

Date: Mar 19 '09

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

N/A

- ☐ 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

N/A

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

2. For 3 or More Spacecraft events

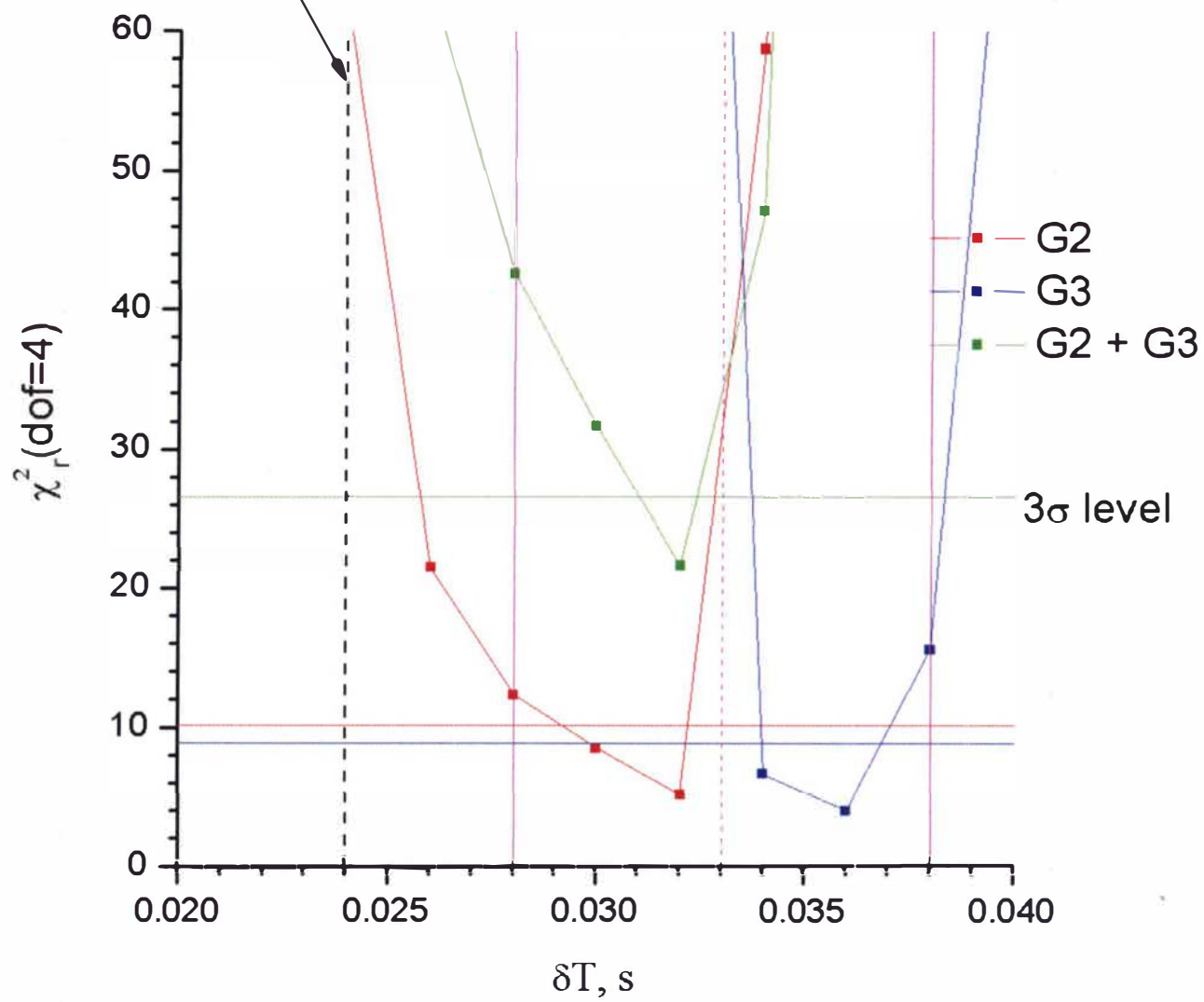
- ☐ $\Sigma 3\Delta t$'s calculated, and/or BMAPSUM executed?

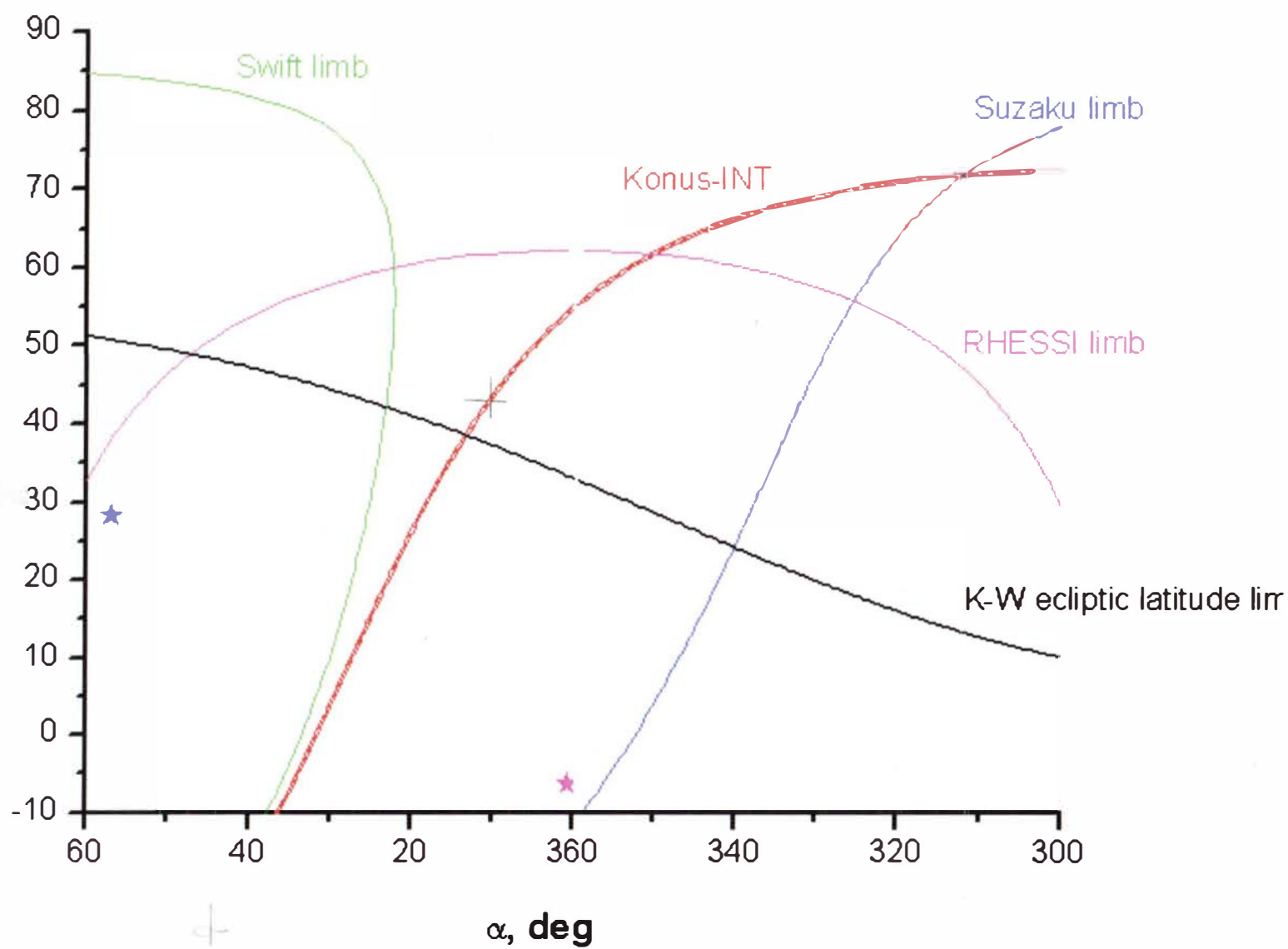
3. For INTEGRAL events

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

-
- ☒ ACCESS and MBL4 databases updated?

derived by Kevin





N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

G=GALACTIC EQUATOR

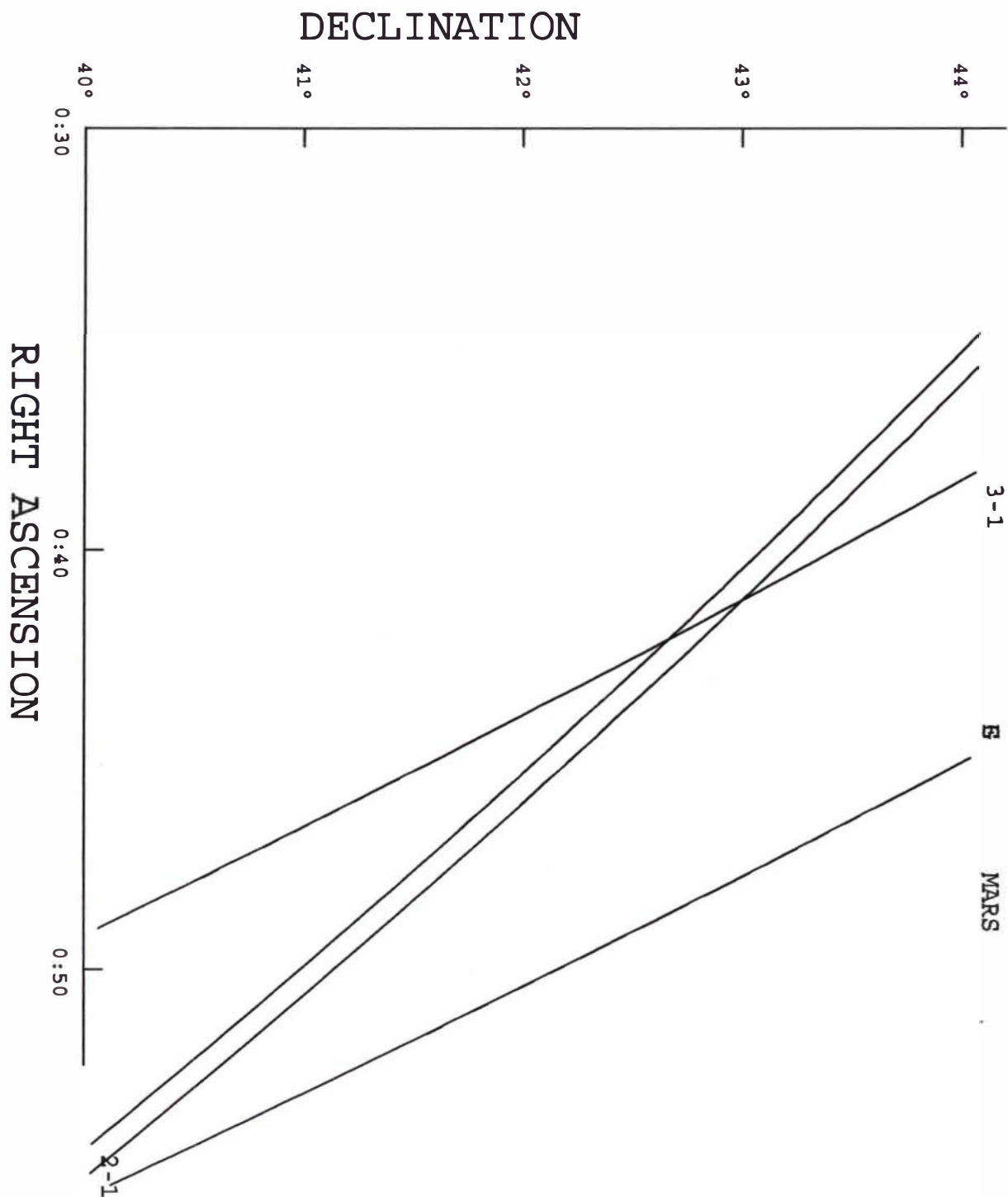
1 KONUS2

2 MESSENGER

3 INTEGRAL

EVENT OF FEB 1, 2007 15:23

18 / 5 / 7

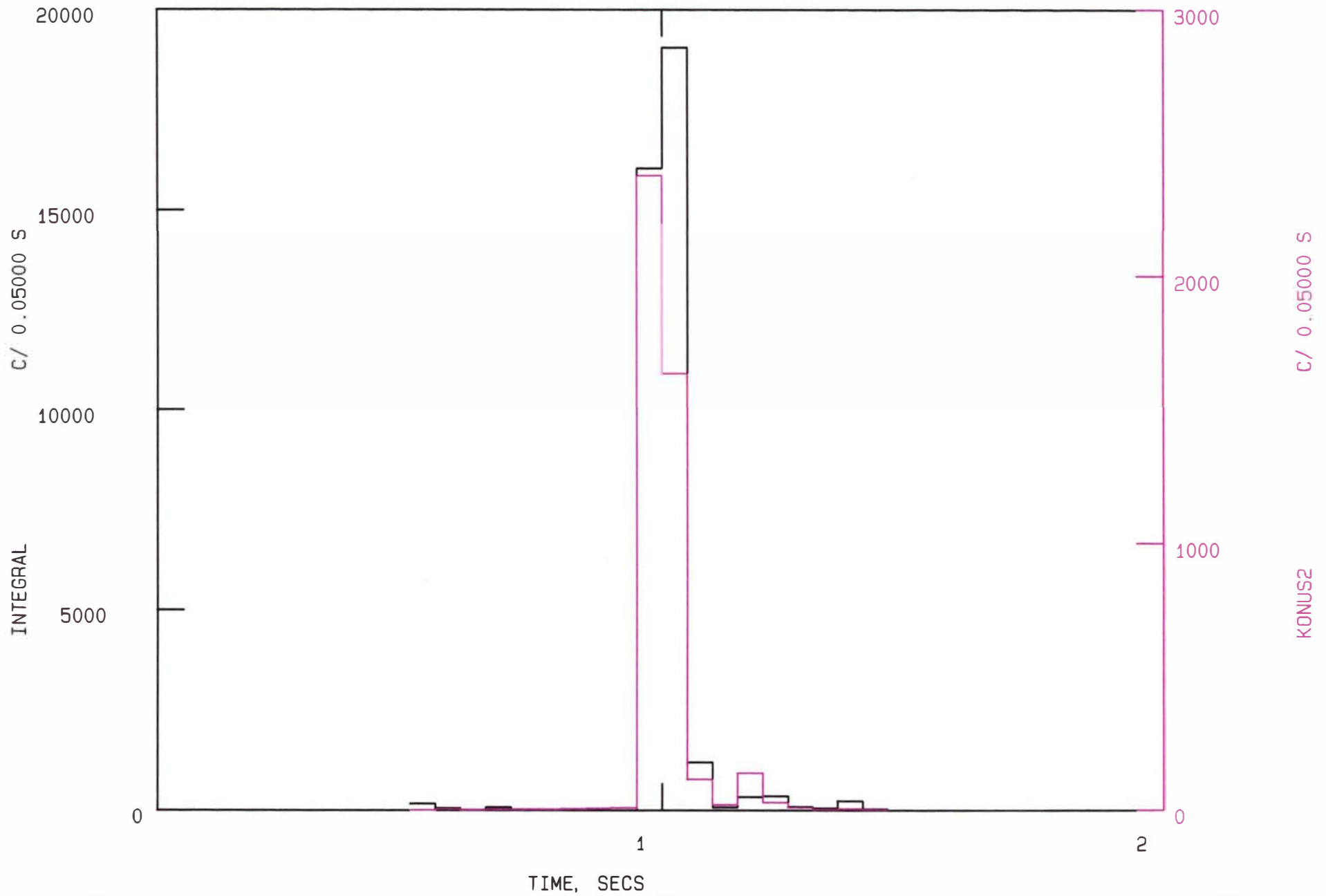


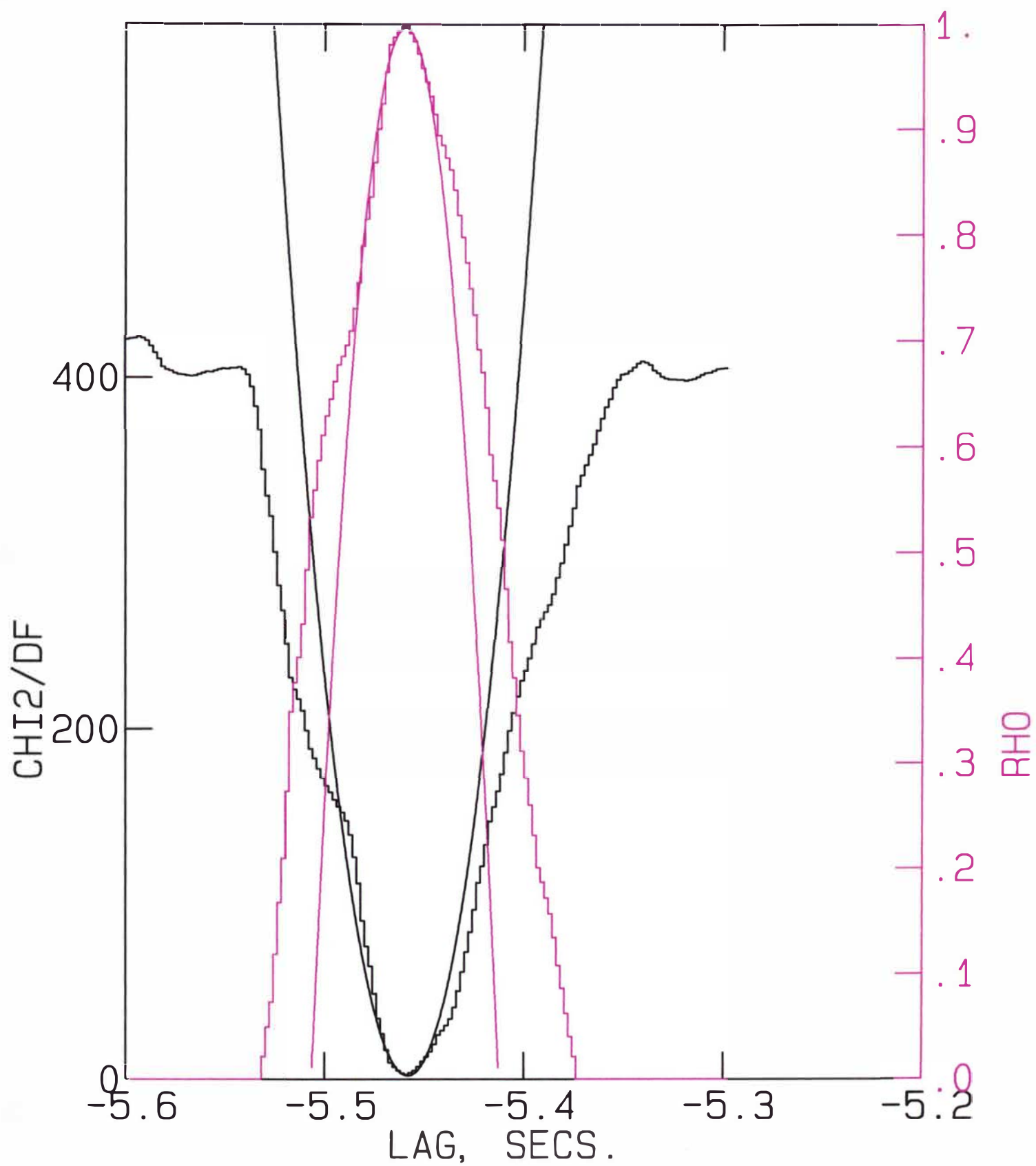
INTEGRAL -KONUS2

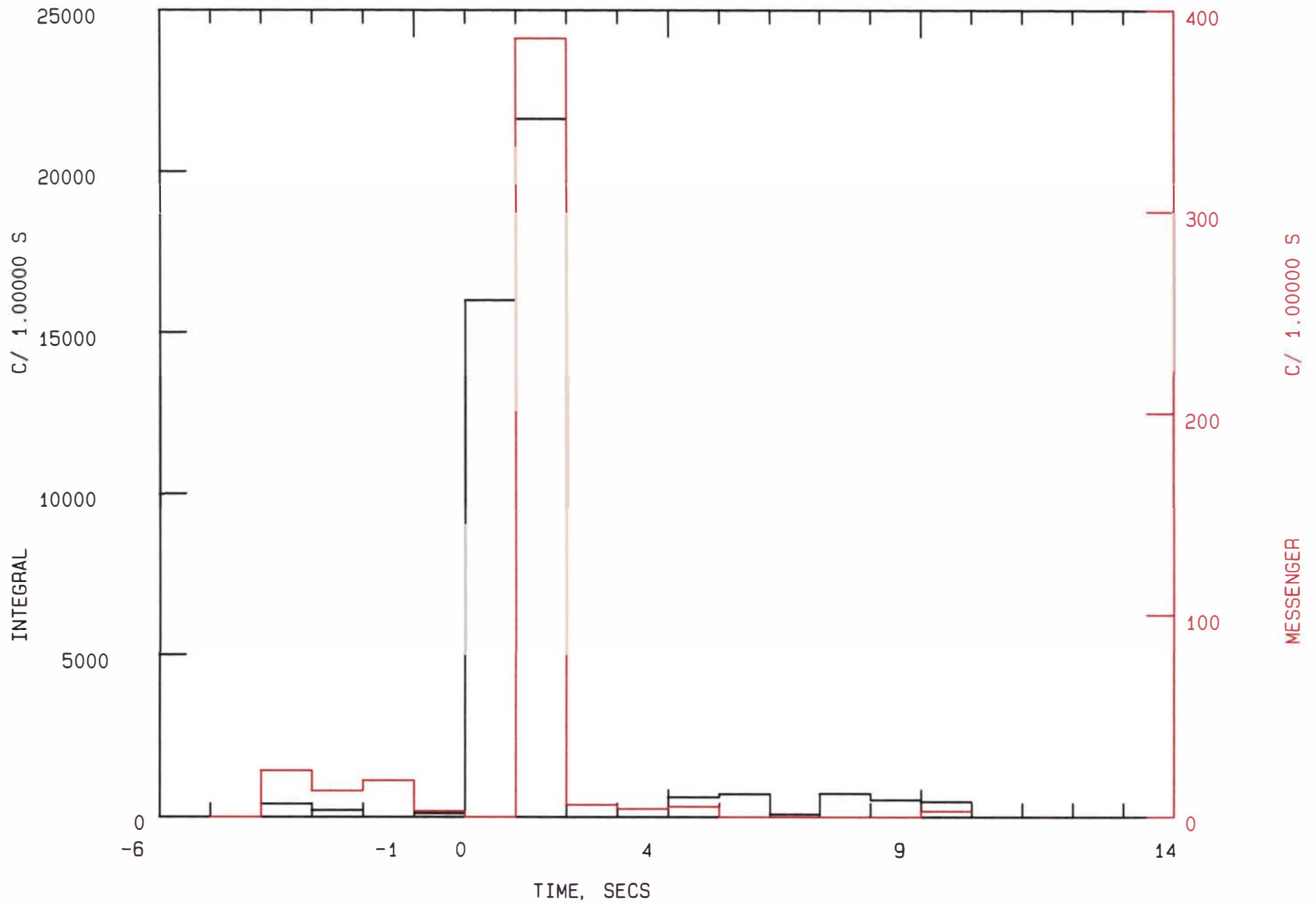
CORRELATION

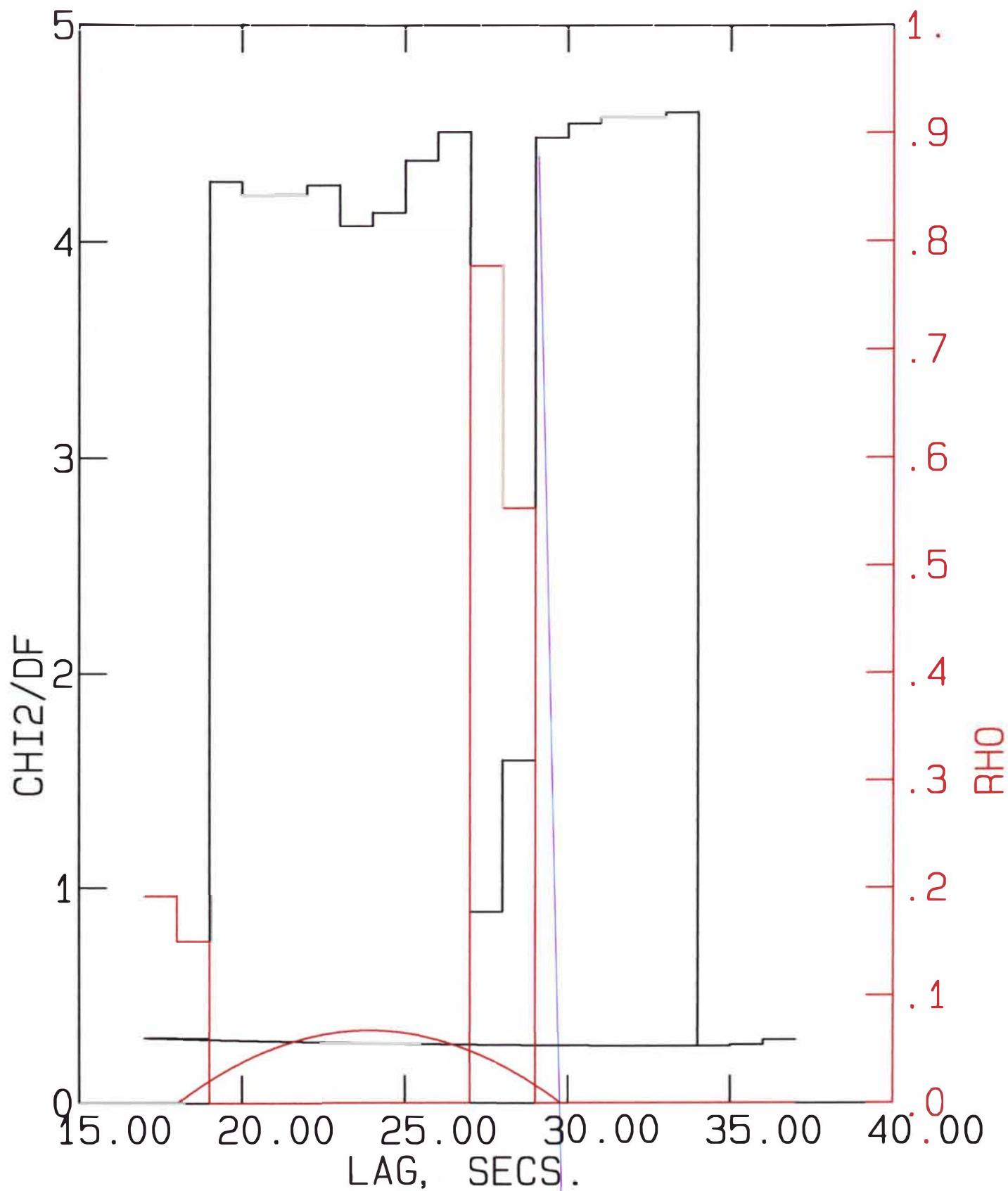
01/02/07 55389.198

15/11/ 7









KONUS2

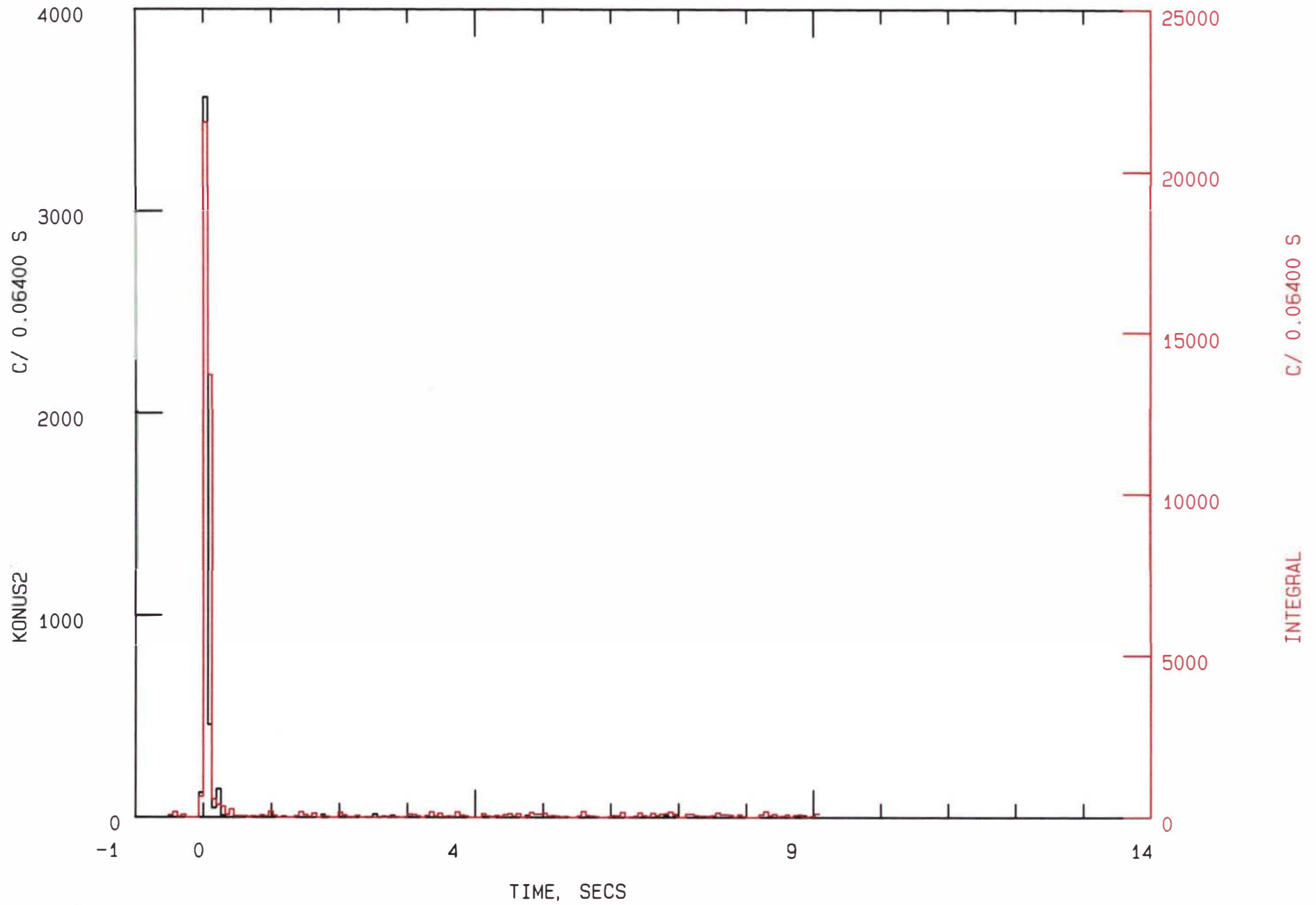
-INTEGRAL

CORRELATION

01/02/07

55390.780

18/ 5/ 7



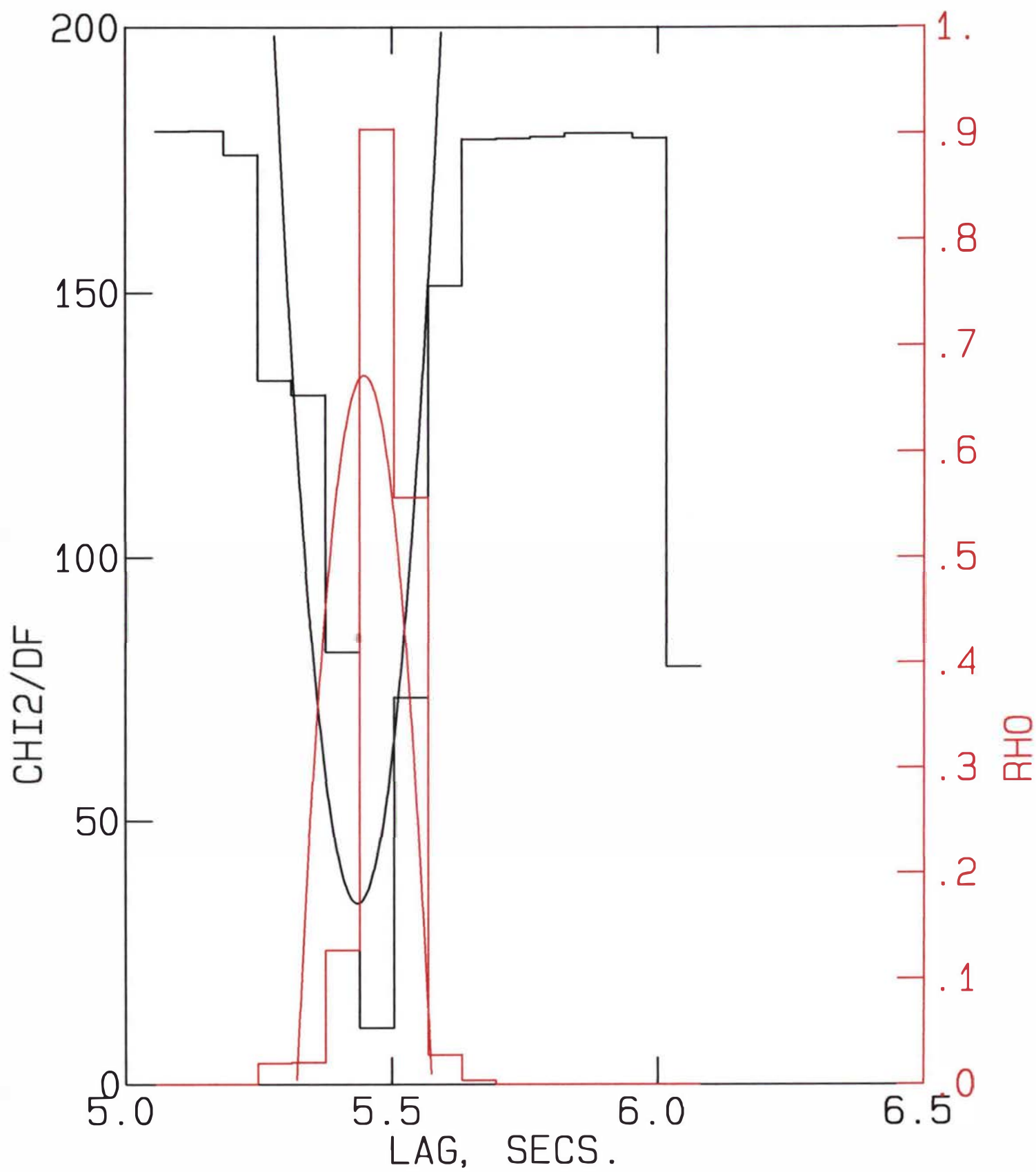
KONUS2

-INTEGRAL

CORRELATION

01/02/07

55390.780



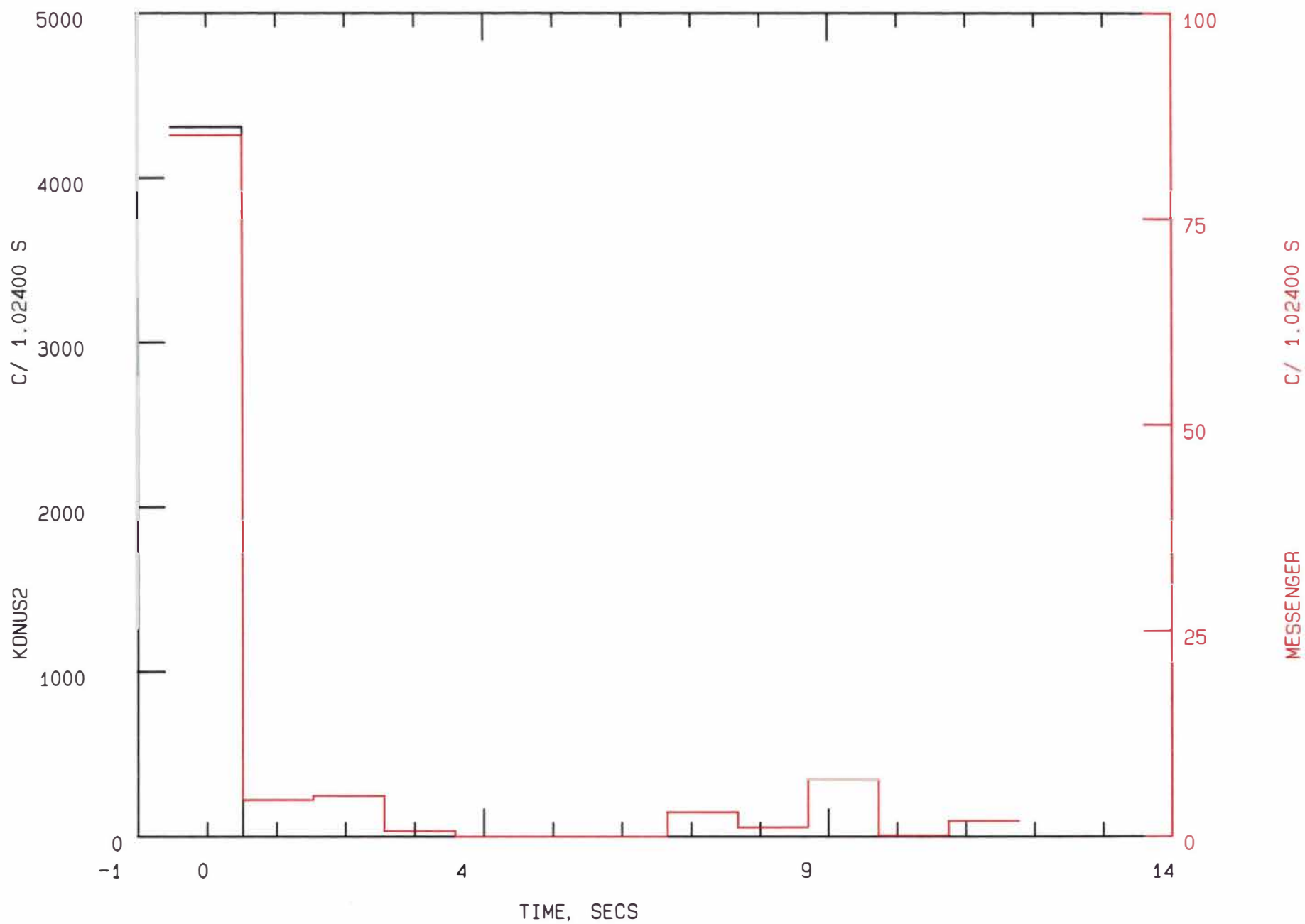
KONUS2

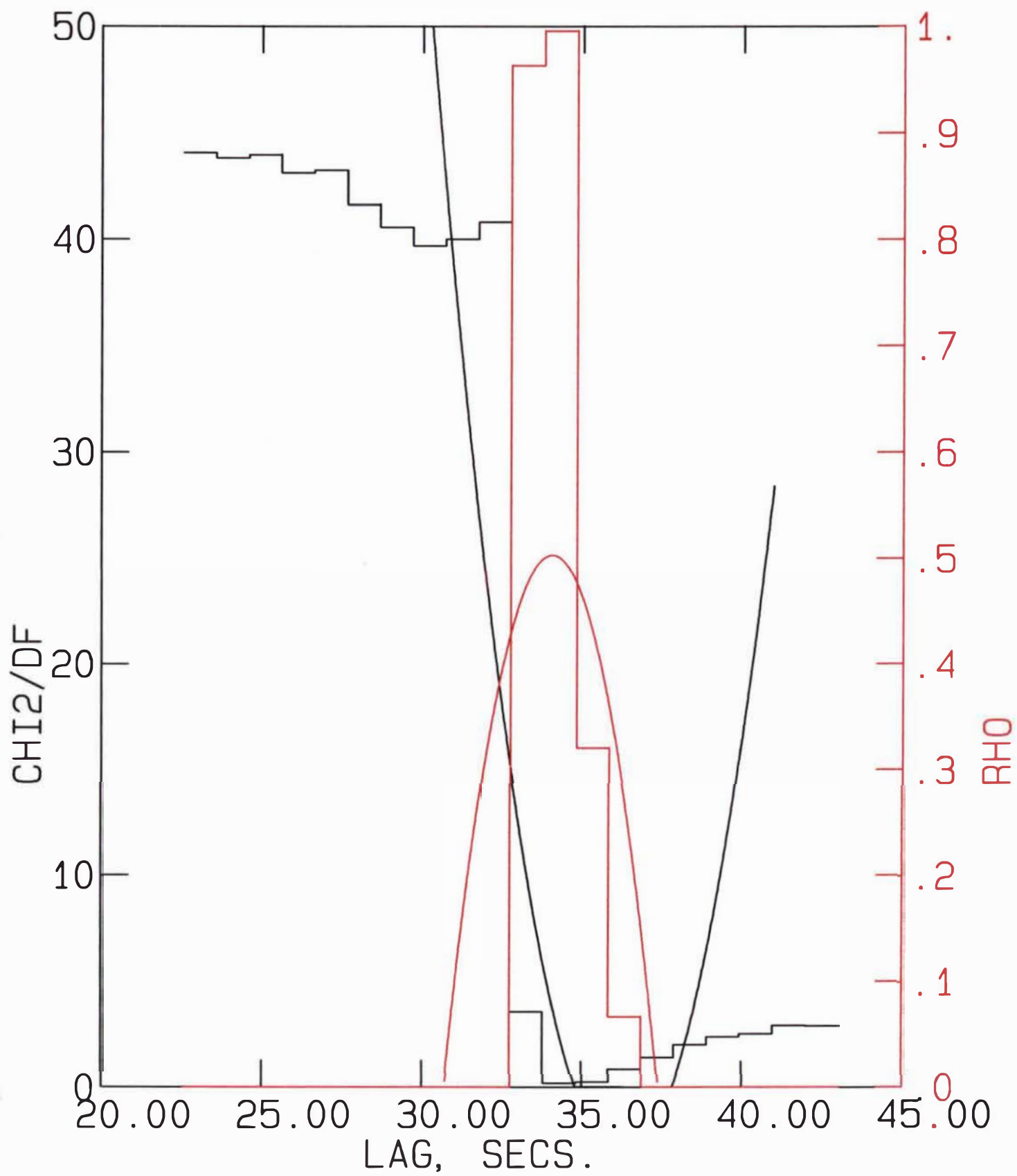
-MESSENGER CORRELATION

01/02/07

55390.780

18/ 5/ 7





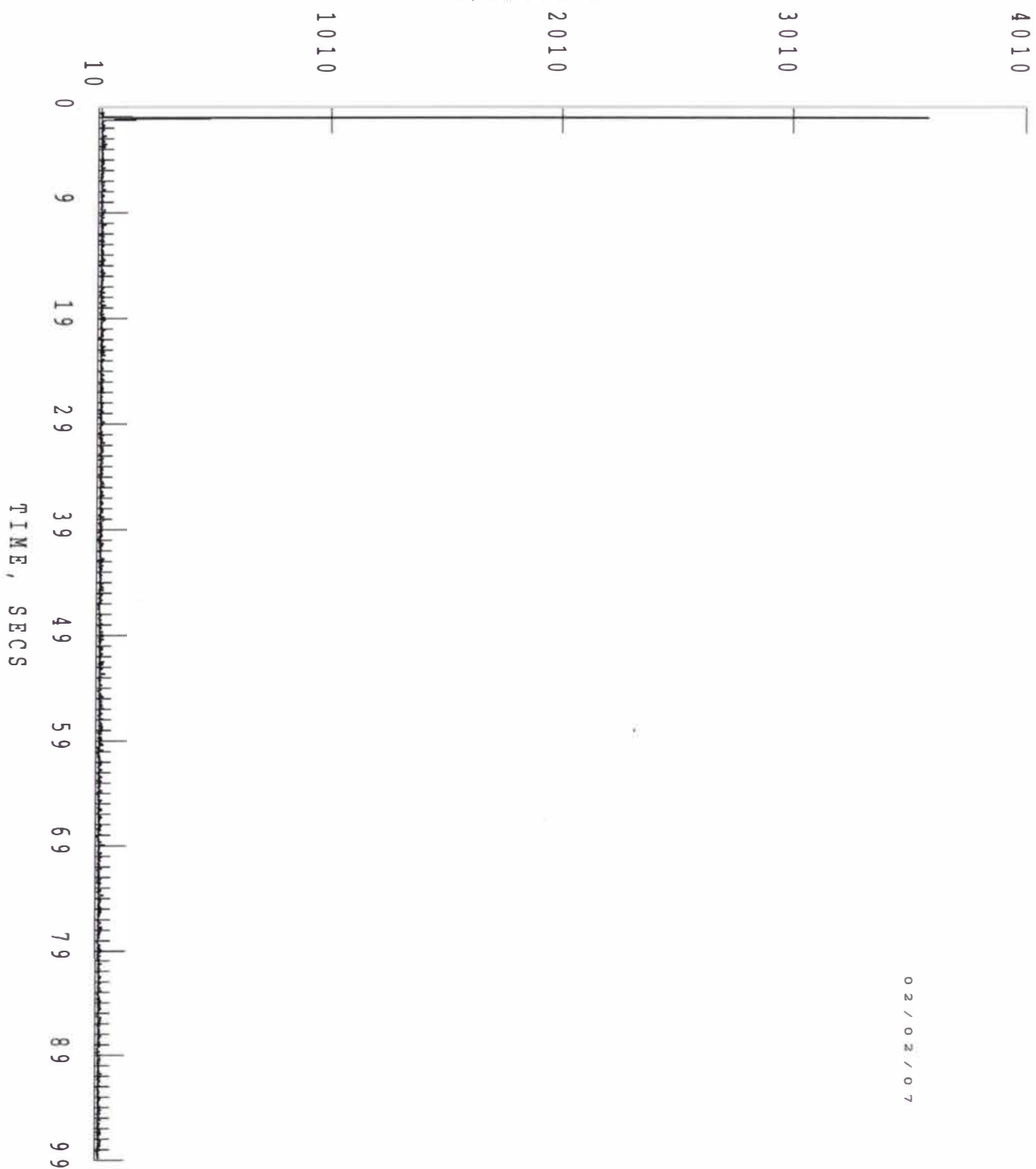
KONUS2

01/02/07

55390.780

50 - 200 keV

COUNTS/0.064 S



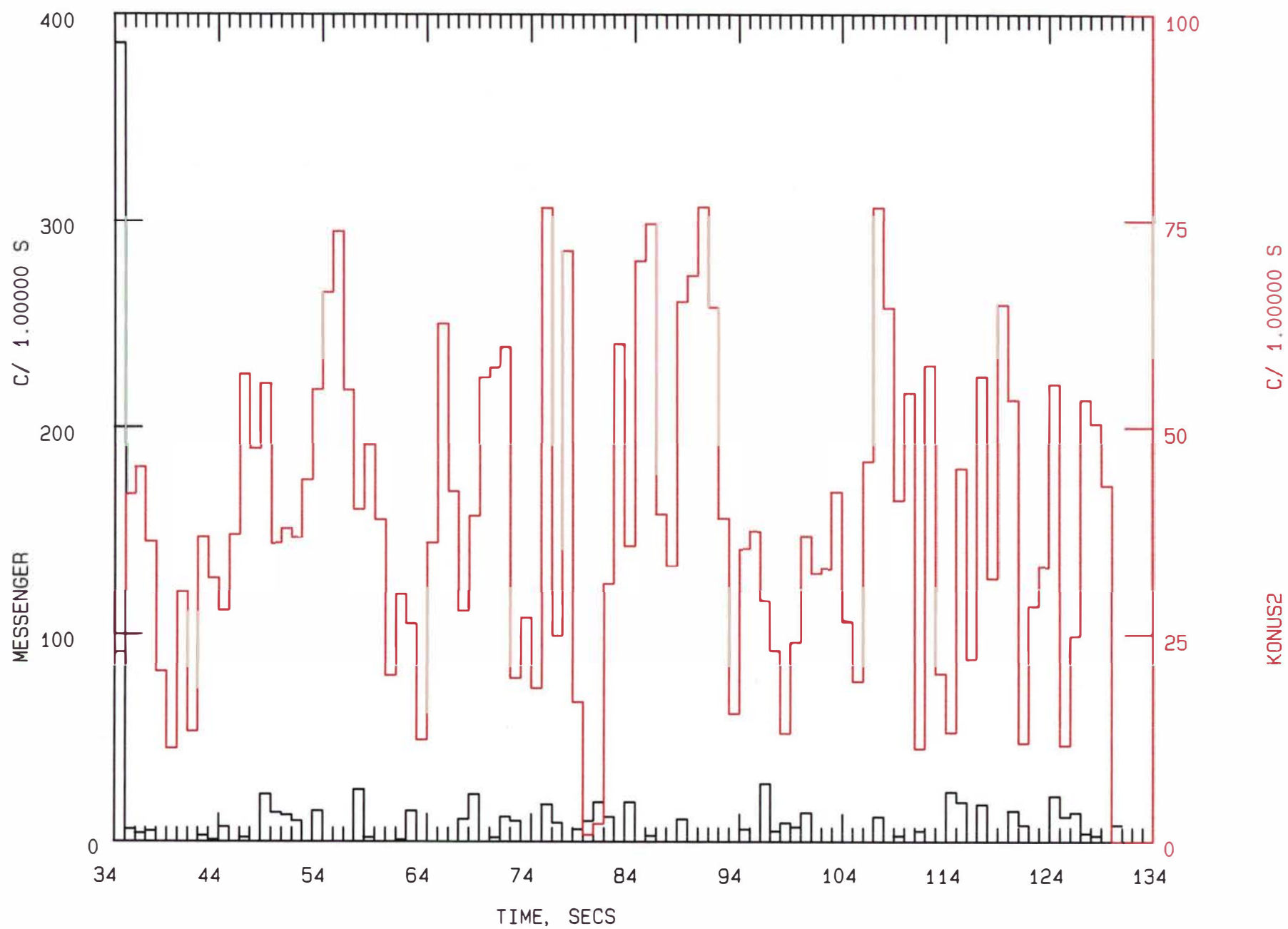
MESSENGER -KONUS2

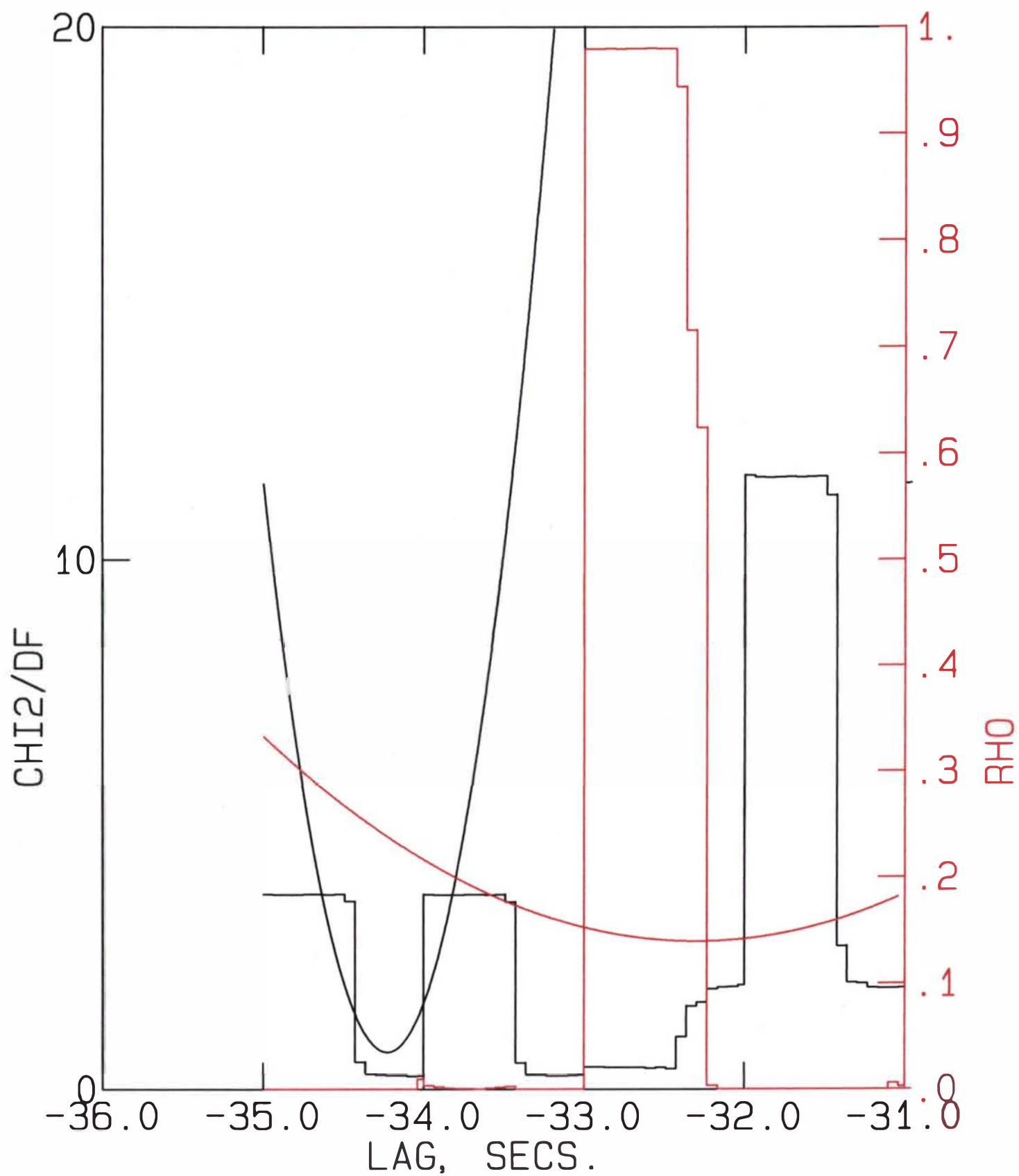
CORRELATION

07/02/07

55159.176

16/ 2/ 7





KONUS HRES 20070201 55390

TRIGGER TIME: 01/02/07 DOY 032 Julian 2454134.14109 UT = 15.386 15:23:10 (55390.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

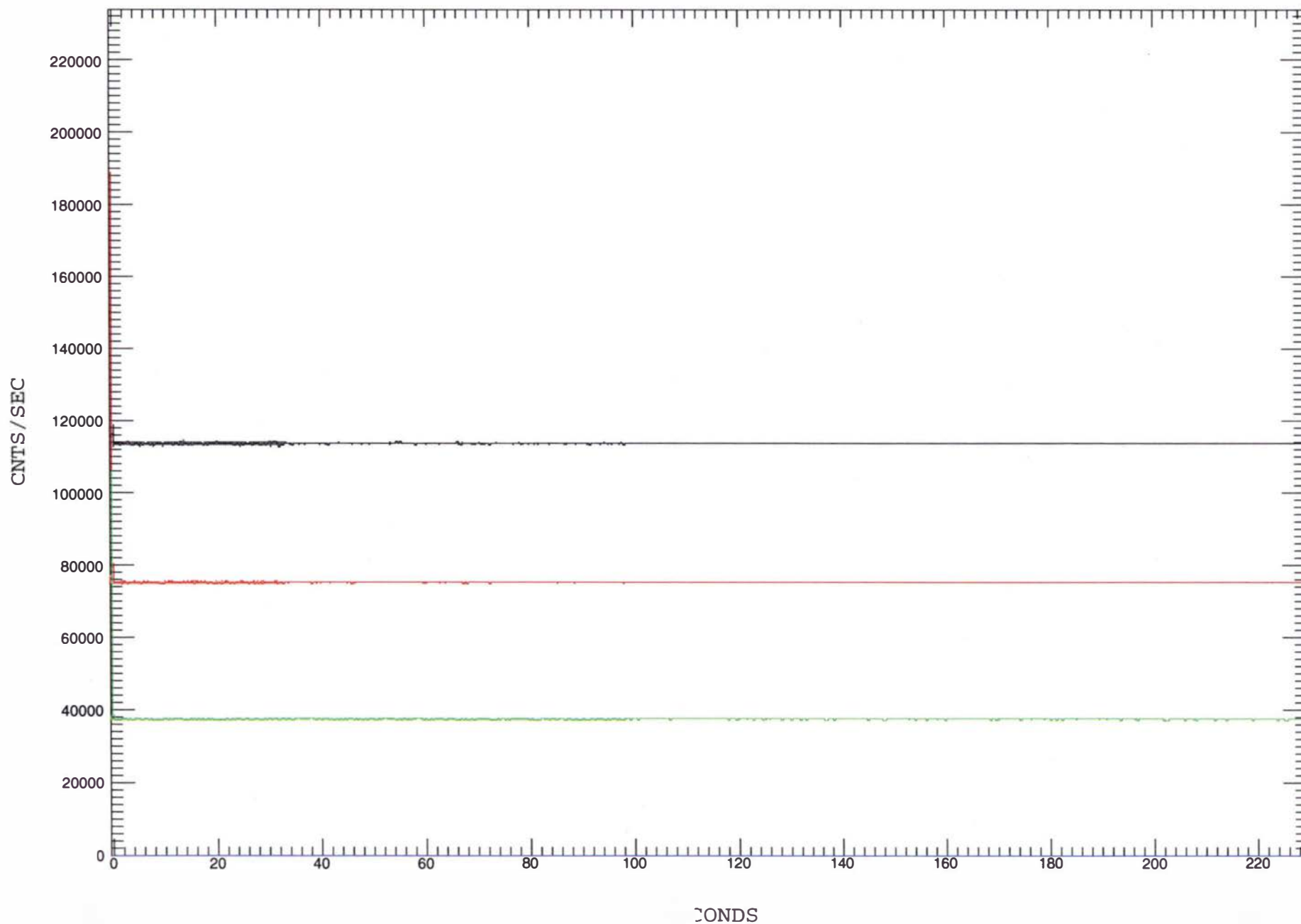
Chan 4 : [> 10 MeV]

Channel 1 + 112800

Channel 2 + 75200

Channel 3 + 37600

Channel 4 + 0

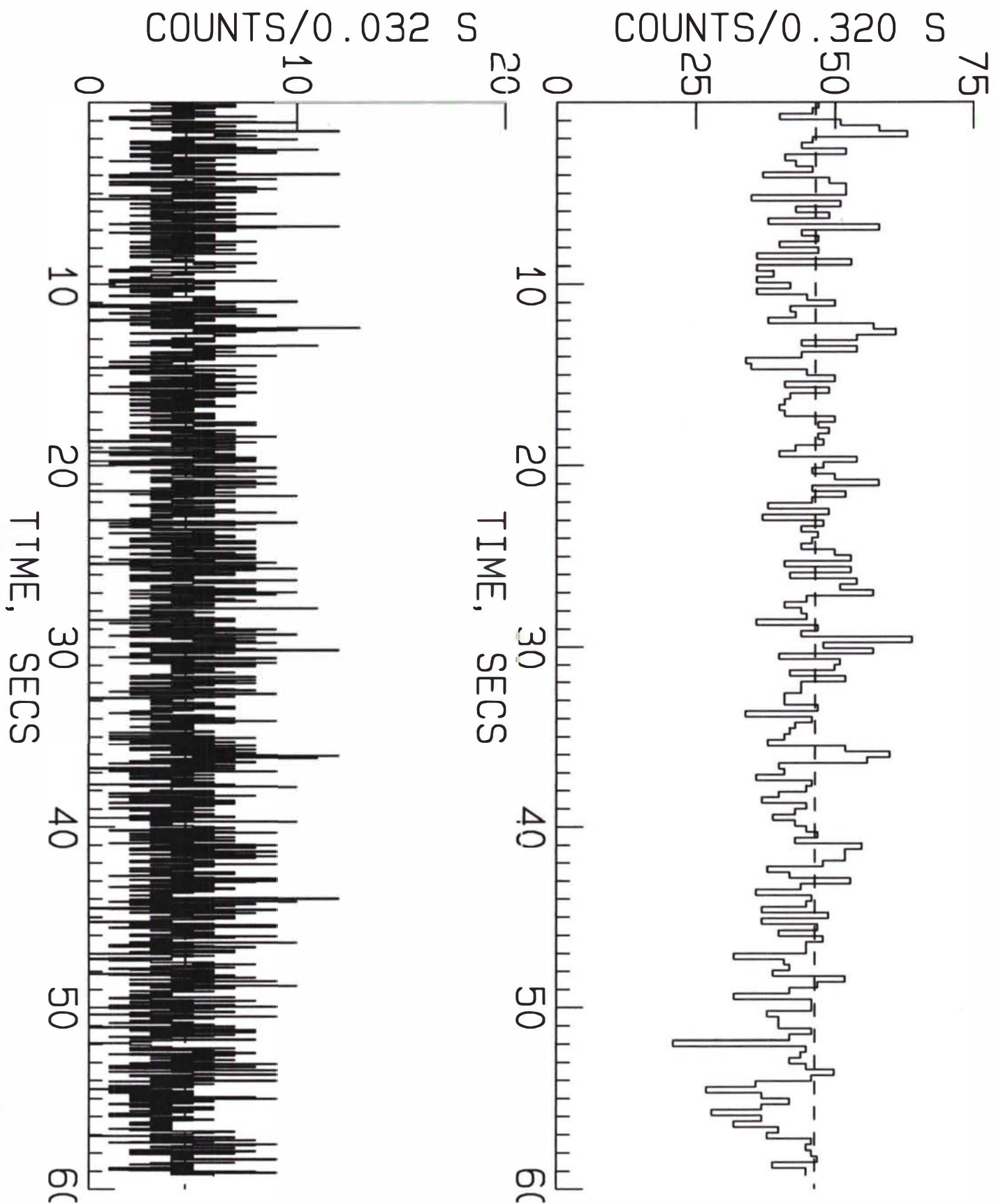


MO GE

01/02/07 54451.604

116- 337 keV

18 / 5 / 7



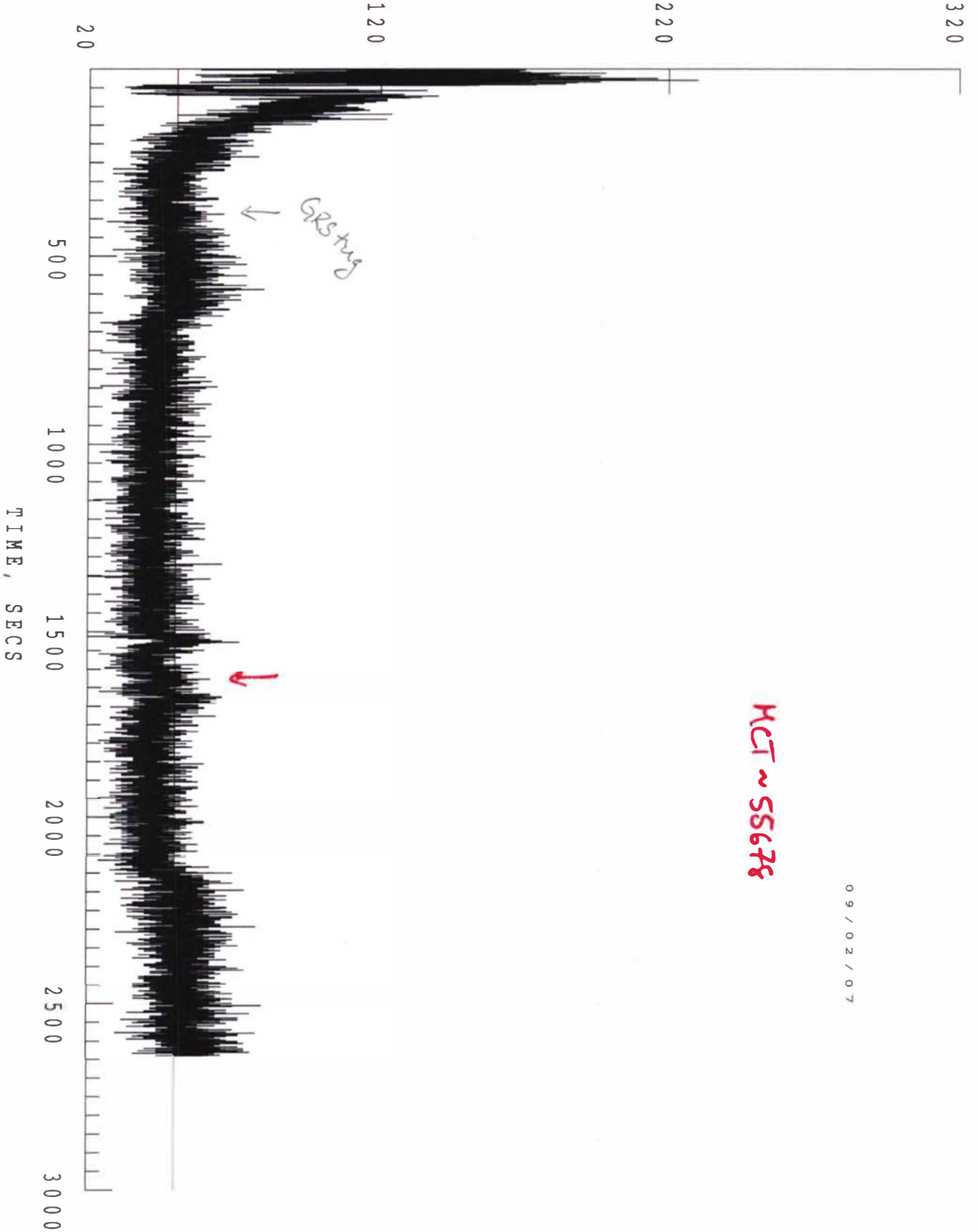
MS01

01/02/07

54049.783

50 - 3000 keV

COUNTS/0.250 S

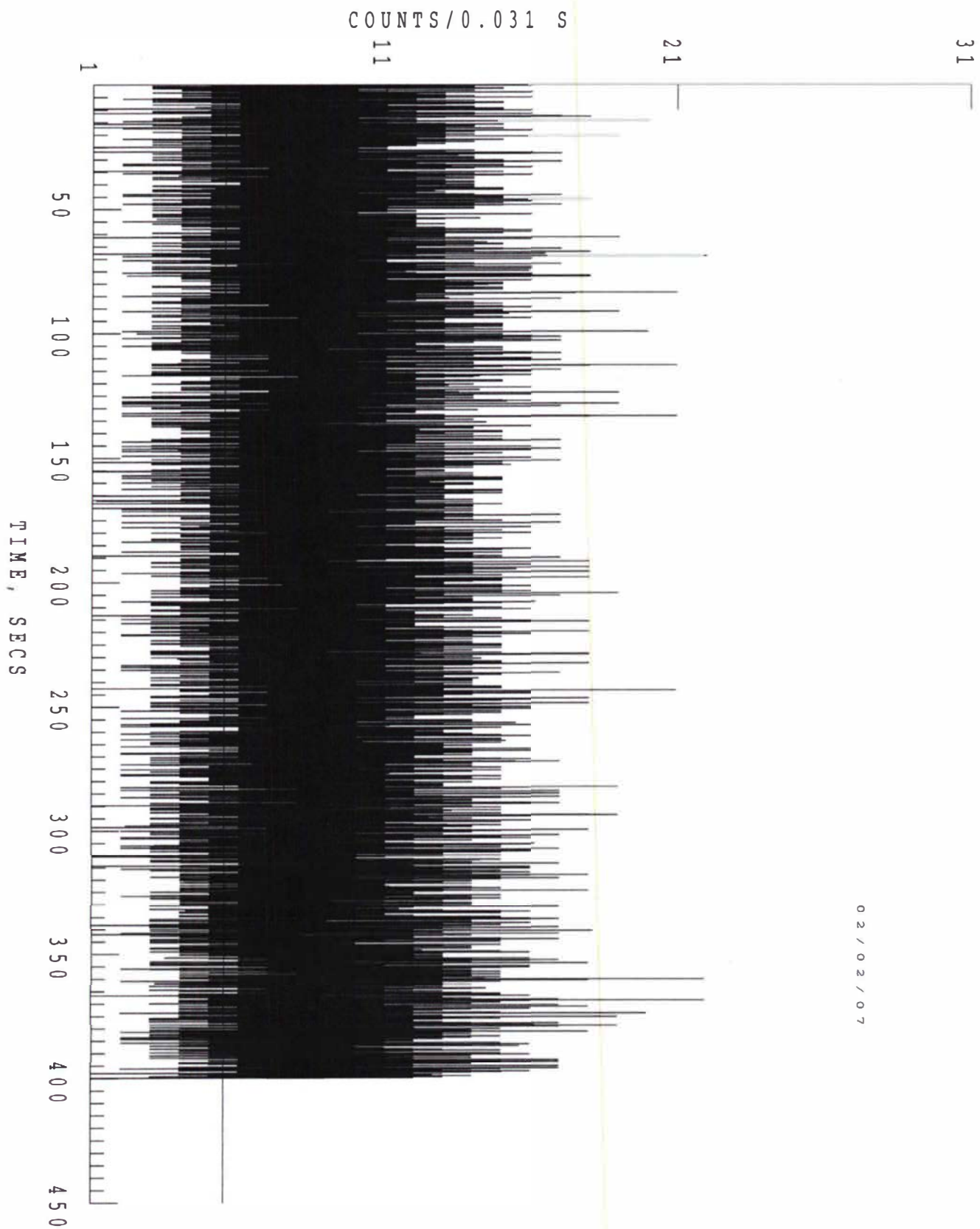


09/02/07

HESSI

01/02/07 55190.000 (KONUS2_20070201_55390)

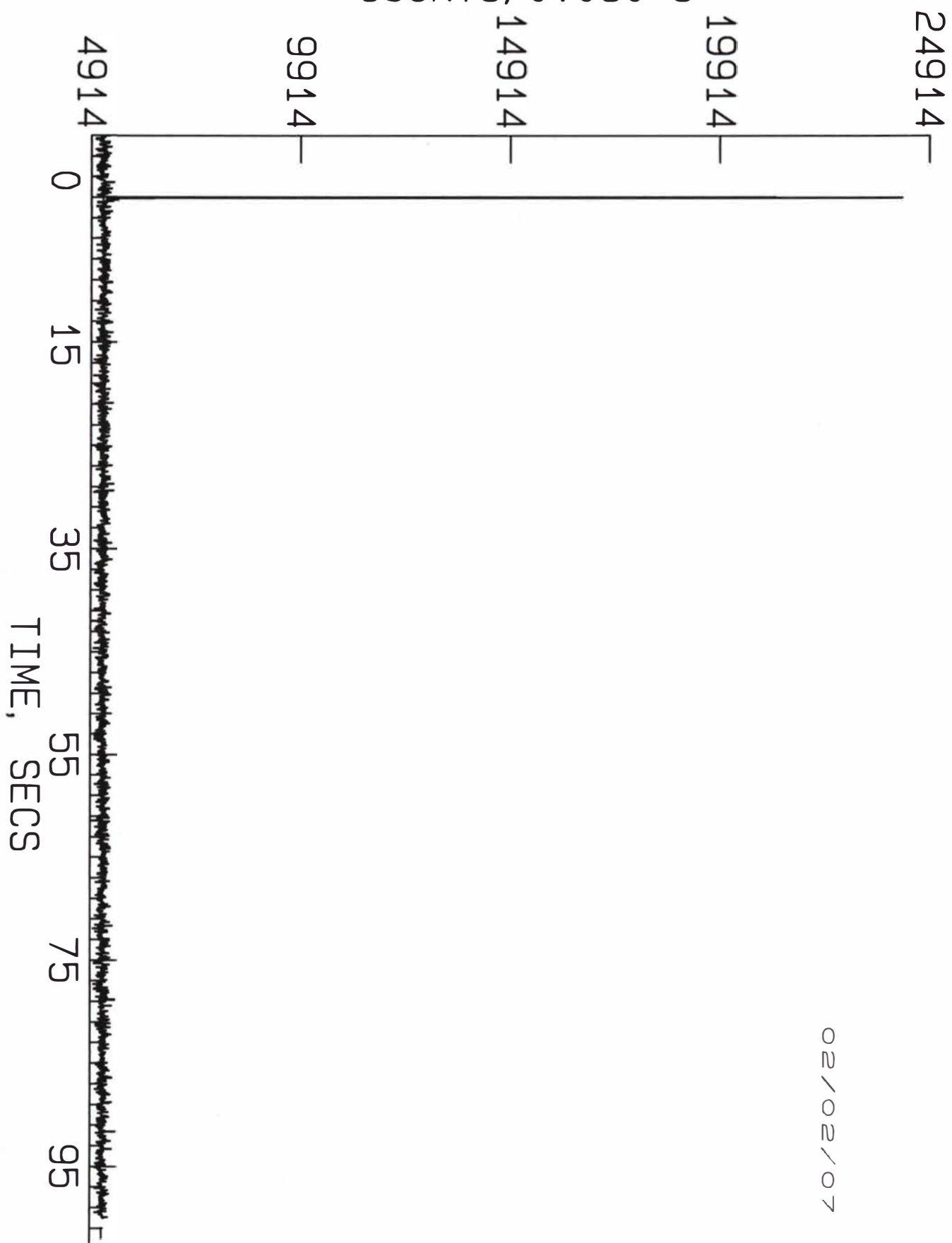
25- 150 keV



INTEGRAL 01/02/07 55389.198 15: 23: 09.1

100-10000 keV

COUNTS/0.050 S



From jayc@milkyway.gsfc.nasa.gov Fri Feb 2 09:45:37 2007
X-ASG-Debug-ID: 1170438470-06ad002a0000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: milkyway.gsfc.nasa.gov[128.183.16.143]
-Barracuda-Start-Time: 1170438470
X-ASG-Whitelist: Sender
Mime-Version: 1.0
Date: Fri, 2 Feb 2007 12:46:05 -0500

To: "Valentin Pal'shin" <val@mail.ioffe.ru>,
Kevin Hurley <khurley@ssl.berkeley.edu>,
Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>,
Roland Vanderspek <roland@space.mit.edu>,
Sergey Golenetskii <golen@mail.ioffe.ru>,
Hans Krimm <krimm@milkyway.gsfc.nasa.gov>,
Masanori Ohno <ohno@hirax7.hepl.hiroshima-u.ac.jp>,
David Palmer <palmer@lanl.gov>

From: jayc@milkyway.gsfc.nasa.gov
X-ASG-Orig-Subj: Re: extremely intense short hard GRB on February 1
Subject: Re: extremely intense short hard GRB on February 1
Cc: val <val@mail.ioffe.ru>
X-Greylist: Sender IP whitelisted, not delayed by milter-greylist-2.0.2 (milkywa
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

BAT saw it too, but as David points out, we had just entered
SAA mode, so we only see it as an enhancement of ~5000 counts
with a background of 172000 counts in the 1-second rates.

At 8:06 PM +0300 2/2/07, Valentin Pal'shin wrote:
>Dear colleagues,

An extremely intense short hard GRB triggered Konus-Wind
>at 2007-02-01 T0=55390.780 s UT (15:23:10.780).
>The peak counts rate is $\sim 2 \times 10^5$ cts/s.
>This burst was discovered yesterday in the SPI-ACS data by Kazu
>(so this burst also triggered SPi-ACS),
>but we just received the K-W data.
>Unfortunatkley this burst was not observed by Suzaku-WAM,
>likely - occulted by the Earth (as Kazu wrote).
>

>The burst had a dusration of ~ 0.1 sec
>(duration is very different in different energy bands,
>so the burst demonstrates very strong spectral evolution).
>

>Any other detections?

>Best wishes,

>Valentin
>
>
>
>--
>
>Valentin Pal'shin

ioffe Physico-Technical Institute
>Laboratory for Experimental Astrophysics
>26 Polytekhnicheskaya, St Petersburg 194021,
>Russian Federation
>

25/04/07

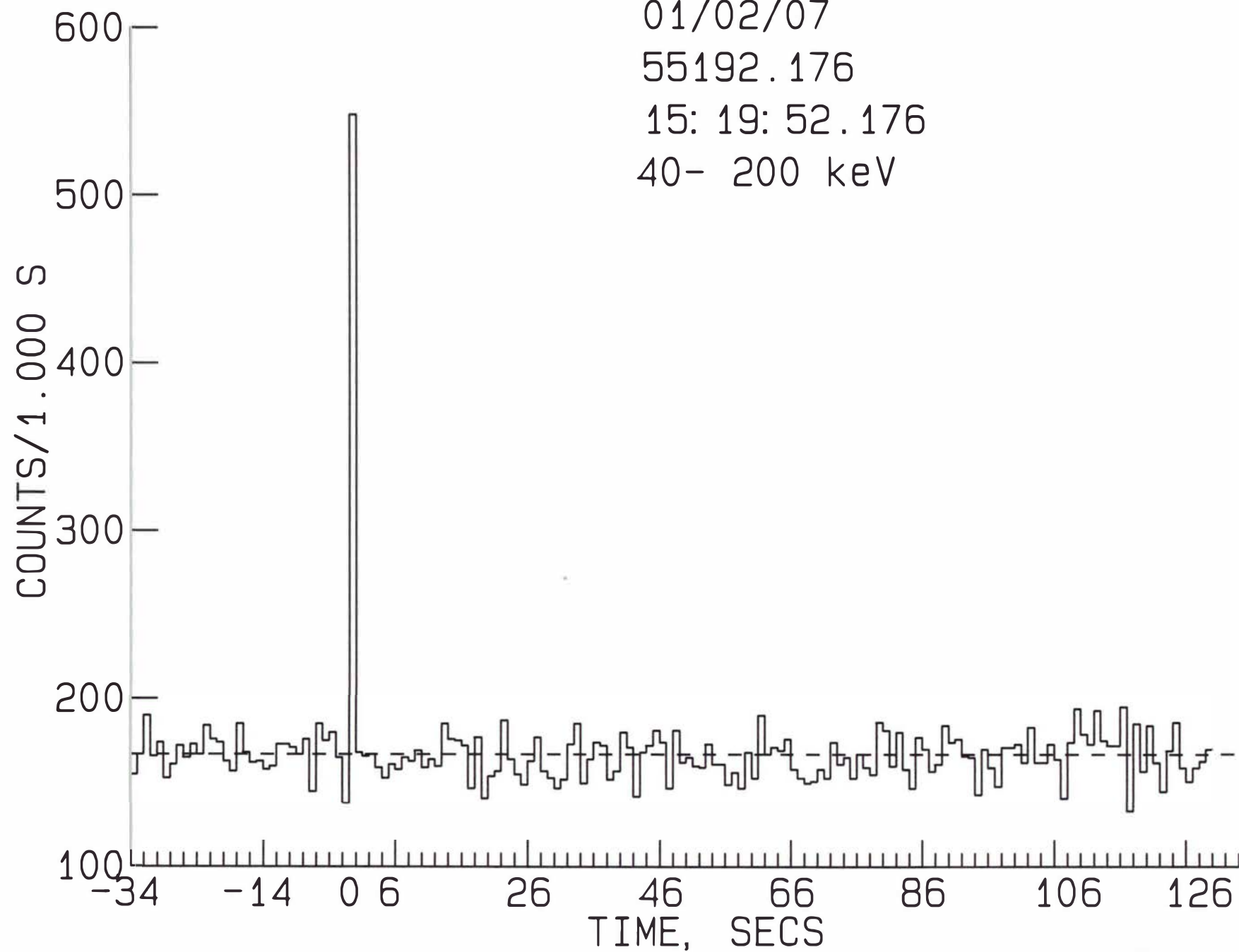
MESSENGER

01/02/07

55192.176

15: 19: 52.176

40- 200 keV



KONUS2

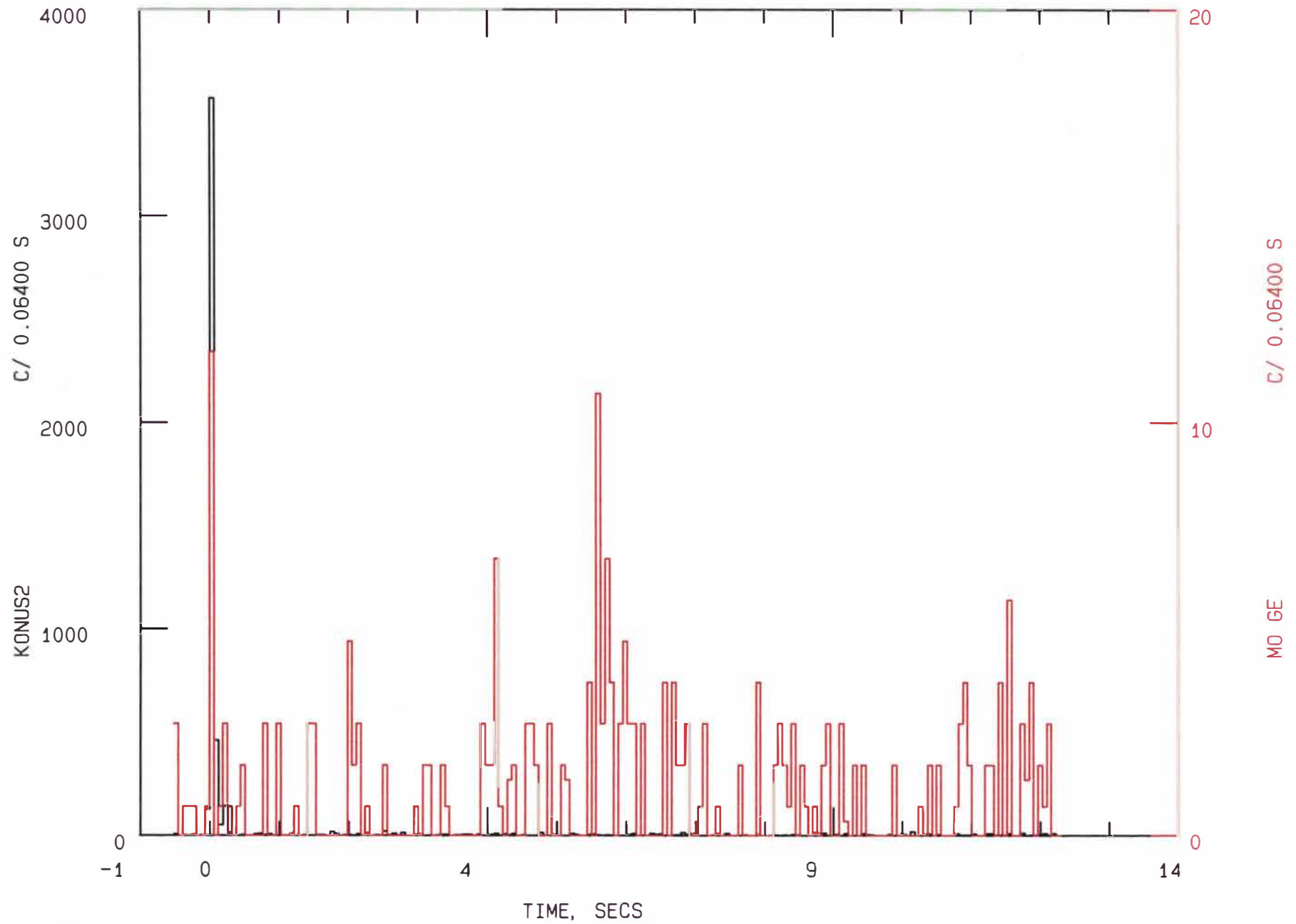
-MO GE

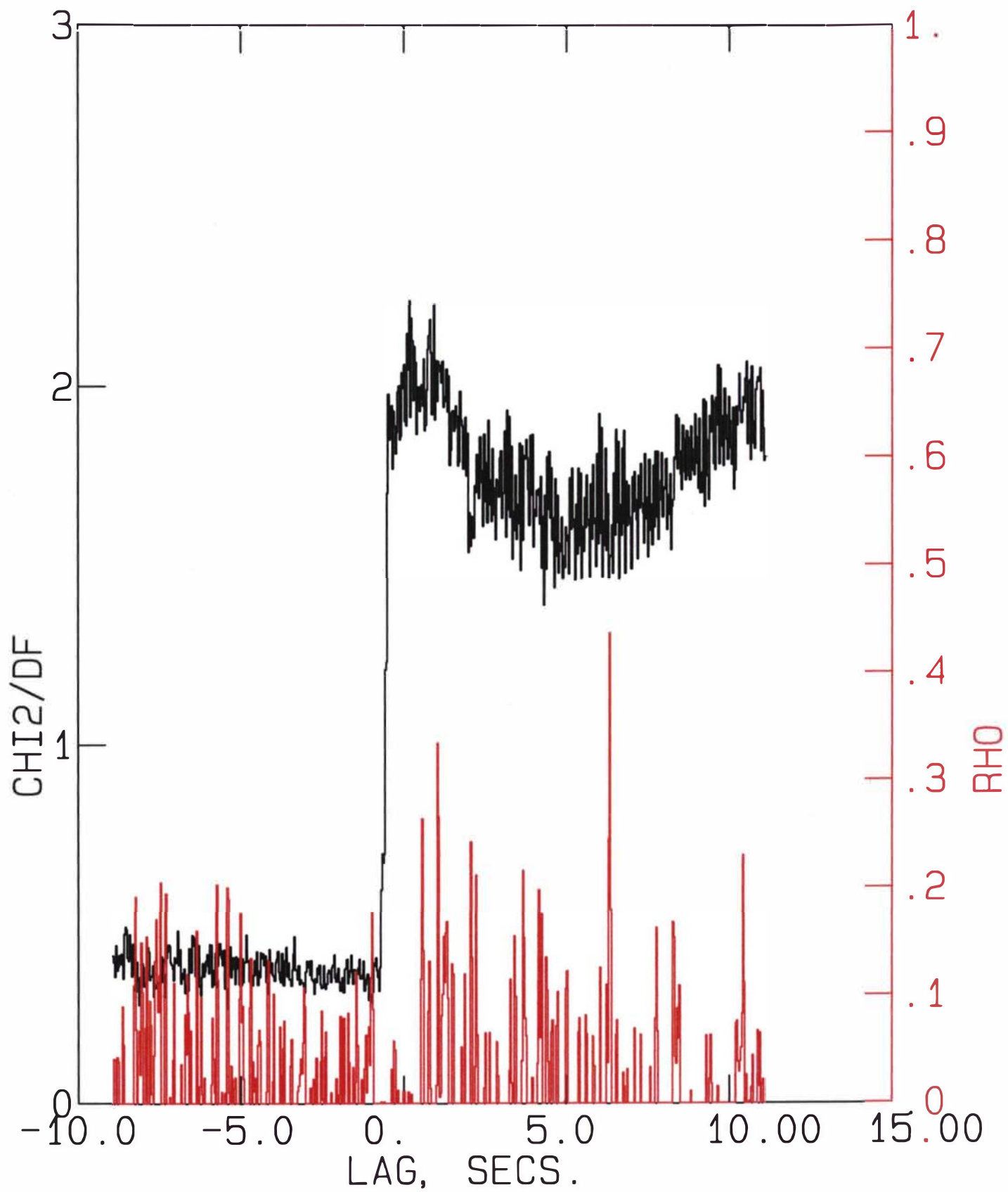
CORRELATION

01/02/07

55390.780

2/ 2/ 7





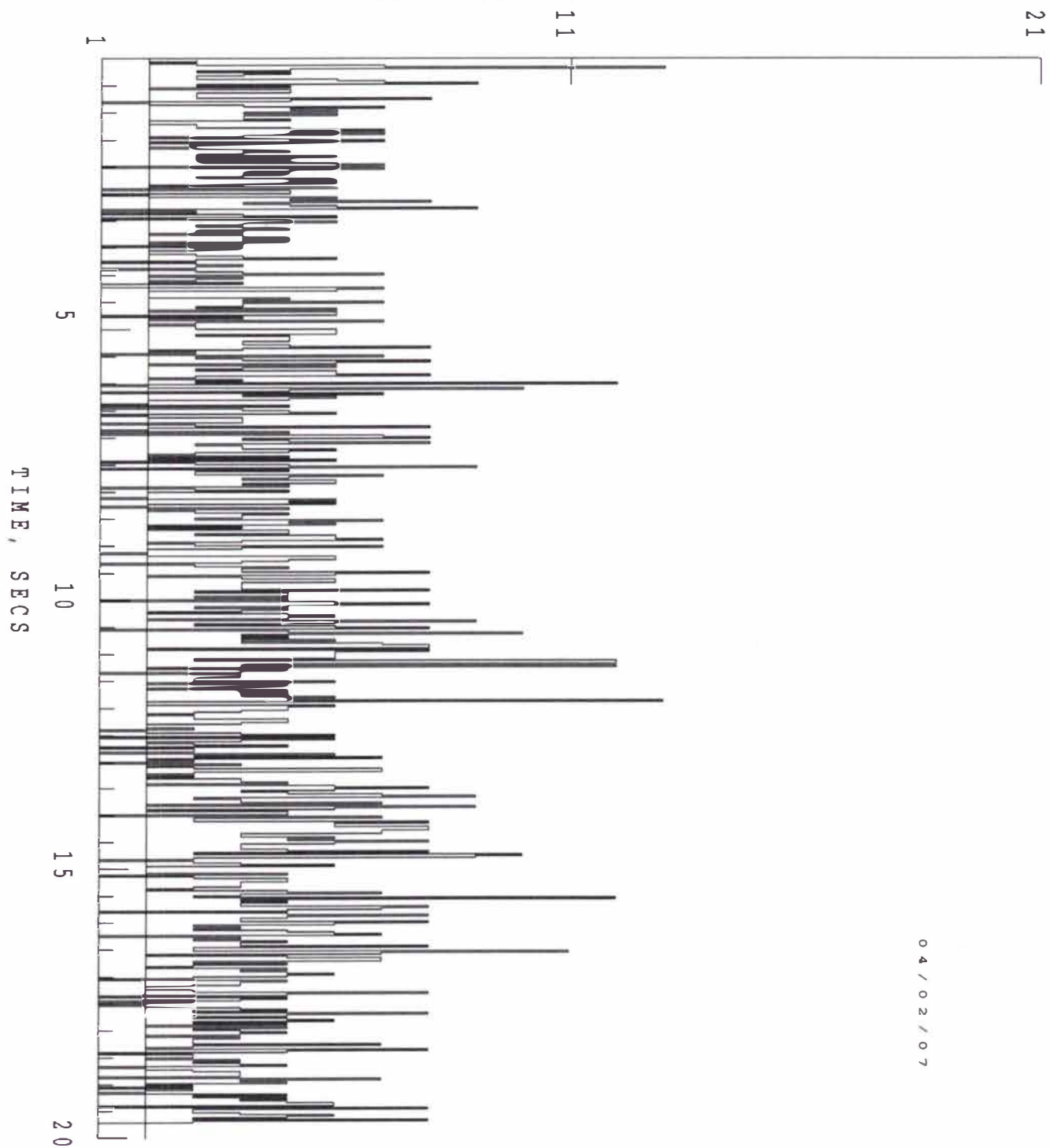
MO

01/02/07

79451.526

116- 337 keV

COUNTS/0.032 S



04/02/07

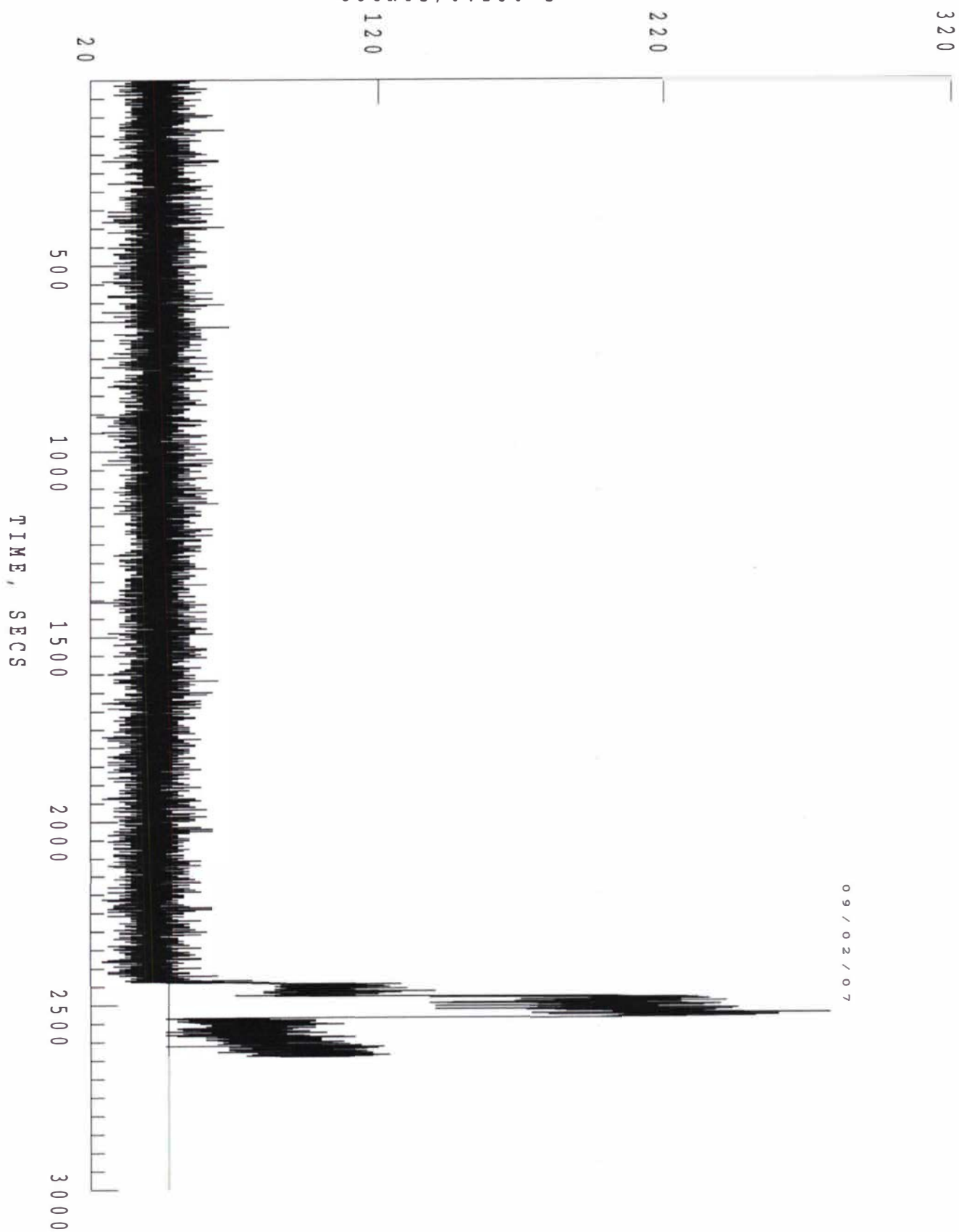
MS01

01/02/07

78109.340

50 - 3000 keV

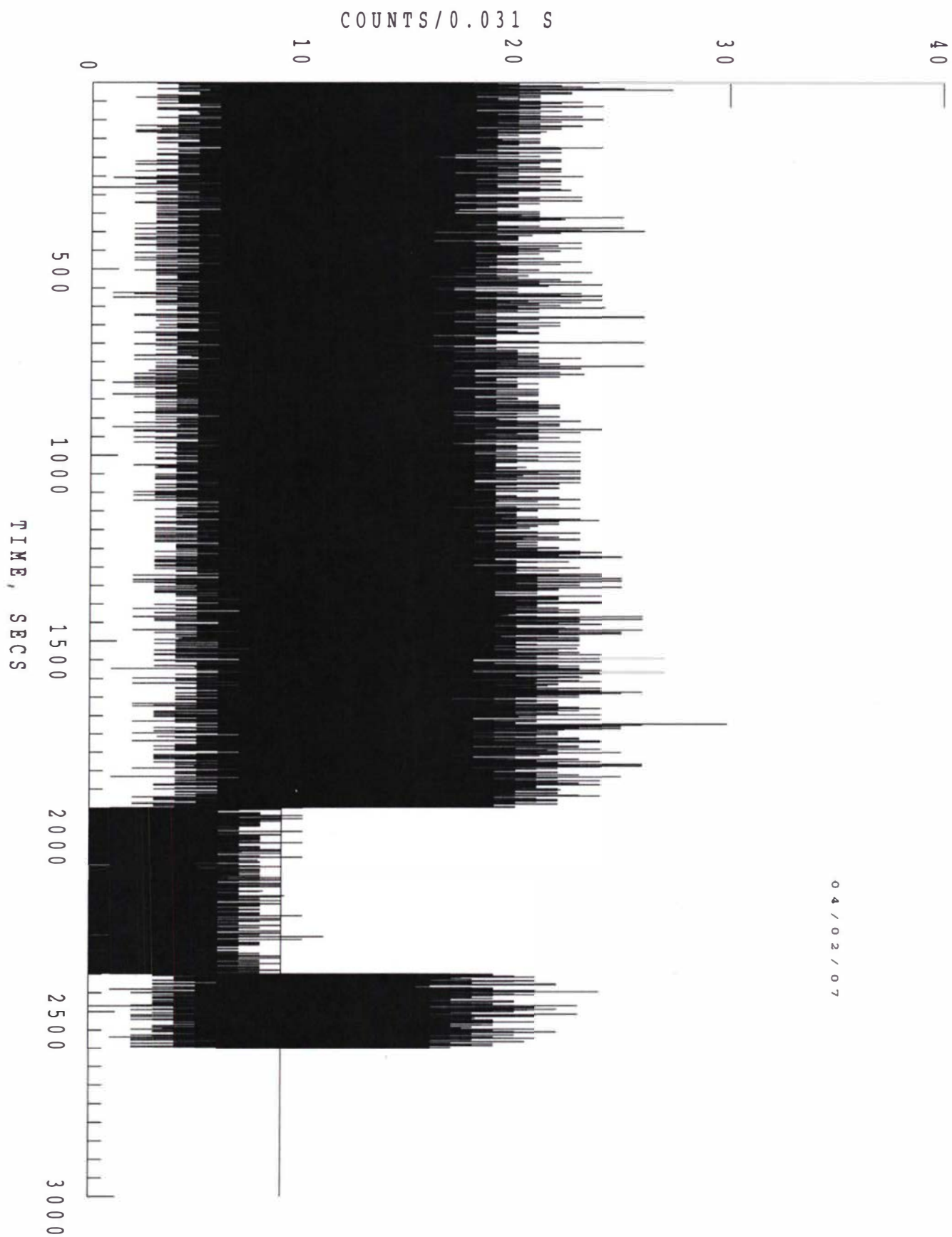
COUNTS/0.250 S



HESSI

01/02/07 78151.000 (MO_GE_20070201_79451)

25- 150 keV



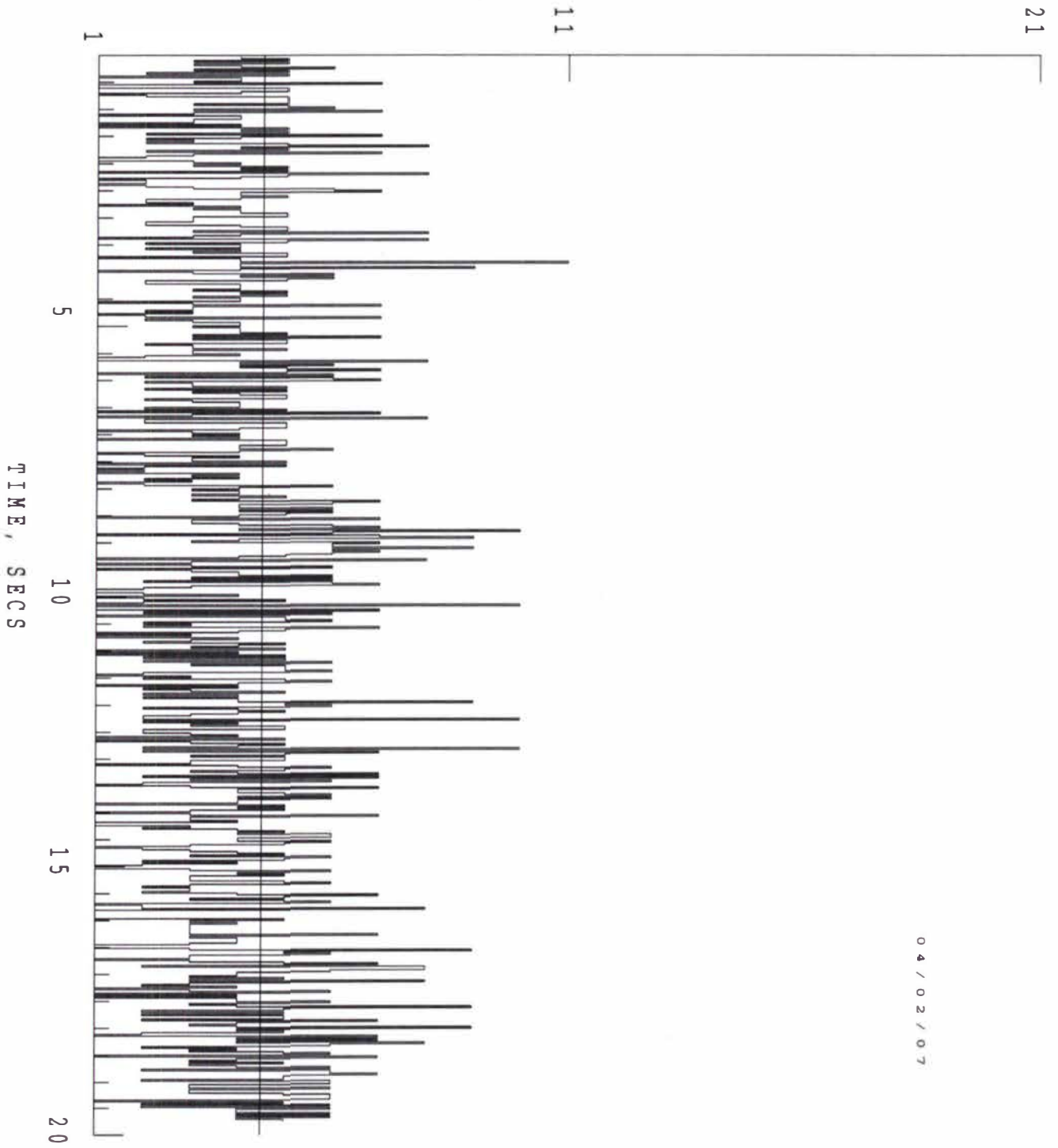
MO

01/02/07

84551.473

116- 337 keV

COUNTS/0.032 S



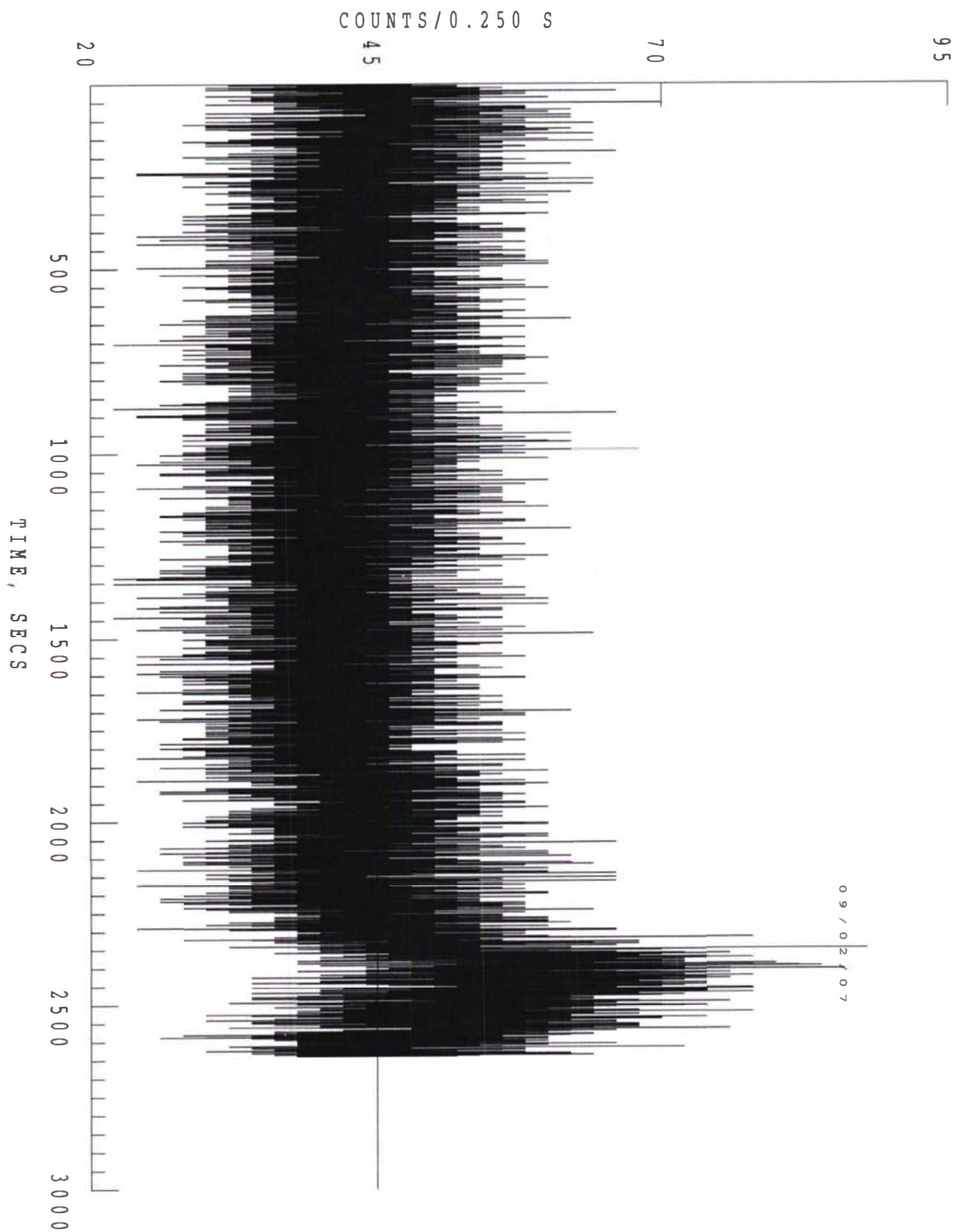
04/02/07

MS01

01/02/07

83209.249

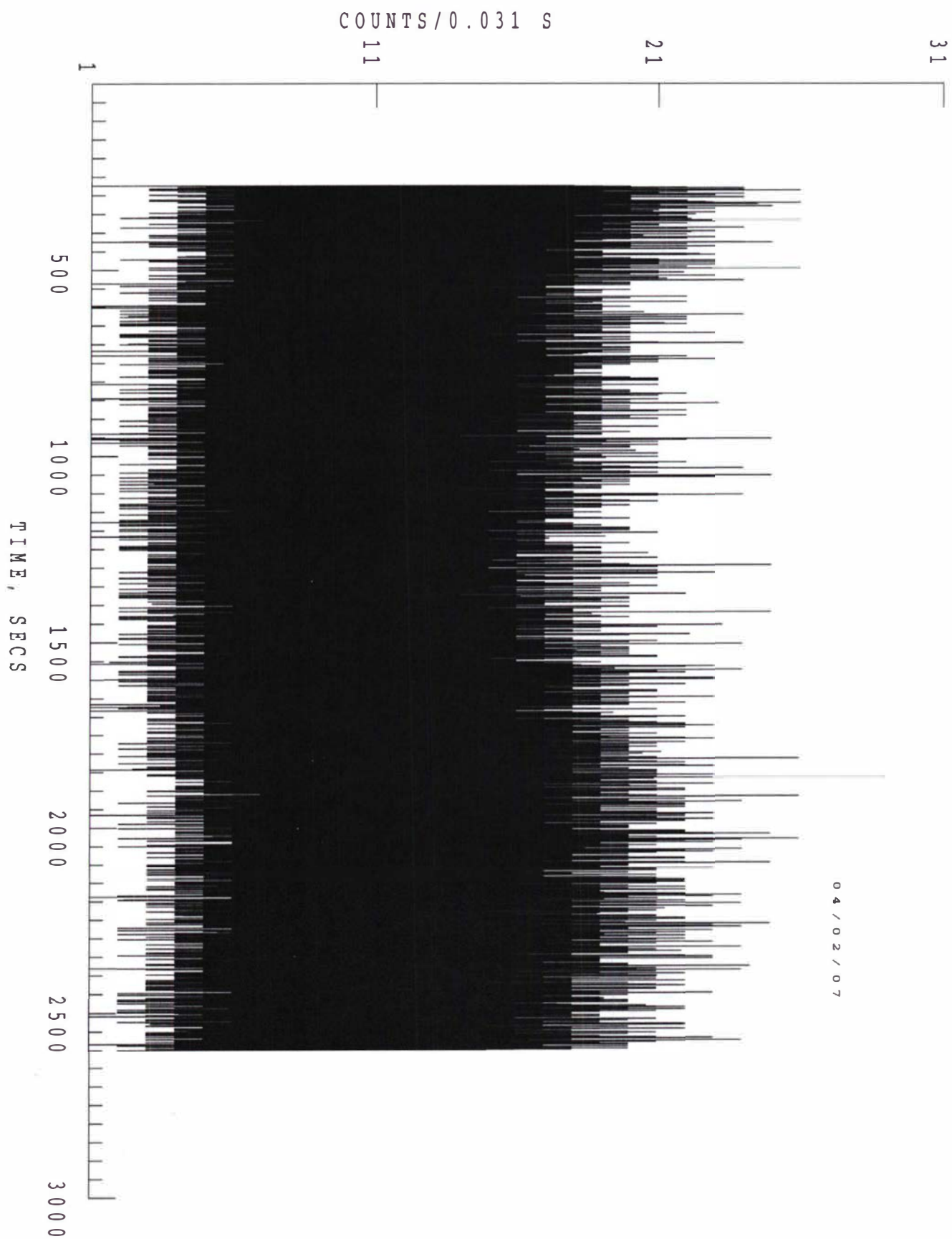
50- 3000 keV

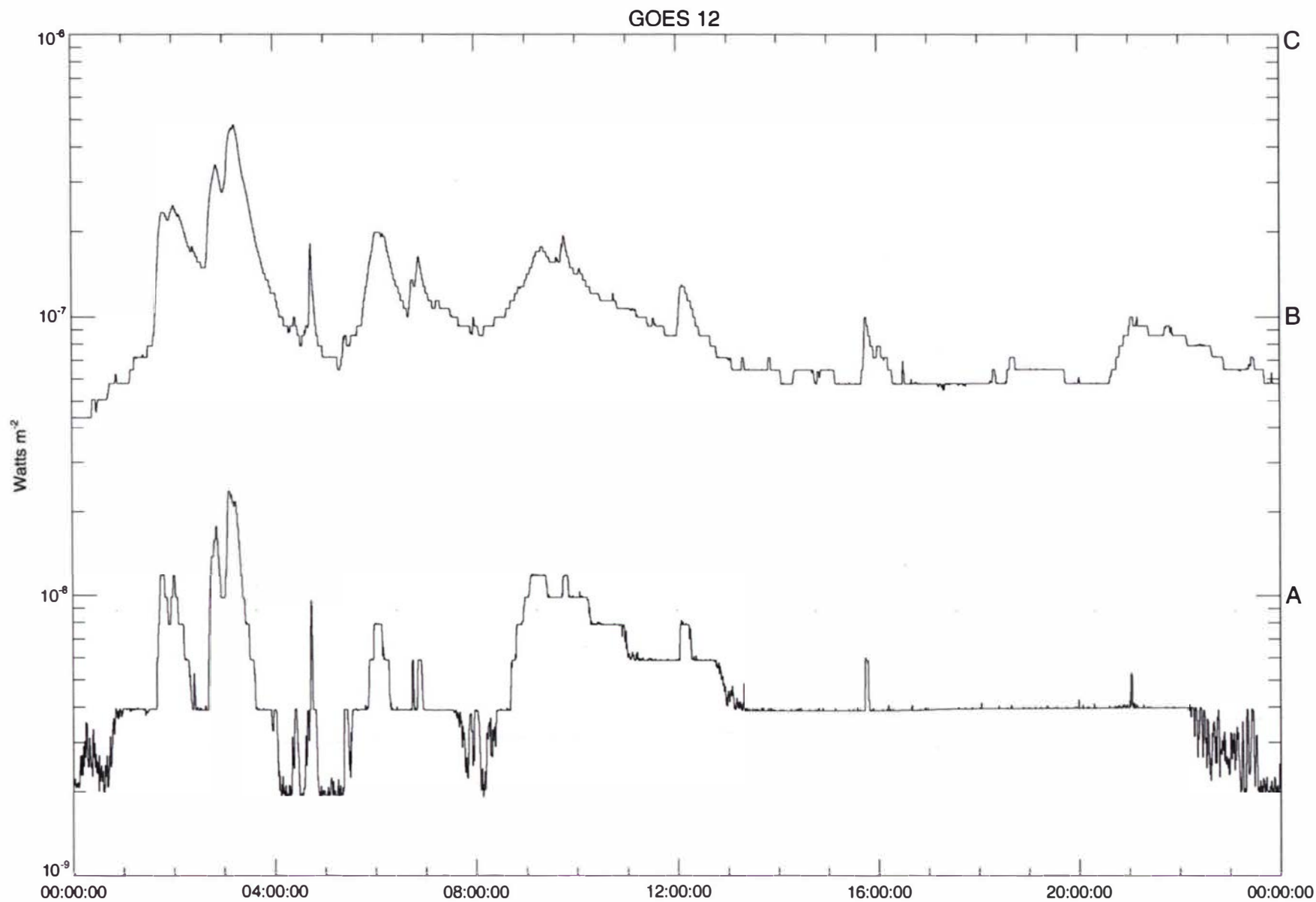


HESSI

01/02/07 83251.000 (MO_GE_20070201_84551)

25- 150 keV





Data Start: 07/02/01, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Background not subtracted

Plot created: 07/02/13, 1932

Sample average = 10

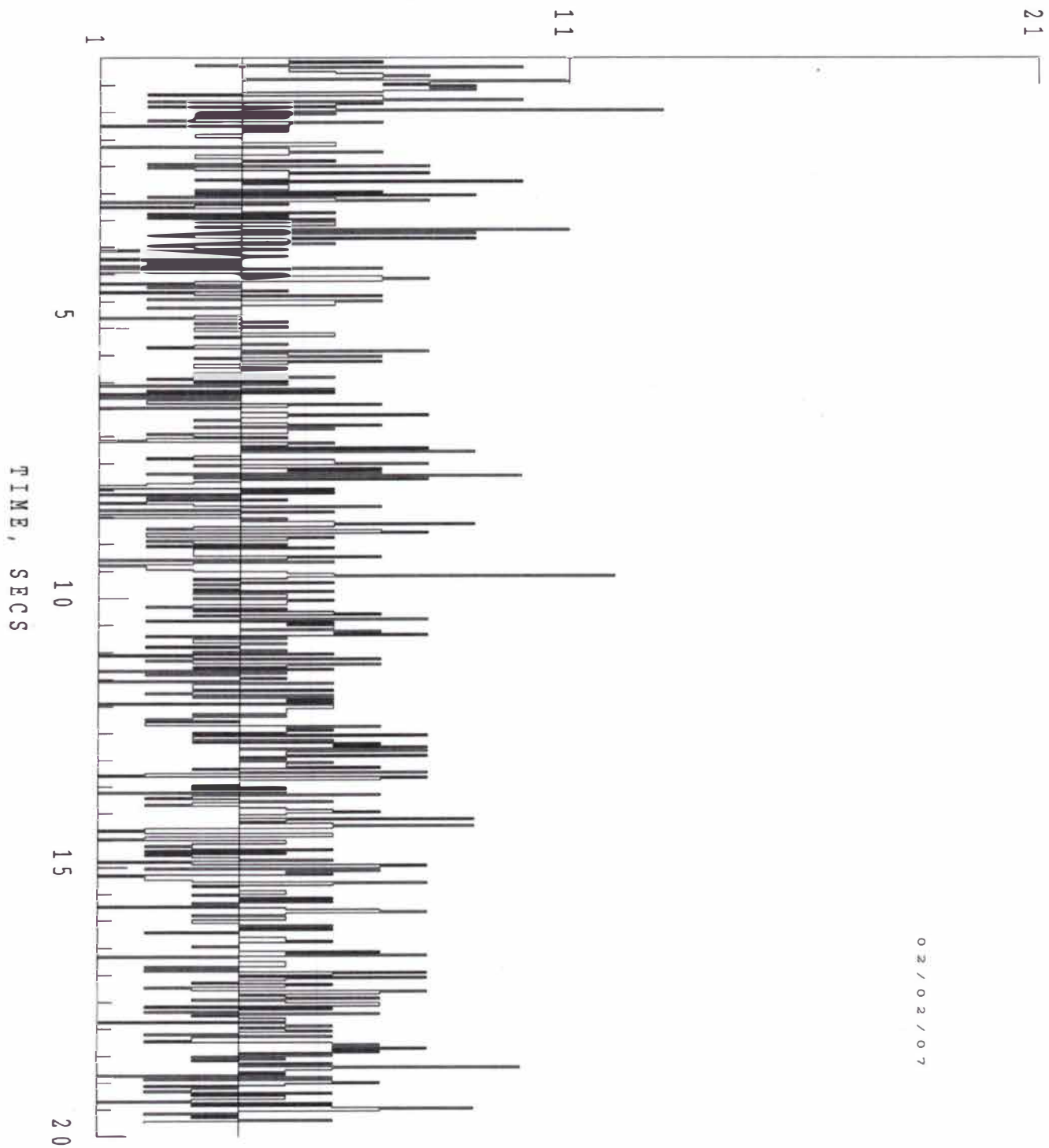
MO

02/02/07

56702.050

116- 337 keV

COUNTS/0.032 S



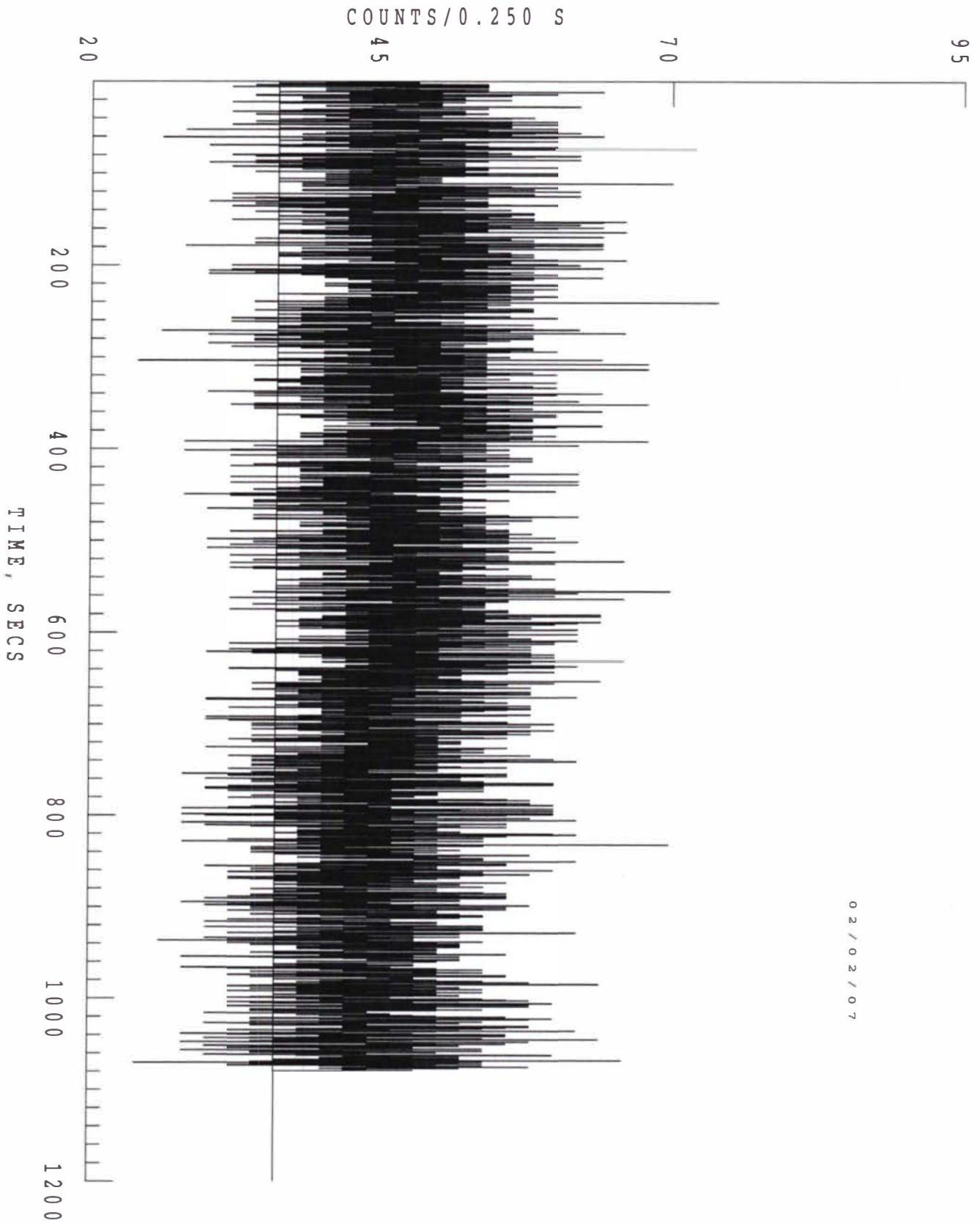
02/02/07

MS01

02/02/07

56149.168

50 - 3000 keV

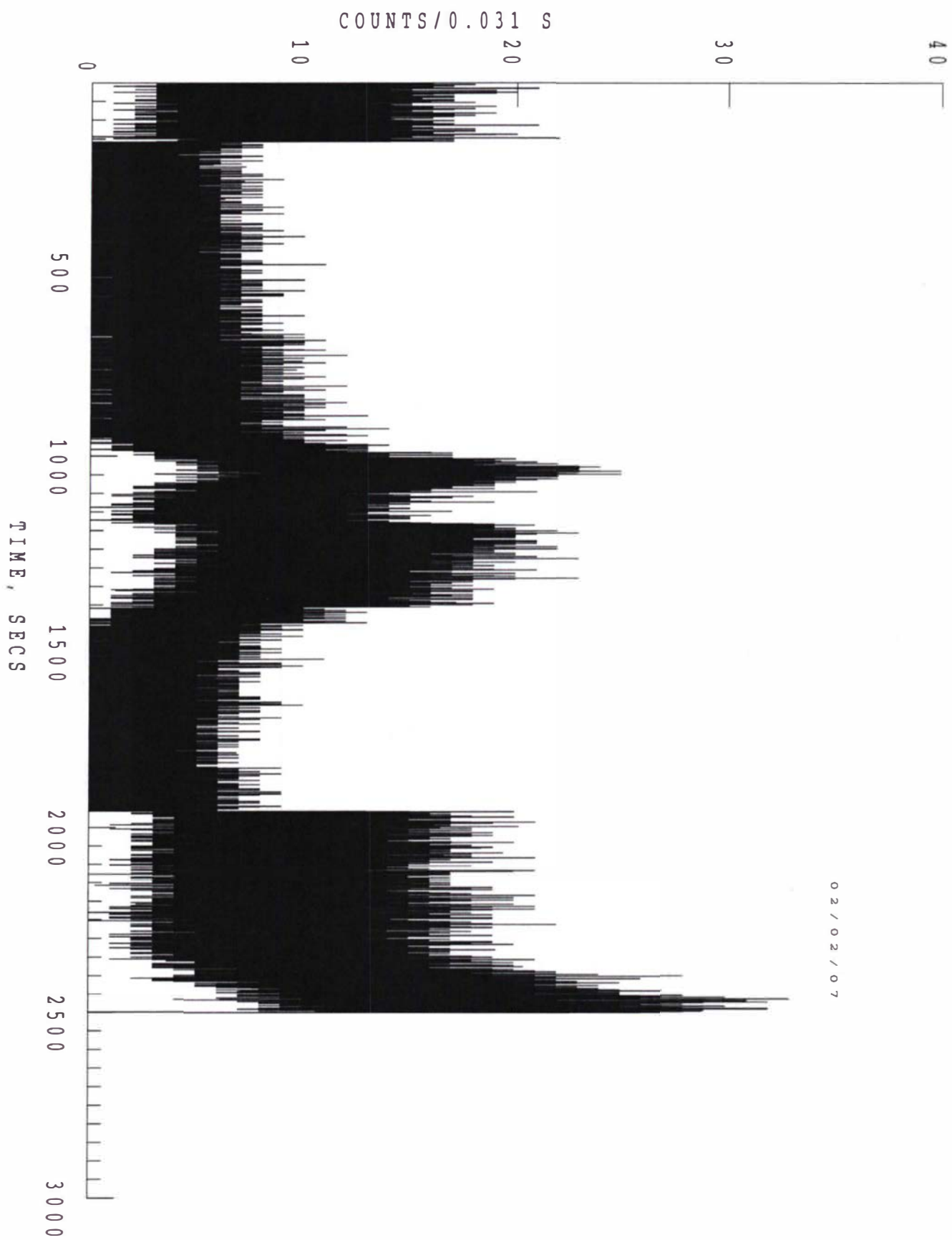


02/02/07

HESSI

02/02/07 55402.000 (MO_GE_20070202_56702)

25- 150 keV



25/04/07

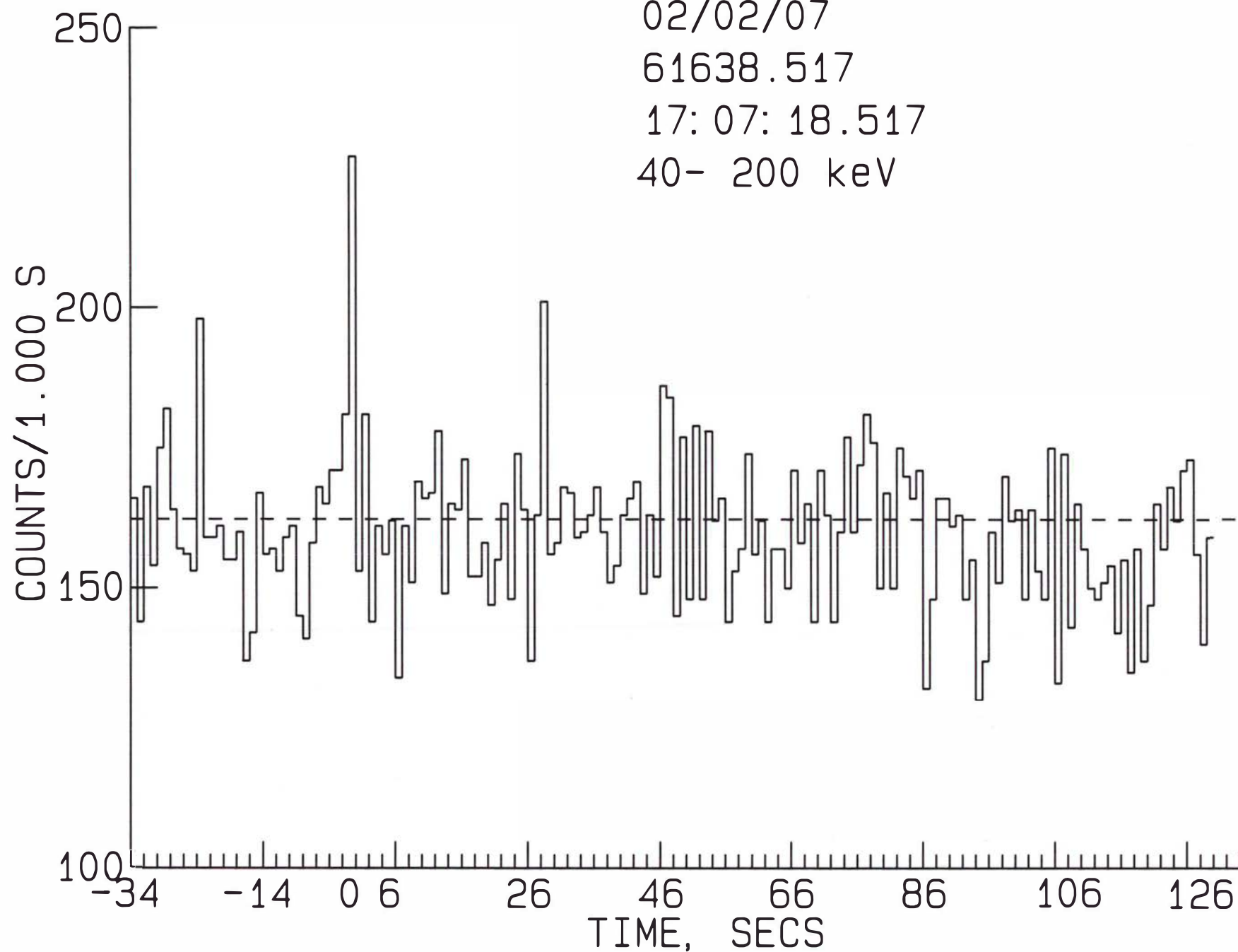
MESSENGER

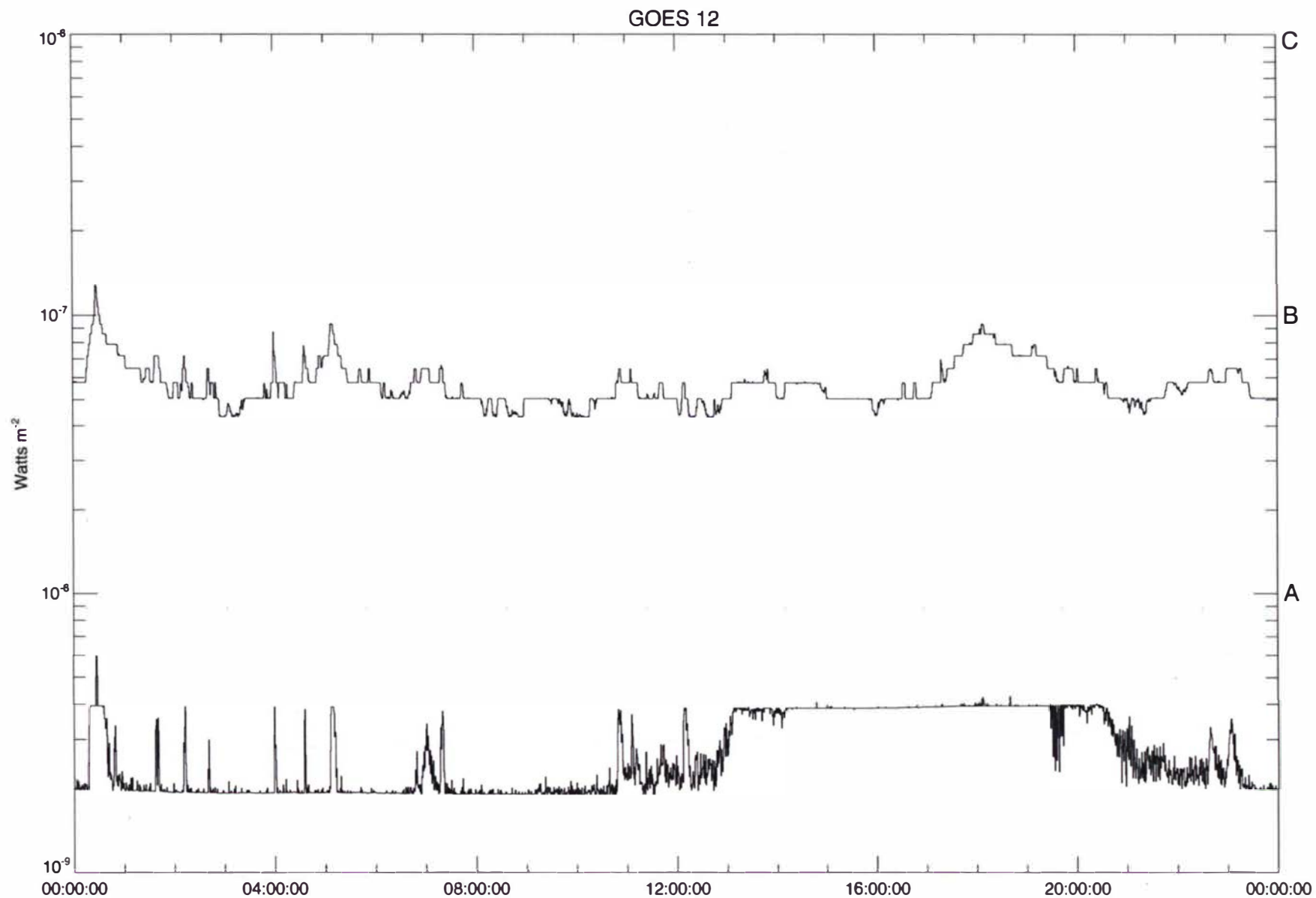
02/02/07

61638.517

17:07:18.517

40- 200 keV





Data Start: 07/02/02, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Background not subtracted

Plot created: 07/02/13, 1931

Sample average = 10

25/04/07

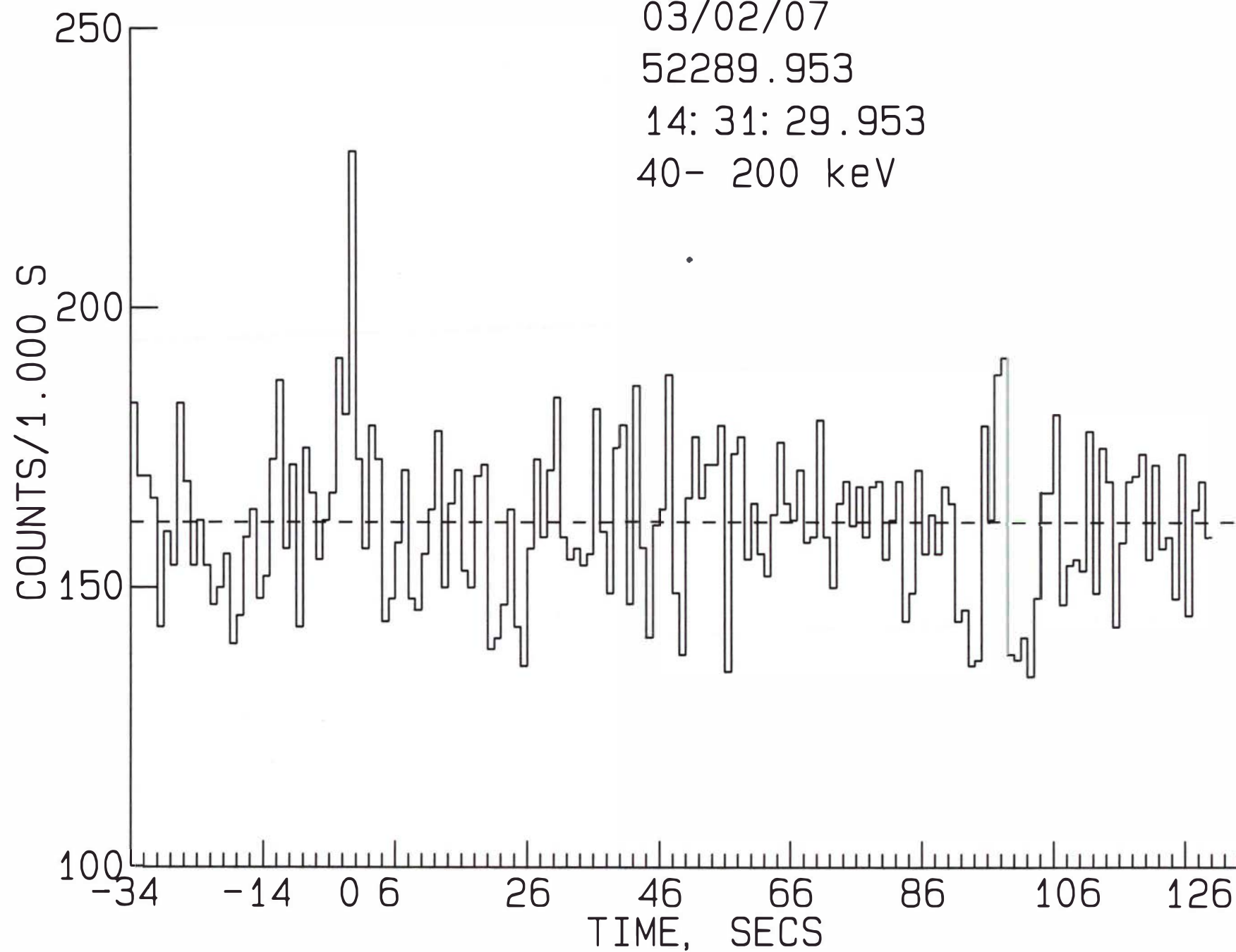
MESSENGER

03/02/07

52289.953

14: 31: 29.953

40- 200 keV

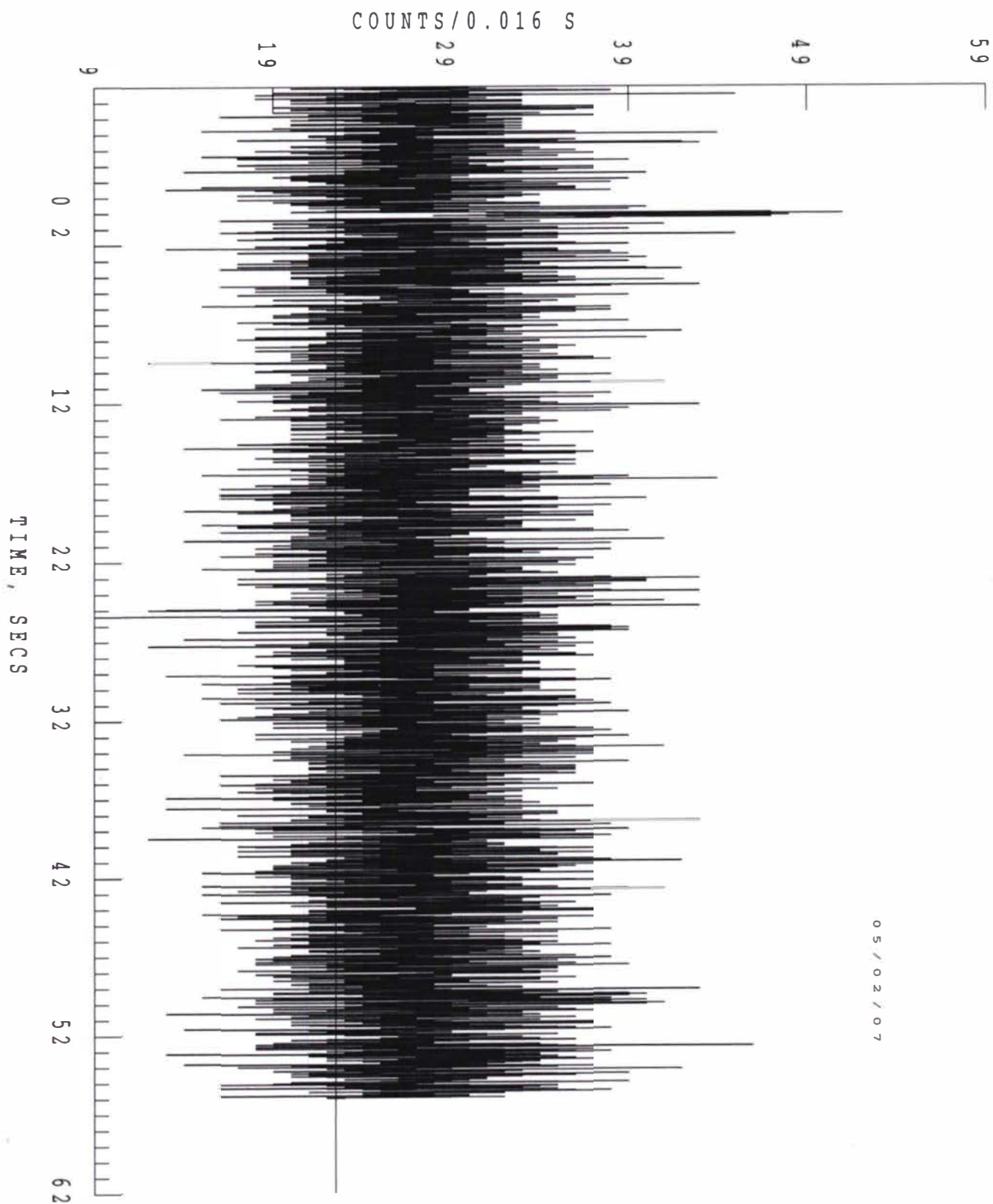


SUZAKU

03/02/07

83204.409

50 - 240 keV

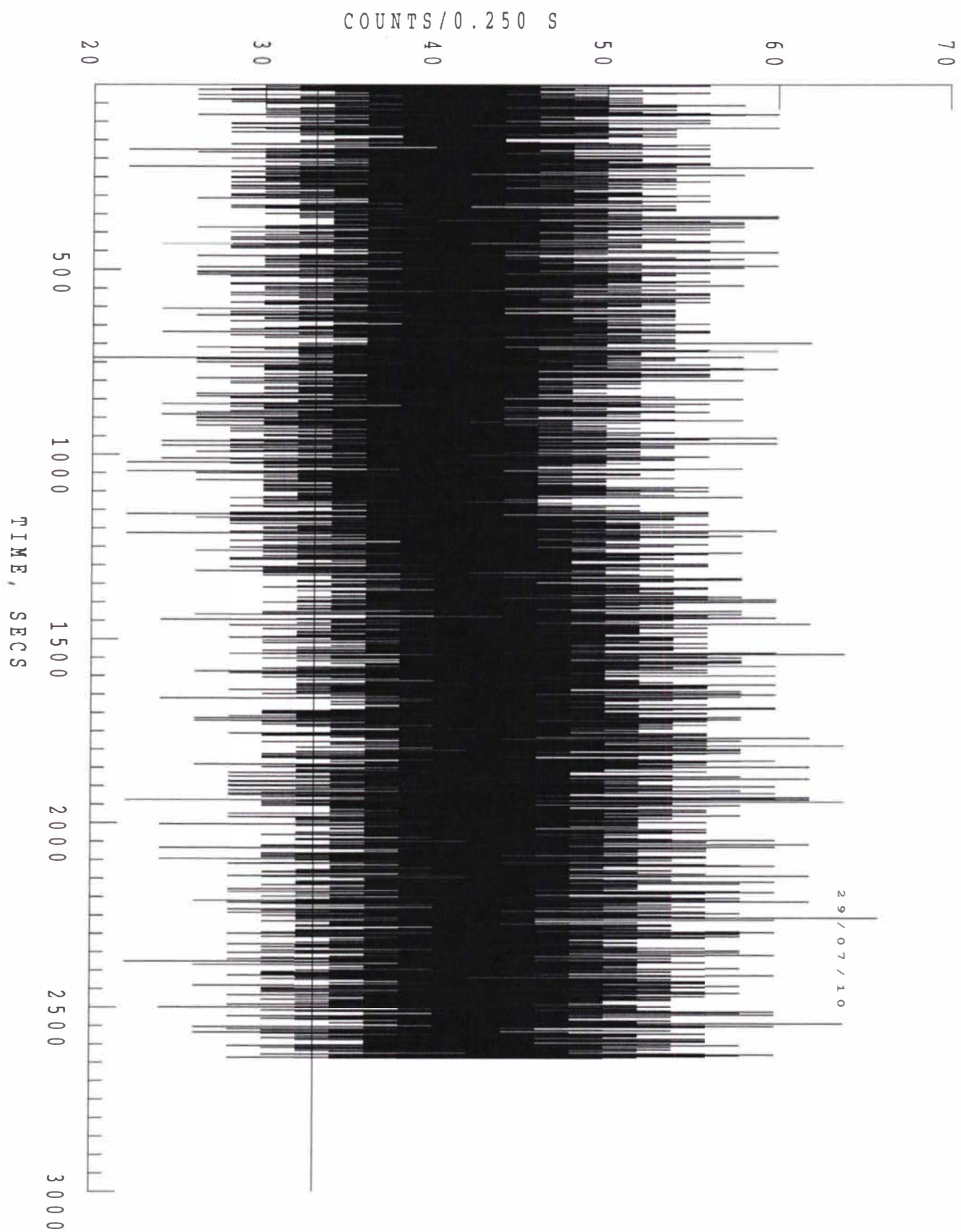


MS01

03/02/07

81886.114

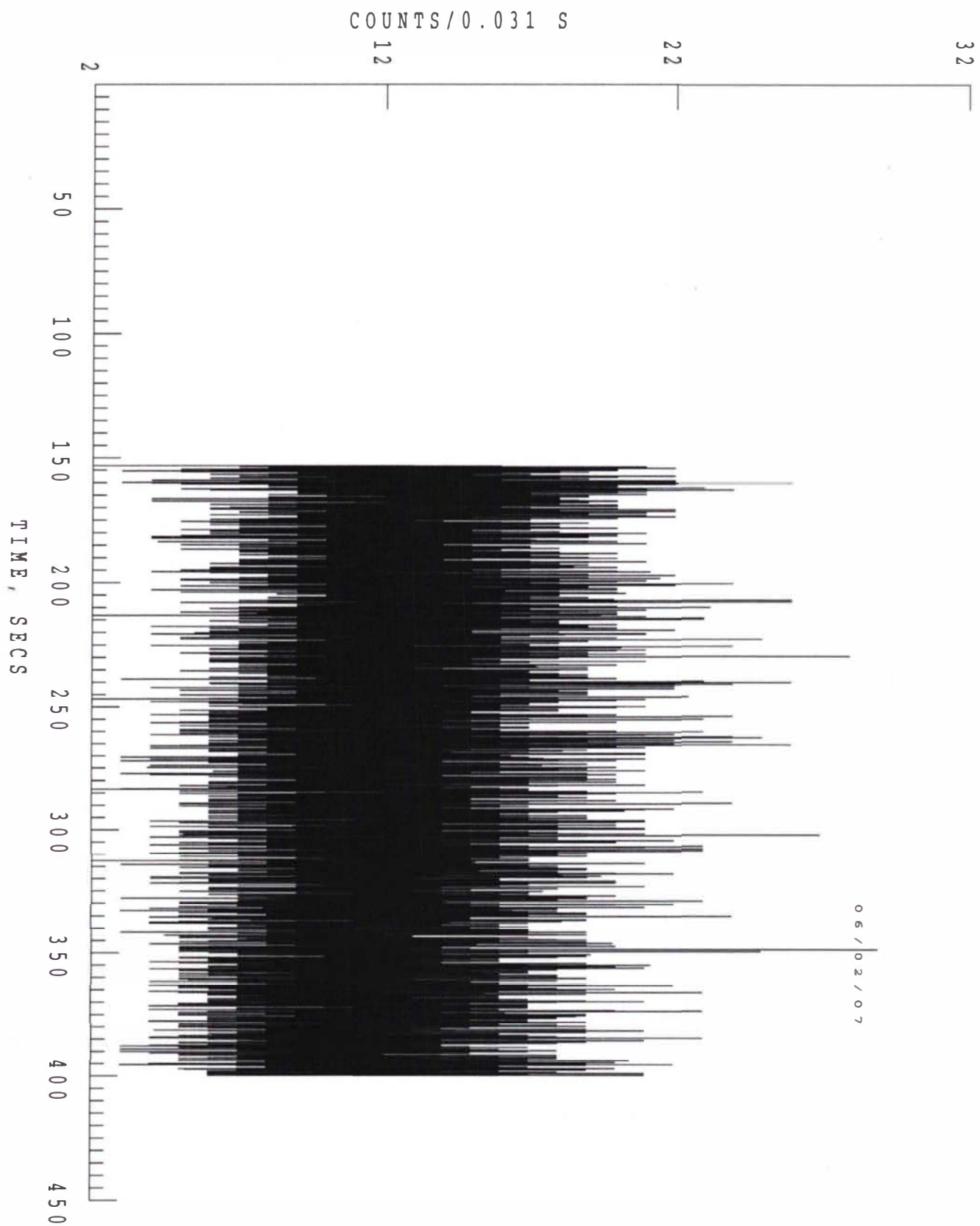
50 - 3000 keV



HESSI

03/02/07 83004.000 (SUZAKU_20070203_83204)

25- 150 keV



Date: July 30 '2010

BURST TRIANGULATION CHECKLIST

1. Suzaku Data

- ☐ 1 second timing error corrected? (Jan 1 – Apr 24 2009)

2. AGILE Data

- ☐ 1 second timing error corrected?

