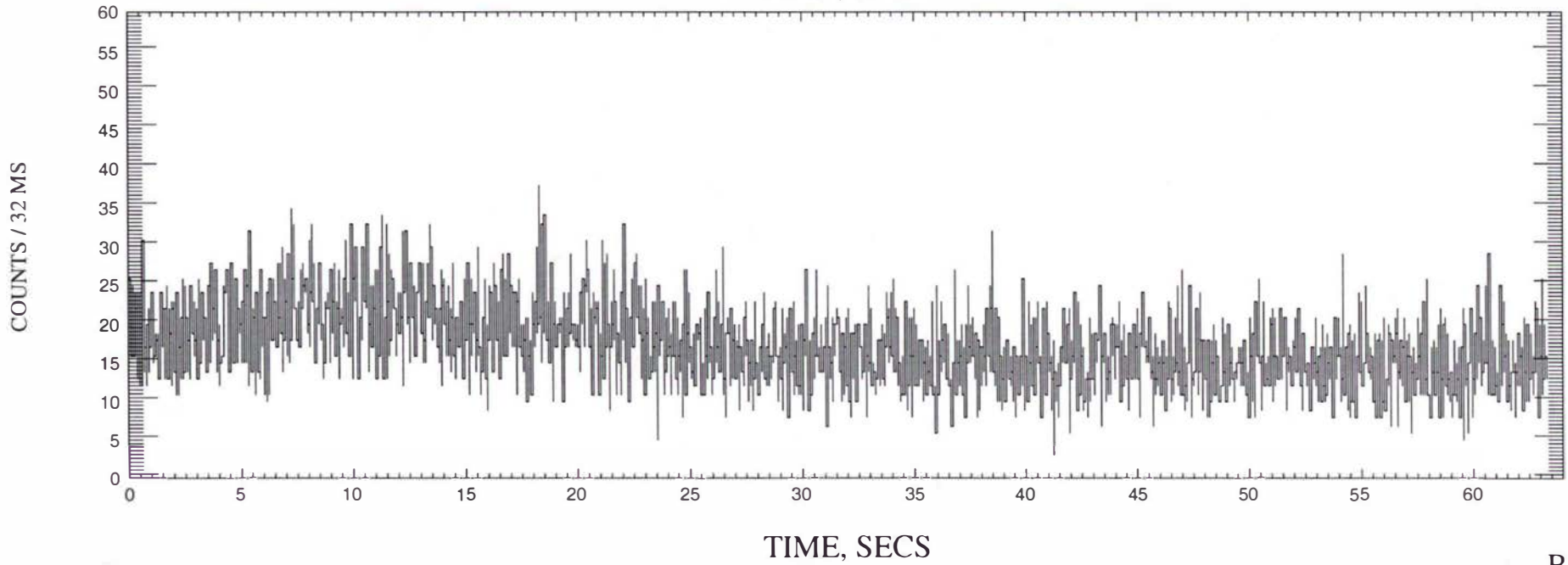


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 06/09/2001 DOY = 249 01/22/02

Burst Counter 5 at UT= 3.848187688192 h=13853.476 s 03:50:53.476

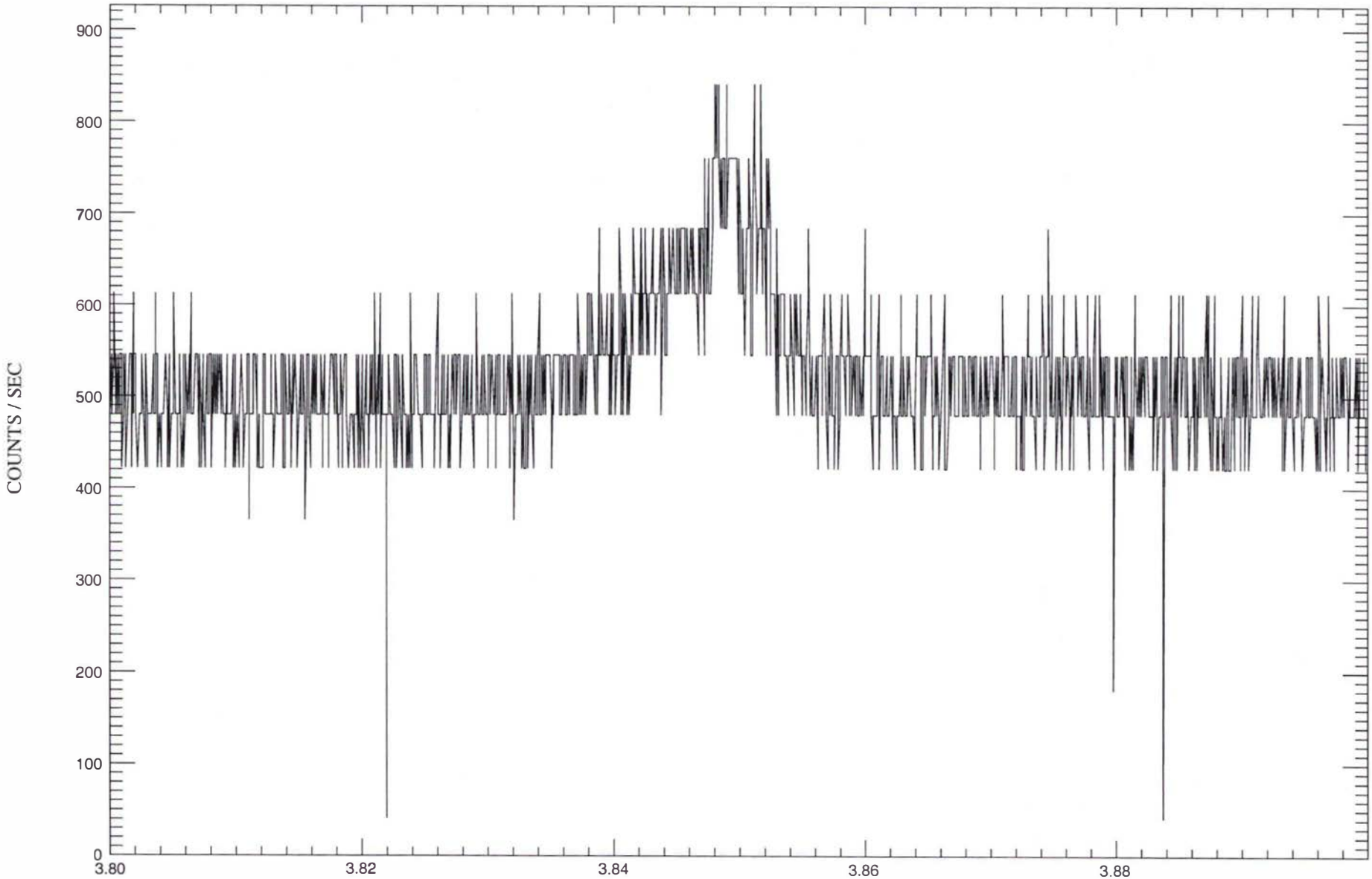




B# 1

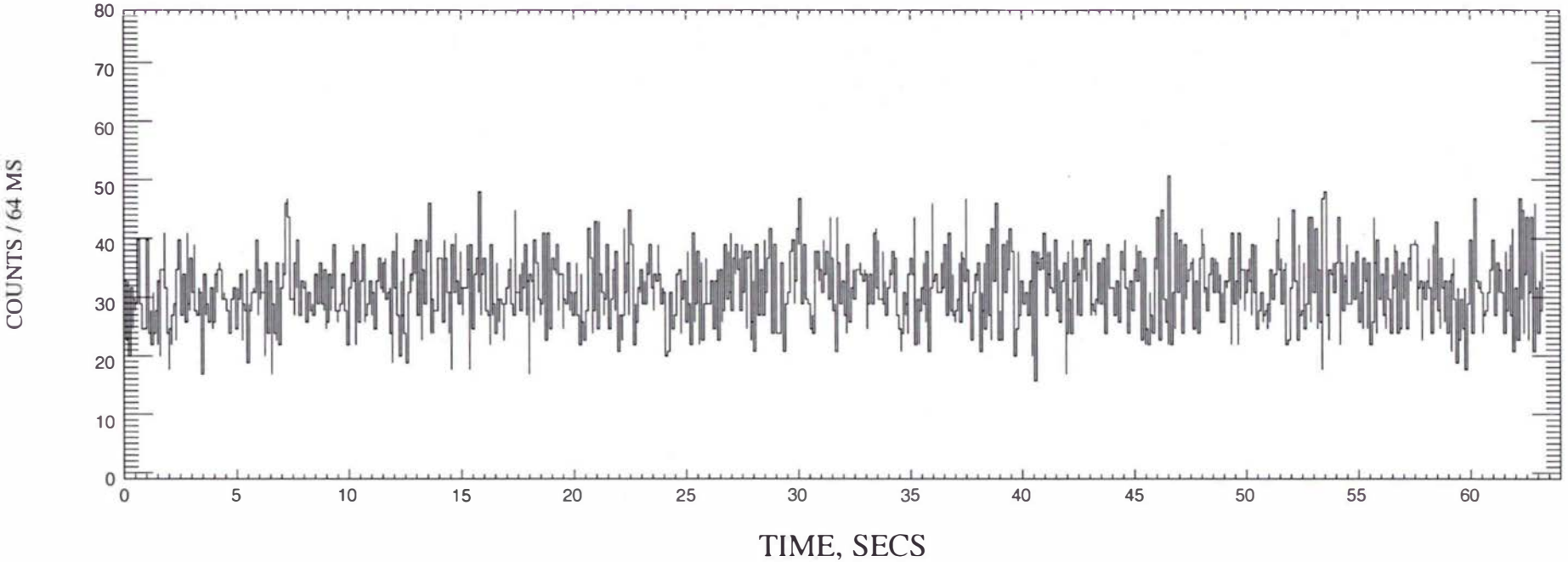
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 06/09/2001 DOY = 249 01/22/02

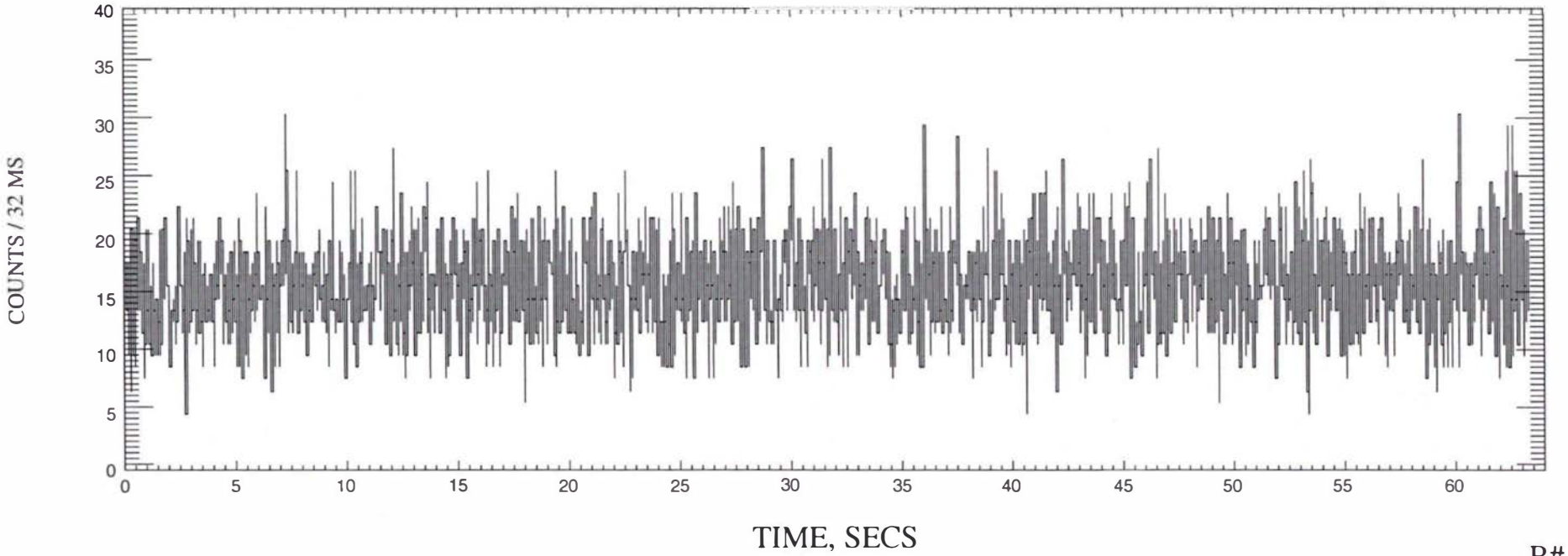
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 06/09/2001 DOY = 249 01/22/02

Burst Counter 6 at UT=13.412164611816 h=48283.793 s 13:24:43.793

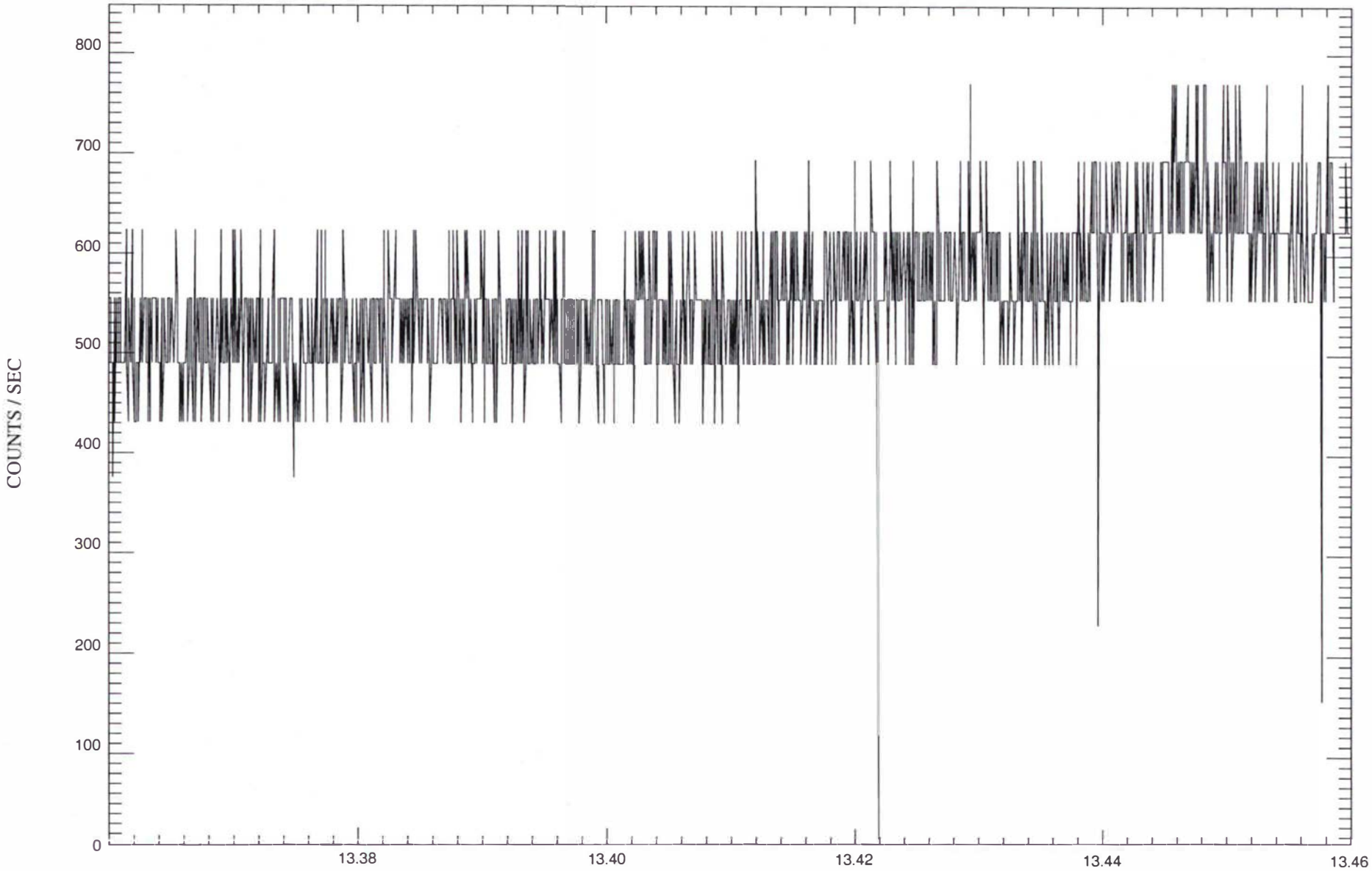




B# 2

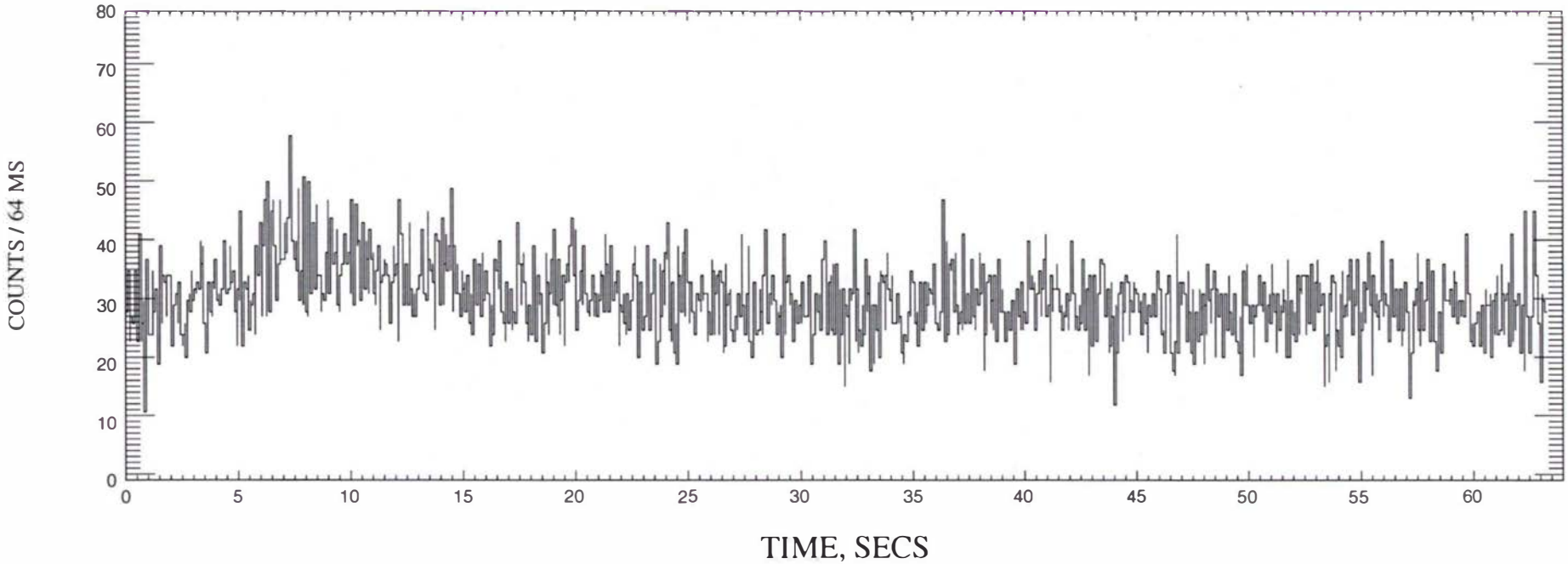
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 06/09/2001 DOY = 249 01/22/02

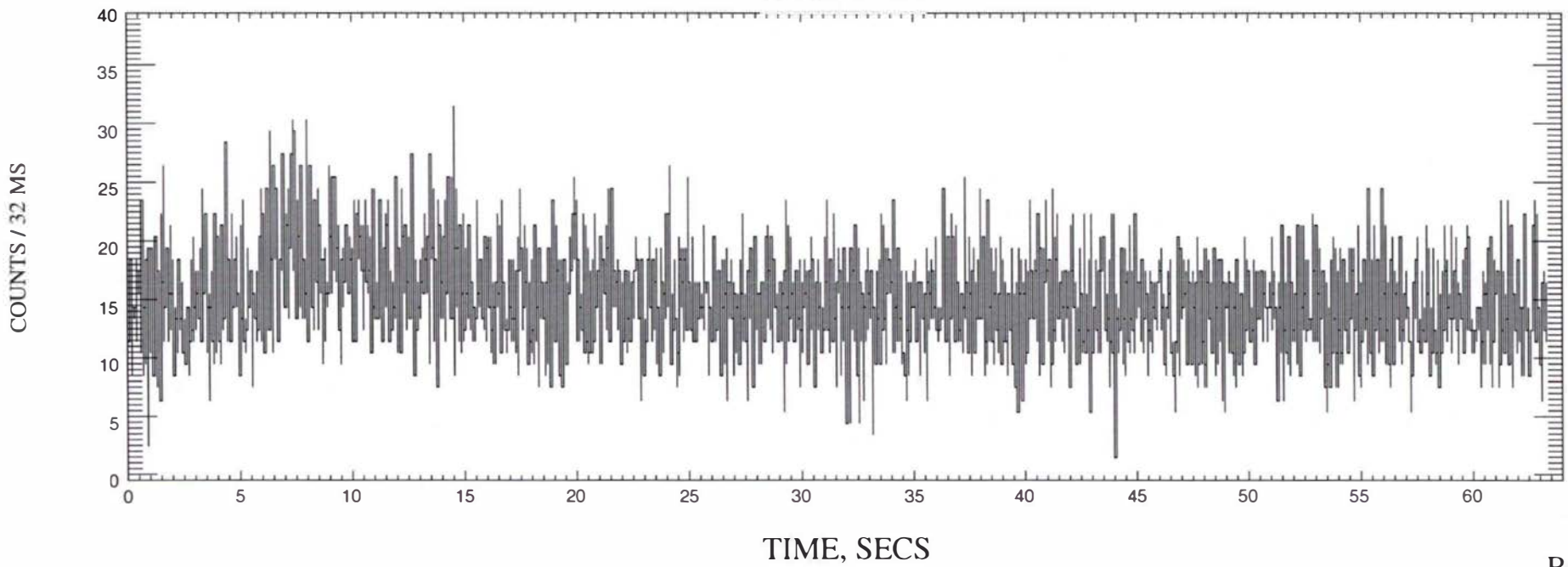
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 06/09/2001 DOY = 249 01/22/02

Burst Counter 7 at UT=21.026872393290 h=75696.741 s 21:01:36.741

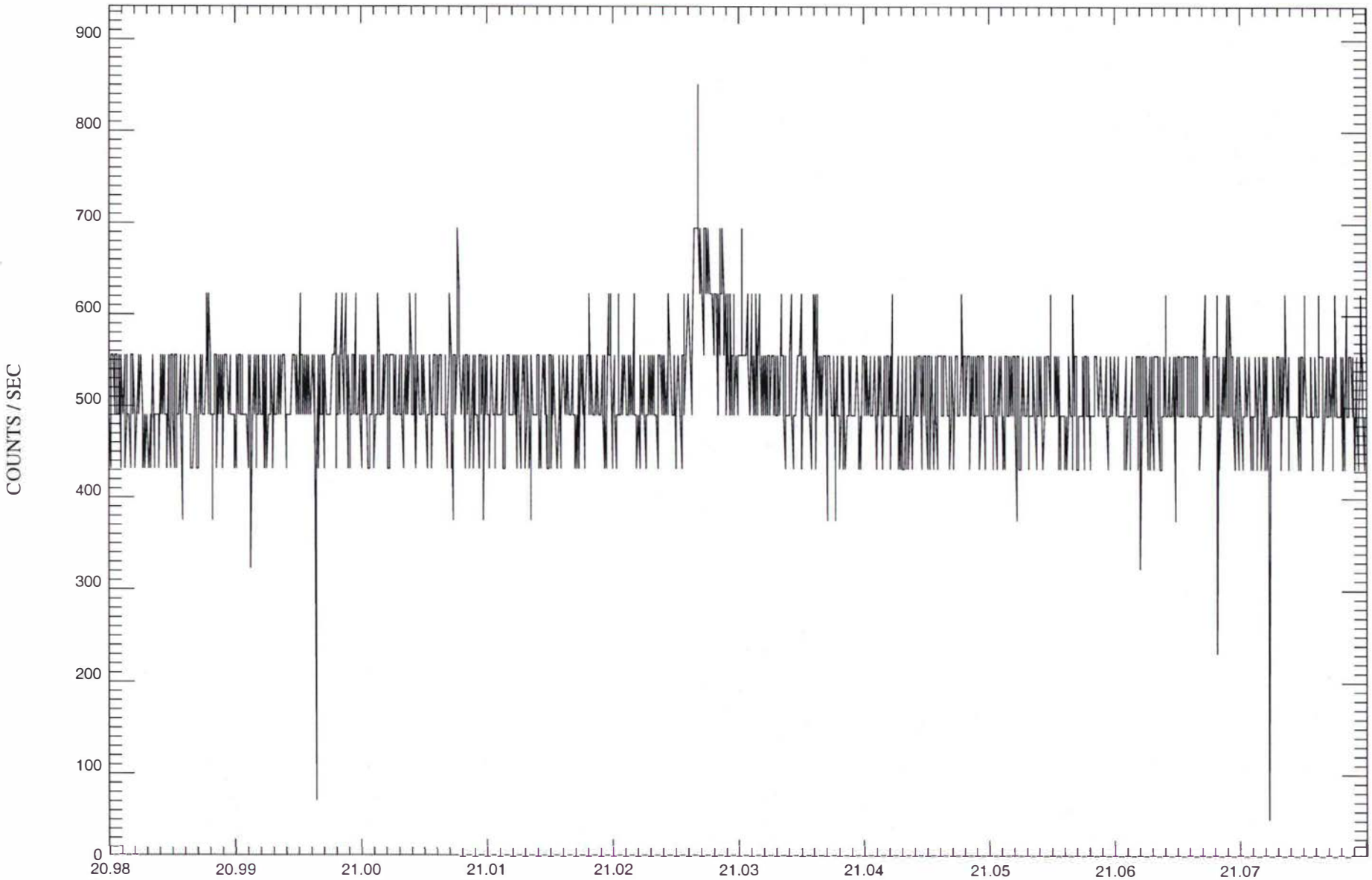




B# 3

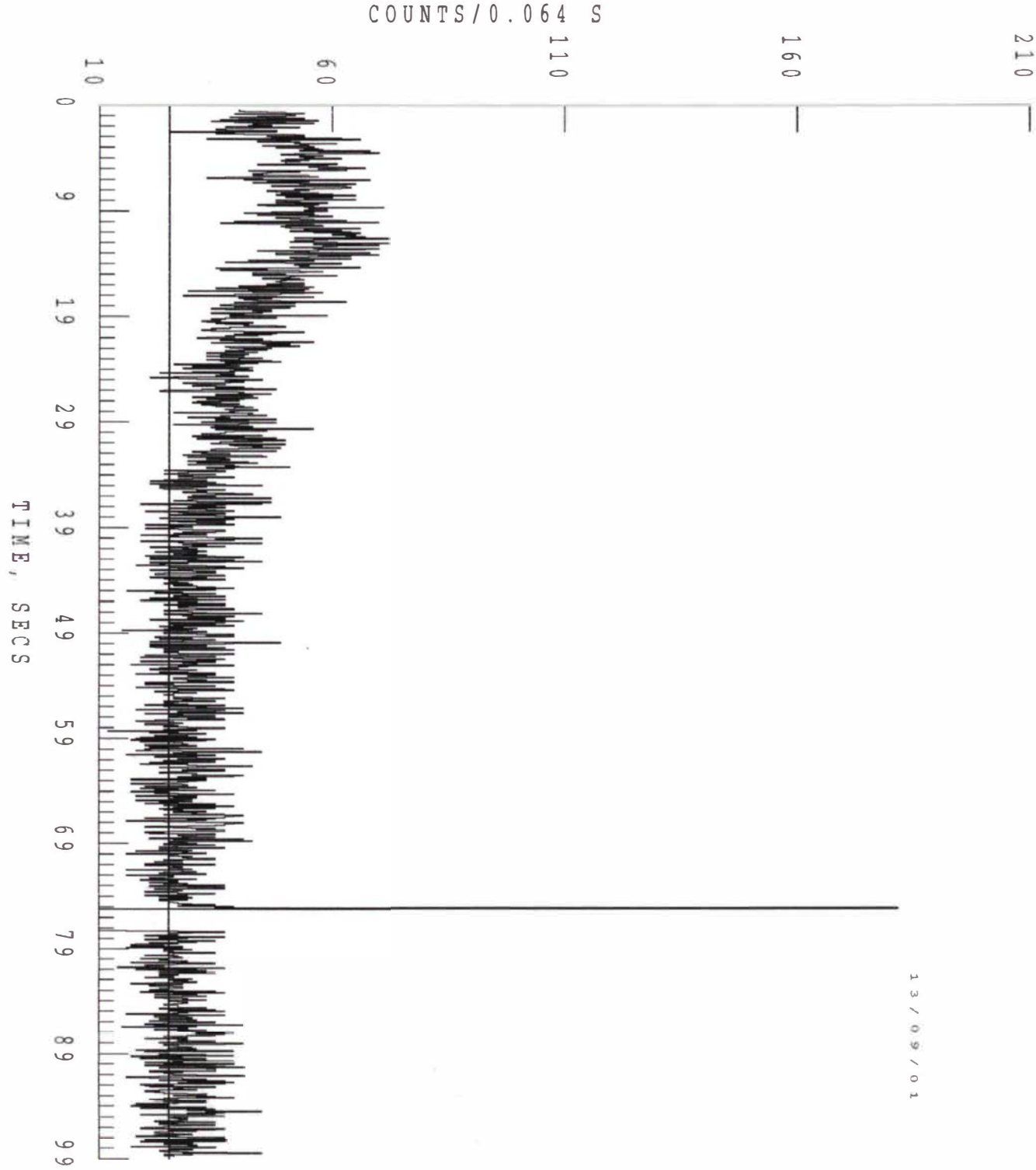
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 06/09/2001 DOY = 249 01/22/02

CALIBRATION DATA INCLUDED



KONUS2 07/09/01 55783.014

50- 200 keV Solar



KONUS2 20010907 55783

ULYSSES RT 13/09/01

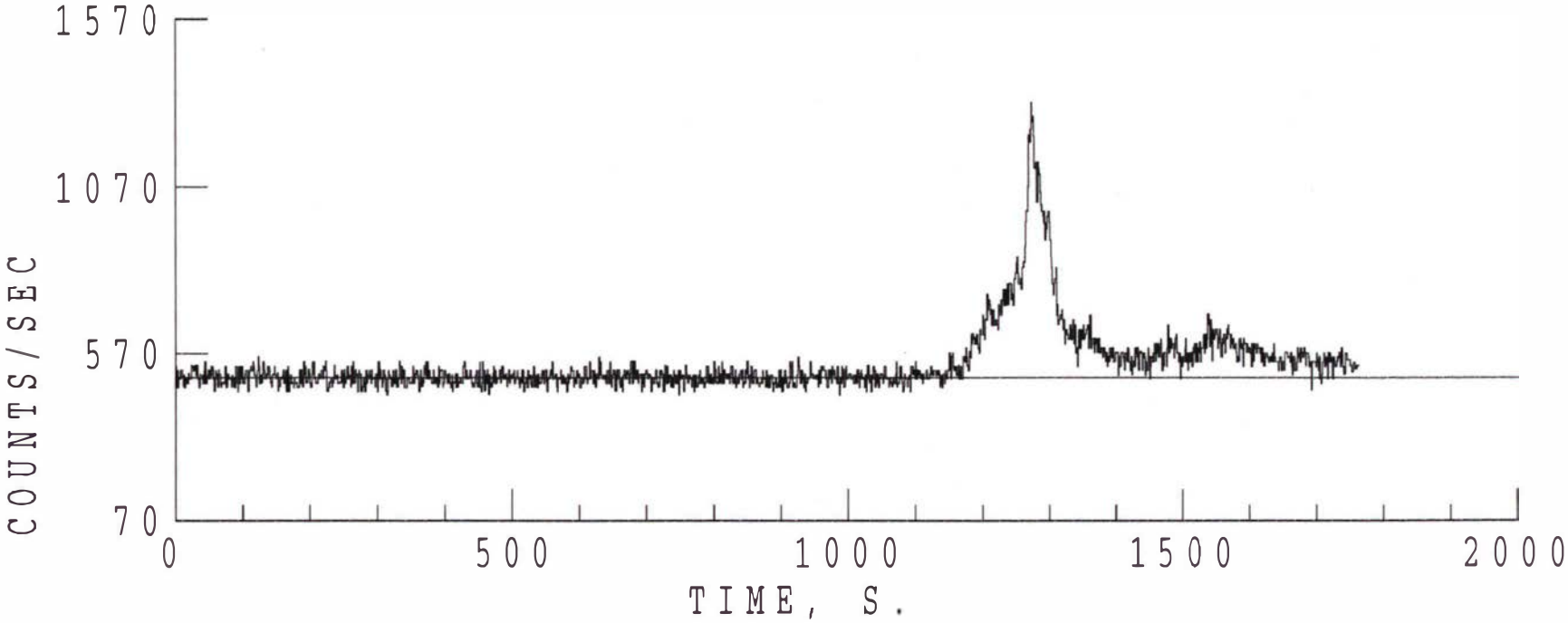
07/09/01 54900.238 s

INTERVALS REGROUPED BY 5

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

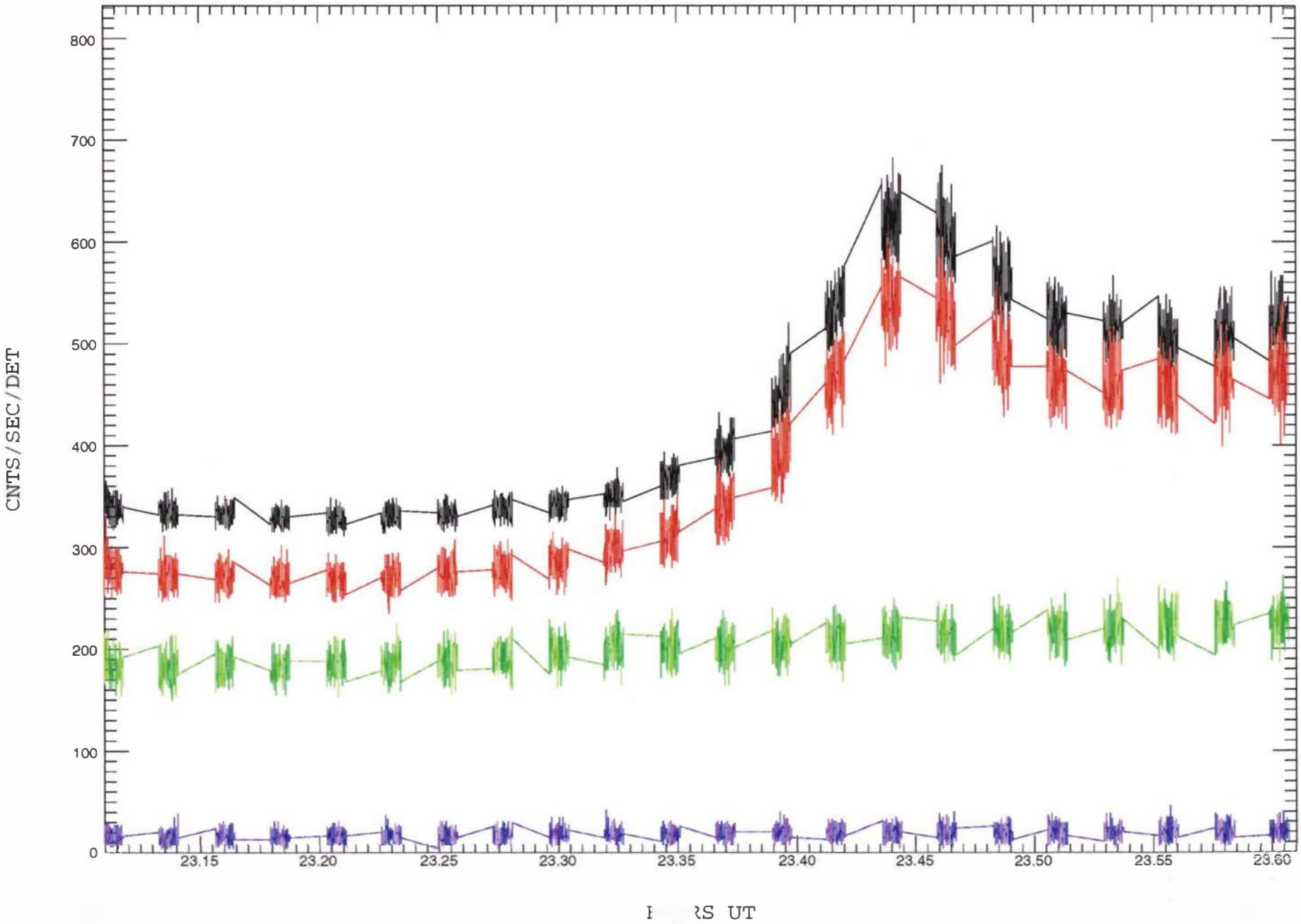


FREGATE SURVEY (TH) TIME HISTORY (AVG x1) -- DETECTORS 1-4 SUMMED (FREG_1750_20010907_84095)

BEG TIME: 07/09/01 DOY 250 Julian 2452161.46292 UT = 23.110 23:06:36 (83196.000 secs) [sct = 0019 4b0d d63f 906d]
END TIME: 07/09/01 DOY 250 Julian 2452161.48375 UT = 23.610 23:36:36 (84996.000 secs) [sct = 0019 4b0e 4189 6874]

Chan 1:[E1=18 E2=103] Chan 2:[E3=18 E4=78] Chan 3:[E5=20 E6=510] Chan 4:[E6=510 ->]

Channel 1 + 300 Channel 2 + 200 Channel 3 + 100 Channel 4 + 0



FREG 1750 20010907 84095

ULYSSES RT 03/10/01

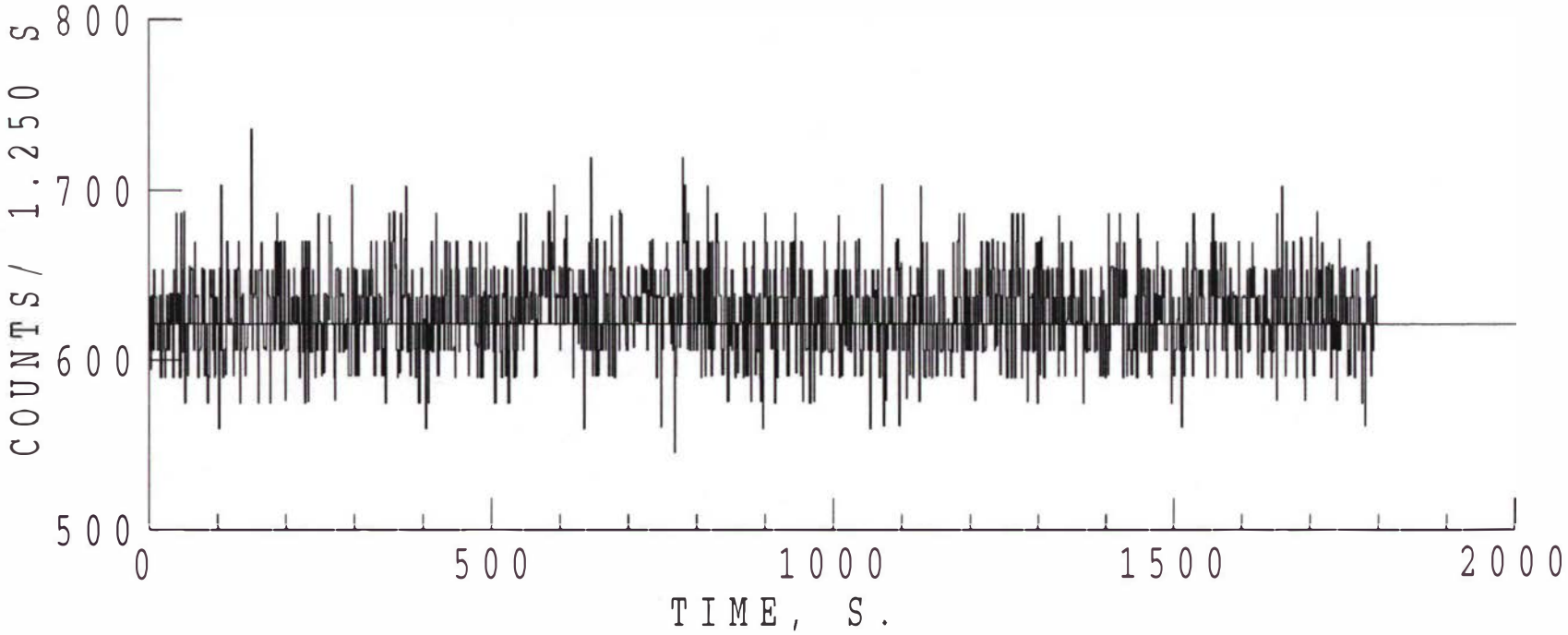
07/09/01 83196.219 s

0.250 S INTERVALS REGROUPED BY 5

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

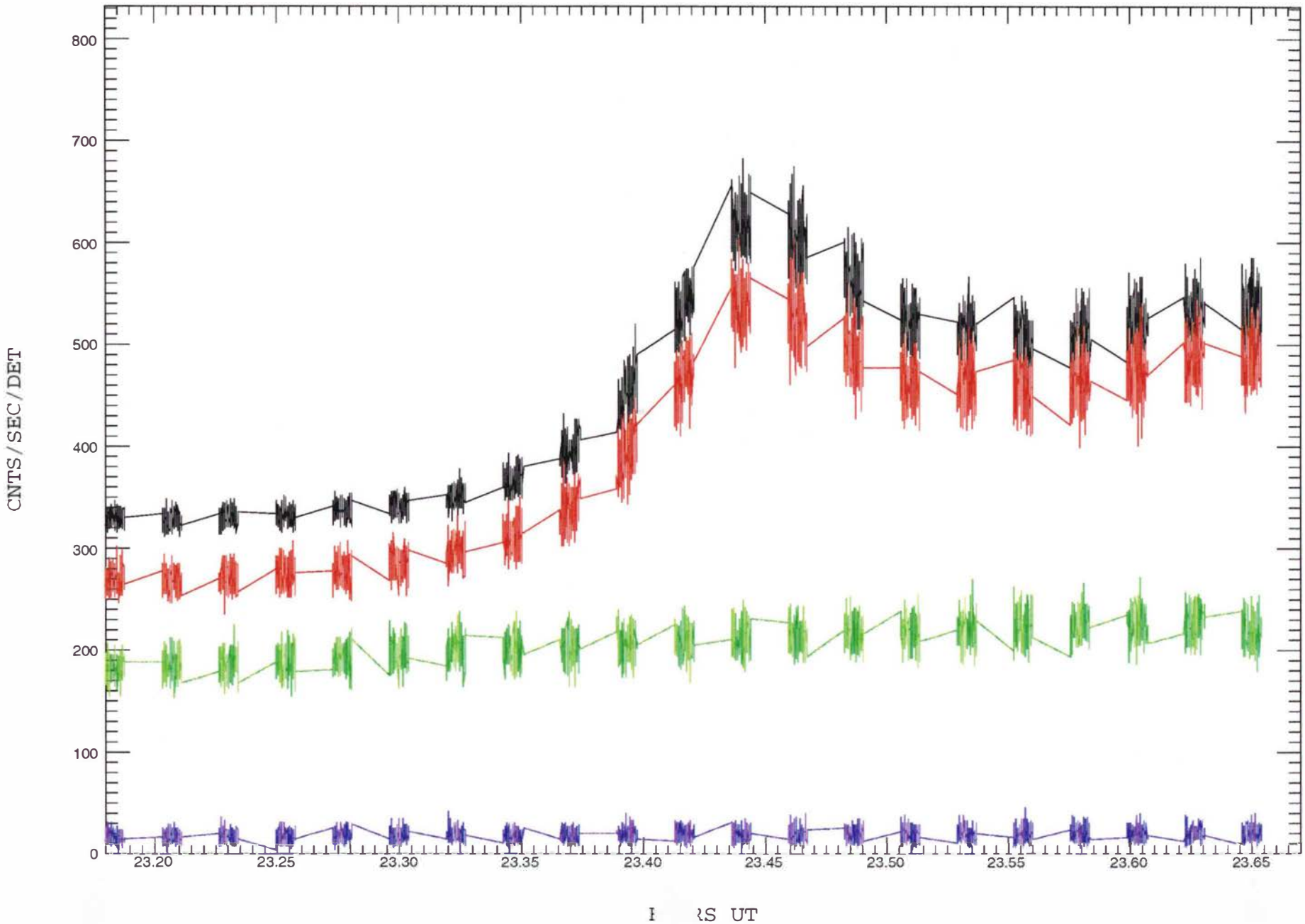


FREGATE SURVEY (TH) TIME HISTORY (AVG x1) -- DETECTORS 1-4 SUMMED (FREG_1751_20010907_84331)

BEG TIME: 07/09/01 DOY 250 Julian 2452161.46583 UT = 23.180 23:10:48 (83448.000 secs) [sct = 0019 4b0d e544 c845]
END TIME: 07/09/01 DOY 250 Julian 2452161.48625 UT = 23.670 23:40:12 (85212.000 secs) [sct = 0019 4b0e 4e69 4f2d]

Chan 1:[E1=18 E2=103] Chan 2:[E3=18 E4=78] Chan 3:[E5=20 E6=510] Chan 4:[E6=510 ->]

Channel 1 + 300 Channel 2 + 200 Channel 3 + 100 Channel 4 + 0



FREG 1751 20010907 84331

ULYSSES RT 03/10/01

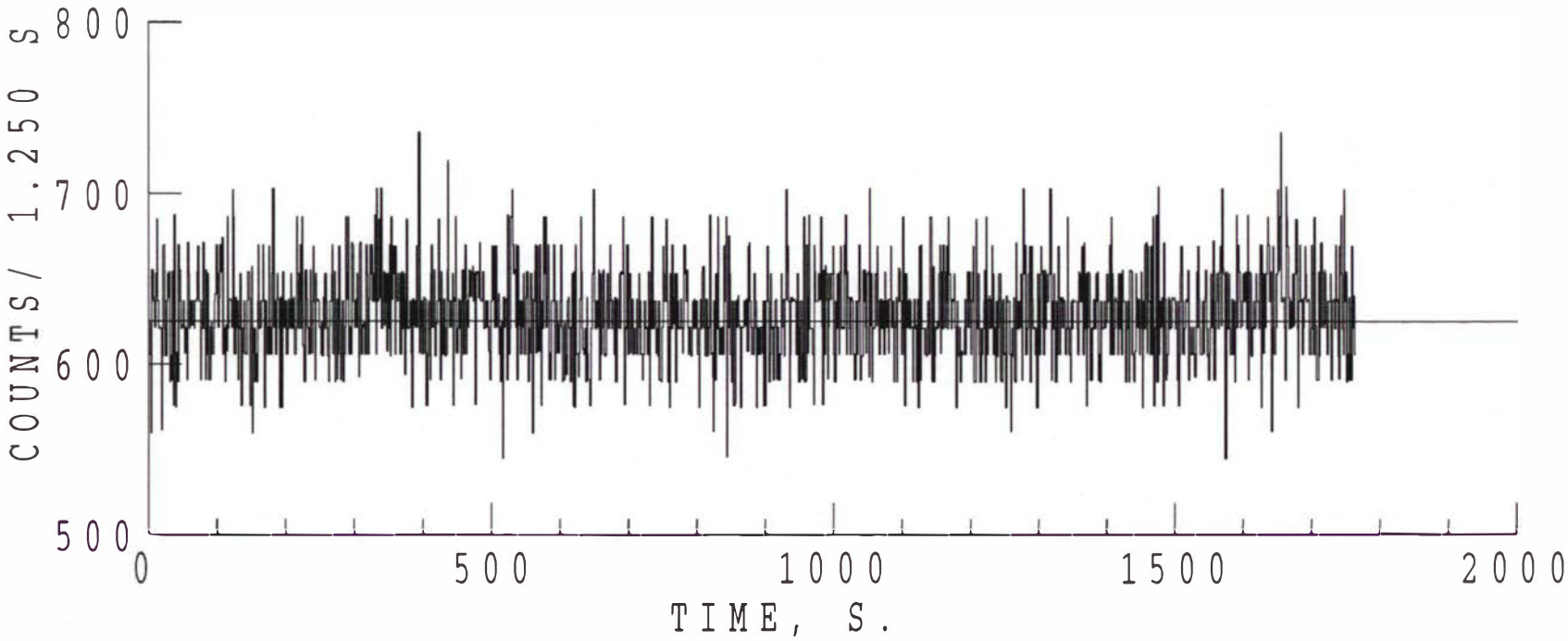
07/09/01 83448.227 s

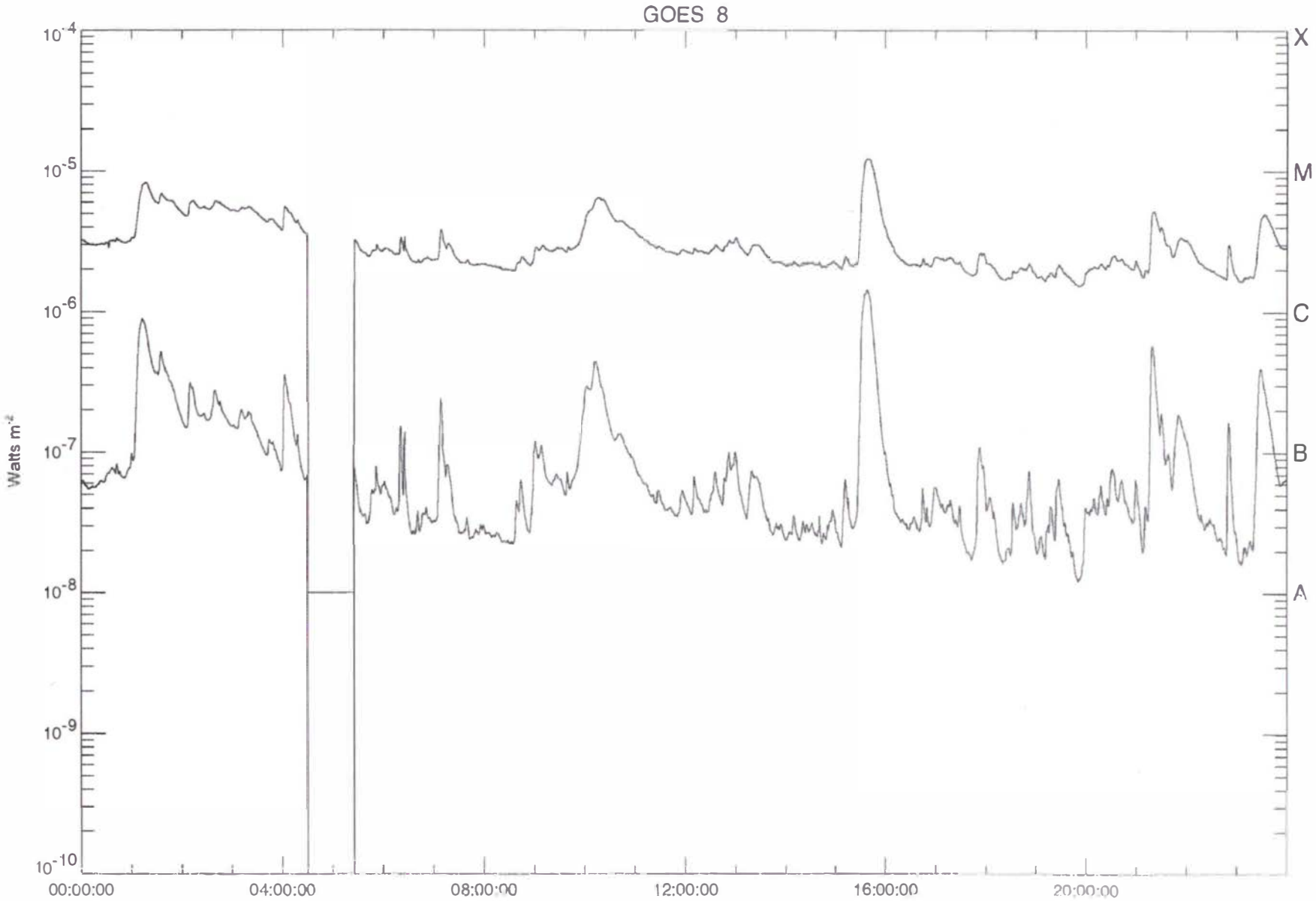
0.250 S INTERVALS REGROUPED BY 5

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

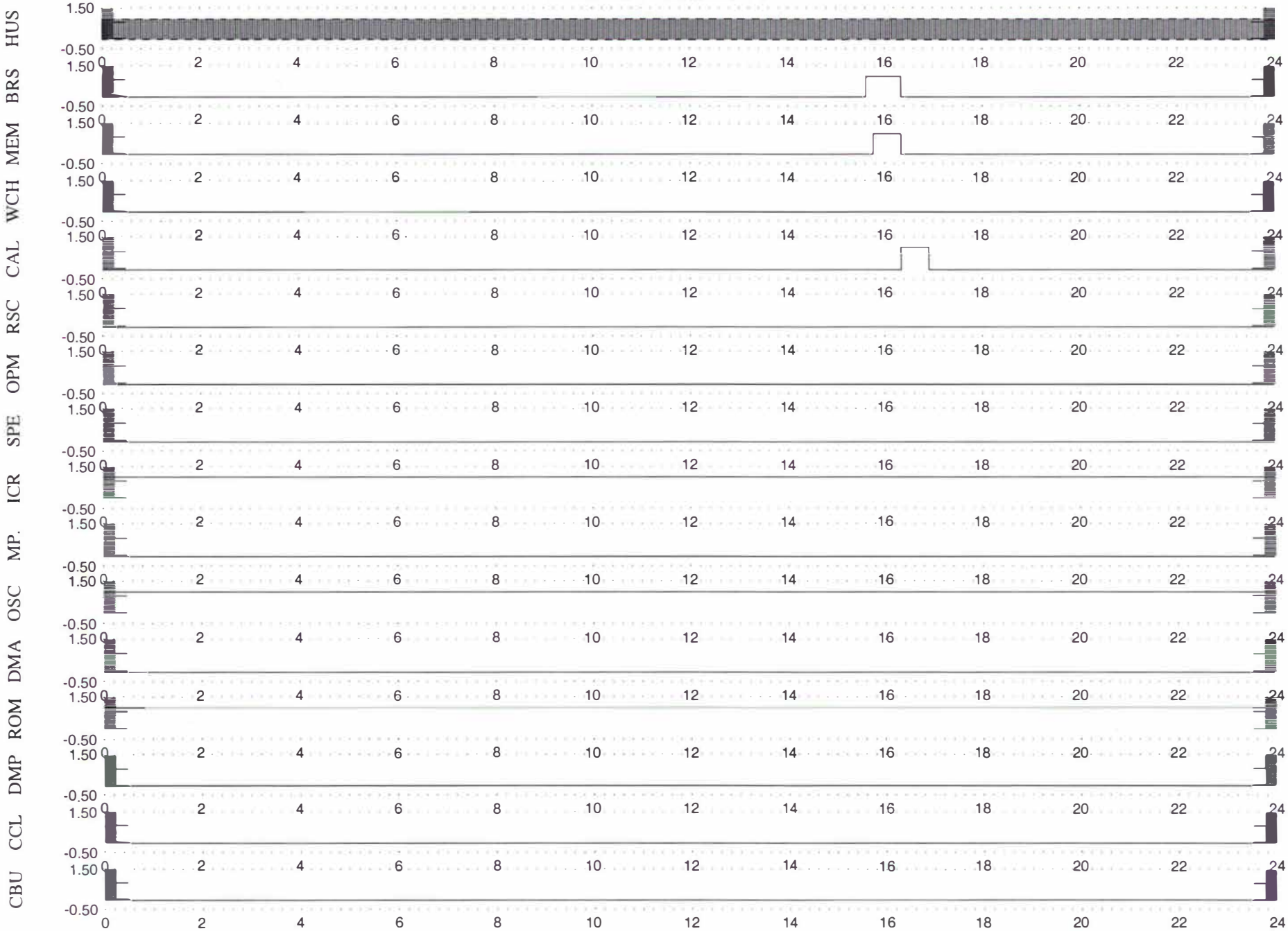




Data Start: 01/09/07, 0000:00 Plot created: 01/09/11, 0951
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

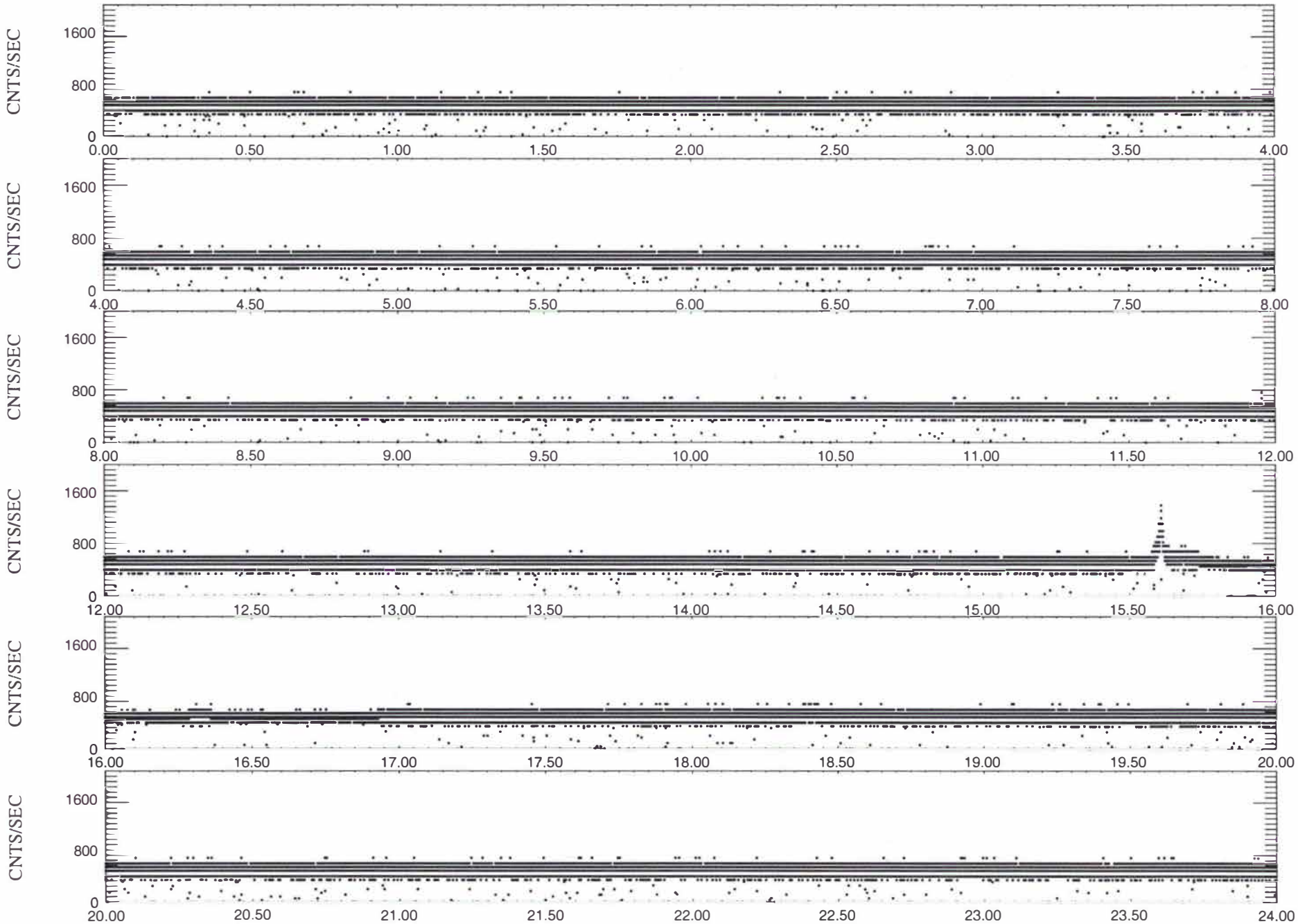
HUS MODES EDR day 250, year 2001 to day 250, year 2001 01/22/02

BURST NUMBER 8



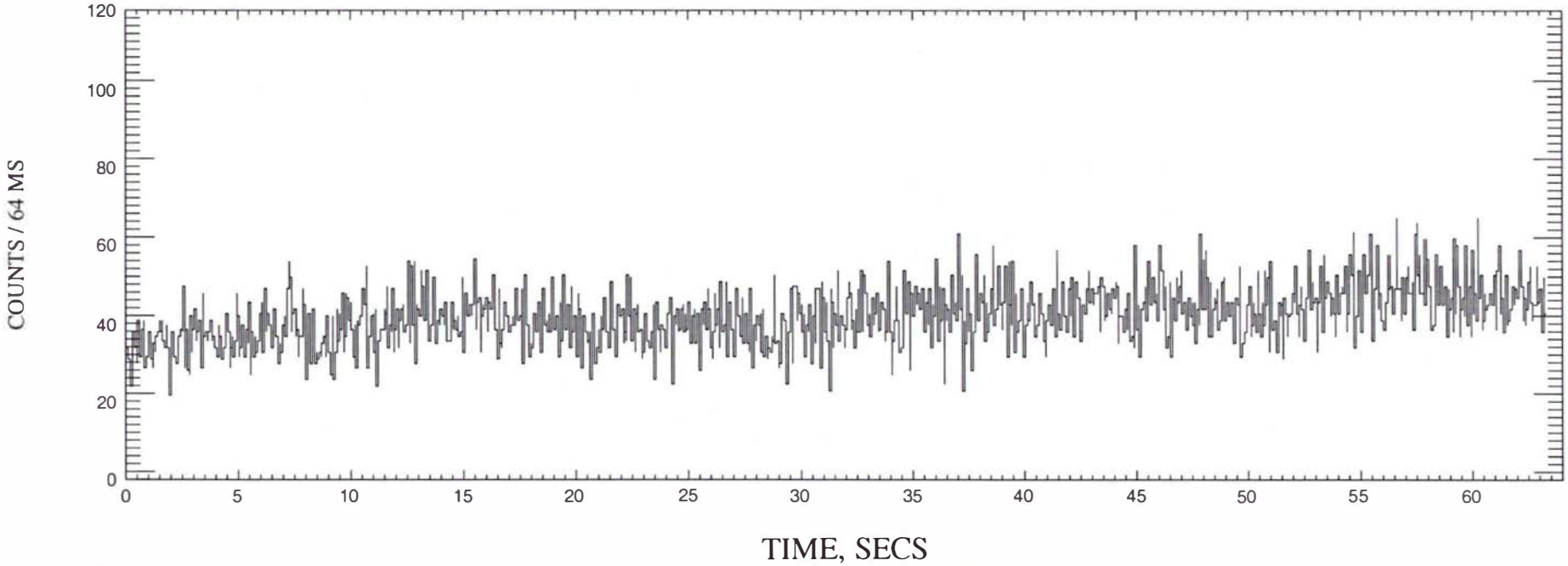
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 07/09/2001 DOY = 250 01/22/02

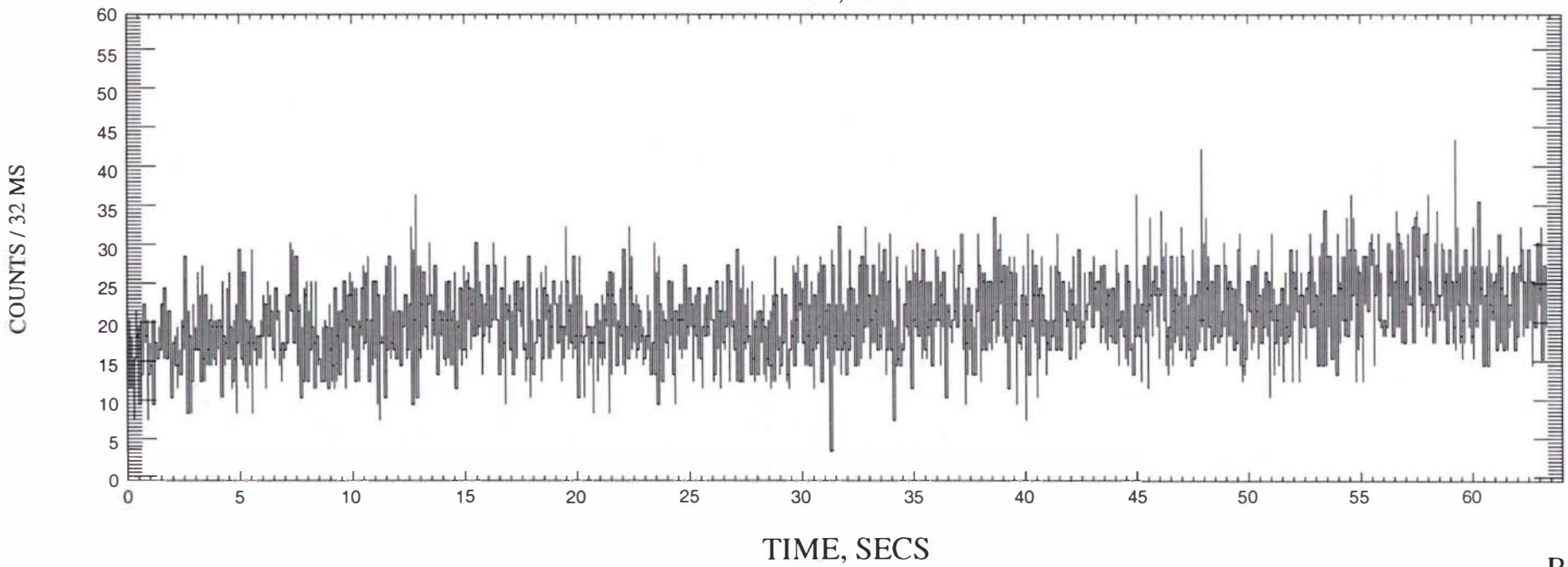
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 07/09/2001 DOY = 250 01/22/02

Burst Counter 8 at UT=15.583750411140 h=56101.501 s 15:35:01.501

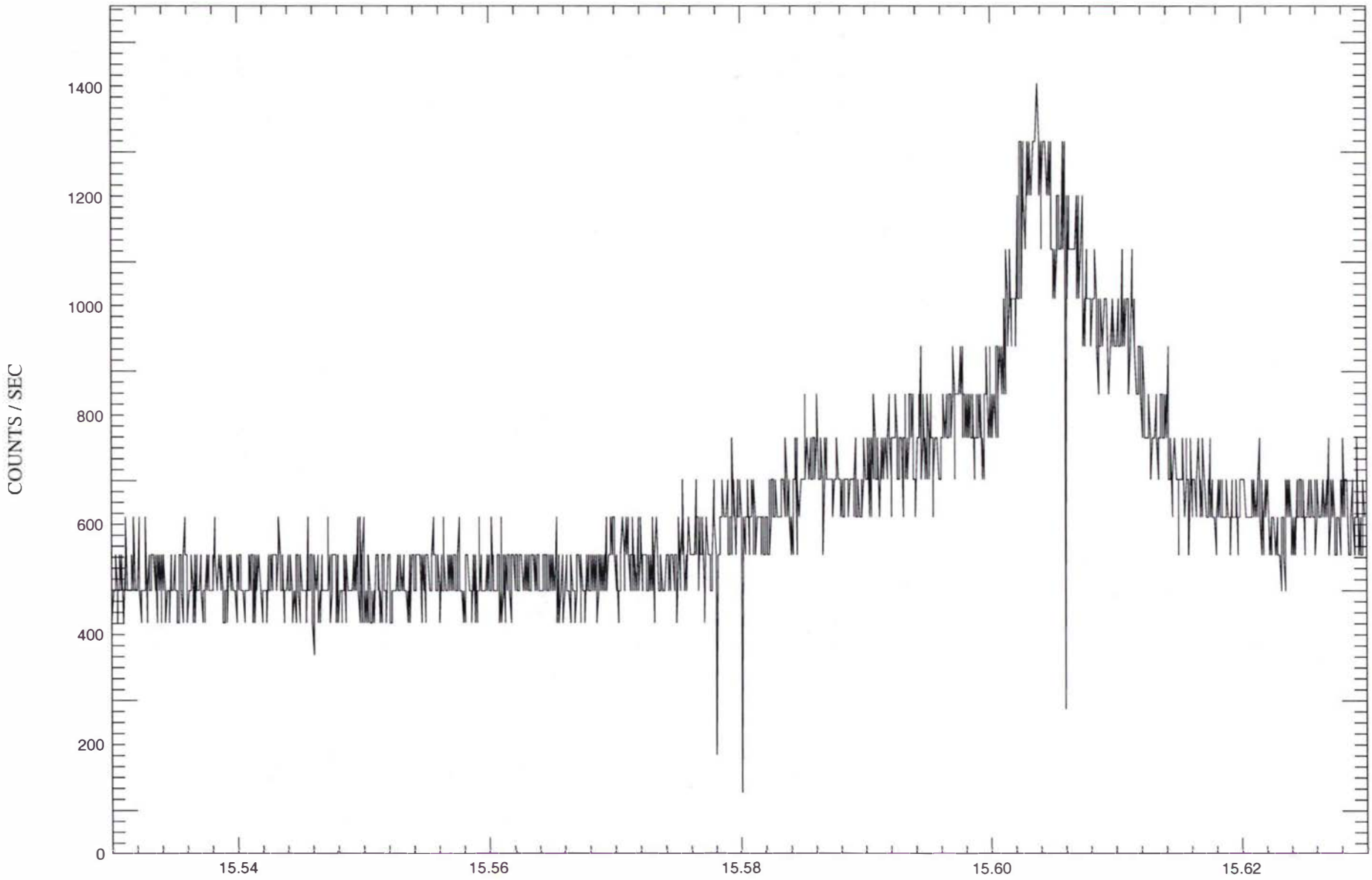




B# 1

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 07/09/2001 DOY = 250 01/22/02

CALIBRATION DATA INCLUDED



GRBM 20010908 64437

ULYSSES RT 17/01/08

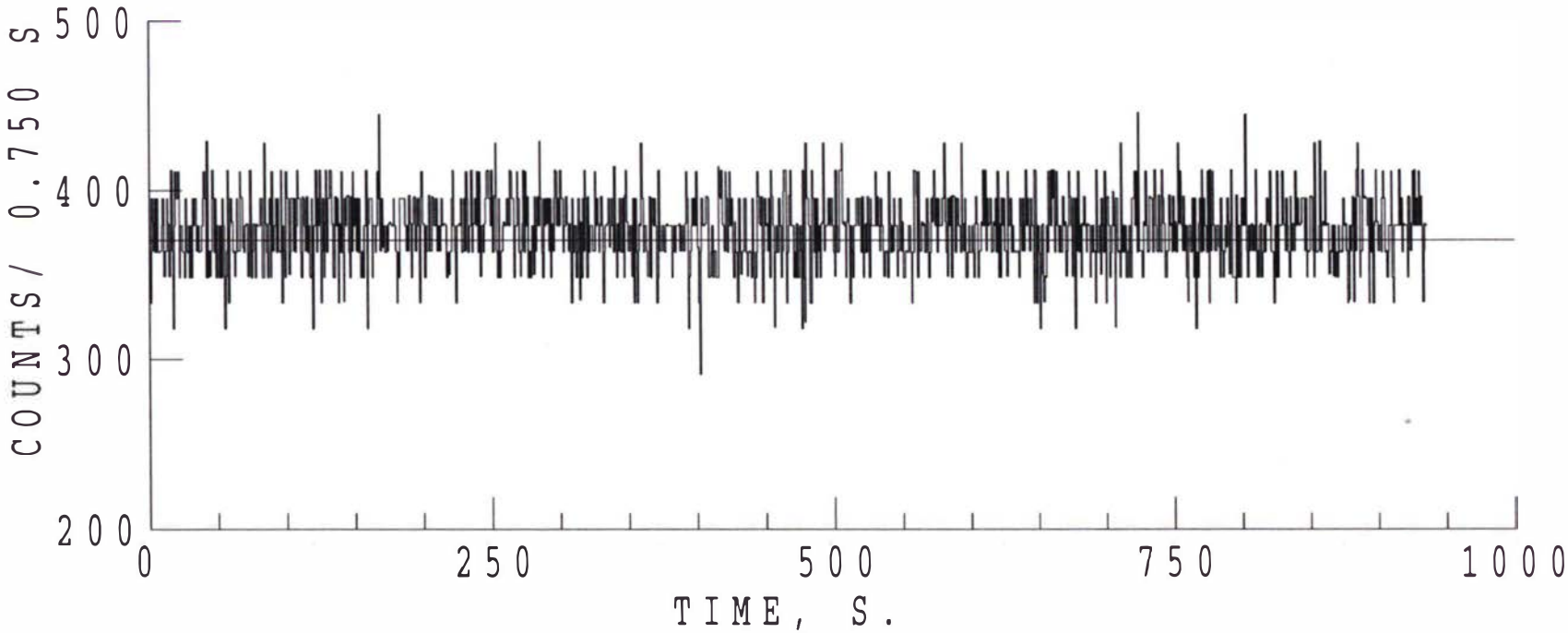
08/09/01 63972.113 s

0.250 S INTERVALS REGROUPED BY 3

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



GRBM 20010908 64805

ULYSSES RT 07/05/04

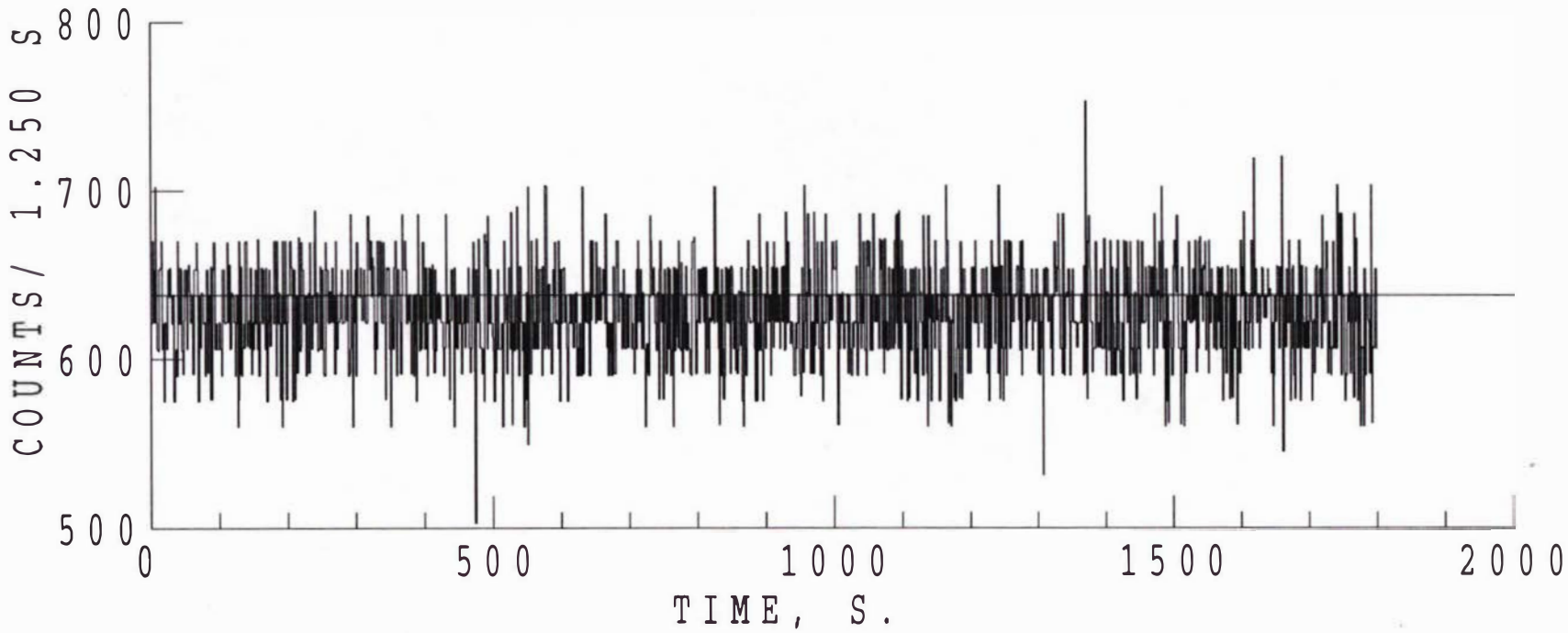
08/09/01 63900.113 s

0.250 S INTERVALS REGROUPED BY 5

0- 0 keV

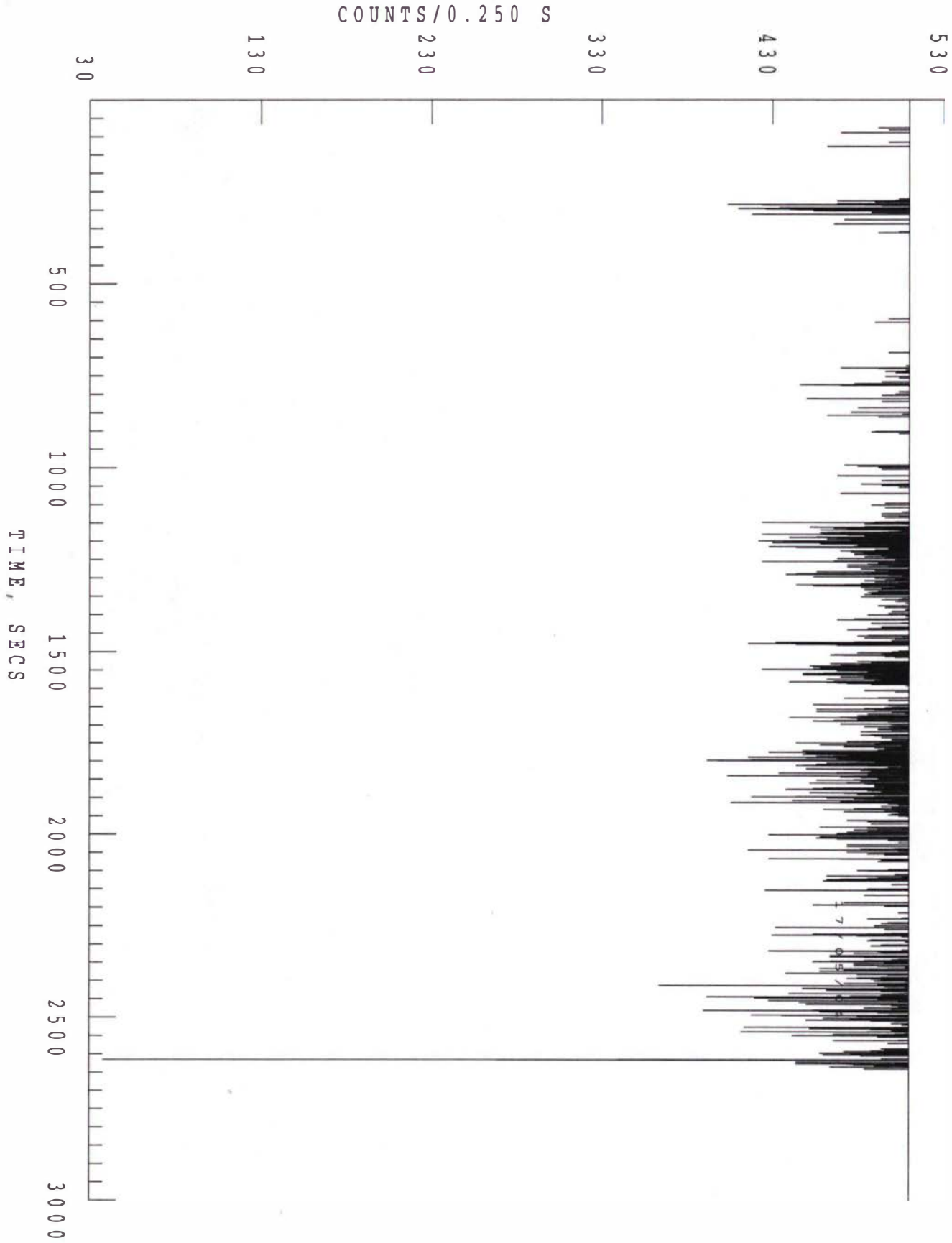
N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



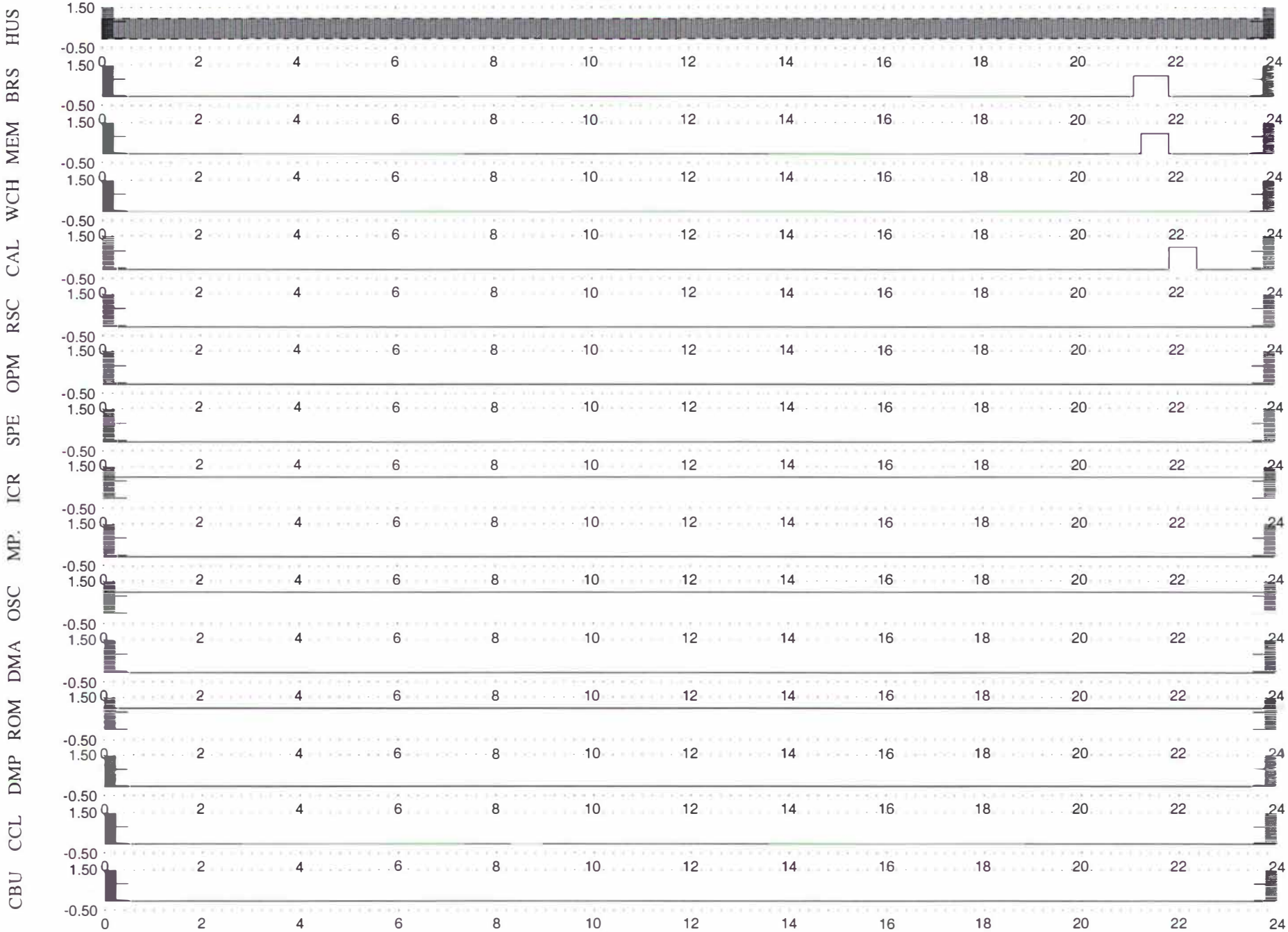
MS01 08/09/01 63456.781

50- 3000 keV



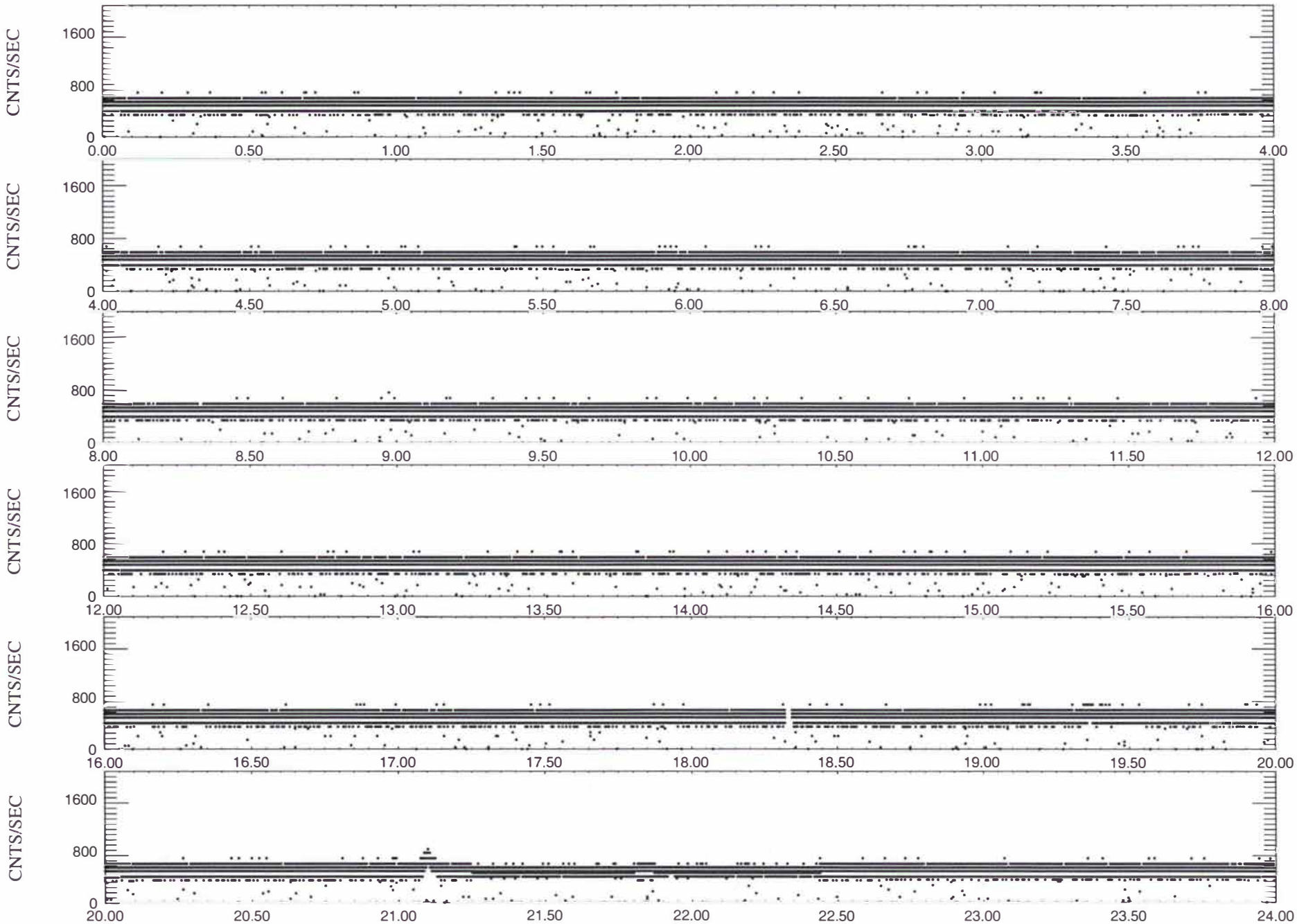
HUS MODES EDR day 251, year 2001 to day 251, year 2001 01/22/02

BURST NUMBER 9



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 08/09/2001 DOY = 251 01/22/02

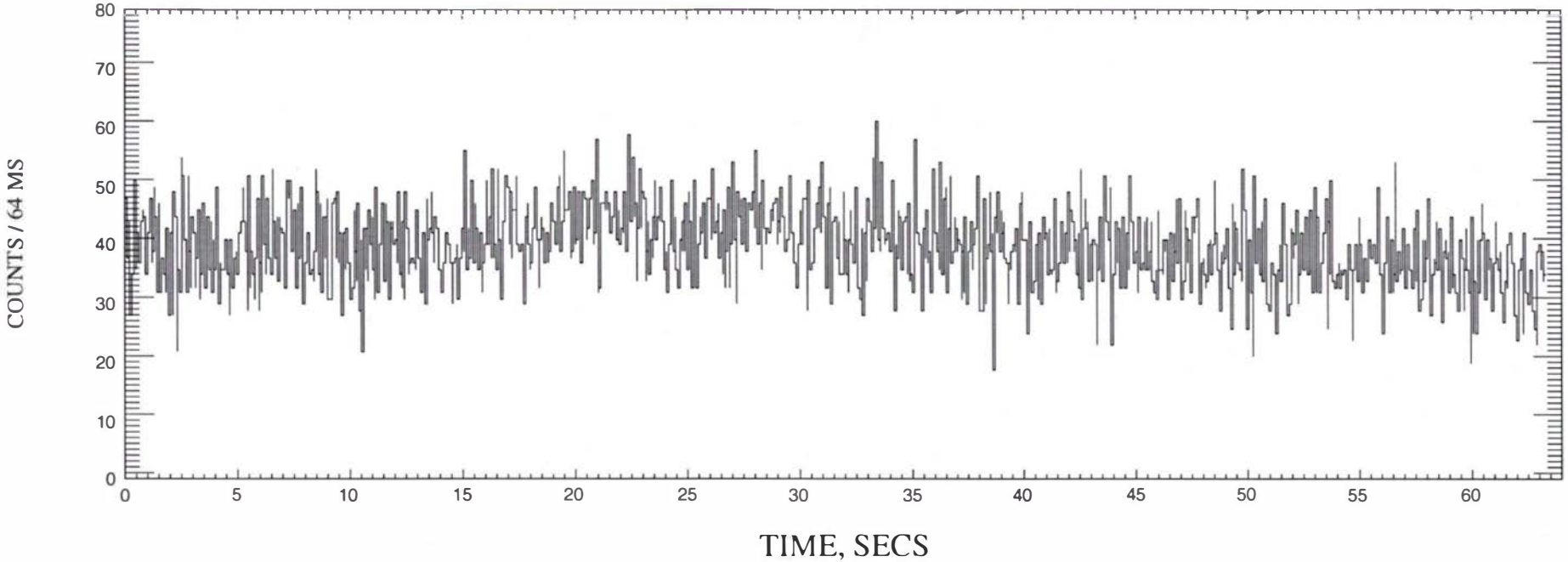
CALIBRATION DATA INCLUDED

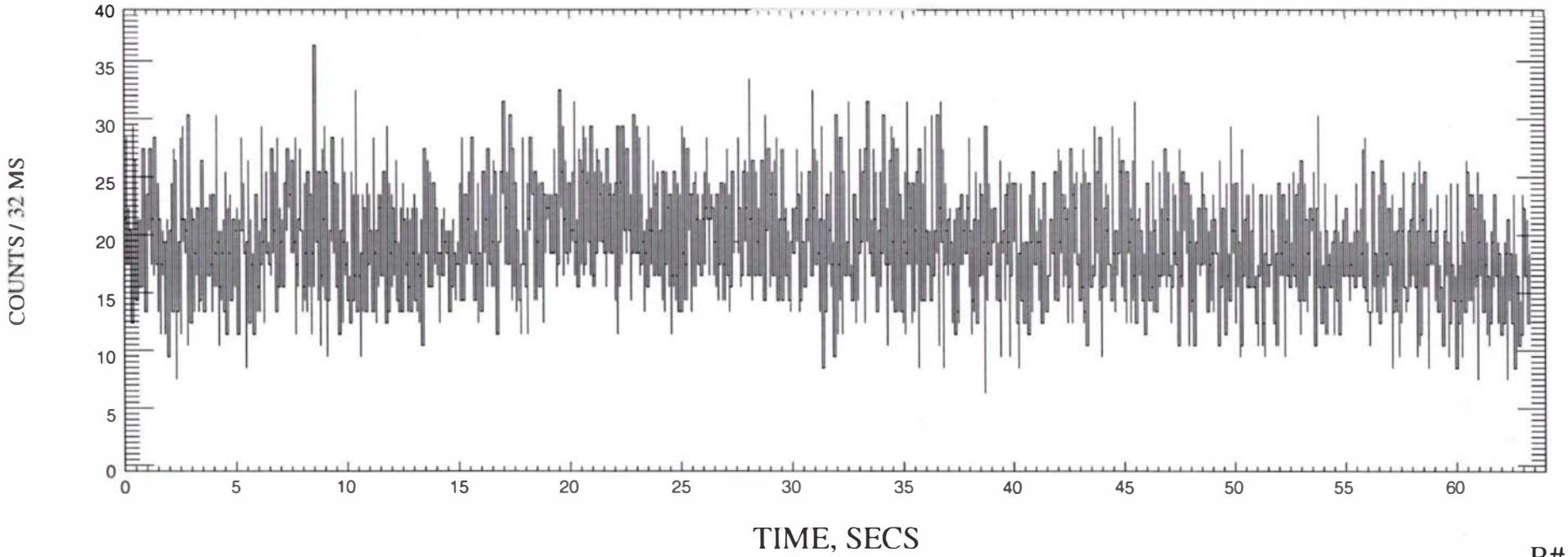


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 08/09/2001 DOY = 251 01/22/02

Burst Counter 9 at UT=21.090918765598 h=75927.308 s 21:05:27.308

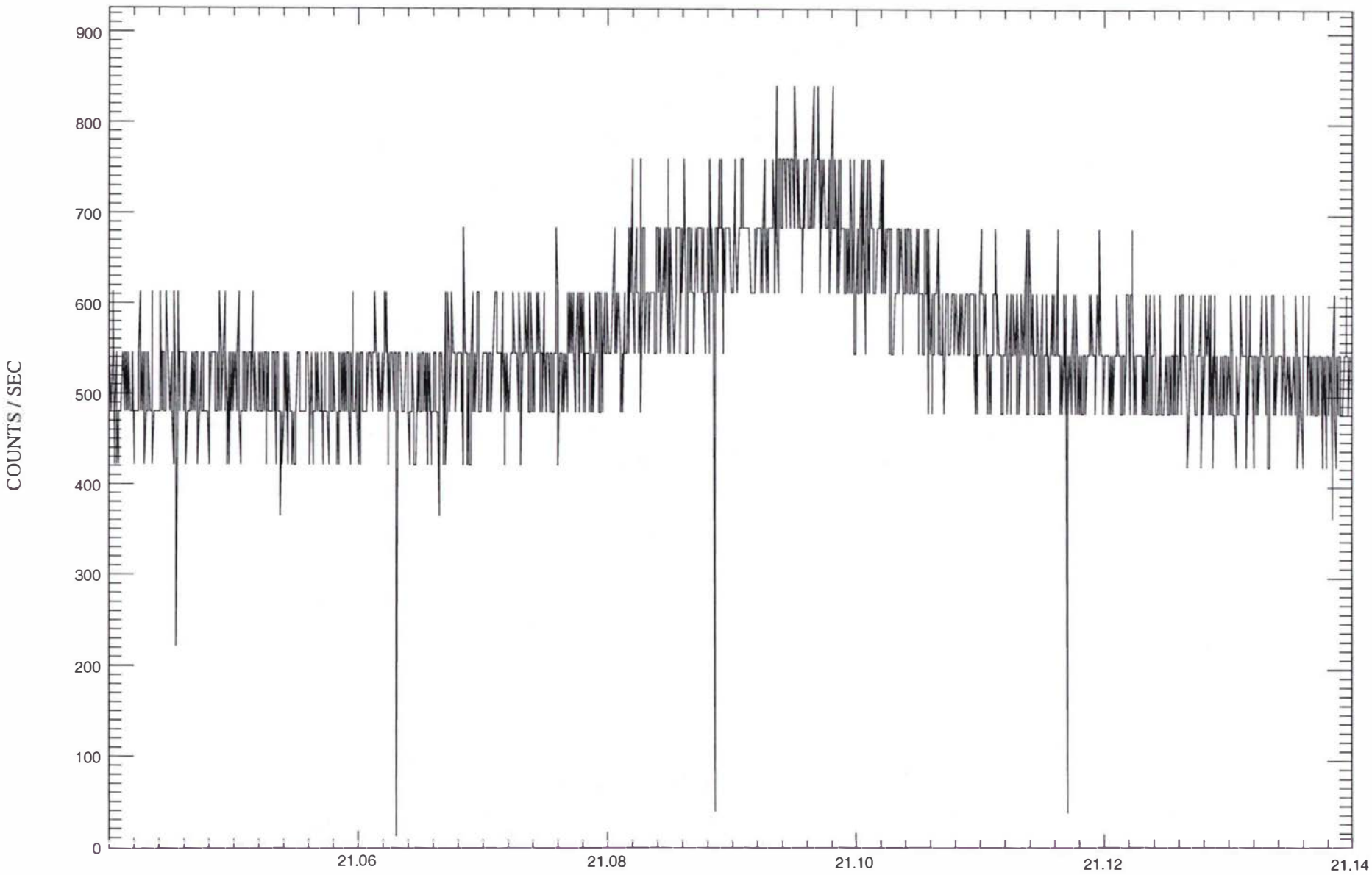




B# 1

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 08/09/2001 DOY = 251 01/22/02

CALIBRATION DATA INCLUDED



From guidorzi@fe.infn.it Sun Sep 9 11:38 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
Date: Sun, 9 Sep 2001 20:30:04 +0200 (MET DST)

1kGRB[288] #LSs: 4 Good HRR: 3
SW Trigger Time (OBT): 83492.995
UTC: Sun, 09 Sep 2001 15:12:15:63740

Prob solar

******Event 0 triggered on board: ev_time - onbtrig_time = 9.596

Nsig(trg):	3.4	25.0	6.3	0.0	0.2	4.6	2.6	0.1
Nsig(pfl):	19.3	137.8	49.9	13.6	7.7	49.4	23.2	6.2
Bkg lev. :	807	984	846	745	982	1005	917	985
ChiSq R. :	1.399	2.038	0.878	1.007	1.270	1.099	0.895	0.859
Peak fl. :	549	4400	1464	373	243	1577	706	196
Error :	46.7	80.3	56.5	43.4	47.2	60.2	50.6	46.7
Fluence :	16930	161111	45287	10731	6405	50782	19782	5373
Error :	348.5	600.6	428.6	310.9	365.0	497.8	410.4	344.7

Dur (s) :	81.00	96.00	94.00	57.00		
Abundance:	64	96	80	57		
H. Ratio :	0.378	0.315	0.437	0.501		
HR Ratio :	1.200	0.866	0.756	0.722	0.630	0.872
HR W-ave :	0.330 +/- 0.003					

1kGRB[289] #LSs: 4 Good HRR: 3
SW Trigger Time (OBT): 83715.995
UTC: Sun, 09 Sep 2001 15:15:58:63733

Nsig(trg):	5.7	62.6	21.2	3.3	1.2	14.9	3.4	0.1
Nsig(pfl):	20.6	123.6	47.9	10.9	6.7	44.6	16.9	6.1
Bkg lev. :	919	1304	915	839	1041	1083	1001	1048
ChiSq R. :	1.502	2.707	1.296	1.804	0.929	1.219	1.340	0.940
Peak fl. :	632	4567	1466	317	216	1483	540	197
Error :	50.2	85.5	57.8	45.1	48.3	60.9	50.9	48.2
Fluence :	20171	179933	54275	9087	5641	54730	17049	4256
Error :	361.8	610.6	424.2	321.1	360.8	460.7	392.7	348.0

Dur (s) :	59.00	71.00	67.00	57.00		
Abundance:	59	71	67	55		
H. Ratio :	0.280	0.304	0.314	0.468		
HR Ratio :	0.919	0.890	0.597	0.968	0.649	0.671
HR W-ave :	0.305 +/- 0.003					

1kGRB[290] #LSs: 4 Good HRR: 3
SW Trigger Time (OBT): 83807.995
UTC: Sun, 09 Sep 2001 15:17:30:63730

Nsig(trg):	7.8	92.9	13.8	1.4	2.7	10.4	3.1	0.0
Nsig(pfl):	13.6	67.7	47.9	6.7	5.0	33.3	8.7	3.9
Bkg lev. :	734	132	564	727	990	803	885	1015
ChiSq R. :	2.512	4.154	3.277	1.583	1.365	4.177	2.532	1.115
Peak fl. :	325	2069	701	171	154	698	240	123
Error :	38.5	13.8	33.7	38.4	45.3	39.8	42.2	45.8

Fluence :	20766	160672	52383	6948	6158	49022	14027	3086
Error :	368.0	215.6	337.4	308.4	427.7	395.4	409.4	366.4

.r (s) :	92.00	96.00	95.00	88.00		
Abundance:	92	96	95	66		
H. Ratio :	0.297	0.305	0.268	0.444		
HR Ratio :	0.972	1.107	0.668	1.139	0.687	0.603
HR W-ave :	0.302	+/- 0.002				

From owner-hete-science@space.mit.edu Sun Sep 9 12:47 PDT 2001
Mime-Version: 1.0
Date: Sun, 9 Sep 2001 15:41:30 -0400
To: hete-ops@space.mit.edu, hete-science@space.mit.edu
From: "George R. Ricker" <grr@space.mit.edu>
Subject: [hete-science] Fwd: GRBM/SAX Trigger S/W Alert

Looks like BeppoSAX might have detected the solar flare at 1512-1517 today.

--George

```
>From: Auto_GRB_monitor@fe.infn.it
>Subject: GRBM/SAX Trigger S/W Alert
>Date: Sun,  9 Sep 2001 20:30:04 +0200 (MET DST)
>Sender: guidorzi@fe.infn.it
>
>lkGRB[288]       #LSs: 4        Good HRR: 3
>SW Trigger Time (OBT):     83492.995
>UTC: Sun, 09 Sep 2001 15:12:15:63740
>
>******Event 0 triggered on board: ev_time - onbtrig_time =   9.596
>
>Nsig(trg):    3.4   25.0    6.3    0.0    0.2    4.6    2.6    0.1
>Nsig(pfl):   19.3  137.8   49.9   13.6    7.7   49.4   23.2    6.2
>Bkg lev. :    807    984    846    745    982   1005    917    985
>ChiSq R. :  1.399  2.038  0.878  1.007  1.270  1.099  0.895  0.859

>Peak fl. :    549   4400   1464    373    243   1577    706    196
>Error    :   46.7   80.3   56.5   43.4   47.2   60.2   50.6   46.7
>
>Fluence  :  16930 161111  45287  10731   6405  50782  19782   5373
>Error    :  348.5  600.6  428.6  310.9  365.0  497.8  410.4  344.7
>
>Dur  (s) :    81.00    96.00    94.00    57.00
>Abundance:       64       96       80       57
>H. Ratio :    0.378    0.315    0.437    0.501
>HR Ratio :    1.200    0.866    0.756    0.722    0.630    0.872
>HR W-ave :    0.330  +/-  0.003
>-----------------------------------------------------------------
>lkGRB[289]       #LSs: 4        Good HRR: 3
>SW Trigger Time (OBT):     83715.995
>UTC: Sun, 09 Sep 2001 15:15:58:63733
>
>Nsig(trg):    5.7   62.6   21.2    3.3    1.2   14.9    3.4    0.1
>Nsig(pfl):   20.6  123.6   47.9   10.9    6.7   44.6   16.9    6.1
>Bkg lev. :    919   1304    915    839   1041   1083   1001   1048
>ChiSq R. :  1.502  2.707  1.296  1.804  0.929  1.219  1.340  0.940
>
>Peak fl. :    632   4567   1466    317    216   1483    540    197
>Error    :   50.2   85.5   57.8   45.1   48.3   60.9   50.9   48.2

>Fluence  :  20171 179933  54275   9087   5641  54730  17049   4256
>Error    :  361.8  610.6  424.2  321.1  360.8  460.7  392.7  348.0
>
>Dur  (s) :    59.00    71.00    67.00    57.00
>Abundance:       59       71       67       55
```

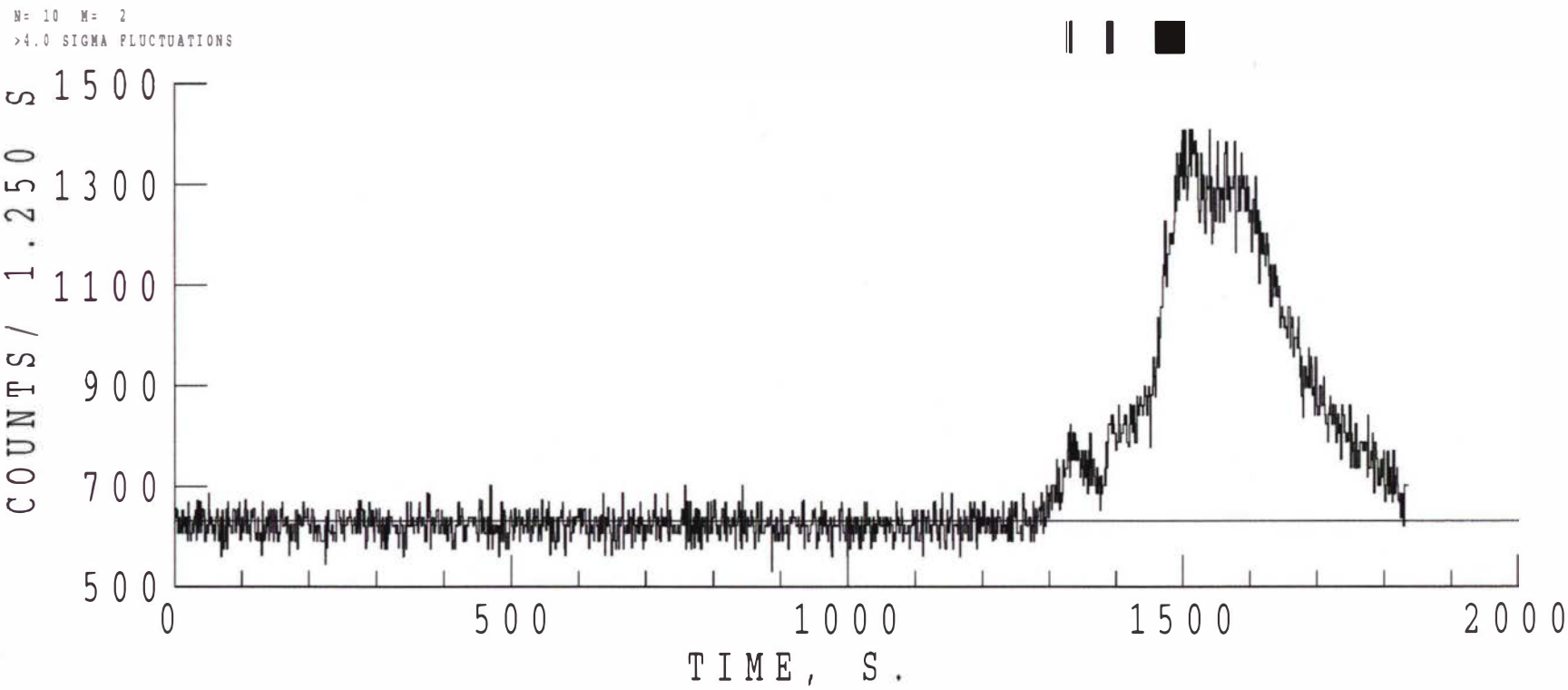
SAX 20010909 54735

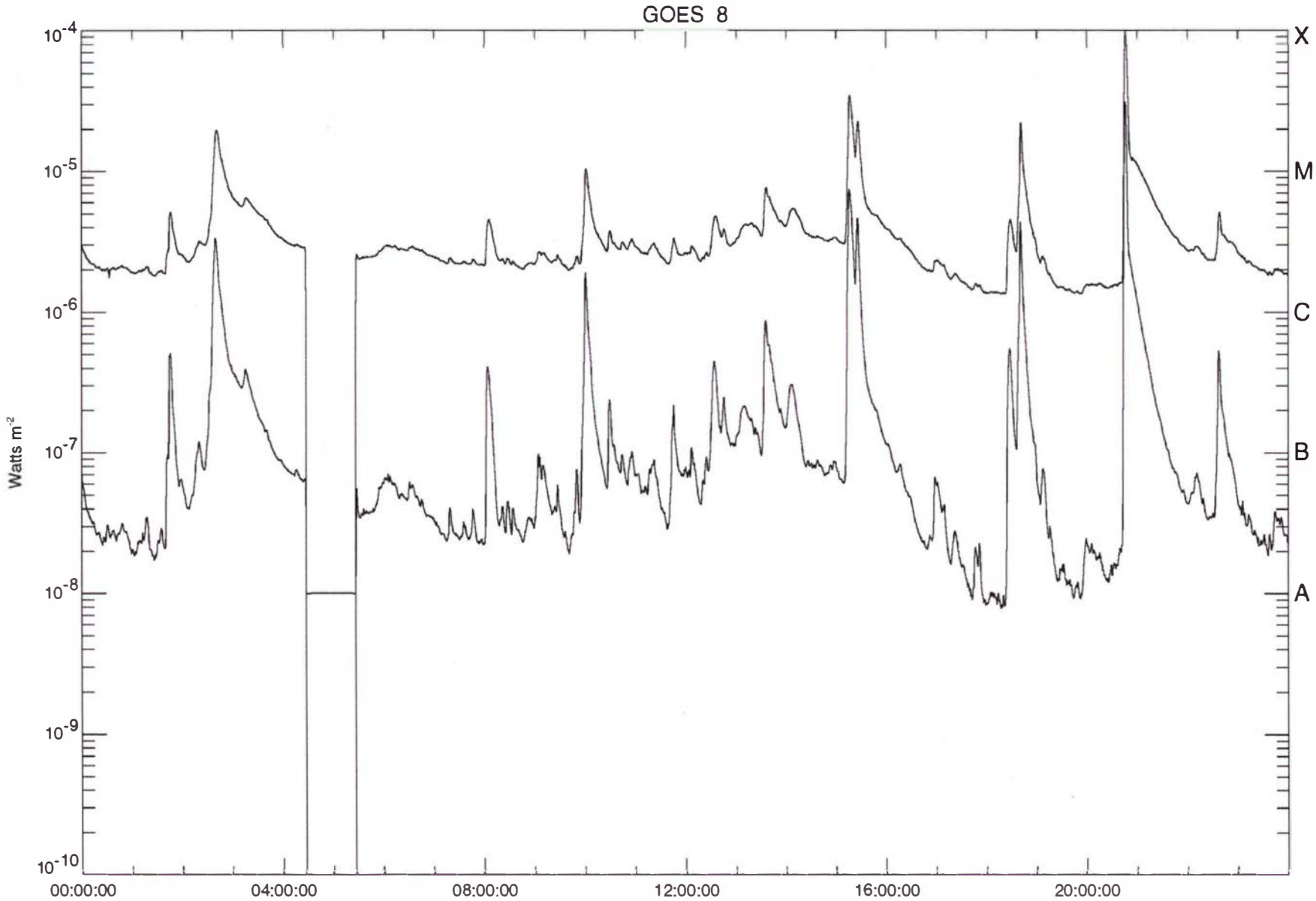
ULYSSES RT 10/09/01

09/09/01 53820.156 s

0.250 S INTERVALS REGROUPED BY 5

0- 0 keV

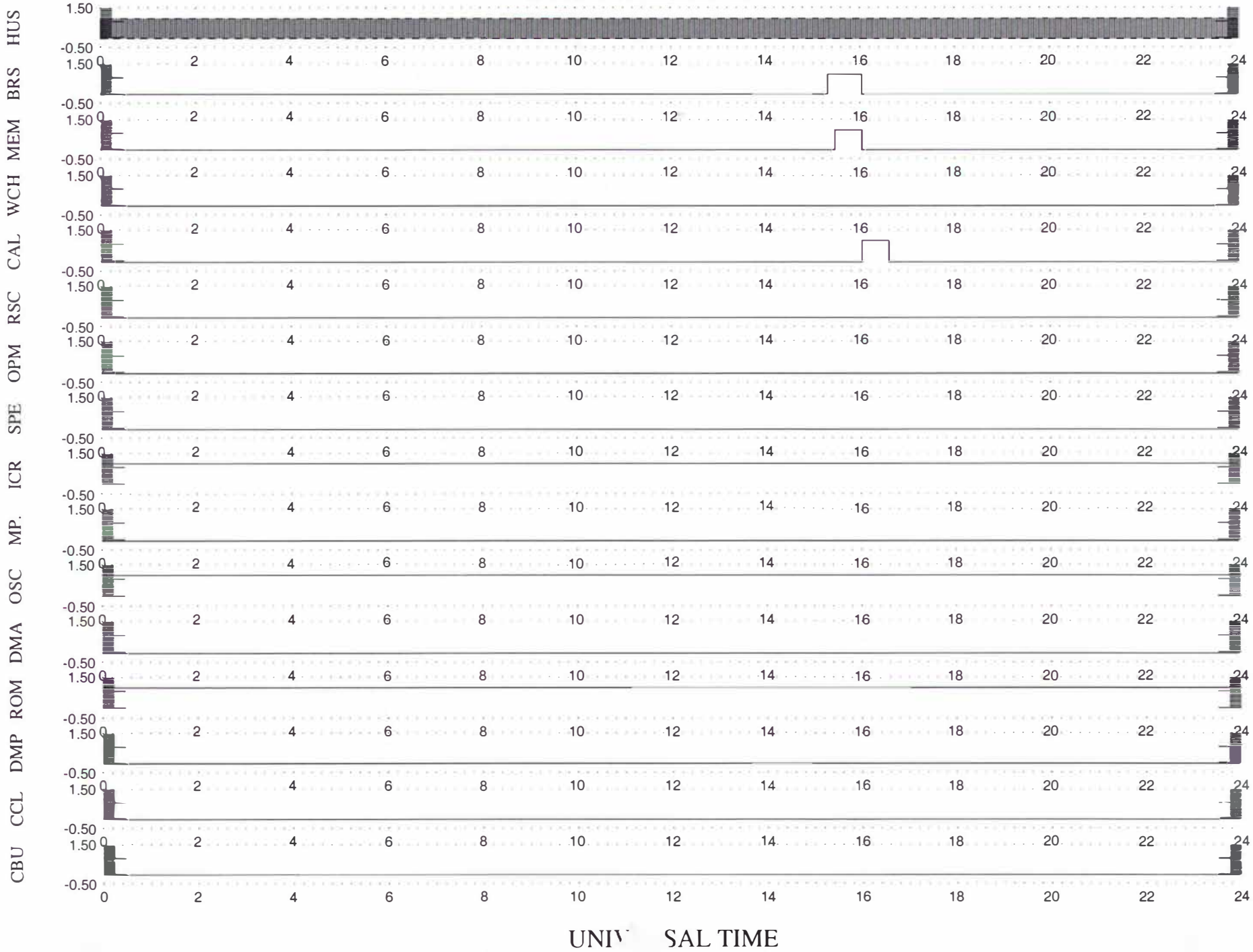




Data Start: 01/09/09, 0000:00 Plot created: 01/09/13, 0950
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

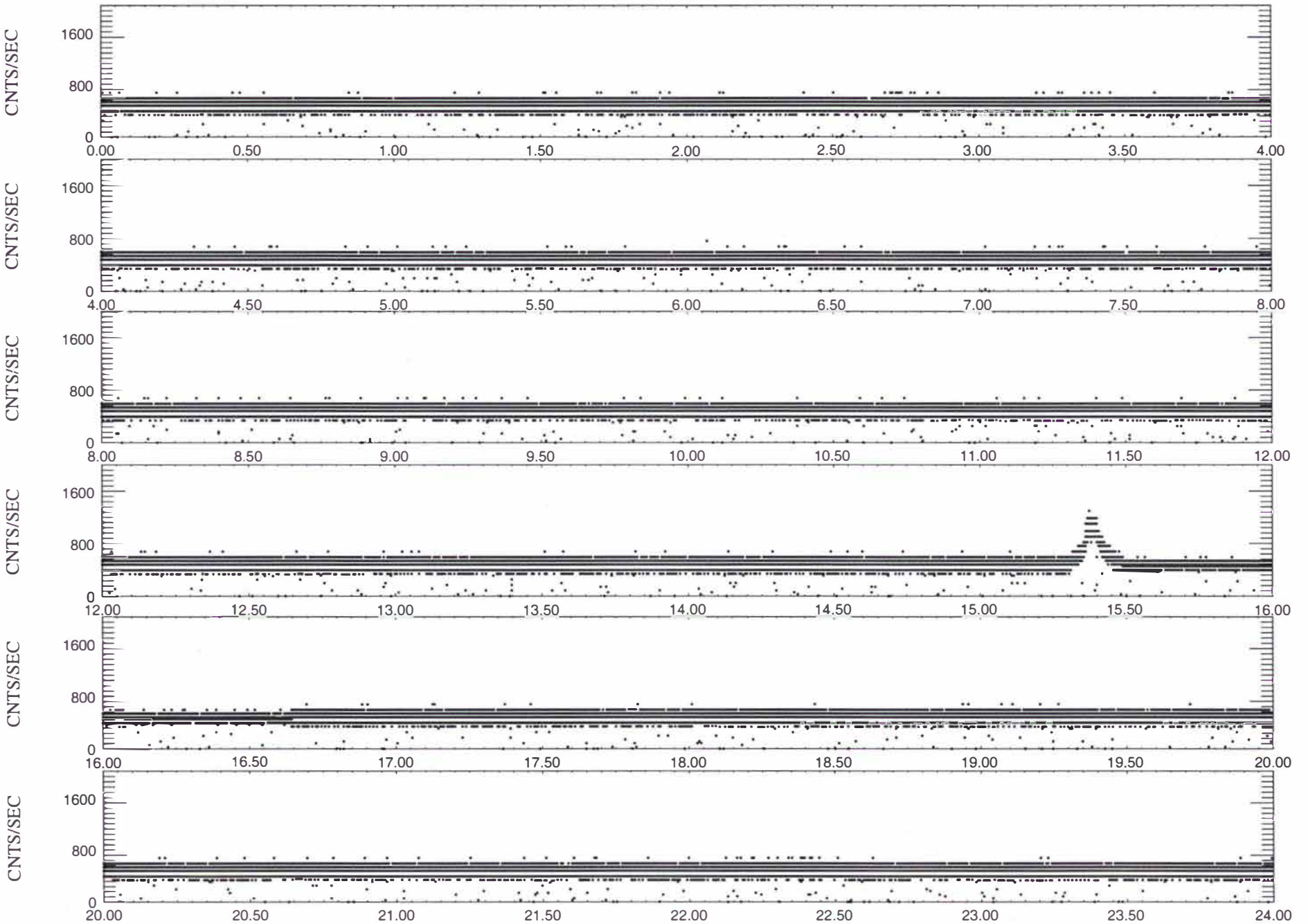
HUS MODES EDR day 252, year 2001 to day 252, year 2001 01/22/02

BURST NUMBER 10



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 09/09/2001 DOY = 252 01/22/02

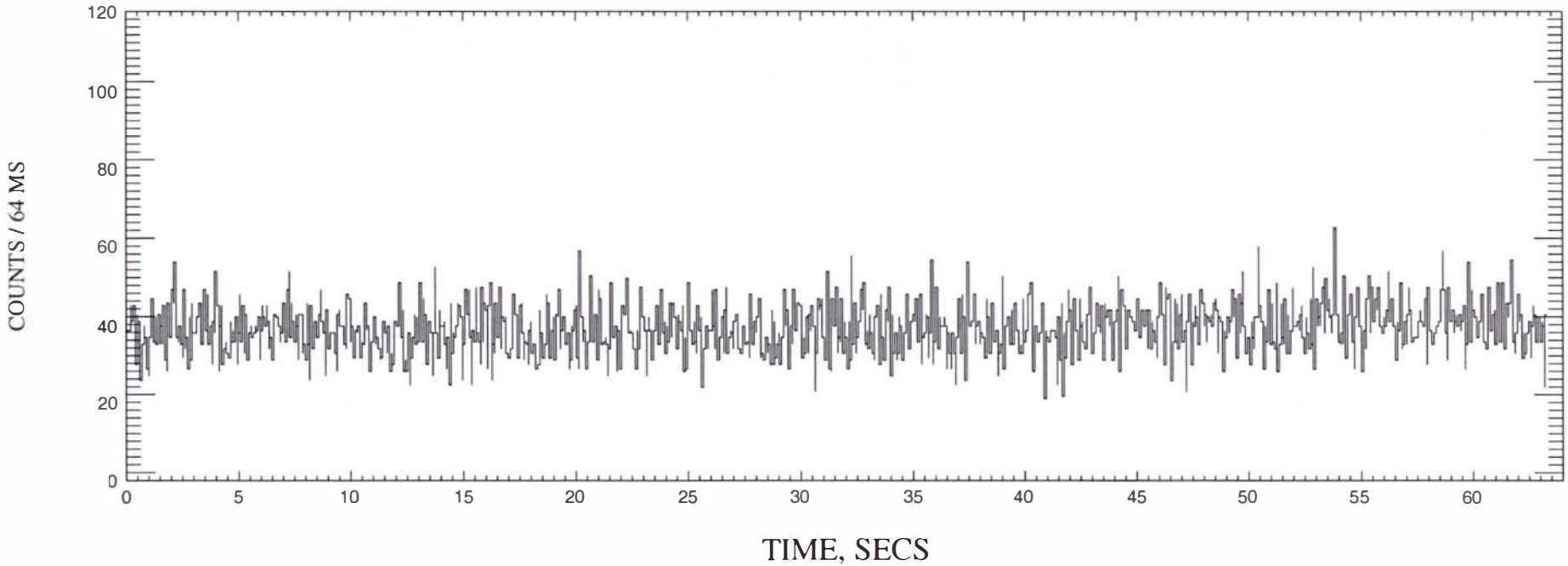
CALIBRATION DATA INCLUDED

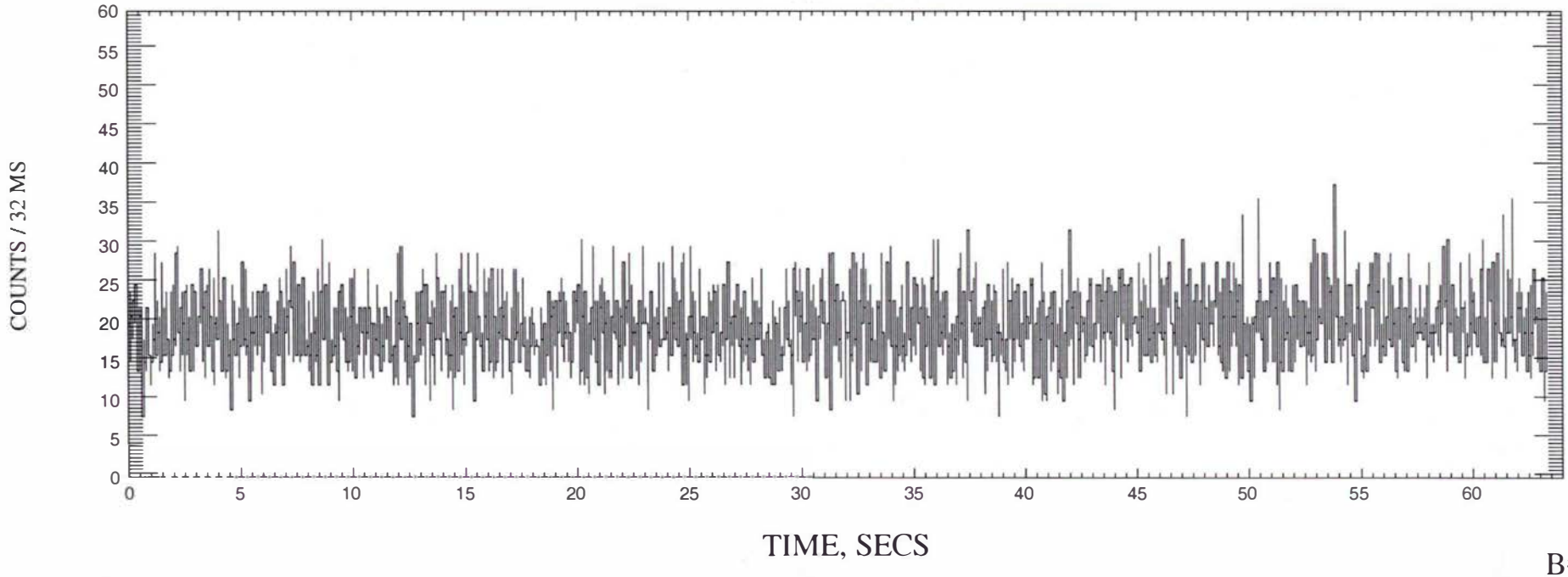


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 09/09/2001 DOY = 252 01/22/02

Burst Counter 10 at UT=15.337929632399 h=55216.547 s 15:20:16.547

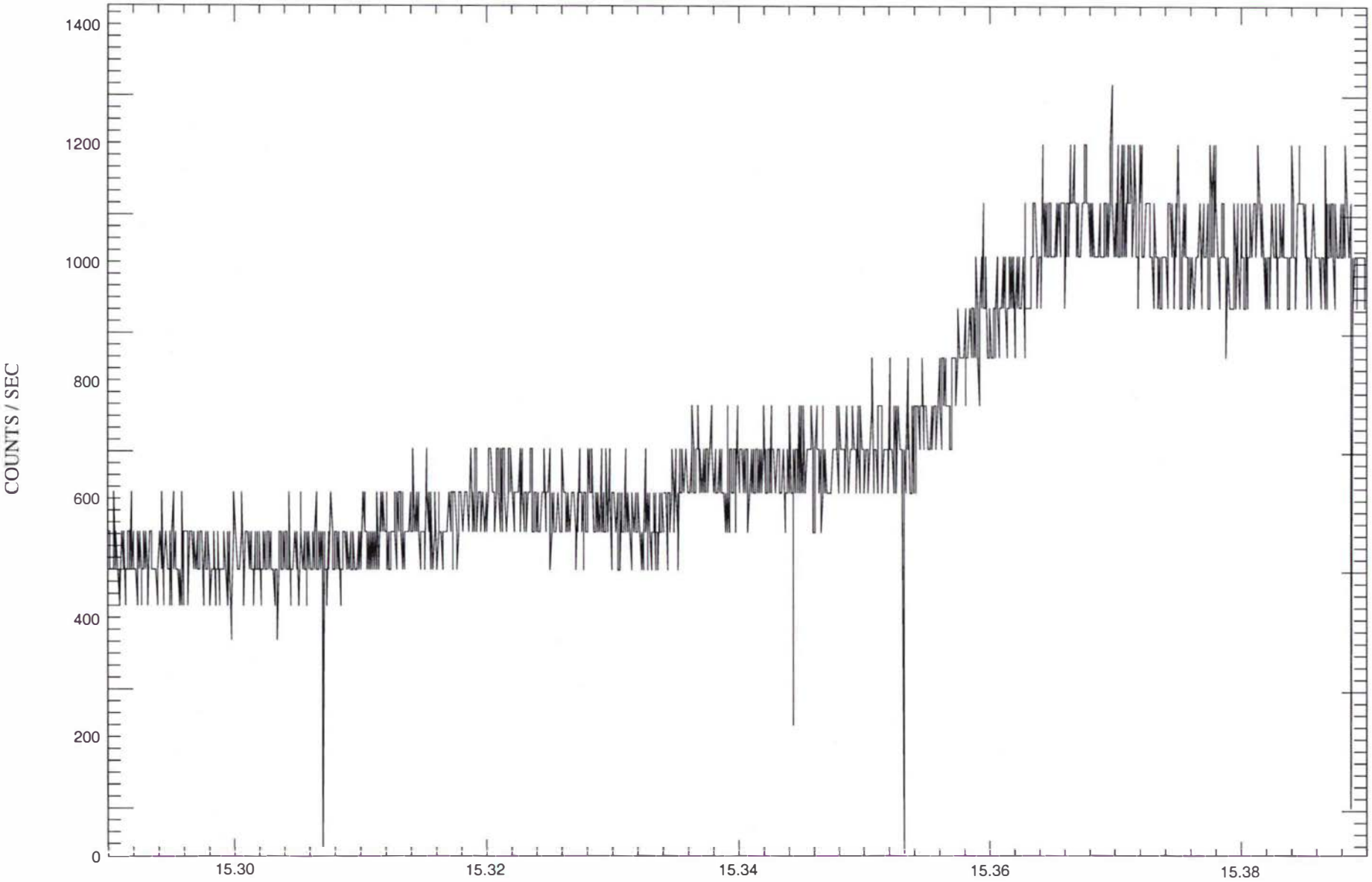


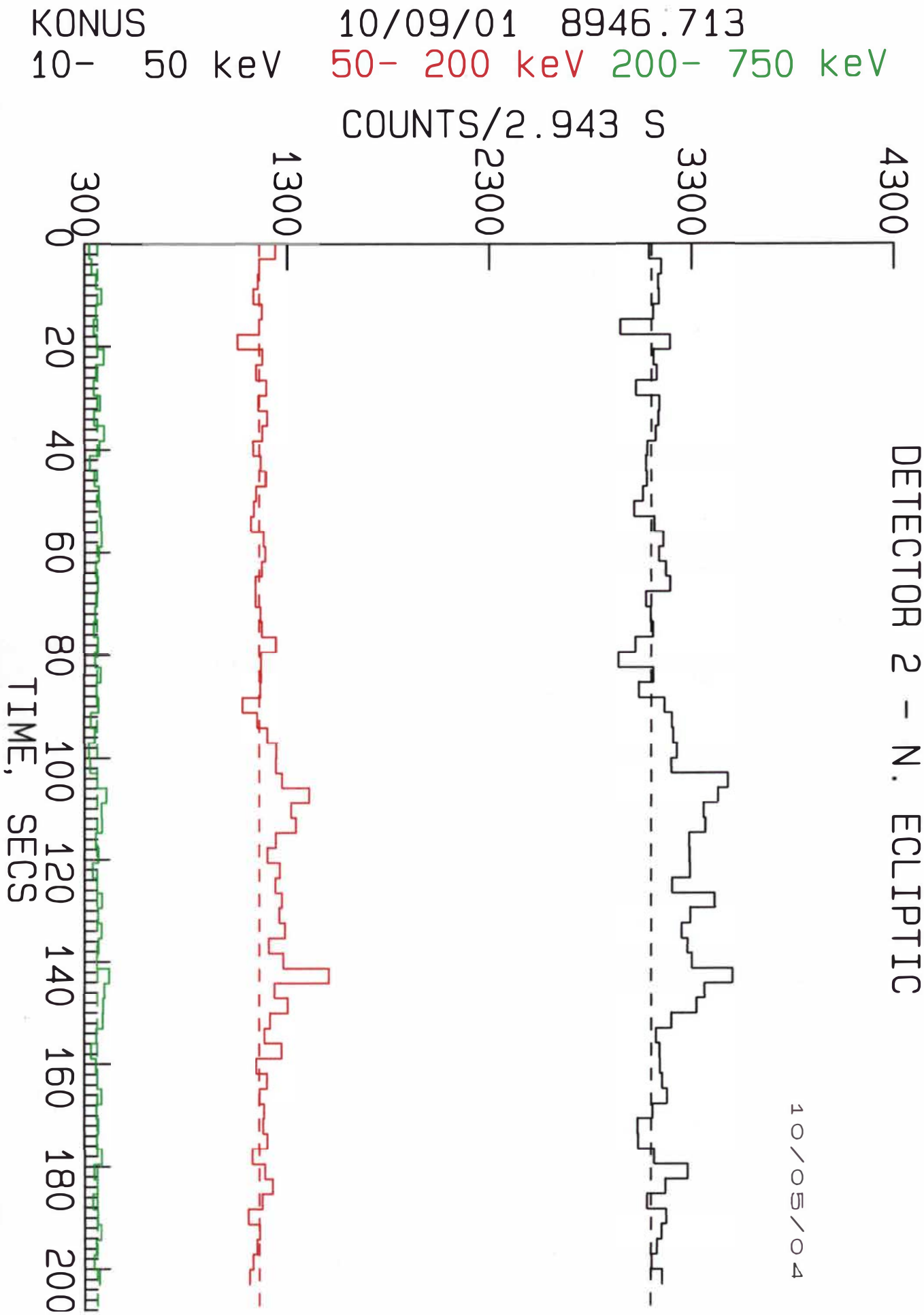


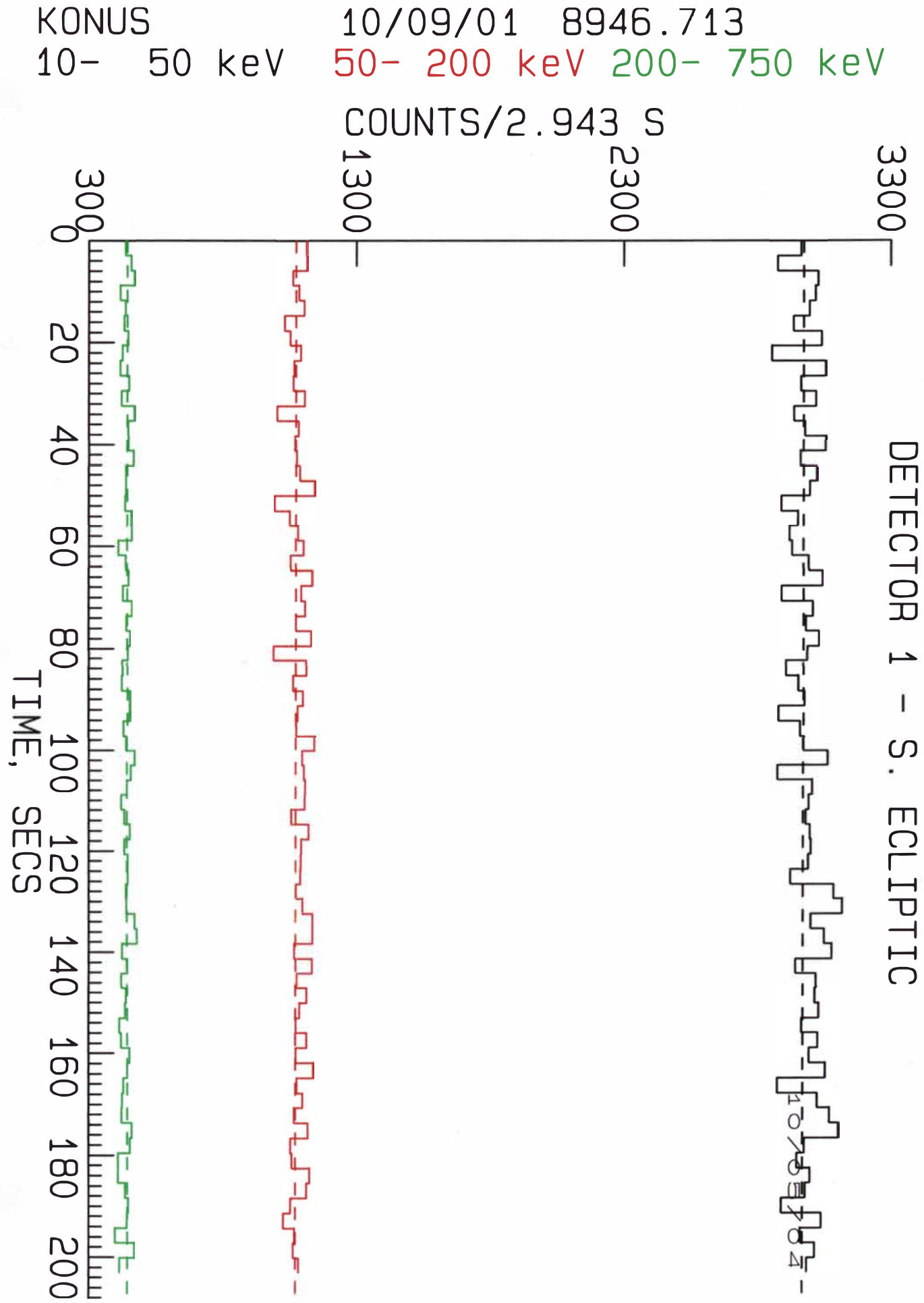
B# 1

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 09/09/2001 DOY = 252 01/22/02

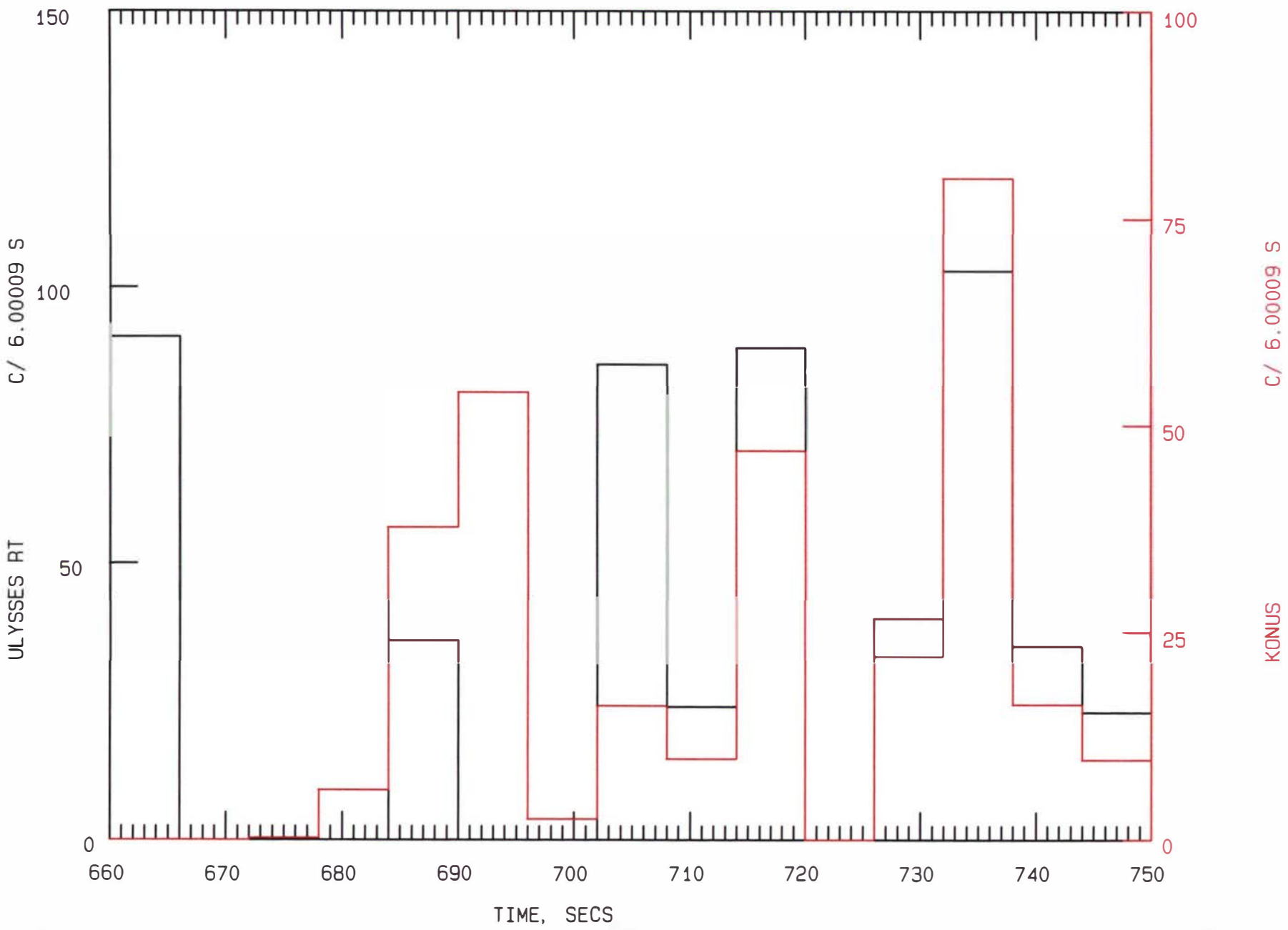
CALIBRATION DATA INCLUDED




KONUS
10/09/01 8946.713
10- 50 keV
50- 200 keV
200- 750 keV
COUNTS/2.943 S
4300
3300
2300
1300
300
0
20
40
60
80
100
120
140
160
180
200
TIME, SECS
DETECTOR 2 - N. ECLIPTIC
10/05/04

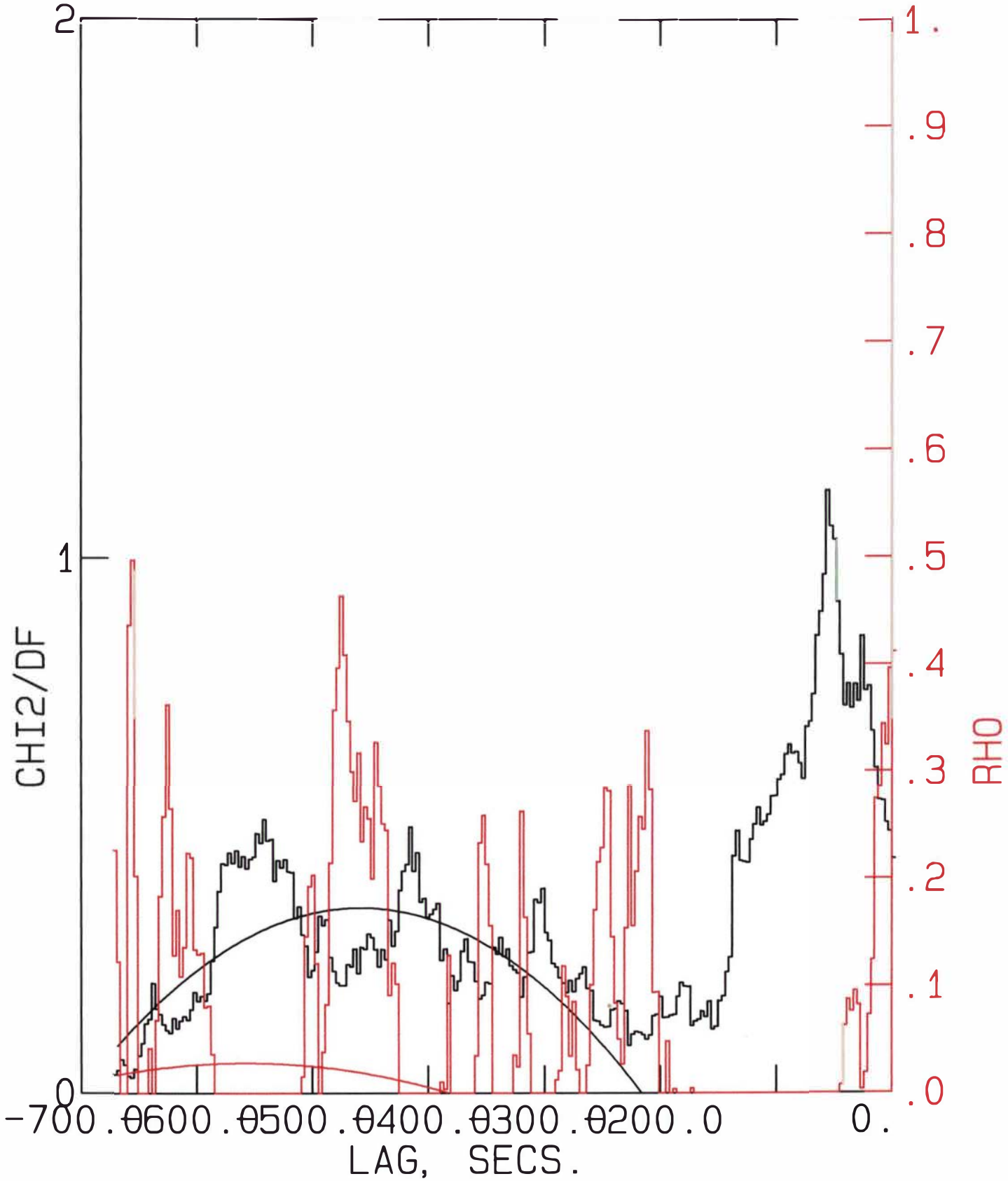

KONUS
10/09/01 8946.713
10- 50 keV
50- 200 keV
200- 750 keV
COUNTS/2.943 S
300
1300
2300
3300
DETECTOR 1 - S. ECLIPTIC
0
20
40
60
80
100
120
140
160
180
200
TIME, SECS

ULYSSES RT-KONUS CORRELATION 10/ 9/01 8244.368 22/ 1/ 8



22/ 1/ 8

ULYSSES RT-KONUS CORRELATION 10/ 9/01 8244.368



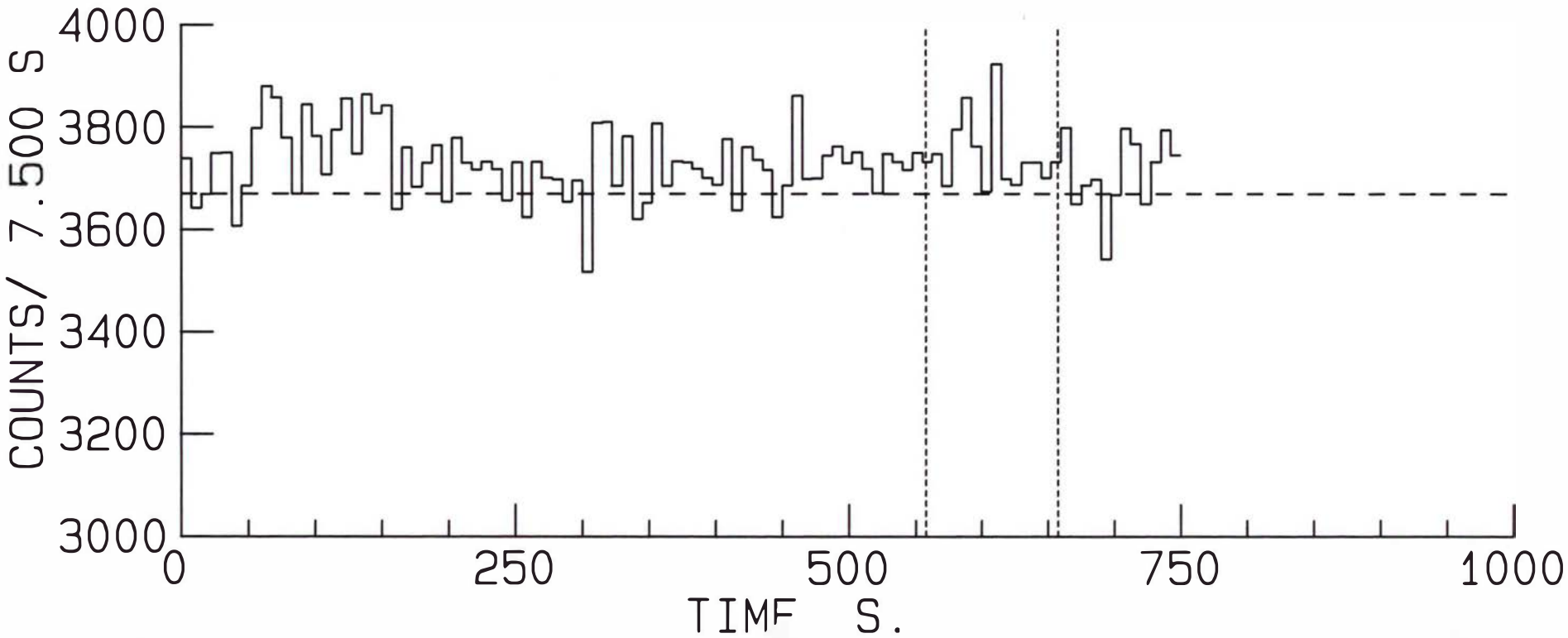
ULYSSES RT

22/ 1/ 8

10/ 9/ 1 8244.104 s

0.250 S INTERVALS REGROUPED BY 30

22- 153 keV



GRBM 20010910 08615

ULYSSES RT 17/01/08

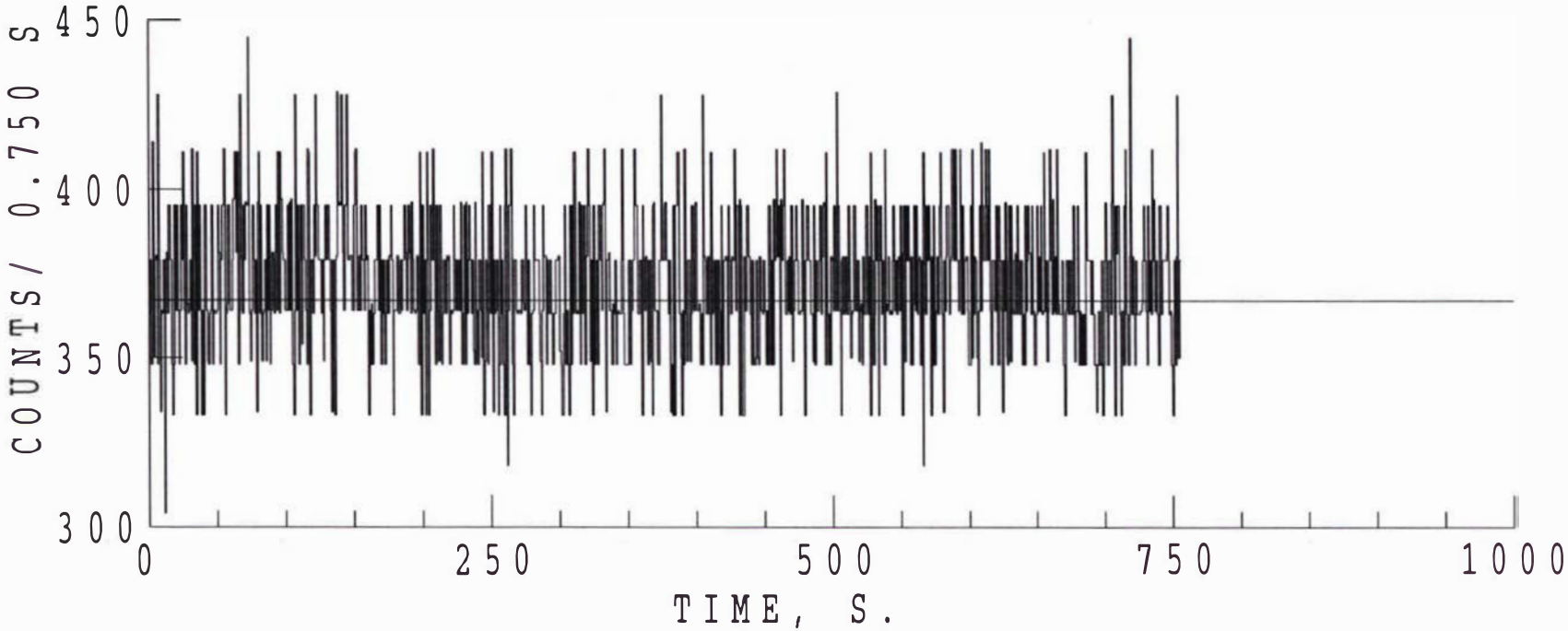
10/09/01 8244.104 s

0.250 S INTERVALS REGROUPED BY 3

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



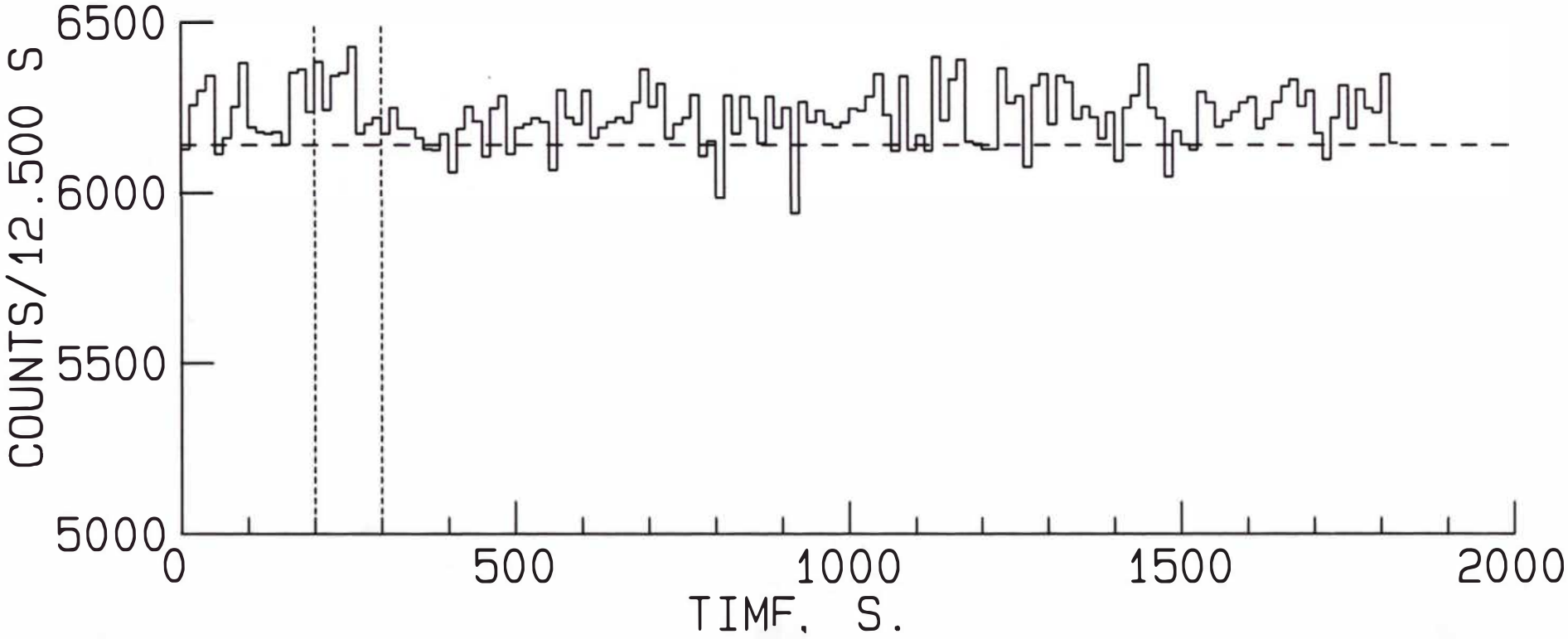
ULYSSES RT

17/ 5/ 4

10/ 9/ 1 8136.099 s

0.250 S INTERVALS REGROUPED BY 50

22- 153 keV



From guidorzi@fe.infn.it Sun Sep 9 23:58 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
`te: Mon, 10 Sep 2001 08:50:05 +0200 (MET DST)

ıkGRB[291] #LSs: 2 Good HRR: 1
SW Trigger Time (OBT): 58673.995
UTC: Mon, 10 Sep 2001 02:30:52:62254

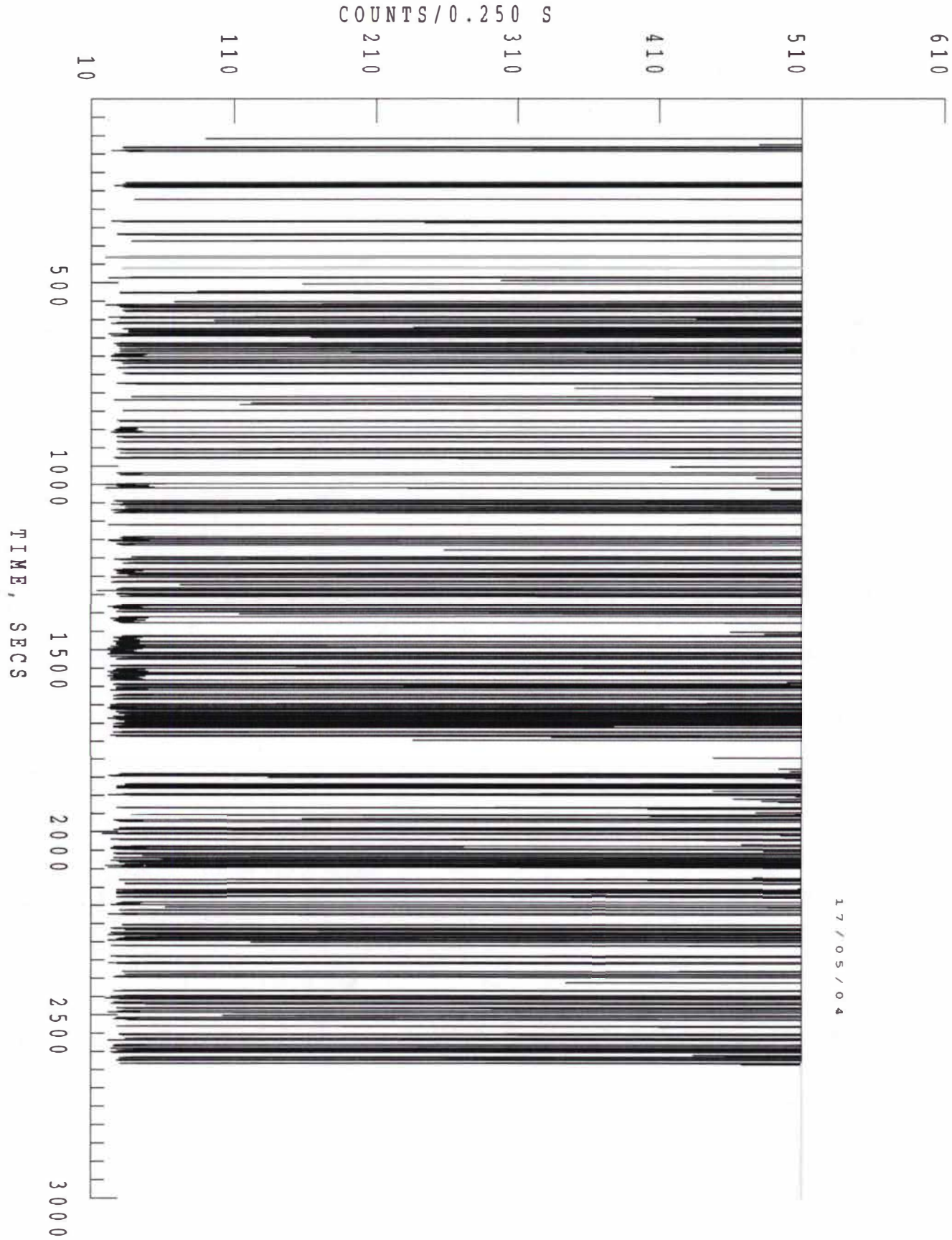
******Event 0 triggered on board: ev_time - onbtrig_time = -0.417

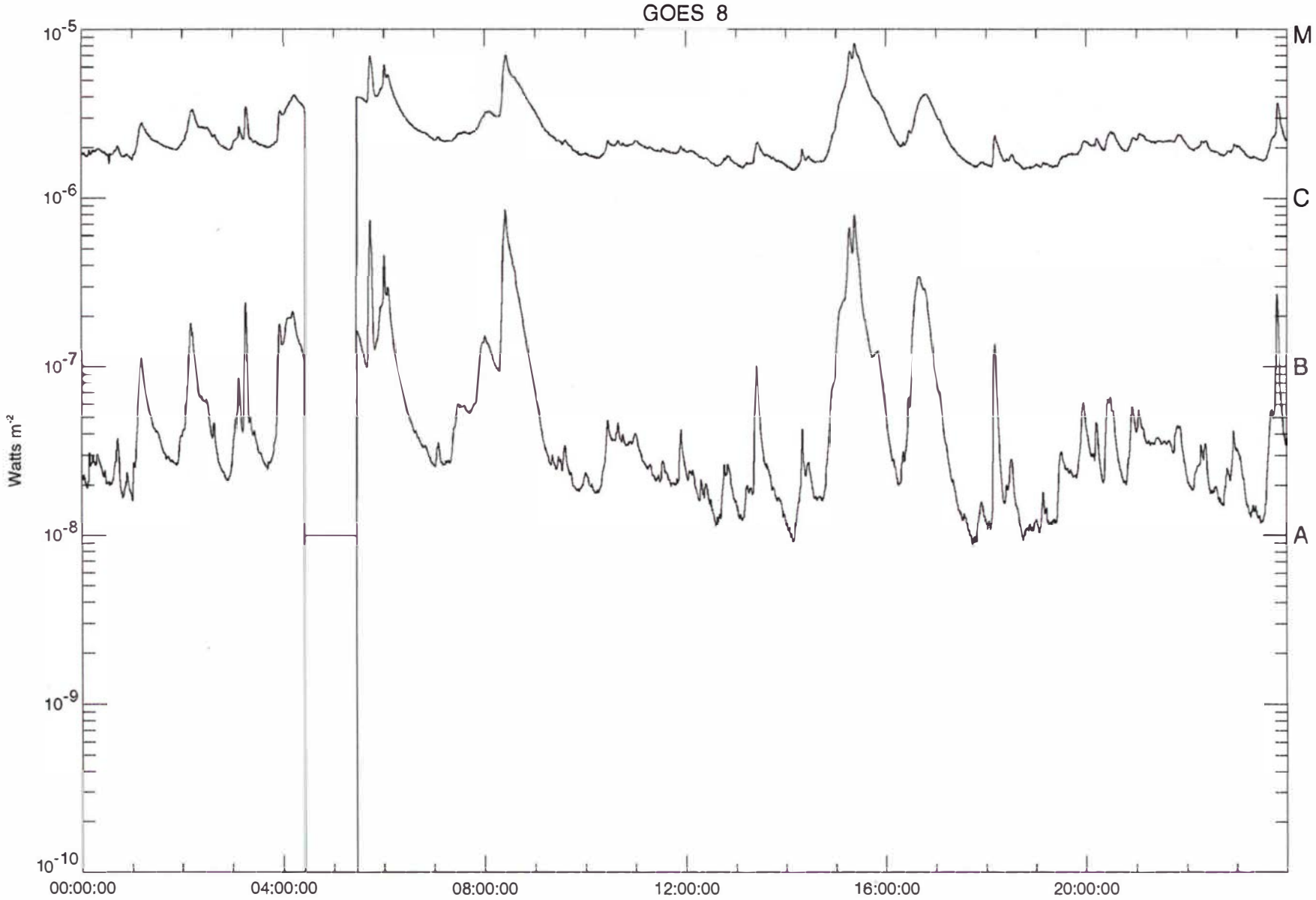
Nsig(trg):	7.0	0.6	0.0	0.0	4.0	0.3	0.0	0.0
Nsig(pfl):	10.7	3.7	0.0	0.0	6.9	3.3	0.0	0.0
Bkg lev. :	720	841	762	695	862	852	820	913
ChiSq R. :	1.390	1.198	0.956	0.870	1.165	0.814	1.442	1.189
Peak fl. :	287	108	0	0	201	96	0	0
Error :	41.8	42.4	0.0	0.0	44.0	42.5	0.0	0.0
Fluence :	4157	275	0	0	3141	215	0	0
Error :	218.5	73.1	0.0	0.0	234.9	73.2	0.0	0.0

Dur (s) :	42.00	3.00	0.00	0.00		
Abundance:	30	3	0	0		
H. Ratio :	0.756	0.781	-1.000	-1.000		
HR Ratio :	0.967	-1.000	-1.000	-1.000	-1.000	-1.000
HR W-ave :	0.757	+/- 0.068				

MS01 10/09/01 7714.496

50- 3000 keV

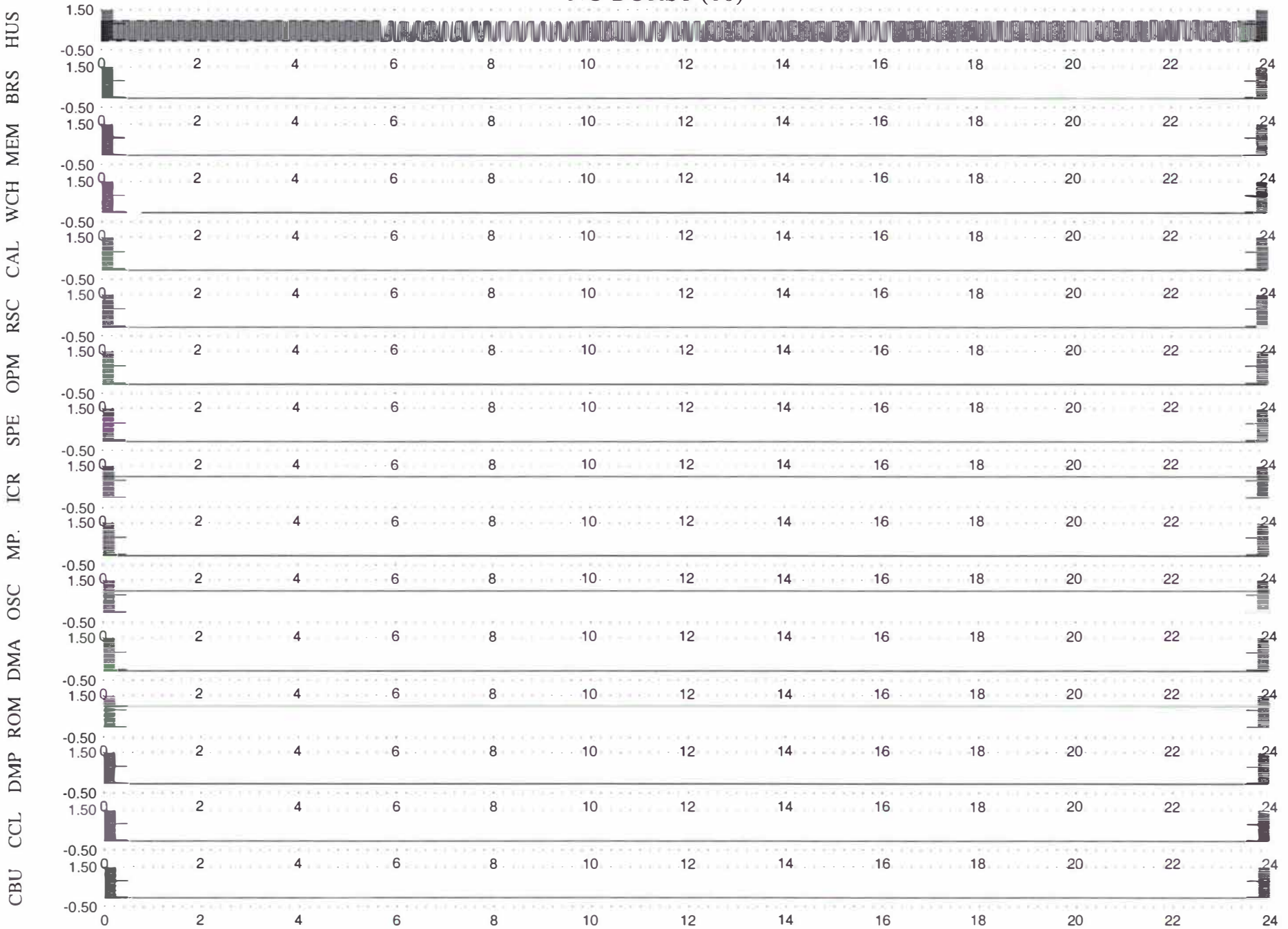




Data Start: 01/09/10, 0000:00 Plot created: 01/09/14, 0951
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 253, year 2001 to day 253, year 2001 01/22/02

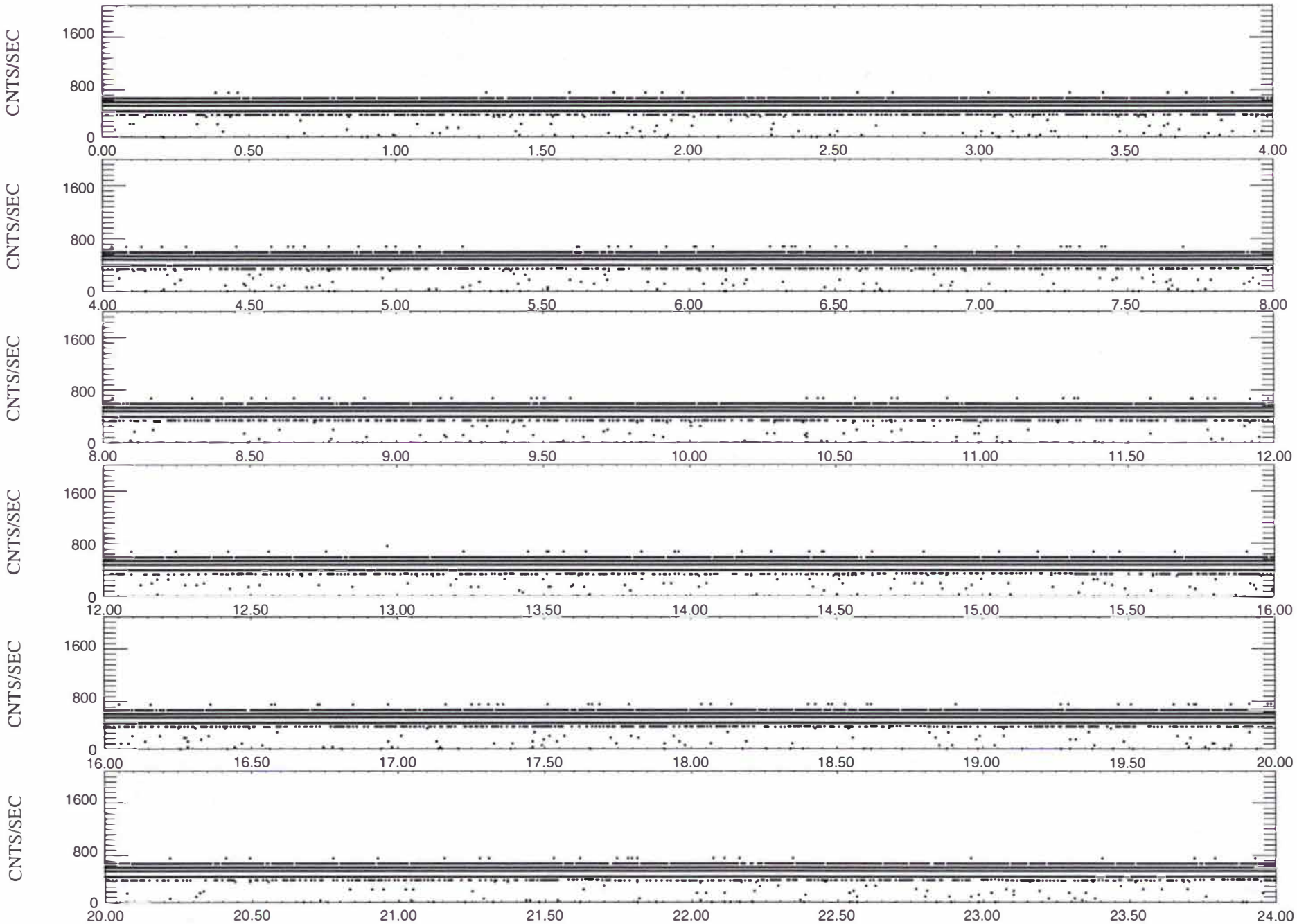
NO BURST (10)



UNIV SAL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 10/09/2001 DOY = 253 01/22/02

CALIBRATION DATA INCLUDED



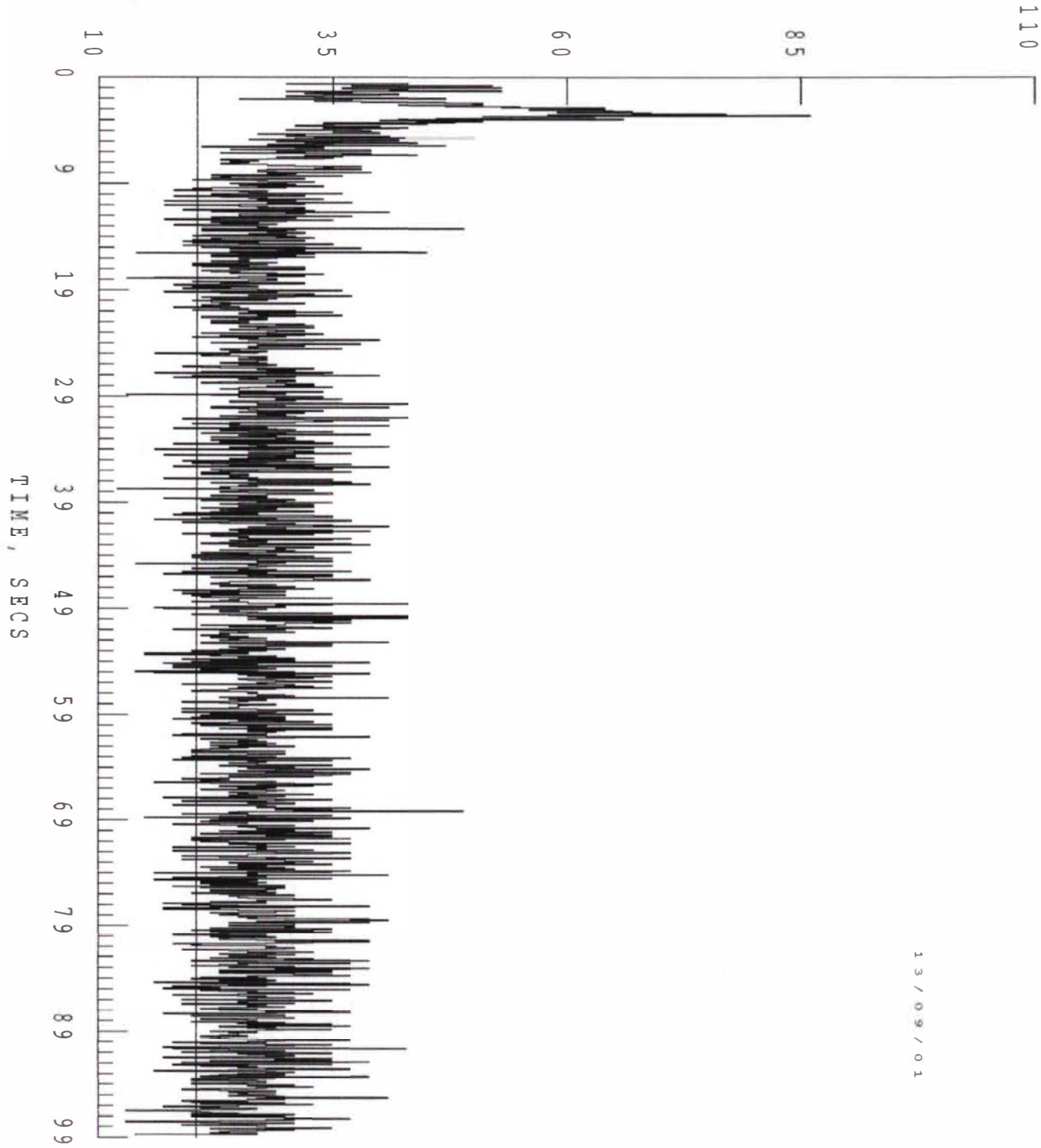
UNIVERSAL TIME

KONUS2 11/09/01 1880.956

50- 200 keV

Solar

COUNTS/0.064 S



13/09/01

KONUS2 20010911 0188C

ULYSSES RT 13/09/01

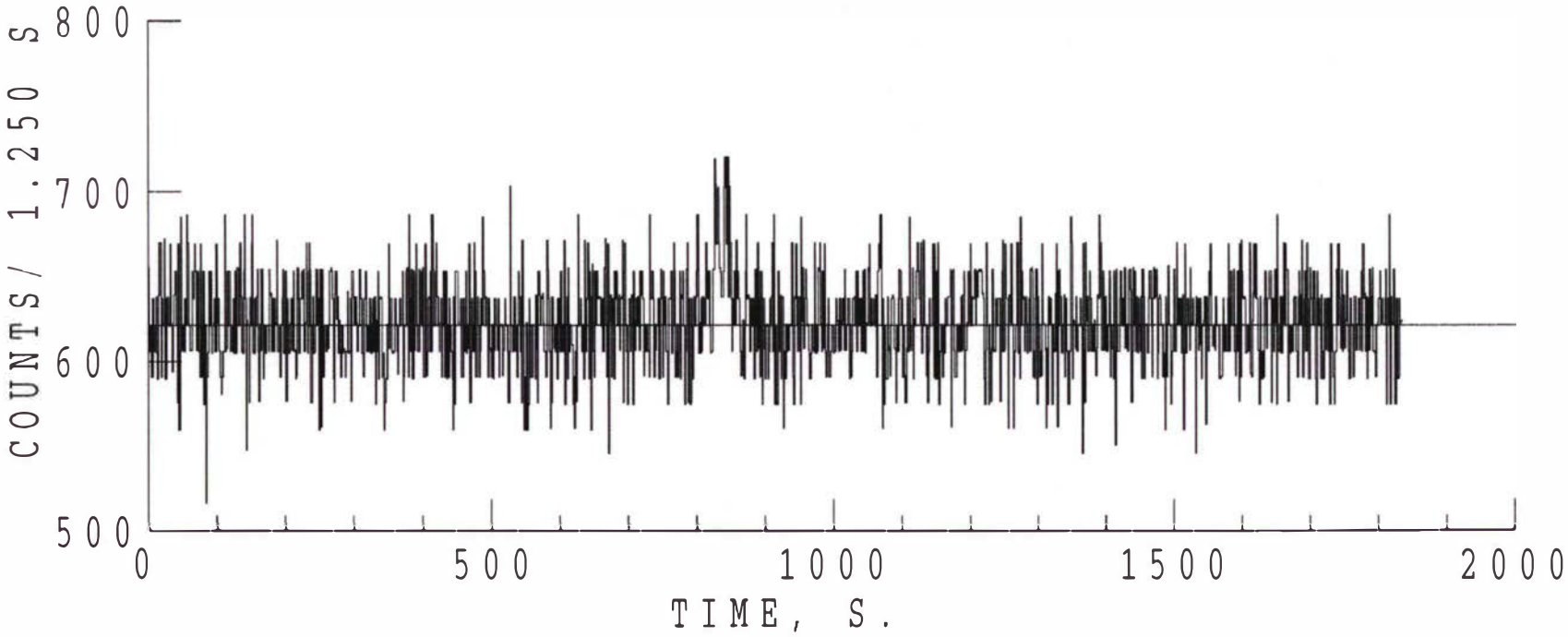
11/09/01 972.195 s

0.250 S INTERVALS REGROUPED BY 5

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

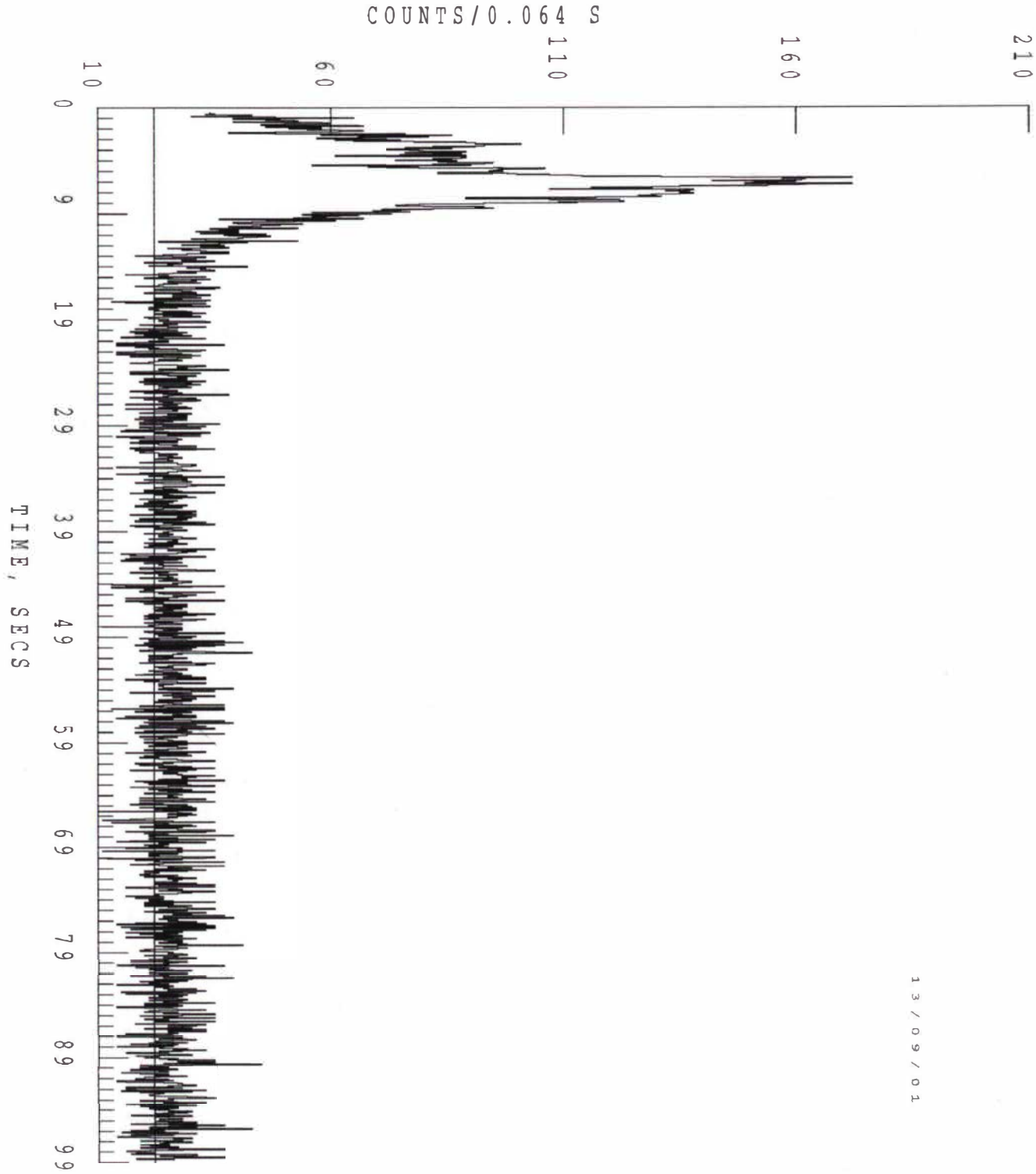
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



KONUS1 11/09/01 34553.688

50- 200 keV

Solar



KONUS1 20010911 34553

ULYSSES RT 13/09/01

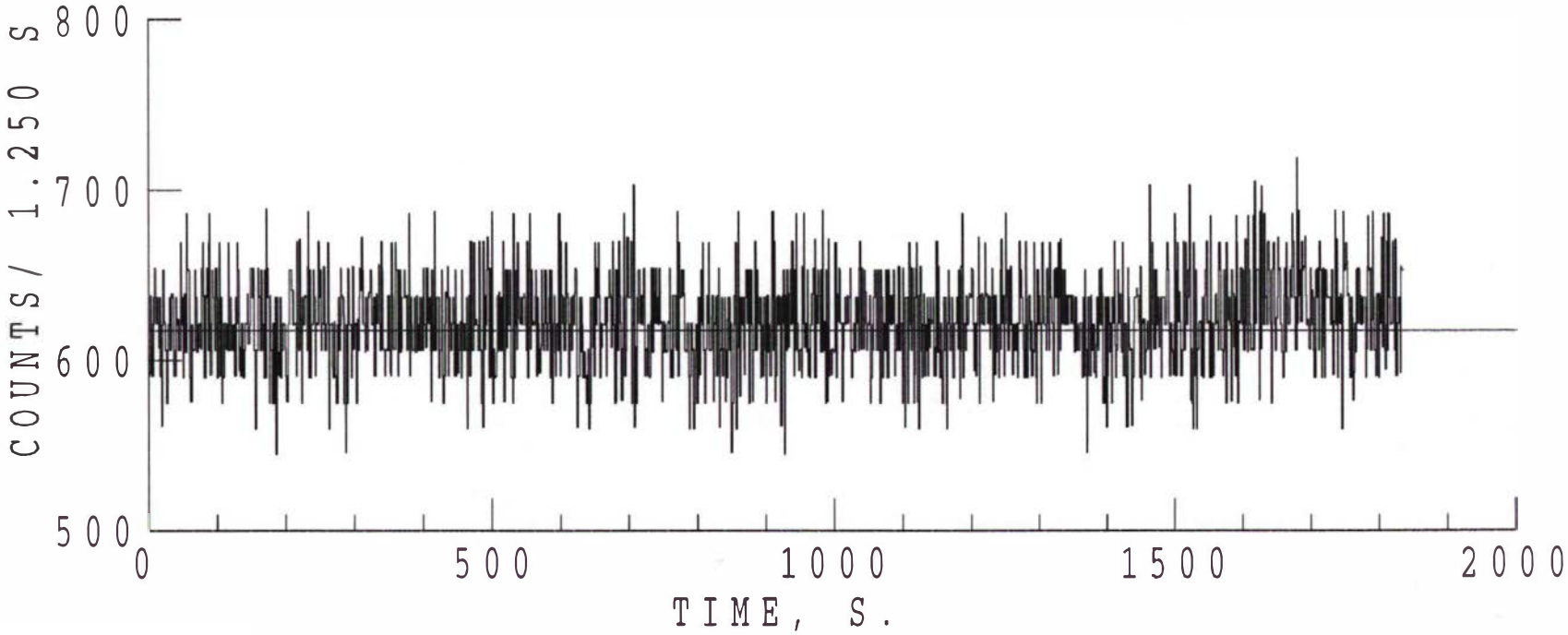
11/09/01 33624.000 s

0.250 S INTERVALS REGROUPED BY 5

0- 0 keV

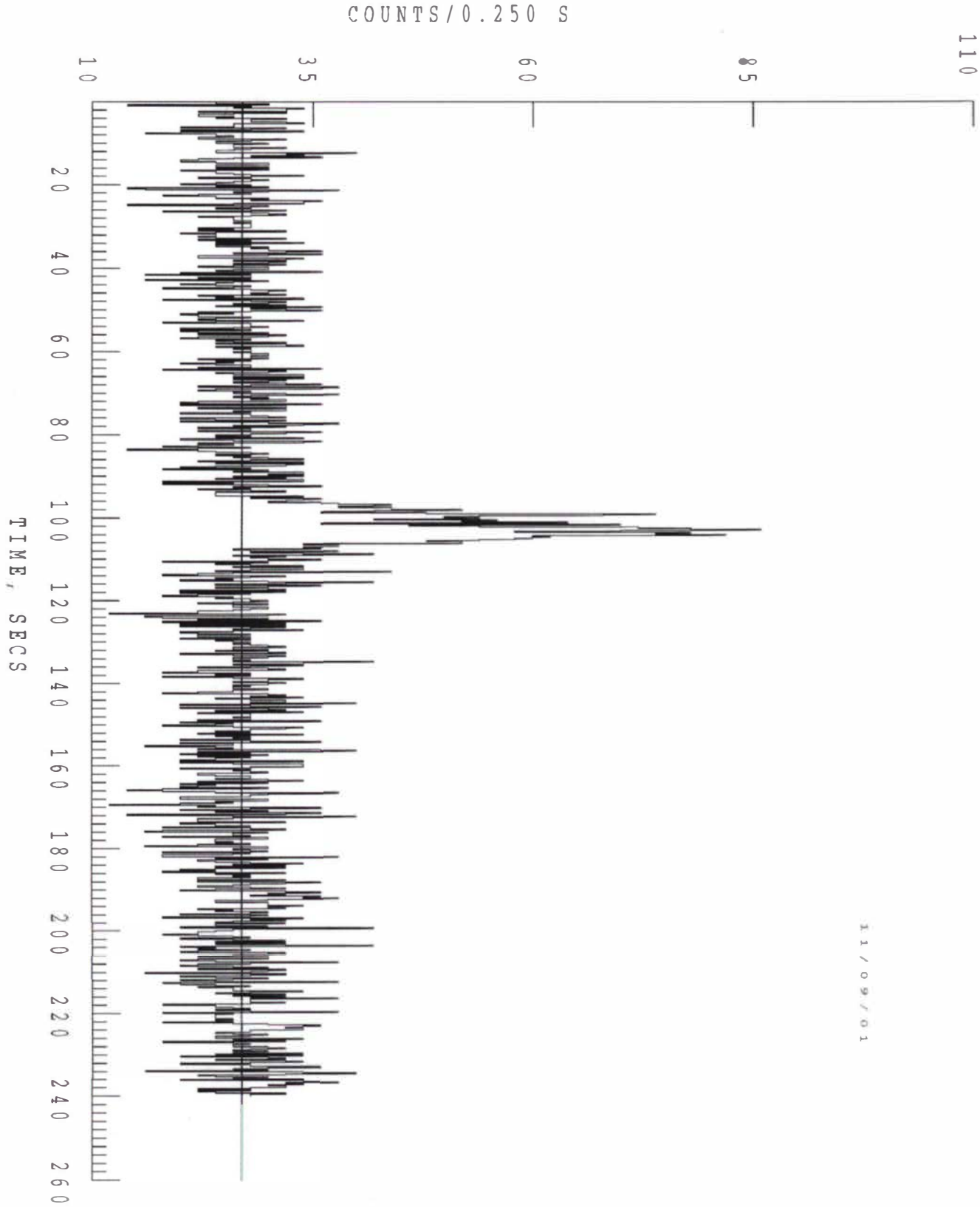
N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

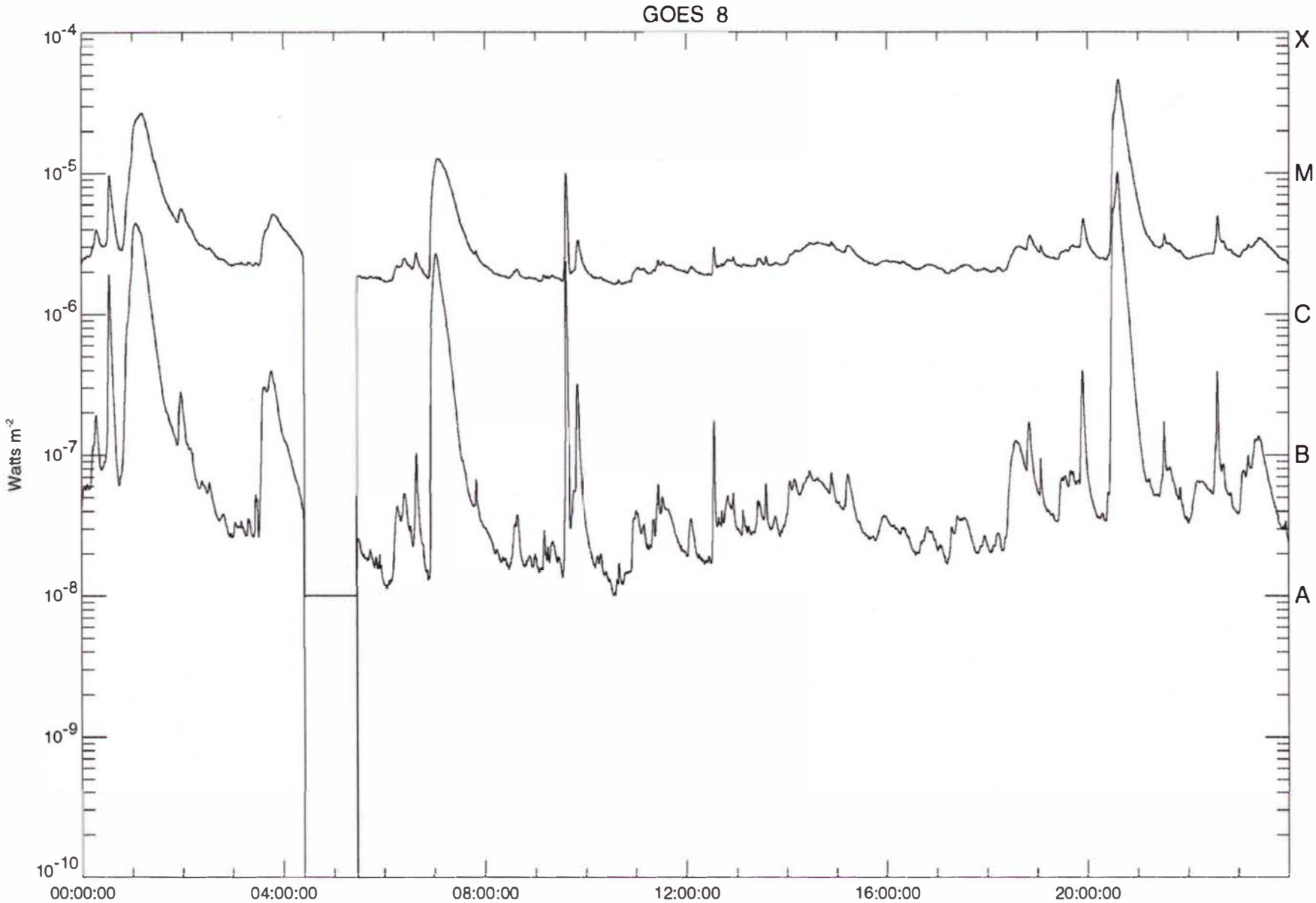
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



MS01 11/09/01 34683.462

50-3000 keV

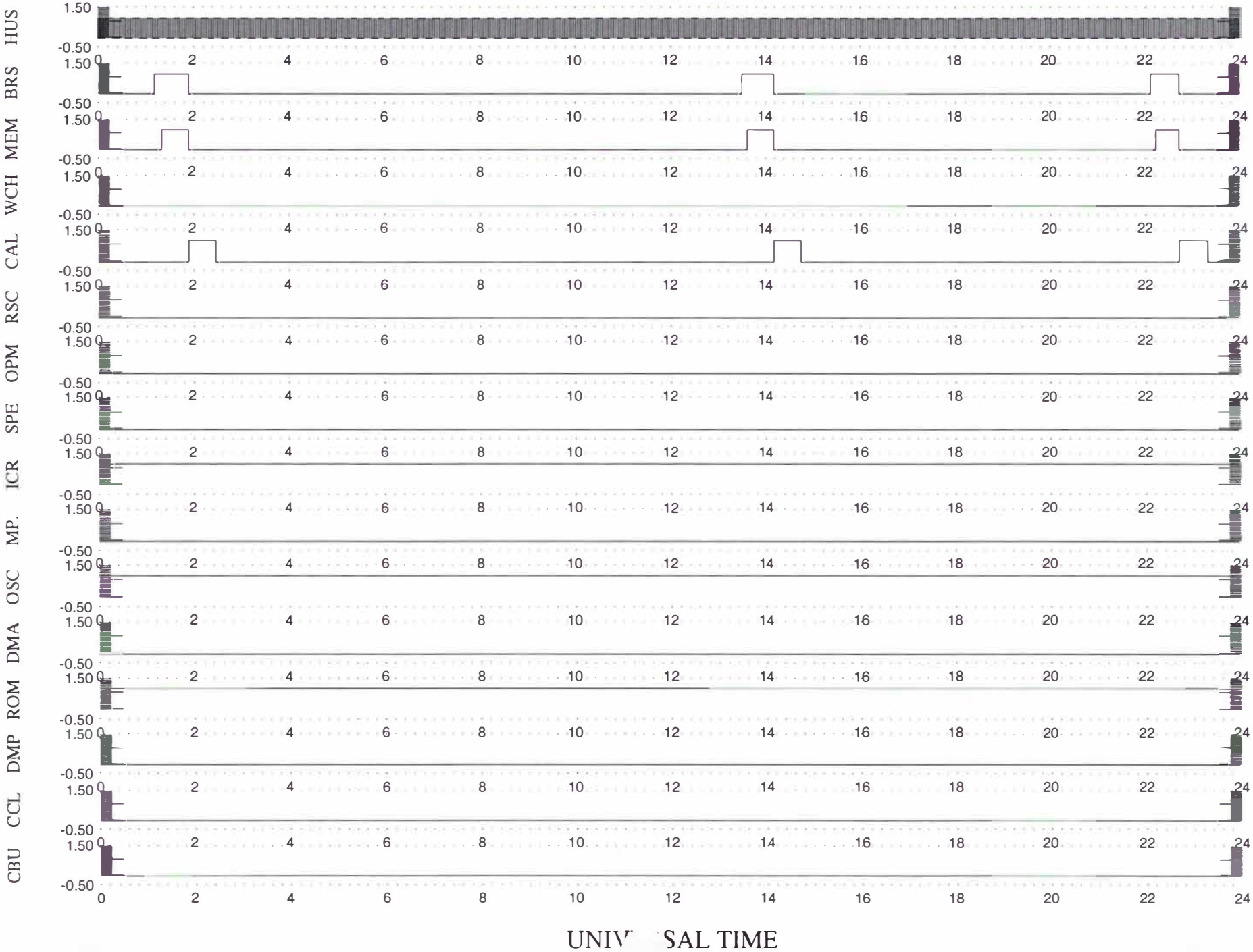




Data Start: 01/09/11, 0000:00 Plot created: 01/09/15, 0951
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

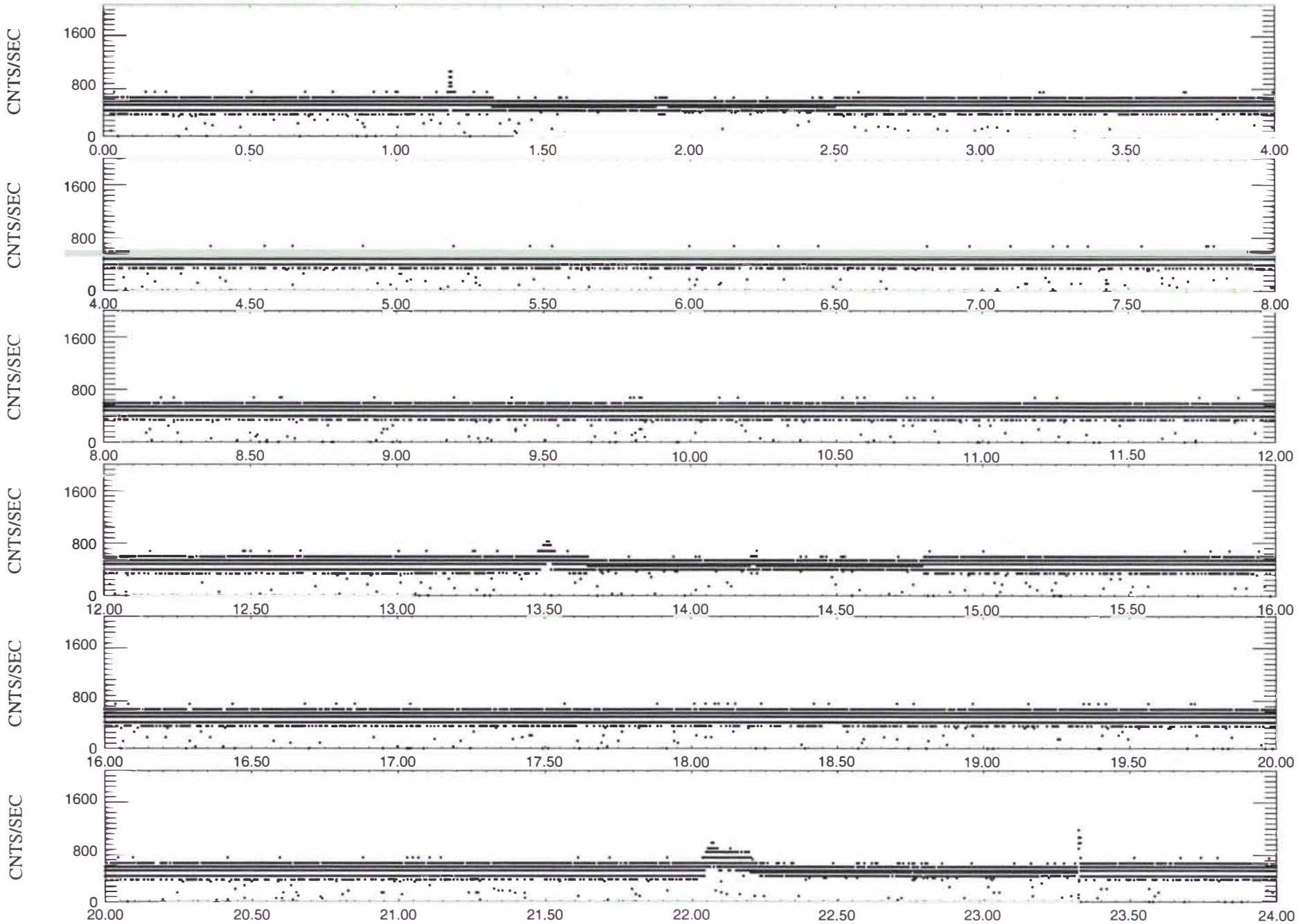
HUS MODES EDR day 254, year 2001 to day 254, year 2001 01/22/02

BURST NUMBER 11 - 13



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 11/09/2001 DOY = 254 01/22/02

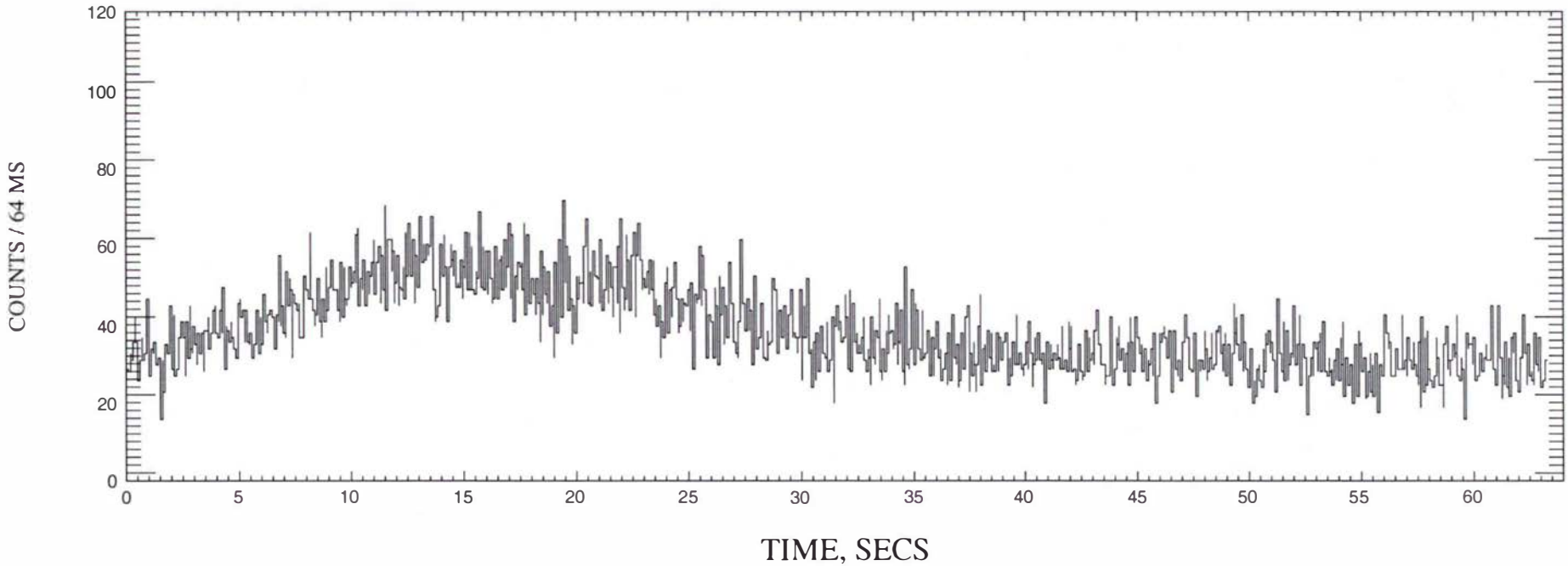
CALIBRATION DATA INCLUDED

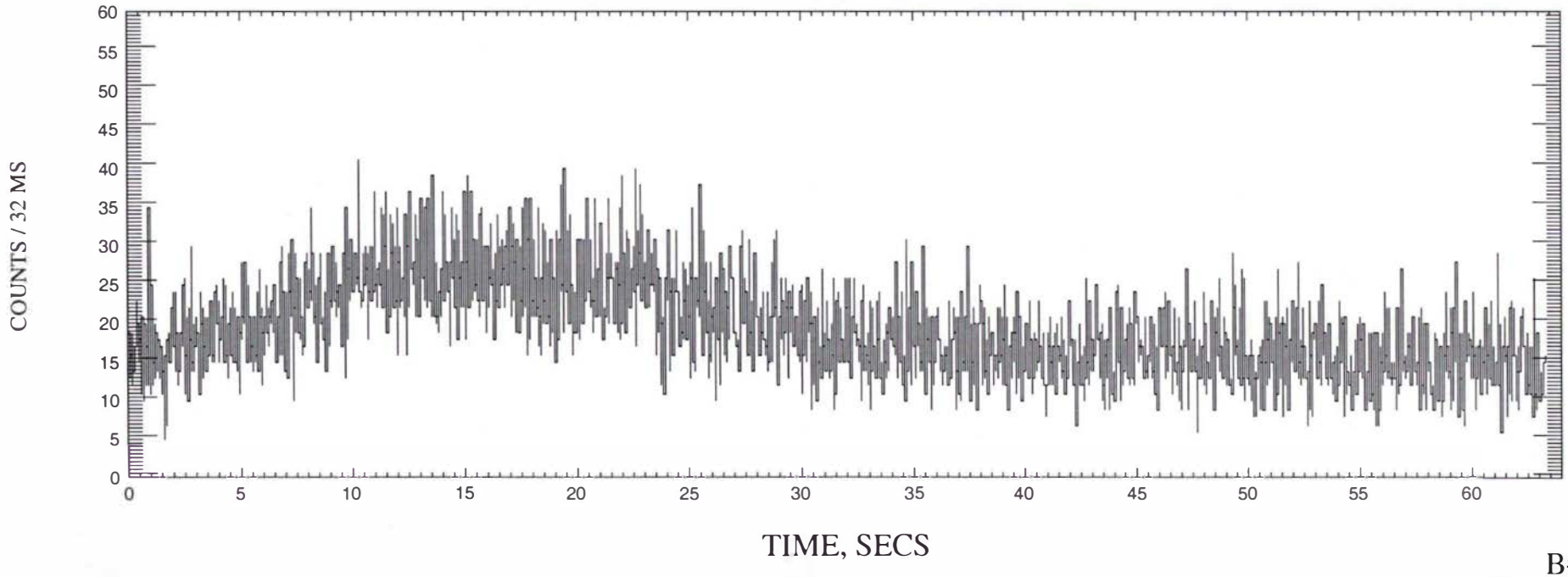


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 11/09/2001 DOY = 254 01/22/02

Burst Counter 11 at UT= 1.177637006972 h= 4239.493 s 01:10:39.493

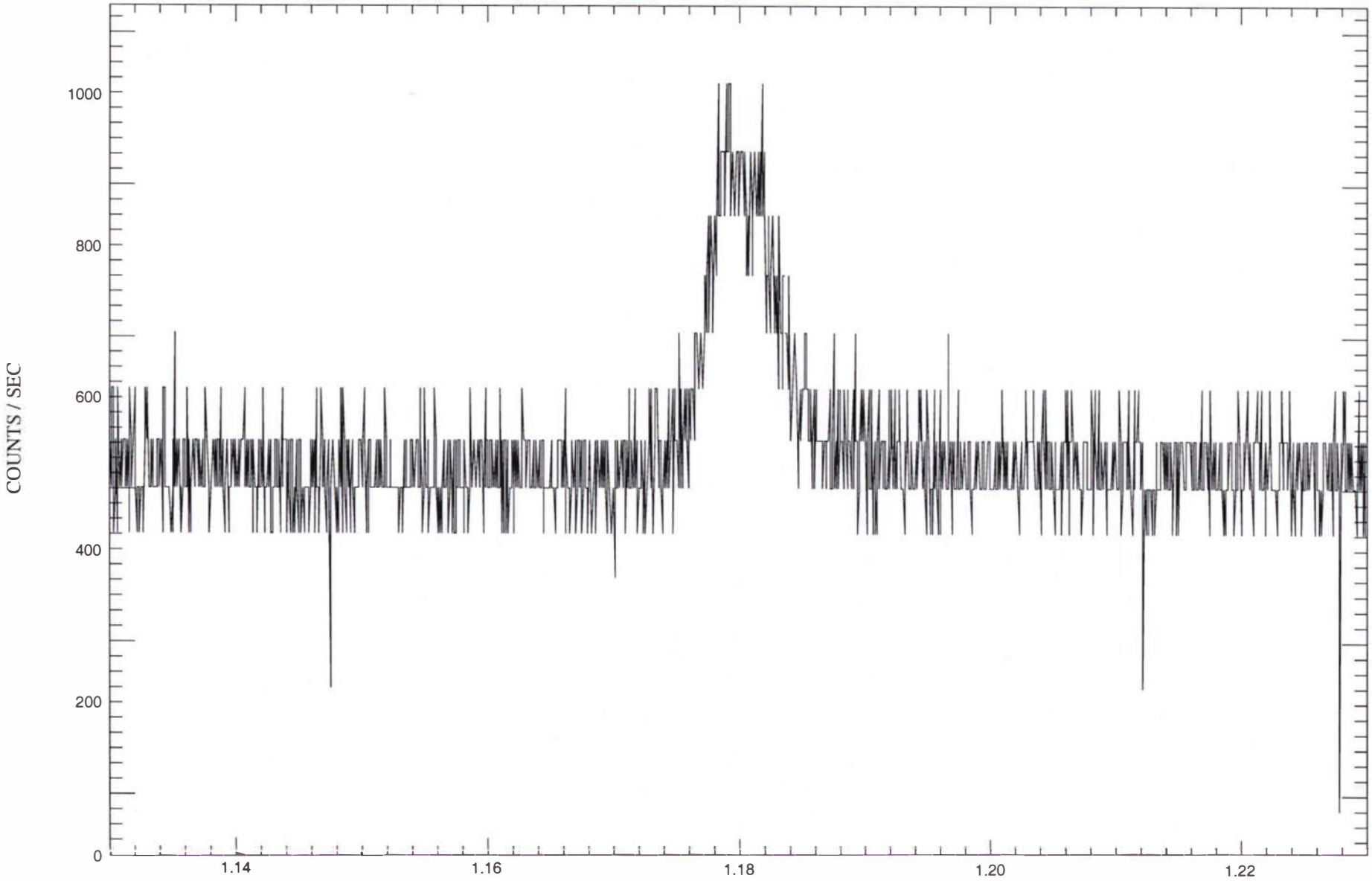




B# 1

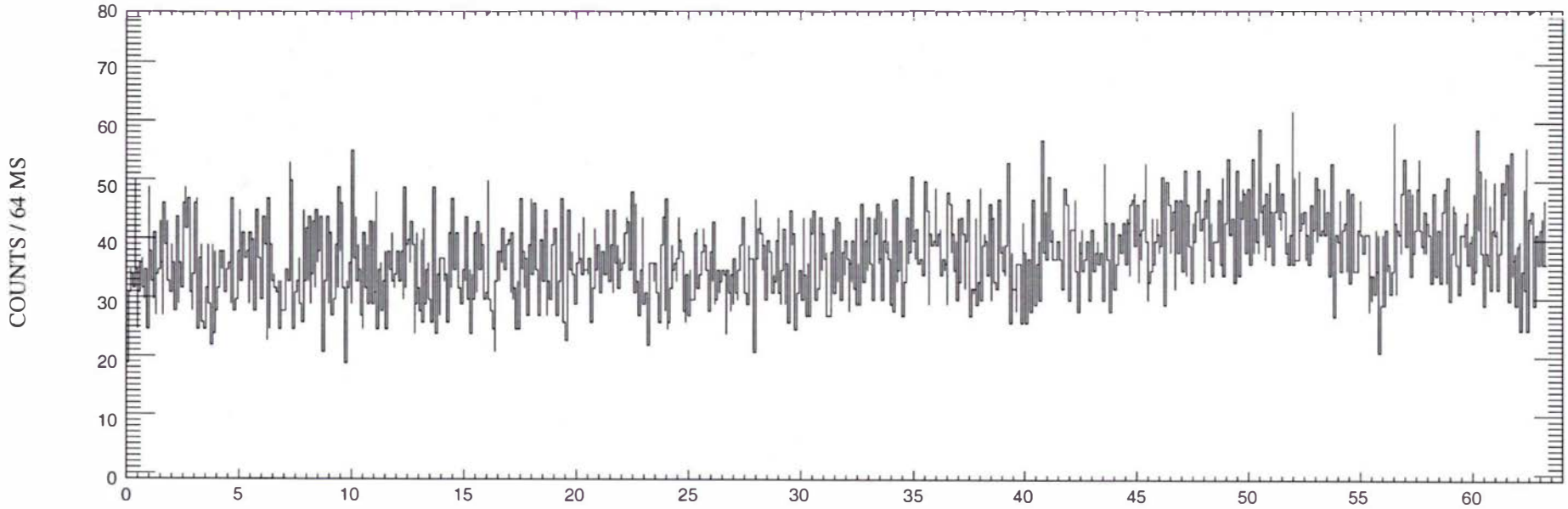
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 11/09/2001 DOY = 254 01/22/02

CALIBRATION DATA INCLUDED

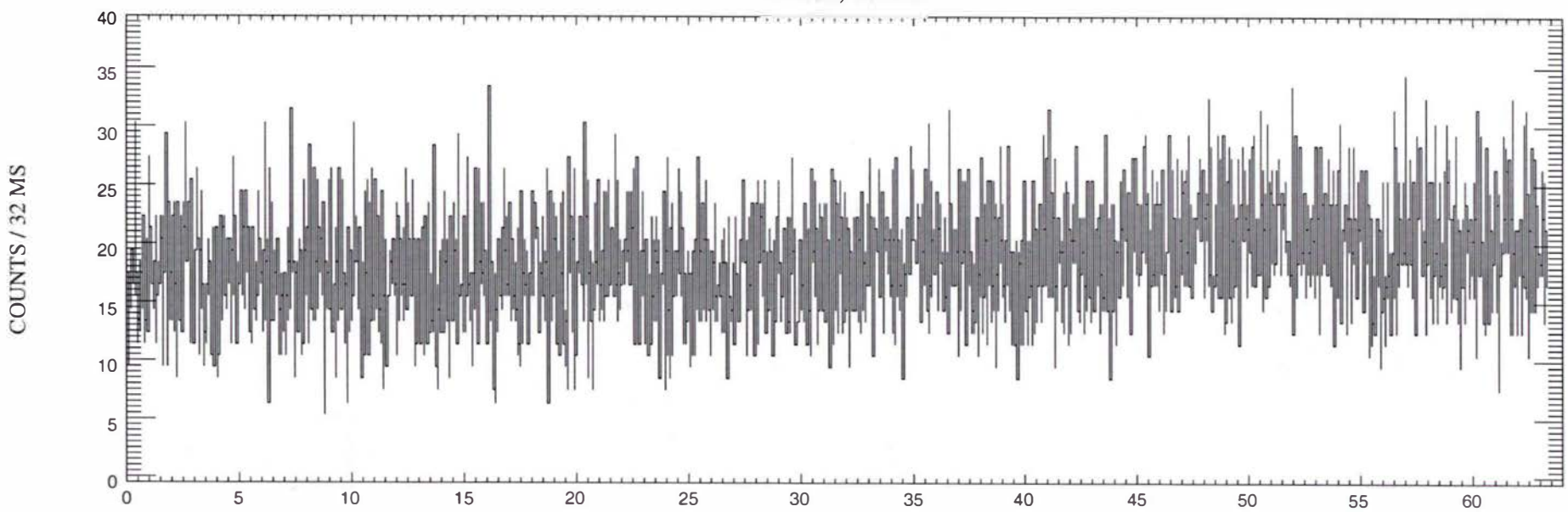


HUS 2A TRIGGERED DATA EDR DMY = 11/09/2001 DOY = 254 01/22/02

Burst Counter 12 at UT=13.498644756741 h=48595.121 s 13:29:55.121



TIME, SECS

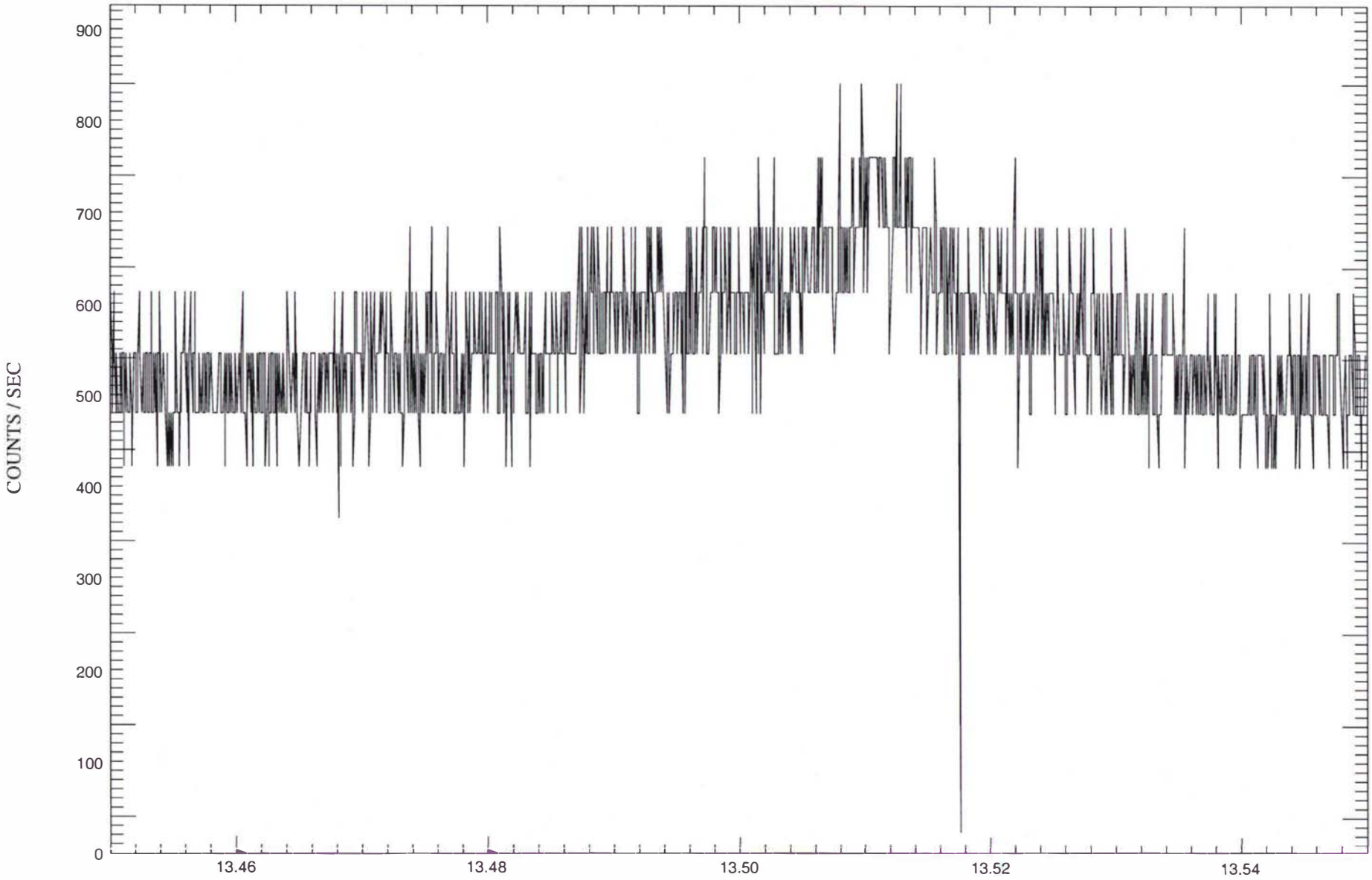


TIME, SECS

B# 2

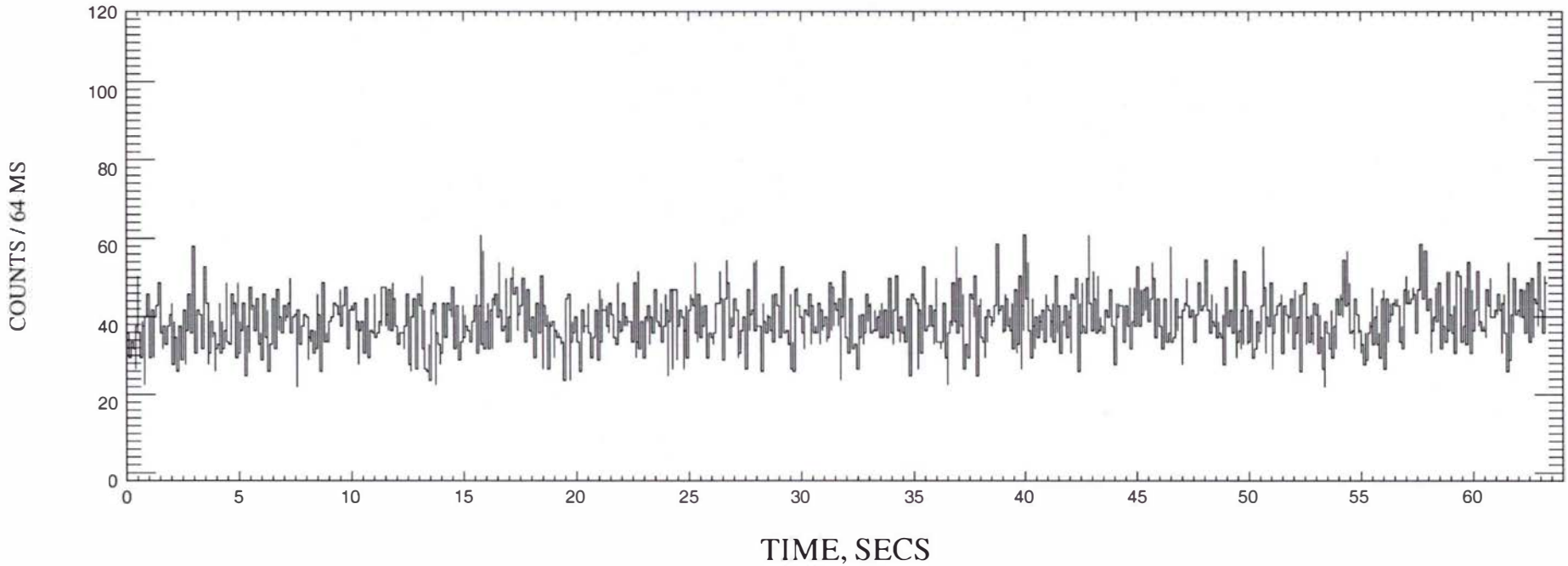
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 11/09/2001 DOY = 254 01/22/02

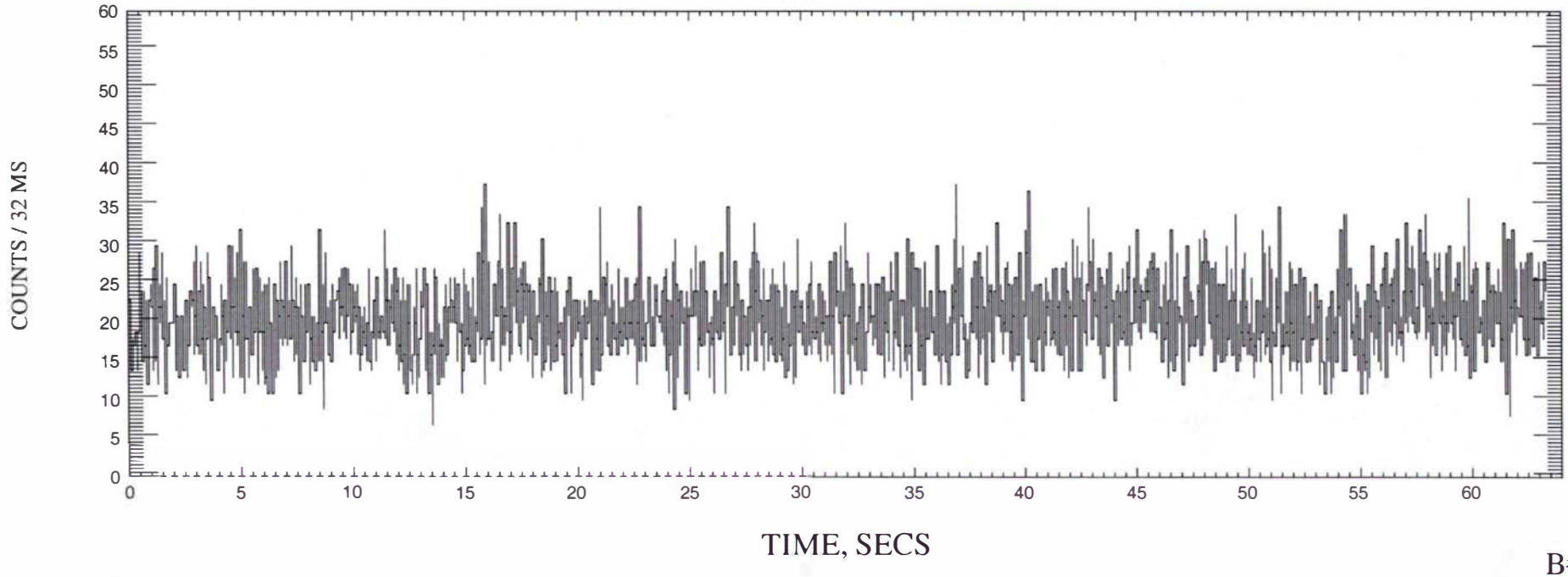
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 11/09/2001 DOY = 254 01/22/02

Burst Counter 13 at UT=22.045666033427 h=79364.398 s 22:02:44.398

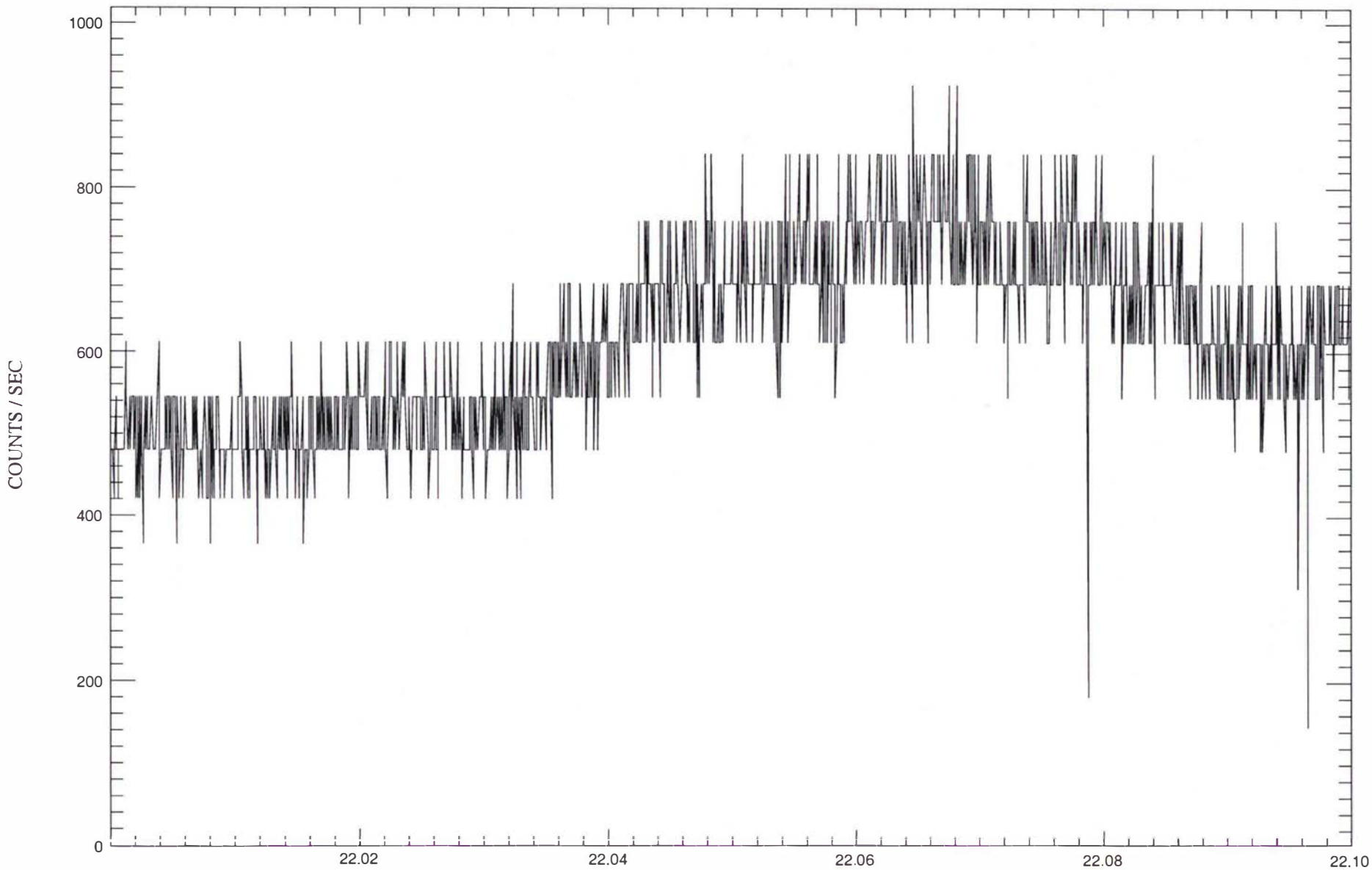




B# 3

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 11/09/2001 DOY = 254 01/22/02

CALIBRATION DATA INCLUDED



Date: May 18 '04

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

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

2. For Konus events

☑ Konus ecliptic latitude used with latest calibration?

2. For Odyssey events

☐ Was CHECKMO run to eliminate data gaps?

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

☐ Was Mars-blocking used?

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

2. For 3 Spacecraft events

☑ Σ 3, Δt's calculated?

3. For INTEGRAL events

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

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

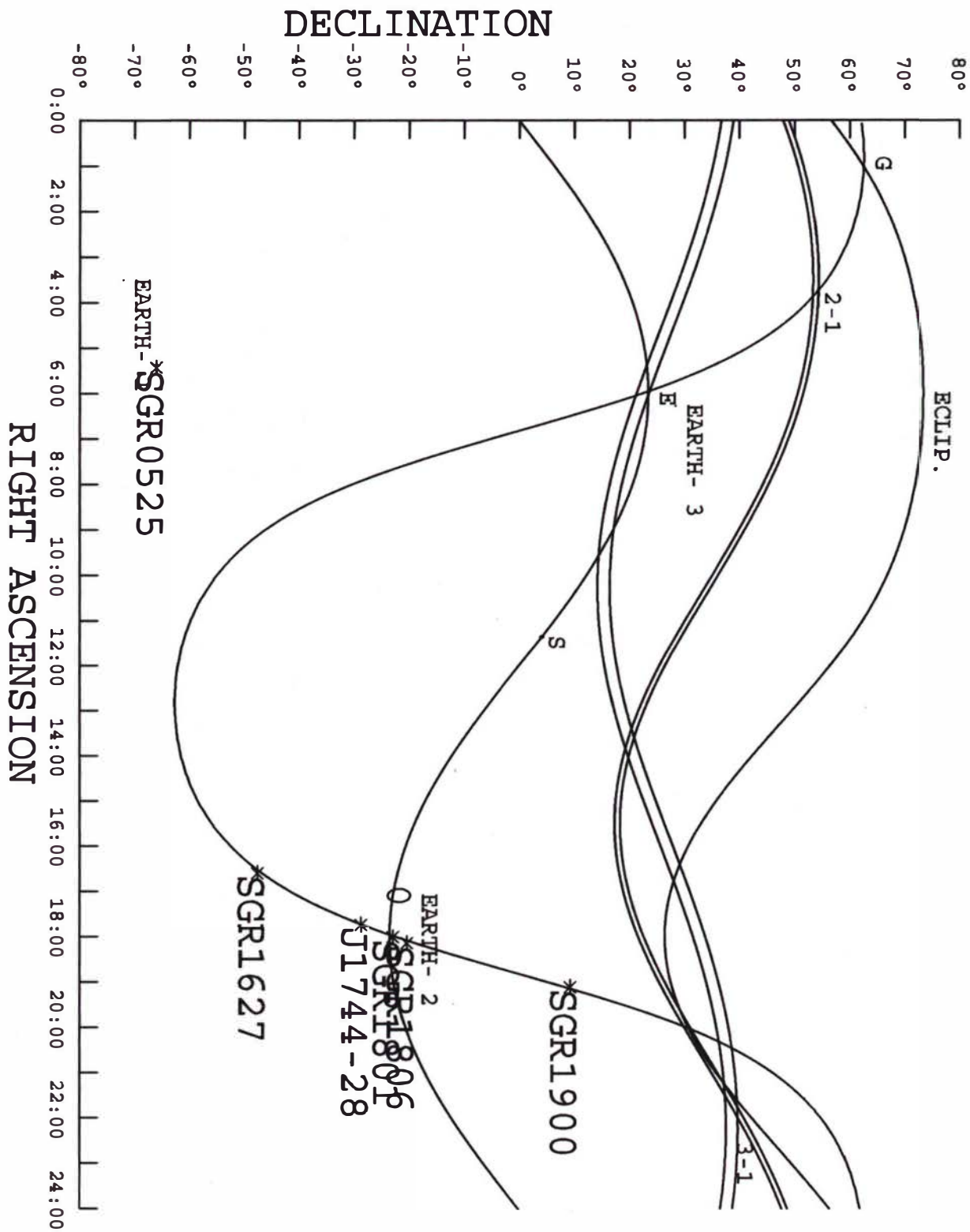
☑ ACCESS database updated?

N-M = CORRELATION BETWEEN SATELLITES N AND M

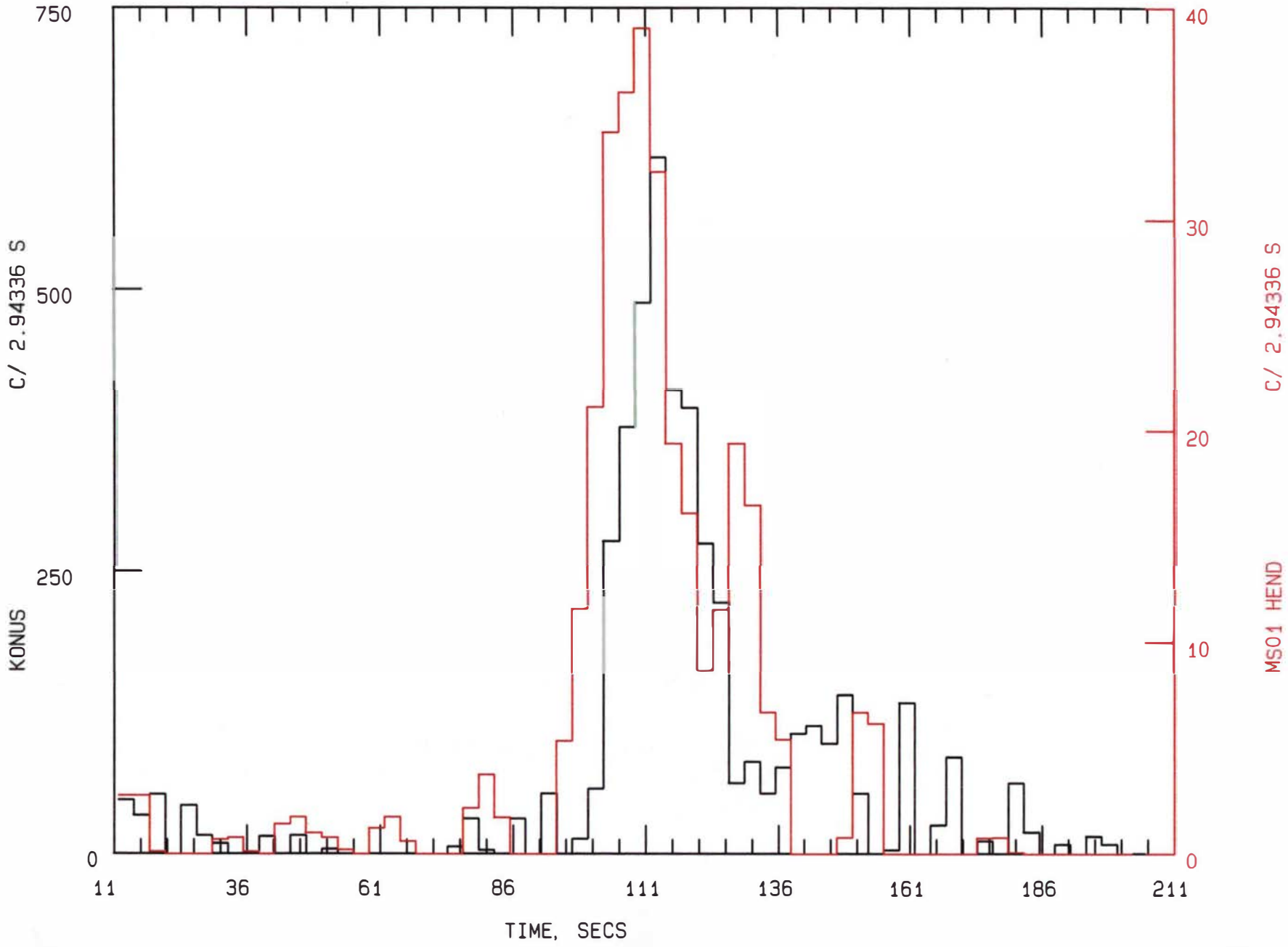
EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN E=ECLIPTIC G=GALACTIC EQUATOR

1 ULYSSES 2 KONUS 3 MO

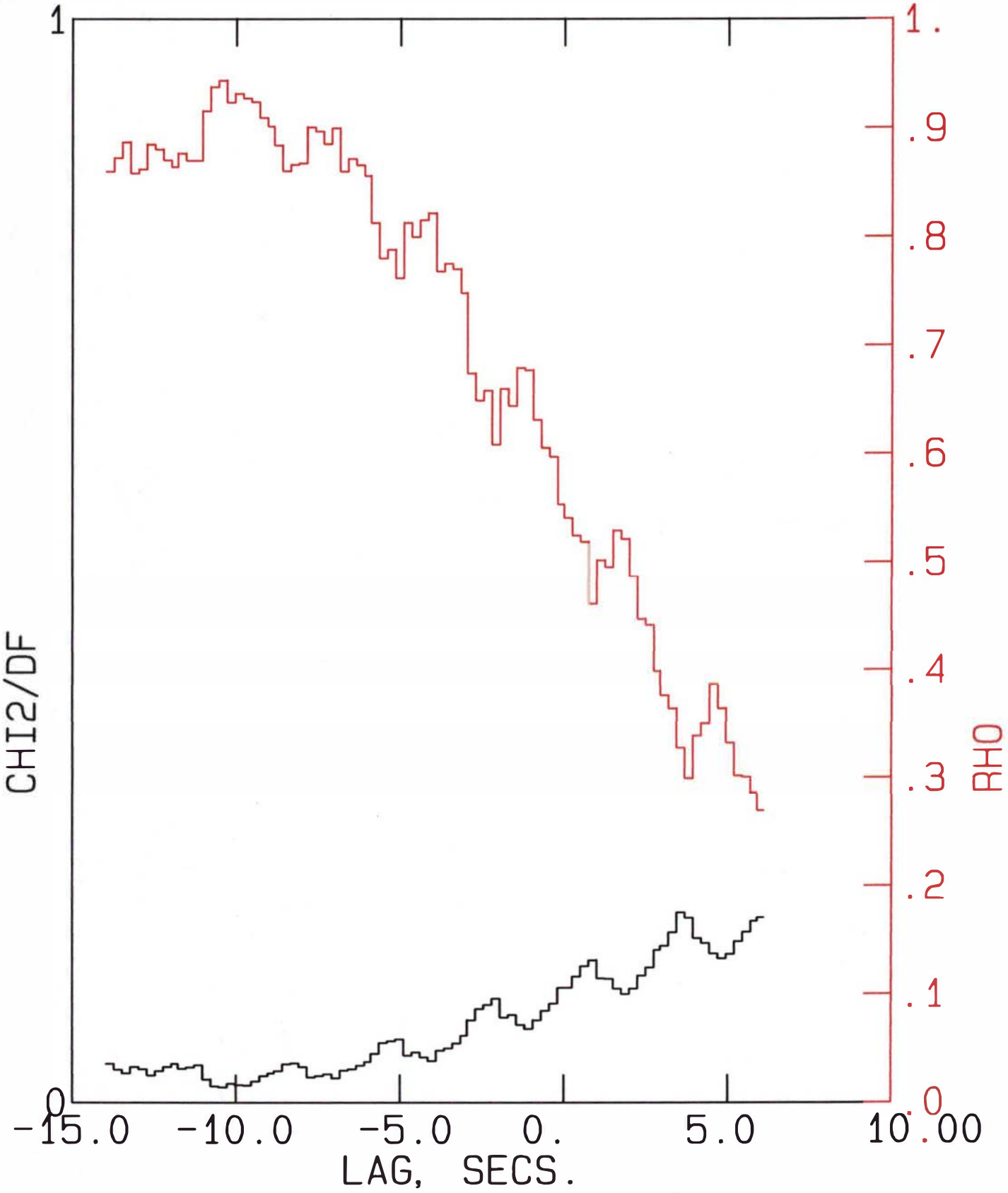


KONUS -MS01 HEND CORRELATION 12/09/01 12948.620 17/ 5/ 4

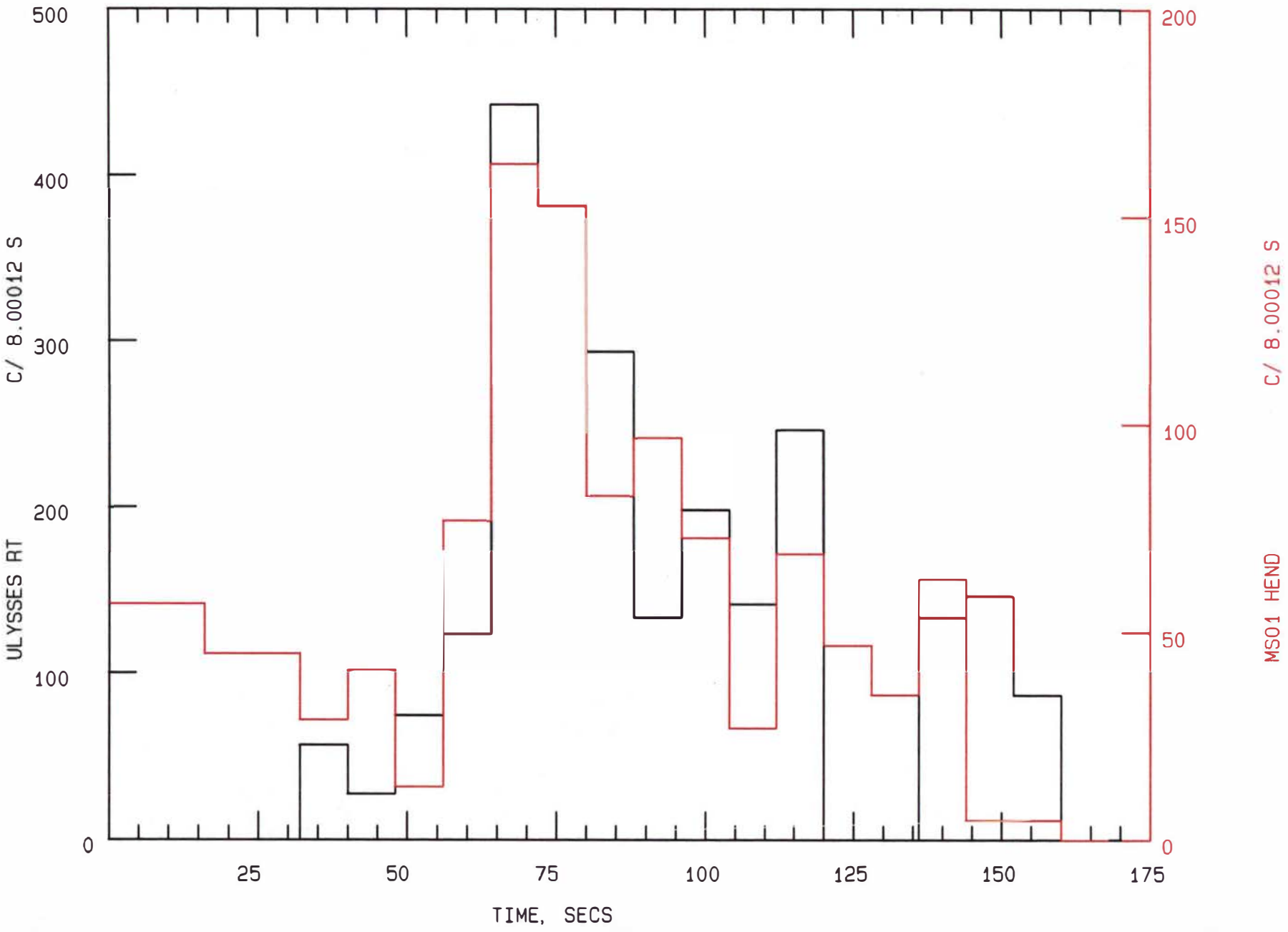


17/ 5/ 4

KONUS -MS01 HEND CORRELATION 12/09/01 12948.620

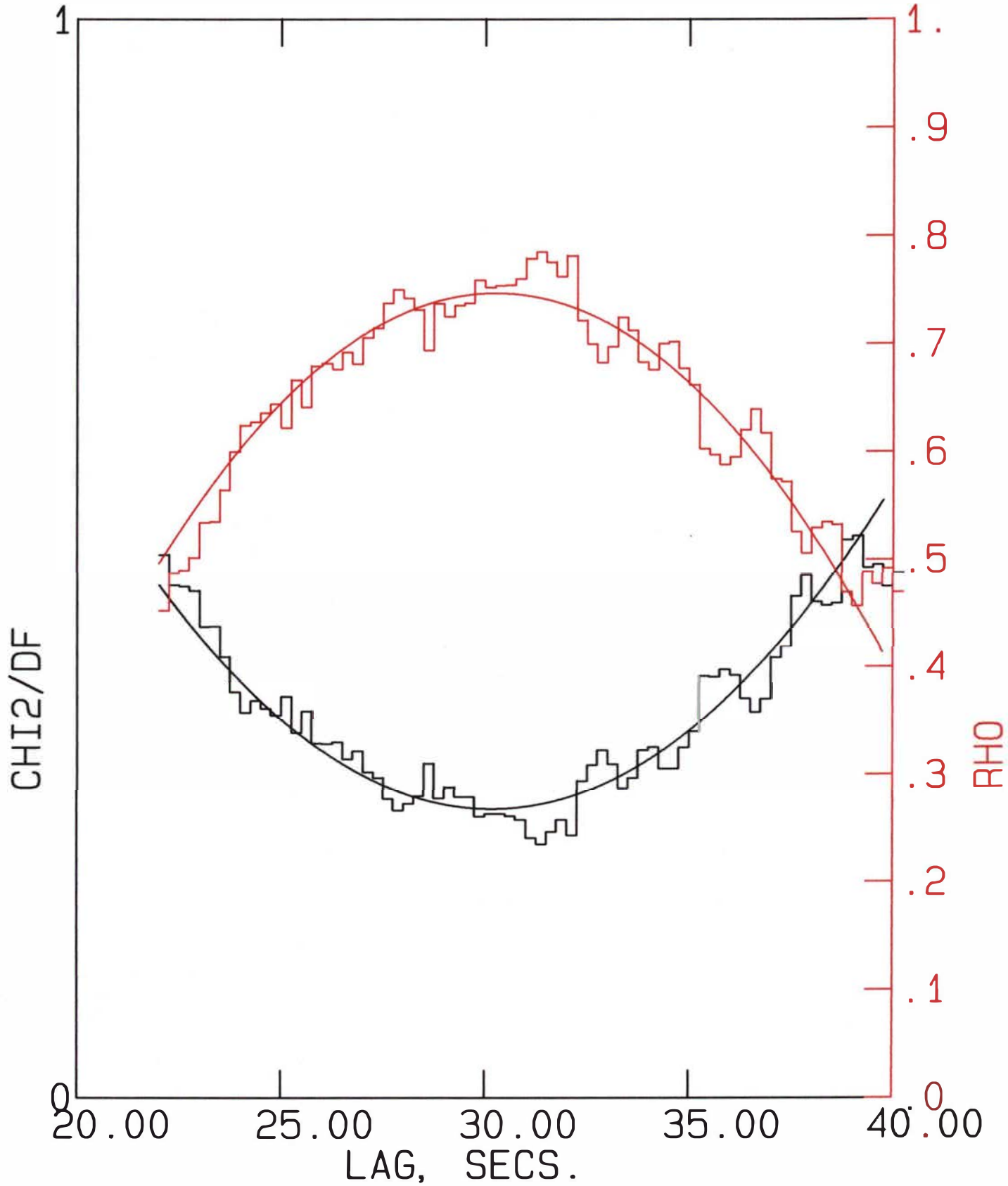


ULYSSES RT-MS01 HEND CORRELATION 12/ 9/01 12482.112 17/ 5/ 4

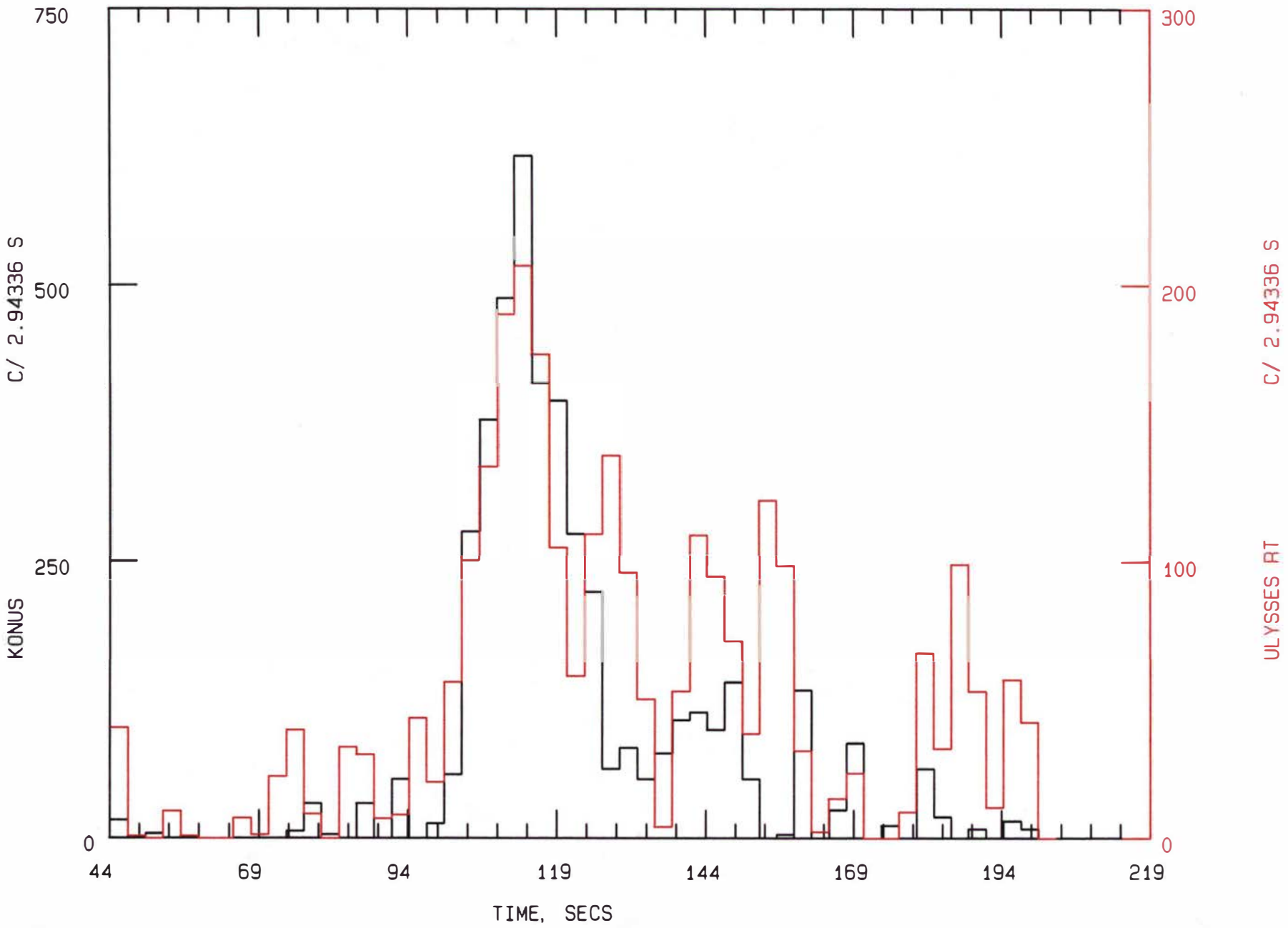


17/ 5/ 4

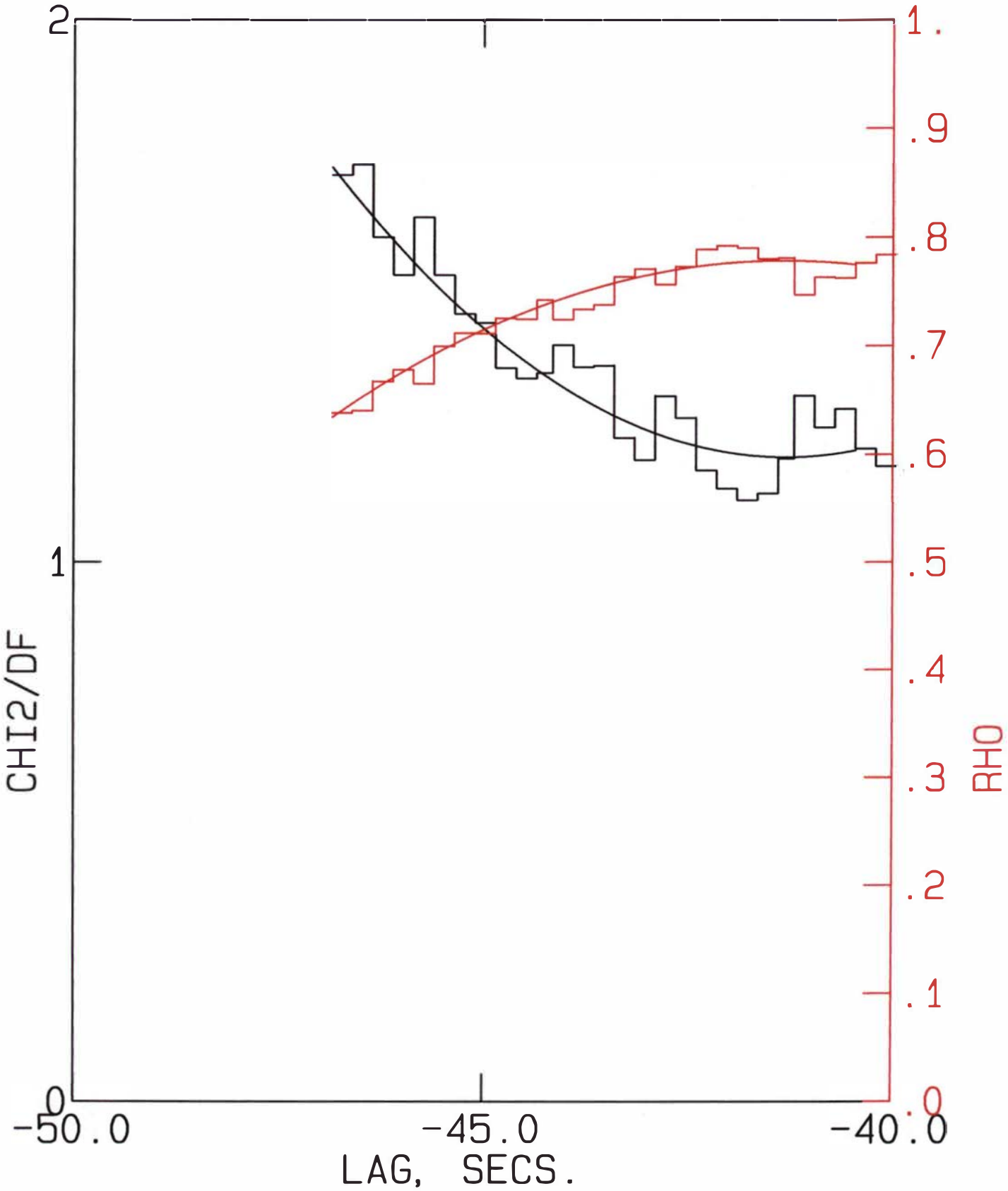
ULYSSES RT-MS01 HEND CORRELATION 12/ 9/01 12482.112



KONUS -ULYSSES RT CORRELATION 12/09/01 12948.620 17/ 5/ 4



KONUS -ULYSSES RT CORRELATION 12/09/01 12948.620



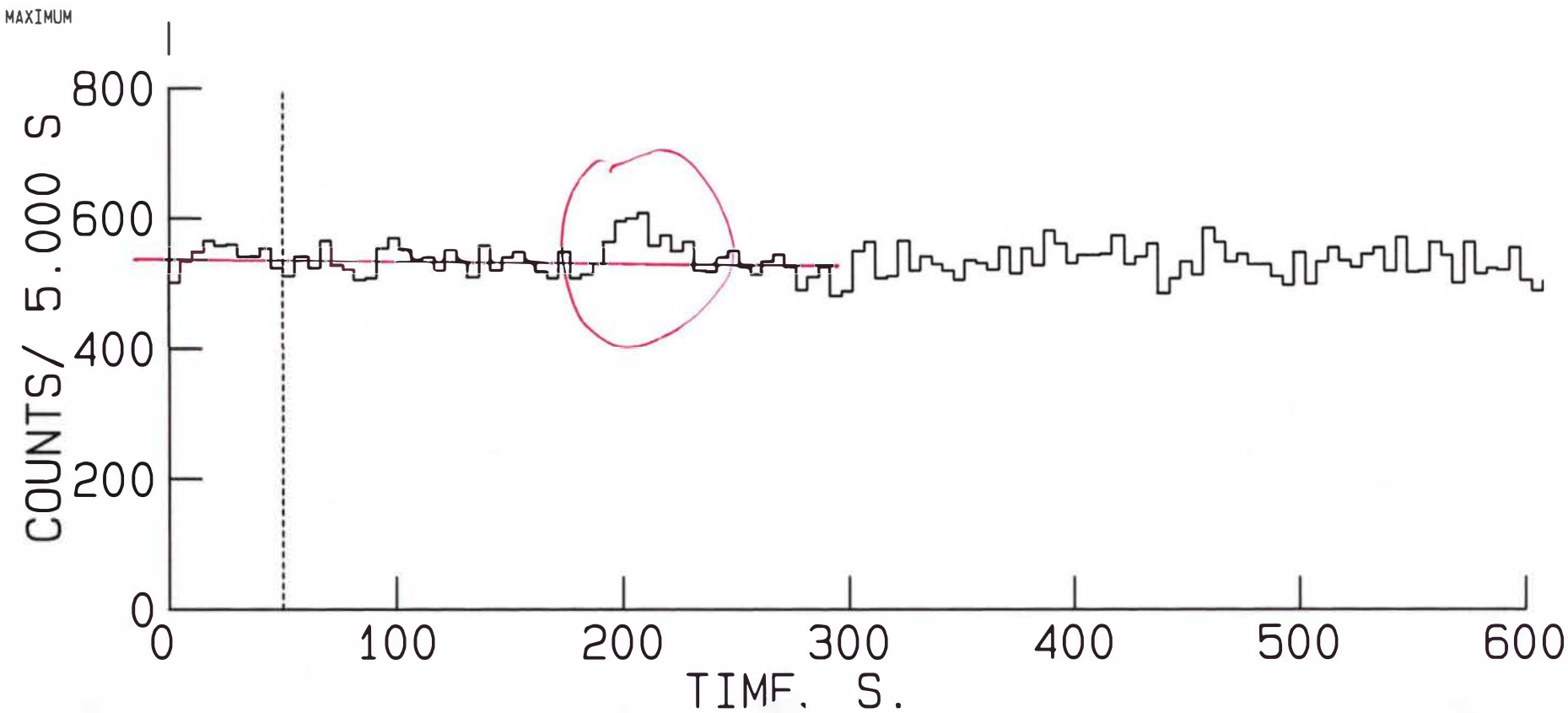
MS01 HEND

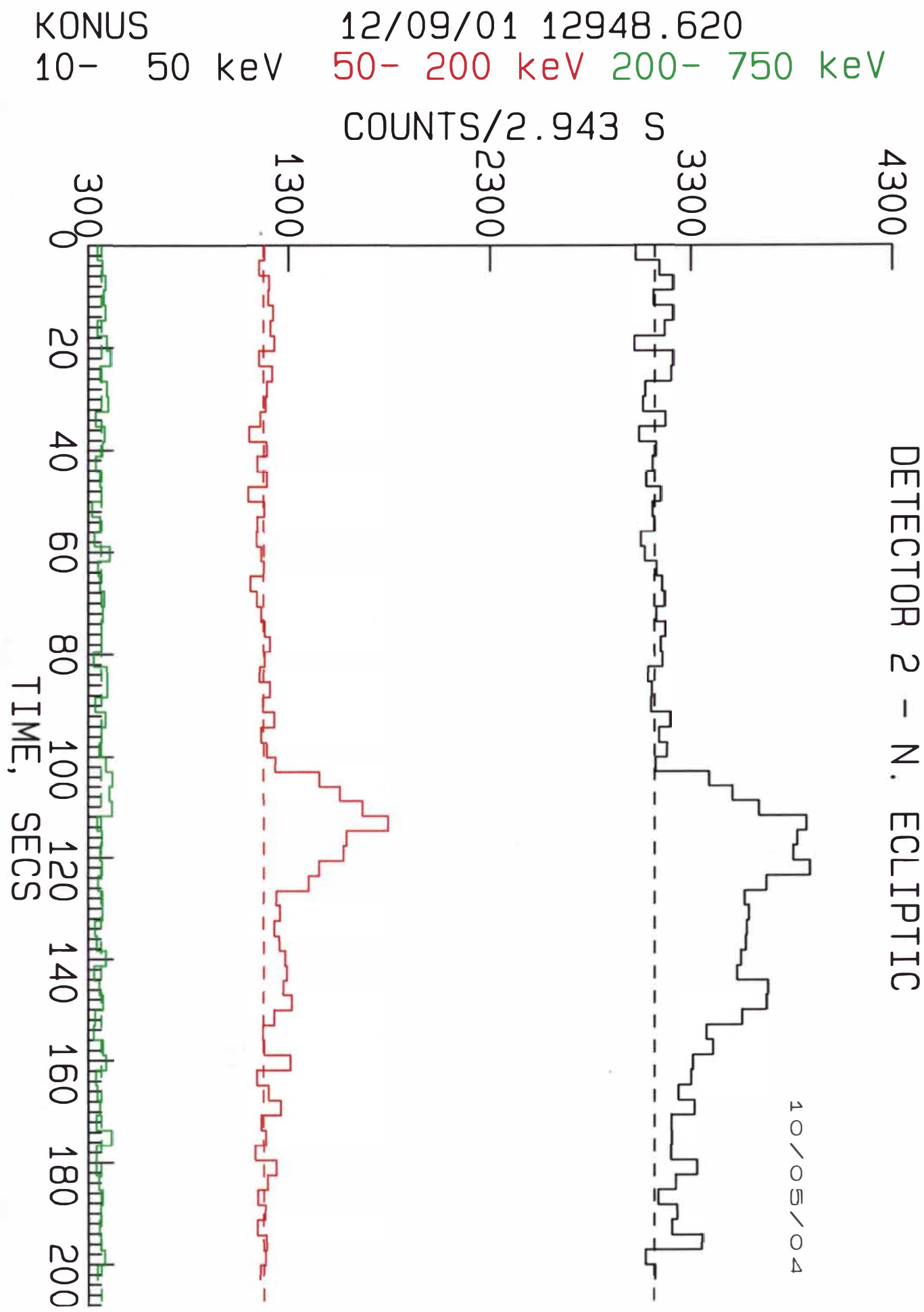
17/05/04

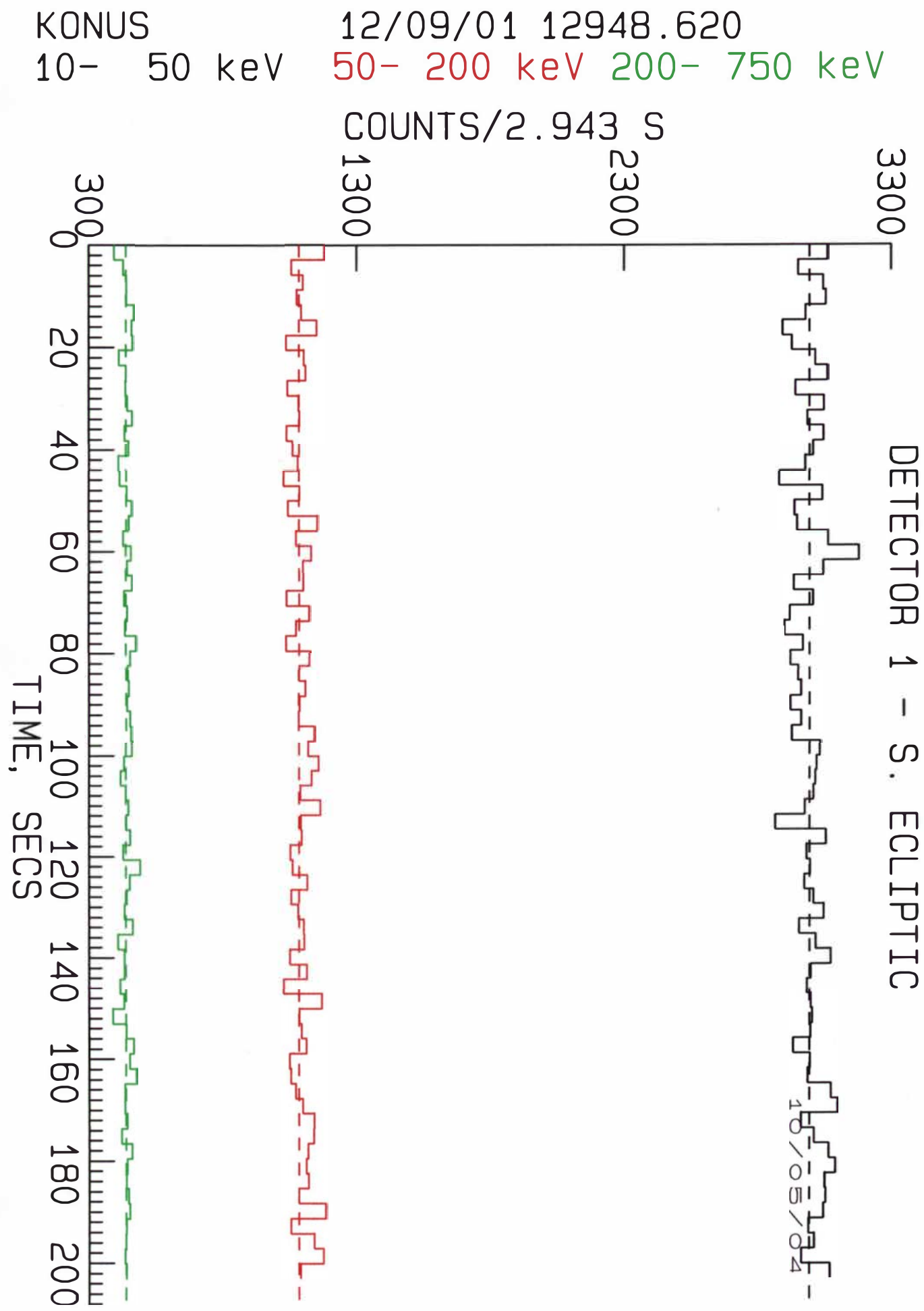
12/09/01 12810.777 s

0.250 S INTERVALS REGROUPED BY 20

50-3000 keV




KONUS
12/09/01 12948.620
10- 50 keV
50- 200 keV
200- 750 keV
COUNTS/2.943 S
4300
3300
2300
1300
300
0
20
40
60
80
100
120
140
160
180
200
TIME, SECS
DETECTOR 2 - N. ECLIPTIC
10/05/04


KONUS
12/09/01 12948.620
10- 50 keV
50- 200 keV
200- 750 keV
COUNTS/2.943 S
3300
2300
1300
300
0
20
40
60
80
100
120
140
160
180
200
TIME, SECS
DETECTOR 1 - S. ECLIPTIC
10/05/04

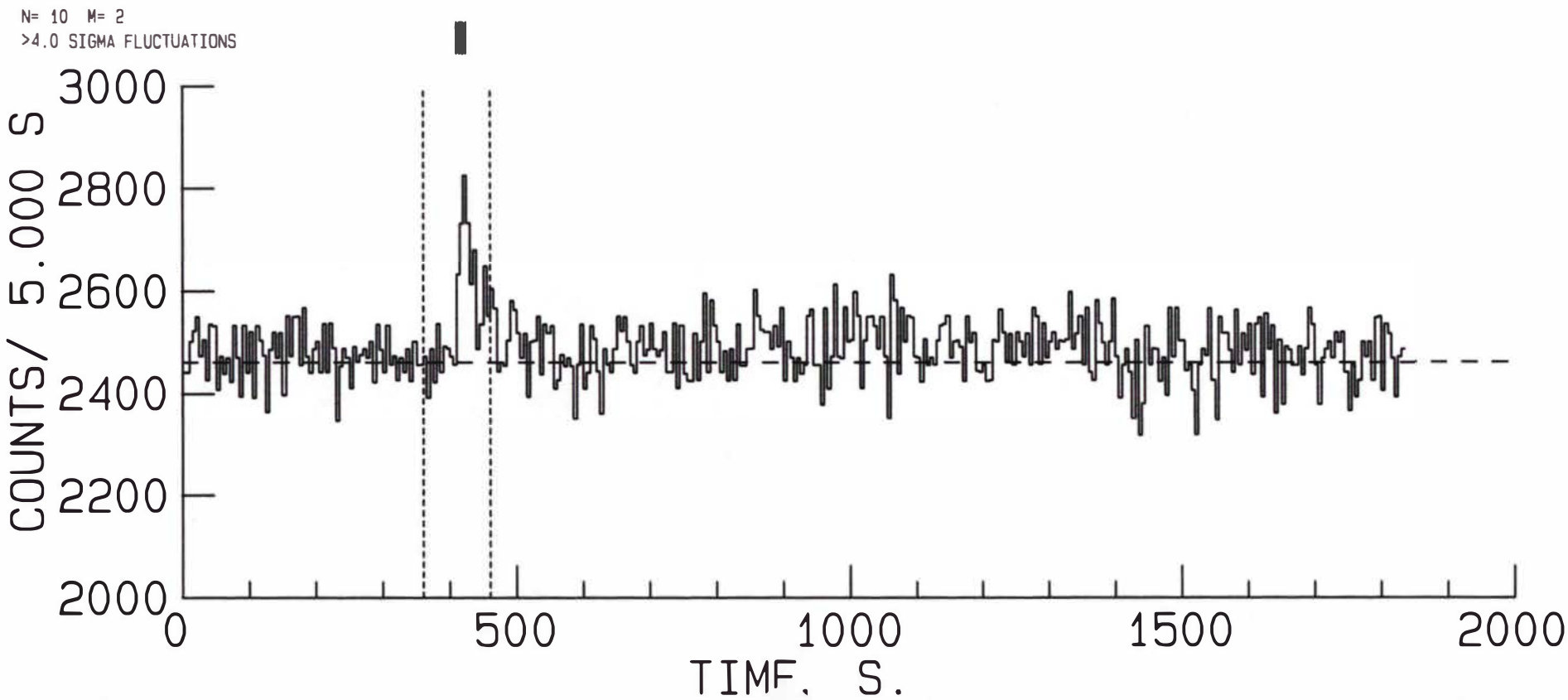
ULYSSES RT

17/ 5/ 4

12/ 9/ 1 12132.106 s

0.250 S INTERVALS REGROUPED BY 20

22- 152 keV

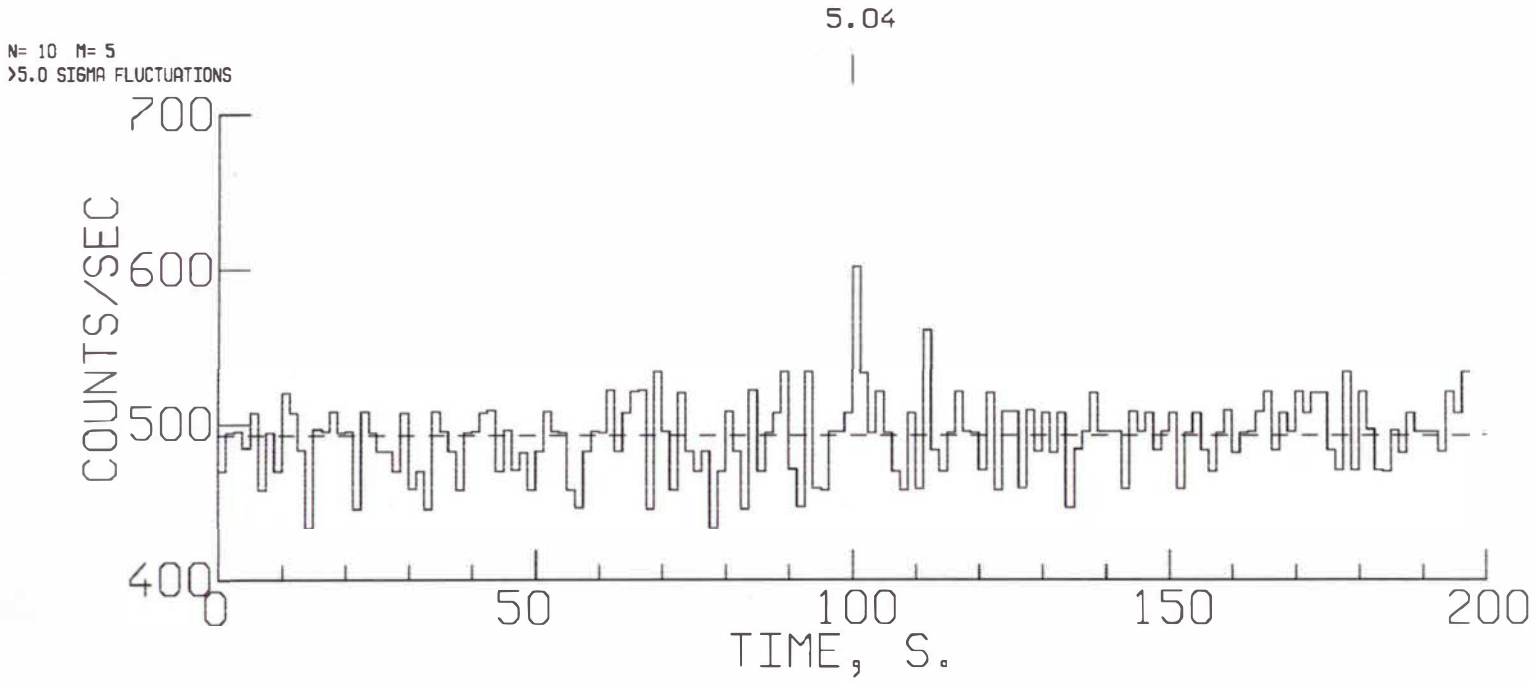


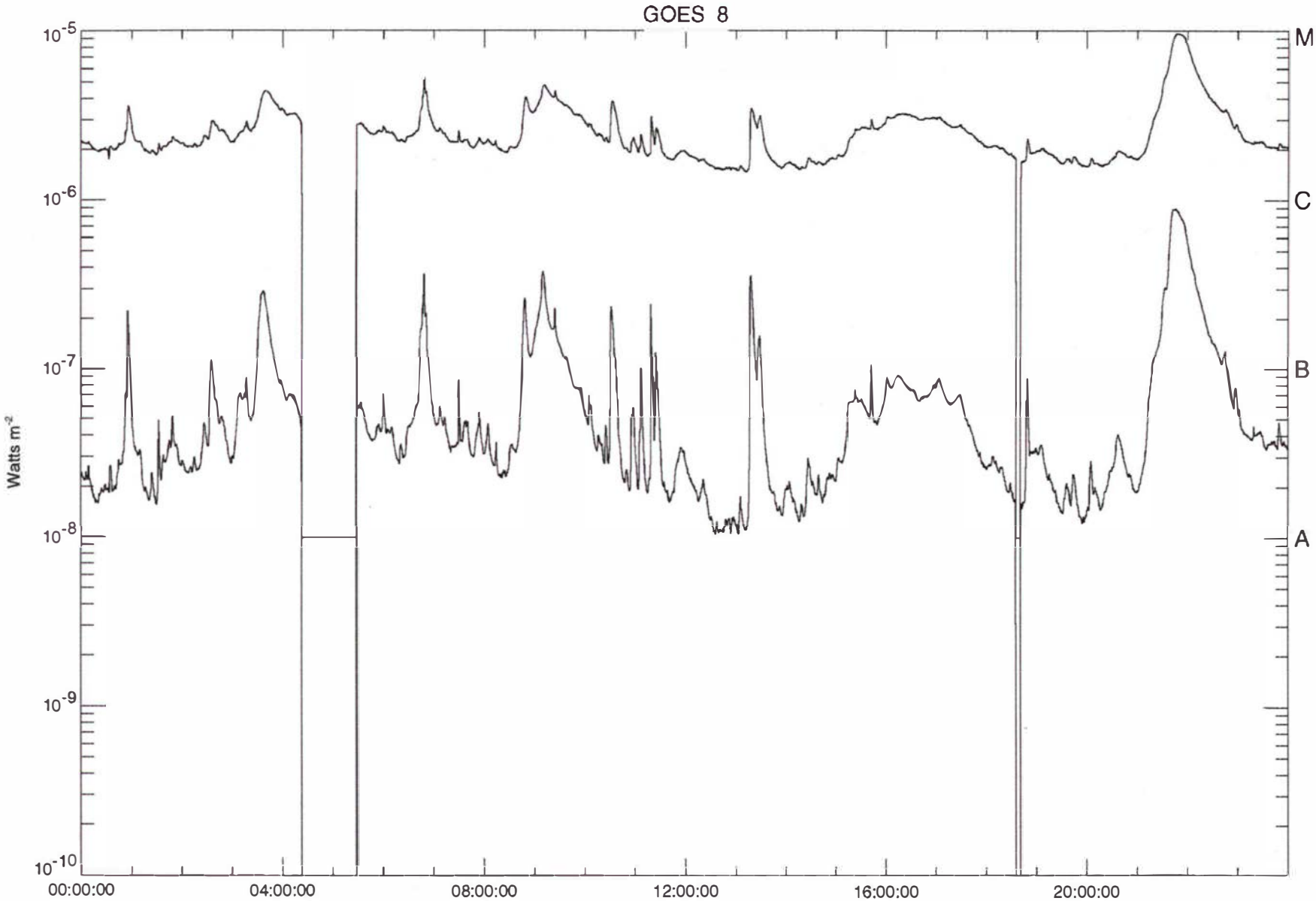
ULYSSES RT 12/ 9/ 1

12/ 9/ 1 53001.302 s

0.250 S INTERVALS REGROUPED BY 5

23- 155 keV

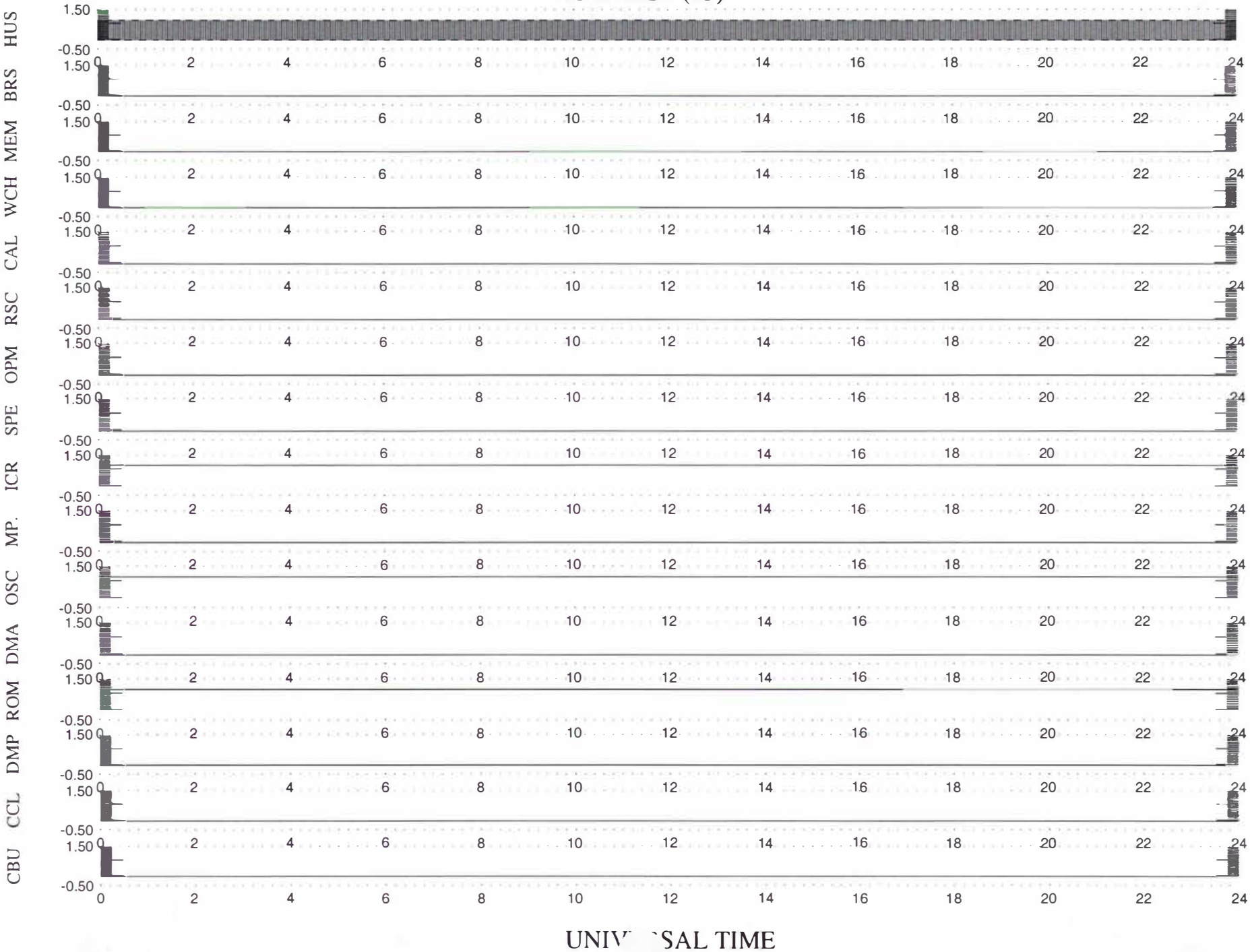




Data Start: 01/09/12, 0000:00 Plot created: 01/09/16, 0950
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

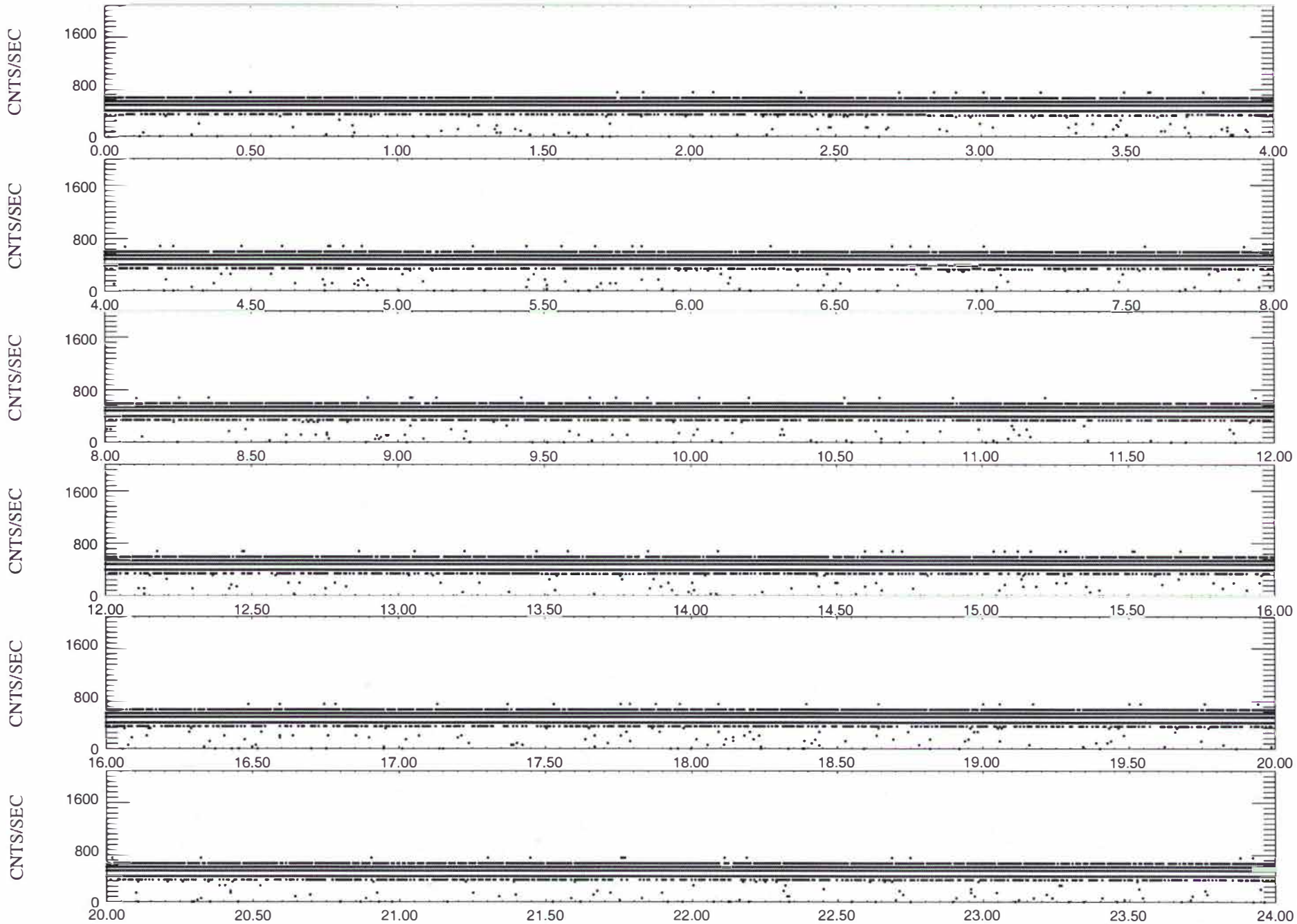
HUS MODES EDR day 255, year 2001 to day 255, year 2001 01/22/02

NO BURST (13)



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 12/09/2001 DOY = 255 01/22/02

CALIBRATION DATA INCLUDED

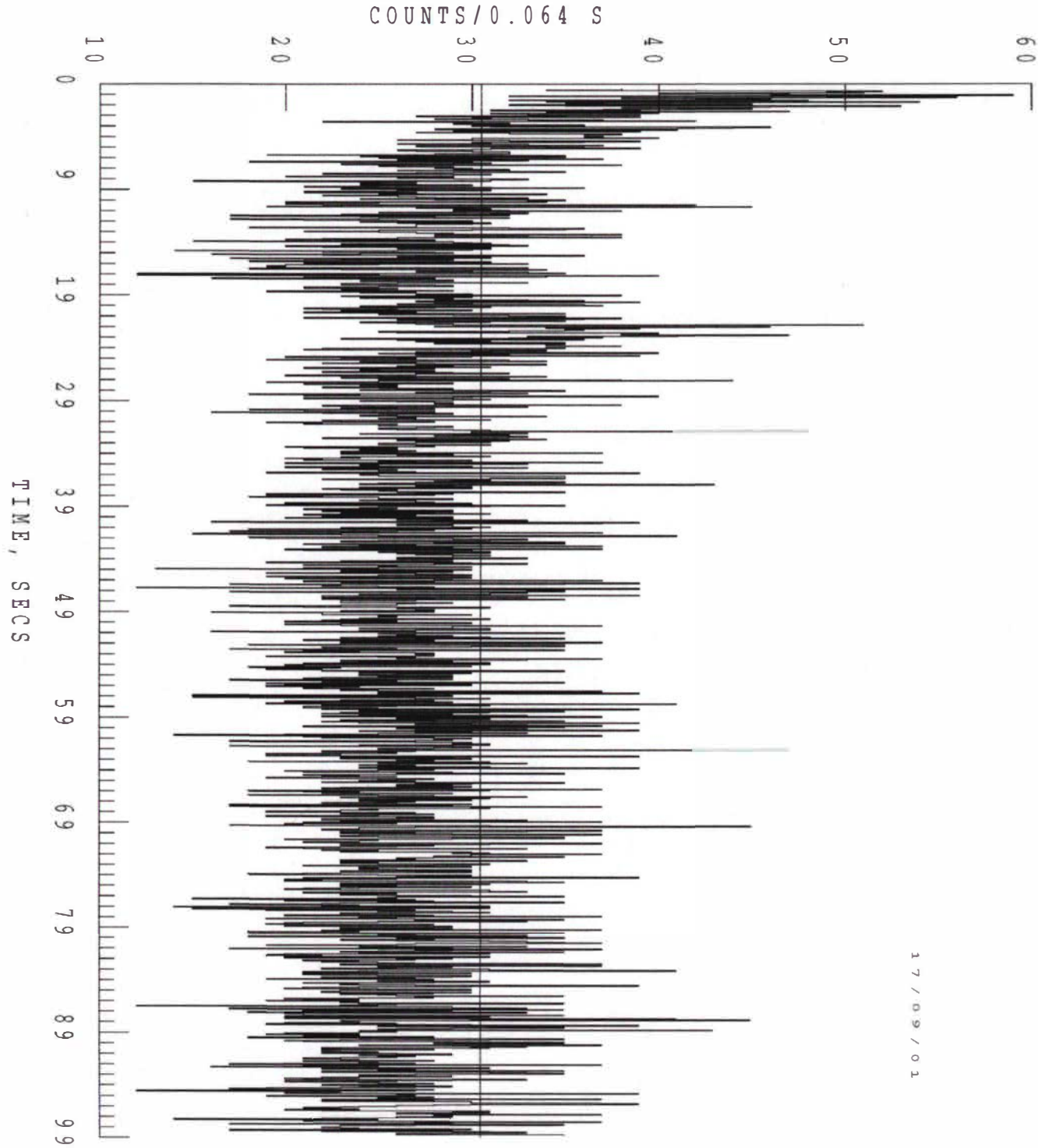


UNIVERSAL TIME

KONUS2 13/09/01 57639.287

50- 200 keV

Solar



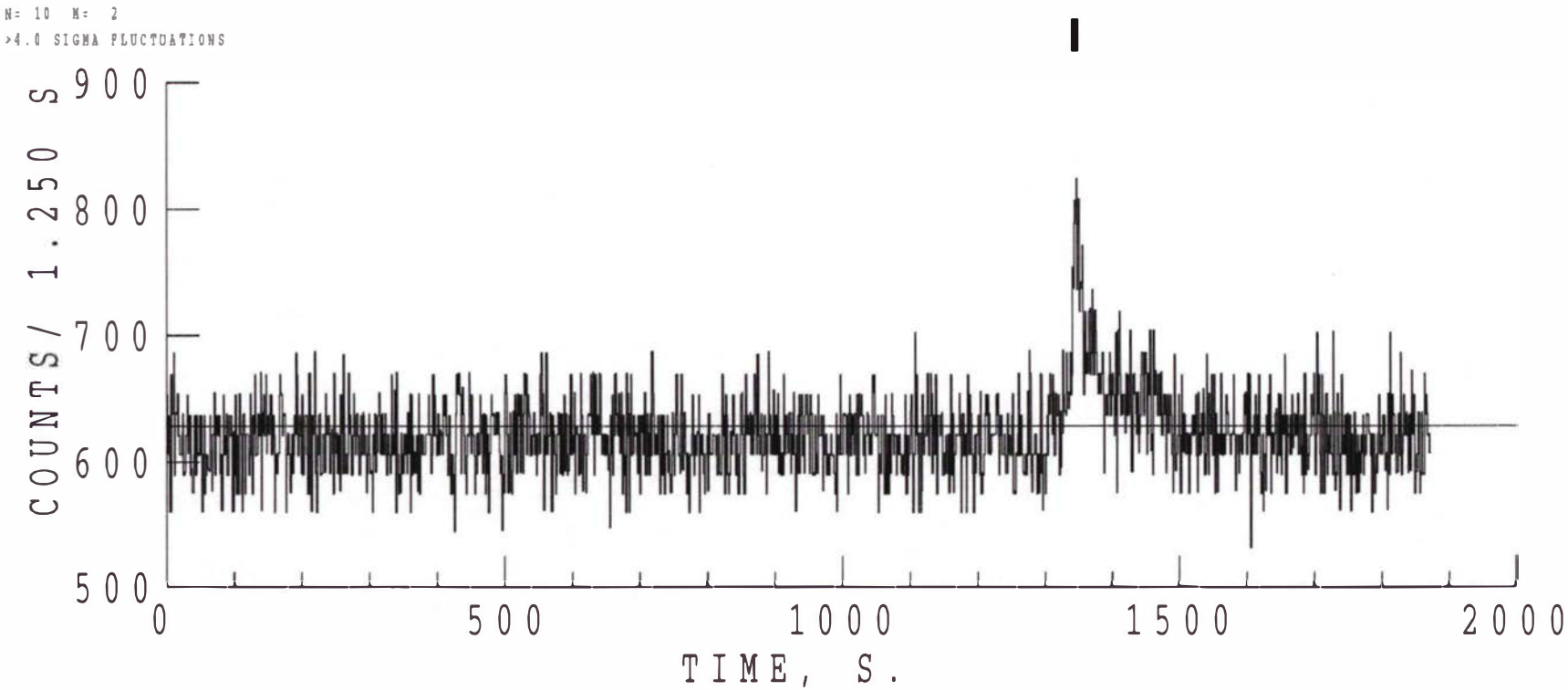
KONUS2 20010913 57639

ULYSSES RT 17/09/01

13/09/01 56700.078 s

0.250 S INTERVALS REGROUPED BY 5

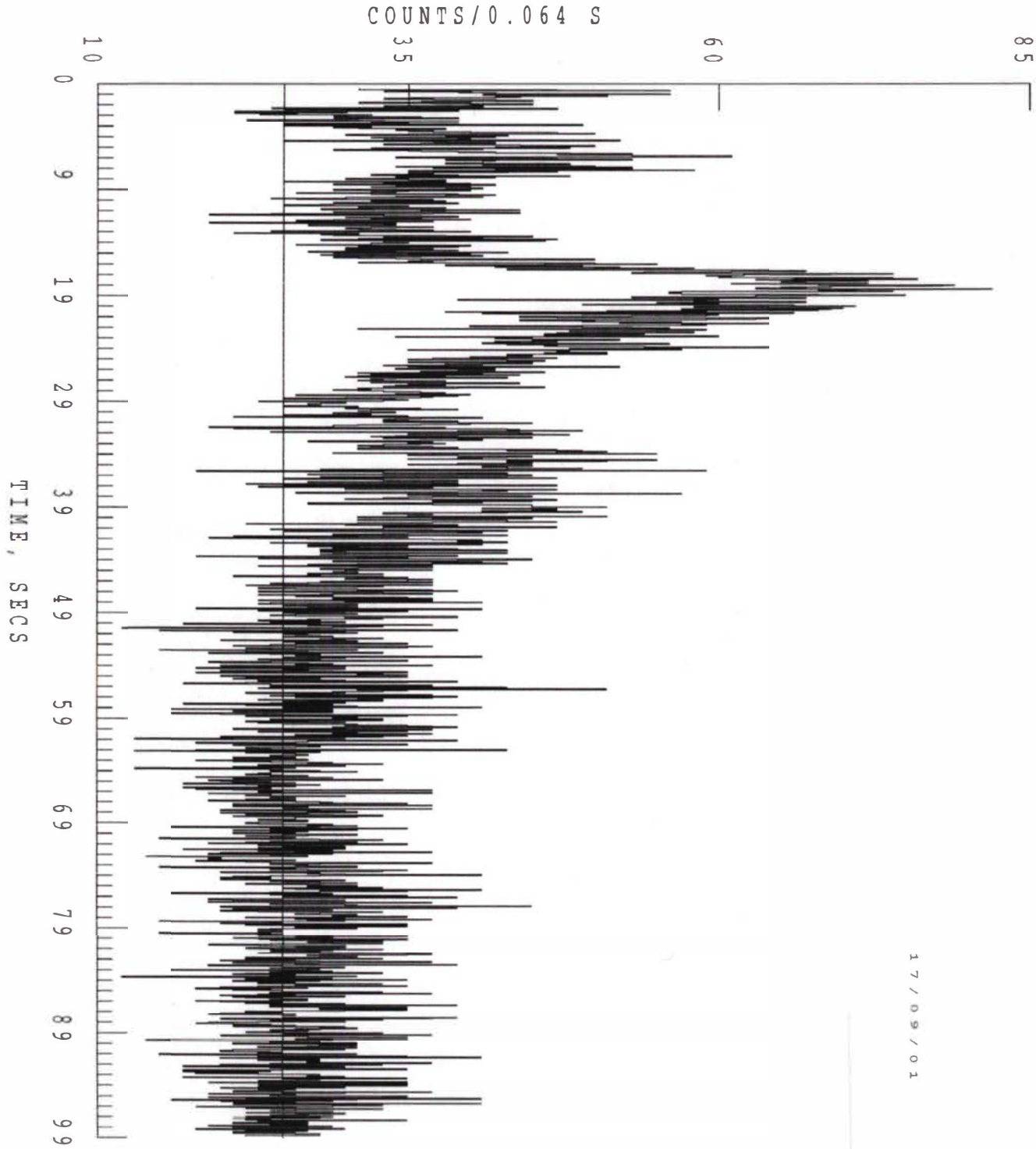
0- 0 keV



KONUS2 13/09/01 71415.910

50- 200 keV

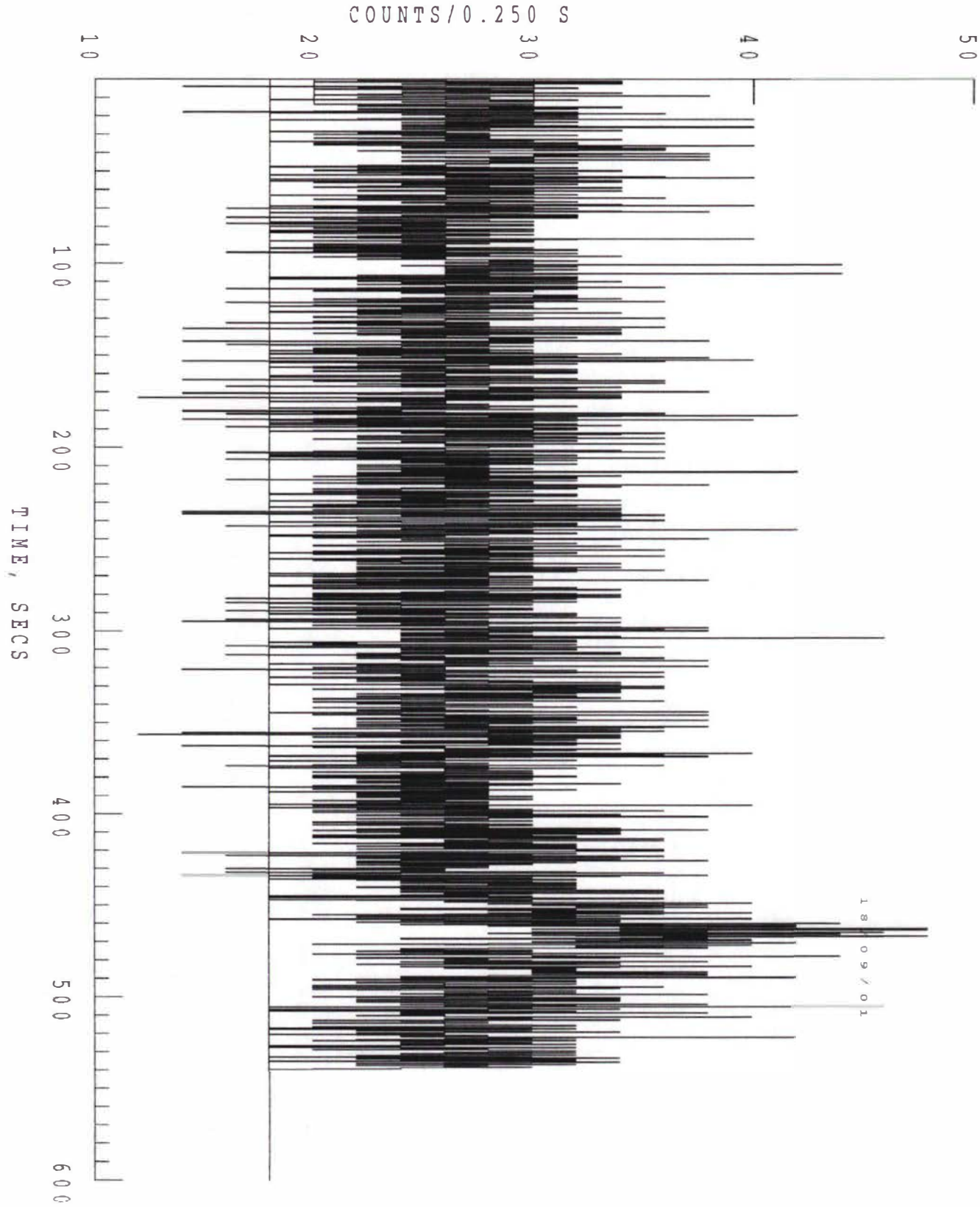
Solar



17/09/01

MS01 13/09/01 71191.406

50-3000 keV



KONUS2 20010913 71415

ULYSSES RT 17/09/01

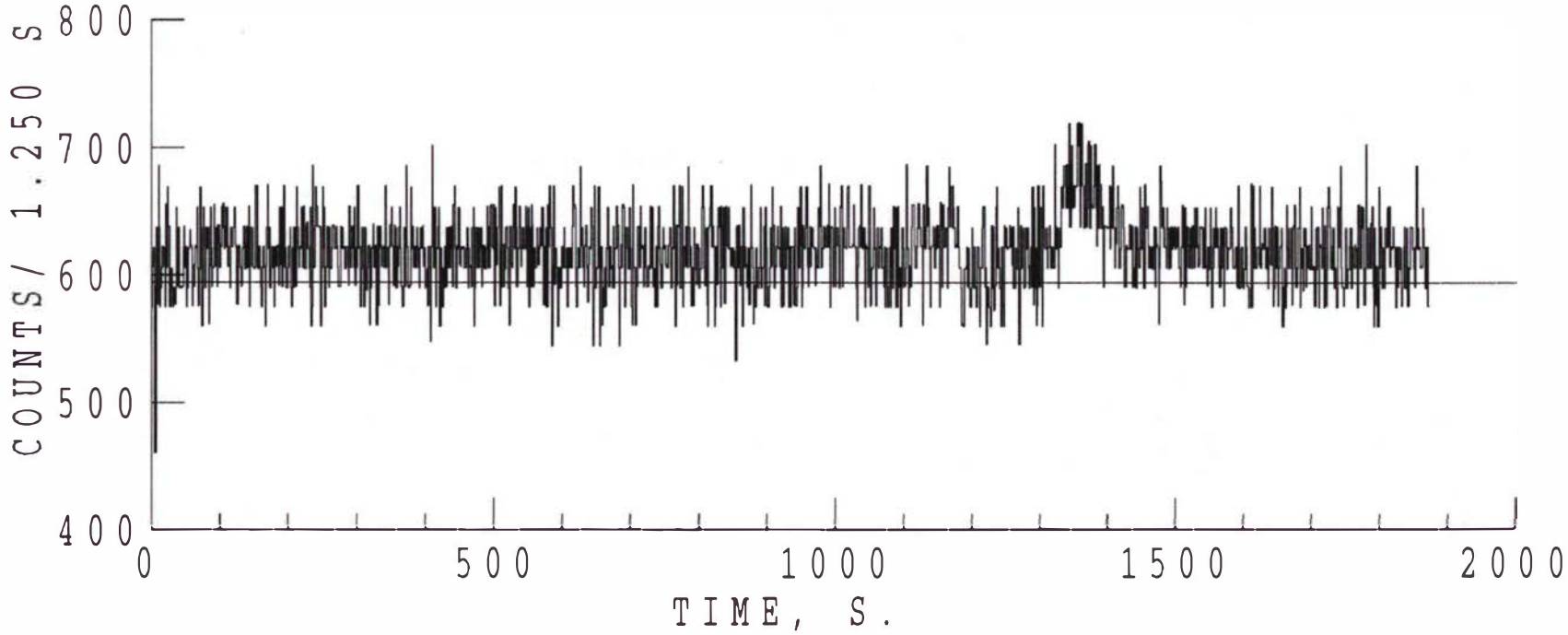
13/09/01 70488.062 s

0.250 S INTERVALS REGROUPED BY 5

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From guidorzi@fe.infn.it Fri Sep 14 07:17 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
Date: Fri, 14 Sep 2001 11:20:05 +0200 (MET DST)

1kGRB[292] #LSs: 1 Good HRR: 1
SW Trigger Time (OBT): 56060.991
UTC: Thu, 13 Sep 2001 20:48:39:49834 74919

******Event 0 triggered on board: ev_time - onbtrig_time = 0.220

Nsig(trg):	4.5	3.4	0.0	0.5	3.1	2.3	0.0	0.9
Nsig(pfl):	4.5	3.4	0.0	0.0	3.1	2.3	0.0	0.0
Bkg lev. :	805	883	829	730	927	930	948	992
ChiSq R. :	1.165	0.813	1.157	1.063	1.197	1.011	0.979	1.094
Peak fl. :	128	100	0	0	95	71	0	0
Error :	41.8	43.3	0.0	0.0	44.3	44.1	0.0	0.0
Fluence :	128	100	0	0	95	71	0	0
Error :	41.8	43.3	0.0	0.0	44.3	44.1	0.0	0.0

Dur (s) :	1.00	1.00	0.00	0.00		
Abundance:	1	1	0	0		
H. Ratio :	0.745	0.708	-1.000	-1.000		
HR Ratio :	1.052	-1.000	-1.000	-1.000	-1.000	-1.000
HR W-ave :	0.731 +/- 0.332					

GRBM 20010913 74779

ULYSSES RT

17/01/08

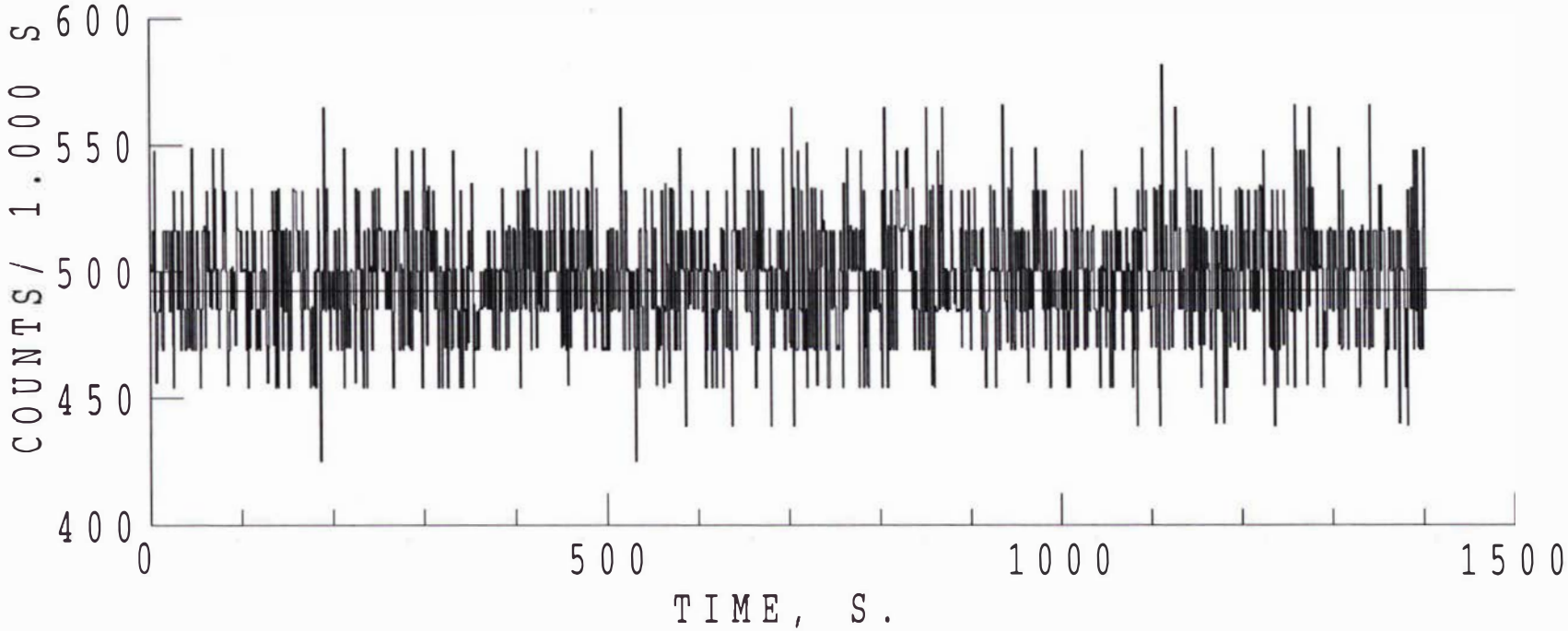
13/09/01 74088.125 s

0.250 S INTERVALS REGROUPED BY 4

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



SAX 20010913 74919

ULYSSES RT 14/02/02

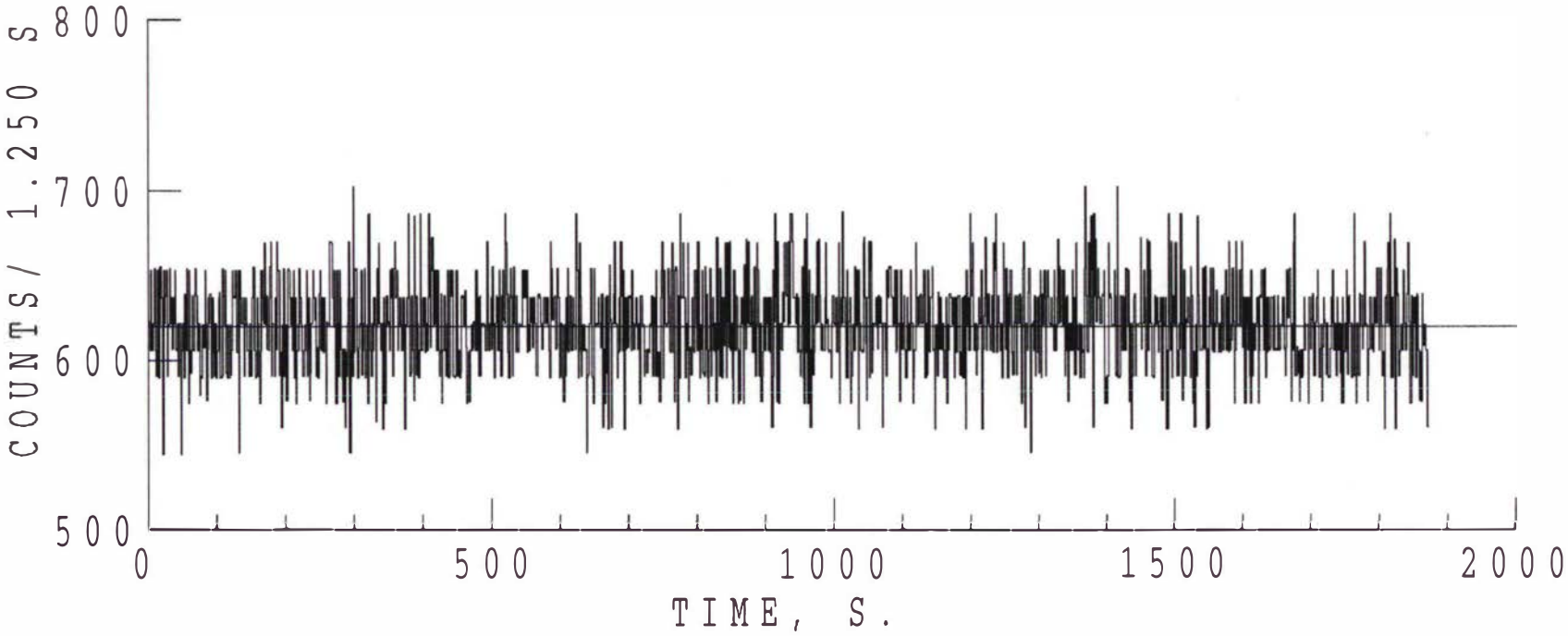
13/09/01 73980.125 s

0.250 S INTERVALS REGROUPED BY 5

0- 0 keV

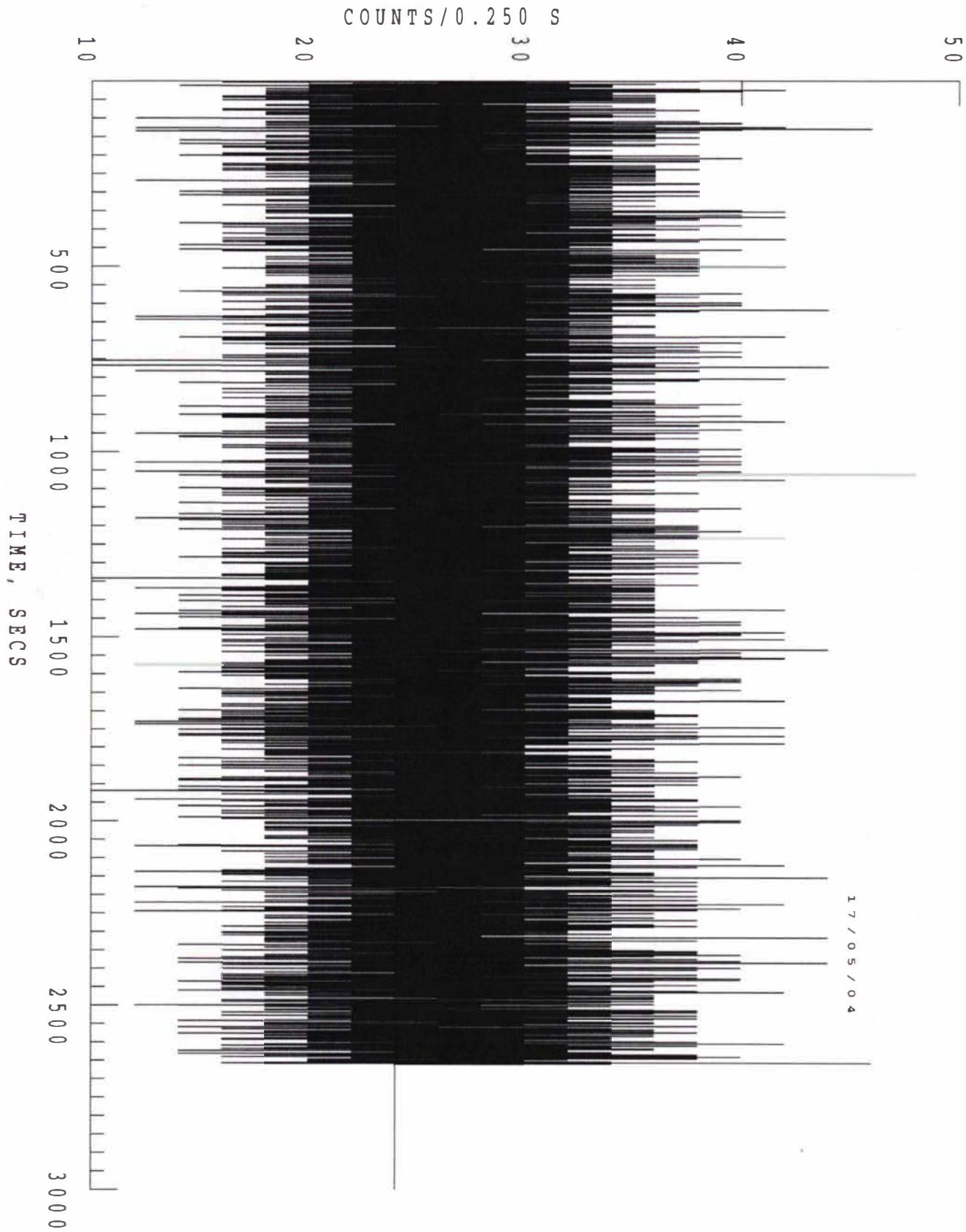
N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



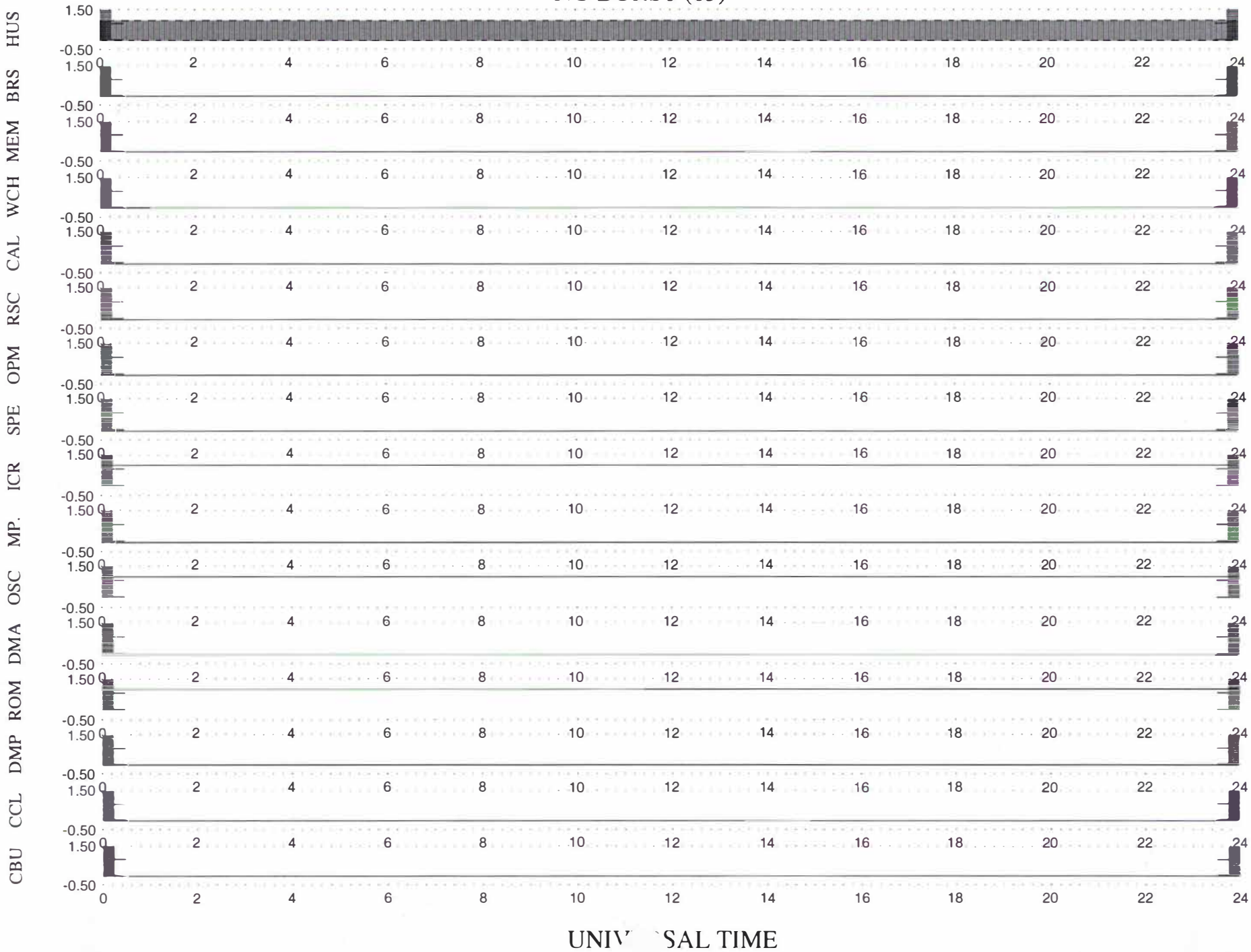
MS01 13/09/01 73570.151

50- 3000 keV



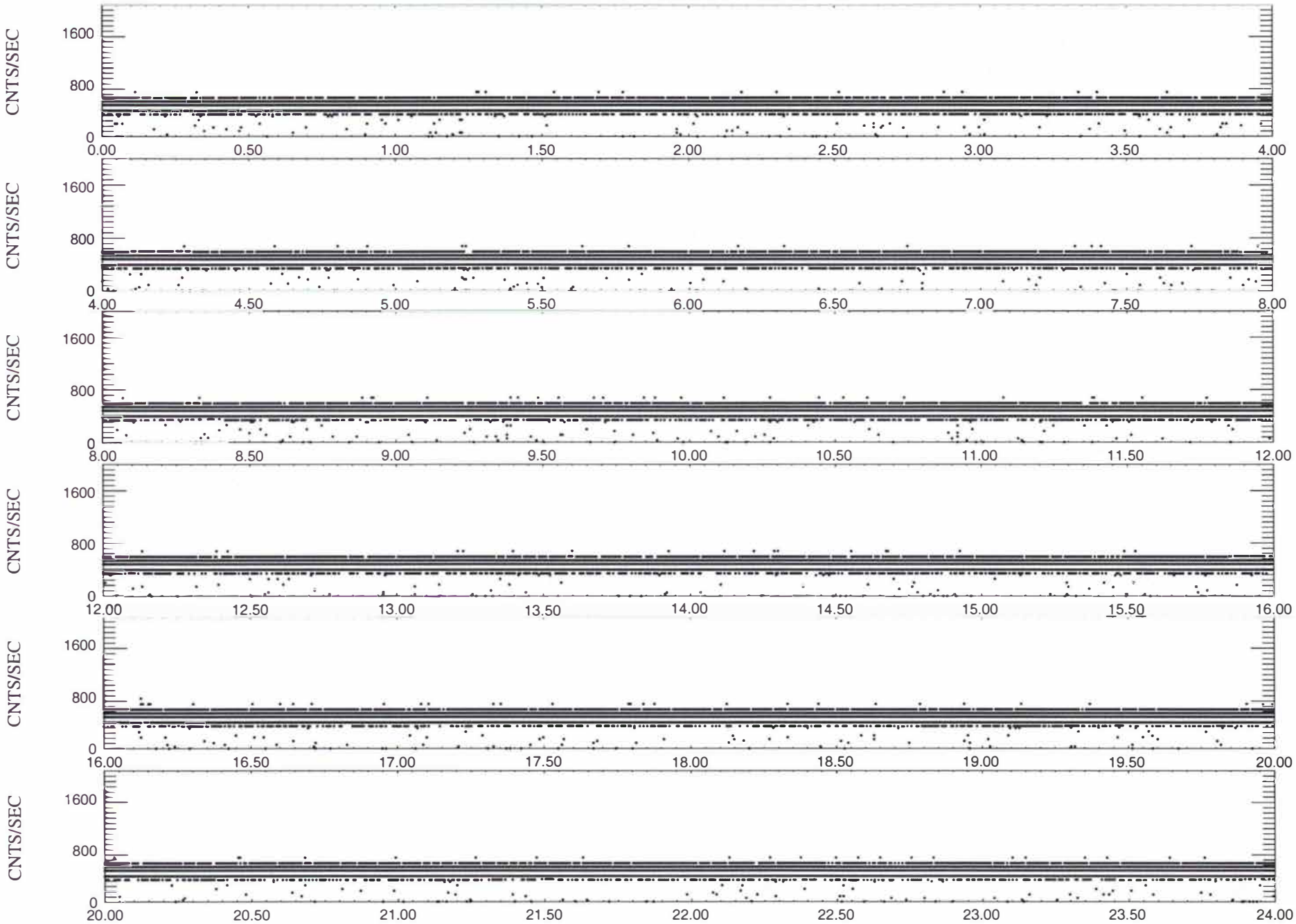
HUS MODES EDR day 256, year 2001 to day 256, year 2001 01/22/02

NO BURST (13)



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 13/09/2001 DOY = 256 01/22/02

CALIBRATION DATA INCLUDED



UNIVERSAL TIME

From guidorzi@fe.infn.it Fri Sep 14 15:18 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
Date: Sat, 15 Sep 2001 00:10:04 +0200 (MET DST)

ıkGRB[293] #LSs: 1 Good HRR: 1
SW Trigger Time (OBT): 3748.990
UTC: Fri, 14 Sep 2001 18:41:19:46819 67279

Nsig(trg):	3.5	0.5	1.1	4.0	3.3	0.5	2.2	3.1
Nsig(pfl):	3.5	3.9	0.0	4.0	3.3	2.6	0.0	3.1
Bkg lev. :	757	869	779	683	843	884	810	903
ChiSq R. :	0.912	1.169	0.905	1.081	1.131	0.868	0.811	0.988
Peak fl. :	95	115	0	106	95	78	0	95
Error :	40.2	43.1	0.0	38.5	42.3	43.1	0.0	43.7
Fluence :	95	639	0	106	95	190	0	95
Error :	40.2	113.3	0.0	38.5	42.3	112.4	0.0	43.7

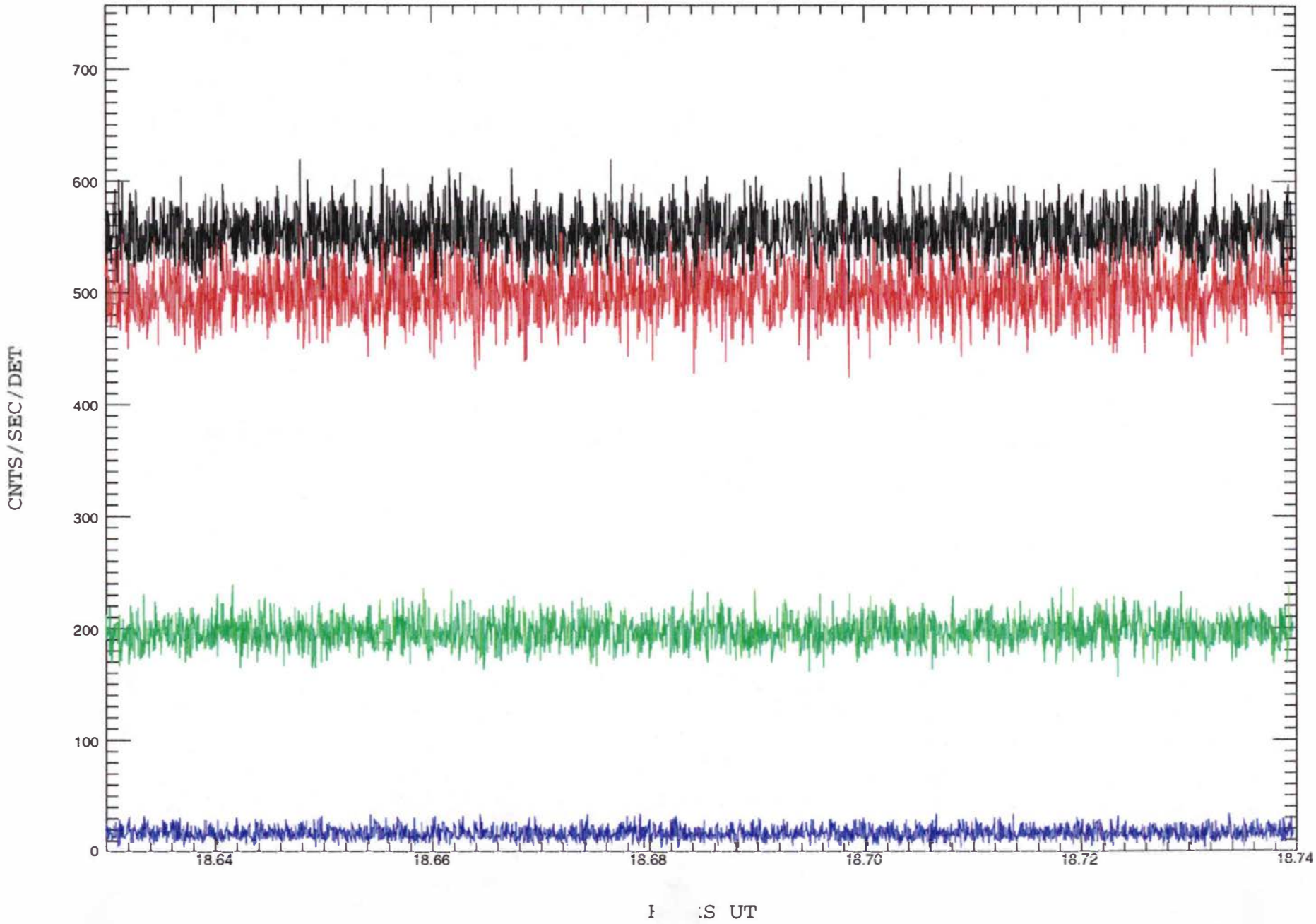
Dur (s) :	1.00	15.00	0.00	1.00		
Abundance:	1	7	0	1		
H. Ratio :	0.993	0.298	-1.000	0.893		
HR Ratio :	3.335	-1.000	1.112	-1.000	0.334	-1.000
HR W-ave :	0.410	+/- 0.167				

FREGATE SURVEY (TH) TIME HISTORY (AVG x1) -- DETECTORS 1-4 SUMMED (SAX_20010914_67279)

BEG TIME: 14/09/01 DOY 257 Julian 2452168.27625 UT = 18.630 18:37:48 (67068.000 secs) [sct = 0019 4b96 e9e0 ece0]
END TIME: 14/09/01 DOY 257 Julian 2452168.28083 UT = 18.740 18:44:24 (67464.000 secs) [sct = 0019 4b97 017b 6930]

Chan 1:[E1=18 E2=103] Chan 2:[E3=18 E4=78] Chan 3:[E5=20 E6=510] Chan 4:[E6=510 ->]

Channel 1 + 300 Channel 2 + 200 Channel 3 + 100 Channel 4 + 0



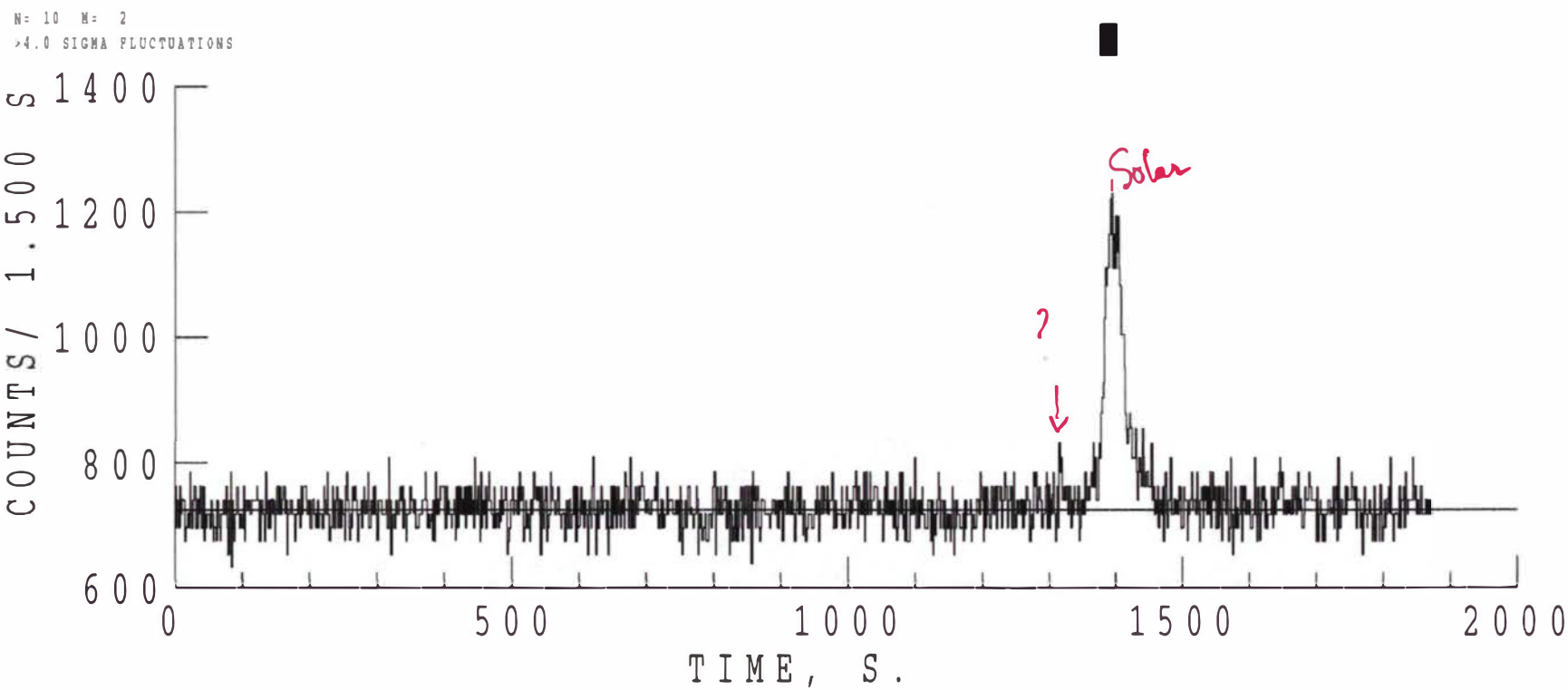
SAX 20010914 67279

ULYSSES RT 17/09/01

14/09/01 66348.461 s

0.500 S INTERVALS REGROUPED BY 3

0- 0 keV

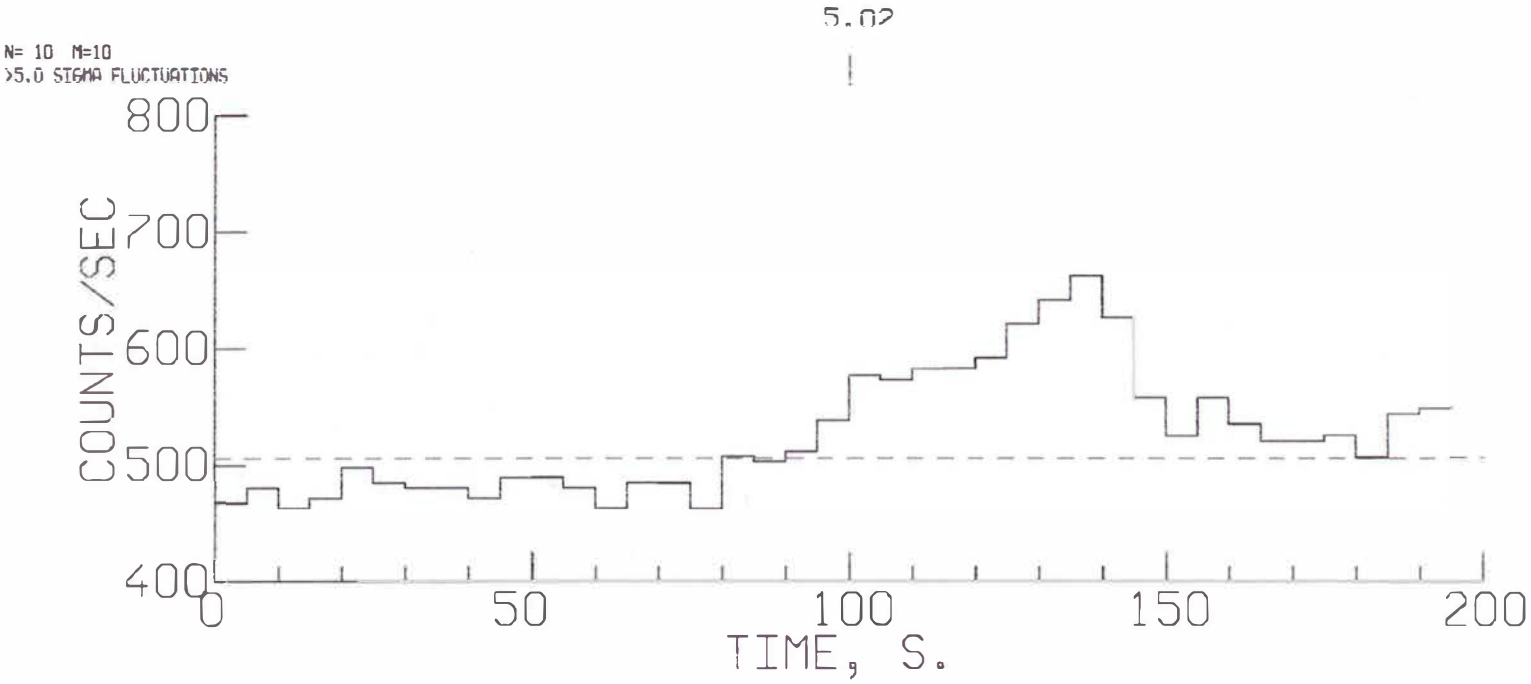


ULYSSES RT 19/ 9/ 1

14/ 9/ 1 72505.573 s

0.500 S INTERVALS REGROUPED BY 10

23- 155 keV



From guidorzi@fe.infn.it Fri Sep 14 20:28 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
`te: Sat, 15 Sep 2001 05:20:05 +0200 (MET DST)

ıkGRB[294] #LSs: 3 Good HRR: 1
SW Trigger Time (OBT): 14776.990
UTC: Fri, 14 Sep 2001 21:45:07:46397 78307

******Event 0 triggered on board: ev_time - onbtrig_time = 8.044

Nsig(trg):	2.2	8.3	3.6	0.0	1.0	3.0	2.7	0.2
Nsig(pfl):	7.1	16.1	8.9	4.0	4.4	6.5	5.1	3.7
Bkg lev. :	778	1023	811	668	799	862	775	851
ChiSq R. :	1.047	1.663	1.289	1.107	1.113	1.149	1.044	1.063
Peak fl. :	199	529	257	103	124	193	142	107
Error :	42.4	51.8	43.9	38.1	41.8	44.1	41.3	42.7
Fluence :	3193	14718	6320	747	1798	4921	3358	689
Error :	215.4	372.3	276.0	119.4	213.2	326.1	262.6	133.6

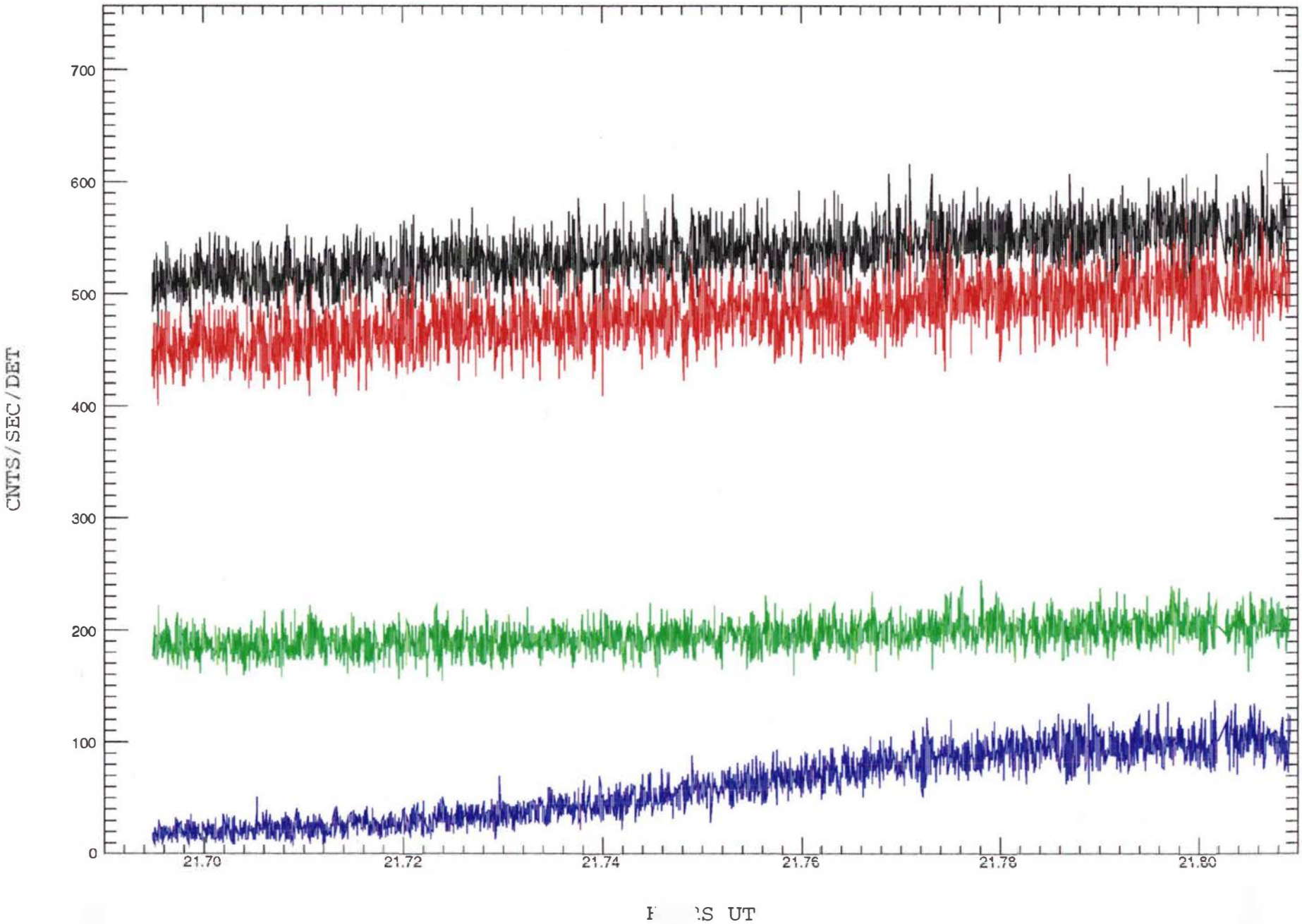
Dur (s) :	27.00	62.00	56.00	22.00		
Abundance:	27	58	42	10		
H. Ratio :	0.563	0.334	0.531	0.922		
HR Ratio :	1.685	1.060	0.611	0.629	0.363	0.576
HR W-ave :	0.391	+/- 0.020				

FREGATE SURVEY (TH) TIME HISTORY (AVG x1) -- DETECTORS 1-4 SUMMED (KONUS1_20010914_78300)

BEG TIME: 14/09/01 DOY 257 Julian 2452168.40375 UT = 21.690 21:41:24 (78084.000 secs) [sct = 0019 4b99 7a7b e370]
END TIME: 14/09/01 DOY 257 Julian 2452168.40875 UT = 21.810 21:48:36 (78516.000 secs) [sct = 0019 4b99 943b b0df]

Chan 1:[E1=18 E2=103] Chan 2:[E3=18 E4=78] Chan 3:[E5=20 E6=510] Chan 4:[E6=510 ->]

Channel 1 + 300 Channel 2 + 200 Channel 3 + 100 Channel 4 + 0

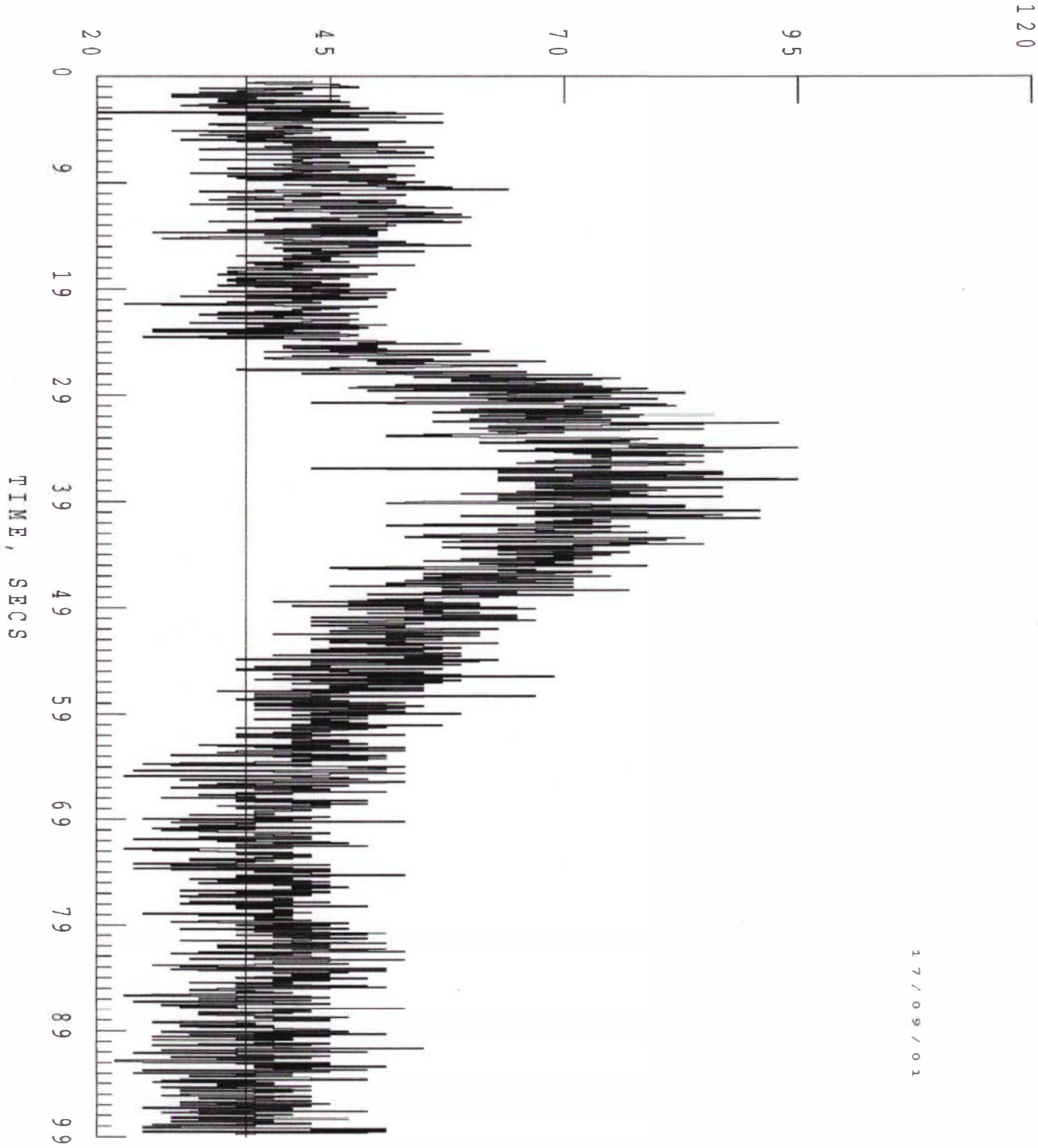


KONUS1 14/09/01 78300.716

50- 200 keV

Solar

COUNTS/0.064 S



17/09/01

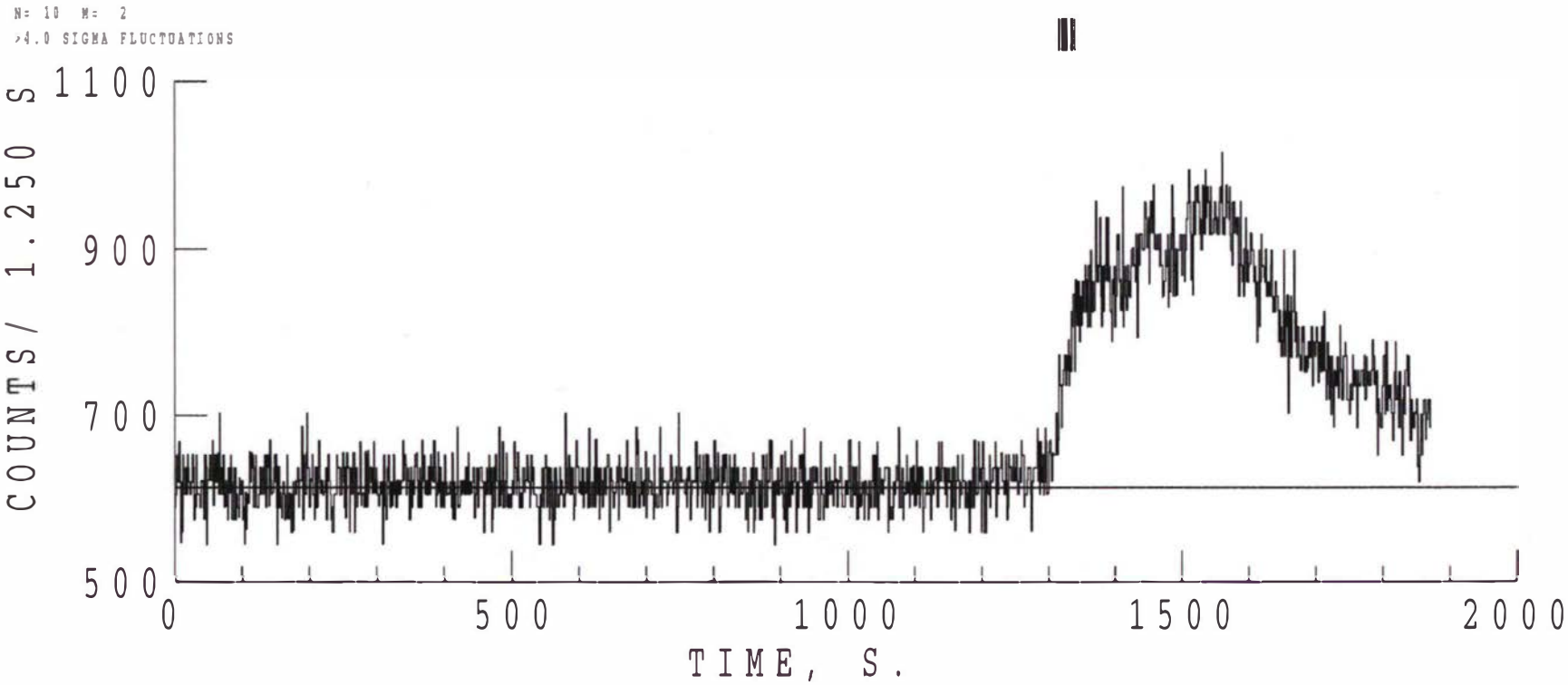
SAX 20010914 78299

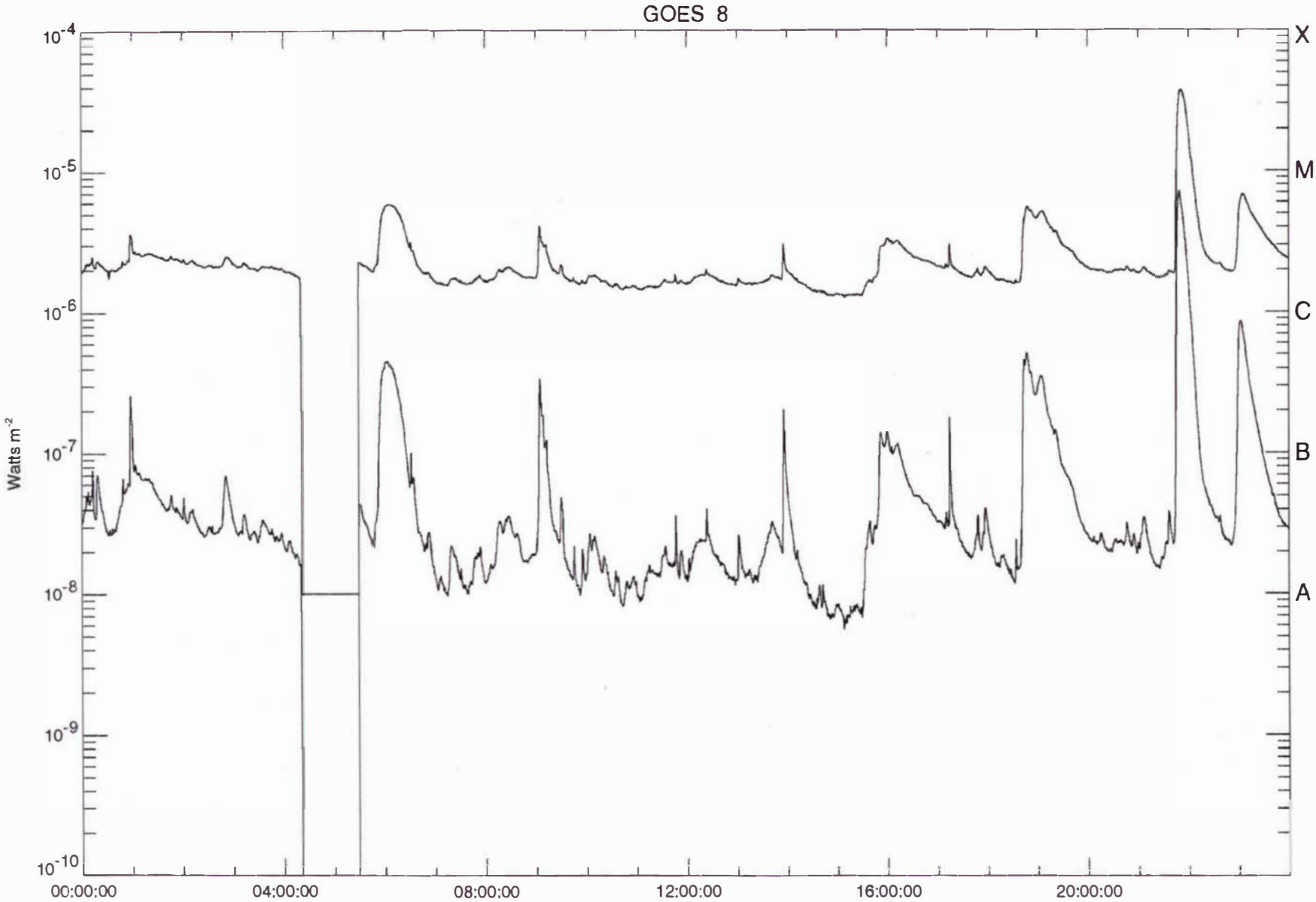
ULYSSES RT 17/09/01

14/09/01 77364.109 s

0.250 S INTERVALS REGROUPED BY 5

0- 0 keV

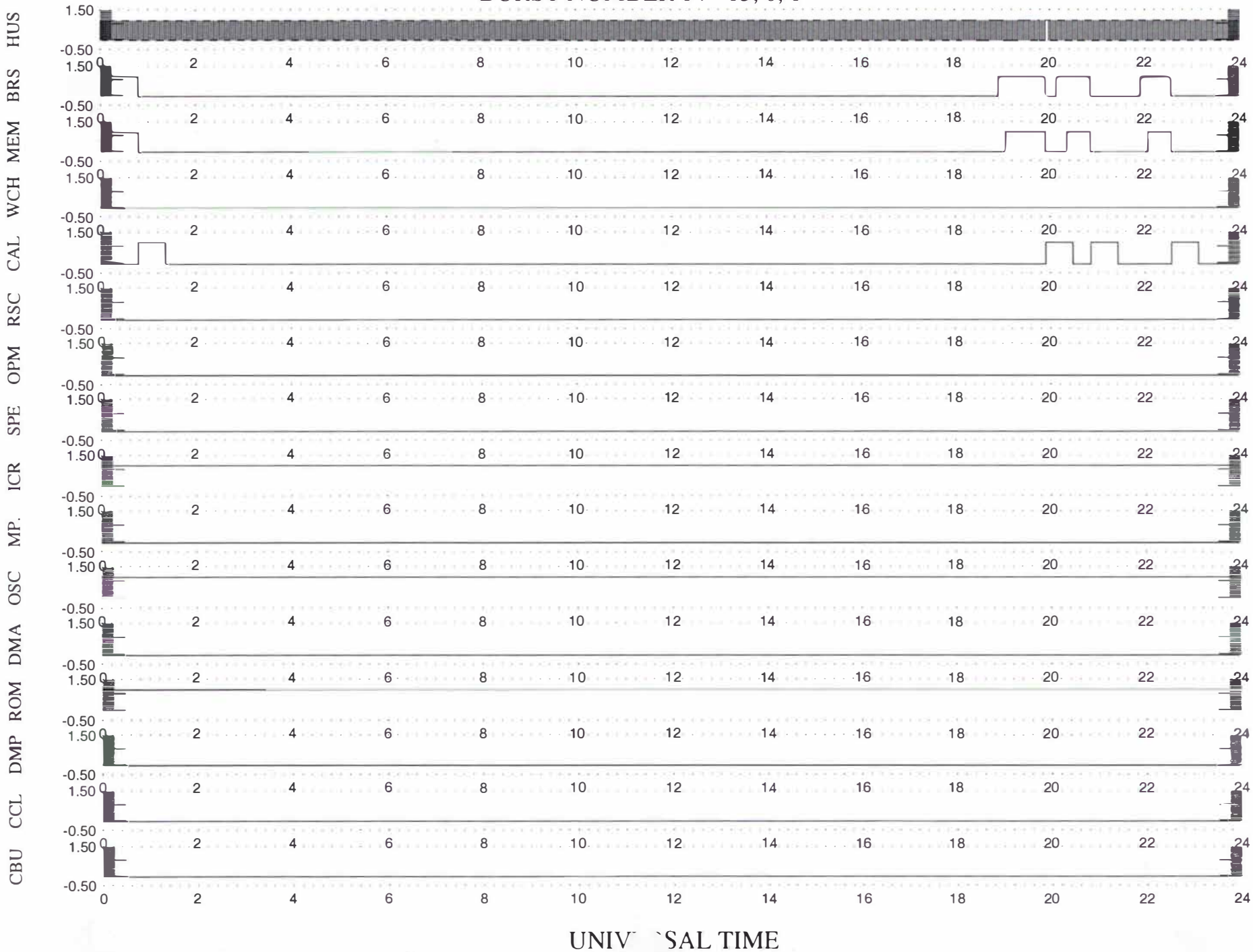




Data Start: 01/09/14, 0000:00 Plot created: 01/09/18, 0951
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

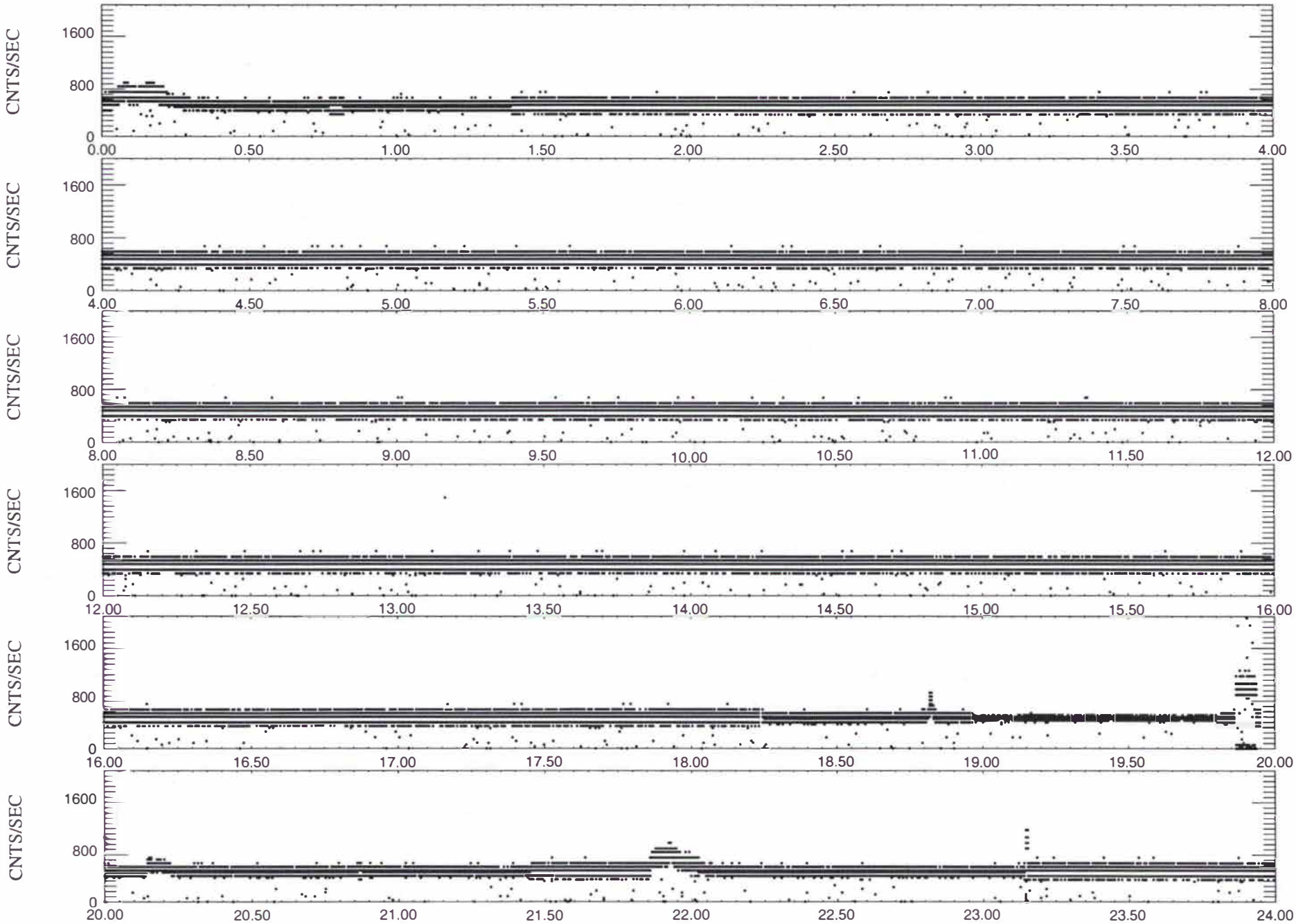
HUS MODES EDR day 257, year 2001 to day 257, year 2001 01/22/02

BURST NUMBER 14 - 15, 0, 1



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 14/09/2001 DOY = 257 01/22/02

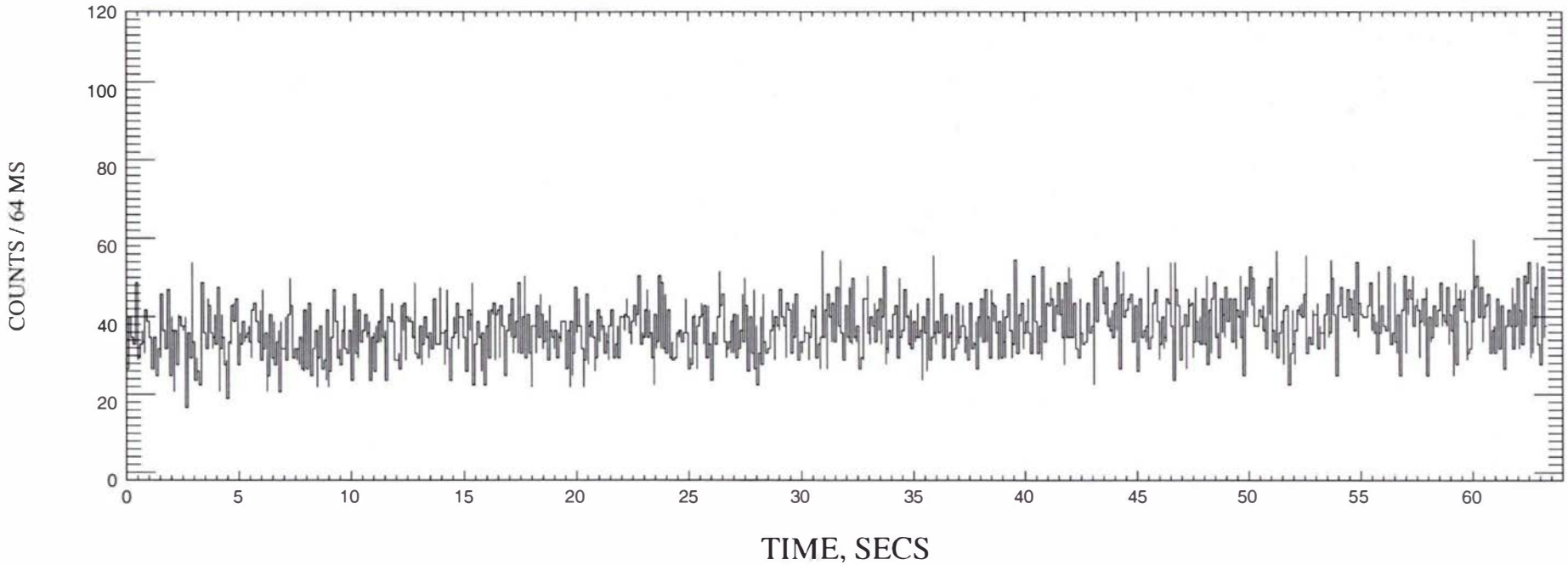
CALIBRATION DATA INCLUDED

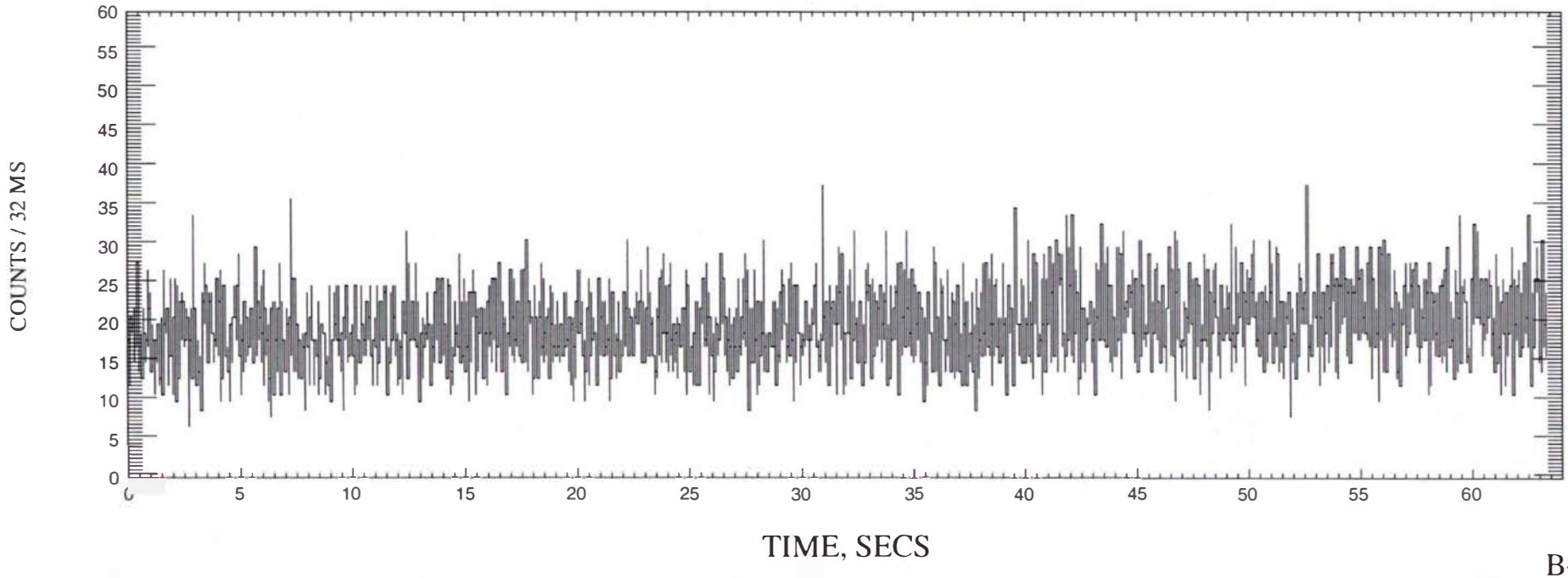


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 14/09/2001 DOY = 257 01/22/02

Burst Counter 14 at UT= 0.064606157939 h= 232.582 s 00:03:52.582

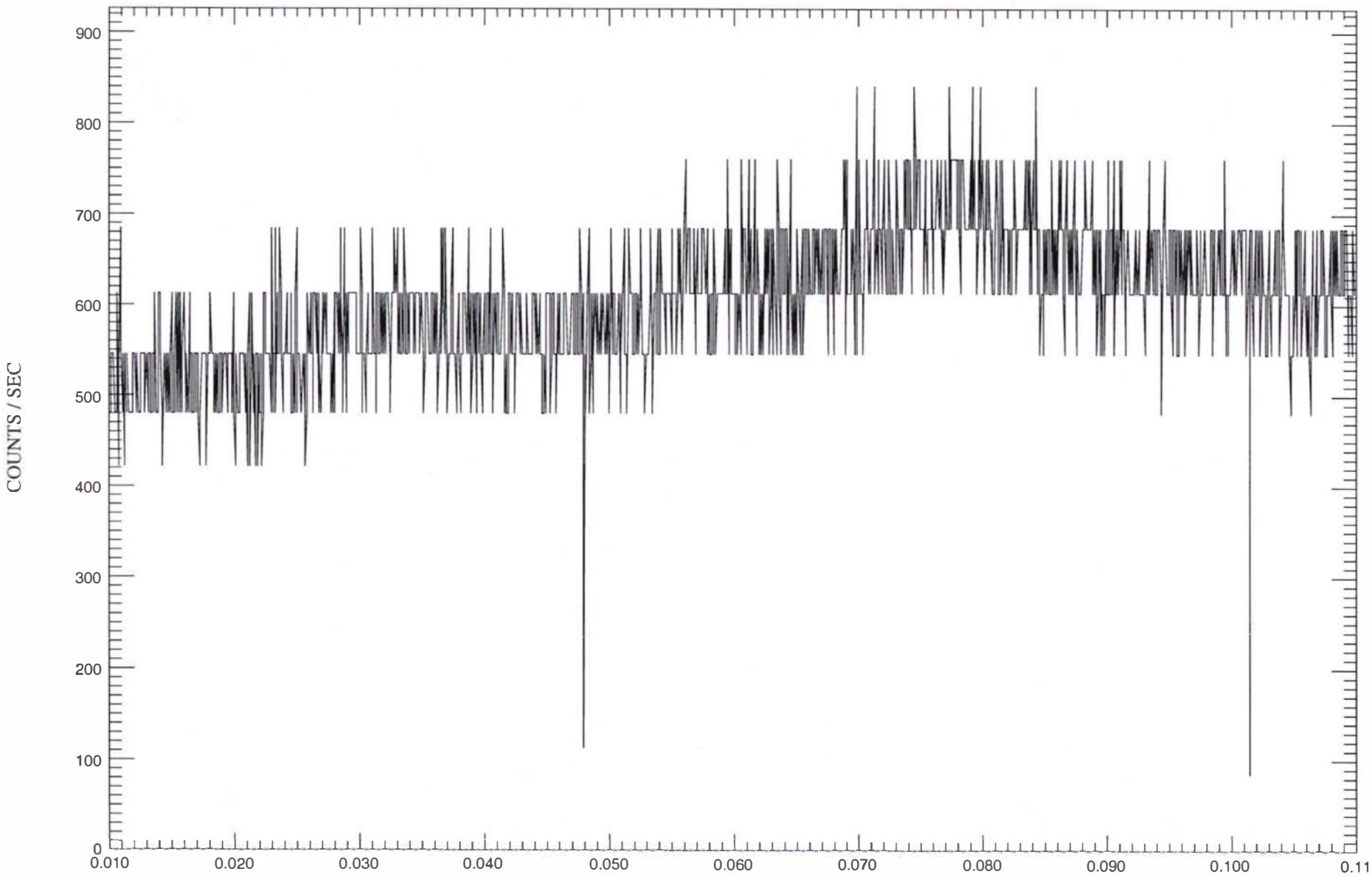




B# 1

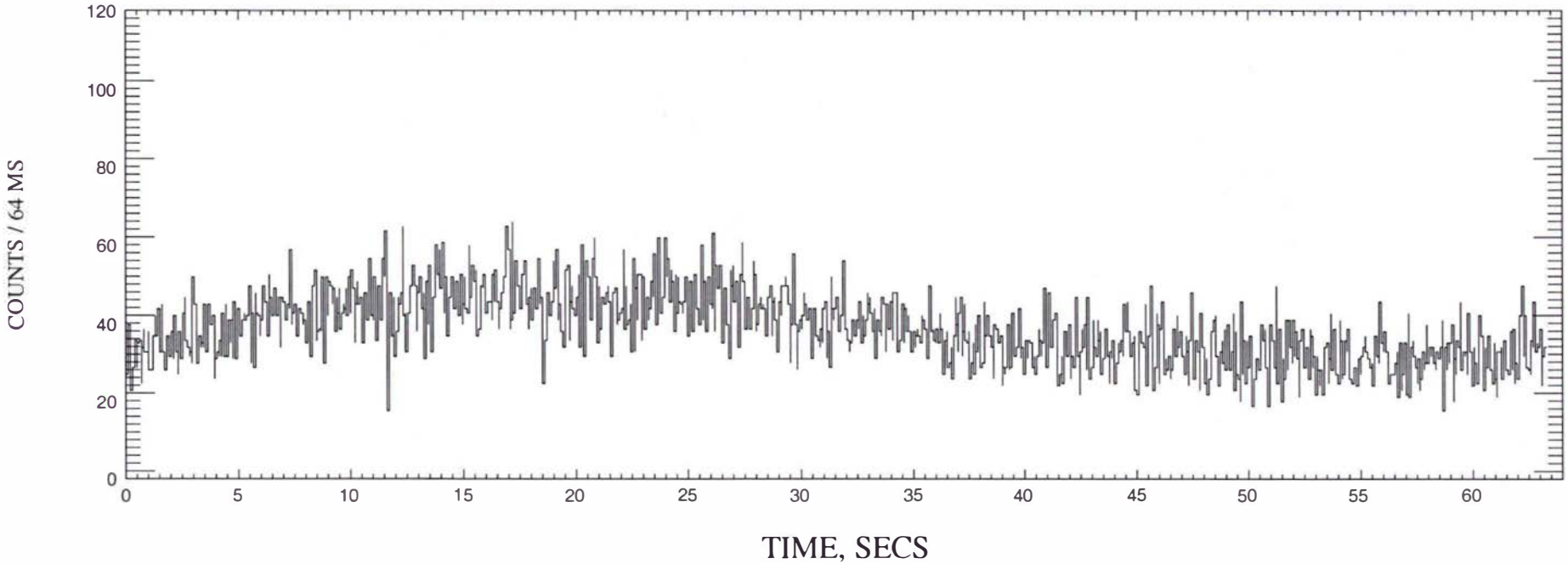
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 14/09/2001 DOY = 257 01/22/02

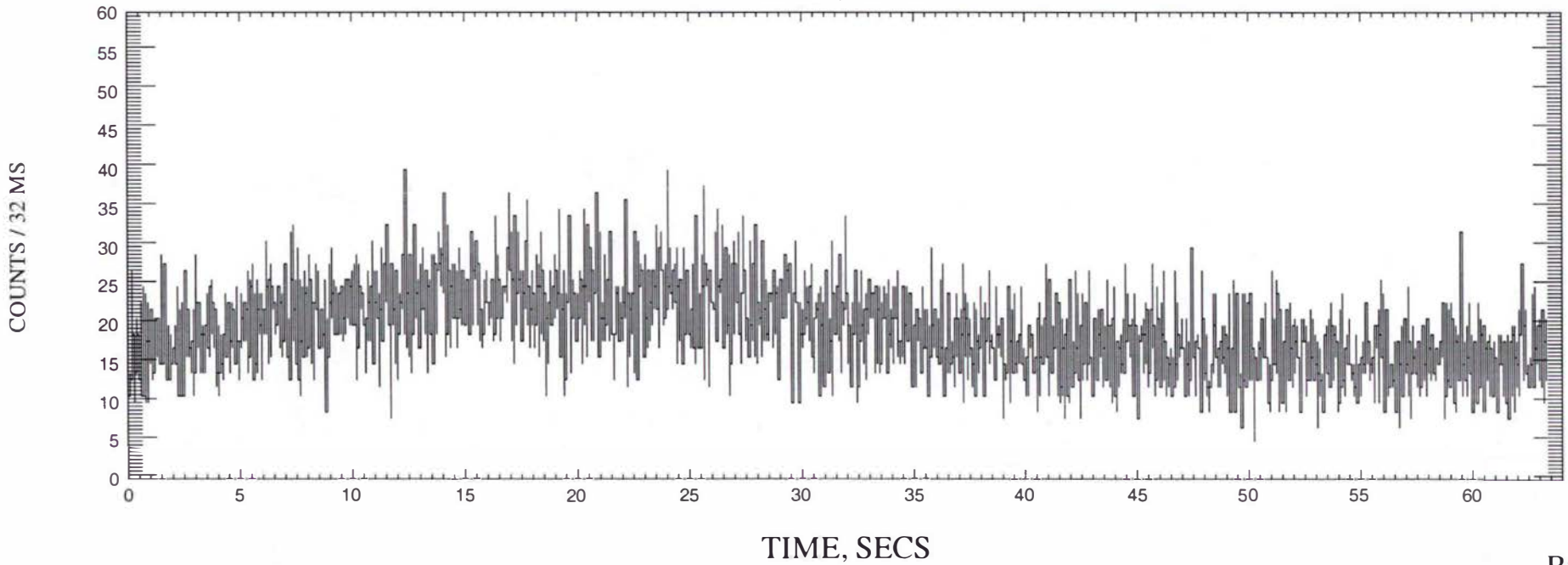
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 14/09/2001 DOY = 257 01/22/02

Burst Counter 15 at UT=18.815029775831 h=67734.107 s 18:48:54.107

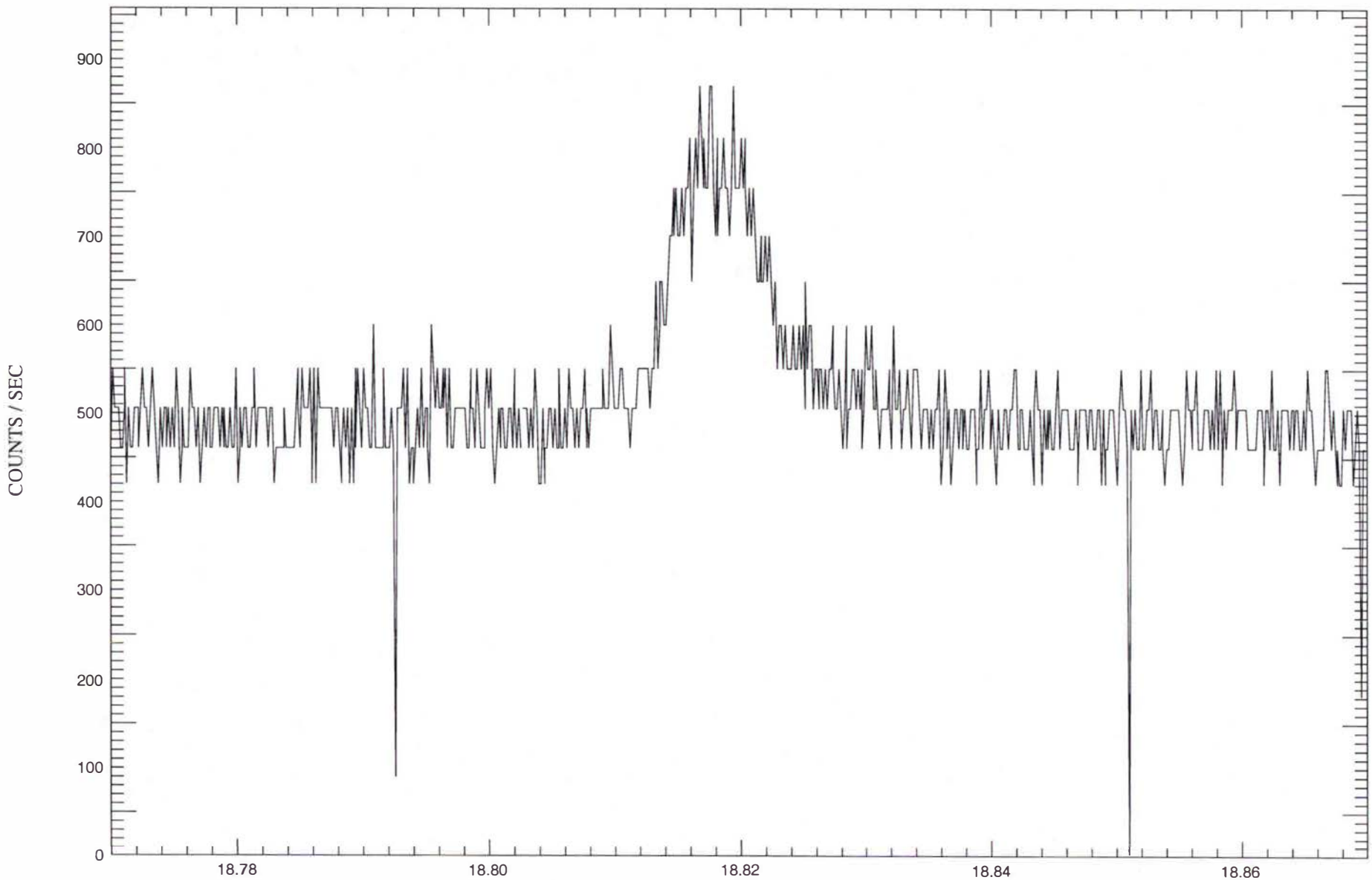




B# 2

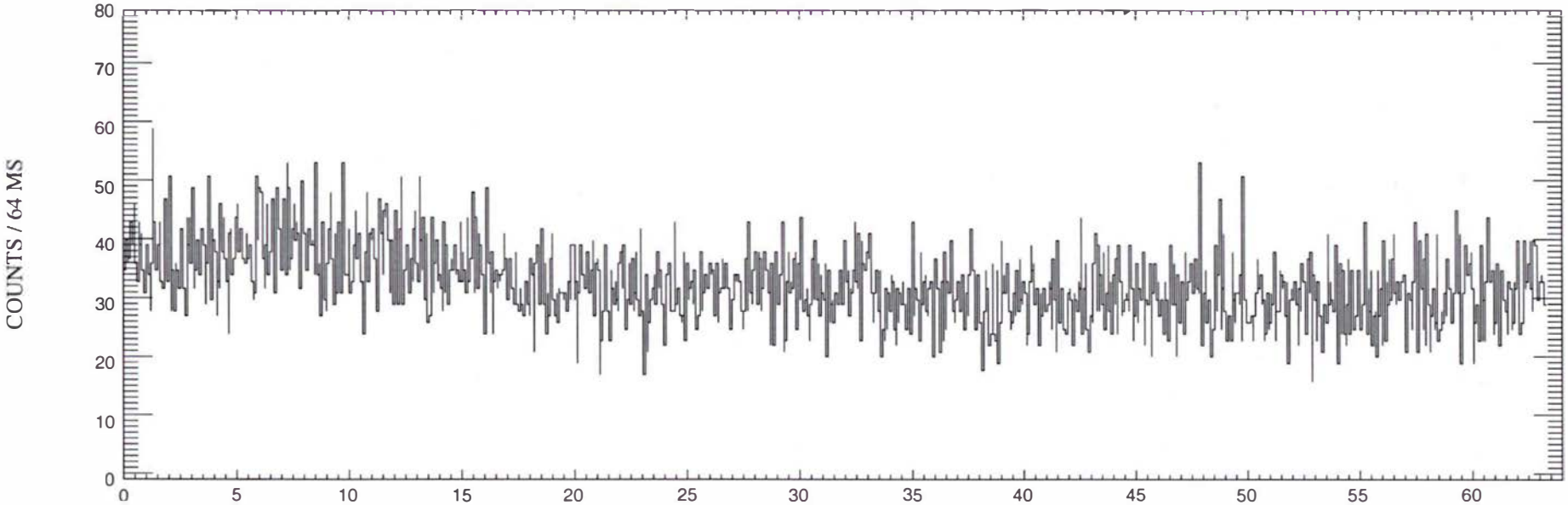
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 14/09/2001 DOY = 257 01/22/02

CALIBRATION DATA INCLUDED

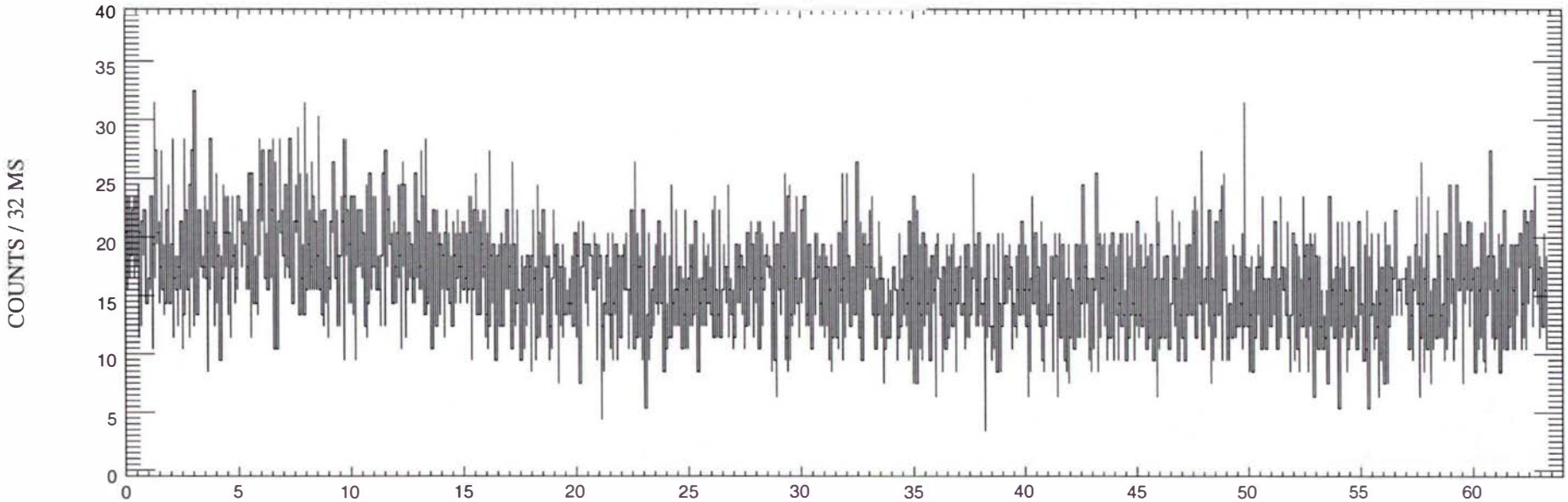


HUS 2A TRIGGERED DATA EDR DMY = 14/09/2001 DOY = 257 01/22/02

Burst Counter 0 at UT=20.150539813572 h=72541.943 s 20:09:01.943



TIME, SECS

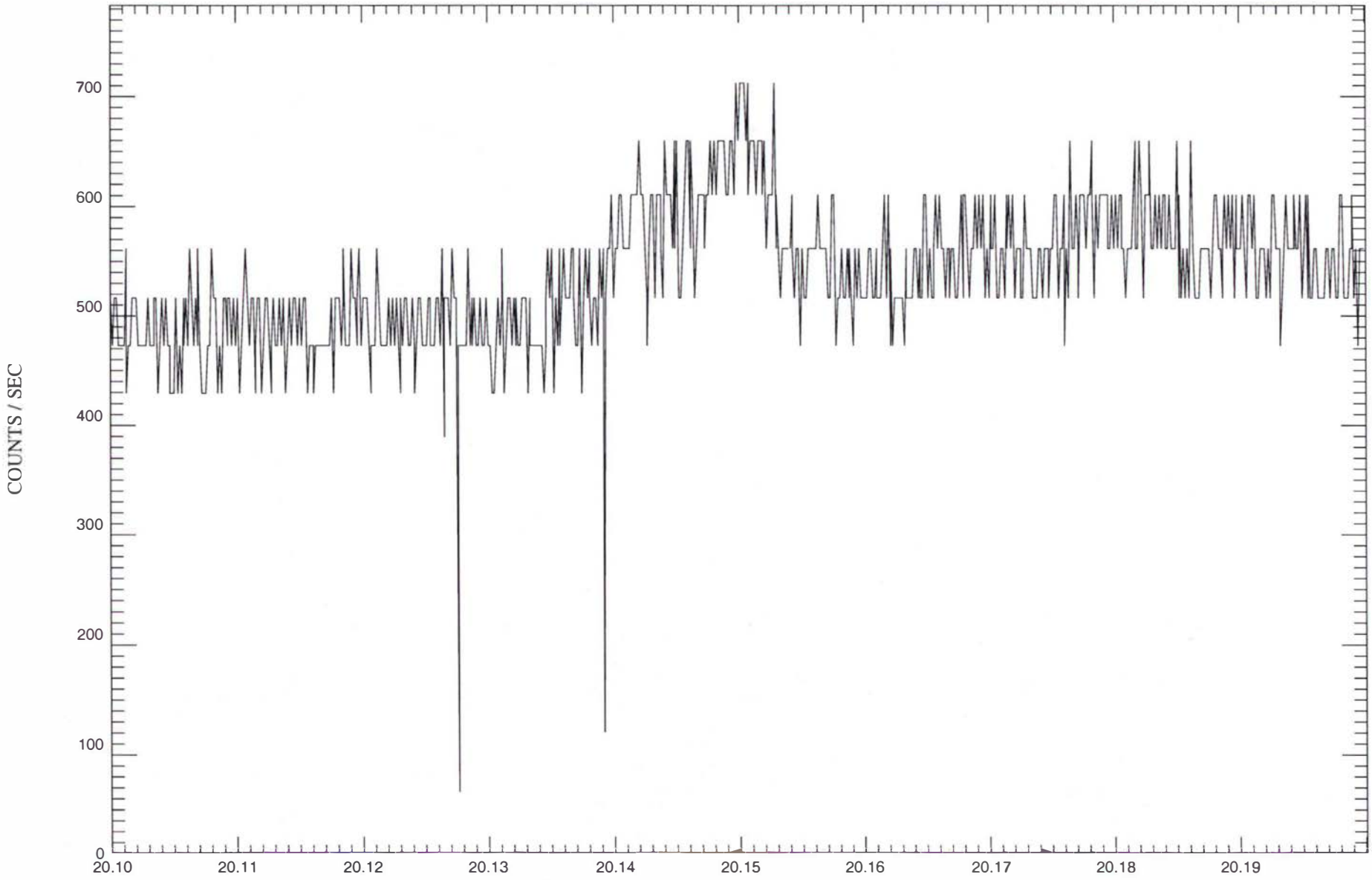


TIME, SECS

B# 3

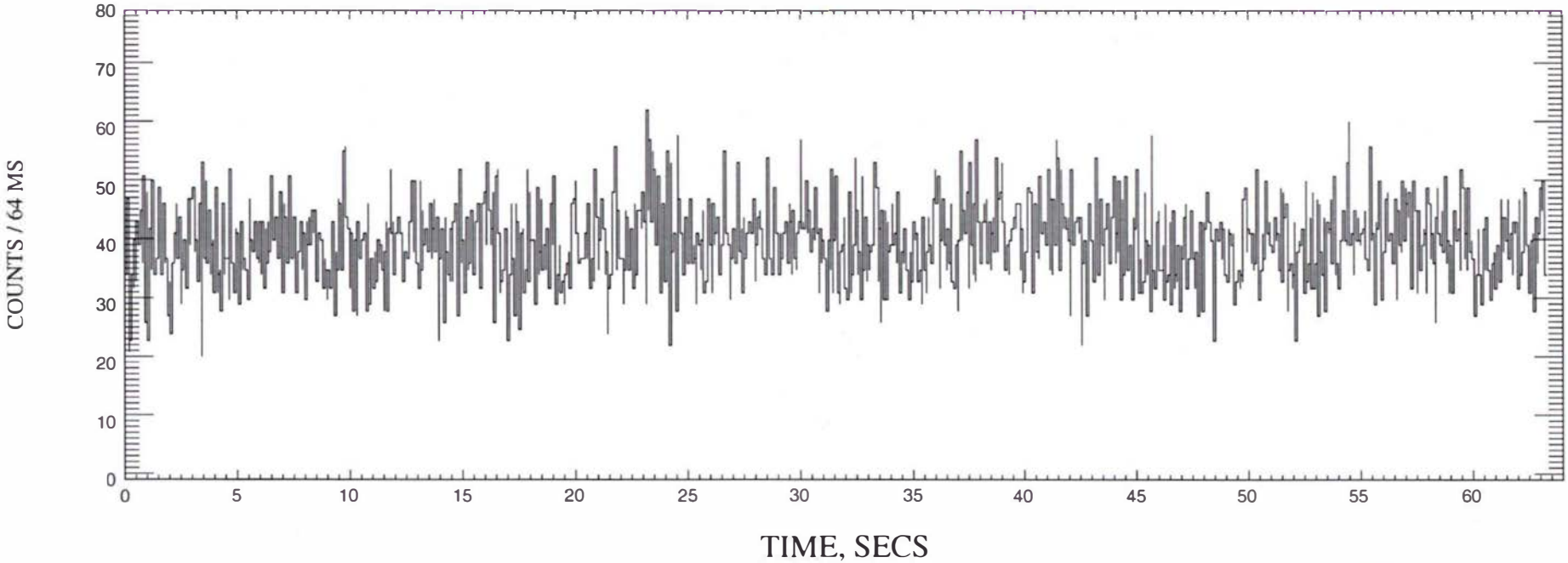
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 14/09/2001 DOY = 257 01/22/02

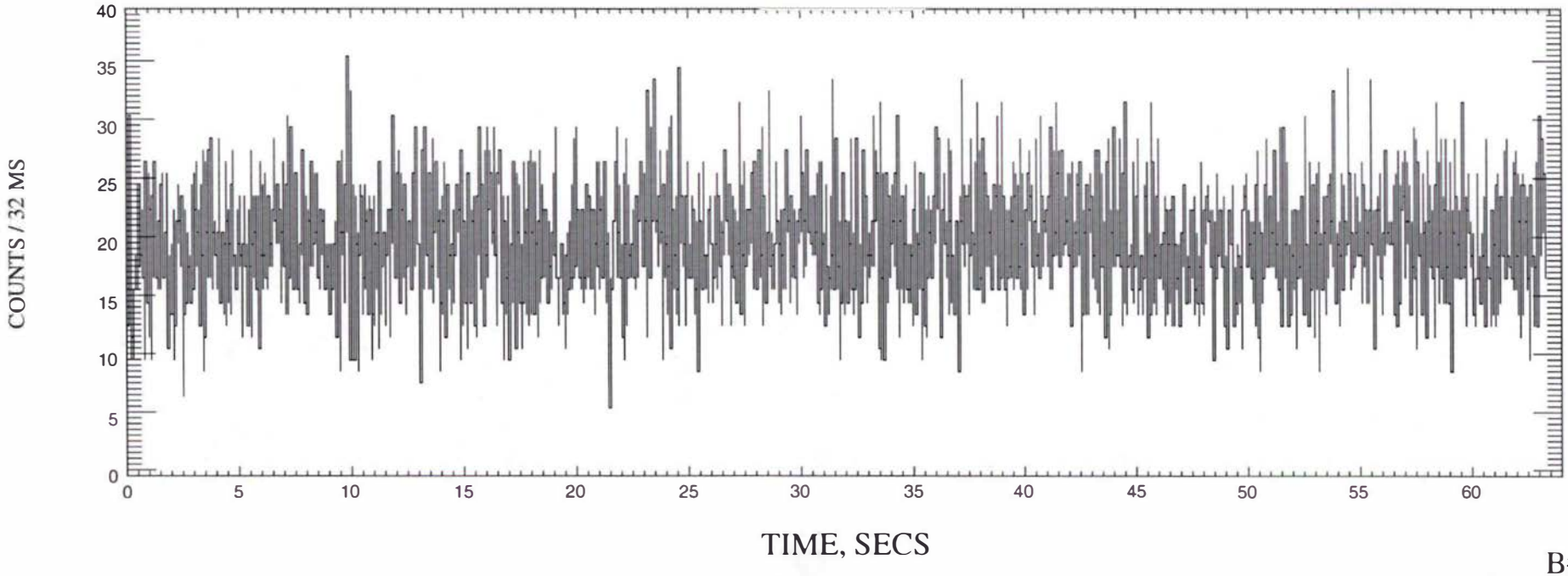
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 14/09/2001 DOY = 257 01/22/02

Burst Counter 1 at UT=21.866633686490 h=78719.881 s 21:51:59.881

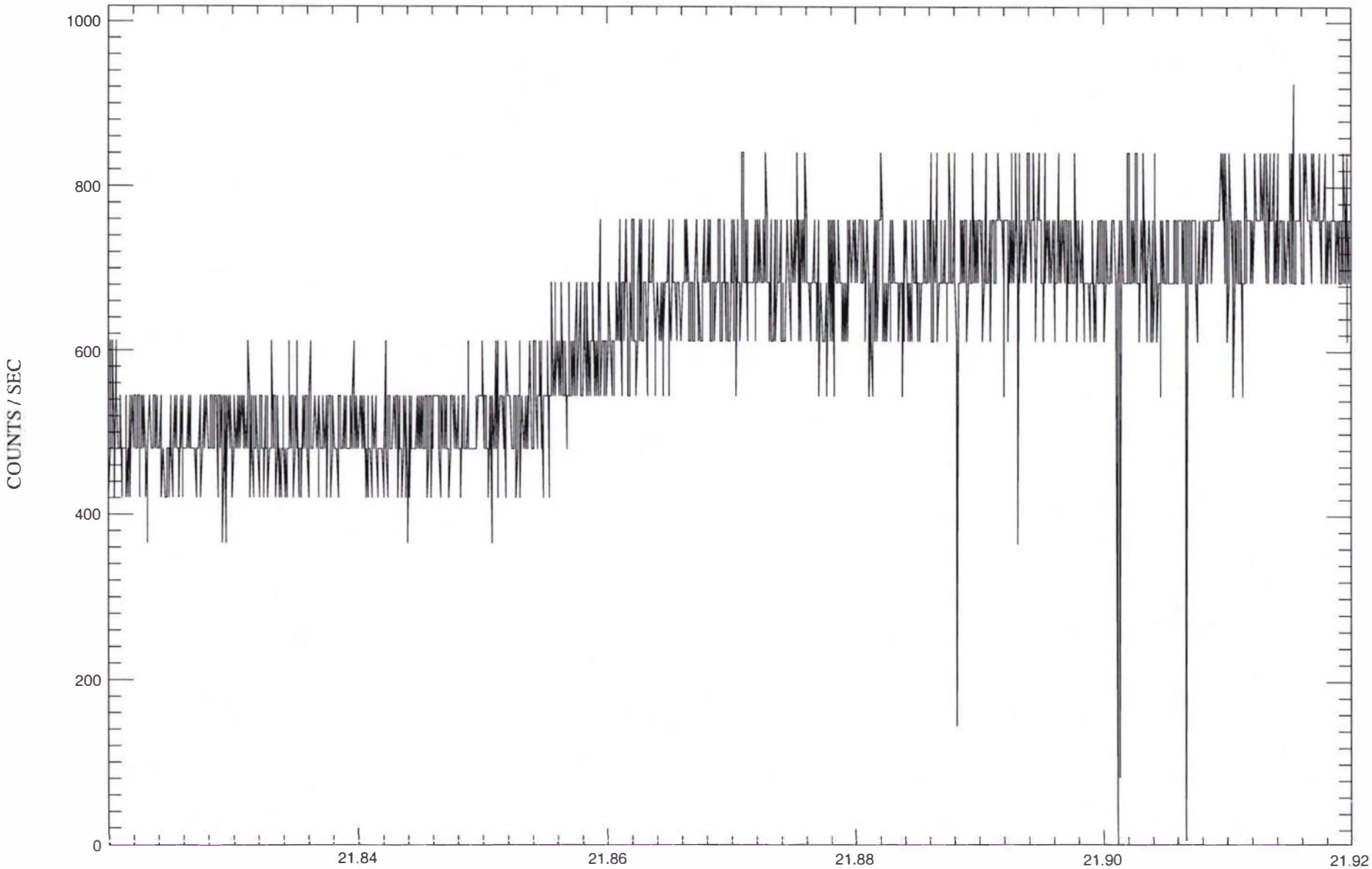




B# 4

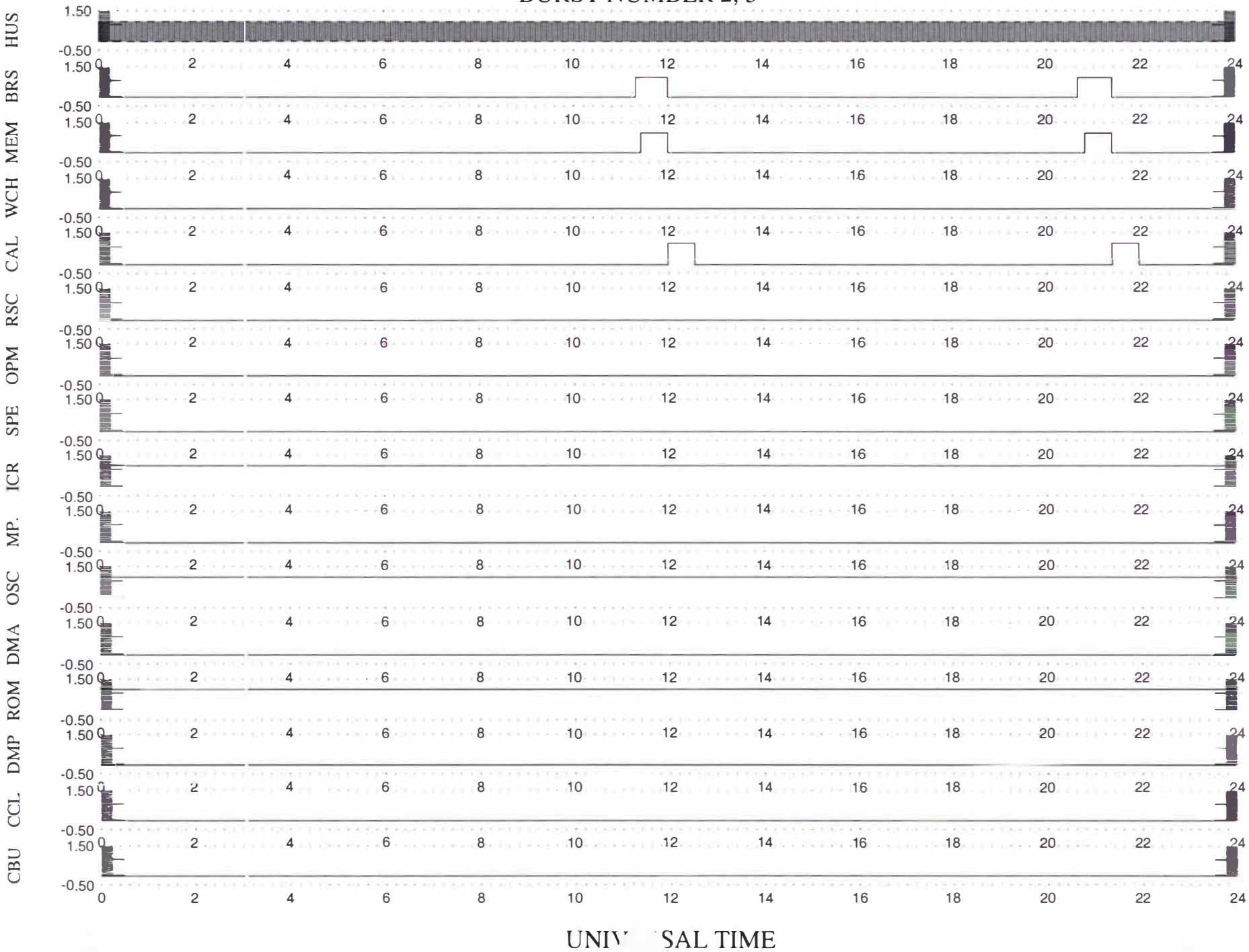
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 14/09/2001 DOY = 257 01/22/02

CALIBRATION DATA INCLUDED



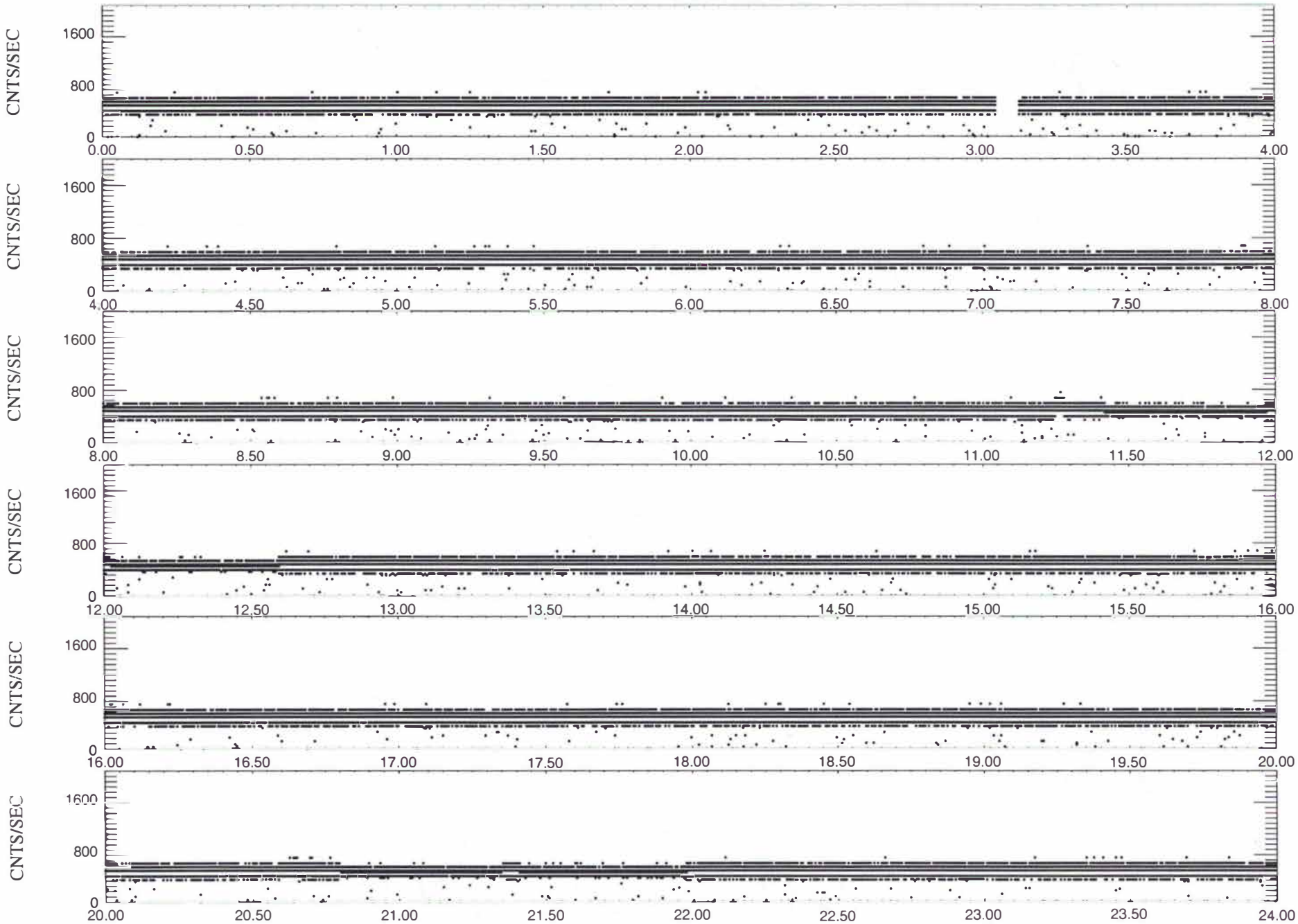
HUS MODES EDR day 258, year 2001 to day 258, year 2001 01/22/02

BURST NUMBER 2, 3



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 15/09/2001 DOY = 258 01/22/02

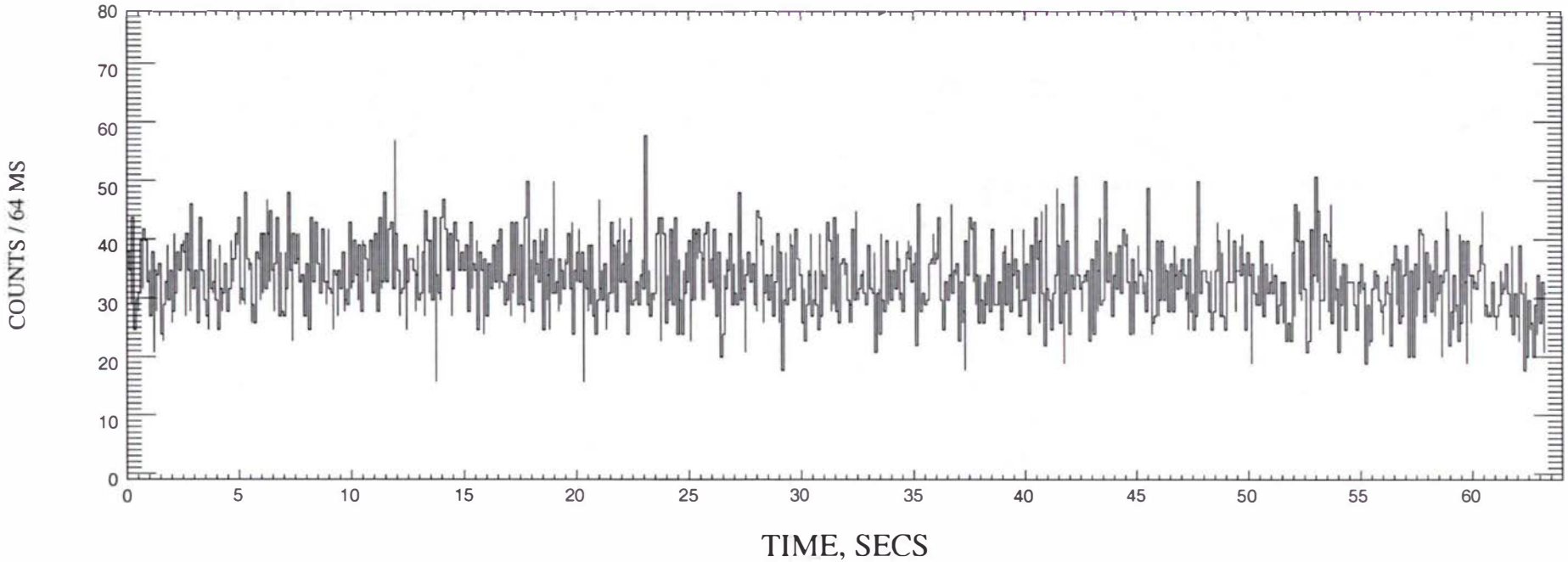
CALIBRATION DATA INCLUDED

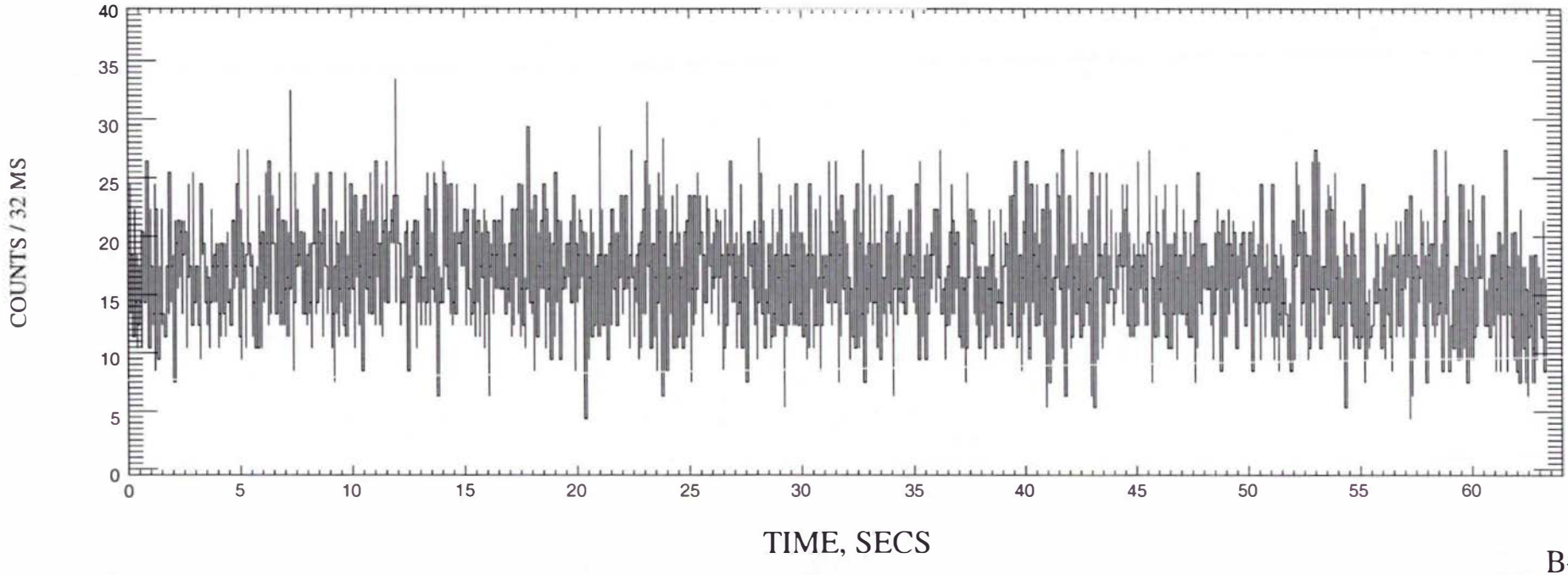


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 15/09/2001 DOY = 258 01/22/02

Burst Counter 2 at UT=11.262238222758 h=40544.058 s 11:15:44.058

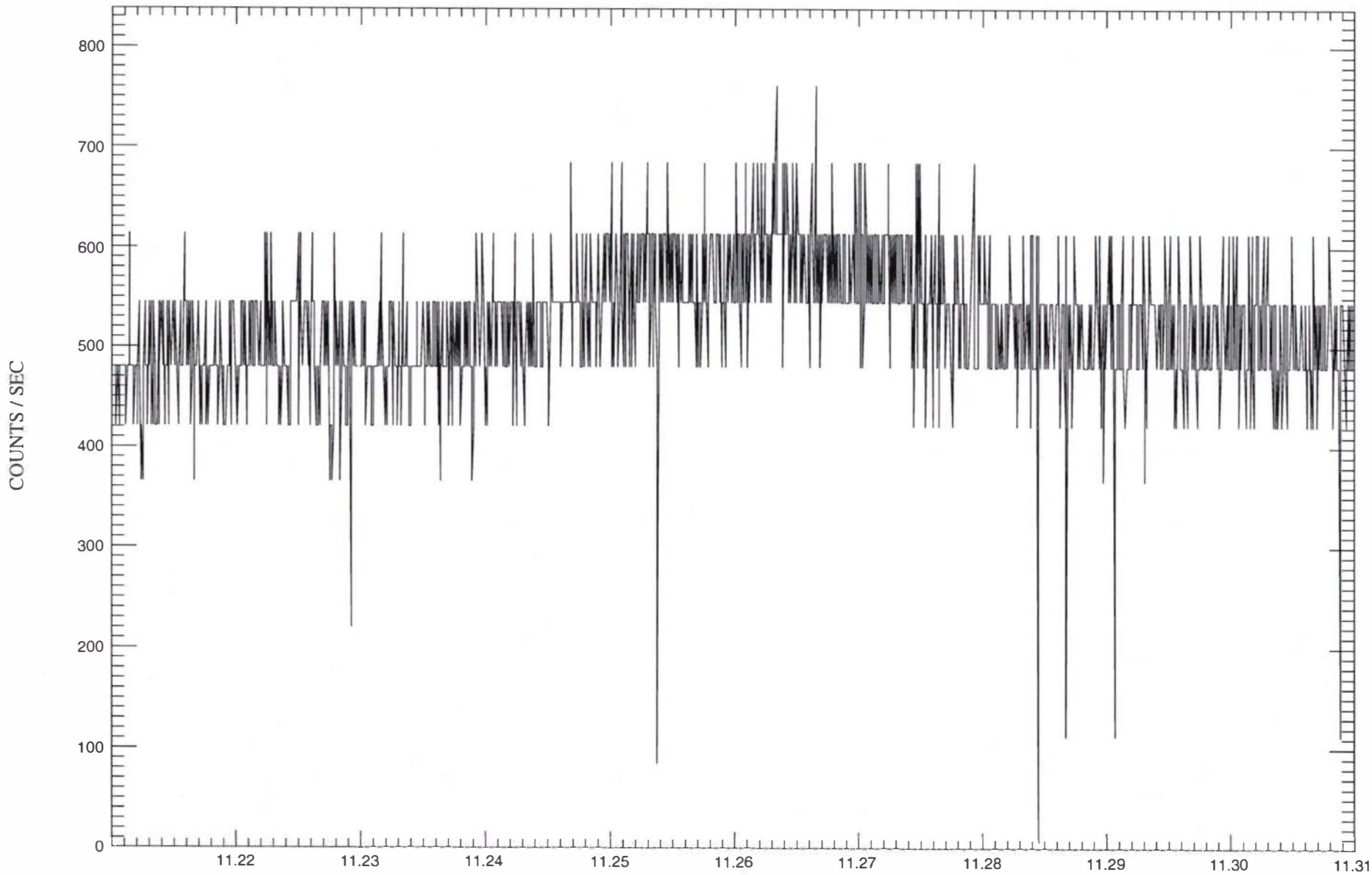




B# 1

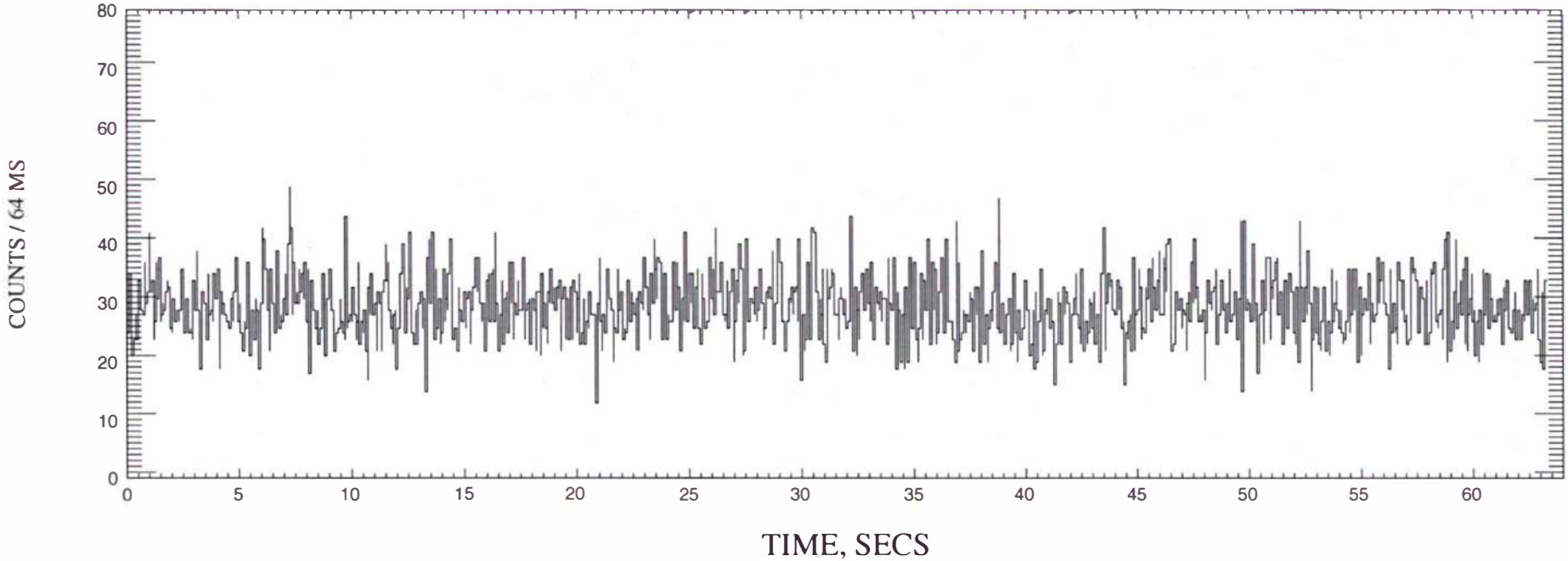
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 15/09/2001 DOY = 258 01/22/02

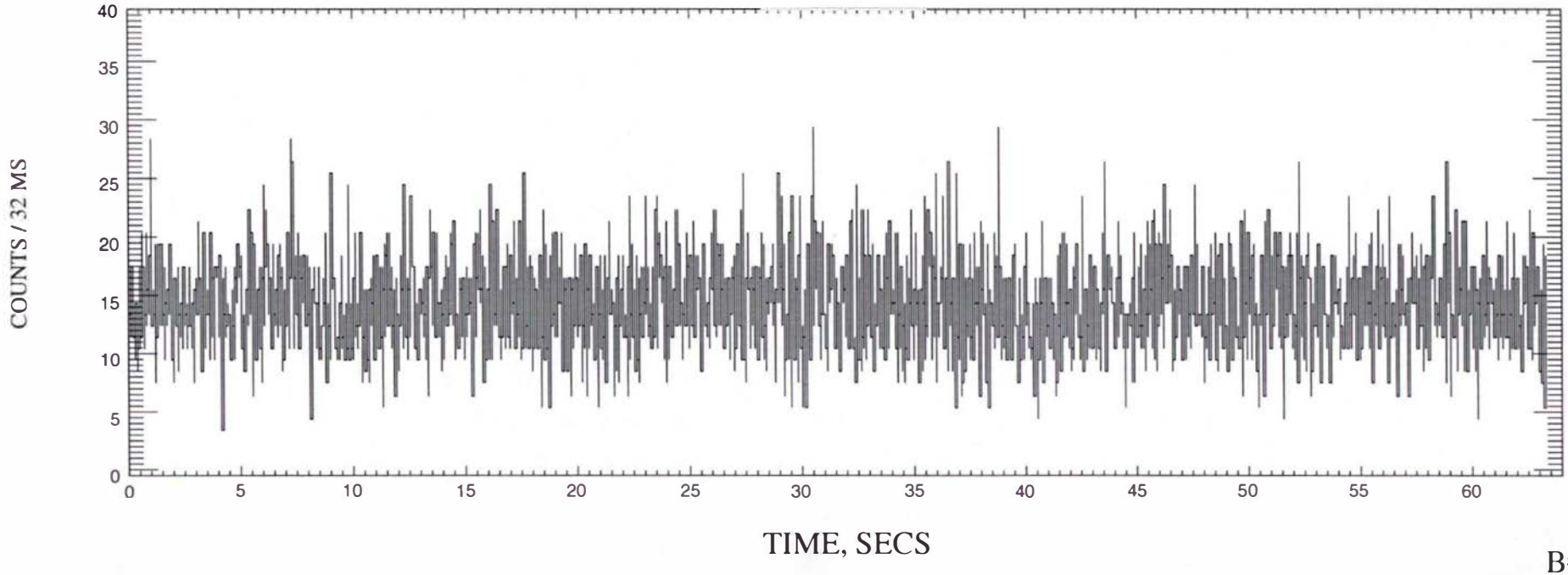
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 15/09/2001 DOY = 258 01/22/02

Burst Counter 3 at UT=20.642741733127 h=74313.870 s 20:38:33.870

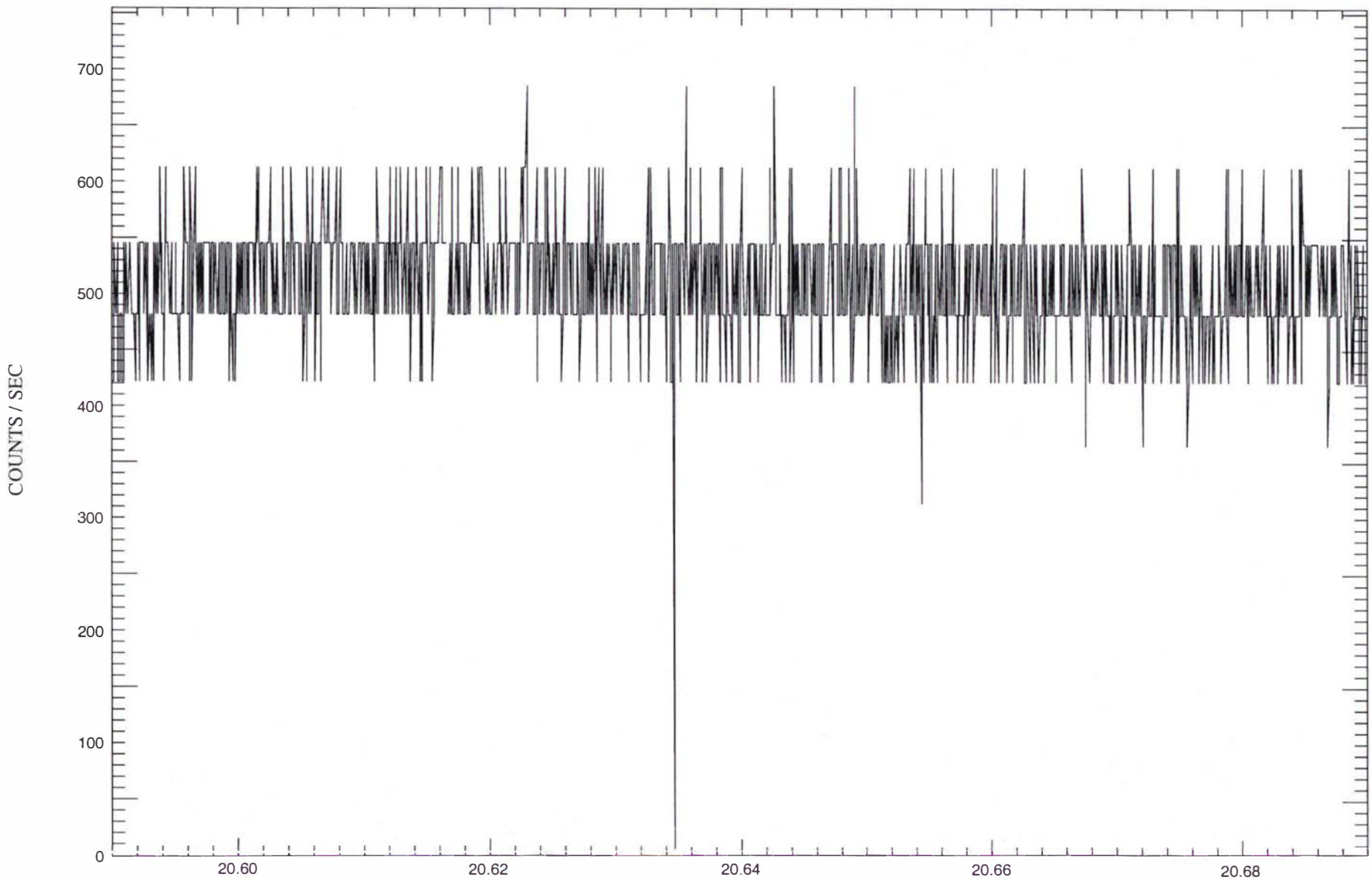




B# 2

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 15/09/2001 DOY = 258 01/22/02

CALIBRATION DATA INCLUDED



From guidorzi@fe.infn.it Sat Sep 15 23:58 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
Date: Sun, 16 Sep 2001 08:50:05 +0200 (MET DST)

ikGRB[295] #LSs: 1 Good HRR: 0
SW Trigger Time (OBT): 55653.991
UTC: Sun, 16 Sep 2001 03:18:40:42721 11920

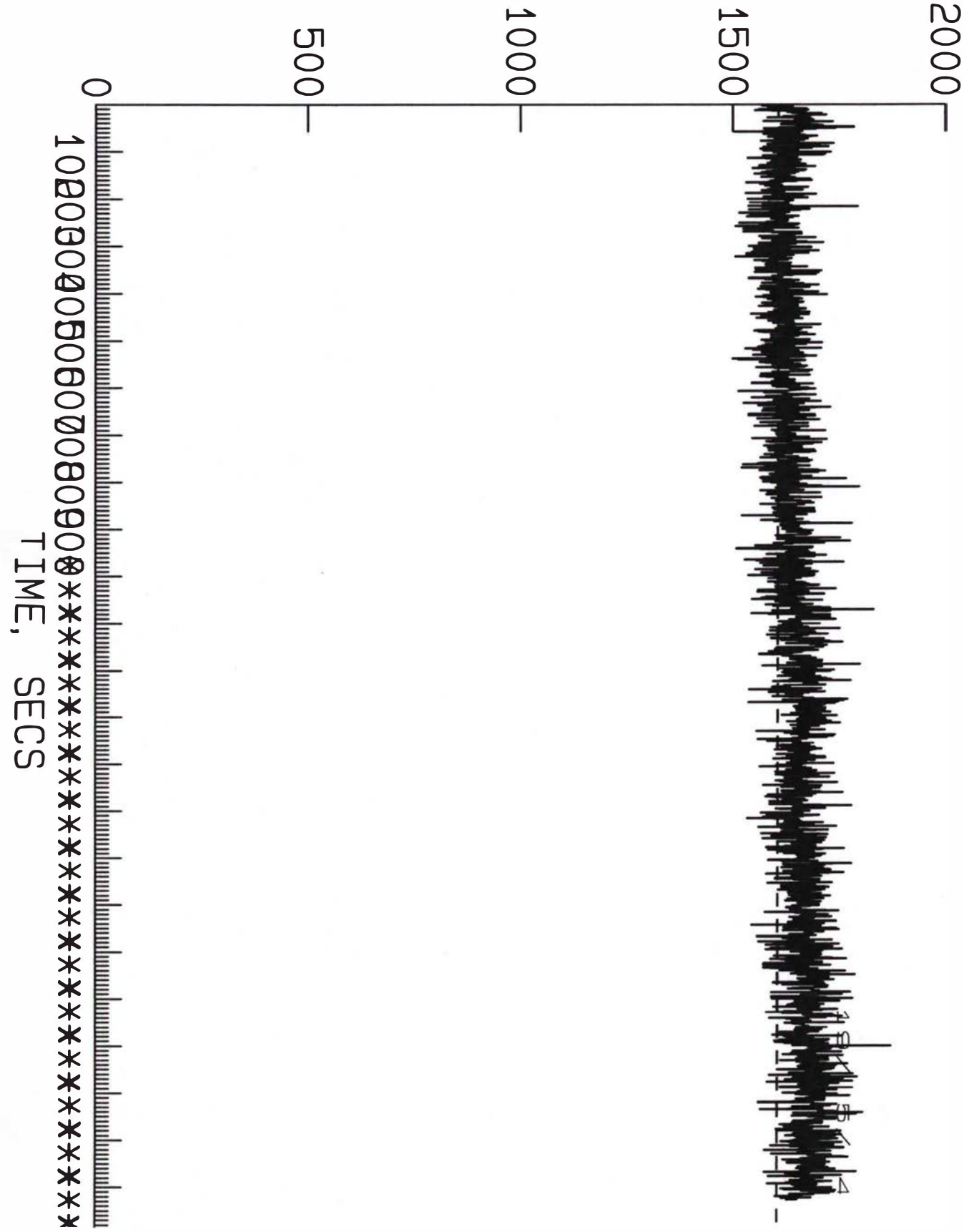
Nsig(trg):	4.3	3.1	0.0	0.0	3.3	3.1	0.3	1.2
Nsig(pfl):	4.3	3.1	0.0	0.0	3.3	3.1	0.0	0.0
Bkg lev. :	777	885	816	695	879	921	913	928
ChiSq R. :	0.997	0.930	1.209	1.208	0.836	1.023	1.043	1.058
Peak fl. :	119	93	0	0	99	94	0	0
Error :	41.0	43.3	0.0	0.0	43.2	44.1	0.0	0.0
Fluence :	119	157	0	0	99	173	0	0
Error :	41.0	61.0	0.0	0.0	43.2	62.3	0.0	0.0

Dur (s) :	1.00	2.00	0.00	0.00		
Abundance:	1	2	0	0		
H. Ratio :	0.830	1.103	-1.000	-1.000		
HR Ratio :	0.753	-1.000	-1.000	-1.000	-1.000	-1.000
HR W-ave :	0.935	+/- 0.362				

SAX GRBM 16/09/01 9920.400

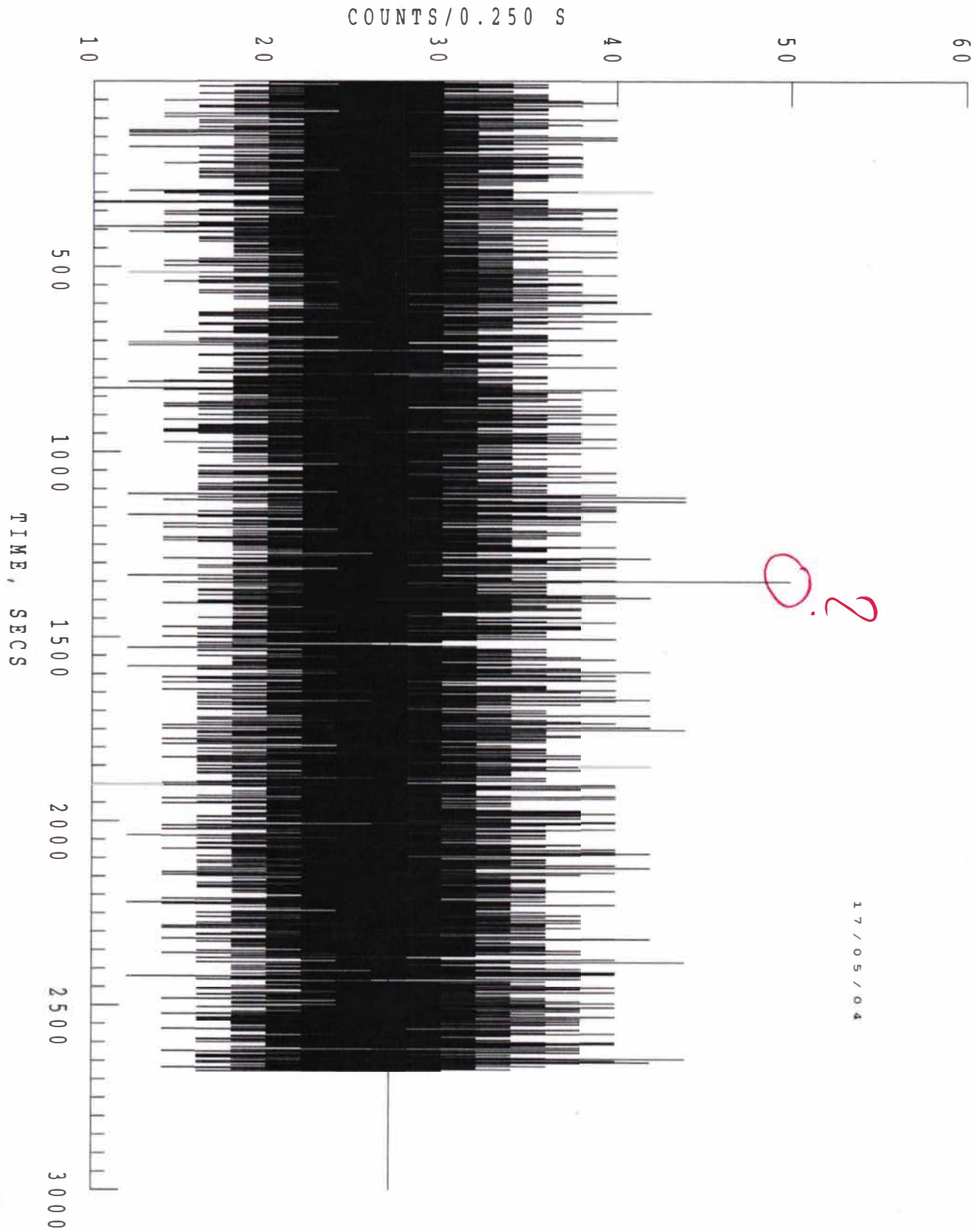
40- 700 keV

COUNTS/1.000 S



MS01 16/09/01 10548.827

50- 3000 keV

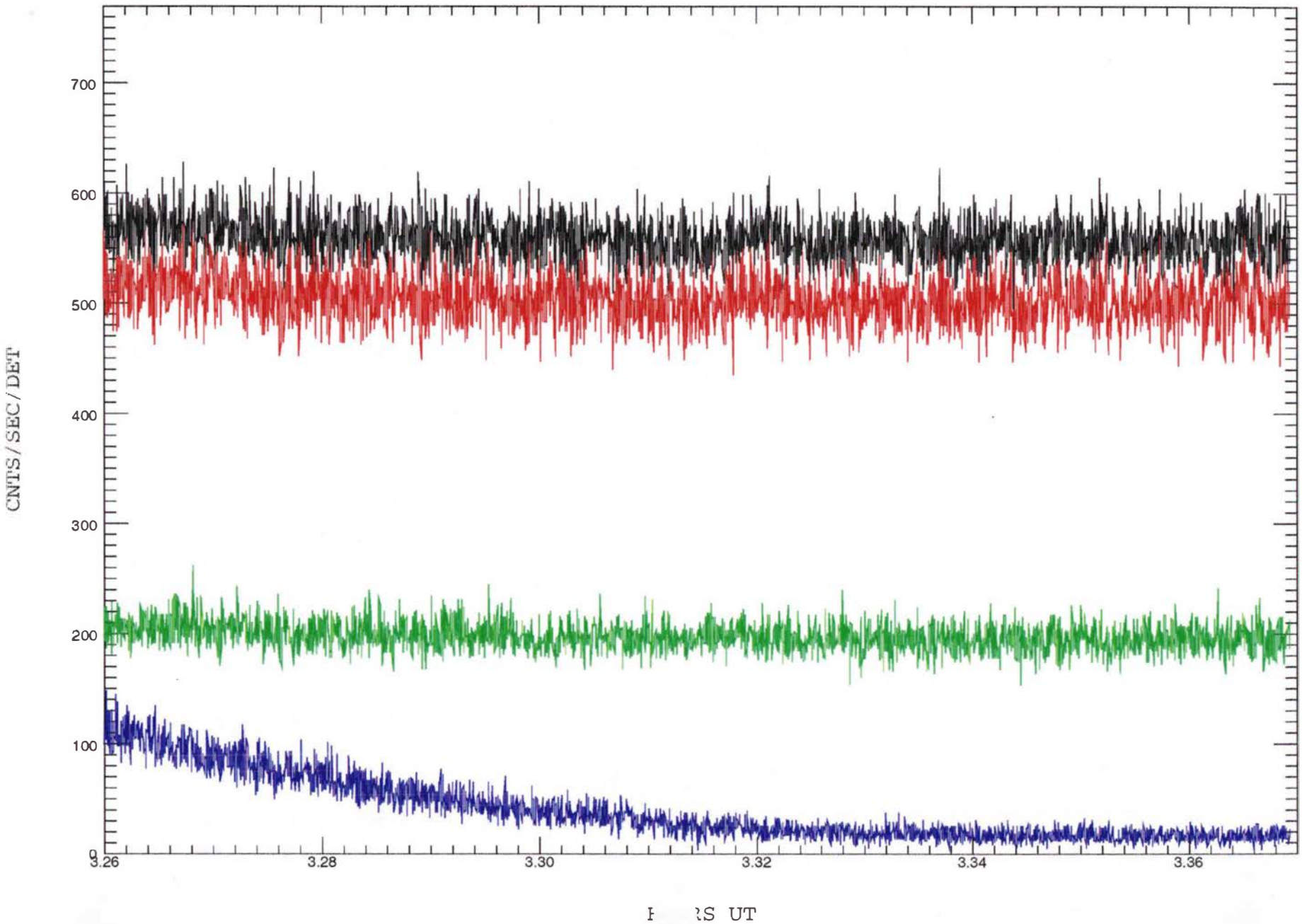


FREGATE SURVEY (TH) TIME HISTORY (AVG x1) -- DETECTORS 1-4 SUMMED (SAX_20010916_11920)

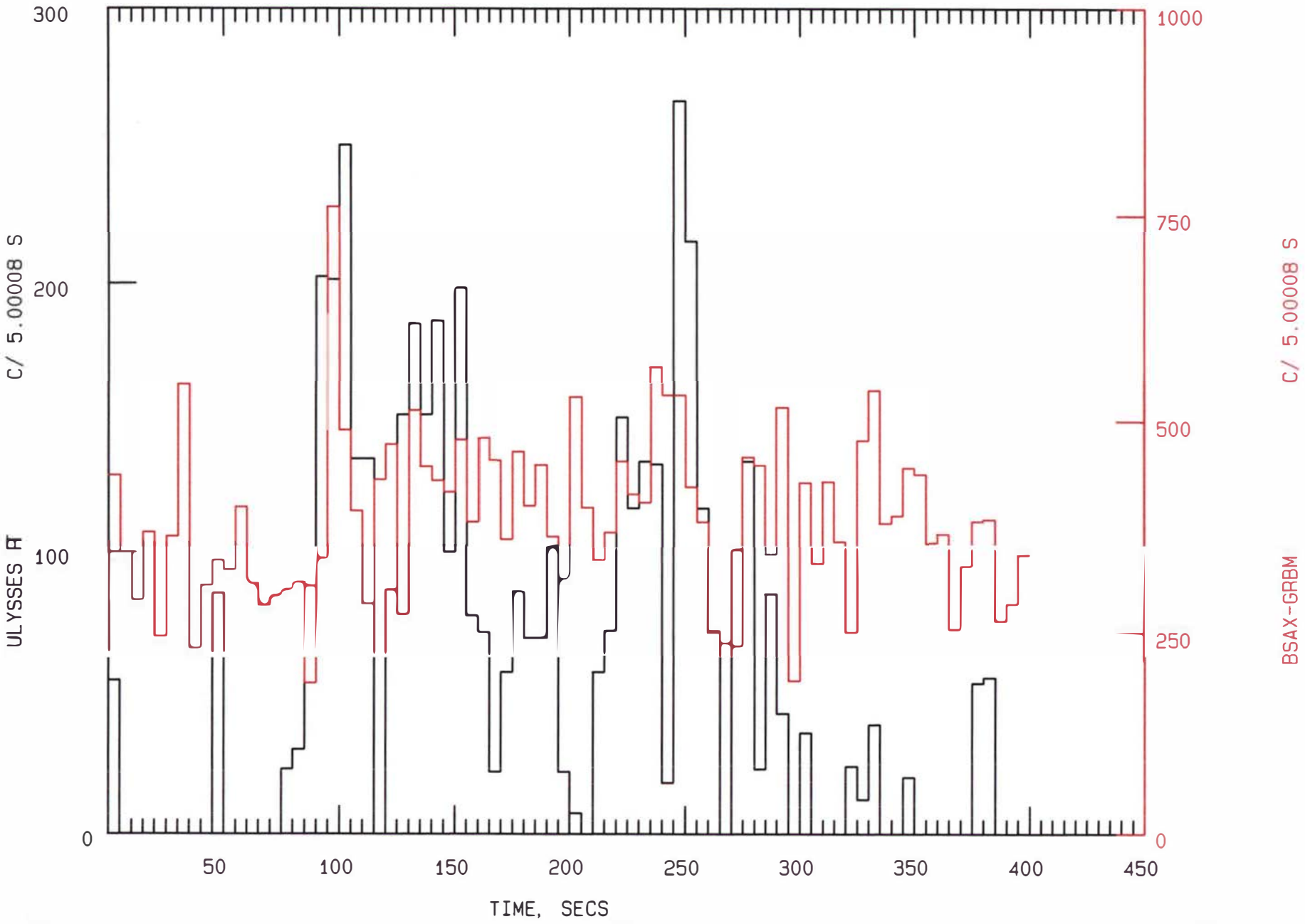
BEG TIME: 16/09/01 DOY 259 Julian 2452169.63583 UT = 03.260 03:15:36 (11736.000 secs) [sct = 0019 4bb2 4385 e1c6]
END TIME: 16/09/01 DOY 259 Julian 2452169.64042 UT = 03.370 03:22:12 (12132.000 secs) [sct = 0019 4bb2 5b20 5e17]

Chan 1:[E1=18 E2=103] Chan 2:[E3=18 E4=78] Chan 3:[E5=20 E6=510] Chan 4:[E6=510 ->]

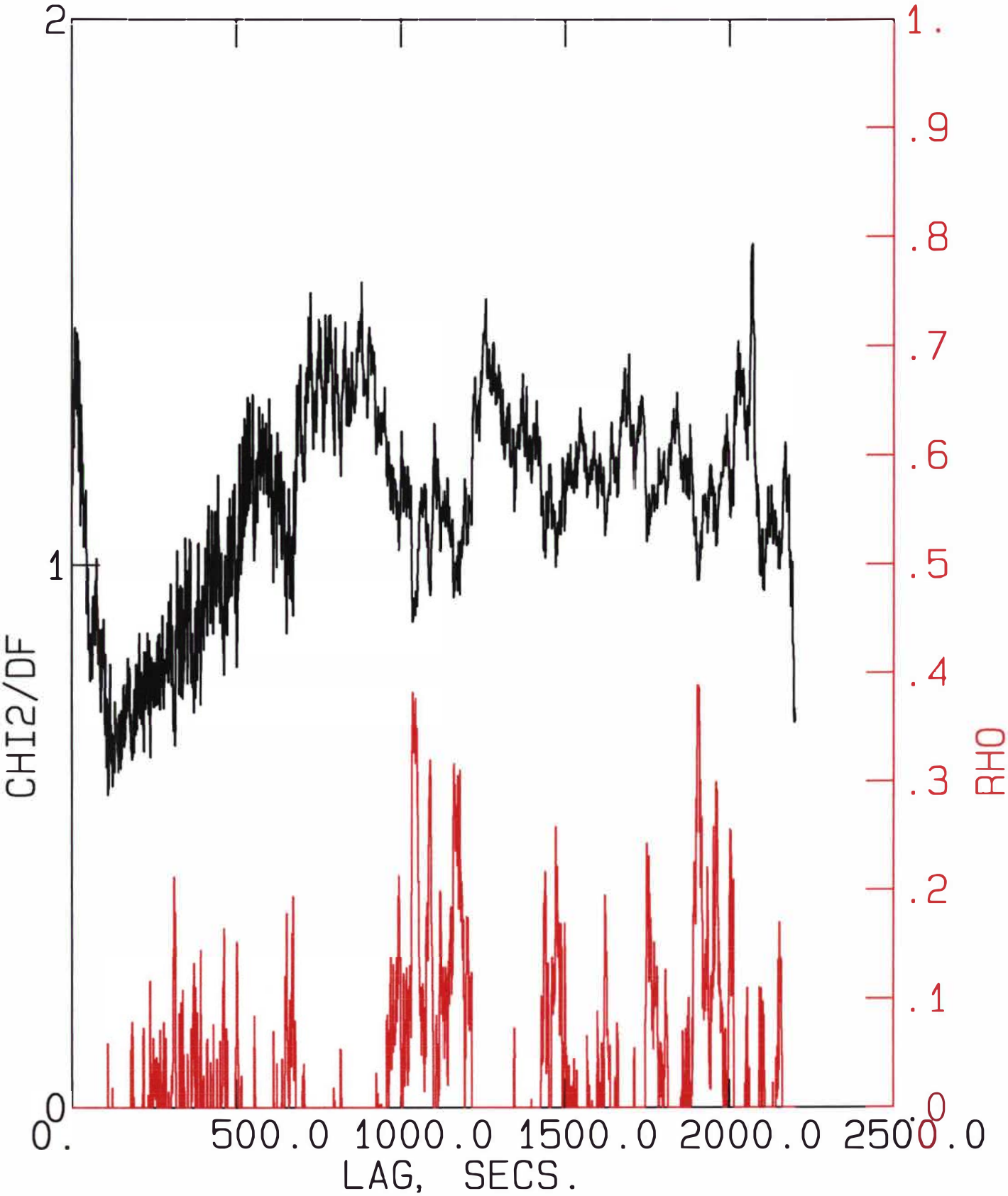
Channel 1 + 300 Channel 2 + 200 Channel 3 + 100 Channel 4 + 0



ULYSSES RT-BSAX-GRBM CORRELATION 16/ 9/01 11380.155 17/ 1/ 8



ULYSSES RT-BSAX-GRBM CORRELATION 16/ 9/01 11380.155



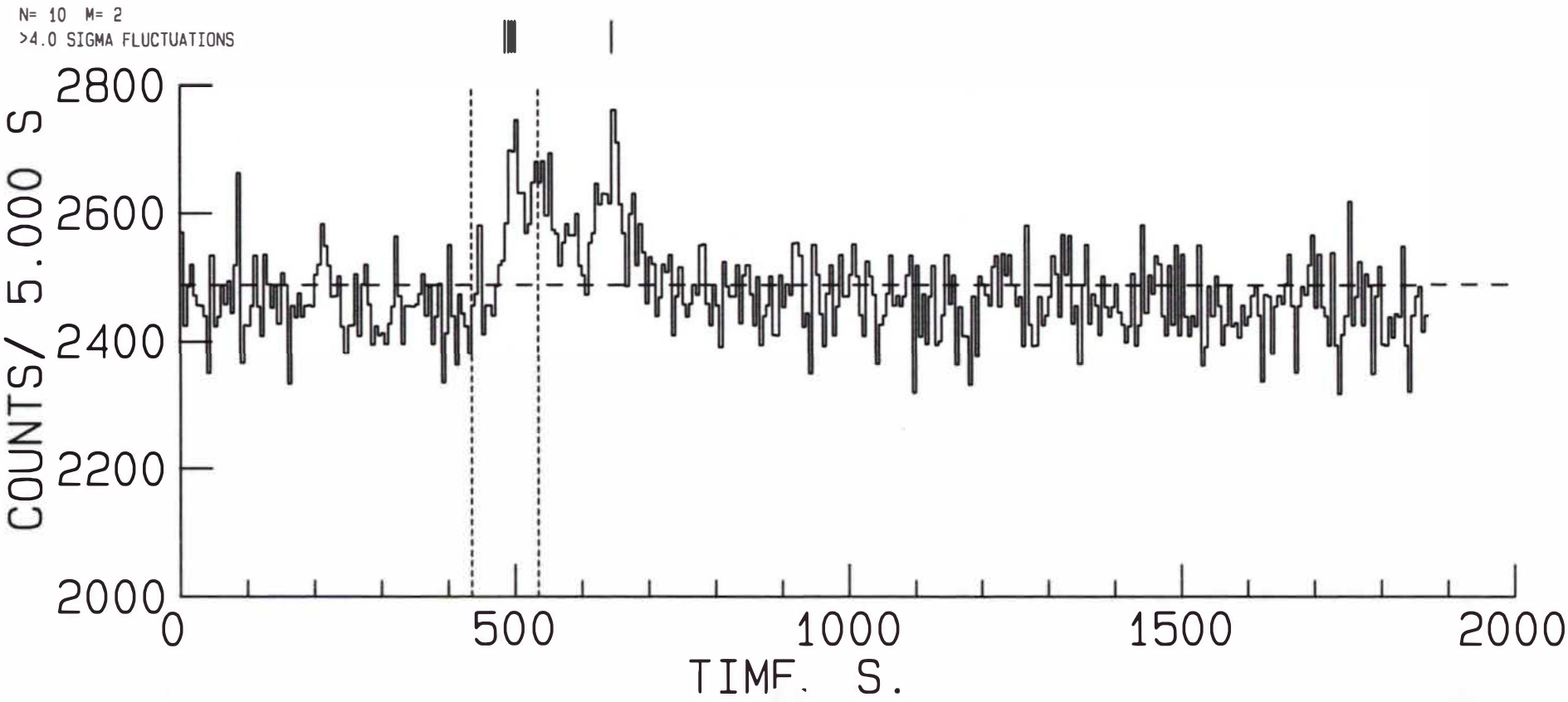
ULYSSES RT

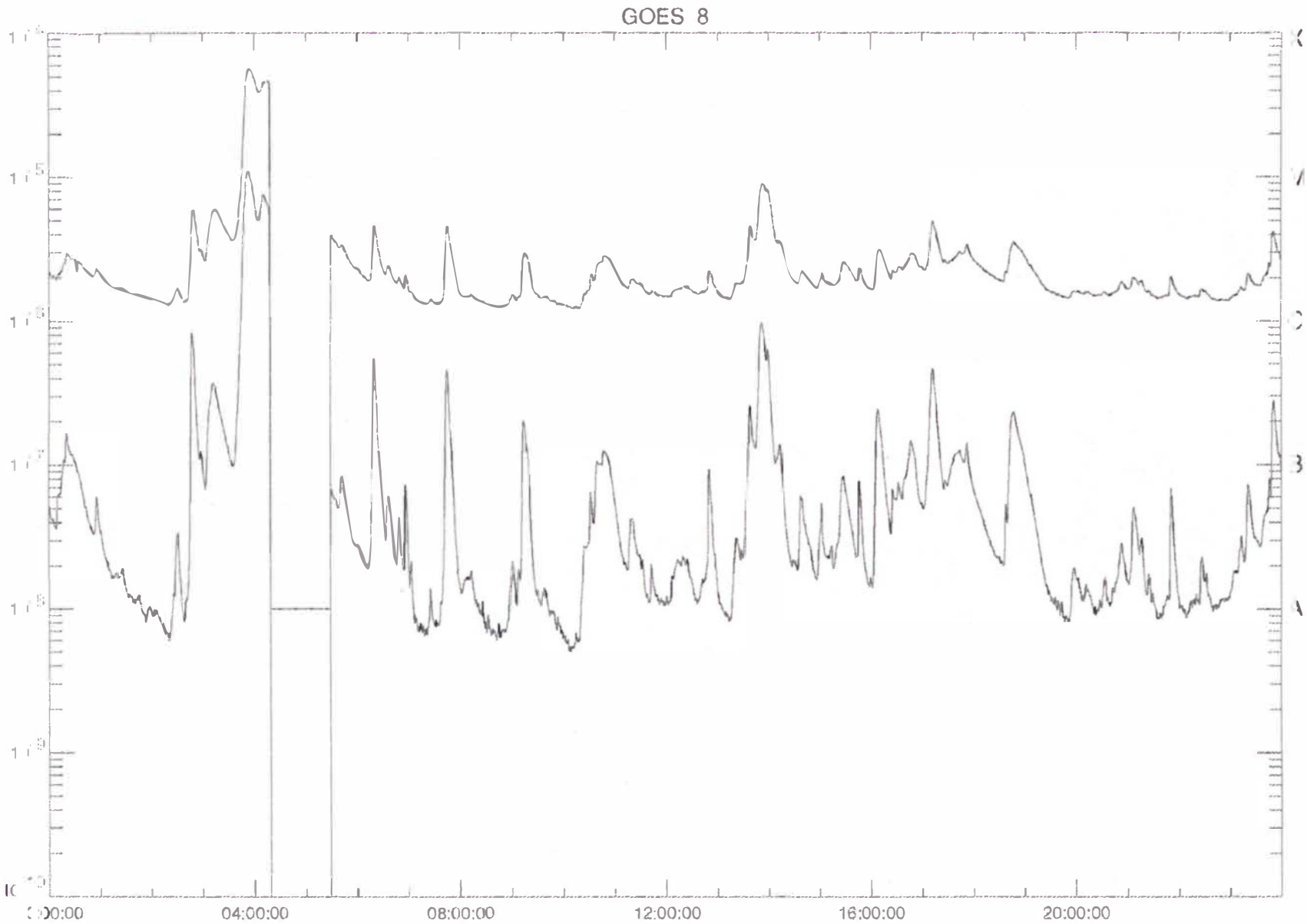
17/ 1/ 8

16/ 9/ 1 10980.136 s

0.250 S INTERVALS REGROUPED BY 20

22- 152 keV

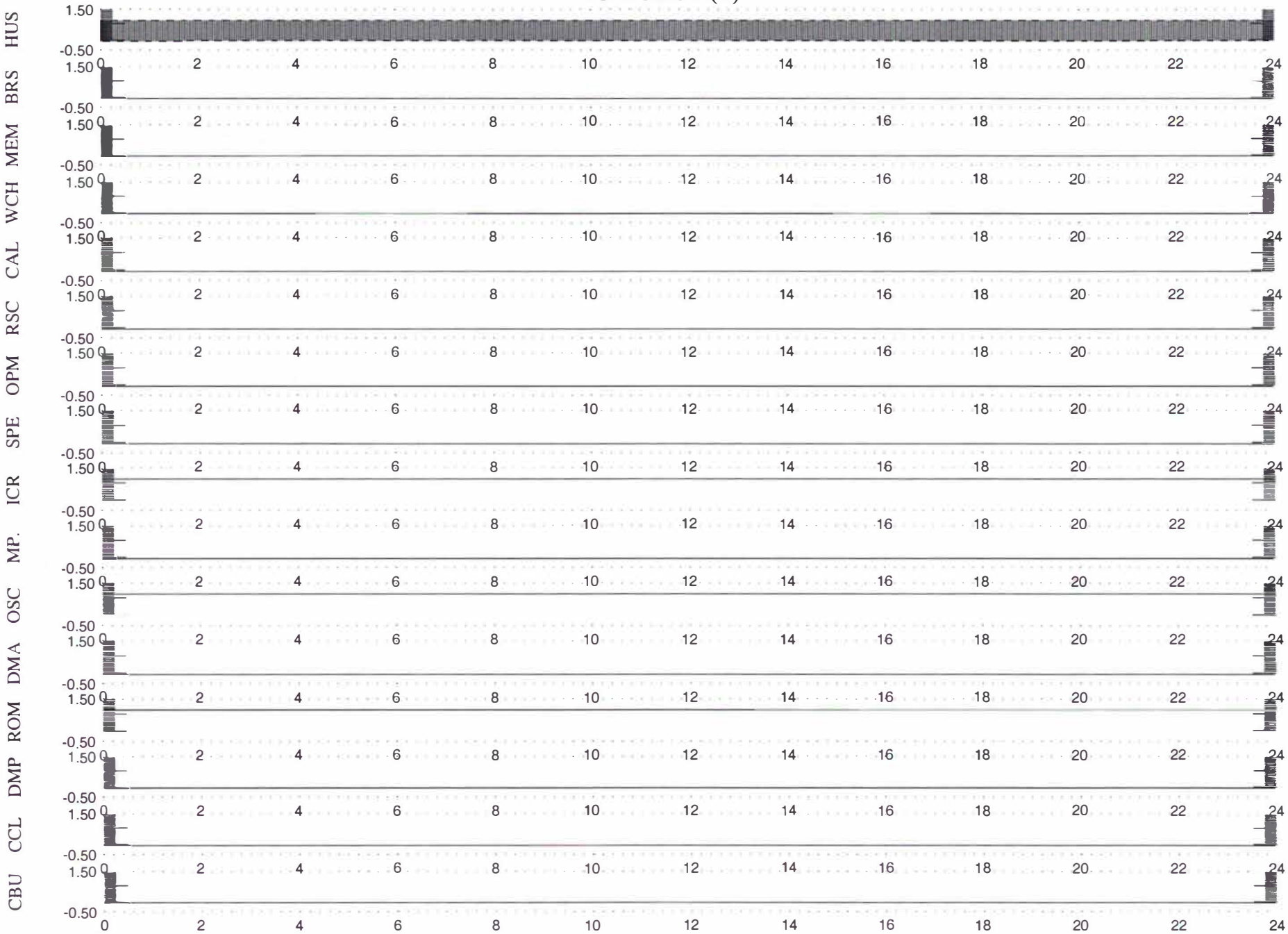




Data Start: 01/09/16, 0000:00 Plot created: 01/09/20, 0950
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

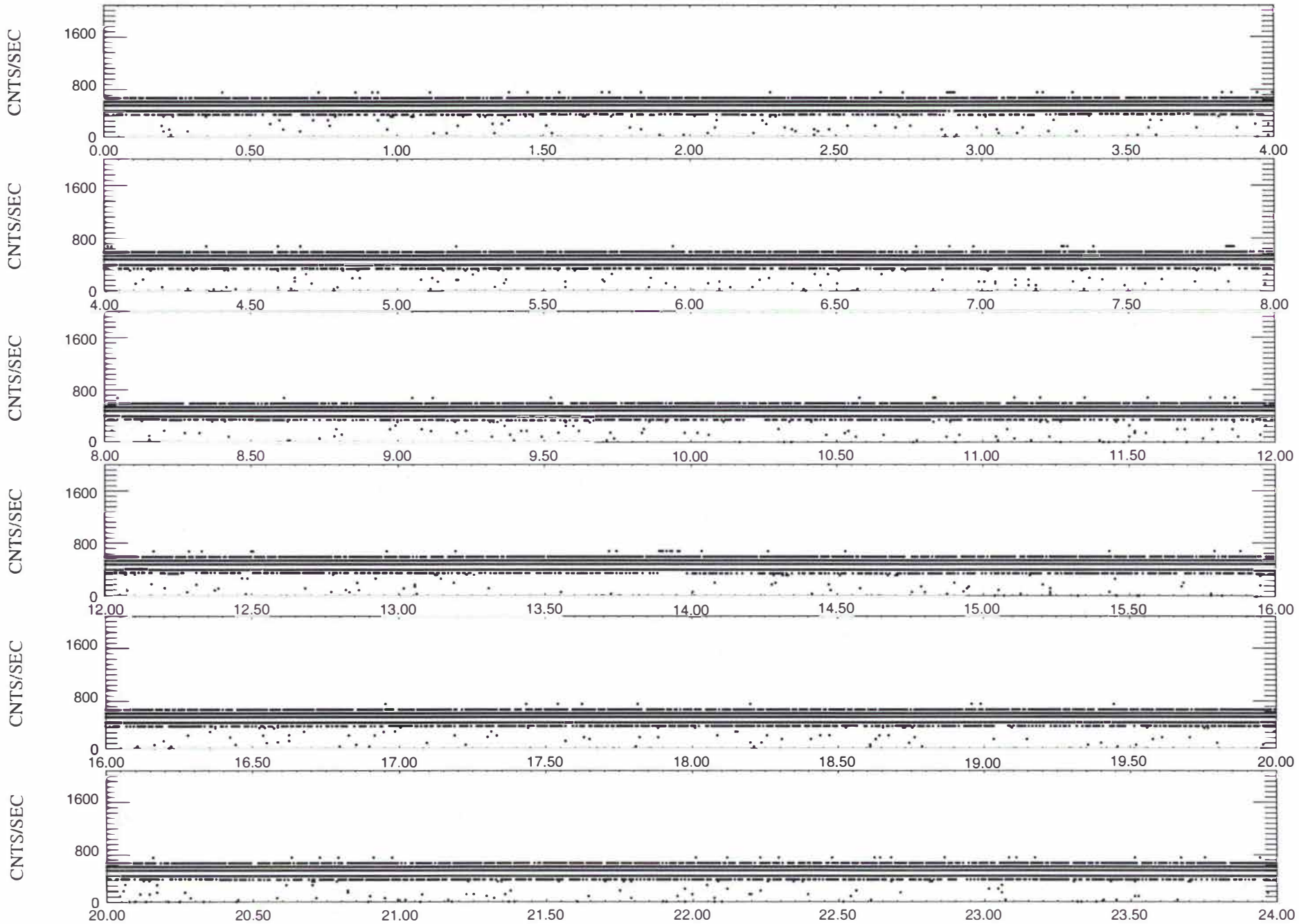
HUS MODES EDR day 259, year 2001 to day 259, year 2001 01/22/02

NO BURST (3)



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 16/09/2001 DOY = 259 01/22/02

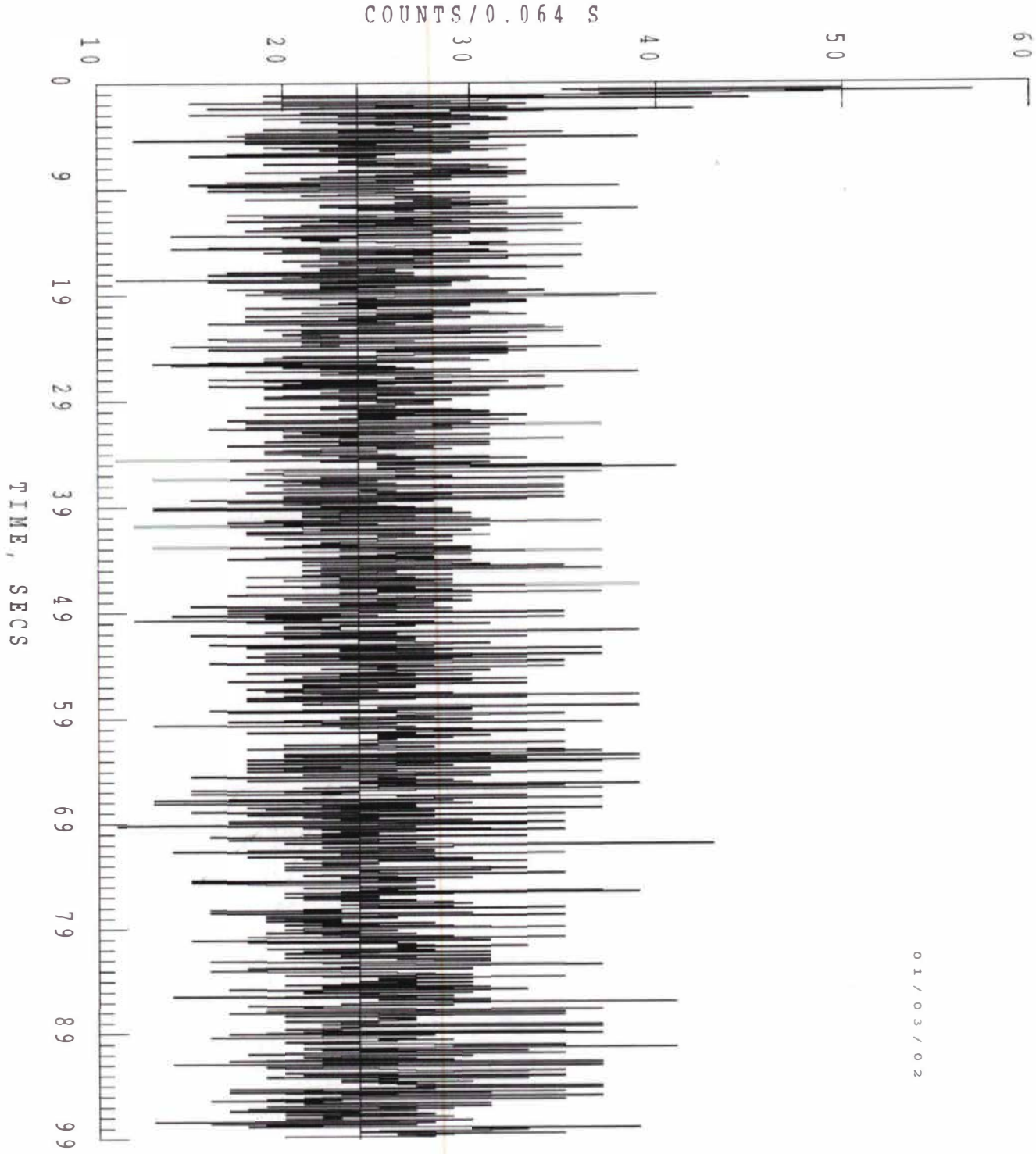
CALIBRATION DATA INCLUDED



UNIVERSAL TIME

KONUS2 17/09/01 6336.045

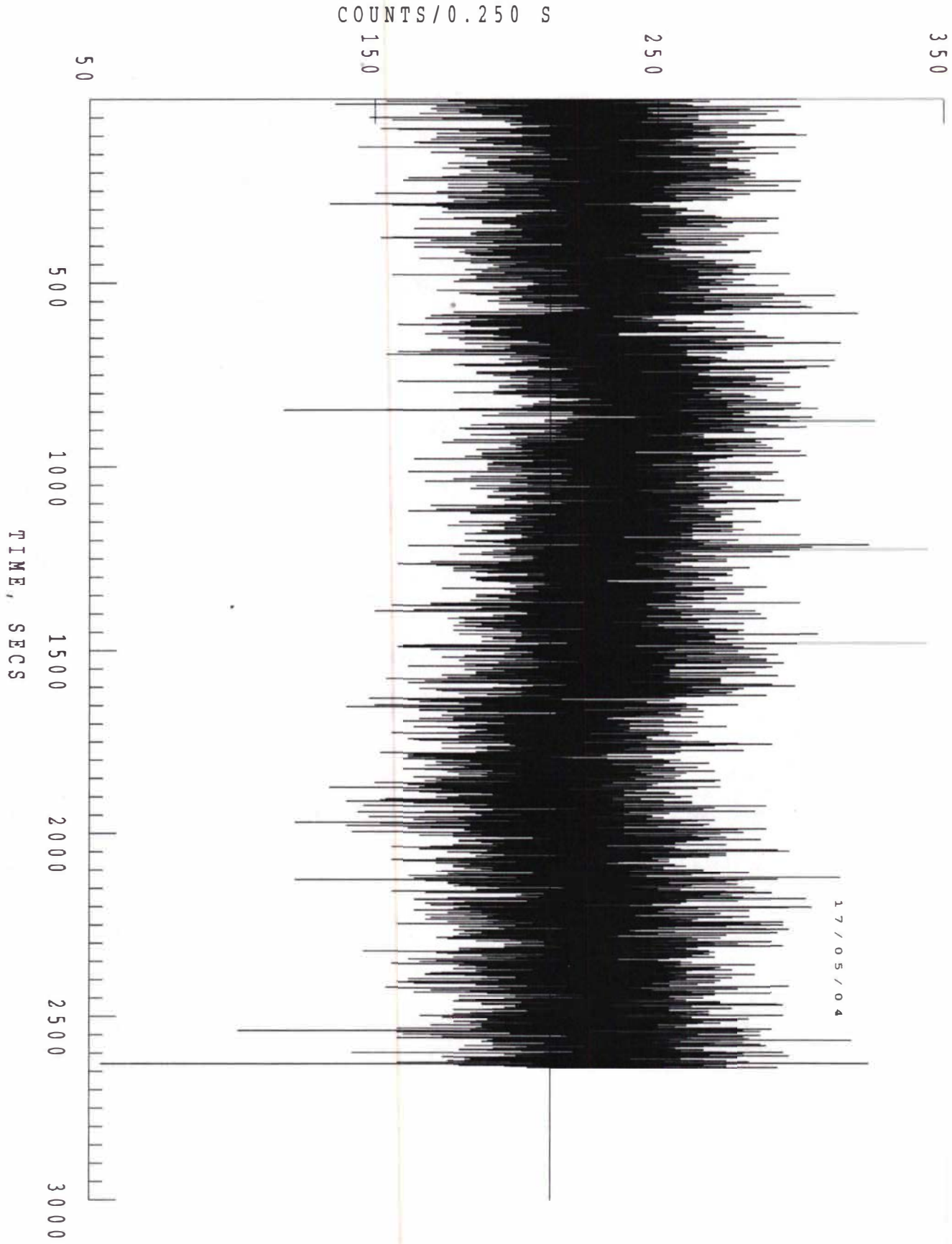
50- 200 keV GRB



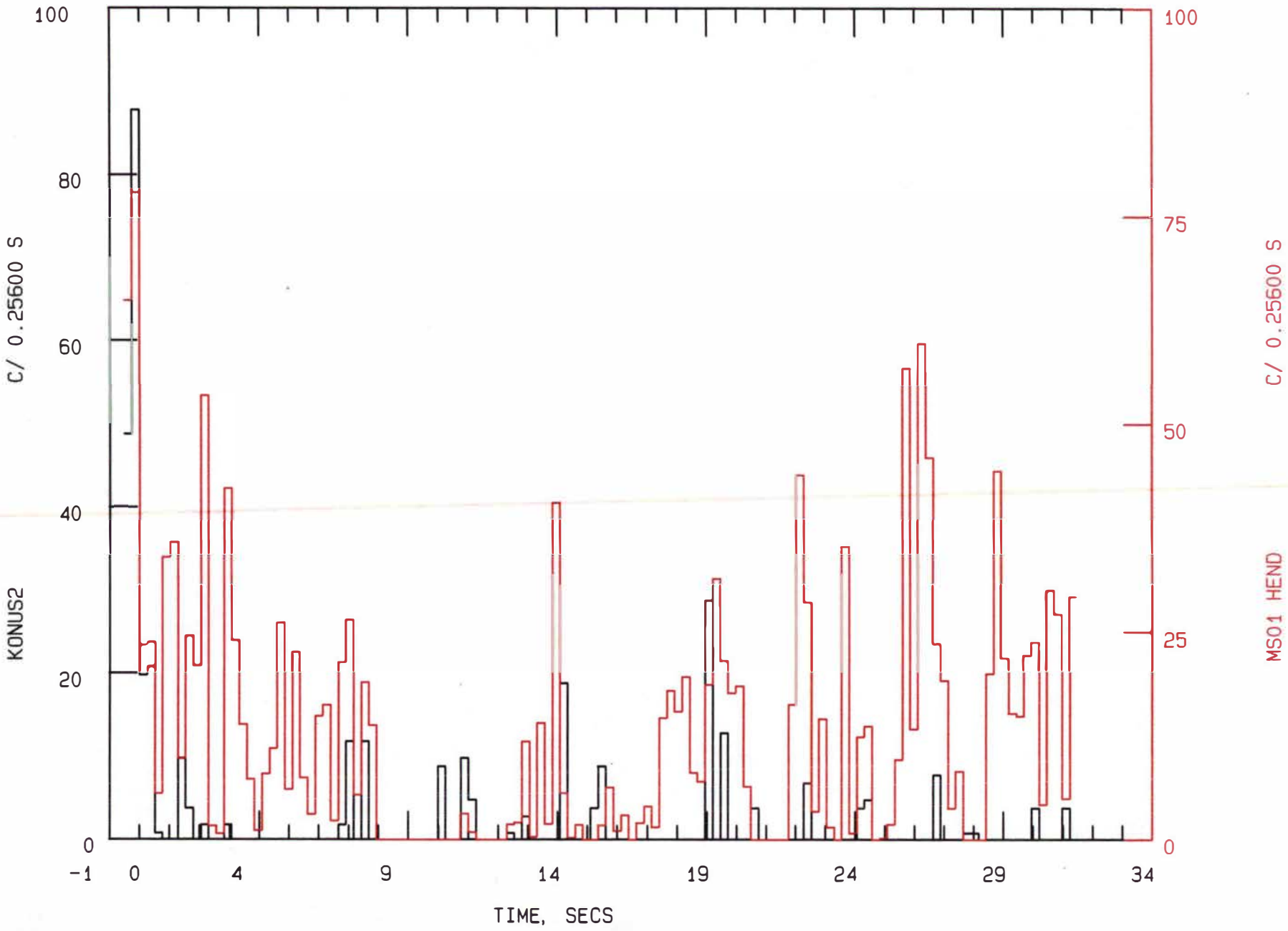
01/03/02

MS01 17/09/01 4987.300

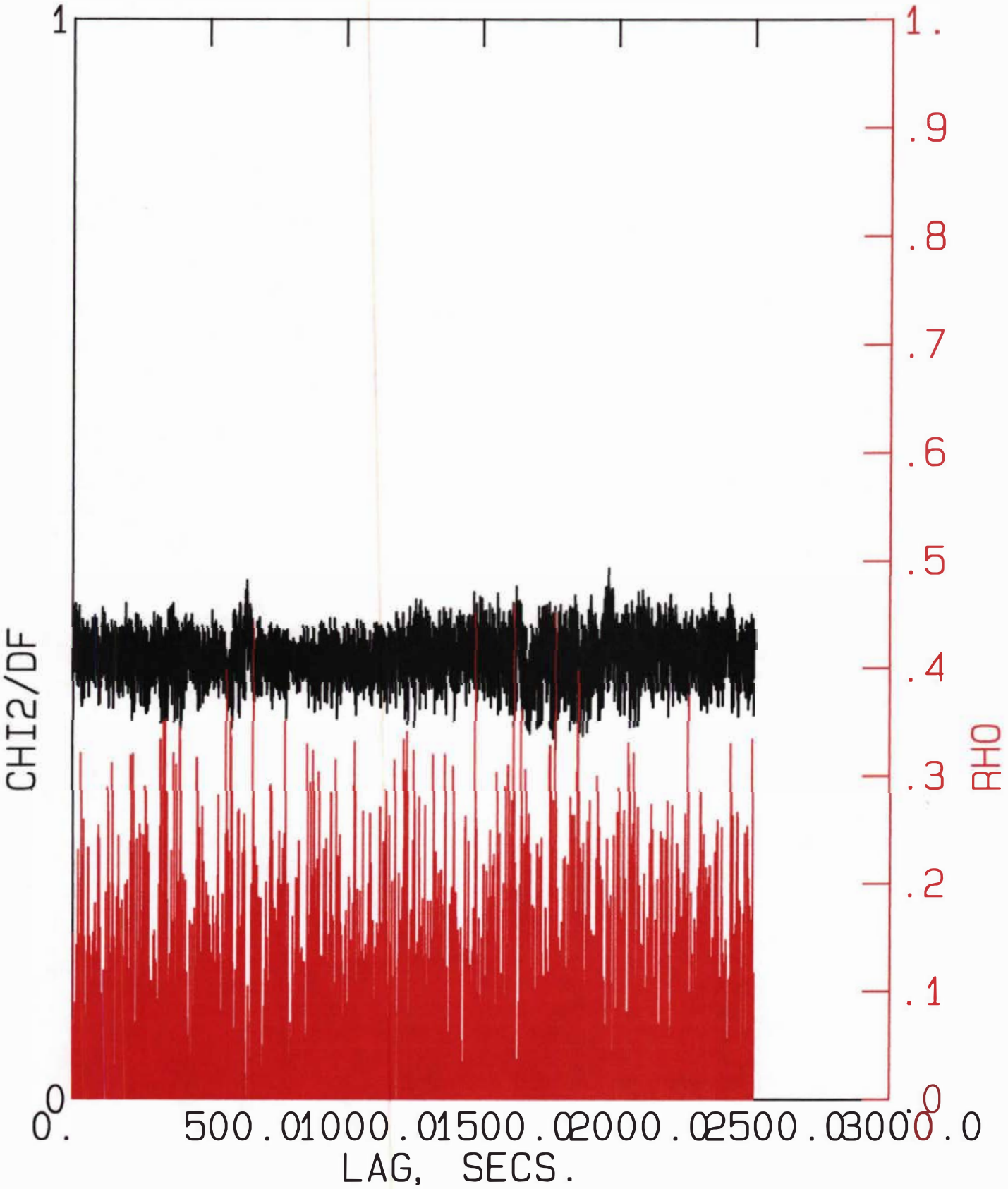
50- 3000 keV



KONUS2 -MS01 HEND CORRELATION 17/09/01 6336.045 18/ 5/ 4



KONUS2 -MS01 HEND CORRELATION 17/09/01 6336.045



KONUS 20010917 06336

ULYSSES RT 18/02/02

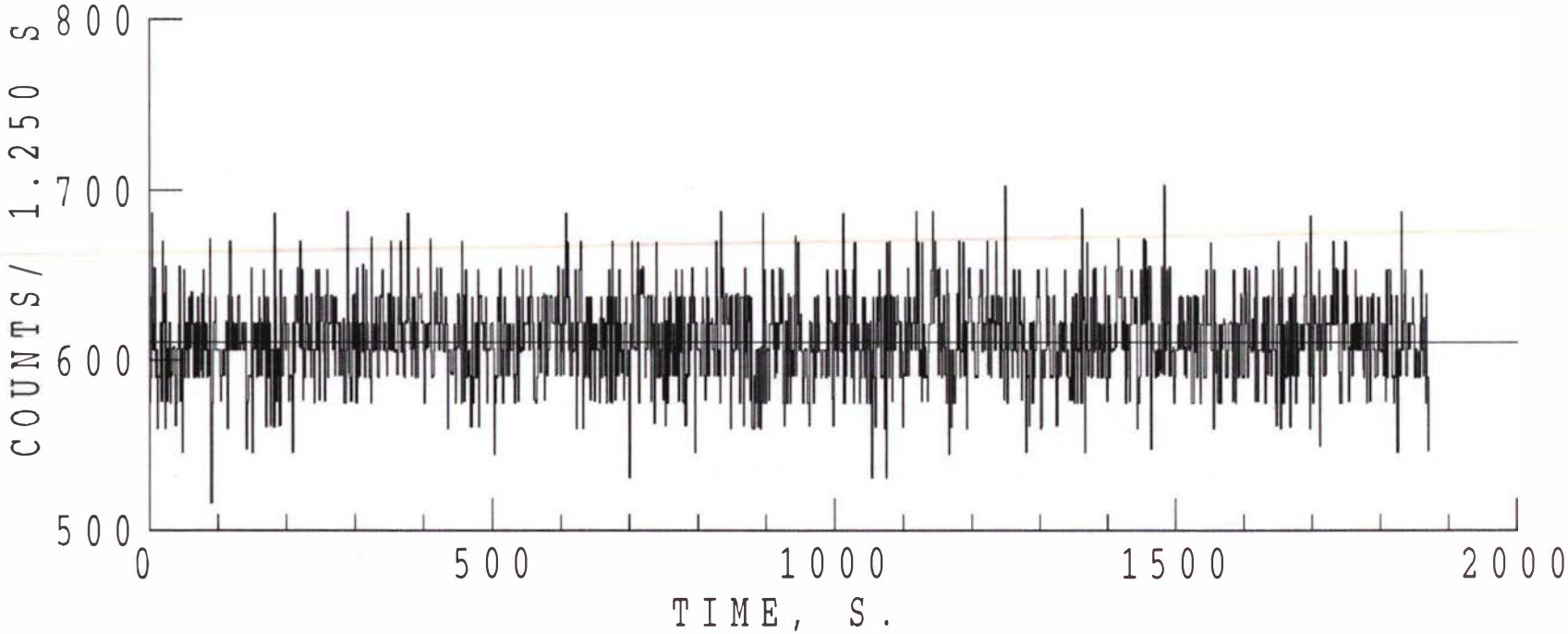
17/09/01 5400.233 s

0.250 S INTERVALS REGROUPED BY 5

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



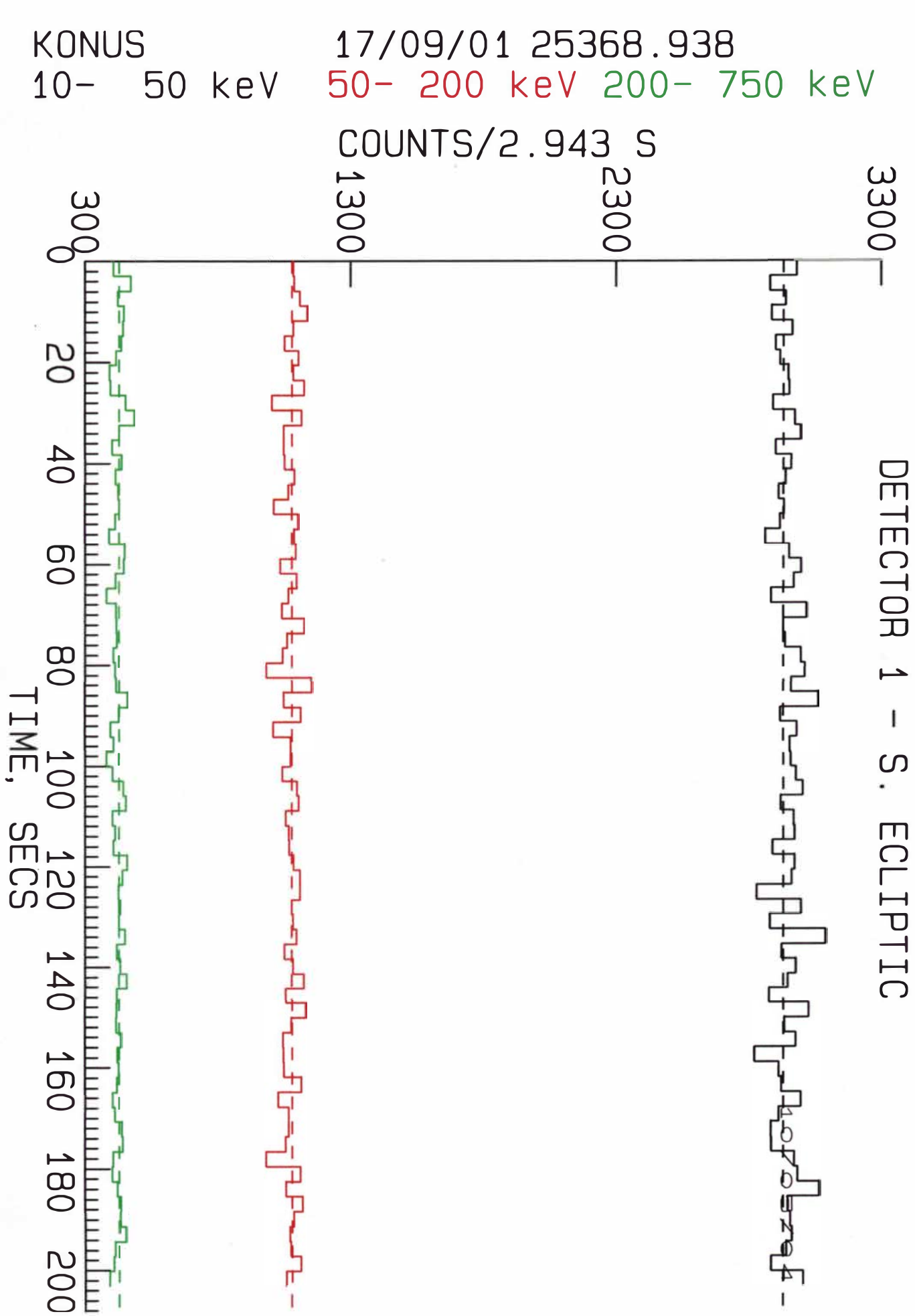
From guidorzi@fe.infn.it Mon Sep 17 02:38 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
`te: Mon, 17 Sep 2001 11:30:05 +0200 (MET DST)

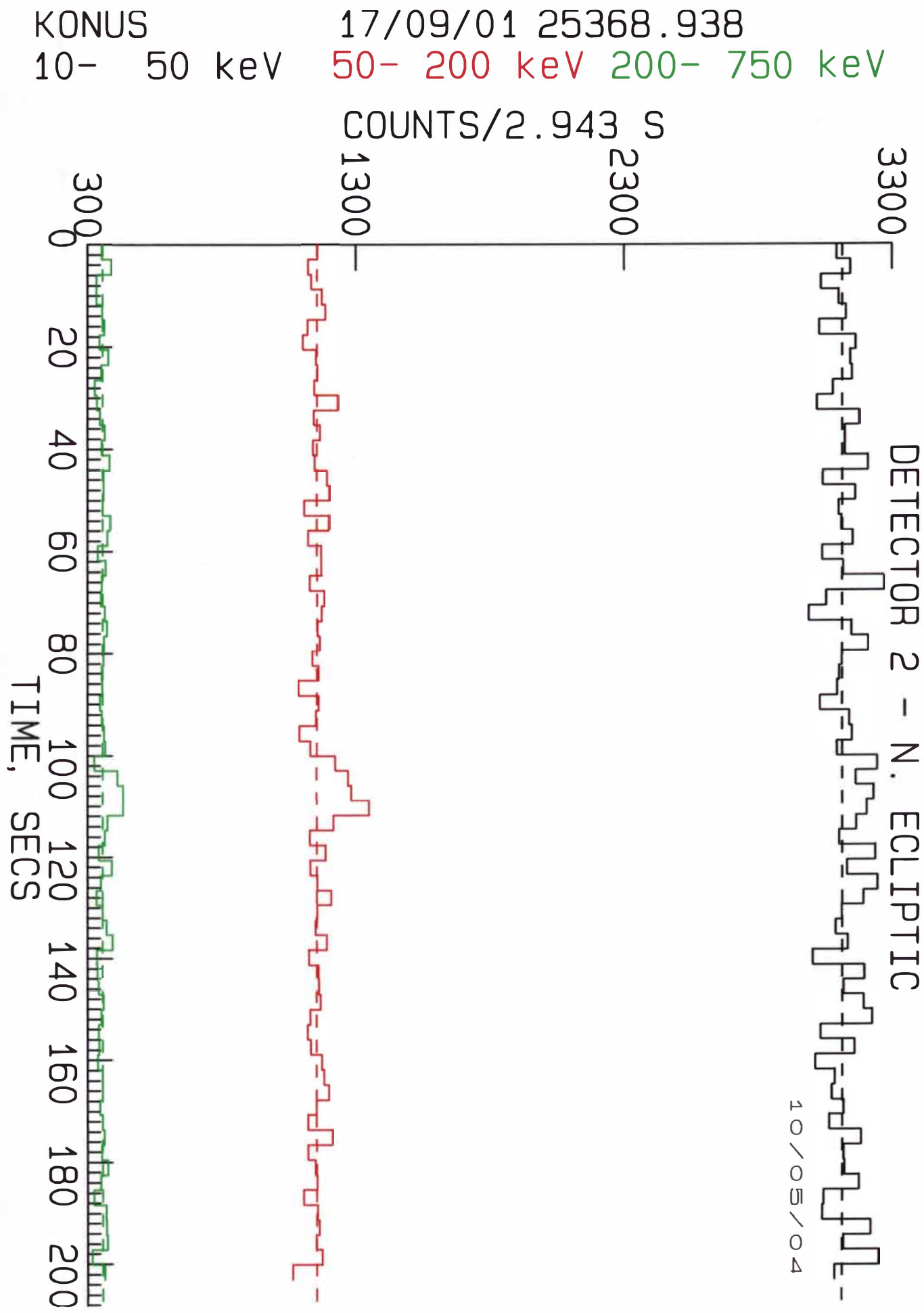
ıkGRB[296] #LSs: 3 Good HRR: 6
SW Trigger Time (OBT): 24535.989
UTC: Mon, 17 Sep 2001 07:04:34:39050

******Event 0 triggered on board: ev_time - onbtrig_time = 0.905

Nsig(trg):	7.1	8.9	4.8	2.5	6.5	8.9	4.8	3.1
Nsig(pfl):	7.1	8.9	4.8	4.3	6.5	8.9	4.8	4.3
Bkg lev. :	761	878	798	717	926	918	881	971
ChiSq R. :	0.904	1.289	1.207	1.240	0.981	1.132	1.277	1.288
Peak fl. :	197	263	135	115	198	269	141	134
Error :	41.6	45.0	41.7	39.5	45.4	46.0	43.7	45.7
Fluence :	1499	1922	276	495	1418	1808	311	557
Error :	135.4	146.1	71.4	95.6	147.9	148.7	75.0	110.8

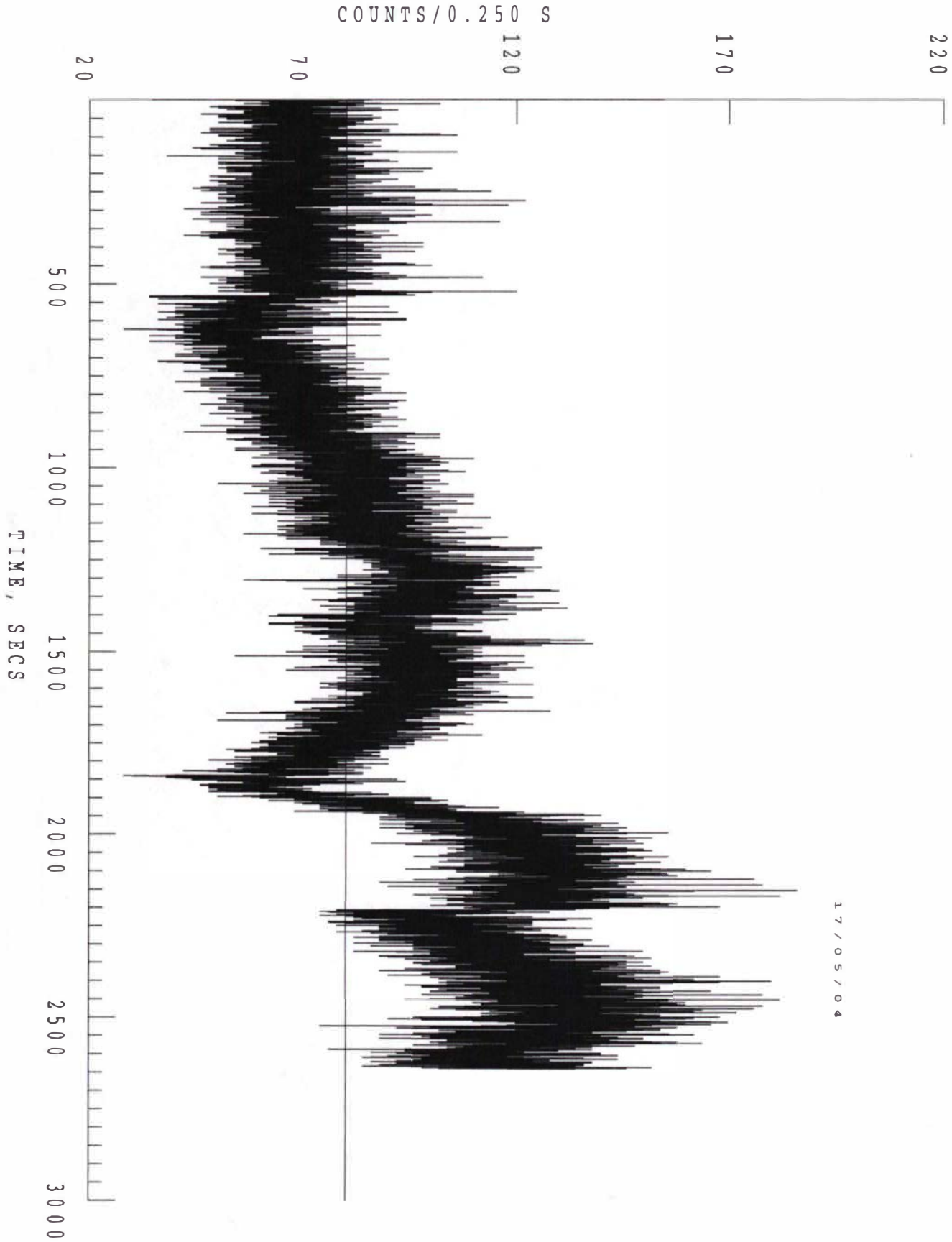
Dur (s) :	11.00	11.00	3.00	7.00		
Abundance:	11	11	3	6		
H. Ratio :	0.946	0.941	1.126	1.125		
HR Ratio :	1.006	0.840	0.841	0.835	0.836	1.001
HR W-ave :	0.961 +/- 0.078					


KONUS
17/09/01 25368.938
10- 50 keV
50- 200 keV
200- 750 keV
COUNTS/2.943 S
3300
2300
1300
300
0
20
40
60
80
100
120
140
160
180
200
TIME, SECS
DETECTOR 1 - S. ECLIPTIC


KONUS
17/09/01 25368.938
10- 50 keV
50- 200 keV
200- 750 keV
COUNTS/2.943 S
3300
2300
1300
300
0
20
40
60
80
100
120
140
160
180
200
TIME, SECS
DETECTOR 2 - N. ECLIPTIC
10/05/04

MS01 17/09/01 24139.627

50- 3000 keV



GRBM 20010917 24840

ULYSSES RT

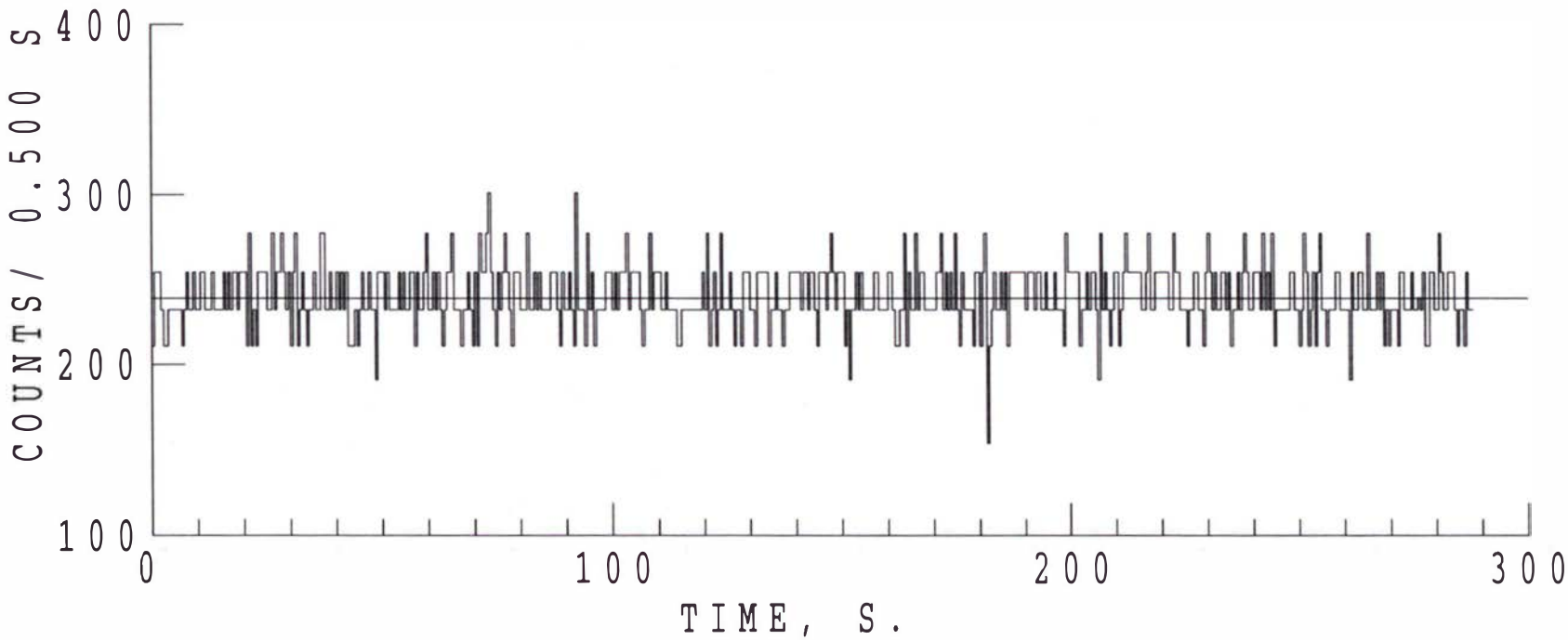
17/01/08

17/09/01 24696.053 s

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



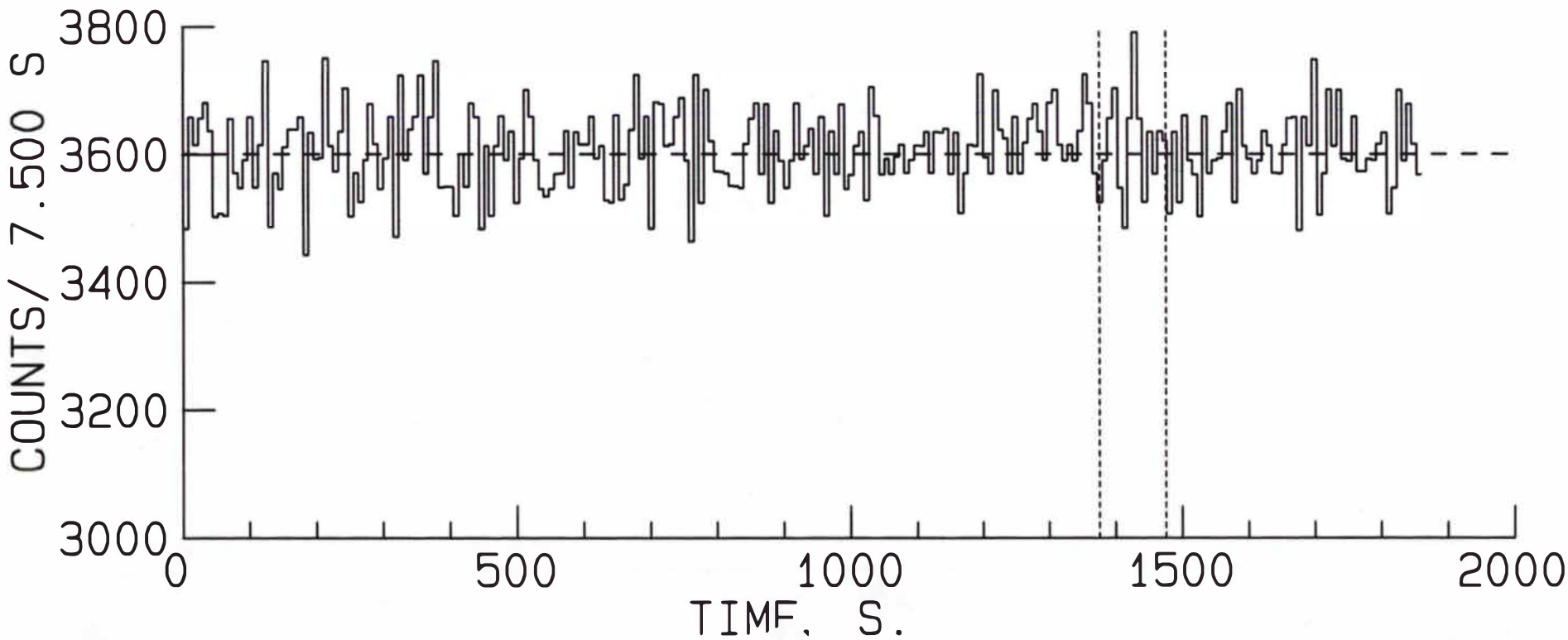
ULYSSES RT

18/ 5/ 4

17/ 9/ 1 24558.053 s

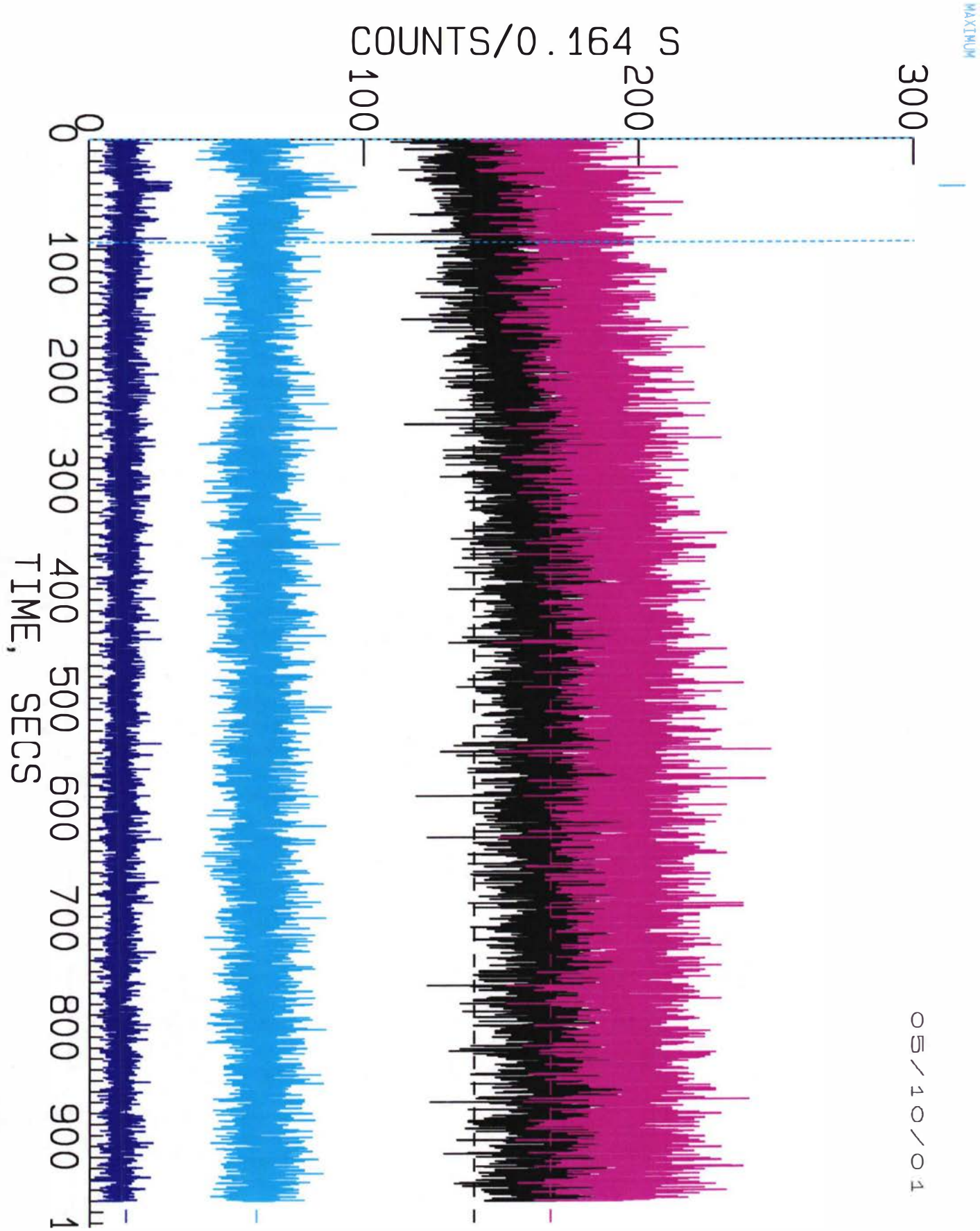
0.500 S INTERVALS REGROUPED BY 15

22- 152 keV



HETE-II 17/09/01 56880.372

18- 103 keV 18- 78 keV 20- 510 keV 510-1000 keV



05/10/01

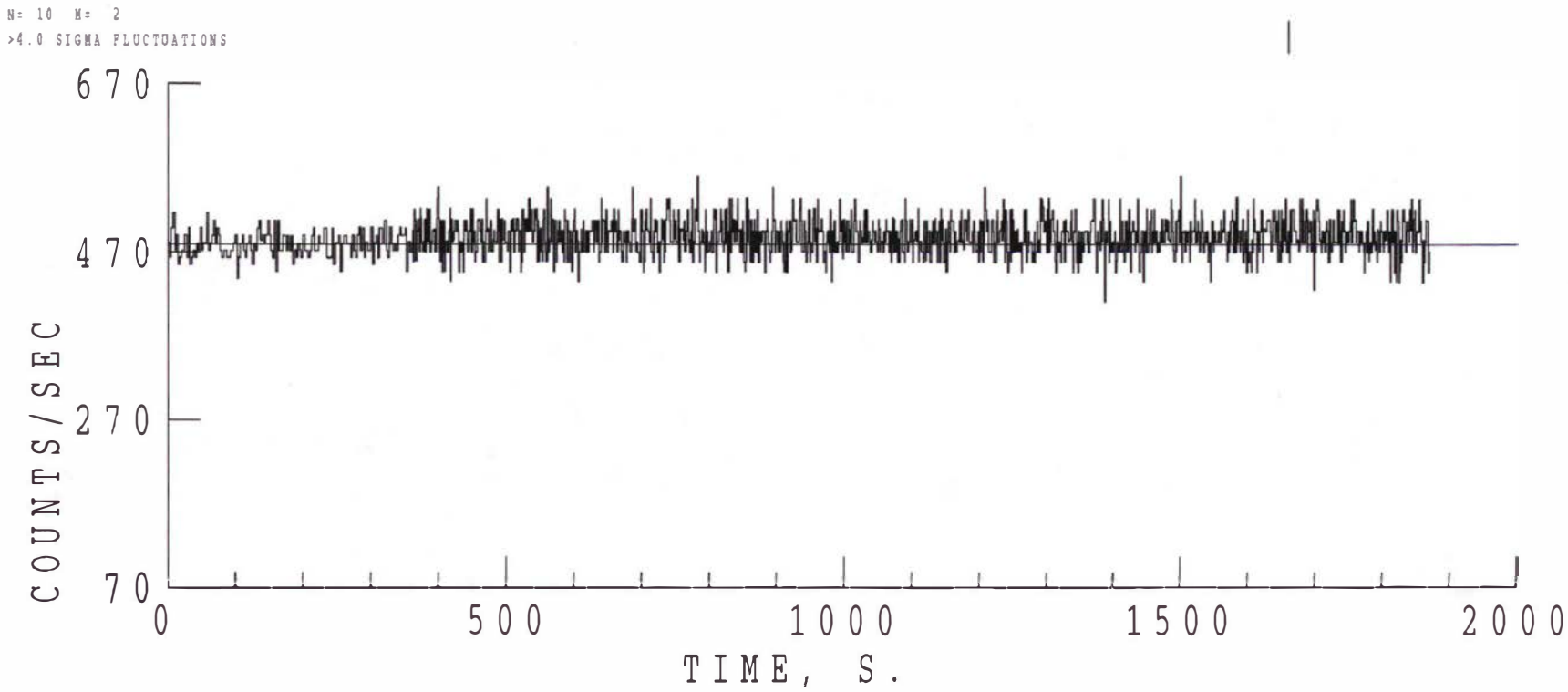
FREG 1756 20010917 56922

ULYSSES RT 03/10/01

17/09/01 55980.070 s

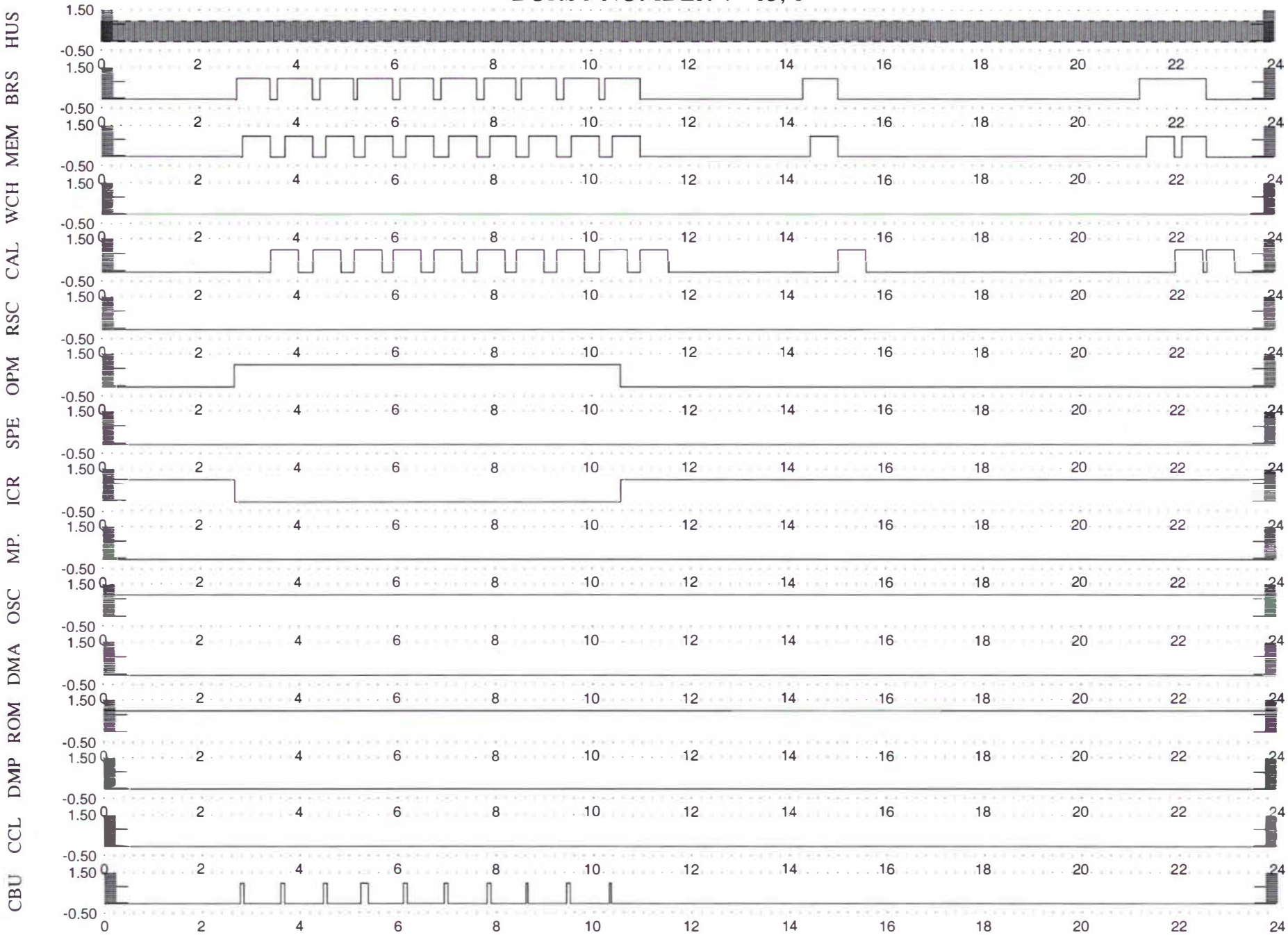
INTERVALS REGROUPED BY 5

0- 0 keV



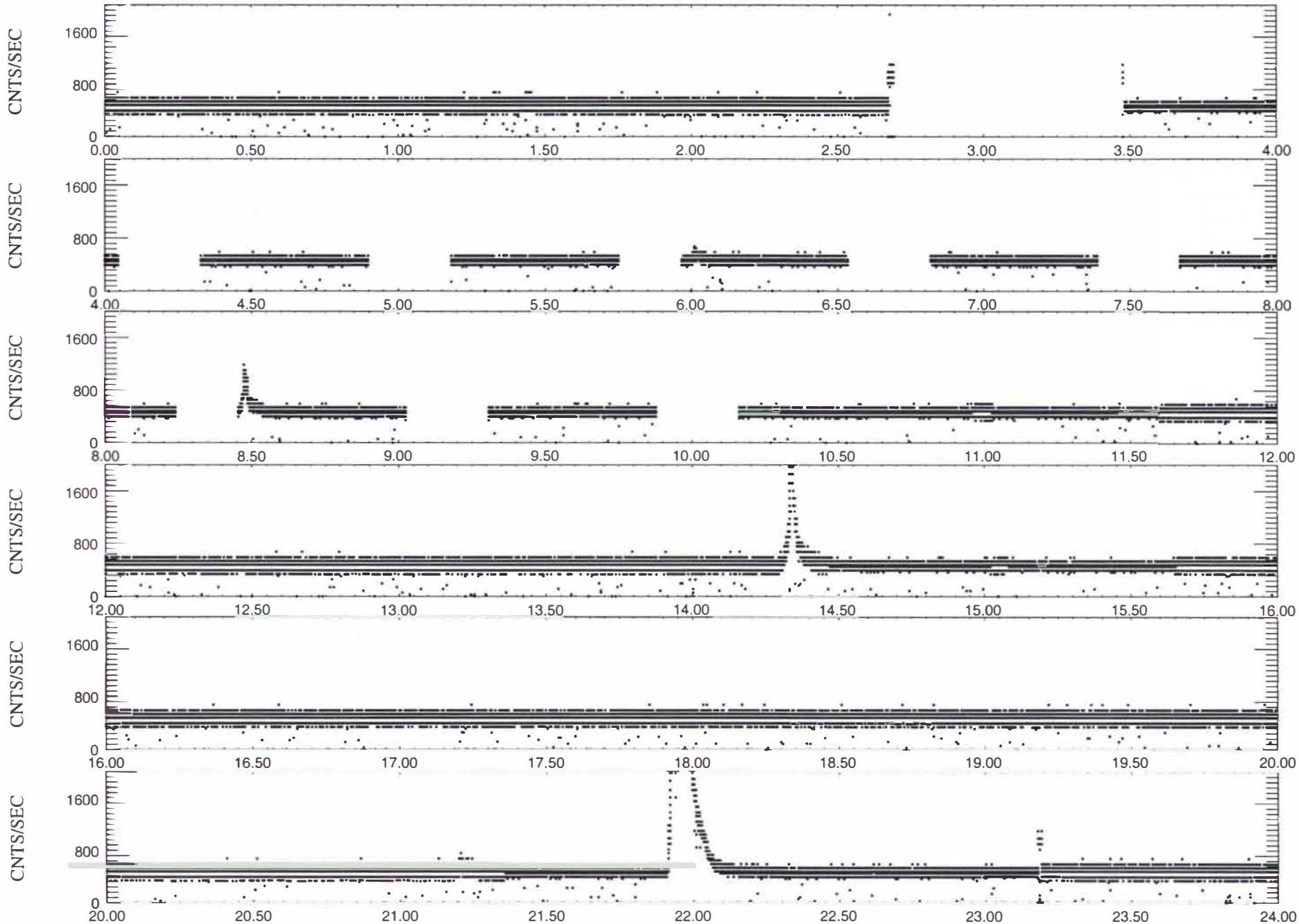
HUS MODES EDR day 260, year 2001 to day 260, year 2001 01/22/02

BURST NUMBER 4 - 15, 0



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 17/09/2001 DOY = 260 01/22/02

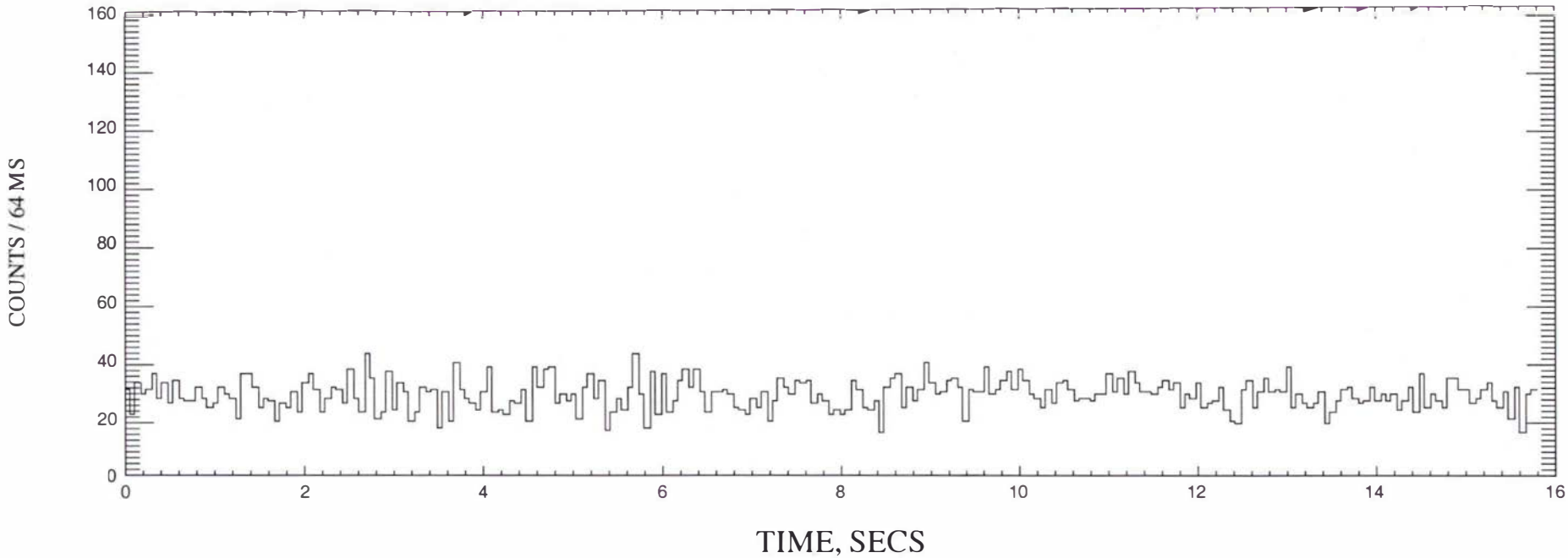
CALIBRATION DATA INCLUDED

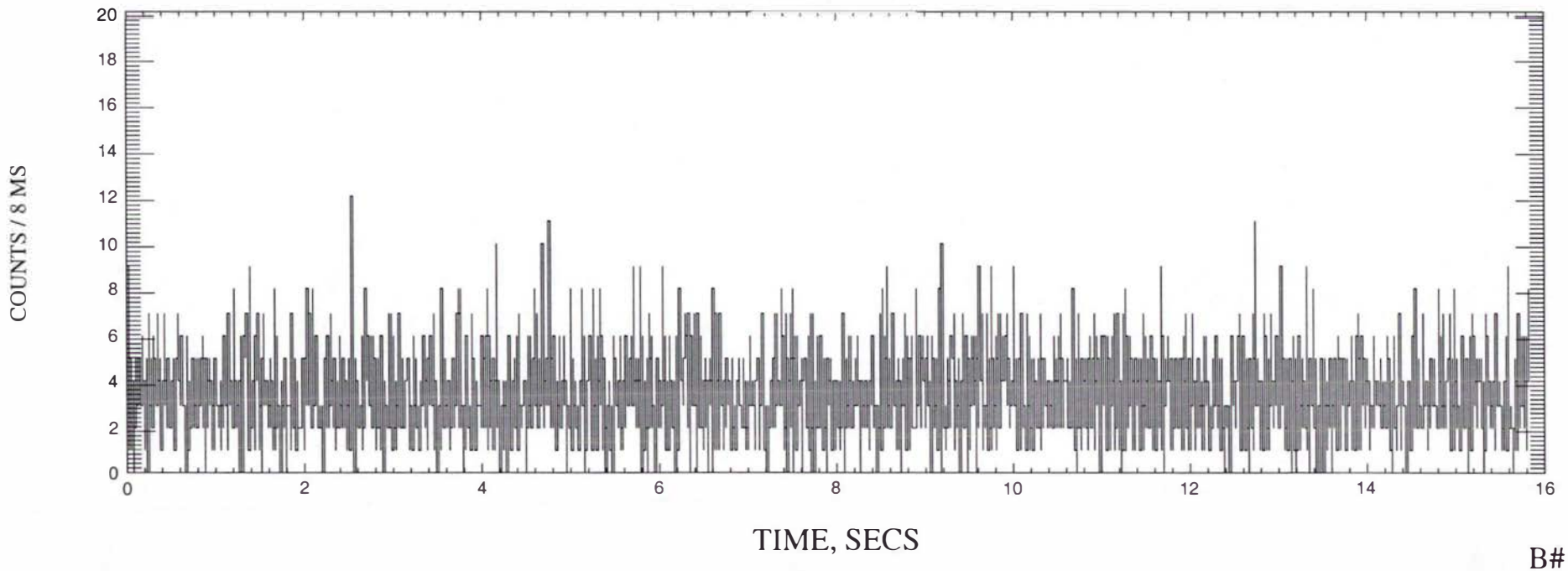


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 17/09/2001 DOY = 260 01/22/02

Burst Counter 4 at UT= 2.752628415426 h= 9909.462 s 02:45:09.462

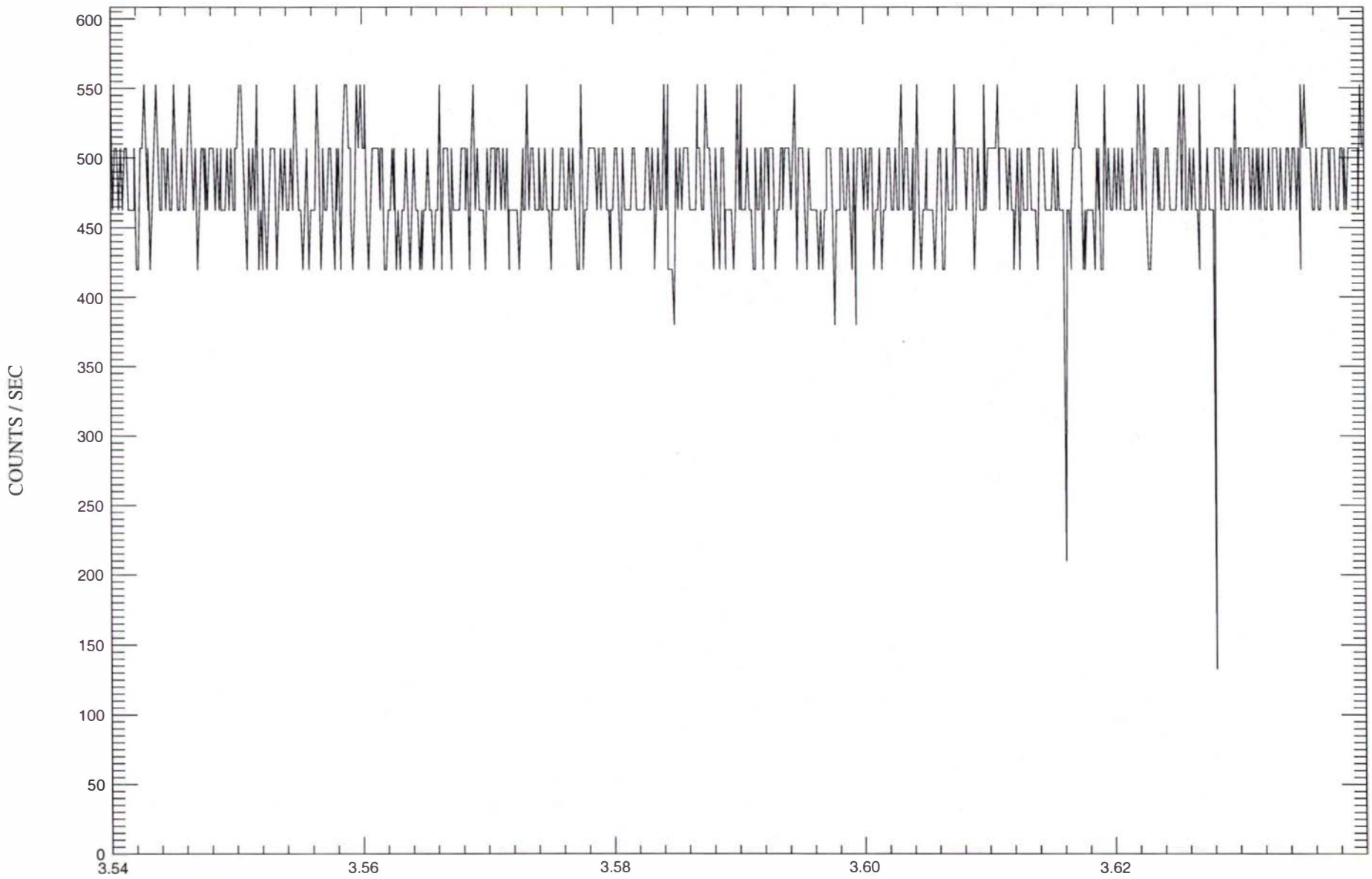




B# 1

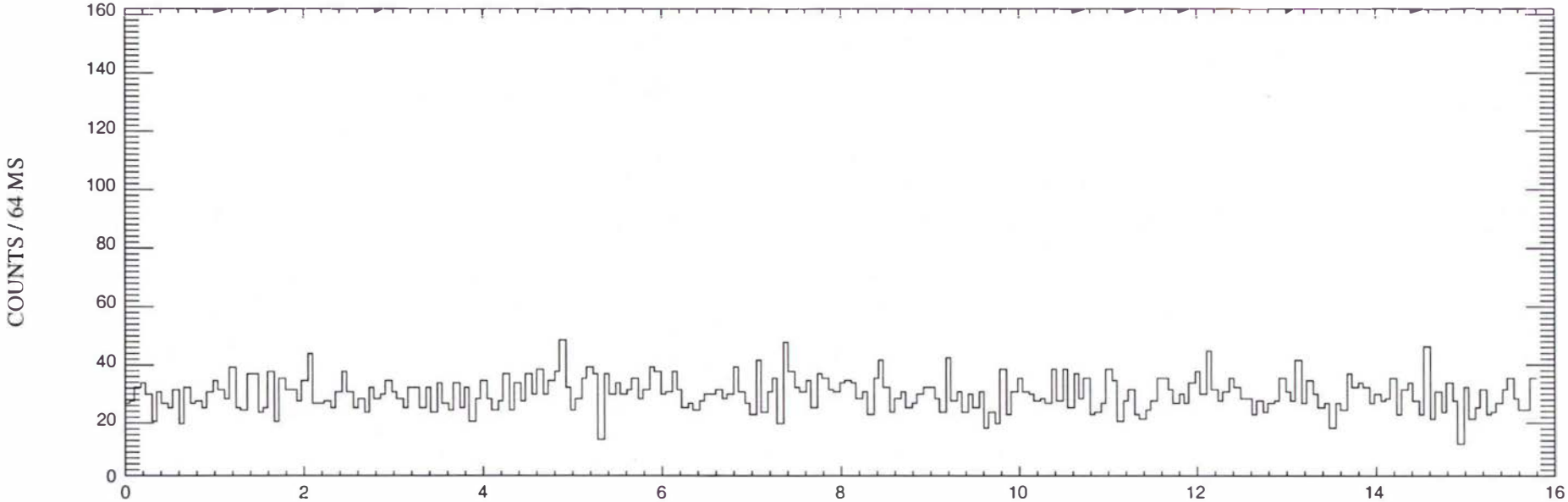
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 17/09/2001 DOY = 260 01/22/02

CALIBRATION DATA INCLUDED

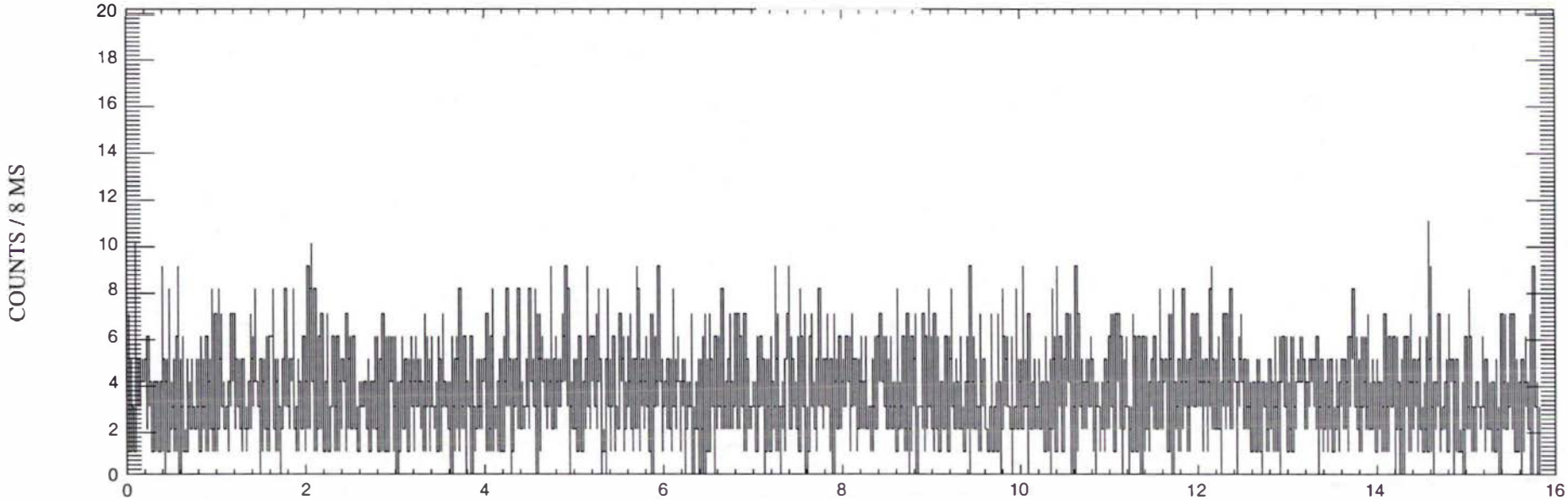


HUS 2A TRIGGERED DATA EDR DMY = 17/09/2001 DOY = 260 01/22/02

Burst Counter 5 at UT= 3.586010678609 h=12909.638 s 03:35:09.638



TIME, SECS

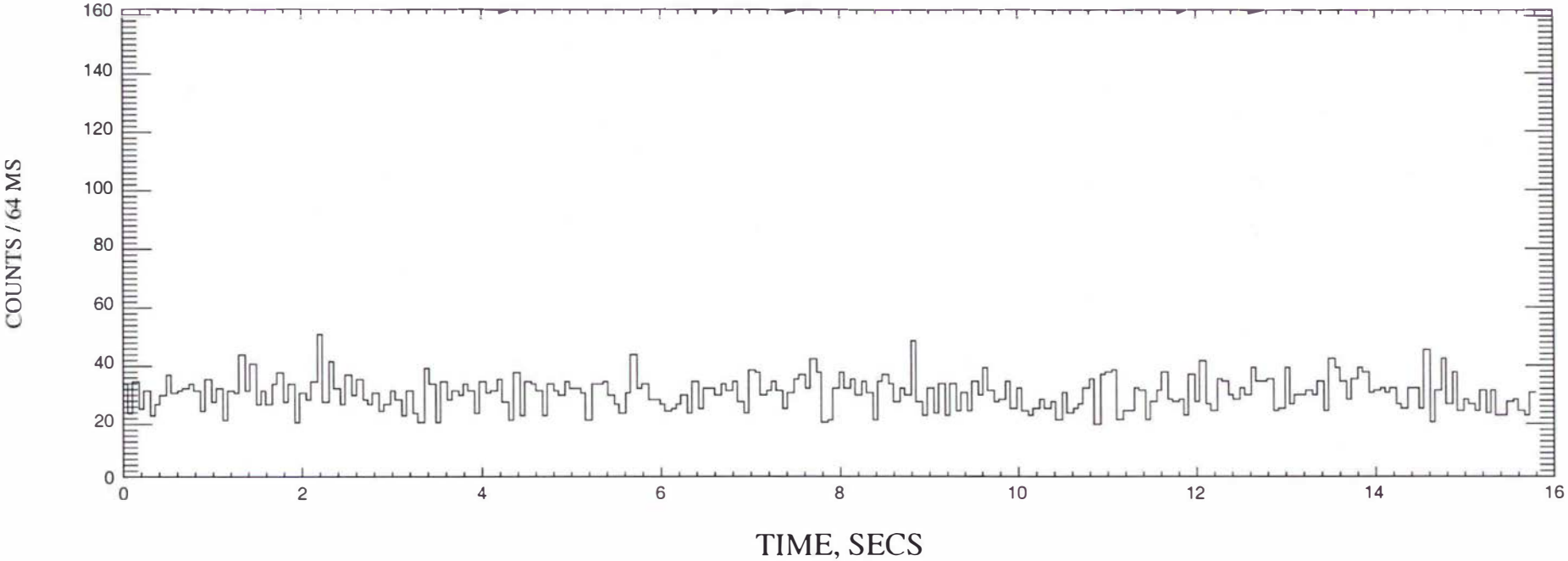


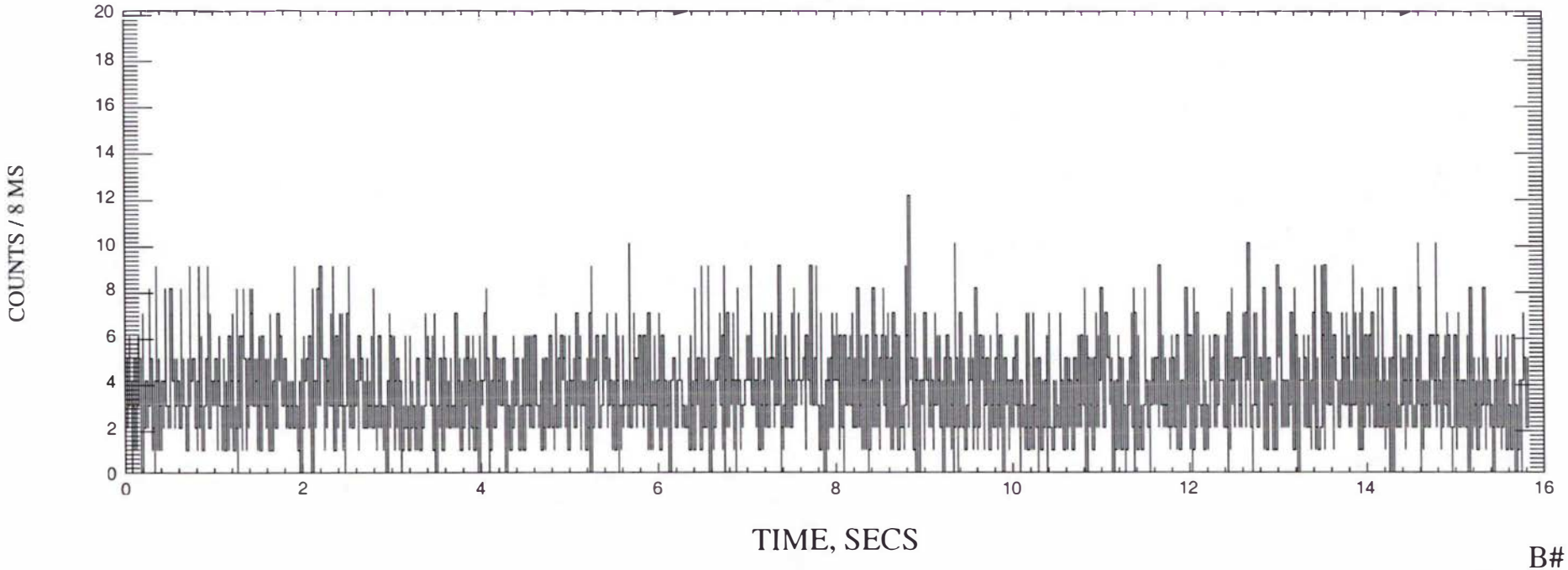
TIME, SECS

B# 2

HUS 2A TRIGGERED DATA EDR DMY = 17/09/2001 DOY = 260 01/22/02

Burst Counter 6 at UT= 4.419392941793 h=15909.815 s 04:25:09.815

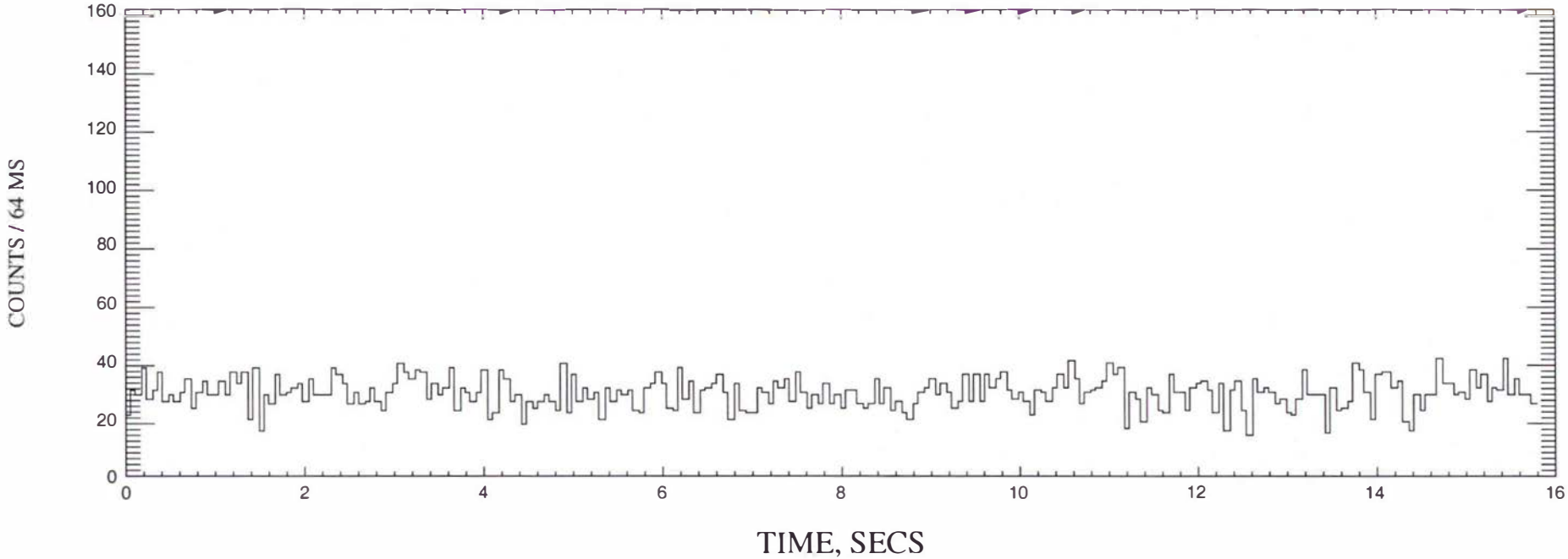


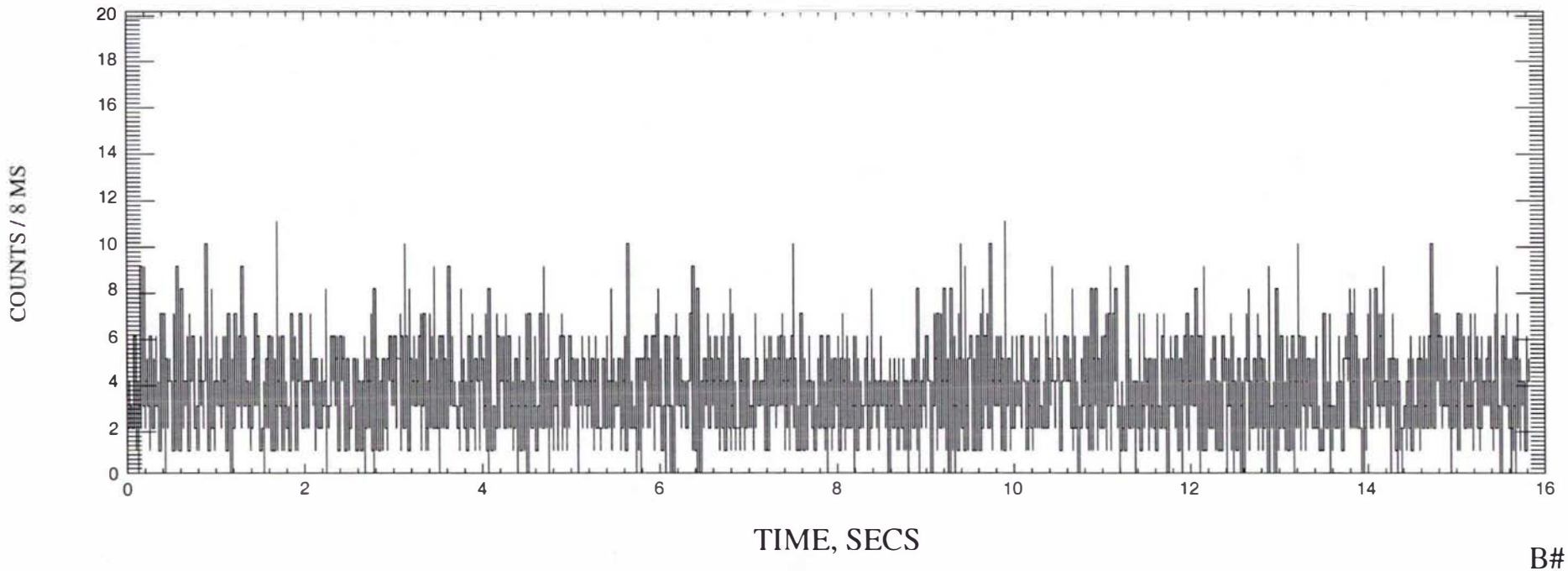


B# 3

HUS 2A TRIGGERED DATA EDR DMY = 17/09/2001 DOY = 260 01/22/02

Burst Counter 7 at UT= 5.252774022420 h=18909.986 s 05:15:09.986

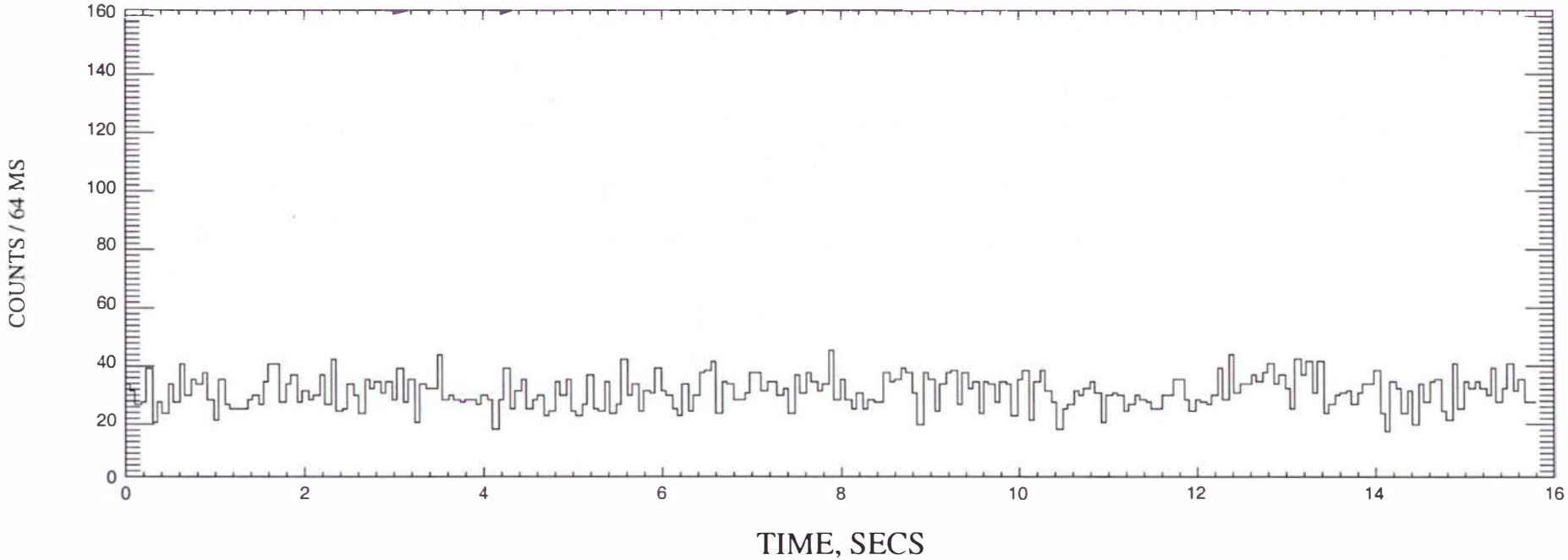


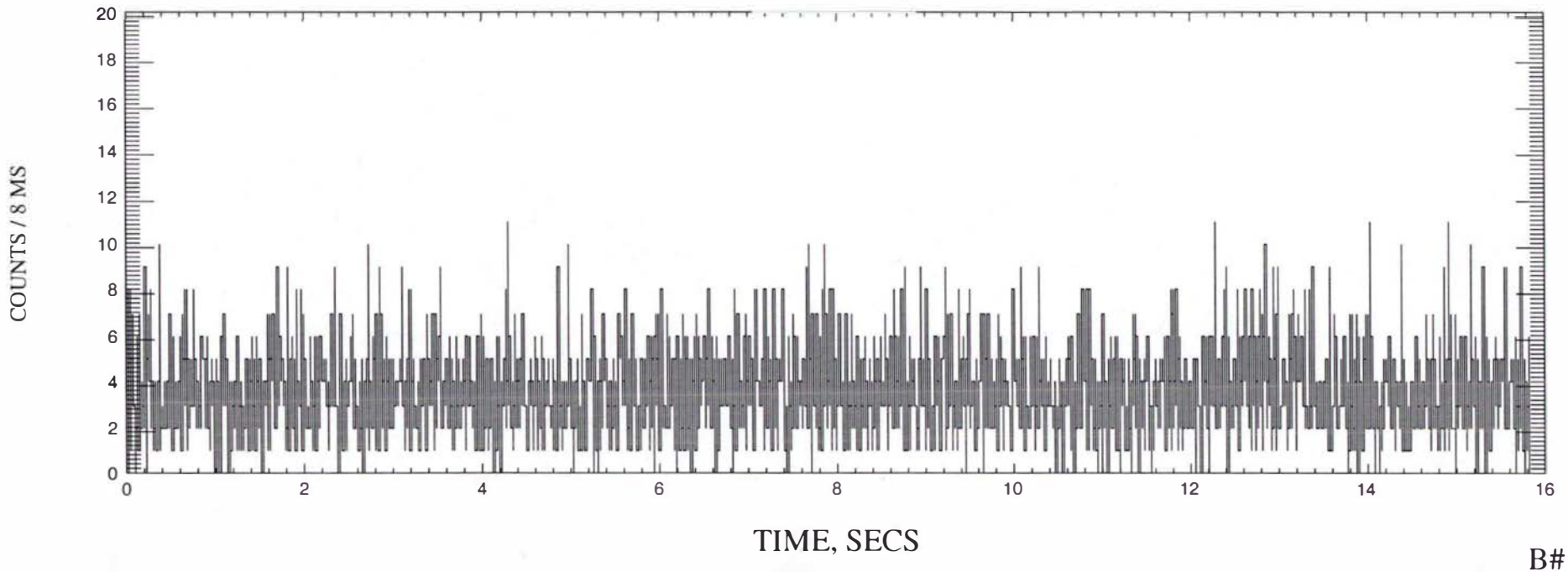


B# 4

HUS 2A TRIGGERED DATA EDR DMY = 17/09/2001 DOY = 260 01/22/02

Burst Counter 8 at UT= 6.086156285604 h=21910.163 s 06:05:10.163

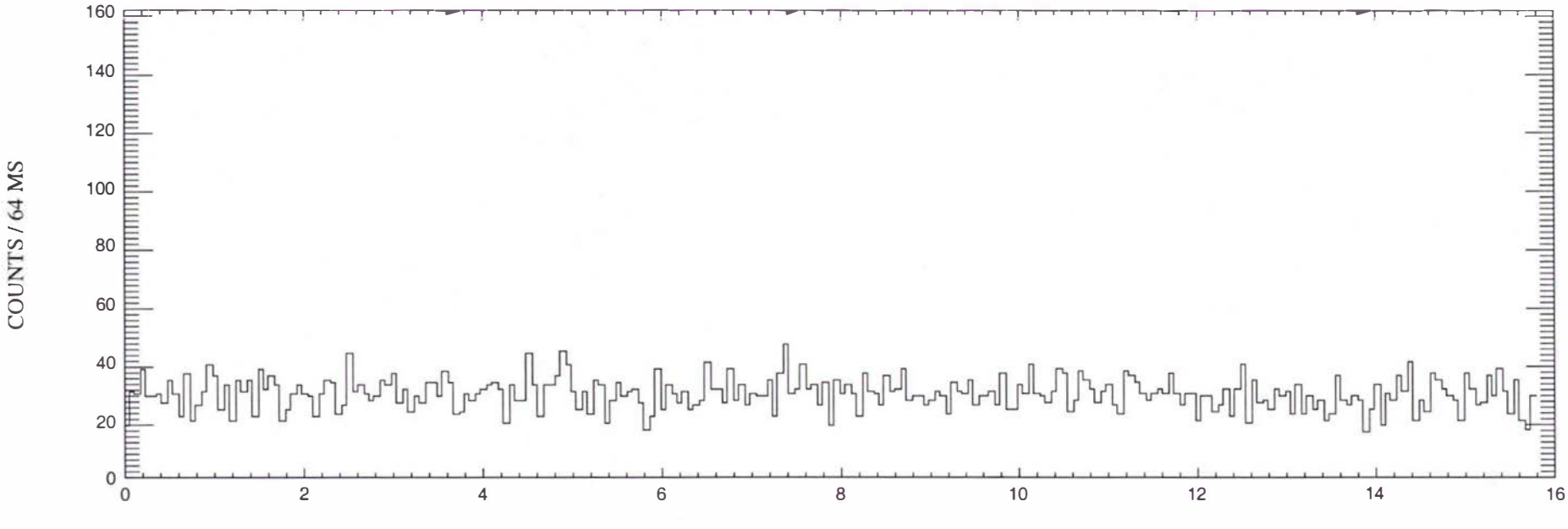


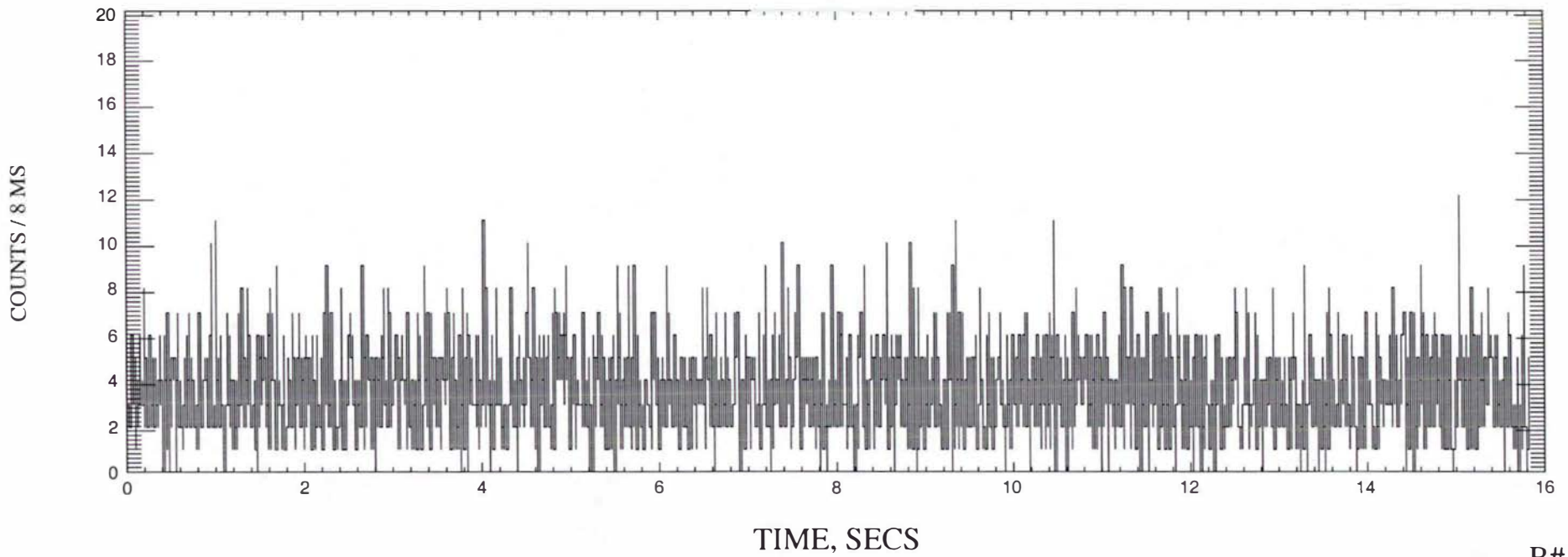


B# 5

HUS 2A TRIGGERED DATA EDR DMY = 17/09/2001 DOY = 260 01/22/02

Burst Counter 9 at UT= 6.919538548787 h=24910.339 s 06:55:10.339

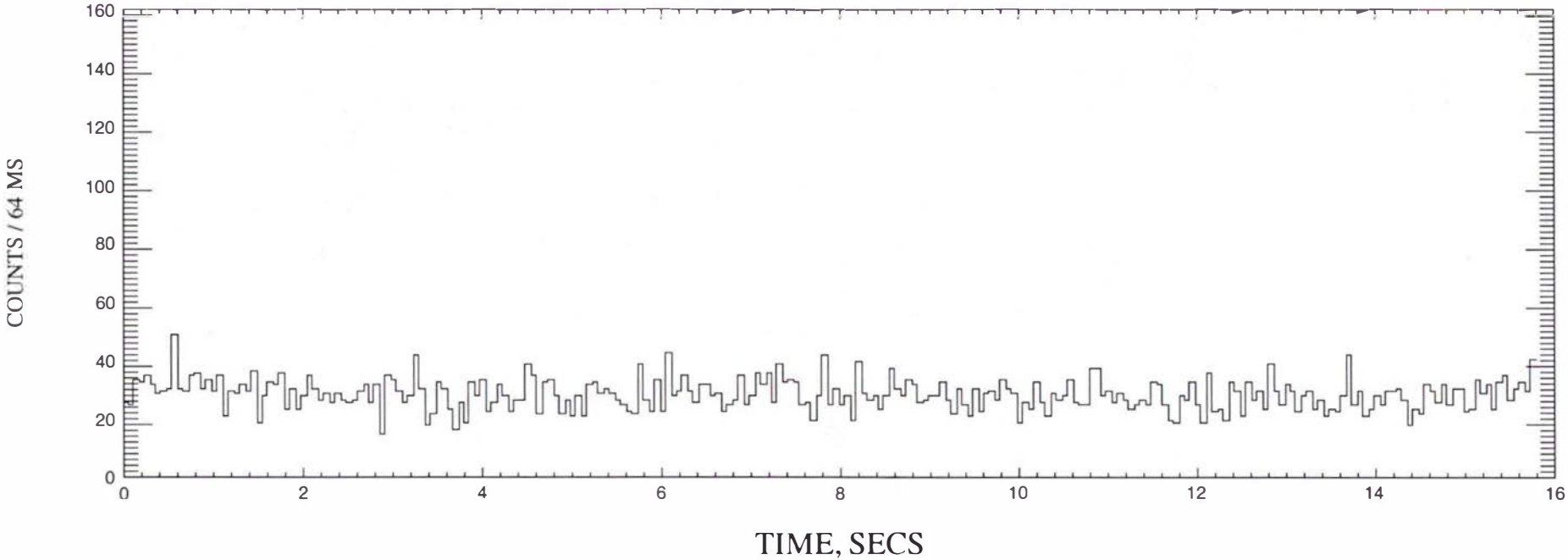


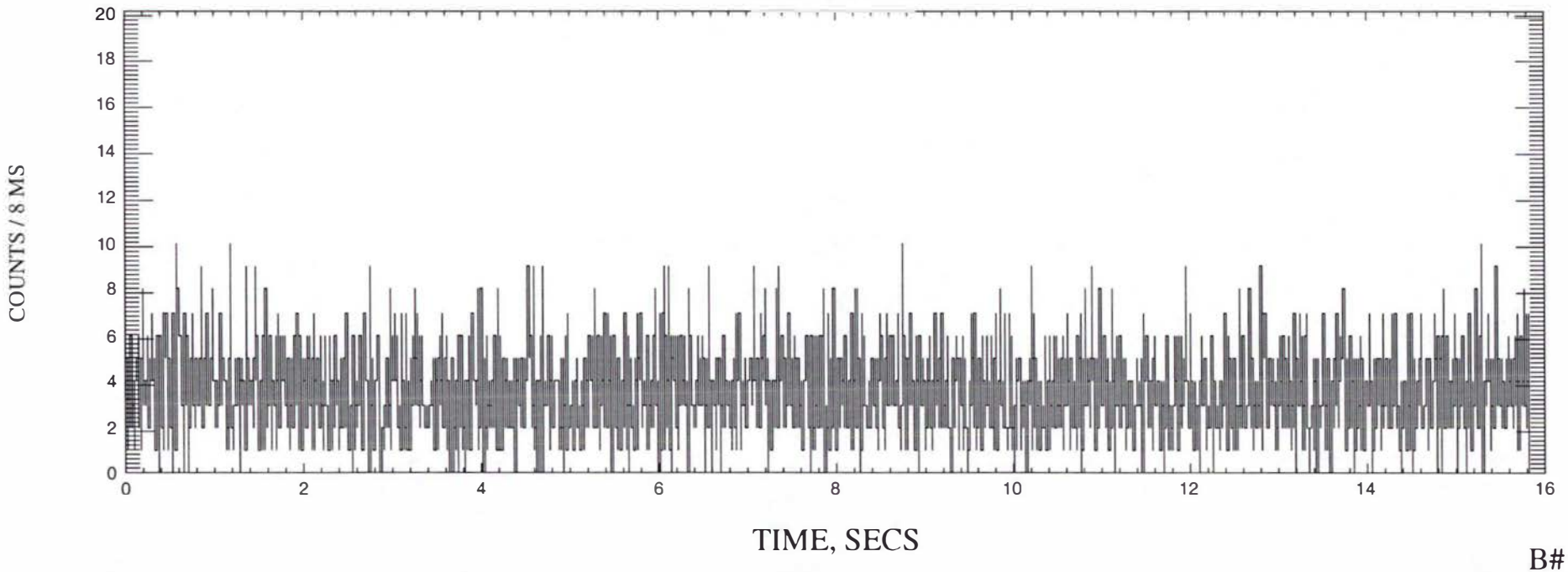


B# 6

HUS 2A TRIGGERED DATA EDR DMY = 17/09/2001 DOY = 260 01/22/02

Burst Counter 10 at UT= 7.752920811971 h=27910.515 s 07:45:10.515

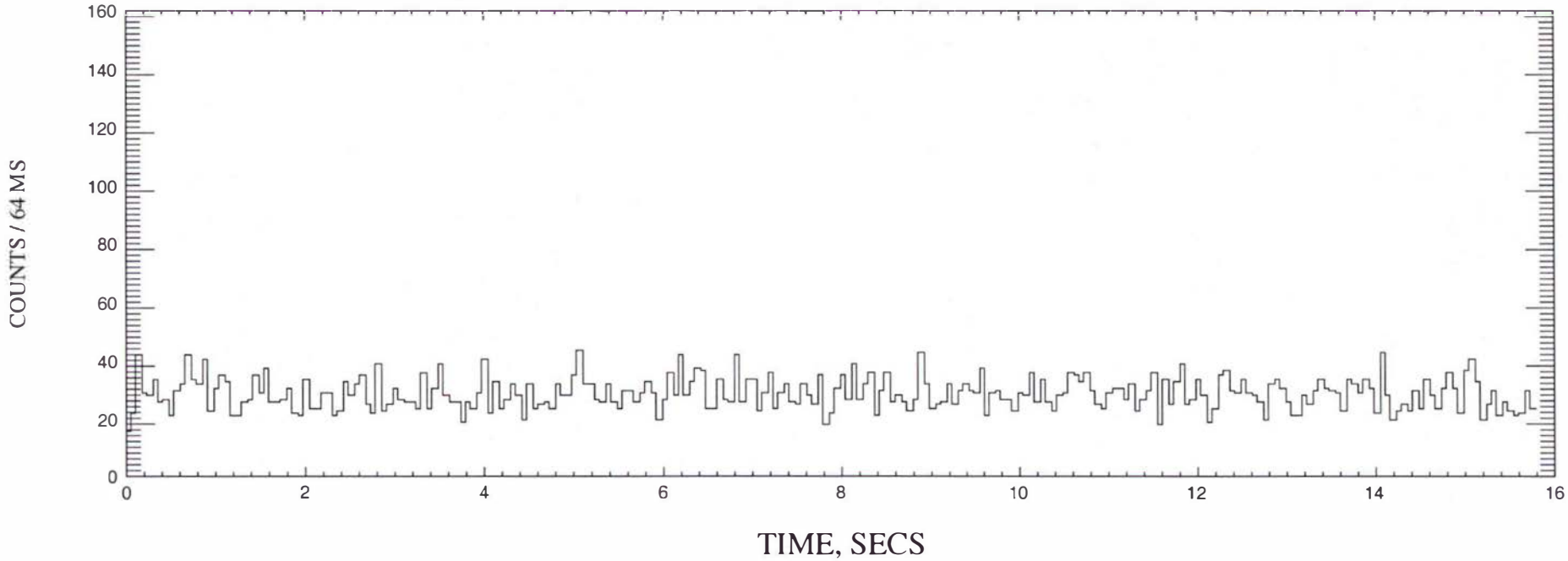


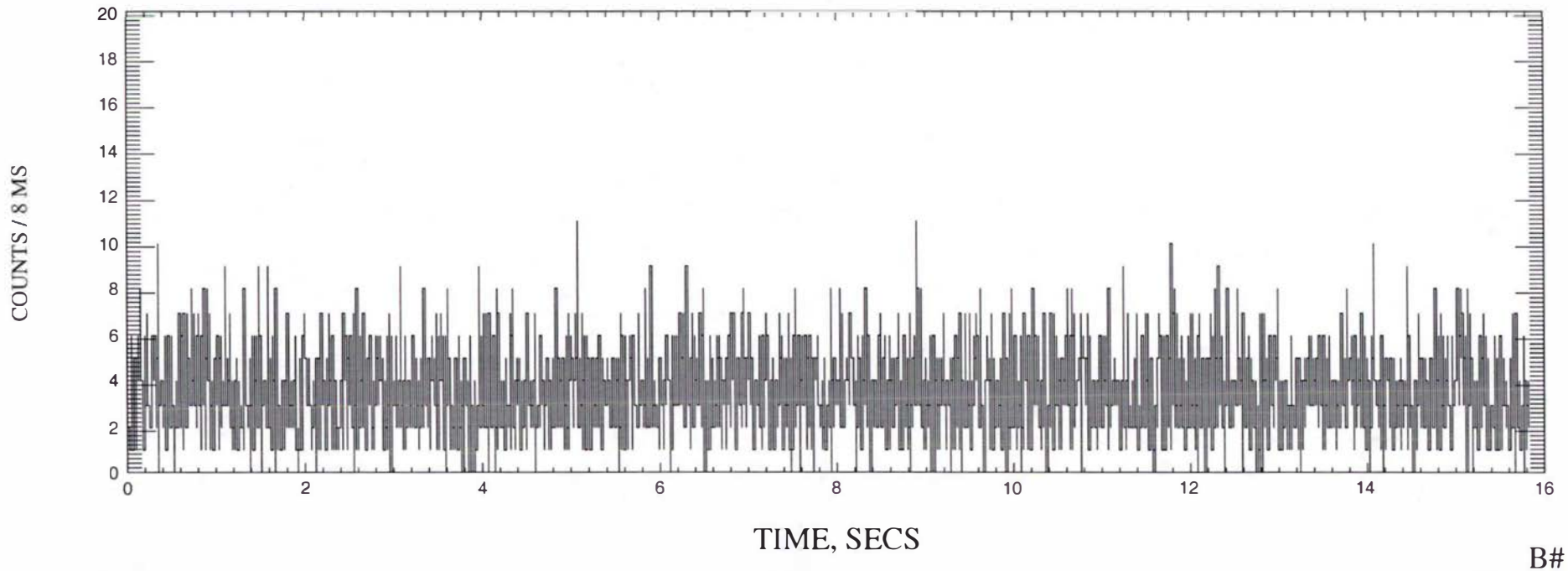


B# 7

HUS 2A TRIGGERED DATA EDR DMY = 17/09/2001 DOY = 260 01/22/02

Burst Counter 11 at UT= 8.586336614821 h=30910.812 s 08:35:10.812

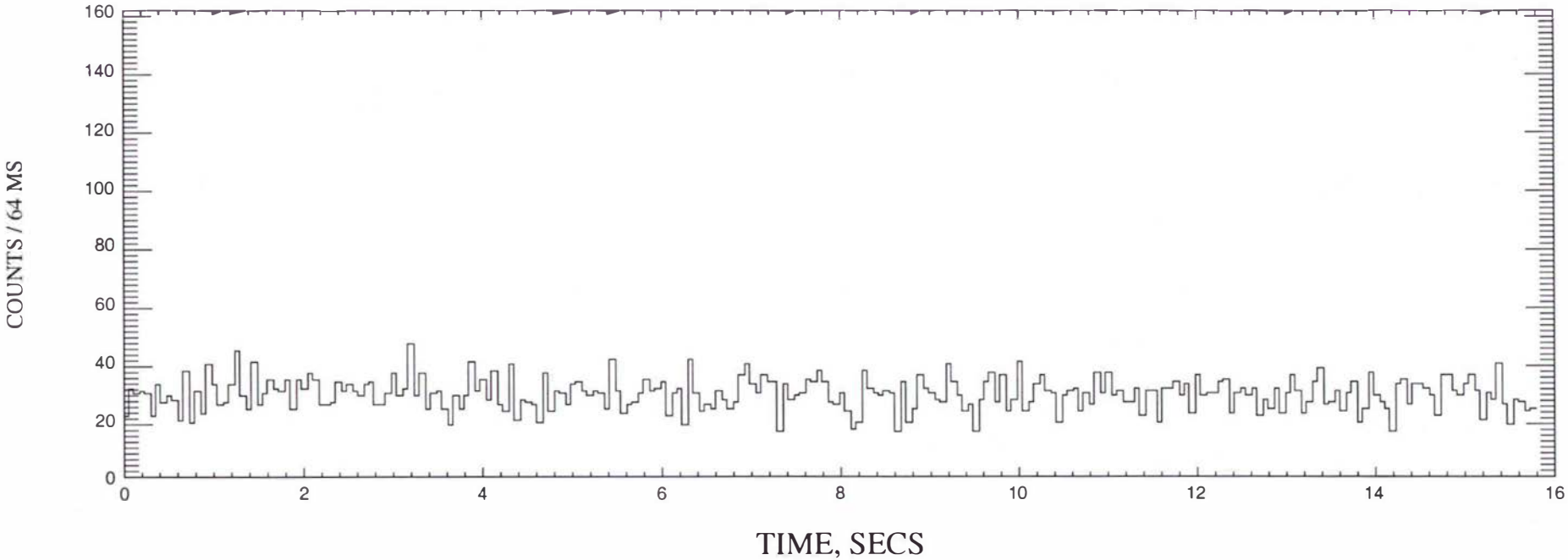


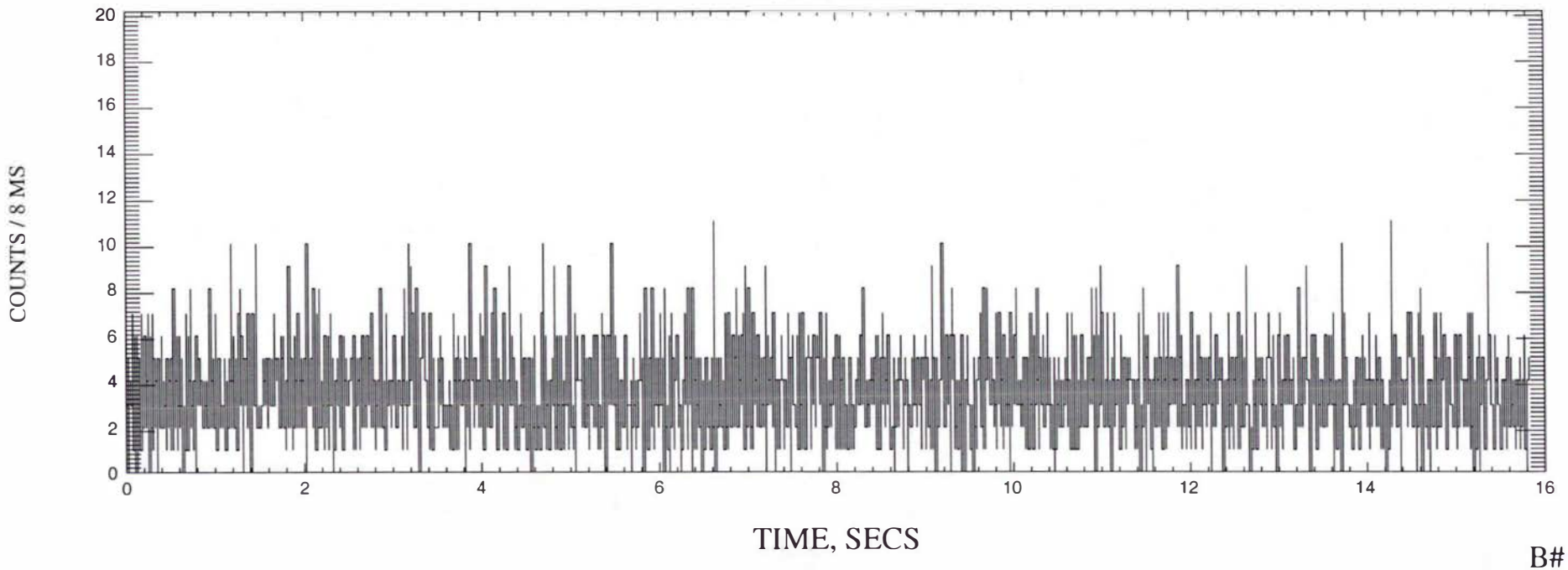


B# 8

HUS 2A TRIGGERED DATA EDR DMY = 17/09/2001 DOY = 260 01/22/02

Burst Counter 12 at UT= 9.419718878004 h=33910.988 s 09:25:10.988

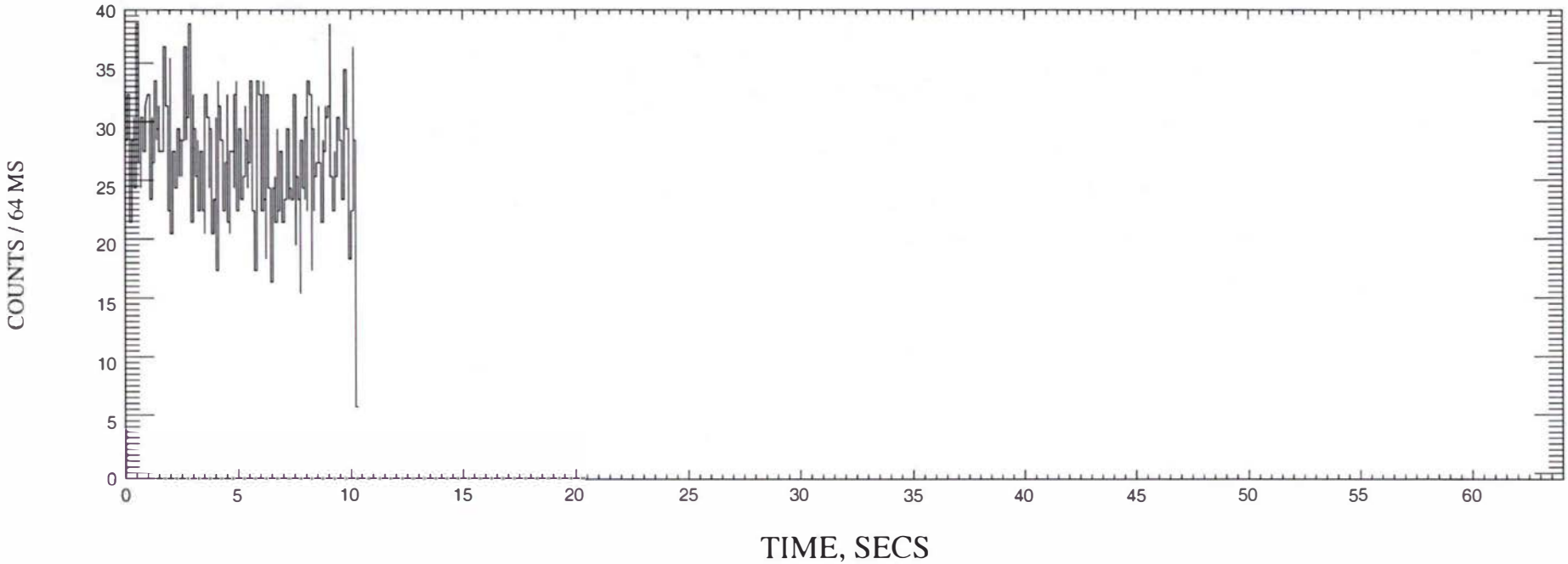


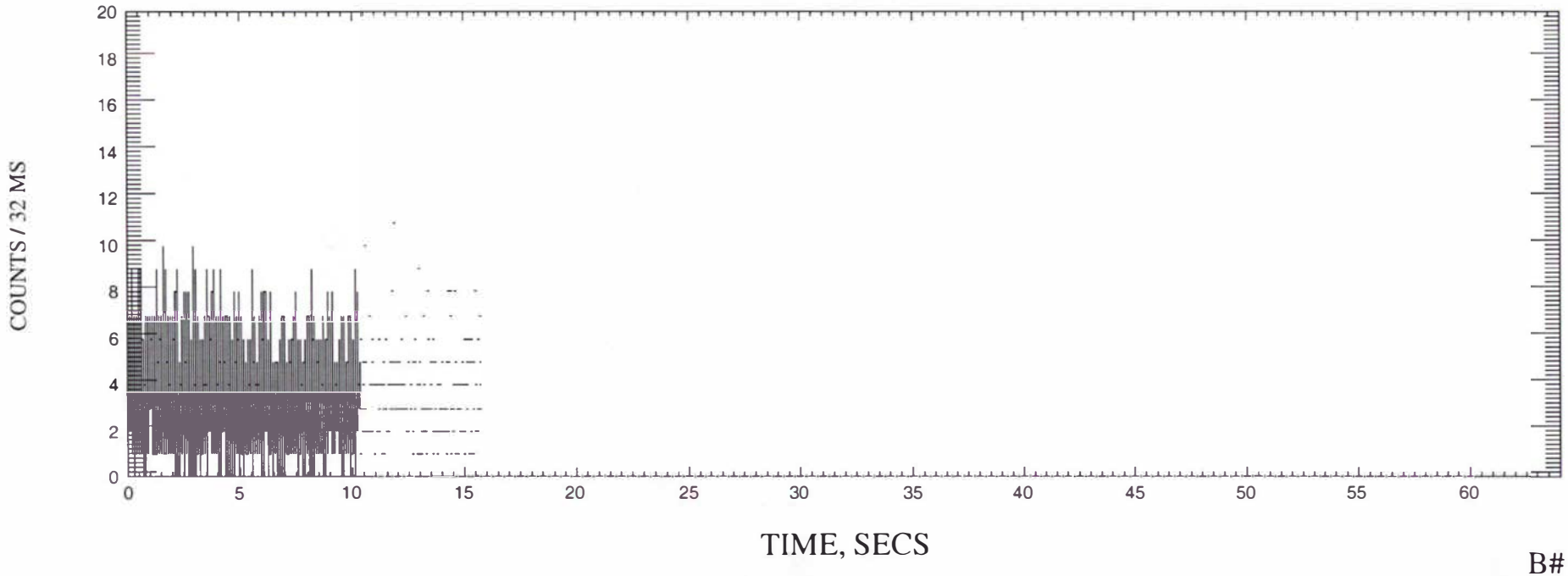


B# 9

HUS 2A TRIGGERED DATA EDR DMY = 17/09/2001 DOY = 260 01/22/02

Burst Counter 13 at UT=10.253101141188 h=36911.164 s 10:15:11.164

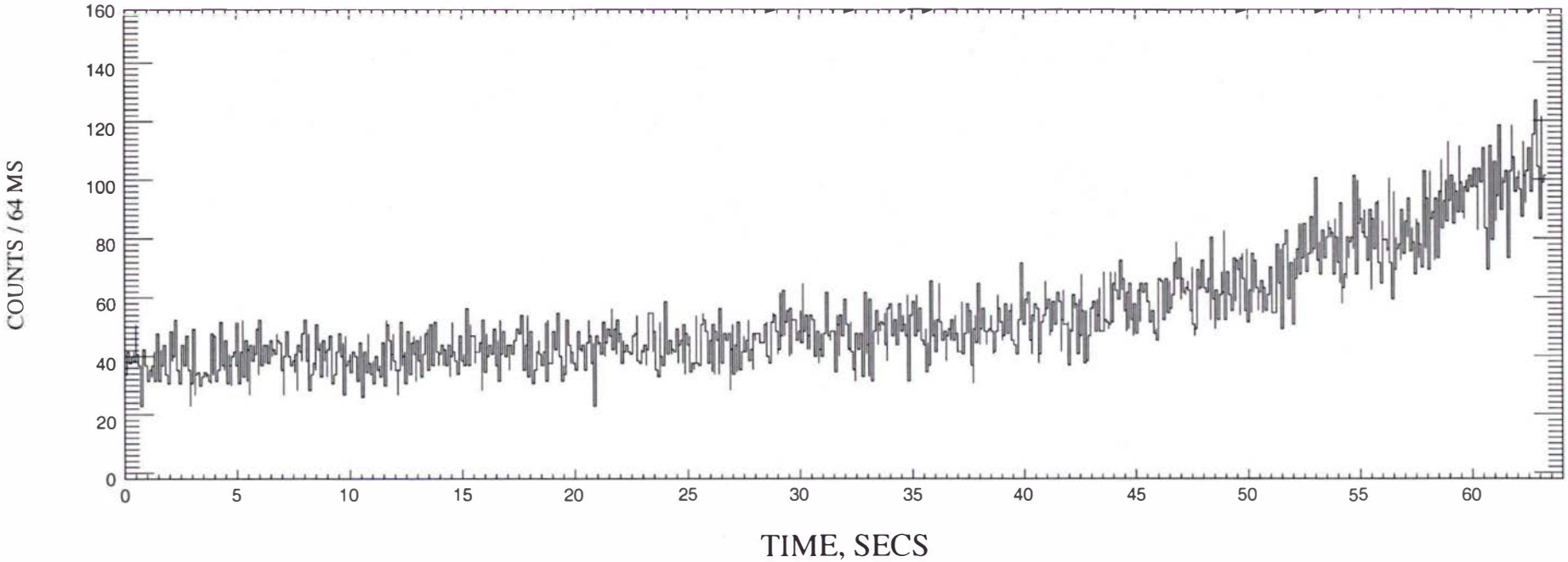


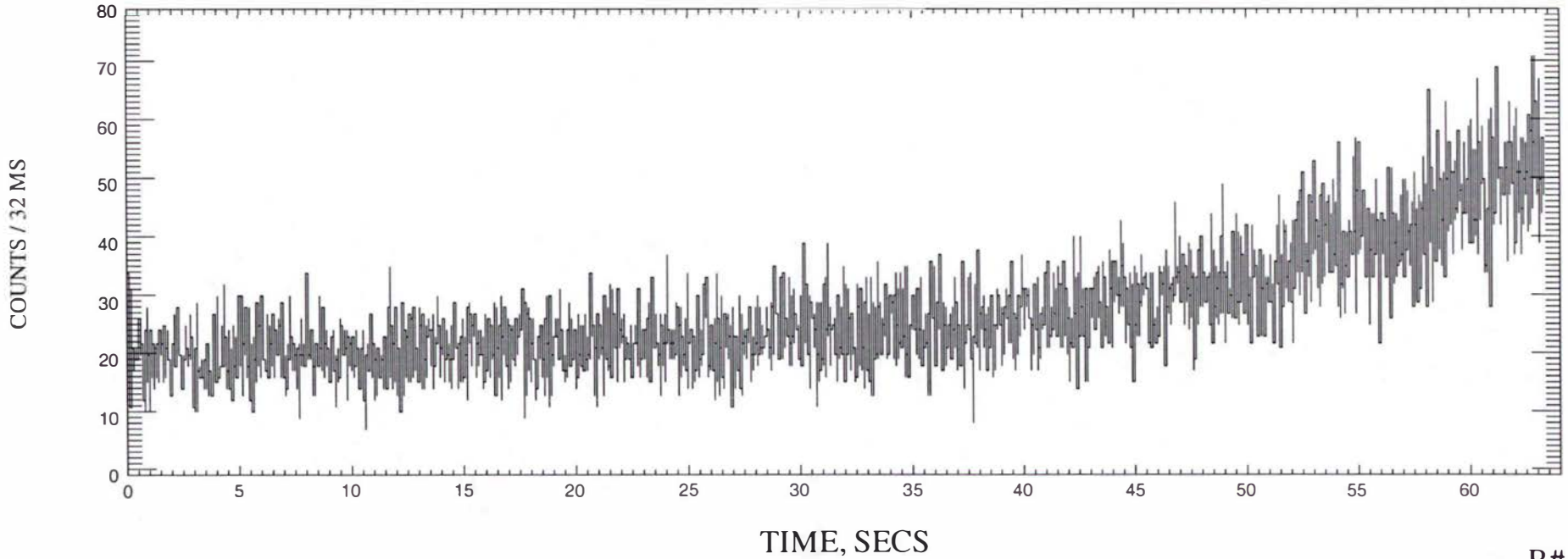


B# 10

HUS 2A TRIGGERED DATA EDR DMY = 17/09/2001 DOY = 260 01/22/02

Burst Counter 14 at UT=14.314648666382 h=51532.735 s 14:18:52.735

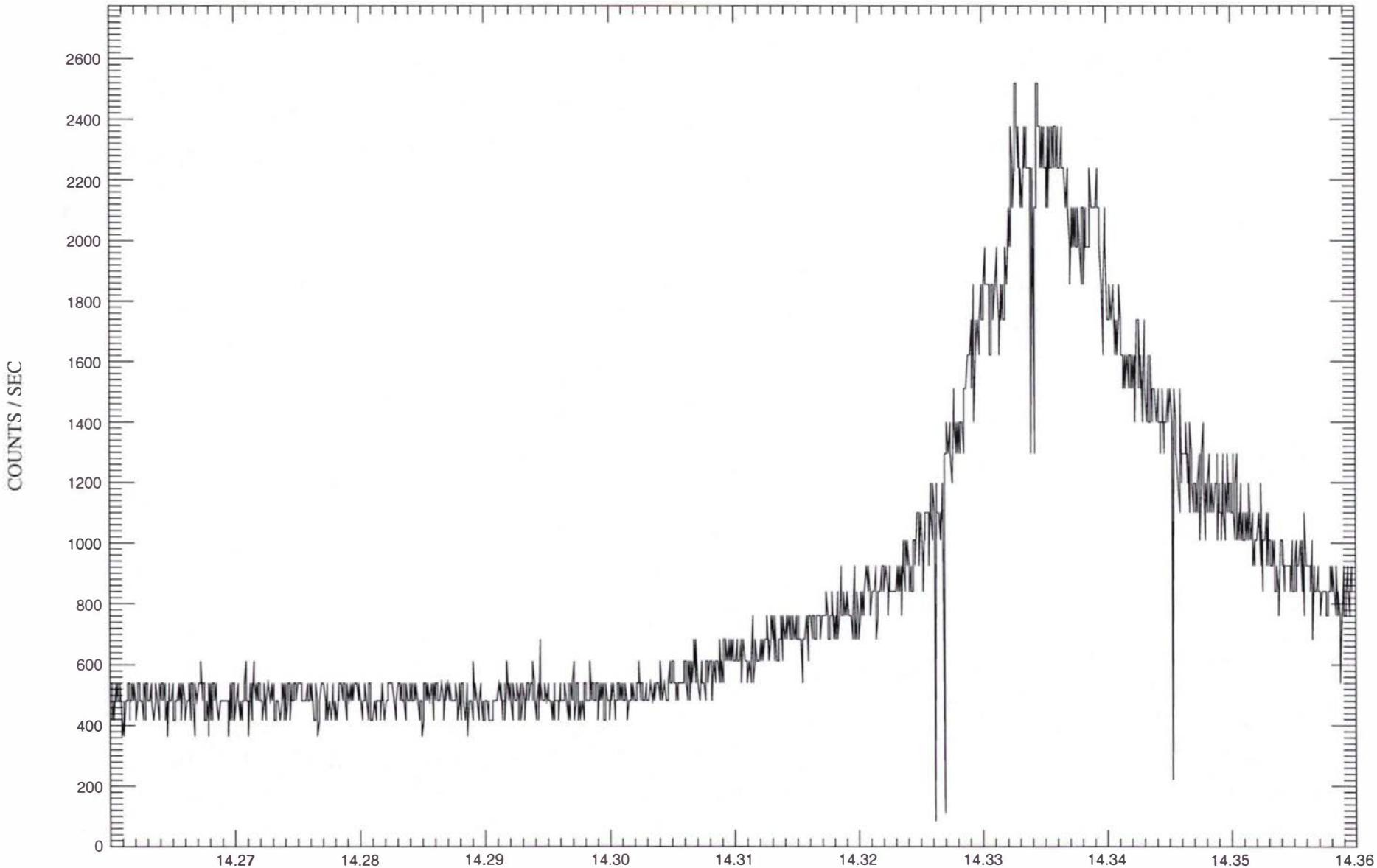




B# 11

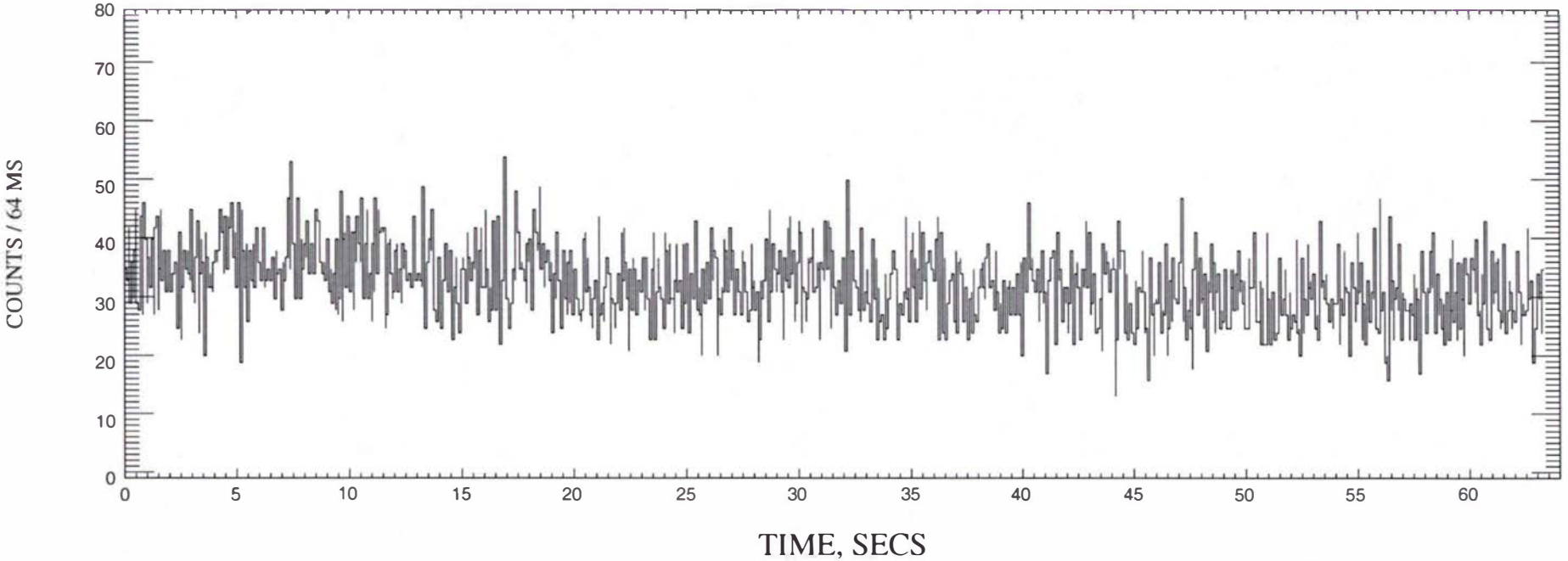
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 17/09/2001 DOY = 260 01/22/02

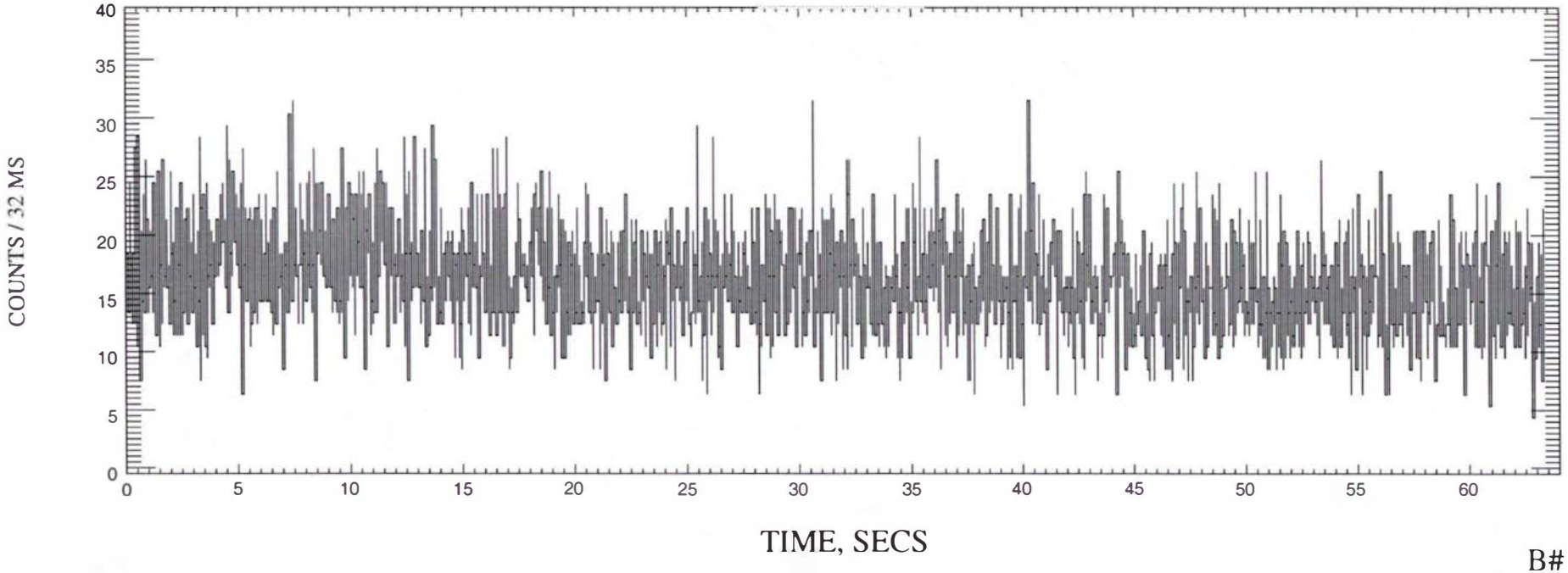
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 17/09/2001 DOY = 260 01/22/02

Burst Counter 15 at UT=21.201467073229 h=76325.281 s 21:12:05.281

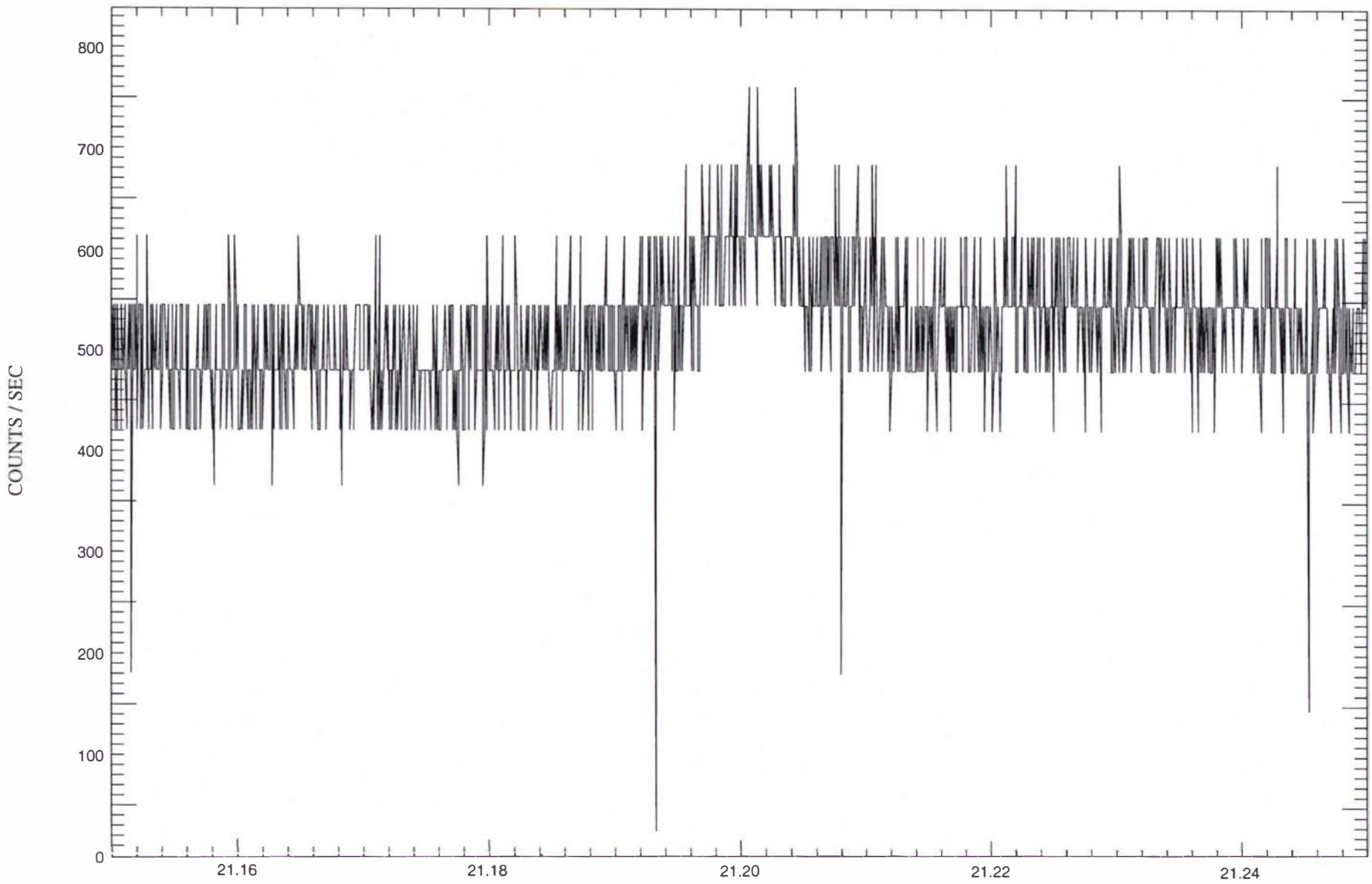




B# 12

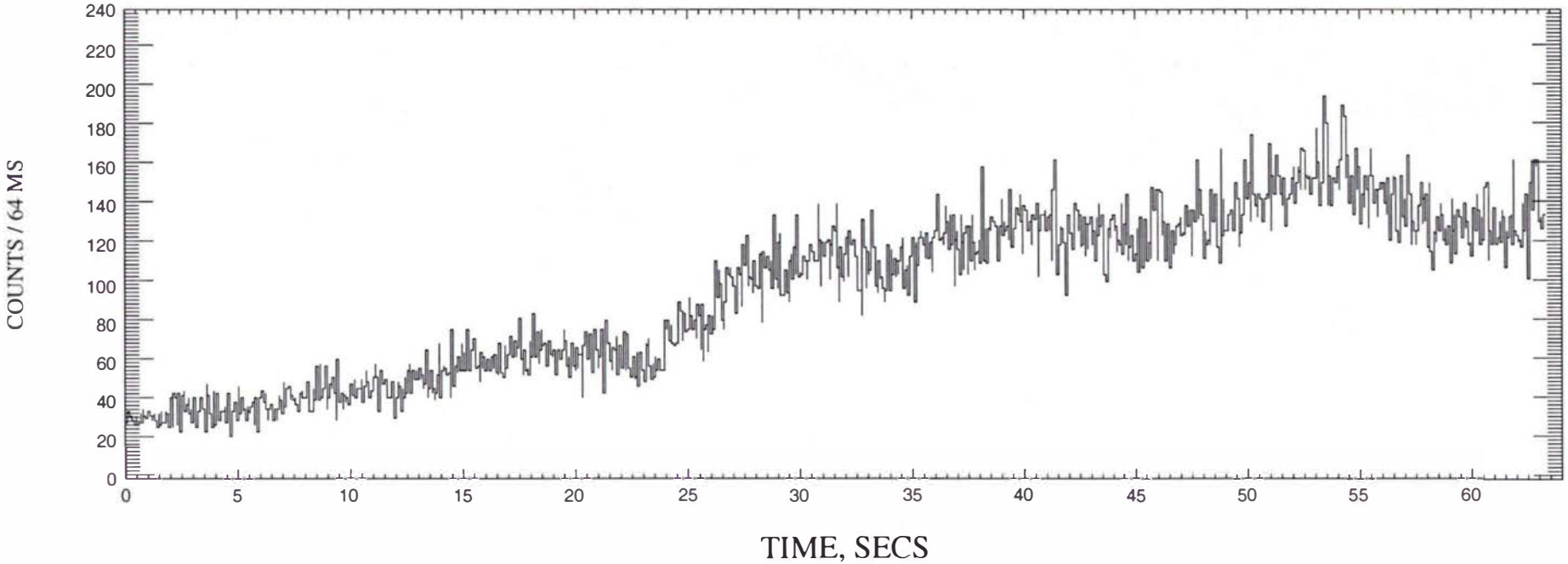
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 17/09/2001 DOY = 260 01/22/02

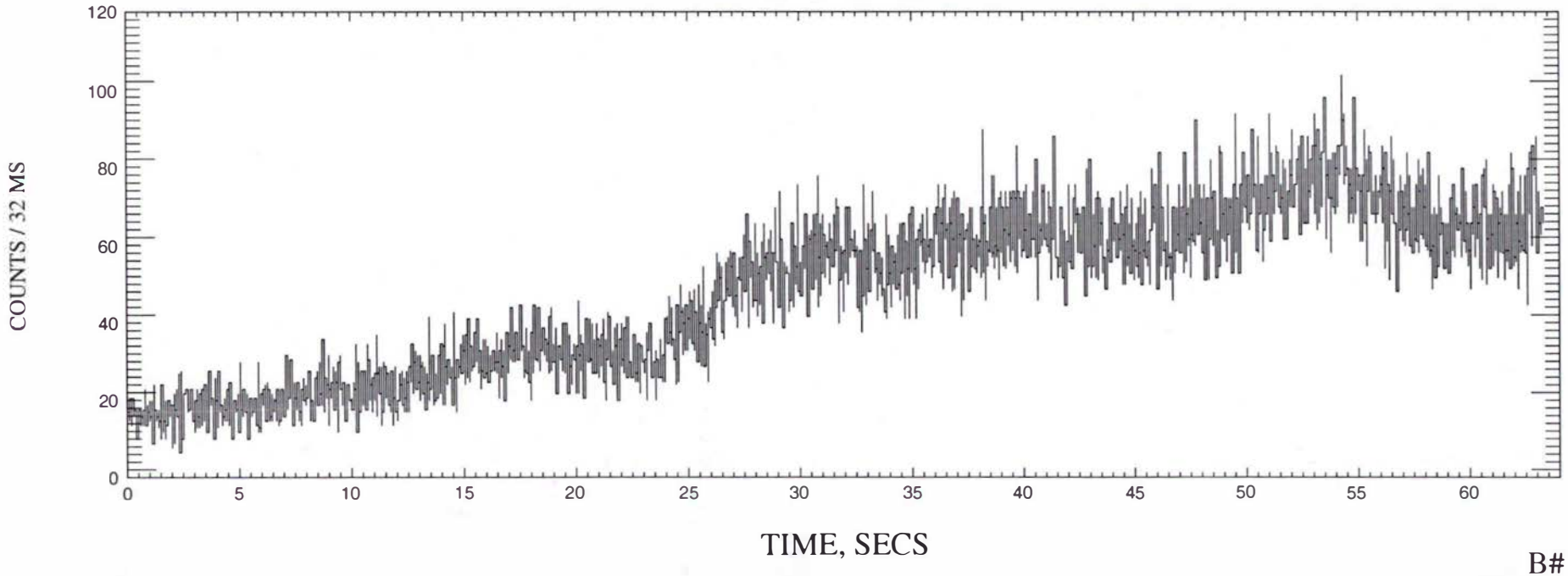
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 17/09/2001 DOY = 260 01/22/02

Burst Counter 0 at UT=21.911340022617 h=78880.824 s 21:54:40.824

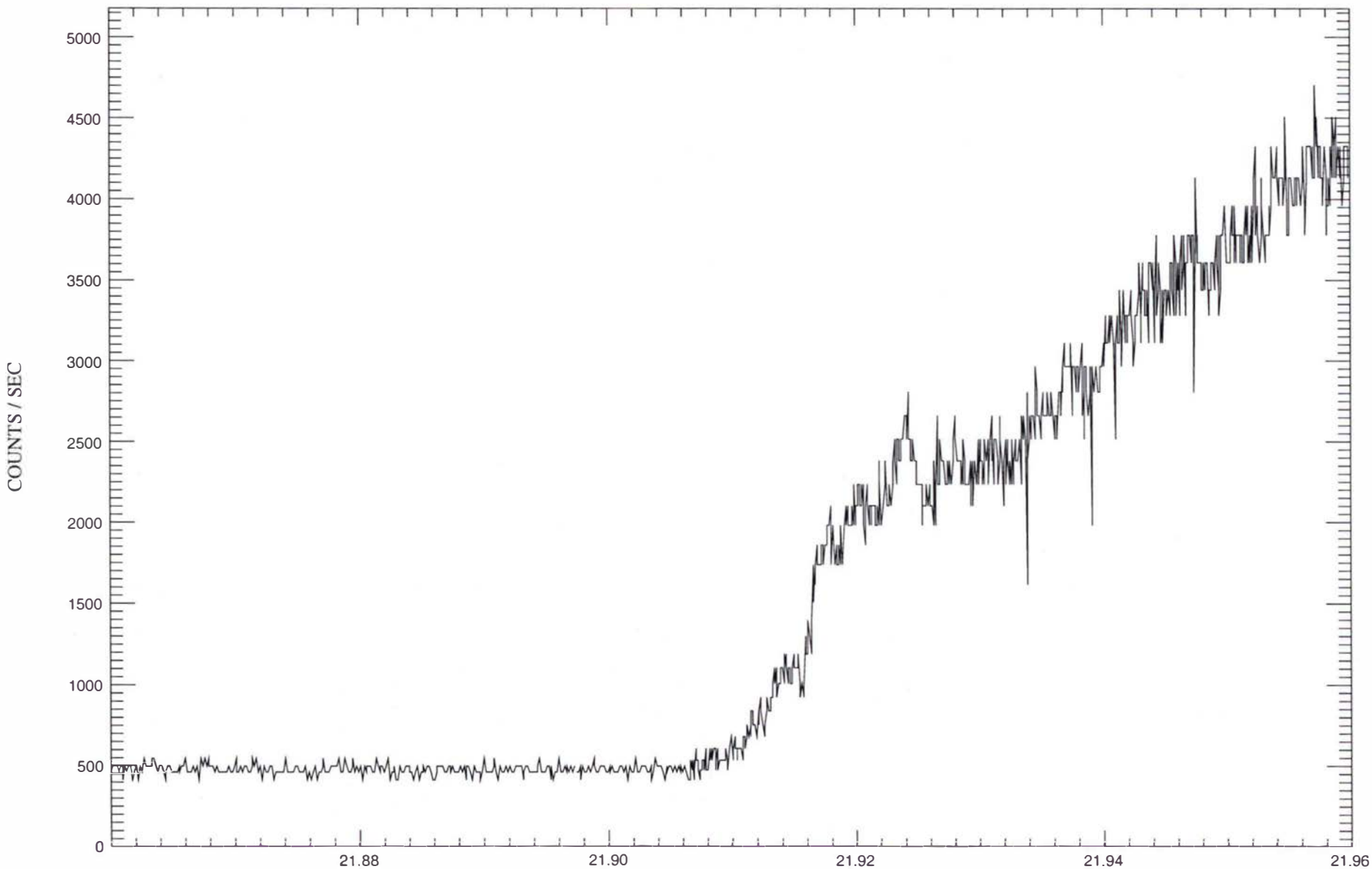




B# 13

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 17/09/2001 DOY = 260 01/22/02

CALIBRATION DATA INCLUDED



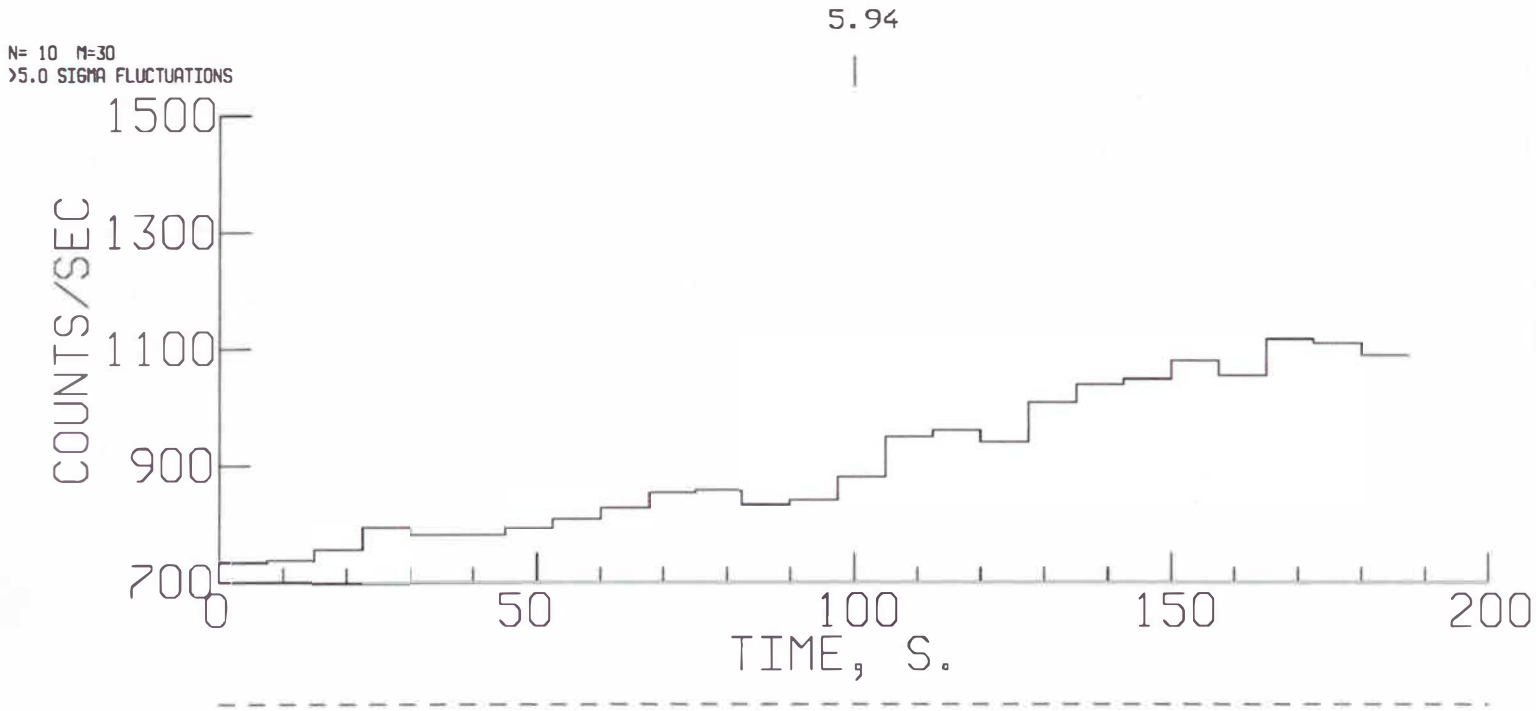
ULYSSES RT

23/ 9/ 1

18/ 9/ 1 18805.646 s

0.250 S INTERVALS REGROUPED BY 30

22- 150 keV

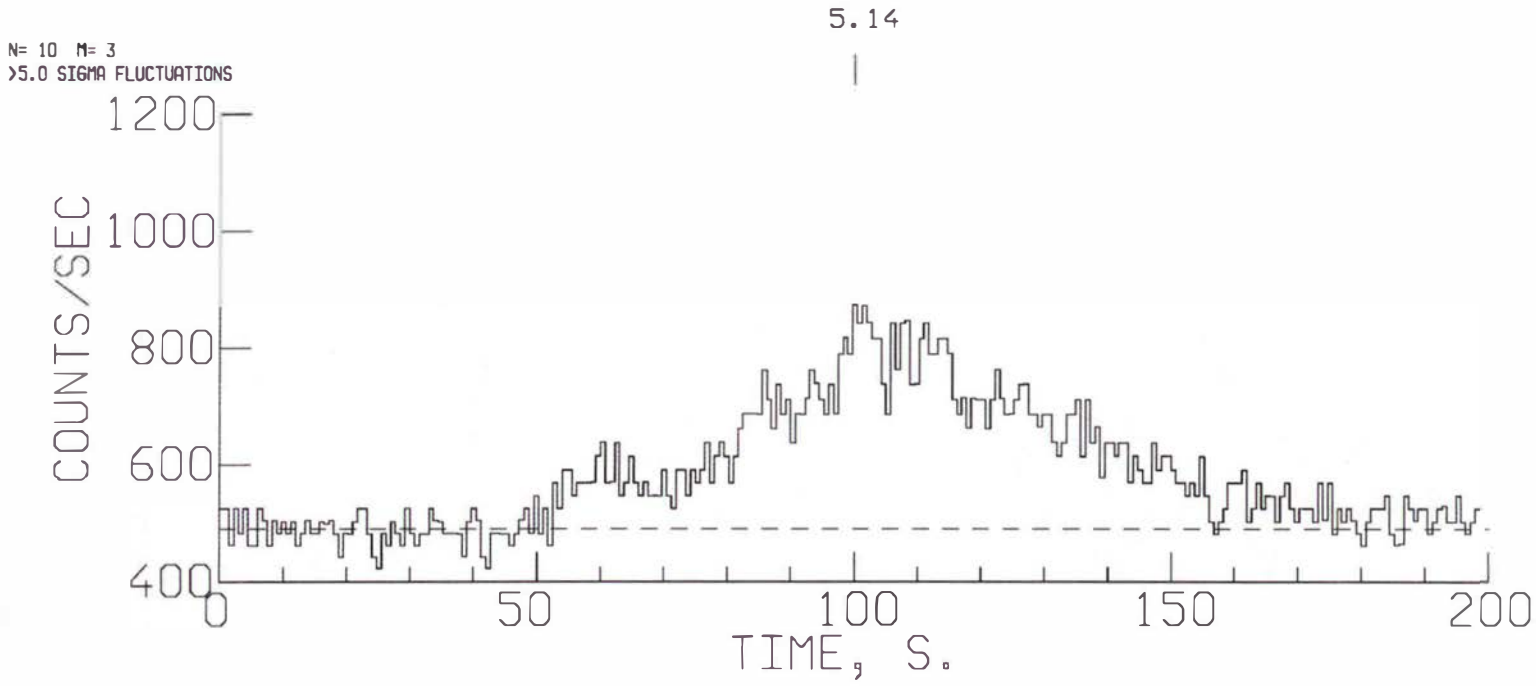


ULYSSES RT 23/ 9/ 1

18/ 9/ 1 28179.054 s

0.250 S INTERVALS REGROUPED BY 3

22- 150 keV



Date: May 18 '04

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

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

2. For Konus events

☑ Konus ecliptic latitude used with latest calibration?