3. MESSENGER Data

- ☐ Coarse or fine oscillator?
- ☐ Timing checked after ~ 1 week?

4. For Konus events

- ☐ Konus ecliptic latitude used with latest calibration?

5. 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?

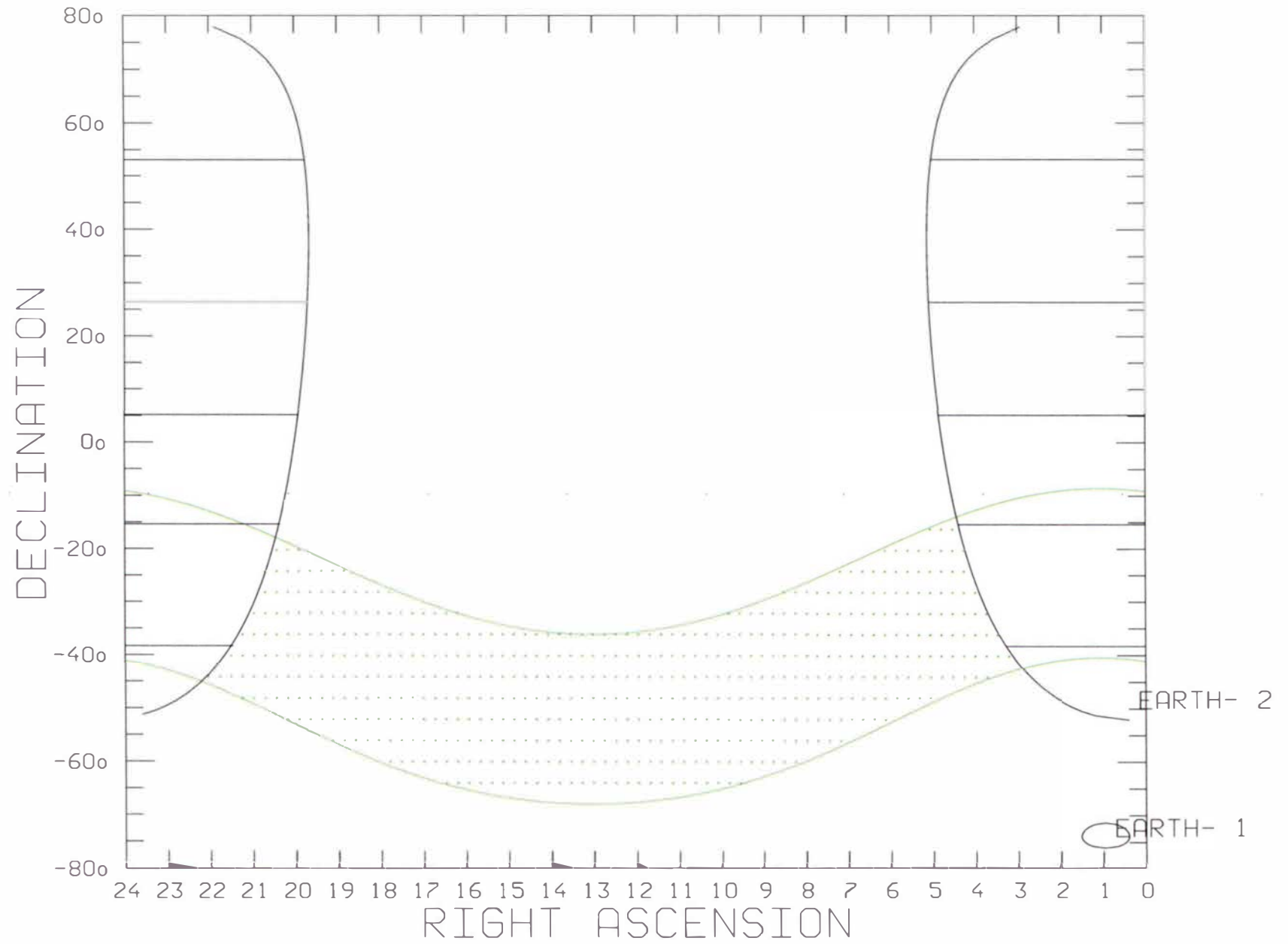
6. For 3 or More Spacecraft events

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

7. For INTEGRAL events

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

☒ ACCESS and MBL4 databases updated, with identical times?

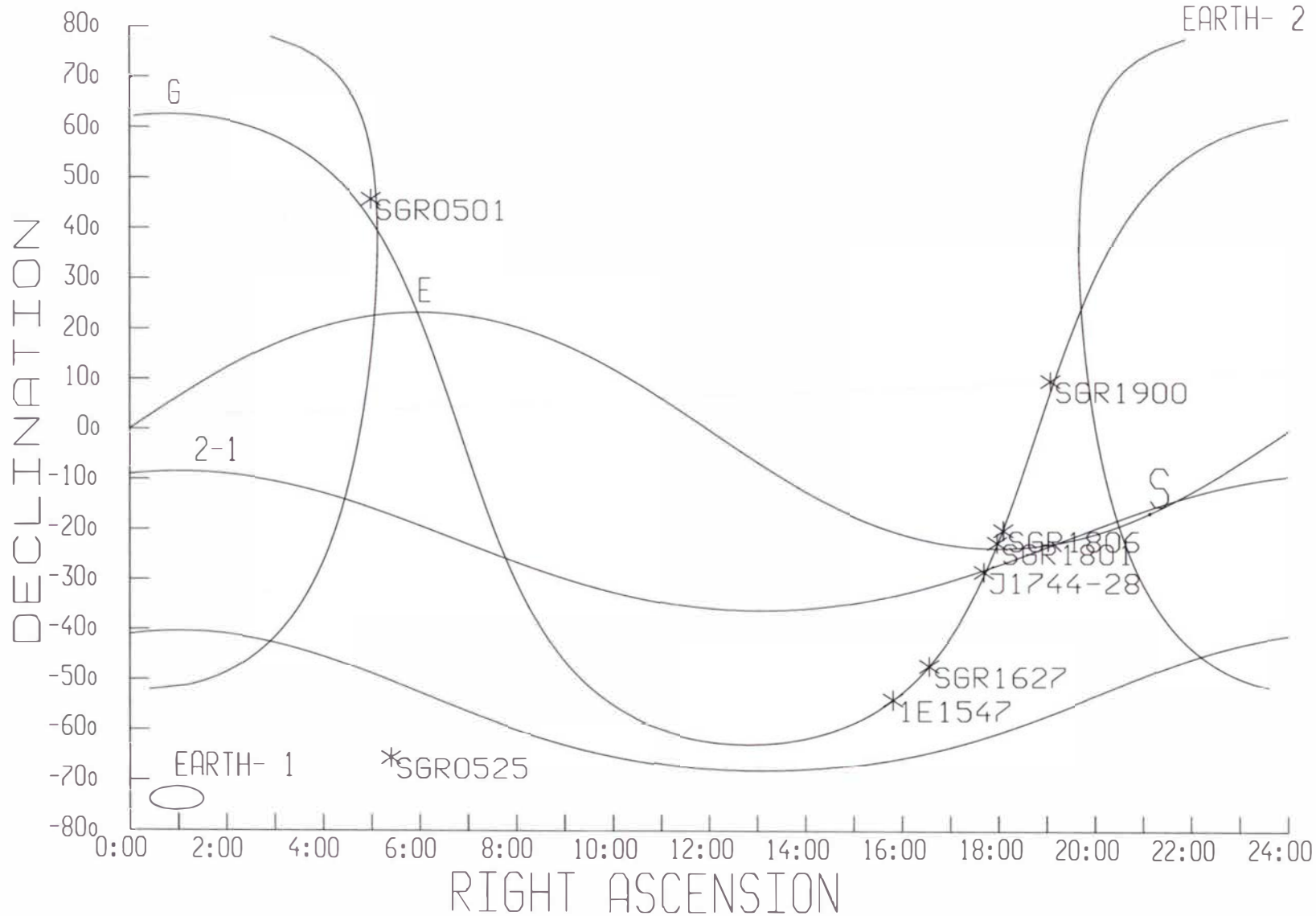


EVENT OF FEB 3, 2007 23:06

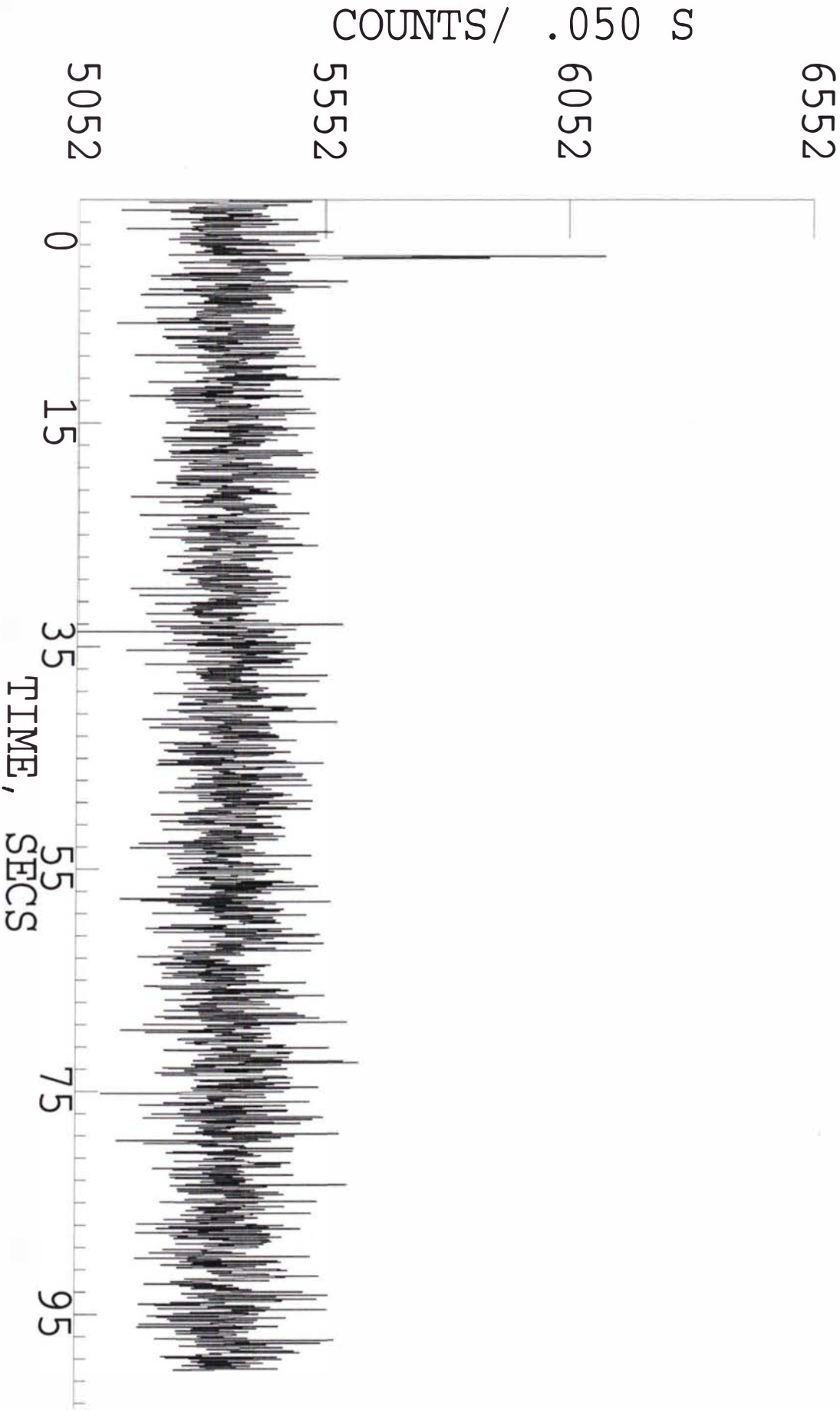
30/07/2010

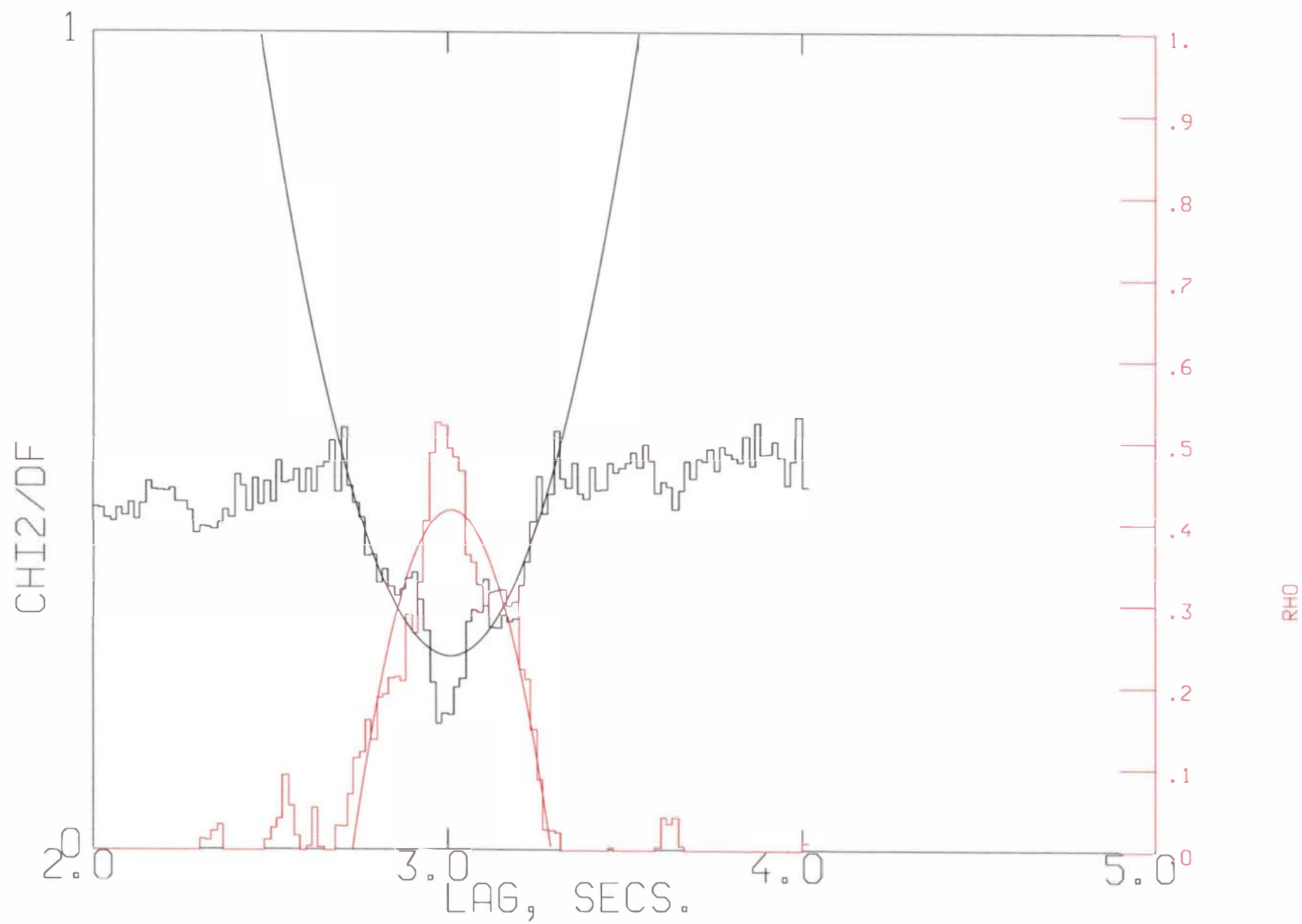
EARTH- 2

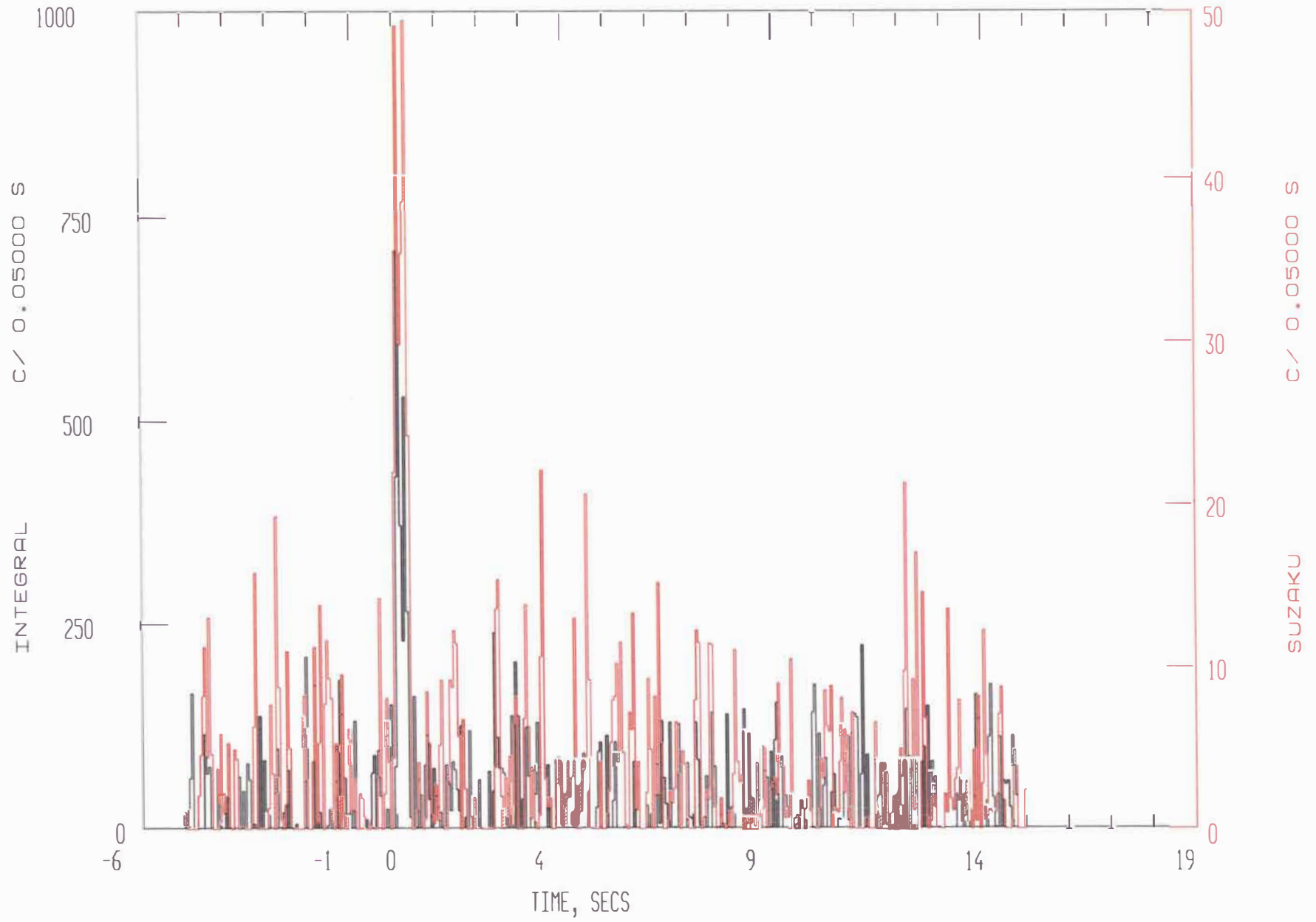
N-M = CORRELATION BETWEEN SATELLITES N AND M
 EARTH-N = EARTH AS SEEN FROM SATELLITE N
 S=SUN
 1 INTEGRAL 2 SUZAKU
 E=ECLIPTIC G=GALACTIC EQUATOR

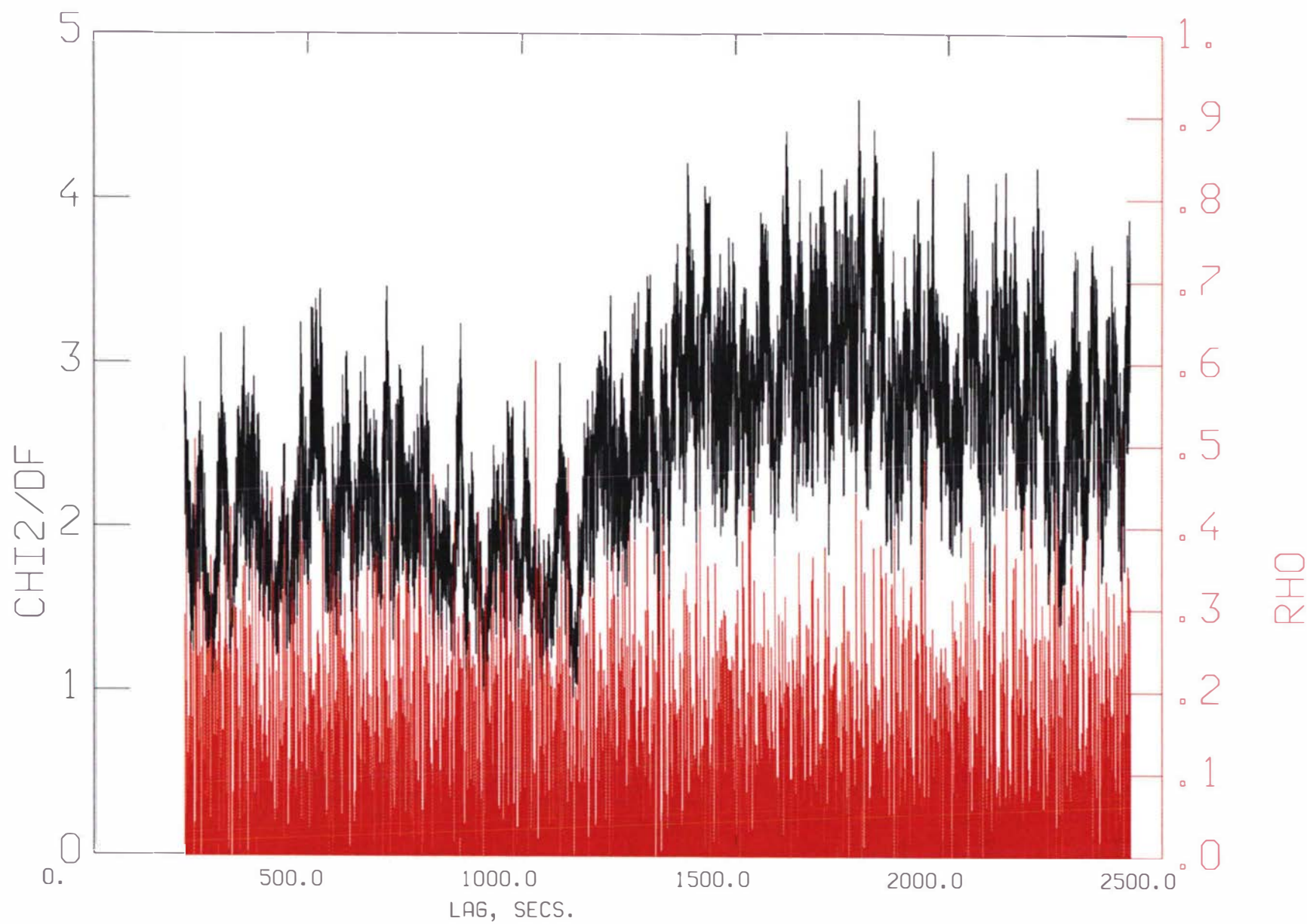


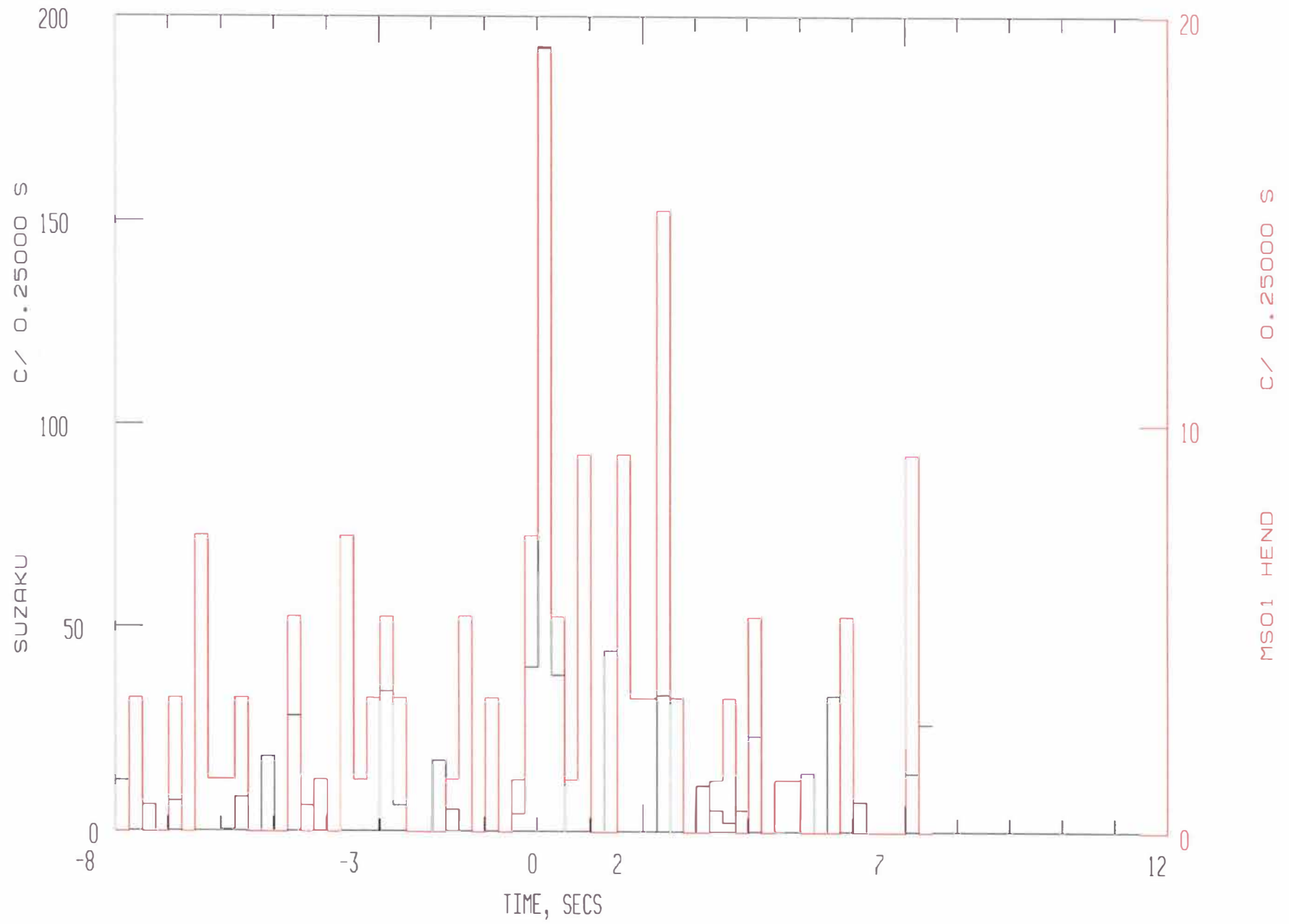
INTEGRAL 03/02/07 83204.713 23:06:44.7
100-10000 keV











04/05/07

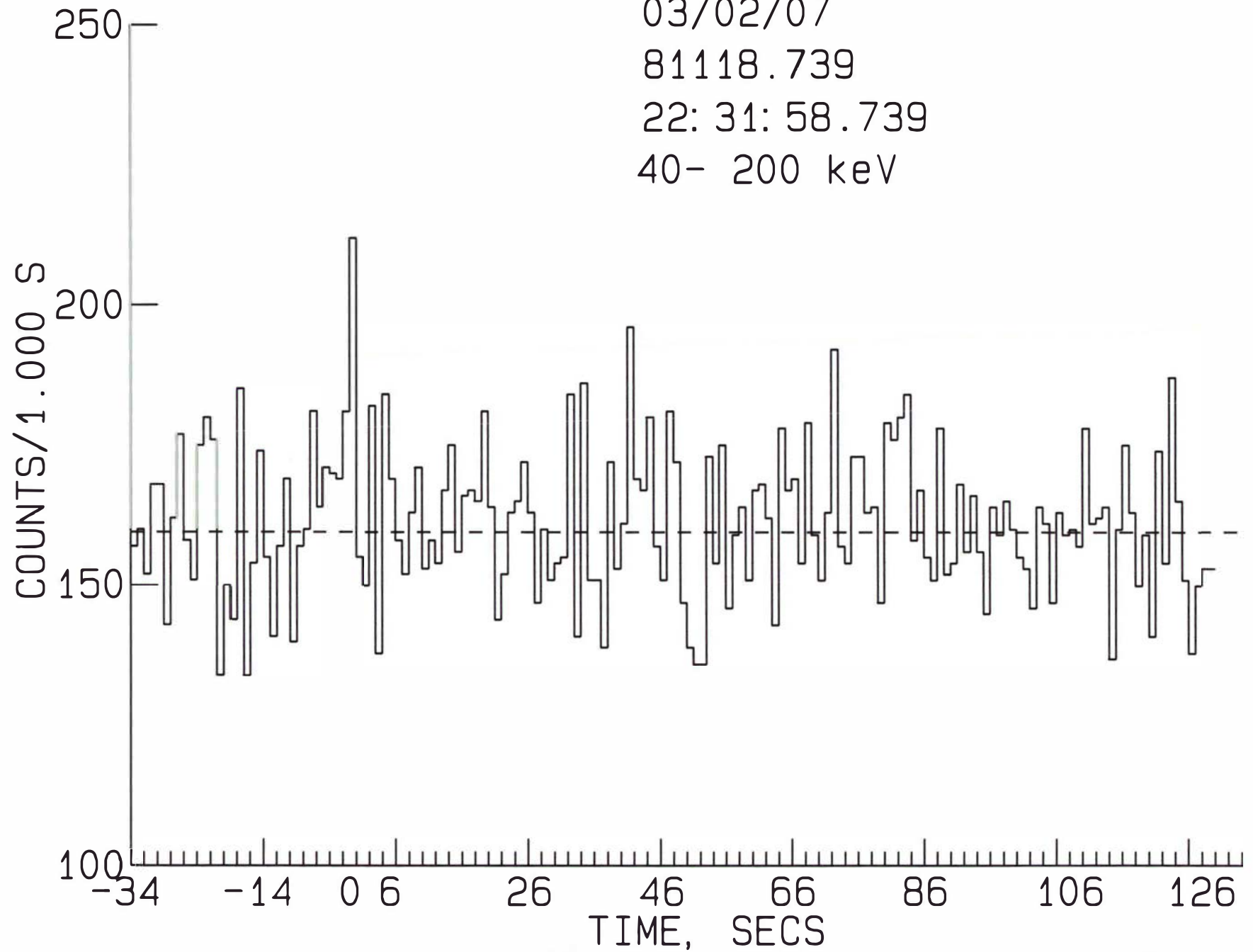
MESSENGER

03/02/07

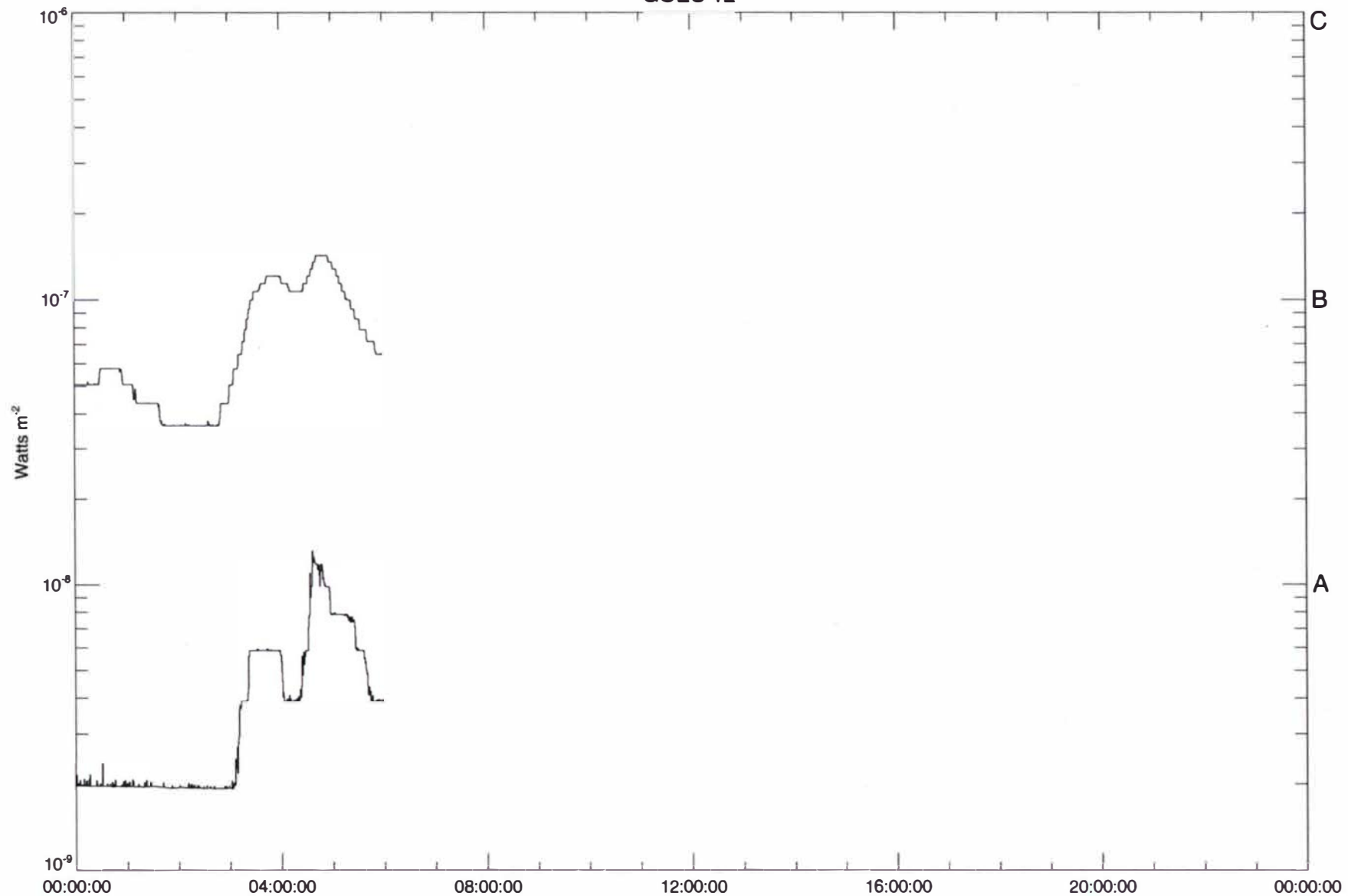
81118.739

22:31:58.739

40- 200 keV



GOES 12



Data Start: 07/02/03, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Background not subtracted

Plot created: 07/02/06, 0921

Sample average = 10

Date: Jul 30 '10

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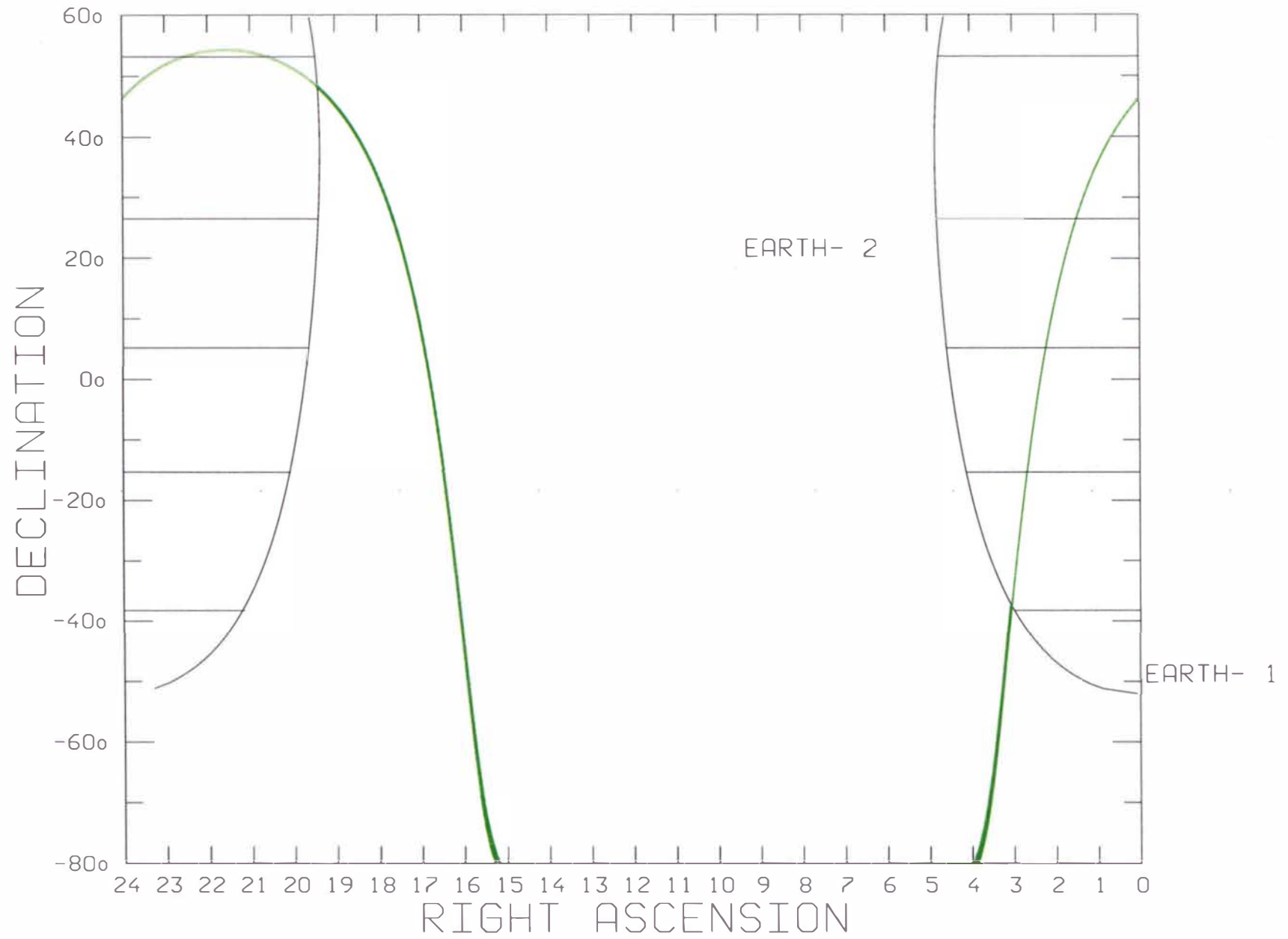
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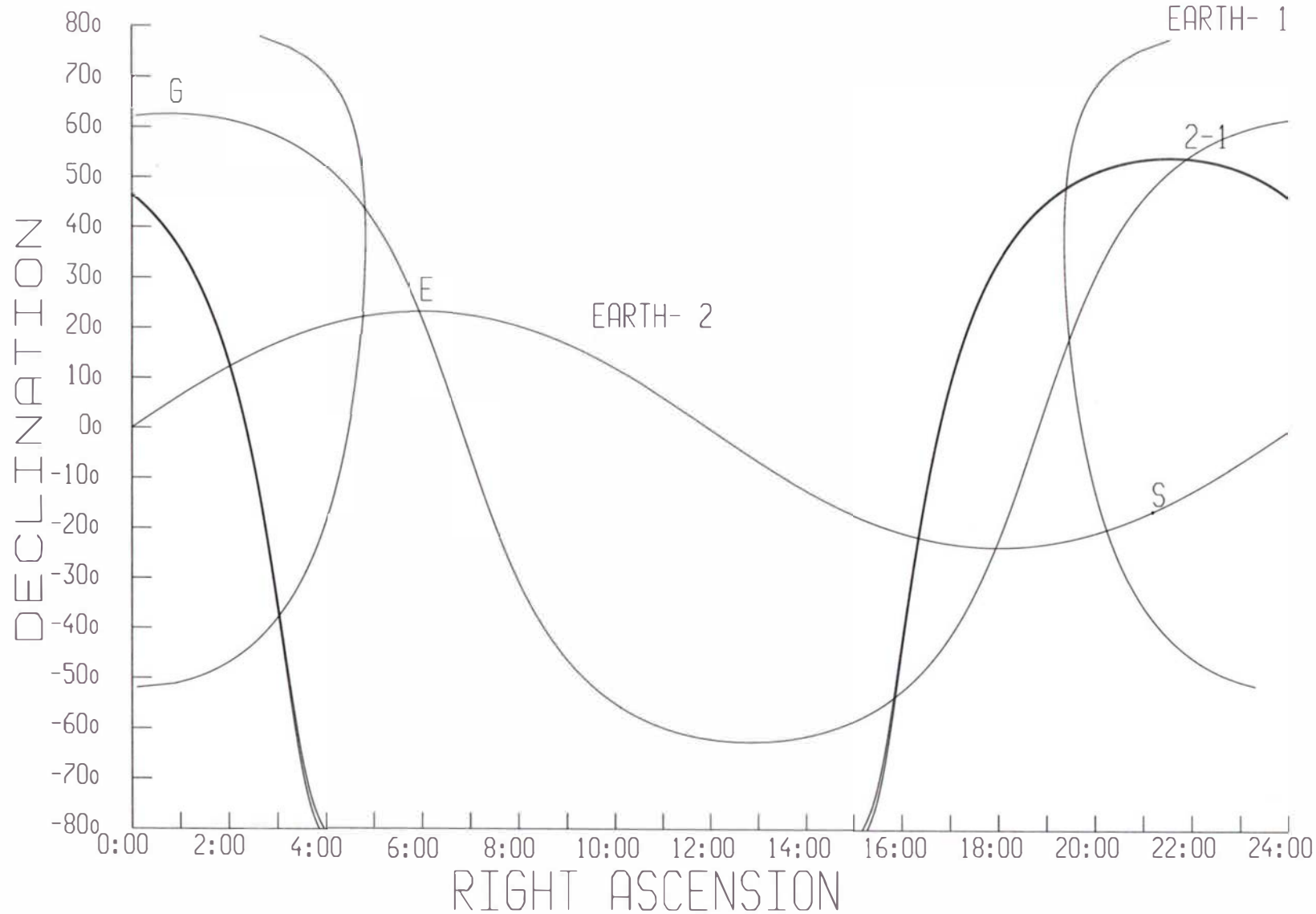
-
- ☒ ACCESS and MBL4 databases updated, with identical times?

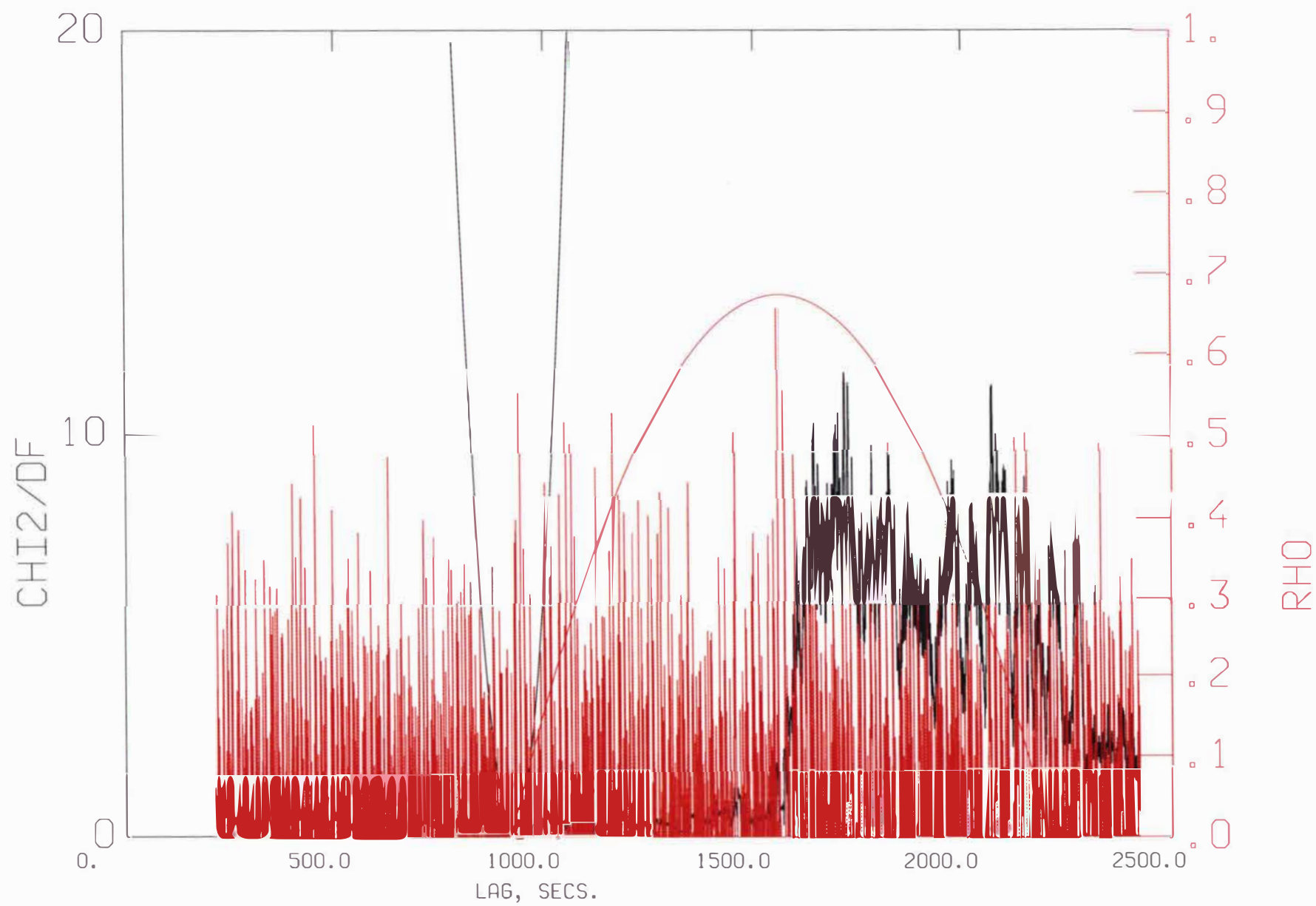


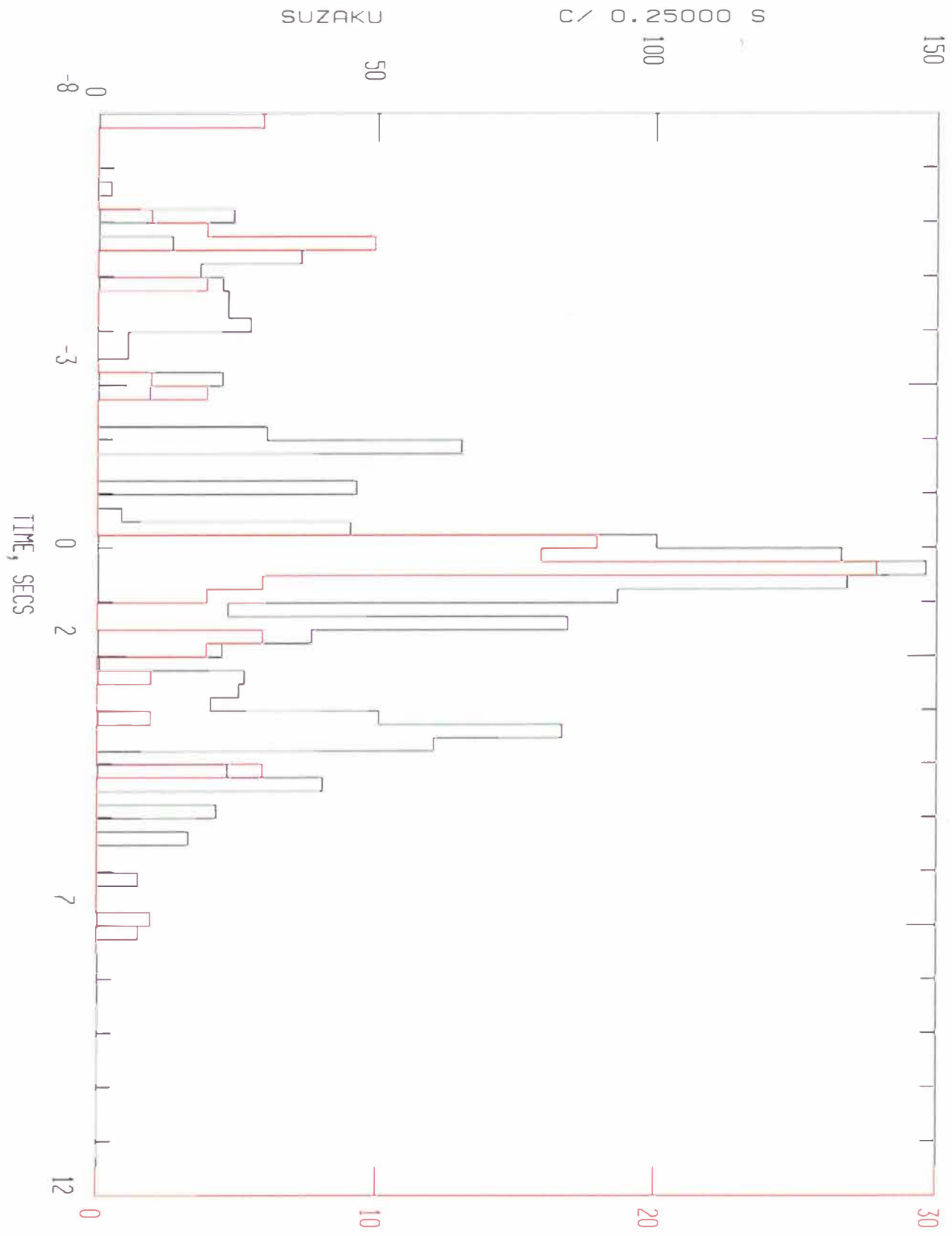
EVENT OF FEB 4, 2007 16:40

30/07/2010

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







21/07/10

MESSENGER

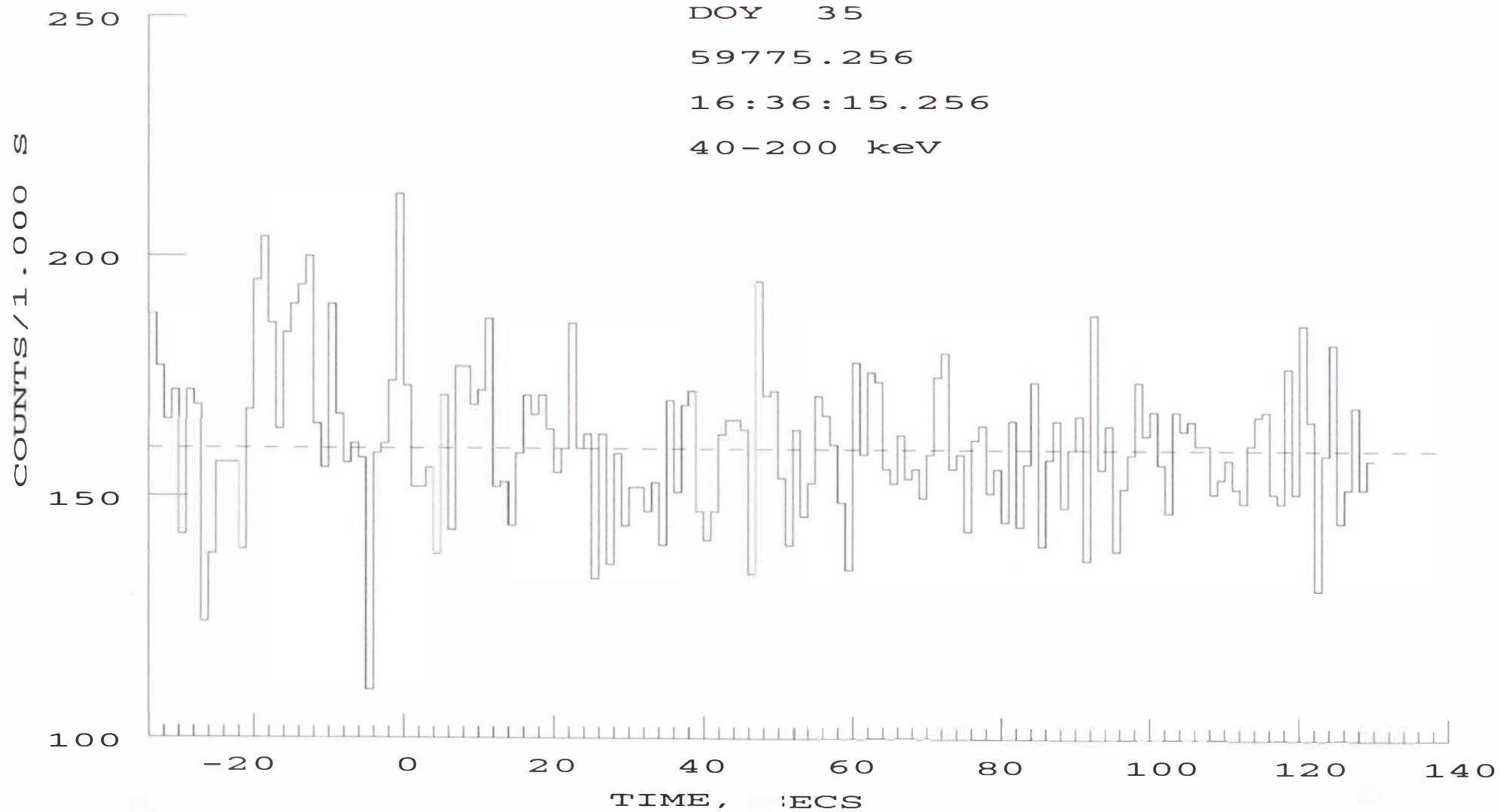
04/02/07

DOY 35

59775.256

16:36:15.256

40-200 keV



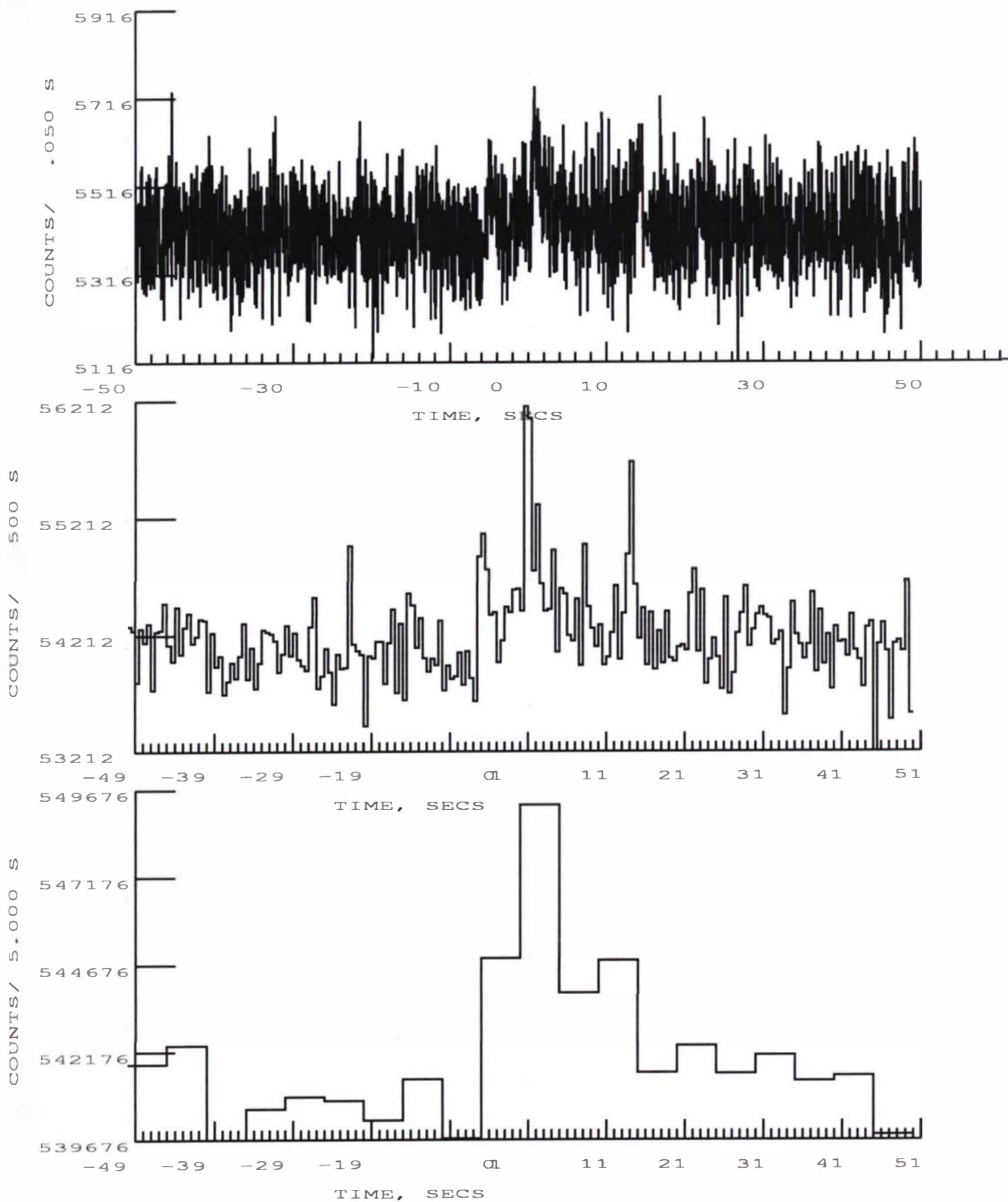
INTEGRAL

04/02/07

60041.000

16:40:41.0

18/07/14



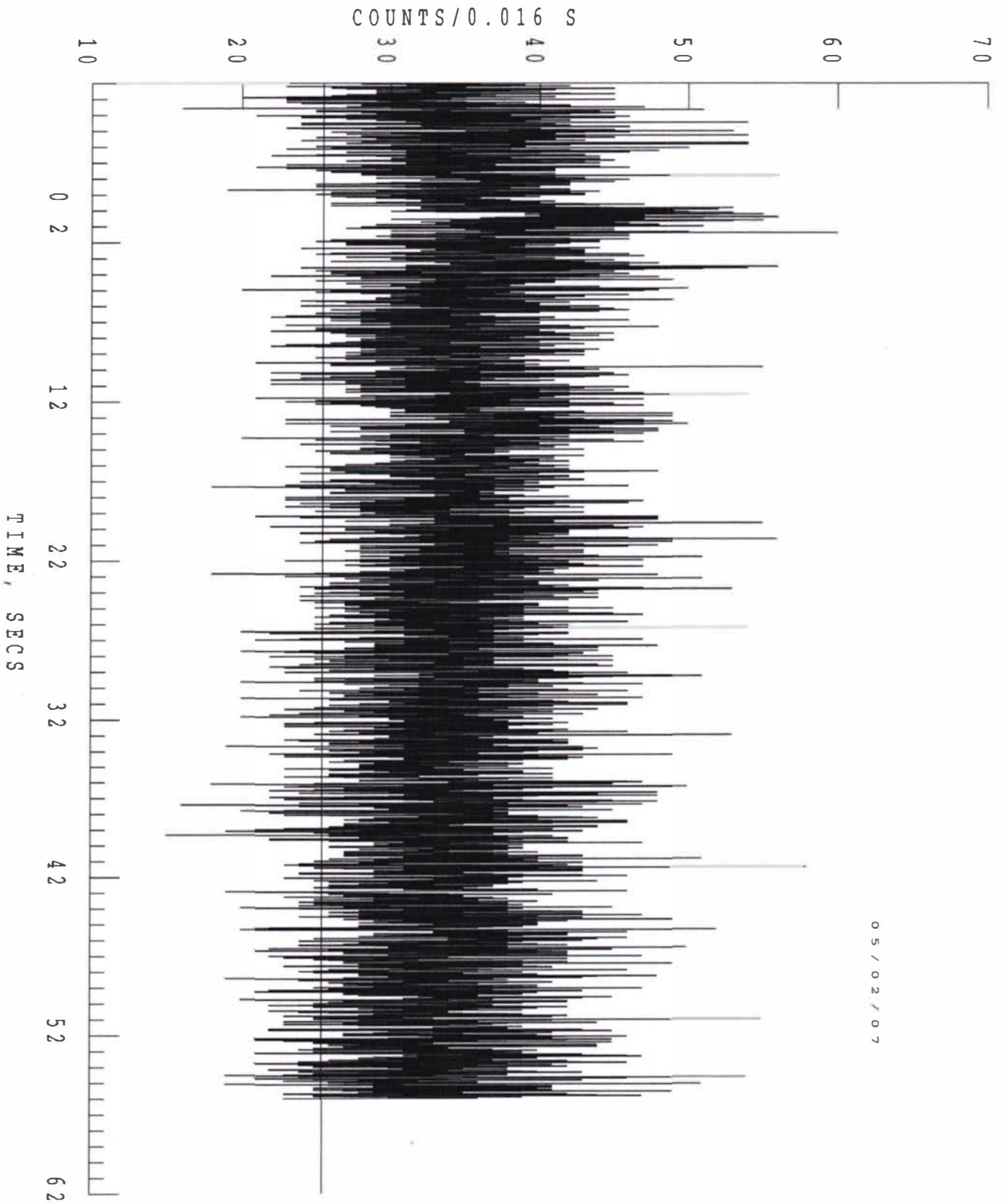
SUZAKU

04/02/07

60041.400

50 - 240 keV

16:40:41

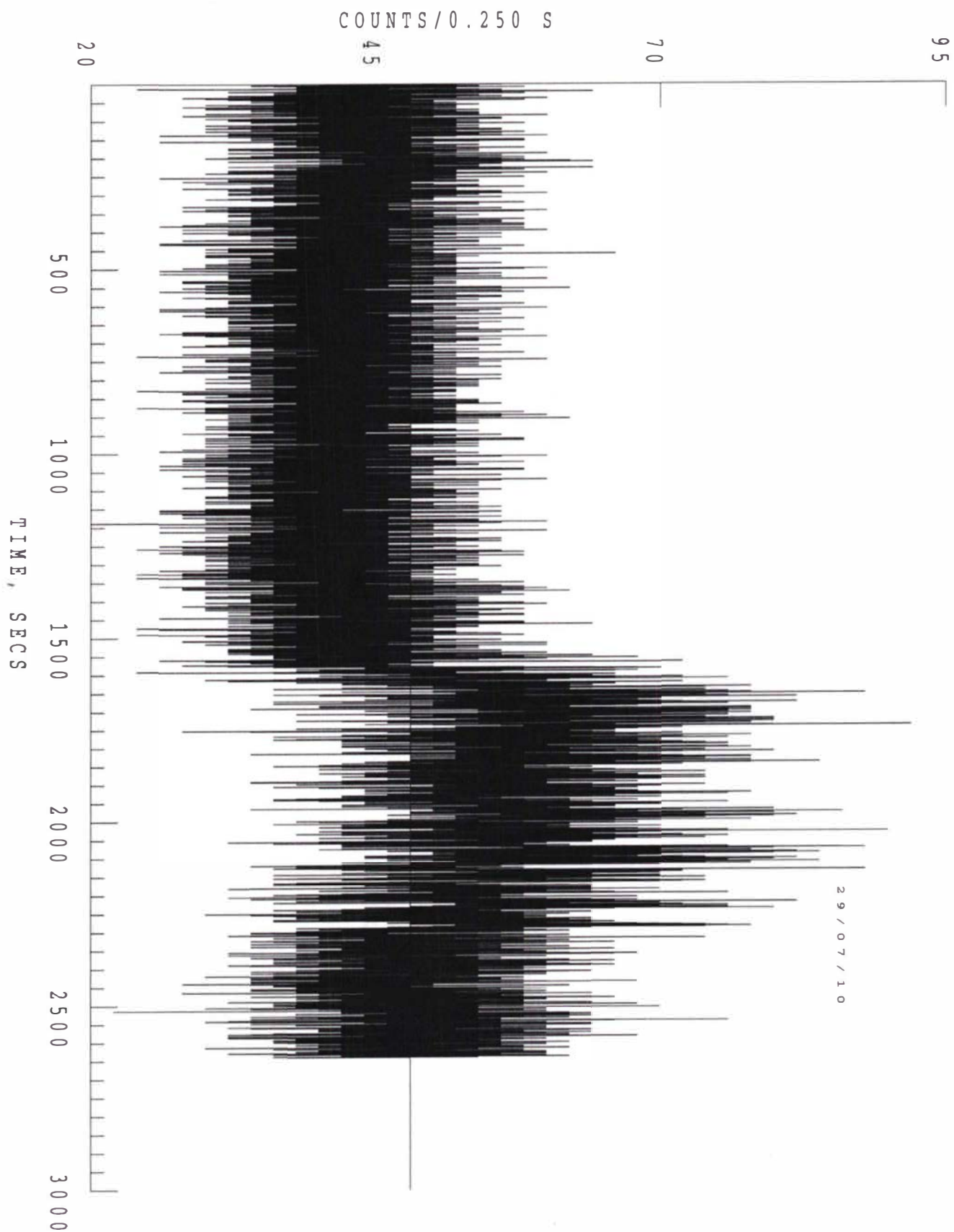


MS01

04/02/07

58724.953

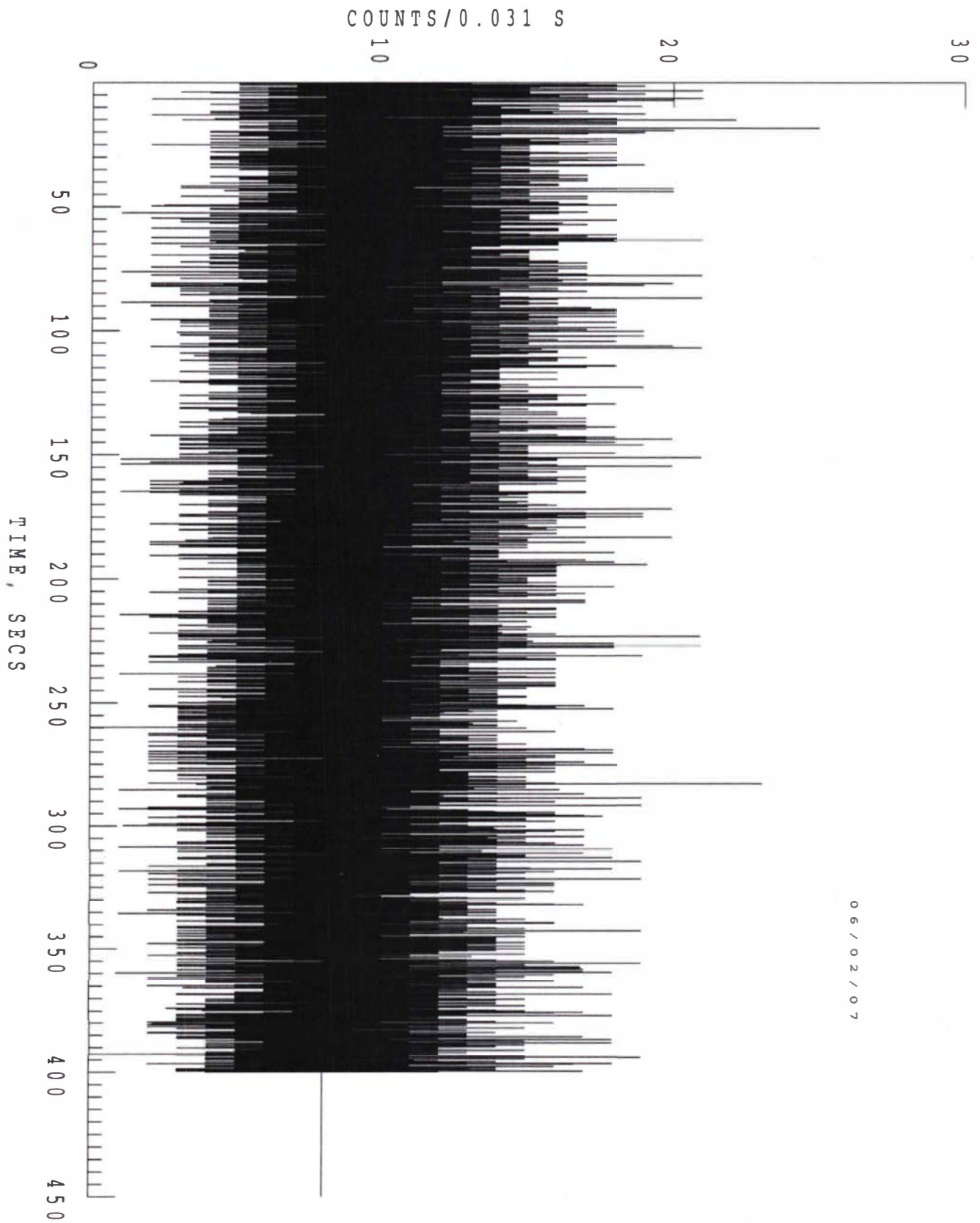
50 - 3000 keV

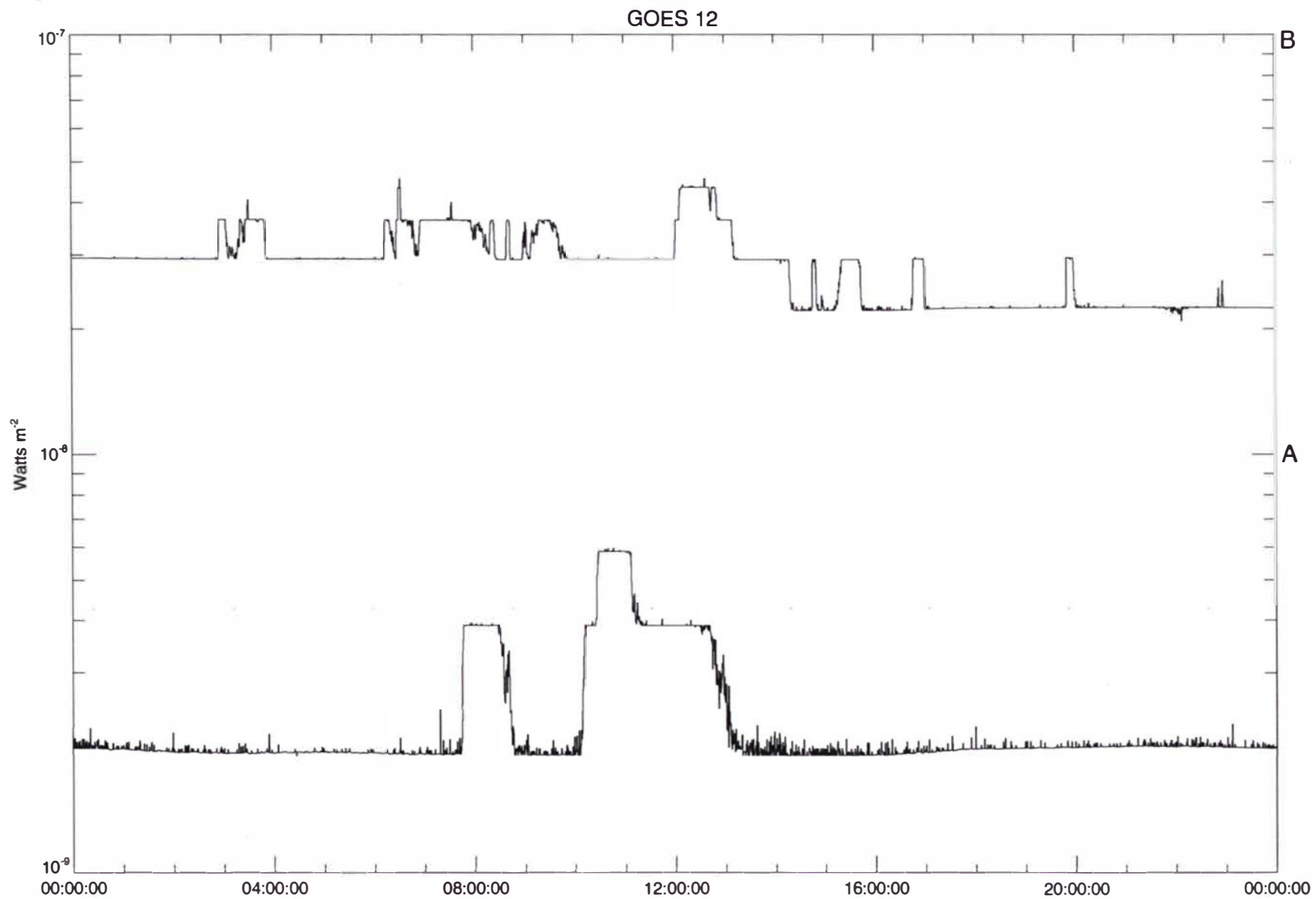


HESSI

04/02/07 59841.000 (SUZAKU_20070204_60041)

25- 150 keV





Data Start: 07/02/04, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Background not subtracted

Plot created: 07/02/07, 0921

Sample average = 10

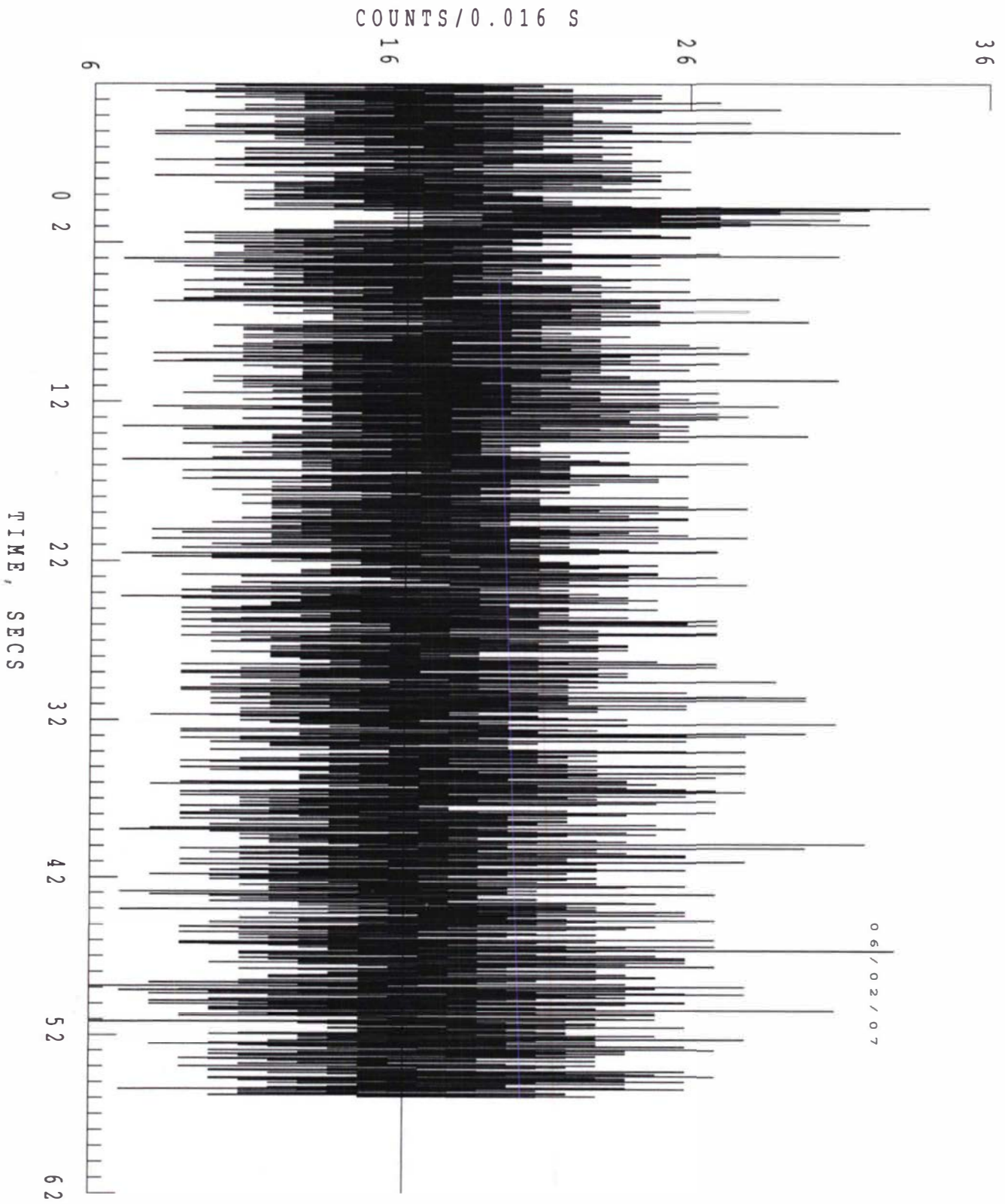
SUZAKU

05/02/07

66881.886

50 - 240 keV

18:34:41



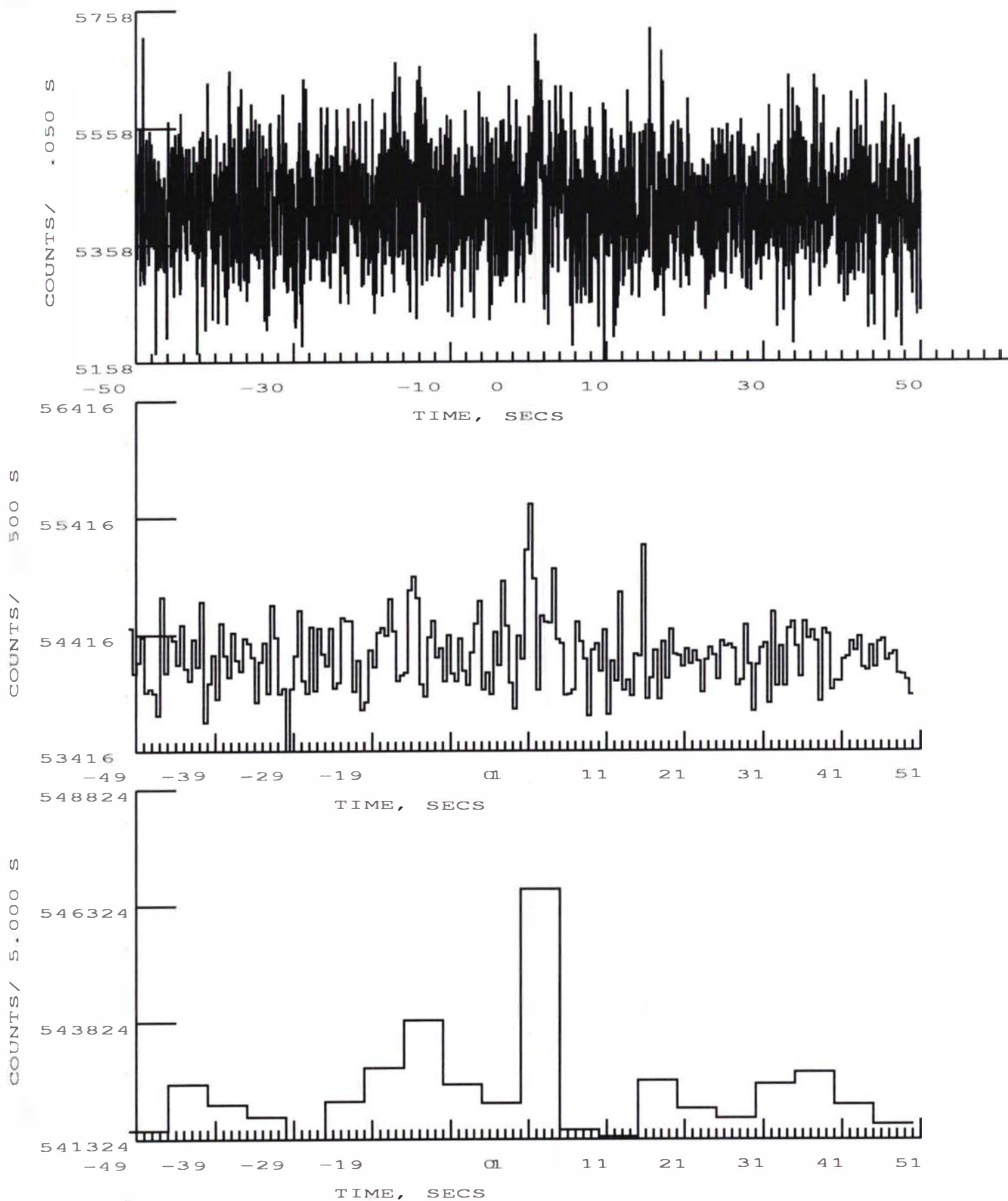
INTEGRAL

05/02/07

66881.000

18:34:41.0

18/07/14



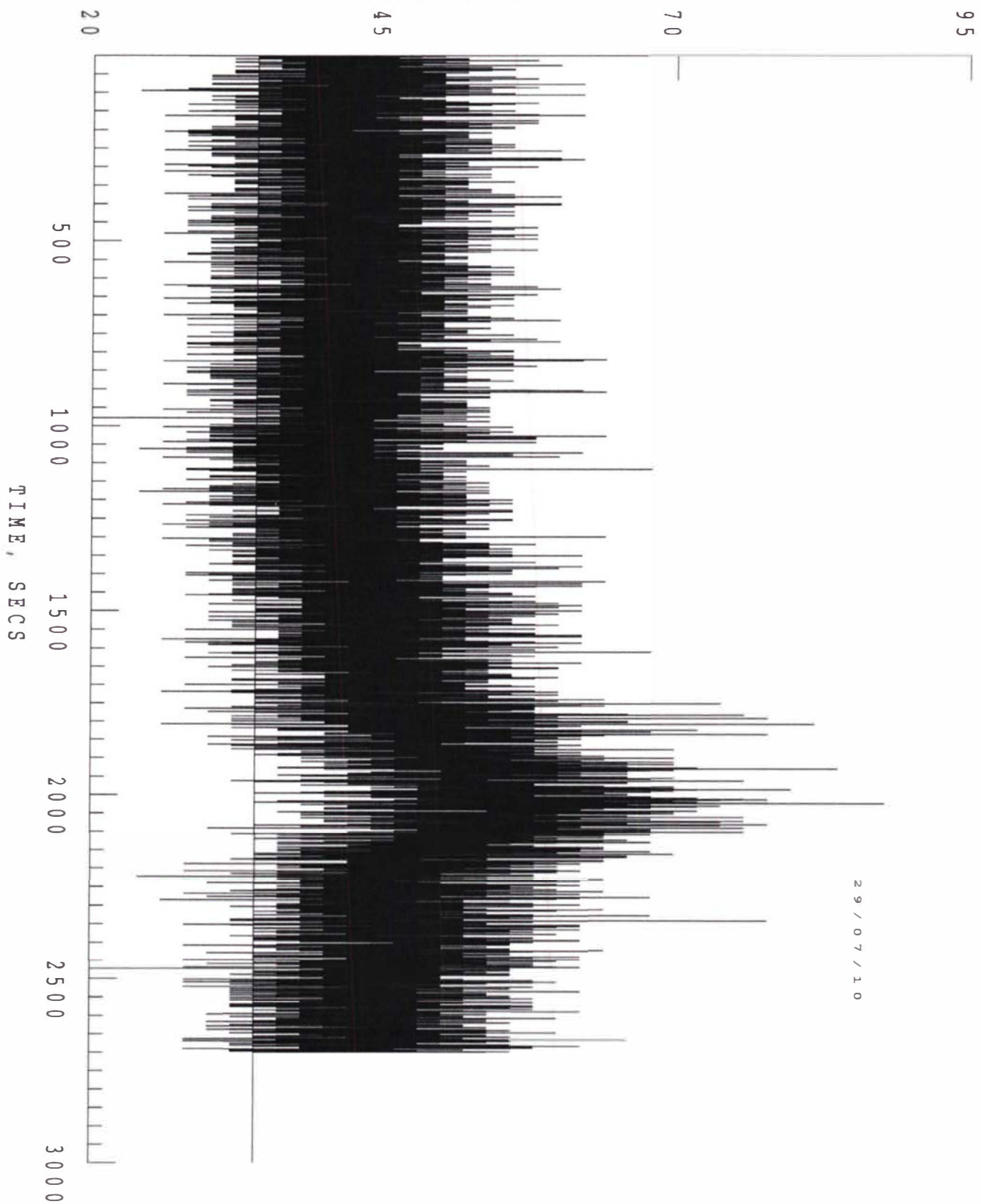
MS01

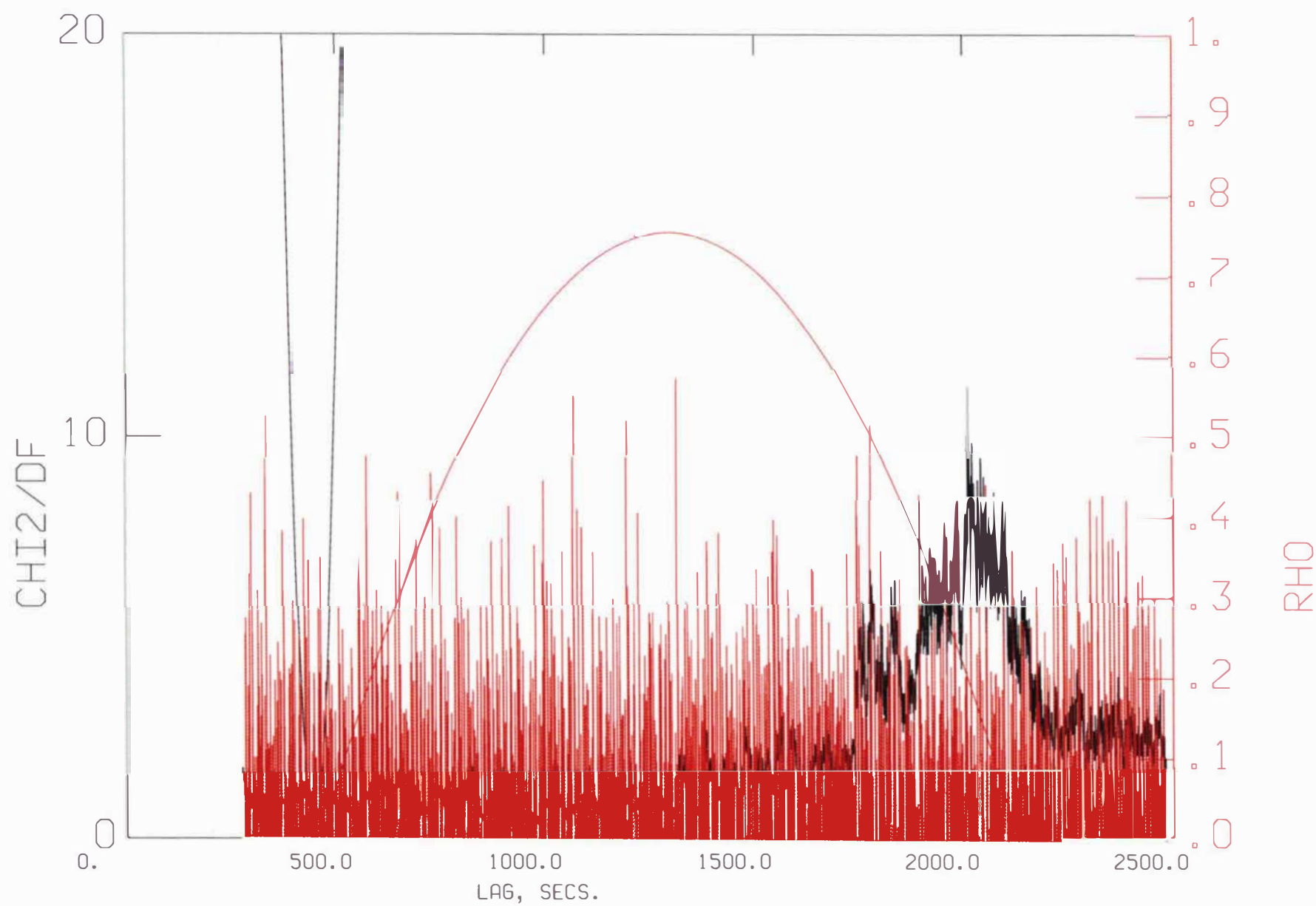
05/02/07

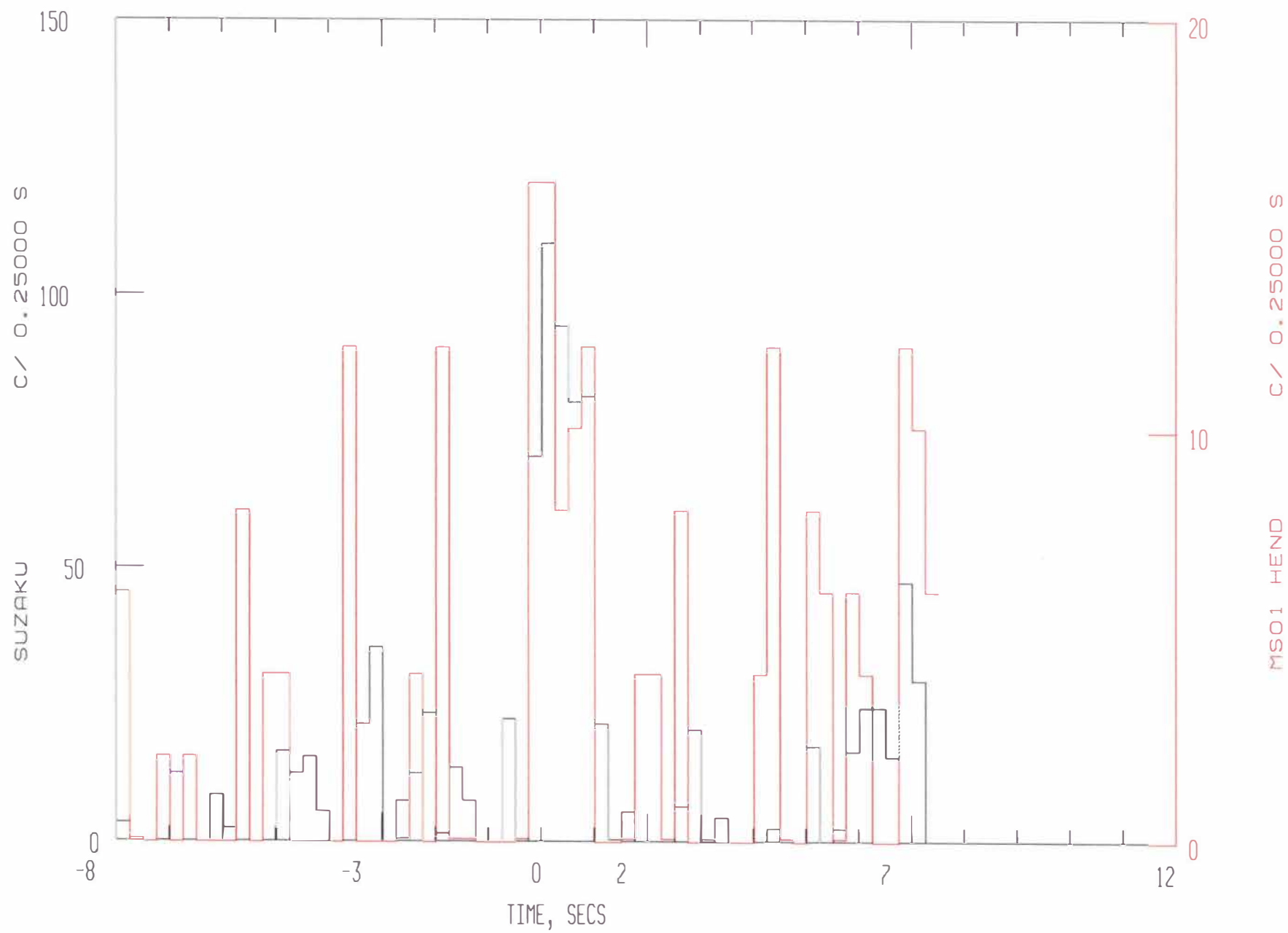
65503.253

50 - 3000 keV

COUNTS/0.250 S



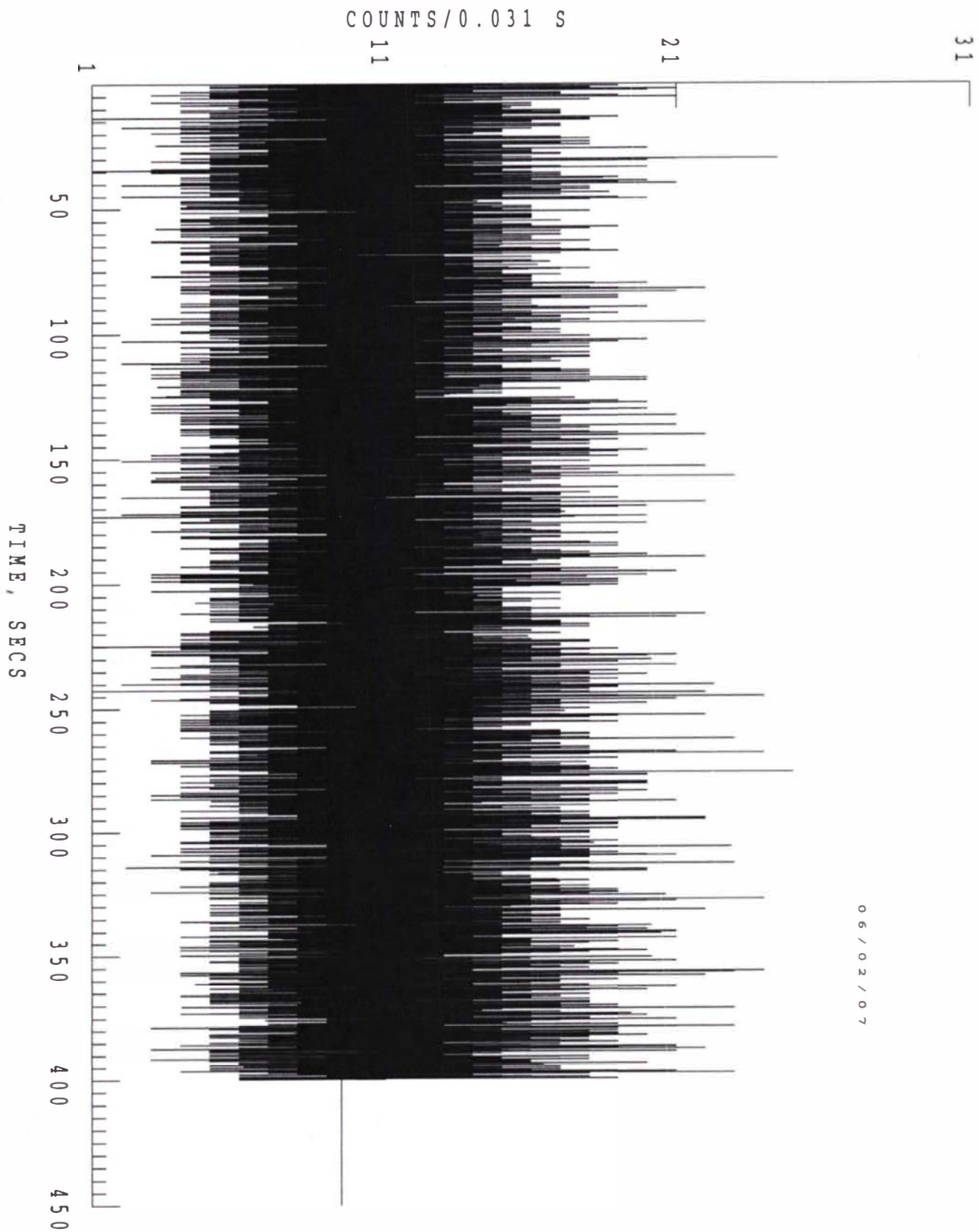




HESSI

05/02/07 66681.000 (SUZAKU_20070205_66881)

25- 150 keV



07/05/07

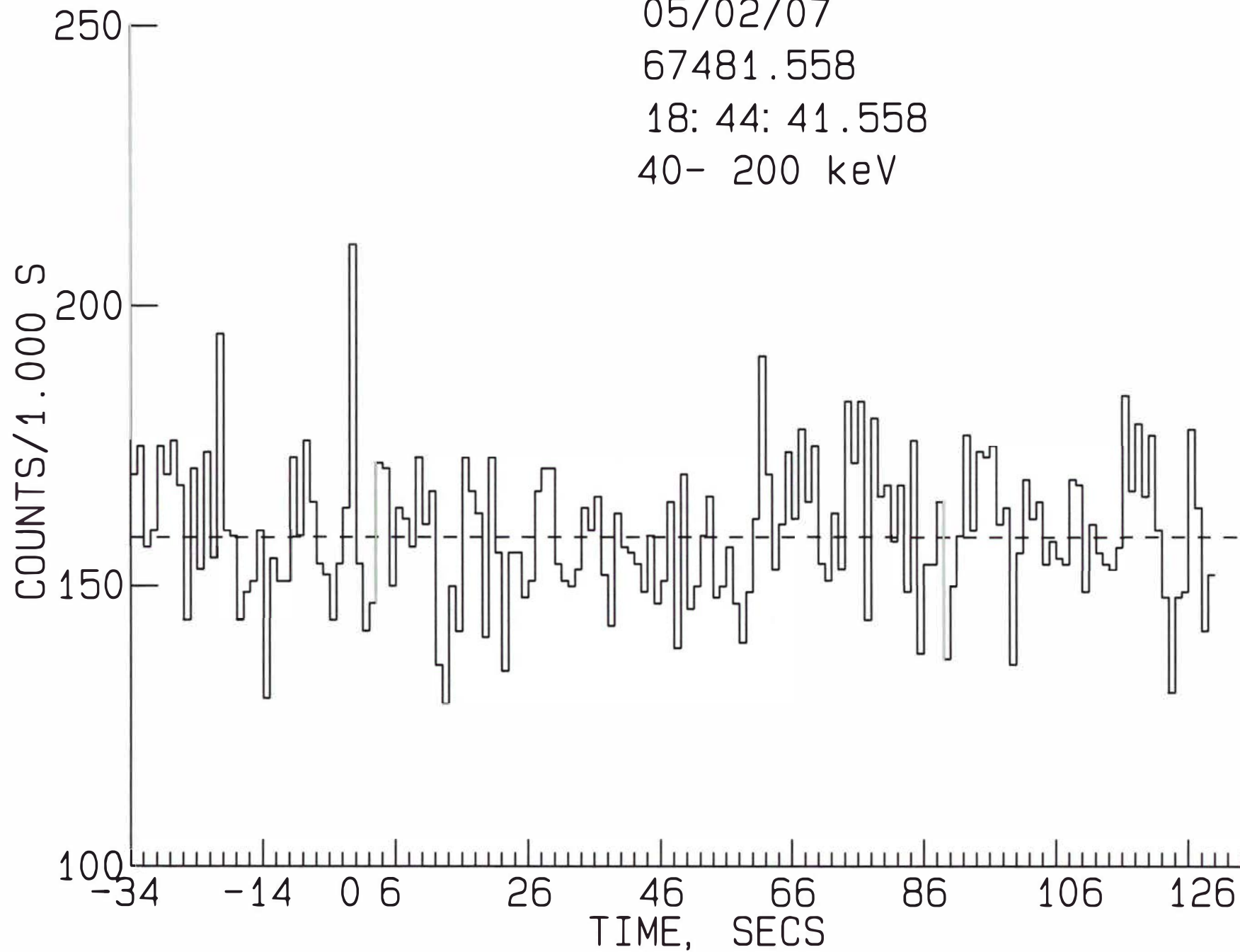
MESSENGER

05/02/07

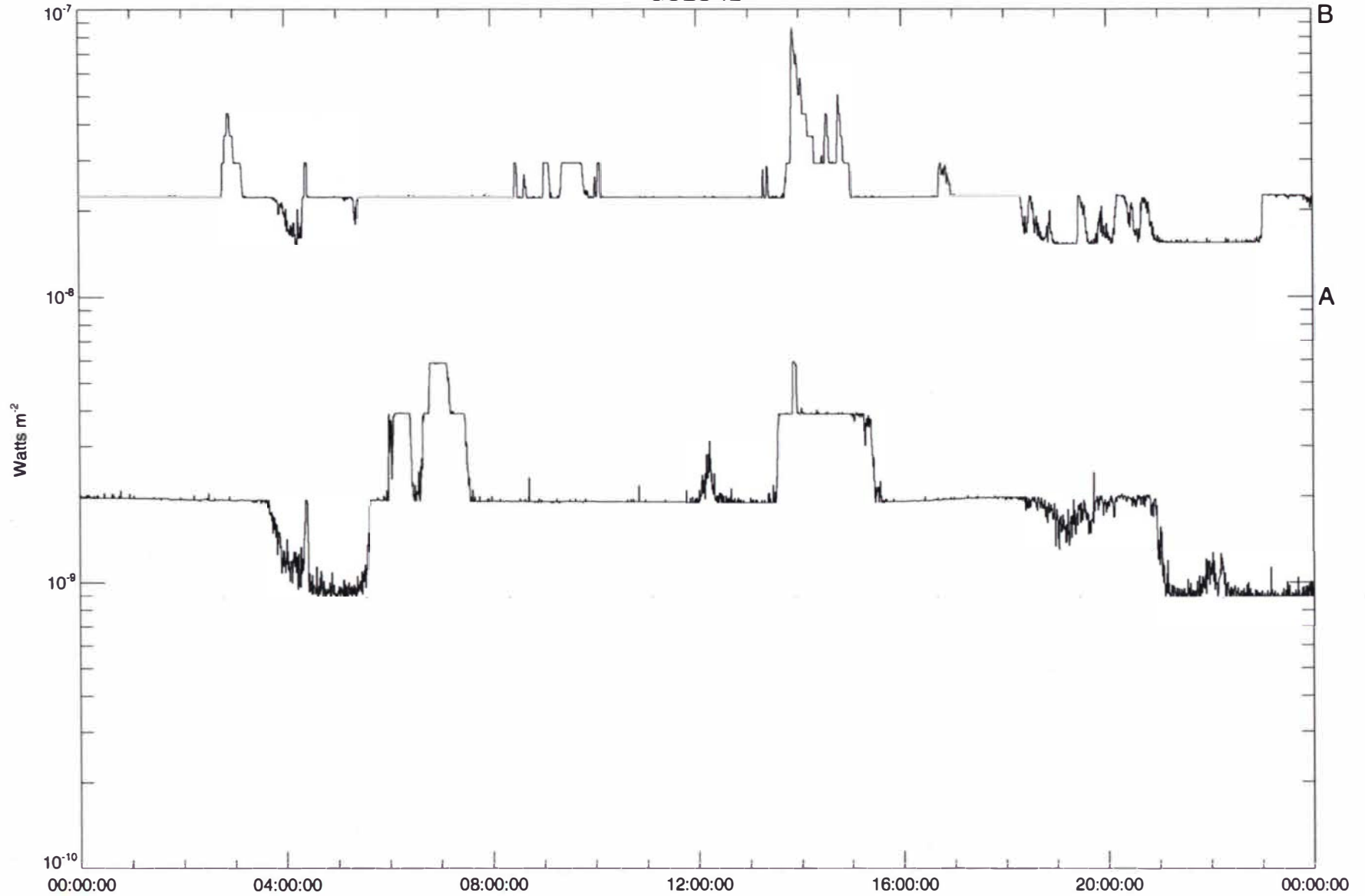
67481.558

18: 44: 41.558

40- 200 keV



GOES 12



Data Start: 07/02/05, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

Background not subtracted

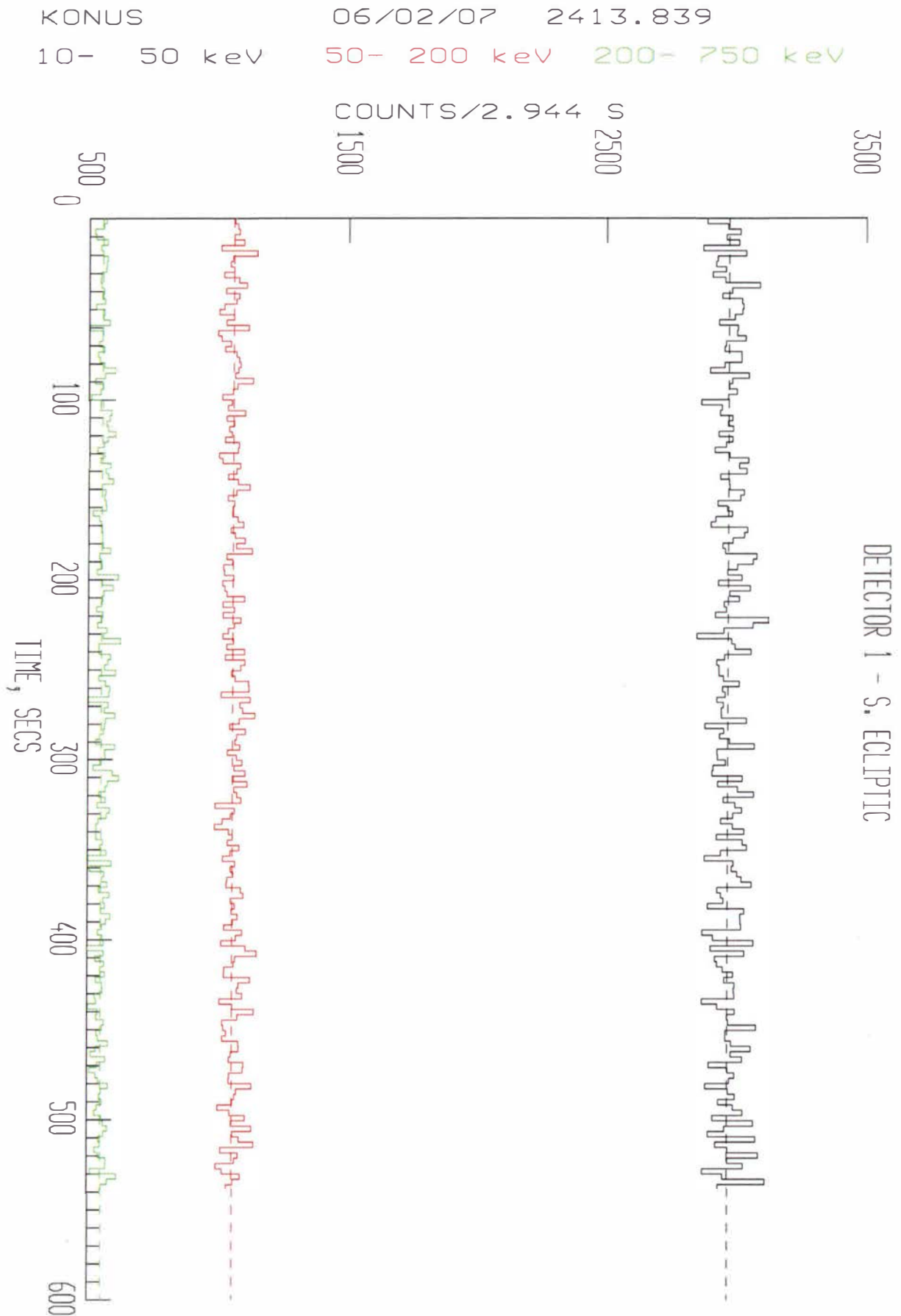
2 (0.5 - 4.0 Angstroms)

Background not subtracted

Plot created: 07/02/08, 0921

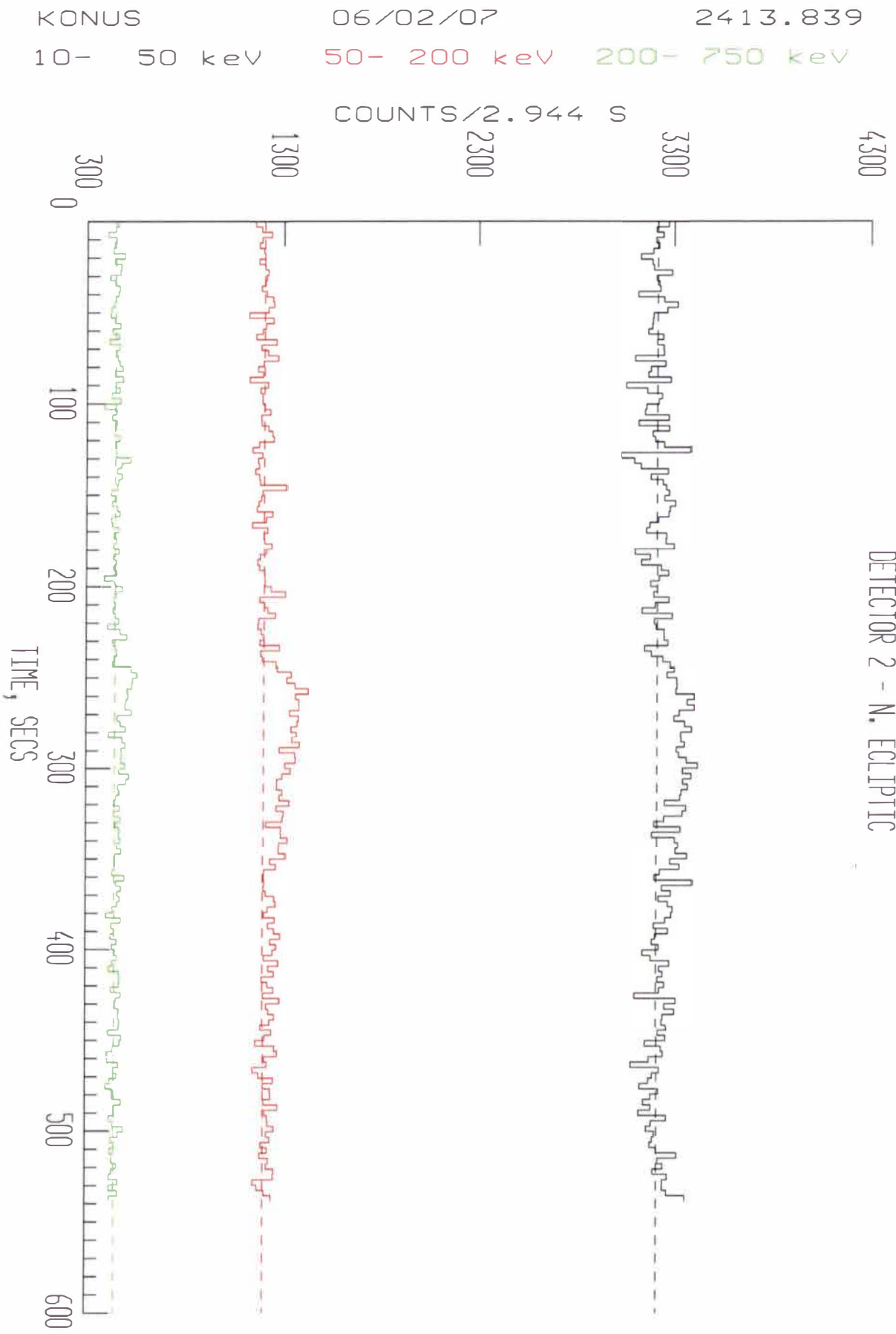
Sample average = 10

EL added to ACCESS



09/08/2010

DETECTOR 2 - N. ECLIPTEIC



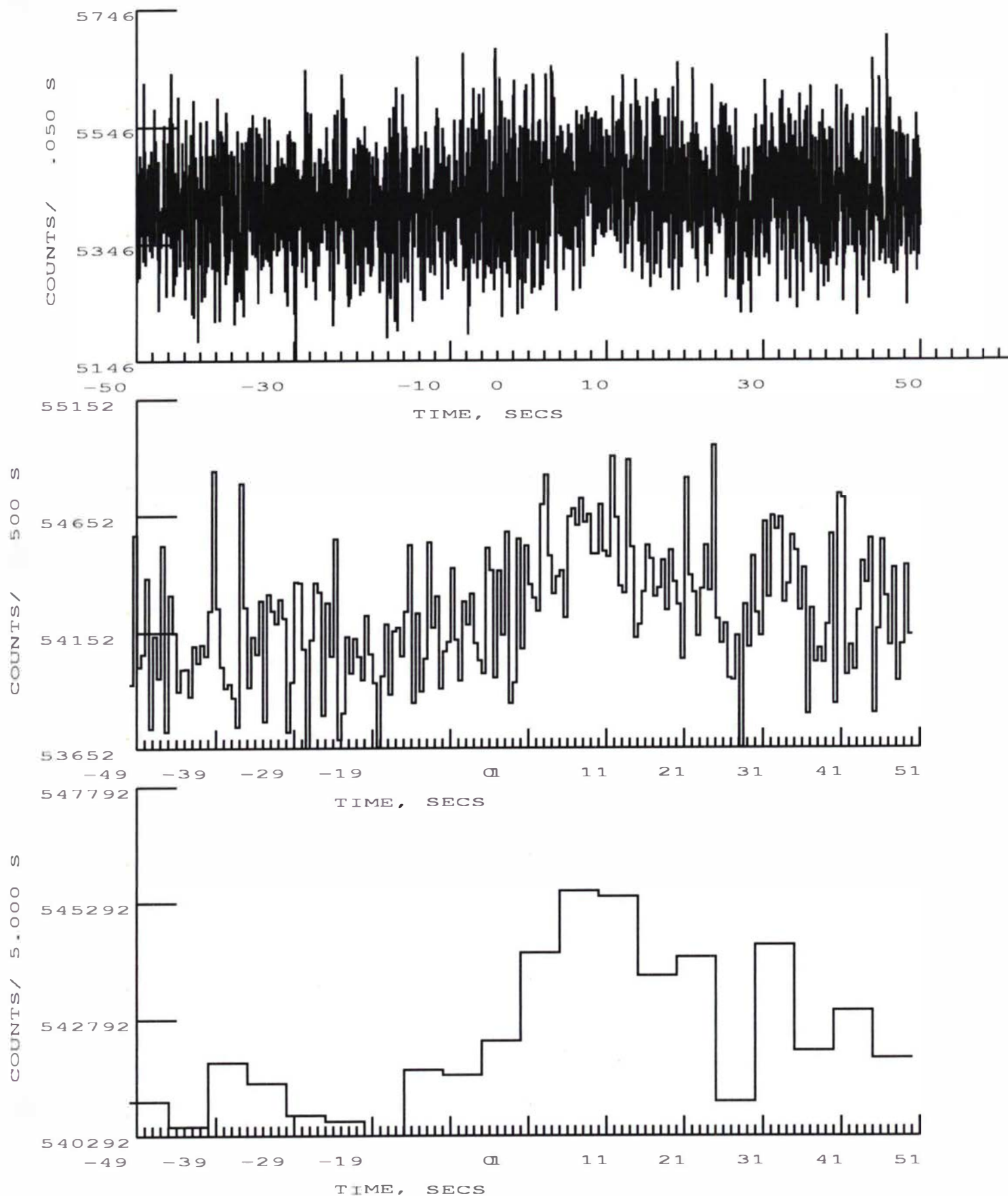
INTEGRAL

06/02/07

2657.000

00:44:17.0

18/07/14



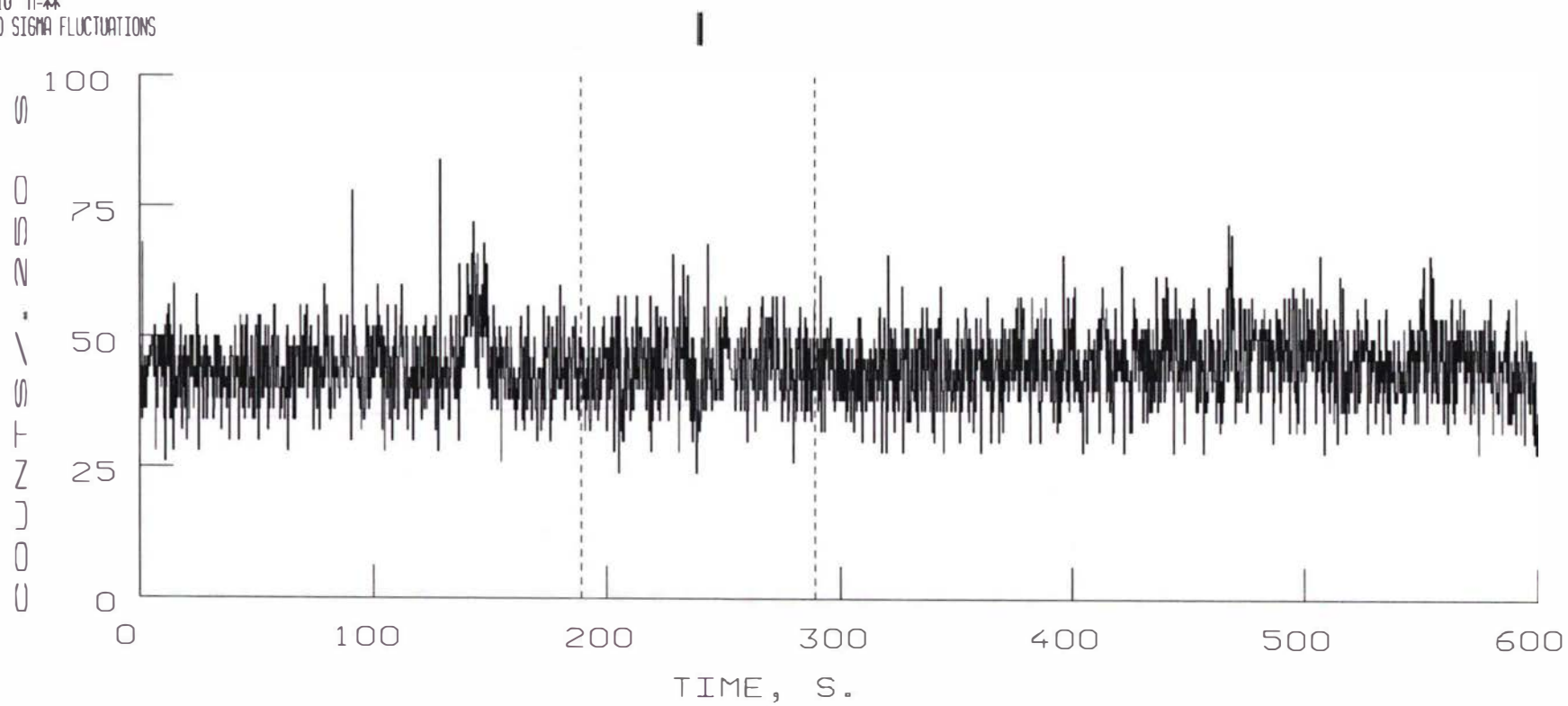
MS01 HEND

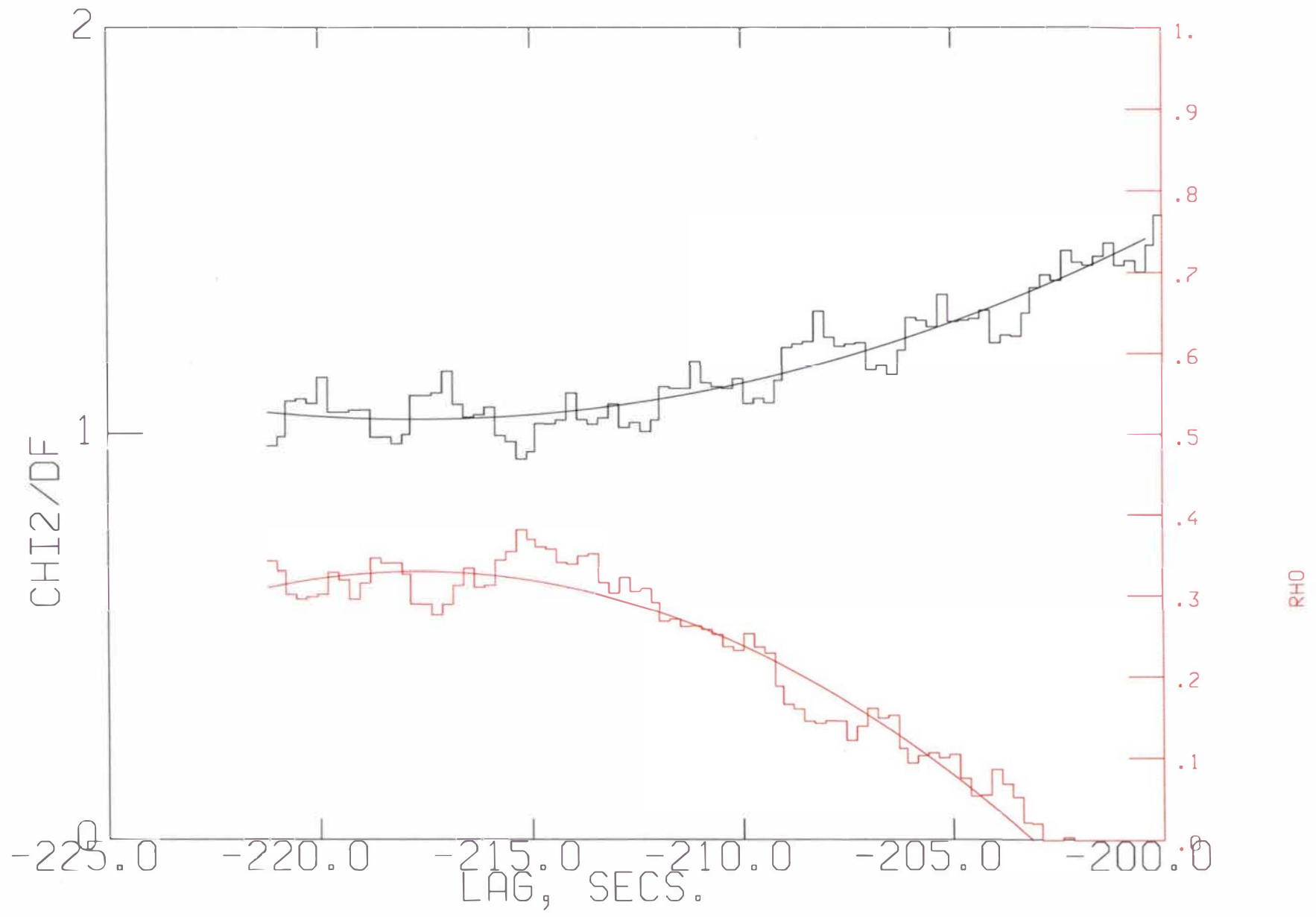
10/08/2010

06/02/2007 1962.832 s

50-3000 keV

N= 10 M=**
>4.0 SIGMA FLUCTUATIONS





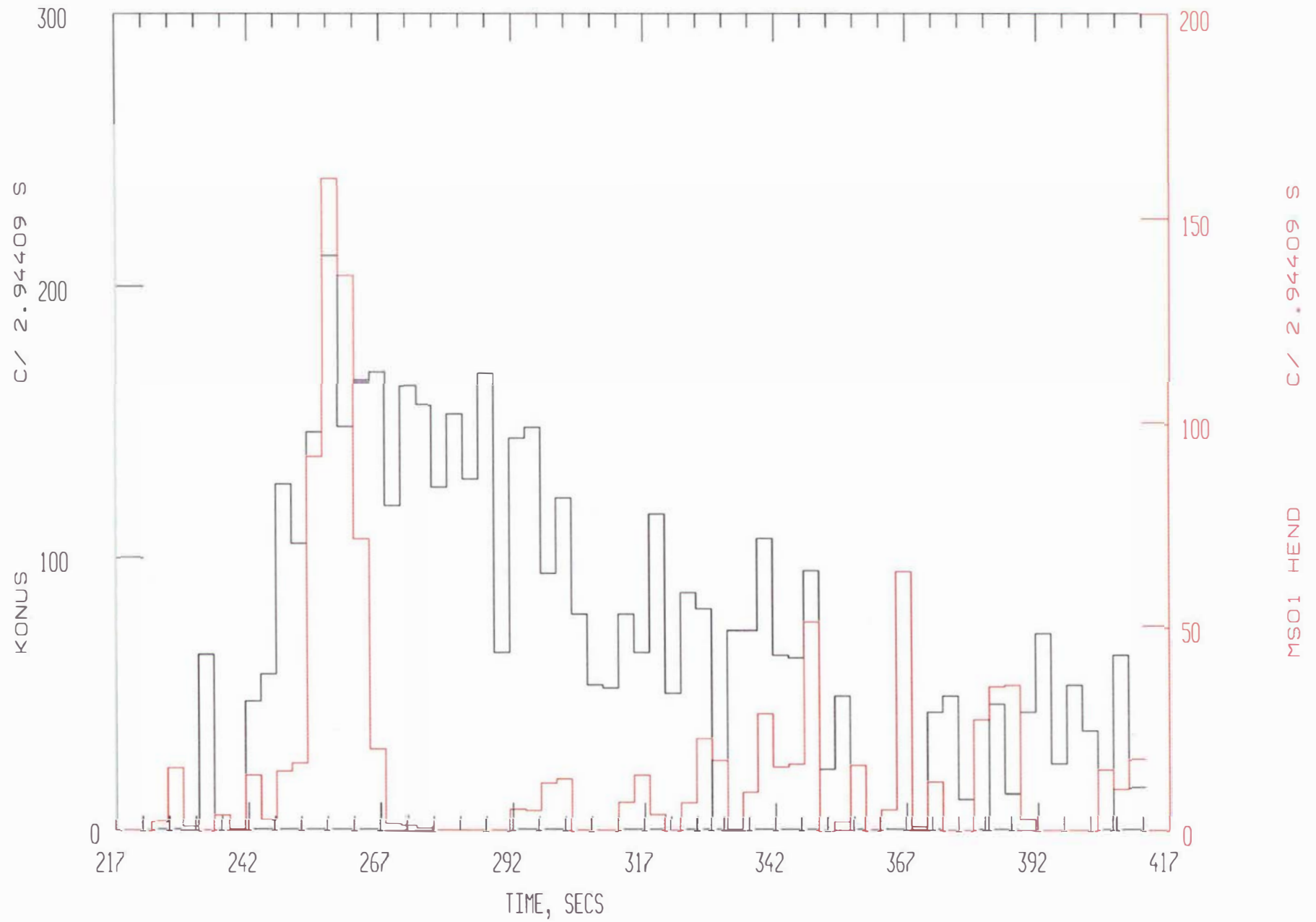
KONUS

-MS01 HEND CORRELATION

06/02/07

2413.839

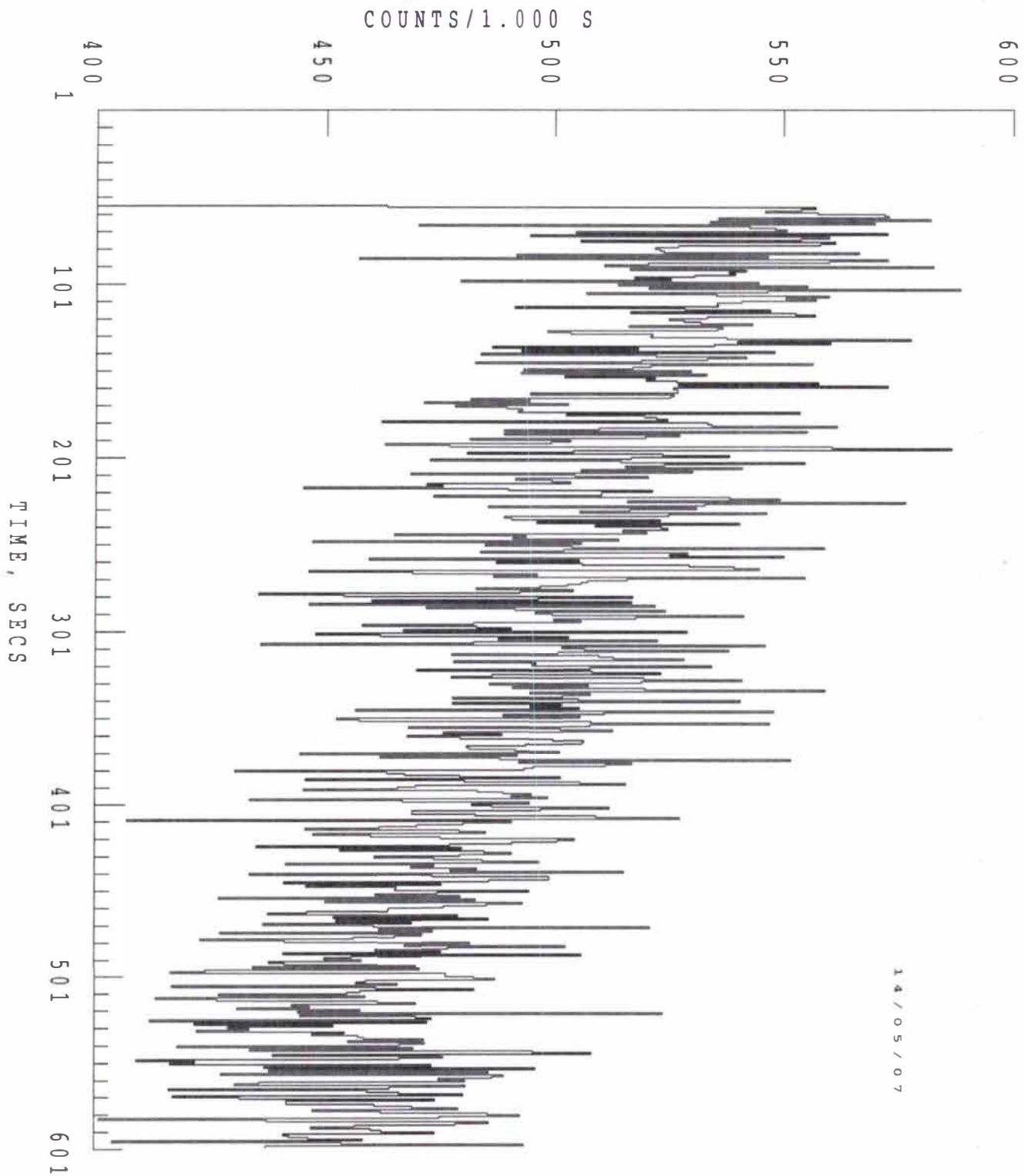
10/ 8/10



HESSI

06/02/07 2357.000 (KONUS_RI_20070206_02657)

25- 150 keV



25/04/07

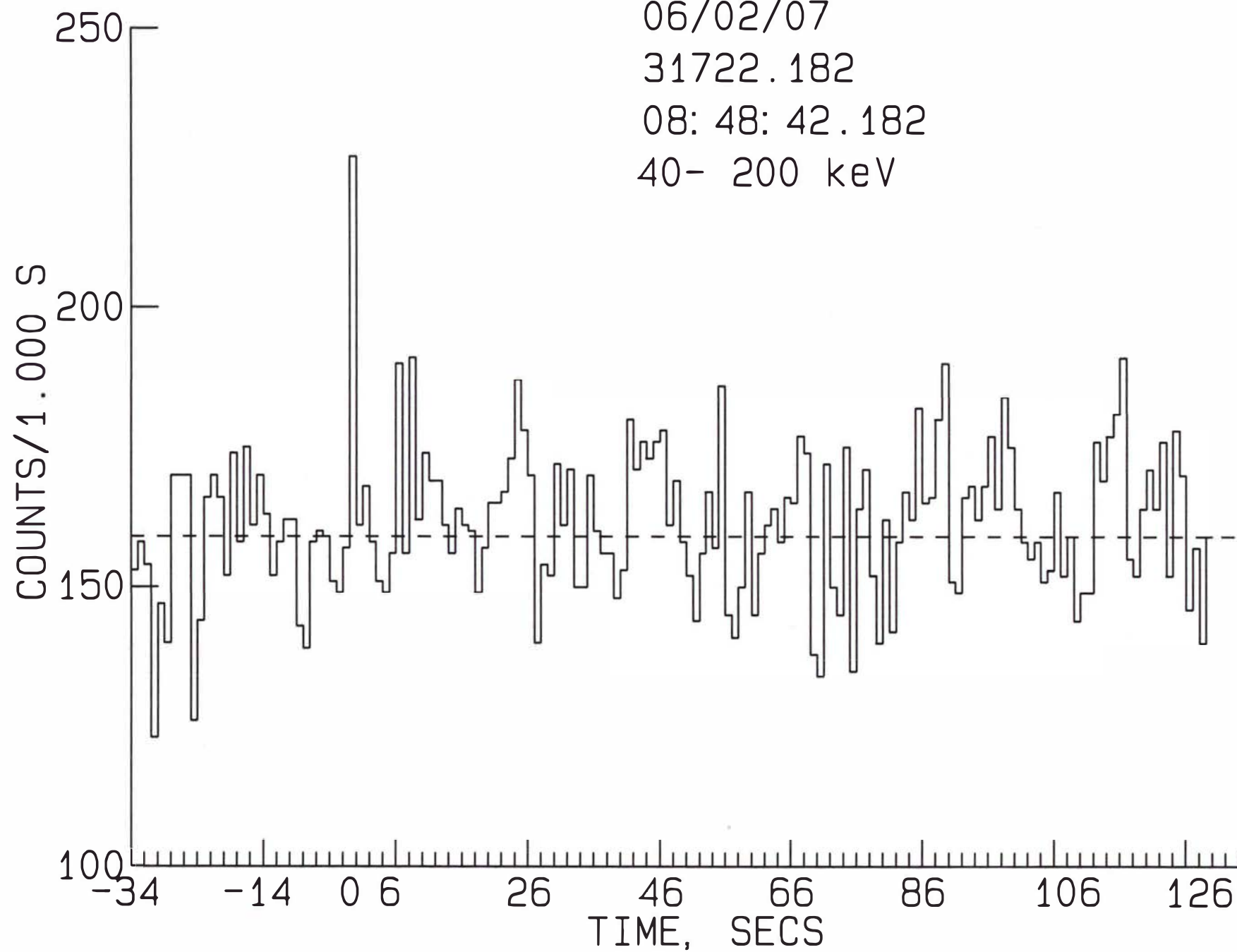
MESSENGER

06/02/07

31722.182

08:48:42.182

40- 200 keV



INTEGRAL

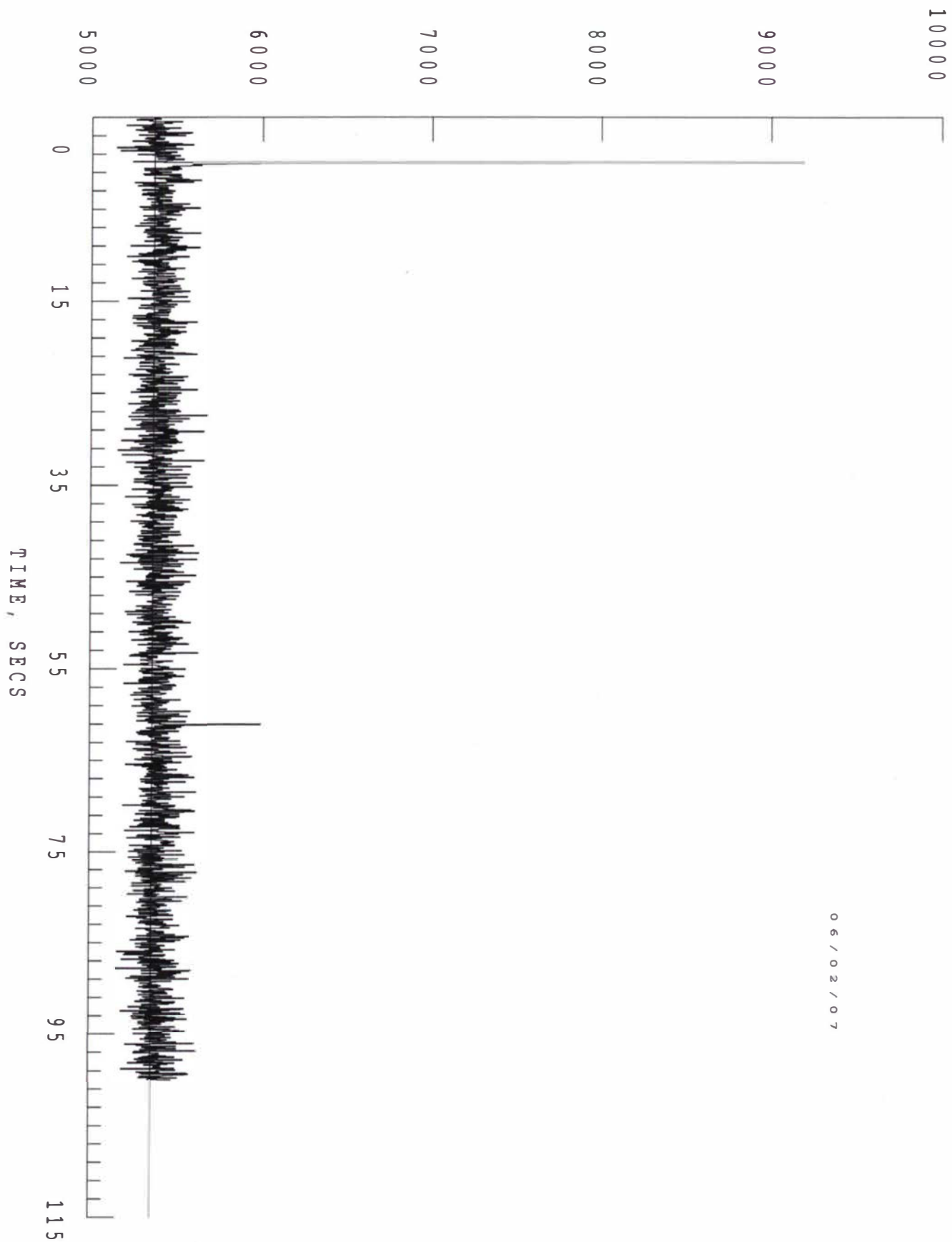
06/02/07

45493.742

100-10000 keV

12:38:13

COUNTS/0.050 S



06/02/07

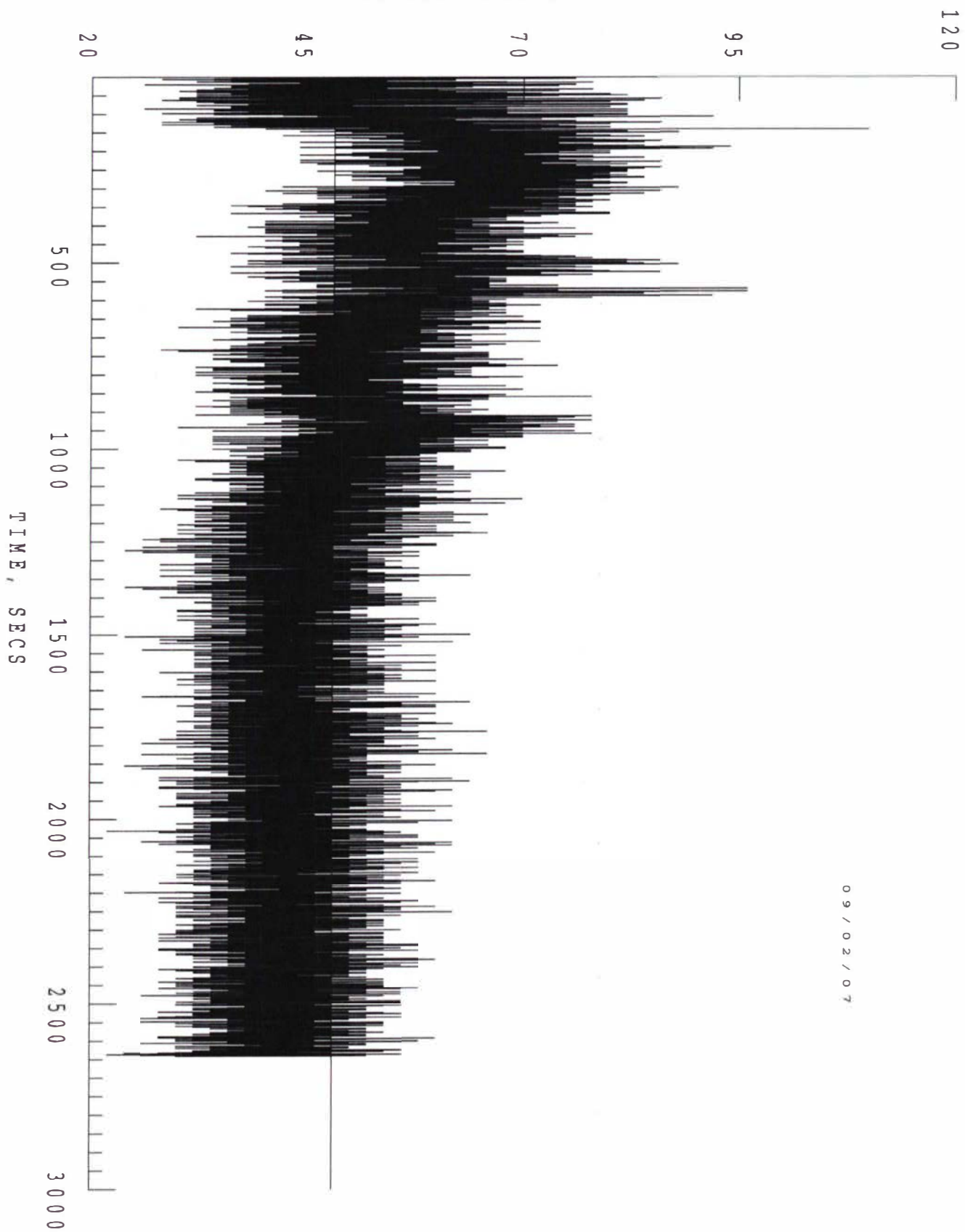
MS01

06/02/07

44142.061

50 - 3000 keV

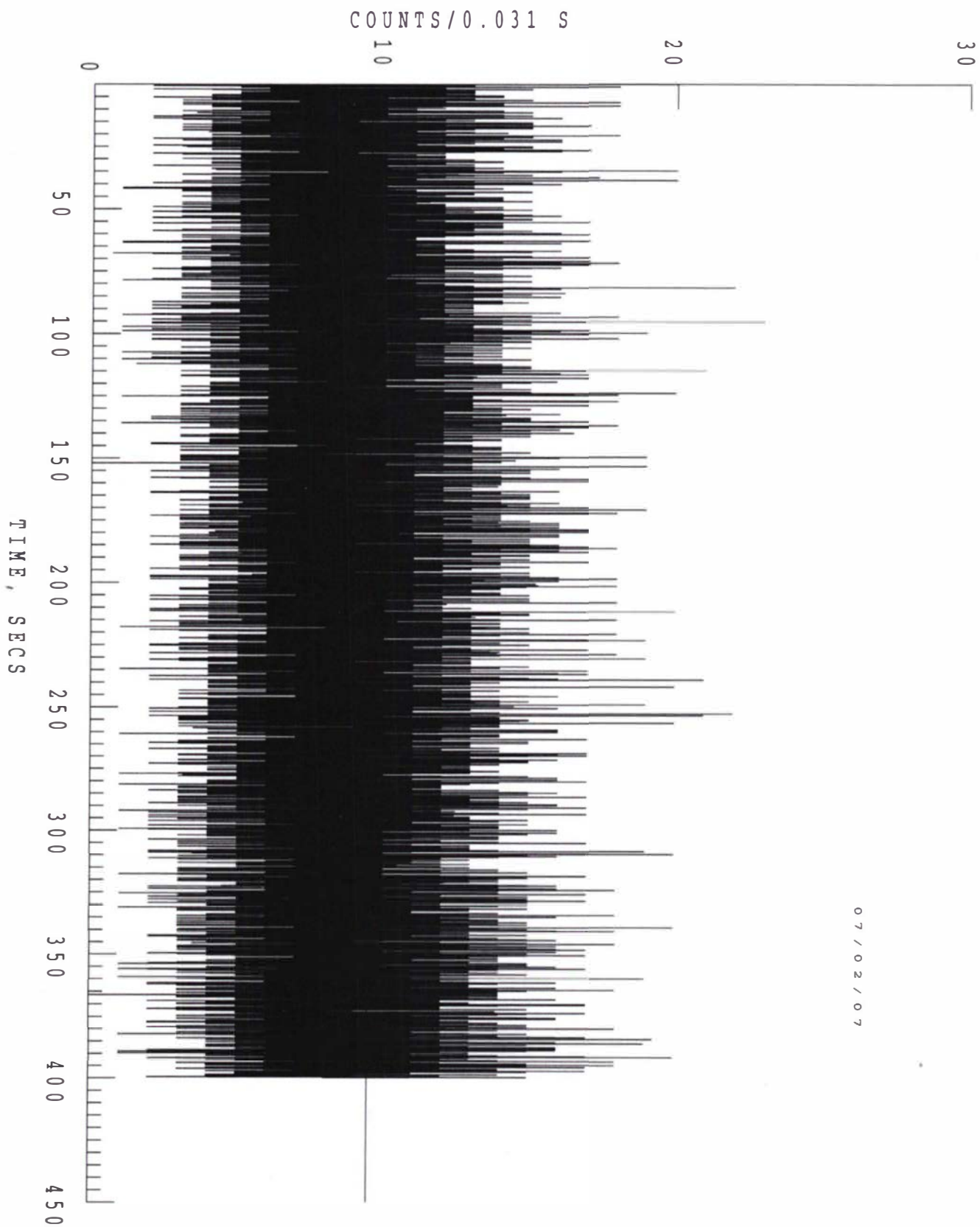
COUNTS/0.250 S

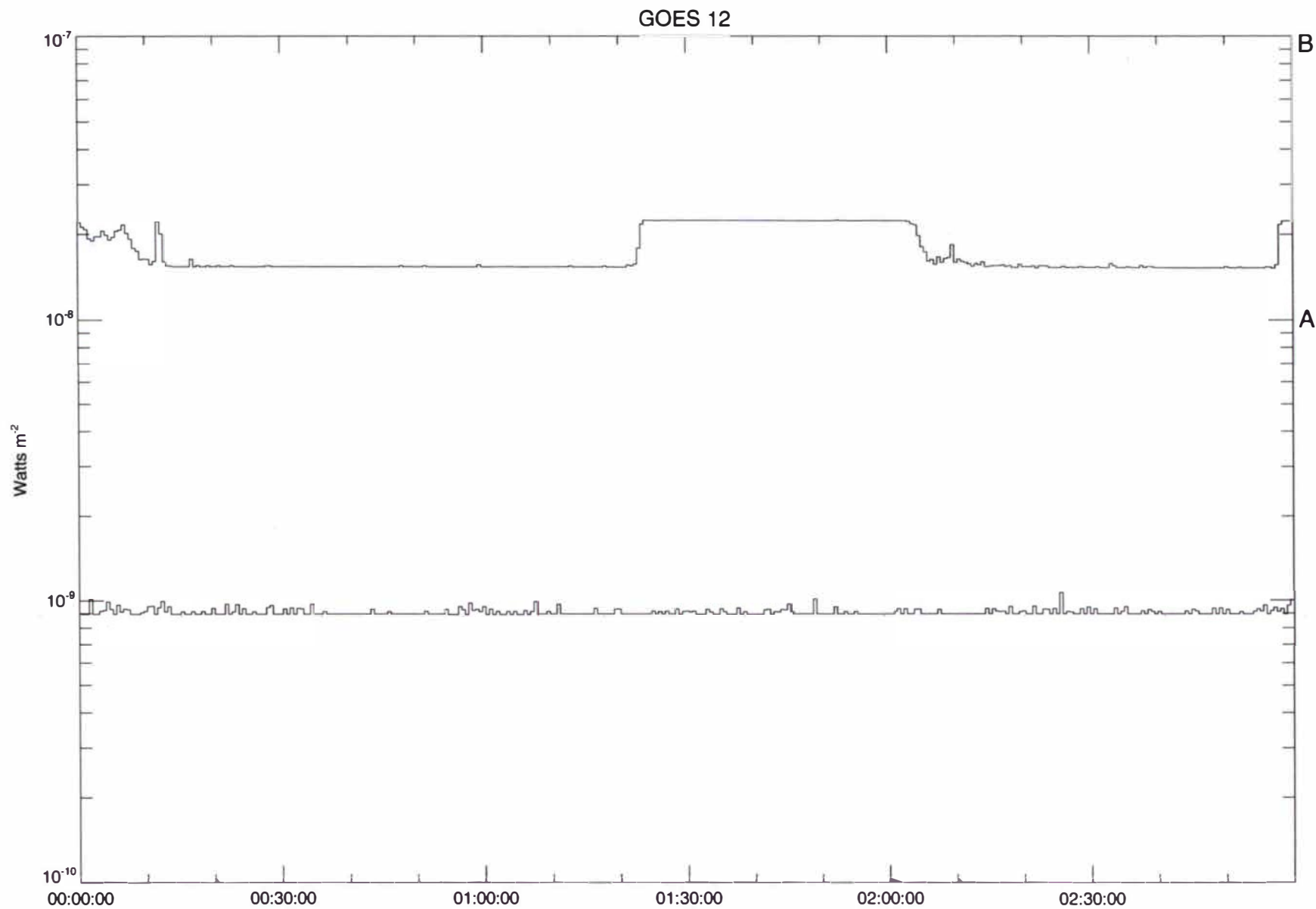


HESSI

06/02/07 45293.000 (INTEGRAL_20070206_45493)

25- 150 keV





Data Start: 07/02/06, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

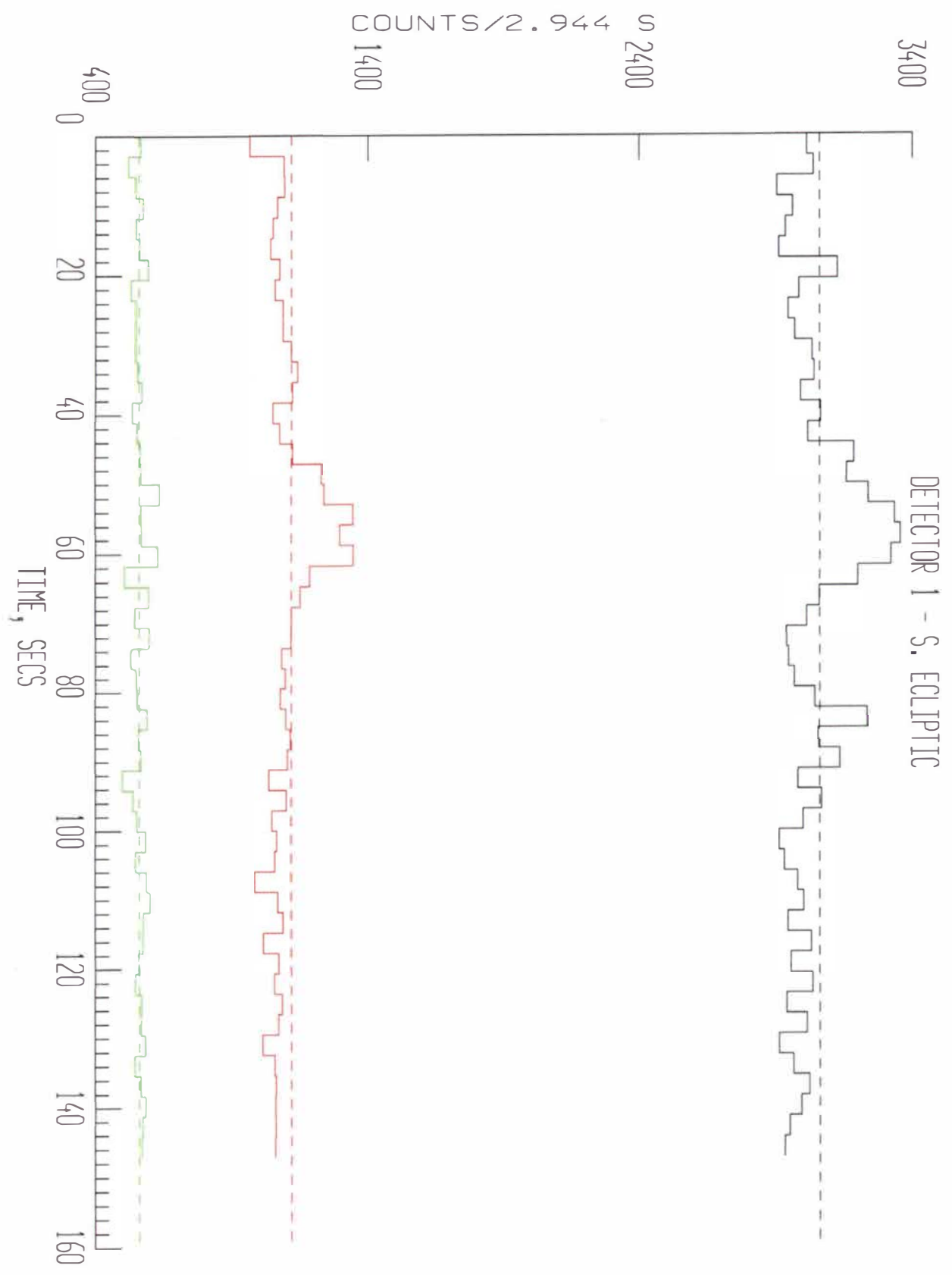
Plot created: 07/02/09, 0921

Sample average = 10

A

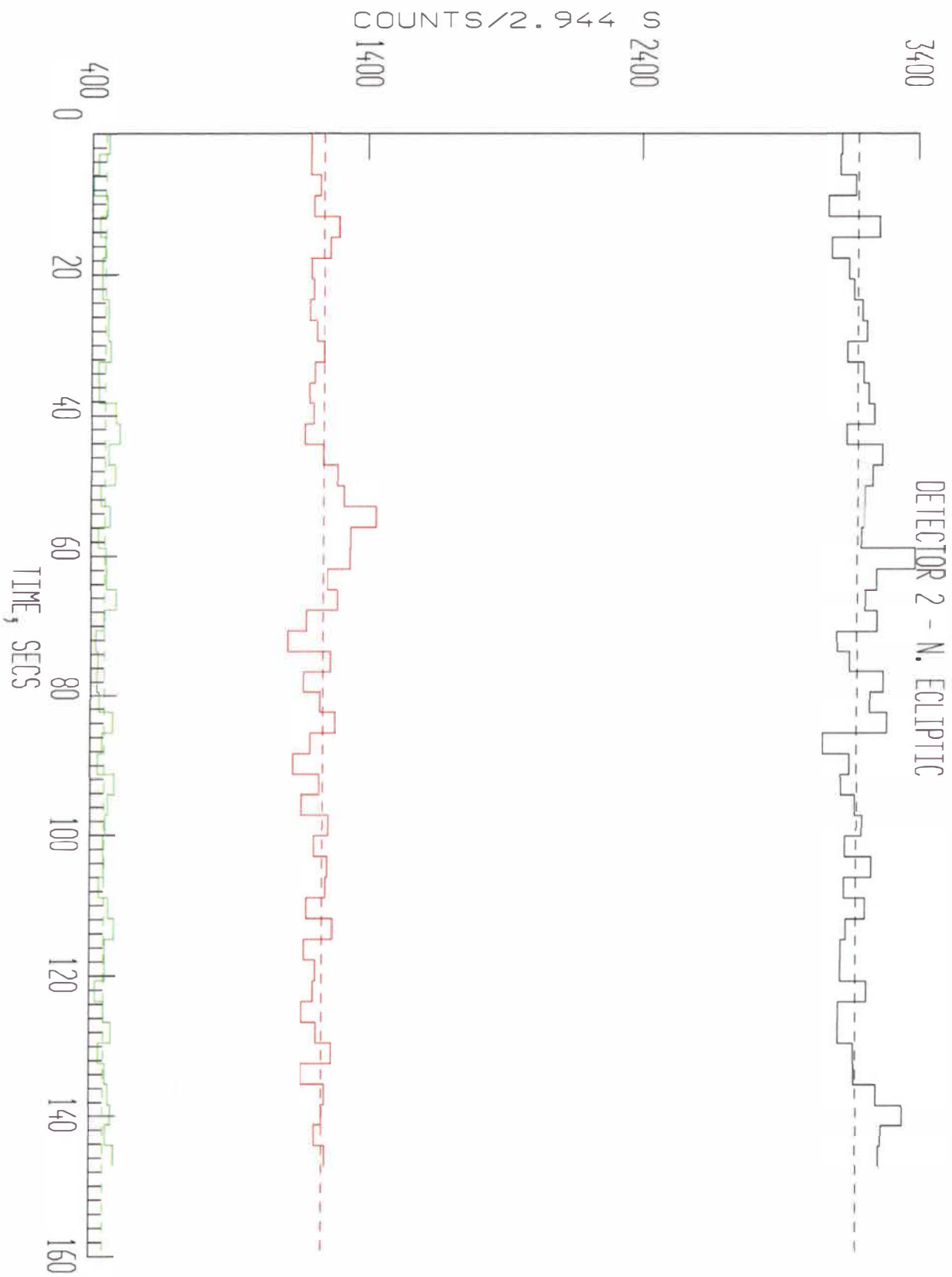
EL added to ACCESS

KONUS 07/02/07 15615.237
10- 50 keV 50- 200 keV 200- 750 keV



09/08/2010

KONUS 07/02/07 15615.237
10- 50 keV 50- 200 keV 200- 750 keV



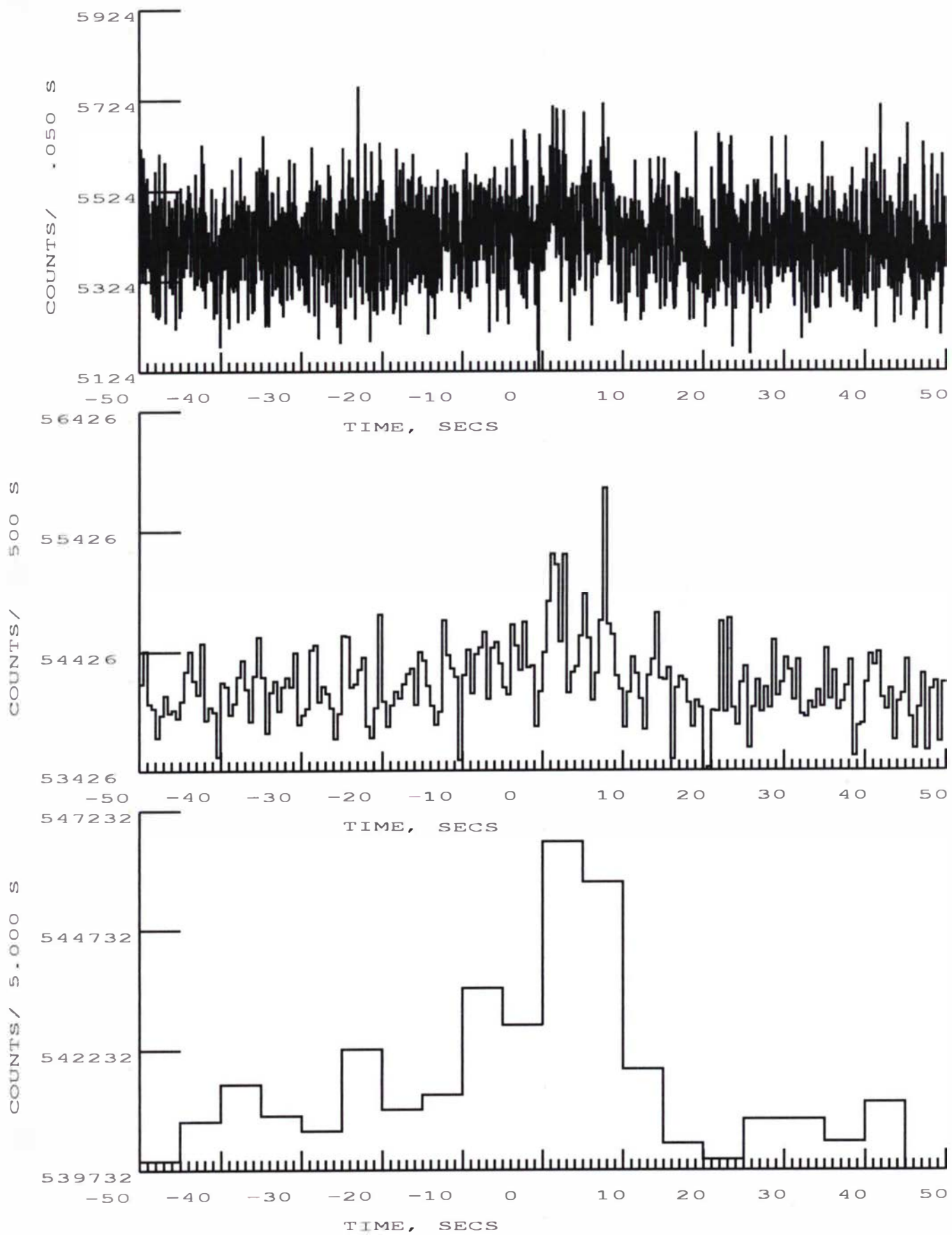
INTEGRAL

07/02/07

15664.000

04:21:04.0

18/07/14



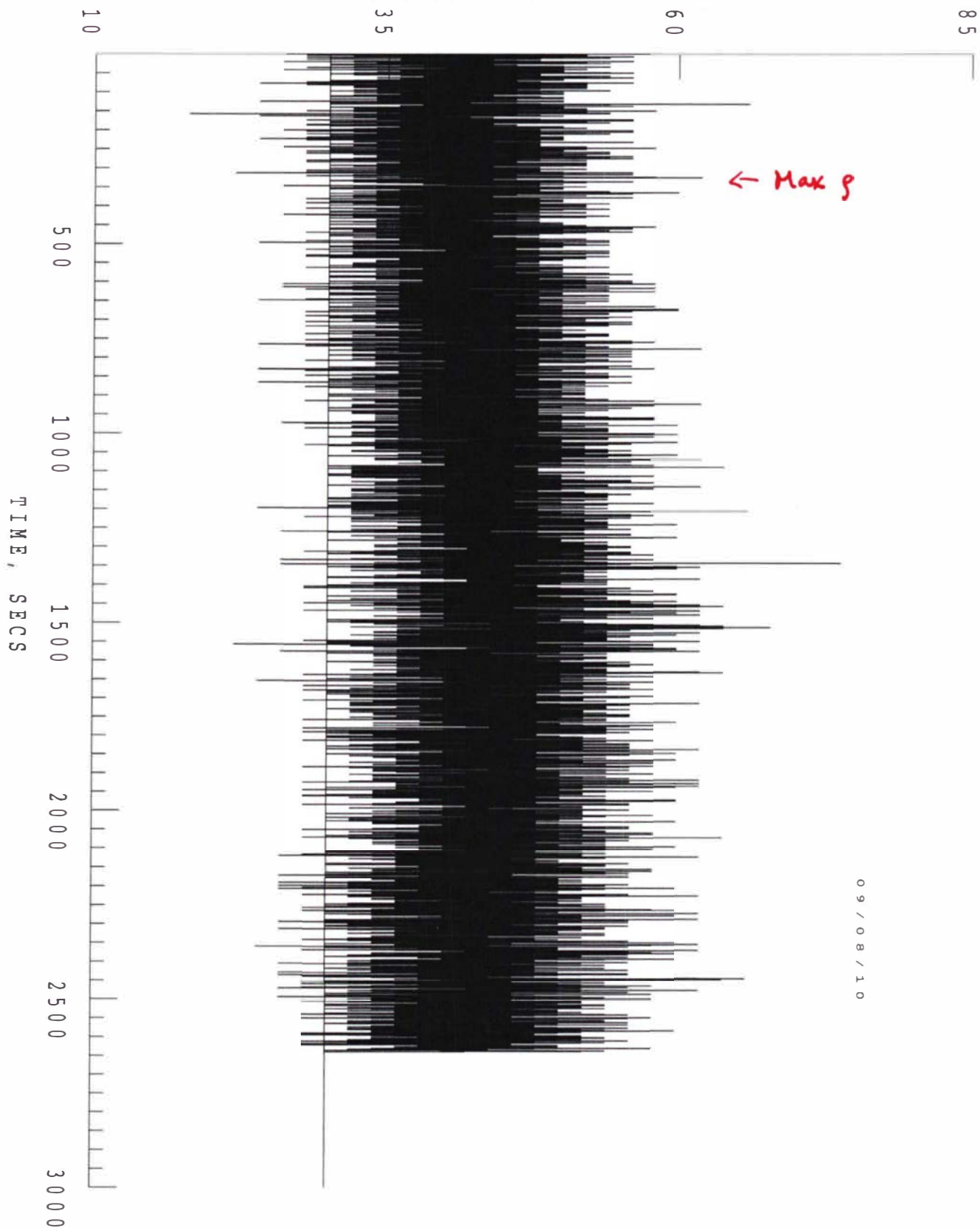
MS01

07/02/07

14321.019

50 - 3000 keV

COUNTS/0.250 S



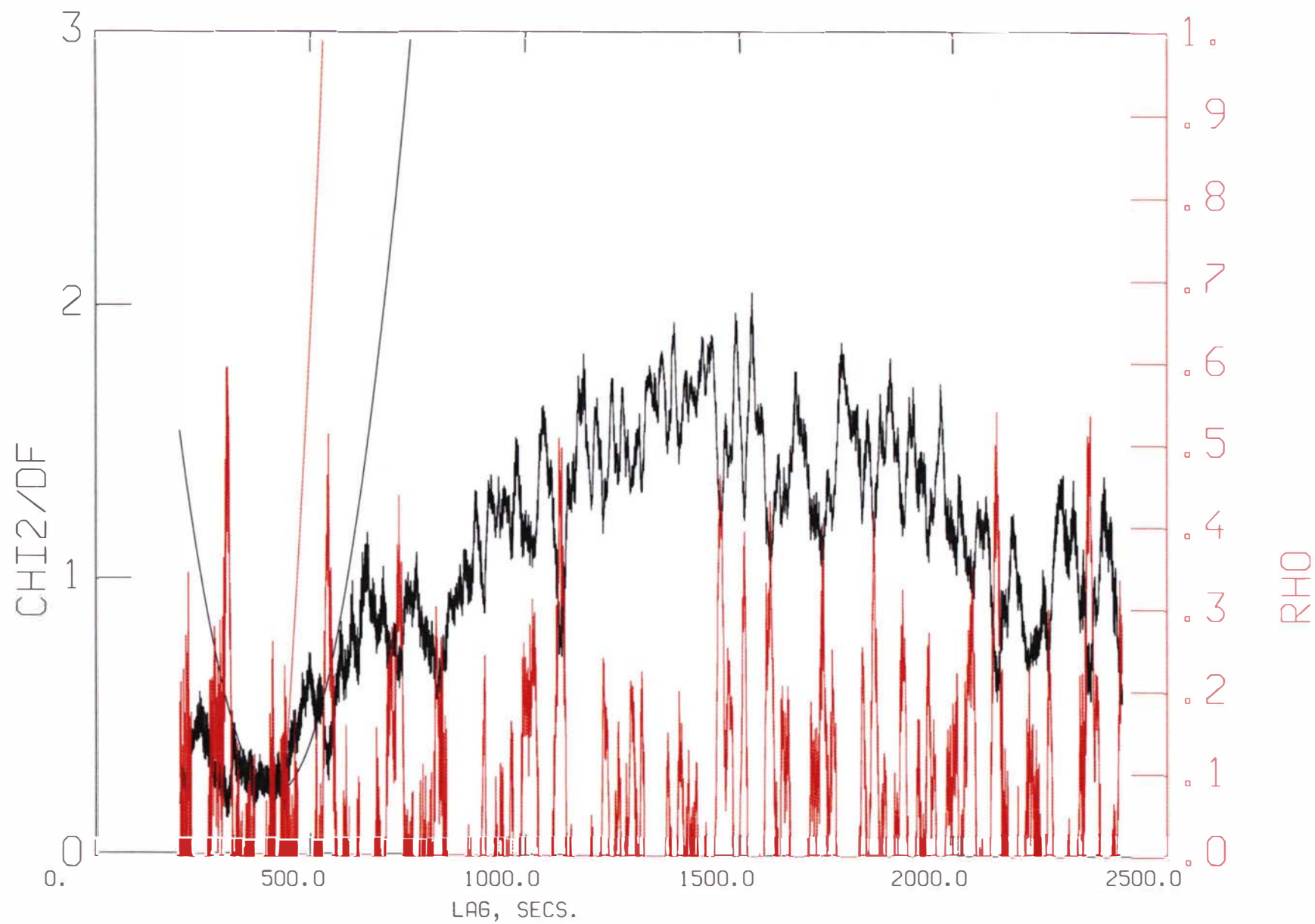
KONUS

-MS01 HEND CORRELATION

07/02/07

15615.237

10/ 8/10



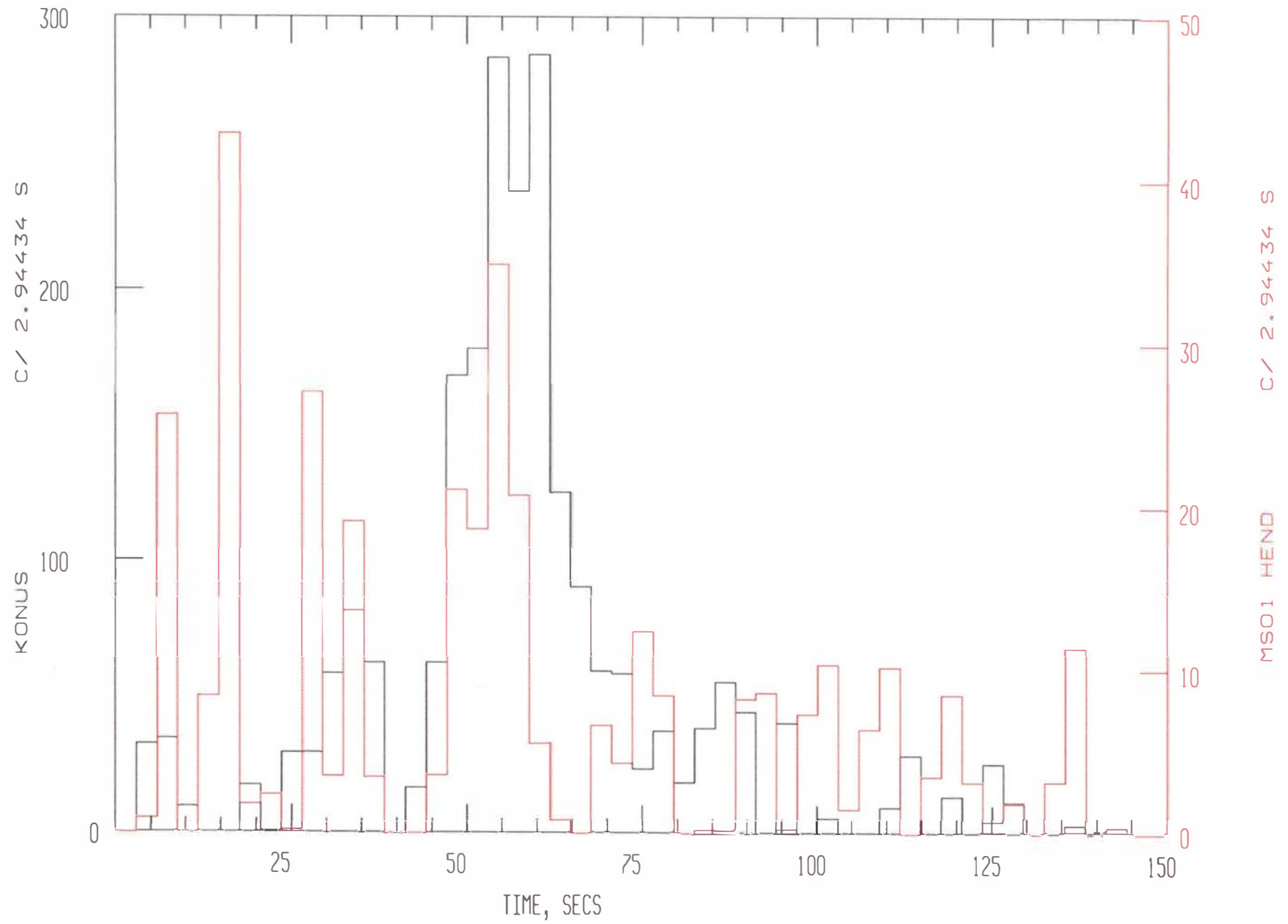
KONUS

-MS01 HEND CORRELATION

07/02/07

15615.237

10/ 8/10

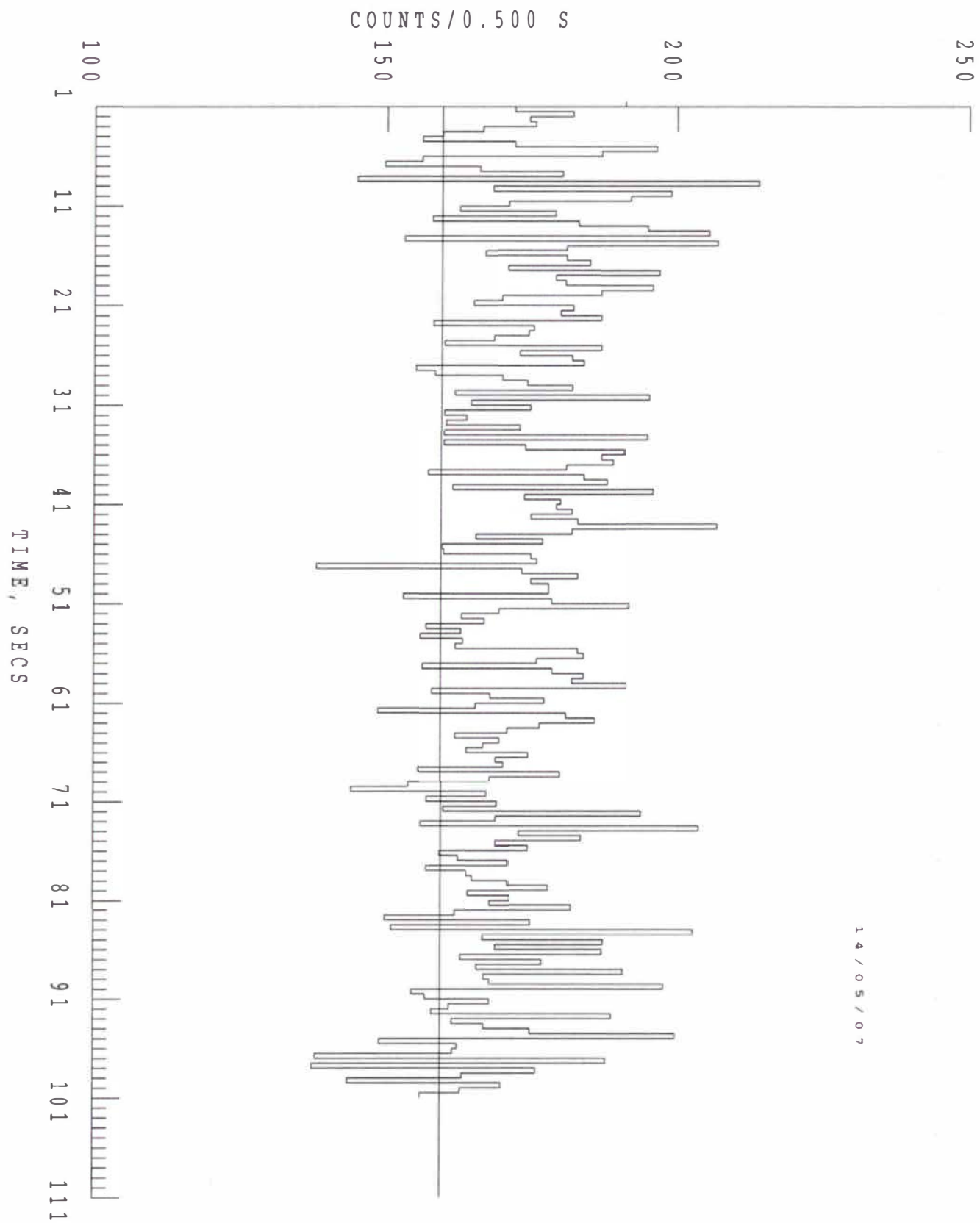


HESSI

07/02/07 15613.000 (KONUS_RI_20070207_15664)

A

25- 150 keV



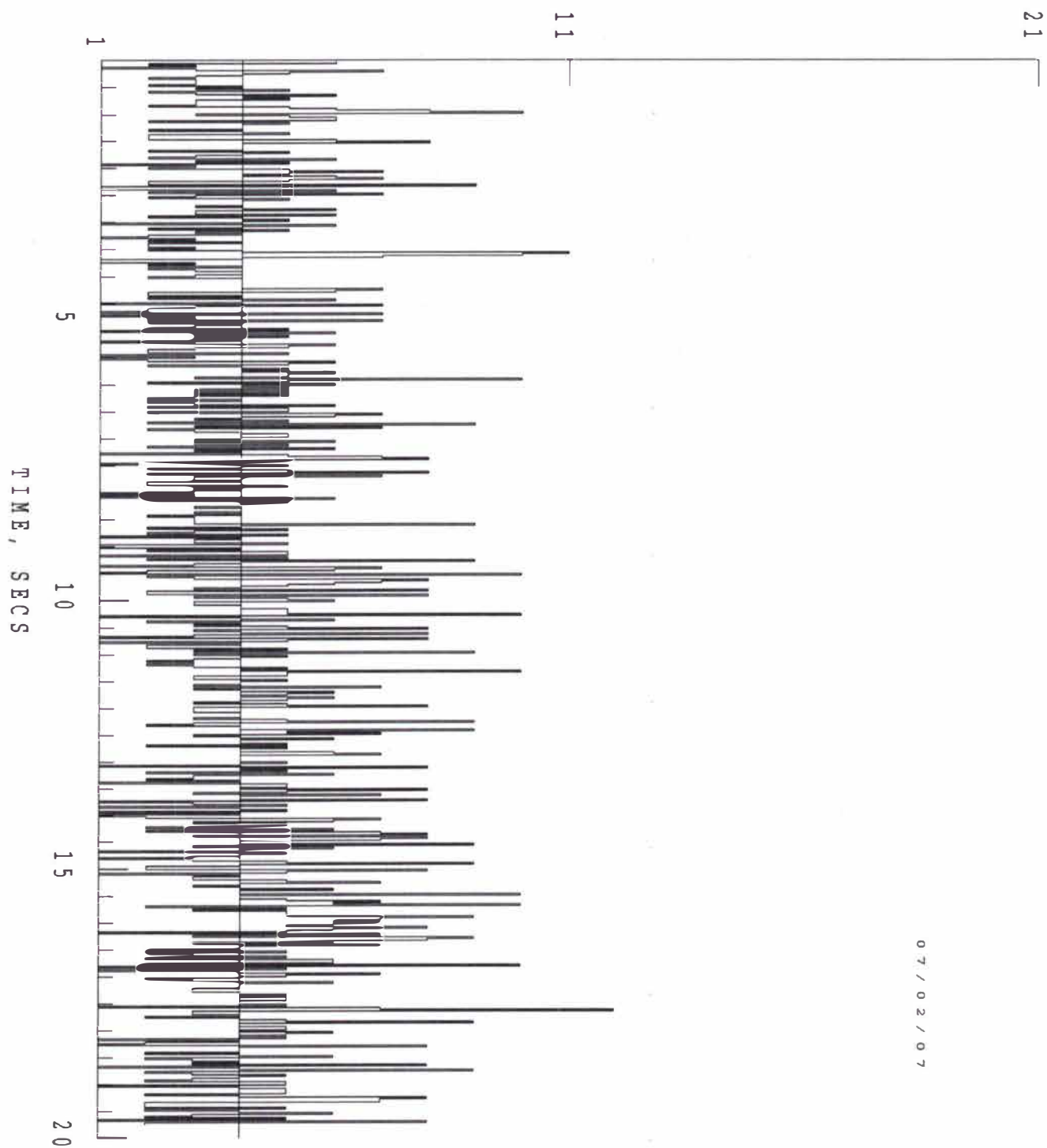
MO

07/02/07

38580.161

116- 337 keV

COUNTS/0.032 S



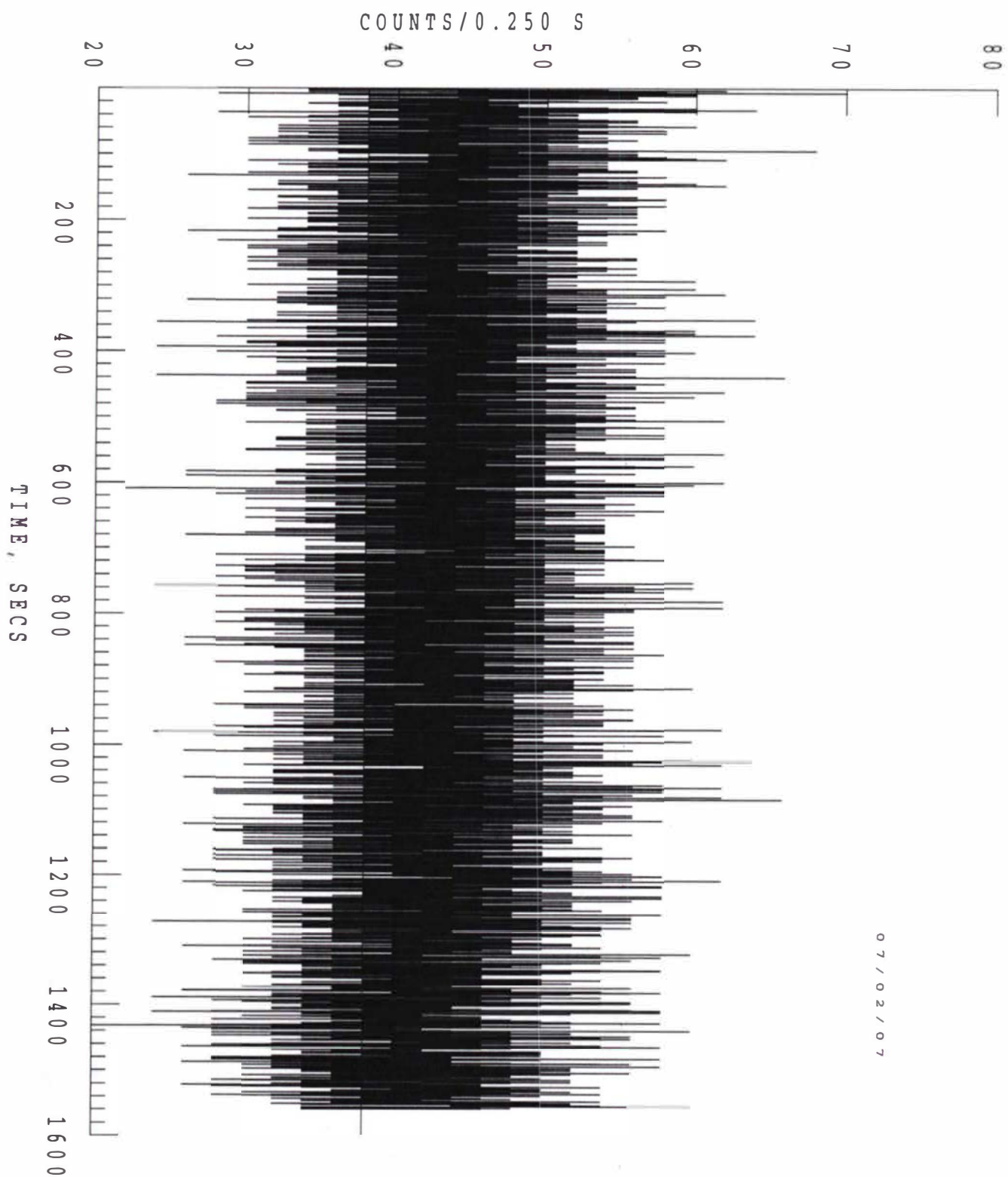
07/02/07

MS01

07/02/07

37241.597

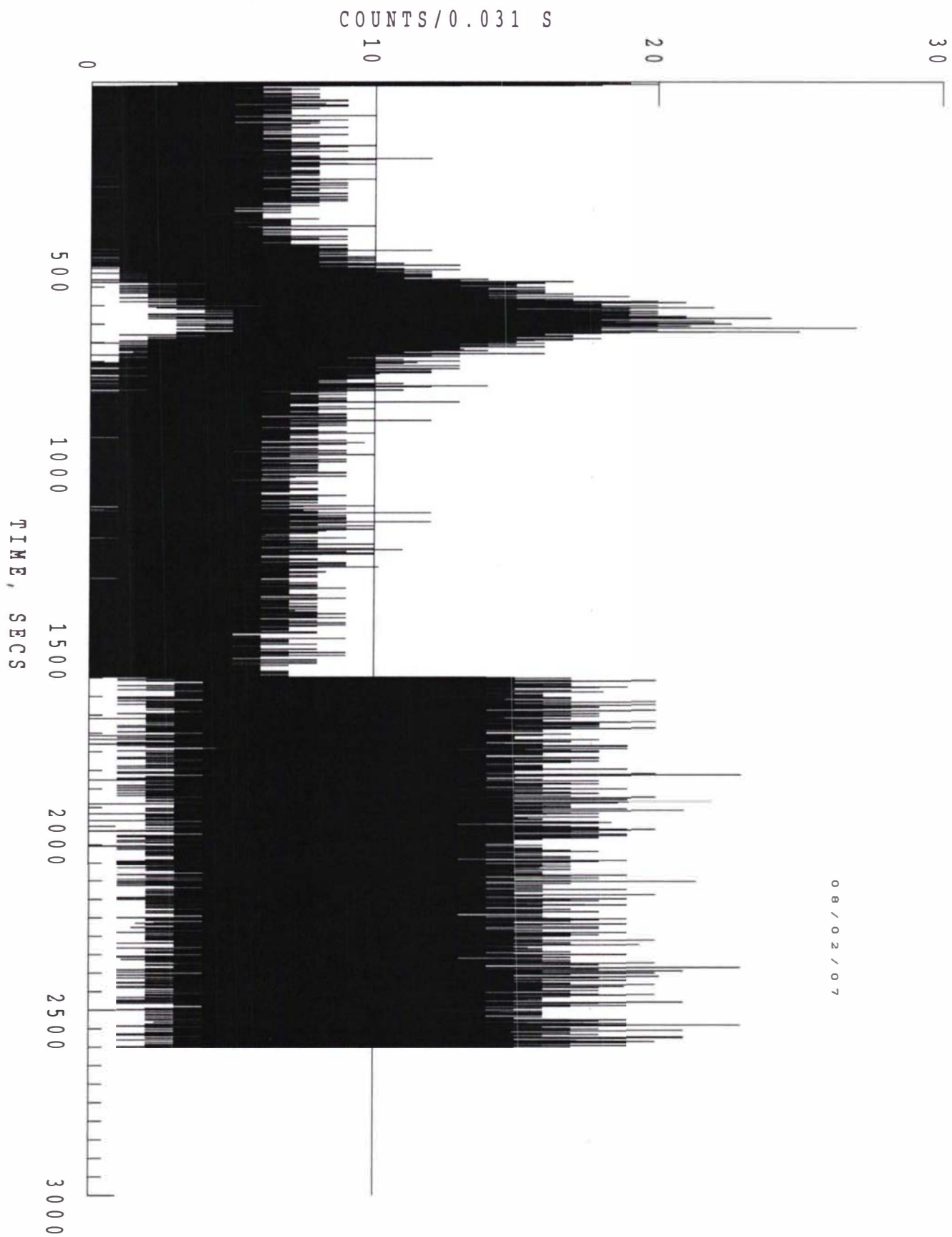
50 - 3000 keV



HESSI

07/02/07 37280.000 (MO_GE_20070207_38580)

25- 150 keV



From atel@astronomerstelegam.org Wed Feb 7 22:36:39 2007
X-ASG-Debug-ID: 1170916734-6c07000b0000-HMYXr3
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: astronomerstelegam.org[69.5.7.158]
-Barracuda-Start-Time: 1170916734
X-Originating-IP: [69.5.7.158]
To: khurley@sunspot.ssl.berkeley.edu
From: atel@astronomerstelegam.org
X-ASG-Orig-Subj: ATel 990, 991, 992, 993
Subject: ATel 990, 991, 992, 993
Date: Wed, 7 Feb 2007 22:38:54 -0800 (PST)
X-Barracuda-Bayes: INNOCENT GLOBAL 0.5000 1.0000 0.0000
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.8064

Rule breakdown below

pts	rule name	description	No GRS, MES, or SPIACS tags
0.55	NO_REAL_NAME	From: does not include a real name	
0.70	MSGID_FROM_MTA_ID	Message-Id for external message added locally	
0.50	BSF_SC0_SA074c	URI: Custom Rule SA074c	

The Astronomer's Telegram

<http://www.astronomerstelegam.org>

Posted: Wed Feb 7 01:30:02 EST 2007 -- Thu Feb 8 01:30:02 EST 2007
=====

ATEL #993

ATEL #993

title: Large X-ray Burst from Anomalous X-ray Pulsar 4U 0142+61
author: F. P. Gavriil (NASA/GSFC), R. Dib, V. M. Kaspi (McGill U.),
P. M. Woods (Dynerics)
Queries: vkaspi@physics.mcgill.ca
Posted: 8 Feb 2007; 2:35 UT
Subjects: Radio, Infra-Red, Optical, X-ray, Request for Observations,
Neutron Stars, Pulsars, Soft Gamma-ray Repeaters, Transients

38959 MCT 39405
At approximately 10:04:19 UTC on 7 February 2007 (MJD 54138.42), the Anomalous X-ray Pulsar 4U 0142+61 exhibited a large fast-rise X-ray burst, followed by a lengthy tail, during routine RXTE/PCA monitoring observations. On a 31-ms time scale, the count rate at the burst peak was approximately 3600 counts/s for 2 operational PCUs, in the 2-60 keV range, which corresponds roughly to a peak flux of $\sim 4 \times 10^{-8}$ erg/s/cm². The burst was followed by an extended tail that lasted 20-30 mins upon which were superimposed, for approximately the first minute, bright single pulses at the nominal pulse period. Further details will be provided as available. Observations at all wavelengths, particularly optical, near and mid-infrared are encouraged.

Password Certification: Victoria Kaspi (vkaspi@physics.mcgill.ca)
<http://www.astronomerstelegam.org/?read=993>
=====

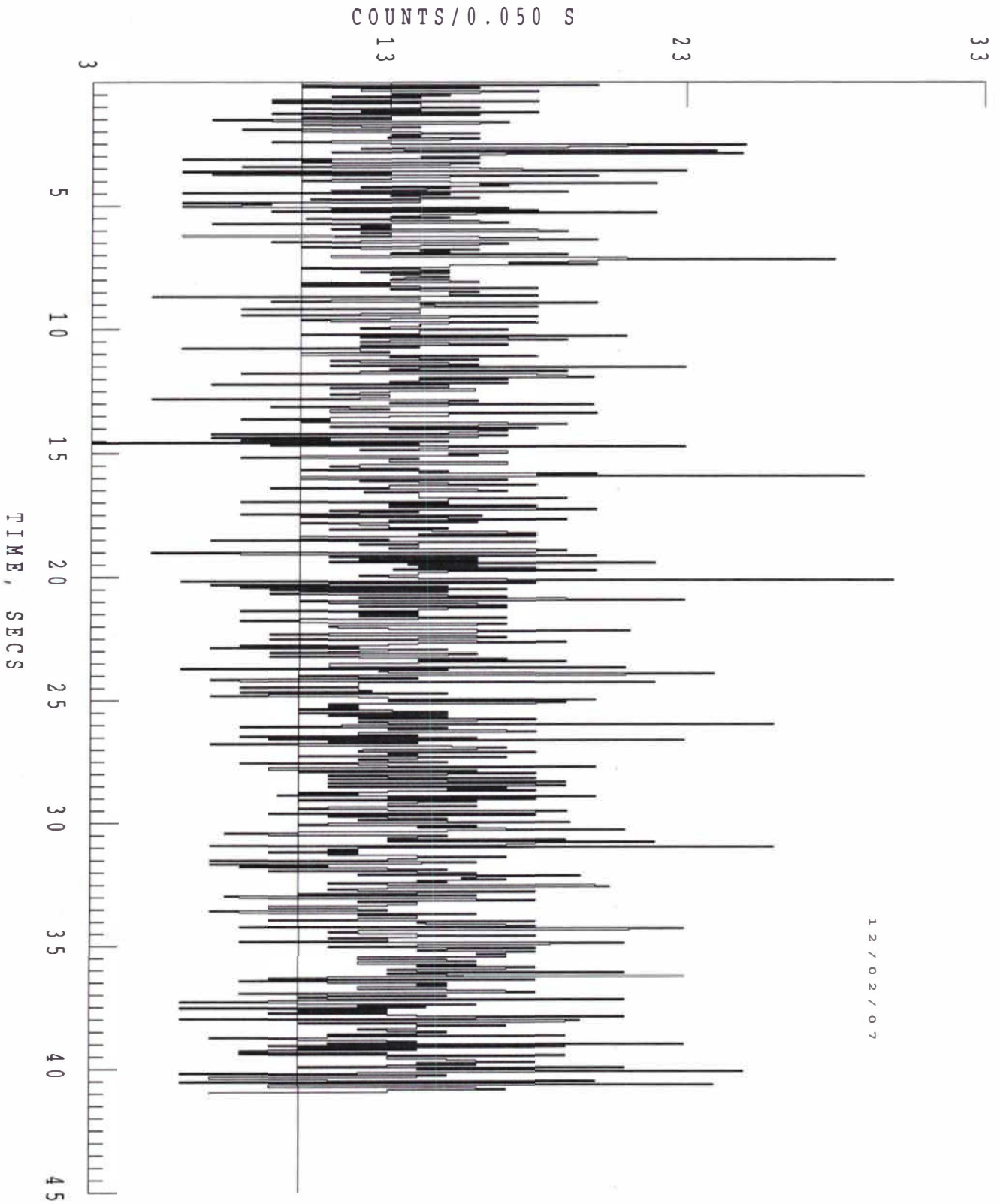
Your keywords: Radio, Optical, X-ray, Gamma Ray, >GeV, Gamma-Ray Bursts, Novae, Soft Gamma-ray Repeaters, Supernovae
=====

This is an automatically-generated notice. If you'd like to be removed from the mailing list, please visit the The Astronomer's Telegram at <http://www.astronomerstelegam.org>.

HESSI

07/02/07 38938.000 (4U0142_20070207_38959)

25- 150 keV



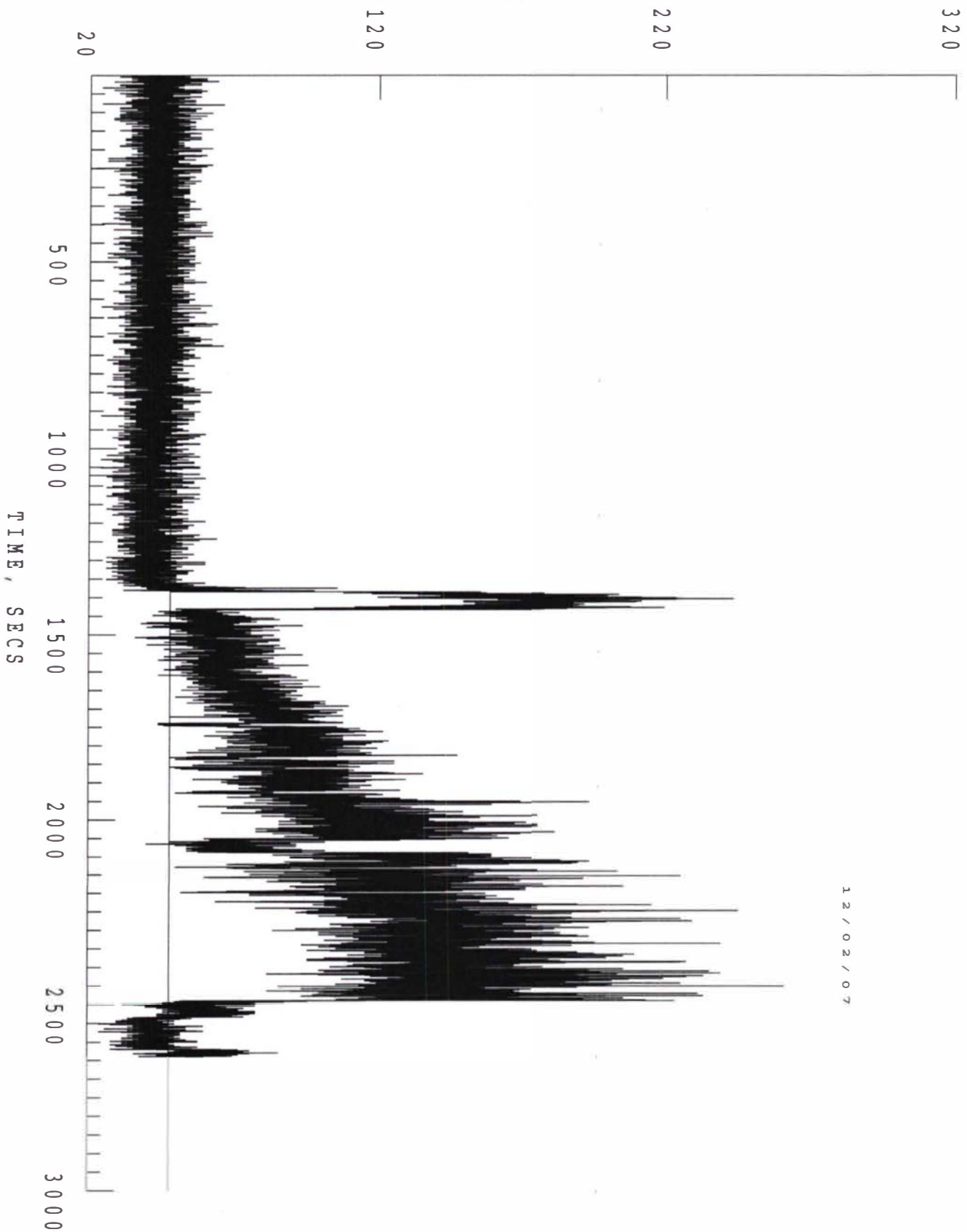
MS01

07/02/07

37600.592

50 - 3000 keV

COUNTS/0.250 S



12/02/07

Date: Nov 10 '08

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

N/A

- ☐ 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

N/A

- ☐ 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?

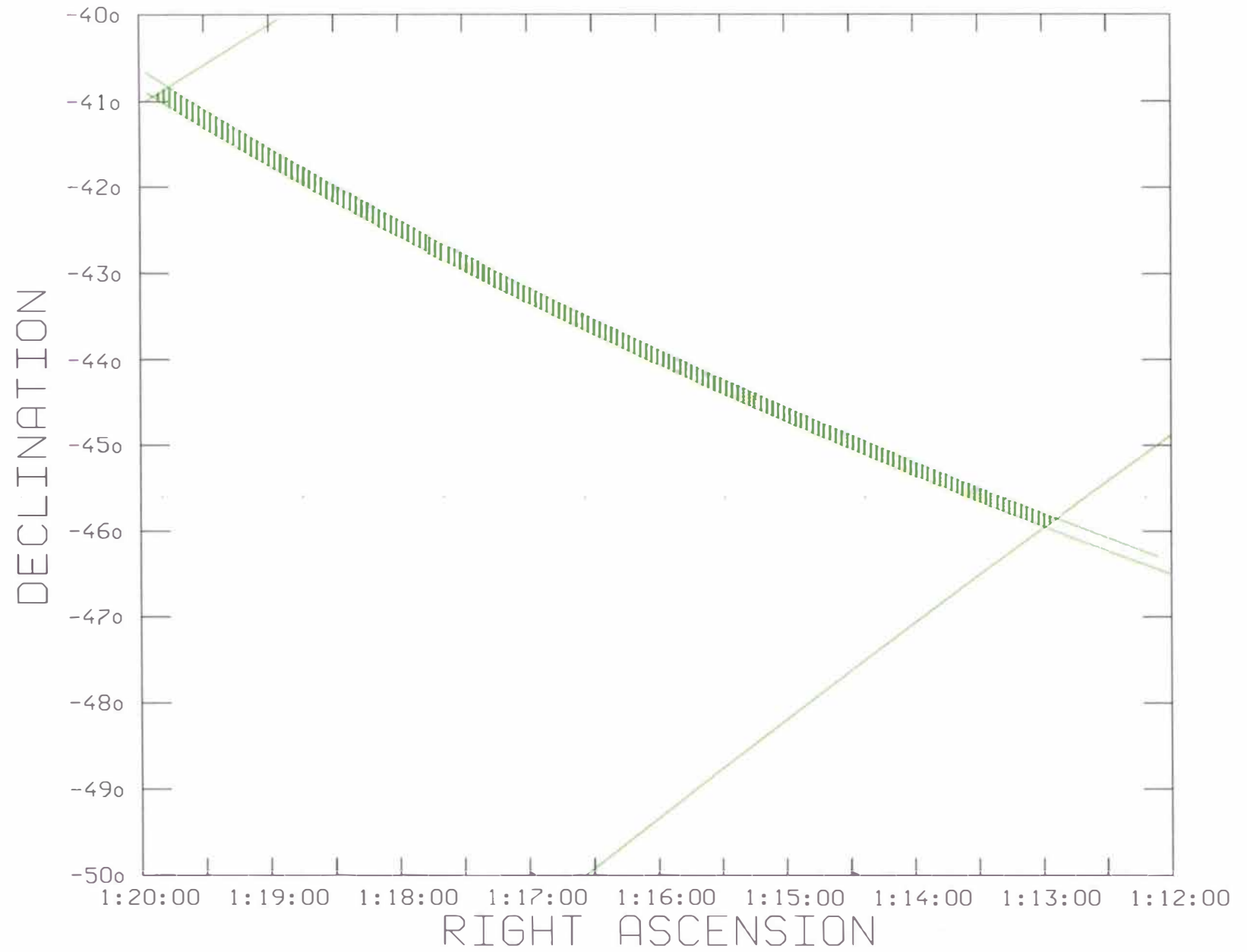
2. For 3 or More Spacecraft events

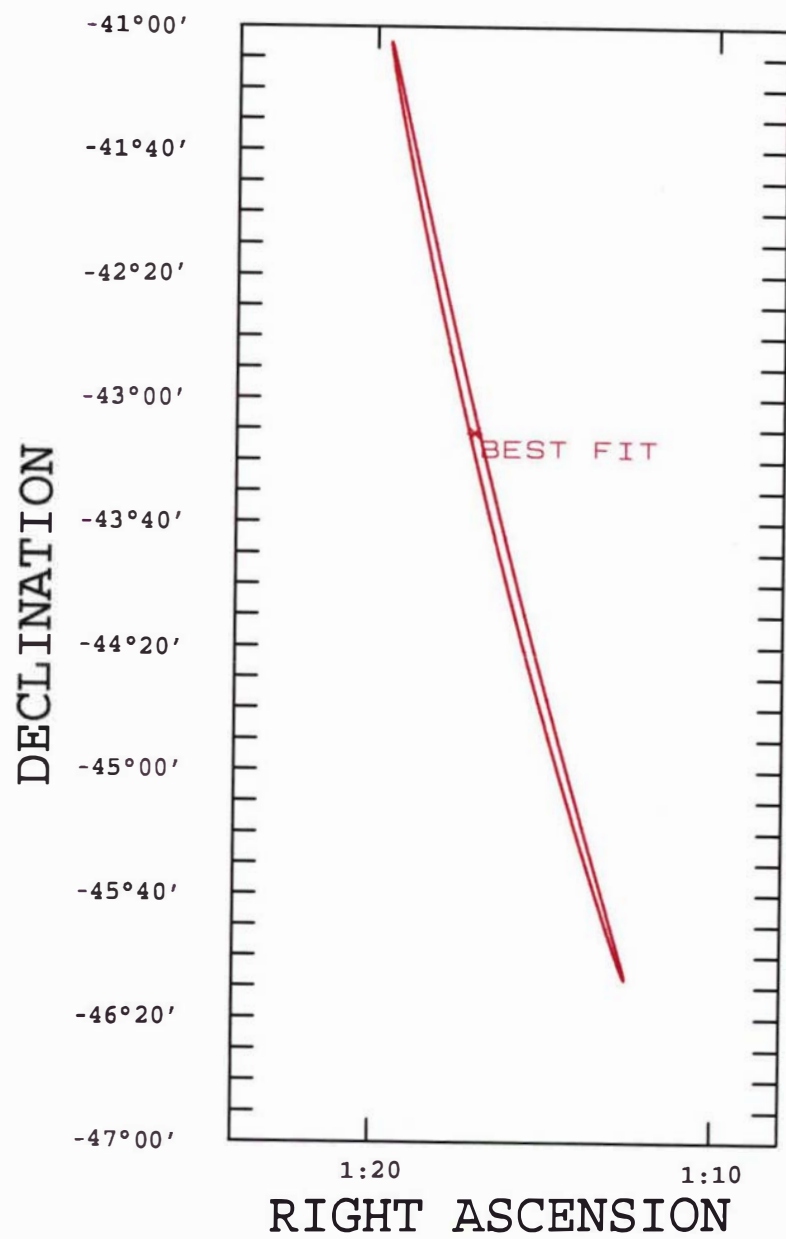
- ☒ $3\Delta t$'s calculated, and/or BMAPSUM executed?

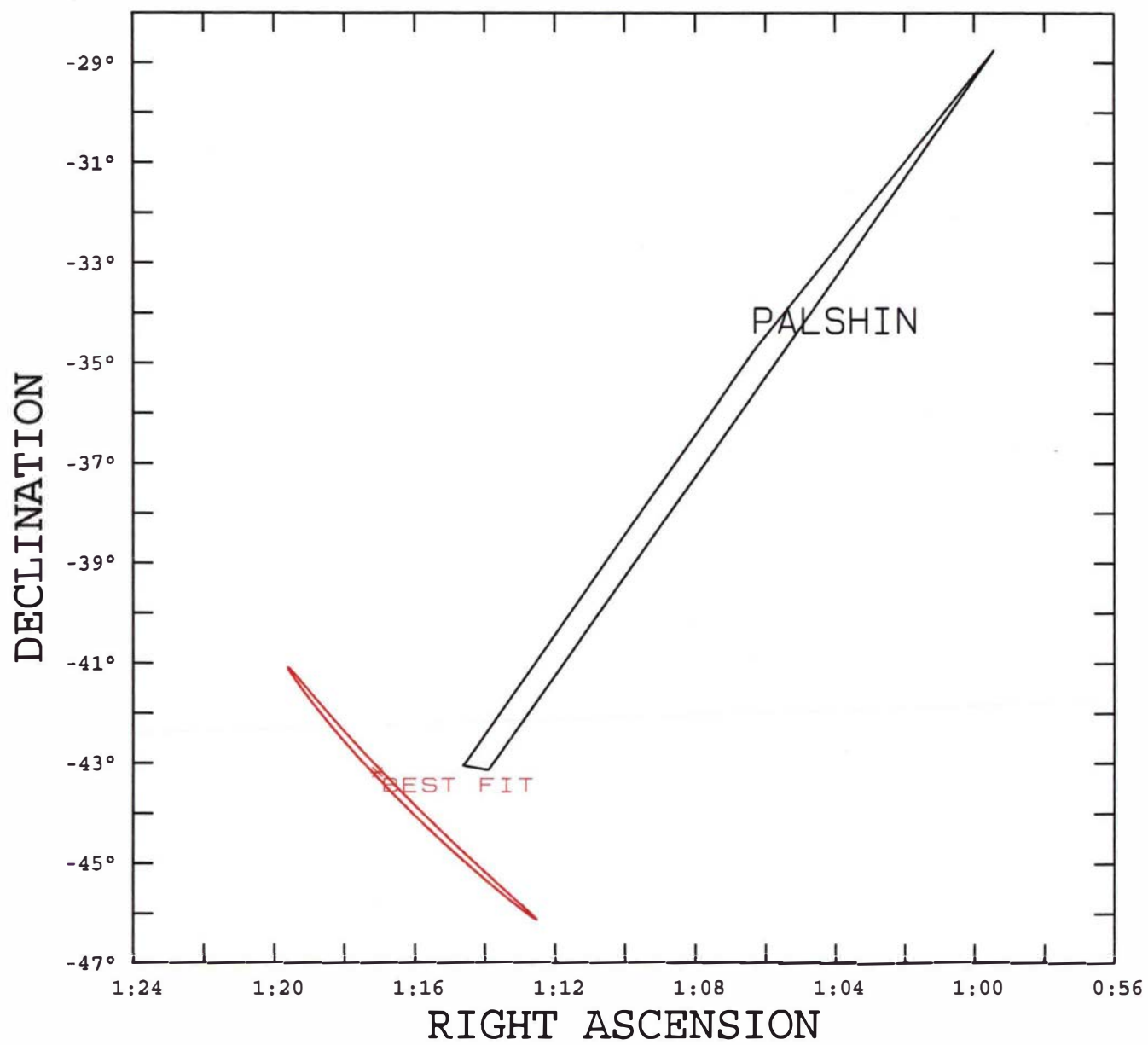
3. For INTEGRAL events

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

☒ ACCESS and MBL4 databases updated?







EVENT OF FEB 7, 2007 21:00

22 / 5 / 7

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

G=GALACTIC EQUATOR

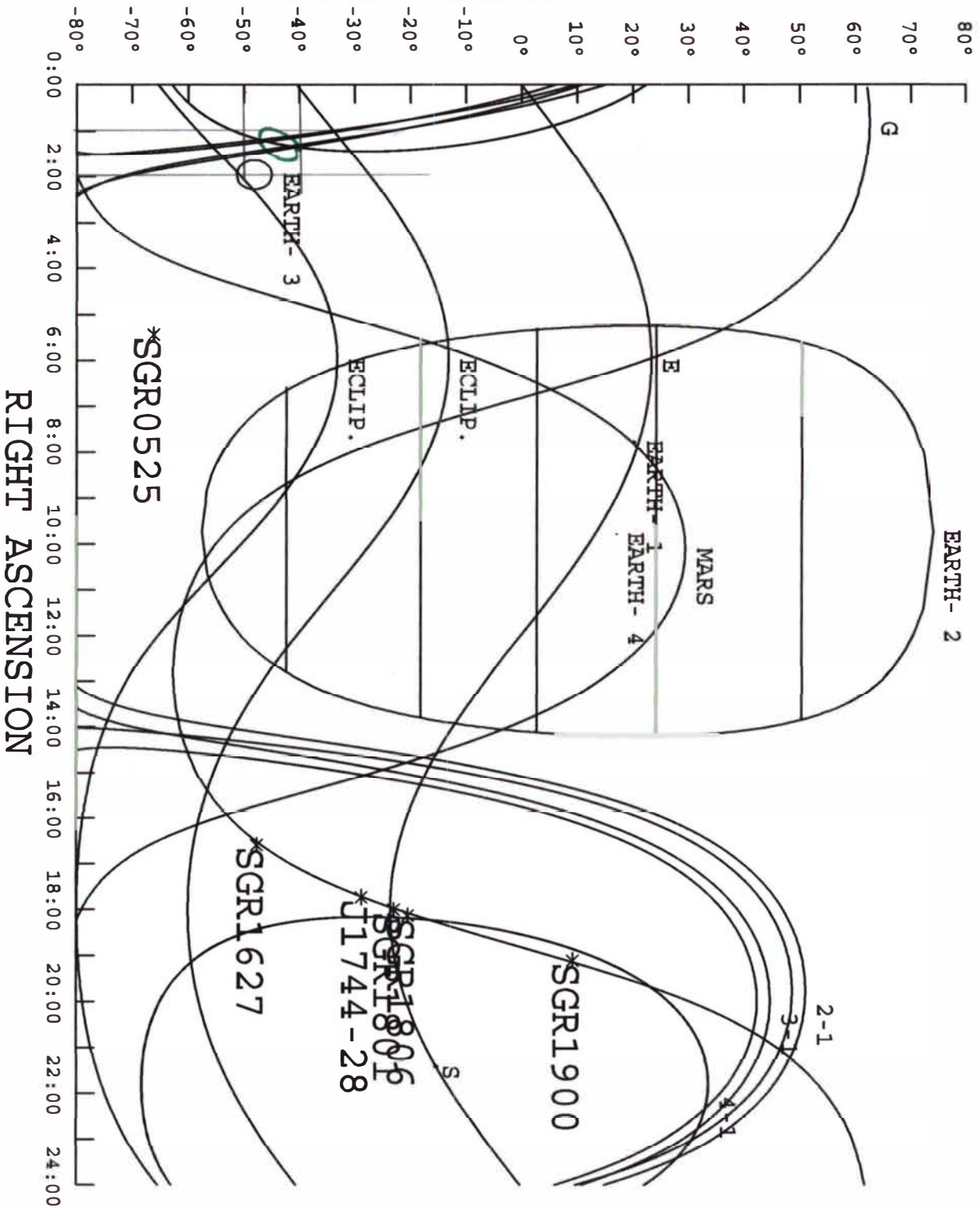
1 KONUS1

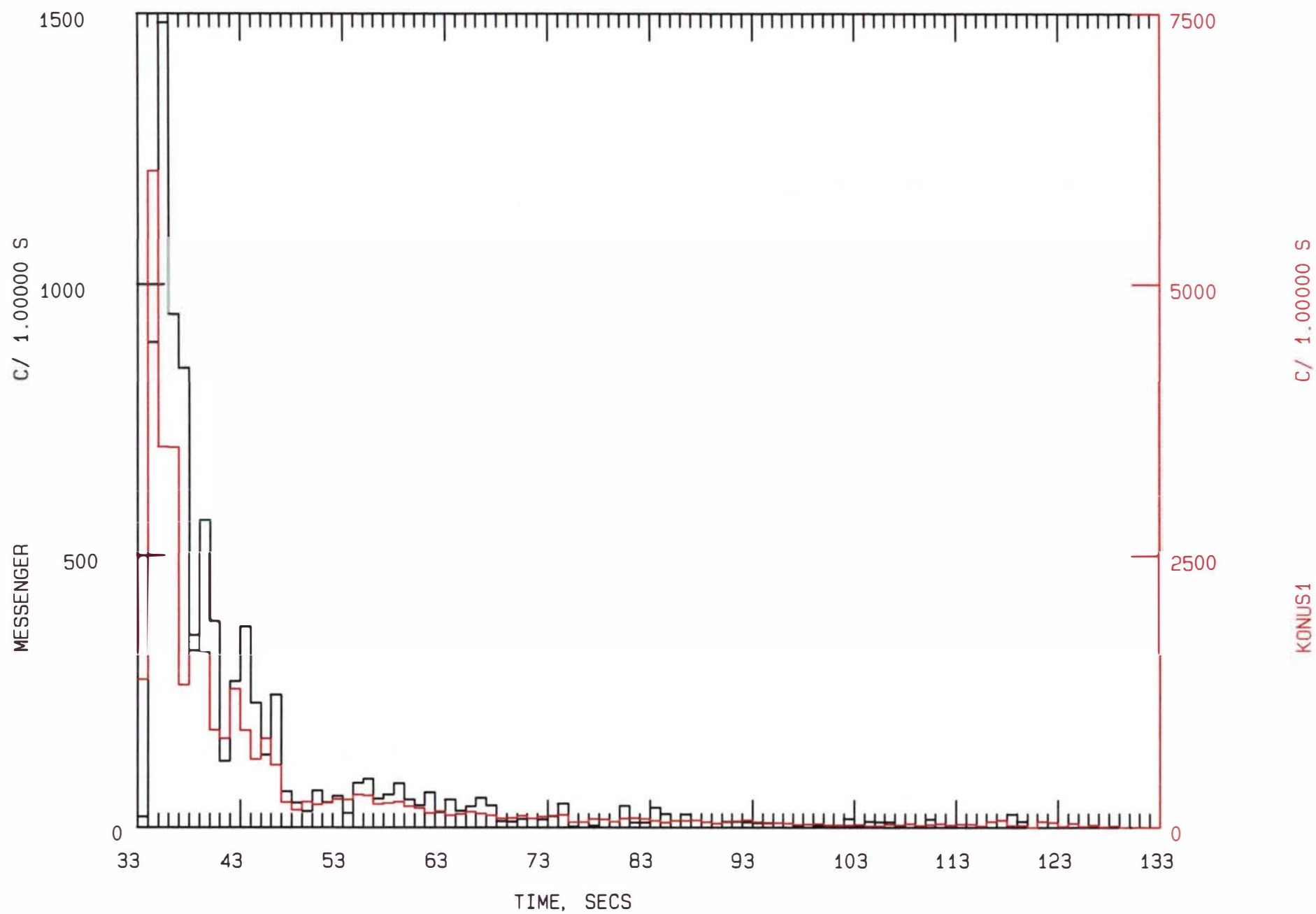
2 SWIFT

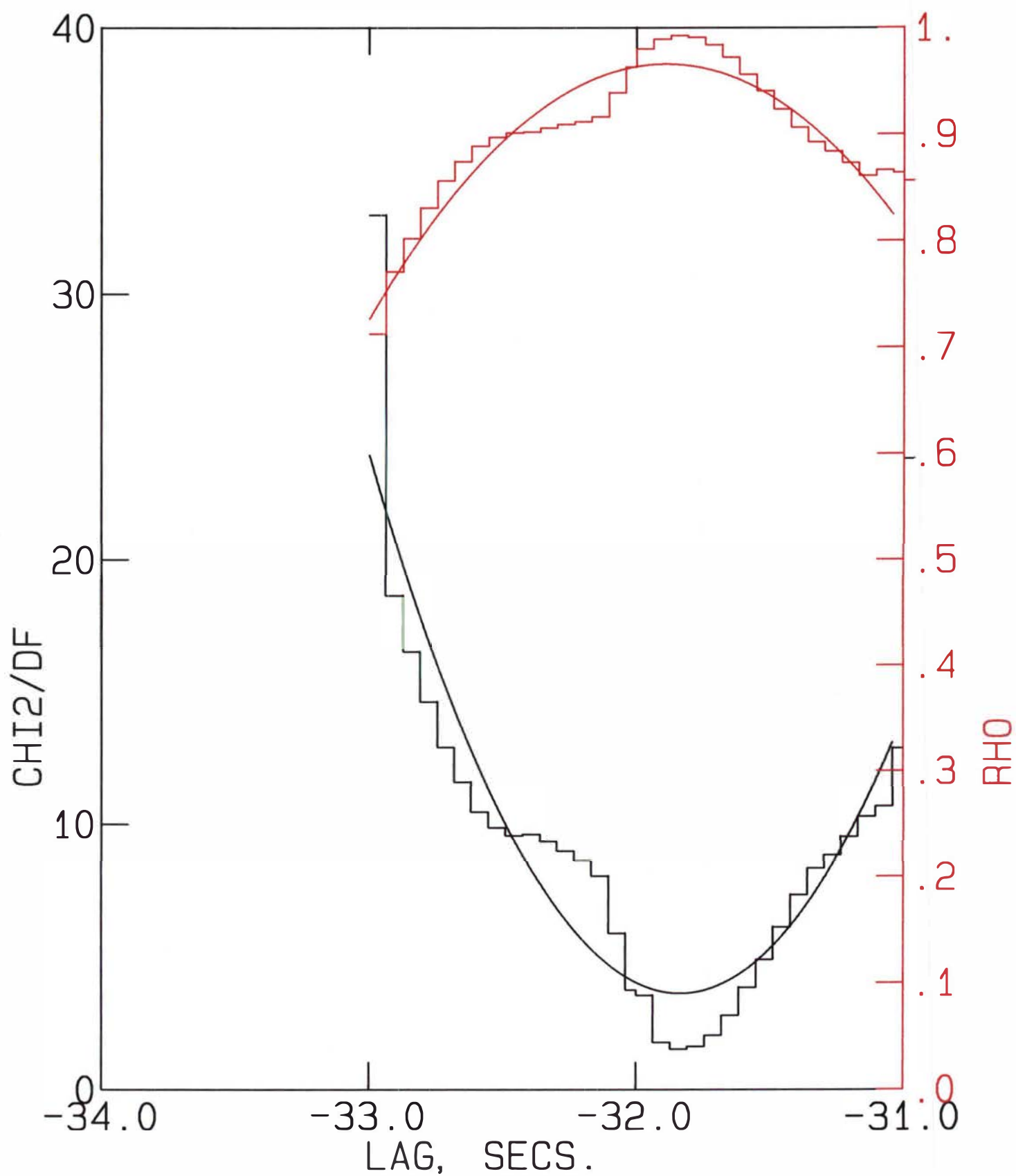
3 INTEGRAL

4 MESSENGER

DECLINATION







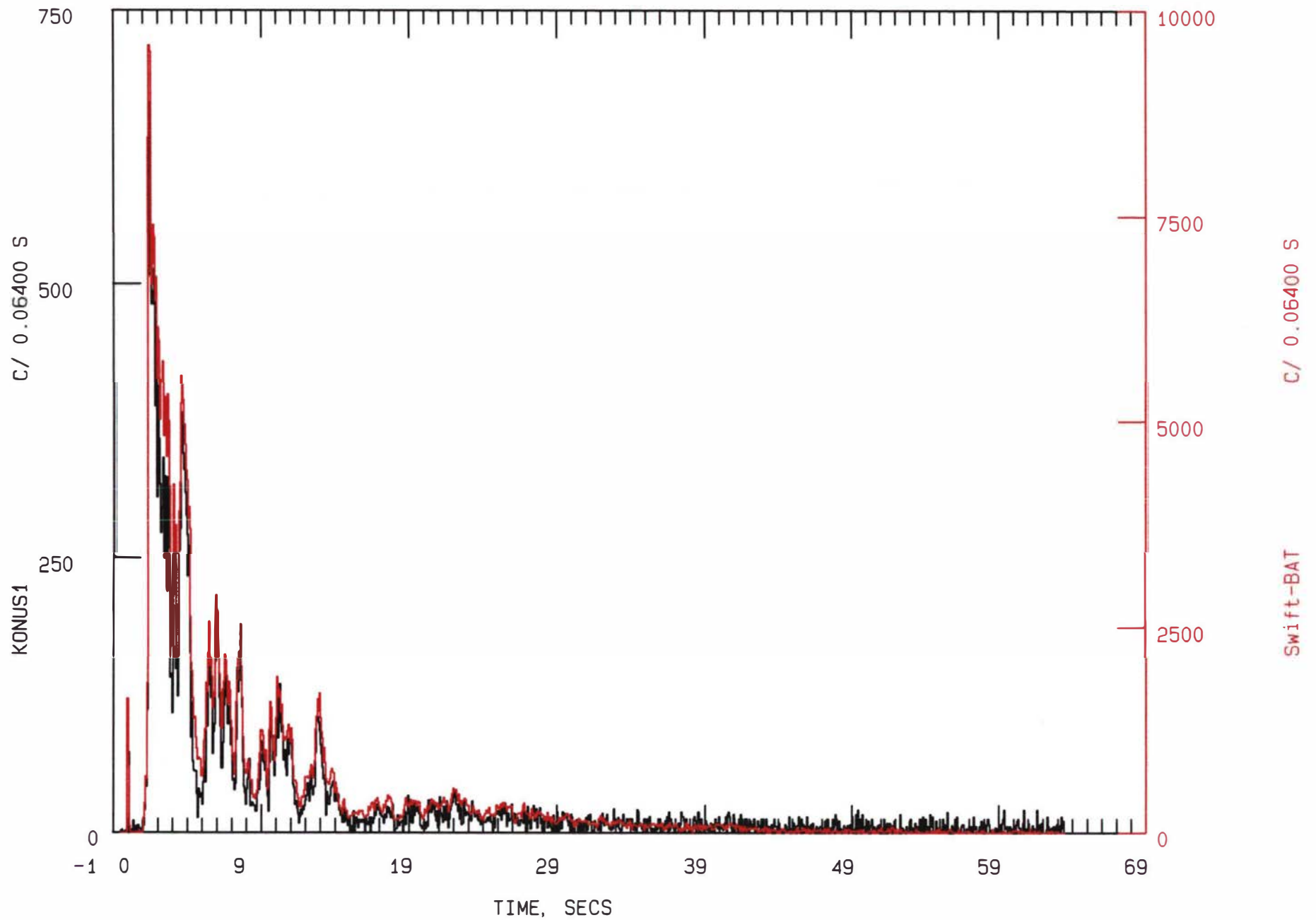
KONUS1

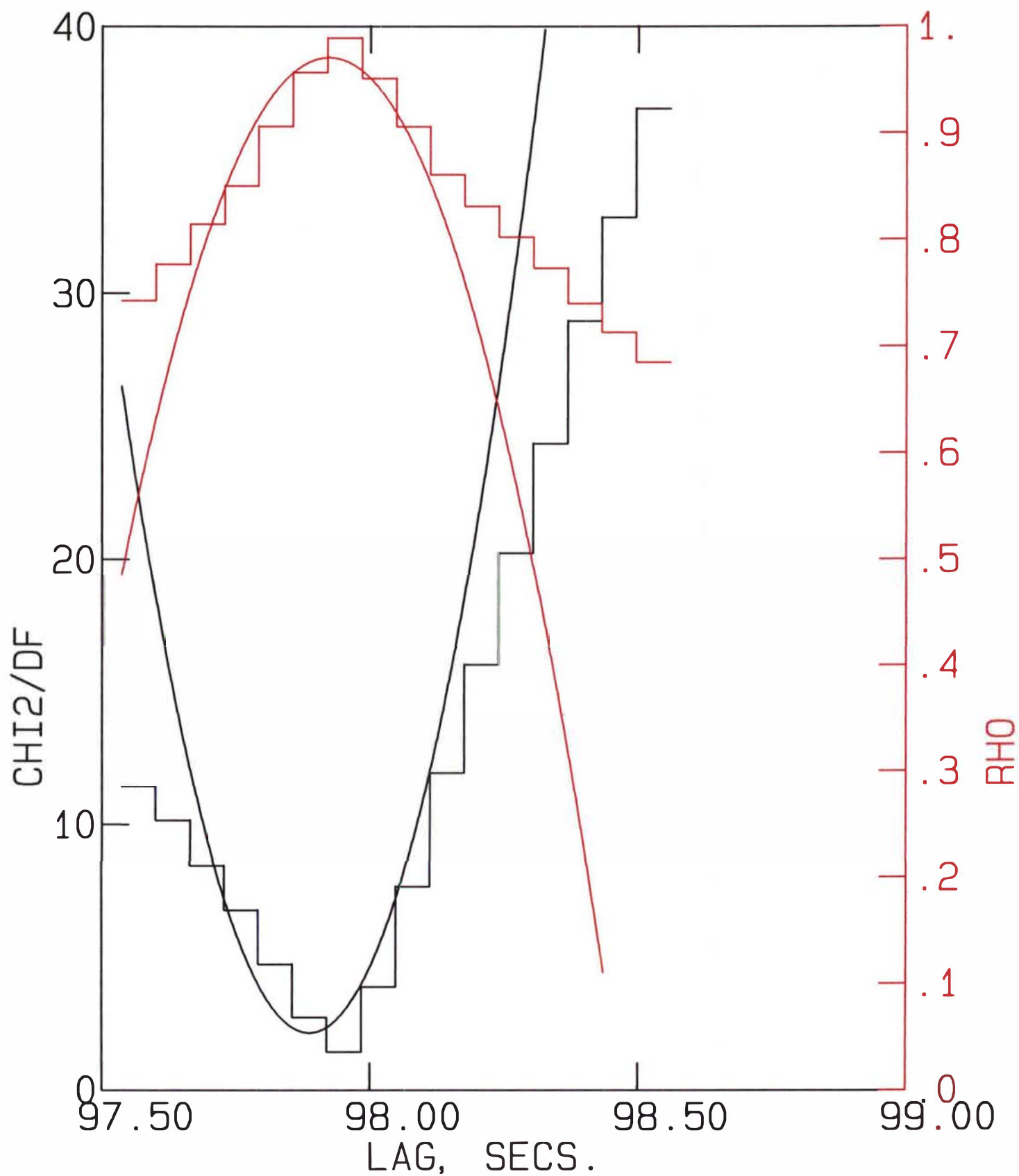
-Swift-BAT CORRELATION

07/02/07

75644.016

22/ 5/ 7





KONUS1

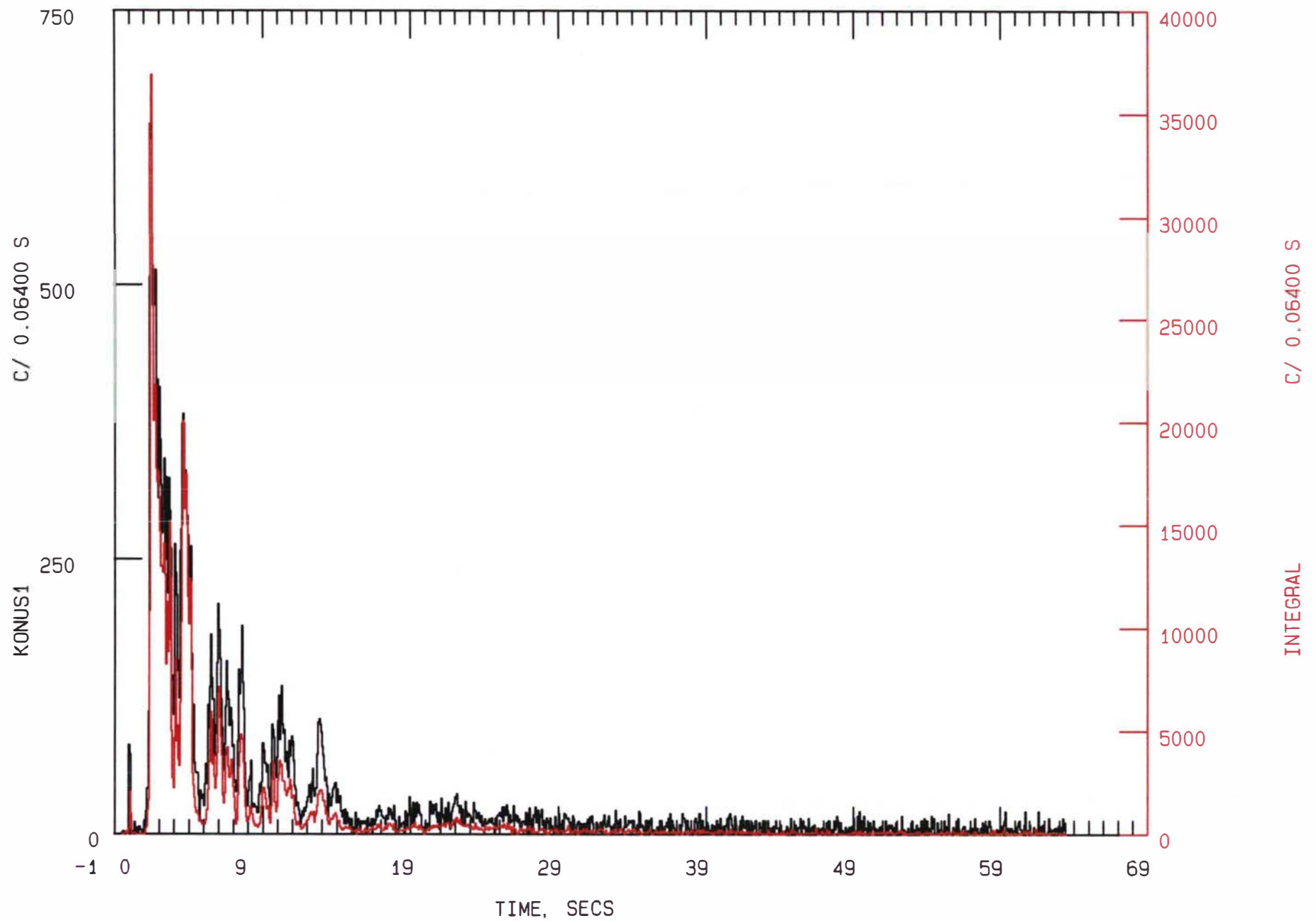
-INTEGRAL

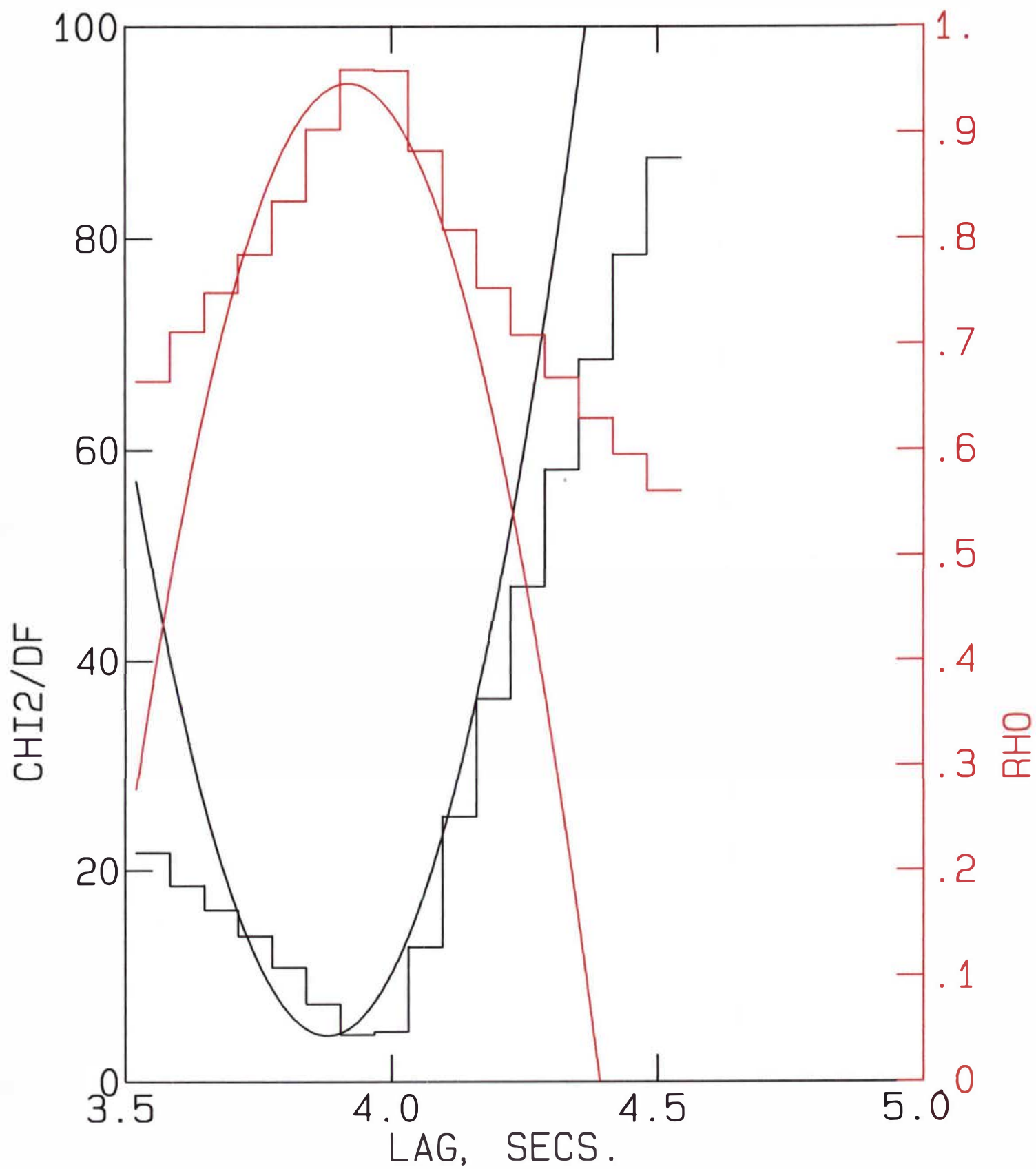
CORRELATION

07/02/07

75644.016

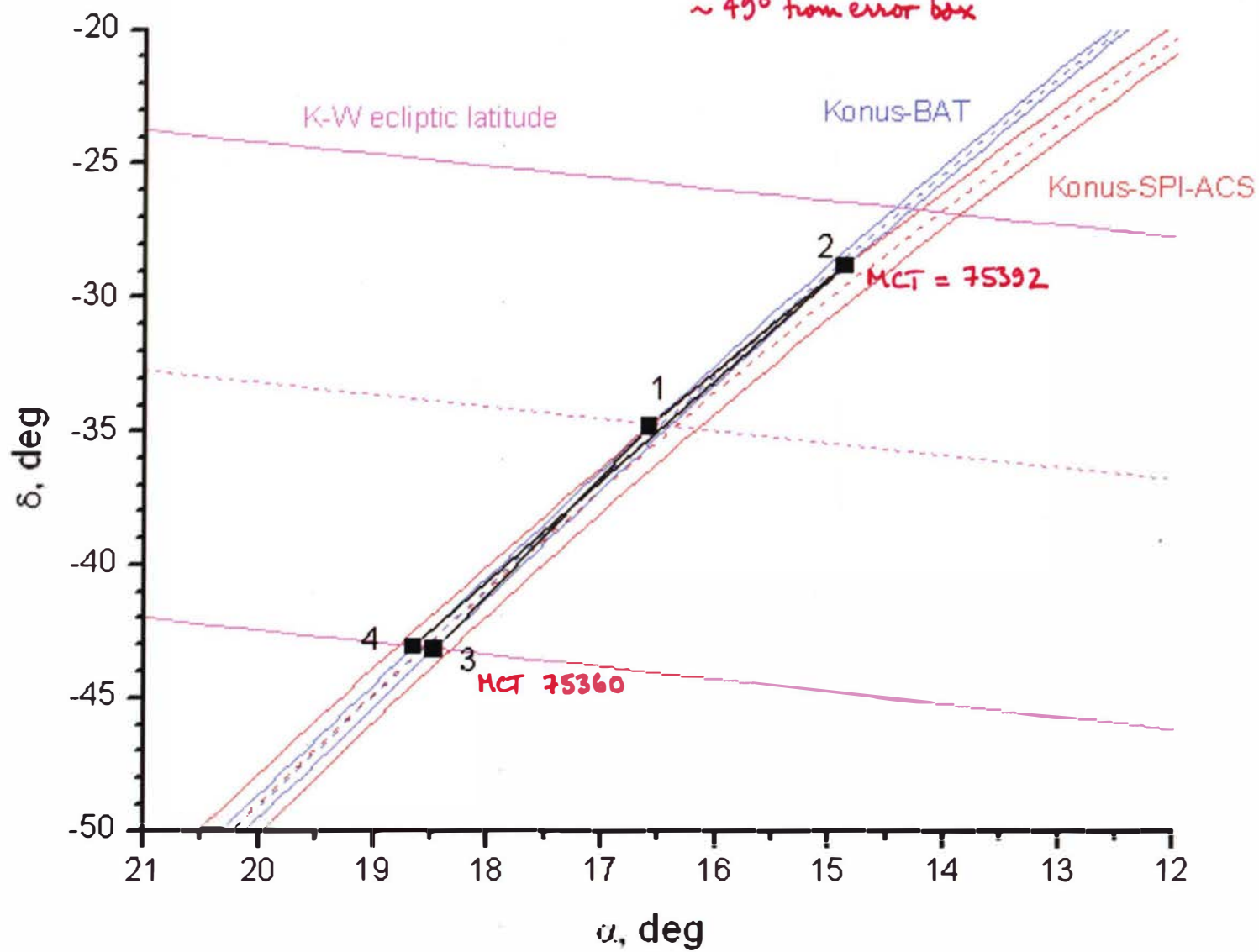
22/ 5/ 7





Mars position: $\alpha, \delta = 84.5, -64.4$

$\sim 49^\circ$ from error box



N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

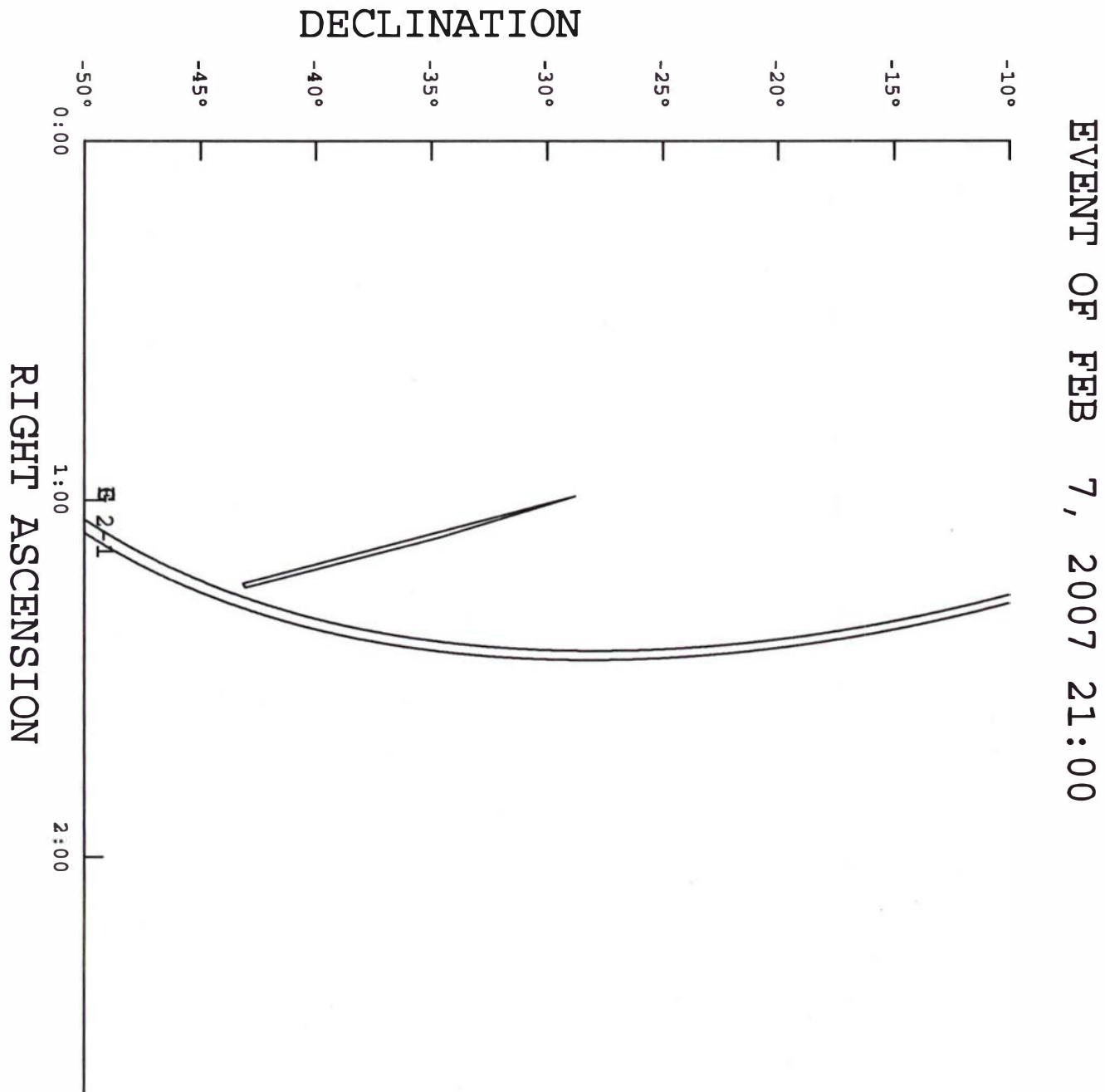
S=SUN

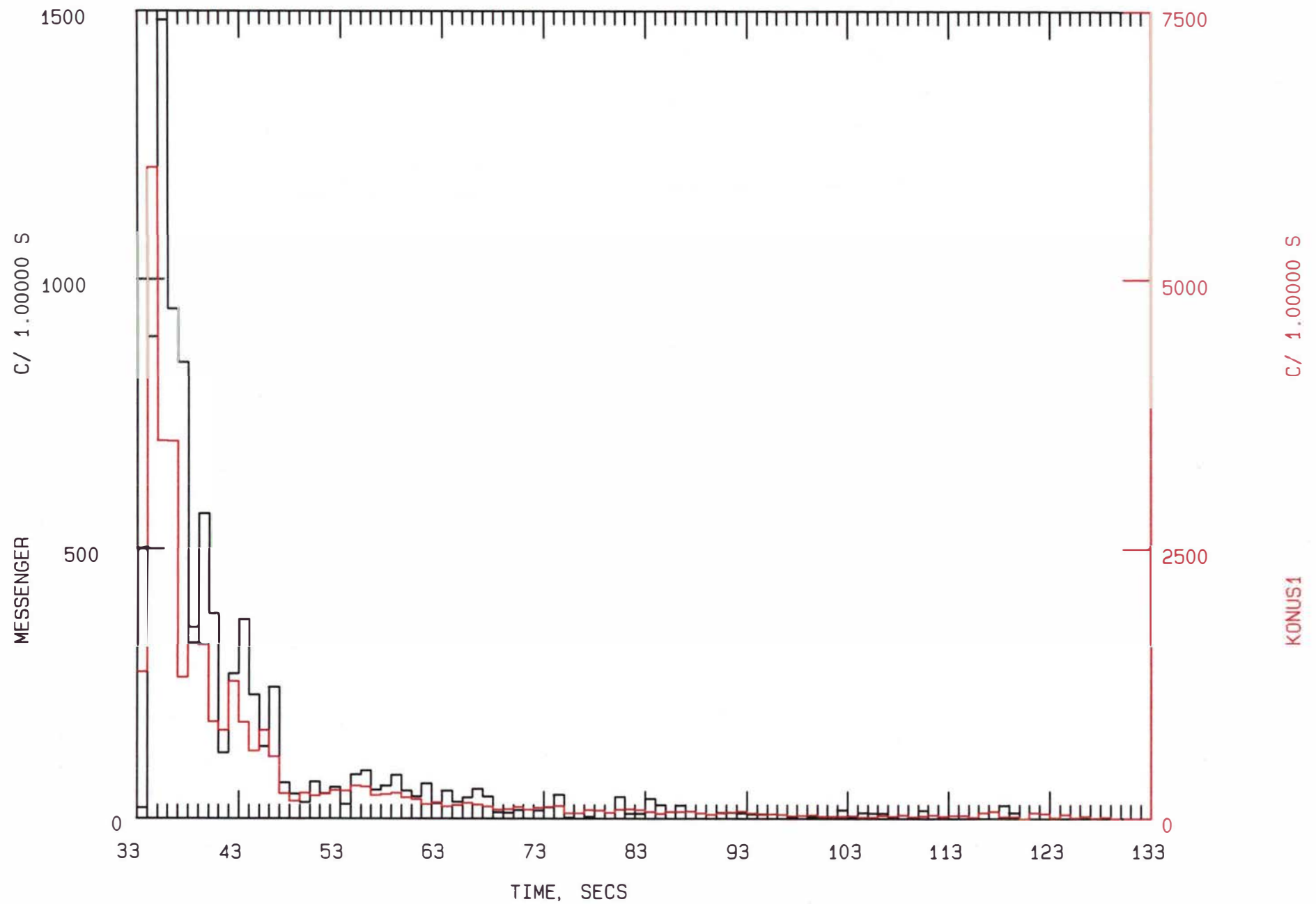
E=ECLIPTIC

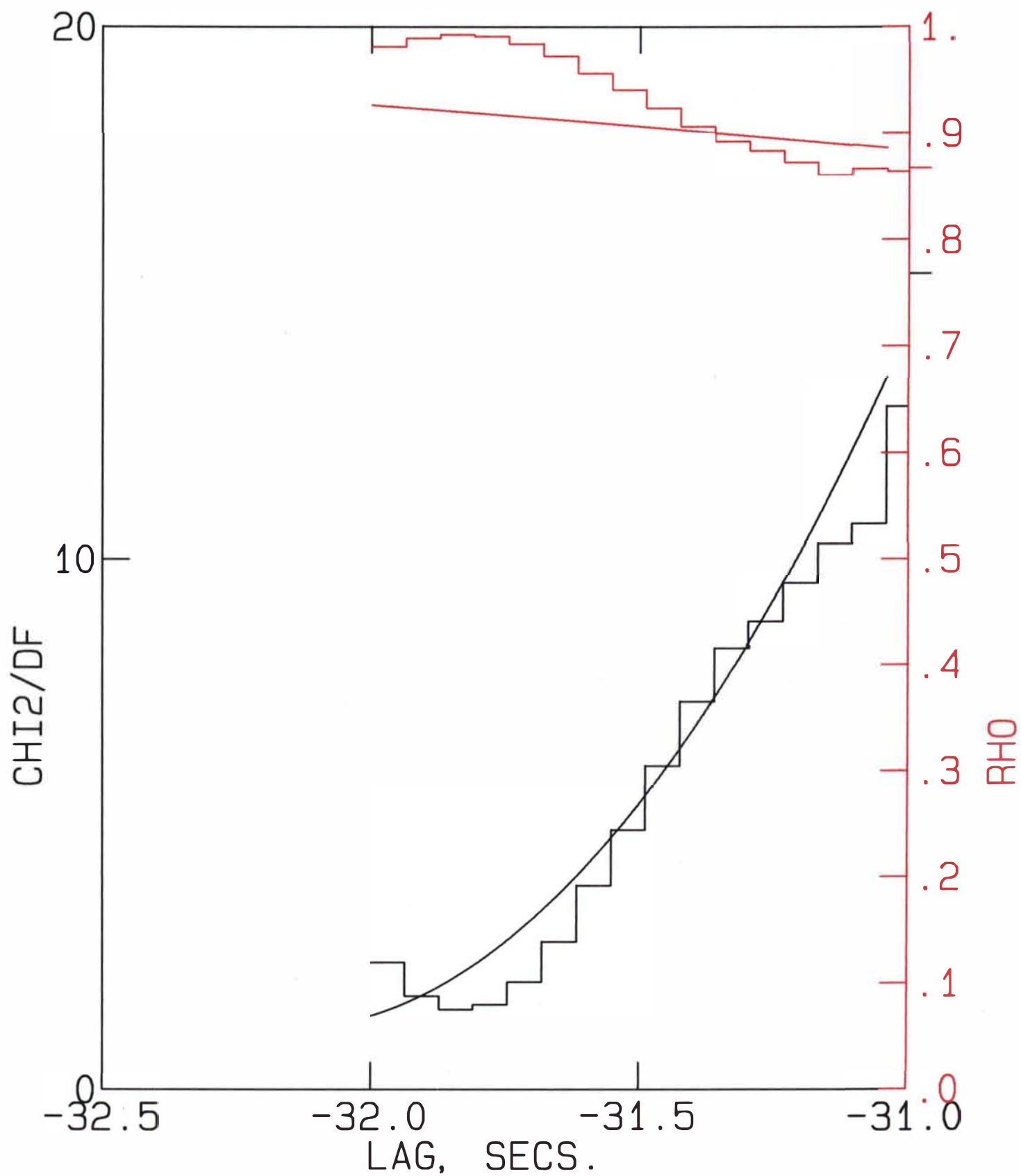
G=GALACTIC EQUATOR

1 KONUS1

2 MESSENGER







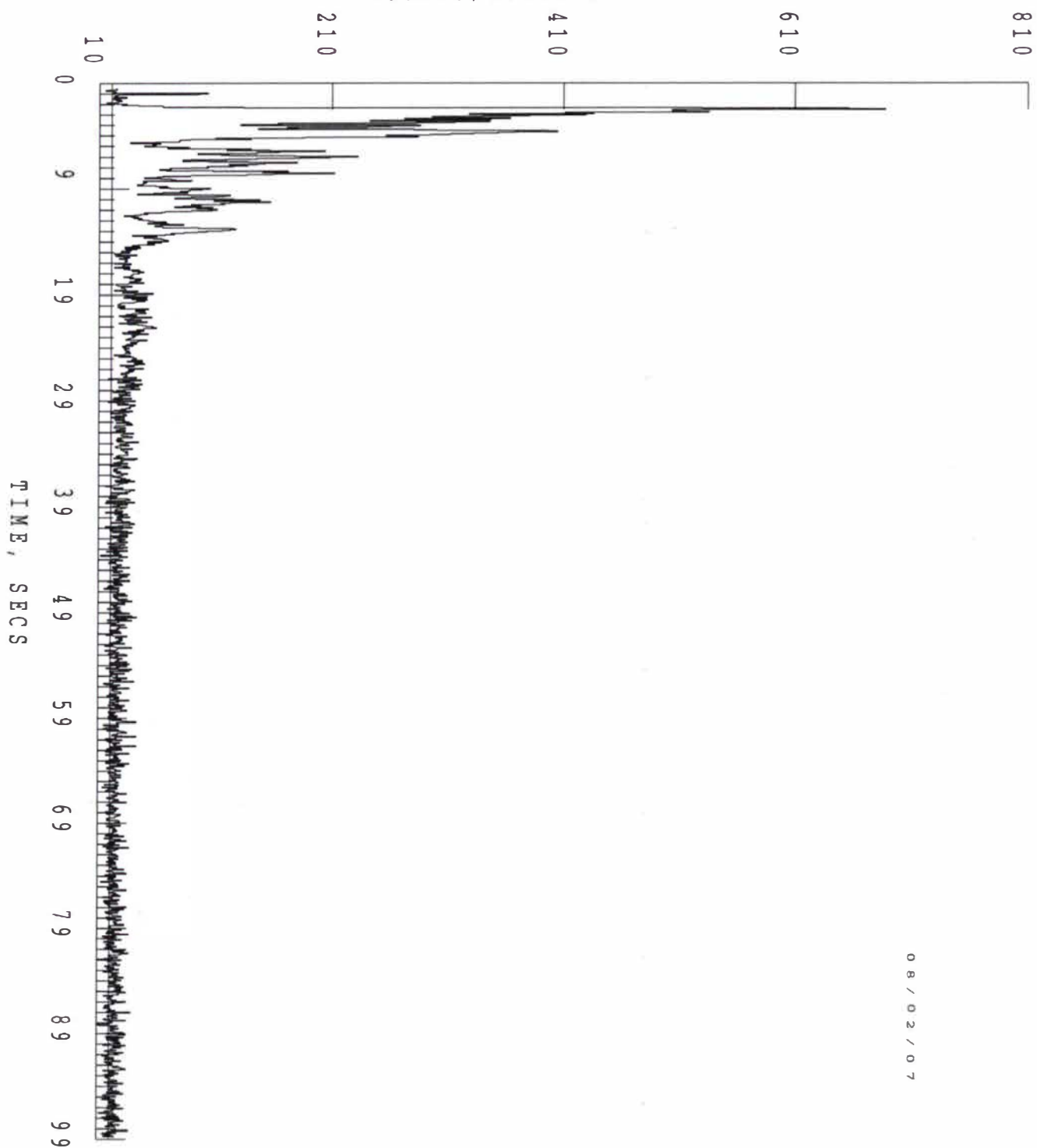
KONUS1

07/02/07

75644.016

50- 200 keV

COUNTS/0.064 S



08/02/07

KONUS HRES 20070207 75644

TRIGGER TIME: 07/02/07 DOY 038 Julian 2454140.37551 UT = 21.012 21:00:44 (75644.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

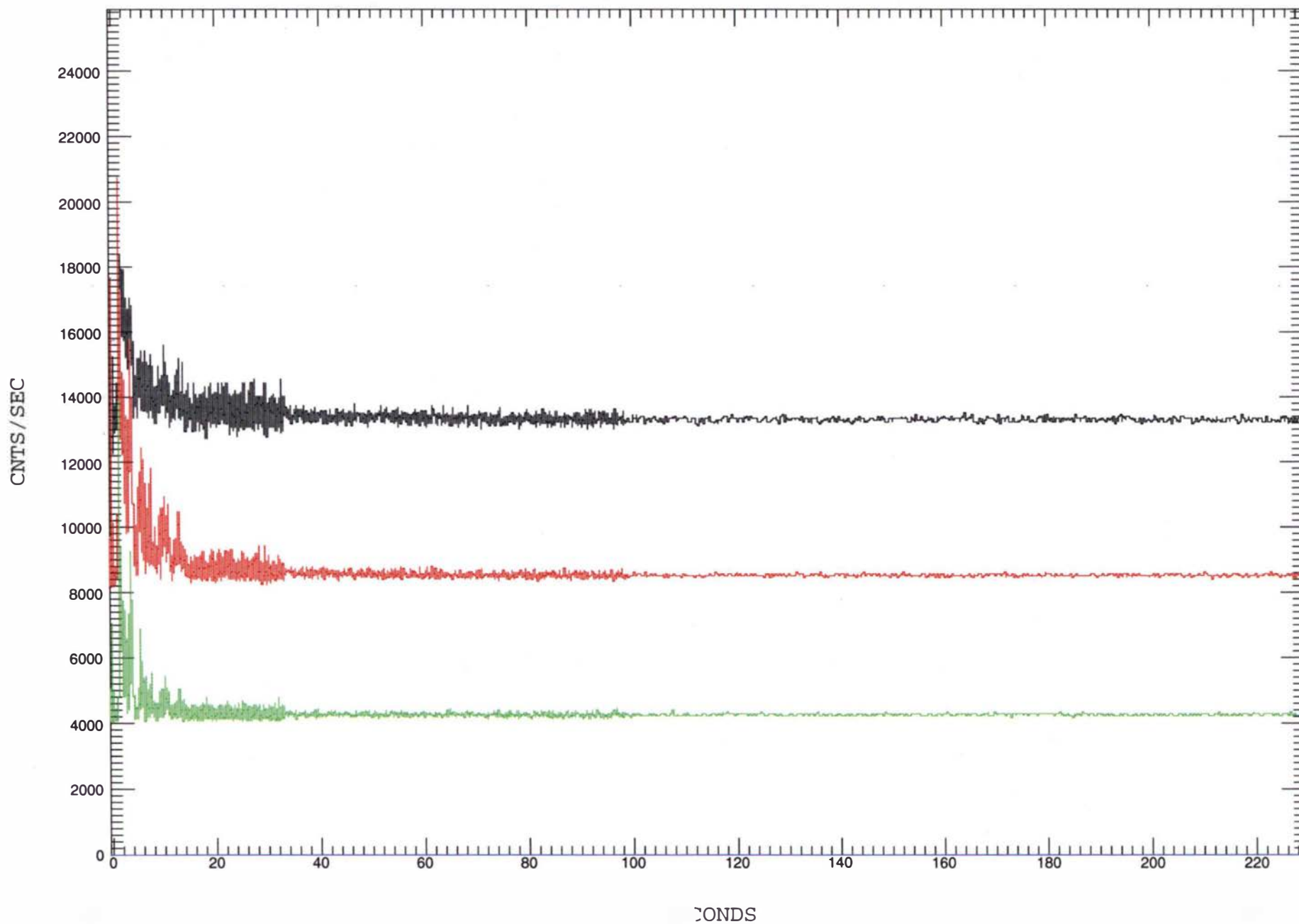
Chan 4 : [> 10 MeV]

Channel 1 + 12300

Channel 2 + 8200

Channel 3 + 4100

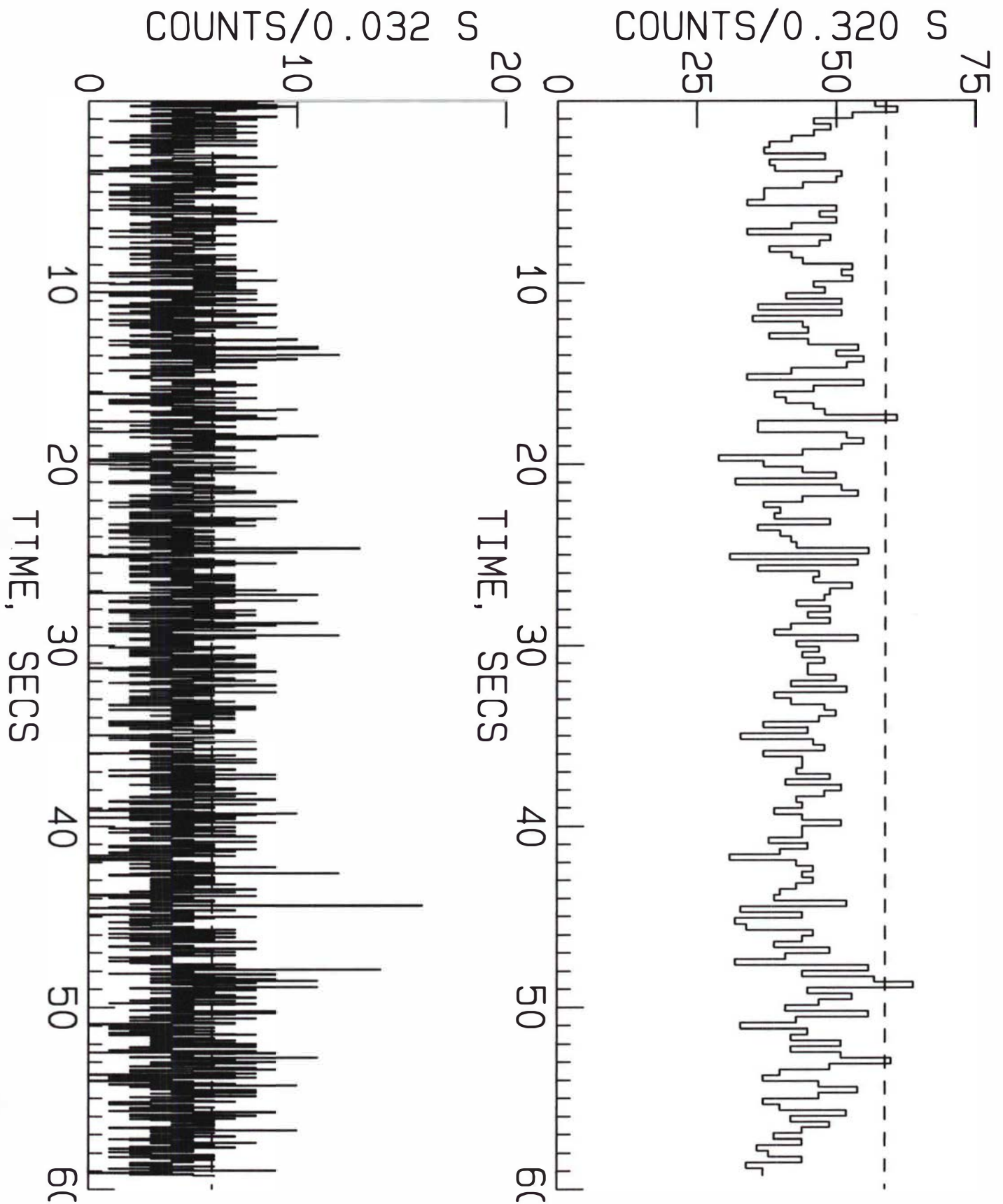
Channel 4 + 0



MO GE

07/02/07 76324.113

116- 337 keV



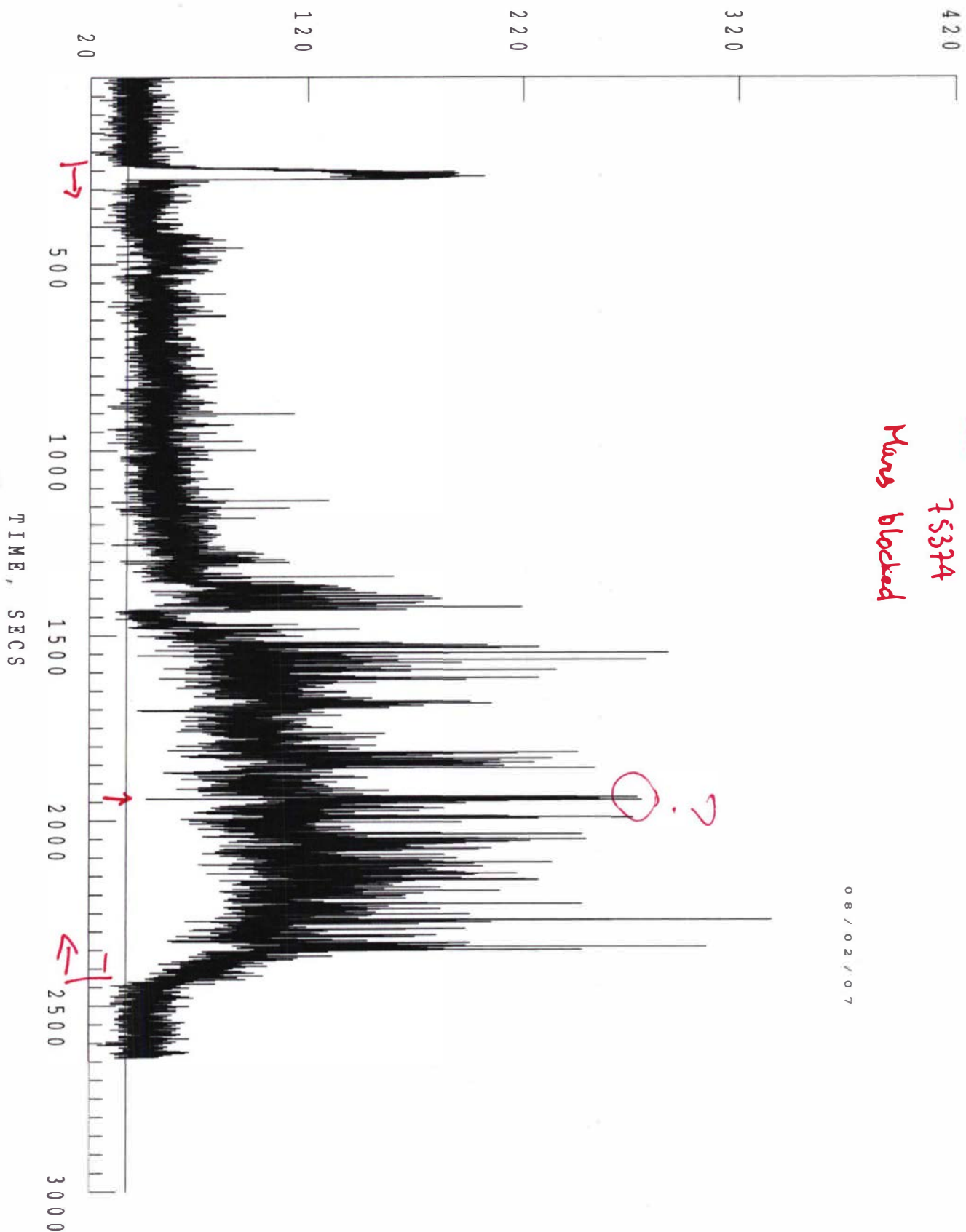
MS01

07/02/07

74320.915

50 - 3000 keV

COUNTS/0.250 S



MCU 74546-76744

75374

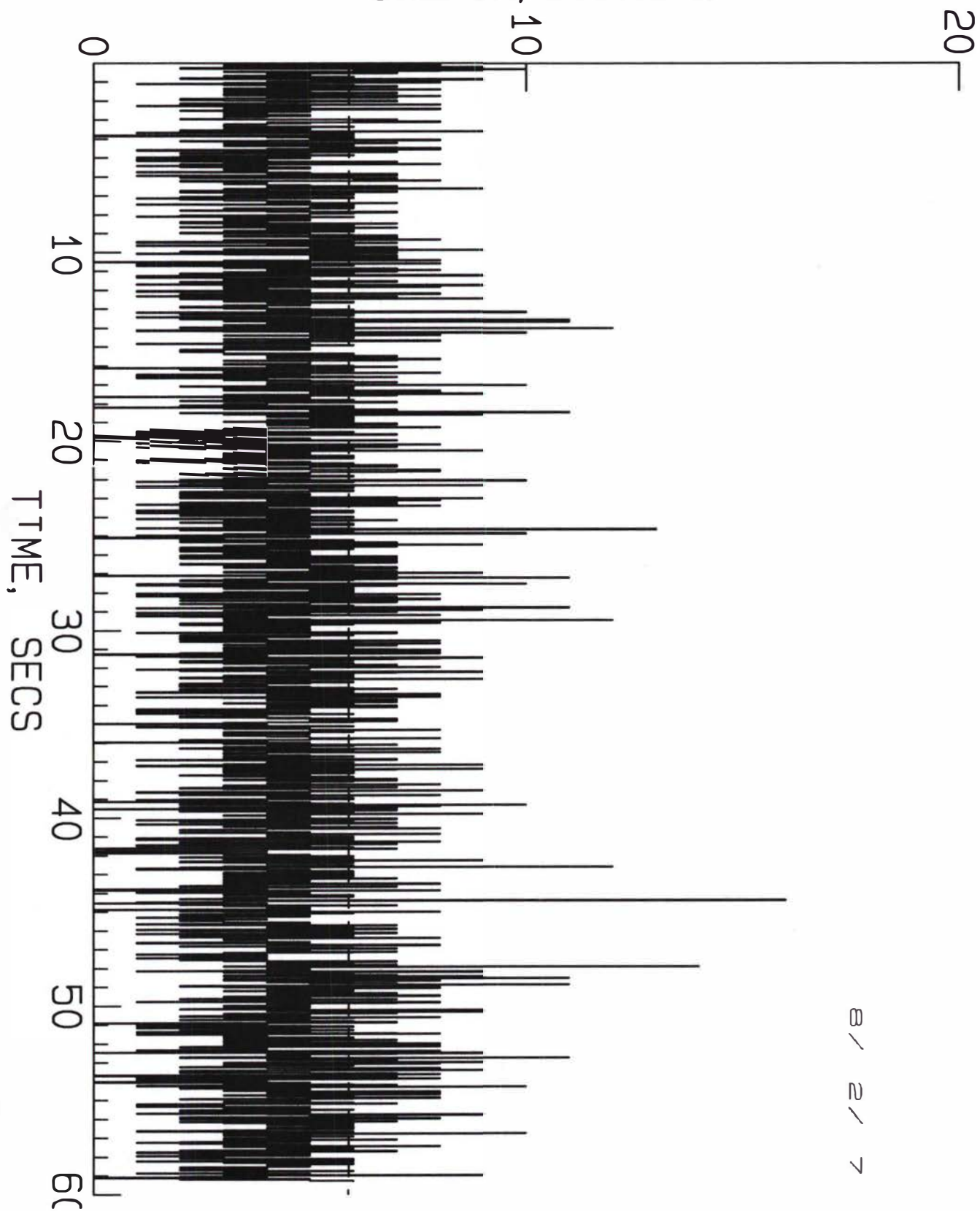
Muns blocked

MO GE

07/02/07 76323.912

116- 337 keV

COUNTS/0.032 S



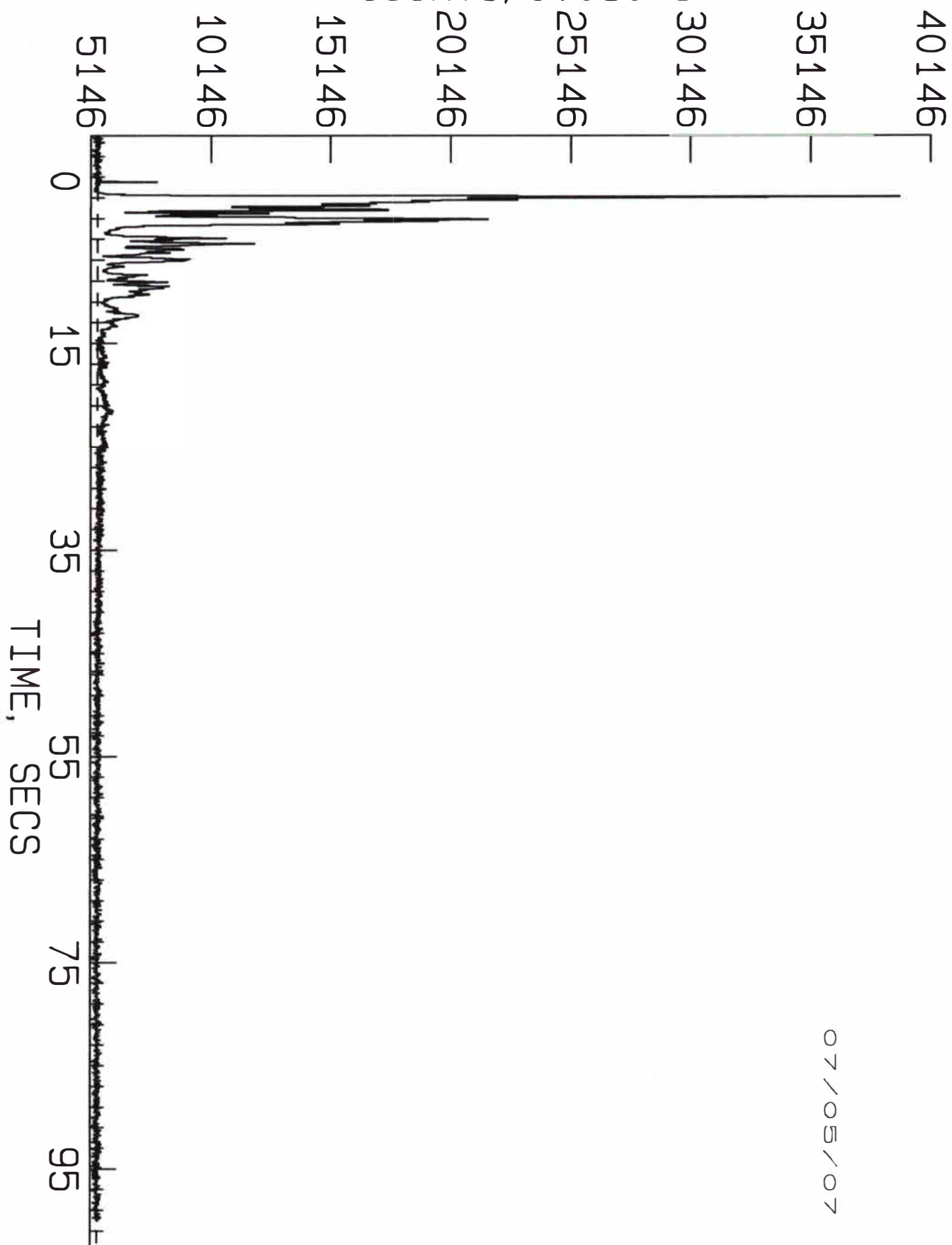
From williams@sunspot.ssl.berkeley.edu Fri Feb 9 09:17:44 2007
X-ASG-Debug-ID: 1171041601-7f5d002f0000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: gammaburst.ssl.berkeley.edu[128.32.98.141]
-Barracuda-Start-Time: 1171041601
Date: Fri, 9 Feb 2007 09:29:21 -0800 (PST)
From: williams@ssl.berkeley.edu
To: khurley@ssl.berkeley.edu
X-ASG-Orig-Subj: No_RHESSI_data_for_KONUS1_20070207_75644
Subject: No_RHESSI_data_for_KONUS1_20070207_75644
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
X-ASG-Whitelist: Sender (Per-User)

HESSI 25 to 150 keV Counts
Created 9-Feb-2007 09:18:45.00
Detectors: 3r 4r 5r 6r 8r 9r
columns: time (sec) counts (summed over detectors)
time_interval = 0.0312500
Full time range in SAA
No Eclipse
No non-SAA data gap
No Data Available For This Time Range
Do Not Retry

INTEGRAL 07/02/07 75646.664 21: 00: 46.6

100-10000 keV

COUNTS/0.050 S



07/05/07

25/04/07

MESSENGER

07/02/07

75082.219

20:51:22.219 ~~8~~ 8

40- 200 keV

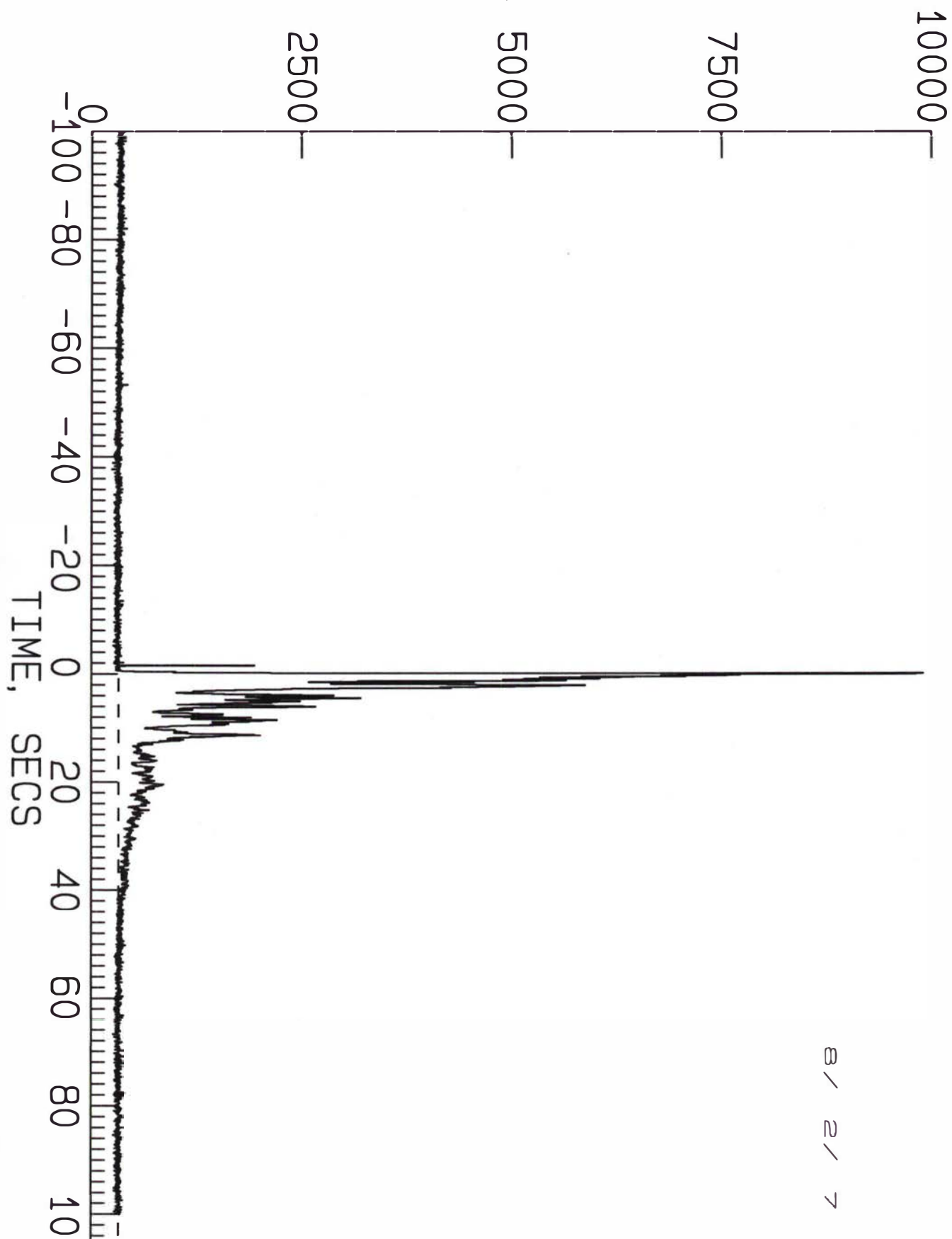


SWIFT

07/02/07 75647.250

25- 350 keV

COUNTS/0.064 S



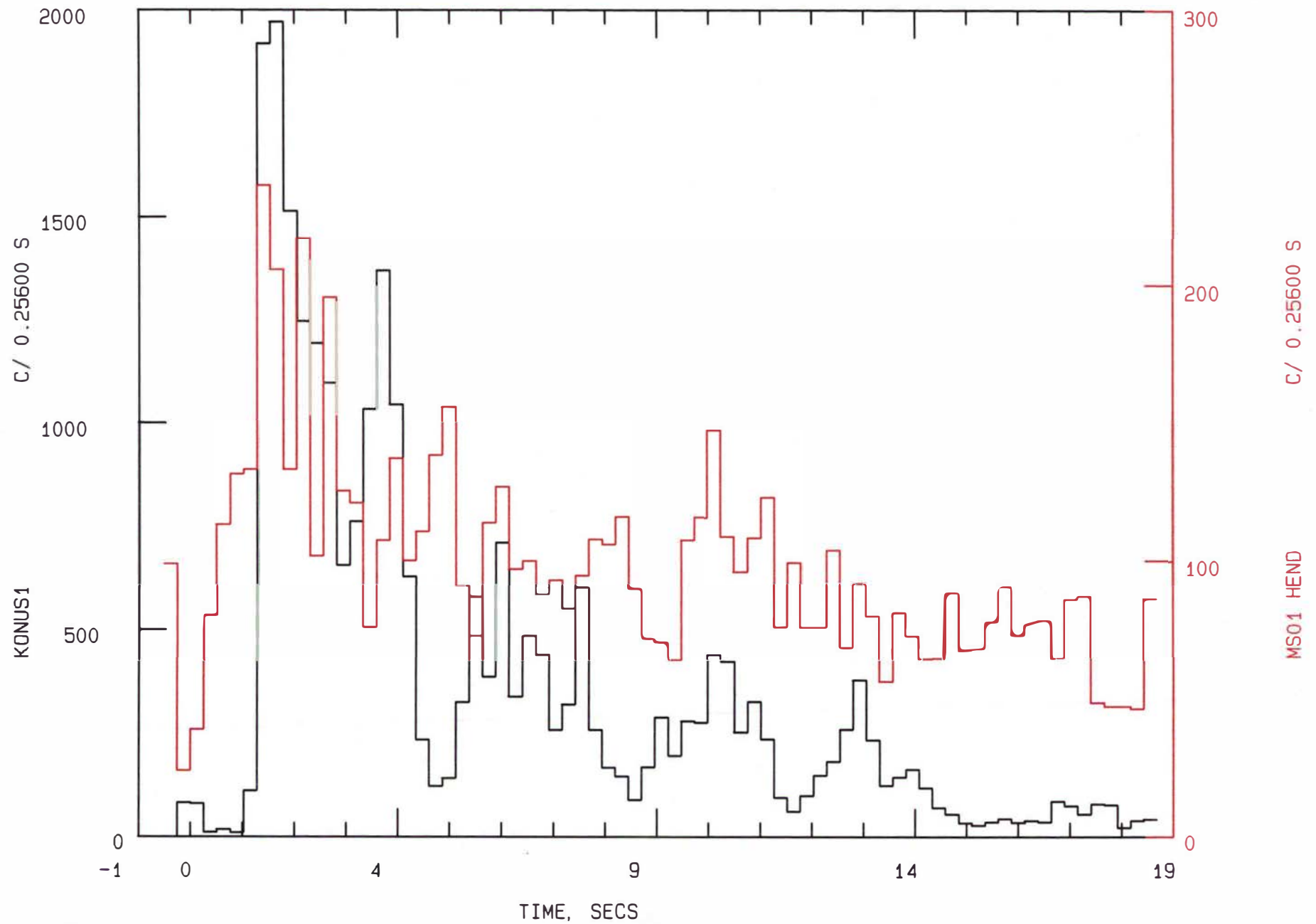
KONUS1

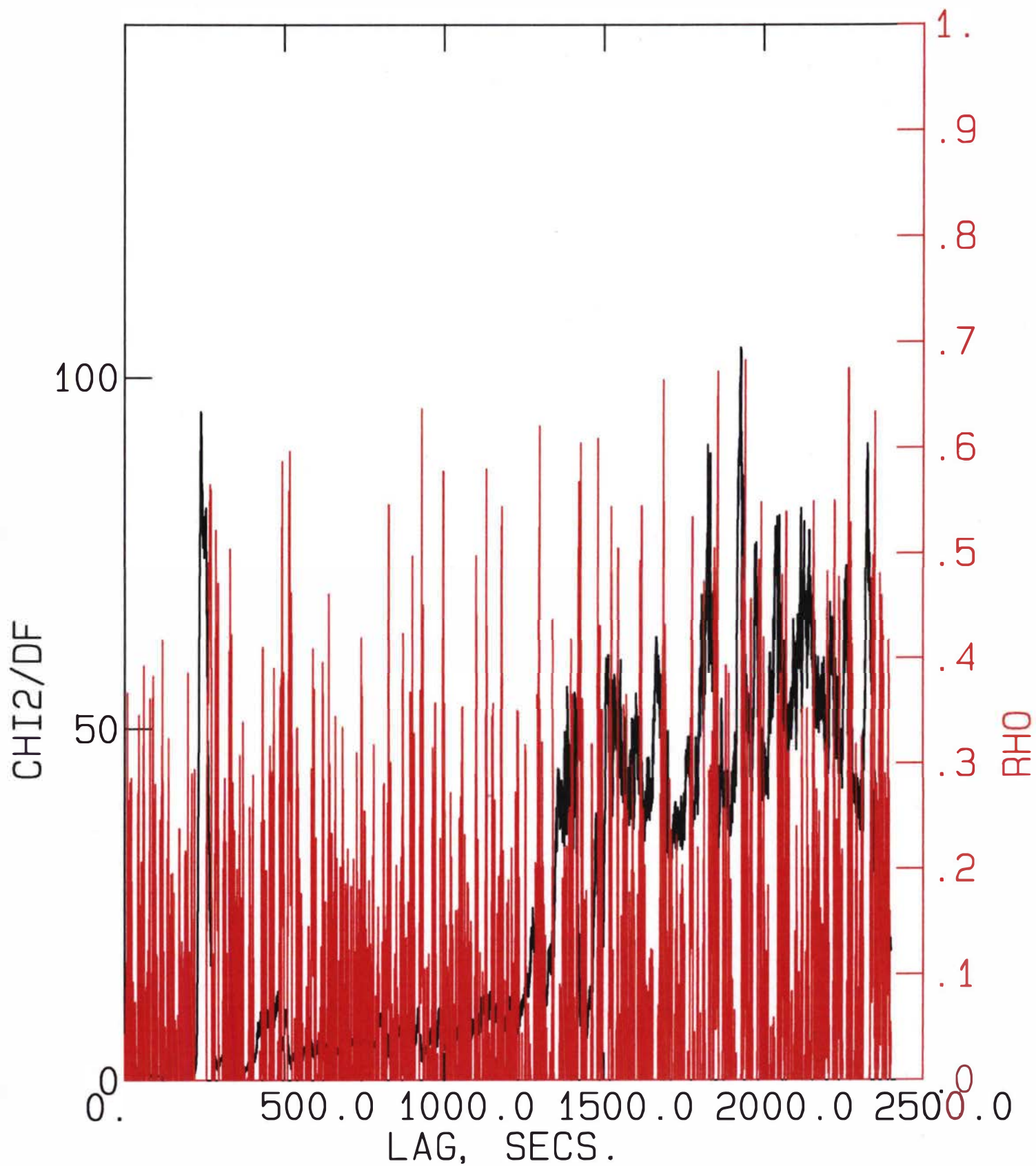
-MS01 HEND CORRELATION

07/02/07

75644.016

8/ 2/ 7





From williams@sunspot.ssl.berkeley.edu Mon May 7 12:47:32 2007
X-ASG-Debug-ID: 1178567261-2fb900080000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: gammaburst.ssl.berkeley.edu[128.32.98.141]
-Barracuda-Start-Time: 1178567261
Date: Mon, 7 May 2007 12:57:25 -0700 (PDT)
From: williams@ssl.berkeley.edu
To: khurley@ssl.berkeley.edu
X-ASG-Orig-Subj: No_RHESSI_data_for_KONUS_20070207_75644
Subject: No_RHESSI_data_for_KONUS_20070207_75644
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
X-ASG-Whitelist: Sender (Per-User)

HESSI 25 to 150 keV Counts
Created 7-May-2007 12:46:20.00
Detectors: 3r 4r 5r 6r 8r 9r
columns: time (sec) counts (summed over detectors)
time_interval = 0.0640000
Full time range in SAA
No Eclipse
No non-SAA data gap
No Data Available For This Time Range
Do Not Retry

From yamaoka@phys.aoyama.ac.jp Thu Feb 8 18:44:24 2007
 X-ASG-Debug-ID: 1170989099-503200080000-LqZNIK
 X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
 -Barracuda-Connect: scmailgw2.scop.aoyama.ac.jp[133.2.251.195]
 -Barracuda-Start-Time: 1170989099
 To: val@mail.ioffe.ru
 Cc: khurley@ssl.berkeley.edu, jayc@milkyway.gsfc.nasa.gov,
 roland@space.mit.edu, golen@mail.ioffe.ru,
 krimm@milkyway.gsfc.nasa.gov, ohno@hirax7.hepl.hiroshima-u.ac.jp,
 palmer@lanl.gov
 Cc: yamaoka@phys.aoyama.ac.jp
 X-ASG-Orig-Subj: Re: very bright long hard GRB 070207 - Konus-SPI annulus
 Subject: Re: very bright long hard GRB 070207 - Konus-SPI annulus
 Mime-Version: 1.0
 Content-Transfer-Encoding: 7bit
 Date: Fri, 09 Feb 2007 11:43:50 +0900
 From: Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>
 X-Dispatcher: imput version 20000228(IM140)
 X-Barracuda-Bayes: INNOCENT GLOBAL 0.0338 1.0000 -1.8023
 X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
 X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.8148

Rule breakdown below

pts	rule name	description
0.00	UNPARSEABLE_RELAY	Informational: message has unparseable relay lines

Dear Valentin,

e detected this event in the TRN data
 with 1-sec resolution.