2. For Odyssey events

☐ Was CHECKMO run to eliminate data gaps?

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

☐ Was Mars-blocking used?

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

2. For 3 Spacecraft events

☐ Σ 3Δt's calculated?

3. For INTEGRAL events

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

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

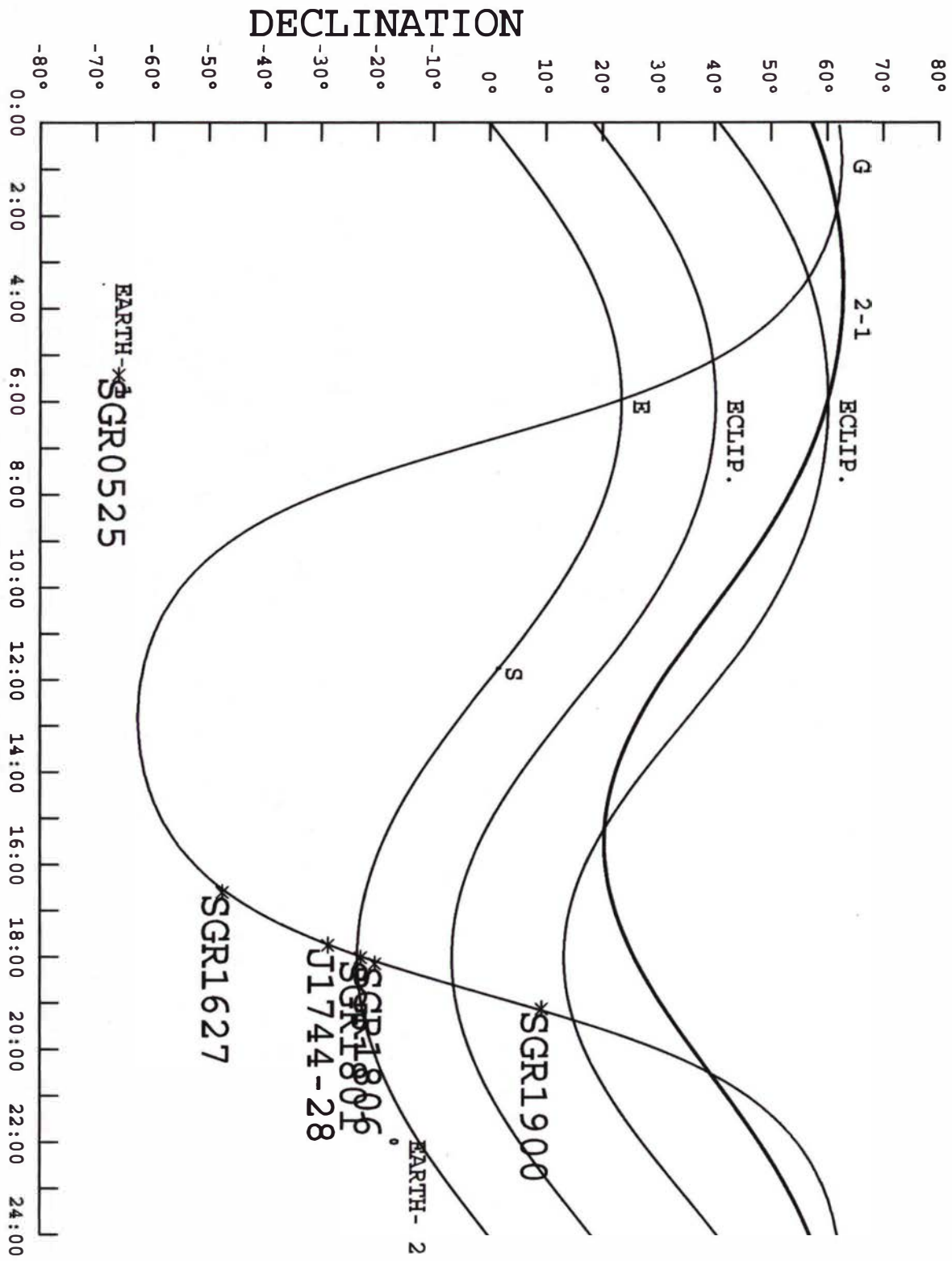
☑ ACCESS database updated?

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

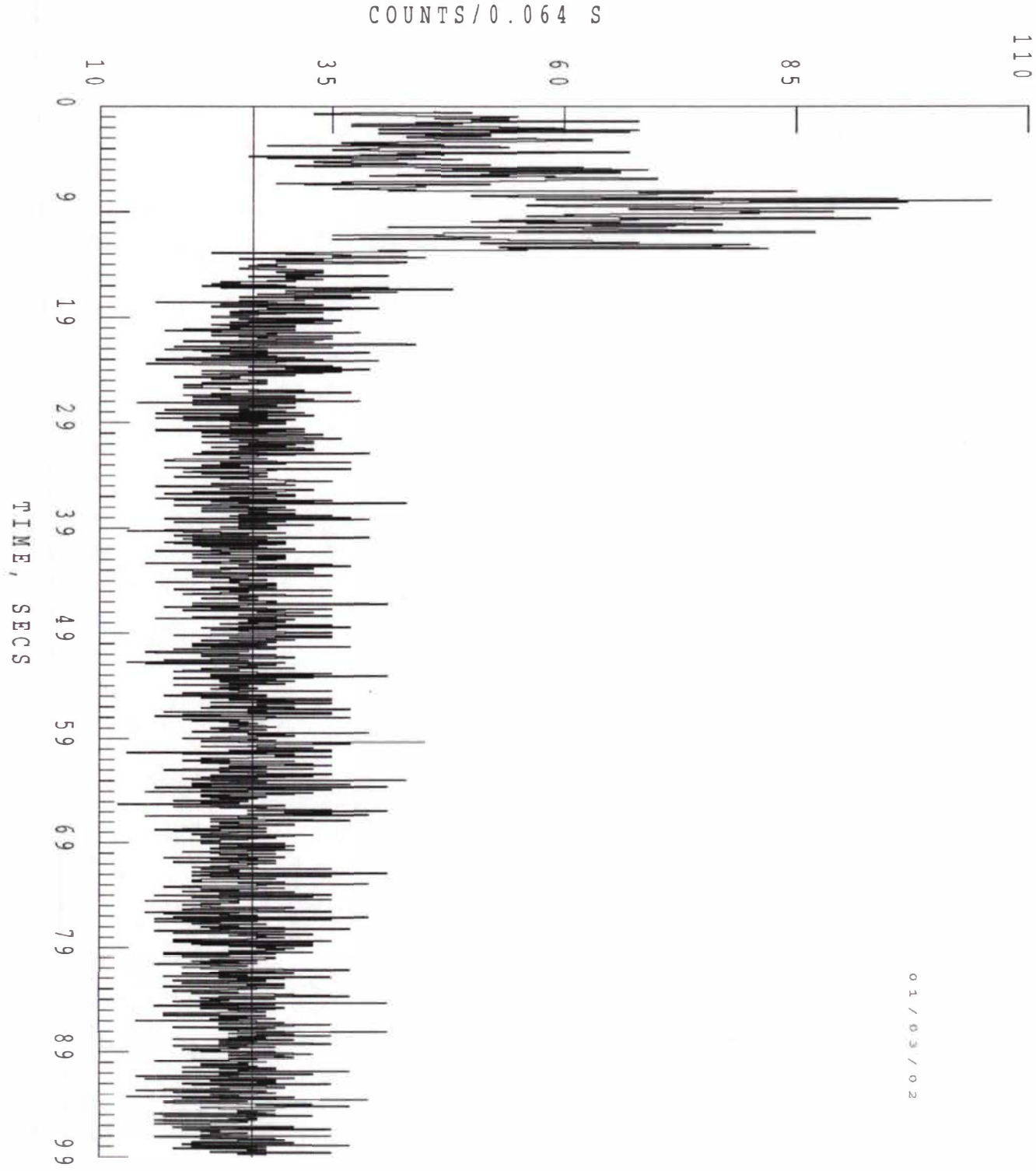
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR

1 ULYSSES 2 KONUS2

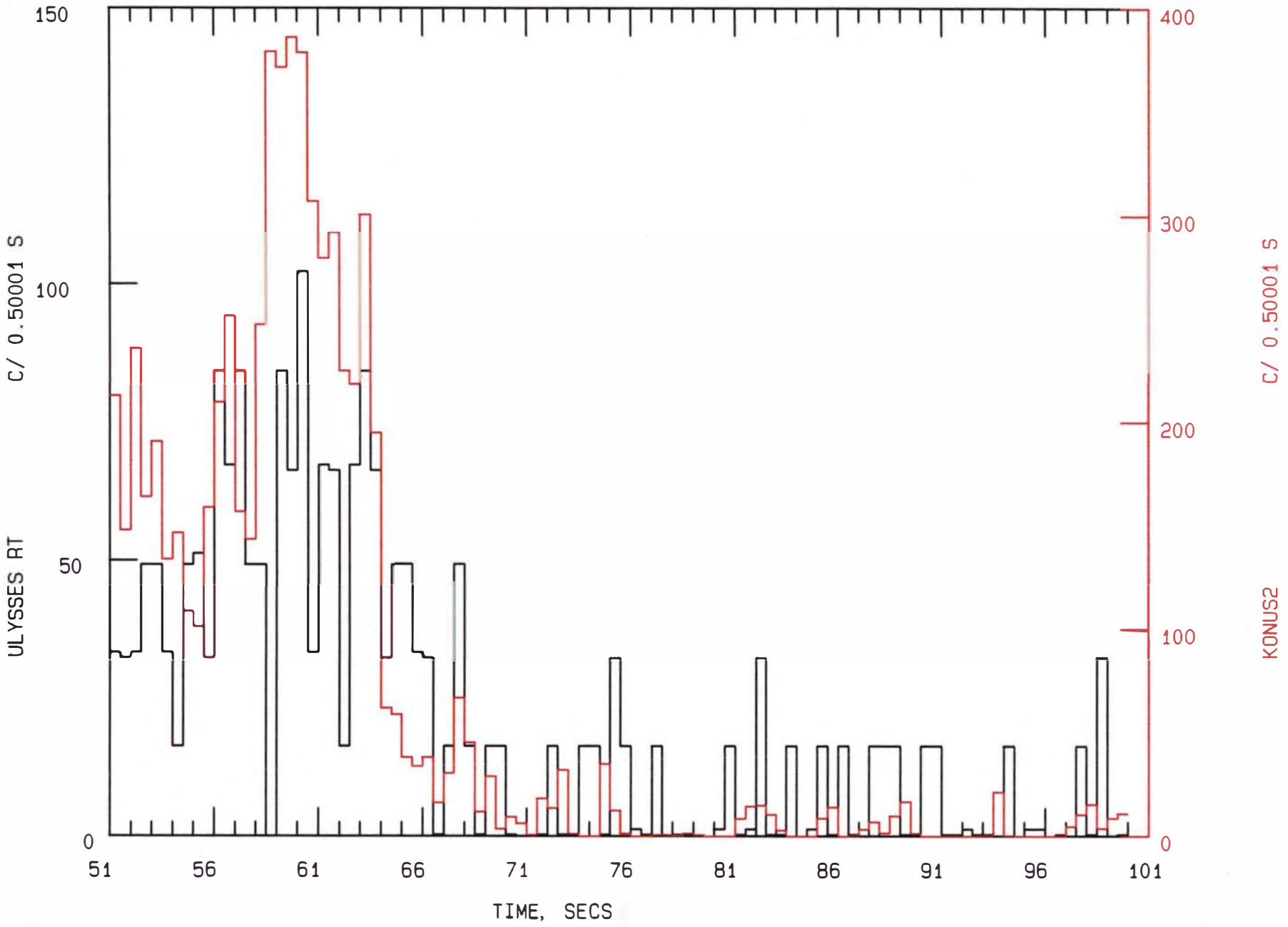


KONUS2 18/09/01 55873.794

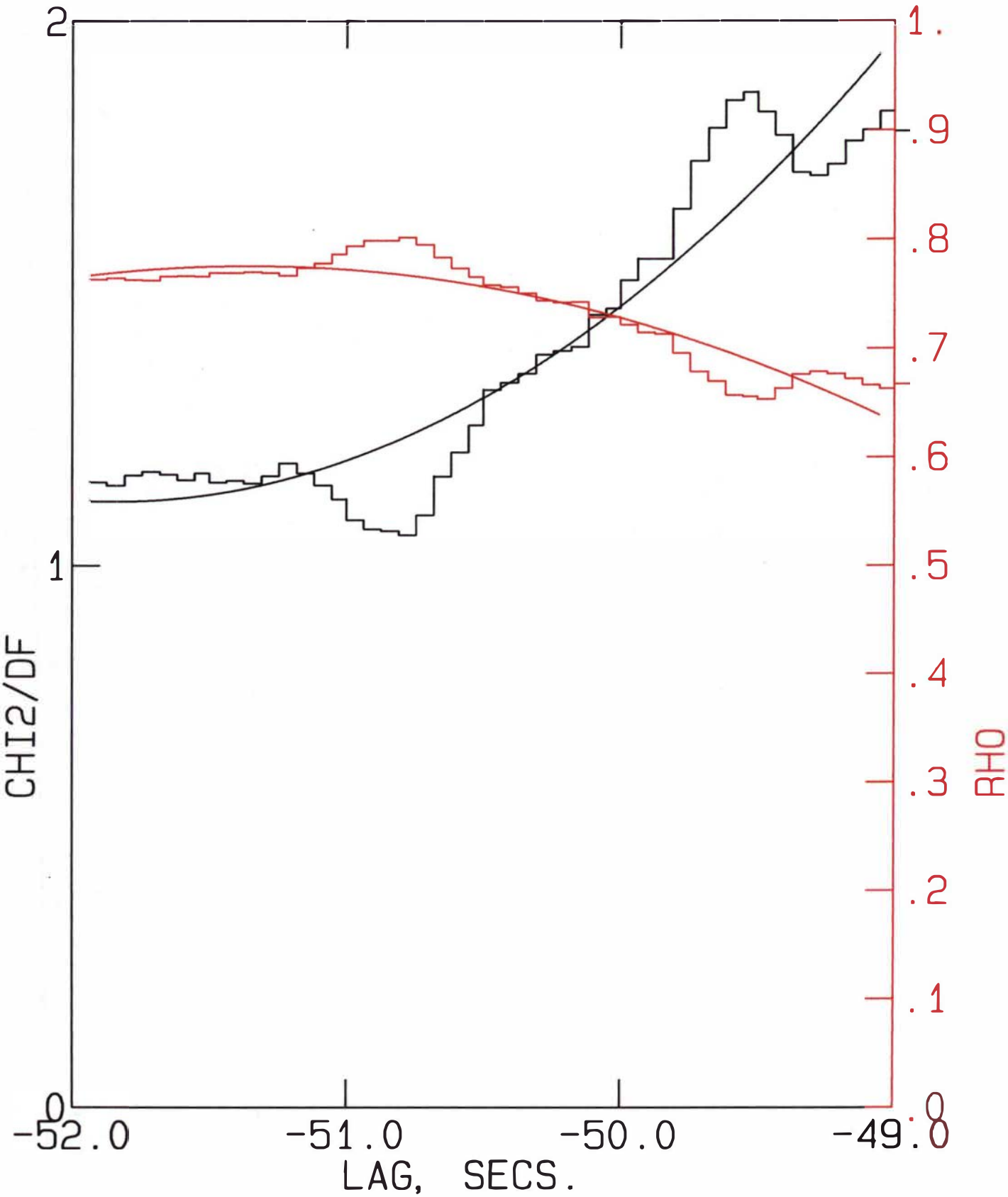
50- 200 keV GRB



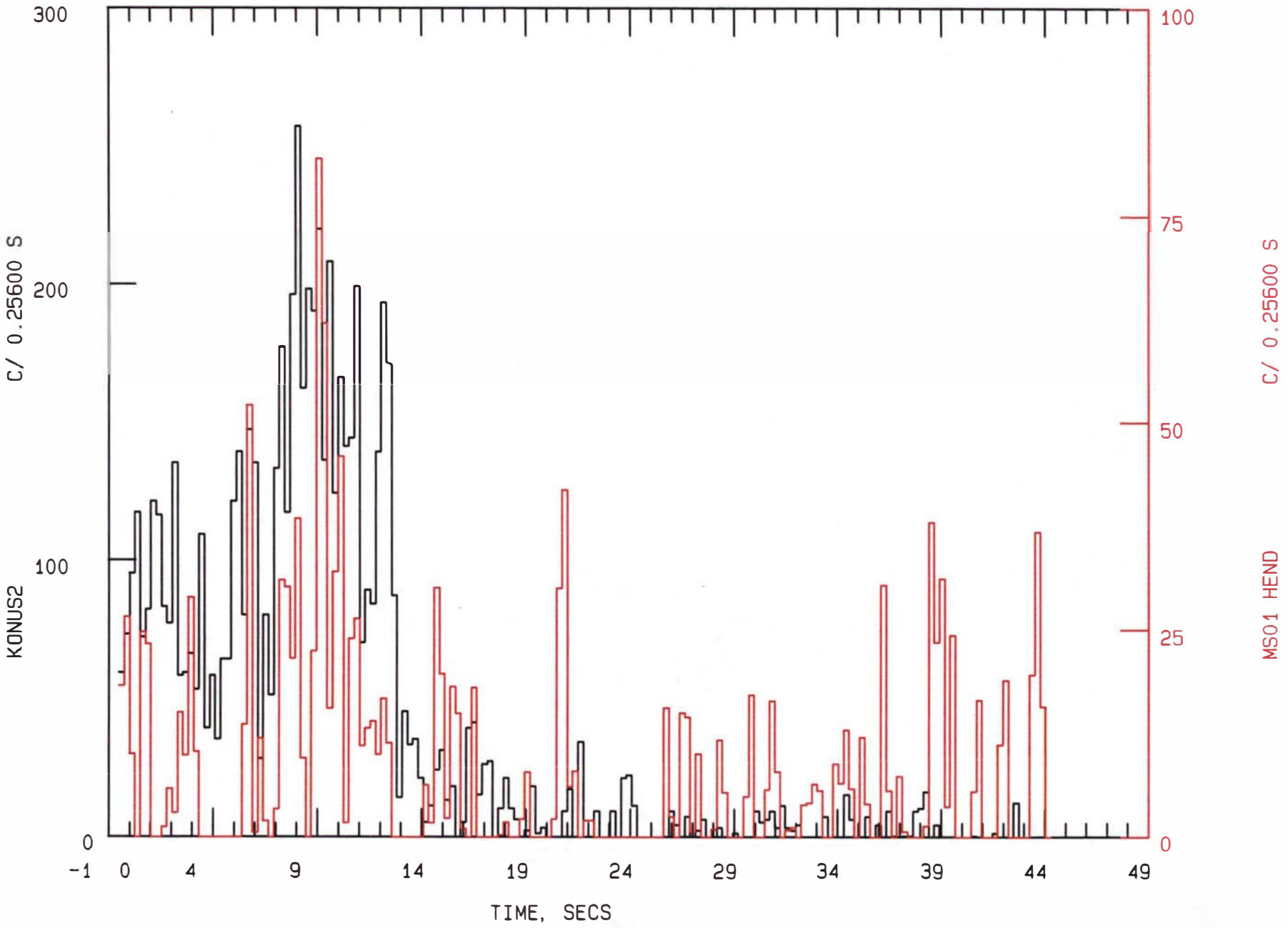
ULYSSES RT-KONUS2 CORRELATION 18/ 9/01 55223.016 18/ 5/ 4



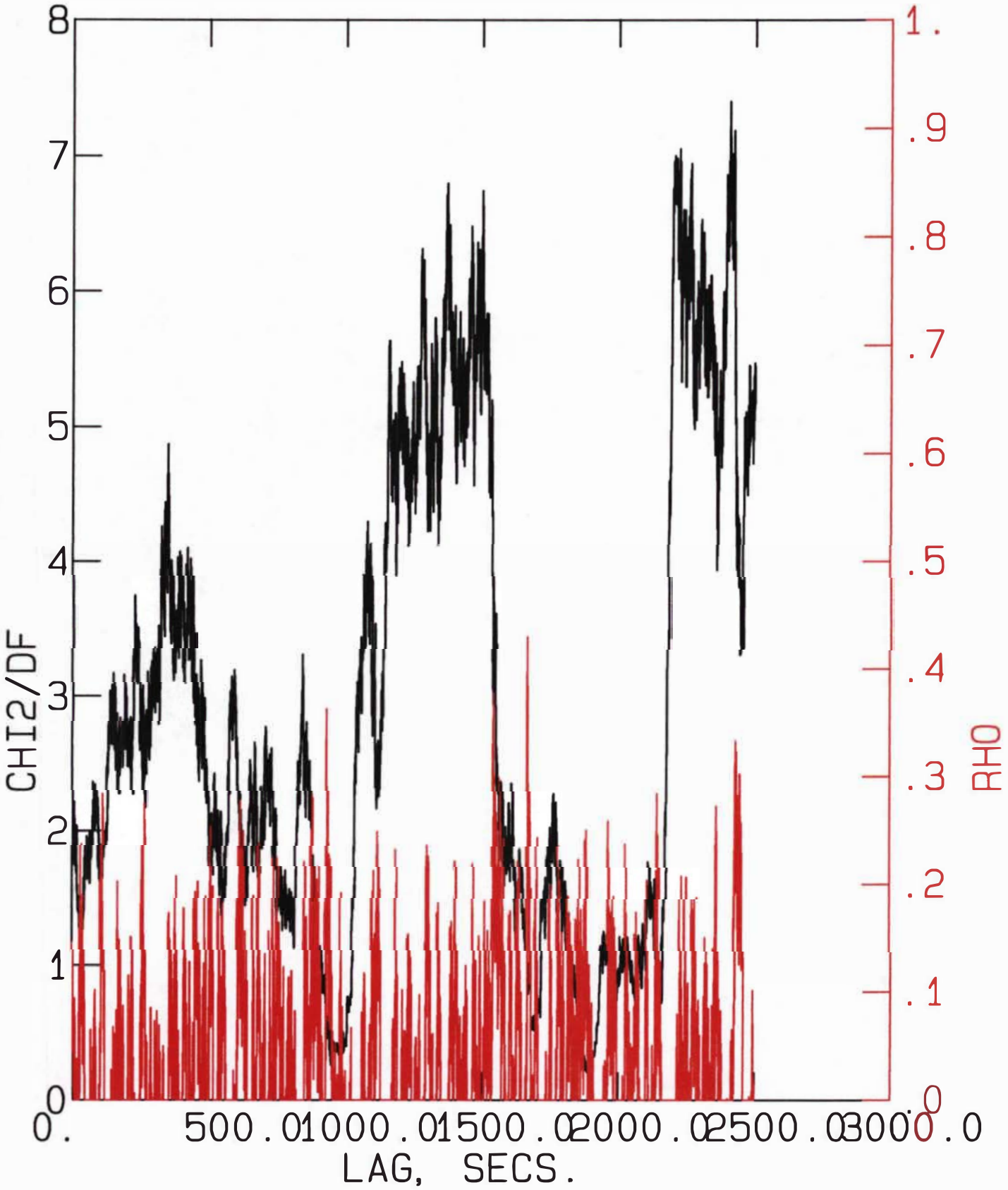
ULYSSES RT-KONUS2 CORRELATION 18/ 9/01 55223.016



KONUS2 -MS01 HEND CORRELATION 18/09/01 55873.794 18/ 5/ 4



KONUS2 -MS01 HEND CORRELATION 18/09/01 55873.794



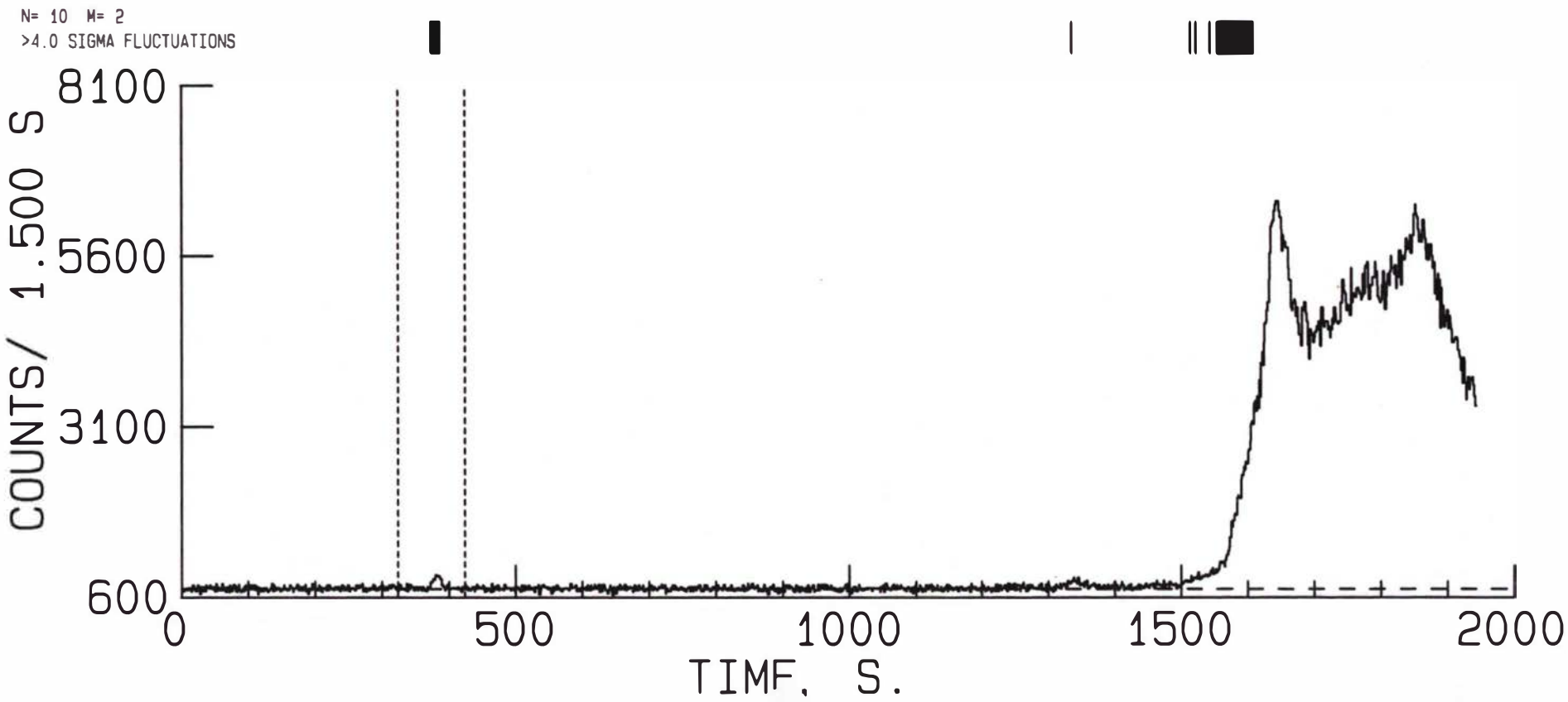
ULYSSES RT

18/ 5/ 4

18/ 9/ 1 54900.246 s

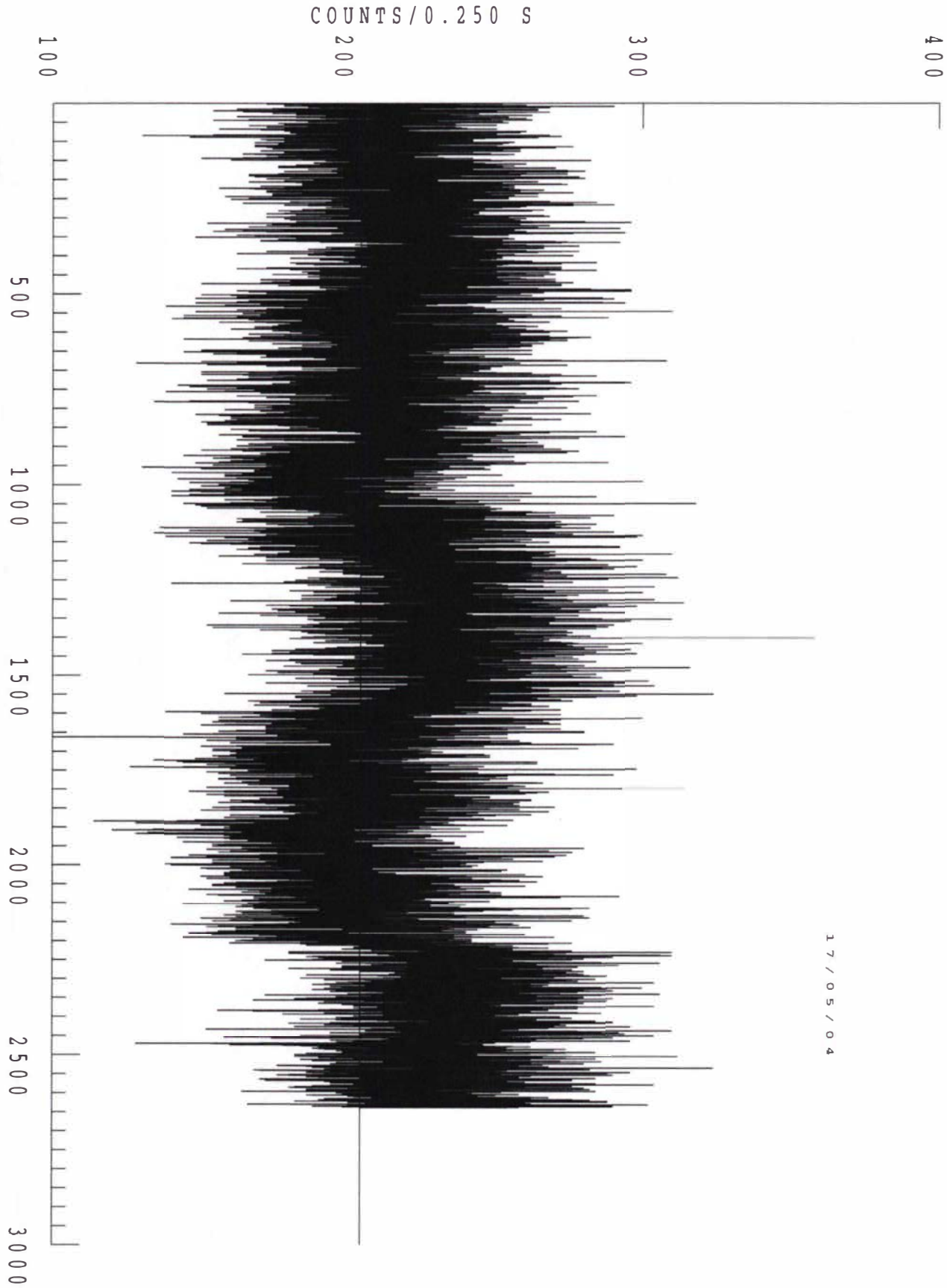
0.250 S INTERVALS REGROUPED BY 6

22- 152 keV



MS01 18/09/01 54557.343

50- 3000 keV

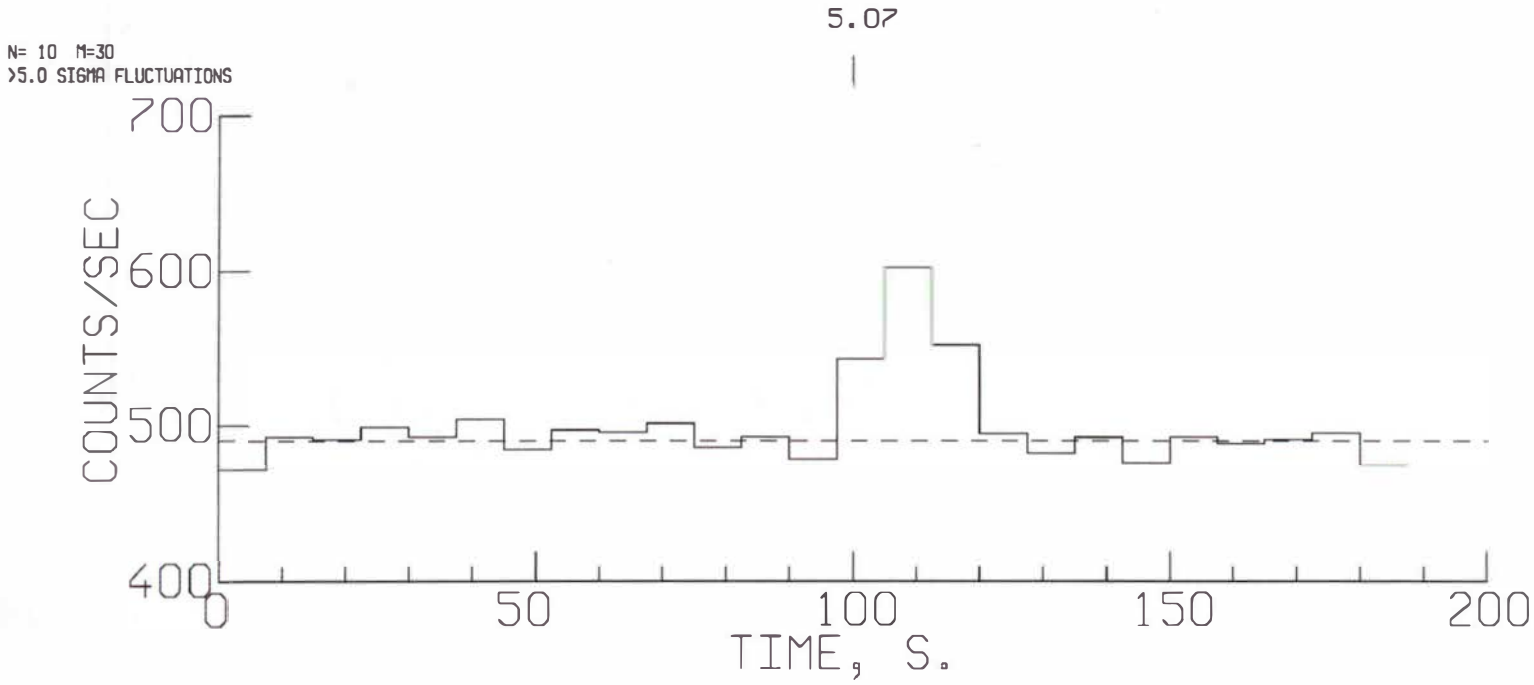


ULYSSES RT 23/ 9/ 1

18/ 9/ 1 55273.001 s

0.250 S INTERVALS REGROUPED BY 30

22- 150 keV

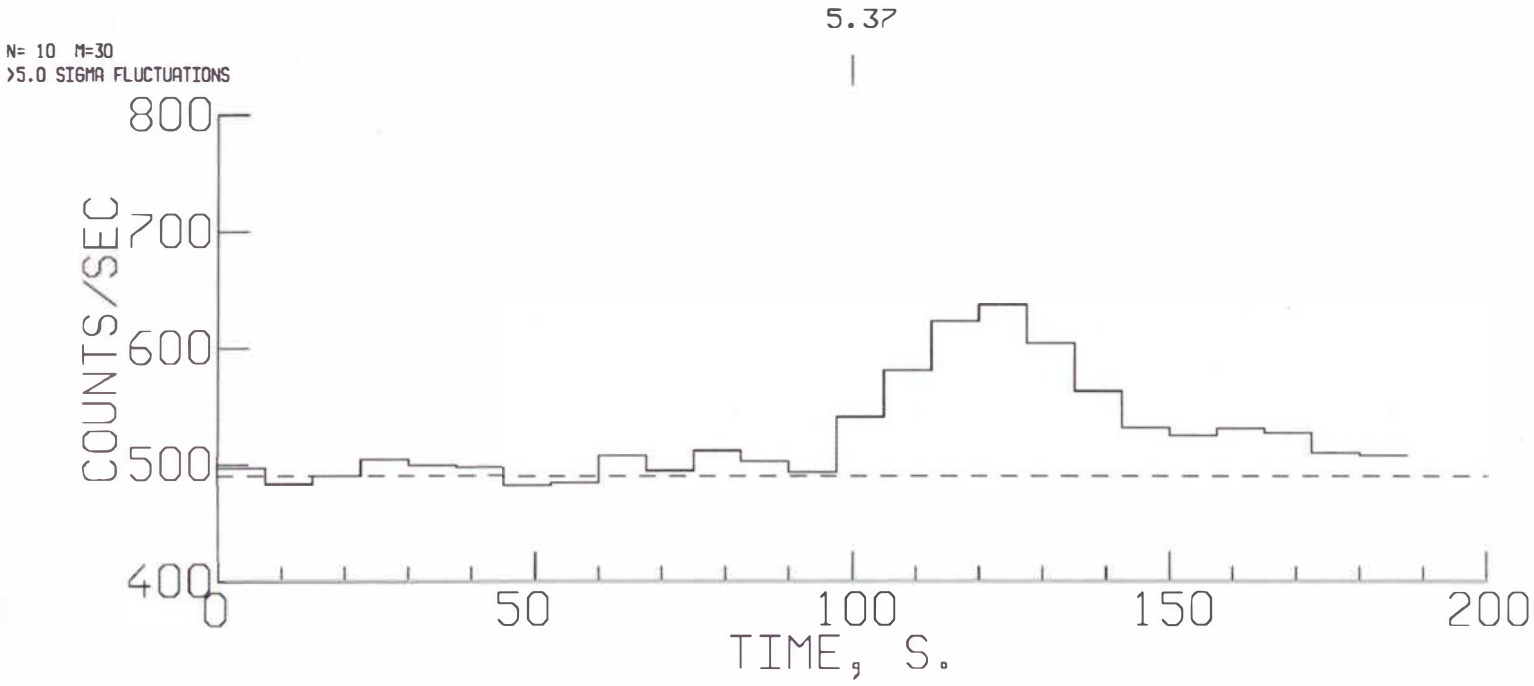


ULYSSES RT 23/ 9/ 1

18/ 9/ 1 78935.648 s

0.250 S INTERVALS REGROUPED BY 30

22- 150 keV

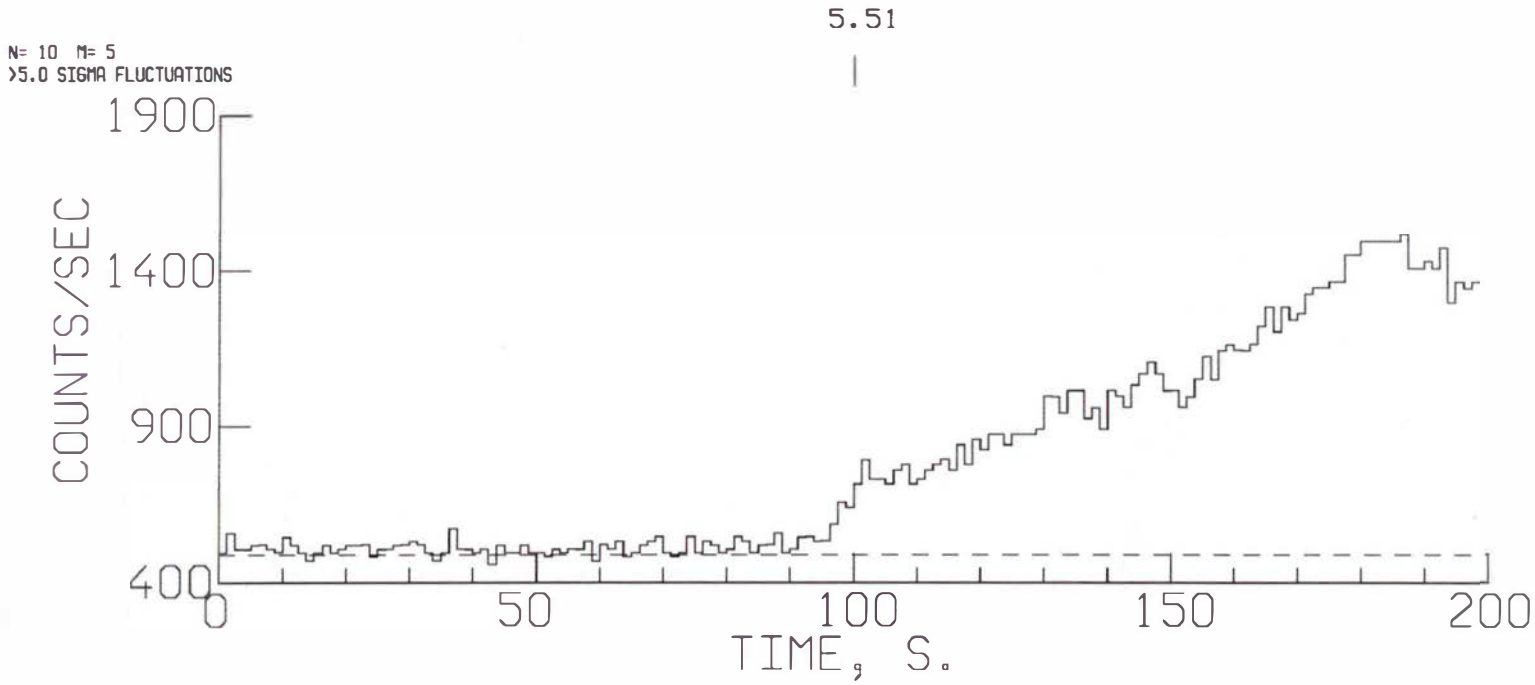


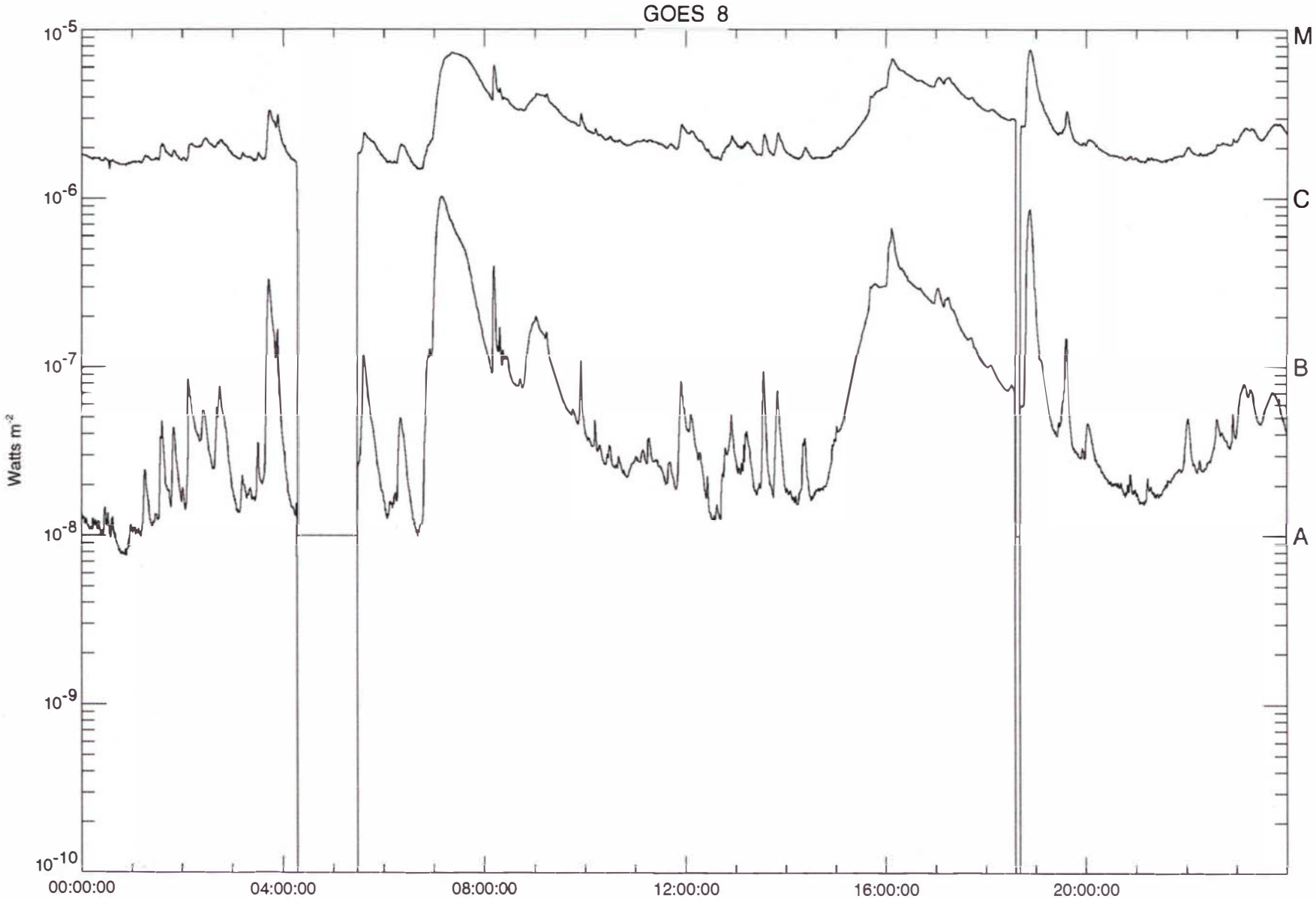
ULYSSES RT 23/ 9/ 1

18/ 9/ 1 79105.648 s

0.250 S INTERVALS REGROUPED BY 5

22- 150 keV

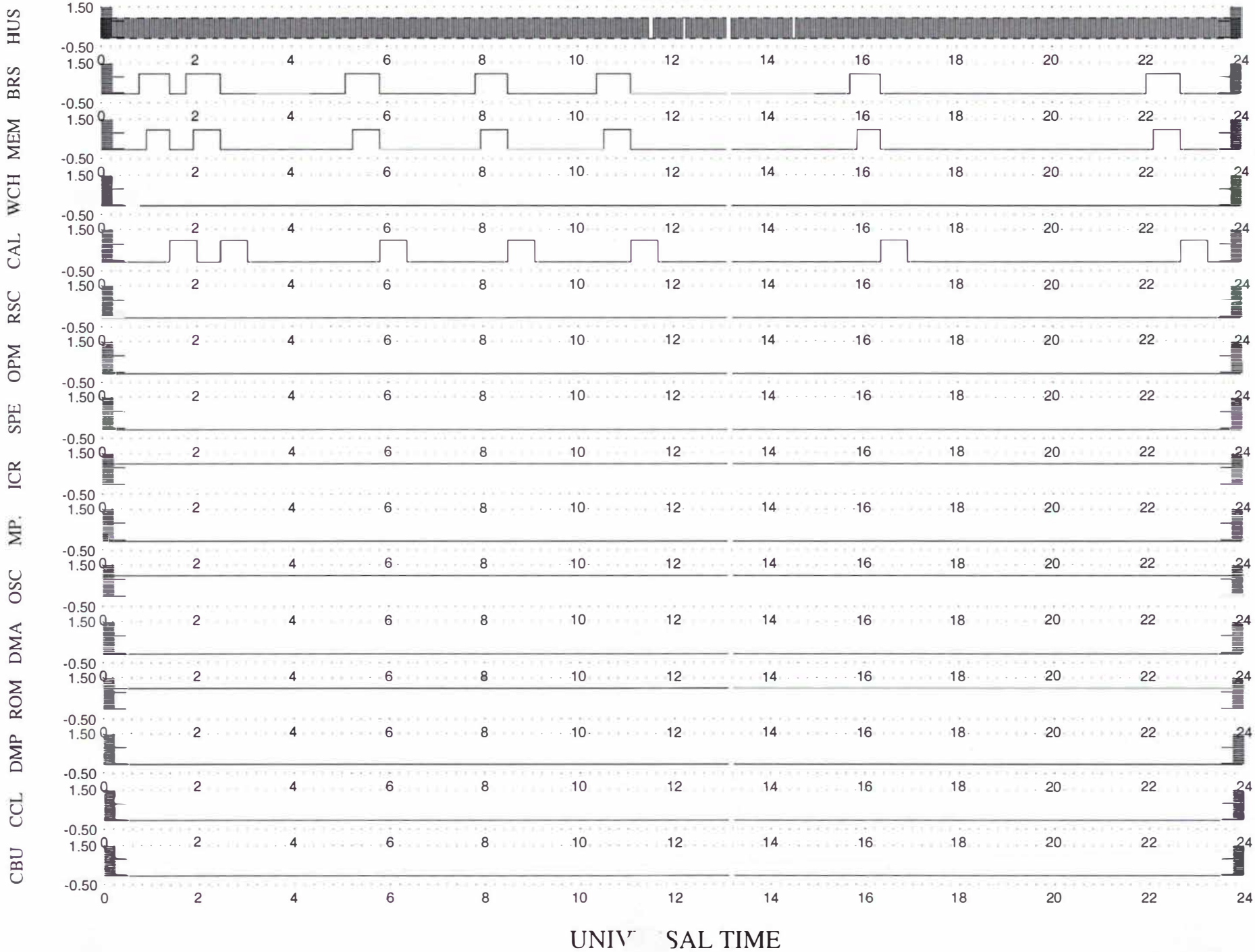




Data Start: 01/09/19, 0000:00 Plot created: 01/09/23, 0950
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

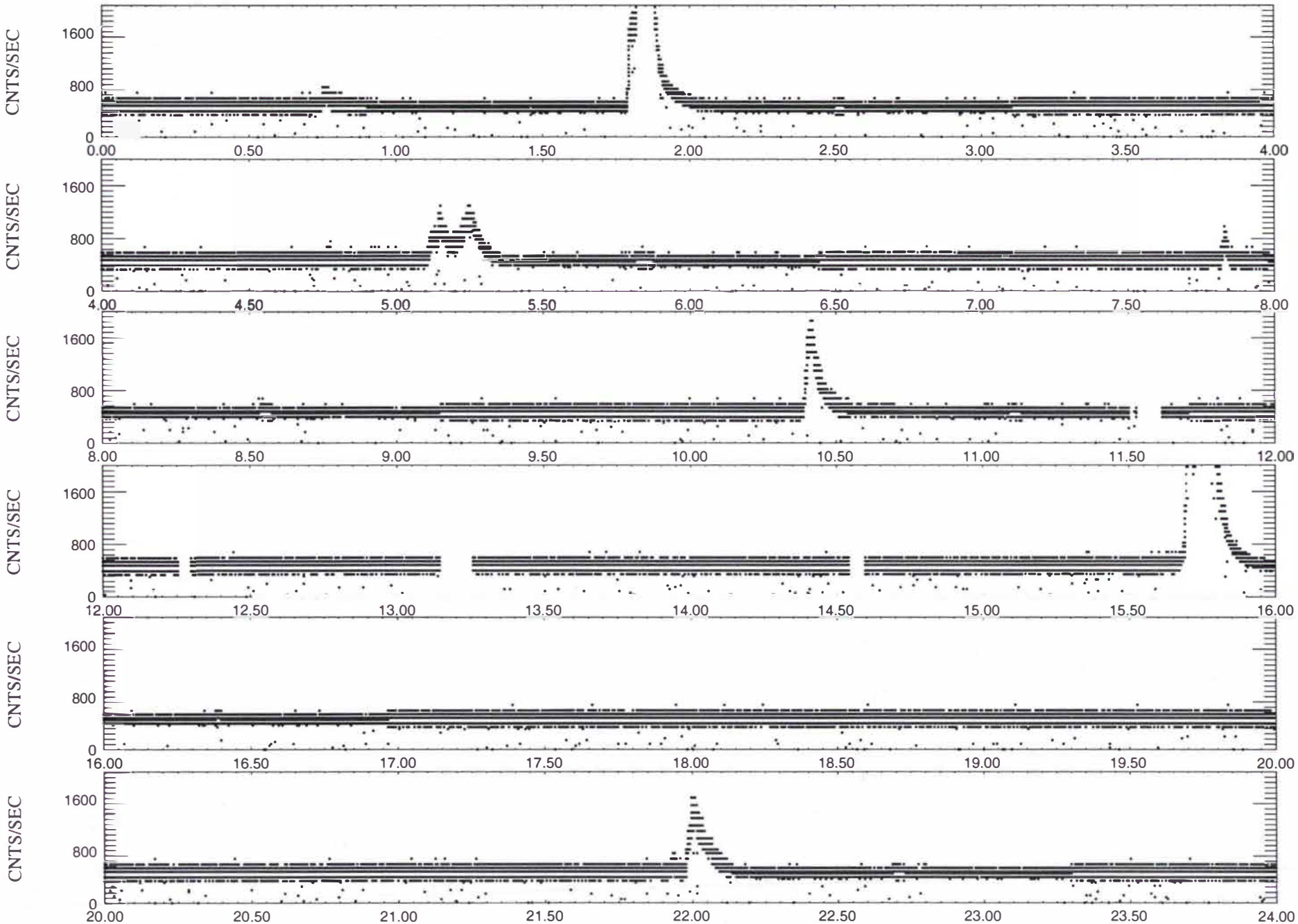
HUS MODES EDR day 261, year 2001 to day 261, year 2001 01/22/02

BURST NUMBER 1 - 7



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 18/09/2001 DOY = 261 01/22/02

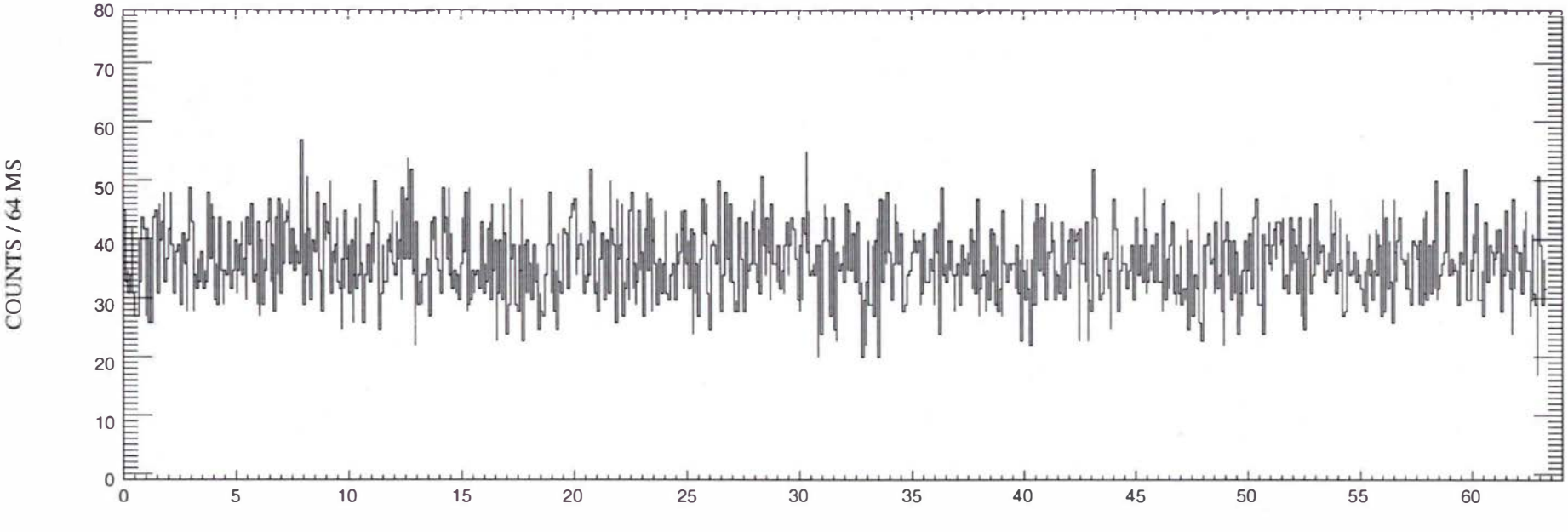
CALIBRATION DATA INCLUDED

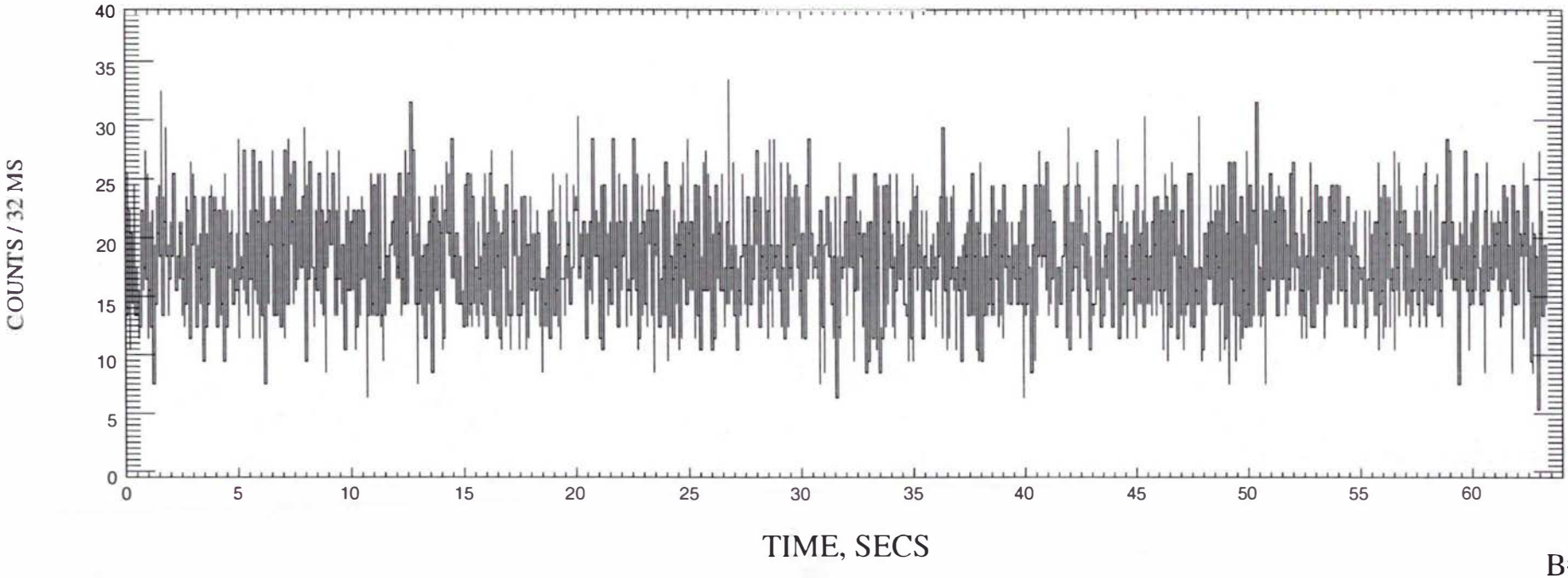


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 18/09/2001 DOY = 261 01/22/02

Burst Counter 1 at UT= 0.750276273092 h= 2700.995 s 00:45:00.995

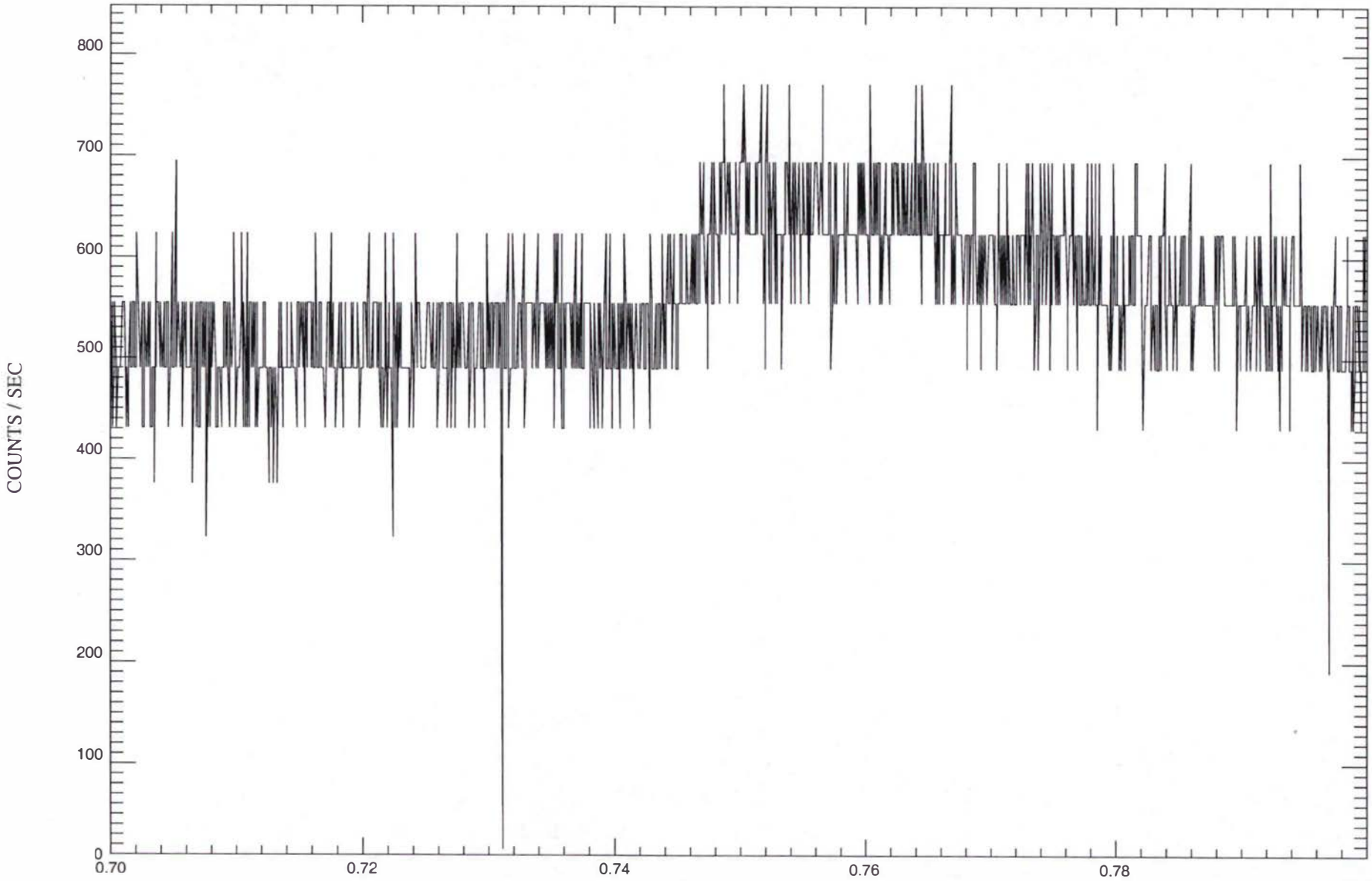




B# 1

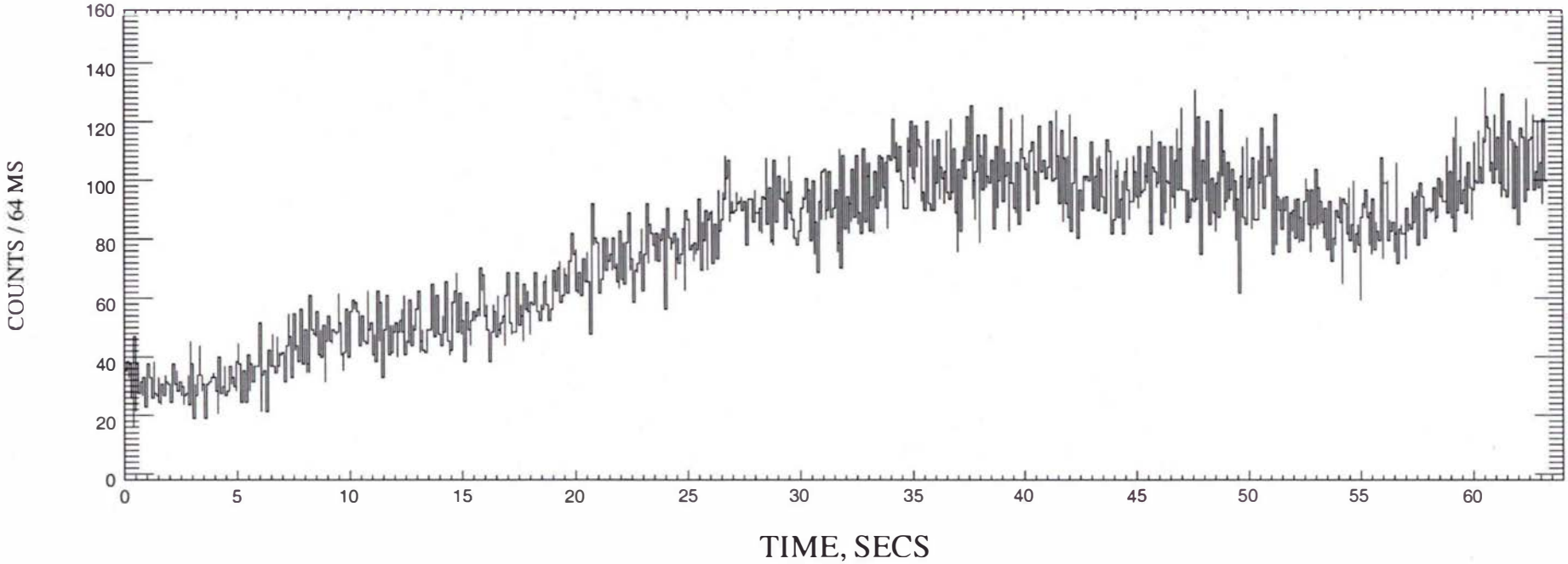
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 18/09/2001 DOY = 261 01/22/02

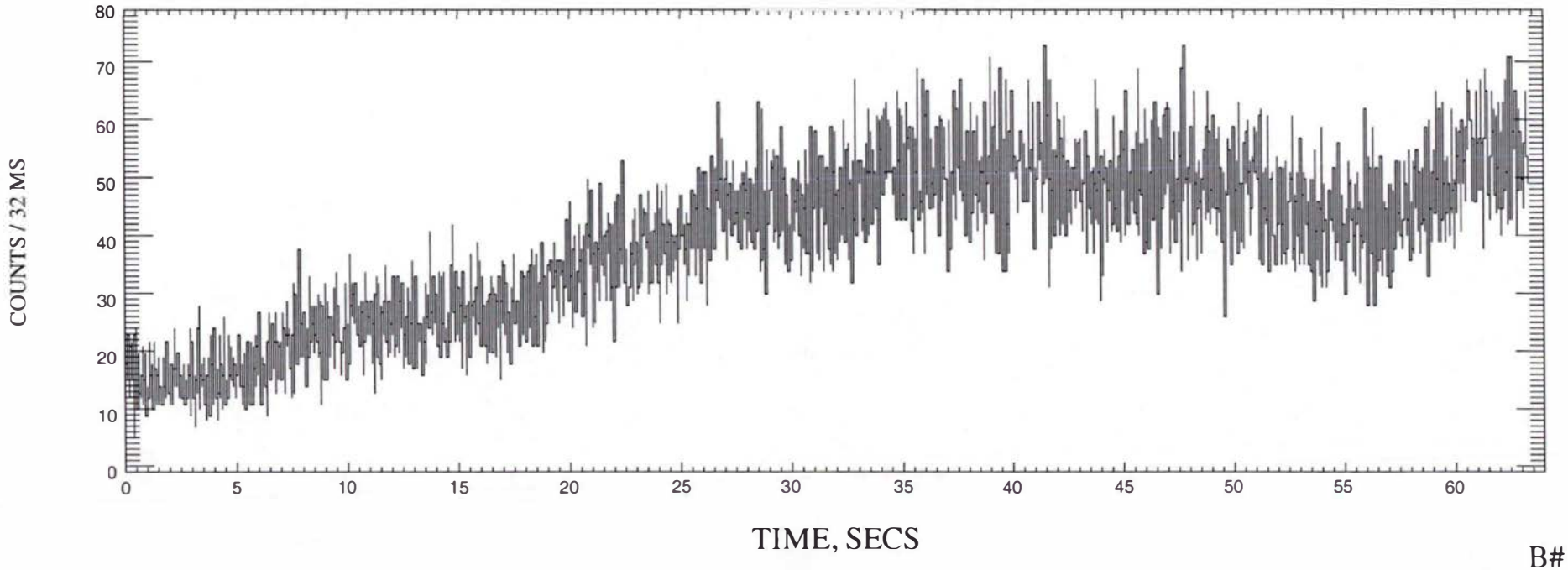
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 18/09/2001 DOY = 261 01/22/02

Burst Counter 2 at UT= 1.788278956943 h= 6437.804 s 01:47:17.804

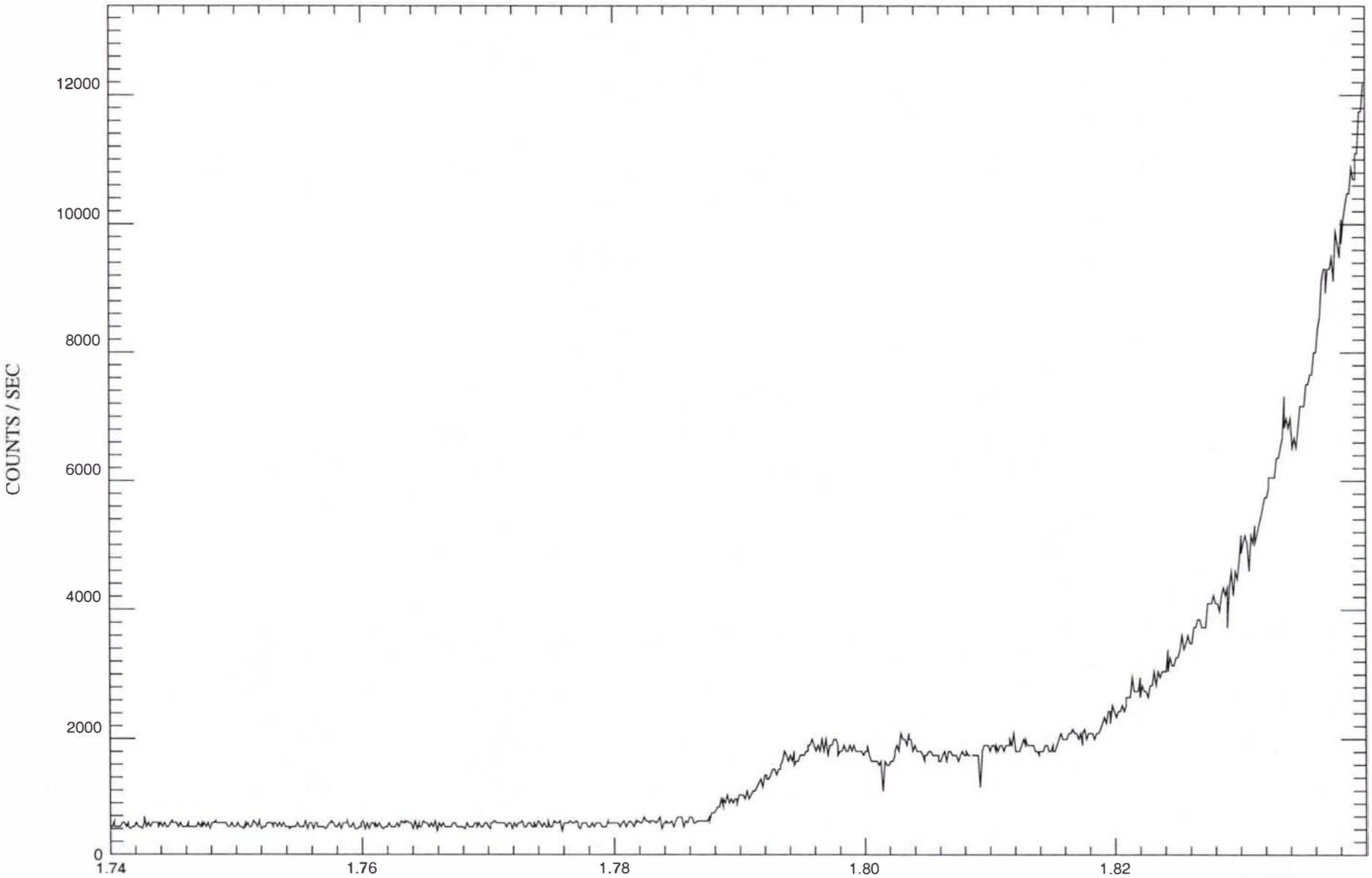




B# 2

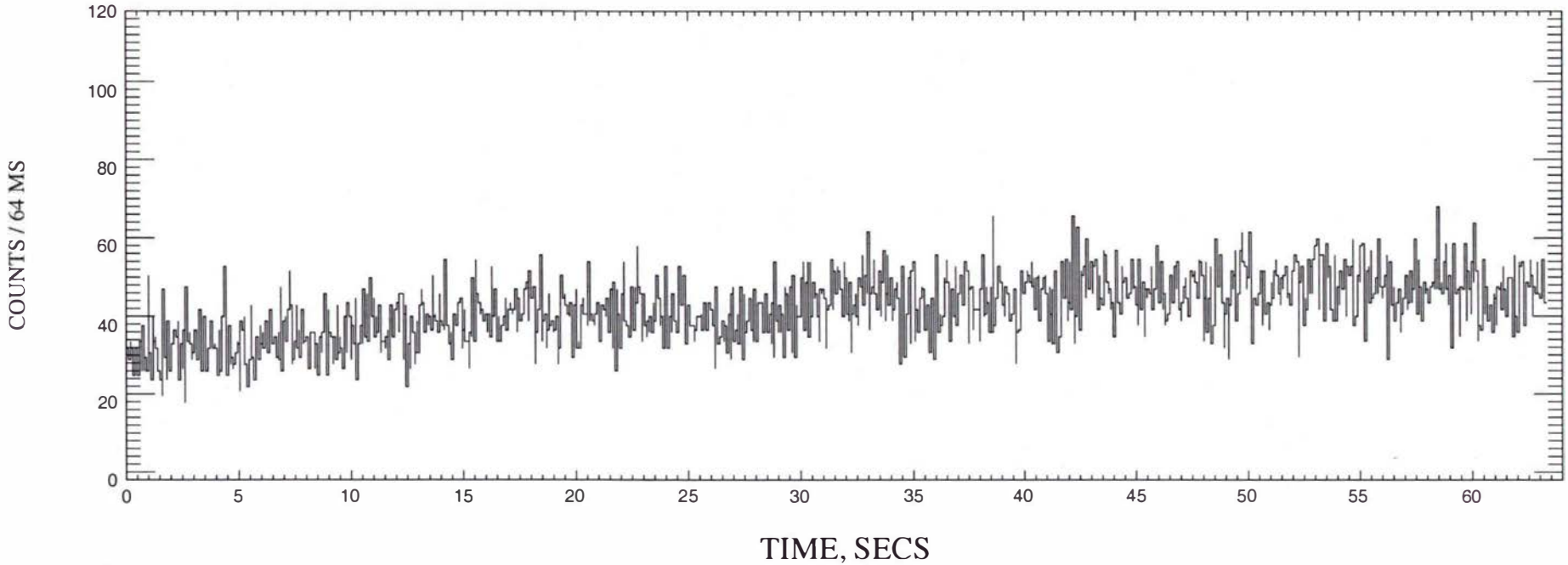
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 18/09/2001 DOY = 261 01/22/02

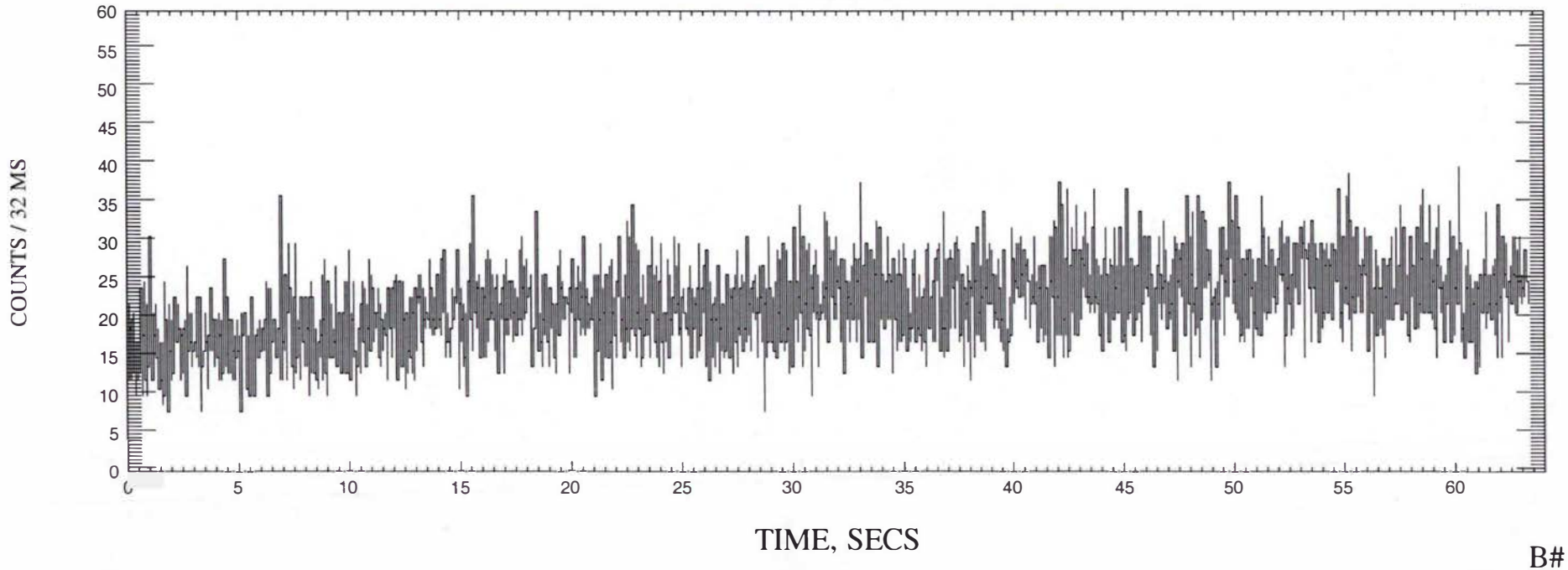
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 18/09/2001 DOY = 261 01/22/02

Burst Counter 3 at UT= 5.108924882677 h=18392.130 s 05:06:32.130

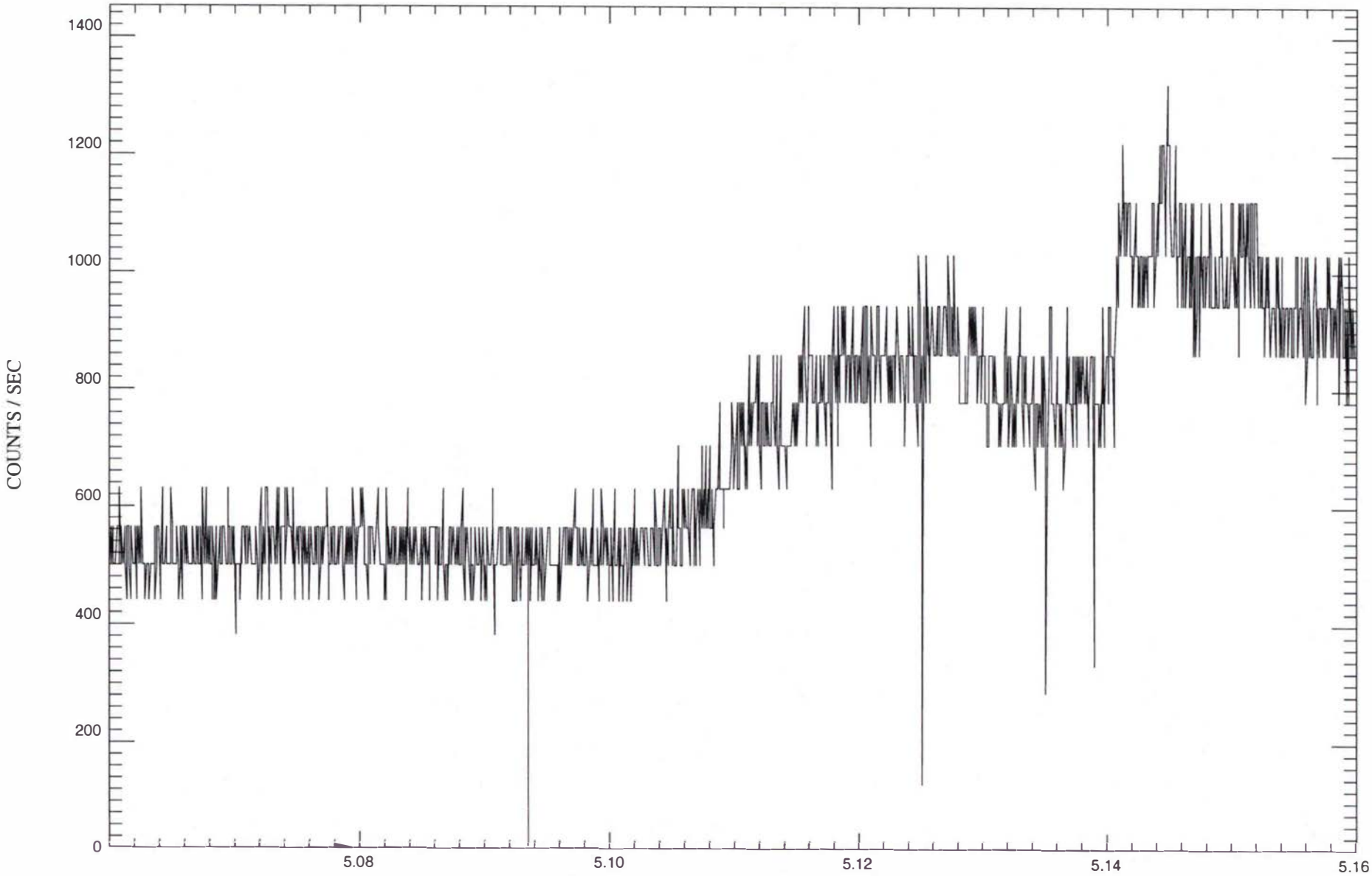




B# 3

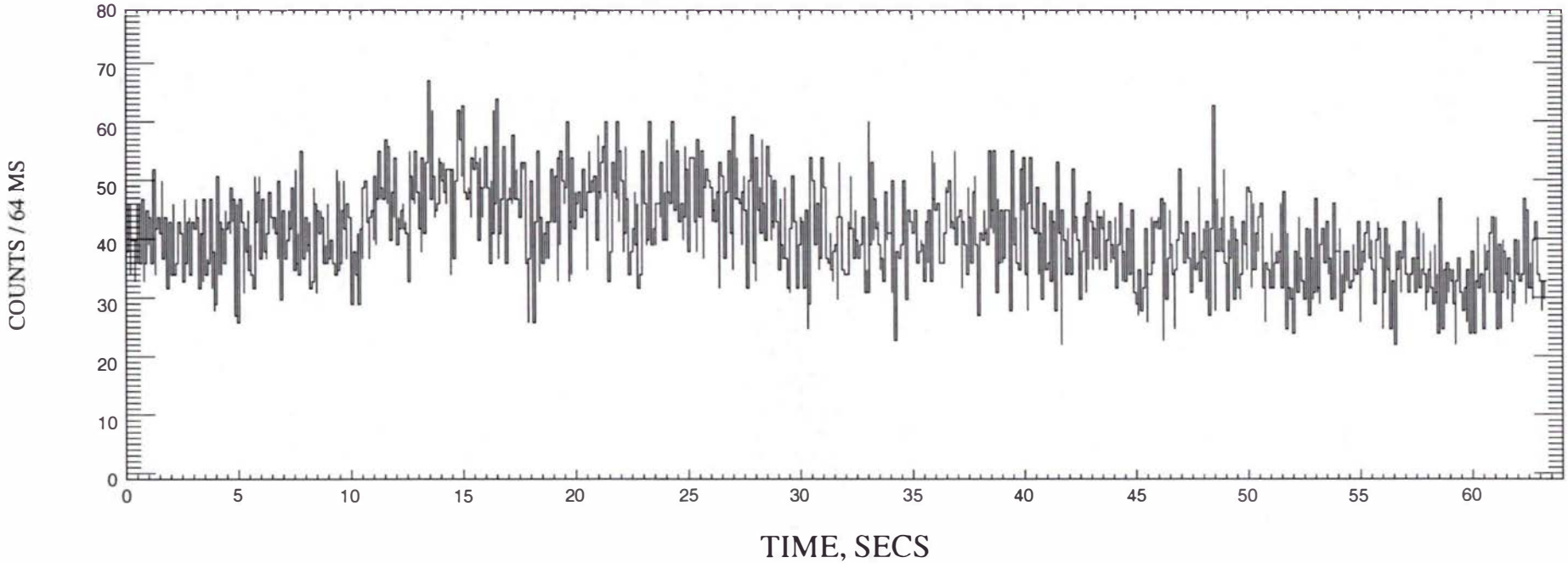
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 18/09/2001 DOY = 261 01/22/02

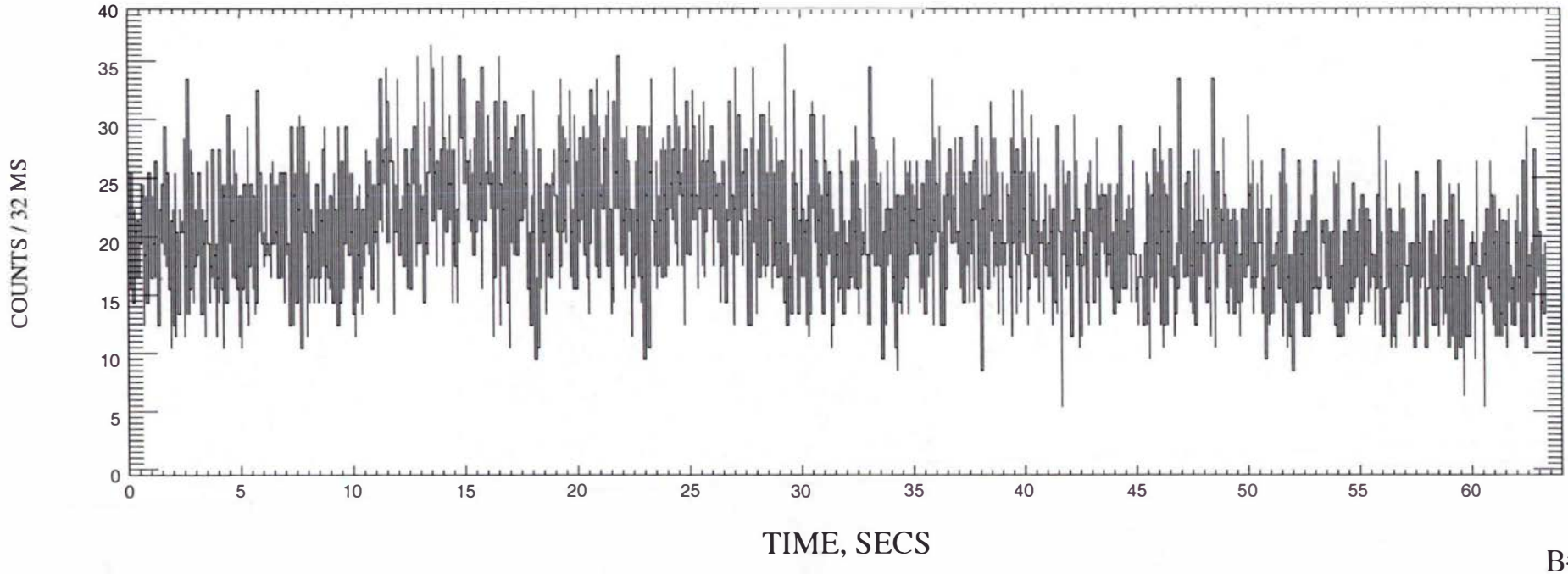
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 18/09/2001 DOY = 261 01/22/02

Burst Counter 4 at UT= 7.825879597134 h=28173.167 s 07:49:33.167

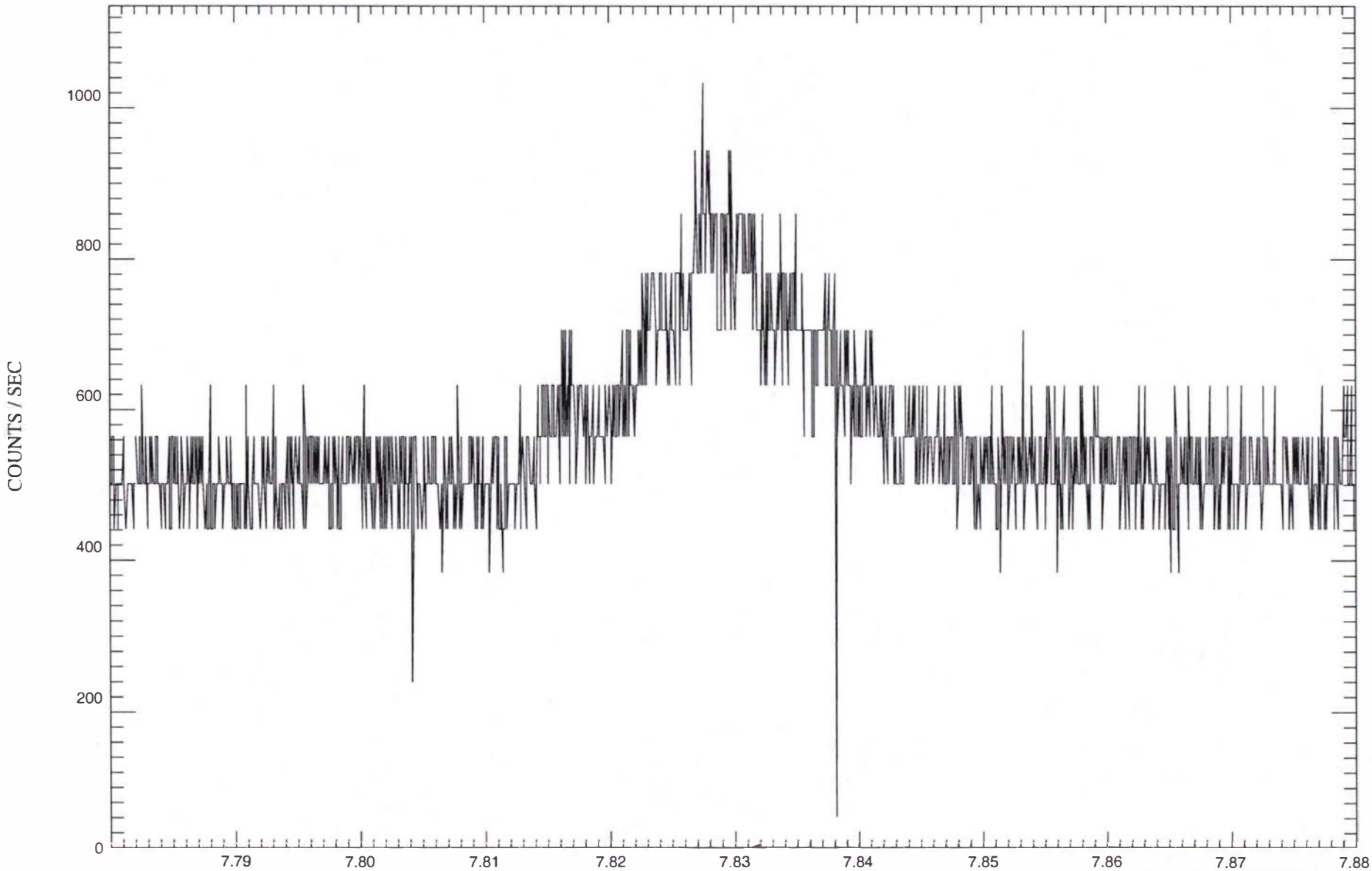




B# 4

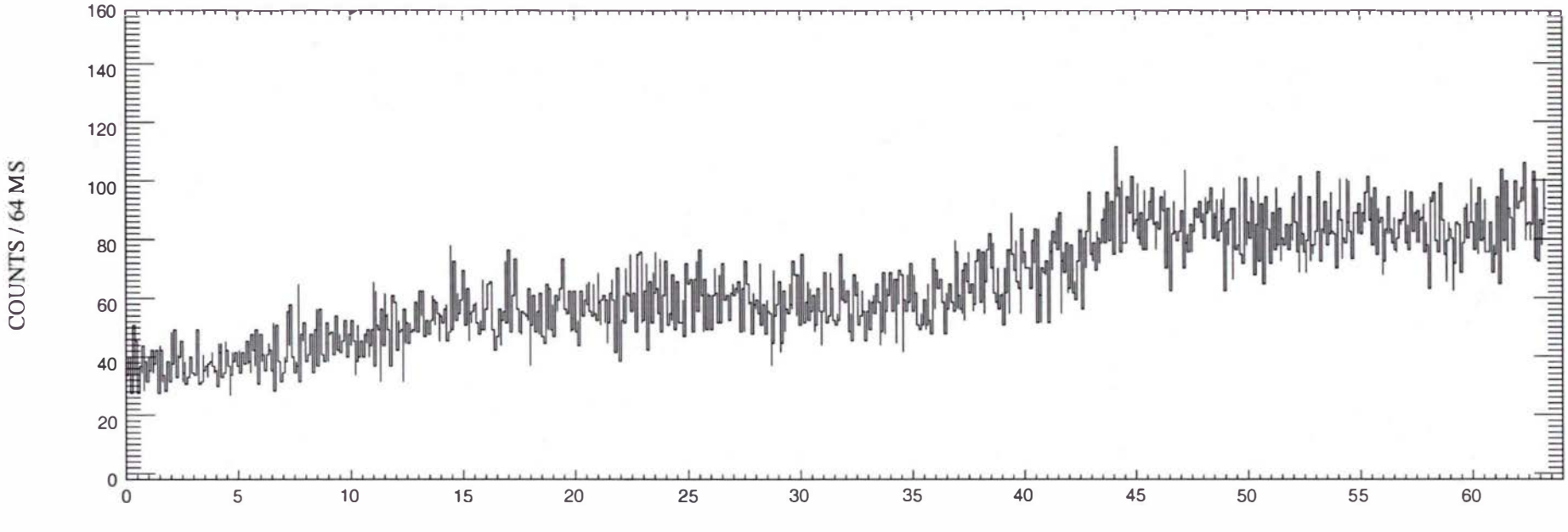
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 18/09/2001 DOY = 261 01/22/02

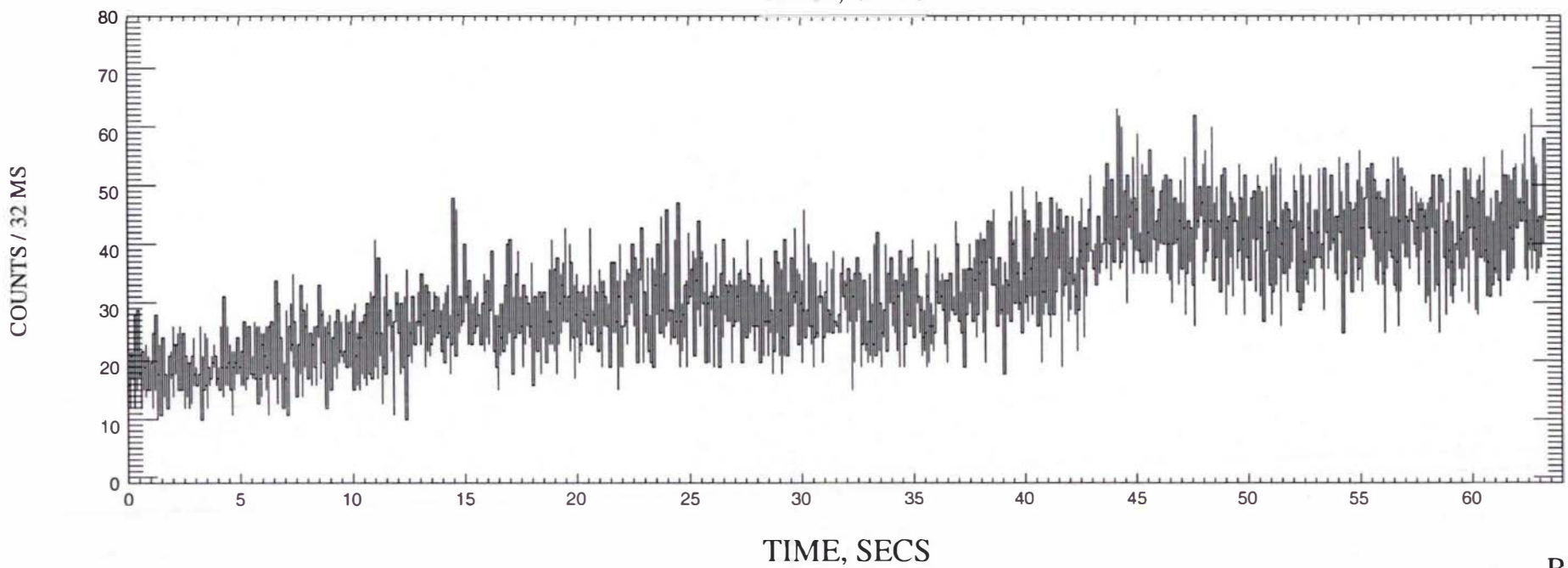
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 18/09/2001 DOY = 261 01/22/02

Burst Counter 5 at UT=10.390922224257 h=37407.320 s 10:23:27.320

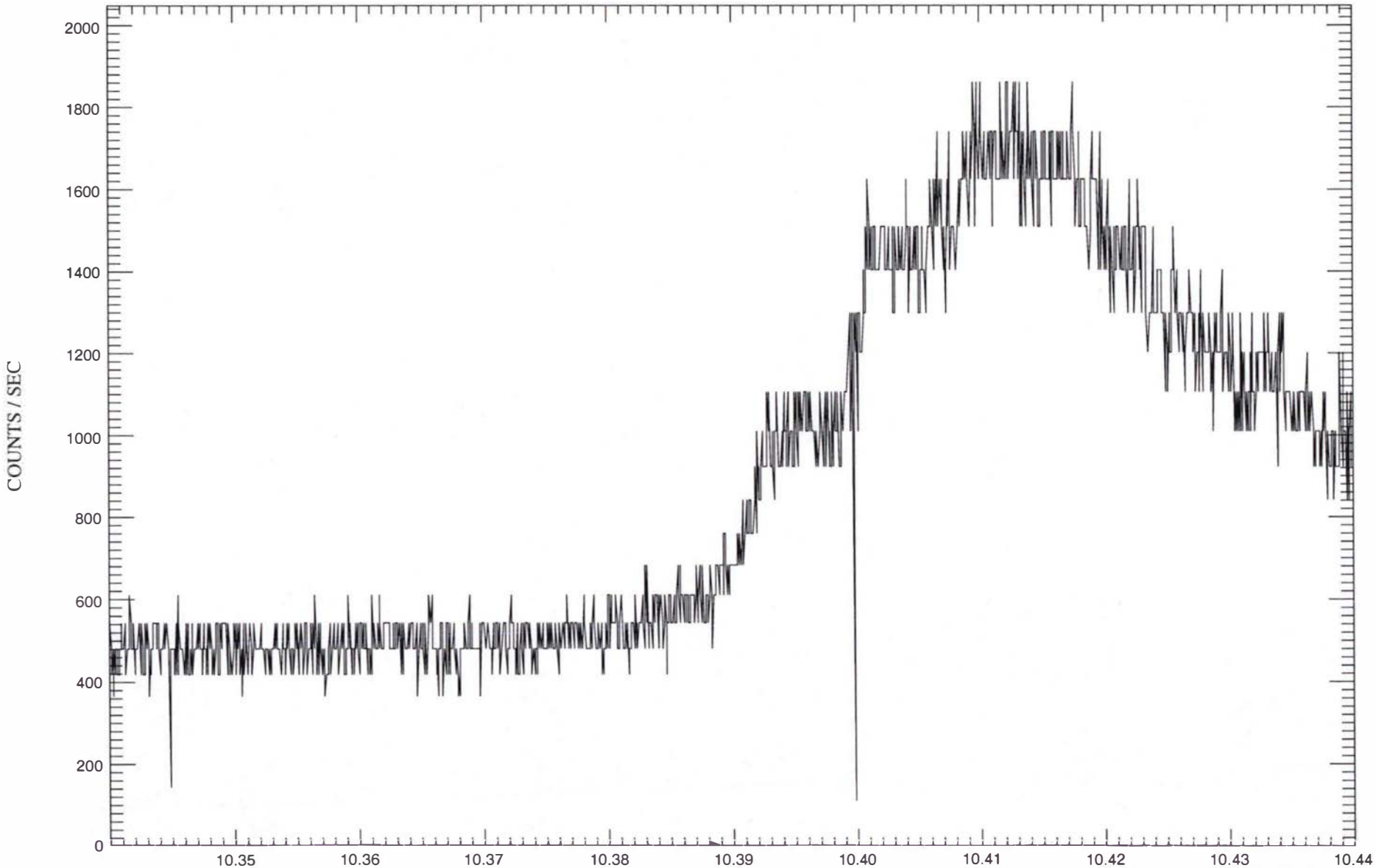




B# 5

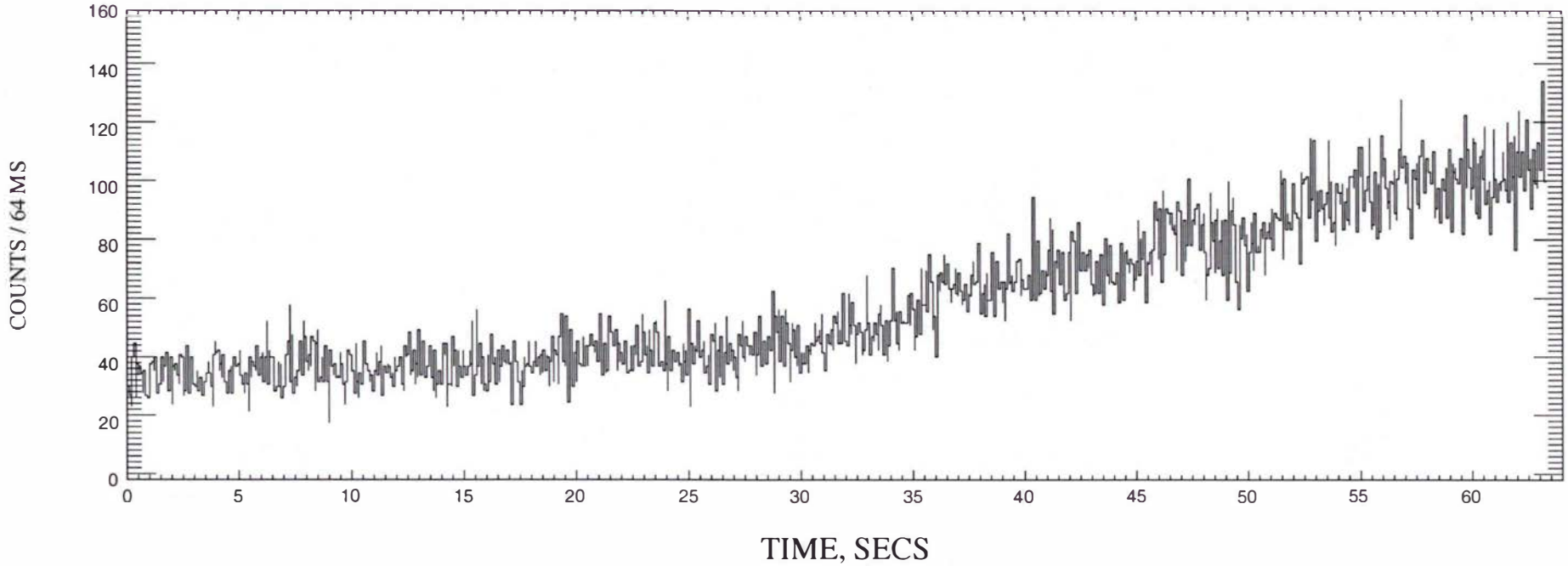
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 18/09/2001 DOY = 261 01/22/02

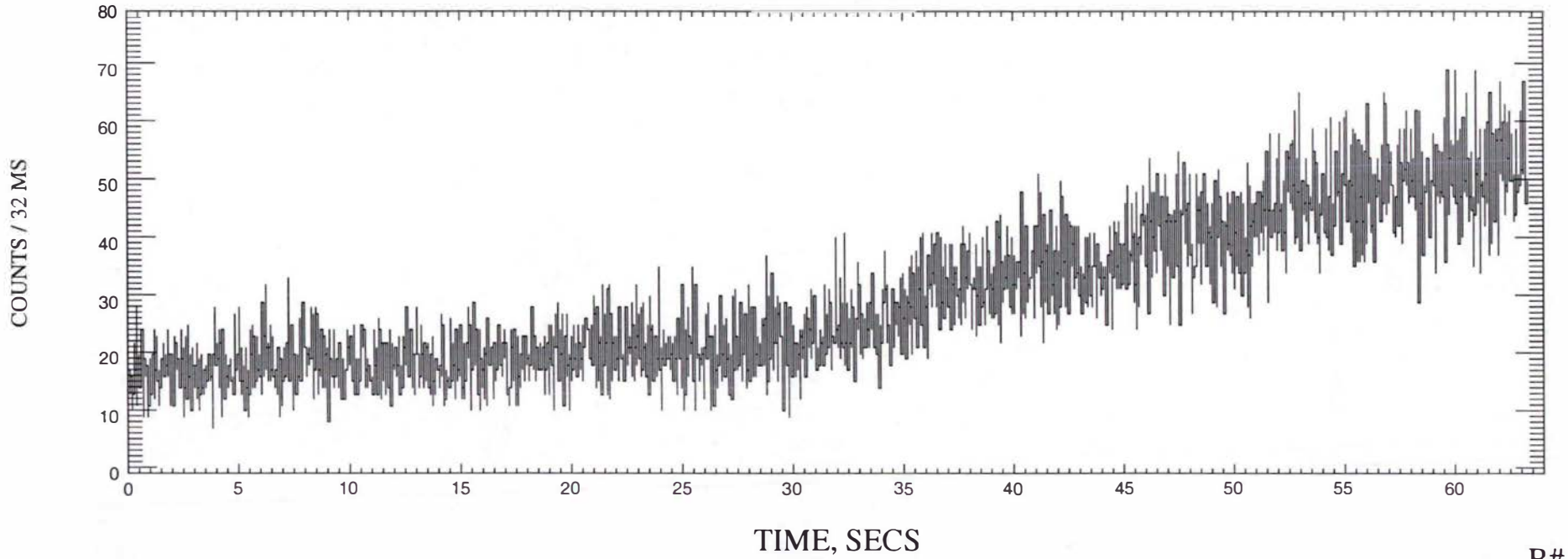
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 18/09/2001 DOY = 261 01/22/02

Burst Counter 6 at UT=15.679552688599 h=56446.390 s 15:40:46.390

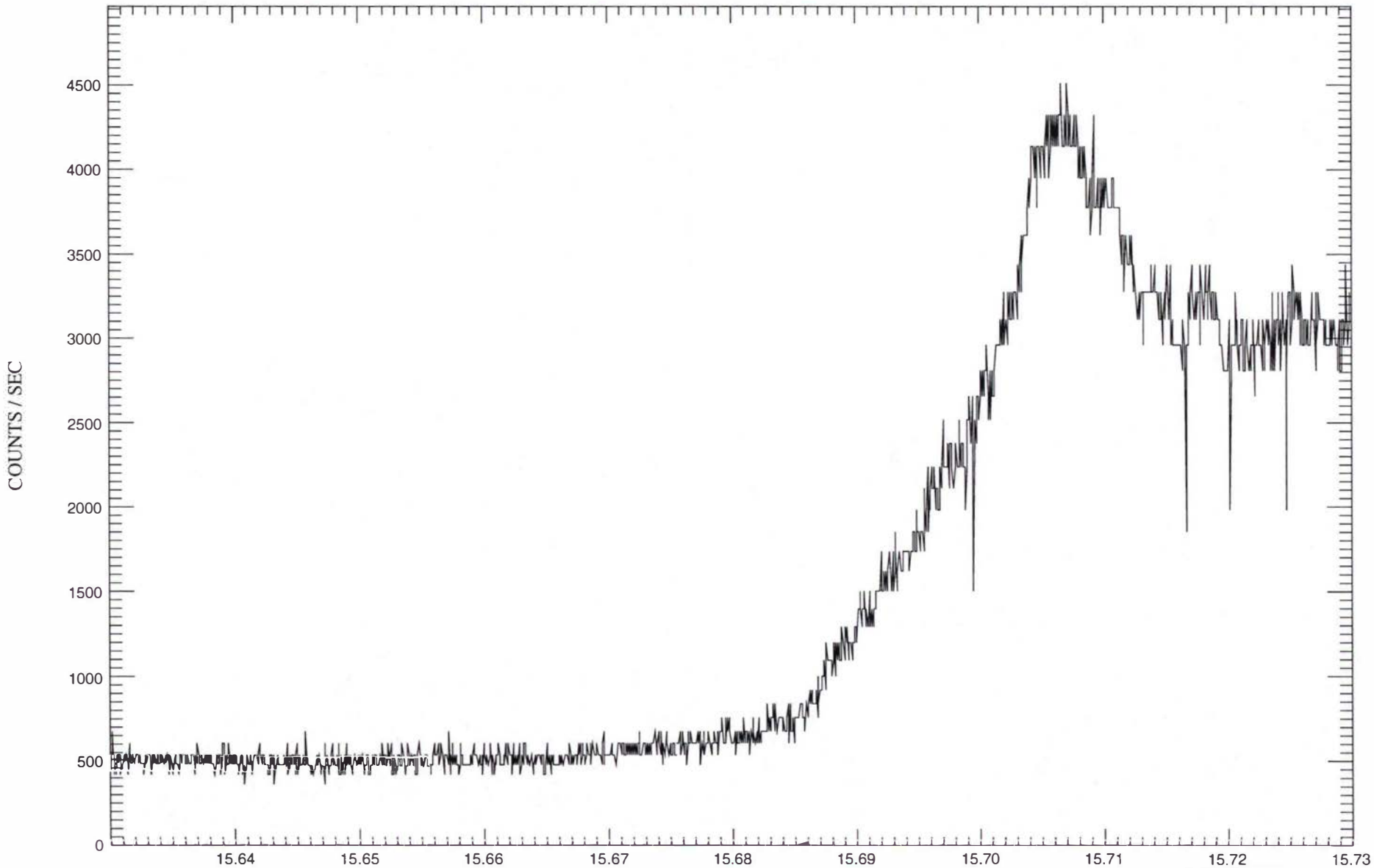




B# 6

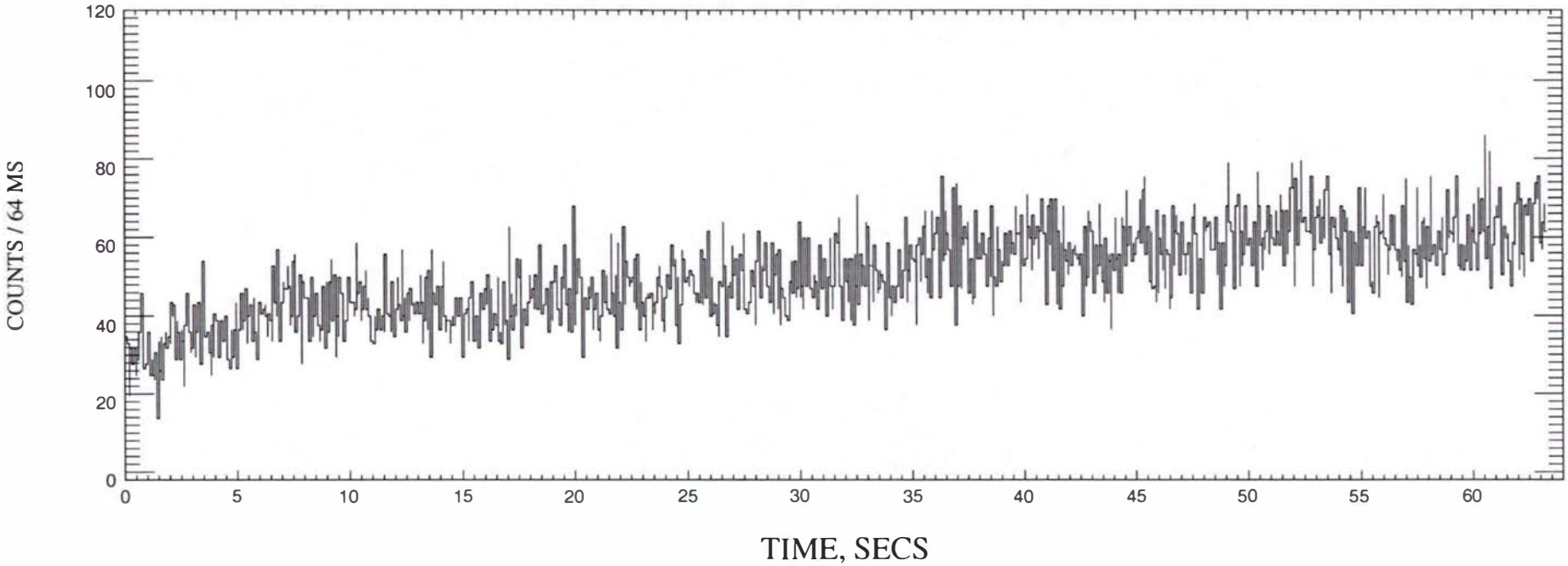
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 18/09/2001 DOY = 261 01/22/02

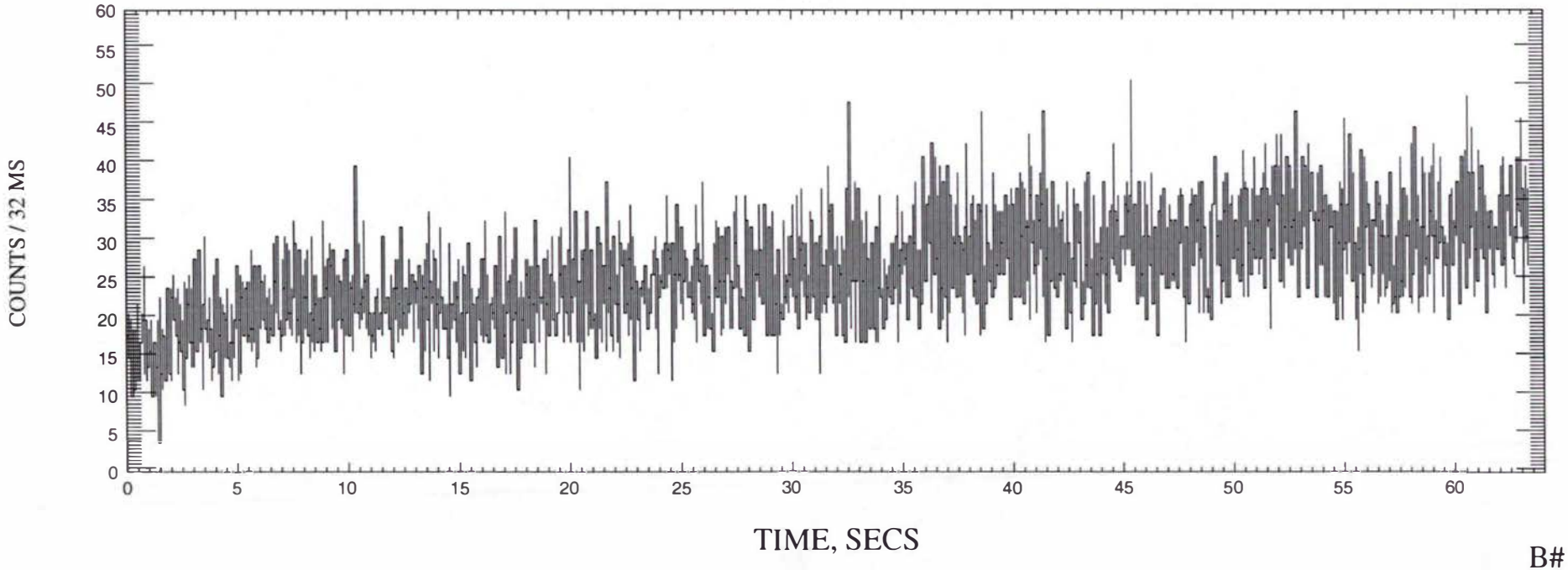
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 18/09/2001 DOY = 261 01/22/02

Burst Counter 7 at UT=21.974376932780 h=79107.757 s 21:58:27.757

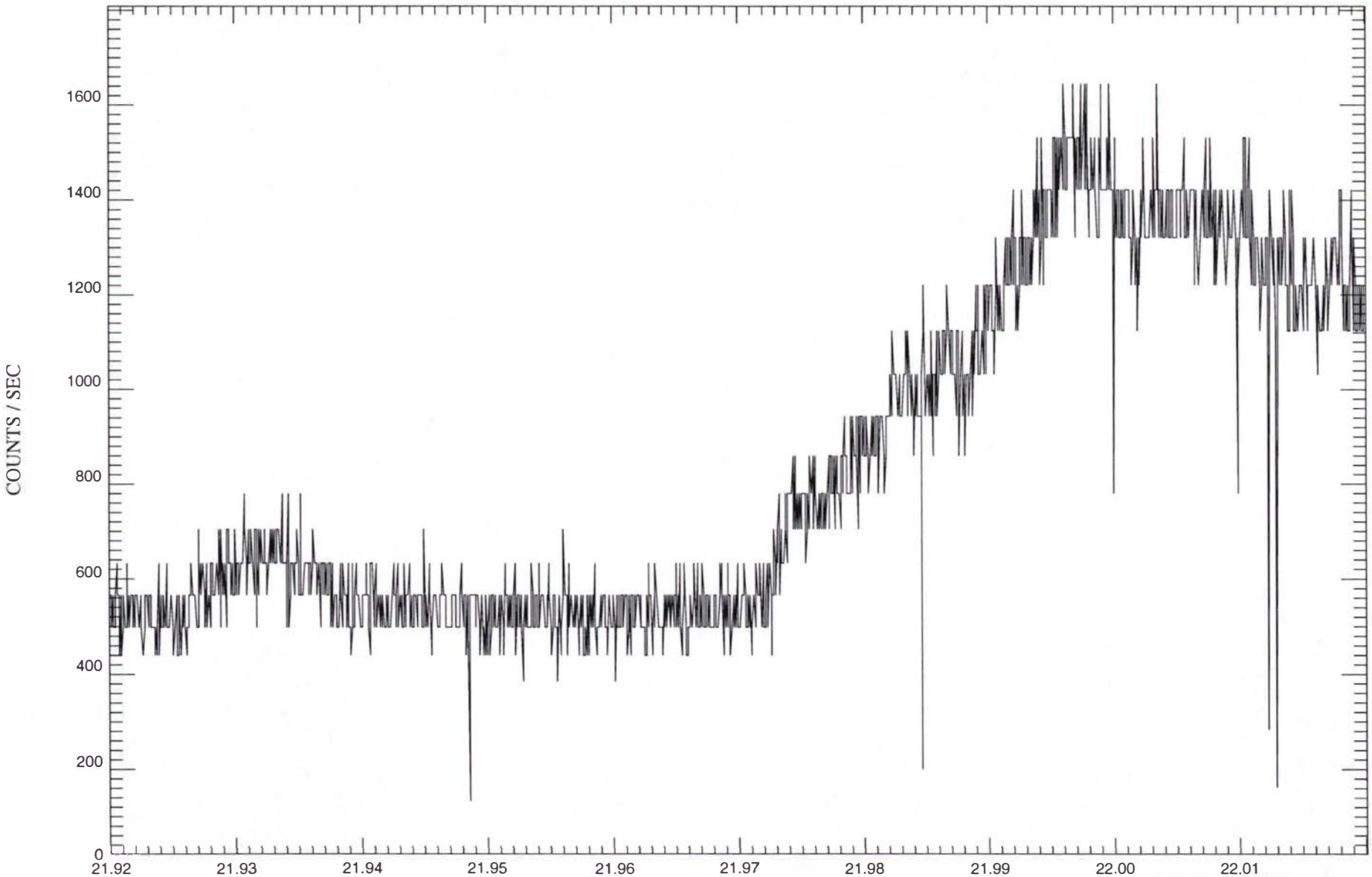




B# 7

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 18/09/2001 DOY = 261 01/22/02

CALIBRATION DATA INCLUDED

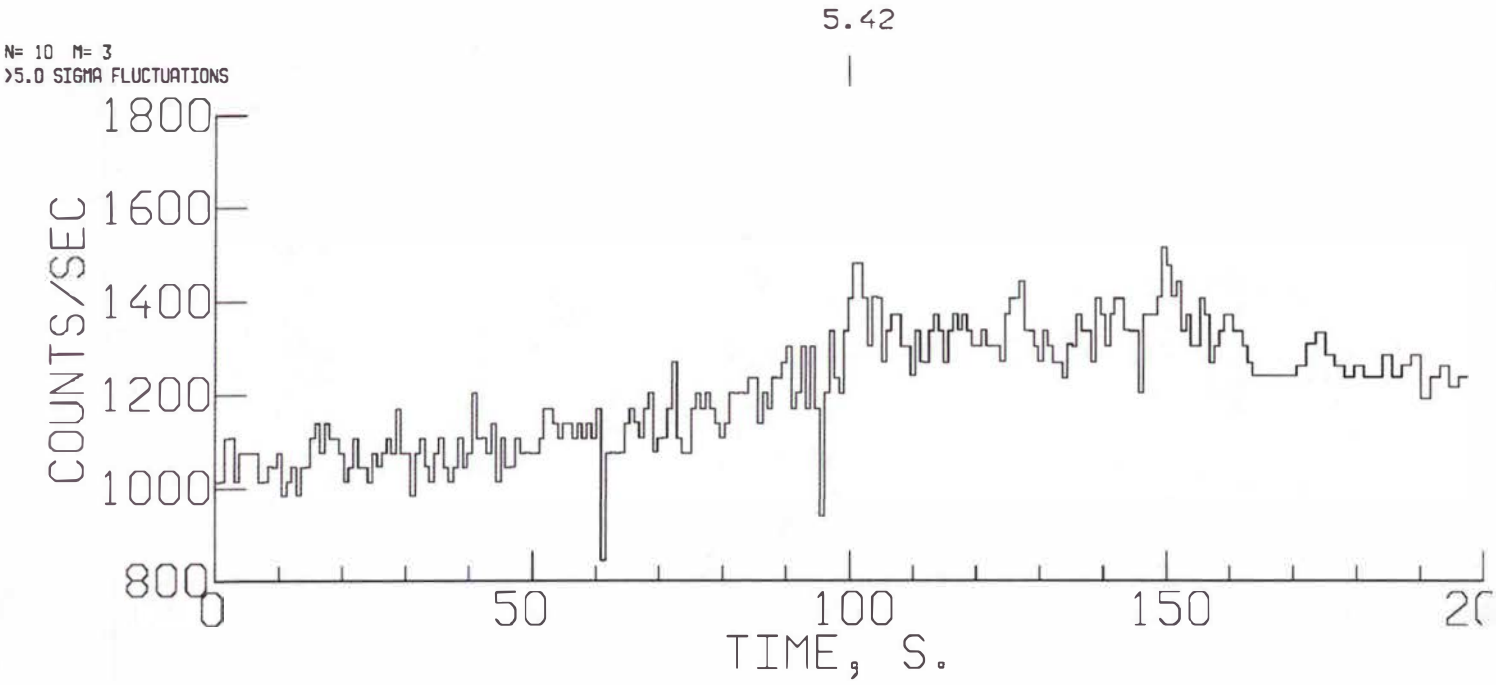


ULYSSES RT 24/ 9/ 1

19/ 9/ 1 13361.243 s

0.500 S INTERVALS REGROUPED BY 3

22- 150 keV



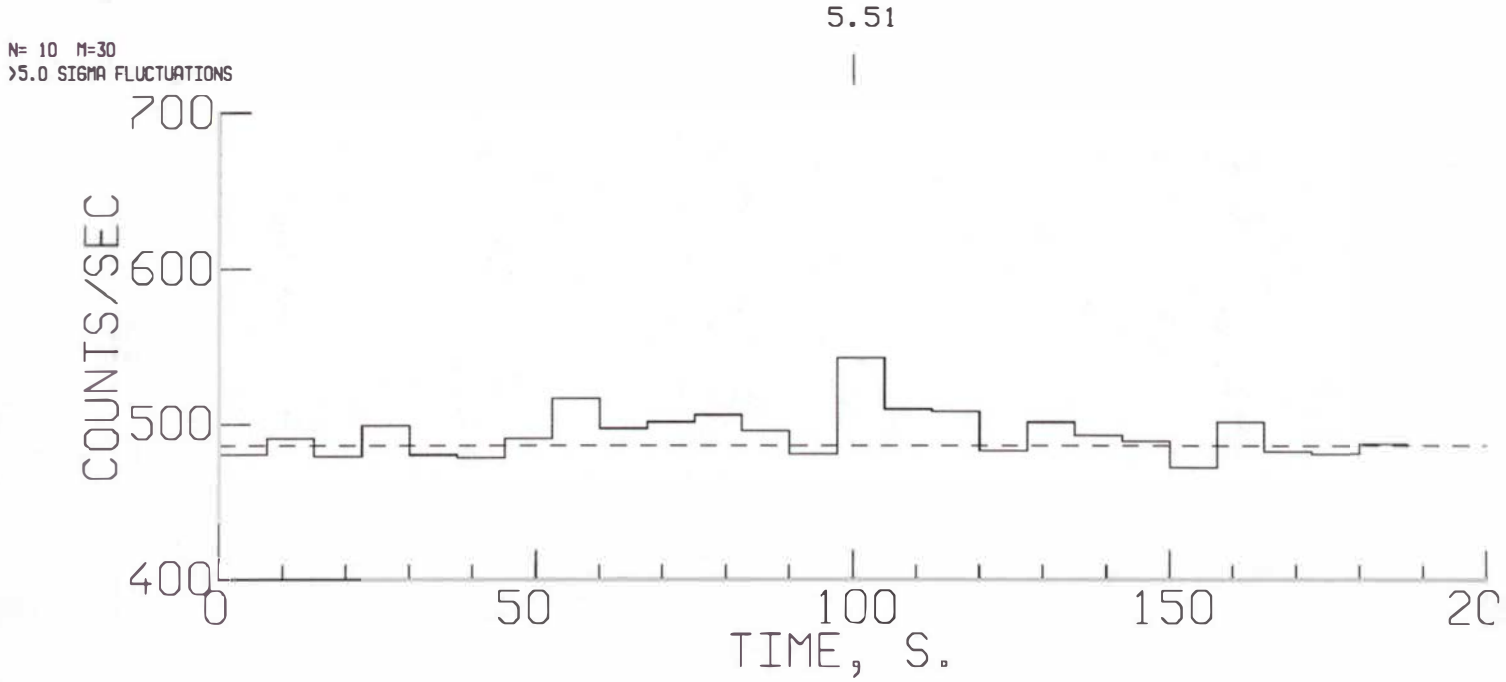
ULYSSES RT

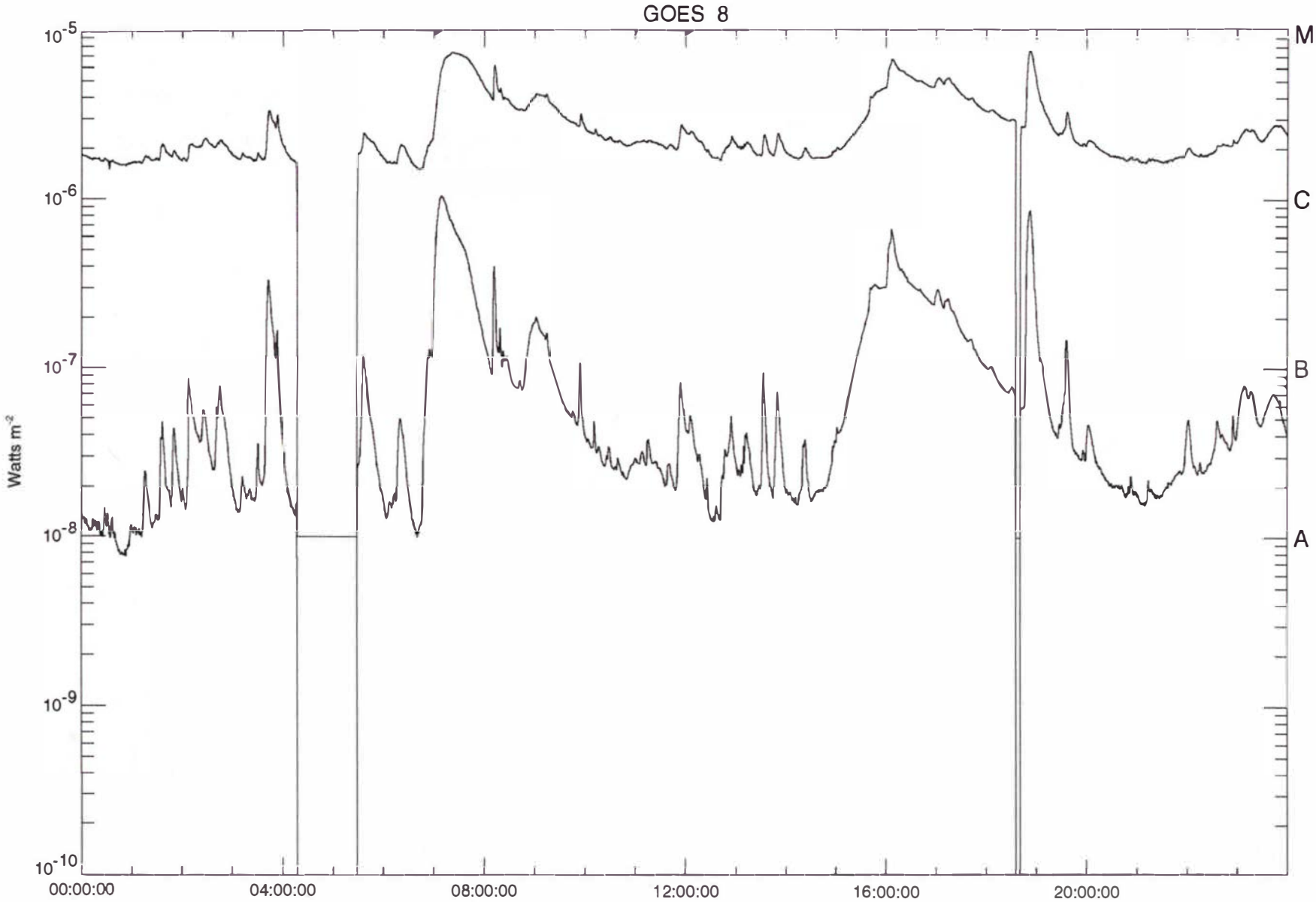
24/ 9/ 1

19/ 9/ 1 31840.050 s

0.250 S INTERVALS REGROUPED BY 30

22- 150 keV

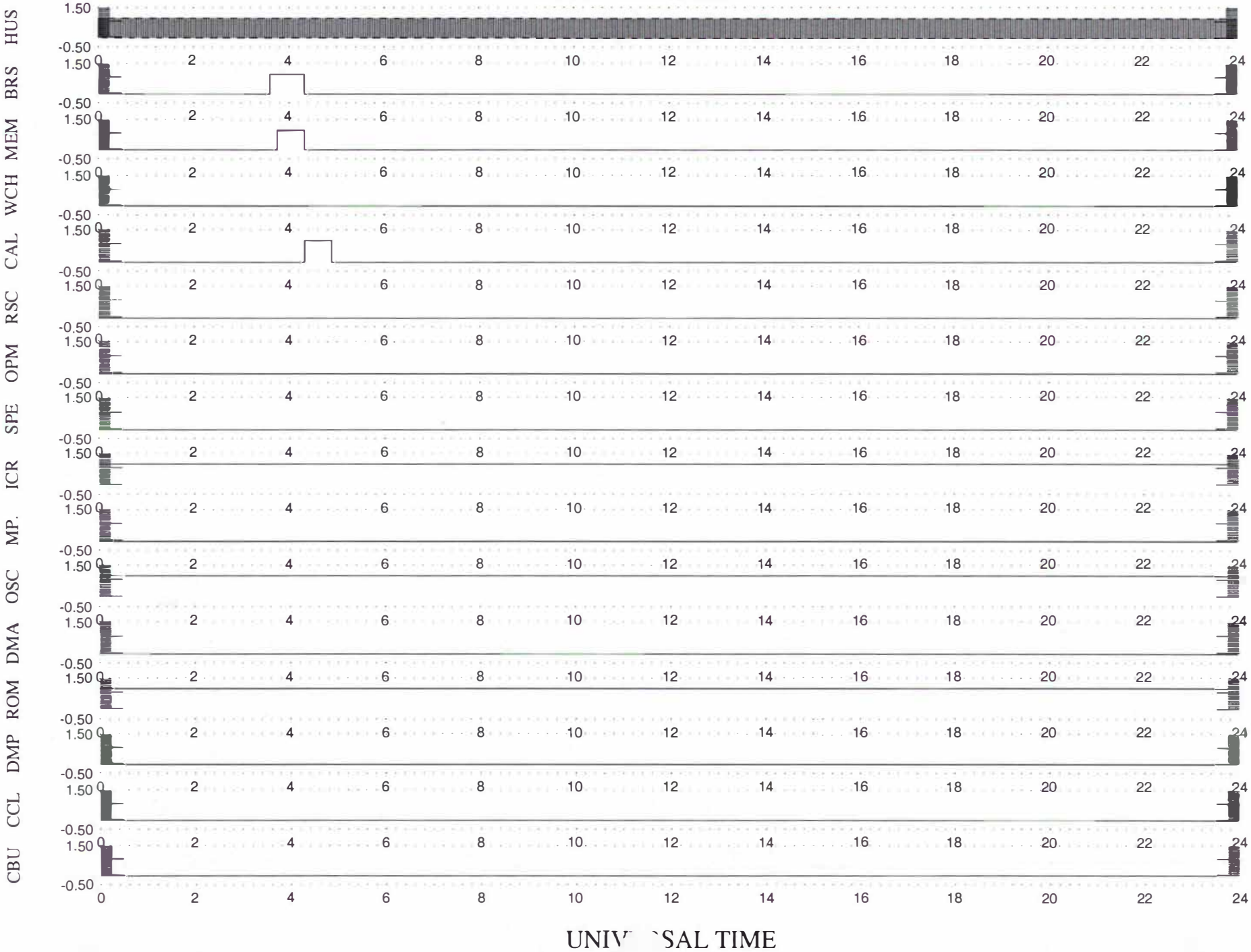




Data Start: 01/09/19, 0000:00 Plot created: 01/09/23, 0950
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

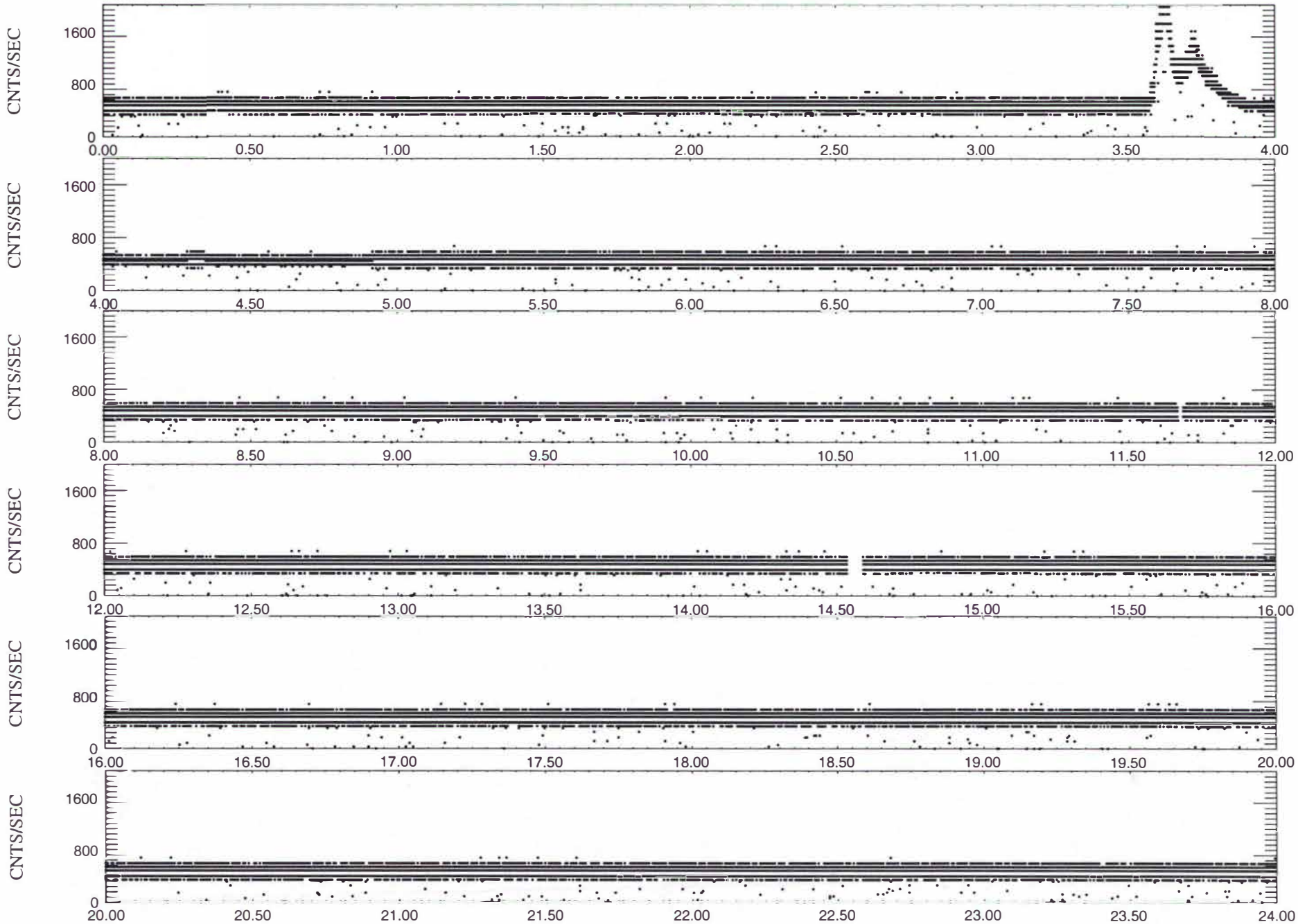
HUS MODES EDR day 262, year 2001 to day 262, year 2001 01/22/02

BURST NUMBER 8



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 19/09/2001 DOY = 262 01/22/02

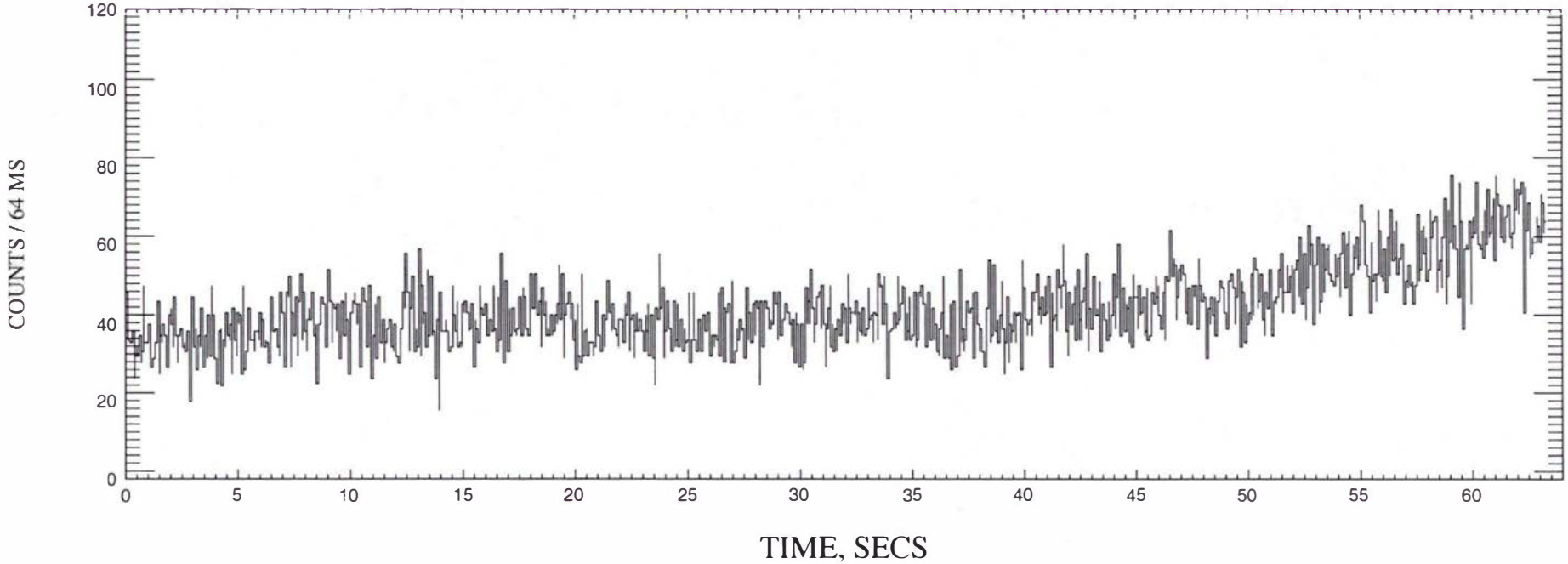
CALIBRATION DATA INCLUDED

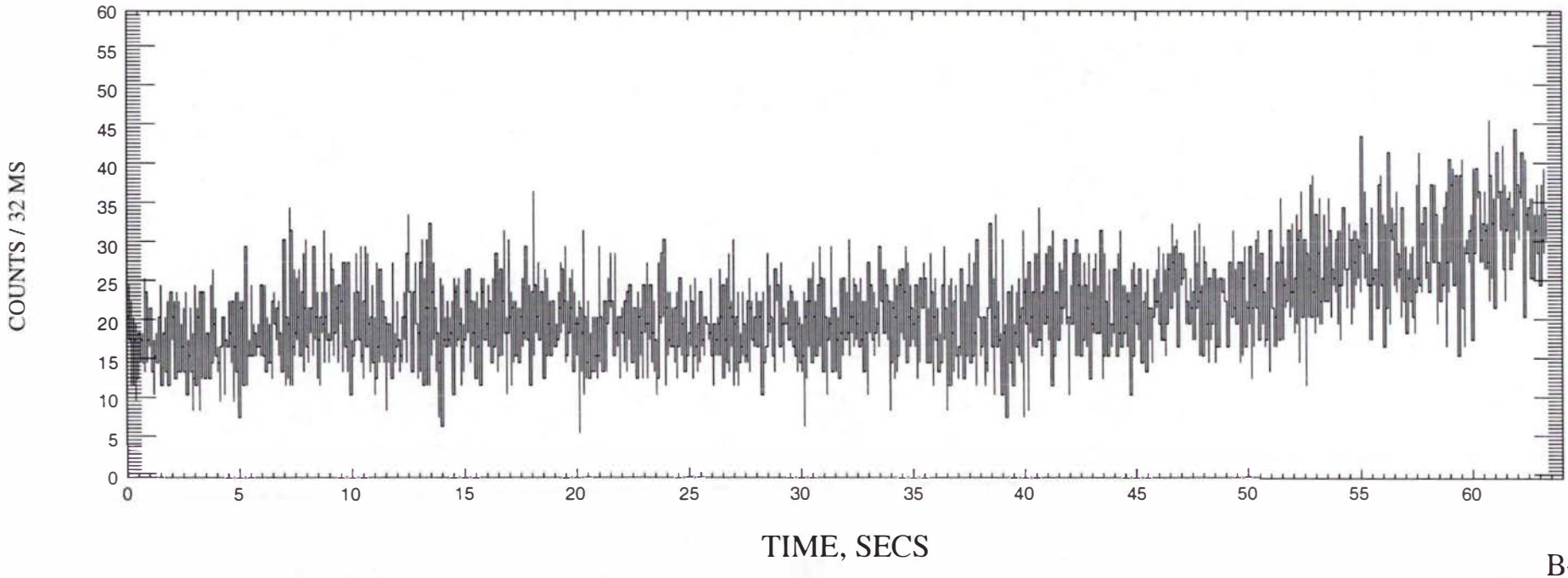


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 19/09/2001 DOY = 262 01/22/02

Burst Counter 8 at UT= 3.574715694851 h=12868.977 s 03:34:28.977

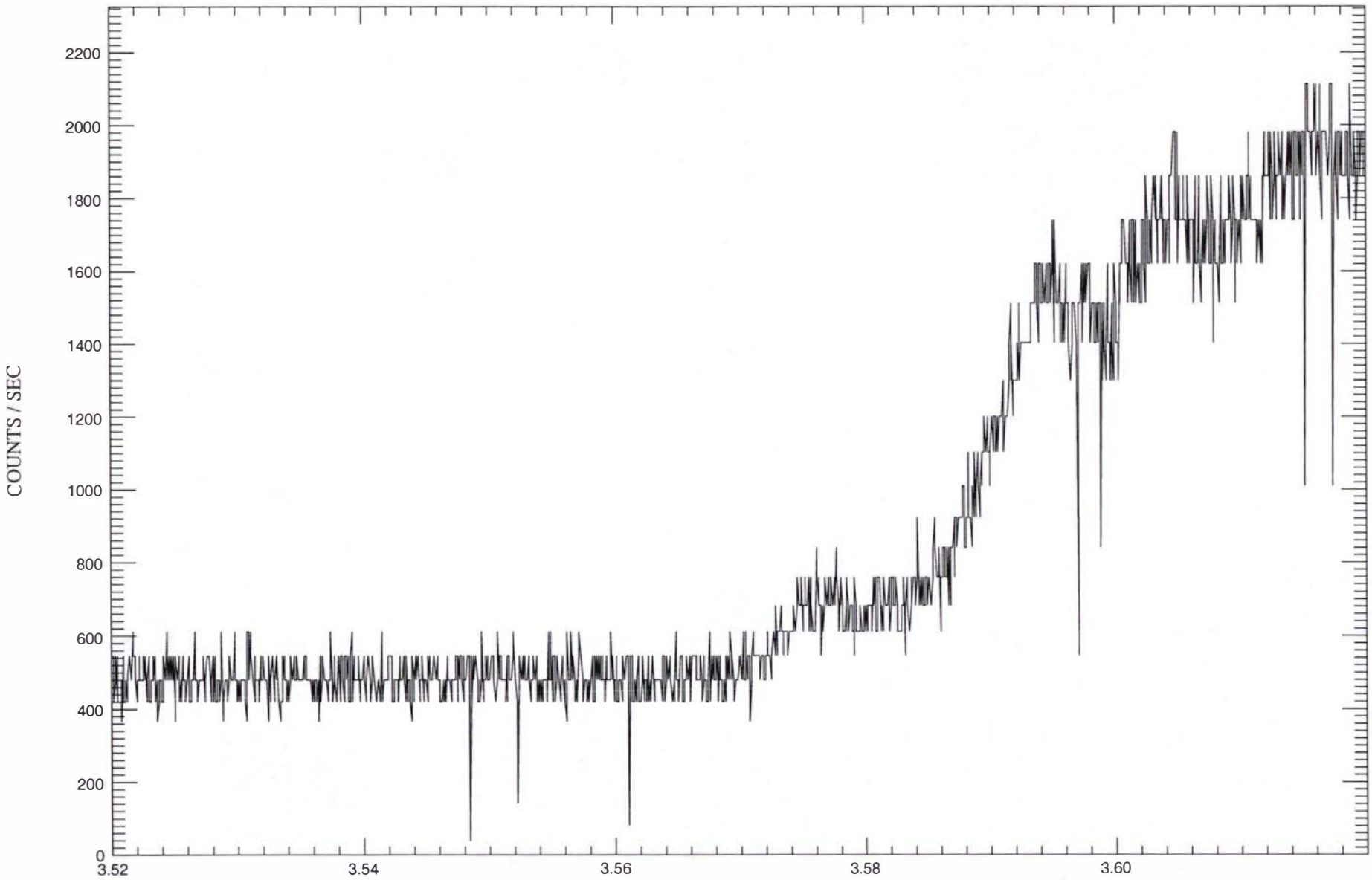




B# 1

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 19/09/2001 DOY = 262 01/22/02

CALIBRATION DATA INCLUDED

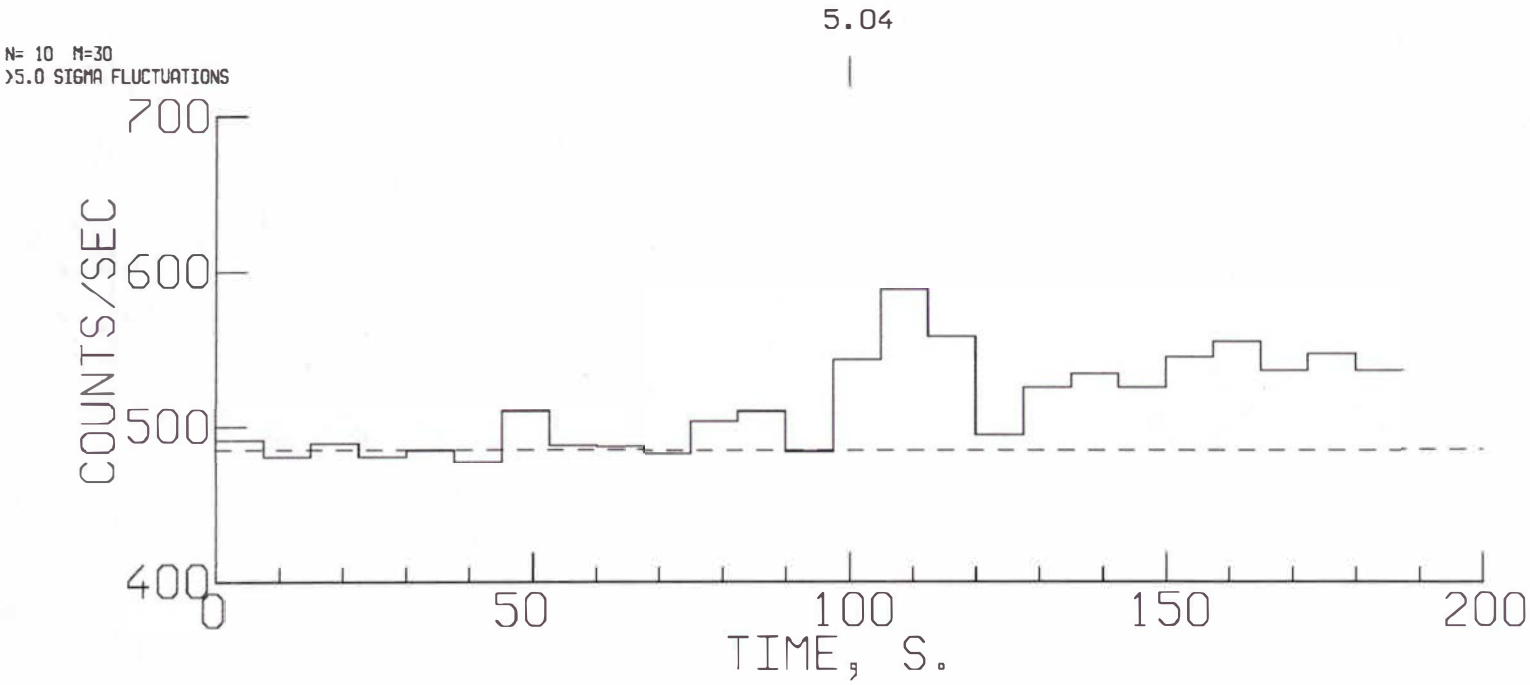


ULYSSES RT 25/ 9/ 1

20/ 9/ 1 32253.746 s

0.250 S INTERVALS REGROUPED BY 30

22- 150 keV

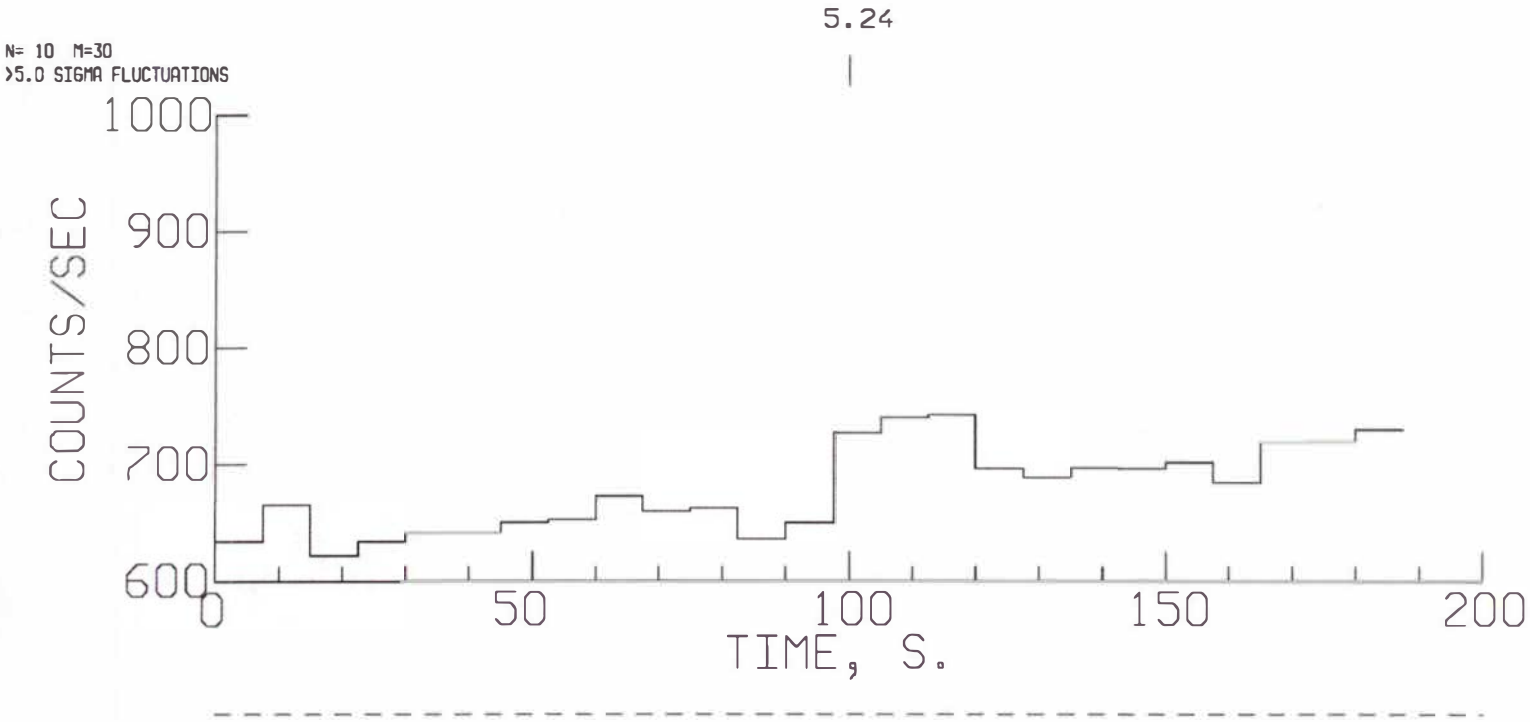


ULYSSES RT 25/ 9/ 1

20/ 9/ 1 45059.709 s

0.250 S INTERVALS REGROUPED BY 30

22- 150 keV

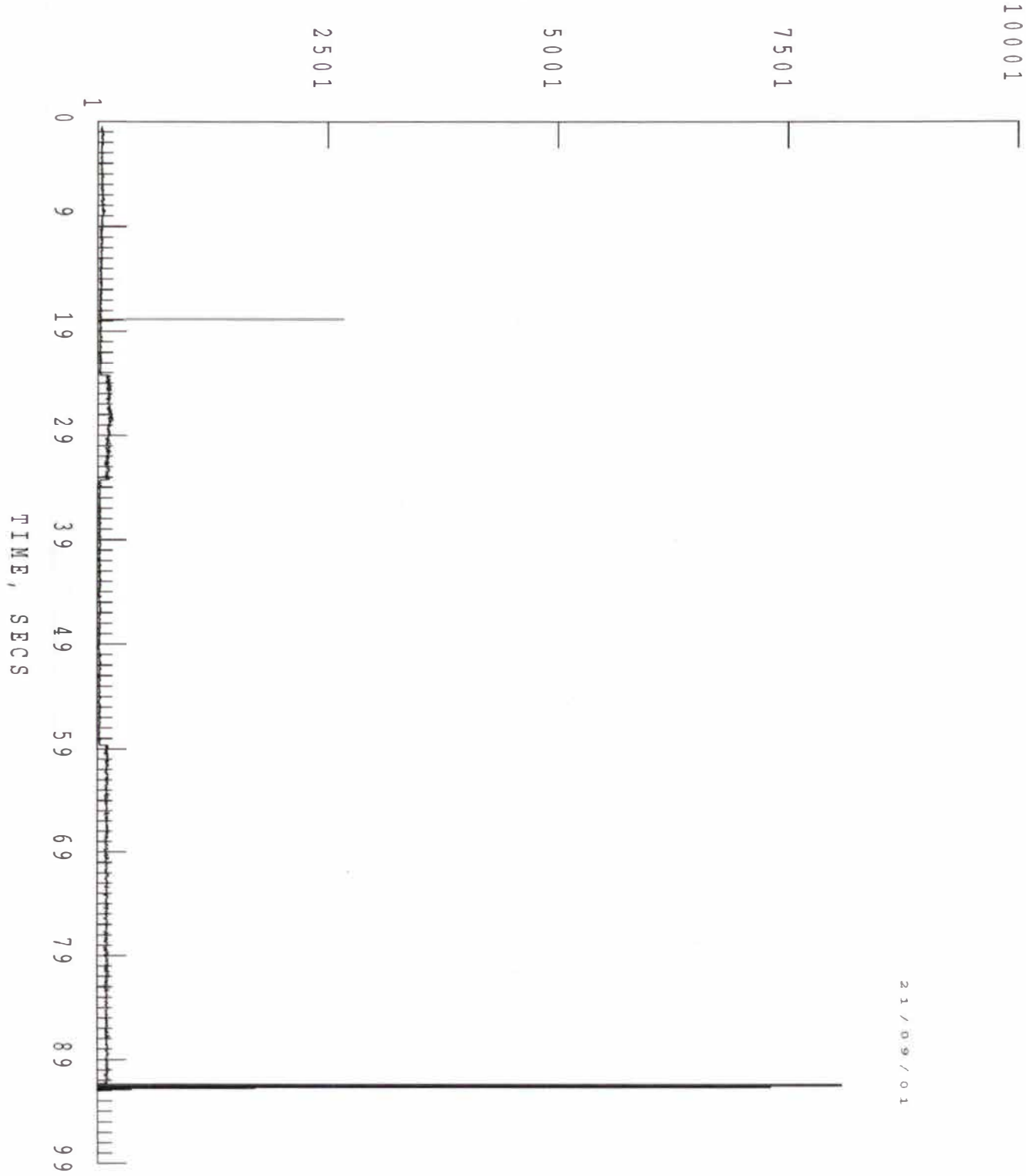


KONUS2 20/09/01 65717.114

50- 200 keV

COUNTS/0.064 S

Solar



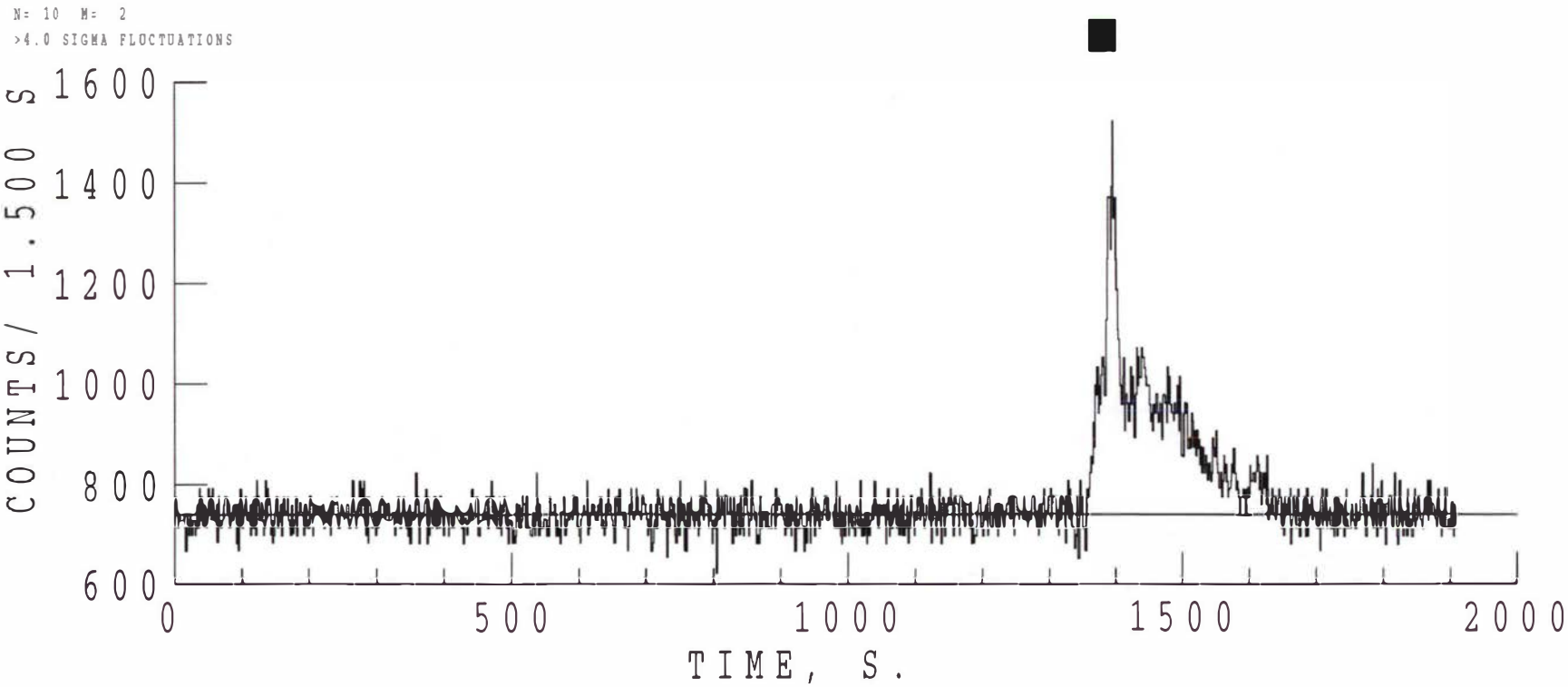
KONUS2 20010920 65717

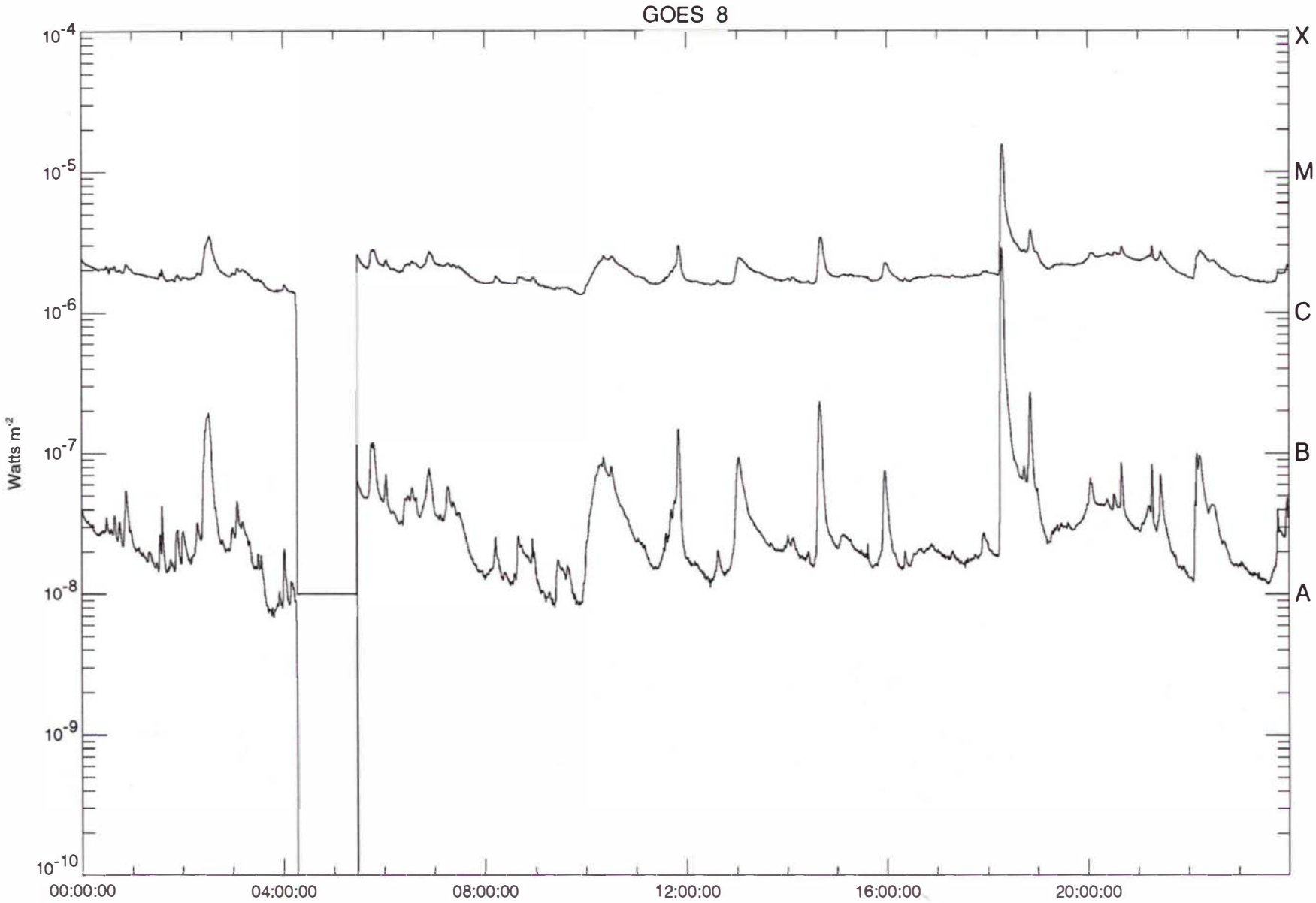
ULYSSES RT 21/09/01

20/09/01 64764.031 s

0.250 S INTERVALS REGROUPED BY 6

0- 0 keV

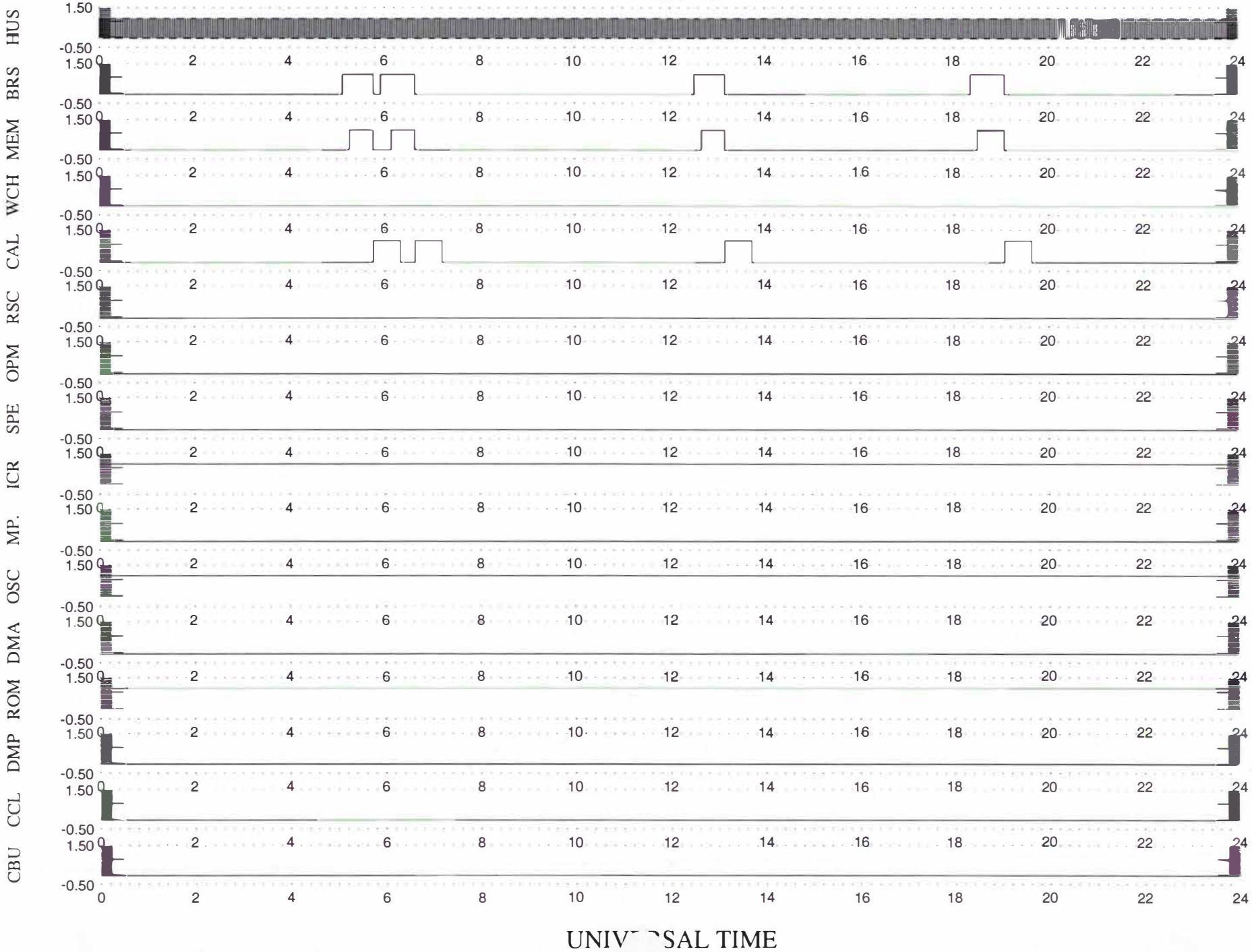




Data Start: 01/09/20, 0000:00 Plot created: 01/09/24, 0950
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

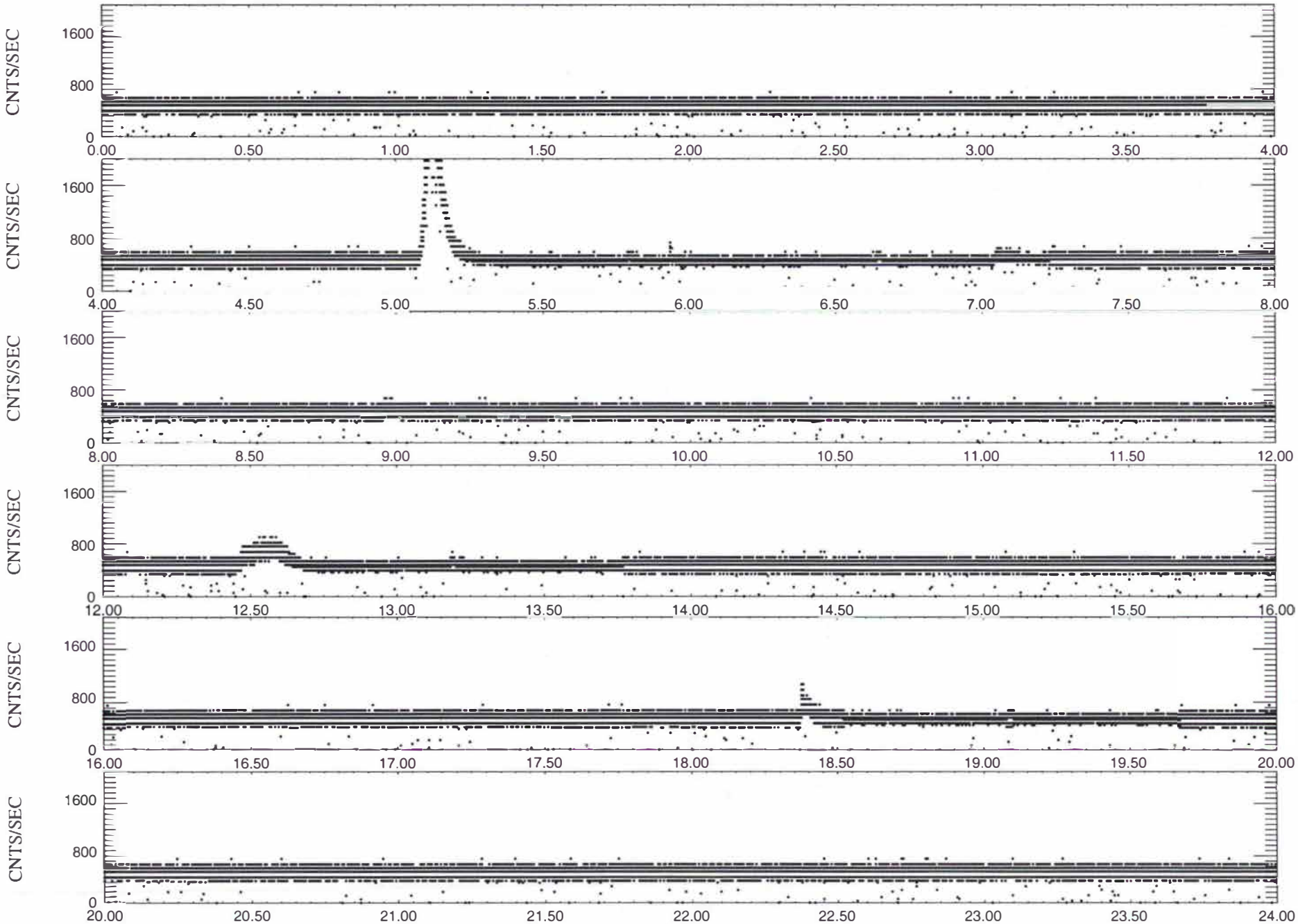
HUS MODES EDR day 263, year 2001 to day 263, year 2001 01/22/02

BURST NUMBER 9 - 12



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 20/09/2001 DOY = 263 01/22/02

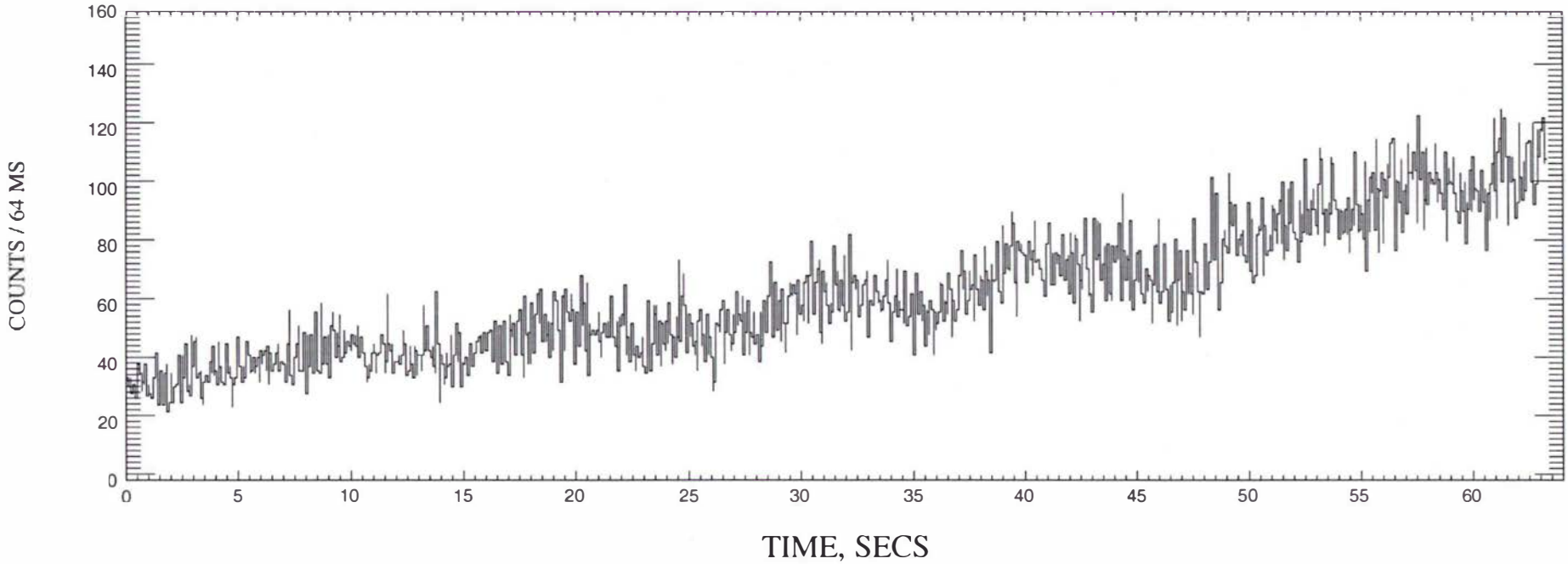
CALIBRATION DATA INCLUDED

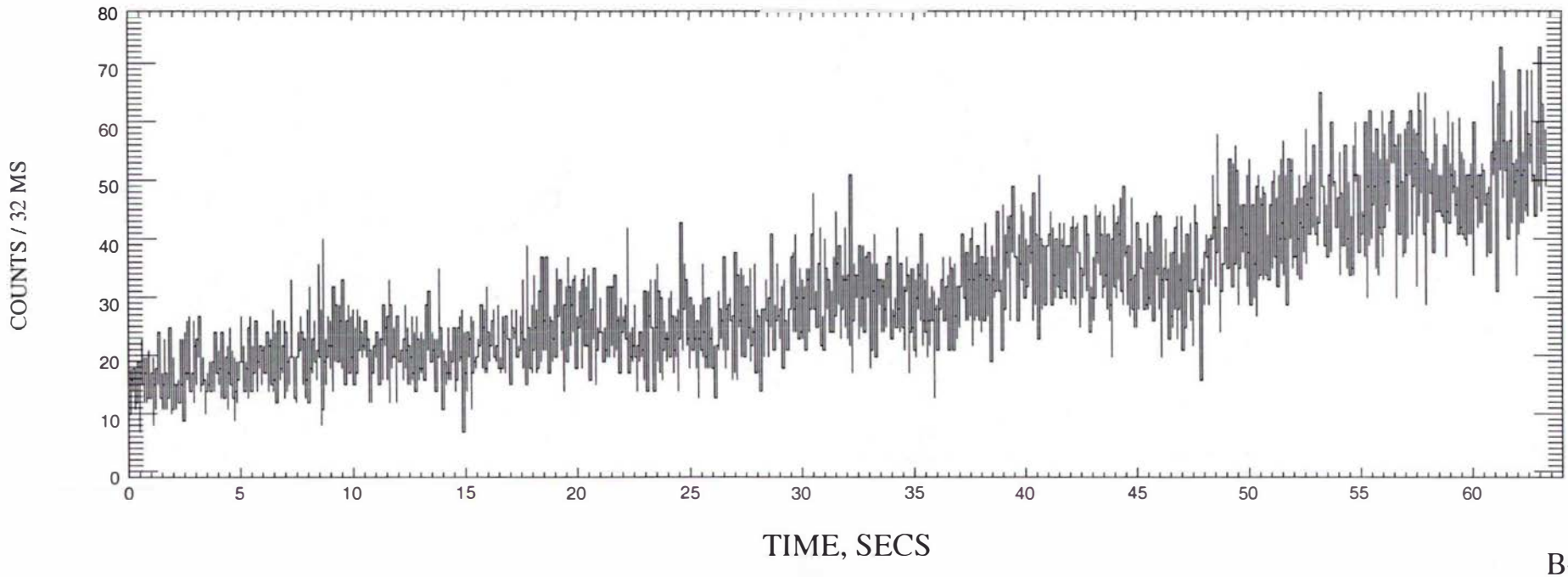


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 20/09/2001 DOY = 263 01/22/02

Burst Counter 9 at UT= 5.082707138062 h=18297.746 s 05:04:57.746

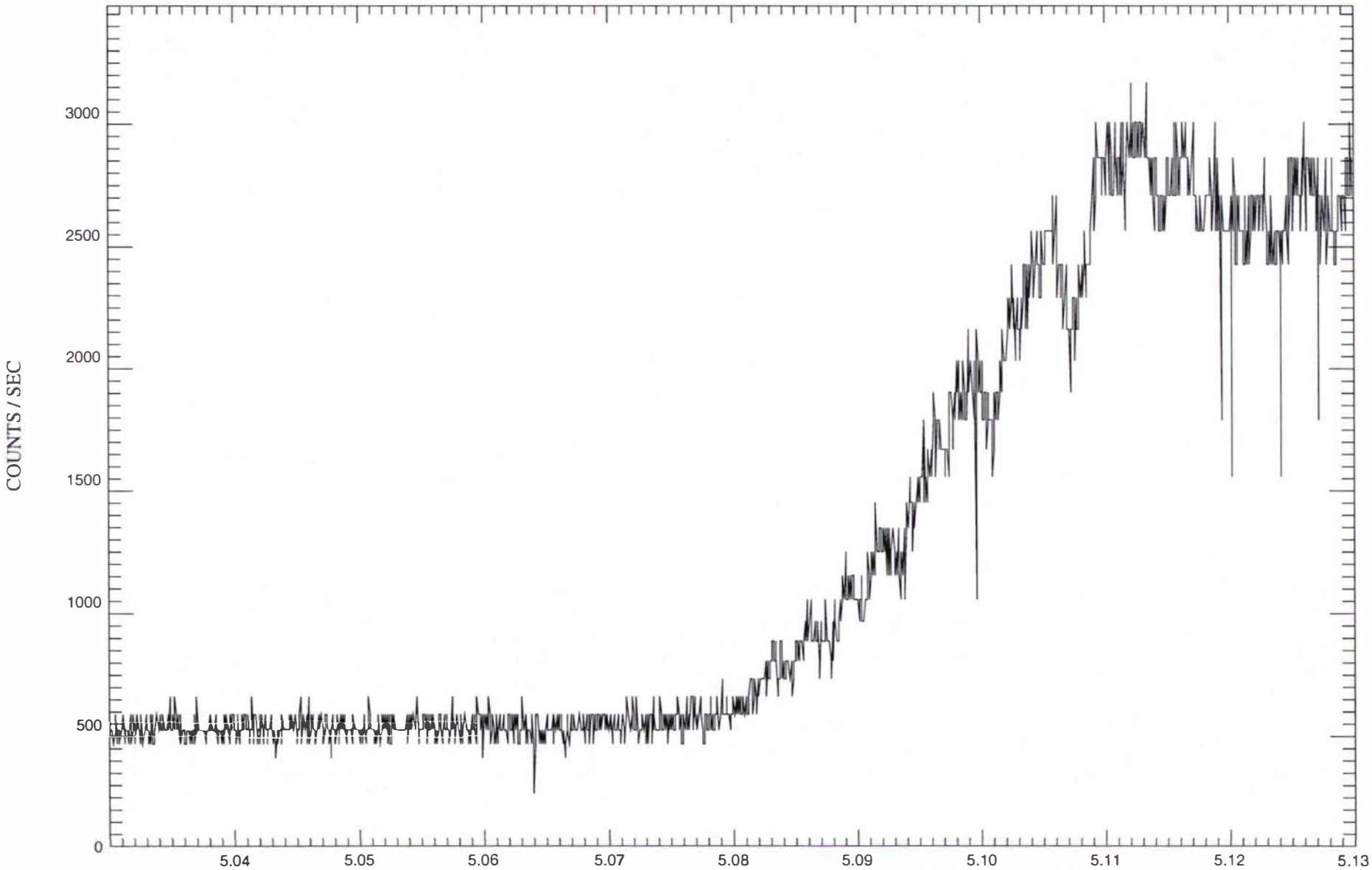




B# 1

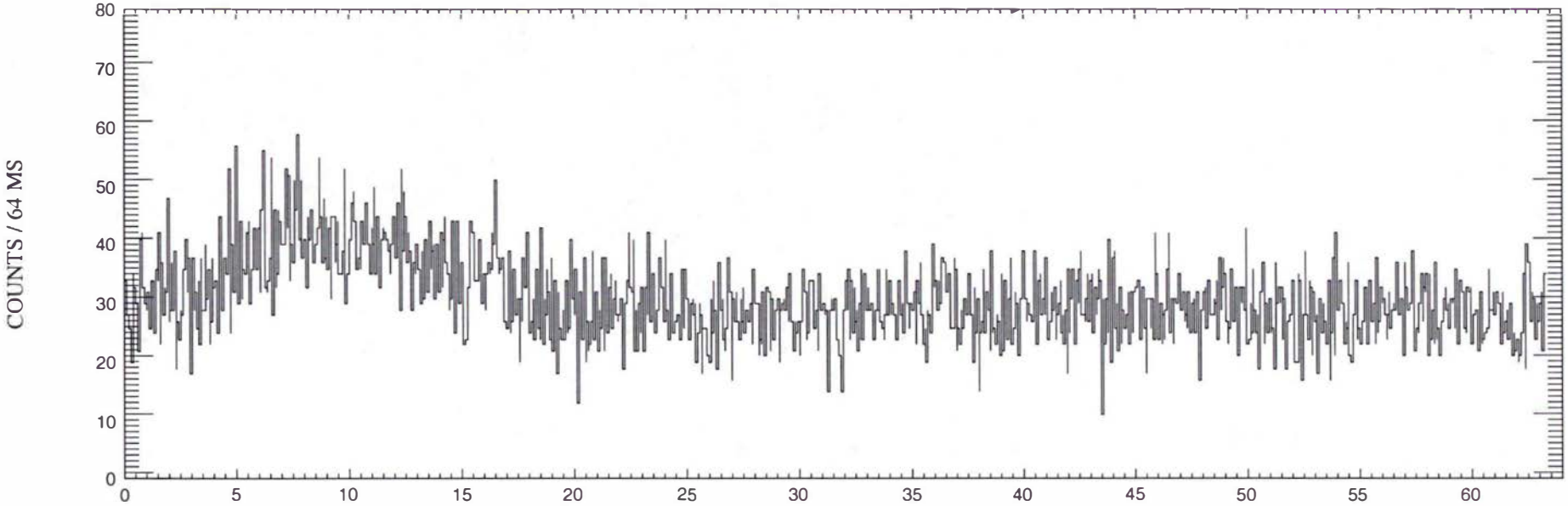
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 20/09/2001 DOY = 263 01/22/02

CALIBRATION DATA INCLUDED

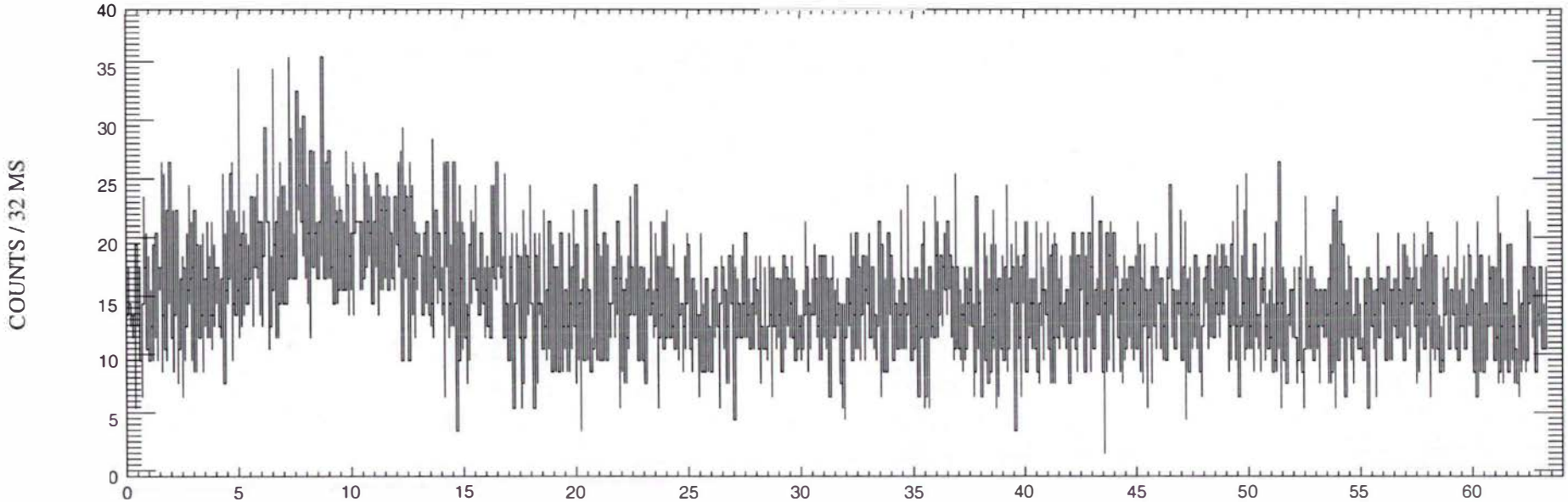


HUS 2A TRIGGERED DATA EDR DMY = 20/09/2001 DOY = 263 01/22/02

Burst Counter 10 at UT= 5.931609052022 h=21353.793 s 05:55:53.793



TIME, SECS

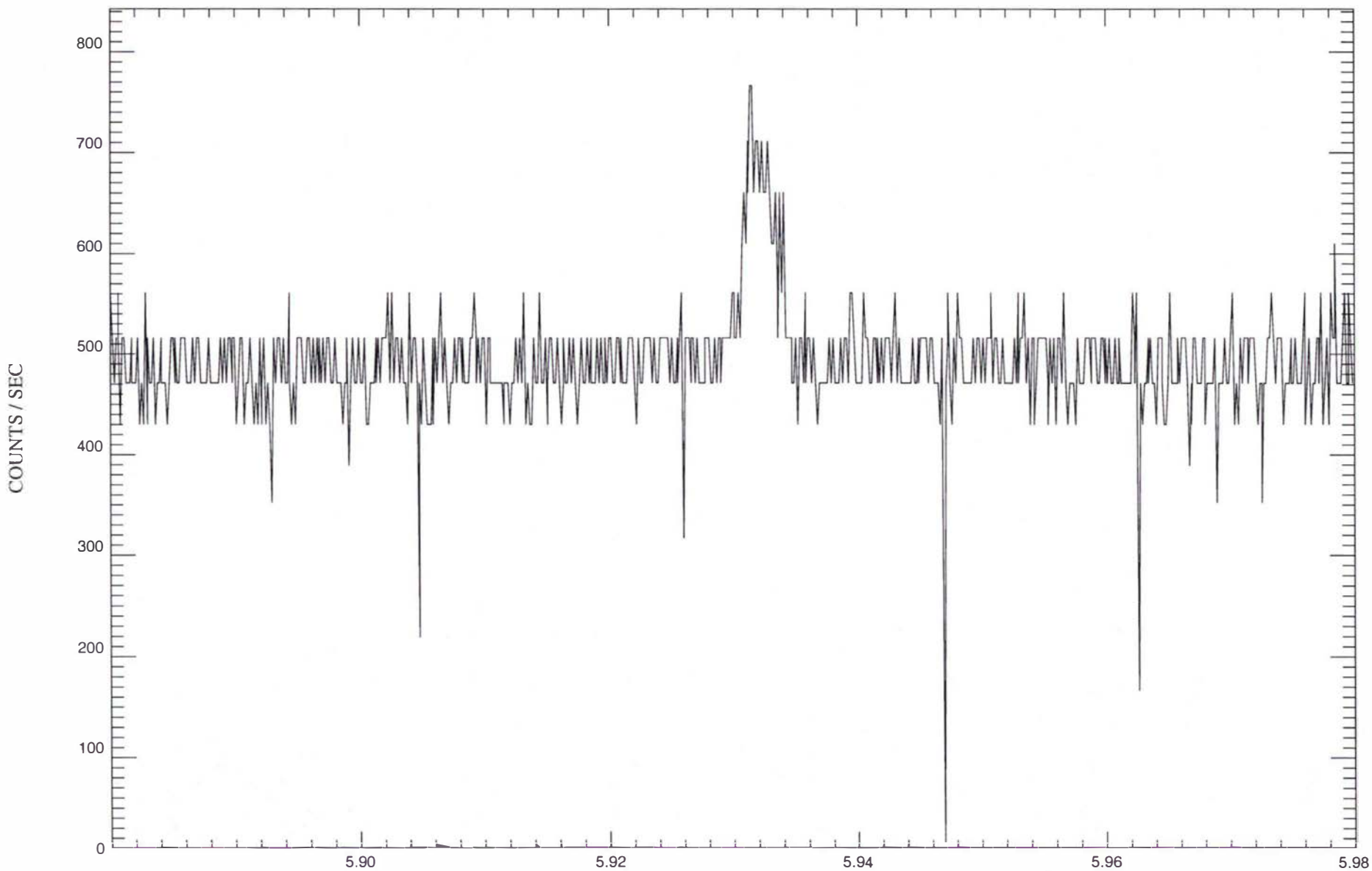


TIME, SECS

B# 2

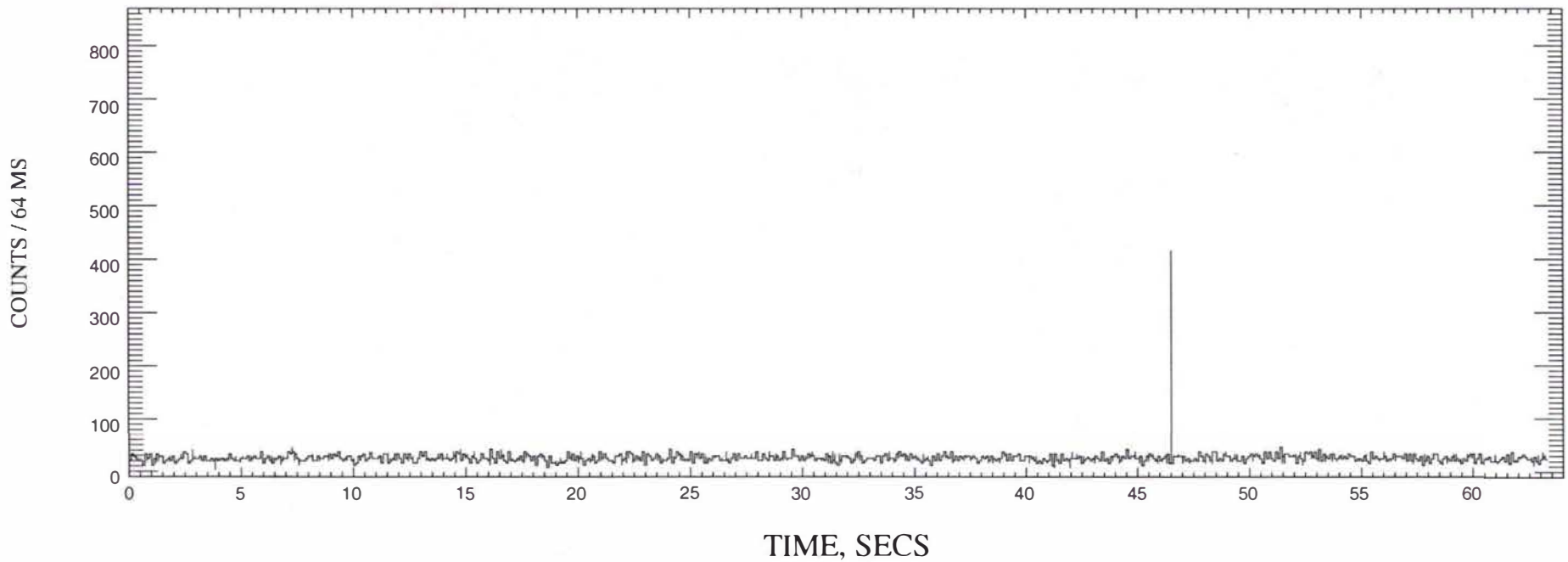
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 20/09/2001 DOY = 263 01/22/02

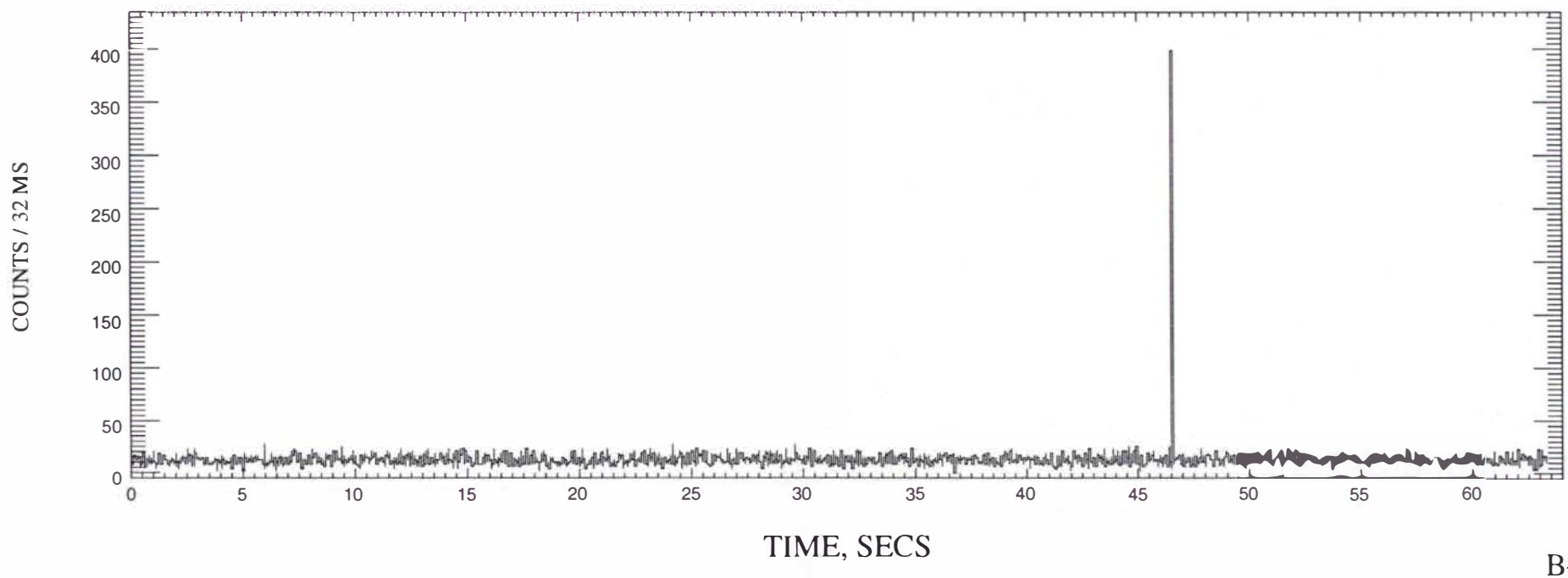
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 20/09/2001 DOY = 263 01/22/02

Burst Counter 11 at UT=12.479256053501 h=44925.322 s 12:28:45.322

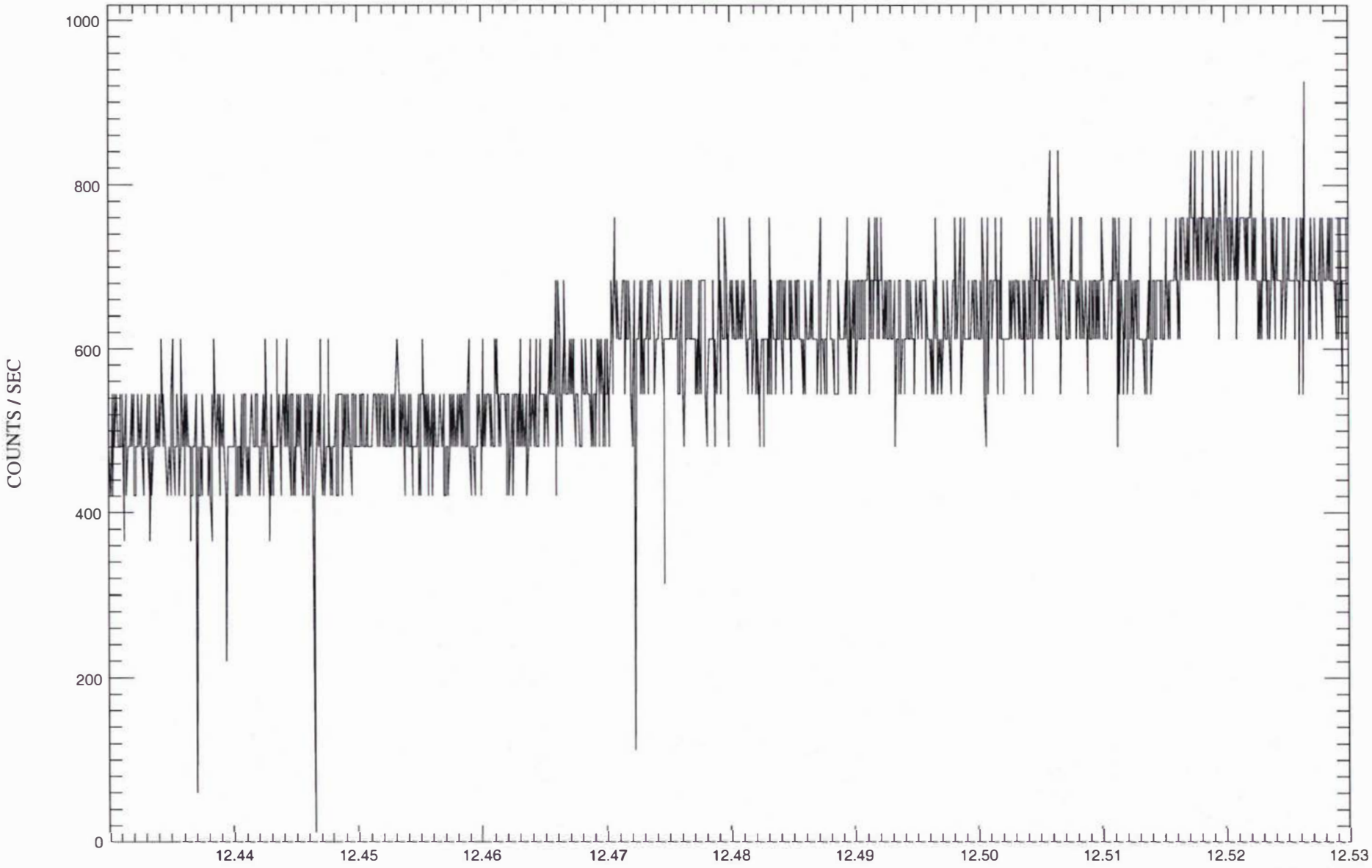




B# 3

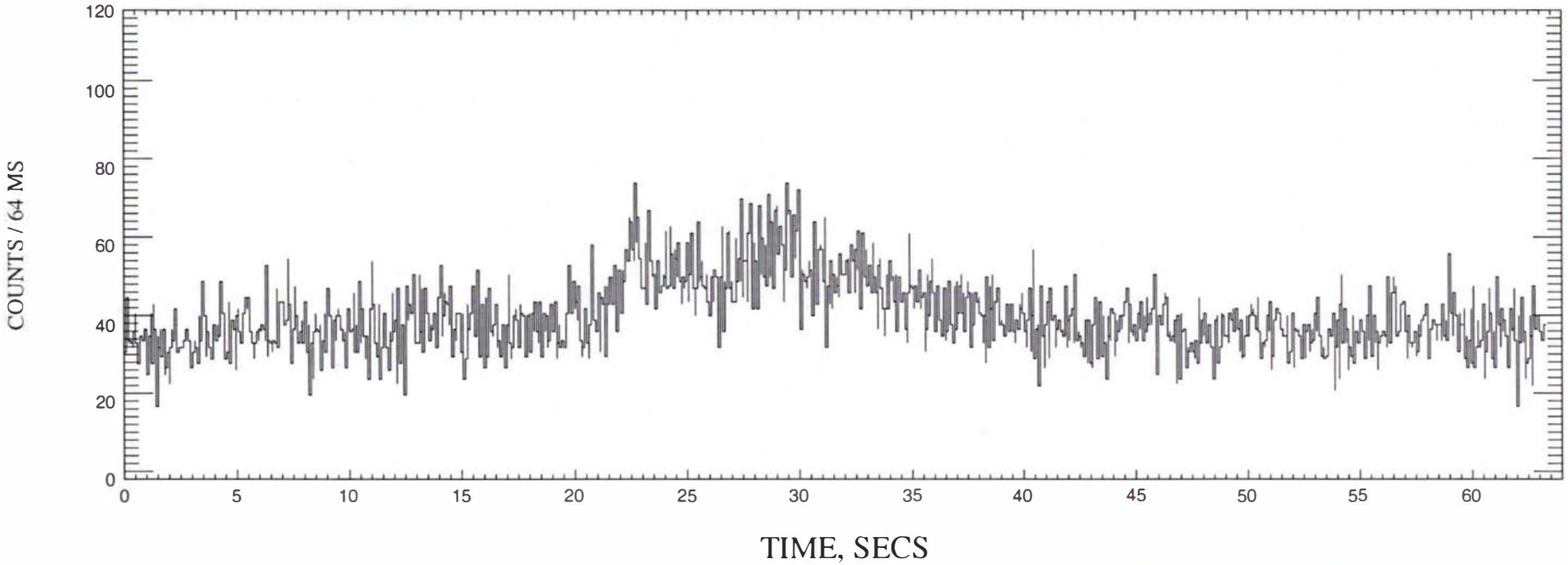
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 20/09/2001 DOY = 263 01/22/02

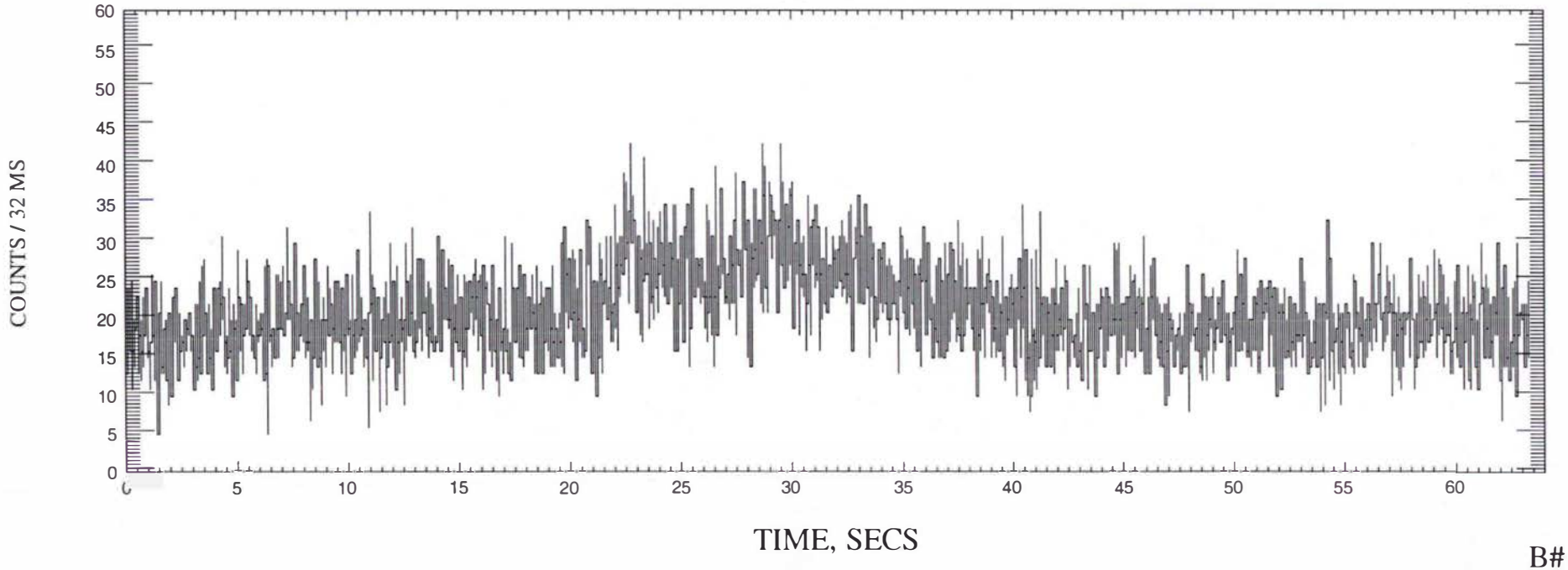
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 20/09/2001 DOY = 263 01/22/02

Burst Counter 12 at UT=18.371610086229 h=66137.796 s 18:22:17.796

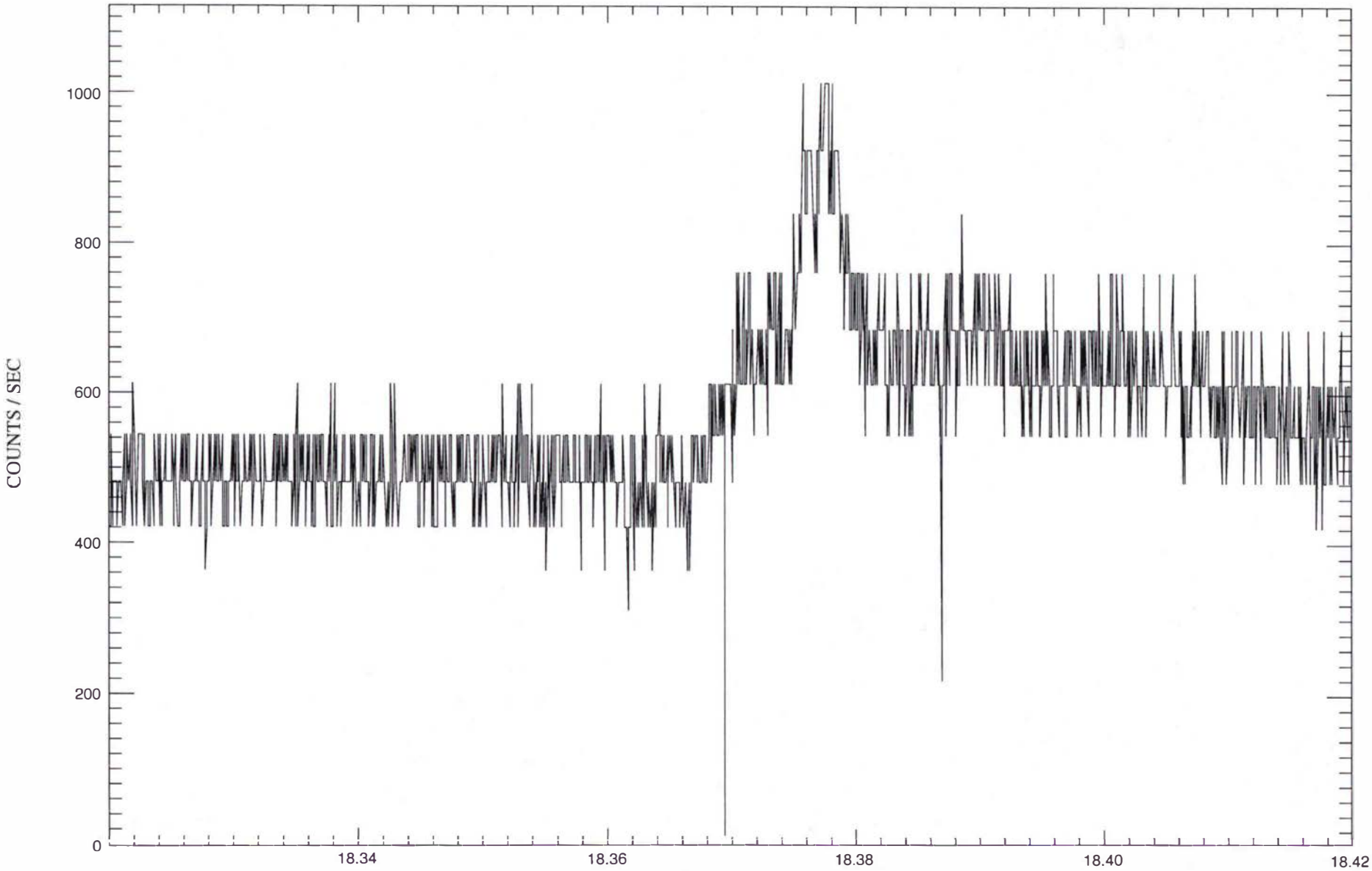




B# 4

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 20/09/2001 DOY = 263 01/22/02

CALIBRATION DATA INCLUDED



Date: May 19 '04

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

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

2. For Konus events

☐ Konus ecliptic latitude used with latest calibration?

2. For Odyssey events

☐ Was CHECKMO run to eliminate data gaps?

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

☐ Was Mars-blocking used?

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

2. For 3 Spacecraft events

☐ Σ 3Δt's calculated?

3. For INTEGRAL events

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

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

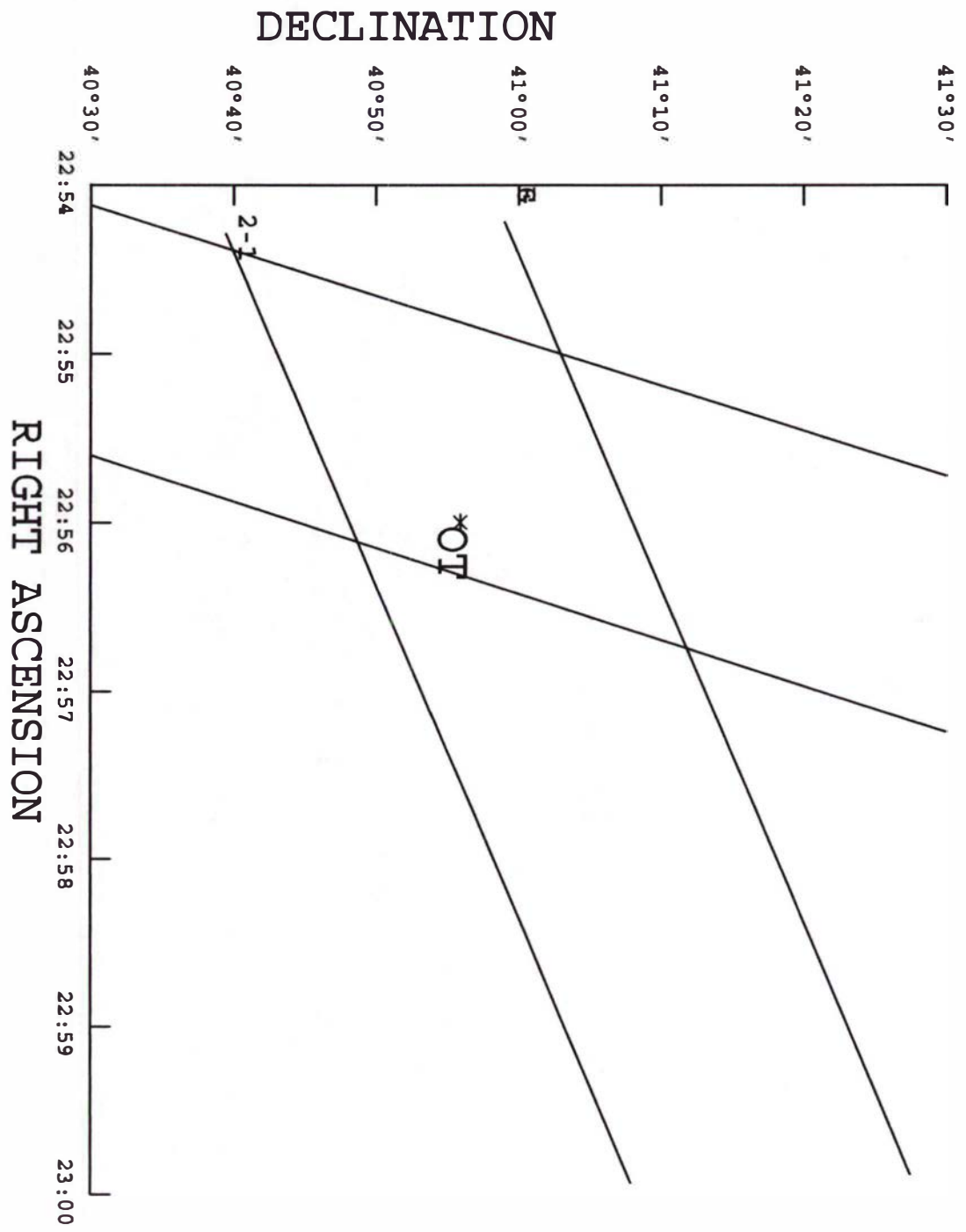
☑ ACCESS database updated?

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 SAX

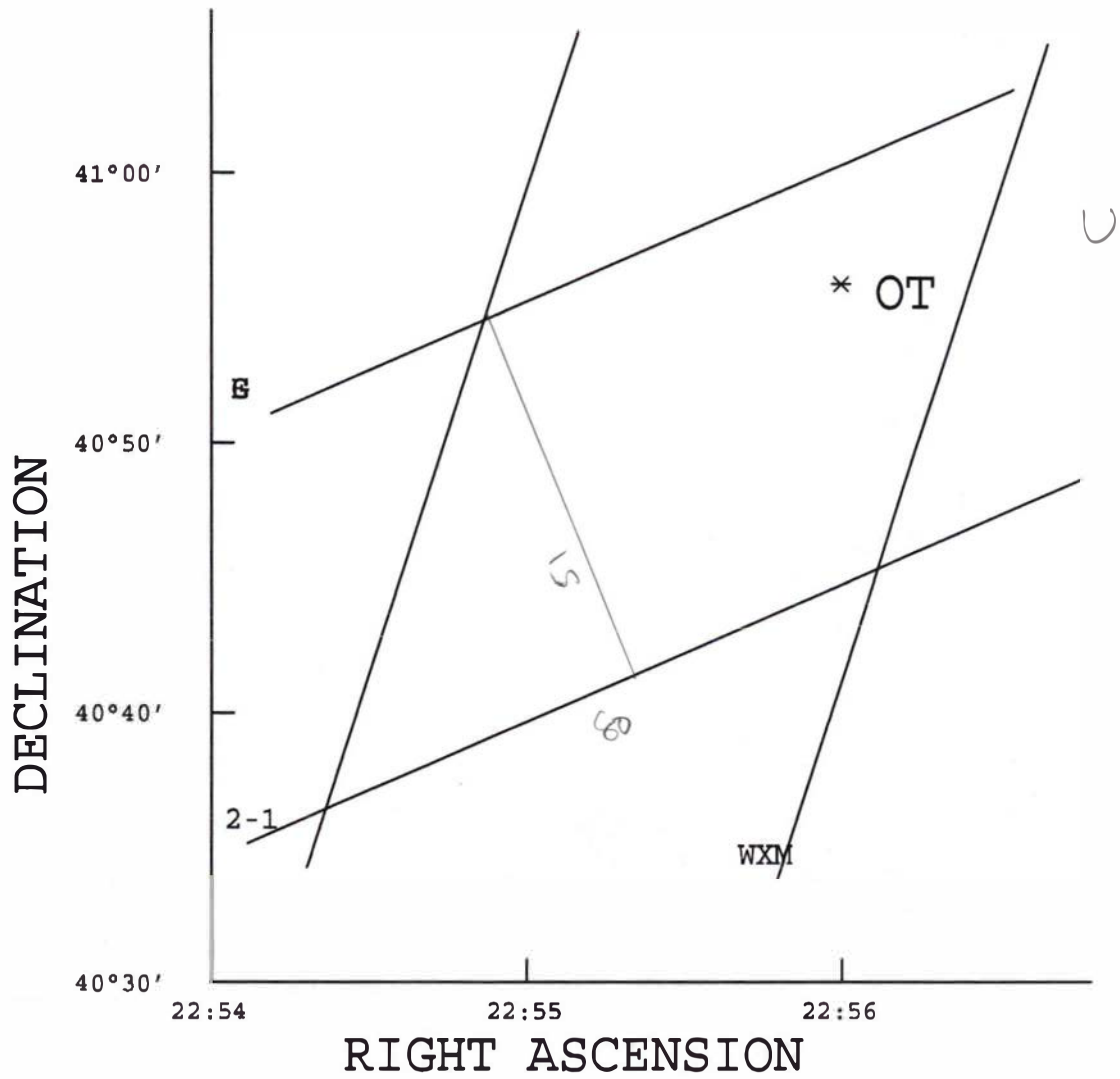


EVENT OF SEP 21, 2001 5:07

18/ 5/ 4

EVENT OF SEP 21, 2001 5:07

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 HETE



$5 \times 60 \times \left(\frac{10'}{36\ mm}\right)^2 = 315$

Using great circles for WXM

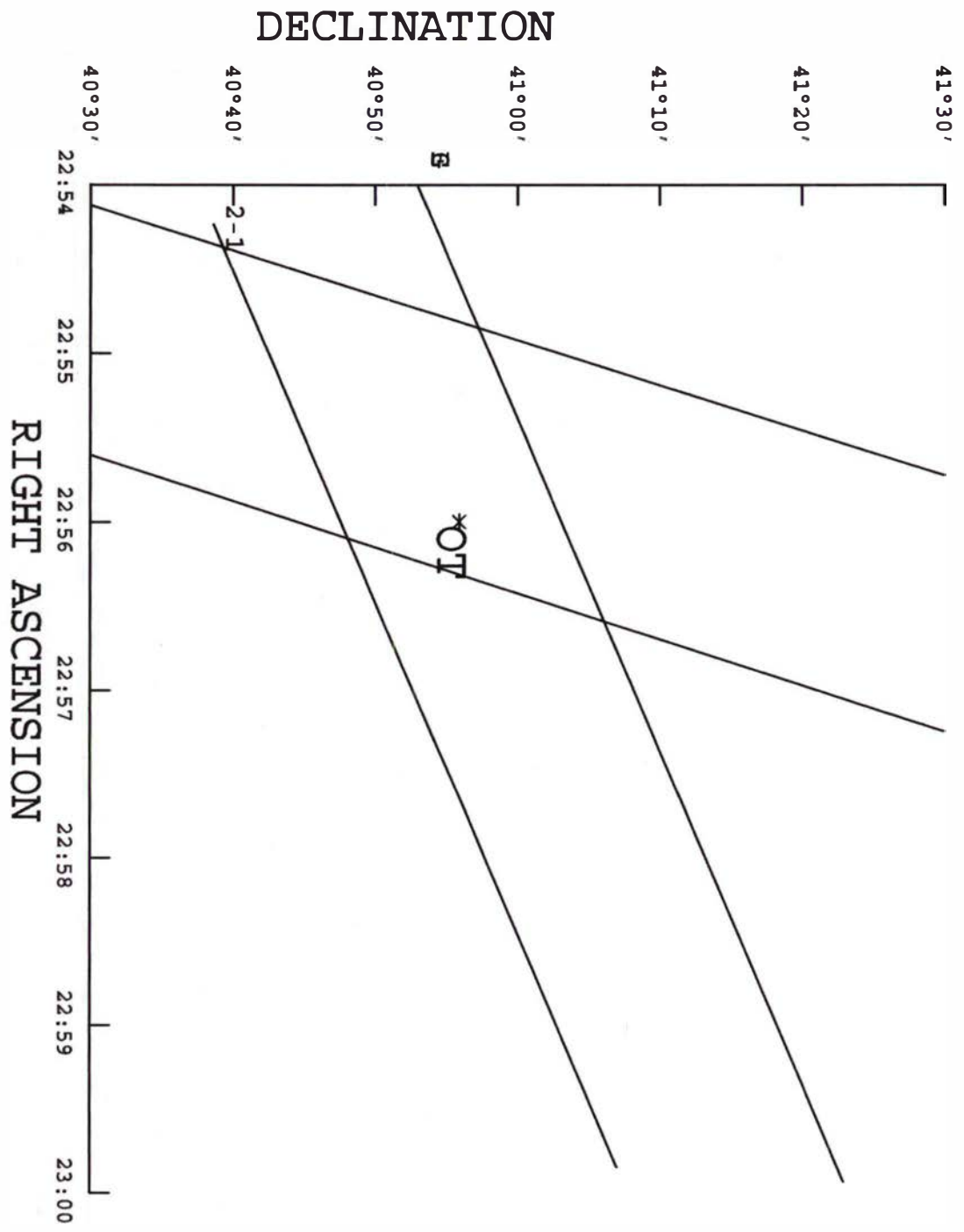
WXM Location
ULYSSES-HETE Annulus
O.T.
41.5
41.0
40.5
345.0
344.5
344.0
343.5
343.0
Dec.
R.A.

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

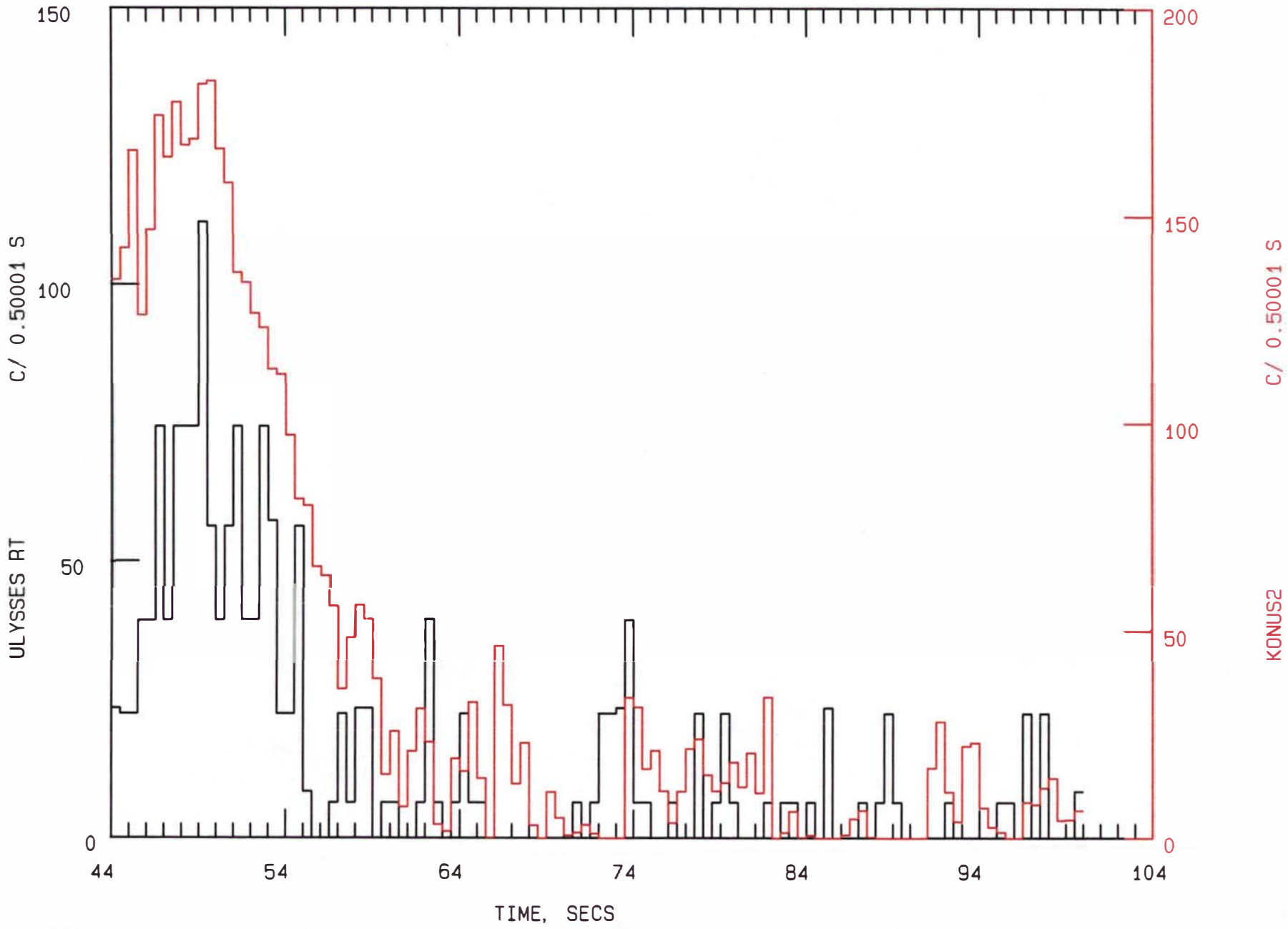
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR

1 ULYSSES 2 KONUS2



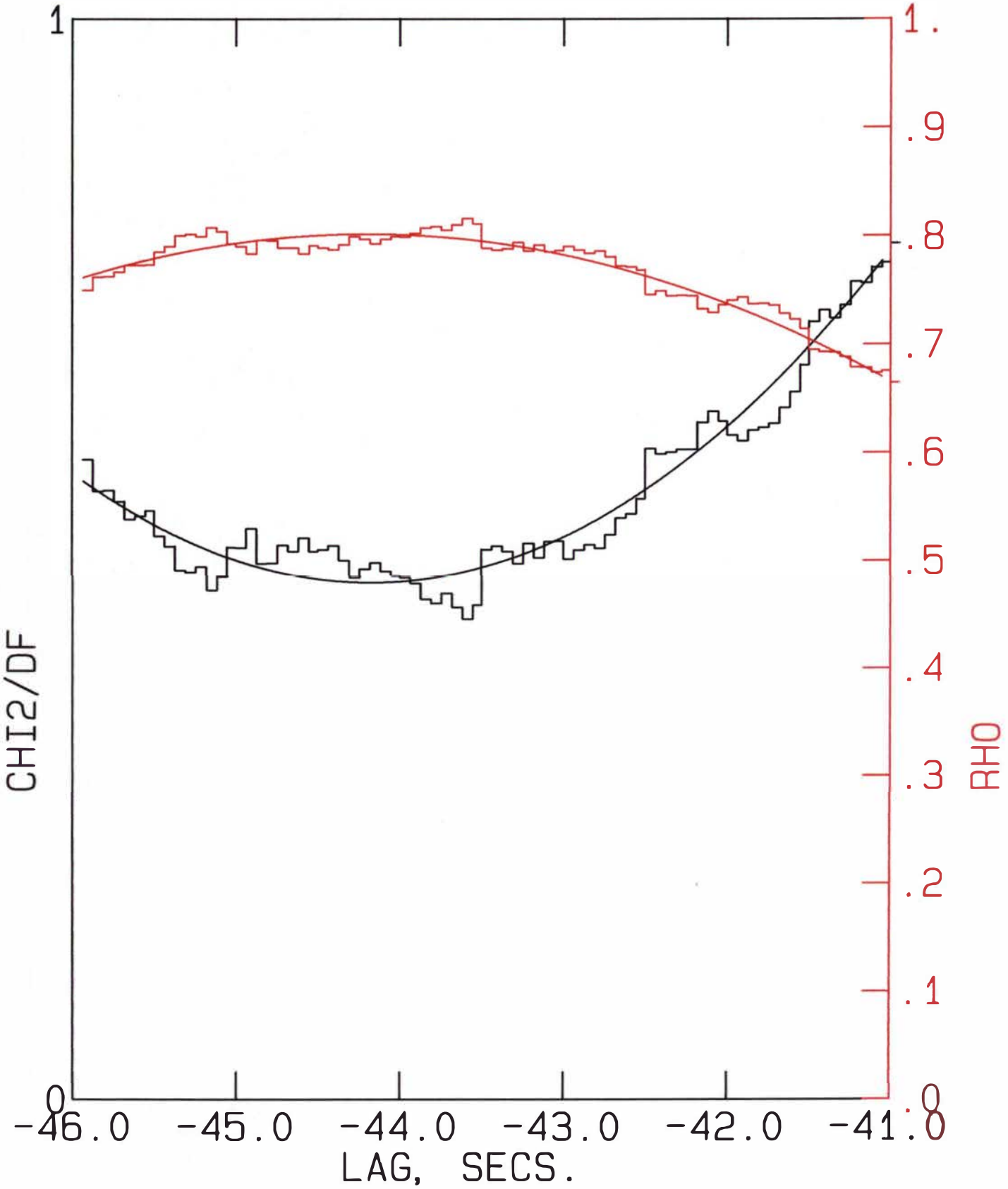
EVENT OF SEP 21, 2001 5:07

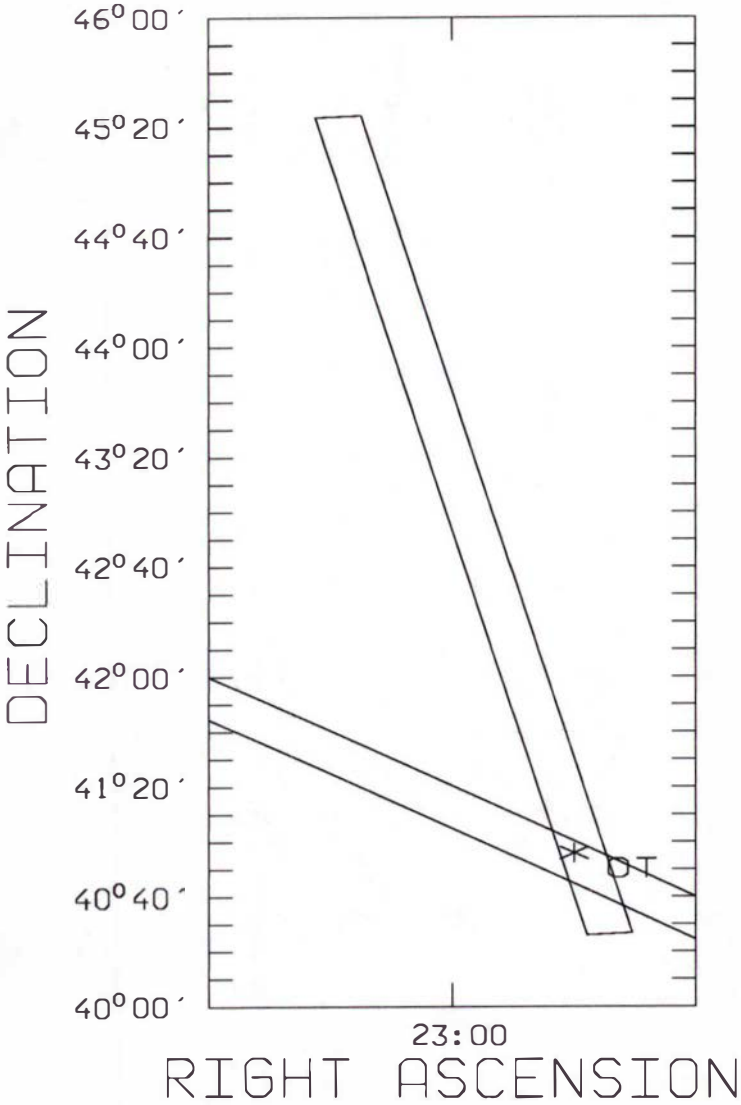
ULYSSES RT-KONUS2 CORRELATION 21/ 9/01 18454.204 18/ 5/ 4

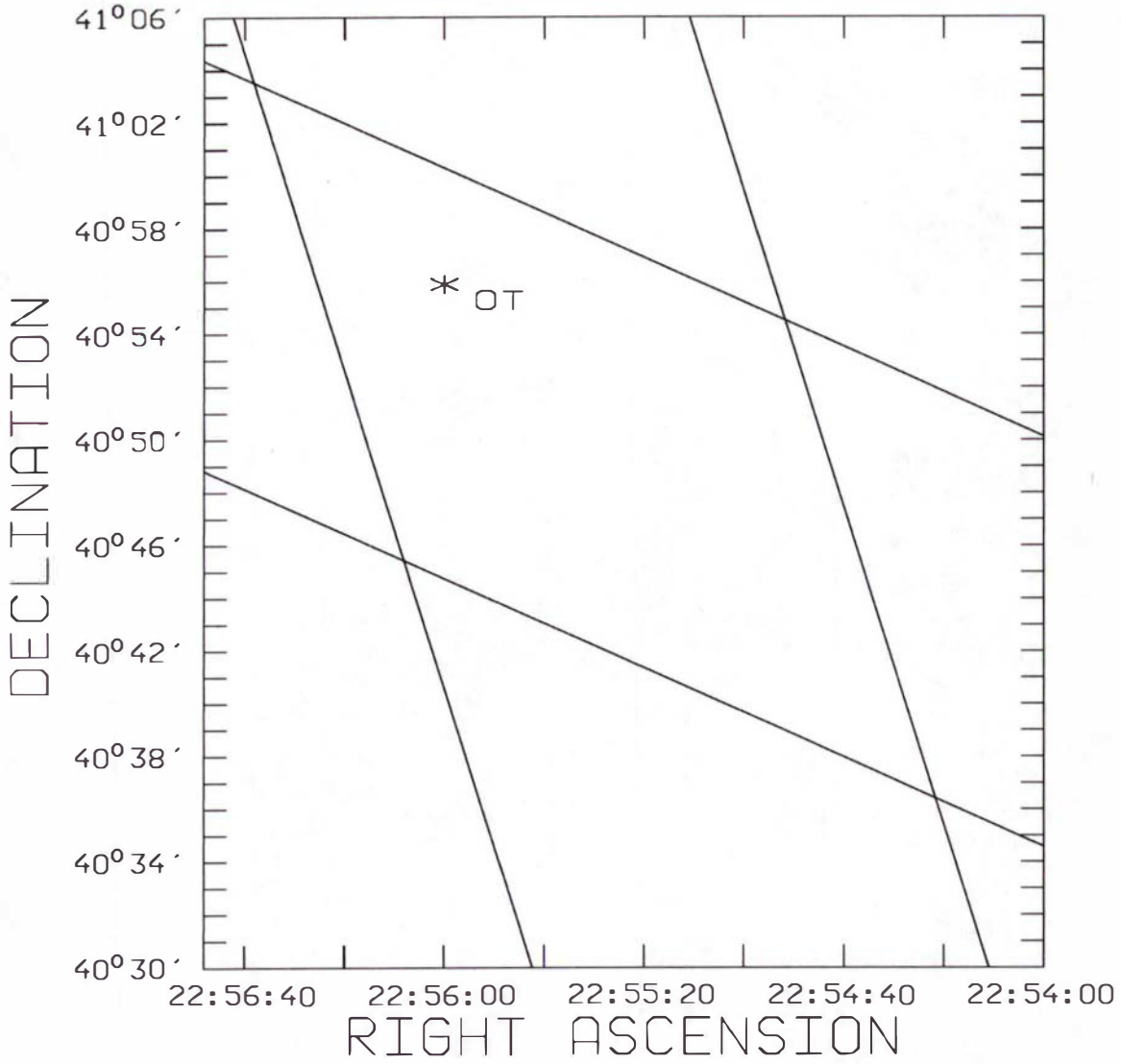


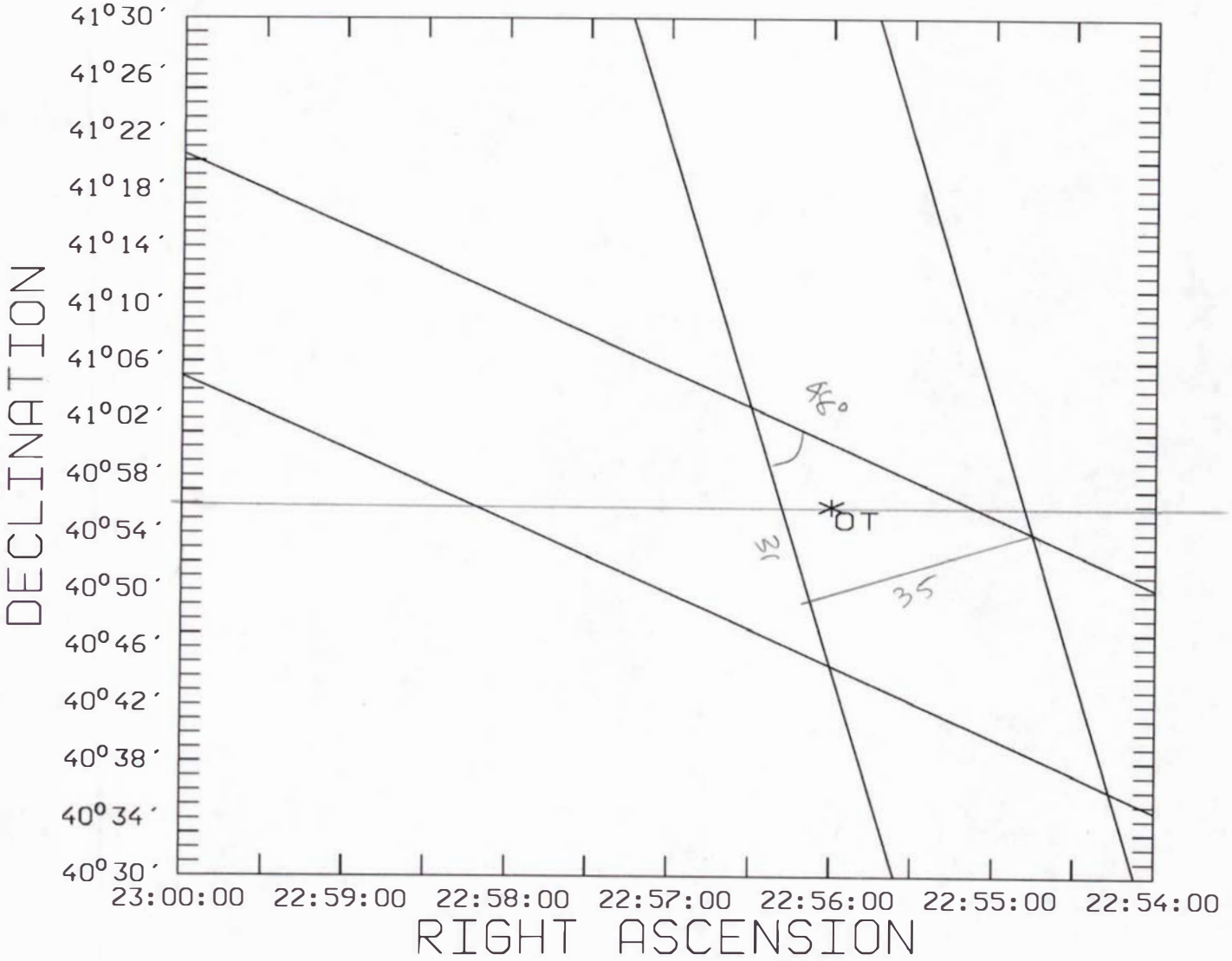
18/ 5/ 4

ULYSSES RT-KONUS2 CORRELATION 21/ 9/01 18454.204



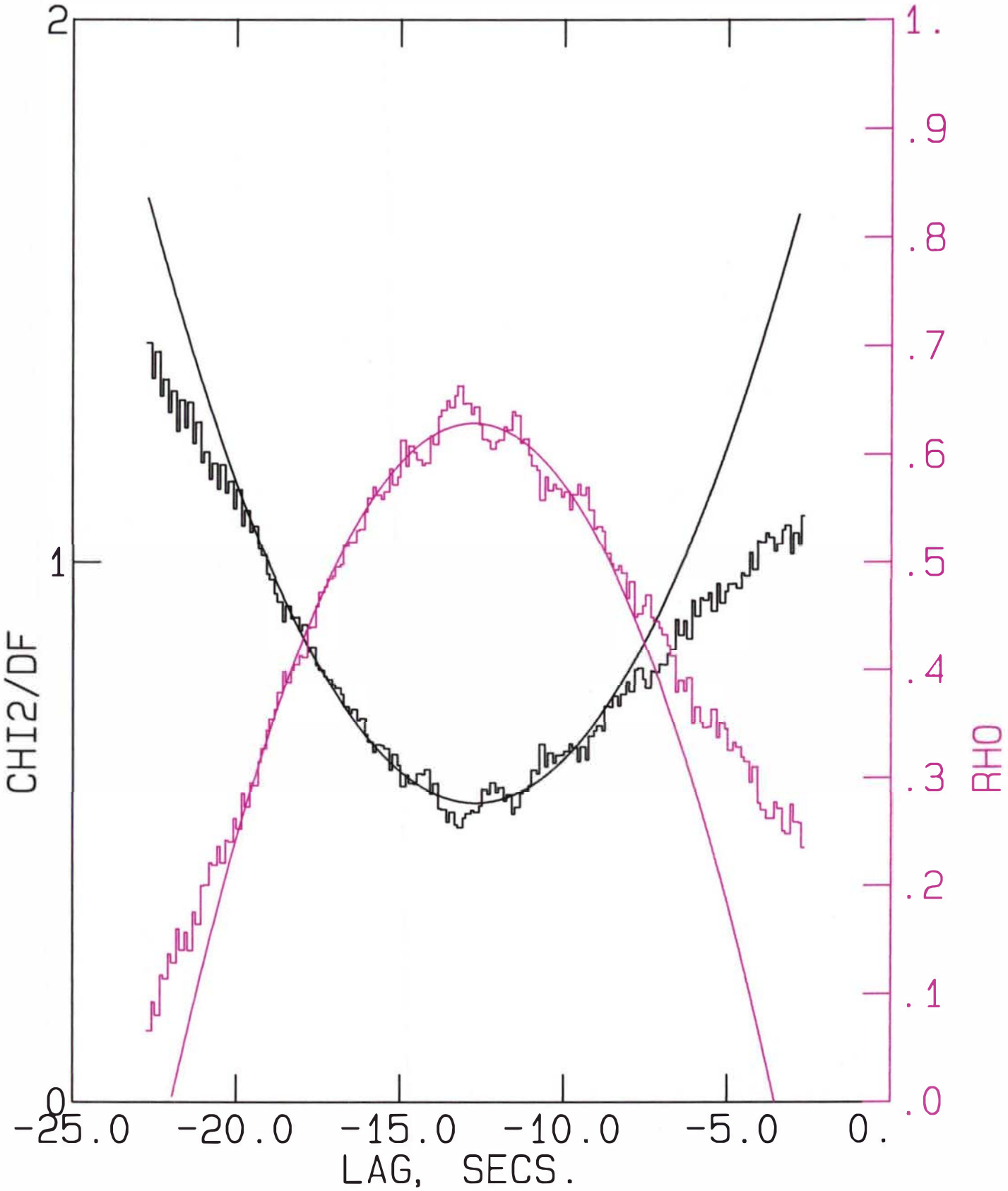

46° 00′
45° 20′
44° 40′
44° 00′
43° 20′
42° 40′
42° 00′
41° 20′
40° 40′
40° 00′
DECLINATION
23:00
RIGHT ASCENSION
OT


41°06′
41°02′
40°58′
40°54′
40°50′
40°46′
40°42′
40°38′
40°34′
40°30′
DECLINATION
OT
22:56:40
22:56:00
22:55:20
22:54:40
22:54:00
RIGHT ASCENSION

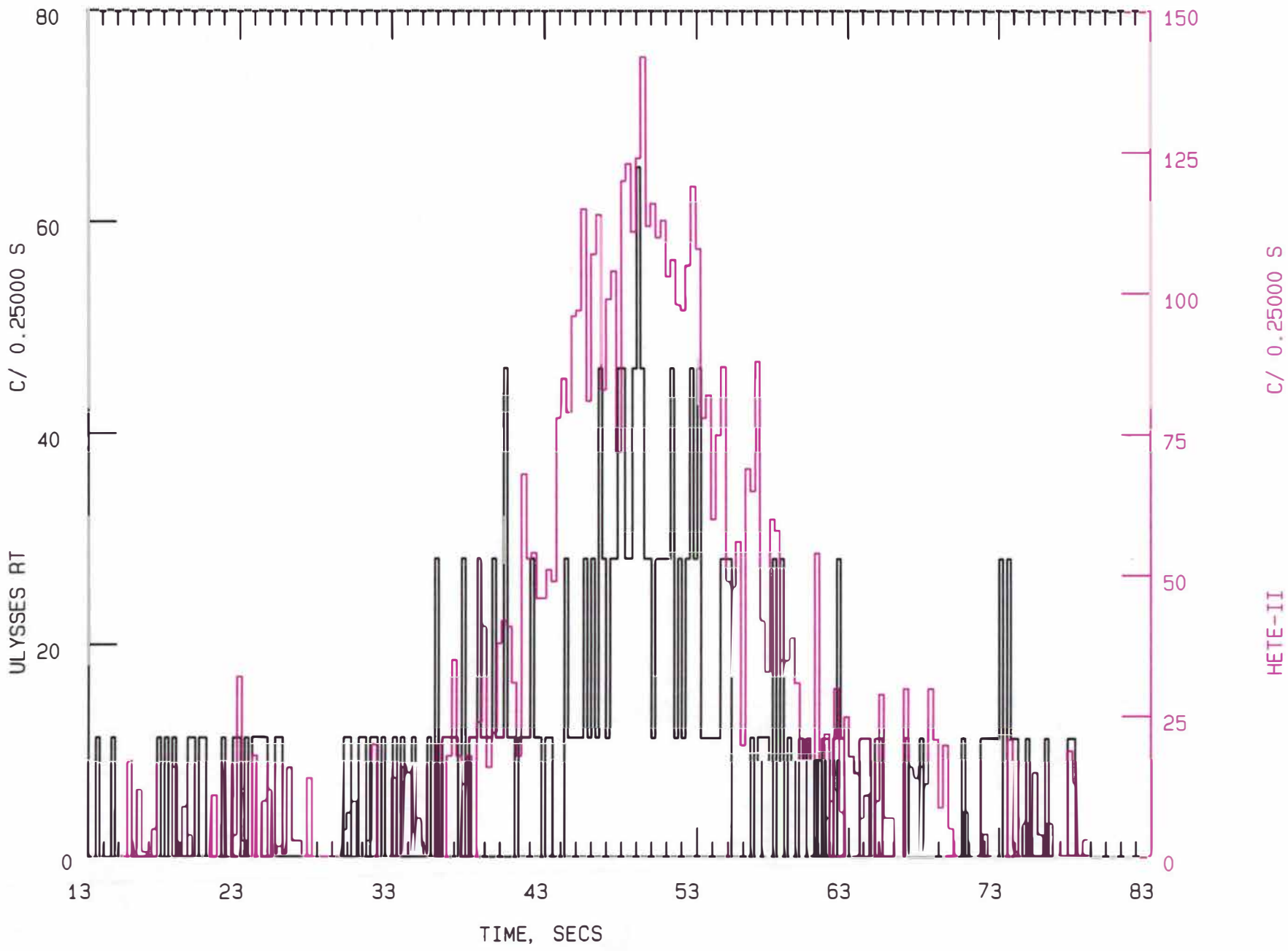


$$31 \times 35 \text{ mm}^2 \times \left(\frac{60'}{131 \text{ mm}}\right)^2 \qquad 227$$

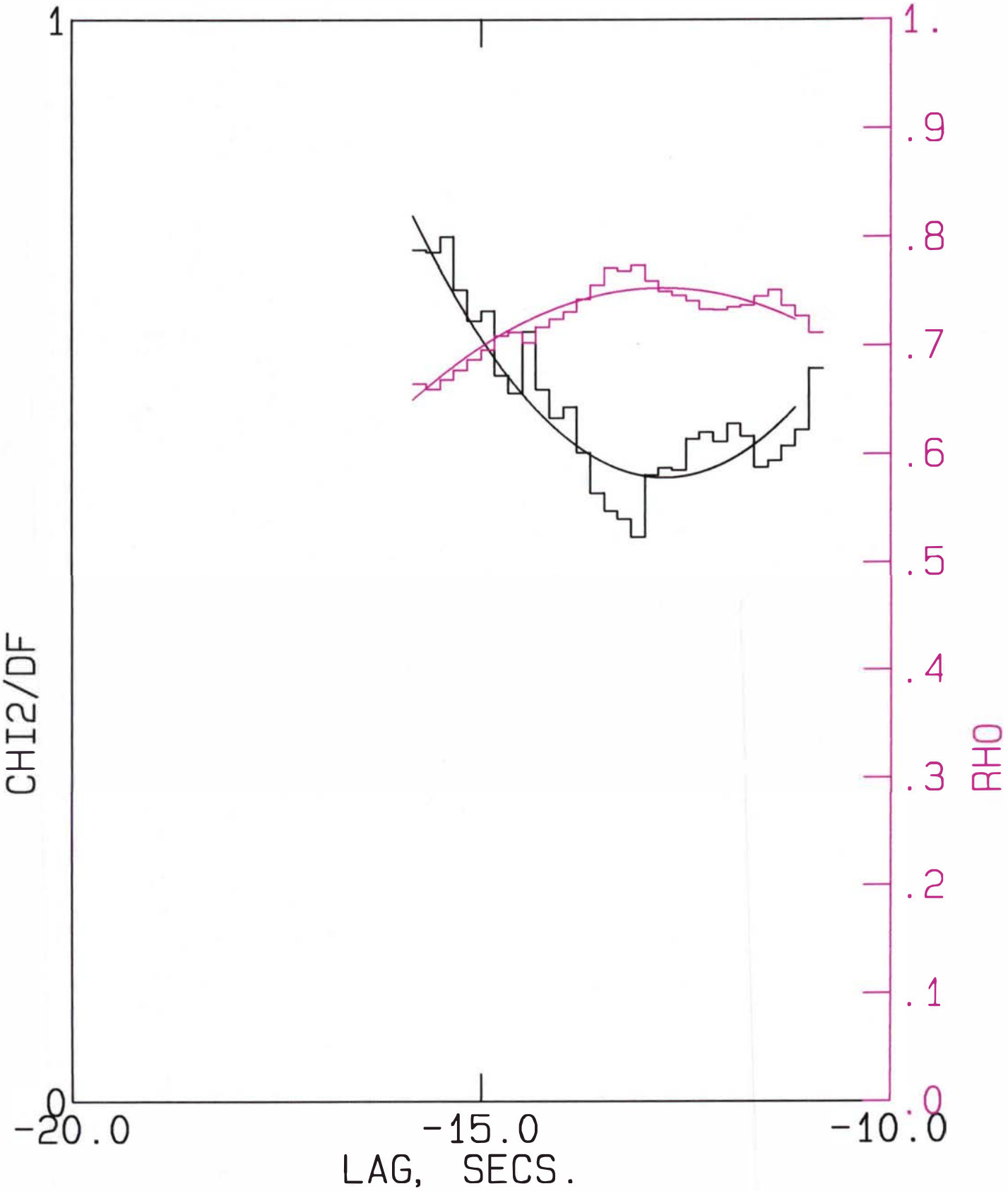
ULYSSES RT-HETE-II CORRELATION 21/ 9/01 18454.204



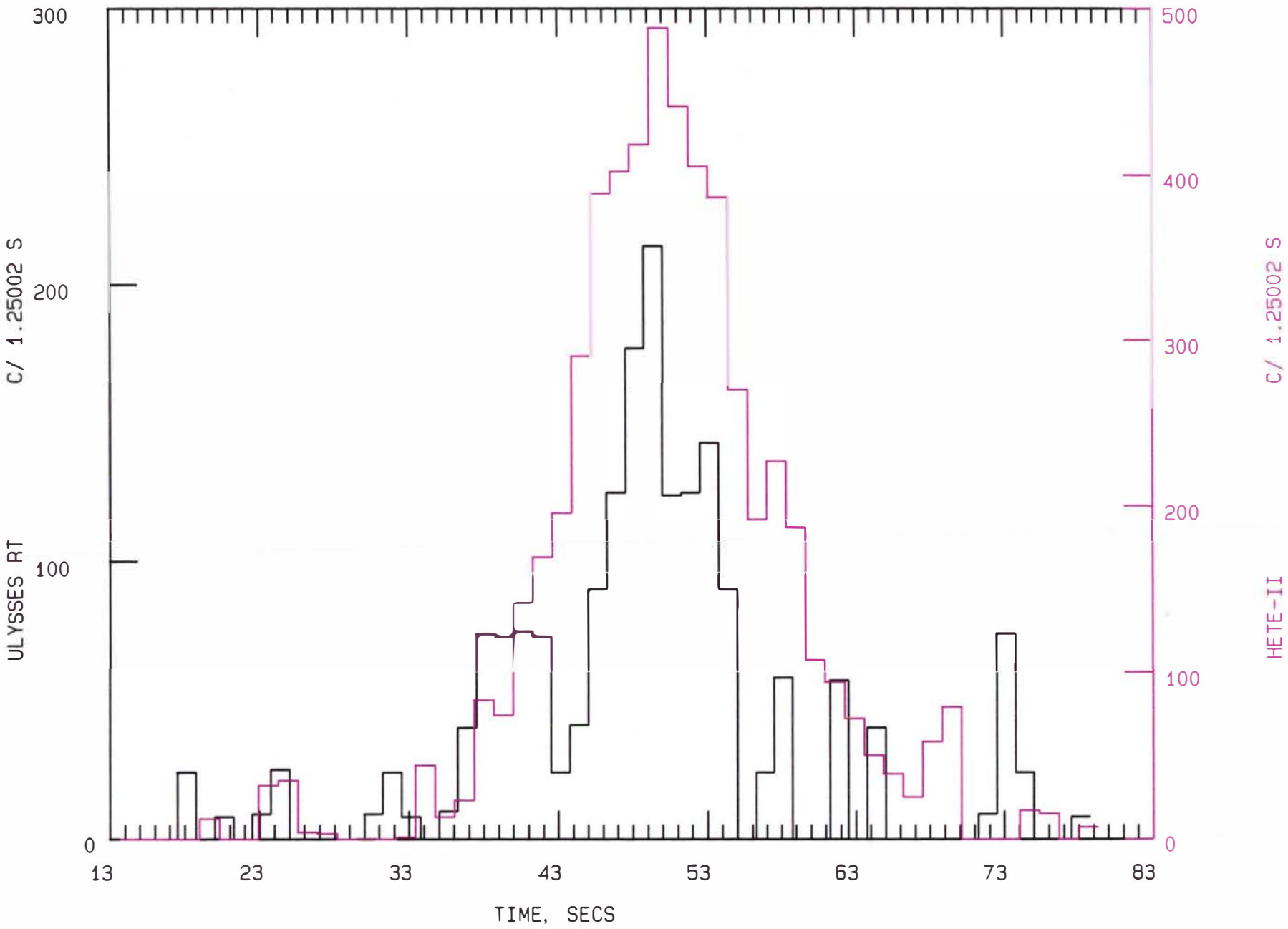
ULYSSES RT-HETE-II CORRELATION 21/ 9/01 18454.204 14/11/ 1



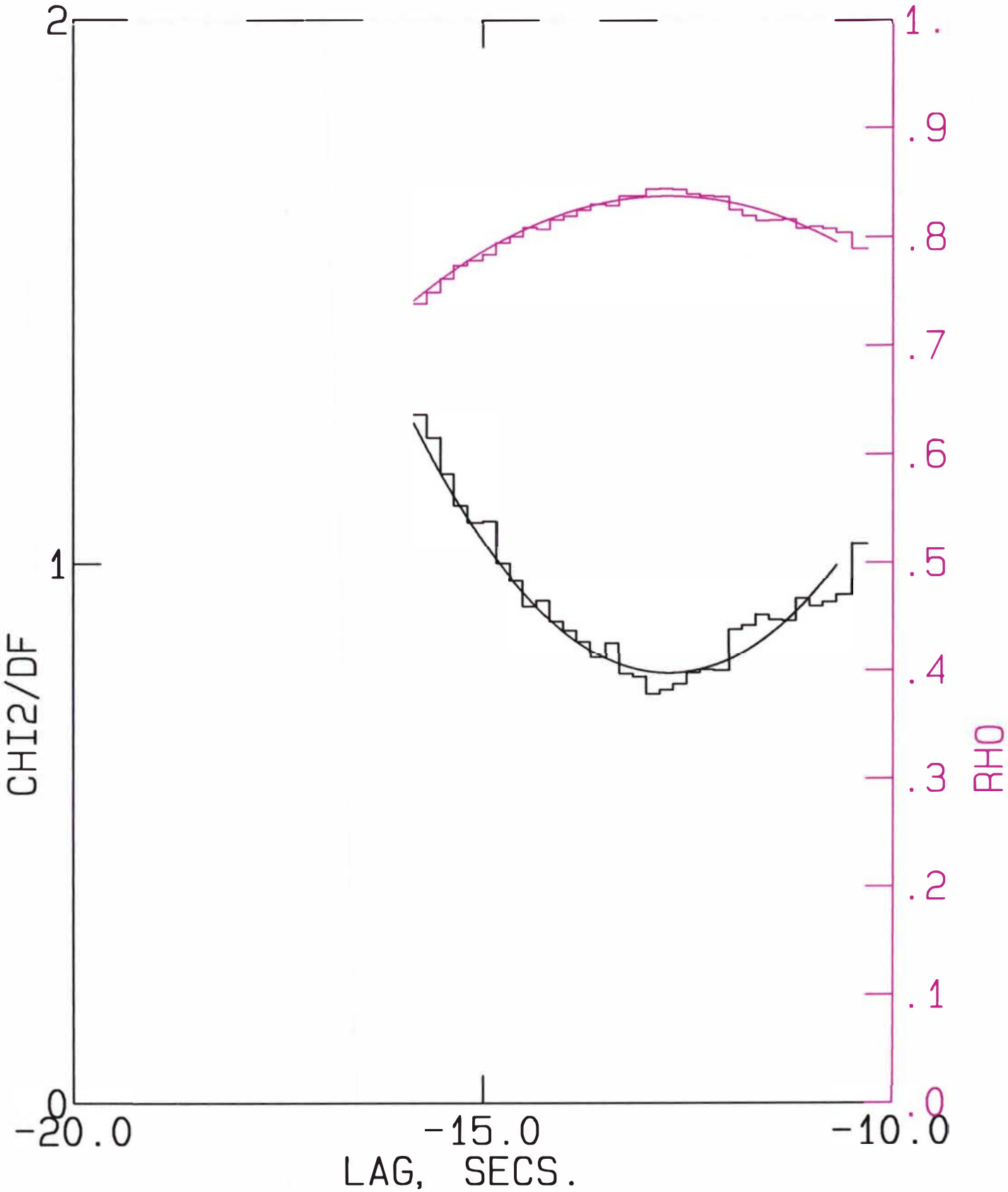
ULYSSES RT-HETE-II CORRELATION 21/ 9/01 18454.204



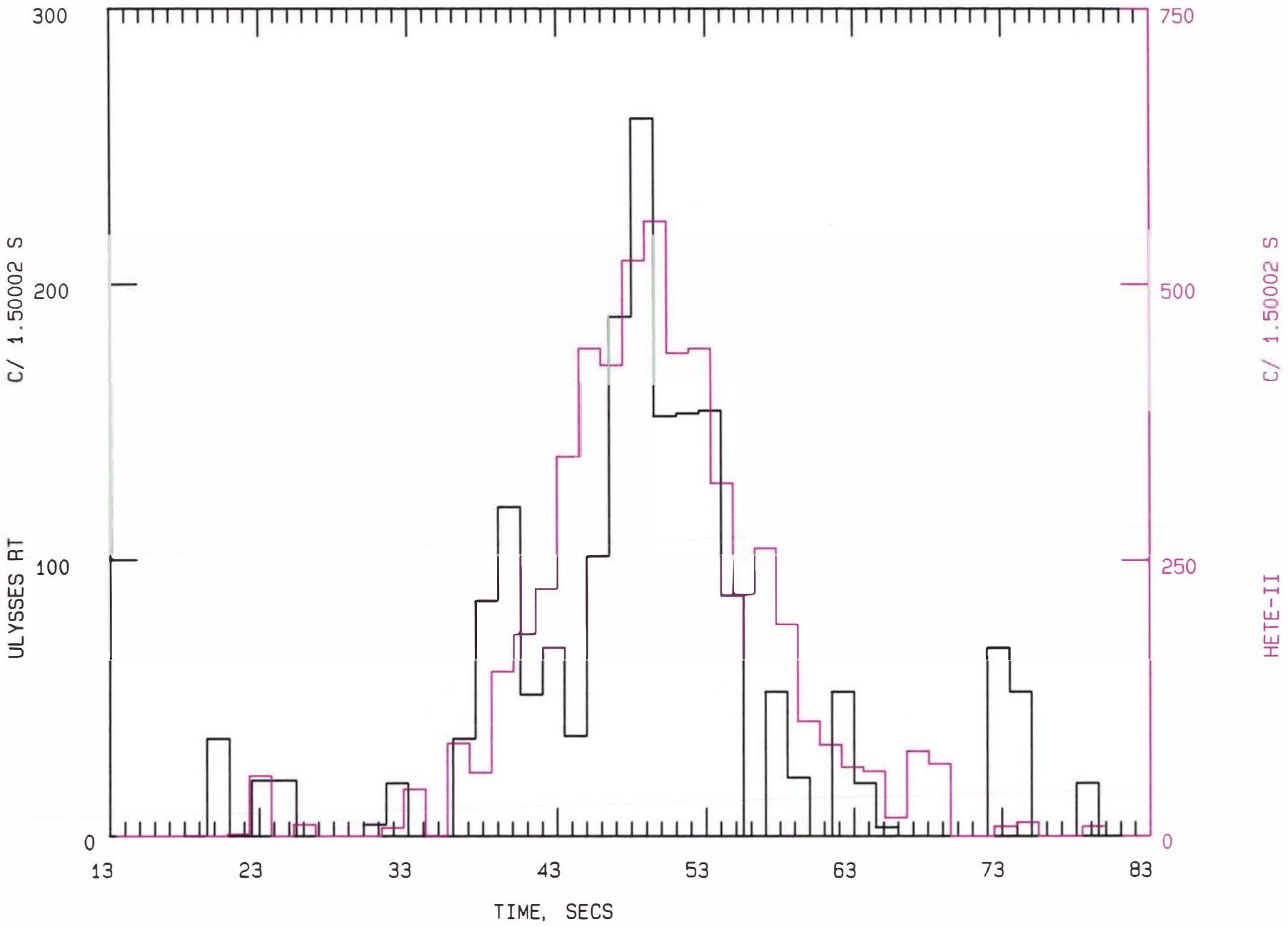
ULYSSES RT-HETE-II CORRELATION 21/ 9/01 18454.204 14/11/ 1



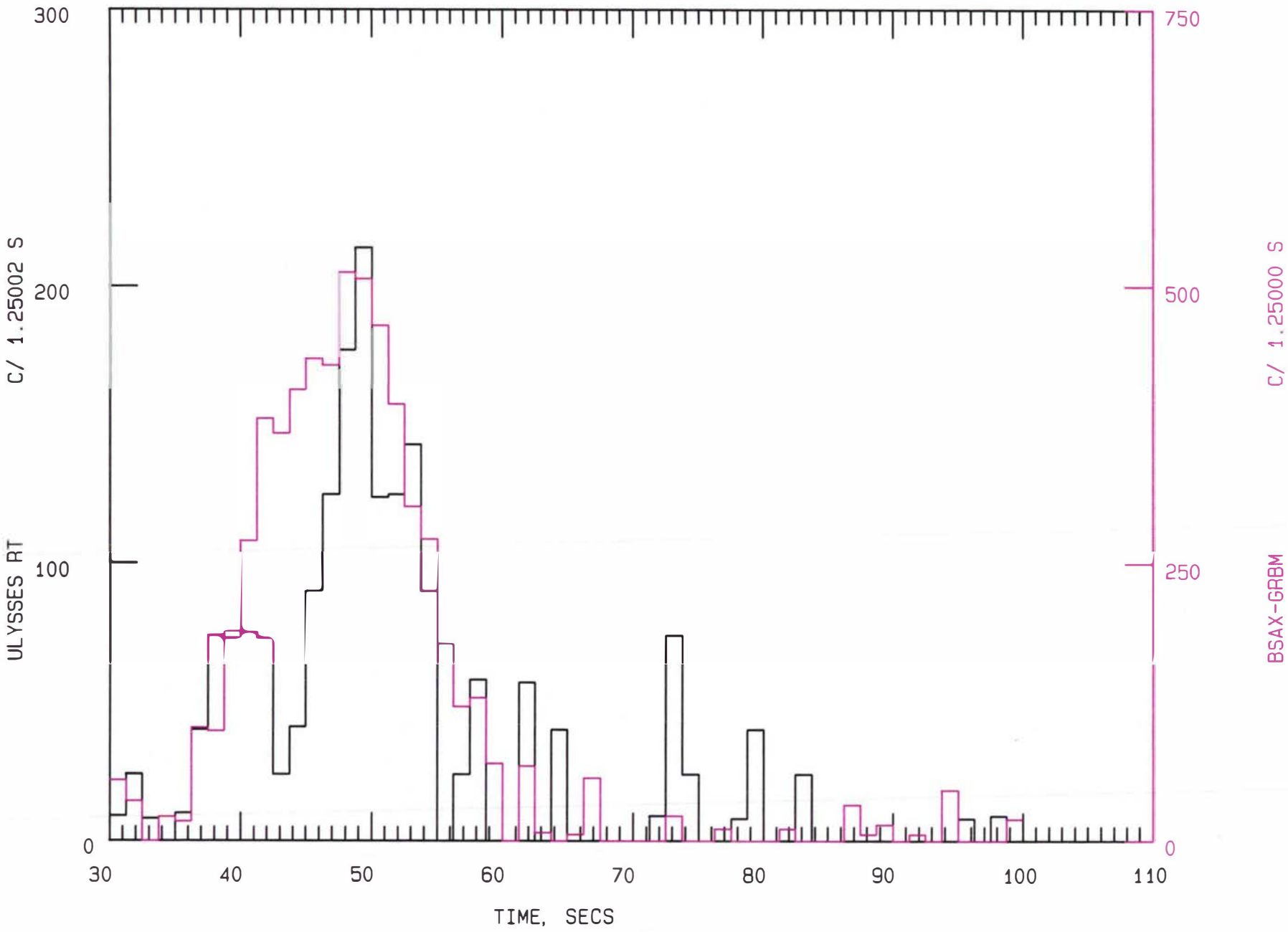
ULYSSES RT-HETE-II CORRELATION 21/ 9/01 18454.204



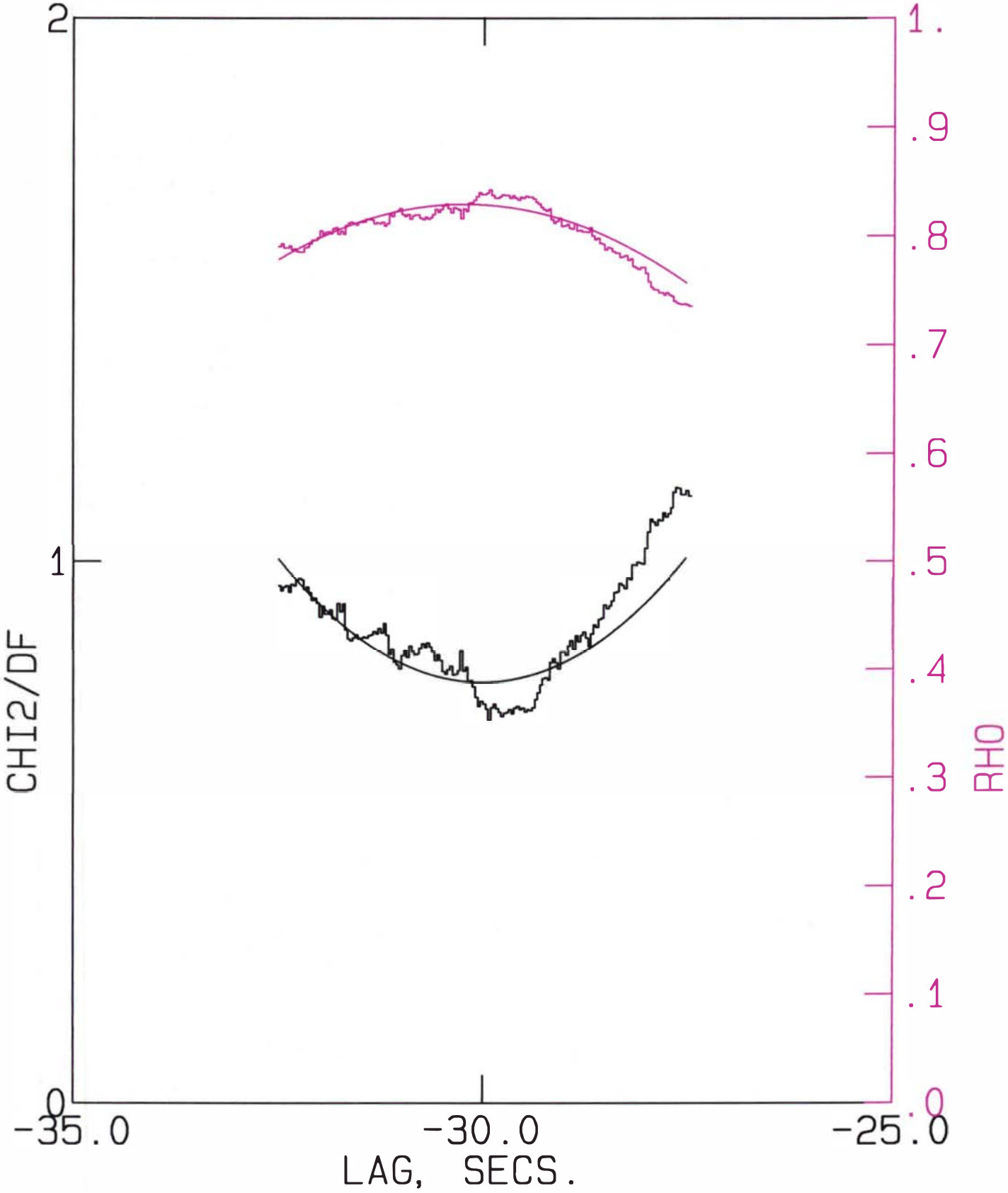
ULYSSES RT-HETE-II CORRELATION 21/ 9/01 18454.204 14/11/ 1



ULYSSES RT-BSAX-GRBM CORRELATION 21/ 9/01 18454.204 14/11/ 1



ULYSSES RT-BSAX-GRBM CORRELATION 21/ 9/01 18454.204



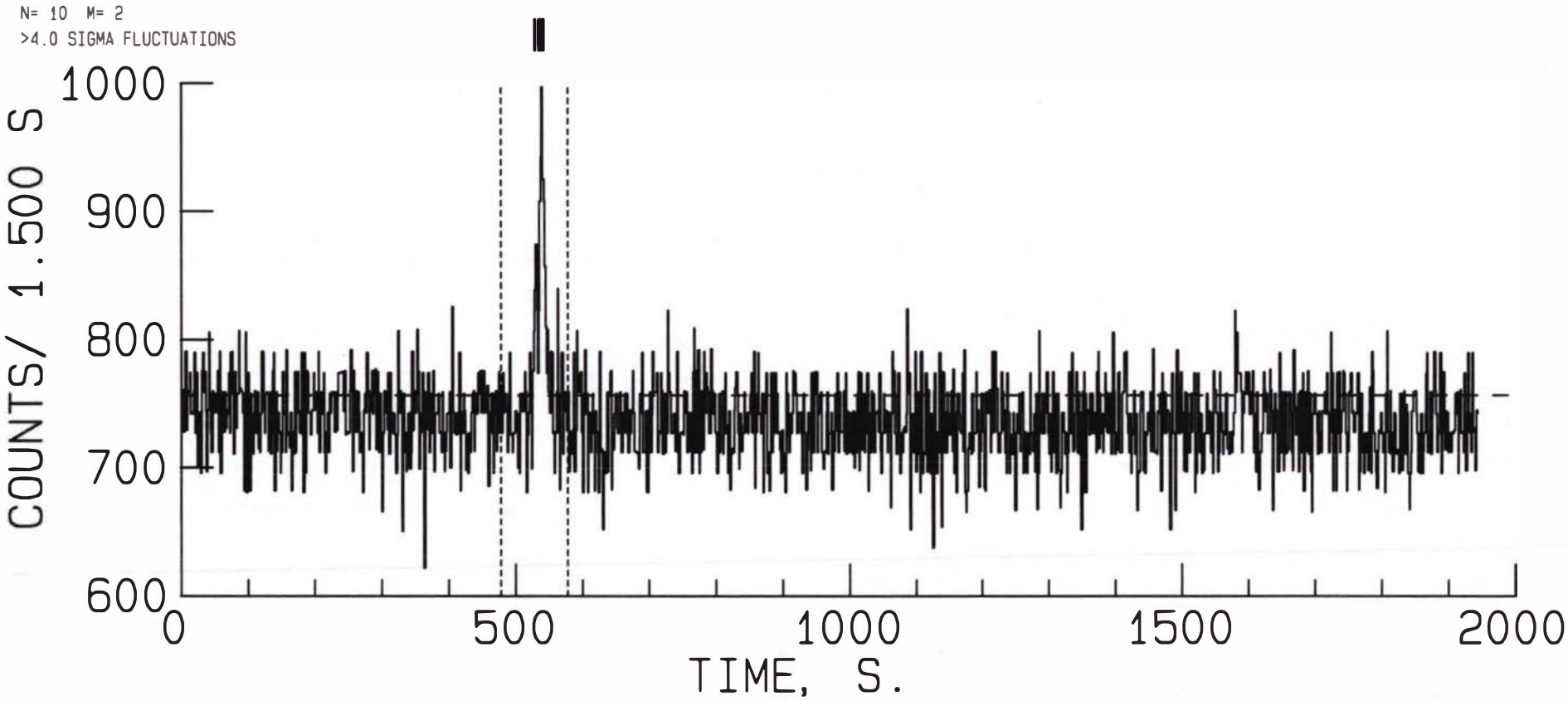
ULYSSES RT

14/11/ 1

21/ 9/ 1 17964.196 s

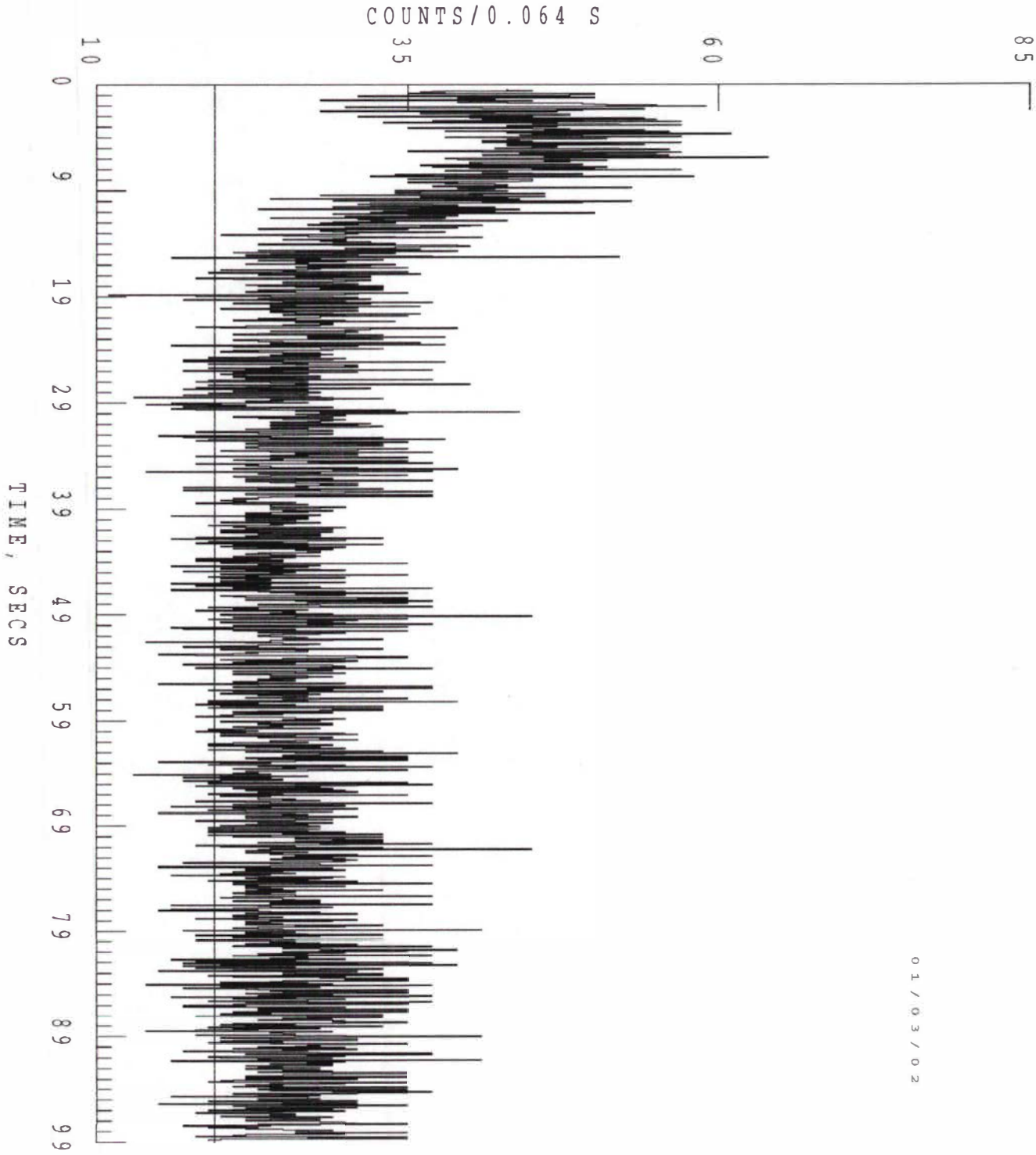
0.250 S INTERVALS REGROUPED BY 6

22- 147 keV

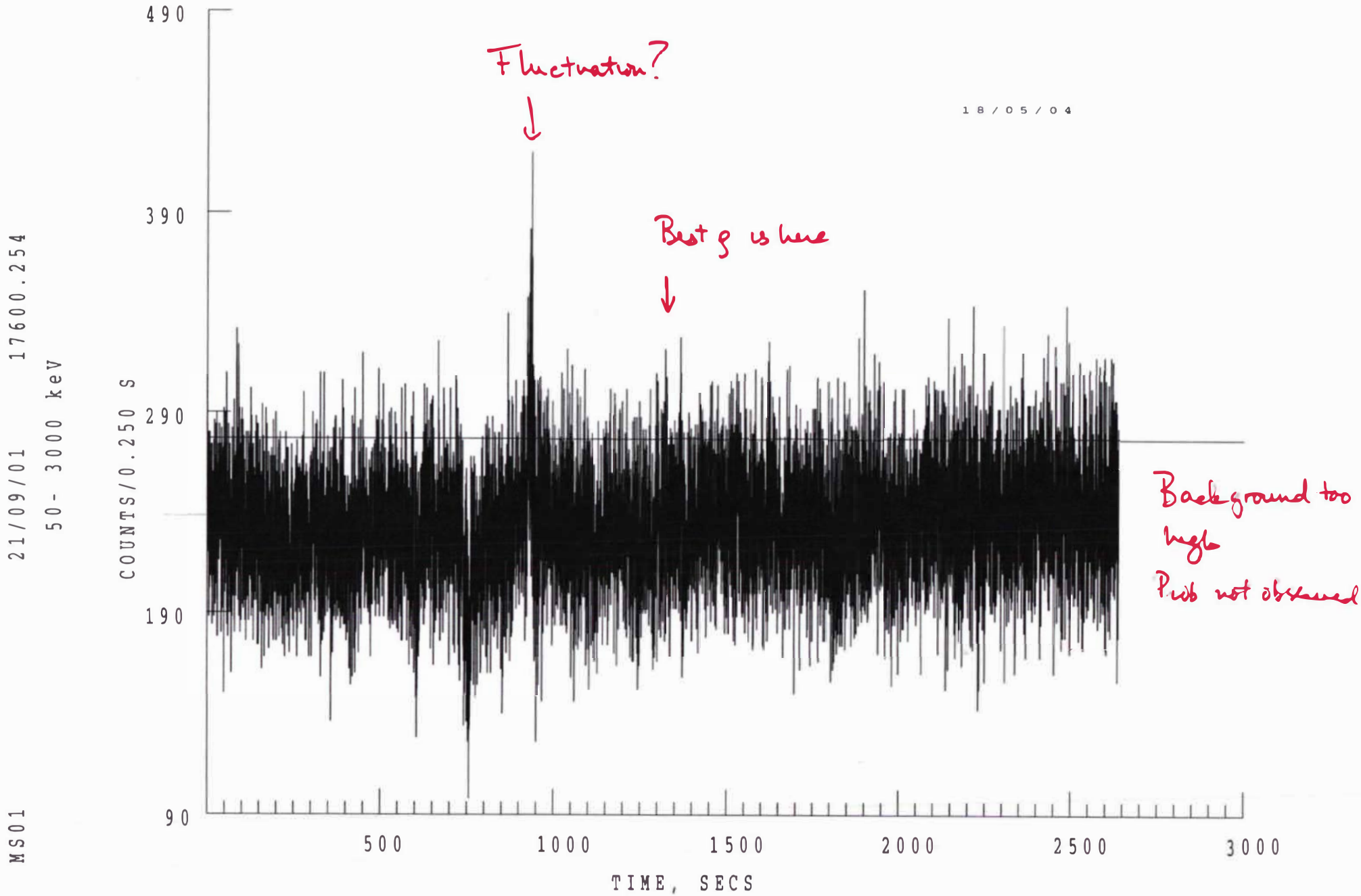


KONUS2 21/09/01 18957.151

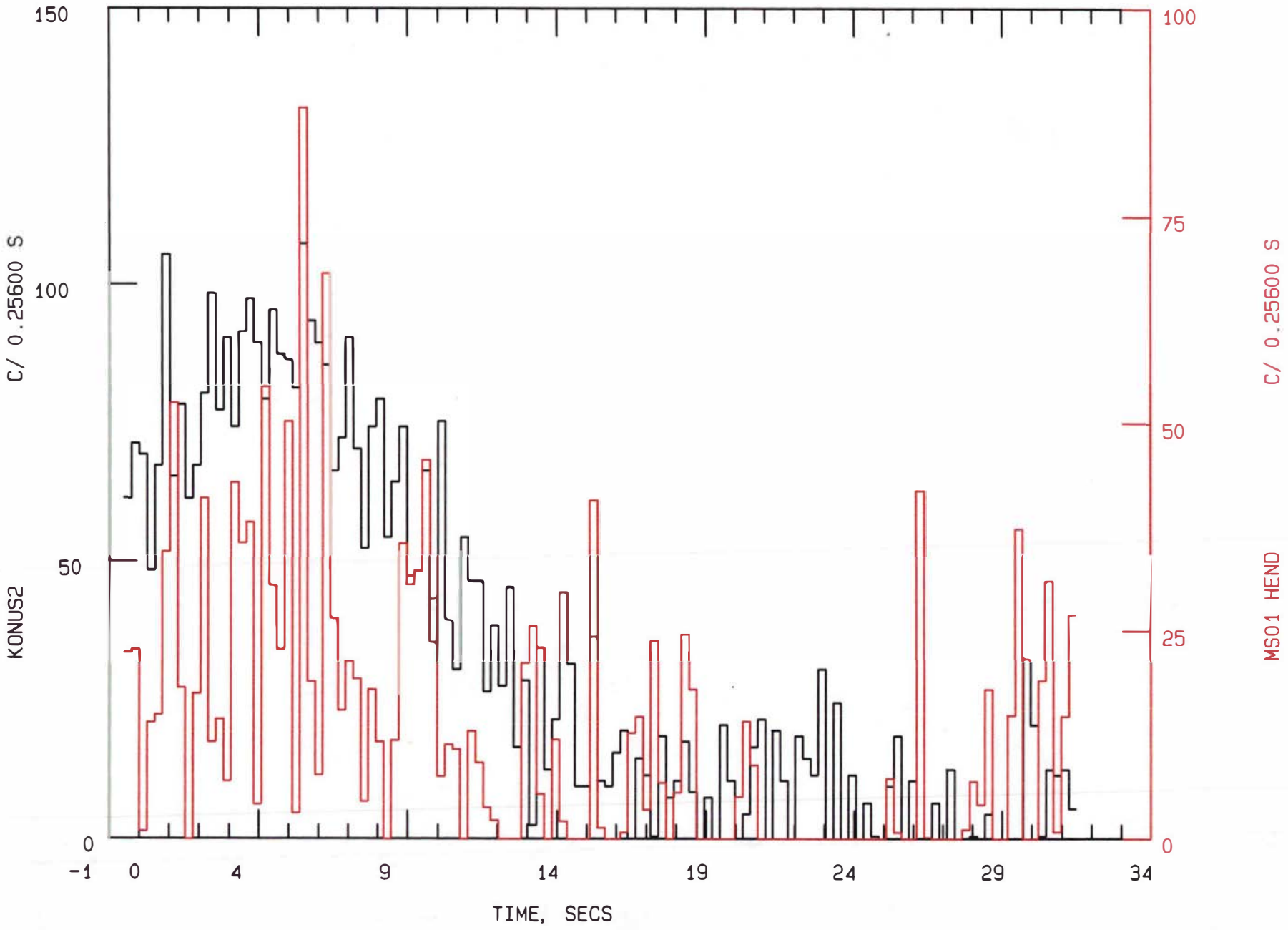
50- 200 keV



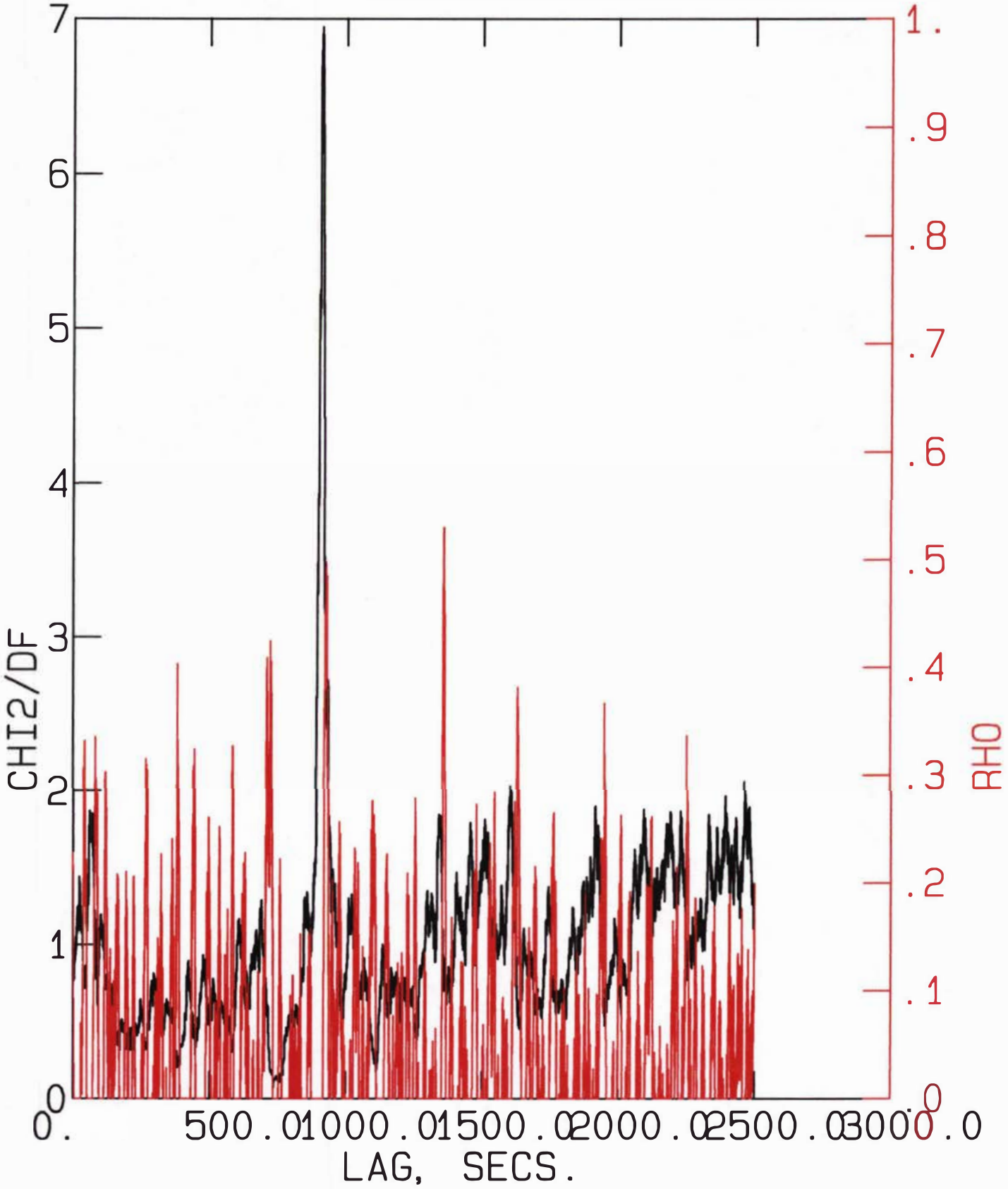
01/03/02


MS01
21/09/01
17600.254
50- 3000 keV
COUNTS/0.250 S
490
390
290
190
90
500
1000
1500
2000
2500
3000
TIME, SECS
18/05/04
Fluctuation?
Best ρ is here
Background too high
Prob not observed

KONUS2 -MS01 HEND CORRELATION 21/09/01 18957.151 18/ 5/ 4



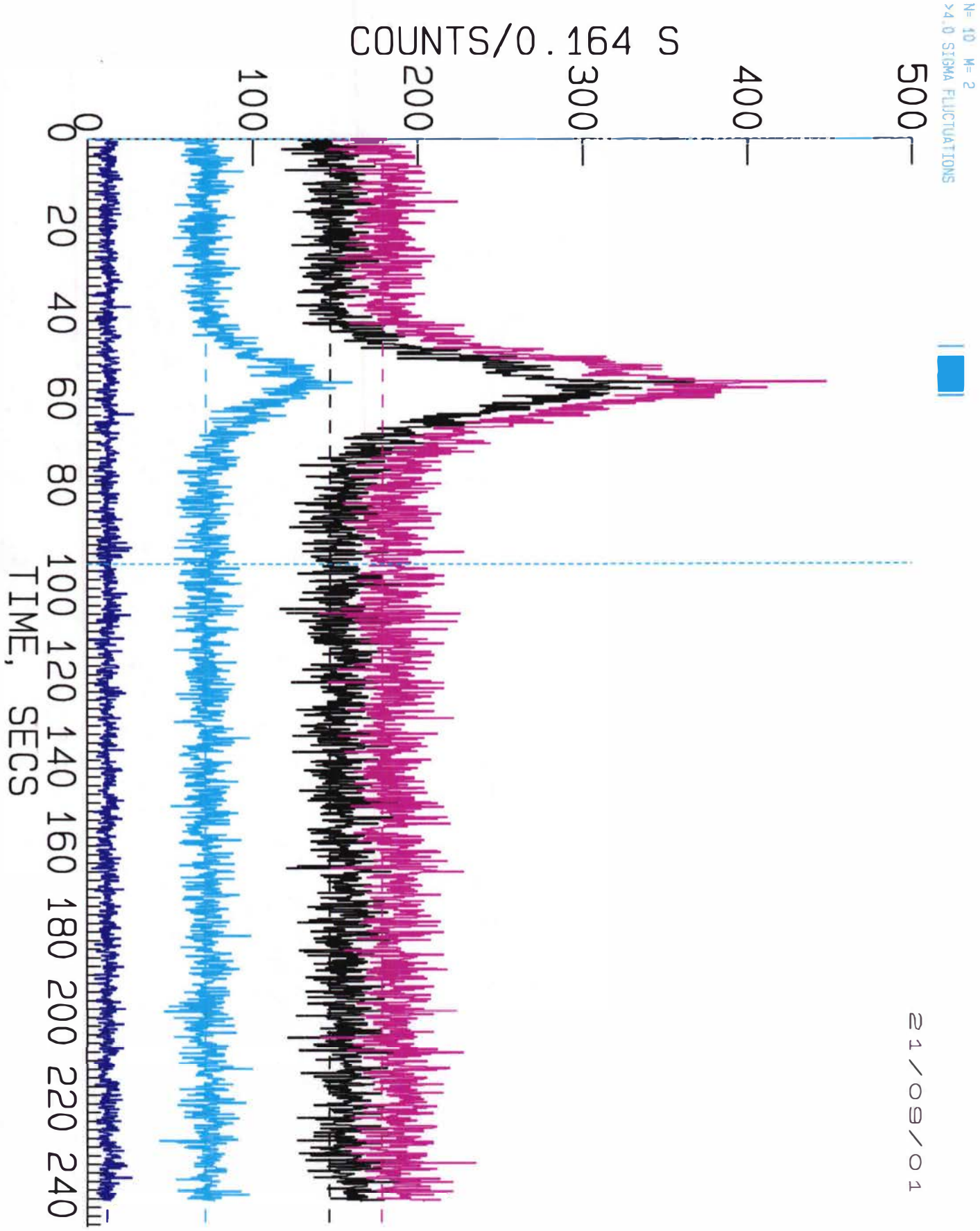
KONUS2 -MS01 HEND CORRELATION 21/09/01 18957.151



WXM Location
ULYSSES-HETE Annulus
41.5
41.0
40.5
345.0
344.5
344.0
343.5
343.0
Dec.
R.A.