Best regards,
 Kazu
 on behalf of the Suzaku WAM team

From: "Valentin Pal'shin" <val@mail.ioffe.ru>
 Subject: very bright long hard GRB 070207 - Konus-SPI annulus
 Date: Thu, 08 Feb 2007 22:44:08 +0300
 Message-ID: <45CB7D88.80506@mail.ioffe.ru>

> Dear colleagues,
 >
 > >
 > > HETE and Ulysses were off. RHESSI did not observe it.
 > > There is a trigger in the Odyssey-GRS data, but it appears
 > > to be only noise. There is presently no Odyssey-HEND data.
 > > Given the intensity of this event, I think it must have been
 > > both Earth-blocked and Mars-blocked. How unlucky can you be?
 > Dear colleagues,
 >
 > A very bright long hard GRB triggered Konus-Wind at
 > 2007-02-07 T0=75644.016 (21:00:44.016).
 > This burst was also detected by INTEGRAL-SPI-ACS
 > and Swift-BAT (out FoV - see David's daily report).
 >
 > We have triangulated the GRB 070207 to the Konus-SPI-ACS annulus
 > centered at RA=299.695 (19h 58m 47s) Dec=-23.210 (-23d 12' 37"),

From vxw@capella.gsfc.nasa.gov Thu Feb 8 01:12:14 2007
X-ASG-Debug-ID: 1170926070-2d2e00010000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: capella.gsfc.nasa.gov[128.183.16.187]
-Barracuda-Start-Time: 1170926070
X-ASG-Whitelist: Sender
Date: Thu, 8 Feb 2007 04:14:29 -0500
From: Bacodine <vxw@capella.gsfc.nasa.gov>
To: khurley@ssl.berkeley.edu
X-ASG-Orig-Subj: GCN/SWIFT BAT LIGHTCURVE
Subject: GCN/SWIFT BAT LIGHTCURVE
Mime-Version: 1.0
Content-Disposition: inline
User-Agent: Mutt/1.4.1i
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

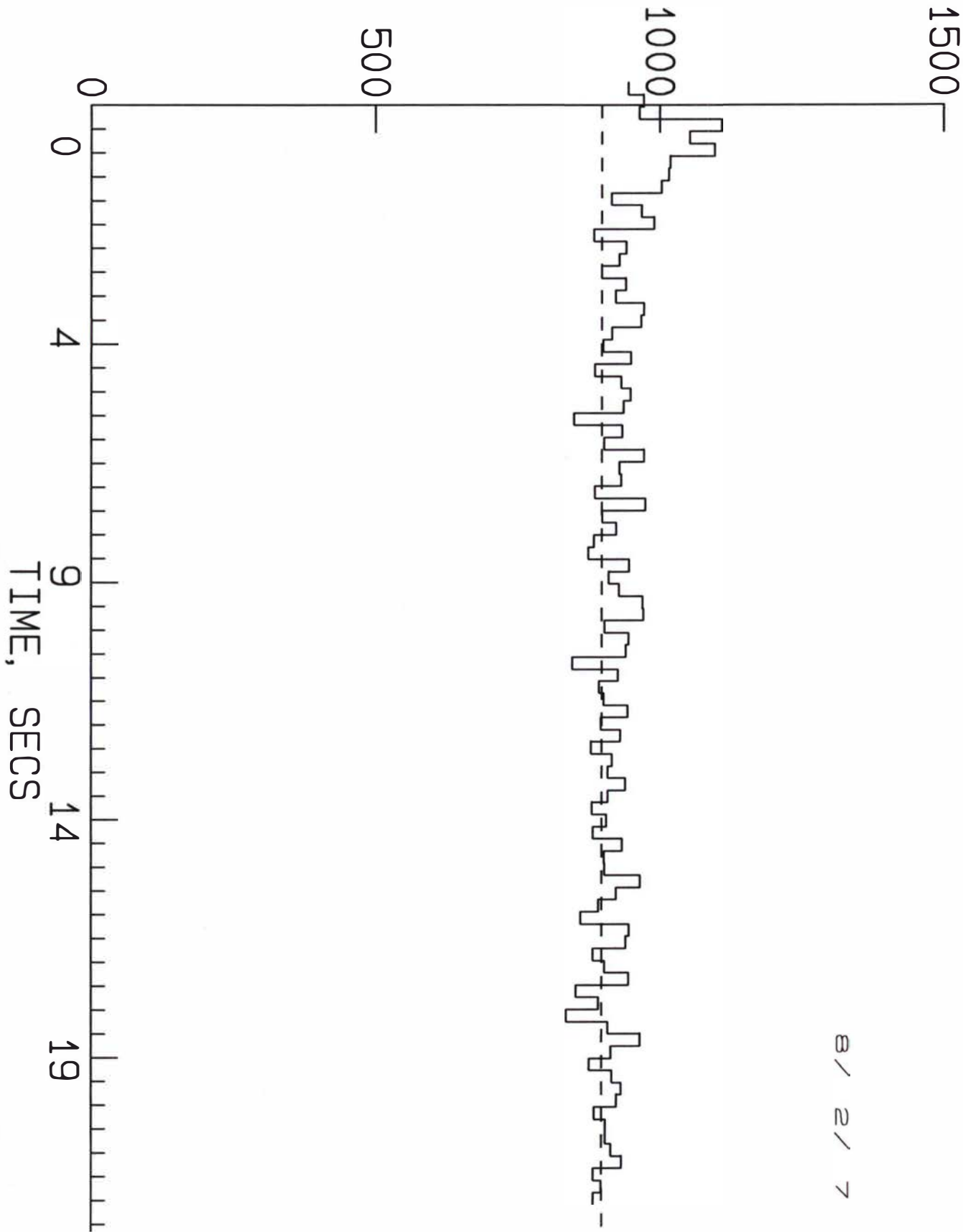
TITLE: GCN/SWIFT NOTICE
NOTICE_DATE: Thu 08 Feb 07 09:14:14 UT
NOTICE_TYPE: Swift-BAT GRB Lightcurve
TRIGGER_NUM: 259714, Seg_Num: 0
GRB_RA: 197.920d {+13h 11m 41s} (J2000),
197.989d {+13h 11m 57s} (current),
197.440d {+13h 09m 45s} (1950)
GRB_DEC: +61.959d {+61d 57' 31"} (J2000),
+61.921d {+61d 55' 16"} (current),
+62.224d {+62d 13' 26"} (1950)
GRB_DATE: 14139 TJD; 39 DOY; 07/02/08
GRB_TIME: 33034.28 SOD {09:10:34.28} UT
TRIGGER_INDEX: 472
RB_PHI: -27.32 [deg]
GRB_THETA: 39.45 [deg]
DELTA_TIME: 76.00 [sec]
TRIGGER_DUR: 1.408 [sec]
SOLN_STATUS: 0x3
RATE_SIGNIF: 10.04 [sigma]
IMAGE_SIGNIF: 7.29 [sigma]
LC_URL: sw00259714000msb.lc
SUN_POSTN: 321.64d {+21h 26m 34s} -15.06d {-15d 03' 27"}
SUN_DIST: 118.76 [deg] Sun_angle= 8.2 [hr] (West of Sun)
MOON_POSTN: 203.75d {+13h 34m 59s} -13.63d {-13d 37' 57"}
MOON_DIST: 75.69 [deg]
MOON_ILLUM: 69 [%]
GAL_COORDS: 118.78, 55.01 [deg] galactic lon,lat of the burst (or transient)
ECL_COORDS: 153.98, 60.15 [deg] ecliptic lon,lat of the burst (or transient)
COMMENTS: SWIFT-BAT GRB Lightcurve.
COMMENTS:
COMMENTS: The next comments were copied from the BAT_POS Notice:
COMMENTS: This is a rate trigger.
COMMENTS: A point_source was found.
COMMENTS: This does not match any source in the on-board catalog.
COMMENTS: This does not match any source in the ground catalog.
COMMENTS: This is a GRB.
COMMENTS: This trigger occurred at longitude,latitude = 255.15,-1.98 [deg]

SWIFT

08/02/07 33034.281

25- 100 keV

COUNTS/0.256 S



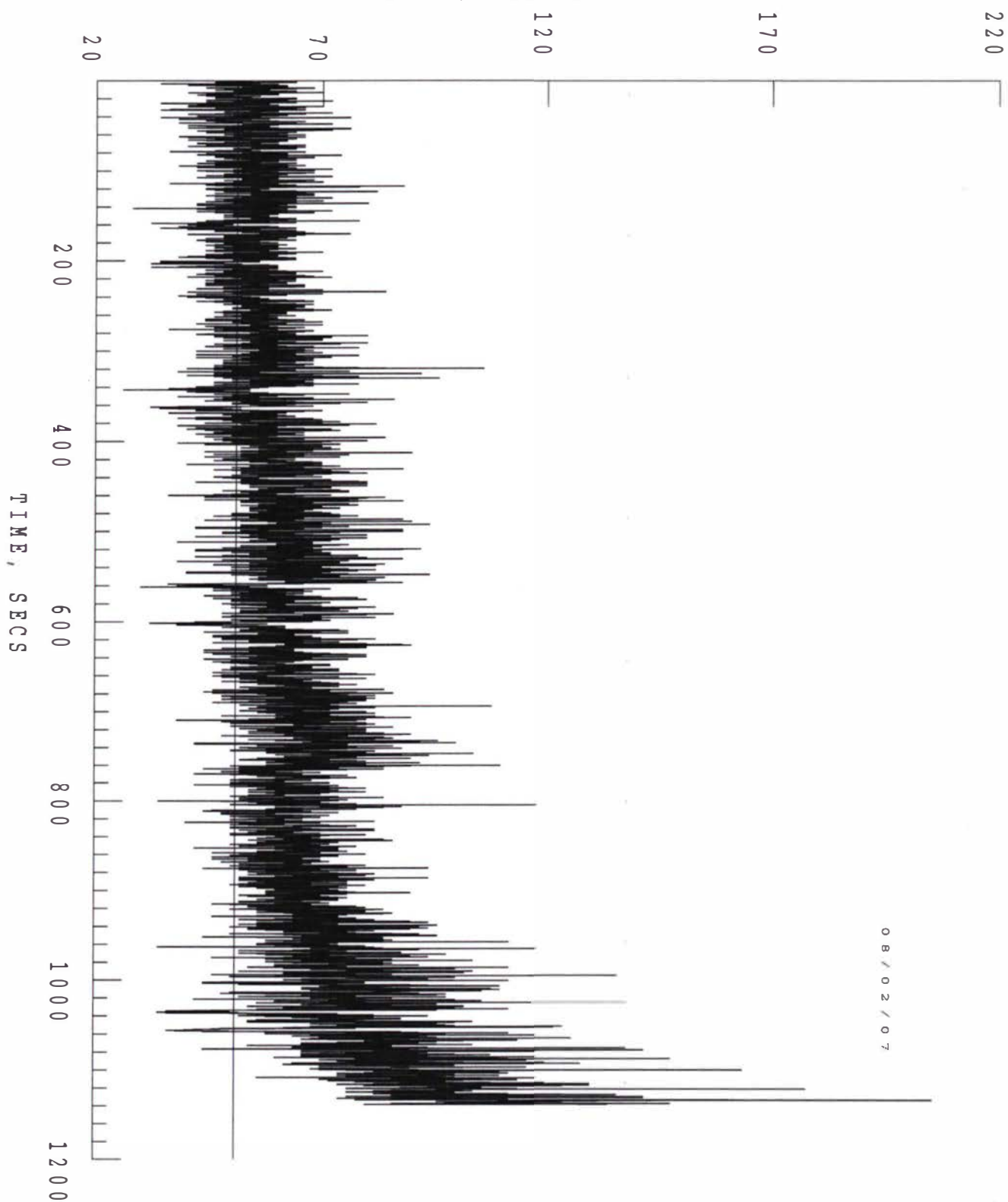
MS01

08/02/07

31660.121

50 - 3000 keV

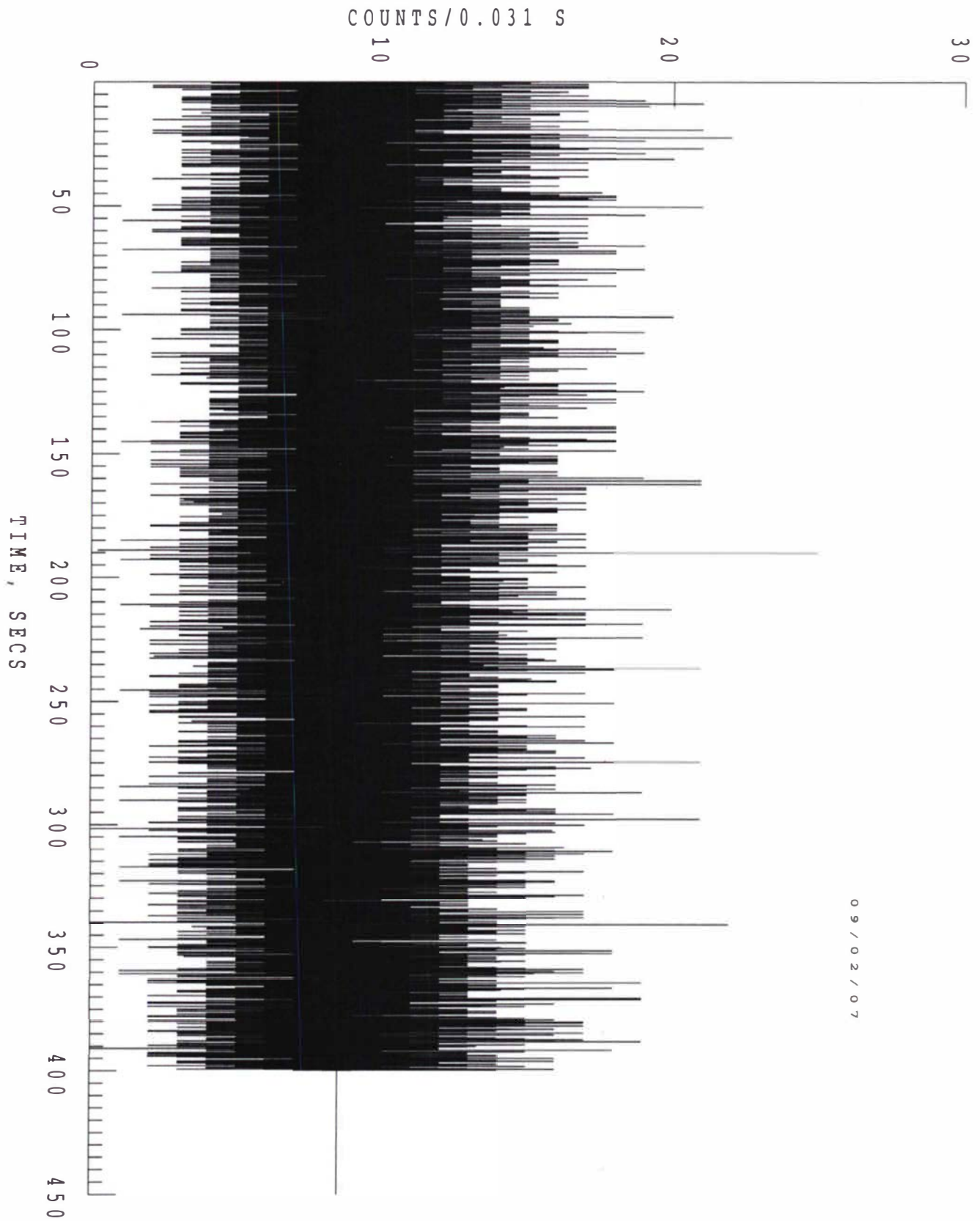
COUNTS/0.250 S



HESSI

08/02/07 32834.000 (GSwift-BAT_259714_0_20070208_

25- 150 keV



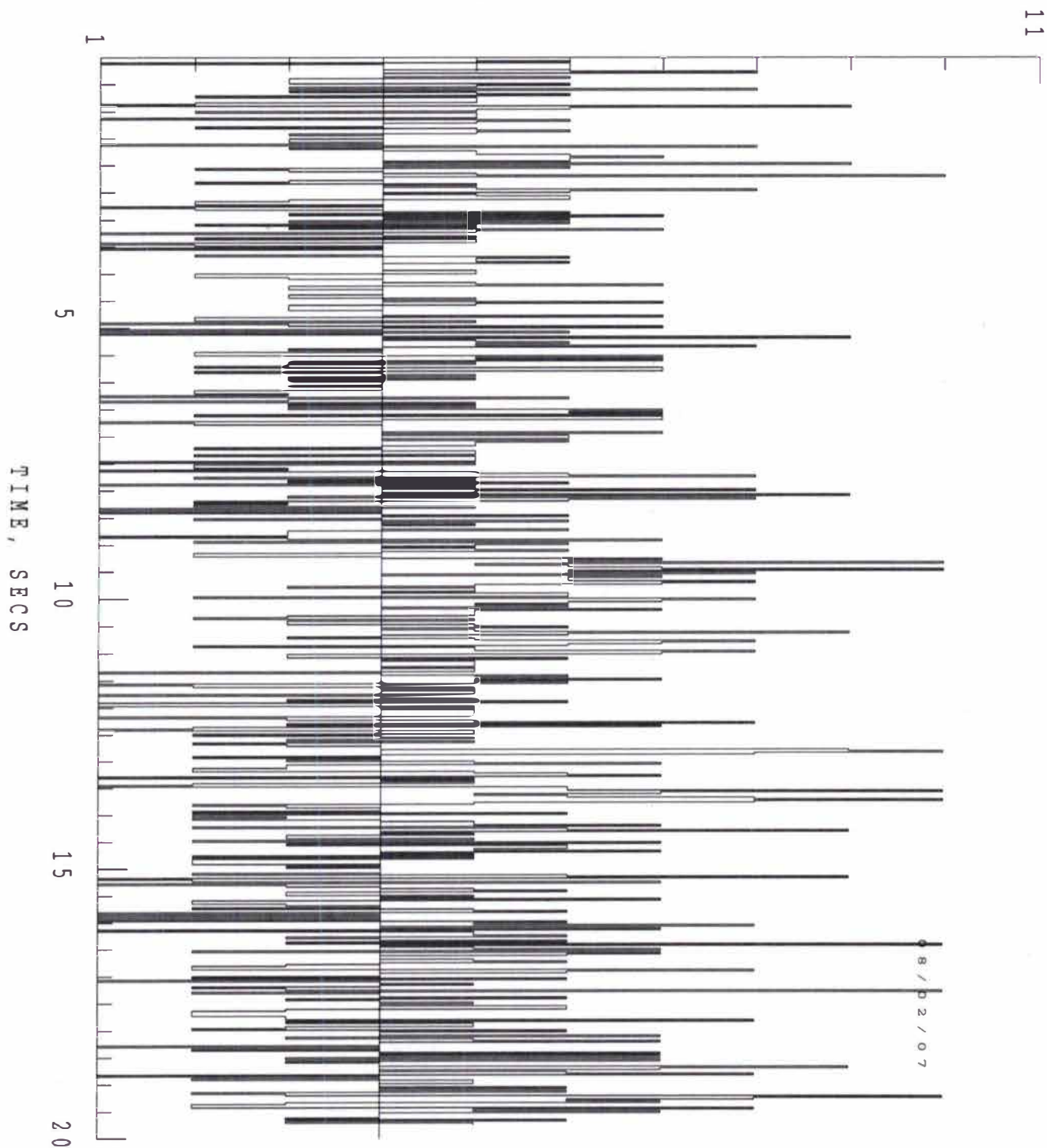
MO

08/02/07

68519.416

116- 337 keV

COUNTS/0.032 S



25/04/07

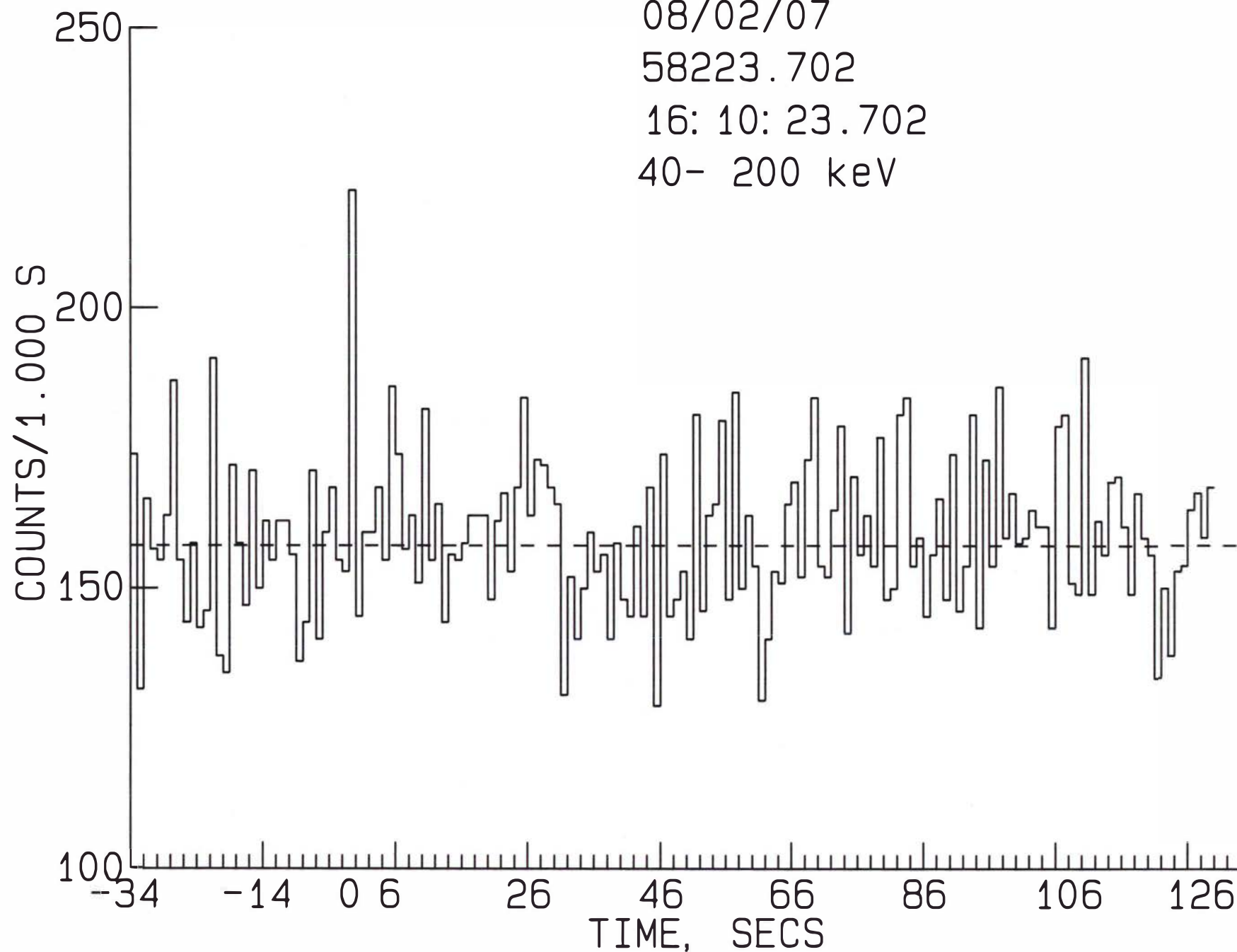
MESSENGER

08/02/07

58223.702

16: 10: 23.702

40- 200 keV



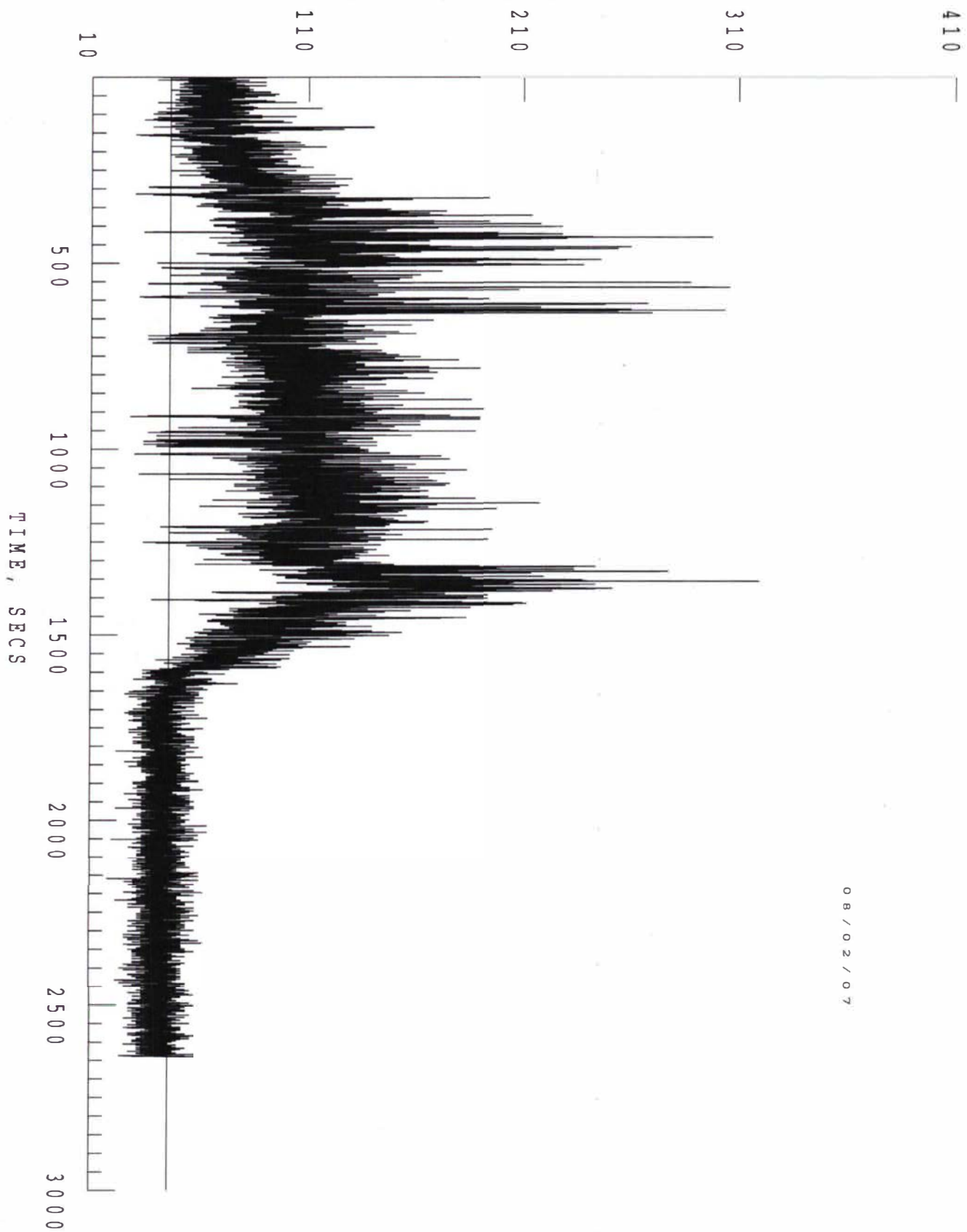
MS01

08/02/07

67179.464

50 - 3000 keV

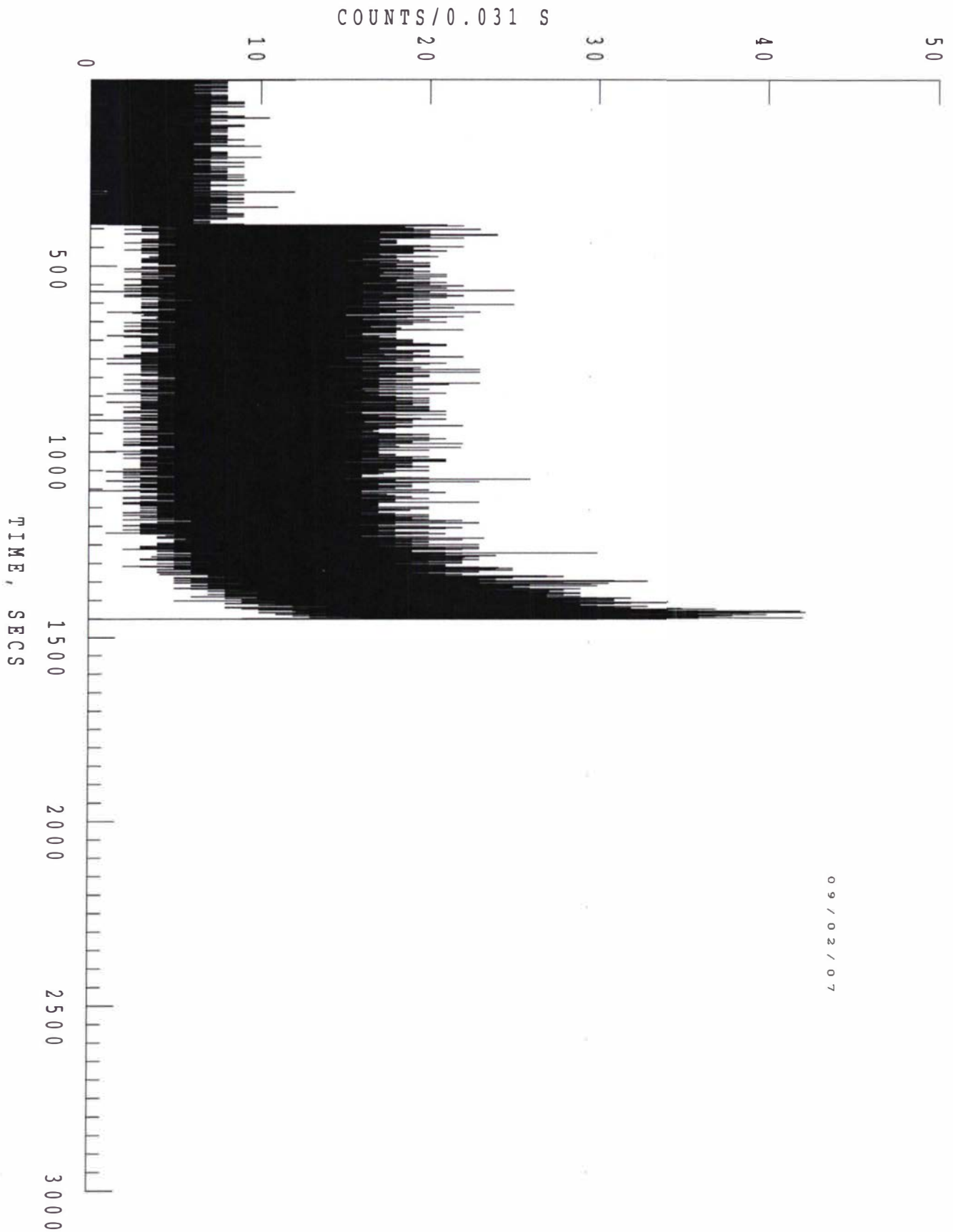
COUNTS/0.250 S



HESSI

08/02/07 67219.000 (MO_GE_20070208_68519)

25- 150 keV



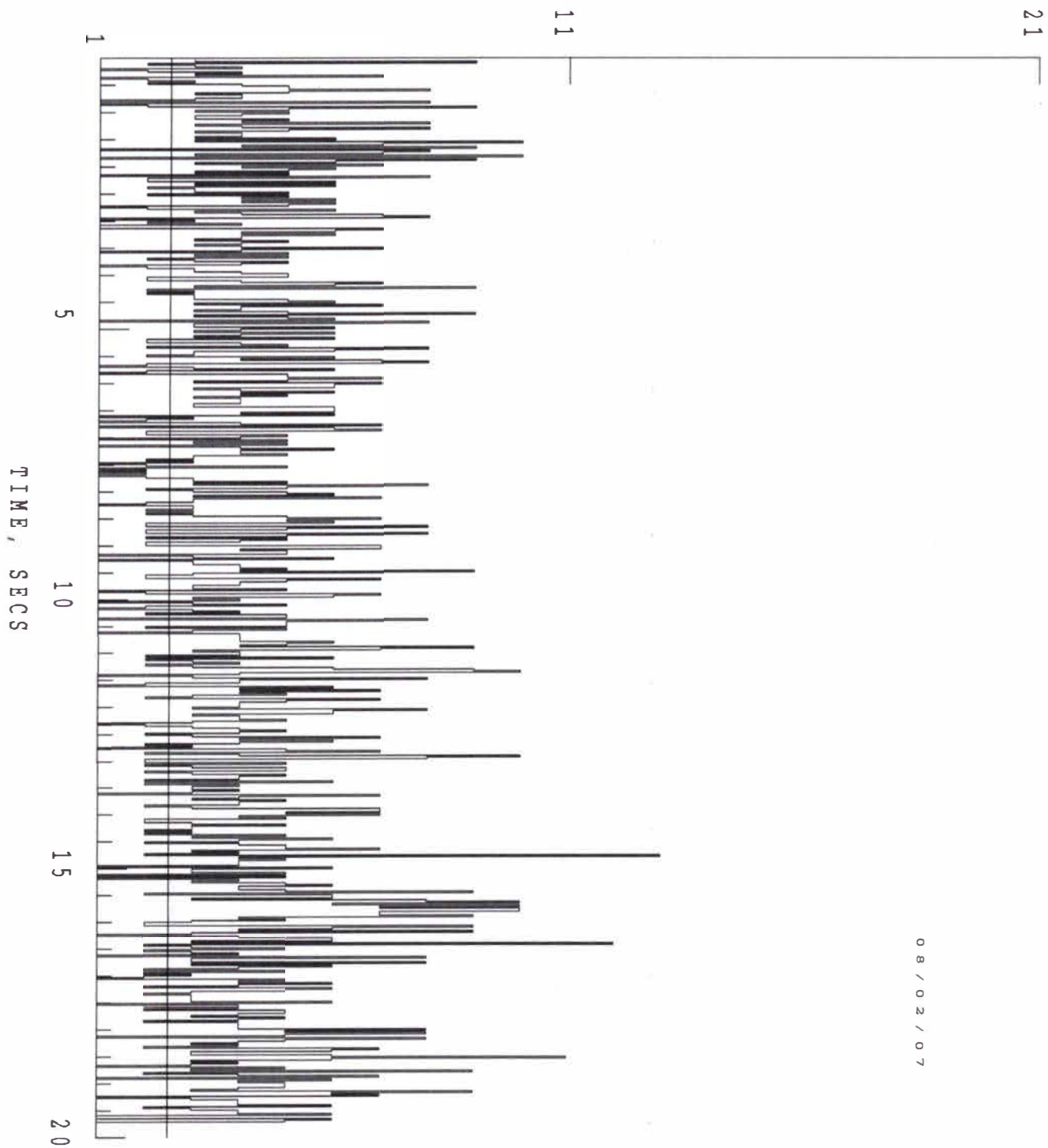
MO

09/02/07

177.671

116- 337 keV

COUNTS/0.032 S



08/02/07

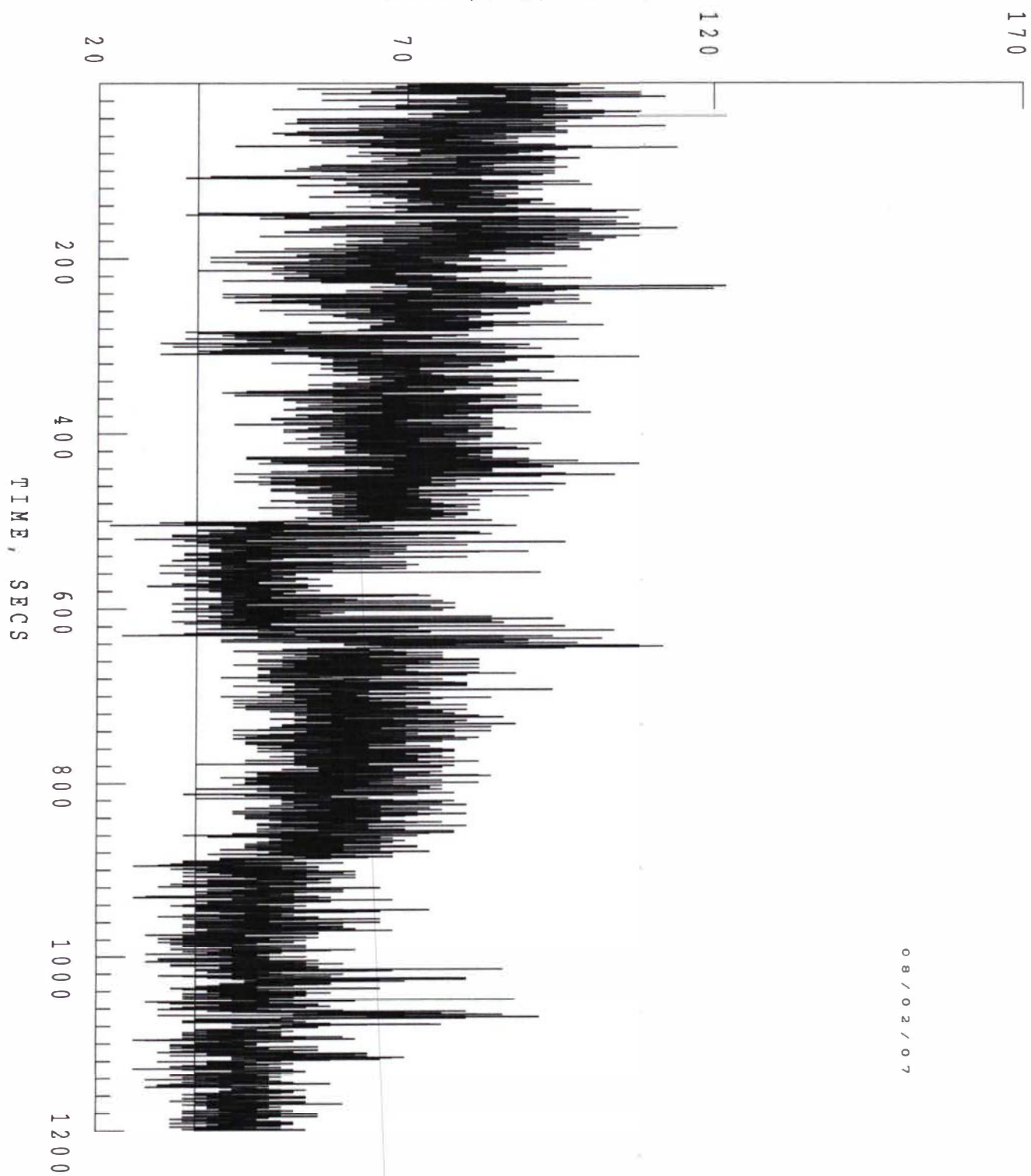
MS01

08/02/07

85239.138

50 - 3000 keV

COUNTS/0.250 S

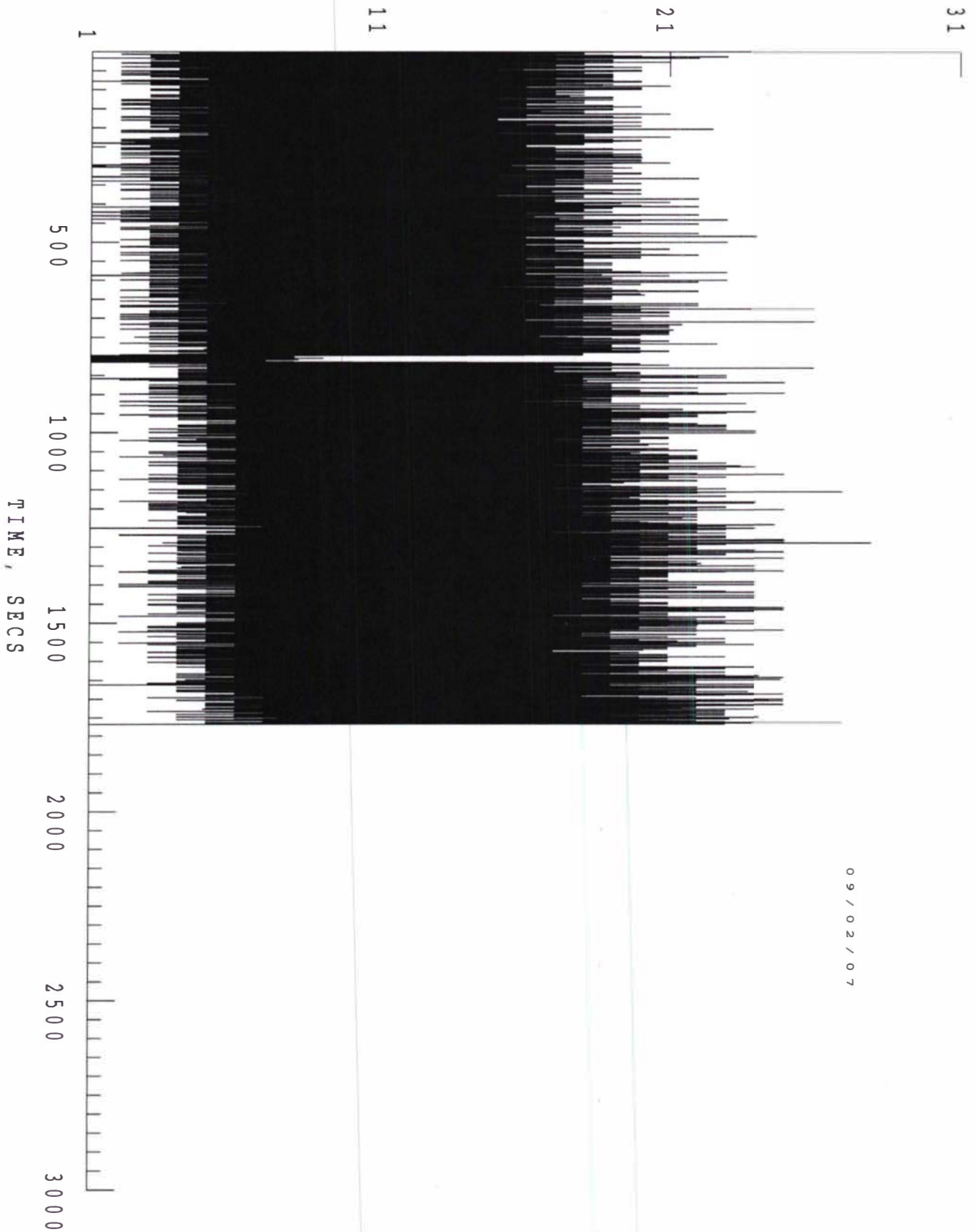


HESSI

08/02/07 85277.000 (MO_GE_20070209_00177)

25- 150 keV

COUNTS/0.031 S



09/02/07

From vxw@capella.gsfc.nasa.gov Thu Feb 8 19:35:03 2007
X-ASG-Debug-ID: 1170992240-68dd00030000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
X-Barracuda-Connect: capella.gsfc.nasa.gov[128.183.16.187]
X-Barracuda-Start-Time: 1170992240
X-ASG-Whitelist: Sender
Date: Thu, 8 Feb 2007 22:37:19 -0500
From: Bacodine <vxw@capella.gsfc.nasa.gov>
To: khurley@ssl.berkeley.edu
X-ASG-Orig-Subj: GCN/SWIFT BAT LIGHTCURVE
Subject: GCN/SWIFT BAT LIGHTCURVE
Mime-Version: 1.0
Content-Disposition: inline
User-Agent: Mutt/1.4.1i
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

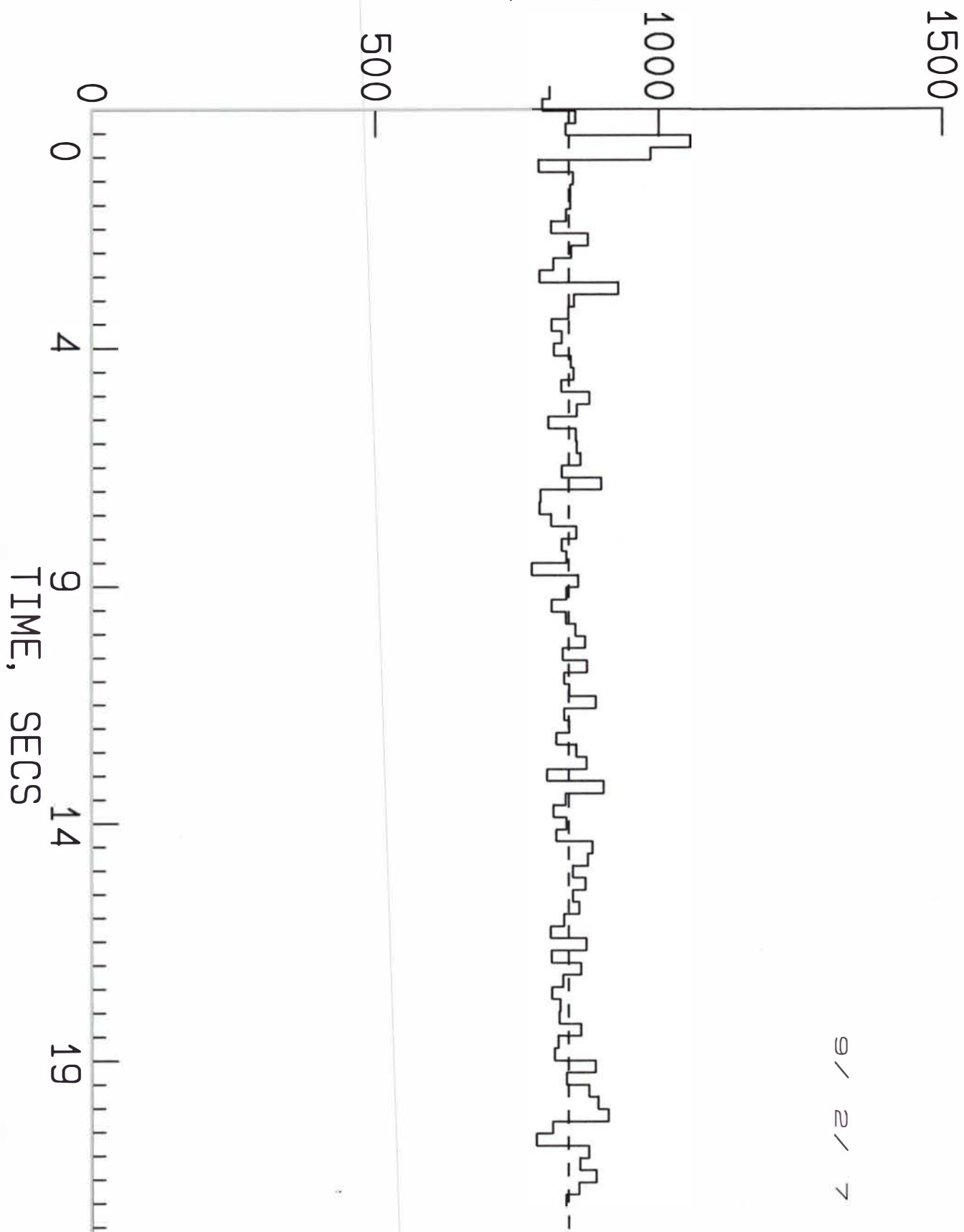
TITLE: GCN/SWIFT NOTICE
NOTICE_DATE: Fri 09 Feb 07 03:37:04 UT
NOTICE_TYPE: Swift-BAT GRB Lightcurve
TRIGGER_NUM: 259803, Seg Num: 0
GRB_RA: 46.237d {+03h 04m 57s} (J2000),
46.297d {+03h 05m 11s} (current),
45.815d {+03h 03m 16s} (1950)
GRB_DEC: -47.370d {-47d 22' 11"} (J2000),
-47.343d {-47d 20' 33"} (current),
-47.563d {-47d 33' 47"} (1950)
GRB_DATE: 14140 TJD; 40 DOY; 07/02/09
GRB_TIME: 12821.94 SOD {03:33:41.94} UT
TRIGGER_INDEX: 10418
RB_PHI: -1.48 [deg]
RB_THETA: 26.74 [deg]
DELTA_TIME: 30.00 [sec]
TRIGGER_DUR: 0.064 [sec]
SOLN_STATUS: 0x3
RATE_SIGNIF: 18.70 [sigma]
IMAGE_SIGNIF: 9.09 [sigma]
LC_URL: sw00259803000msb.lc
SUN_POSTN: 322.41d {+21h 29m 37s} -14.81d {-14d 48' 52"}
SUN_DIST: 75.06 [deg] Sun_angle= -5.6 [hr] (East of Sun)
MOON_POSTN: 212.32d {+14h 09m 17s} -17.35d {-17d 21' 07"}
MOON_DIST: 114.10 [deg]
MOON_ILLUM: 62 [%]
GAL_COORDS: 259.74,-57.02 [deg] galactic lon,lat of the burst (or transient
ECL_COORDS: 18.43,-60.41 [deg] ecliptic lon,lat of the burst (or transient
COMMENTS: SWIFT-BAT GRB Lightcurve.
COMMENTS:
COMMENTS: The next comments were copied from the BAT_POS Notice:
COMMENTS: This is a rate trigger.
COMMENTS: A point_source was found.
COMMENTS: This does not match any source in the on-board catalog.
COMMENTS: This does not match any source in the ground catalog.
COMMENTS: This is a GRB.
COMMENTS: This trigger occurred at longitude,latitude = 136.89,-4.20 [deg

SWIFT

09/02/07 12821.948

25- 100 keV

COUNTS/0.256 S



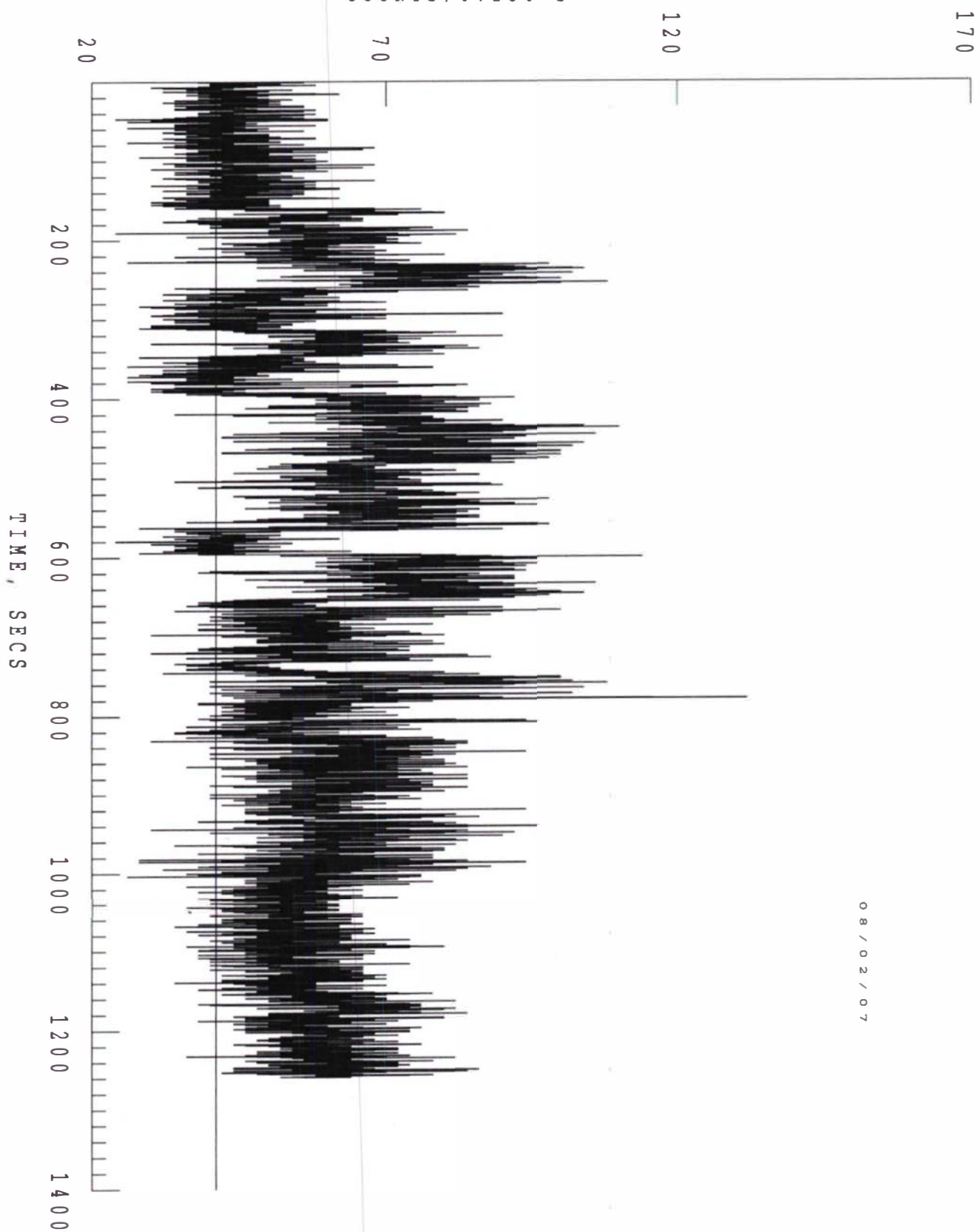
MS01

09/02/07

11498.907

50 - 3000 keV

COUNTS/0.250 S



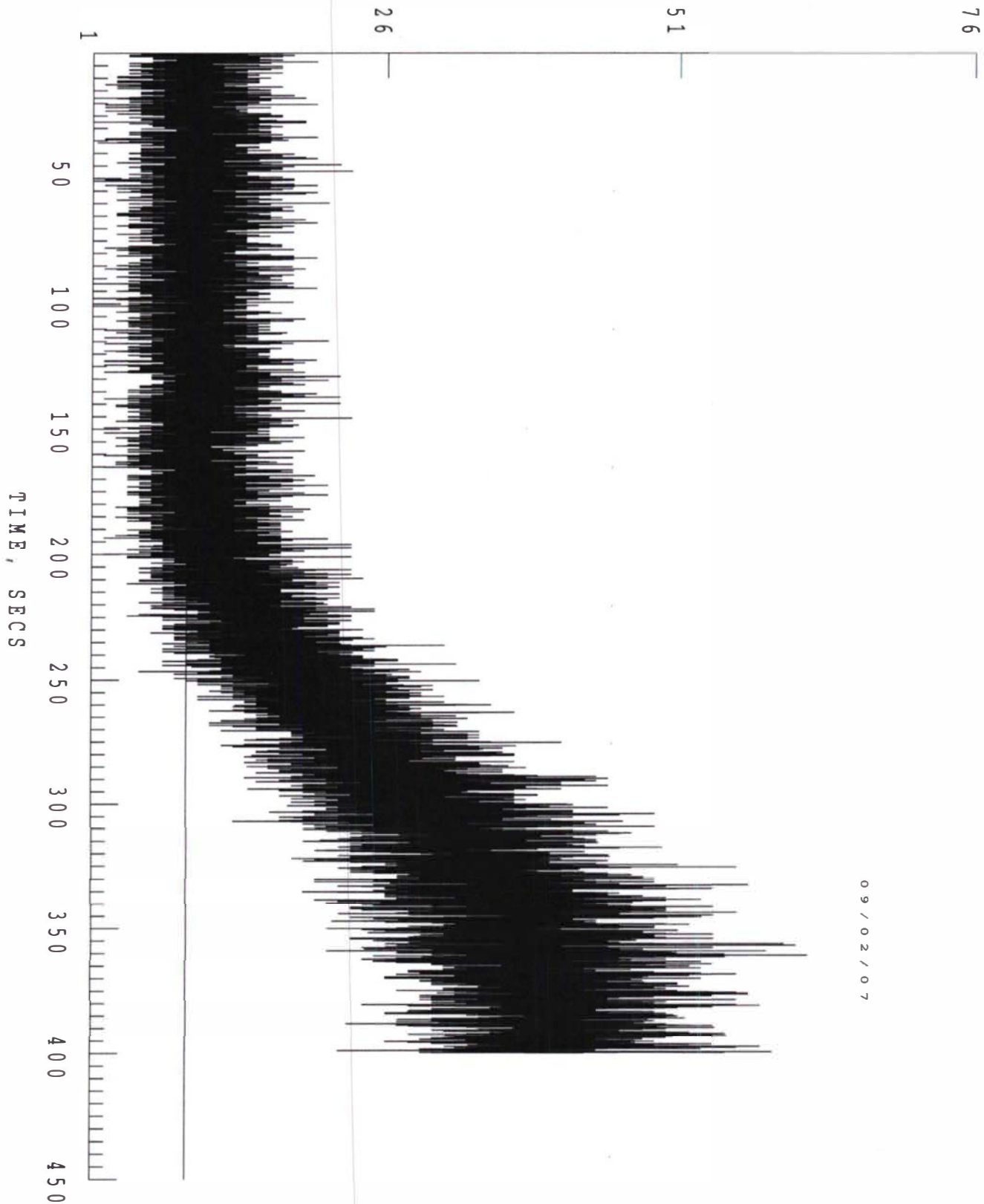
08/02/07

HESSI

09/02/07 12621.000 (GSwift-BAT_259803_0_20070209_

25- 150 keV

COUNTS/0.031 S



09/02/07

07/05/07

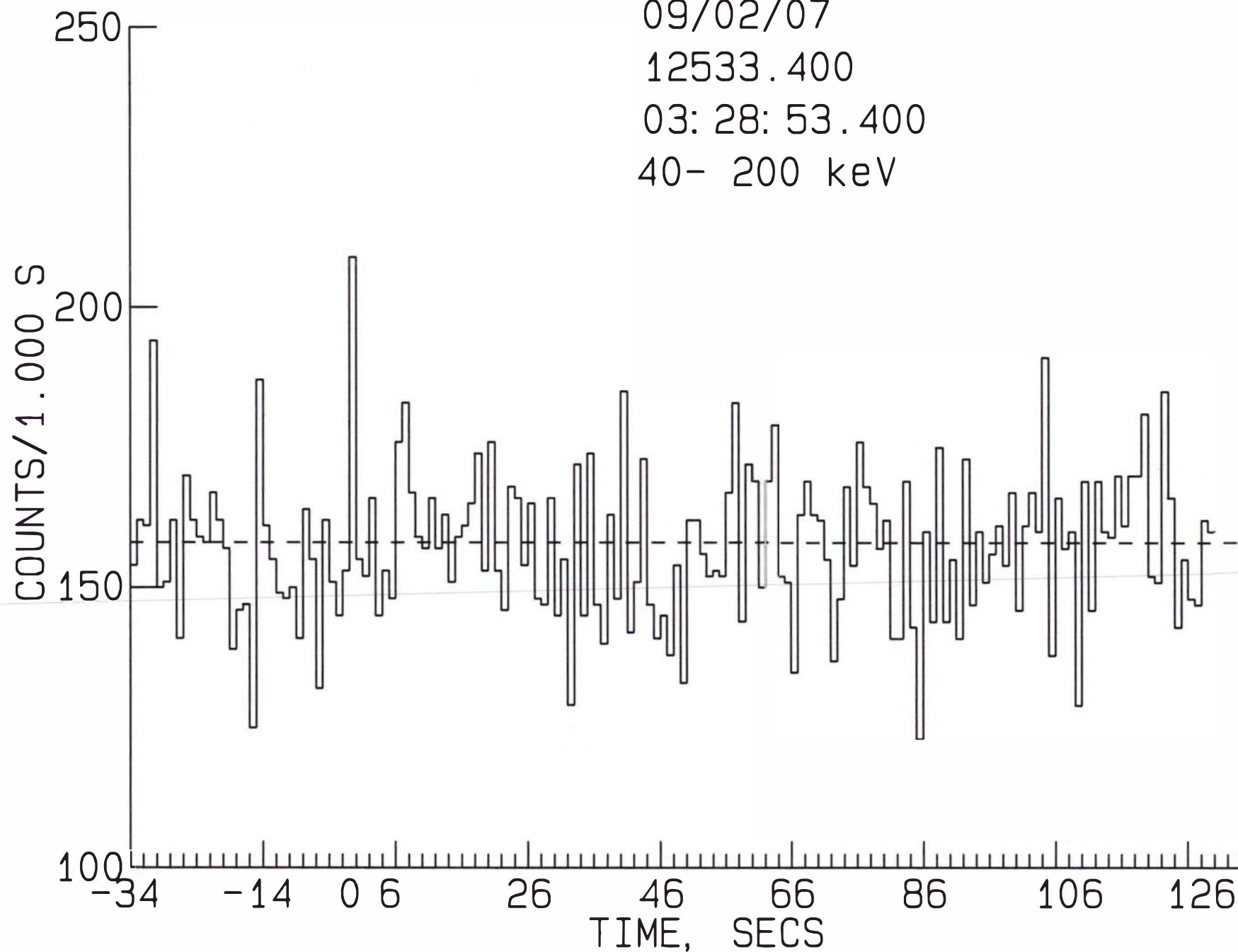
MESSENGER

09/02/07

12533.400

03:28:53.400

40- 200 keV



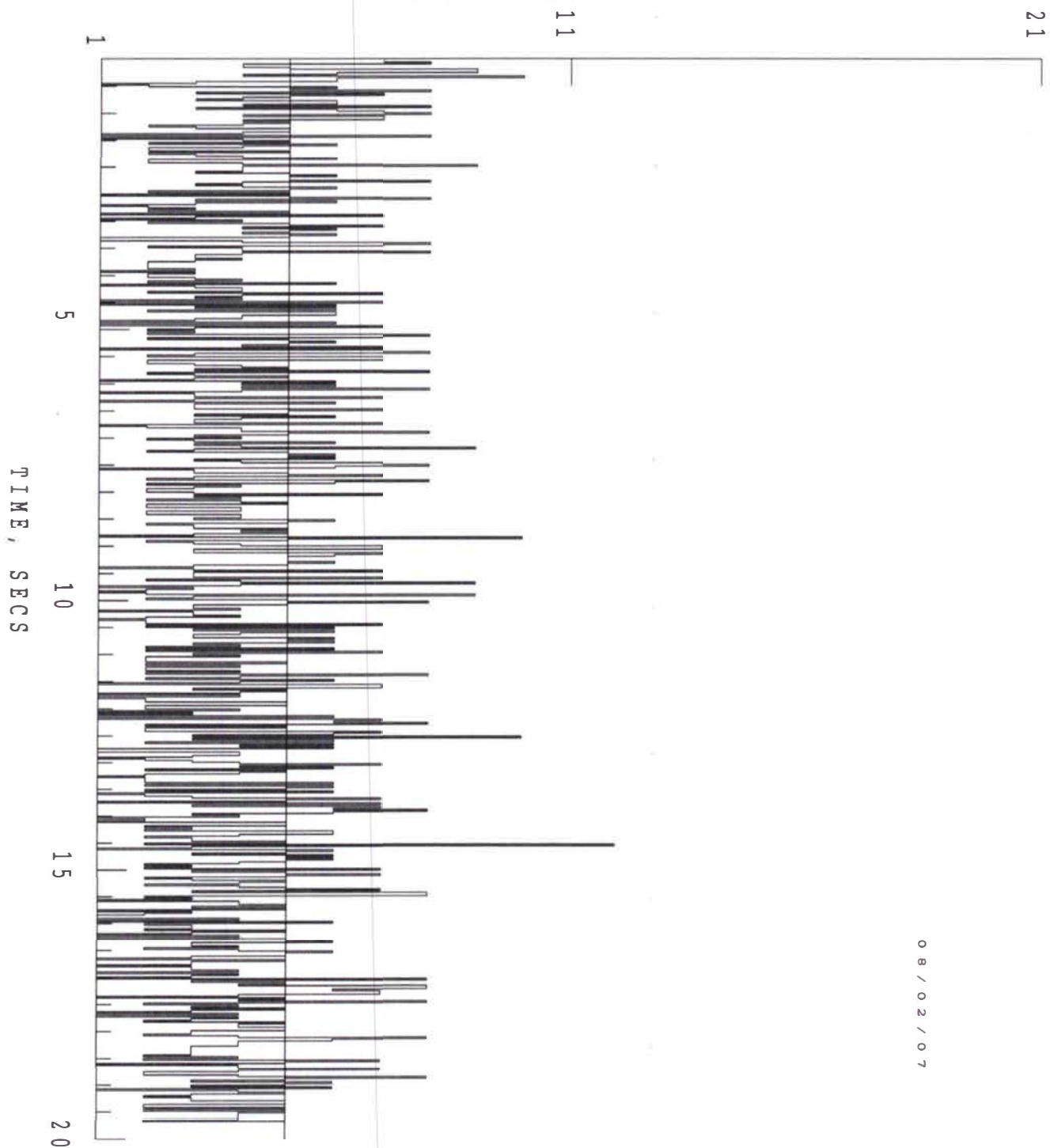
MO

09/02/07

18797.557

116- 337 keV

COUNTS/0.032 S



08/02/07

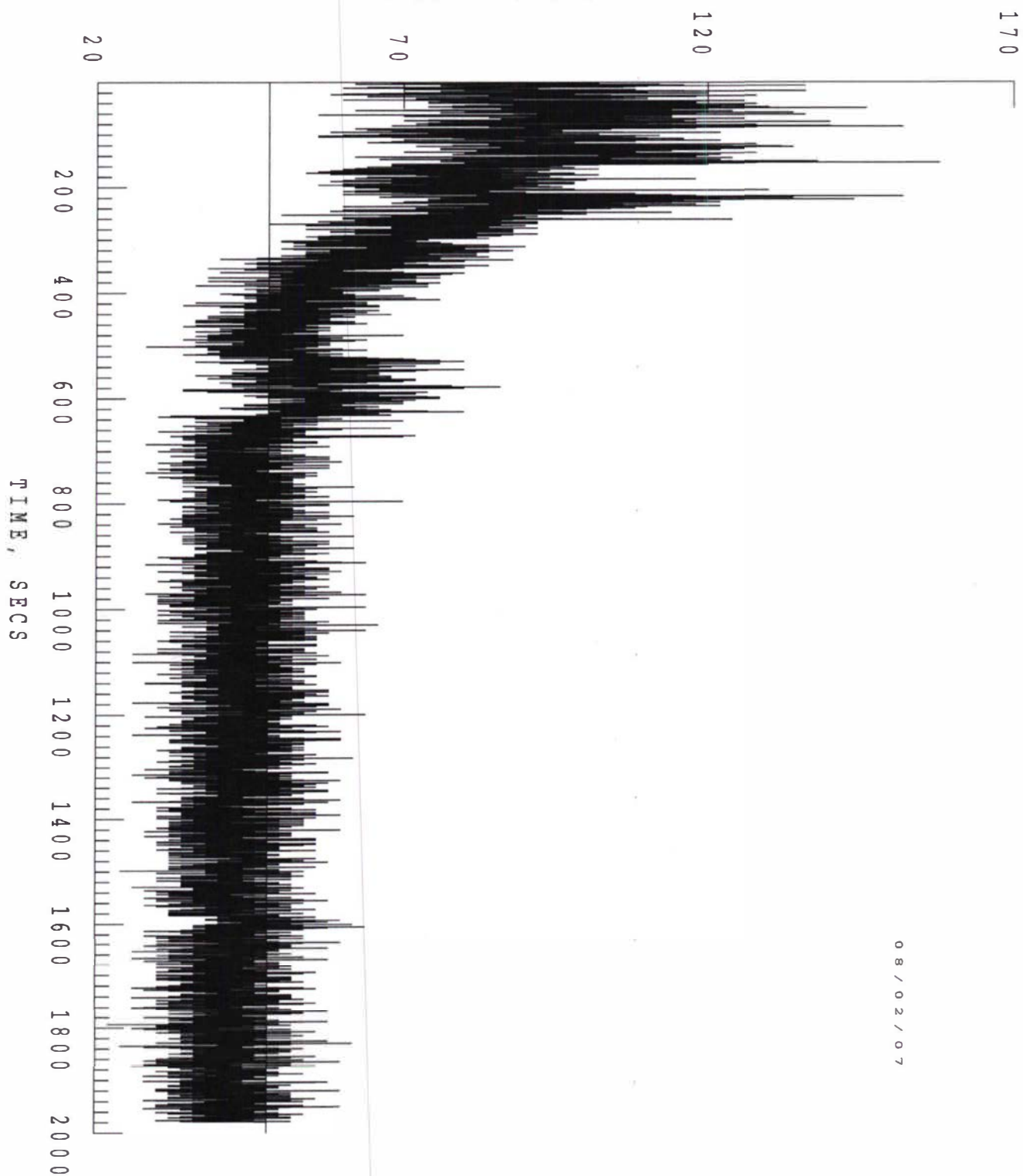
MS01

09/02/07

17438.797

50- 3000 keV

COUNTS/0.250 S



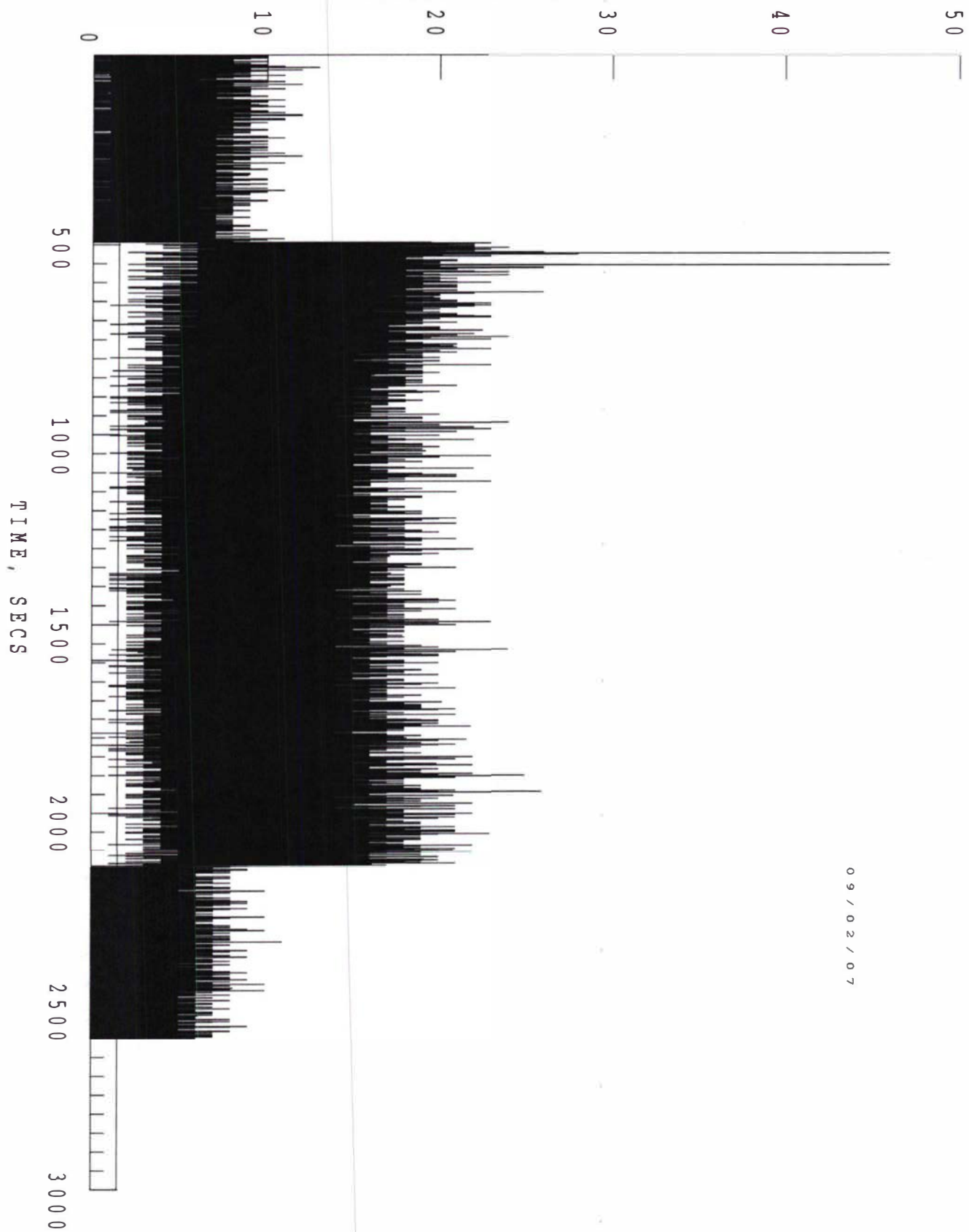
08/02/07

HESSI

09/02/07 17497.000 (MO_GE_20070209_18797)

25- 150 keV

COUNTS/0.031 S



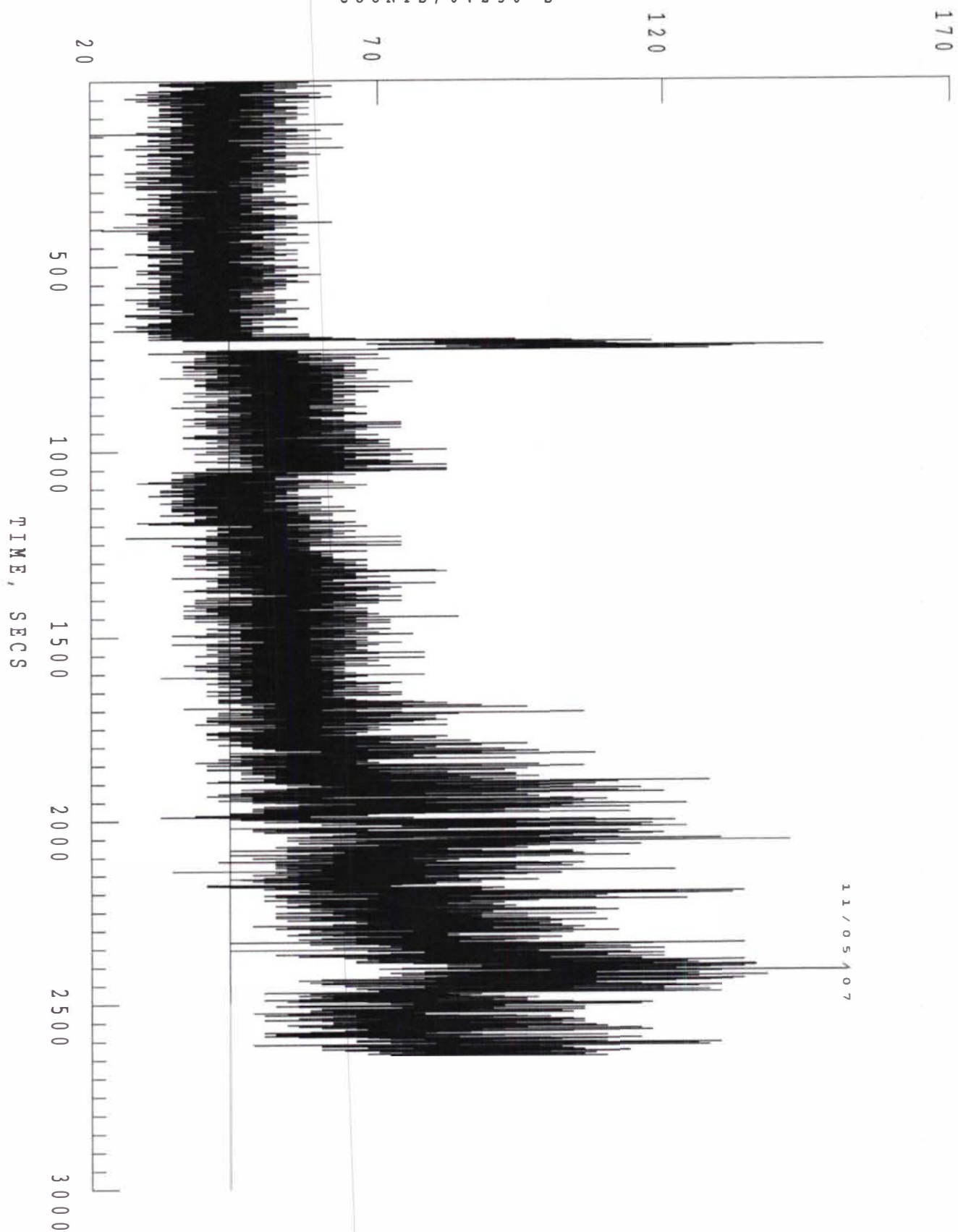
MS01

10/02/07

28177.017

50 - 3000 keV

COUNTS/0.250 S

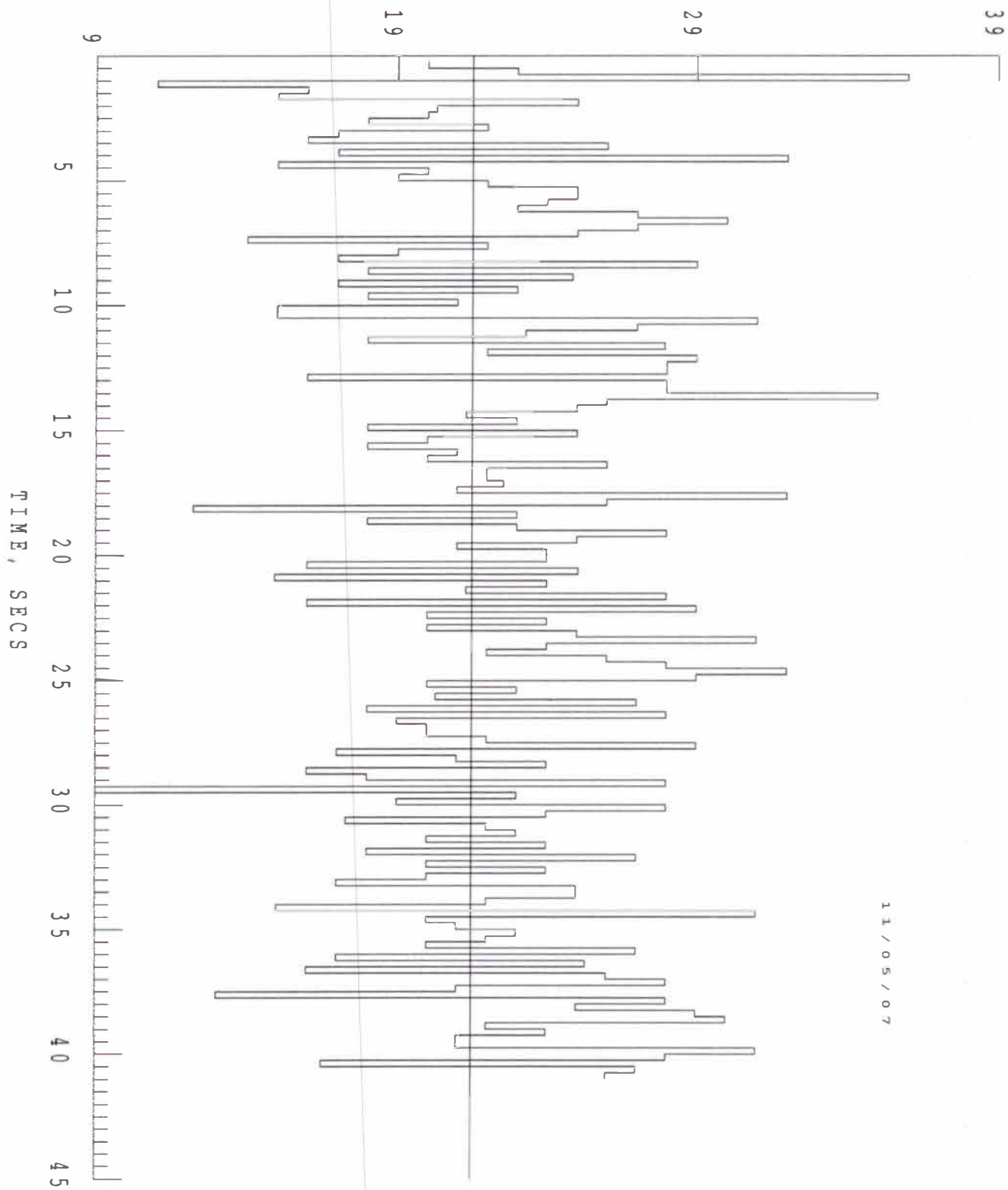


HESSI

10/02/07 29496.000 (SUZAKU_20070210_29517)

25- 150 keV

COUNTS/0.250 S



25/04/07

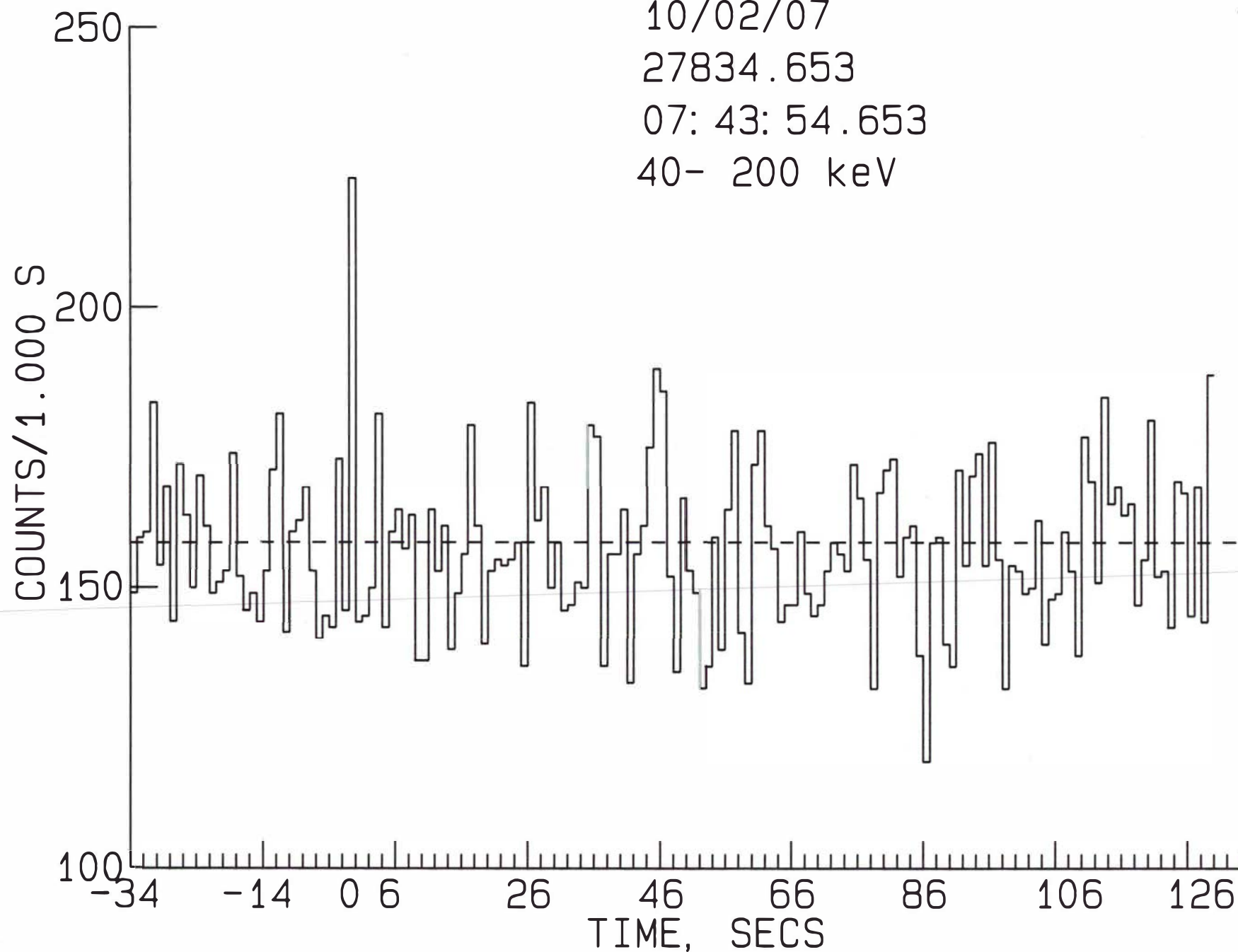
MESSENGER

10/02/07

27834.653

07: 43: 54.653

40- 200 keV



Date: Aug 2 2010

BURST TRIANGULATION CHECKLIST

1. Suzaku Data

- ☐ 1 second timing error corrected? (Jan 1 – Apr 24 2009)

2. AGILE Data

- ☐ 1 second timing error corrected?

3. MESSENGER Data

- ☐ Coarse or fine oscillator?
☐ Timing checked after ~ 1 week?

4. For Konus events

- ☐ Konus ecliptic latitude used with latest calibration?

5. 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? *Large uncertainty*

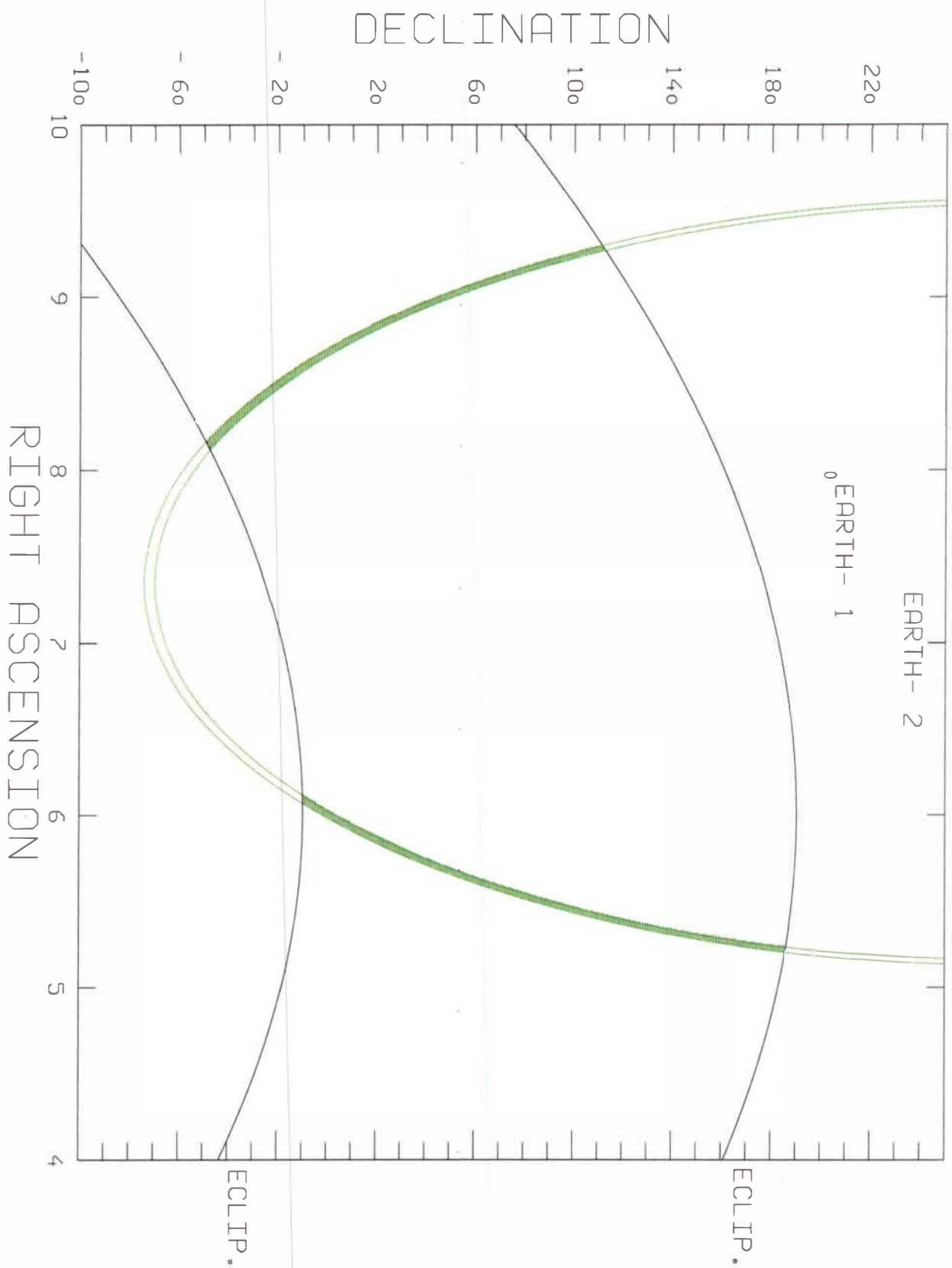
6. For 3 or More Spacecraft events

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

7. For INTEGRAL events

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

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

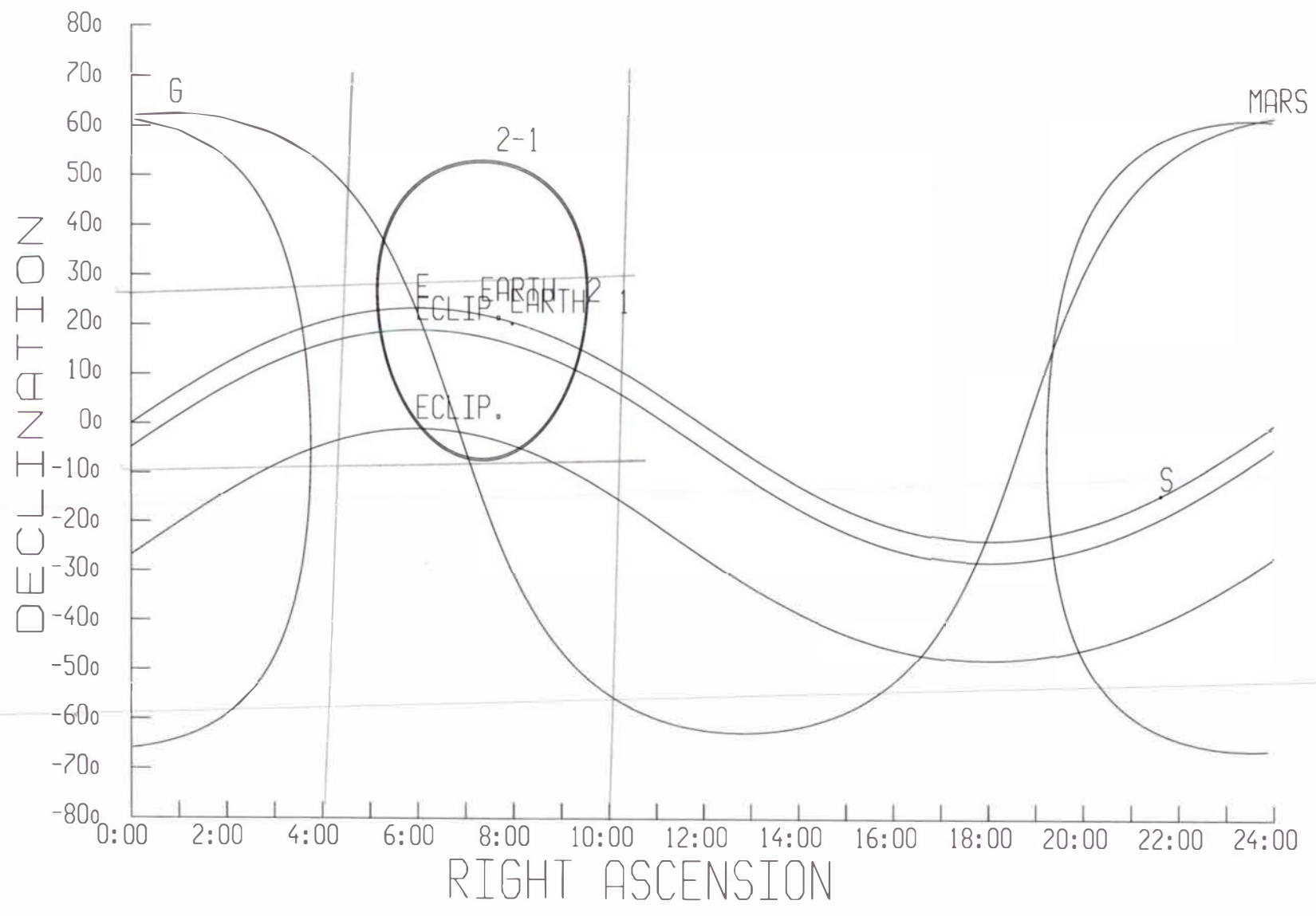


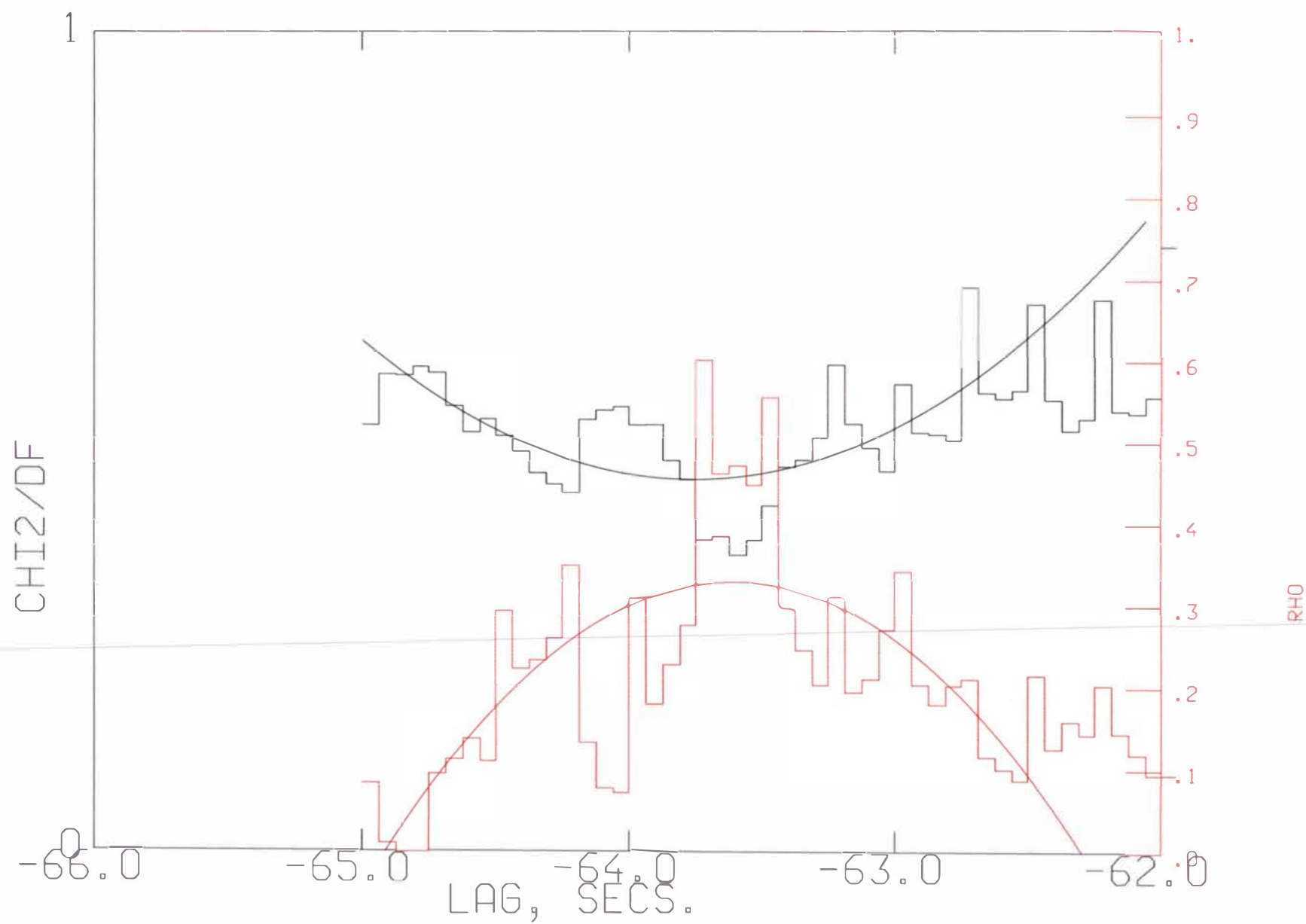
A

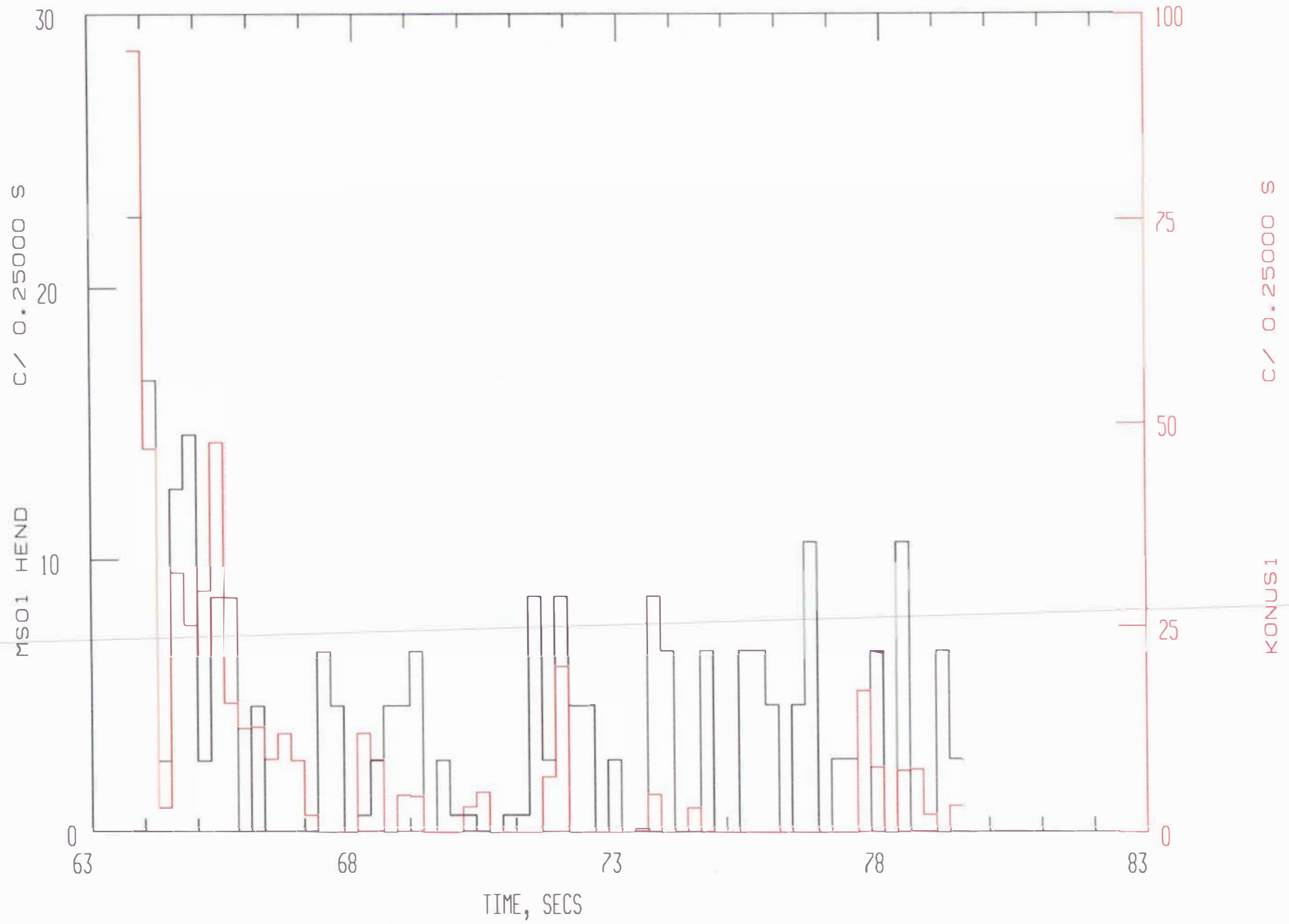
EVENT OF FEB 11, 2007 0:17

02/08/2010

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







KONUS1

11/02/07

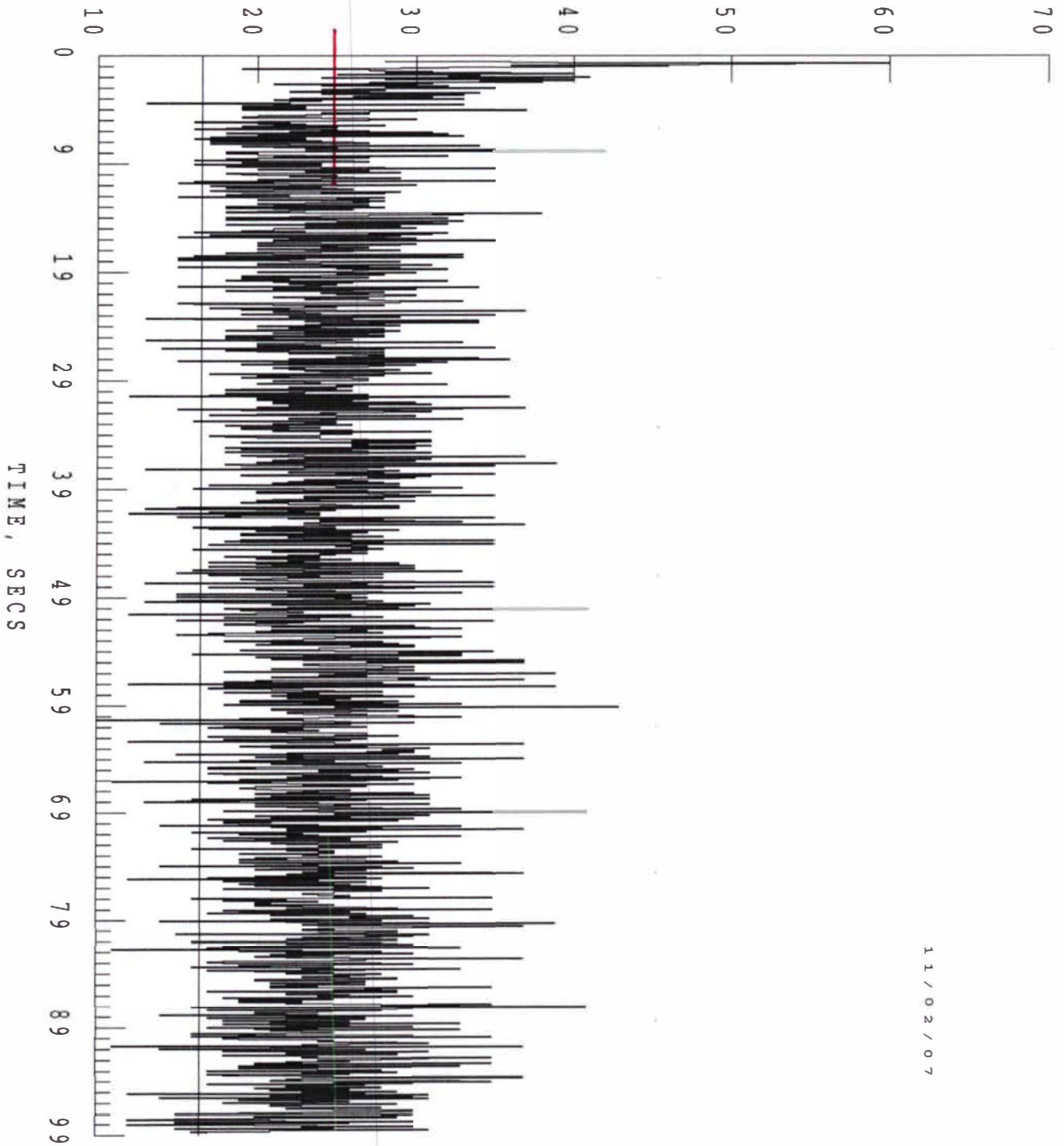
1060.316

A

50 - 200 keV

00:17:40

COUNTS/0.064 S



KONUS HRES 20070211 01060

TRIGGER TIME: 11/02/07 DOY 042 Julian 2454143.51227 UT = 00.294 00:17:40 (01060.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

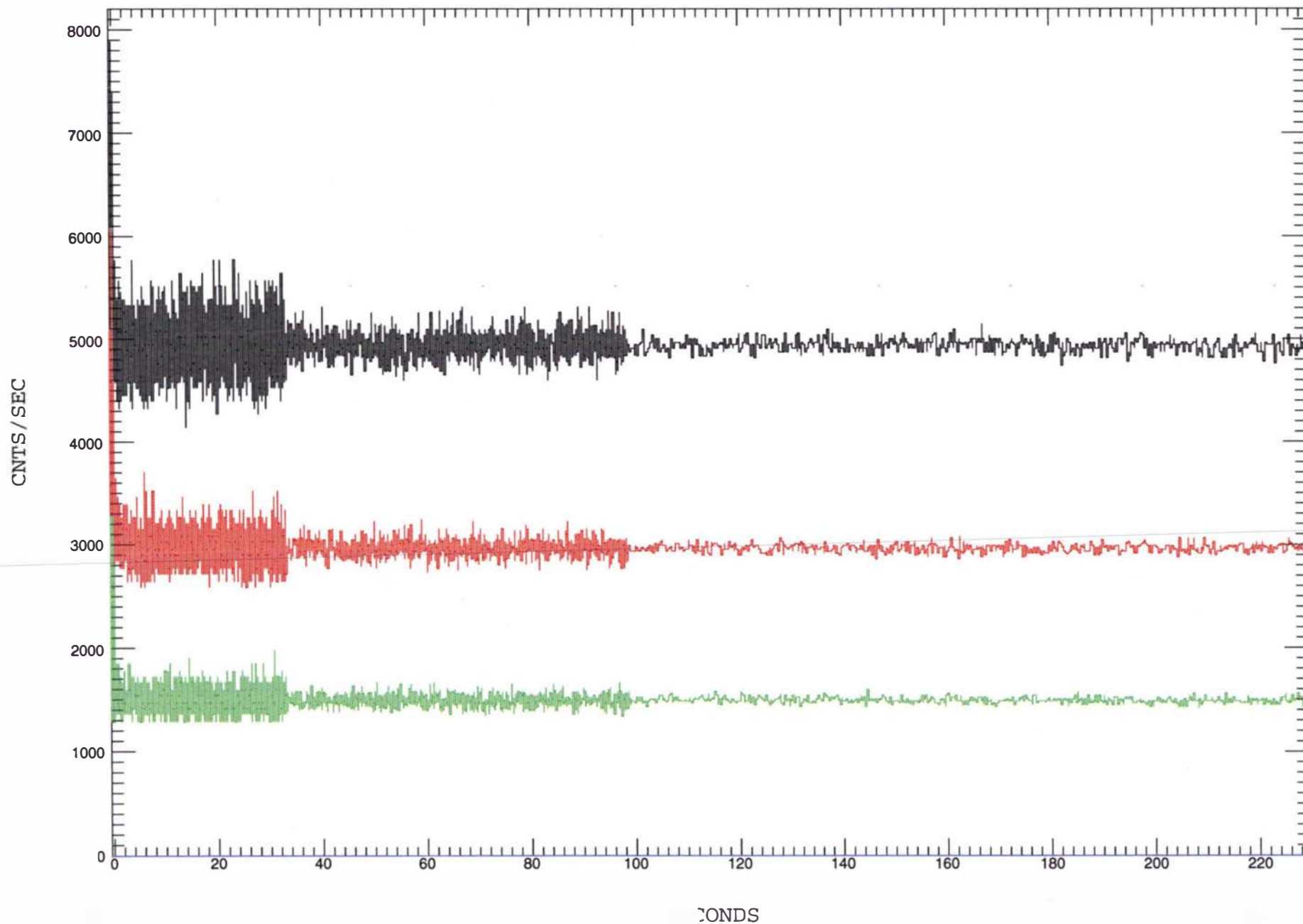
Chan 4 : [> 10 MeV]

Channel 1 + 3900

Channel 2 + 2600

Channel 3 + 1300

Channel 4 + 0



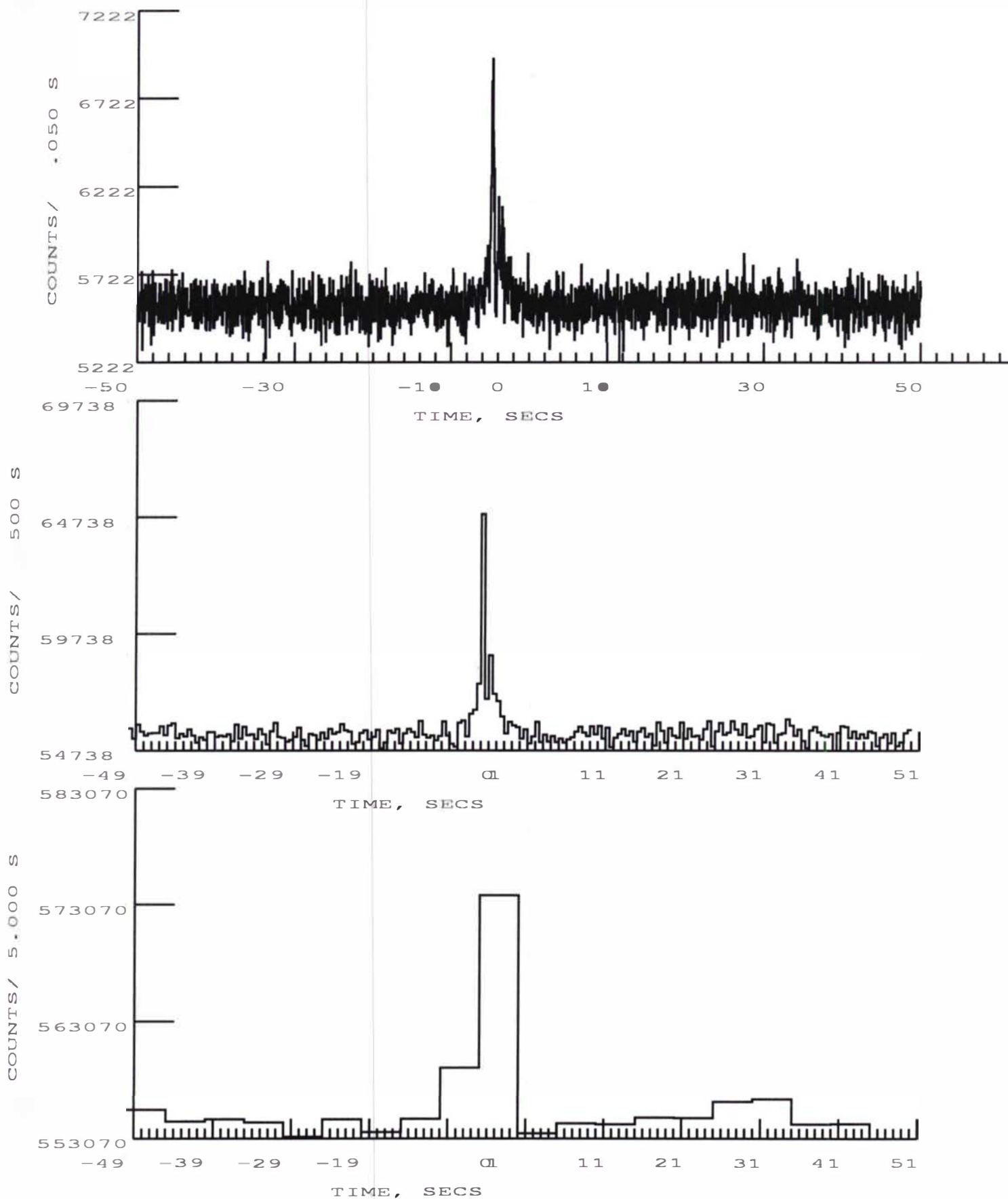
INTEGRAL

11/02/07

1060.000

00:17:40.0

18/07/14

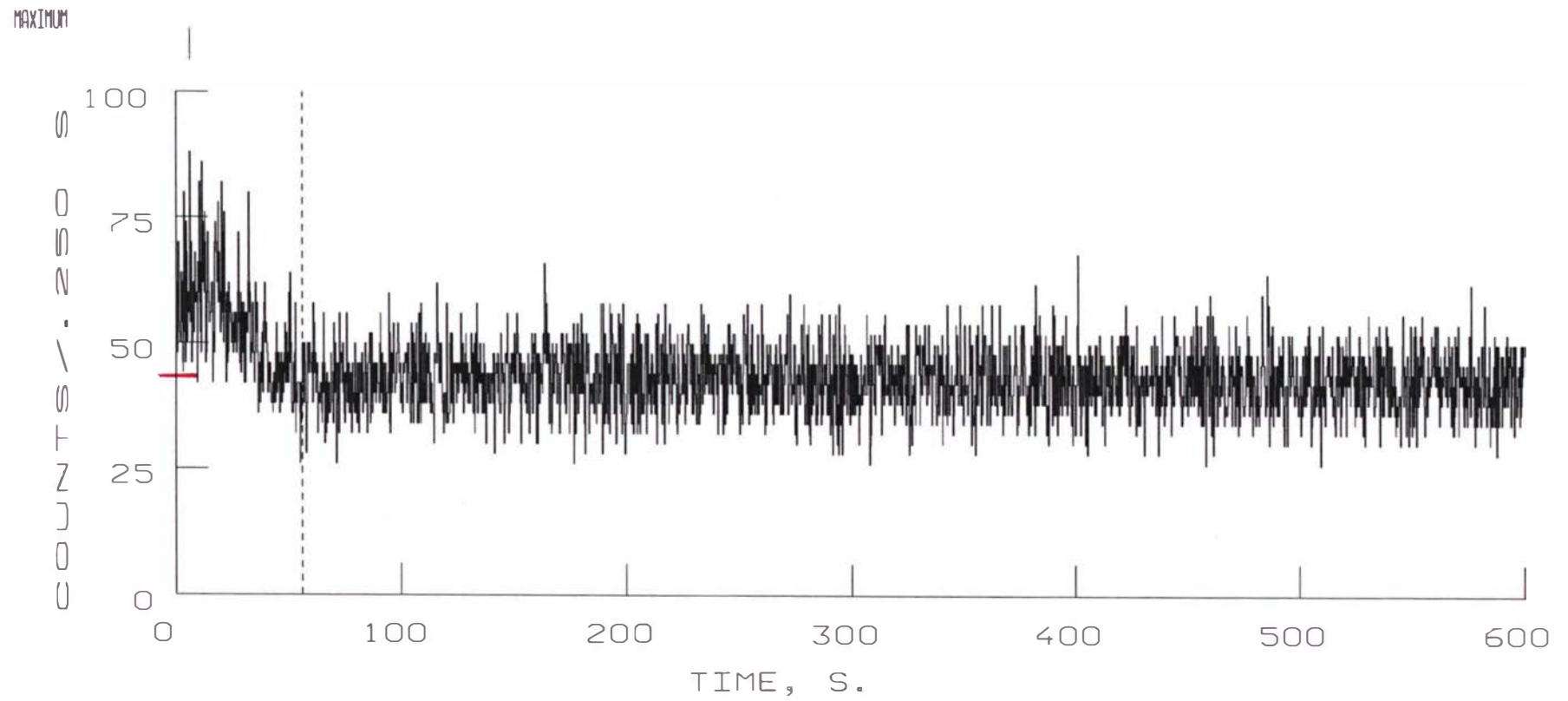


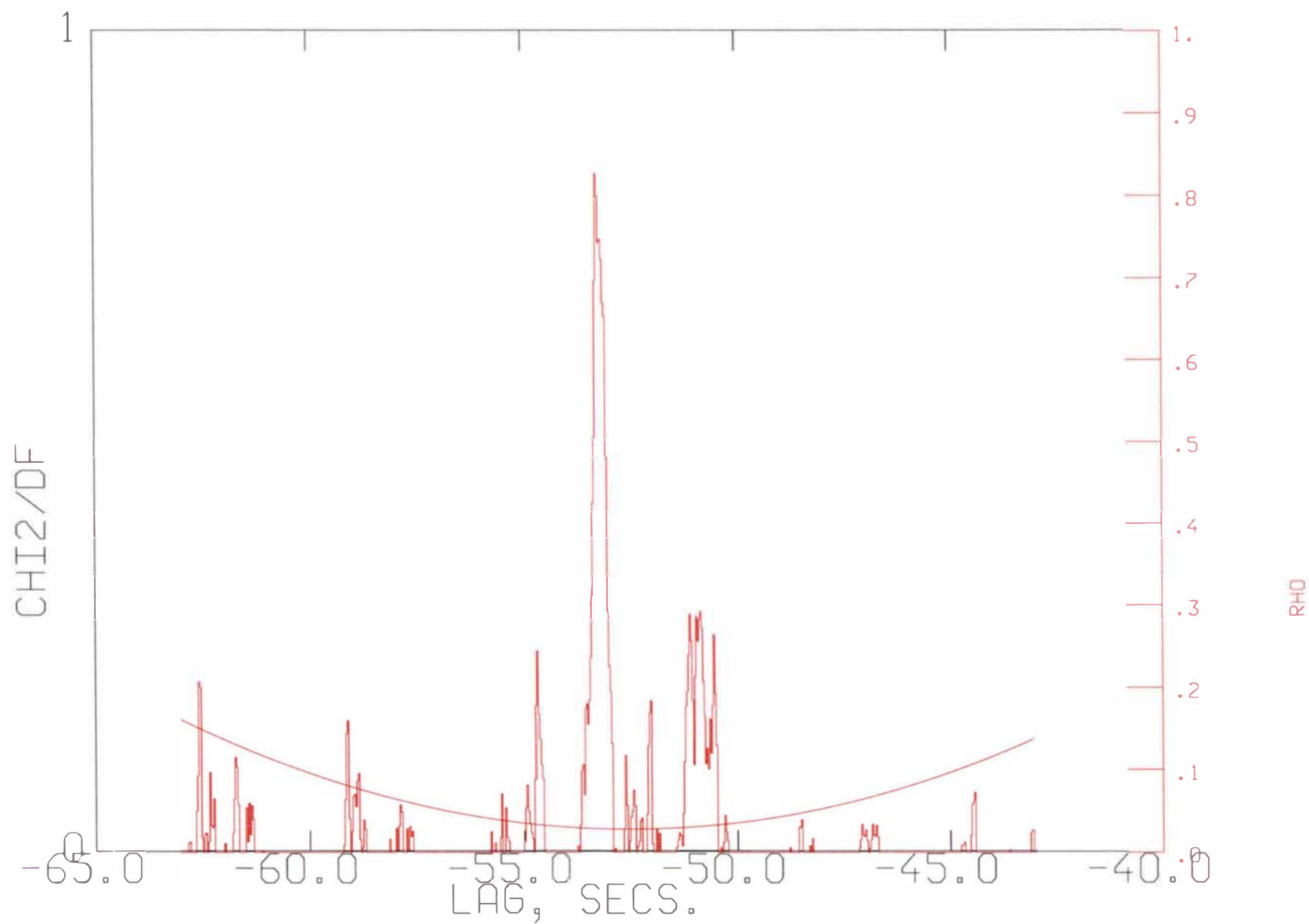
MS01 HEND

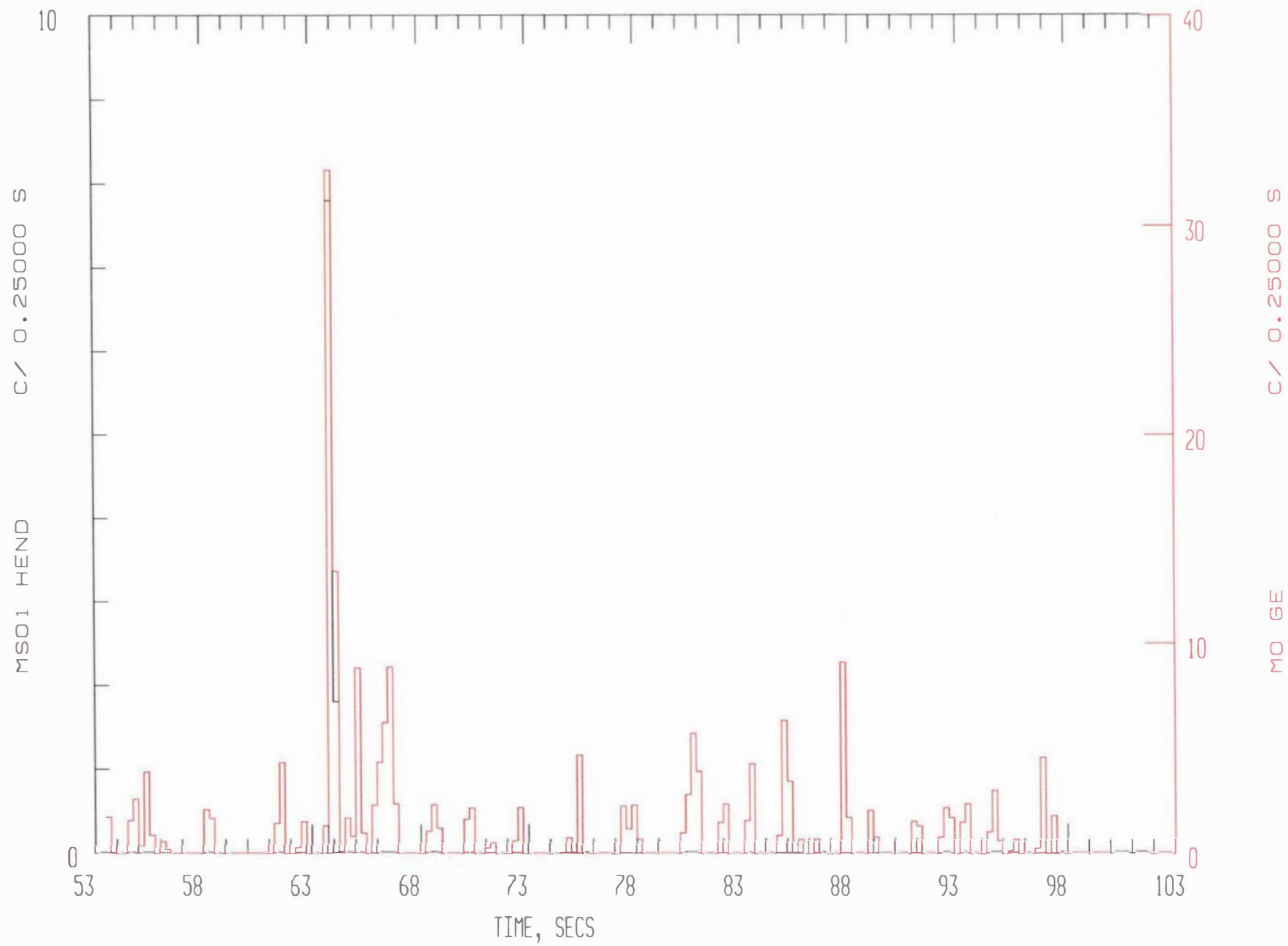
02/08/2010

11/02/2007 1834.923 s

50-3000 keV







MO GE

11/02/07

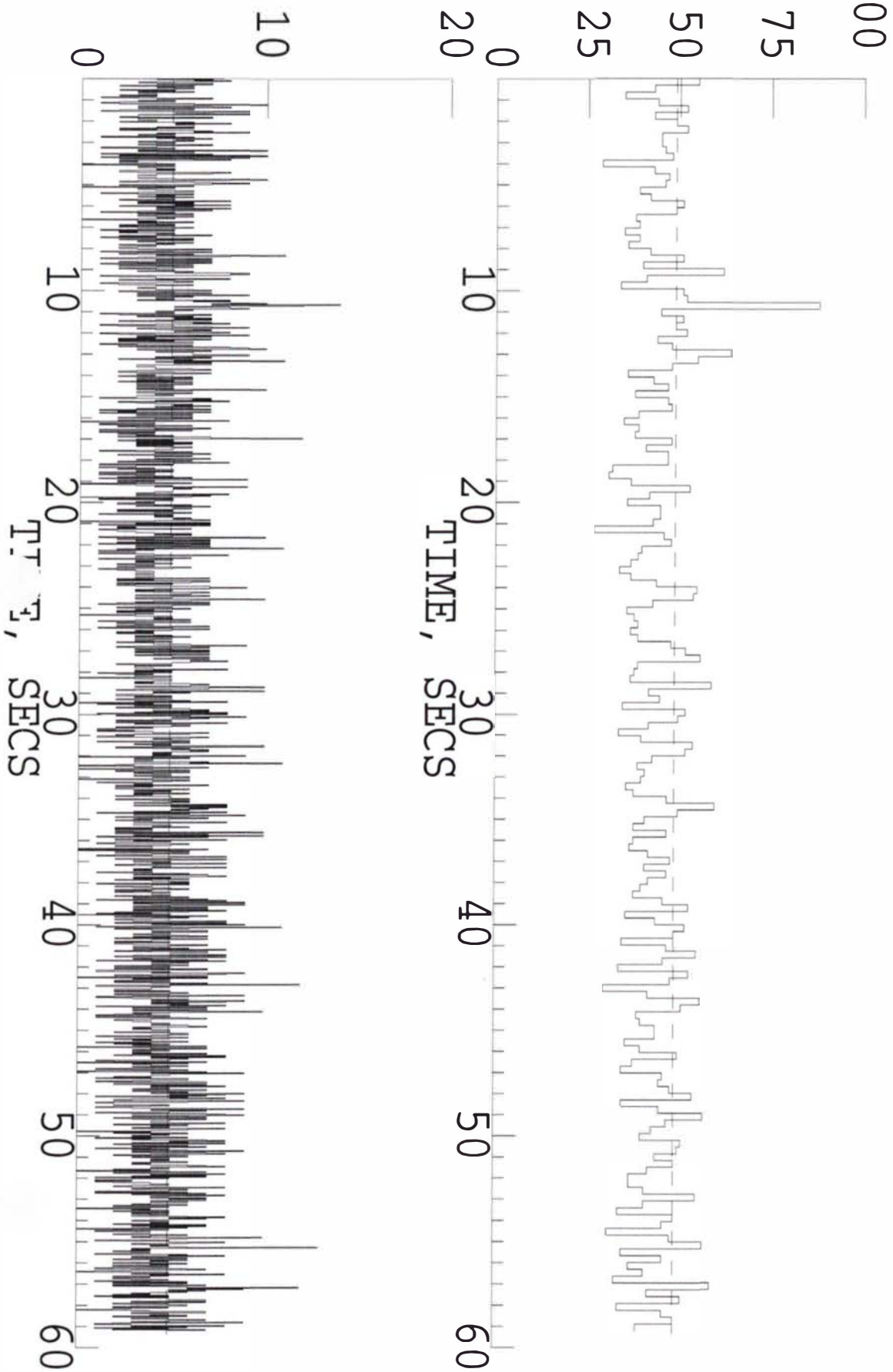
1987.361

A

116- 337 keV

COUNTS/ .320 S

COUNTS/ .032 S

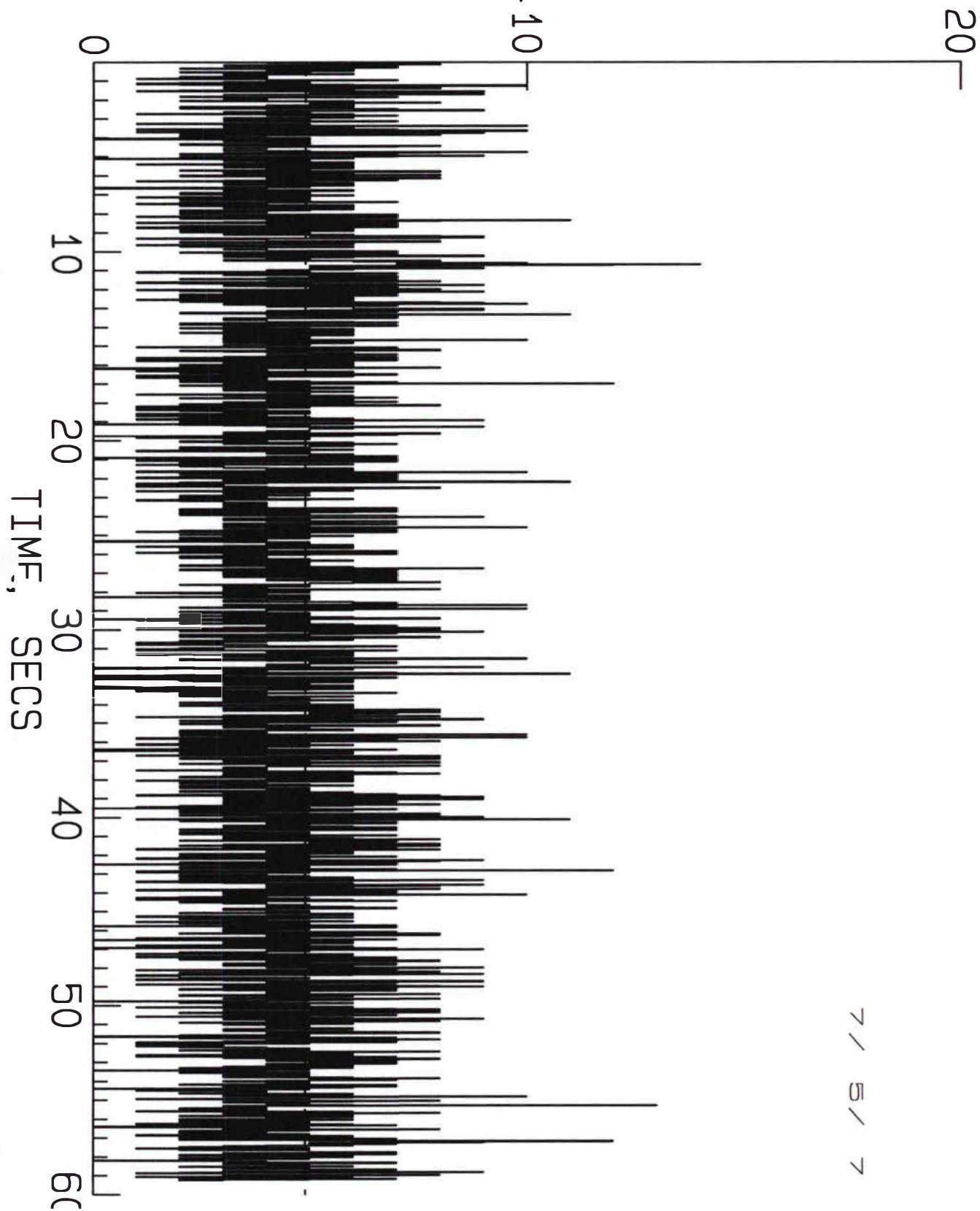


30/07/2010

1988. 069

116- 337 keV

COUNTS/0.032 S



A

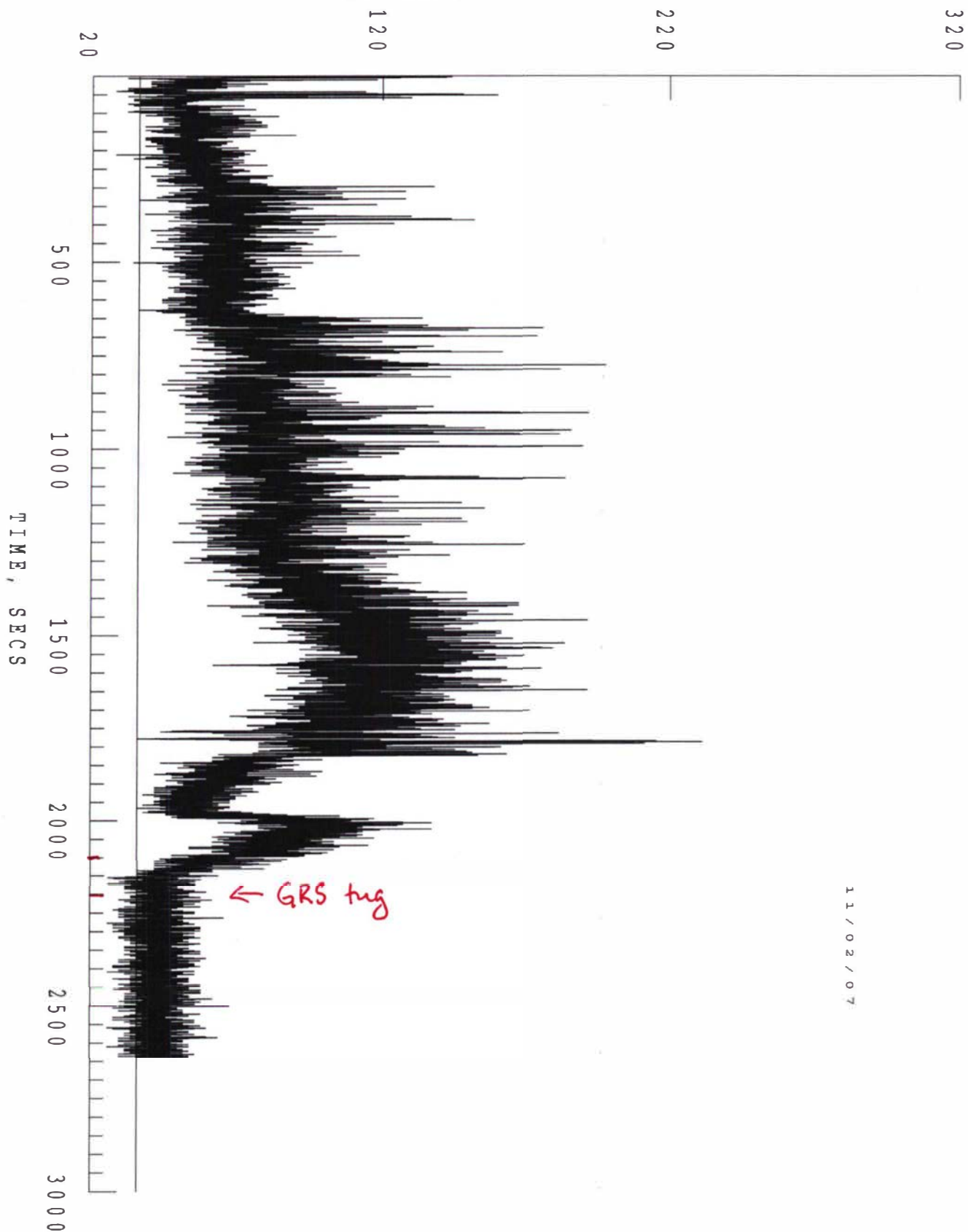
MS01

10/02/07

86135.960

50- 3000 keV

COUNTS/0.250 S



A

From williams@sunspot.ssl.berkeley.edu Mon May 7 12:49:37 2007
X-ASG-Debug-ID: 1178567387-2fb3000c0000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: gammaburst.ssl.berkeley.edu[128.32.98.141]
-Barracuda-Start-Time: 1178567387
Date: Mon, 7 May 2007 12:59:31 -0700 (PDT)
From: williams@ssl.berkeley.edu
To: khurley@ssl.berkeley.edu
X-ASG-Orig-Subj: No_RHESSI_data_for_KONUS_20070211_01060
Subject: No_RHESSI_data_for_KONUS_20070211_01060
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
X-ASG-Whitelist: Sender (Per-User)

HESSI 50 to 200 keV Counts
Created 7-May-2007 12:48:26.00
Detectors: 3r 4r 5r 6r 8r 9r
columns: time (sec) counts (summed over detectors)
time_interval = 0.0640000
Full time range in SAA
Full time range in eclipse
No non-SAA data gap
No Data Available For This Time Range
Do Not Retry

Date: Apr 22 '09

B

BURST TRIANGULATION CHECKLIST

1. Suzaku Data

N/A

- ☐ 1 second timing error corrected? N/A

2. AGILE Data

N/A

- ☐ 1 second timing error corrected?

3. MESSENGER Data

N/A

- ☐ Coarse or fine oscillator?
☐ Timing checked after ~ 1 week?

4. For Konus events

- ☒ Konus ecliptic latitude used with latest calibration?

5. For Odyssey events

N/A

- ☐ 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?

6. For 3 or More Spacecraft events

N/A

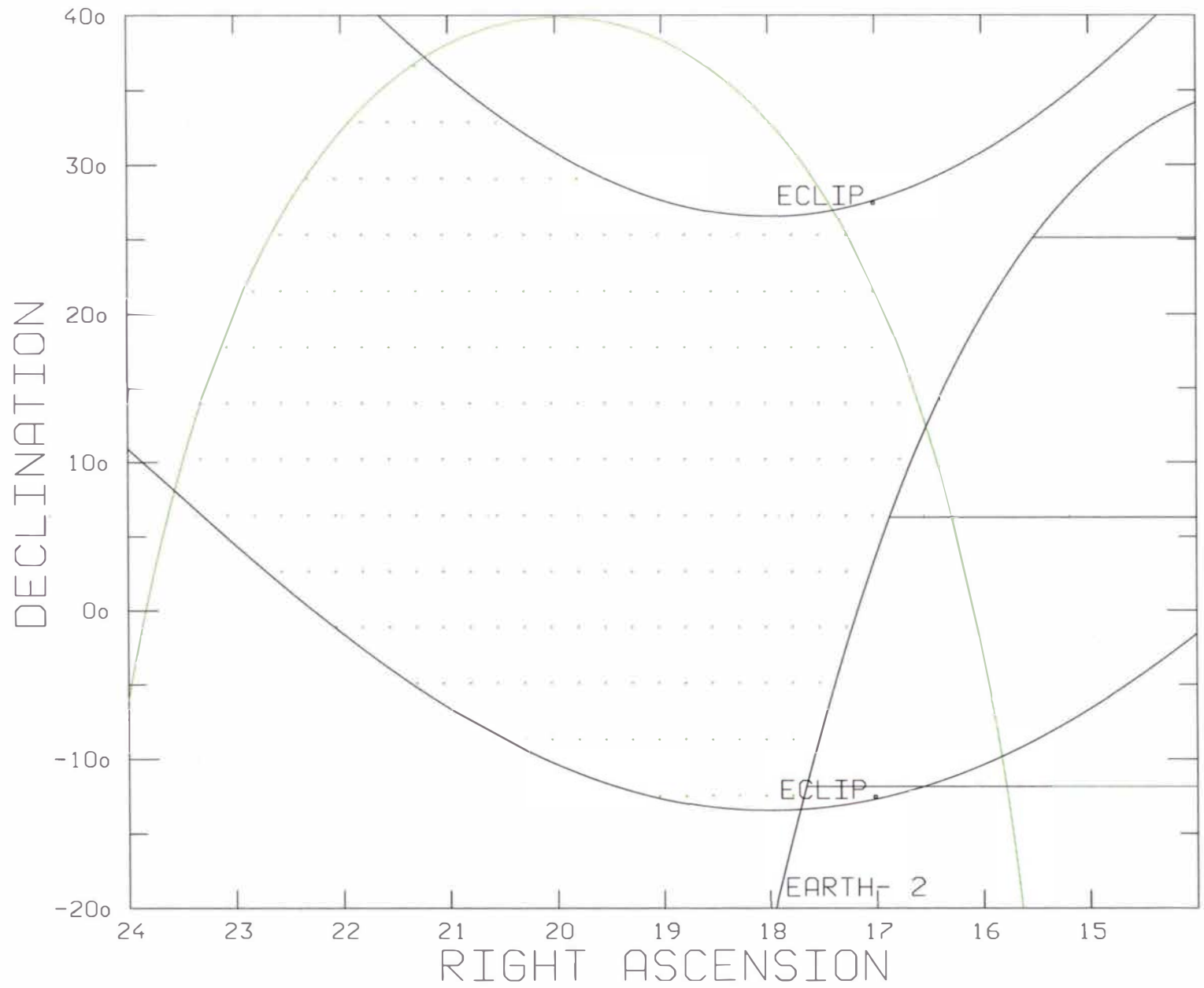
- ☐ $\Sigma 3\Delta t$'s calculated, and/or BMAPSUM executed?

7. For INTEGRAL events

N/A

- ☐ 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?

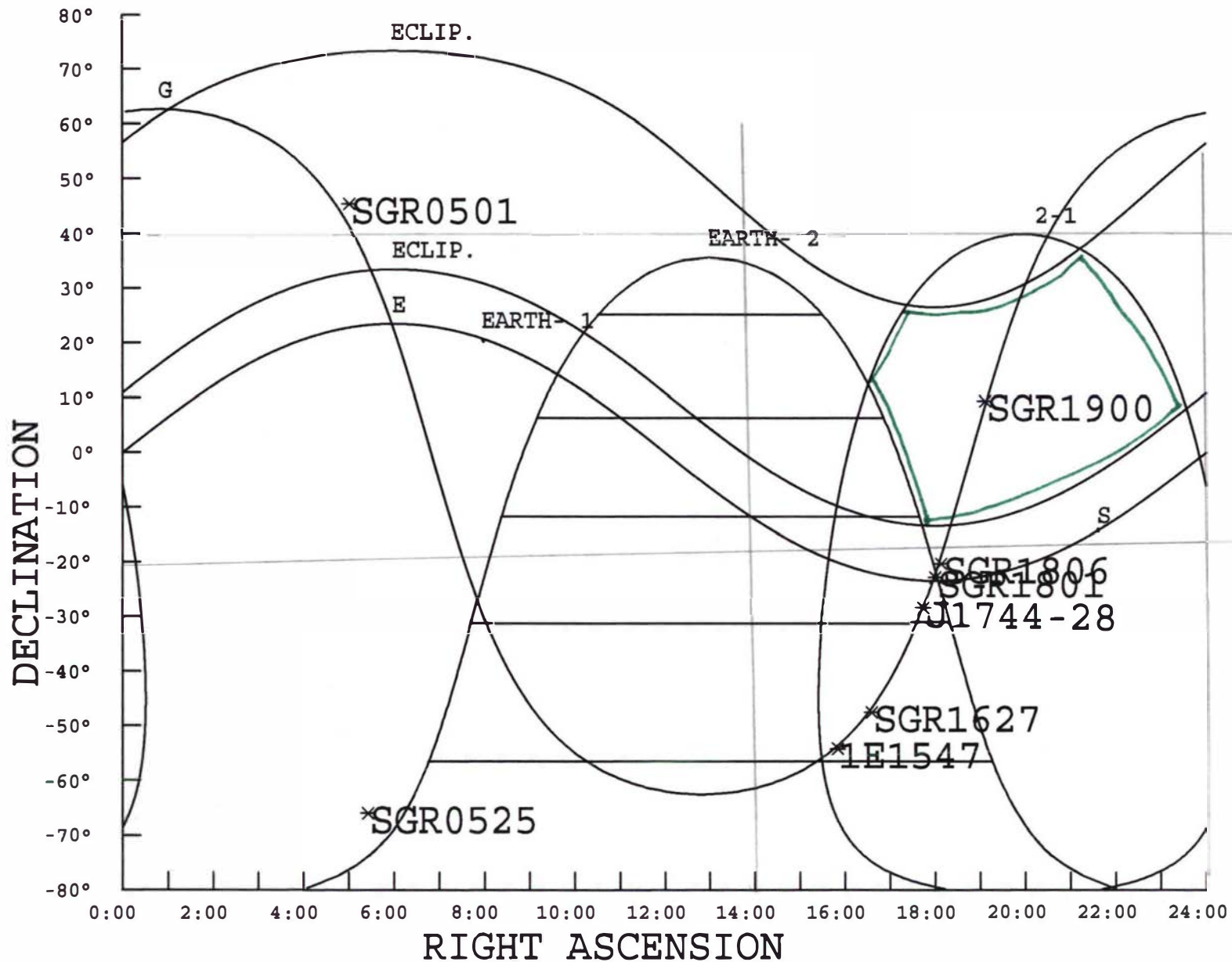
-
- ☒ ACCESS and MBL4 databases updated?