HETE-II 21/09/01 18904.456

18- 103 keV 18- 78 keV 20- 510 keV 510-1000 keV



FREGATE BURST #1761 TIME HISTORY -- DETECTORS 1-4 SUMMED

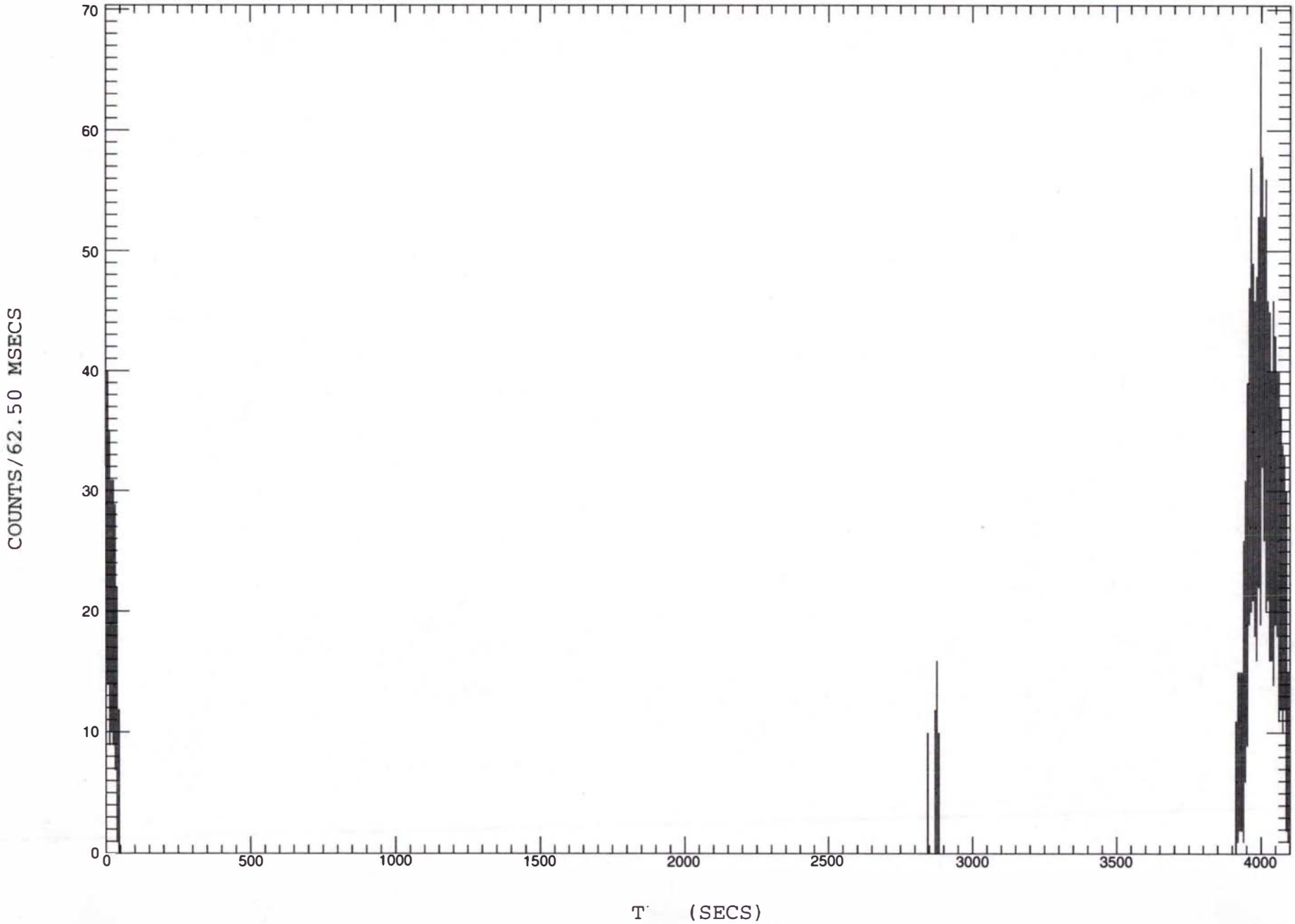
21/09/01 DOY 264 Julian 2452174.71935

TRIGGERED BY FREGATE UT = 05:15:51 (18951.91 secs) [sct = 0019 4c18 86da 7822]

PLOT STARTING TIME UT = NA (NA secs) [sct = NA]

BACKGRND SAMPLED FROM UT = 05:15:35 (18935.91 secs) [sct = 0019 4c18 85e6 6822]

BIN WIDTH 62.50 msecs INTEGRATED OVER CHANS. 25-150



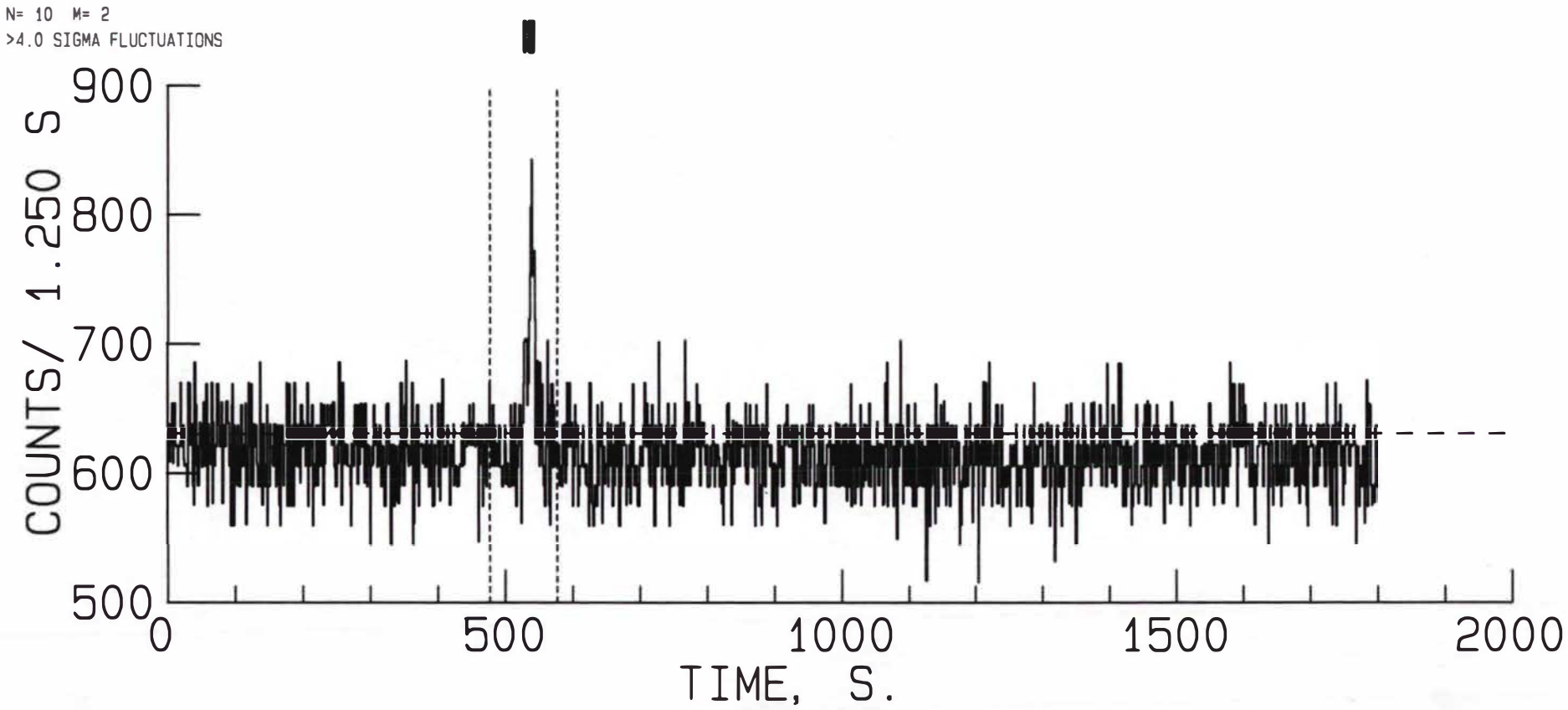
ULYSSES RT

21/ 9/ 1

21/ 9/ 1 17964.193 s

0.250 S INTERVALS REGROUPED BY 5

22- 150 keV



From guidorzi@fe.infn.it Fri Sep 21 04:09 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
`te: Fri, 21 Sep 2001 13:00:07 +0200 (MET DST)

ıkGRB[297] #LSs: 4 Good HRR: 3
SW Trigger Time (OBT): 35933.987
UTC: Fri, 21 Sep 2001 05:15:52:26613 18952

******Event 0 triggered on board: ev_time - onbtrig_time = 1.894

Nsig(trg):	4.7	5.5	0.7	4.6	2.8	2.9	0.0	3.0
Nsig(pfl):	10.3	14.8	5.7	18.5	7.7	10.1	5.3	12.1
Bkg lev. :	785	897	818	717	933	956	887	951
ChiSq R. :	0.990	0.830	1.207	1.050	1.081	0.752	1.136	0.905
Peak fl. :	290	442	164	496	235	313	158	374
Error :	43.3	47.4	42.6	44.0	46.0	47.3	44.1	47.8
Fluence :	3041	5791	1514	5778	2254	3383	912	4570
Error :	173.0	217.4	156.8	190.0	184.9	218.2	160.9	211.6

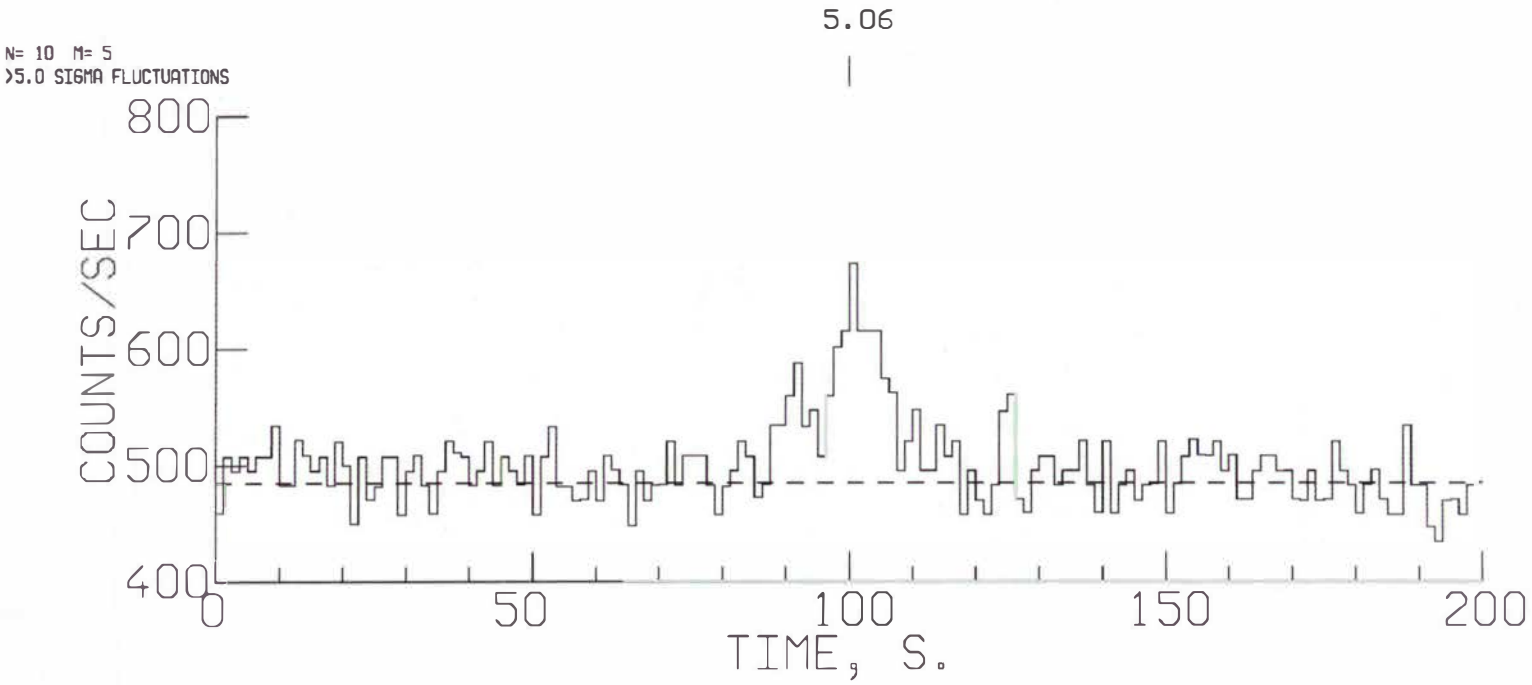
Dur (s) :	17.00	23.00	14.00	21.00		
Abundance:	17	23	14	21		
H. Ratio :	0.741	0.584	0.603	0.791		
HR Ratio :	1.268	1.230	0.937	0.969	0.739	0.762
HR W-ave :	0.688	+/- 0.028				

ULYSSES RT 26/ 9/ 1

21/ 9/ 1 18502.205 s

0.250 S INTERVALS REGROUPED BY 5

22- 150 keV

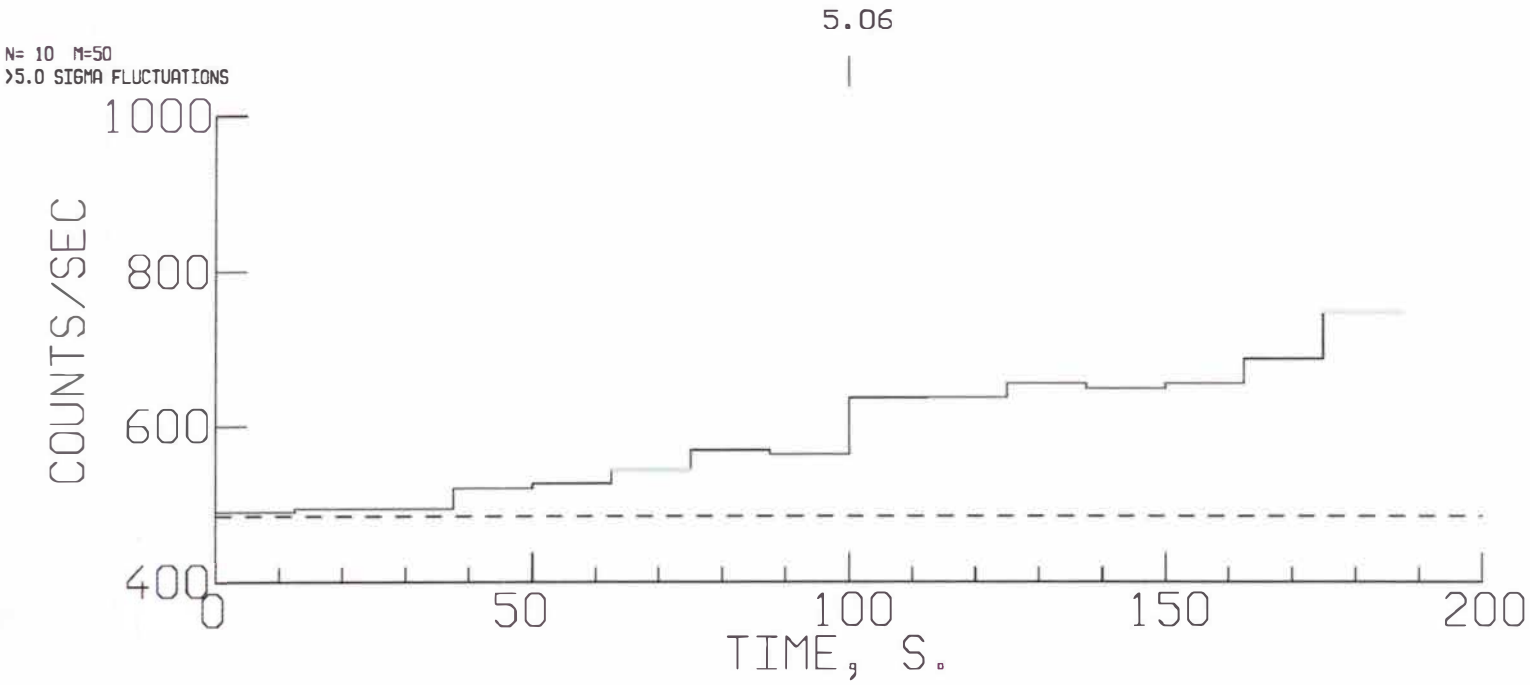


ULYSSES RT 26/ 9/ 1

21/ 9/ 1 26395.337 s

0.250 S INTERVALS REGROUPED BY 50

22- 150 keV

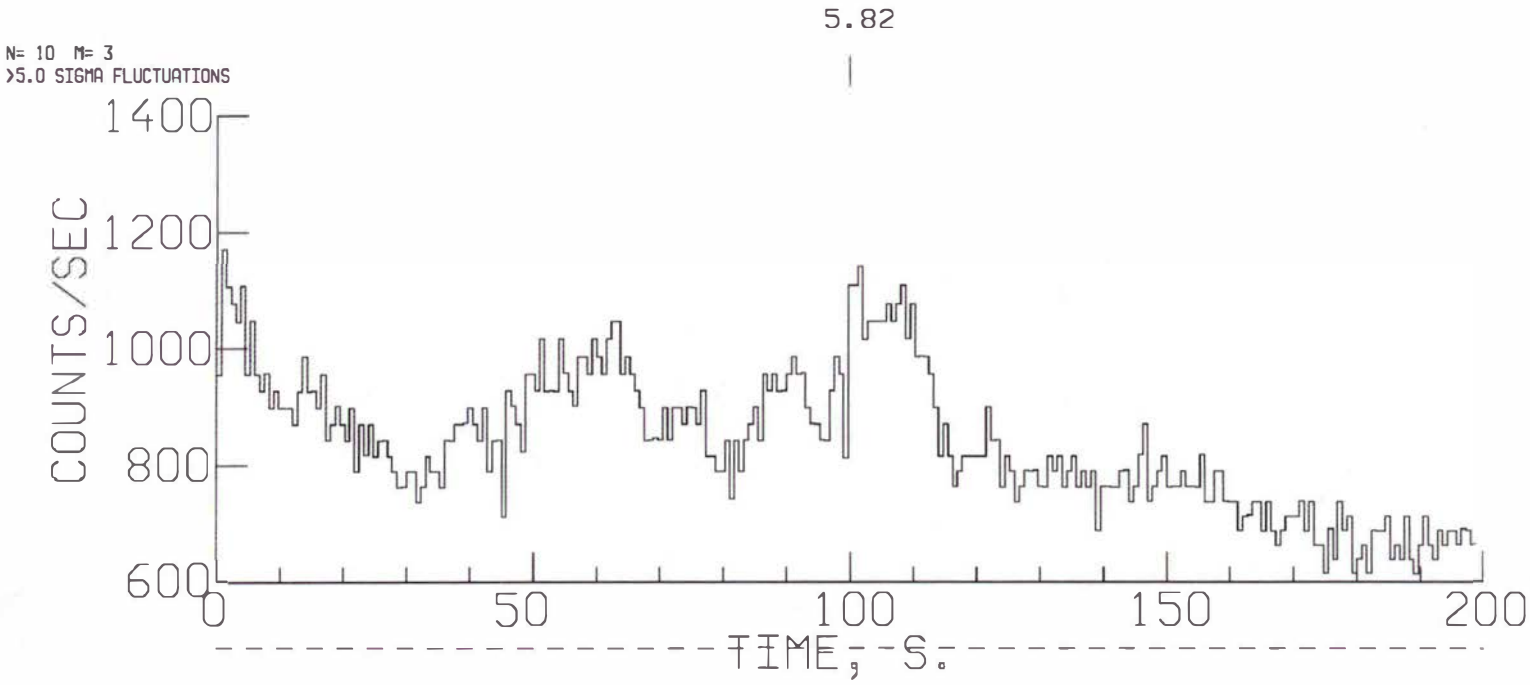


ULYSSES RT 26/ 9/ 1

21/ 9/ 1 26762.842 s

0.250 S INTERVALS REGROUPED BY 3

22- 150 keV

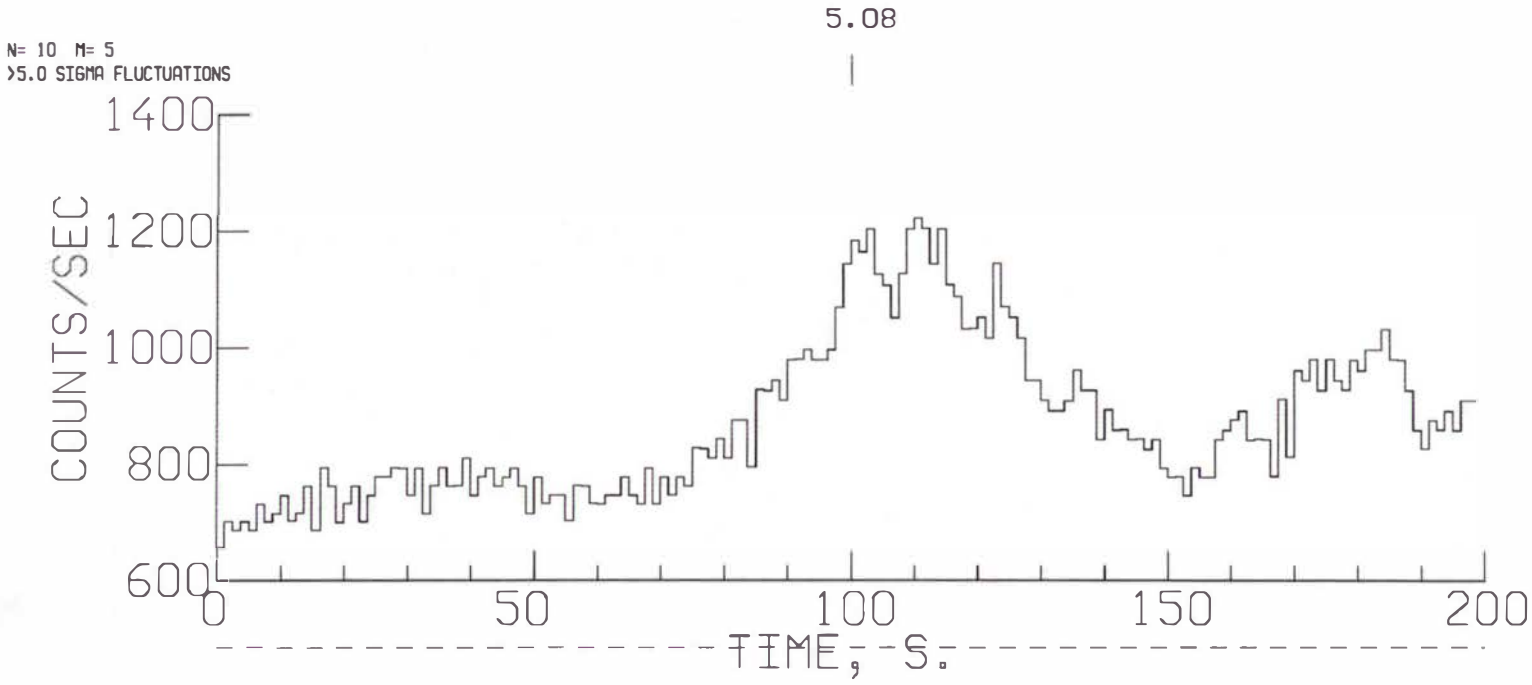


ULYSSES RT 26/ 9/ 1

21/ 9/ 1 26641.342 s

0.250 S INTERVALS REGROUPED BY 5

22- 150 keV

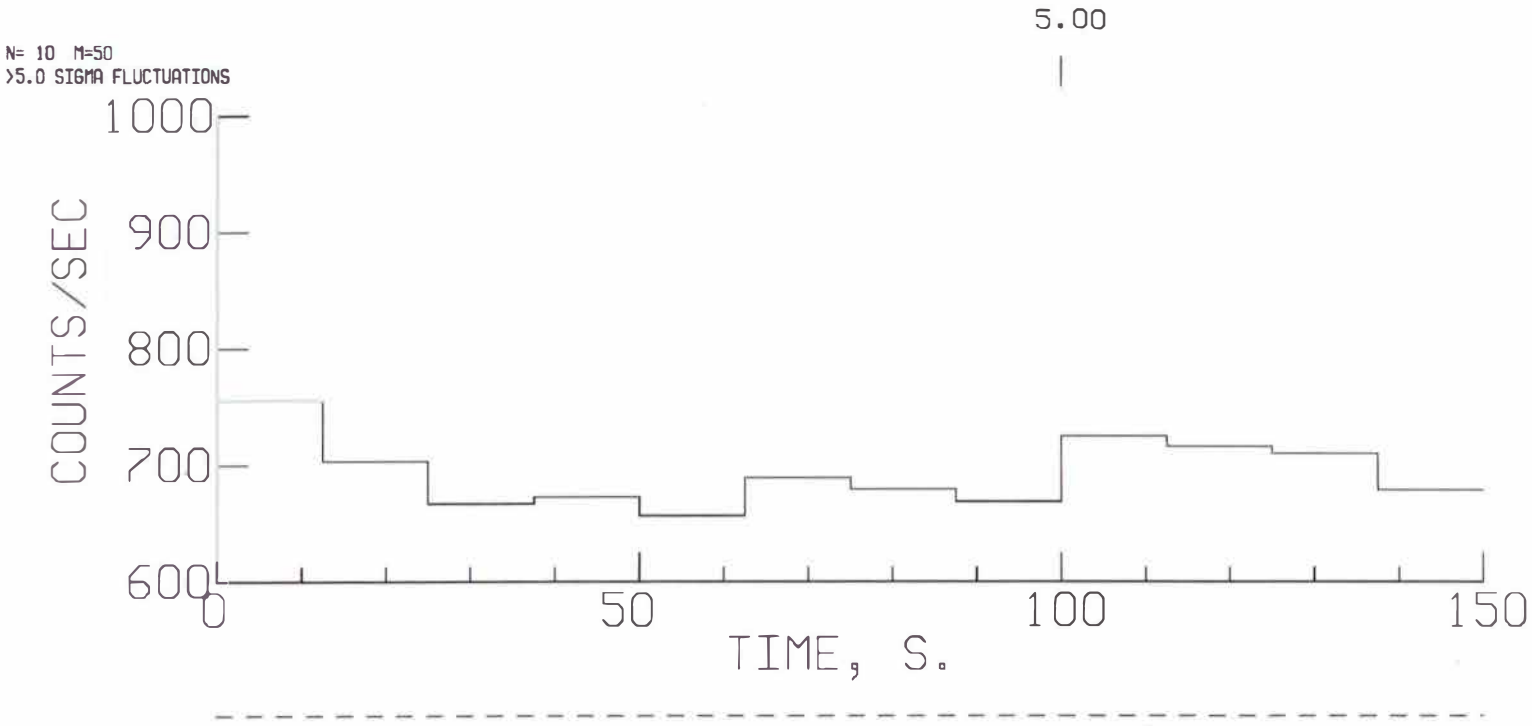


ULYSSES RT 26/ 9/ 1

21/ 9/ 1 26912.846 s

0.500 S INTERVALS REGROUPED BY 50

22- 150 keV



From root@frascati.sdc.asi.it Fri Sep 21 13:40 PDT 2001
From: root@frascati.sdc.asi.it
Date: Fri, 21 Sep 2001 23:58:27 +0200
: khurley@ssl.berkeley.edu

B_TRIG: 21 Sep 2001 17:55:14:97752

SAX 20010921 64514

ULYSSES RT 24/09/01

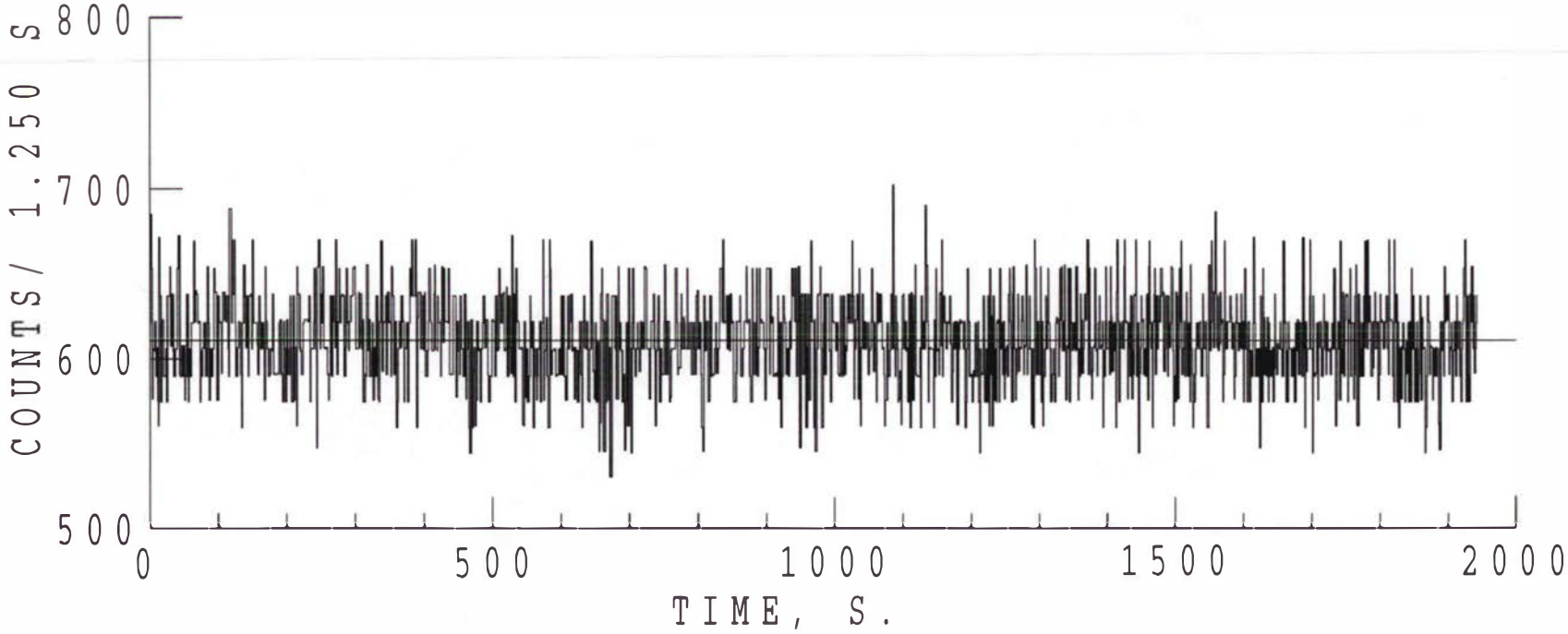
21/09/01 63540.203 s

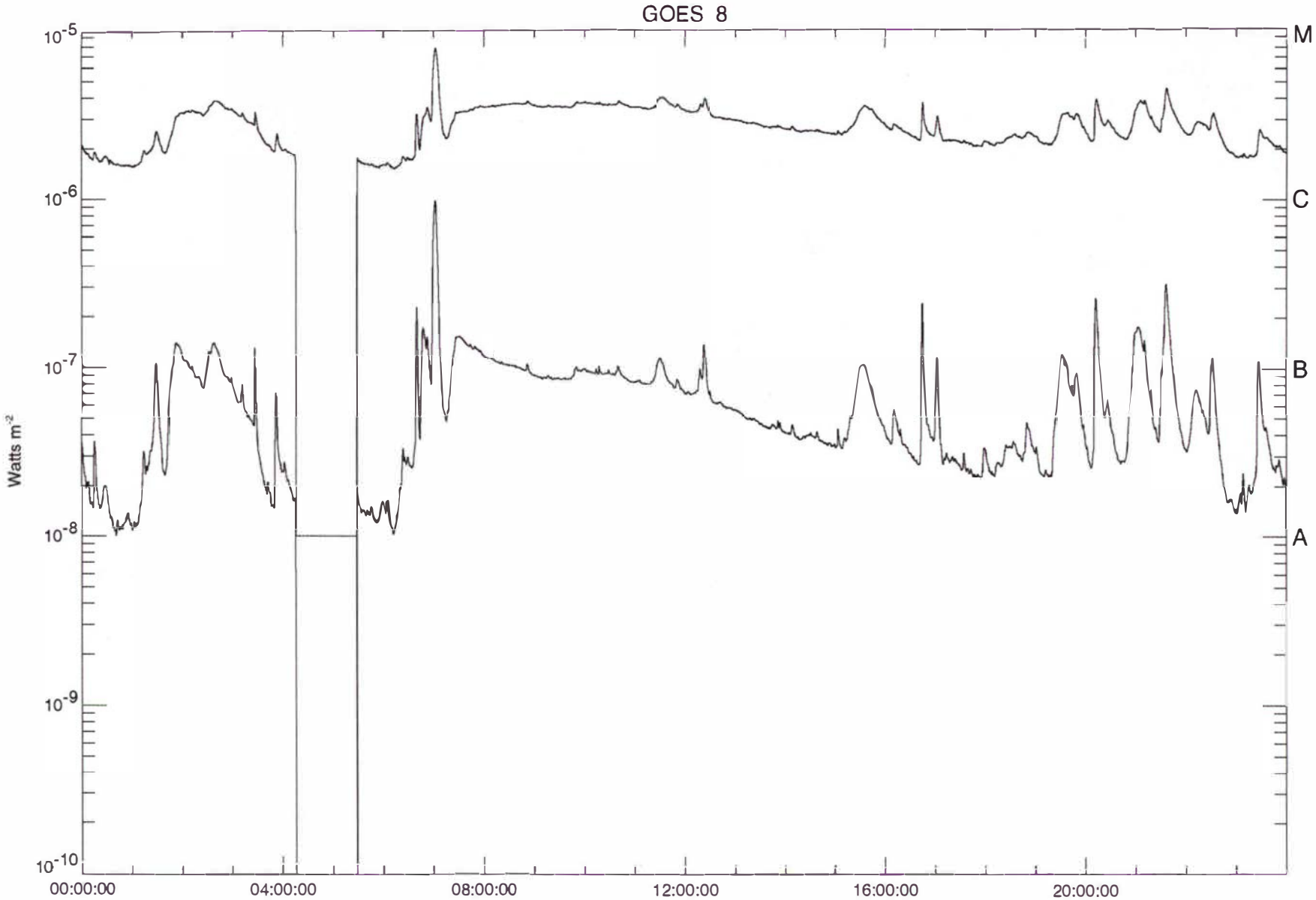
0.250 S INTERVALS REGROUPED BY 5

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

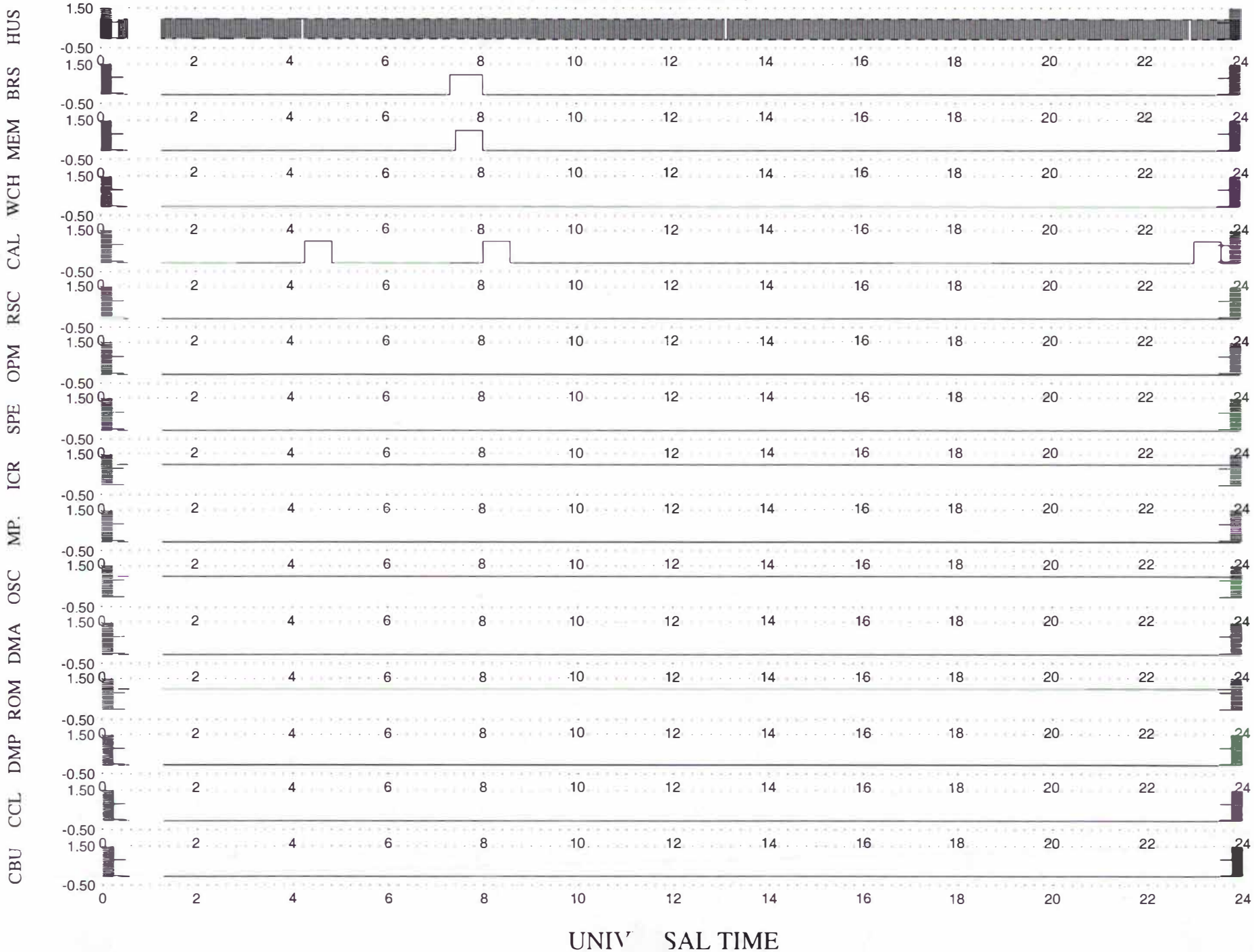




Data Start: 01/09/21, 0000:00 Plot created: 01/09/25, 0950
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

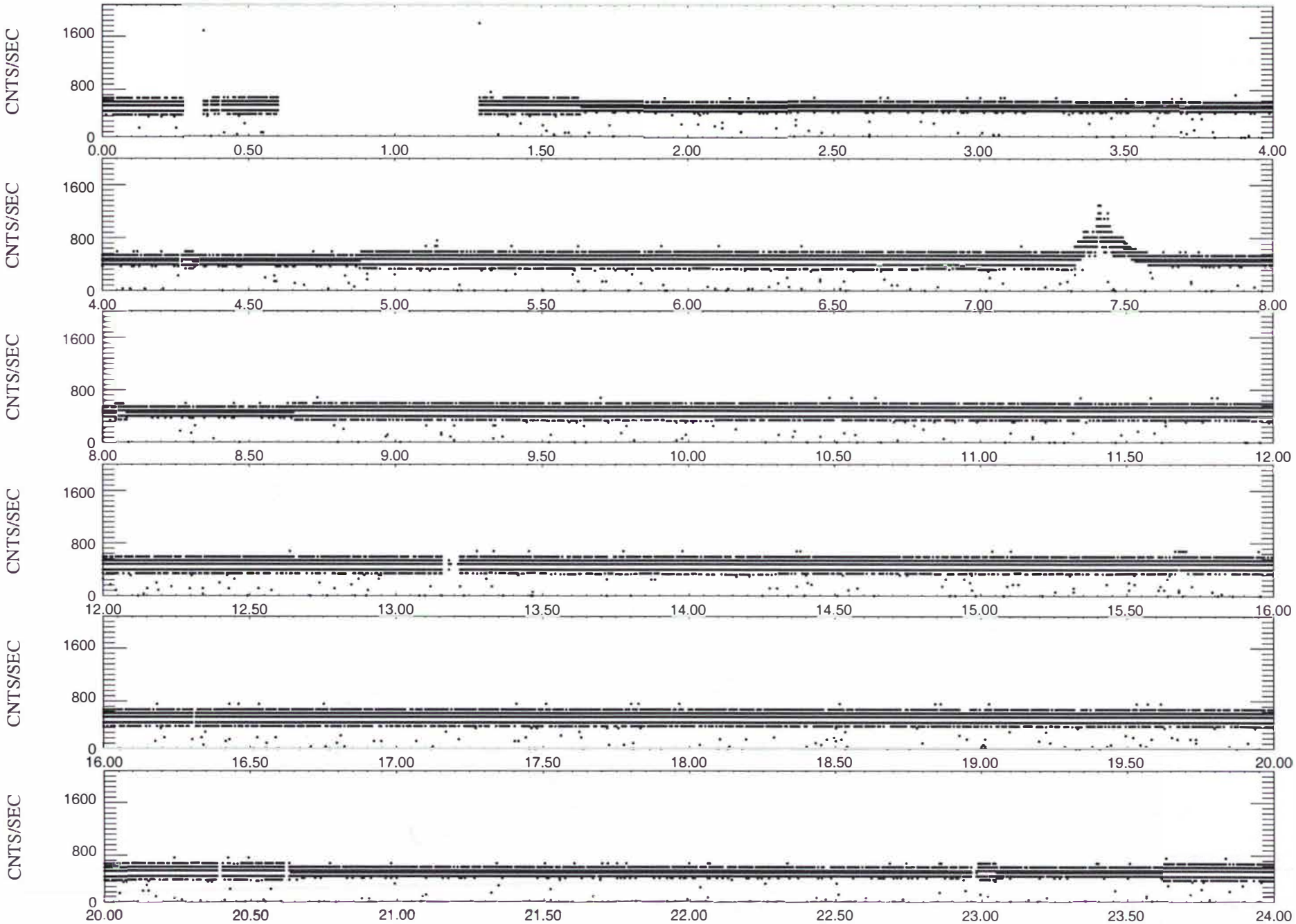
HUS MODES EDR day 264, year 2001 to day 264, year 2001 01/22/02

BURST NUMBER 13



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 21/09/2001 DOY = 264 01/22/02

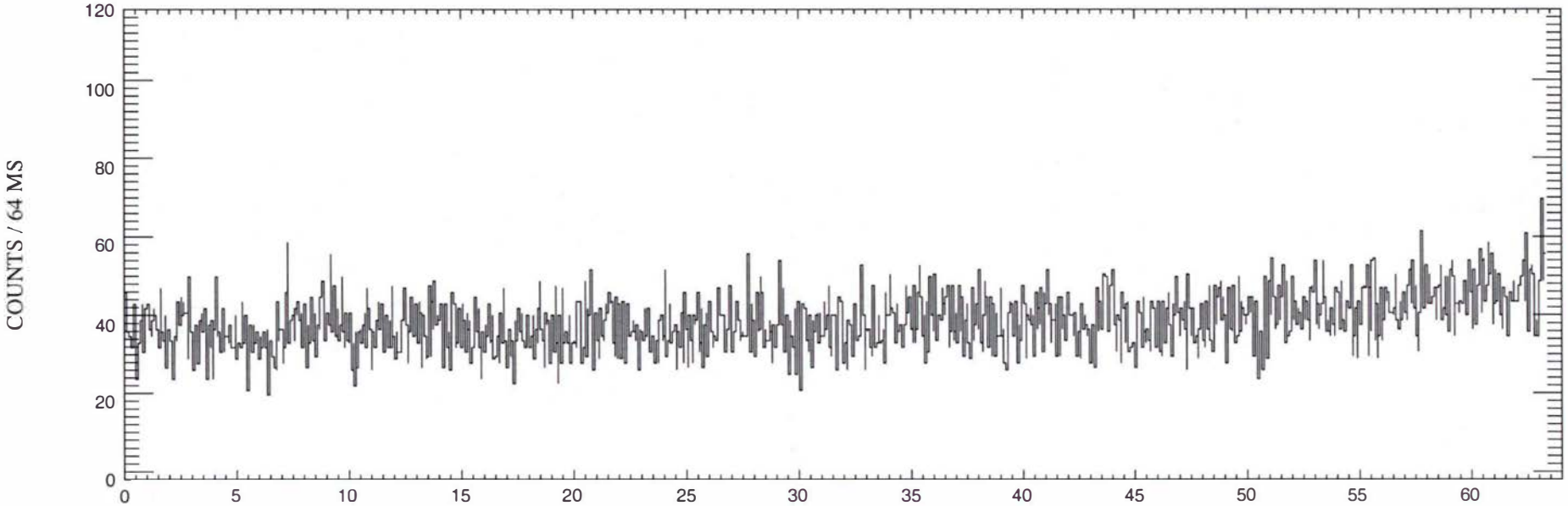
CALIBRATION DATA INCLUDED



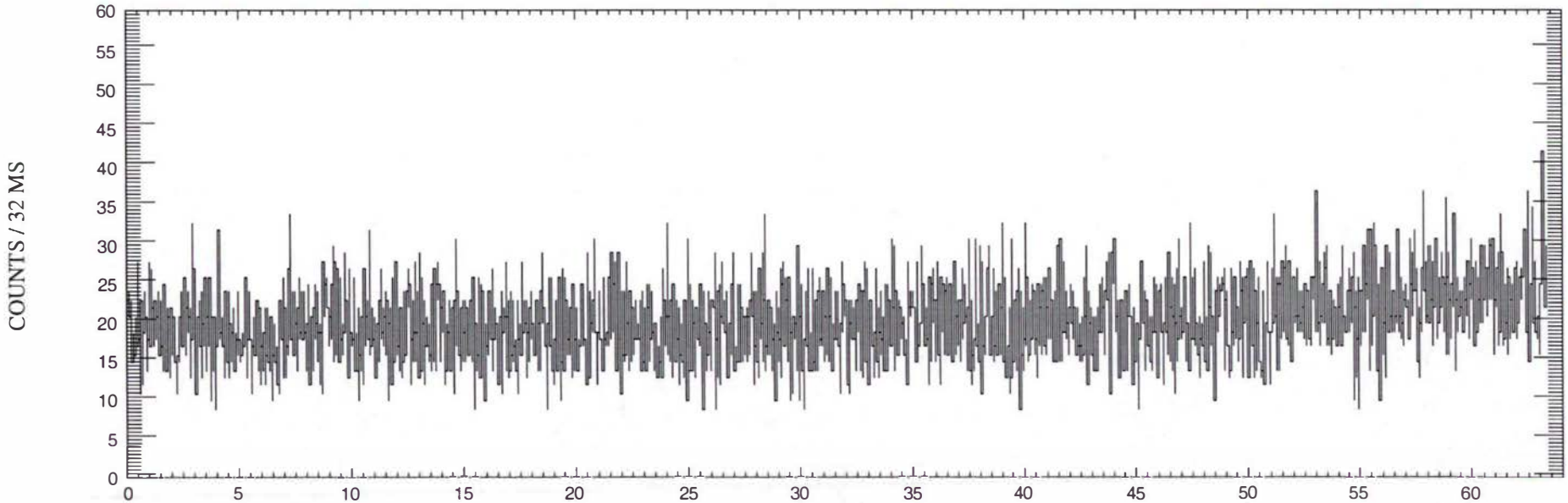
UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 21/09/2001 DOY = 264 01/22/02

Burst Counter 13 at UT= 7.341583408780 h=26429.700 s 07:20:29.700



TIME, SECS

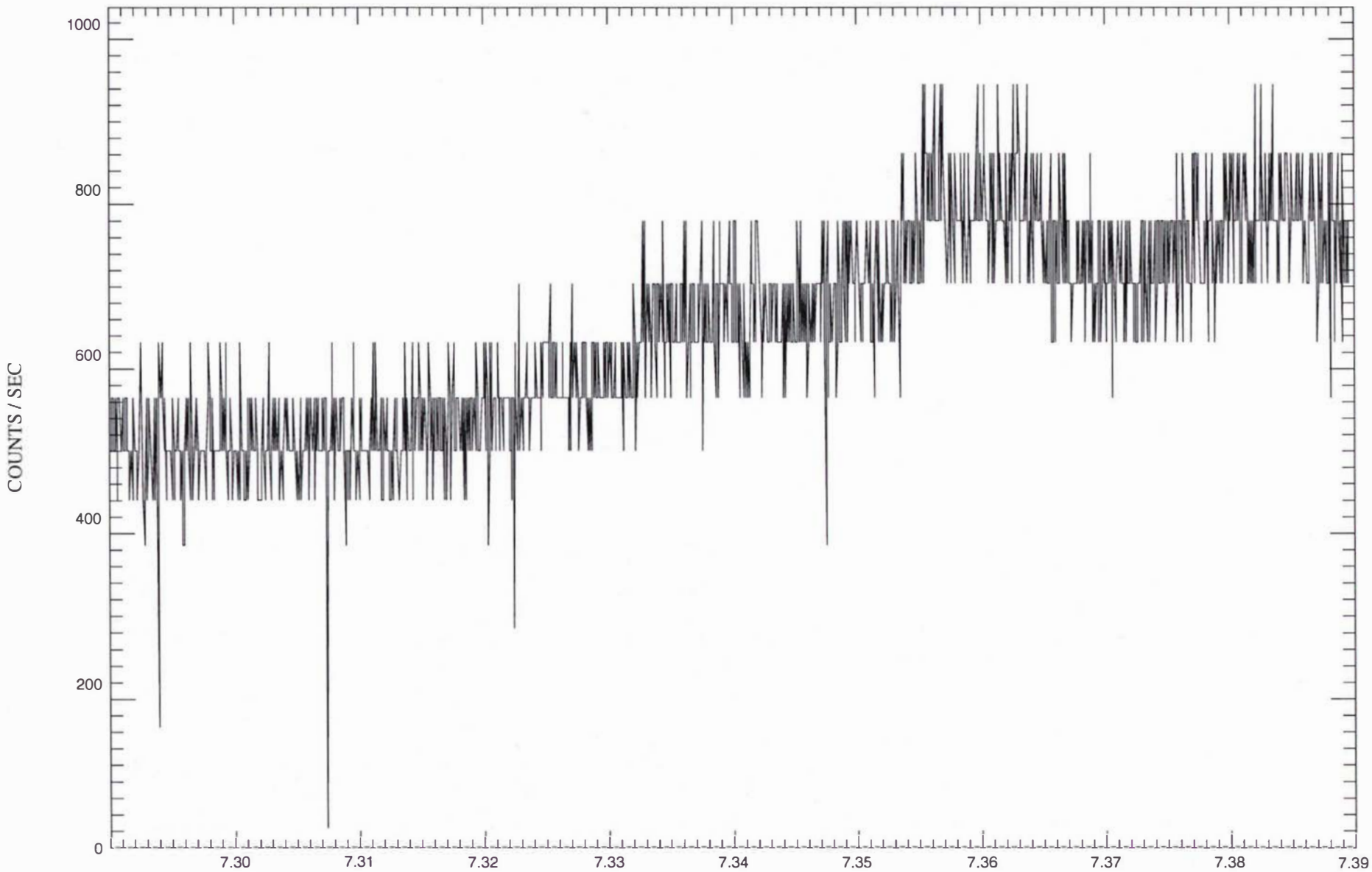


TIME, SECS

B# 1

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 21/09/2001 DOY = 264 01/22/02

CALIBRATION DATA INCLUDED

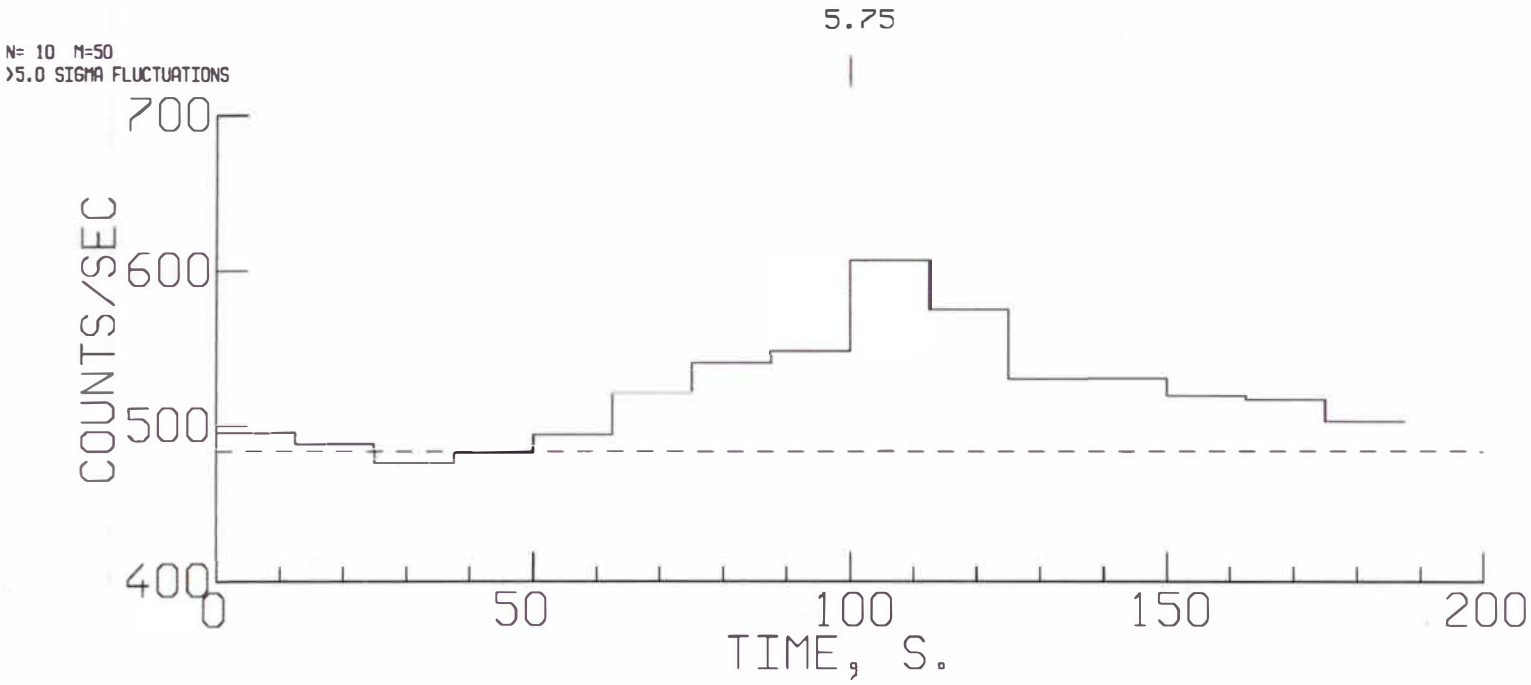


ULYSSES RT 27/ 9/ 1

22/ 9/ 1 24625.746 s

0.250 S INTERVALS REGROUPED BY 50

22- 150 keV



From guidorzi@fe.infn.it Sat Sep 22 11:39 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
`te: Sat, 22 Sep 2001 20:30:04 +0200 (MET DST)

ıkGRB[298] #LSs: 1 Good HRR: 1
SW Trigger Time (OBT): 26377.985
UTC: Sat, 22 Sep 2001 15:01:08:21897 54068

Nsig(trg):	3.1	4.2	0.0	3.2	2.3	3.6	0.0	3.4
Nsig(pfl):	3.1	4.2	0.0	3.2	2.3	3.6	0.0	3.4
Bkg lev. :	763	904	799	715	937	964	885	985
ChiSq R. :	0.965	0.888	0.999	1.170	1.022	0.650	0.973	1.017
Peak fl. :	85	126	0	87	71	110	0	106
Error :	40.2	44.1	0.0	39.1	44.2	45.3	0.0	45.7
Fluence :	85	126	0	87	71	110	0	106
Error :	40.2	44.1	0.0	39.1	44.2	45.3	0.0	45.7

Dur (s) :	1.00	1.00	0.00	1.00		
Abundance:	1	1	0	1		
H. Ratio :	0.831	0.877	-1.000	1.229		
HR Ratio :	0.947	-1.000	0.676	-1.000	0.713	-1.000

HR W-ave : 0.935 +/- 0.342

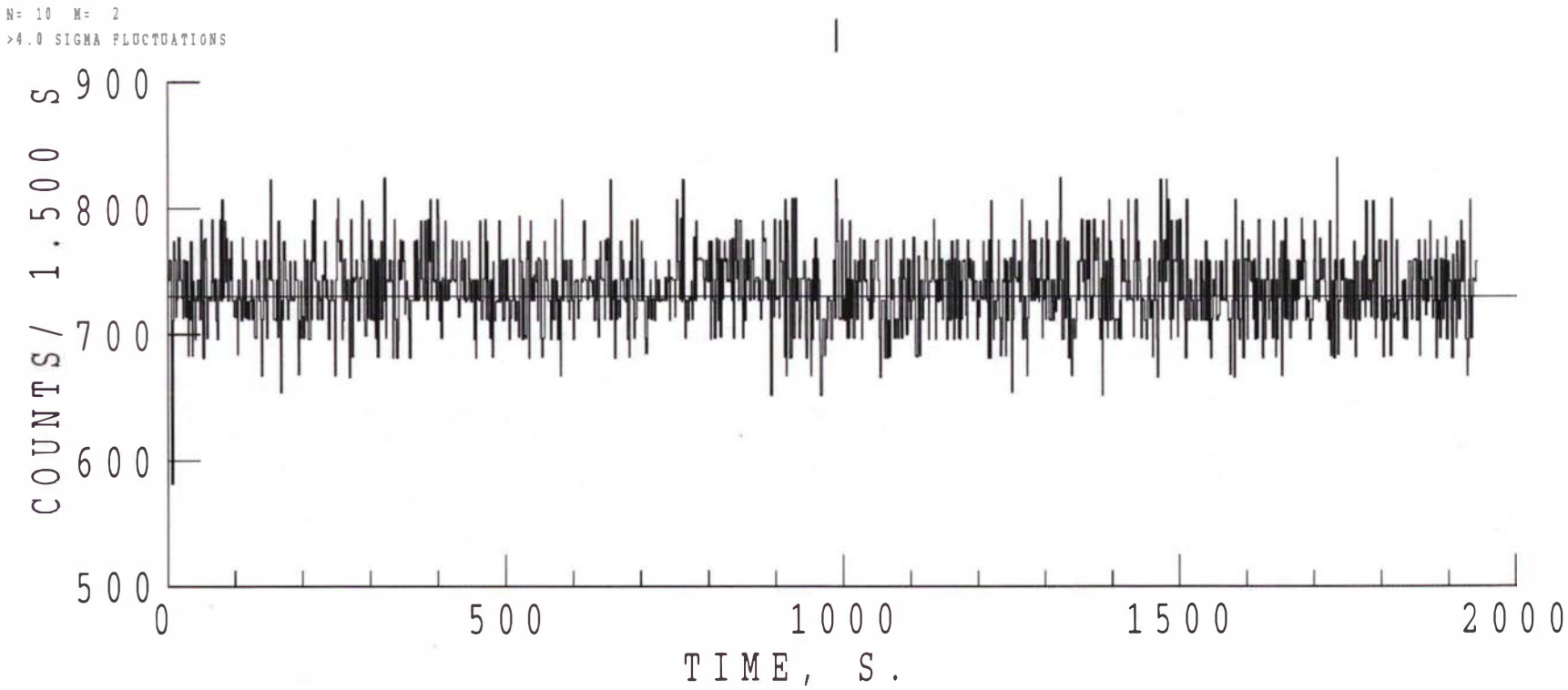
SAX 20010922 54068

ULYSSES RT 24/09/01

22/09/01 53100.219 s

0.250 S INTERVALS REGROUPED BY 6

0- 0 keV

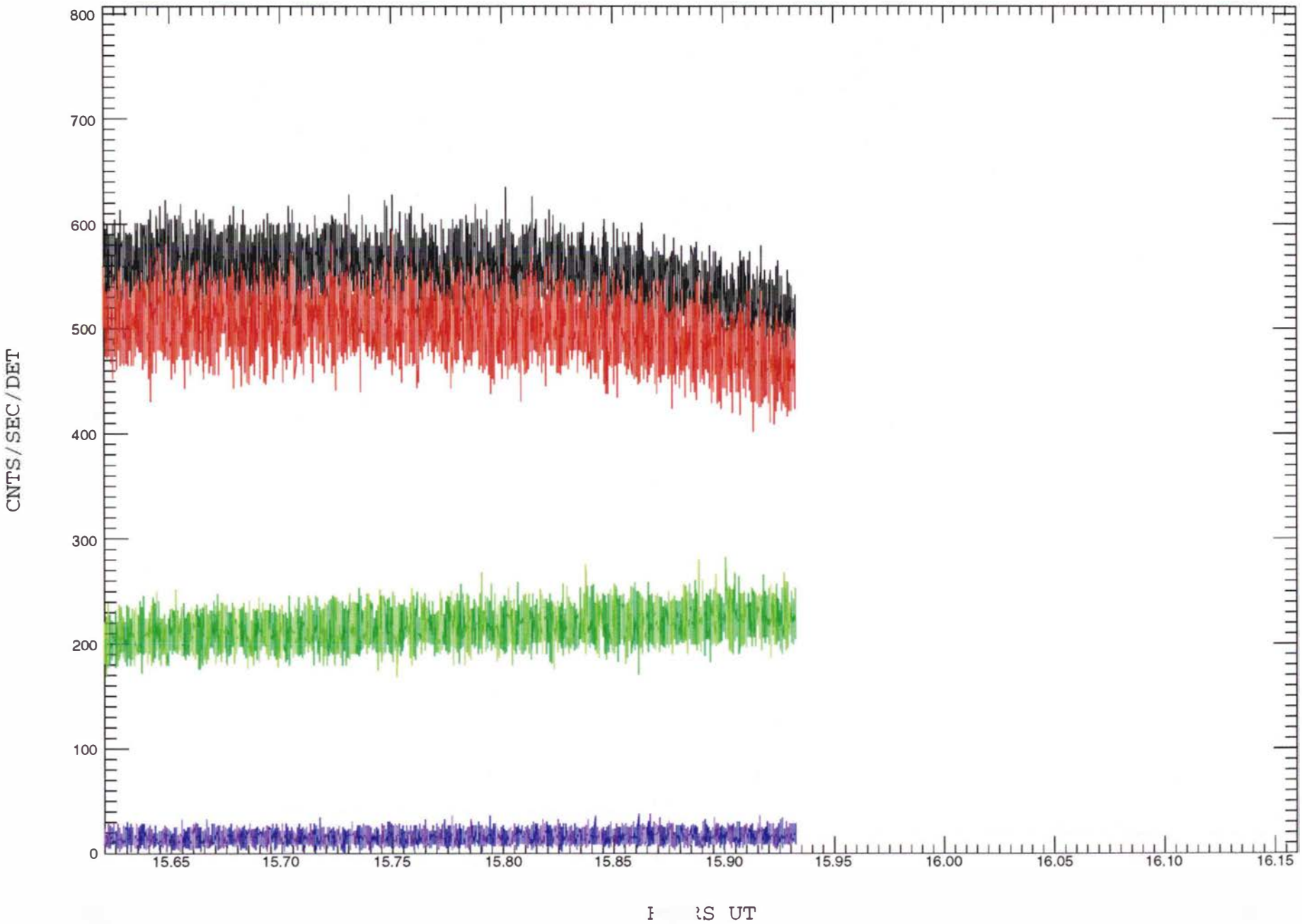


FREGATE SURVEY (TH) TIME HISTORY (AVG x1) -- DETECTORS 1-4 SUMMED (FREG_1762_20010922_57202)

BEG TIME: 22/09/01 DOY 265 Julian 2452176.15083 UT = 15.620 15:37:12 (56232.000 secs) [sct = 0019 4c35 52c4 821e]
END TIME: 22/09/01 DOY 265 Julian 2452176.17333 UT = 16.160 16:09:36 (58176.000 secs) [sct = 0019 4c35 c6a3 9e92]

Chan 1:[E1=18 E2=103] Chan 2:[E3=18 E4=78] Chan 3:[E5=20 E6=510] Chan 4:[E6=510 ->]

Channel 1 + 300 Channel 2 + 200 Channel 3 + 100 Channel 4 + 0



FREG 1762 20010922 57202

ULYSSES RT 03/10/01

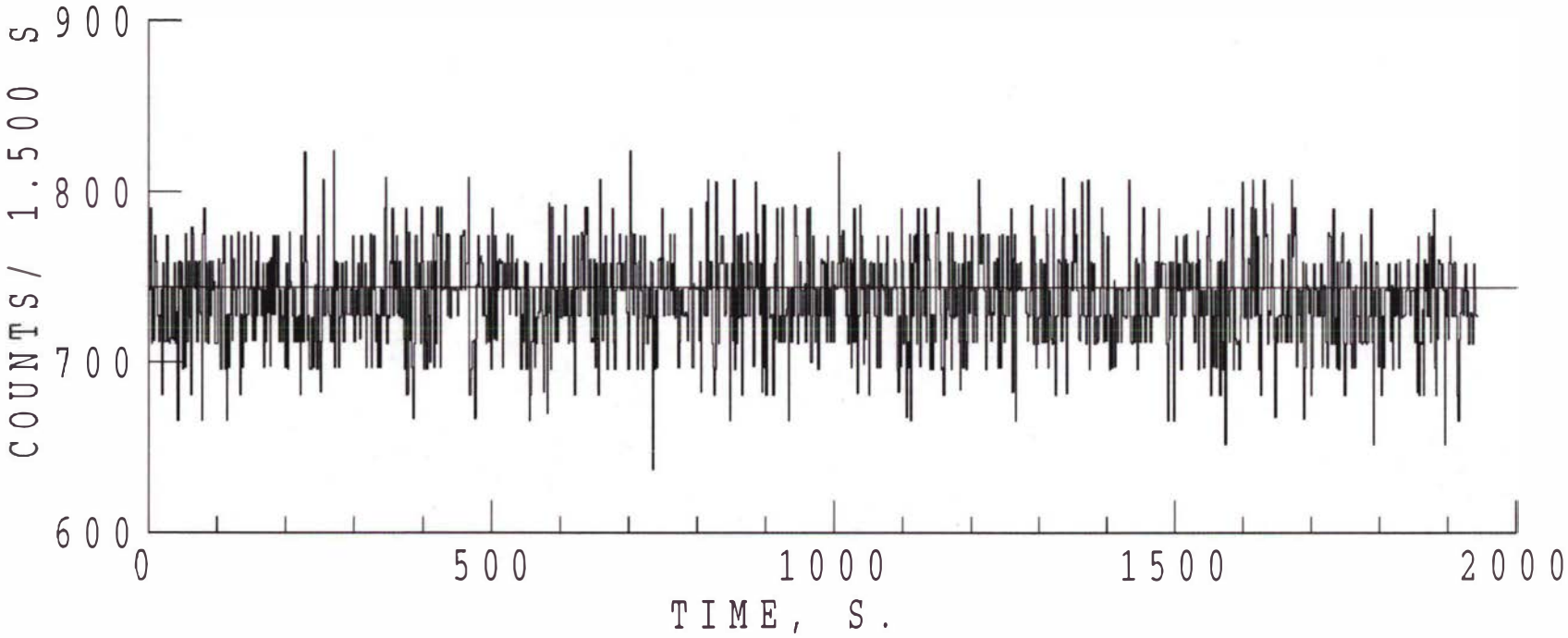
22/09/01 56232.020 s

0.250 S INTERVALS REGROUPED BY 6

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



Date: May 20 '04

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

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

2. For Konus events

☑ Konus ecliptic latitude used with latest calibration?

2. For Odyssey events

☐ Was CHECKMO run to eliminate data gaps?

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

☐ Was Mars-blocking used?

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

2. For 3 Spacecraft events

☐ Σ 3Δt's calculated?

3. For INTEGRAL events

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

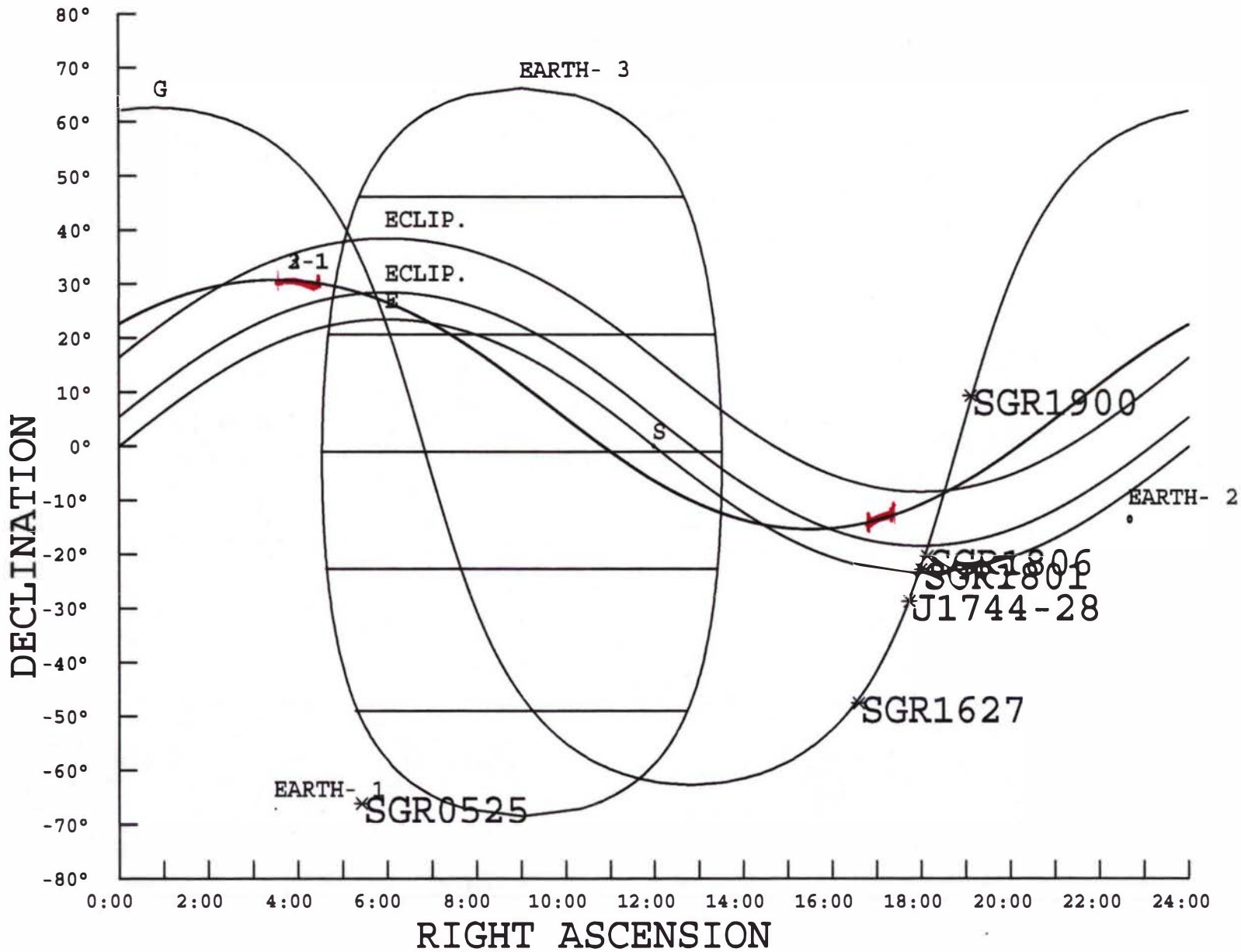
☐ Updated ephemeris used for bursts prior to September 30, 2003?

☑ ACCESS database updated?

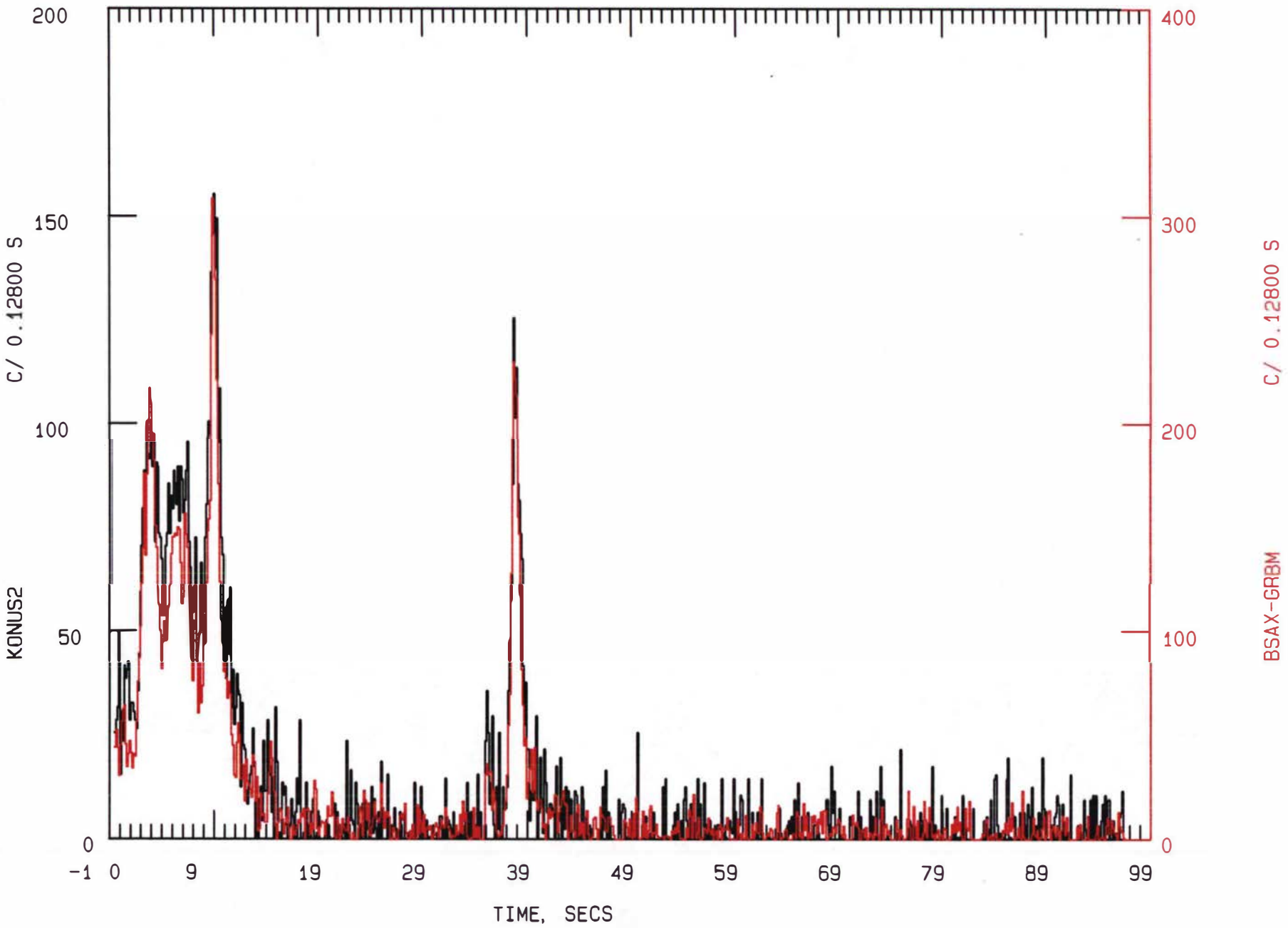
EVENT OF SEP 22, 2001 17:34

20/ 5/ 4

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

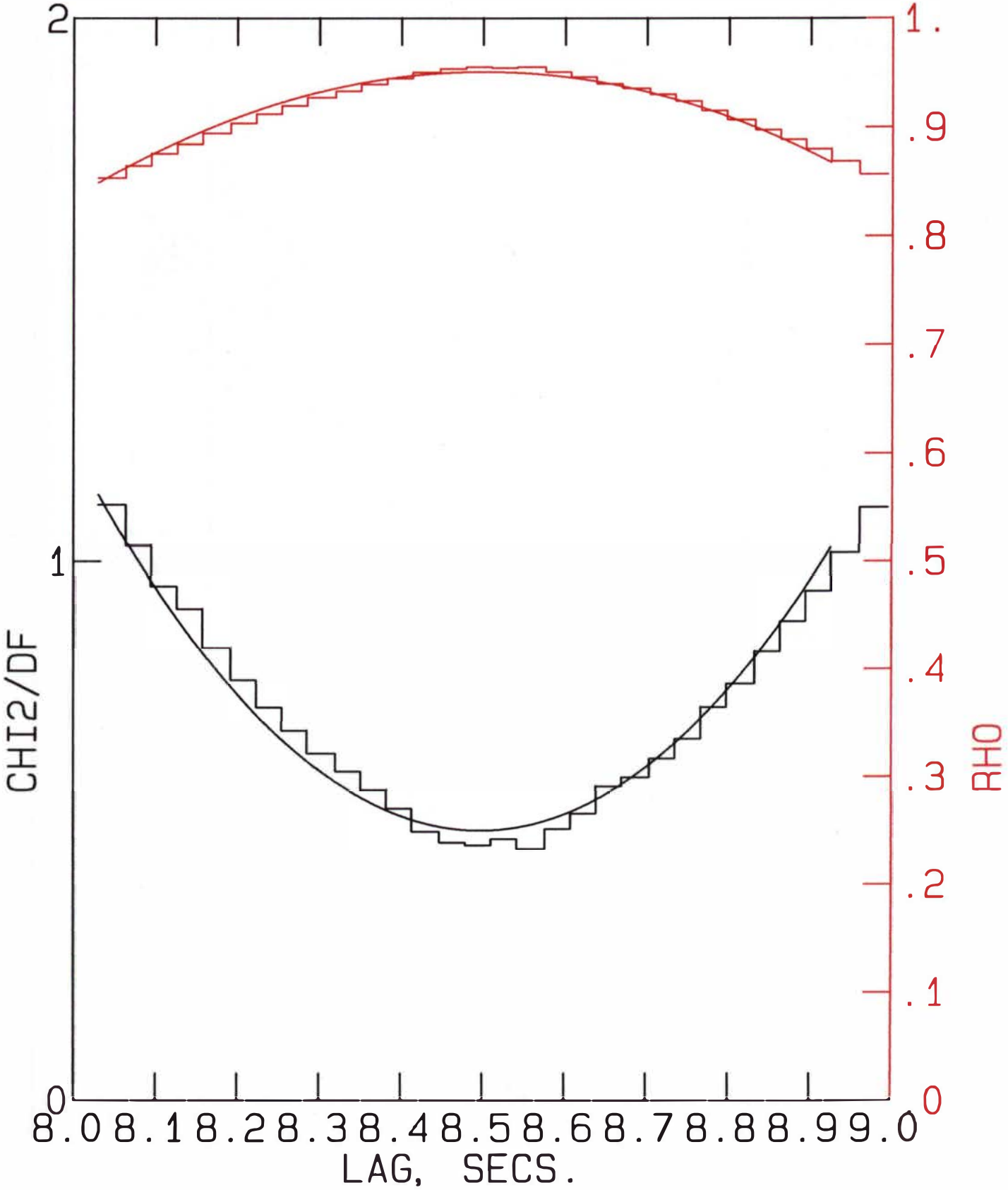


KONUS2 -BSAX-GRBM CORRELATION 22/09/01 63413.750 19/ 5/ 4

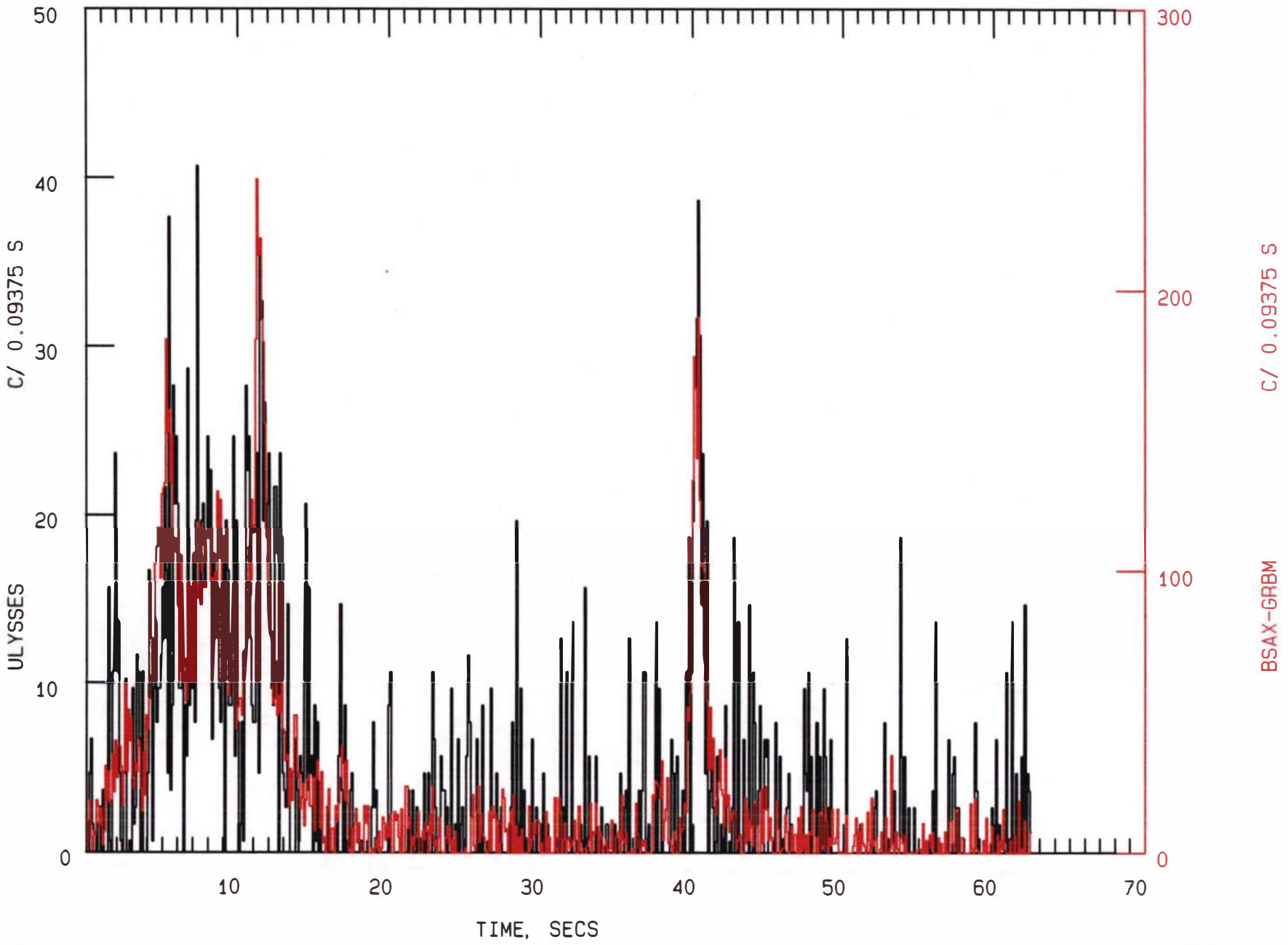


19/ 5/ 4

KONUS2 -BSAX-GRBM CORRELATION 22/09/01 63413.750

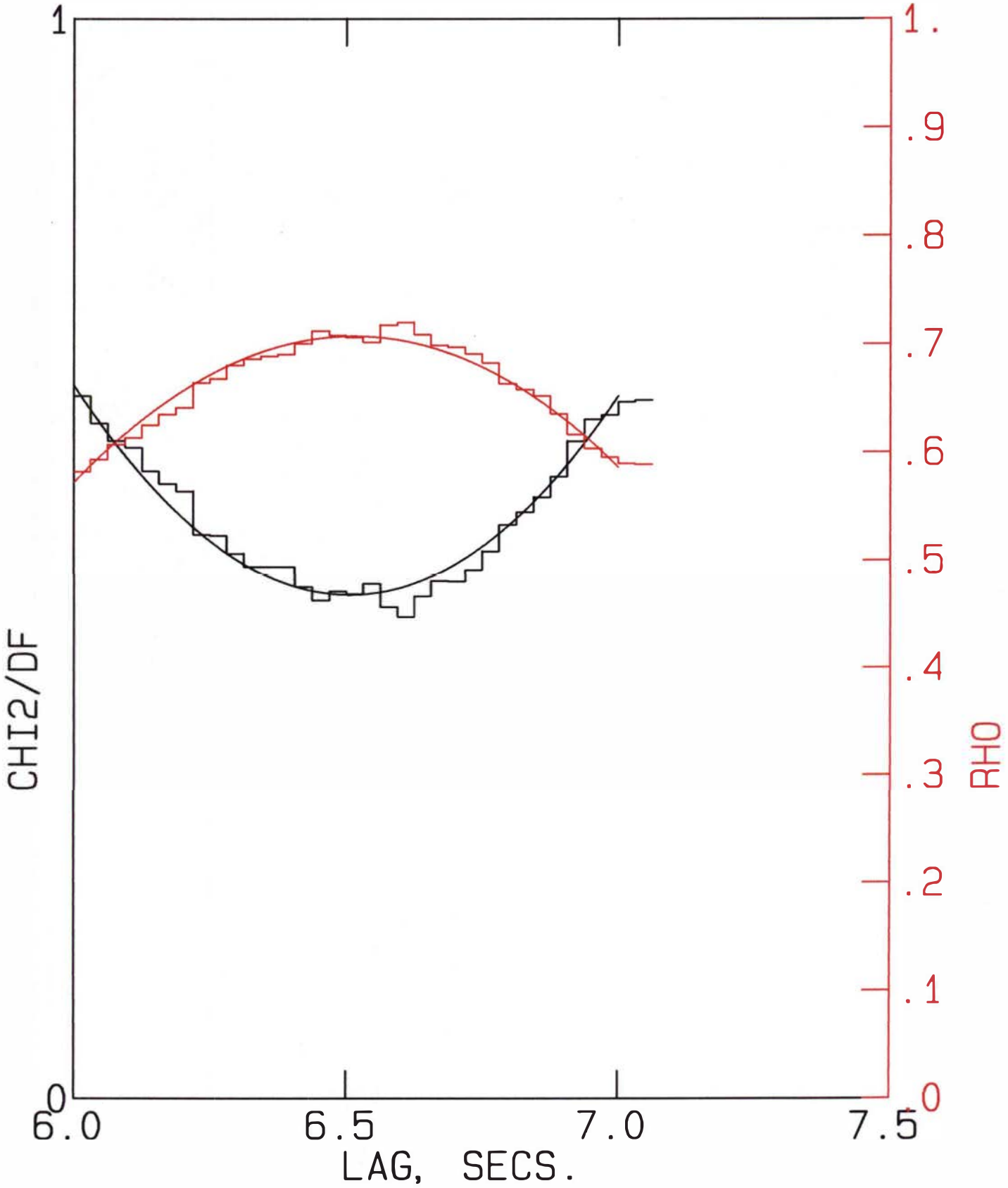


ULYSSES -BSAX-GRBM CORRELATION 22/09/01 63294.862 19/ 5/ 4

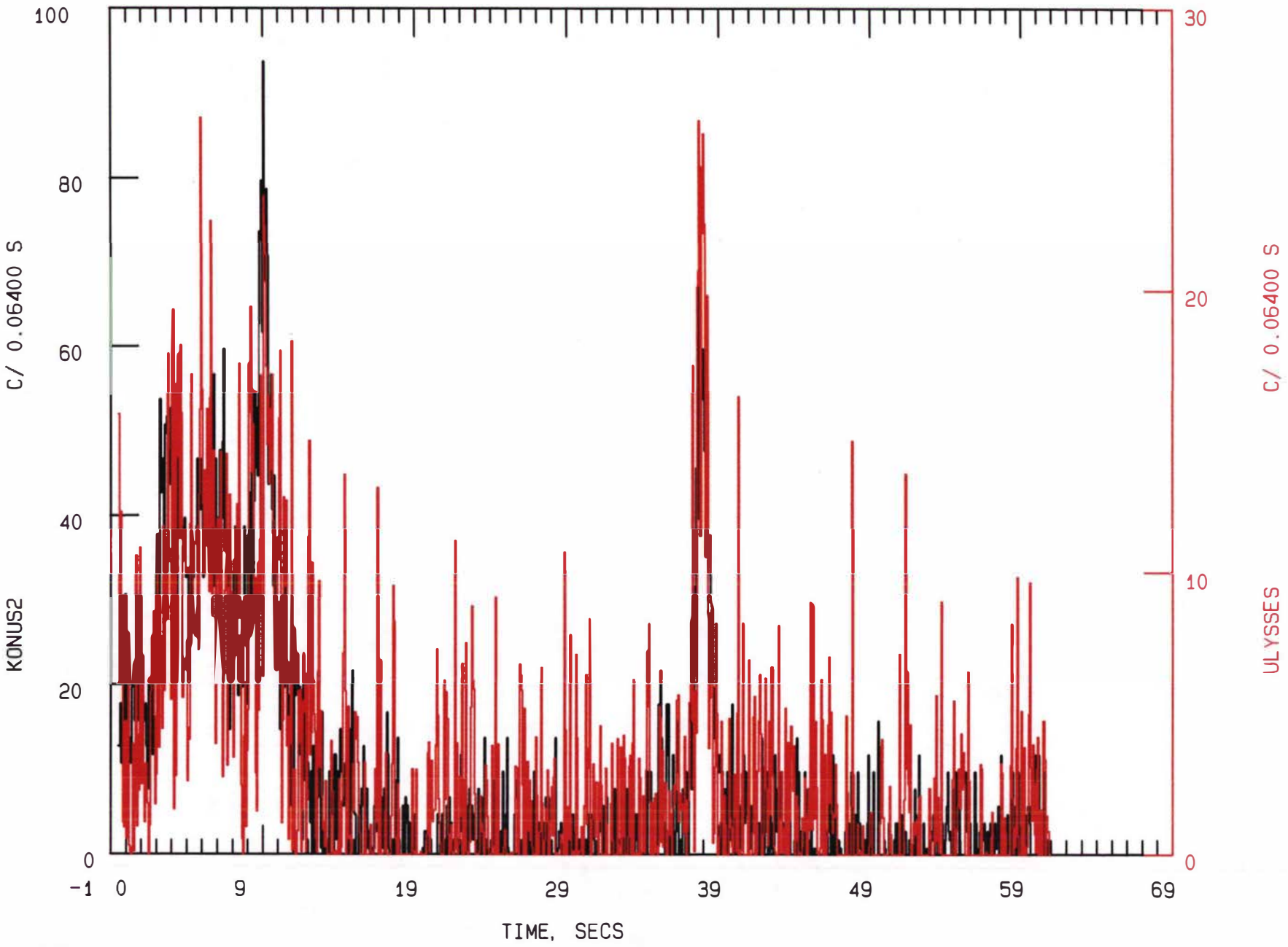


19/ 5/ 4

ULYSSES -BSAX-GRBM CORRELATION 22/09/01 63294.862

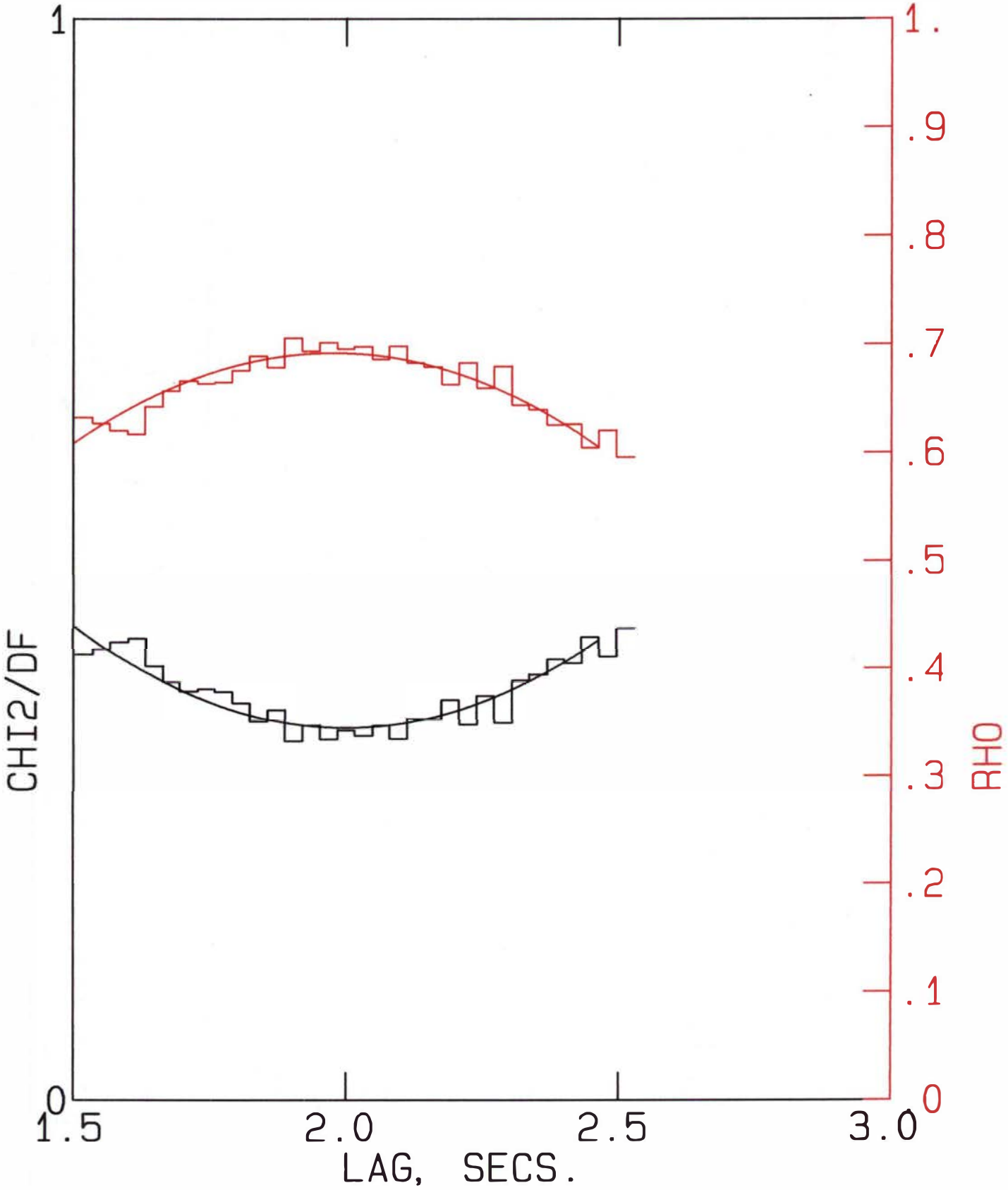


KONUS2 -ULYSSES CORRELATION 22/09/01 63413.750 19/ 5/ 4

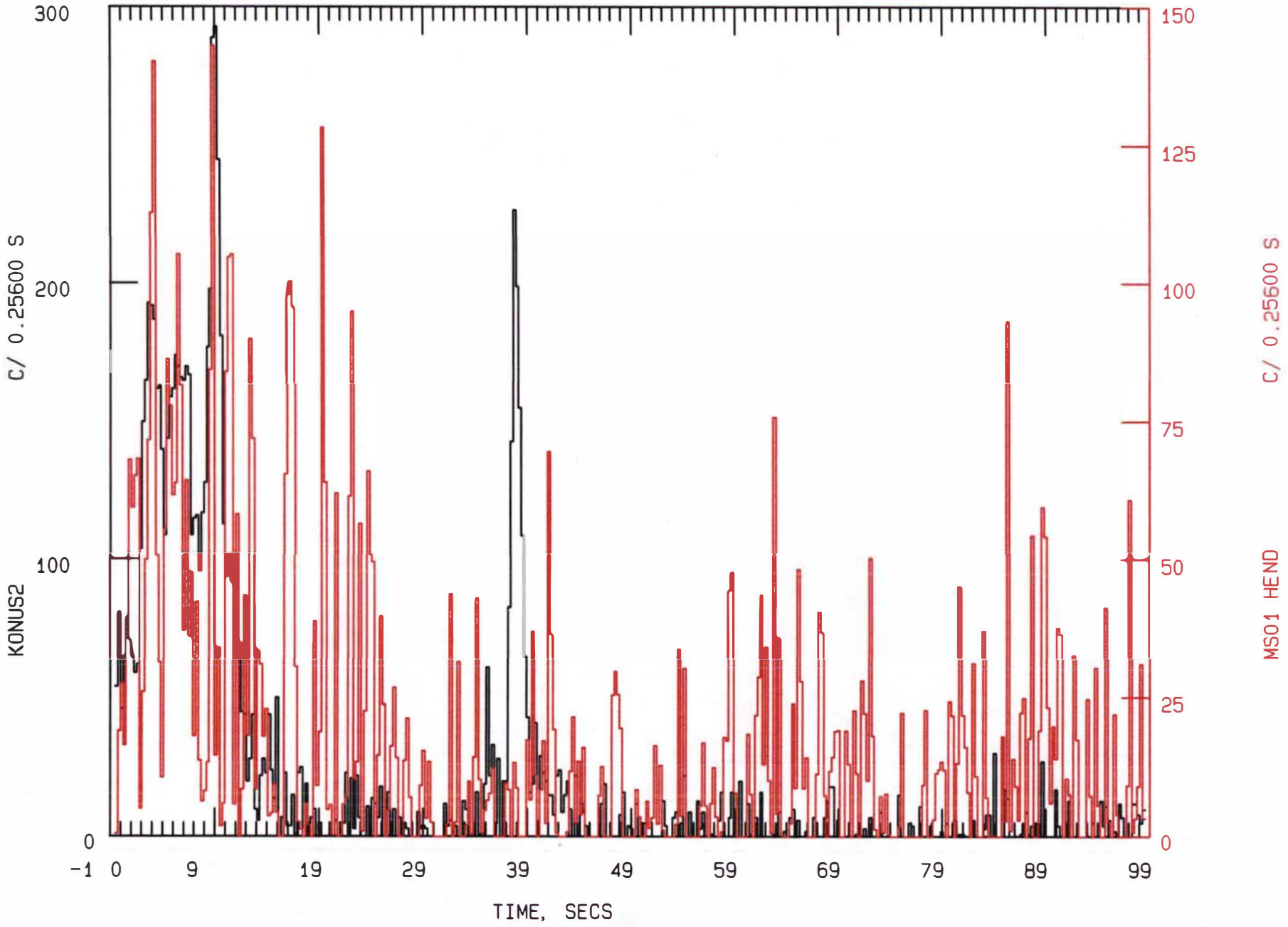


19/ 5/ 4

KONUS2 -ULYSSES CORRELATION 22/09/01 63413.750

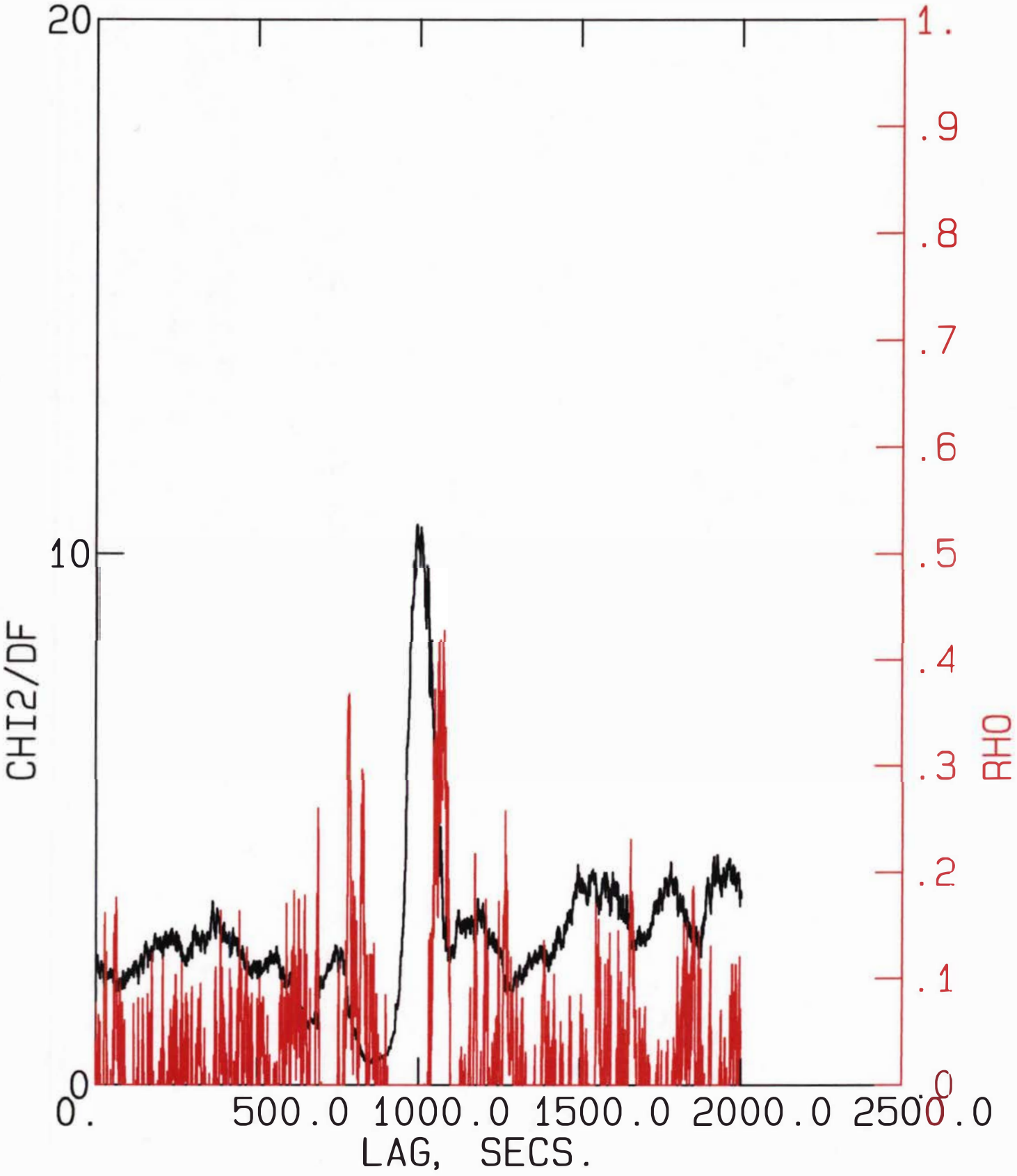


KONUS2 -MS01 HEND CORRELATION 22/09/01 63413.750 19/ 5/ 4

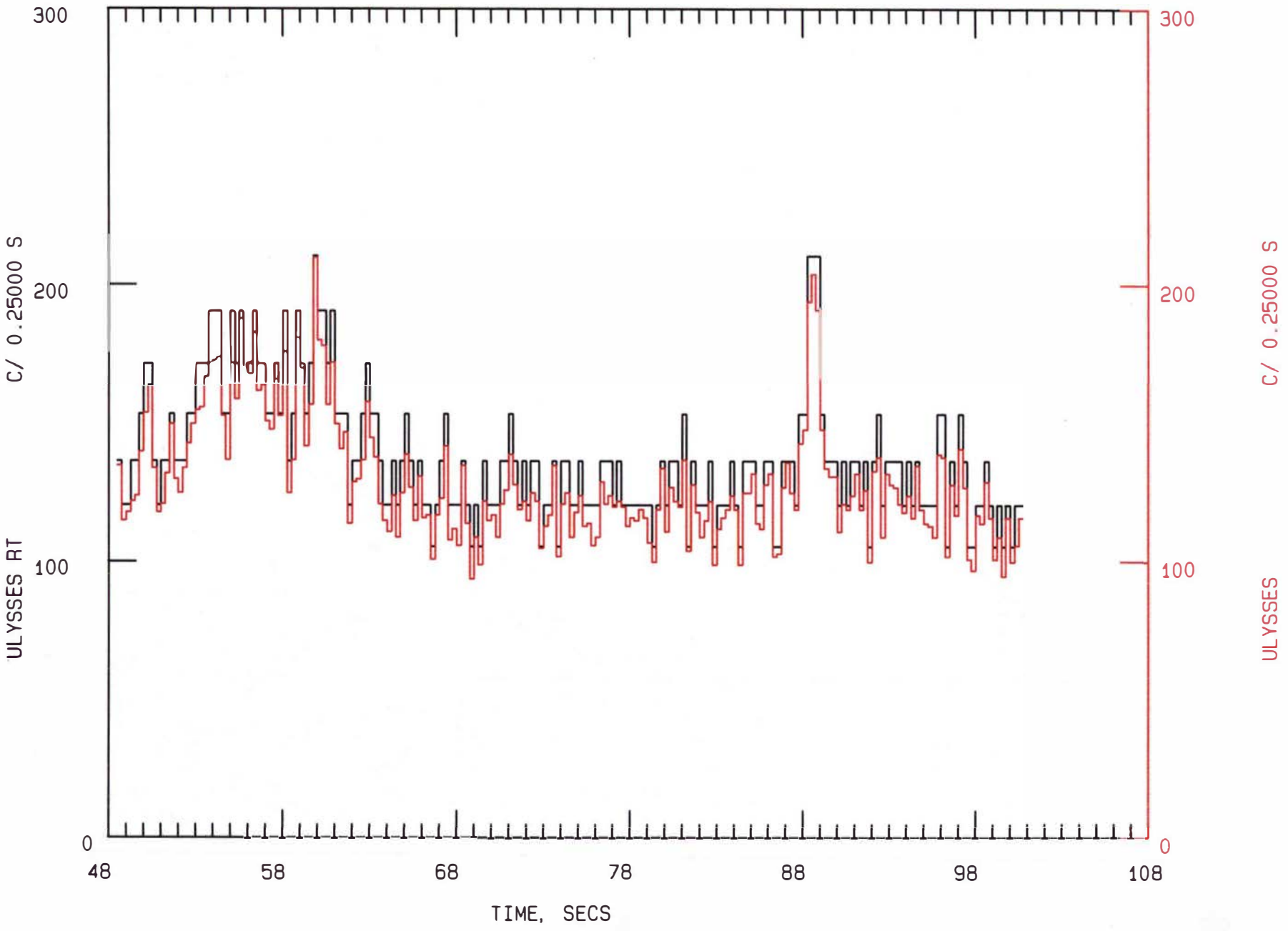


19/ 5/ 4

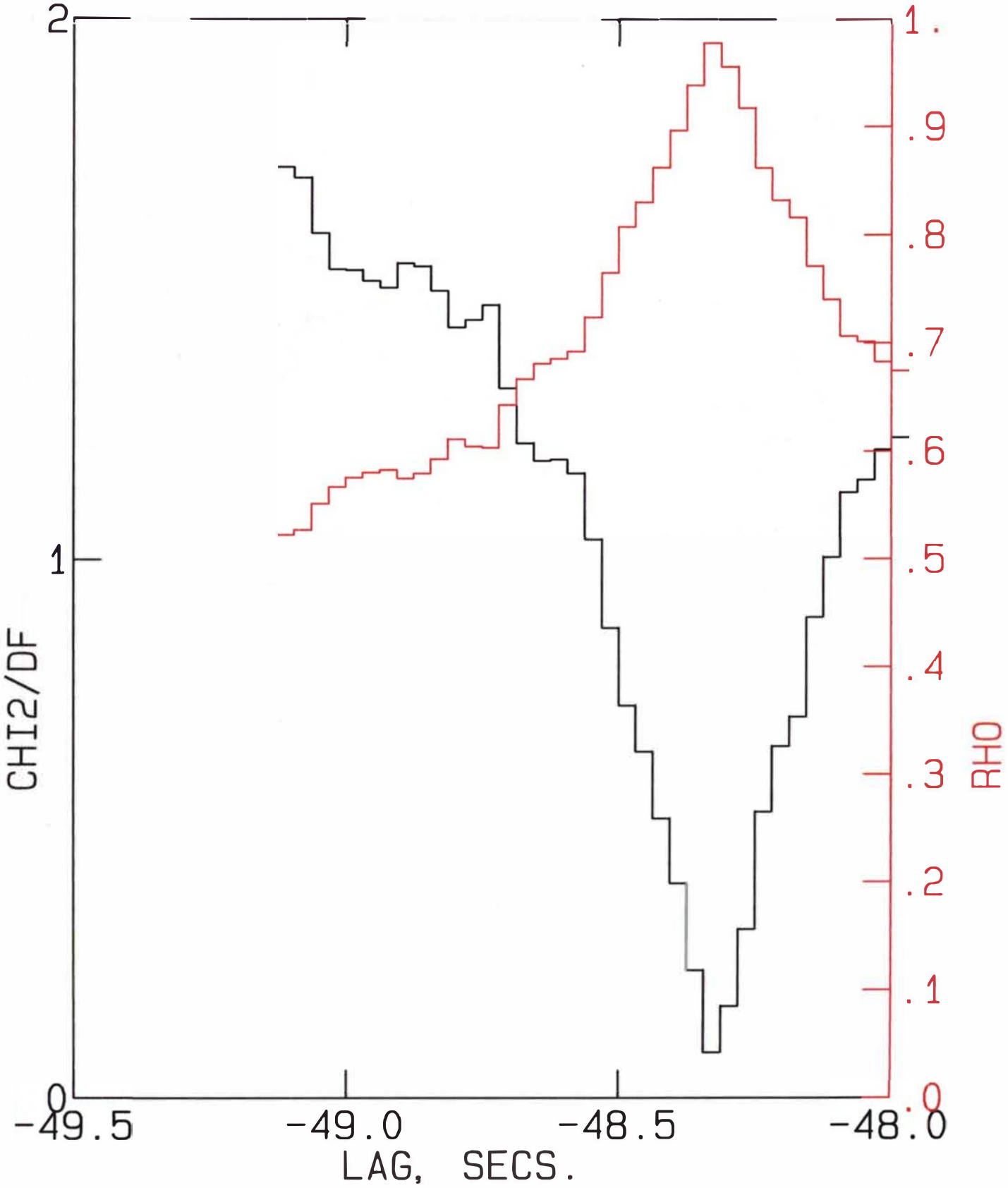
KONUS2 -MS01 HEND CORRELATION 22/09/01 63413.750

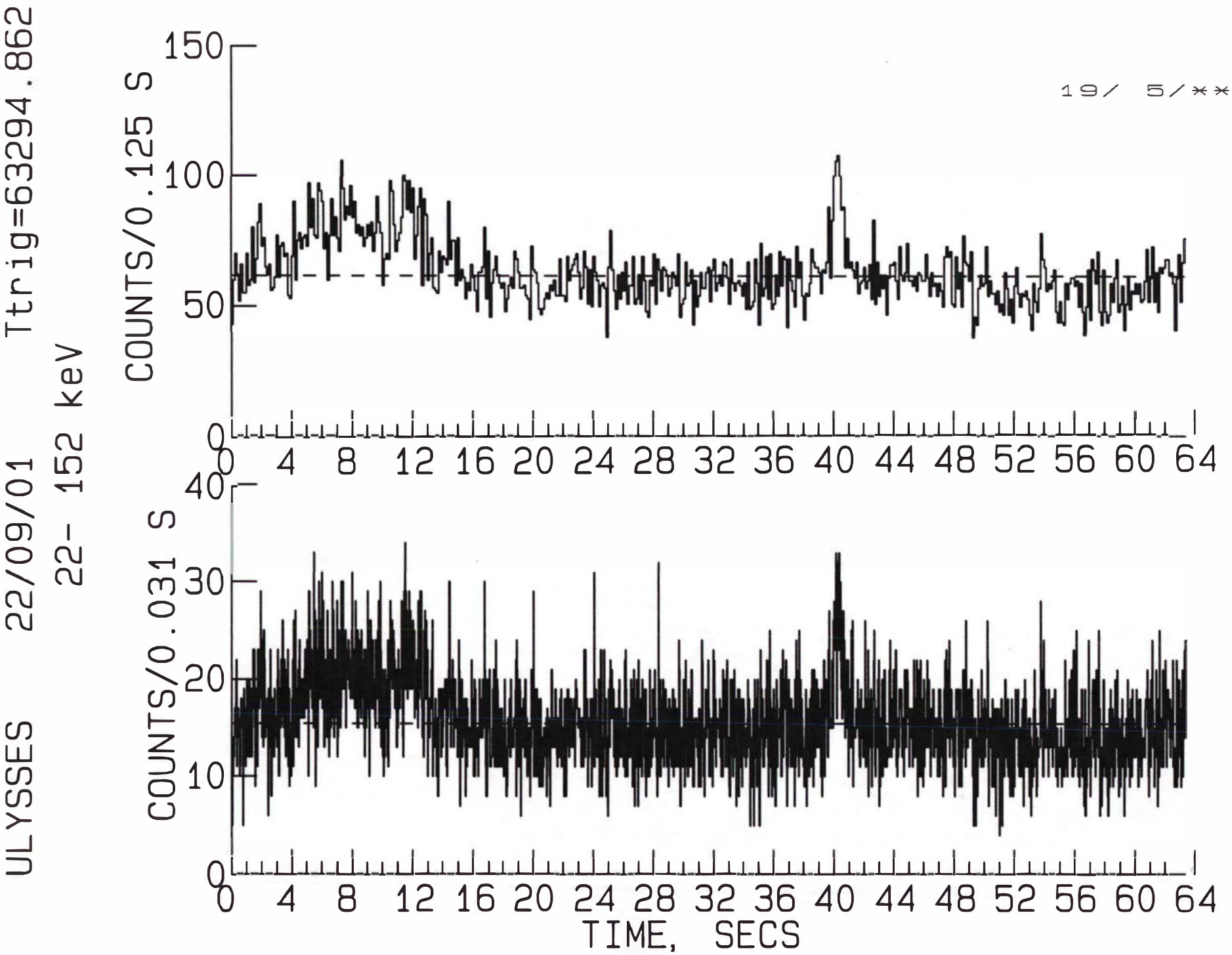


ULYSSES RT-ULYSSES CORRELATION 22/ 9/01 63239.118 19/ 5/ 4



ULYSSES RT-ULYSSES CORRELATION 22/ 9/01 63239.118



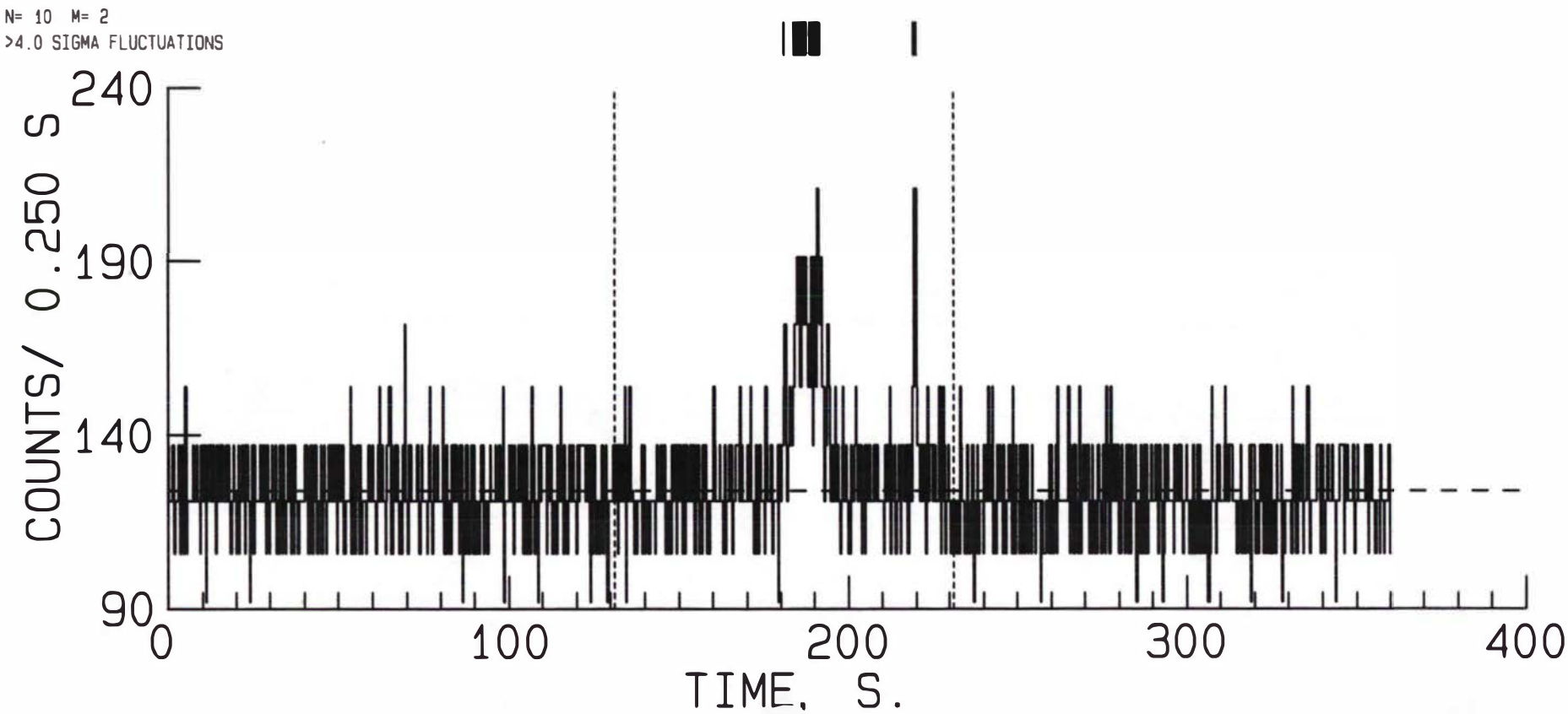

ULYSSES 22/09/01 Ttrig=63294.862
22- 152 keV
19/ 5/**
COUNTS/0.125 S
150
100
50
0
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64
COUNTS/0.031 S
40
30
20
10
0
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64
TIME, SECS

ULYSSES RT

19/ 5/ 4

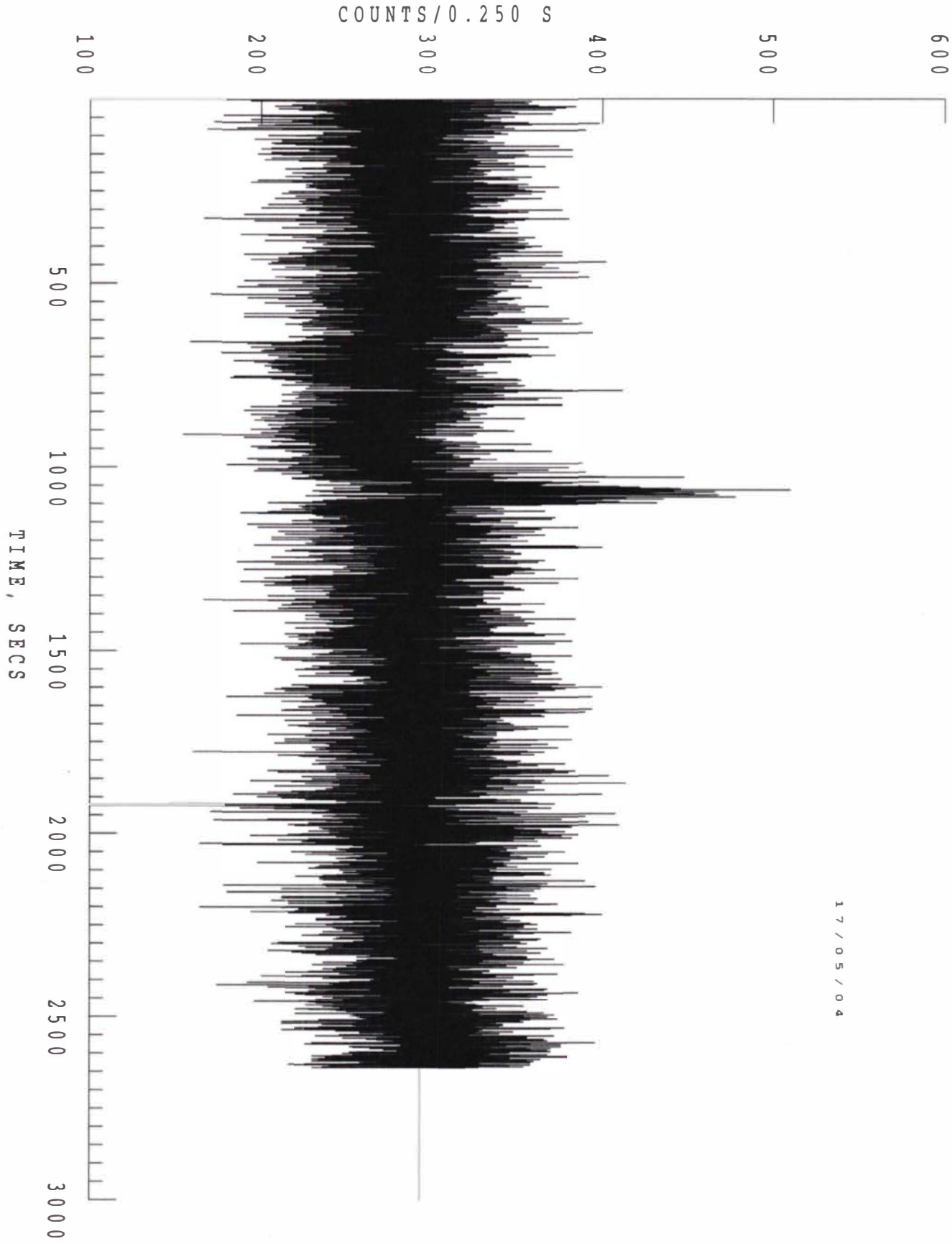
22/ 9/ 1 63108.137 s

22- 152 keV



MS01 22/09/01 62057.693

50- 3000 keV



From guidorzi@fe.infn.it Sat Sep 22 13:29 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
`te: Sat, 22 Sep 2001 22:20:05 +0200 (MET DST)

ıkGRB[299] #LSs: 4 Good HRR: 6
SW Trigger Time (OBT): 35722.985
UTC: Sat, 22 Sep 2001 17:36:53:21537 63413

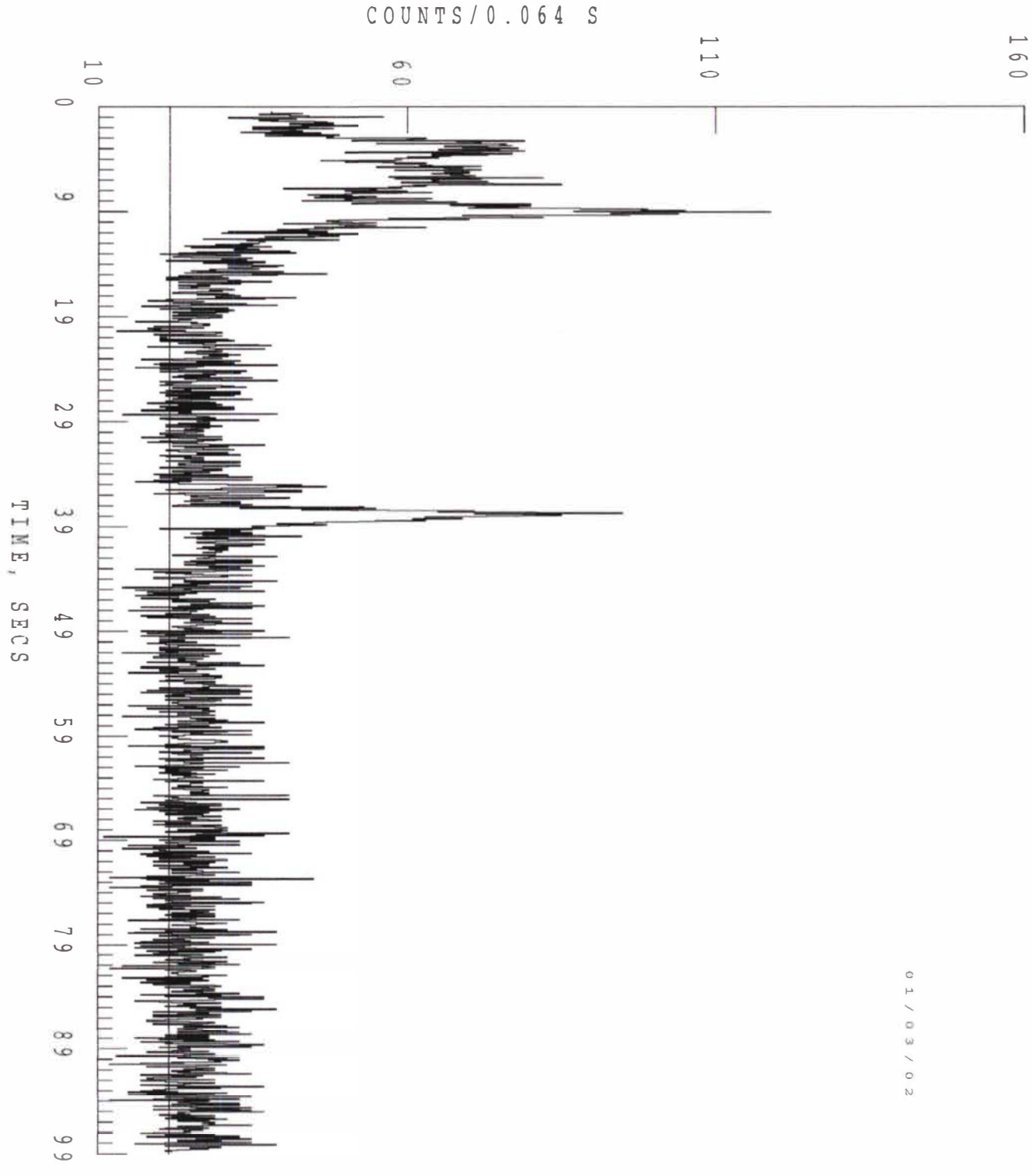
******Event 0 triggered on board: ev_time - onbtrig_time = 0.667

Nsig(trg):	4.3	5.1	9.1	4.7	2.3	4.6	4.6	2.1
Nsig(pfl):	33.5	43.9	64.5	29.6	21.5	28.6	41.4	19.3
Bkg lev. :	760	839	772	693	868	910	876	913
ChiSq R. :	0.839	1.265	1.031	0.989	1.192	1.265	0.804	0.915
Peak fl. :	923	1271	1794	778	632	863	1226	583
Error :	49.5	54.4	57.9	46.6	48.8	51.9	54.7	49.2
Fluence :	5315	8650	14098	5527	3625	5823	9193	4180
Error :	168.1	213.8	240.0	170.8	172.7	214.7	241.9	188.0

Dur (s) :	15.00	43.00	45.00	41.00		
Abundance:	15	22	28	17		
H. Ratio :	0.682	0.673	0.652	0.756		
HR Ratio :	1.013	1.046	0.902	1.032	0.890	0.862
HR W-ave :	0.674	+/- 0.014				

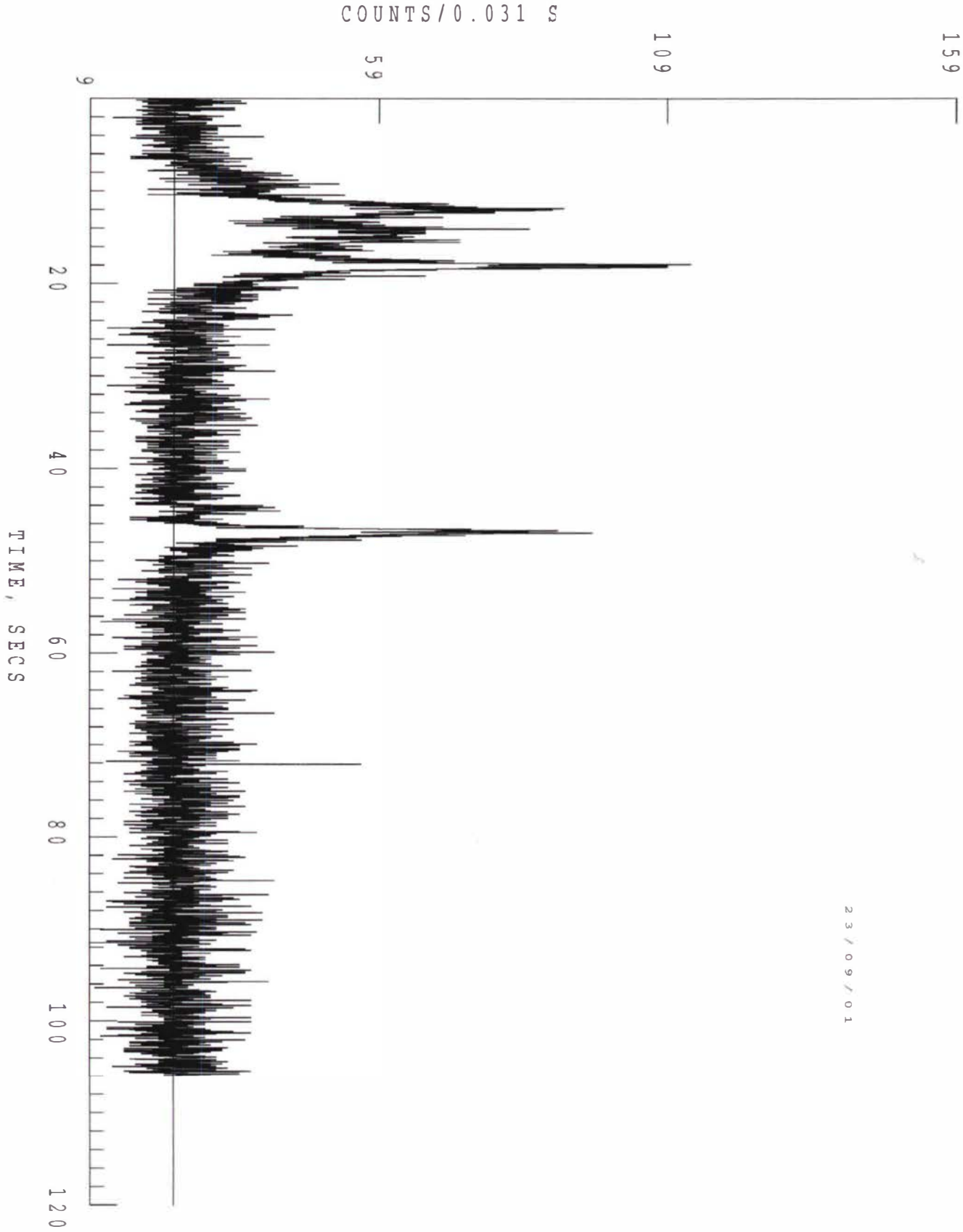
KONUS2 22/09/01 63413.750

50- 200 keV GRB



BSAX-GRBM 22/09/01 63404.549

40- 700 keV

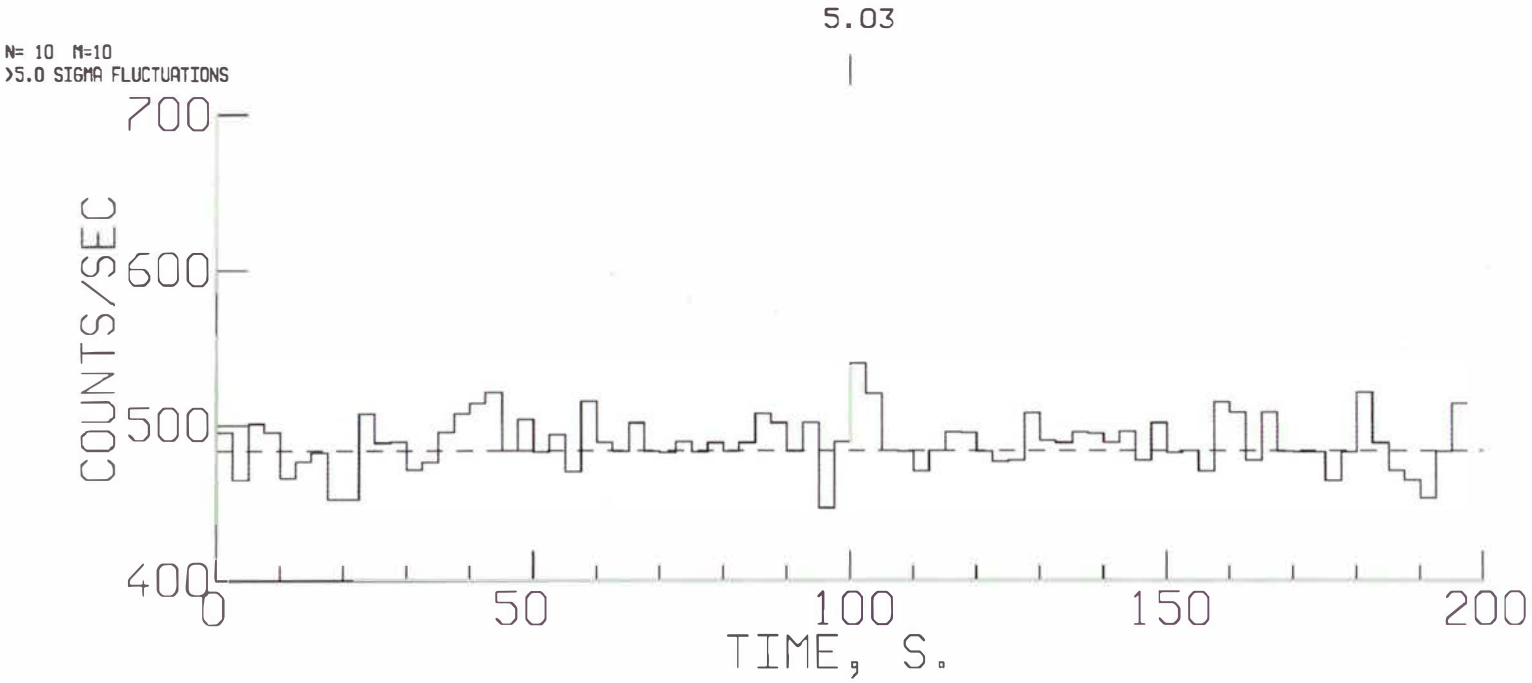


ULYSSES RT 27/ 9/ 1

22/ 9/ 1 76864.616 s

0.250 S INTERVALS REGROUPED BY 10

22- 150 keV



From guidorzi@fe.infn.it Sat Sep 22 20:19 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
Date: Sun, 23 Sep 2001 05:10:04 +0200 (MET DST)

1kGRB[300] #LSs: 1 Good HRR: 1
SW Trigger Time (OBT): 54516.985
UTC: Sat, 22 Sep 2001 22:50:07:20910

Nsig(trg):	3.1	2.9	2.2	2.8	1.8	2.4	2.7	2.3
Nsig(pfl):	3.1	2.9	2.2	2.8	1.8	2.4	2.7	2.3
Bkg lev. :	715	821	760	661	881	884	831	897
ChiSq R. :	1.034	1.026	1.149	0.850	0.938	0.900	1.043	0.744
Peak fl. :	84	83	60	71	53	72	78	69
Error :	39.0	41.6	39.9	37.4	42.7	43.0	41.8	43.3
Fluence :	153	83	60	71	101	72	78	69
Error :	55.1	41.6	39.9	37.4	60.4	43.0	41.8	43.3

Dur (s) :	2.00	1.00	1.00	1.00		
Abundance:	2	1	1	1		
H. Ratio :	0.659	0.864	1.299	0.971		
HR Ratio :	0.763	0.507	0.679	0.665	0.890	1.338
HR W-ave :	0.816 +/- 0.328					

SAX 20010922 82207

ULYSSES RT

24/09/01

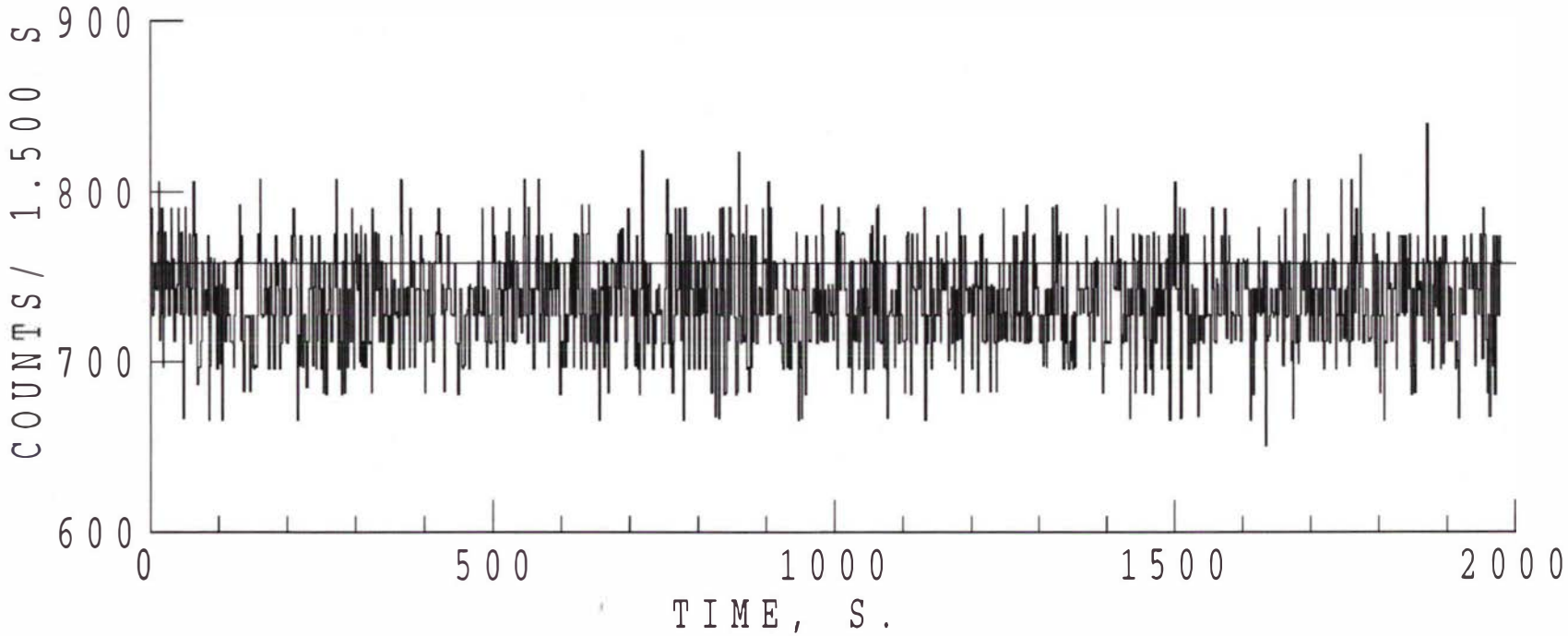
22/09/01 81216.195 s

0.250 S INTERVALS REGROUPED BY 6

0- 0 keV

N= 10 M= 10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

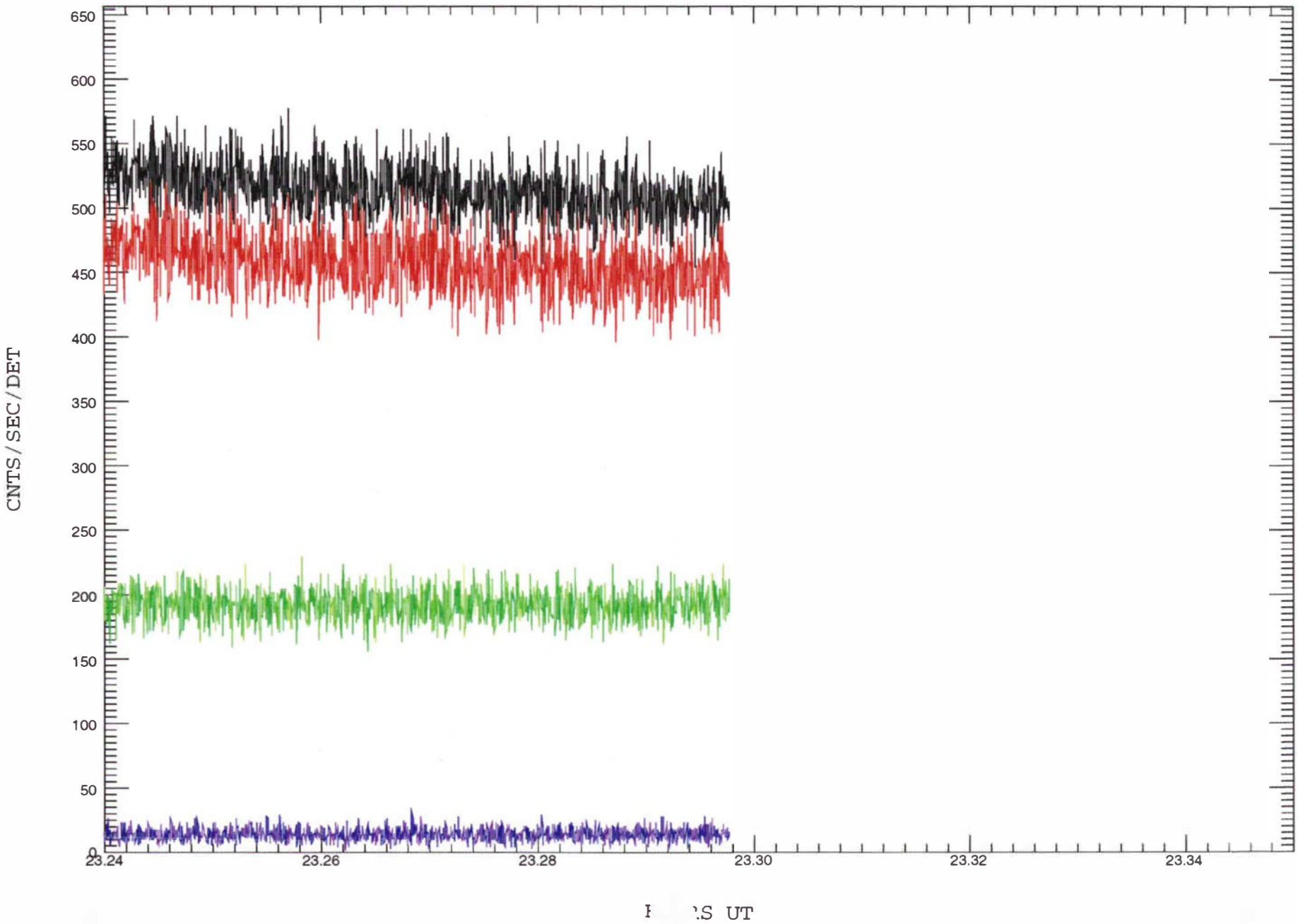


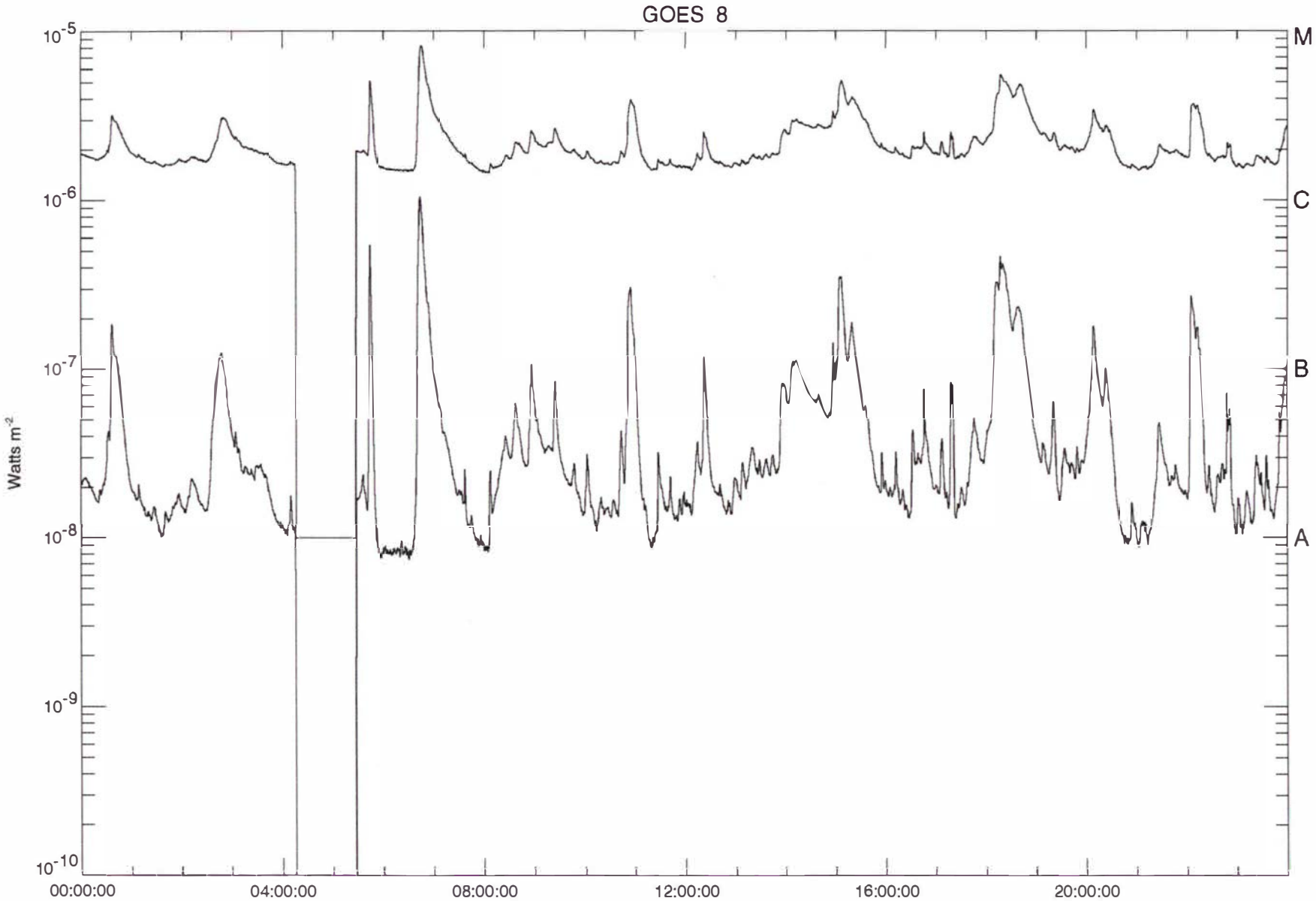
FREGATE SURVEY (TH) TIME HISTORY (AVG x1) -- DETECTORS 1-4 SUMMED (SAX_20010927_83867)

BEG TIME: 27/09/01 DOY 270 Julian 2452181.46833 UT = 23.240 23:14:24 (83664.000 secs) [sct = 0019 4ca0 4b12 7101]
END TIME: 27/09/01 DOY 270 Julian 2452181.47292 UT = 23.350 23:21:00 (84060.000 secs) [sct = 0019 4ca0 62ac ed52]

Chan 1:[E1=18 E2=103] Chan 2:[E3=18 E4=78] Chan 3:[E5=20 E6=510] Chan 4:[E6=510 ->]

Channel 1 + 300 Channel 2 + 200 Channel 3 + 100 Channel 4 + 0

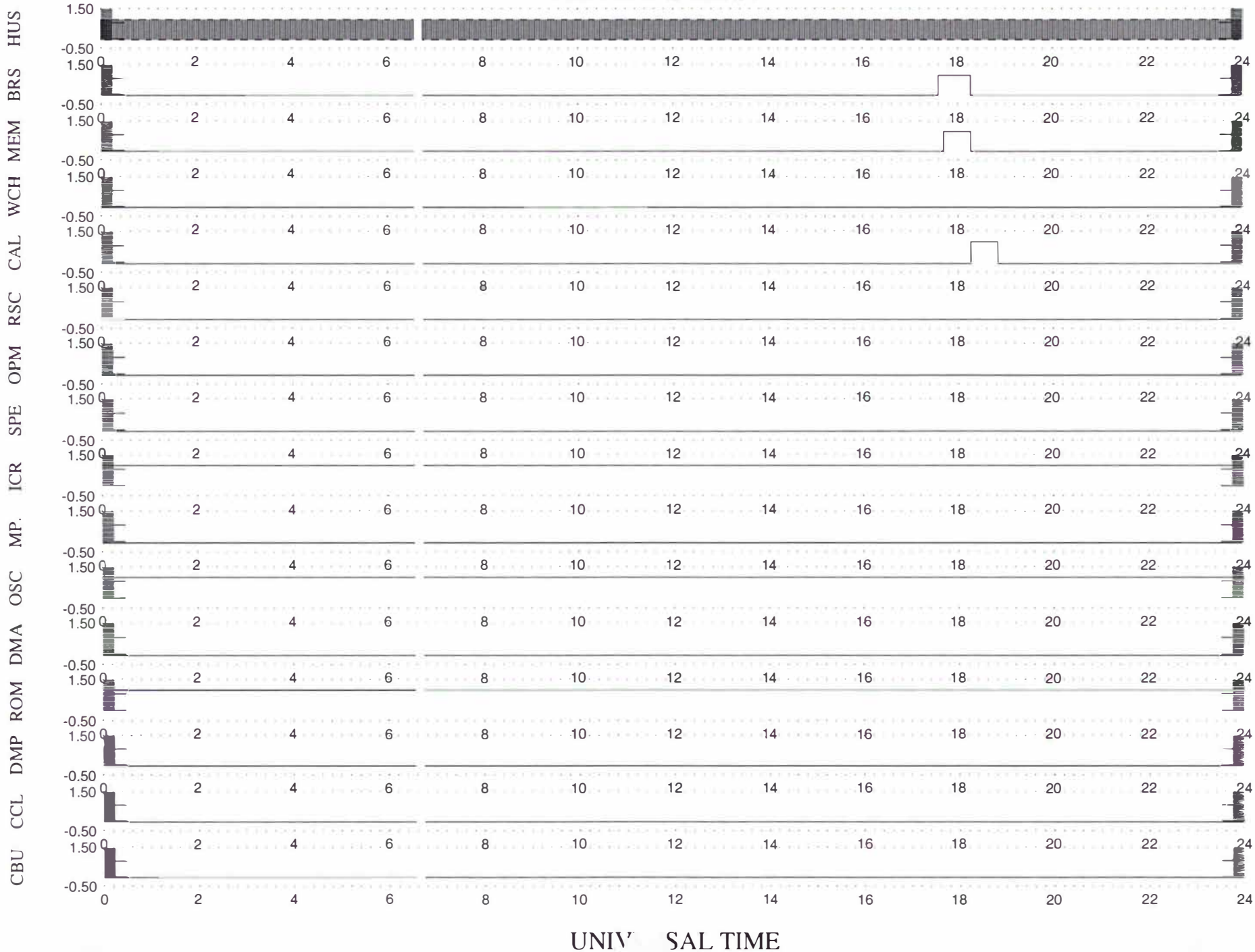




Data Start: 01/09/22, 0000:00 Plot created: 01/09/26, 0951
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

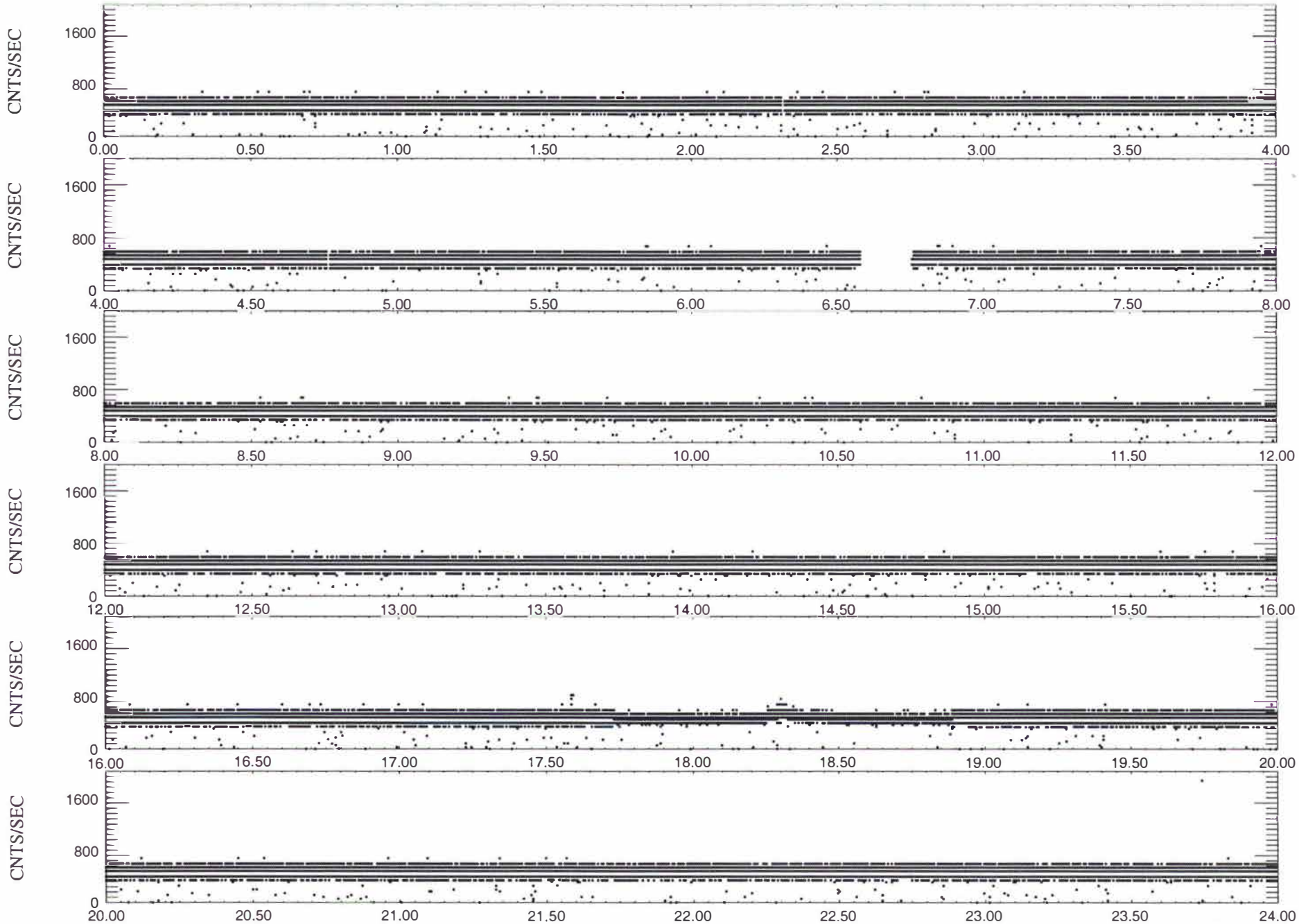
HUS MODES EDR day 265, year 2001 to day 265, year 2001 01/22/02

BURST NUMBER 14



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 22/09/2001 DOY = 265 01/22/02

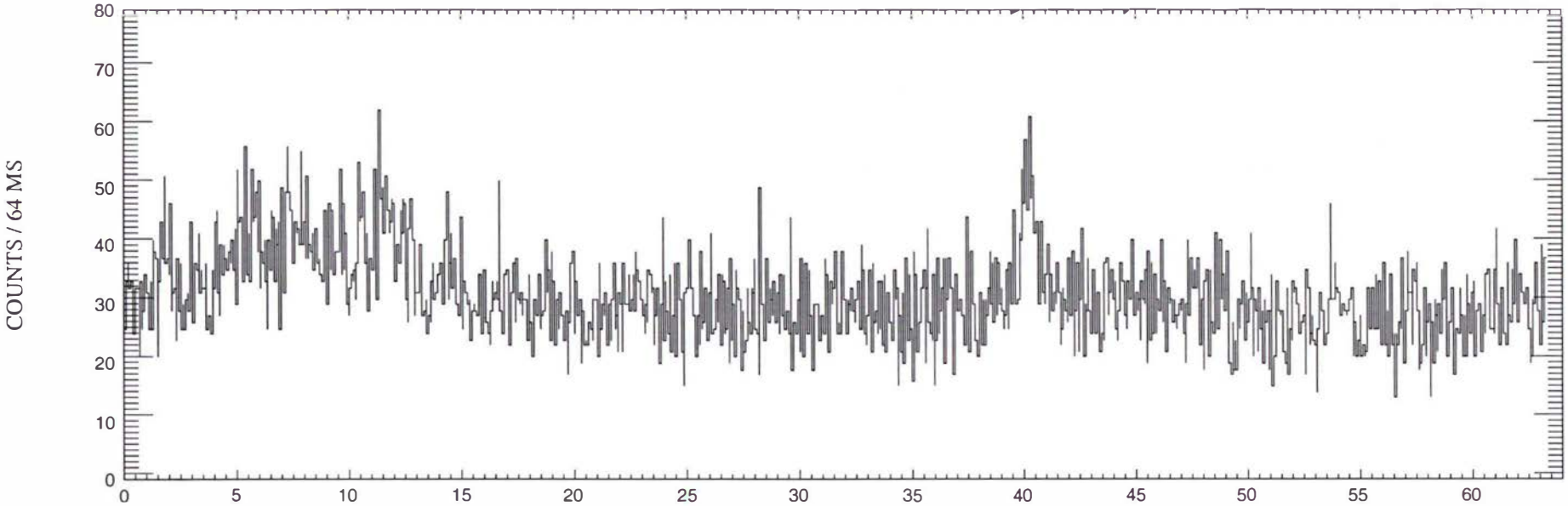
CALIBRATION DATA INCLUDED



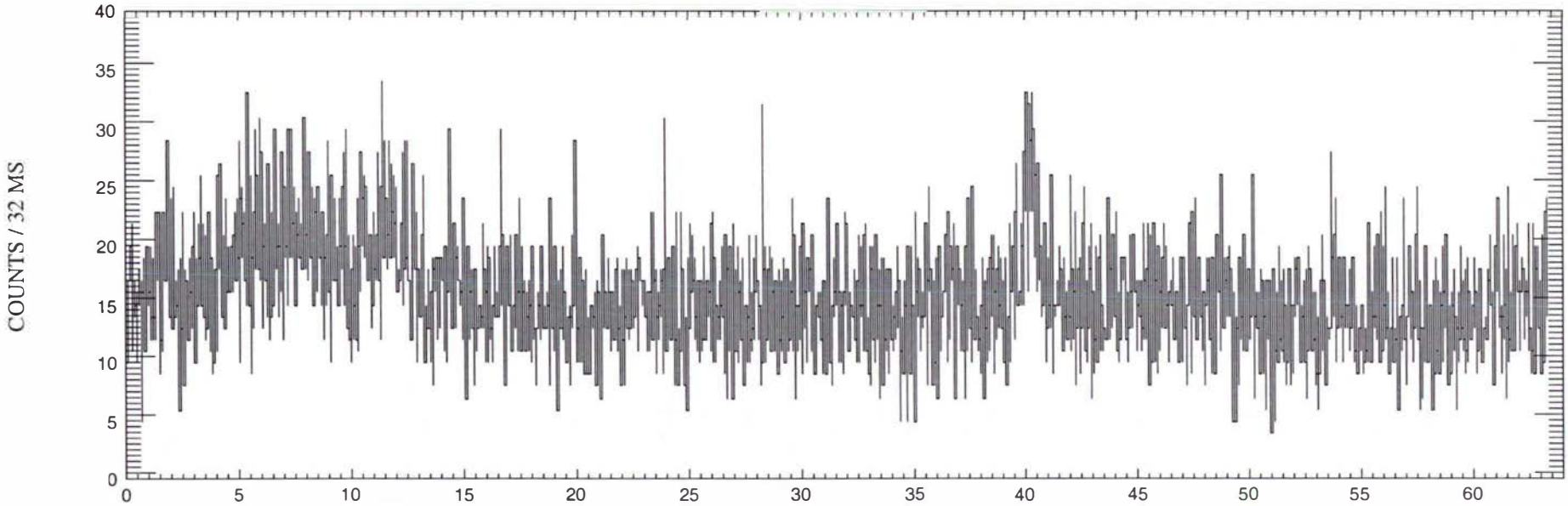
UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 22/09/2001 DOY = 265 01/22/02

Burst Counter 14 at UT=17.581910447015 h=63294.878 s 17:34:54.878



TIME, SECS

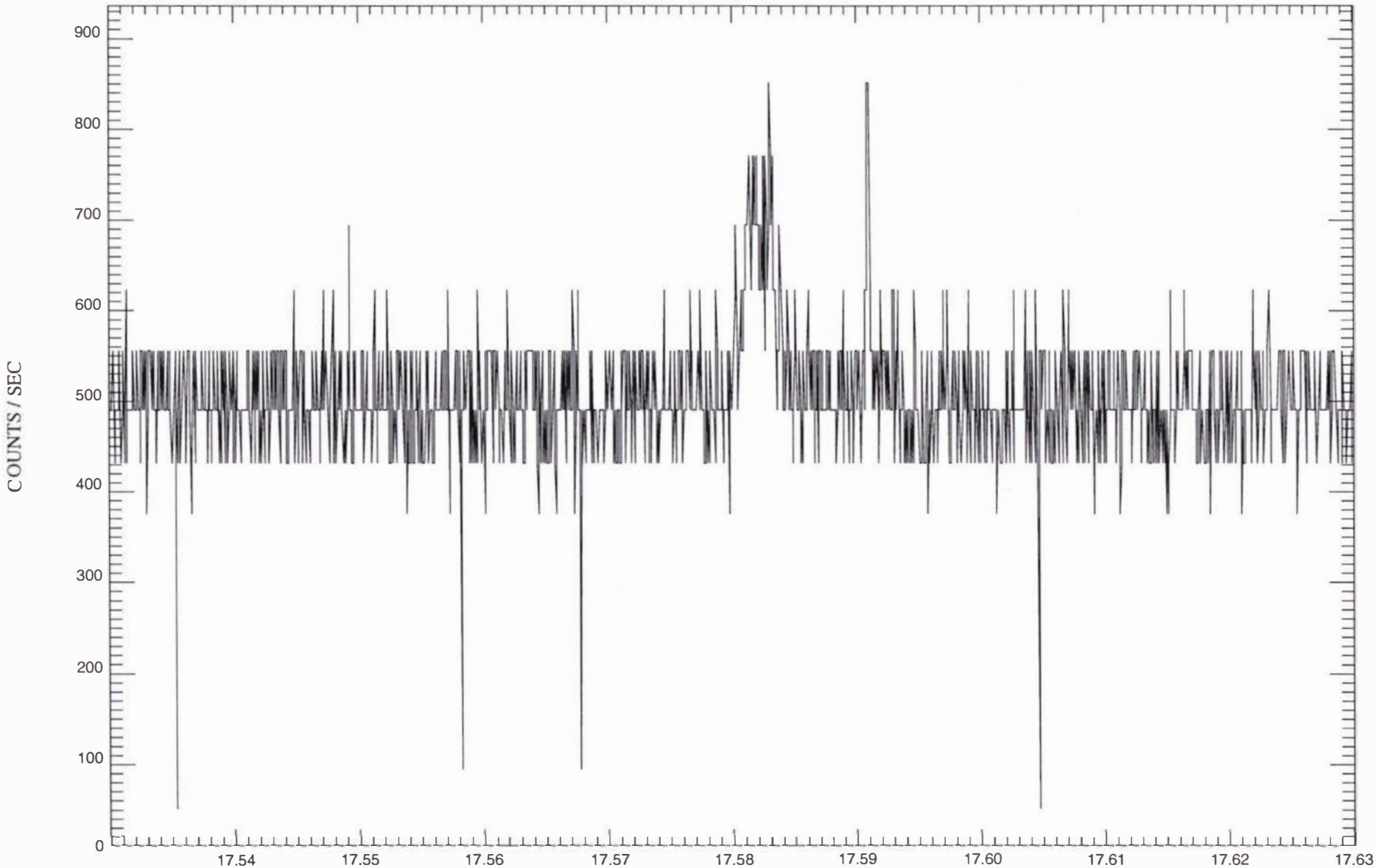


TIME, SECS

B# 1

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 22/09/2001 DOY = 265 01/22/02

CALIBRATION DATA INCLUDED



Date: Apr 2 '04

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

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

2. For 3 Spacecraft events

☐ Konus N/S anisotropy used to distinguish between positions? ~~Konus el doesn't agree with other intersection~~

☑ SAX anisotropy used to distinguish between positions?

☐ SAX Earth-blocking used to distinguish between positions?

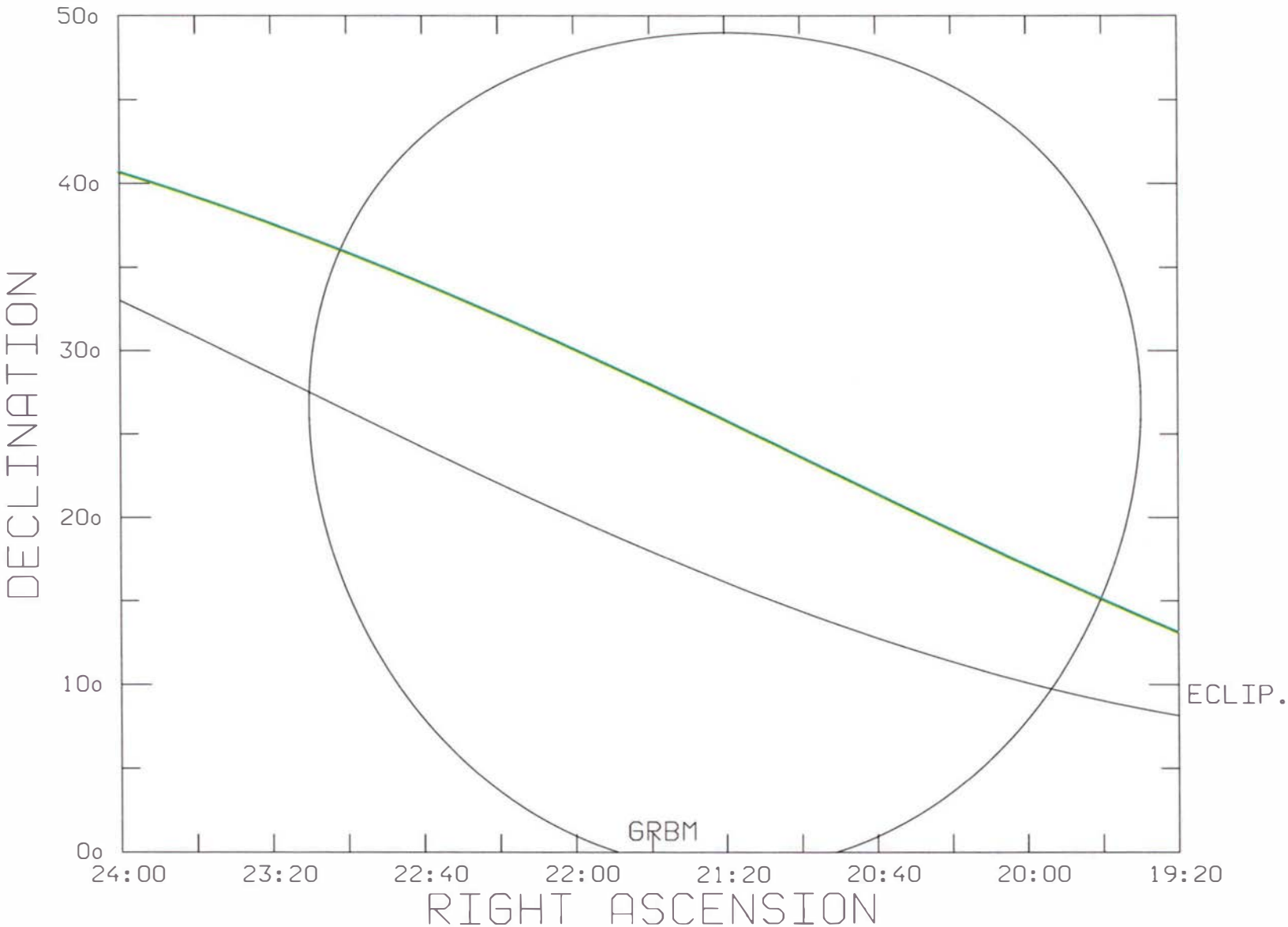
☑ Σ 3Δt's calculated?

3. For 4 Spacecraft Events

☐ BMAPSUM executed to get chisquare for alternate positions?

☑ ACCESS database updated?

GRB010923 ~33817 S 11/07/2011



From guidorzi@fe.infn.it Sun Sep 23 06:20 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
Date: Sun, 23 Sep 2001 15:11:45 +0200 (MET DST)

+ HETE (1764)

1kGRB[301] #LSs: 4 Good HRR: 4
SW Trigger Time (OBT): 27043.985
UTC: Sun, 23 Sep 2001 09:24:30:19572 33870

******Event 0 triggered on board: ev_time - onbtrig_time = 0.819

Nsig(trg):	35.8	10.8	12.9	35.1	28.0	7.7	7.6	27.8
Nsig(pfl):	35.8	10.8	12.9	35.1	28.0	7.7	7.6	27.8
Bkg lev. :	744	827	760	678	828	863	853	873
ChiSq R. :	1.098	1.207	0.876	0.867	1.129	0.944	1.029	1.142
Peak fl. :	976	310	354	913	805	226	221	821
Error :	49.7	44.4	43.4	47.7	49.7	44.3	44.0	50.8
Fluence :	1551	404	354	1403	1216	280	221	1185
Error :	95.0	61.1	43.4	90.6	97.7	61.2	44.0	99.8

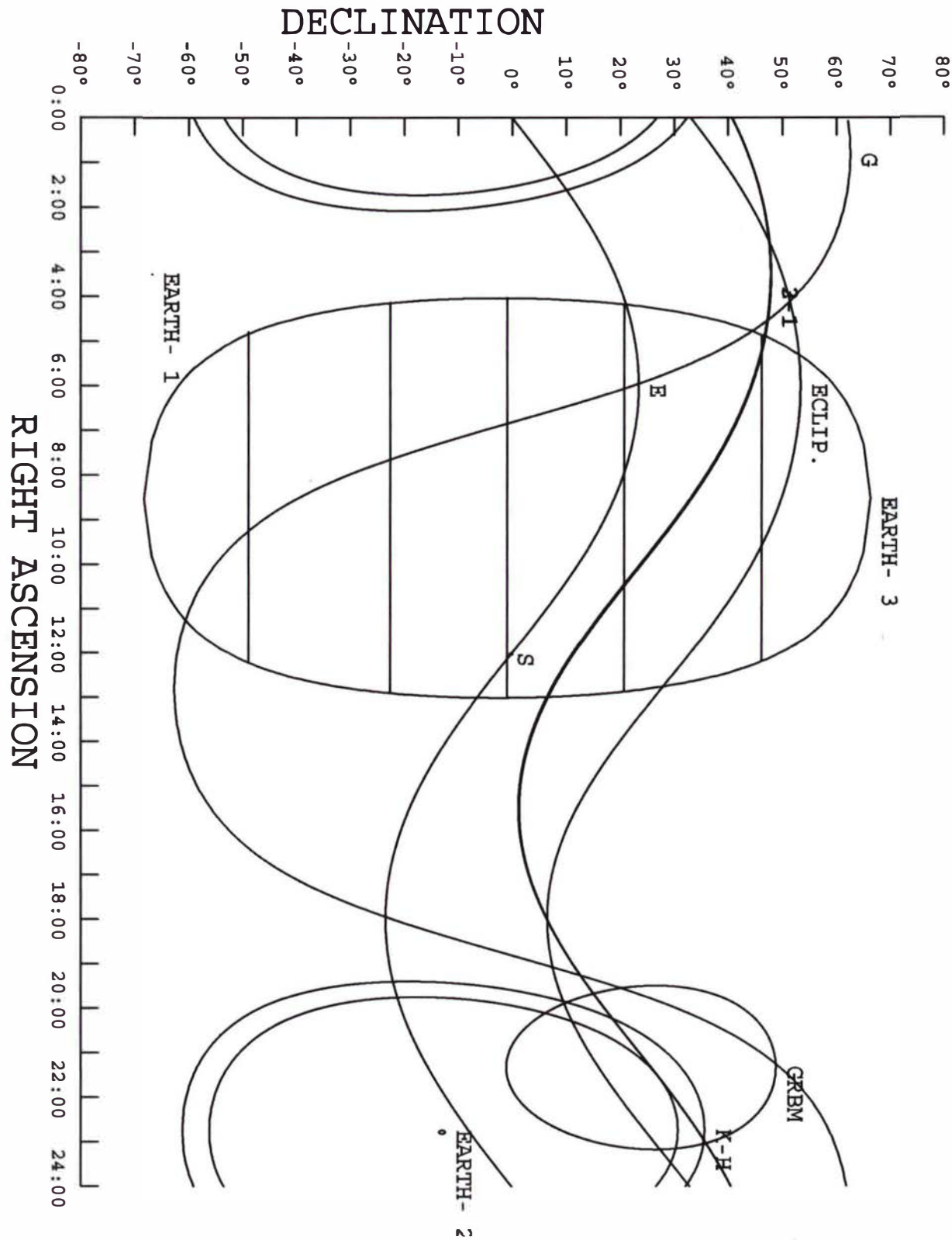
Dur (s) :	5.00	2.00	1.00	5.00		
Abundance:	5	2	1	5		
H. Ratio :	0.784	0.694	0.623	0.844		
HR Ratio :	1.130	1.258	0.928	1.113	0.822	0.738
HR W-ave :	0.776	+/- 0.053				

N-M = CORRELATION BETWEEN SATELLITES N AND M

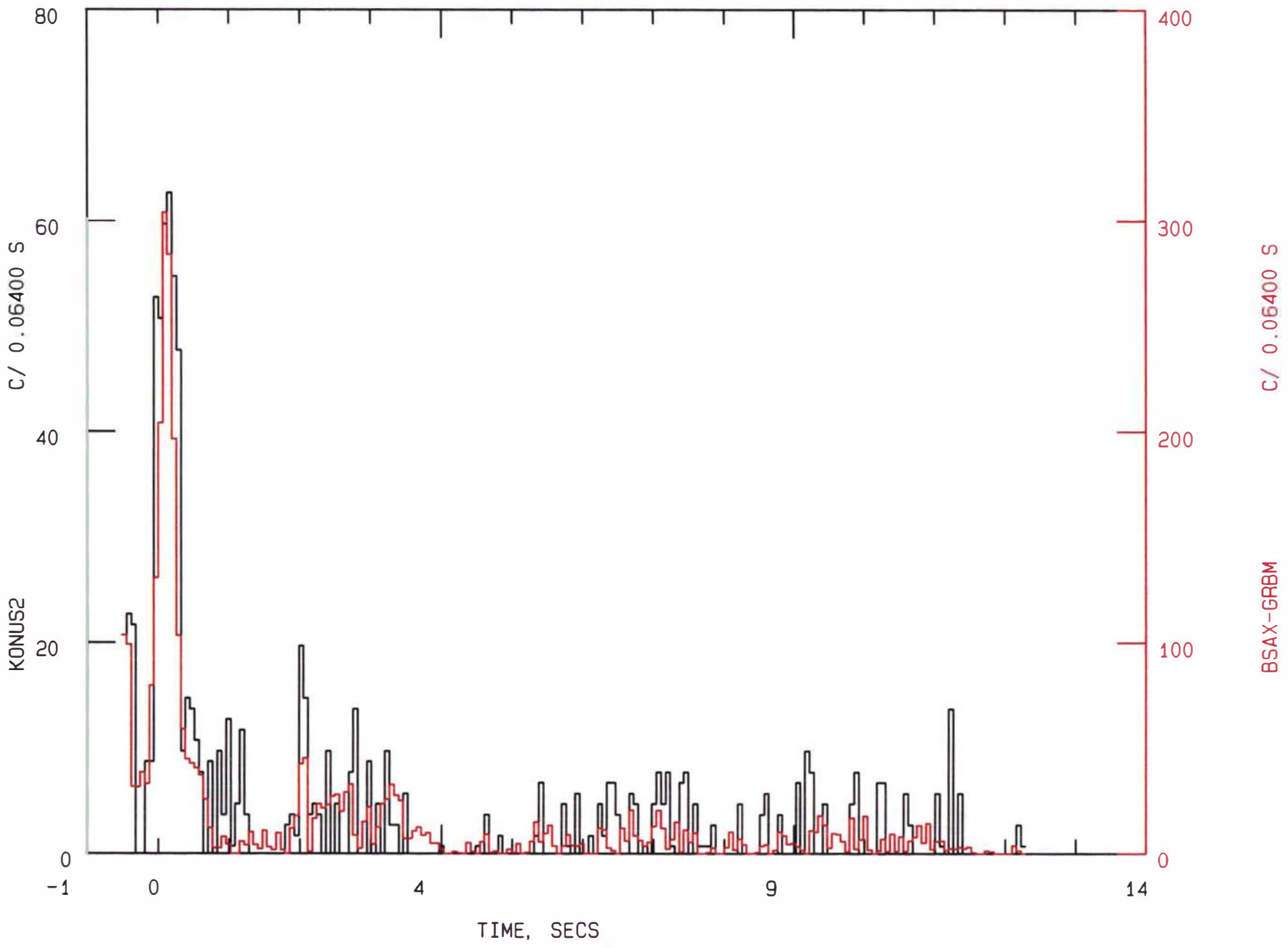
EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN E=ECLIPTIC G=GALACTIC EQUATOR

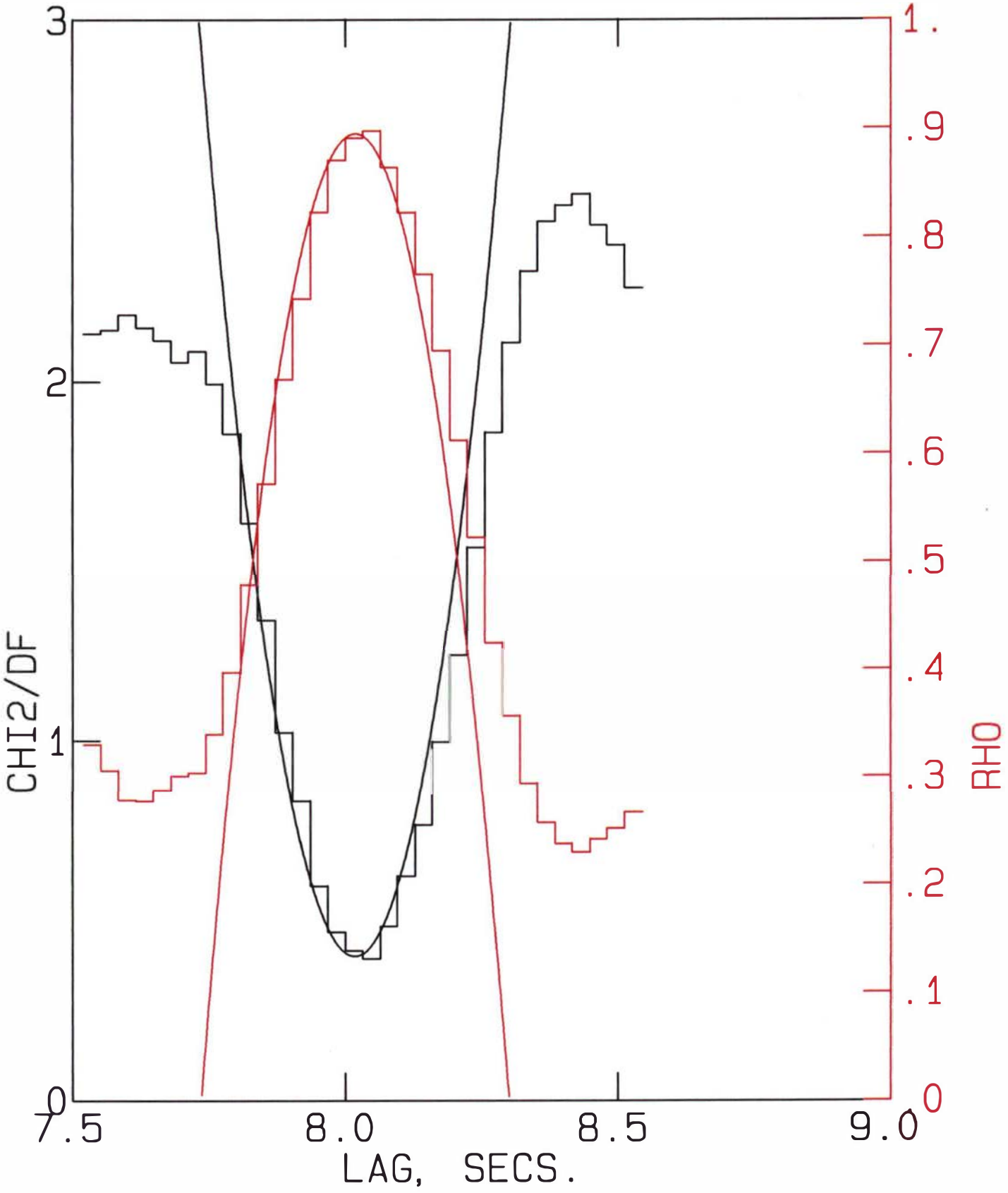
1 ULYSSES 2 KONUS2 3 SAX



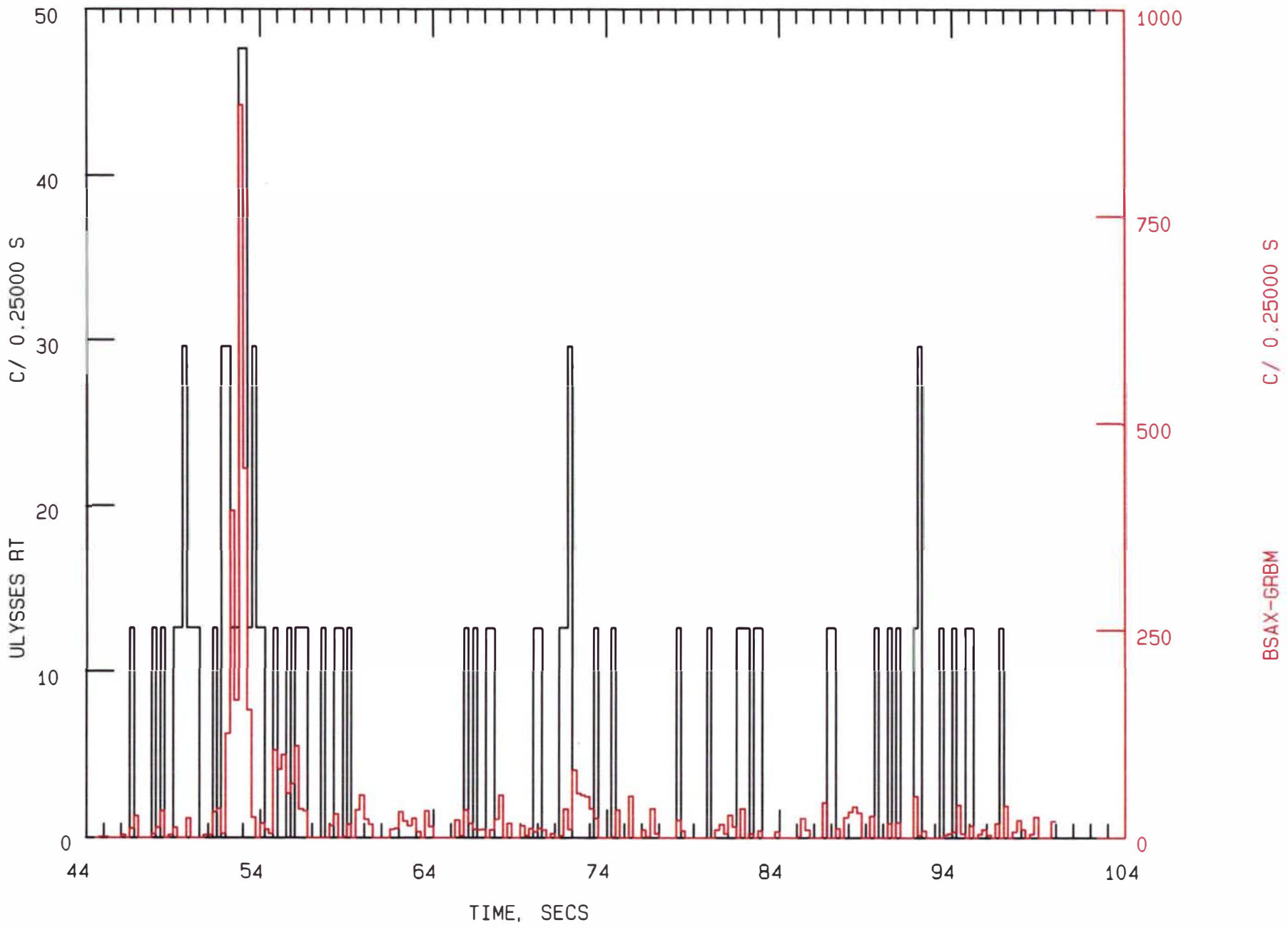
KONUS2 -BSAX-GRBM CORRELATION 23/09/01 33871.263 2/ 4/ 4



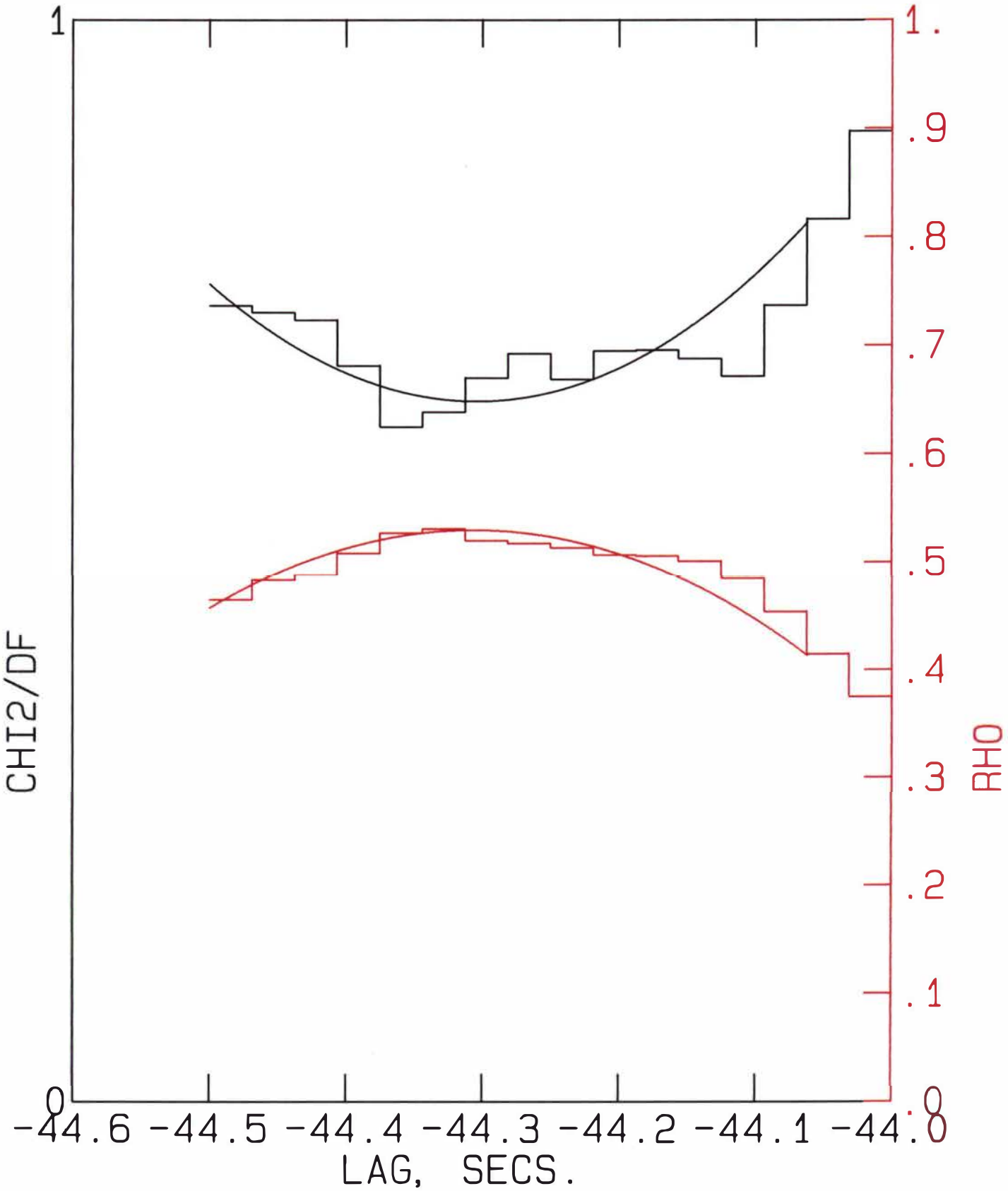
KONUS2 -BSAX-GRBM CORRELATION 23/09/01 33871.263



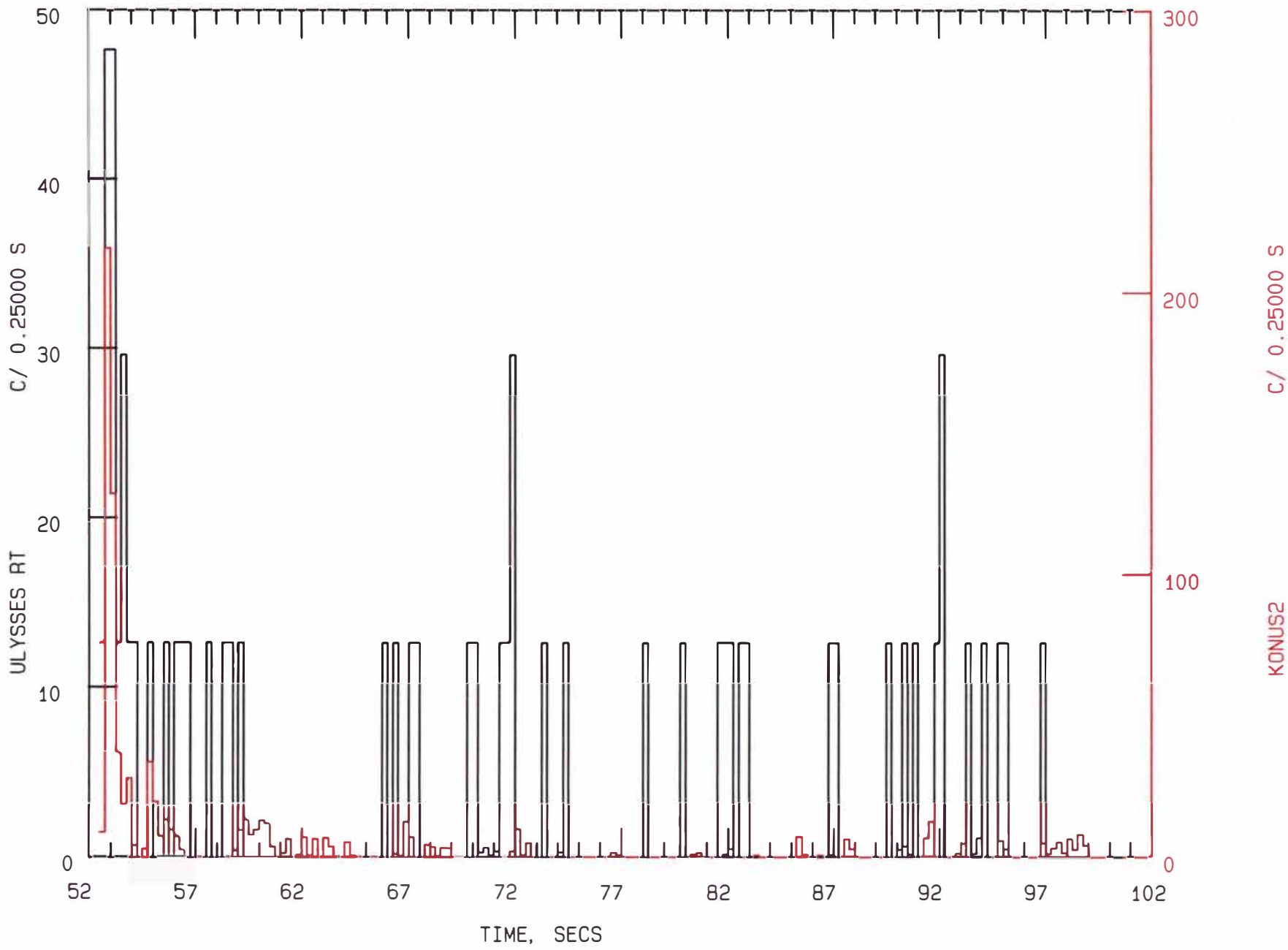
ULYSSES RT-BSAX-GRBM CORRELATION 23/ 9/01 33431.049 2/ 4/ 4



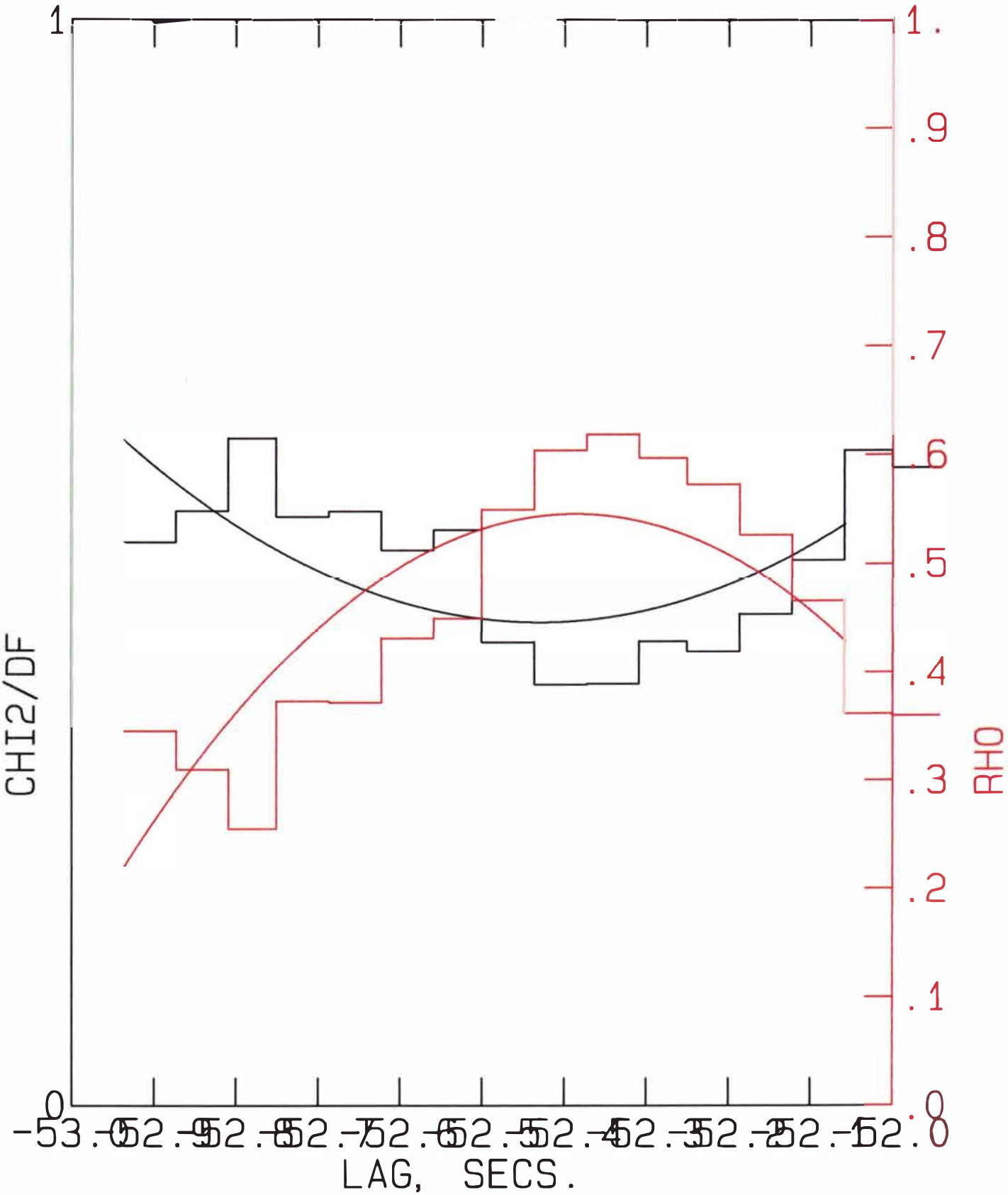
ULYSSES RT-BSAX-GRBM CORRELATION 23/ 9/01 33431.049



ULYSSES RT-KONUS2 CORRELATION 23/ 9/01 33431.049 2/ 4/ 4



ULYSSES RT-KONUS2 CORRELATION 23/ 9/01 33431.049



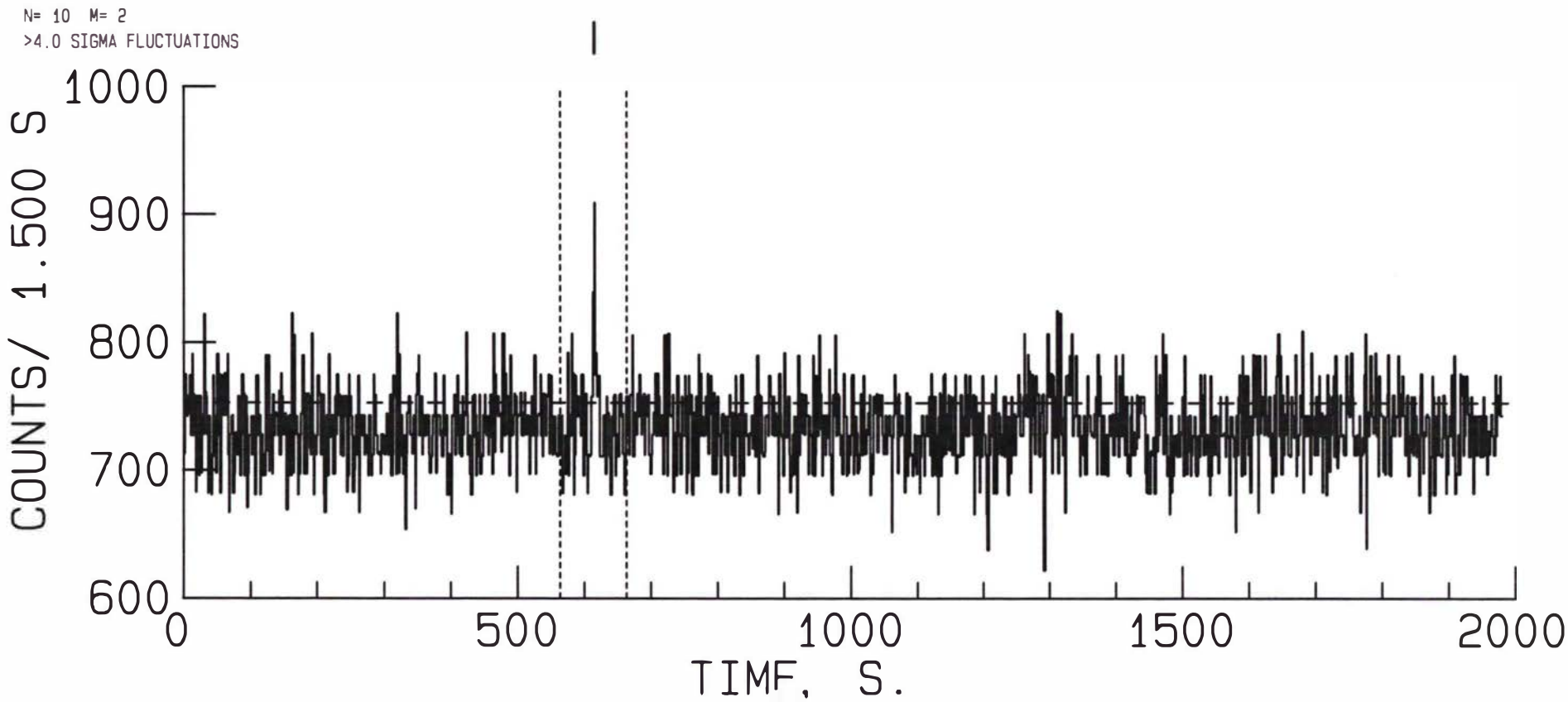
ULYSSES RT

2/ 4/ 4

23/ 9/ 1 32868.066 s

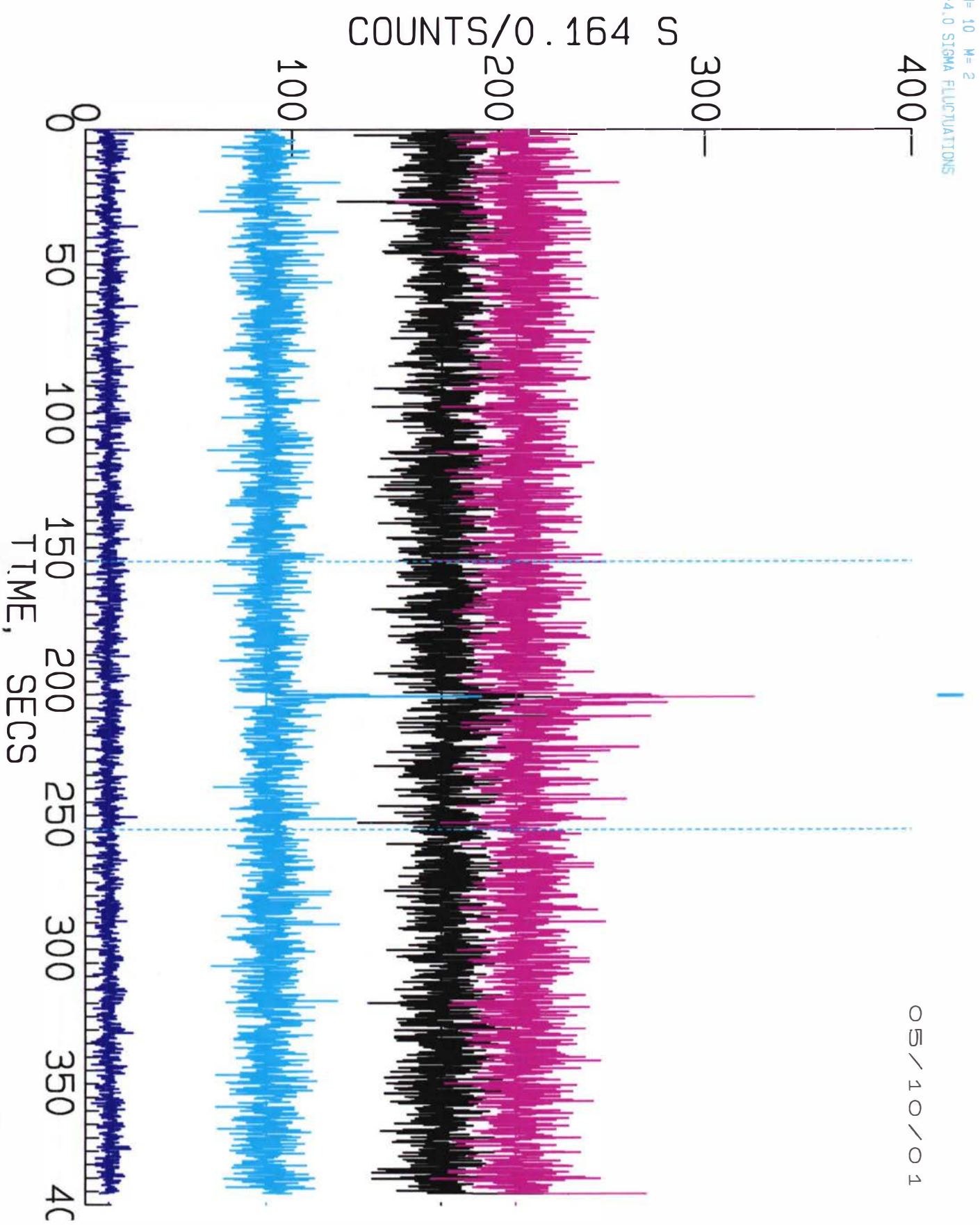
0.250 S INTERVALS REGROUPED BY 6

22- 151 keV



HETE-II 23/09/01 33659.358

18- 103 keV 18- 78 keV 20- 510 keV 510-1000 keV



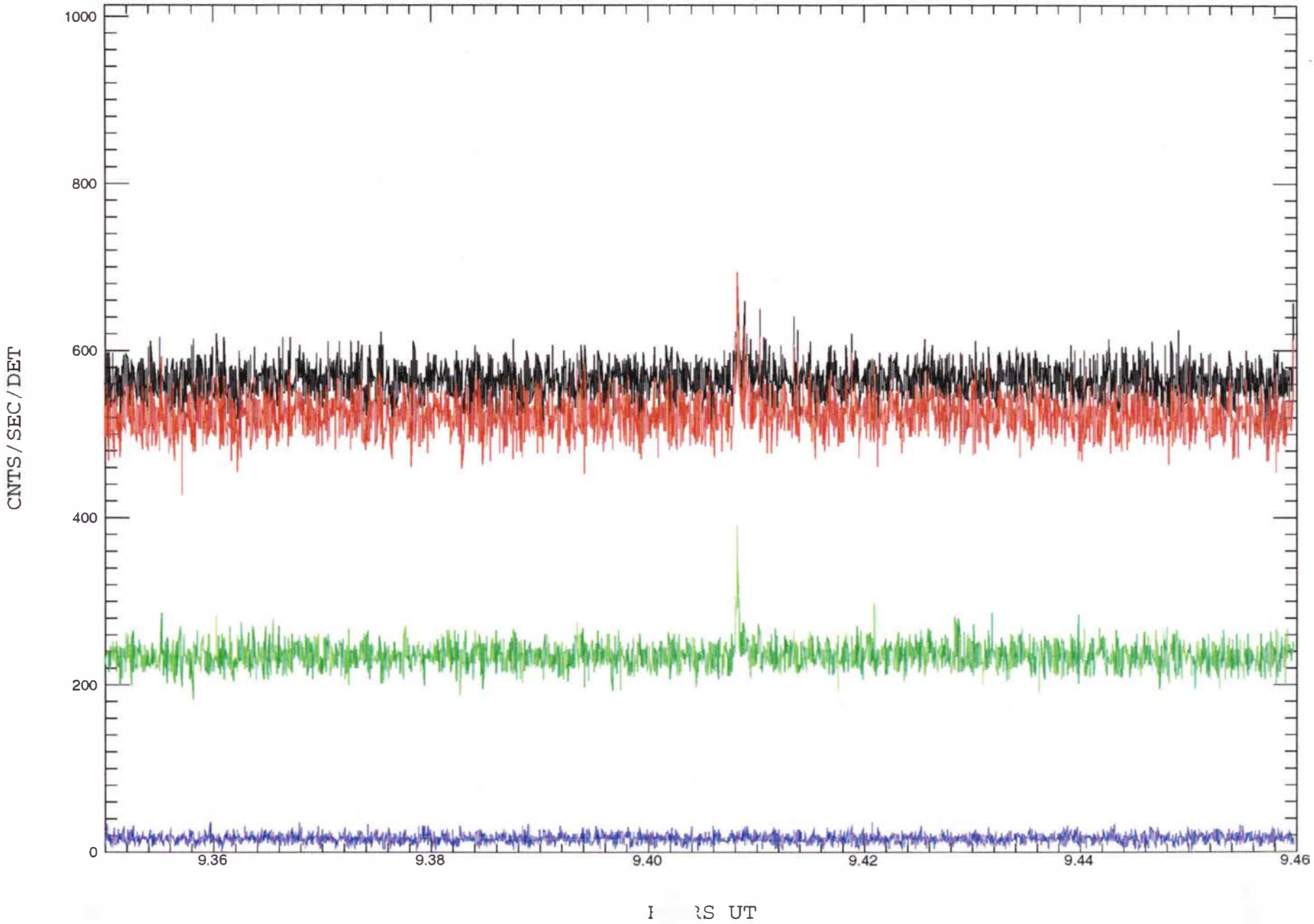
05/10/01

FREGATE SURVEY (TH) TIME HISTORY (AVG x1) -- DETECTORS 1-4 SUMMED (KONUS2_20010923_33871)

BEG TIME: 23/09/01 DOY 266 Julian 2452176.88958 UT = 09.350 09:21:00 (33660.000 secs) [sct = 0019 4c44 2f37 52f7]
END TIME: 23/09/01 DOY 266 Julian 2452176.89417 UT = 09.460 09:27:36 (34056.000 secs) [sct = 0019 4c44 46d1 cf48]

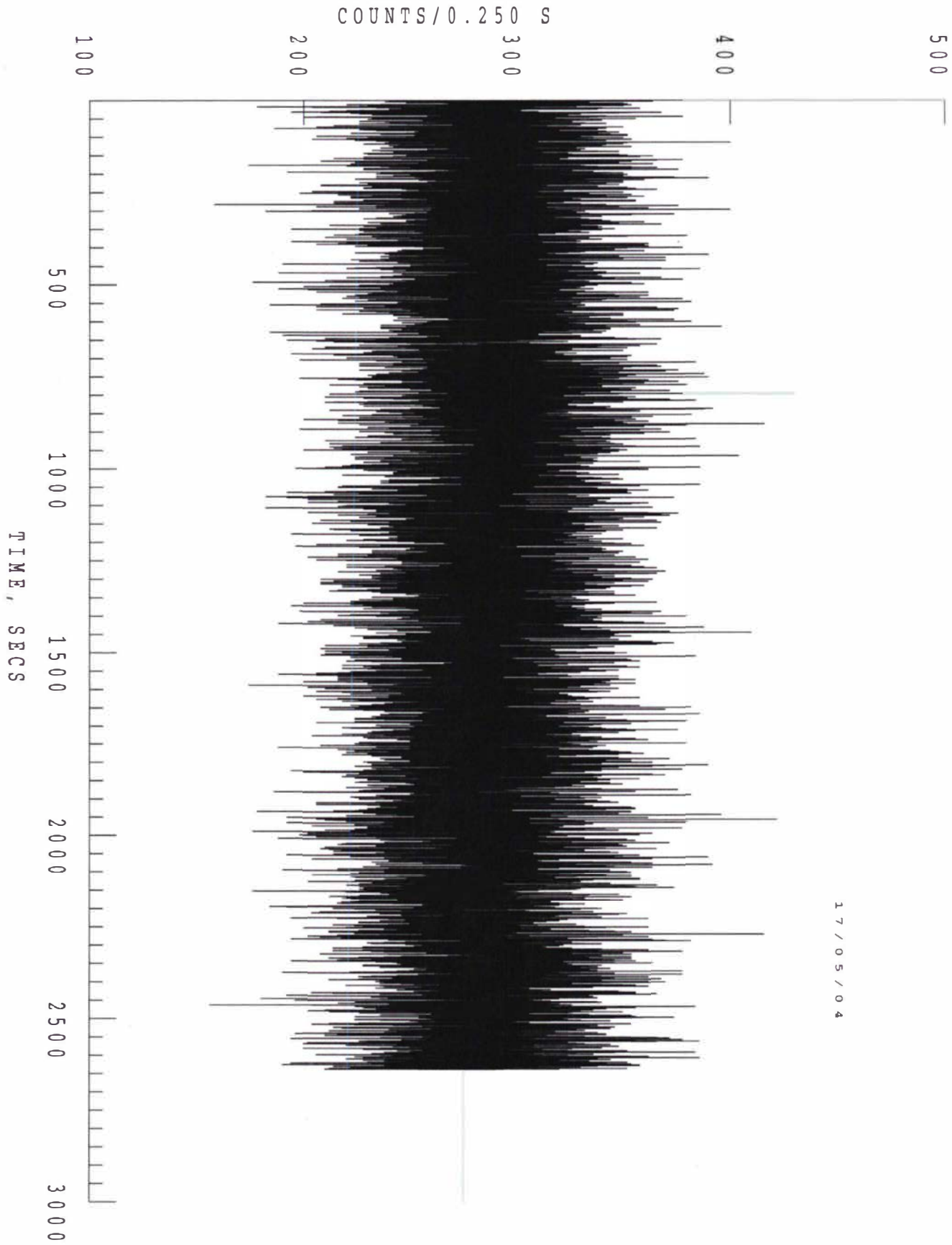
Chan 1:[E1=18 E2=103] Chan 2:[E3=18 E4=78] Chan 3:[E5=20 E6=510] Chan 4:[E6=510 ->]

Channel 1 + 300 Channel 2 + 200 Channel 3 + 100 Channel 4 + 0



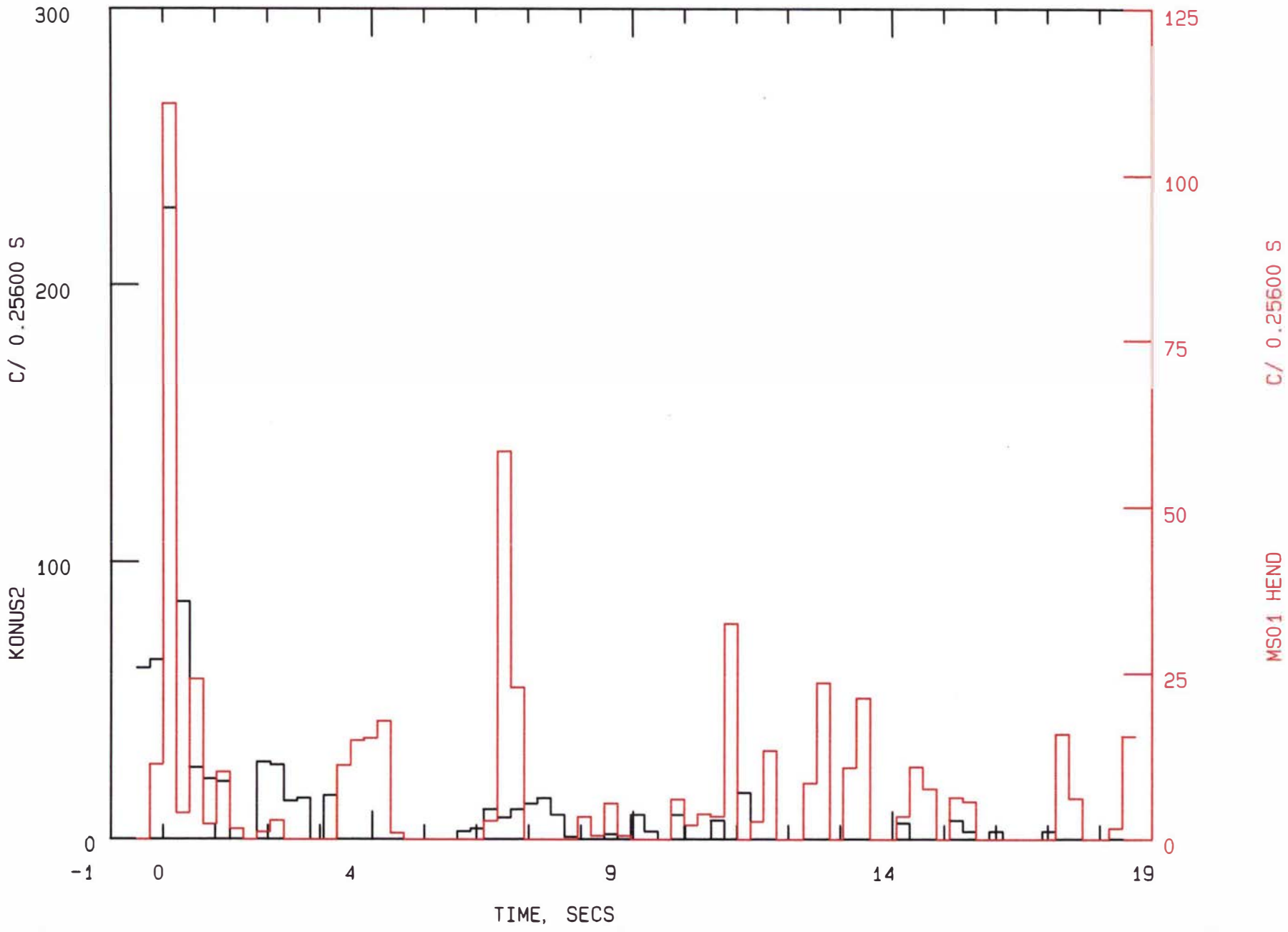
MS01 23/09/01 32536.587

50- 3000 keV



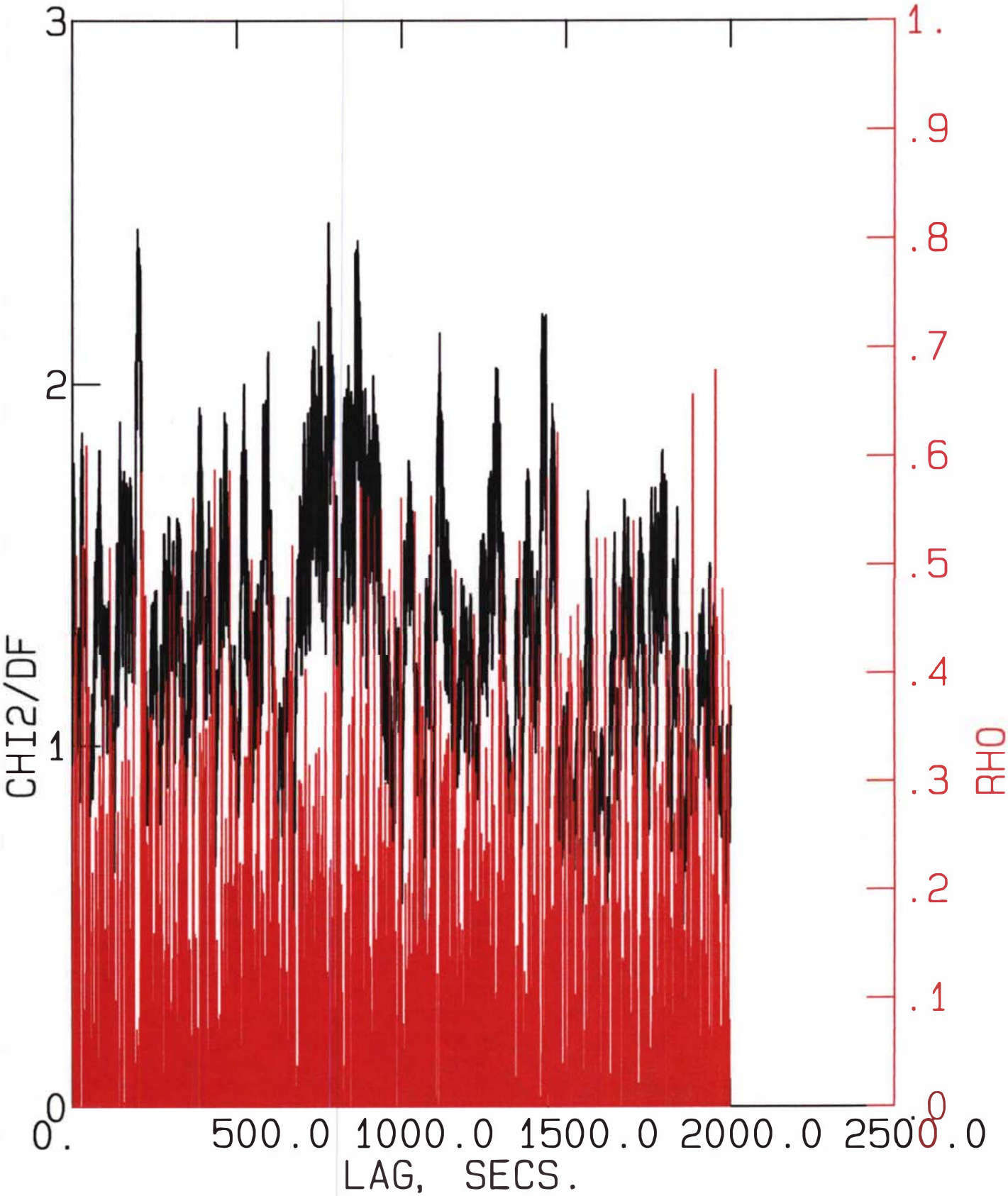
17/05/04

KONUS2 -MS01 HEND CORRELATION 23/09/01 33871.263 19/ 5/ 4



19/ 5/ 4

KONUS2 -MS01 HEND CORRELATION 23/09/01 33871.263



From gcncirc@lheawww.gsfc.nasa.gov Mon Oct 1 12:02 PDT 2001
From: GCN Circulars <gcncirc@lheawww.gsfc.nasa.gov>
Subject: GRB010923 as seen by BeppoSAX GRBM
: khurley@sunspot.ssl.berkeley.edu
ce: Mon, 1 Oct 2001 15:02:17 -0400 (EDT)
Affiliation: NASA-GSFC LHEA
Project: GCN (GRB Coordinates Network), Circular Service
Phone: 301-286-3106 (S.Barthelmy's office, -1684 fax)
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit

TITLE: GCN GRB OBSERVATION REPORT
NUMBER: 1104
SUBJECT: GRB010923 as seen by BeppoSAX GRBM
DATE: 01/10/01 19:01:06 GMT
FROM: Cristiano Guidorzi at Phys.Dept, U.of Ferrara(Italy) <guidorzi@fe.infn

E. Montanari, C. Guidorzi and F. Frontera, Physics Dept, University of Ferrara; L. Amati, ITESRE, CNR, Bologna, on behalf of the GRBM BeppoSAX team, report:

The gamma-ray burst GRB010223 reported by the HETE team (GCN/HETE_POSITION H1764, GCN 1102) was also detected by the BeppoSAX GRBM (units 1 and 4) with onset at 09:24:29 UT of September 23, 2001. The event was classified (GCN 1102) as short (<1 s) GRB. However, on the basis of the GRBM data, in addition to the double peak structure reported by HETE, the 40-700 keV time profile shows another peak starting 2 s after the burst onset, and lasting ~2 s. The time duration in terms of T90 is thus found to be ~4 s. The FWHM of the first two peaks also detected by HETE are estimated about 0 ms and 350 ms, respectively. The total counts collected during the ent are 2680, with 540 cts in the first peak, 1600 cts in the second one and 540 cts in the last peak.

A preliminary spectral analysis shows that the total fluence in the 80-600 keV range is about 2.5 x 10-6 ergs cm-2. The spectral hardness, as estimated from the ratio between the 100-700 keV counts and those in the 40-100 keV band, looks softer than typical short bursts.

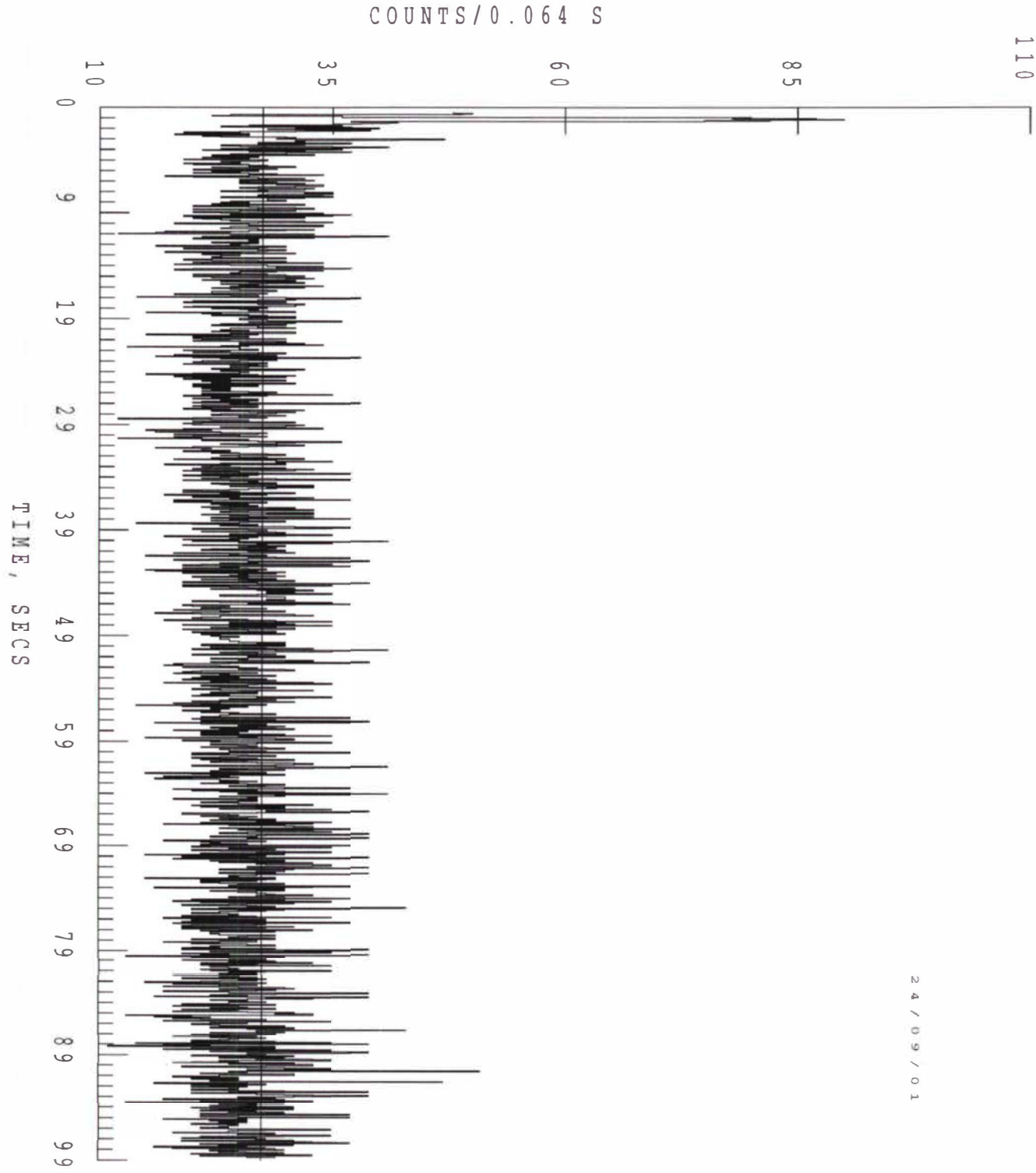
>From GRBM data we derived the following rough position: R.A. = 312 deg, Decl.= +17 deg, with an error radius of 25 deg (inclusive of 10 deg systematics).

In summary, GRBM data suggest that GRB010923 is more likely to be an "intermediate" burst, both for its time duration and its spectral hardness.

This message can be cited.

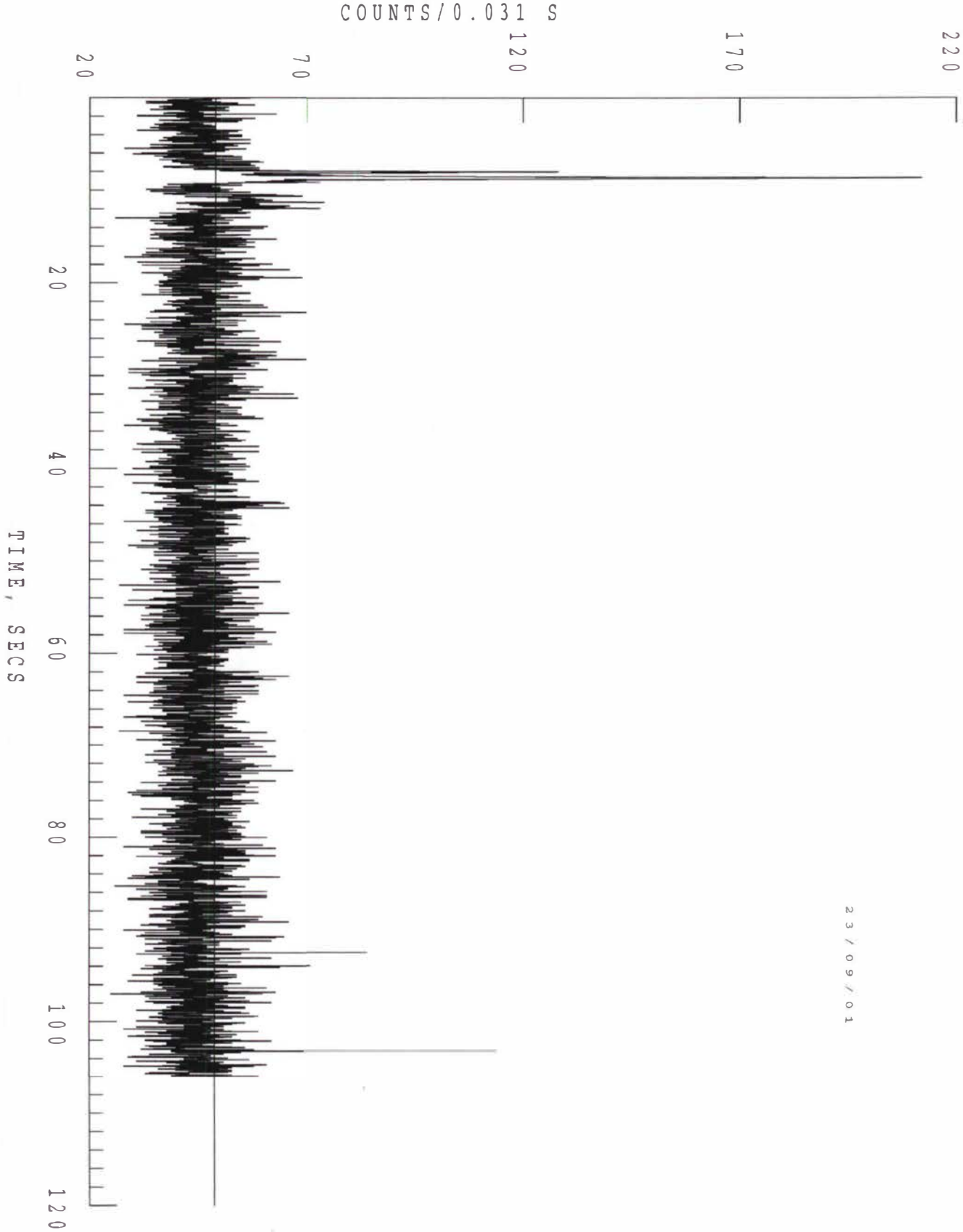
KONUS2 23/09/01 33871.263

50- 200 keV GRB



BSAX-GRBM 23/09/01 33861.377

40- 700 keV

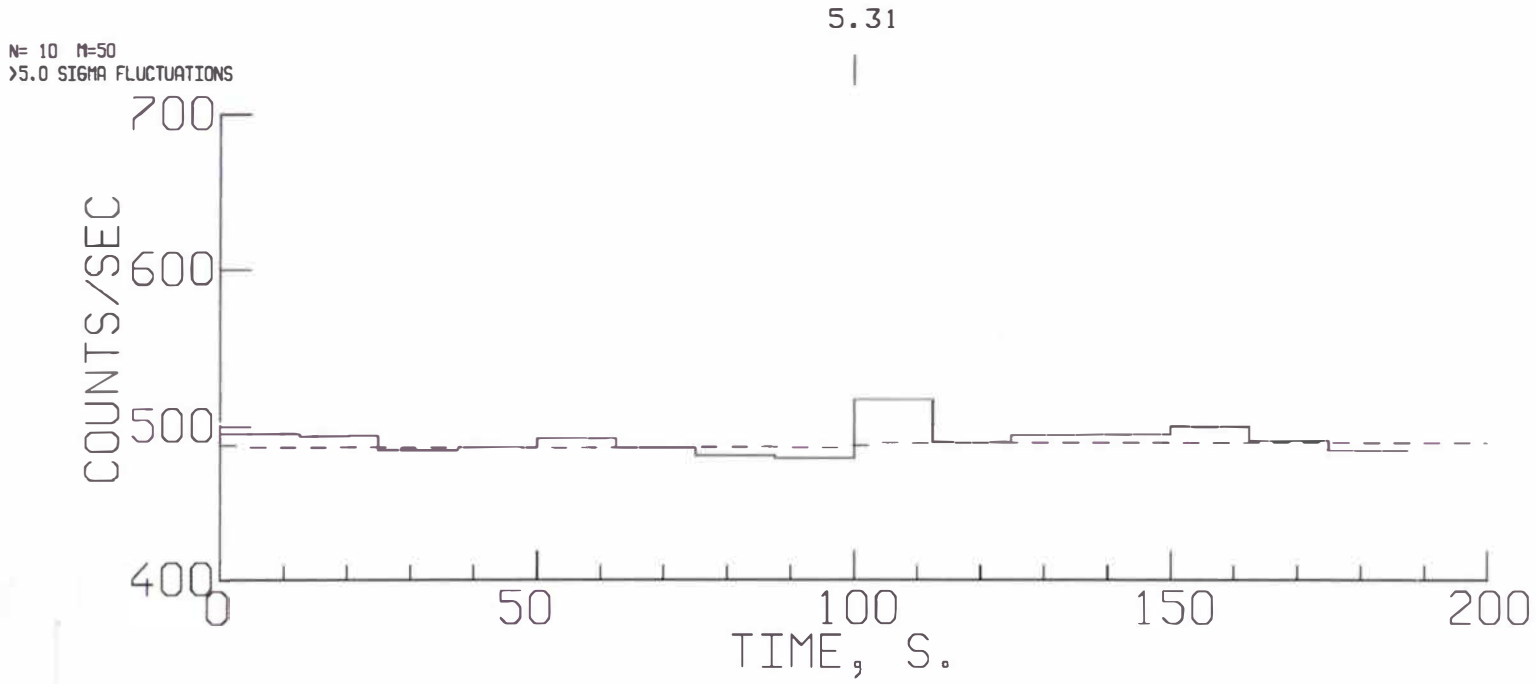


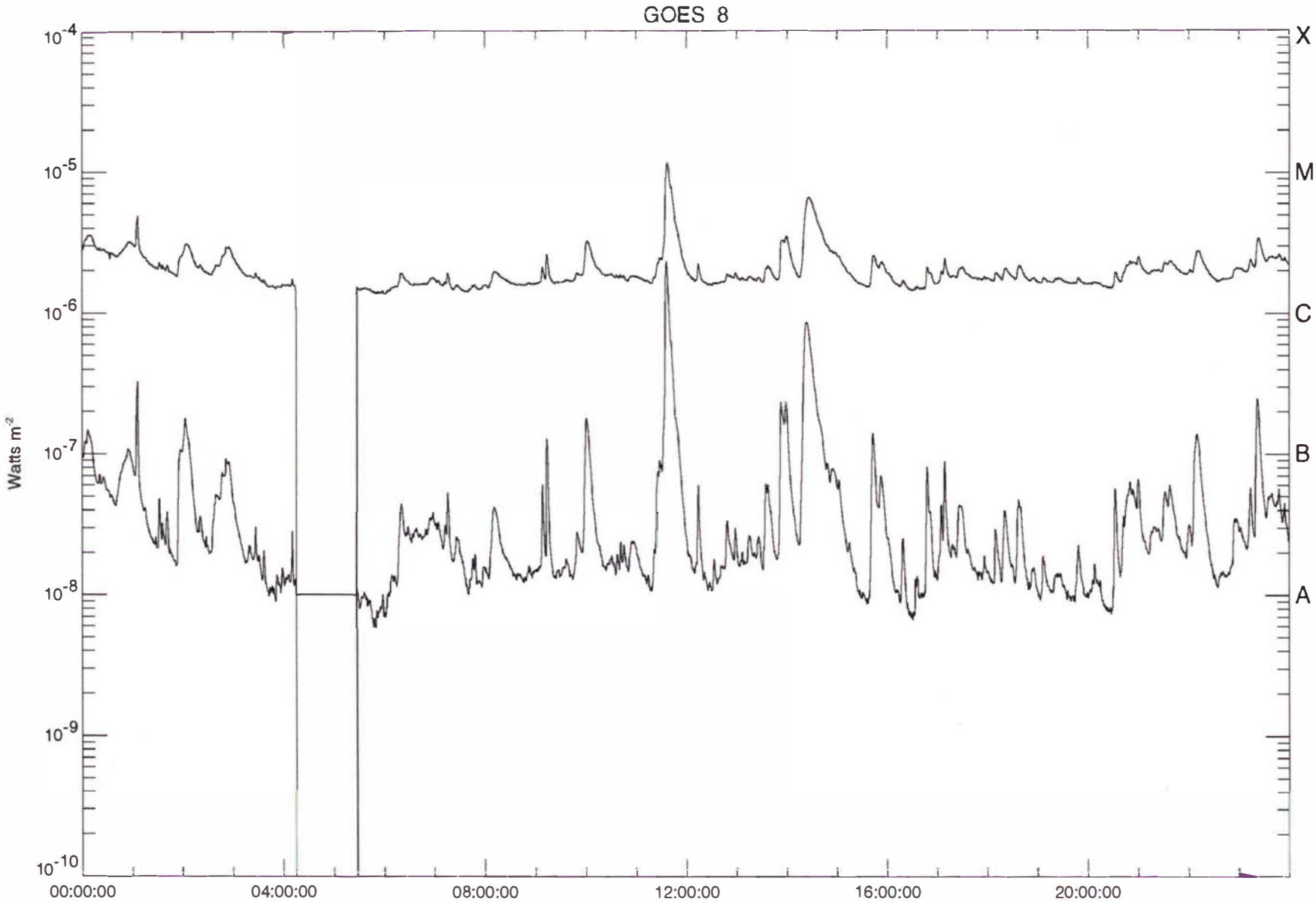
ULYSSES RT 28/ 9/ 1

23/ 9/ 1 79687.603 s

0.250 S INTERVALS REGROUPED BY 50

22- 150 keV

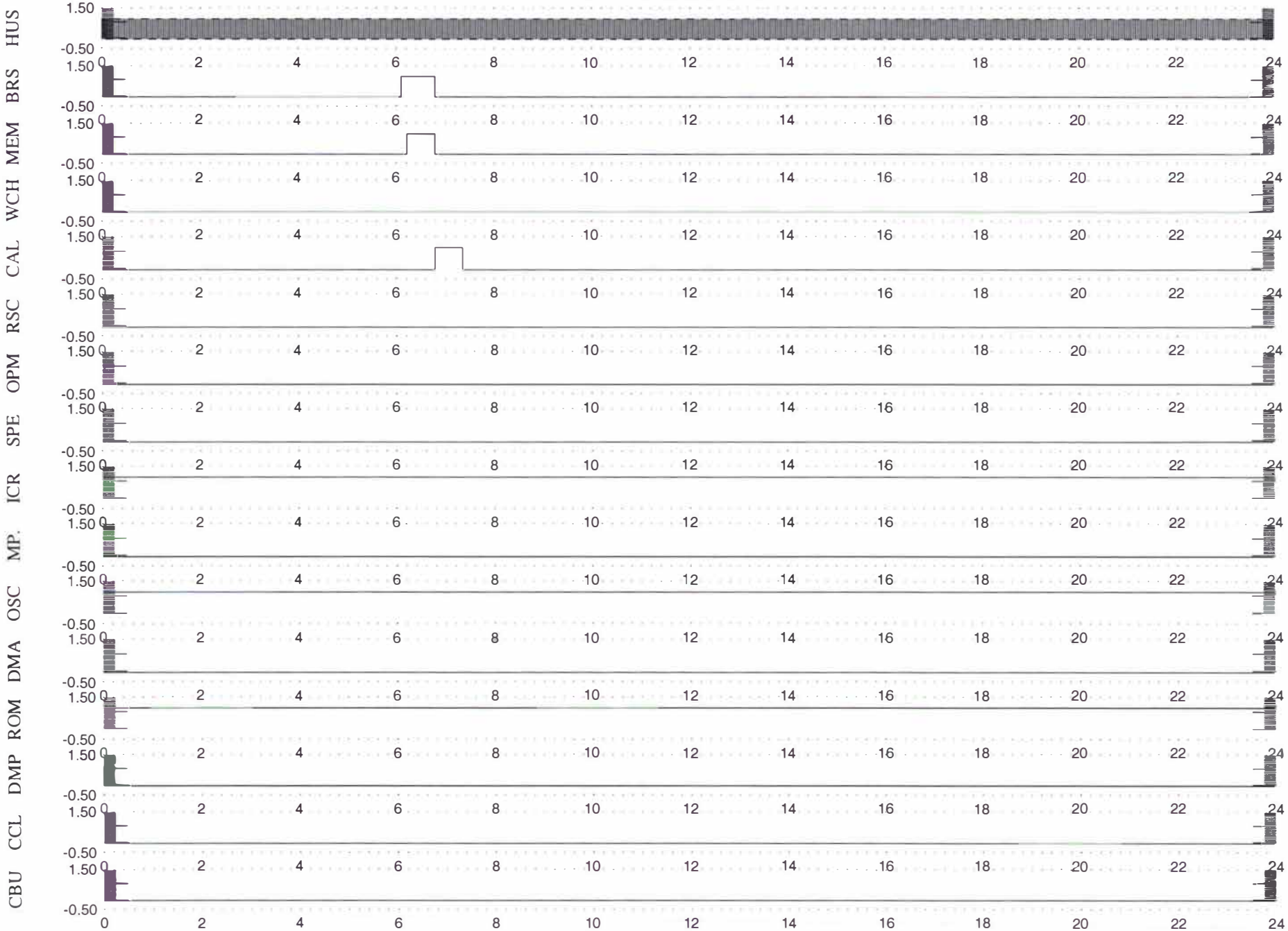




Data Start: 01/09/23, 0000:00 Plot created: 01/09/27, 0950
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

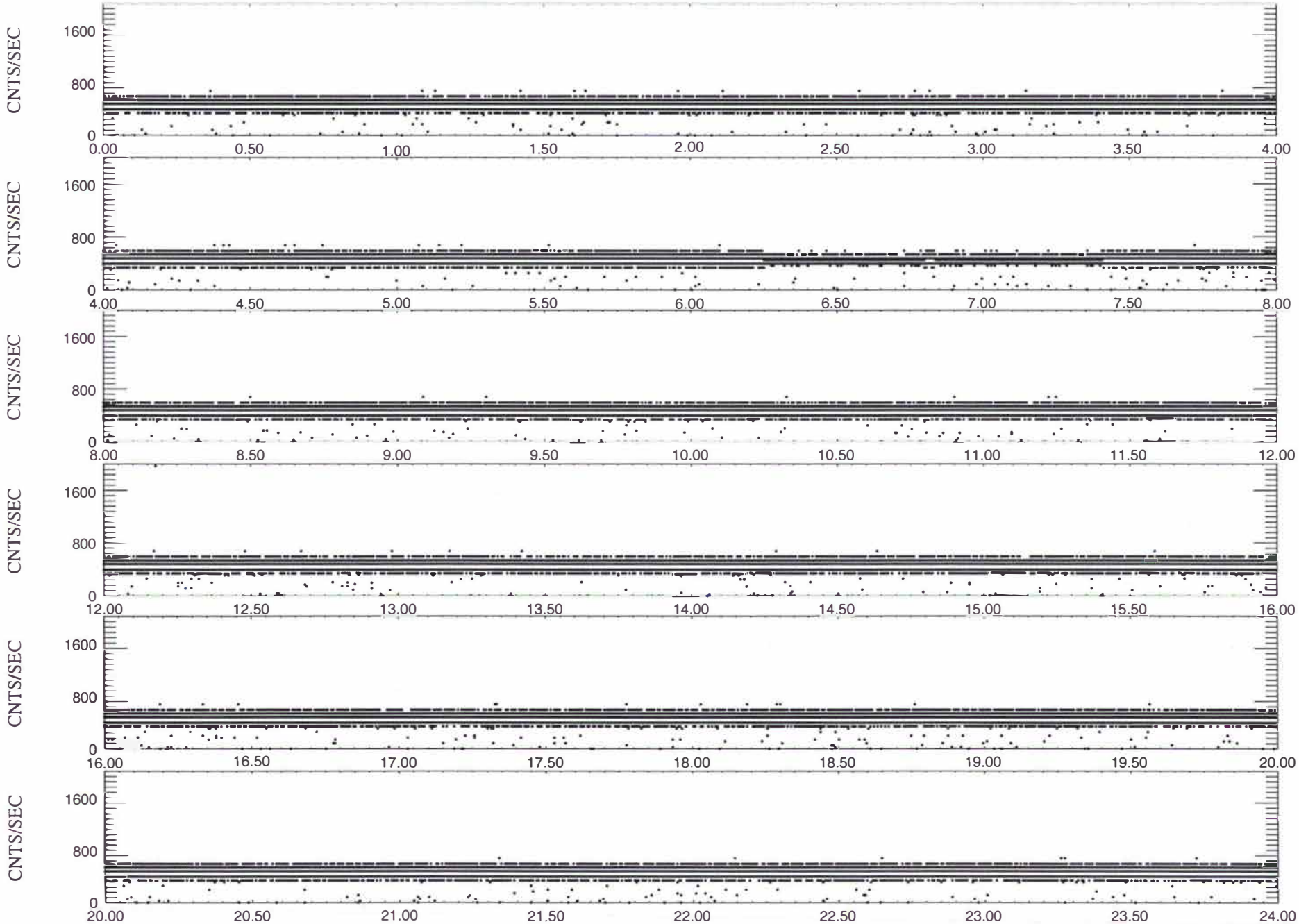
HUS MODES EDR day 266, year 2001 to day 266, year 2001 01/22/02

BURST NUMBER 15



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 23/09/2001 DOY = 266 01/22/02

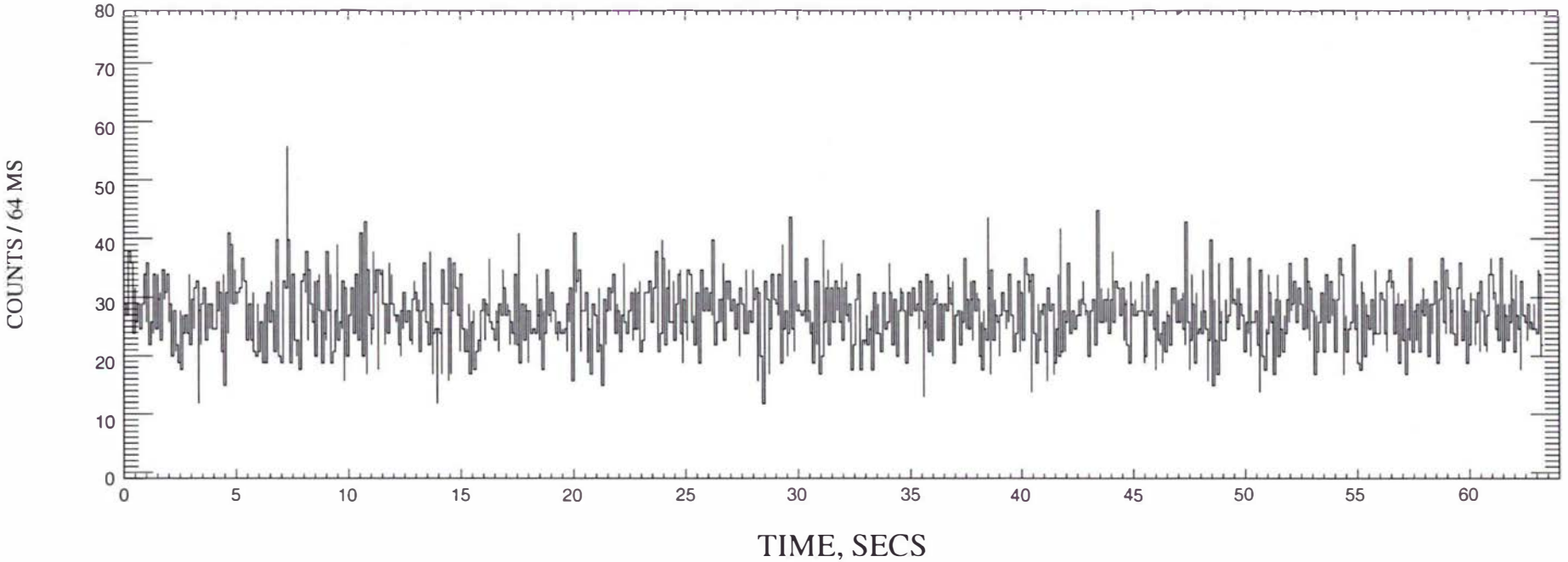
CALIBRATION DATA INCLUDED

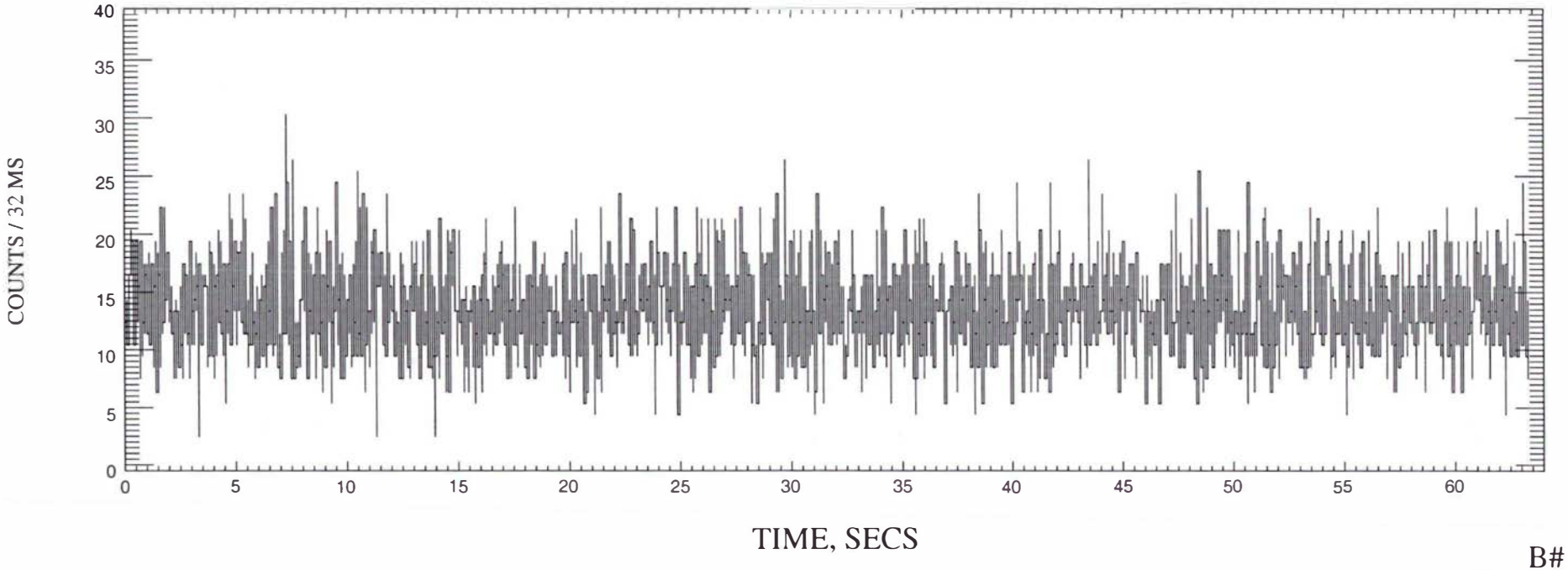


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 23/09/2001 DOY = 266 01/22/02

Burst Counter 15 at UT= 6.097084108988 h=21949.503 s 06:05:49.503

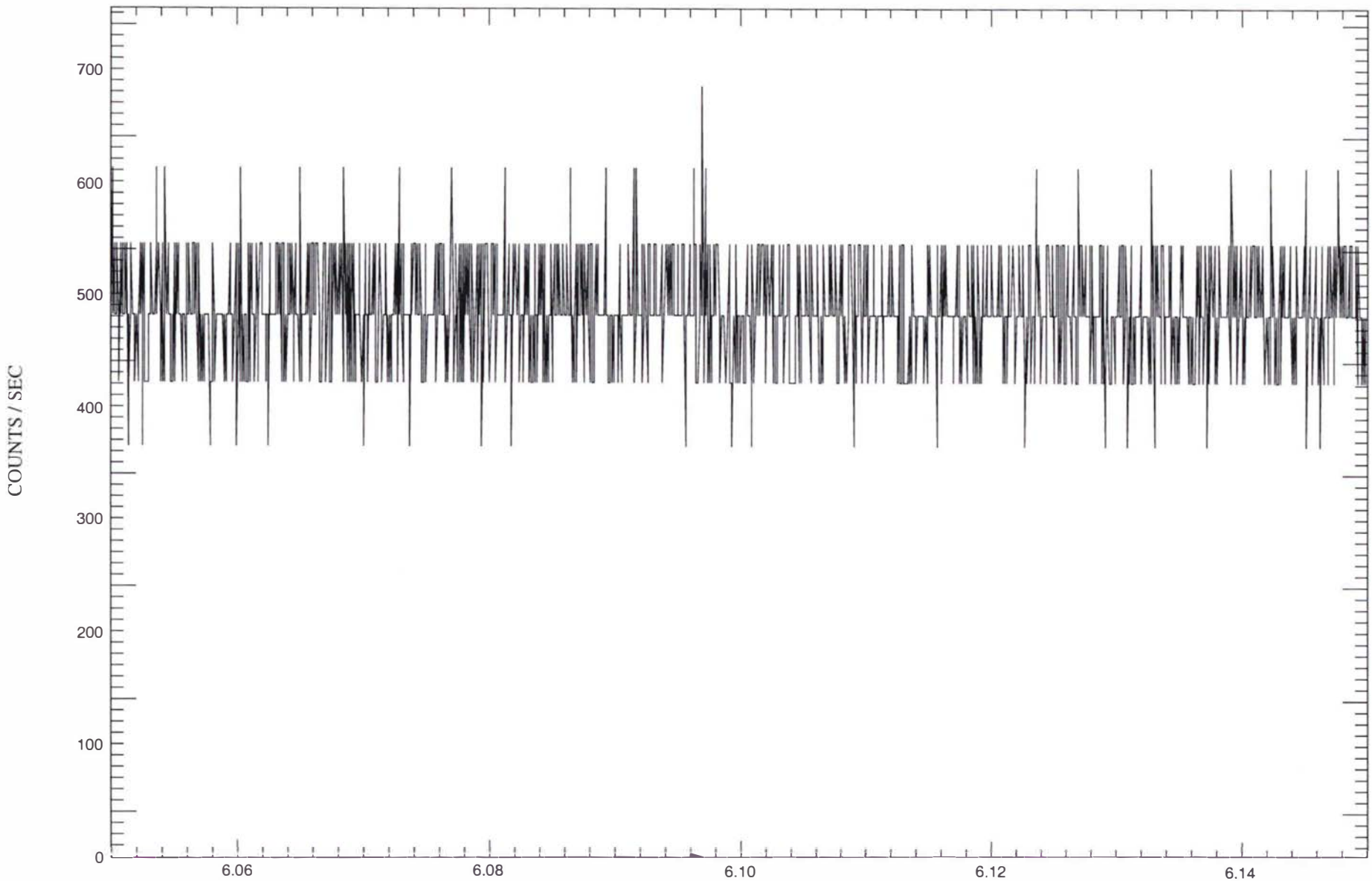




B# 1

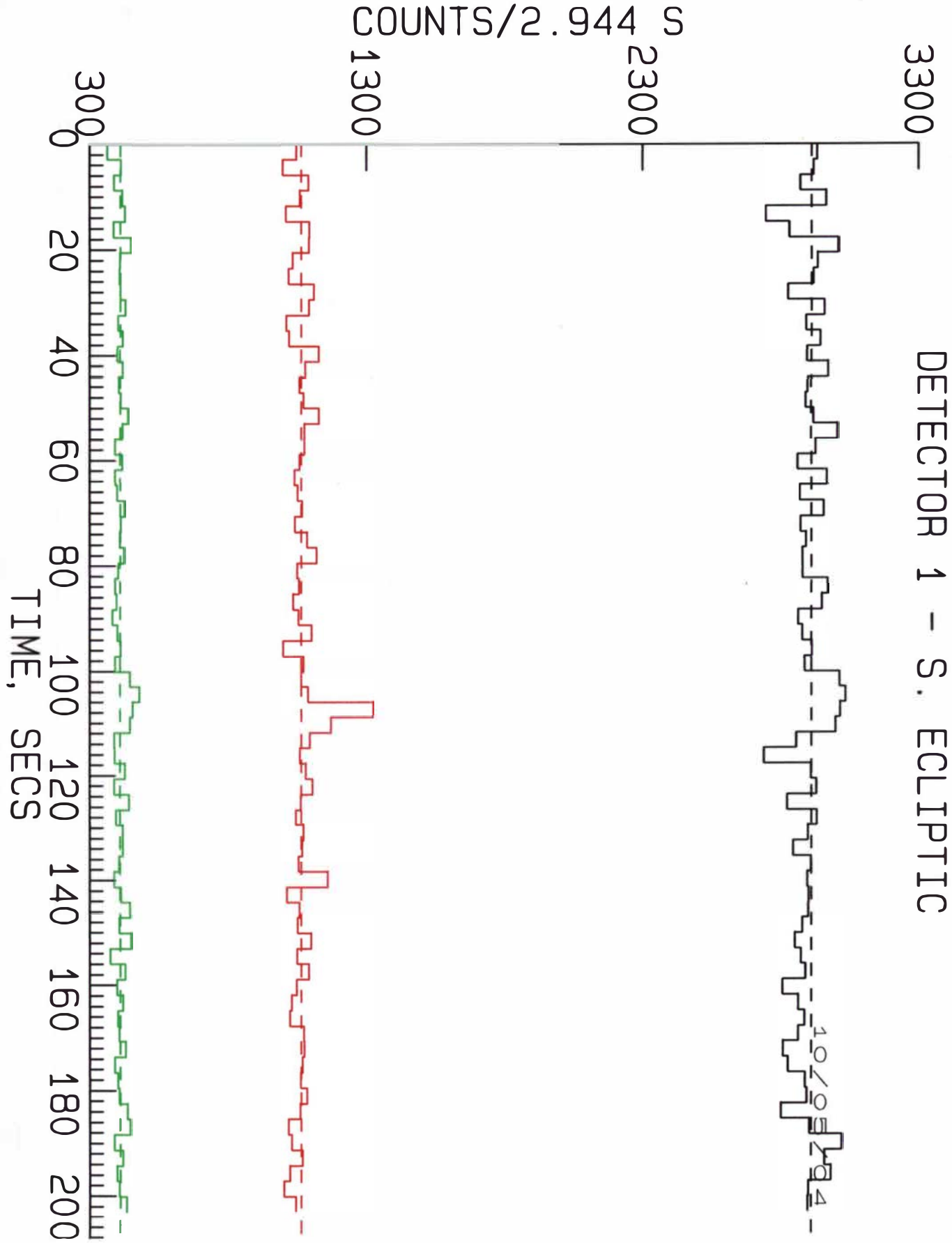
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 23/09/2001 DOY = 266 01/22/02

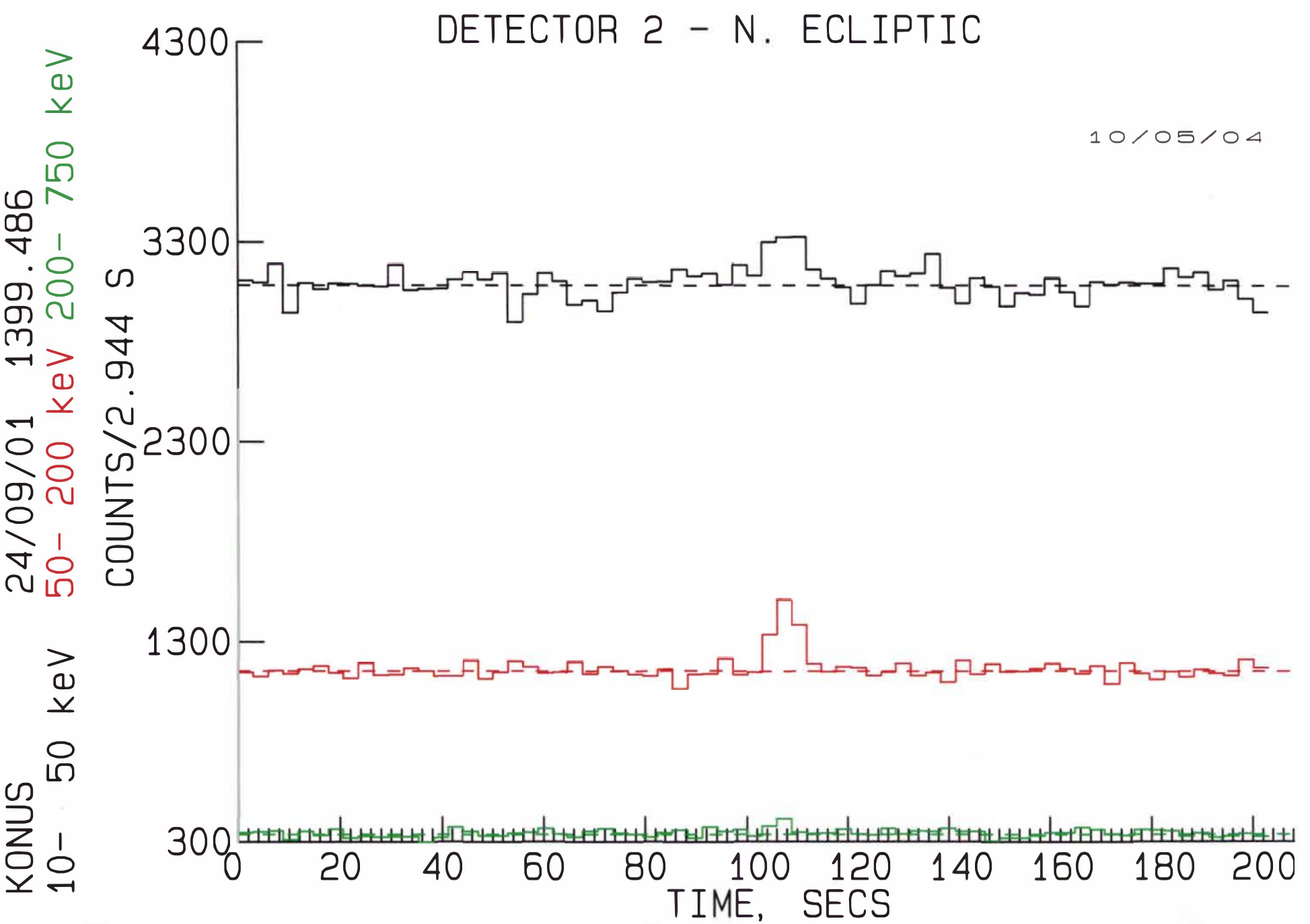
CALIBRATION DATA INCLUDED



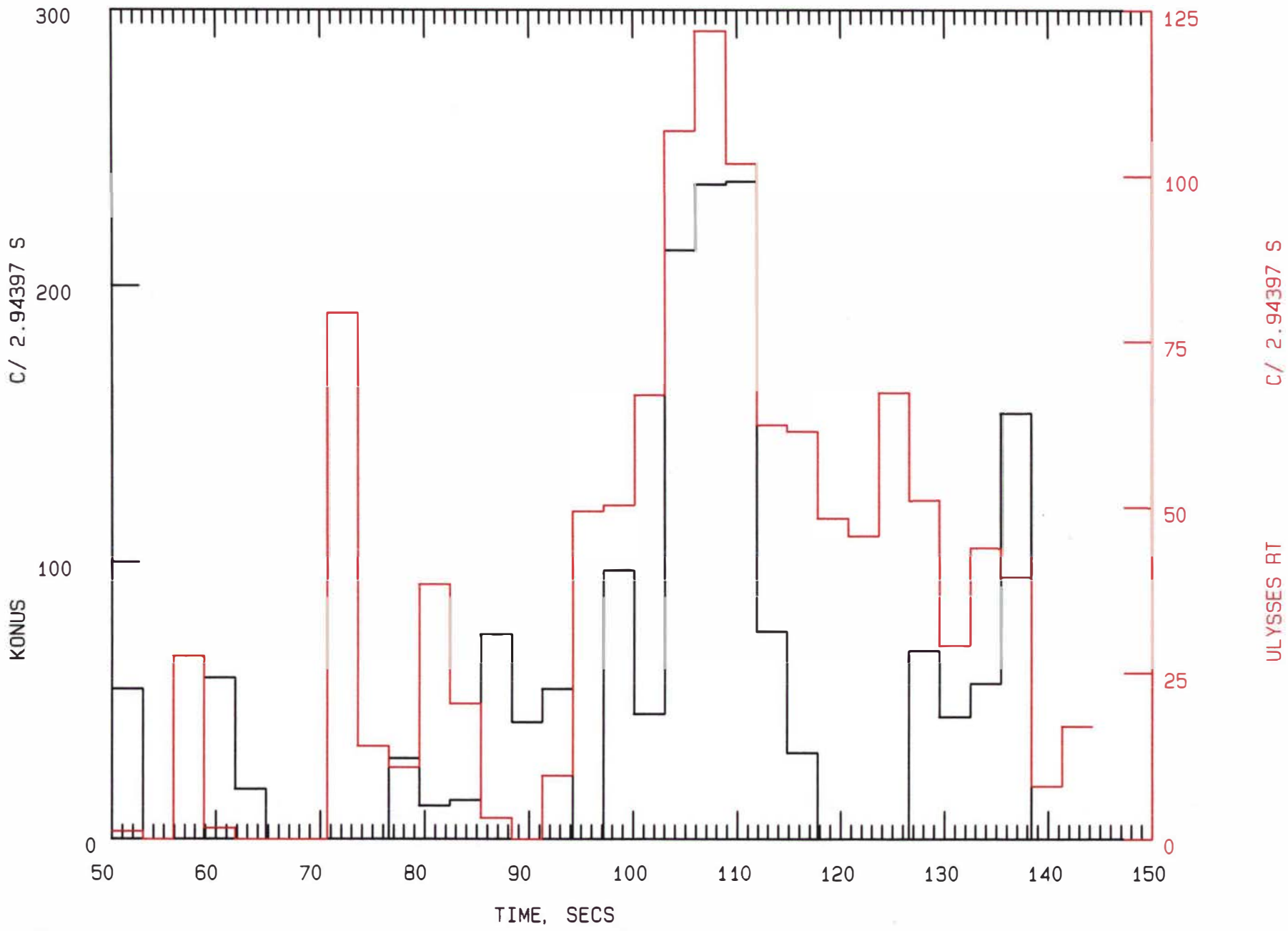
KONUS 24/09/01 1399.486

10- 50 keV 50- 200 keV 200- 750 keV



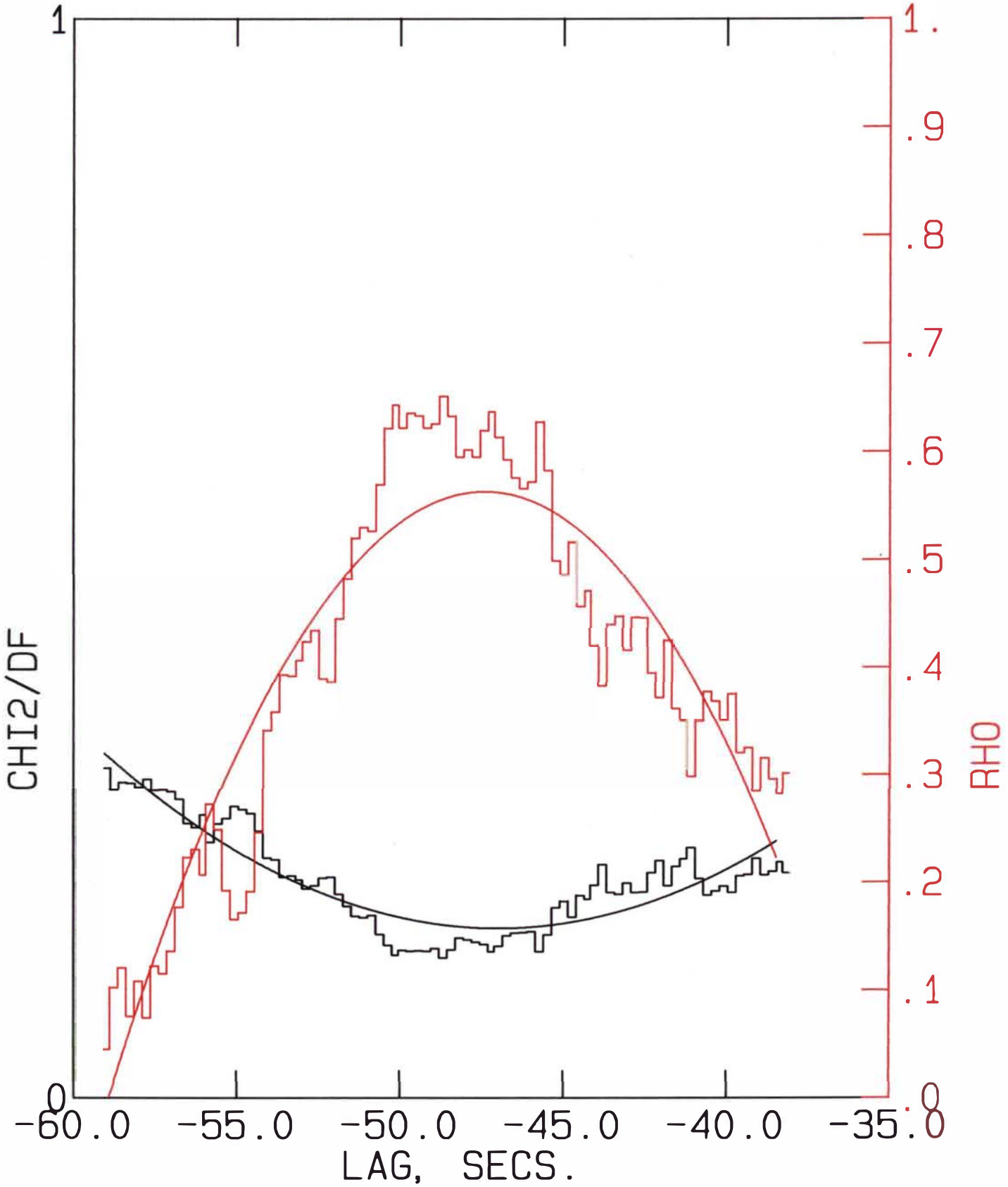

DETECTOR 2 - N. ECLIPTIC
10/05/04
KONUS 24/09/01 1399.486
10- 50 keV 50- 200 keV 200- 750 keV
COUNTS/2.944 S
4300
3300
2300
1300
300
0
20
40
60
80
100
120
140
160
180
200
TIME, SECS

KONUS - CH1 -ULYSSES RT CORRELATION 24/09/01 1399.486 20/ 5/ 4

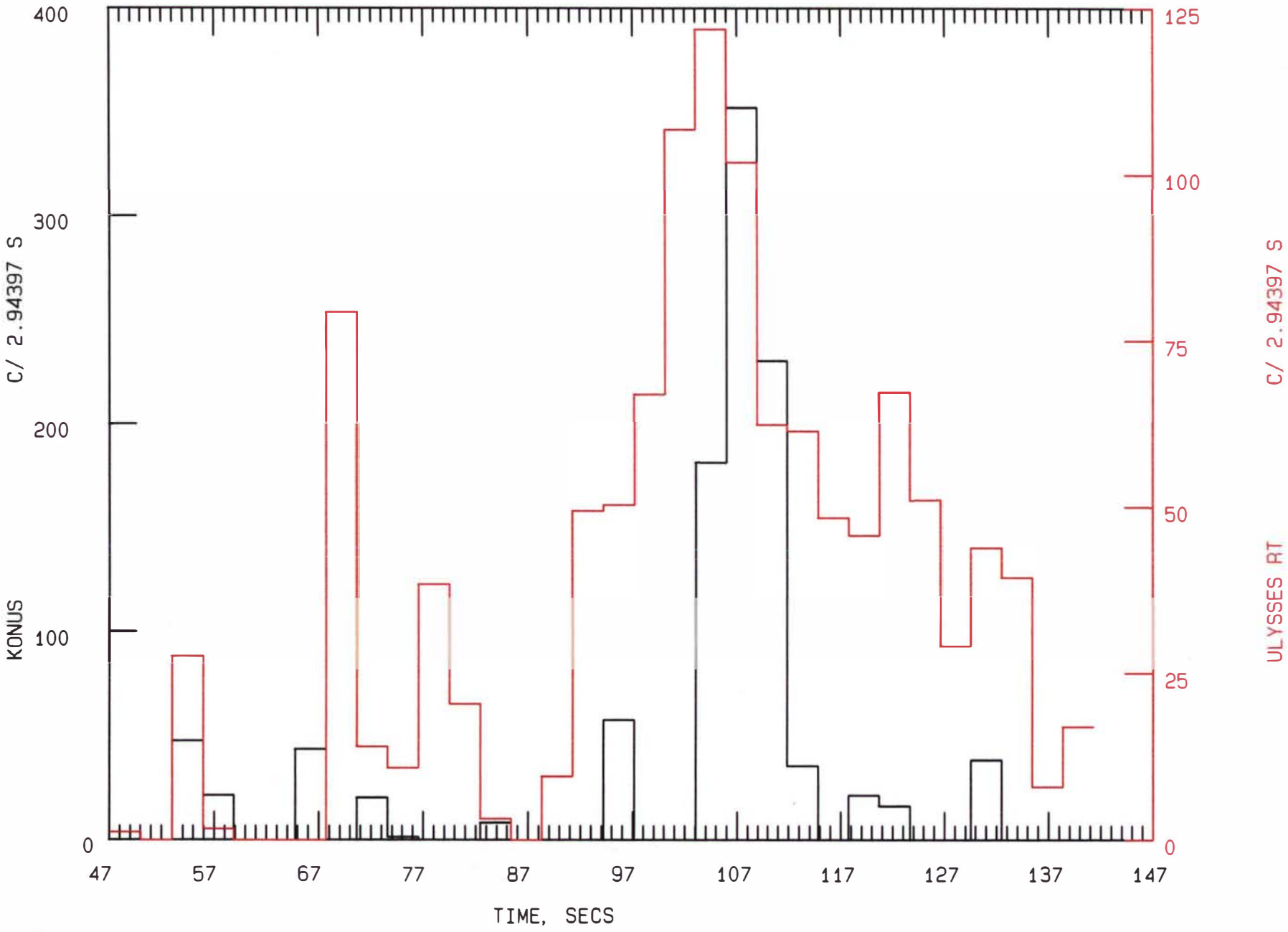


20/ 5/ 4

KONUS -ULYSSES RT CORRELATION 24/09/01 1399.486

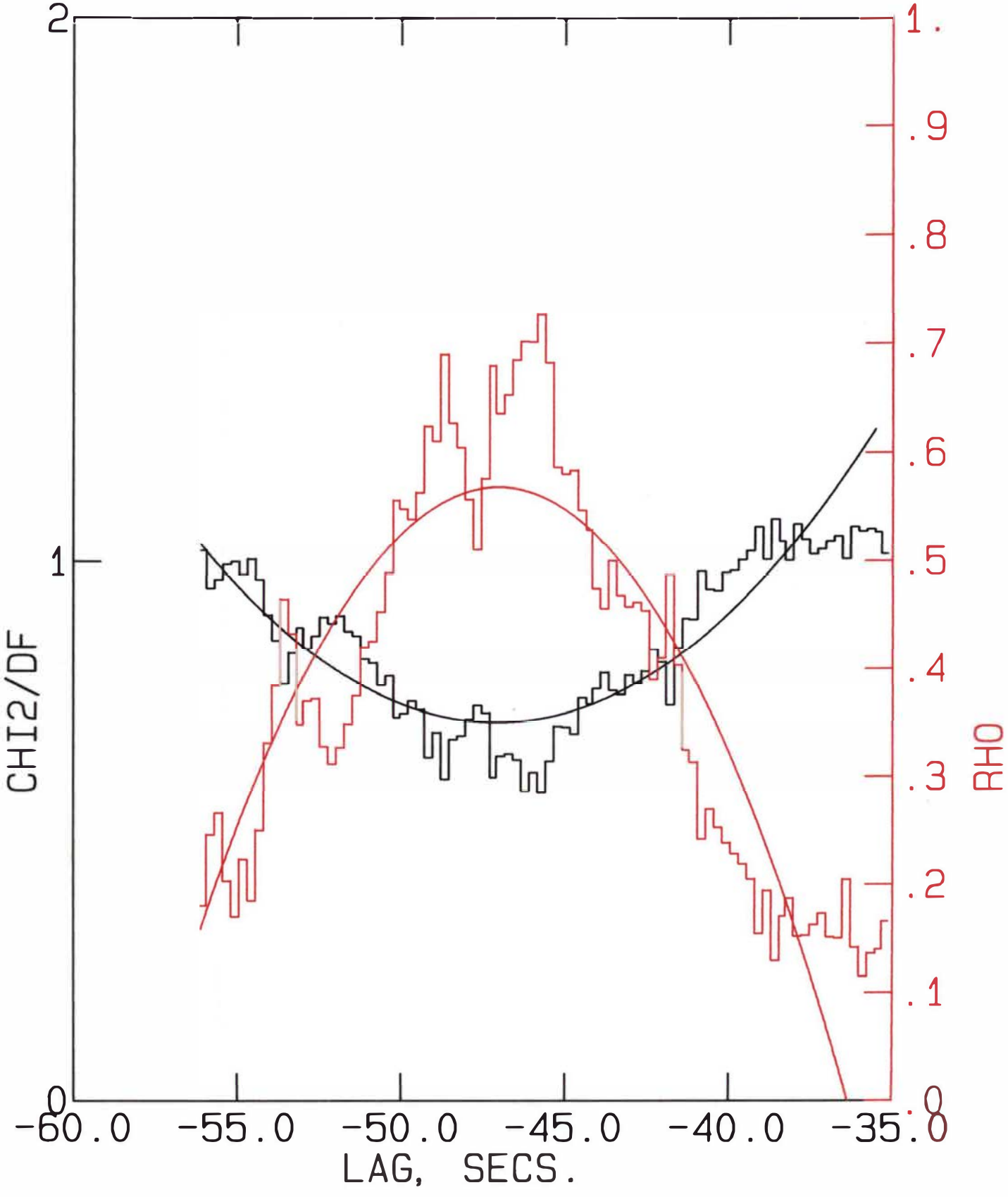


KONUS -CH2 -ULYSSES RT CORRELATION 24/09/01 1399.486 20/ 5/ 4

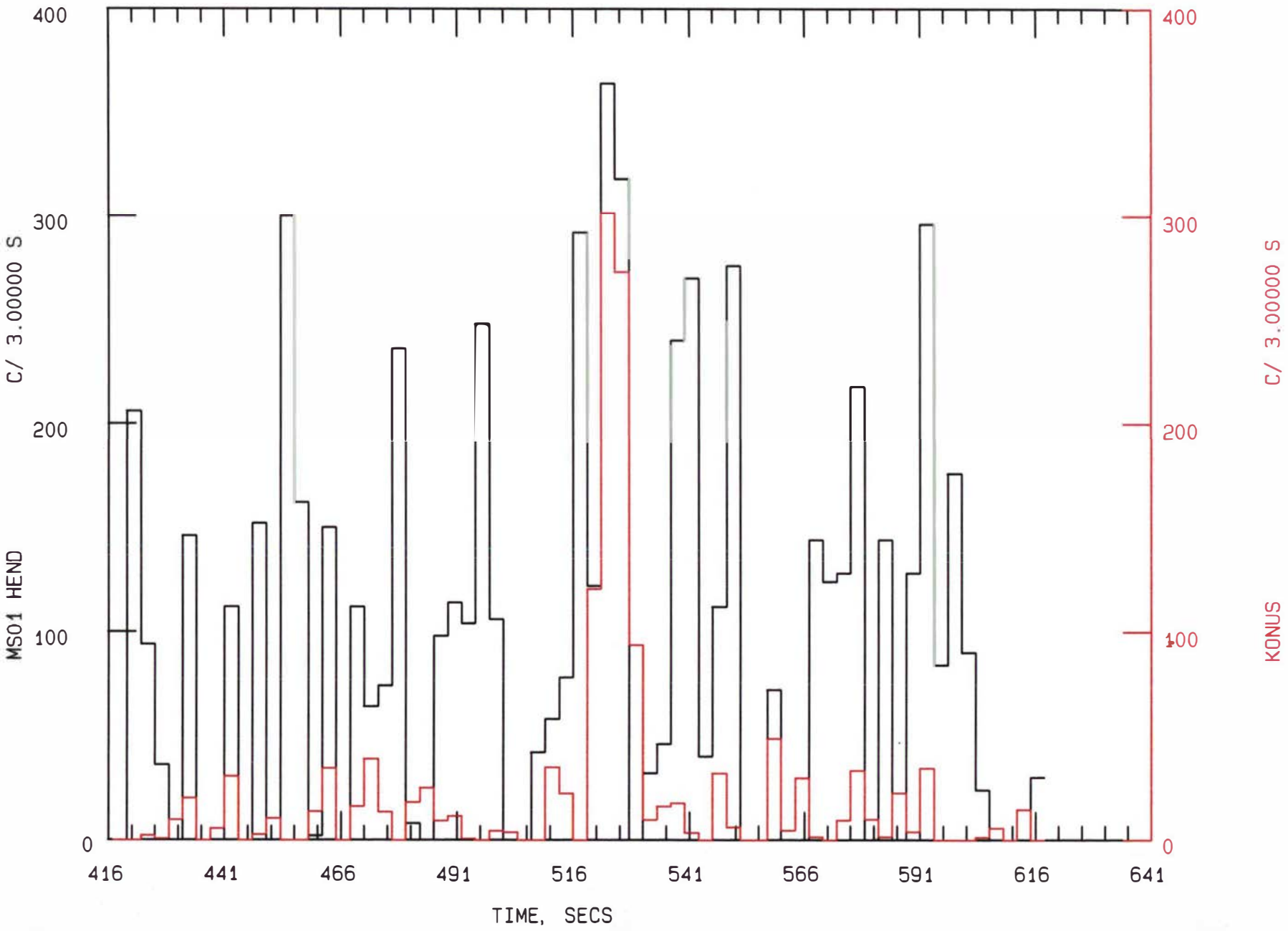


20/ 5/ 4

KONUS -ULYSSES RT CORRELATION 24/09/01 1399.486

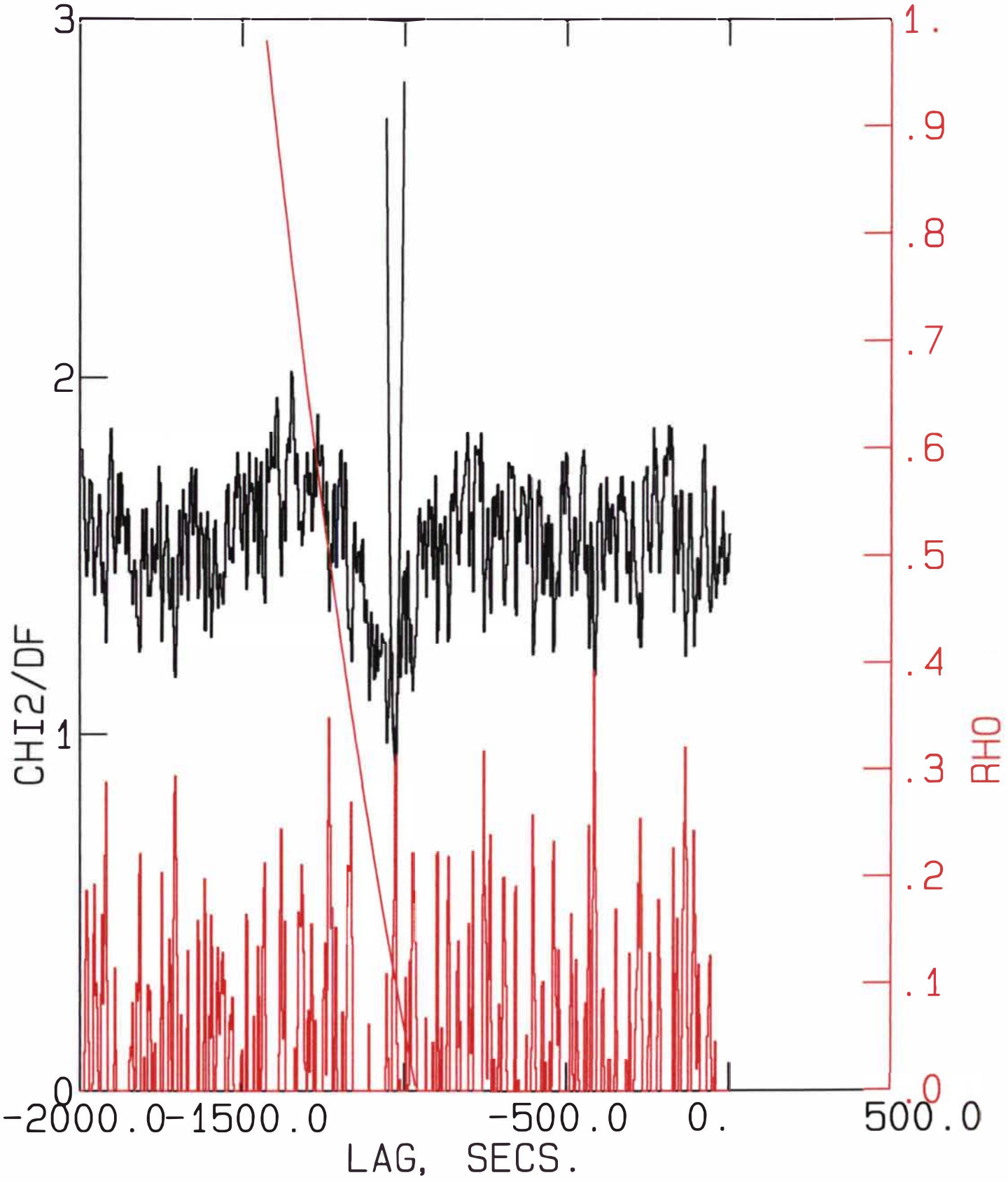


MS01 HEND -KONUS CORRELATION 24/09/01 135.533 20/ 5/ 4



20/ 5/ 4

MS01 HEND -KONUS CORRELATION 24/09/01 135.533



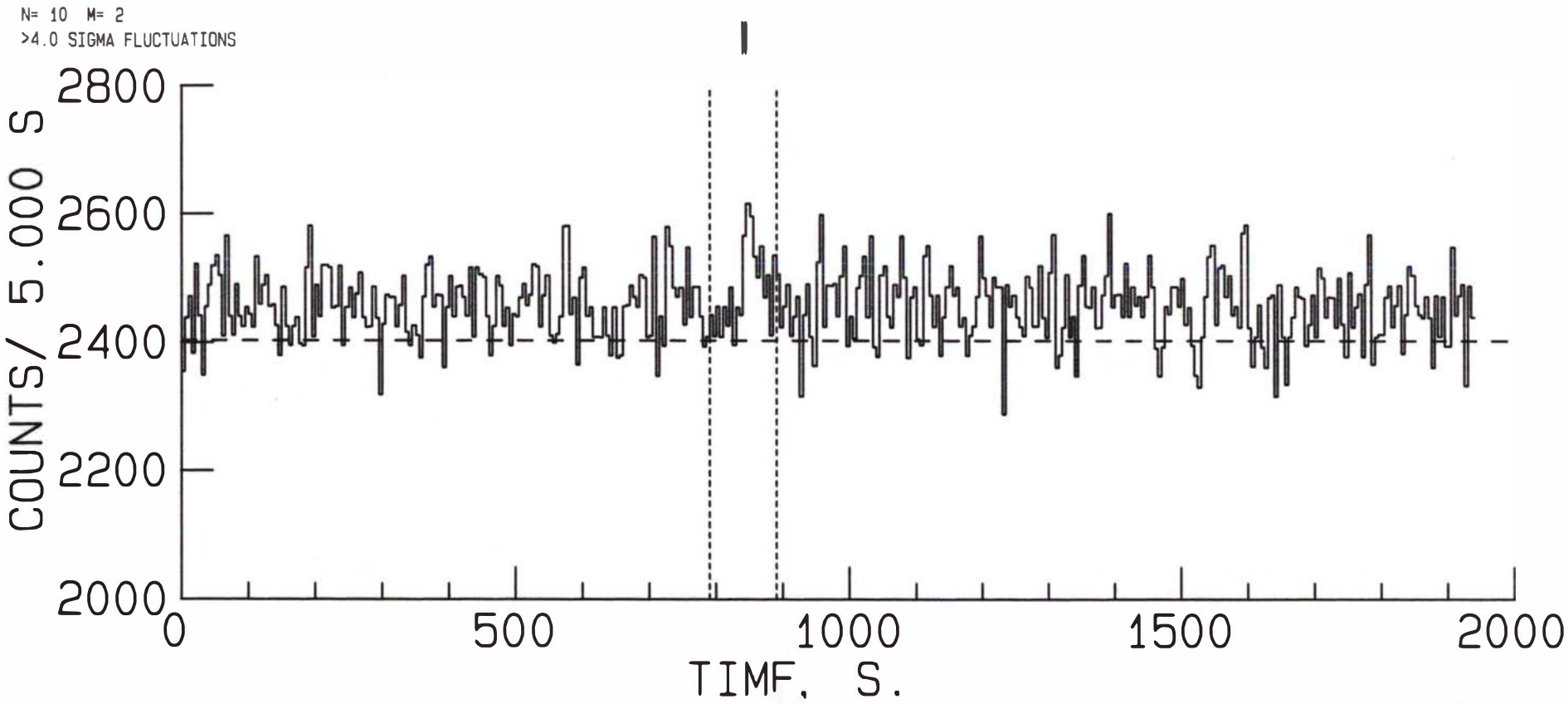
ULYSSES RT

20/ 5/ 4

24/ 9/ 1 540.222 s

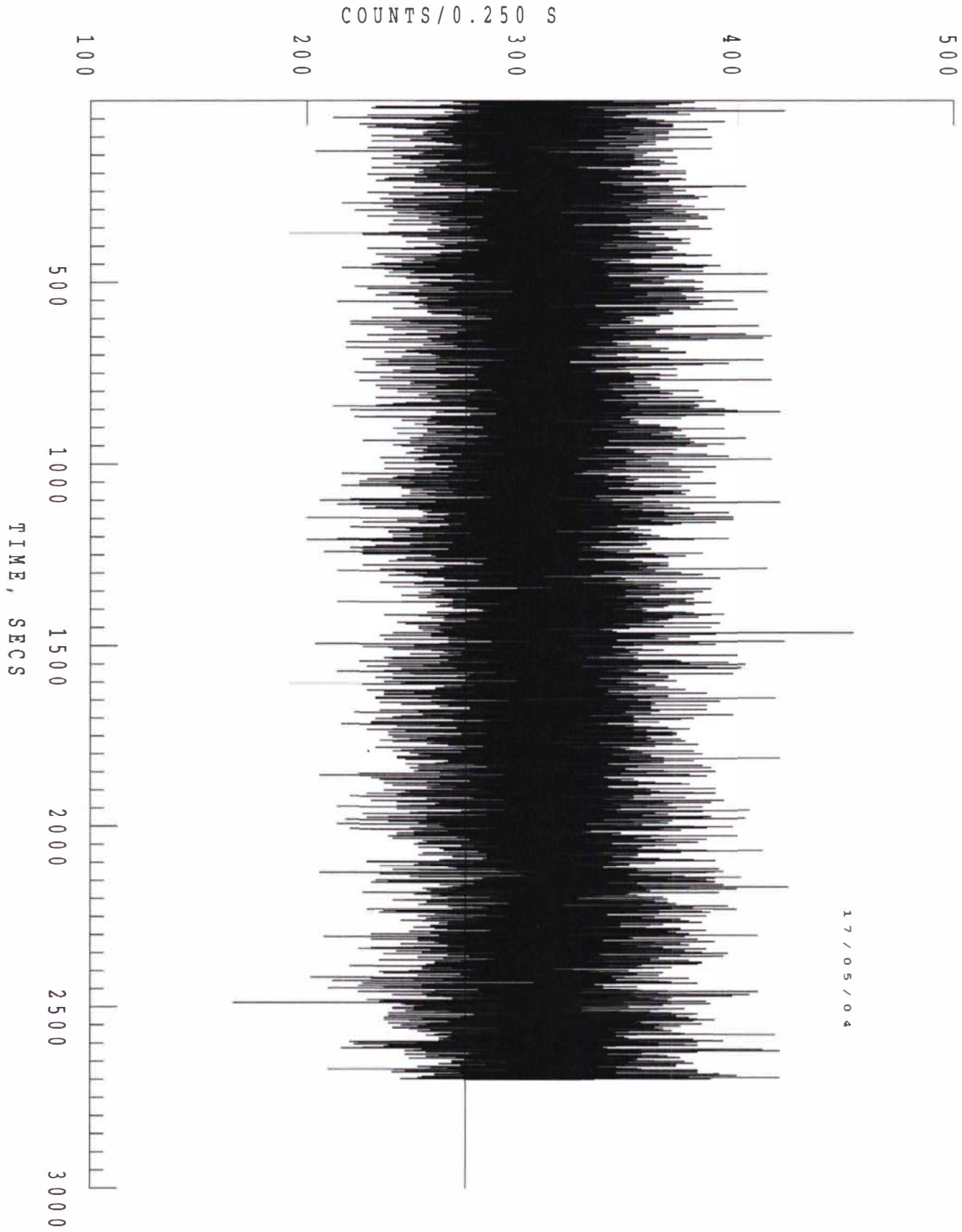
0.250 S INTERVALS REGROUPED BY 20

22- 151 keV



MS01 24/09/01 135.533

50- 3000 keV

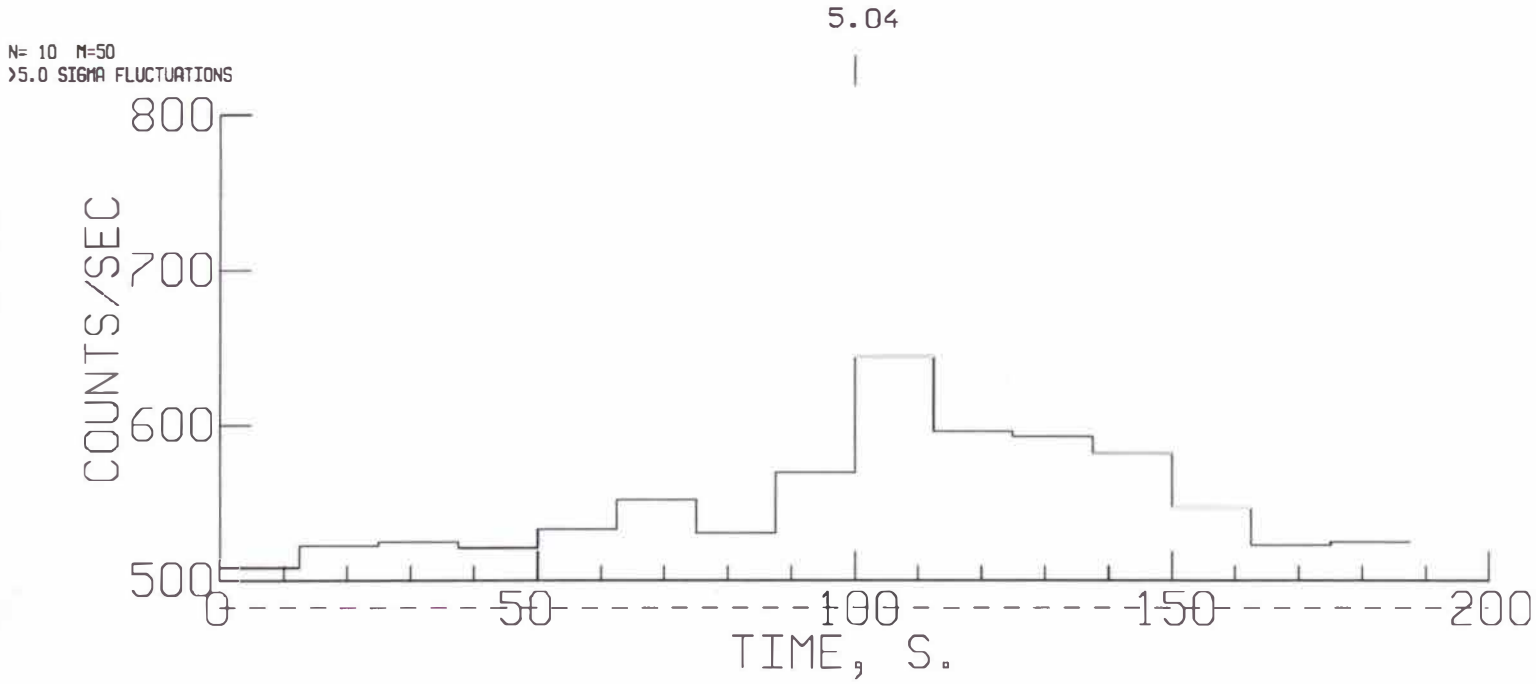


ULYSSES RT 29/ 9/ 1

24/ 9/ 1 61600.917 s

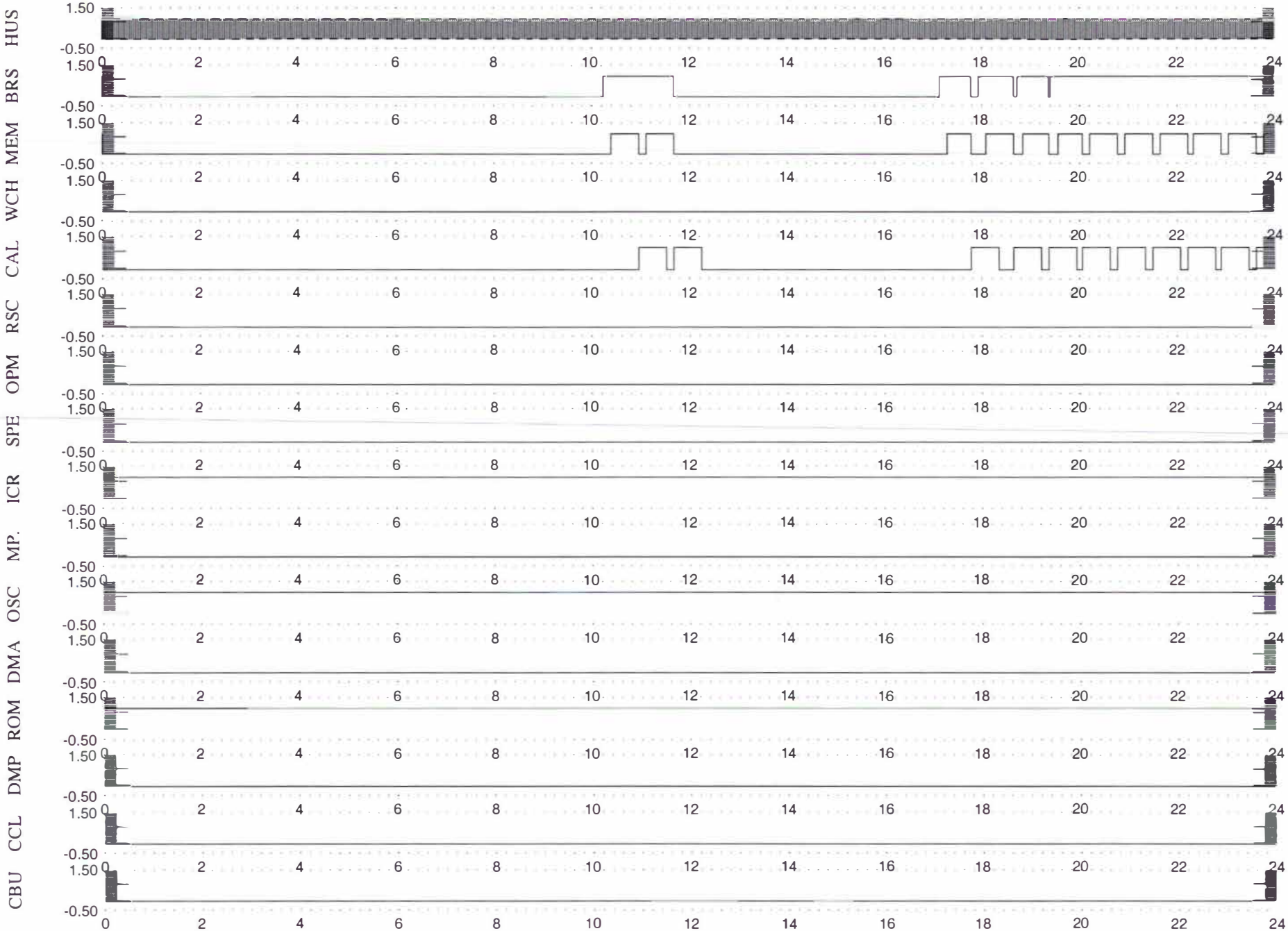
0.250 S INTERVALS REGROUPED BY 50

22- 150 keV



HUS MODES EDR day 267, year 2001 to day 267, year 2001 01/22/02

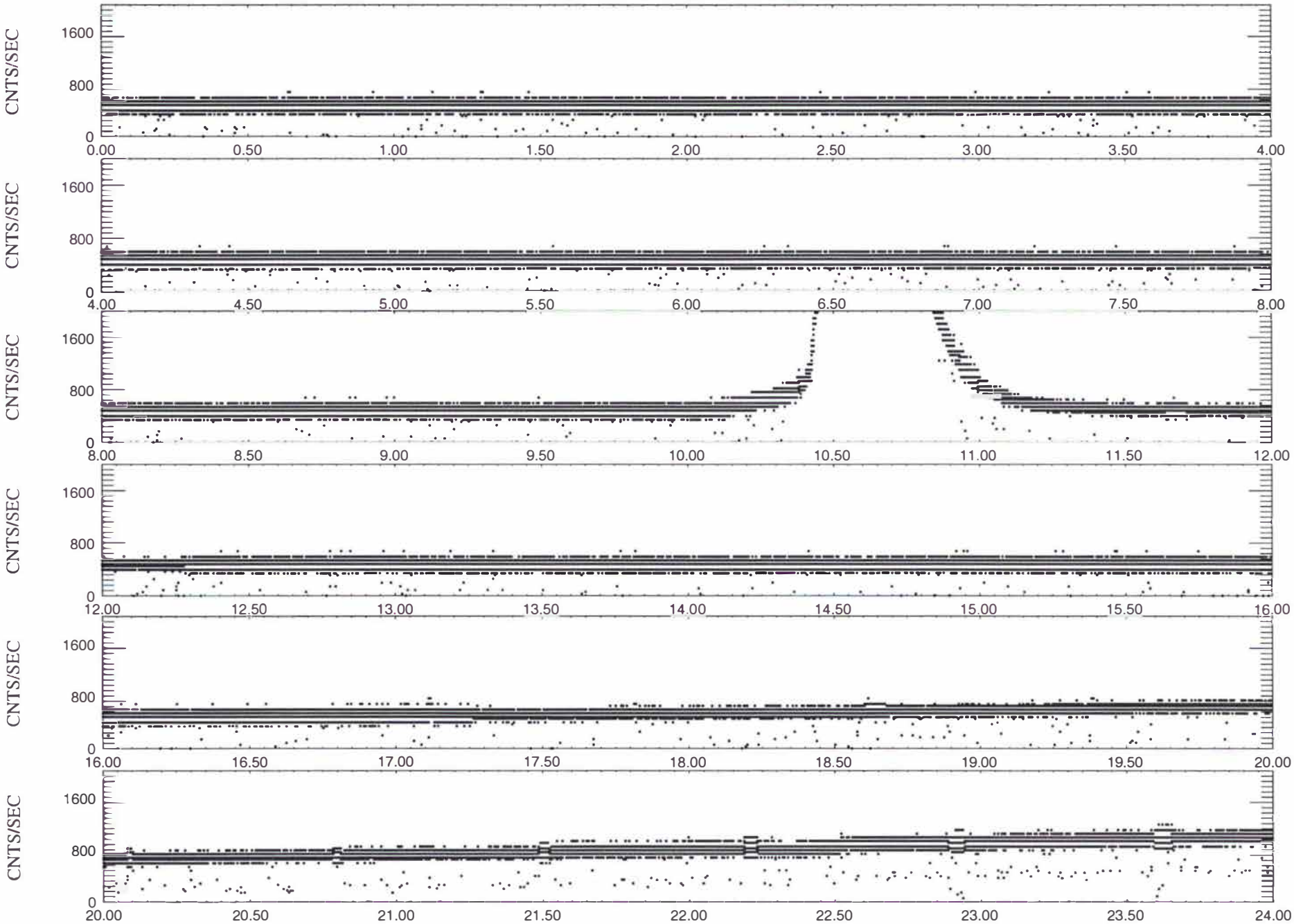
BURST NUMBER 0 - 11



UNIV SAL TIME

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 24/09/2001 DOY = 267 01/22/02