EVENT OF FEB 11, 2007 0:15

22/ 4/ 9

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



B

KONUS

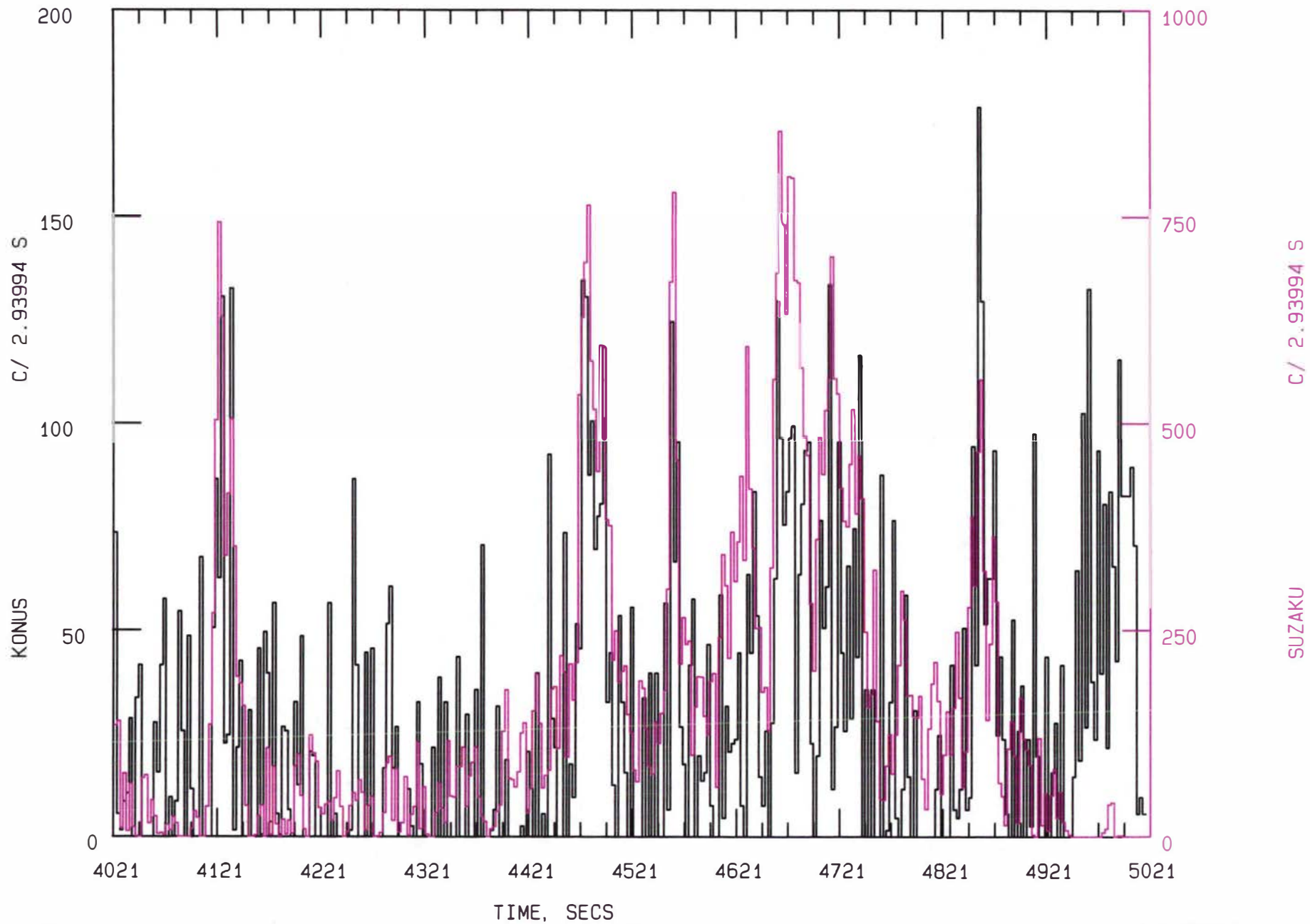
-SUZAKU

CORRELATION

11/02/07

926.696

20/ 4/ 9



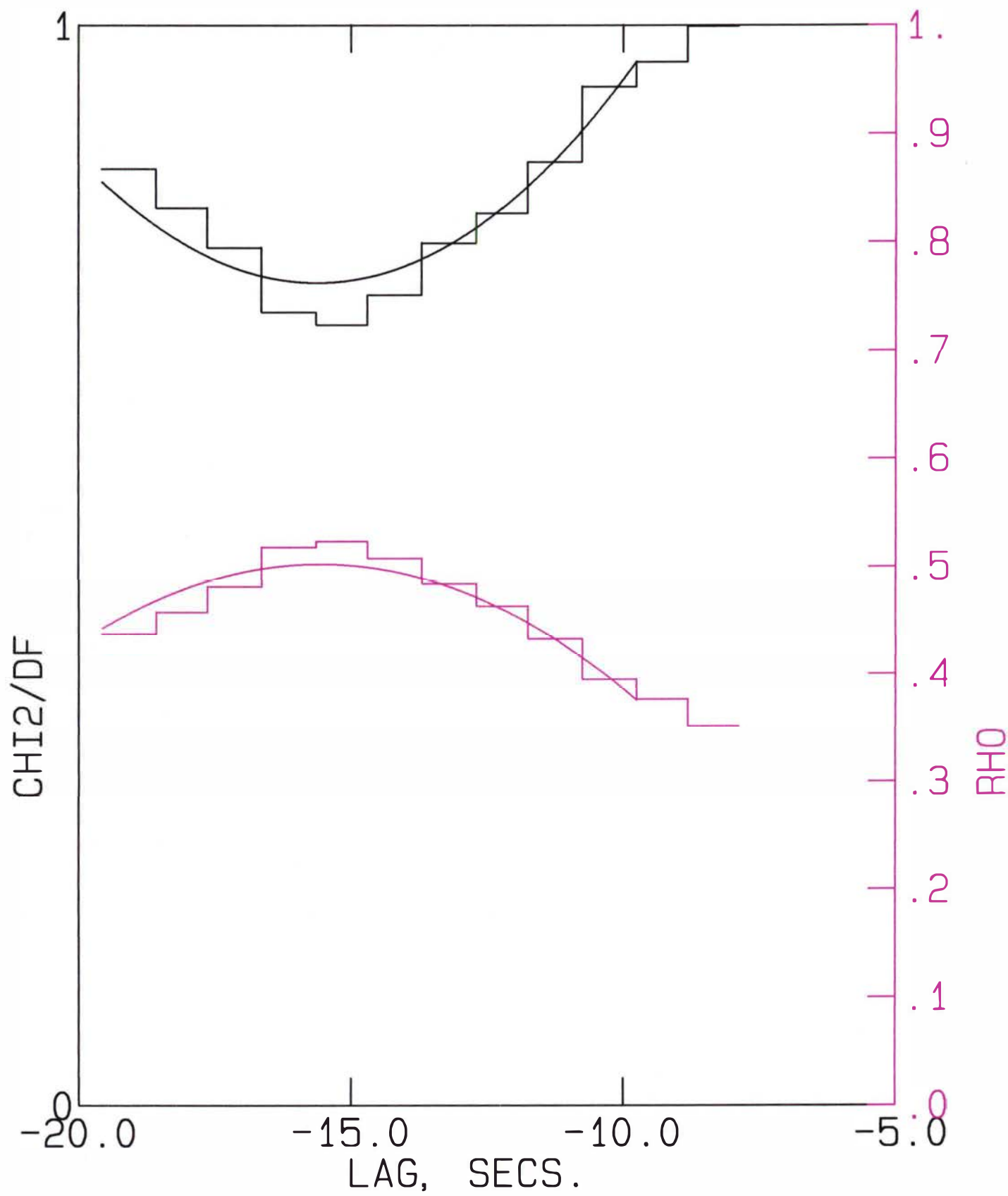
KONUS

-SUZAKU

CORRELATION

11/02/07

926.696



SUZAKU

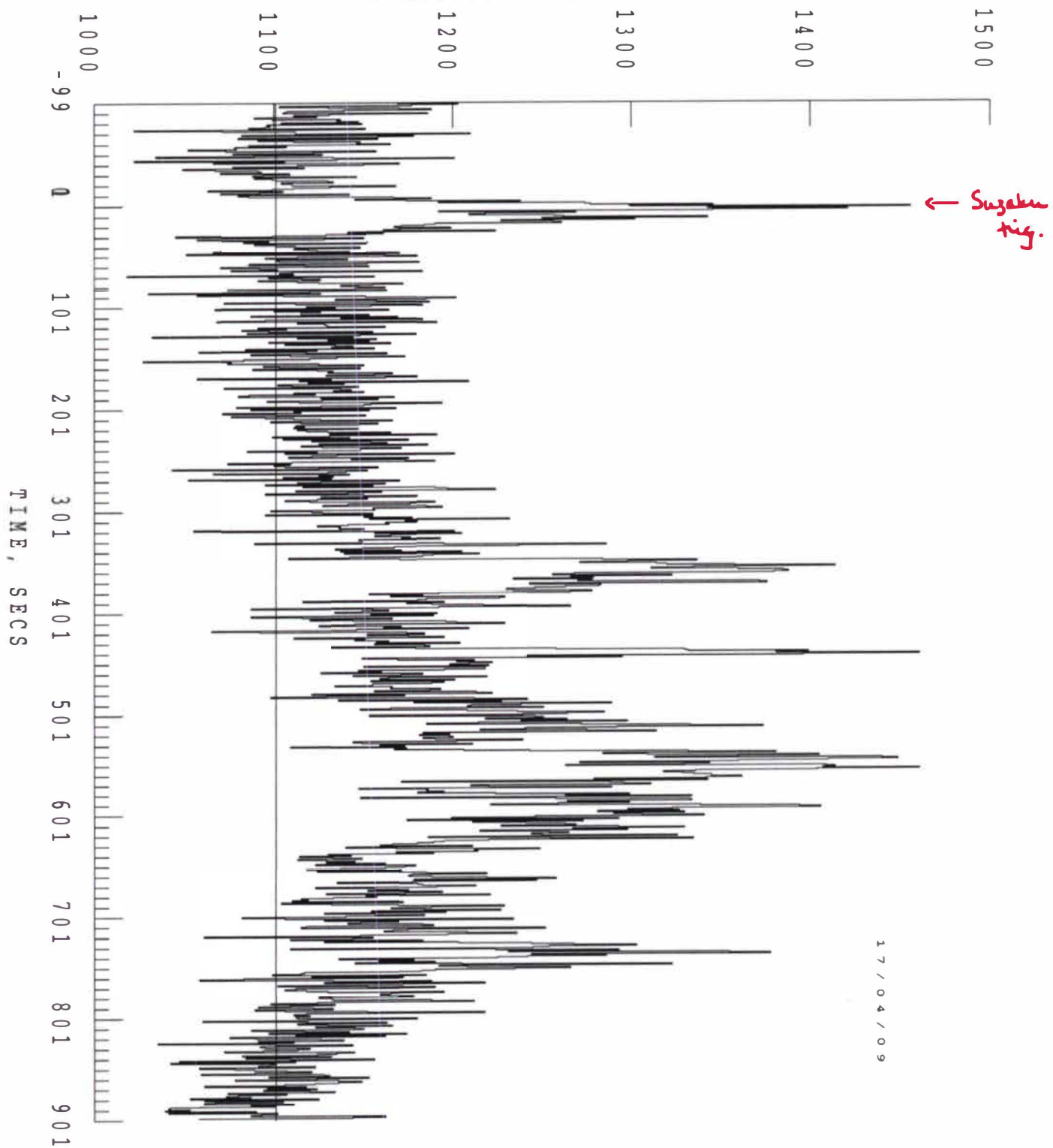
11/02/07

5050.826

B

50 - 240 keV

COUNTS/1.000 S



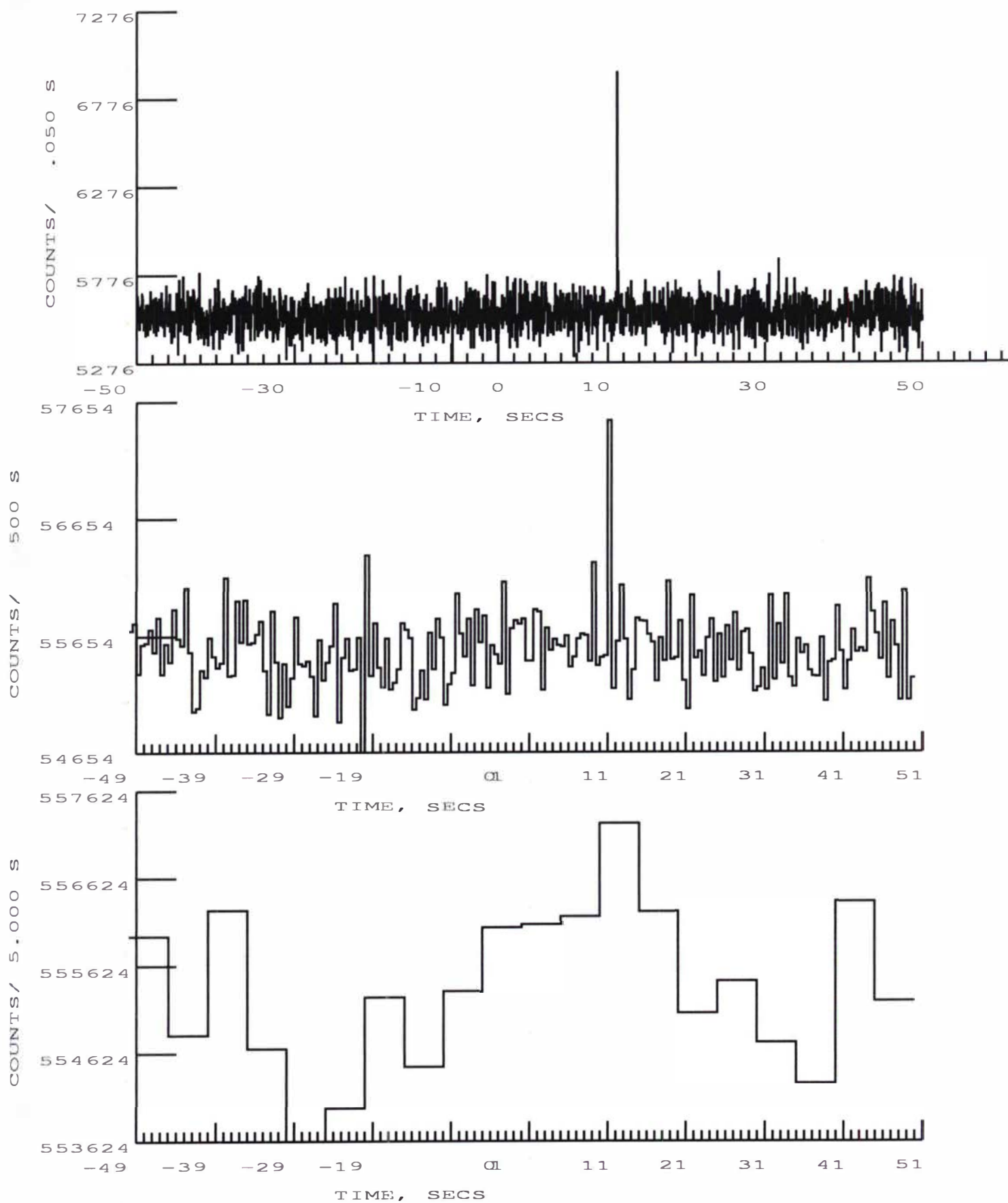
INTEGRAL

11/02/07

5054.000

01:24:14.0

18/07/14



B

KONUS

11/02/07

926.696

10- 50 keV

50- 200 keV

COUNTS/2.944 S

4400

3400

2400

1400

400

DETECTOR 2 - N. ECLIPTIC

← TRN data
start here

End here

17/4/09

TIME, SECS

B

KONUS 11/02/07 926.696
10- 50 keV 50- 200 keV

COUNTS/2.944 S

3500

DETECTOR 1 - S. ECLIPPTIC

47/04/09

2500

1500

500

1000

2000

3000

4000

5000

TIME, SECS



SUZAKU

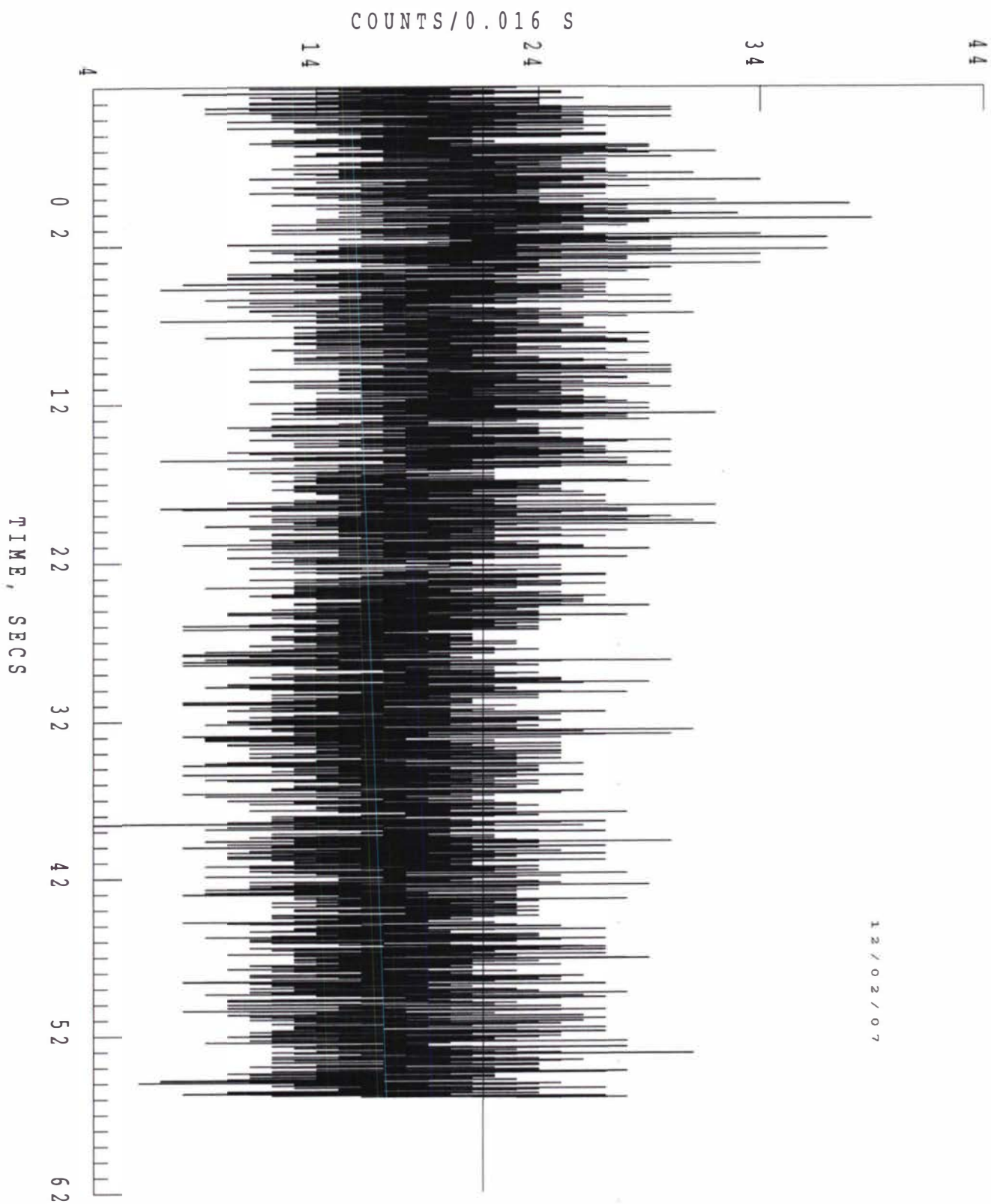
11/02/07

5054.323

B

50 - 240 keV

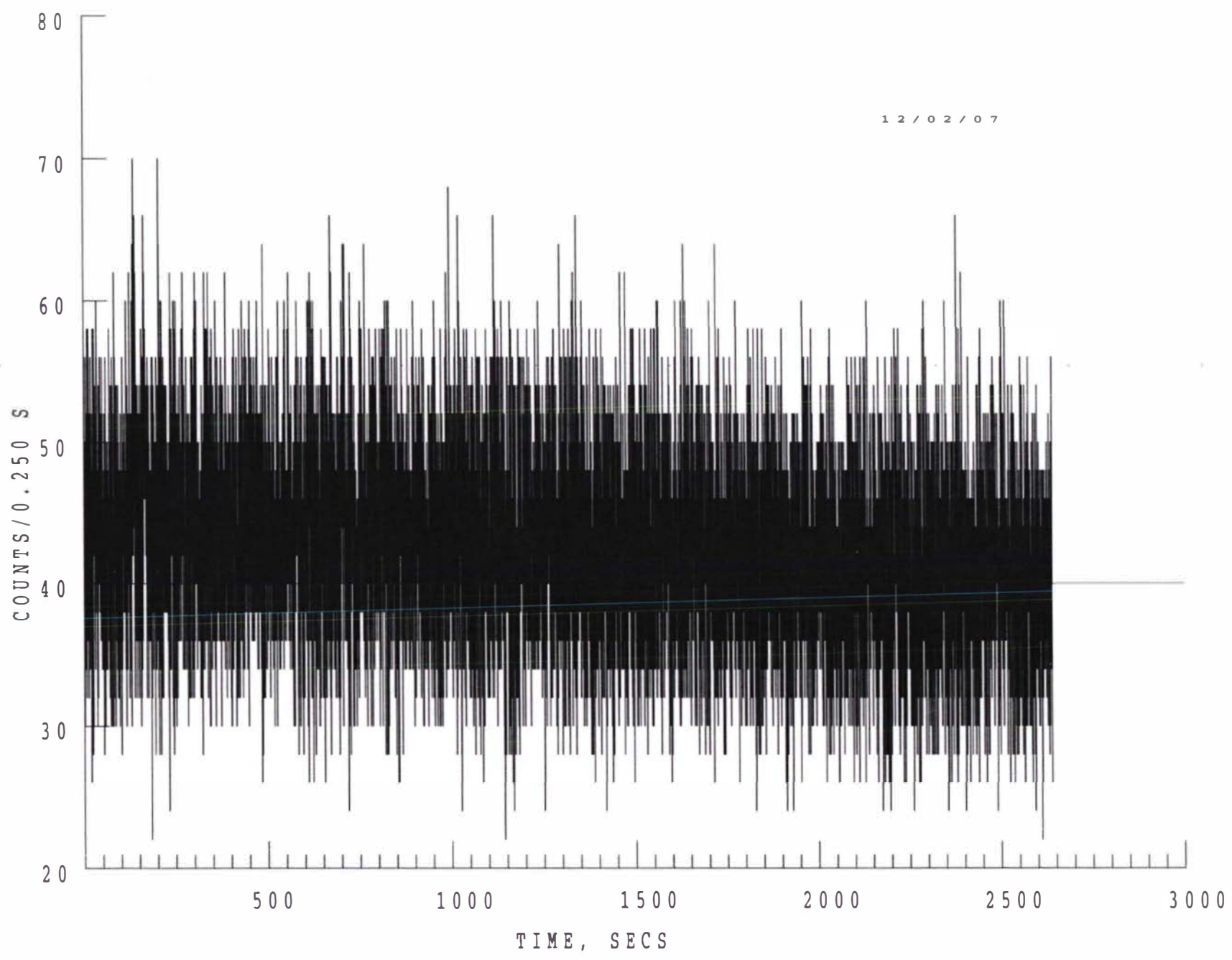
01:24:14



B

11/02/07 3695.882
50- 3000 keV

MS01





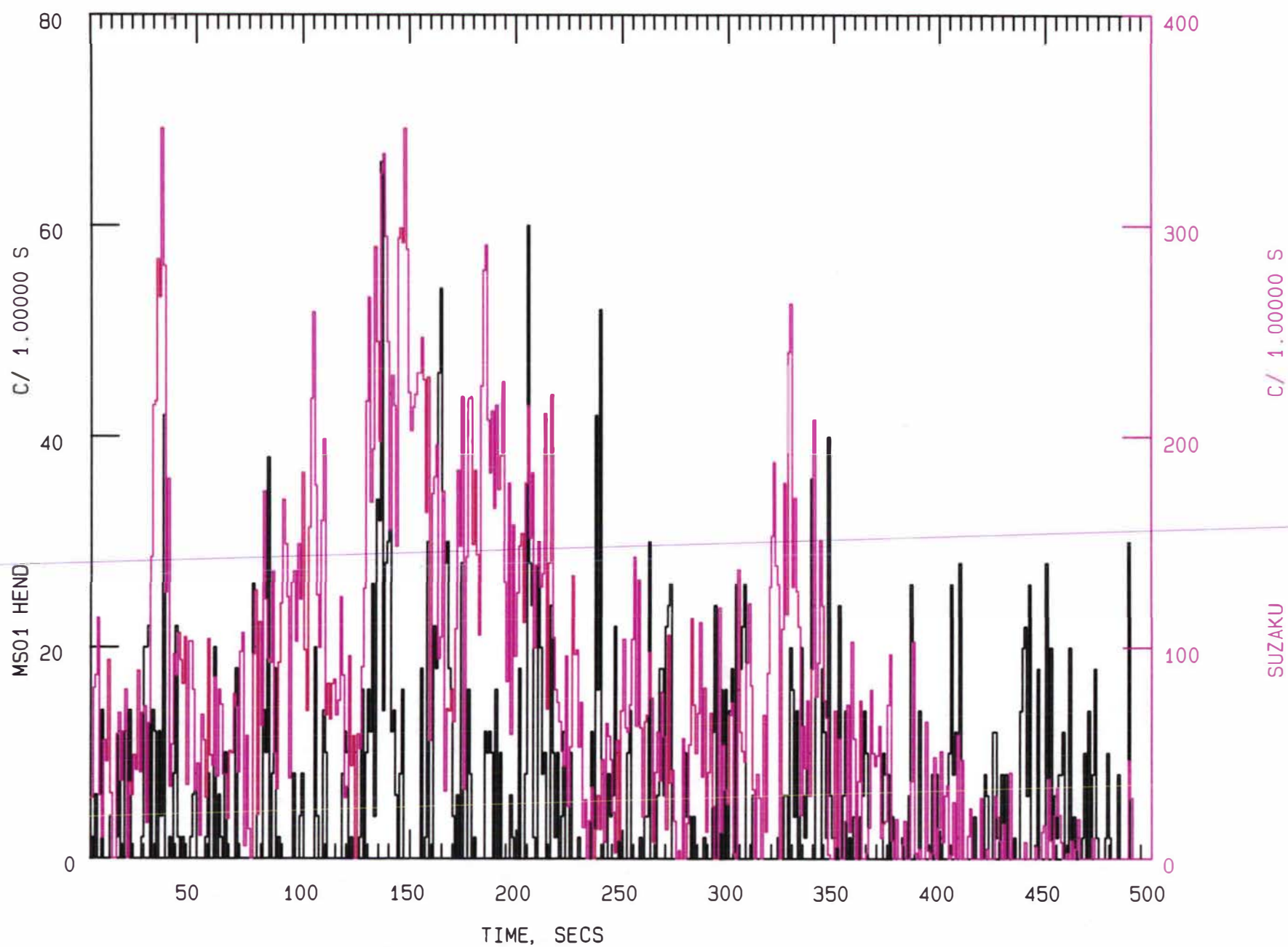
MS01 HEND -SUZAKU

CORRELATION

11/02/07

3695.882

20/ 4/ 9



B

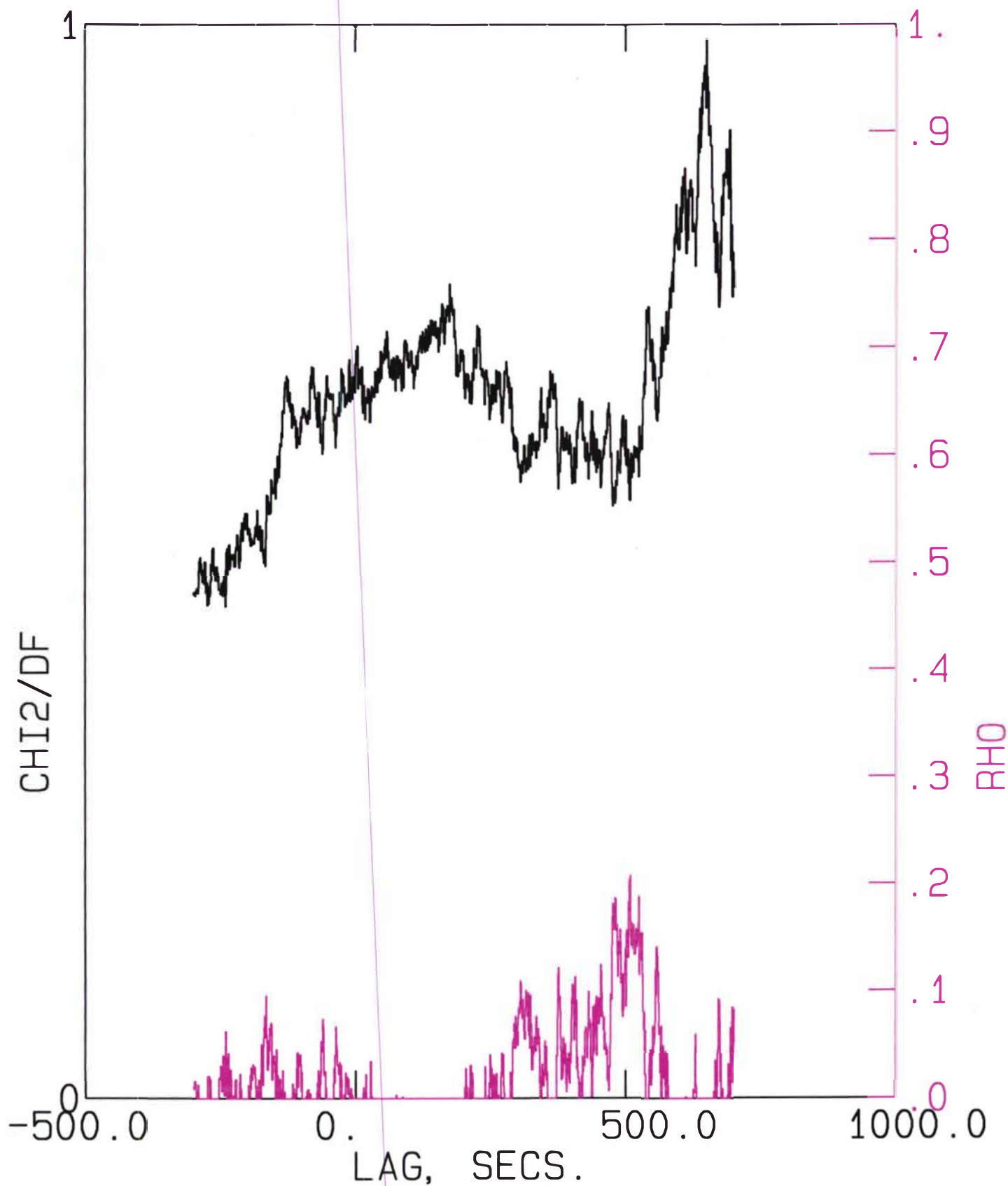
20/ 4/ 9

MS01 HEND -SUZAKU

CORRELATION

11/02/07

3695.882



B

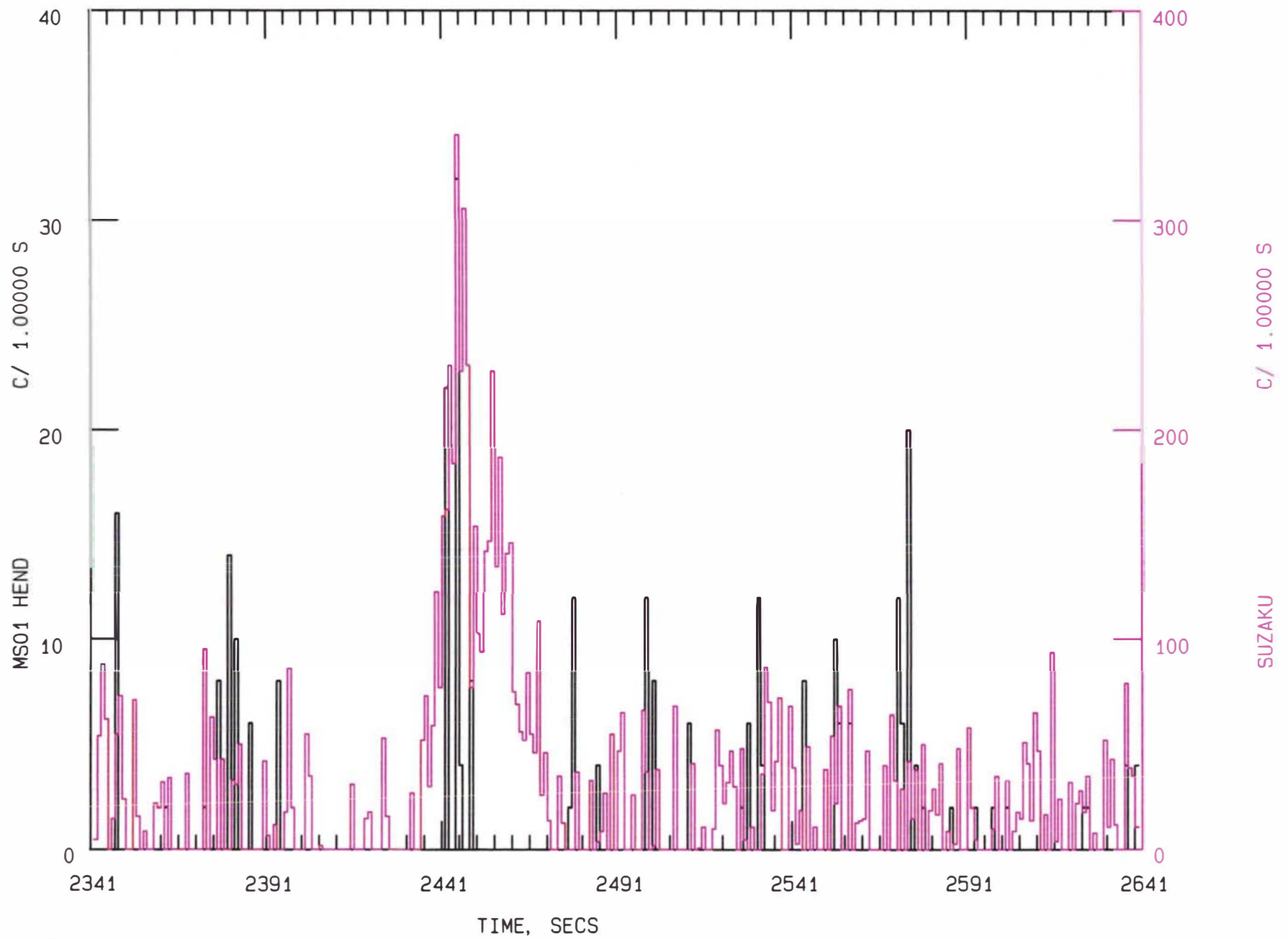
MS01 HEND -SUZAKU

CORRELATION

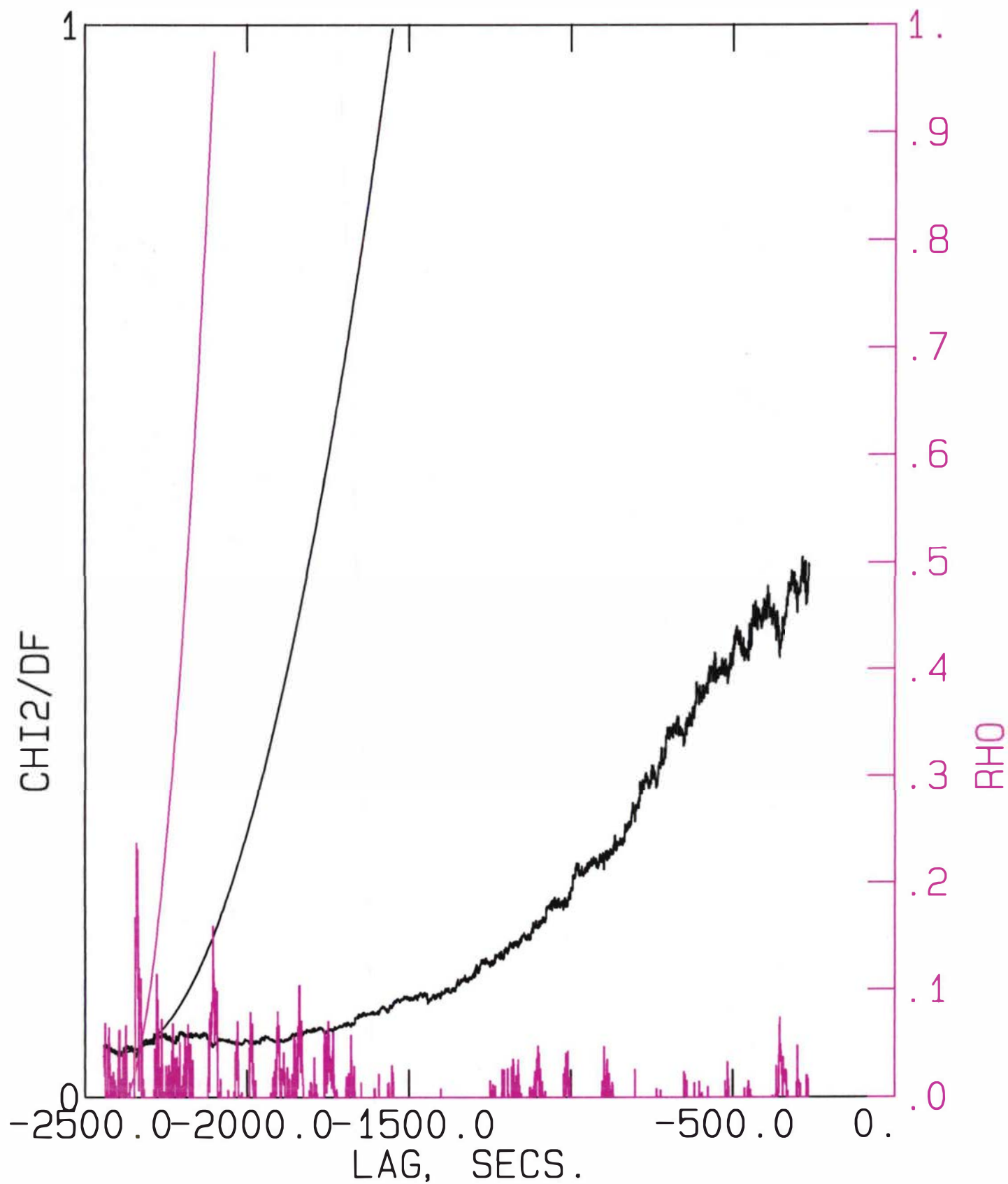
11/02/07

3695.882

20/ 4/ 9



B



HESSI

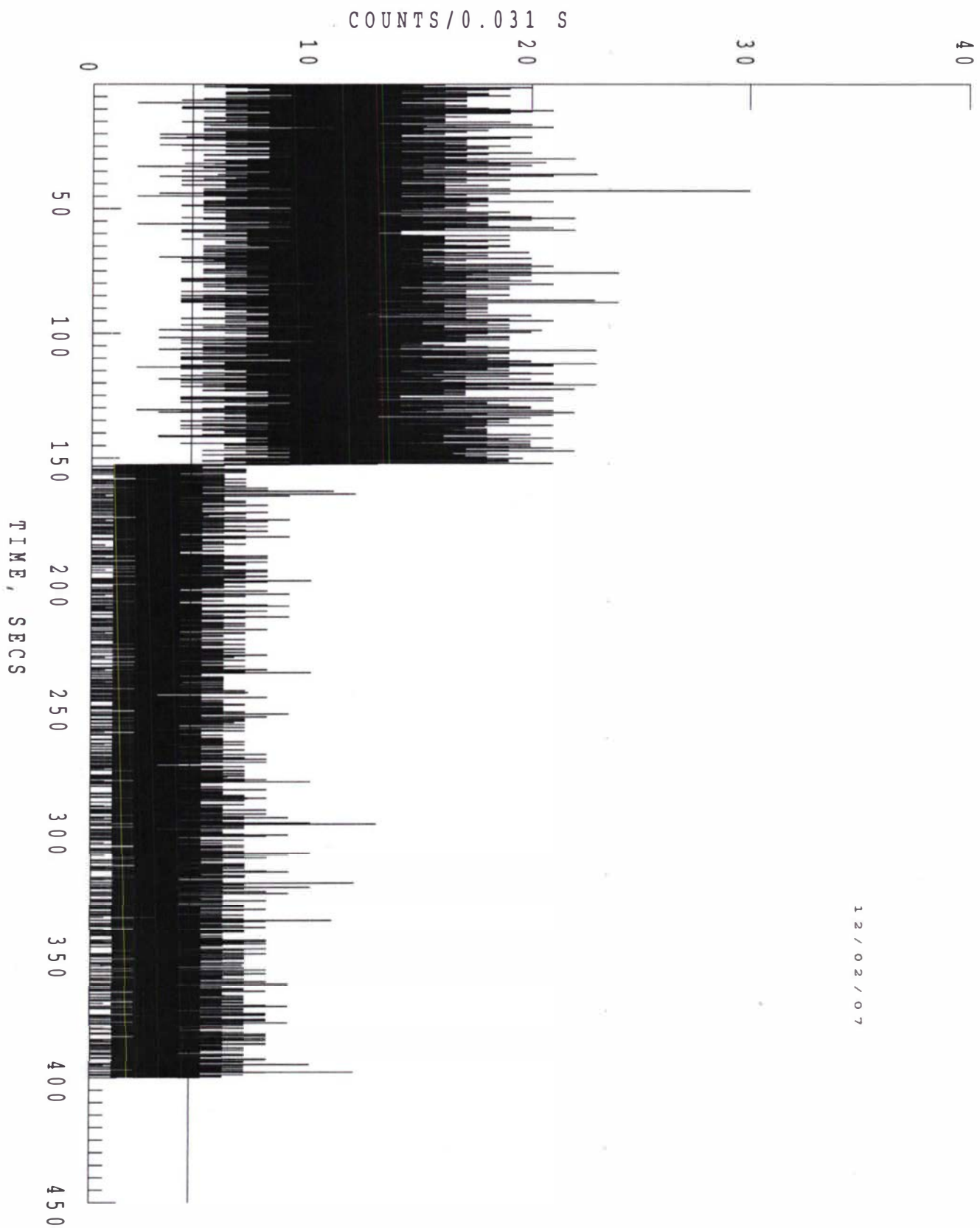
11/02/07

4854.000

(SUZAKU_20070211_05054)

B

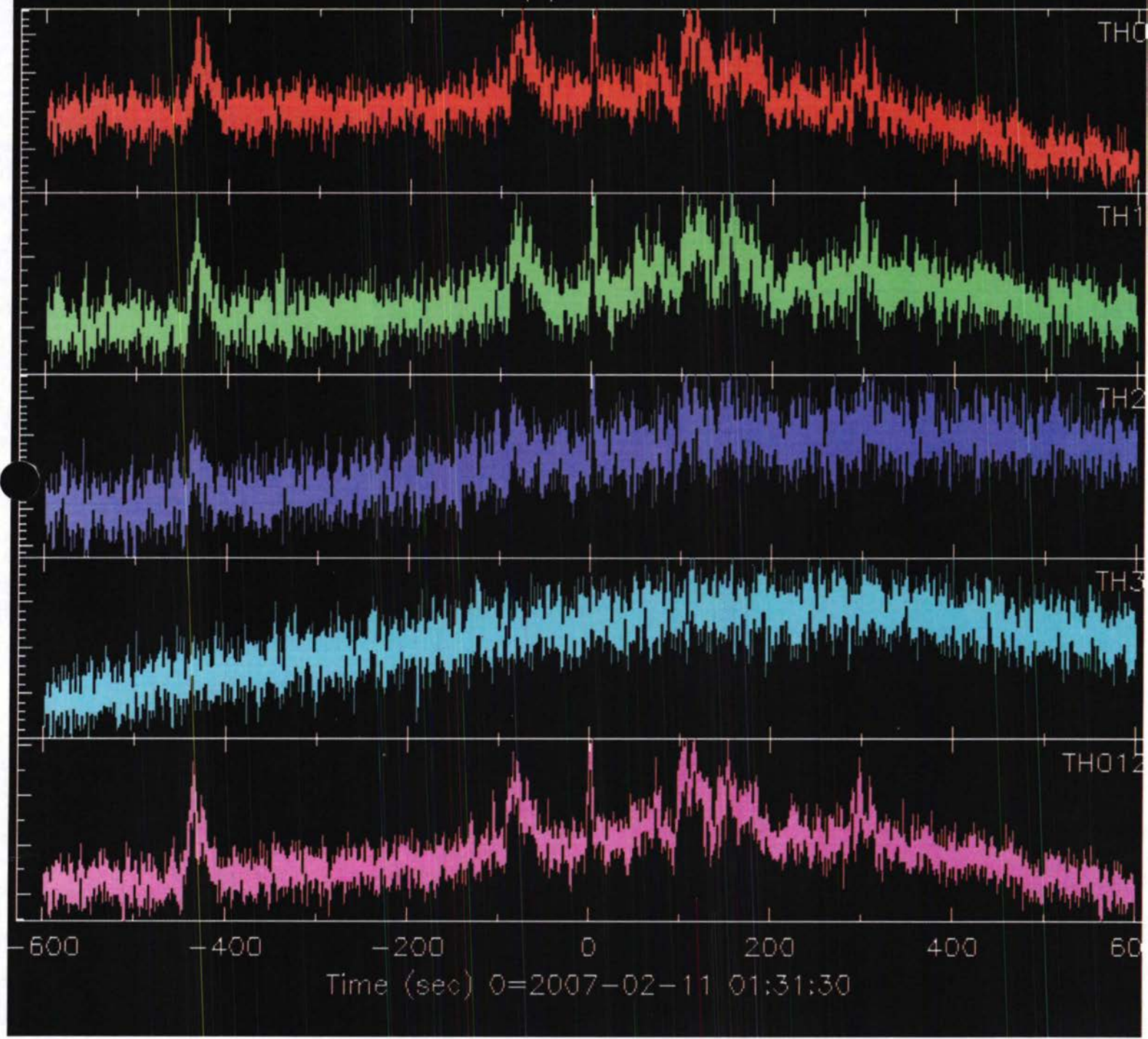
25- 150 keV



B

Trig.
↓

trn20070211013130_wam0_4band.qdp



05490

MS01

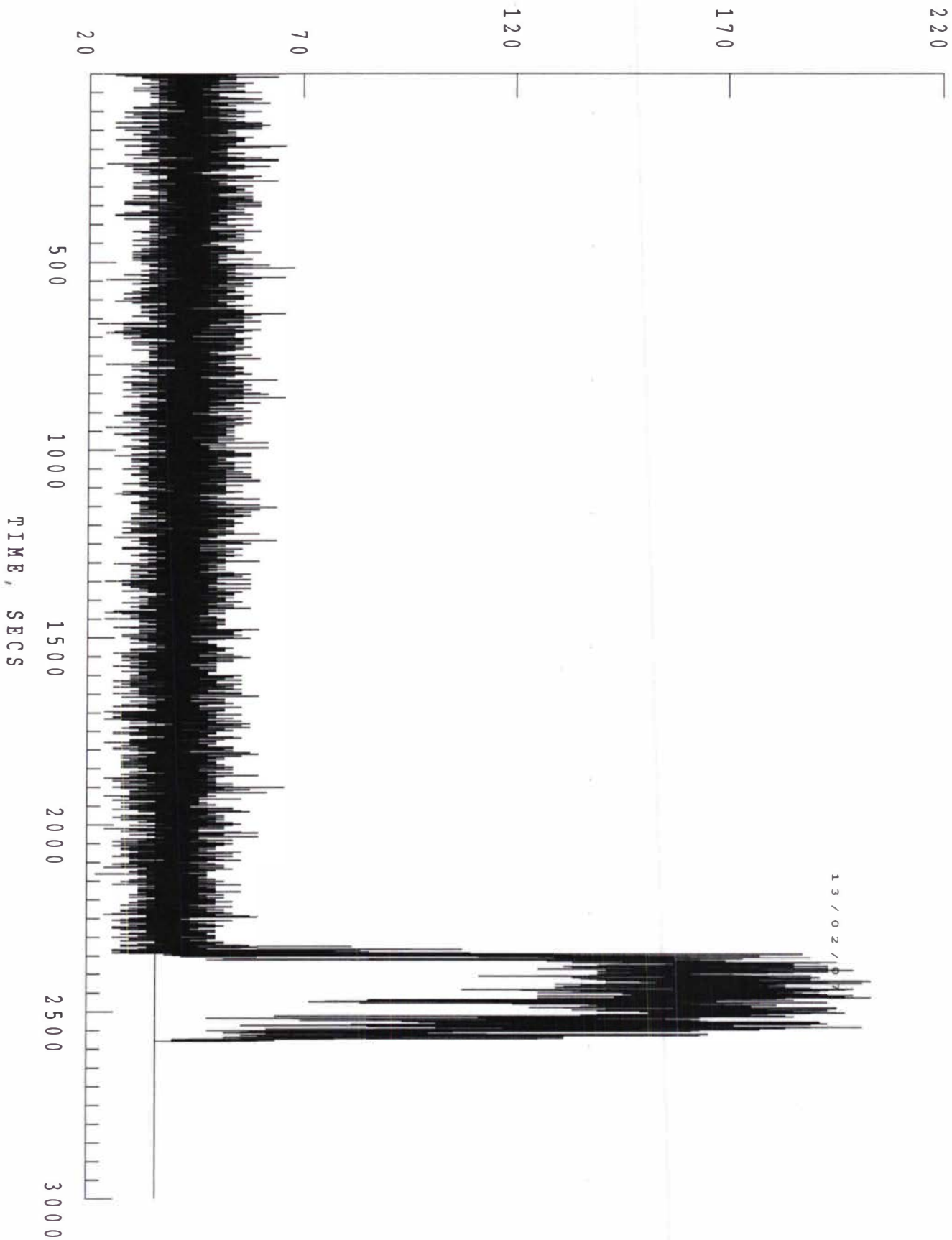
11/02/07

4175.877

B

50 - 3000 keV

COUNTS/0.250 S



B

From val@mail.ioffe.ru Tue Feb 13 08:24:35 2007
X-ASG-Debug-ID: 1171384010-7e2600430000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: relay.ioffe.rssi.ru[194.85.224.33]
-Barracuda-Start-Time: 1171384010
DomainKey-Signature: a=rsa-sha1; s=relay; d=ioffe.ru; c=noews; q=dns;
h=message-id:date:from:user-agent:mime-version:to:cc:subject:
references:in-reply-to:content-type;
b=ADyZI5Zww+mnp6rQr0eMiaBgdIw0Cu5iN314M5DwTAT38p7fsSVvg/DWB2DtcnfPB
/4V+6kttrBcKaFDcD1luUNM5LlqiydIFB1liCJtZFU94z7pe3FGscP4ZW/QAHw5vjS
7tQH0RTrSZafV242OwtUUu1Ohb7HFahwO4ko5GIF
Date: Tue, 13 Feb 2007 19:36:24 +0300
From: "Valentin Pal'shin" <val@mail.ioffe.ru>
User-Agent: Thunderbird 1.5.0.7 (Windows/20060909)
MIME-Version: 1.0
To: Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>
CC: khurley@ssl.berkeley.edu, jayc@milkyway.gsfc.nasa.gov,
krimm@milkyway.gsfc.nasa.gov, palmer@lanl.gov, roland@space.mit.edu,
golen@mail.ioffe.ru, ohno@hirax7.hepl.hiroshima-u.ac.jp
X-ASG-Orig-Subj: Re: GRB or other candidates on 2007/02/11
Subject: Re: GRB or other candidates on 2007/02/11
X-Greylist: Sender succeeded SMTP AUTH authentication, not delayed by milter-gre
X-Virus-Status: Clean
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
X-ASG-Whitelist: Sender (Per-User)

Dear Kazu,

>
> The Suzaku WAM detected sequential strange bursts around
> 01:31:30(UT) on Feb. 11, 2007.
> We also have a weak trigger by this event at 01:24:14.323.
> Attached is the WAM0 light curve.
> The total duration is ~780 sec (from ~01:24:00 to ~01:37:00).
>
> If your instruments detected this event, please let me know.
> This is not for the GRB localization,
> but only for our identification.

I noticed this highly variable emission yesterday
when looked through the K-W data for our trigger burst at
2007-02-11 T0=01060.316 s UT (00:17:40.316):
just after the end of the data read out (at 01:22:13)
long high variable emission is seen in G1 and G2
(see the attached figure). The GRB triggered the detector S1,
whereas this emission is seen in S2 and not seen in S1,
and hence it can not be related to the burst.

Best wishes,

Valentin

PS On the figure, data rebinned to 15 sec.

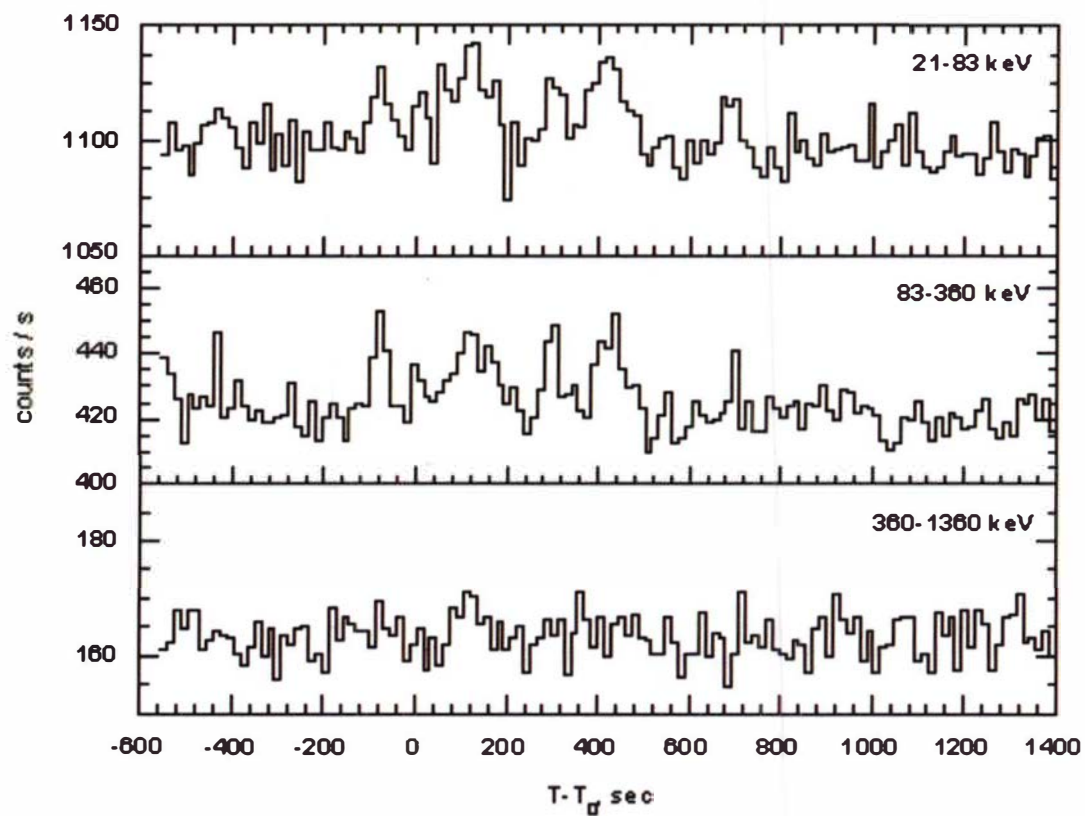
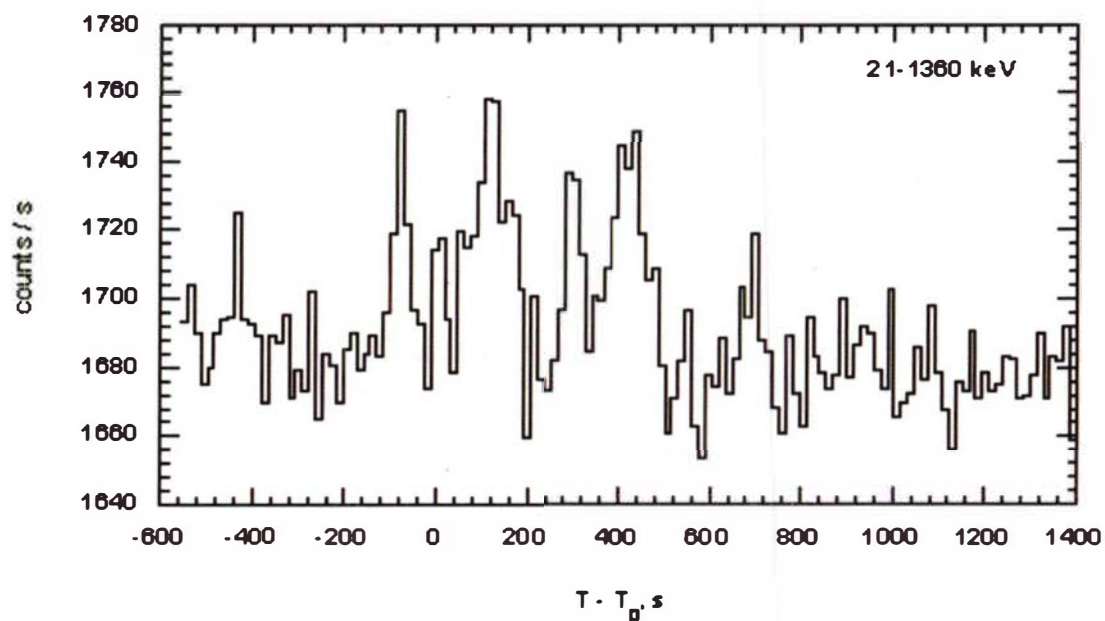
Valentin Pal'shin

Ioffe Physico-Technical Institute

KONUS-WIND GRB 070211

 $T_0 = 5490$ s UT (01:31:30)

S2



HESSI

11/02/07

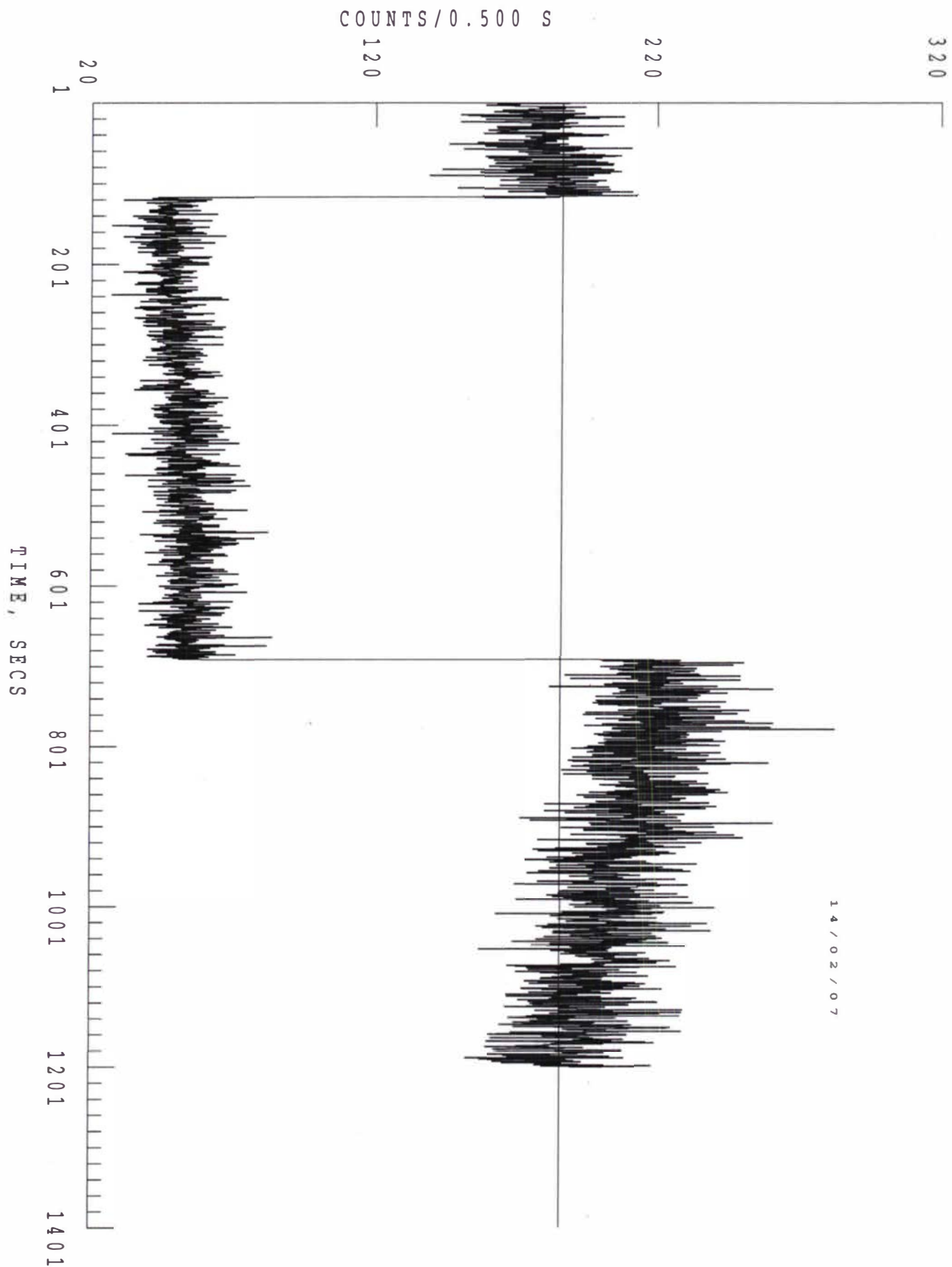
4889.000

(SUZAKU_20070211_05490)

B

25- 150 keV

01:21:29



B

From palmer@lanl.gov Tue Feb 13 07:47:01 2007
X-ASG-Debug-ID: 1171381758-6cd200320000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
X-Barracuda-Connect: mailwasher.lanl.gov[192.65.95.54]
-Barracuda-Start-Time: 1171381758
Mime-Version: 1.0
Date: Tue, 13 Feb 2007 08:48:21 -0700
To: Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>, khurley@ssl.berkeley.edu,
val@mail.ioffe.ru, jayc@milkyway.gsfc.nasa.gov,
krimm@milkyway.gsfc.nasa.gov, roland@space.mit.edu,
golen@mail.ioffe.ru, ohno@hirax7.hepl.hiroshima-u.ac.jp
From: David Palmer <palmer@lanl.gov>
X-ASG-Orig-Subj: Re: GRB or other candidates on 2007/02/11
Subject: Re: GRB or other candidates on 2007/02/11
Cc: yamaoka@phys.aoyama.ac.jp
X-PMX-Version: 4.7.1.128075
X-Barracuda-Bayes: INNOCENT GLOBAL 0.0000 1.0000 -2.0210
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.8563

Rule breakdown below

pts	rule name	description
-----	-----------	-------------

BAT sees nothing. (lightcurve attached)

At 12:36 AM +0900 07-02-14, Kazutaka Yamaoka wrote:

>Dear colleagues,

>

>The Suzaku WAM detected sequential strange bursts around
01:31:30(UT) on Feb. 11, 2007.

> We also have a weak trigger by this event at 01:24:14.323.

>Attached is the WAM0 light curve.

>The total duration is ~780 sec (from ~01:24:00 to ~01:37:00).

>

>If your instruments detected this event, please let me know.

>This is not for the GRB localization,

> but only for our identification.

>

>Best regards,

>Kazu

>on behalf of the Suzaku WAM team

>

>Attachment converted:

>System:trn20070211013130_wa#8D988F.gif

>(GIFf/¼IC¼) (008D988F)

--
David Palmer palmer@lanl.gov (505)665-6863 (voice) (505)665-4414 (fax)

MS01

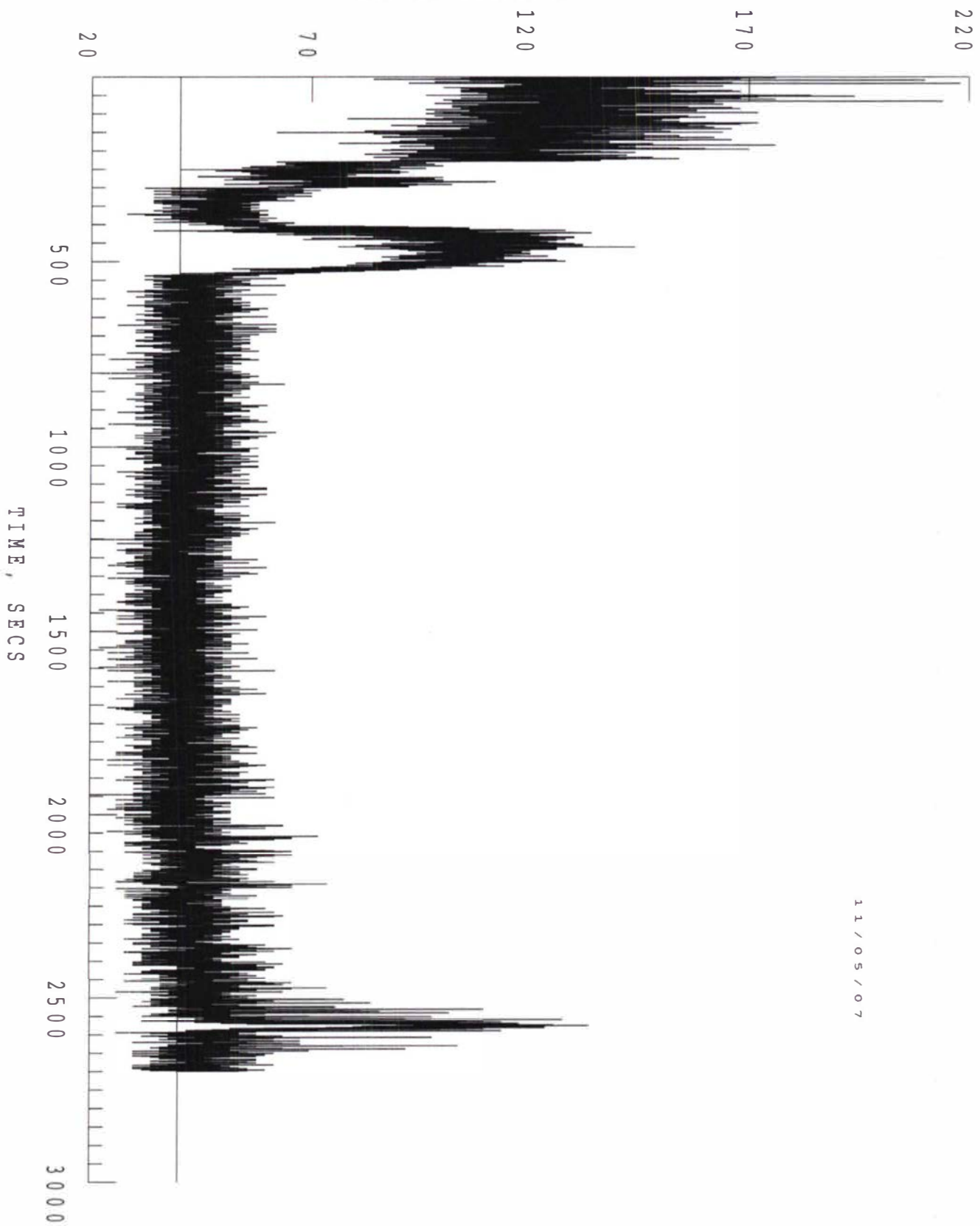
11/02/07

8435.796

C

50 - 3000 keV

COUNTS/0.250 S



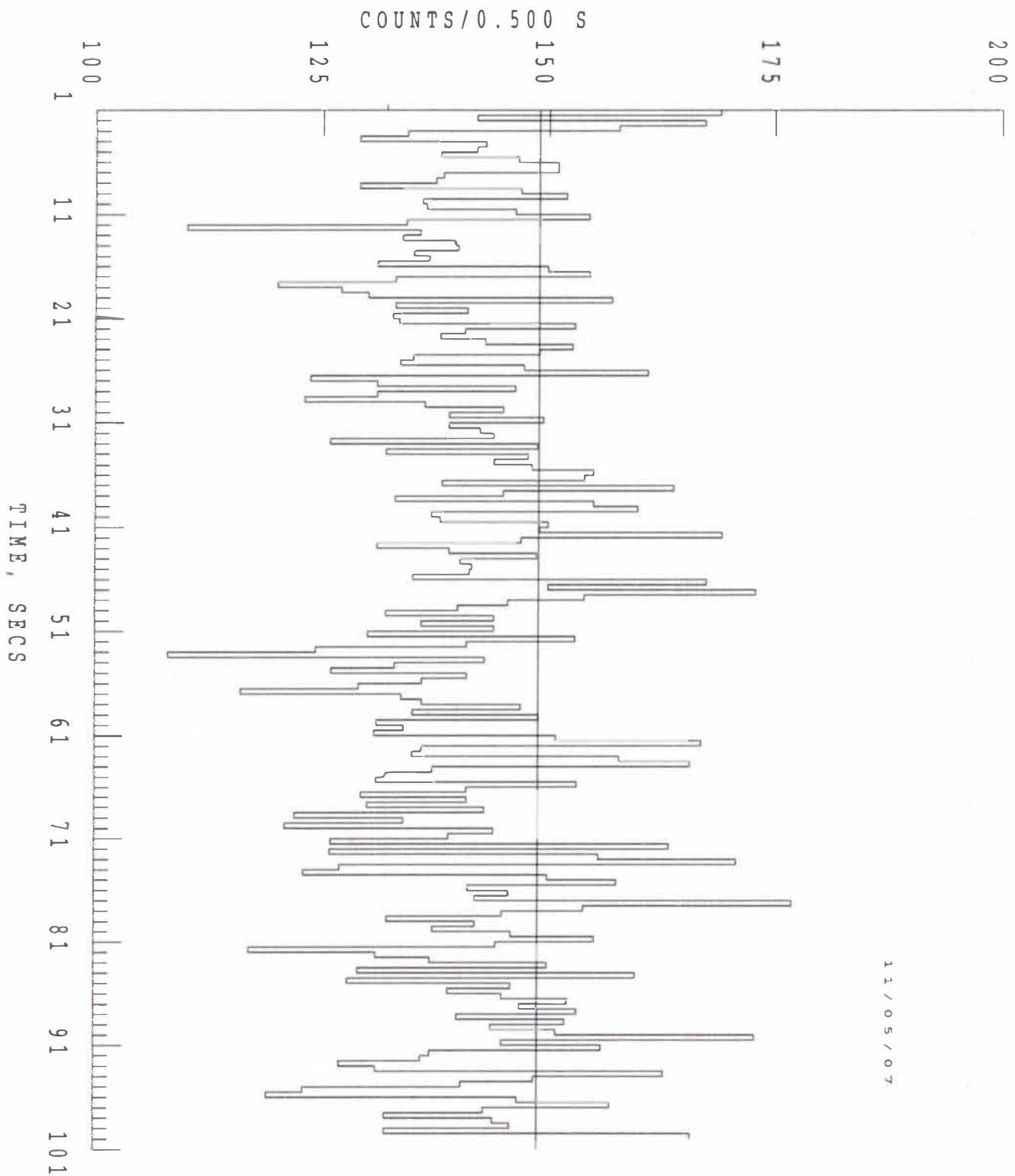
11/05/07

HESSI

11/02/07 9758.000 (SUZAKU_20070211_09808)

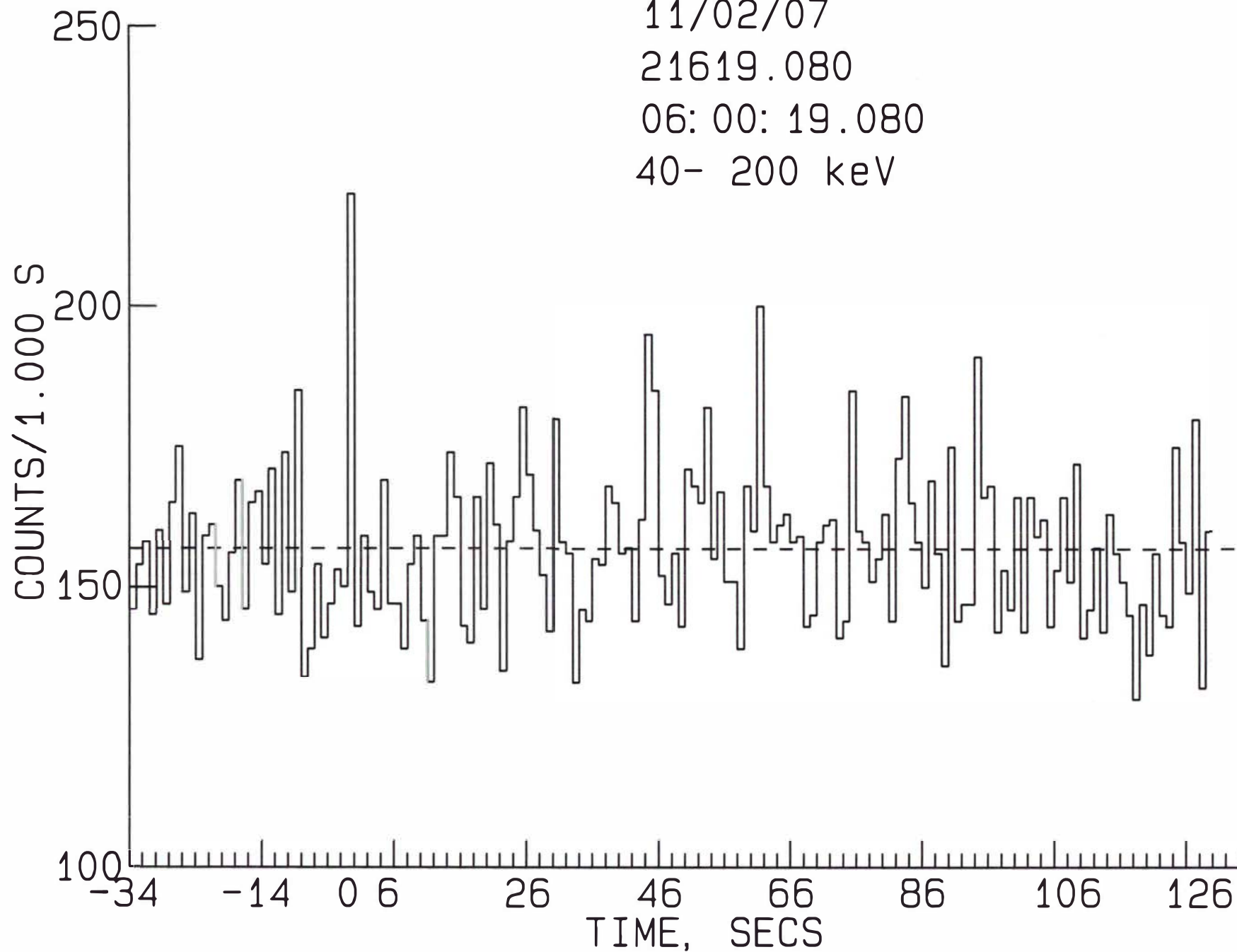
C

25- 150 keV



25/04/07

MESSENGER
11/02/07
21619.080
06:00:19.080
40- 200 keV



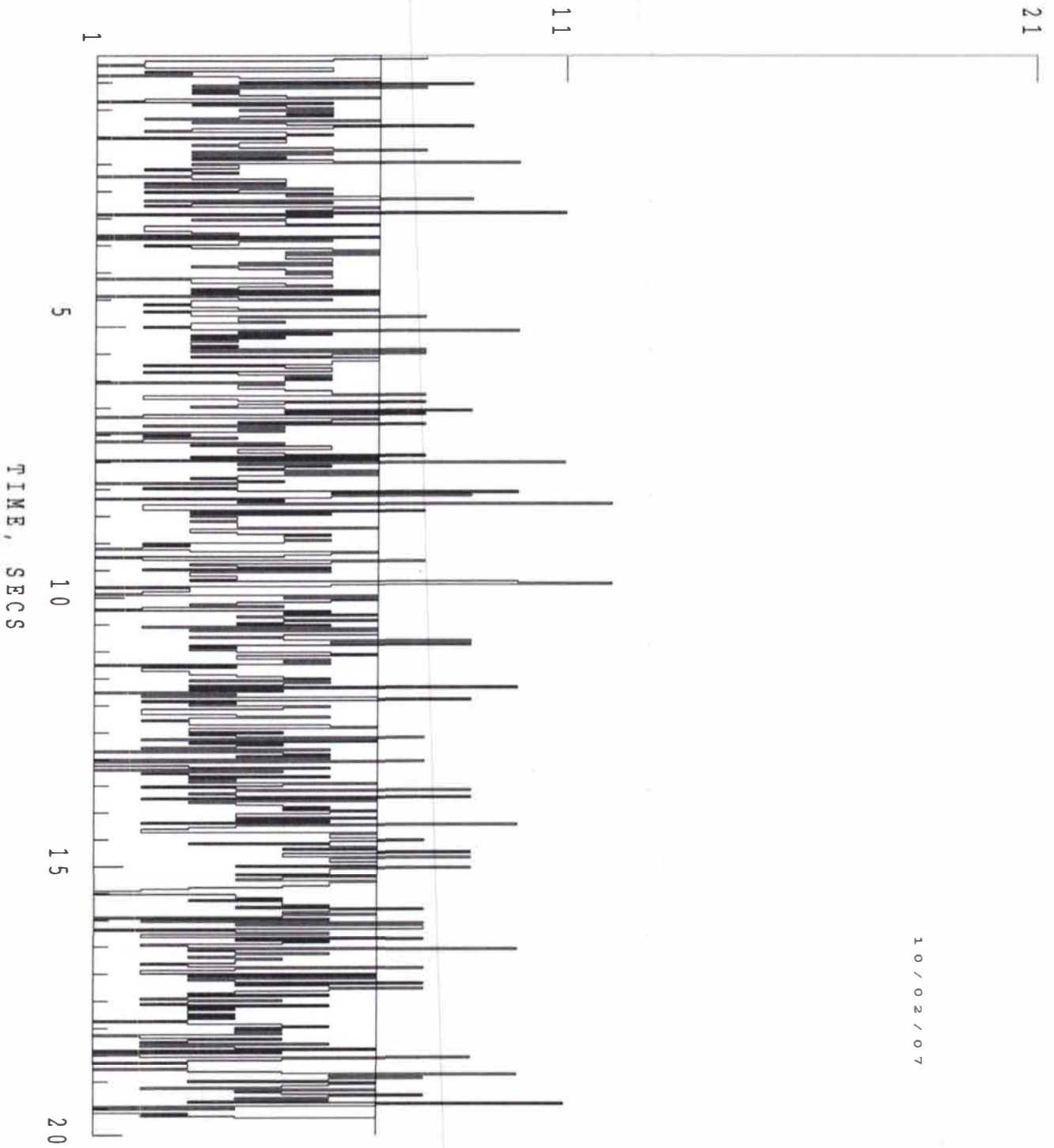
MO

11/02/07

23434.008

116- 337 keV

COUNTS/0.032 S



10/02/07

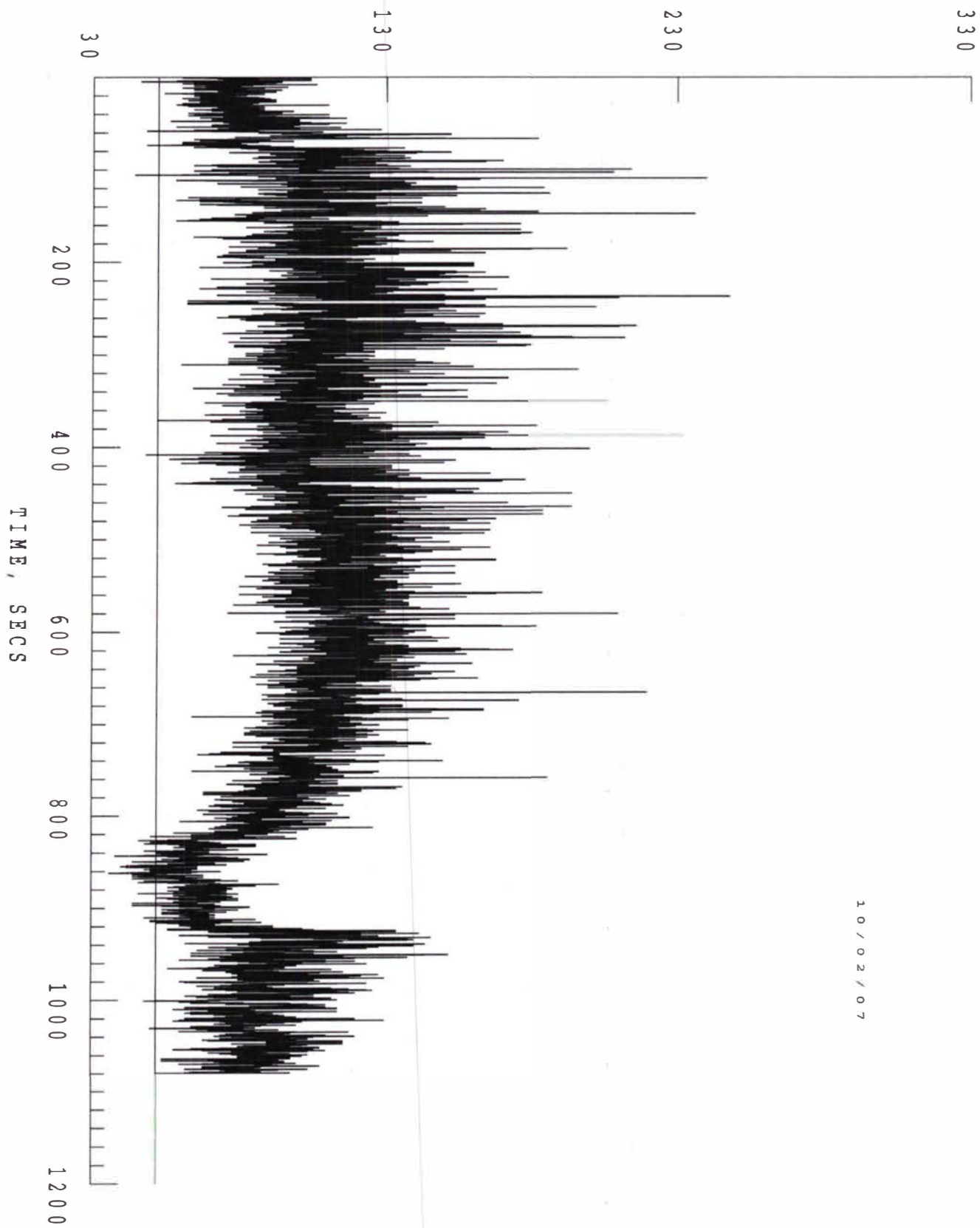
MS01

11/02/07

22115.536

50 - 3000 keV

COUNTS/0.250 S



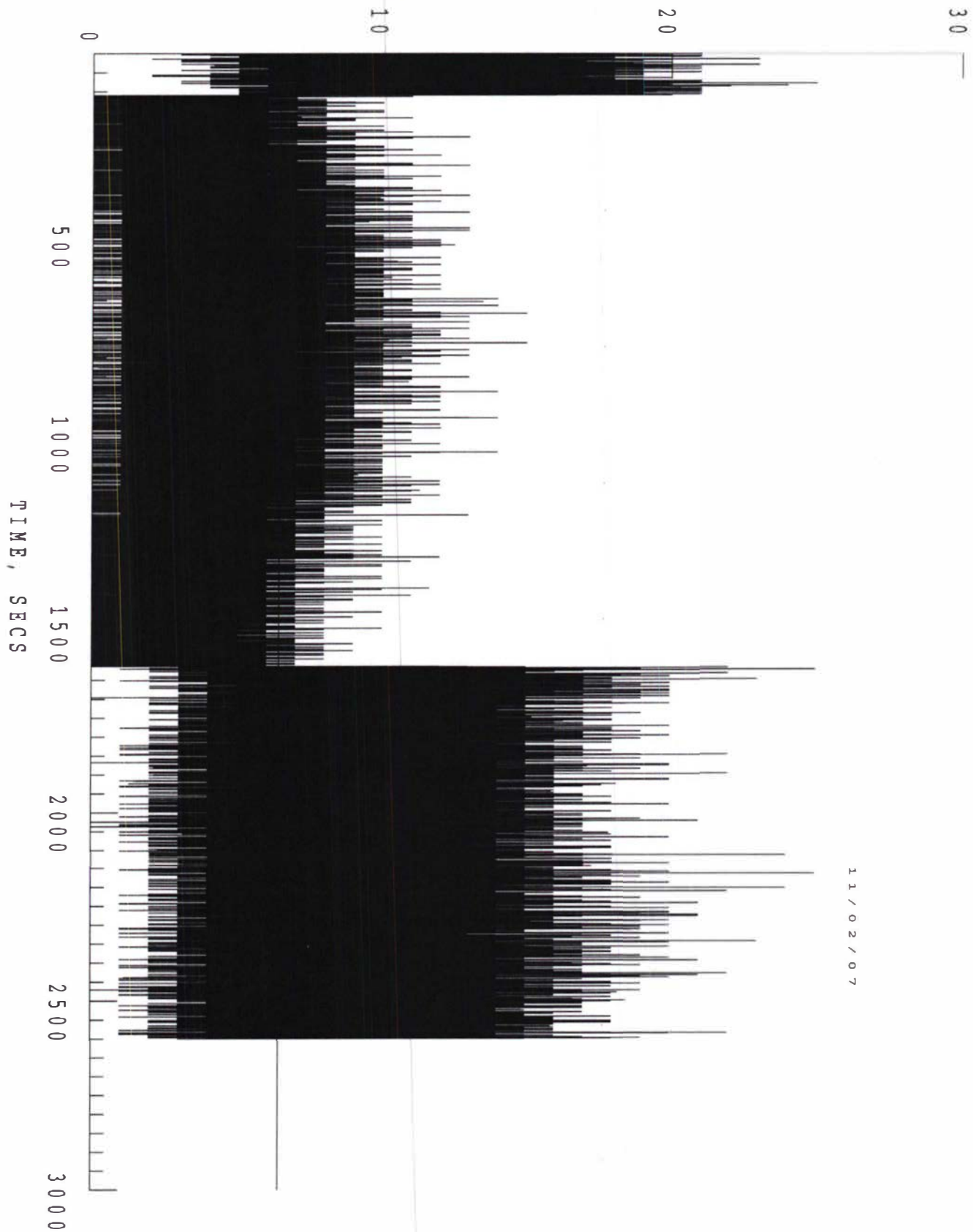
10/02/07

HESSI

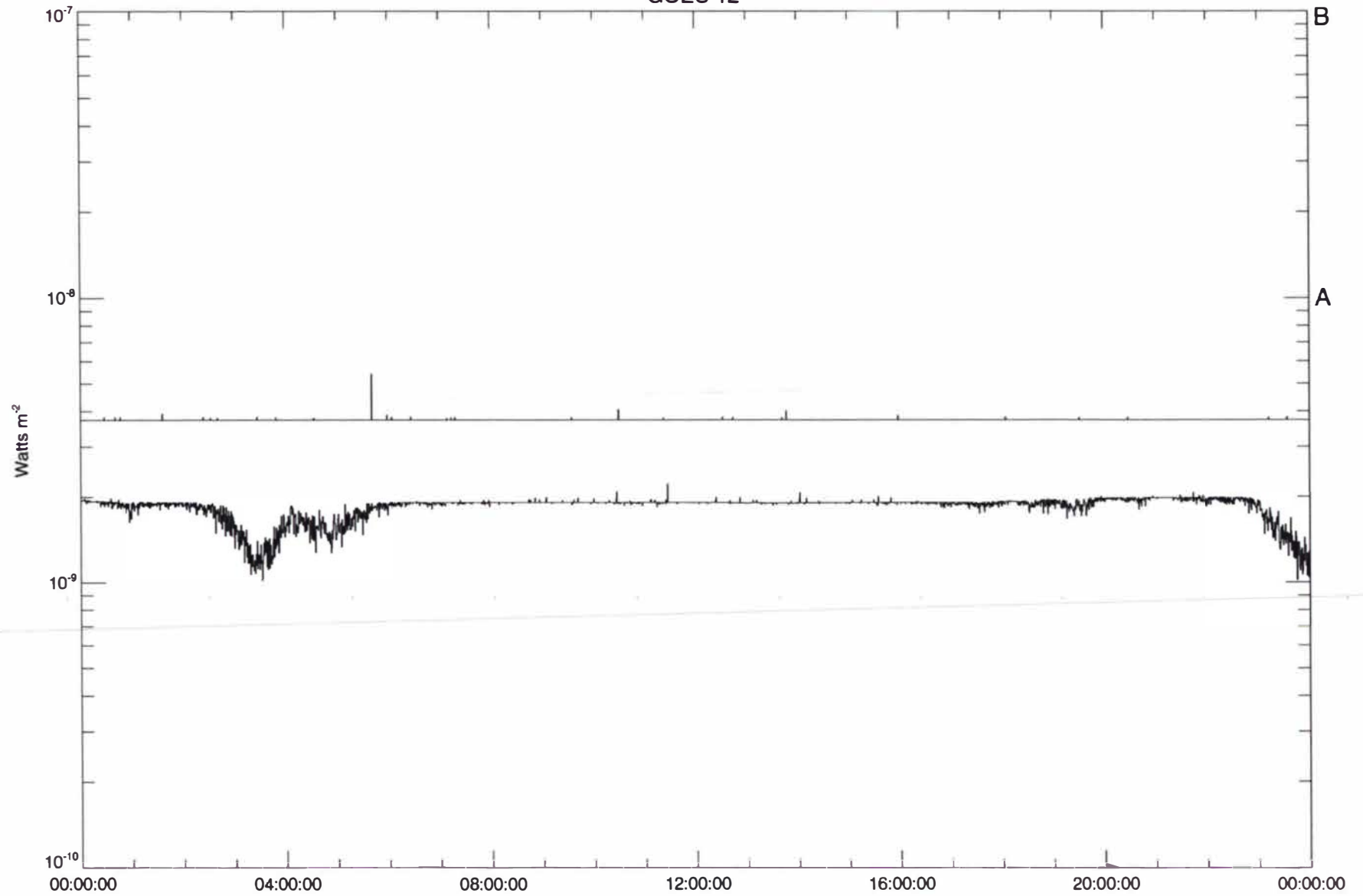
11/02/07 22134.000 (MO_GE_20070211_23434)

25- 150 keV

COUNTS/0.031 S



GOES 12



Data Start: 07/02/11, 0000:00

Channel

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

Plot created: 07/02/13, 1921

Sample average = 10

25/04/07

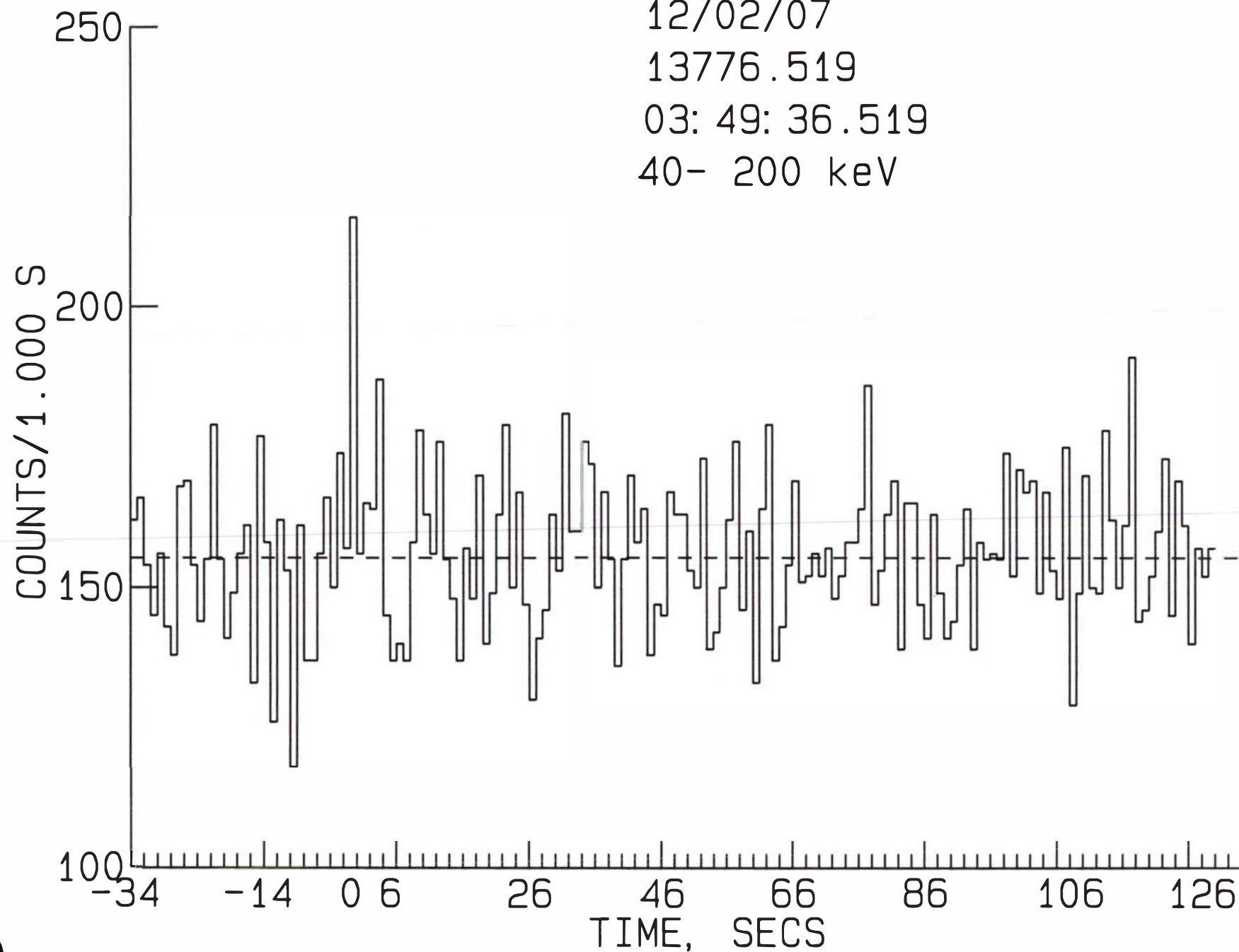
MESSENGER

12/02/07

13776.519

03: 49: 36.519

40- 200 keV



Date: _____

BURST TRIANGULATION CHECKLIST

1. Suzaku Data

- ☐ 1 second timing error corrected? (Jan 1 – Apr 24 2009) **N/A**

2. AGILE Data

- ☐ 1 second timing error corrected?

3. MESSENGER Data

- ☒ Coarse or fine oscillator? **C**
☒ Timing checked after ~ 1 week?

4. For Konus events

- ☒ Konus ecliptic latitude used with latest calibration?

5. For Odyssey events **N/A**

- ☐ 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?

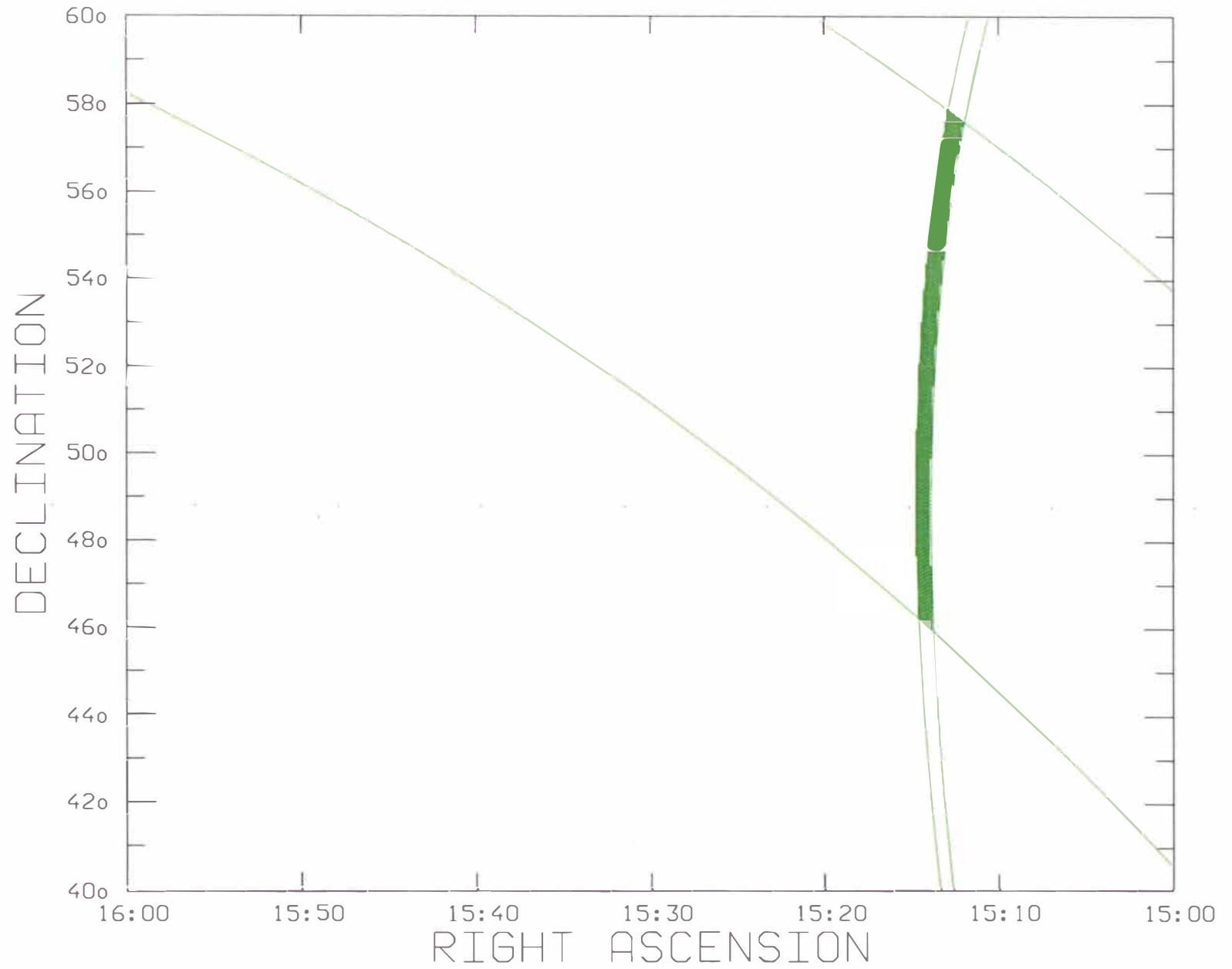
6. For 3 or More Spacecraft events

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

7. For INTEGRAL events

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

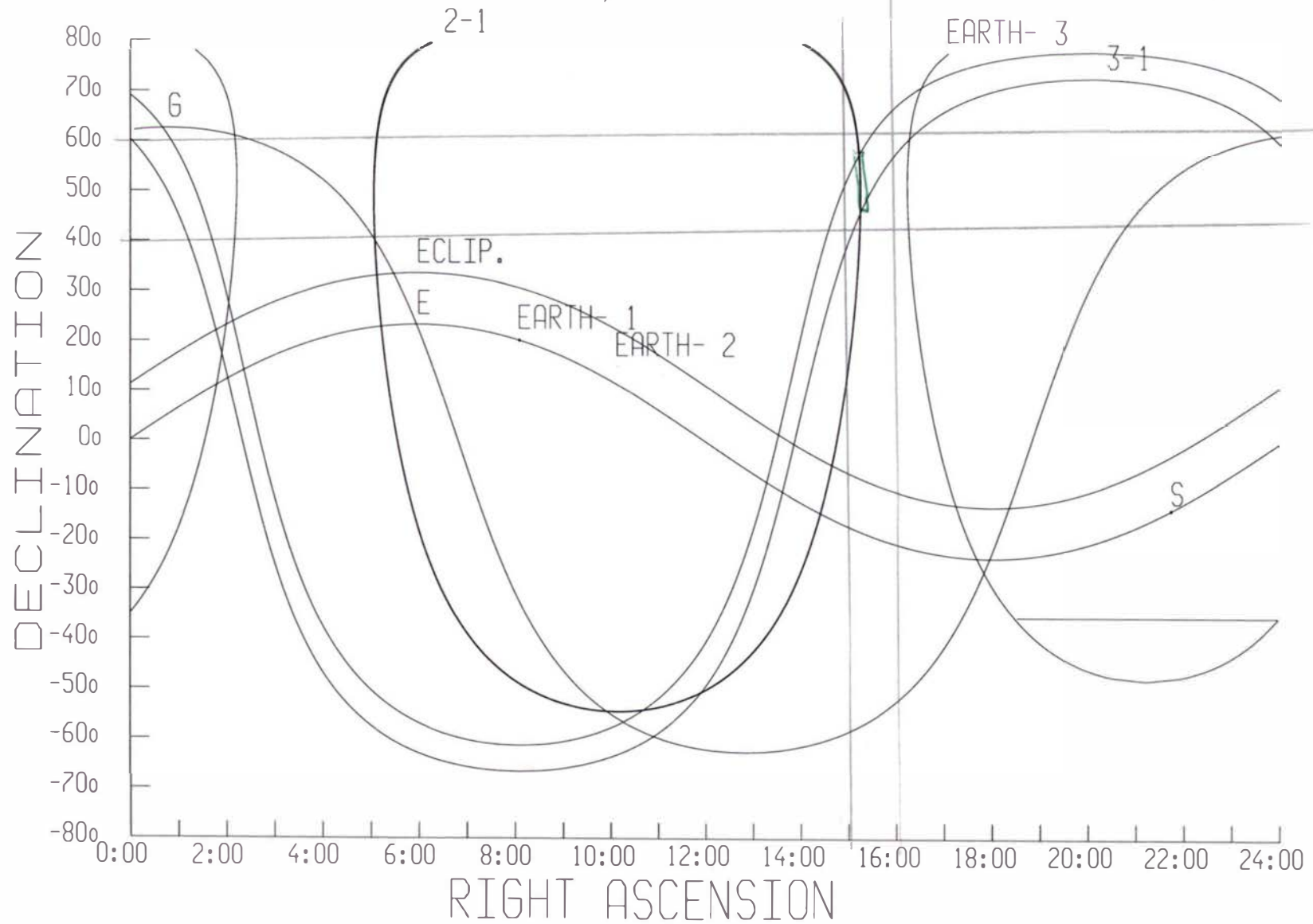
-
- ☒ ACCESS and MBL4 databases updated, with identical times?

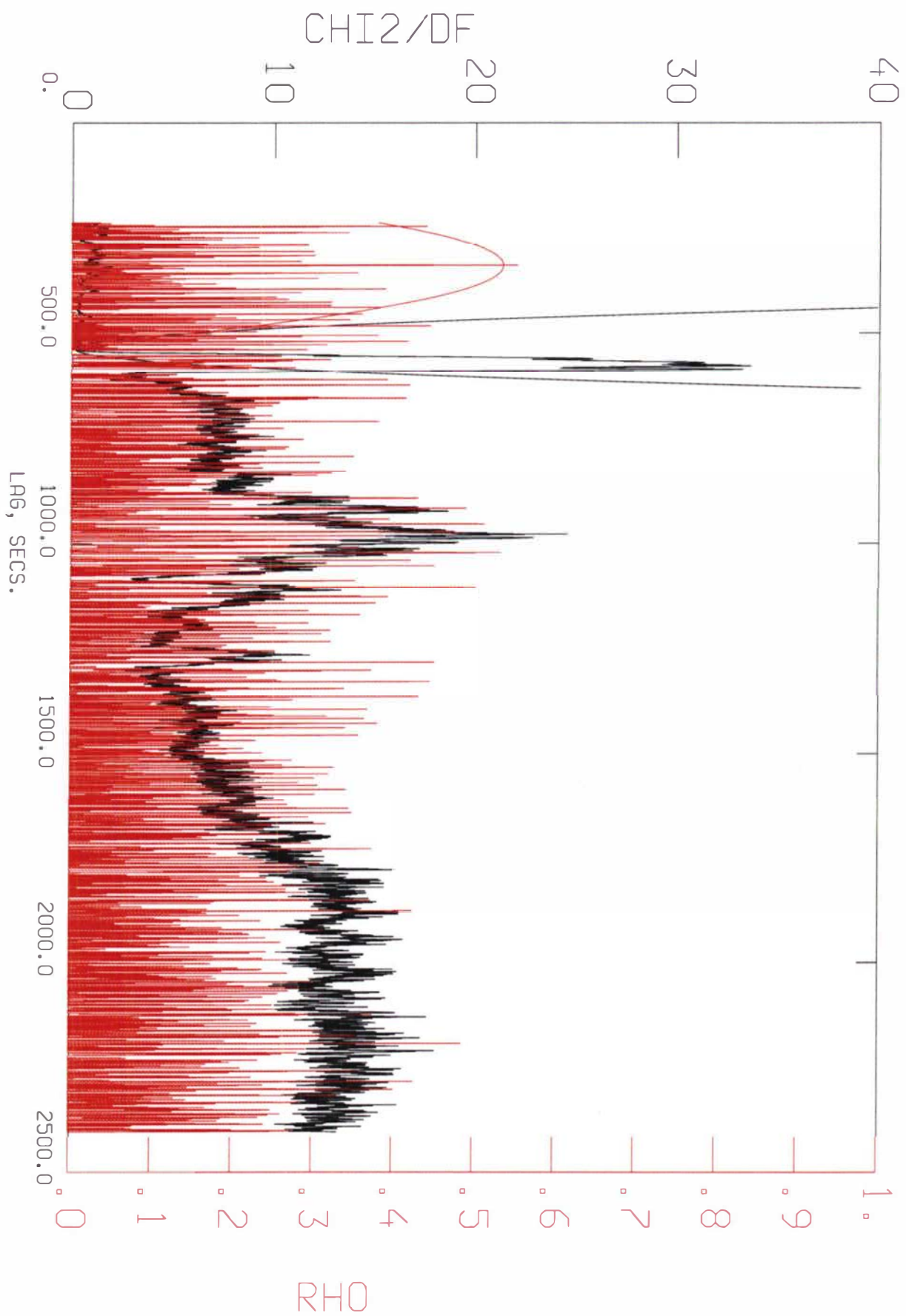


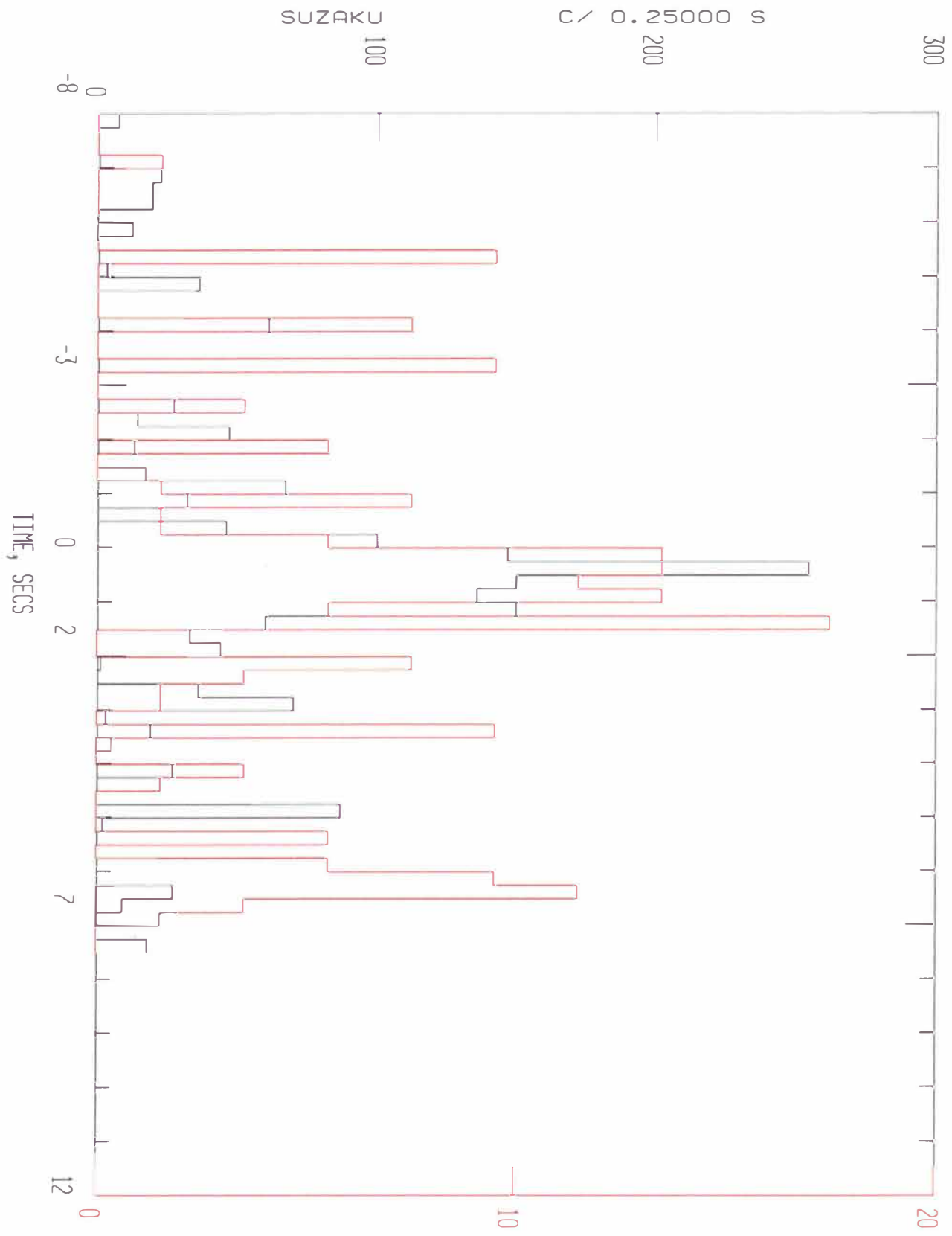
EVENT OF FEB 12, 2007 19:31

02/08/2010

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







21/07/10

MESSENGER

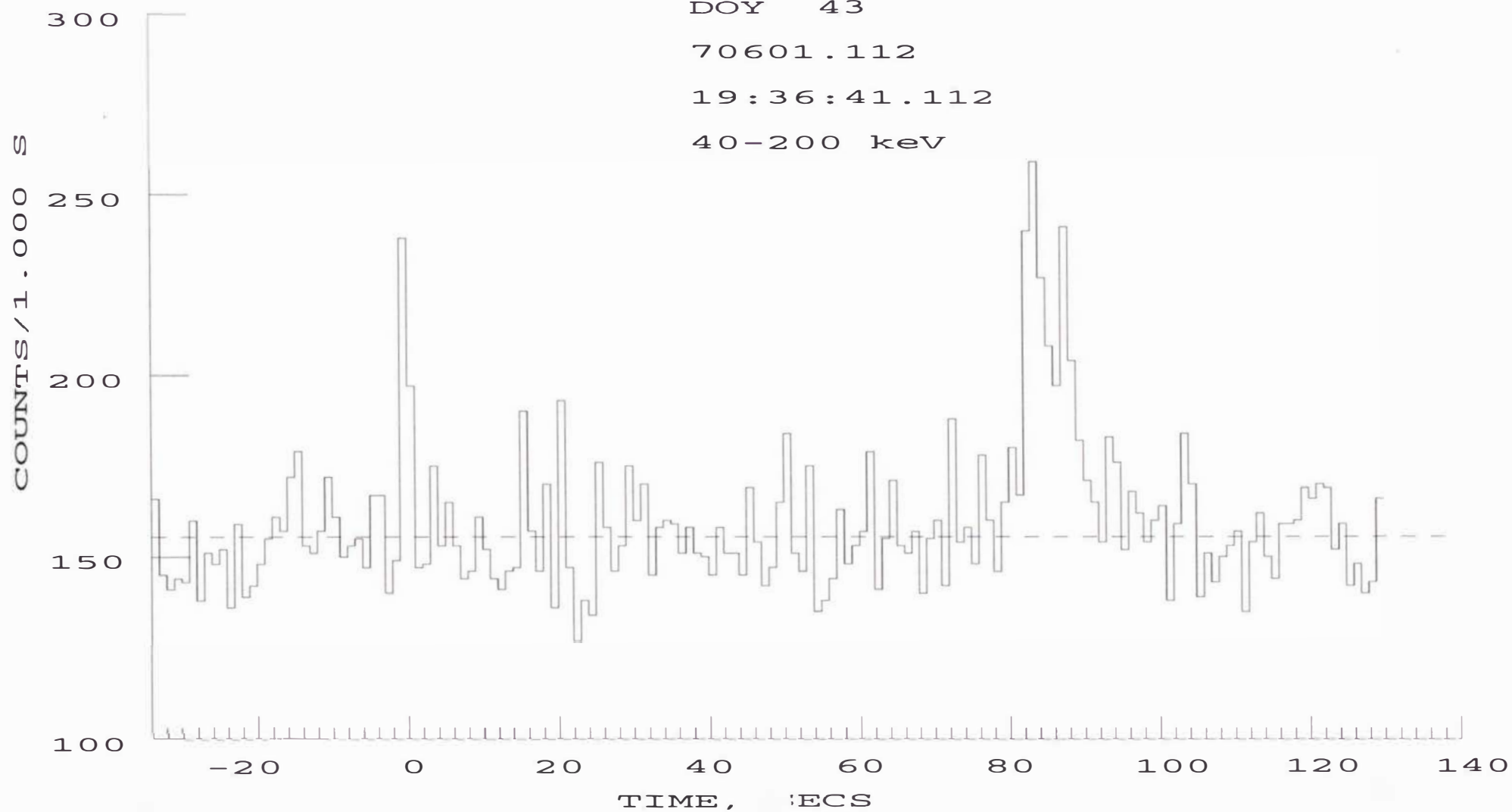
12/02/07

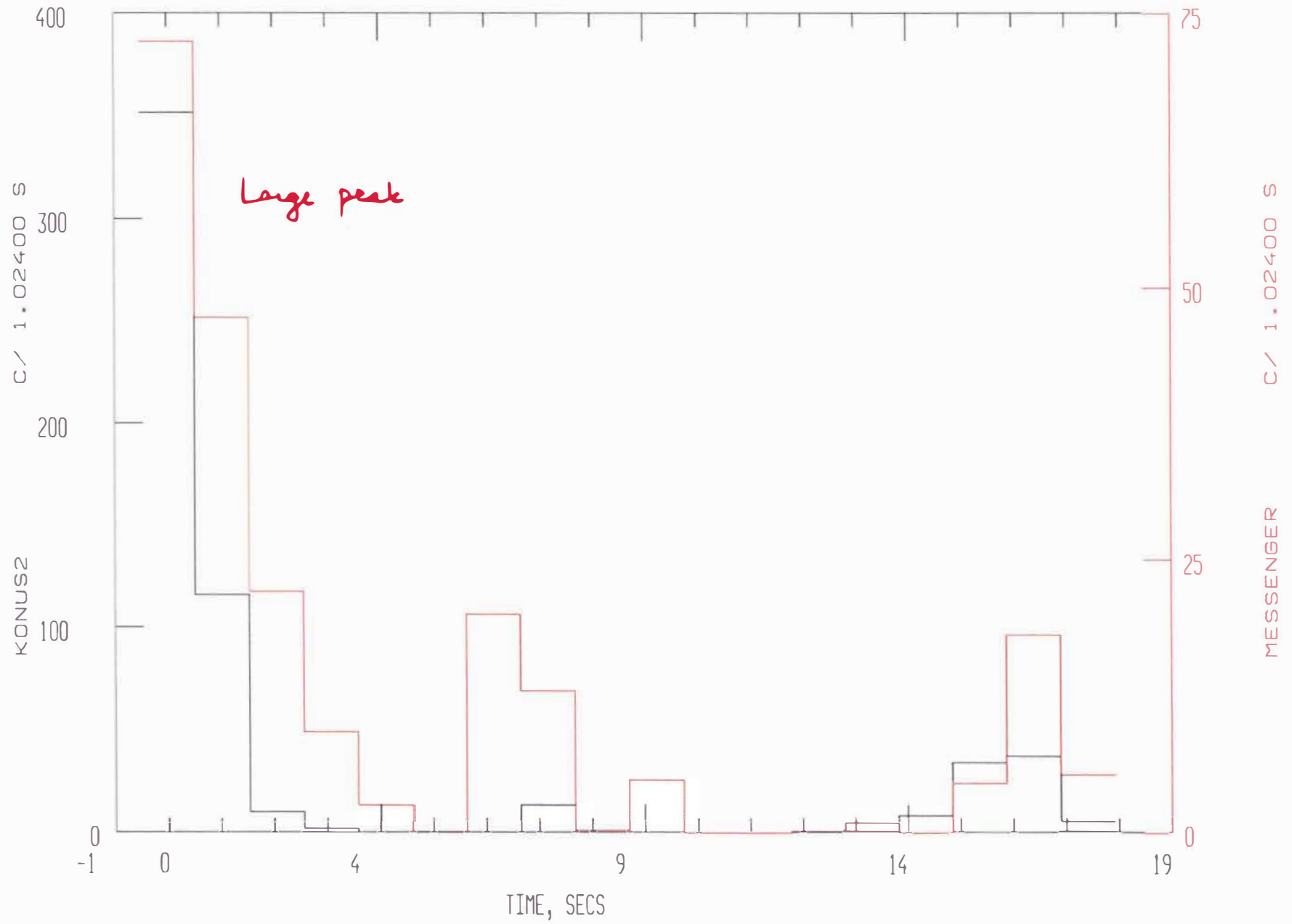
DOY 43

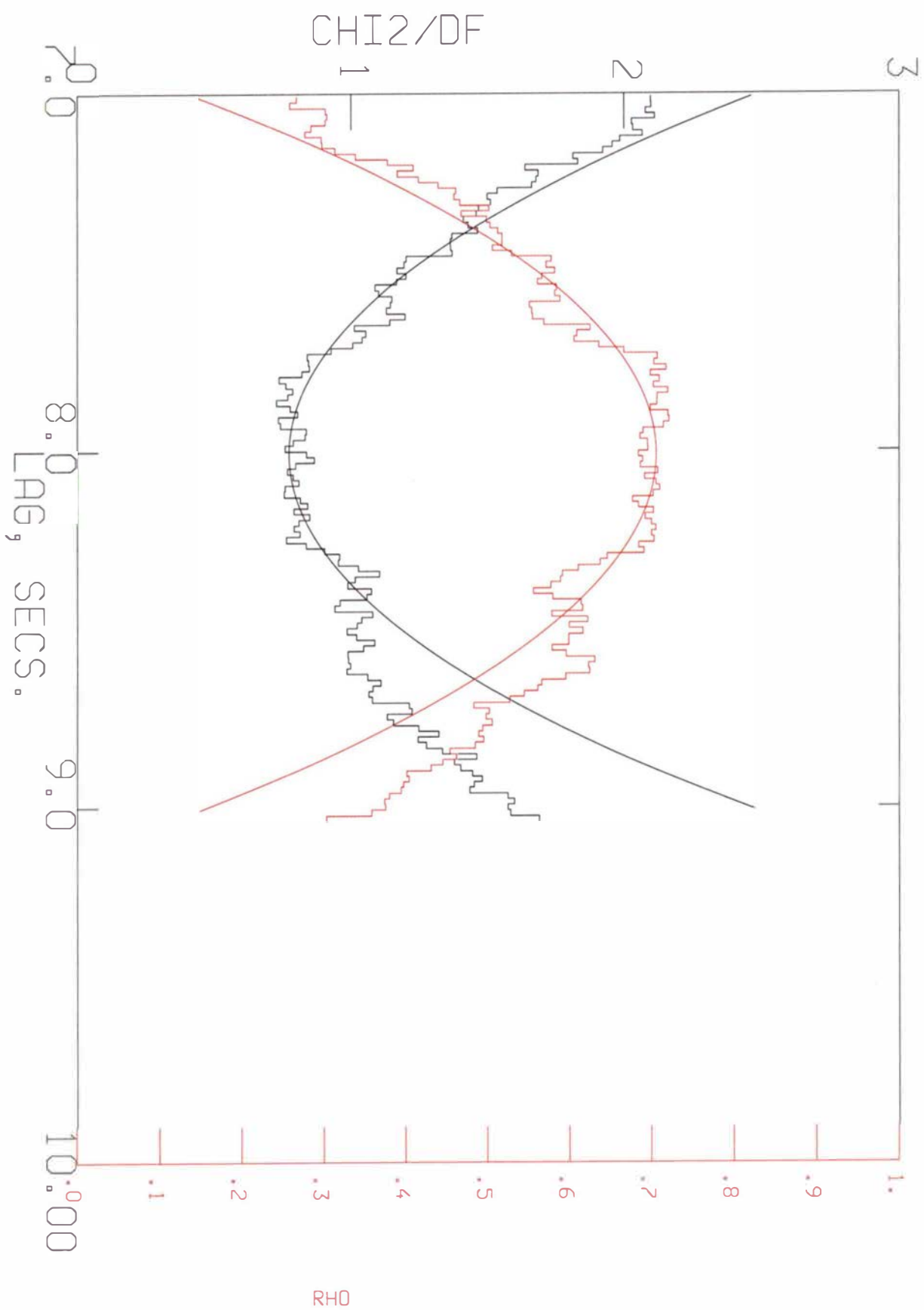
70601.112

19:36:41.112

40-200 keV







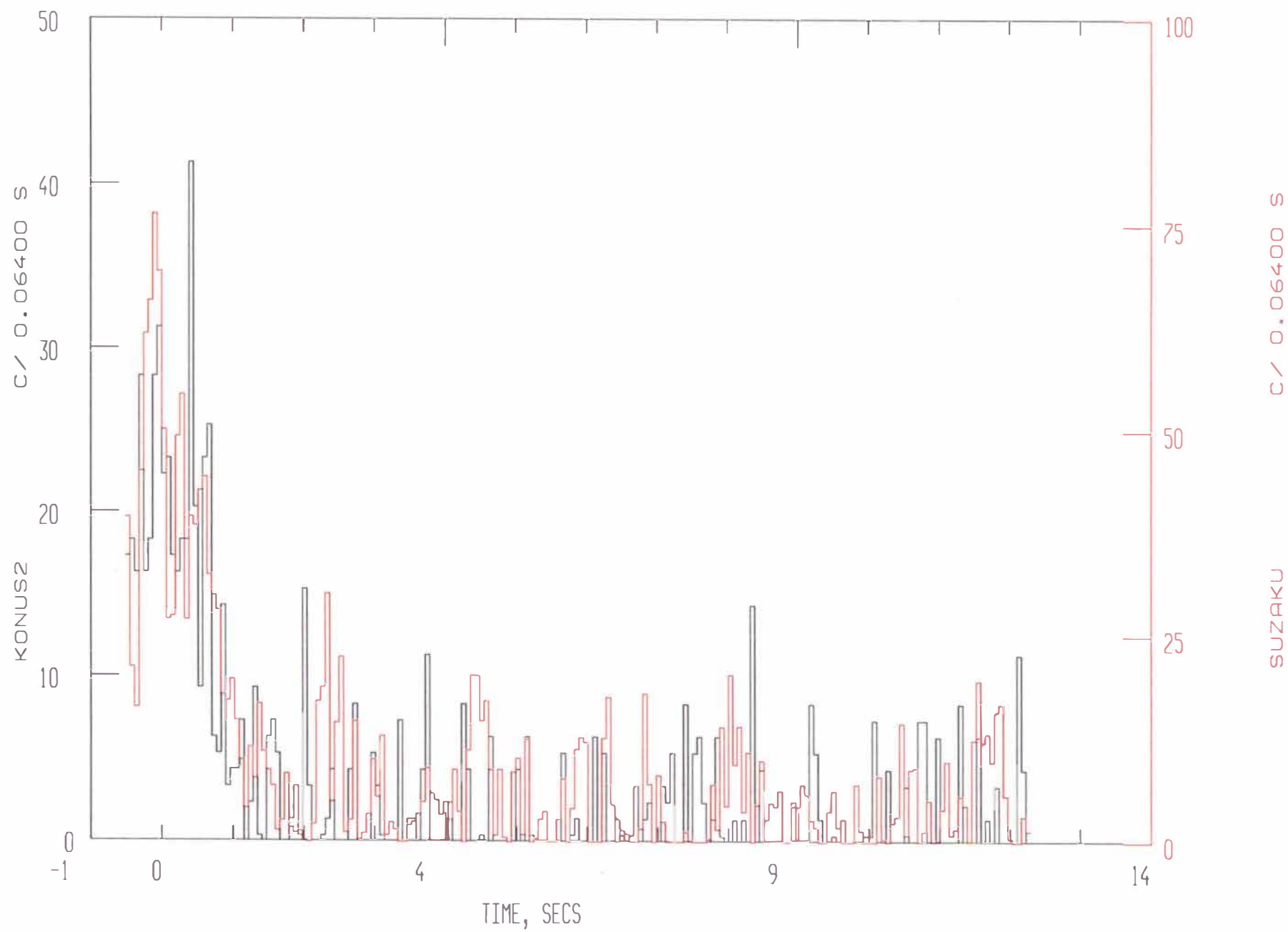
KONUS2

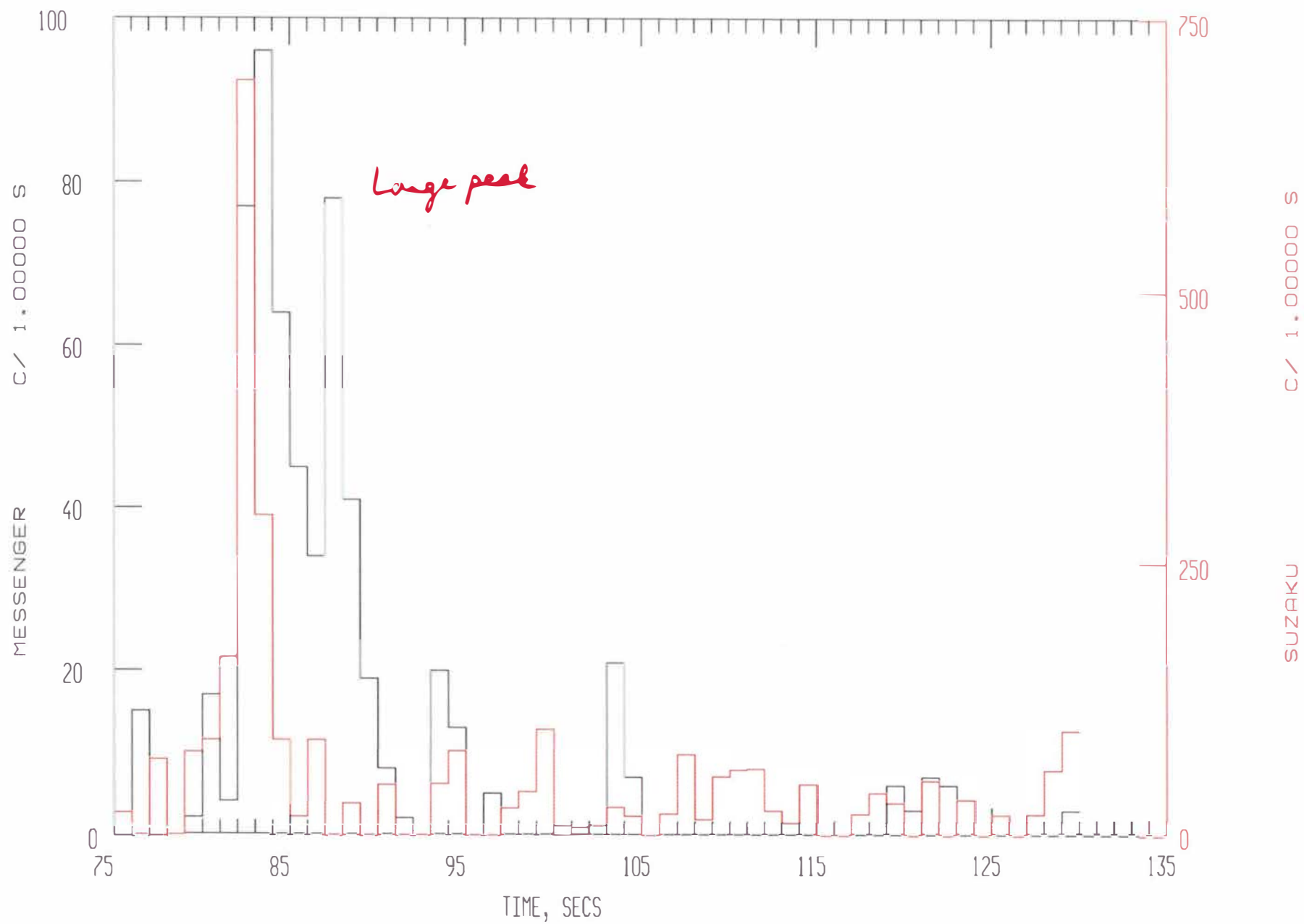
-SUZAKU

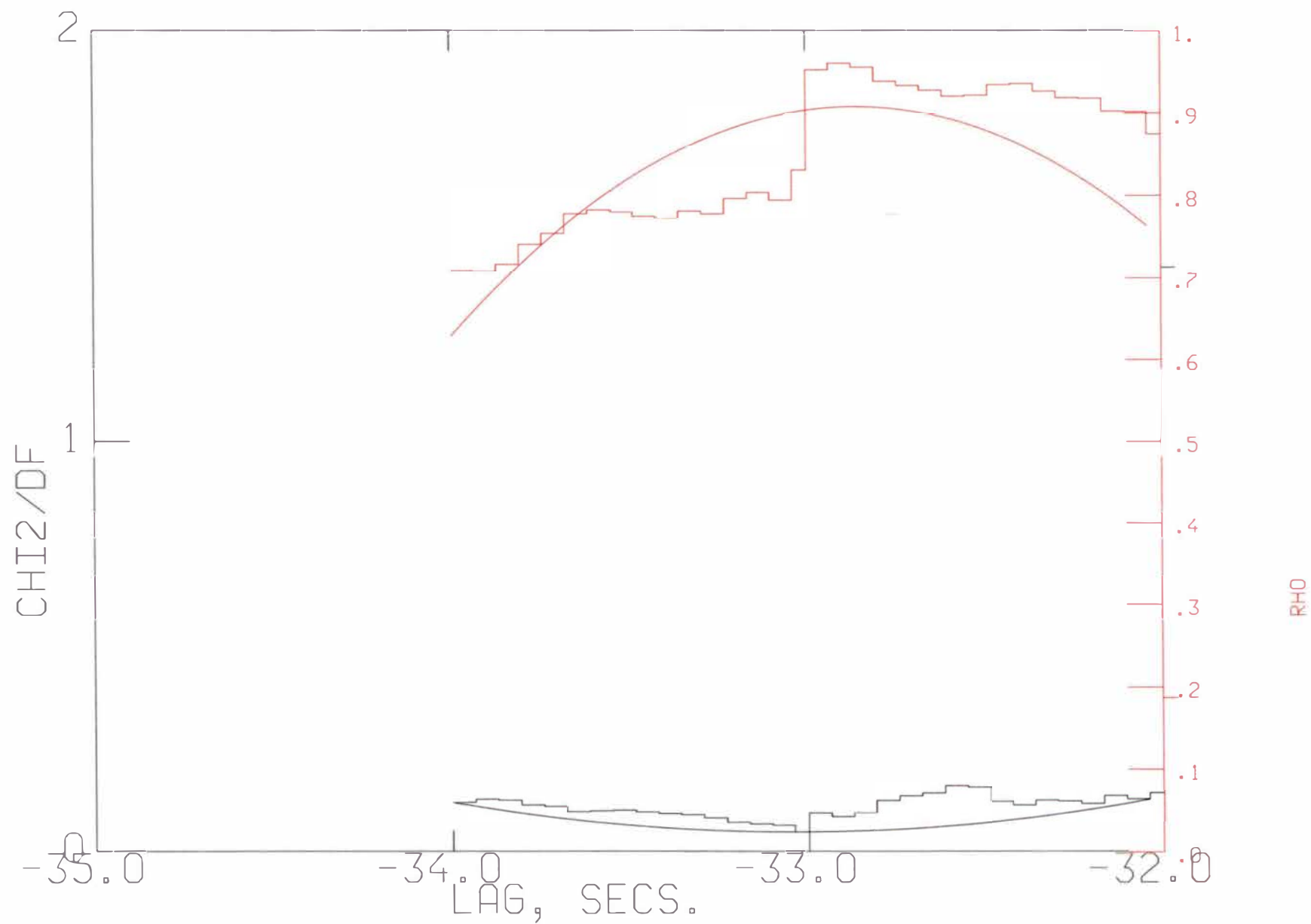
CORRELATION

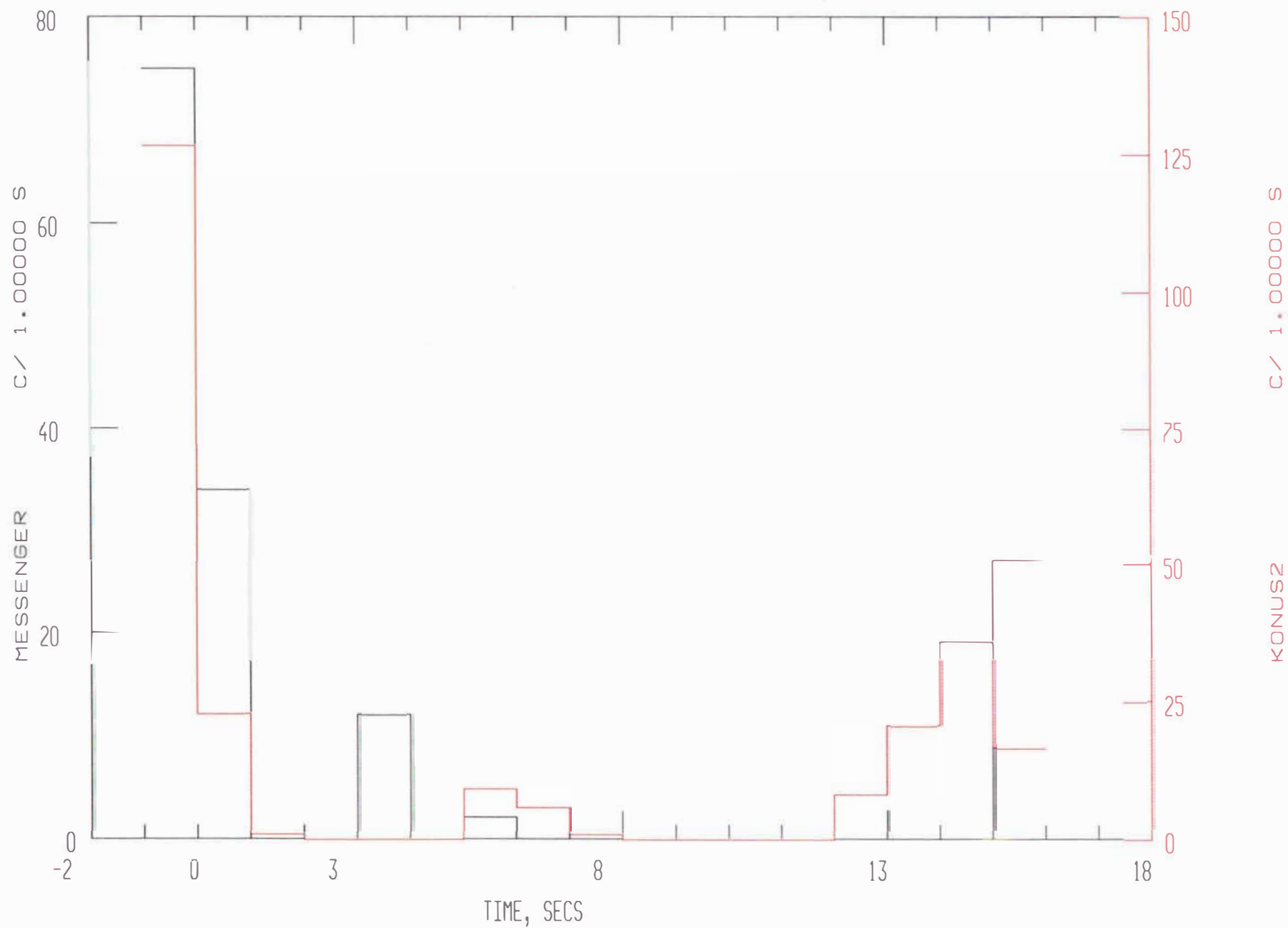
12/02/07 70293.711

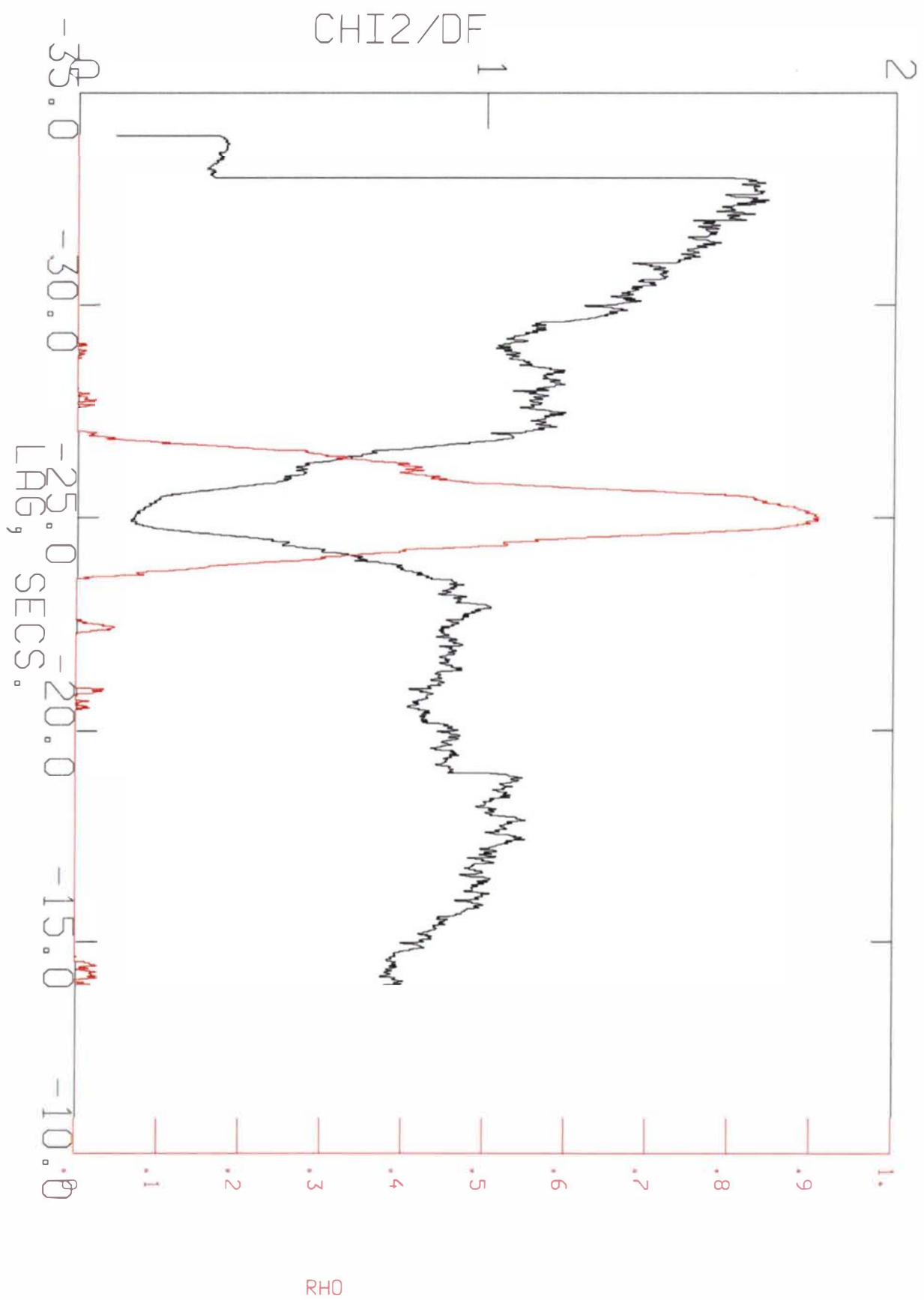
2/ 8/10

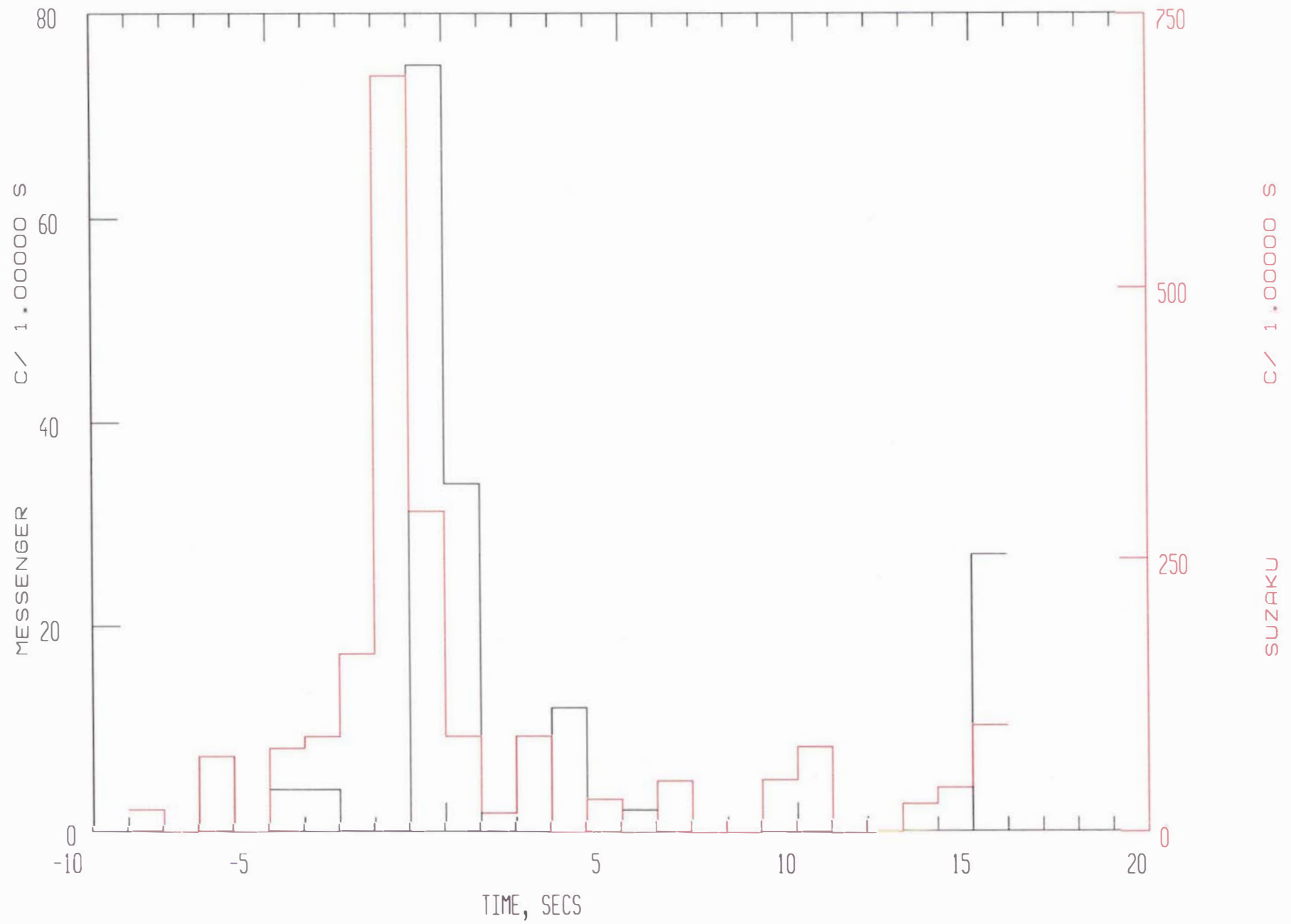












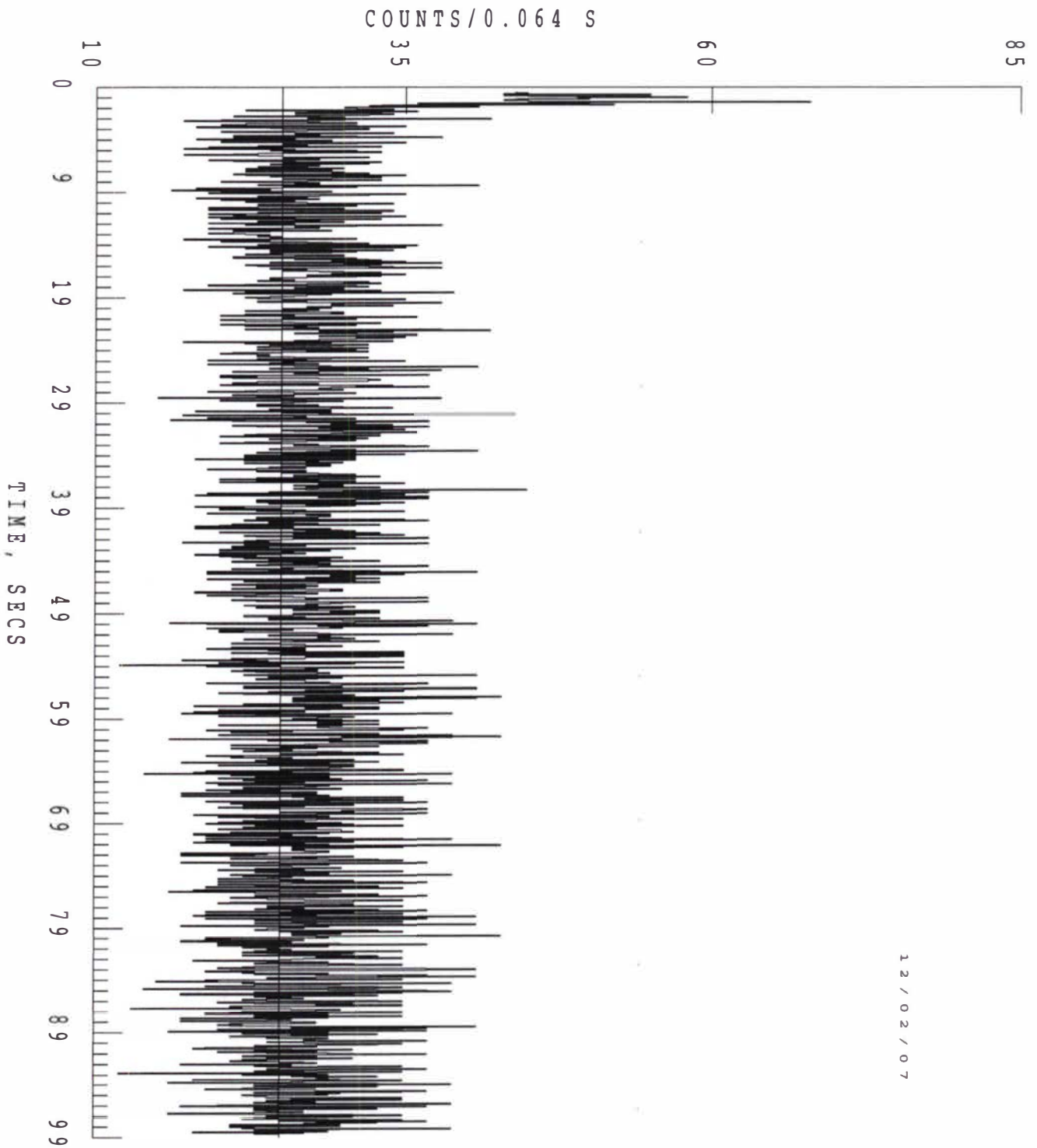
KONUS2

12/02/07

70293.711

50 - 200 keV

19:31:33



KONUS HRES 20070212 70293

TRIGGER TIME: 12/02/07 DOY 043 Julian 2454145.31358 UT = 19.526 19:31:33 (70293.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

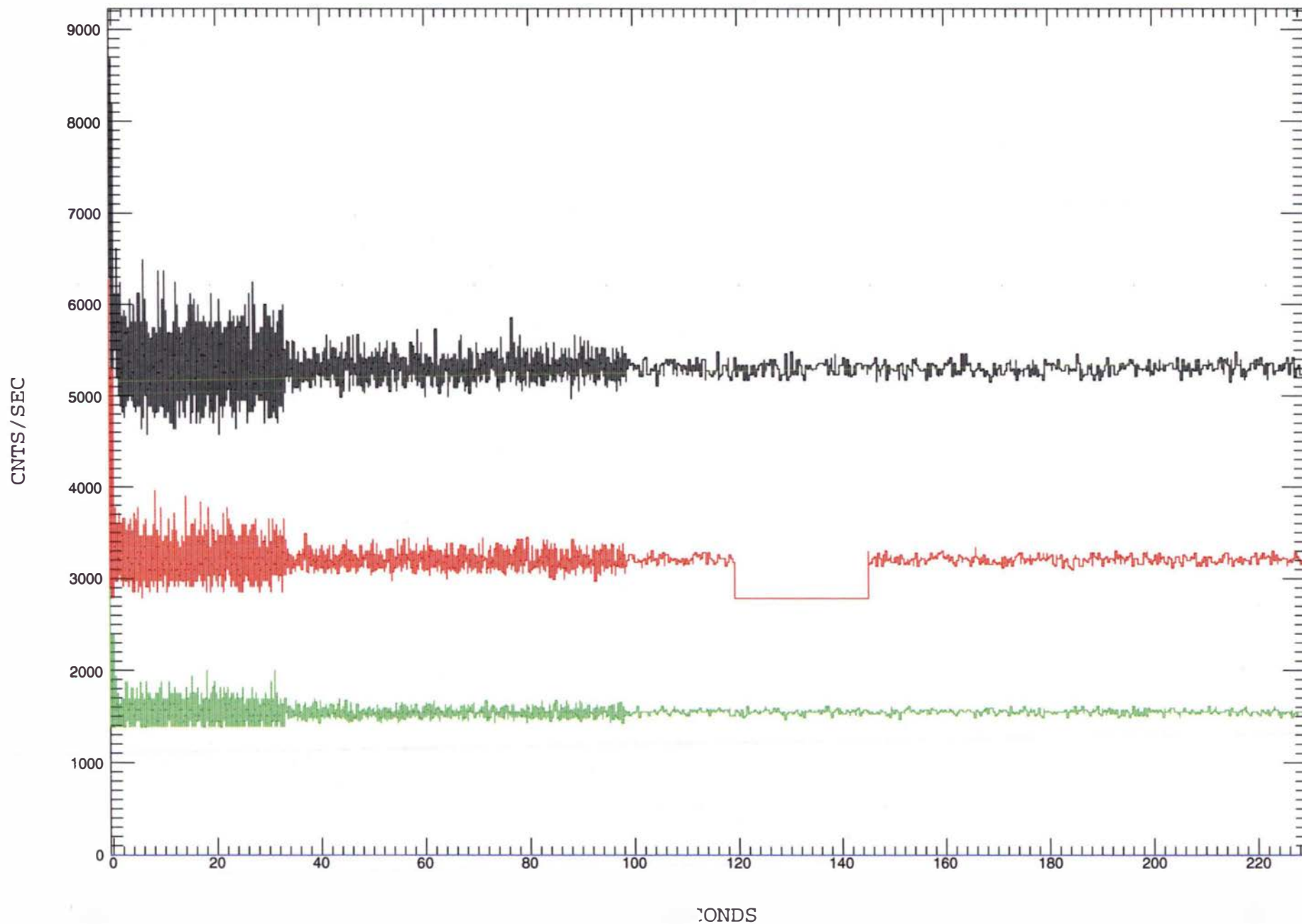
Chan 4 : [> 10 MeV]

Channel 1 + 4200

Channel 2 + 2800

Channel 3 + 1400

Channel 4 + 0



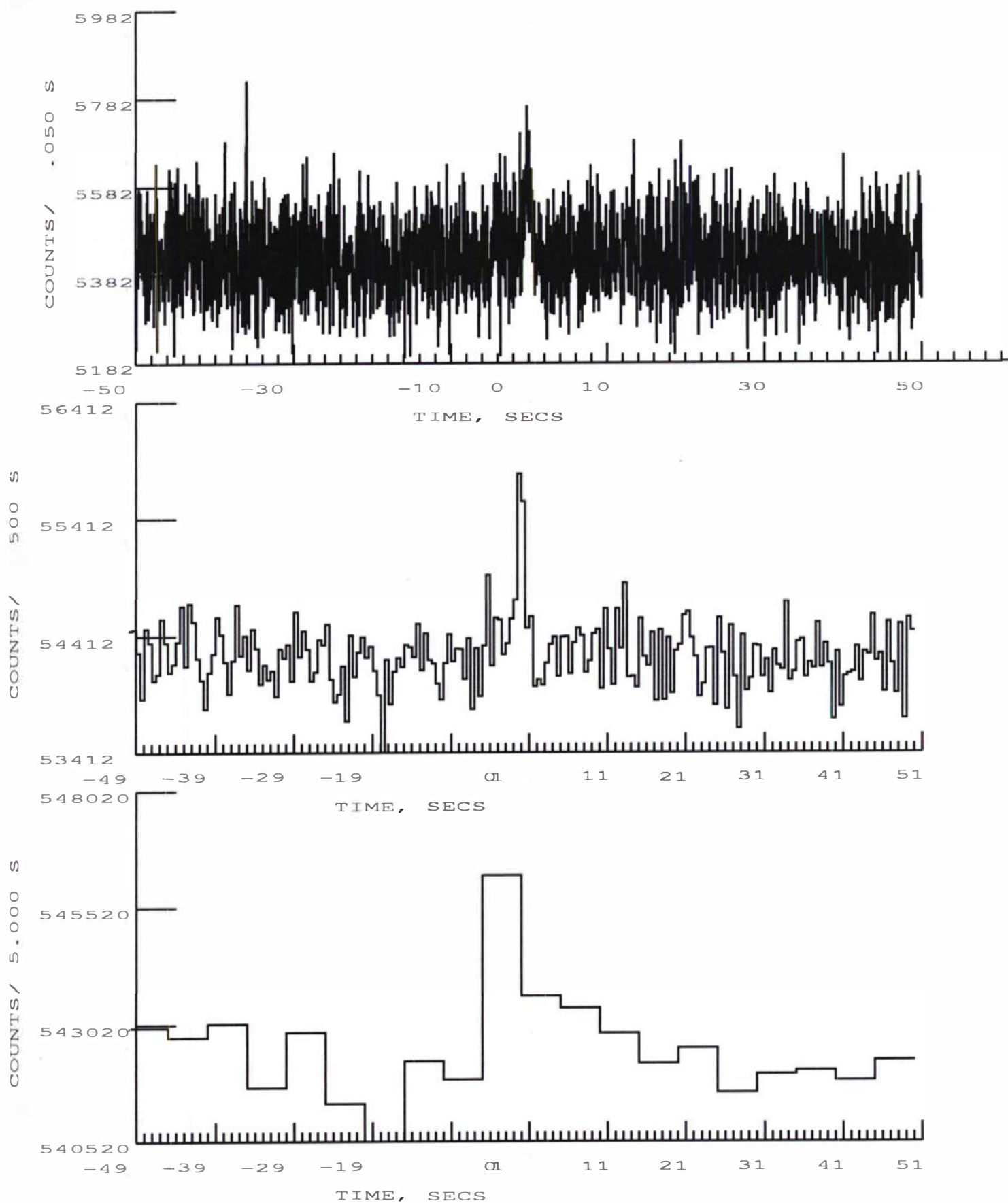
INTEGRAL

12/02/07

70293.000

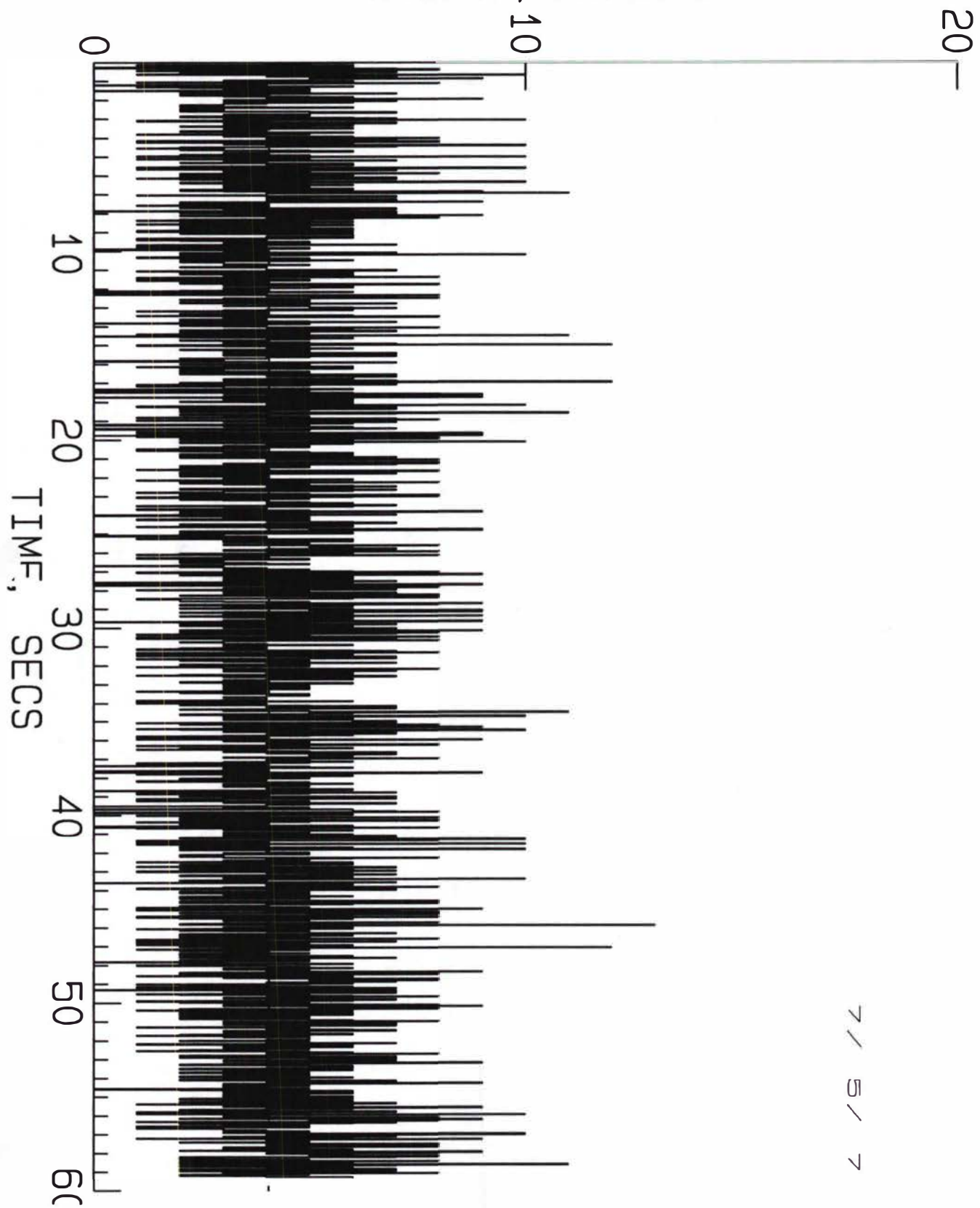
19:31:33.0

18/07/14



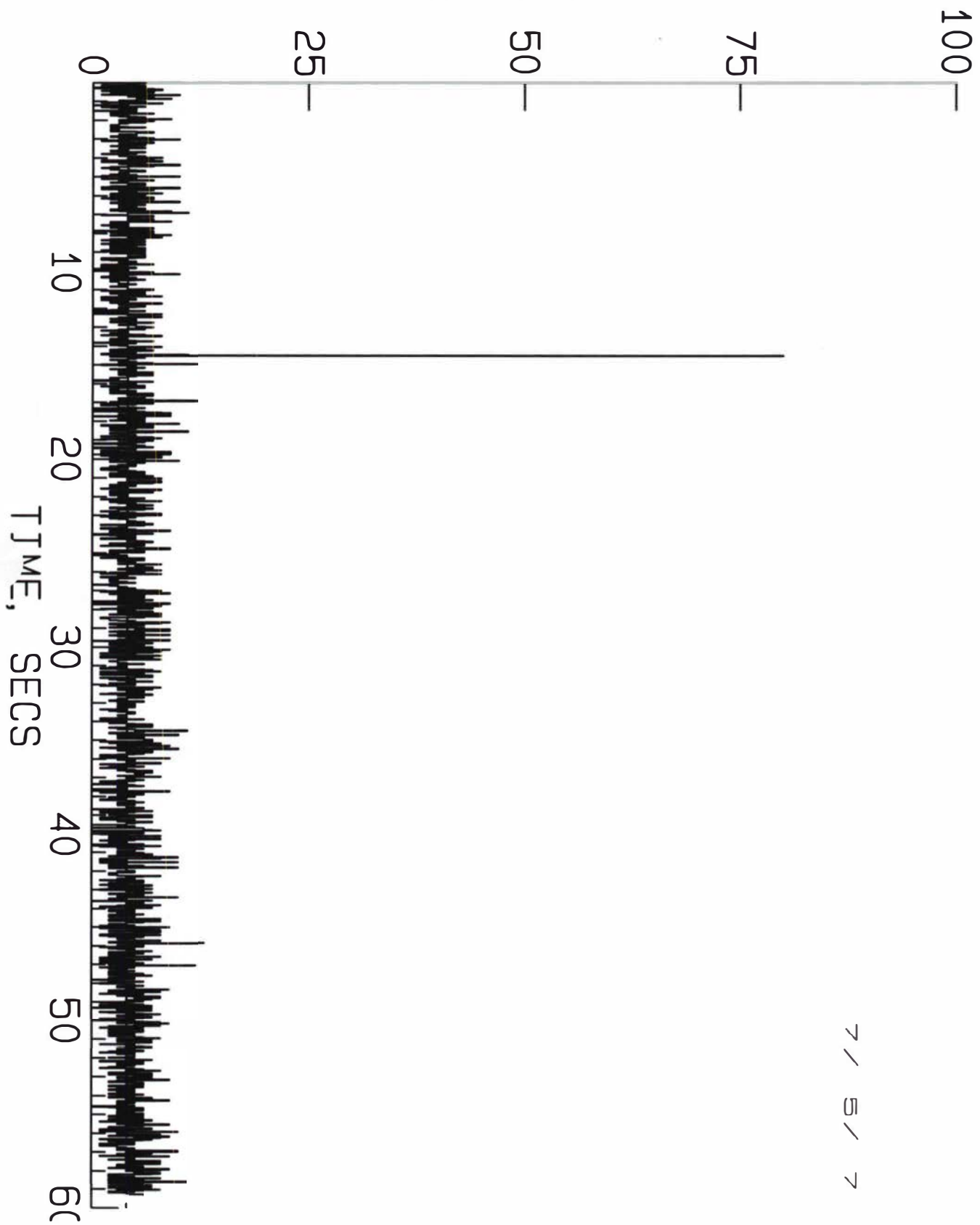
116- 337 keV

COUNTS/0.032 S



116- 337 keV

COUNTS/0.032 S



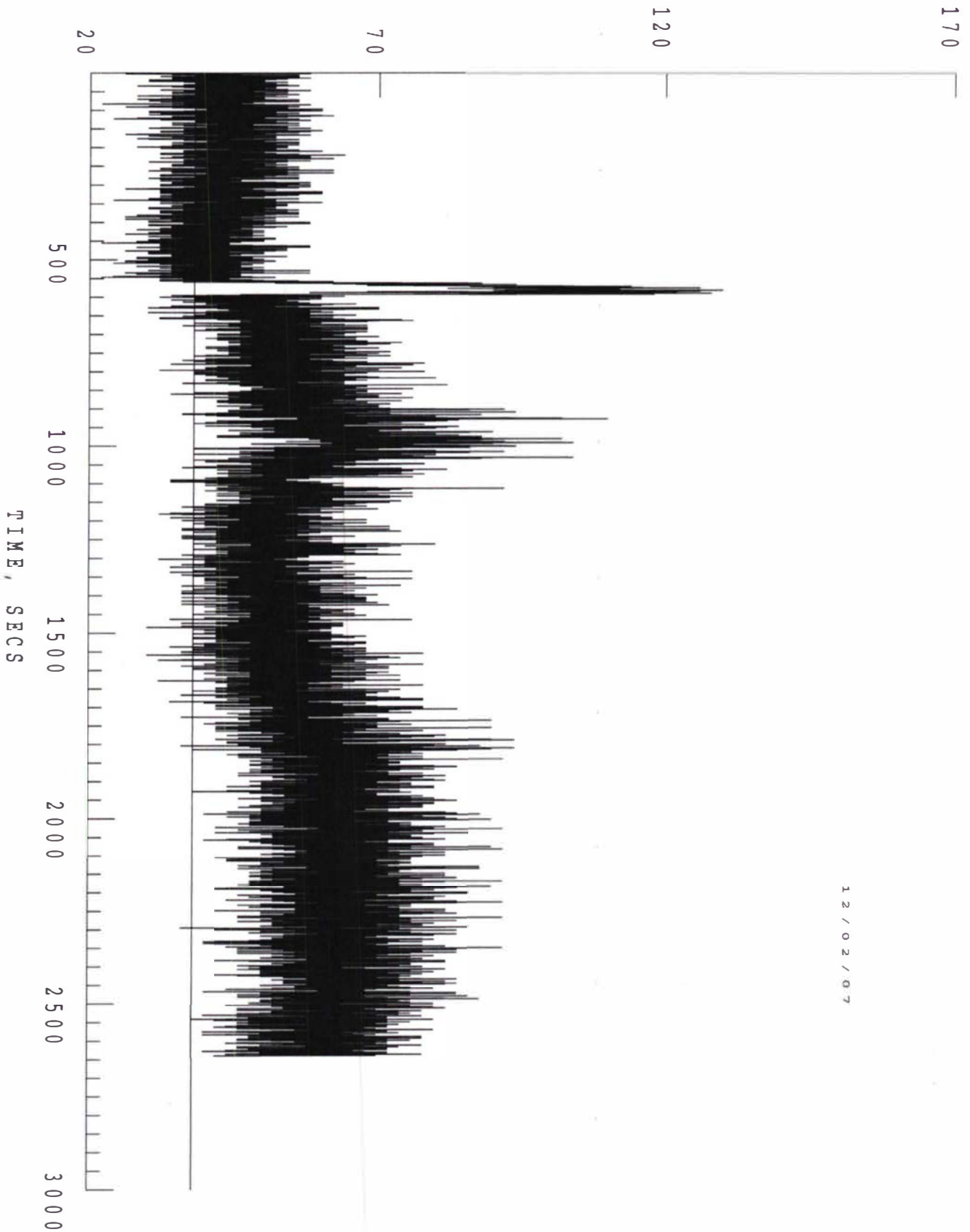
MS01

12/02/07

68973.107

50 - 3000 keV

COUNTS/0.250 S

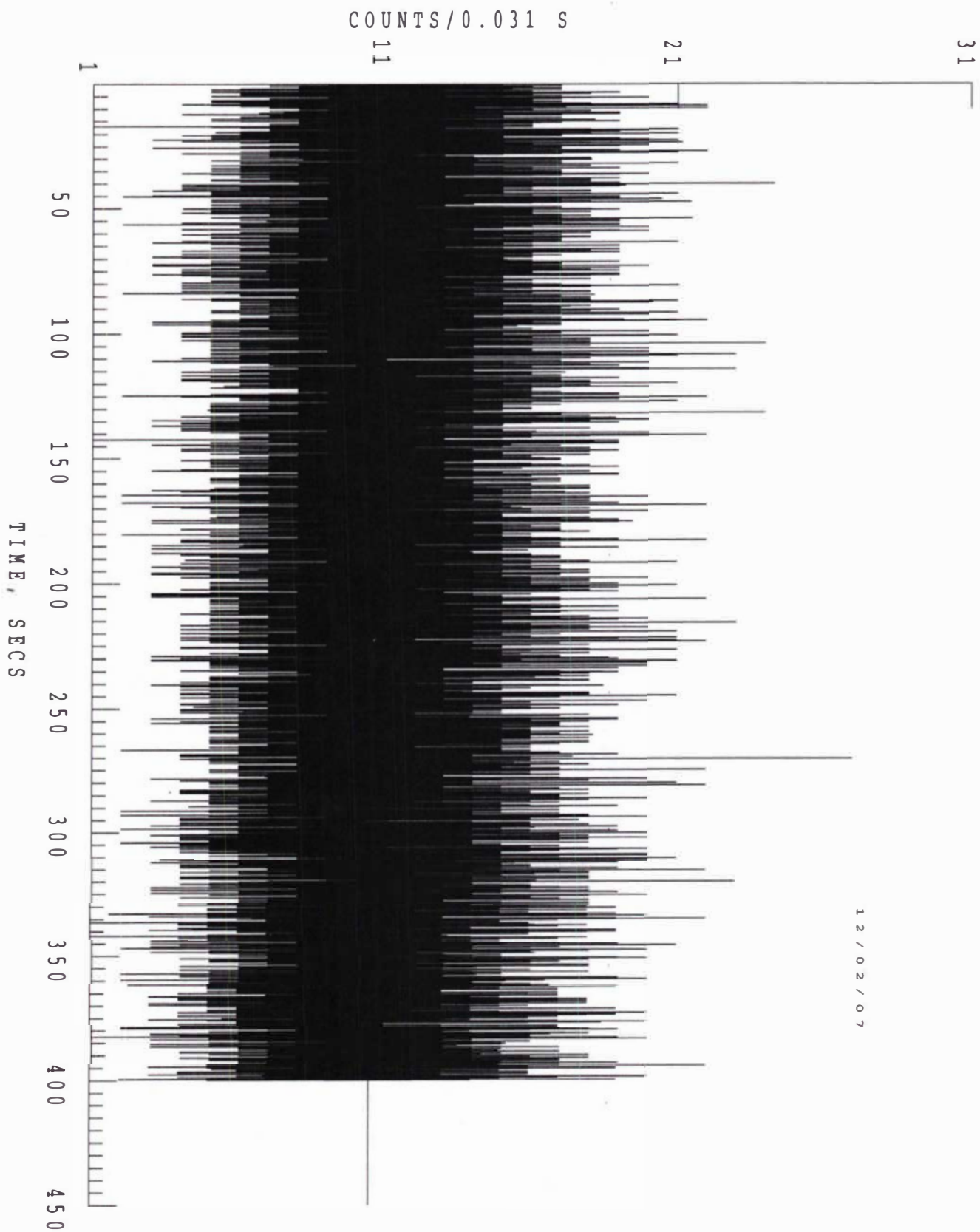


12/02/07

HESSI

12/02/07 70093.000 (KONUS2_20070212_70293)

25- 150 keV



25/04/07

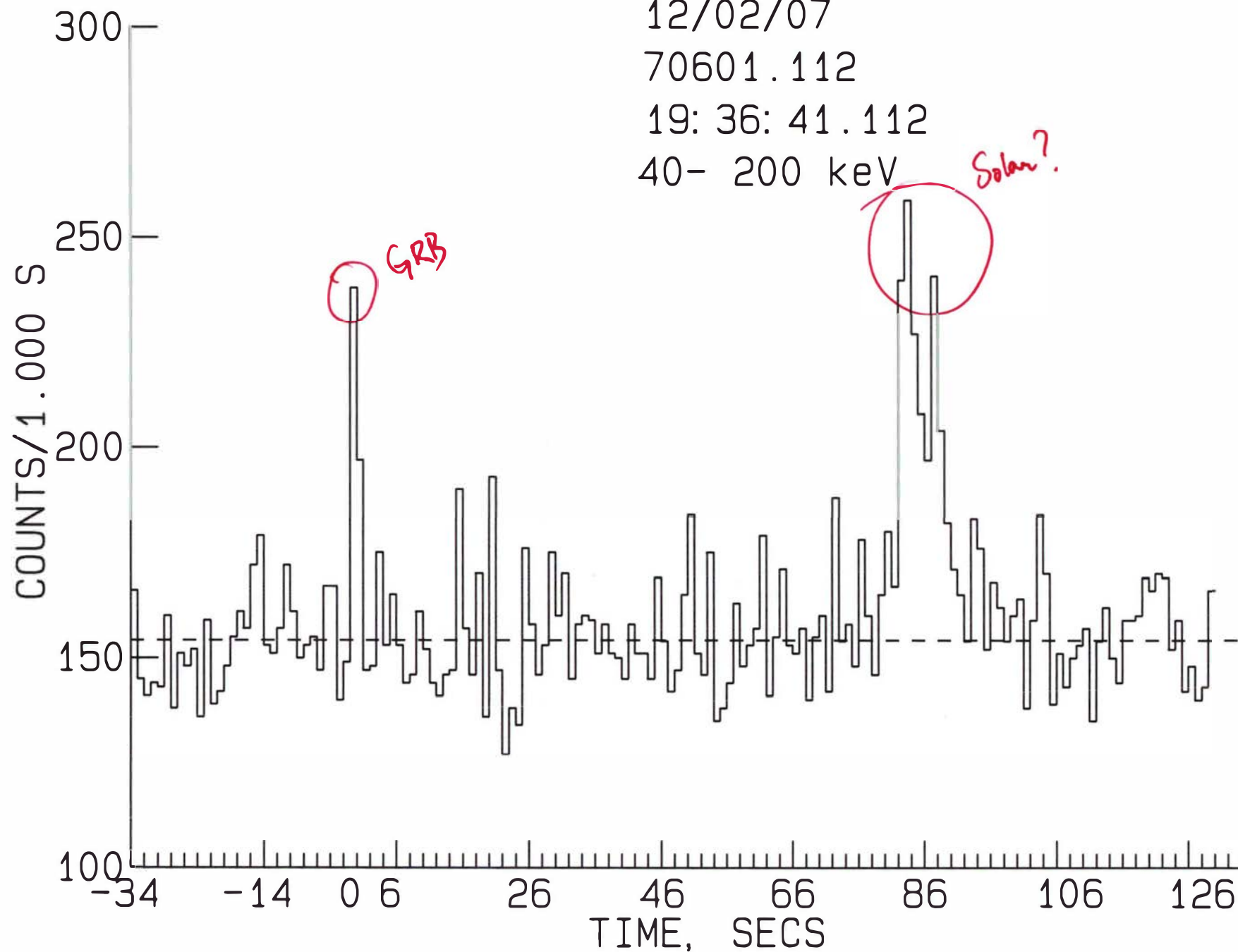
MESSENGER

12/02/07

70601.112

19: 36: 41.112

40- 200 keV

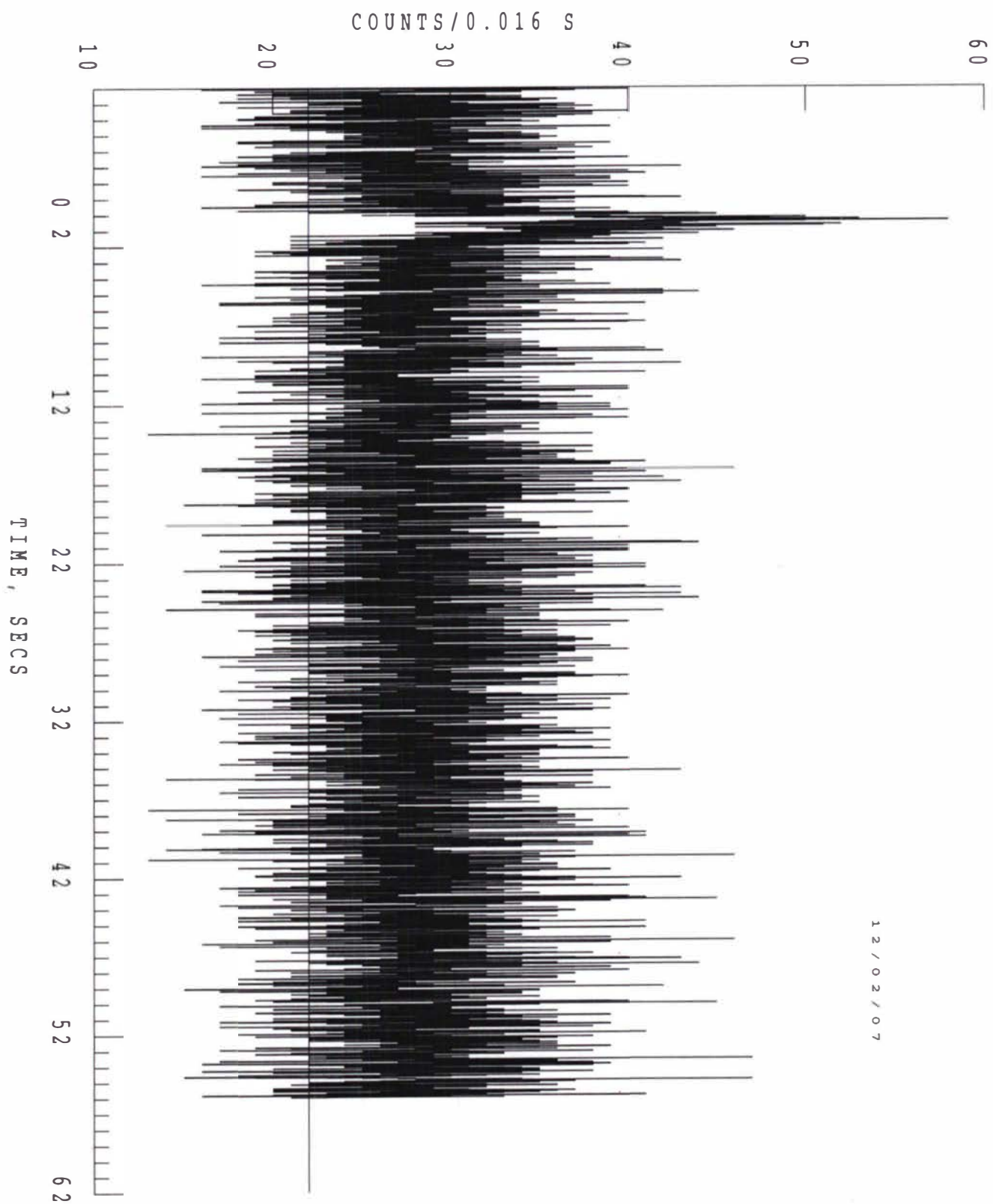


SUZAKU

12/02/07

70292.804

50 - 240 keV



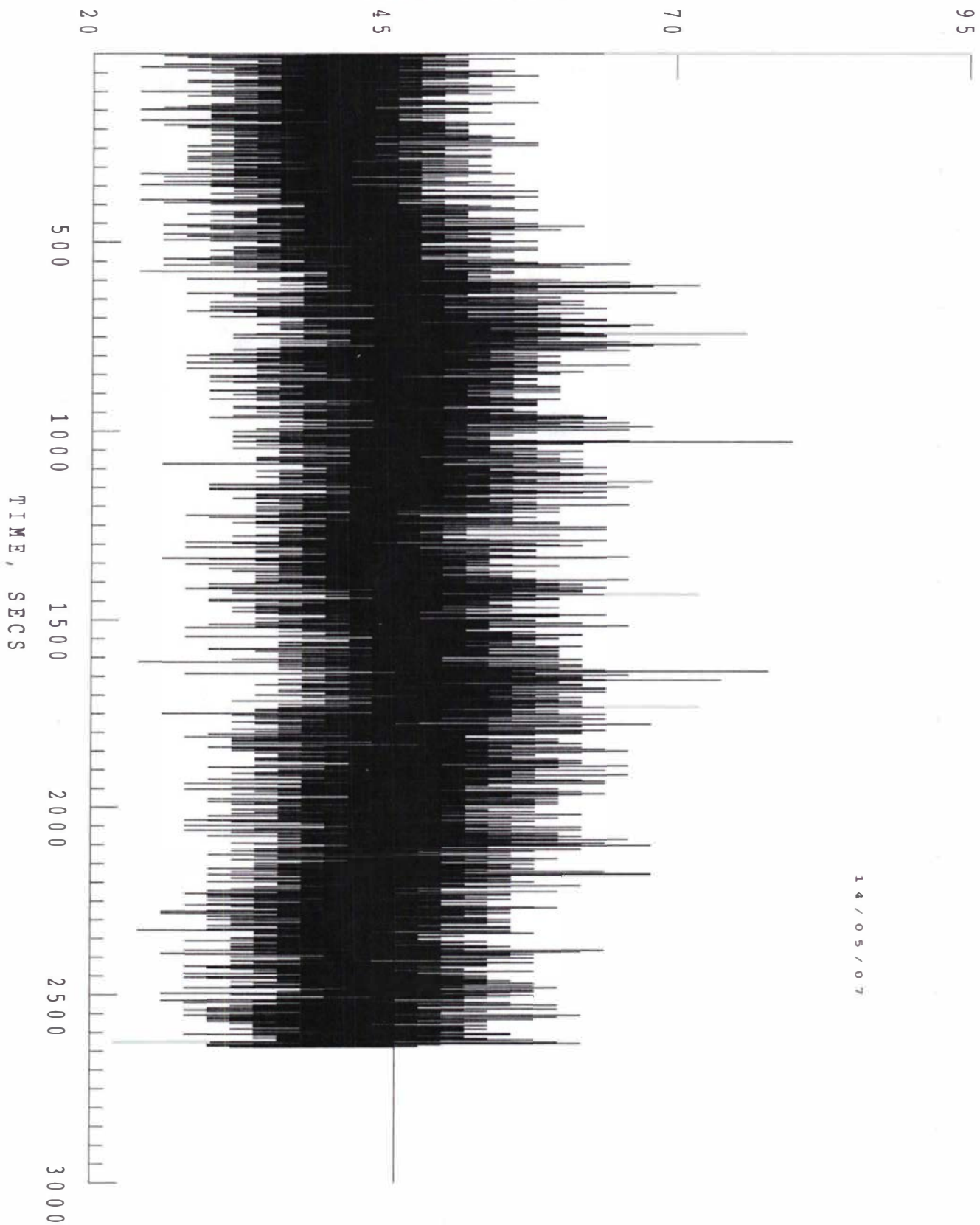
MS01

12/02/07

80492.856

50 - 3000 keV

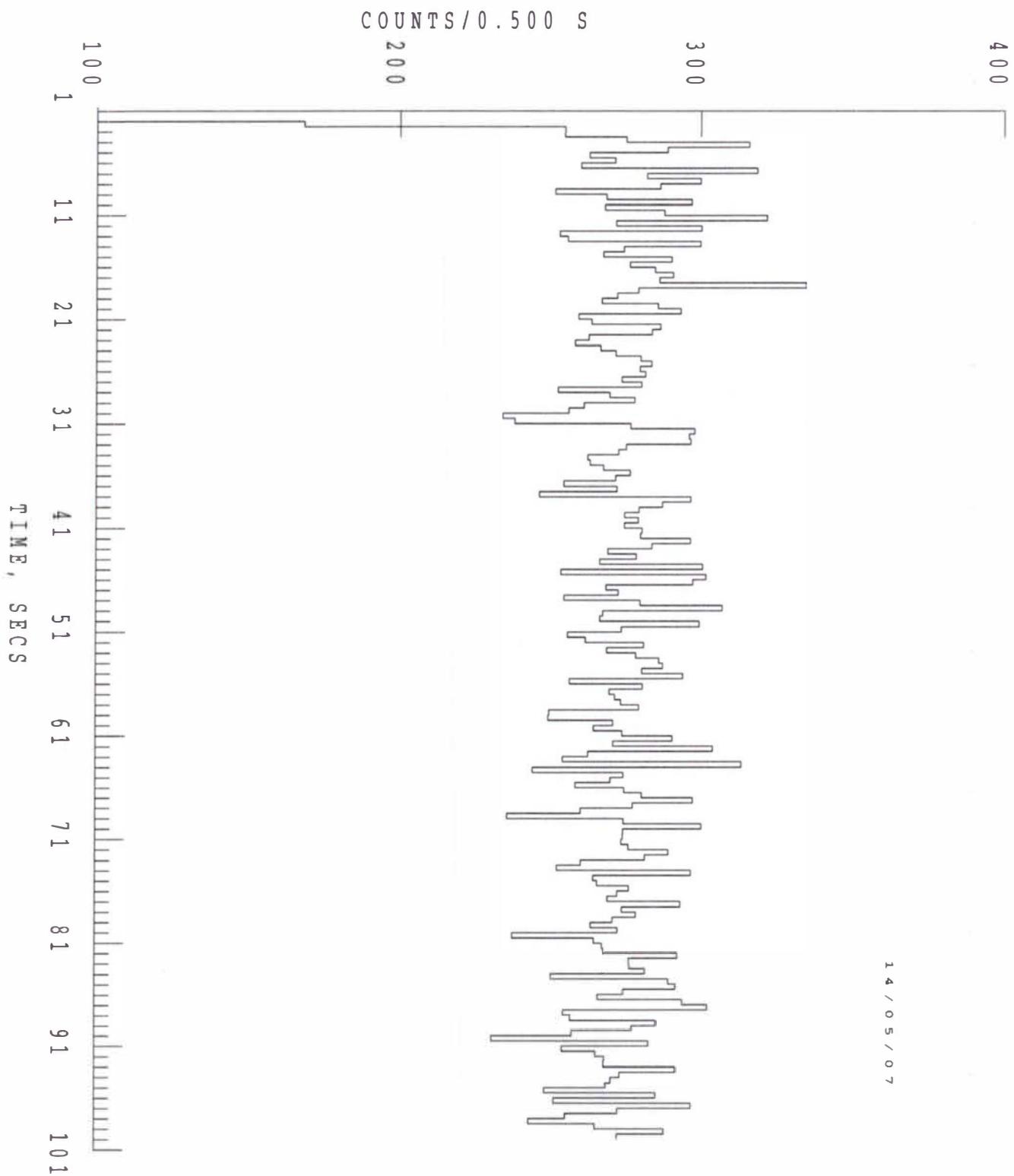
COUNTS/0.250 S



HESSI

12/02/07 81771.000 (KONUS_RI_20070212_81821)

25- 150 keV



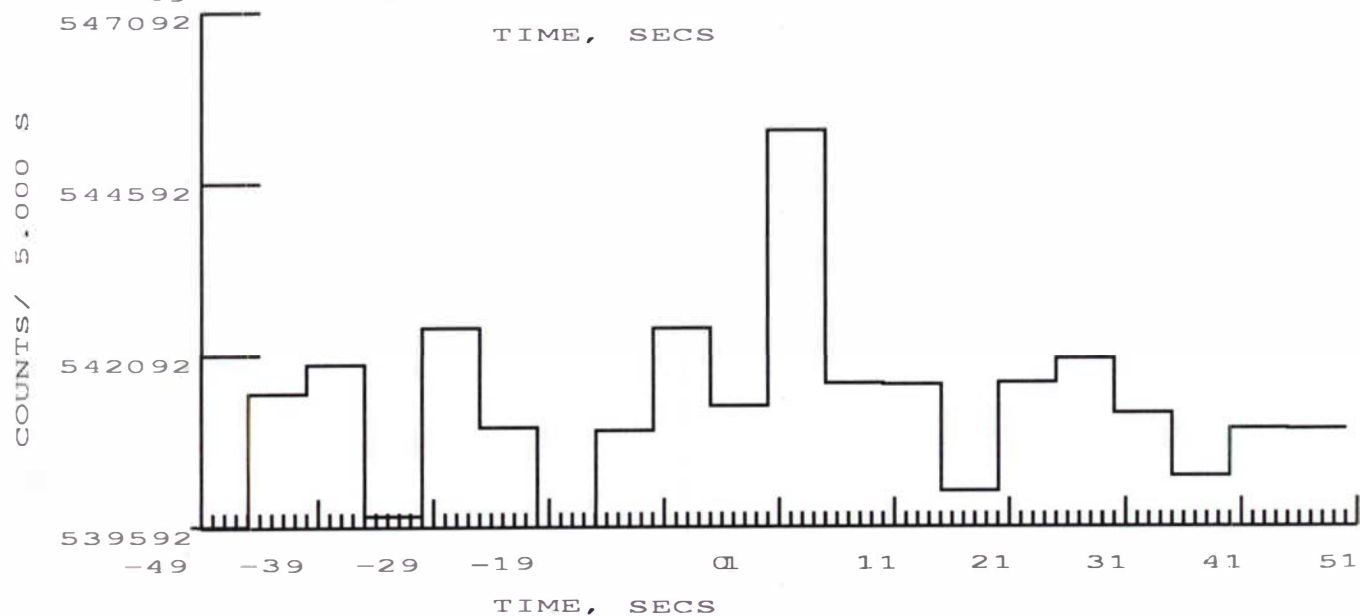
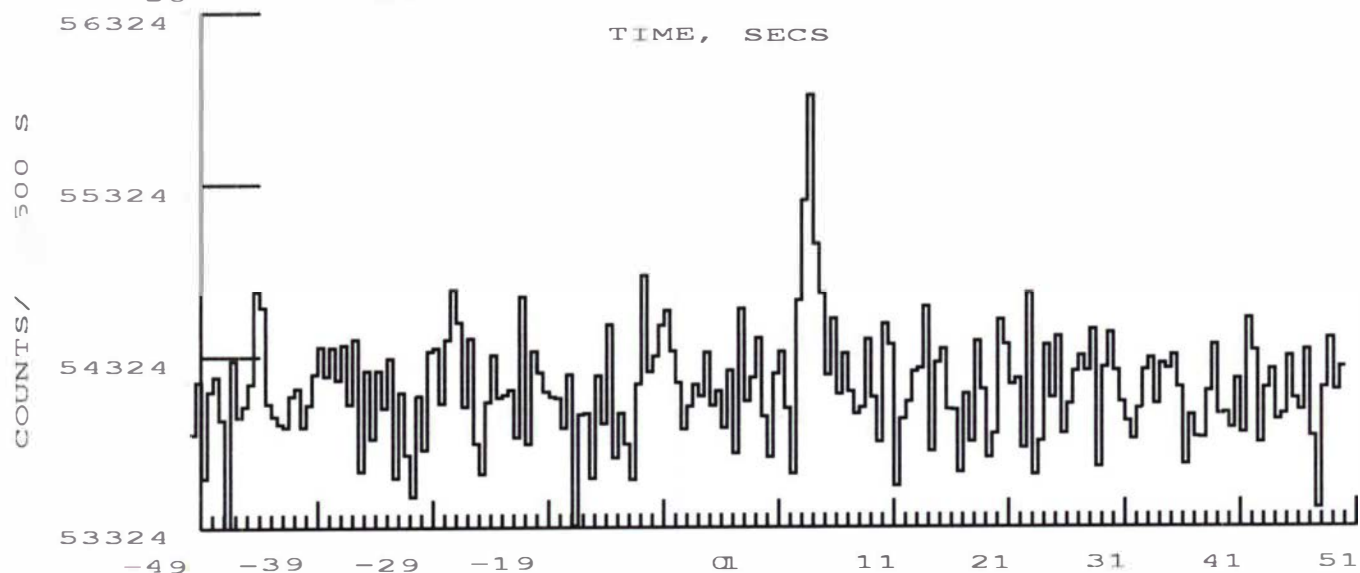
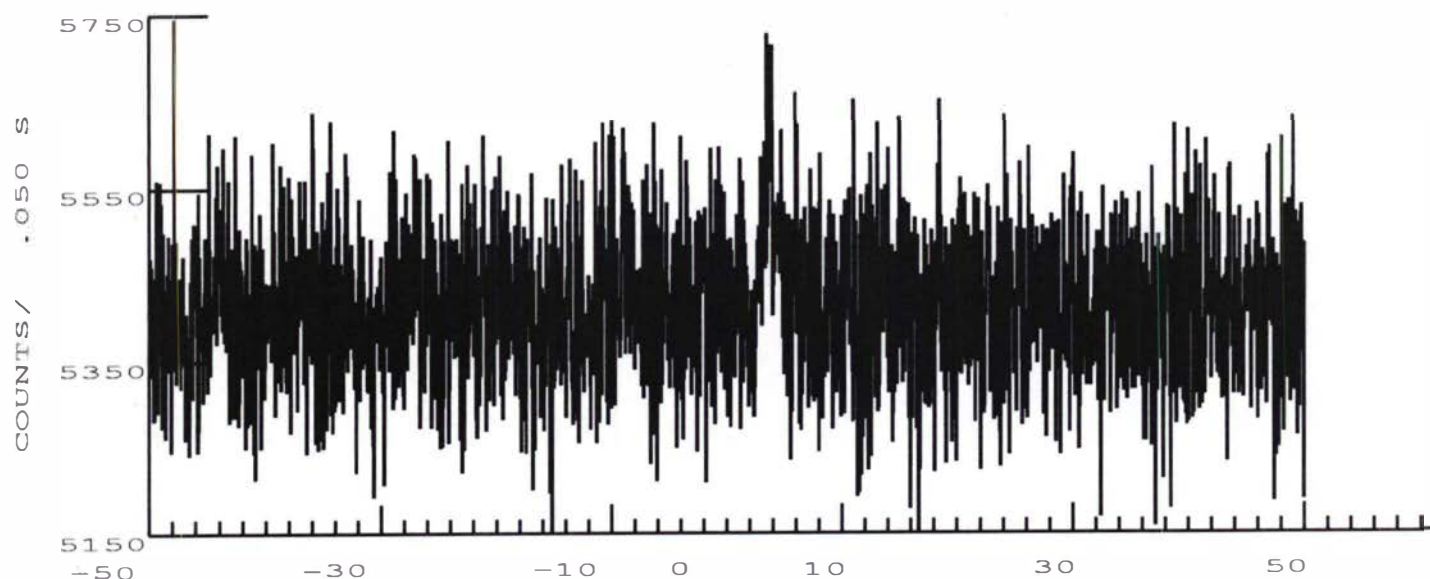
INTEGRAL

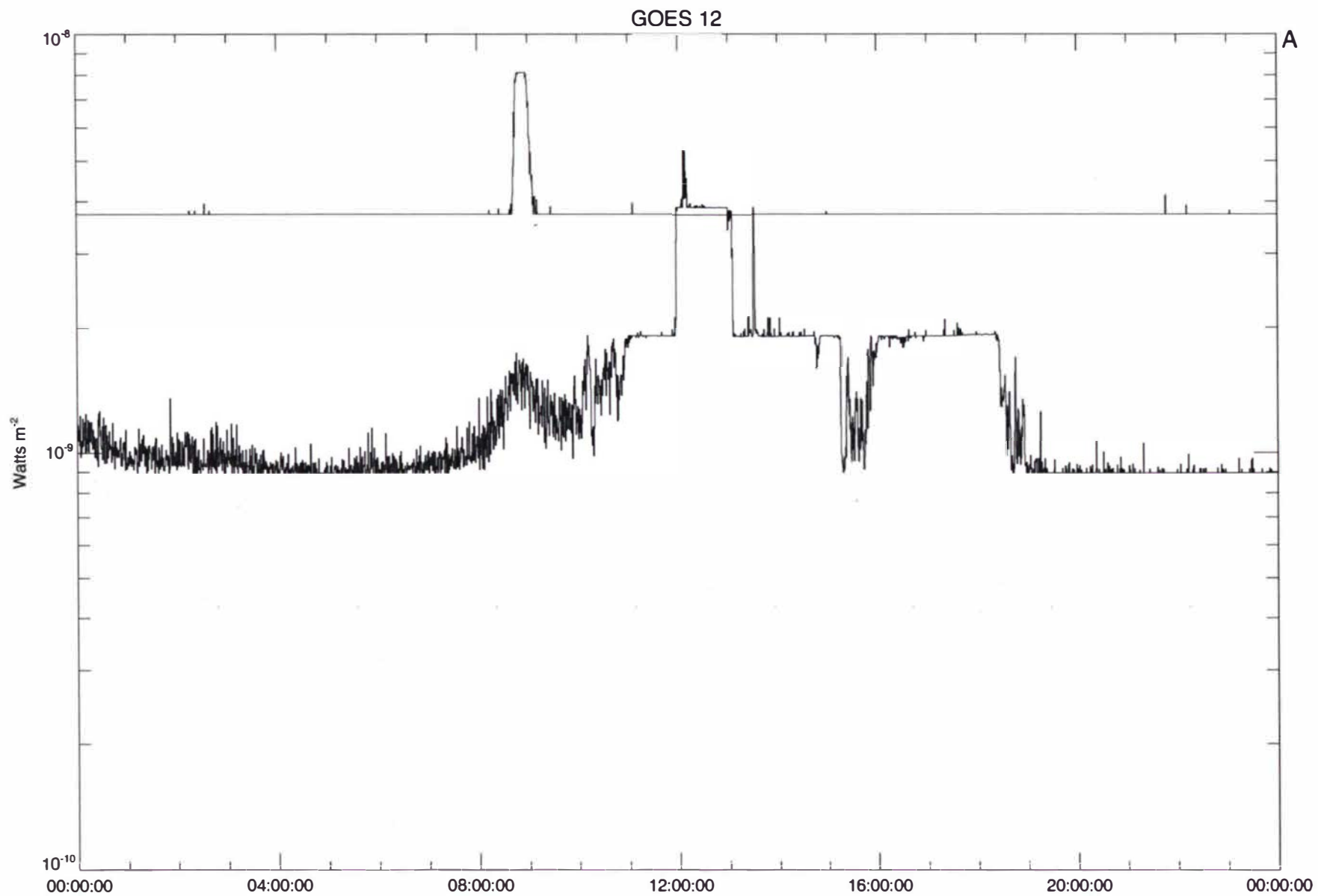
12/02/07

81821.000

22:43:41.0

18/07/14





Data Start: 07/02/12, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Background not subtracted

Plot created: 07/02/13, 2001

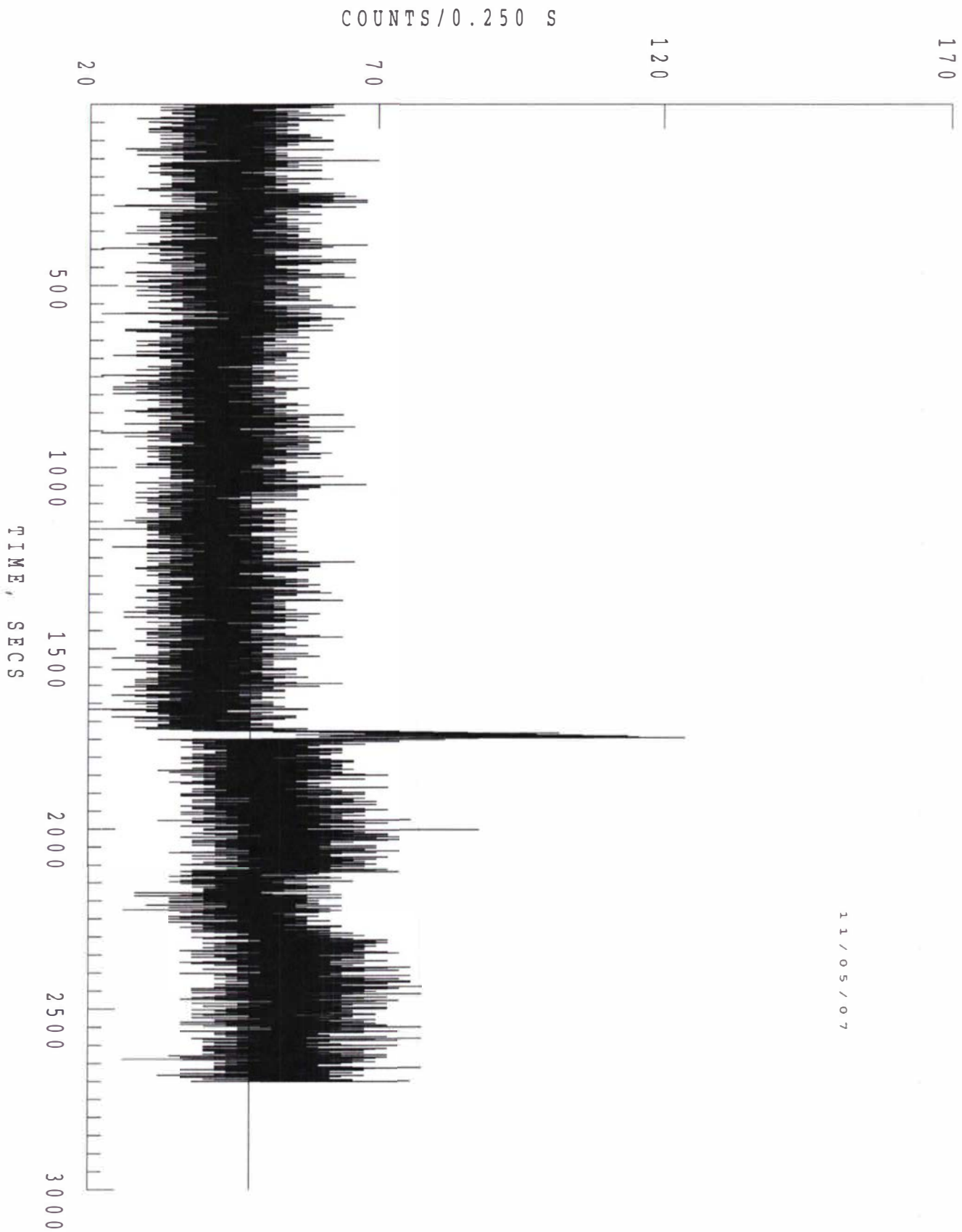
Sample average = 10

MS01

13/02/07

2732.737

50- 3000 keV



11/05/07

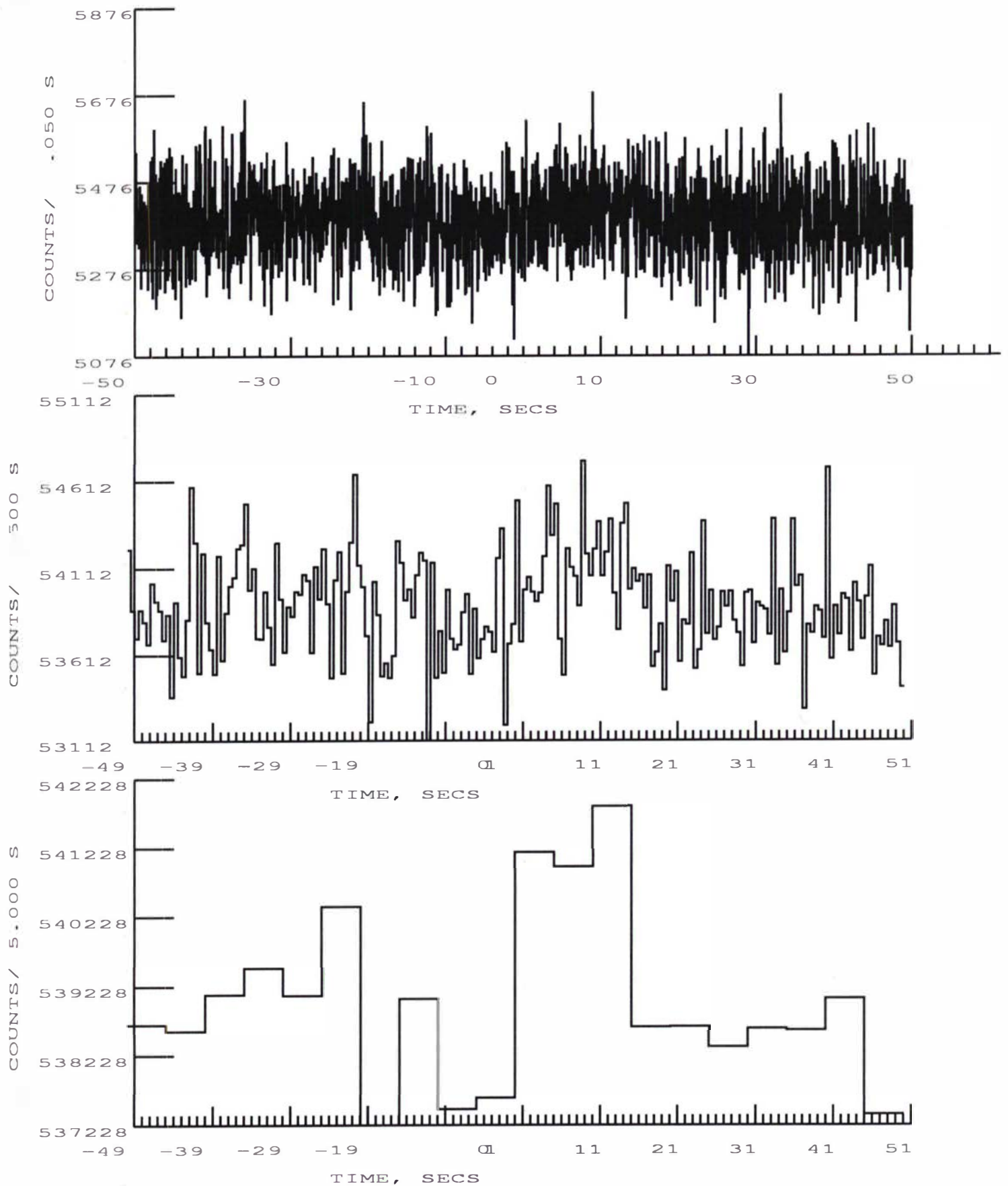
INTEGRAL

13/02/07

4098.000

01:08:18.0

18/07/14



HESSI

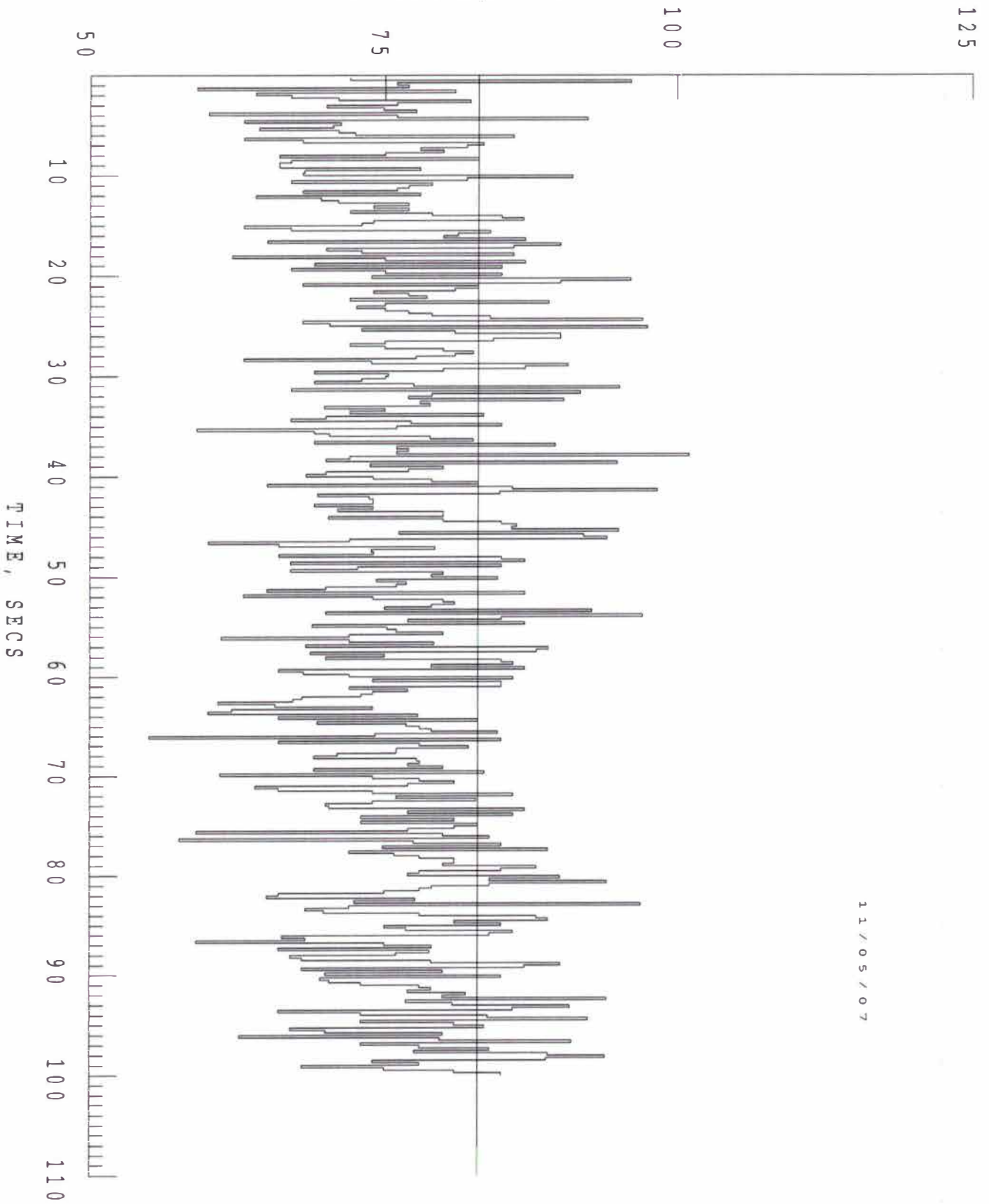
13/02/07

4048.000

(SUZAKU_20070213_04098)

25- 150 keV

COUNTS/0.250 S



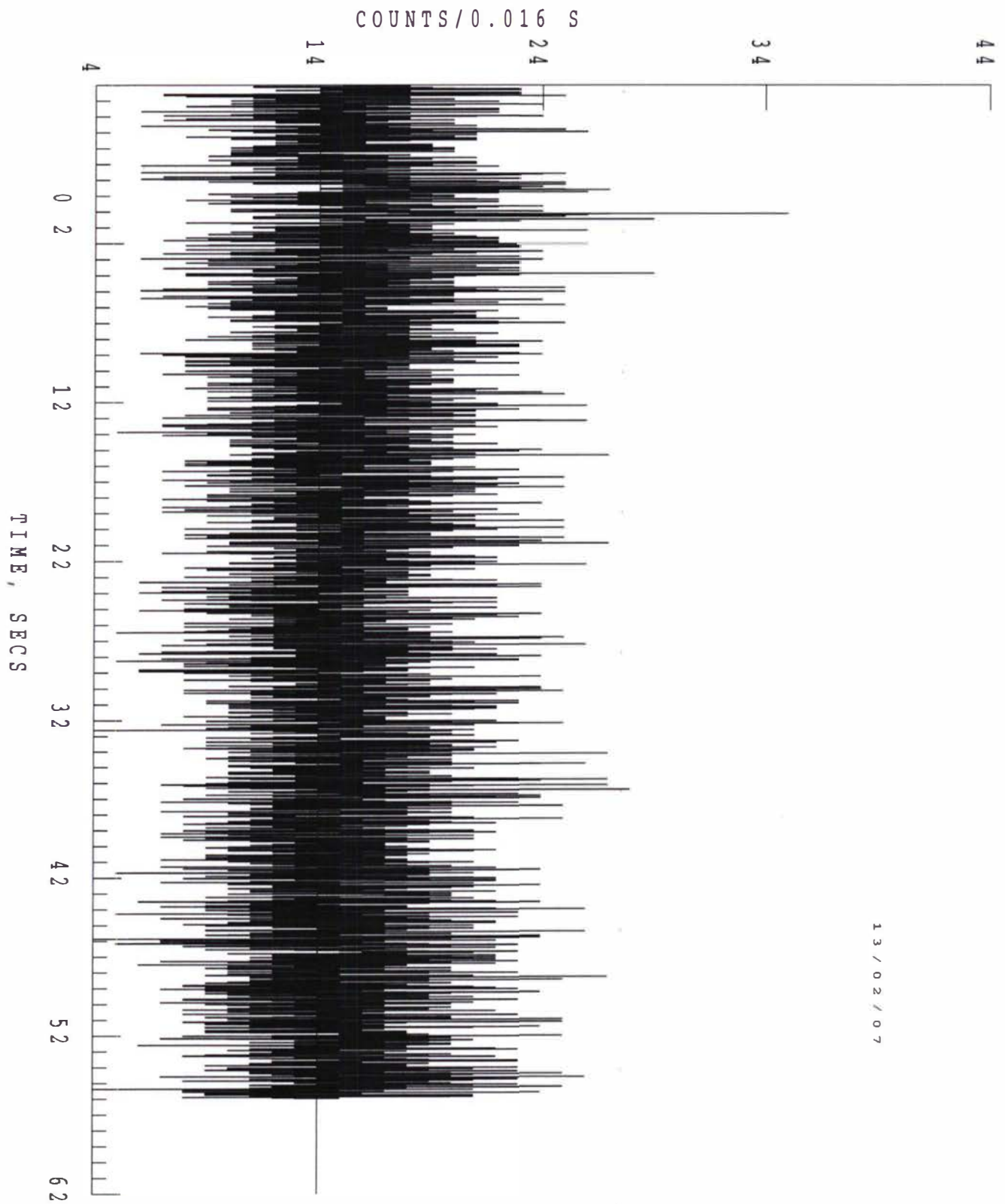
SUZAKU

13/02/07

72416.289

50 - 240 keV

20:06:58



13/02/07

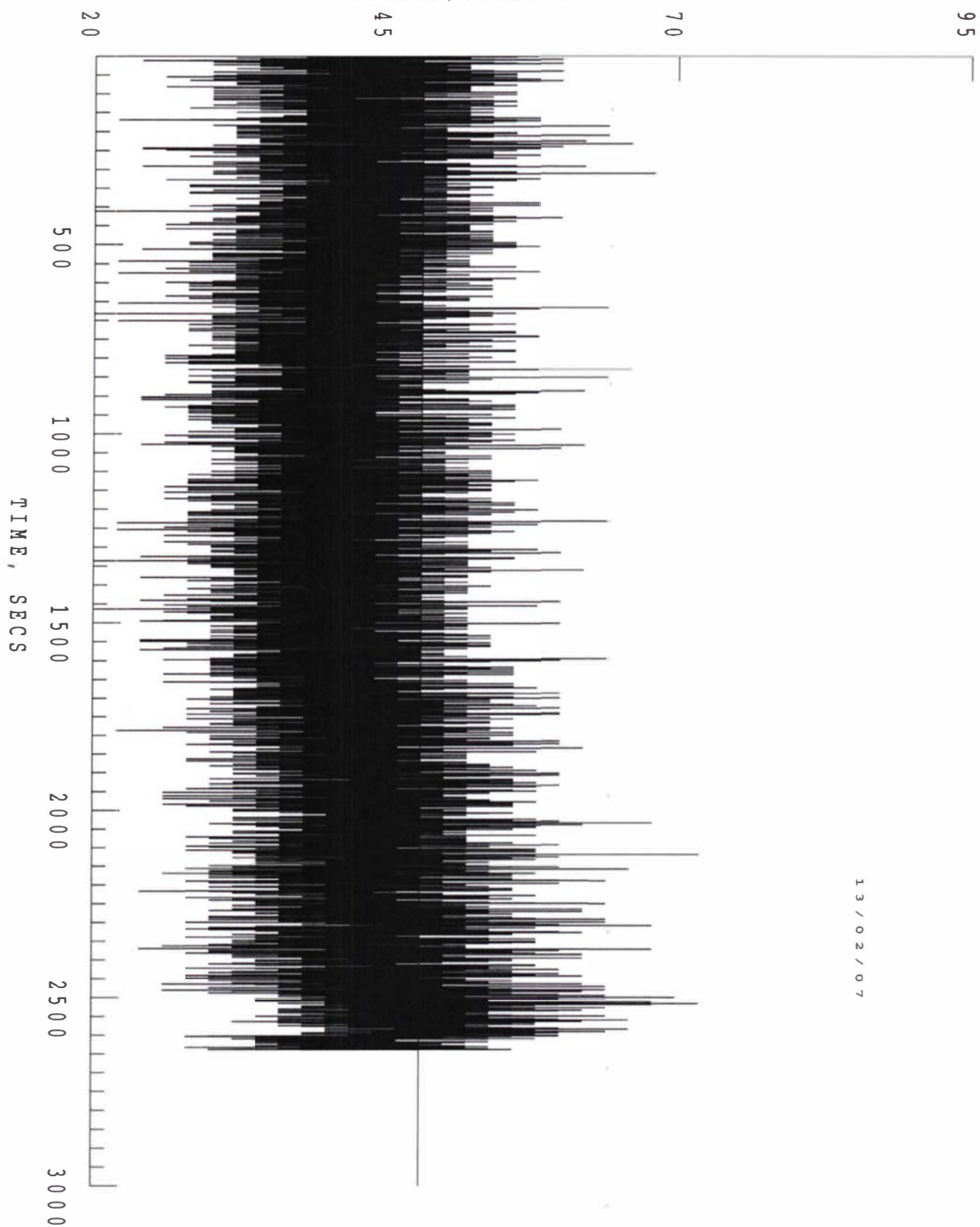
MS01

13/02/07

71071.486

50 - 3000 keV

COUNTS/0.250 S

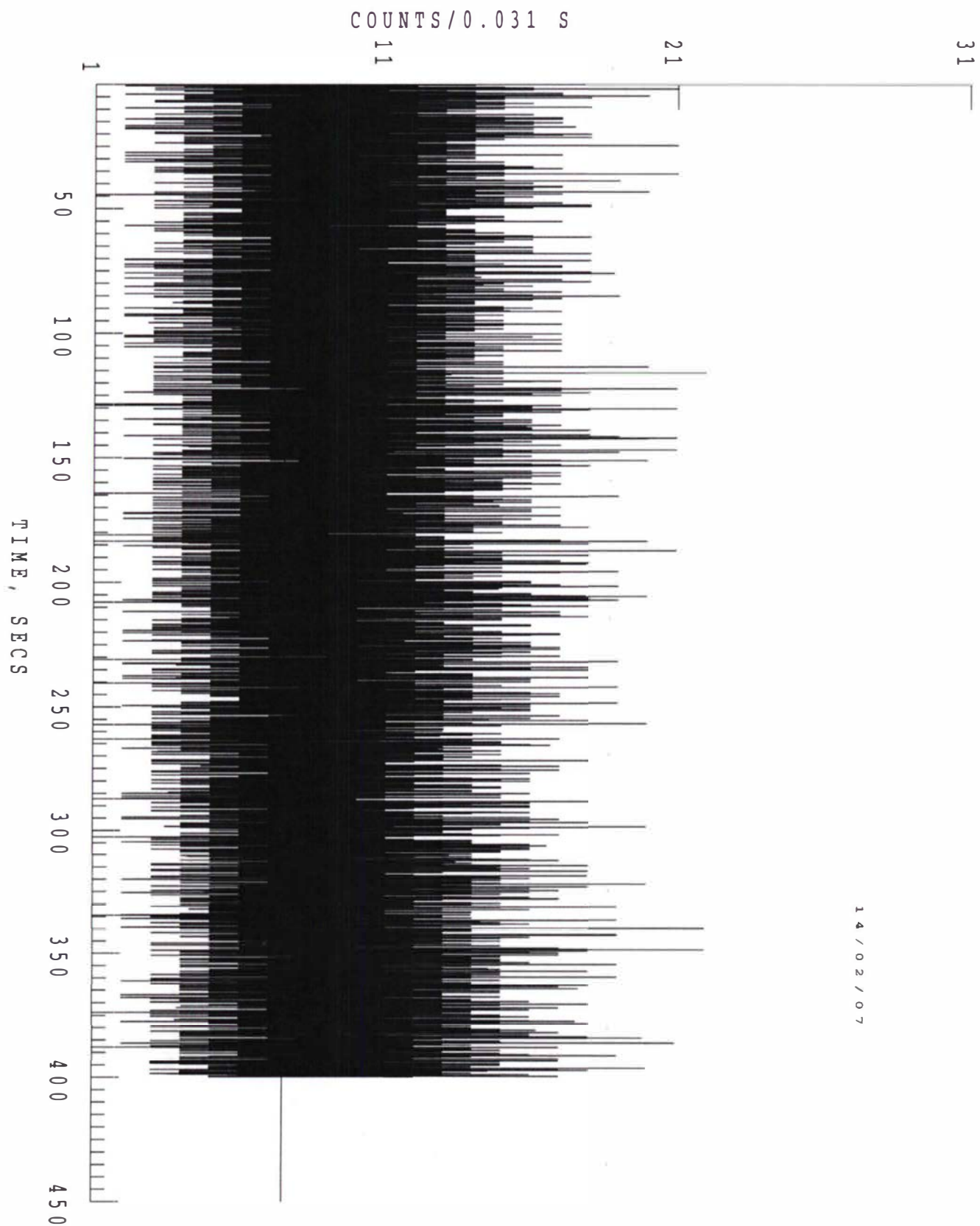


13/02/07

HESSI

13/02/07 72216.000 (SUZAKU_20070213_72416)

25- 150 keV



07/05/07

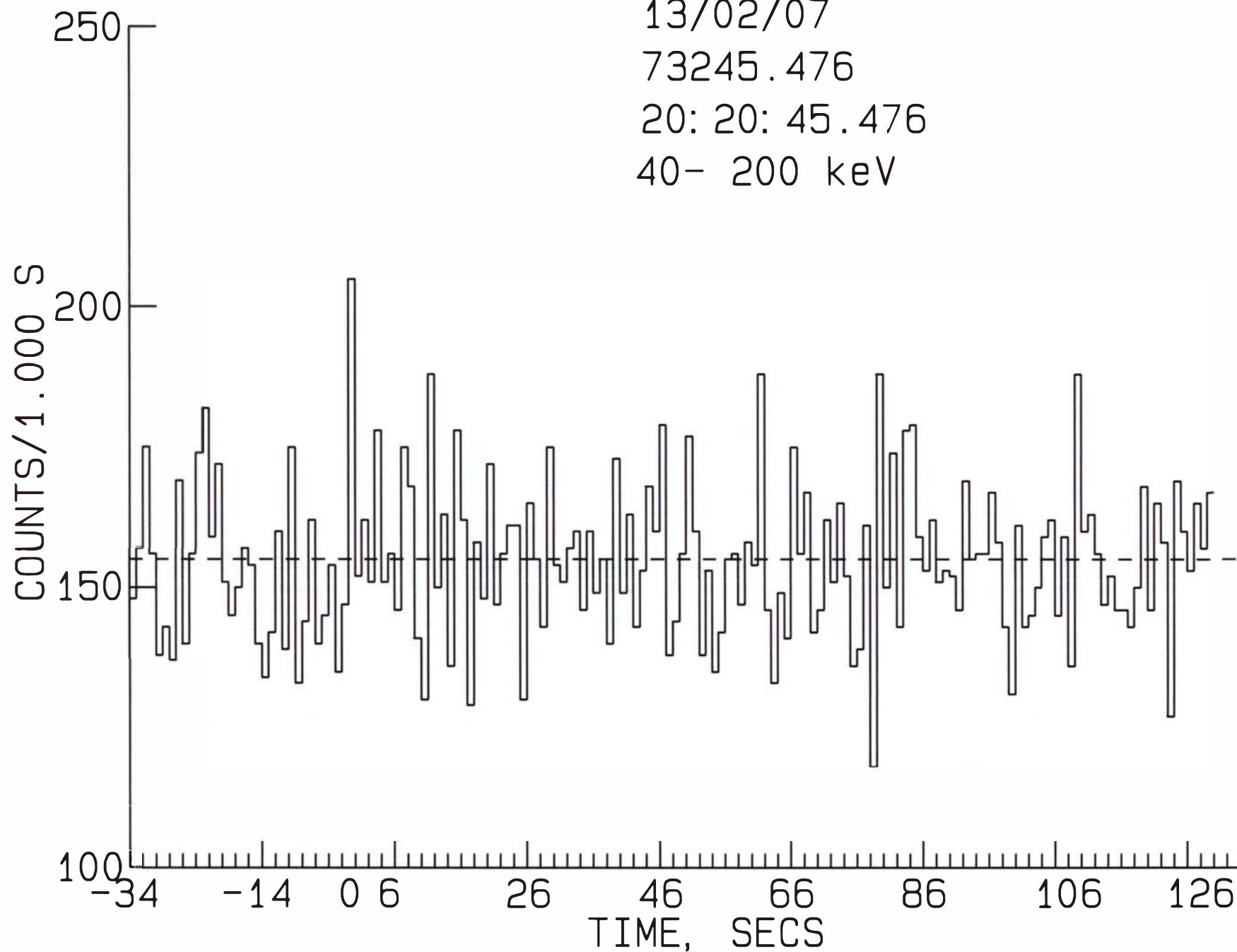
MESSENGER

13/02/07

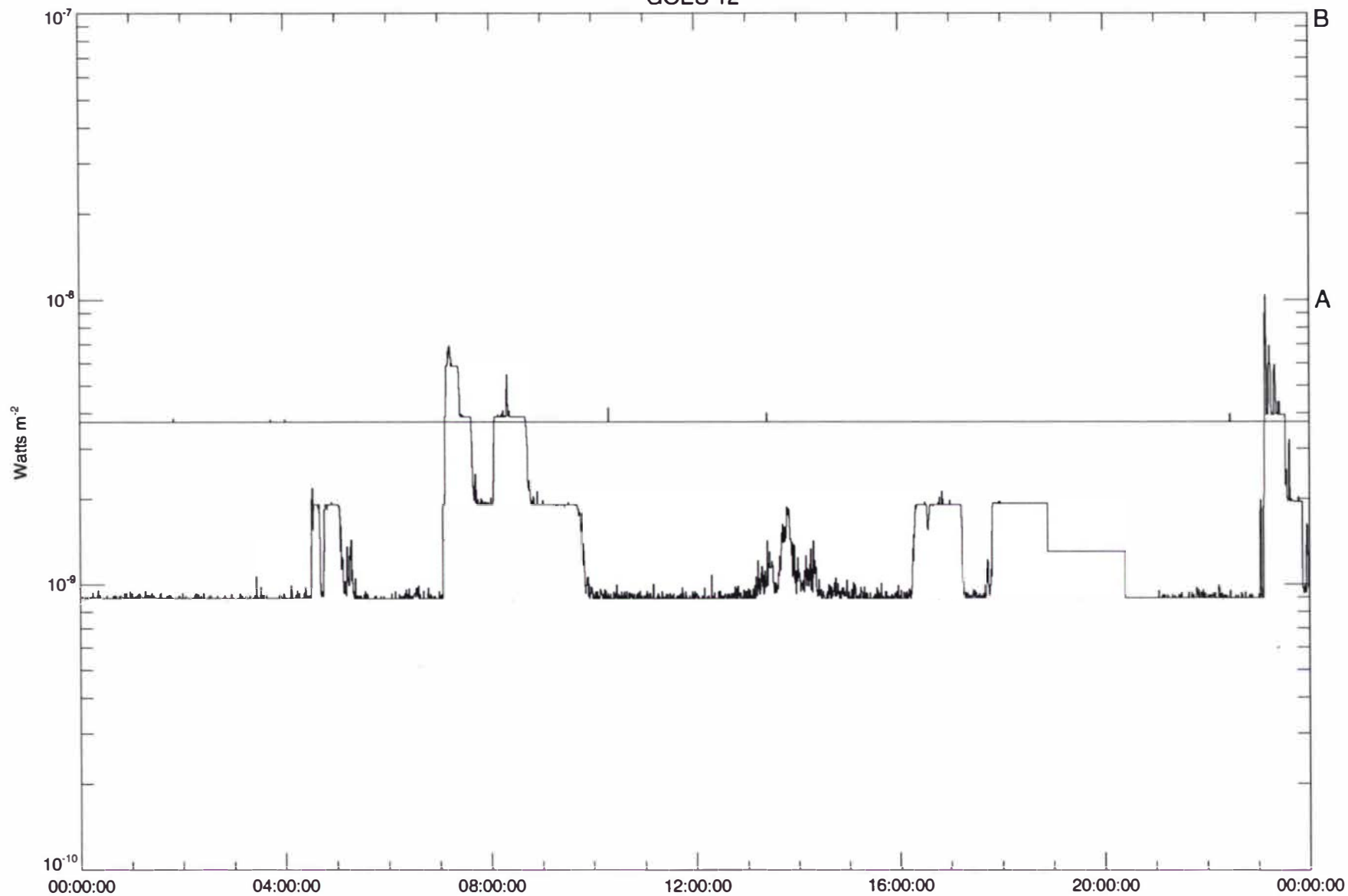
73245.476

20:20:45.476

40- 200 keV



GOES 12



Data Start: 07/02/13, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Plot created: 07/02/16, 0921

Sample average = 10

25/04/07

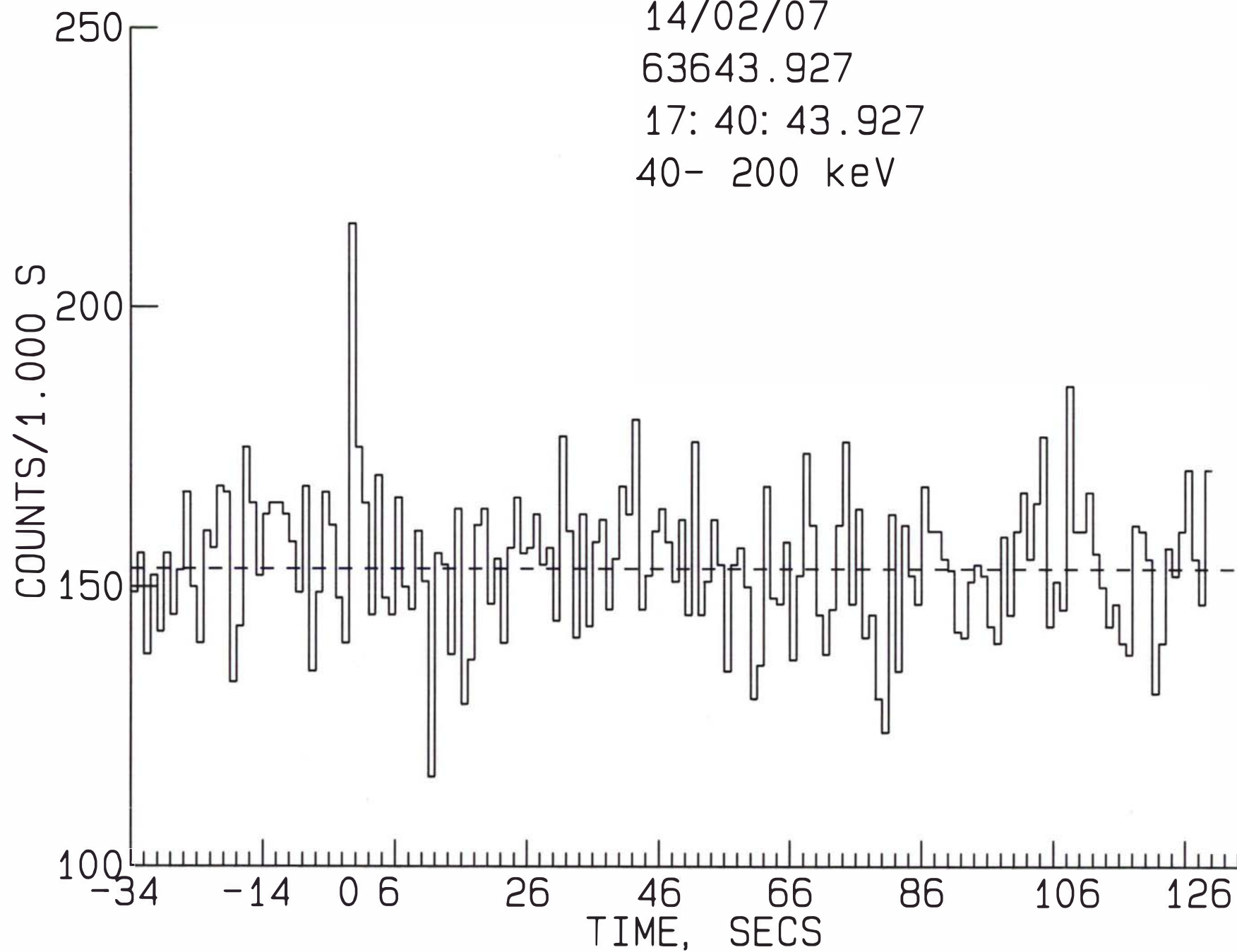
MESSENGER

14/02/07

63643.927

17: 40: 43.927

40- 200 keV

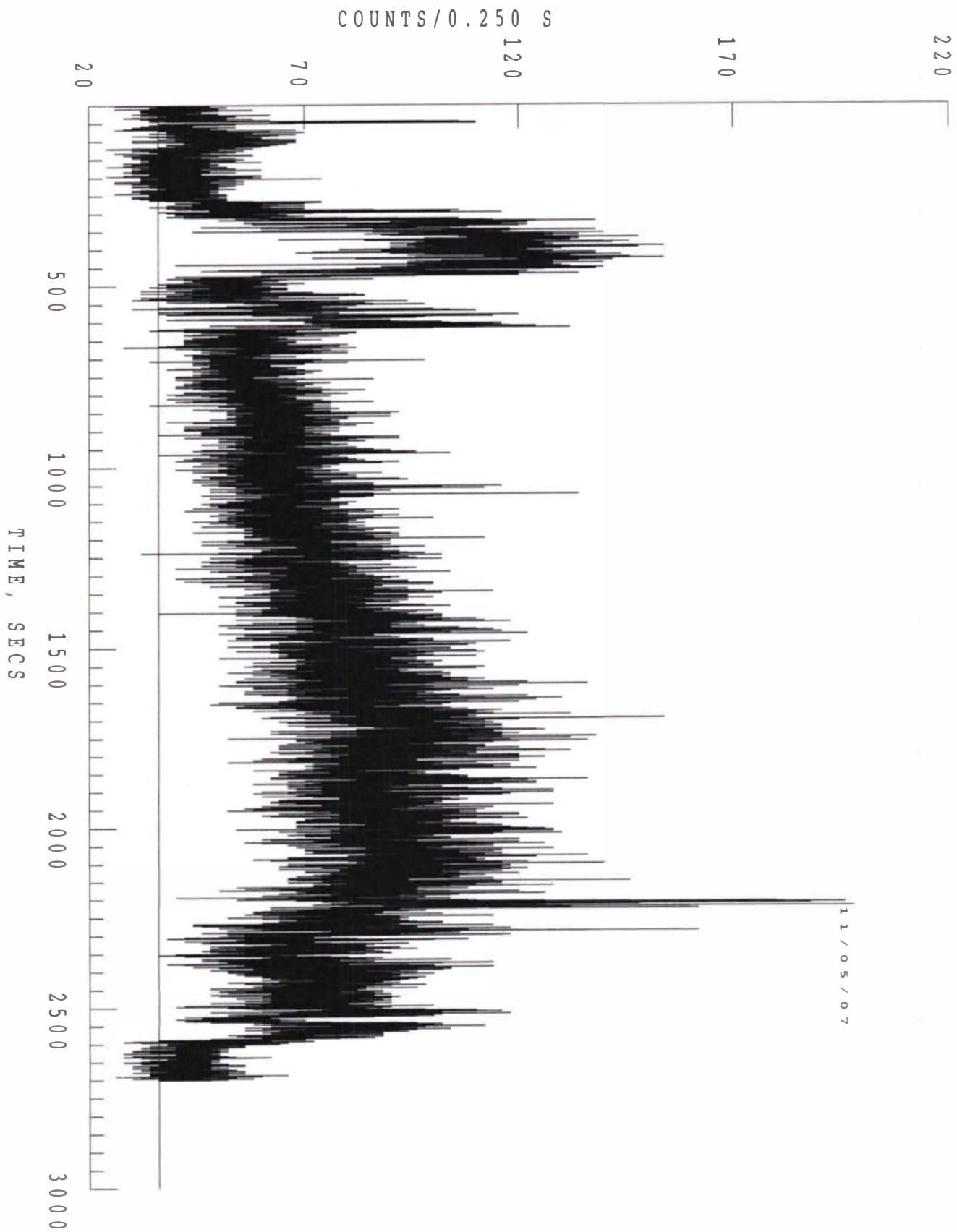


MS01

14/02/07

67469.968

50 - 3000 keV



From williams@sunspot.ssl.berkeley.edu Fri May 11 10:47:10 2007
X-ASG-Debug-ID: 1178905642-199e00290000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
X-Barracuda-Connect: gammaburst.ssl.berkeley.edu[128.32.98.141]
X-Barracuda-Start-Time: 1178905642
Date: Fri, 11 May 2007 10:57:07 -0700 (PDT)
From: williams@ssl.berkeley.edu
To: khurley@ssl.berkeley.edu
X-ASG-Orig-Subj: No_RHESSI_data_for_SUZAKU_20070214_68843
Subject: No_RHESSI_data_for_SUZAKU_20070214_68843
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
X-ASG-Whitelist: Sender (Per-User)

HESSI 25 to 150 keV Counts
Created 11-May-2007 10:46:01.00
Detectors: 3r 4r 5r 6r 8r 9r
columns: time (sec) counts (summed over detectors)
time_interval = 0.125000
Full time range in SAA
No Eclipse
No non-SAA data gap
No Data Available For This Time Range
Do Not Retry

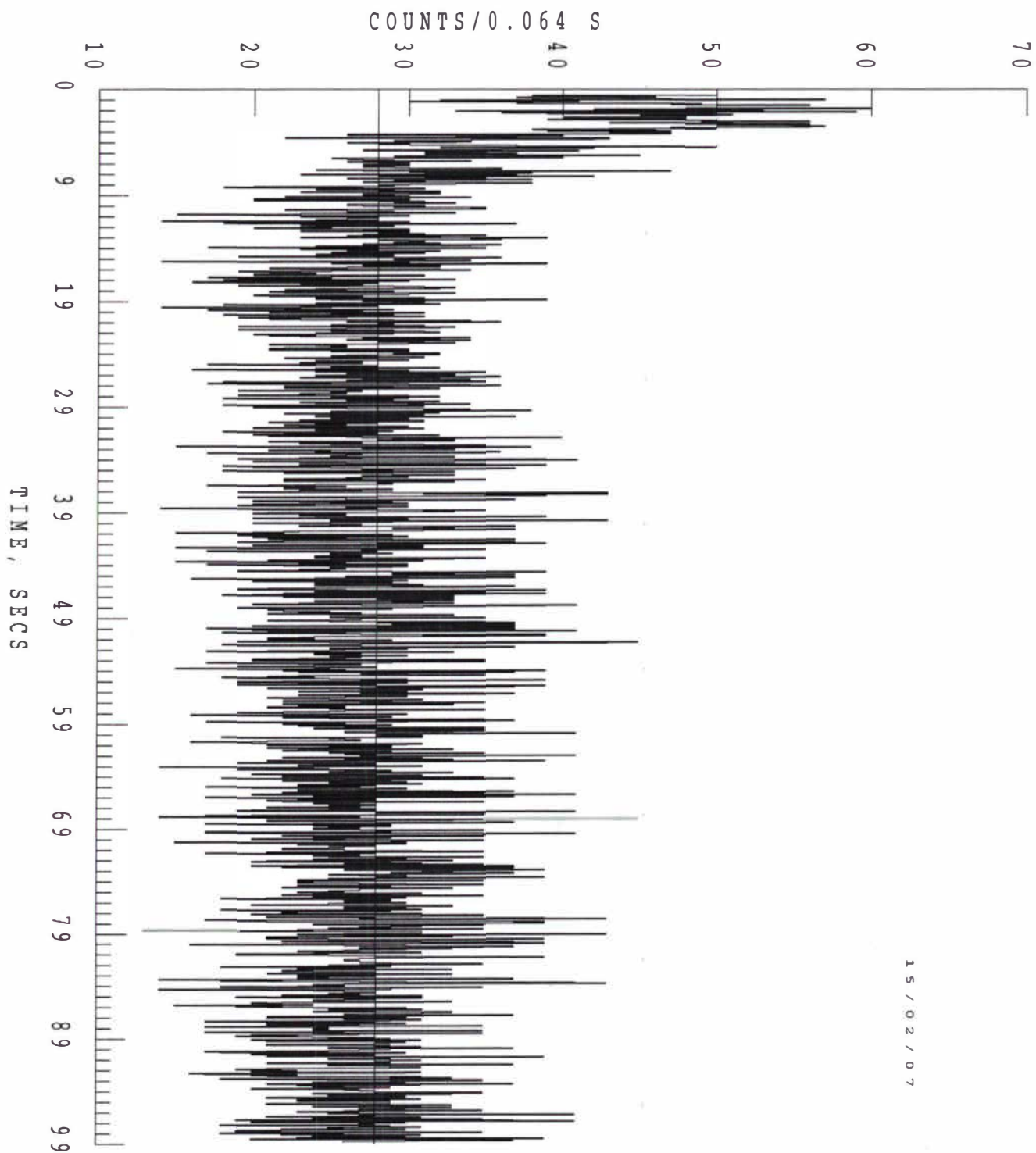
KONUS2

14/02/07

81558.383

50 - 200 keV

22:39:18



KONUS HRES 20070214 81558

TRIGGER TIME: 14/02/07 DOY 045 Julian 2454147.44396 UT = 22.655 22:39:18 (81558.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

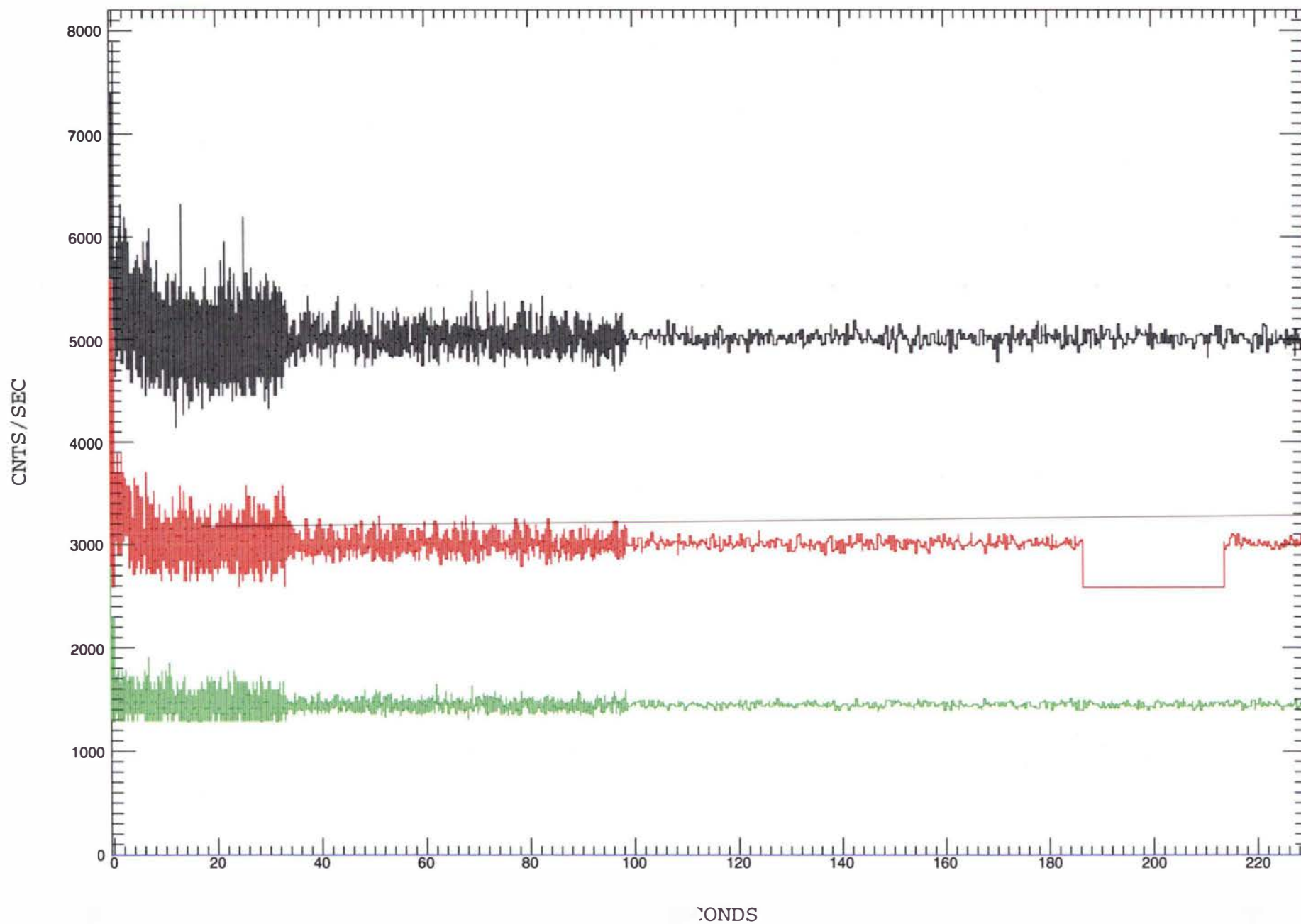
Chan 4 : [> 10 MeV]

Channel 1 + 3900

Channel 2 + 2600

Channel 3 + 1300

Channel 4 + 0



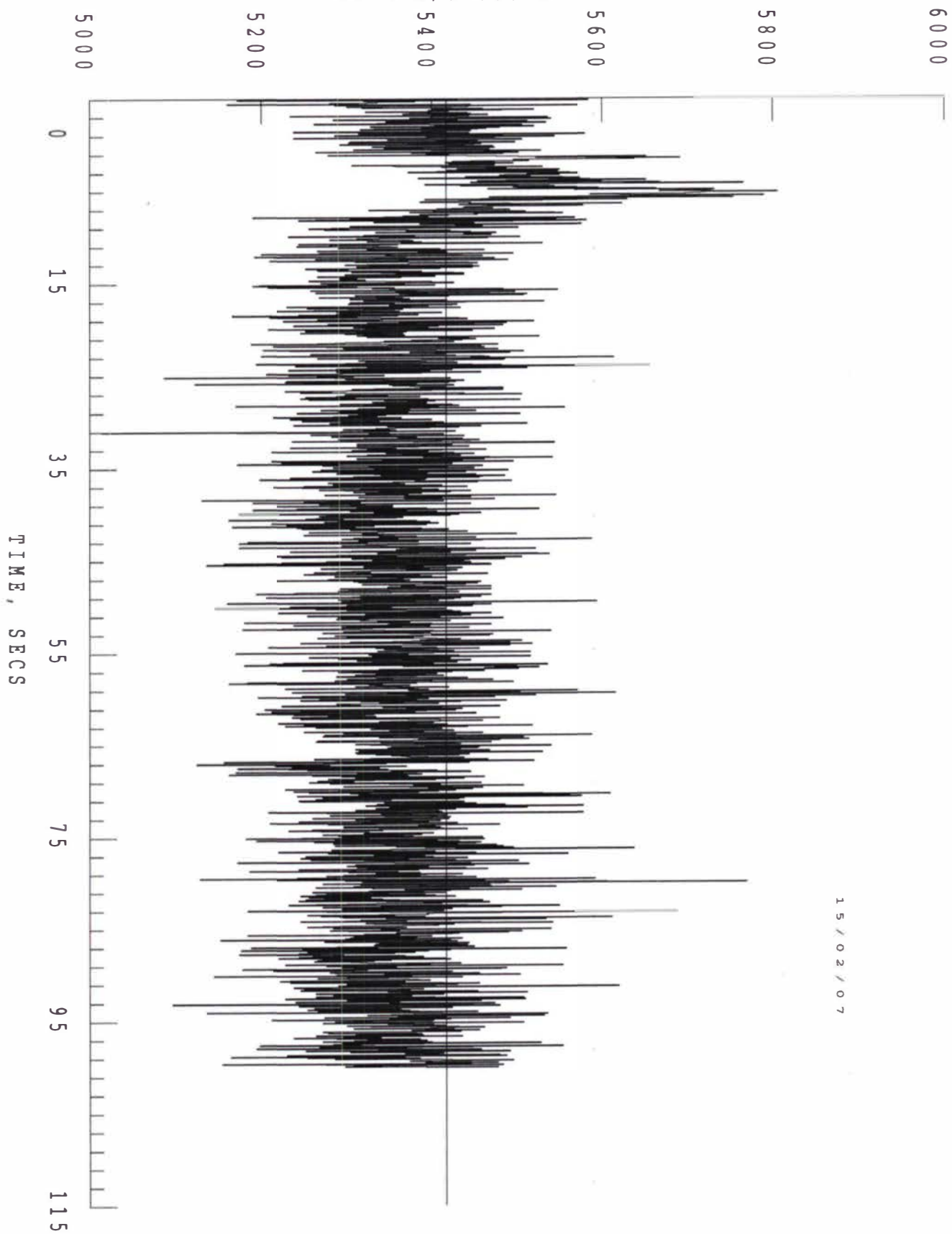
INTEGRAL

14/02/07

81553.171

100-10000 keV

COUNTS/0.050 S

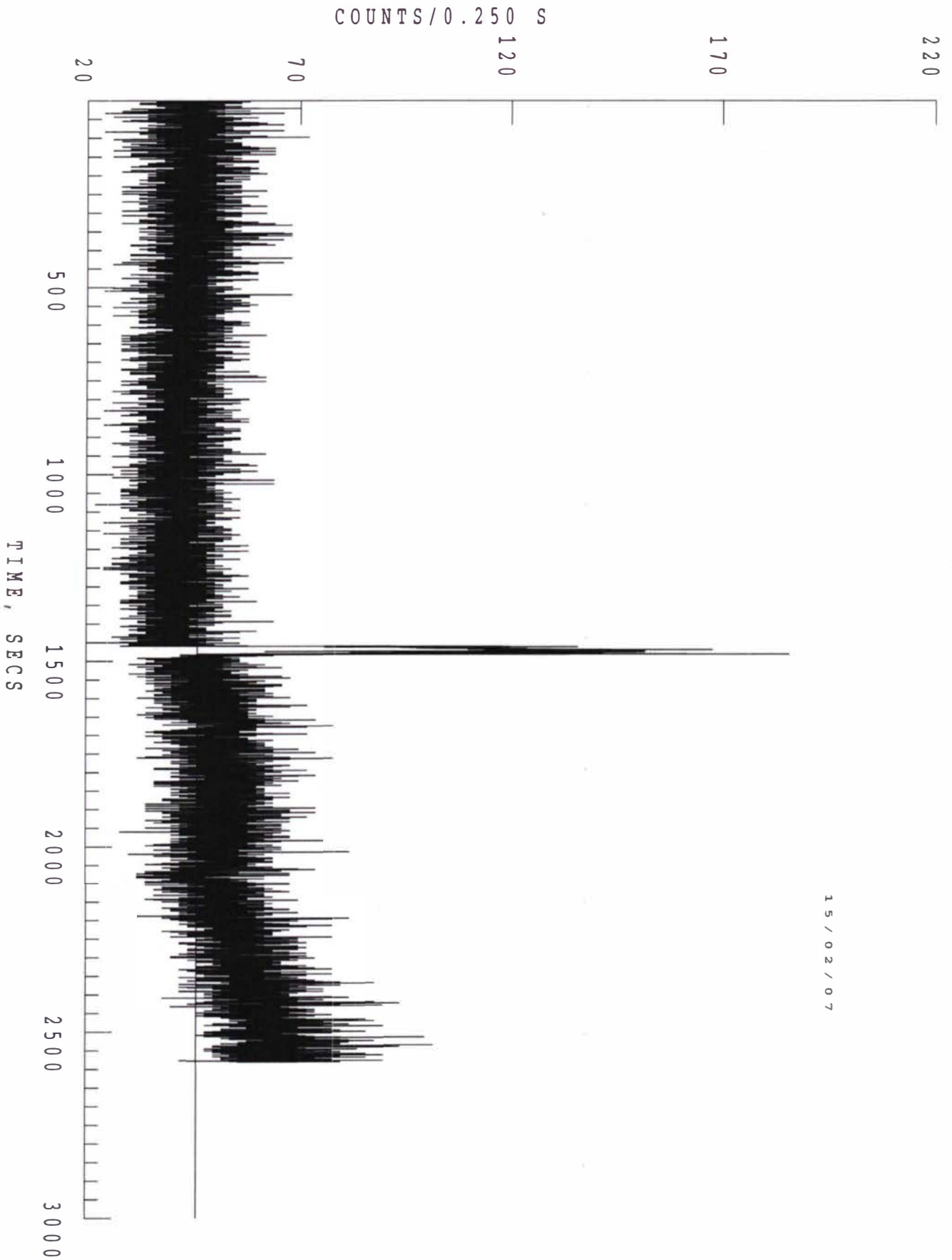


MS01

14/02/07

80249.515

50- 3000 keV



15/02/07

HESSI

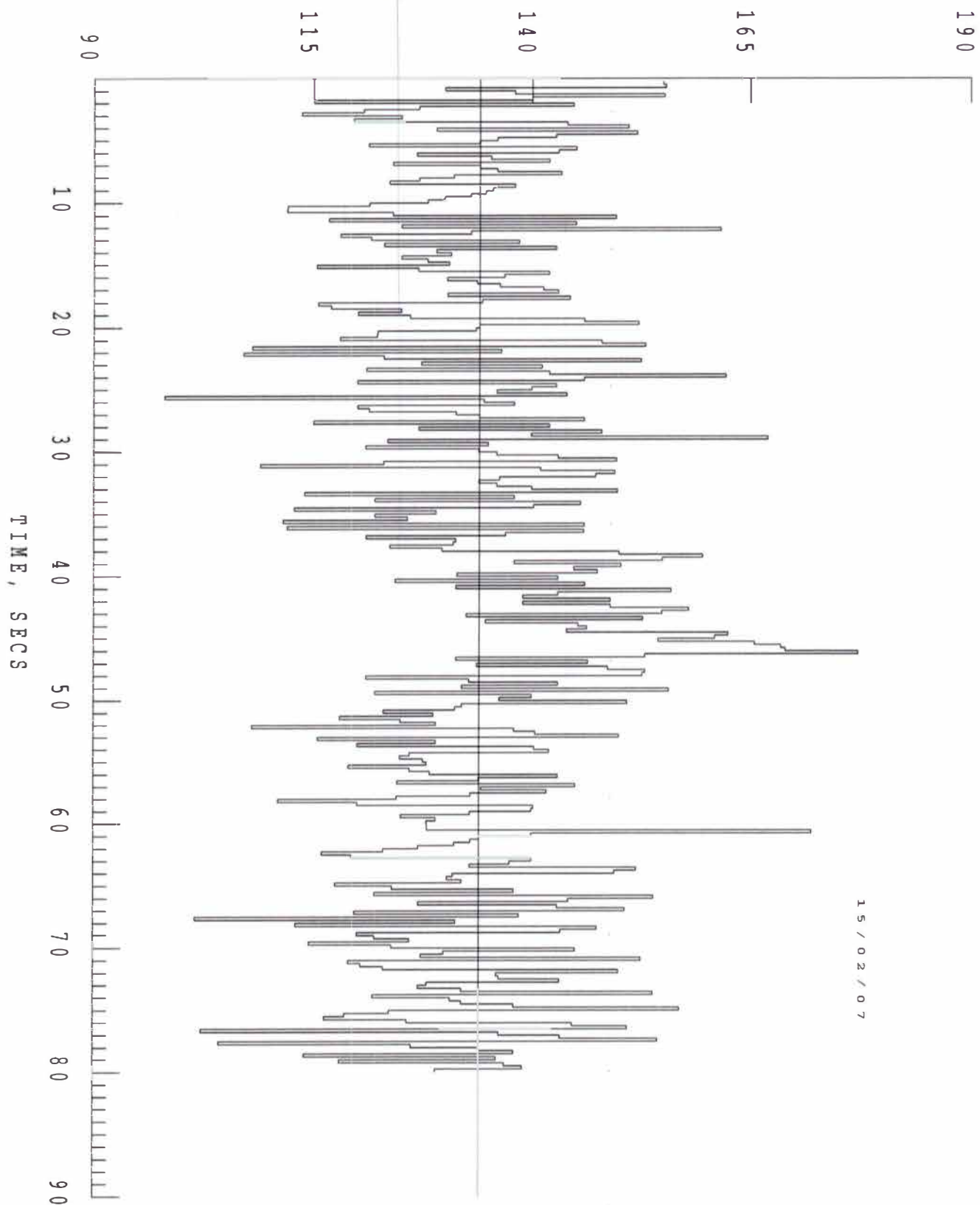
14/02/07

81513.000

(integral_20070214_81553)

50 - 200 keV

COUNTS/0.250 S



25/04/07

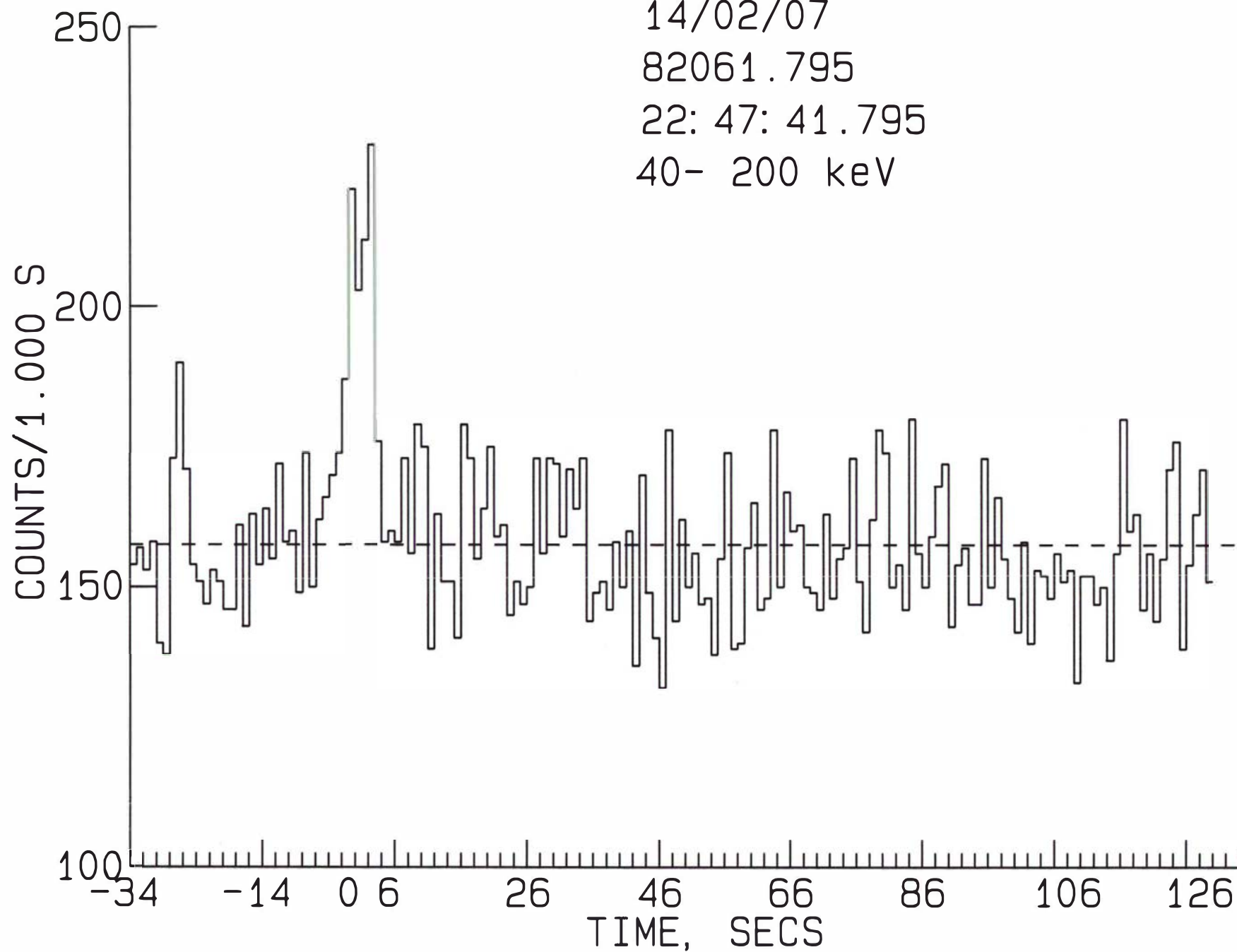
MESSENGER

14/02/07

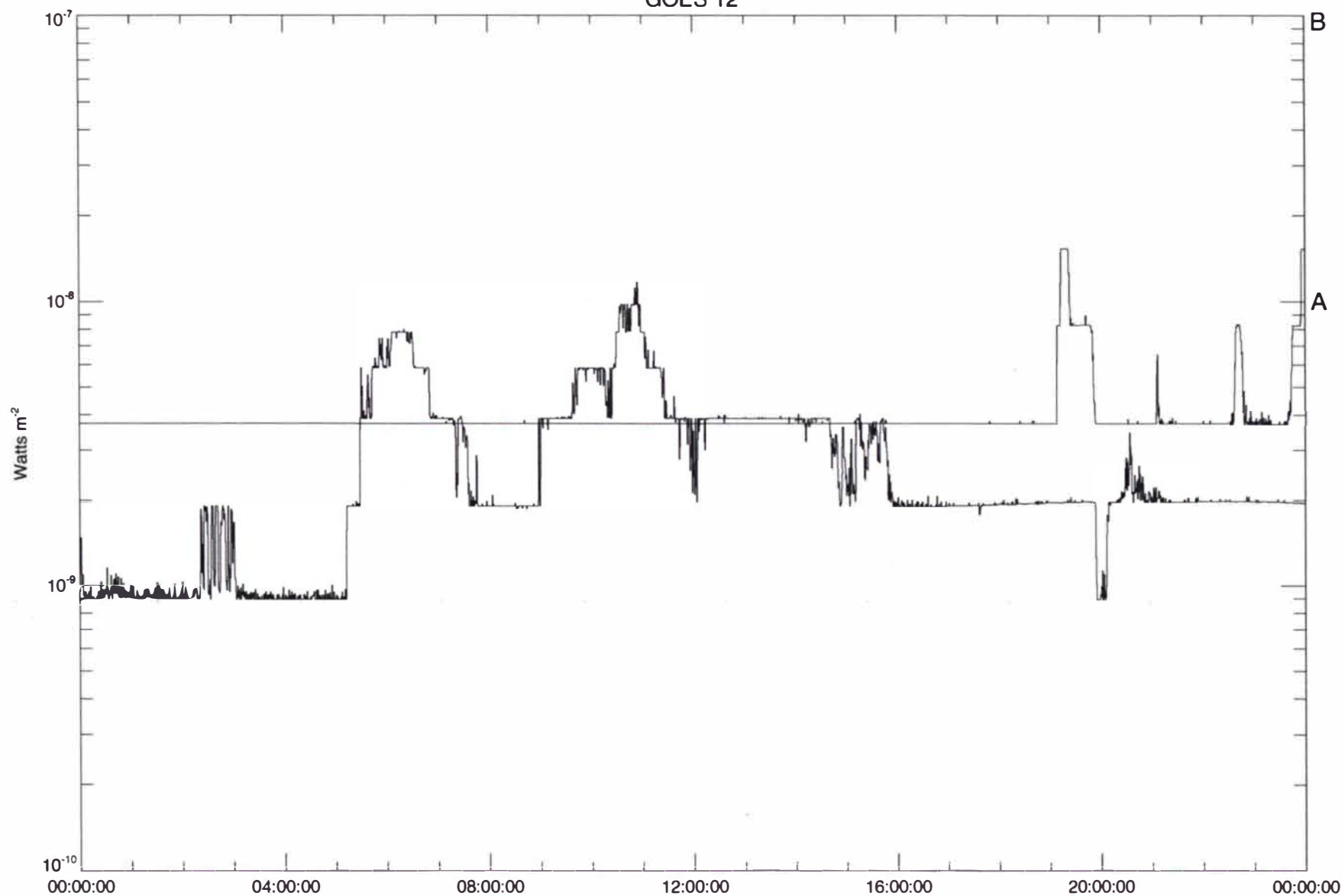
82061.795

22: 47: 41.795

40- 200 keV



GOES 12



Data Start: 07/02/14, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Plot created: 07/02/17, 0921

Sample average = 10

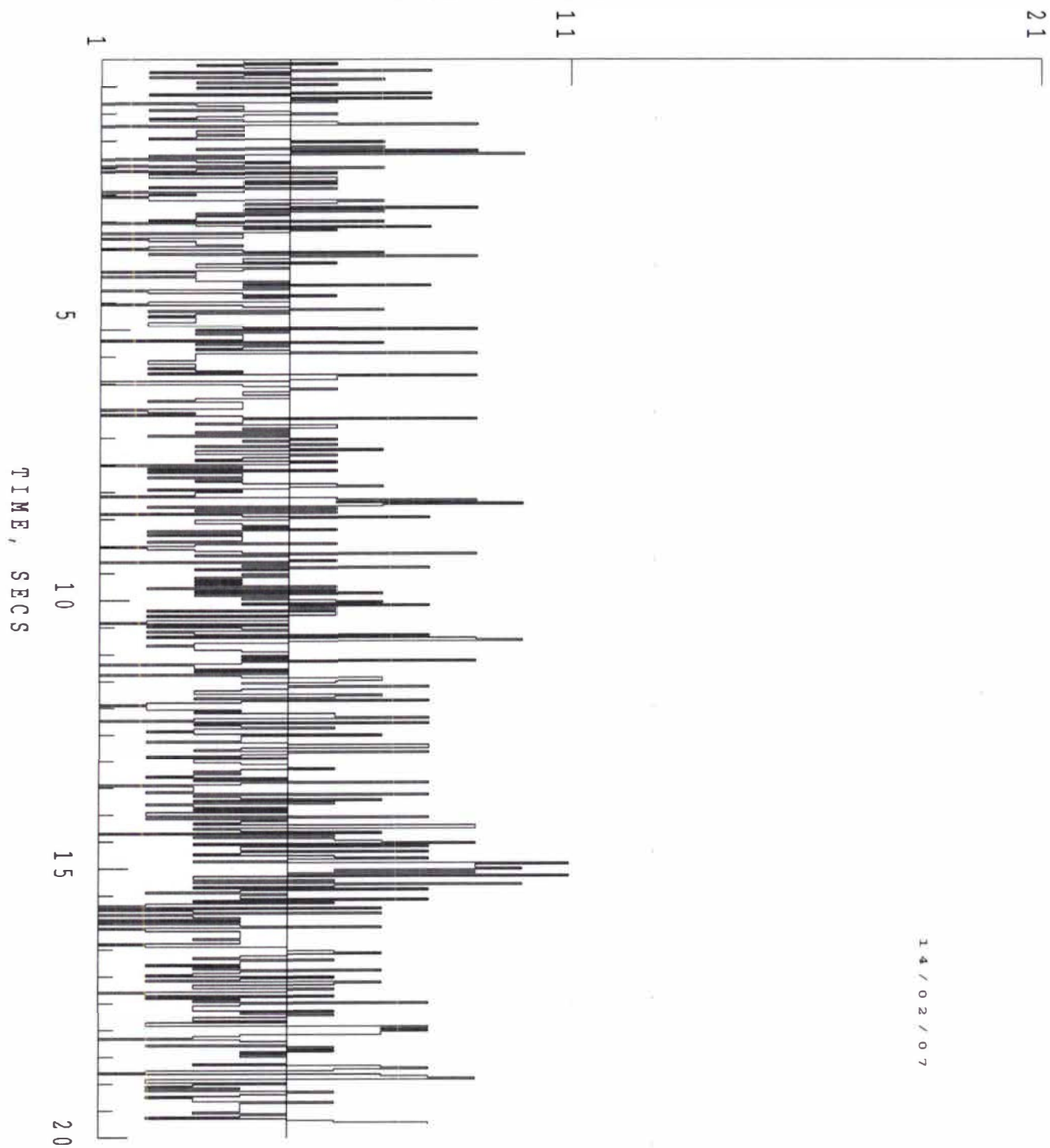
MO

15/02/07

22147.031

116 - 337 keV

COUNTS/0.032 S



14/02/07

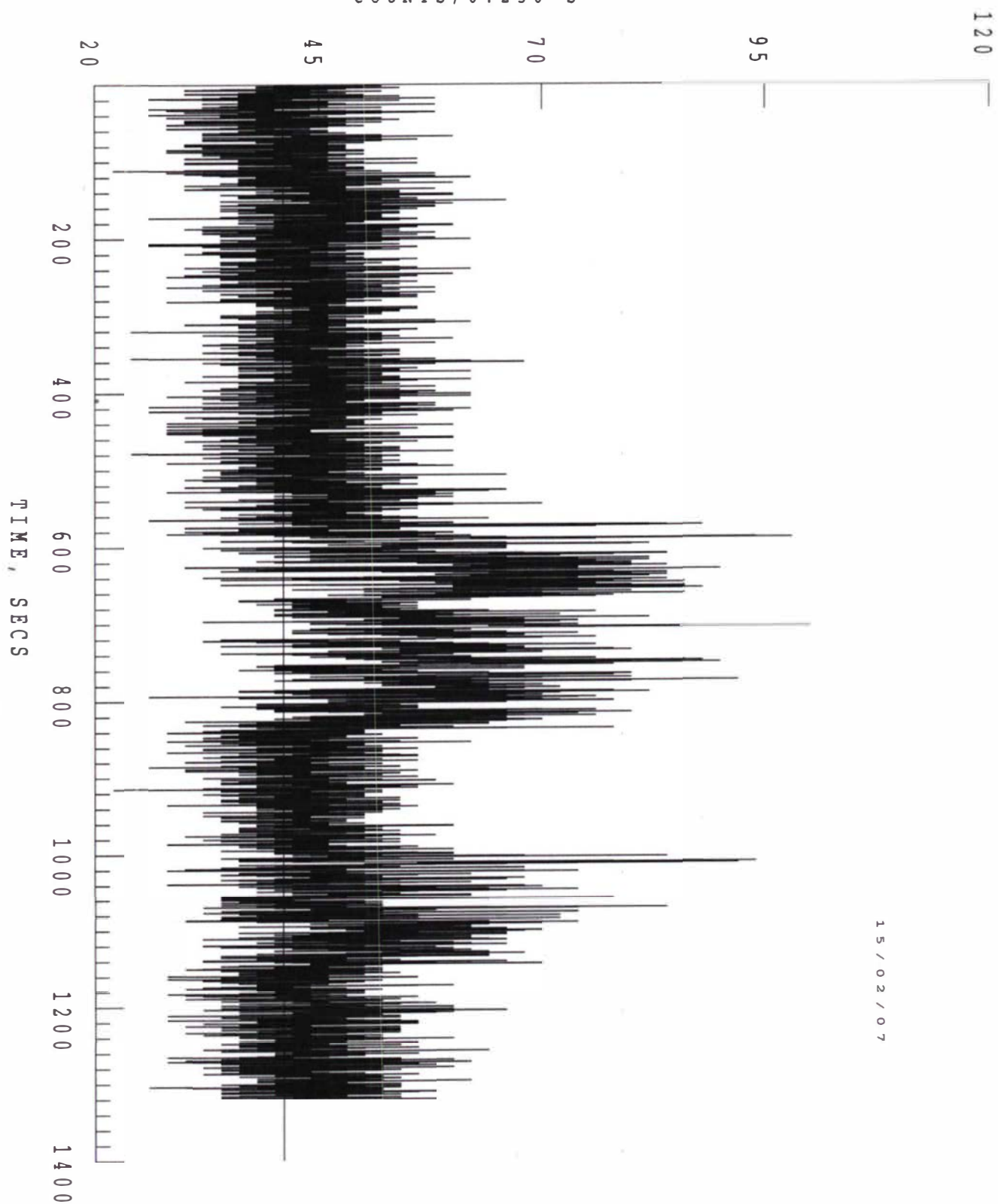
MS01

15/02/07

20789.206

50 - 3000 keV

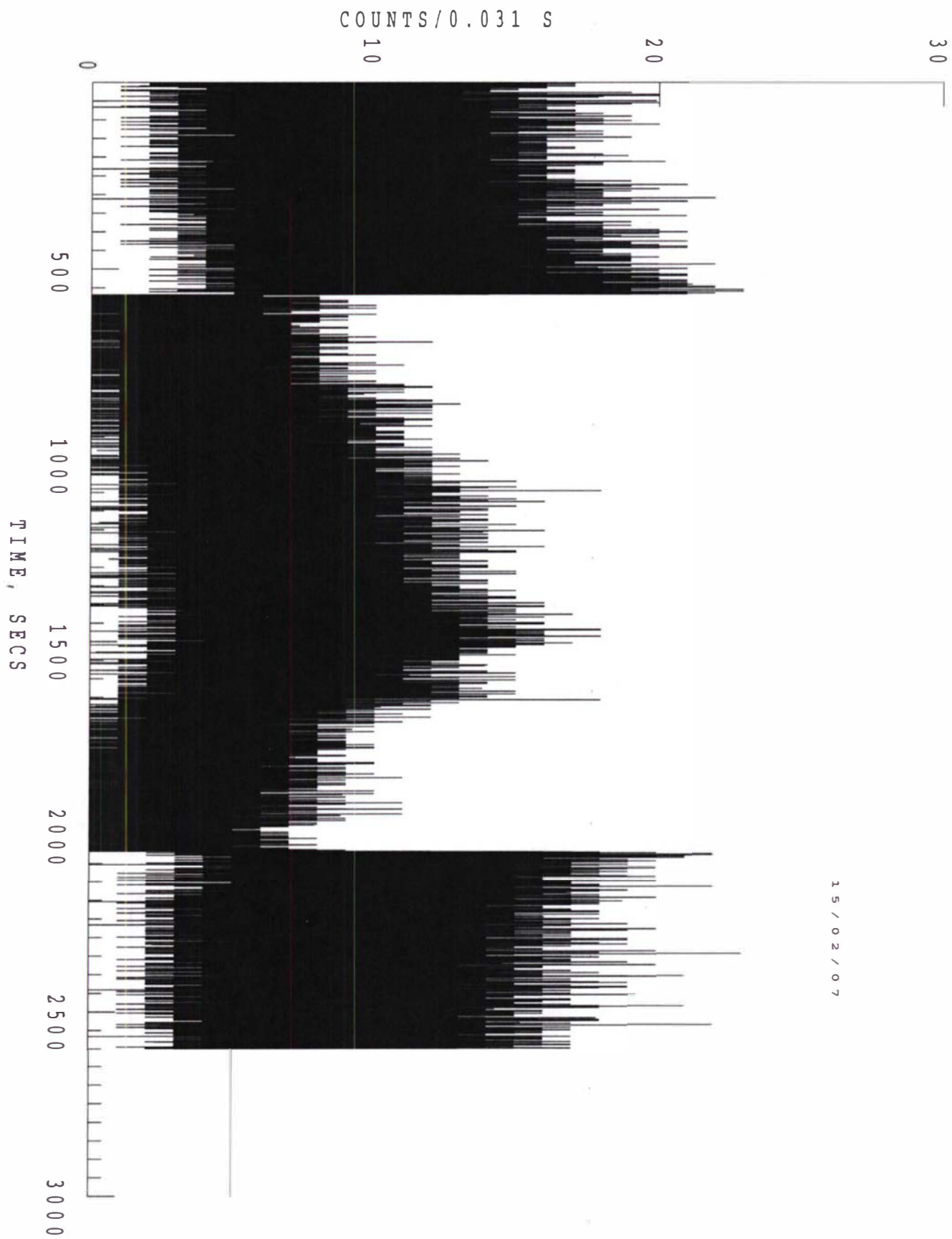
COUNTS/0.250 S



HESSI

15/02/07 20847.000 (MO_GE_20070215_22147)

25- 150 keV



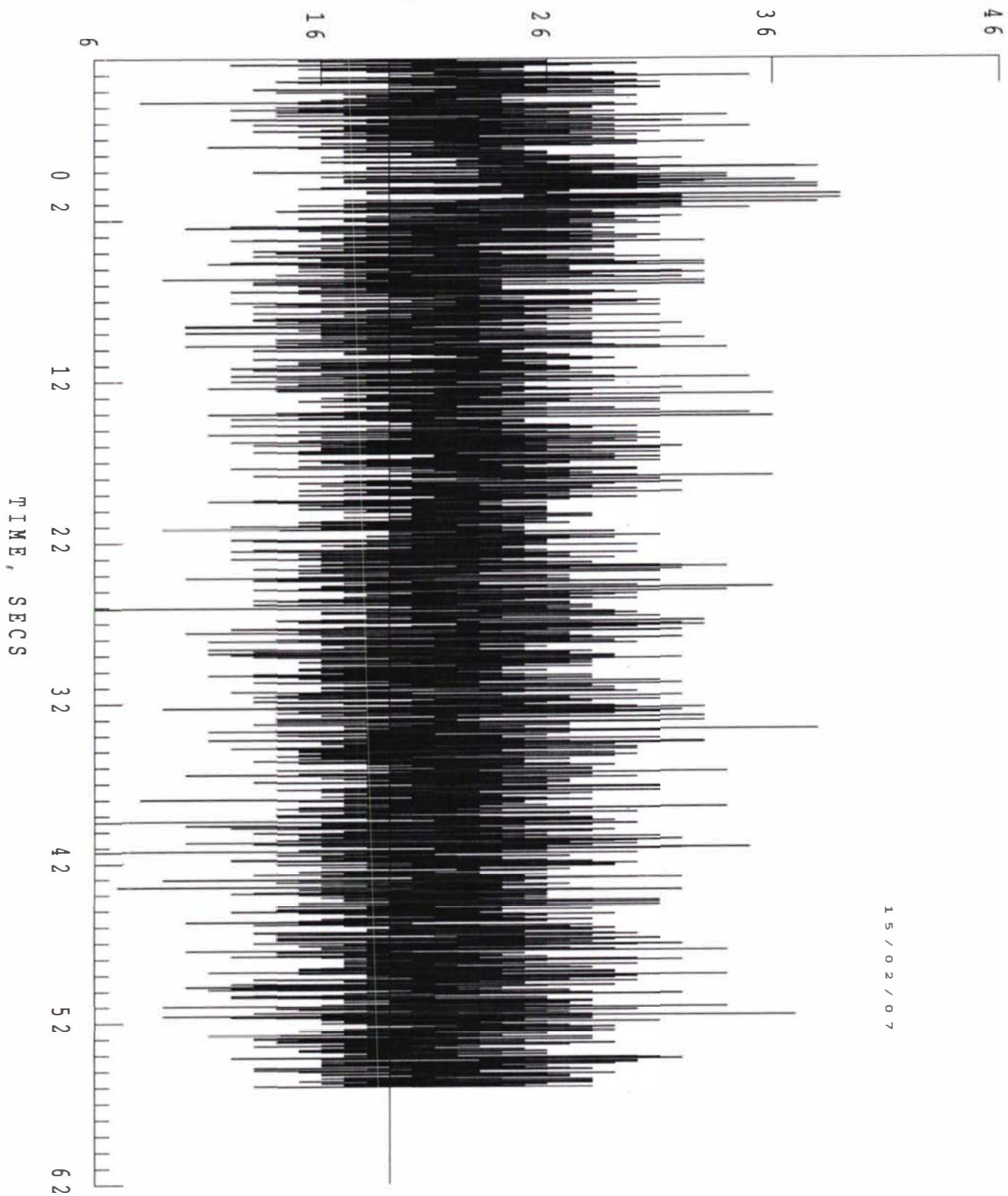
SUZAKU

15/02/07

26983.772

50- 240 keV

COUNTS/0.016 S



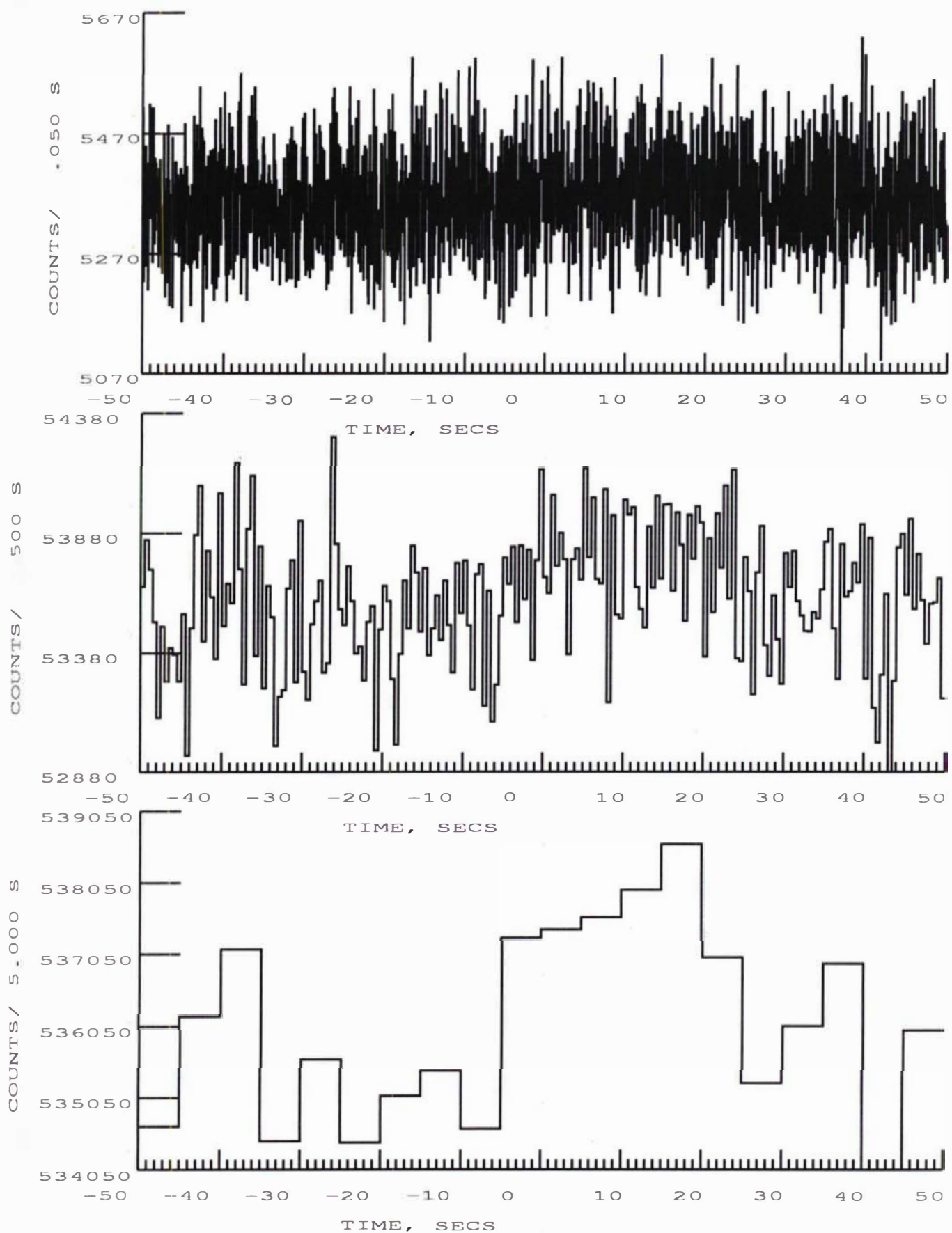
INTEGRAL

15/02/07

26983.000

07:29:43.0

18/07/14



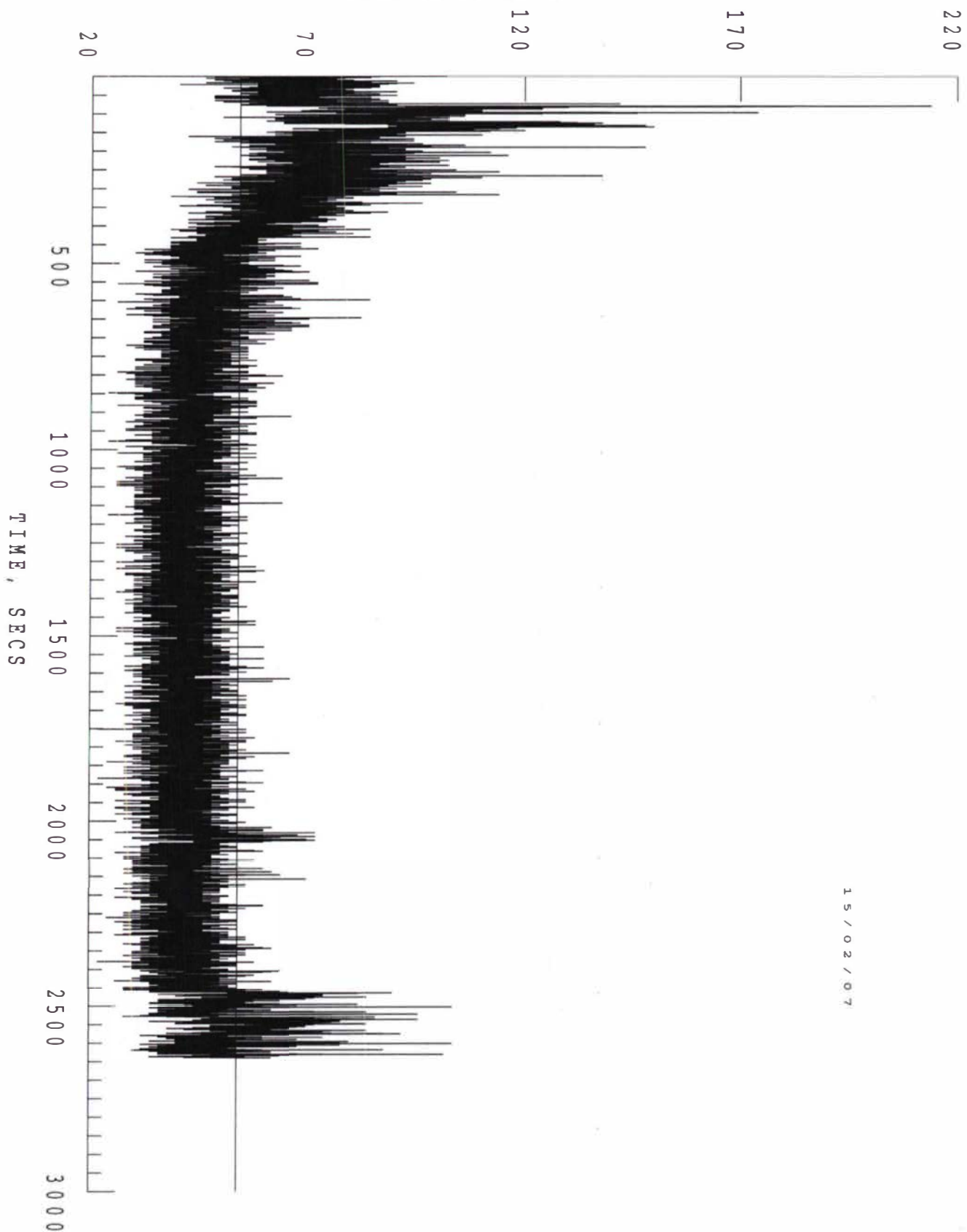
MS01

15/02/07

25649.154

50 - 3000 keV

COUNTS/0.250 S

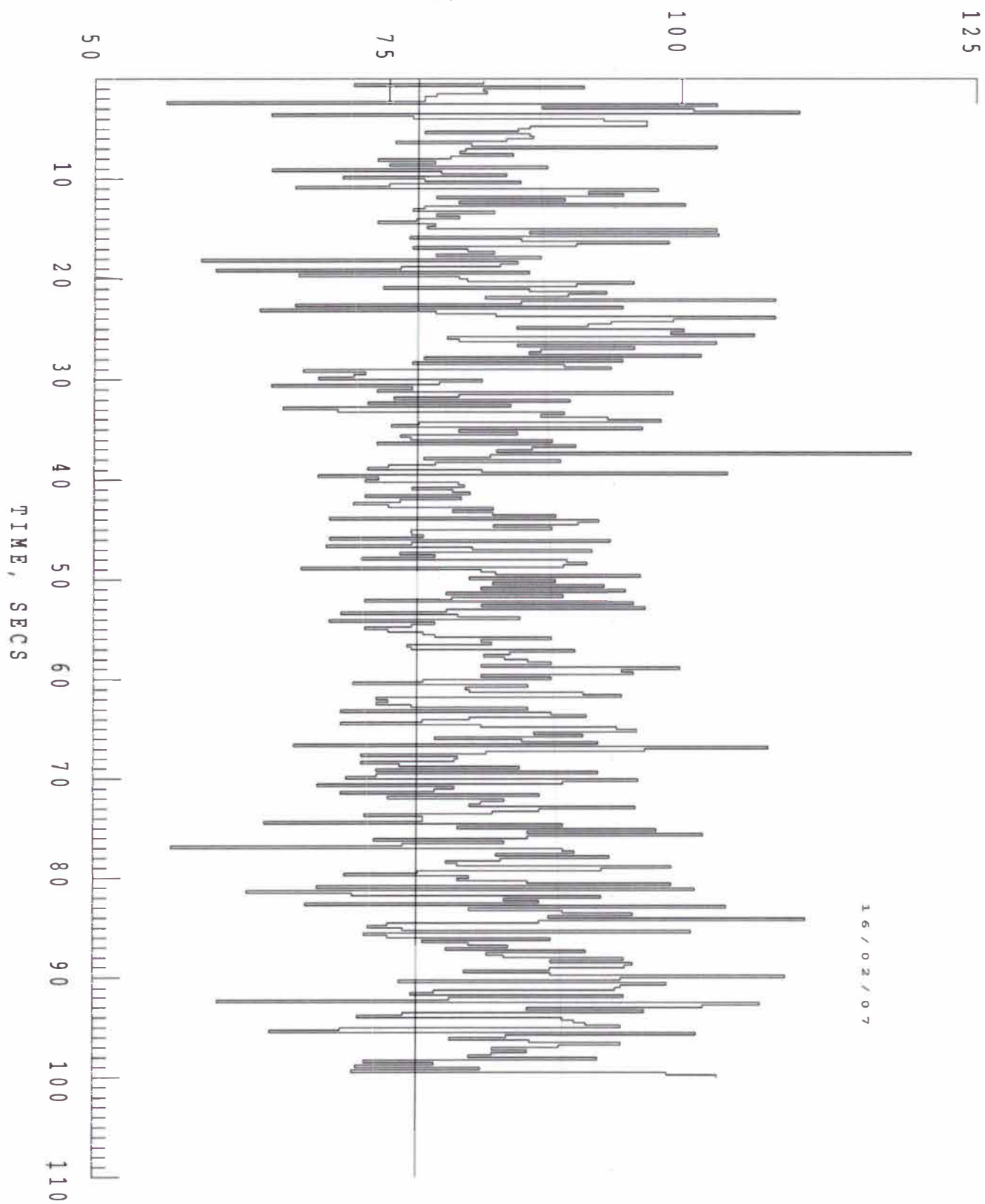


HESSI

15/02/07 26933.000 (SUZAKU_20070215_26983)

50- 200 keV

COUNTS/0.250 S



08/05/07

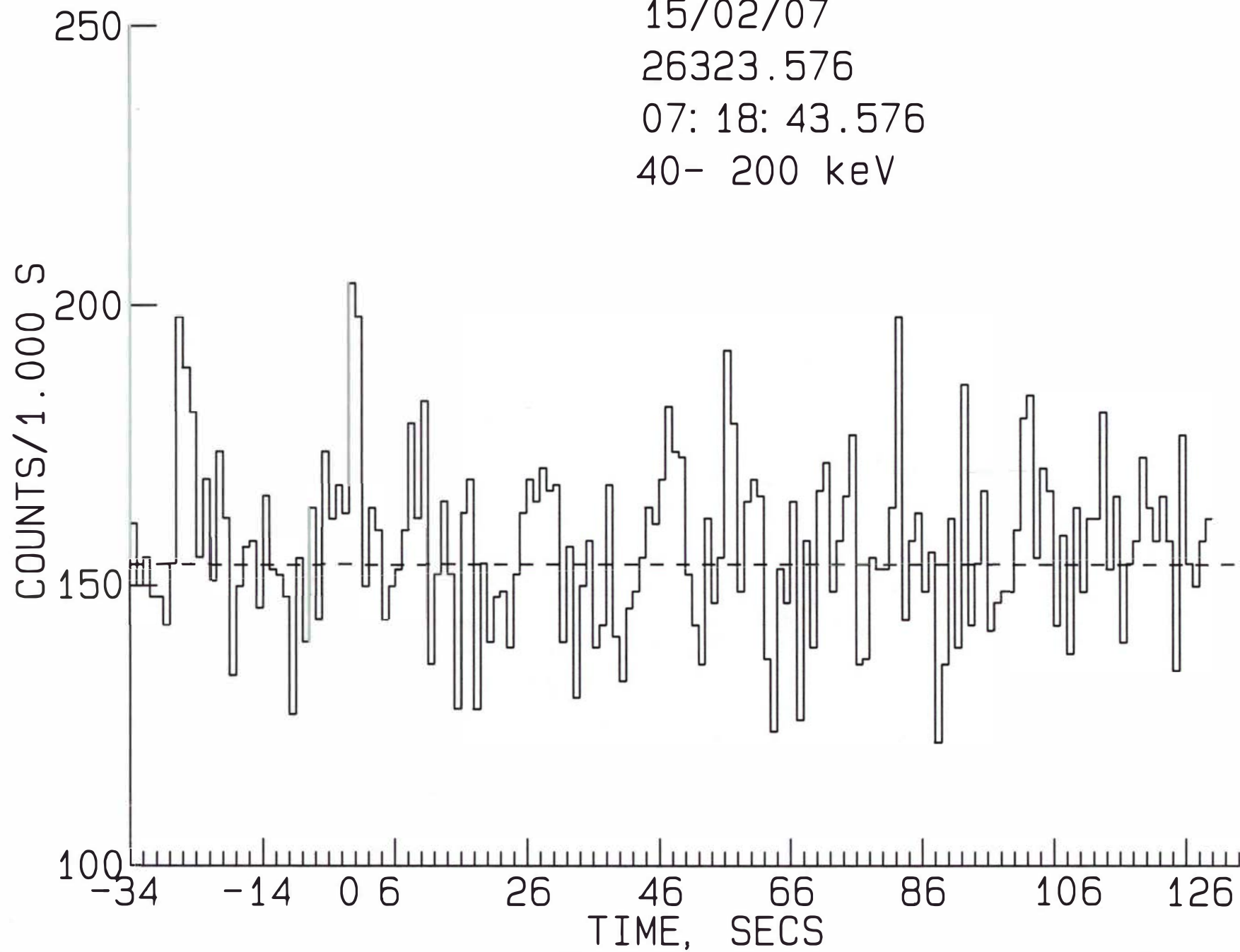
MESSENGER

15/02/07

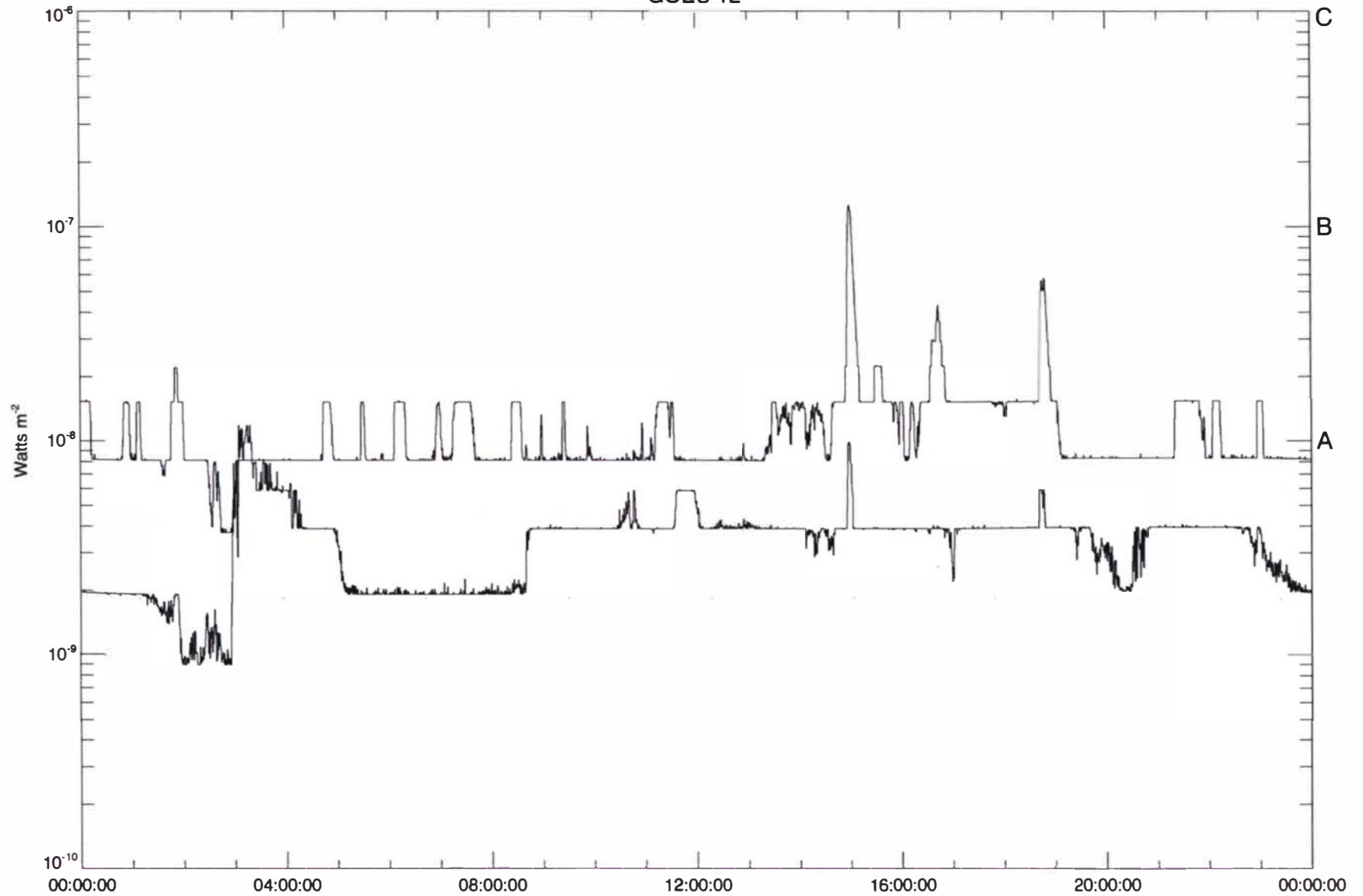
26323.576

07: 18: 43.576

40- 200 keV



GOES 12



Data Start: 07/02/15, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Plot created: 07/02/18, 0921

Sample average = 10

From val@mail.ioffe.ru Mon Feb 19 02:34:04 2007
X-ASG-Debug-ID: 1171881383-563b00010000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: relay.ioffe.rssi.ru[194.85.224.33]
-Barracuda-Start-Time: 1171881383
DomainKey-Signature: a=rsa-sha1; s=relay; d=ioffe.ru; c=noaws; q=dns;
h=message-id:date:from:user-agent:mime-version:to:cc:subject:
references:in-reply-to:content-type:content-transfer-encoding;
b=AS/D4oB13b79FomWOiKxkHNEu8sFD3PAiY08T5/guk1bLai24yzs+qsrIXRFE0STj
zQ9xmaAE8wNcYNTRGTwZoRNKvGzk/GtTQEdbxf20CJpmKD620YE39L9xd9WvXB/JvT2
i4kBuX9i3KUz/3ZbyLAS/pv7D+/YPwhg72YdBsnT

Date: Mon, 19 Feb 2007 13:46:24 +0300
From: "Valentin Pal'shin" <val@mail.ioffe.ru>
User-Agent: Thunderbird 1.5.0.7 (Windows/20060909)
MIME-Version: 1.0

To: jayc@milkyway.gsfc.nasa.gov
CC: Kevin Hurley <khurley@ssl.berkeley.edu>,
Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>,
Hans Krimm <krimm@milkyway.gsfc.nasa.gov>,
Sergey Golenetskii <golen@mail.ioffe.ru>

X-ASG-Orig-Subj: Re: BAT trigger 260755 event on 2/16/07

Subject: Re: BAT trigger 260755 event on 2/16/07

Content-Transfer-Encoding: 7bit

X-Greylist: Sender succeeded SMTP AUTH authentication, not delayed by milter-gre

X-Virus-Status: Clean

X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

X-ASG-Whitelist: Sender (Per-User)

Dear Jay,

25733

> At 2007-02-16T07:08:53.7 BAT sees a FRED event in the 15-50 keV
> range, lasting about 80 seconds, about 2000 counts/sec in the array.
> The energy does not look right for an out-of-FOV burst, but there was
> no source detected in several image attempts. I don't see any solar
> activity at this time at <http://sec.noaa.gov/today.html> Were there any
> other observations of this event?