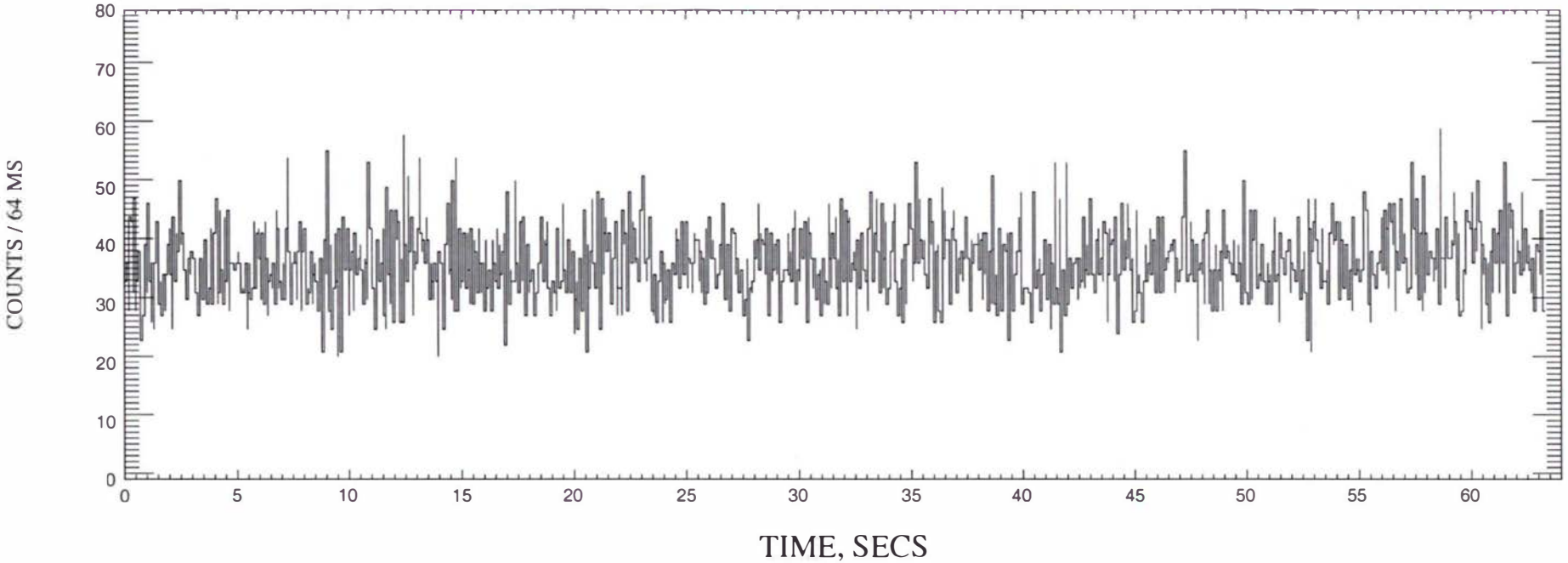
CALIBRATION DATA INCLUDED

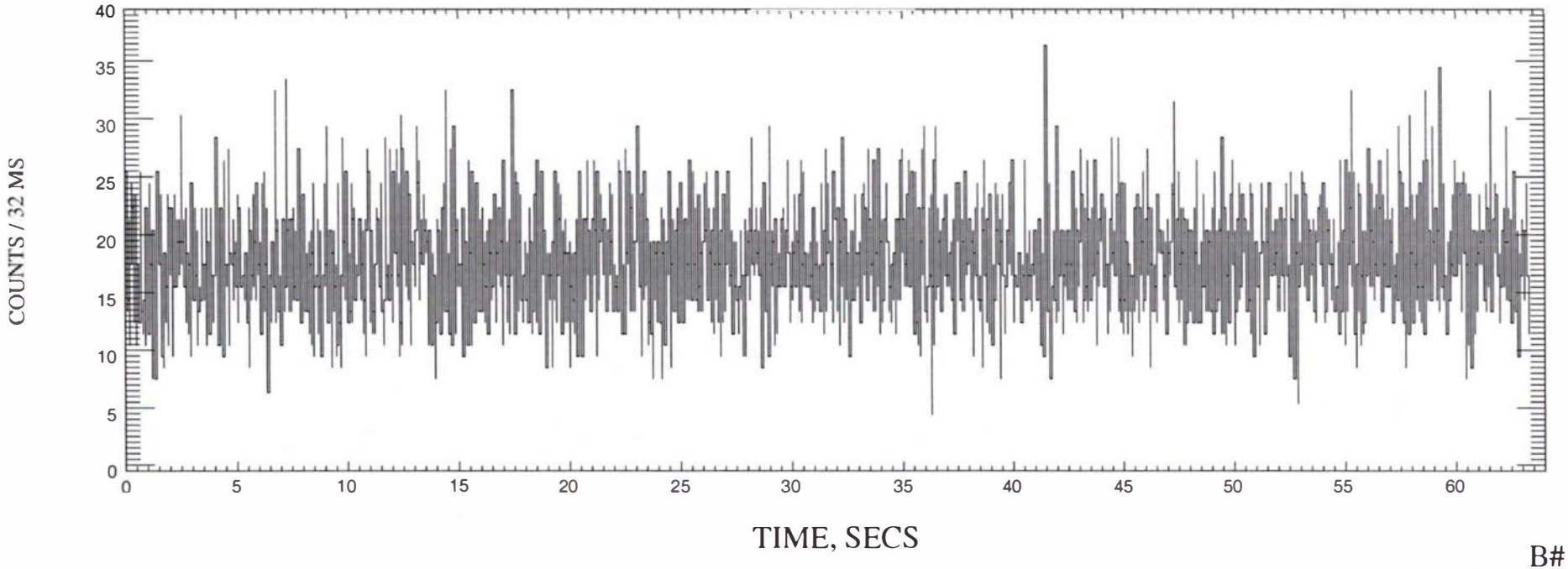


UNIVERSAL TIME

HUS 2A TRIGGERED DATA EDR DMY = 24/09/2001 DOY = 267 01/22/02

Burst Counter 0 at UT=10.228126915826 h=36821.257 s 10:13:41.257

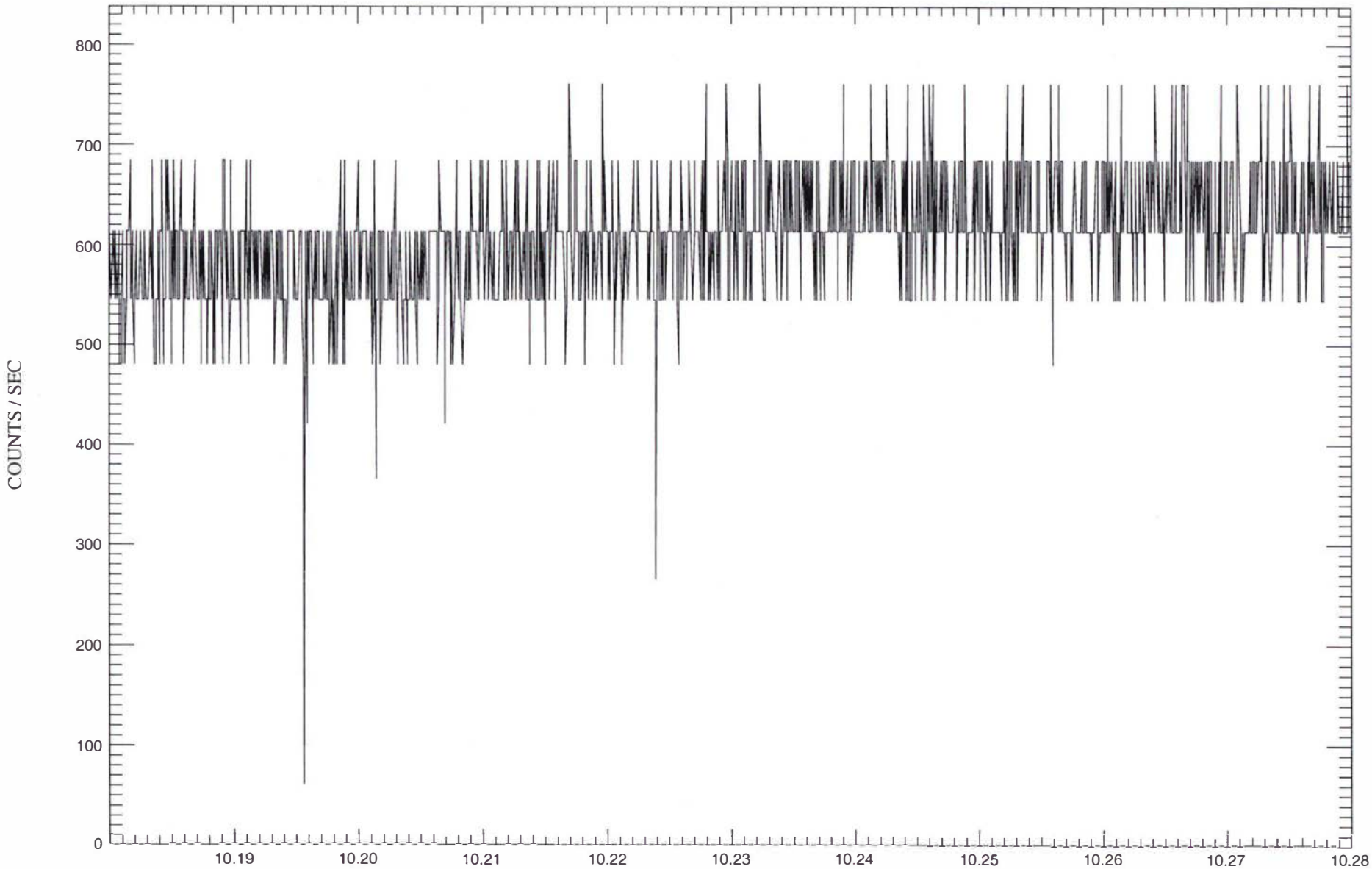




B# 1

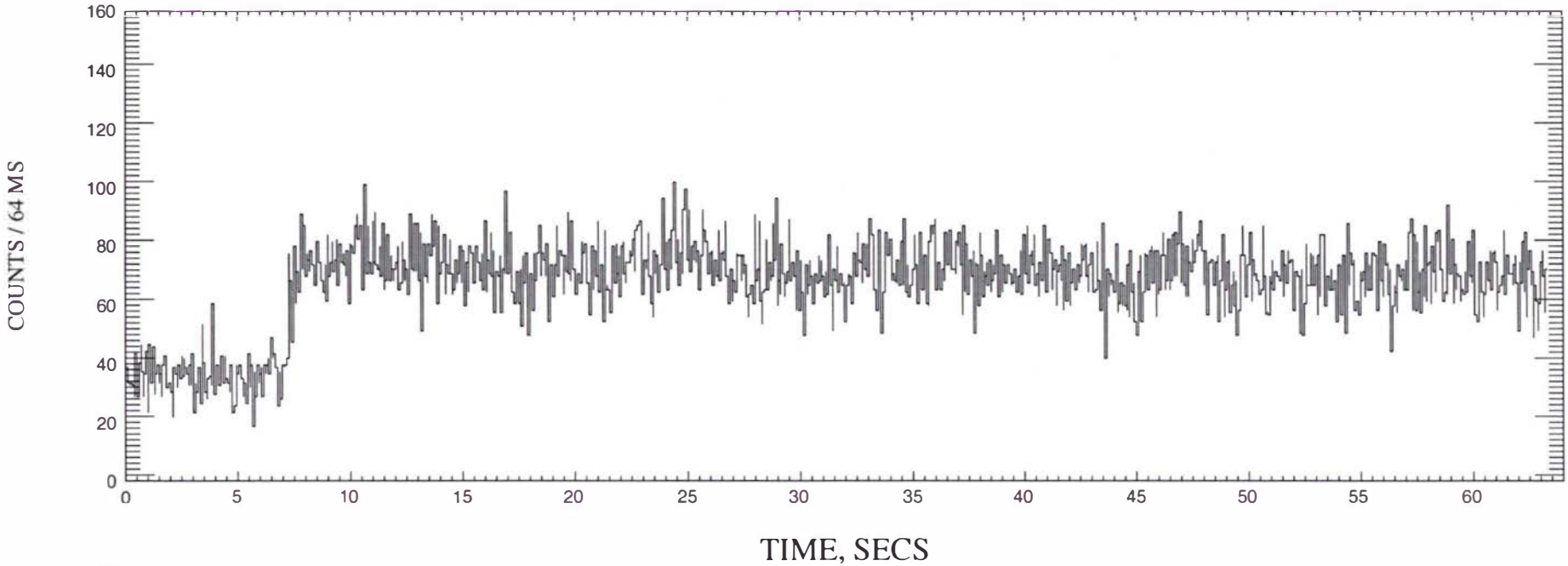
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 24/09/2001 DOY = 267 01/22/02

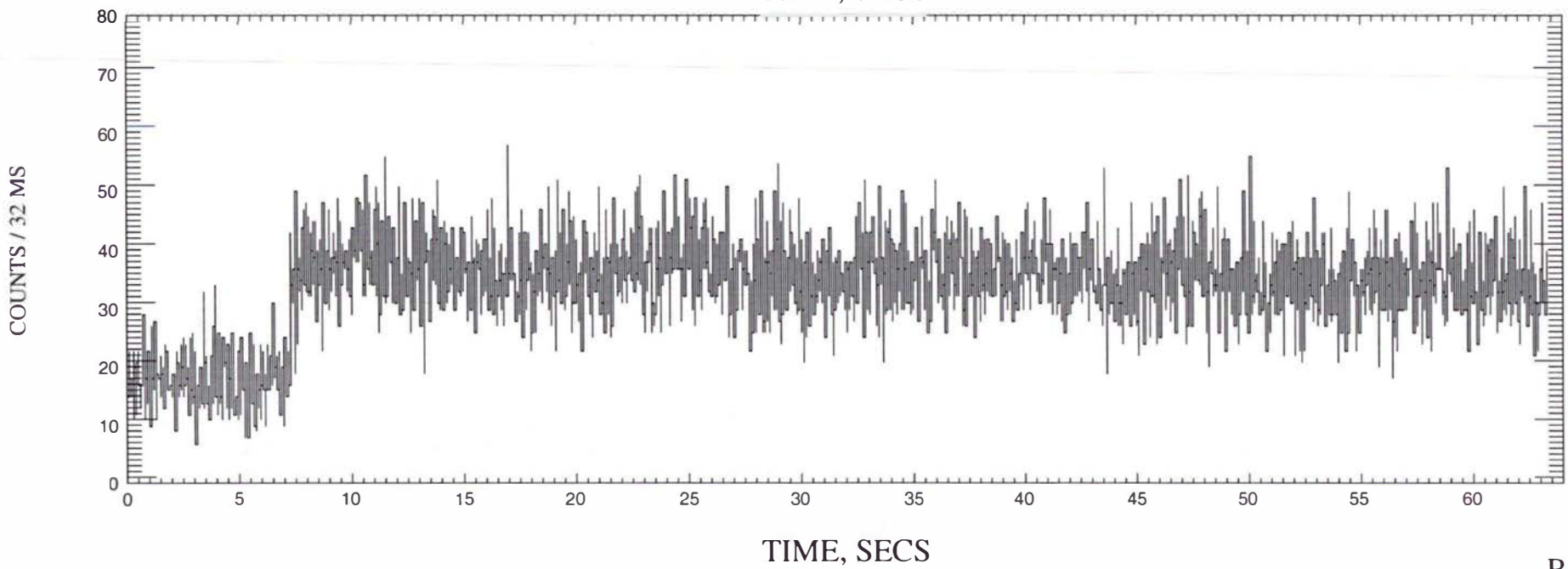
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 24/09/2001 DOY = 267 01/22/02

Burst Counter 1 at UT=10.931495513916 h=39353.384 s 10:55:53.384

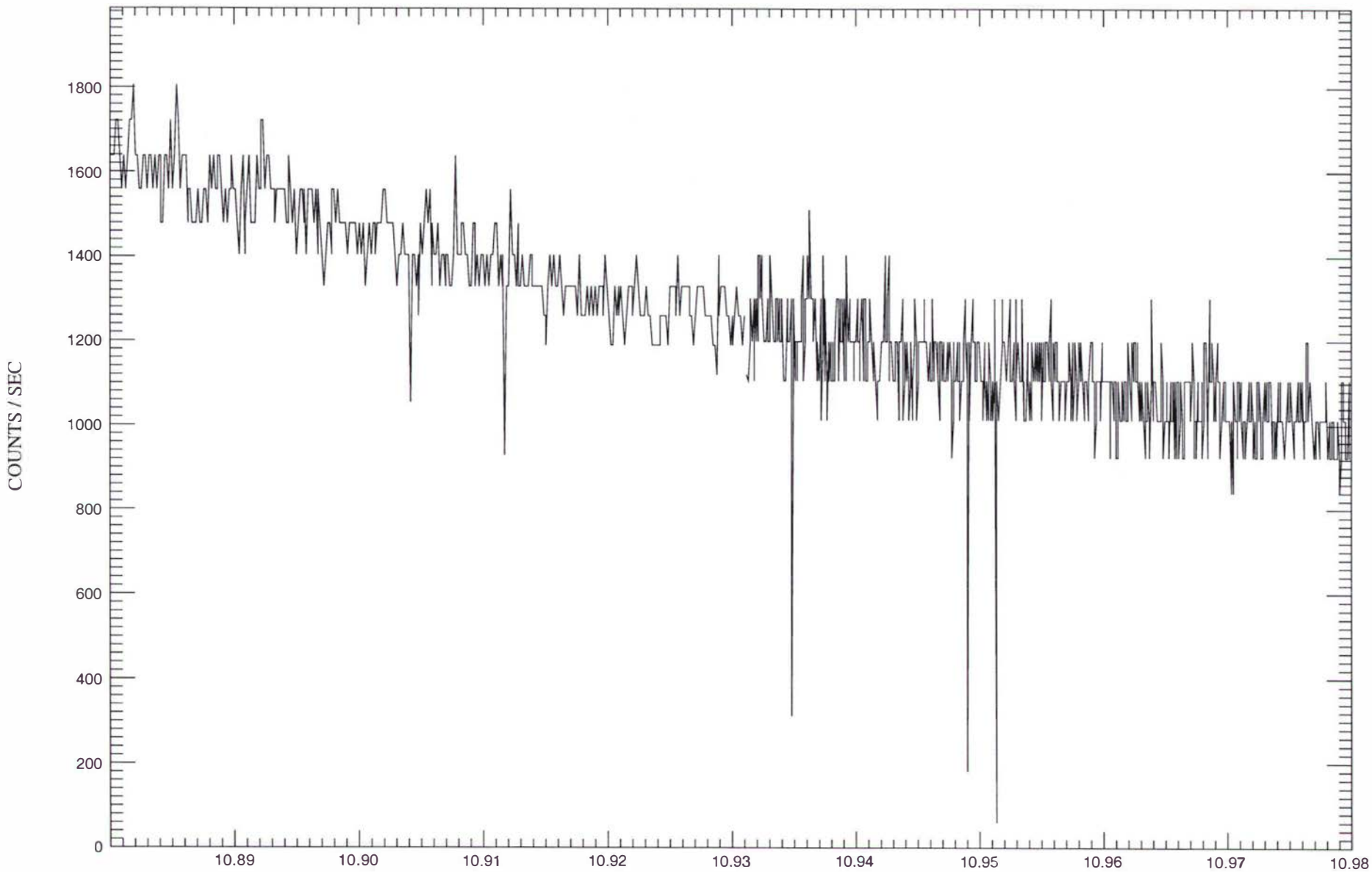




B# 2

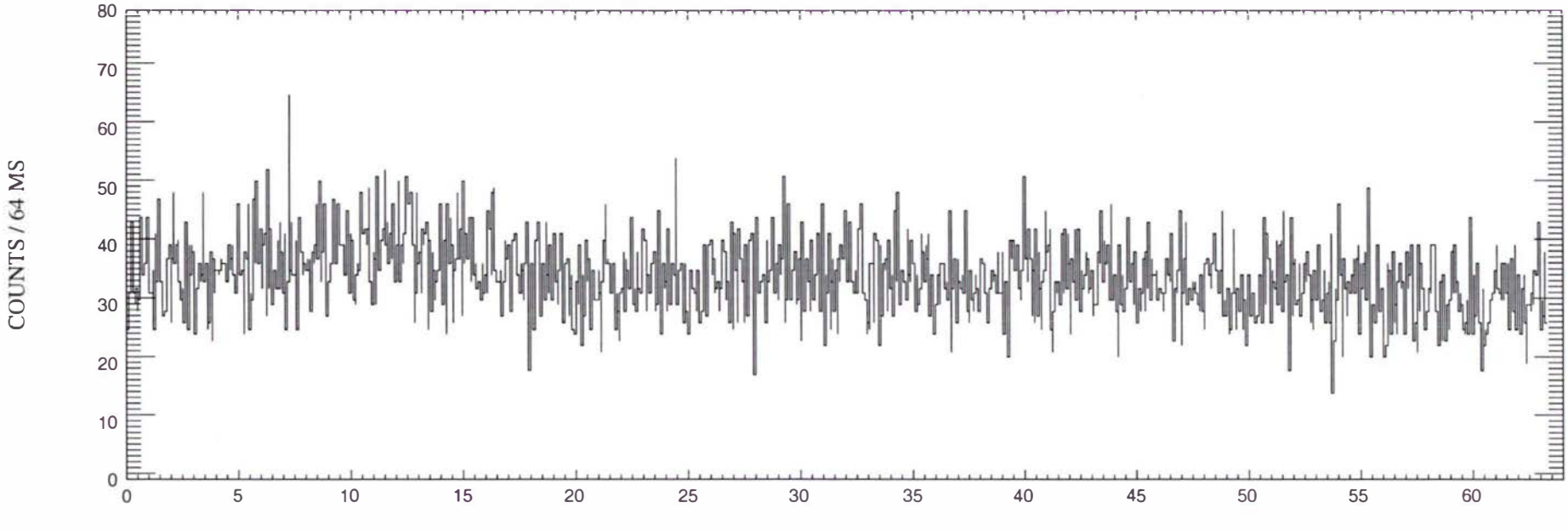
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 24/09/2001 DOY = 267 01/22/02

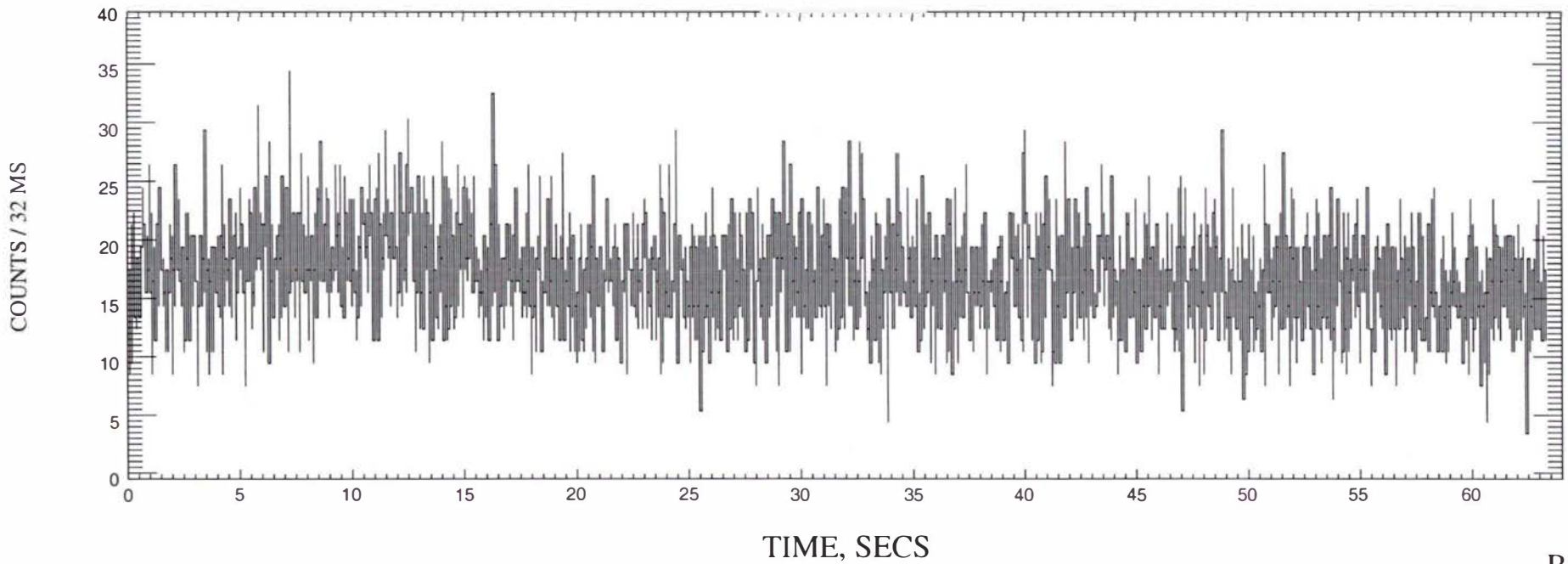
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 24/09/2001 DOY = 267 01/22/02

Burst Counter 2 at UT=17.112959675259 h=61606.655 s 17:06:46.655

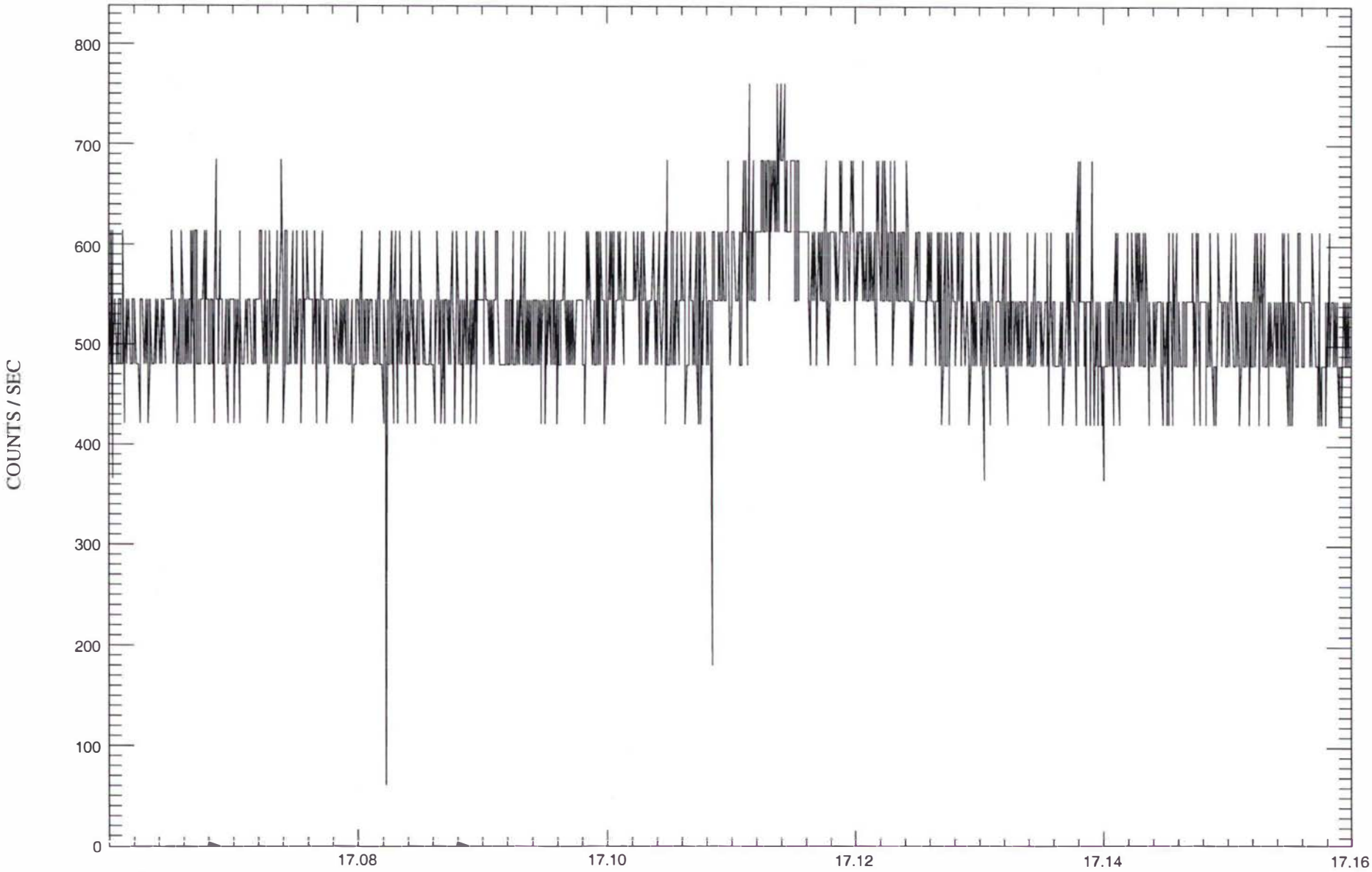




B# 3

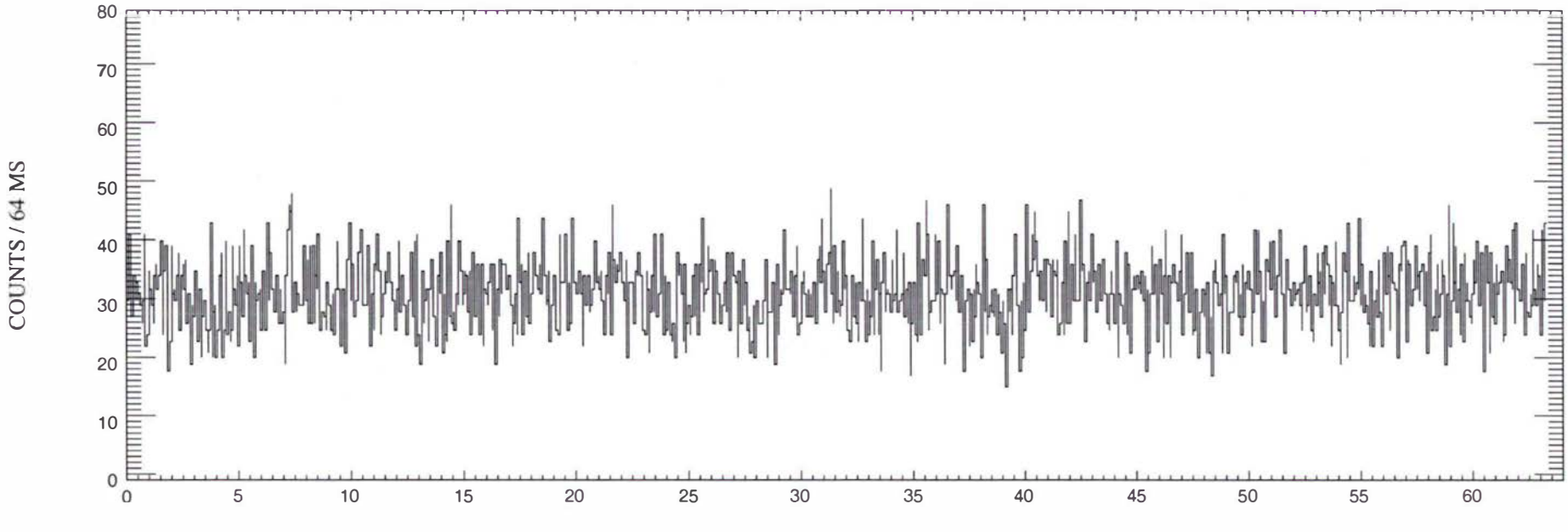
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 24/09/2001 DOY = 267 01/22/02

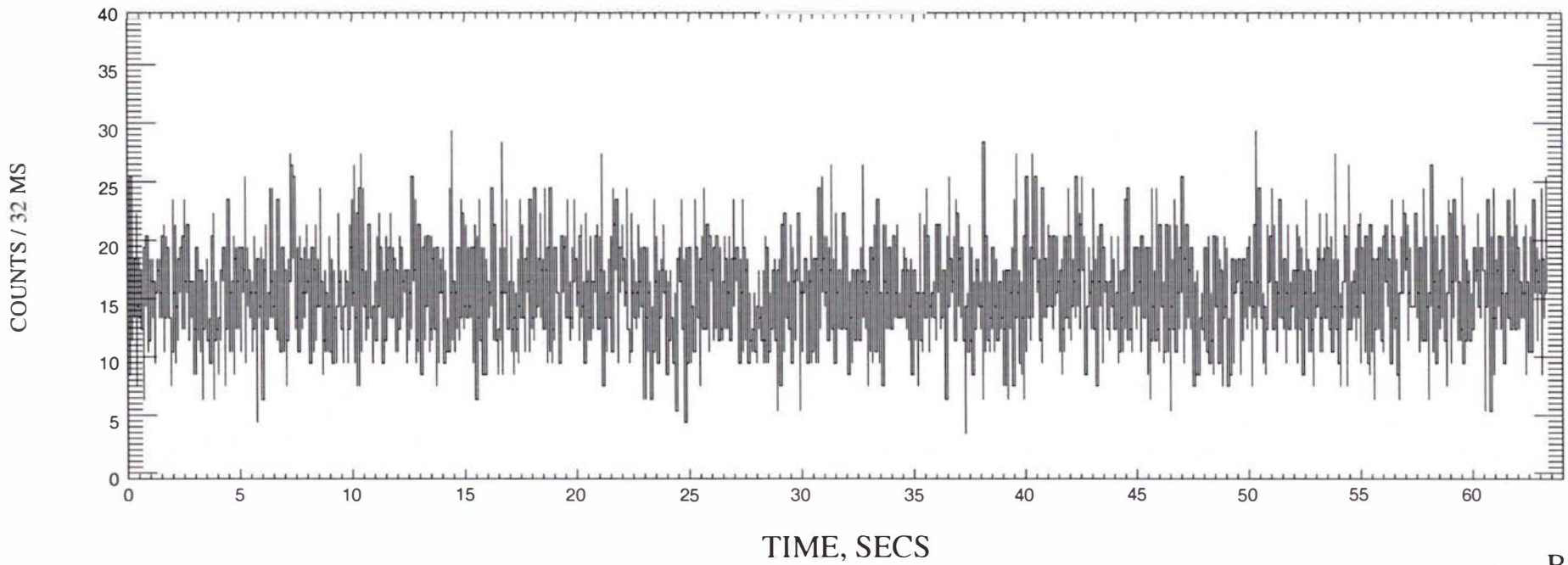
CALIBRATION DATA INCLUDED



HUS 2A TRIGGERED DATA EDR DMY = 24/09/2001 DOY = 267 01/22/02

Burst Counter 3 at UT=17.897798597548 h=64432.075 s 17:53:52.075

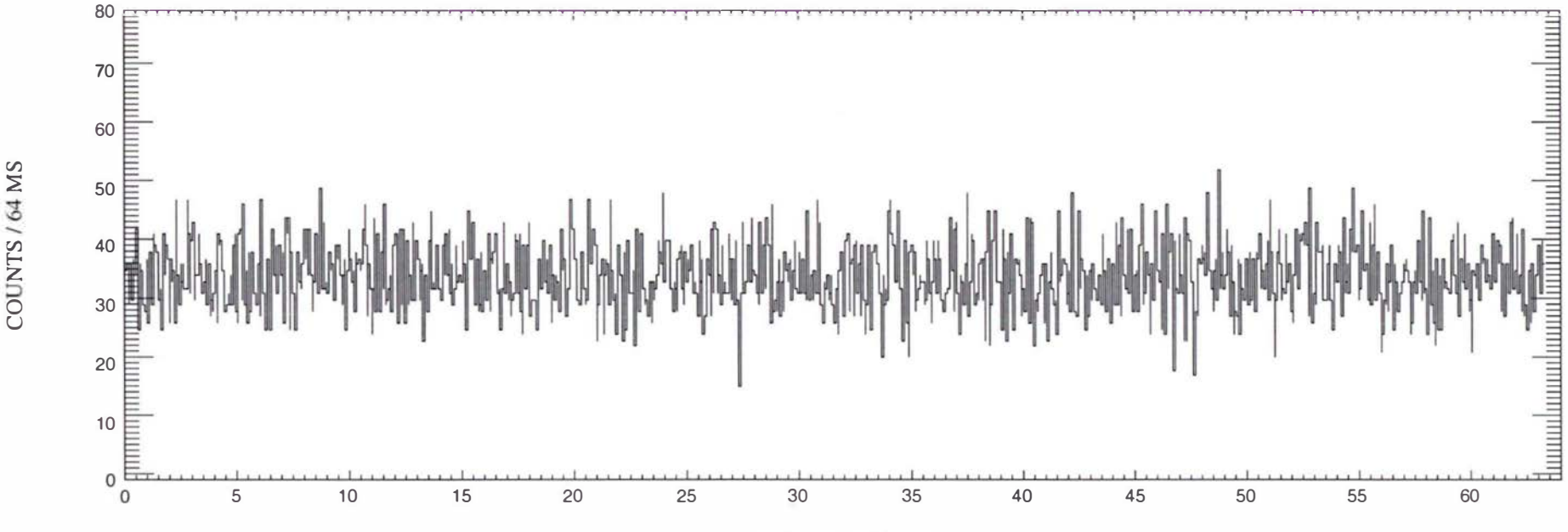


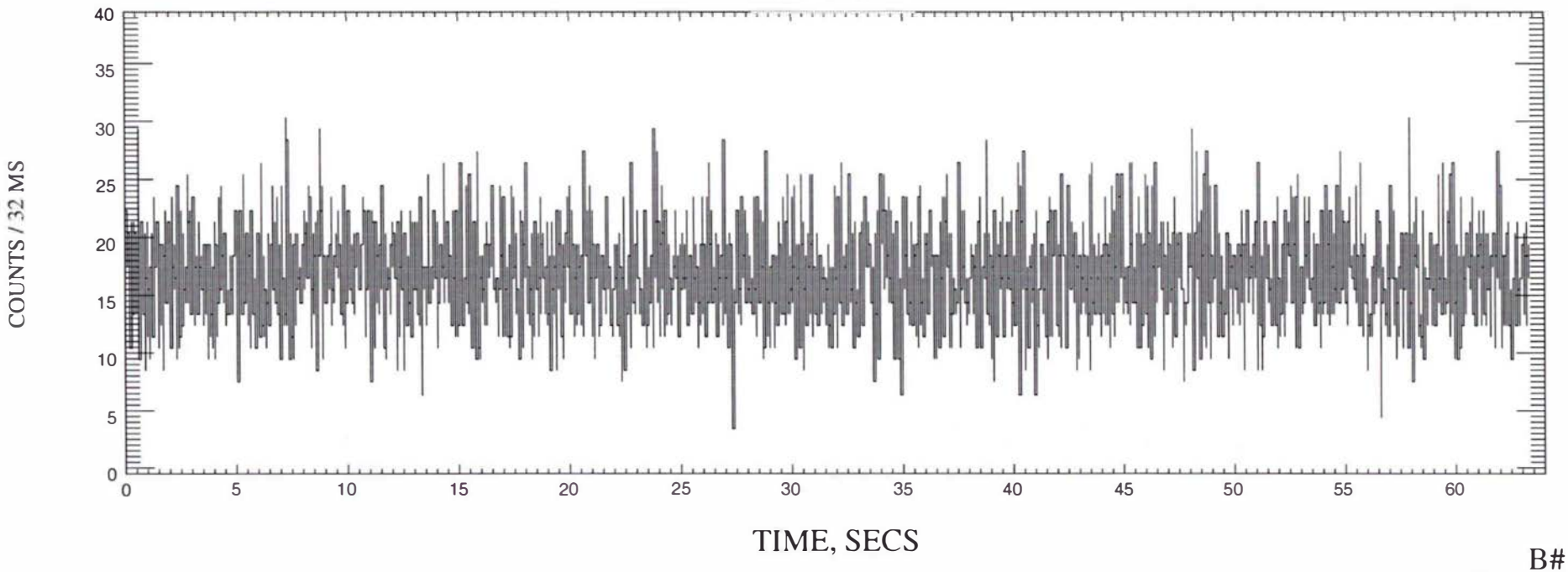


B# 4

HUS 2A TRIGGERED DATA EDR DMY = 24/09/2001 DOY = 267 01/22/02

Burst Counter 4 at UT=18.678331968519 h=67241.995 s 18:40:41.995

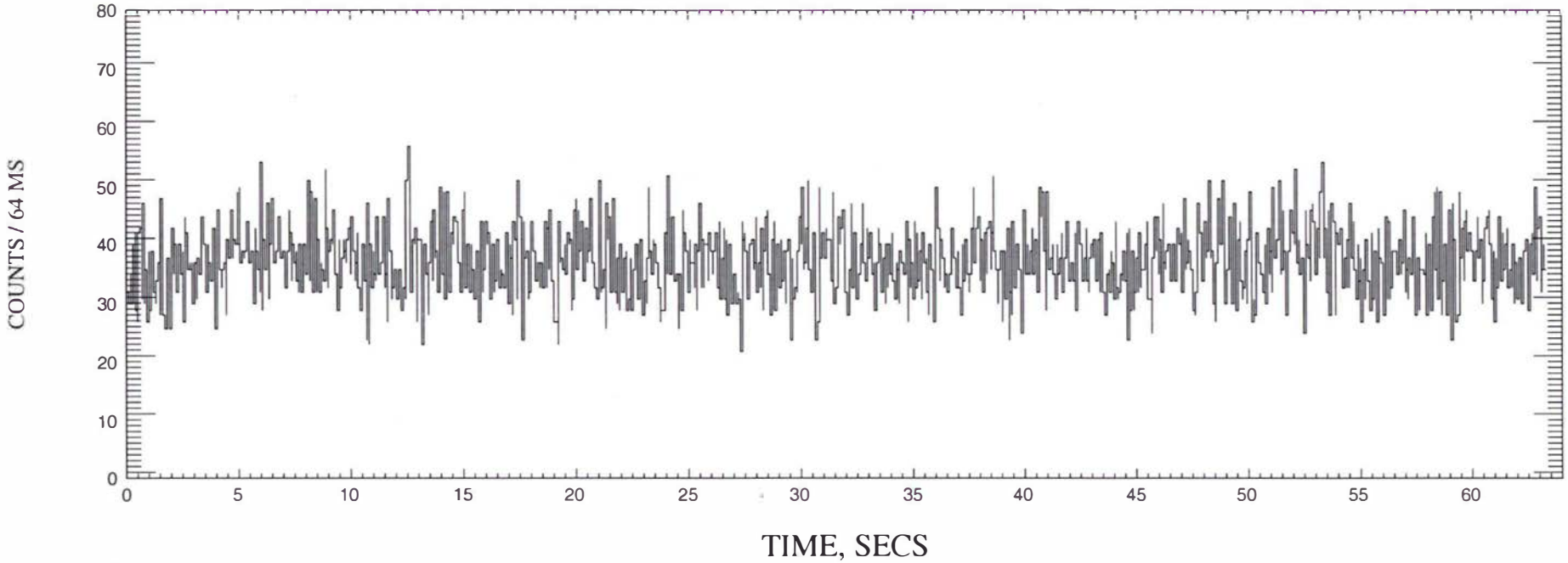


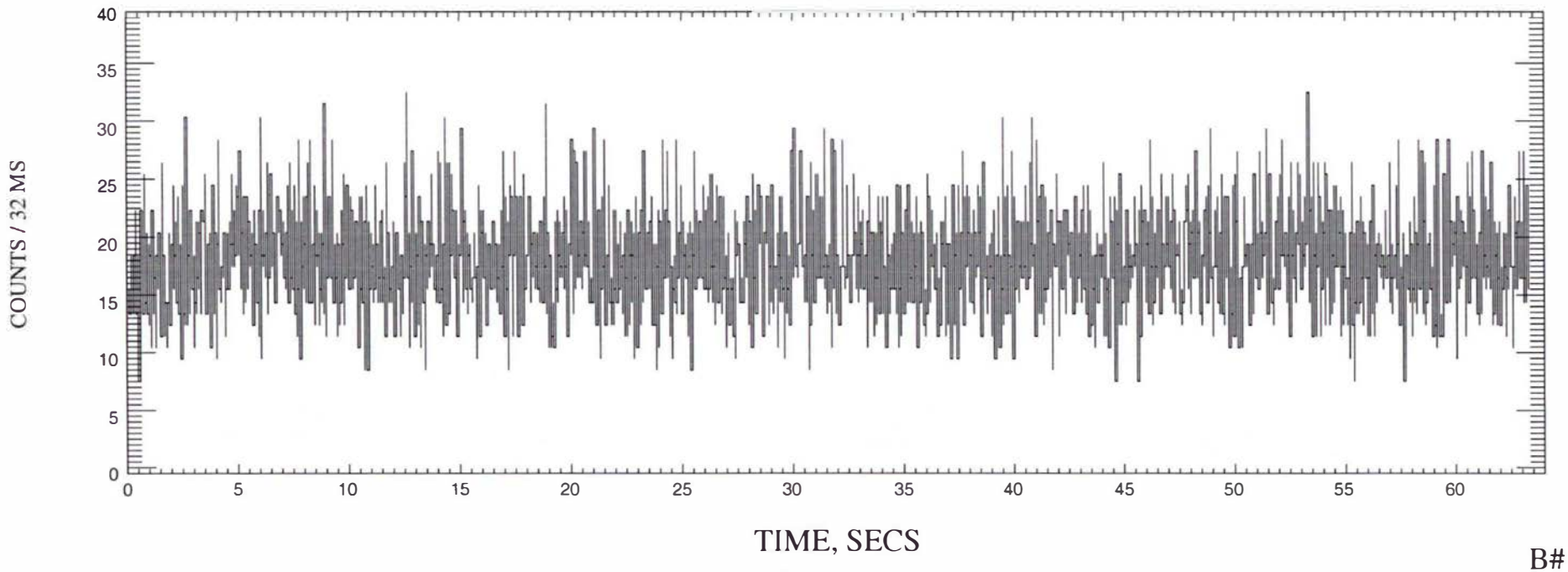


B# 5

HUS 2A TRIGGERED DATA EDR DMY = 24/09/2001 DOY = 267 01/22/02

Burst Counter 5 at UT=19.377138934665 h=69757.700 s 19:22:37.700

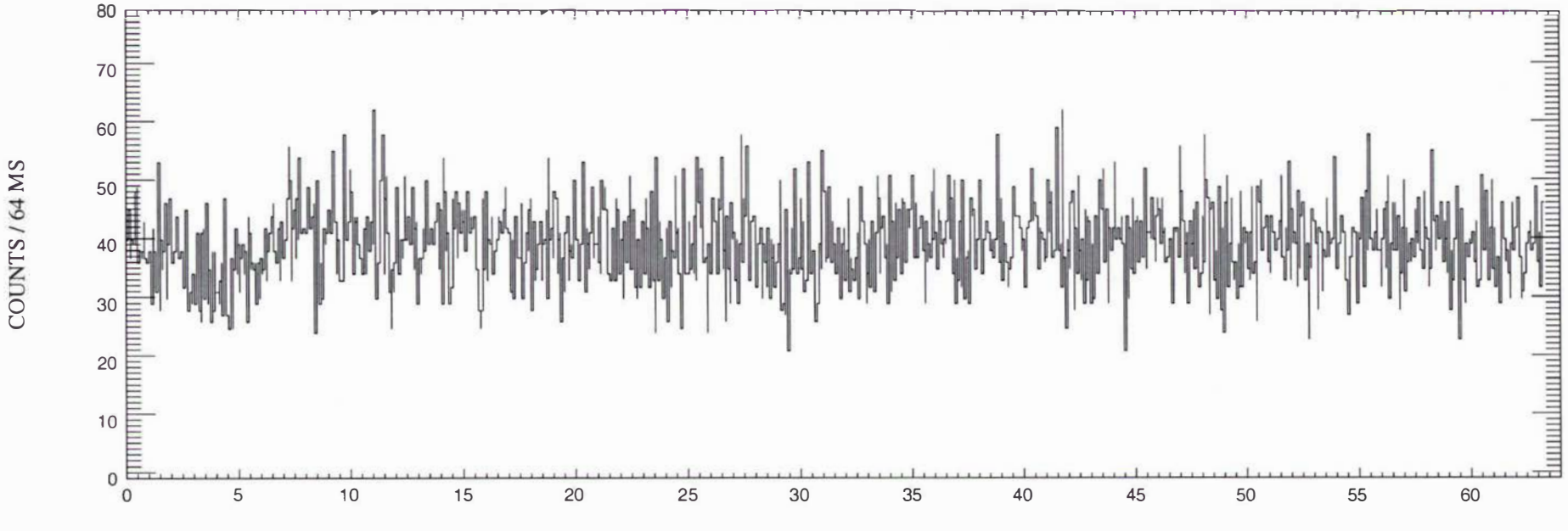


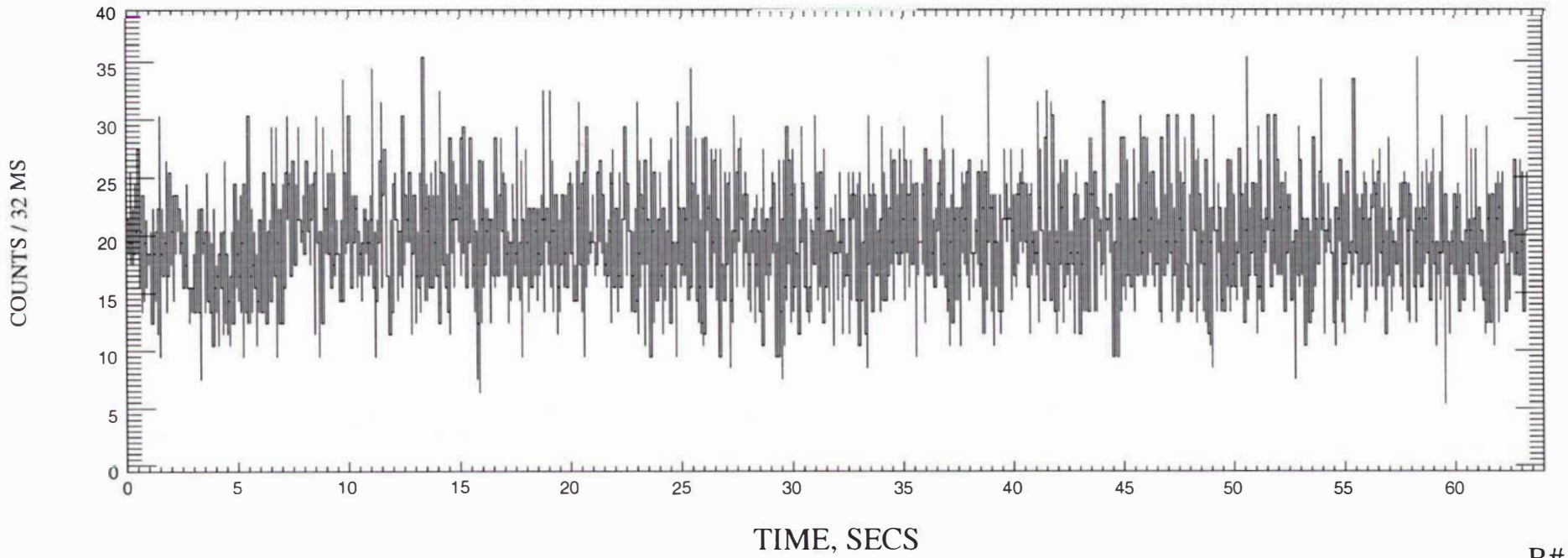


B# 6

HUS 2A TRIGGERED DATA EDR DMY = 24/09/2001 DOY = 267 01/22/02

Burst Counter 6 at UT=20.078594504462 h=72282.940 s 20:04:42.940

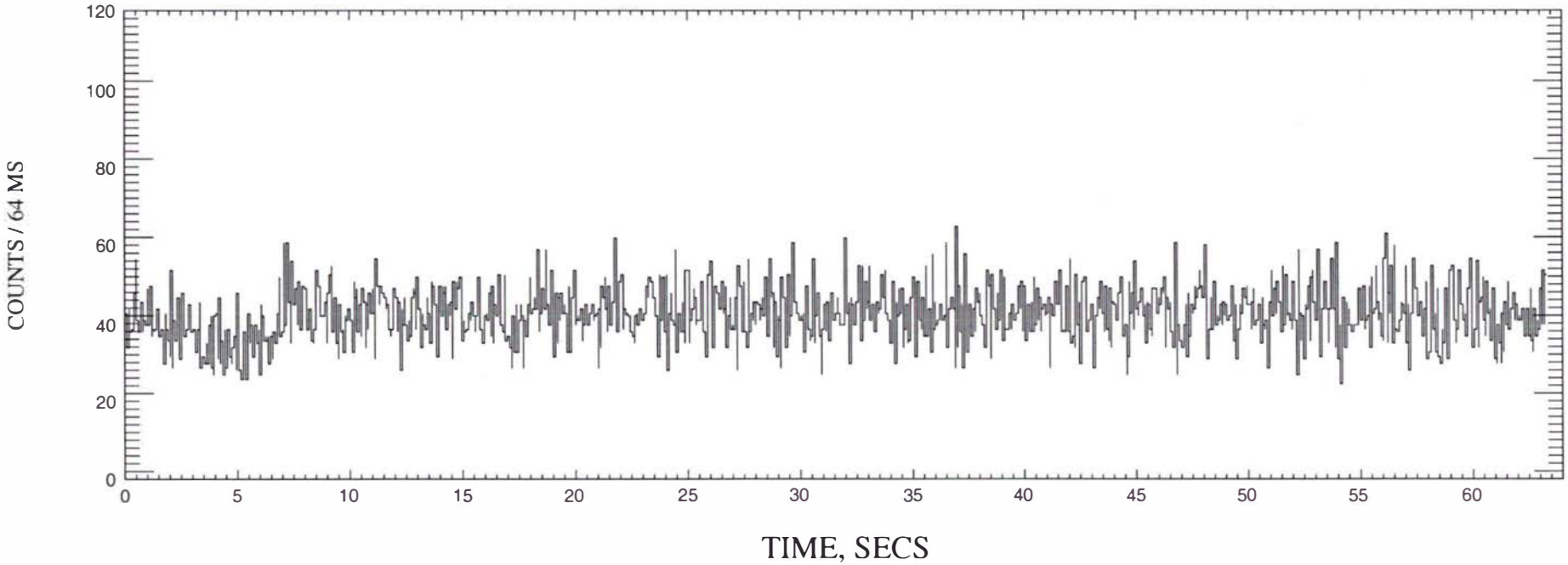


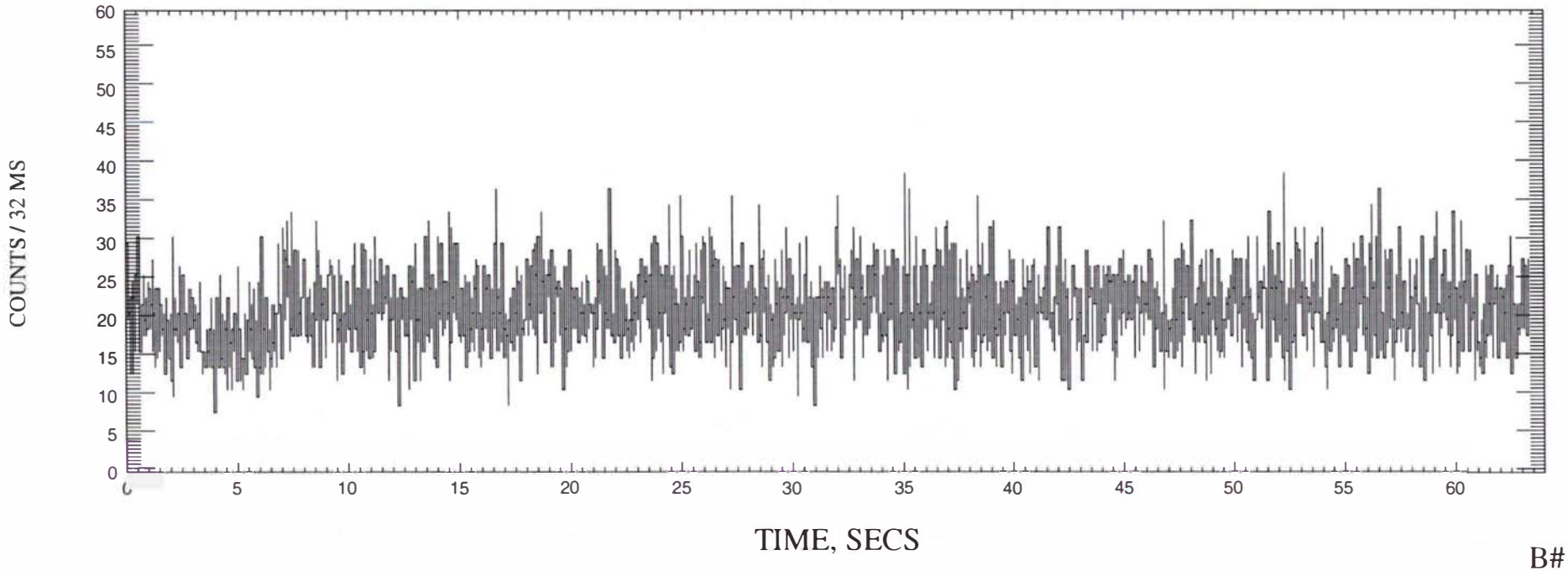


B# 7

HUS 2A TRIGGERED DATA EDR DMY = 24/09/2001 DOY = 267 01/22/02

Burst Counter 7 at UT=20.780656678942 h=74810.364 s 20:46:50.364

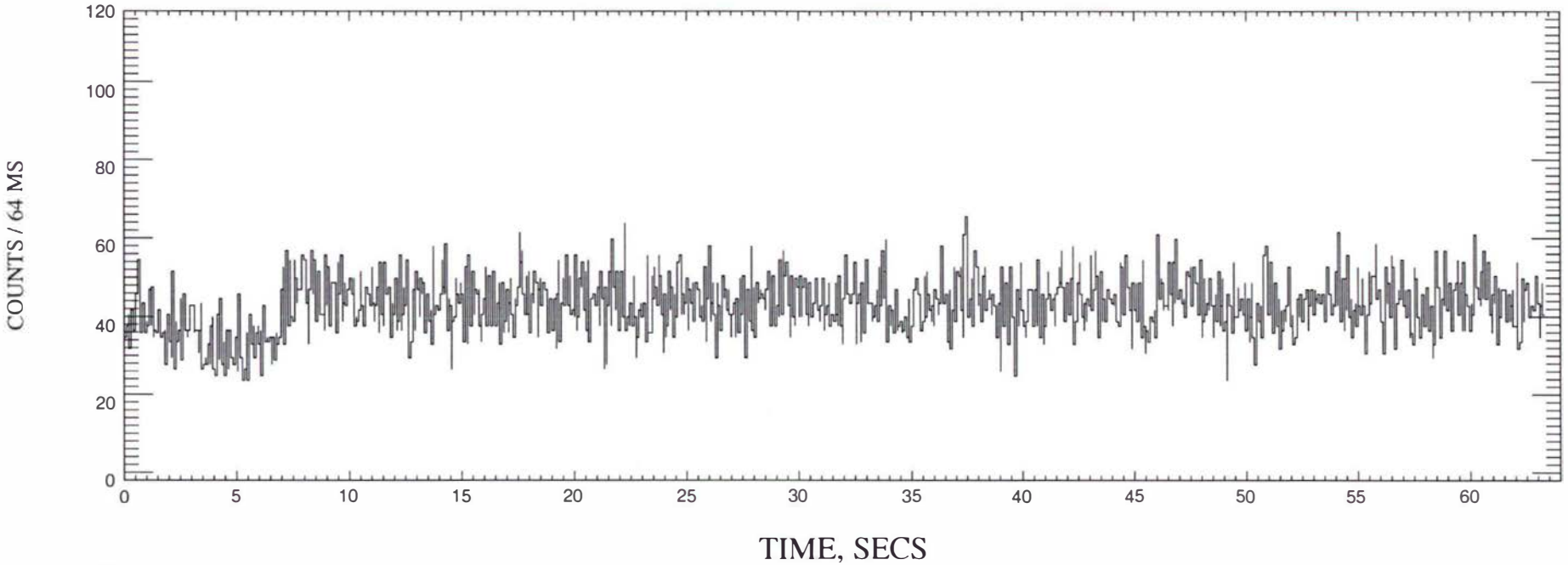


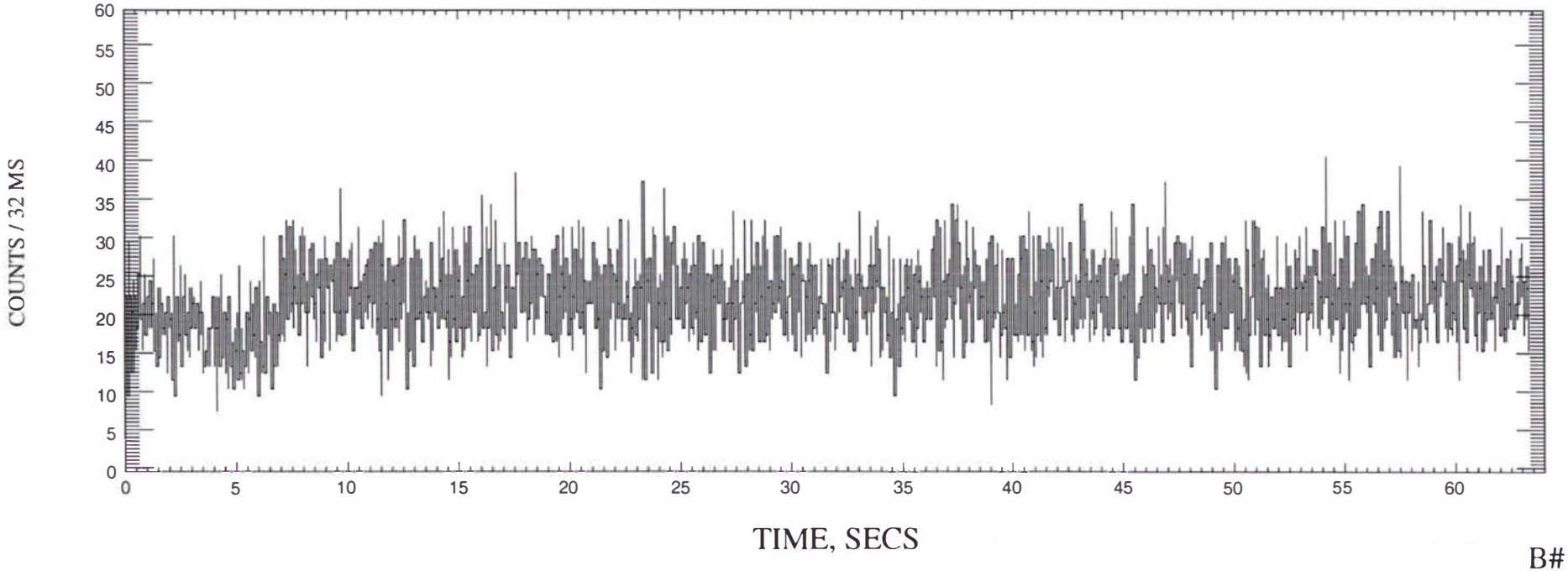


B# 8

HUS 2A TRIGGERED DATA EDR DMY = 24/09/2001 DOY = 267 01/22/02

Burst Counter 8 at UT=21.482855576409 h=77338.280 s 21:28:58.280

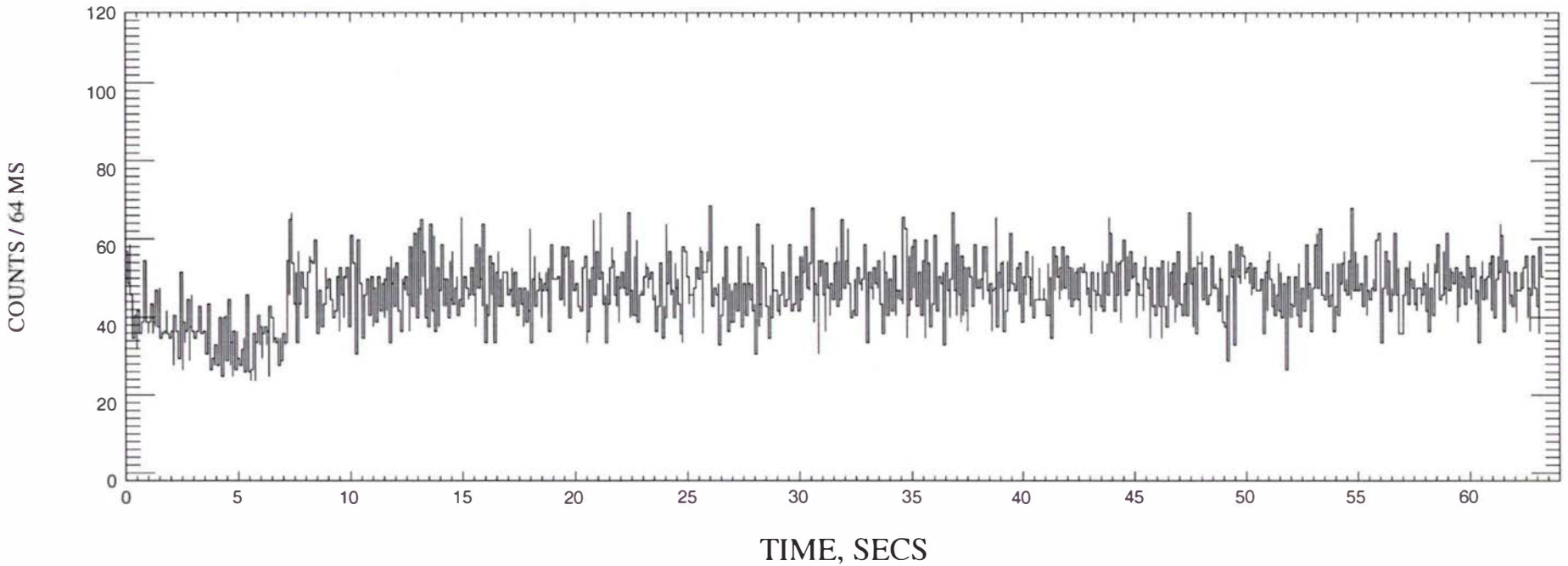


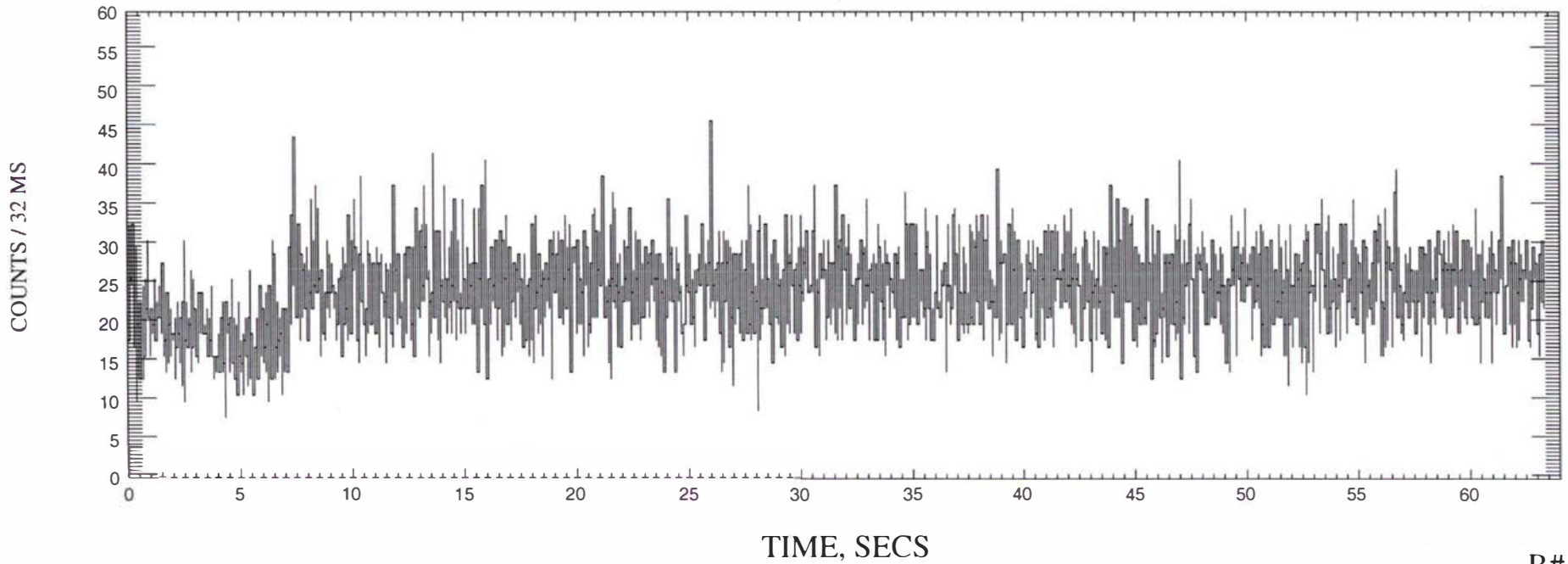


B# 9

HUS 2A TRIGGERED DATA EDR DMY = 24/09/2001 DOY = 267 01/22/02

Burst Counter 9 at UT=22.185019751655 h=79866.071 s 22:11:06.071

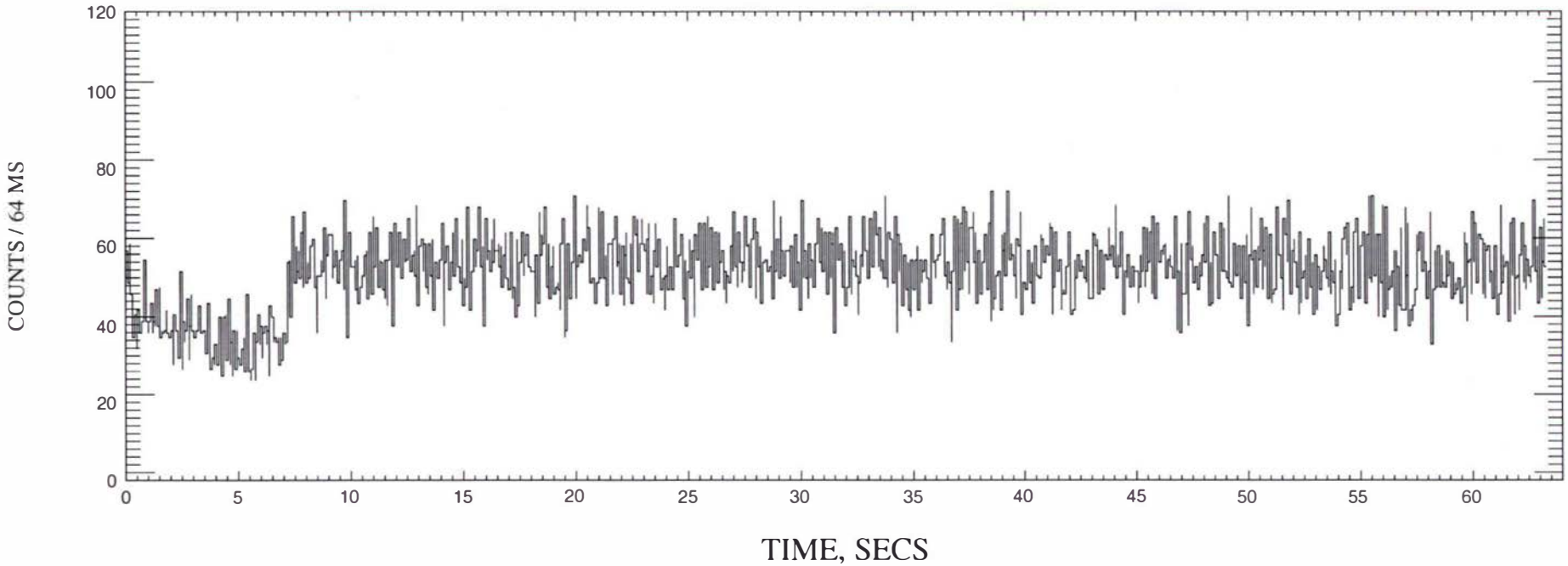


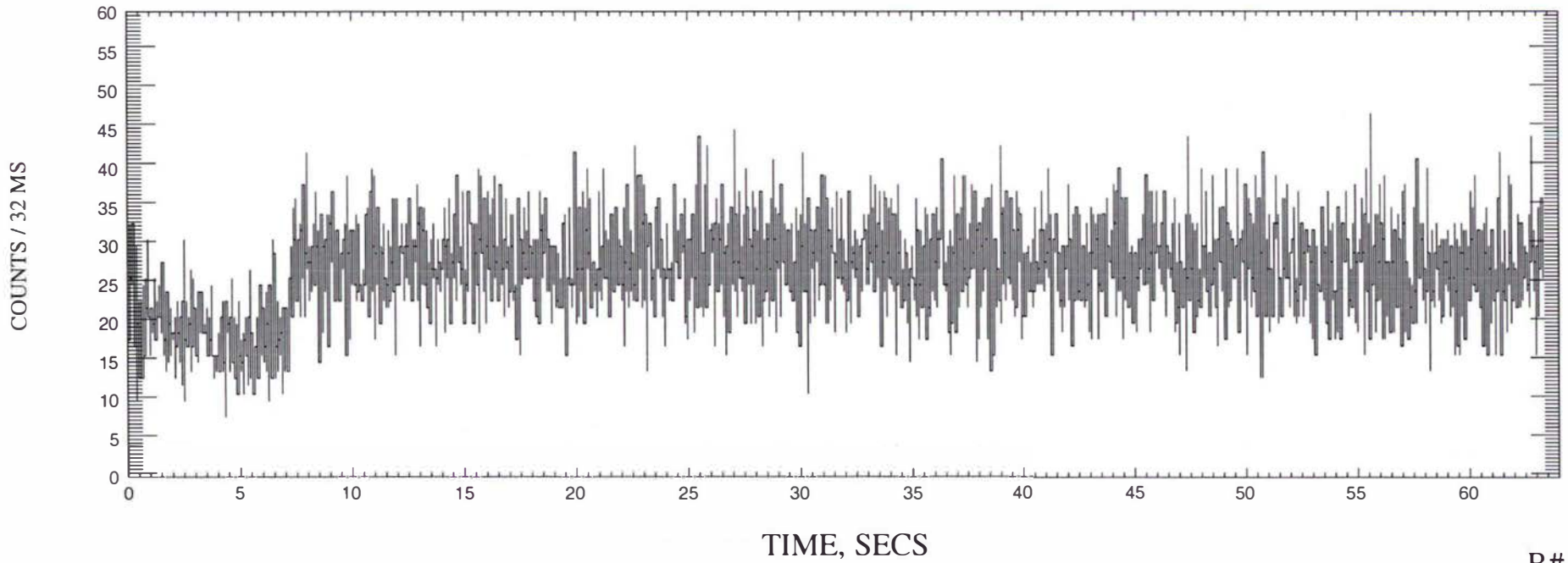


B# 10

HUS 2A TRIGGERED DATA EDR DMY = 24/09/2001 DOY = 267 01/22/02

Burst Counter 10 at UT=22.887249026828 h=82394.096 s 22:53:14.096

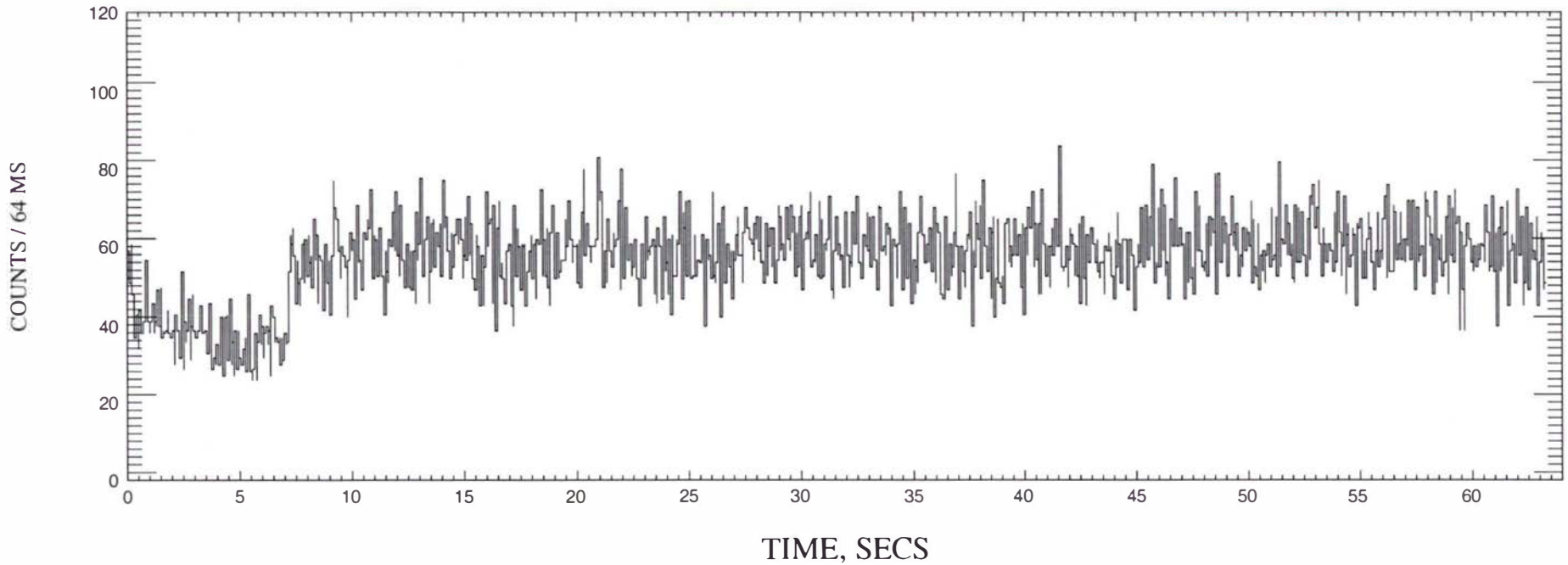


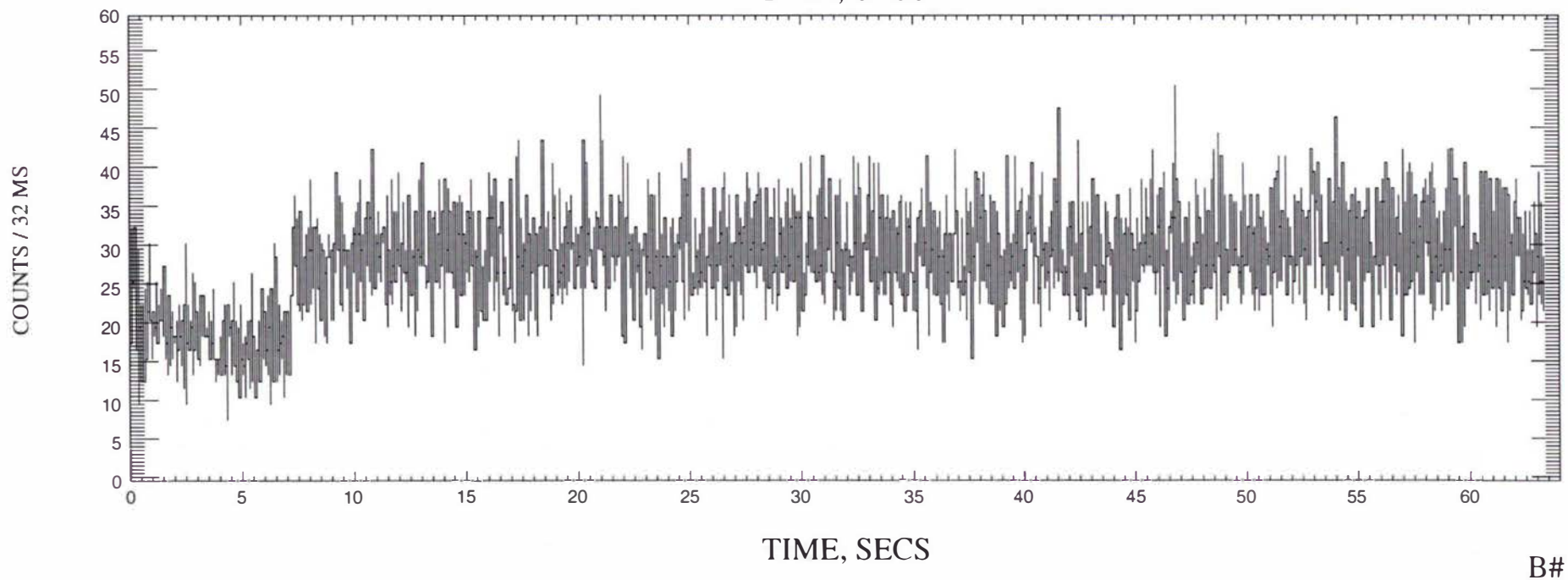


B# 11

HUS 2A TRIGGERED DATA EDR DMY = 24/09/2001 DOY = 267 01/22/02

Burst Counter 11 at UT=23.589480476379 h=84922.130 s 23:35:22.130

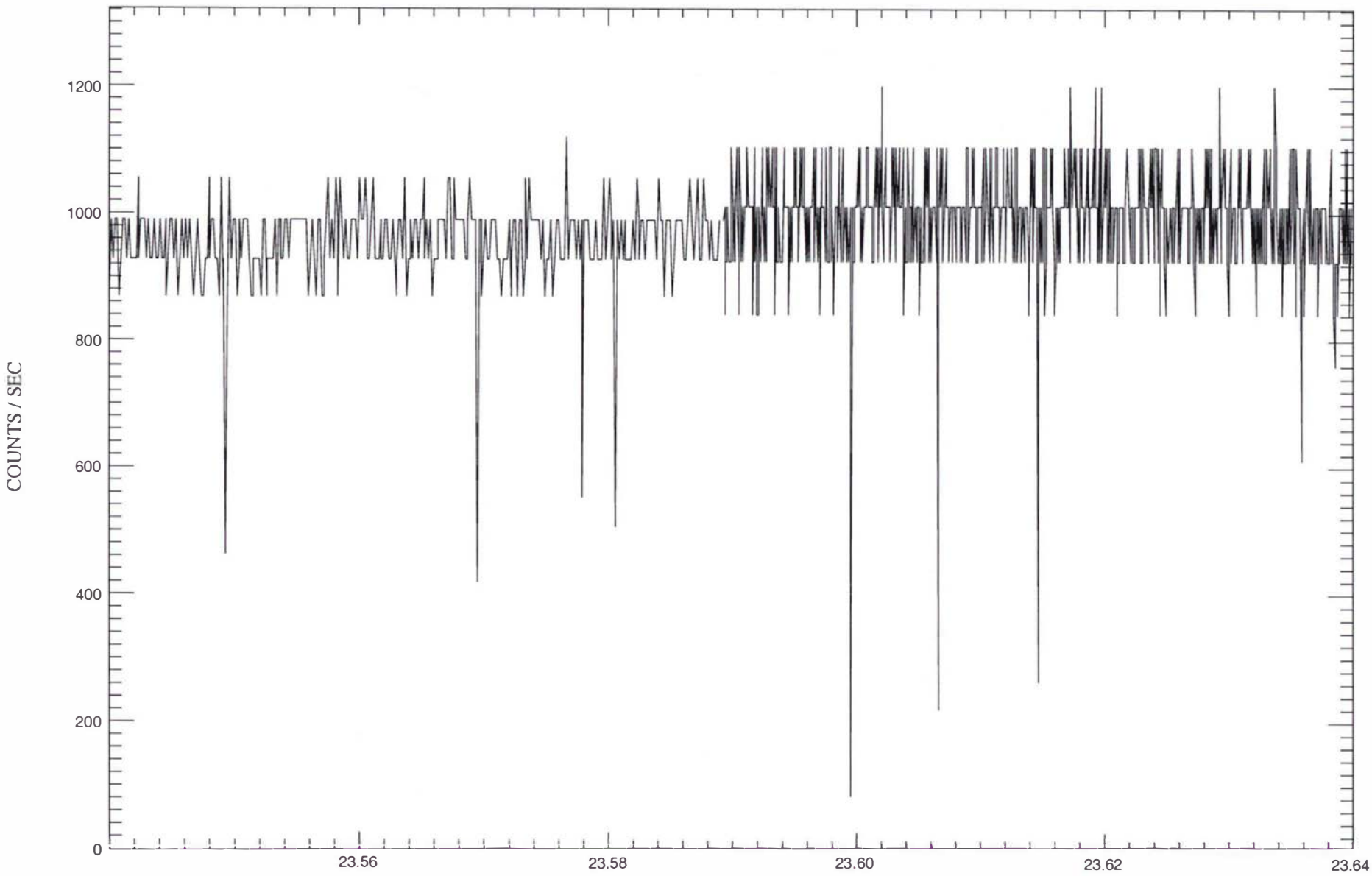


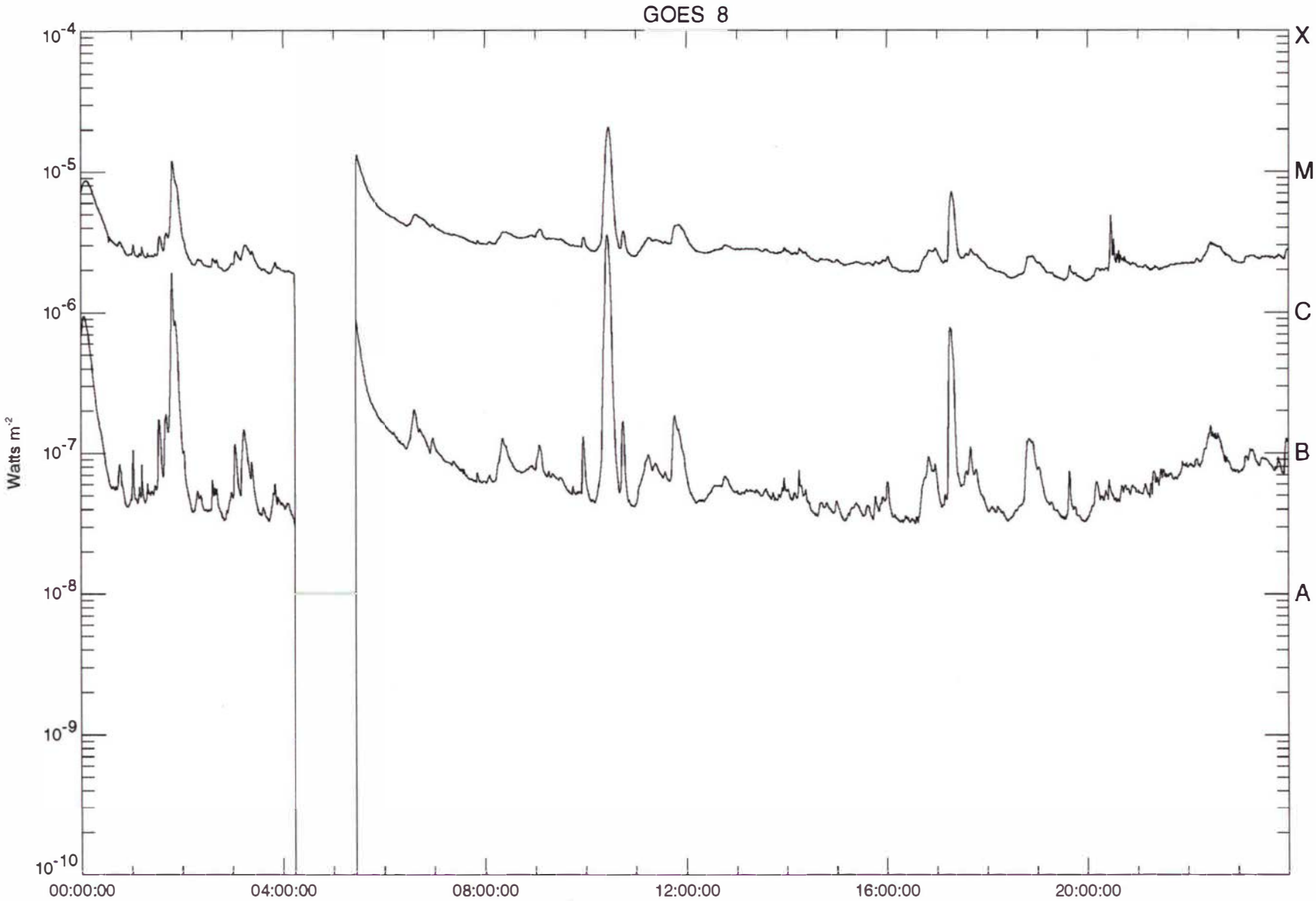


B# 12

HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 24/09/2001 DOY = 267 01/22/02

CALIBRATION DATA INCLUDED

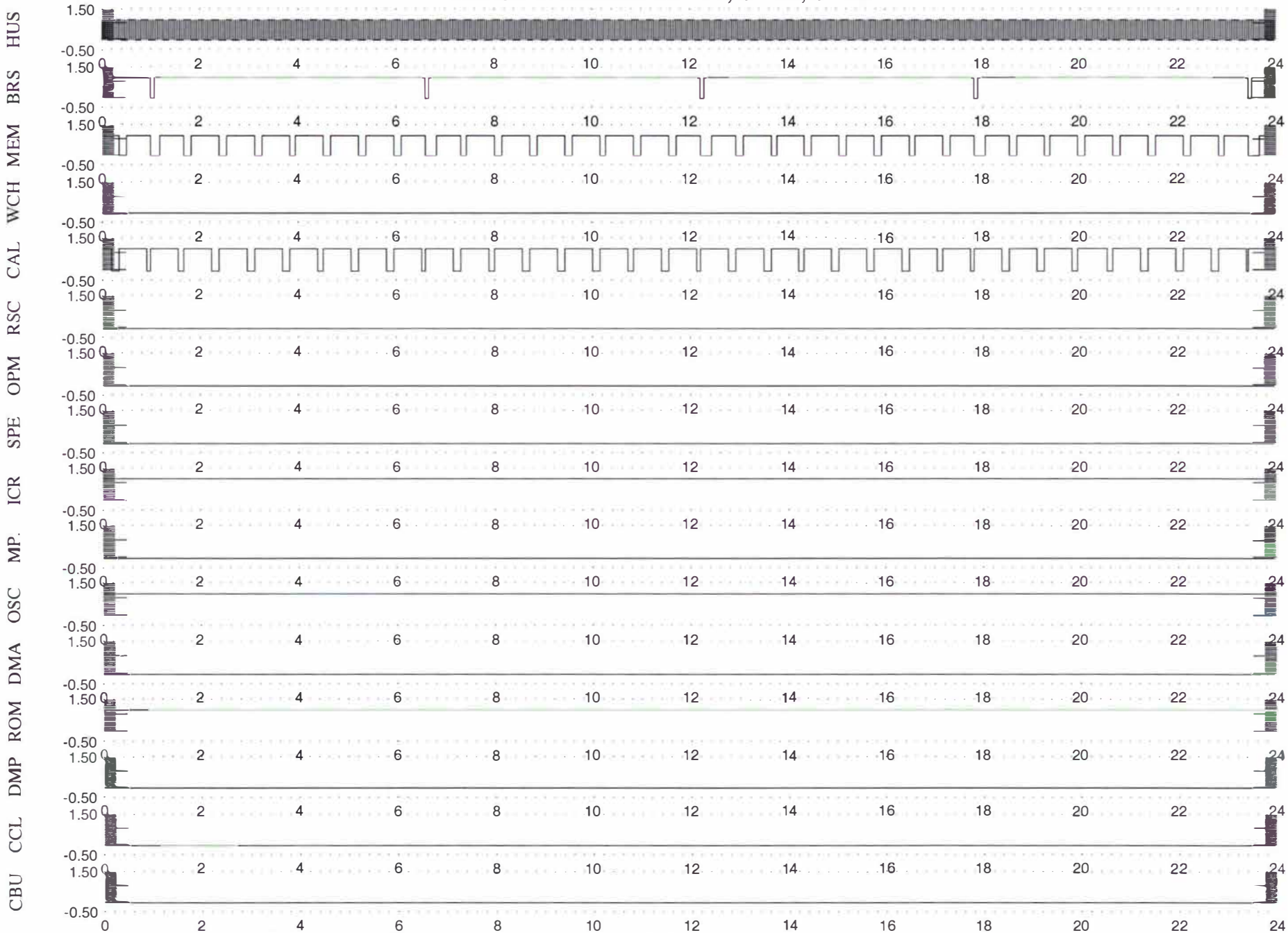




Data Start: 01/09/25, 0000:00 Plot created: 01/09/29, 0950
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

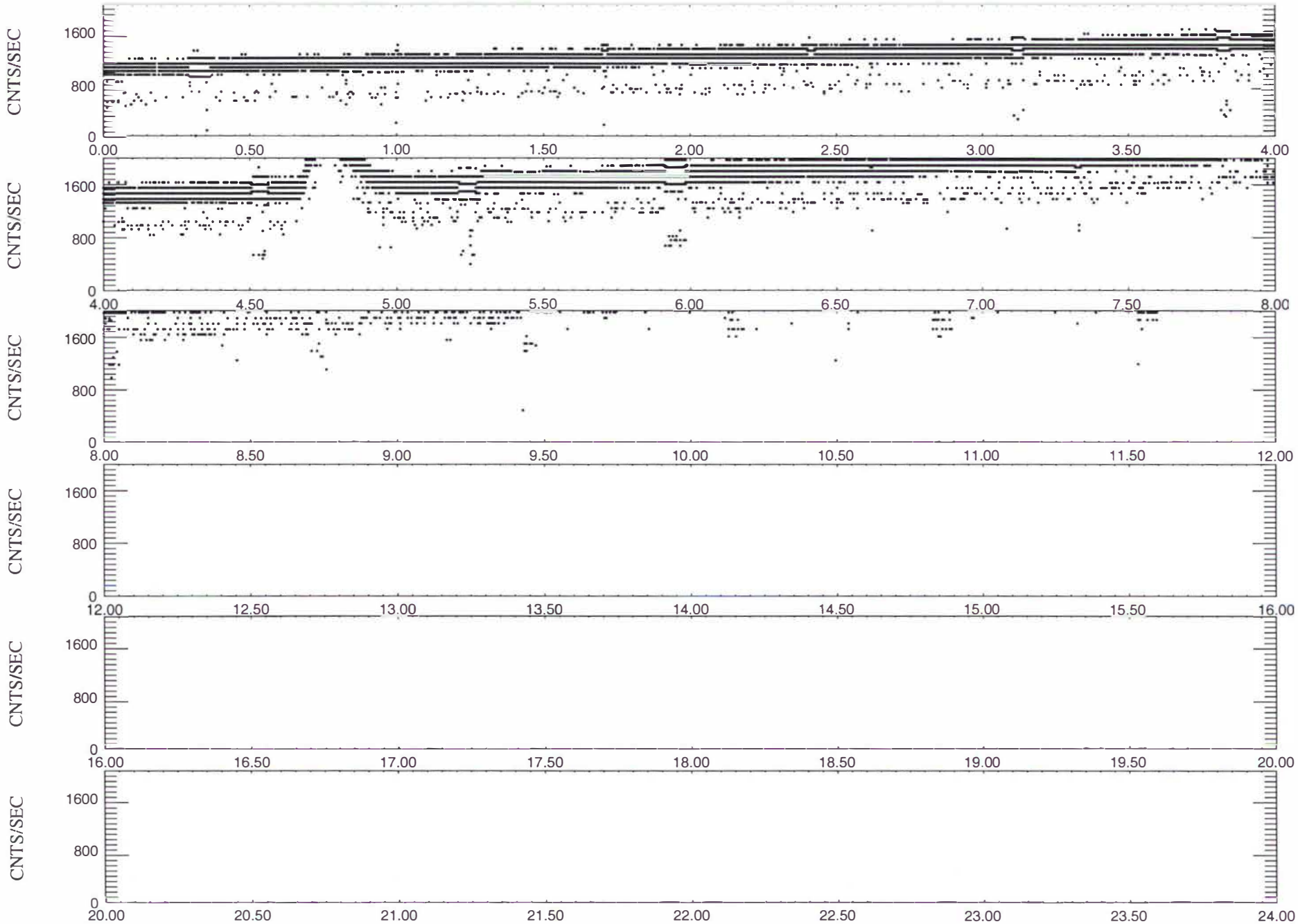
HUS MODES EDR day 268, year 2001 to day 268, year 2001 01/22/02

BURST NUMBER 12 - 15, 0 - 15, 0 - 13



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 25/09/2001 DOY = 268 01/22/02

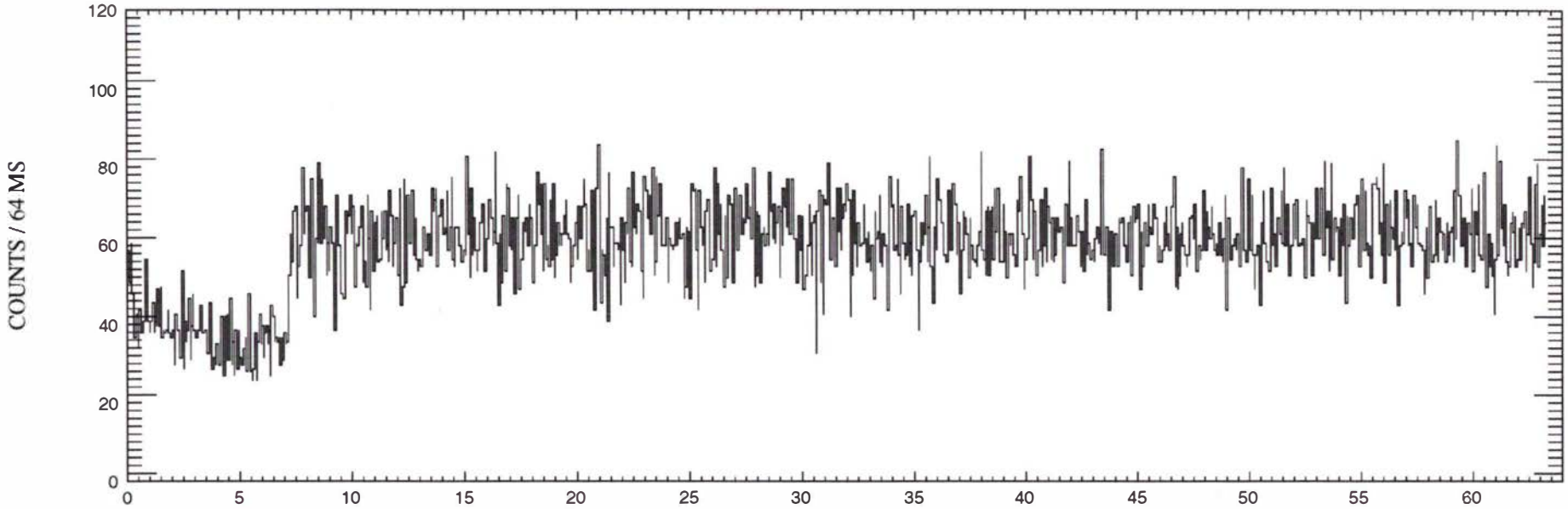
CALIBRATION DATA INCLUDED



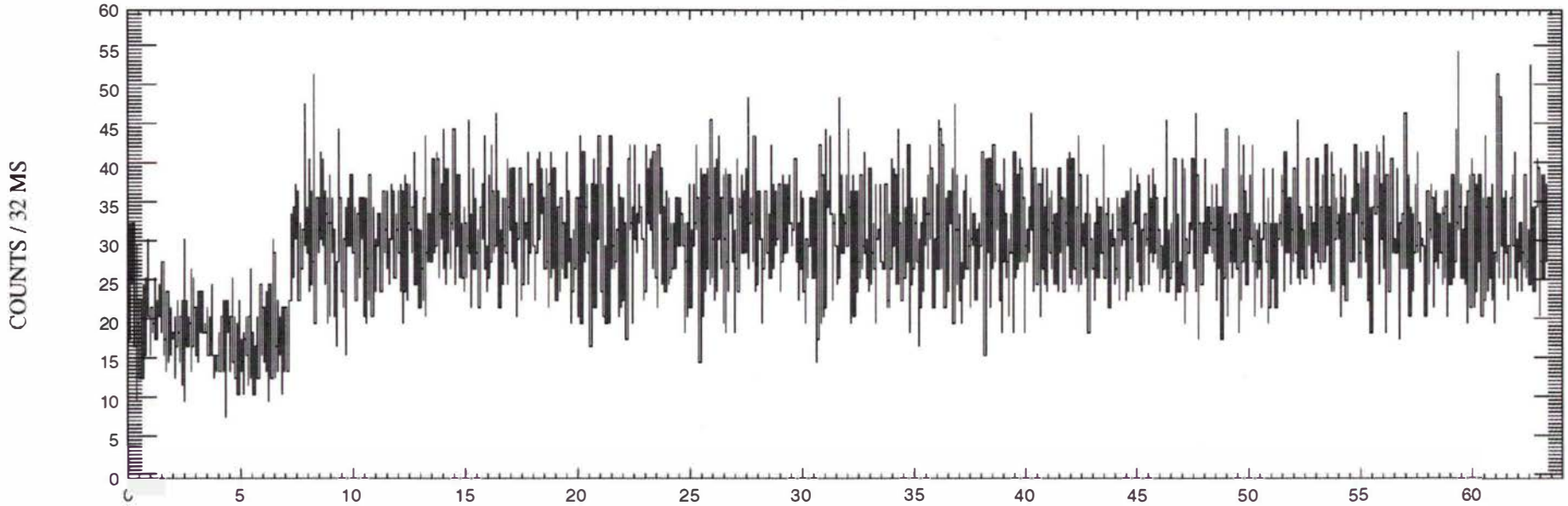
UNIVERSAL TIME

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 12 at UT= 0.291716261970 h= 1050.179 s 00:17:30.179



TIME, SECS

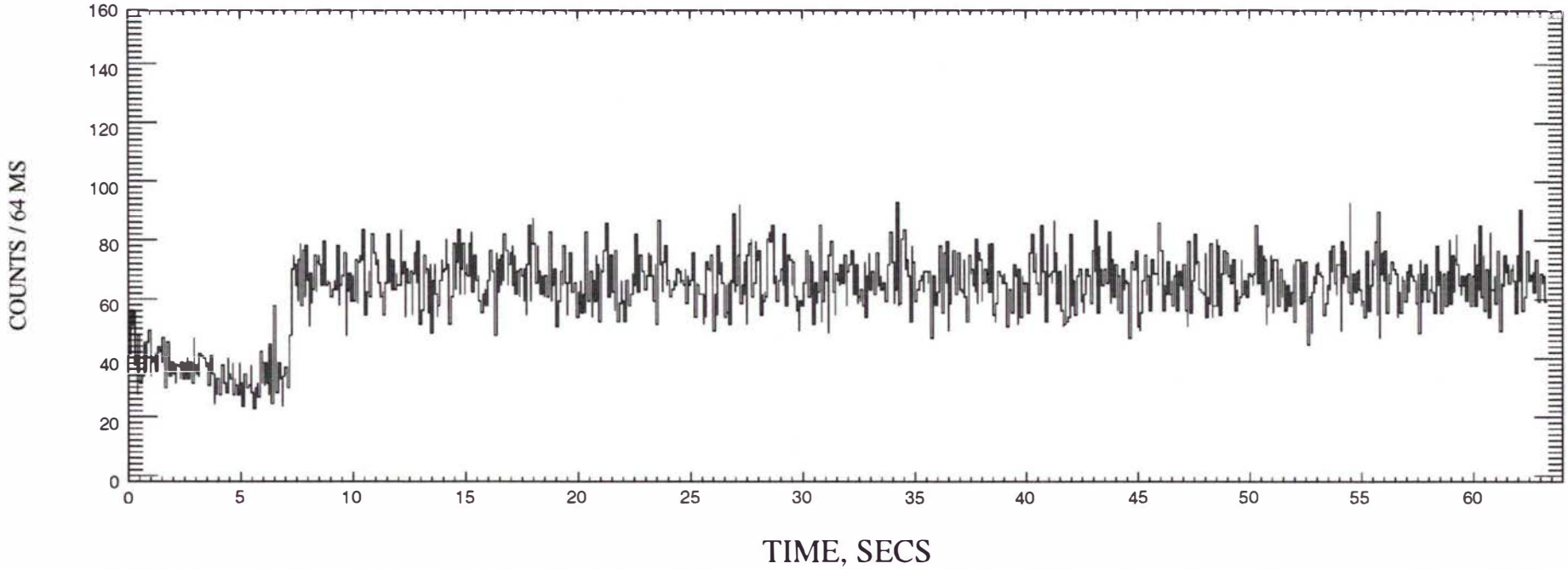


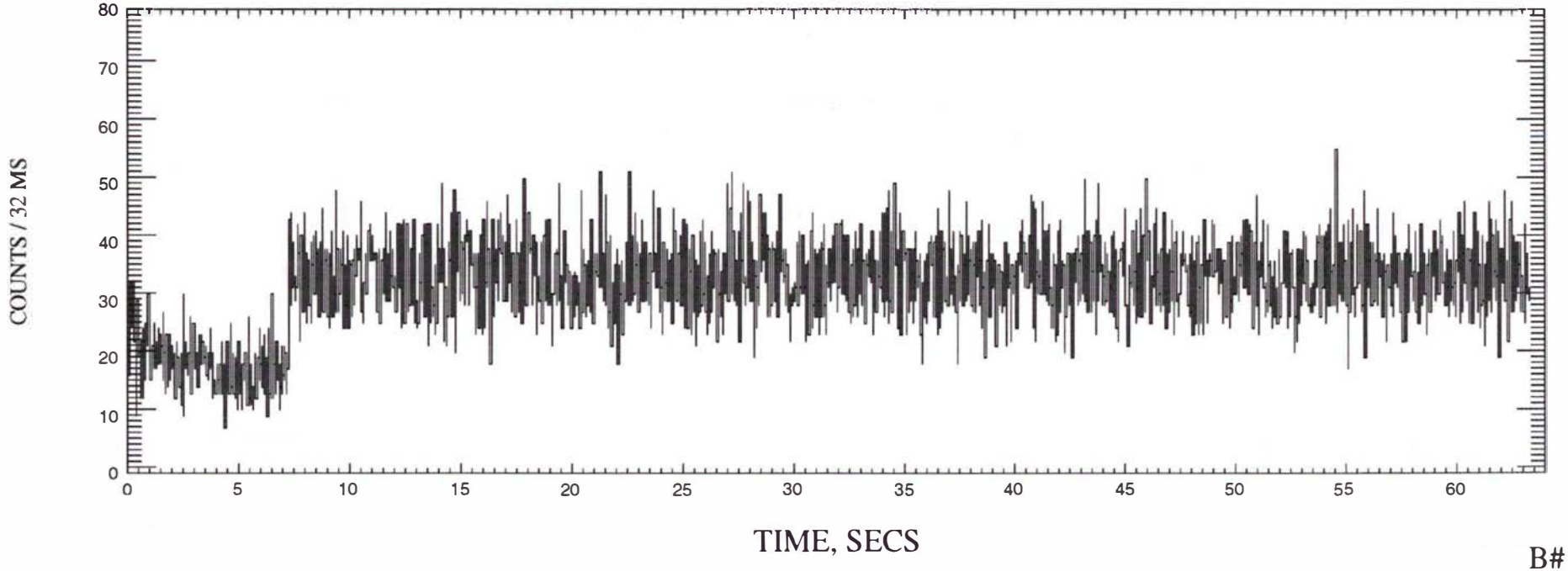
TIME, SECS

B# 1

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 13 at UT= 0.993943371243 h= 3578.196 s 00:59:38.196

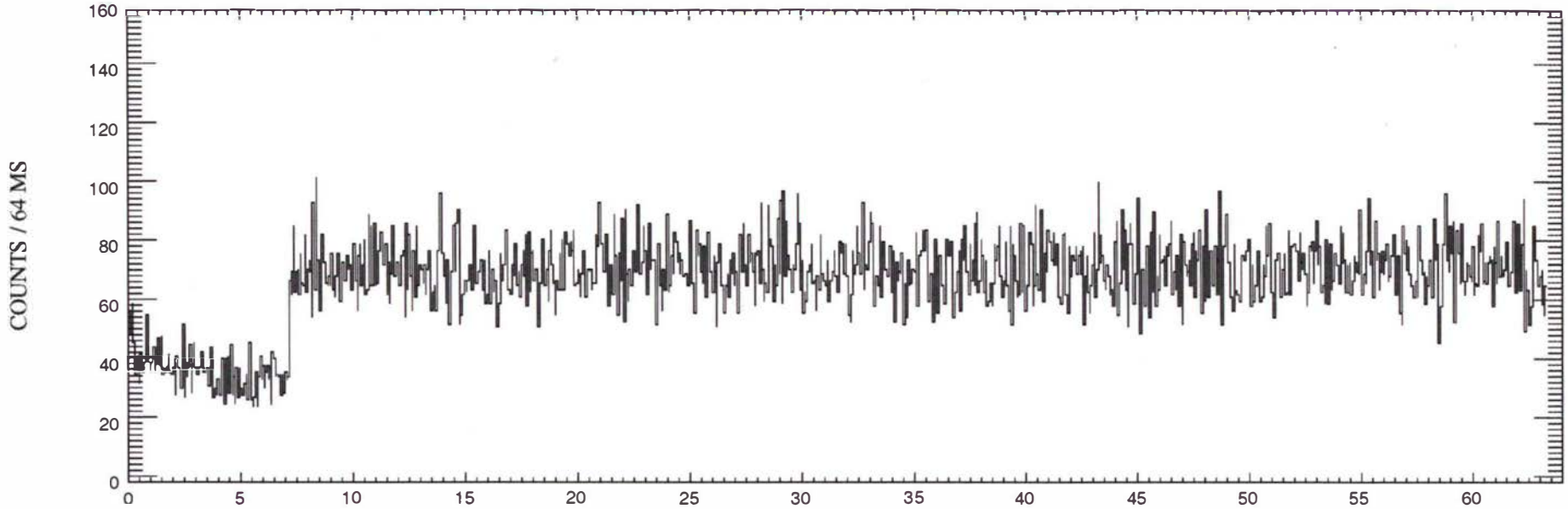




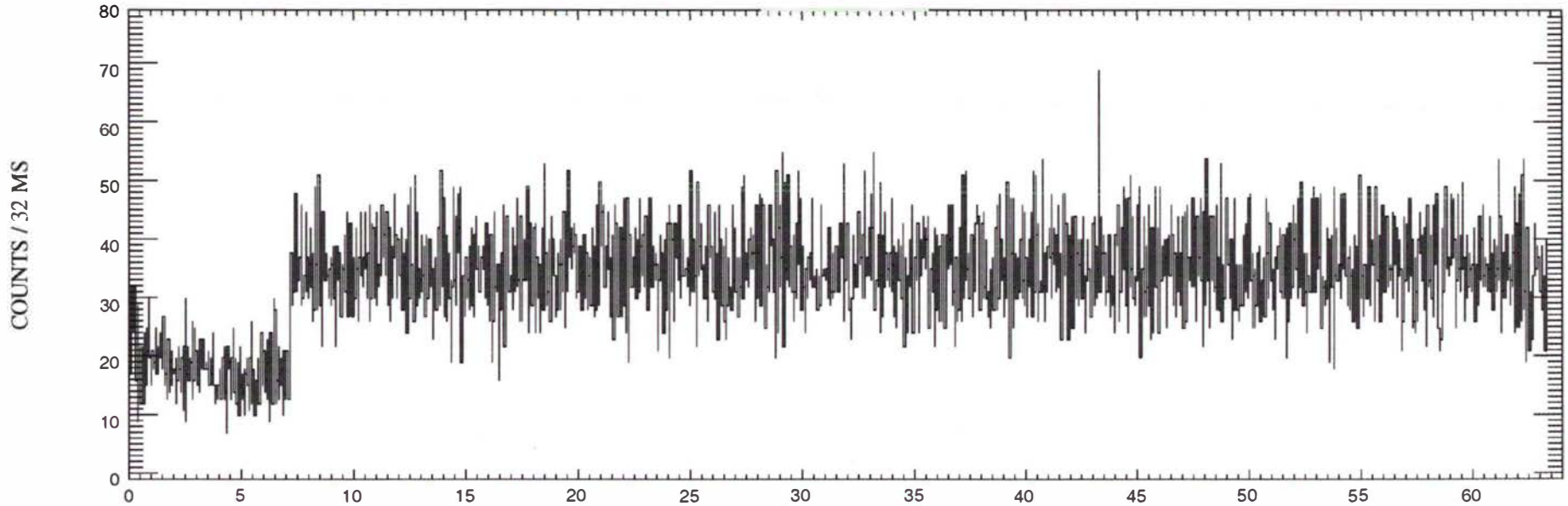
B# 2

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 14 at UT= 1.696182356940 h= 6106.256 s 01:41:46.256



TIME, SECS

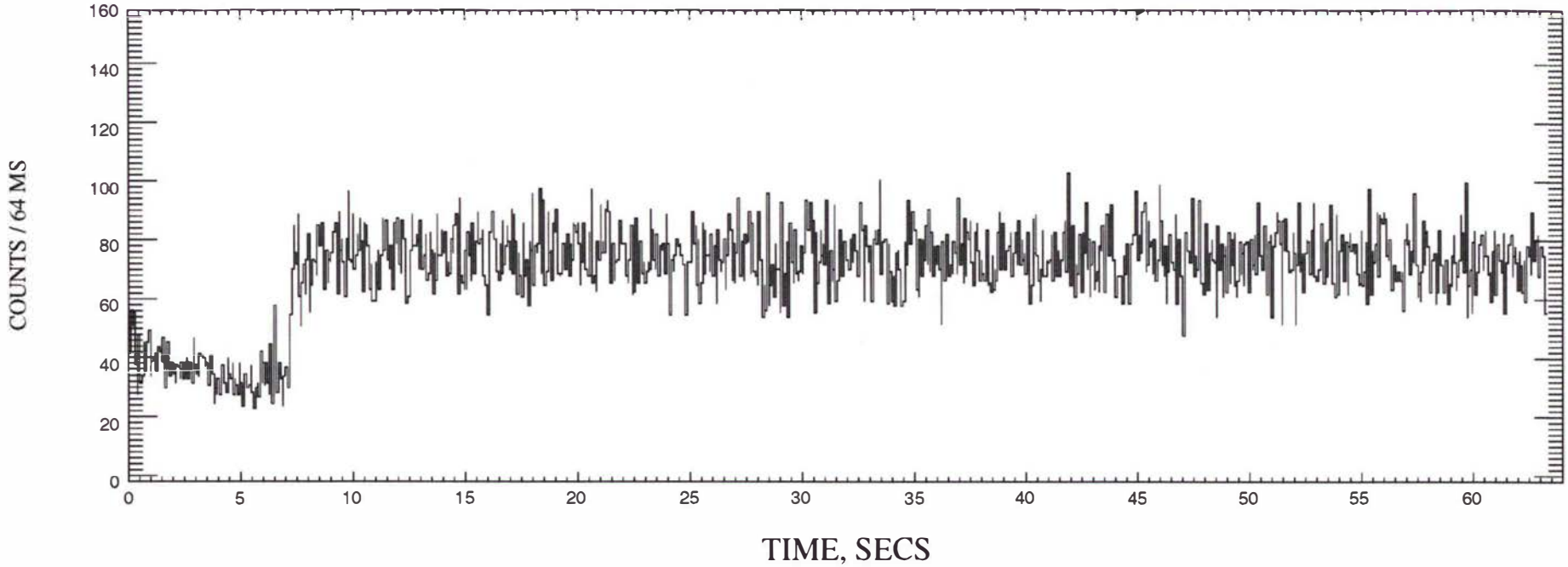


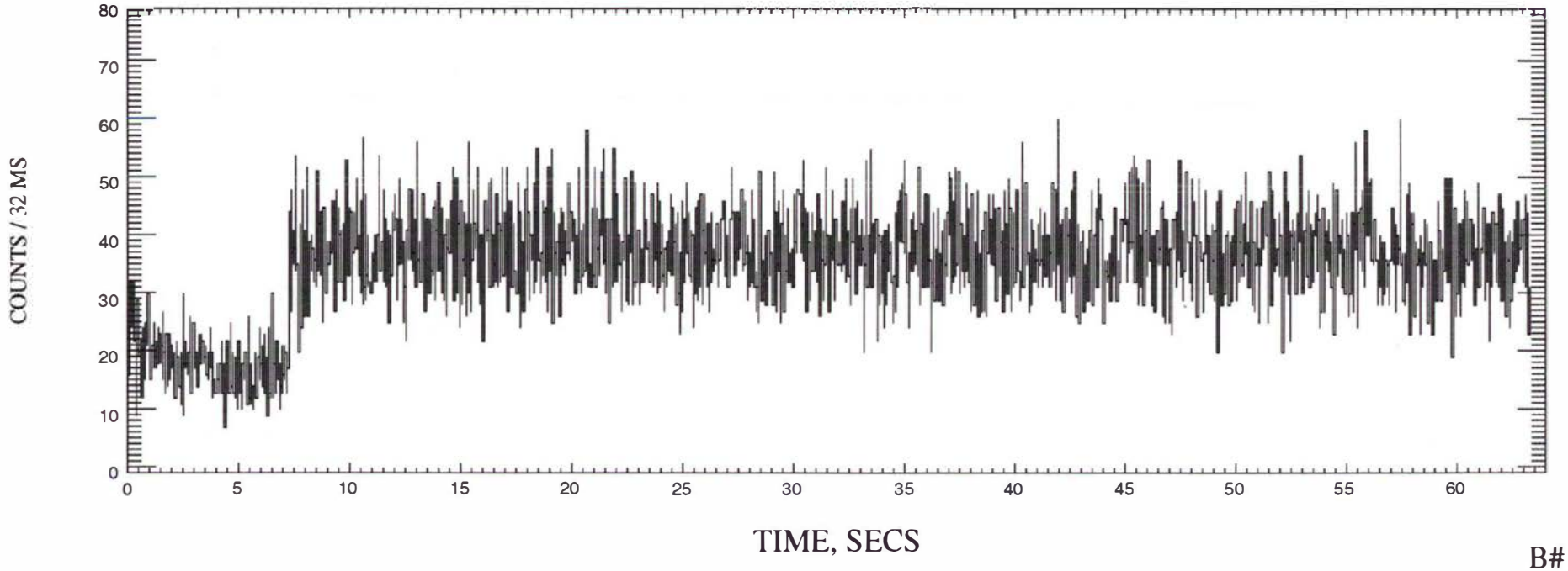
TIME, SECS

B# 3

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 15 at UT= 2.398409466214 h= 8634.274 s 02:23:54.274

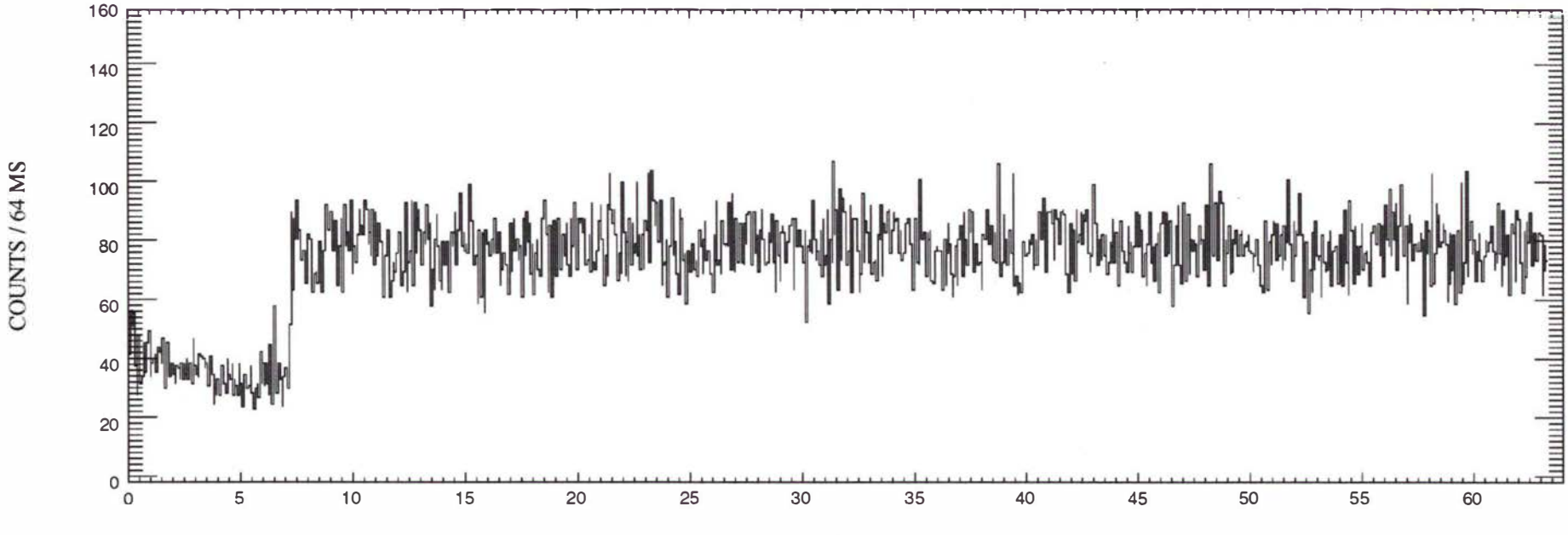


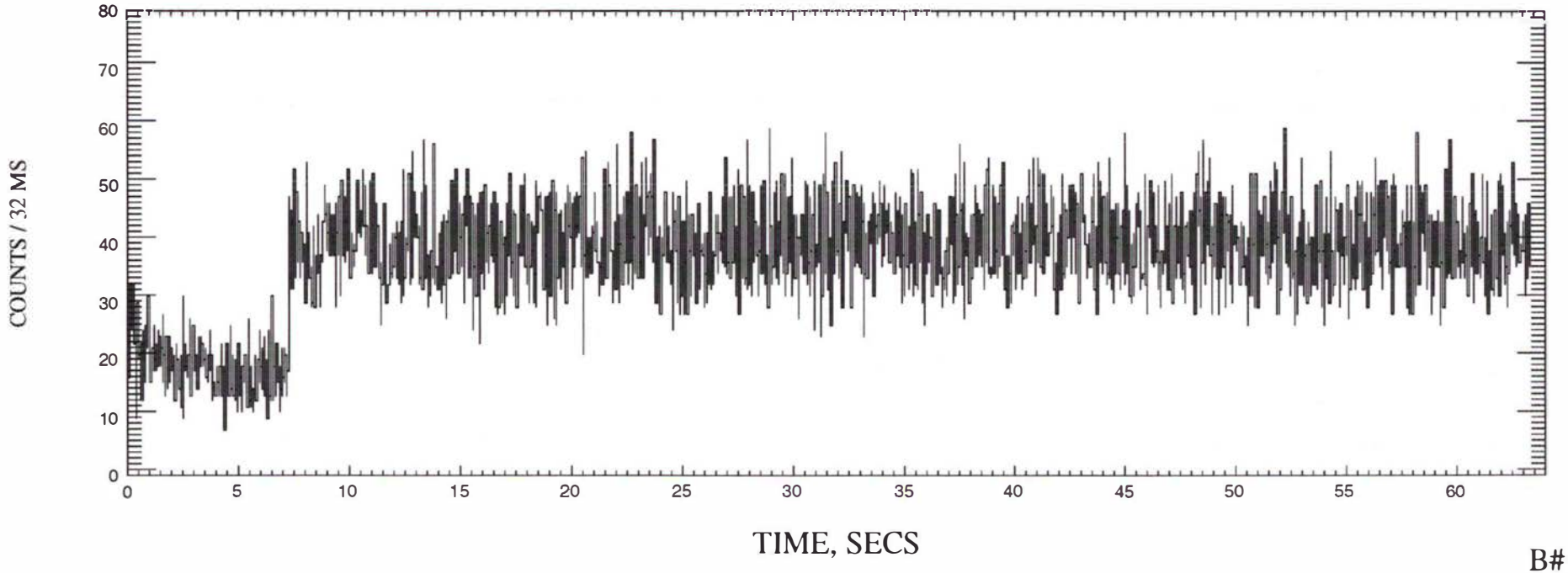


B# 4

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 0 at UT= 3.100638745626 h=11162.299 s 03:06:02.299

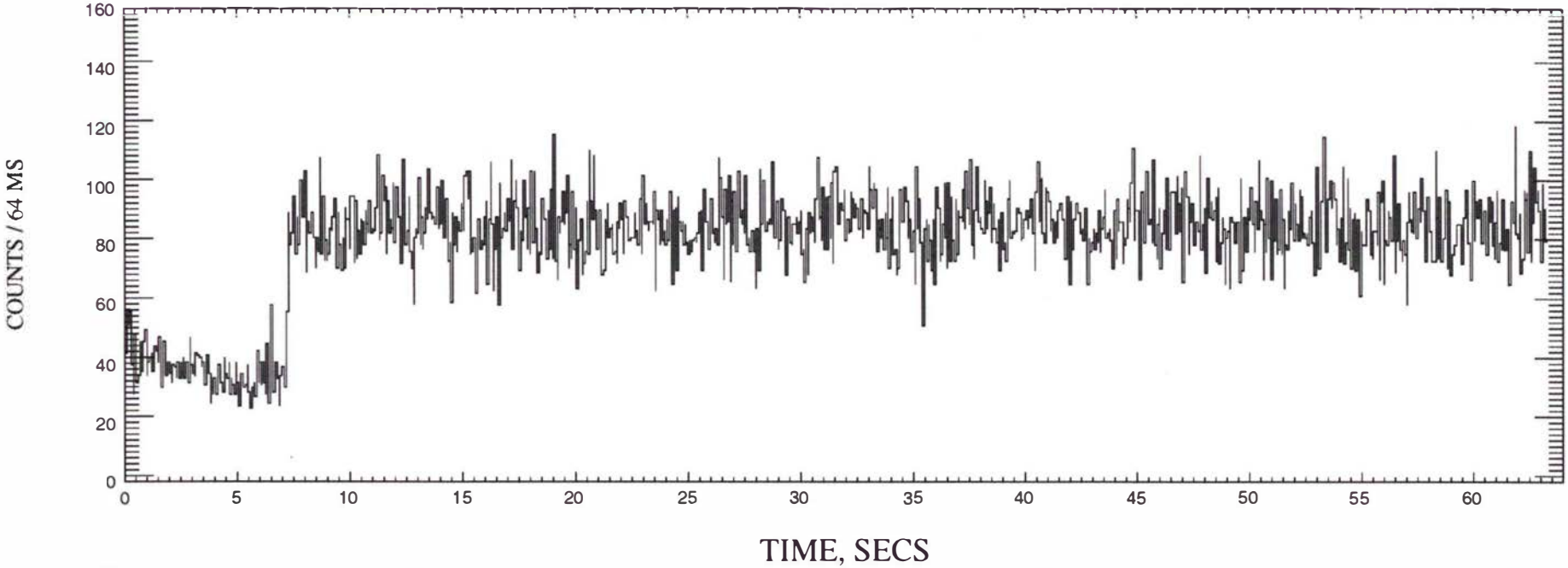


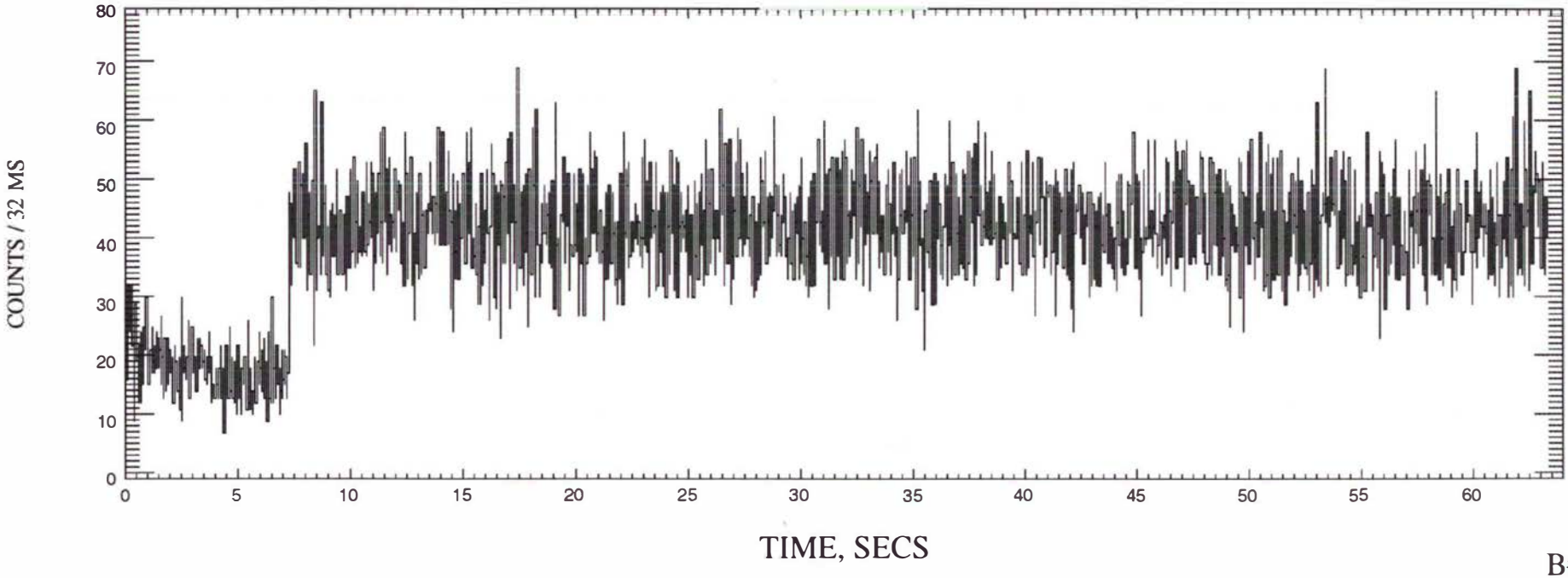


B# 5

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 1 at UT= 3.802872361077 h=13690.340 s 03:48:10.340

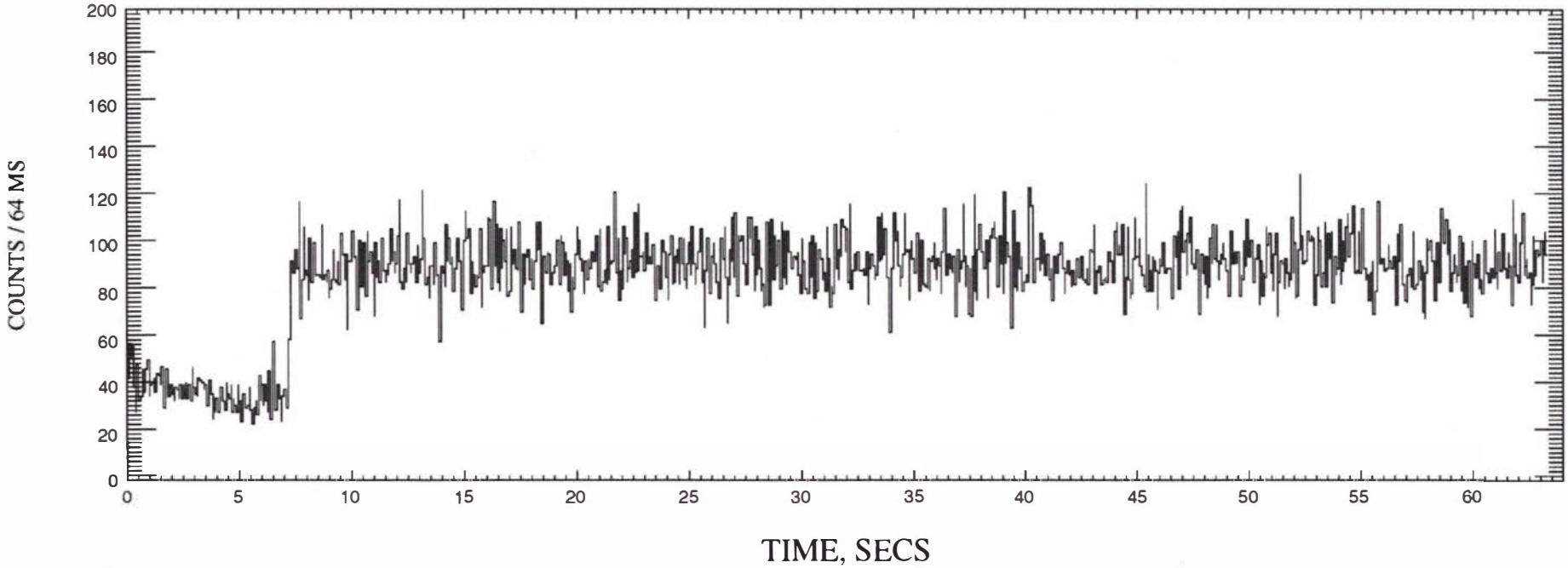


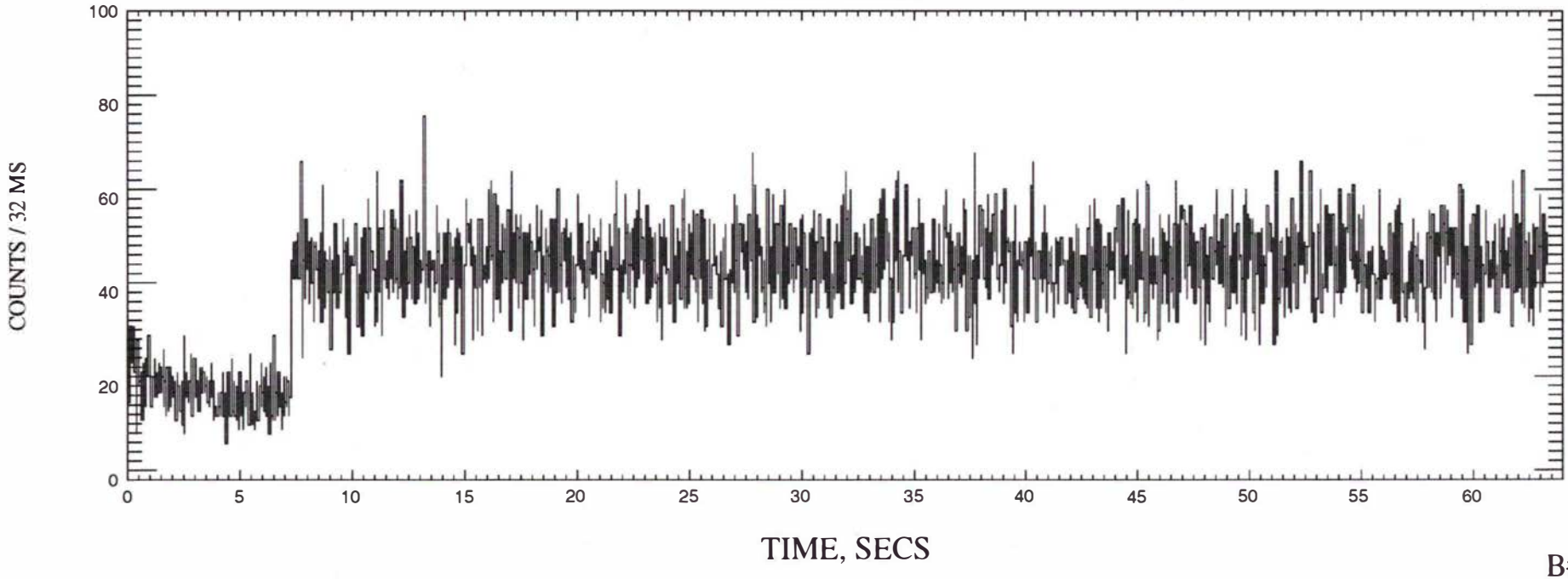


B# 6

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 2 at UT= 4.505110321045 h=16218.397 s 04:30:18.397

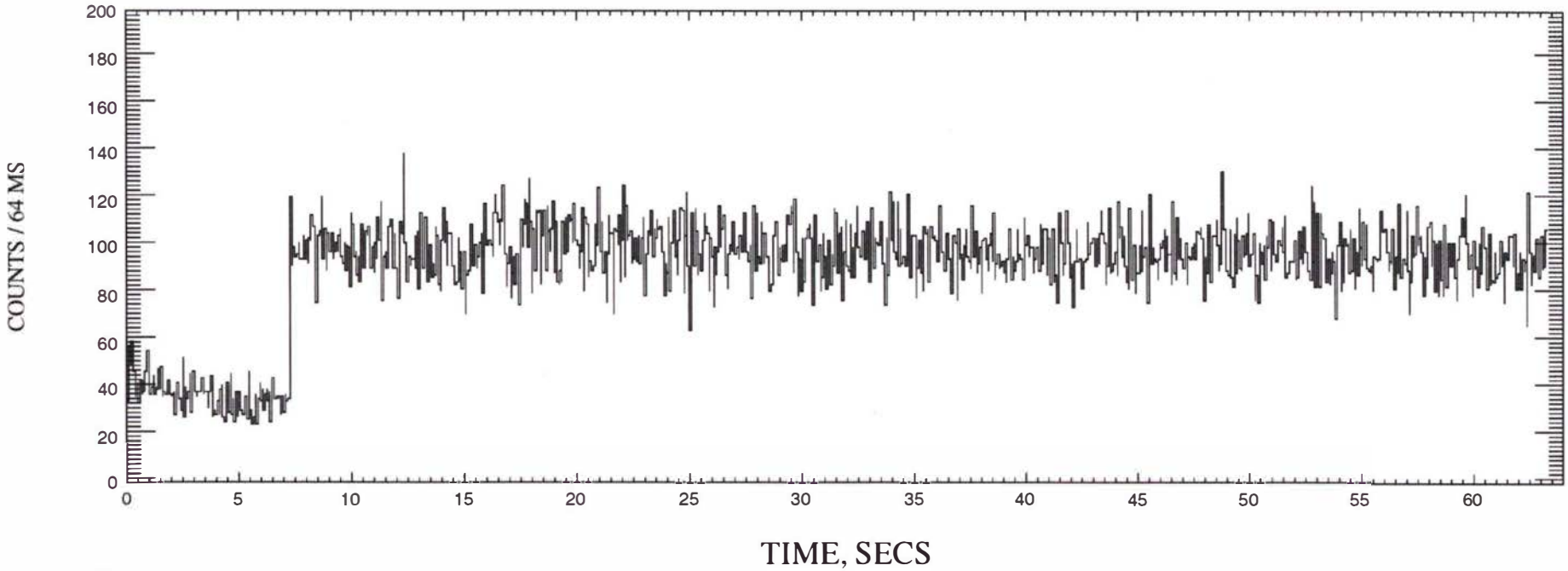


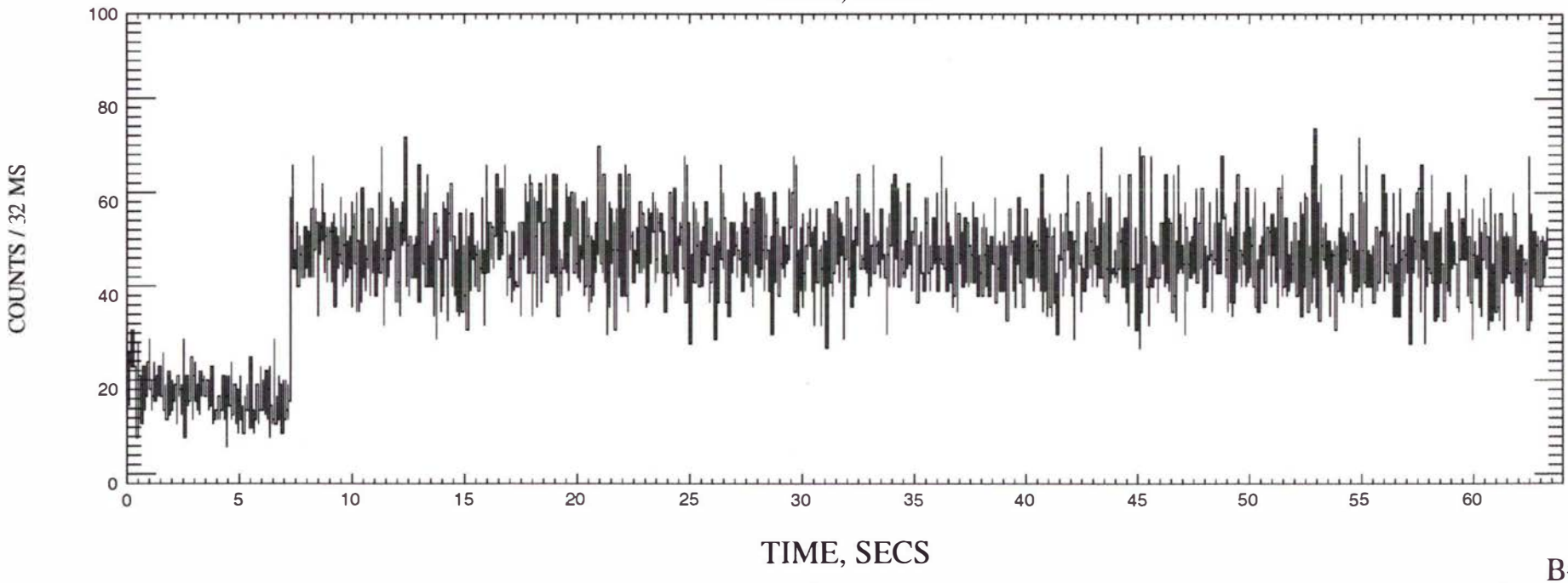


B# 7

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 3 at UT= 5.207337426080 h=18746.415 s 05:12:26.415

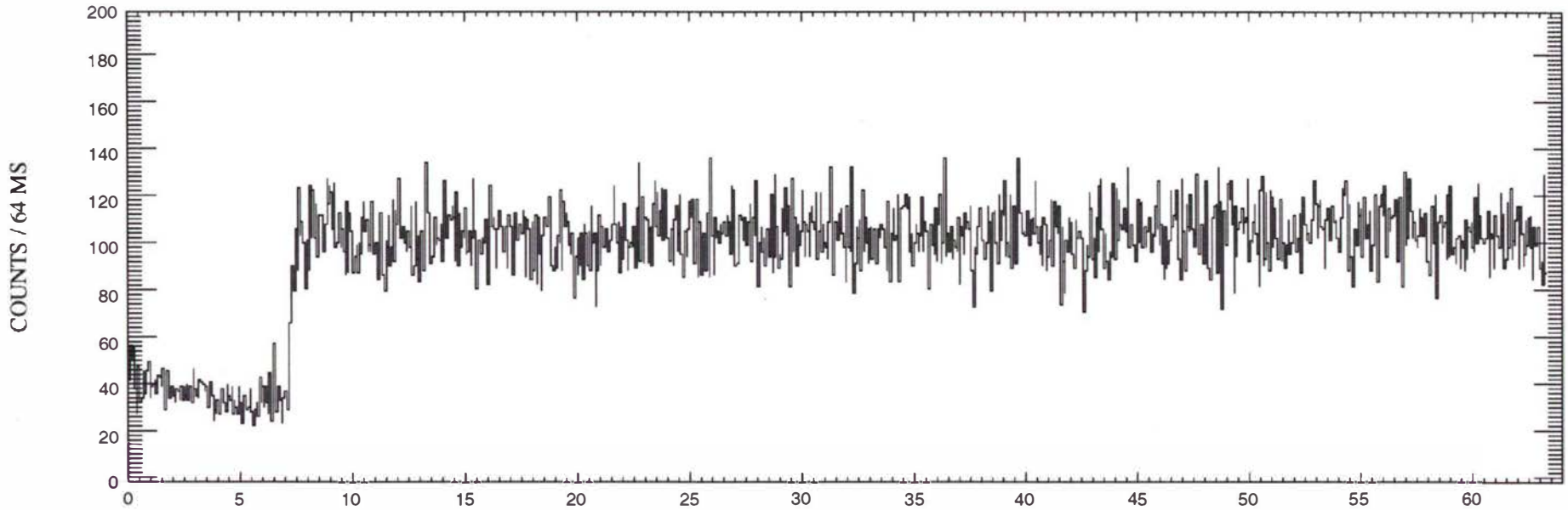




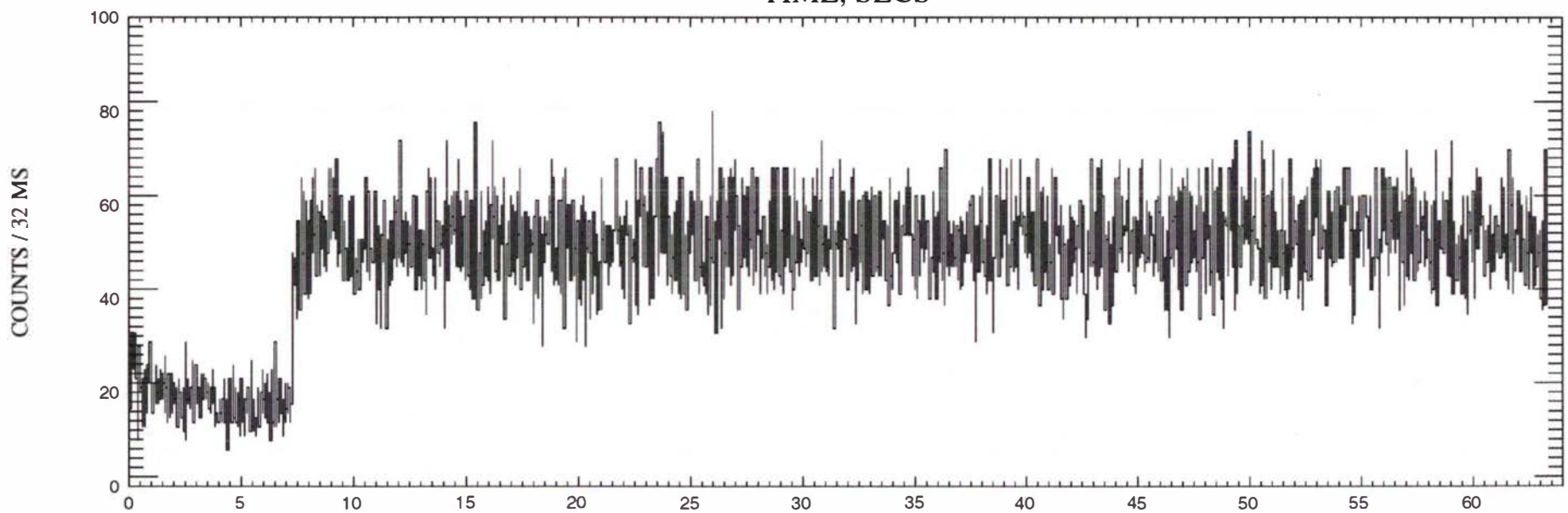
B# 8

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 4 at UT= 5.909573215908 h=21274.464 s 05:54:34.464



TIME, SECS

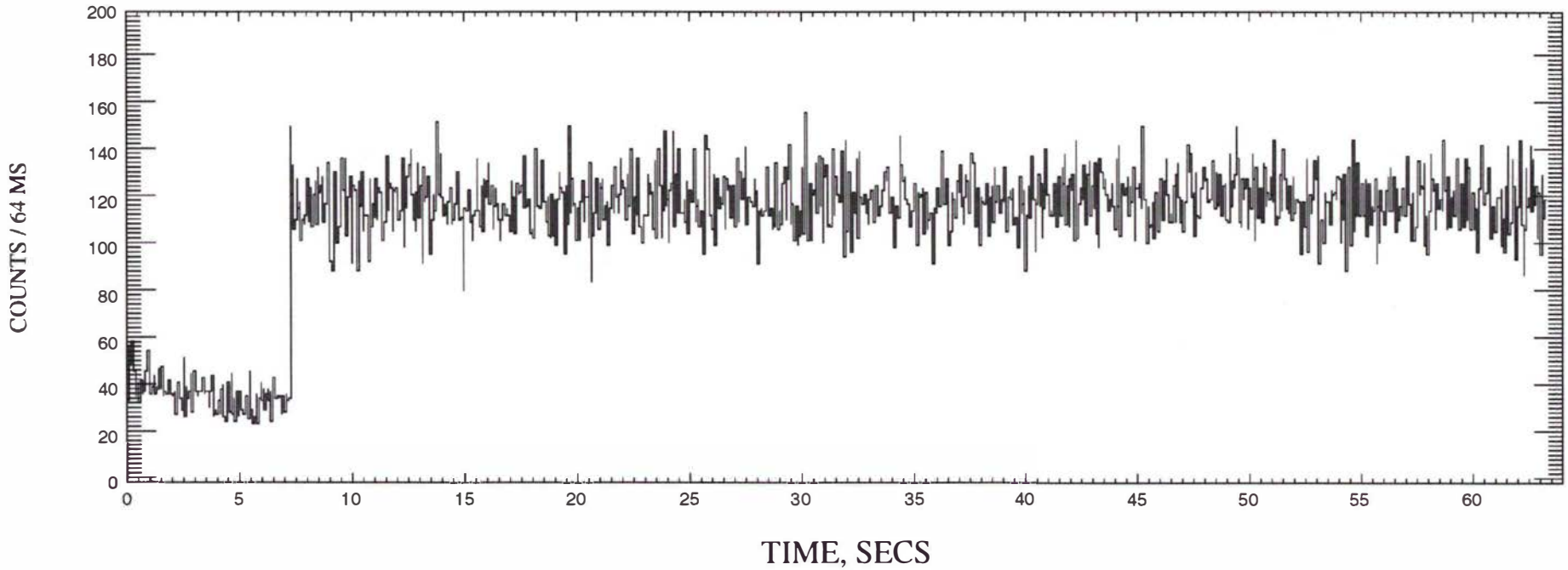


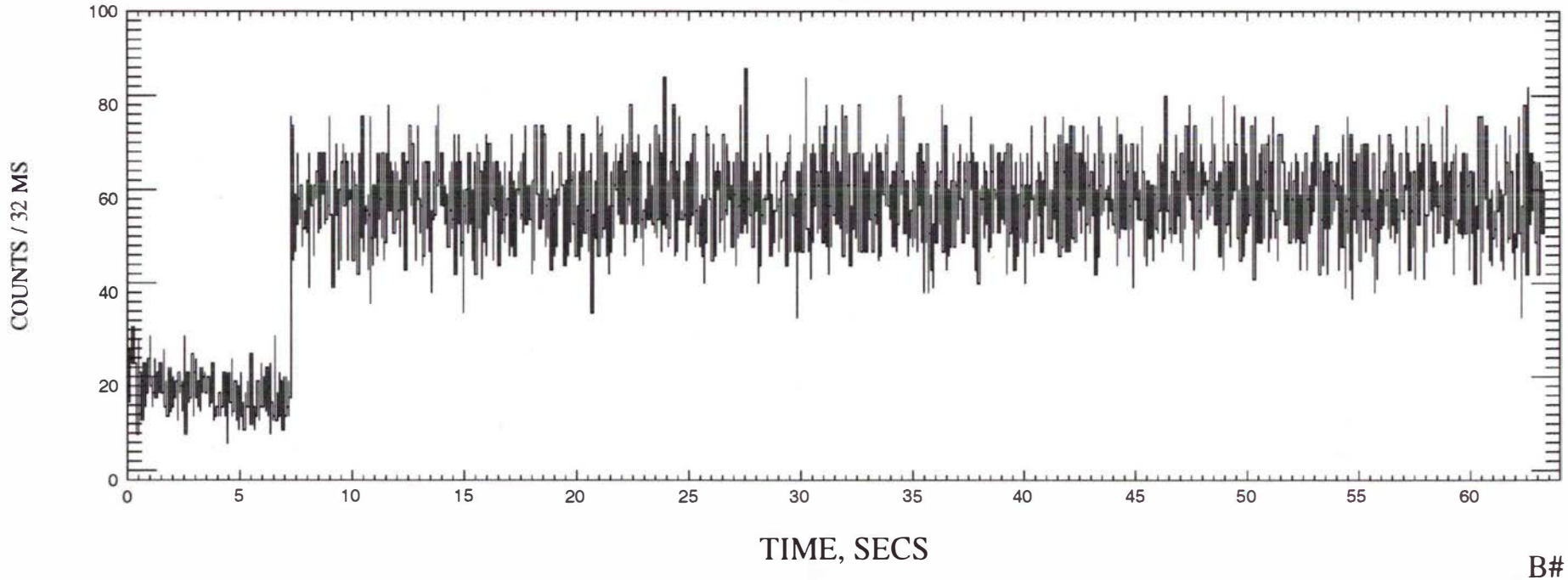
TIME, SECS

B# 9

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 6 at UT= 7.314032800463 h=26330.518 s 07:18:50.518

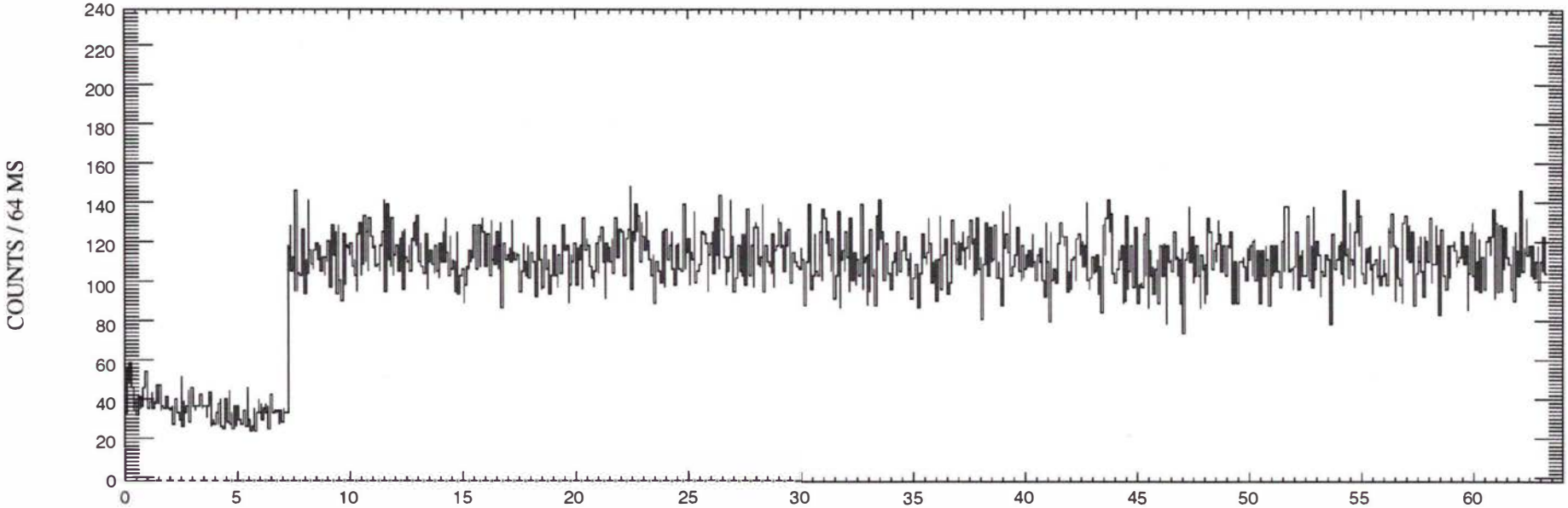




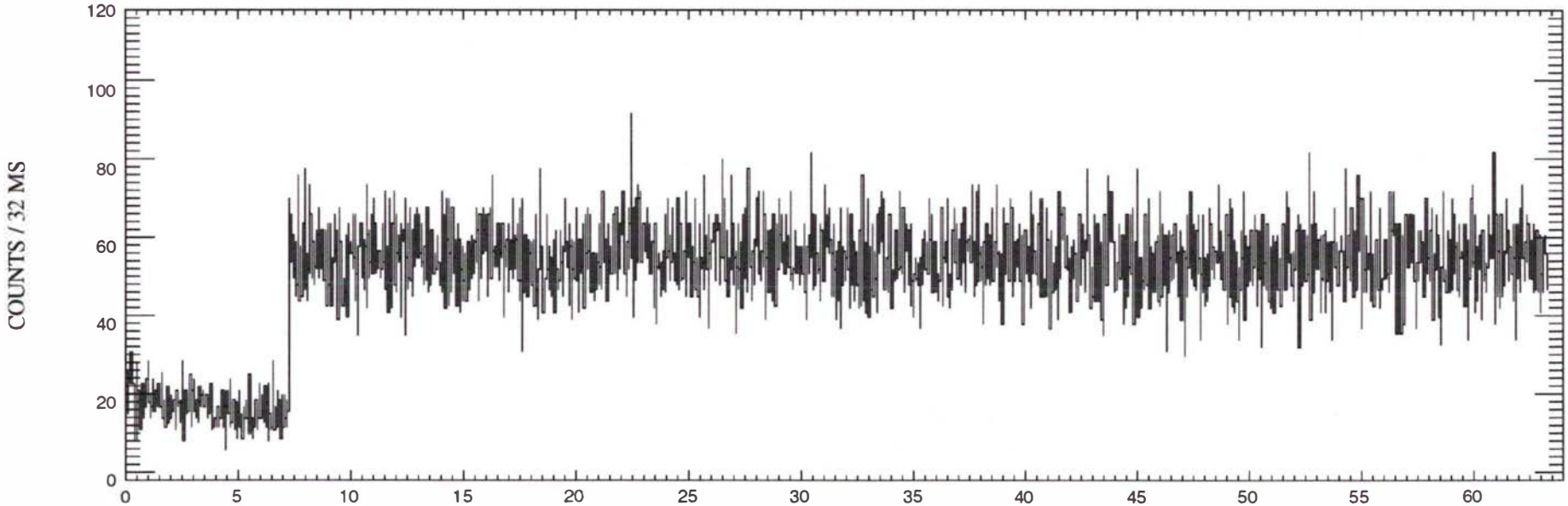
B# 11

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 5 at UT= 6.611802491082 h=23802.489 s 06:36:42.489



TIME, SECS

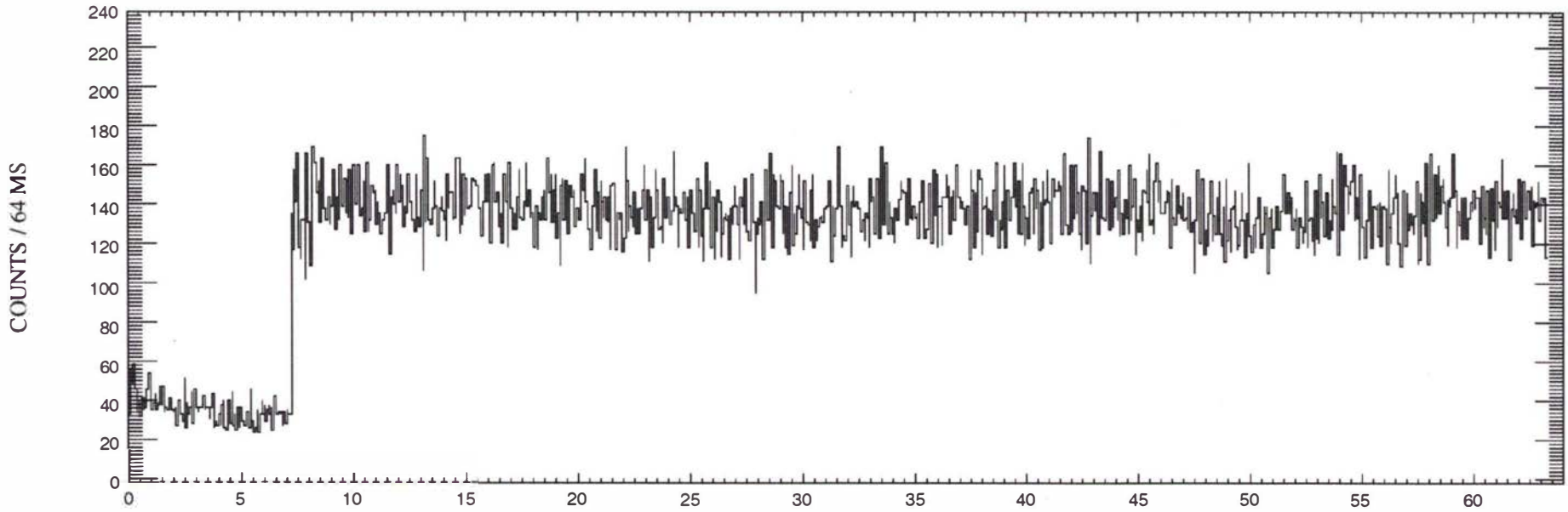


TIME, SECS

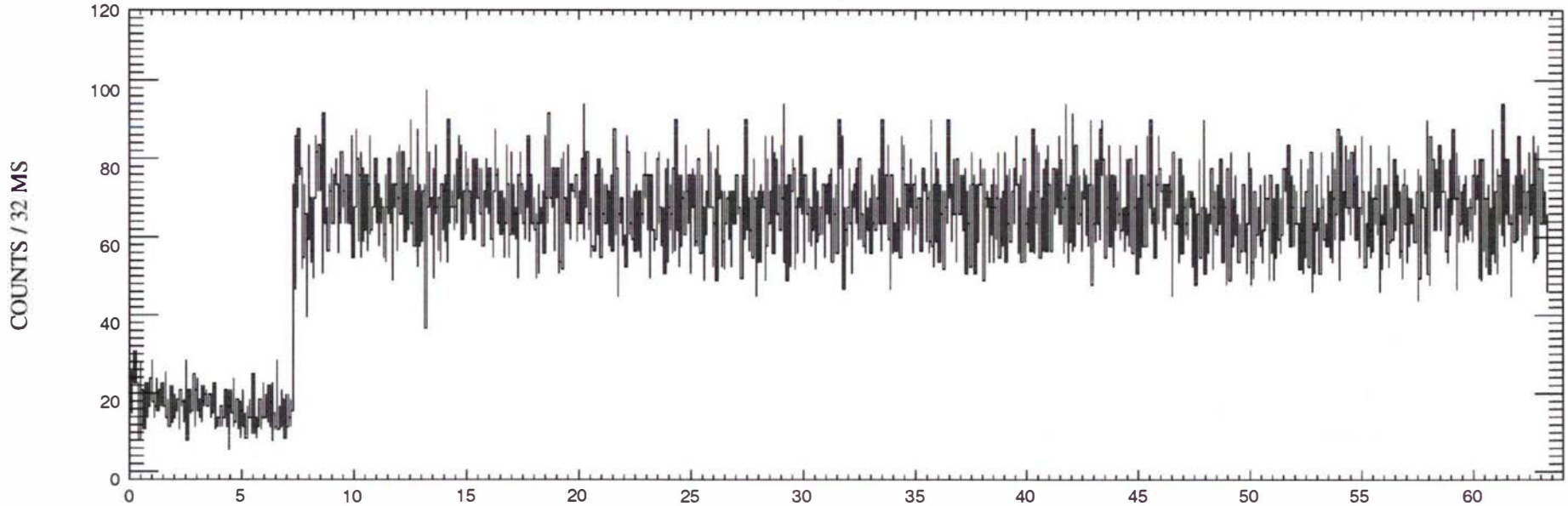
B# 10

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 8 at UT= 8.718500035604 h=31386.600 s 08:43:06.600



TIME, SECS

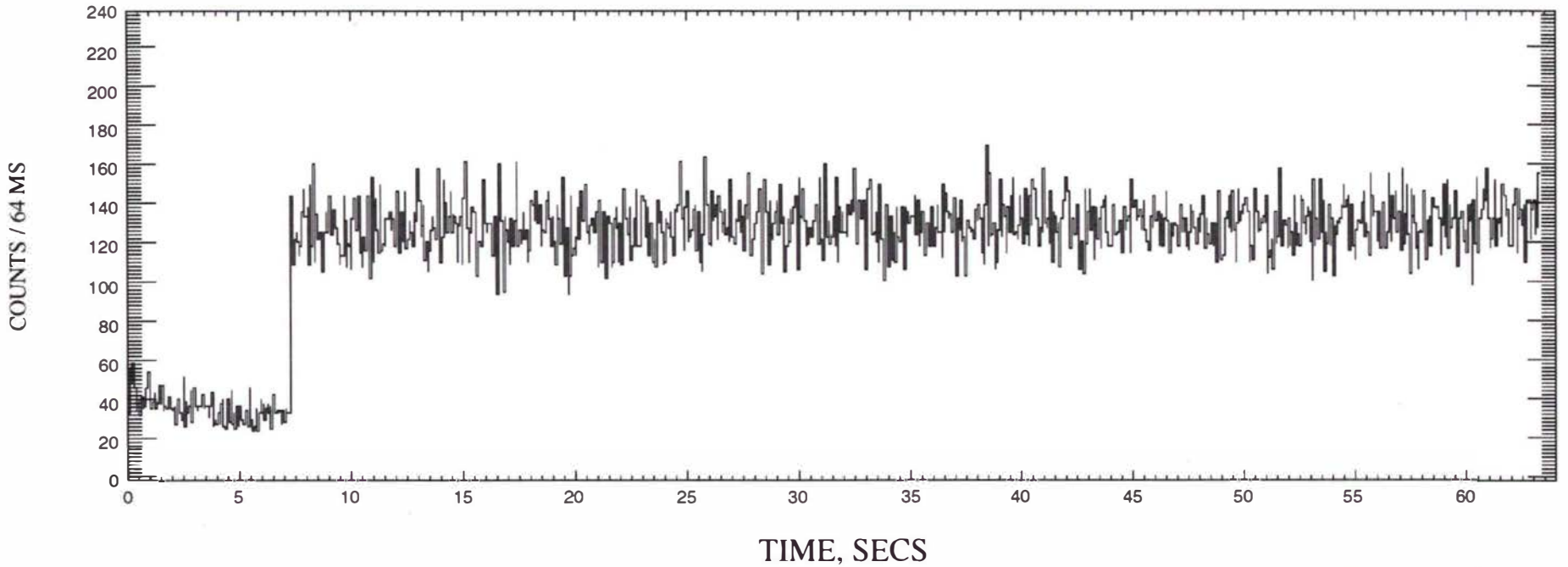


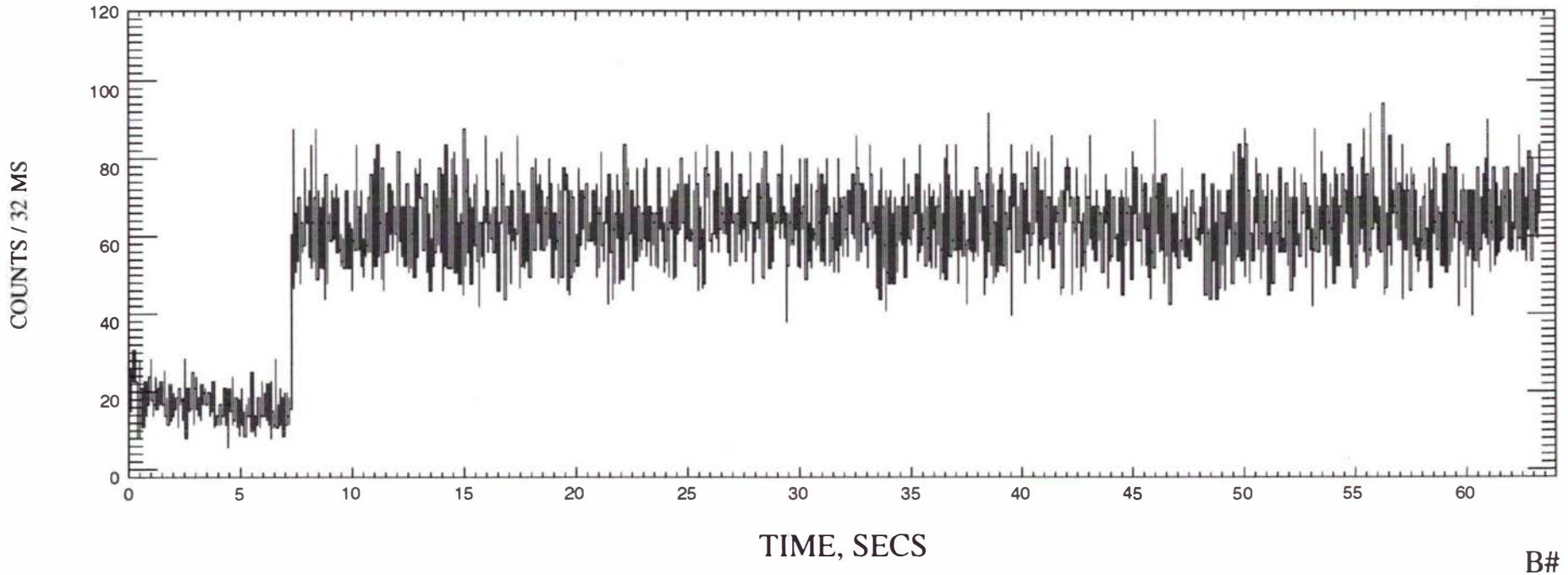
TIME, SECS

B# 13

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 7 at UT= 8.016268590291 h=28858.567 s 08:00:58.567

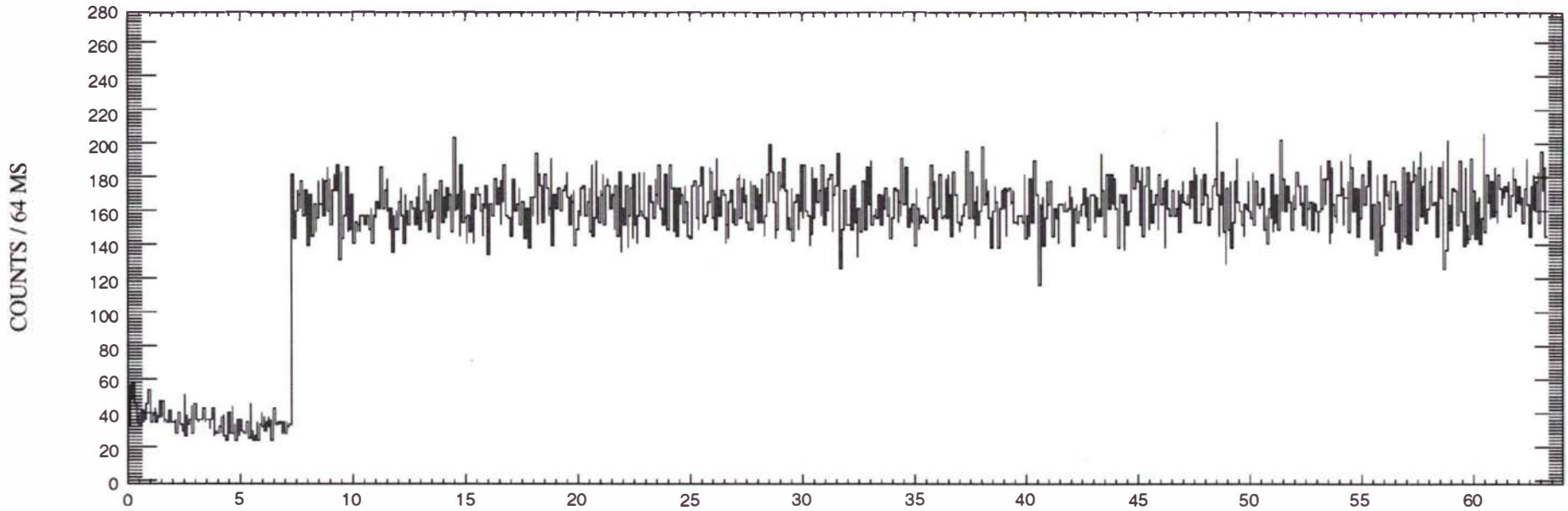




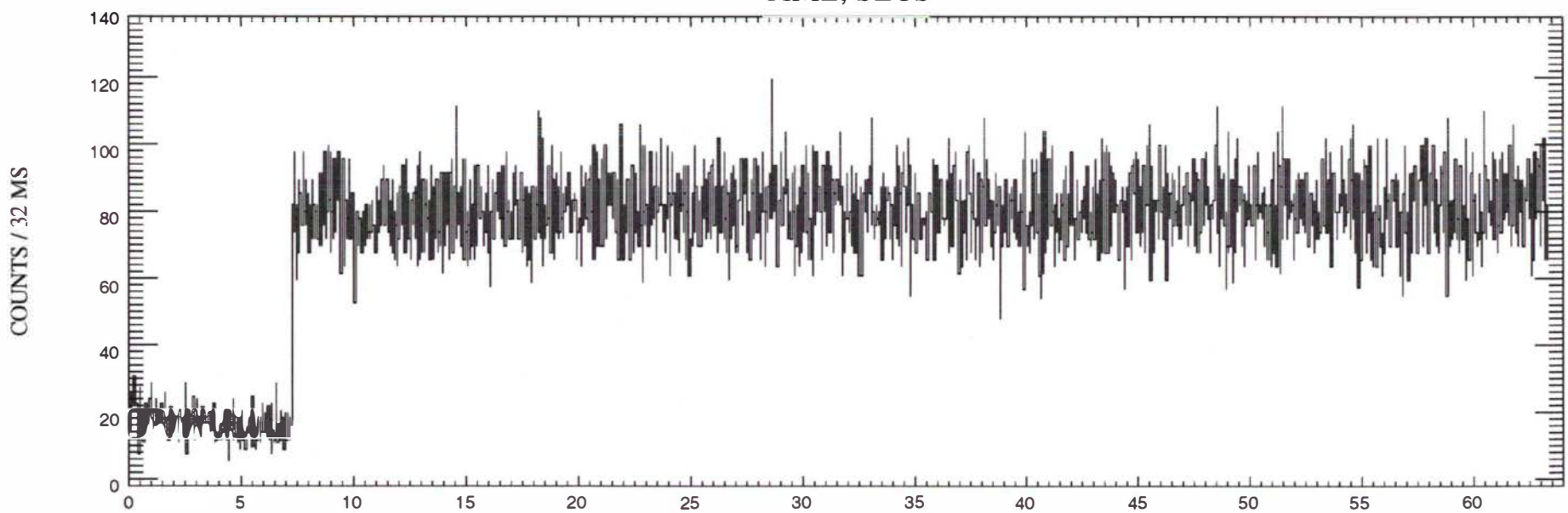
B# 12

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 10 at UT=10.122967270745 h=36442.682 s 10:07:22.682



TIME, SECS

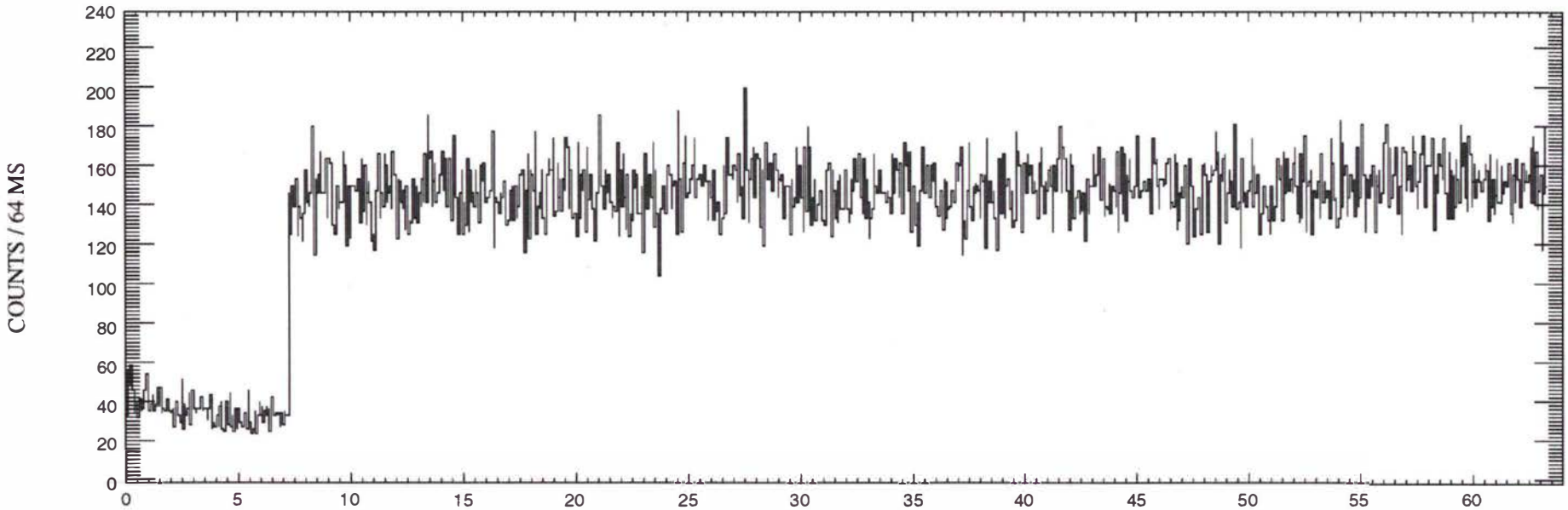


TIME, SECS

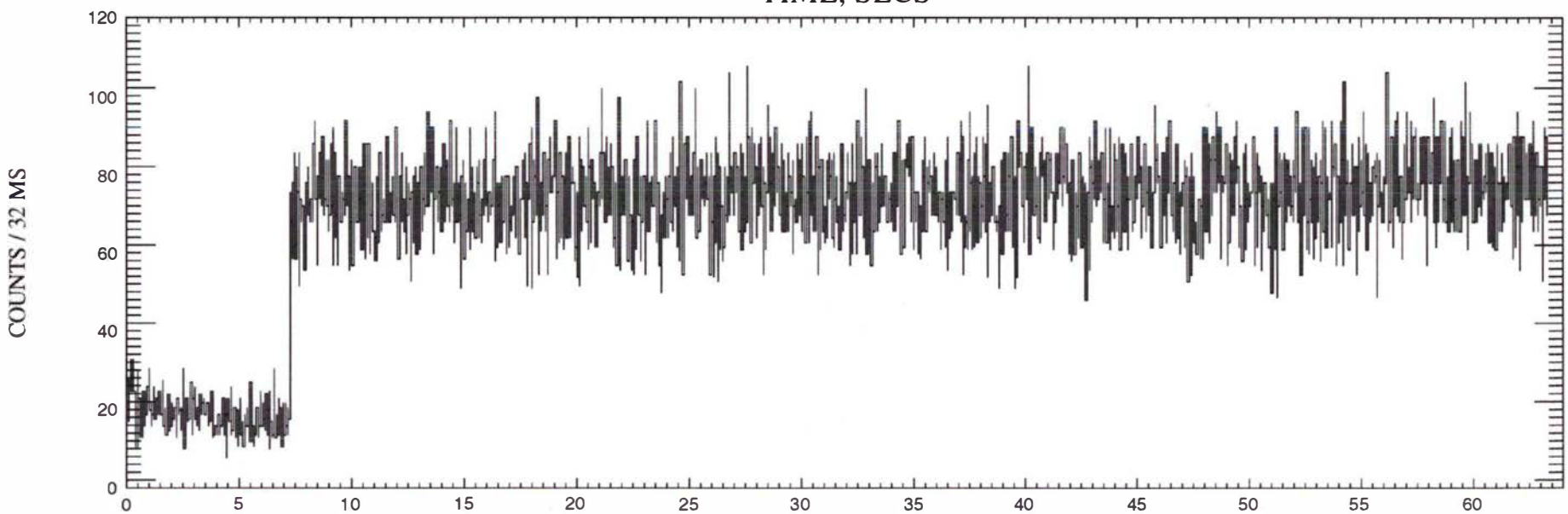
B# 15

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 9 at UT= 9.420733655294 h=33914.641 s 09:25:14.641



TIME, SECS

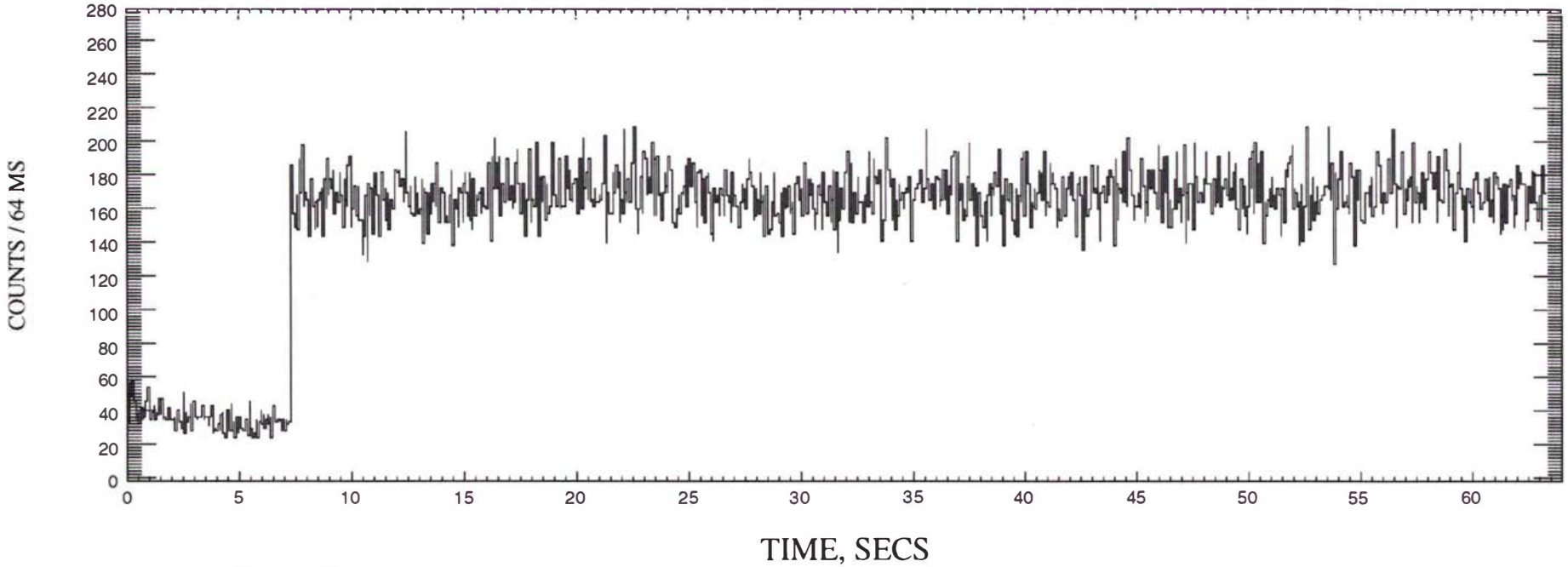


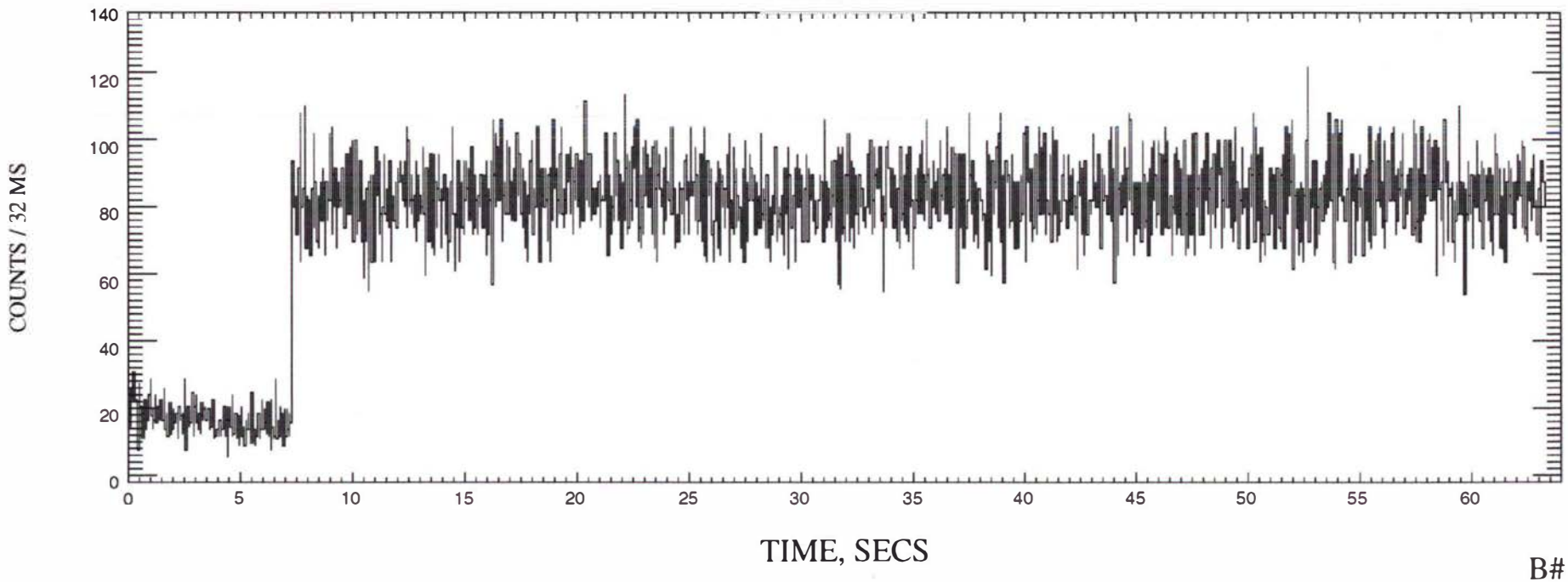
TIME, SECS

B# 14

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 11 at UT=10.825200890435 h=38970.723 s 10:49:30.723

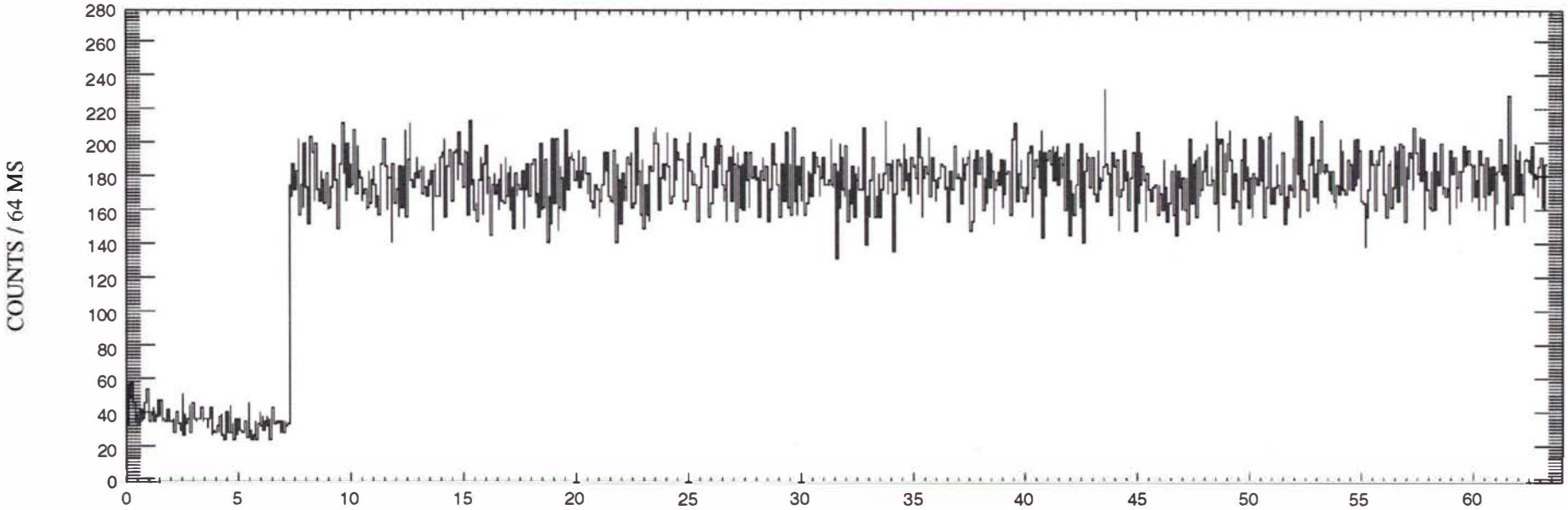




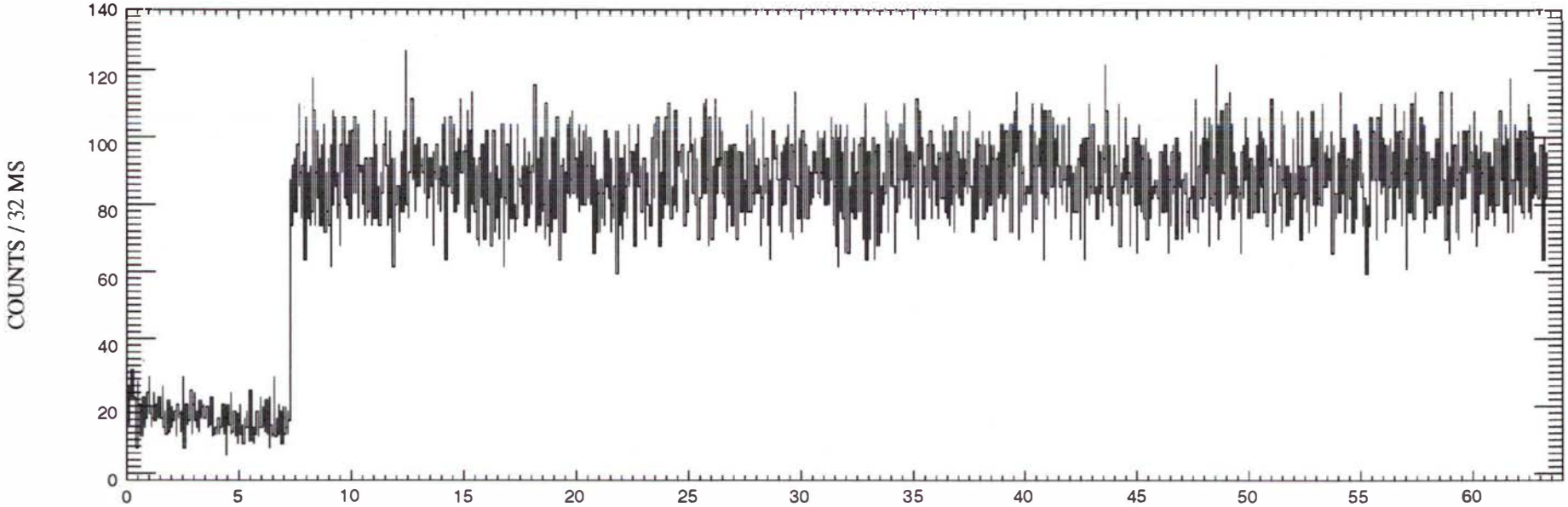
B# 16

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 12 at UT=11.527432335748 h=41498.756 s 11:31:38.756



TIME, SECS

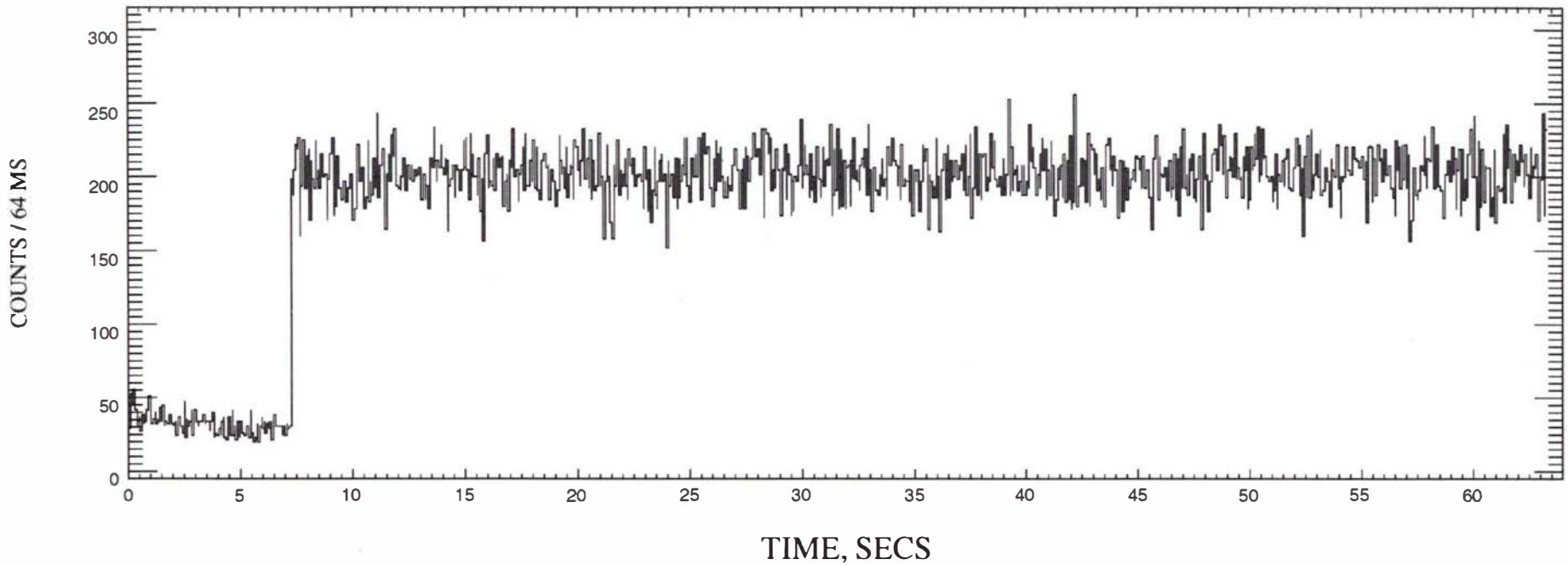


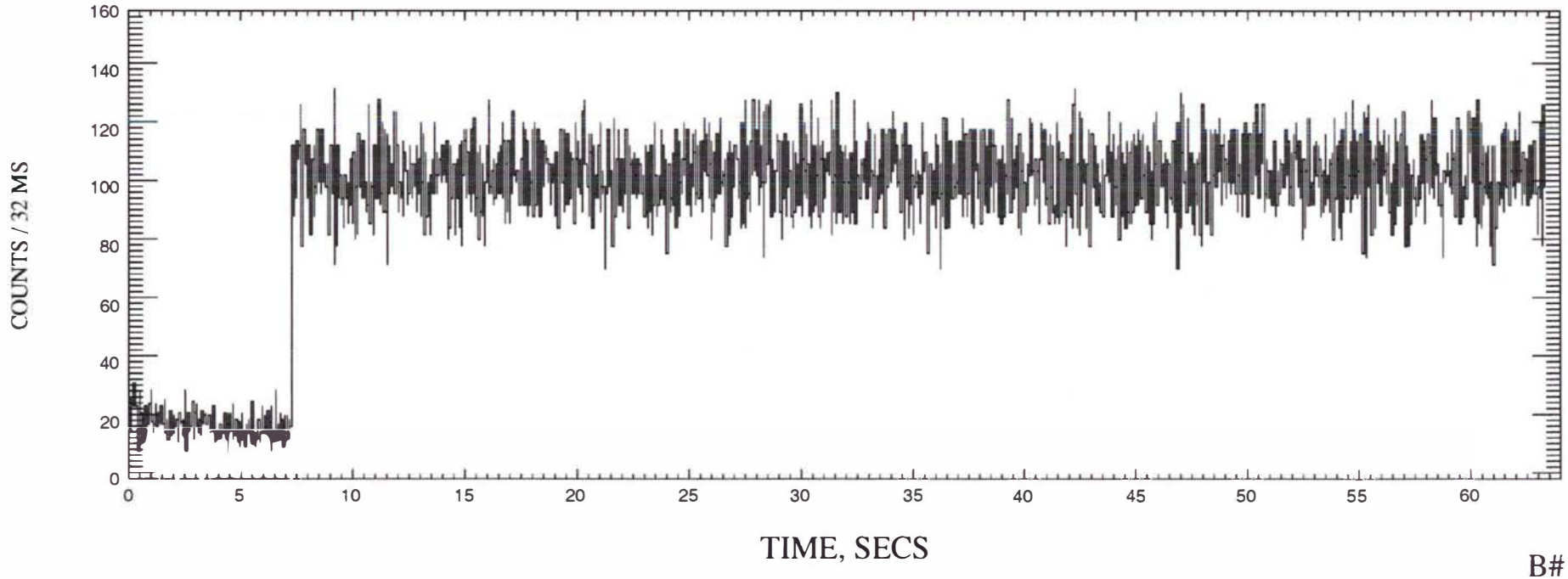
TIME, SECS

B# 17

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 13 at UT=12.229665955438 h=44026.797 s 12:13:46.797

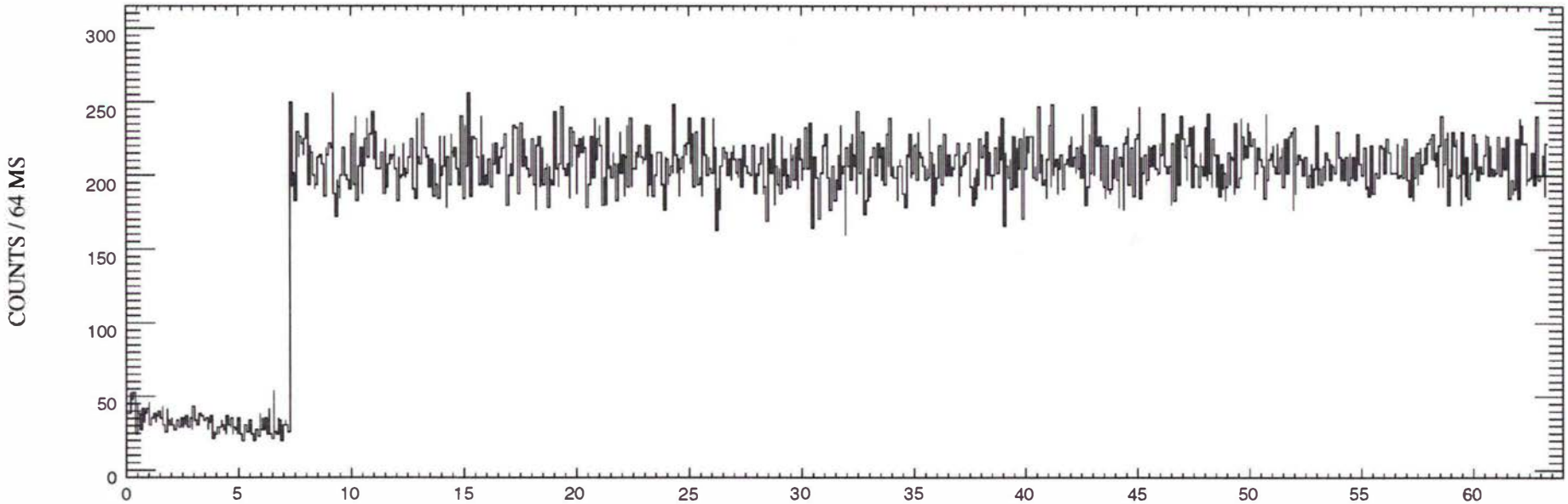




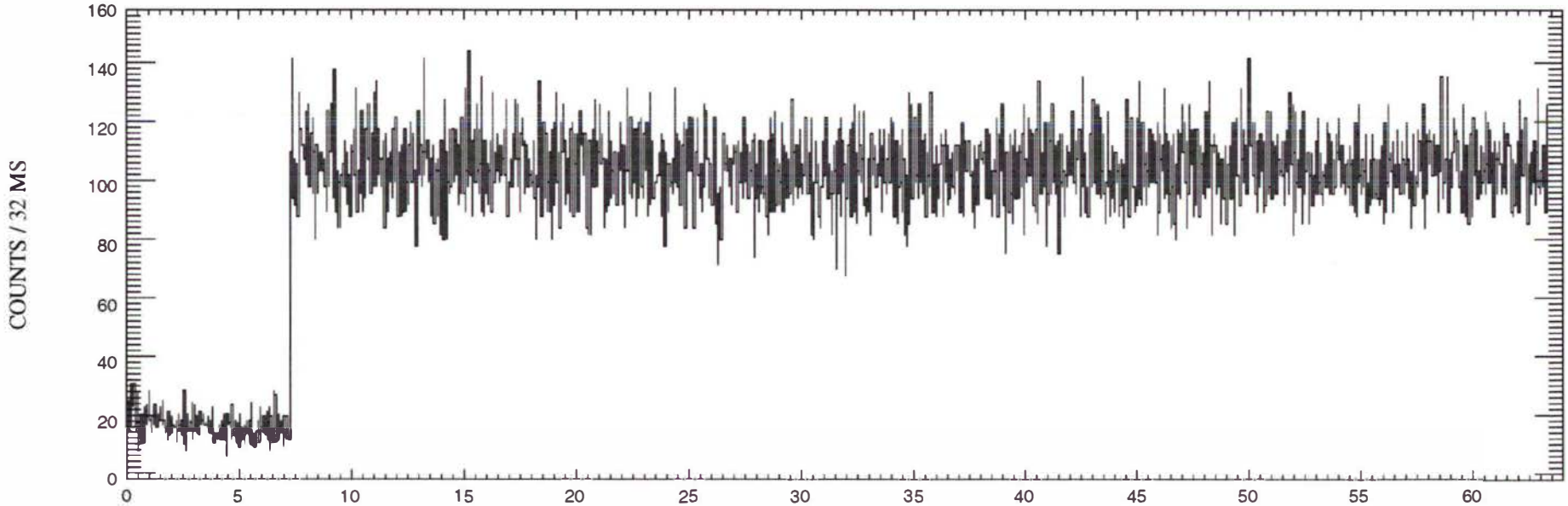
B# 18

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 14 at UT=12.931896832784 h=46554.829 s 12:55:54.829



TIME, SECS

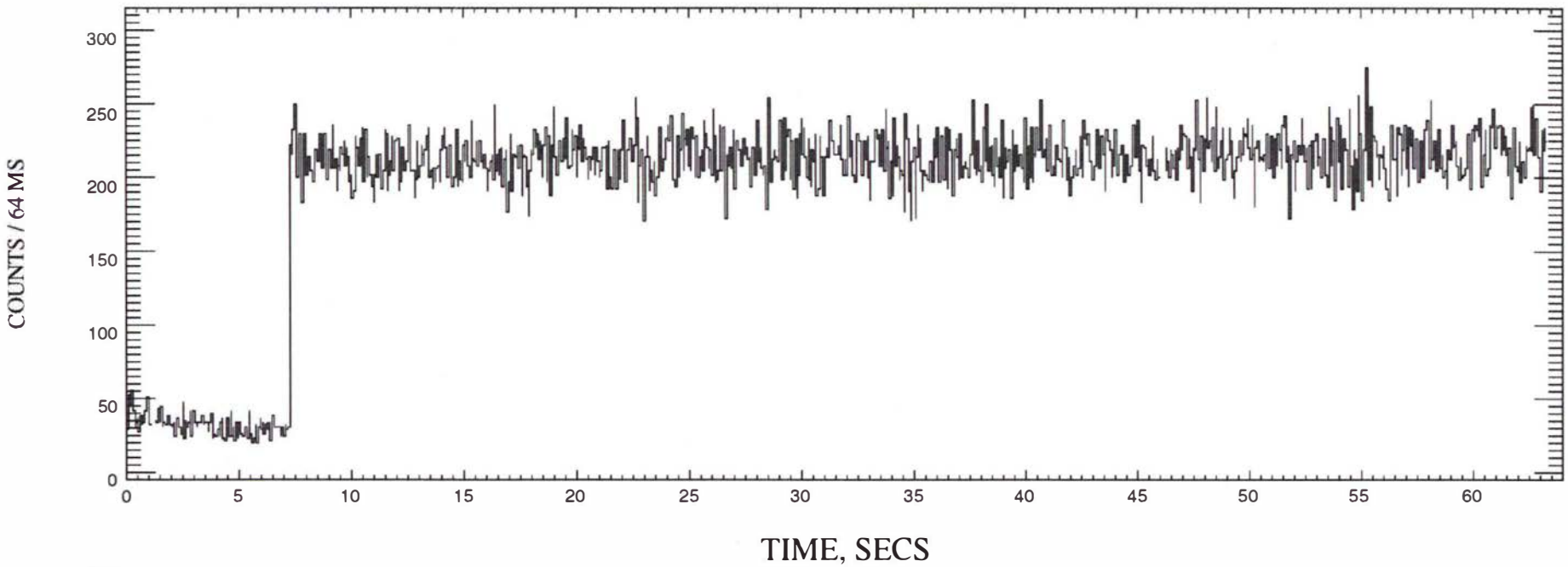


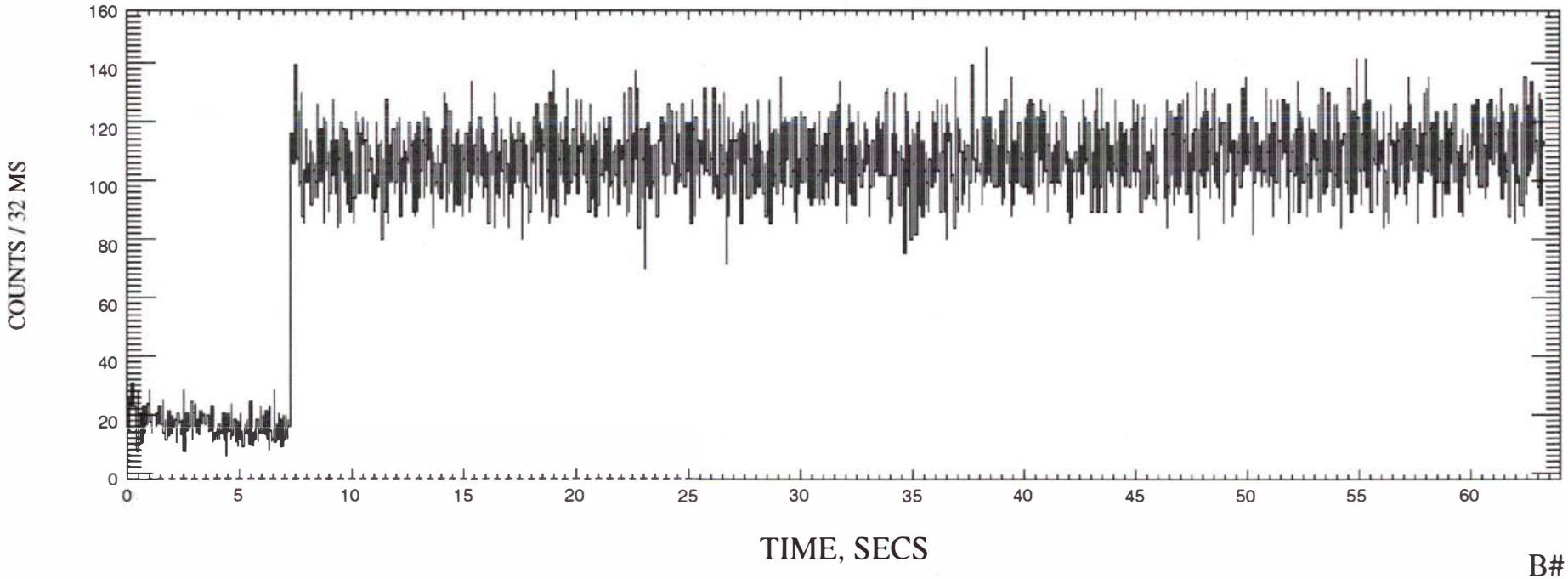
TIME, SECS

B# 19

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 15 at UT=13.634141748216 h=49082.910 s 13:38:02.910

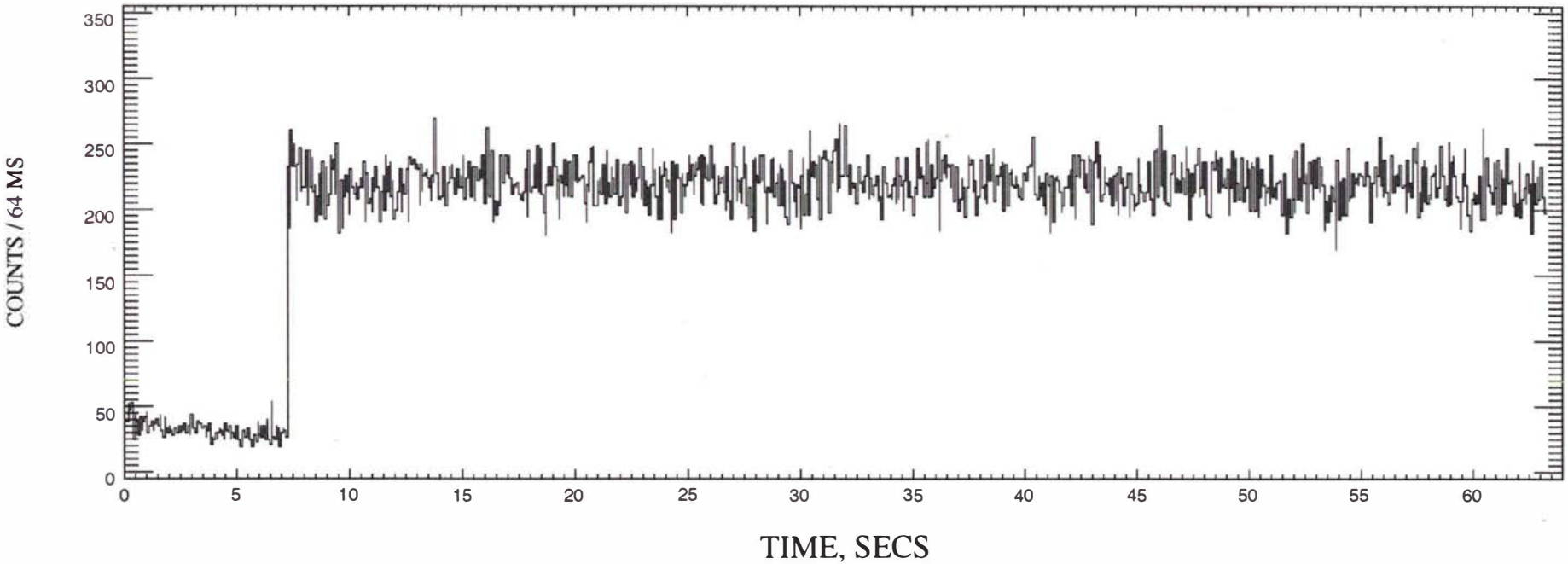


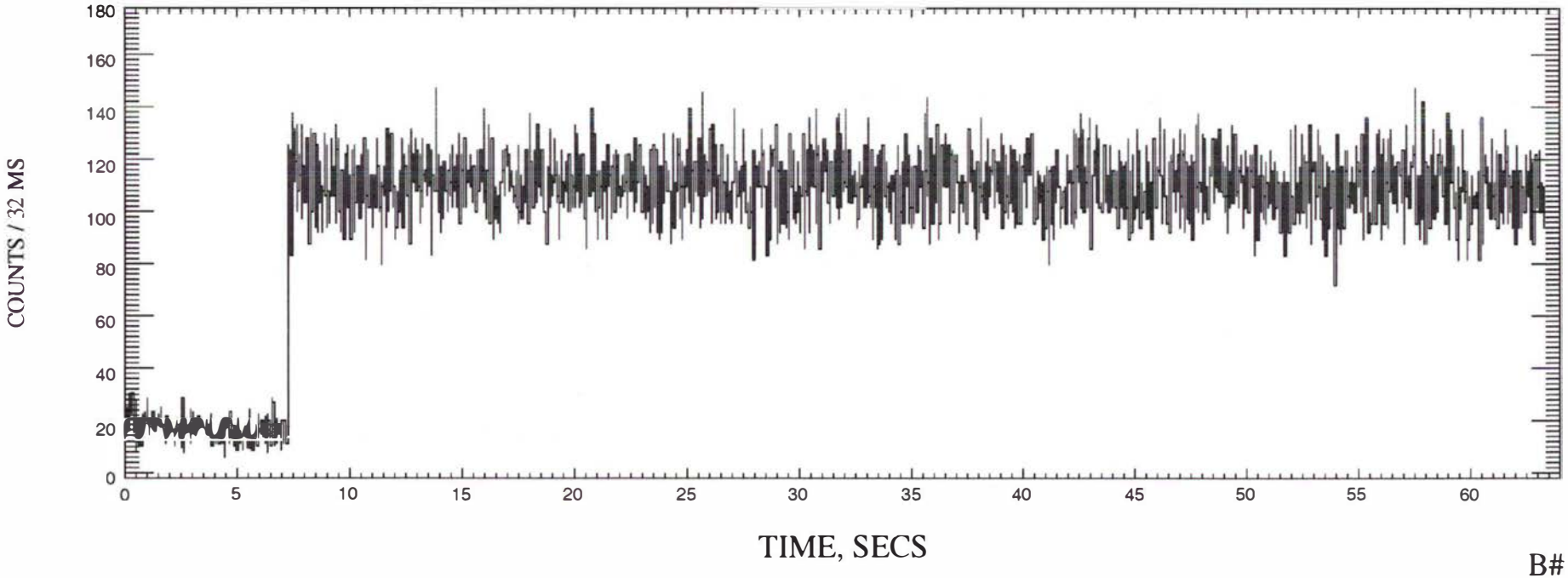


B# 20

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 0 at UT=14.336375660366 h=51610.952 s 14:20:10.952

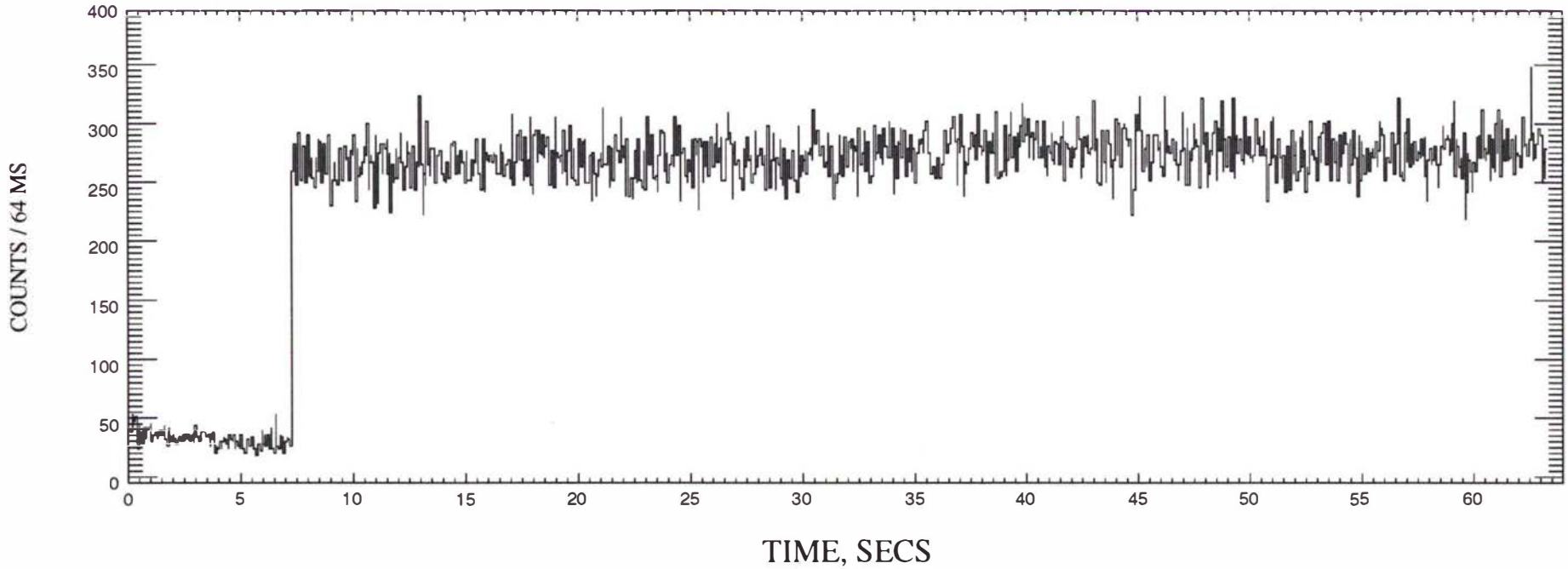


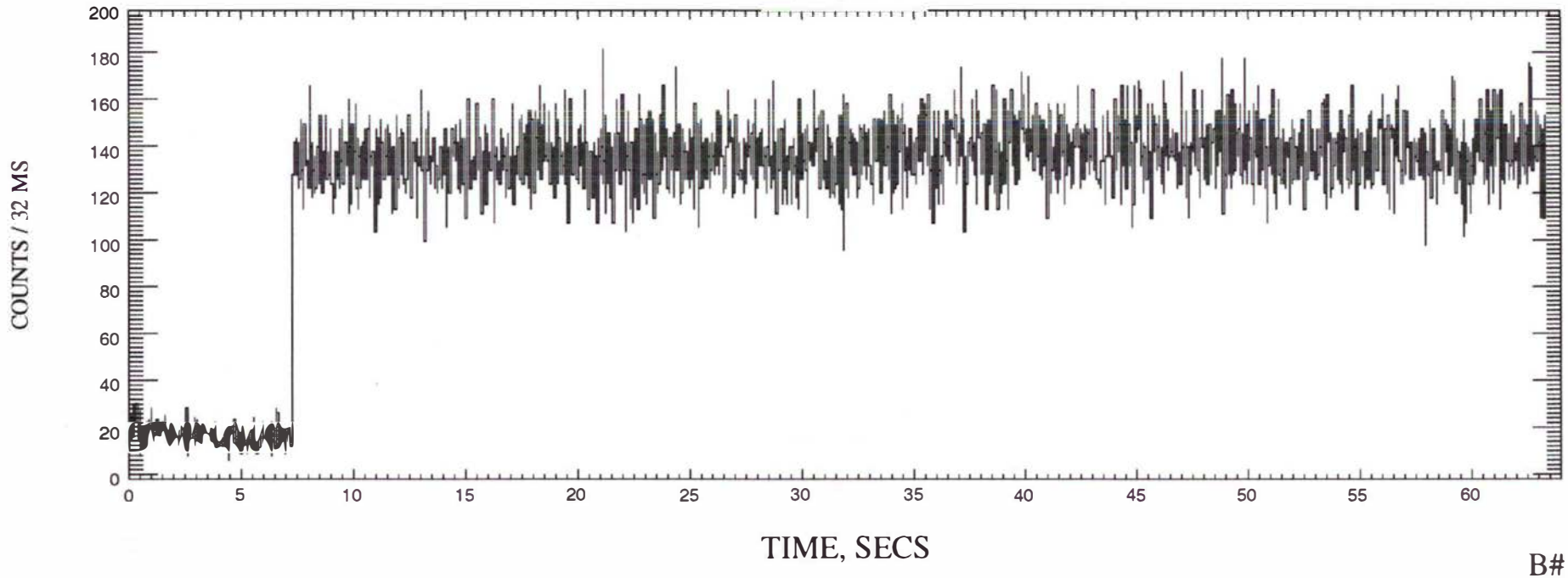


B# 21

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 1 at UT=15.038609475030 h=54138.994 s 15:02:18.994

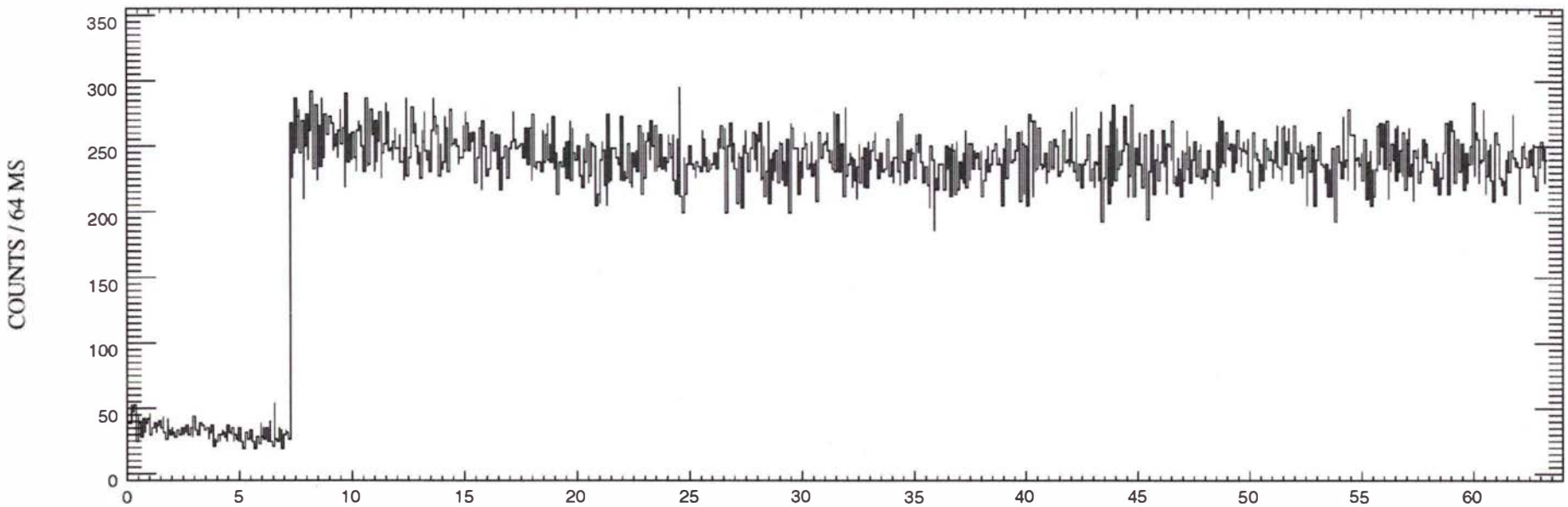




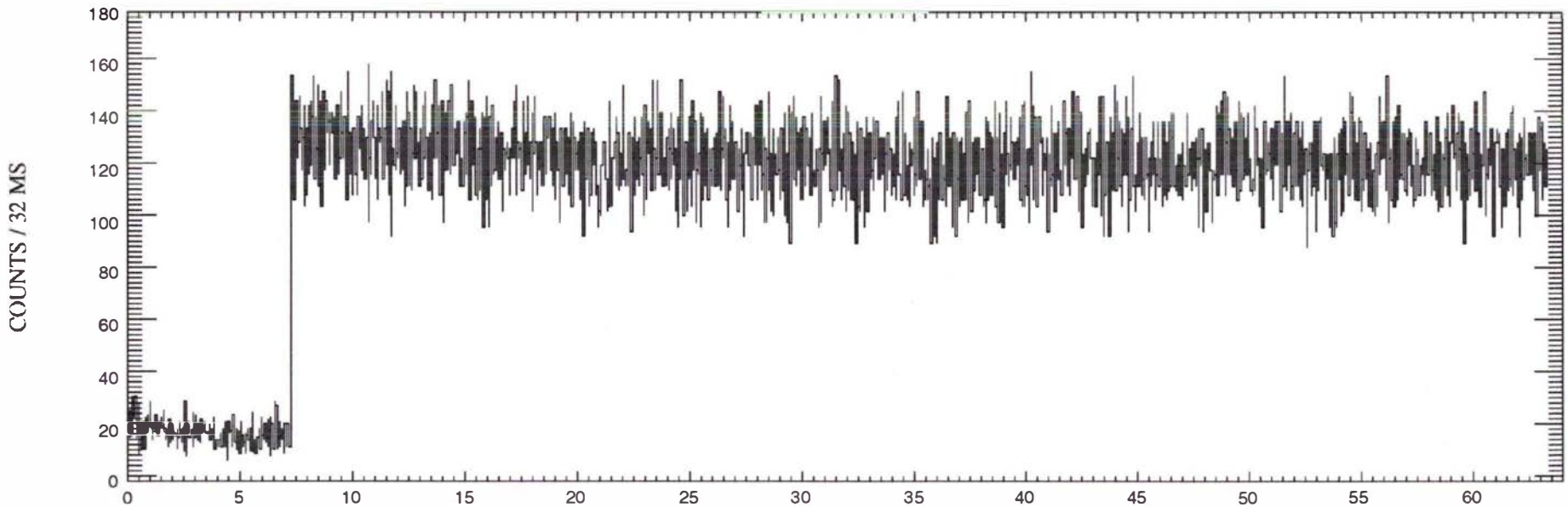
B# 22

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 D●Y = 268 09/26/01

Burst Counter 2 at UT=15.740841119554 h=56667.028 s 15:44:27.028



TIME, SECS

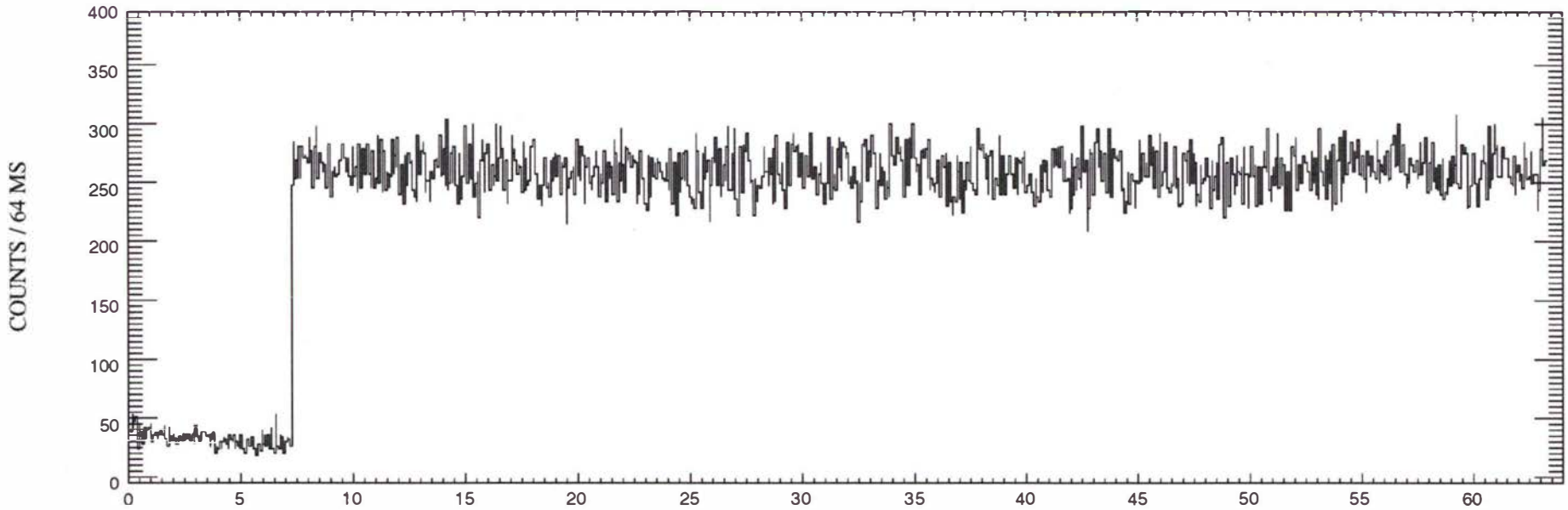


TIME, SECS

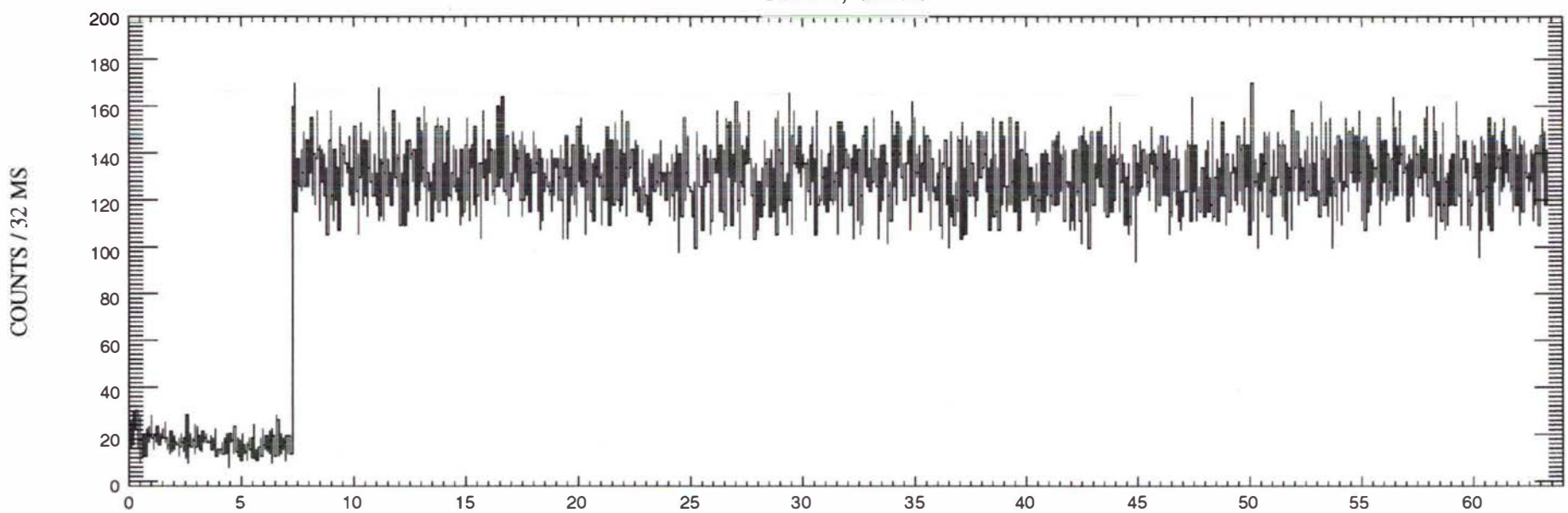
B# 23

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 3 at UT=16.443074934218 h=59195.070 s 16:26:35.070



TIME, SECS

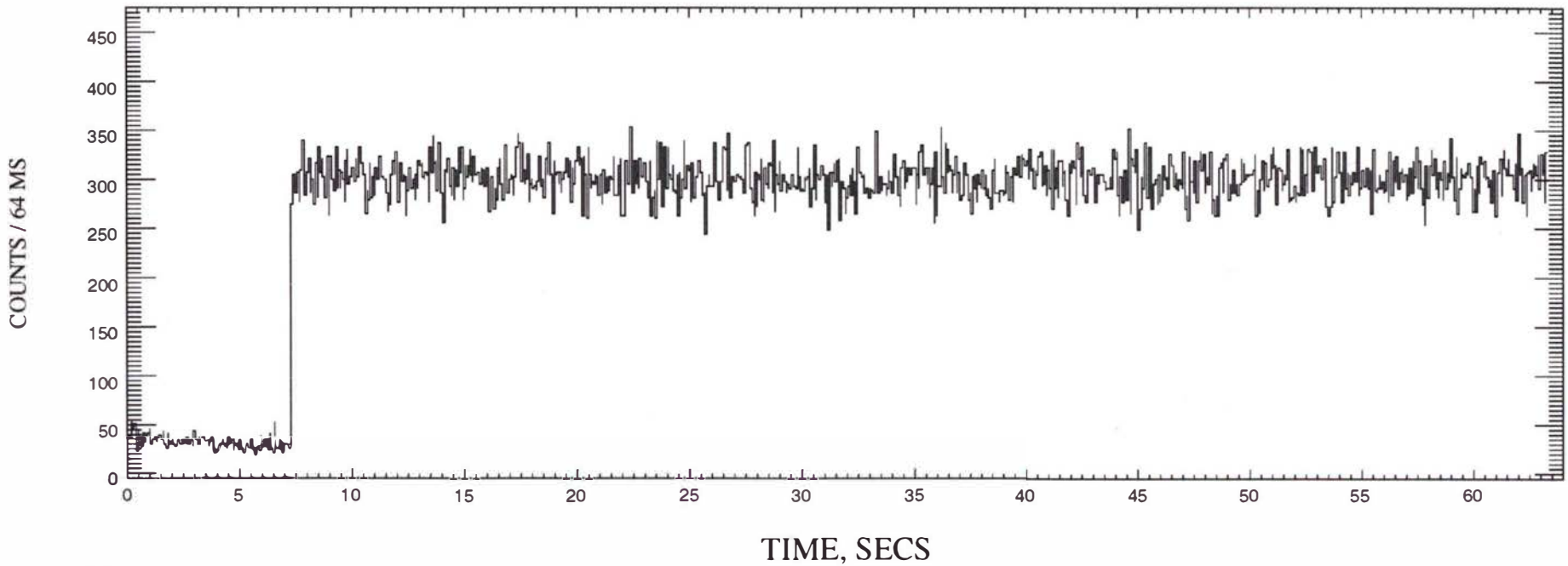


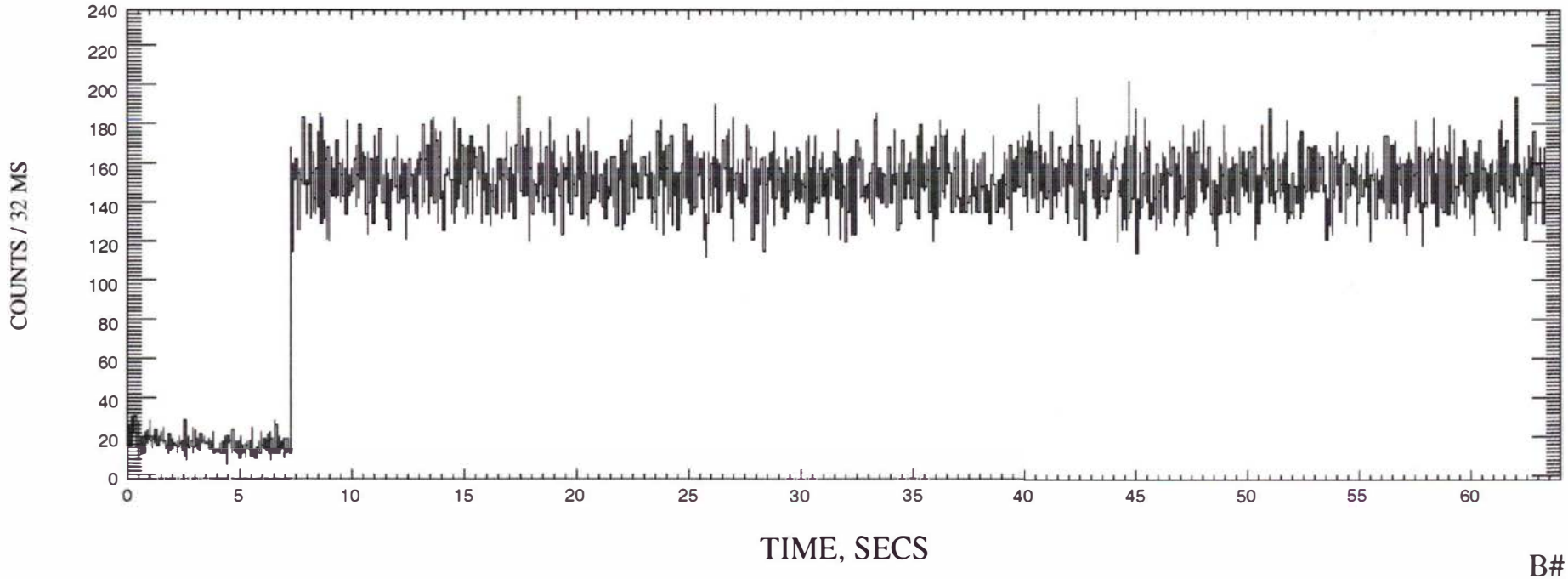
TIME, SECS

B# 24

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 4 at UT=17.145310914781 h=61723.119 s 17:08:43.119

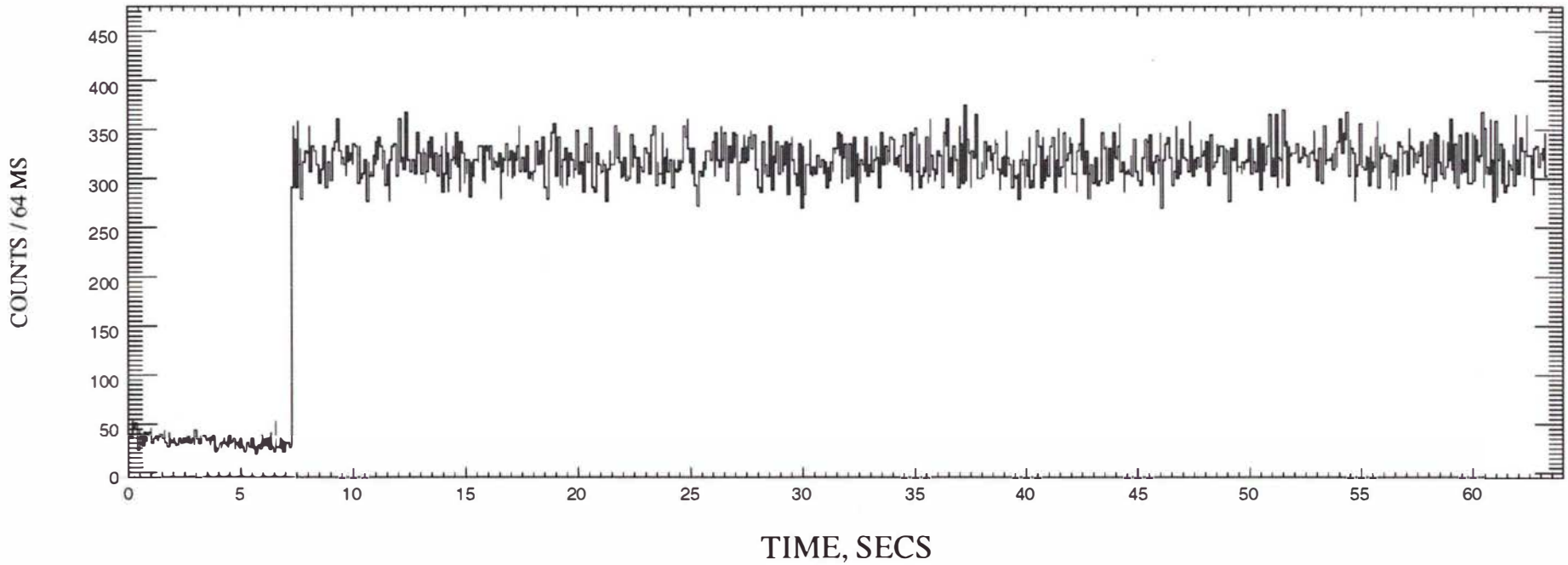


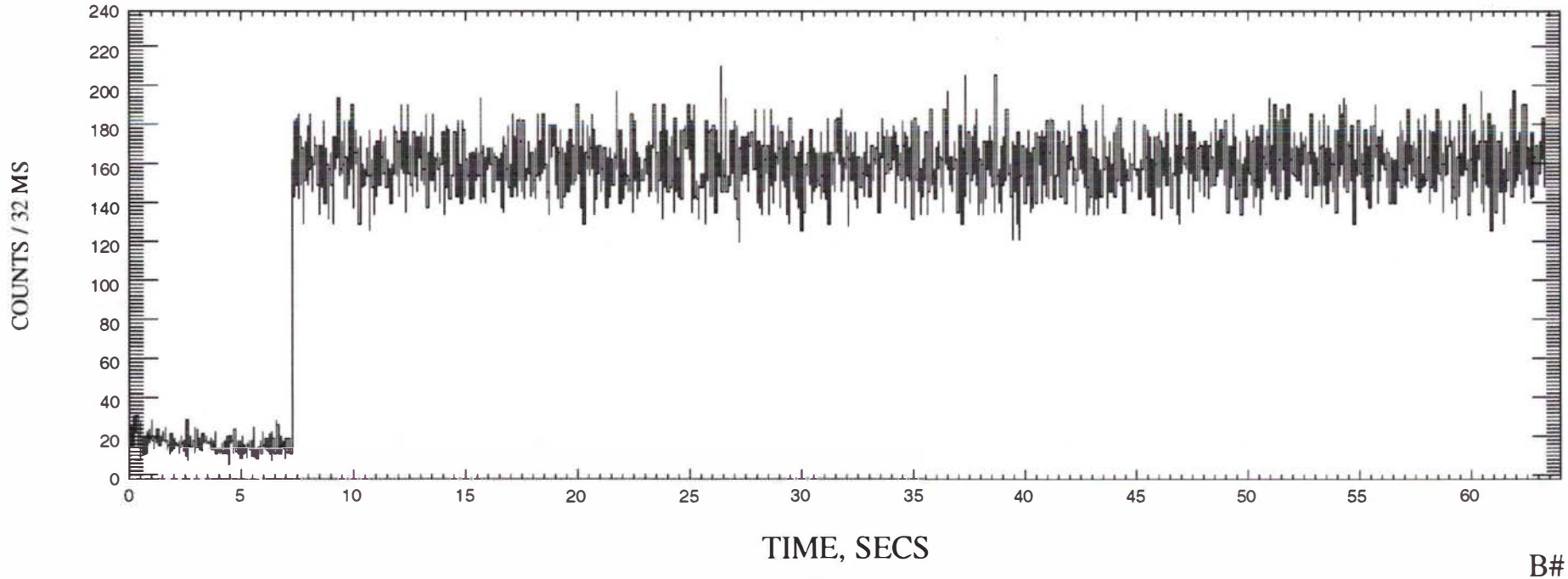


B# 25

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 5 at UT=17.847542559306 h=64251.153 s 17:50:51.153

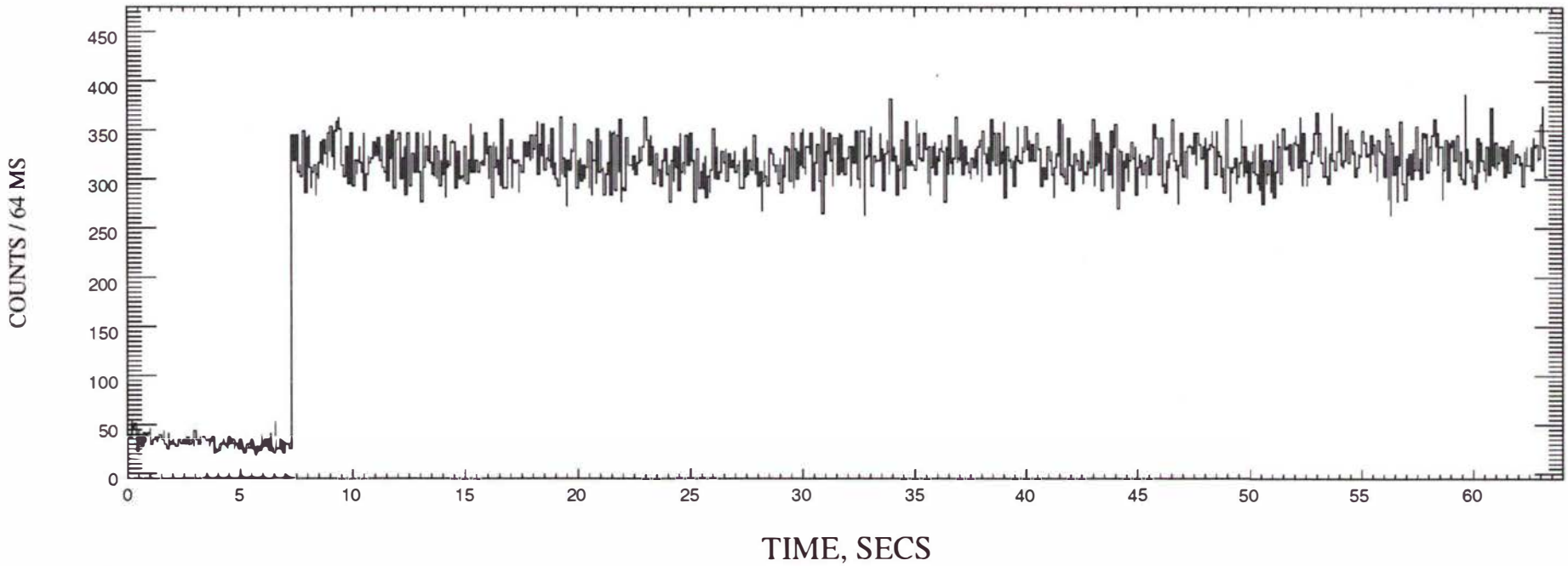


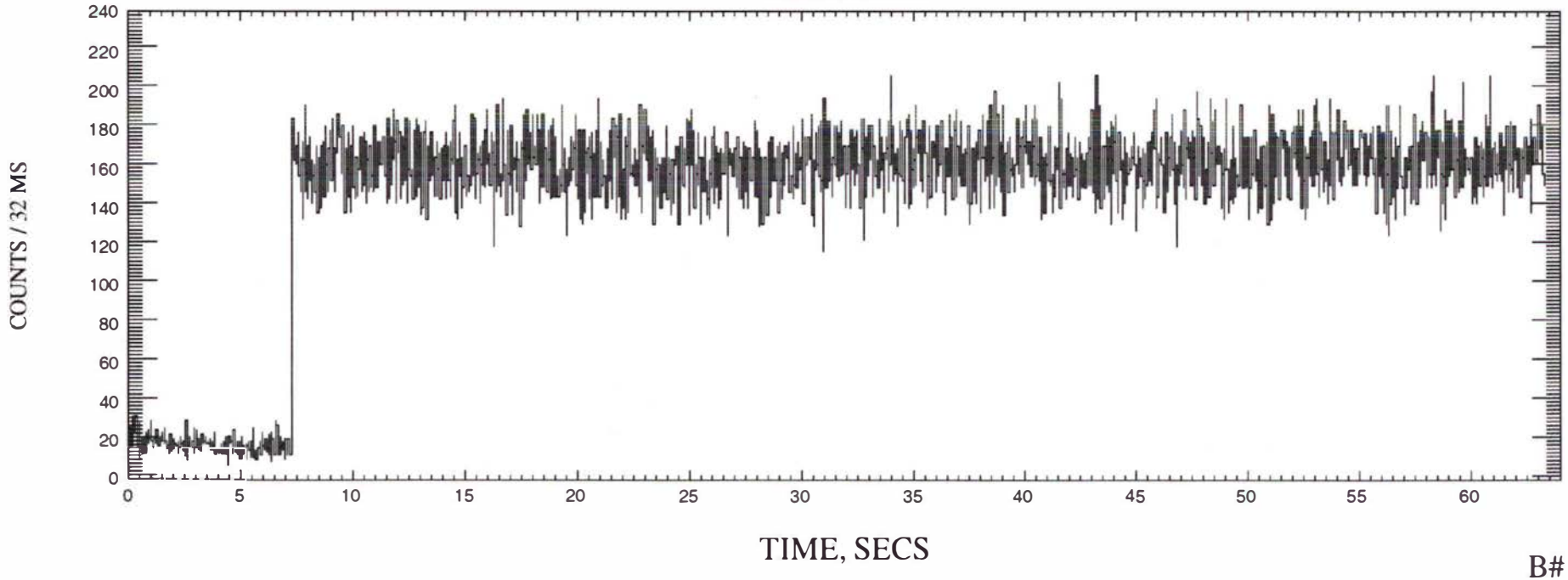


B# 26

HUS 2A TRIGGERED DATA ●EDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 6 at UT=18.549775212606 h=66779.191 s 18:32:59.191

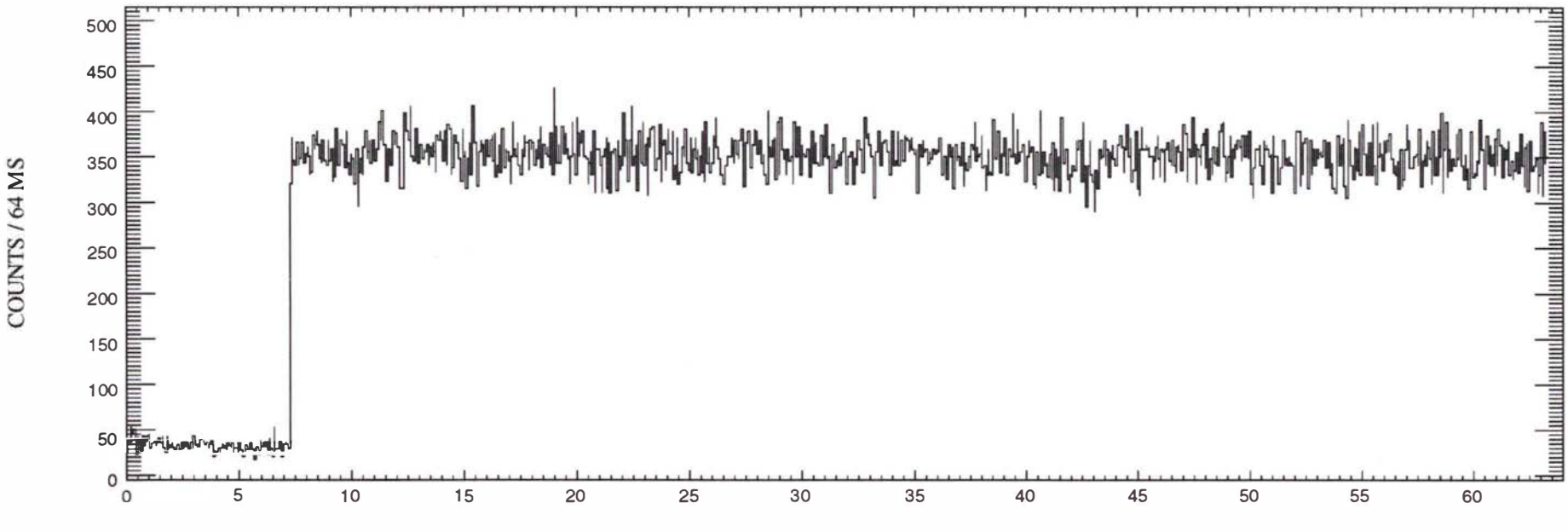


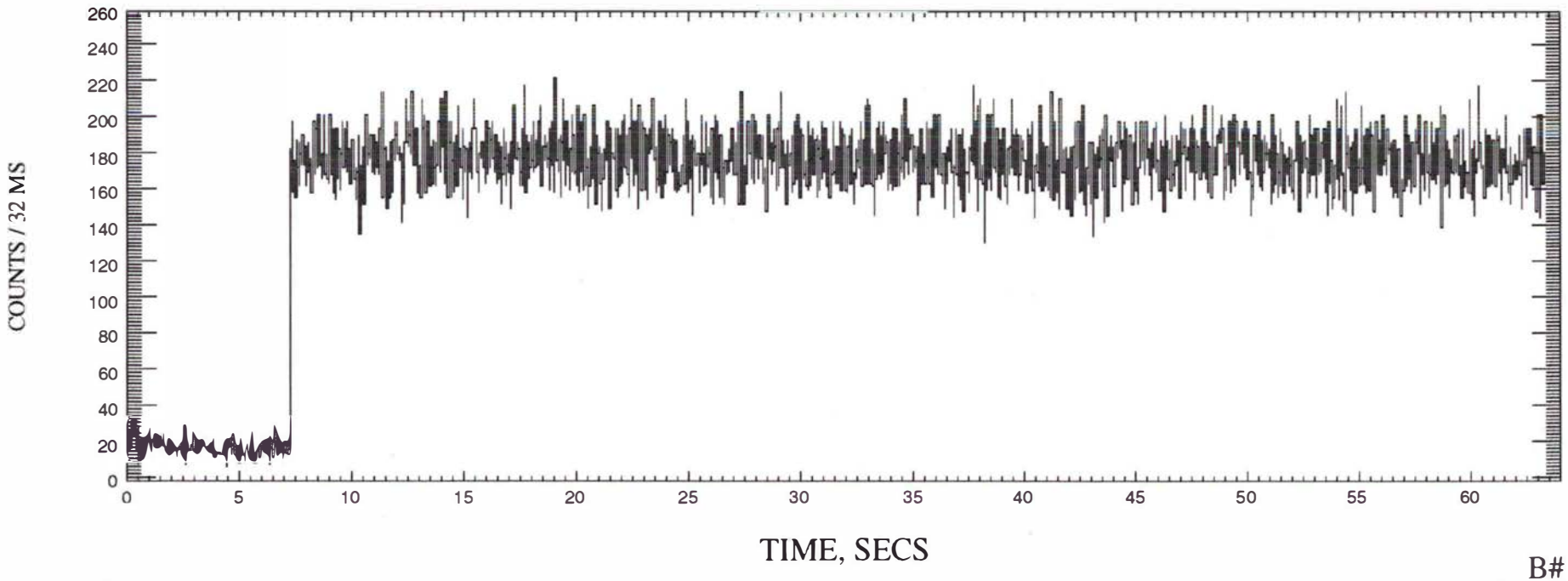


B# 27

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 7 at UT=19.252009027269 h=69307.232 s 19:15:07.232

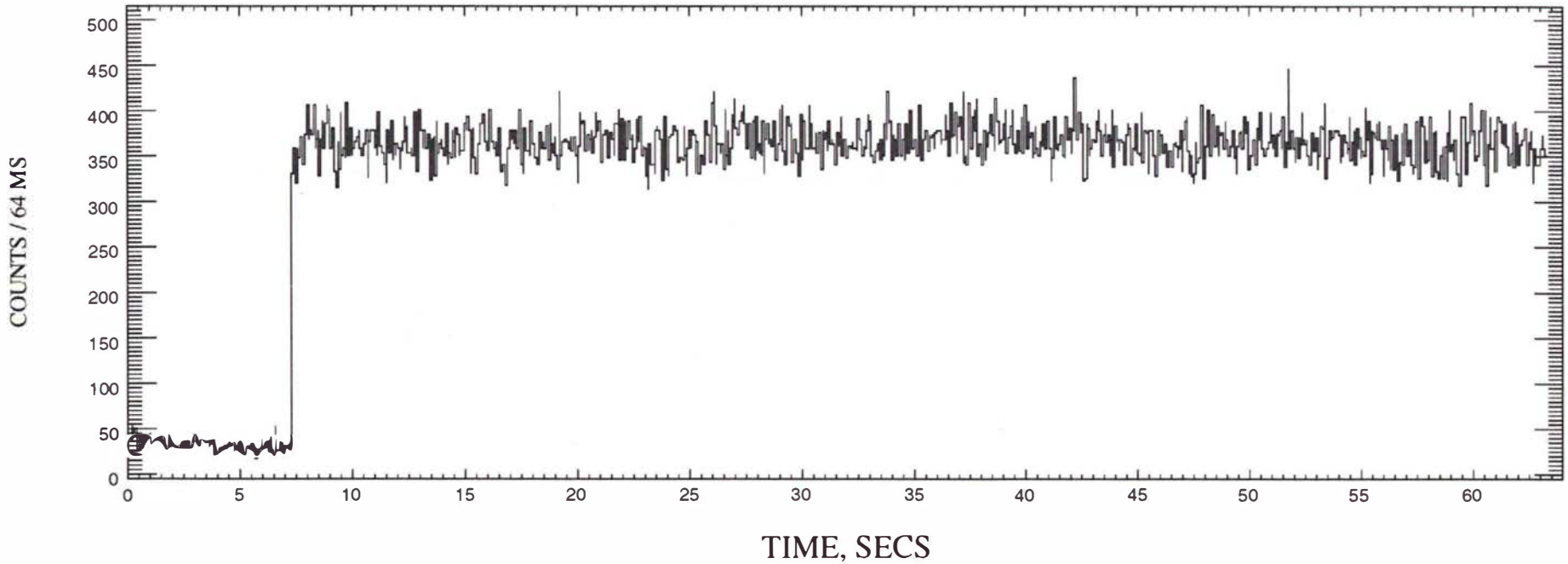


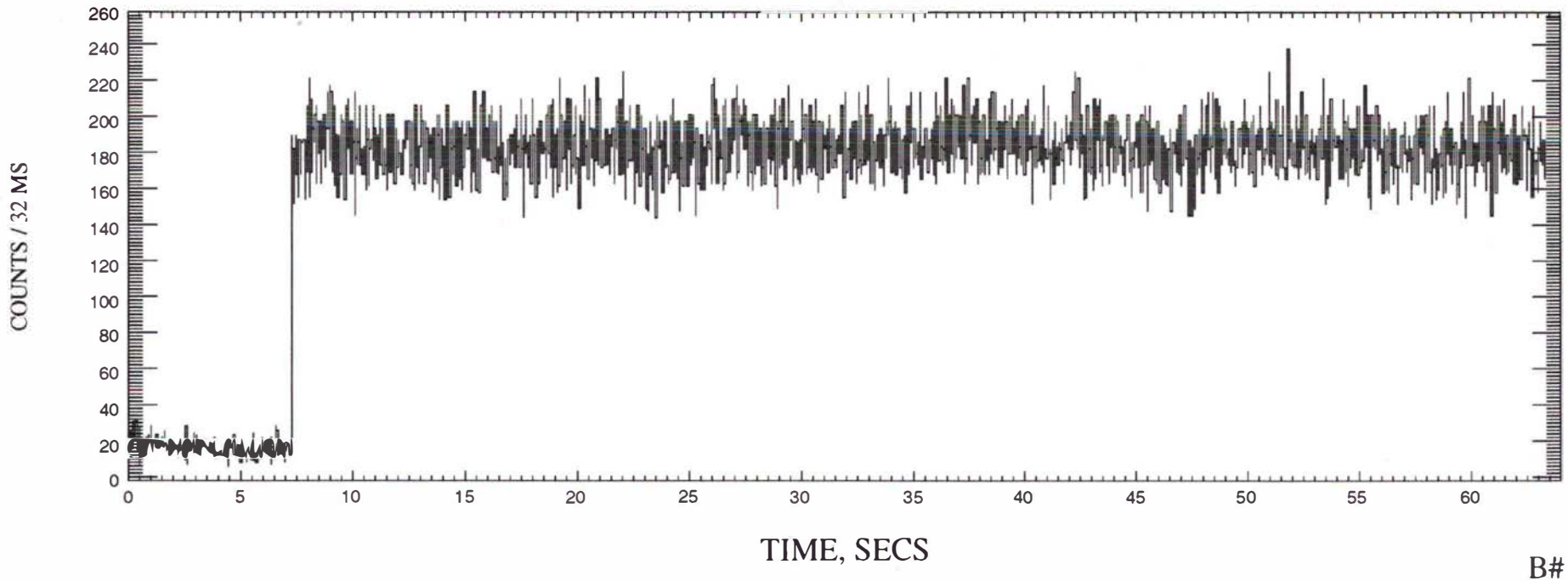


B# 28

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 8 at UT=19.954242841933 h=71835.274 s 19:57:15.274

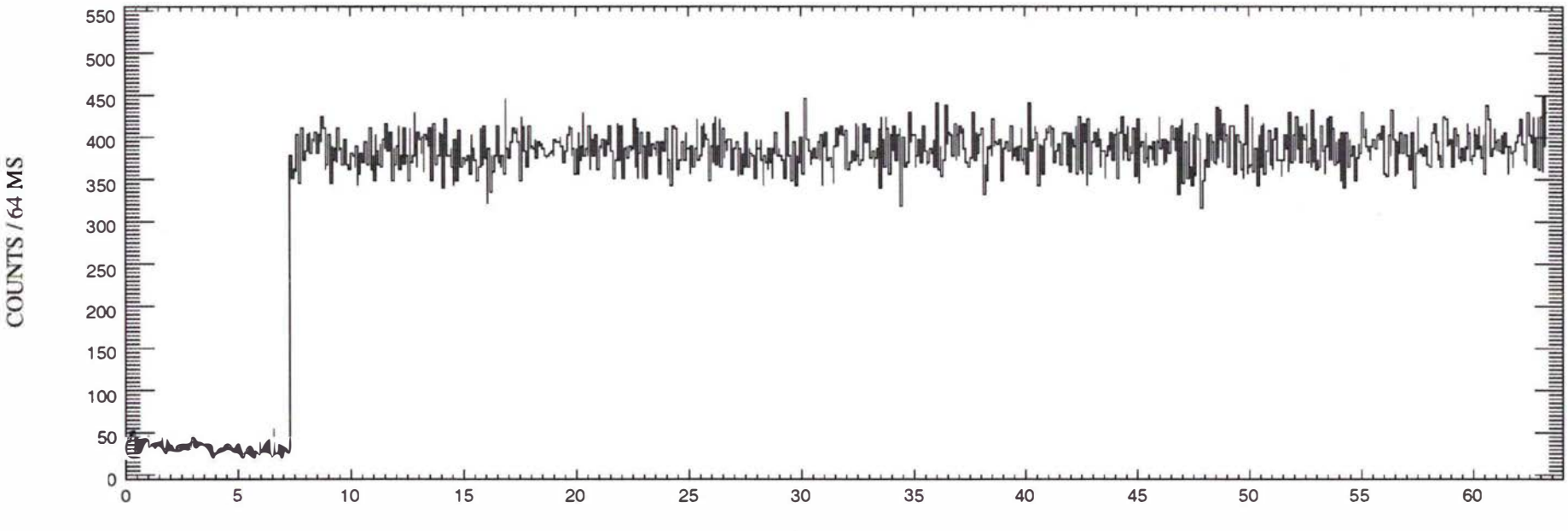


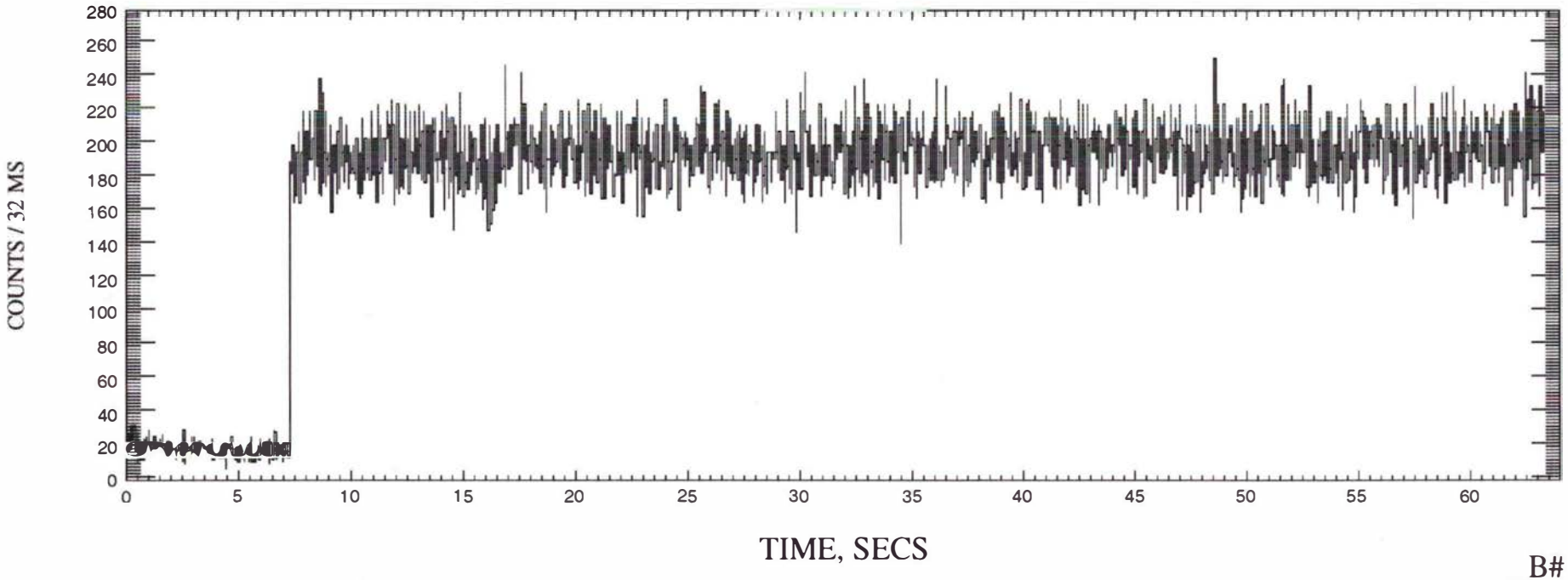


B# 29

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 9 at UT=20.656476652357 h=74363.316 s 20:39:23.316

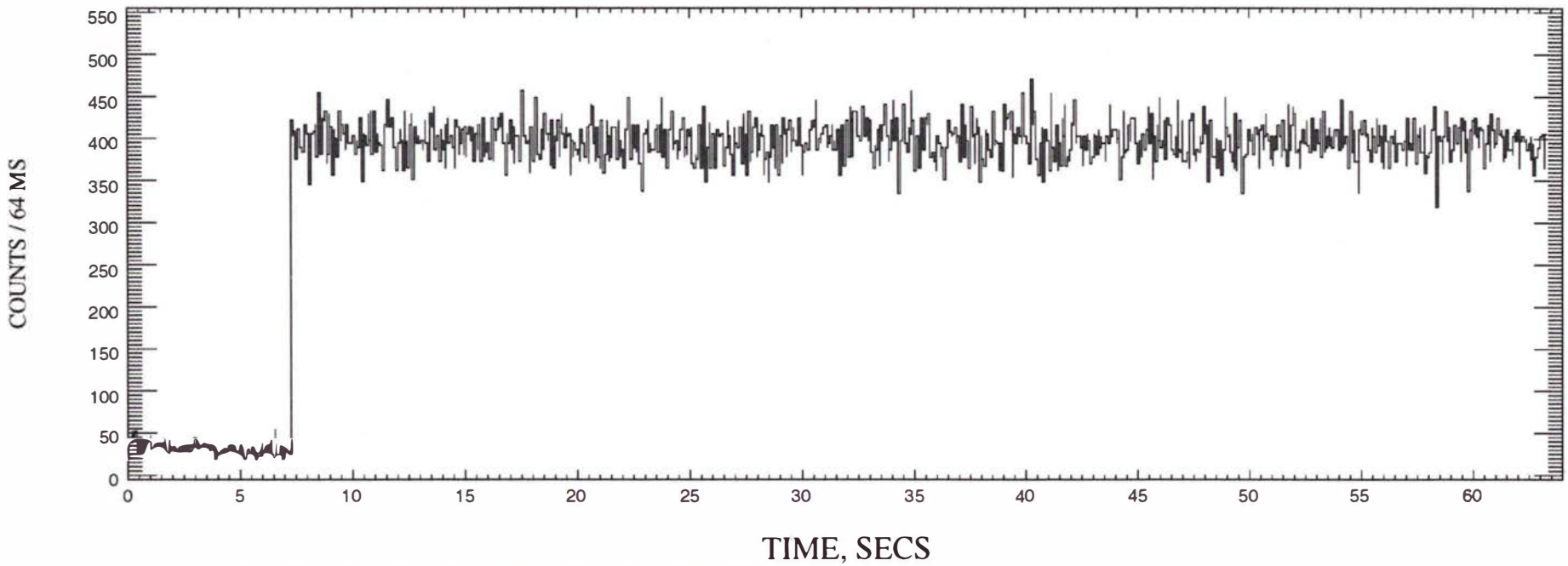


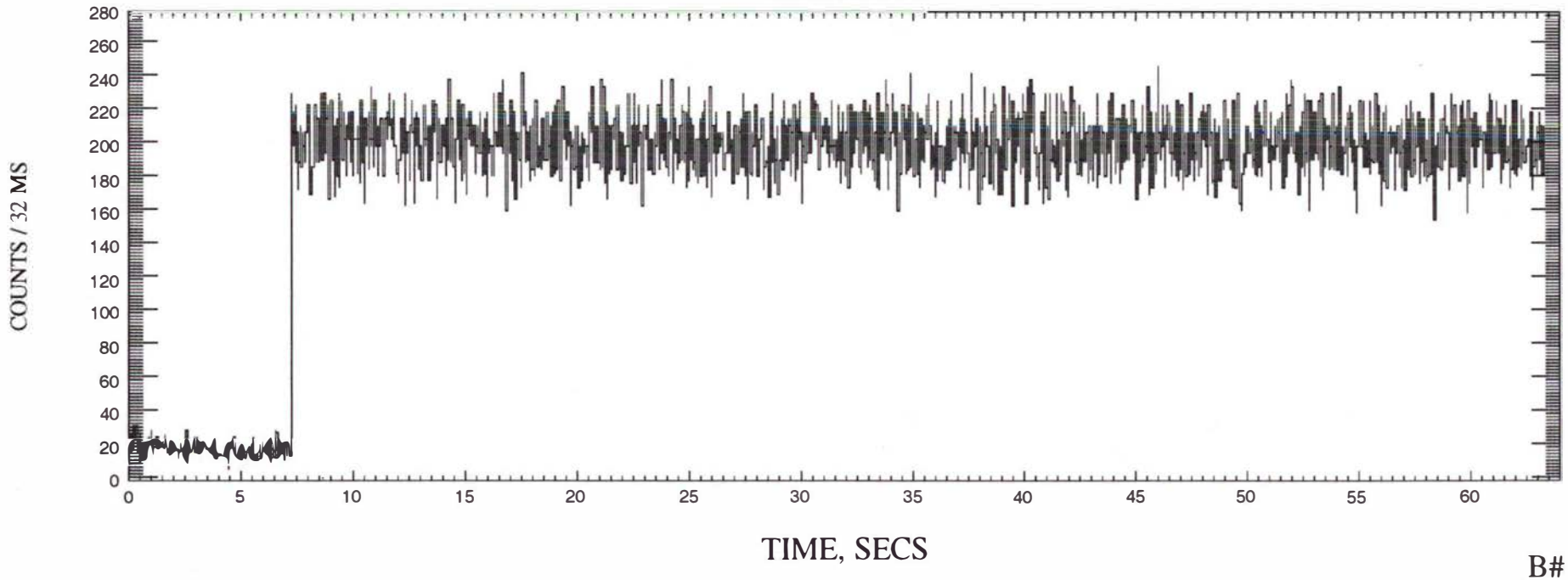


B# 30

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 10 at UT=21.358710467021 h=76891.358 s 21:21:31.358

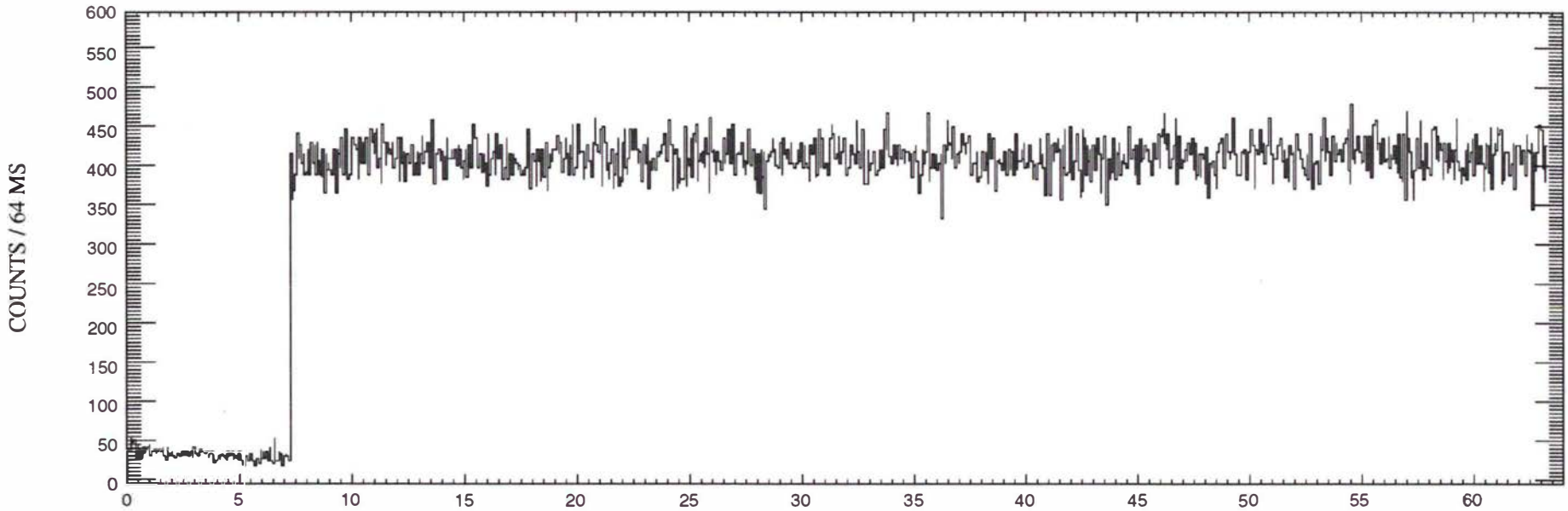




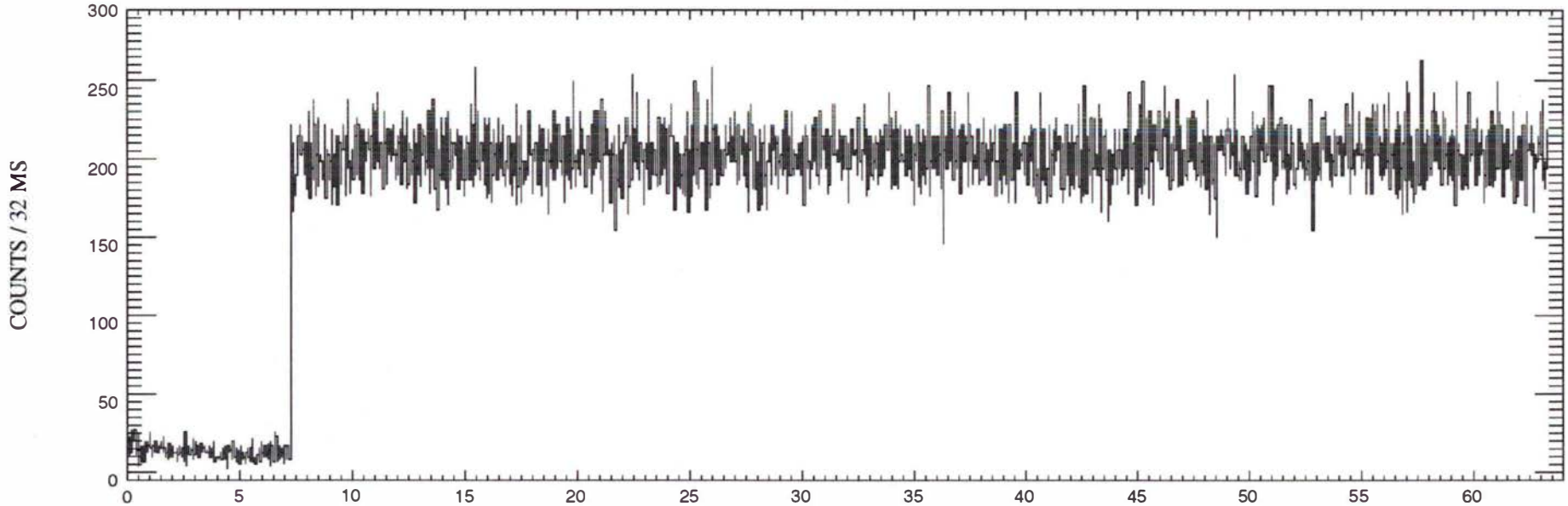
B# 31

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 11 at UT=22.060944281684 h=79419.399 s 22:03:39.399



TIME, SECS

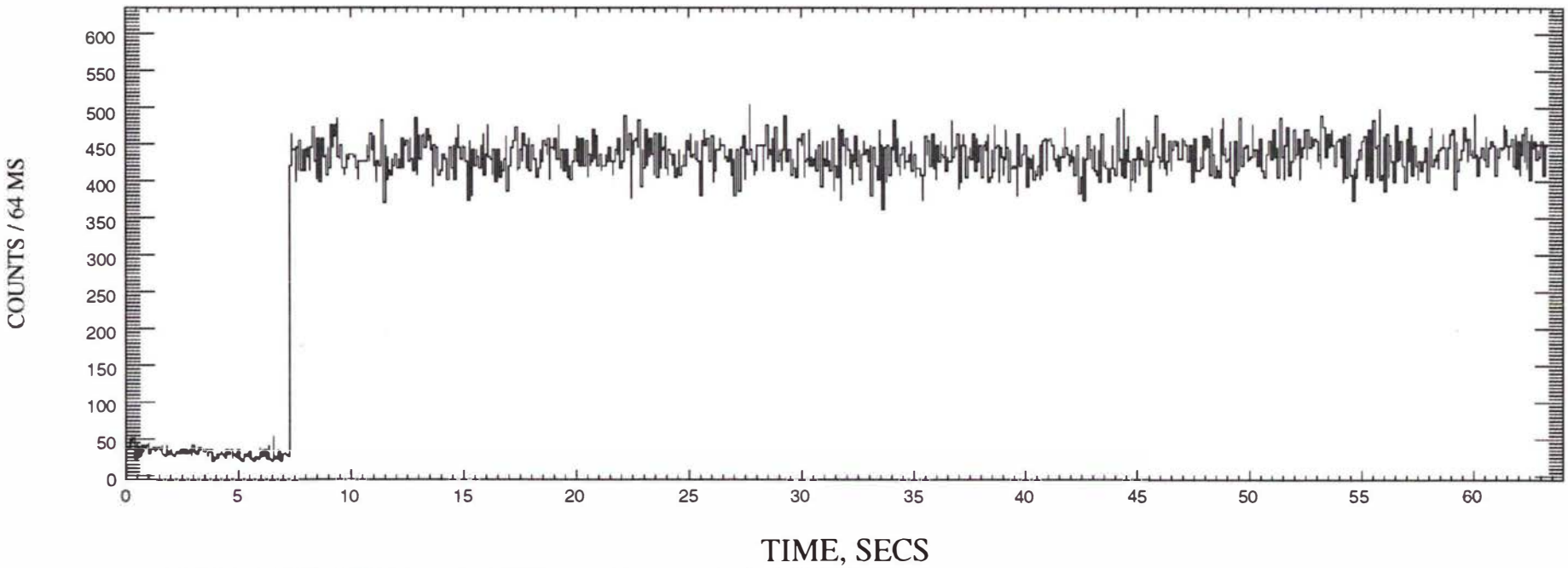


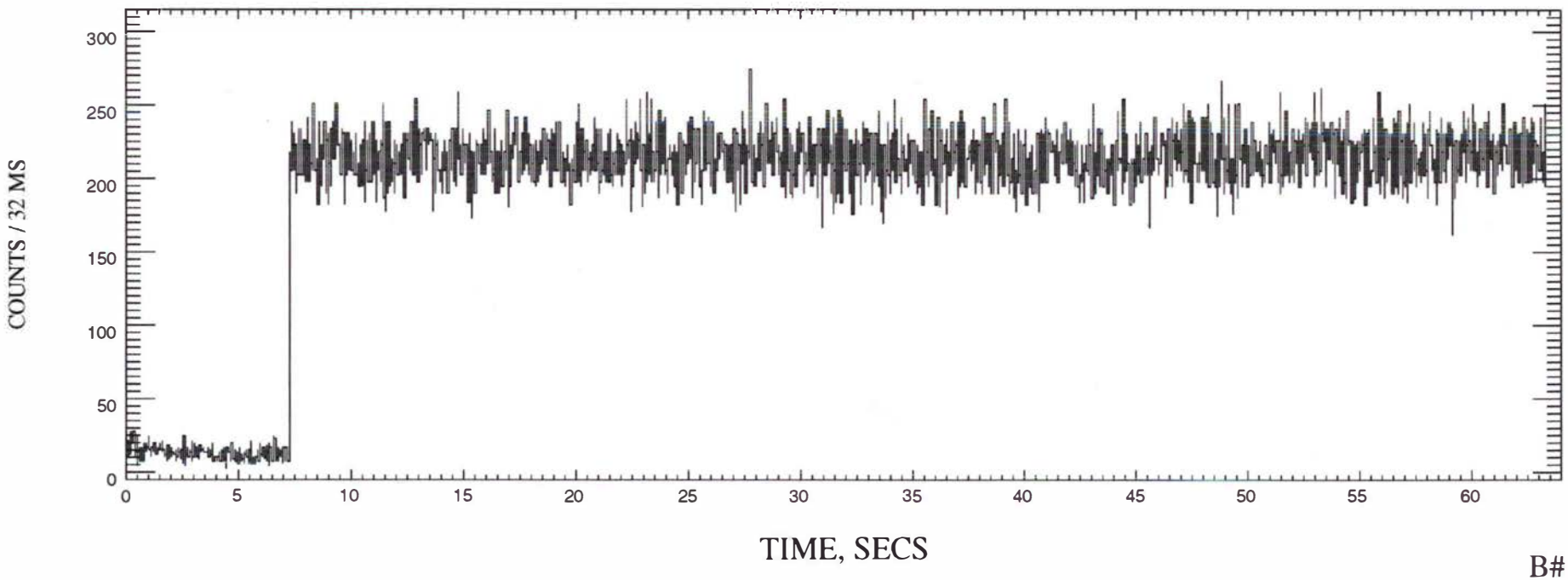
TIME, SECS

B# 32

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 12 at UT=22.763175921970 h=81947.433 s 22:45:47.433

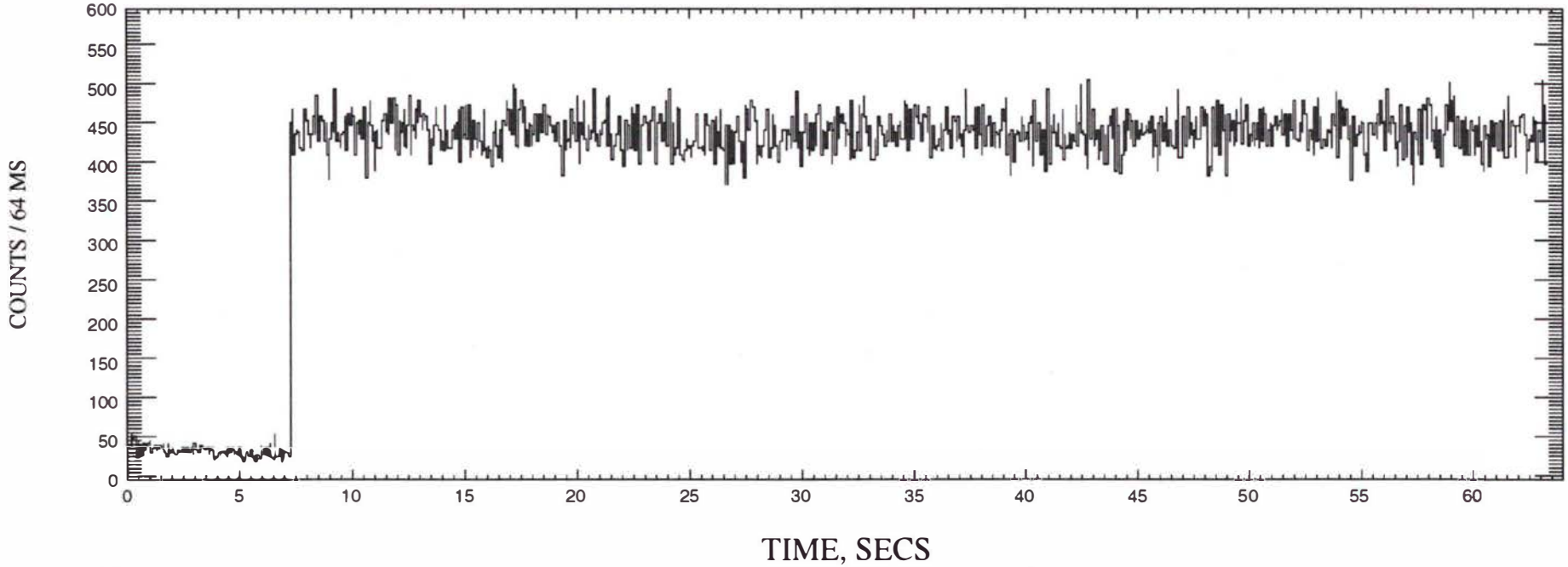


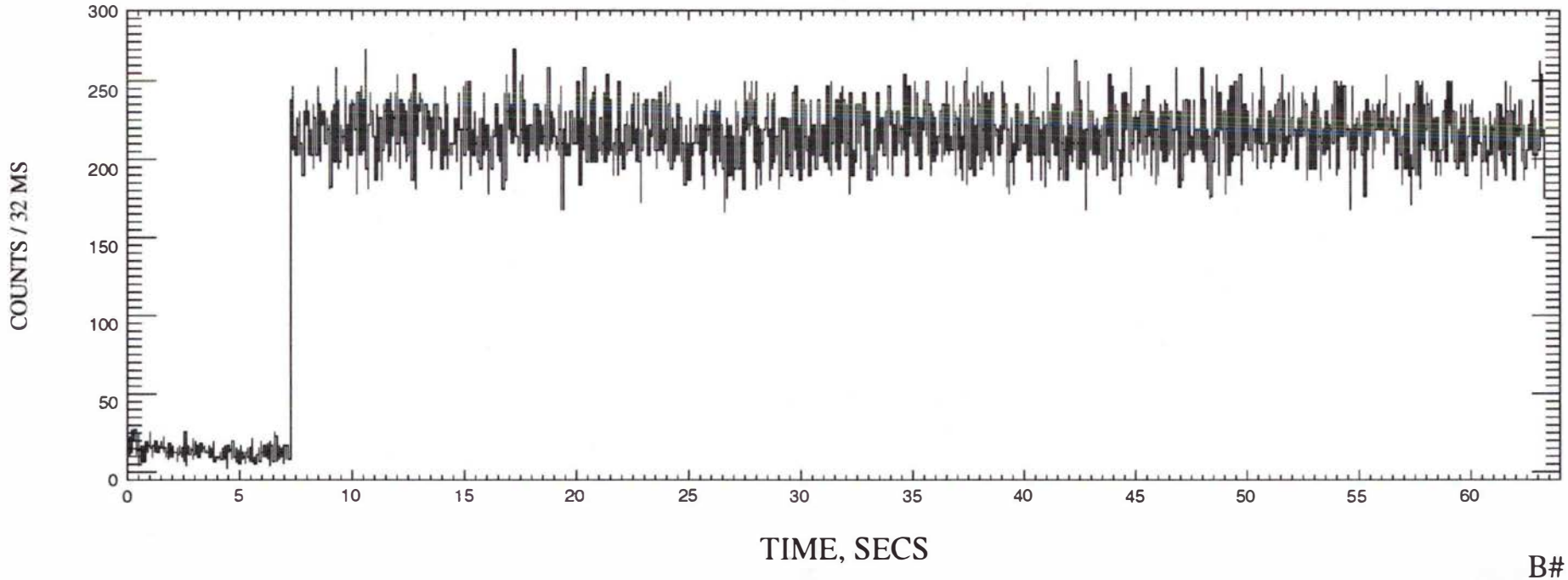


B# 33

HUS 2A TRIGGERED DATA QEDR DMY = 25/09/2001 DOY = 268 09/26/01

Burst Counter 13 at UT=23.465409736633 h=84475.475 s 23:27:55.475

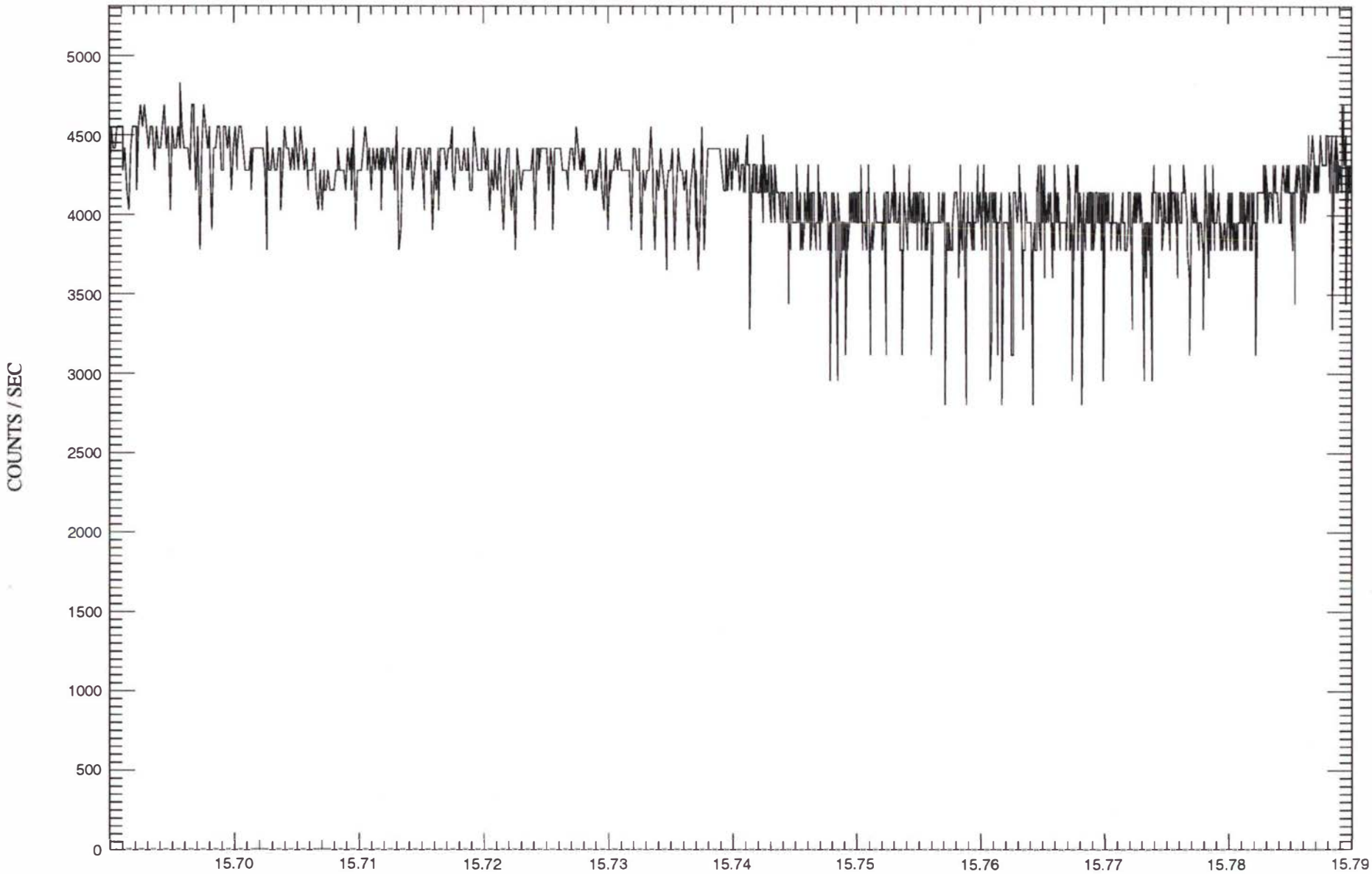


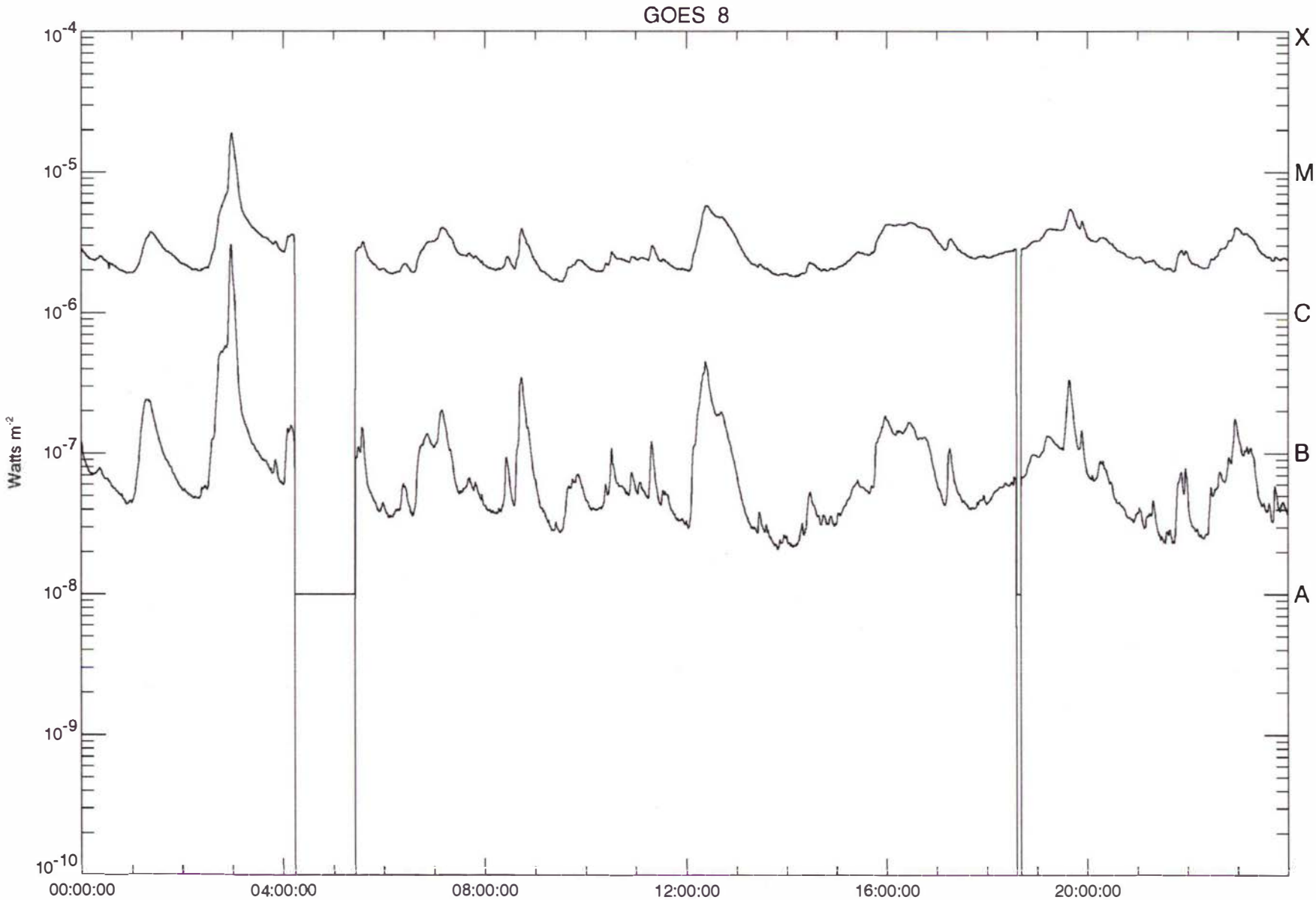


B# 34

HUS 2A, MODE 1, NOT AVERAGED QEDR DMY = 25/09/2001 DOY = 268 09/26/01

CALIBRATION DATA INCLUDED

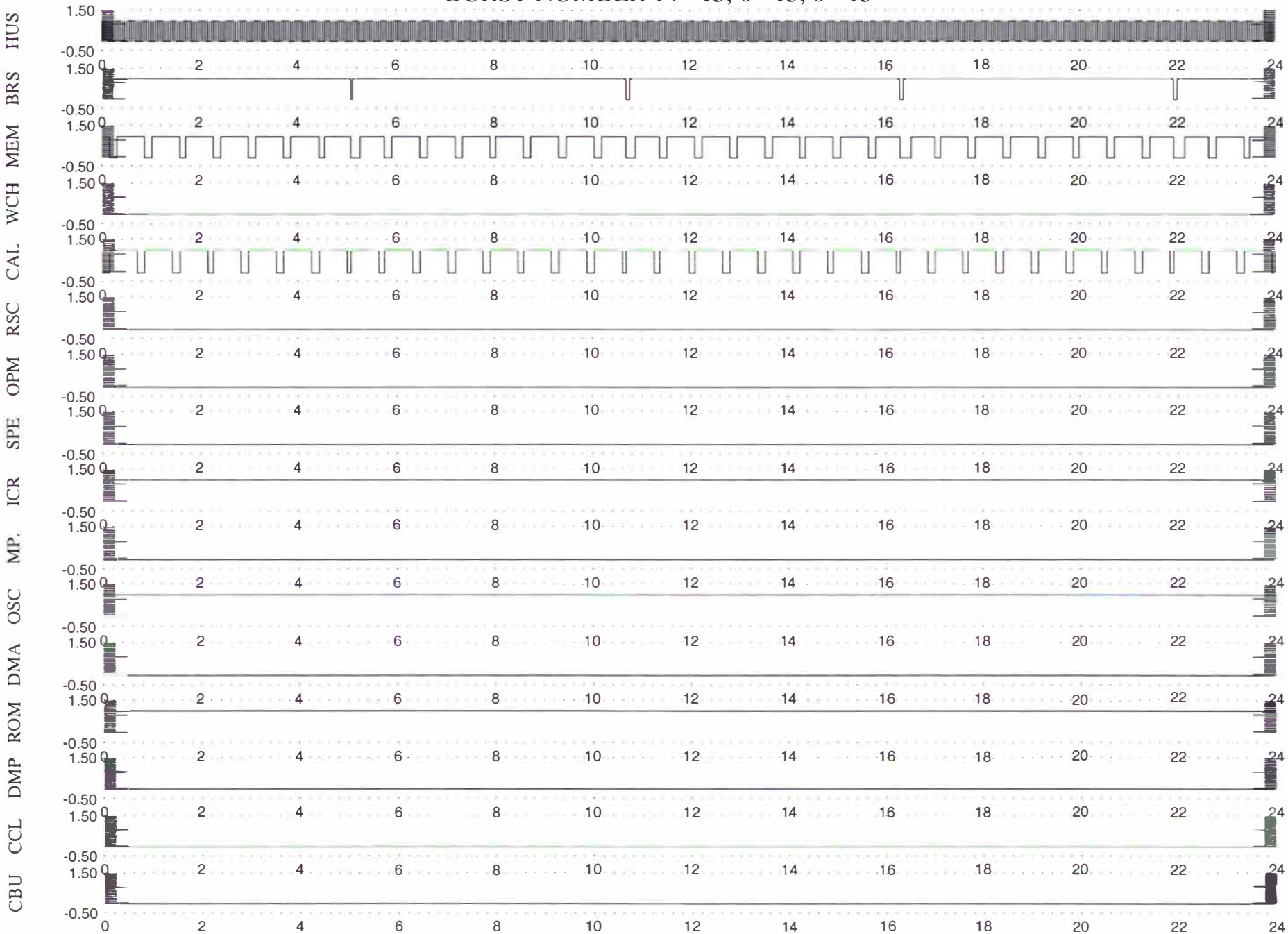




Data Start: 01/09/26, 0000:00 Plot created: 01/09/30, 0950
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 269, year 2001 to day 269, year 2001 01/22/02

BURST NUMBER 14 - 15, 0 - 15, 0 - 15



UNIV SAL TIME

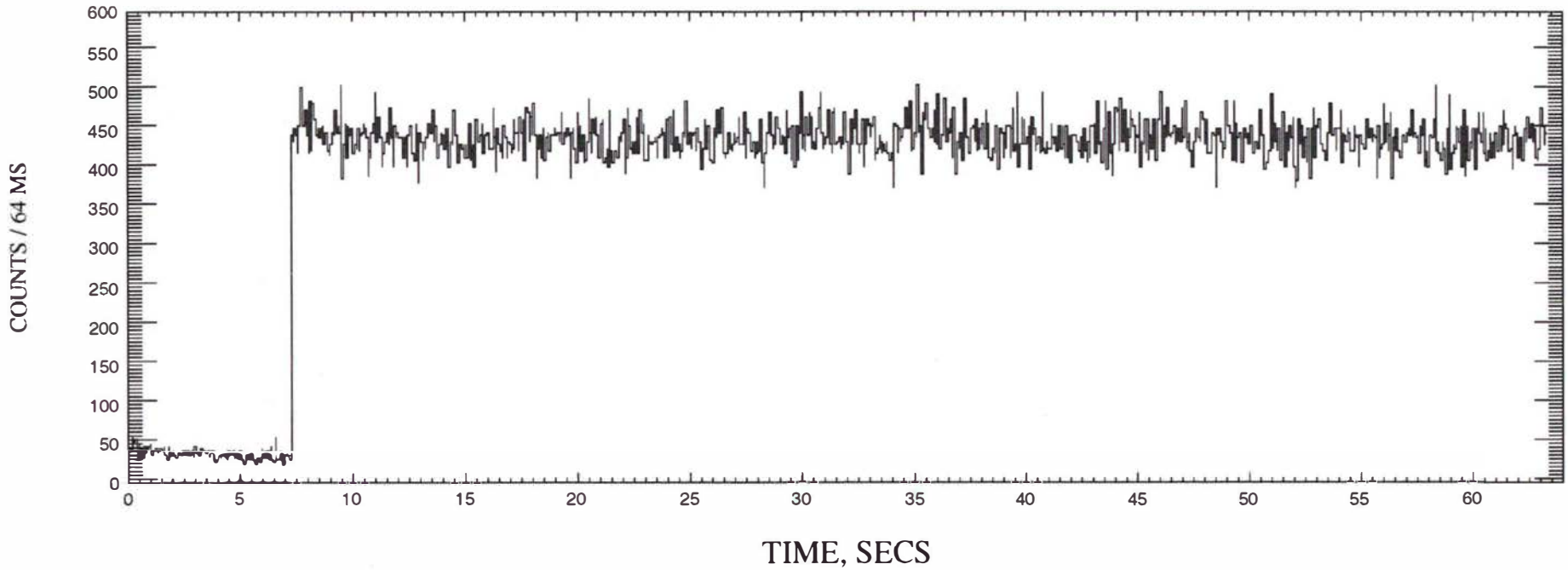
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 26/09/2001 DOY = 269 01/22/02

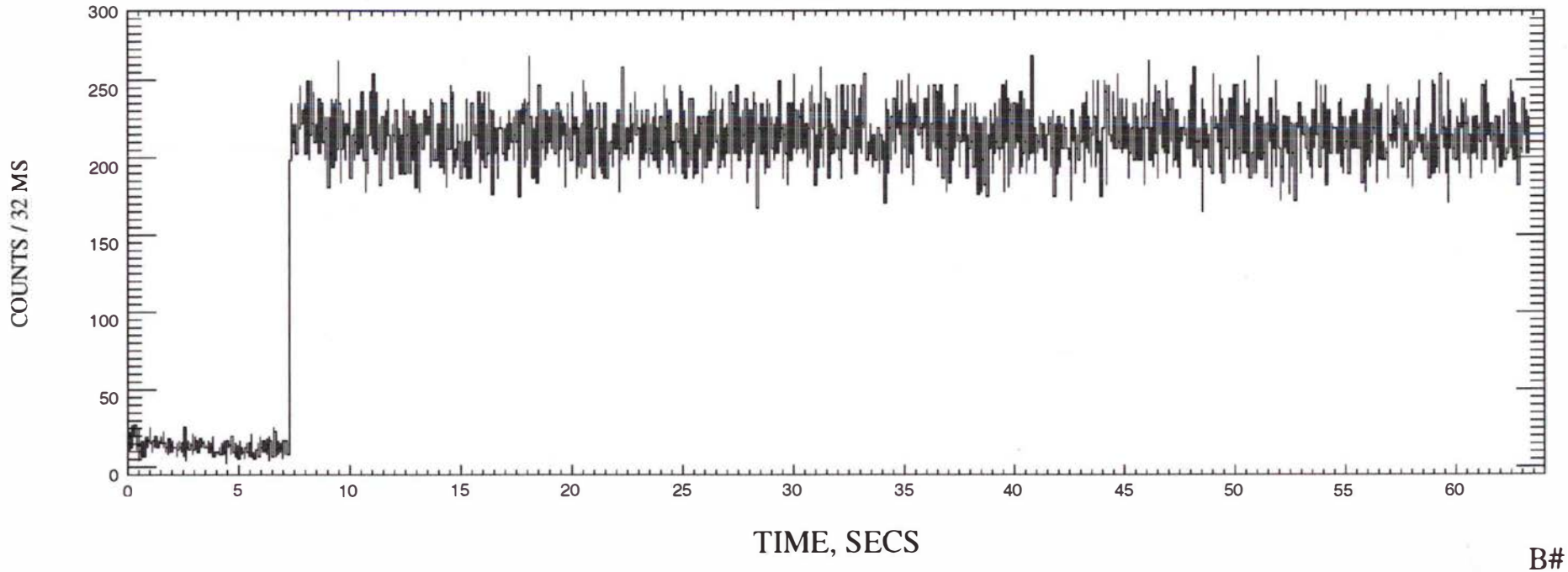
CALIBRATION DATA INCLUDED

UNIVERSAL TIME

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 14 at UT= 0.167642389933 h= 603.513 s 00:10:03.513