Konus-Wind sees nothing at this time.

Valentin

--

Valentin Pal'shin

Ioffe Physico-Technical Institute
Laboratory for Experimental Astrophysics
26 Polytekhnicheskaya, St Petersburg 194021,
Russian Federation

email: val@mail.ioffe.ru
Tel: (7)-812-2927177
Fax: (7)-812-2971963

From grb_hend@mx.iki.rssi.ru Thu May 10 10:21:17 2007
X-ASG-Debug-ID: 1178817683-131f00200000-HMYXr3
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
X-Barracuda-Connect: ns2.space.ru[193.232.212.12]
X-Barracuda-Start-Time: 1178817683
Date: Thu, 10 May 2007 12:44:35 +0400
X-AntiVirus: Checked by Dr.Web [version: 4.33, engine: 4.33.5.10110, virus recor
From: "grb_hend" <grb_hend@mx.iki.rssi.ru>
To: "recipient1" <grb_hend@mx.iki.rssi.ru>,
"recipient2" <khurley@sunspot.ssl.berkeley.edu>
X-ASG-Orig-Subj: No data in HEND Data Base
Subject: No data in HEND Data Base
MIME-Version: 1.0
X-MimeOLE: Produced By Microsoft MimeOLE V6.00.2900.3028
X-IKI-MailScanner-Information: Please contact the ISP for more information
X-IKI-MailScanner: Found to be clean
X-MailScanner-From: grb_hend@mx.iki.rssi.ru
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
X-ASG-Whitelist: Sender (Per-User)

Received letter from = khurley@ssl.berkeley.edu
No HEND data for GRB around 070216 06:46:53

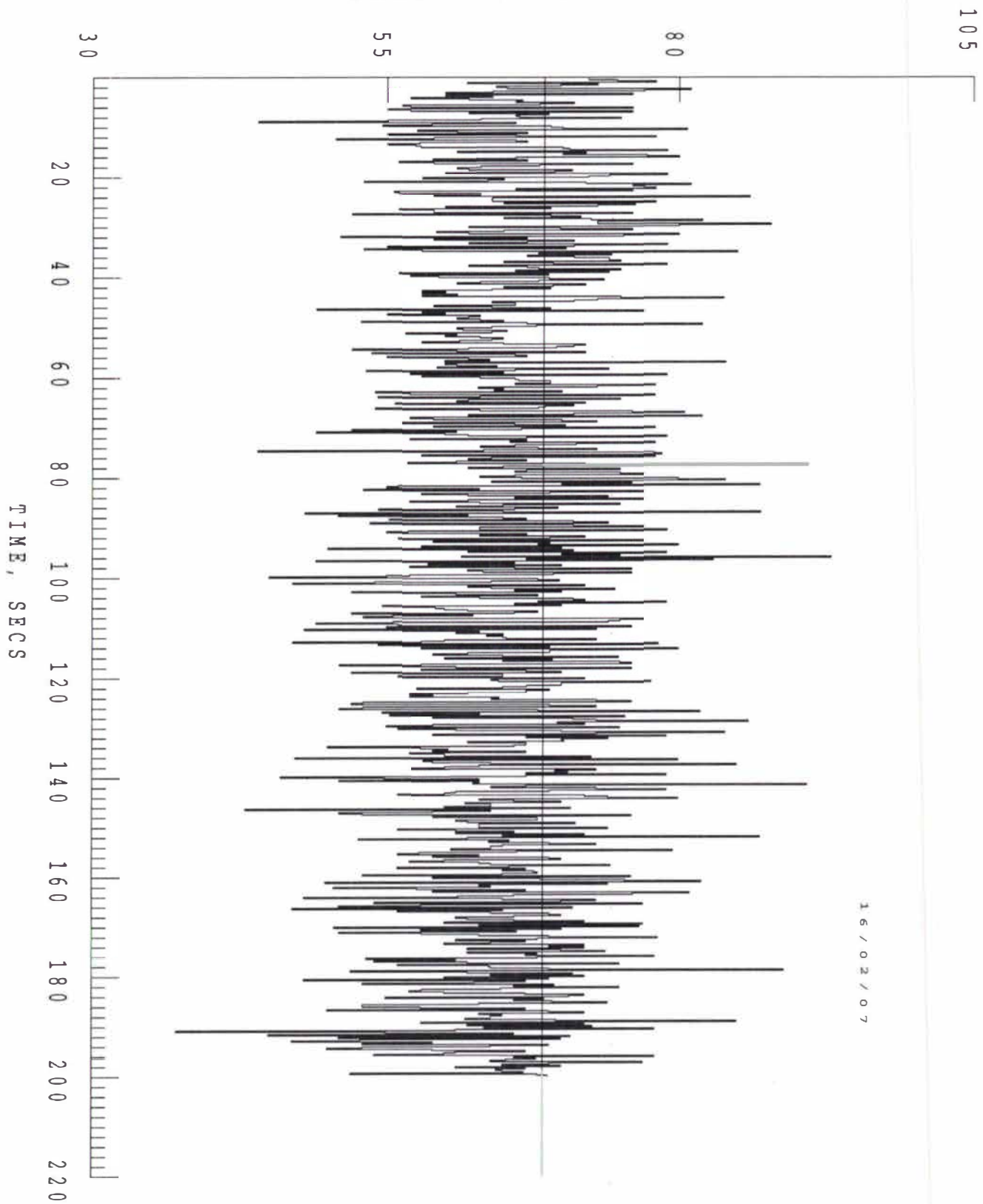
<This message contains 1 attachments (not printed)>

HESSI

16/02/07 25633.000 (SWIFT_20070216_25733)

25- 150 keV

COUNTS/0.250 S



25/04/07

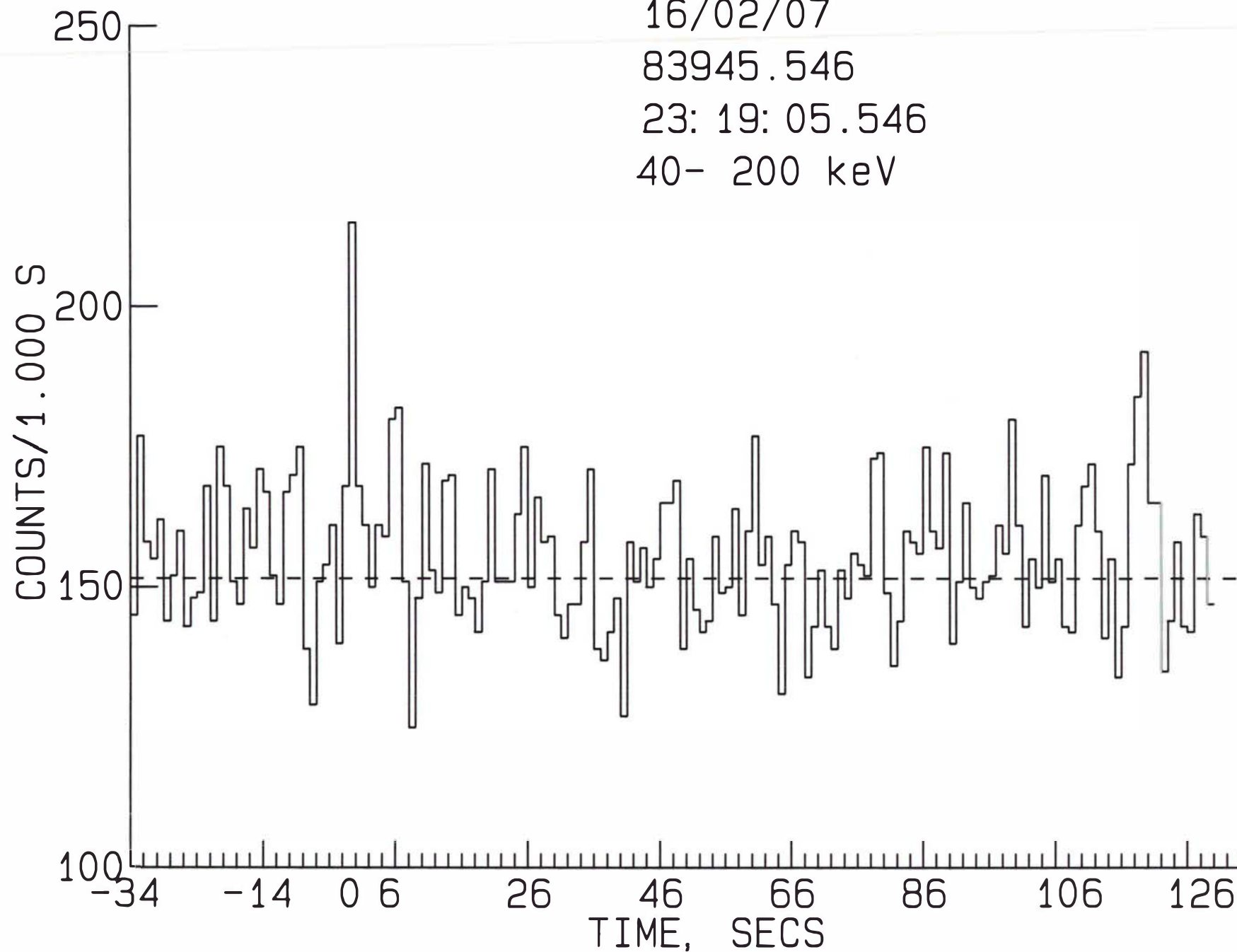
MESSENGER

16/02/07

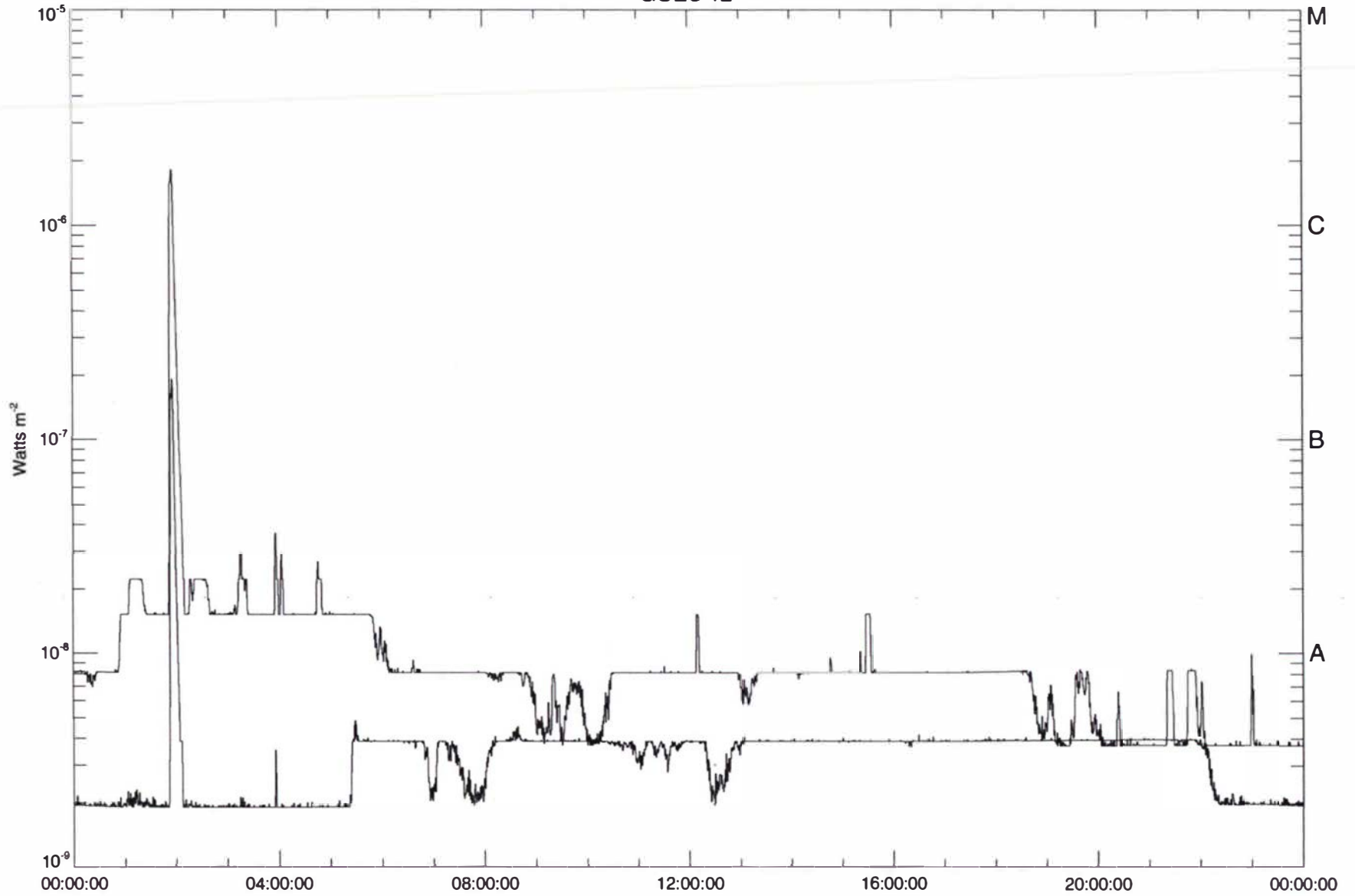
83945.546

23: 19: 05.546

40- 200 keV



GOES 12



Data Start: 07/02/16, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Plot created: 07/02/19, 0921

Sample average = 10

25/04/07

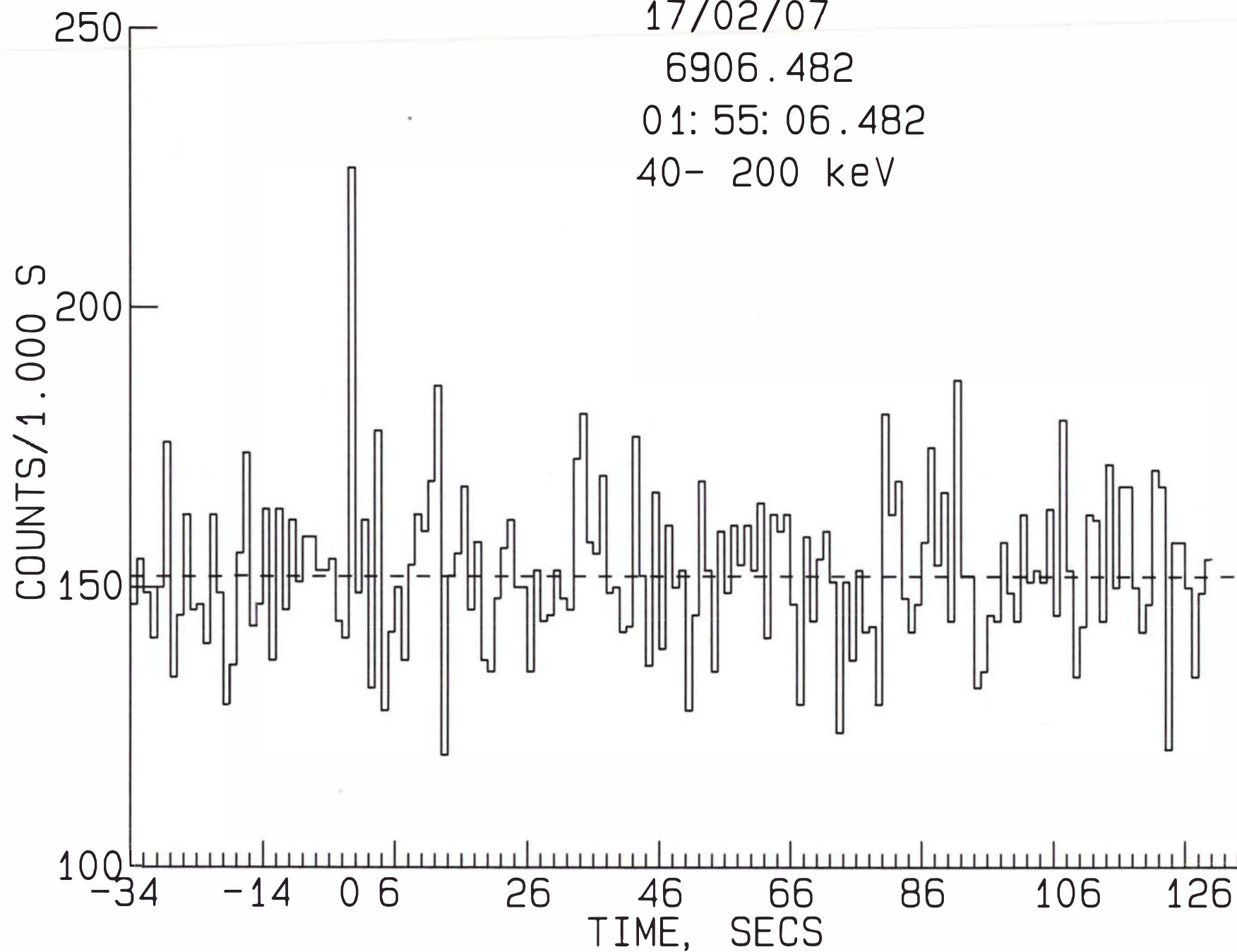
MESSENGER

17/02/07

6906.482

01:55:06.482

40- 200 keV



Date: Sep 16 2010

BURST TRIANGULATION CHECKLIST

1. Suzaku Data

- ☐ 1 second timing error corrected? (Jan 1 – Apr 24 2009)

2. AGILE Data

- ☐ 1 second timing error corrected?

3. MESSENGER Data

- ☒ Coarse or Precision oscillator (C or P bronte.jhuapl.edu/spice/kernels/sclk/timekeeping/OPS_TIME_ENGR.txt)? C
- ☒ Timing checked after ~ 1 week?

4. For Konus events

- ☒ Konus ecliptic latitude used with latest calibration?

5. 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). For later data, was timing checked after ~1 week?
- ☐ 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?

6. For 3 or More Spacecraft events

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

7. For INTEGRAL events

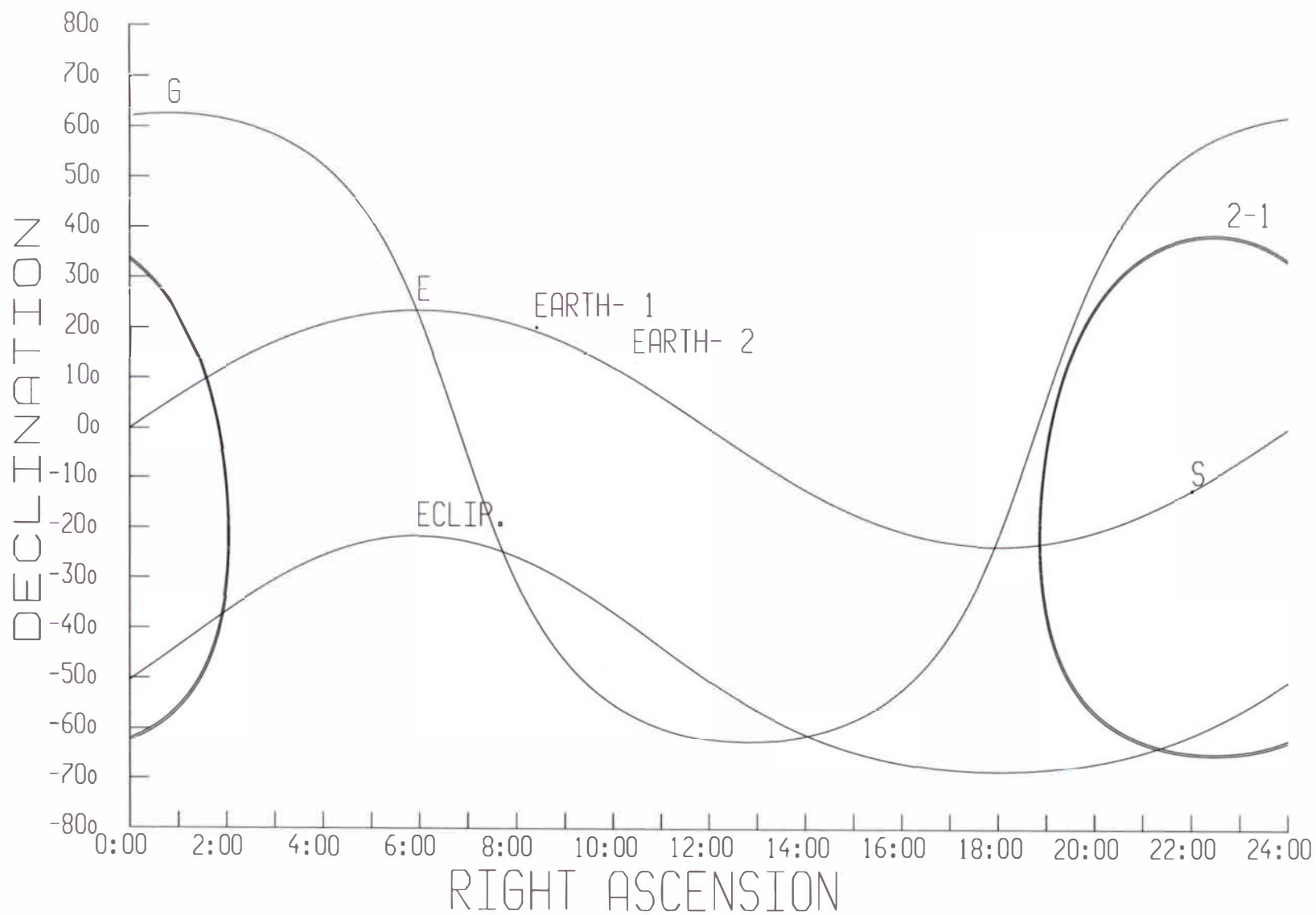
- ☐ INTEGRAL SPI-ACS website checked for bursts that weren't transmitted automatically?
- ☐ 125 ms added to INTEGRAL SPI-ACS time for bursts prior to April 2 2004 11:00 UT?
- ☐ Updated ephemeris used for bursts prior to September 30, 2003?

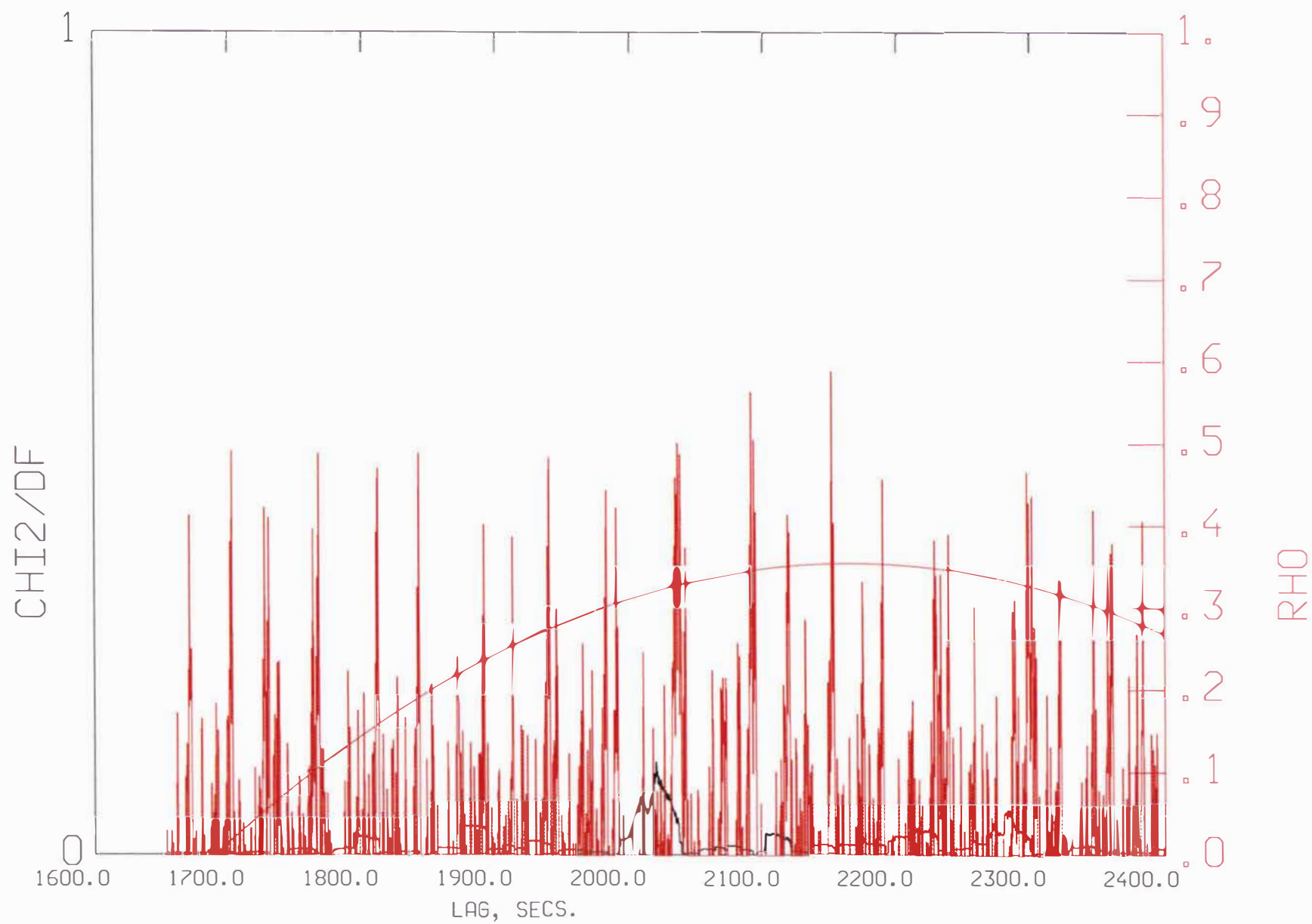
-
- ☒ ACCESS and MBL4 databases updated, with identical times?

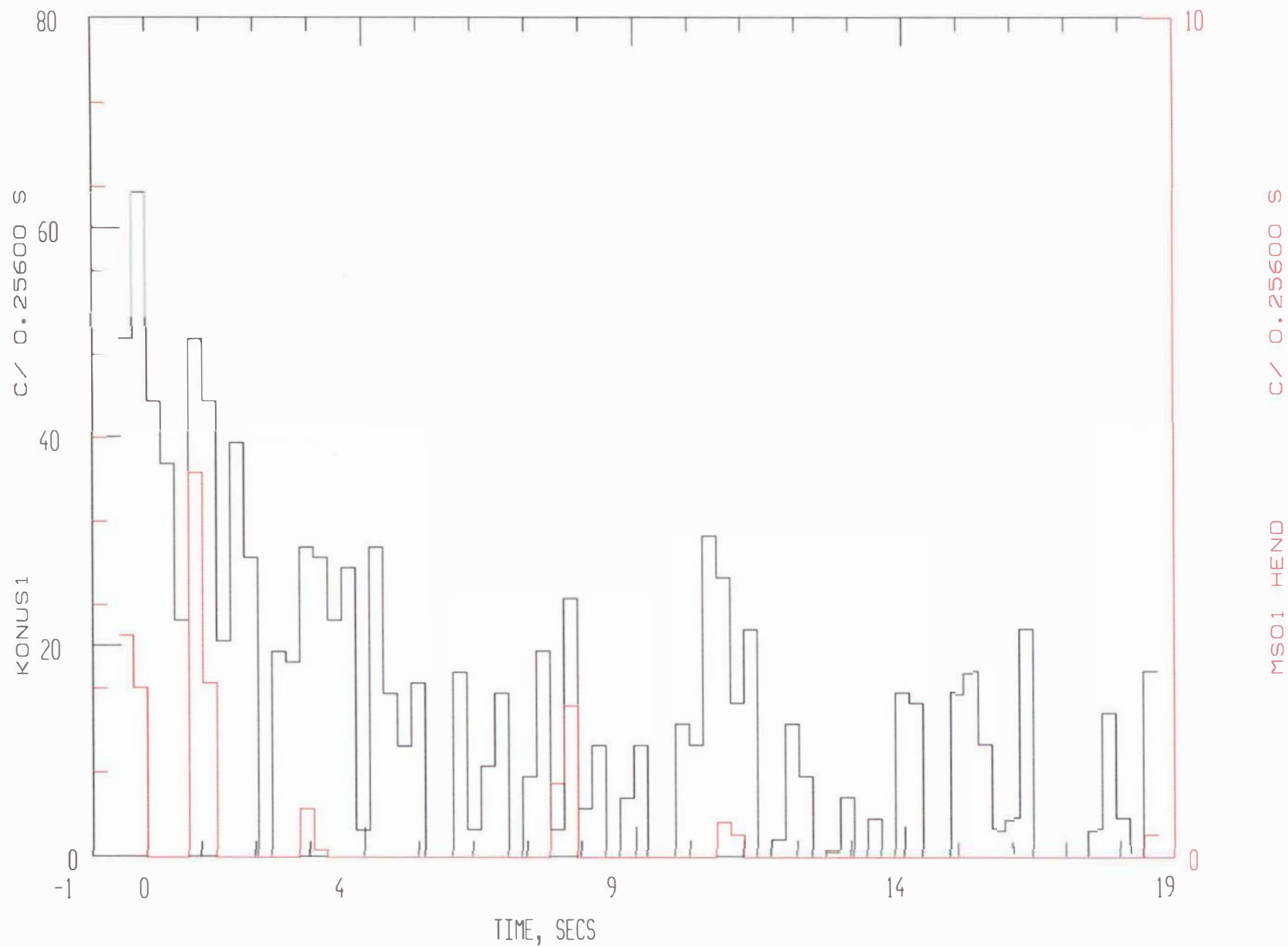
EVENT OF FEB 17, 2007 7:03

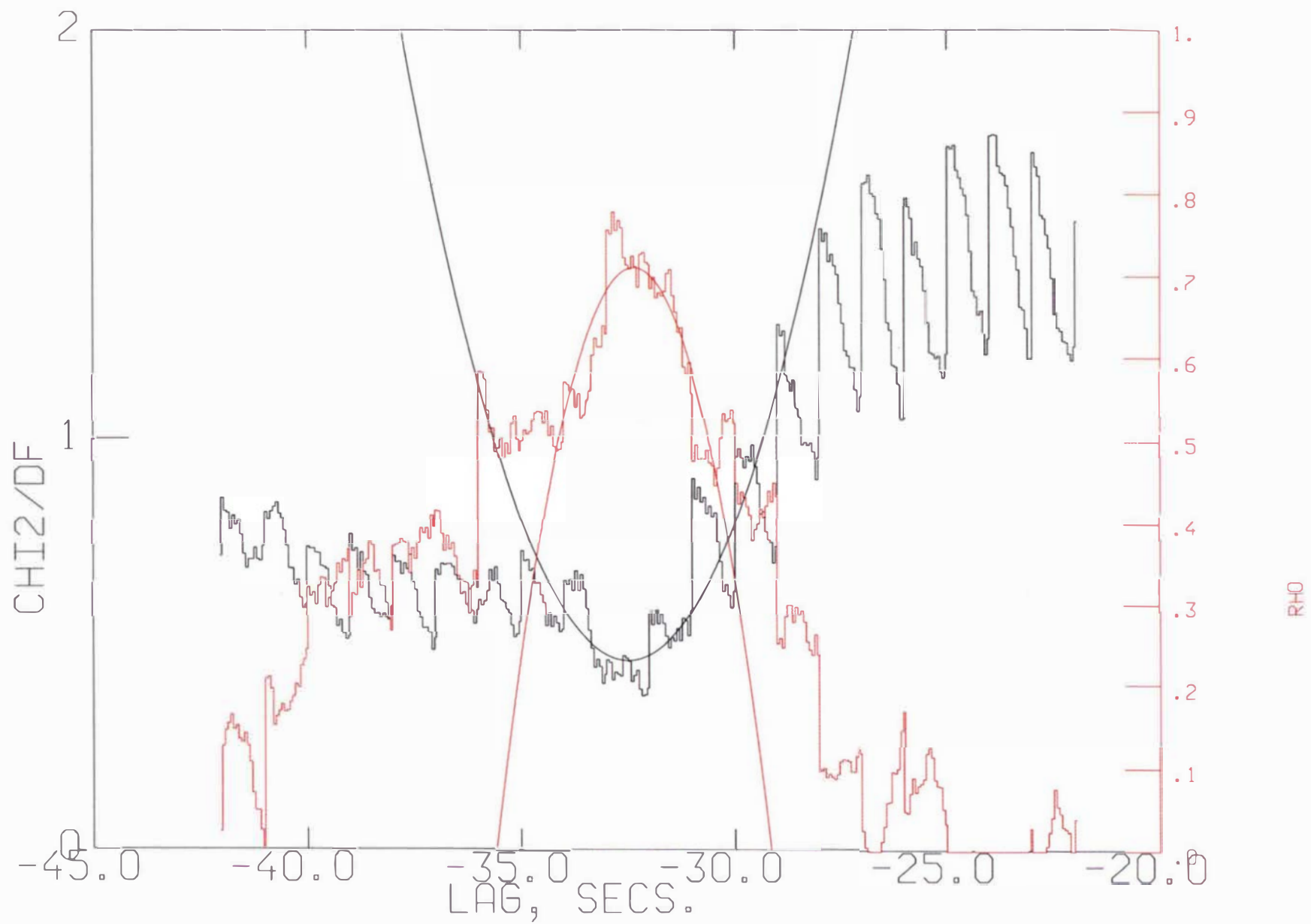
16/09/2010

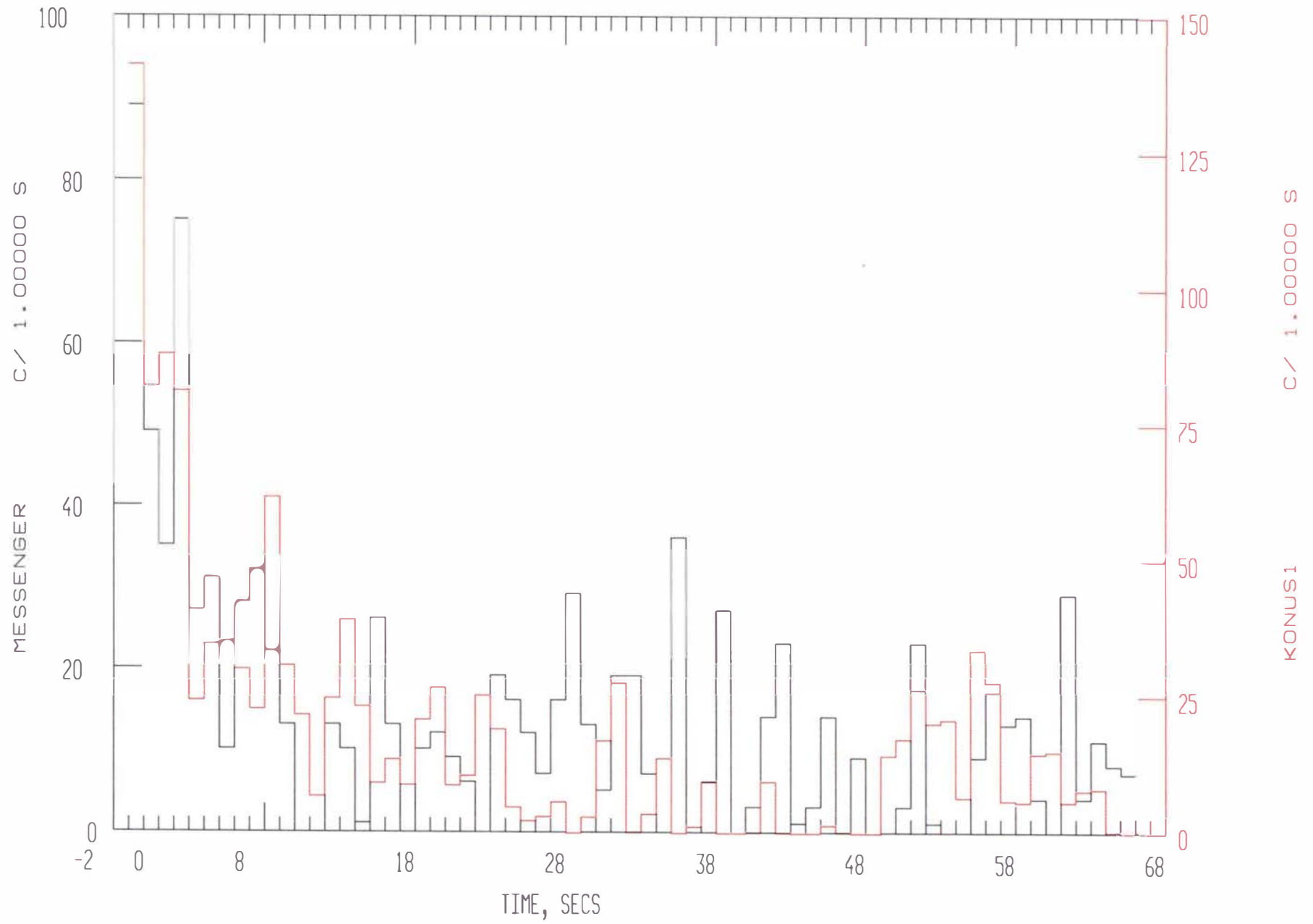
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 KONUS1 2 MESSENGER











KONUS1

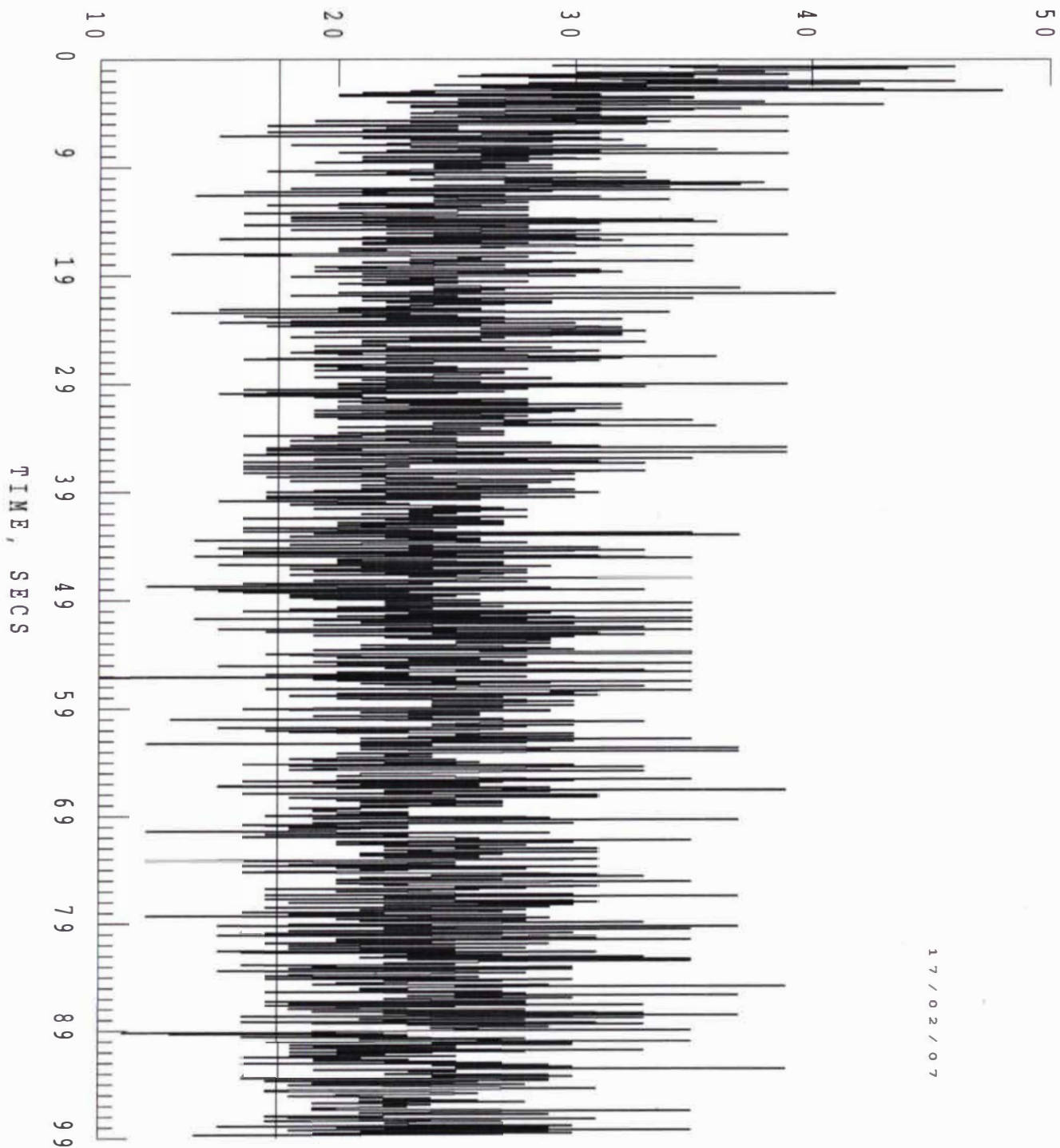
17/02/07

25417.625

50 - 200 keV

07:03:37

COUNTS/0.064 S



17/02/07

KONUS HRES 20070217 25417

TRIGGER TIME: 17/02/07 DOY 048 Julian 2454149.79418 UT = 07.060 07:03:37 (25417.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

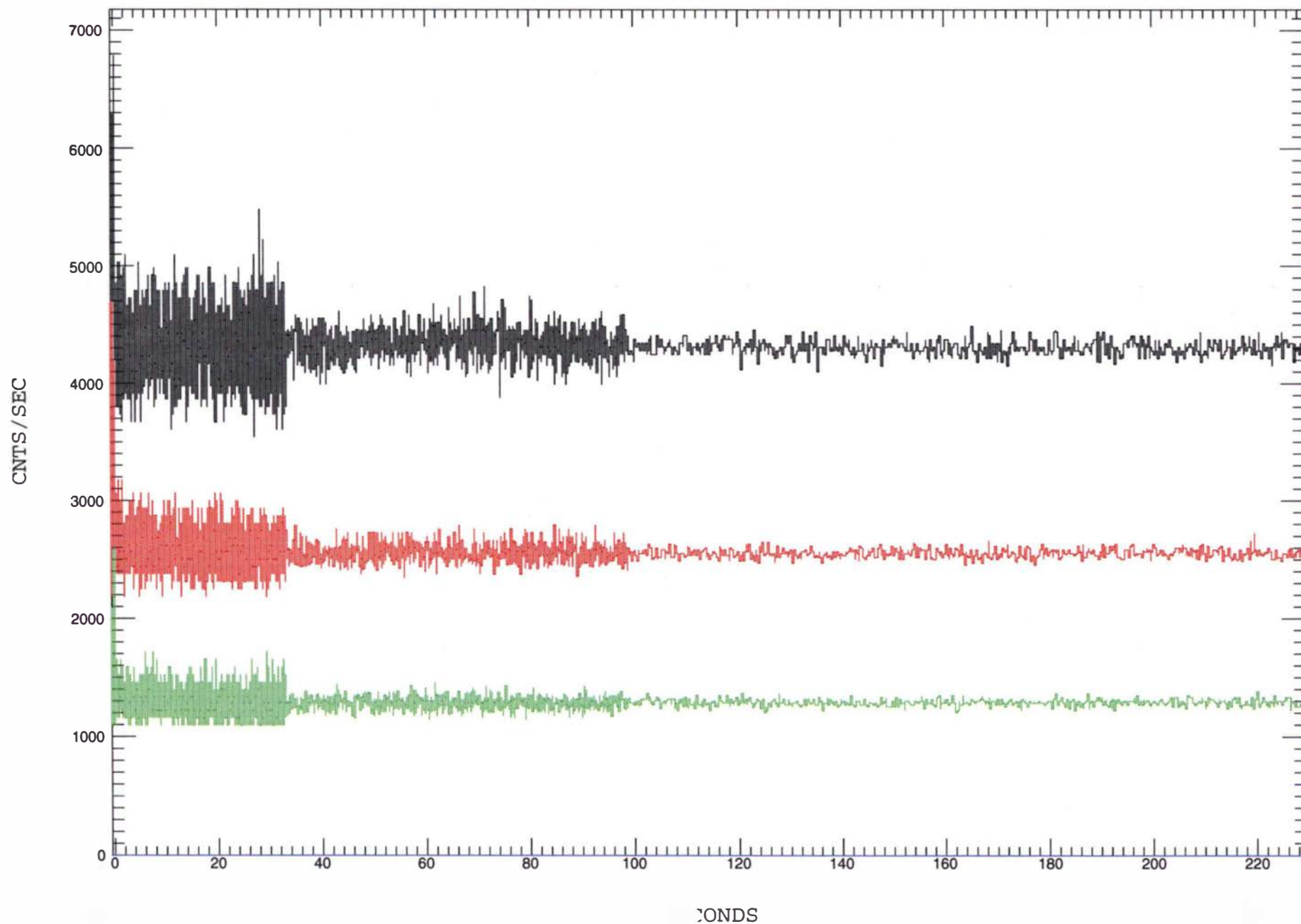
Chan 4 : [> 10 MeV]

Channel 1 + 3300

Channel 2 + 2200

Channel 3 + 1100

Channel 4 + 0

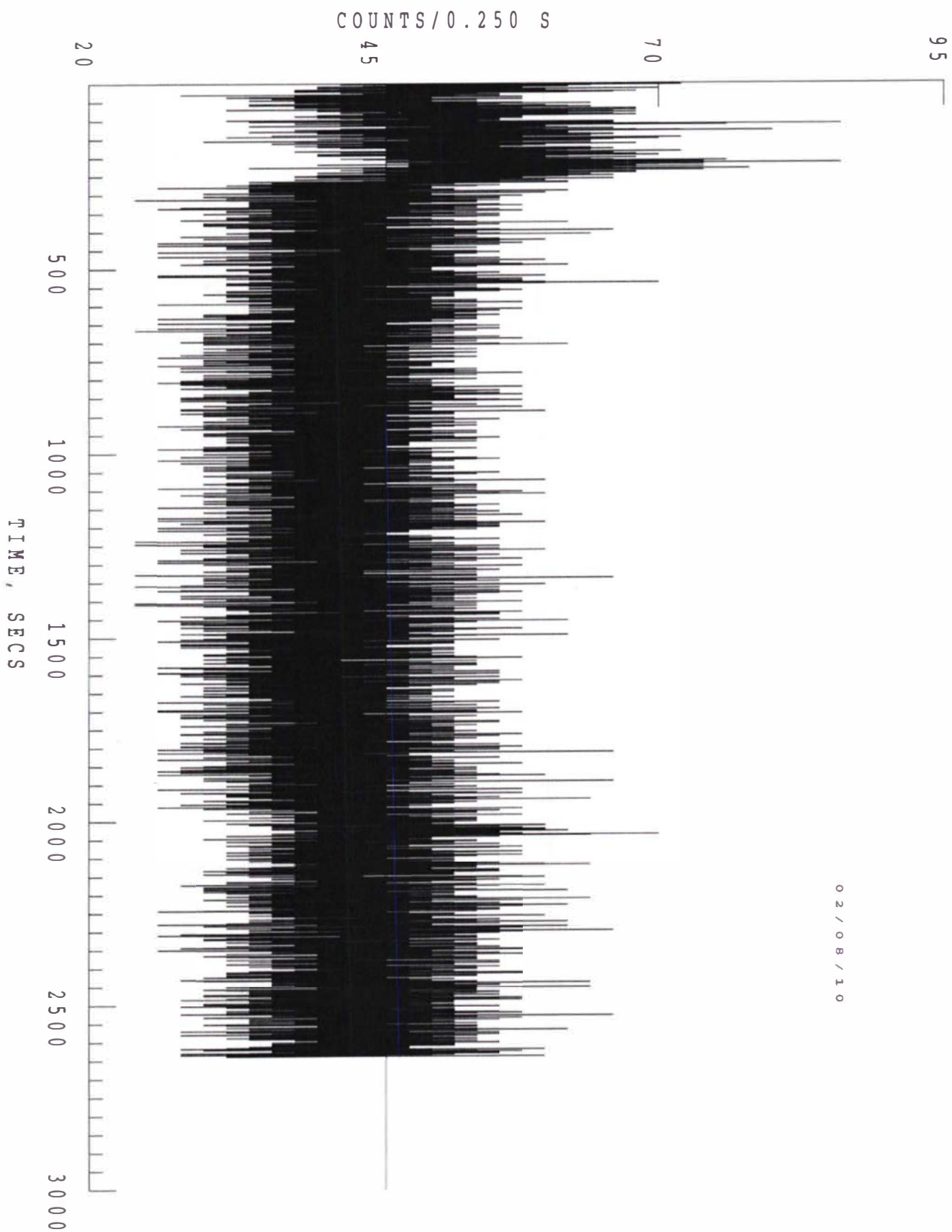


MS01

17/02/07

24085.034

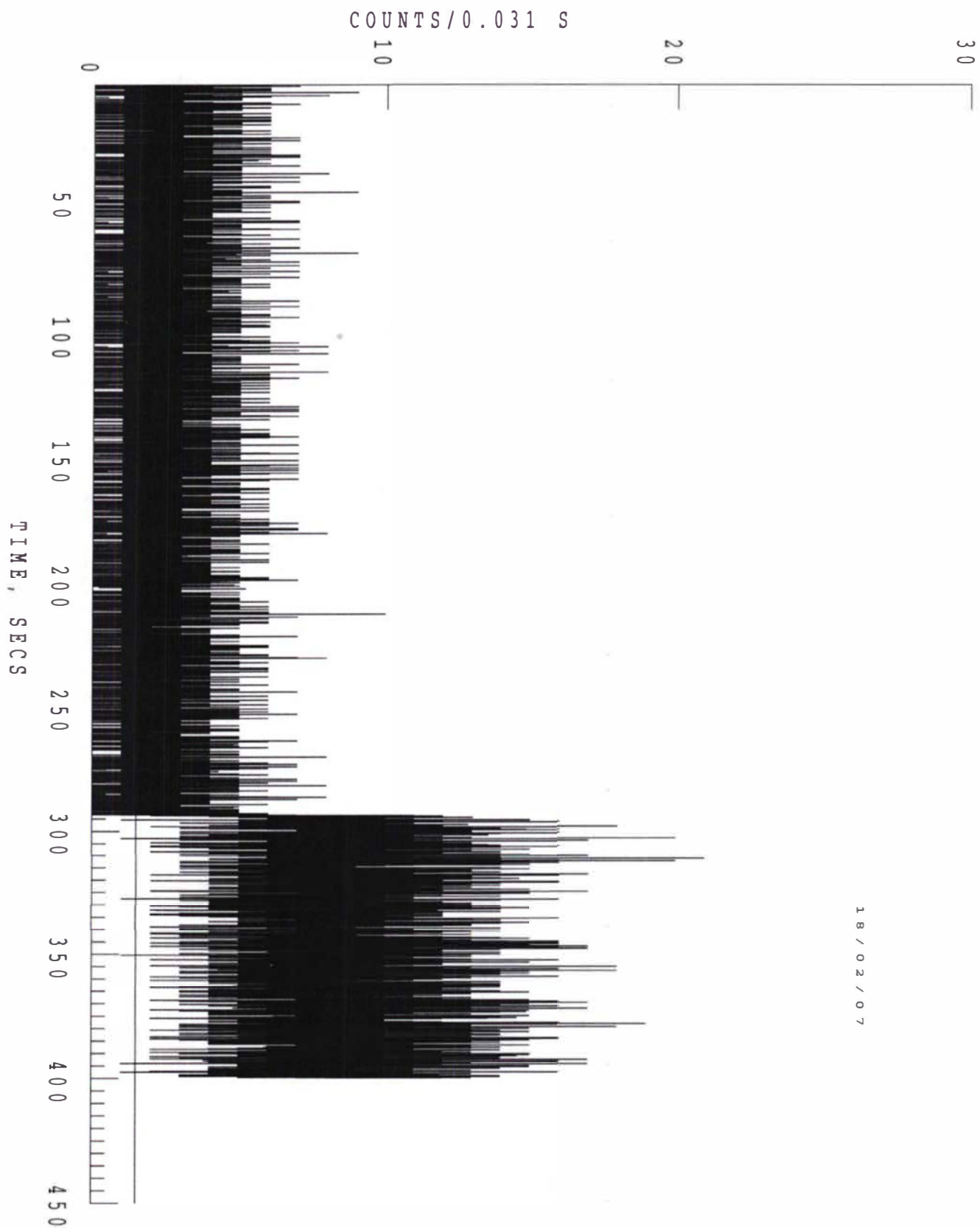
50 - 3000 keV



HESSI

17/02/07 25217.000 (KONUS1_20070217_25417)

25- 150 keV



18/02/07

25/04/07

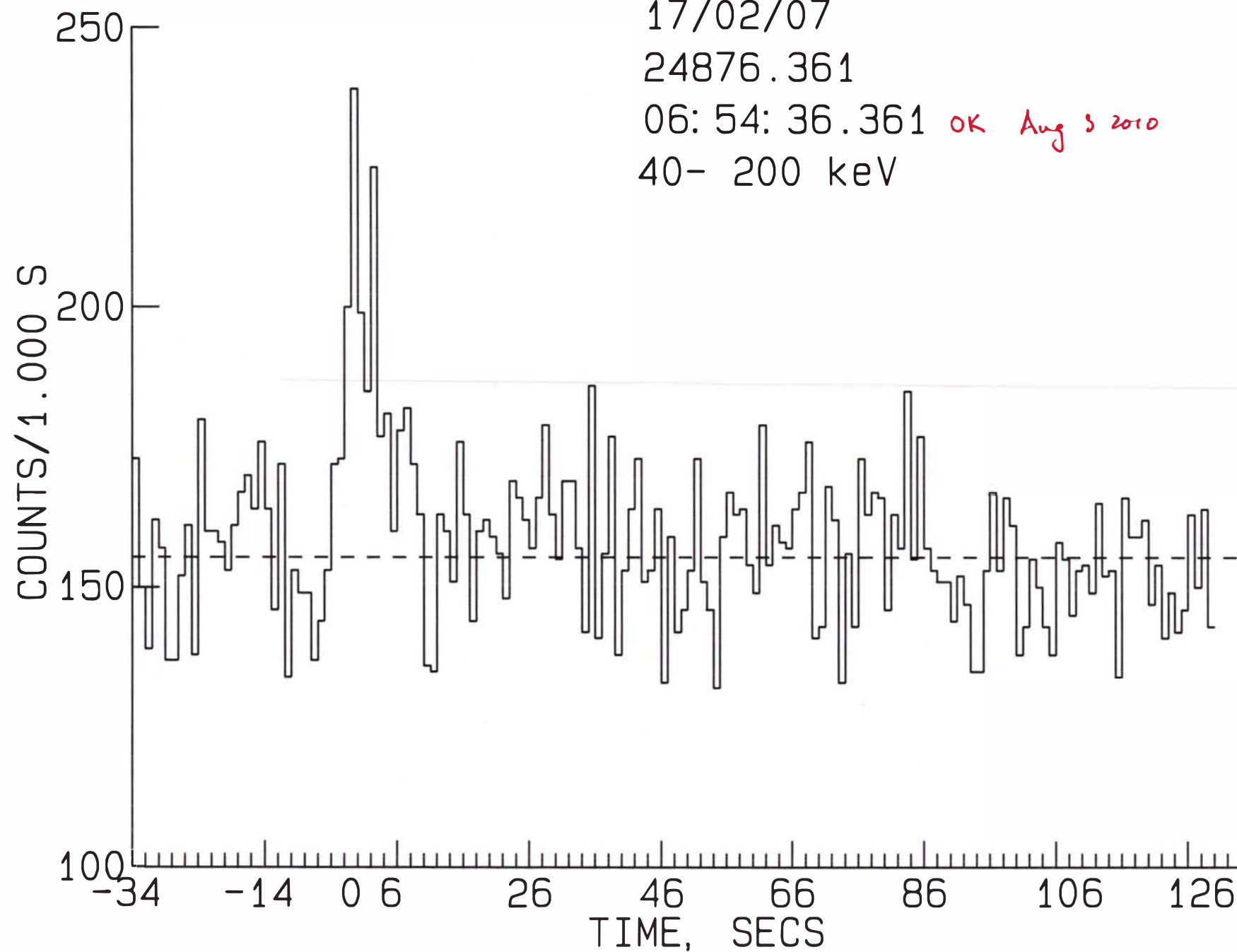
MESSENGER

17/02/07

24876.361

06: 54: 36.361 OK Aug 3 2010

40- 200 keV



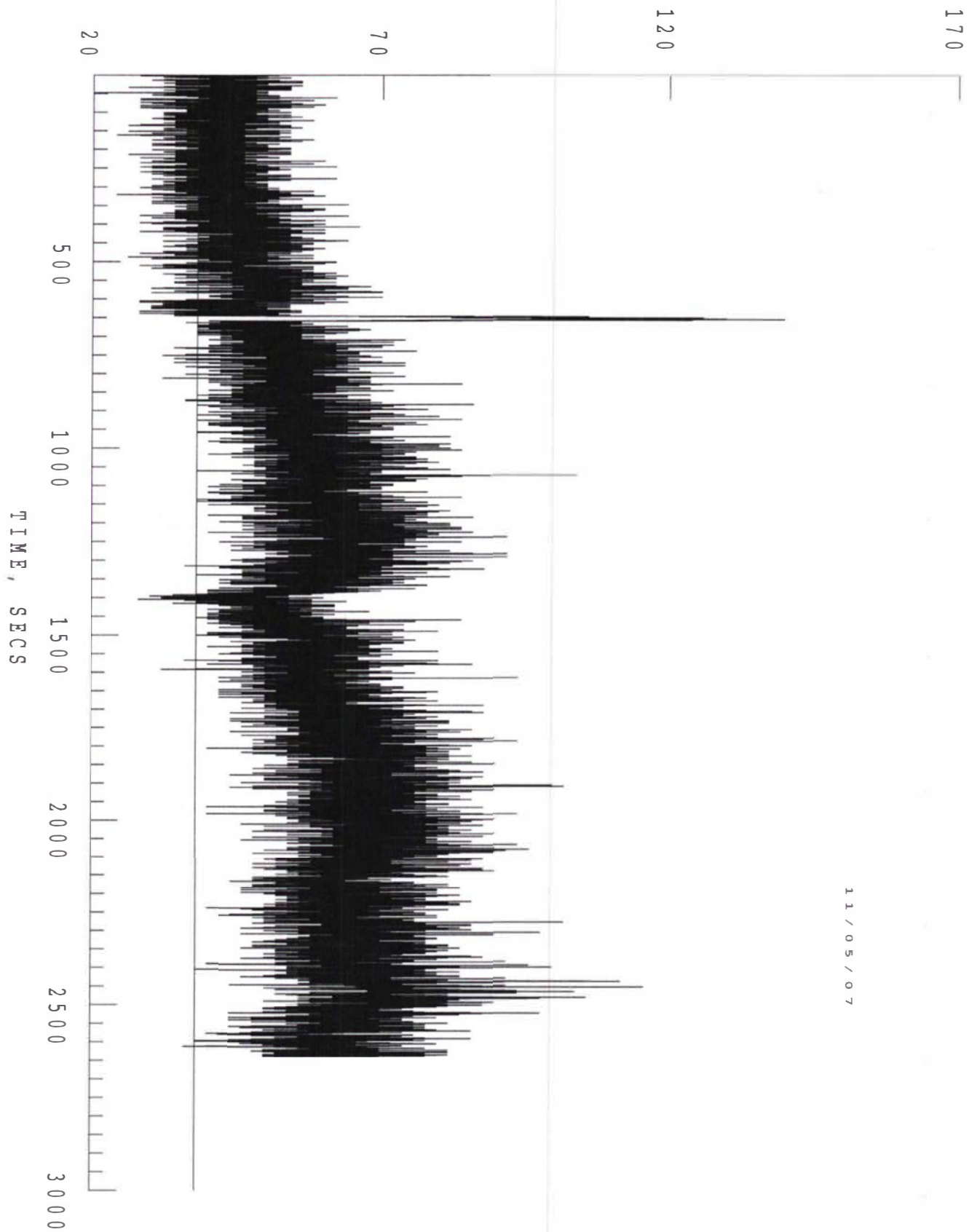
MS01

17/02/07

78025.032

50- 3000 keV

COUNTS/0.250 S



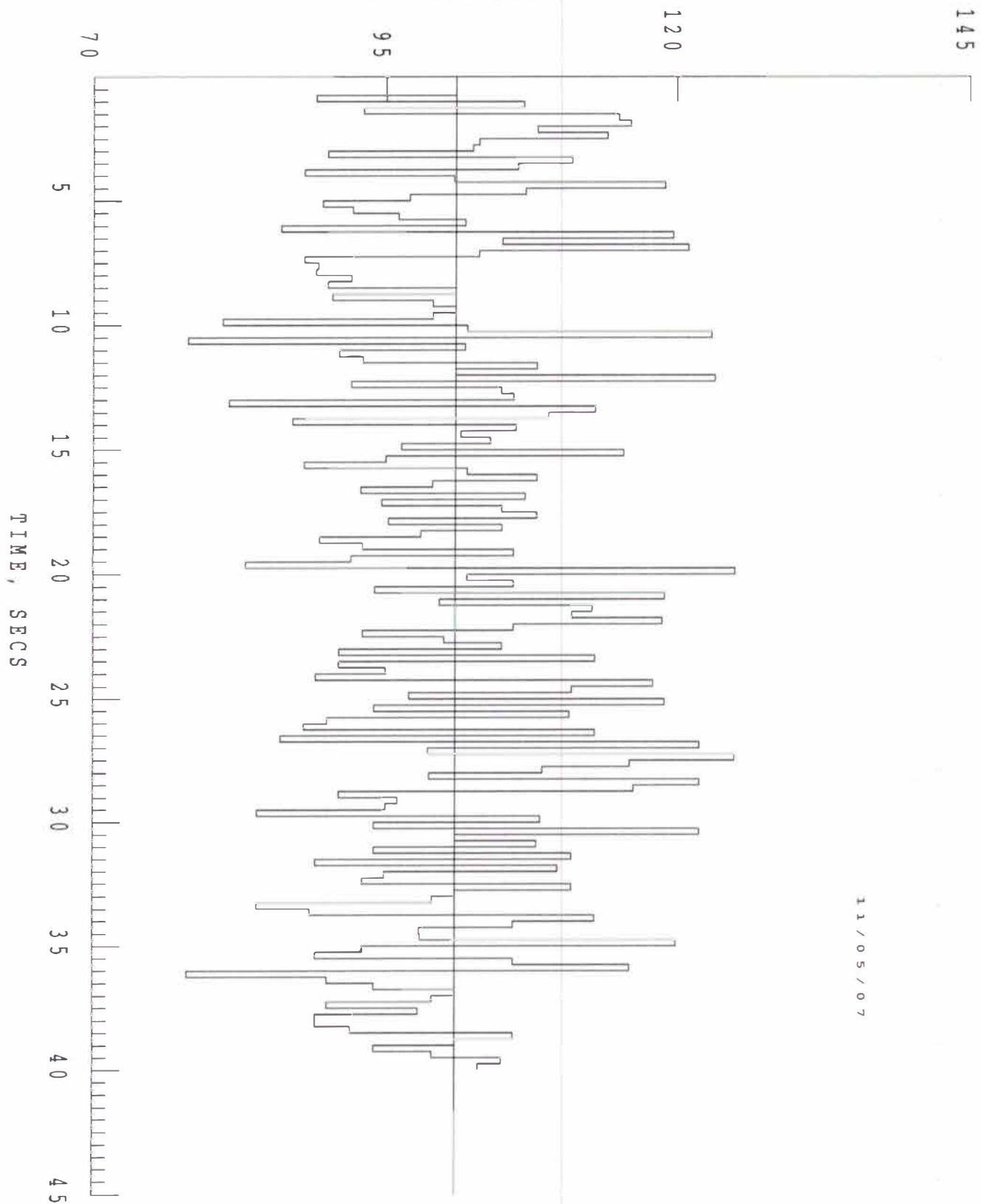
11/05/07

HESSI

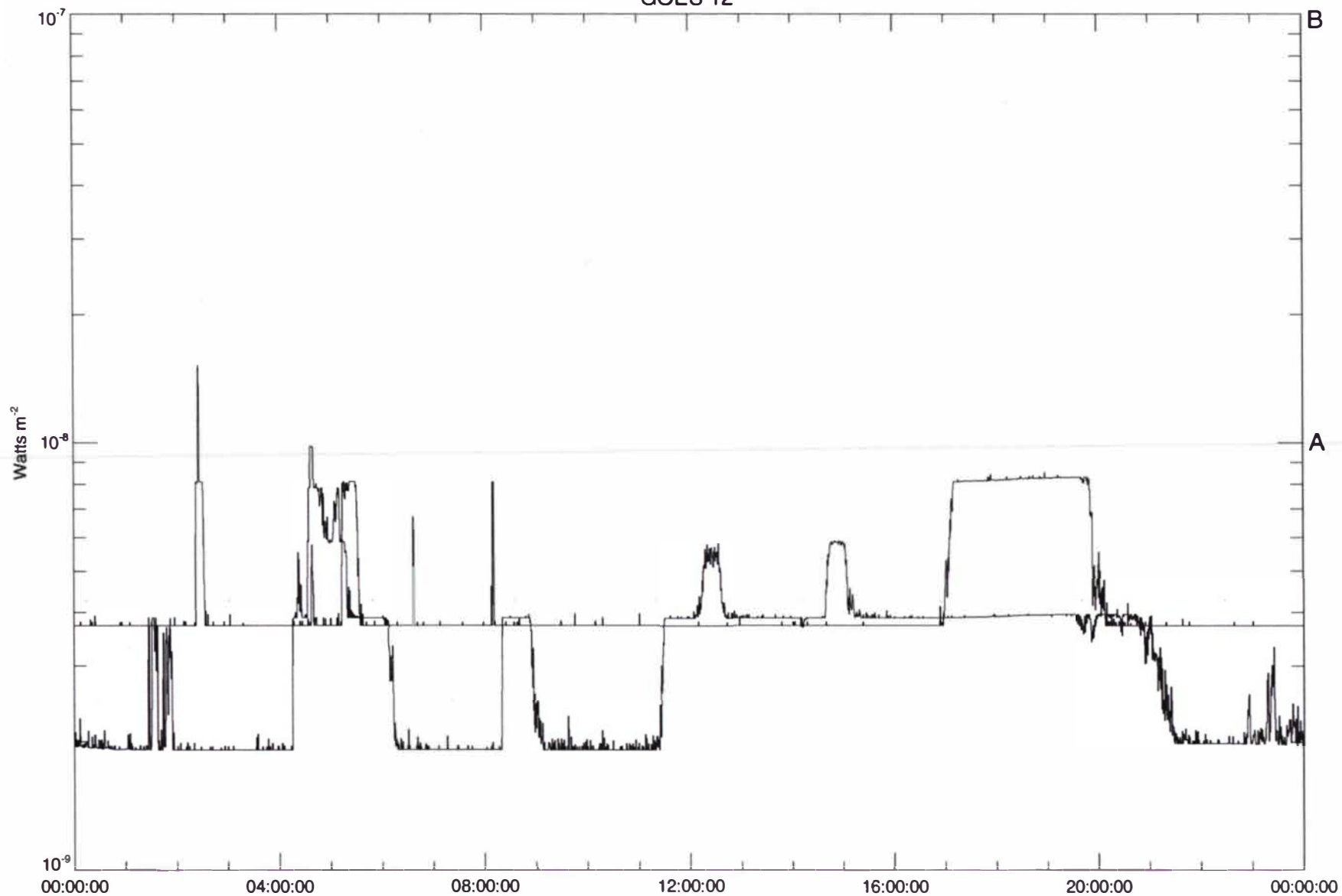
17/02/07 79355.000 (SUZAKU_20070217_79375)

25- 150 keV

COUNTS/0.250 S



GOES 12



Data Start: 07/02/17, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Plot created: 07/02/20, 0921

Sample average = 10

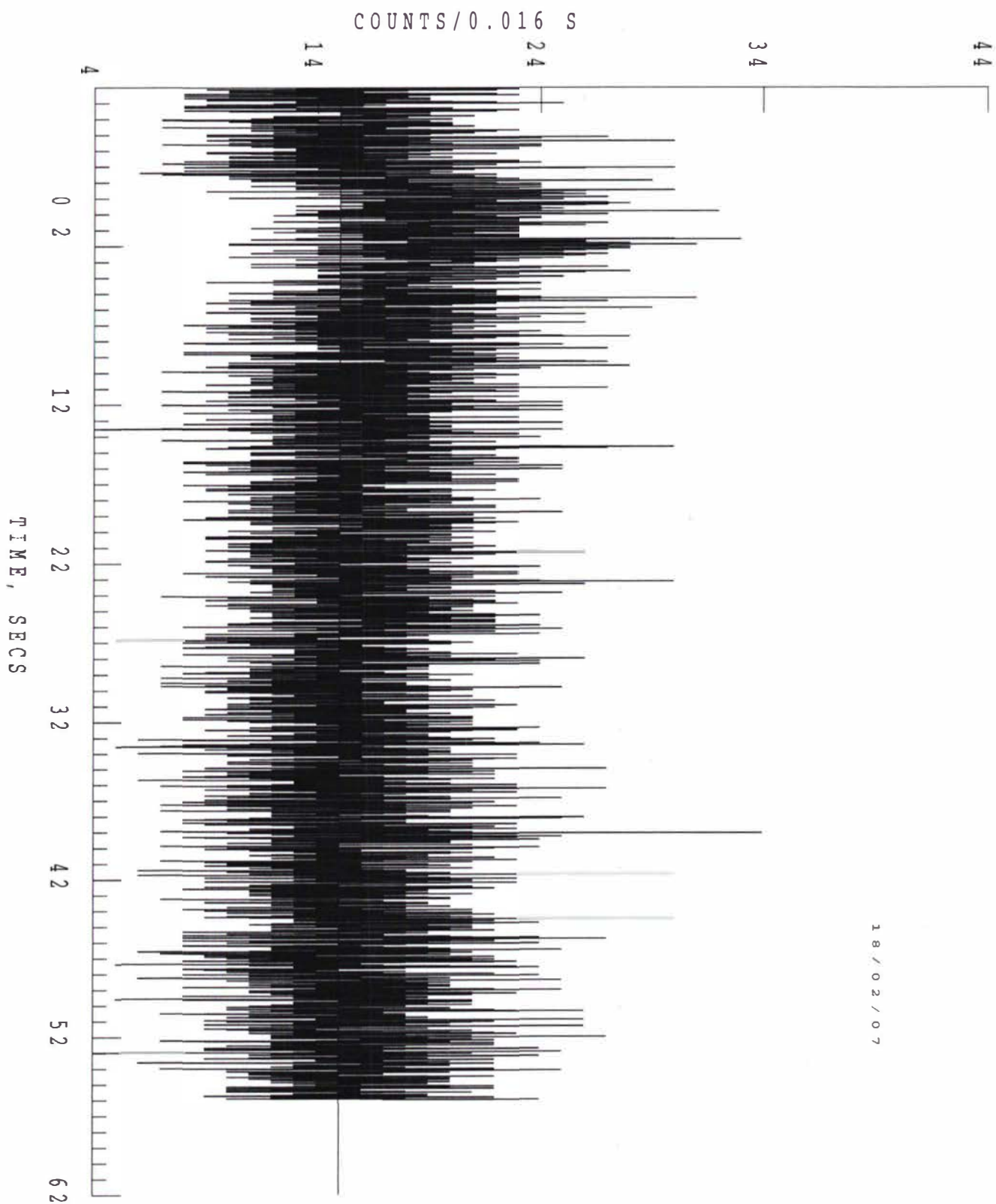
SUZAKU

18/02/07

48056.747

50 - 240 keV

Not in Suzaku burst list



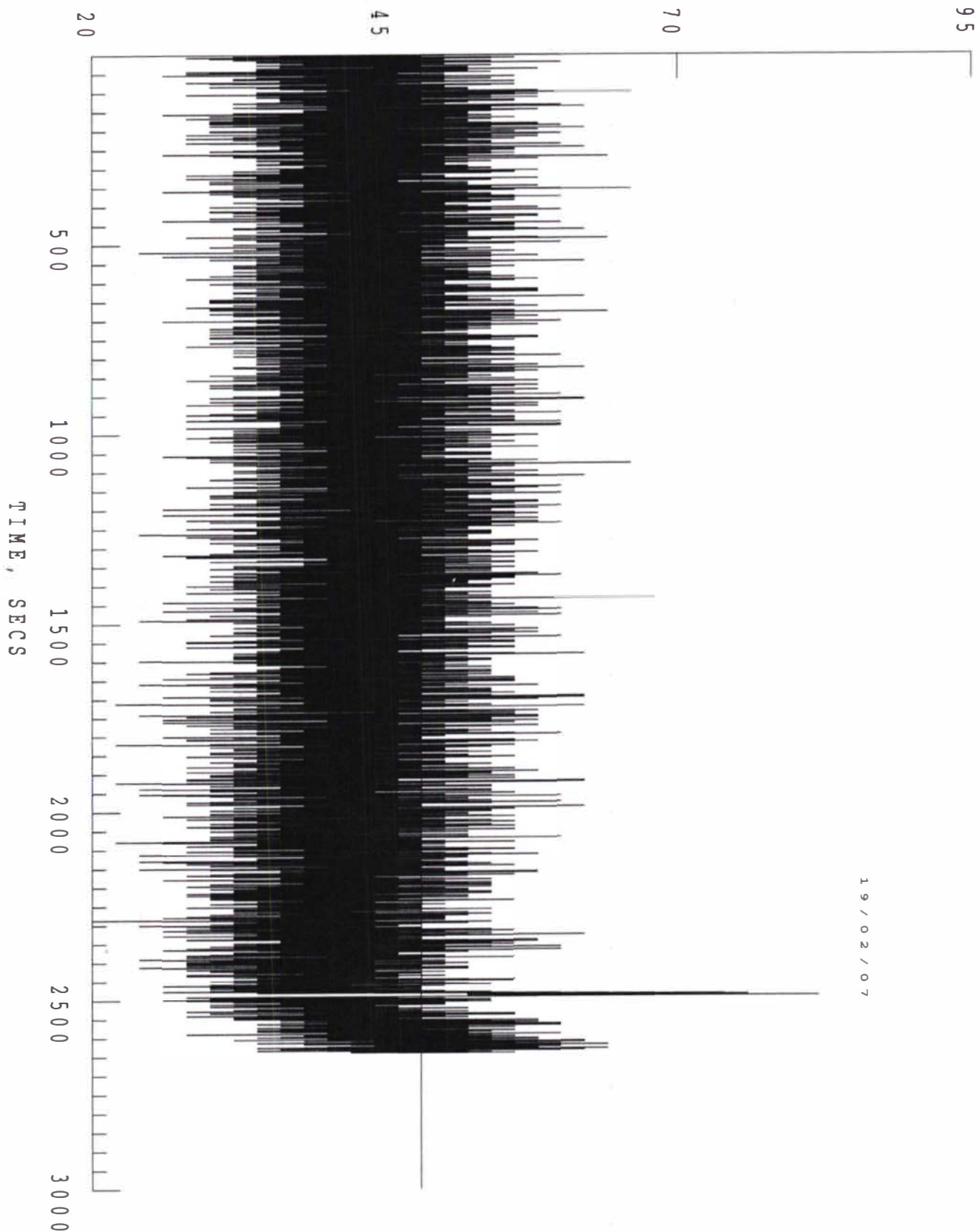
MS01

18/02/07

46704.023

50 - 3000 keV

COUNTS/0.250 S

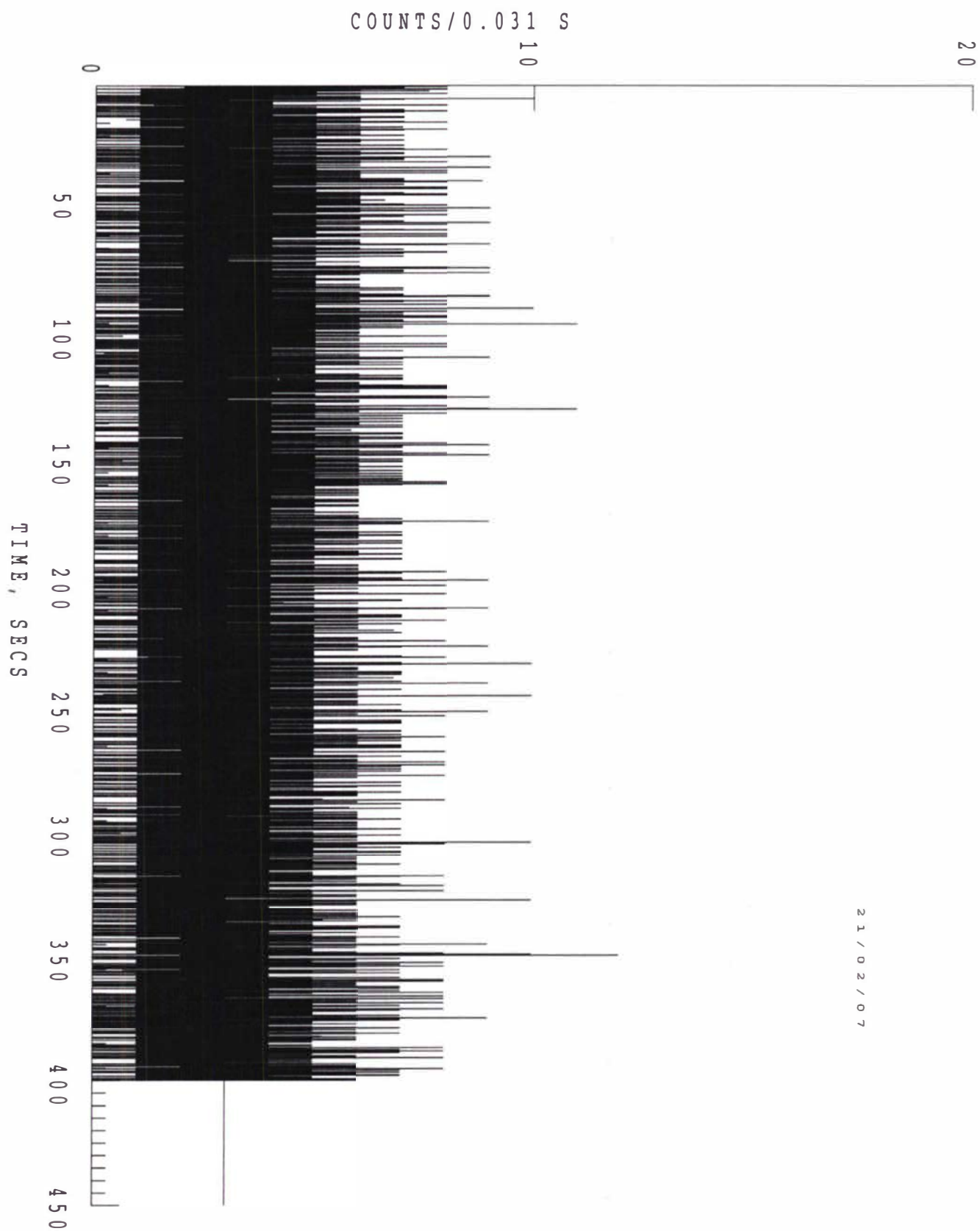


19/02/07

HESSI

18/02/07 47856.000 (SUZAKU_20070218_48056)

25- 150 keV



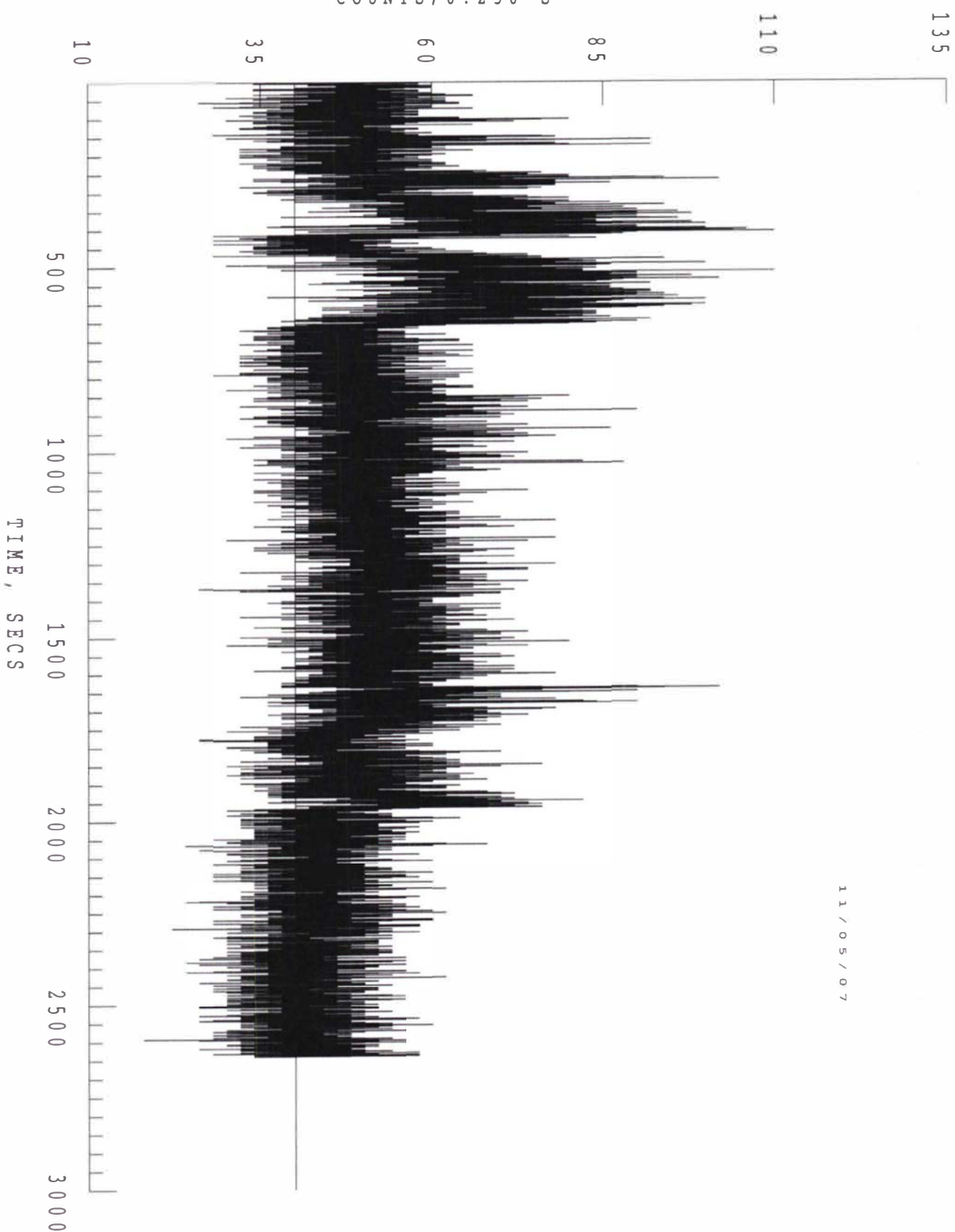
MS01

18/02/07

56963.842

50 - 3000 keV

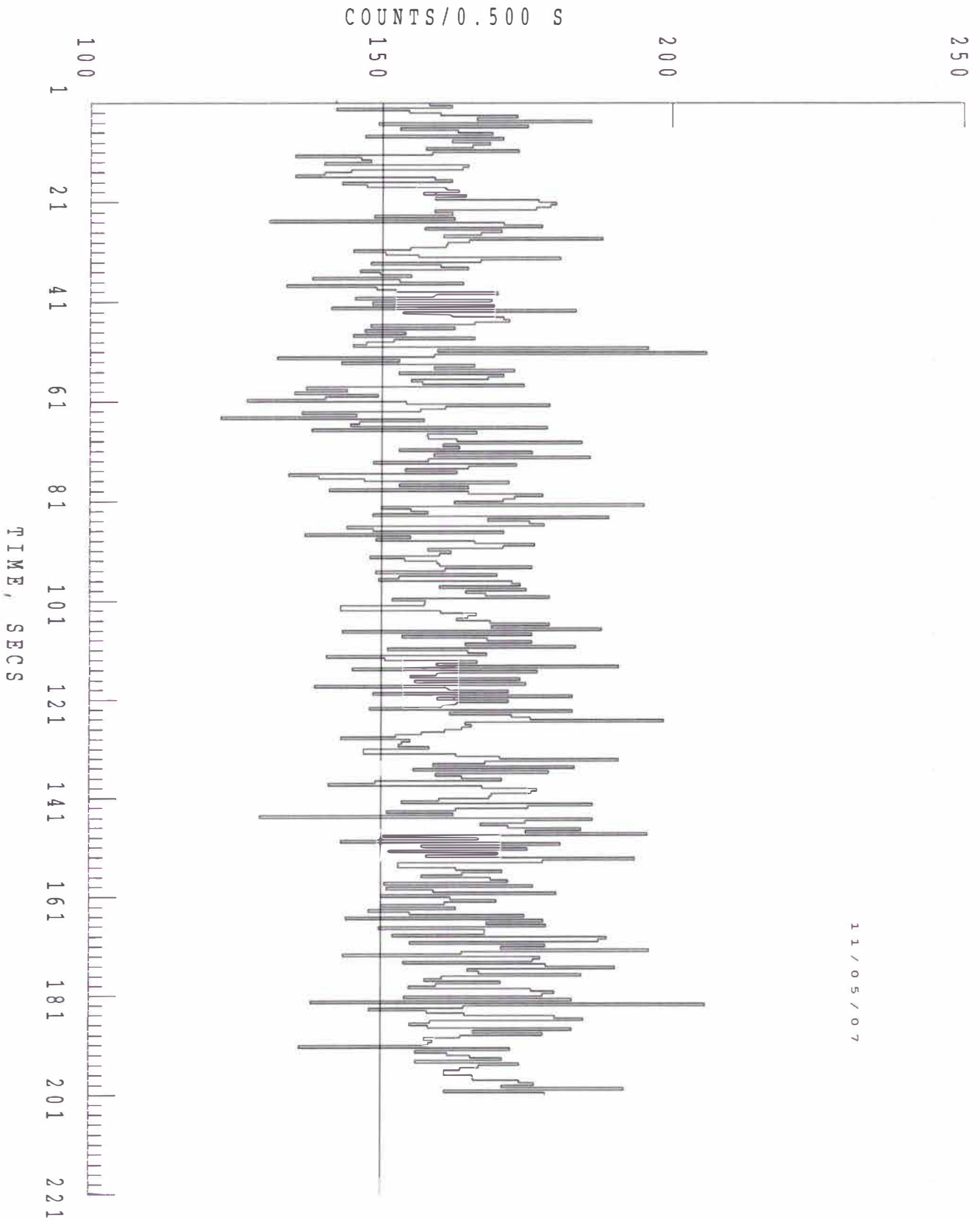
COUNTS/0.250 S



HESSI

18/02/07 58219.000 (SUZAKU_20070218_58320)

25- 150 keV



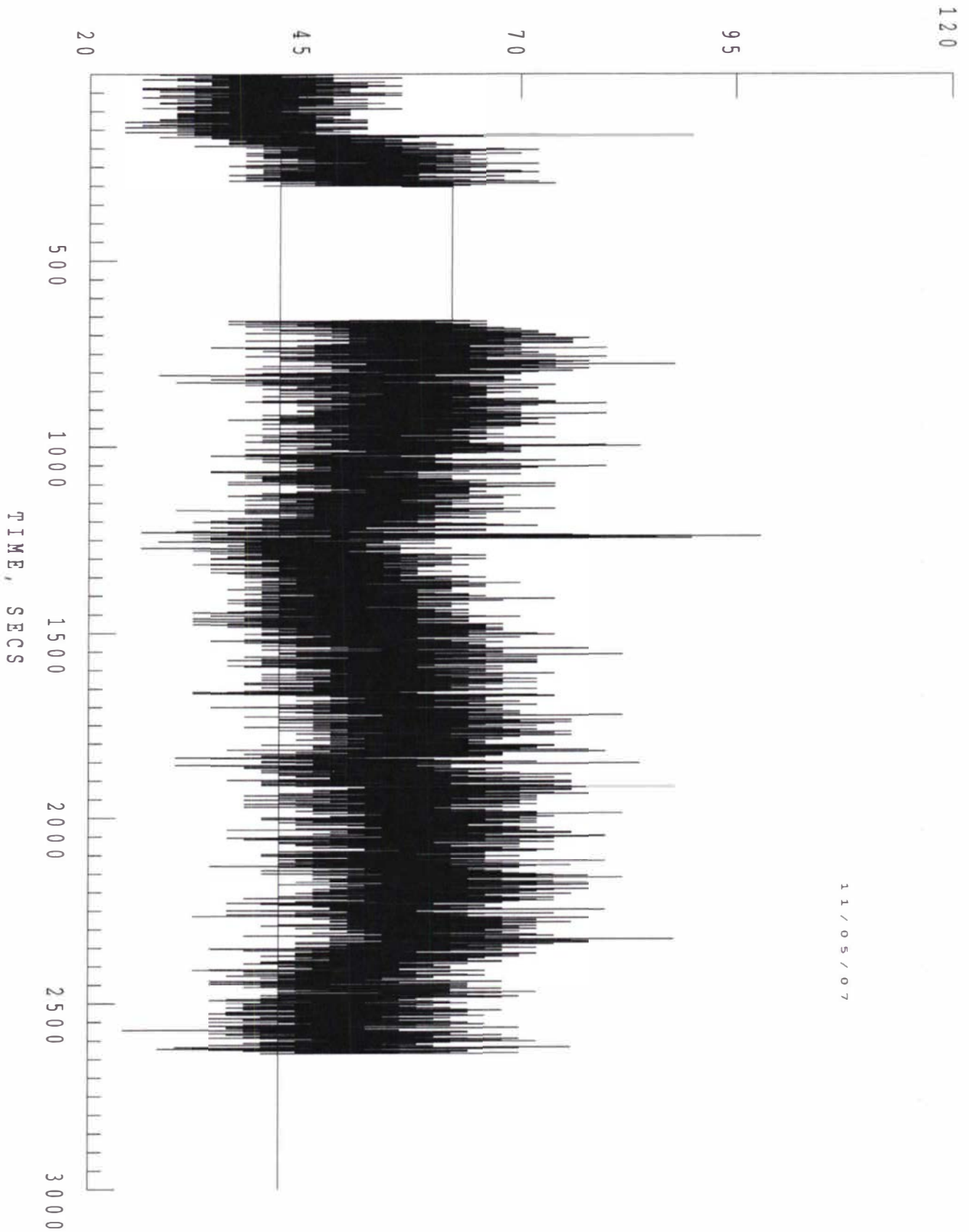
MS01

18/02/07

77483.486

50 - 3000 keV

COUNTS/0.250 S

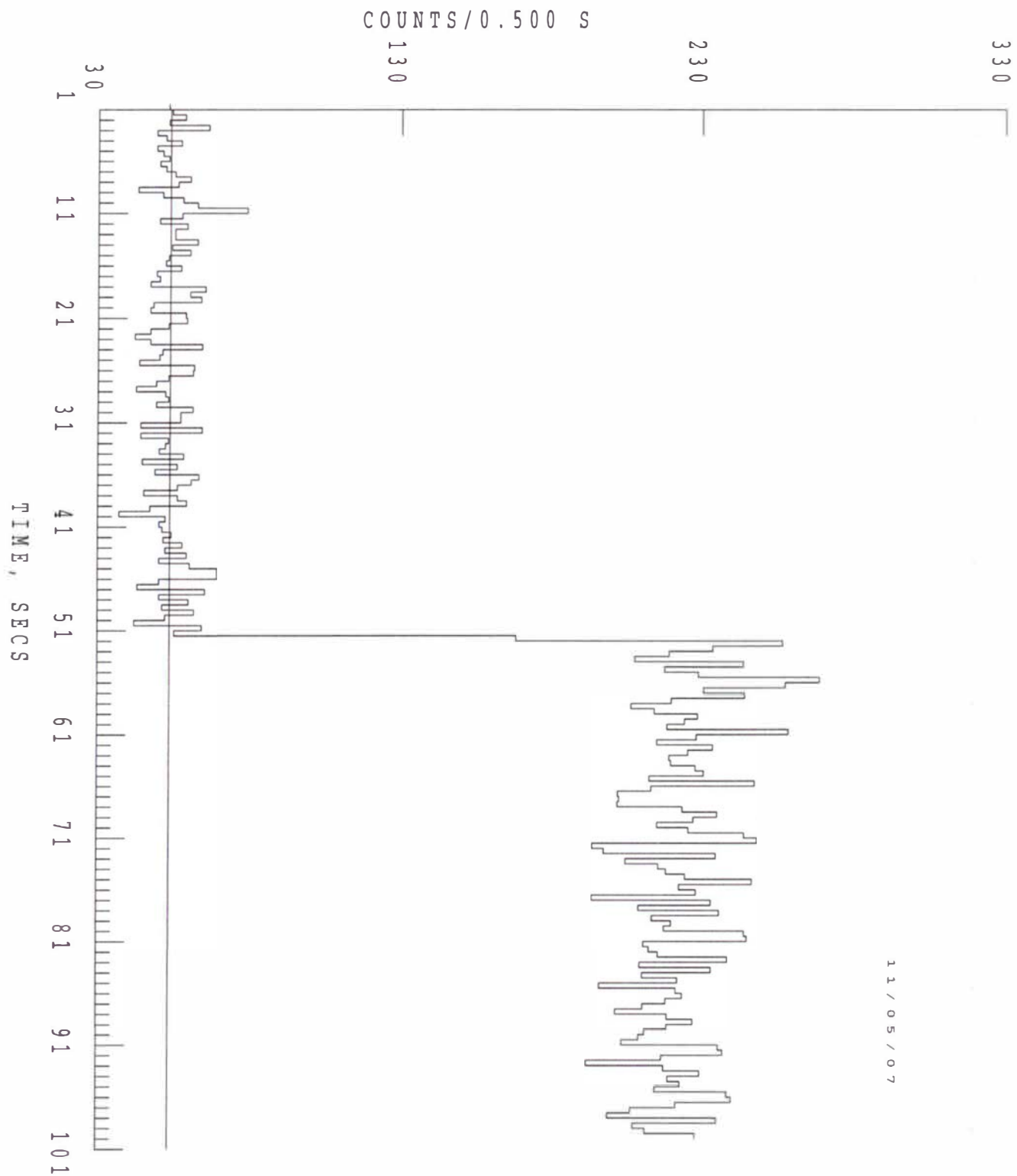


11/05/07

HESSI

18/02/07 78758.000 (SUZAKU_20070218_78808)

25- 150 keV



11/05/07

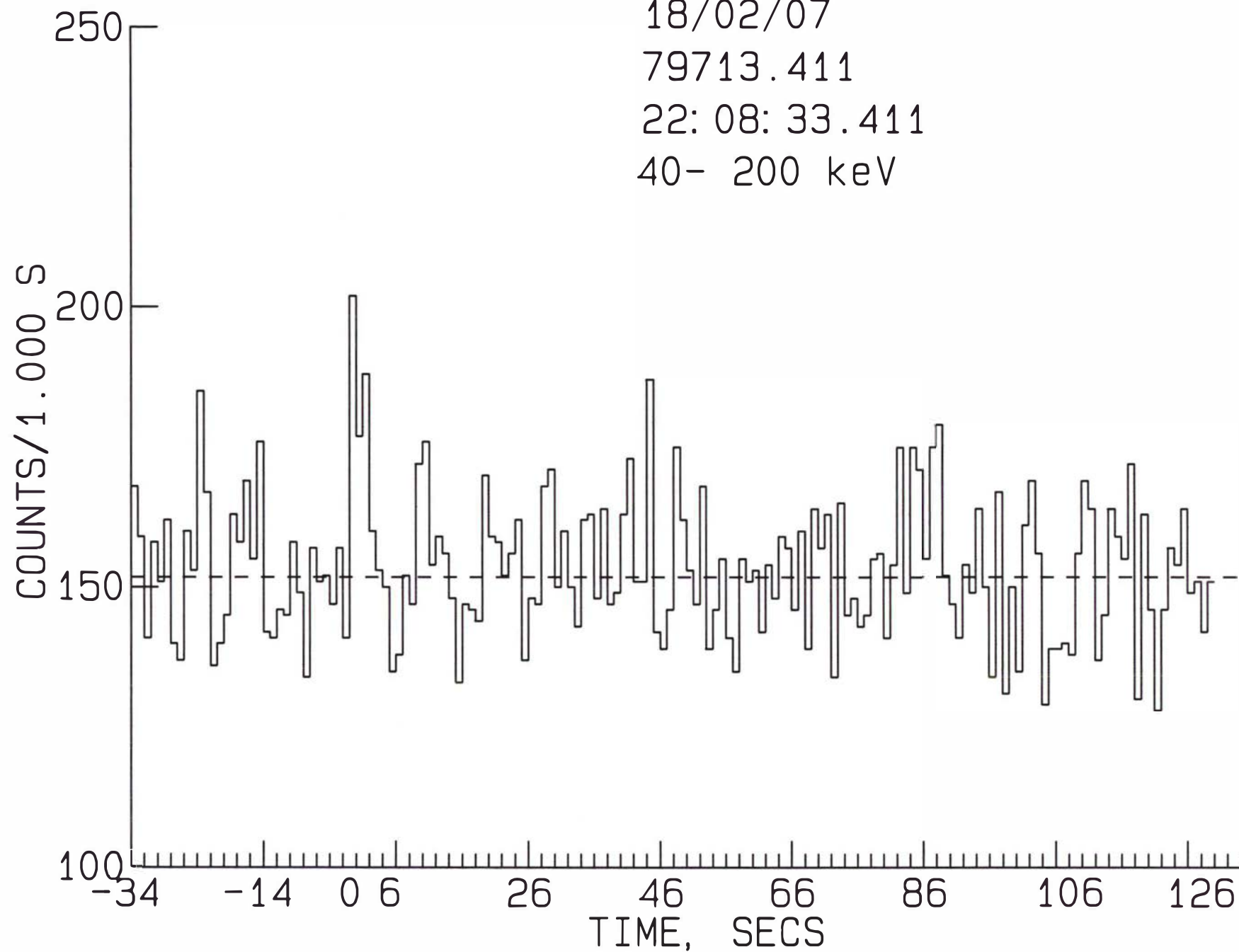
MESSENGER

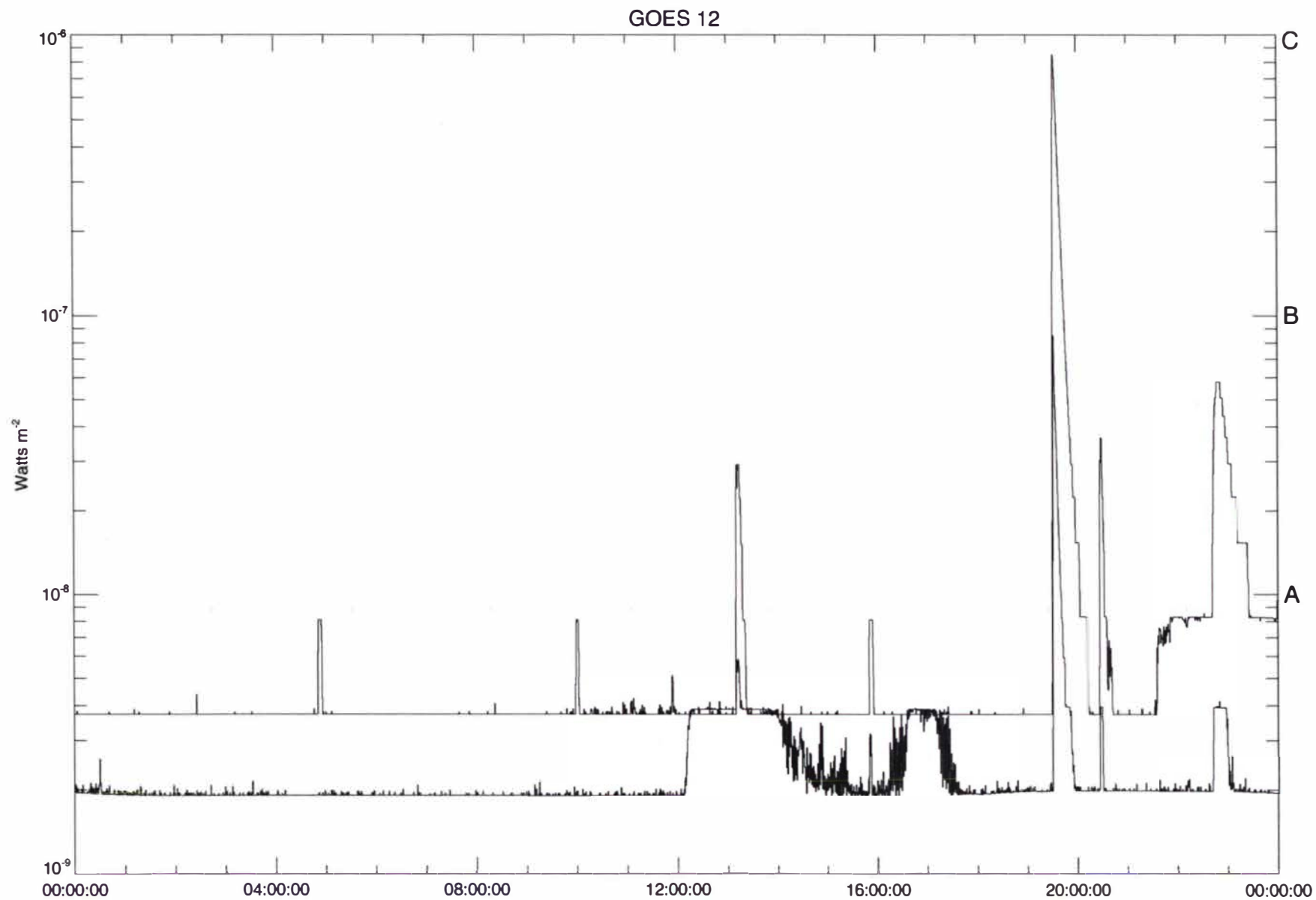
18/02/07

79713.411

22:08:33.411

40- 200 keV





Data Start: 07/02/18, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Plot created: 07/02/21, 0921

Sample average = 10

From vxw@capella.gsfc.nasa.gov Sun Feb 18 17:13:36 2007
X-ASG-Debug-ID: 1171847758-506400070000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: capella.gsfc.nasa.gov[128.183.16.187]
-Barracuda-Start-Time: 1171847758
X-ASG-Whitelist: Sender
Date: Sun, 18 Feb 2007 20:15:57 -0500
From: Bacodine <vxw@capella.gsfc.nasa.gov>
To: khurley@ssl.berkeley.edu
X-ASG-Orig-Subj: GCN/SWIFT_BAT_LIGHTCURVE
Subject: GCN/SWIFT_BAT_LIGHTCURVE
Mime-Version: 1.0
Content-Disposition: inline
User-Agent: Mutt/1.4.1i
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

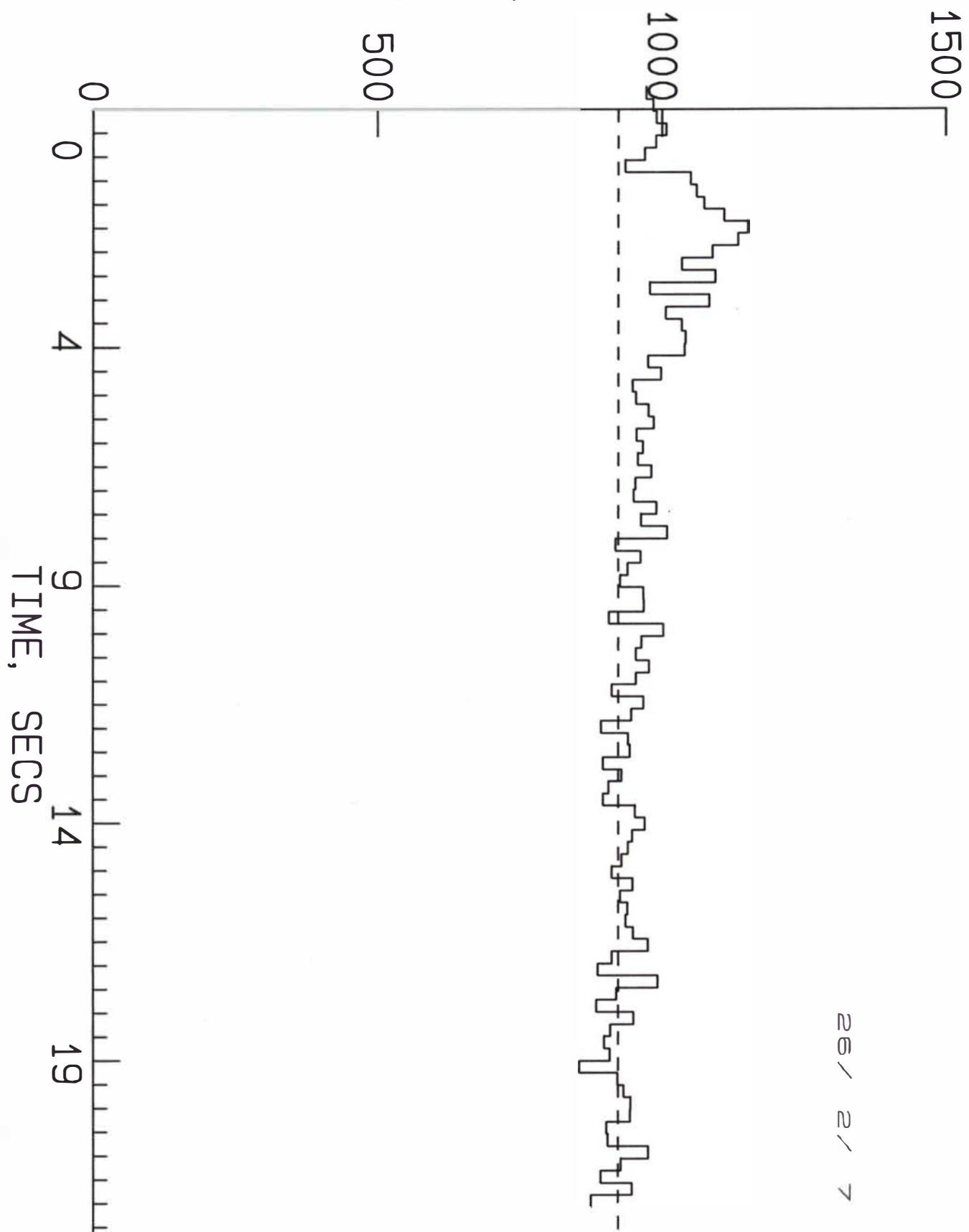
TITLE: GCN/SWIFT NOTICE
NOTICE_DATE: Mon 19 Feb 07 01:15:40 UT
NOTICE_TYPE: Swift-BAT GRB Lightcurve
TRIGGER_NUM: 261132, Seg_Num: 0
GRB_RA: 260.198d {+17h 20m 48s} (J2000),
260.186d {+17h 20m 45s} (current),
260.287d {+17h 21m 09s} (1950)
GRB_DEC: +69.364d {+69d 21' 51"} (J2000),
+69.357d {+69d 21' 27"} (current),
+69.411d {+69d 24' 41"} (1950)
GRB_DATE: 14150 TJD; 50 DOY; 07/02/19
GRB_TIME: 4216.14 SOD {01:10:16.14} UT
TRIGGER_INDEX: 443
RB_PHI: 130.29 [deg]
RB_THETA: 14.36 [deg]
DELTA_TIME: -31.00 [sec]
TRIGGER_DUR: 2.048 [sec]
SOLN_STATUS: 0x3
RATE_SIGNIF: 14.59 [sigma]
IMAGE_SIGNIF: 7.61 [sigma]
LC_URL: sw00261132000msb.lc
SUN_POSTN: 332.09d {+22h 08m 22s} -11.47d {-11d 28' 11"}
SUN_DIST: 94.52 [deg] Sun_angle= 4.8 [hr] (West of Sun)
MOON_POSTN: 349.74d {+23h 18m 58s} -4.24d {-04d 14' 23"}
MOON_DIST: 93.81 [deg]
MOON_ILLUM: 3 [%]
GAL_COORDS: 100.06, 33.20 [deg] galactic lon,lat of the burst (or transient)
ECL_COORDS: 138.21, 85.38 [deg] ecliptic lon,lat of the burst (or transient)
COMMENTS: SWIFT-BAT GRB Lightcurve.
COMMENTS:
COMMENTS: The next comments were copied from the BAT_POS Notice:
COMMENTS: This is a rate trigger.
COMMENTS: A point_source was found.
COMMENTS: This does not match any source in the on-board catalog.
COMMENTS: This does not match any source in the ground catalog.
COMMENTS: This is a GRB.
COMMENTS: This trigger occurred at longitude,latitude = 119.99,5.10 [deg]

SWIFT

19/02/07 4216.147

25- 100 keV

COUNTS/0.256 S



MS01

19/02/07

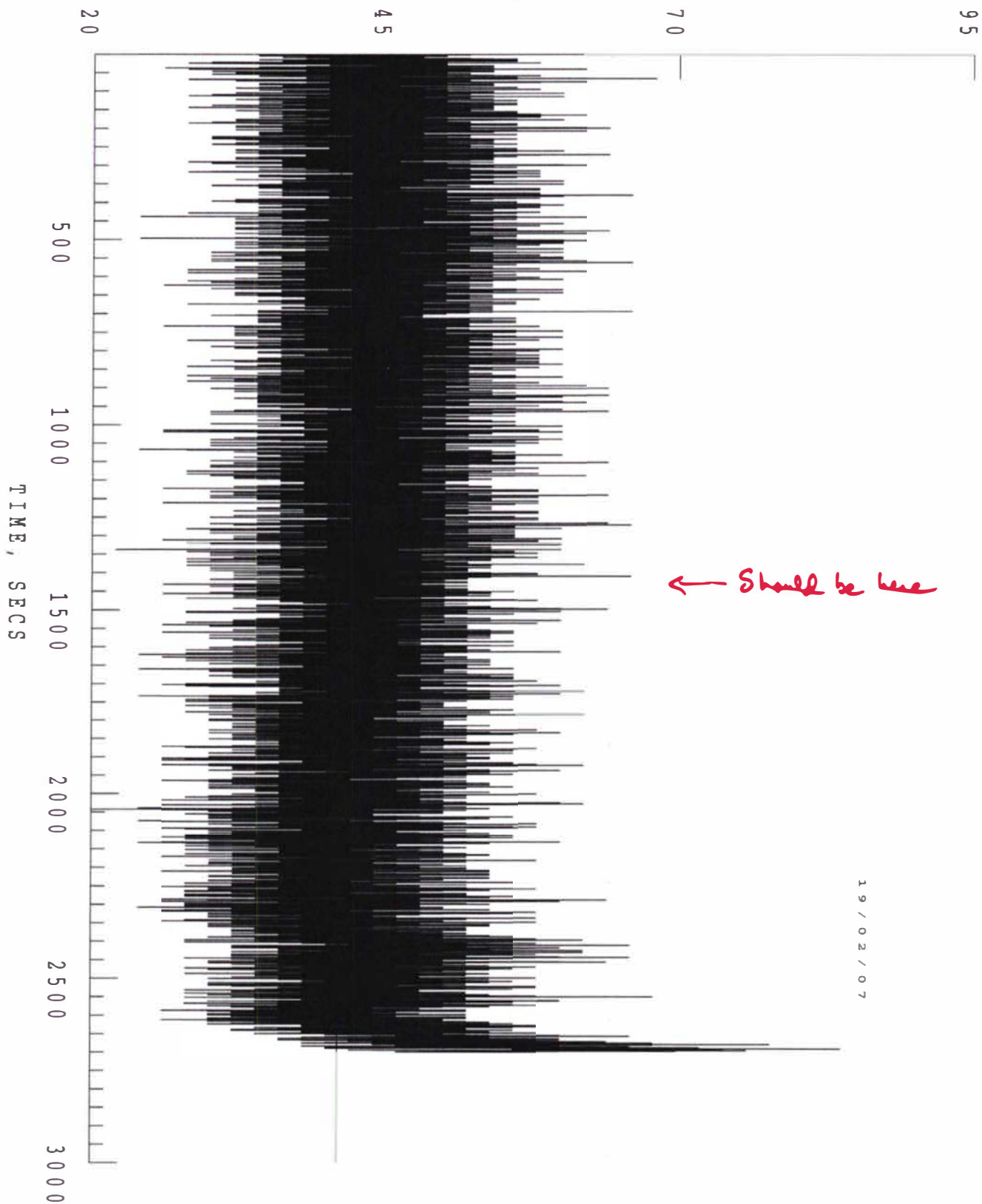
2843.250

50 - 3000 keV

MCT = 4309s

No GRS tug

COUNTS/0.250 S



HESSI

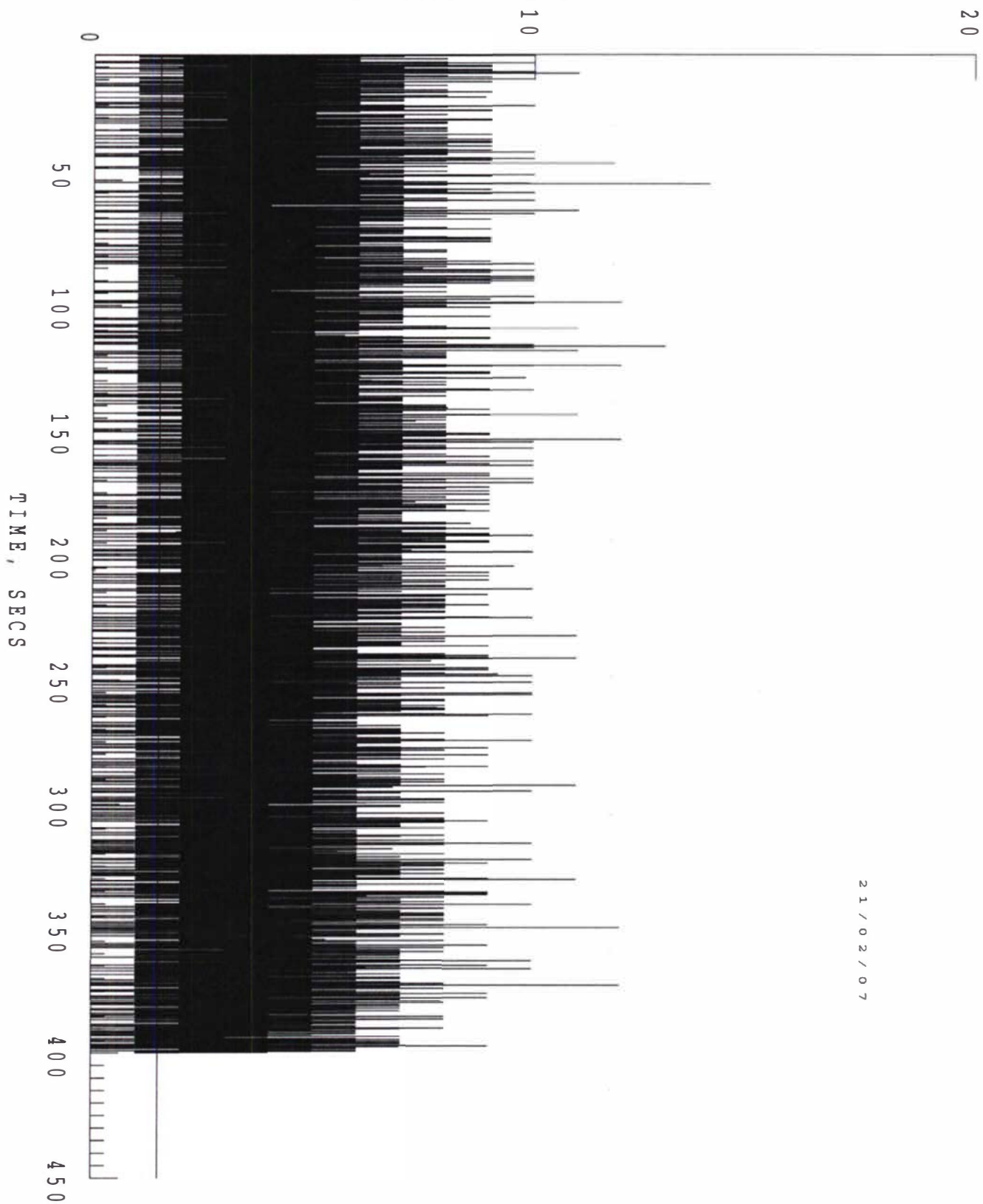
19/02/07

4016.000

(GSwift-BAT_261132_0_20070219_

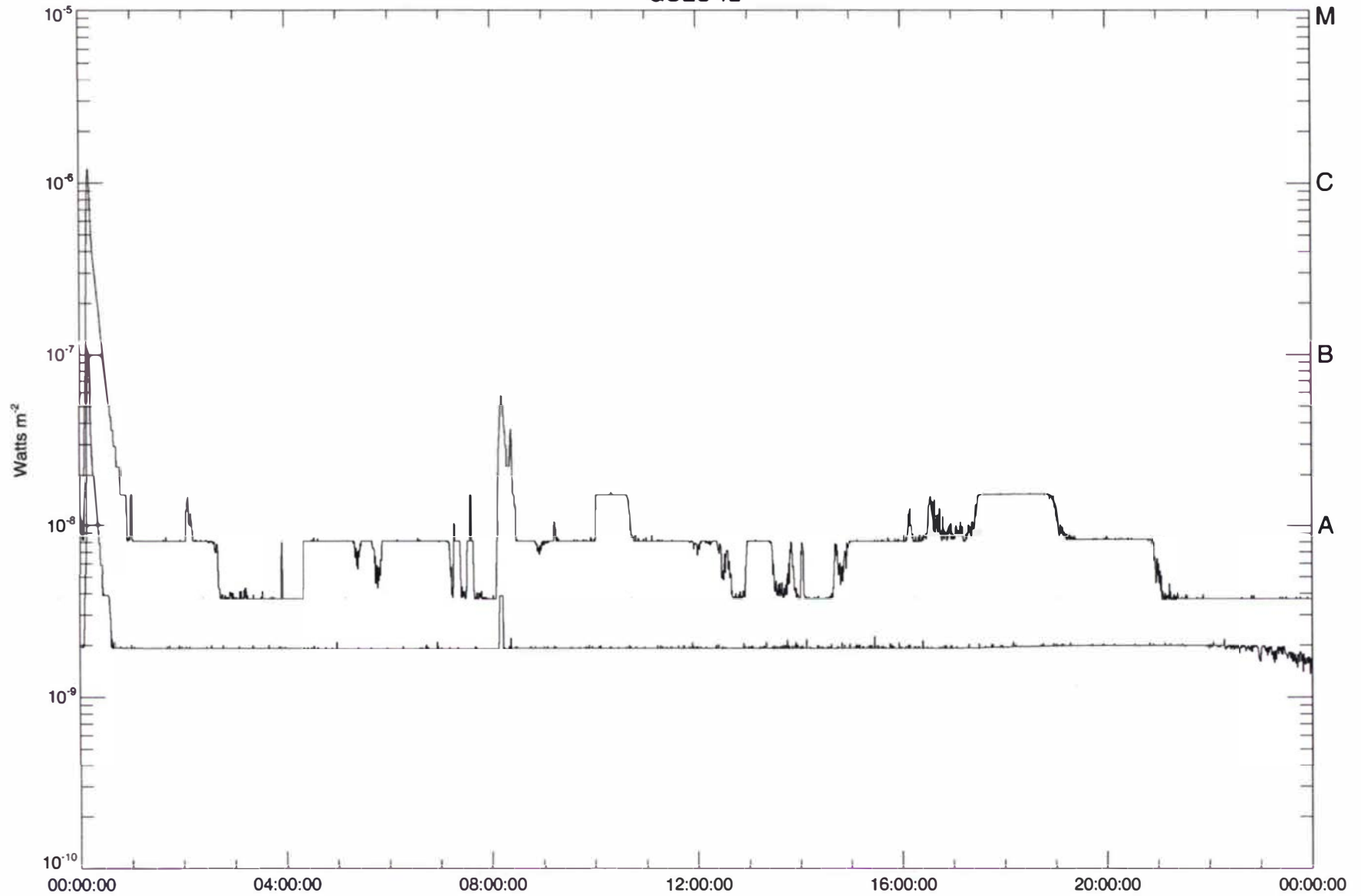
25- 150 keV

COUNTS/0.031 S



21/02/07

GOES 12



Data Start: 07/02/19, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Plot created: 07/02/22, 0921

Sample average = 10

From gcncirc@capella.gsfc.nasa.gov Mon Feb 19 21:02:54 2007
X-ASG-Debug-ID: 1171947915-617100100000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: capella.gsfc.nasa.gov[128.183.16.187]
-Barracuda-Start-Time: 1171947915
X-ASG-Whitelist: Sender
From: GCN Circulars <gcncirc@capella.gsfc.nasa.gov>
X-ASG-Orig-Subj: GRB 070220: Swift detection of a burst
Subject: GRB 070220: Swift detection of a burst
To: khurley@ssl.berkeley.edu
Date: Tue, 20 Feb 2007 00:05:15 -0500 (EST)
Project: GCN (GRB Coordinates Network)
Phone: 301-286-3106 (voice) (-1684 fax)
Pager: 3013463733@mmode.com
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

TITLE: GCN CIRCULAR
NUMBER: 6114
SUBJECT: GRB 070220: Swift detection of a burst
DATE: 07/02/20 05:05:13 GMT
FROM: Scott Barthelmy at NASA/GSFC <scott@lheamail.gsfc.nasa.gov>

MCT = 174685 = 04:51:28

M. Stamatikos (NASA/ORAU), S. D. Barthelmy (GSFC),
A. P. Beardmore (U Leicester), D. N. Burrows (PSU),
N. Gehrels (NASA/GSFC), S. Immler (GSFC/USRA), J. A. Kennea (PSU),
F. E. Marshall (NASA/GSFC), C. Pagani (PSU),
K. L. Page (U Leicester), D. M. Palmer (LANL),
. Sakamoto (NASA/ORAU), P. Schady (MSSL-UCL) and
. E. Vanden Berk (PSU) report on behalf of the Swift Team:

17073

At 04:44:33 UT, the Swift Burst Alert Telescope (BAT) triggered and located GRB 070220 (trigger=261299). Swift slewed immediately to the burst. The BAT on-board calculated location is

RA, Dec 34.819, +68.818 which is

RA(J2000) = +02h 19m 17s

Dec(J2000) = +68d 49' 06"

with an uncertainty of 3 arcmin (radius, 90% containment, including systematic uncertainty). The BAT light curve shows multiple peaks with a duration of about 60 sec. The peak count rate was ~7000 counts/sec (15-350 keV), at ~15 sec after the trigger.

The XRT began observing the field at 04:45:51 UT, 79 seconds after the BAT trigger. XRT found a bright, fading, uncatalogued X-ray source located at RA, Dec 34.7765, +68.8052 which is

RA(J2000) = 02h 19m 06.3s

Dec(J2000) = 68d 48' 18.7"

with an uncertainty of 4.7 arcseconds (radius, 90% containment). This location is 72 arcseconds from the BAT on-board position, within the BAT error circle. The initial flux in the 2.5s image was 4.5×10^{-9} erg/cm²/s (0.2-10 keV).