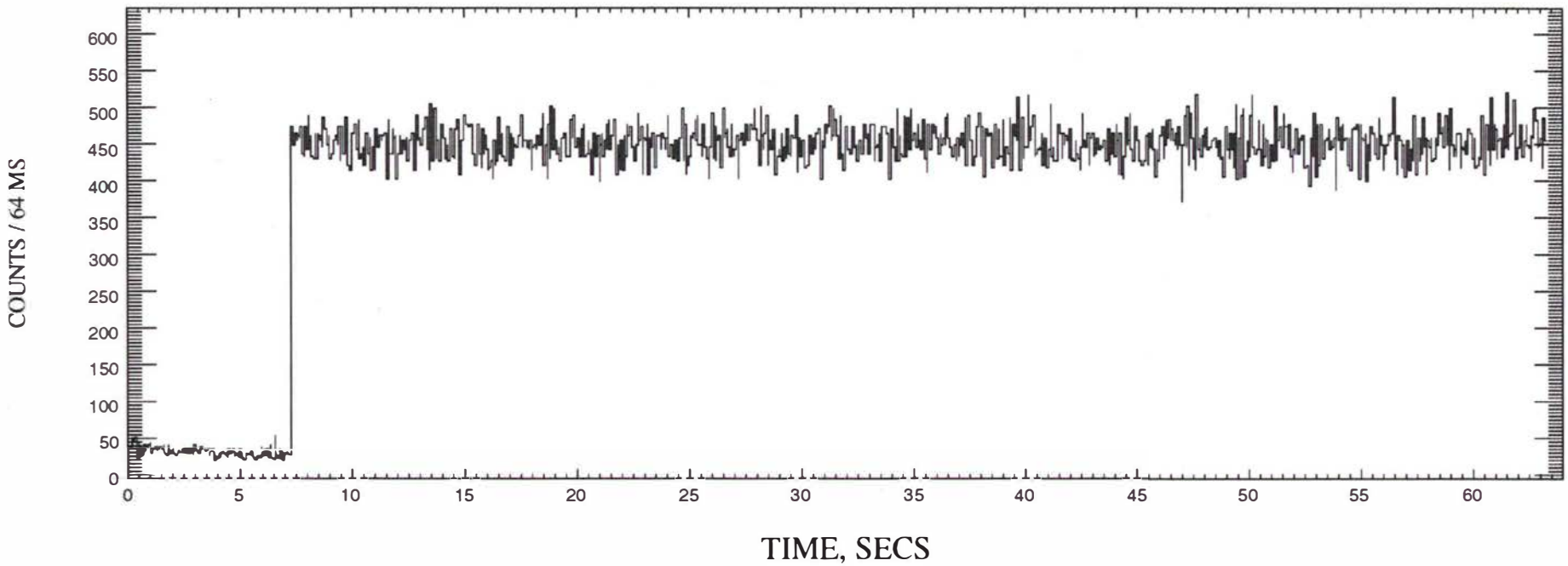


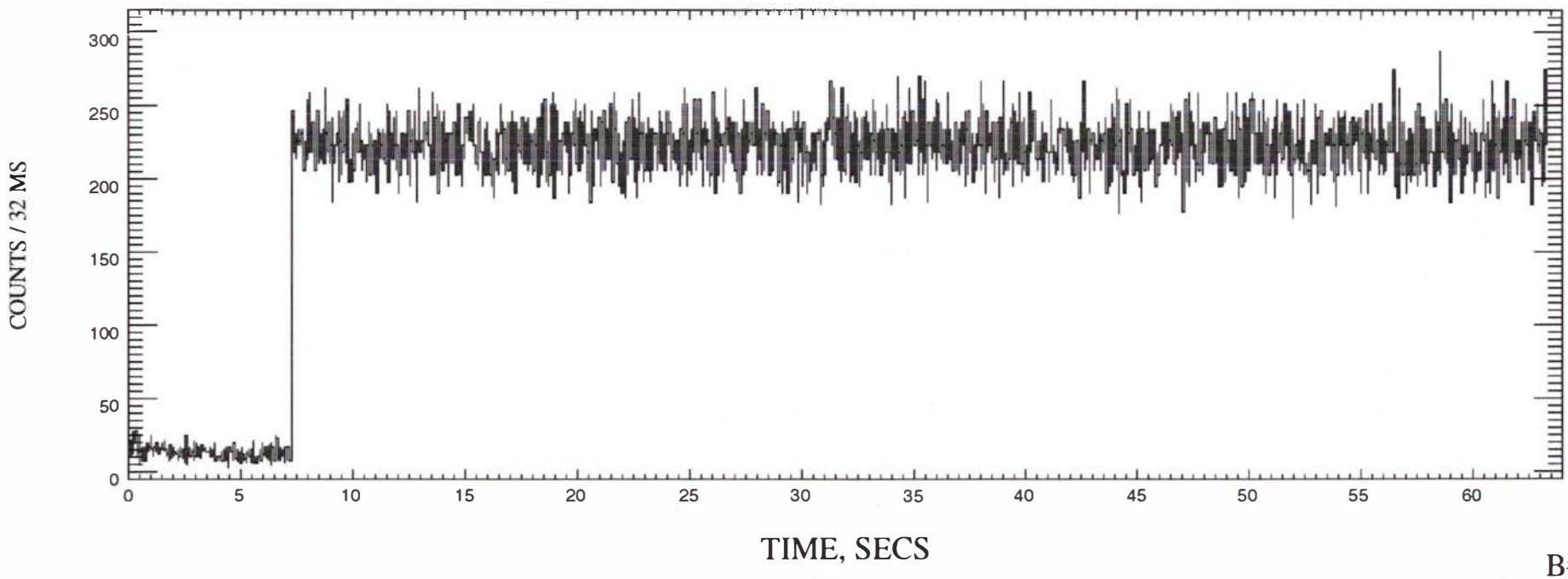


B# 1

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 15 at UT= 0.869876204597 h= 3131.554 s 00:52:11.554

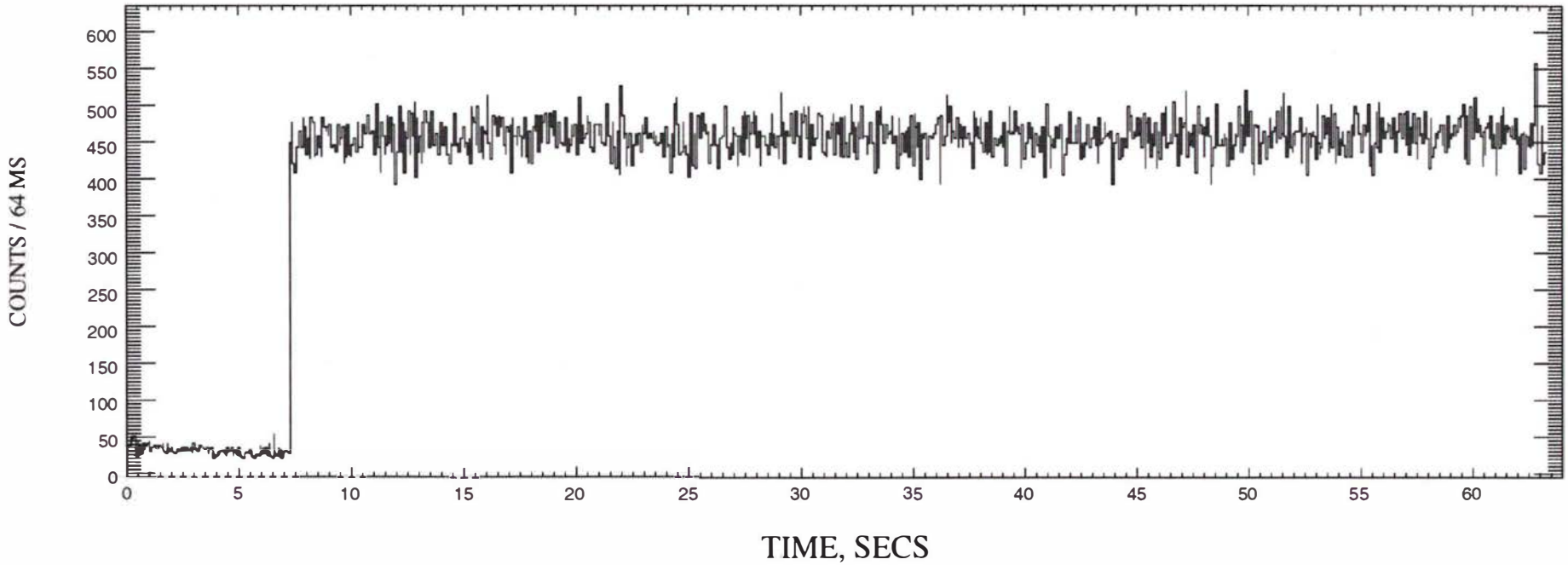


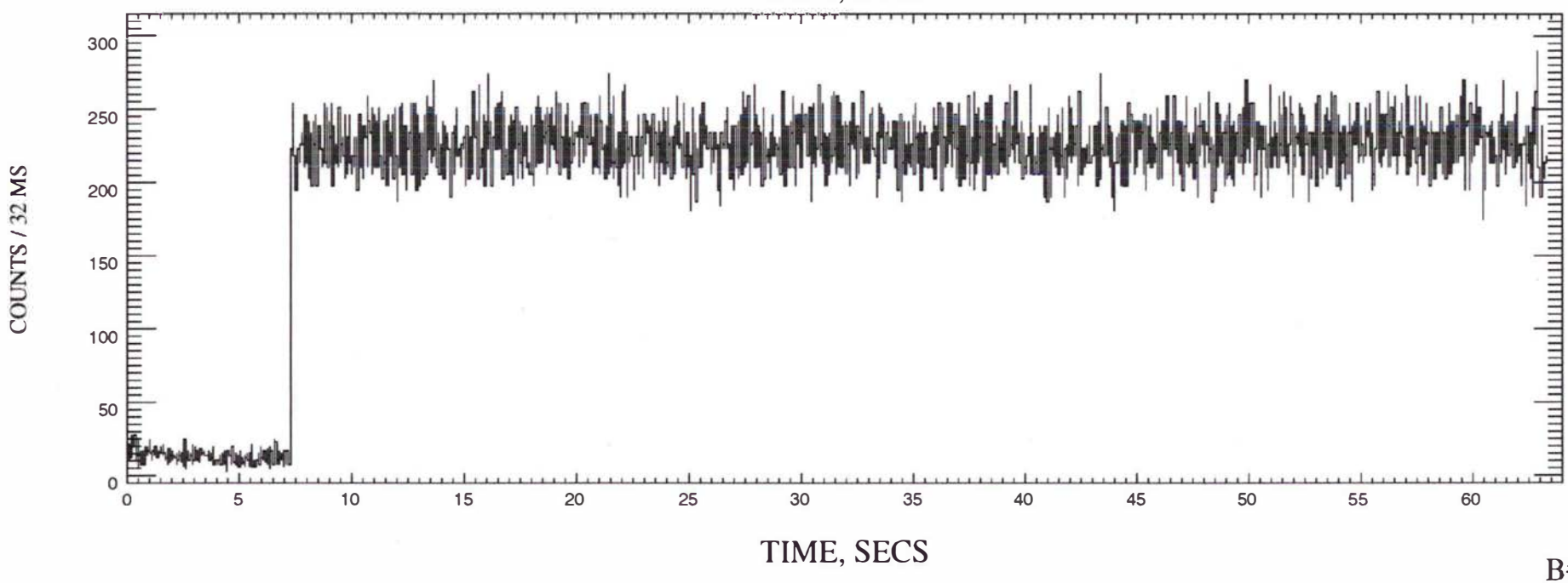


B# 2

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 0 at UT= 1.572110019260 h= 5659.596 s 01:34:19.596

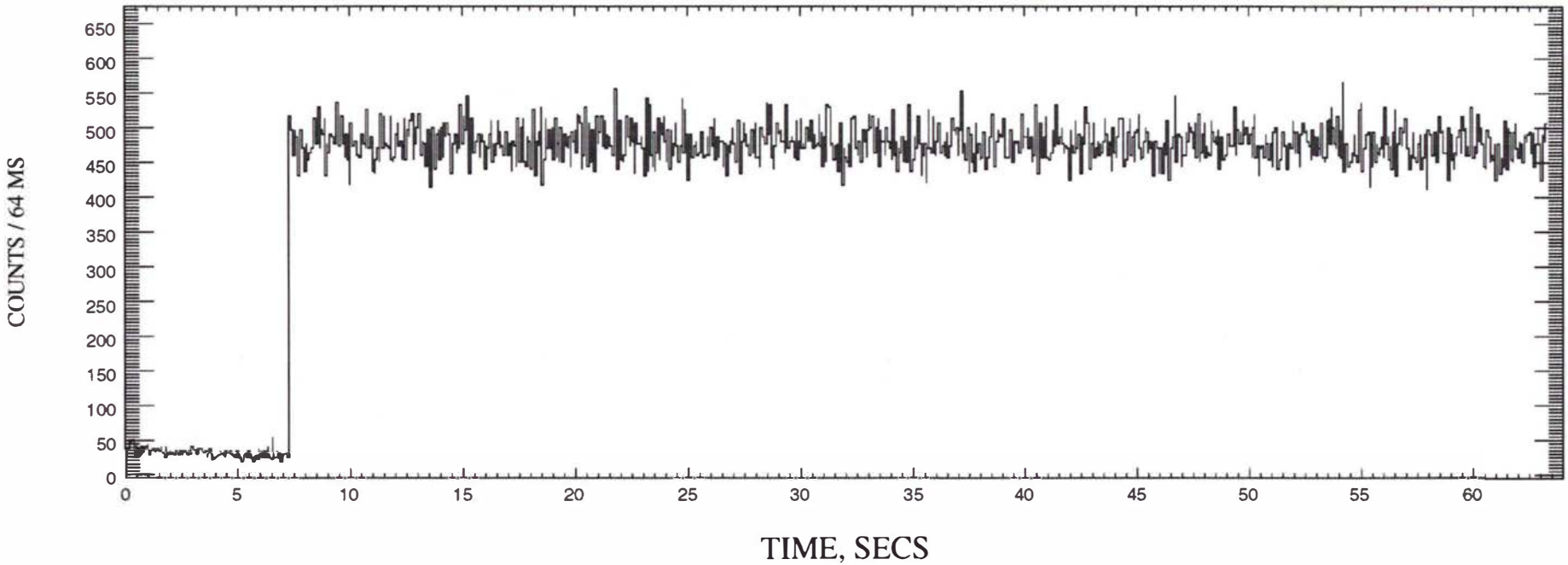


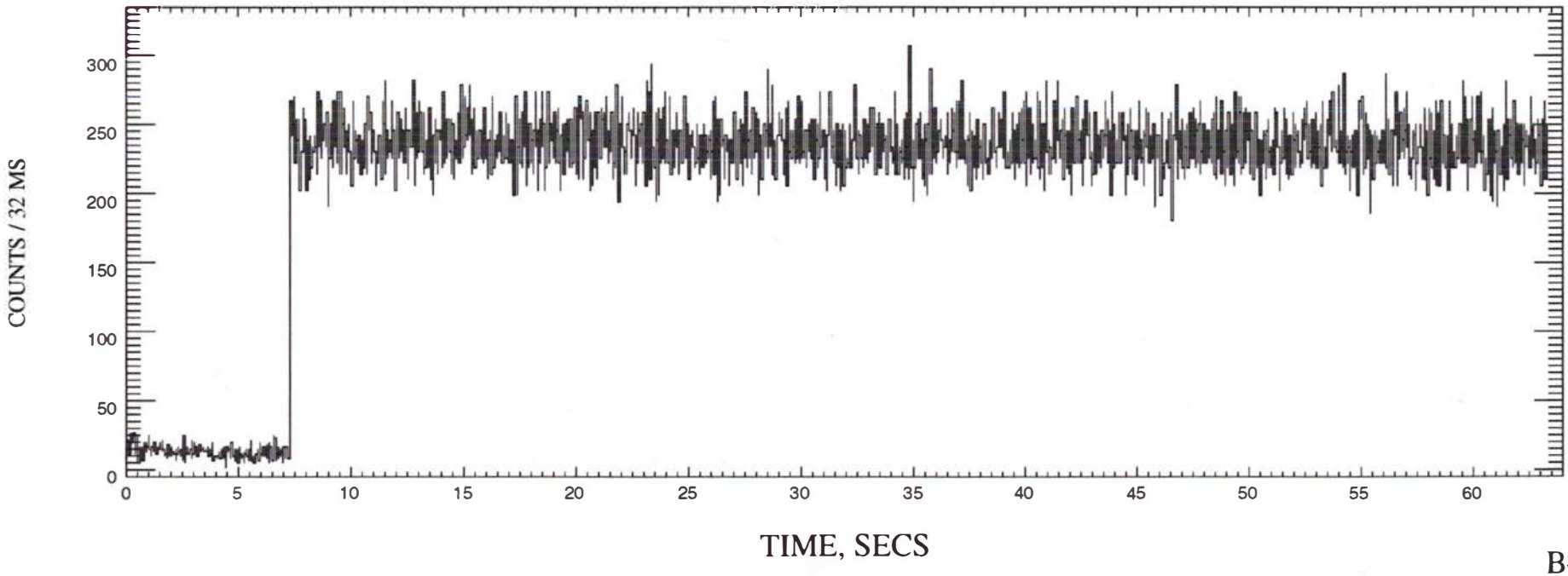


B# 3

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 1 at UT= 2.274343829685 h= 8187.638 s 02:16:27.638

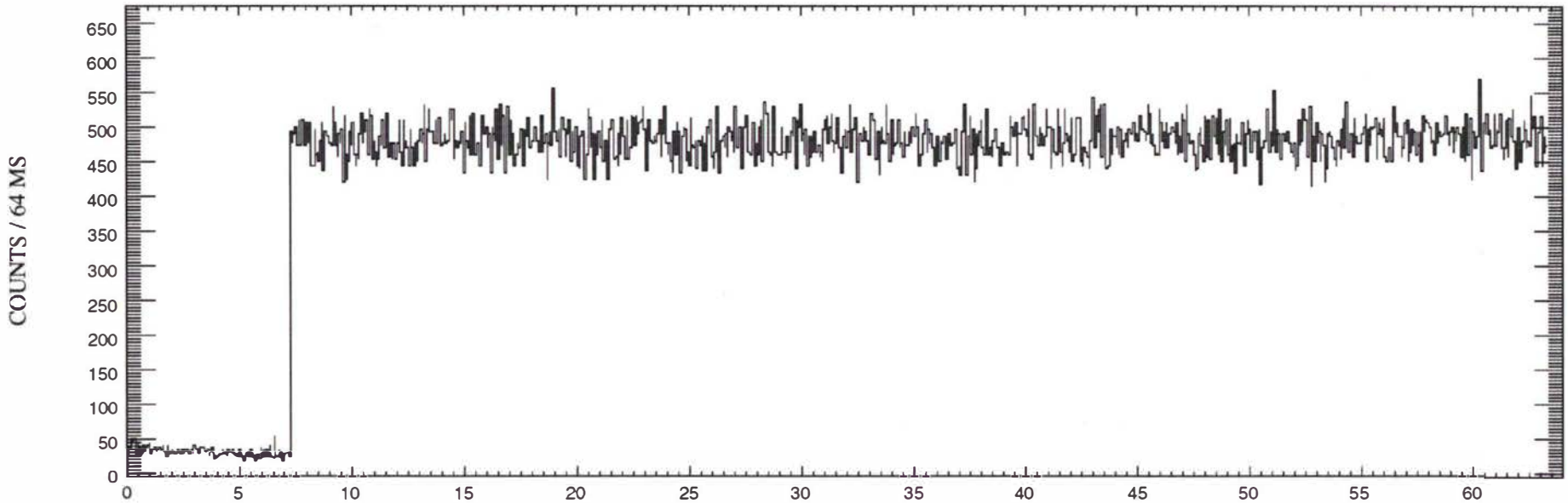




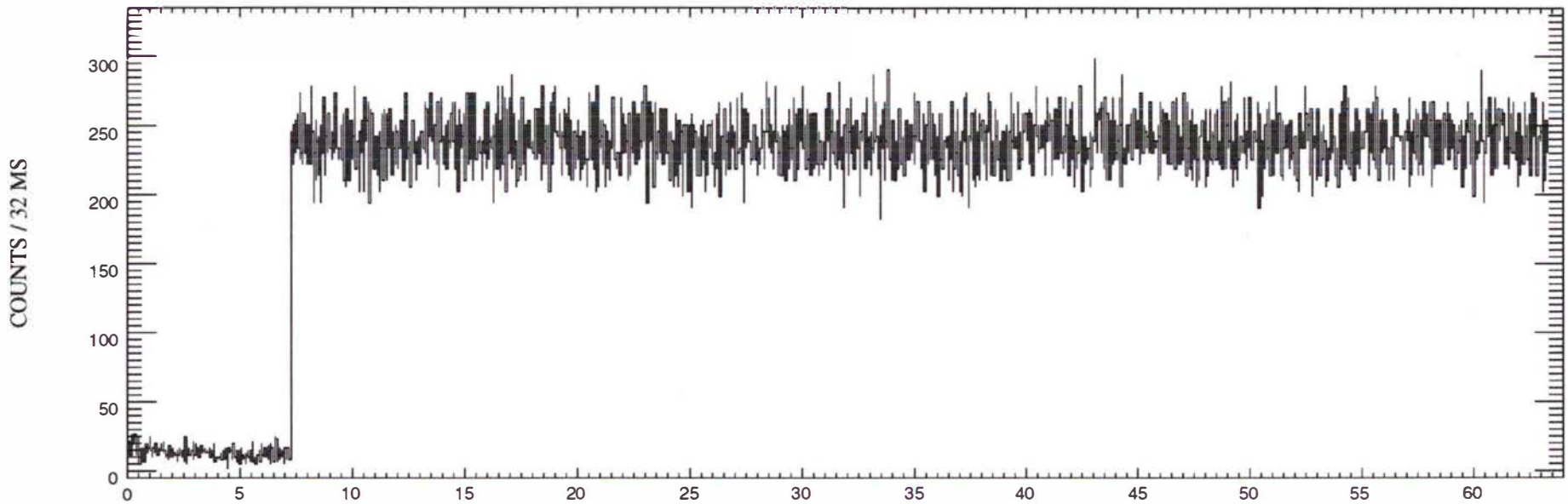
B# 4

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 2 at UT= 2.976577644348 h=10715.680 s 02:58:35.680



TIME, SECS

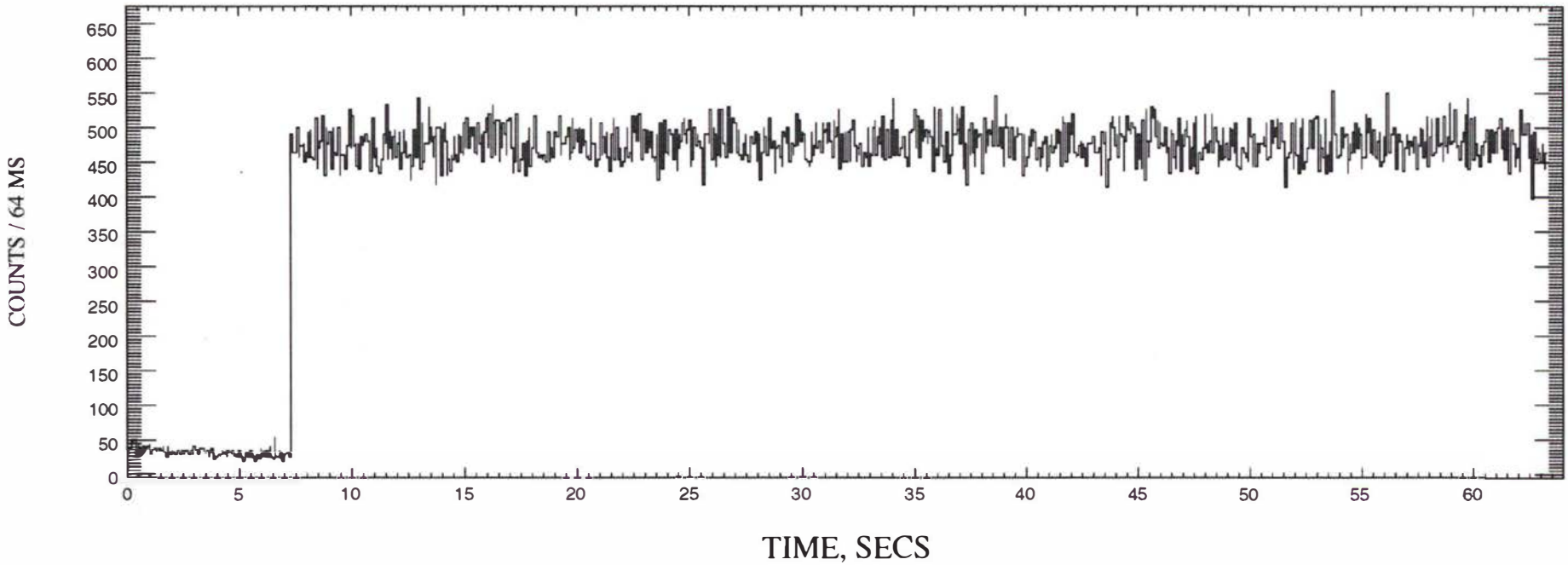


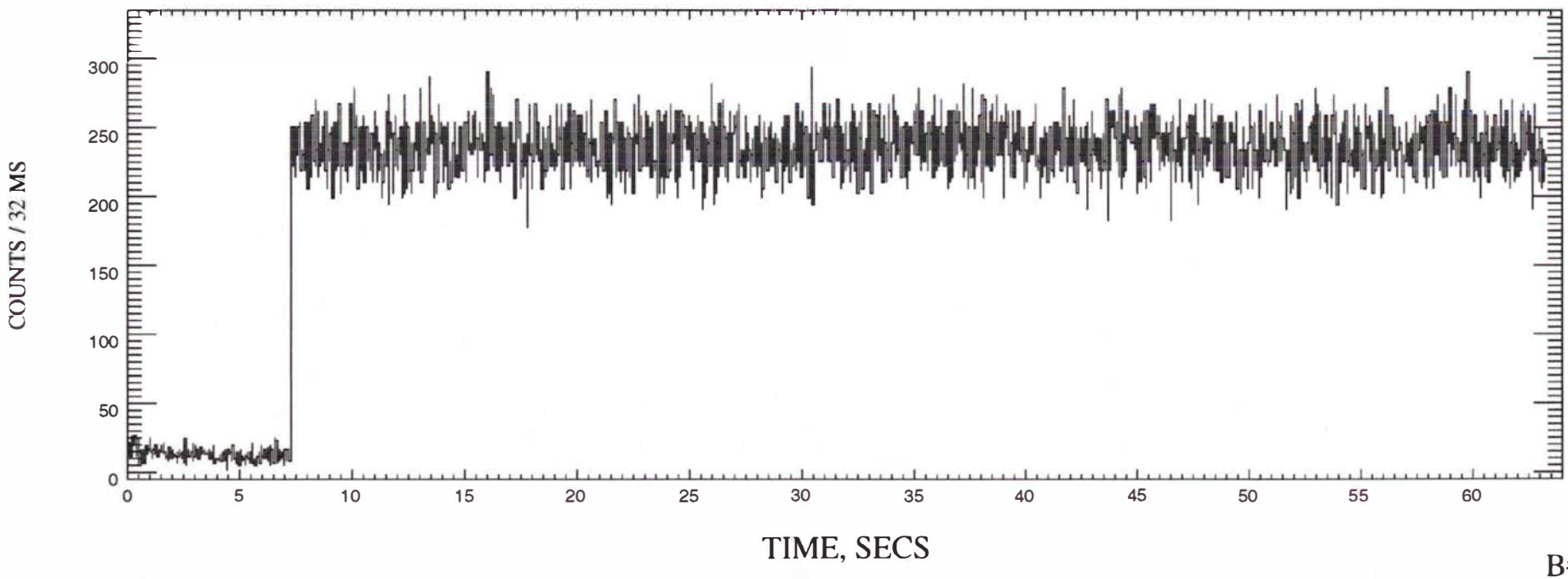
TIME, SECS

B# 5

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 3 at UT= 3.678811459012 h=13243.721 s 03:40:43.721

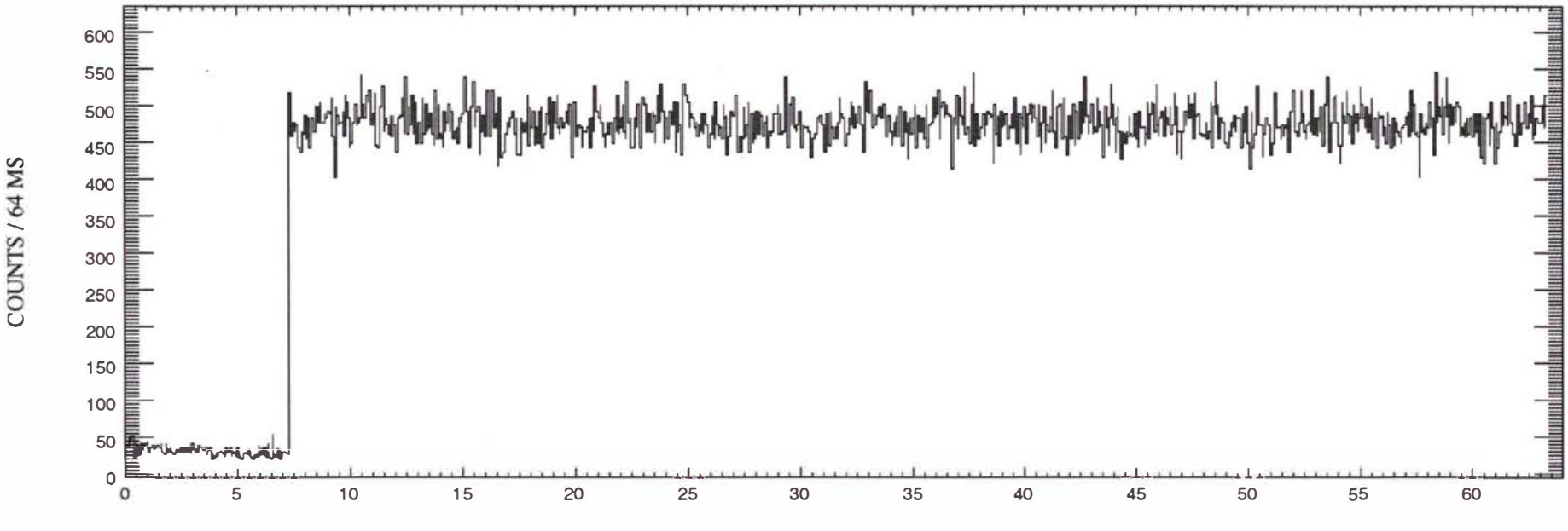


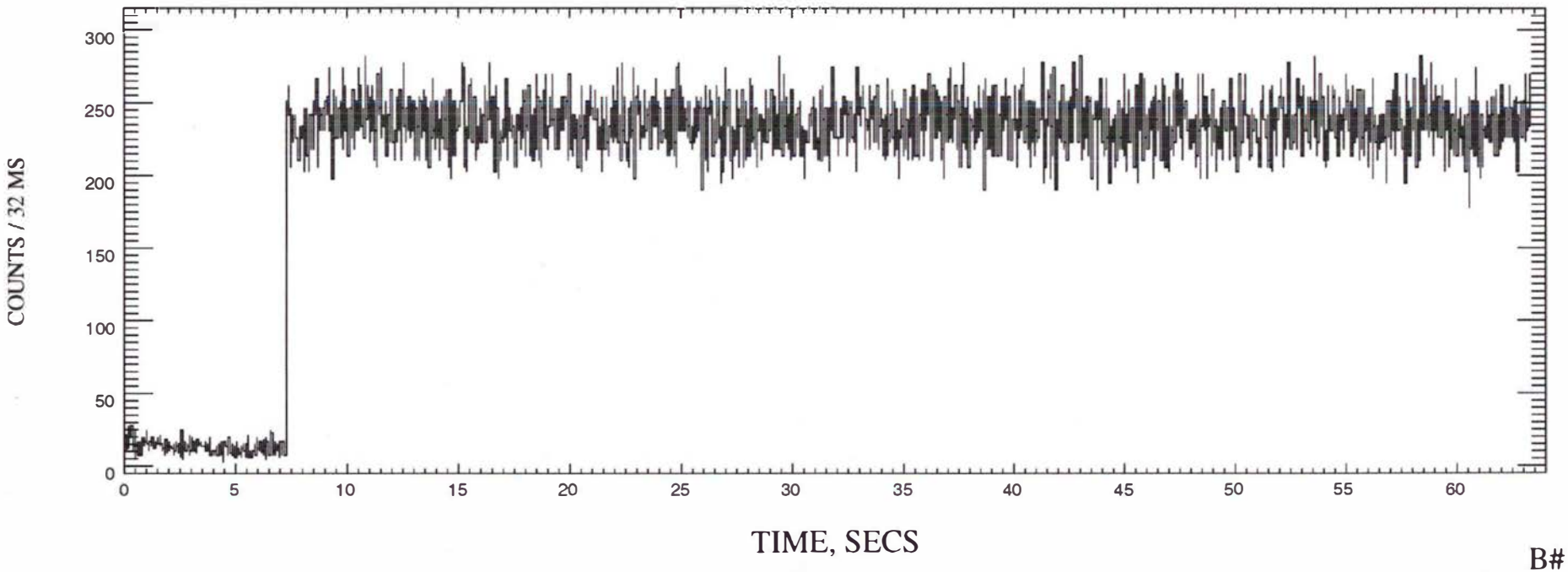


B# 6

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 4 at UT= 4.381045269436 h=15771.763 s 04:22:51.763

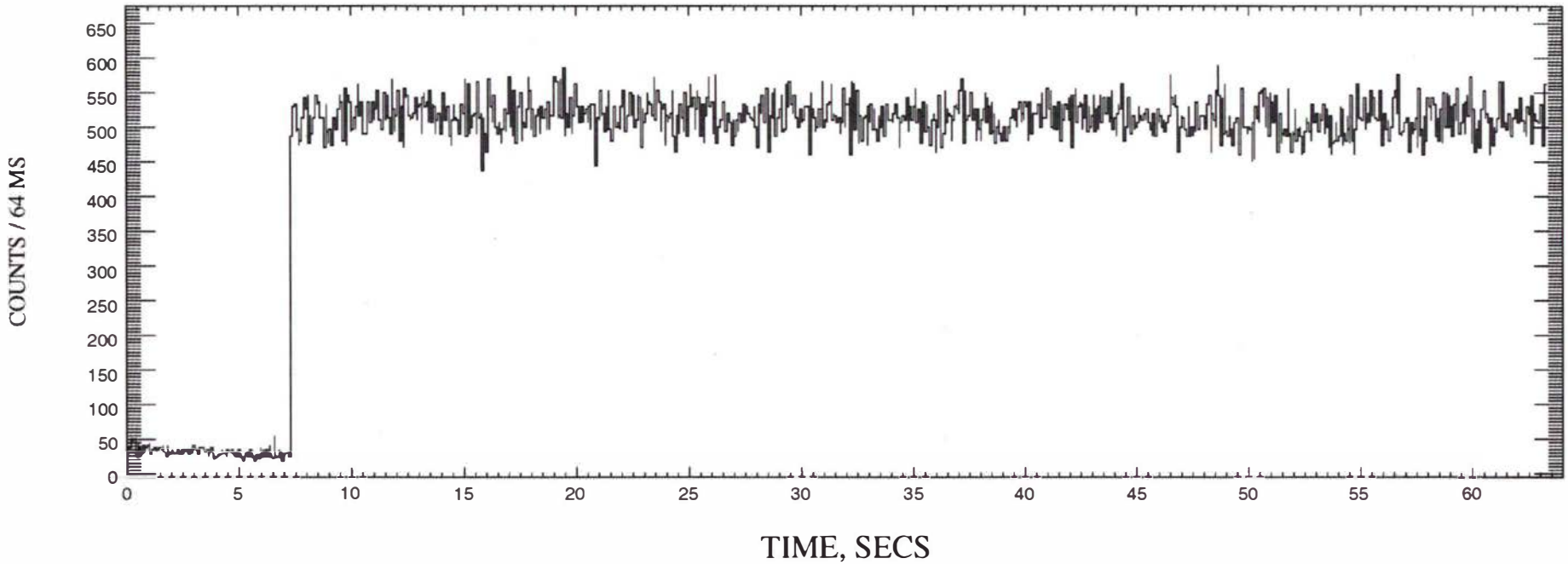


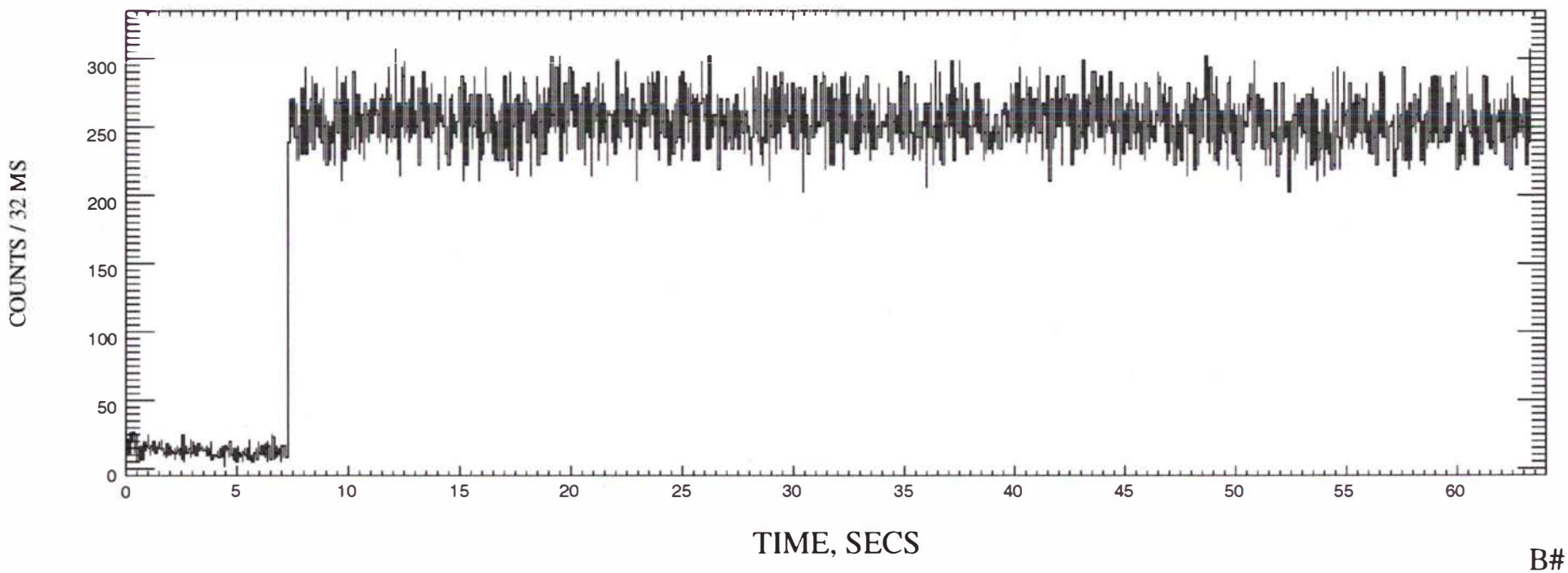


B# 7

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 5 at UT= 5.083279084100 h=18299.805 s 05:04:59.805

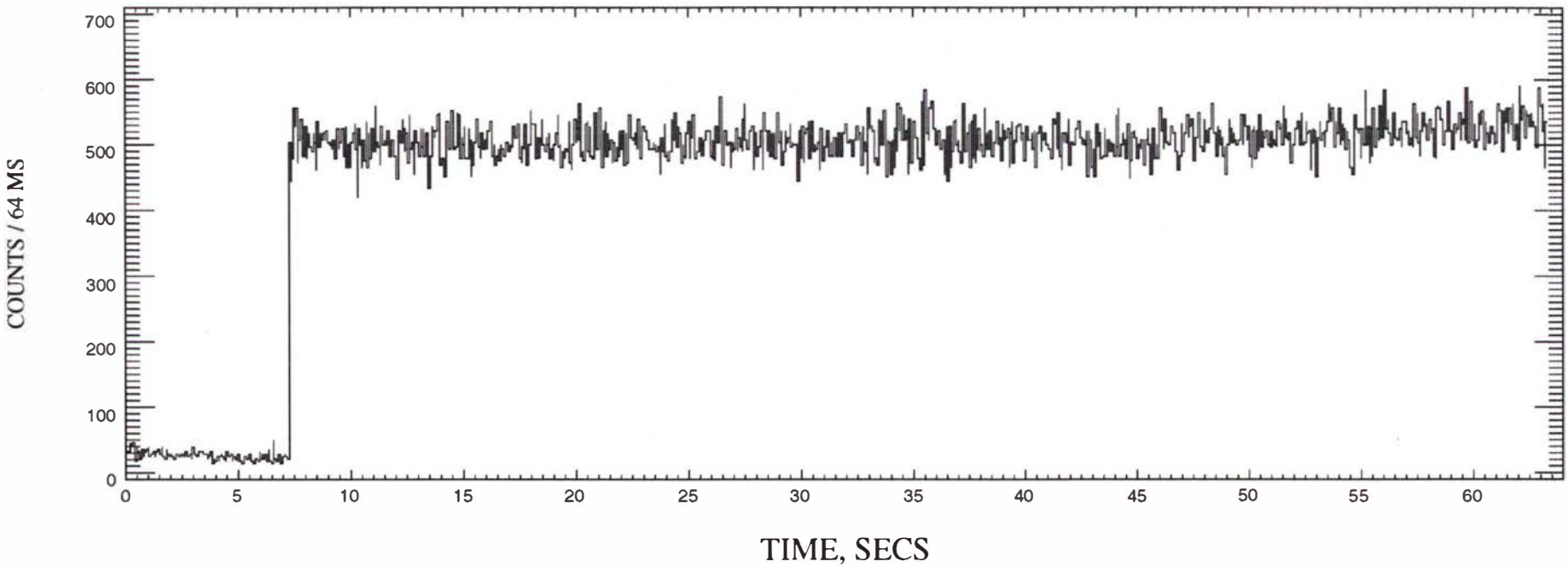


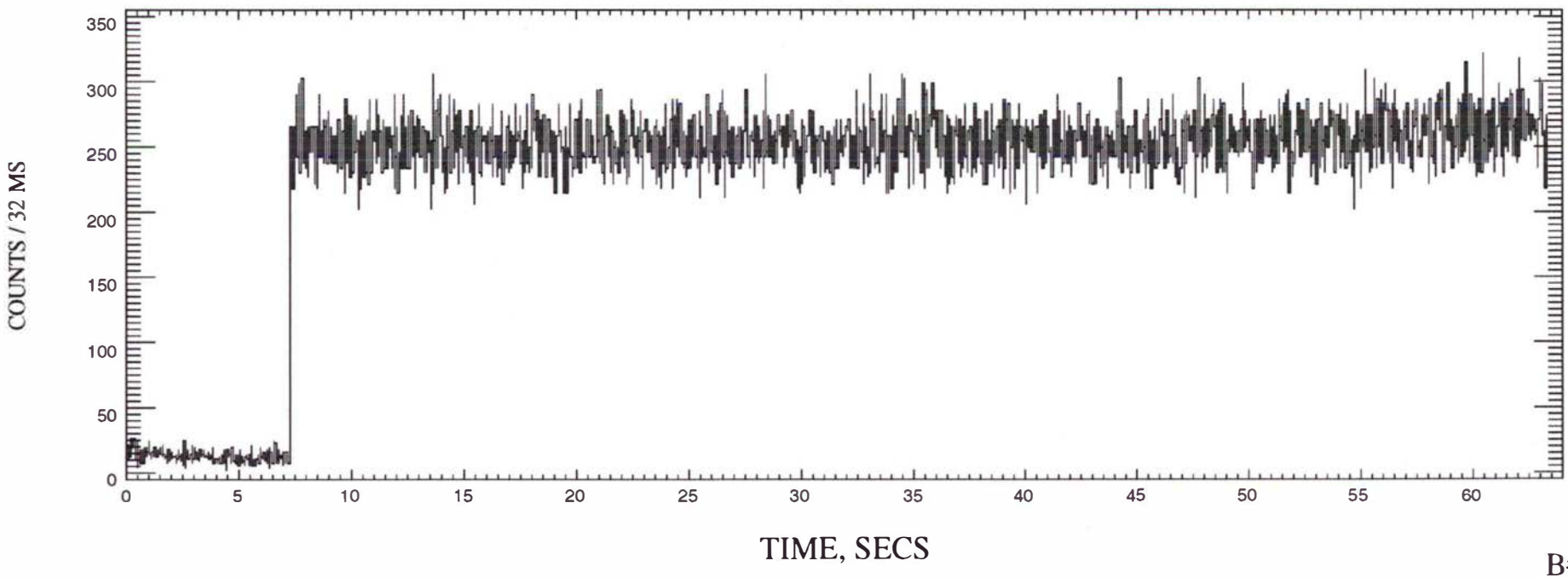


B# 8

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 6 at UT= 5.785511737400 h=20827.842 s 05:47:07.842

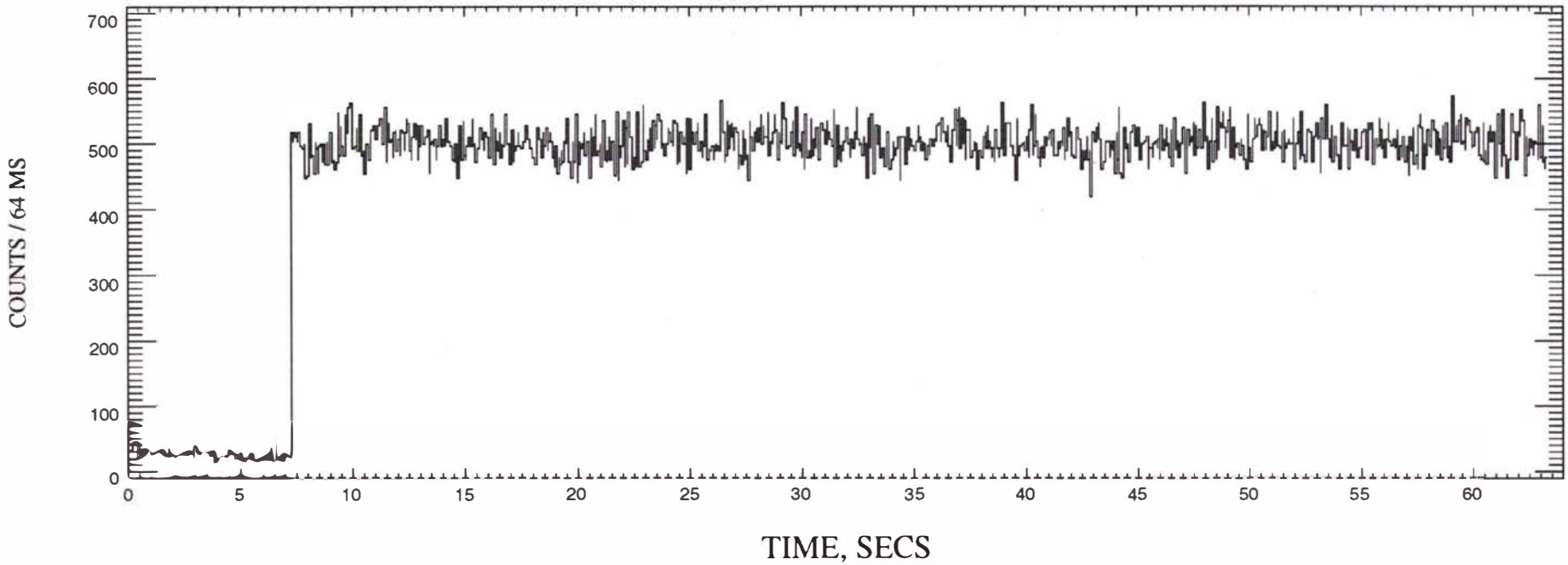


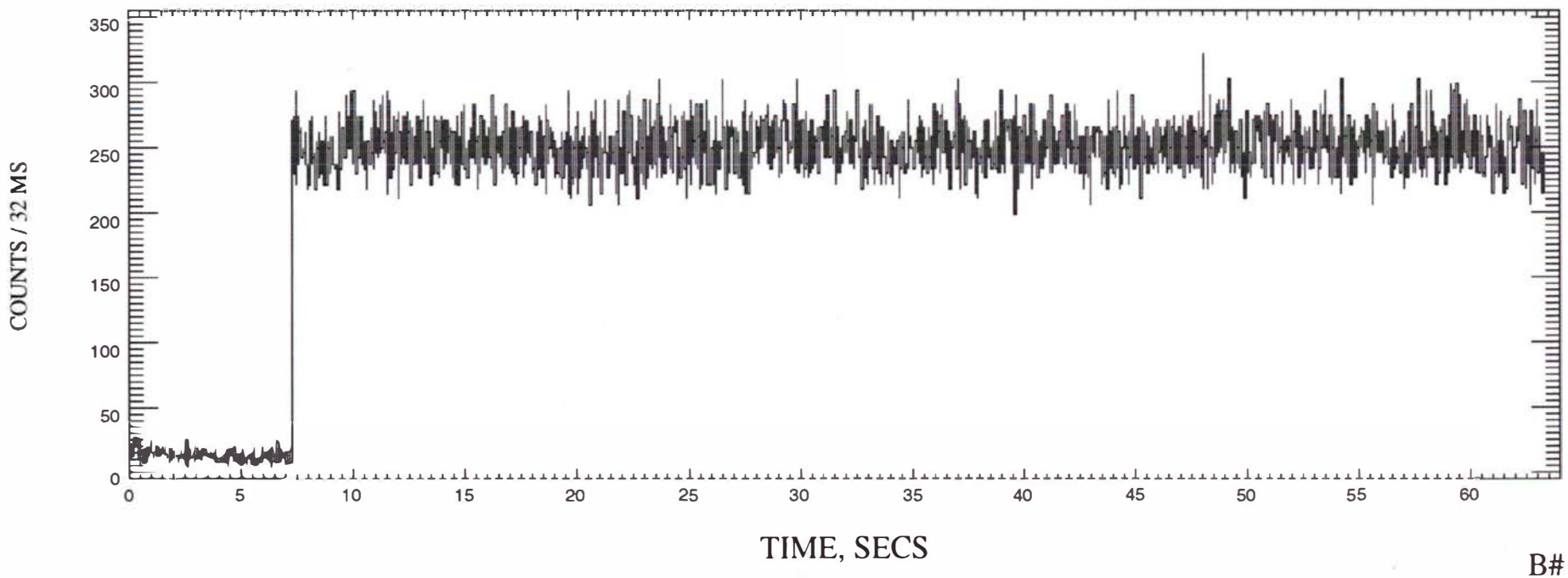


B# 9

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 7 at UT= 6.487745552063 h=23355.884 s 06:29:15.884

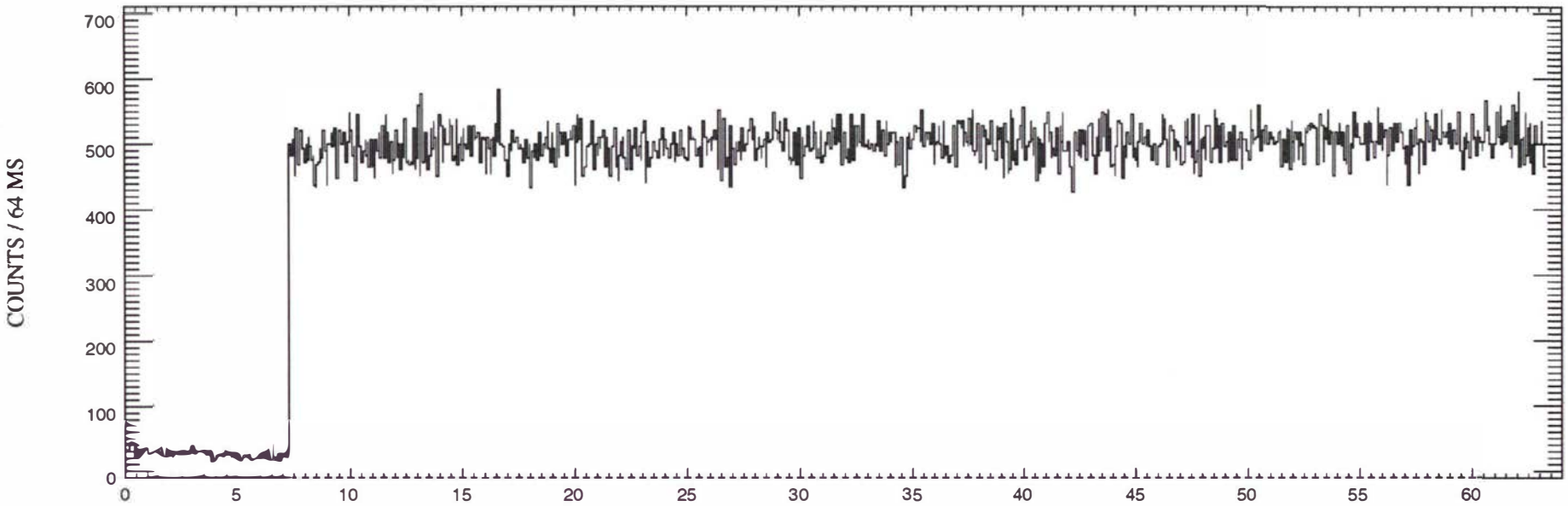




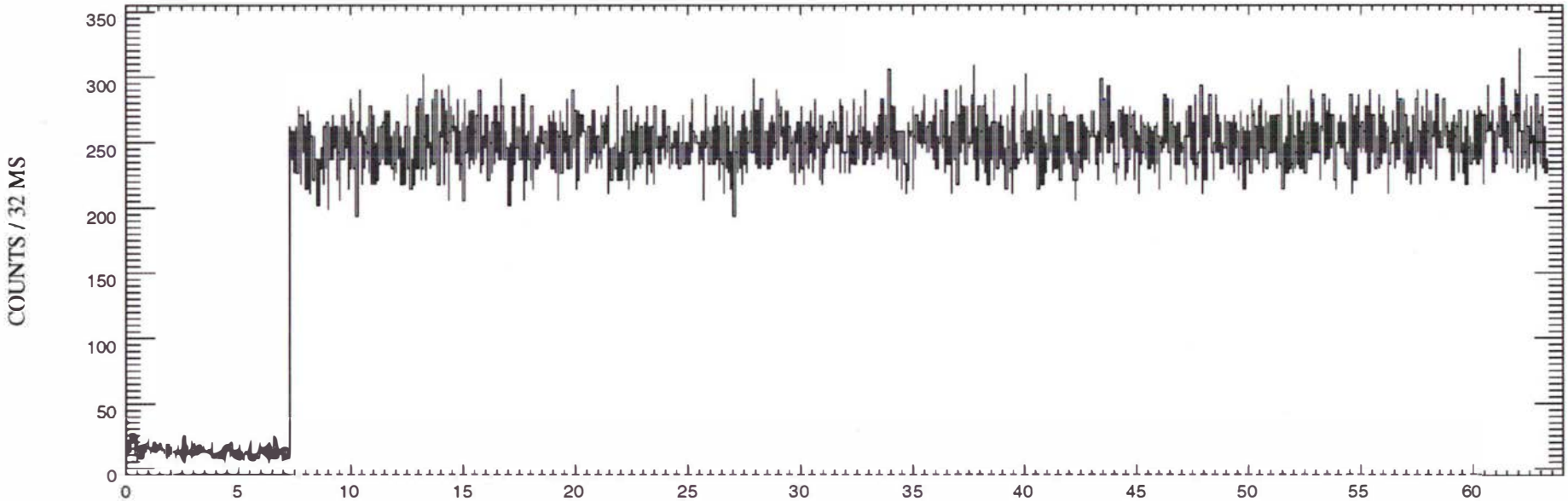
B# 10

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 8 at UT= 7.189979366726 h=25883.926 s 07:11:23.926



TIME, SECS

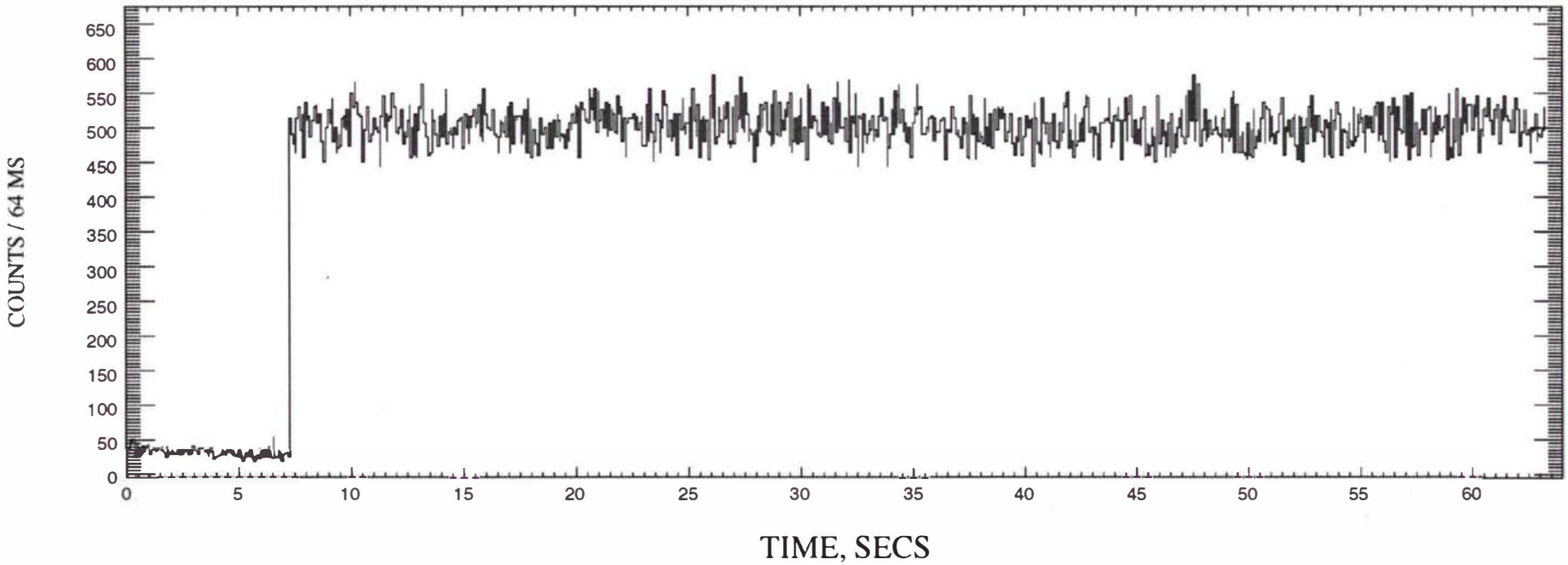


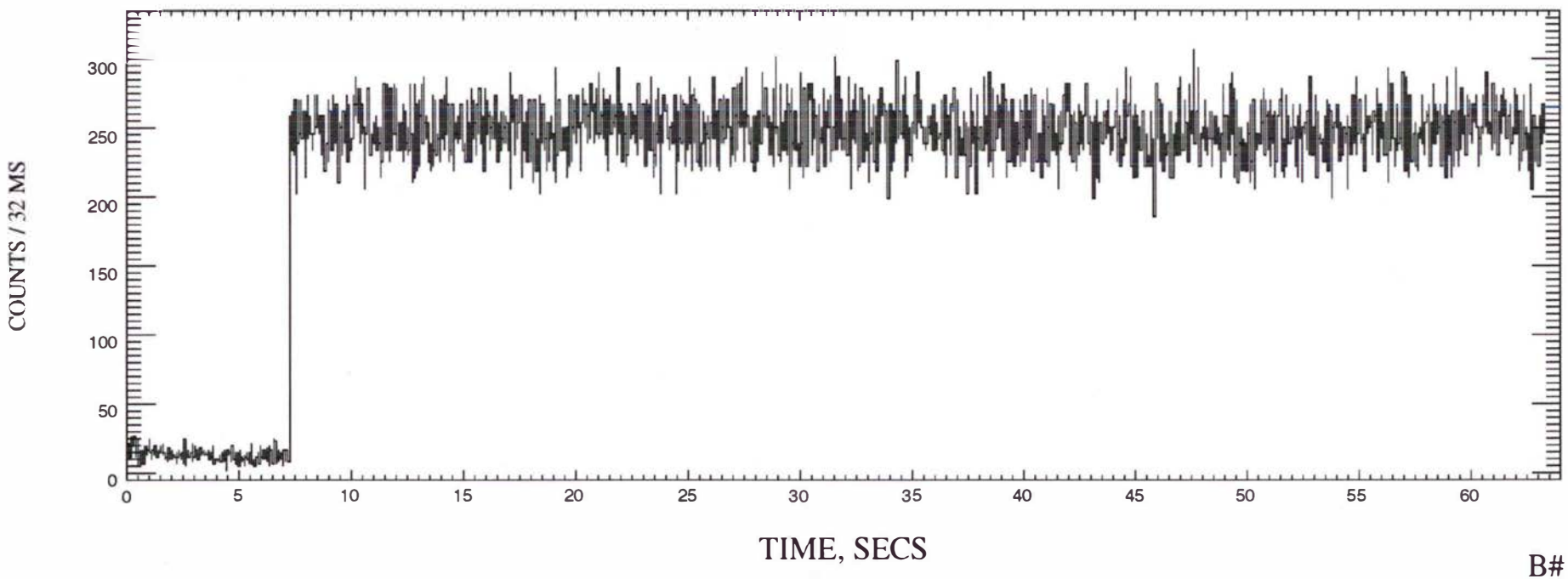
TIME, SECS

B# 11

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 9 at UT= 7.892213177151 h=28411.967 s 07:53:31.967

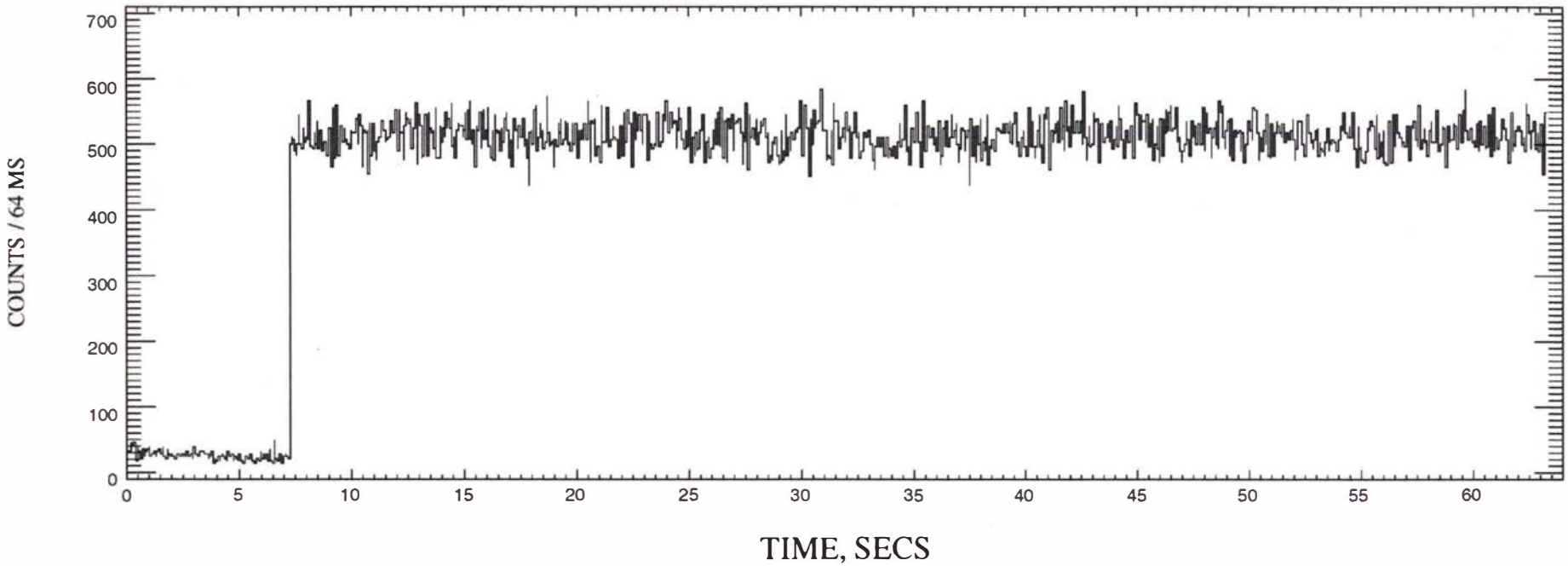


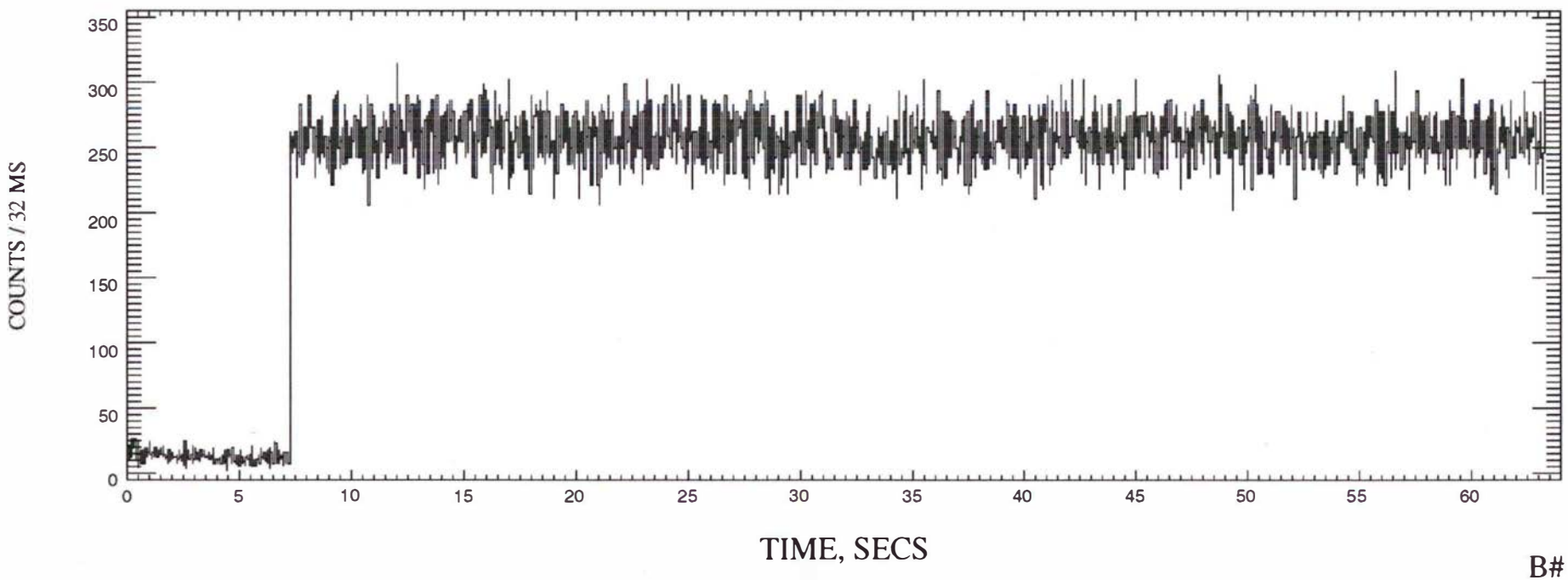


B# 12

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 10 at UT= 8.594446991815 h=30940.009 s 08:35:40.009

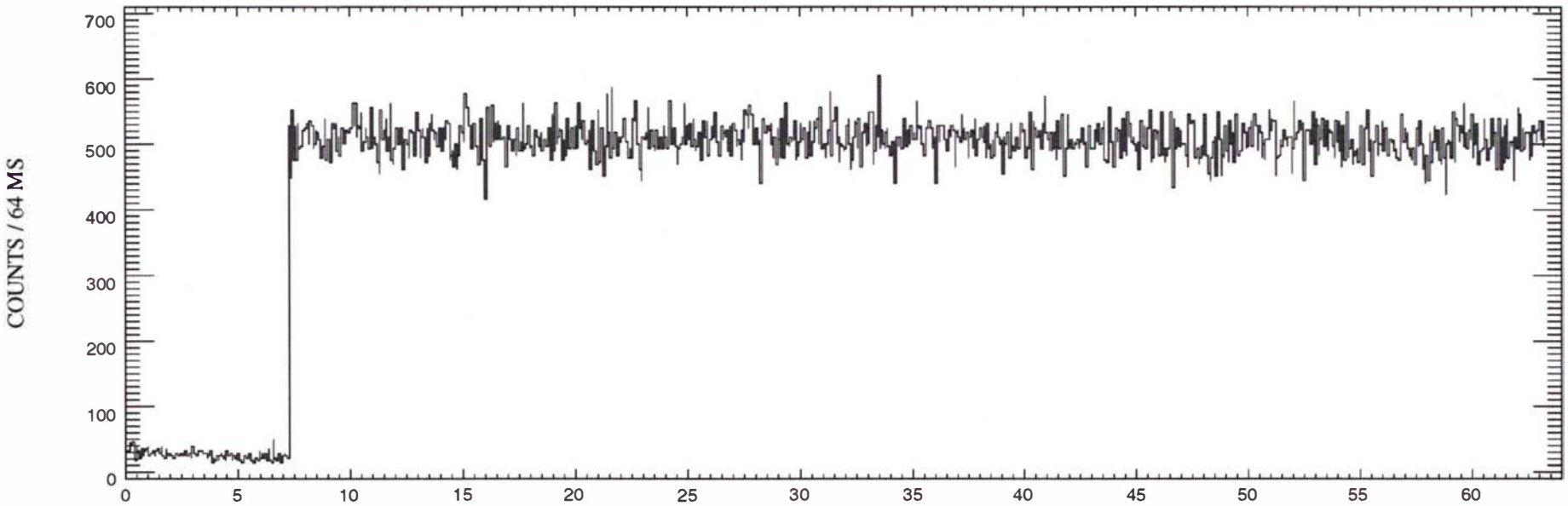


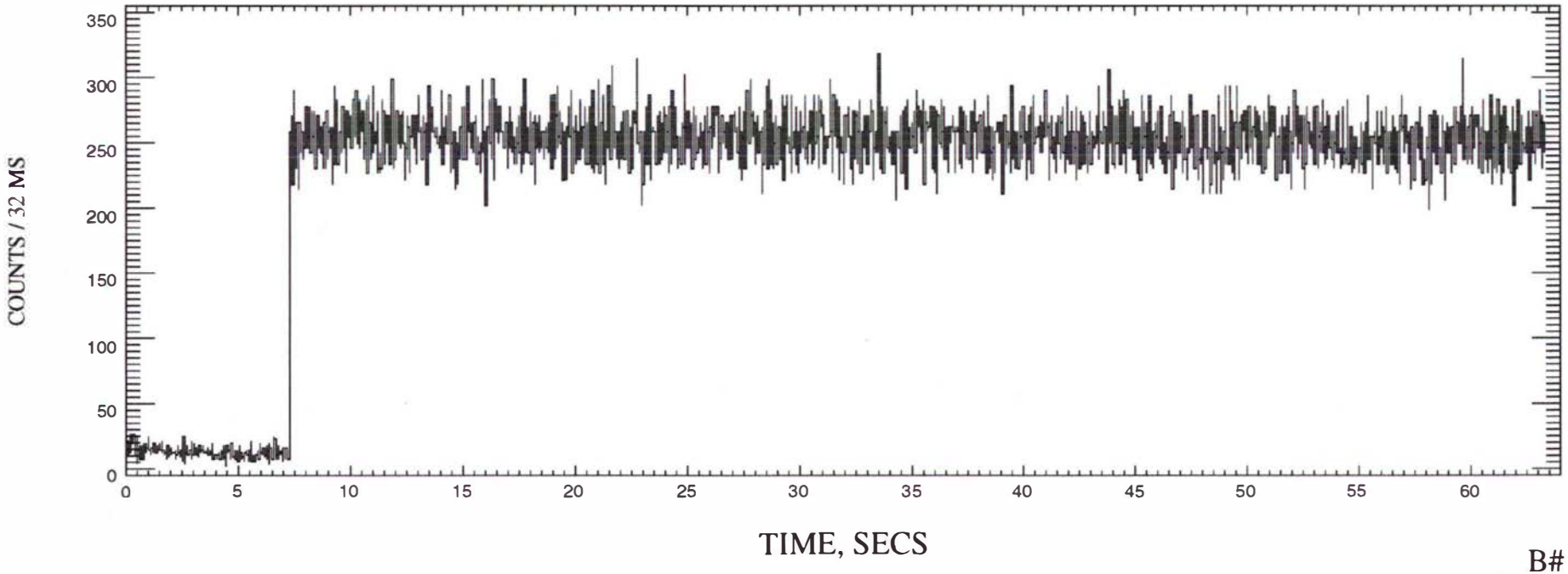


B# 13

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 11 at UT= 9.296680806478 h=33468.051 s 09:17:48.051

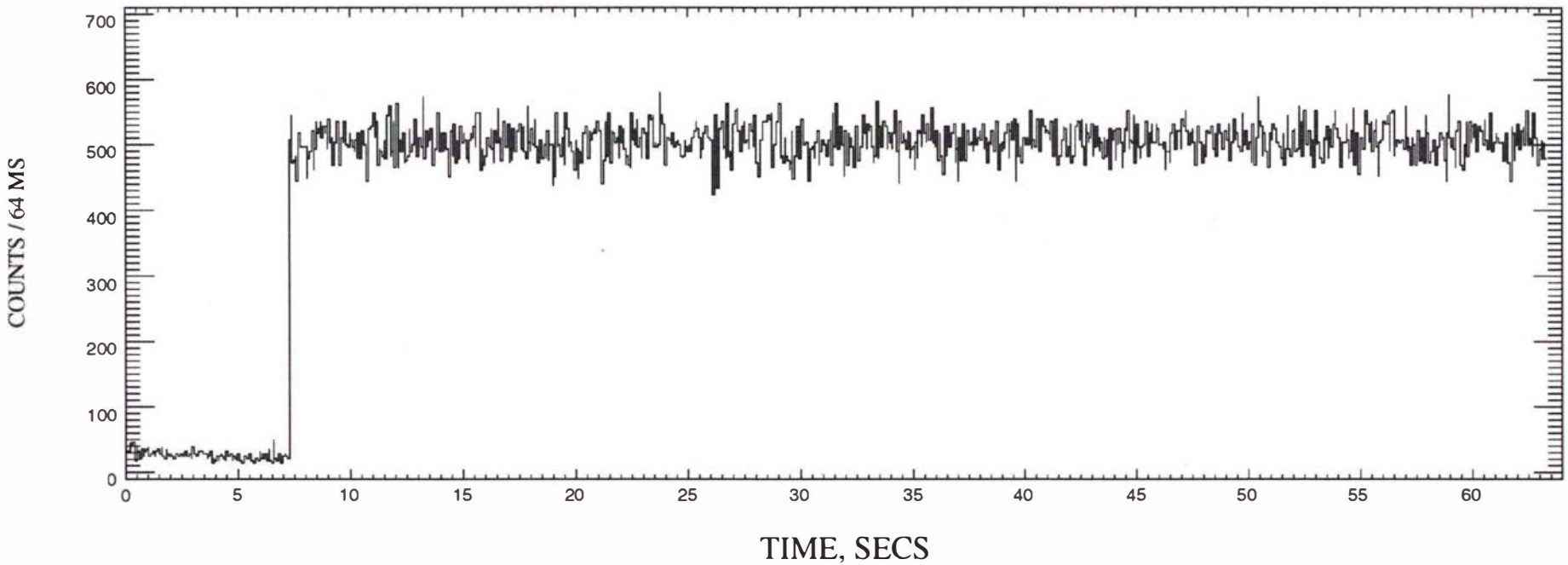


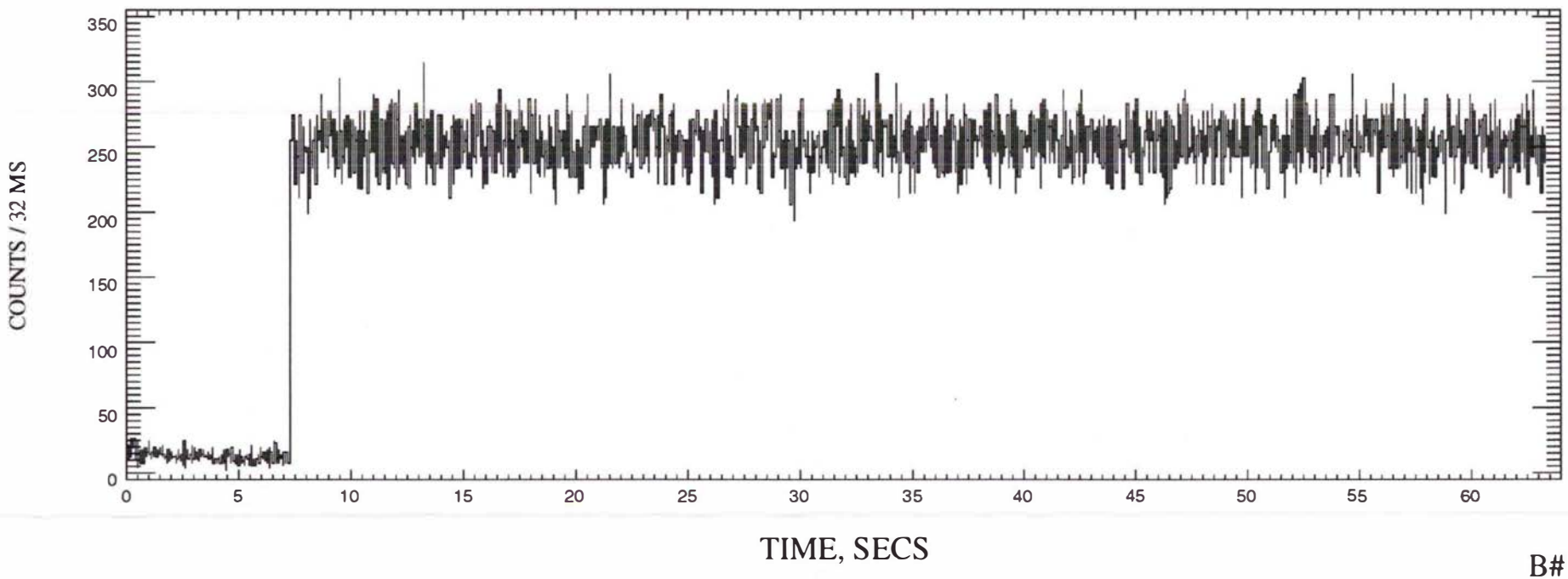


B# 14

HUS 2A TRIGGERED DATA ●EDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 12 at UT= 9.998914616903 h=35996.093 s 09:59:56.093

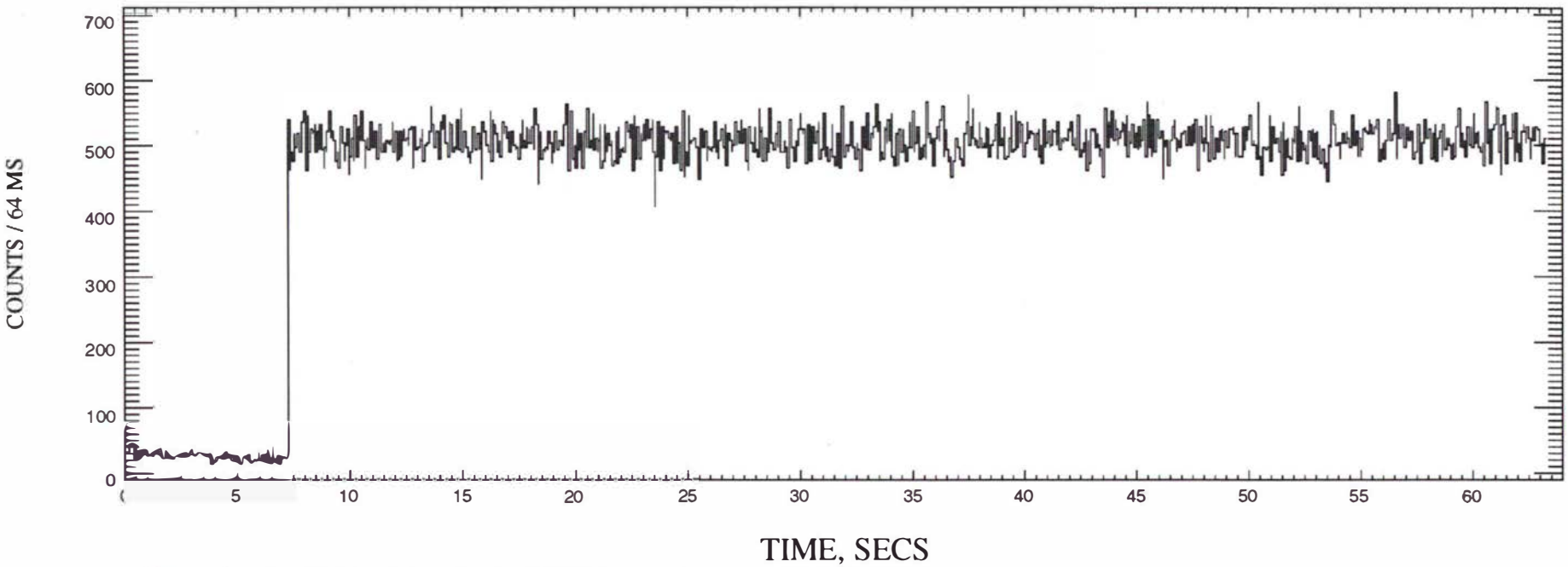


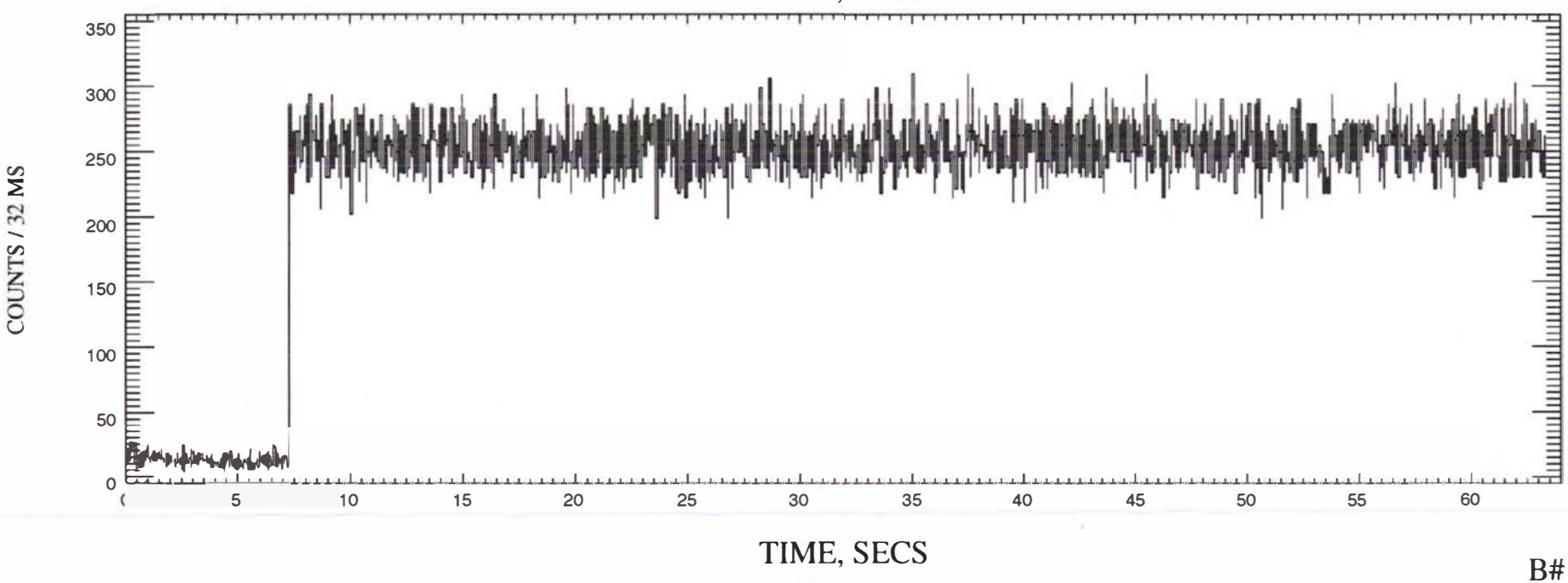


B# 15

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 13 at UT=10.701148431566 h=38524.134 s 10:42:04.134

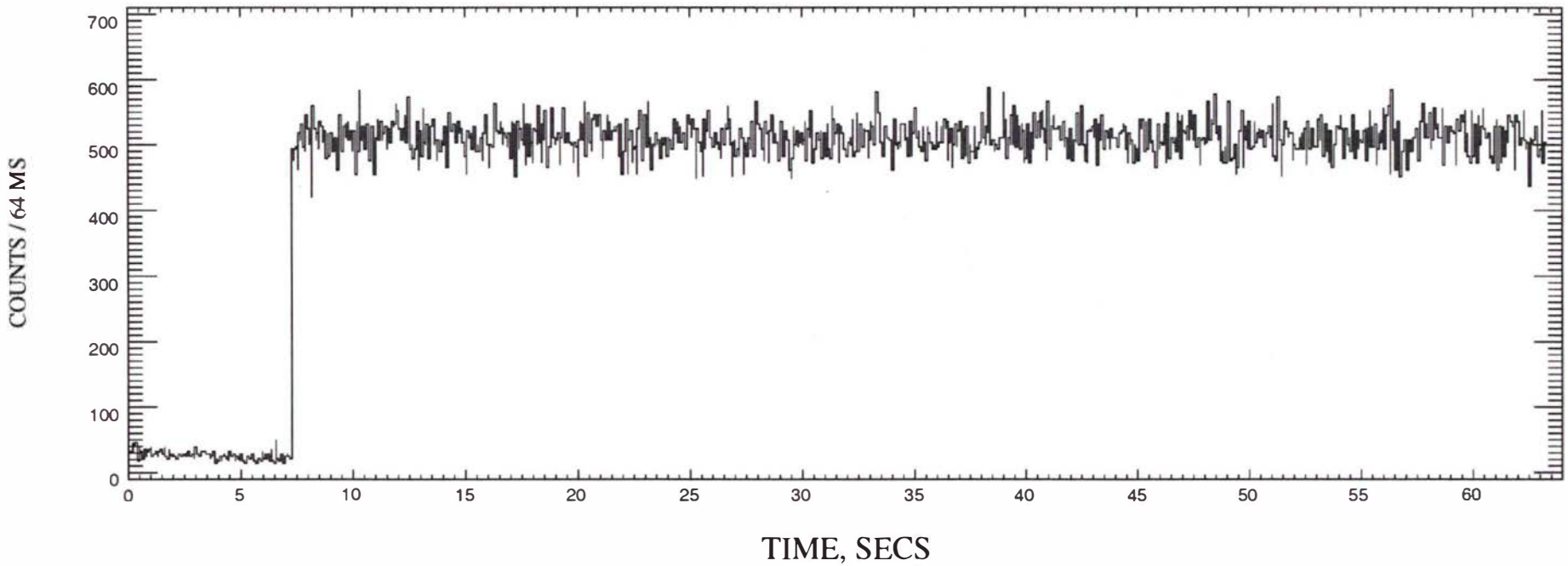


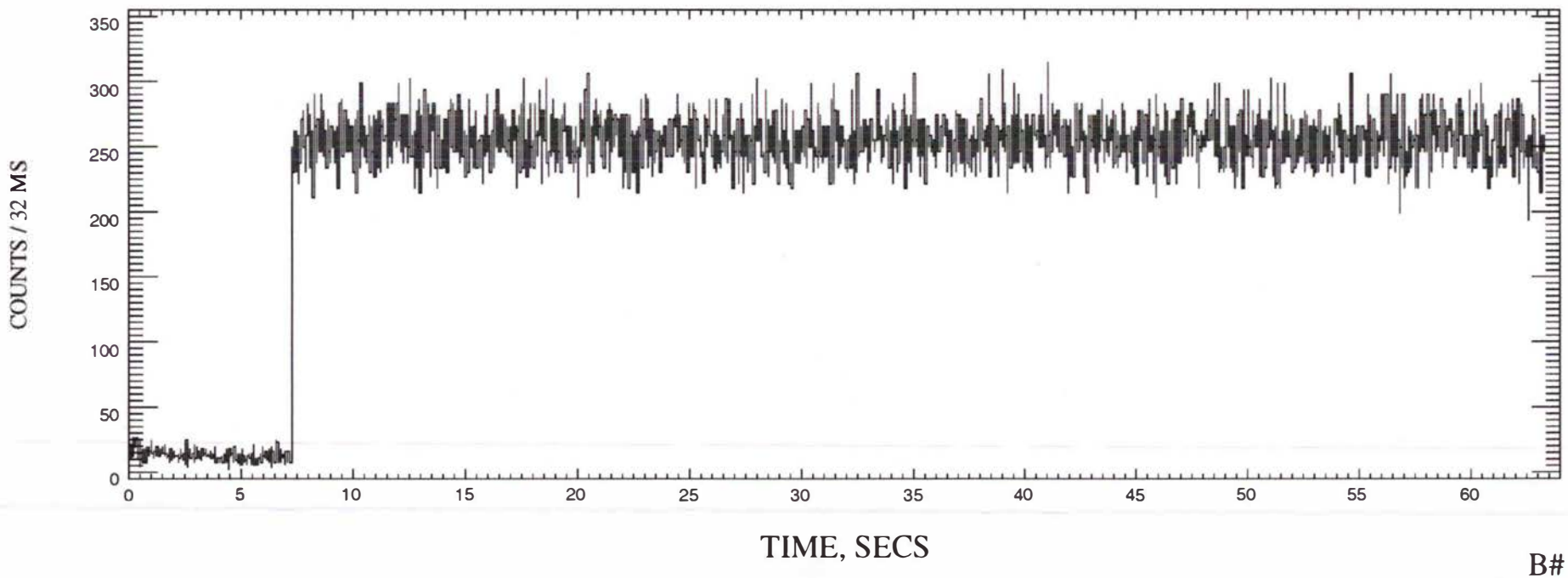


B# 16

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 14 at UT=11.403381084866 h=41052.172 s 11:24:12.172

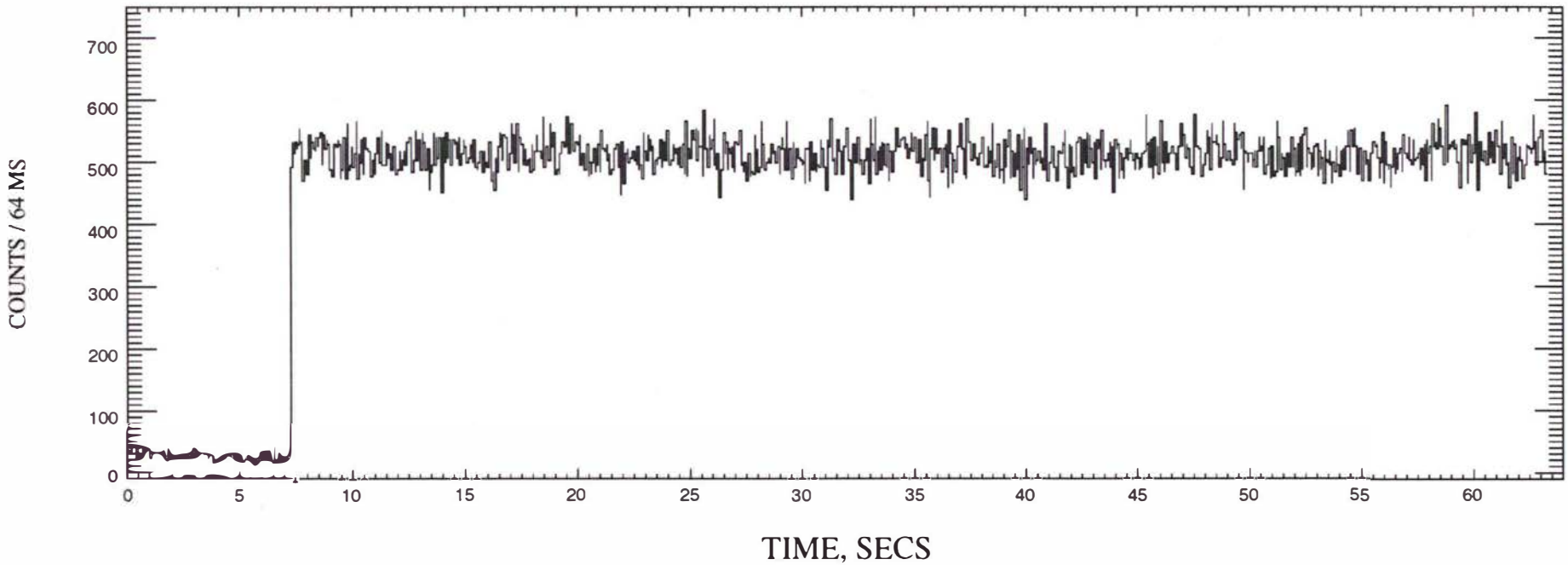


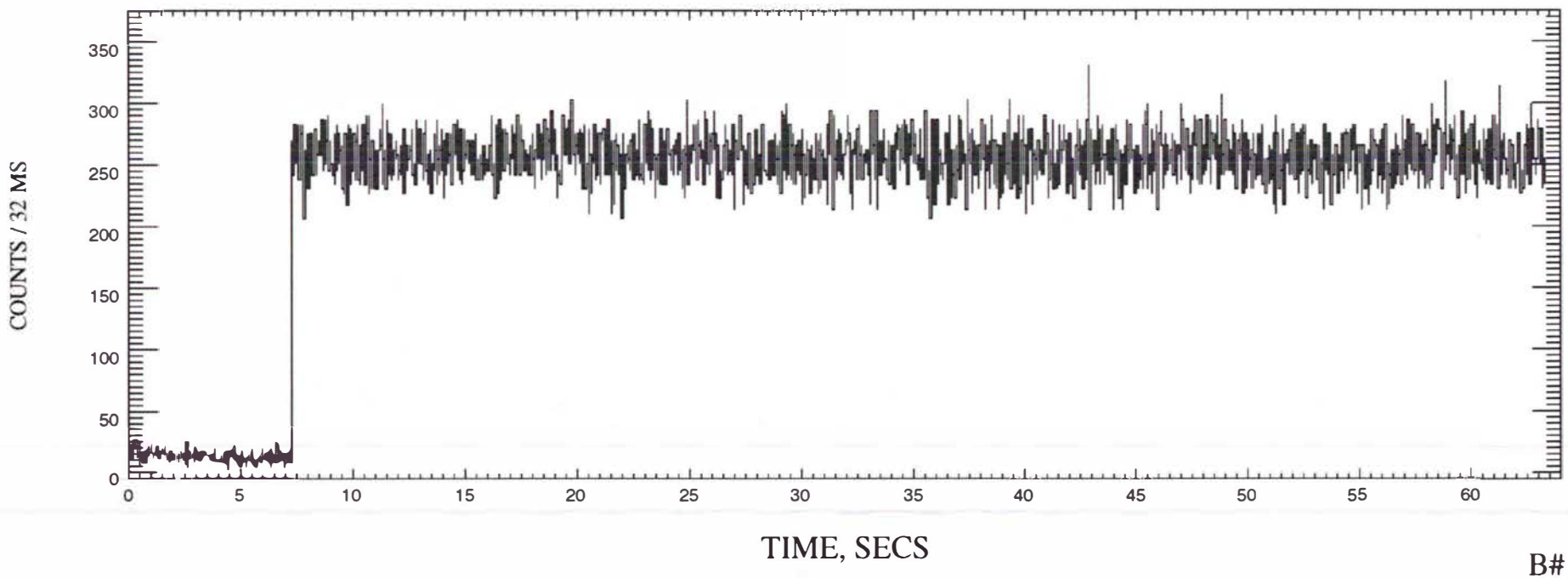


B# 17

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 15 at UT=12.105614899529 h=43580.214 s 12:06:20.214

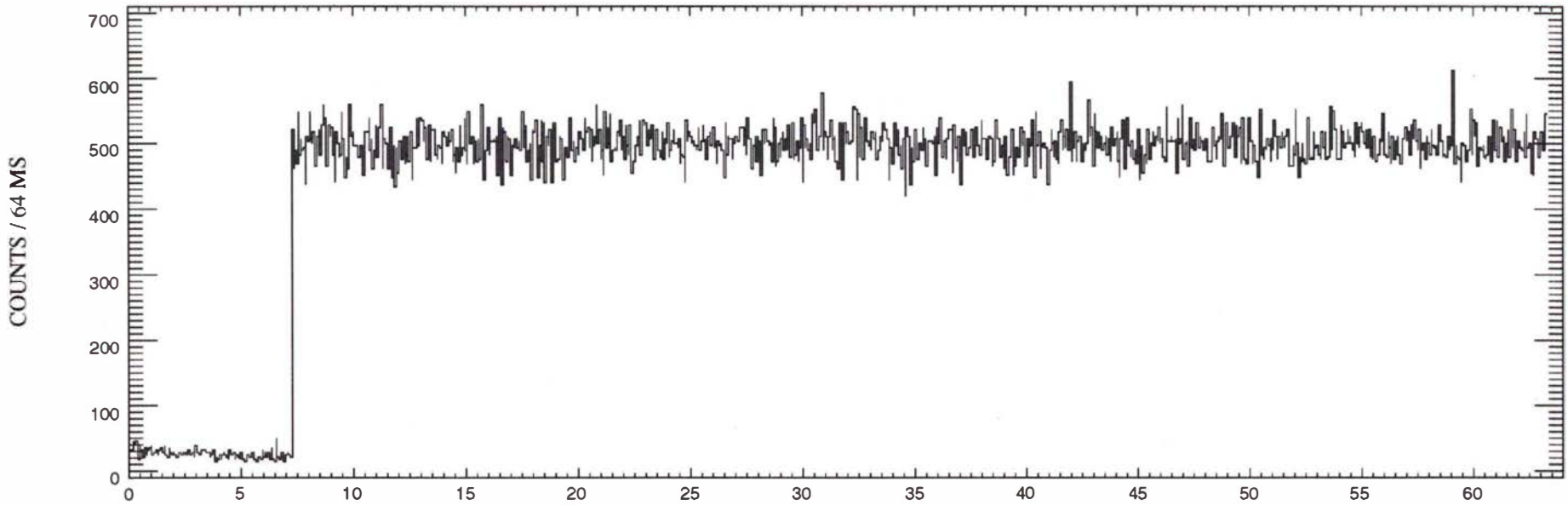


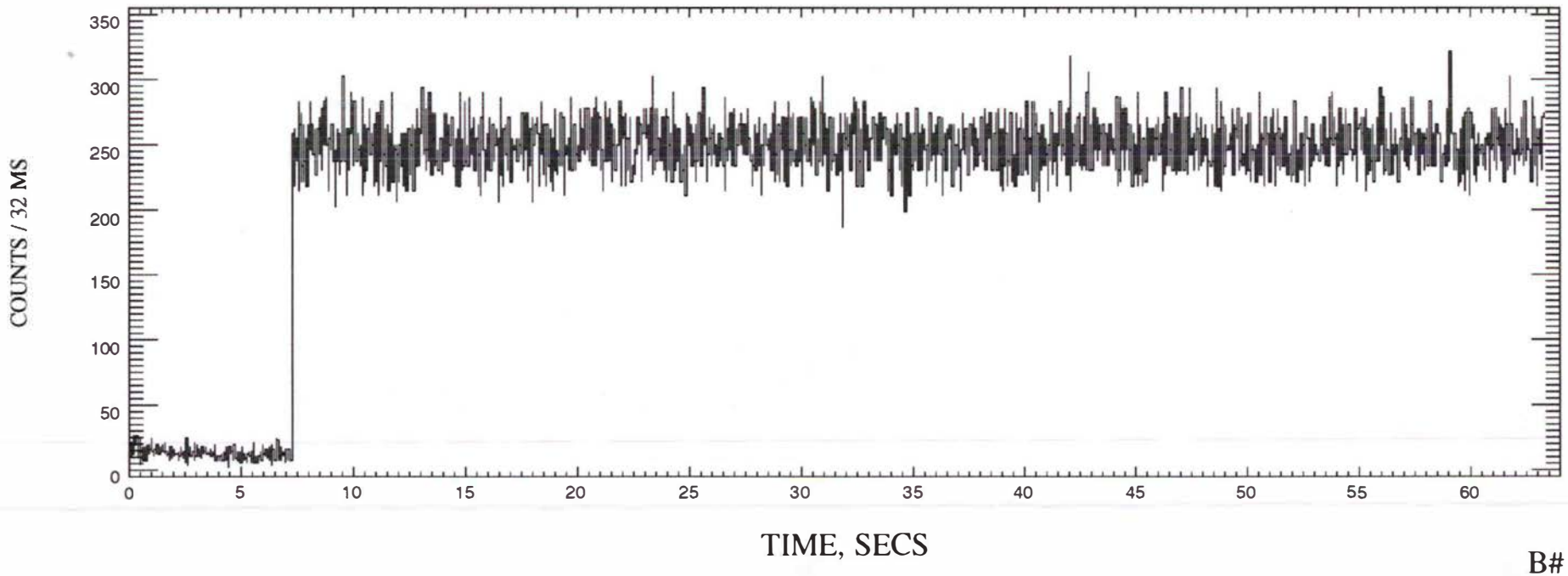


B# 18

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 0 at UT=12.807848133511 h=46108.253 s 12:48:28.253

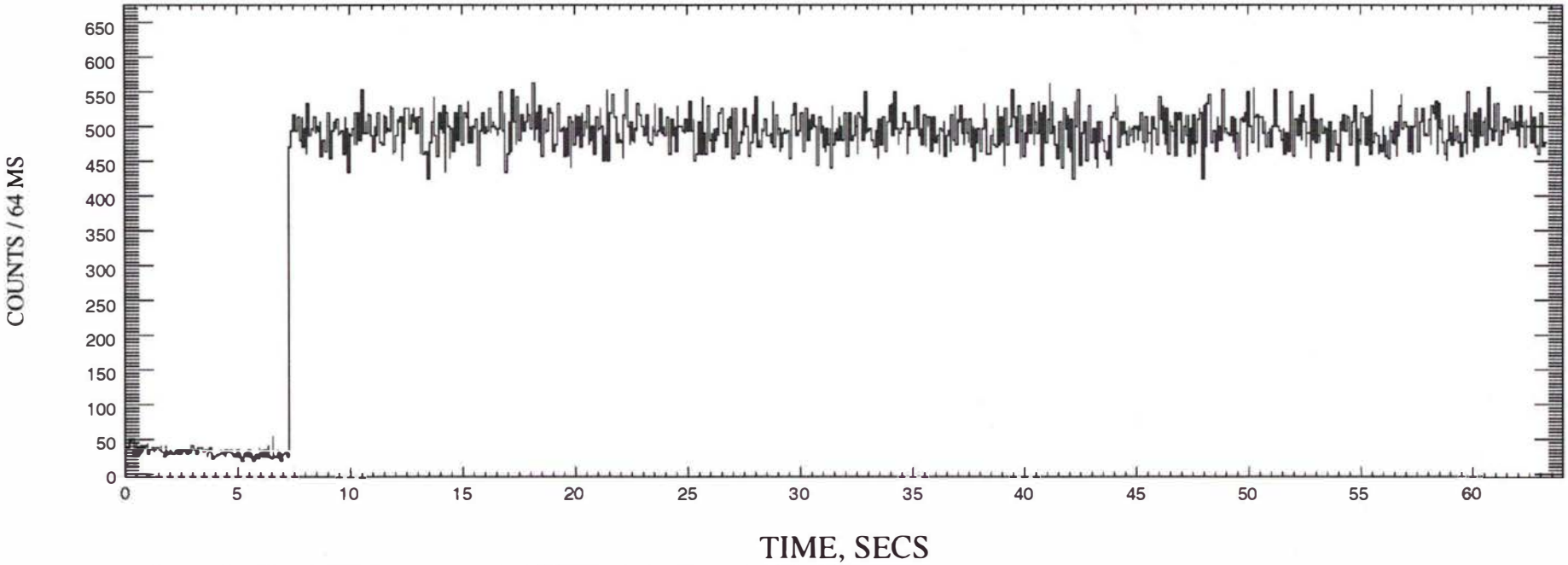


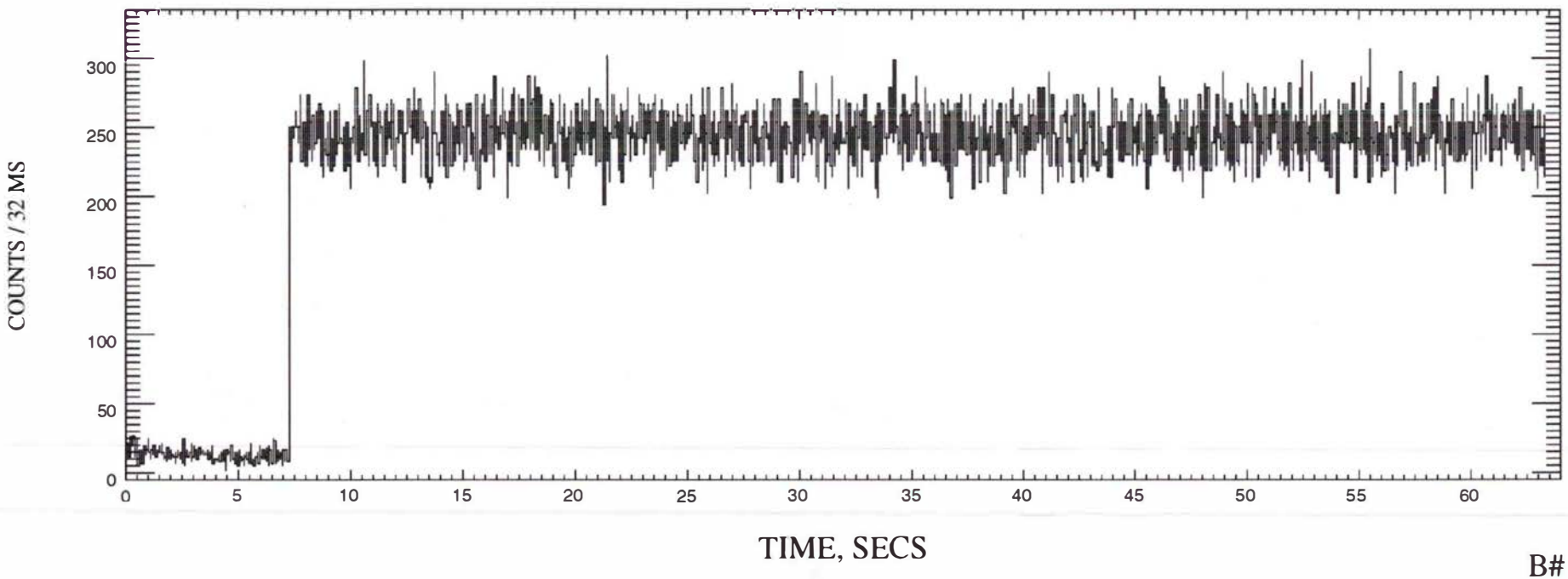


B# 19

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 1 at UT=13.510084118313 h=48636.303 s 13:30:36.303

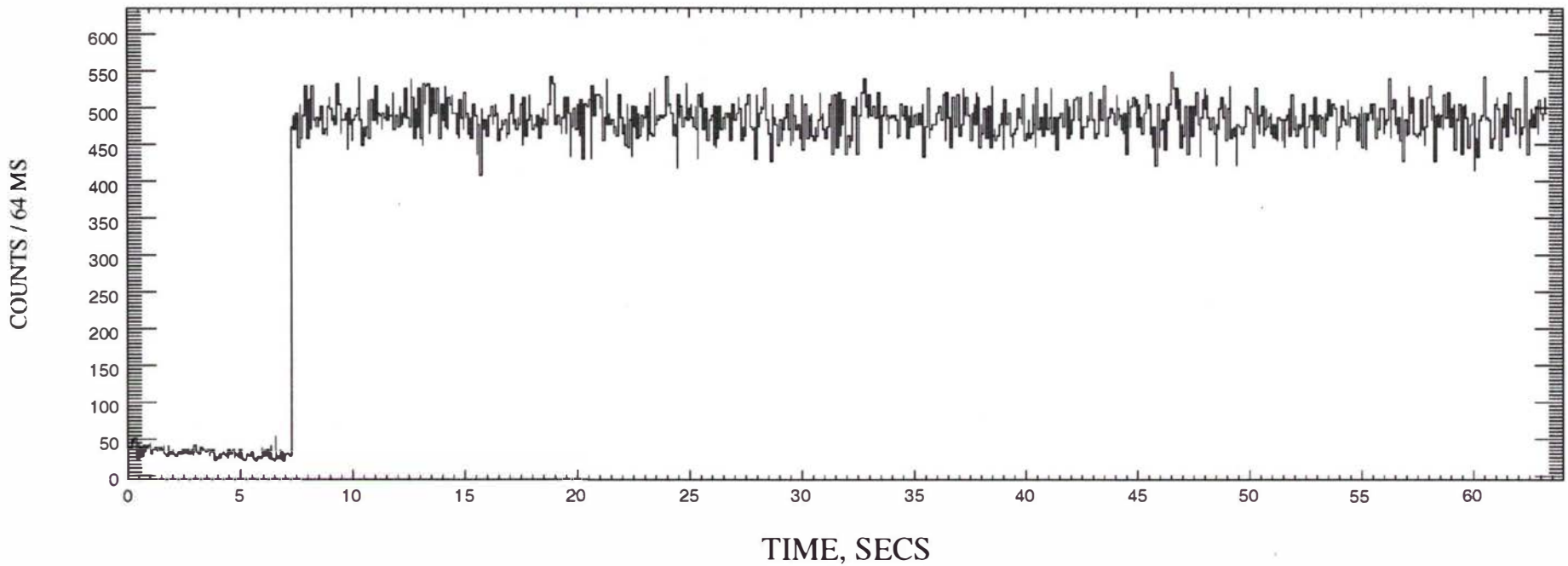


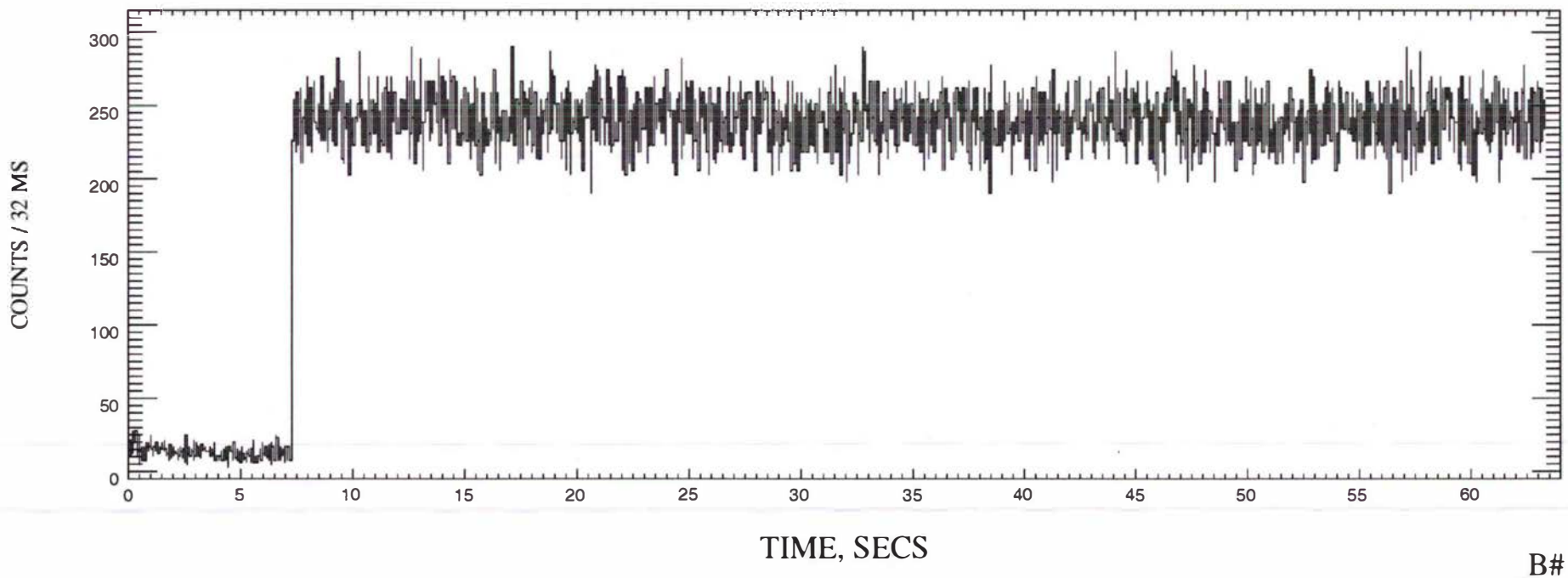


B# 20

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 2 at UT=14.212315758599 h=51164.337 s 14:12:44.337

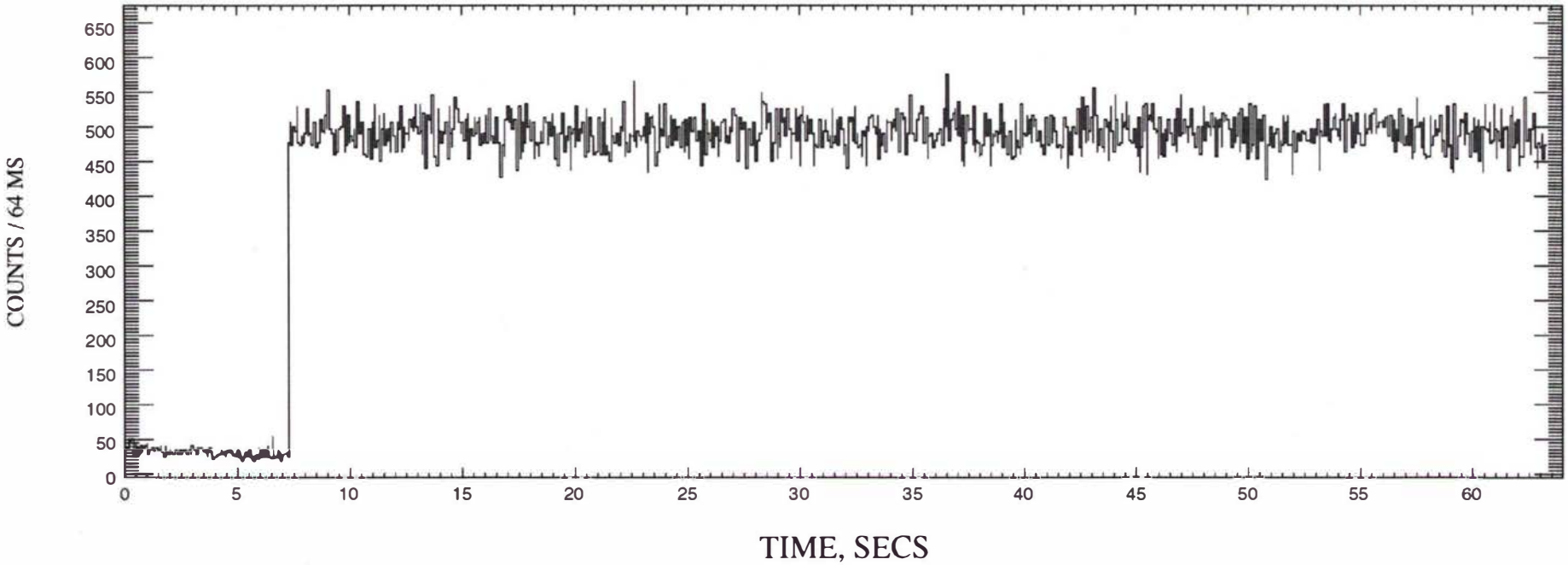


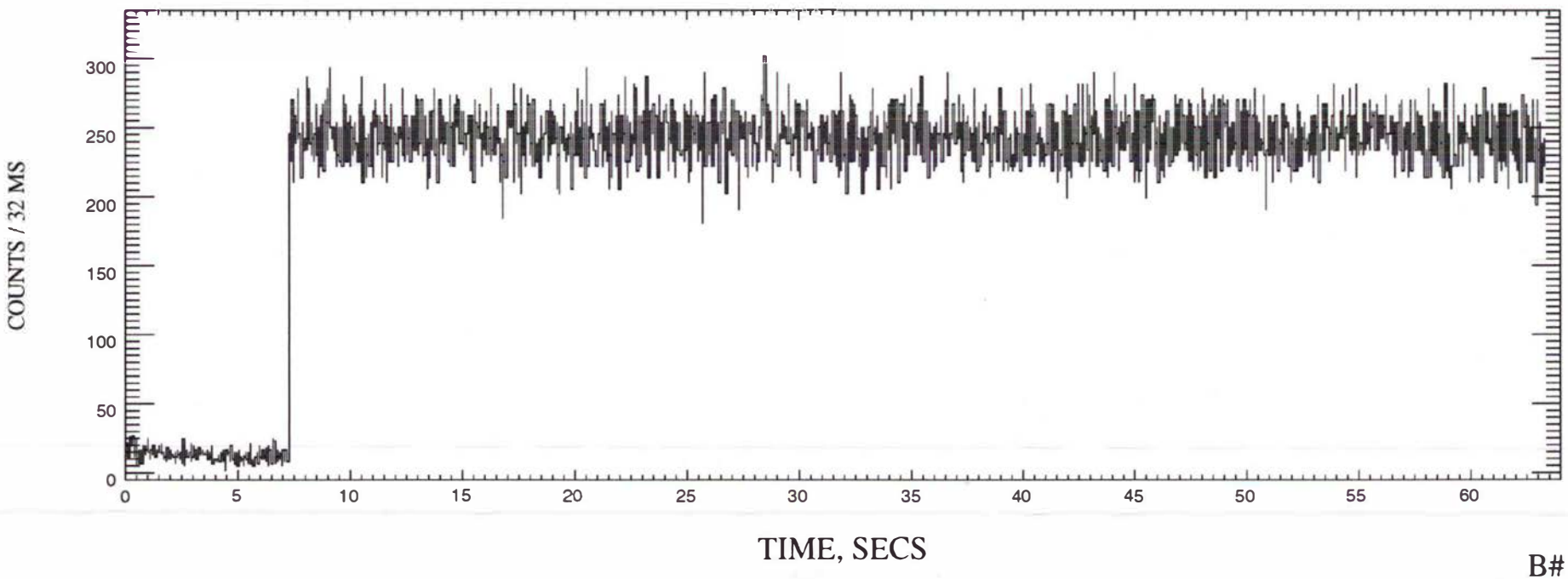


B# 21

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 3 at UT=14.914549573263 h=53692.378 s 14:54:52.378

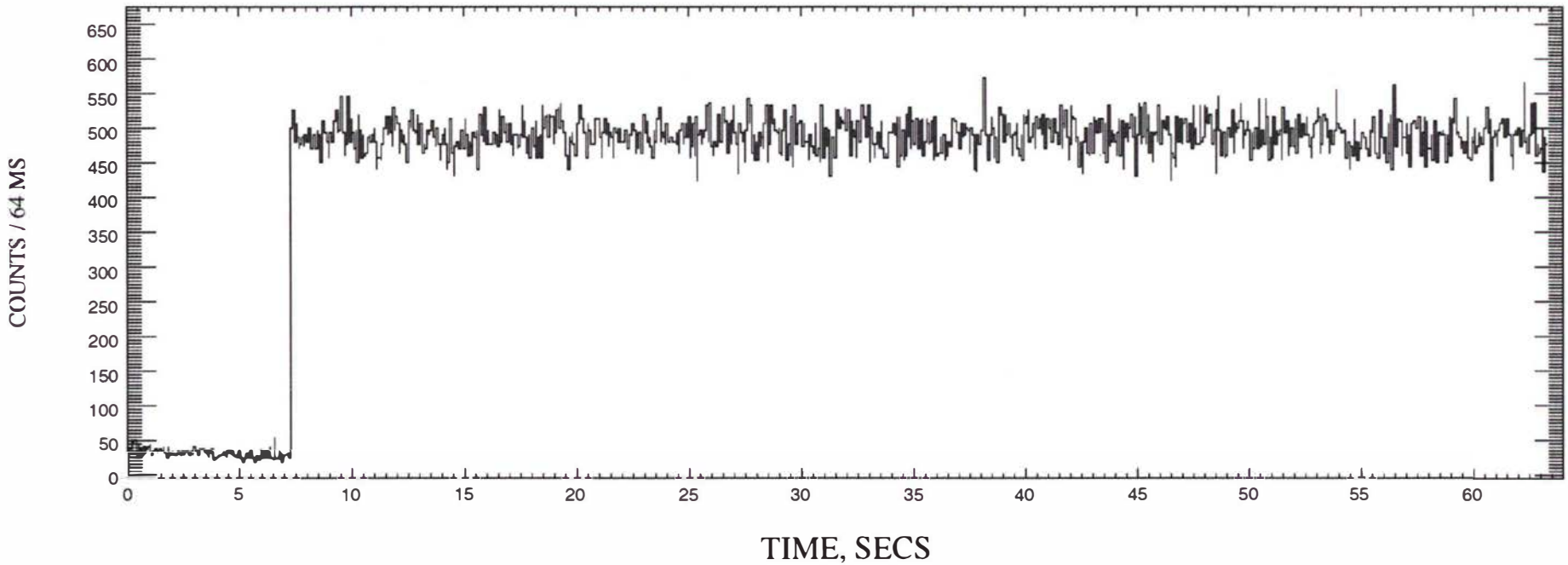


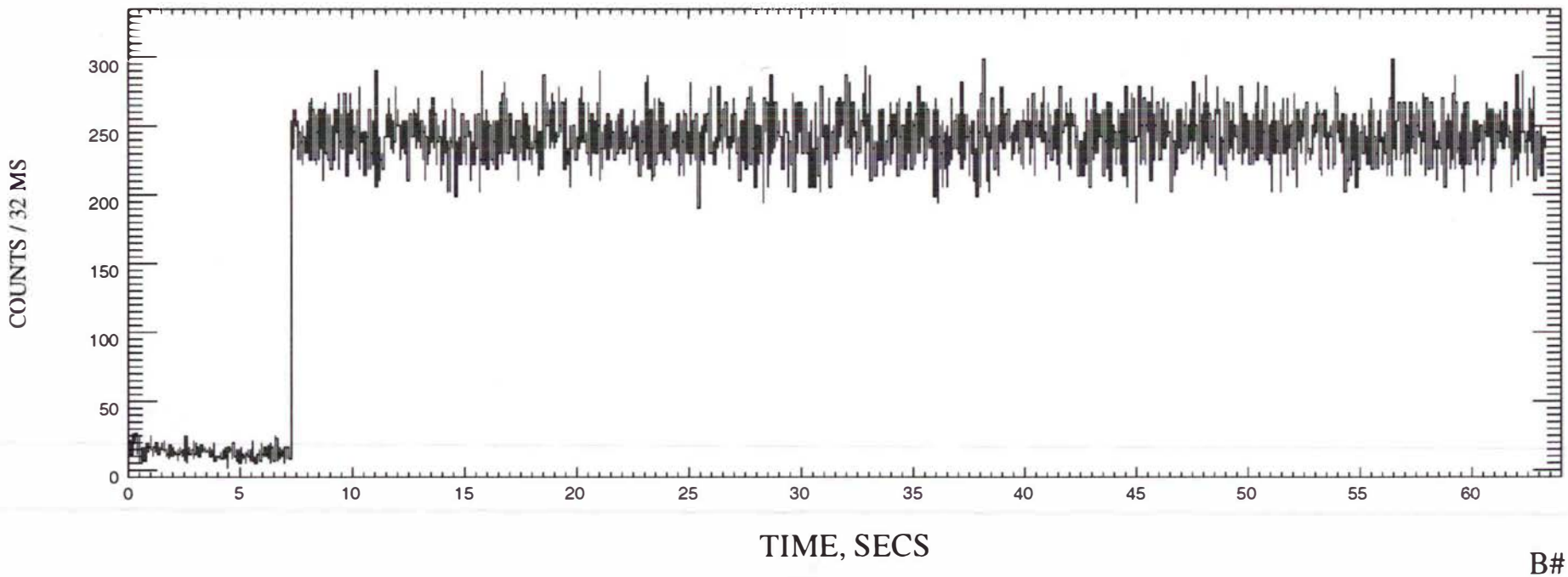


B# 22

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 4 at UT=15.616783387926 h=56220.420 s 15:37:00.420

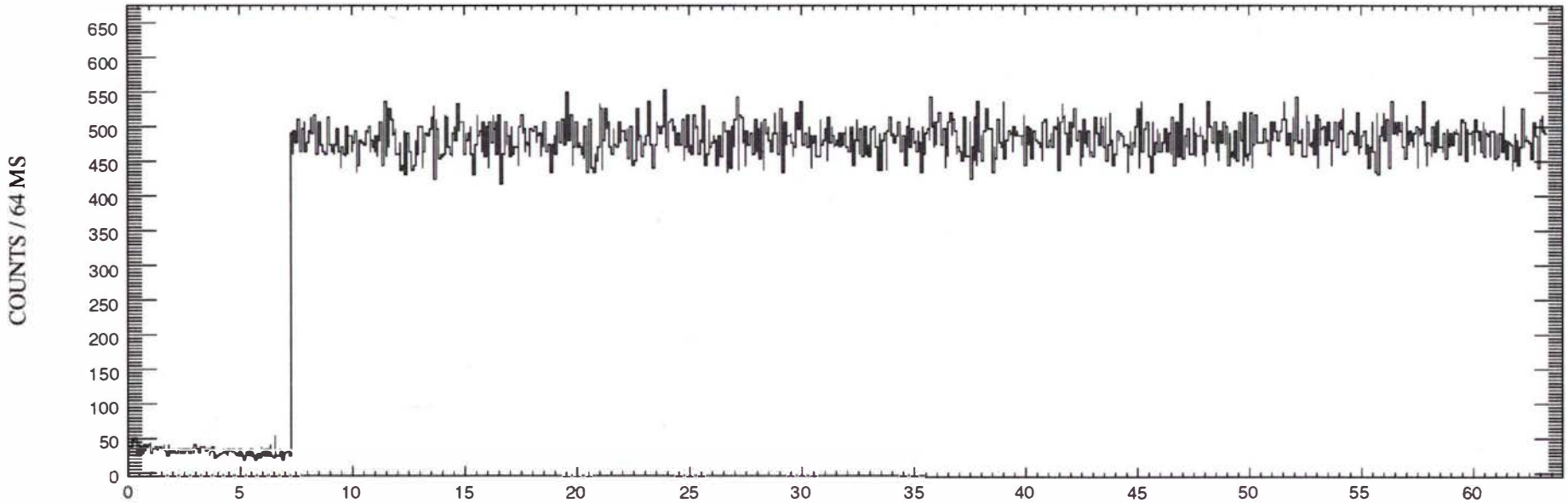




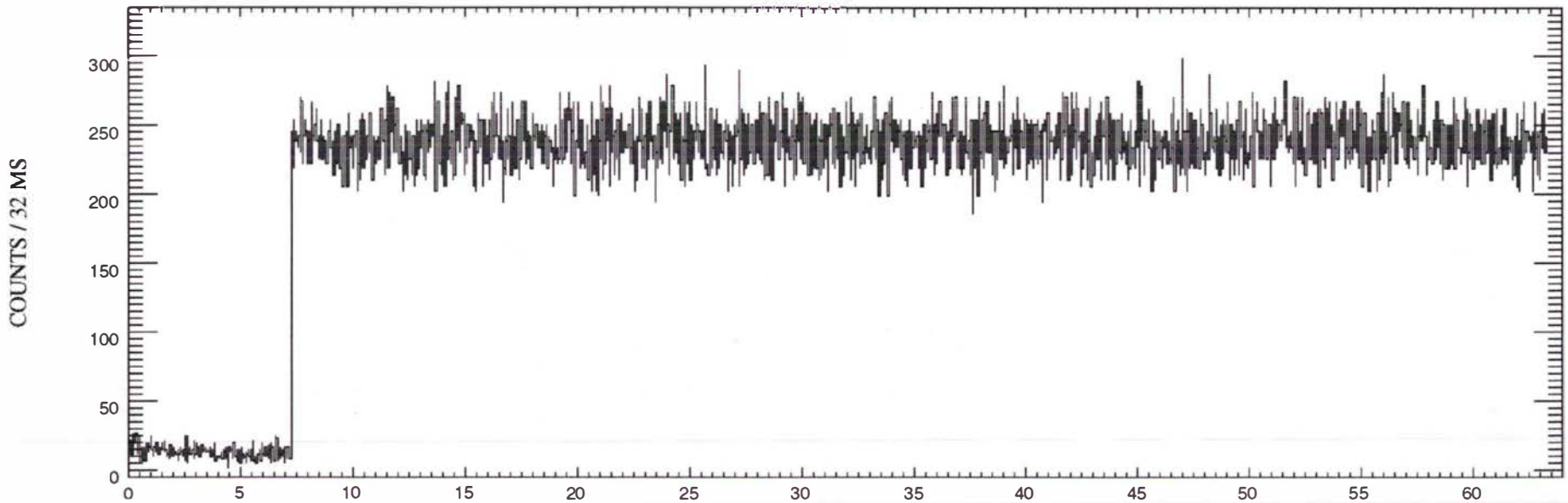
B# 23

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 5 at UT=16.319017198351 h=58748.462 s 16:19:08.462



TIME, SECS

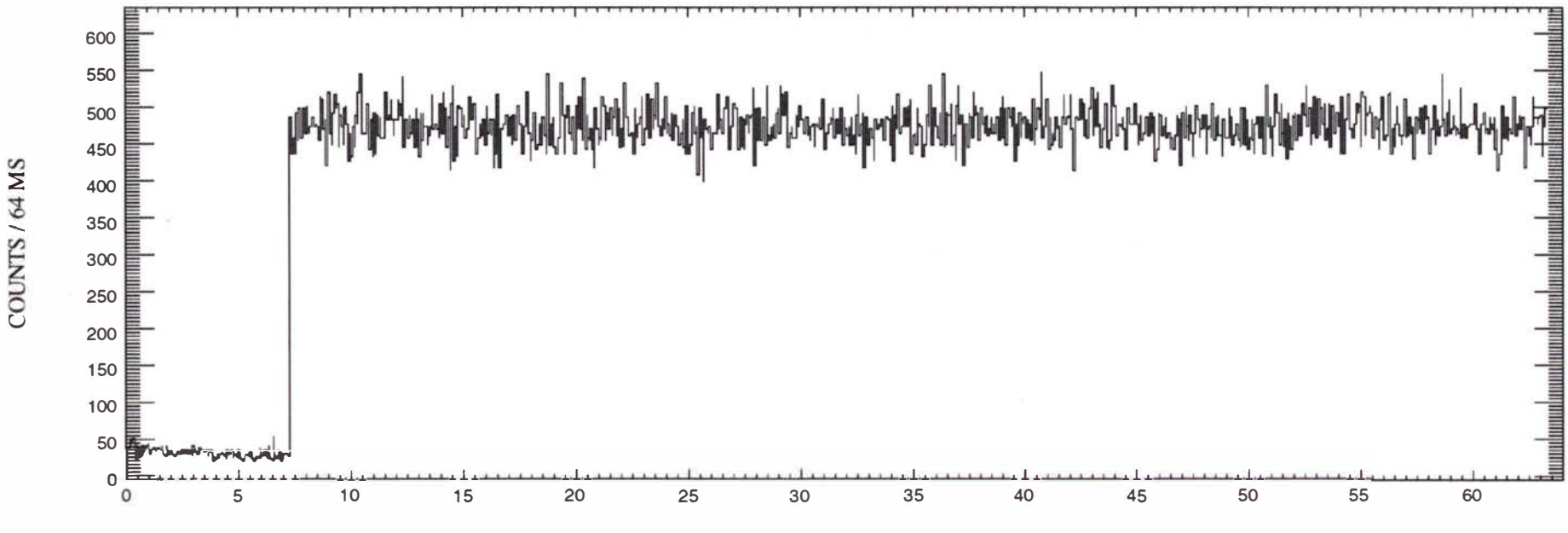


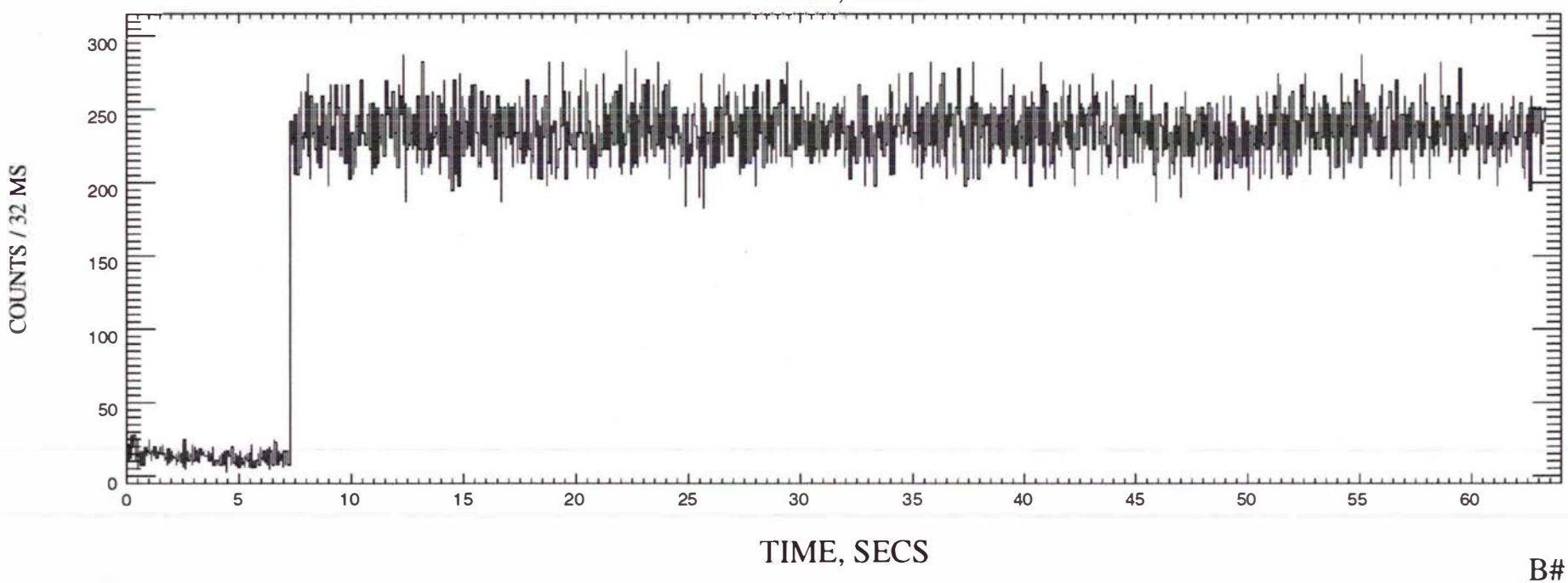
TIME, SECS

B# 24

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 6 at UT=17.021249851651 h=61276.499 s 17:01:16.499

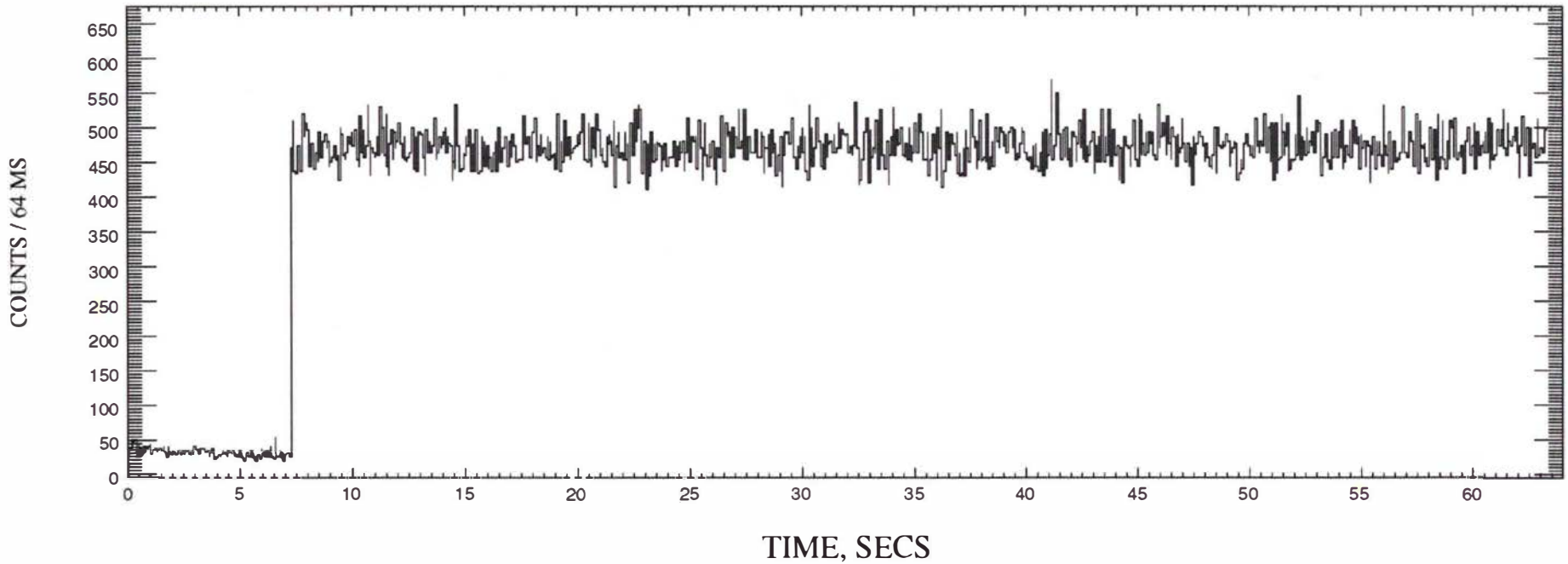


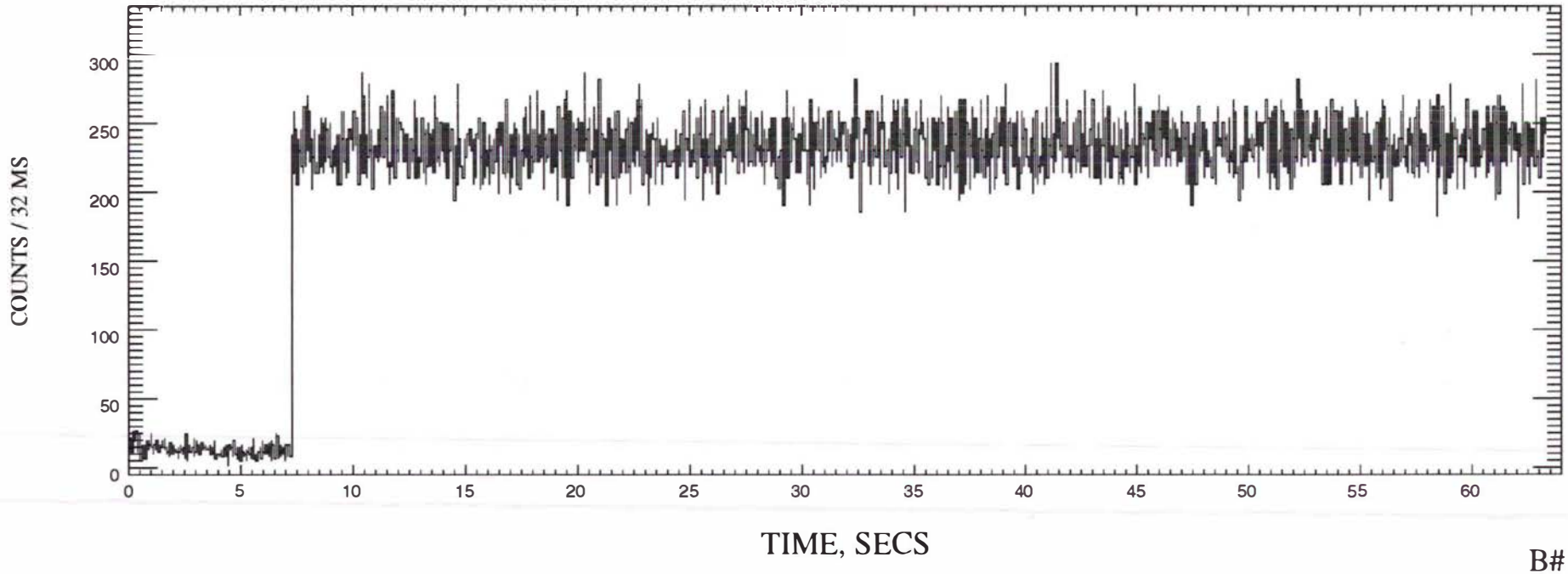


B# 25

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 7 at UT=17.723483666314 h=63804.541 s 17:43:24.541

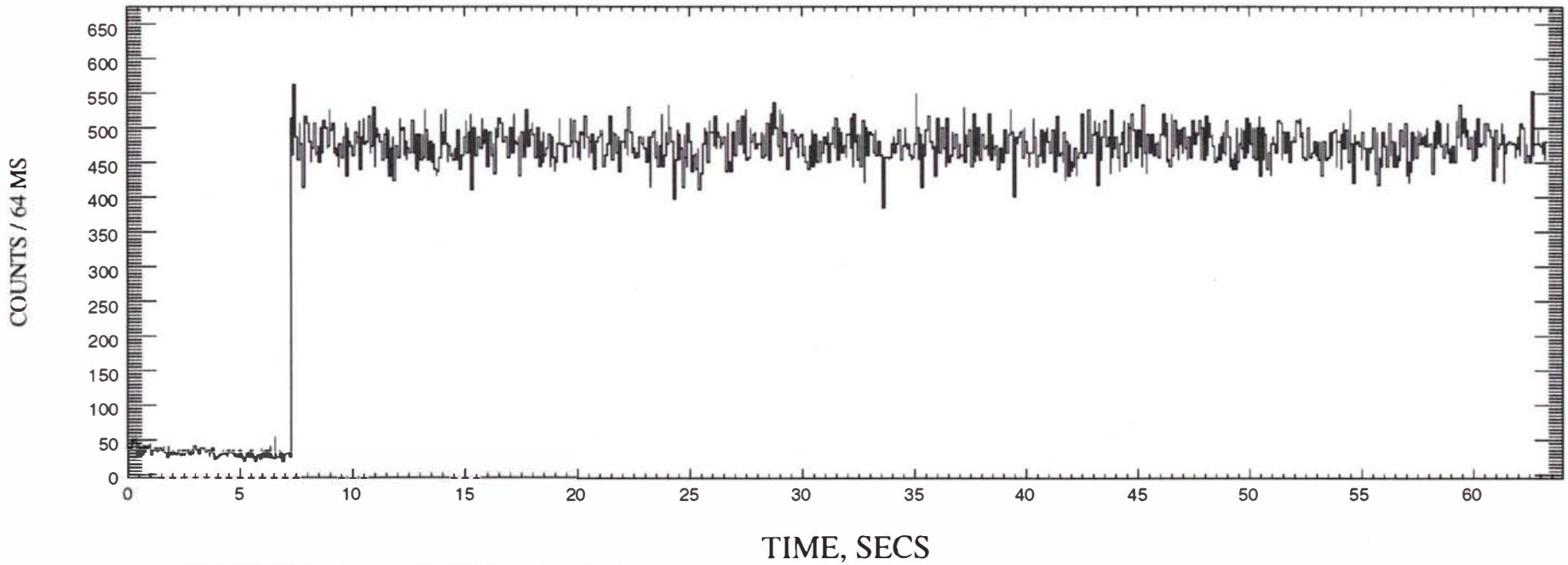


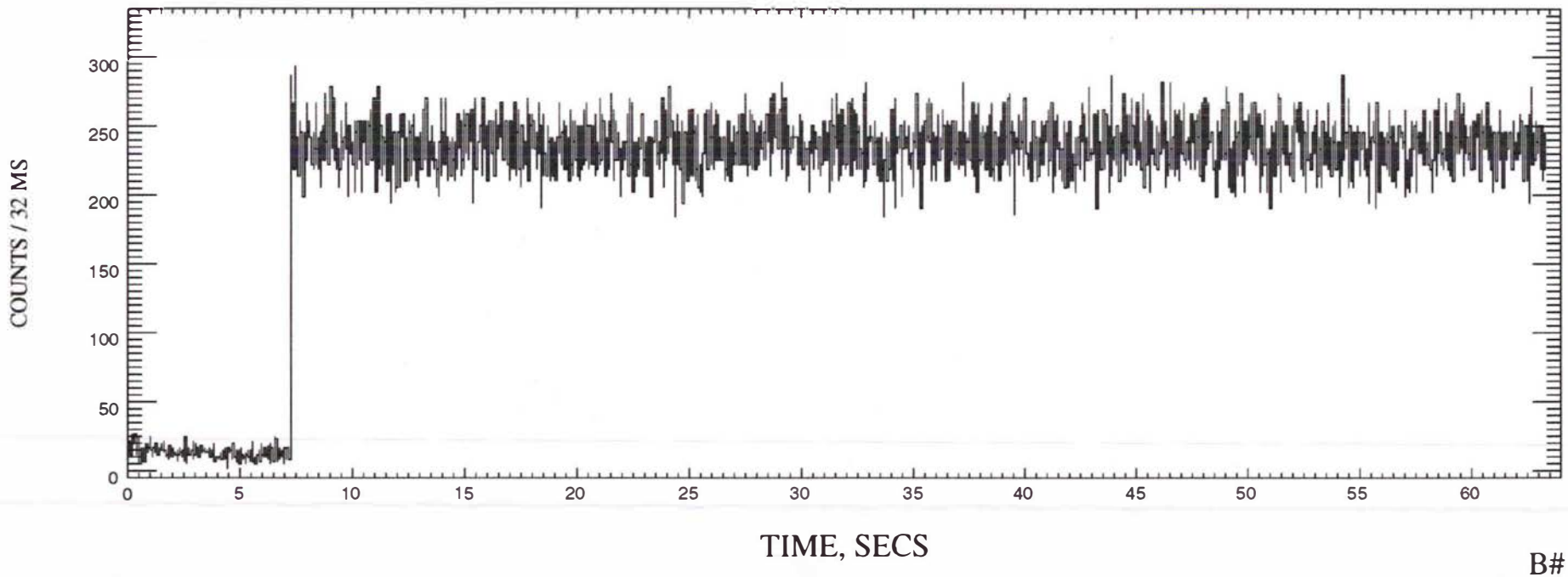


B# 26

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

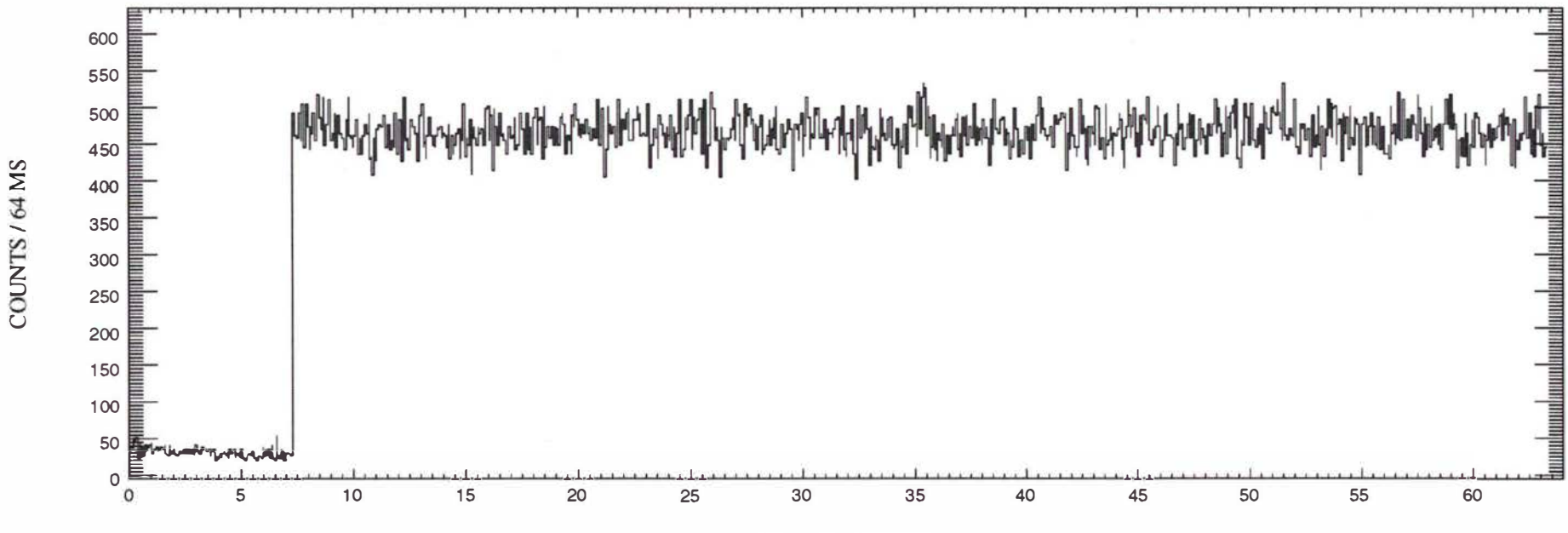
Burst Counter 8 at UT=18.425717480977 h=66332.583 s 18:25:32.583

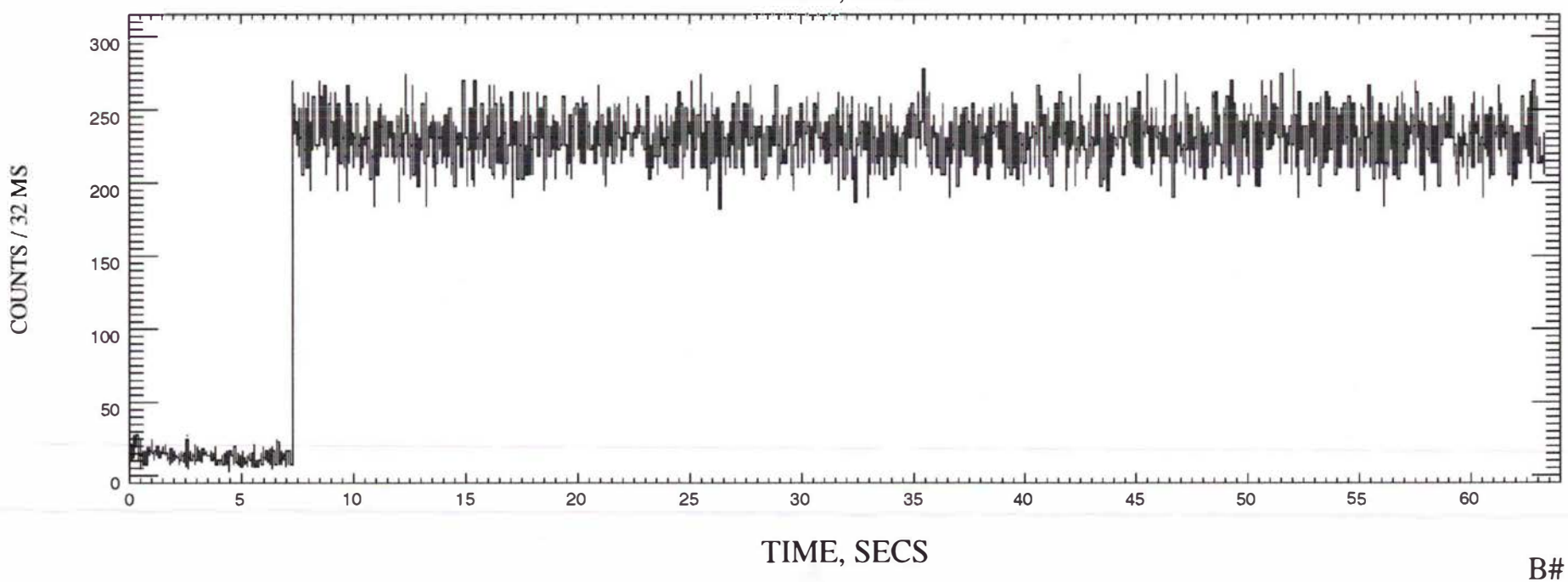




HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 9 at UT=19.127951295641 h=68860.625 s 19:07:40.625

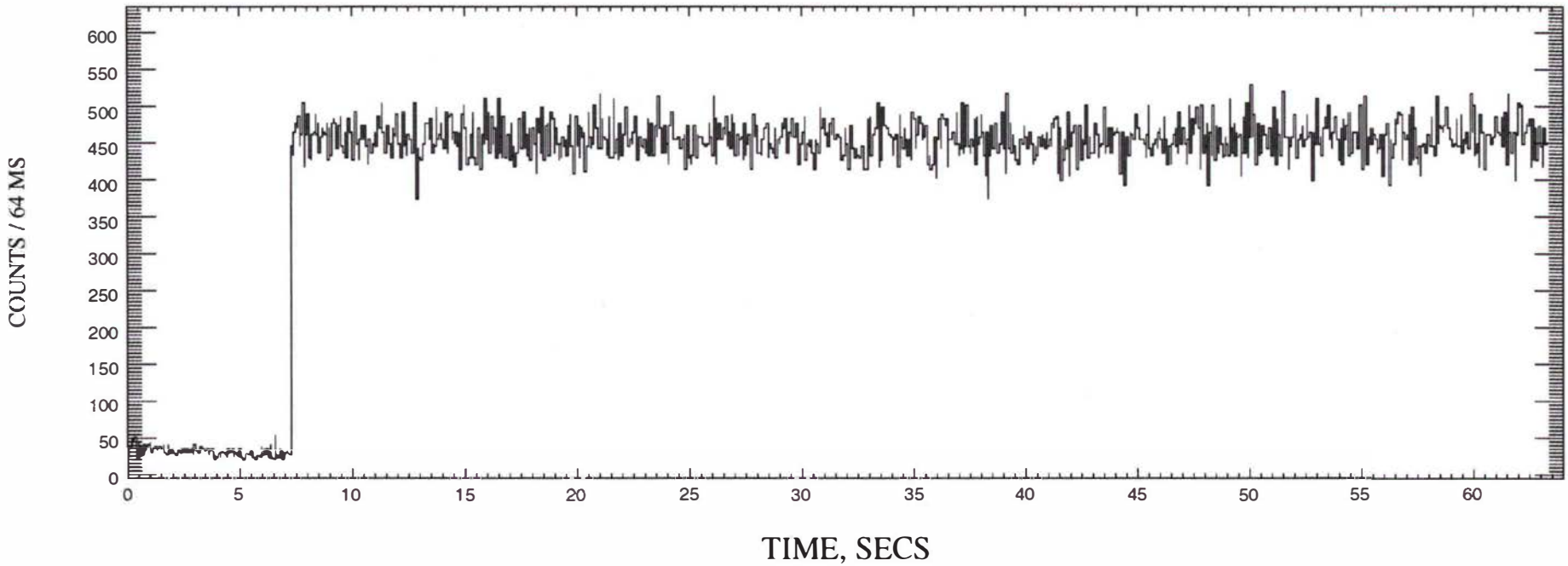


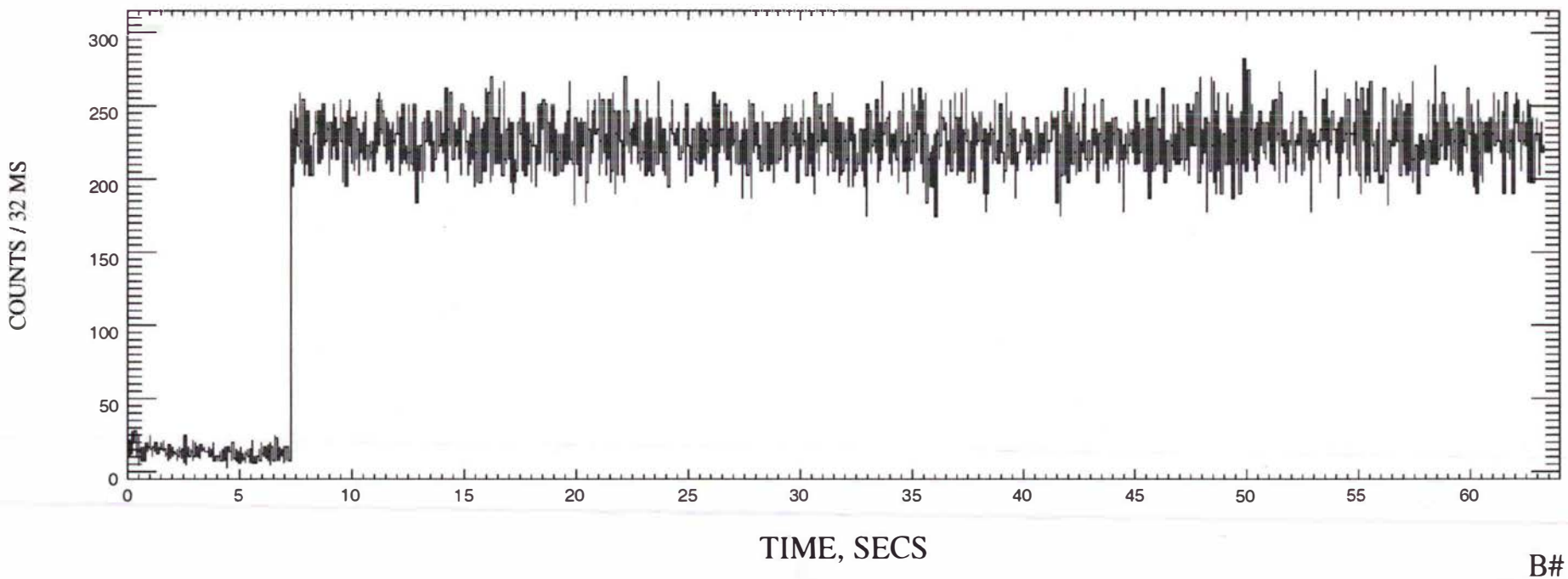


B# 28

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 10 at UT=19.830185106066 h=71388.666 s 19:49:48.666

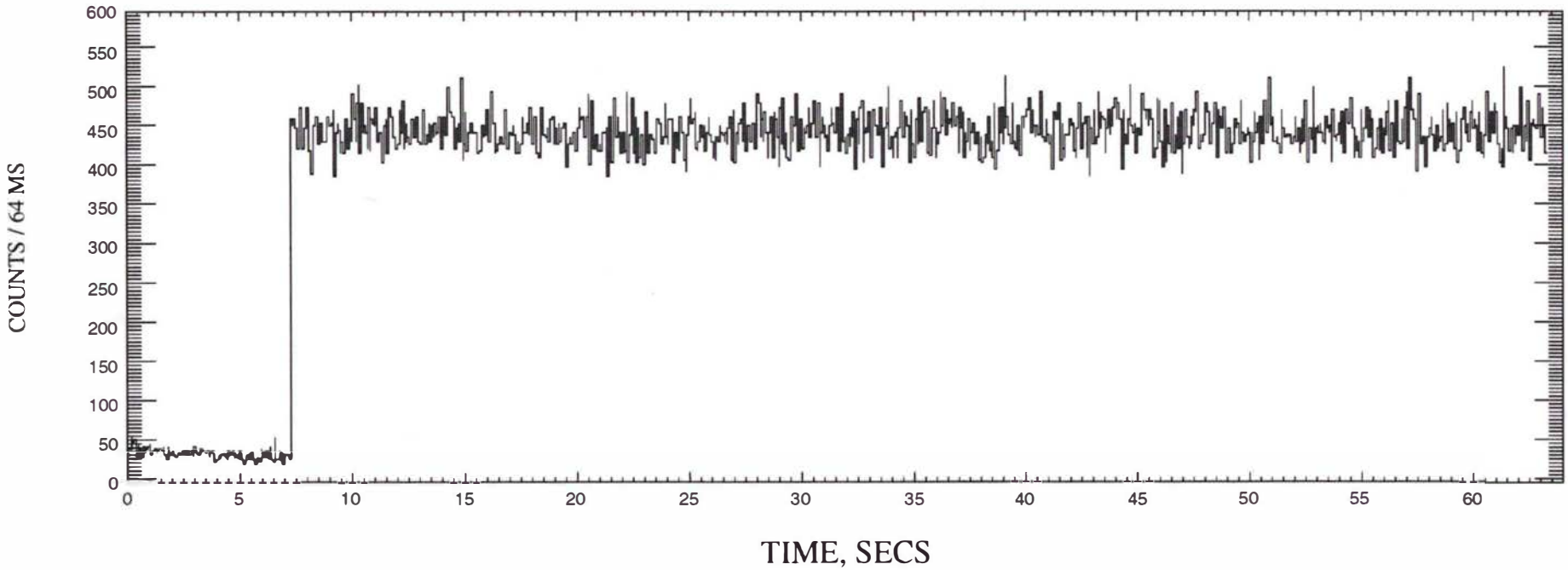


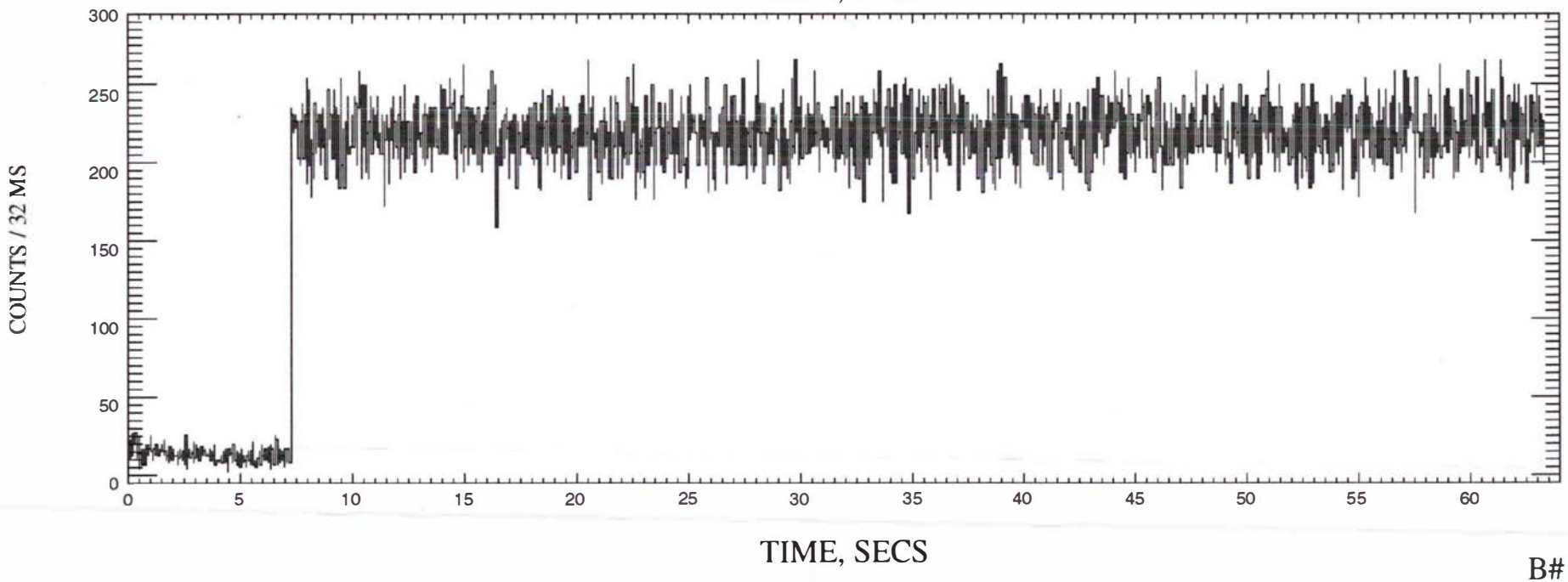


B# 29

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 11 at UT=20.532418920729 h=73916.708 s 20:31:56.708

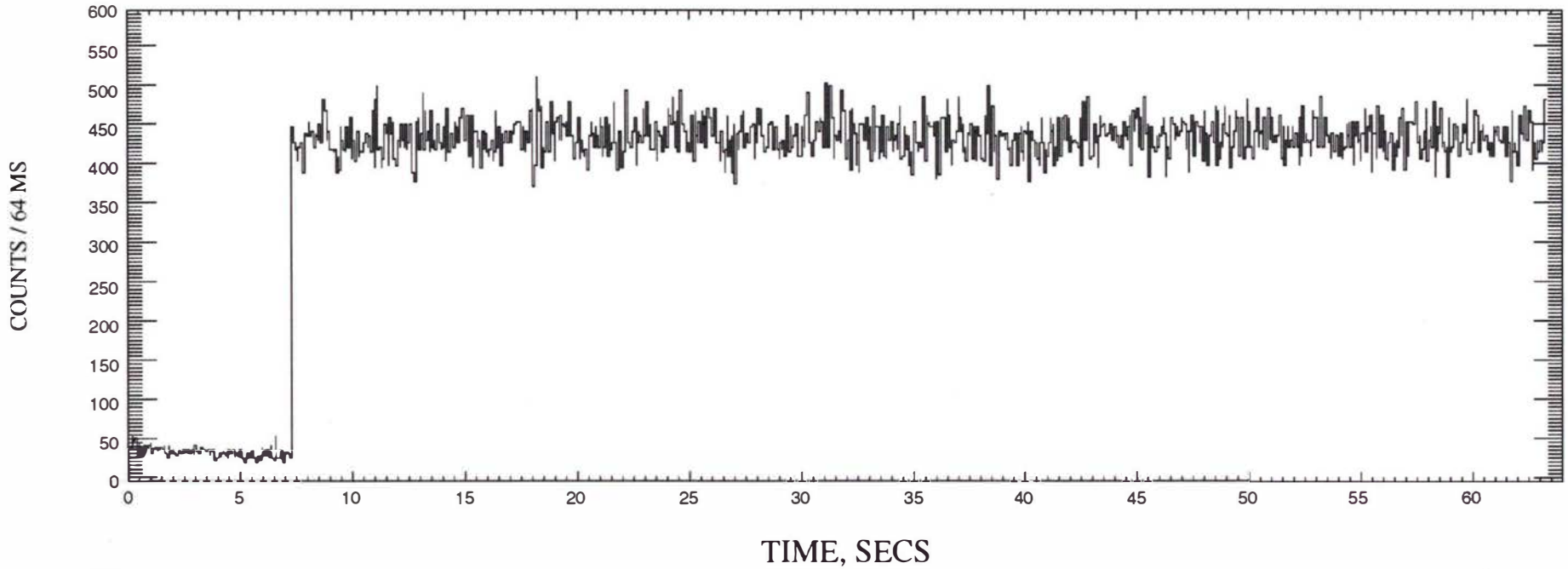


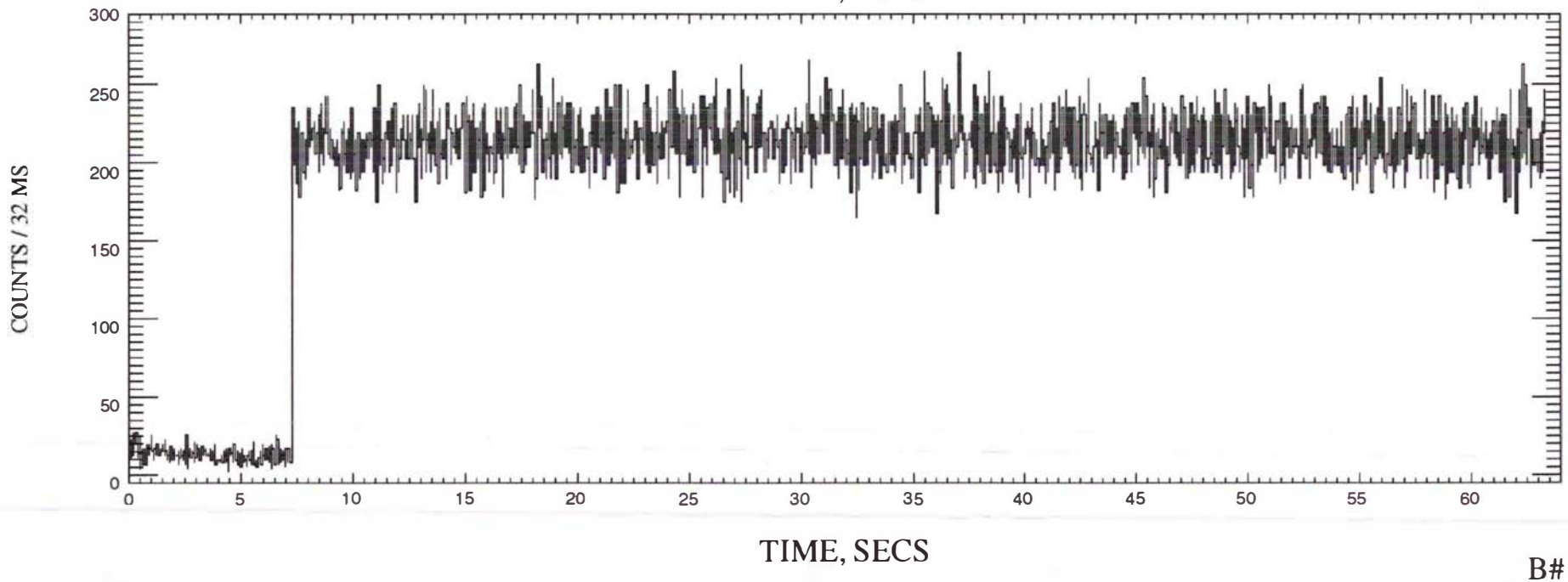


B# 30

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 12 at UT=21.234652735392 h=76444.750 s 21:14:04.750

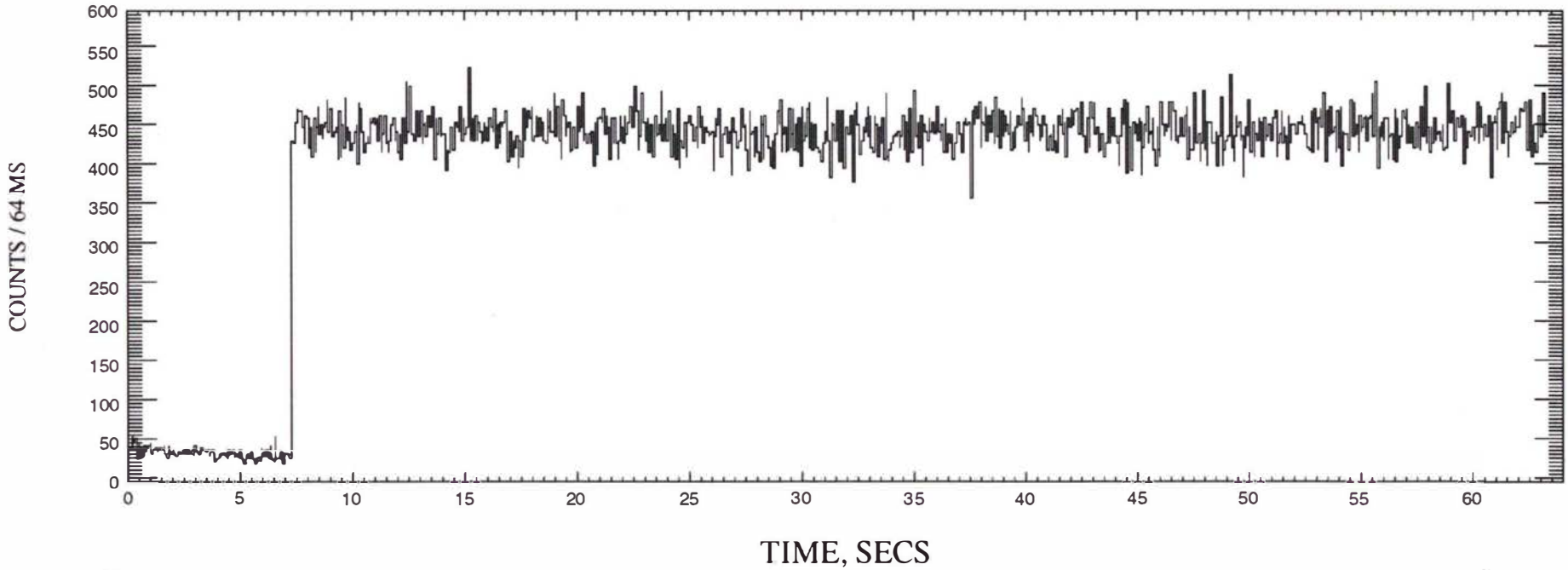


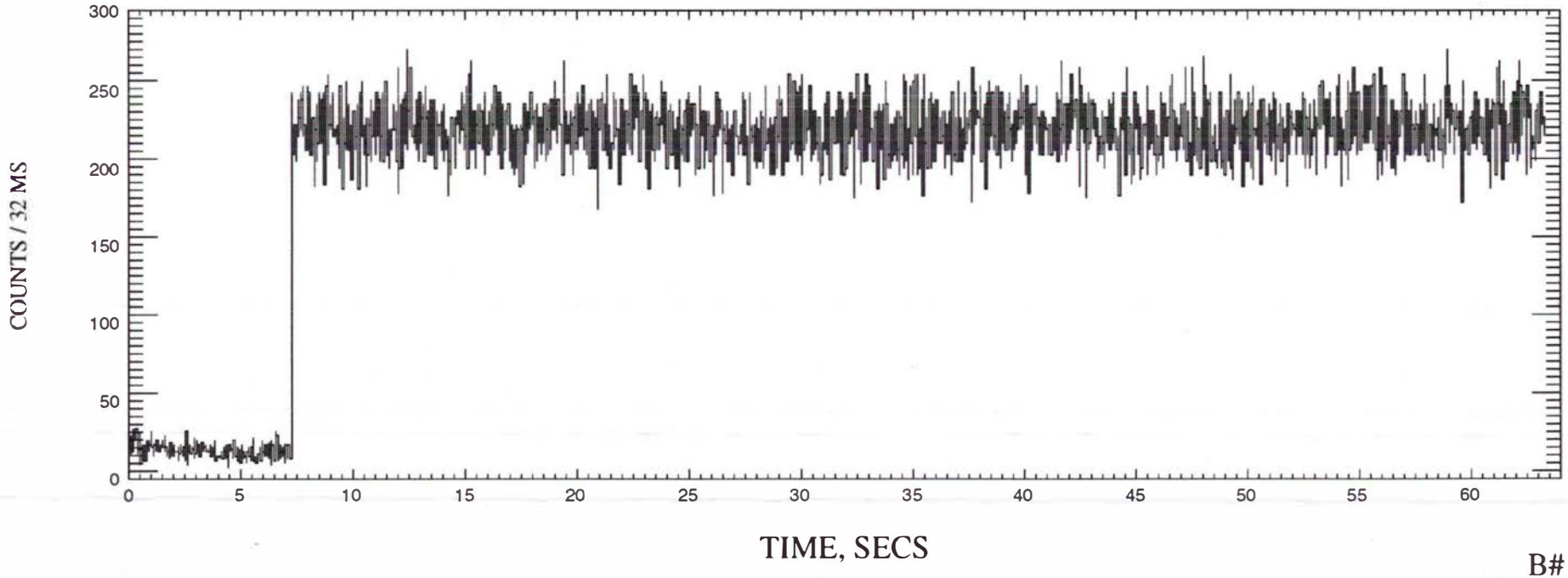


B# 31

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 13 at UT=21.936886545817 h=78972.792 s 21:56:12.792

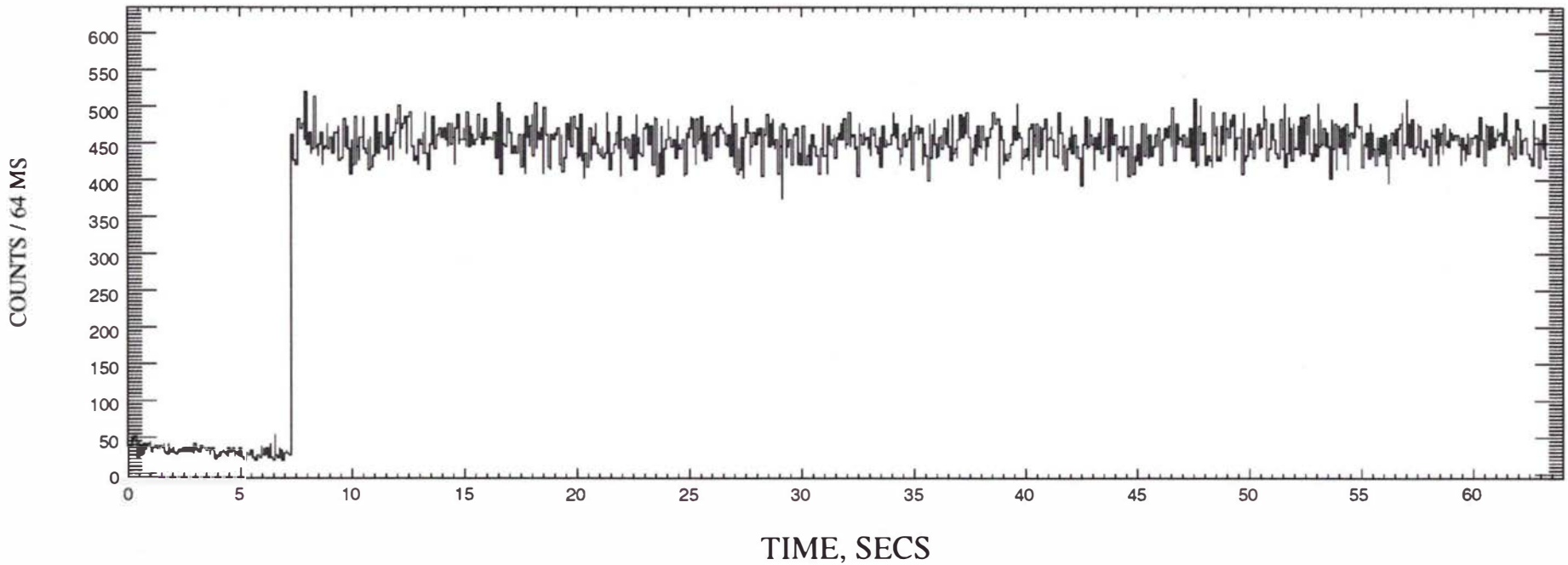


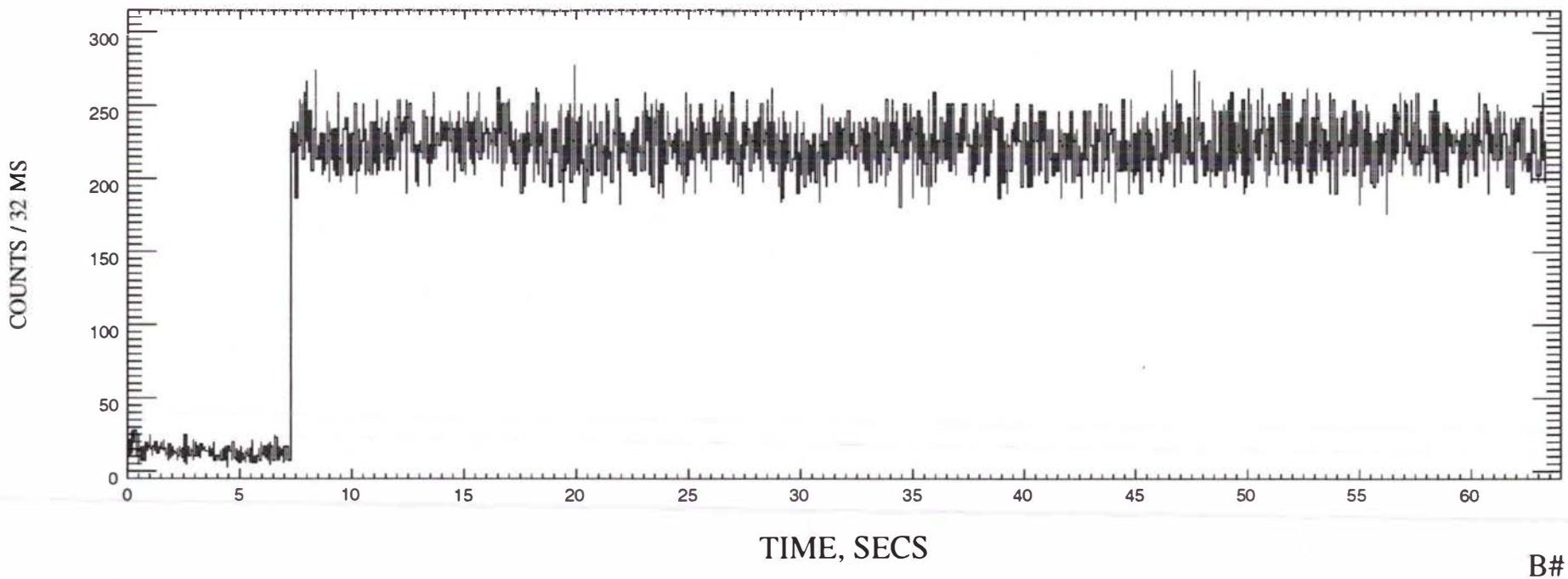


B# 32

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 14 at UT=22.639119203356 h=81500.829 s 22:38:20.829

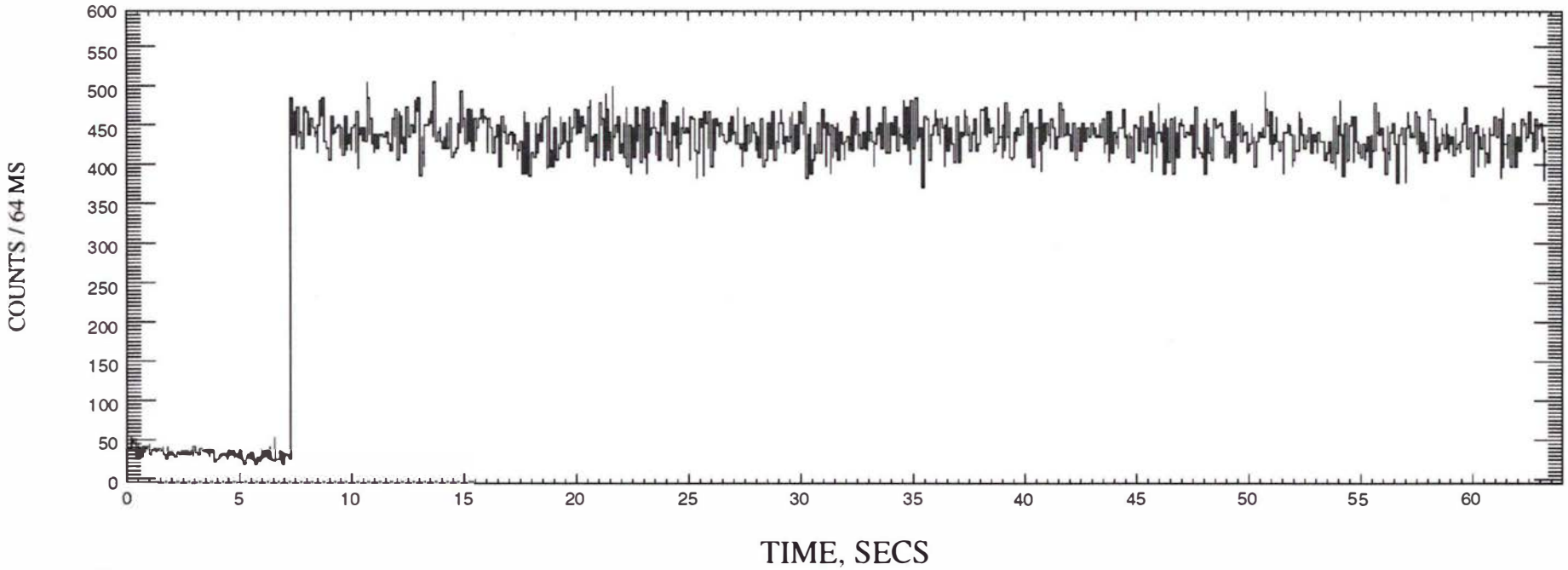


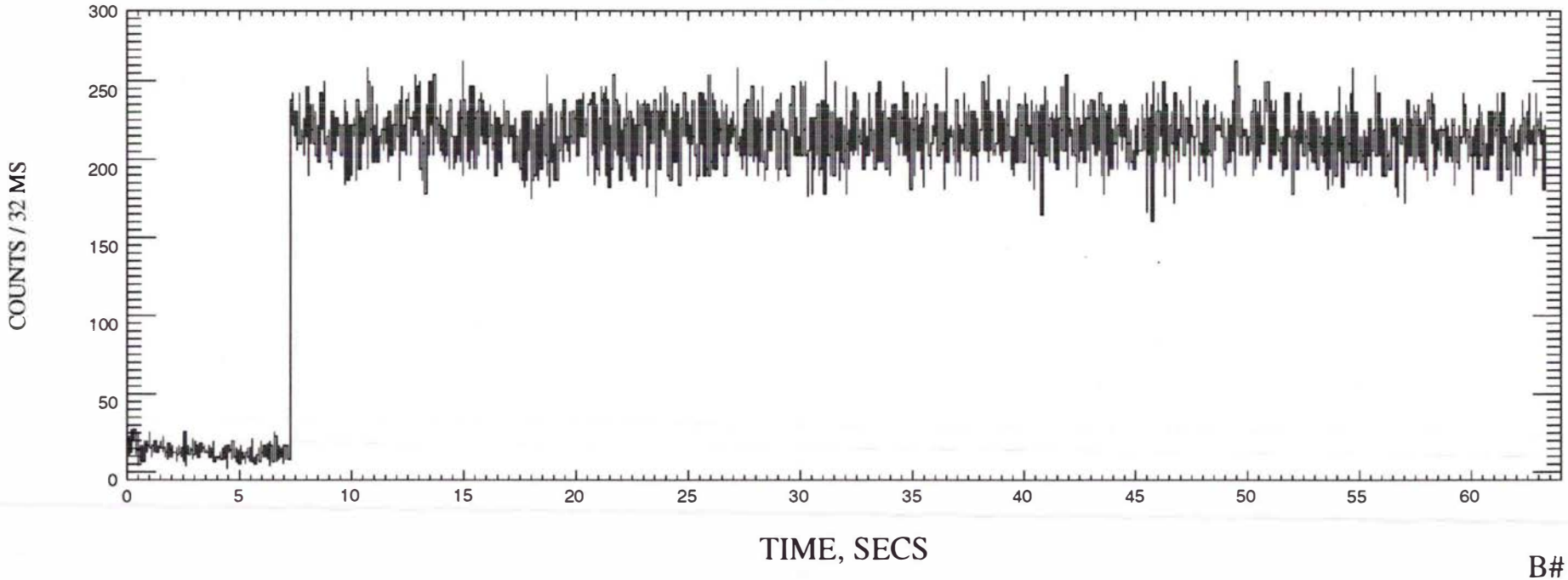


B# 33

HUS 2A TRIGGERED DATA QEDR DMY = 26/09/2001 DOY = 269 09/27/01

Burst Counter 15 at UT=23.341353013780 h=84028.871 s 23:20:28.871

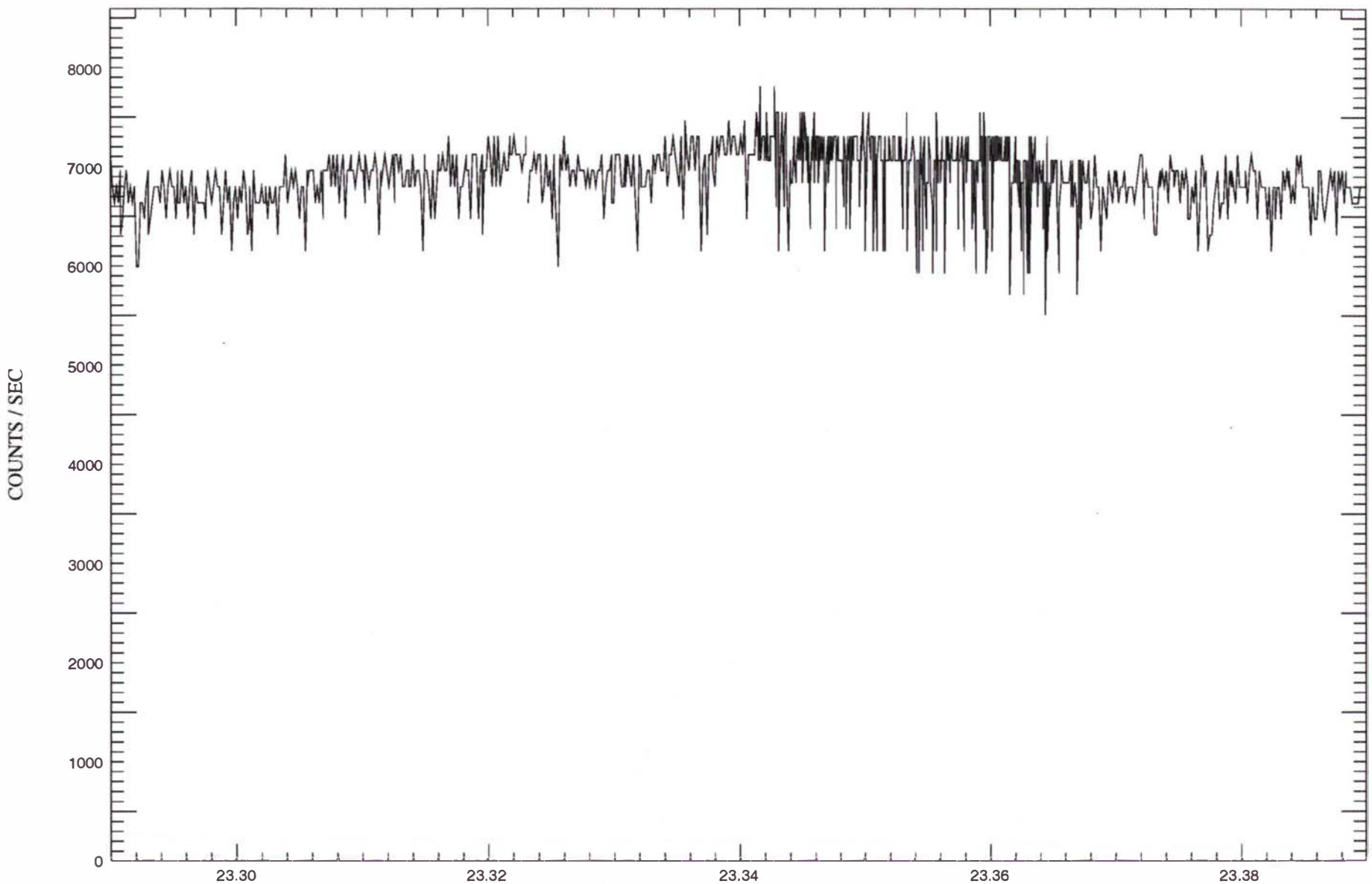




B# 34

HUS 2A, MODE 1, NOT AVERAGED QEDR DMY = 26/09/2001 DOY = 269 09/27/01

CALIBRATION DATA INCLUDED



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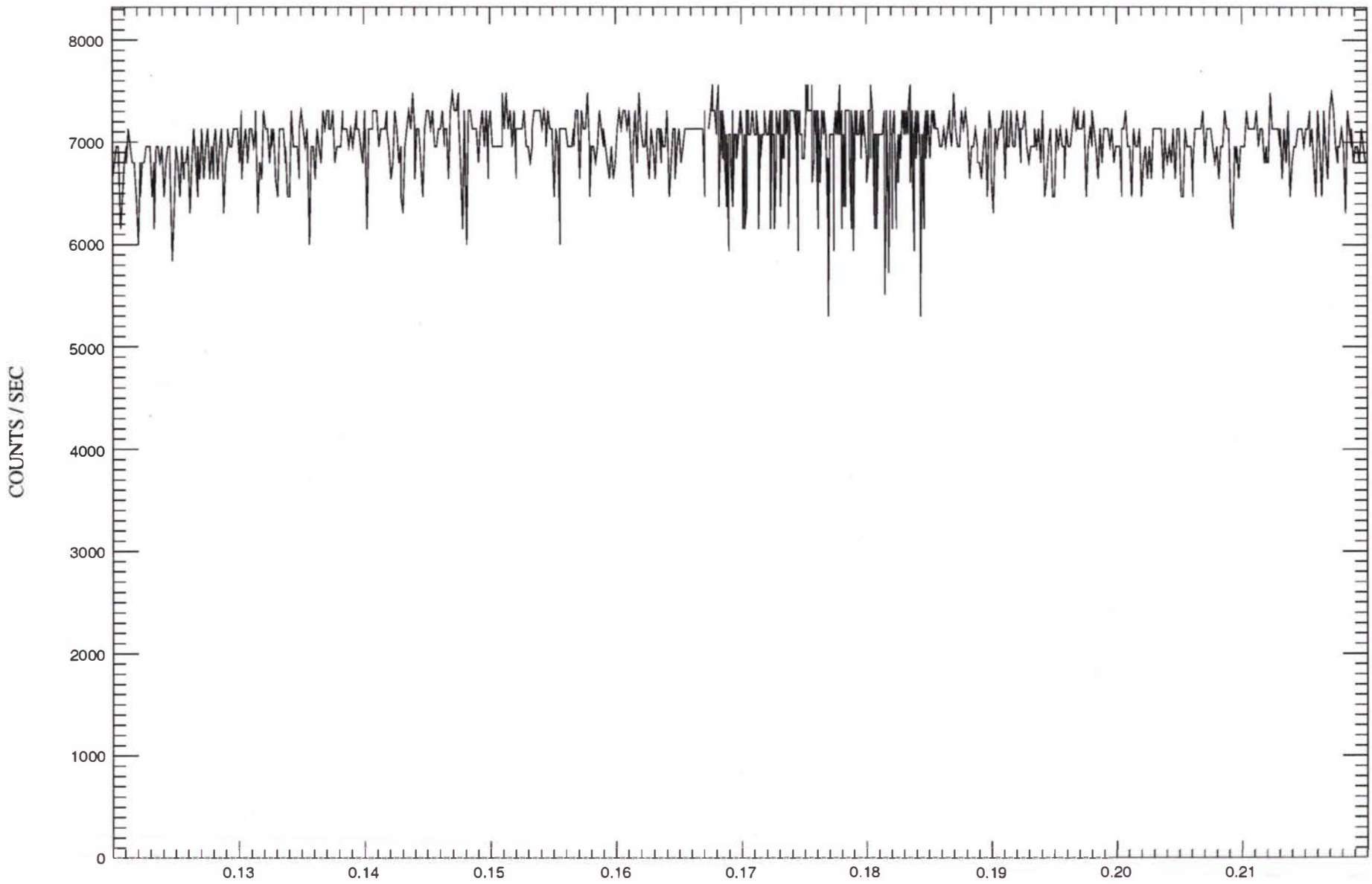
CALIBRATION DATA INCLUDED



From root@frascati.sdc.asi.it Thu Sep 27 17:14 PDT 2001
From: root@frascati.sdc.asi.it
Date: Fri, 28 Sep 2001 03:35:42 +0200
: khurley@ssl.berkeley.edu

B_TRIG: 27 Sep 2001 22:15:10:22079

SAX 20010927 80110

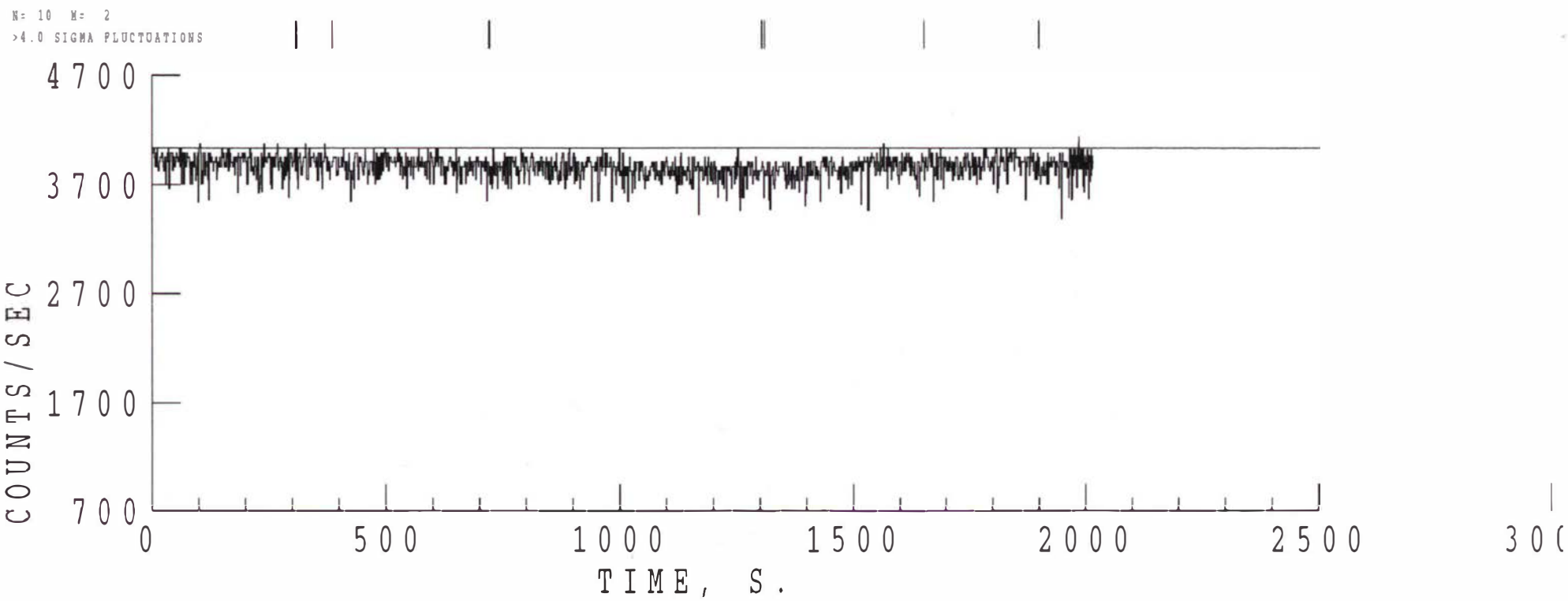
ULYSSES RT

28/09/01

27/09/01 79092.195 s

INTERVALS REGROUPED BY 3

0- 0 keV



From guidorzi@fe.infn.it Thu Sep 27 20:09 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
`te: Fri, 28 Sep 2001 05:00:06 +0200 (MET DST)

ıkGRB[302] #LSs: 1 Good HRR: 1
SW Trigger Time (OBT): 29424.981
UTC: Thu, 27 Sep 2001 23:17:47:04825

Nsig(trg):	3.2	0.0	2.1	4.9	2.5	0.4	2.9	3.8
Nsig(pfl):	3.2	0.0	2.1	4.9	2.5	0.0	2.9	3.8
Bkg lev. :	747	821	702	645	818	842	812	868
ChiSq R. :	1.208	1.029	0.962	1.067	0.697	0.906	1.177	1.239
Peak fl. :	88	0	55	125	71	0	82	111
Error :	39.9	0.0	38.3	37.7	41.4	0.0	41.4	43.1
Fluence :	88	0	55	125	71	0	82	111
Error :	39.9	0.0	38.3	37.7	41.4	0.0	41.4	43.1

Dur (s) :	1.00	0.00	1.00	1.00		
Abundance:	1	0	1	1		
H. Ratio :	0.810	-1.000	1.496	0.885		
HR Ratio :	-1.000	0.541	0.915	-1.000	-1.000	1.691
HR W-ave :	0.903	+/- 0.339				

SAX 20010927 83867

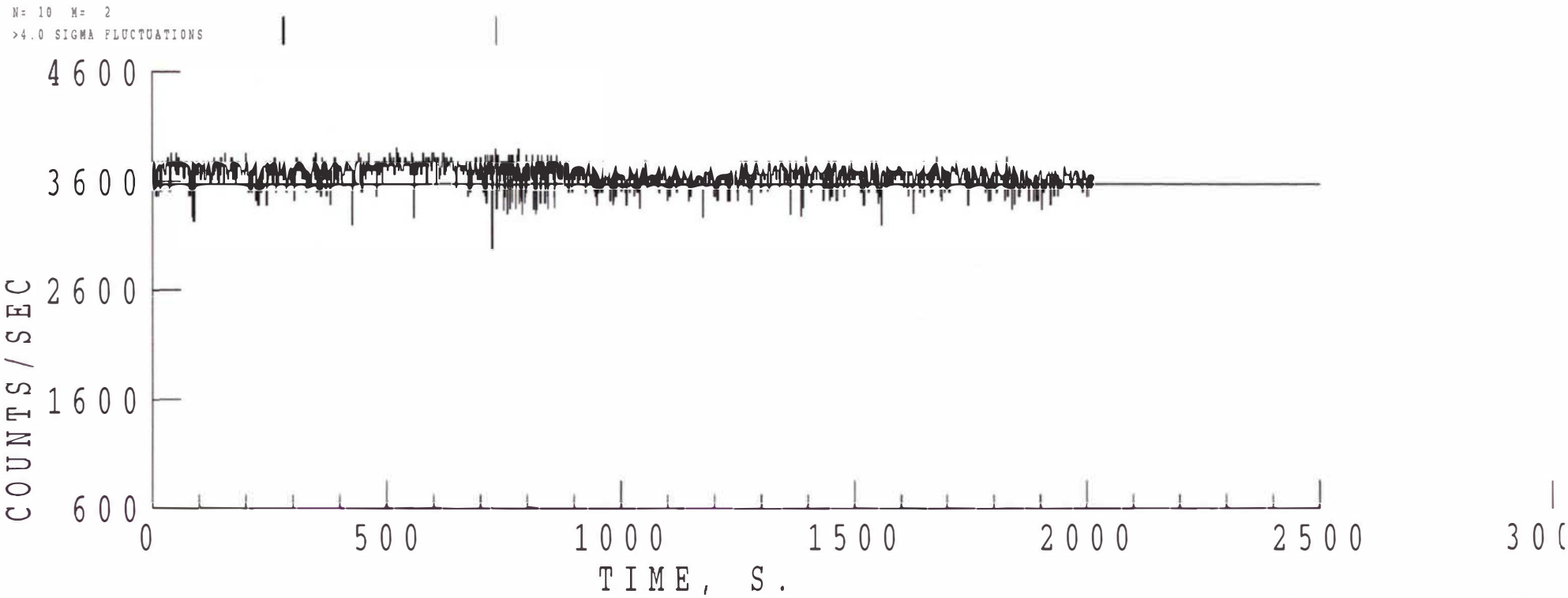
ULYSSES RT

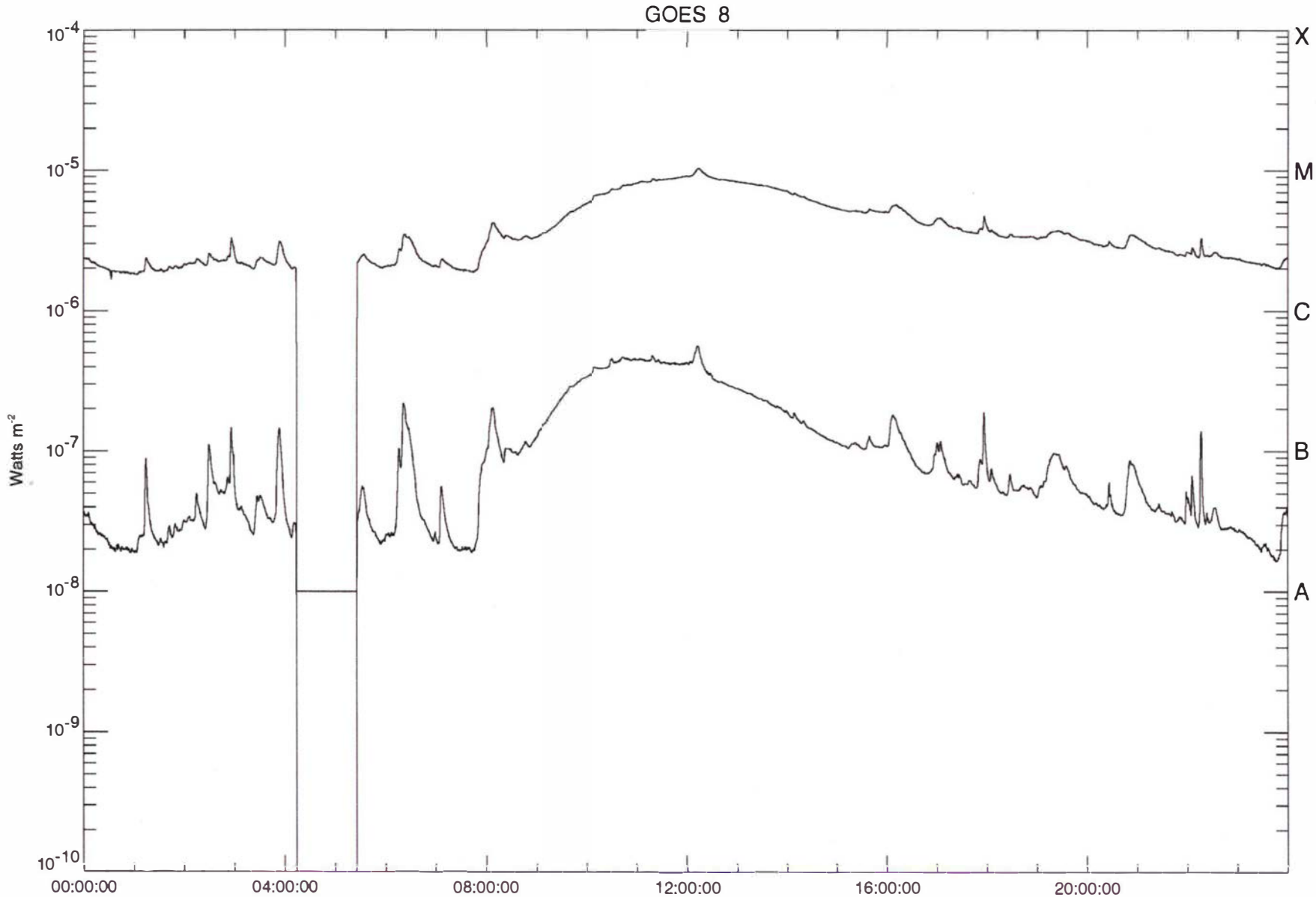
28/09/01

27/09/01 82872.258 s

INTERVALS REGROUPED BY 3

0- 0 keV

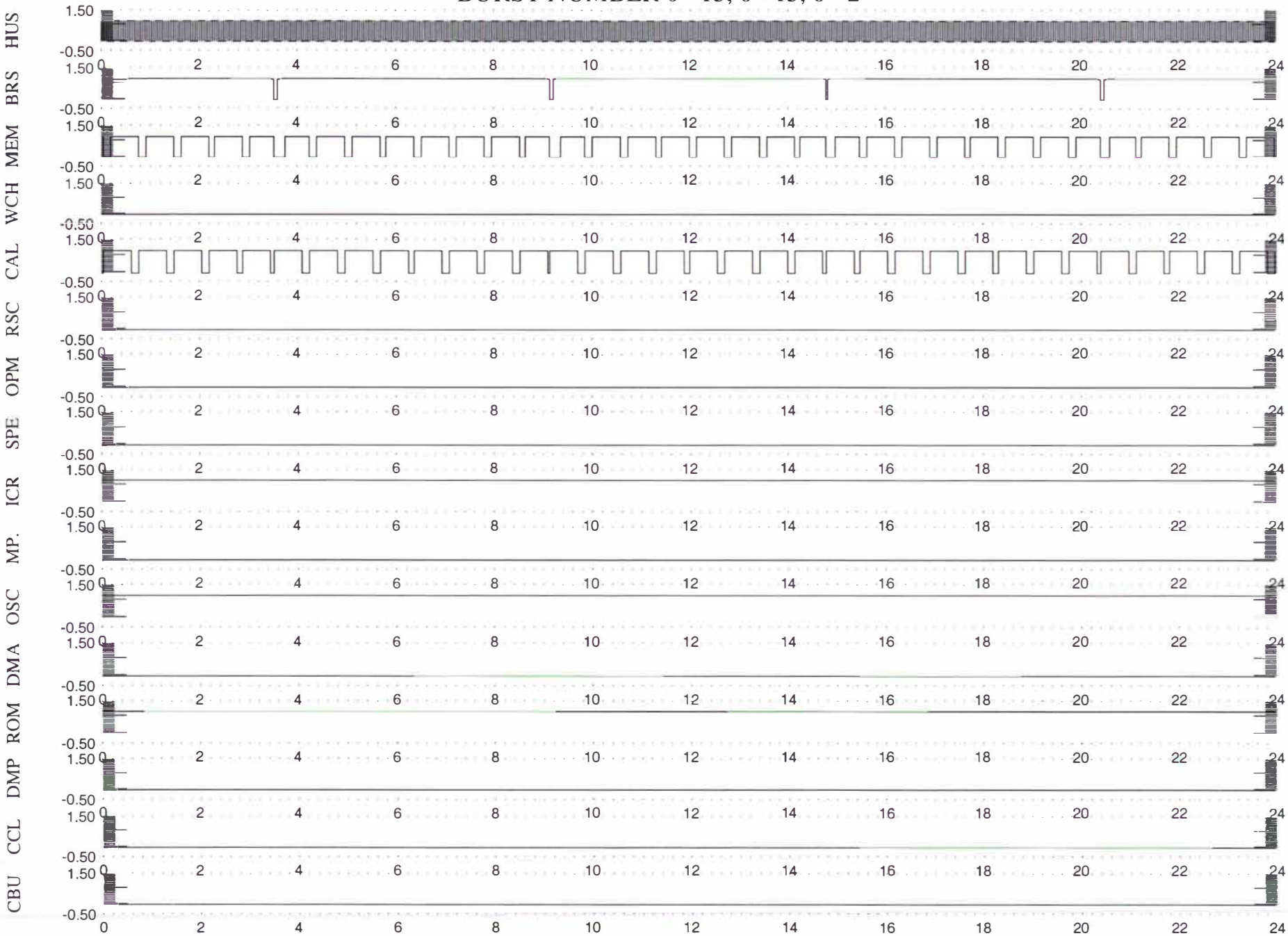




Data Start: 01/09/27, 0000:00 Plot created: 01/10/01, 0951
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

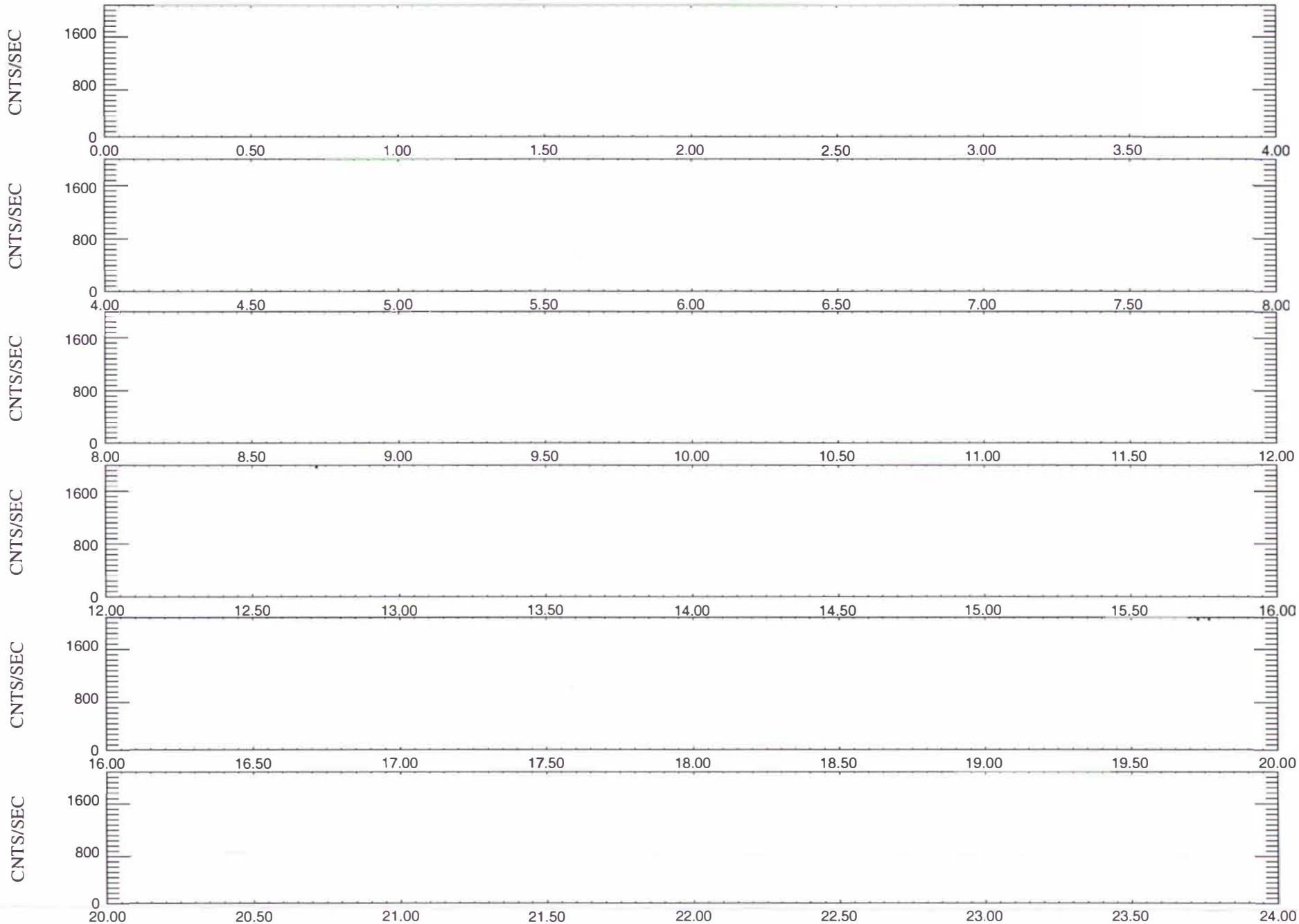
HUS MODES EDR day 270, year 2001 to day 270, year 2001 01/22/02

BURST NUMBER 0 - 15, 0 - 15, 0 - 2



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 27/09/2001 DOY = 270 01/22/02

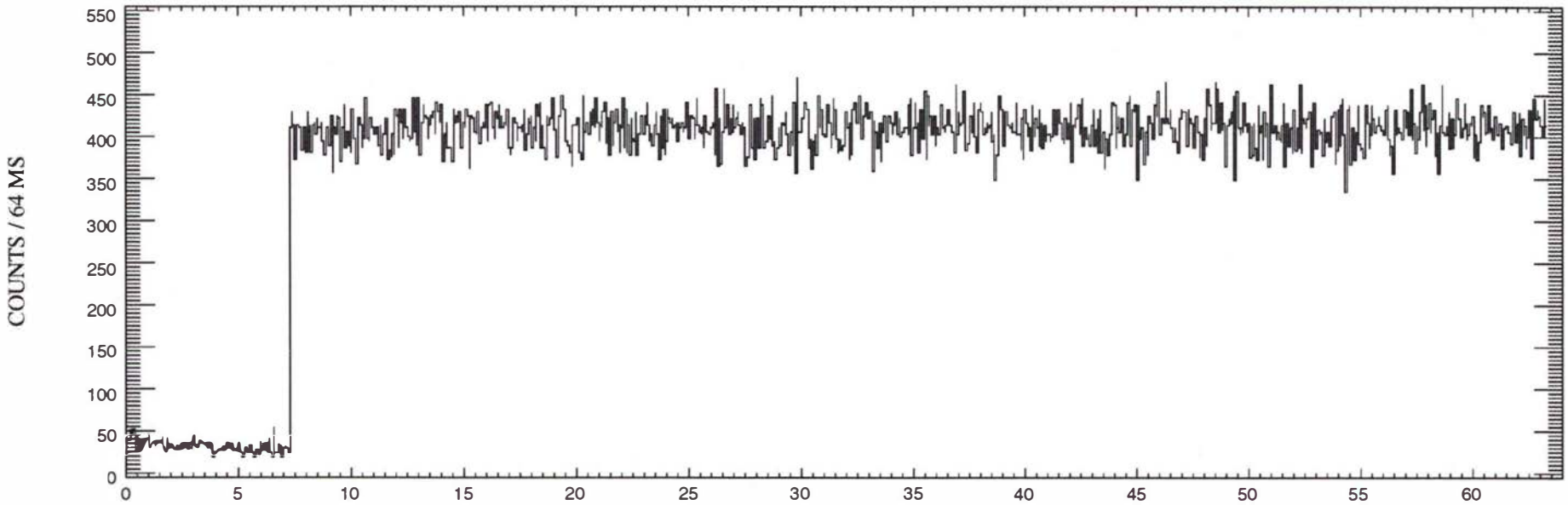
CALIBRATION DATA INCLUDED



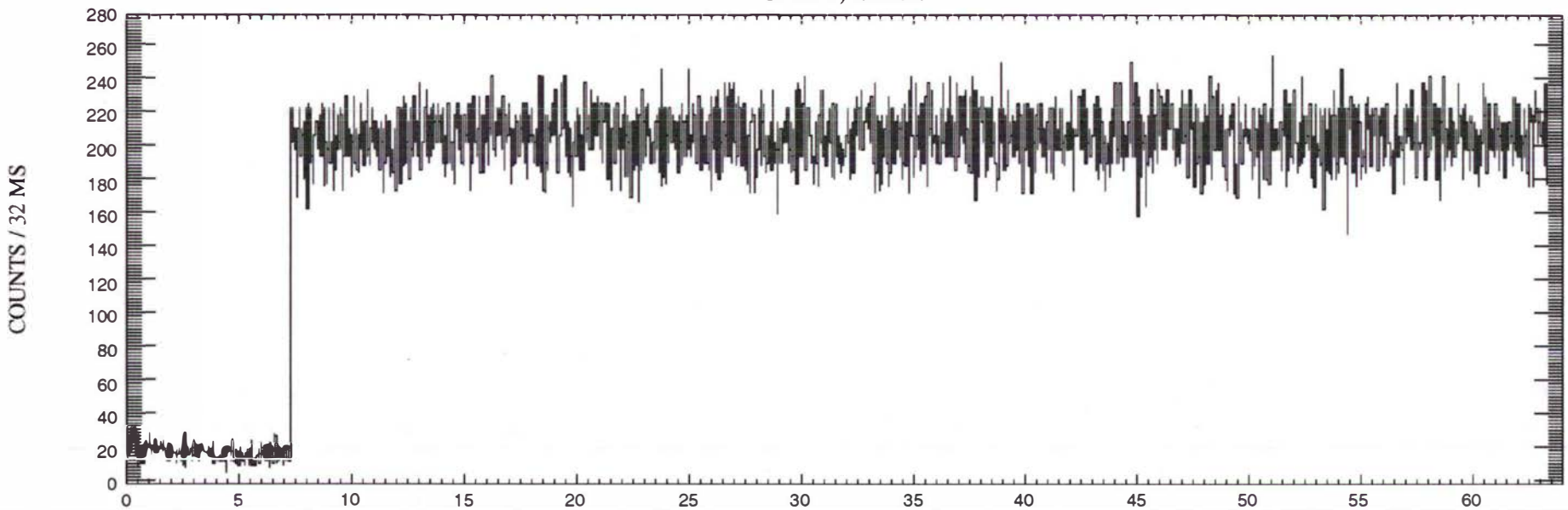
UNIVERSAL TIME

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 8 at UT= 5.661458346049 h=20381.250 s 05:39:41.250



TIME, SECS

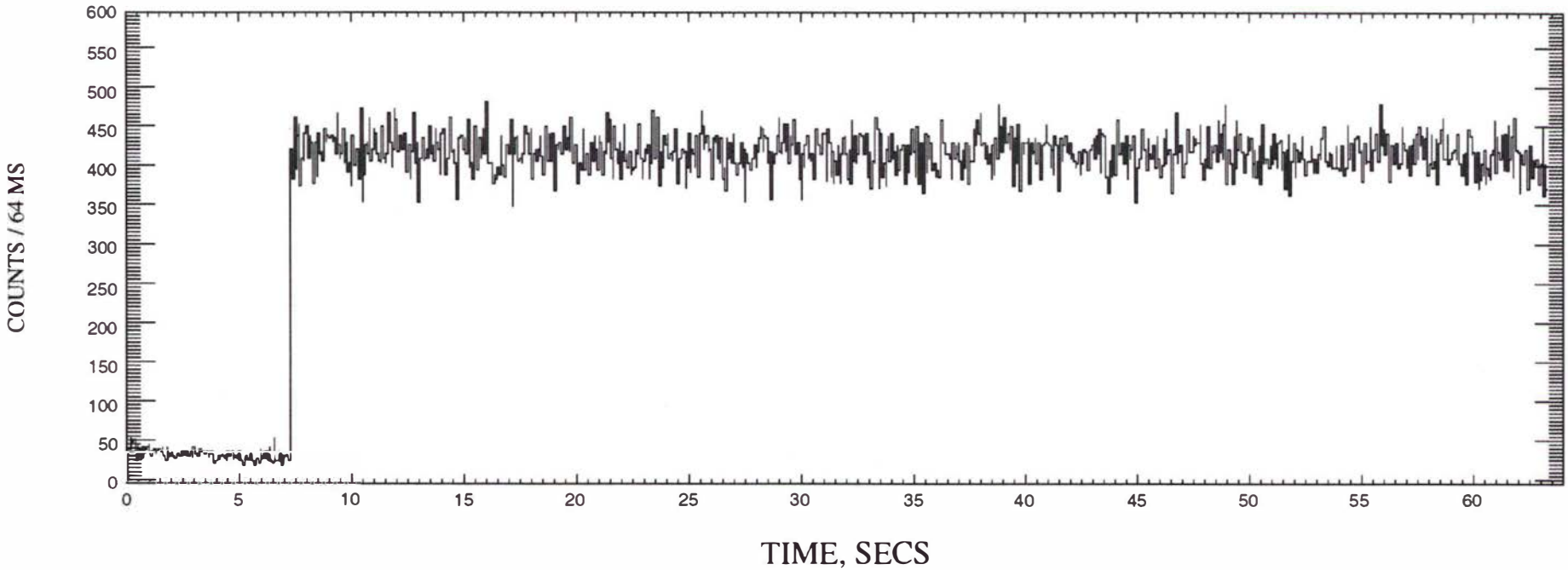


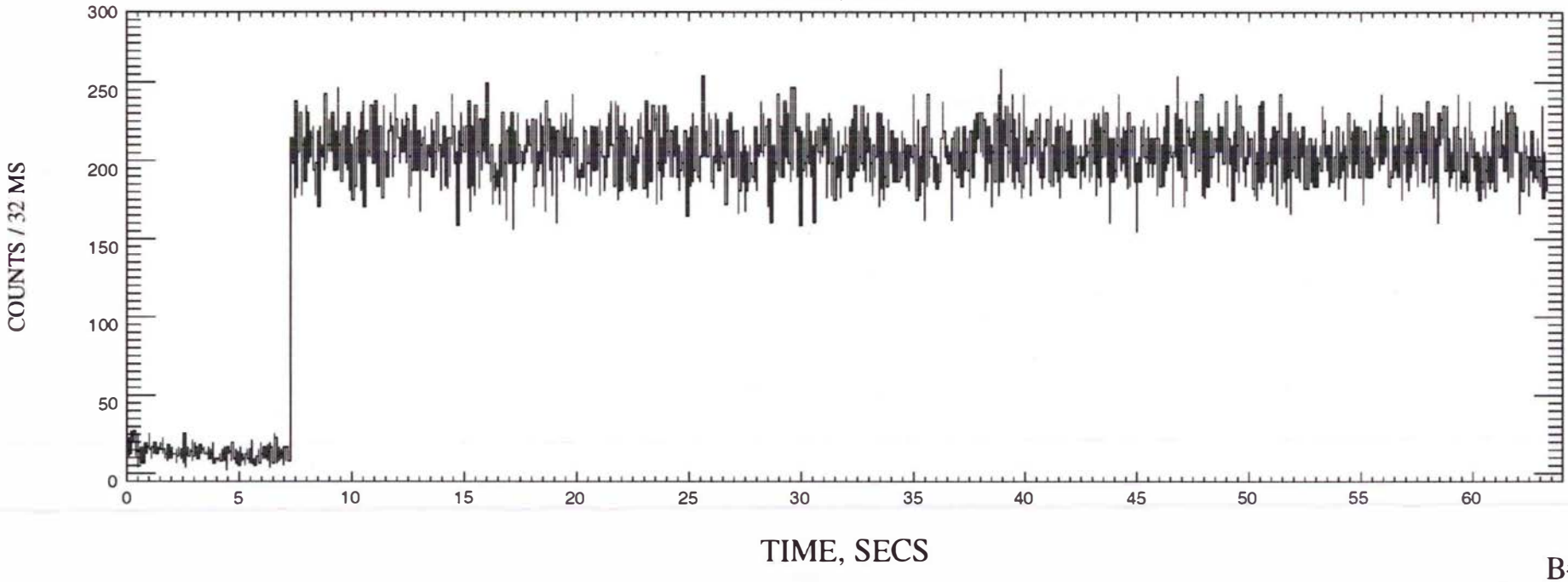
TIME, SECS

B# 9

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 6 at UT= 4.256988550822 h=15325.159 s 04:15:25.159

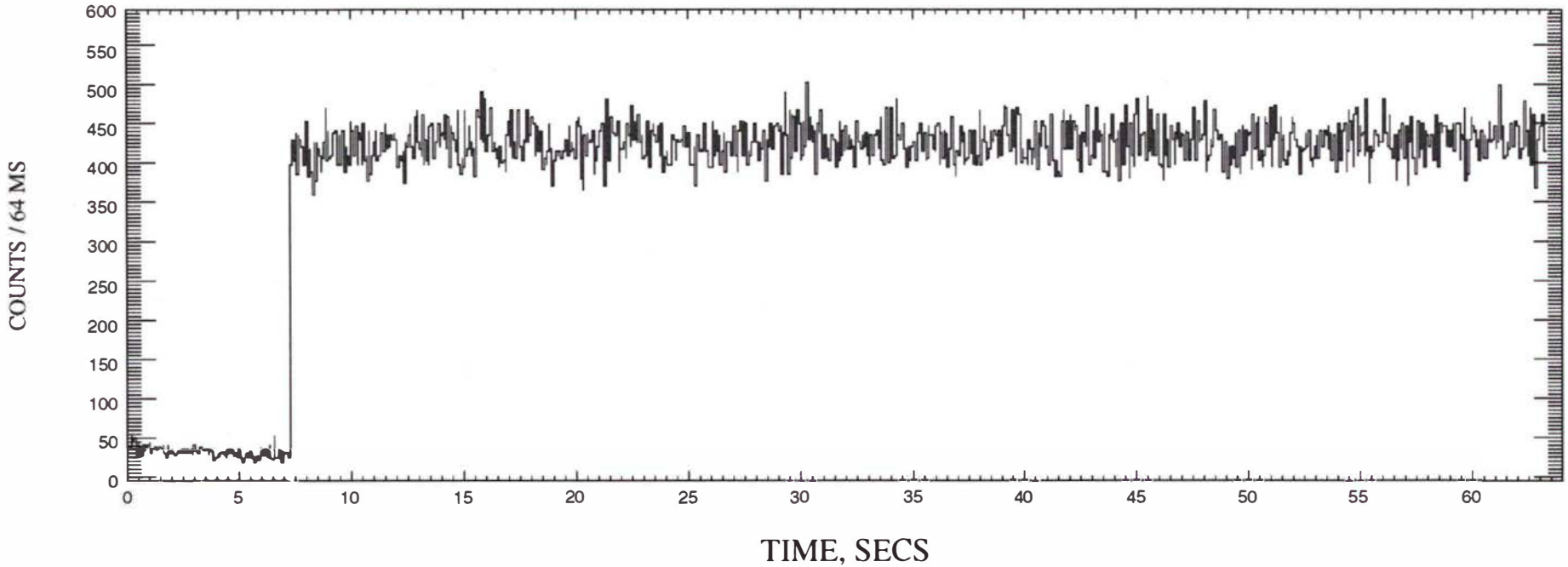


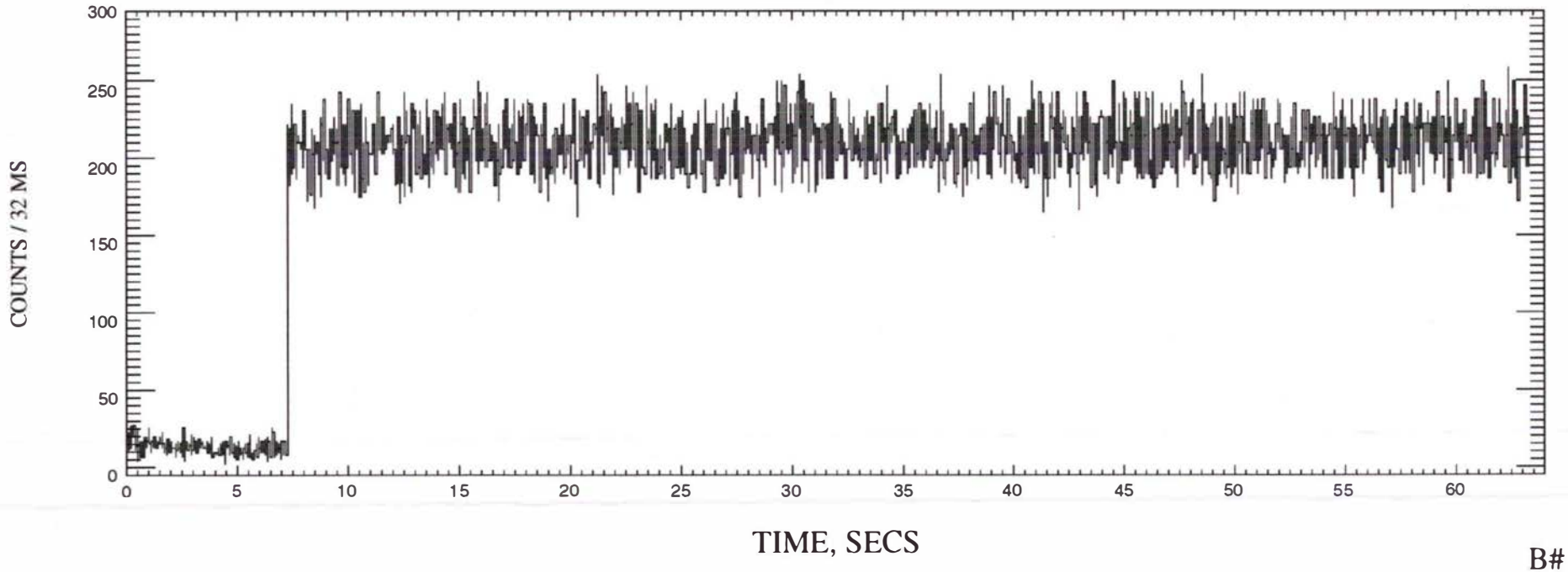


B# 7

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 4 at UT= 2.852522082859 h=10269.079 s 02:51:09.079

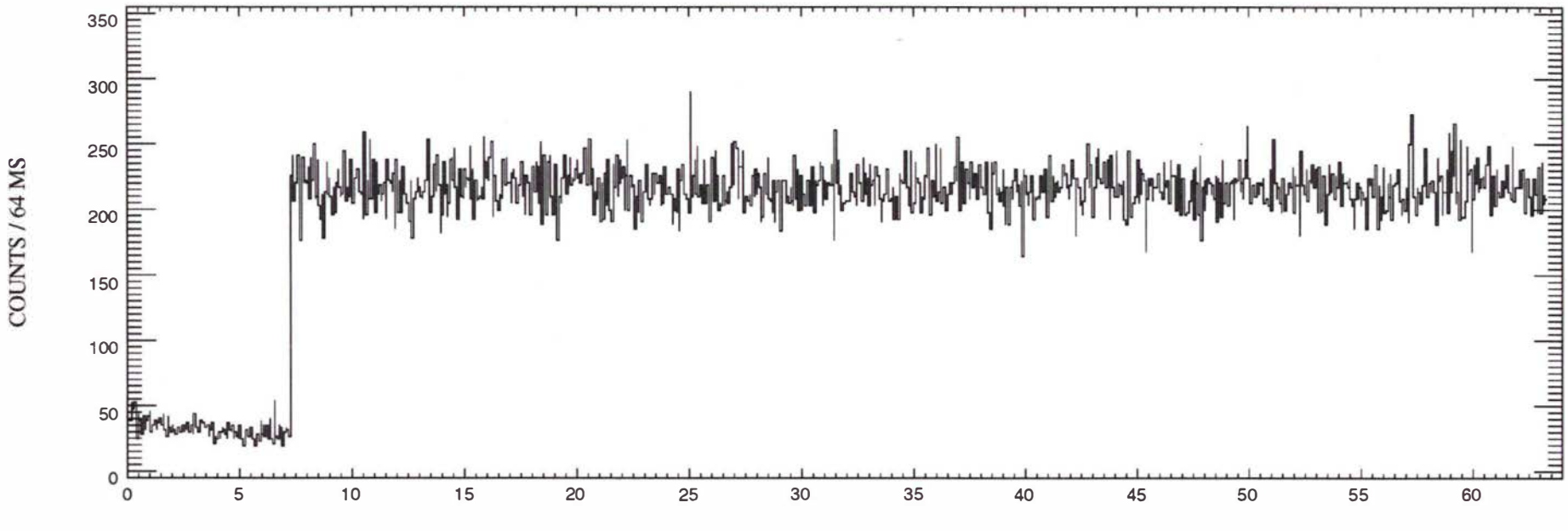


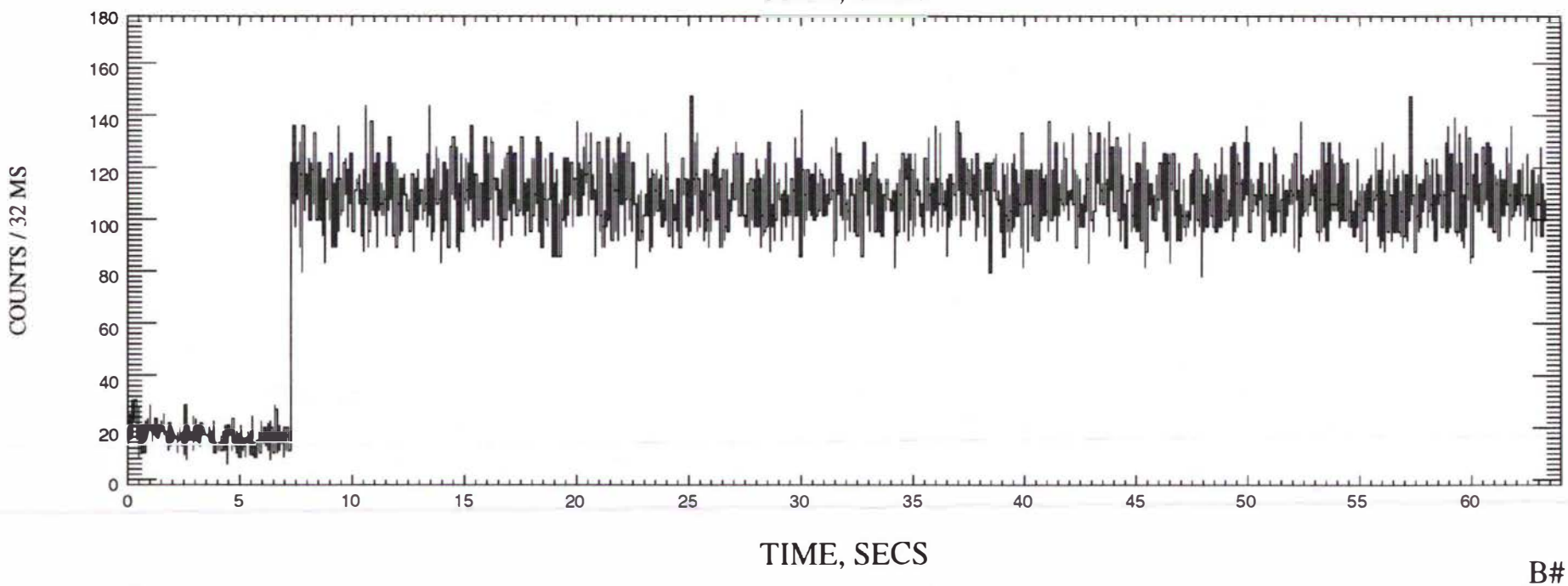


B# 5

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 2 at UT=23.919536764357 h=86110.332 s 23:55:10.332

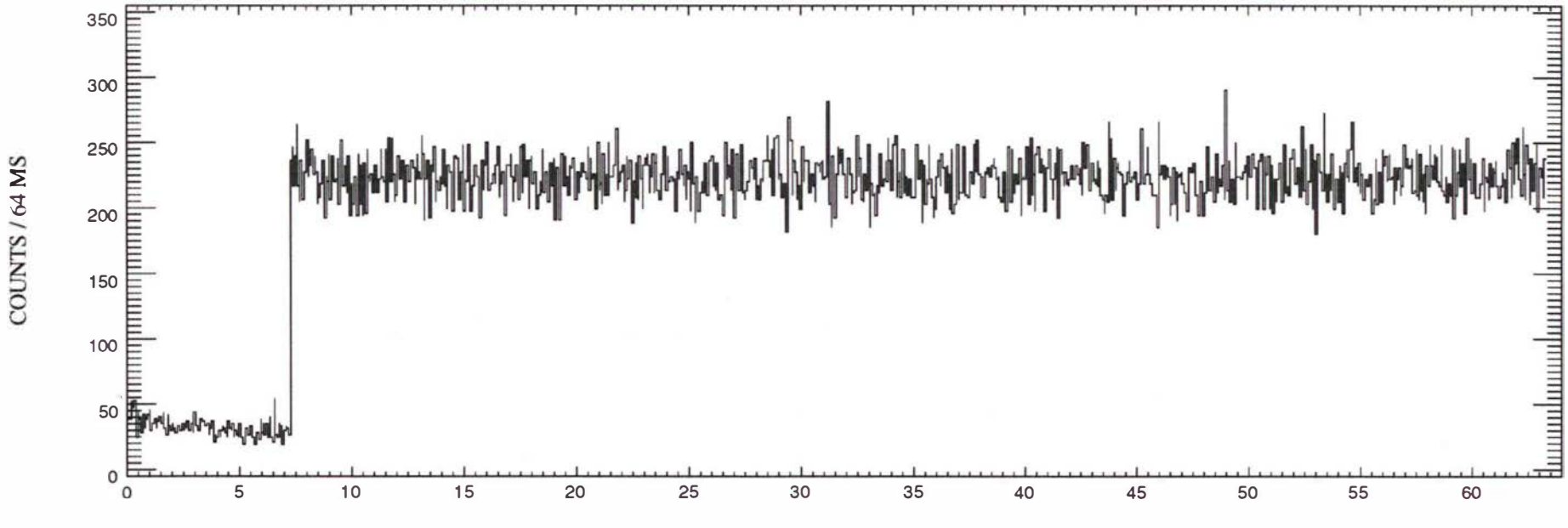


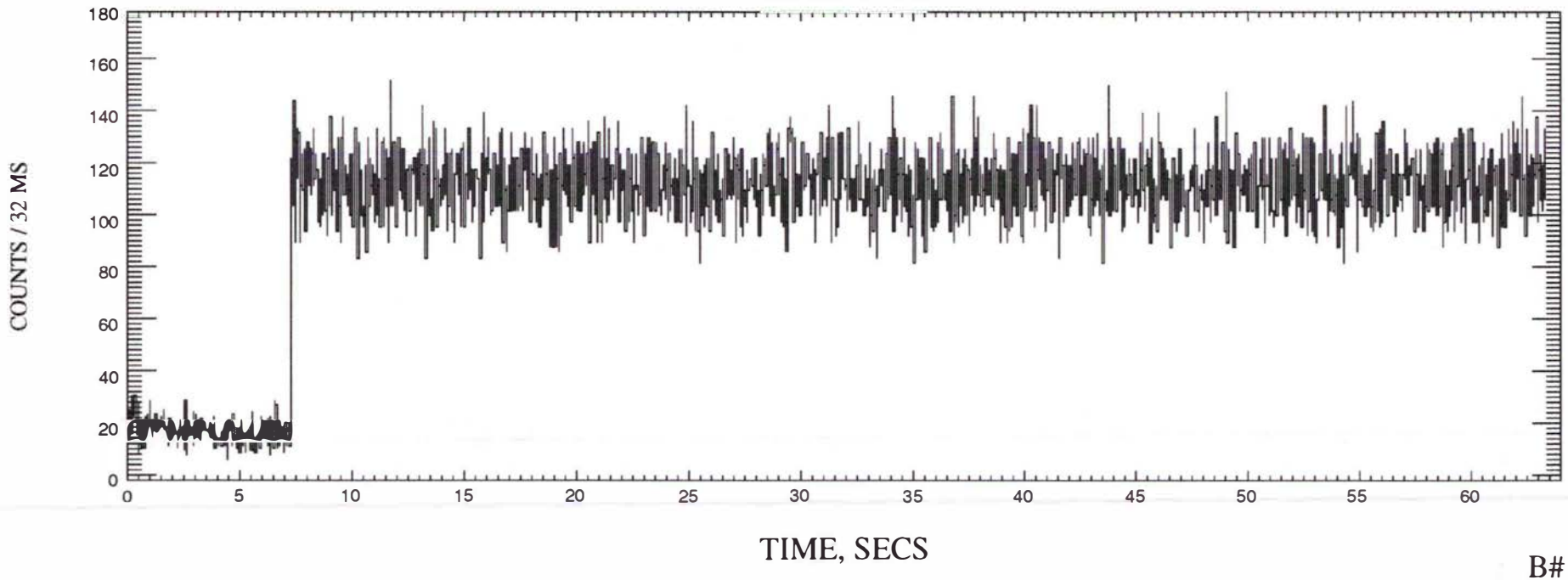


B# 35

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

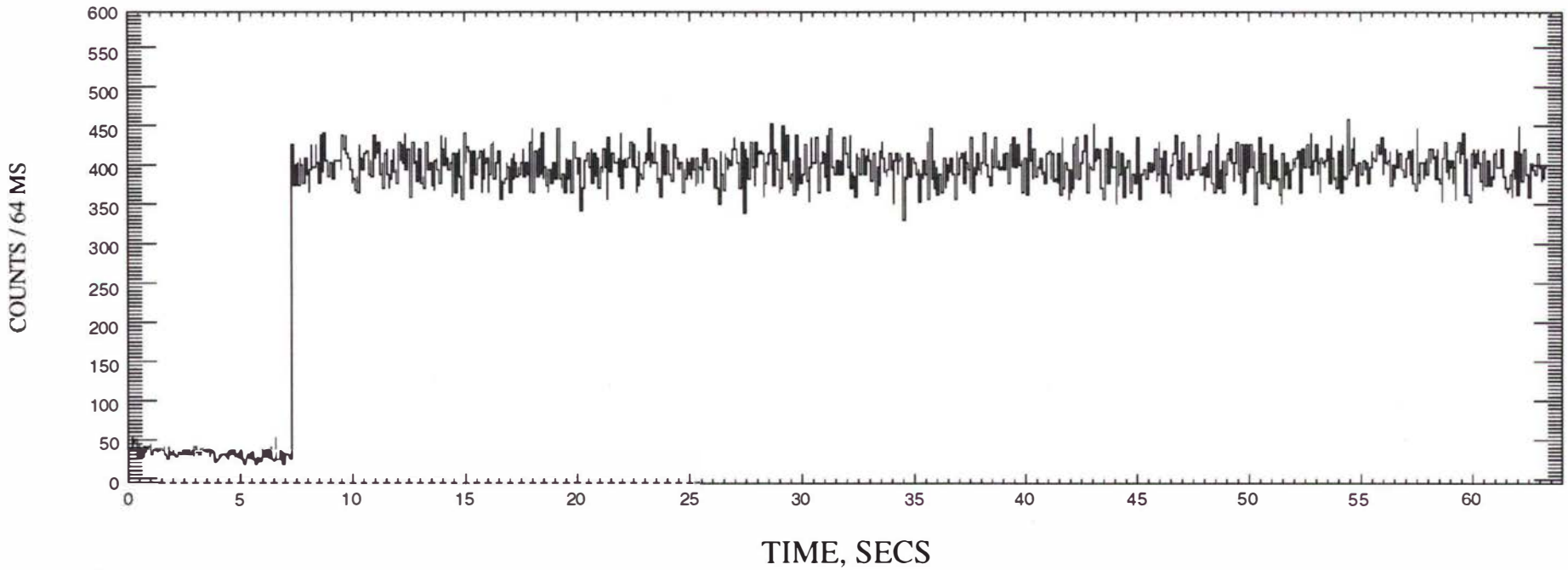
Burst Counter 1 at UT=23.217302949693 h=83582.291 s 23:13:02.291

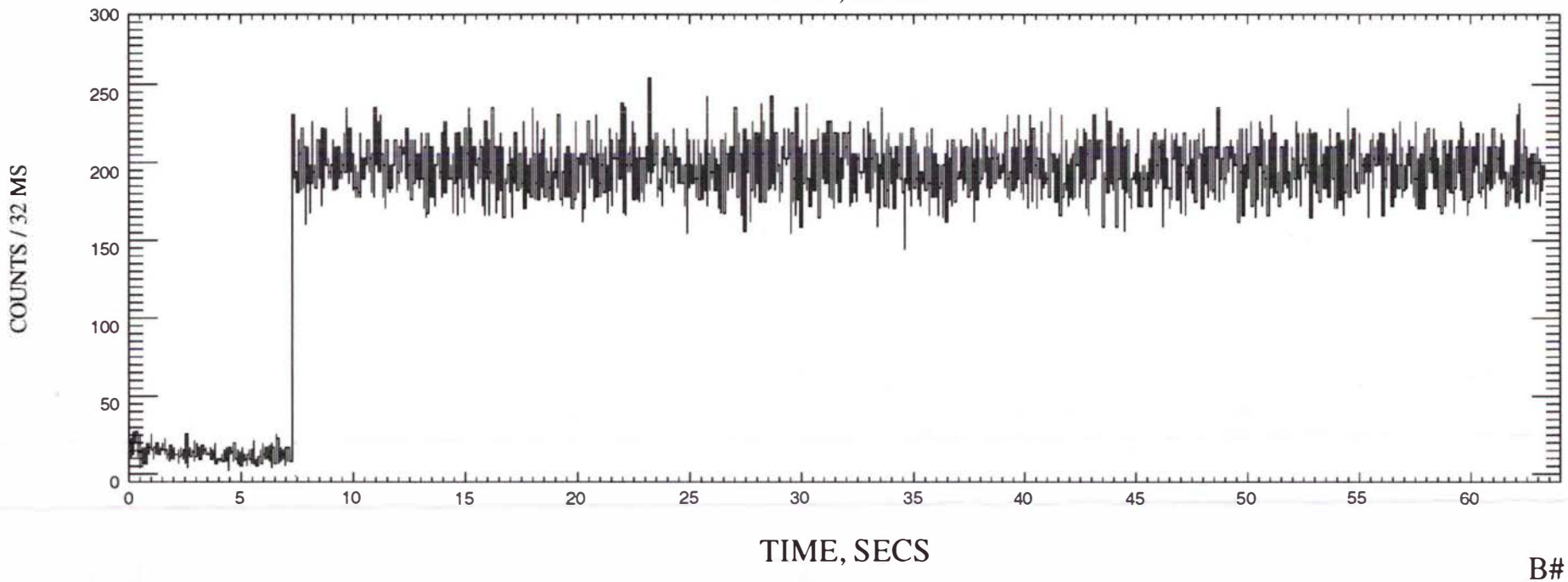




HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 9 at UT= 6.363689990573 h=22909.284 s 06:21:49.284

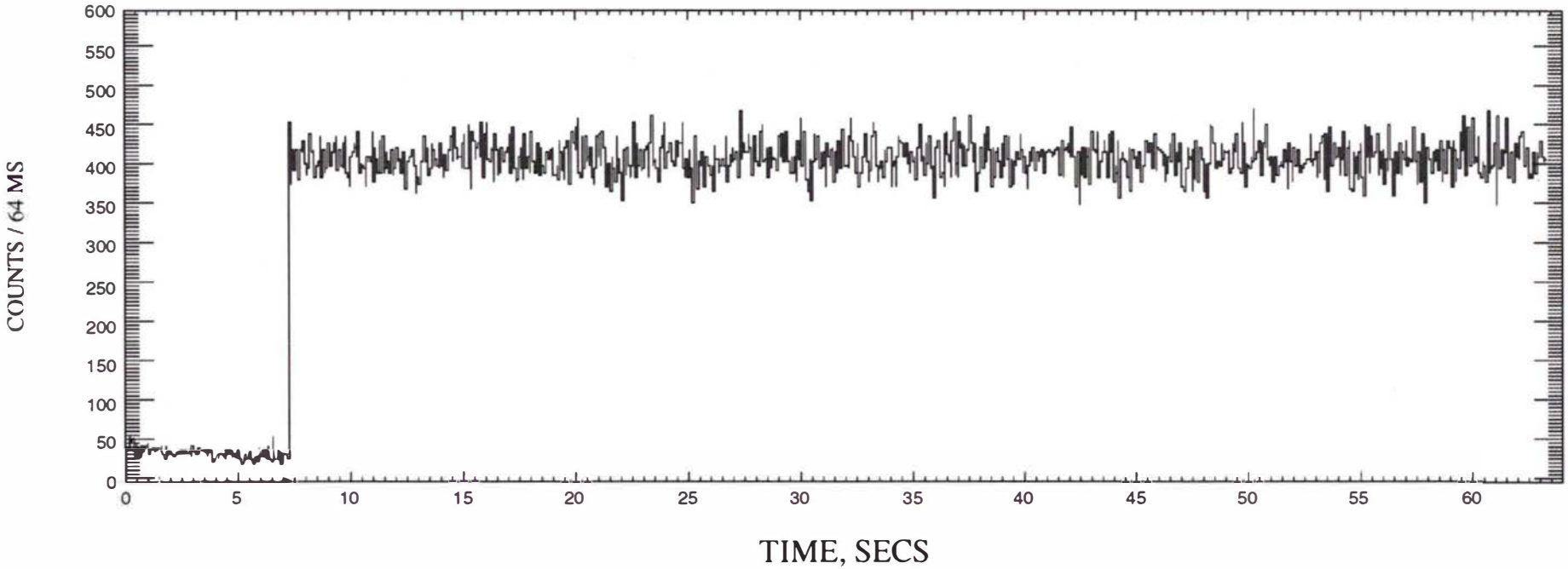


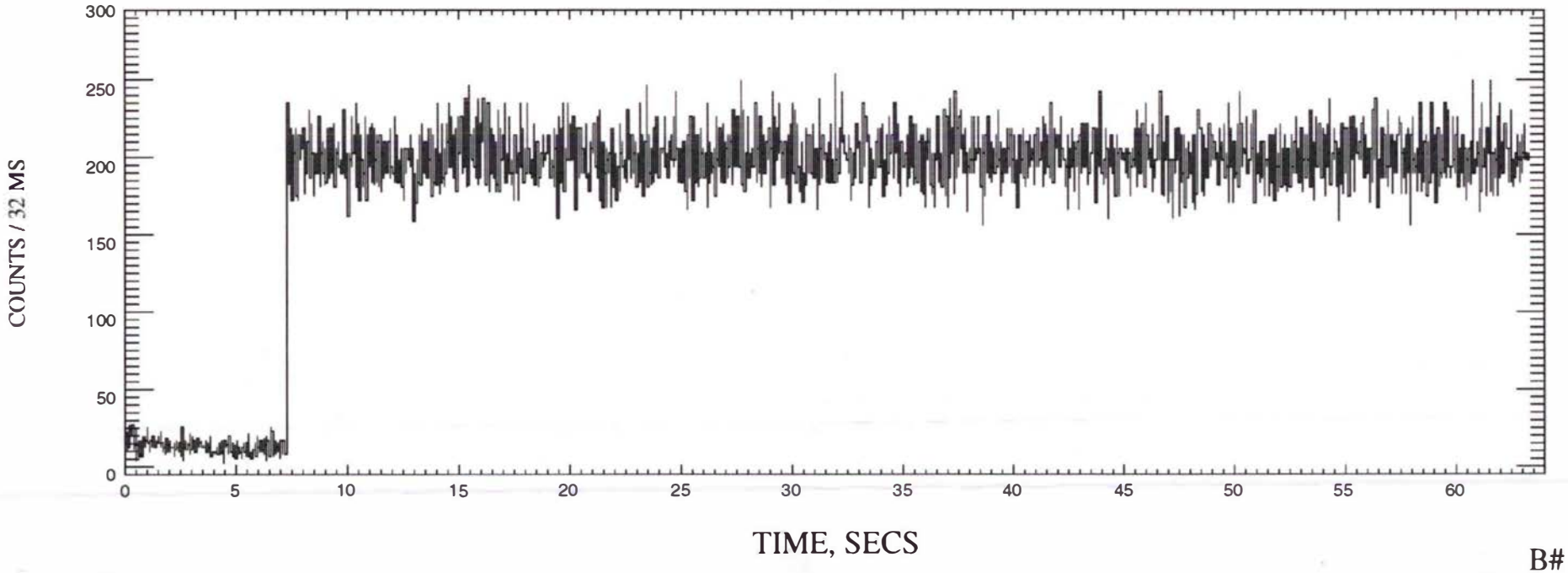


B# 10

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 7 at UT= 4.959222361247 h=17853.201 s 04:57:33.201

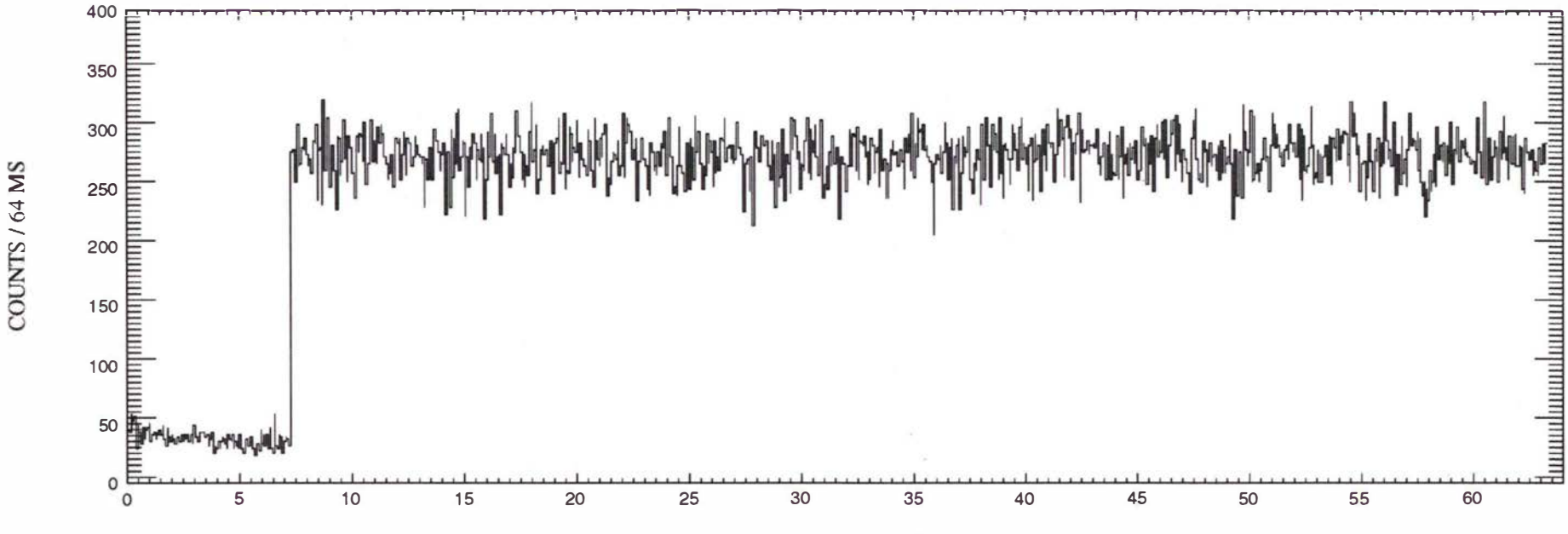


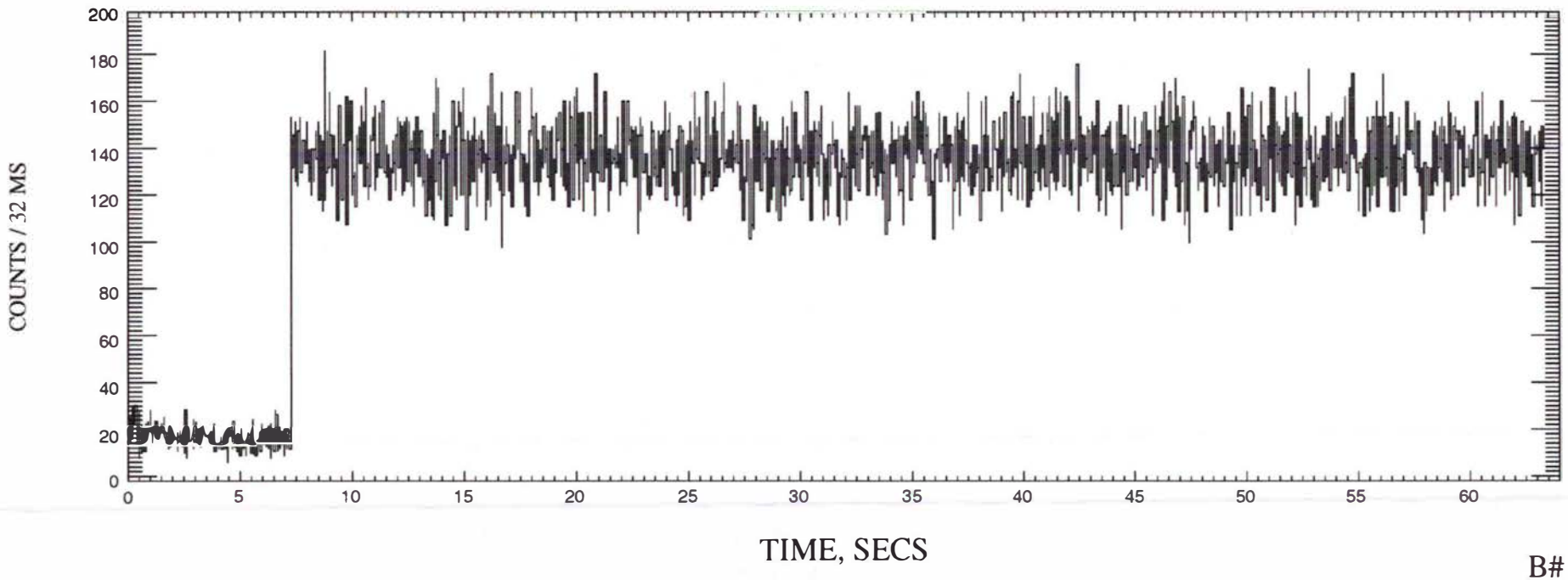


B# 8

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

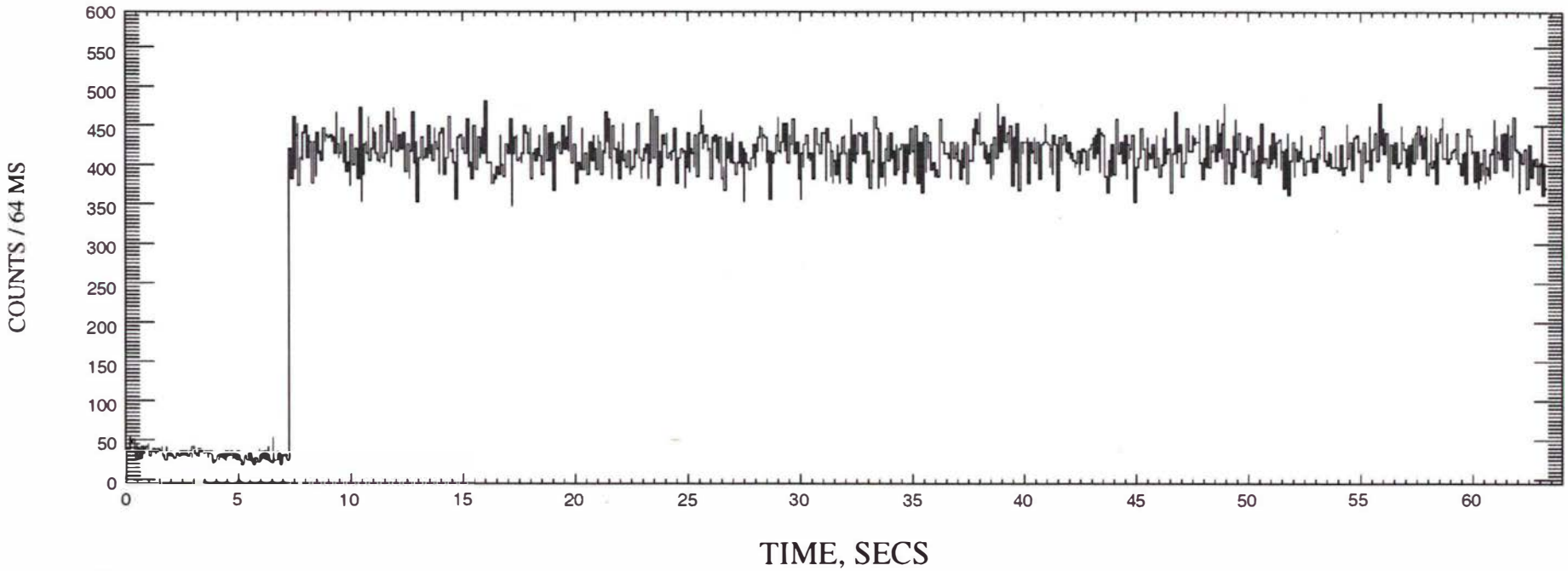
Burst Counter 8 at UT=16.897197621663 h=60829.911 s 16:53:49.911

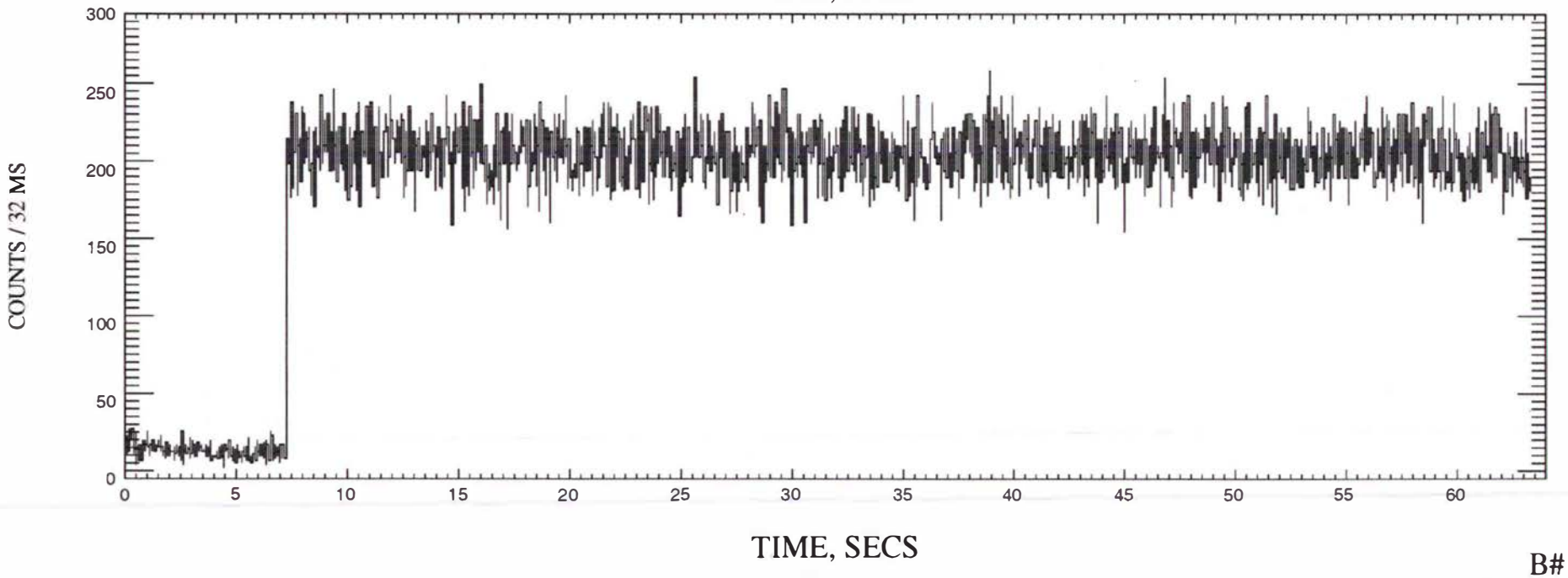




HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 6 at UT= 4.256988550822 h=15325.159 s 04:15:25.159

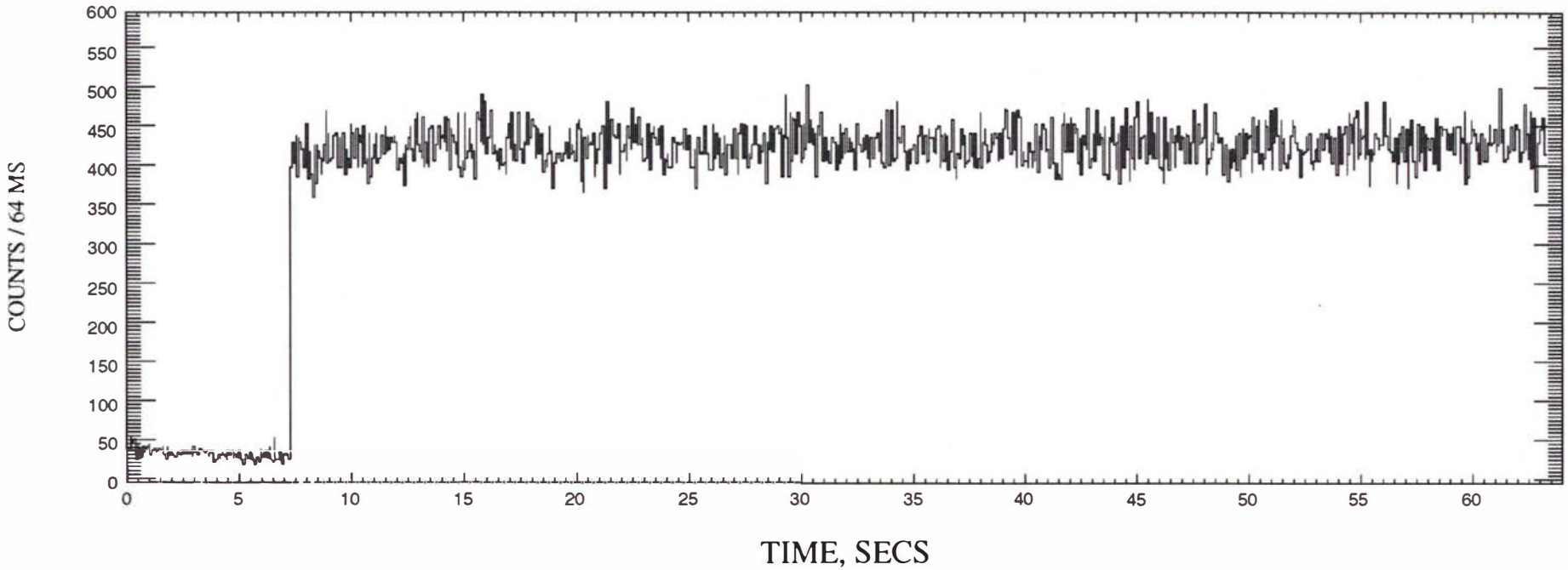


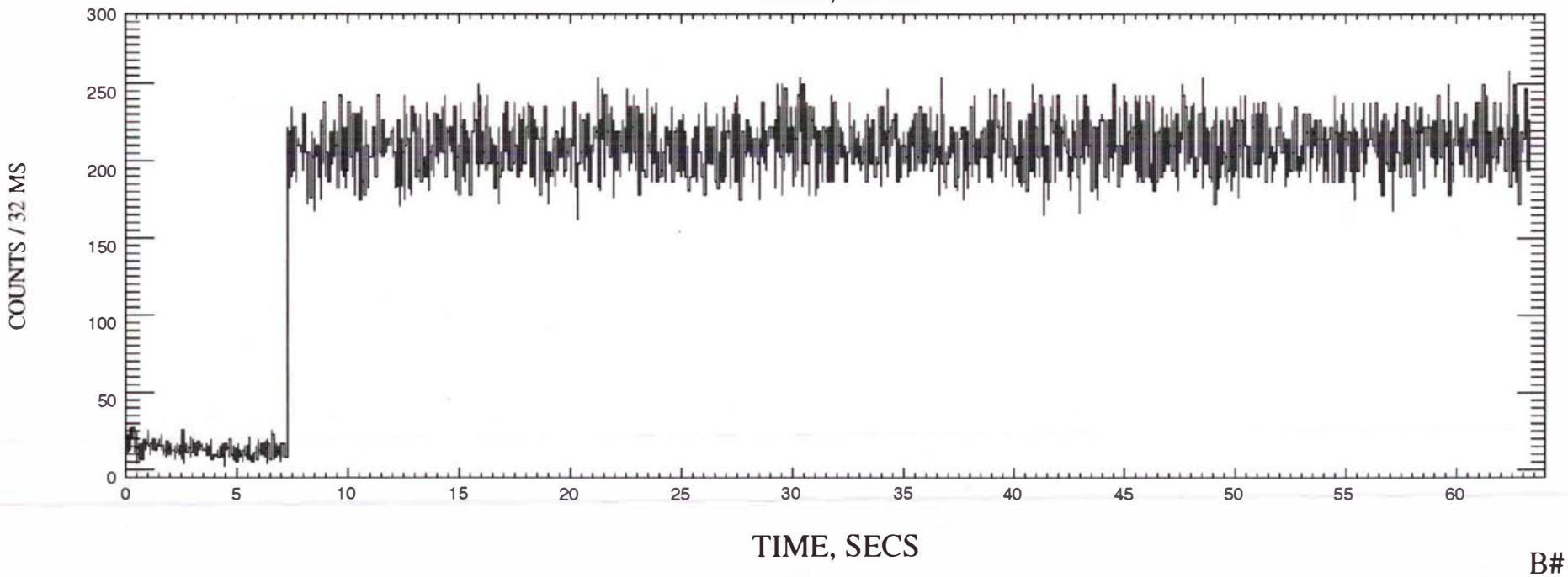


B# 7

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 4 at UT= 2.852522082859 h=10269.079 s 02:51:09.079

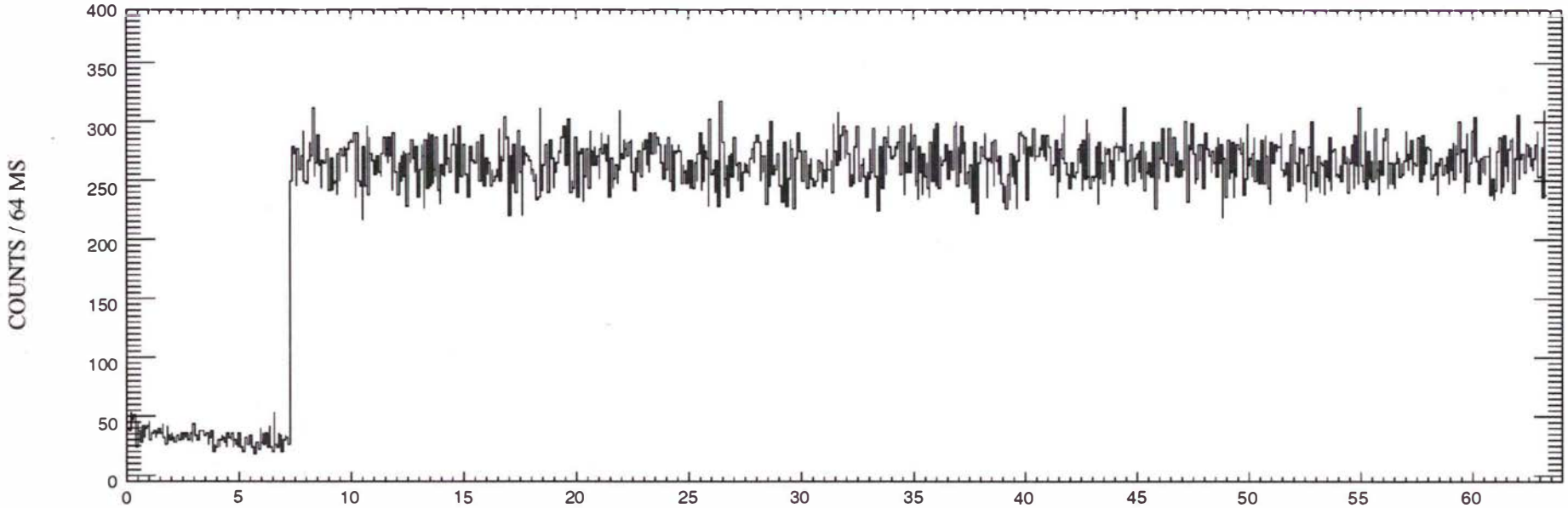




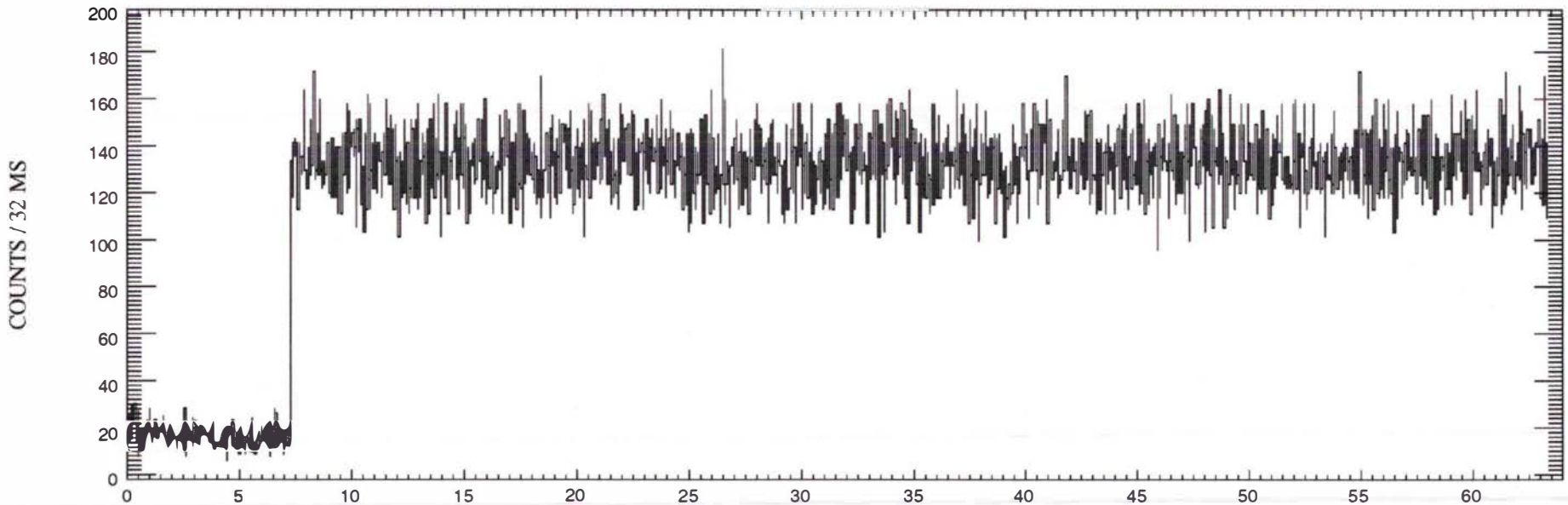
B# 5

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 9 at UT=17.599431432088 h=63357.953 s 17:35:57.953



TIME, SECS

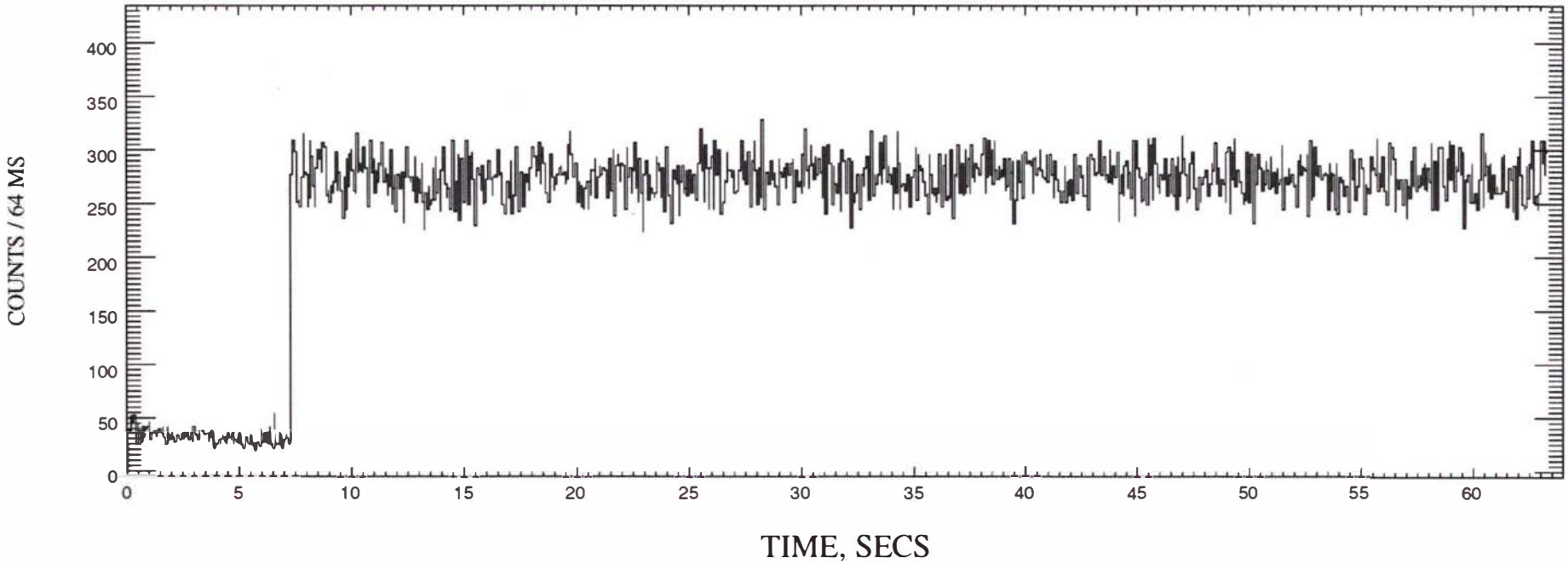


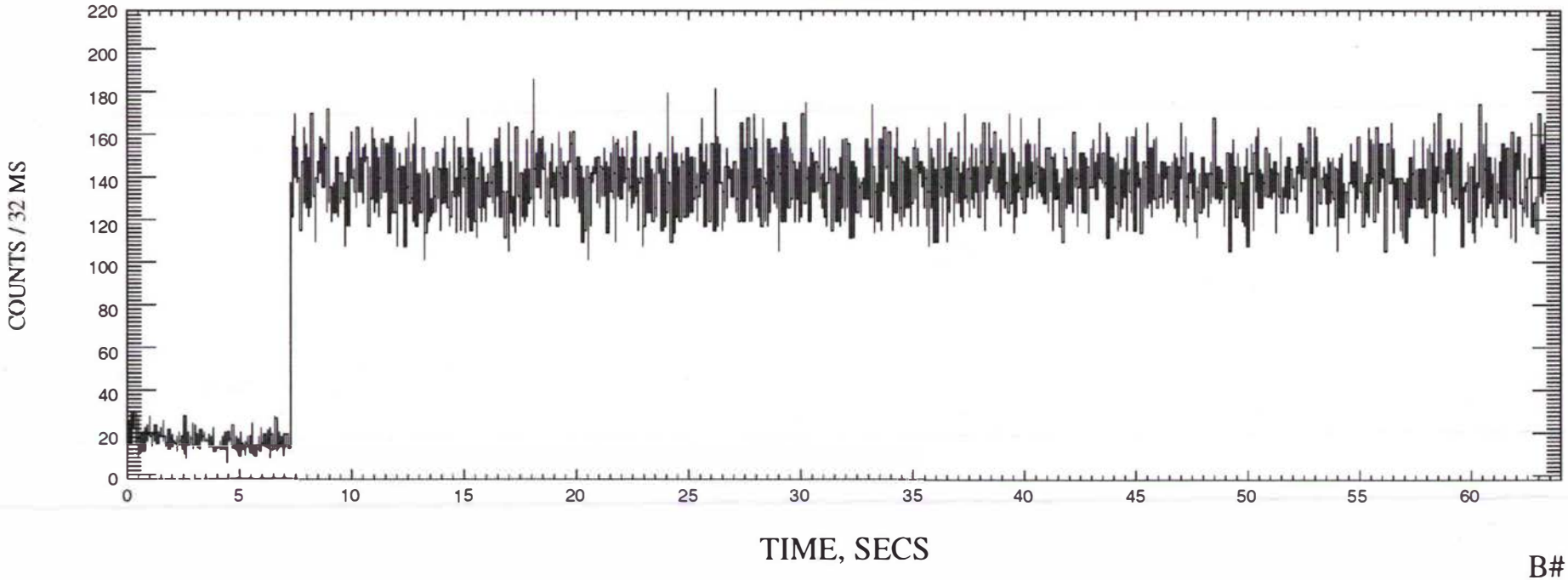
TIME, SECS

B# 26

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

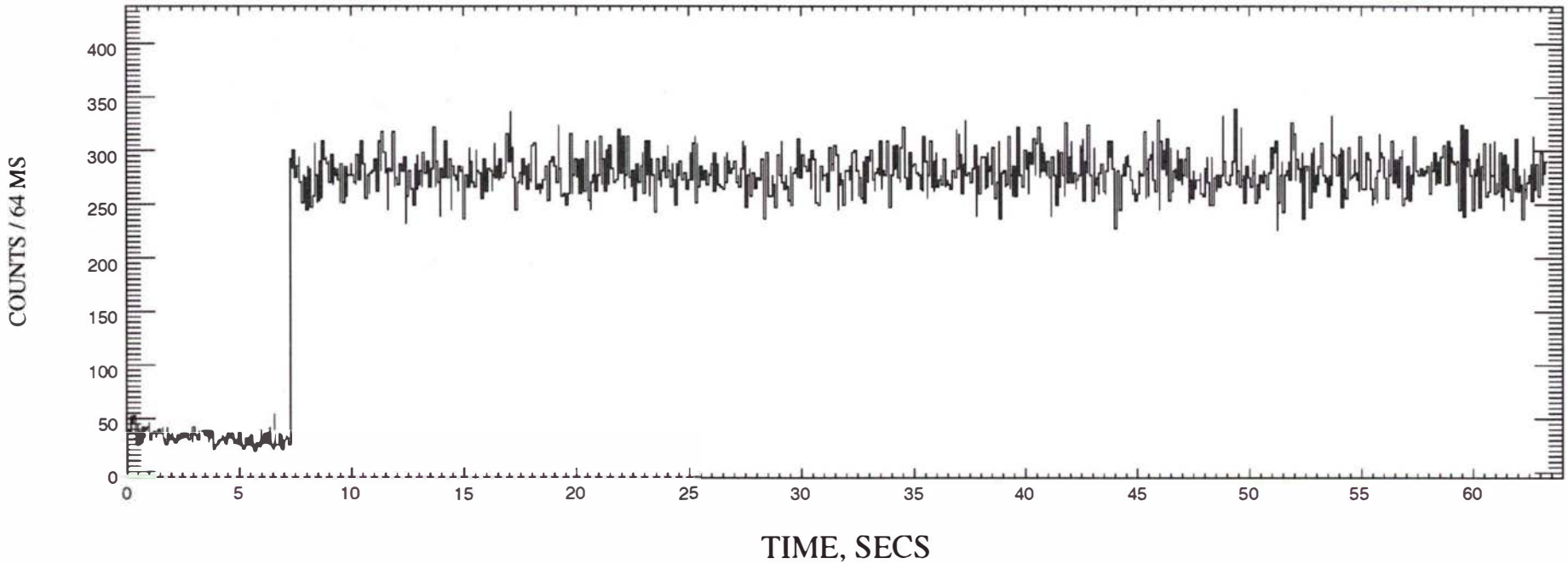
Burst Counter 7 at UT=16.194965977139 h=58301.878 s 16:11:41.878

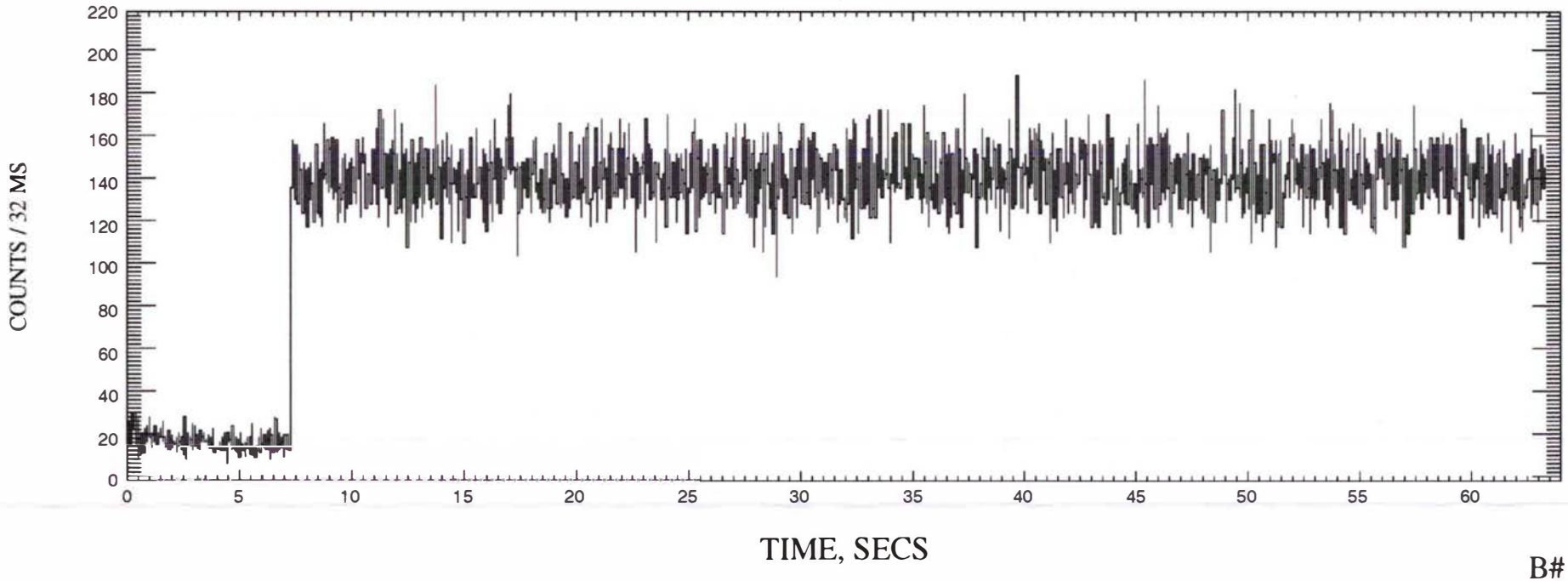




HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 6 at UT=15.492732162476 h=55773.836 s 15:29:33.836

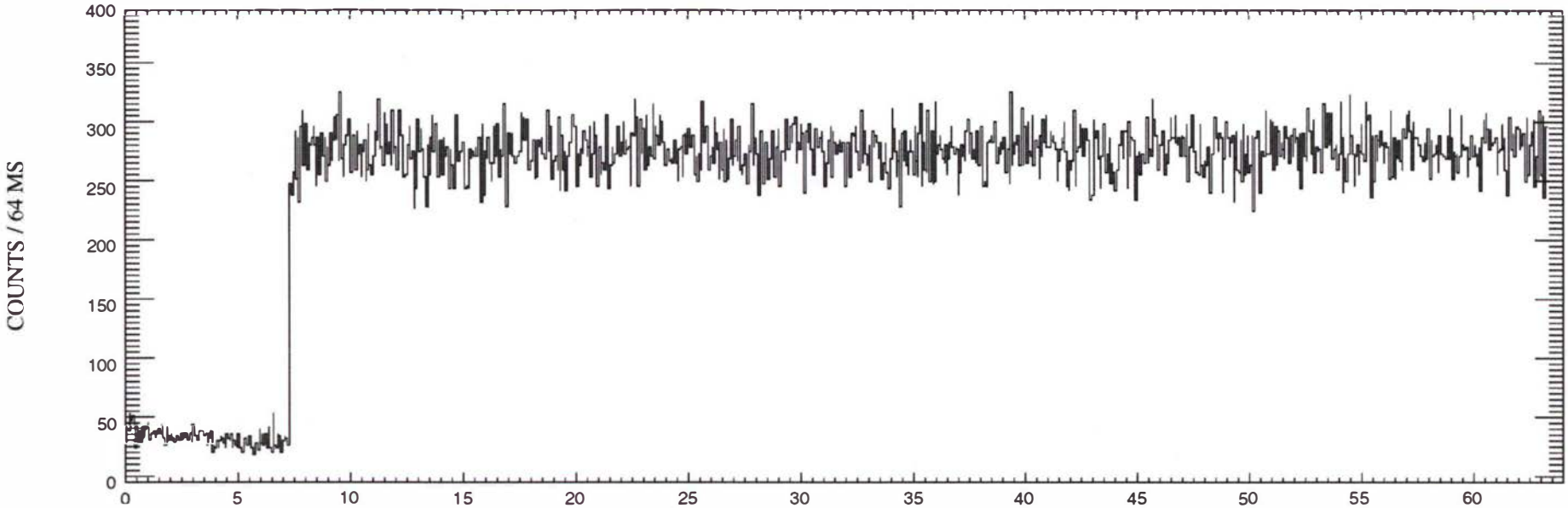




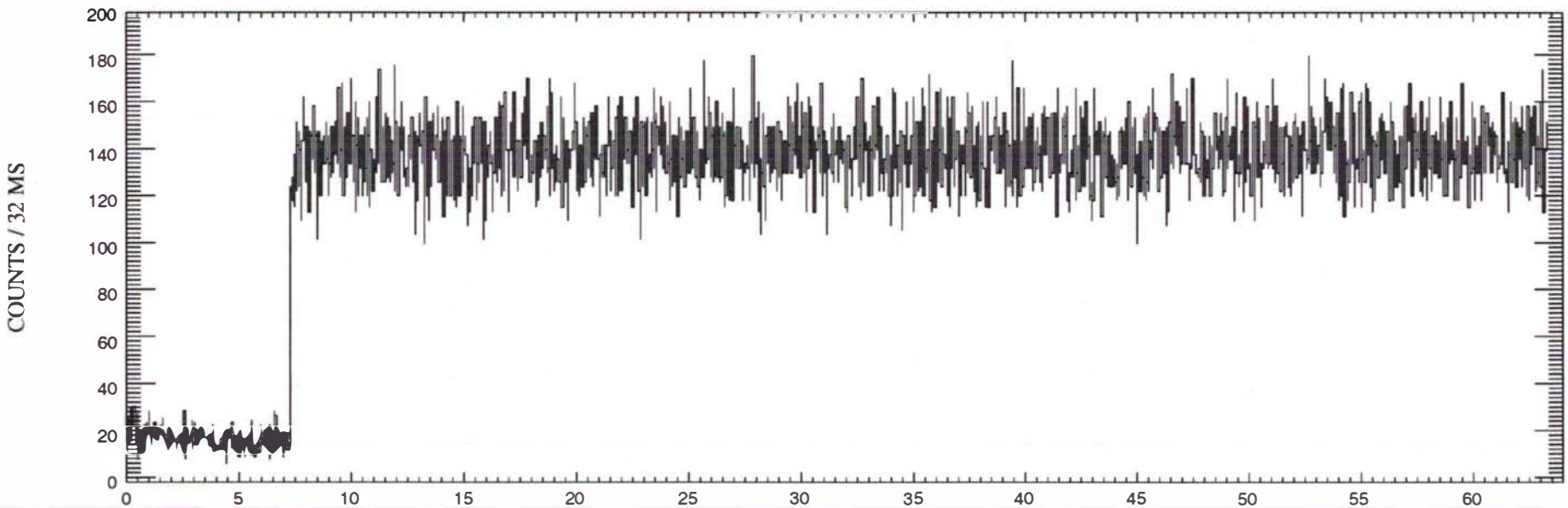
B# 23

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 5 at UT=14.790499509176 h=53245.798 s 14:47:25.798



TIME, SECS

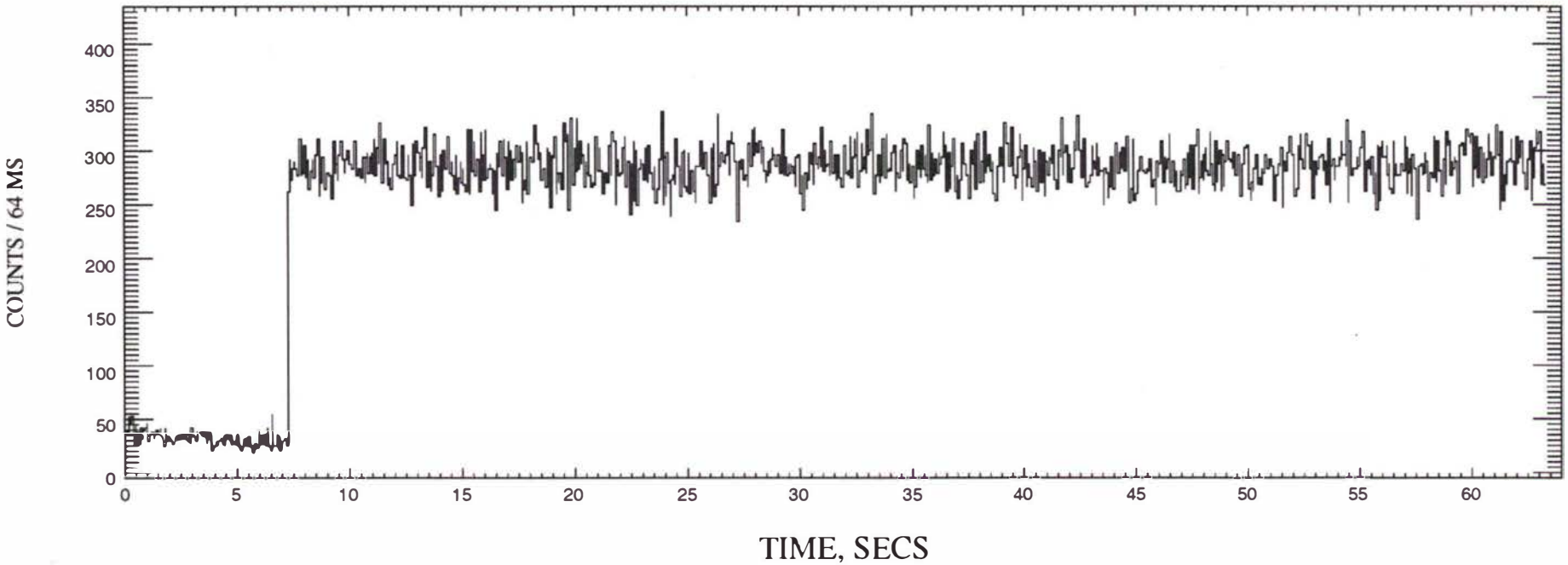


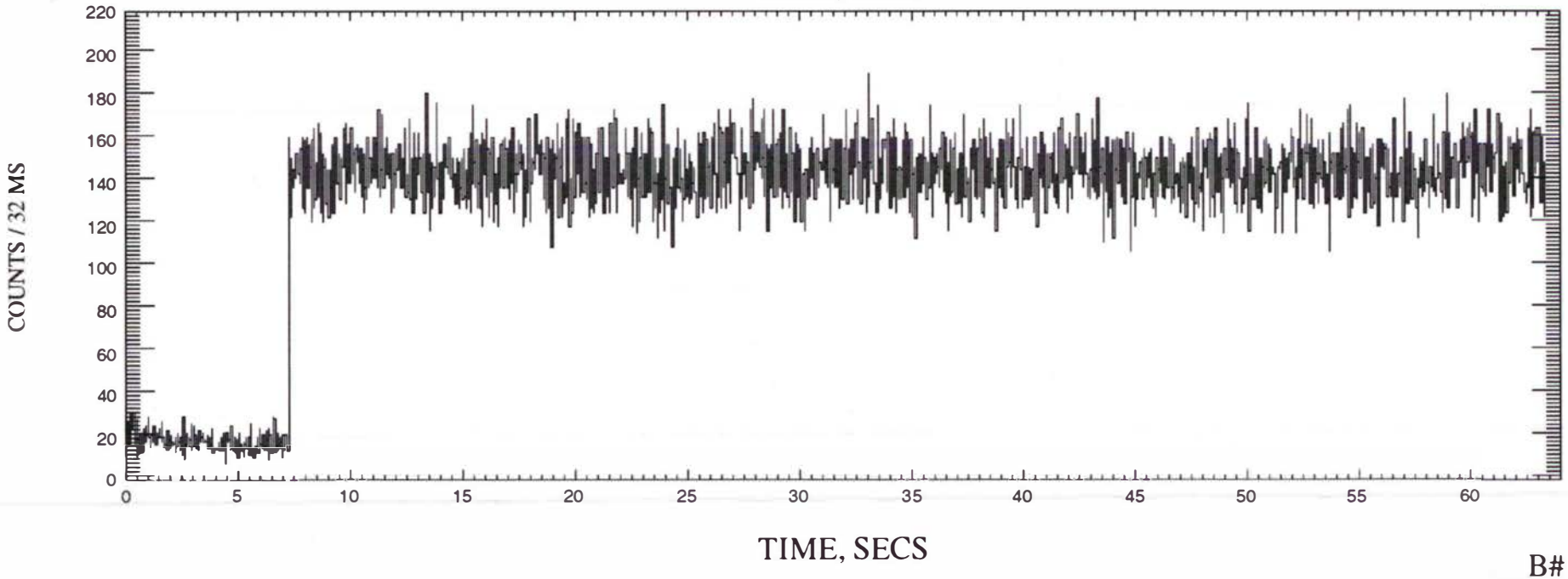
TIME, SECS

B# 22

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 4 at UT=14.088263524373 h=50717.749 s 14:05:17.749

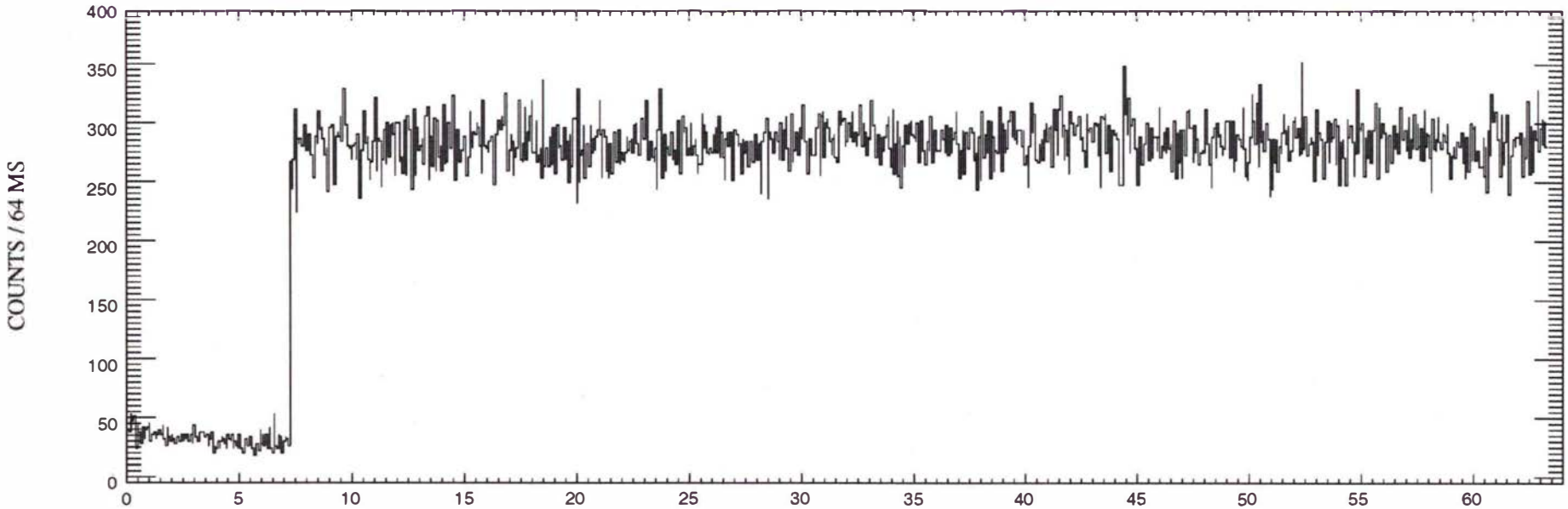




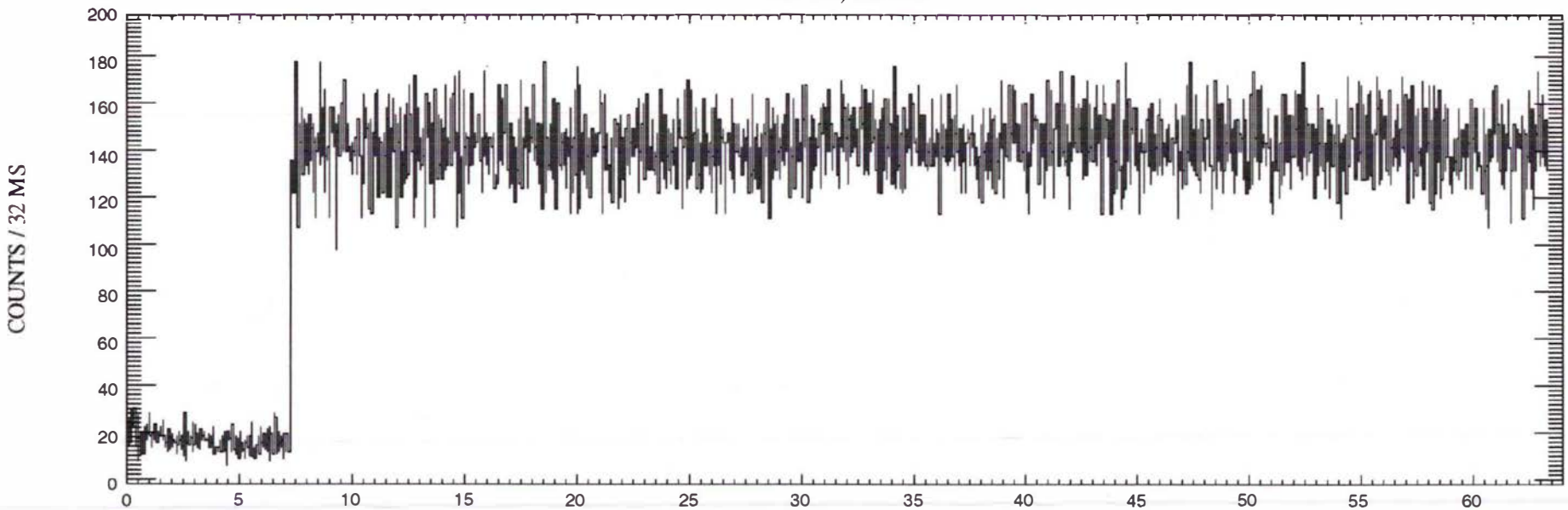
B# 21

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 3 at UT=13.386029713949 h=48189.707 s 13:23:09.707



TIME, SECS

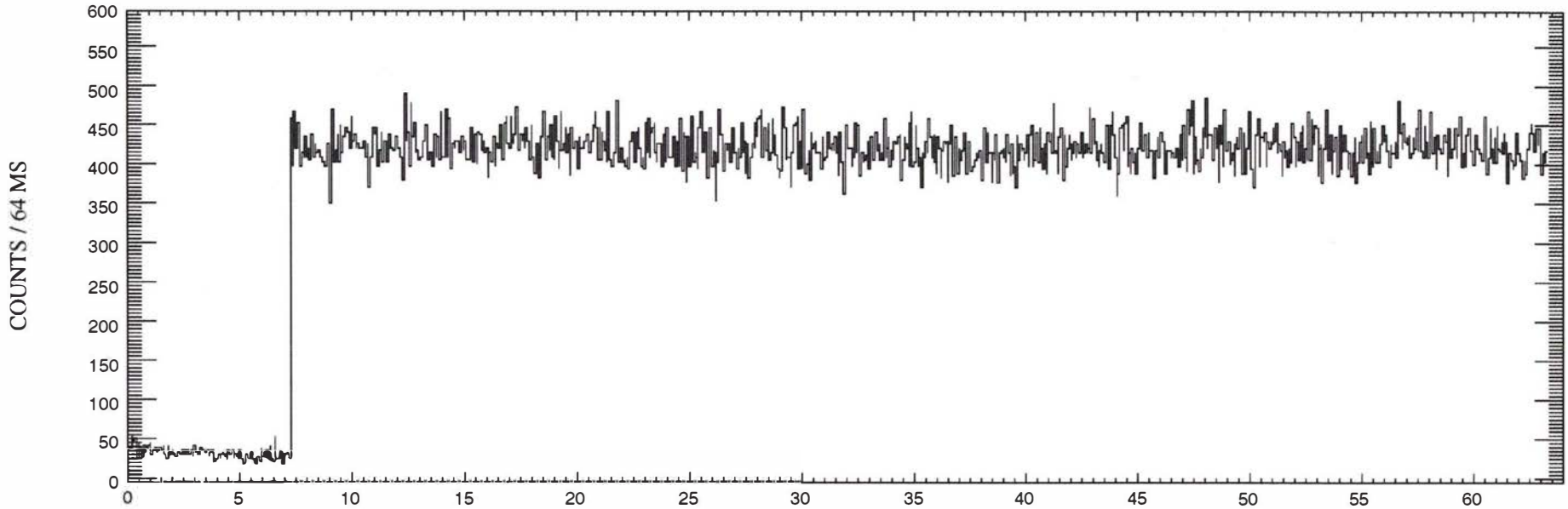


TIME, SECS

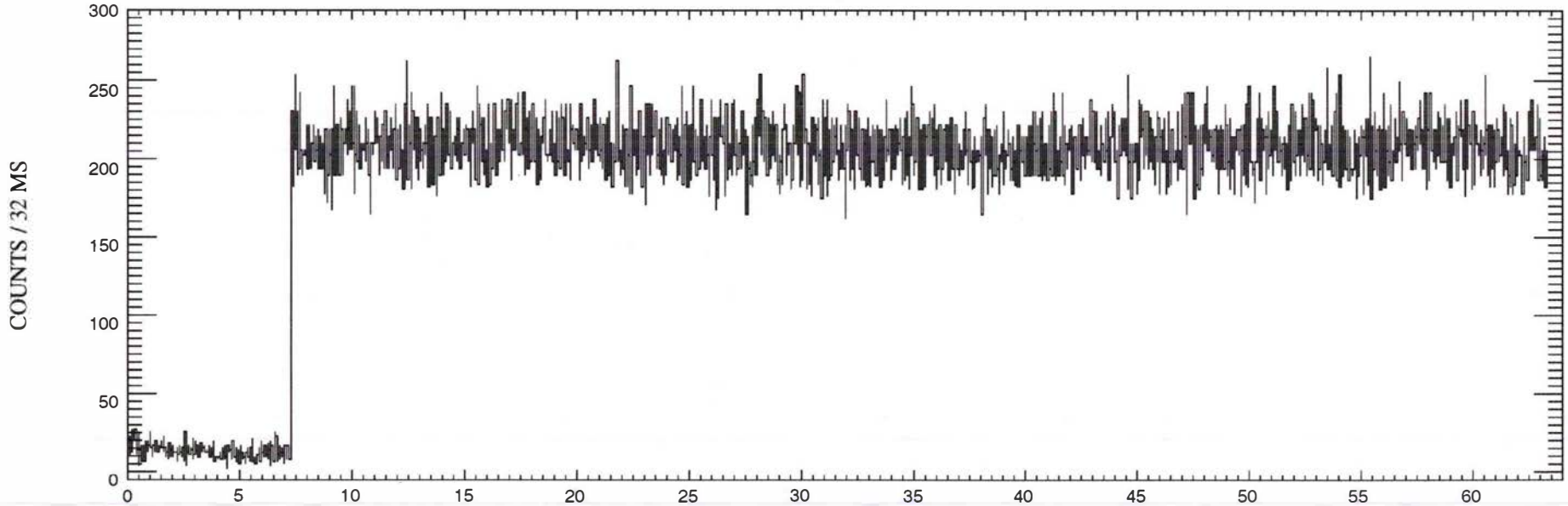
B# 20

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 1 at UT= 0.745818472968 h= 2684.947 s 00:44:44.947



TIME, SECS

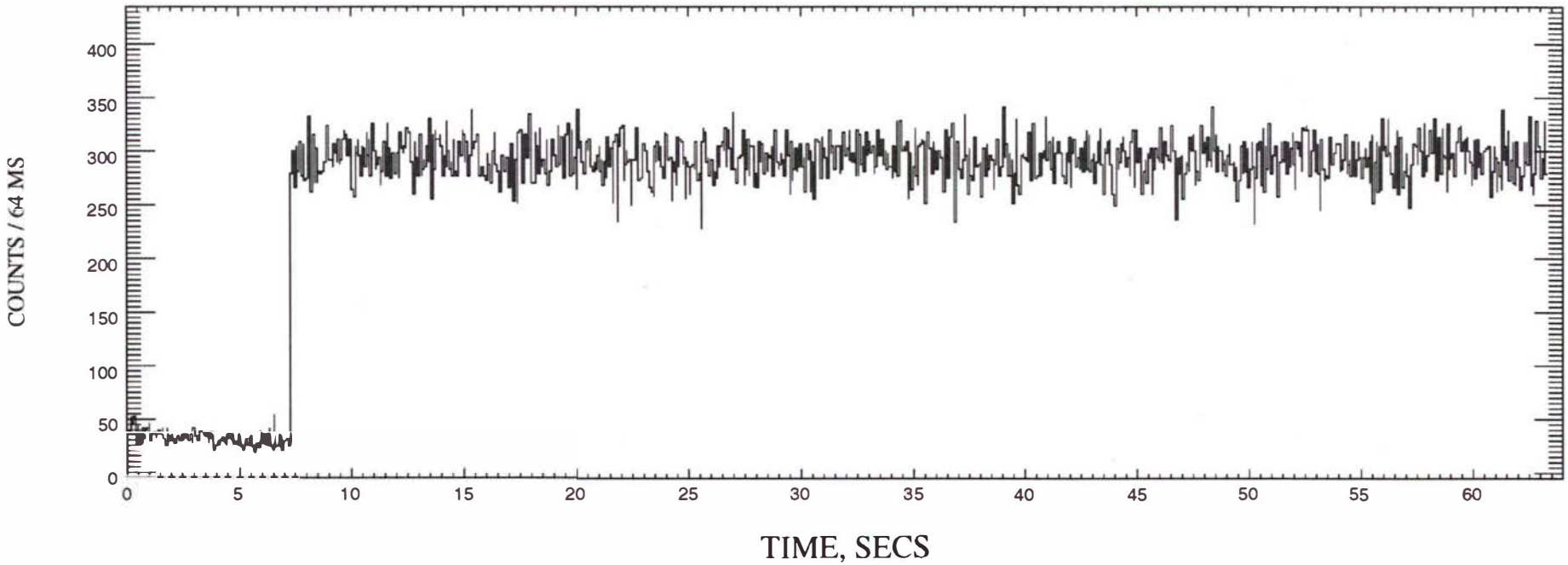


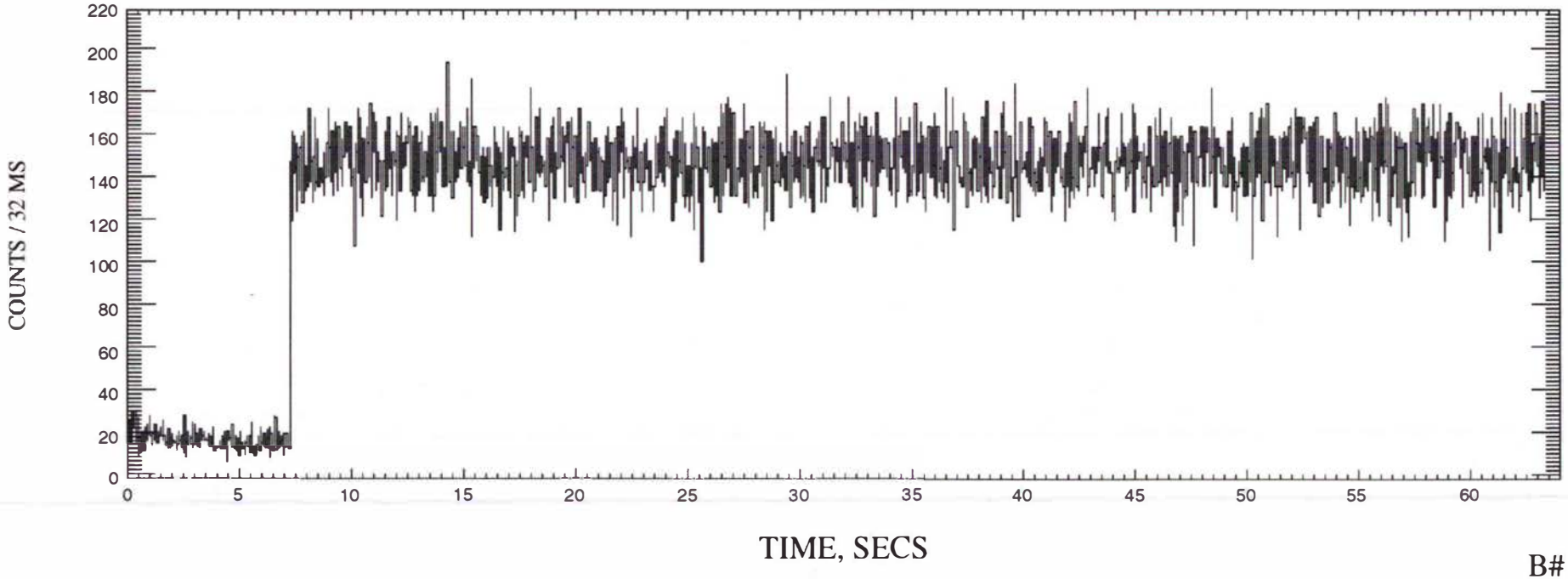
TIME, SECS

B# 2

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 2 at UT=12.683797488742 h=45661.671 s 12:41:01.671

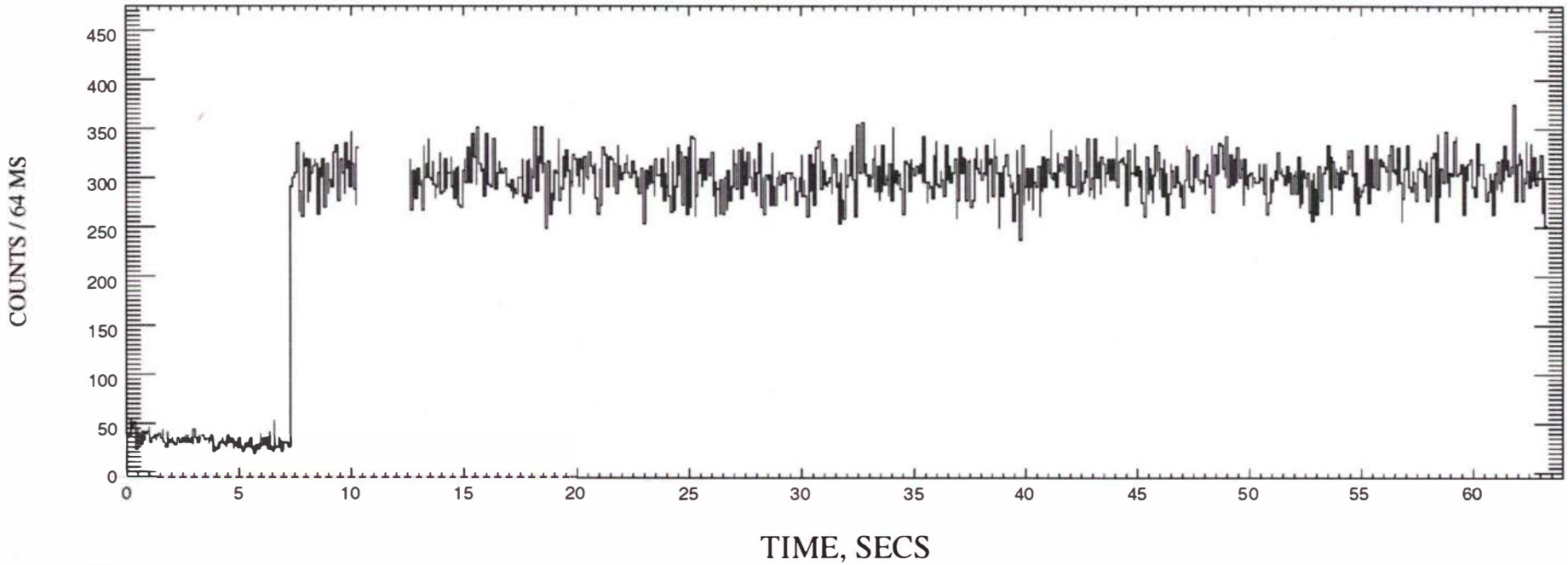


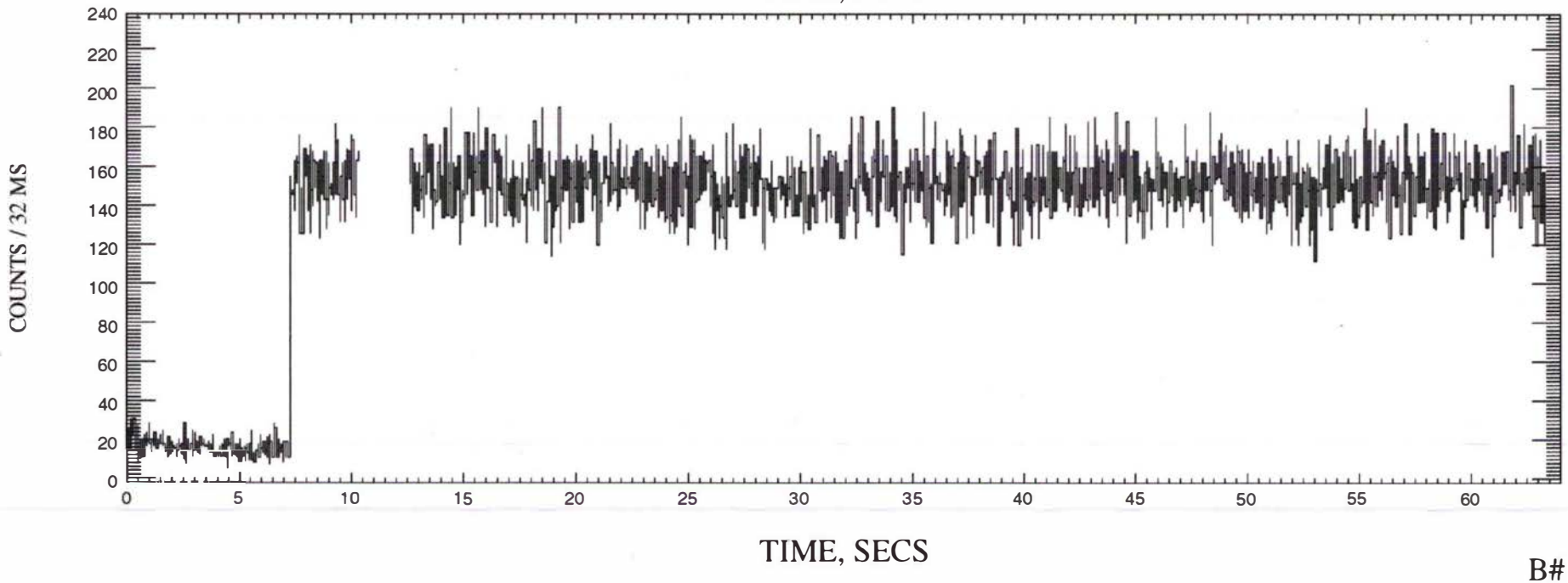


B# 19

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 1 at UT=11.981561508179 h=43133.621 s 11:58:53.621

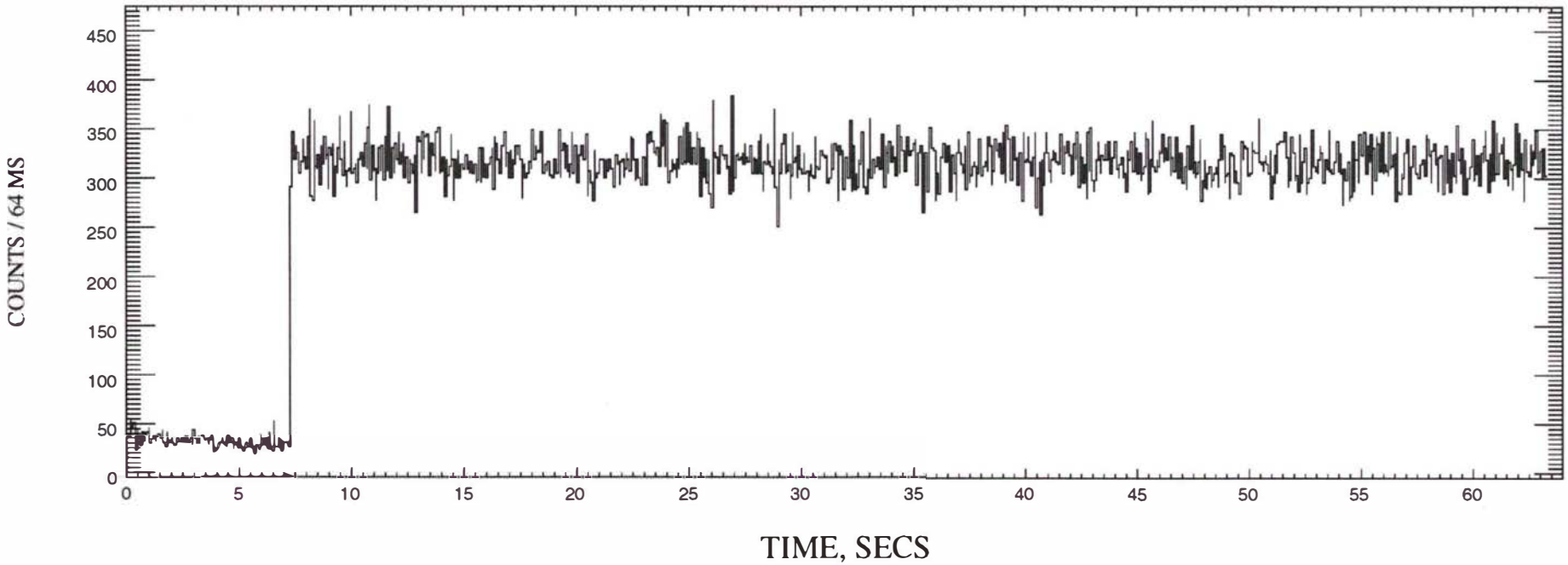


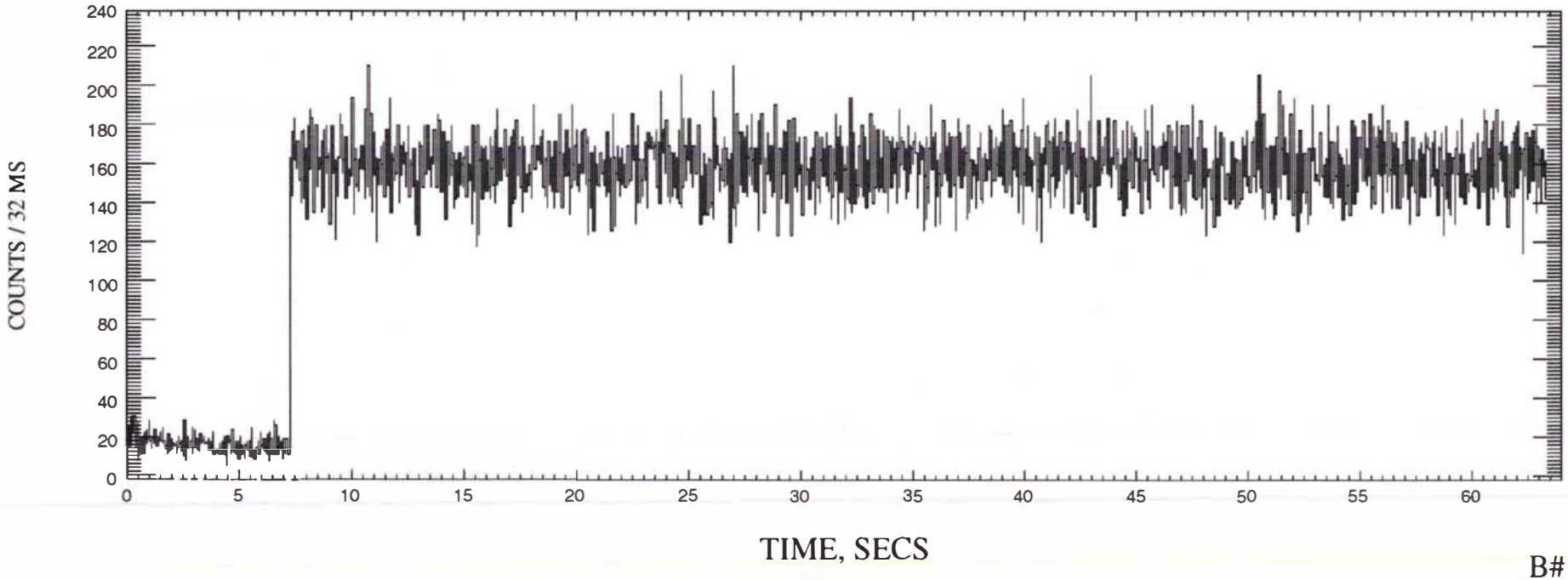


B# 18

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 0 at UT=11.279327693515 h=40605.580 s 11:16:45.580

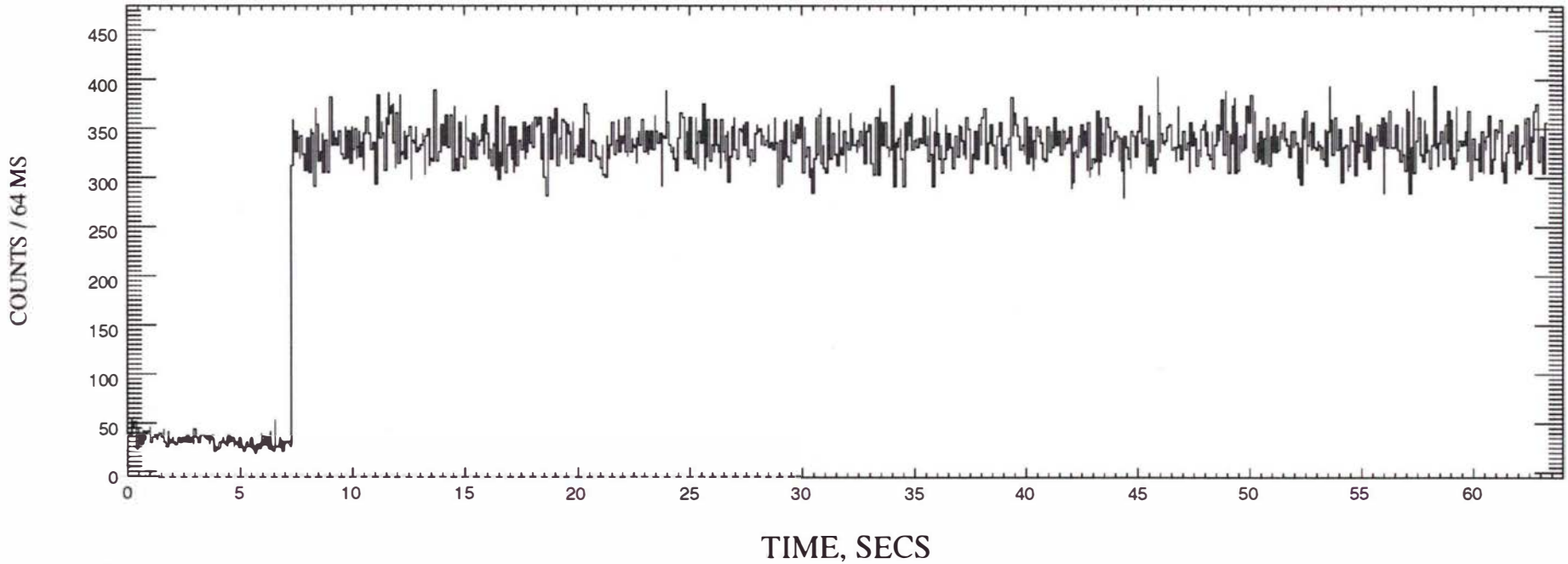


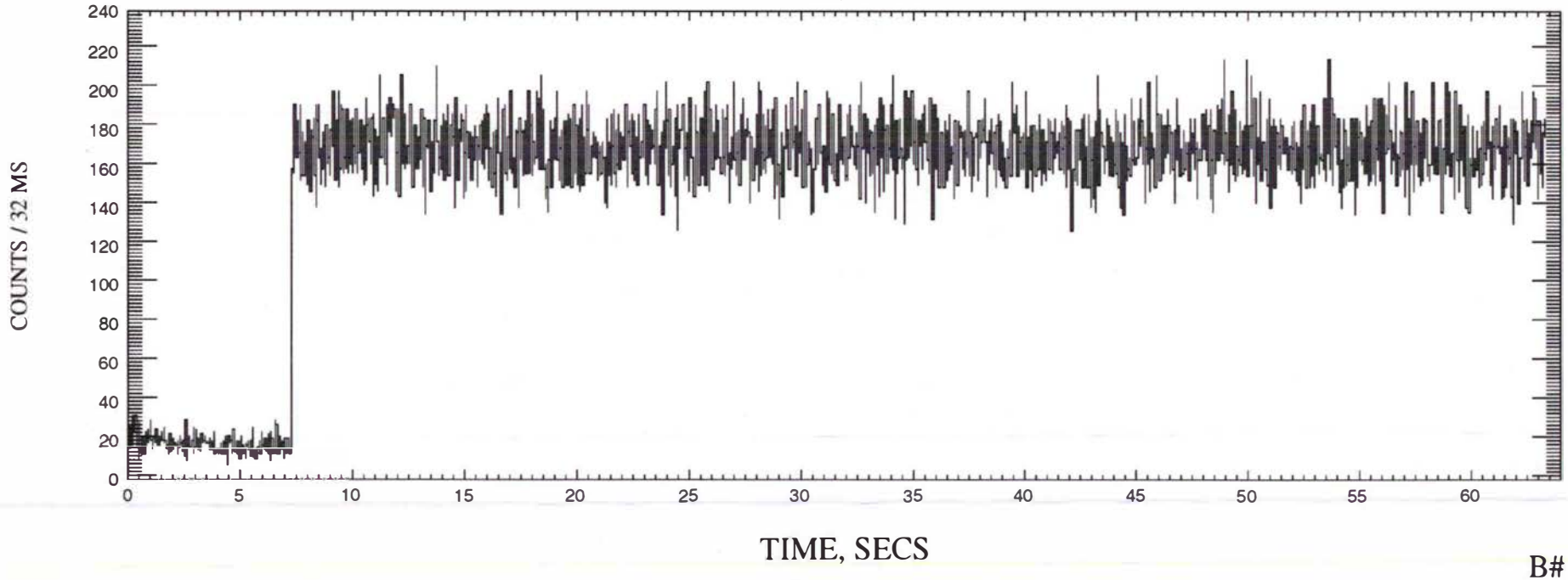


B# 17

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 15 at UT=10.577093878852 h=38077.538 s 10:34:37.538

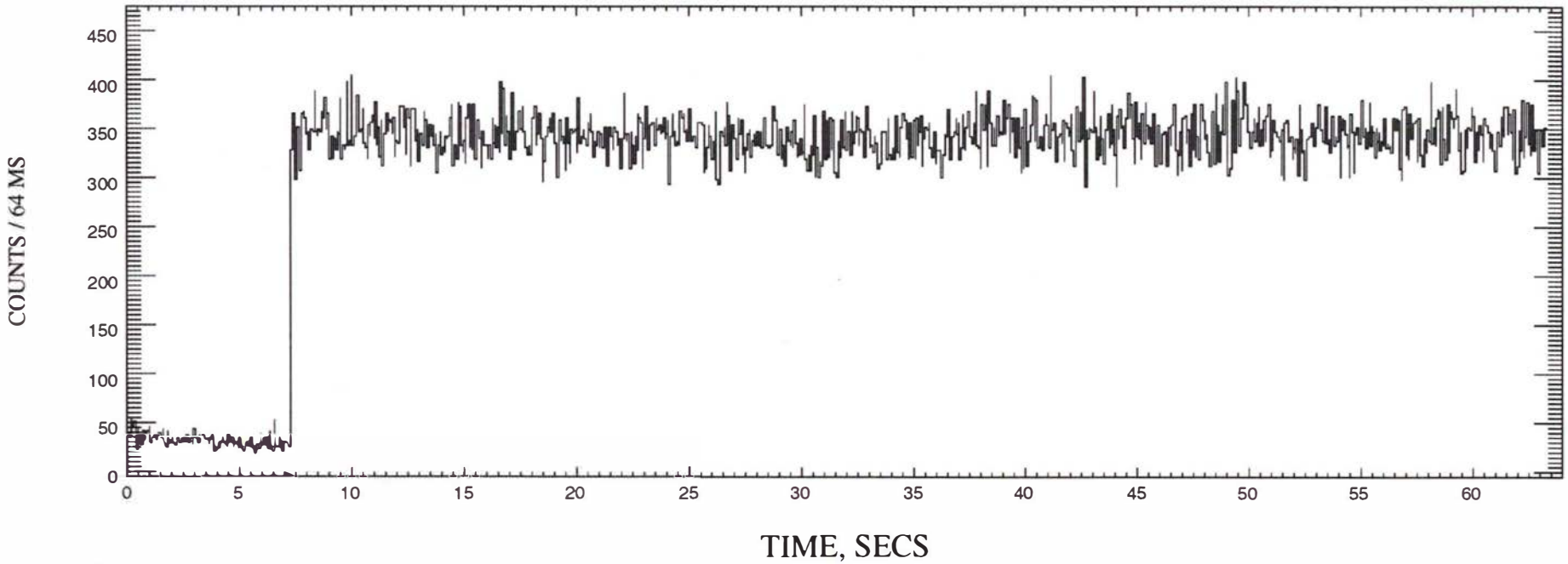


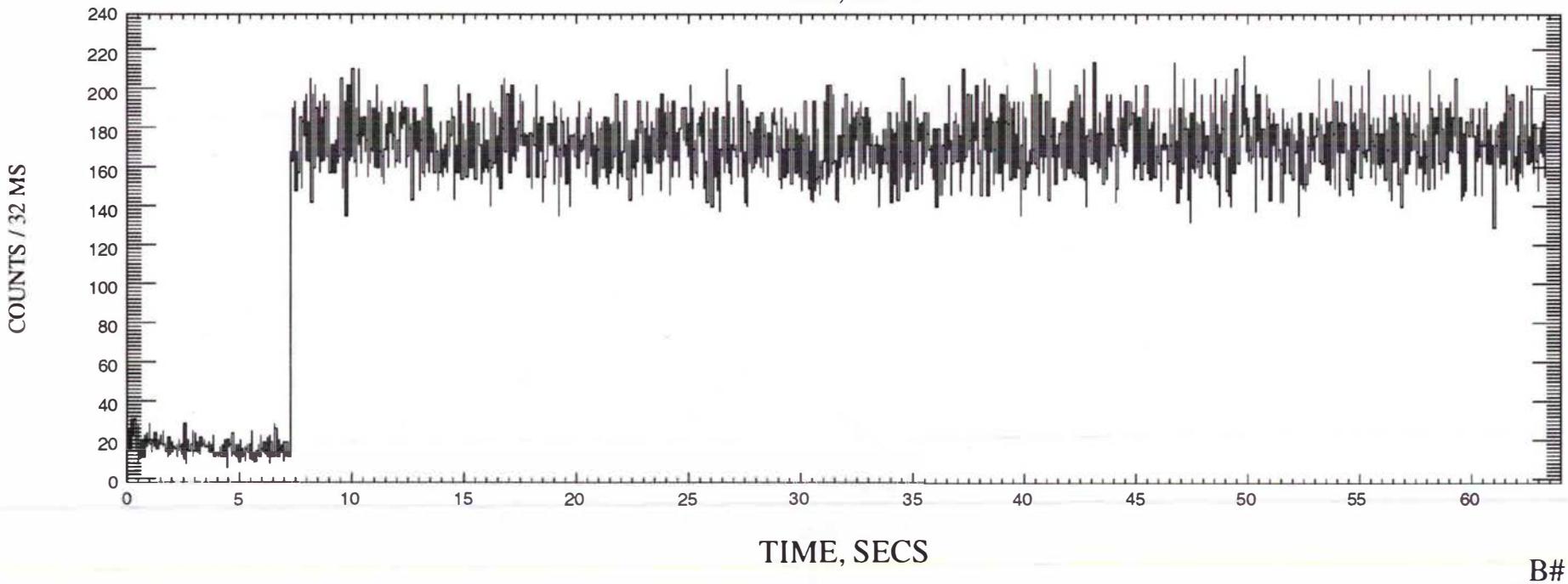


B# 16

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/27/01

Burst Counter 14 at UT= 9.874860068427 h=35549.496 s 09:52:29.496

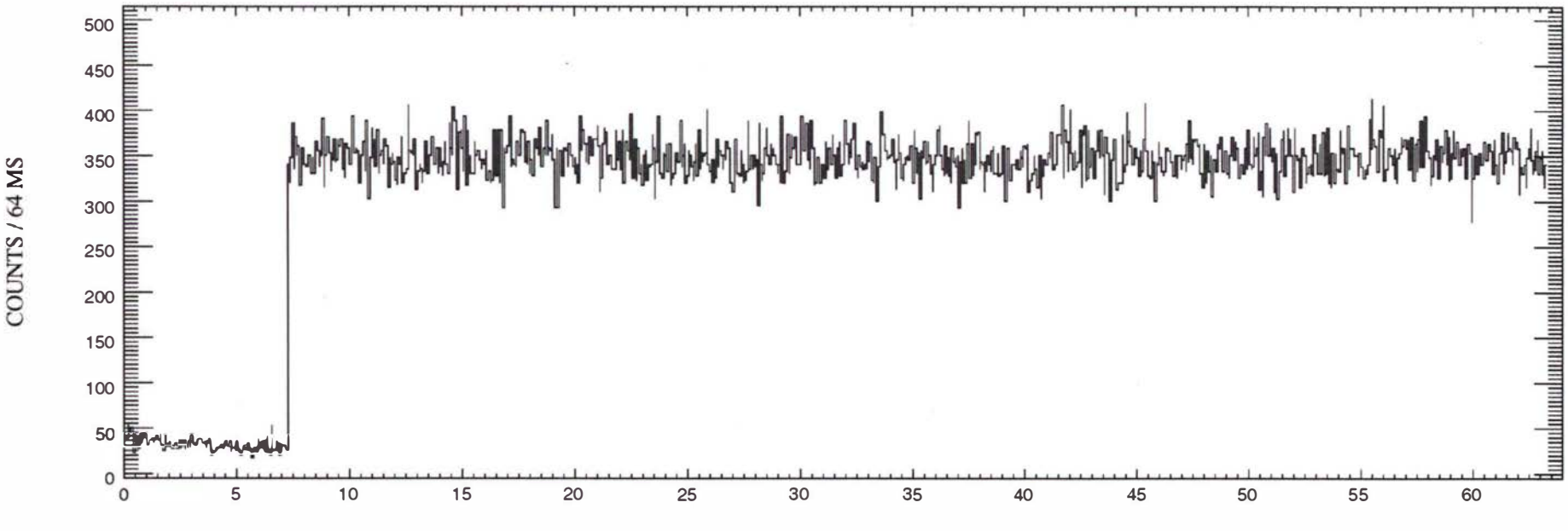


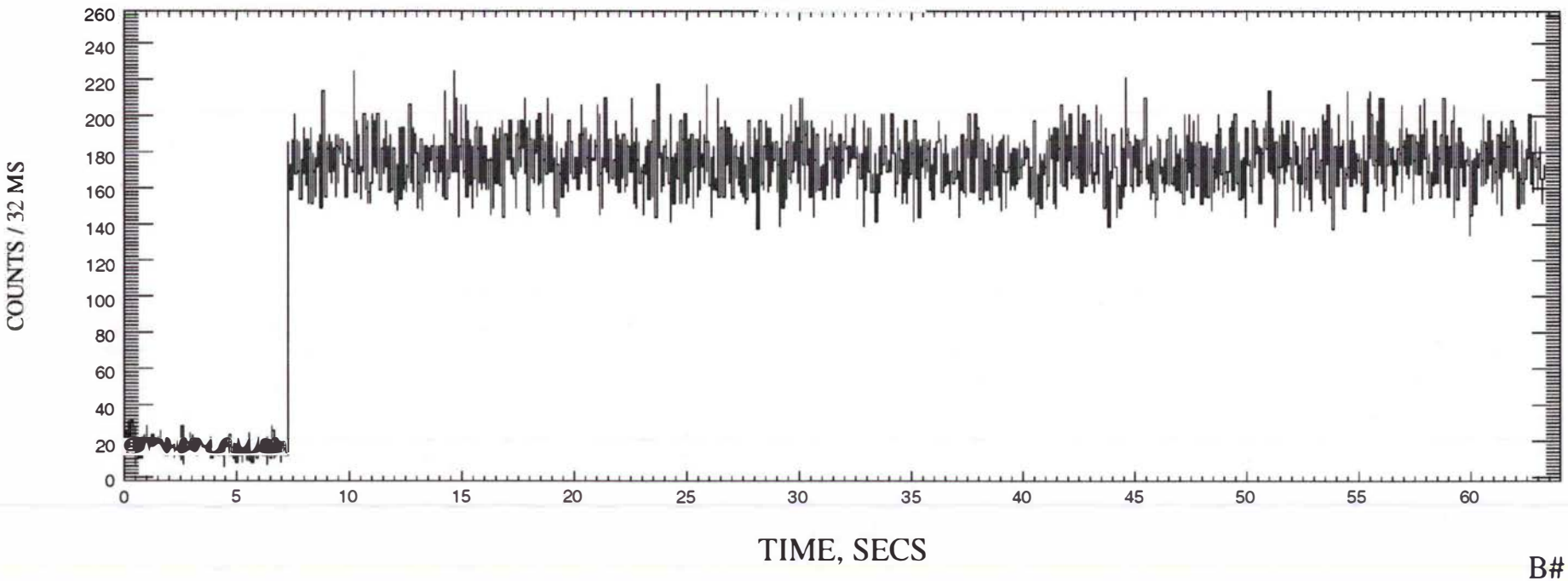


B# 15

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 13 at UT= 9.172627410889 h=33021.459 s 09:10:21.459

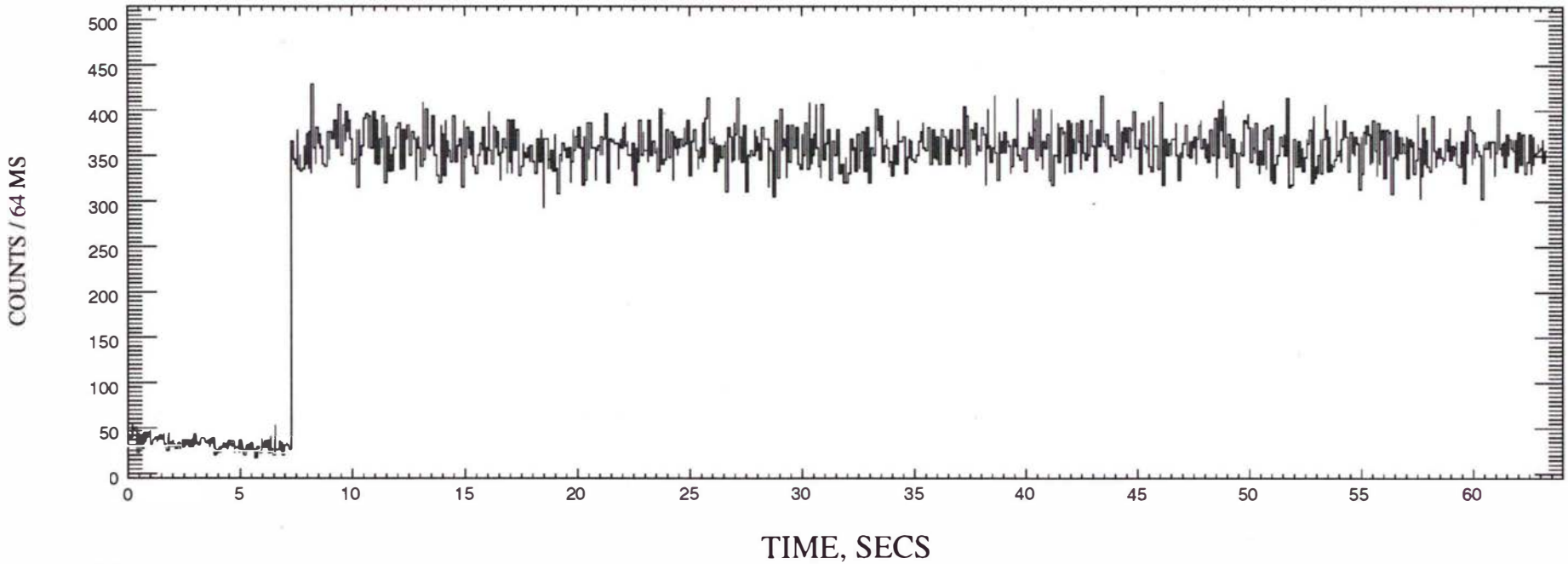


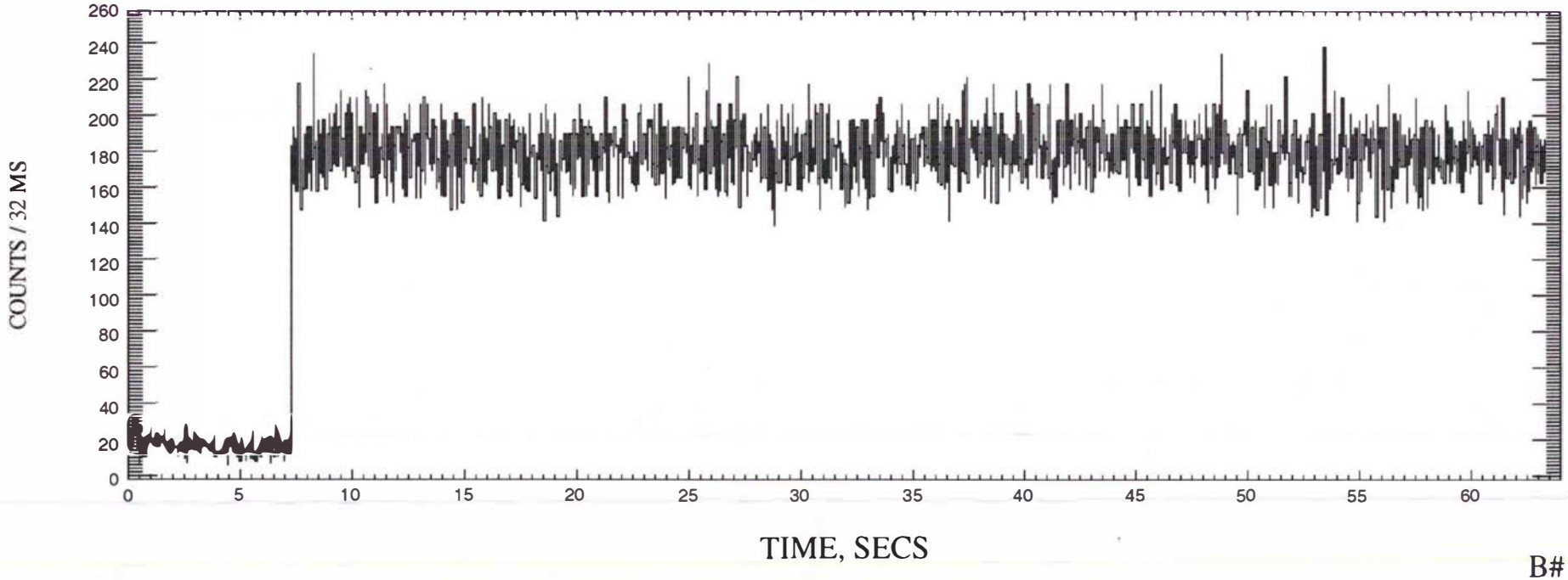


B# 14

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 12 at UT= 8.470393600464 h=30493.417 s 08:28:13.417

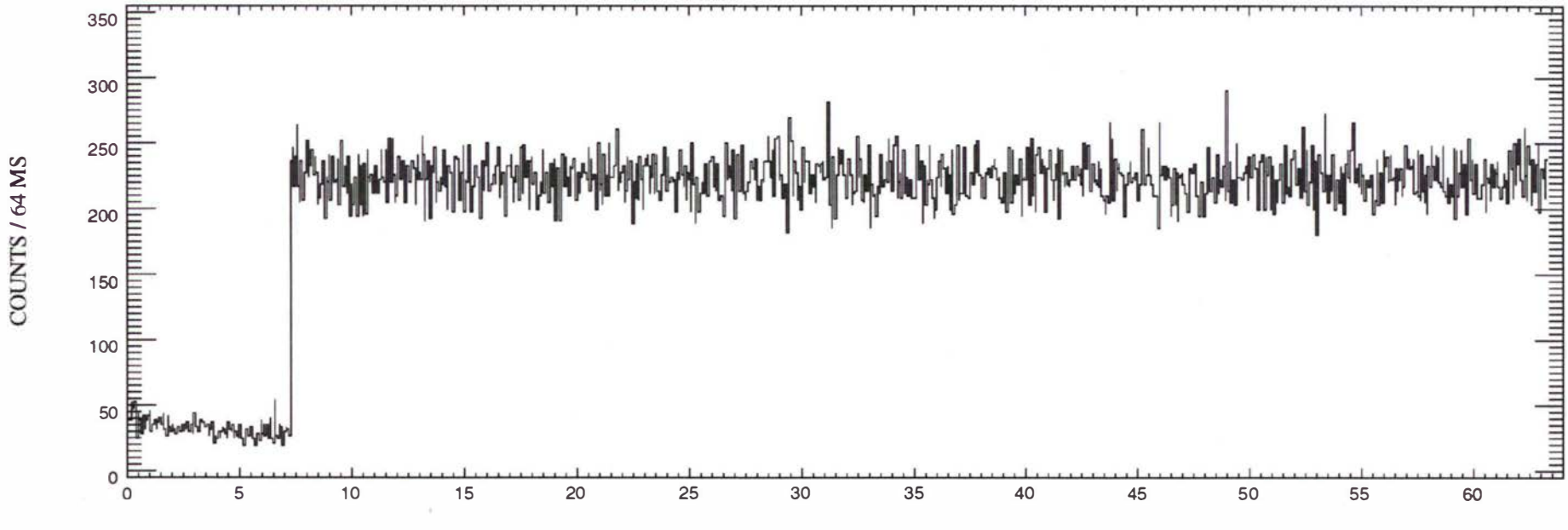


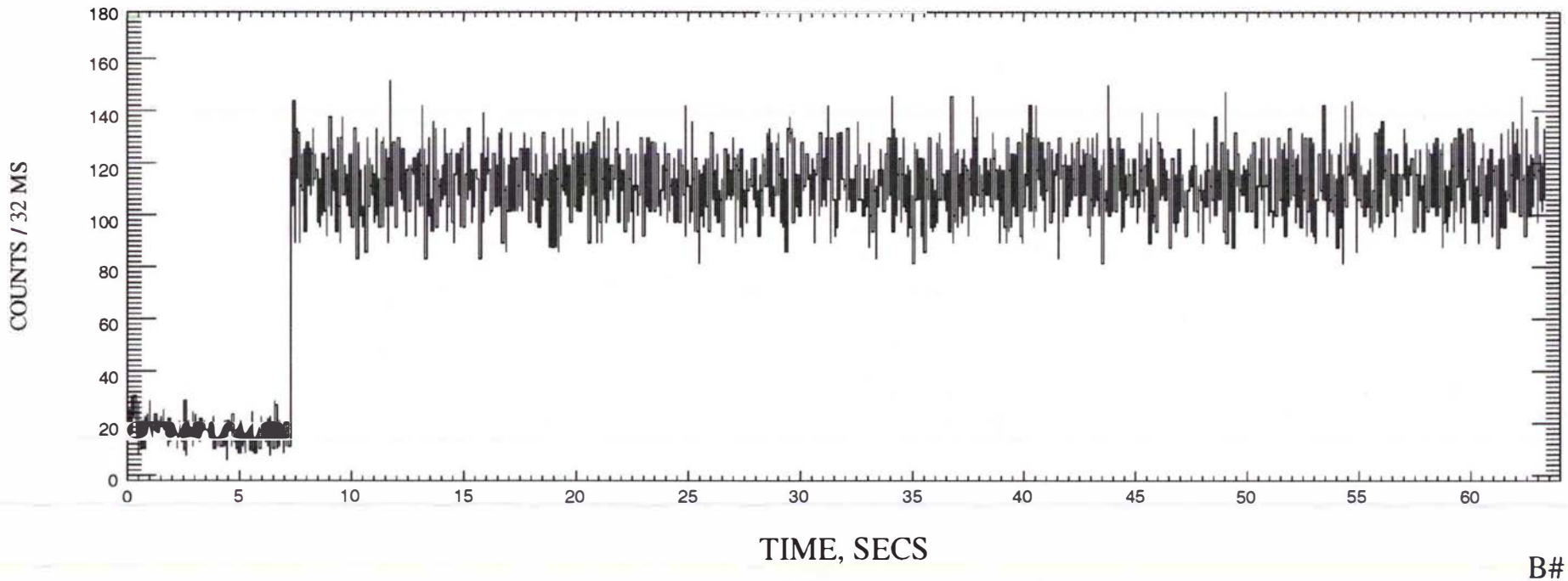


B# 13

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

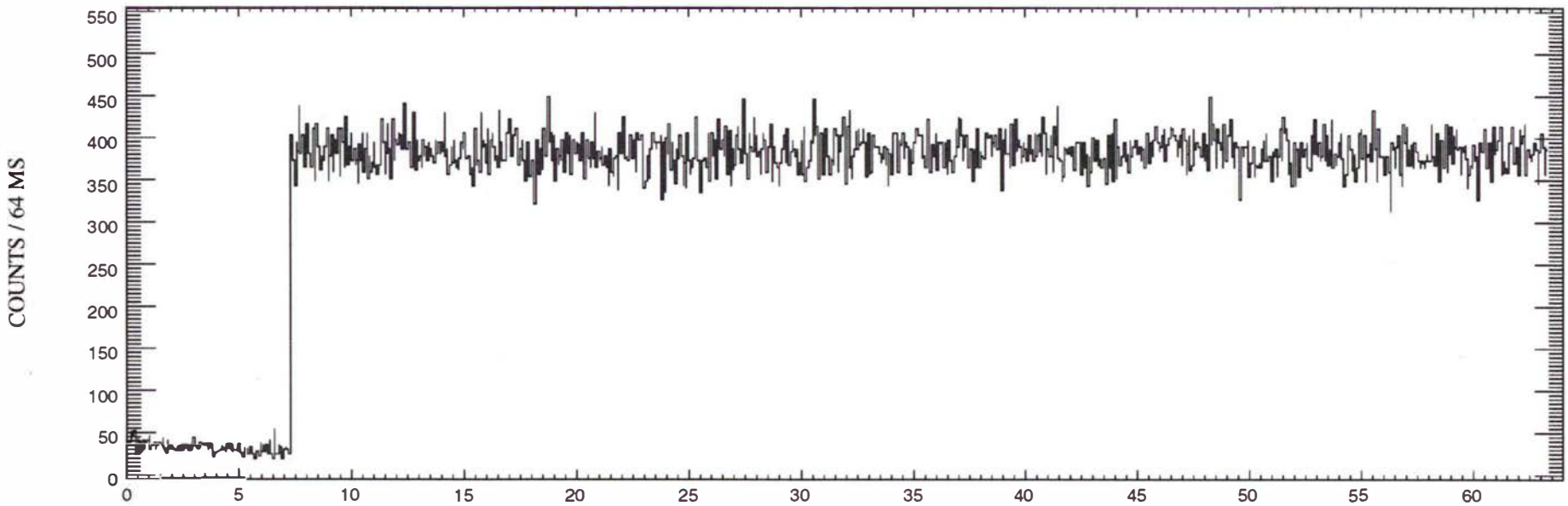
Burst Counter 1 at UT=23.217302949693 h=83582.291 s 23:13:02.291



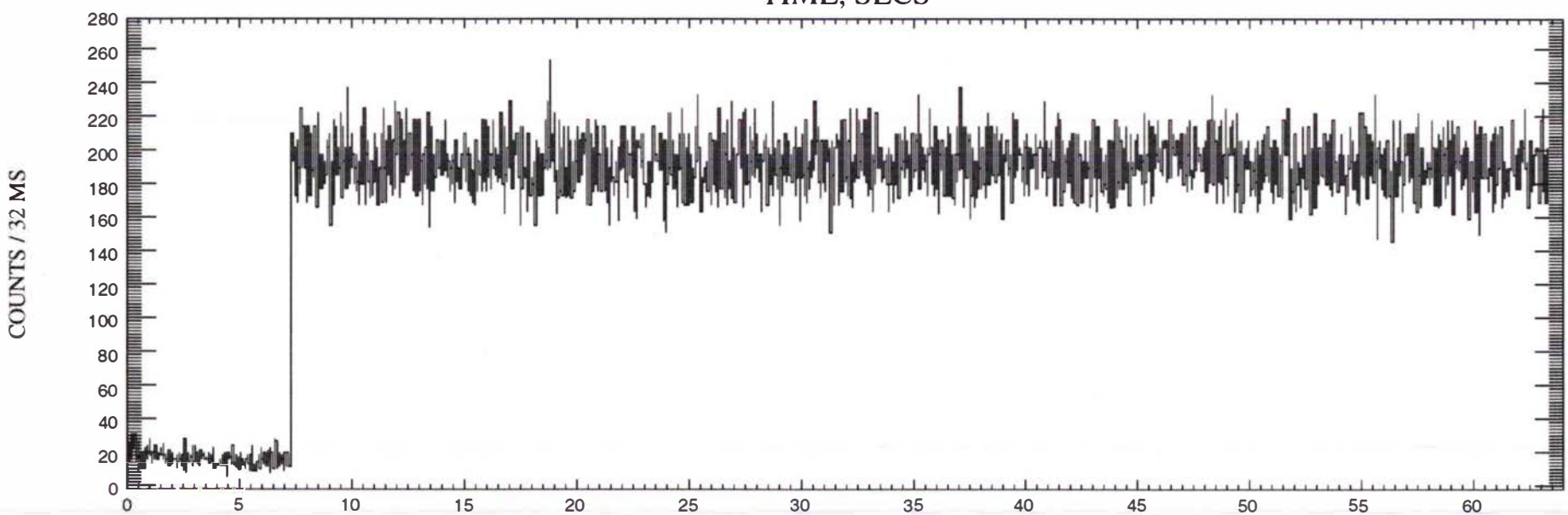


HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 10 at UT= 7.065925971137 h=25437.333 s 07:03:57.333



TIME, SECS

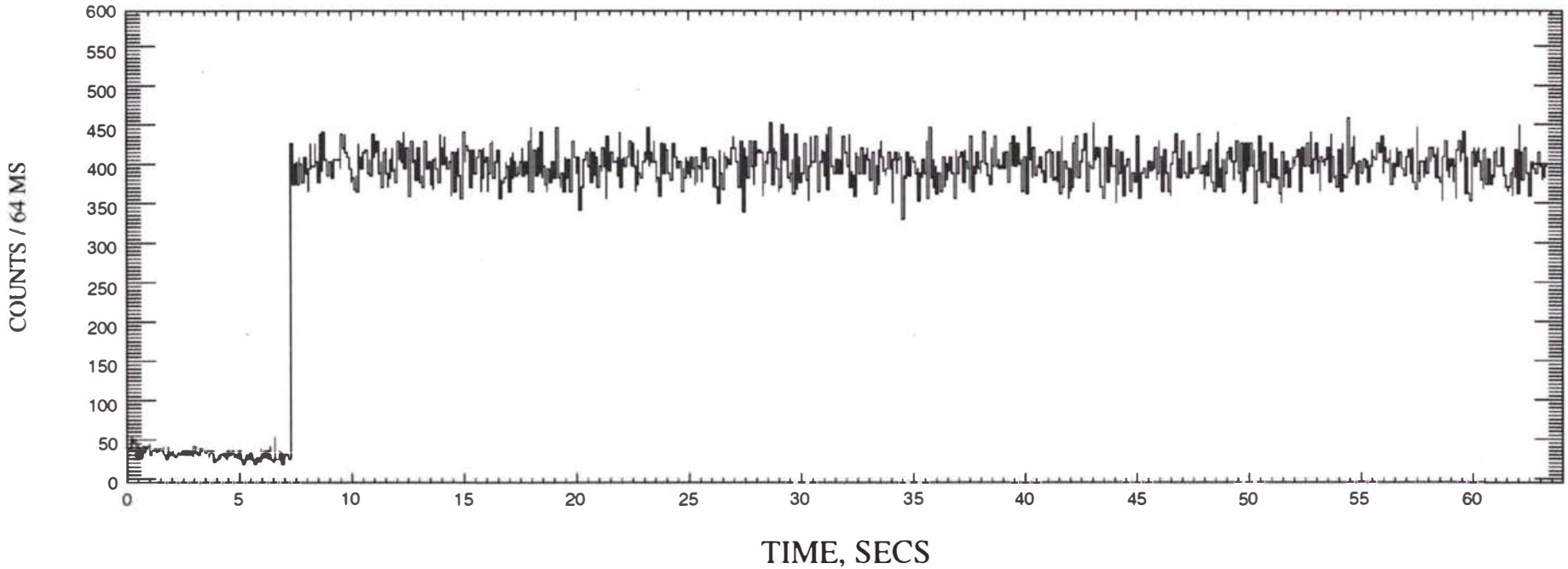


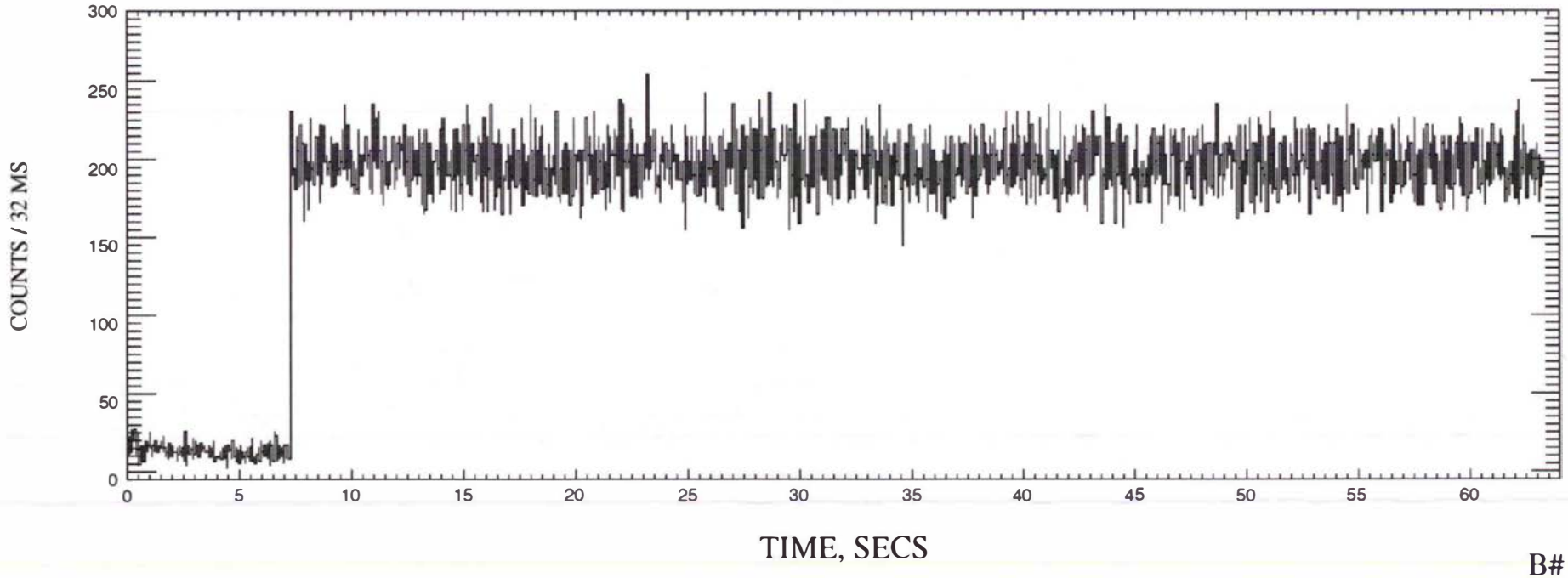
TIME, SECS

B# 11

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 9 at UT= 6.363689990573 h=22909.284 s 06:21:49.284

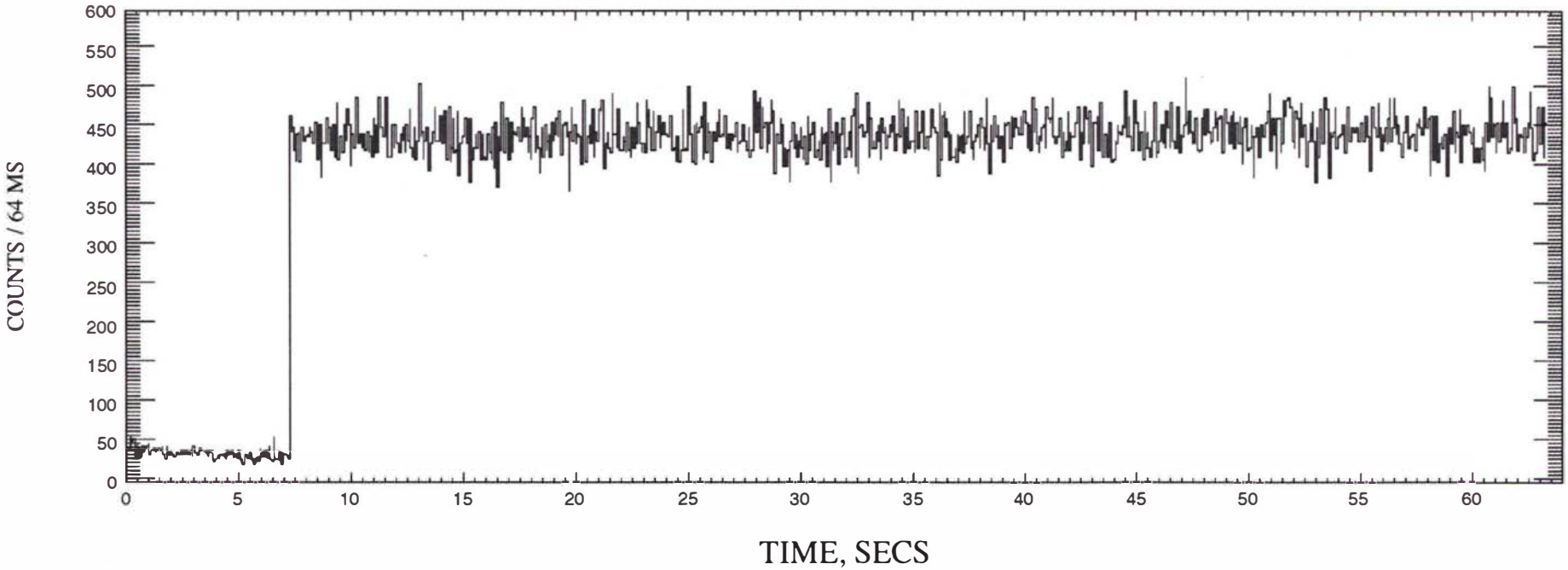


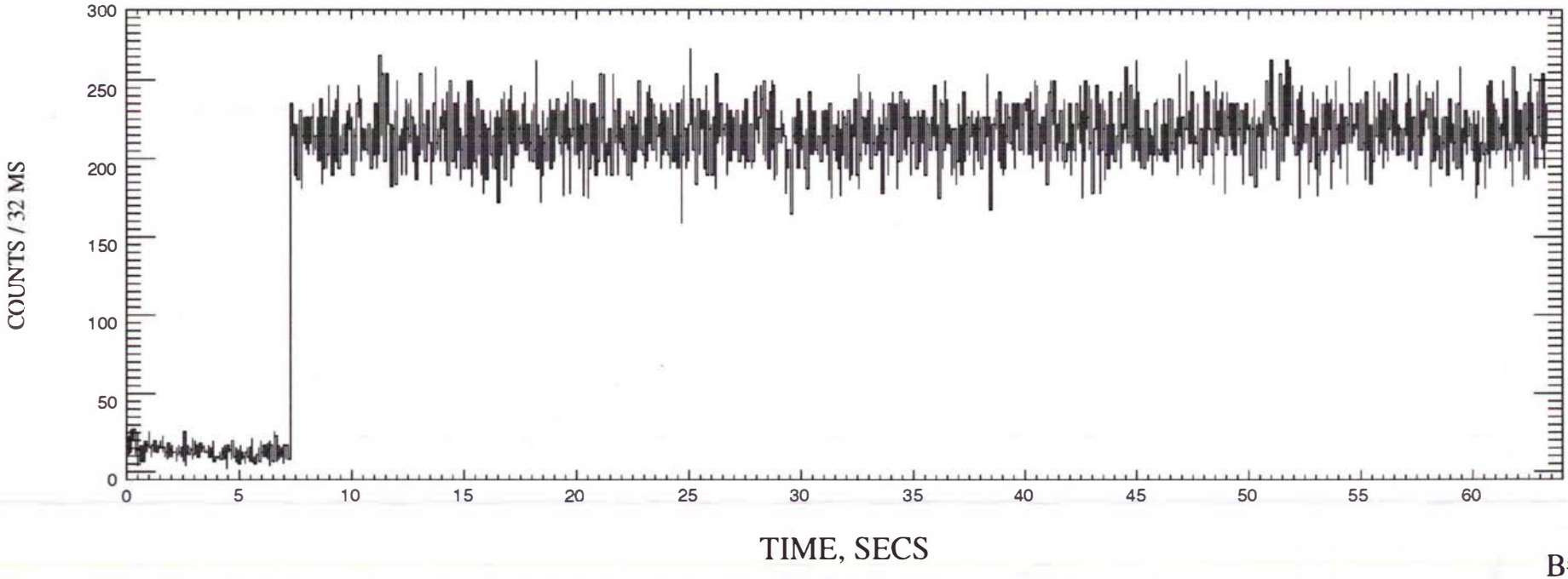


B# 10

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 0 at UT= 0.043586828444 h= 156.913 s 00:02:36.913

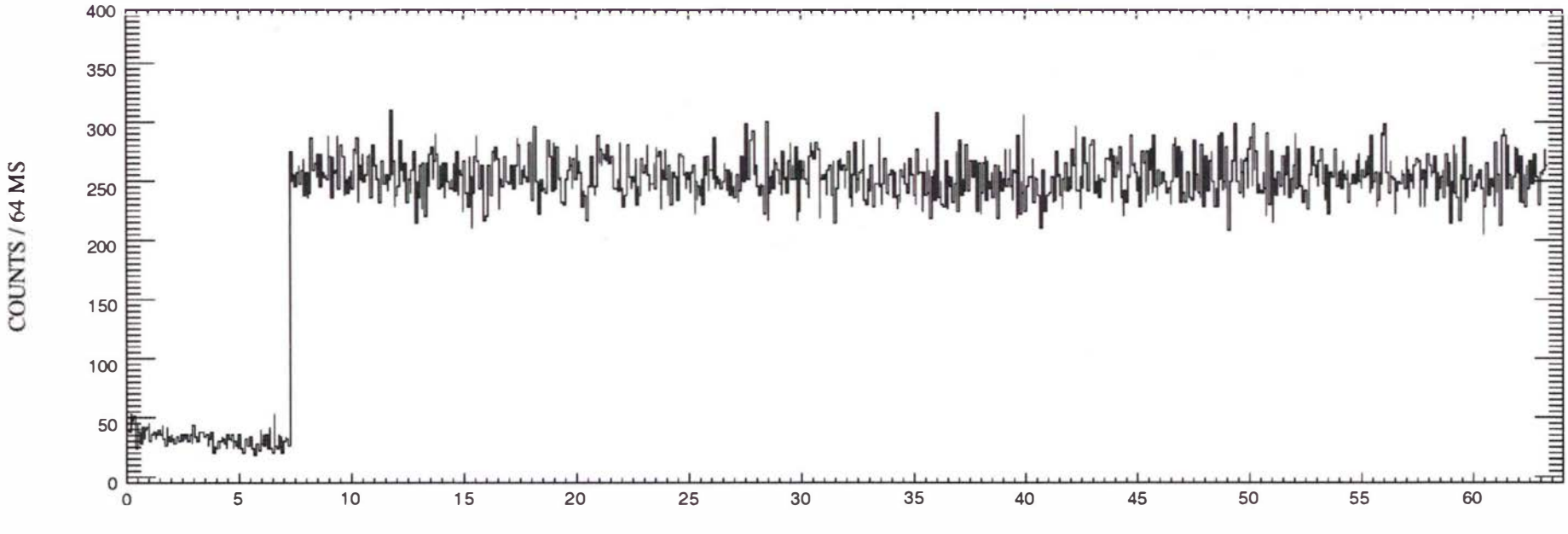


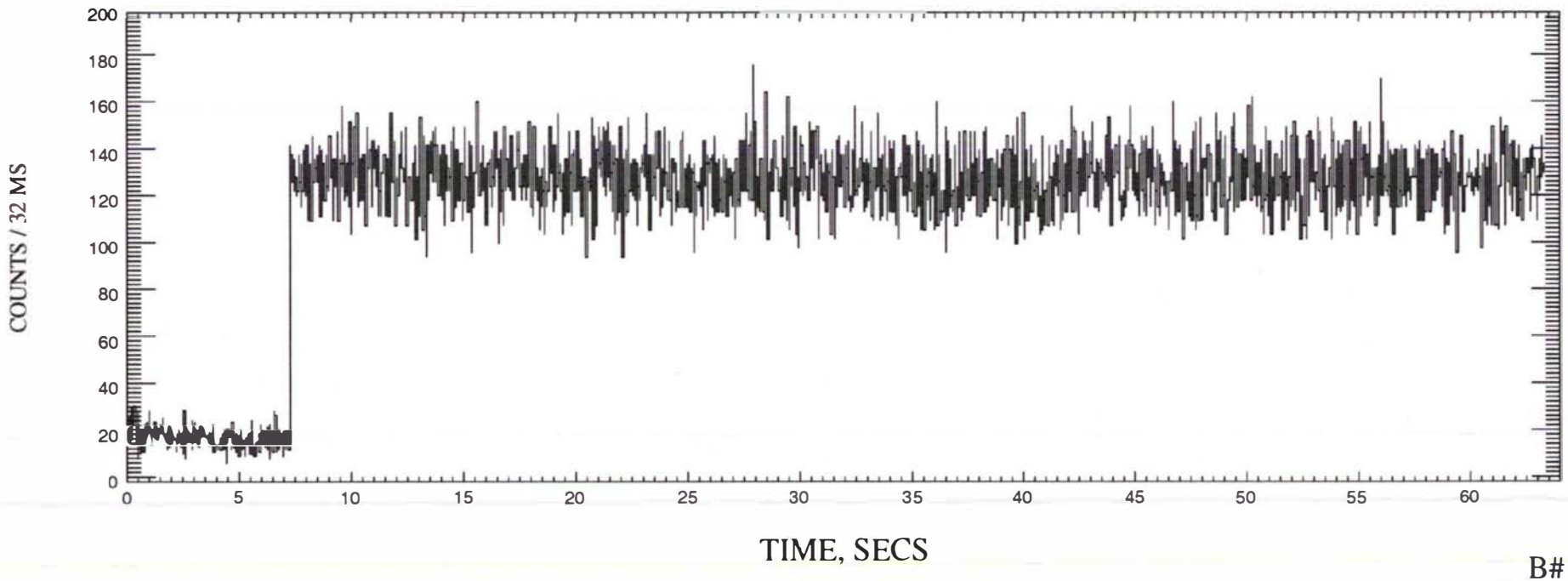


B# 1

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 11 at UT=19.003899061415 h=68414.037 s 19:00:14.037

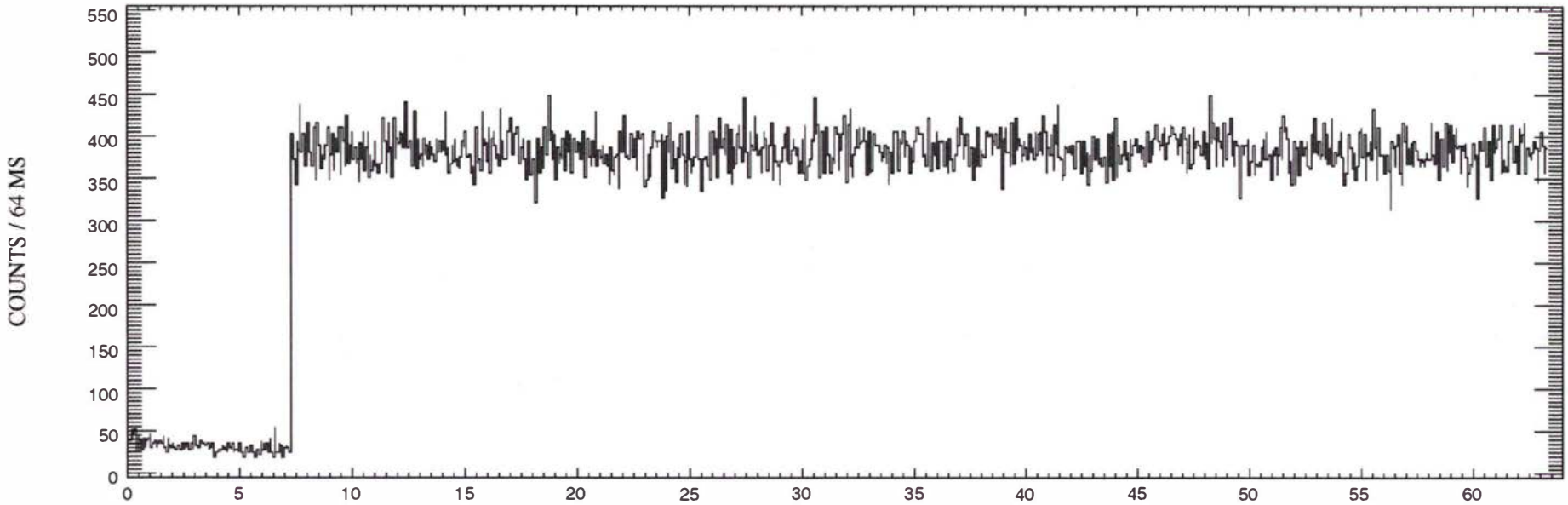




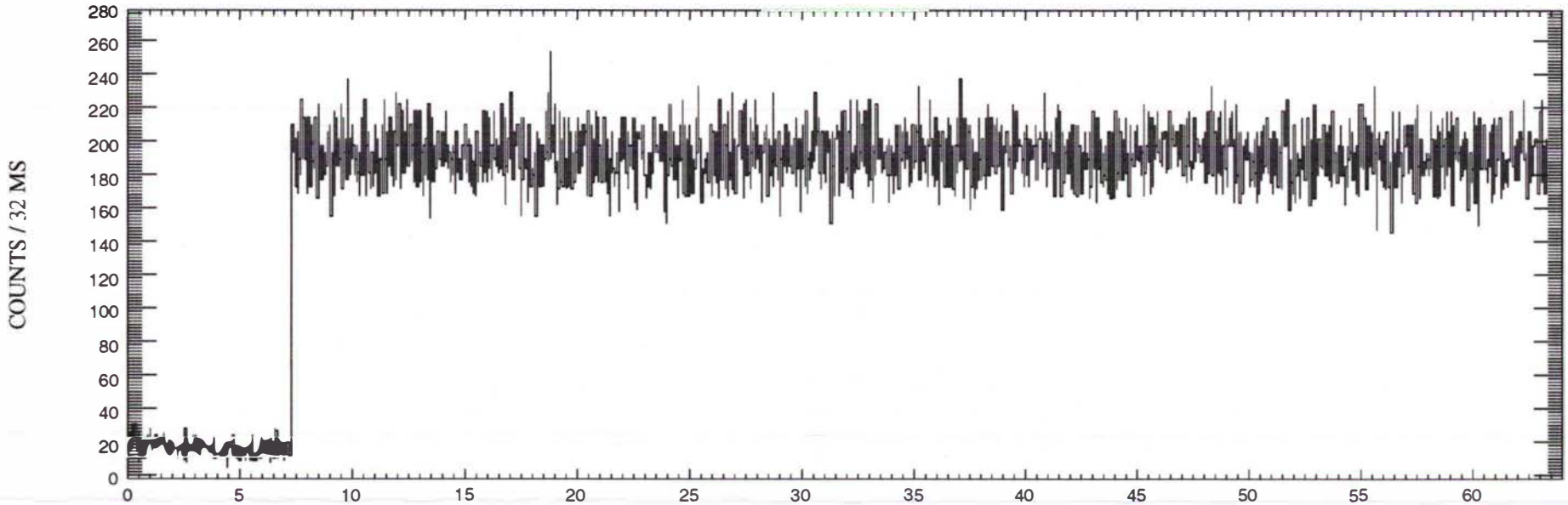
B# 28

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 10 at UT= 7.065925971137 h=25437.333 s 07:03:57.333



TIME, SECS

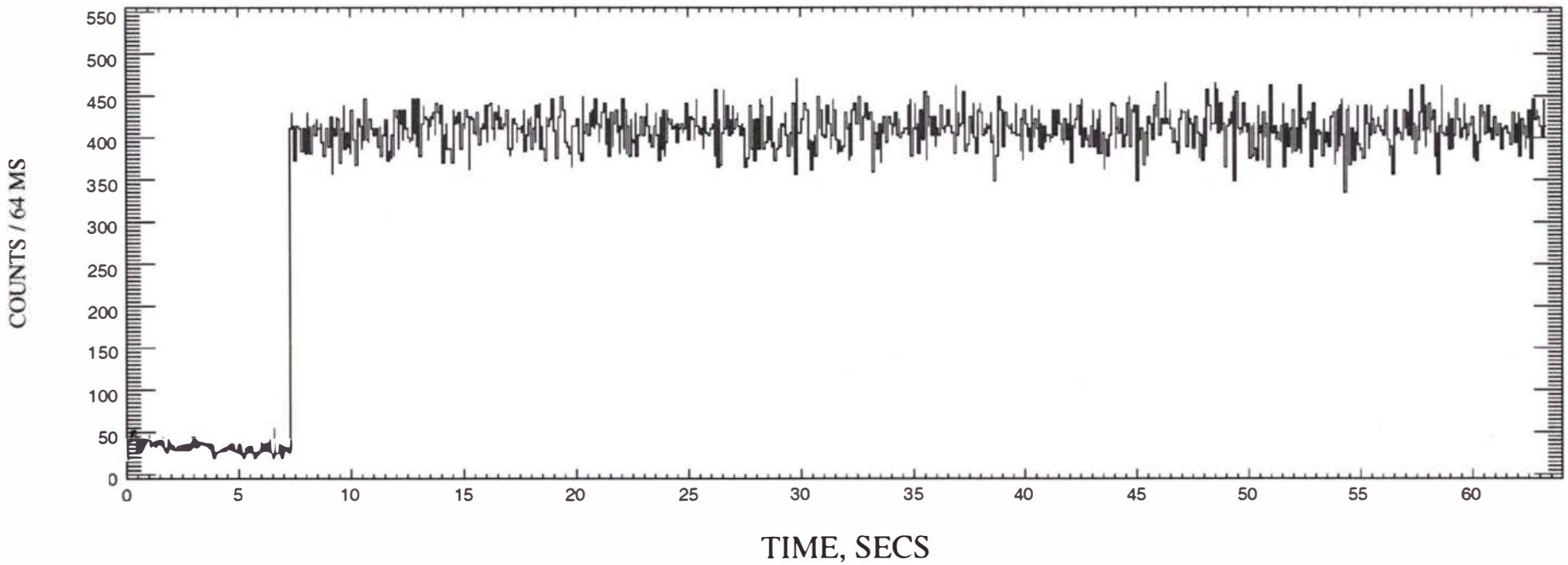


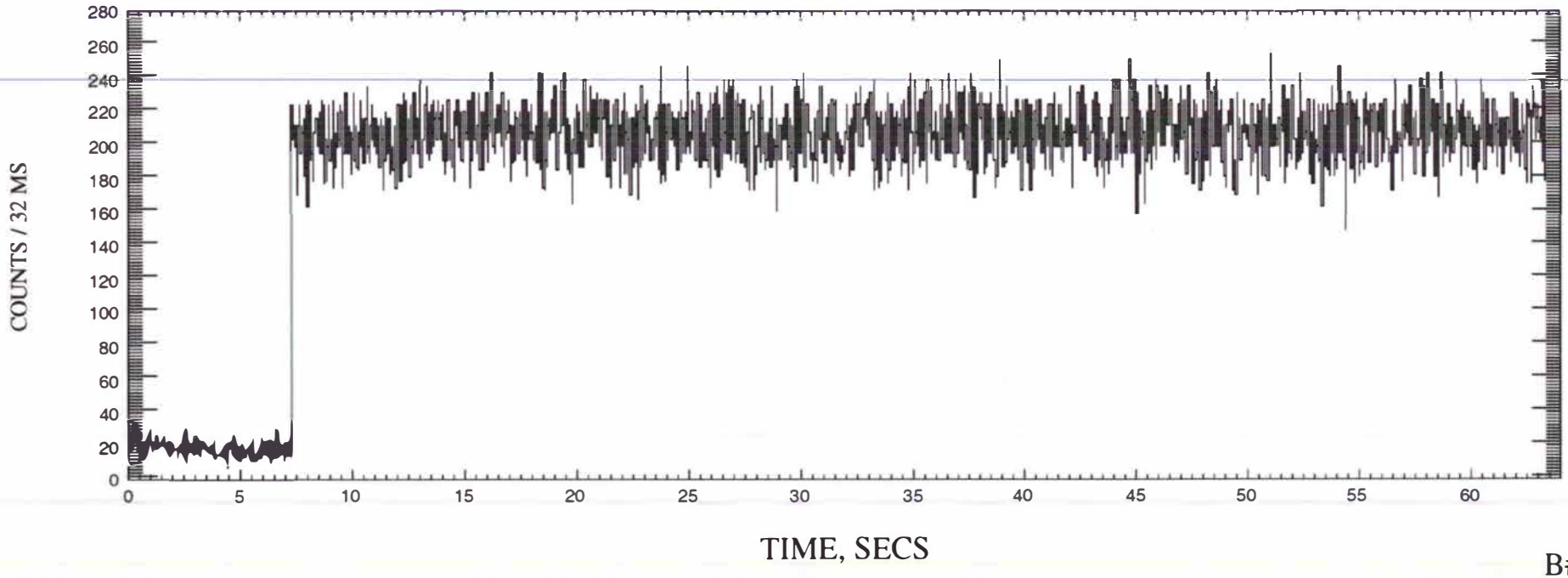
TIME, SECS

B# 11

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 8 at UT= 5.661458346049 h=20381.250 s 05:39:41.250

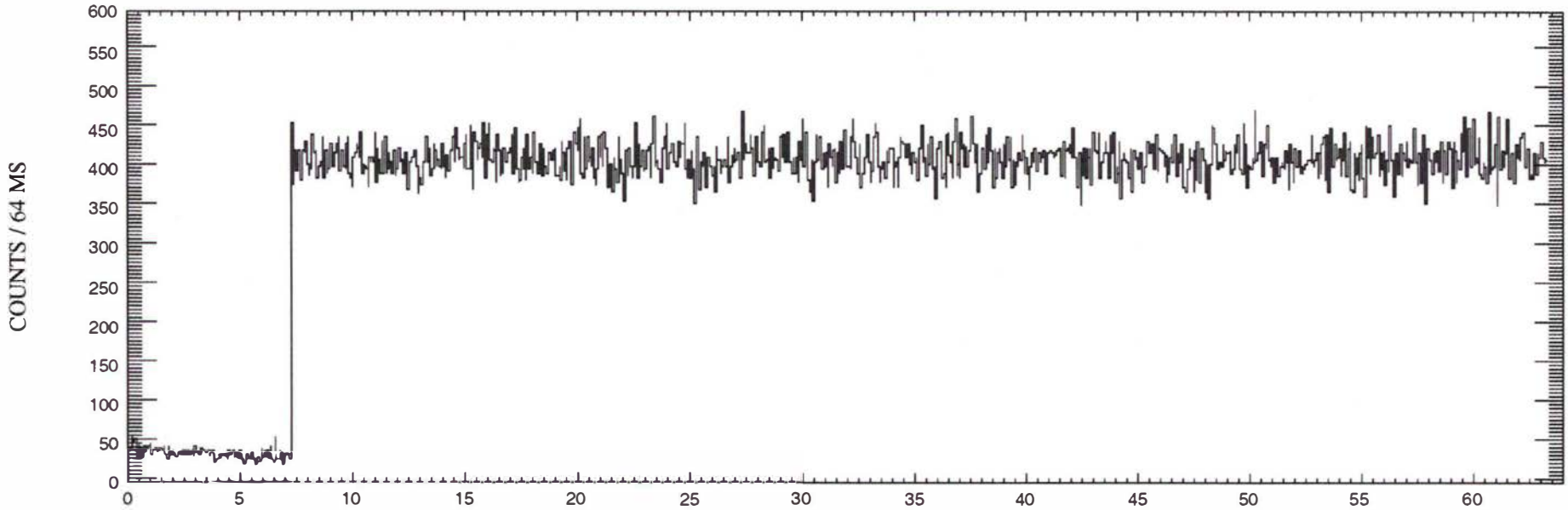




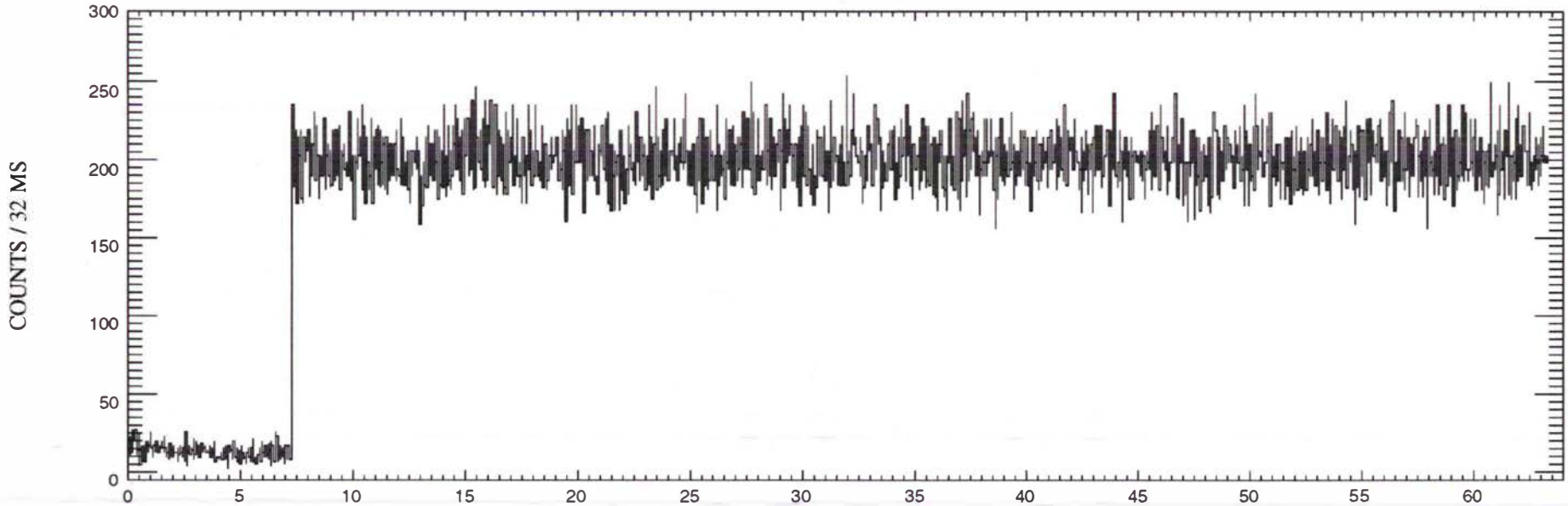
B# 9

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

Burst Counter 7 at UT= 4.959222361247 h=17853.201 s 04:57:33.201



TIME, SECS

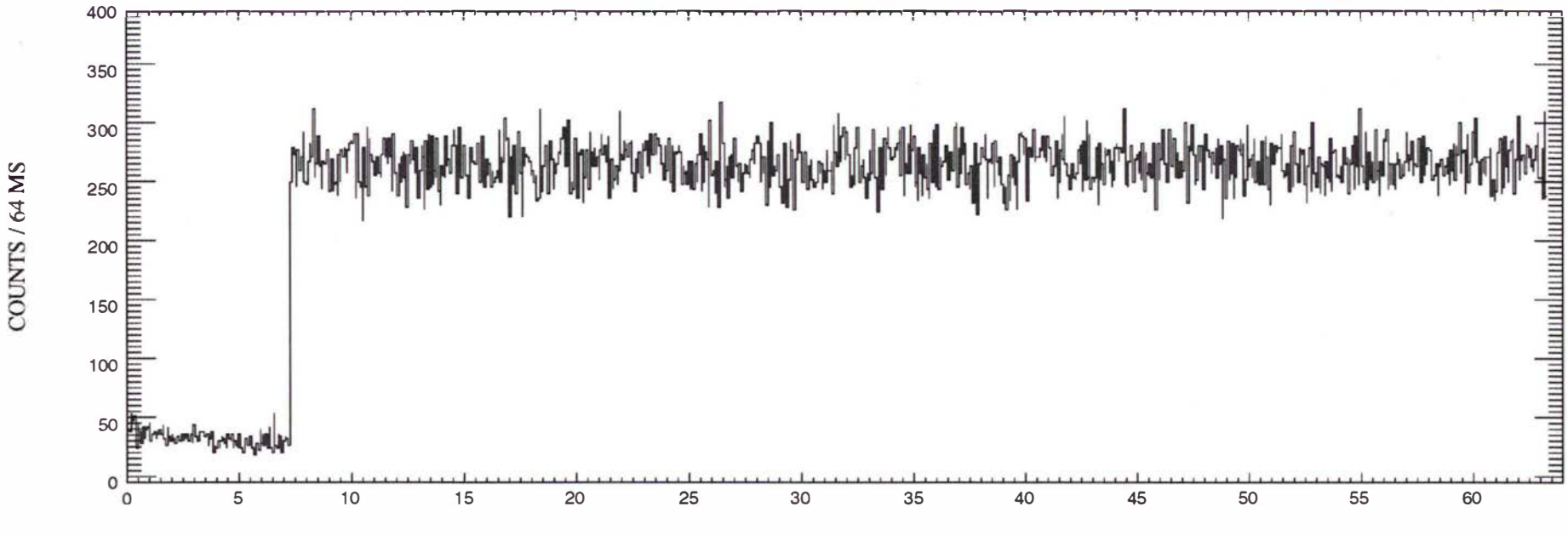


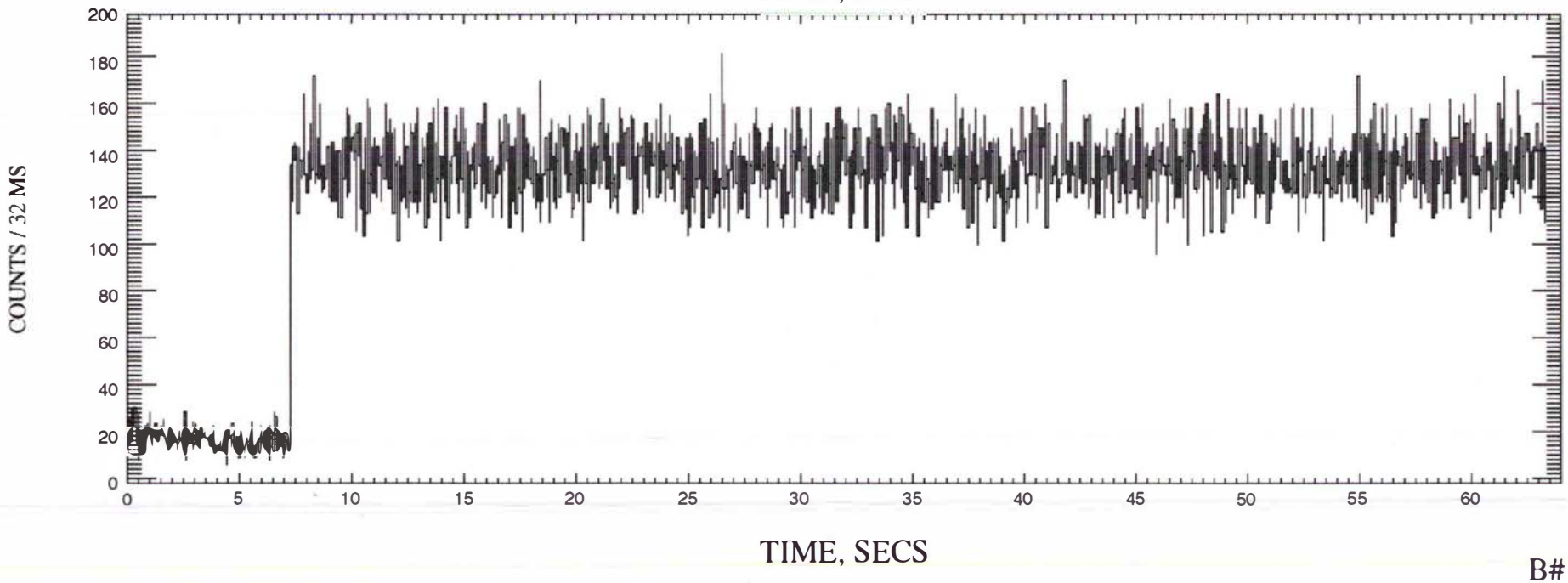
TIME, SECS

B# 8

HUS 2A TRIGGERED DATA QEDR DMY = 27/09/2001 DOY = 270 09/28/01

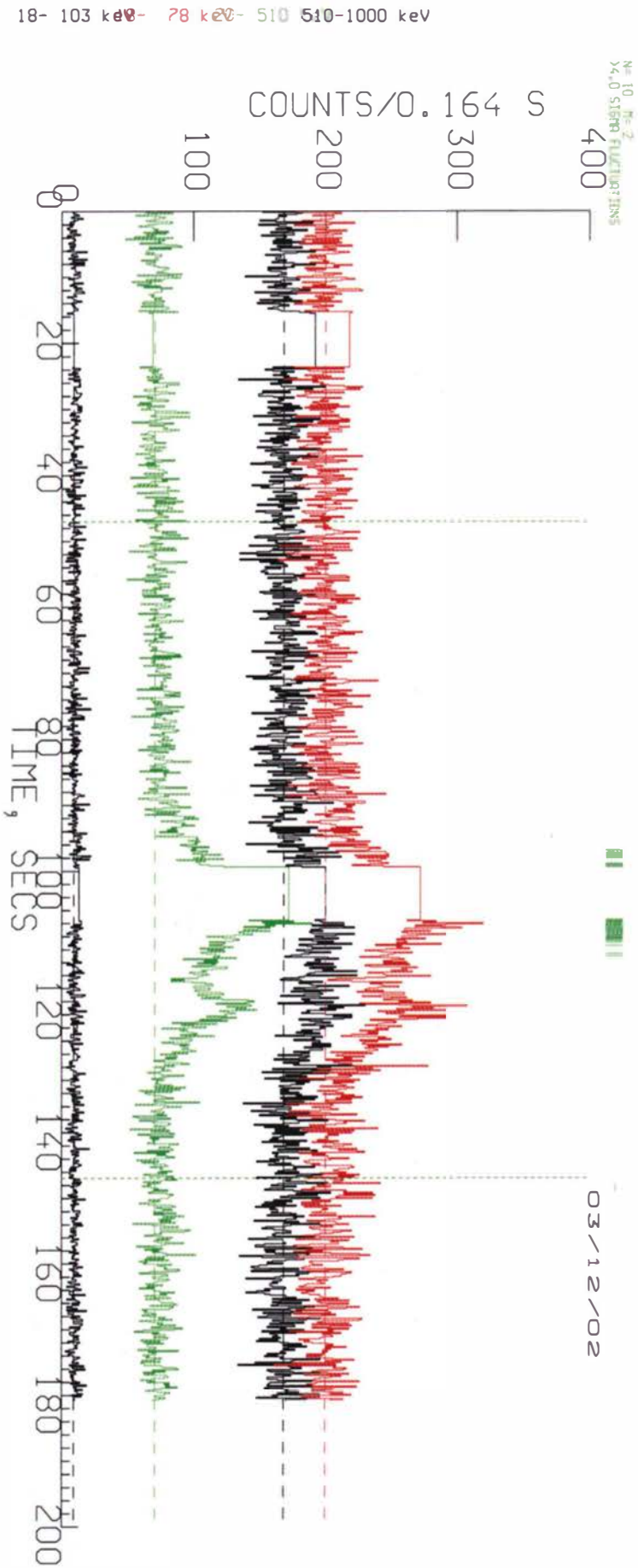
Burst Counter 9 at UT=17.599431432088 h=63357.953 s 17:35:57.953





B# 26

HETE-II 28/09/01 60730.907



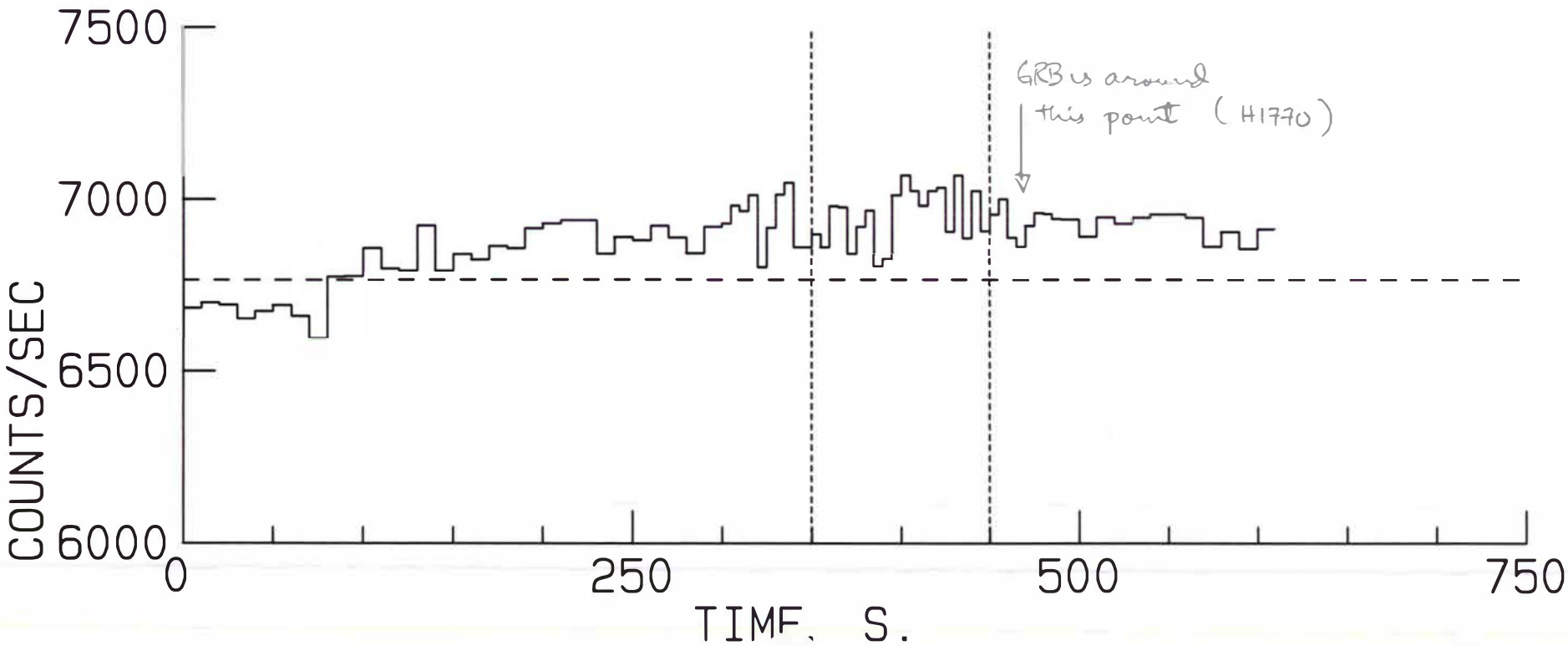
ULYSSES RT

3/12/ 2

28/ 9/ 1 60084.293 s

INTERVALS REGROUPED BY 20

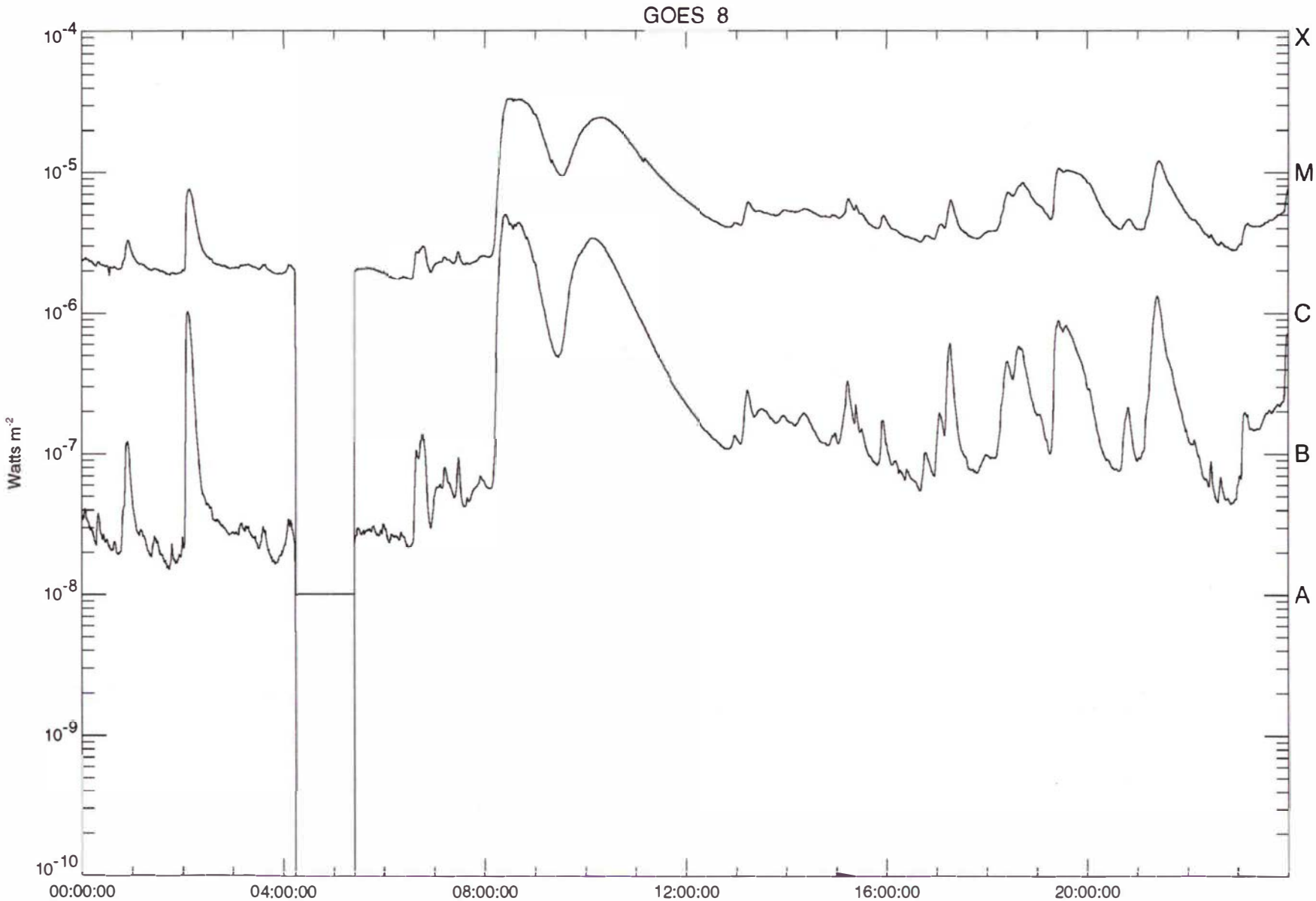
22- 153 keV



From grbhend@mx.iki.rssi.ru Tue May 18 11:35:21 2004
Date: Tue, 18 May 2004 22:34:00 +0400
From: "GRB HEND" <grbhend@mx.iki.rssi.ru>
To: "recipient1" <grbhend@mx.iki.rssi.ru>,
"recipient2" <khurley@sunspot.ssl.berkeley.edu>
Subject: No data in HEND Data Base
MIME-Version: 1.0
X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2600.0000
X-IKI-MailScanner-Information: Please contact the ISP for more information
X-IKI-MailScanner: Found to be clean
X-MailScanner-From: grbhend@mx.iki.rssi.ru

Received letter from = khurley@ssl.berkeley.edu
No HEND data for GRB around 010928 16:31:56

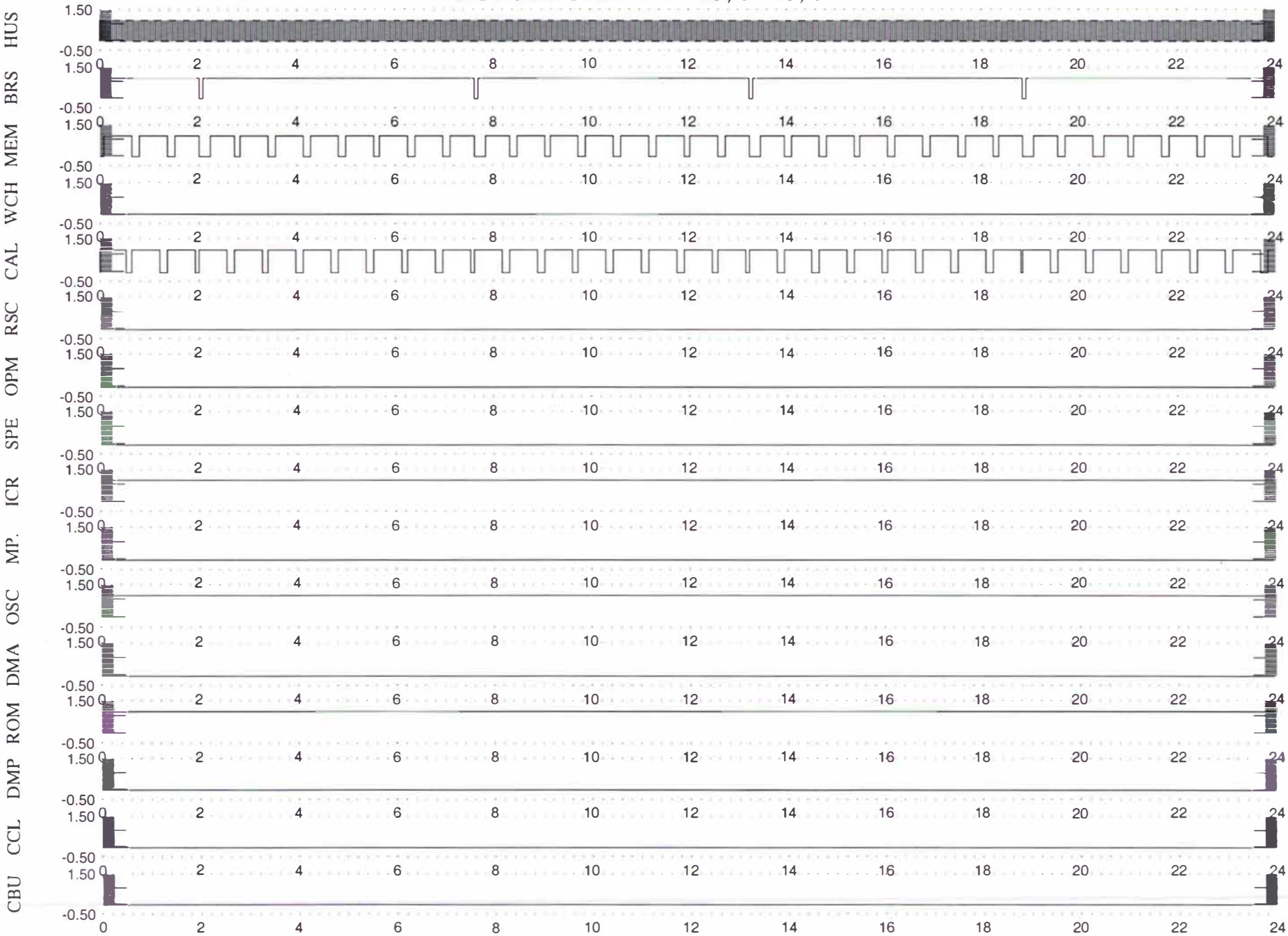
<This message contains 1 attachments (not printed)>



Data Start: 01/09/28, 0000:00 Plot created: 01/10/02, 0952
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

HUS MODES EDR day 271, year 2001 to day 271, year 2001 01/22/02

BURST NUMBER 3 - 15, 0 - 15, 0 - 4



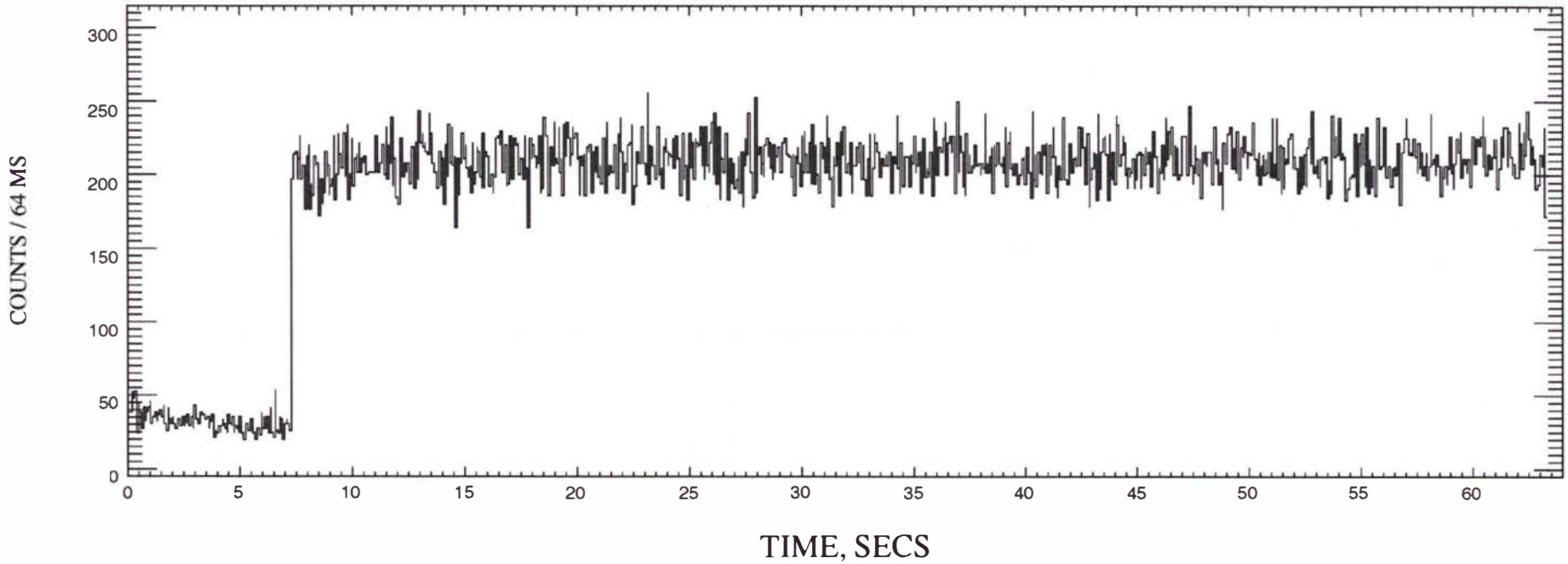
HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 28/09/2001 DOY = 271 01/22/02

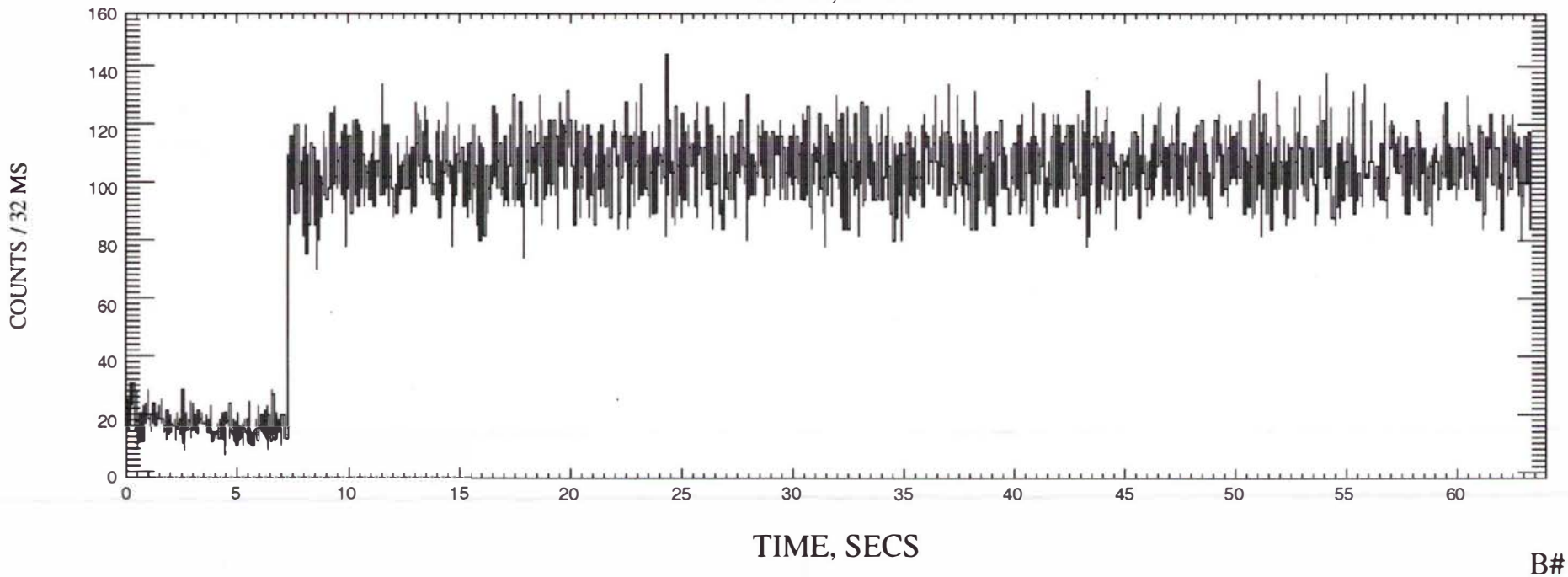
CALIBRATION DATA INCLUDED

UNIVERSAL TIME

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 3 at UT= 0.621770579020 h= 2238.374 s 00:37:18.374

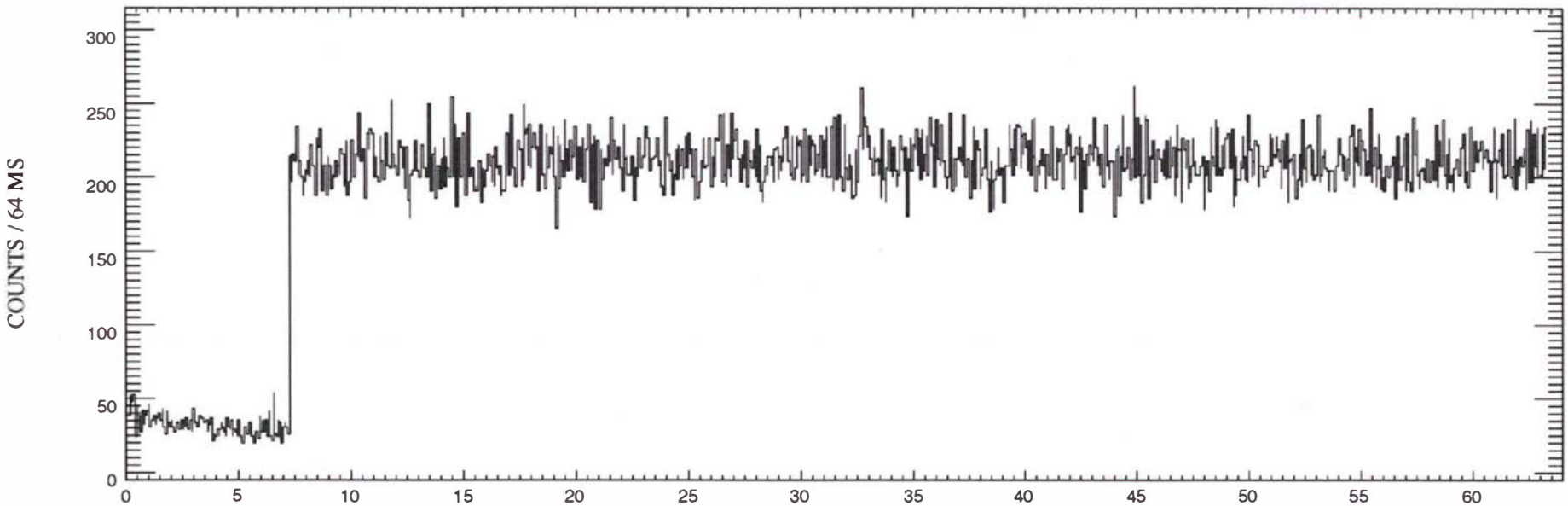




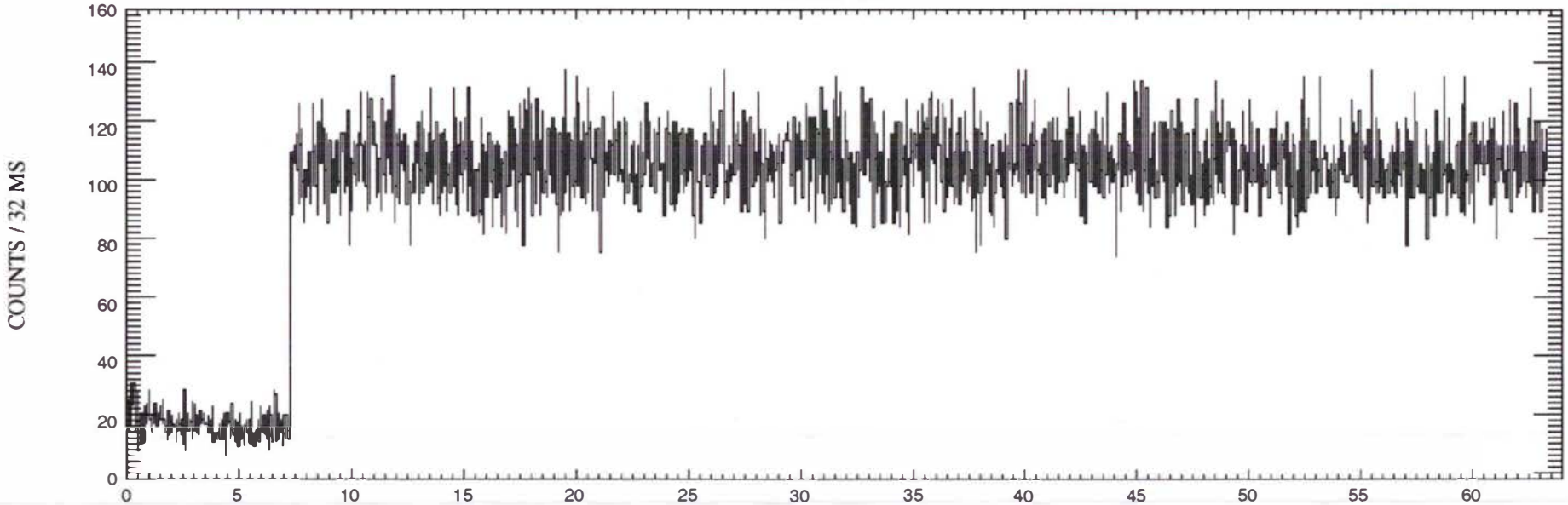
B# 1

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 4 at UT= 1.324004389445 h= 4766.416 s 01:19:26.416



TIME, SECS

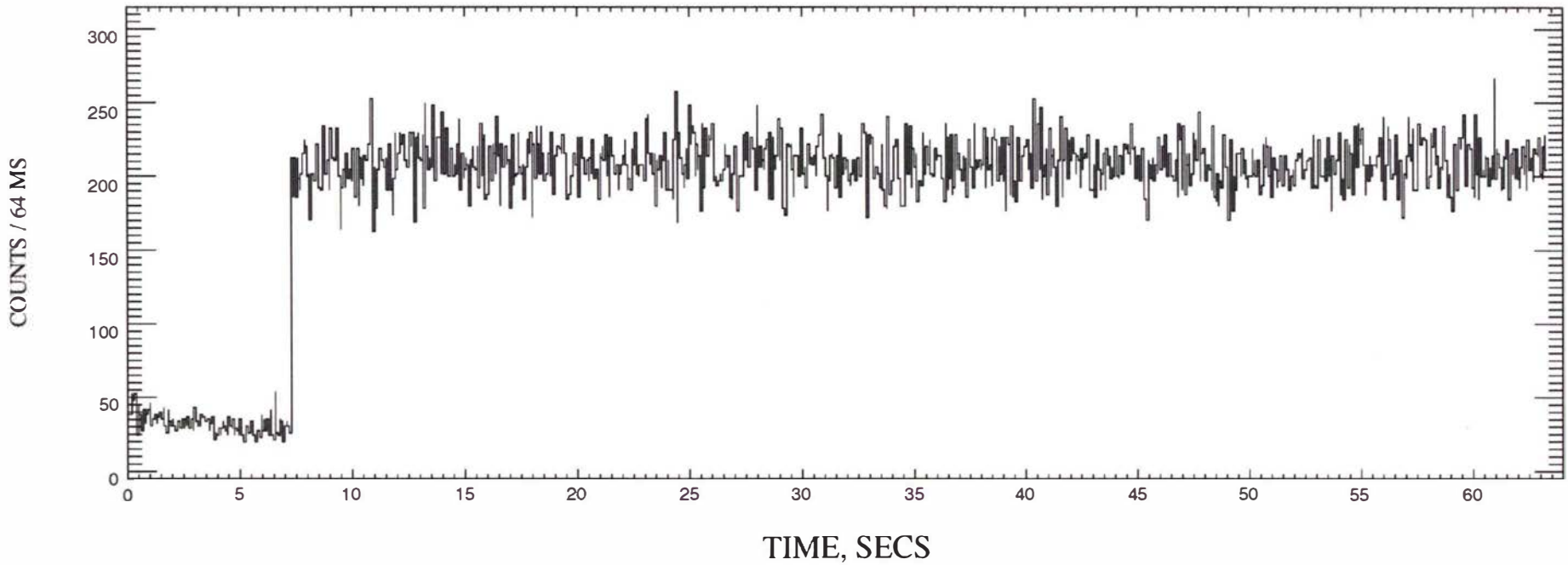


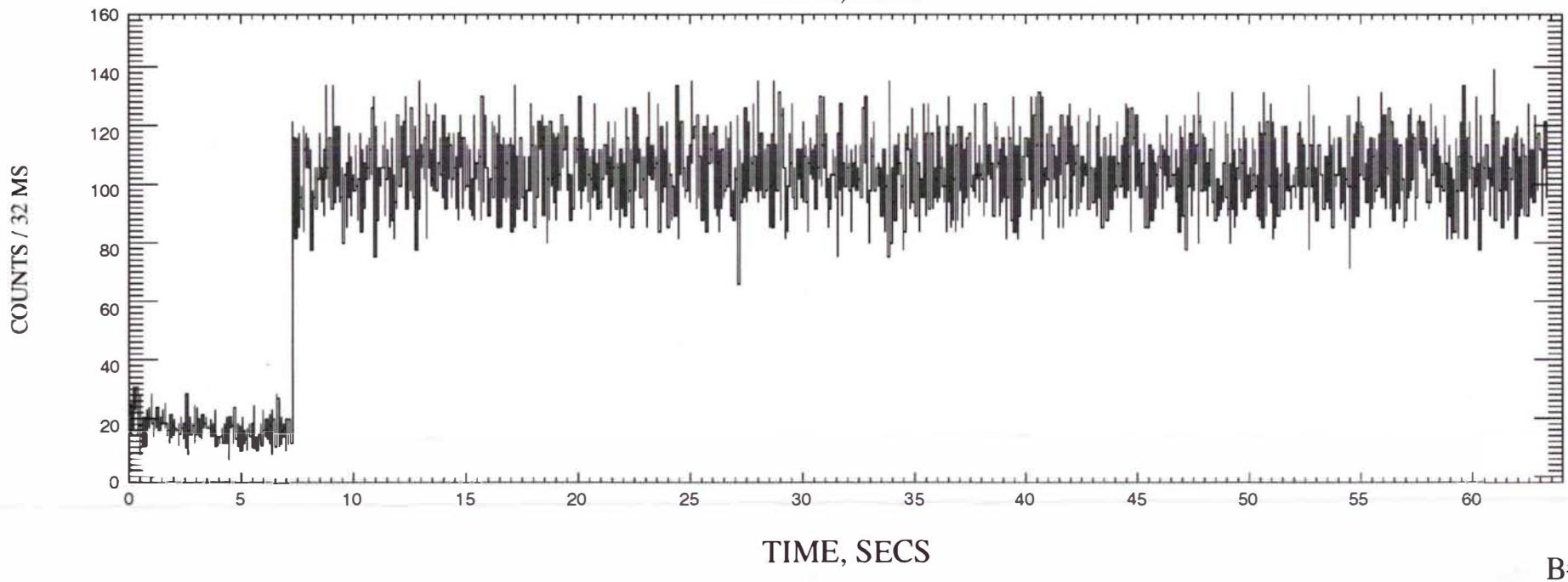
TIME, SECS

B# 2

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 5 at UT= 2.026238204108 h= 7294.458 s 02:01:34.458

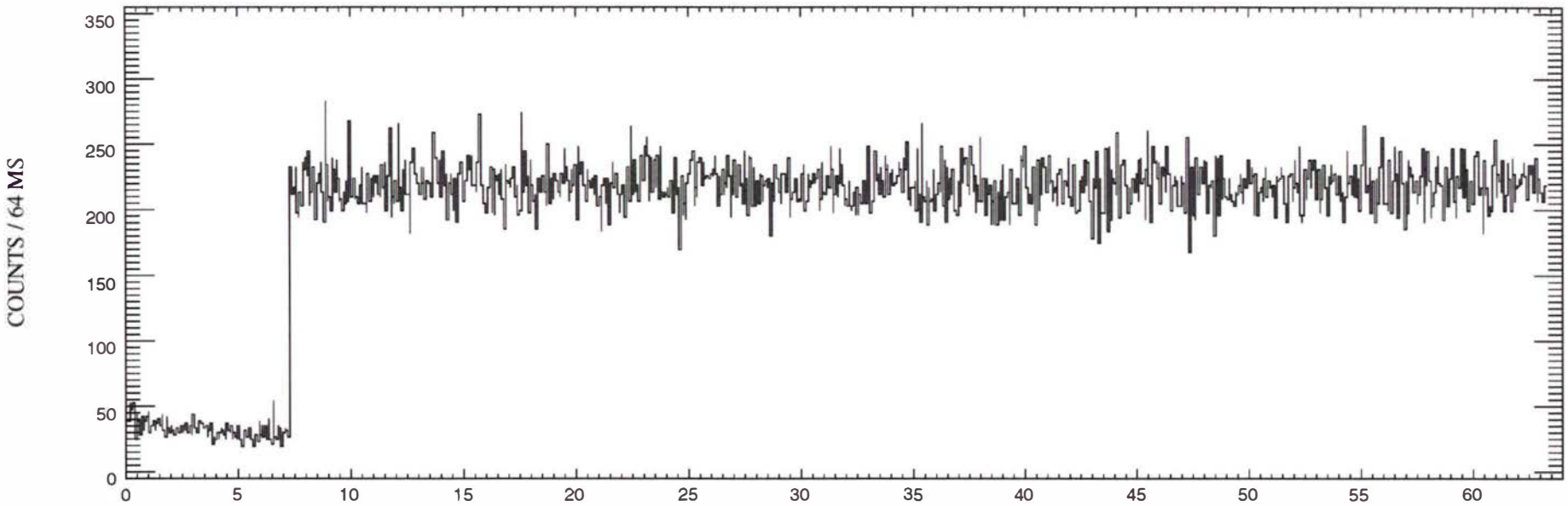




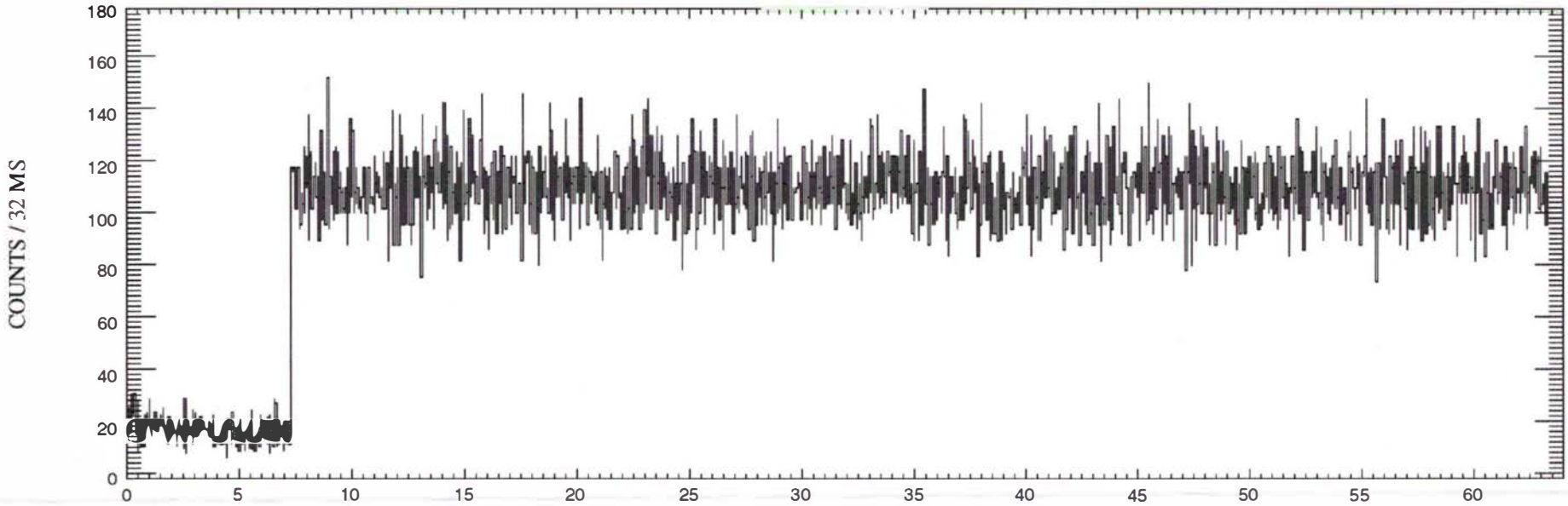
B# 3

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 8 at UT= 4.132938486735 h=14878.579 s 04:07:58.579



TIME, SECS

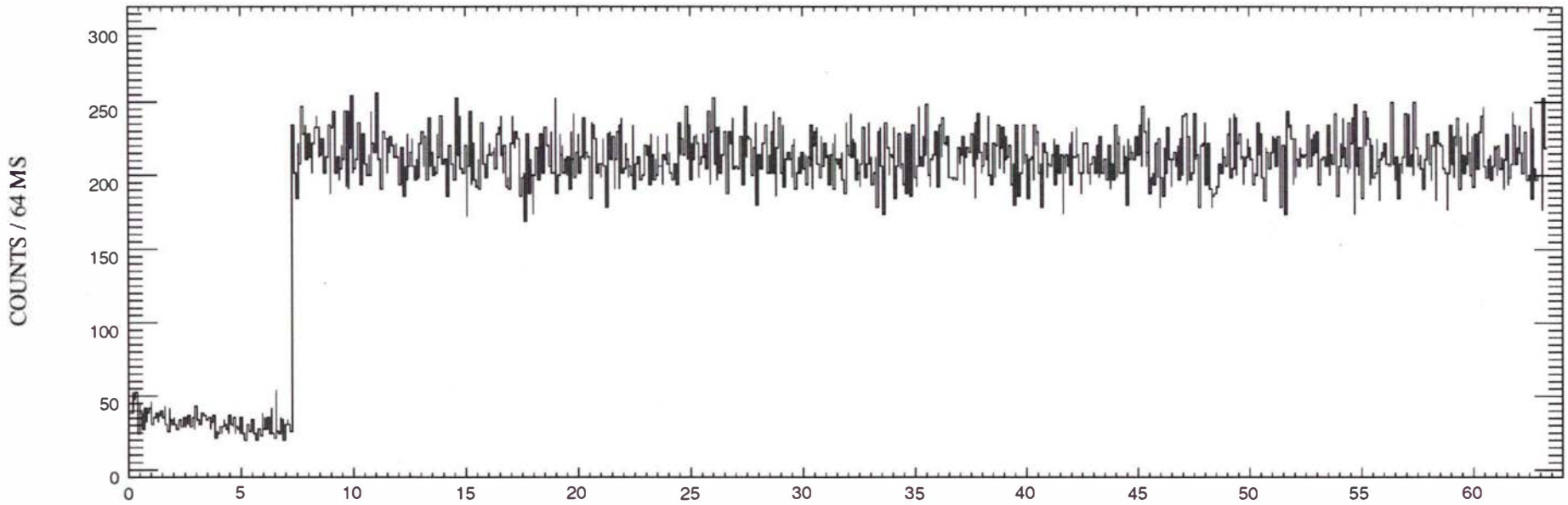


TIME, SECS

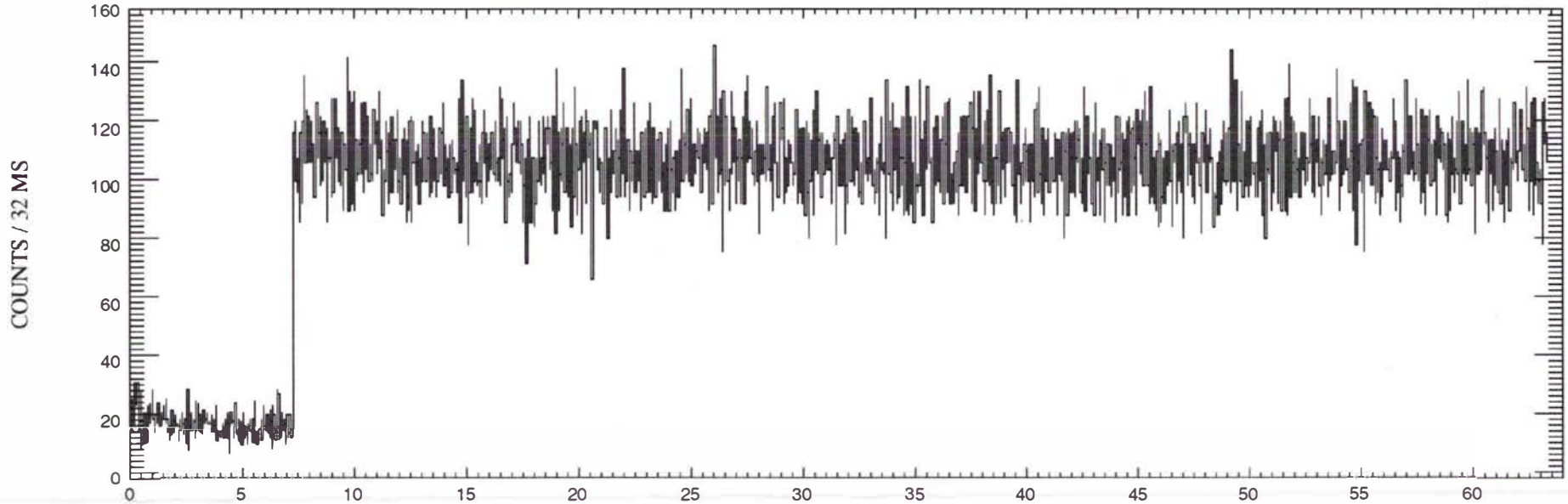
B# 6

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 10 at UT= 5.537406111823 h=19934.662 s 05:32:14.662



TIME, SECS

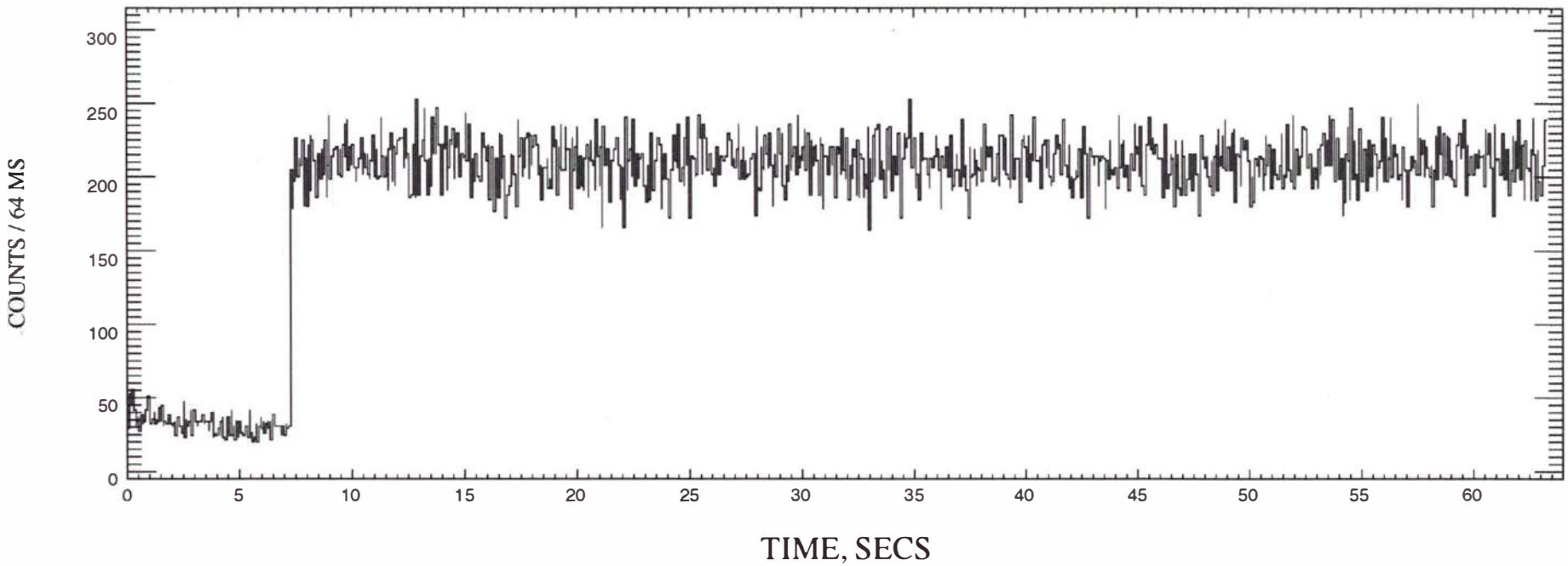


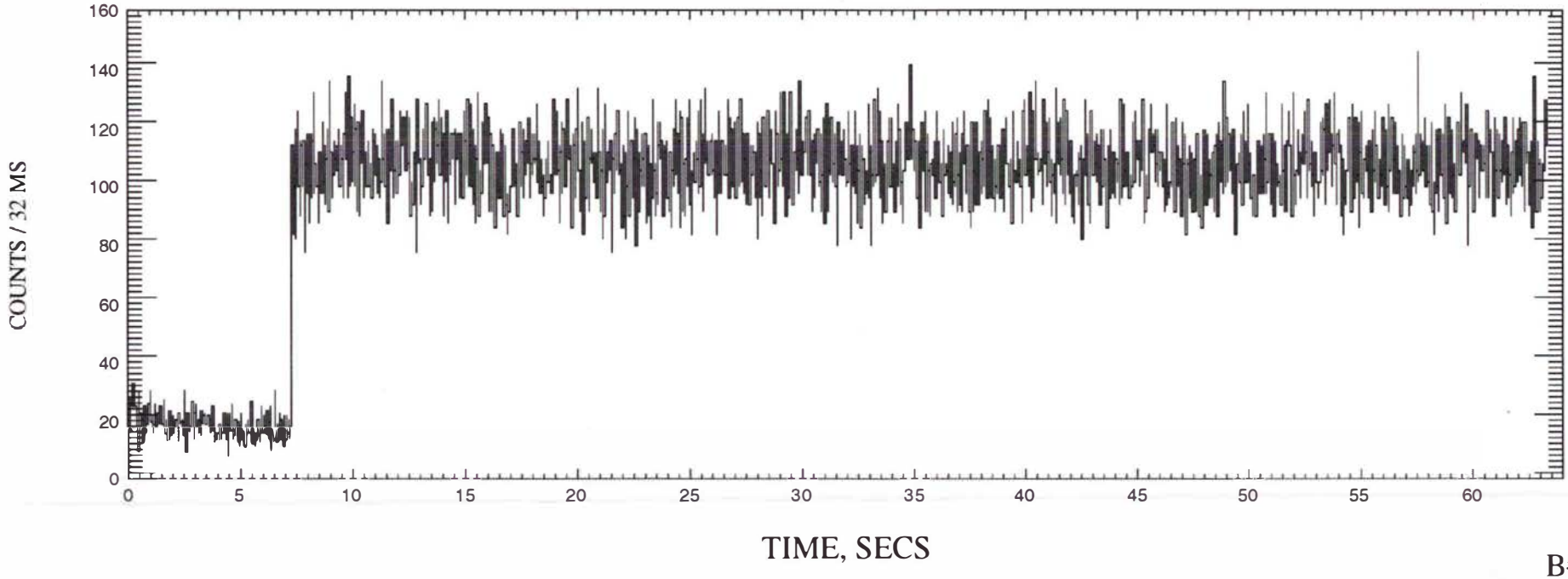
TIME, SECS

B# 8

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 11 at UT= 6.239642096625 h=22462.712 s 06:14:22.712

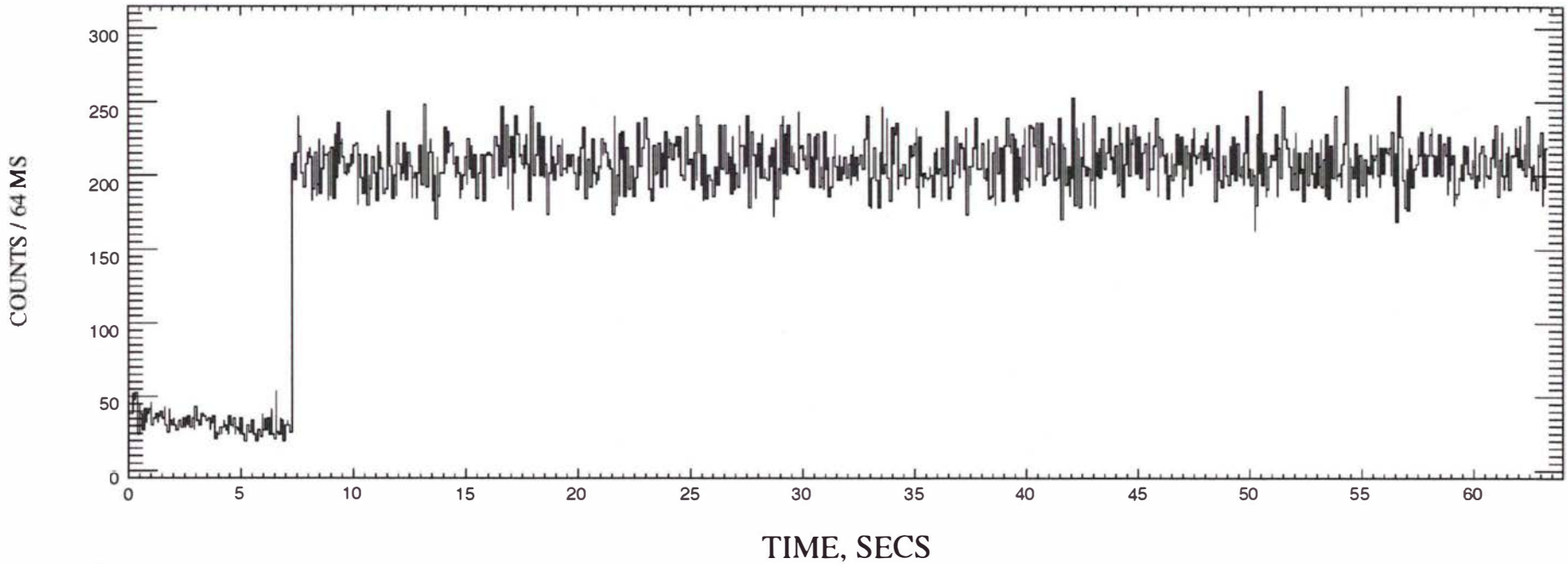


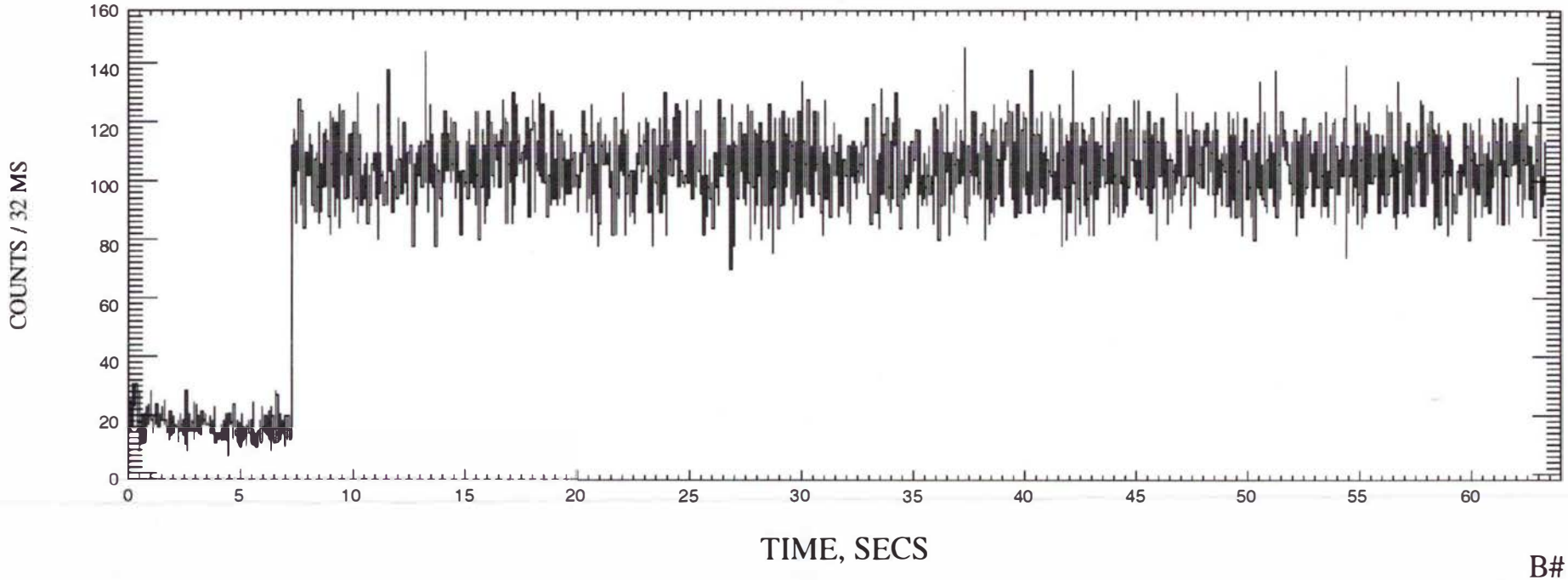


B# 9

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 12 at UT= 6.941873736911 h=24990.745 s 06:56:30.745

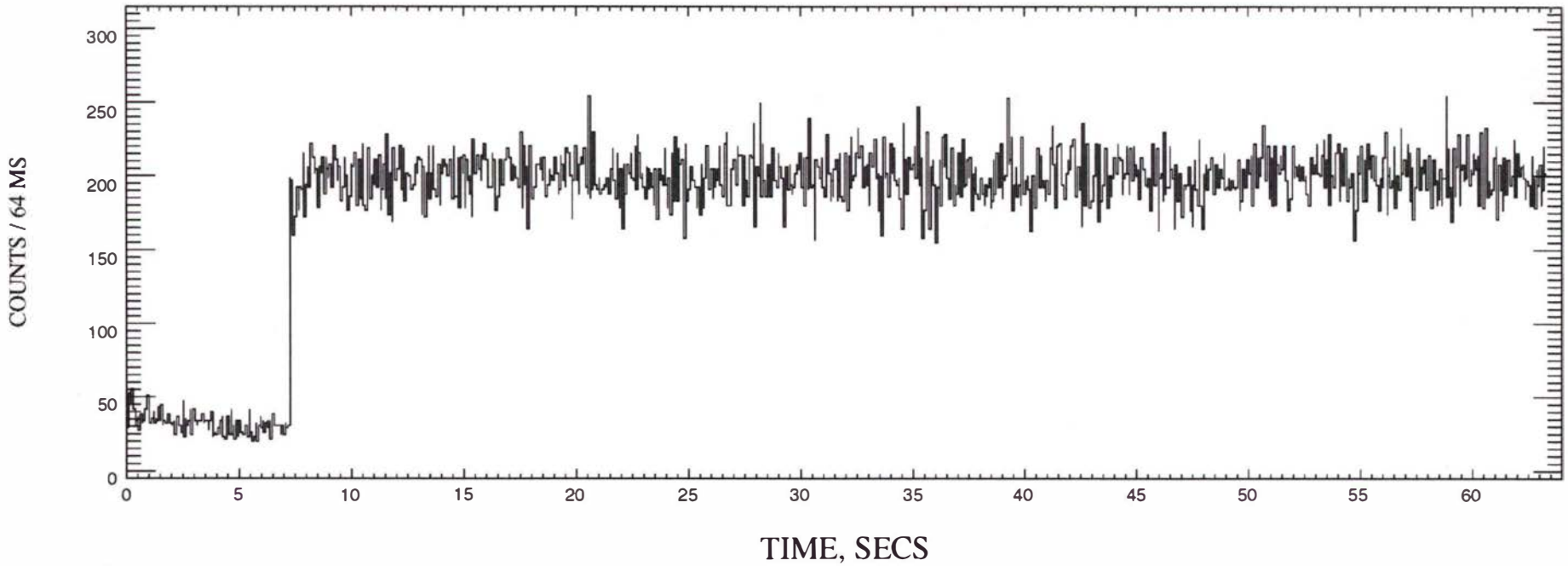


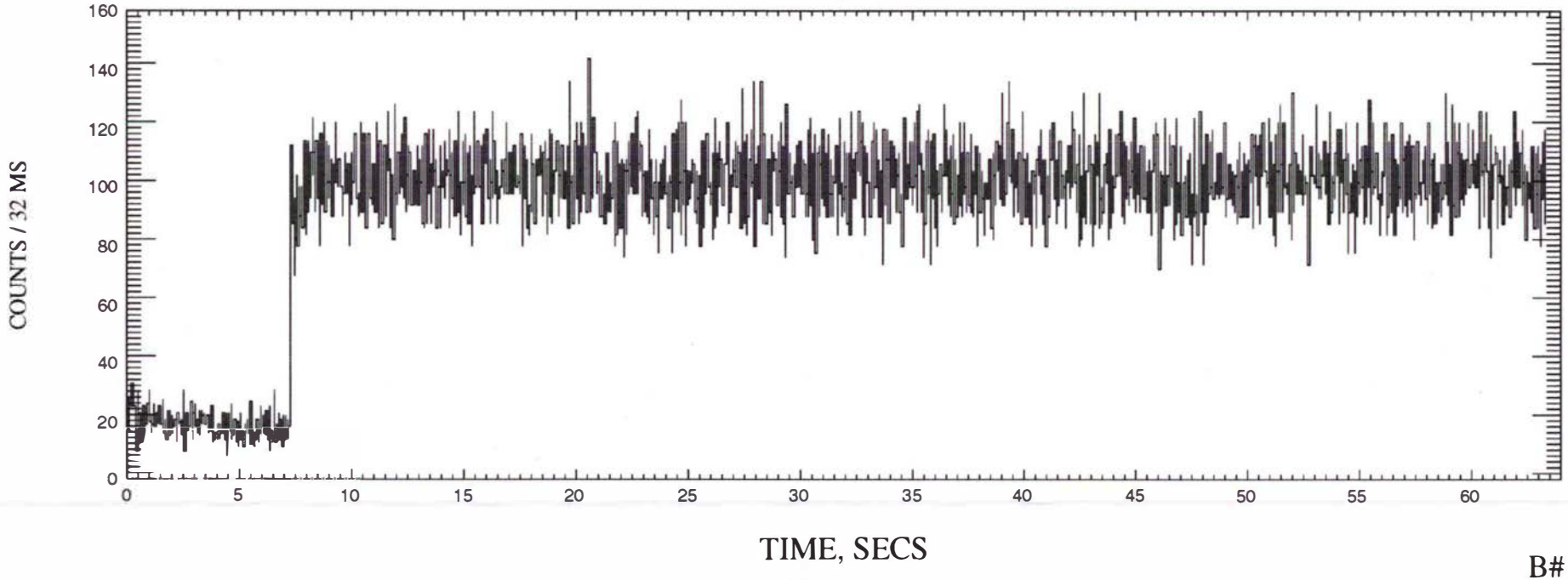


B# 10

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 13 at UT= 7.644109721714 h=27518.795 s 07:38:38.795

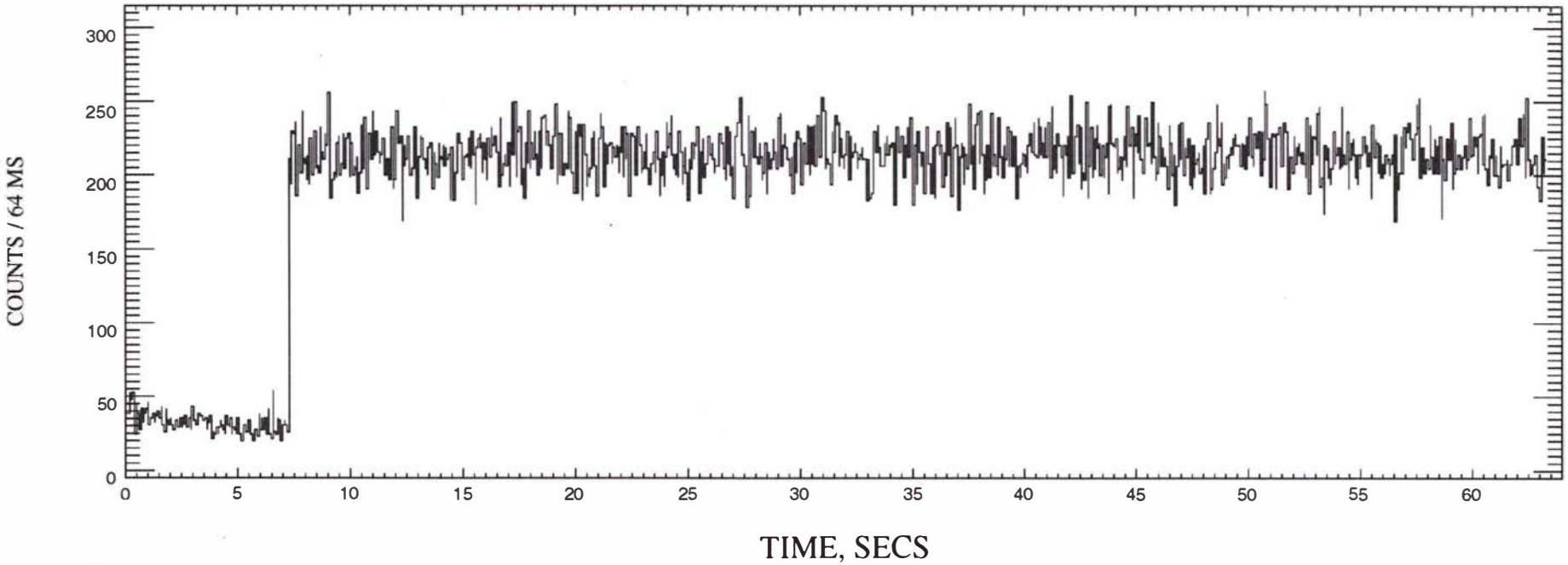


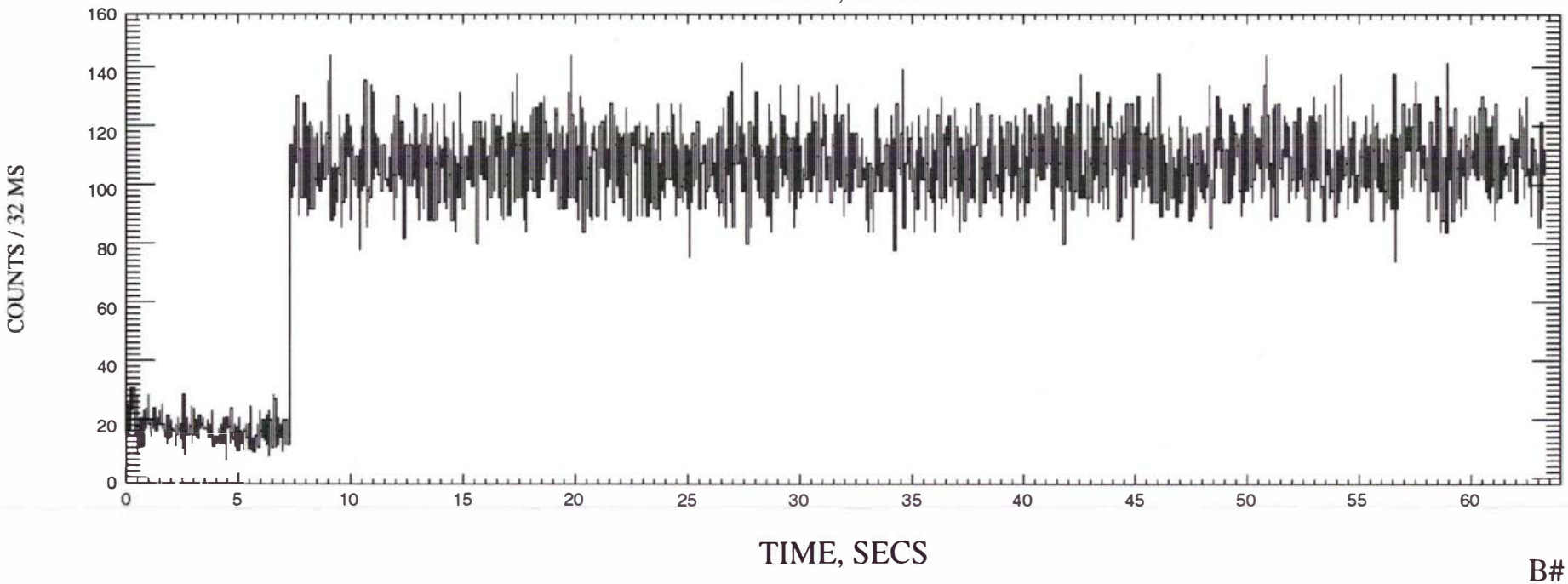


B# 11

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 14 at UT= 8.346340204875 h=30046.825 s 08:20:46.825

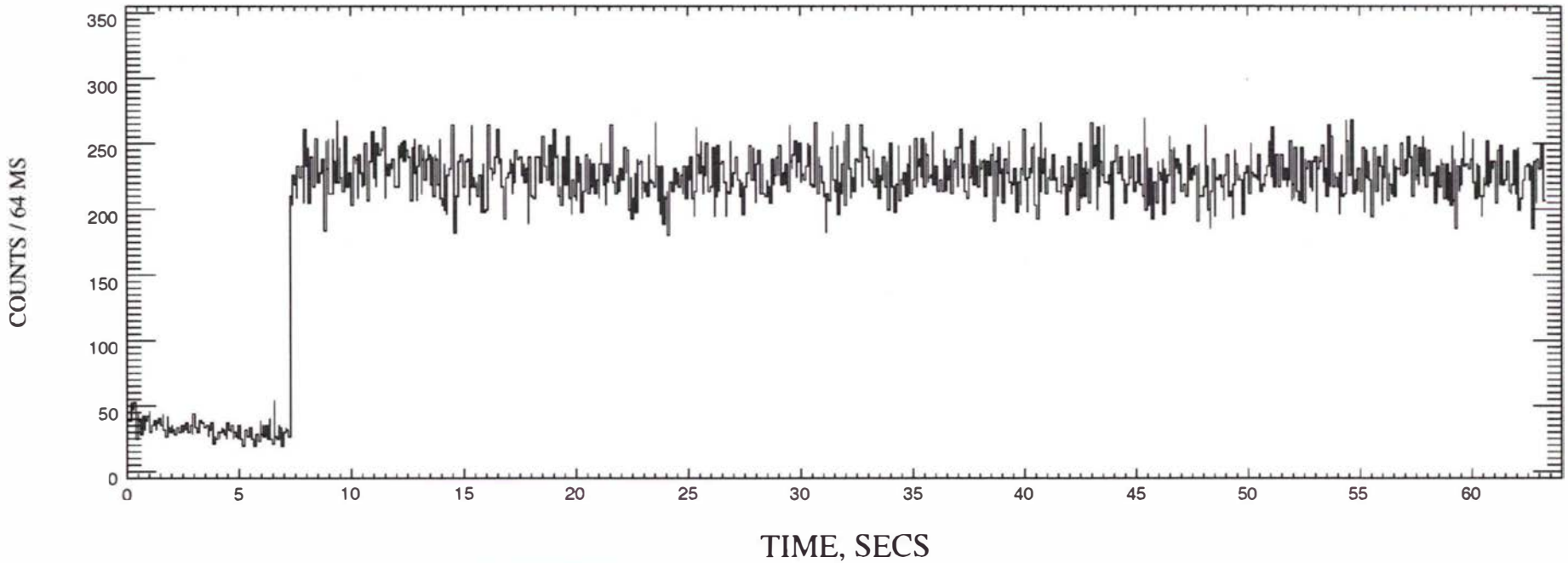


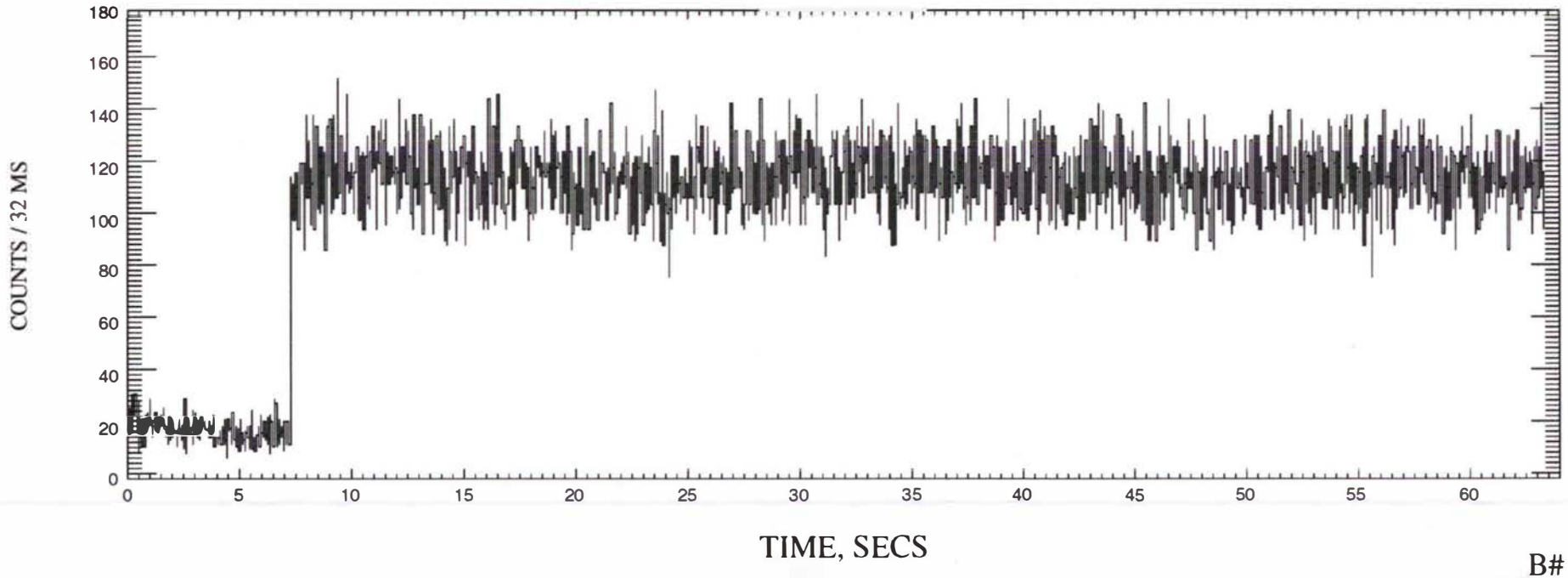


B# 12

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 15 at UT= 9.048574019538 h=32574.866 s 09:02:54.866

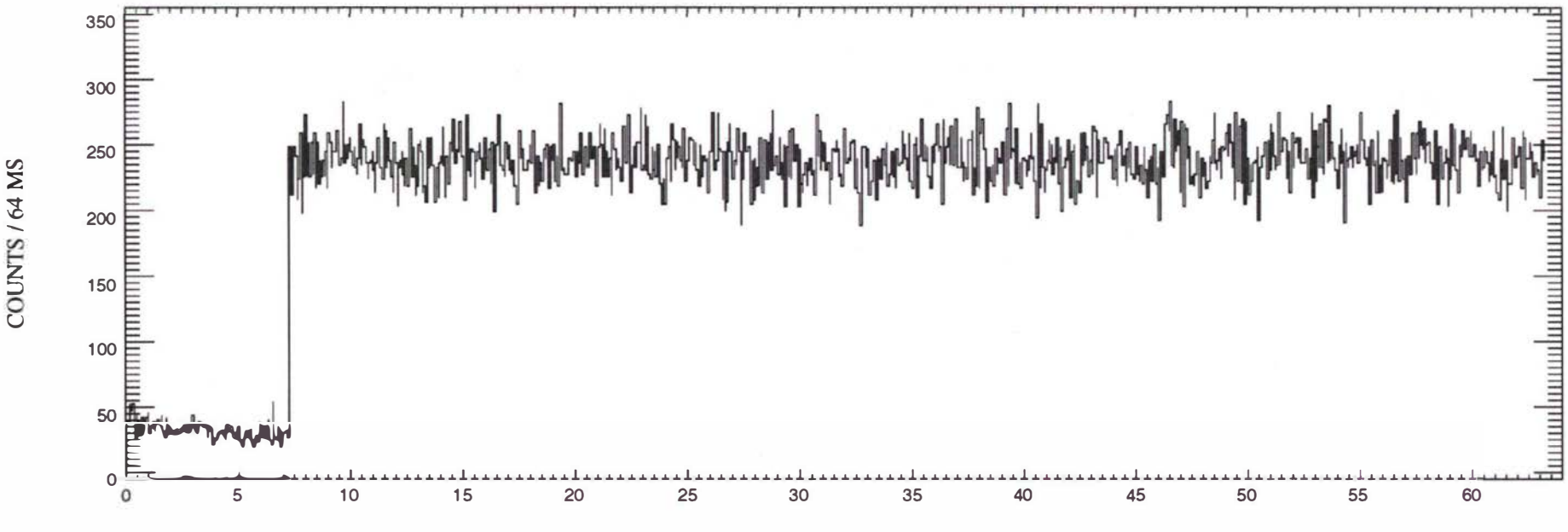


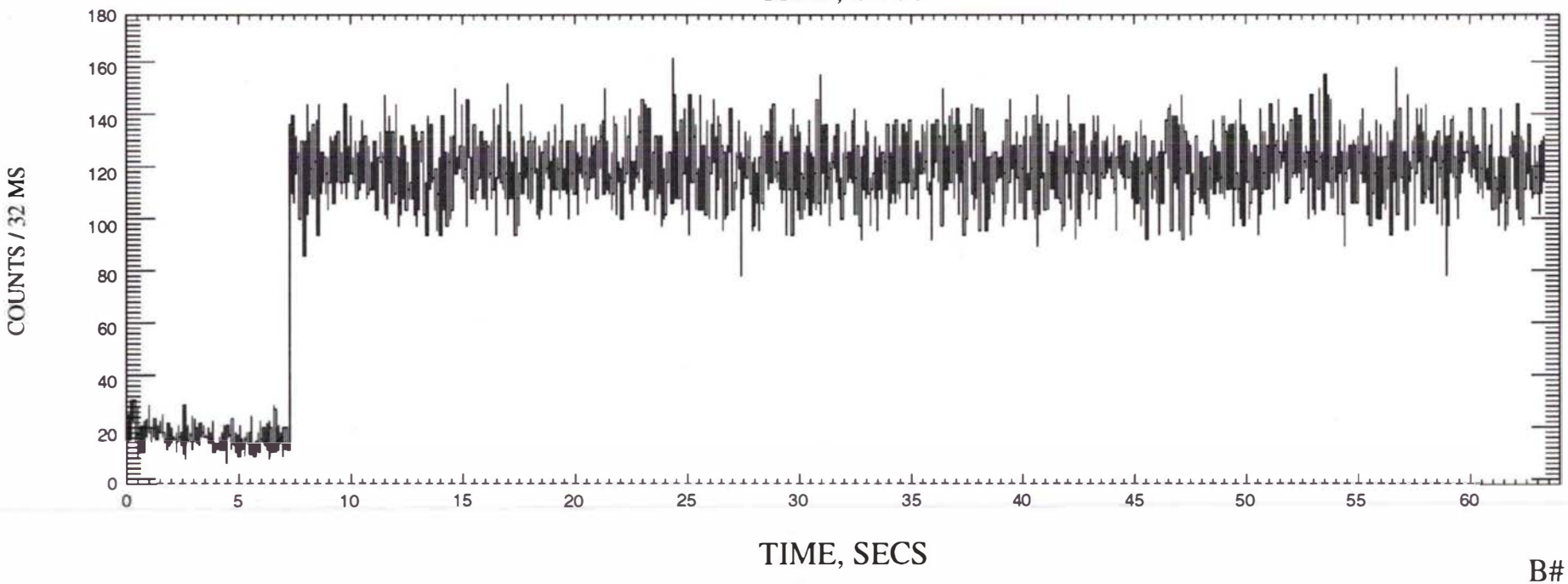


B# 13

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 0 at UT= 9.750805664063 h=35102.900 s 09:45:02.900

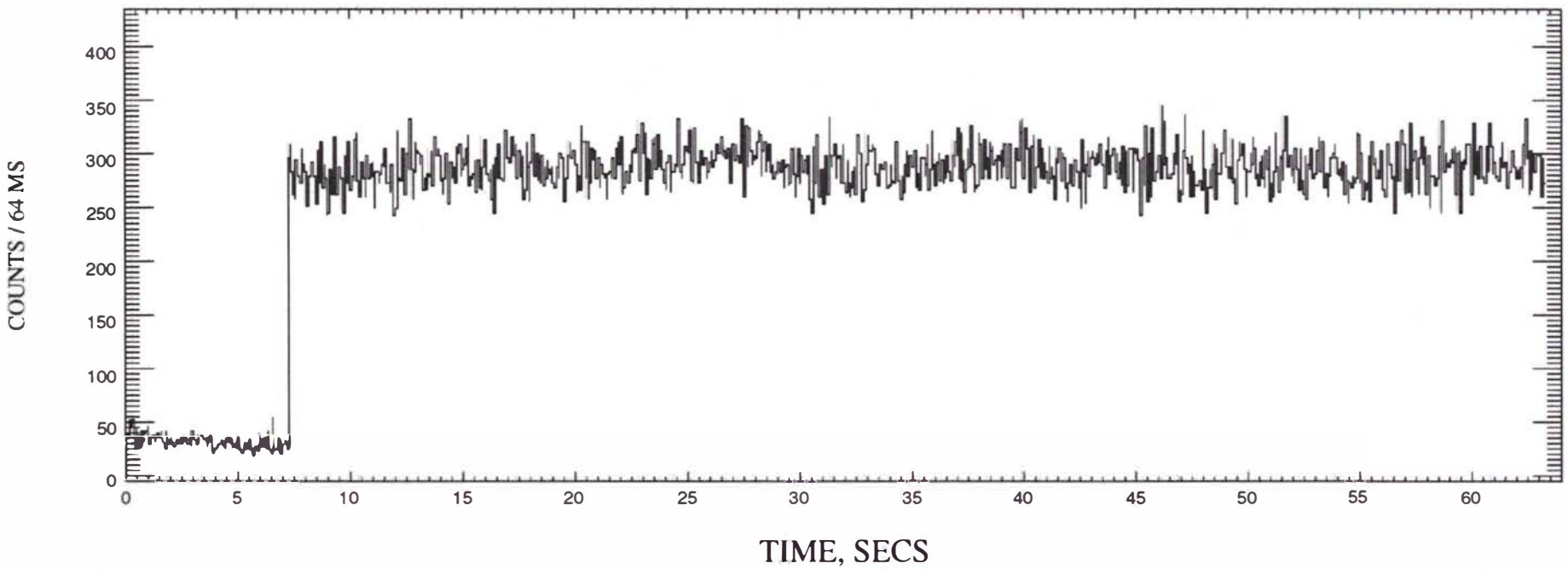


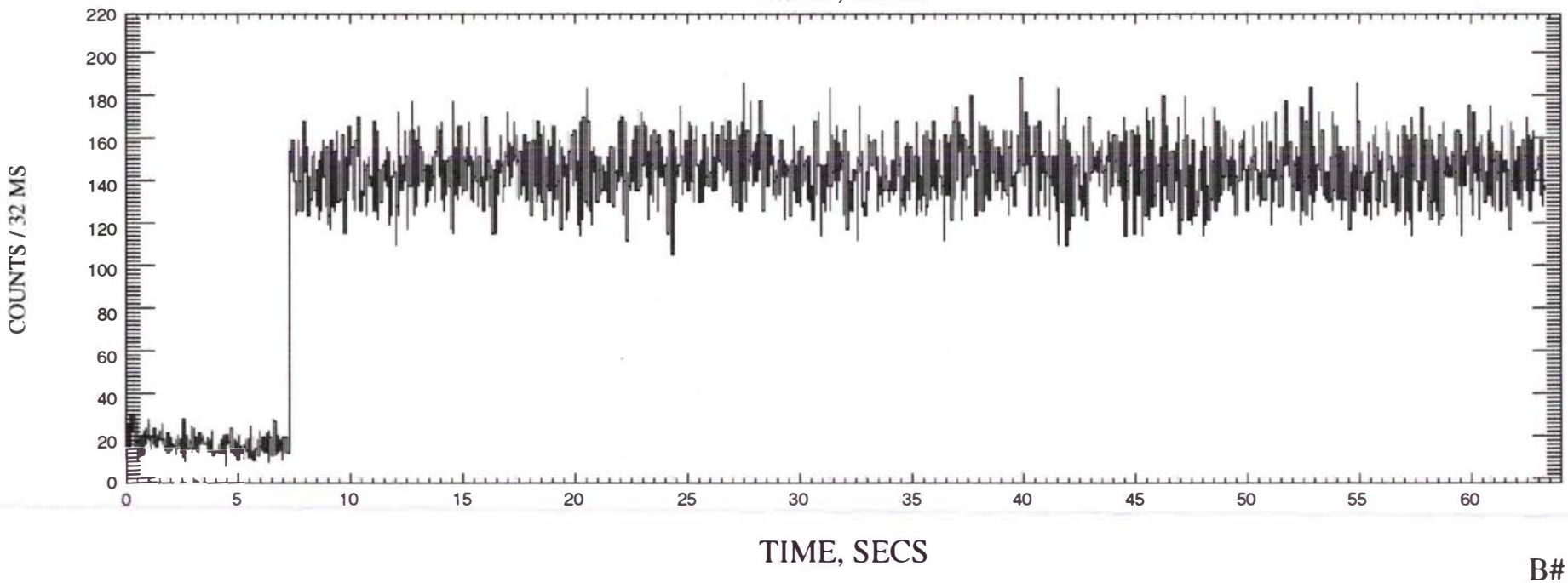


B# 14

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

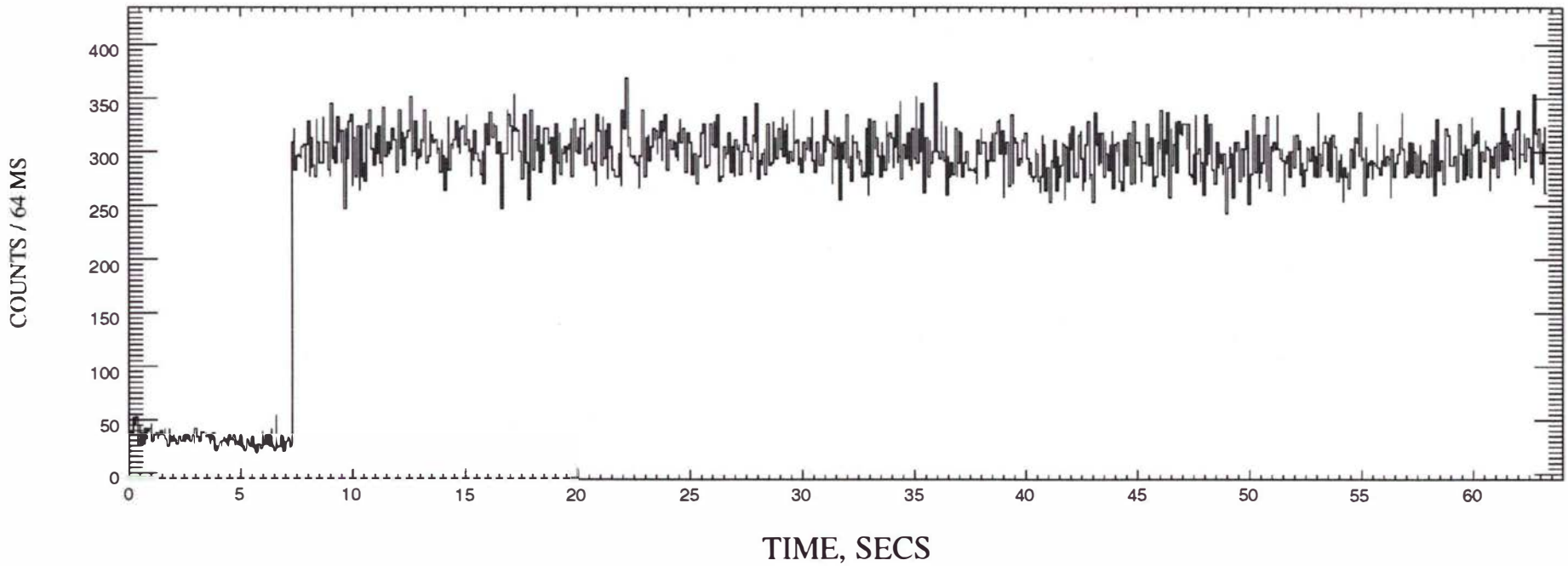
Burst Counter 1 at UT=10.453039474487 h=37630.942 s 10:27:10.942

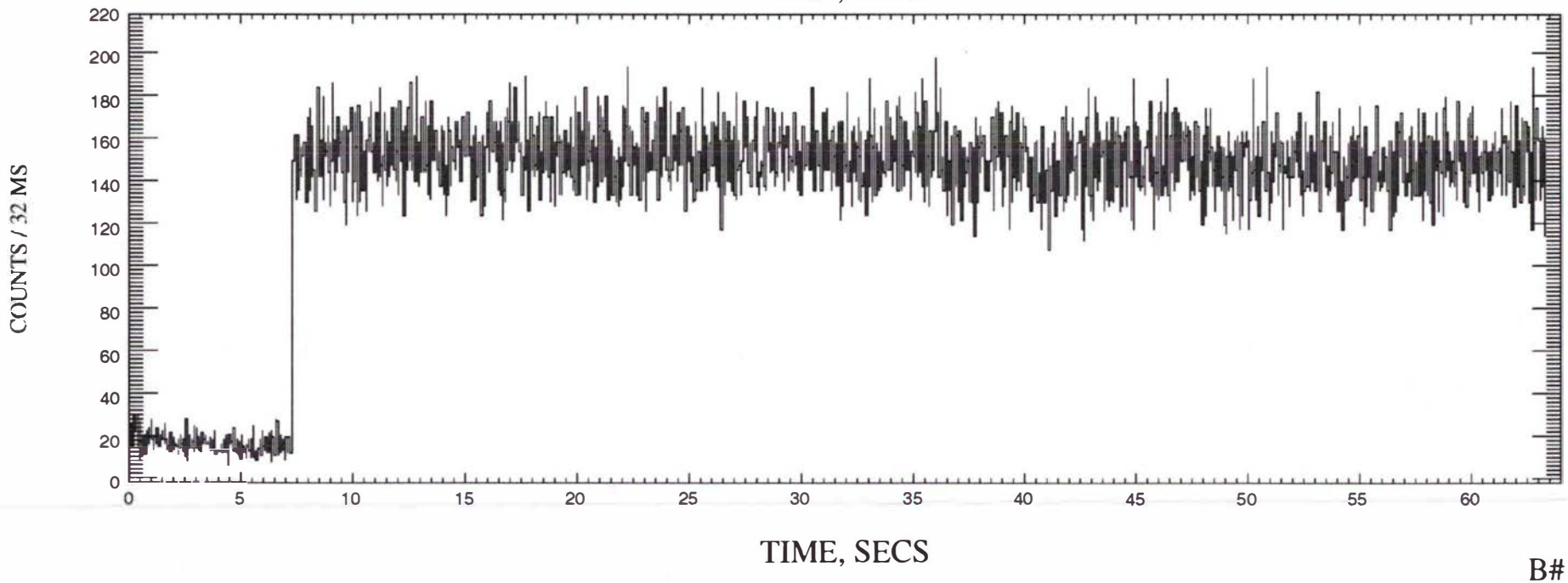




HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 2 at UT=11.155273289151 h=40158.984 s 11:09:18.984

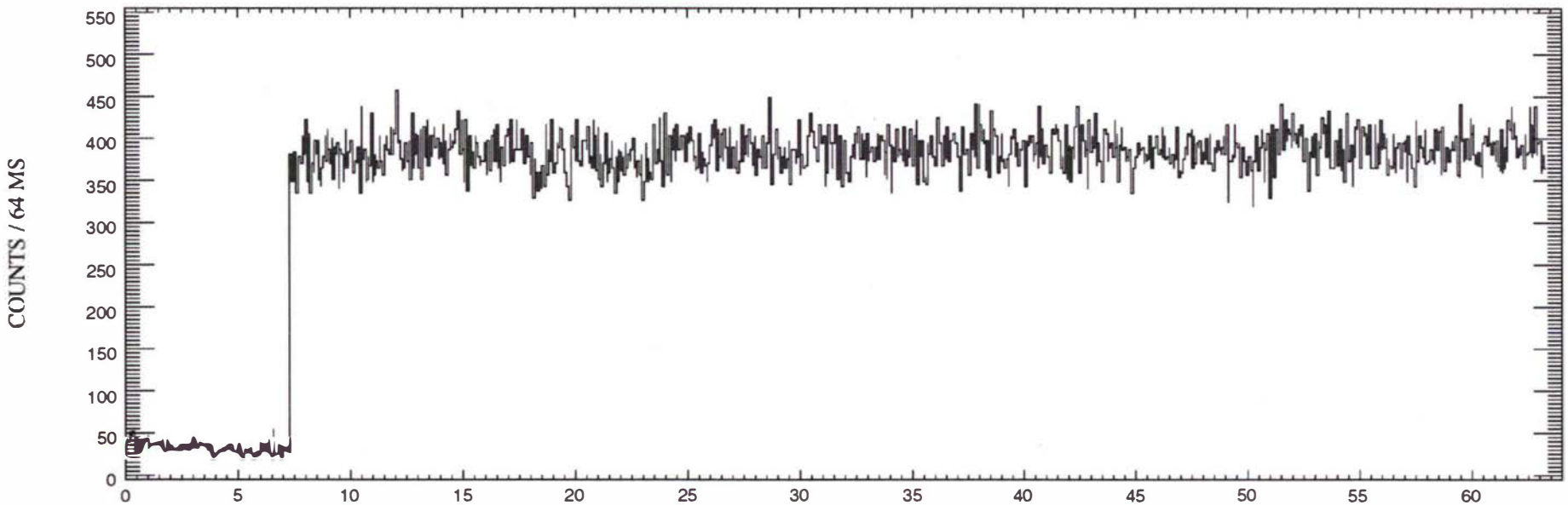




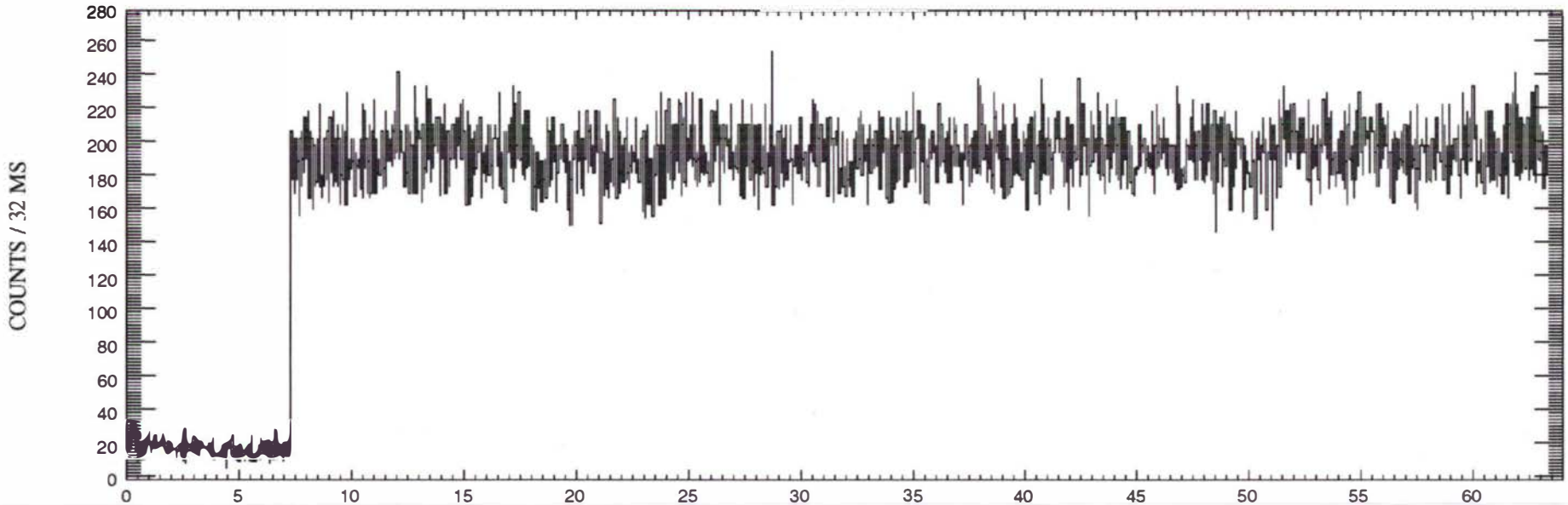
B# 16

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 3 at UT=11.857507103814 h=42687.026 s 11:51:27.026



TIME, SECS

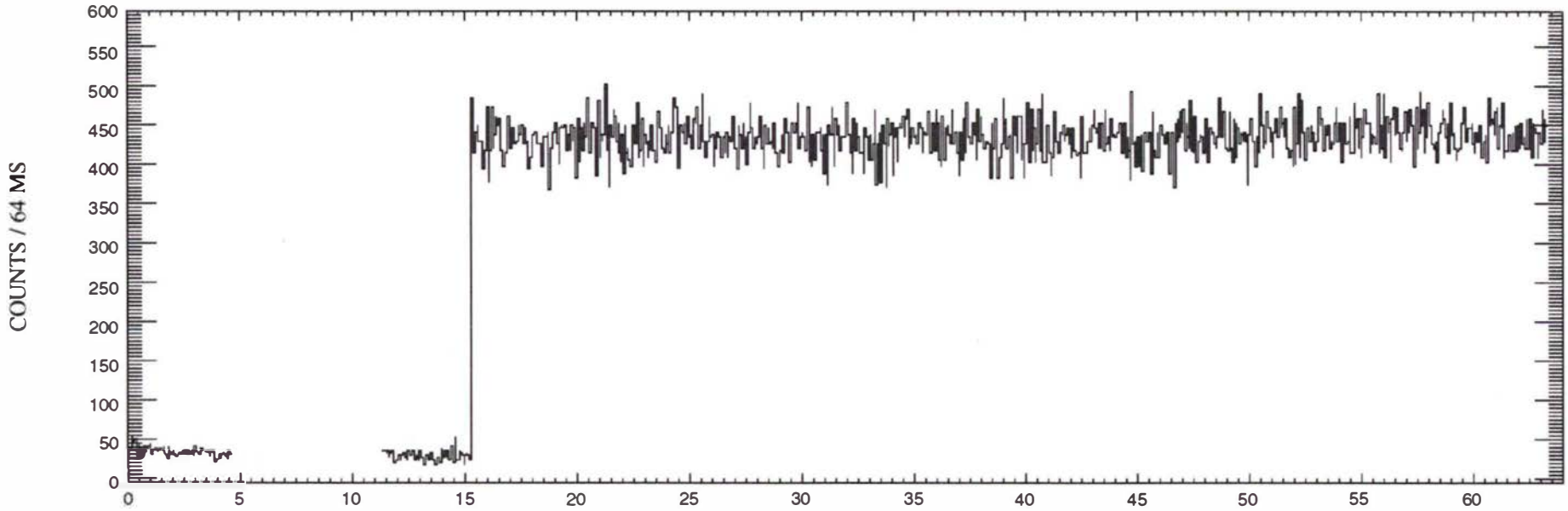


TIME, SECS

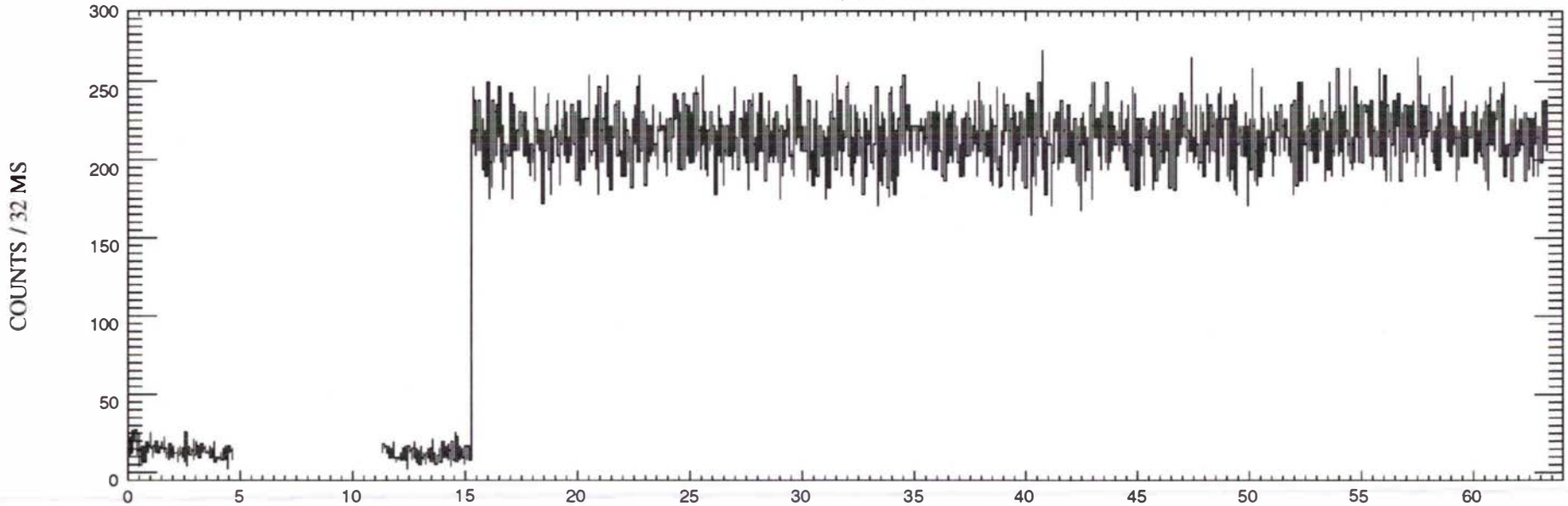
B# 17

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 4 at UT=12.559738744100 h=45215.059 s 12:33:35.059



TIME, SECS

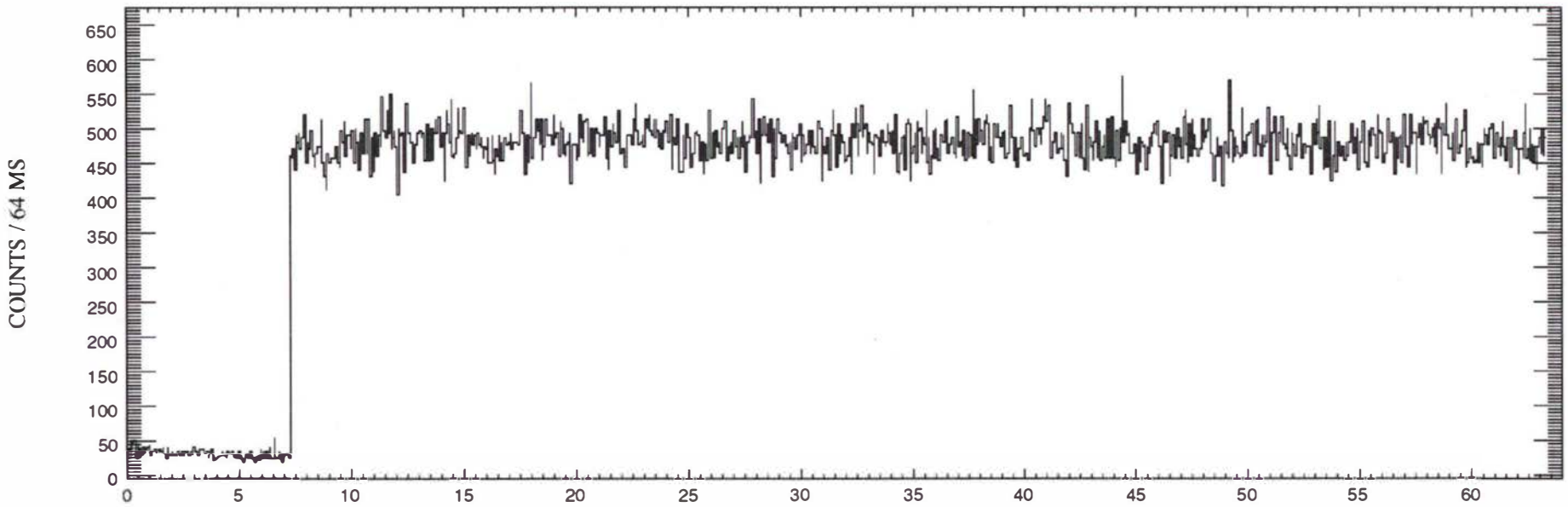


TIME, SECS

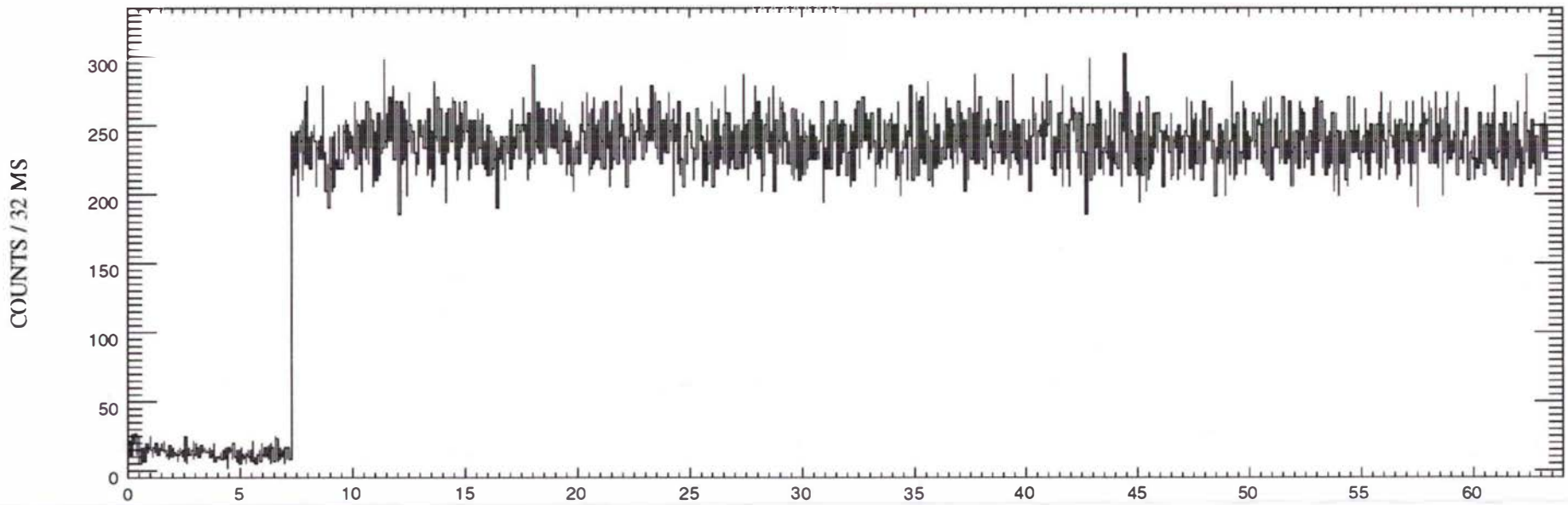
B# 18

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 5 at UT=13.261971978082 h=47743.099 s 13:15:43.099



TIME, SECS

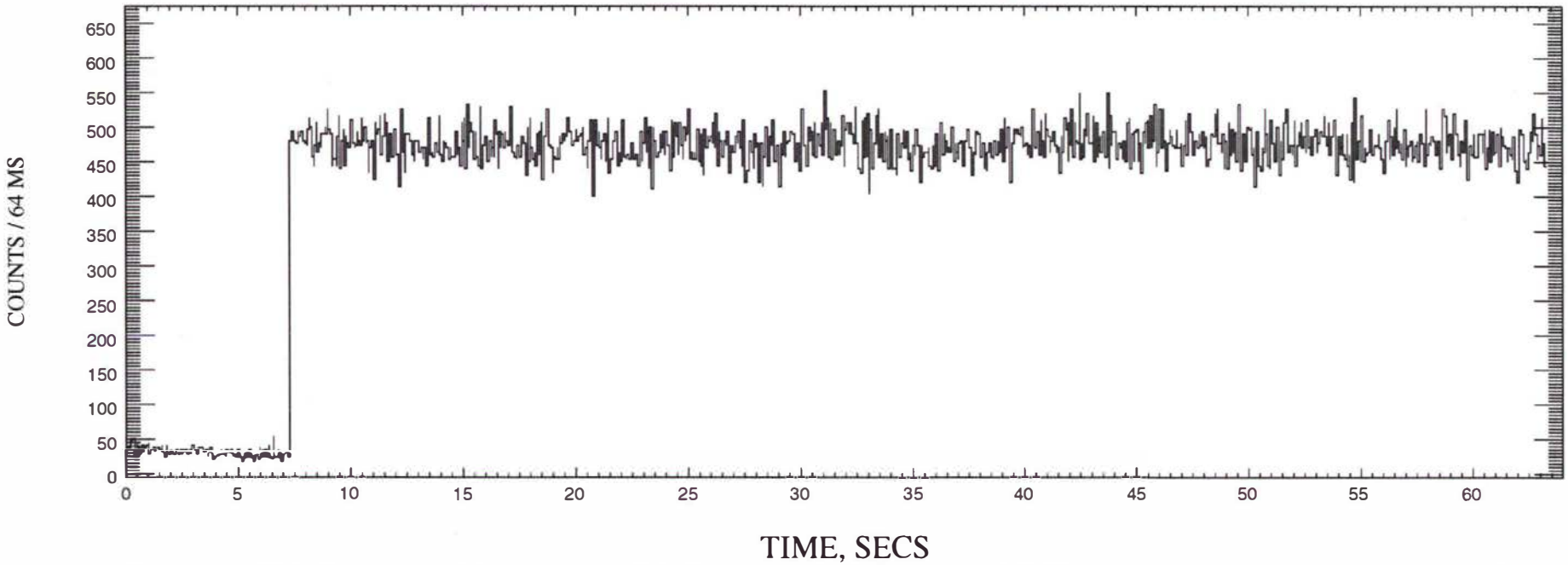


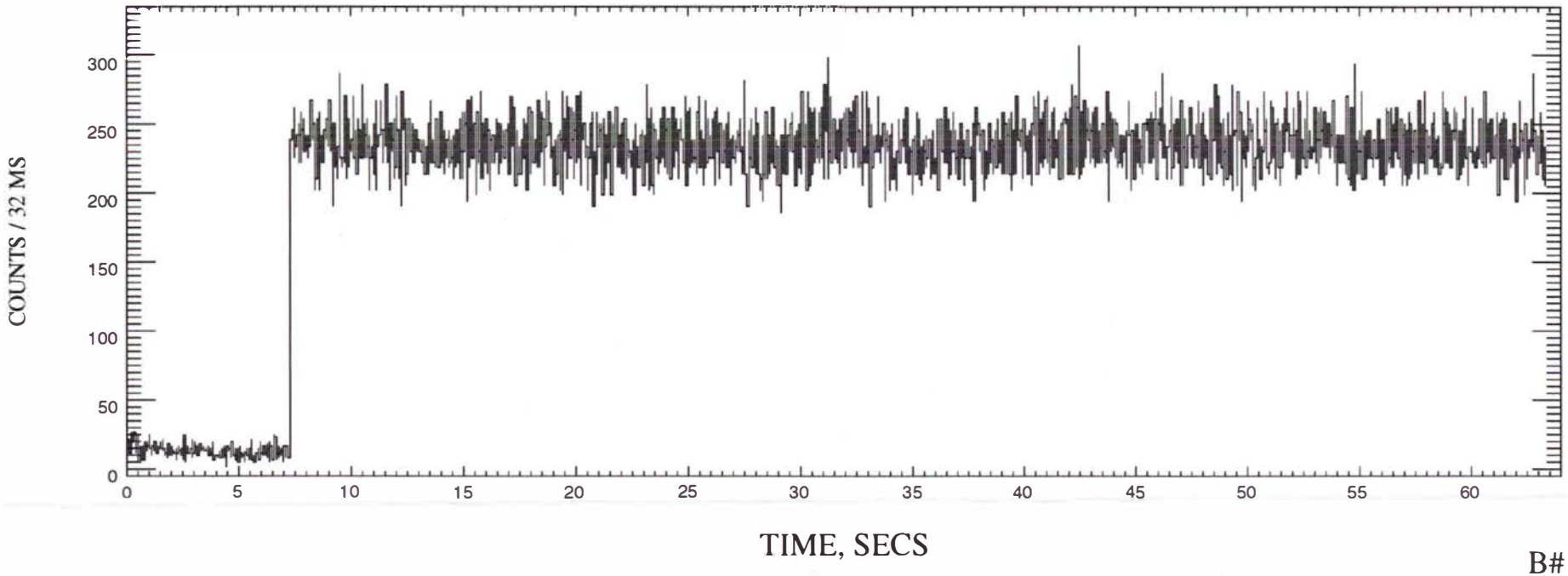
TIME, SECS

B# 19

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 6 at UT=13.964204635620 h=50271.137 s 13:57:51.137

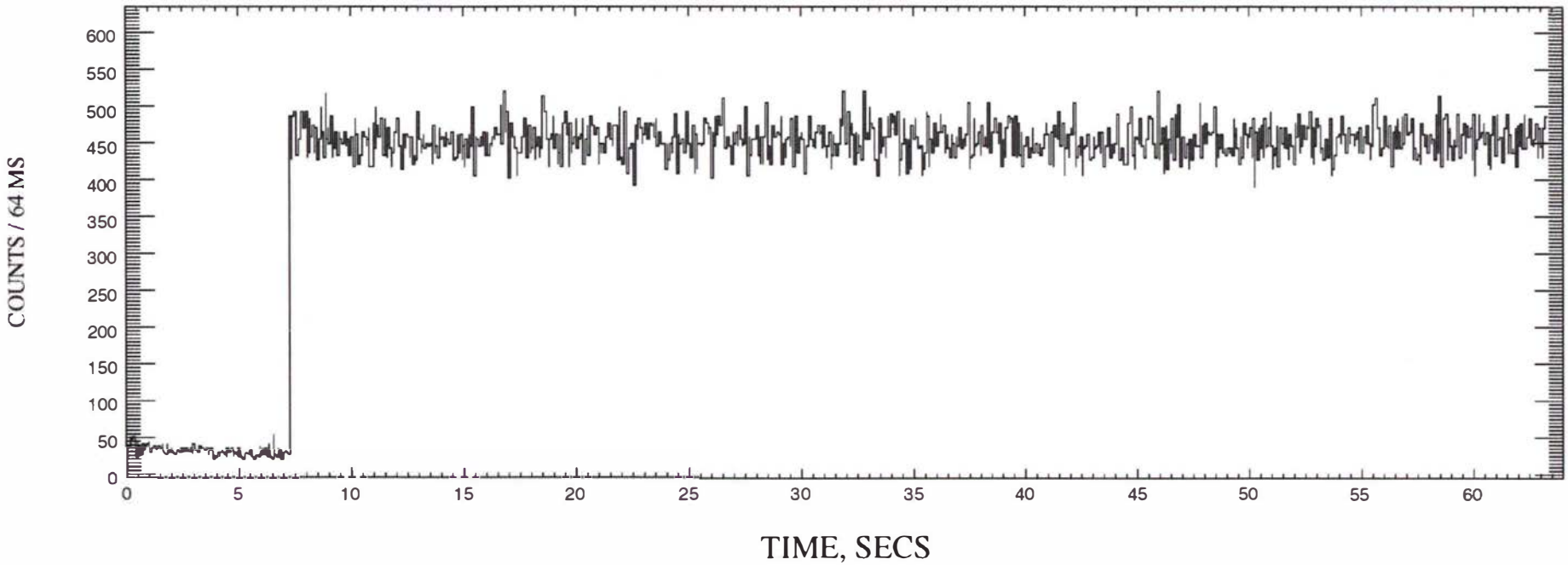


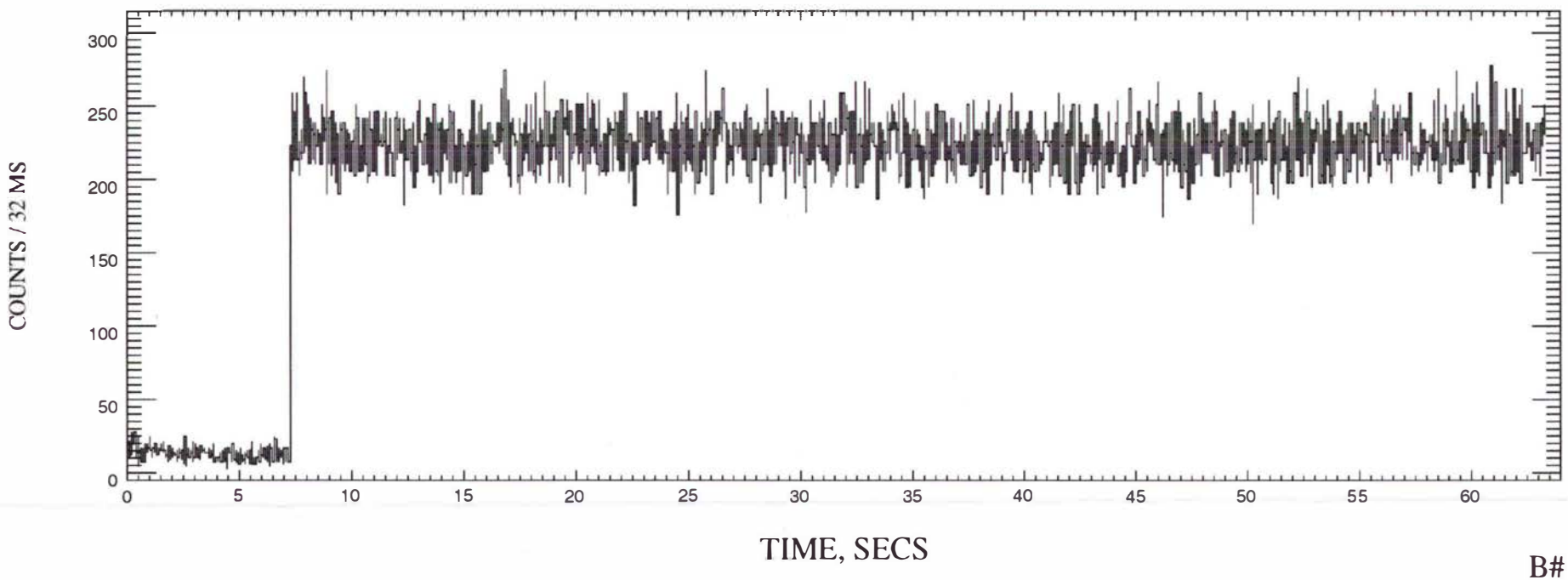


B# 20

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 7 at UT=14.666436275906 h=52799.171 s 14:39:59.171

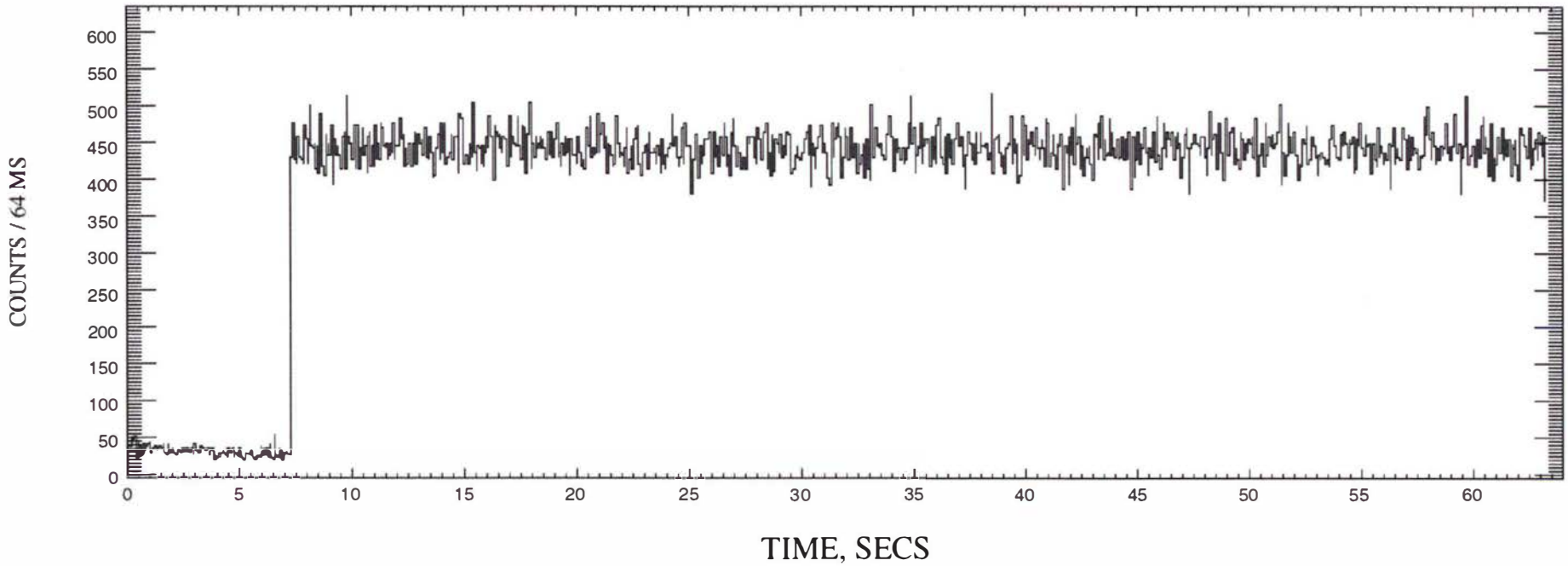


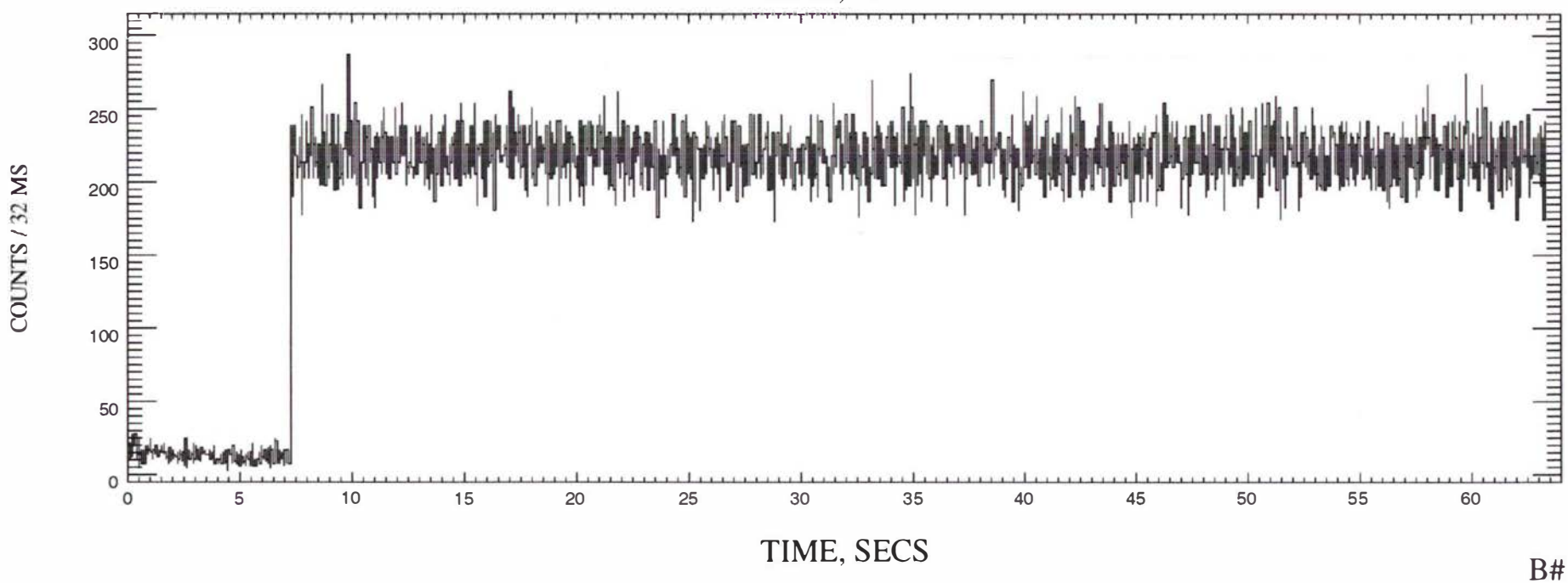


B# 21

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 8 at UT=15.368672260708 h=55327.220 s 15:22:07.220

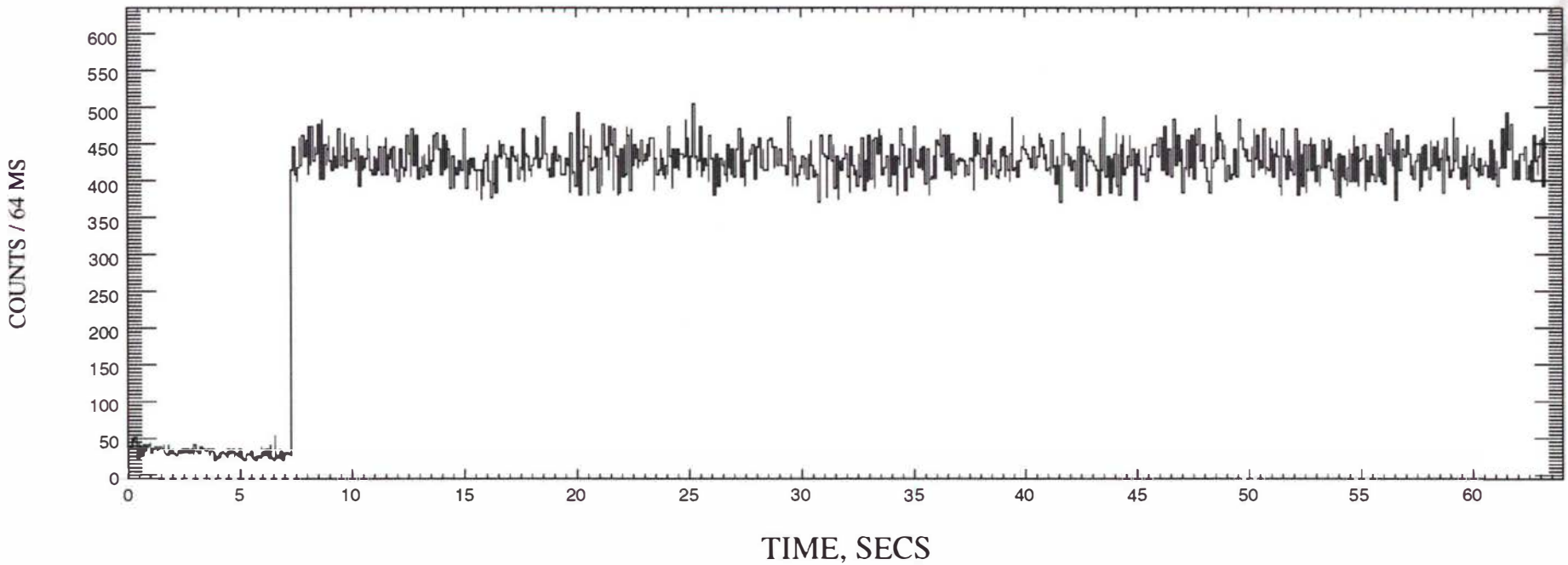


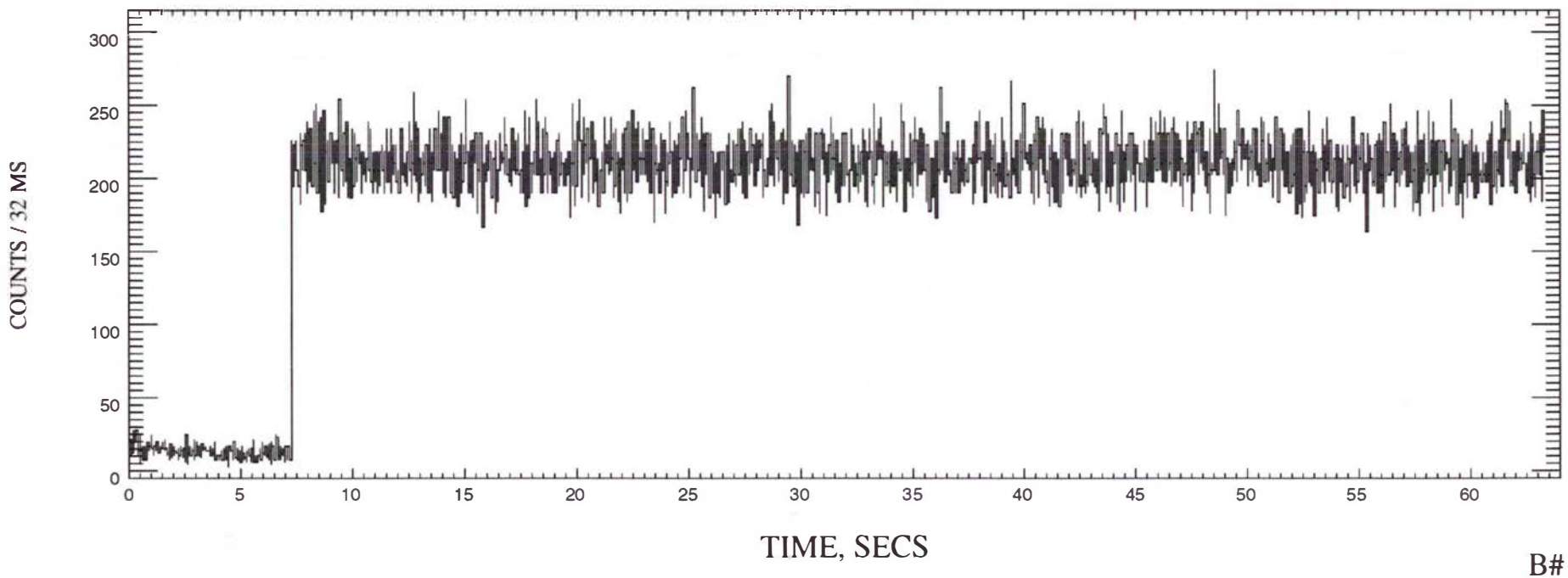


B# 22

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 9 at UT=16.070908245511 h=57855.270 s 16:04:15.270

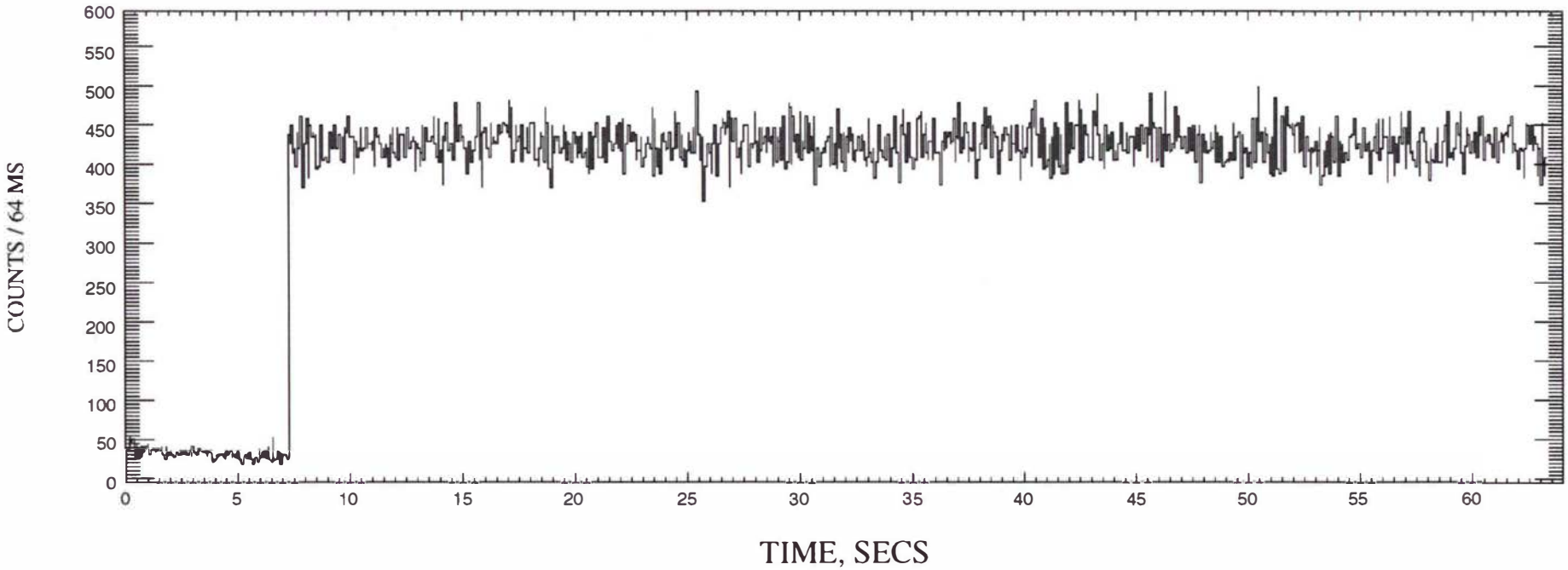


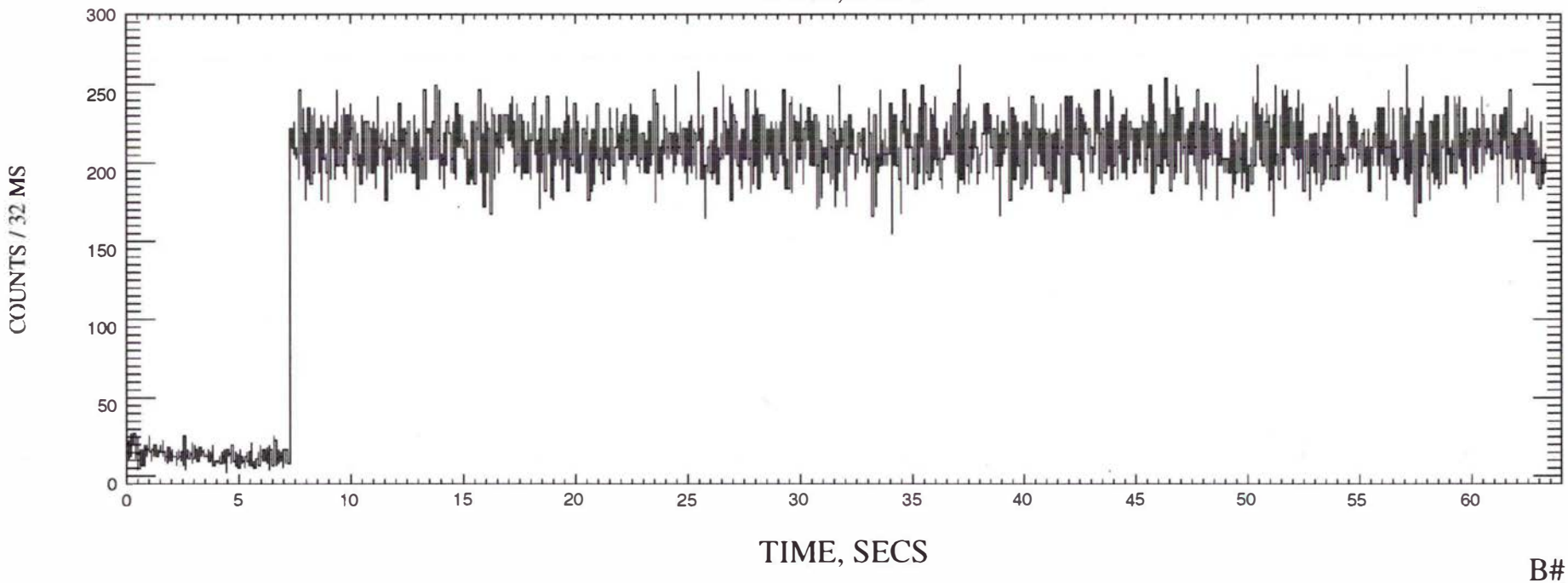


B# 23

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 10 at UT=16.773139885796 h=60383.304 s 16:46:23.304

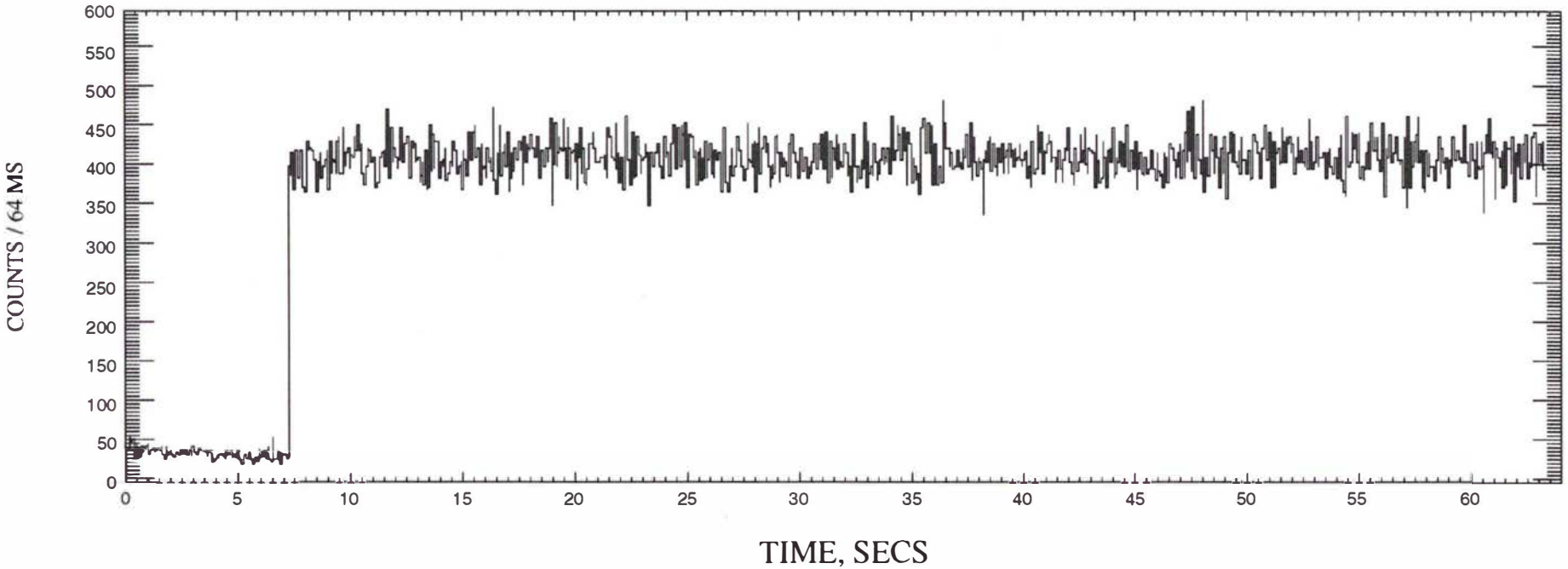


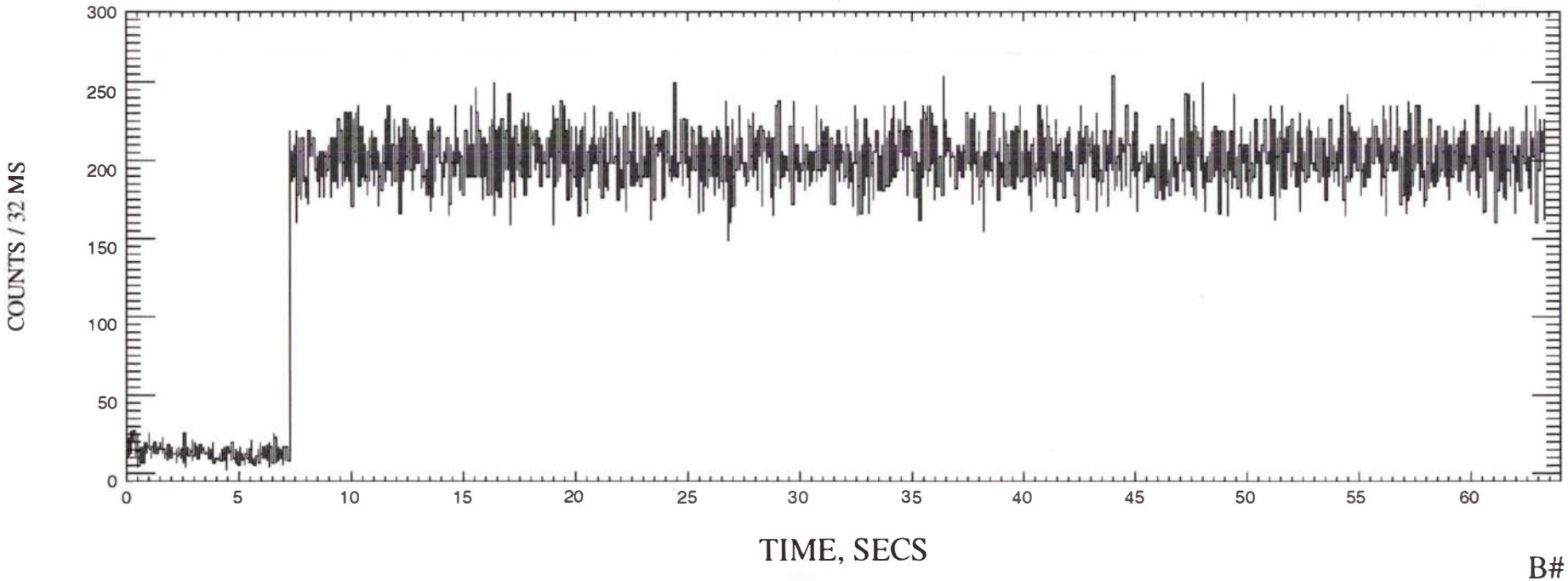


B# 24

HUS 2A TRIGGERED DATA ●EDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 11 at UT=17.475373700460 h=62911.345 s 17:28:31.345

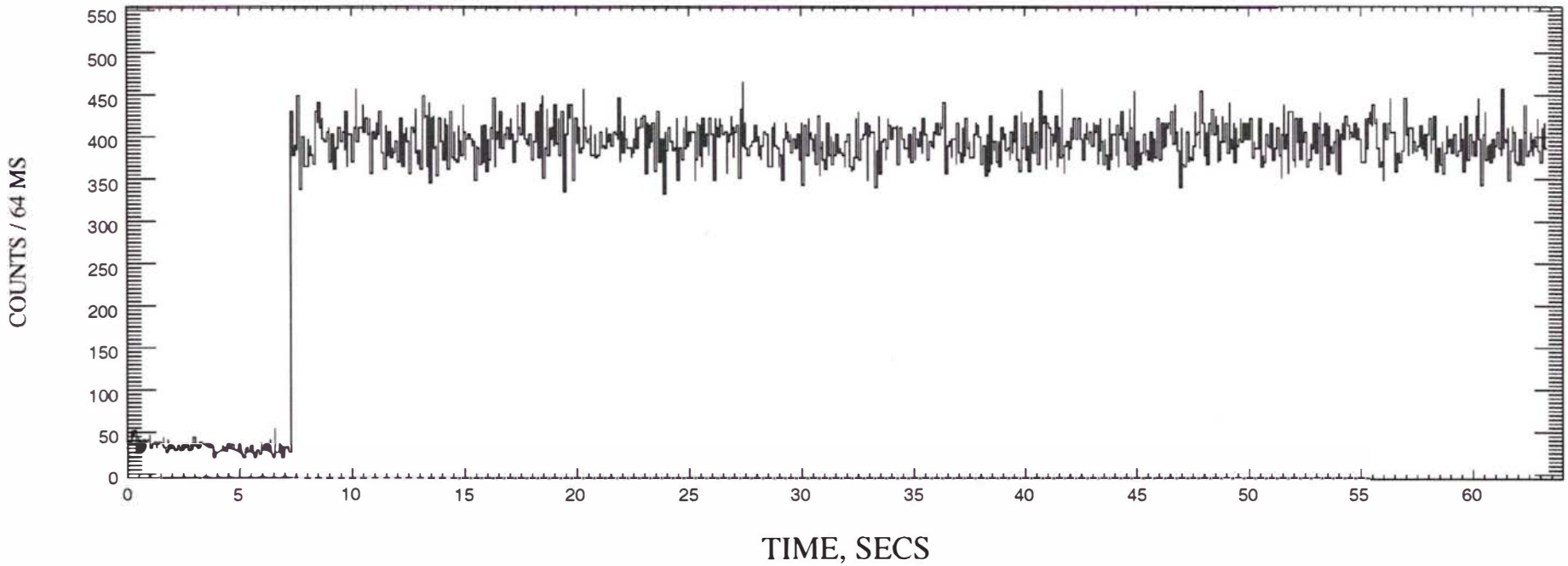


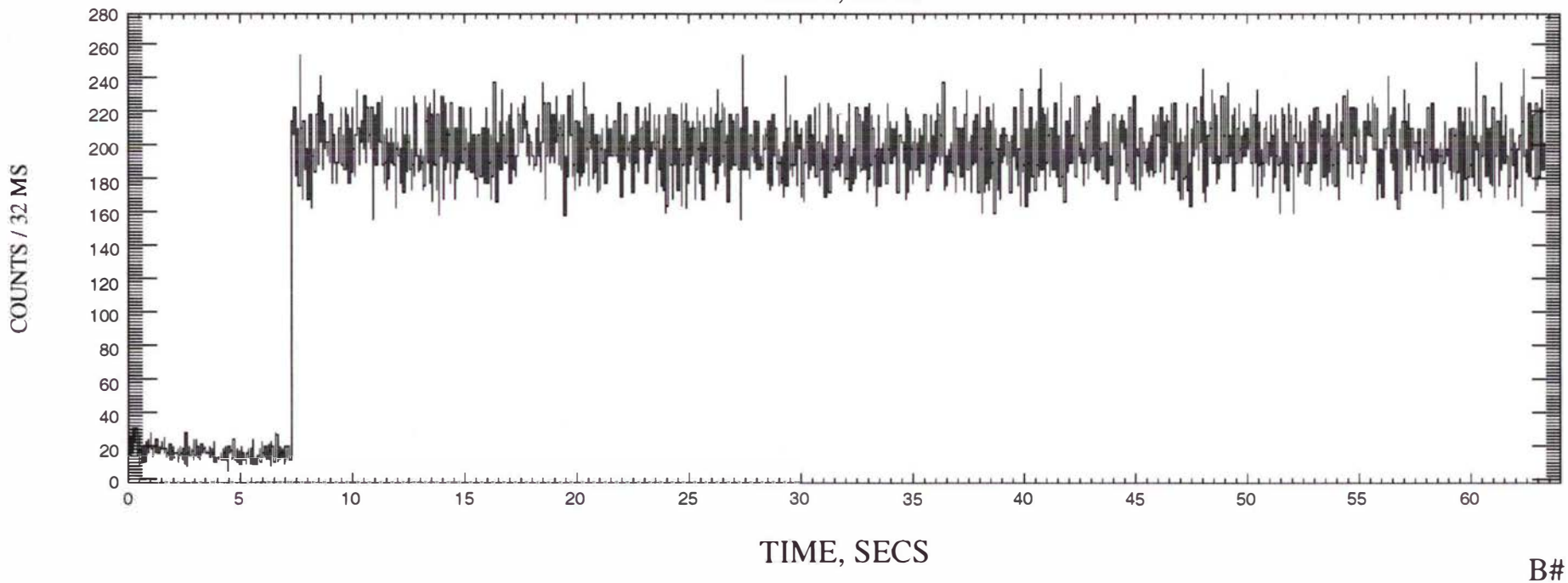


B# 25

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 12 at UT=18.177609685262 h=65439.395 s 18:10:39.395

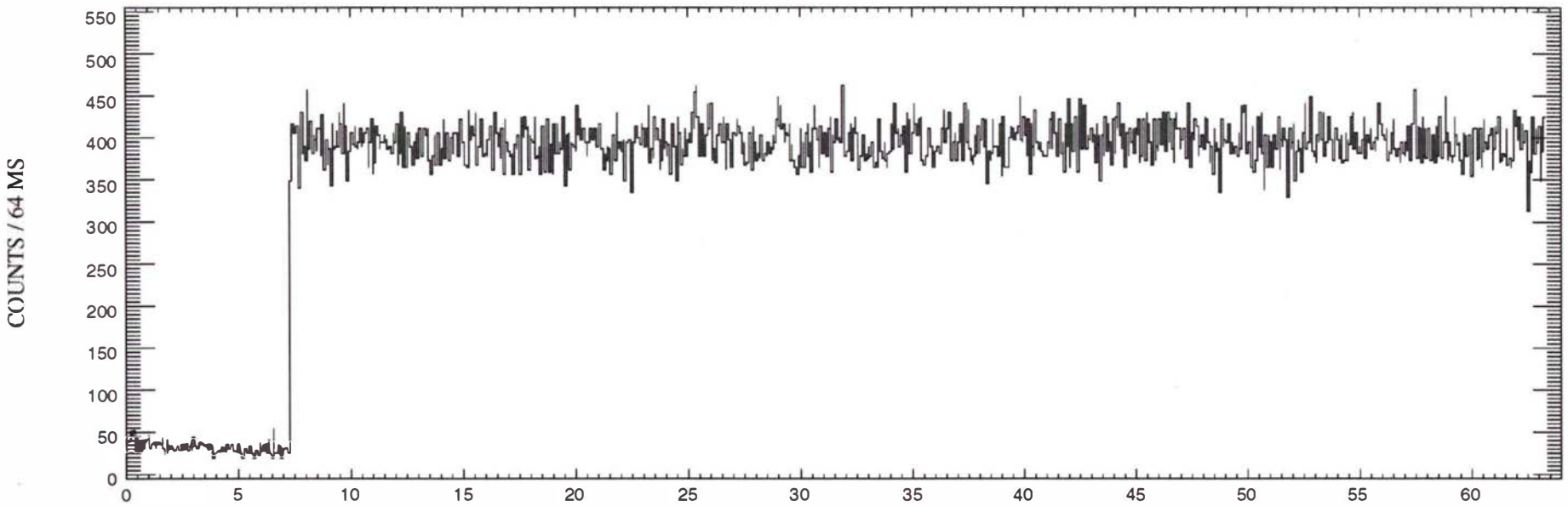




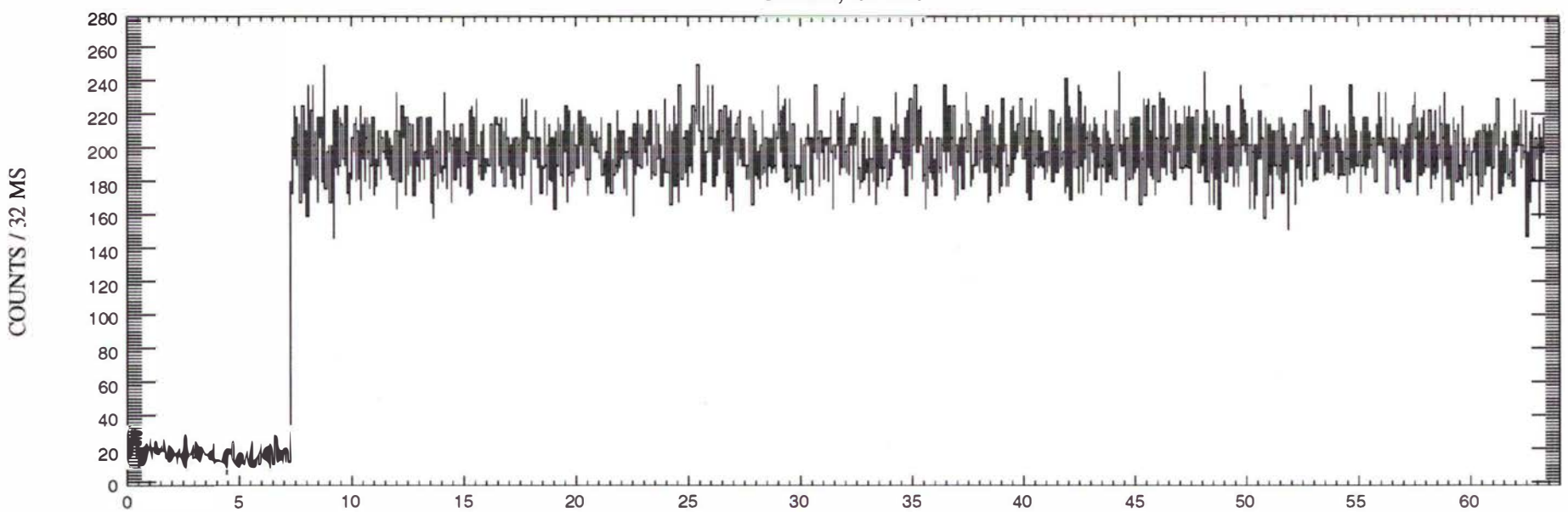
B# 26

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 13 at UT=18.879843495687 h=67967.437 s 18:52:47.437



TIME, SECS

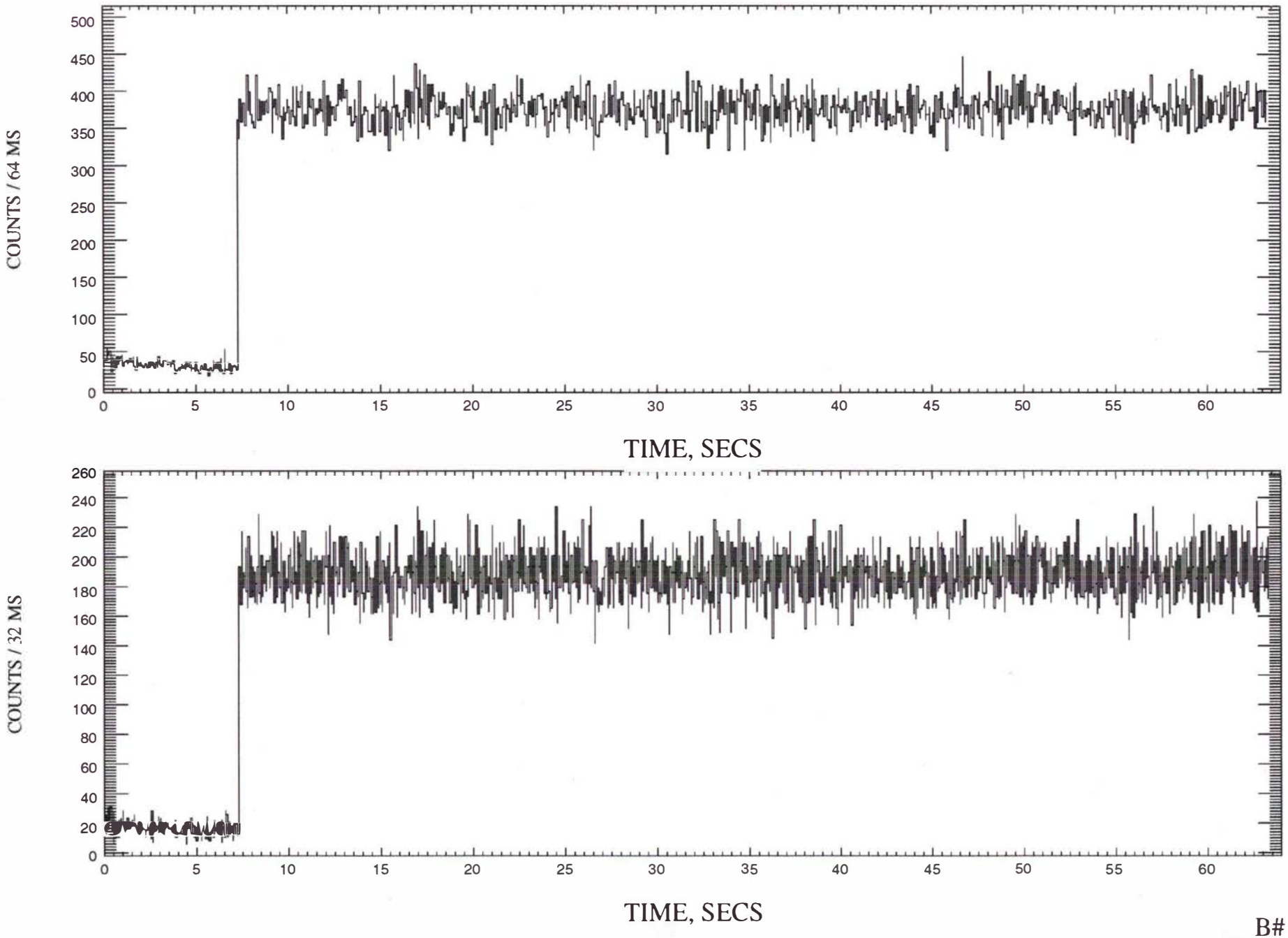


TIME, SECS

B# 27

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

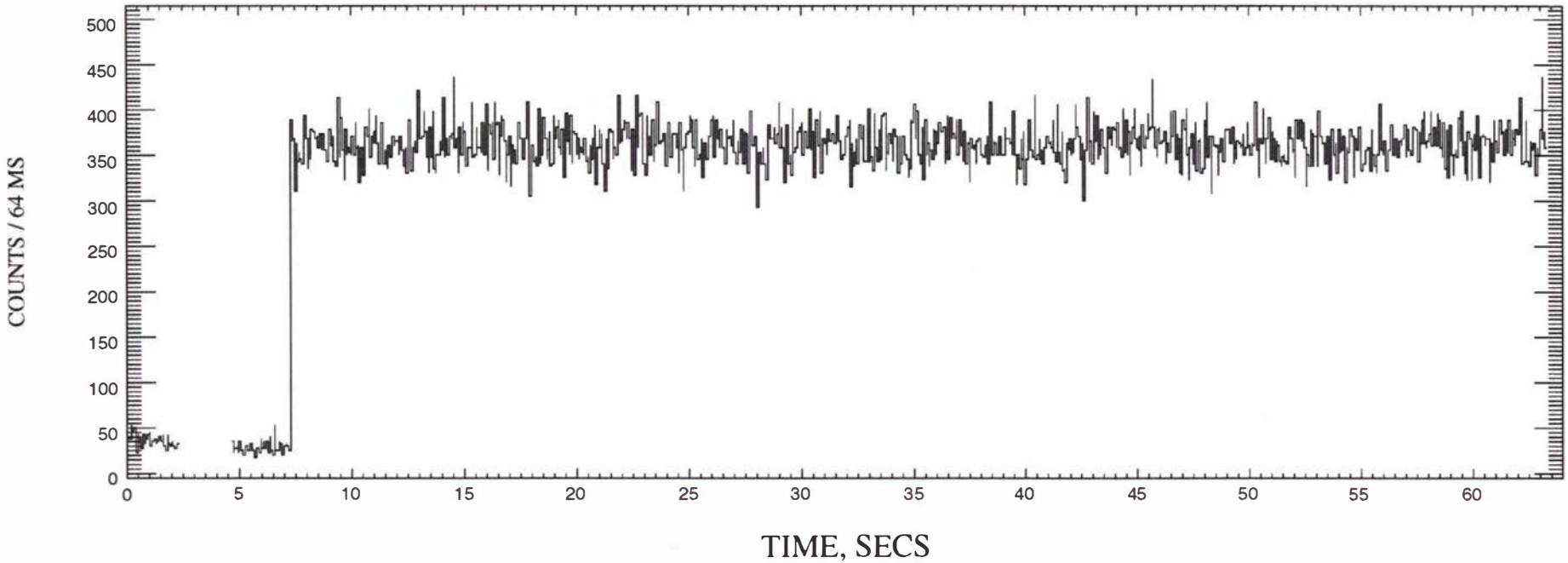
Burst Counter 14 at UT=19.582076153225 h=70495.474 s 19:34:55.474

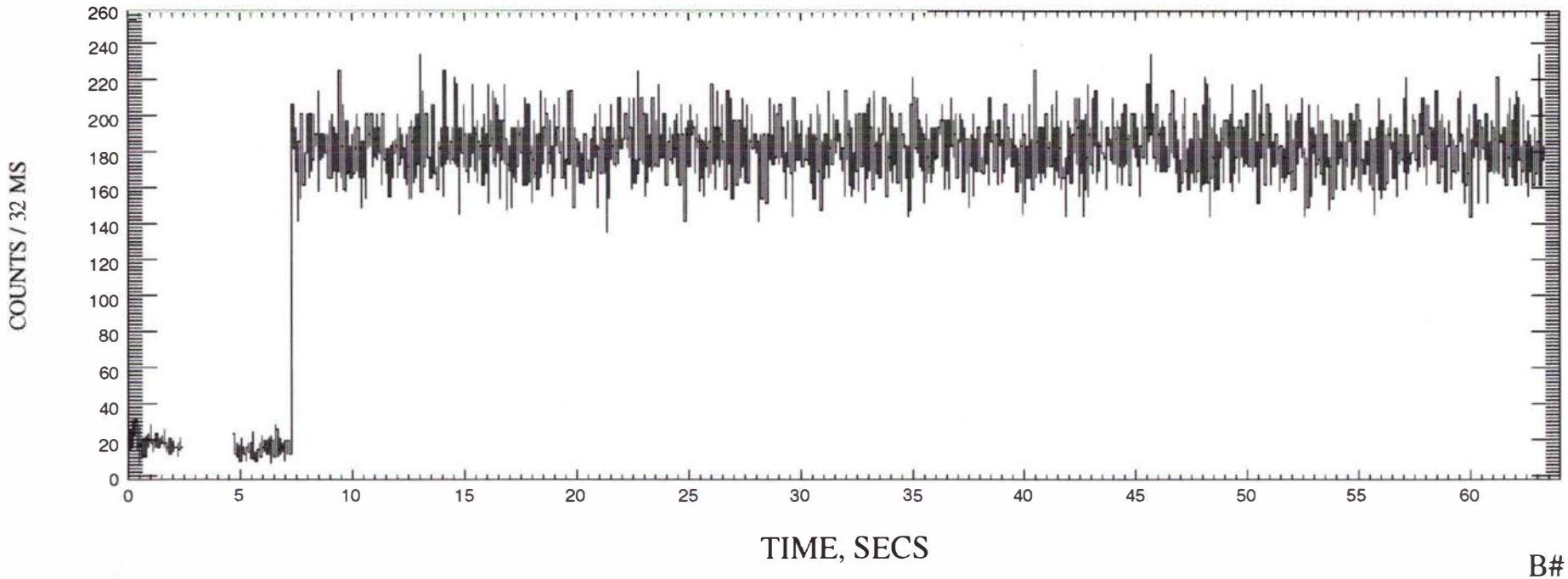


B# 28

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 15 at UT=20.284307793511 h=73023.508 s 20:17:03.508

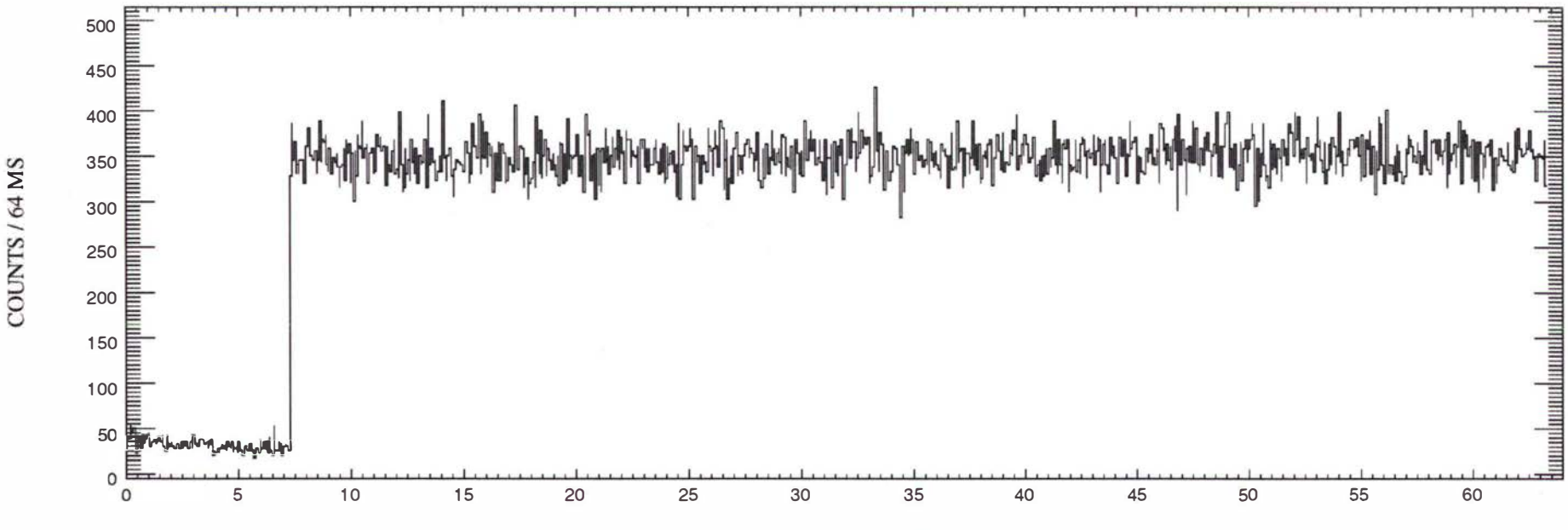


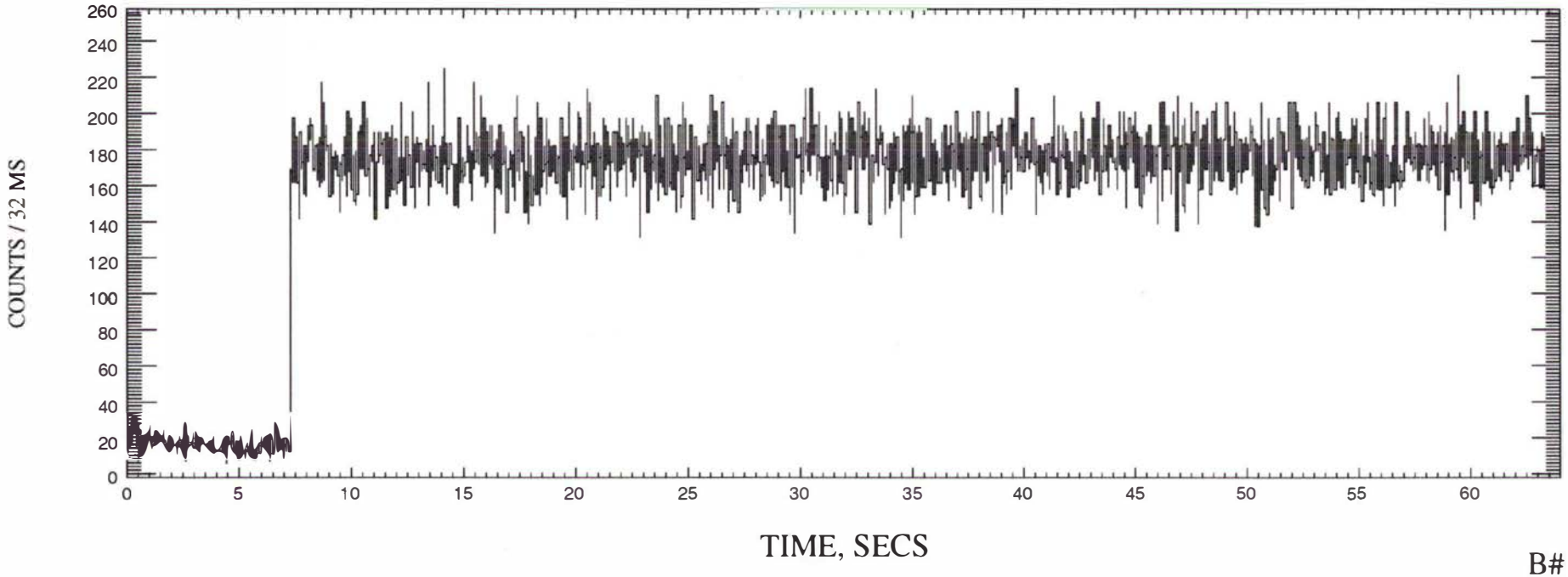


B# 29

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 0 at UT=20.986543778314 h=75551.558 s 20:59:11.558

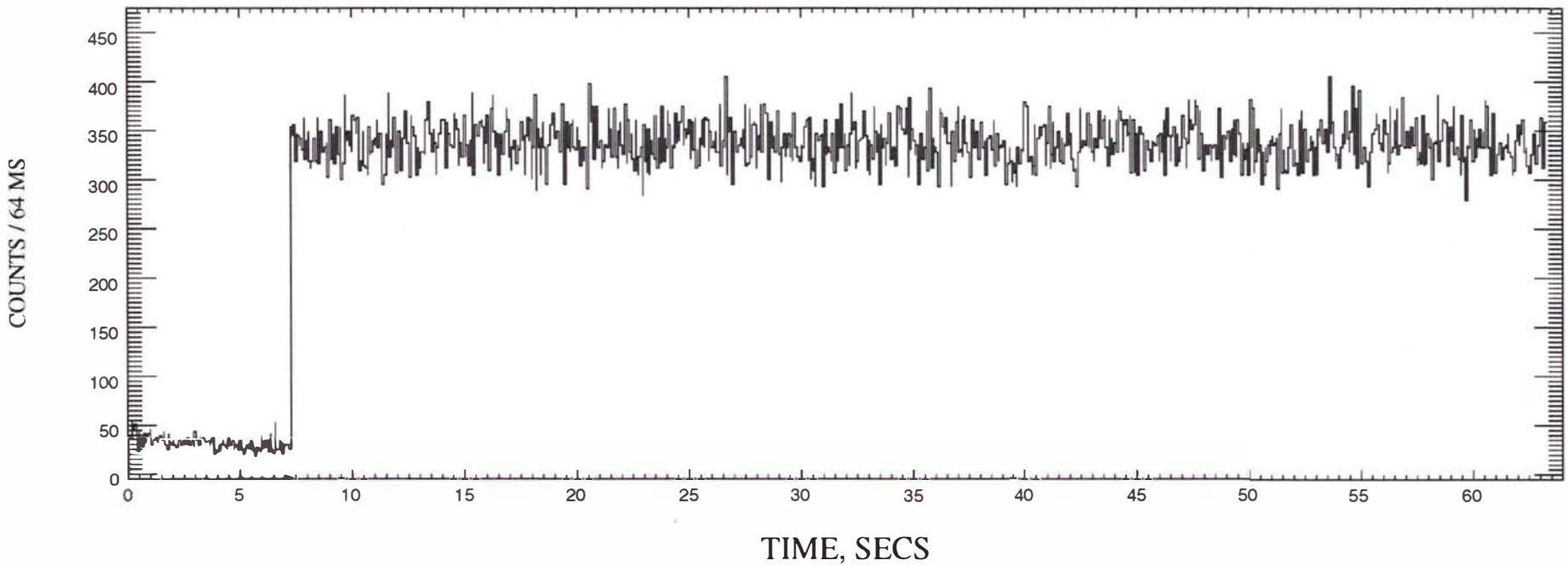


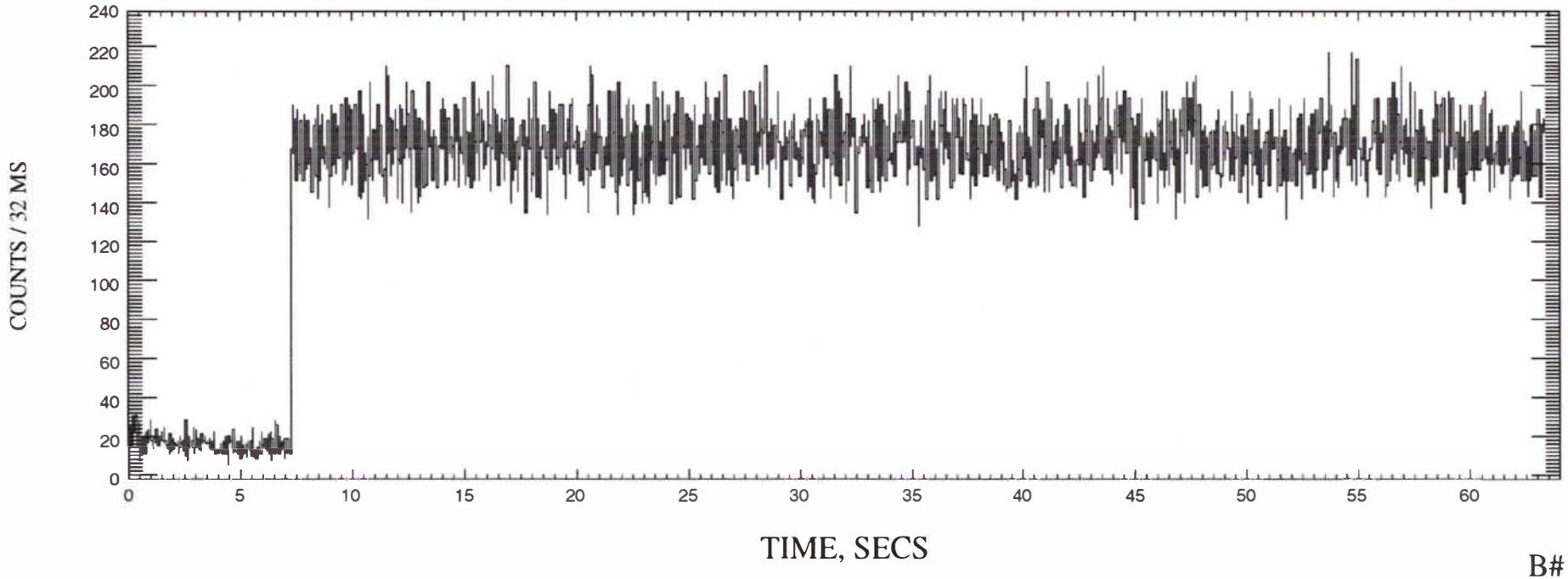


B# 30

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 1 at UT=21.688777592977 h=78079.599 s 21:41:19.599

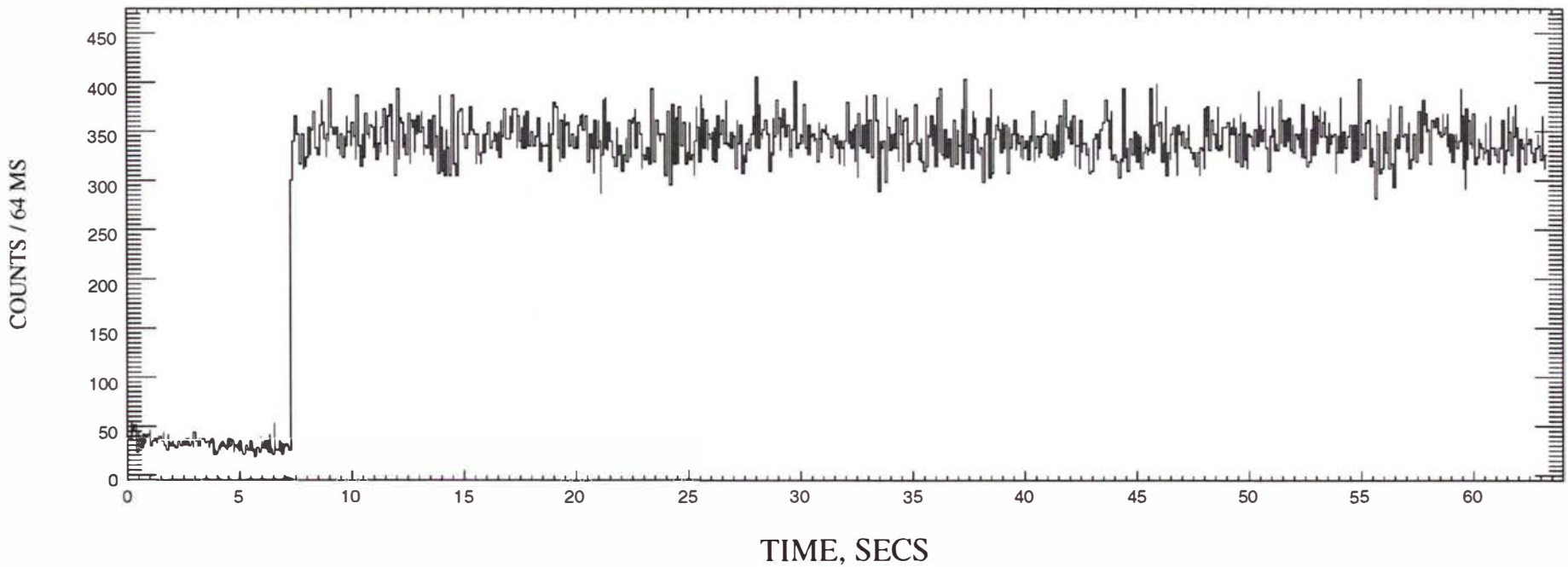


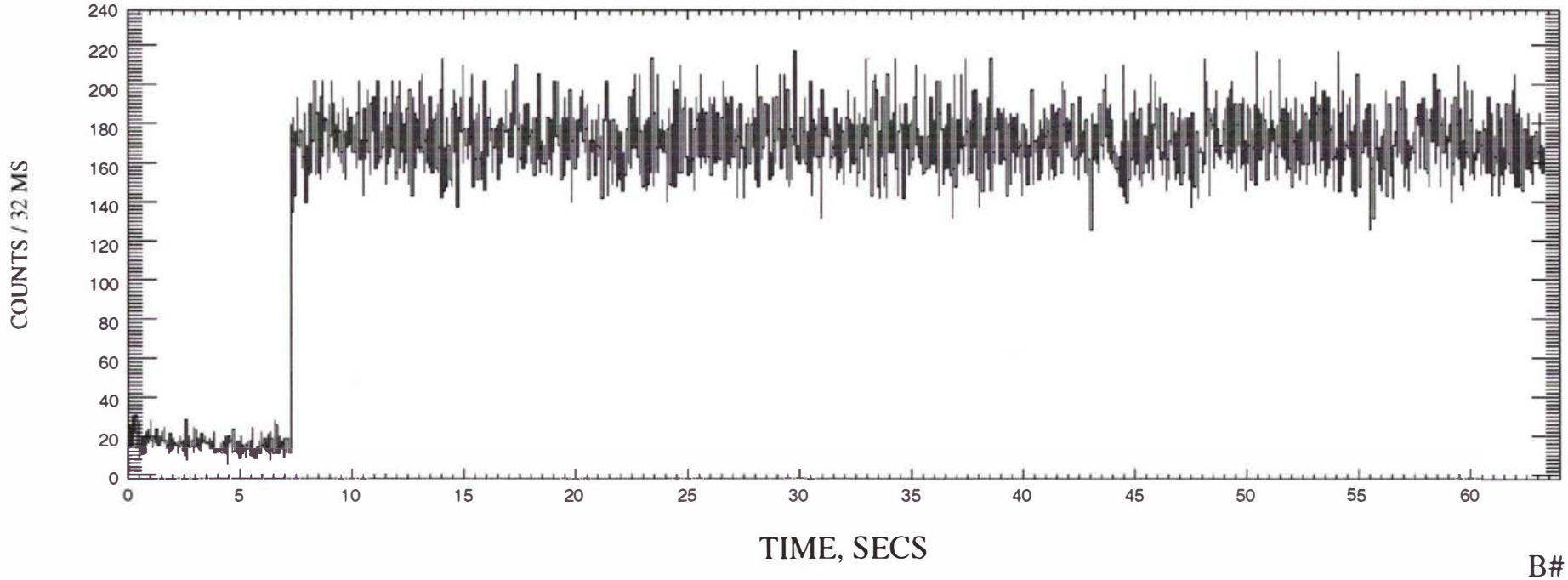


B# 31

HUS 2A TRIGGERED DATA ●EDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 3 at UT=23.093247388204 h=83135.691 s 23:05:35.691

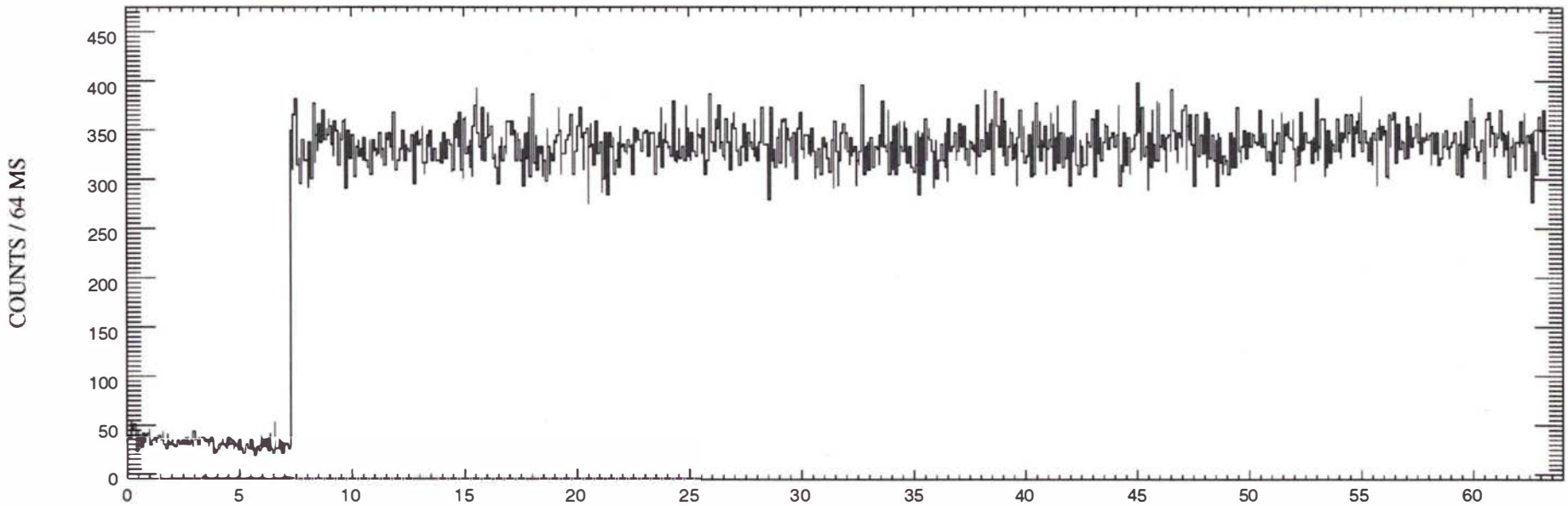


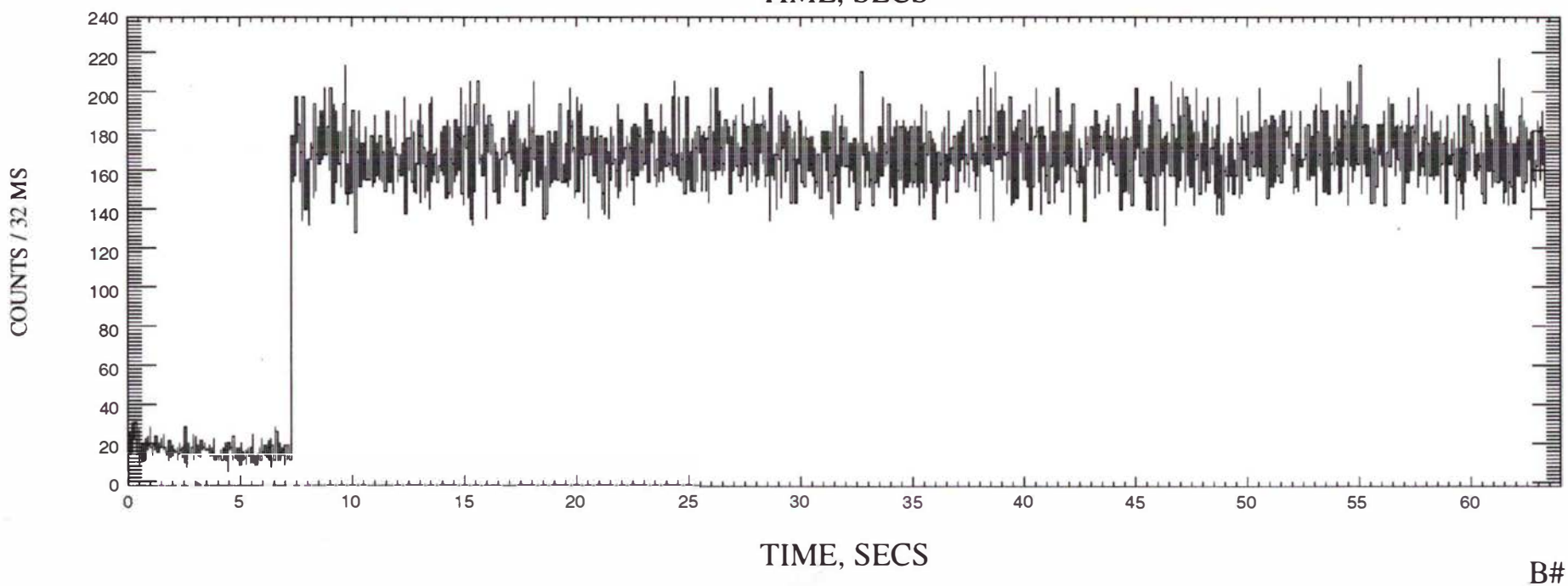


B# 33

HUS 2A TRIGGERED DATA QEDR DMY = 28/09/2001 DOY = 271 10/01/01

Burst Counter 4 at UT=23.795474692451 h=85663.709 s 23:47:43.709





B# 34

Date: Aug 24 2007

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

☑ Jim Schmidling's stat file correction applied?

☑ Final ephemeris used?

☑ Final, CDROM data used?

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

2. For Konus events

☑ Konus ecliptic latitude used with latest calibration?

2. For Odyssey events

☐ Was CHECKMO run to eliminate data gaps?

☐ Did the Odyssey ephemeris correspond to the event time? (When there is data in the database, the ephemeris is for the start of record, usually ~1320 s prior to the request time; when there is no data in the database, the ephemeris is for the request time in the e-mail, so the request time in mosearch should be equal to the GRB time. Note that the time in the return e-mail will be ~1320 s prior to the time requested, in the line "no HEND data…")

☐ Was Mars-blocking used?

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

☐ GRS database searched for triggered data? Database data between August 2005 and January 2006 should be re-extracted, due to timing errors. (E-mailed data should be OK).

☐ GRS and HEND data cross-correlated to check timing?

2. For 3 or More Spacecraft events

☐ Σ 3Δt's calculated, and/or BMAPSUM executed?

3. For INTEGRAL events

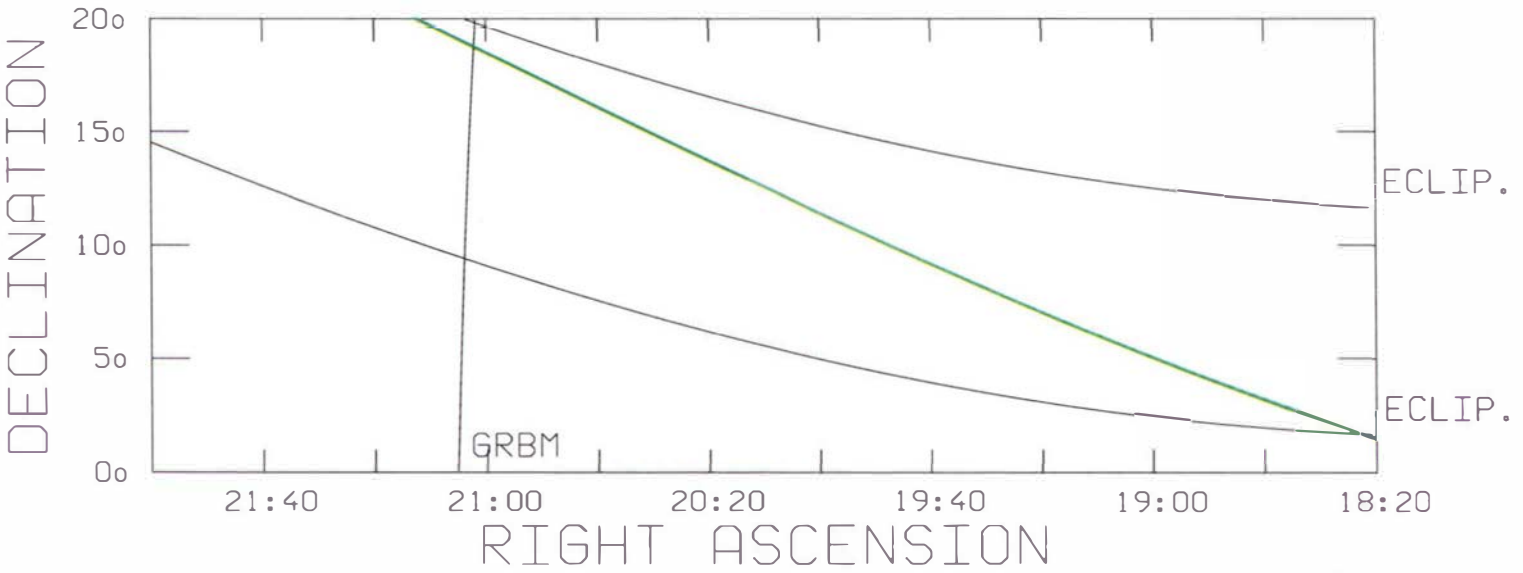
☐ INTEGRAL SPI-ACS website checked for bursts that weren't transmitted automatically?

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

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

☑ ACCESS and MBL4 databases updated?

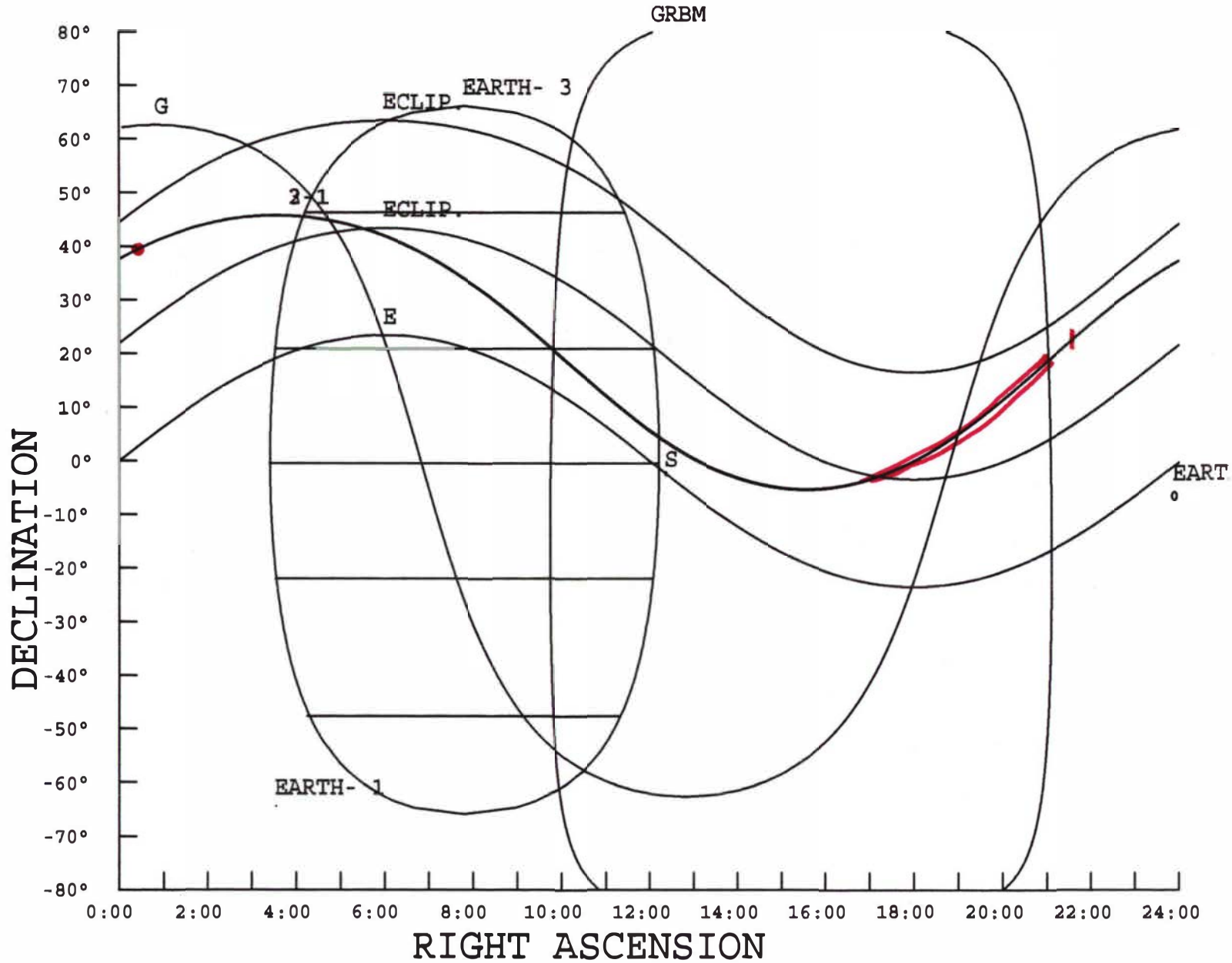
GRB010929 ~01340 S 11/07/2011



EVENT OF SEP 29, 2001 0:16

21/ 5/ 4

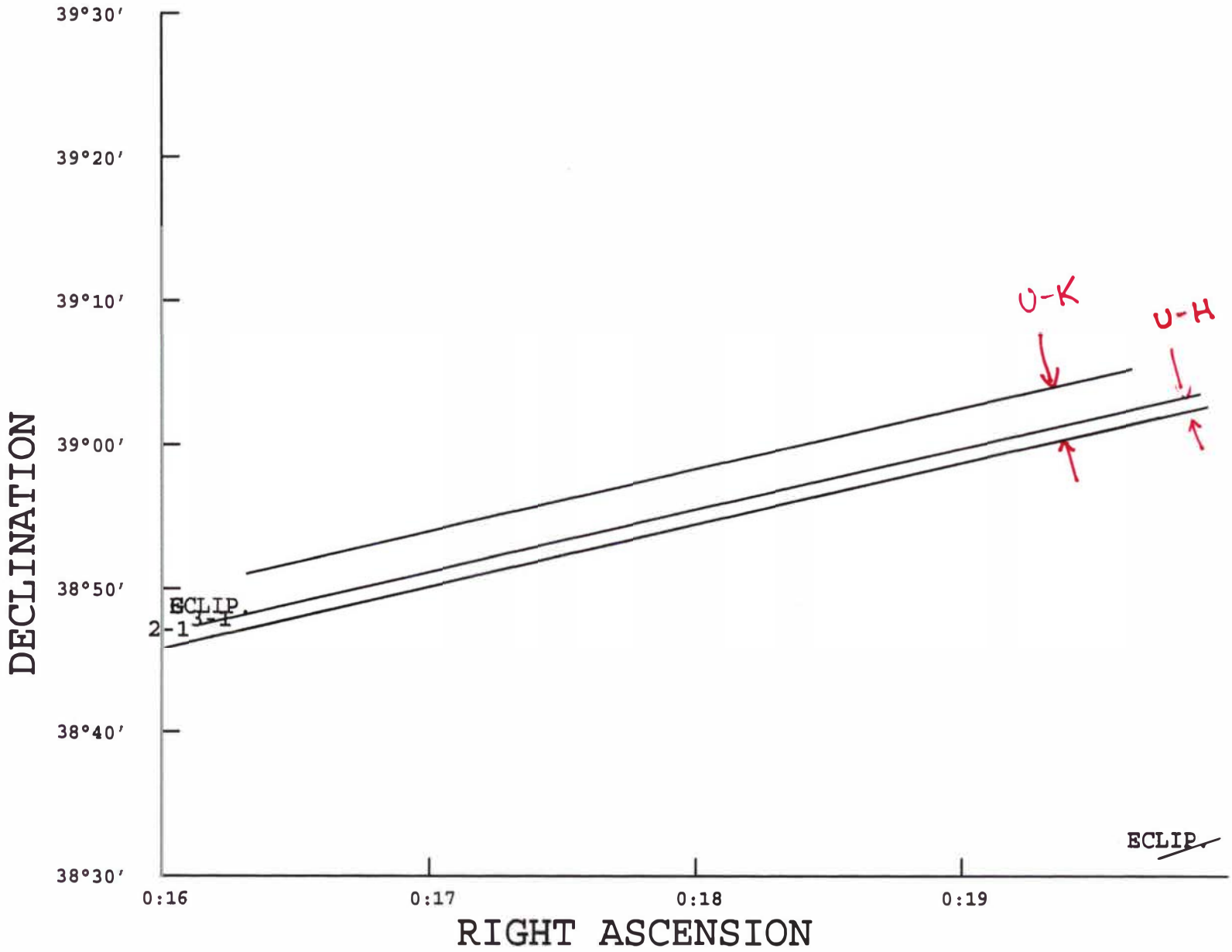
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 KONUS 3 HETE



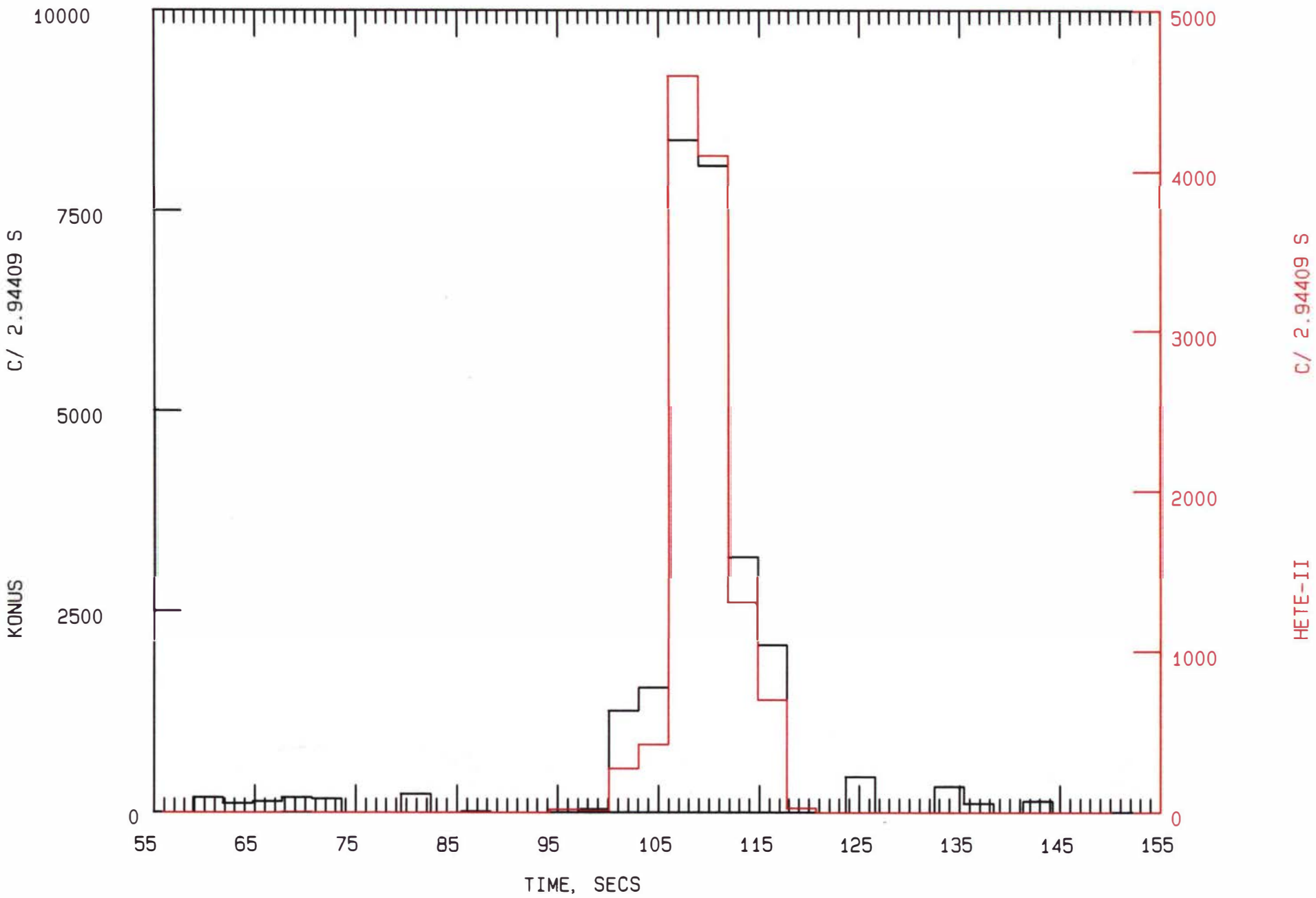
EVENT OF SEP 29, 2001 0:16

20/ 5/ 4

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

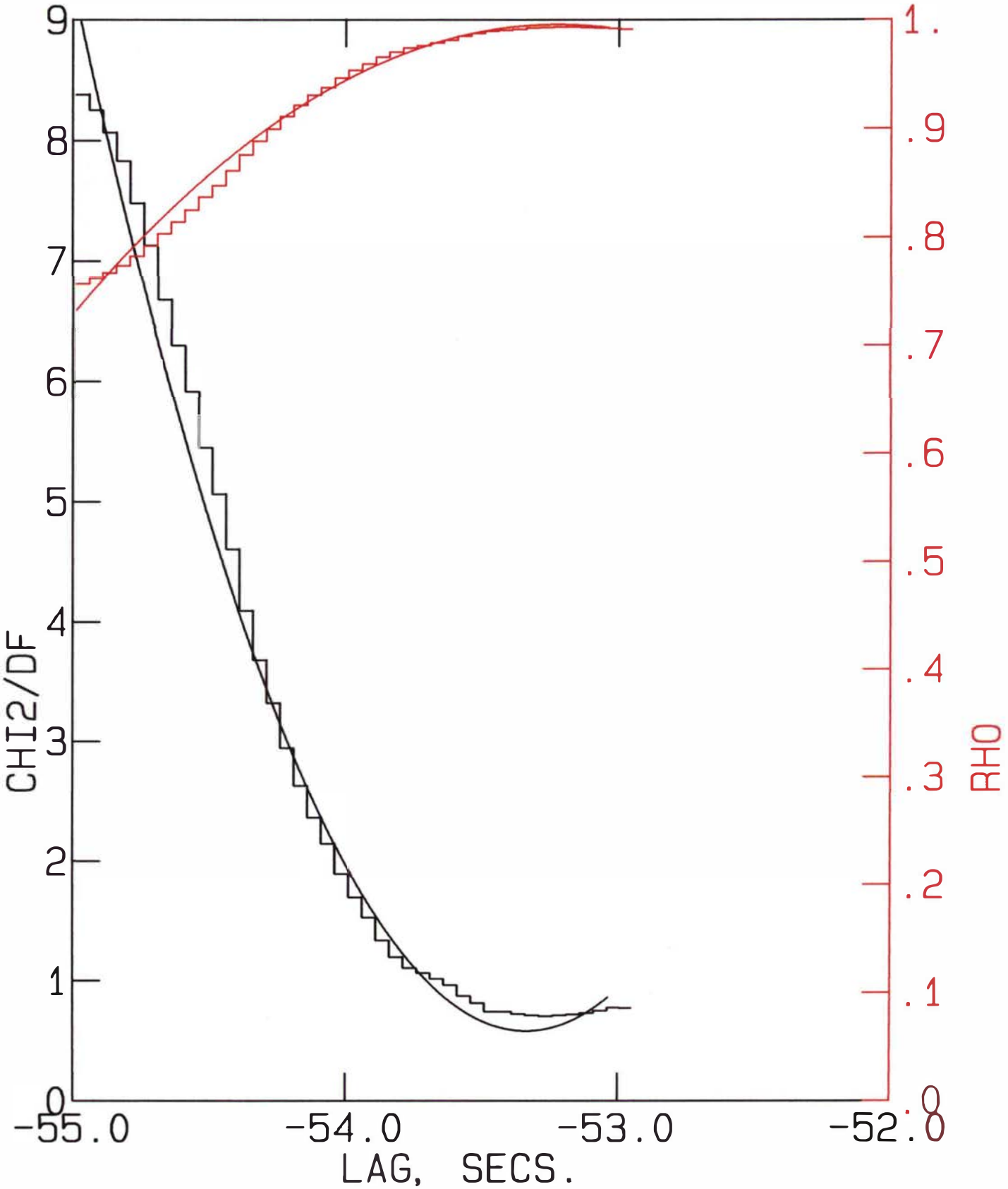


KONUS -HETE-II CORRELATION 29/09/01 1257.756 20/ 5/ 4

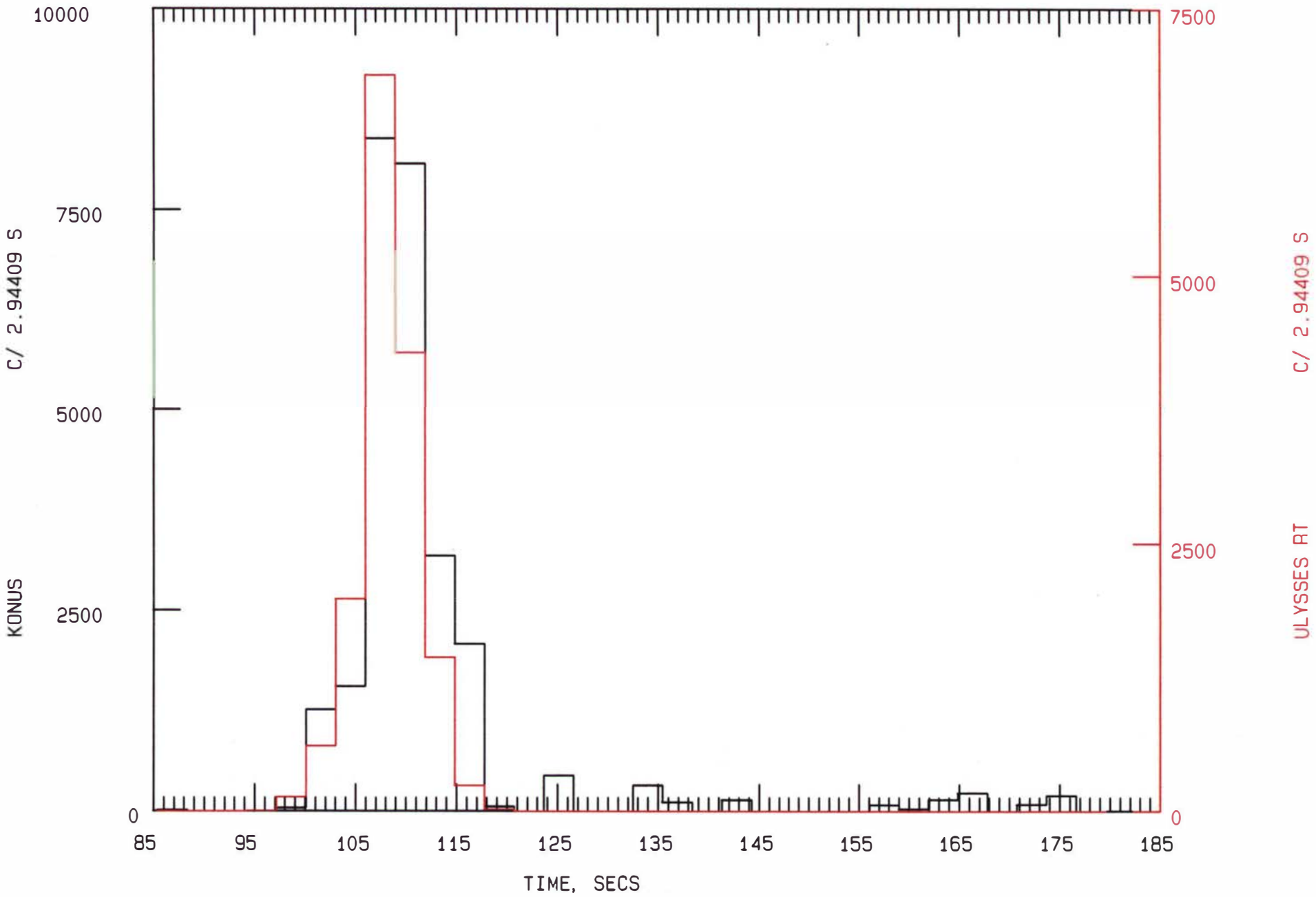


20/ 5/ 4

KONUS -HETE-II CORRELATION 29/09/01 1257.756

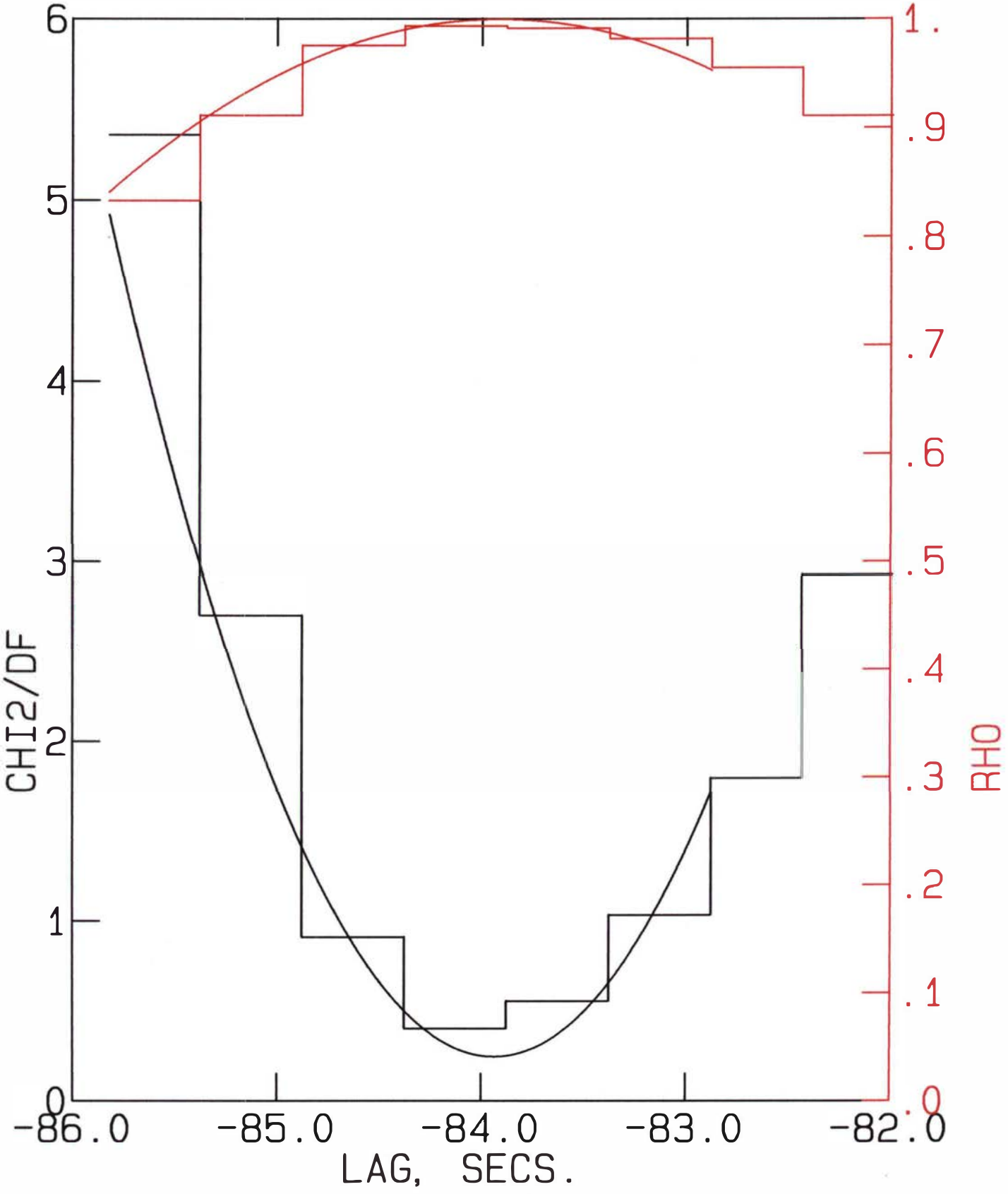


KONUS -ULYSSES RT CORRELATION 29/09/01 1257.756 20/ 5/ 4

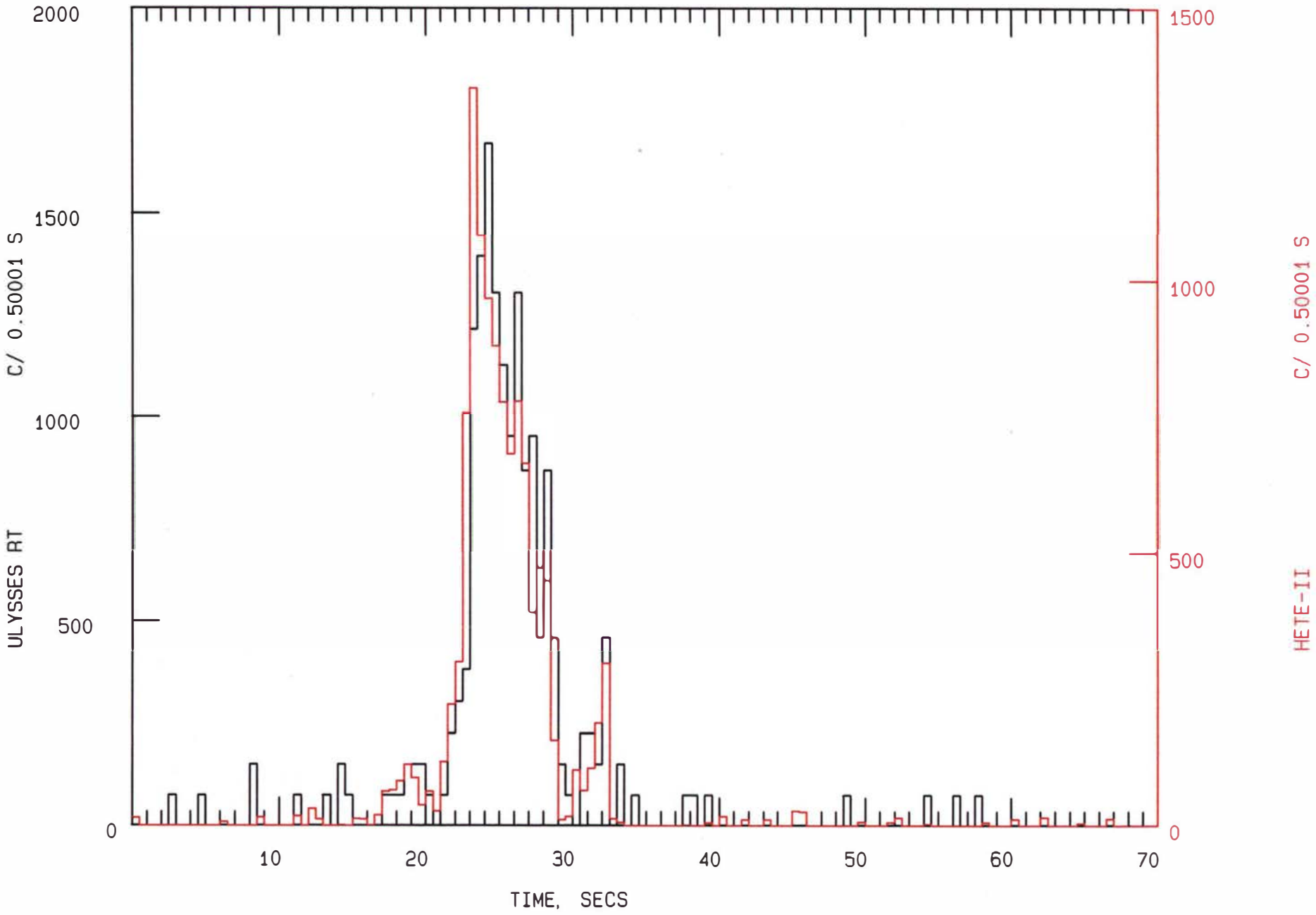


20/ 5/ 4

KONUS -ULYSSES RT CORRELATION 29/09/01 1257.756

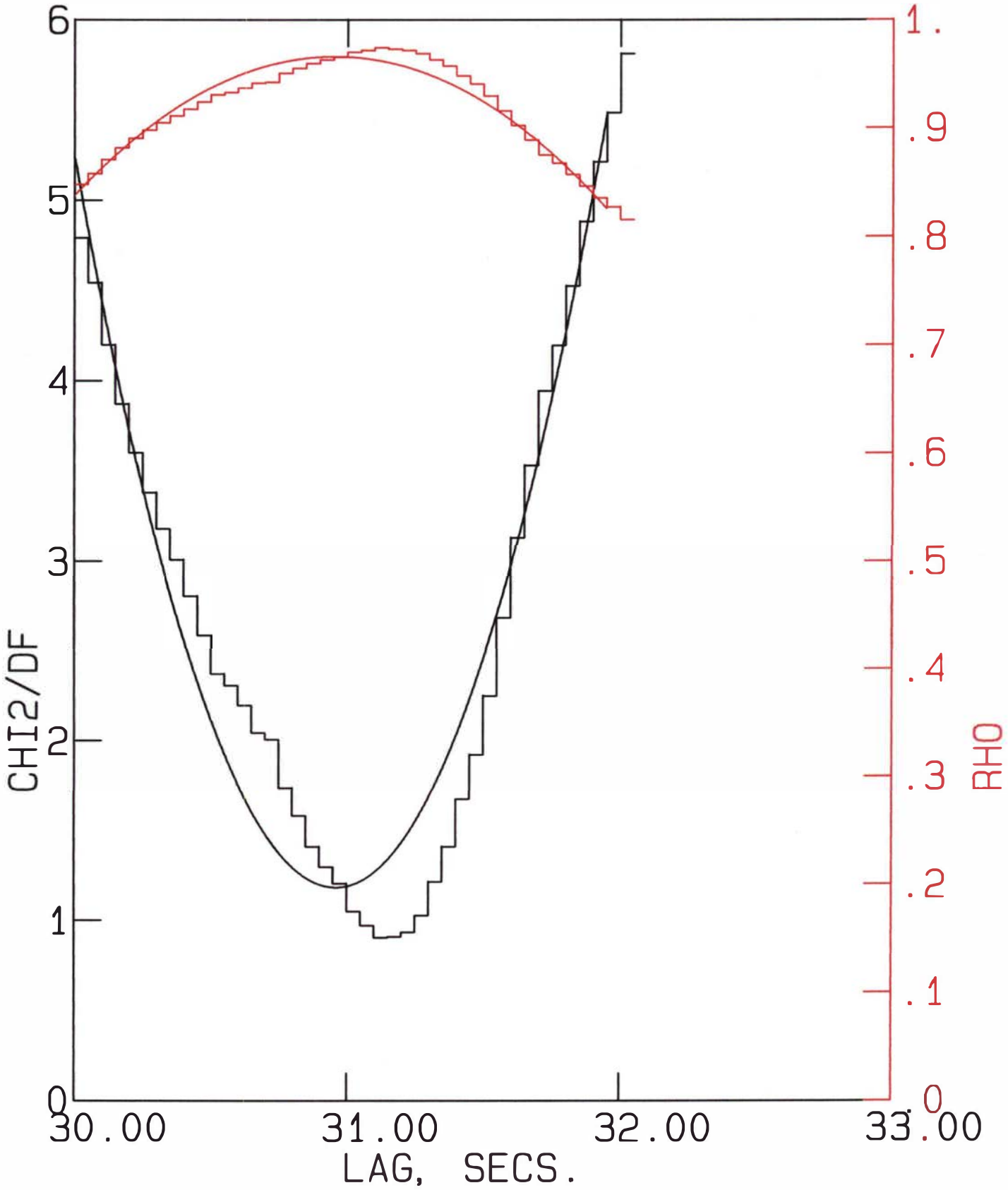


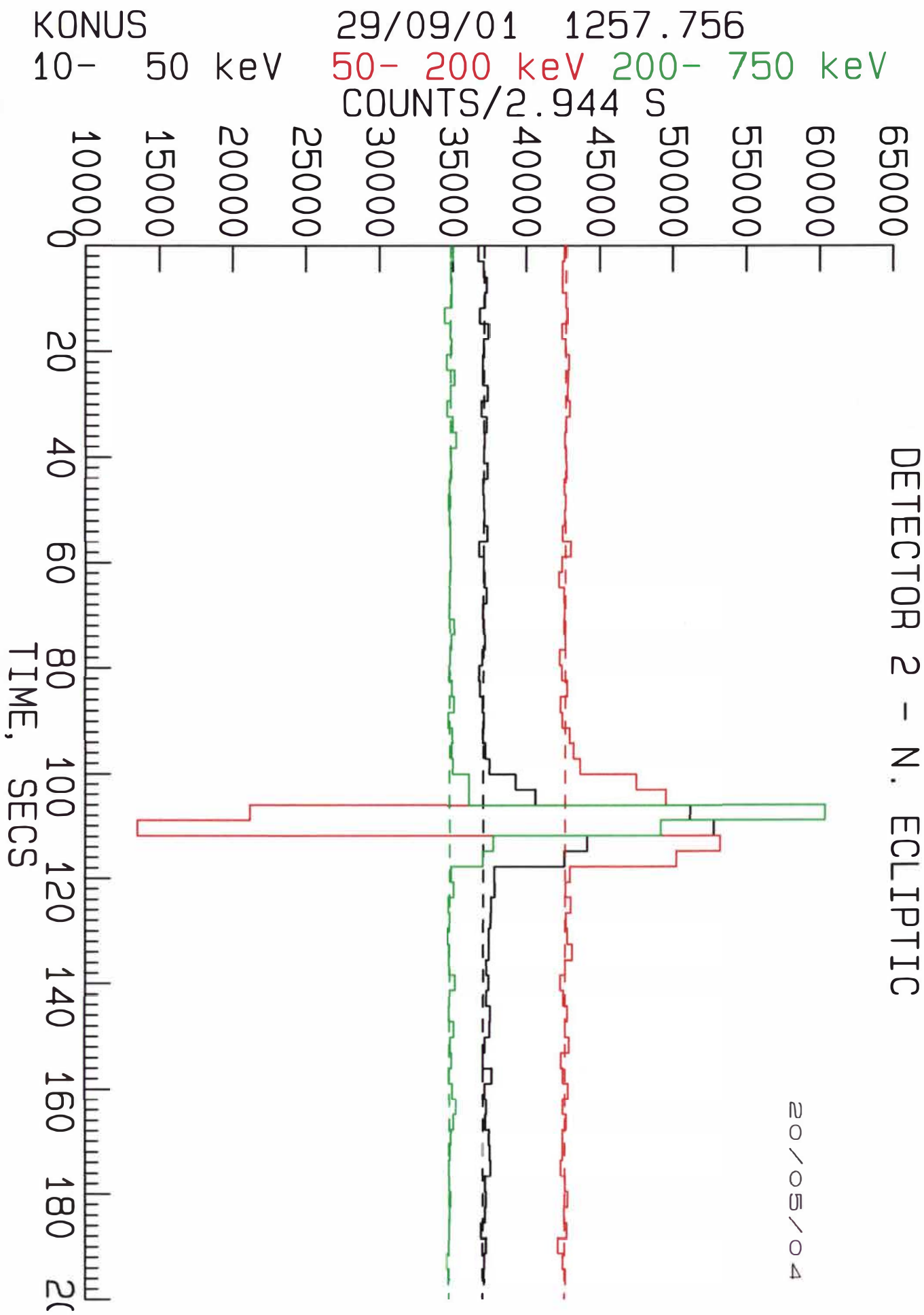
ULYSSES RT-HETE-II CORRELATION 29/ 9/01 1010.240 20/ 5/ 4

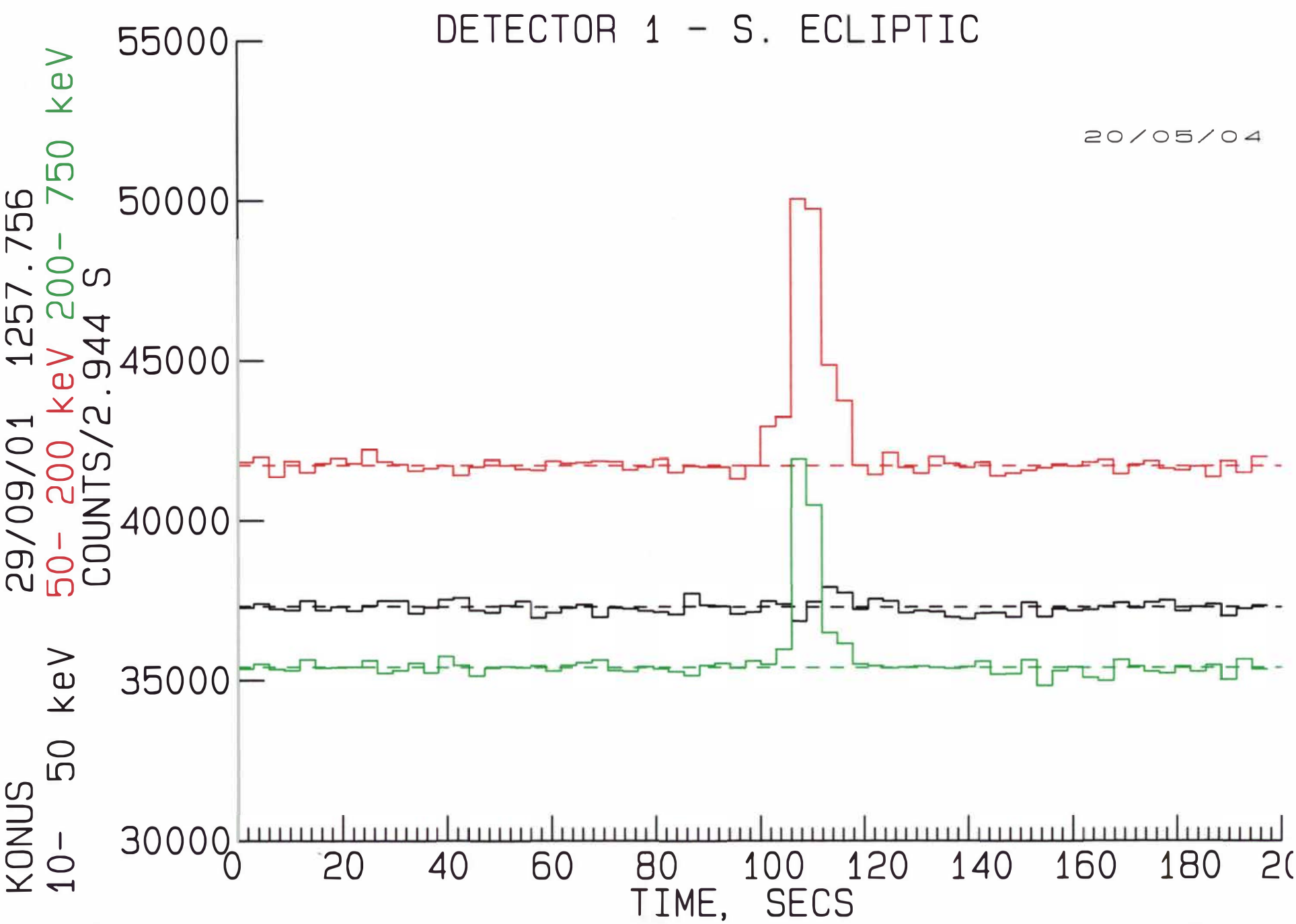


20/ 5/ 4

ULYSSES RT-HETE-II CORRELATION 29/ 9/01 1010.240




KONUS
29/09/01 1257.756
10- 50 keV
50- 200 keV
200- 750 keV
COUNTS/2.944 S
65000
60000
55000
50000
45000
40000
35000
30000
25000
20000
15000
10000
0
20
40
60
80
100
120
140
160
180
TIME, SECS
DETECTOR 2 - N. ECLIPTIC
20/05/04


DETECTOR 1 - S. ECLIPTIC
20/05/04
KONUS 29/09/01 1257.756
10- 50 keV 50- 200 keV 200- 750 keV
COUNTS/2.944 S
55000
50000
45000
40000
35000
30000
0
20
40
60
80
100
120
140
160
180
TIME, SECS

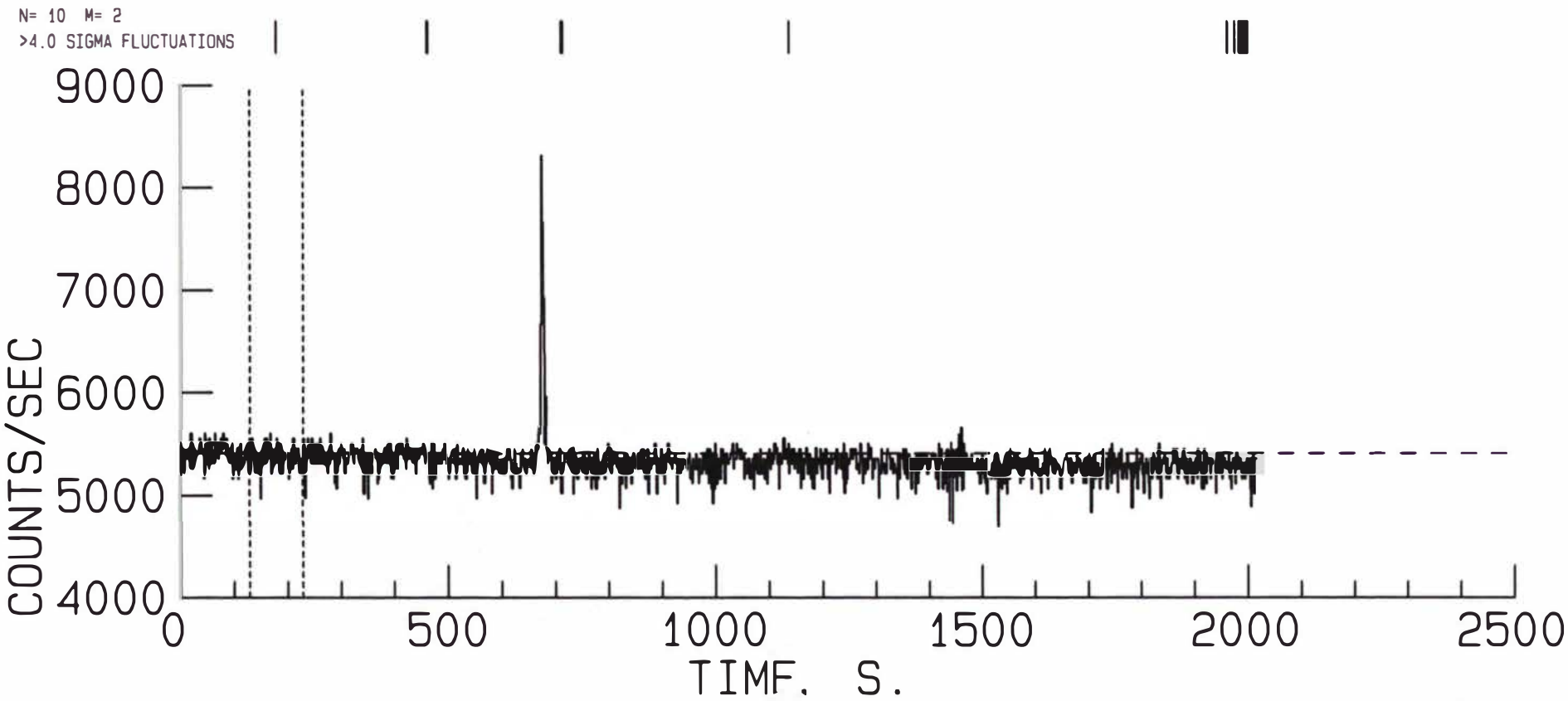
ULYSSES RT

20/ 5/ 4

29/ 9/ 1 360.225 s

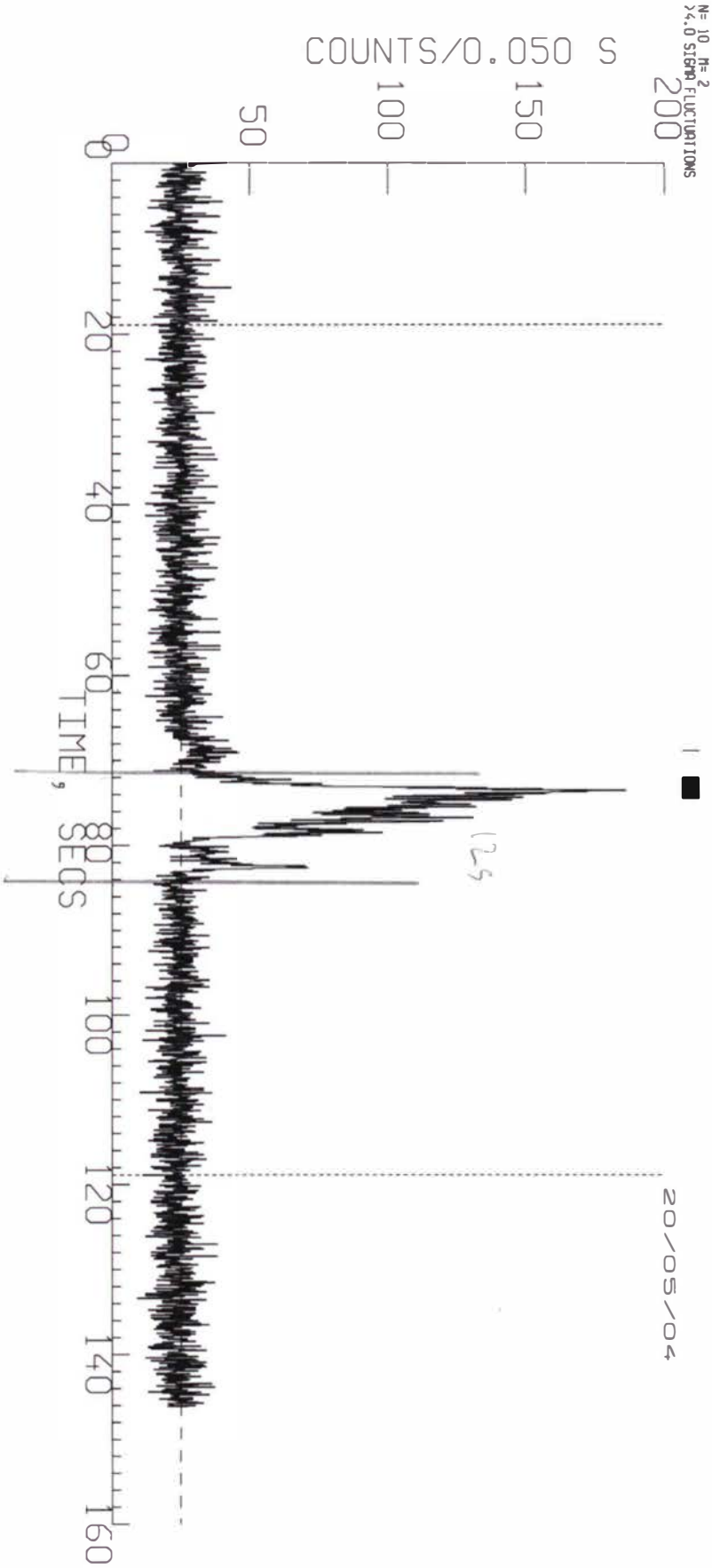
INTERVALS REGROUPED BY 3

23- 154 keV



HETE-II 29/09/01 1290.658

18- 510 keV



From feroci@ias.rm.cnr.it Mon Oct 1 02:07 PDT 2001
Date: Mon, 1 Oct 2001 10:57:33 +0200 (DFT)
From: Marco Feroci <feroci@ias.rm.cnr.it>
: "George R. Ricker" <grr@space.mit.edu>
: Kevin Hurley <khurley@sunspot.ssl.berkeley.edu>,
Marco Feroci <feroci@ias.rm.cnr.it>
Subject: Re: H1771
MIME-Version: 1.0

Hello George,

I gave a look to the GRBM data for the time of H1771. We have no trigger at that time.
Curiously, exactly at that time we have a significant 1 bin excess in the ratemeters (1-s resolution, 40-700 keV) of our detector #4 (the anti-Sun one). However, we see no other signal neither in the high energy (>100 keV) band of the same detector, nor in any of the other detectors.
>From this analysis, I would say that the excess is due to a particle. For sure, it cannot be a very bright and hard event.

Hope this can help,
Marco

On Sat, 29 Sep 2001, George R. Ricker wrote:

> Kevin, Marco,
>
> One possible explanation for H1771 is that it was an extremely bright (fluence>10^-5), hard (Ep>1 Mev) GRB well outside the FOV of the WXM. Do you see any evidence for an event at that time in your data?
>
> H1771 occurred at:
> UTC: 20010929_002237.117085
> GPS: 685758170.117085
> Burst: GRB010929+1357.117085
>
> Thanks,
>
> --George
>

Marco Feroci
Istituto di Astrofisica Spaziale
C.N.R. - Area di Ricerca di Roma - Tor Vergata
Via Fosso del Cavaliere, Roma, I-00133 ITALY
Phone: +39-06-4993-4099
Fax : +39-06-2066-0188
E-mail: feroci@ias.rm.cnr.it

From grbhend@mx.iki.rssi.ru Tue May 18 11:36:07 2004
Date: Tue, 18 May 2004 22:34:29 +0400
From: "GRB HEND" <grbhend@mx.iki.rssi.ru>
To: "recipient1" <grbhend@mx.iki.rssi.ru>,
"recipient2" <khurley@sunspot.ssl.berkeley.edu>
Subject: No data in HEND Data Base
MIME-Version: 1.0
X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2600.0000
X-IKI-MailScanner-Information: Please contact the ISP for more information
X-IKI-MailScanner: Found to be clean
X-MailScanner-From: grbhend@mx.iki.rssi.ru

Received letter from = khurley@ssl.berkeley.edu
No HEND data for GRB around 010929 00:00:37

<This message contains 1 attachments (not printed)>

GRBM 20010929 03609

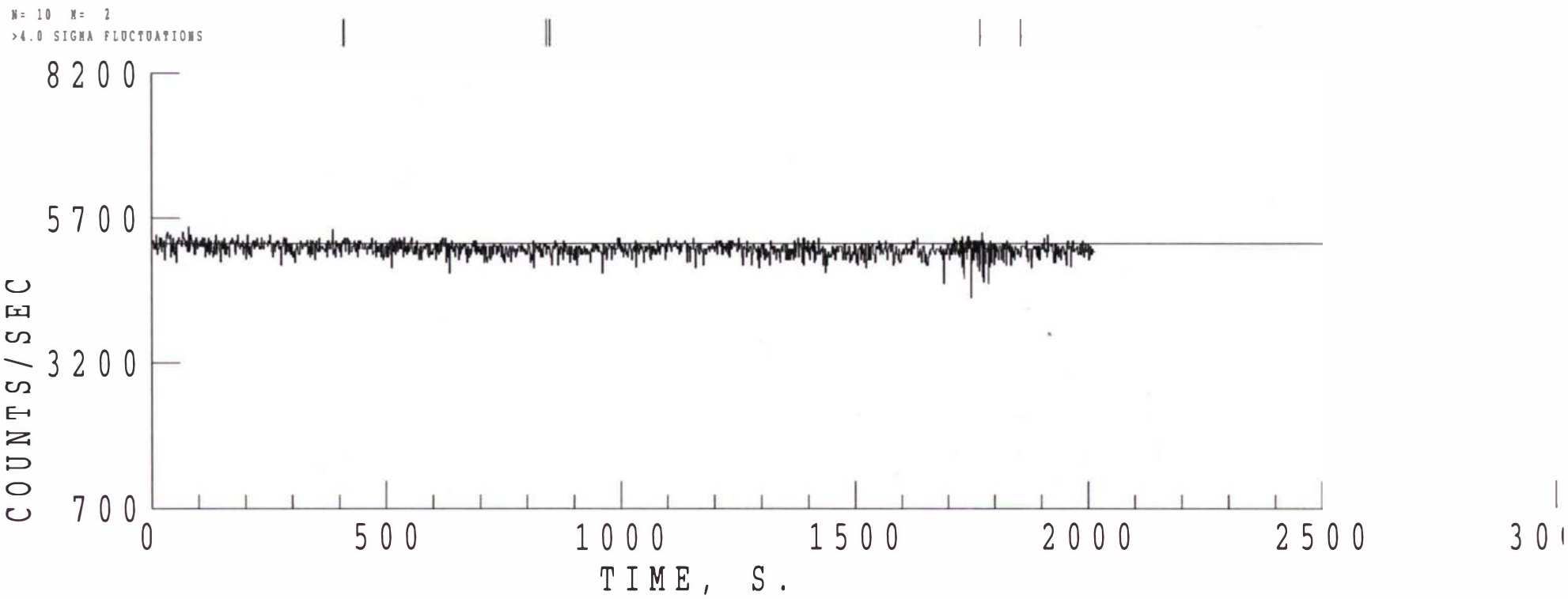
07/05/04

ULYSSES RT

29/09/01 2592.263 s

INTERVALS REGROUPED BY 3

0- 0 keV



From grbhend@mx.iki.rssi.ru Tue May 18 11:36:21 2004
Date: Tue, 18 May 2004 22:35:00 +0400
From: "GRB HEND" <grbhend@mx.iki.rssi.ru>
`: "recipient1" <grbhend@mx.iki.rssi.ru>,
"recipient2" <khurley@sunspot.ssl.berkeley.edu>
Subject: No data in HEND Data Base
MIME-Version: 1.0
X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2600.0000
X-IKI-MailScanner-Information: Please contact the ISP for more information
X-IKI-MailScanner: Found to be clean
X-MailScanner-From: grbhend@mx.iki.rssi.ru

Received letter from = khurley@ssl.berkeley.edu
No HEND data for GRB around 010929 00:38:09

<This message contains 1 attachments (not printed)>

SAX GRBM

HUS DATA

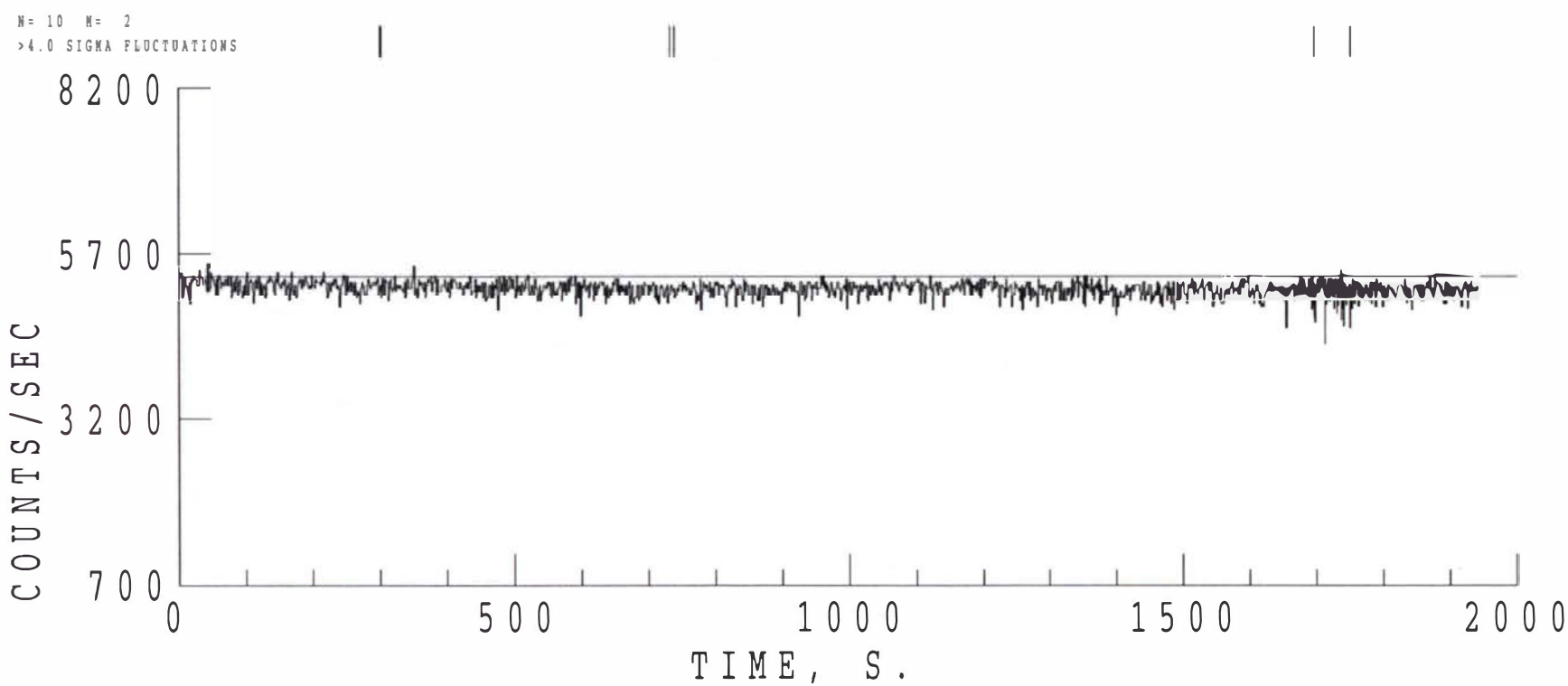
19/07/05

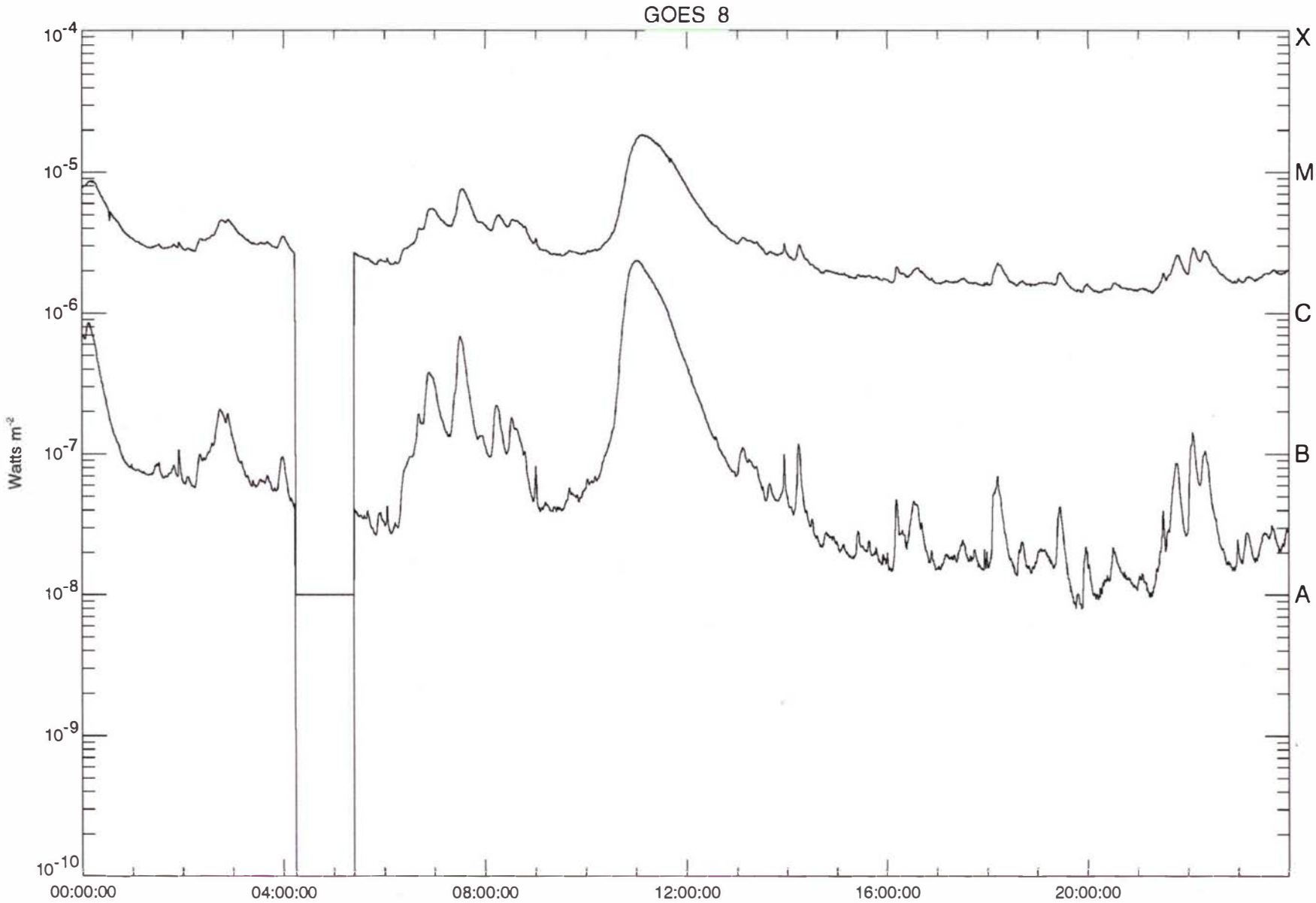
ULYSSES RT

29/09/01 2628.263 s

INTERVALS REGROUPED BY 3

0- 0 keV

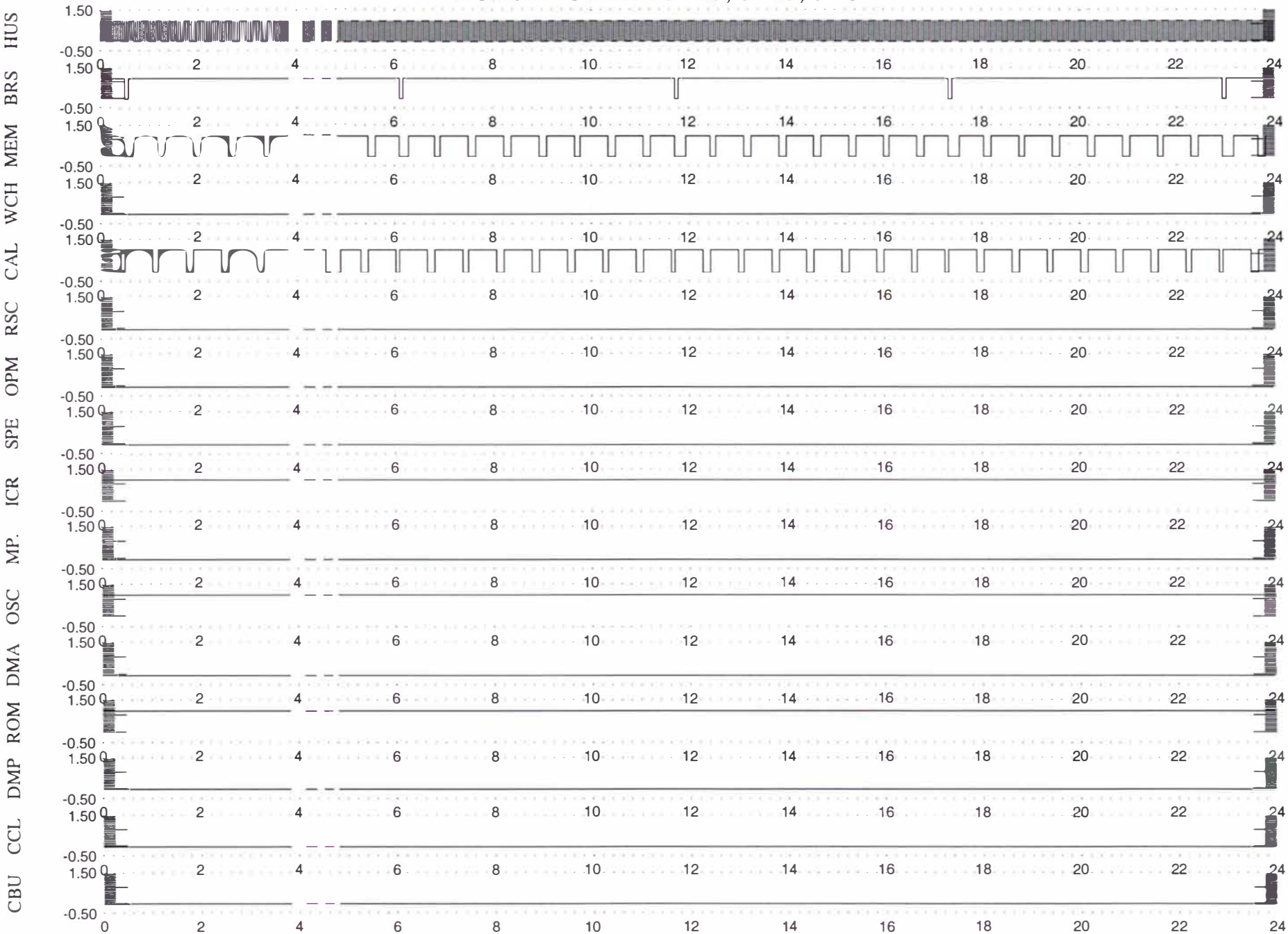




Data Start: 01/09/29, 0000:00 Plot created: 01/10/03, 0950
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

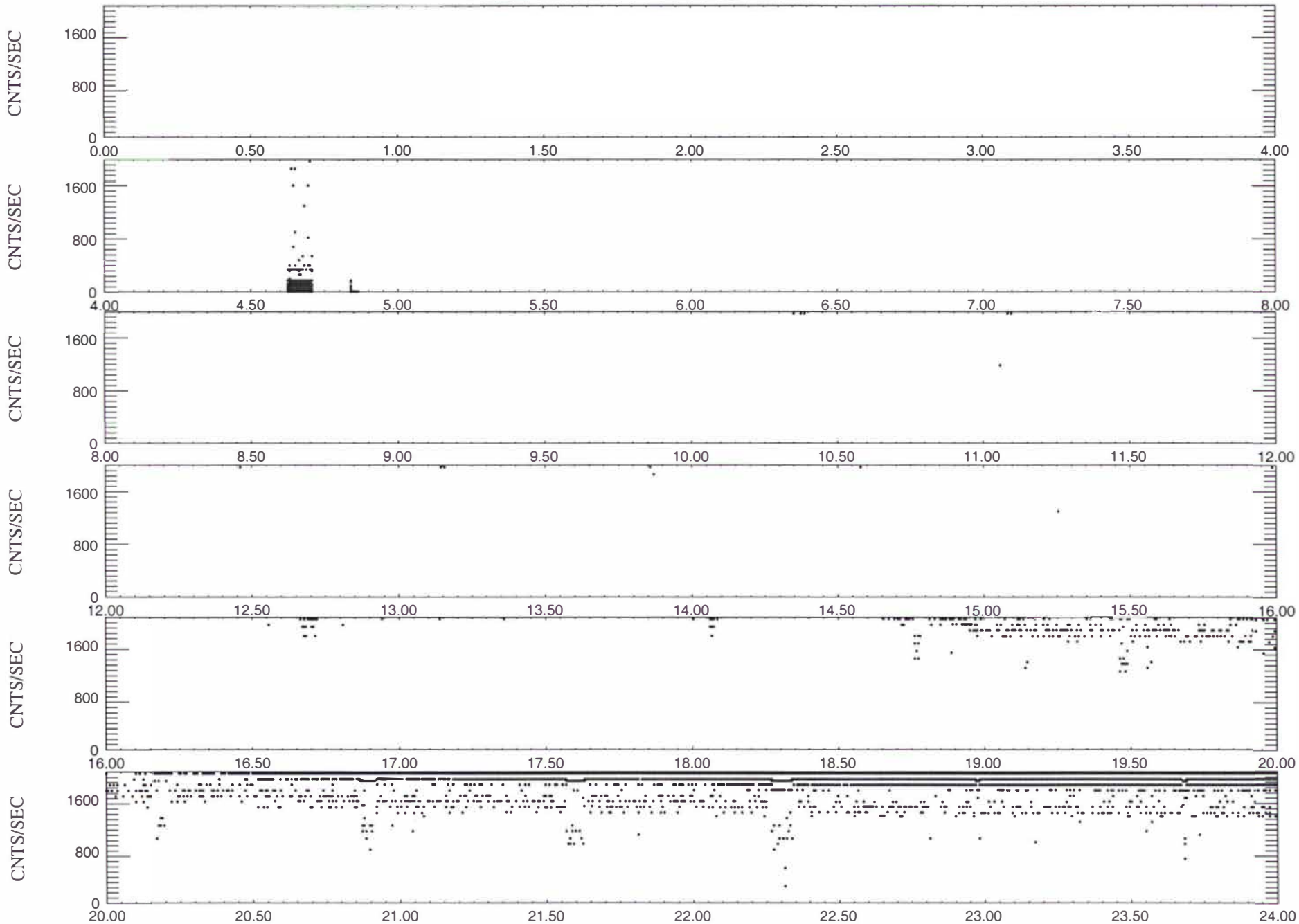
HUS MODES EDR day 272, year 2001 to day 272, year 2001 01/22/02

BURST NUMBER 5 - 15, 0 - 15, 0 - 6



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 29/09/2001 DOY = 272 01/22/02

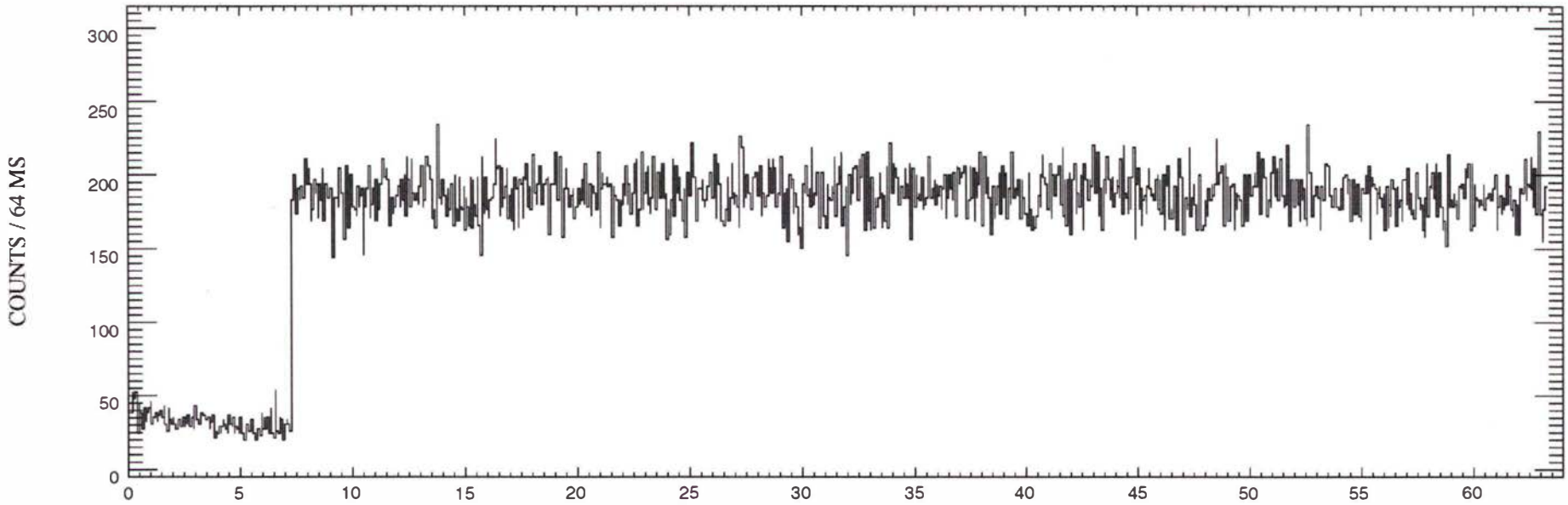
CALIBRATION DATA INCLUDED



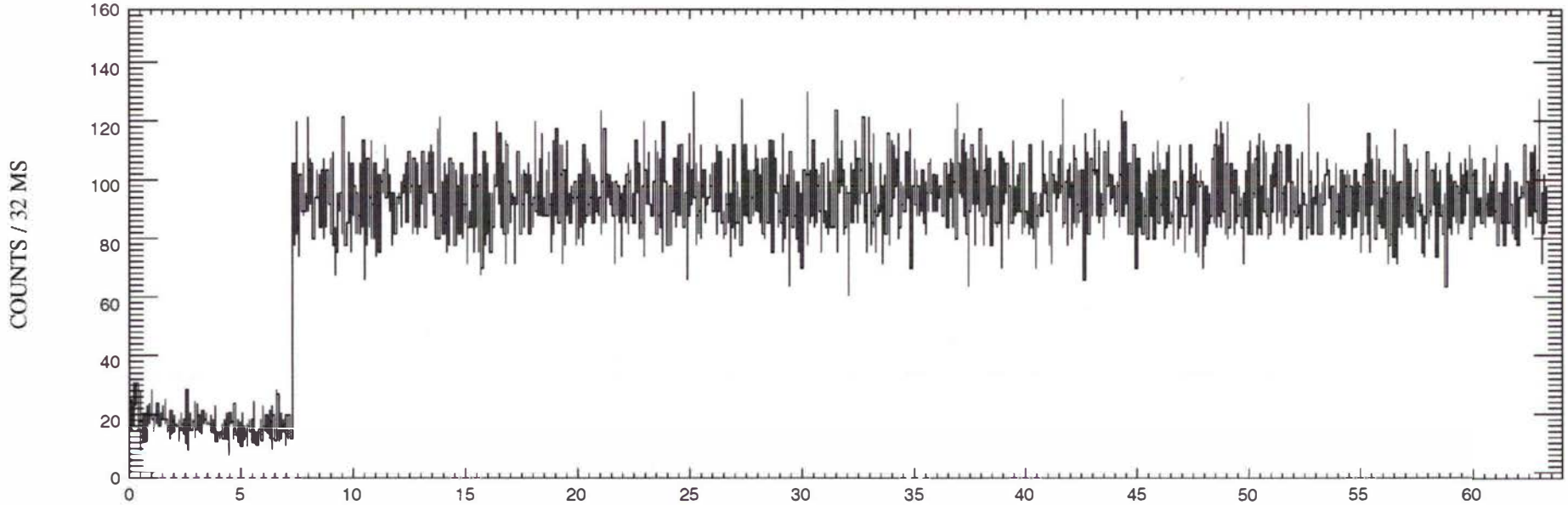
UNIVERSAL TIME

HUS 2A TRIGGERED DATA QEDR DMY = 29/09/2001 DOY = 272 10/01/01

Burst Counter 7 at UT=13.137920756870 h=47296.515 s 13:08:16.515



TIME, SECS

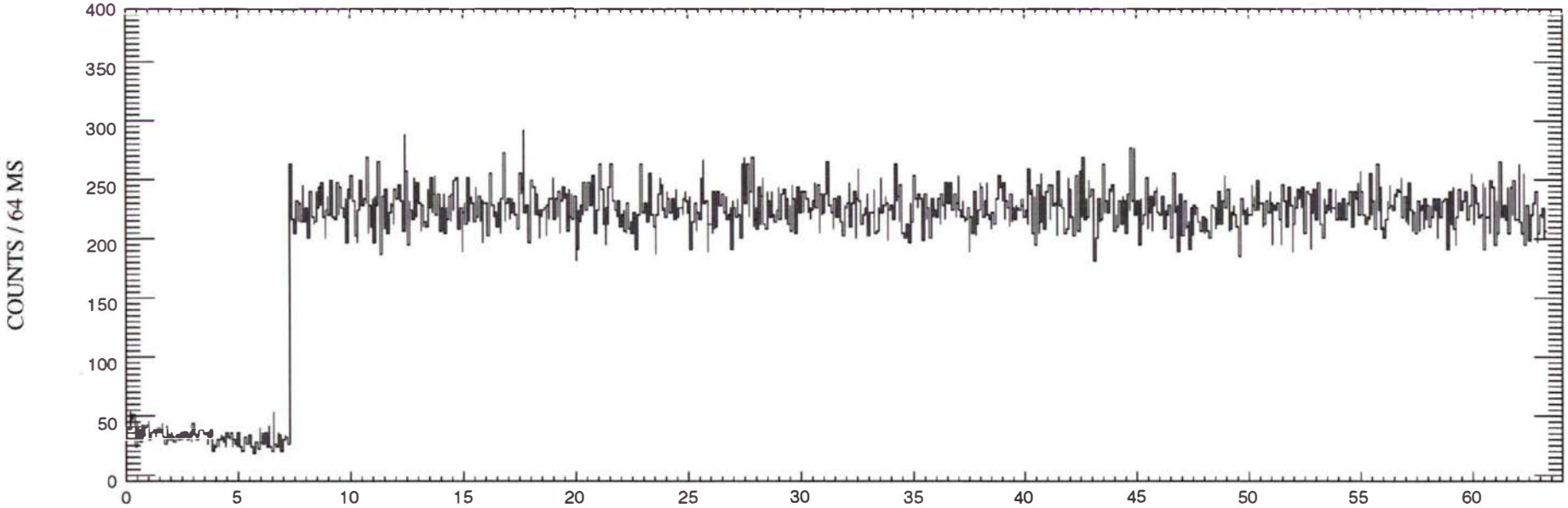


TIME, SECS

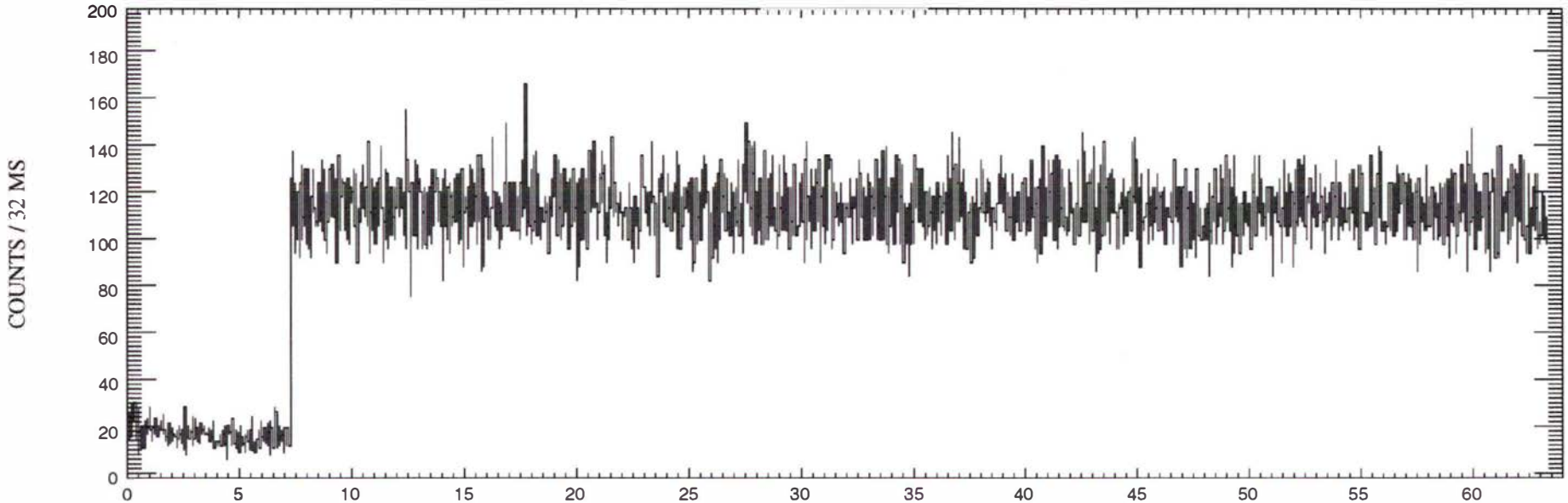
B# 18

HUS 2A TRIGGERED DATA QEDR DMY = 29/09/2001 DOY = 272 10/01/01

Burst Counter 3 at UT=10.328986663818 h=37184.352 s 10:19:44.352



TIME, SECS

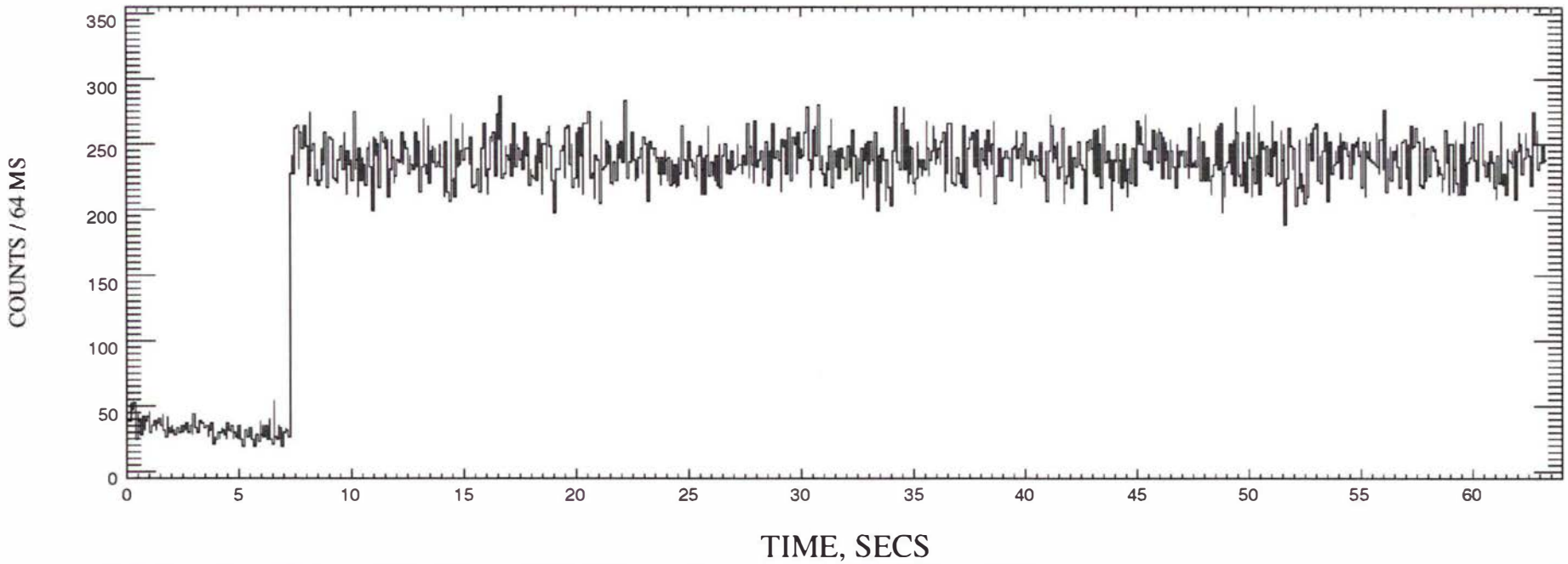


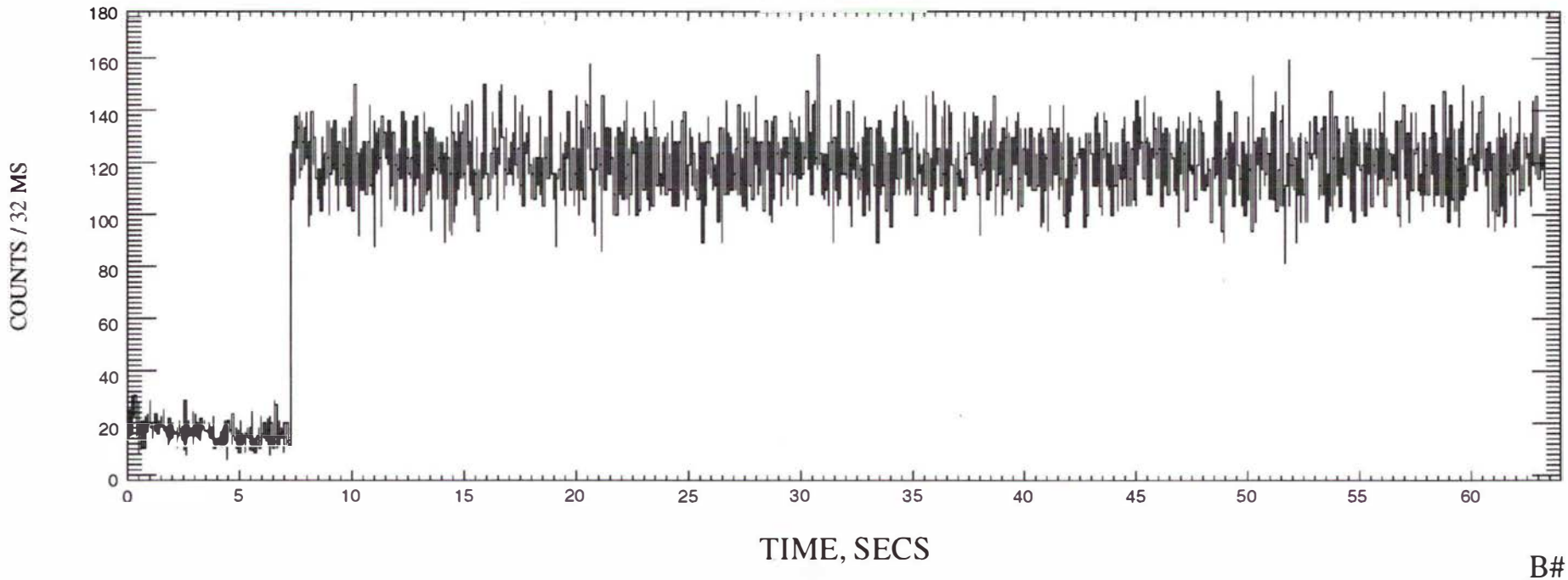
TIME, SECS

B# 14

HUS 2A TRIGGERED DATA QEDR DMY = 29/09/2001 DOY = 272 10/01/01

Burst Counter 1 at UT= 8.924519038730 h=32128.269 s 08:55:28.269

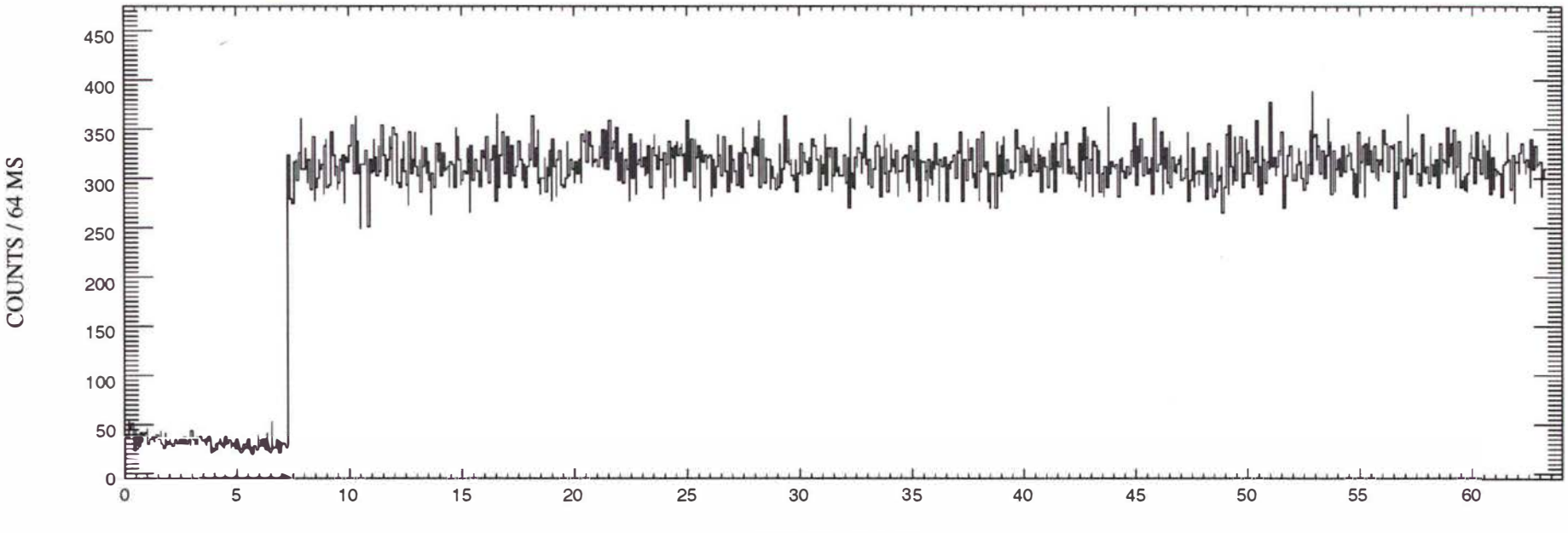


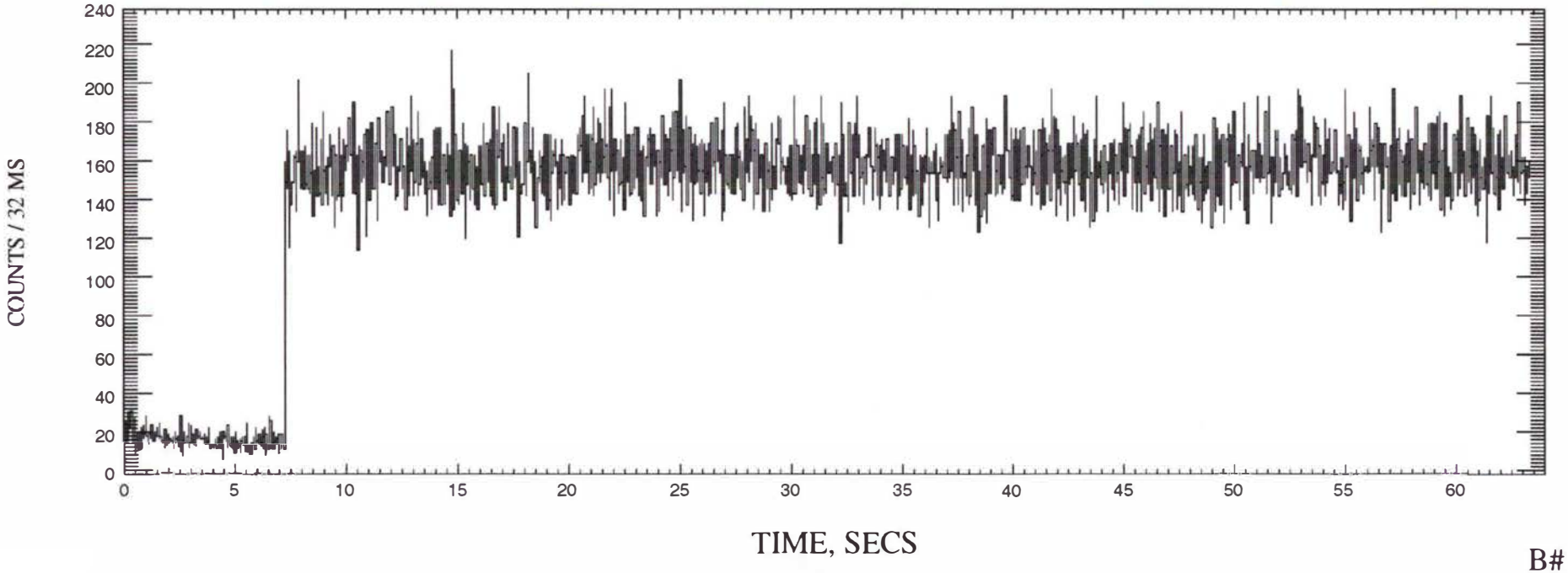


B# 12

HUS 2A TRIGGERED DATA QEDR DMY = 29/09/2001 D●Y = 272 10/01/01

Burst Counter 6 at UT= 1.199945500692 h= 4319.804 s 01:11:59.804

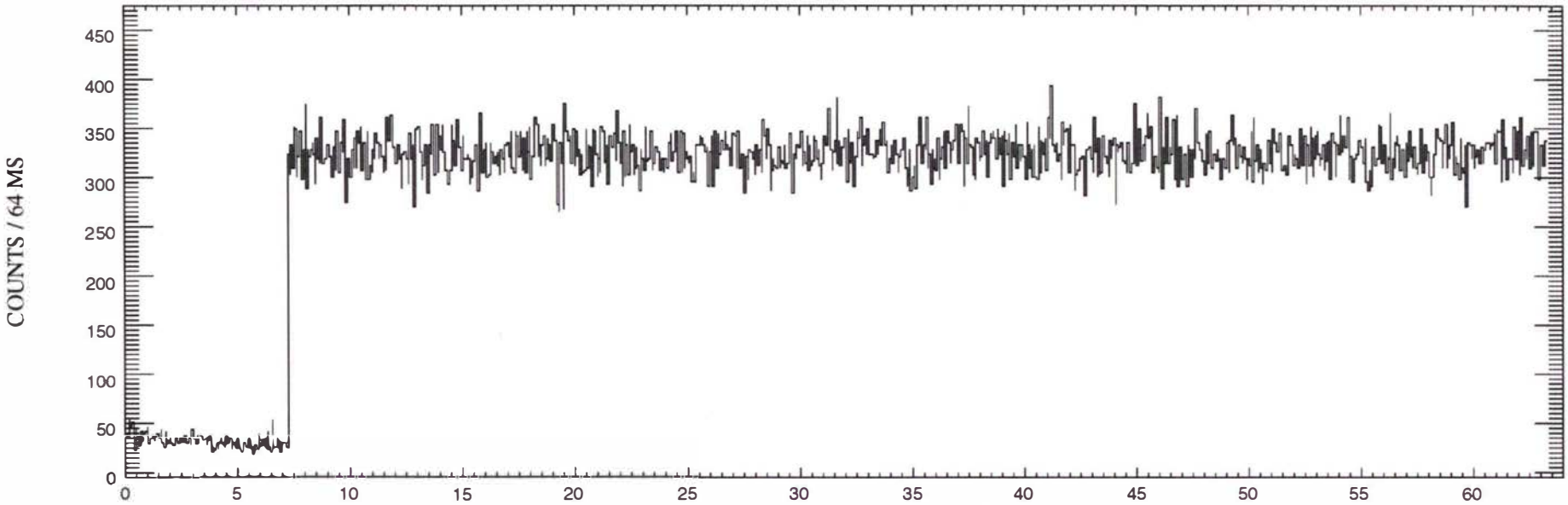


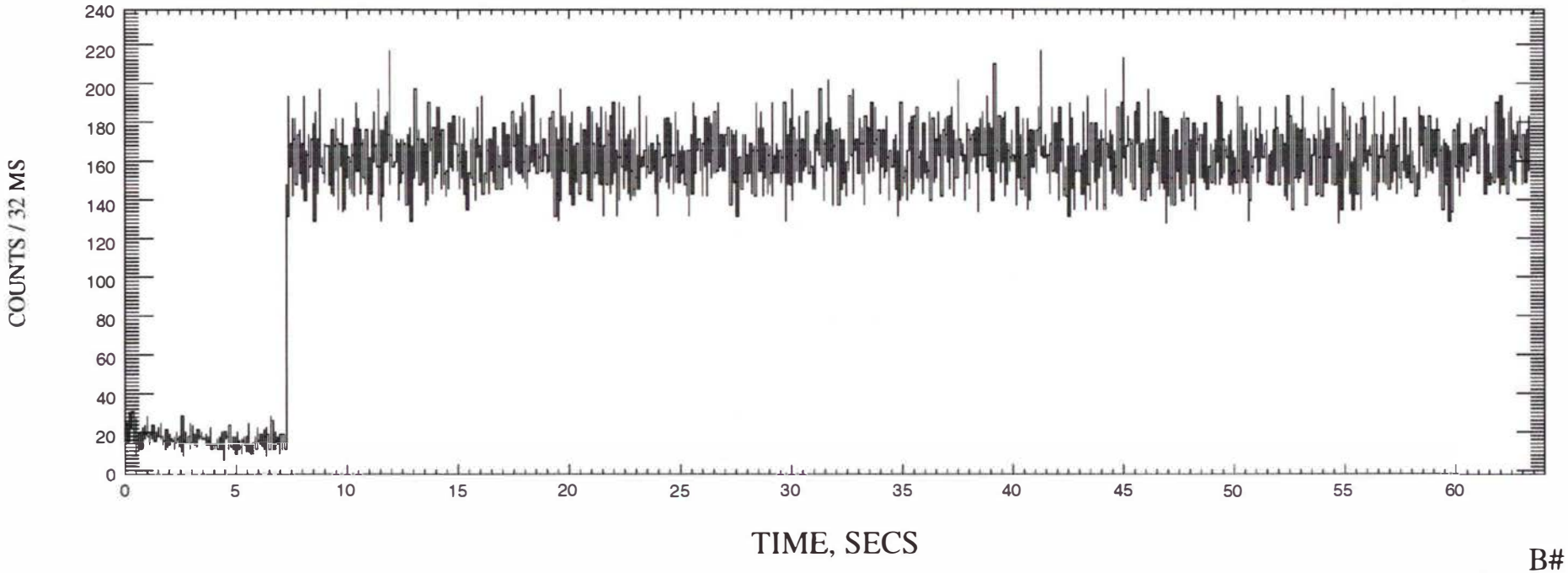


B# 2

HUS 2A TRIGGERED DATA QEDR DMY = 29/09/2001 DOY = 272 10/01/01

Burst Counter 5 at UT= 0.497712843153 h= 1791.766 s 00:29:51.766

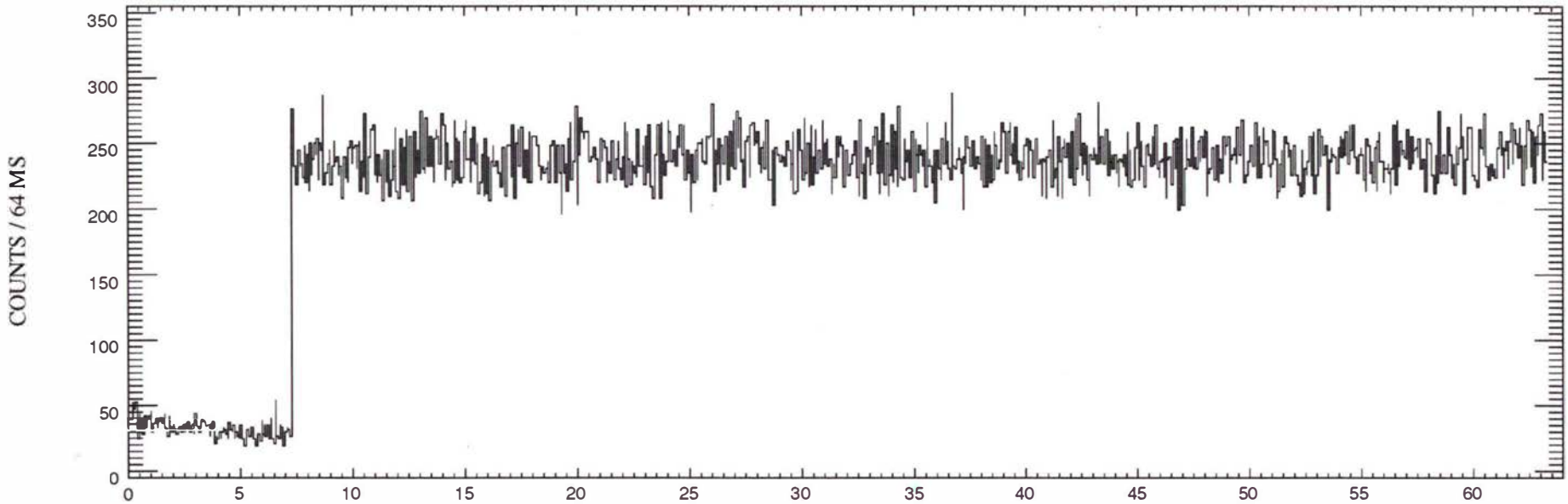




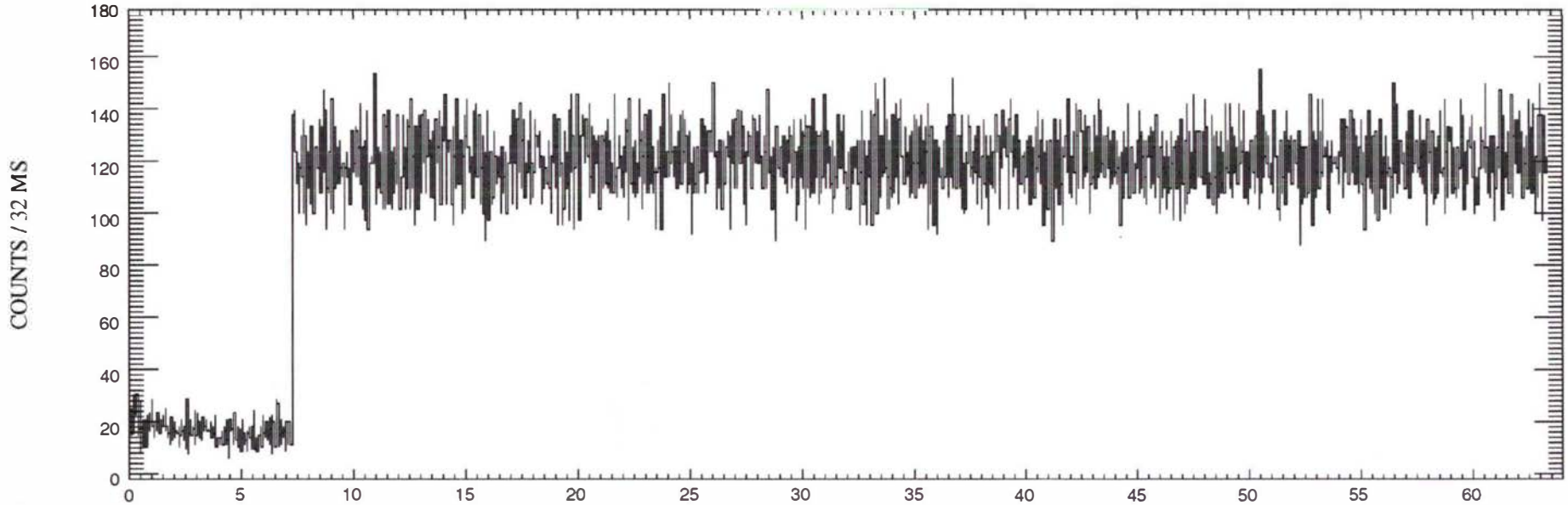
B# 1

HUS 2A TRIGGERED DATA QEDR DMY = 29/09/2001 DOY = 272 10/01/01

Burst Counter 15 at UT= 7.520049239265 h=27072.177 s 07:31:12.177



TIME, SECS



TIME, SECS

B# 10

From guidorzi@fe.infn.it Sun Sep 30 09:45 PDT 2001
From: Auto_GRB_monitor@fe.infn.it
Subject: GRBM/SAX Trigger S/W Alert
te: Sun, 30 Sep 2001 18:36:19 +0200 (MET DST)

lkGRB[303] #LSs: 2 Good HRR: 0
SW Trigger Time (OBT): 57353.979
UTC: Sun, 30 Sep 2001 13:40:03:96486 49204

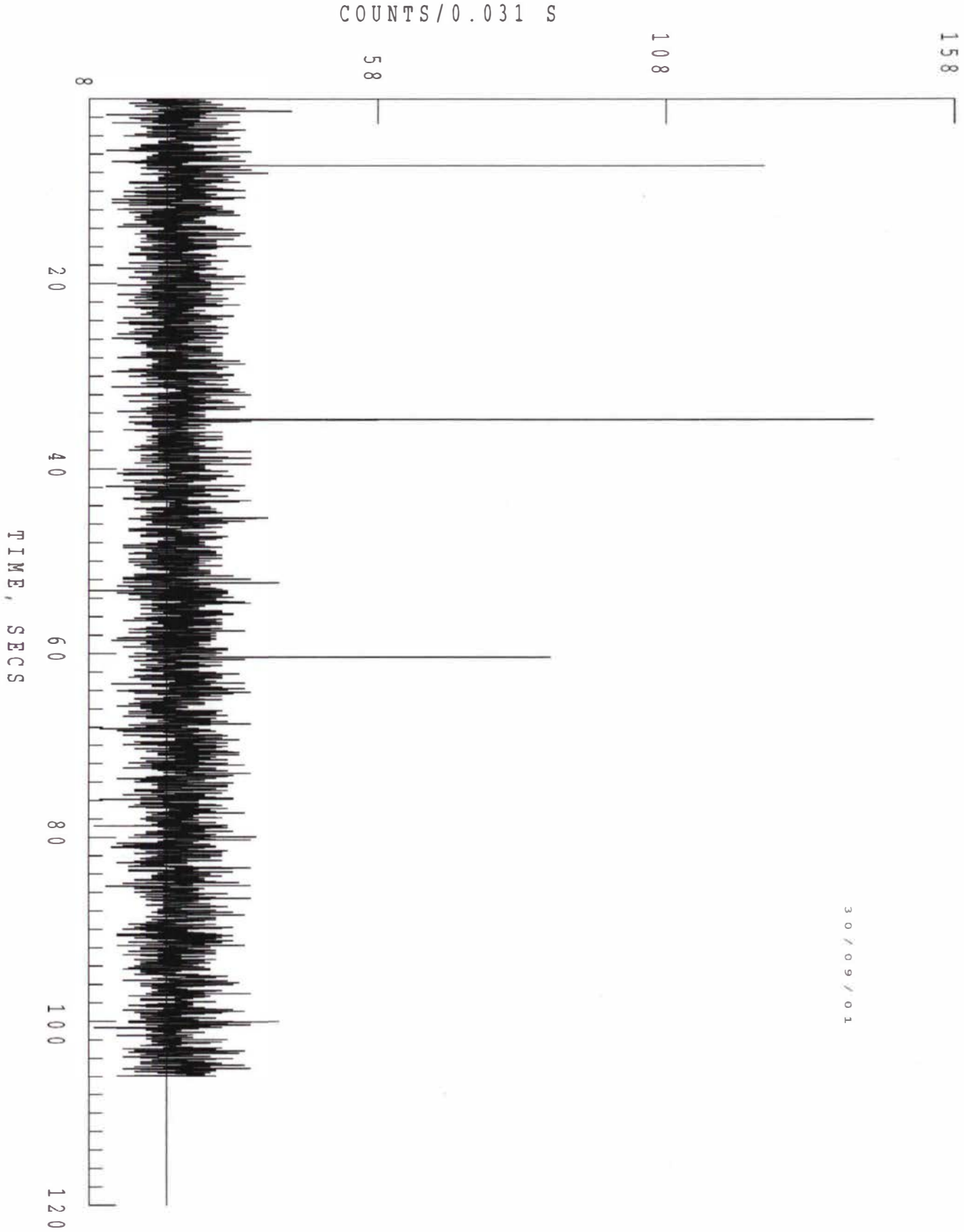
******Event 0 triggered on board: ev_time - onbtrig_time = 0.852

Nsig(trg):	3.7	2.0	14.6	5.4	1.2	1.6	8.4	3.7
Nsig(pfl):	0.0	0.0	14.6	5.4	0.0	0.0	8.4	3.7
Bkg lev. :	726	849	791	692	895	878	853	916
ChiSq R. :	1.288	0.974	0.844	0.937	0.846	0.893	0.534	1.015
Peak fl. :	0	0	410	141	0	0	244	111
Error :	0.0	0.0	44.7	39.1	0.0	0.0	44.3	44.2
Fluence :	0	0	796	141	0	0	478	111
Error :	0.0	0.0	84.6	39.1	0.0	0.0	85.7	44.2

Dur (s) :	0.00	0.00	4.00	1.00		
Abundance:	0	0	4	1		
H. Ratio :	-1.000	-1.000	0.600	0.785		
HR Ratio :	-1.000	-1.000	-1.000	-1.000	-1.000	0.764
HR W-ave :	0.618	+/- 0.119				

BSAX-GRBM 30/09/01 49195.113

40- 700 keV



SAX 20010930 49204

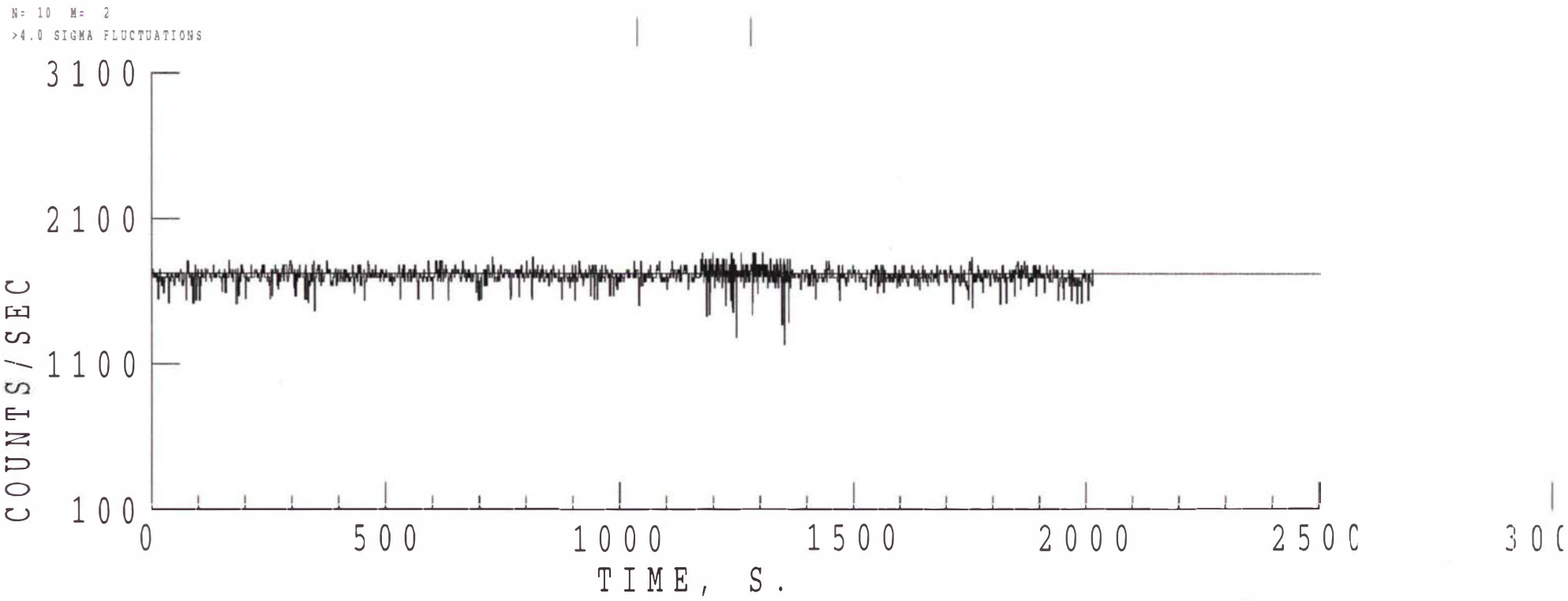
ULYSSES RT

15/02/02

30/09/01 48204.414 s

INTERVALS REGROUPED BY 3

0- 0 keV

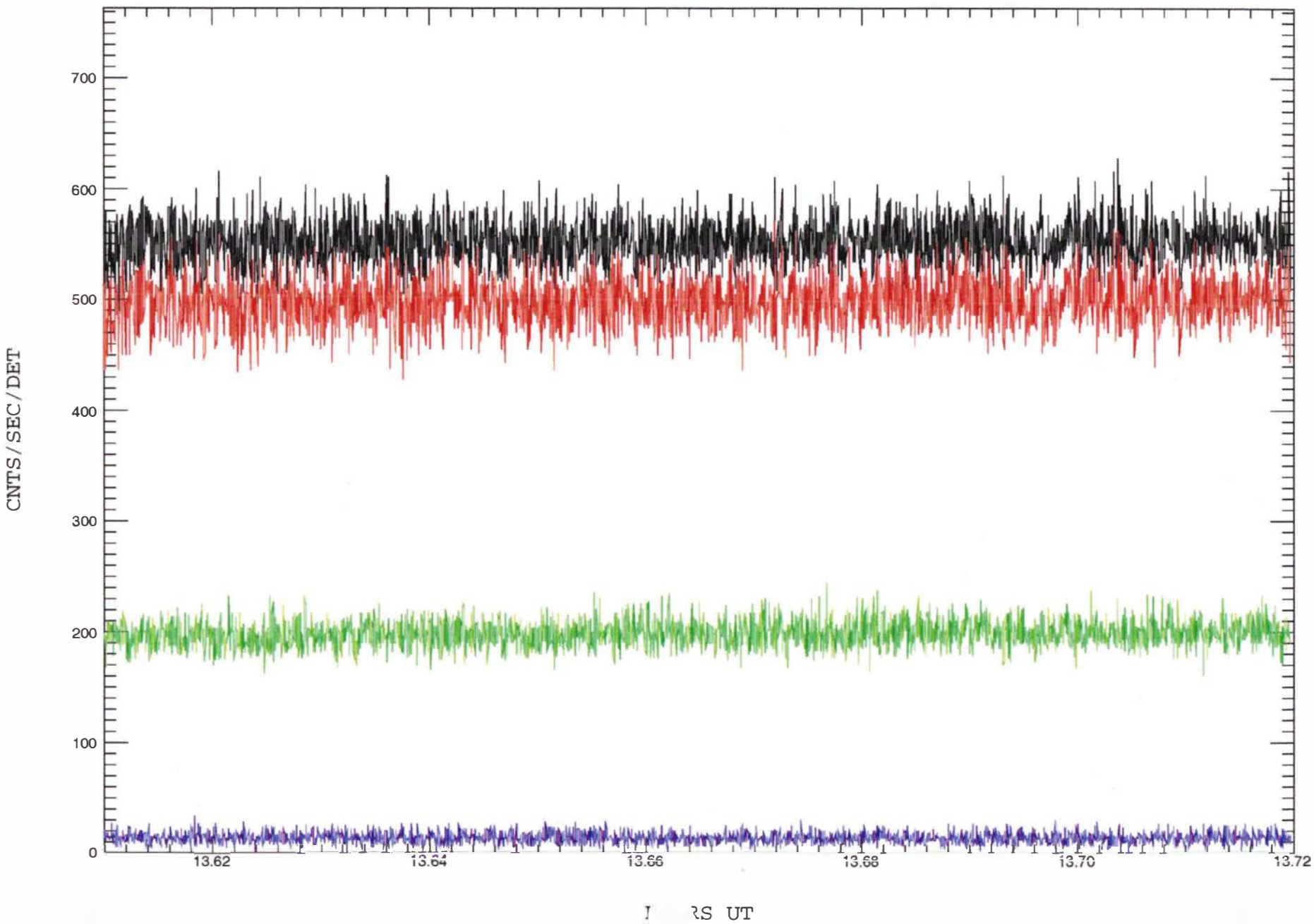


FREGATE SURVEY (TH) TIME HISTORY (AVG x1) -- DETECTORS 1-4 SUMMED (SAX_20010930_49203)

BEG TIME: 30/09/01 DOY 273 Julian 2452184.06708 UT = 13.610 13:36:36 (48996.000 secs) [sct = 0019 4cd4 923b c74a]
END TIME: 30/09/01 DOY 273 Julian 2452184.07167 UT = 13.720 13:43:12 (49392.000 secs) [sct = 0019 4cd4 a9d6 439a]

Chan 1:[E1=18 E2=103] Chan 2:[E3=18 E4=78] Chan 3:[E5=20 E6=510] Chan 4:[E6=510 ->]

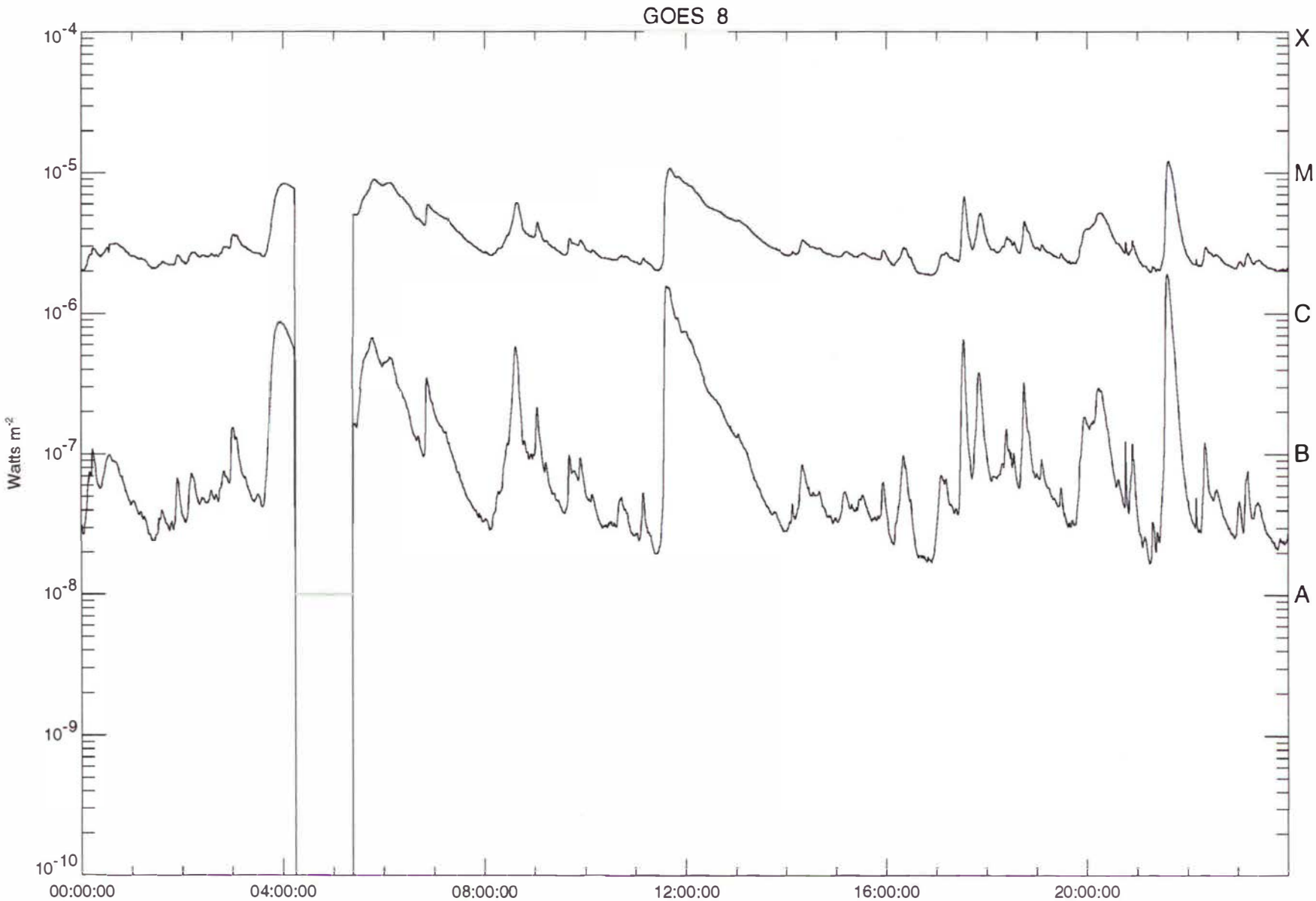
Channel 1 + 300 Channel 2 + 200 Channel 3 + 100 Channel 4 + 0



From grbhend@mx.iki.rssi.ru Tue May 18 11:36:54 2004
Date: Tue, 18 May 2004 22:35:29 +0400
From: "GRB HEND" <grbhend@mx.iki.rssi.ru>
`: "recipient1" <grbhend@mx.iki.rssi.ru>,
"recipient2" <khurley@sunspot.ssl.berkeley.edu>
Subject: No data in HEND Data Base
MIME-Version: 1.0
X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2600.0000
X-IKI-MailScanner-Information: Please contact the ISP for more information
X-IKI-MailScanner: Found to be clean
X-MailScanner-From: grbhend@mx.iki.rssi.ru

Received letter from = khurley@ssl.berkeley.edu
No HEND data for GRB around 010930 13:18:02

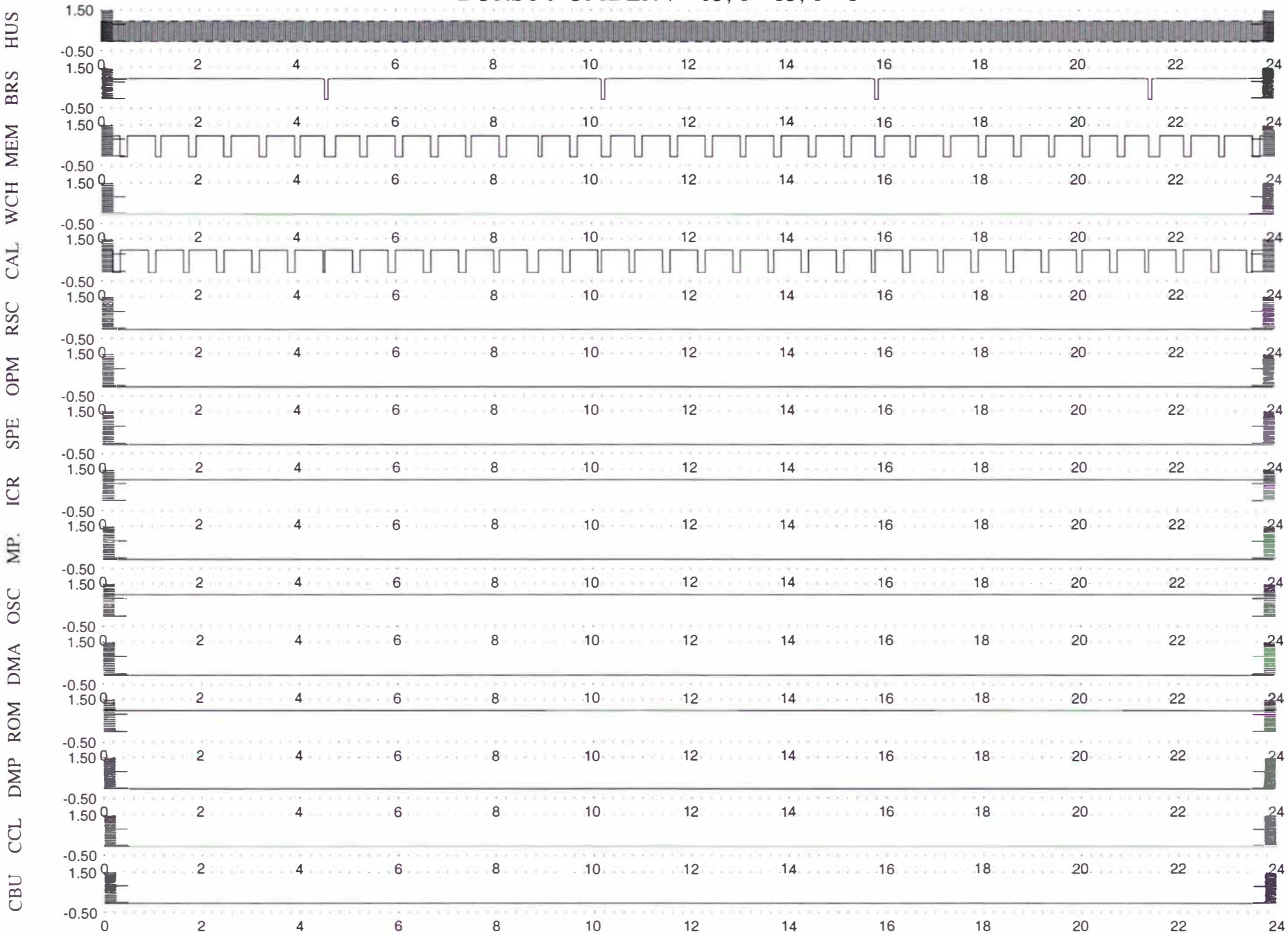
<This message contains 1 attachments (not printed)>



Data Start: 01/09/30, 0000:00 Plot created: 01/10/04, 0949
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted
2 (0.5 - 4.0 Angstroms) Background not subtracted
Sample average = 10

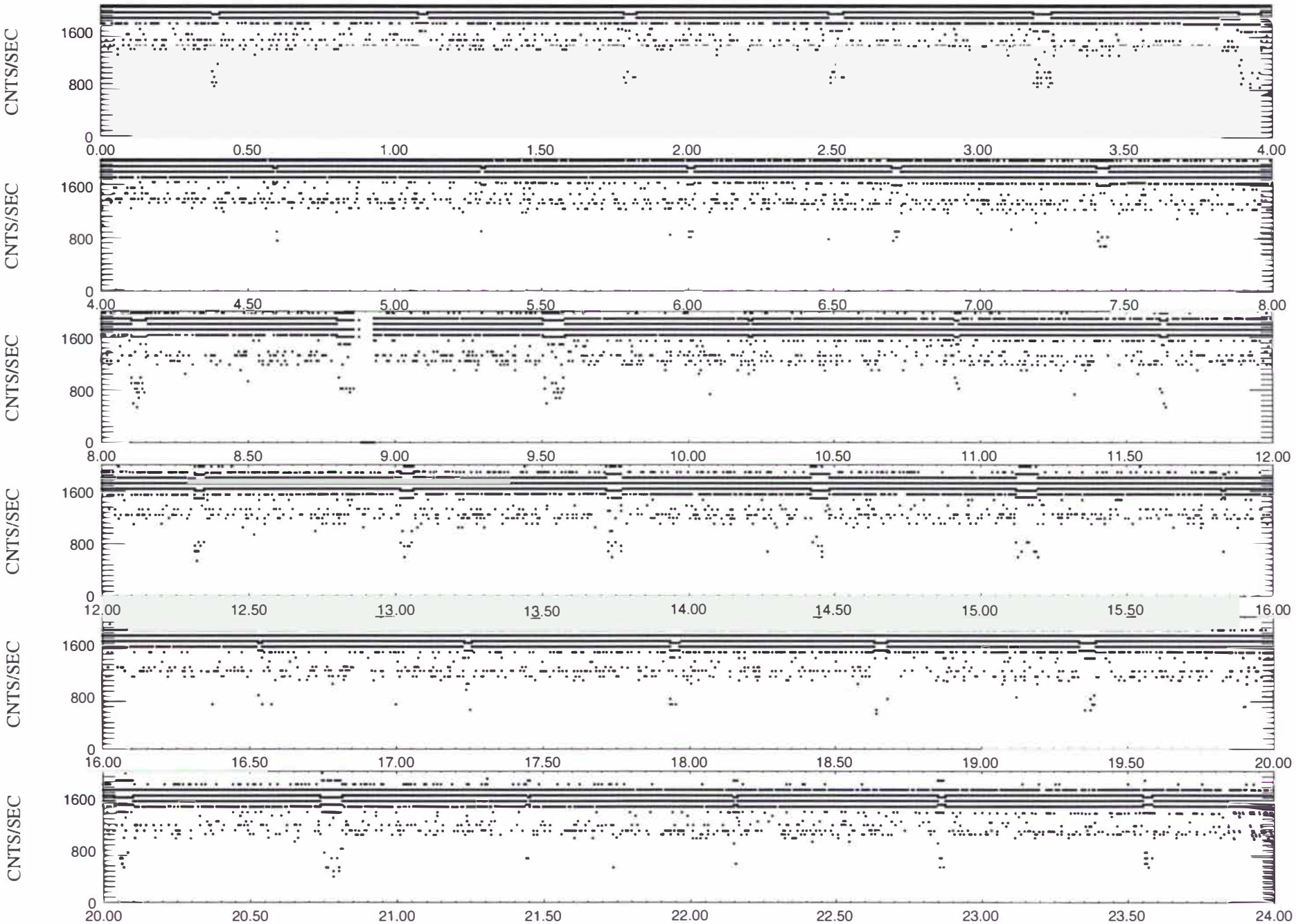
HUS MODES EDR day 273, year 2001 to day 273, year 2001 01/22/02

BURST NUMBER 7 - 15, 0 - 15, 0 - 8



HUS 2A, MODE 1, NOT AVERAGED EDR DMY = 30/09/2001 DOY = 273 01/22/02

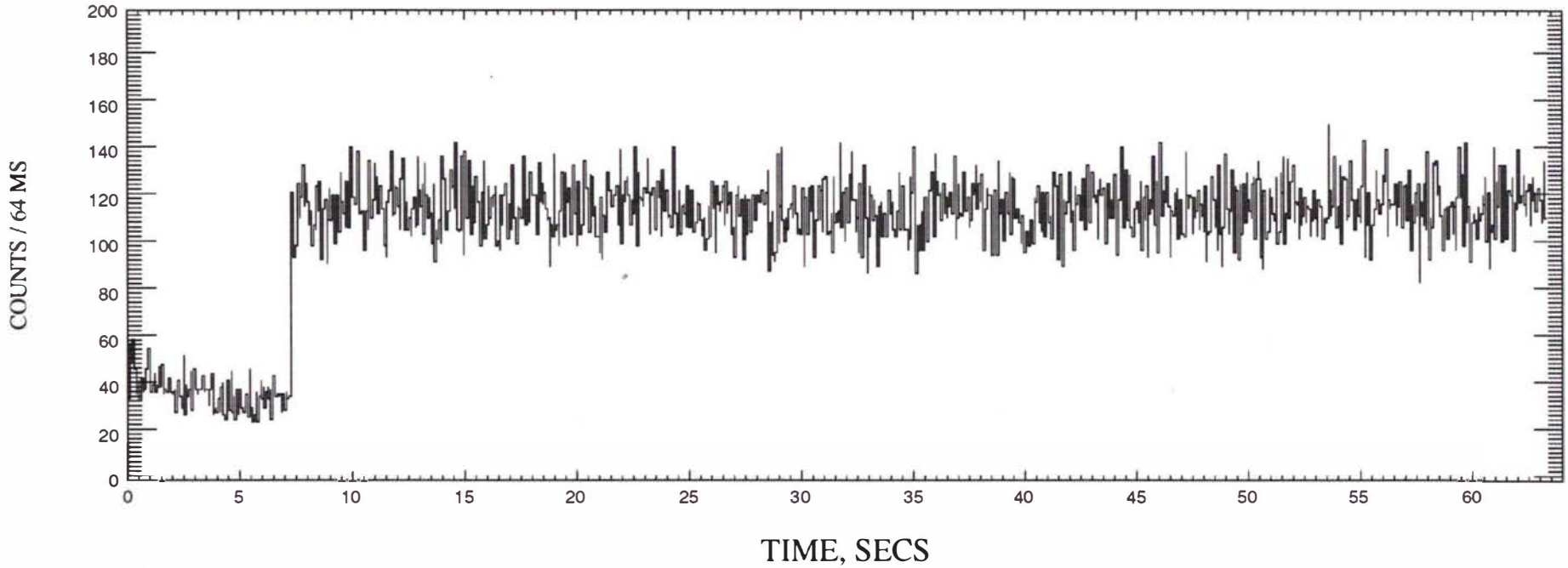
CALIBRATION DATA INCLUDED

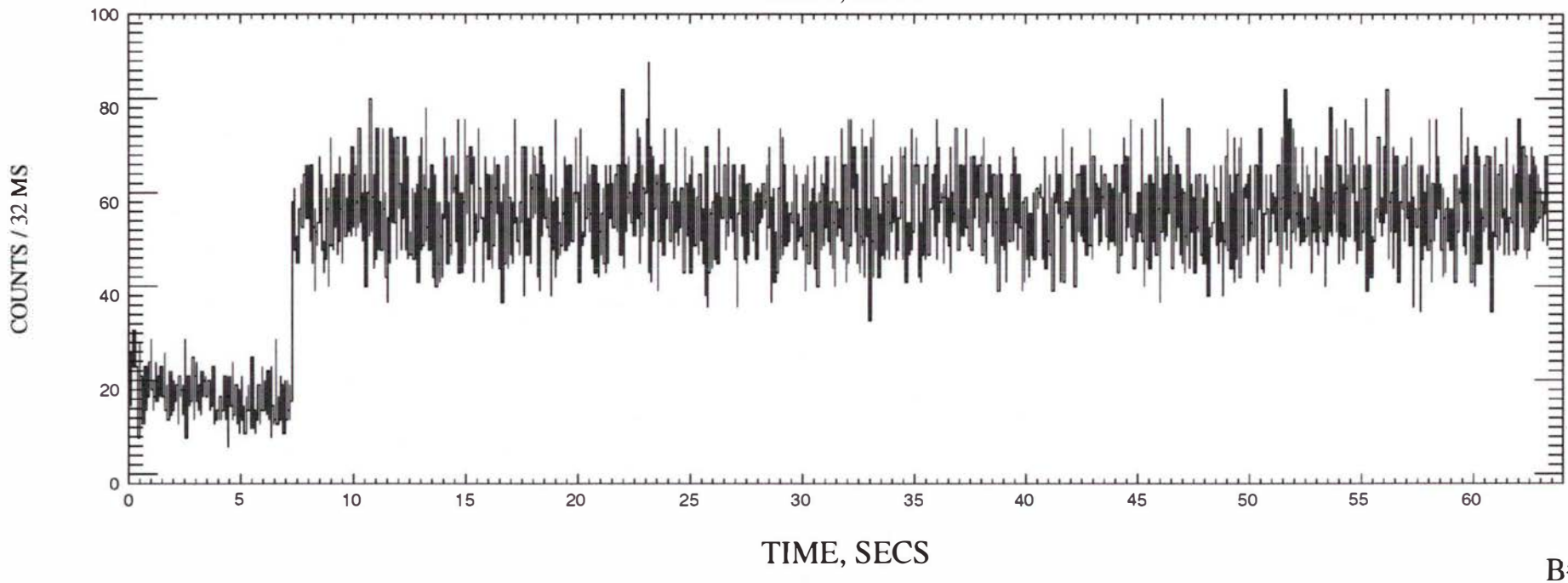


UNIVERSAL TIME

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 7 at UT= 0.373668132358 h= 1345.205 s 00:22:25.205

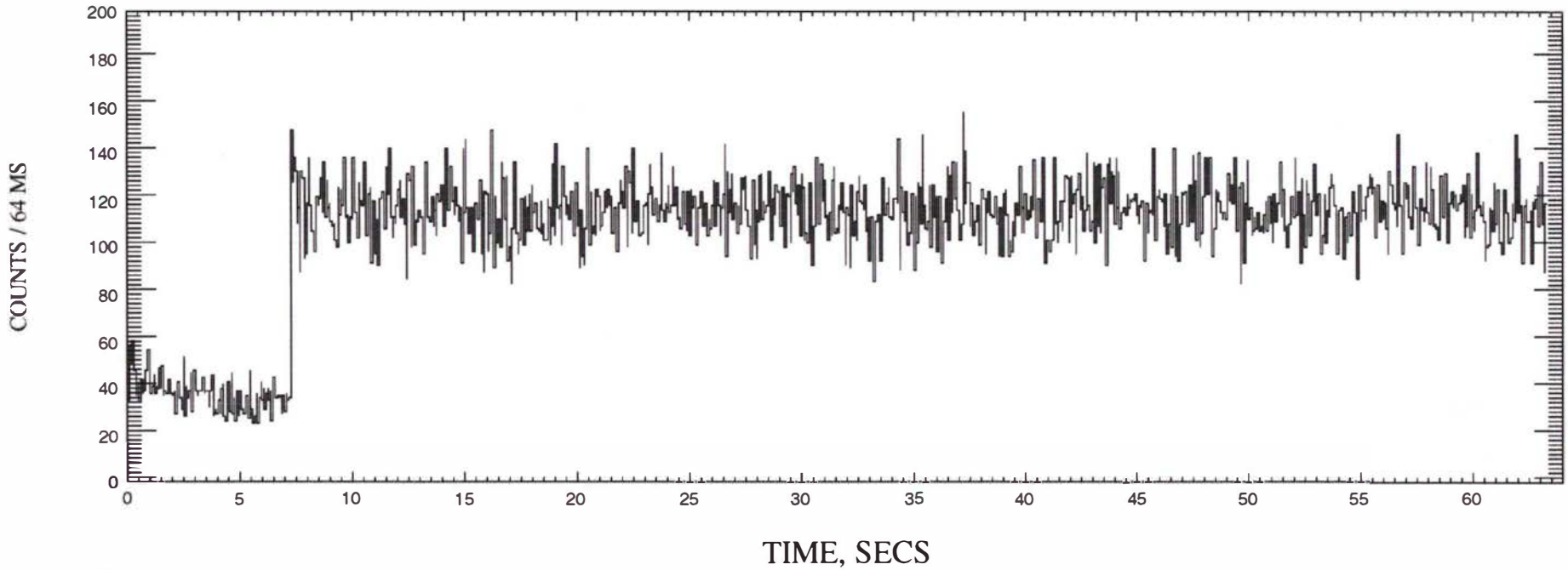


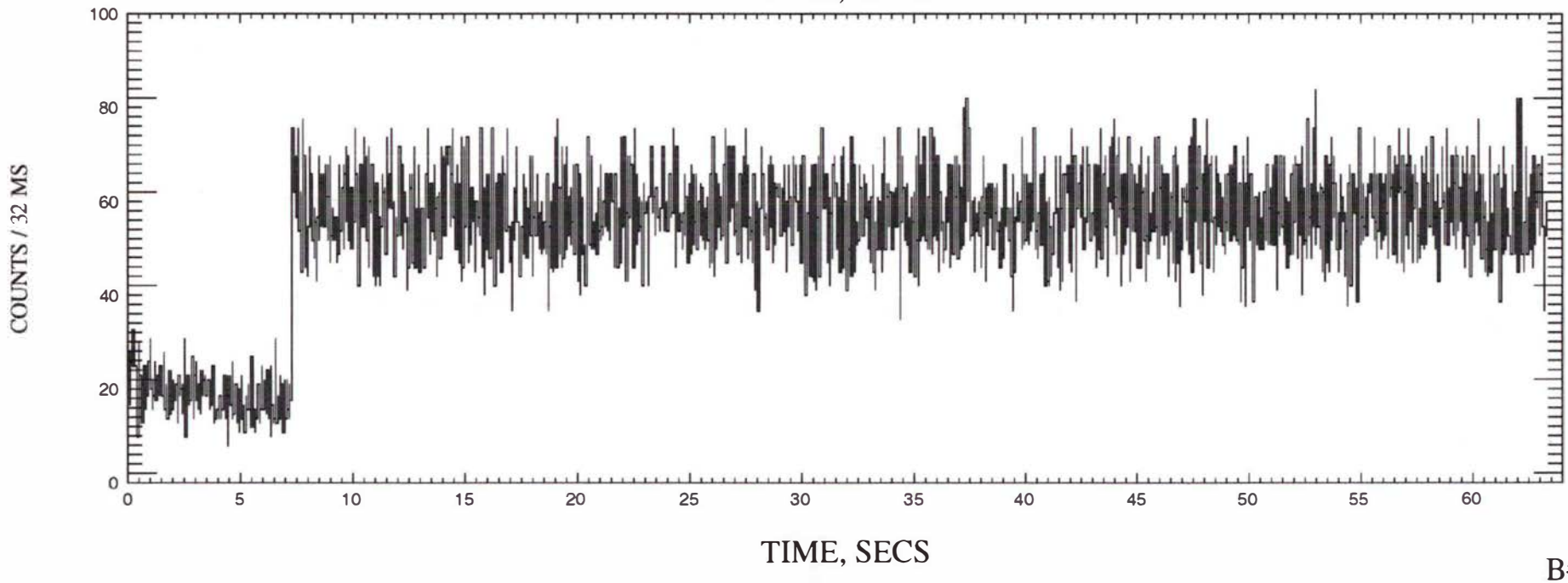


B# 1

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 8 at UT= 1.075899776883 h= 3873.239 s 01:04:33.239

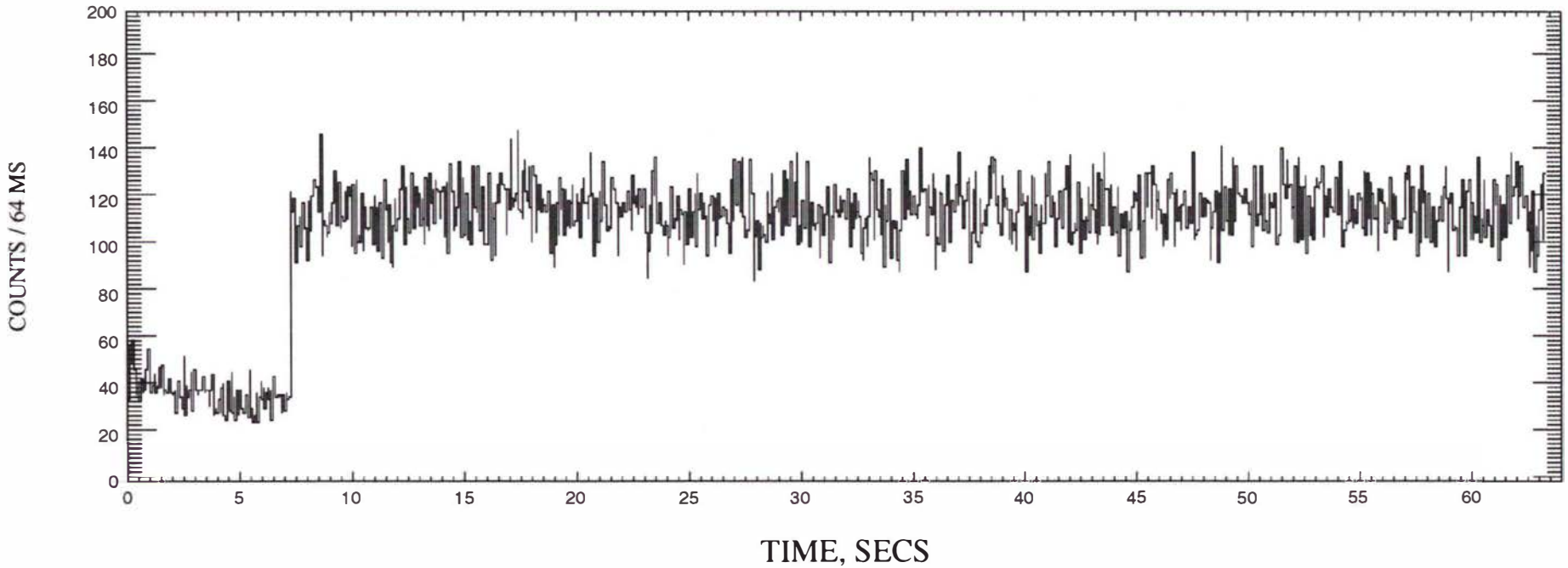


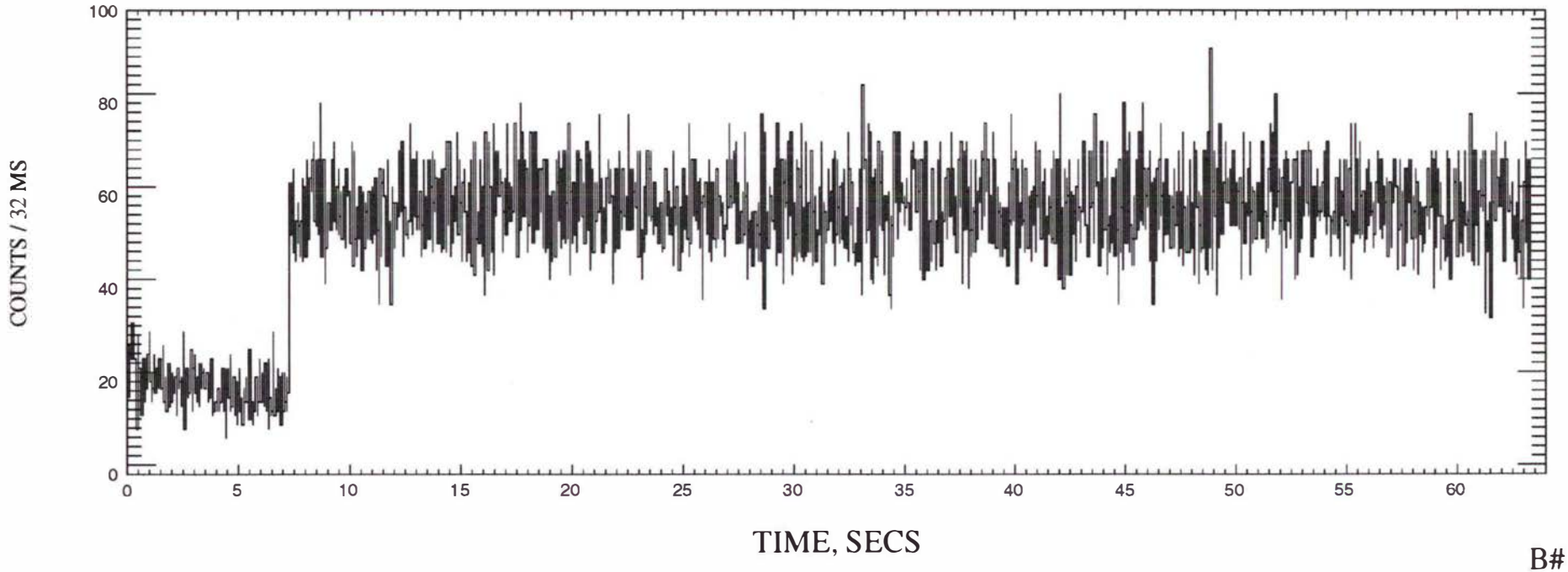


B# 2

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 9 at UT= 1.778133591546 h= 6401.281 s 01:46:41.281

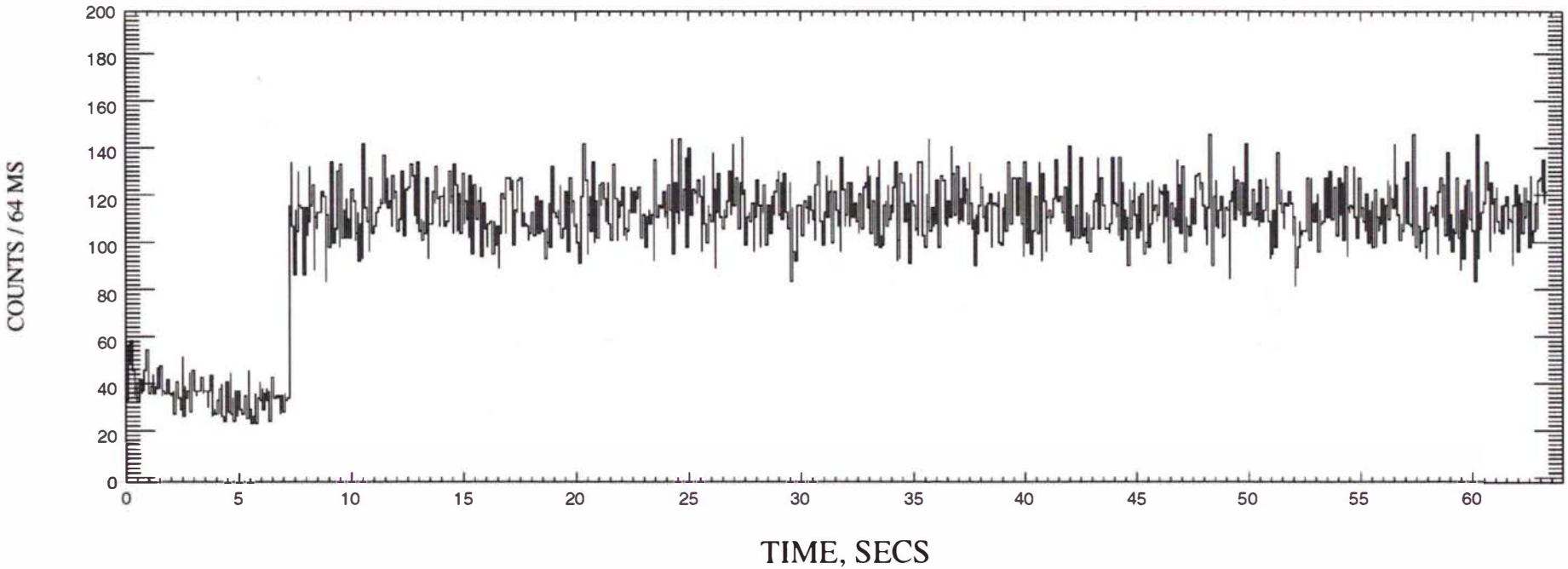


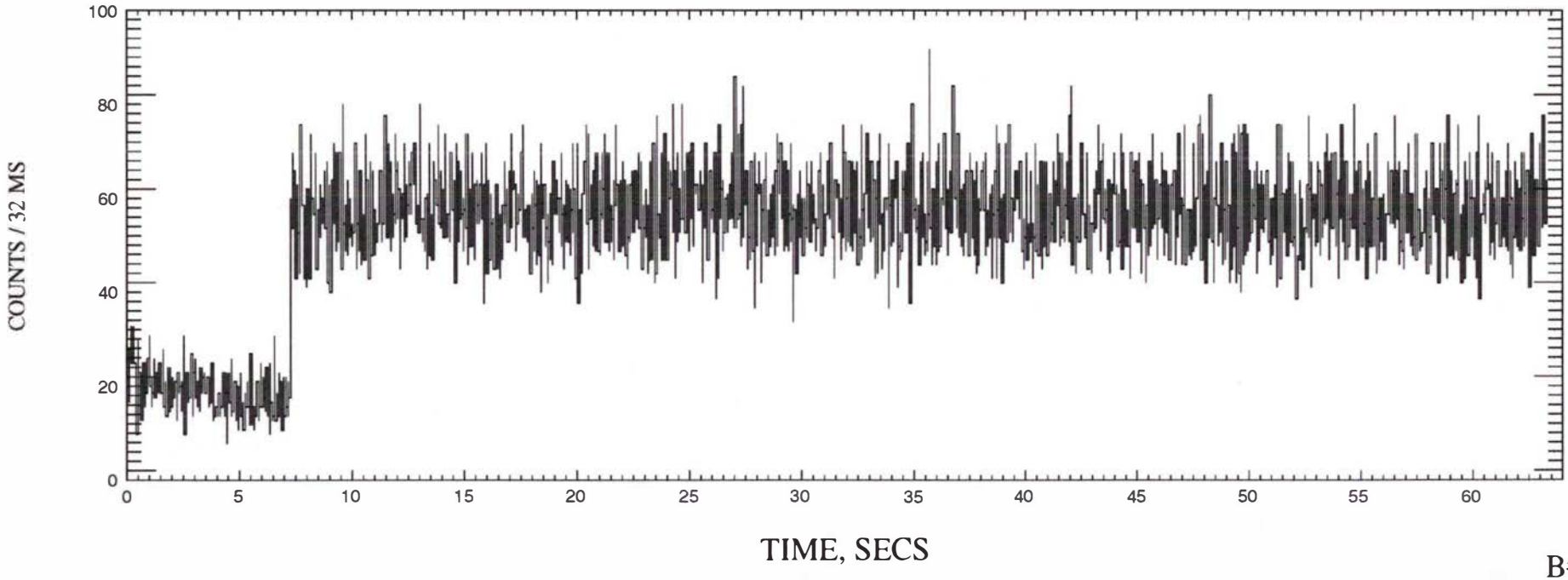


B# 3

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 10 at UT= 2.480367401971 h= 8929.323 s 02:28:49.323

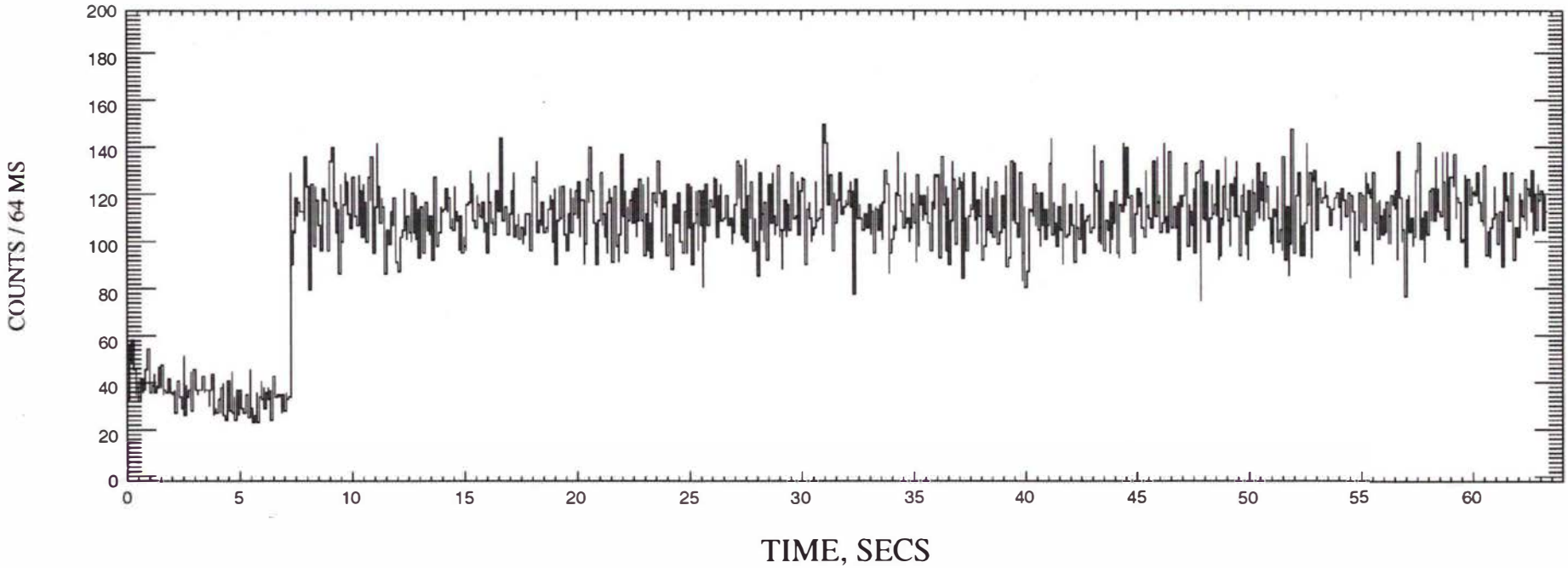


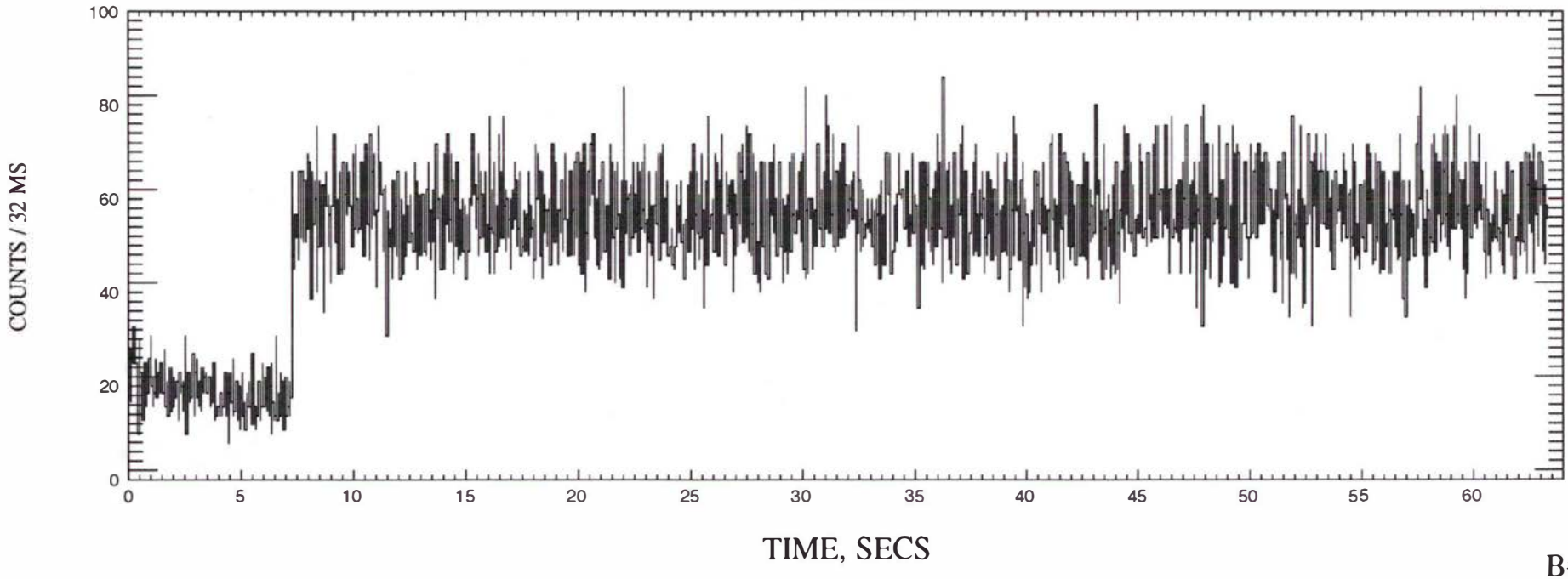


B# 4

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 11 at UT= 3.182601216634 h=11457.364 s 03:10:57.364

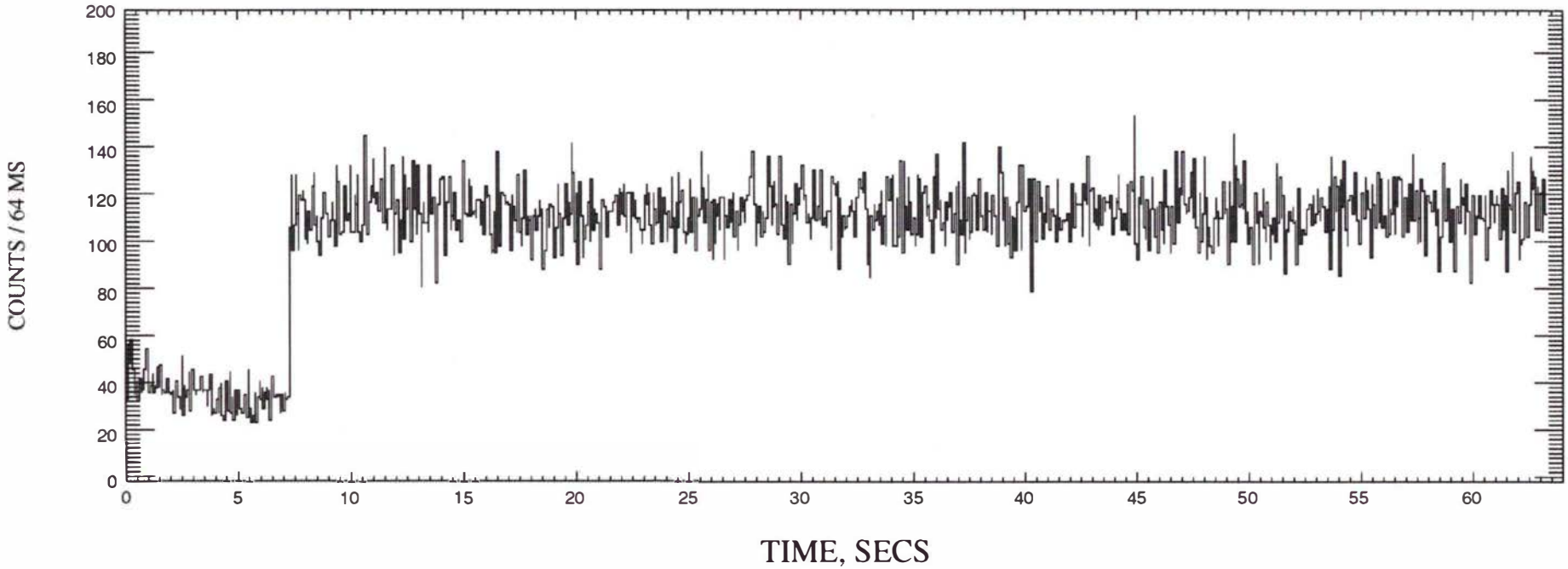


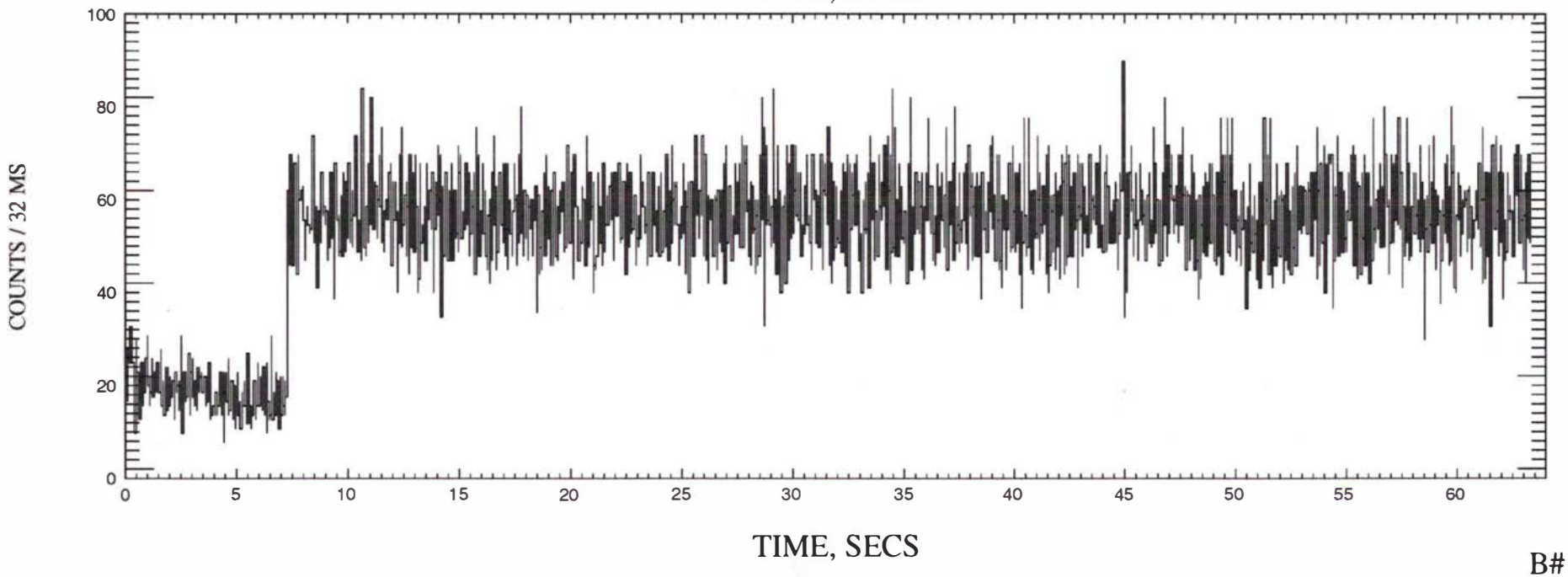


B# 5

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 12 at UT= 3.884837201436 h=13985.414 s 03:53:05.414

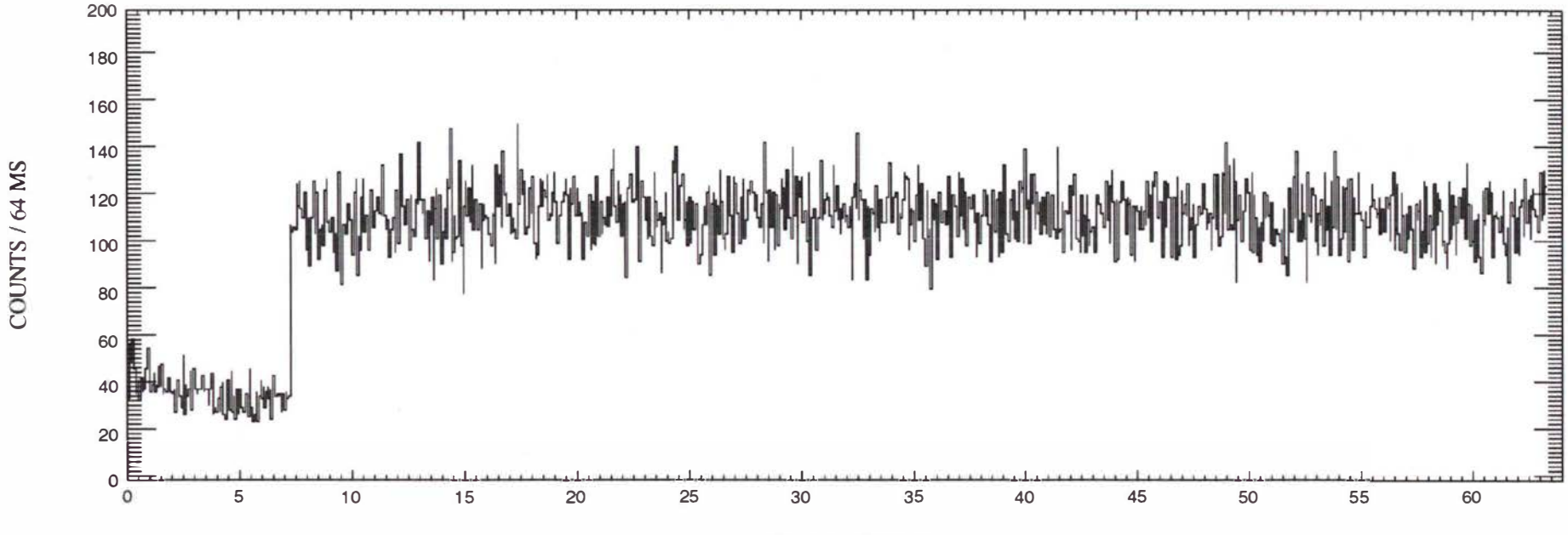


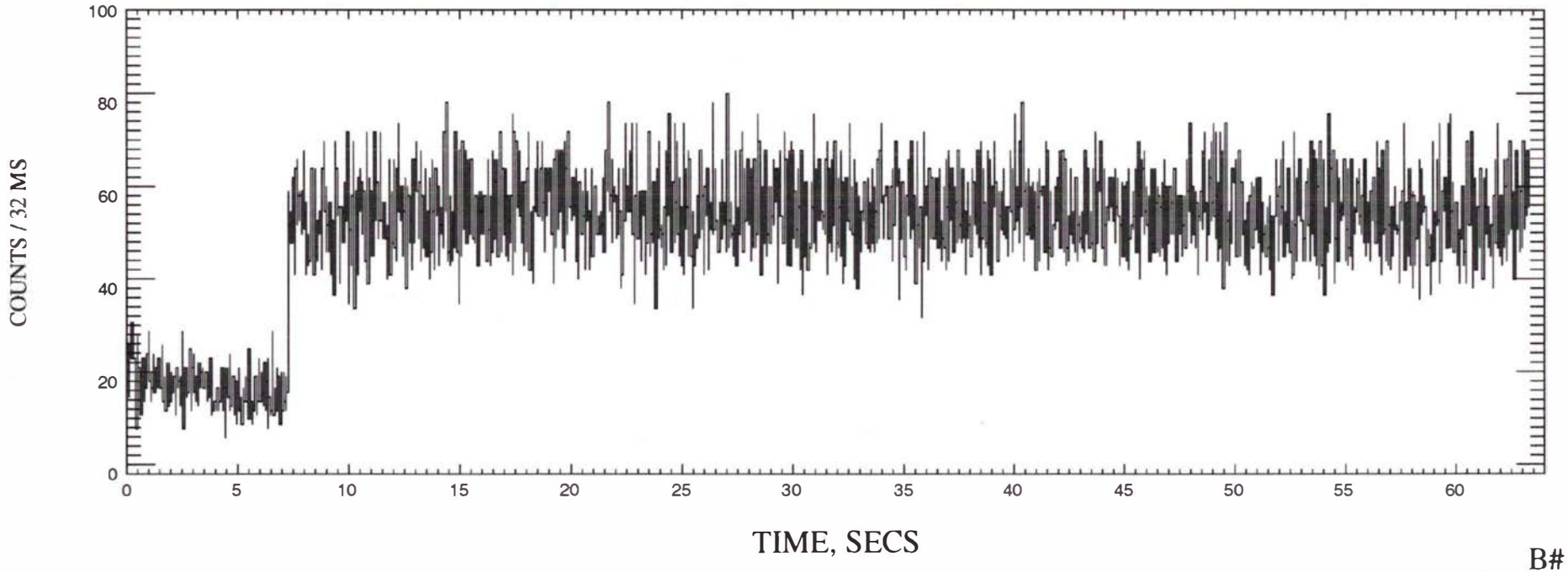


B# 6

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 13 at UT= 4.587071011861 h=16513.456 s 04:35:13.456

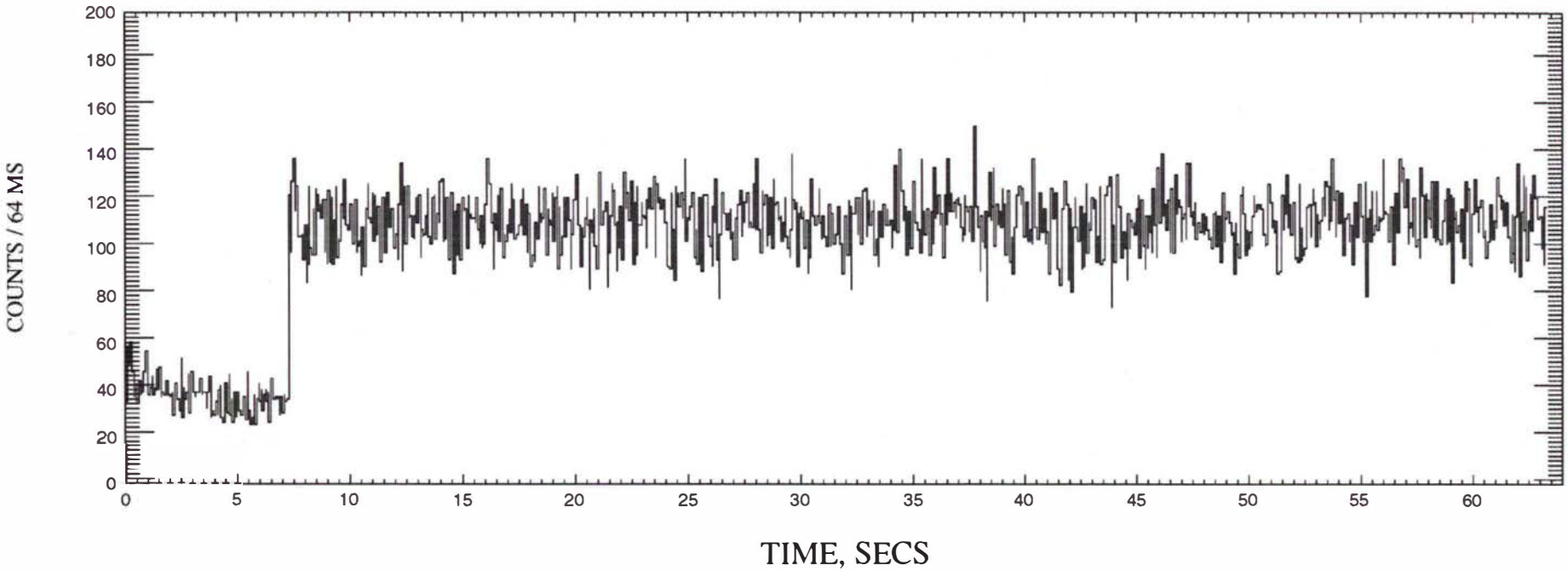


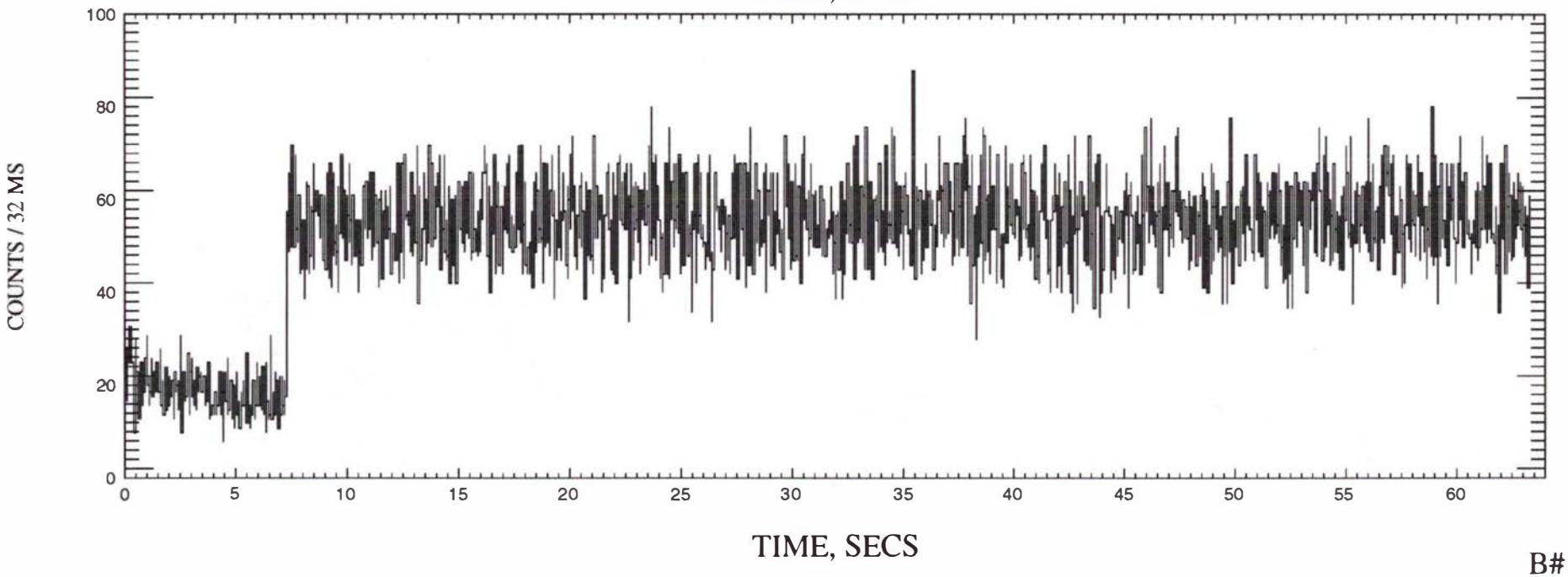


B# 7

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 14 at UT= 5.289301499261 h=19041.485 s 05:17:21.485

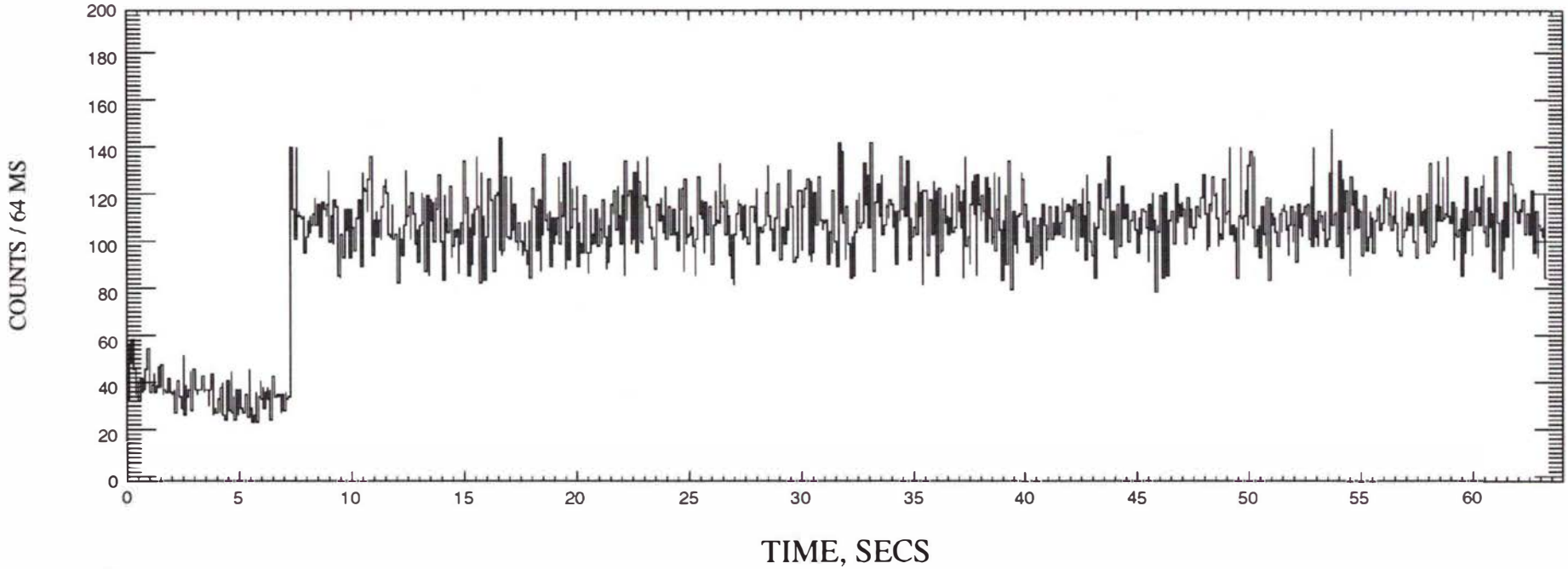


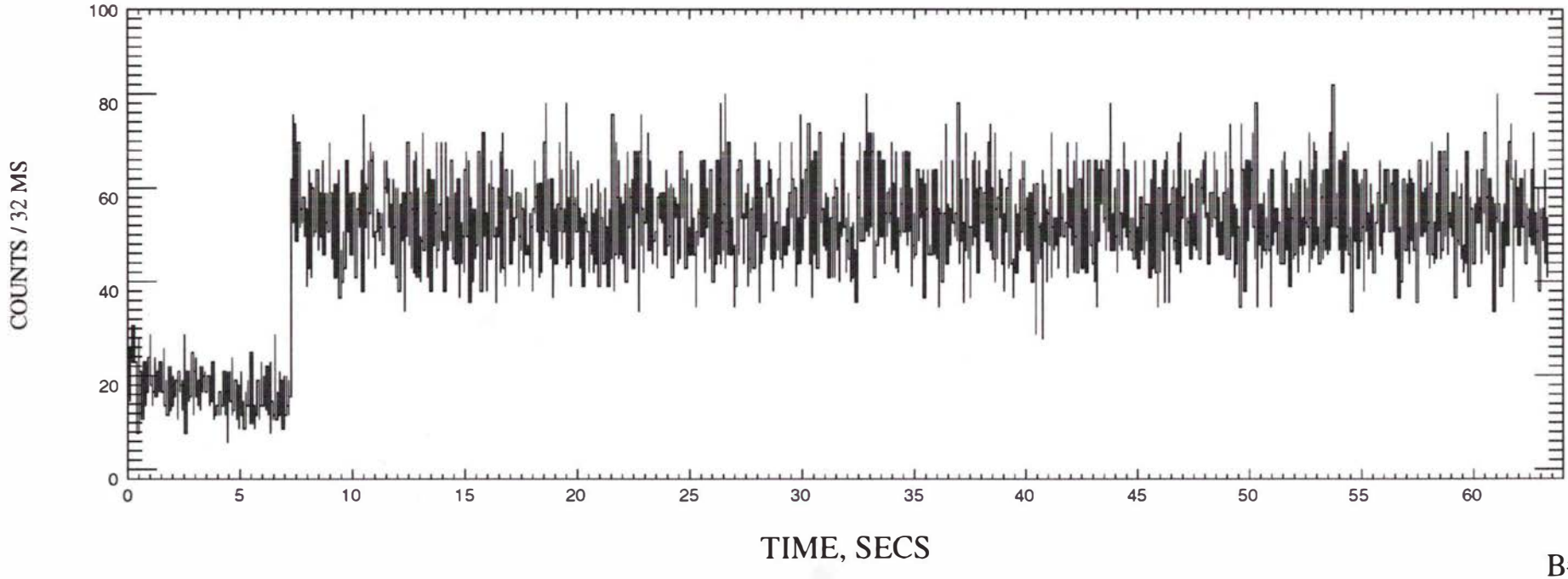


B# 8

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 15 at UT= 5.991535309686 h=21569.527 s 05:59:29.527

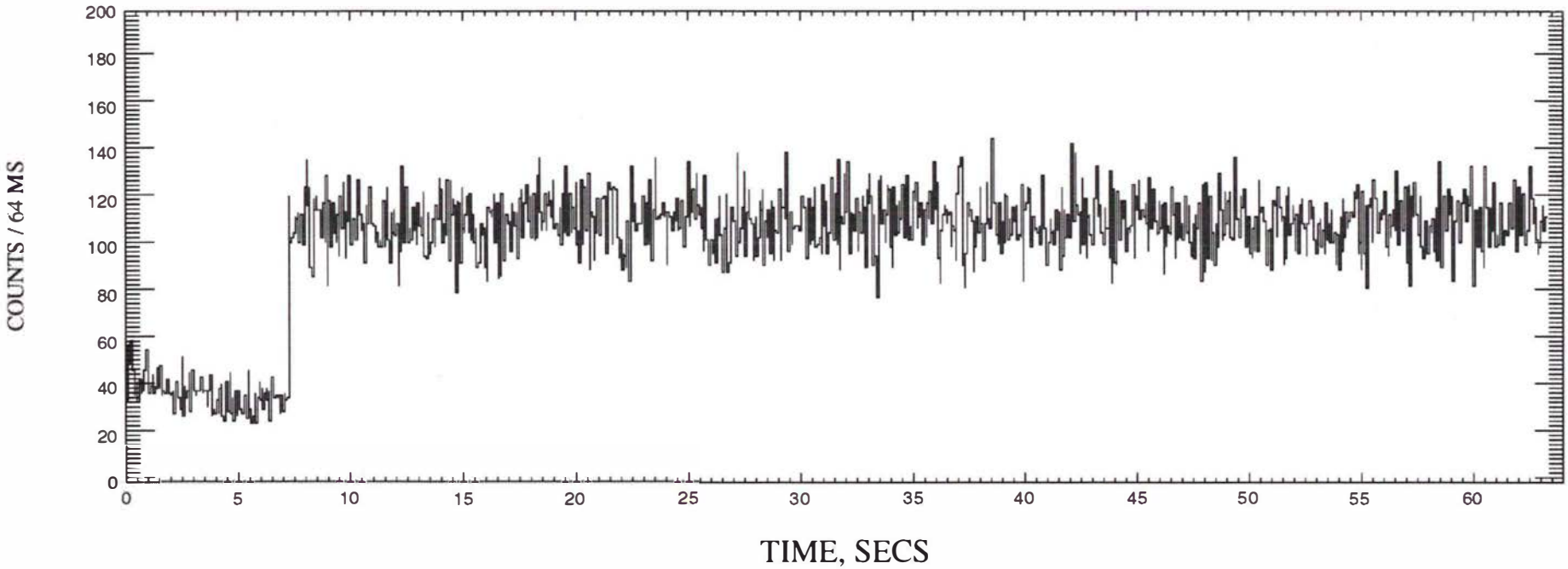


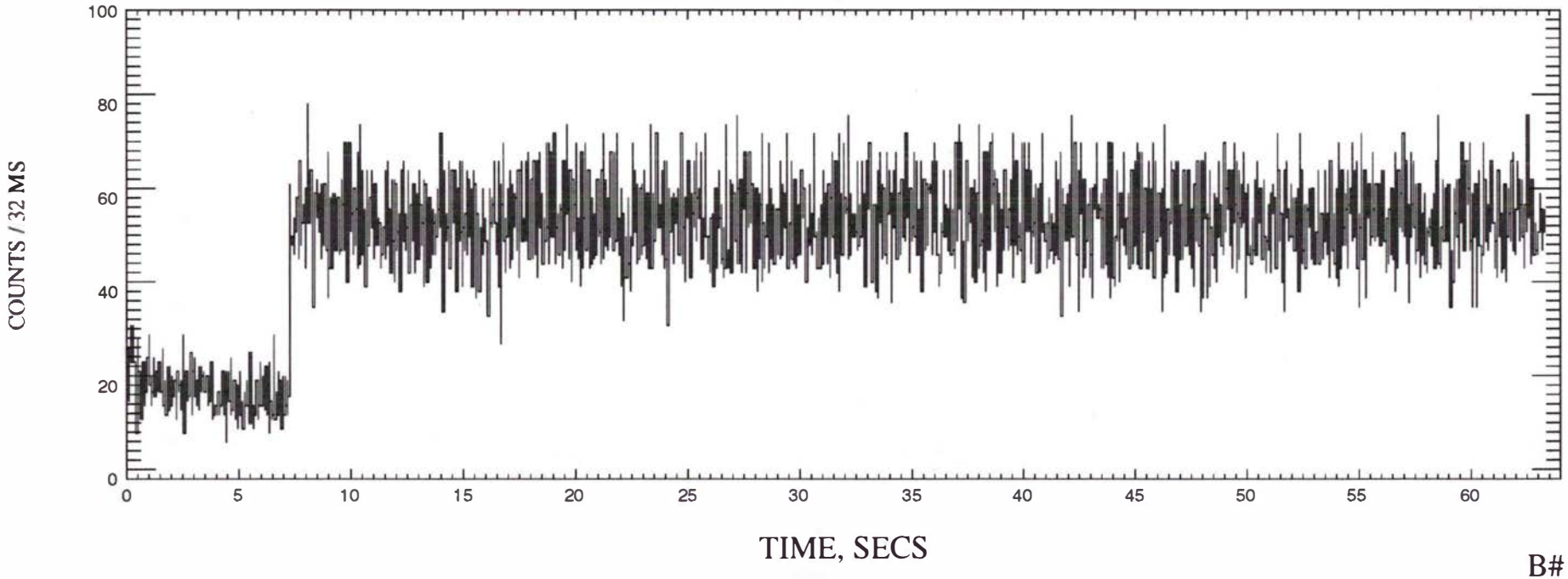


B# 9

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 0 at UT= 6.693769124349 h=24097.569 s 06:41:37.569

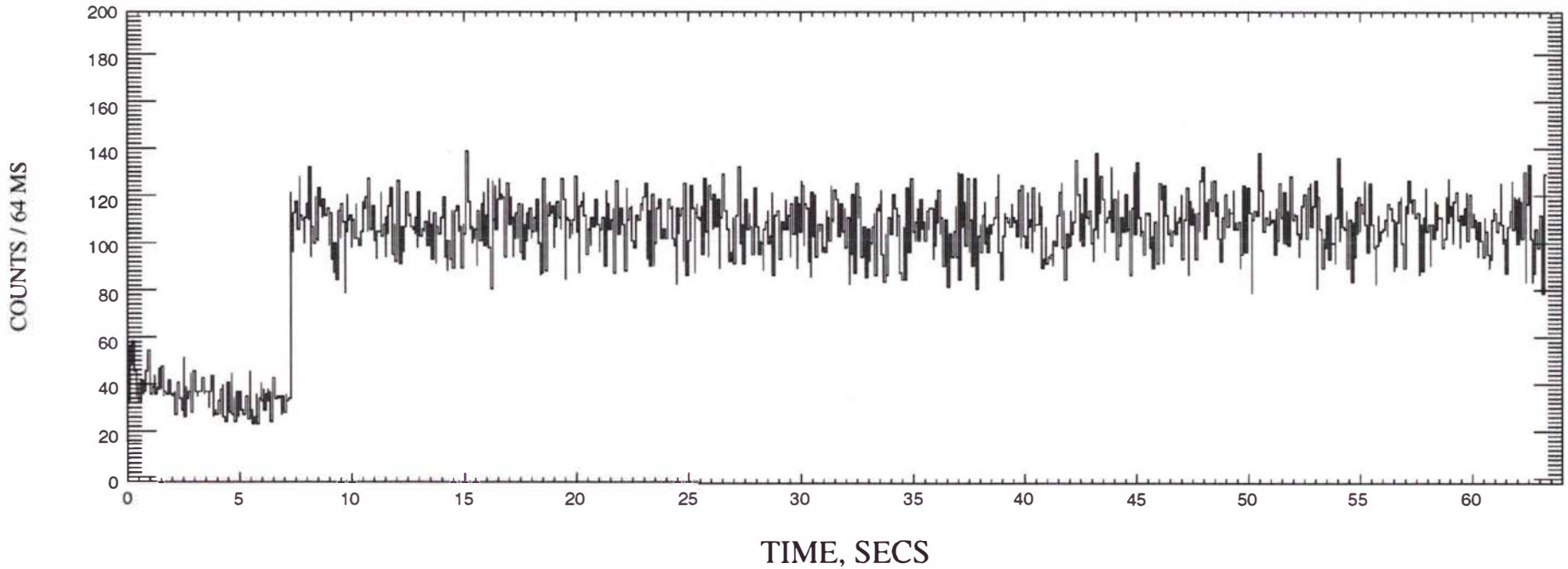


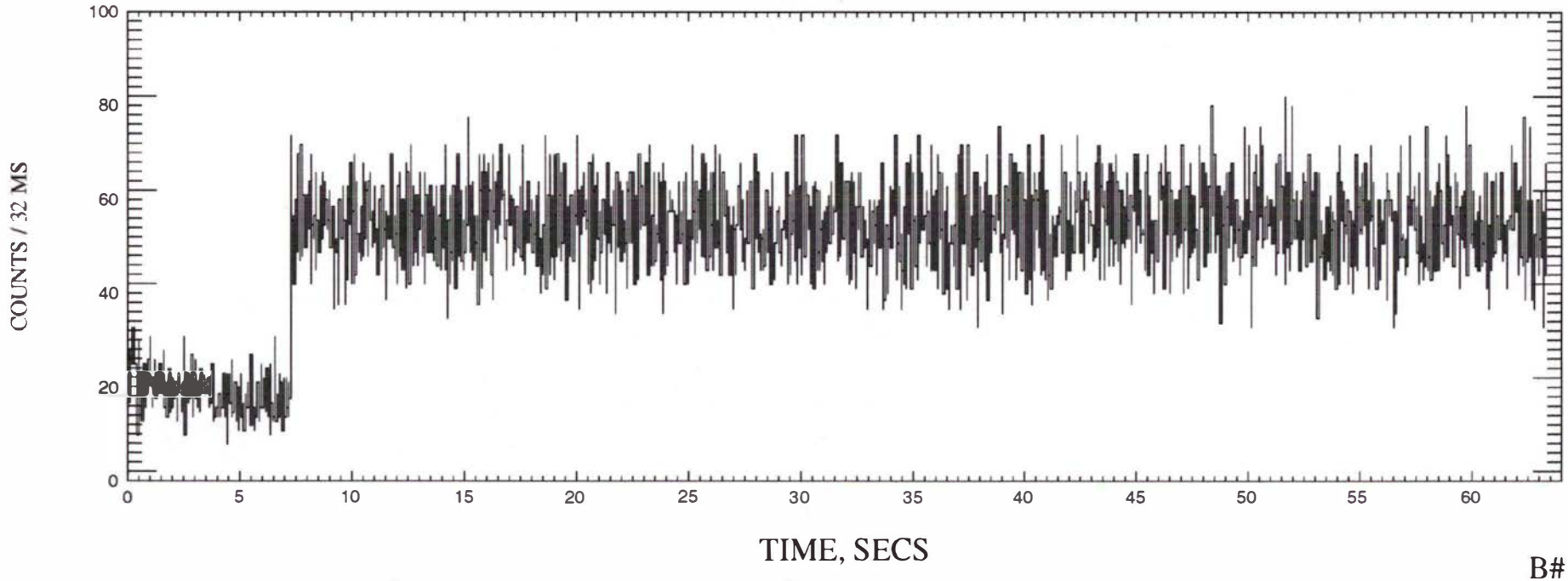


B# 10

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 1 at UT= 7.396000768873 h=26625.603 s 07:23:45.603

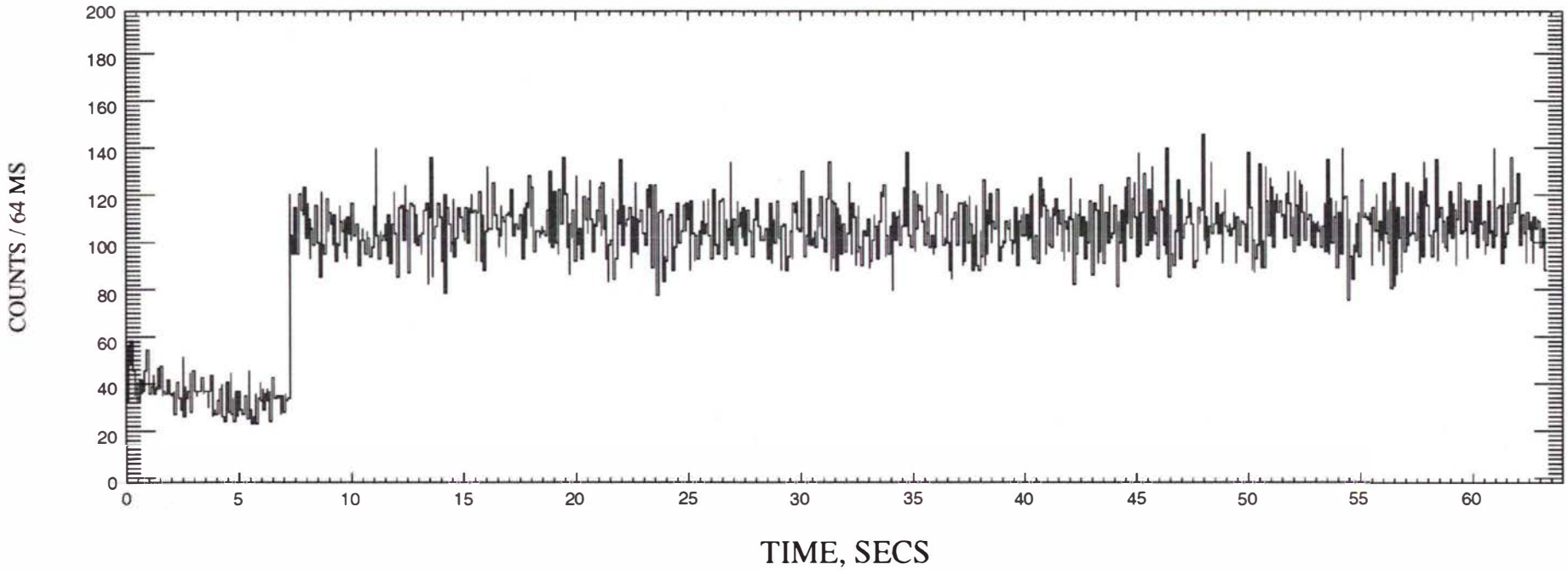


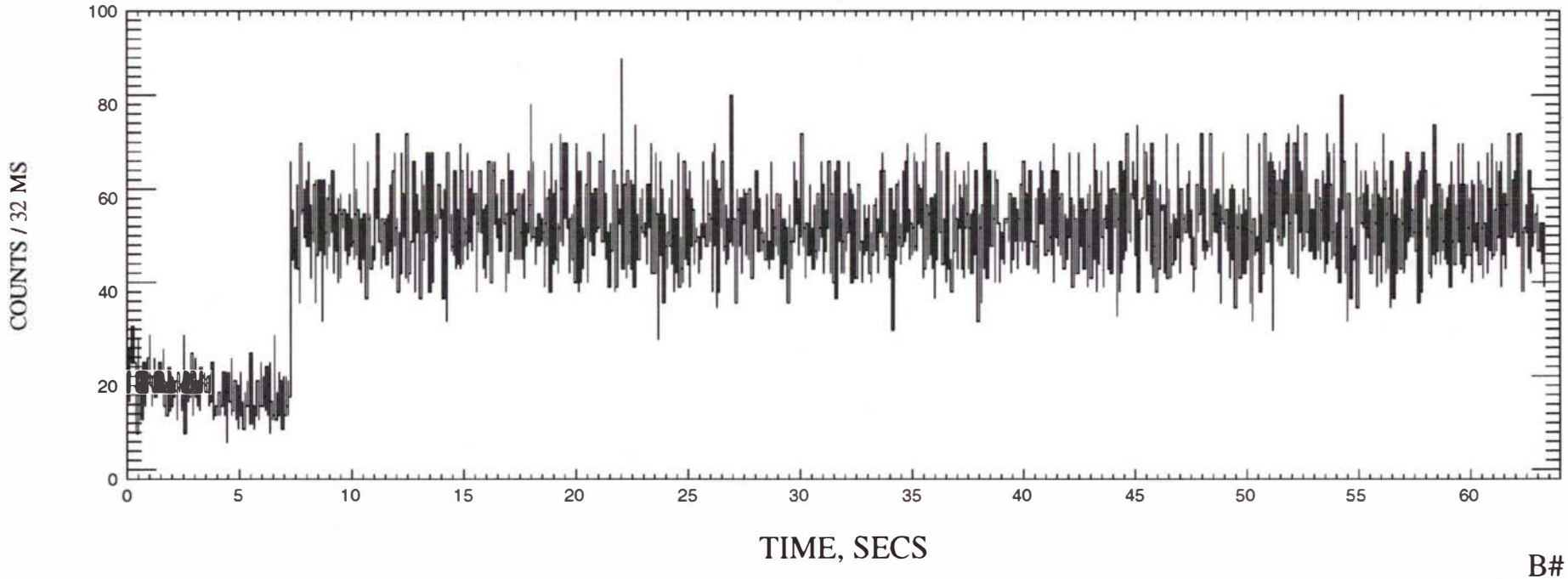


B# 11

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 2 at UT= 8.098241089715 h=29153.668 s 08:05:53.668

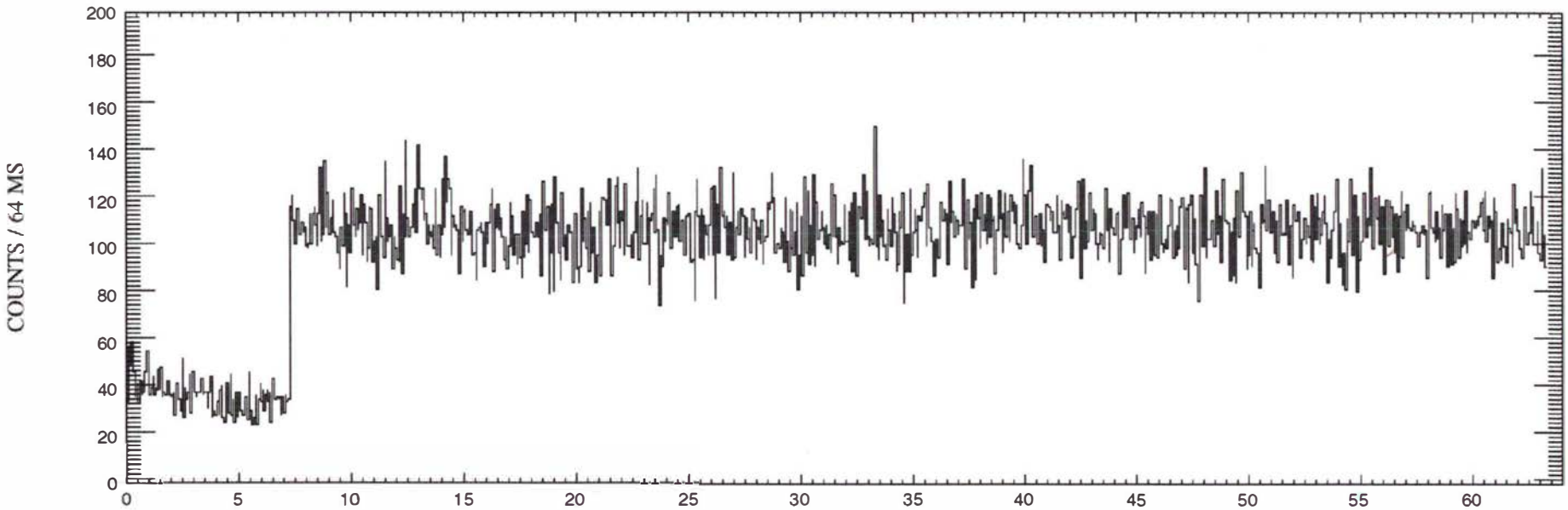




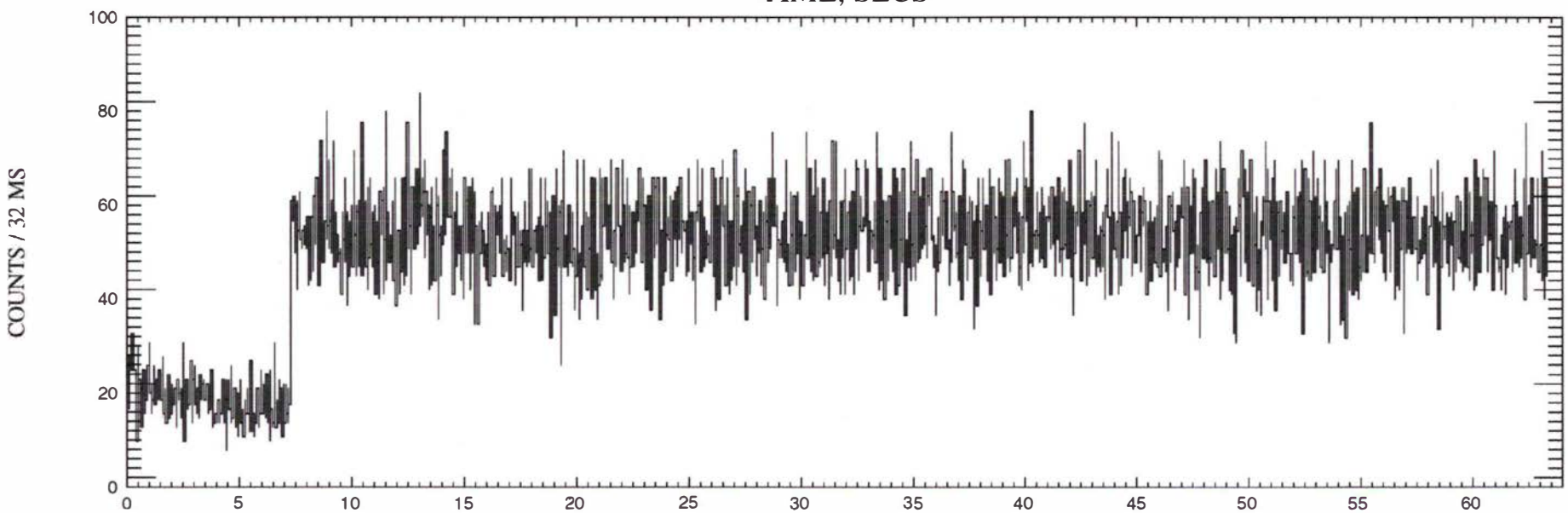
B# 12

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 3 at UT= 8.800472734239 h=31681.702 s 08:48:01.702



TIME, SECS

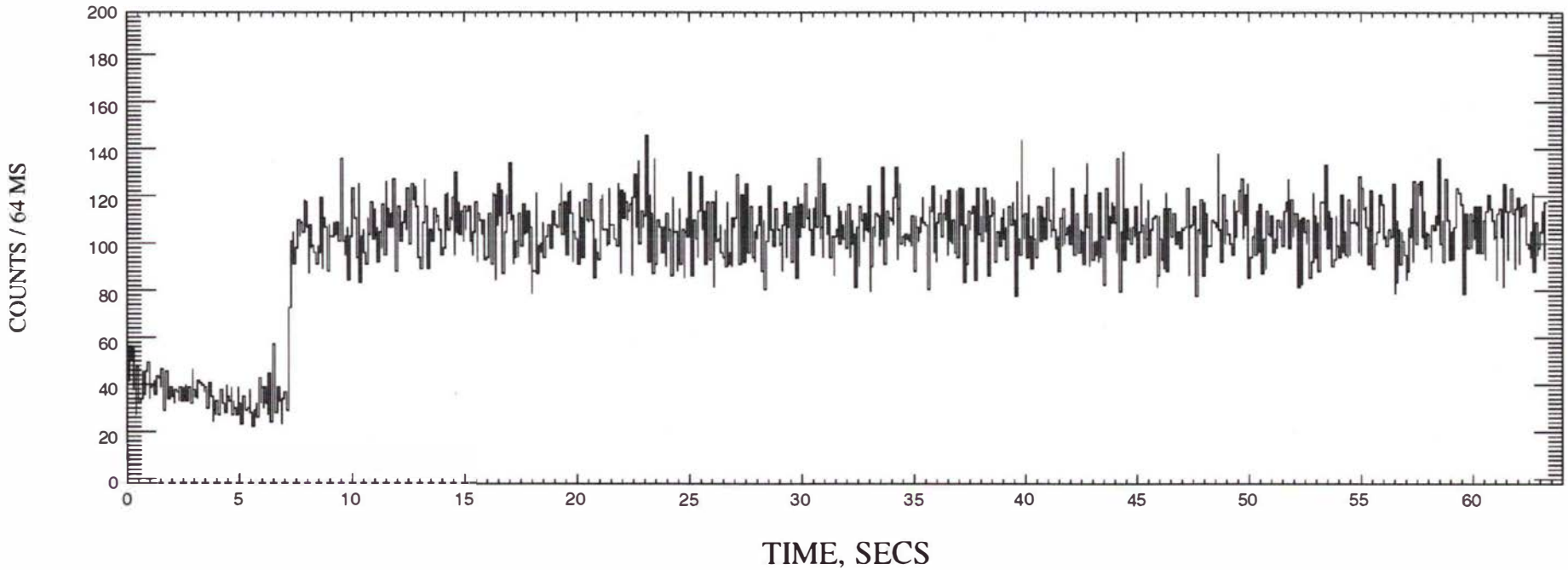


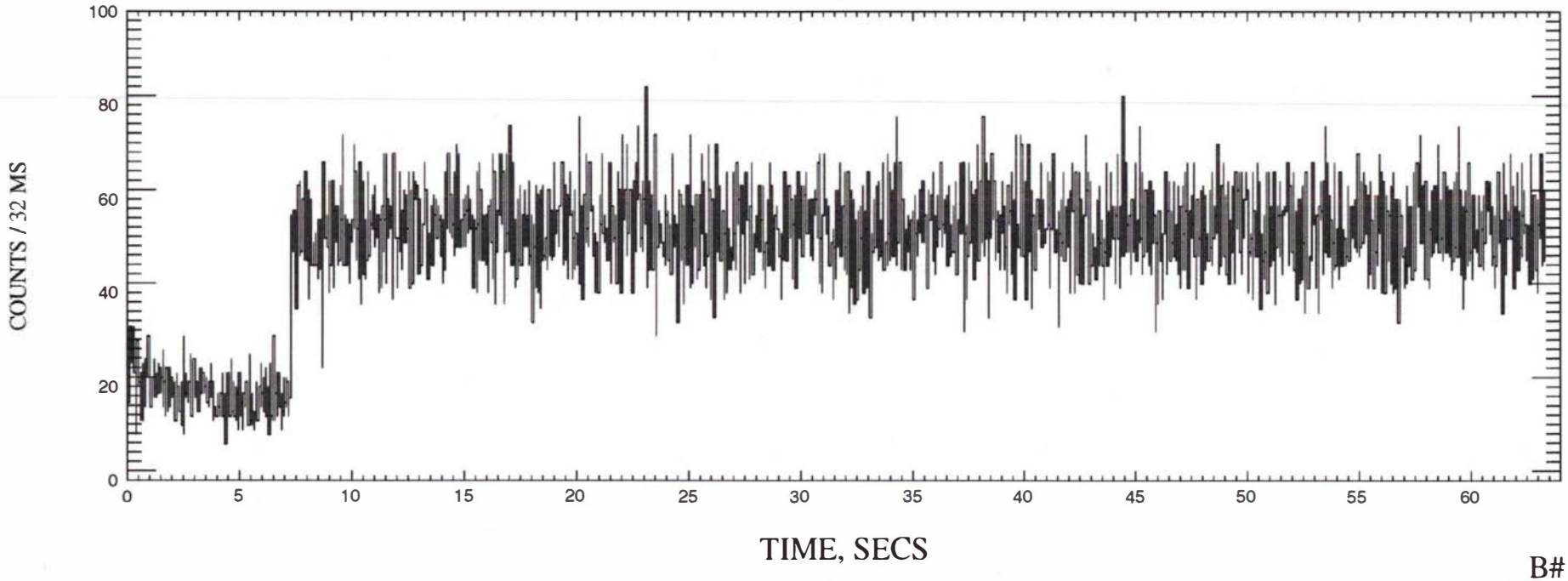
TIME, SECS

B# 13

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 4 at UT= 9.502708719042 h=34209.751 s 09:30:09.751

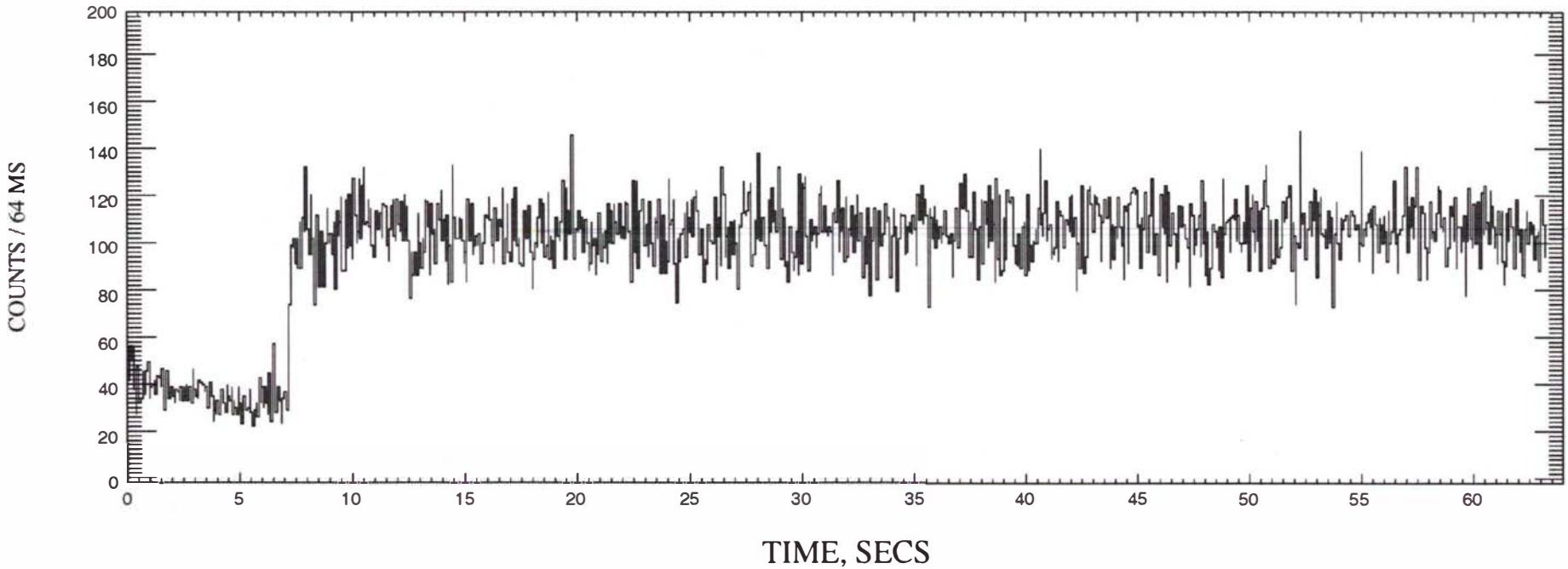


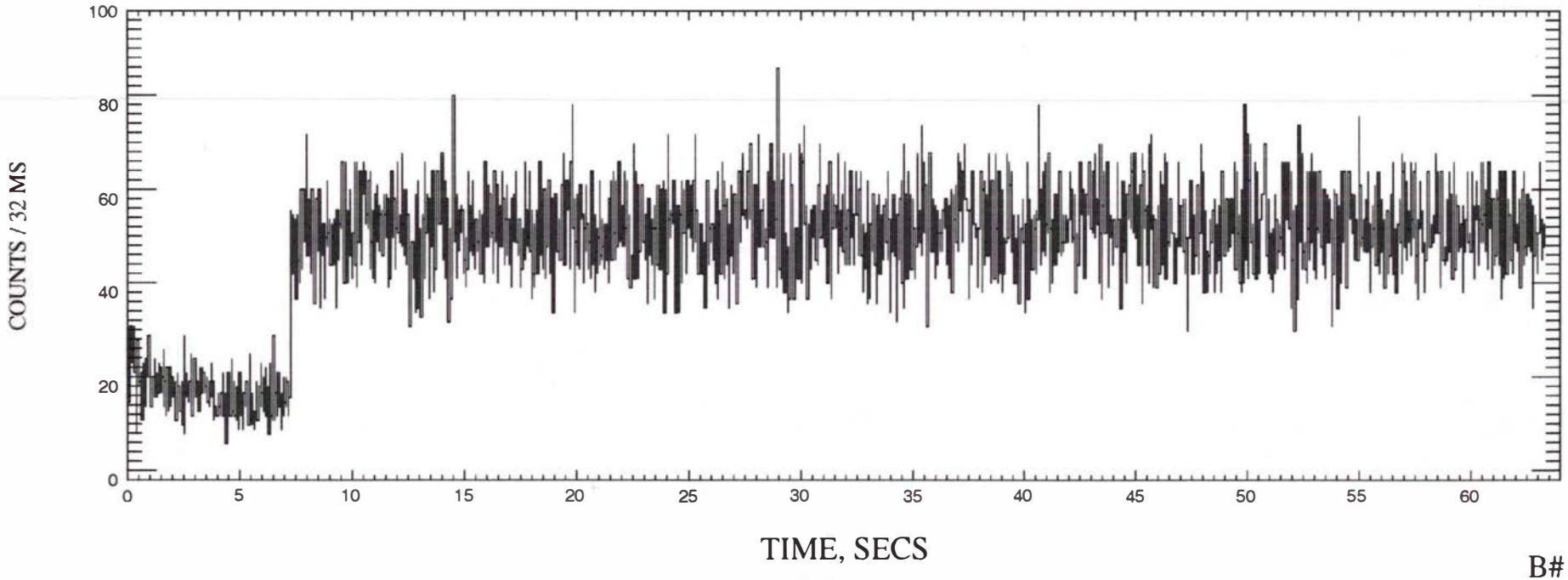


B# 14

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 5 at UT=10.204942529466 h=36737.793 s 10:12:17.793

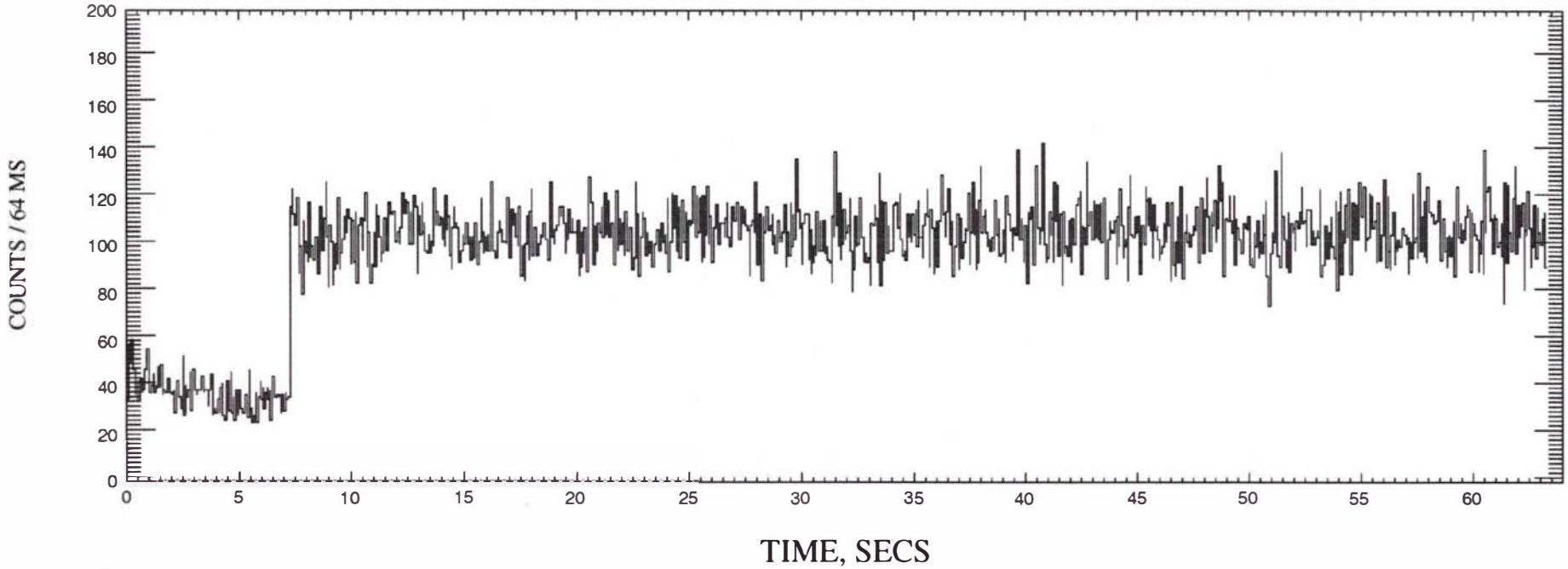


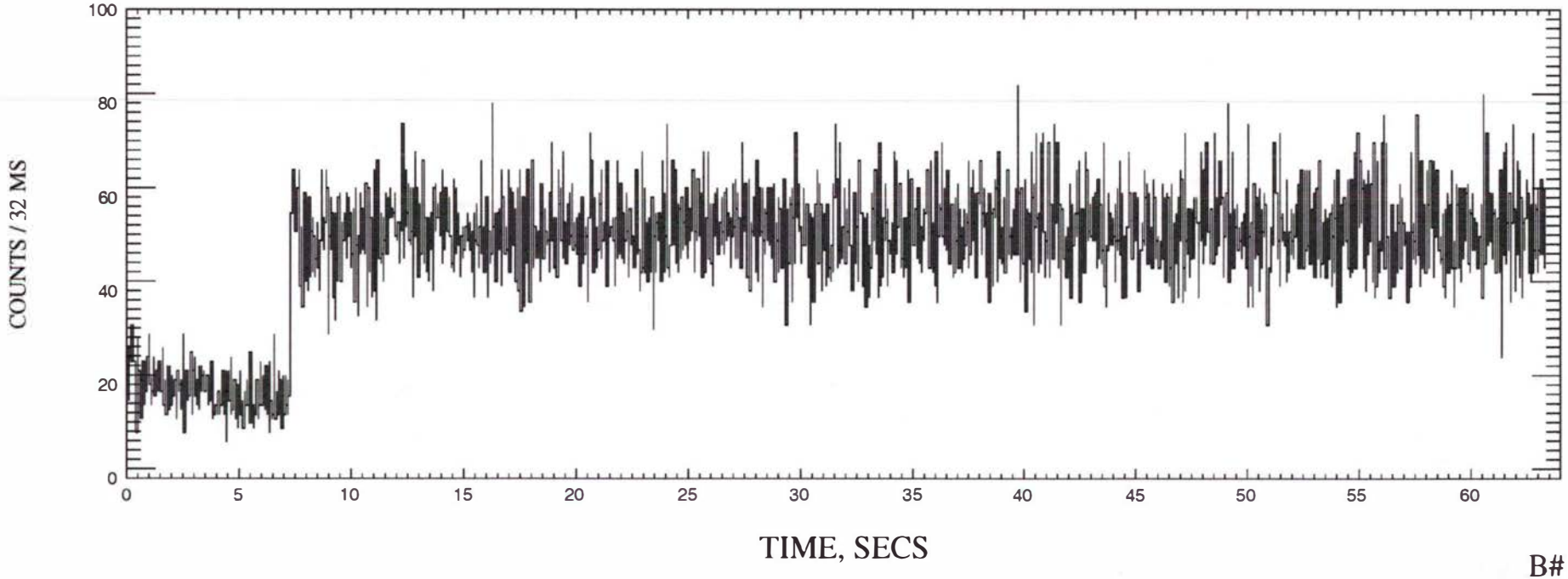


B# 15

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 6 at UT=10.907173016866 h=39265.823 s 10:54:25.823

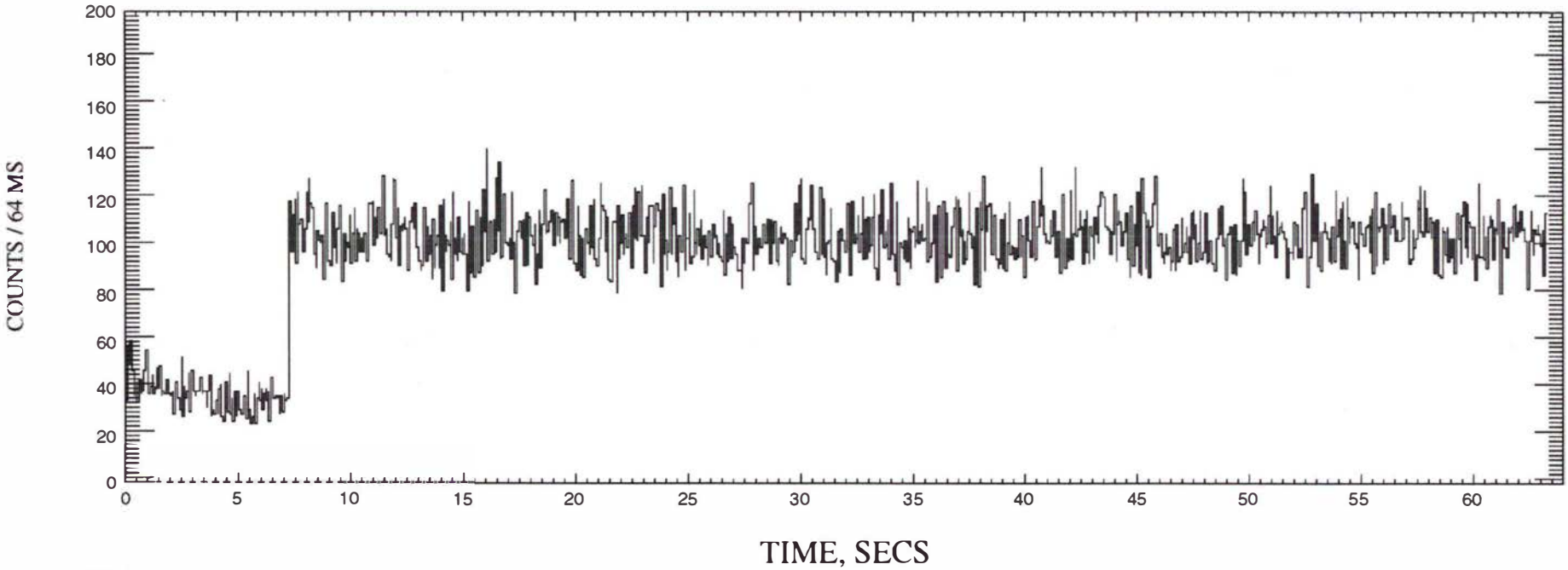


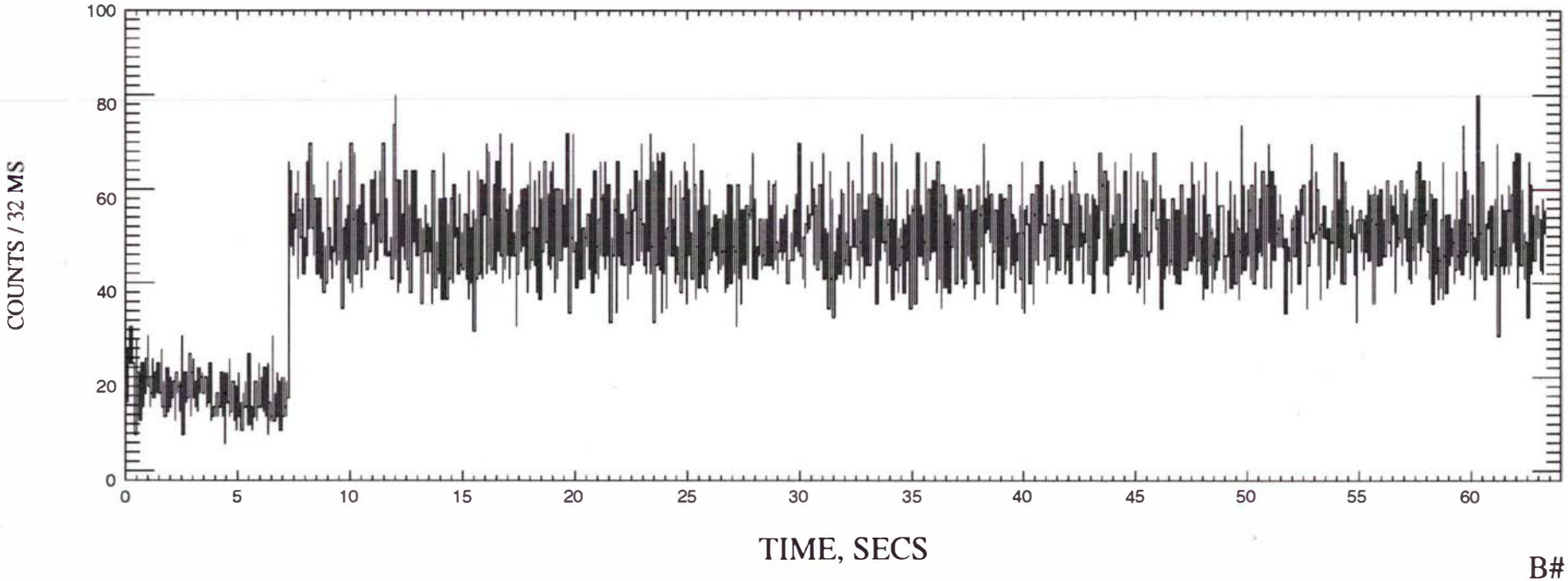


B# 16

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 7 at UT=11.609402487013 h=41793.849 s 11:36:33.849

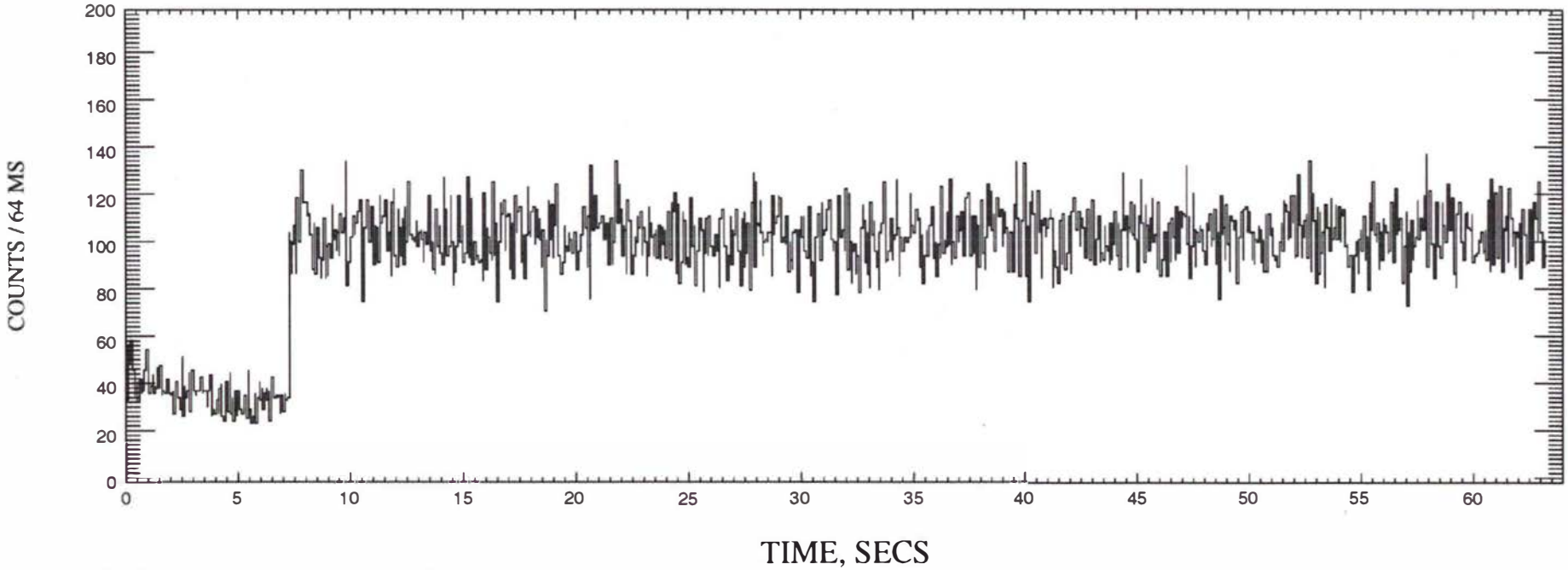


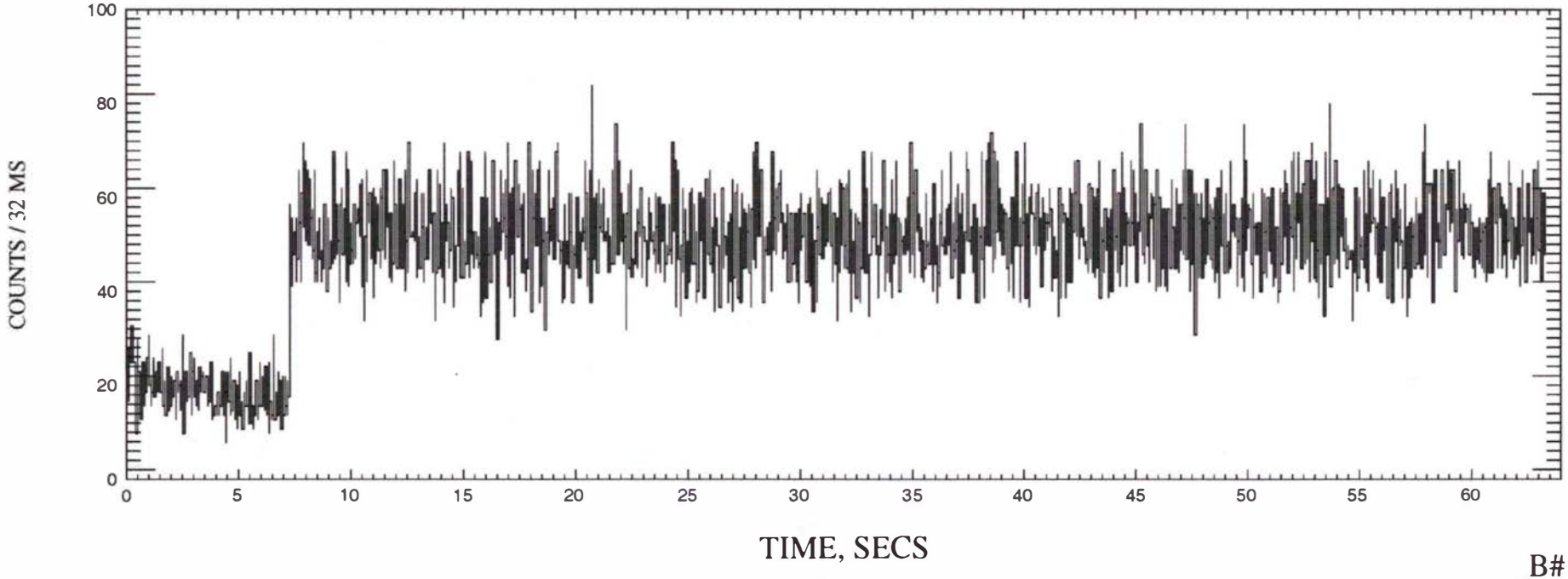


B# 17

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 8 at UT=12.311640641954 h=44321.906 s 12:18:41.906

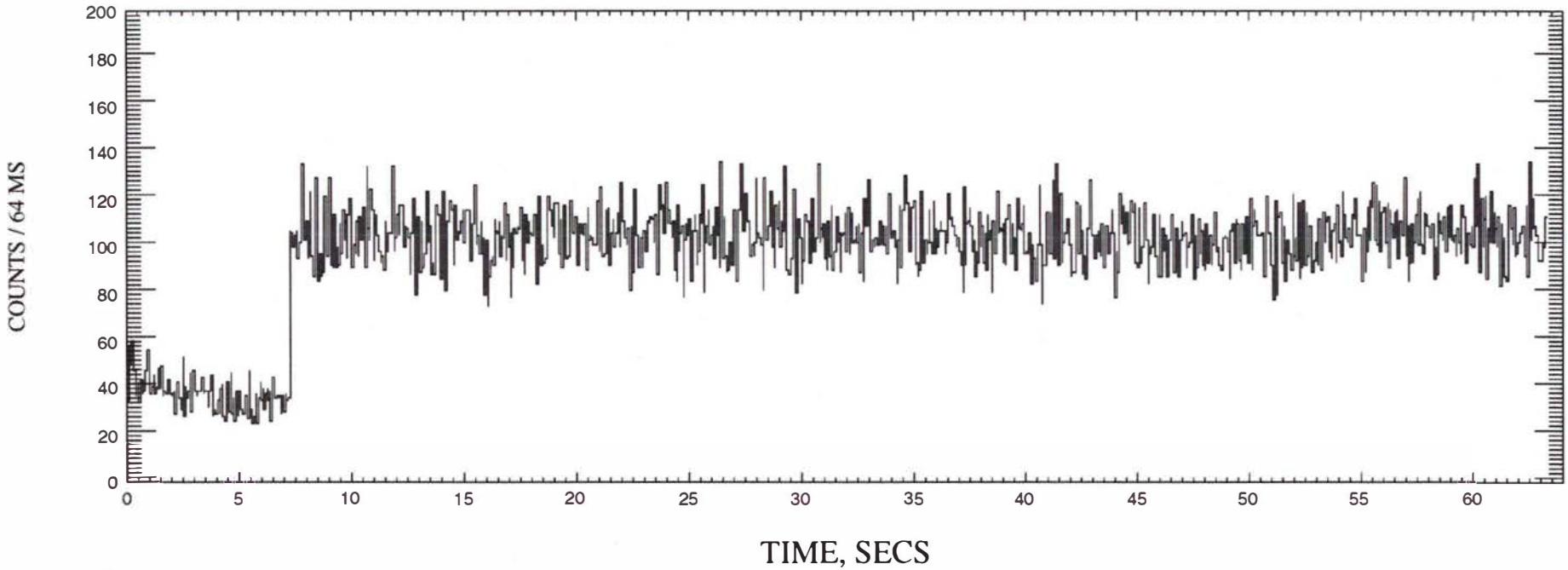


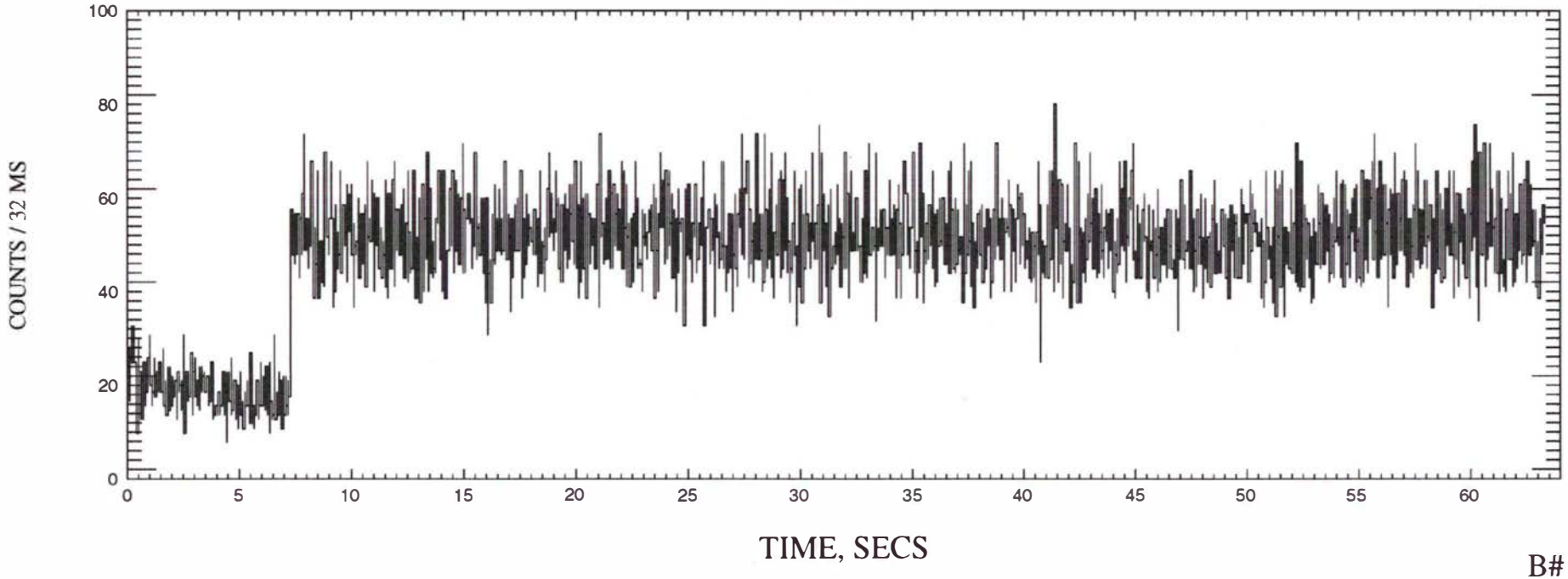


B# 18

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 9 at UT=13.013874456618 h=46849.948 s 13:00:49.948

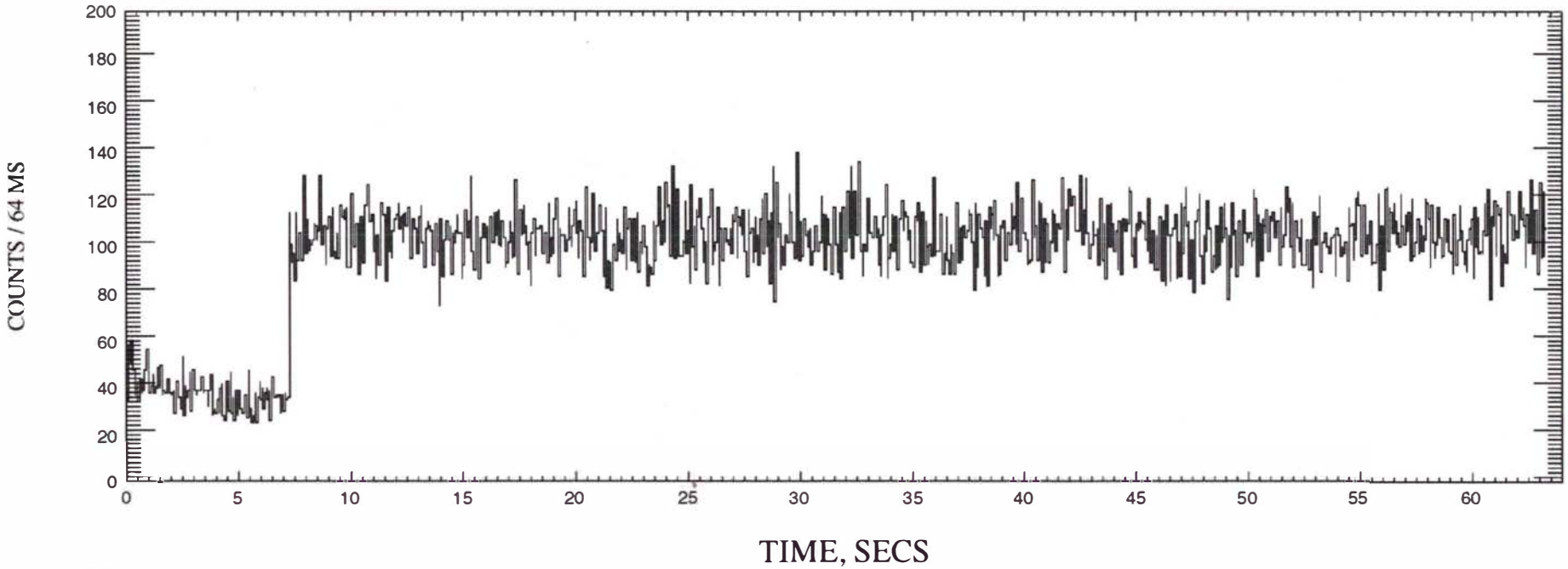


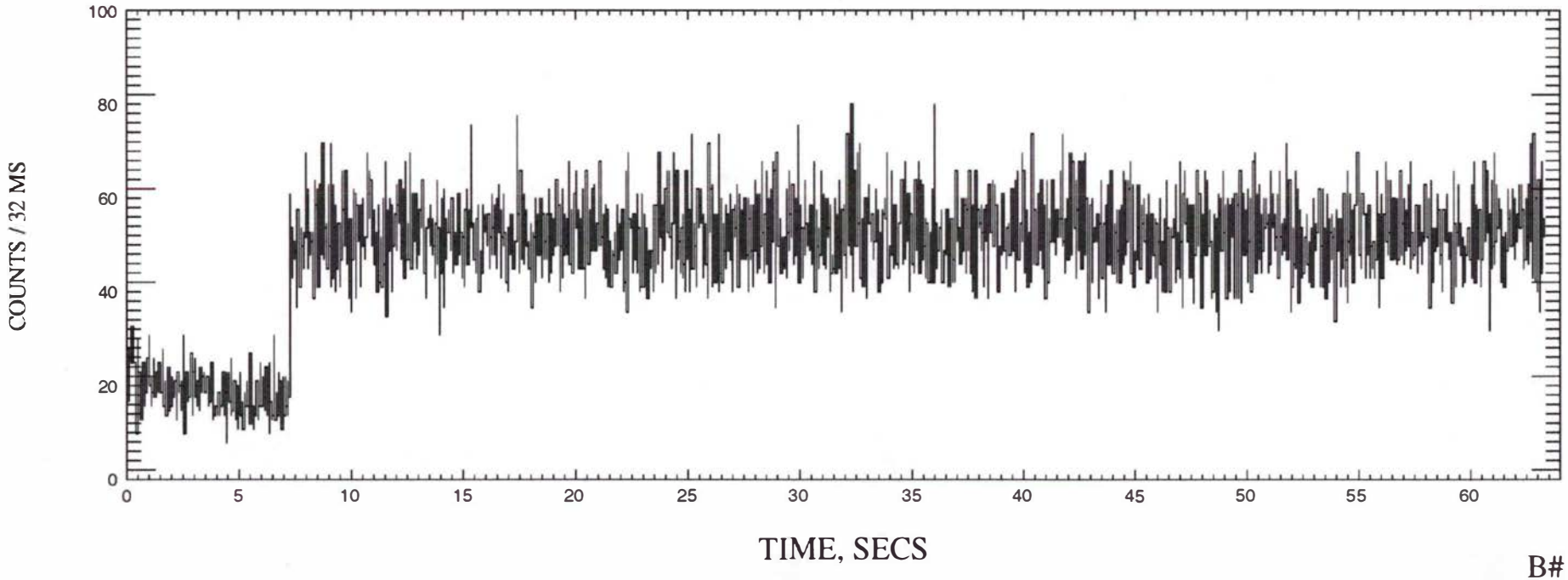


B# 19

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 10 at UT=13.716108267042 h=49377.990 s 13:42:57.990

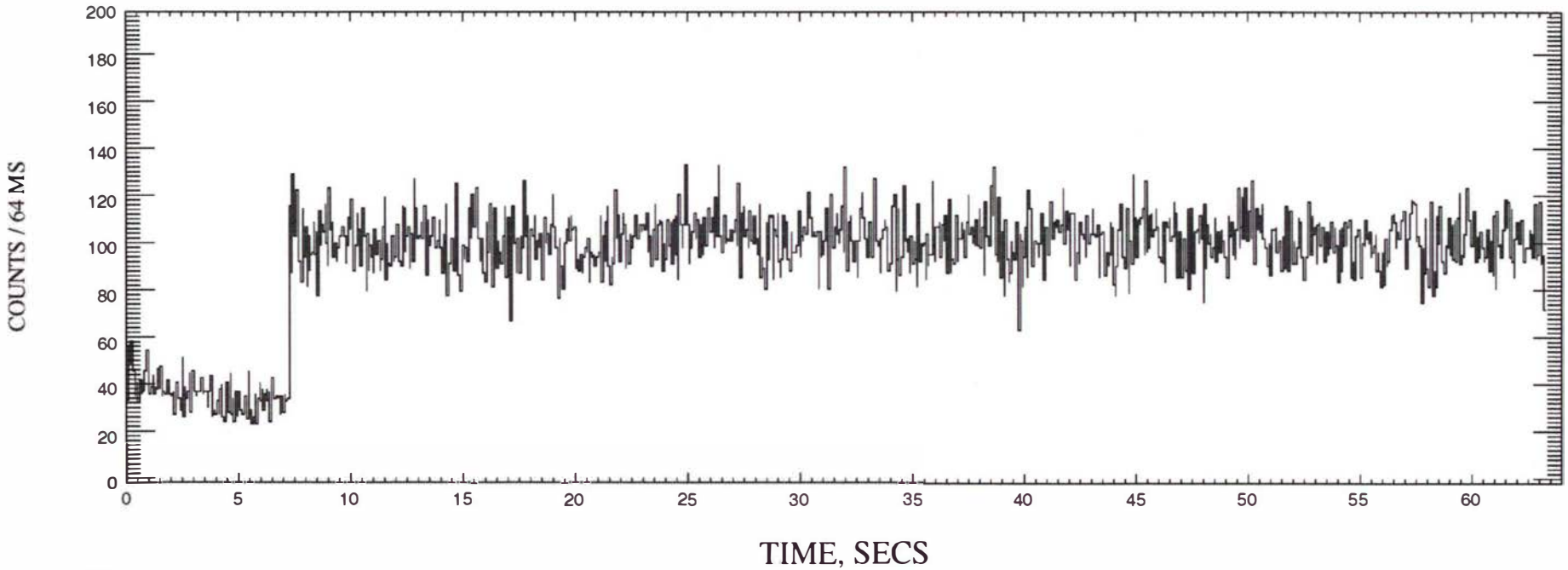


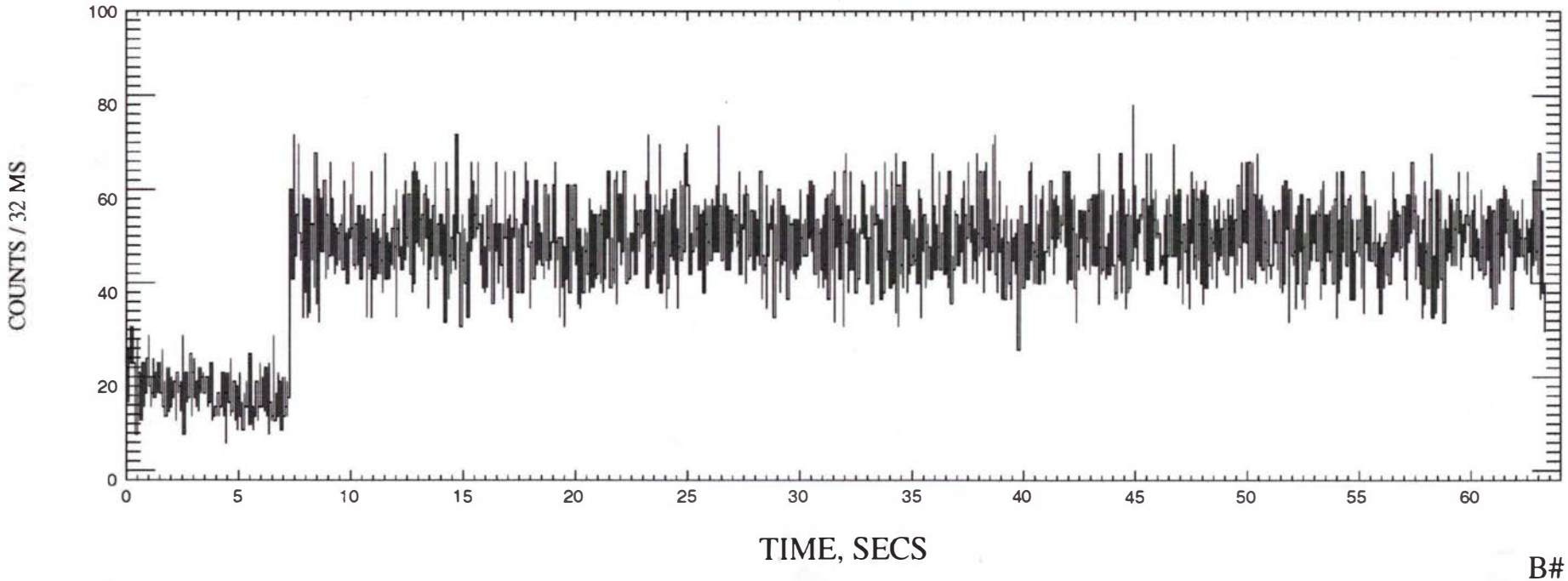


B# 20

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 11 at UT=14.418342081706 h=51906.031 s 14:25:06.031

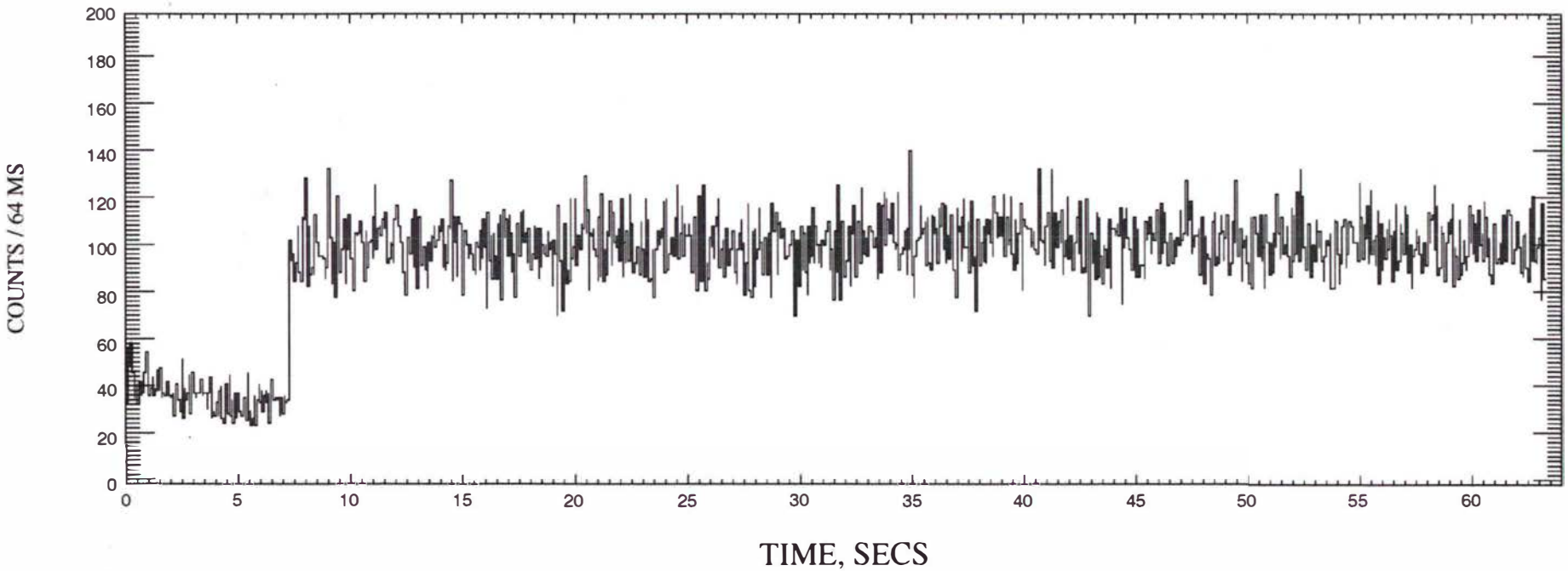


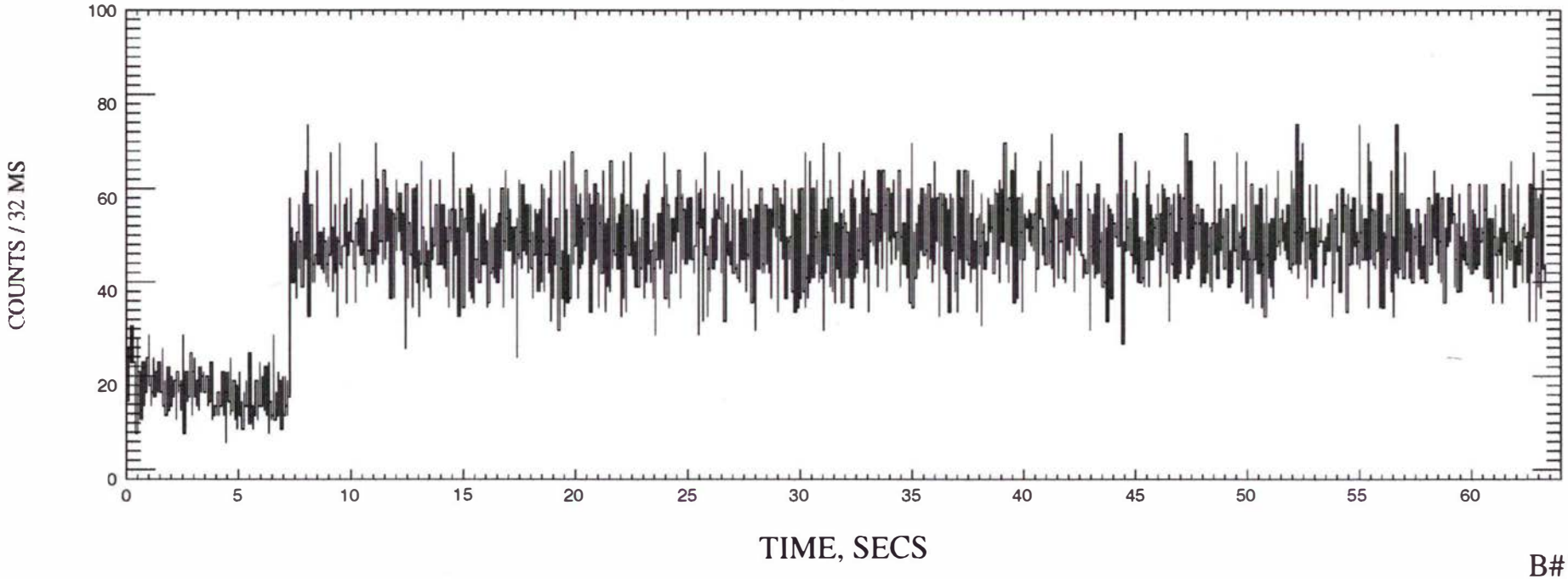


B# 21

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 12 at UT=15.120575896369 h=54434.073 s 15:07:14.073

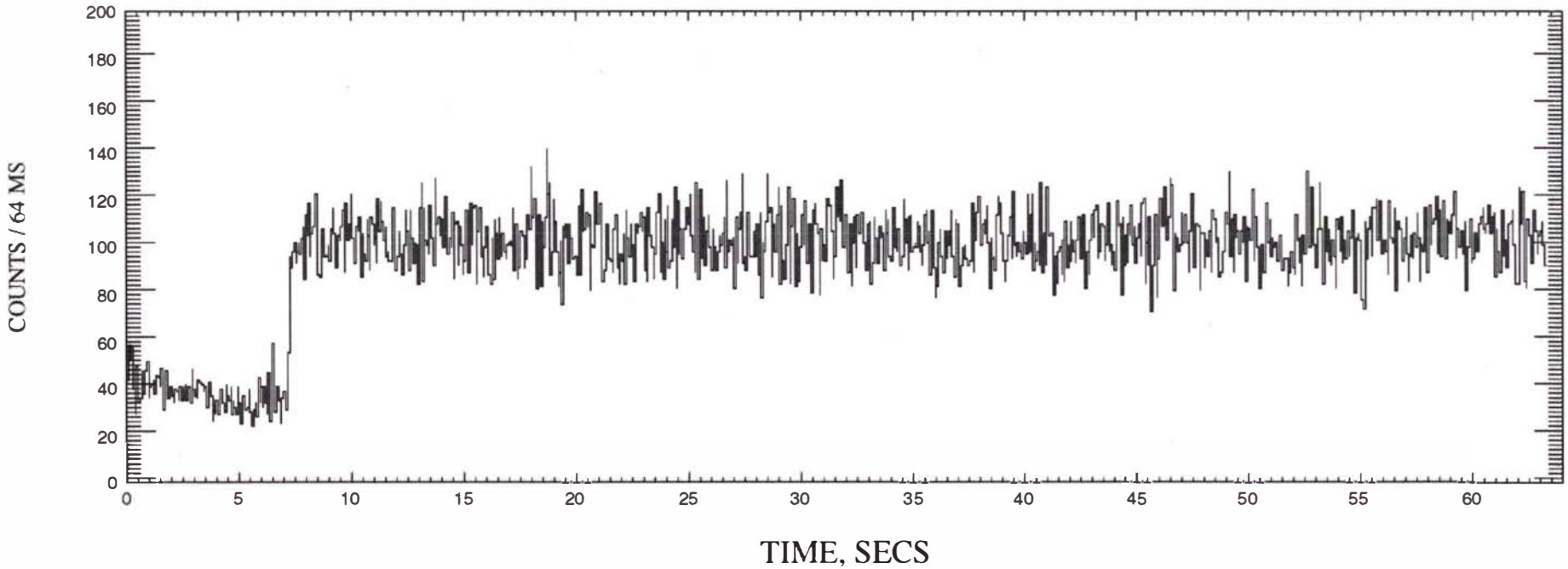


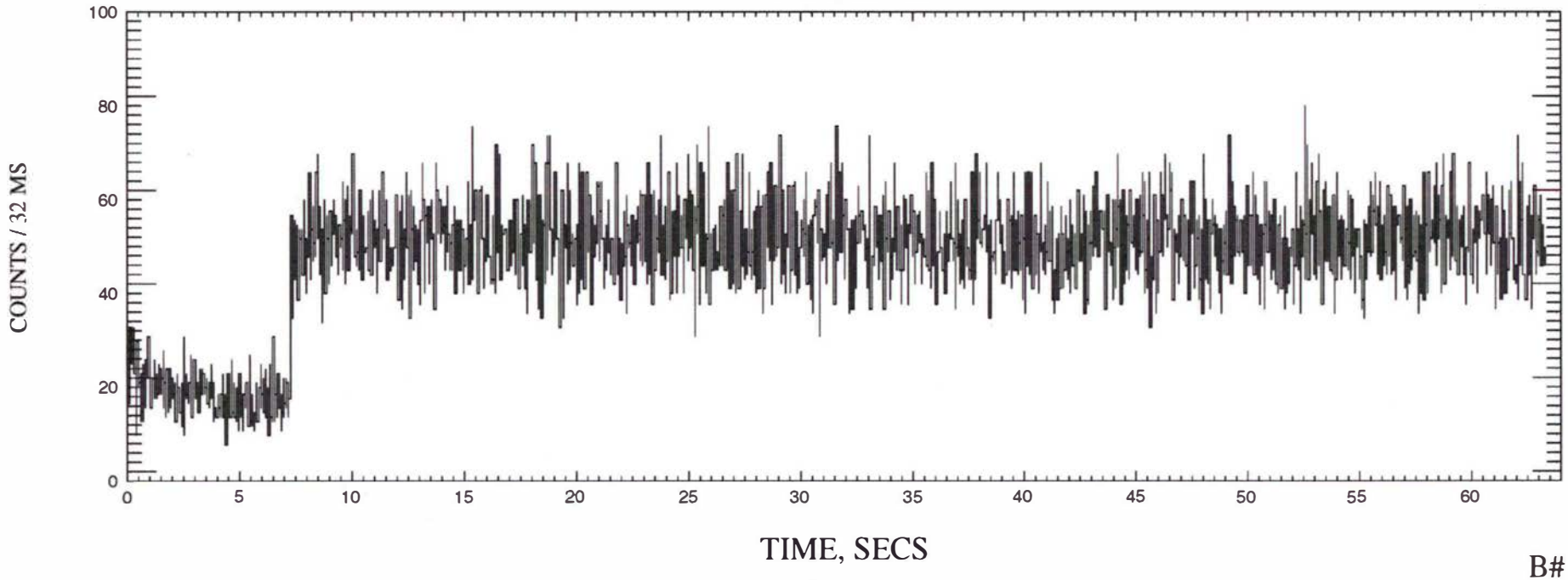


B# 22

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 13 at UT=15.822811876933 h=56962.123 s 15:49:22.123

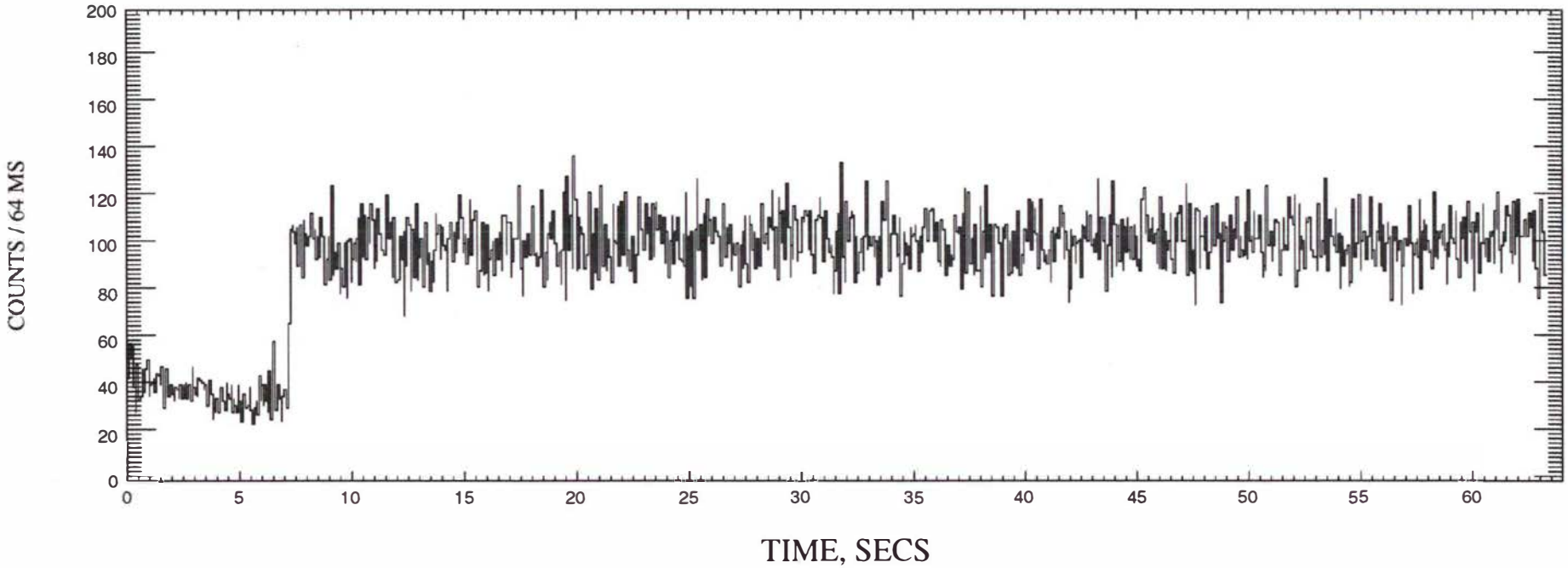


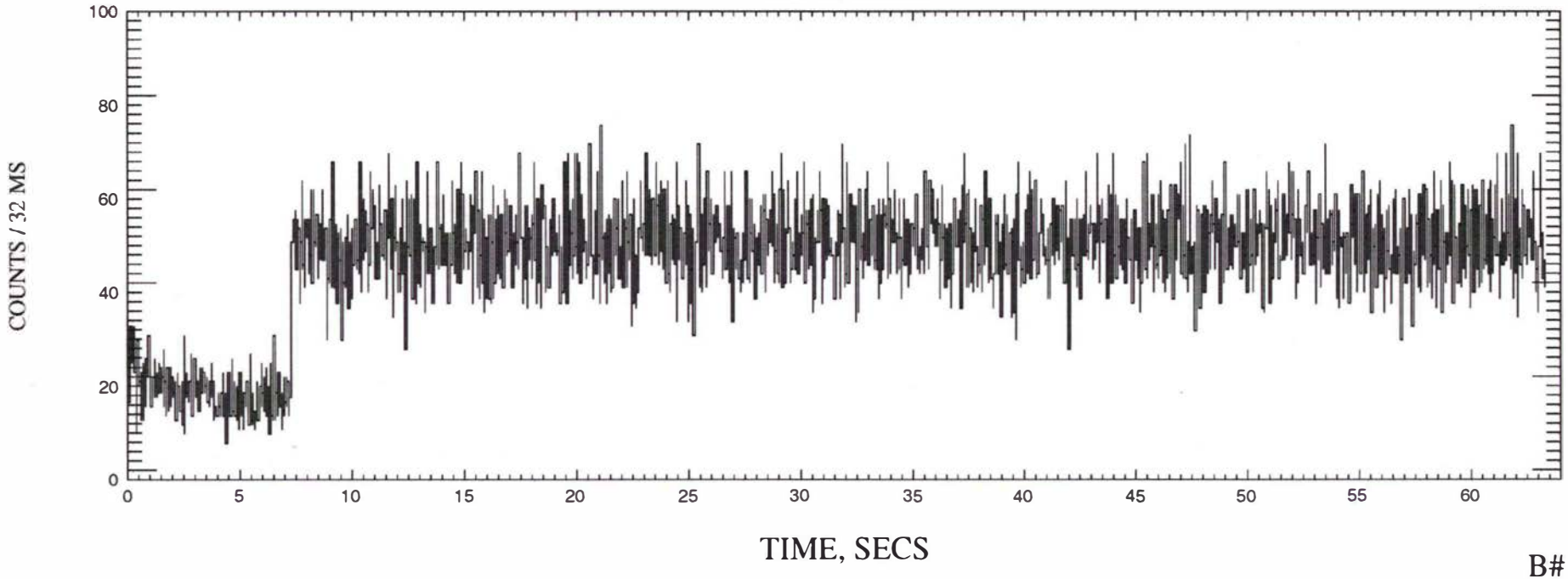


B# 23

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 14 at UT=16.525044534471 h=59490.160 s 16:31:30.160

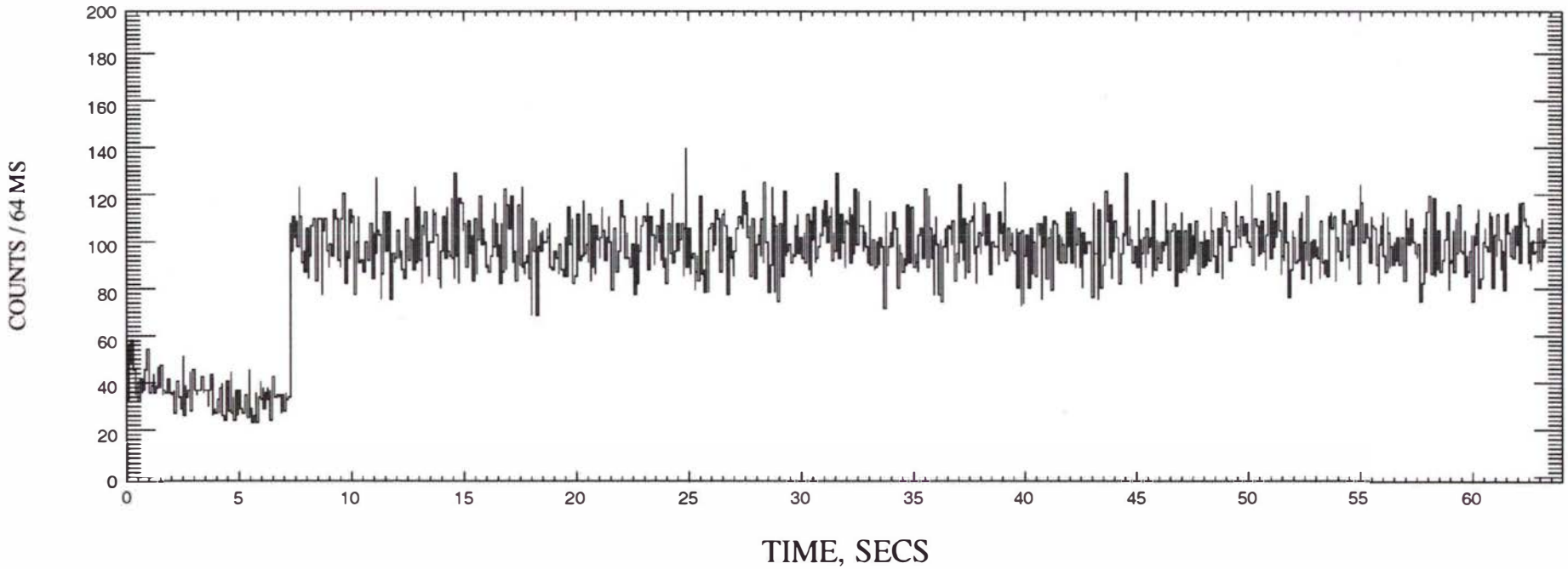


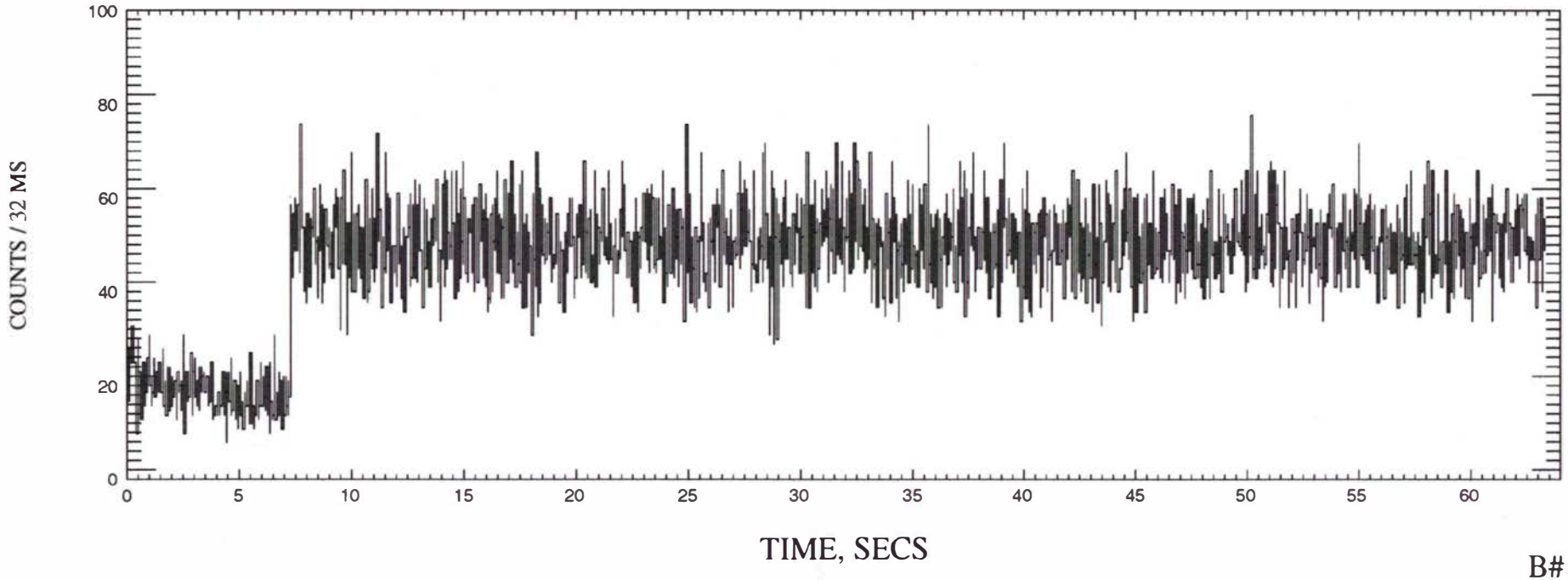


B# 24

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 15 at UT=17.227276174757 h=62018.194 s 17:13:38.194

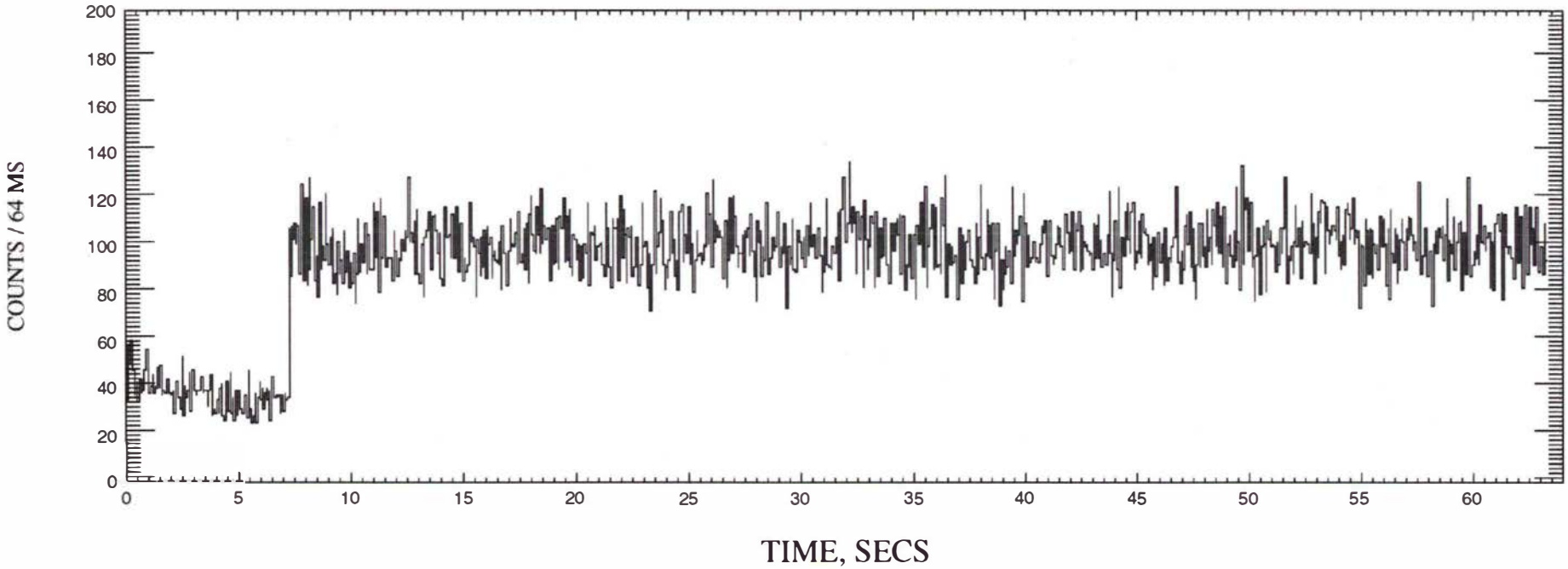


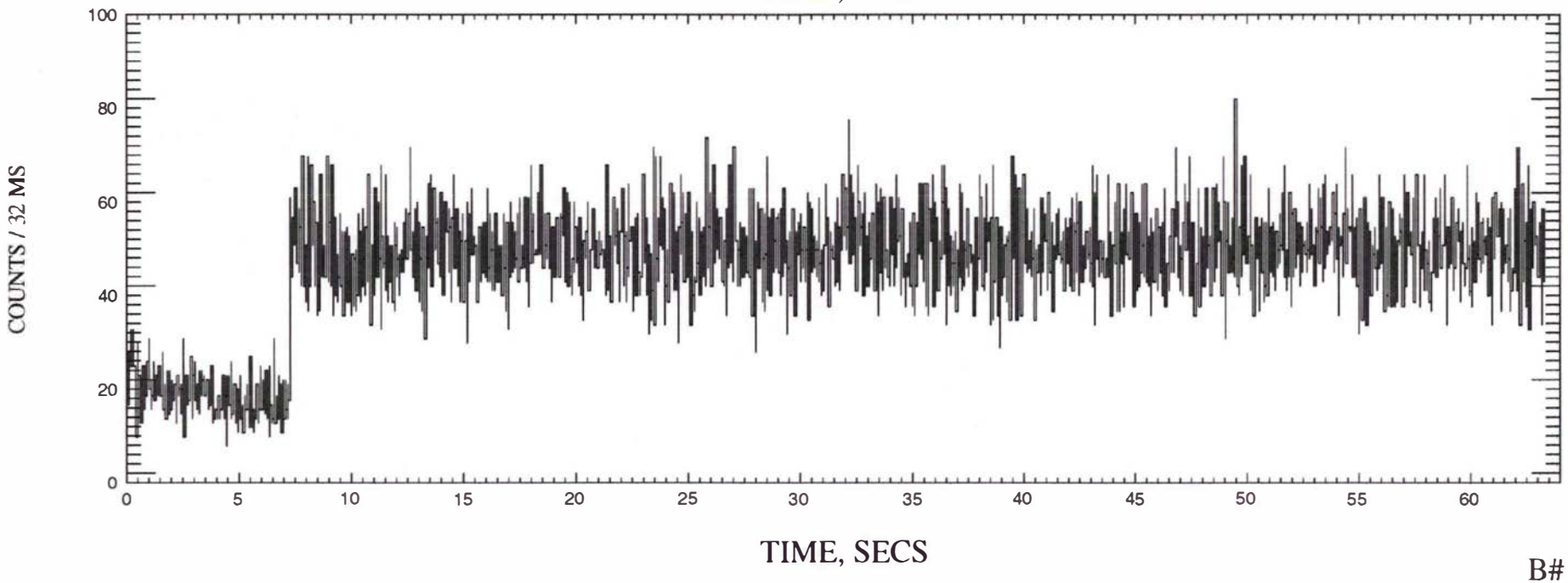


B# 25

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 0 at UT=17.929509989421 h=64546.236 s 17:55:46.236

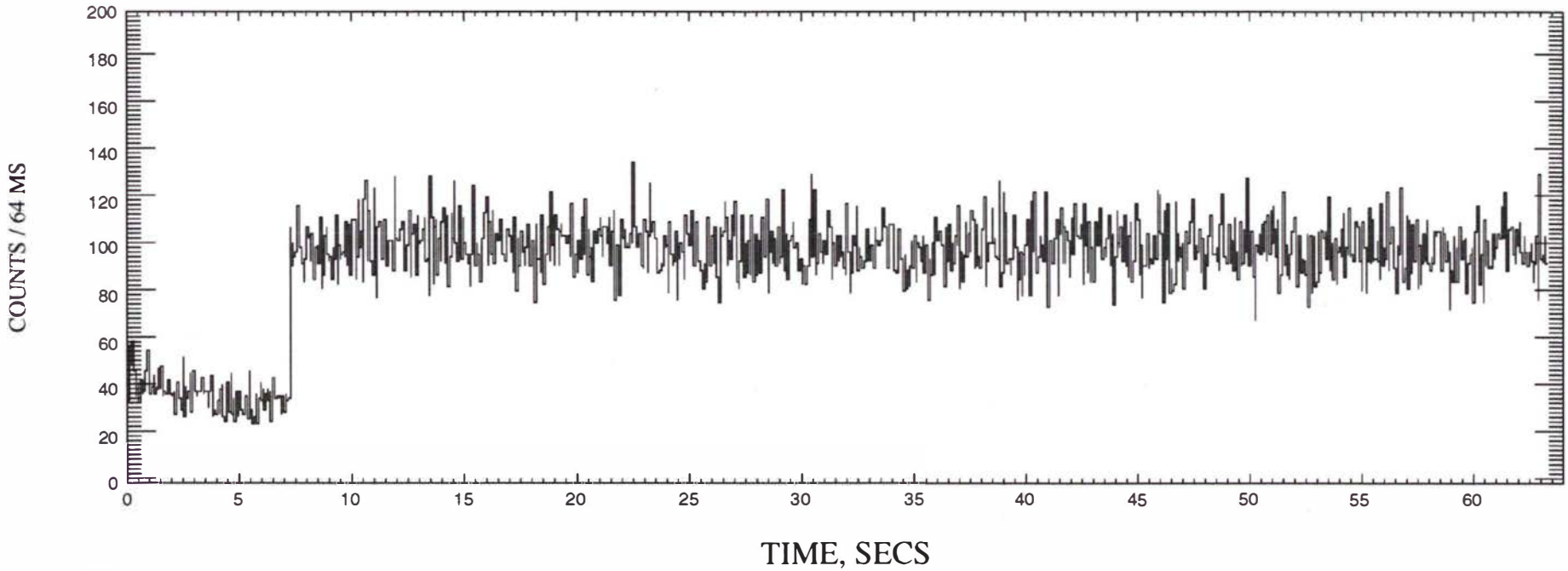


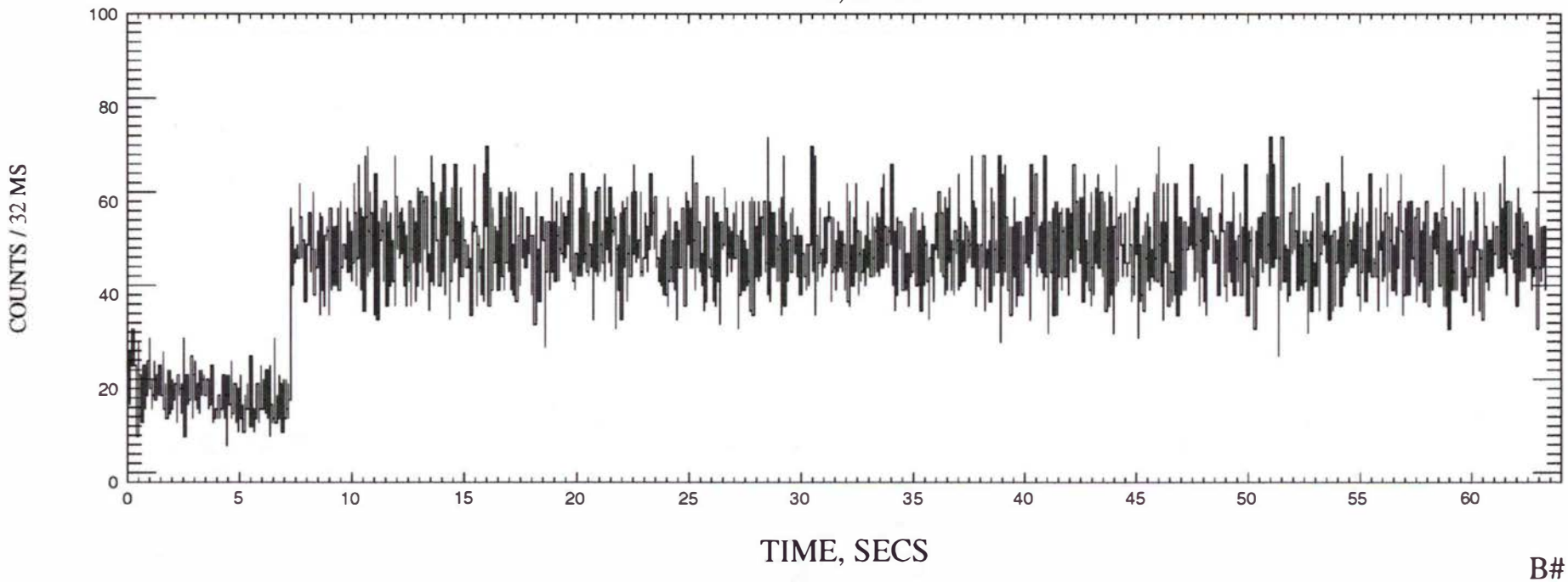


B# 26

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 1 at UT=18.631743804084 h=67074.278 s 18:37:54.278

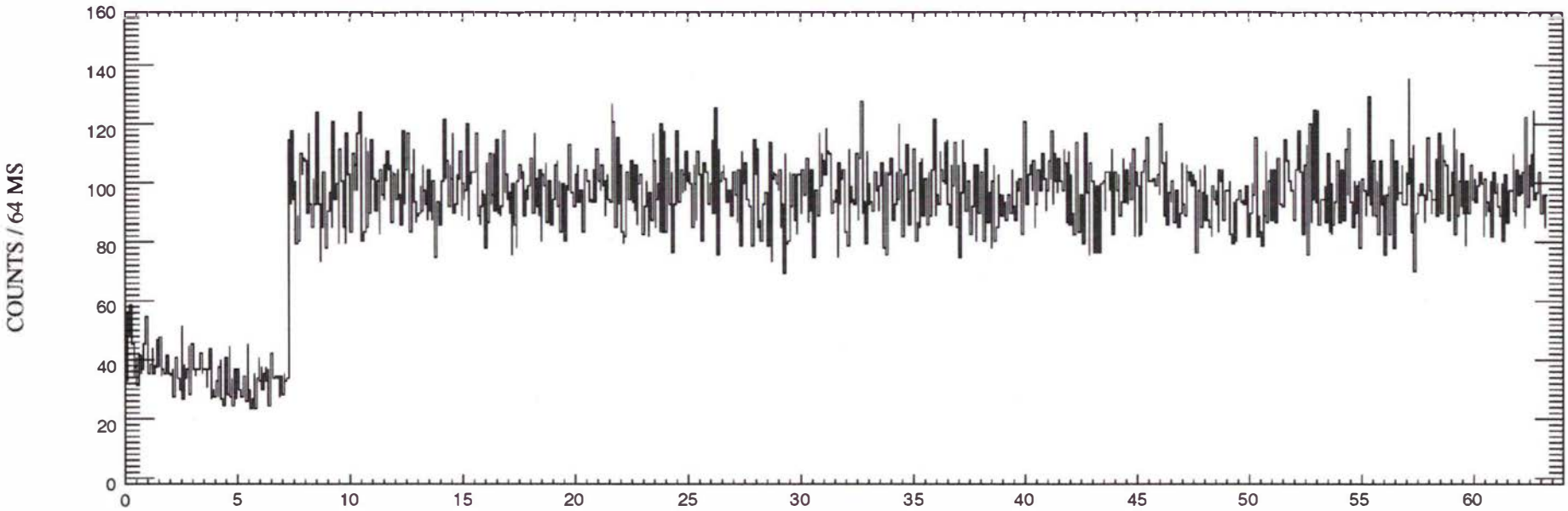




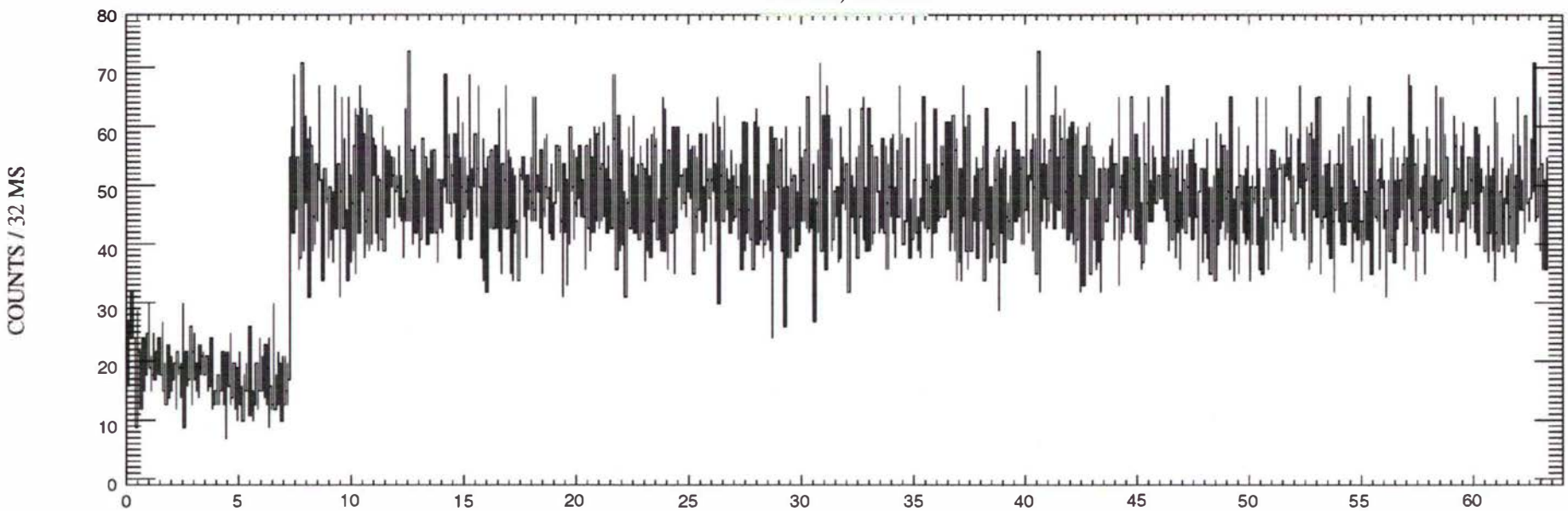
B# 27

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 2 at UT=19.333977614509 h=69602.319 s 19:20:02.319



TIME, SECS

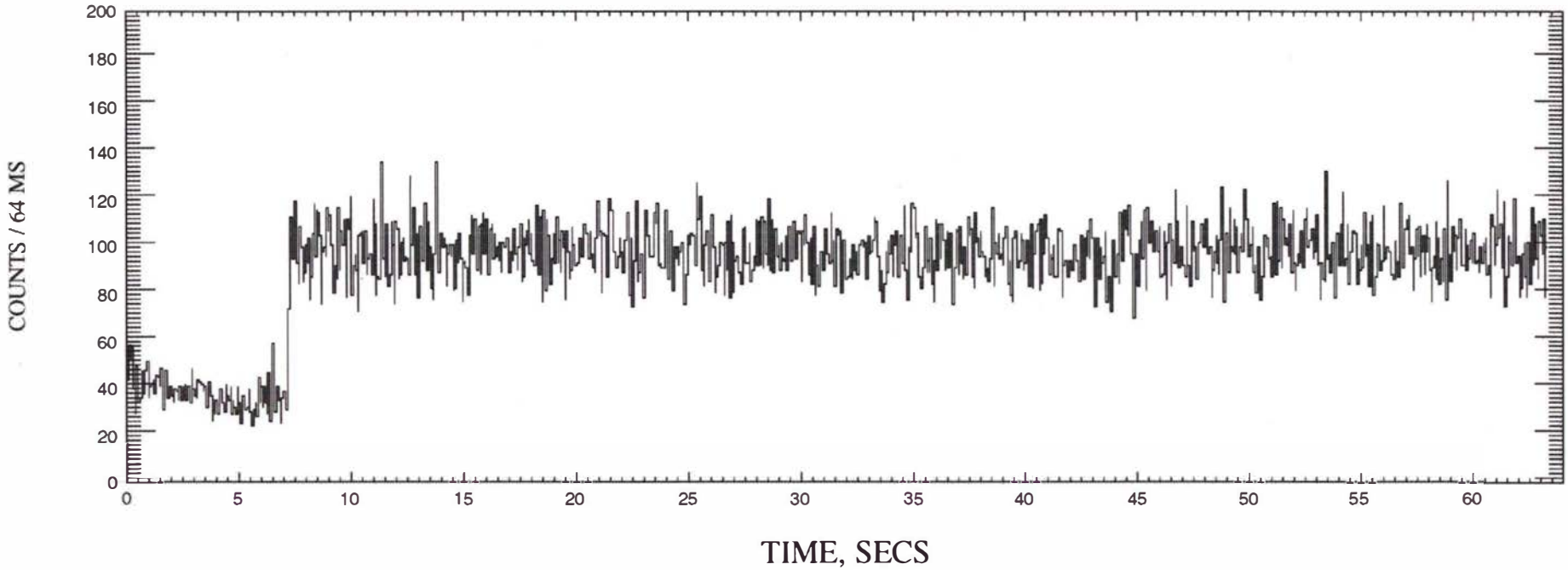


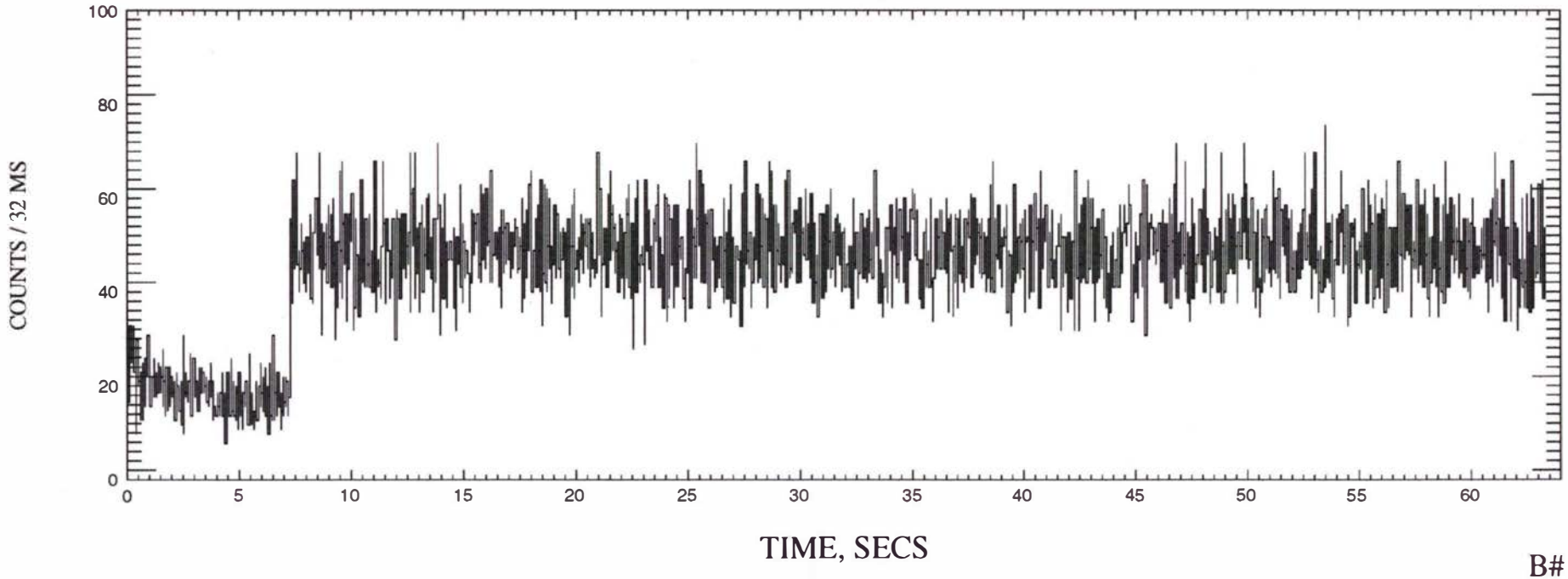
TIME, SECS

B# 28

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 3 at UT=20.036213599311 h=72130.369 s 20:02:10.369

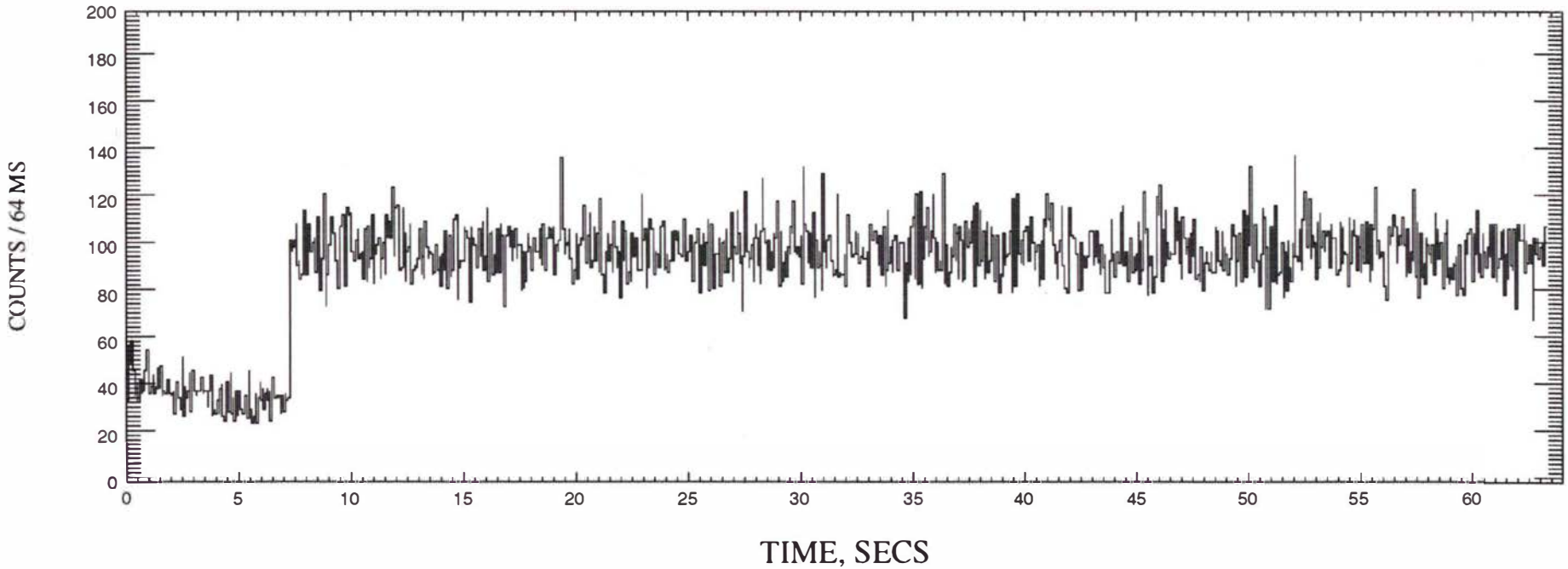


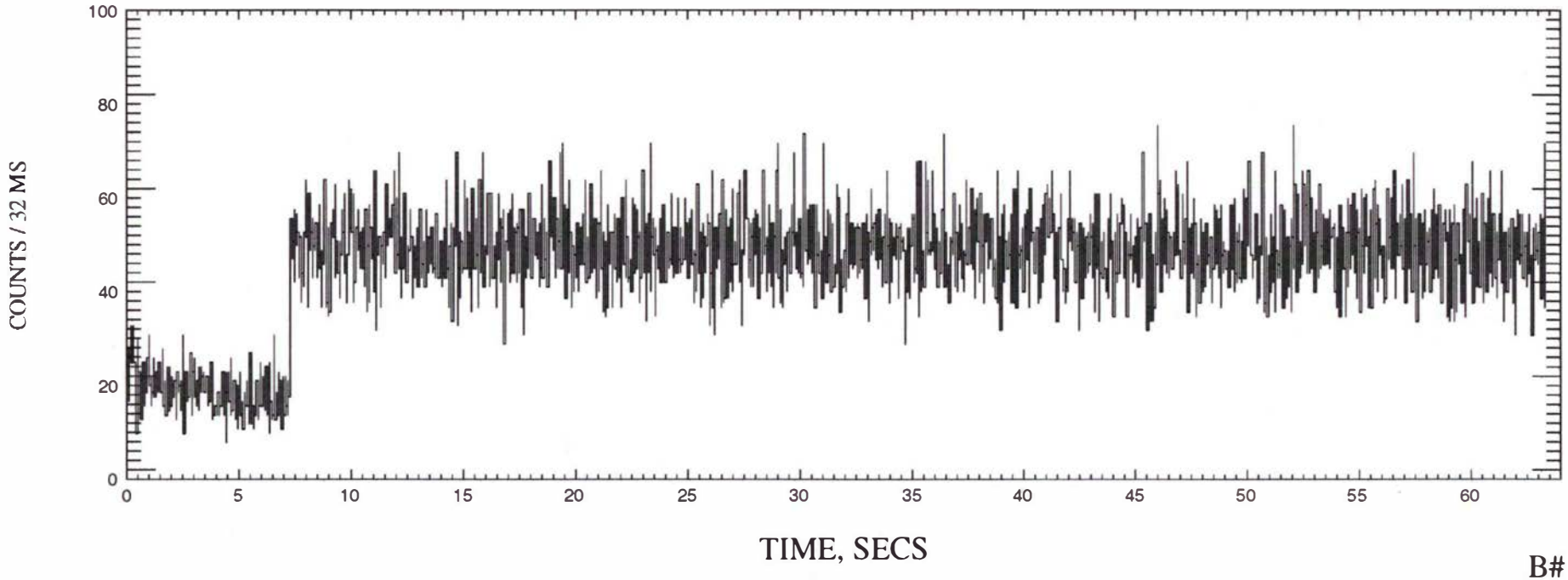


B# 29

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 4 at UT=20.738445243835 h=74658.403 s 20:44:18.403

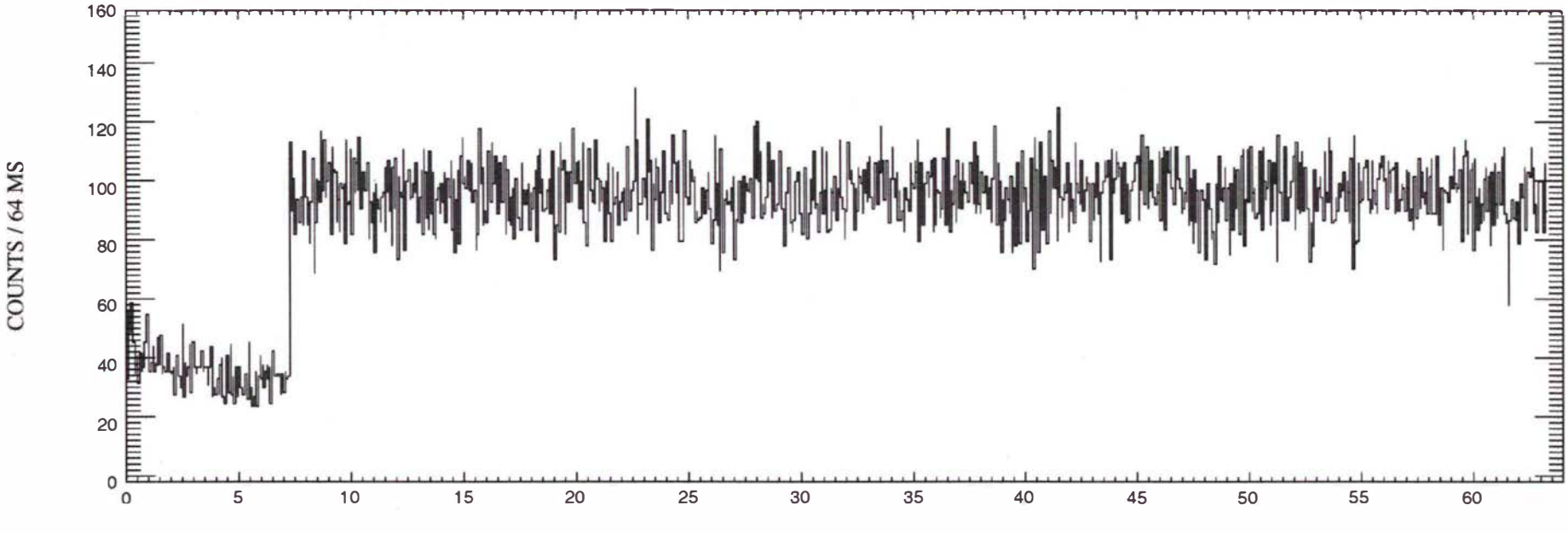




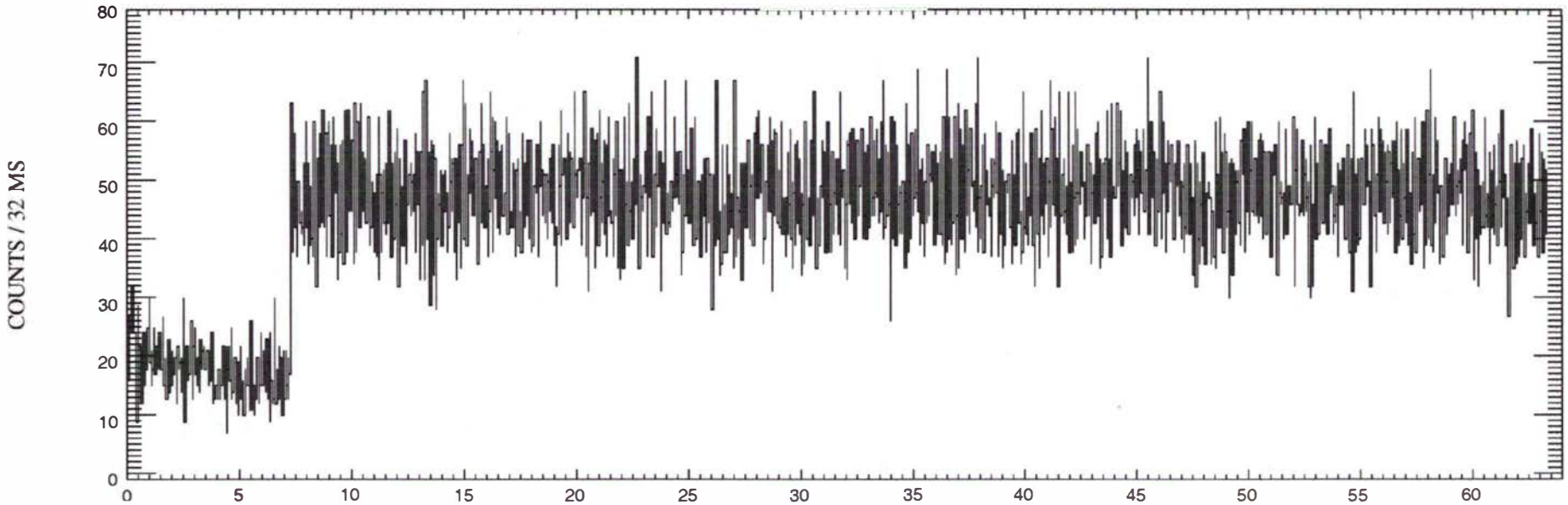
B# 30

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 5 at UT=21.440676884121 h=77186.437 s 21:26:26.437



TIME, SECS

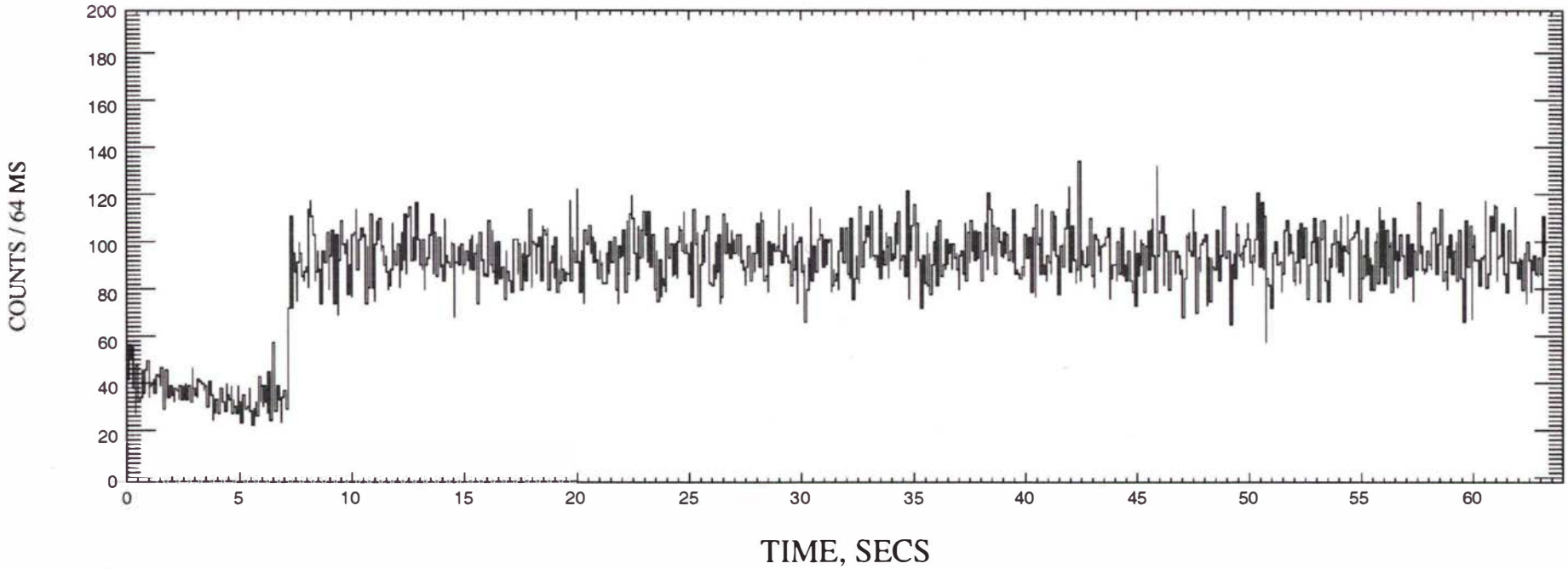


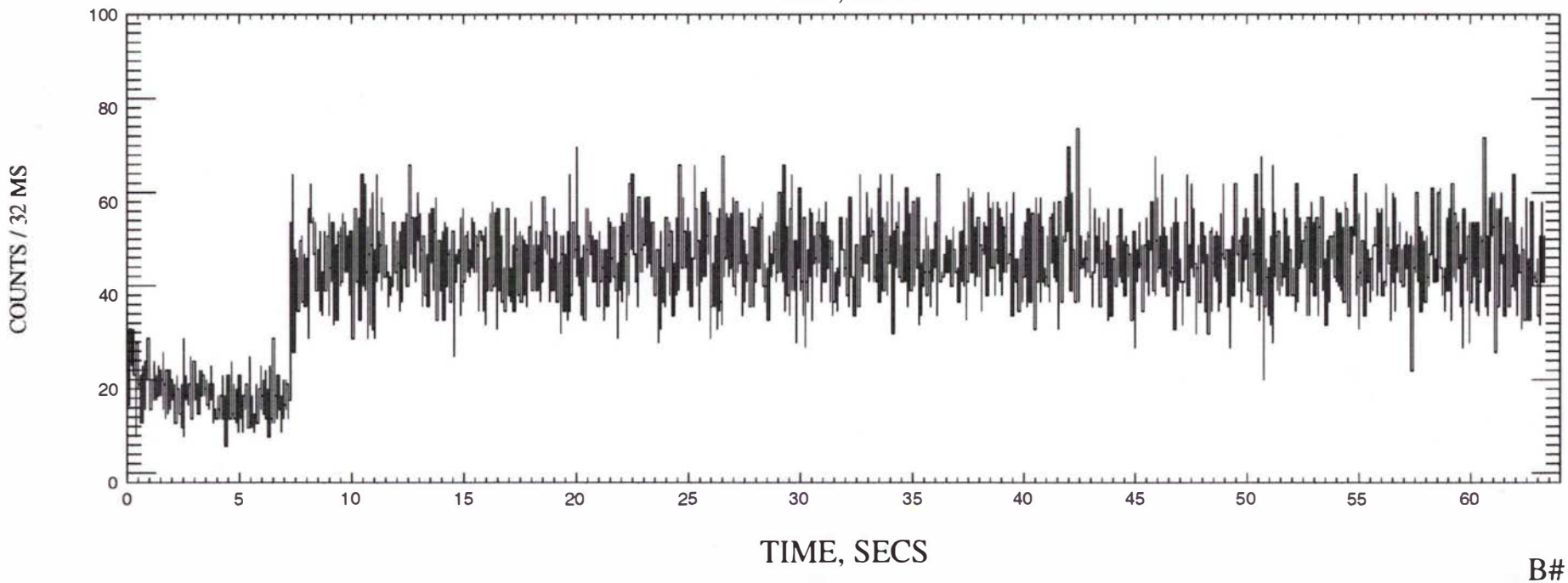
TIME, SECS

B# 31

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 6 at UT=22.142916052077 h=79714.498 s 22:08:34.498

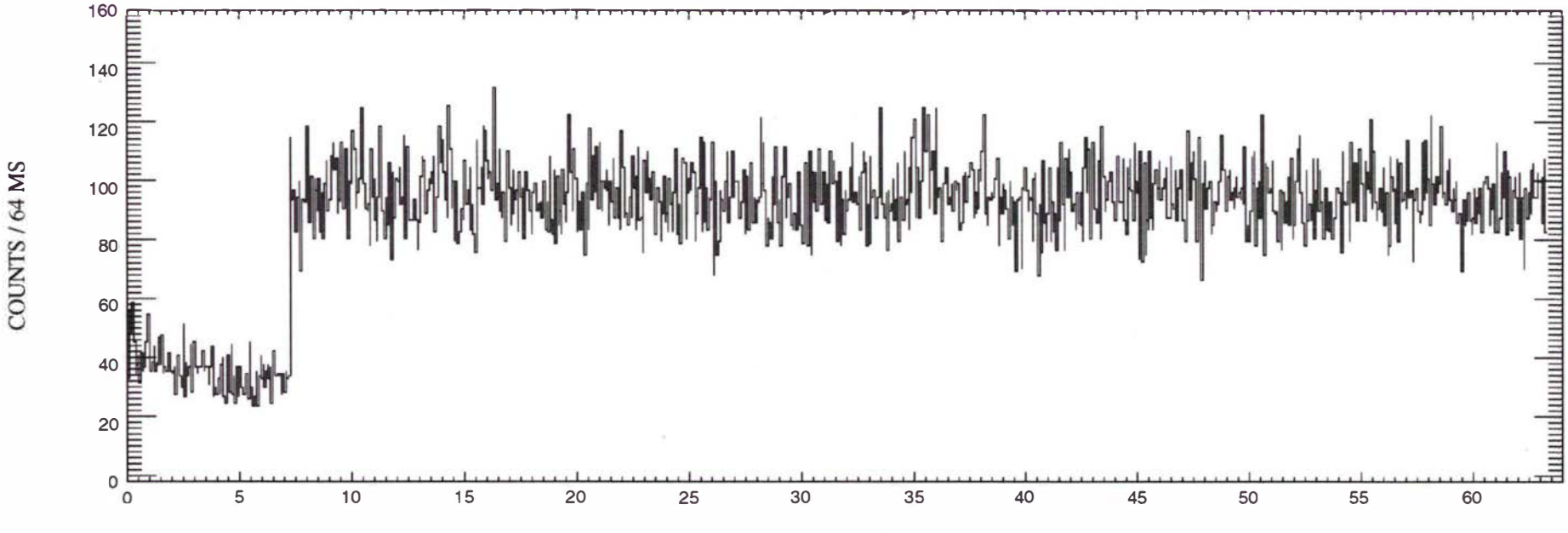


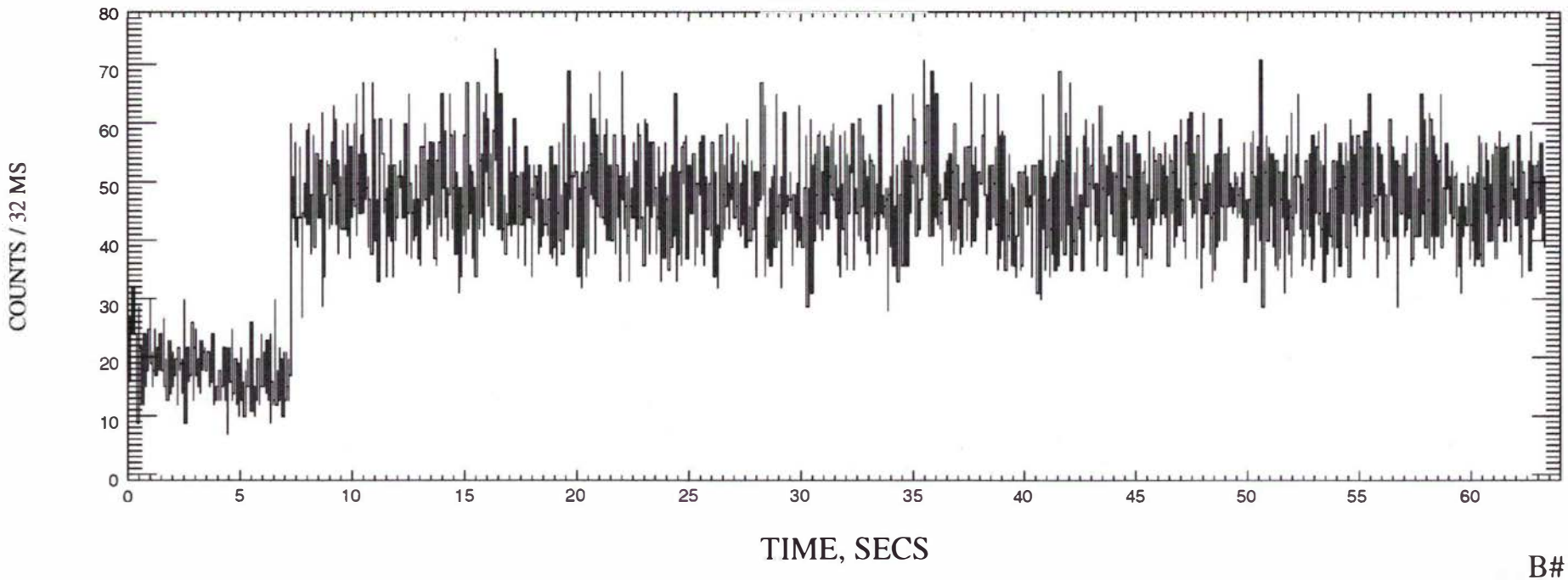


B# 32

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 7 at UT=22.845145522224 h=82242.524 s 22:50:42.524

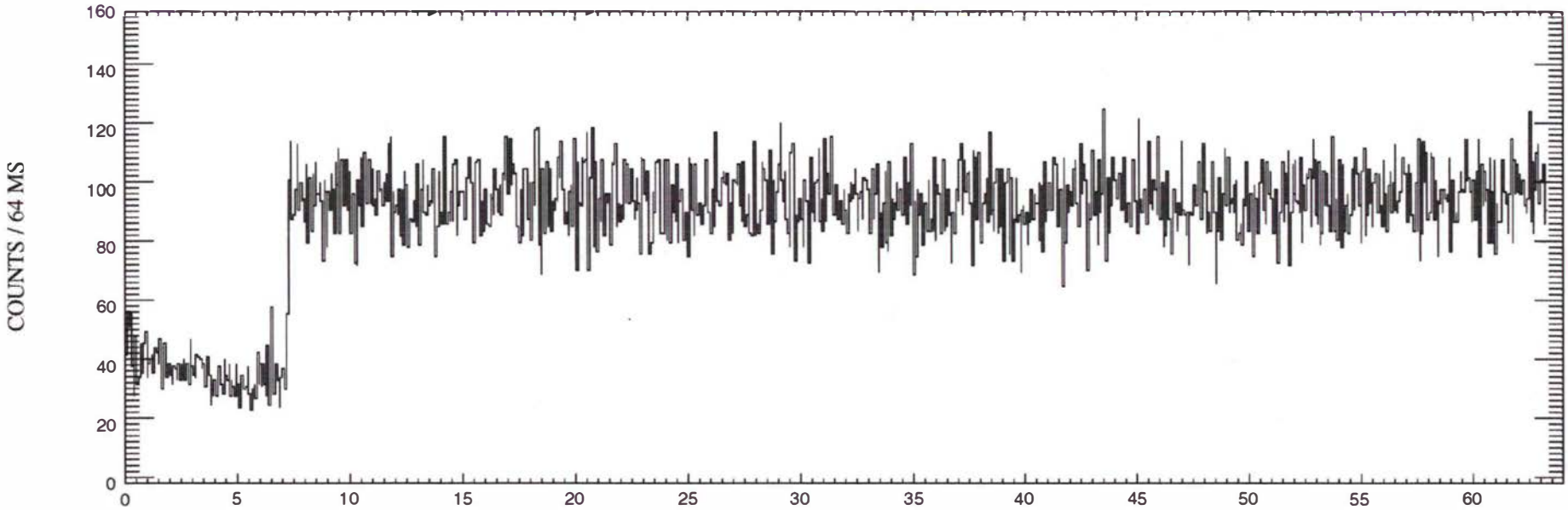




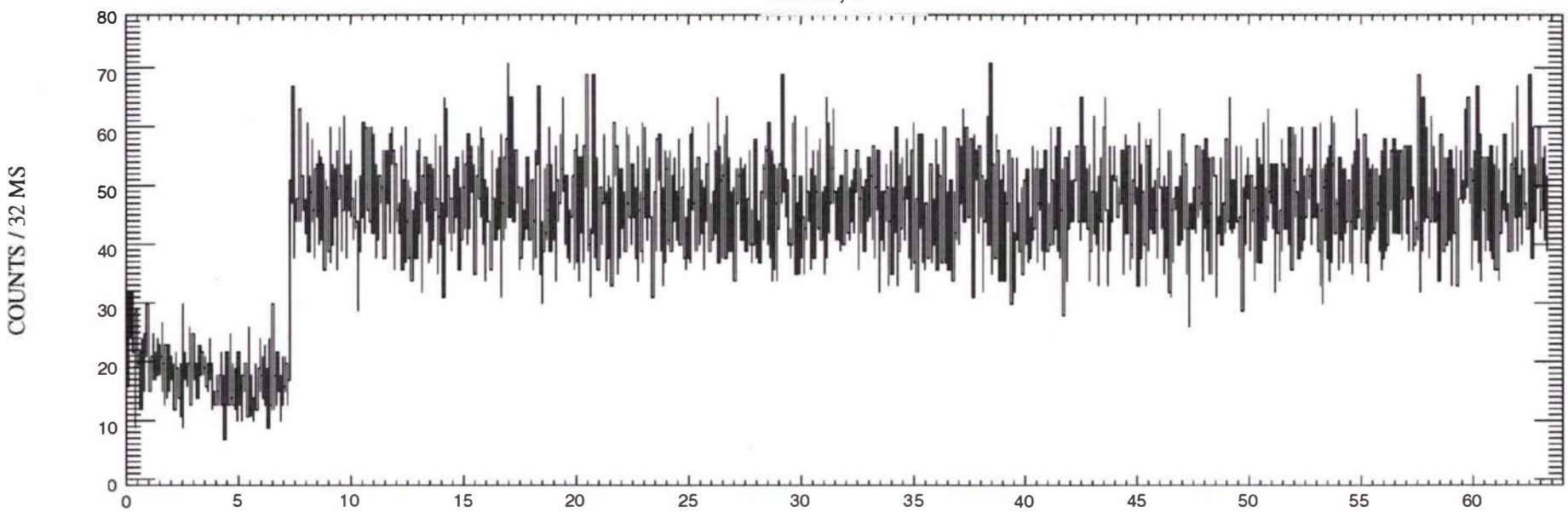
B# 33

HUS 2A TRIGGERED DATA QEDR DMY = 30/09/2001 DOY = 273 10/01/01

Burst Counter 8 at UT=23.547381507026 h=84770.573 s 23:32:50.573

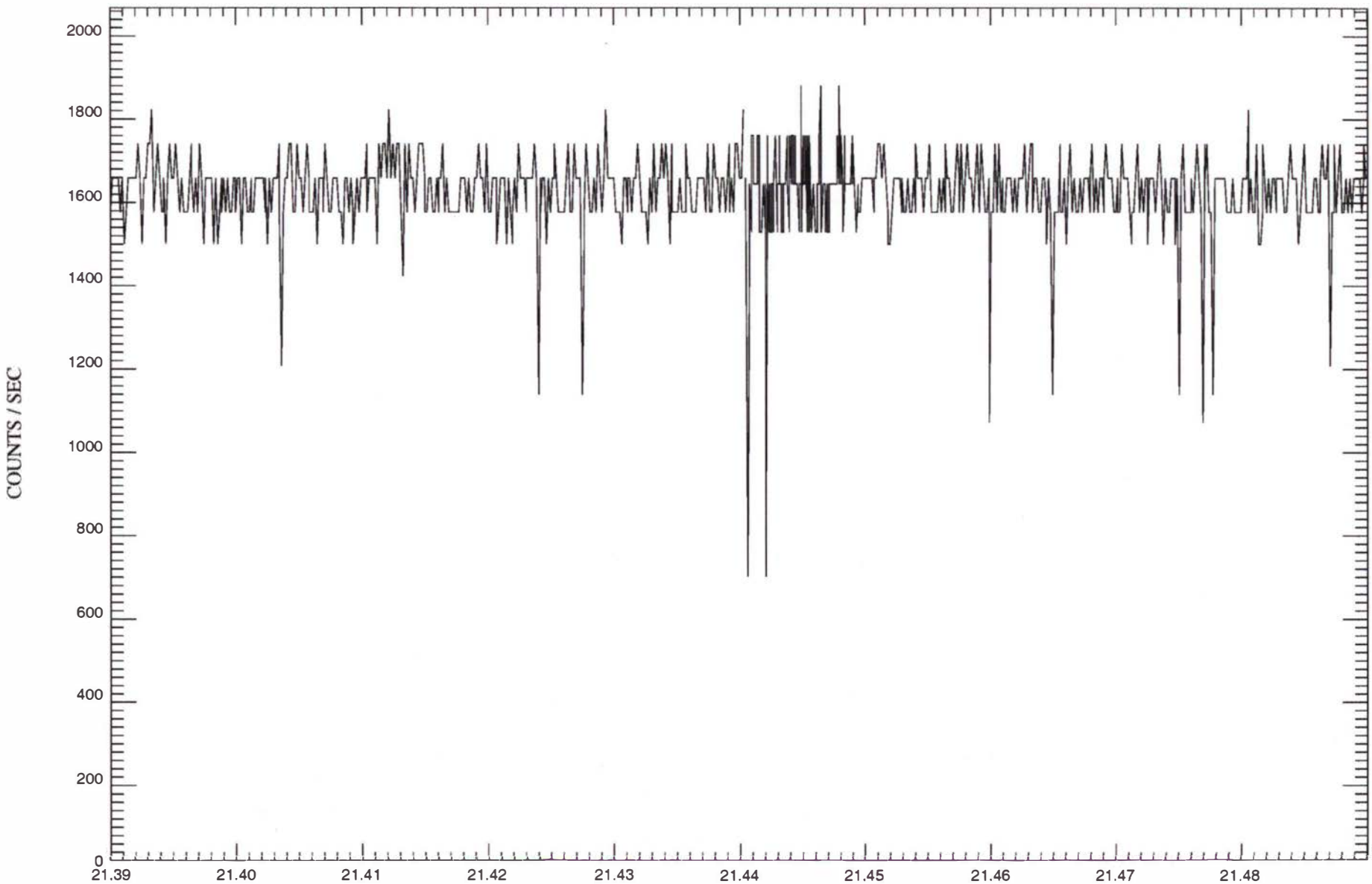


TIME, SECS



TIME, SECS

B# 34

HUS 2A, MODE 1, NOT AVERAGED QEDR DMY = 30/09/2001 DOY = 273 10/01/01

CALIBRATION DATA INCLUDED