UVOT took a finding chart exposure of 100 seconds with the White ('160-650 nm) filter starting 88 seconds after the BAT trigger. No afterglow candidate has been found in the initial data products. The 2.7'x2.7' sub-image covers 100% of the XRT error circle. The 3-sigma upper limit in a 100s white band exposure is 19.6 mag. The 8'x8' region for the list of sources generated on-board covers 100% of the XRT error circle. The list of sources is typically complete to about

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

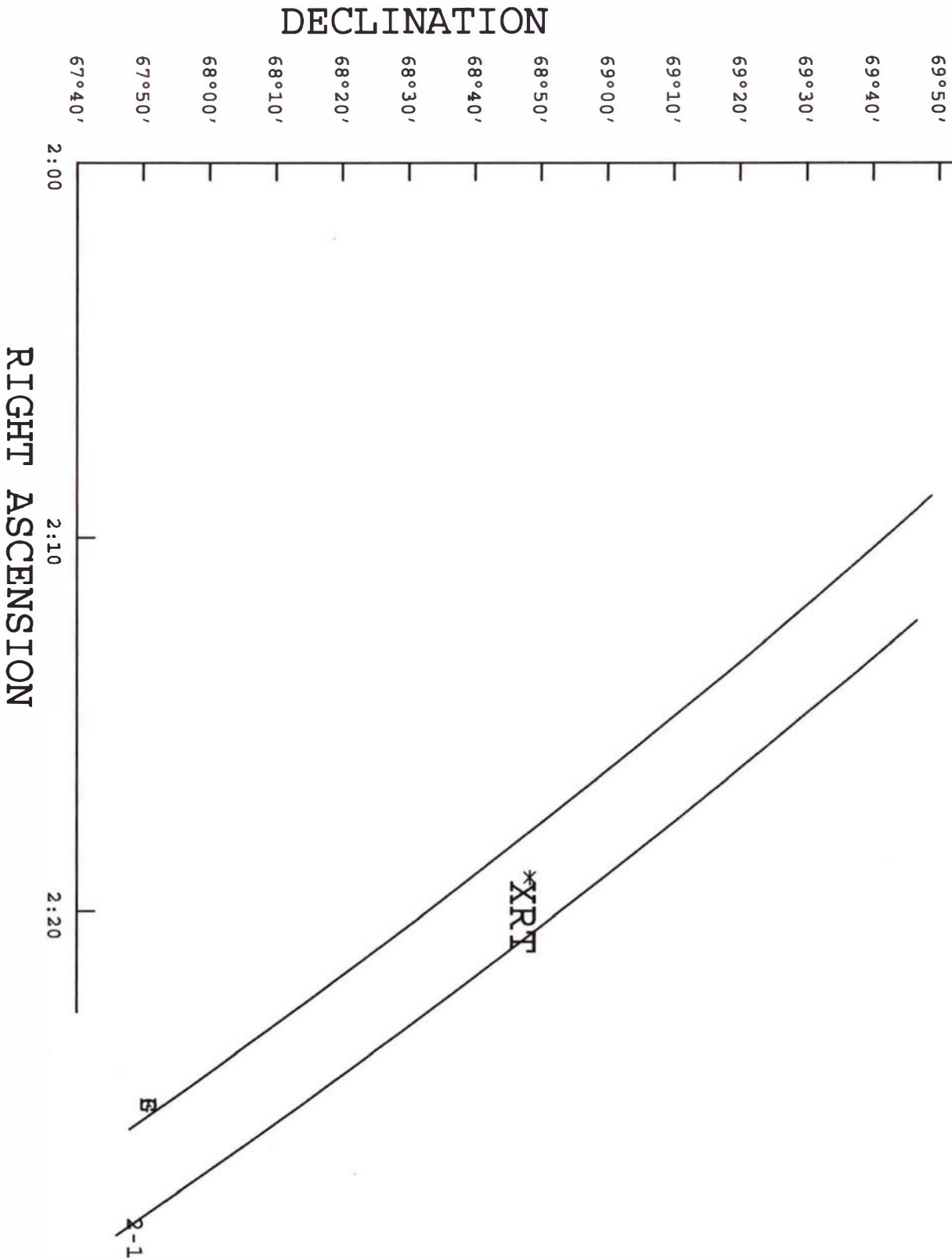
G=GALACTIC EQUATOR

1 MESSENGER

2 SWIFT

EVENT OF FEB 20, 2007 4:44

23 / 5 / 7



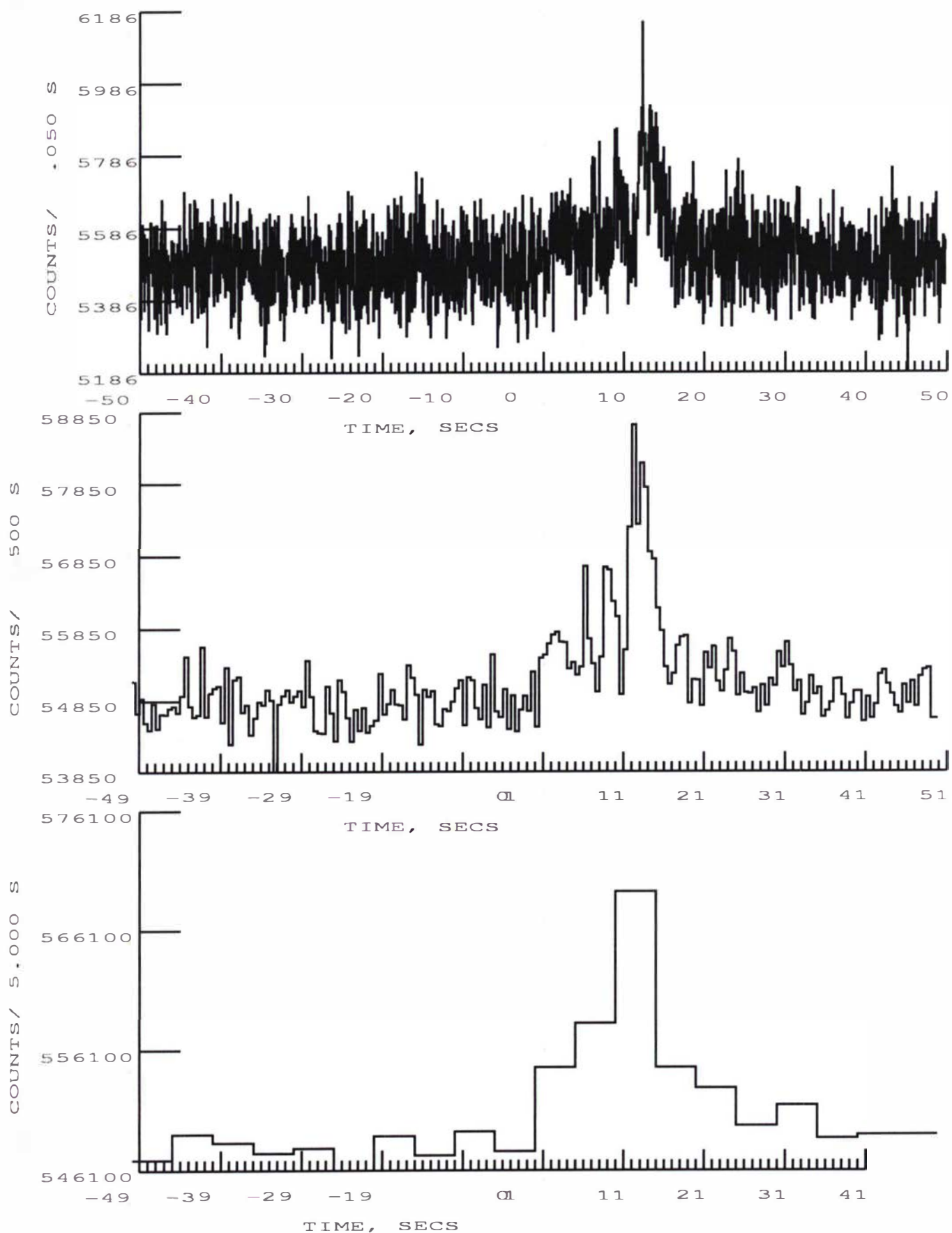
INTEGRAL

20/02/07

17073.000

04:44:33.0

18/07/14



N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

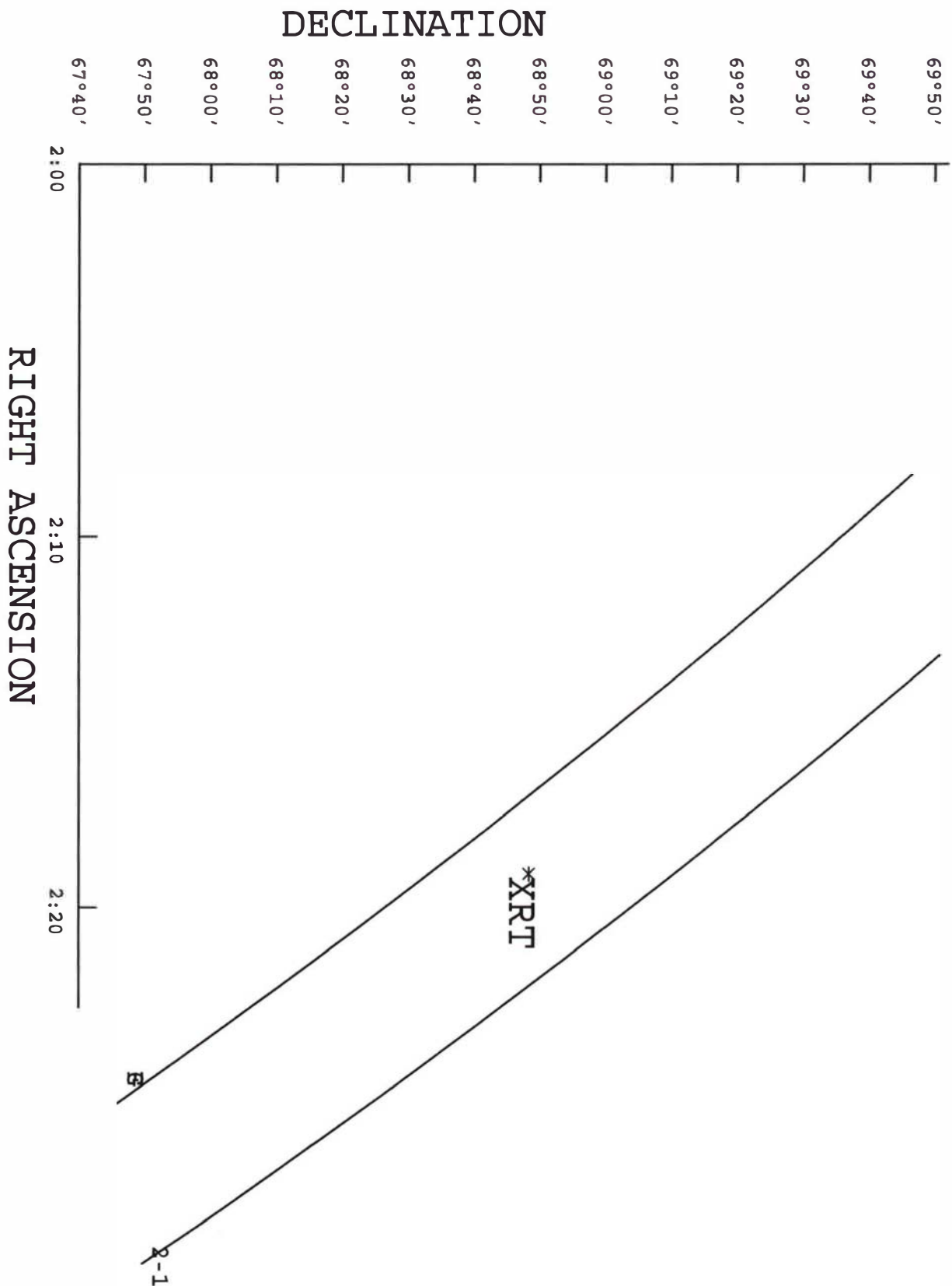
G=GALACTIC EQUATOR

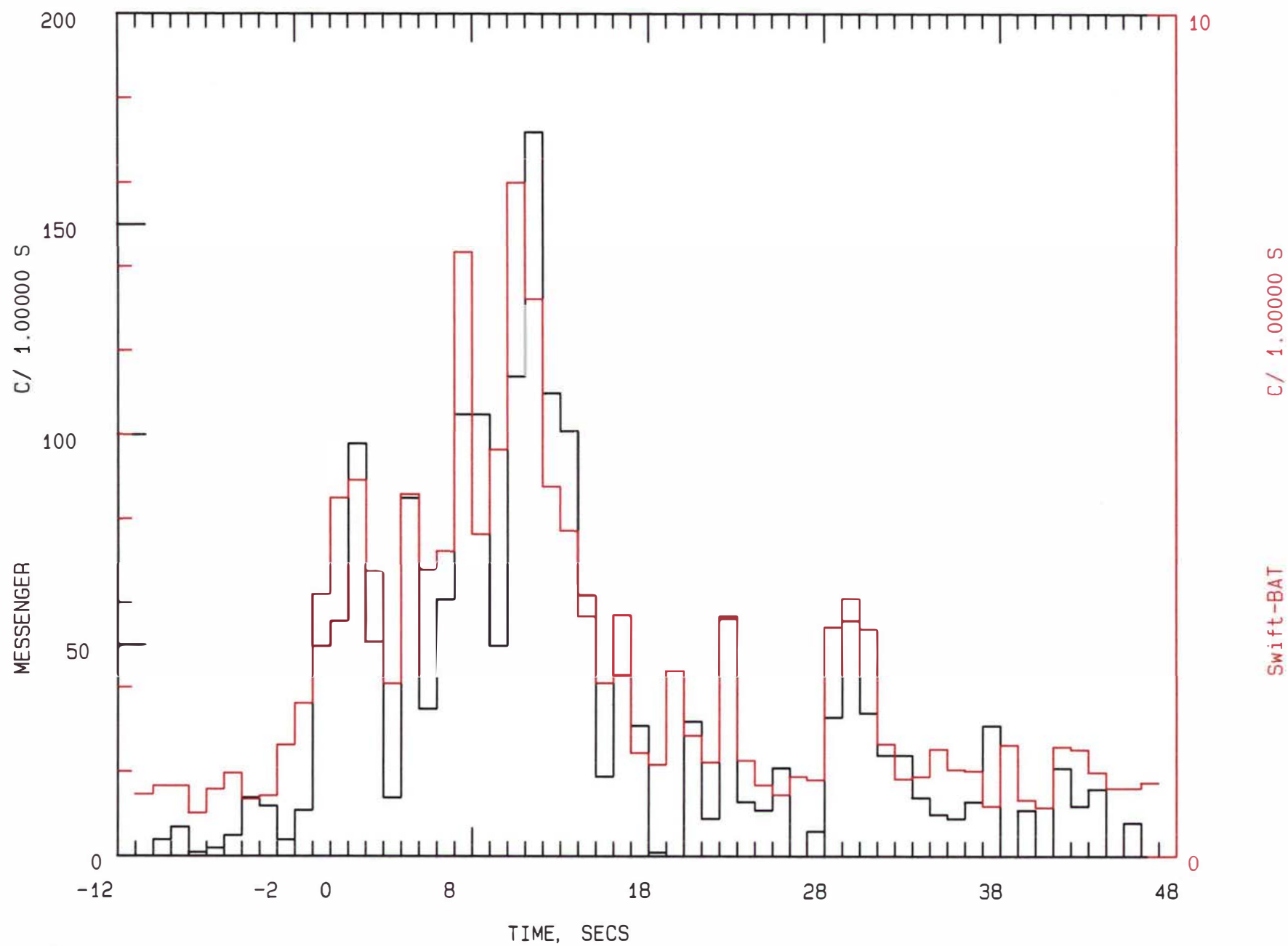
1 SWIFT

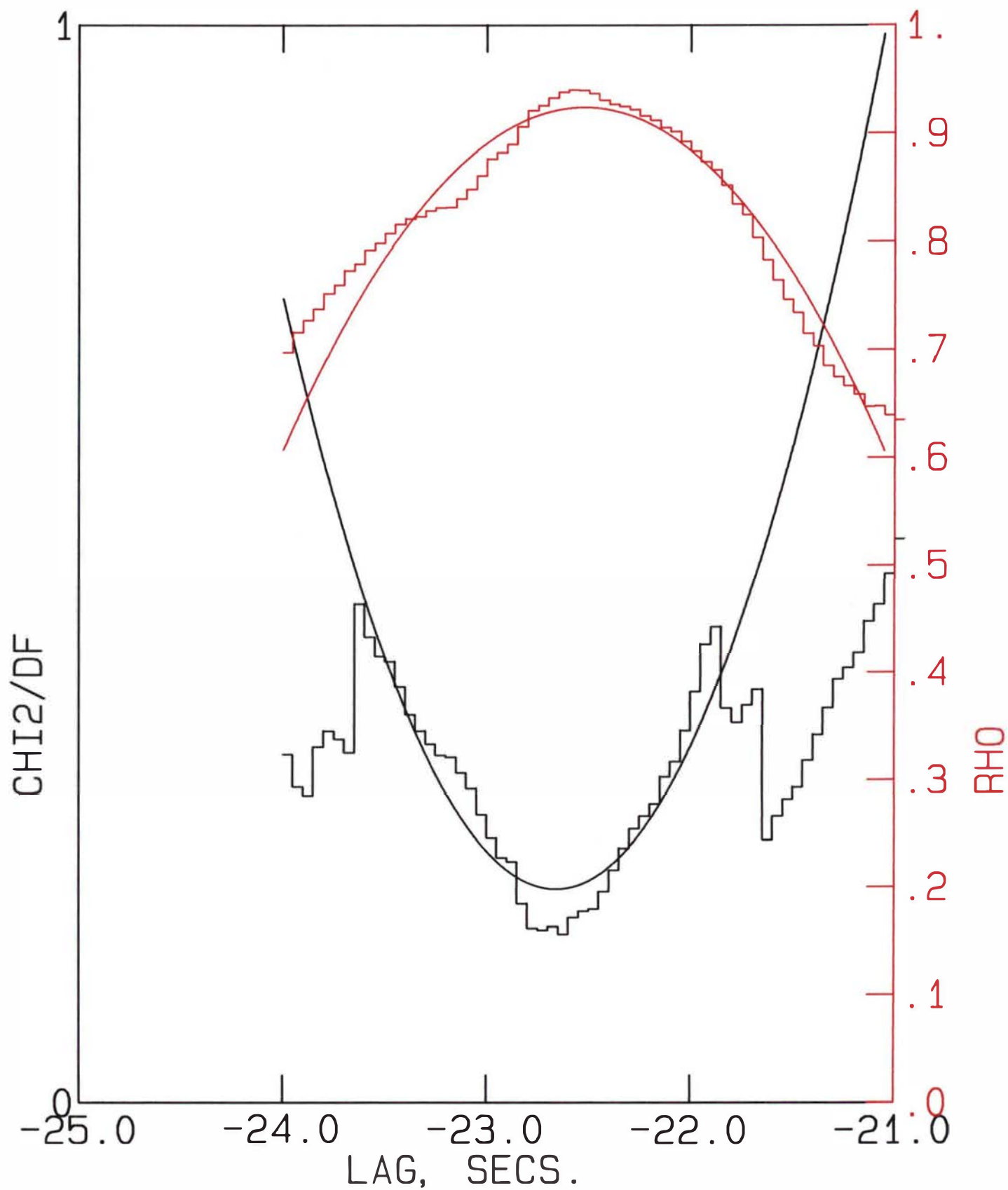
2 MESSENGER

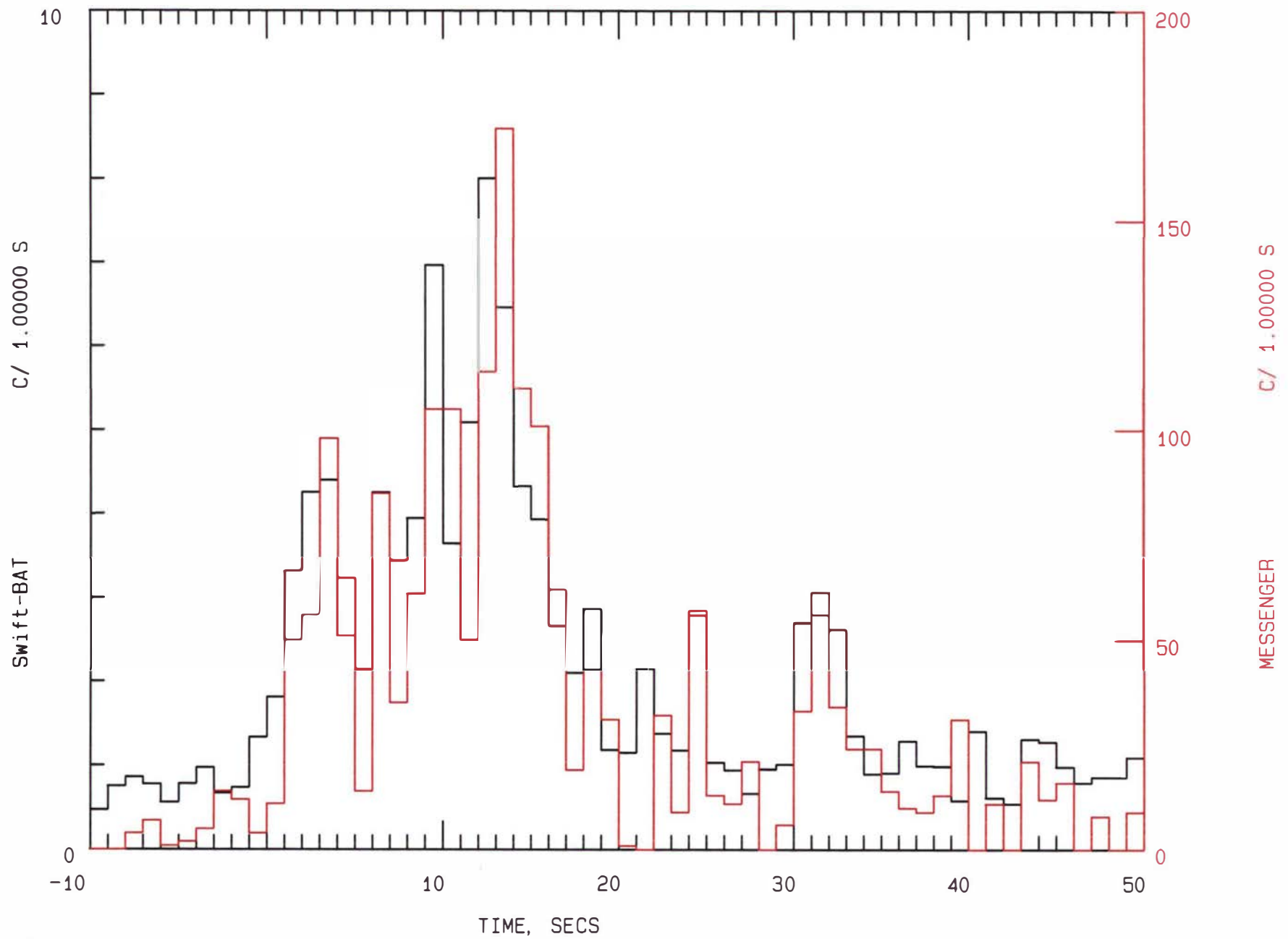
EVENT OF FEB 20, 2007 4:44

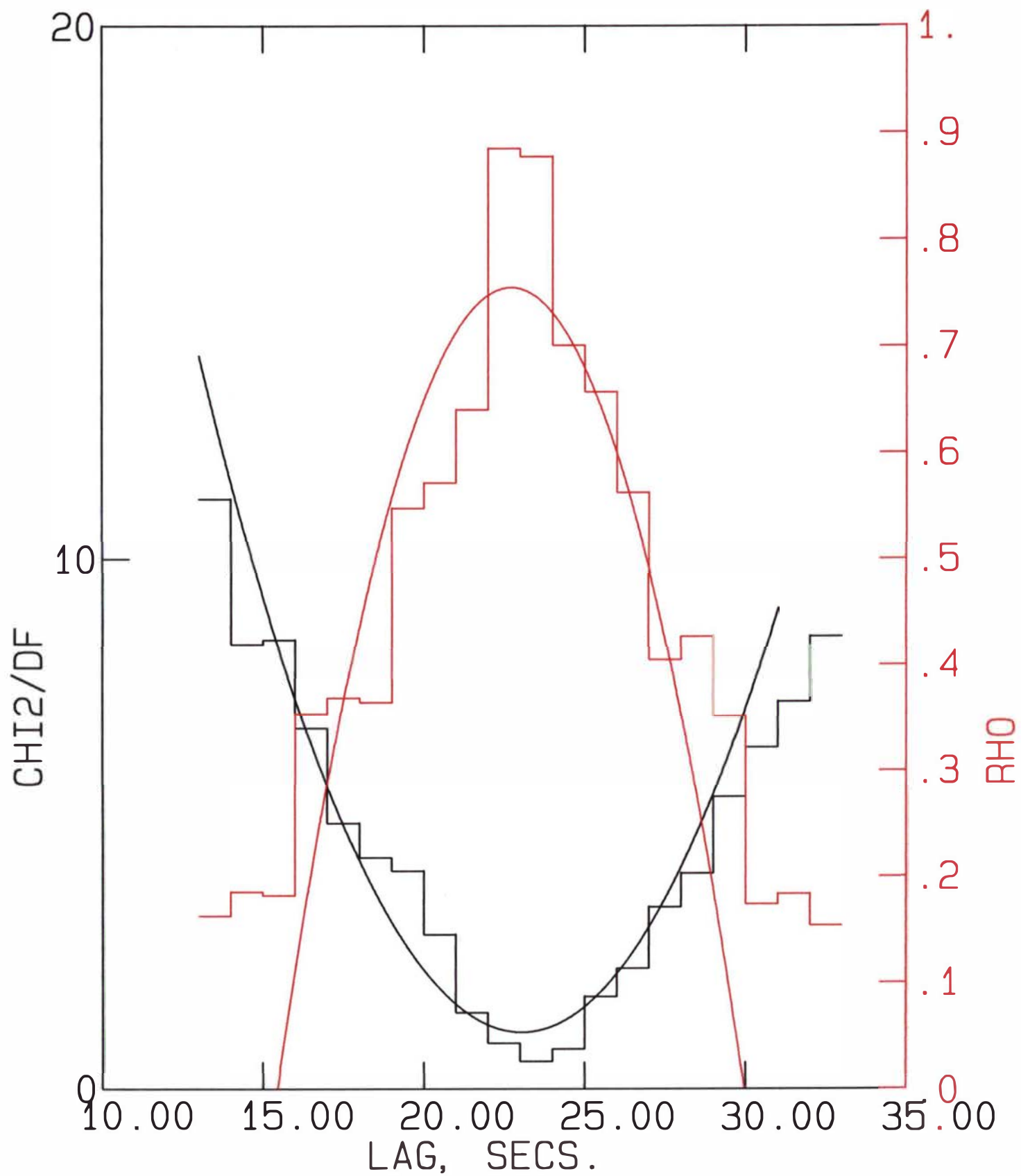
23 / 5 / 7









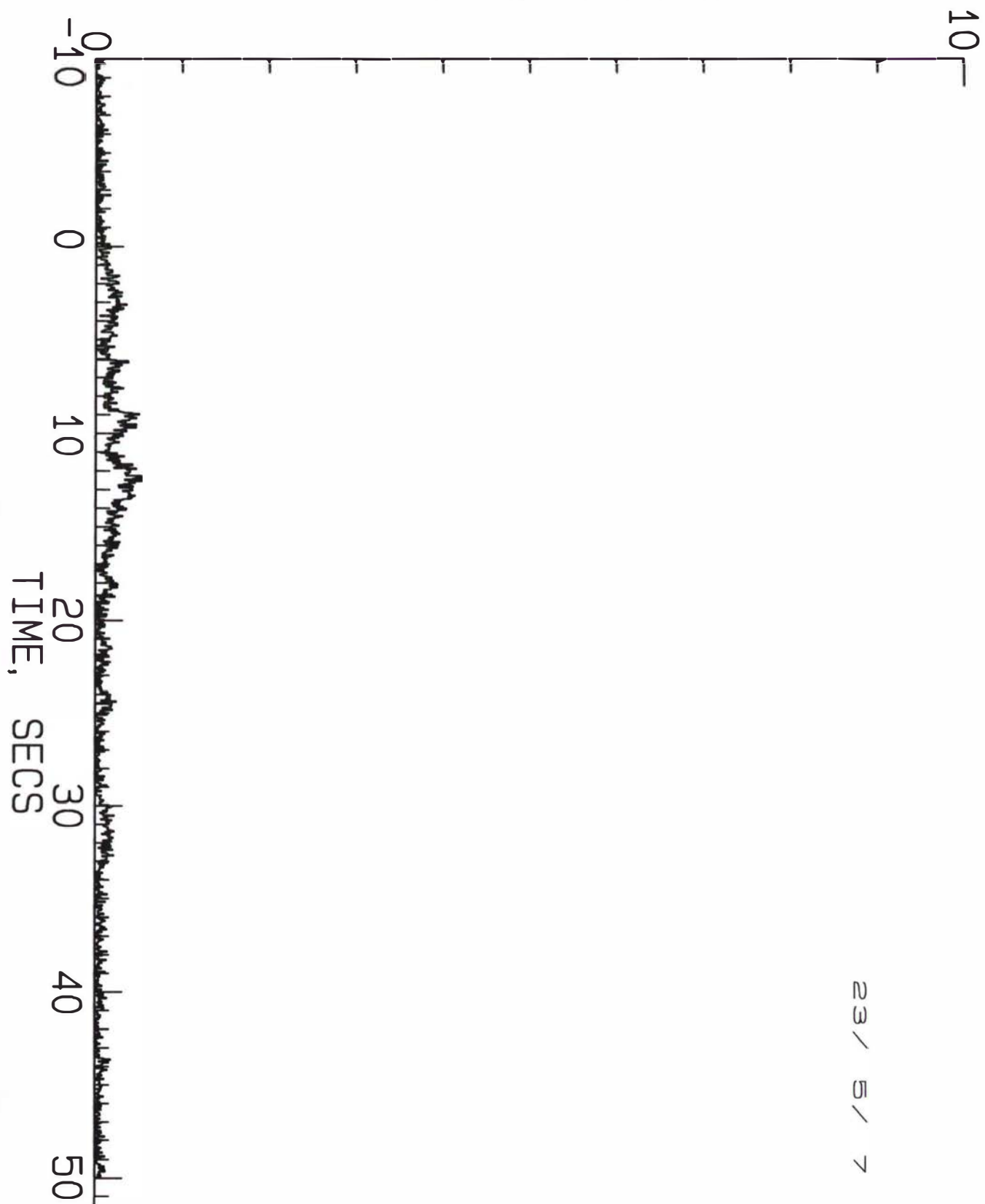


SWIFT

07/02/20 17072.912

40- 200 keV

COUNTS/0.050 S

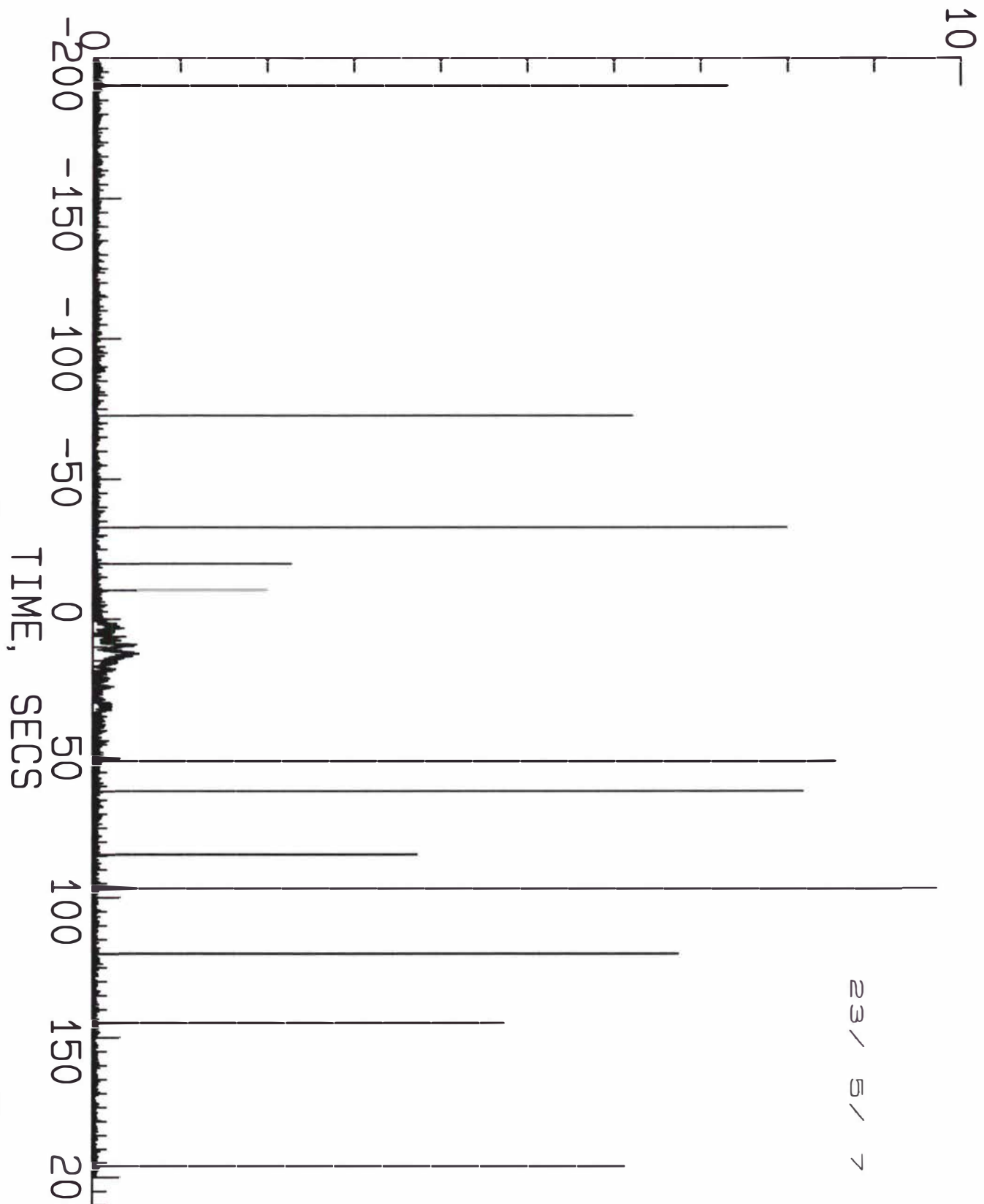


SWIFT

07/02/20 17072.912

40- 200 keV

COUNTS/0.050 S



3357

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

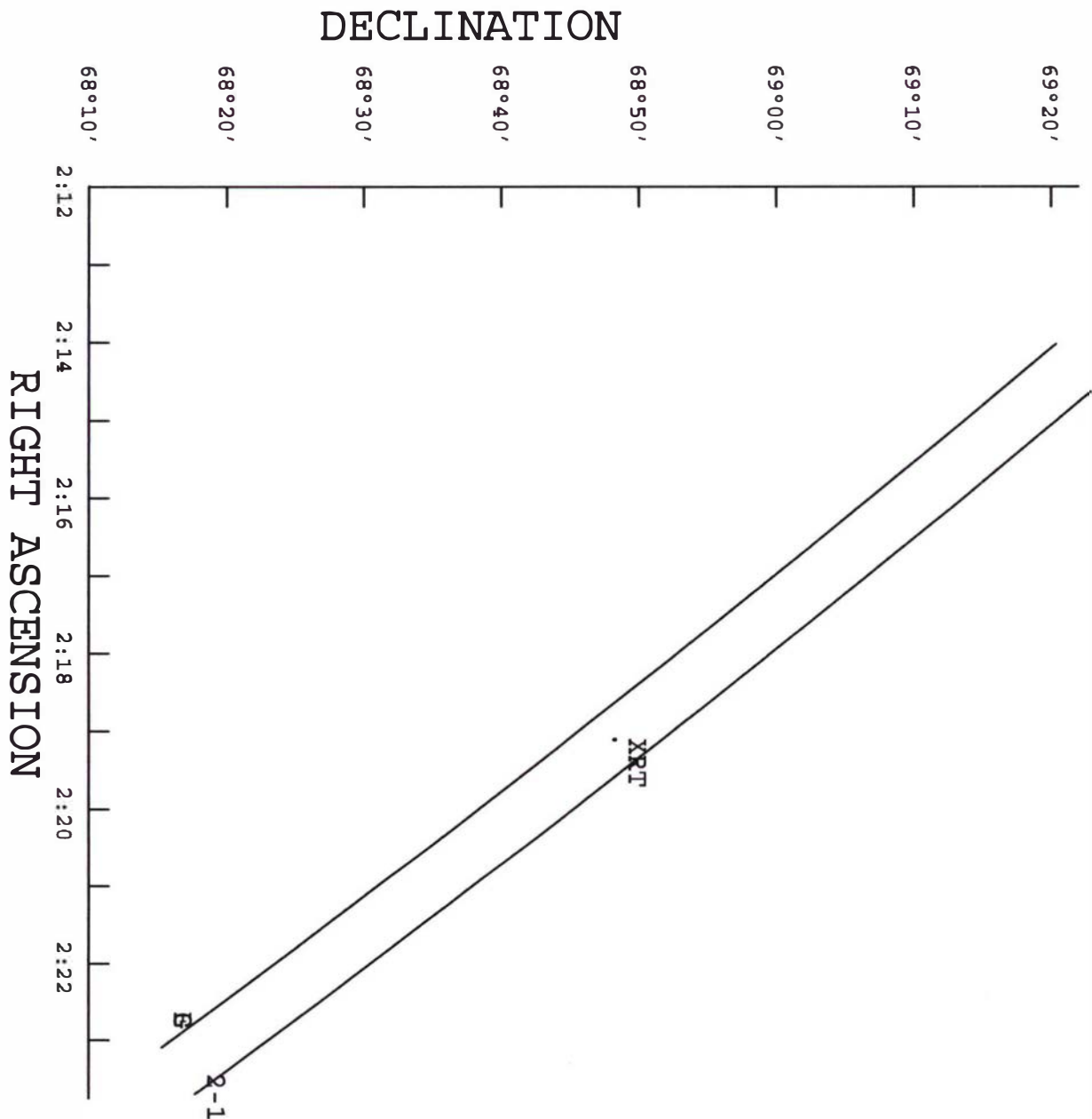
G=GALACTIC EQUATOR

1 MESSENGER

2 KONUS2

EVENT OF FEB 20, 2007 4:44

8 / 5 / 7



N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

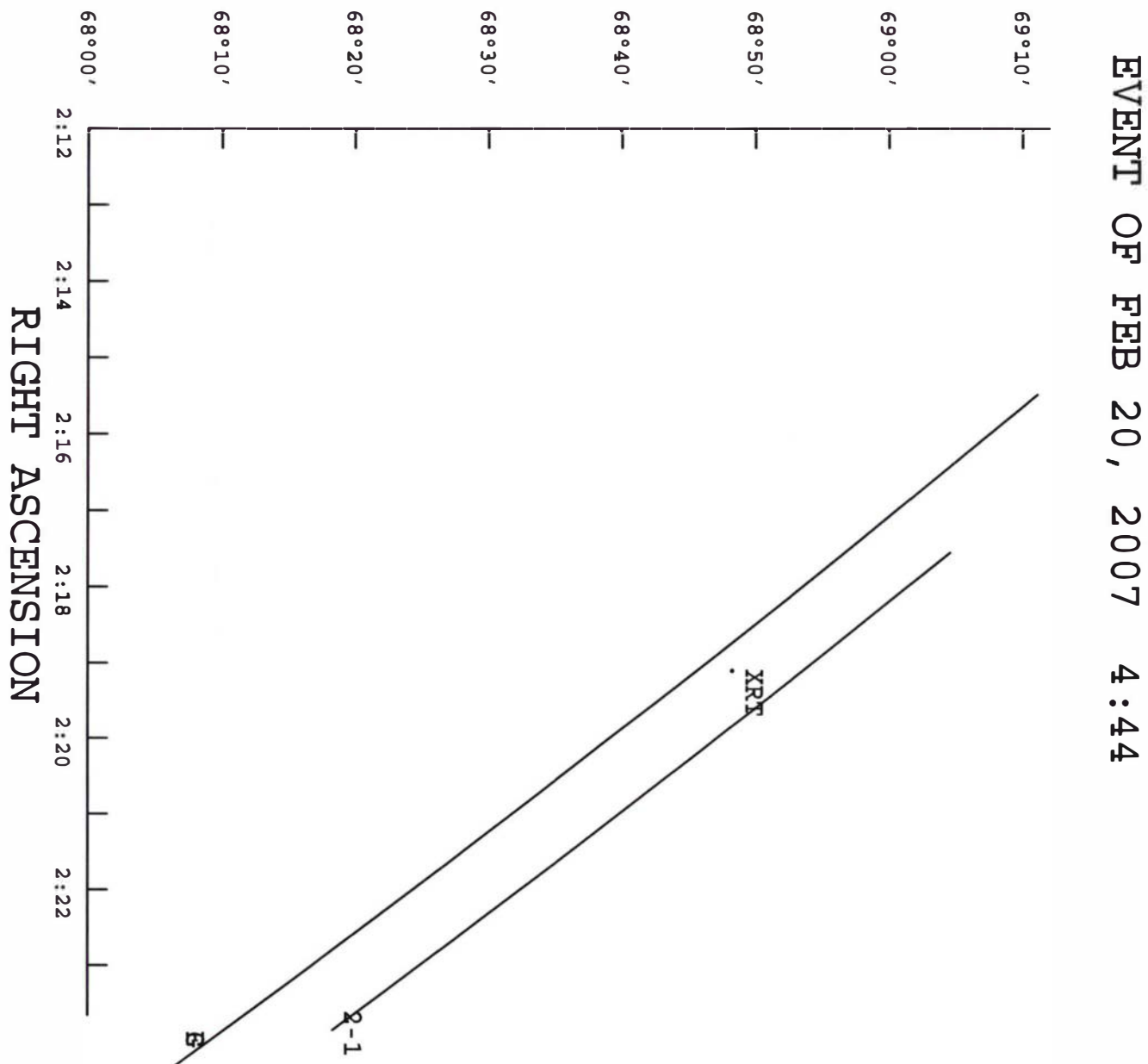
E=ECLIPTIC

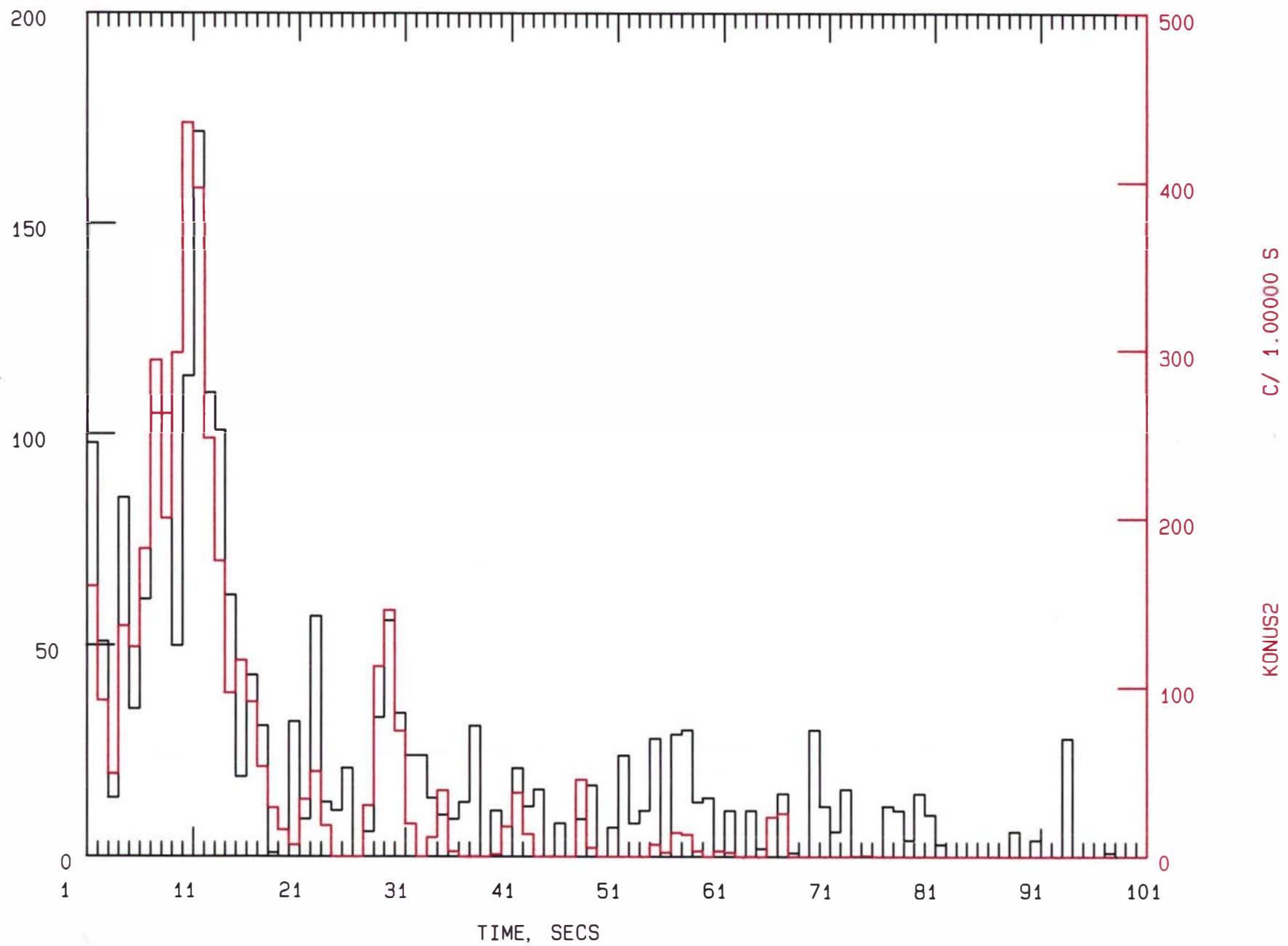
G=GALACTIC EQUATOR

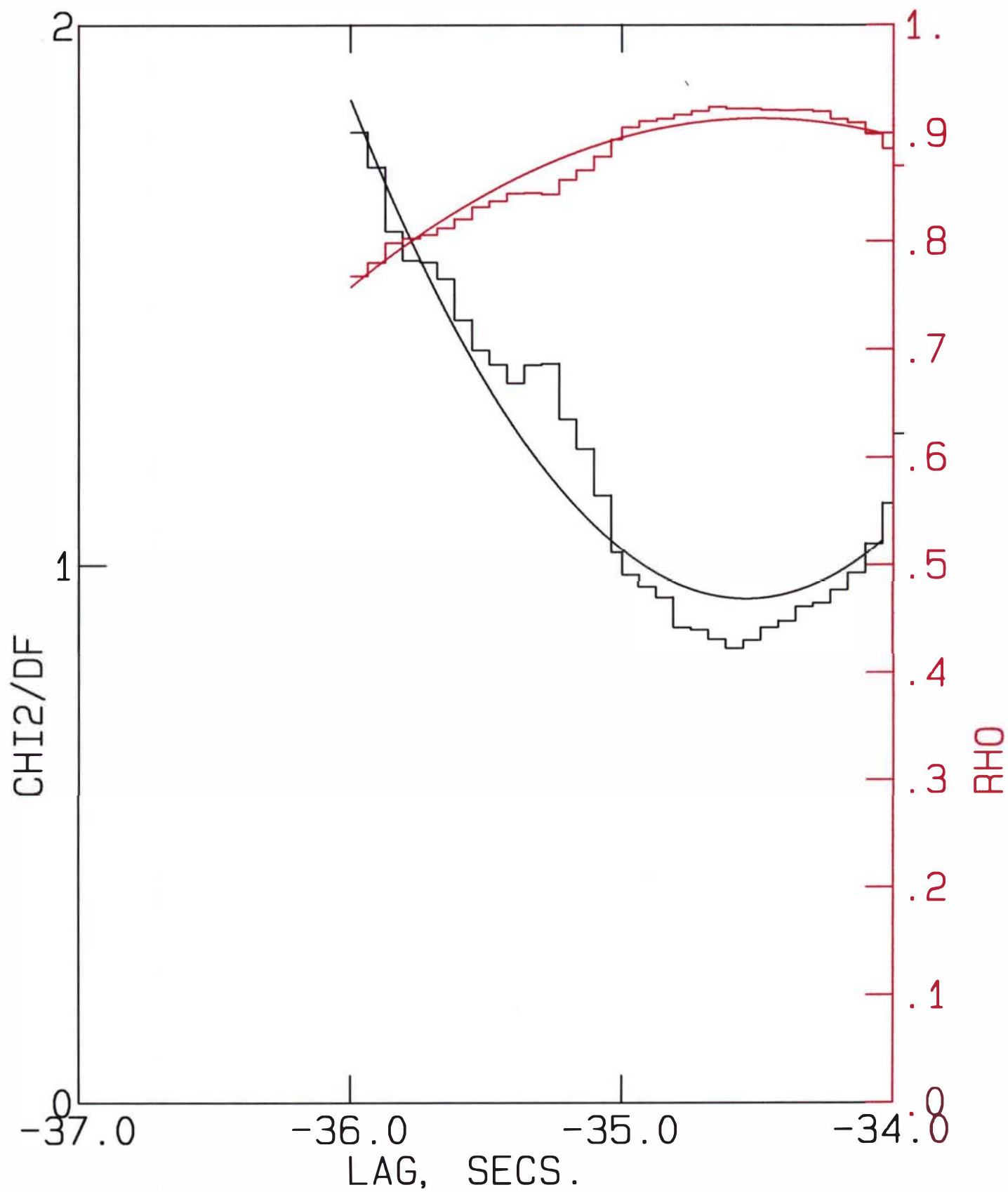
1 KONUS2

2 MESSENGER

DECLINATION







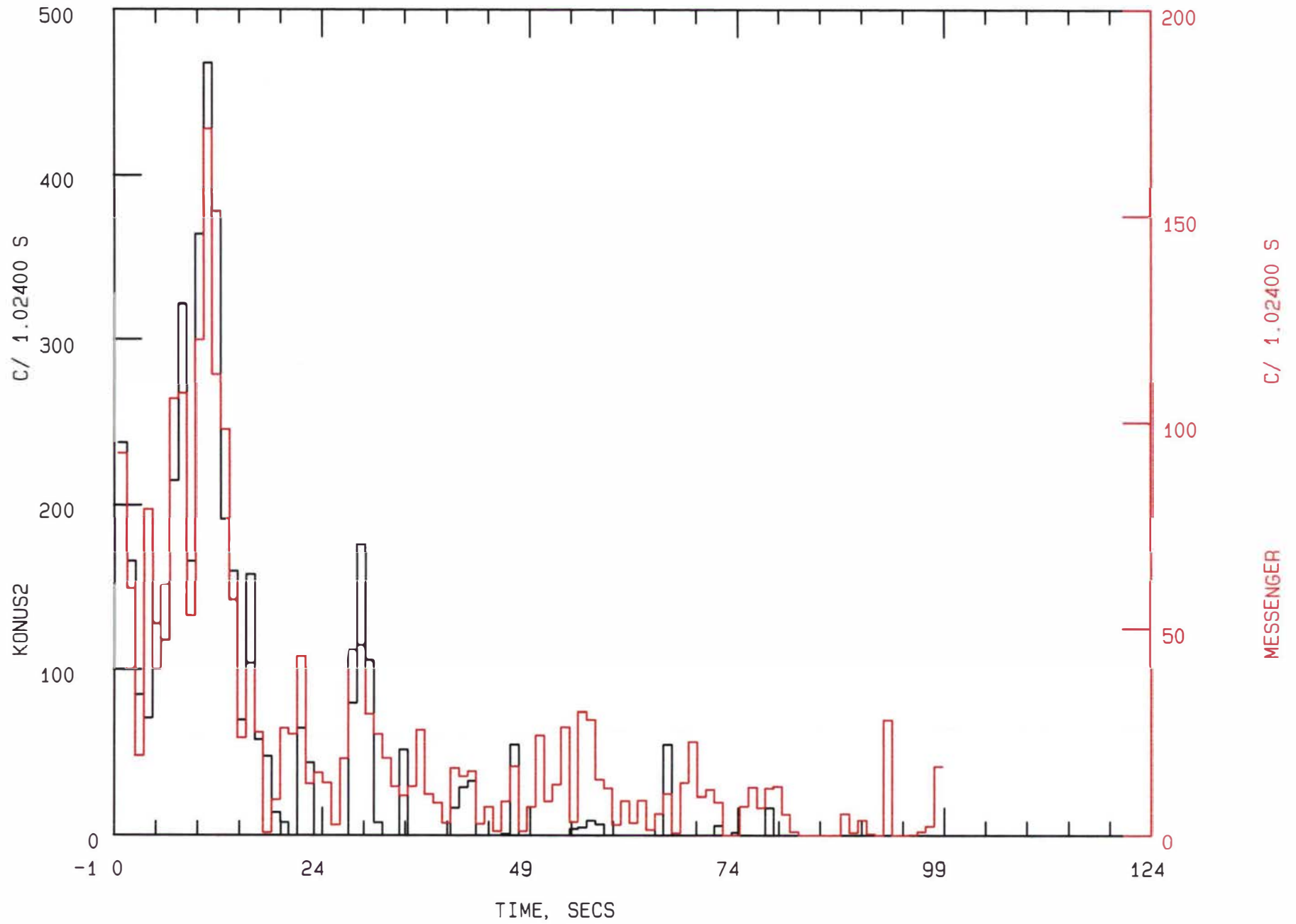
KONUS2

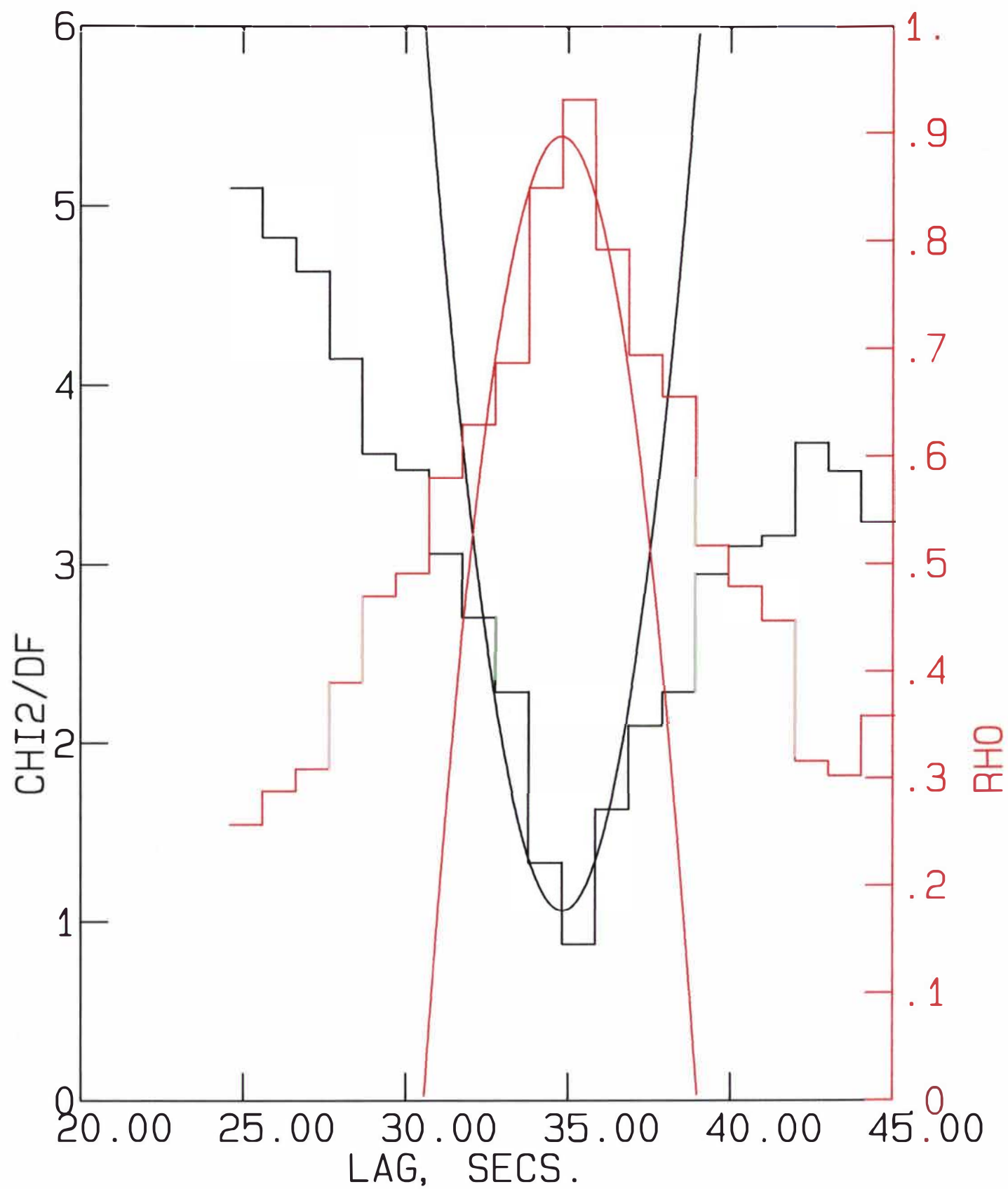
-MESSENGER CORRELATION

20/02/07

17076.976

8/ 5/ 7



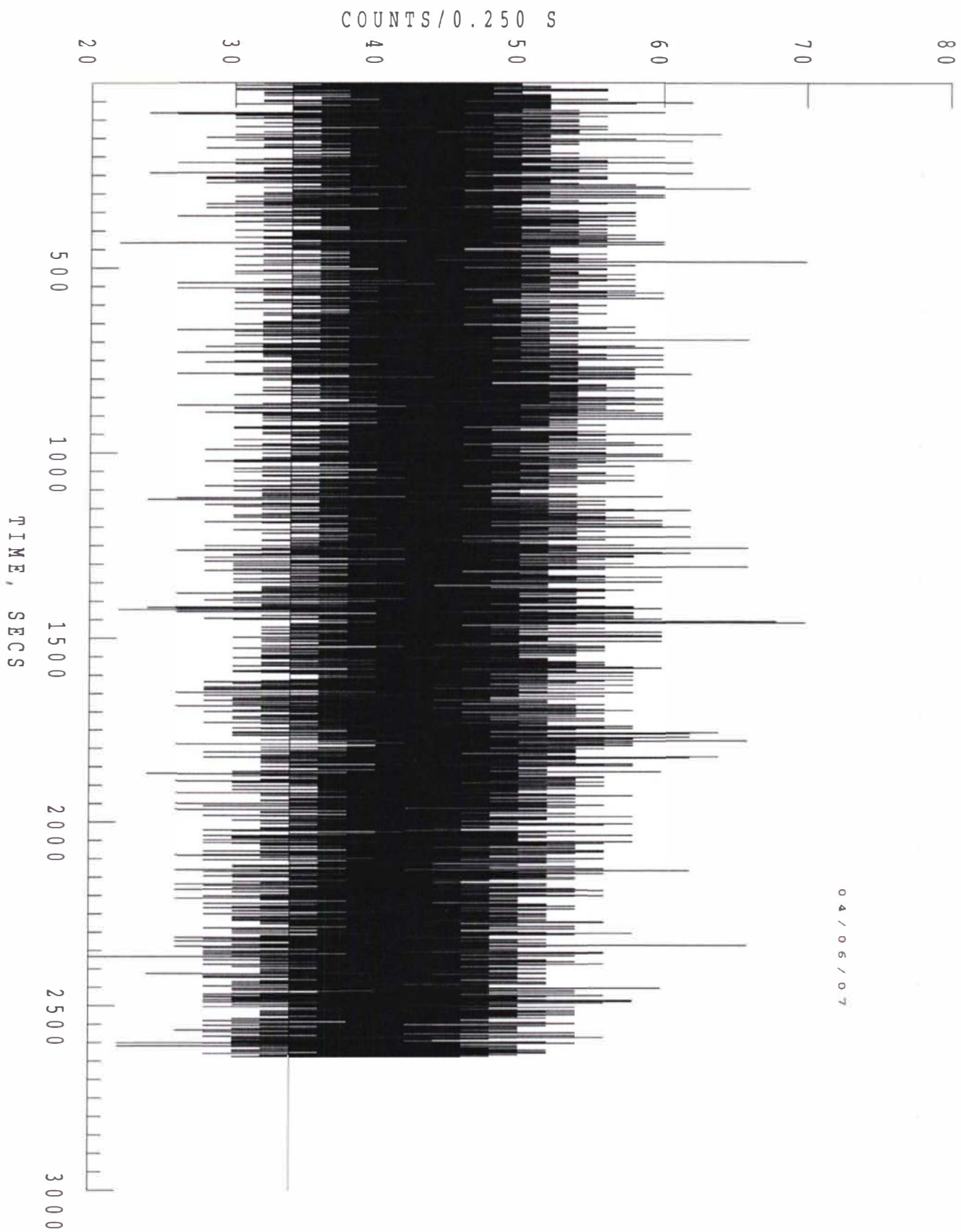


MS01

20/02/07

15740.461

50 - 3000 keV

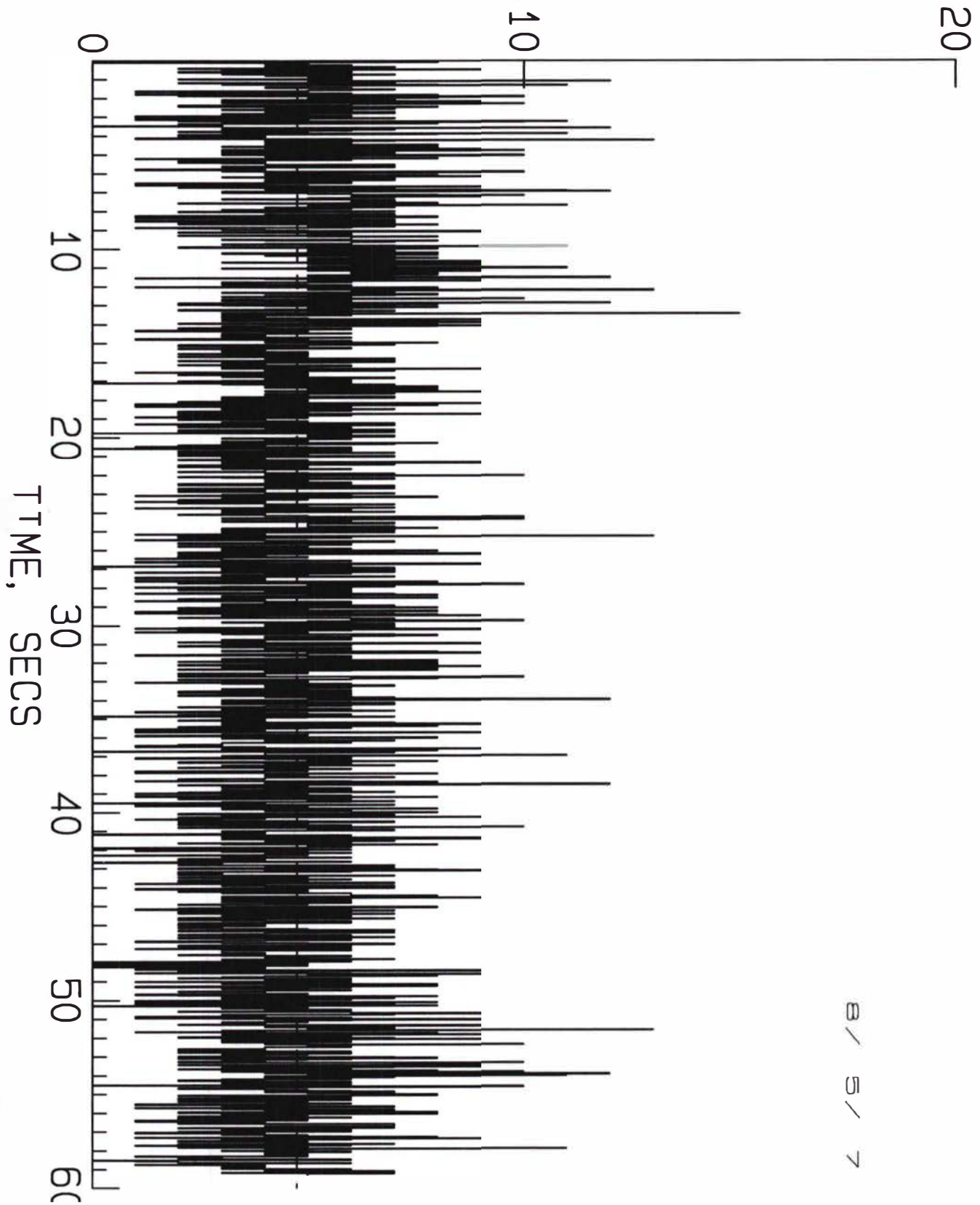


MO GE

20/02/07 17489.631

116- 337 keV

COUNTS/0.032 S



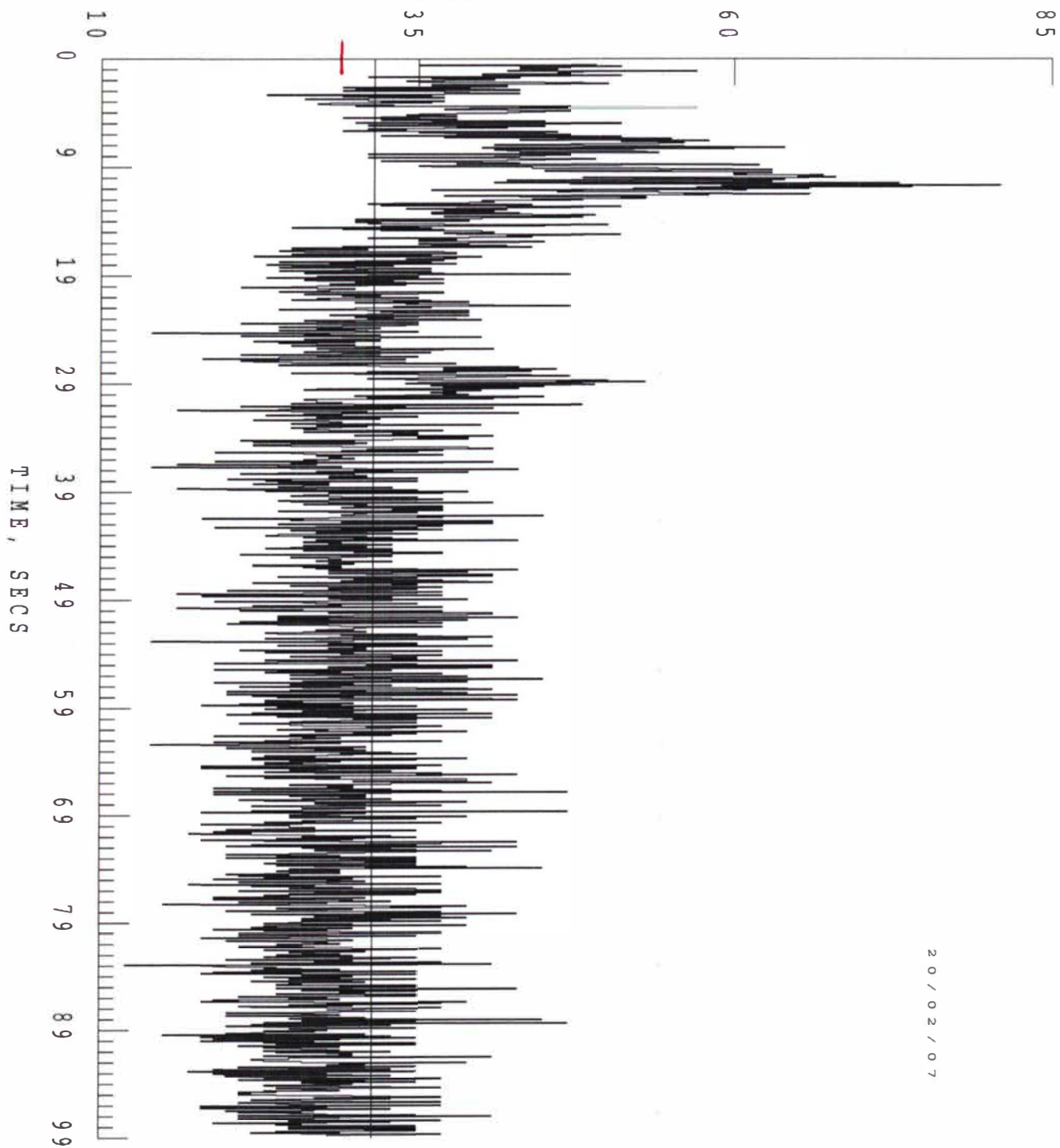
KONUS2

20/02/07

17076.976

50- 200 keV

COUNTS/0.064 S



KONUS HRES 20070220 17076

TRIGGER TIME: 20/02/07 DOY 051 Julian 2454152.69764 UT = 04.743 04:44:36 (17076.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

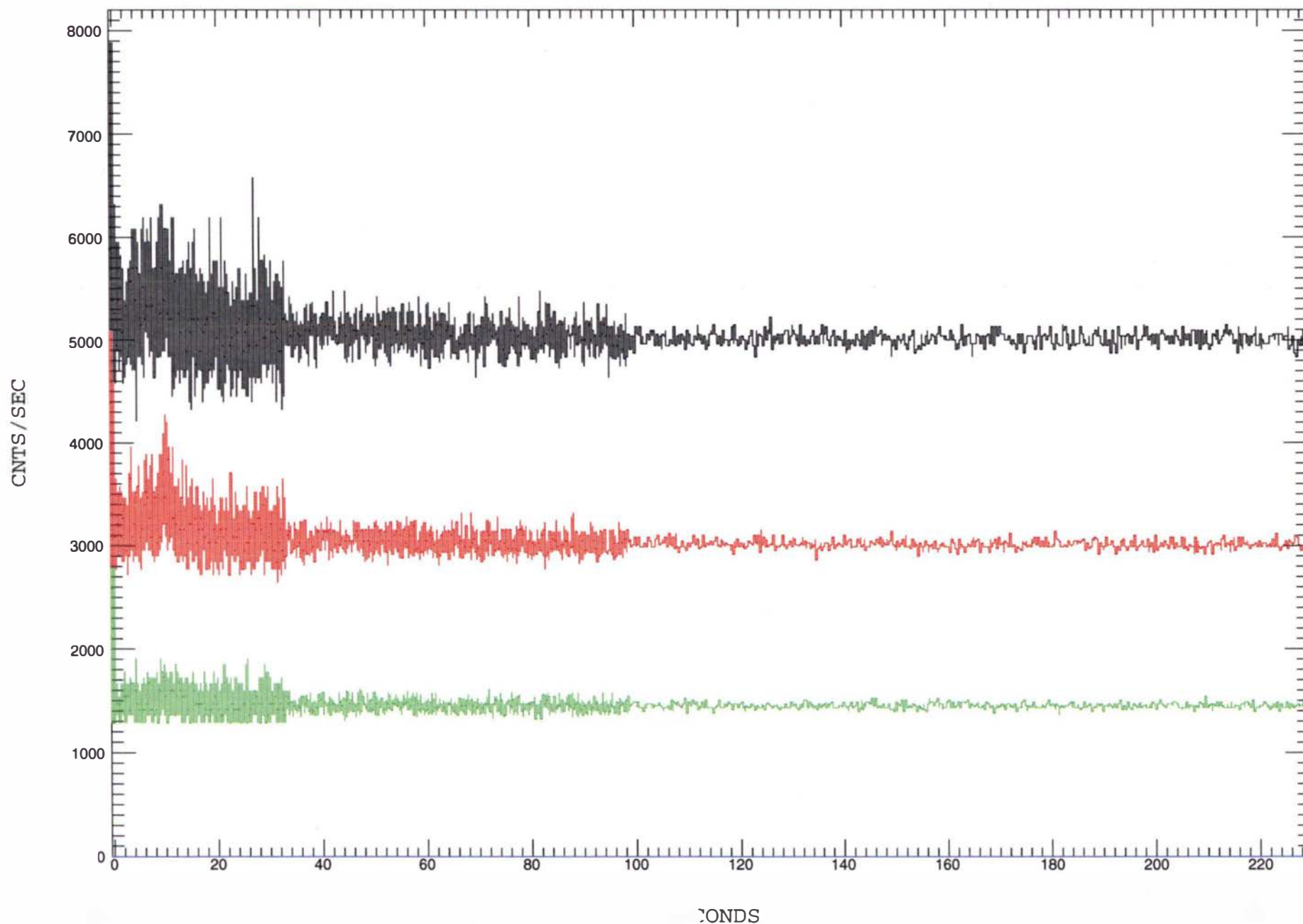
Chan 4 : [> 10 MeV]

Channel 1 + 3900

Channel 2 + 2600

Channel 3 + 1300

Channel 4 + 0

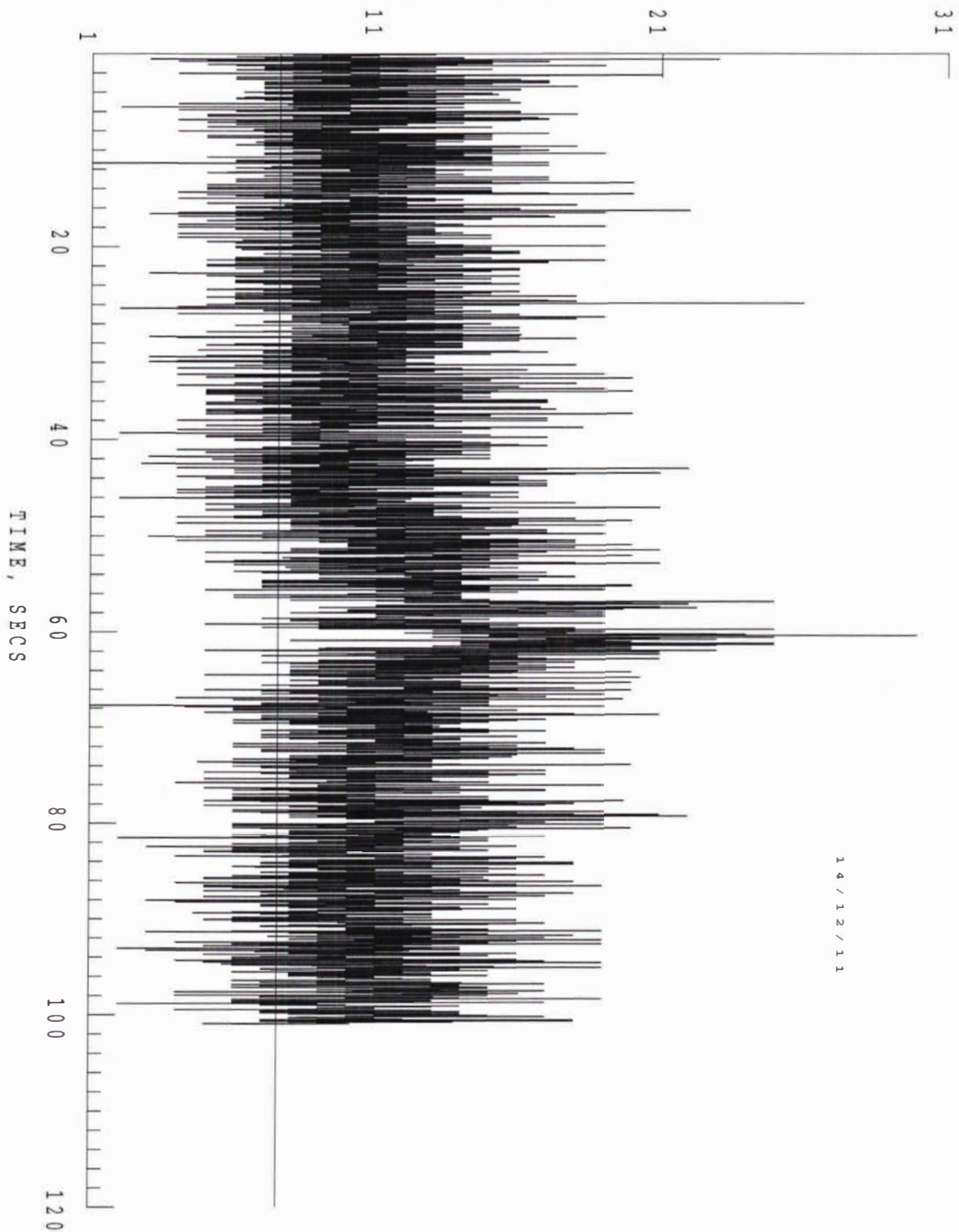


HESSI

20/02/07 17025.000 (KONUS_20070220_17076)

50 - 200 keV

COUNTS/0.032 S

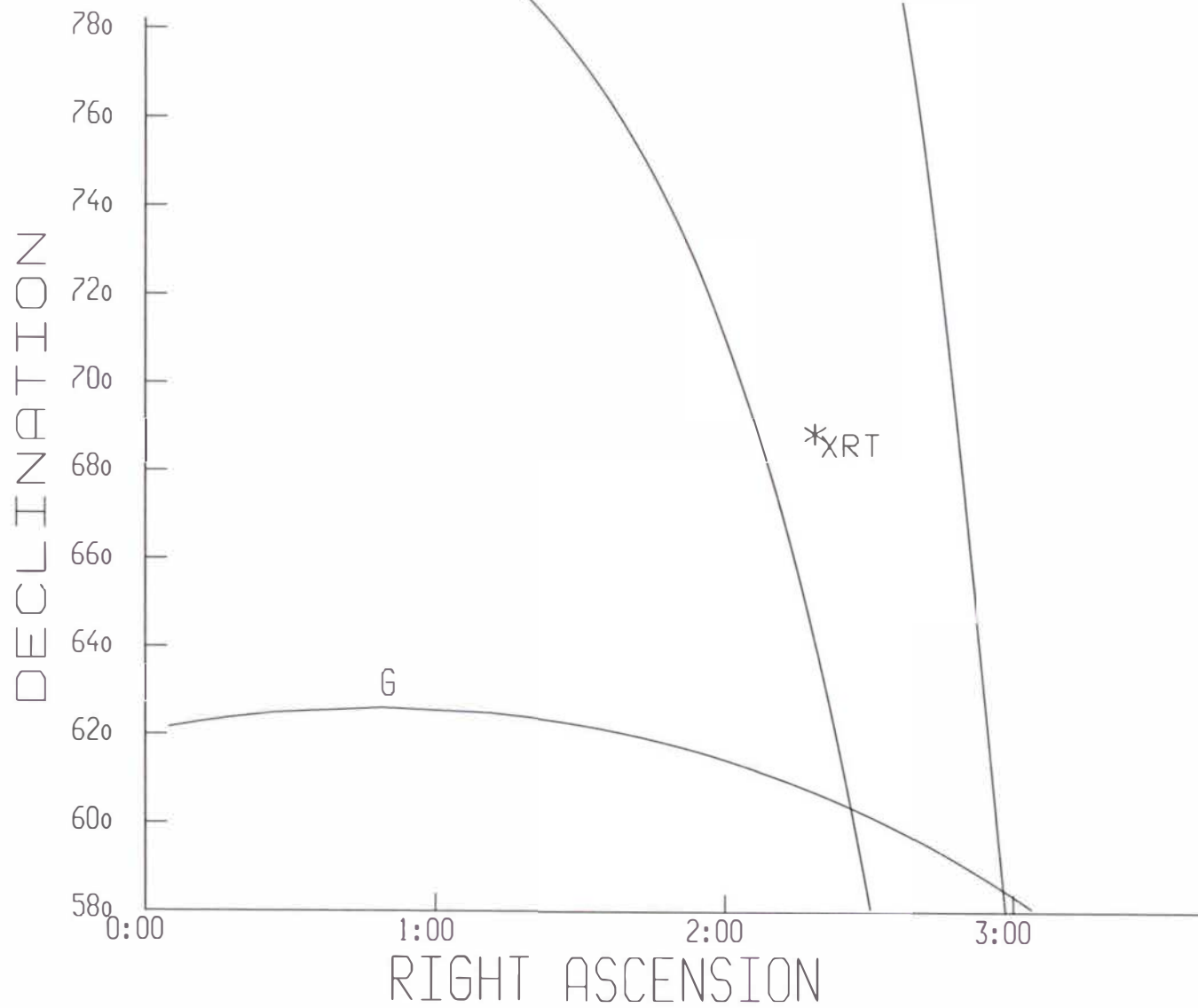


14/12/11

EVENT OF FEB 20, 2007 4:44

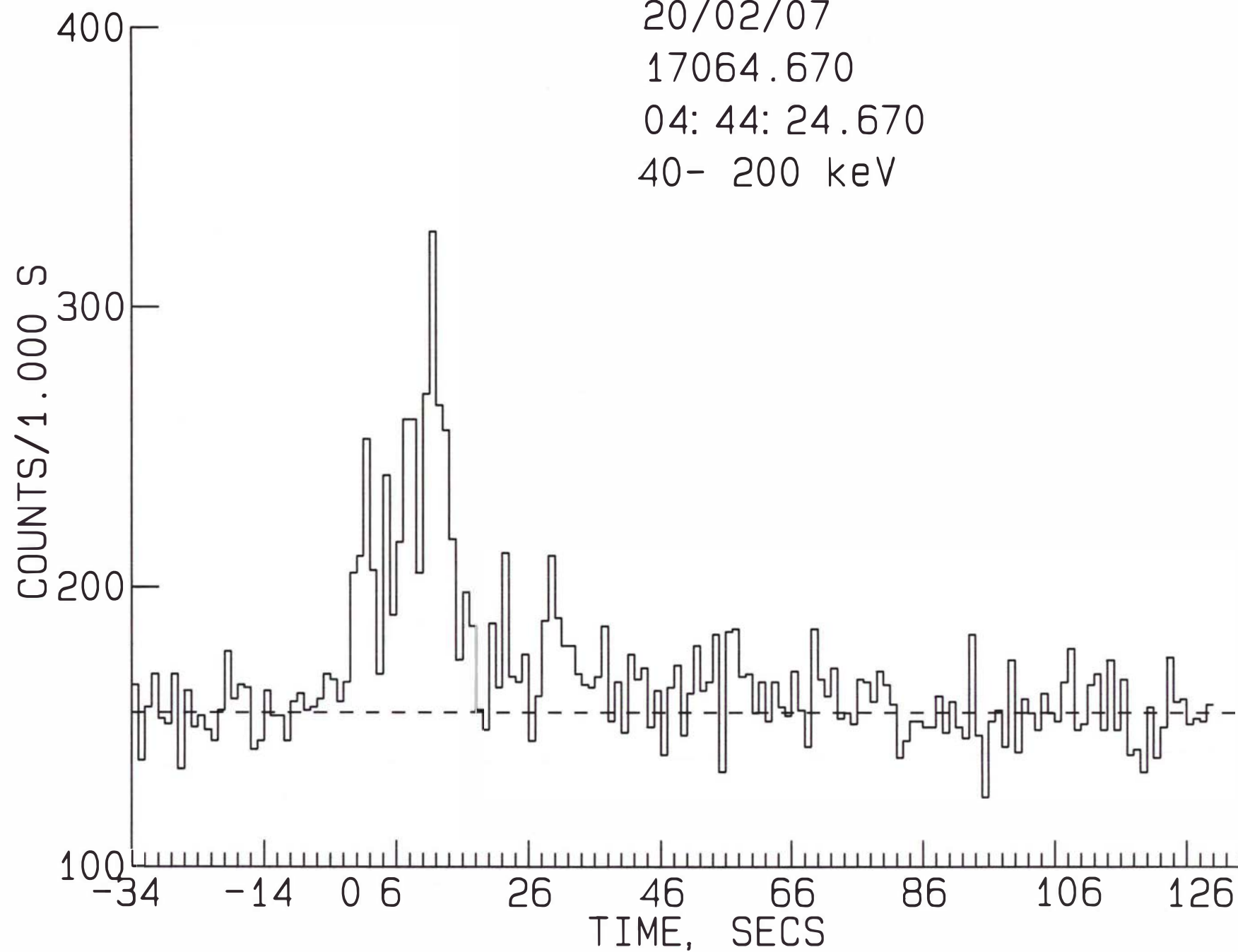
16/12/2011

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

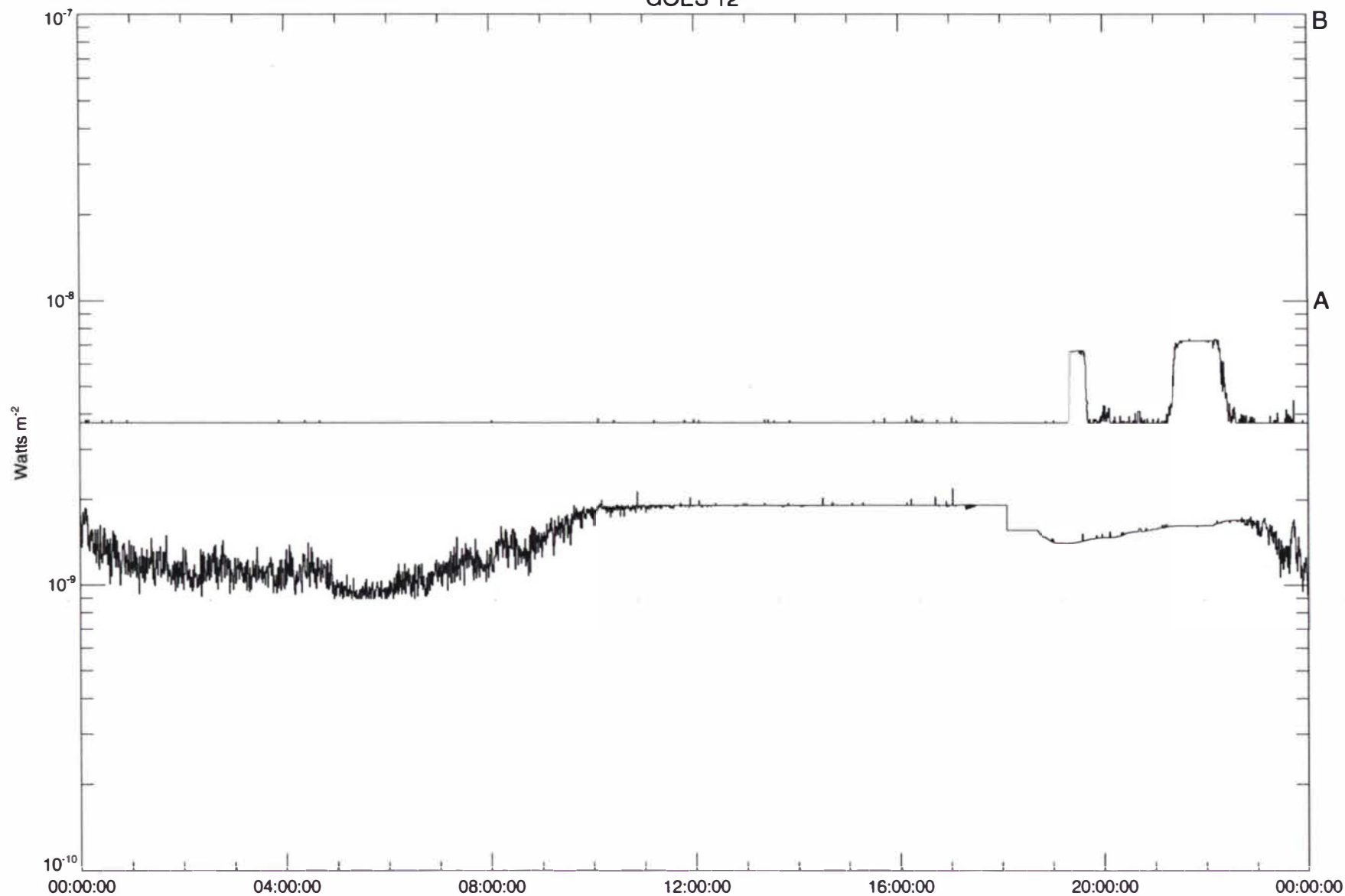


25/04/07

MESSENGER
20/02/07
17064.670
04: 44: 24.670
40- 200 keV



GOES 12



Data Start: 07/02/20, 0000:00

Plot created: 07/02/23, 0921

Channel

1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

Sample average = 10

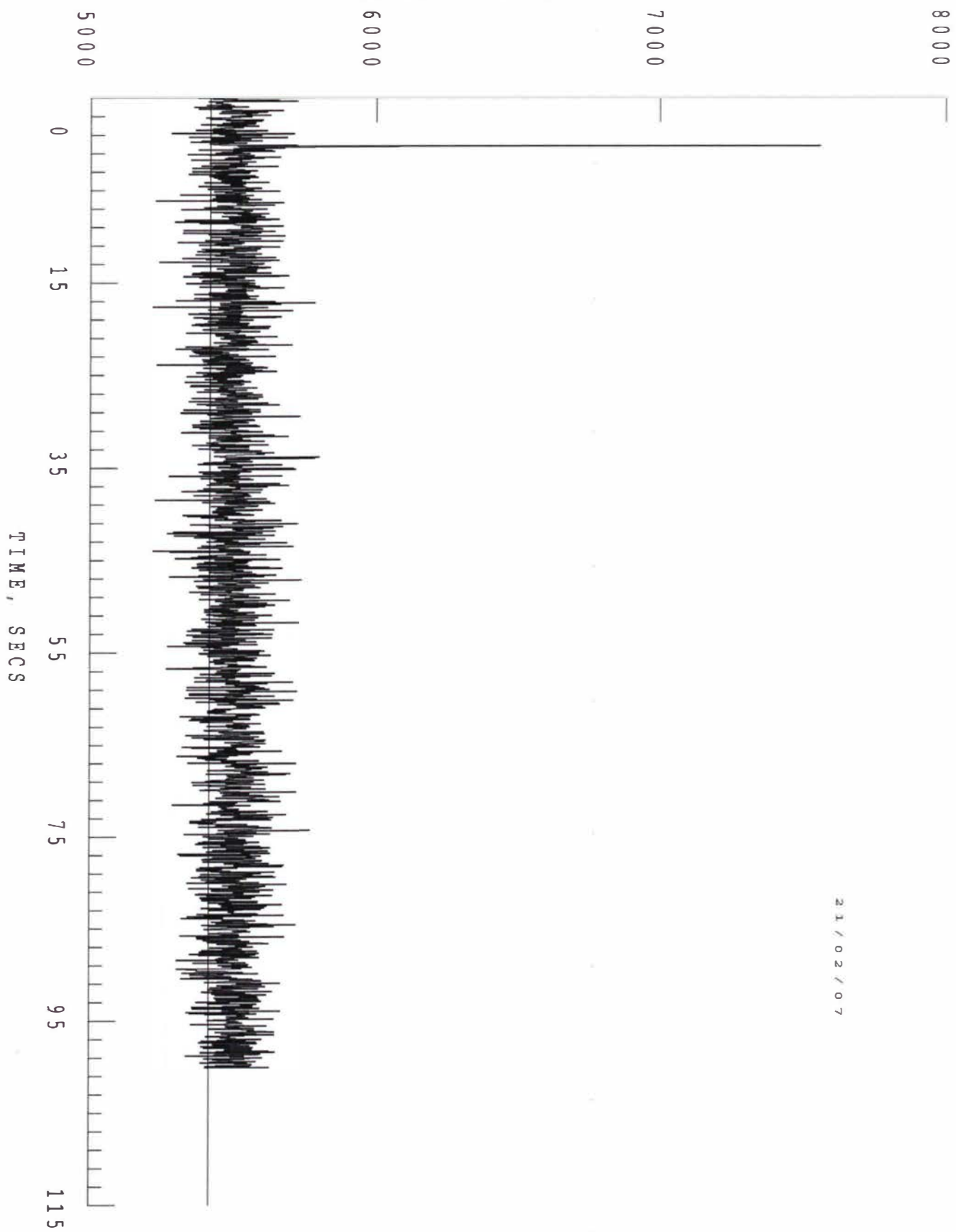
INTEGRAL

21/02/07

22760.765

100-10000 keV

COUNTS/0.050 S



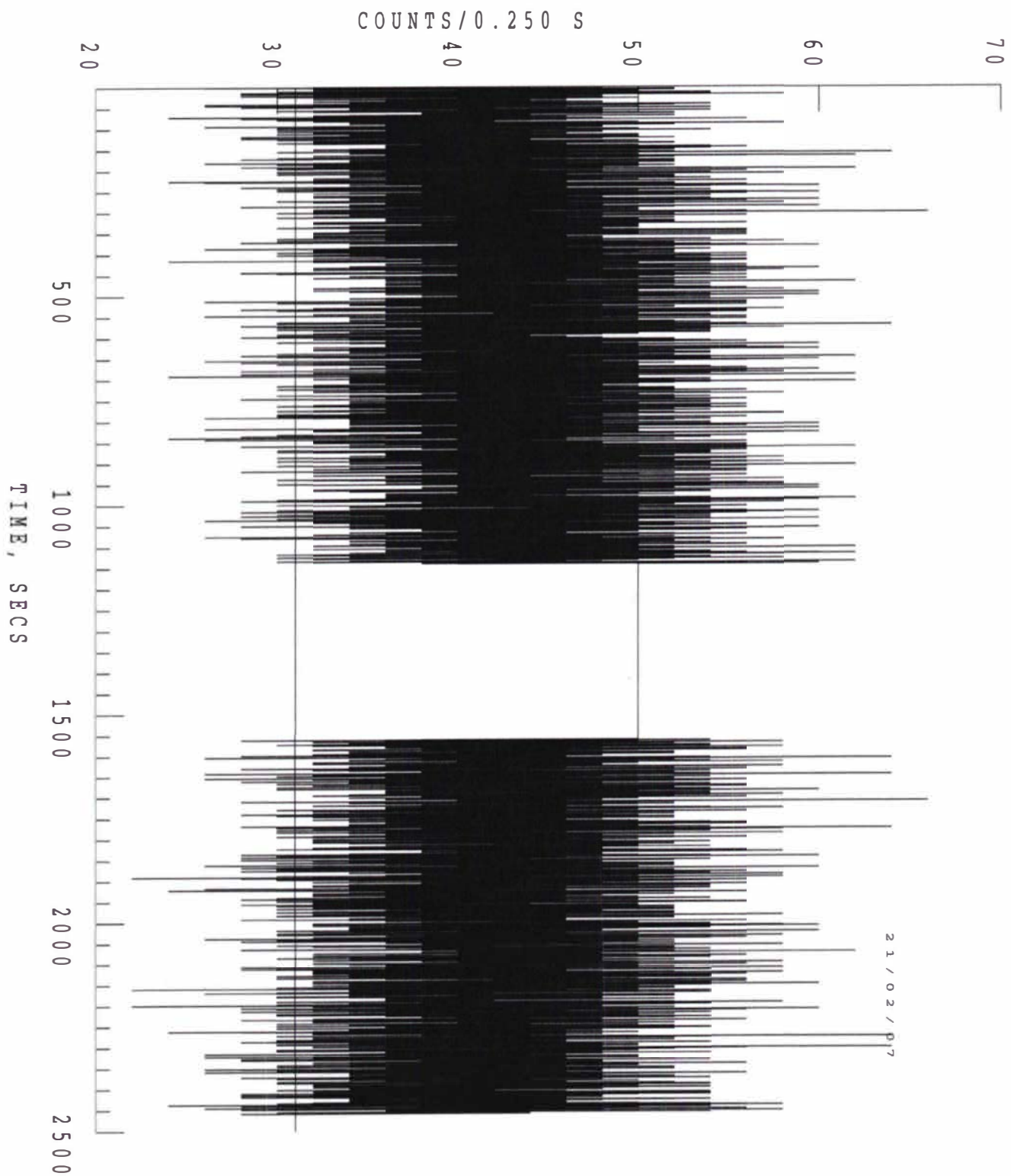
21/02/07

MS01

21/02/07

21619.763

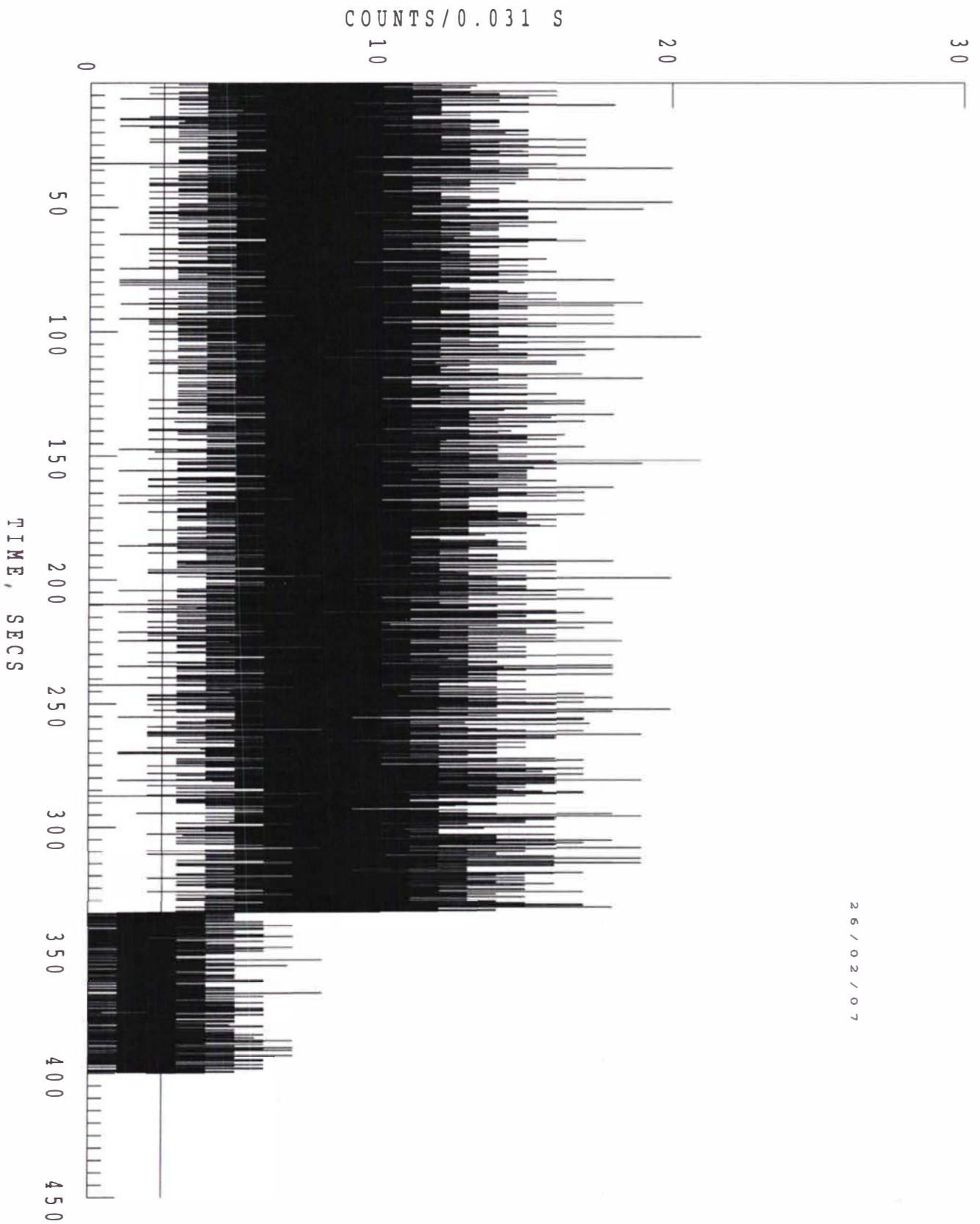
50 - 3000 keV



HESSI

21/02/07 22560.000 (INTEGRAL_20070221_22760)

25- 150 keV



26/02/07

Date: Jan 3 2011

BURST TRIANGULATION CHECKLIST

1. Suzaku Data

- ☐ 1 second timing error corrected? (Jan 1 – Apr 24 2009)

2. AGILE Data

- ☐ 1 second timing error corrected?

3. MESSENGER Data

- ☐ Coarse or Precision oscillator (C or P bronte.jhuapl.edu/spice/kernels/sclk/timekeeping/OPS_TIME_ENGR.txt)?
- ☐ Timing checked after ~ 1 week?

4. For Konus events

- ☒ Konus ecliptic latitude used with latest calibration?

5. 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). For later data, was timing checked after ~1 week?
- ☐ 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?

6. For 3 or More Spacecraft events

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

7. For INTEGRAL events

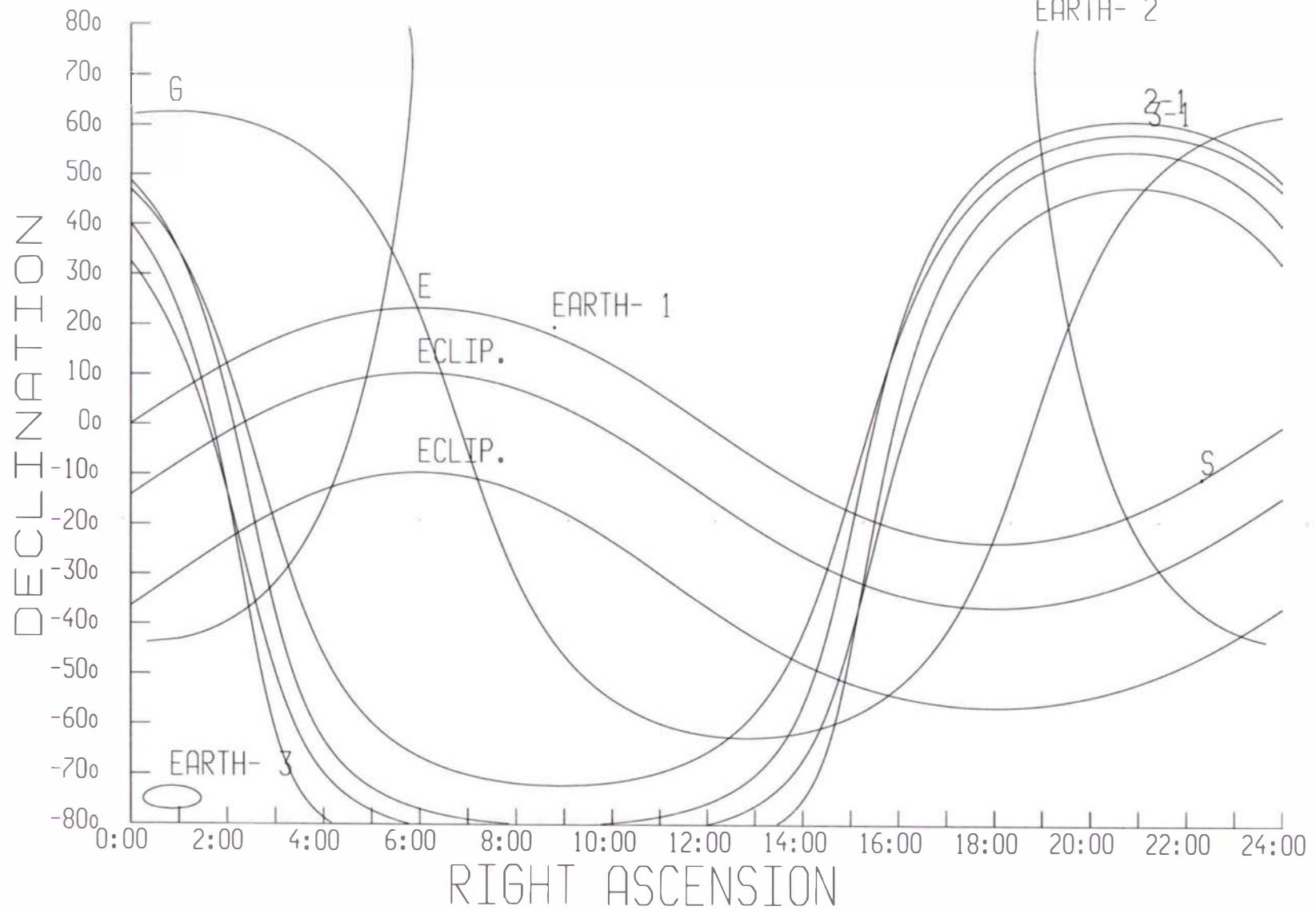
- ☐ INTEGRAL SPI-ACS website checked for bursts that weren't transmitted automatically?
- ☐ 125 ms added to INTEGRAL SPI-ACS time for bursts prior to April 2 2004 11:00 UT?
- ☐ Updated ephemeris used for bursts prior to September 30, 2003?

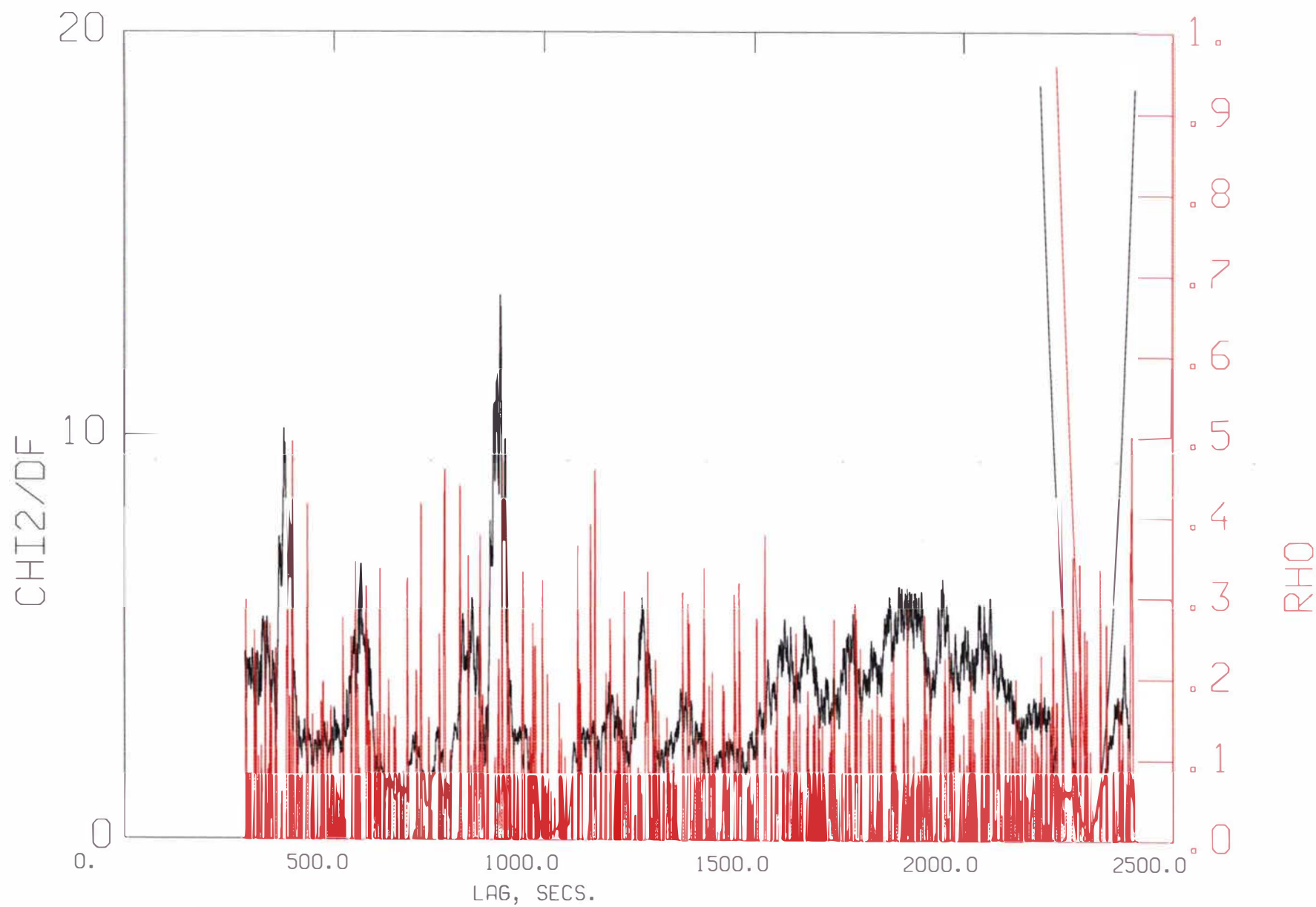
-
- ☒ ACCESS and MBL4 databases updated, with identical times?

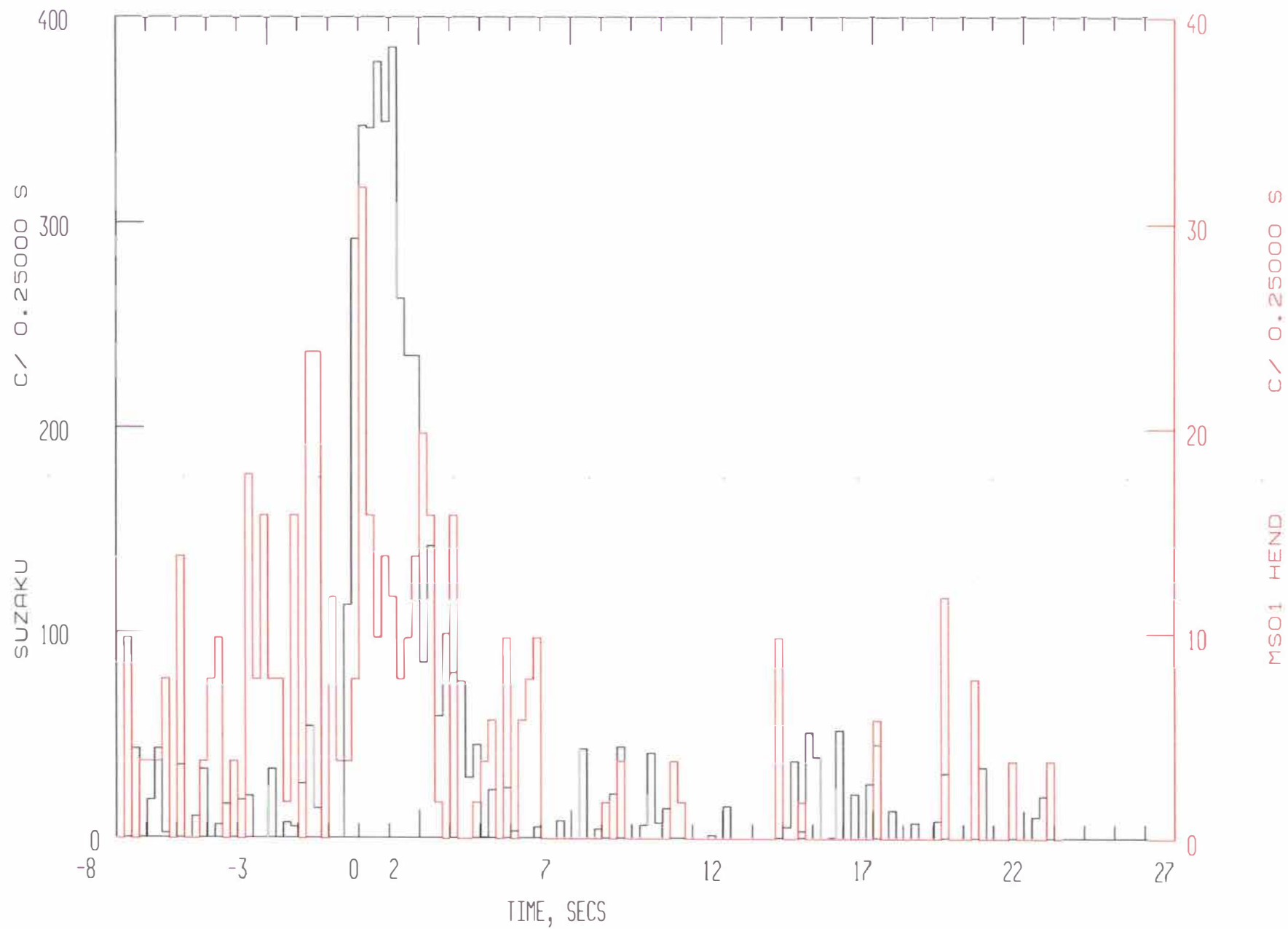
EVENT OF FEB 21, 2007 21:06

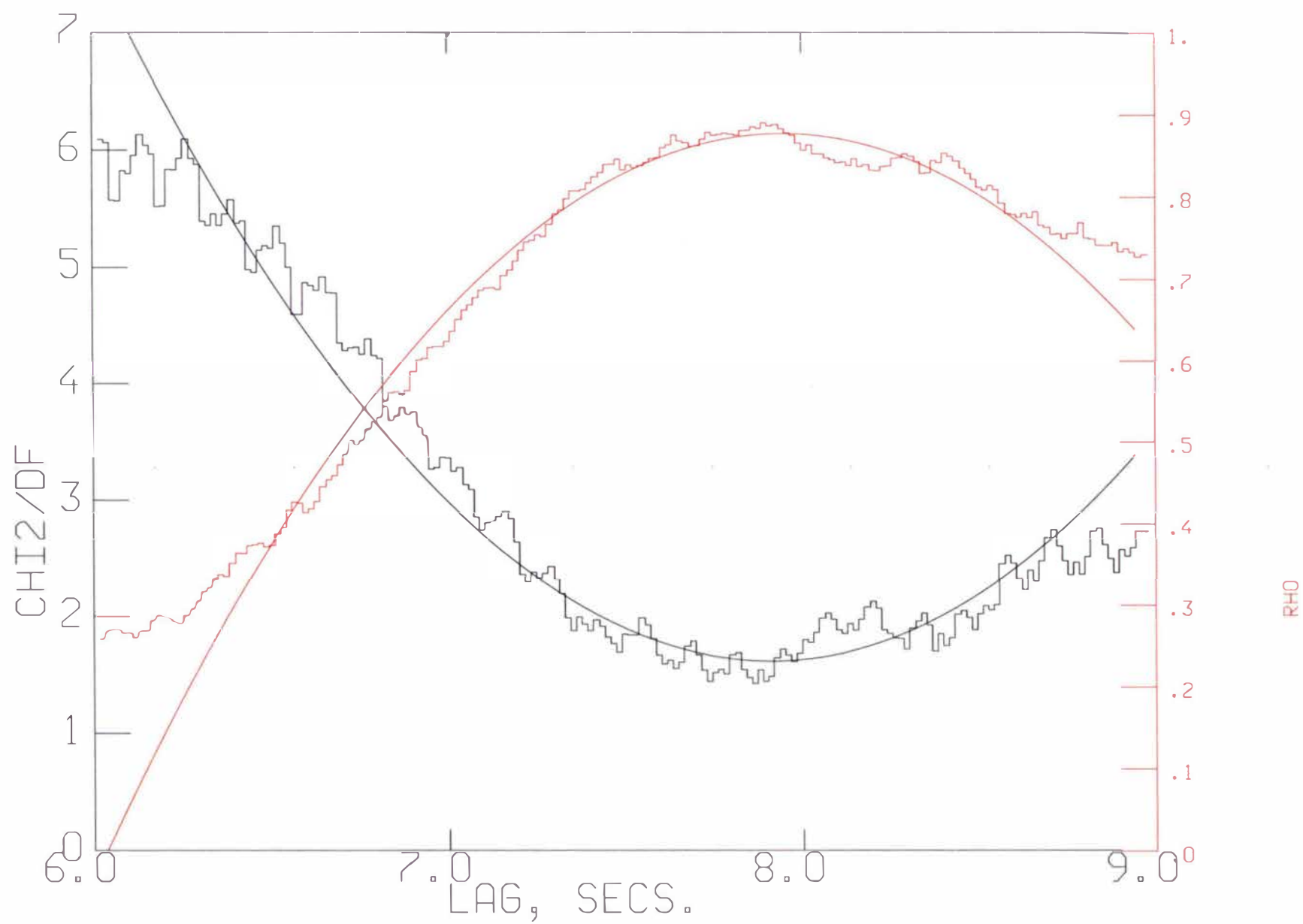
03/01/2011

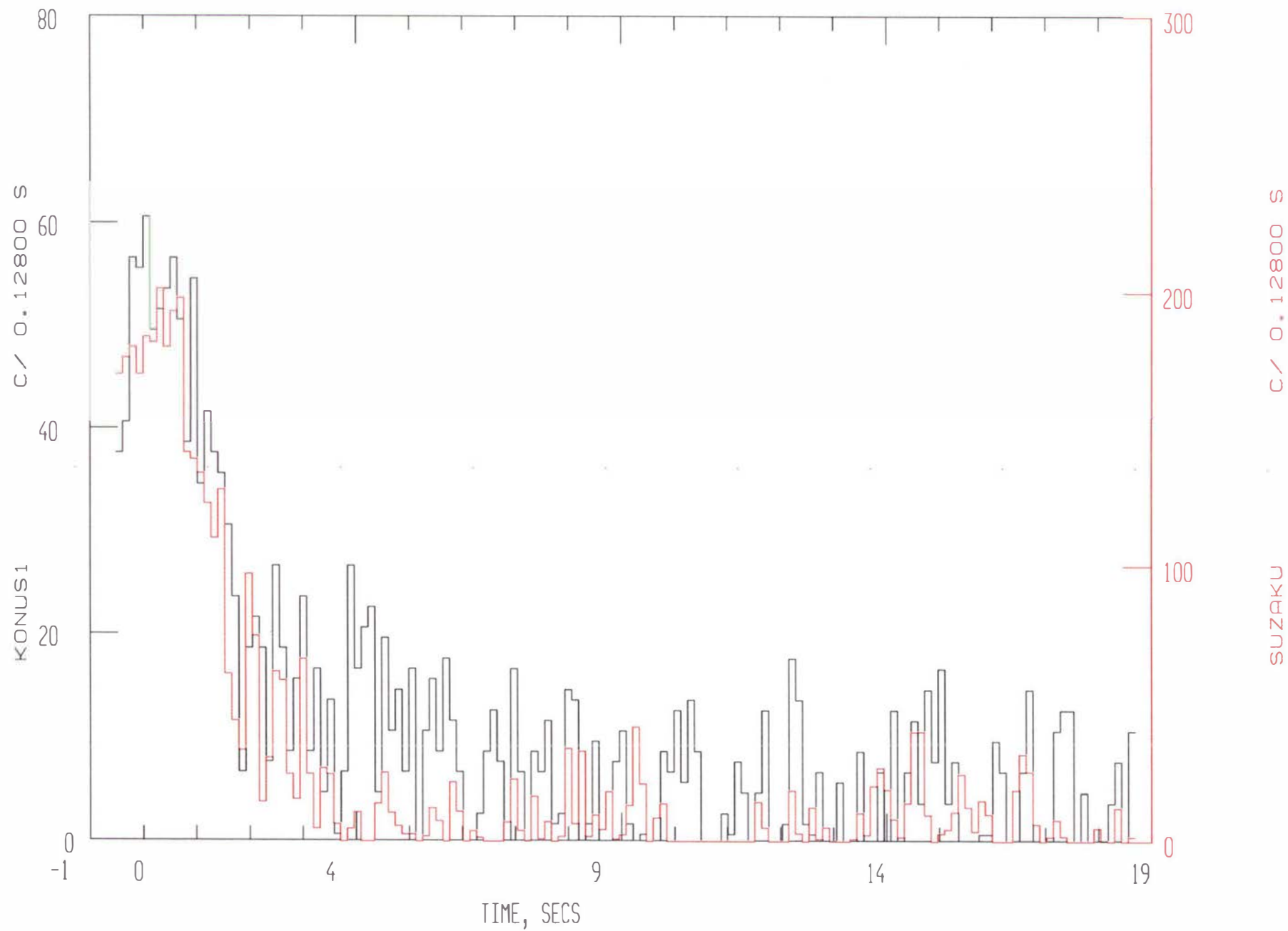
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN
1 KONUS1
E=ECLIPTIC
2 SUZAKU
G= GALACTIC EQUATOR
3 INTEGRAL

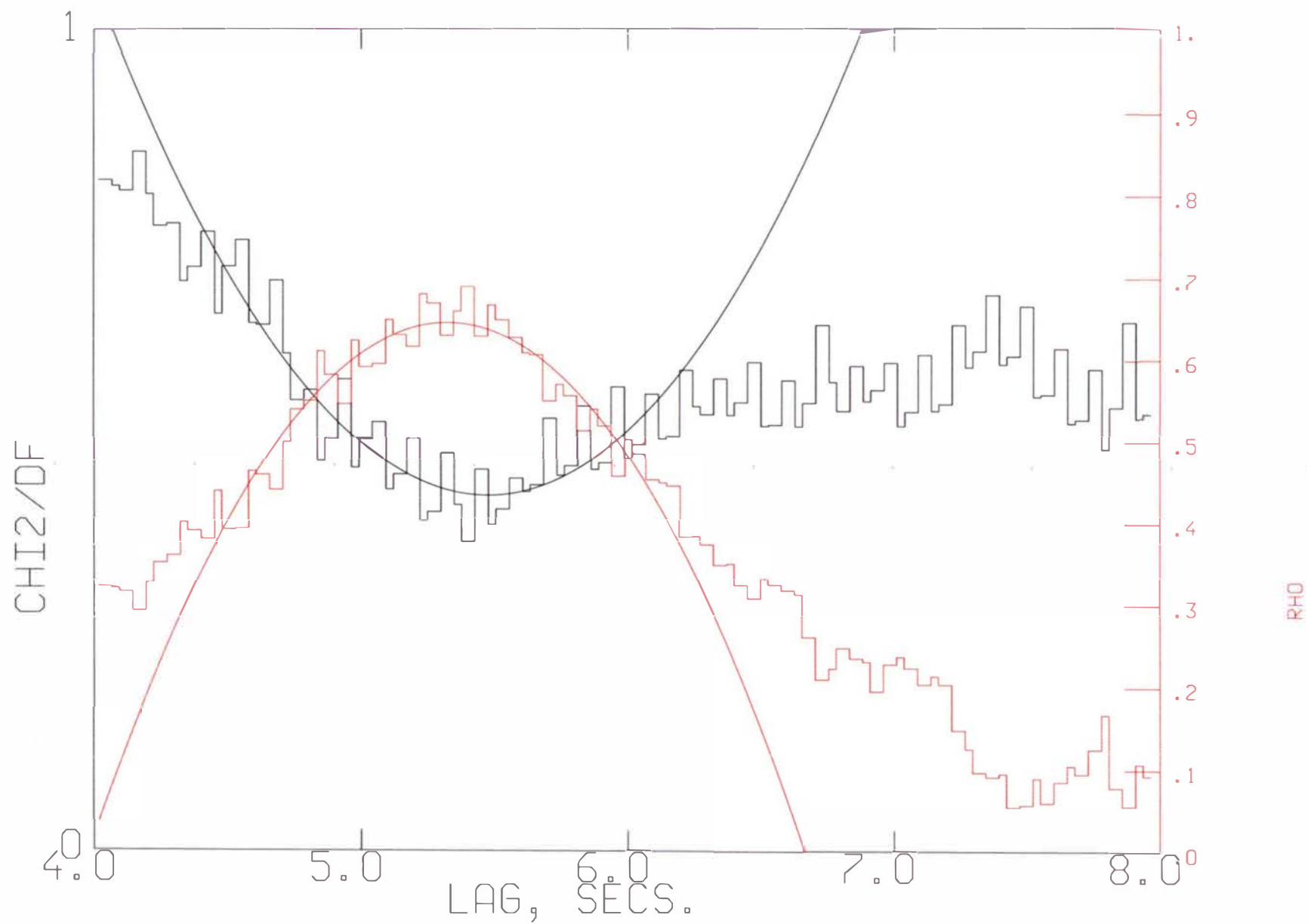


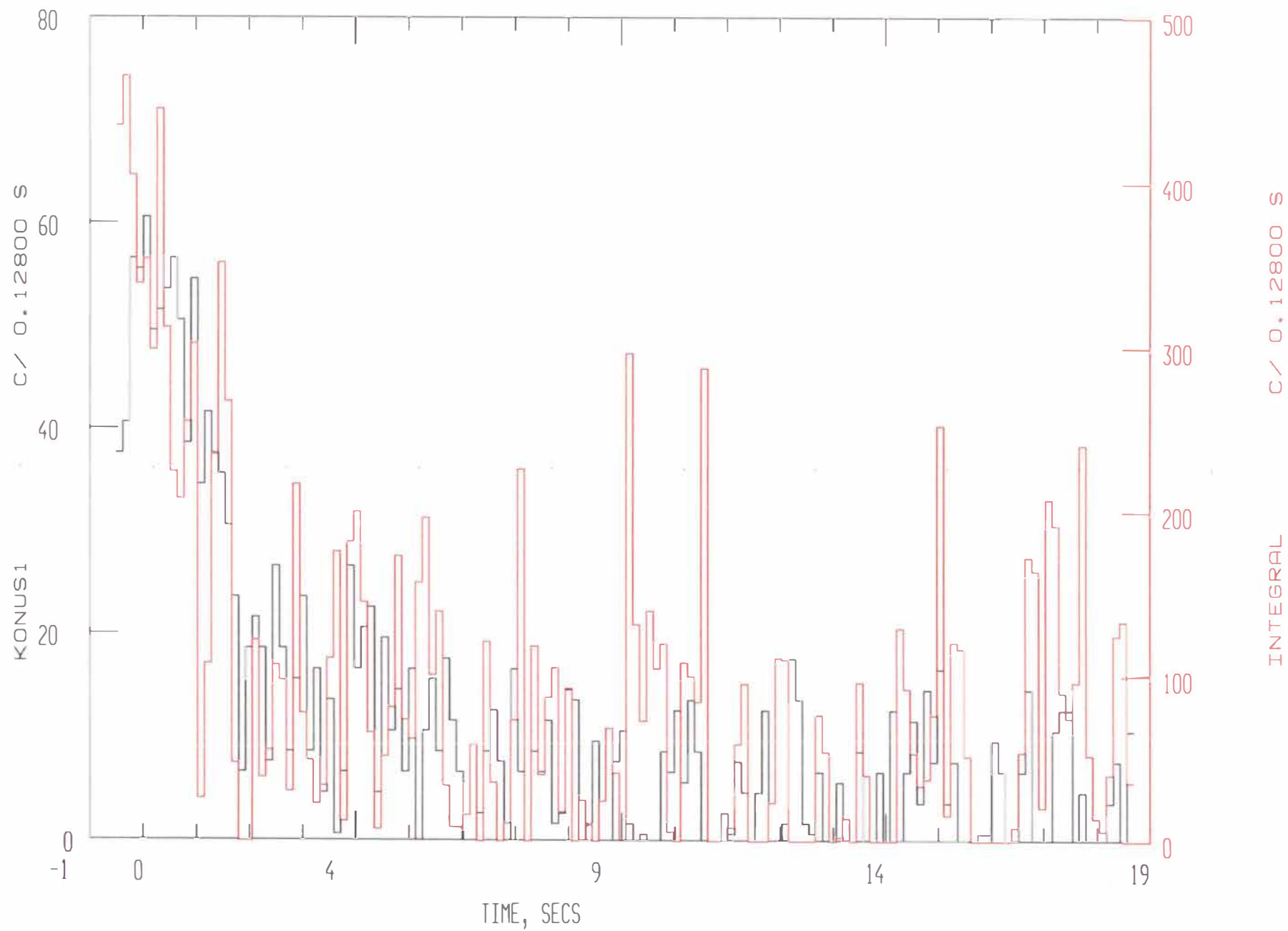


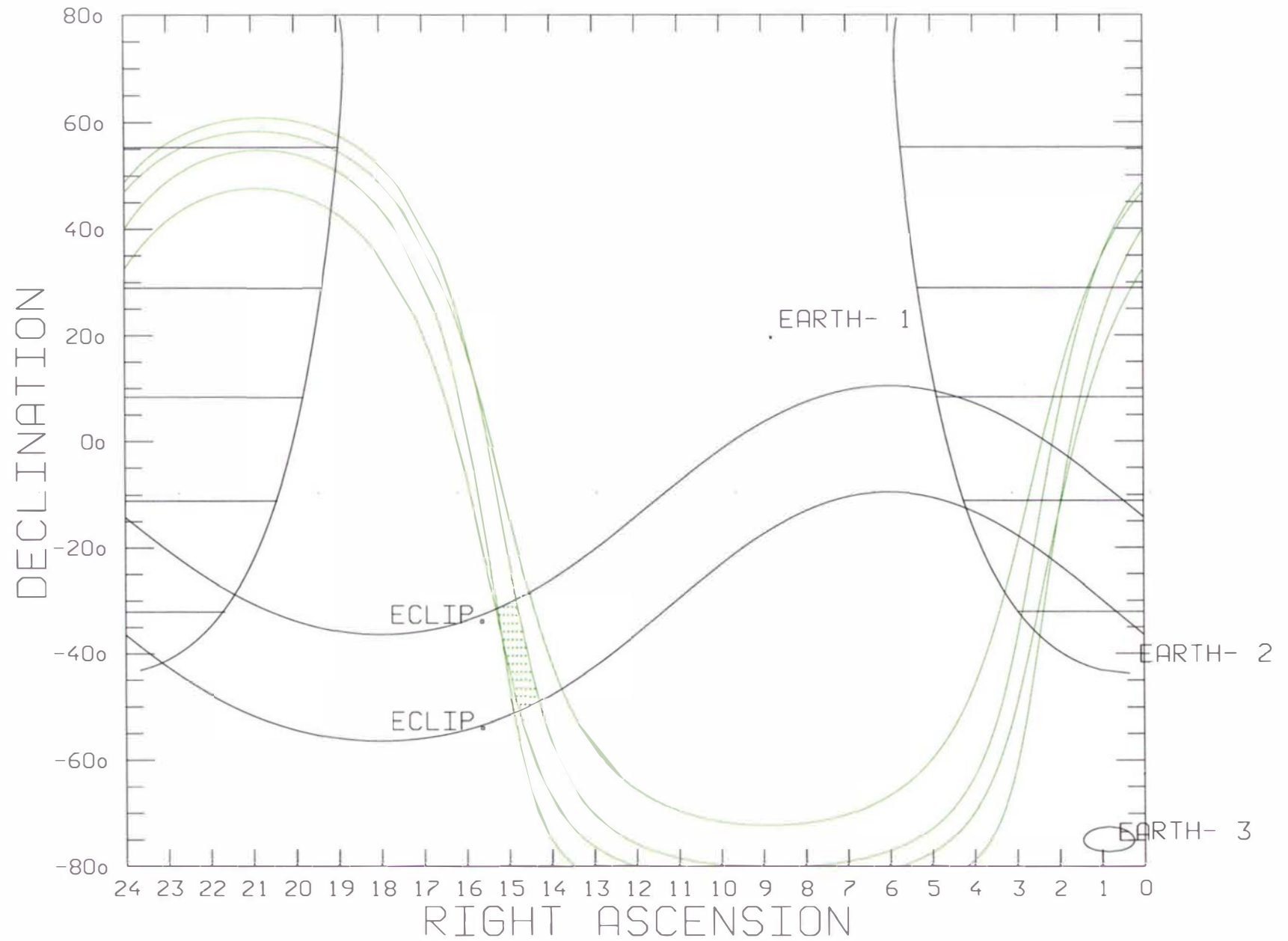












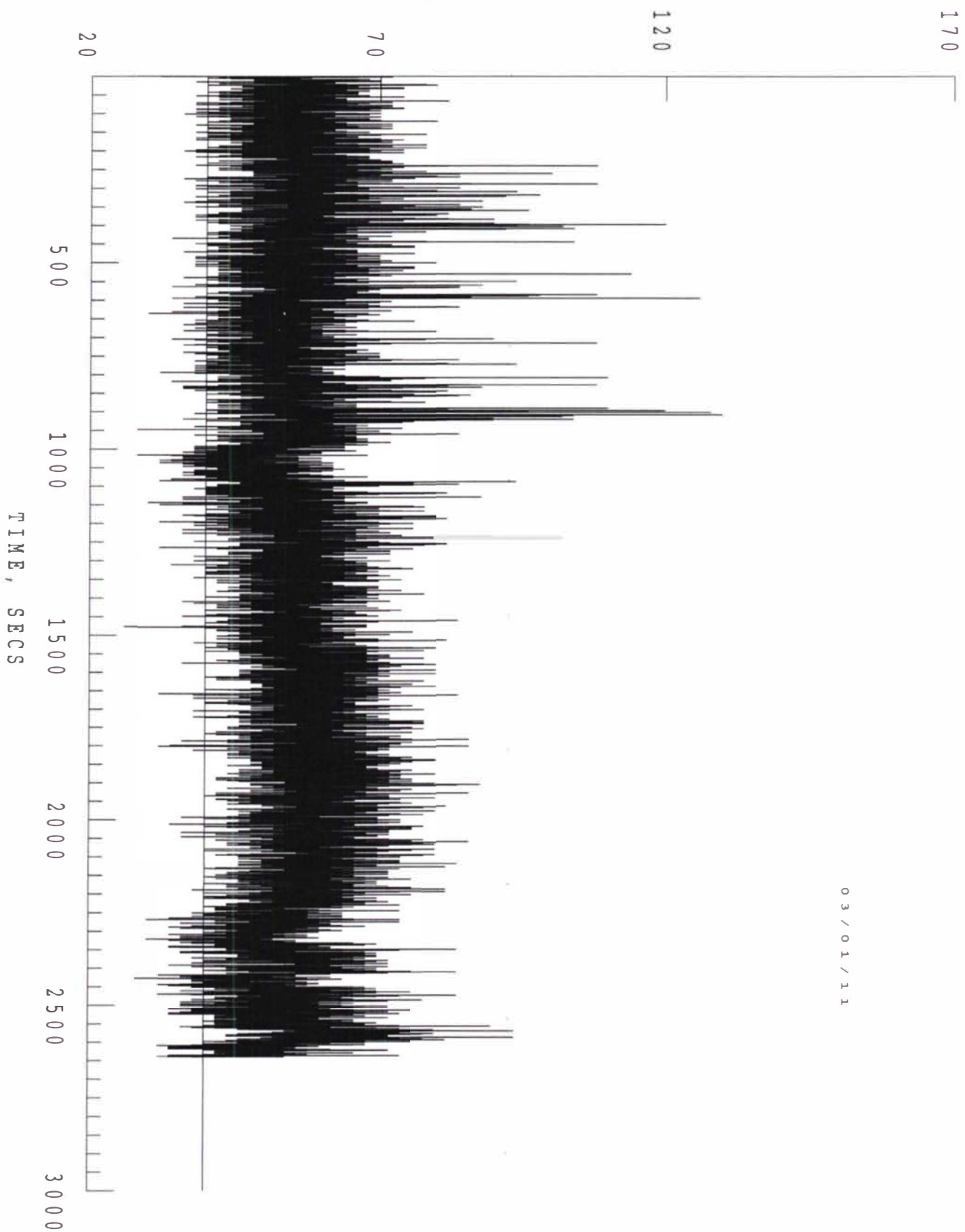
MS01

21/02/07

74657.814

50 - 3000 keV

COUNTS/0.250 S

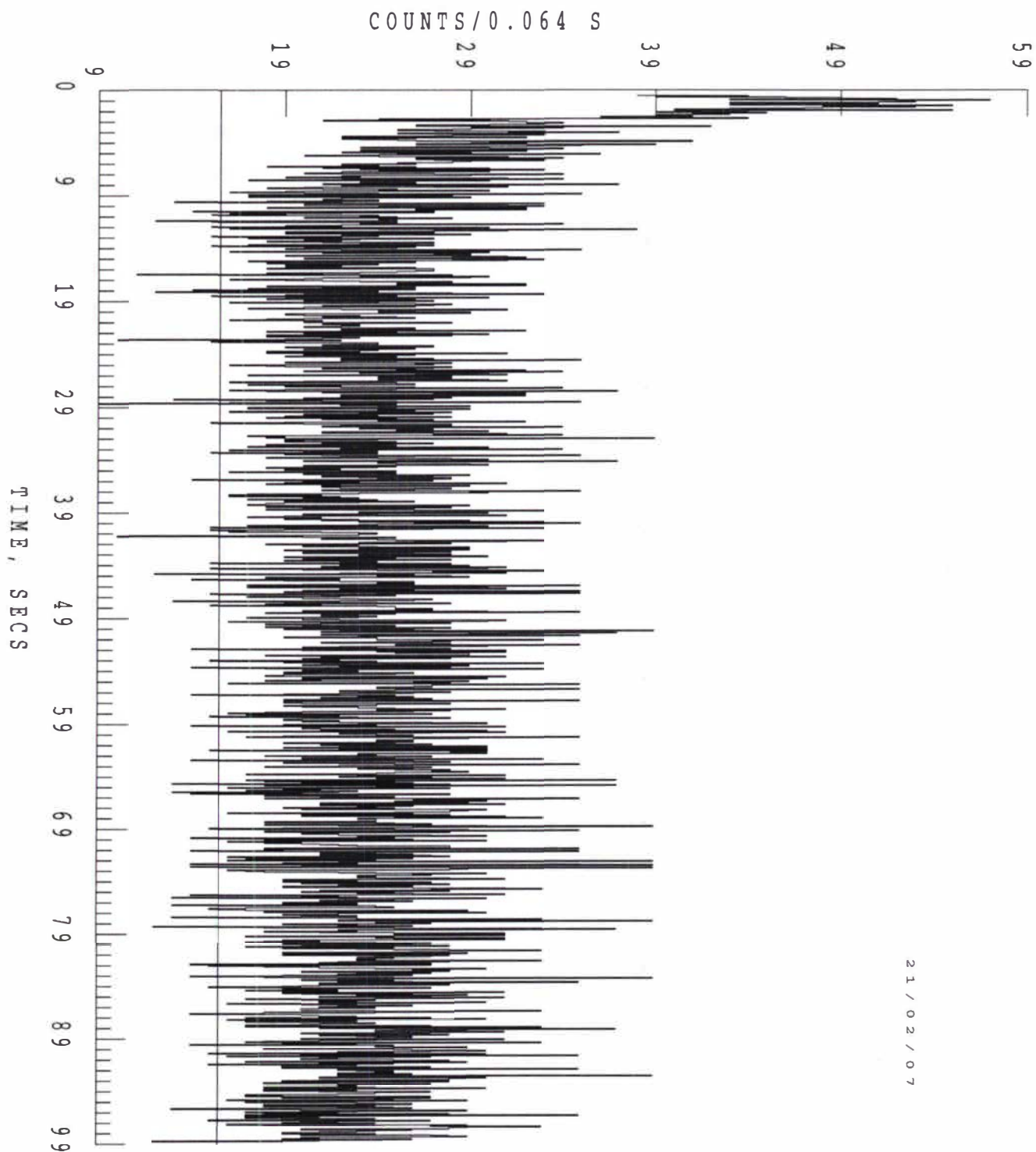


KONUS1

21/02/07

76004.551

50 - 200 keV



KONUS HRES 20070221 76004

TRIGGER TIME: 21/02/07 DOY 052 Julian 2454154.37968 UT = 21.112 21:06:44 (76004.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

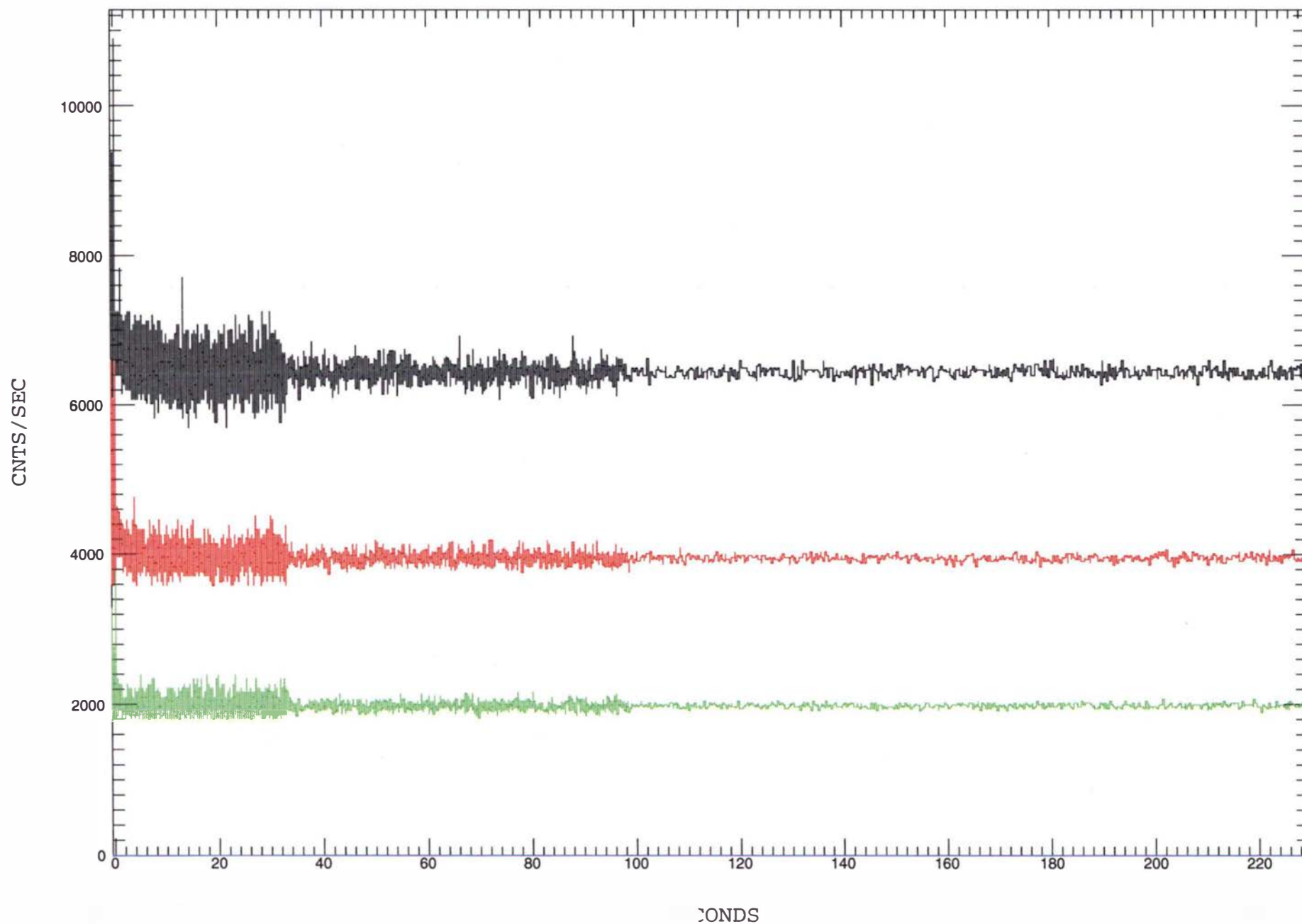
Chan 4 : [> 10 MeV]

Channel 1 + 5400

Channel 2 + 3600

Channel 3 + 1800

Channel 4 + 0



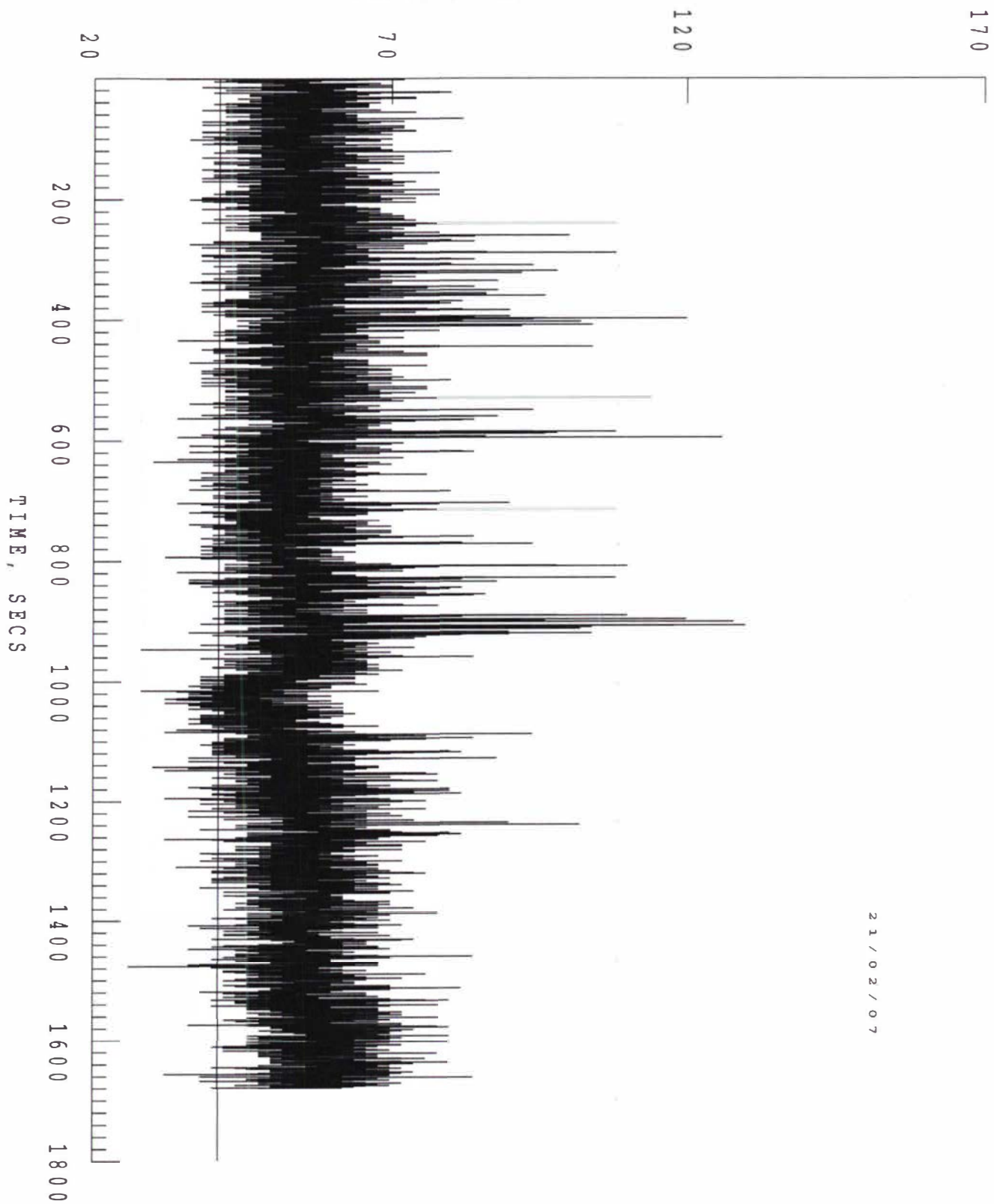
MS01

21/02/07

74658.787

50 - 3000 keV

COUNTS/0.250 S

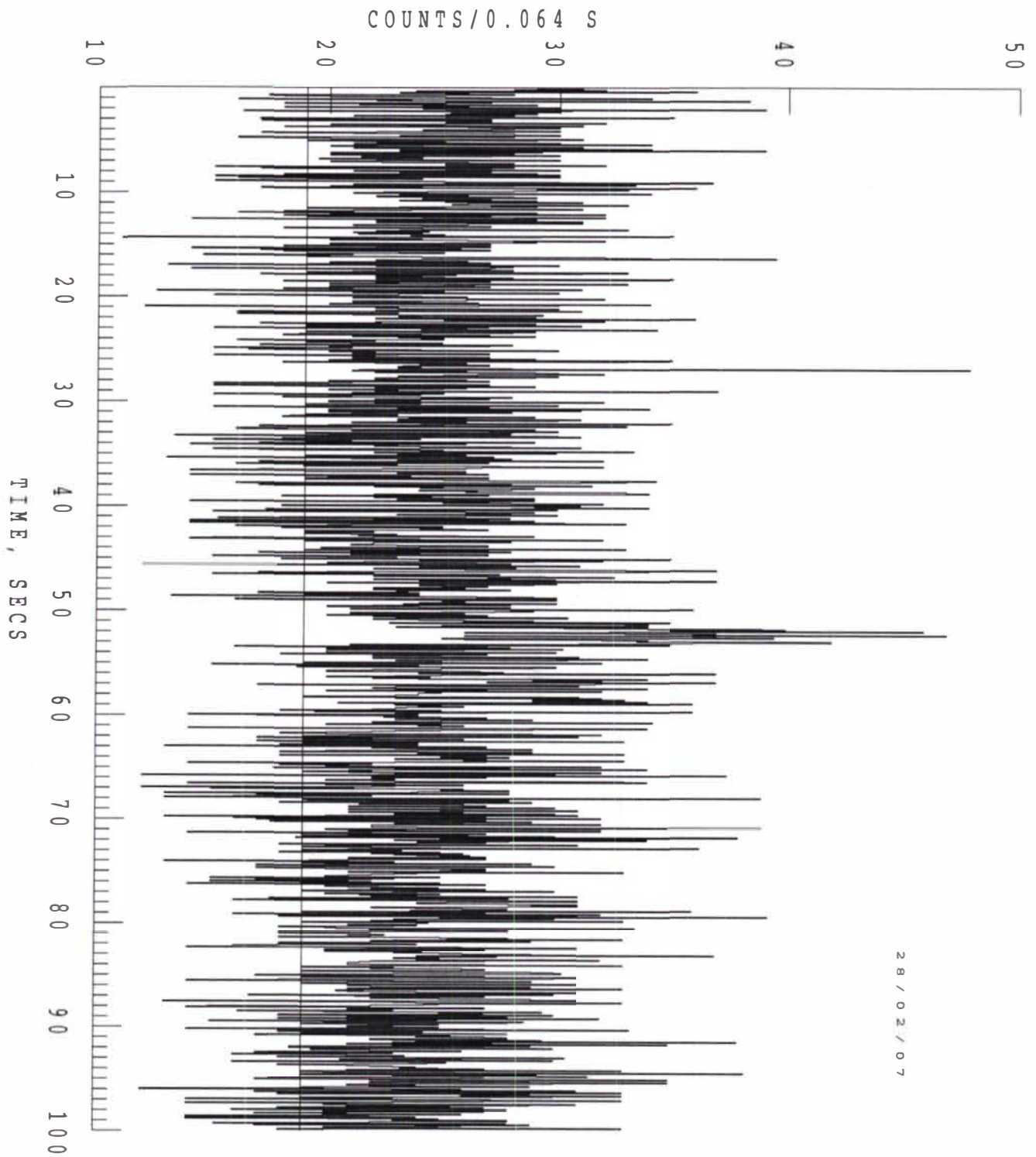


21/02/07

HESSI

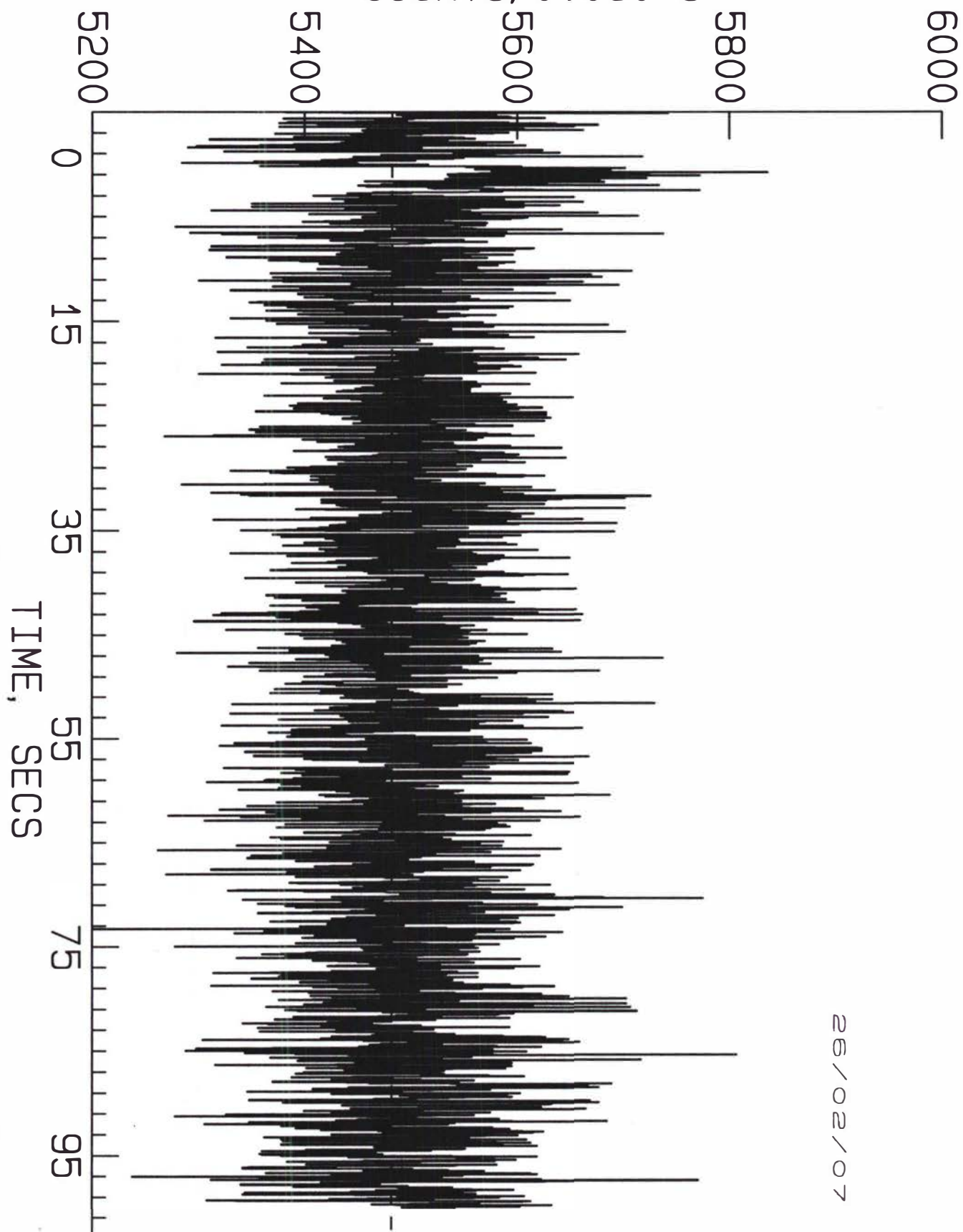
21/02/07 75954.000 (KONUS_20070221_76004)

50- 200 keV



INTEGRAL 21/02/07 76004.748 21:06:44.7
100-10000 keV

COUNTS/0.050 S



26/02/07

From jayc@milkyway.gsfc.nasa.gov Thu Feb 22 10:13:47 2007
X-ASG-Debug-ID: 1172168168-479b000d0000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: milkyway.gsfc.nasa.gov[128.183.16.143]
-Barracuda-Start-Time: 1172168168
X-ASG-Whitelist: Sender
Mime-Version: 1.0
Date: Thu, 22 Feb 2007 13:13:58 -0500
To: "val" <val@mail.ioffe.ru>, "Kevin Hurley" <khurley@ssl.berkeley.edu>,
"Kazutaka Yamaoka" <yamaoka@phys.aoyama.ac.jp>,
"Roland Vanderspek" <roland@space.mit.edu>,
"Masanori Ohno" <ohno@hirax7.hepl.hiroshima-u.ac.jp>,
"Hans Krimm" <krimm@milkyway.gsfc.nasa.gov>,
"Sergey Golenetskii" <golen@mail.ioffe.ru>
From: jayc@milkyway.gsfc.nasa.gov
X-ASG-Orig-Subj: Re: long GRB detected on February 21
Subject: Re: long GRB detected on February 21
Cc: "val" <val@mail.ioffe.ru>
X-Greylist: Sender IP whitelisted, not delayed by milter-greylist-2.0.2 (milkywa
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
Content-Transfer-Encoding: 8bit
X-MIME-Autoconverted: from quoted-printable to 8bit by sunspot.ssl.berkeley.edu

BAT sees nothing at this time.

At 8:33 PM +0300 2/22/07, val wrote:

>A long rather weak GRB triggered Konus-Wind at 2007-02-21

>T0=76004.551 s UT (21:06:44.551).

>This burst also triggered Suzaku-WAM.

The burst light curve shows single pulse with a total duration of ~10 sec.

The burst source is in the south ecliptic hemisphere.

>The burst spectrum is rather unusual: G1/G2 ratio is 1.2 +/- 0.1 whereas

>G3/G2 = 0.00 +/- 0.03, i.e. there is no emission in the G3 band.

>(see the attached figure).

>

>Any other detections?

>

>Best wishes,

>

>Valentin

>

>

>Attachment converted: Apps_and_Documents:GRB070221_KW_256ms.gif (GIFf/¼ICȳ) (00

--

Jay Cummings

08/05/07

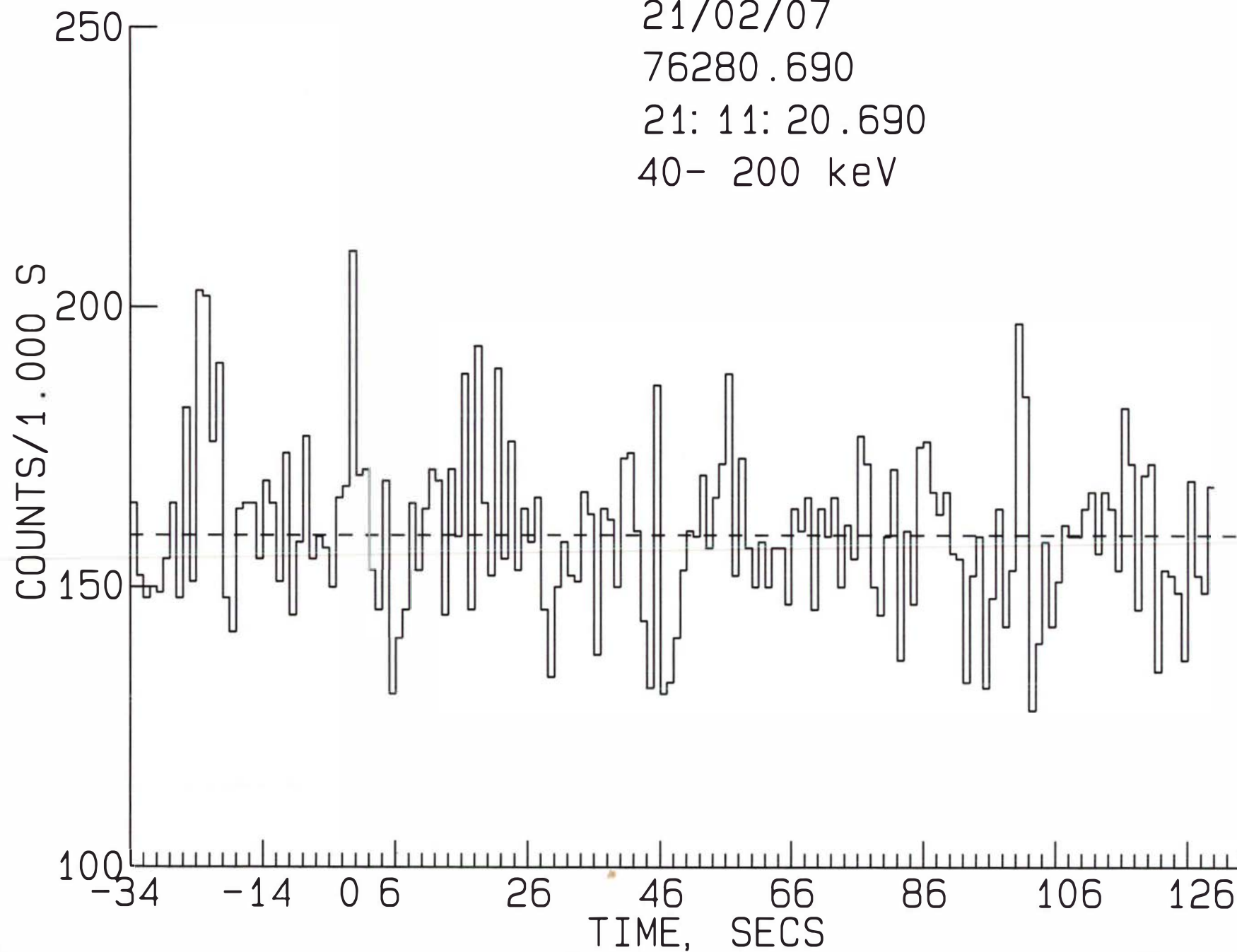
MESSENGER

21/02/07

76280.690

21: 11: 20.690

40- 200 keV



08/05/07

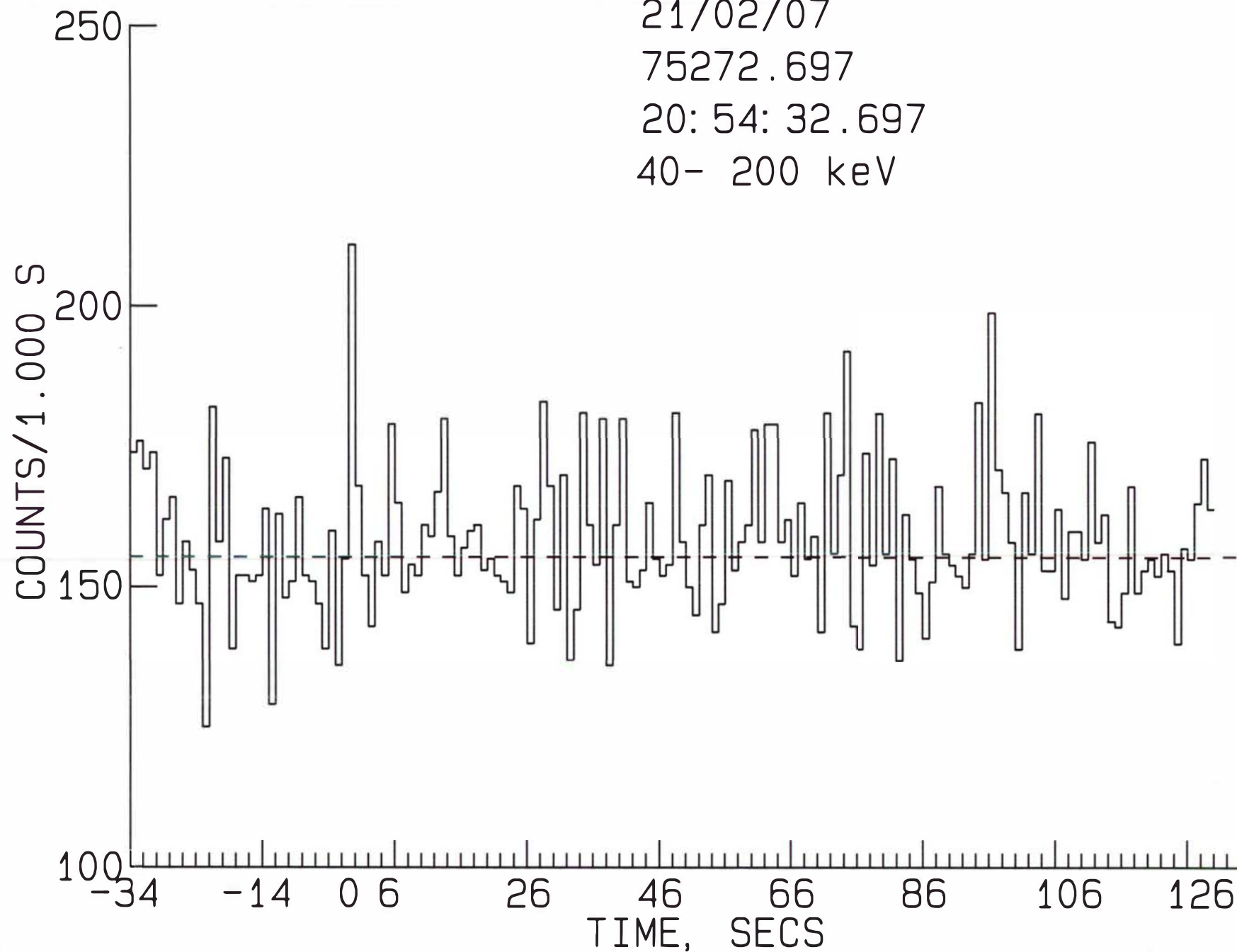
MESSENGER

21/02/07

75272.697

20:54:32.697

40- 200 keV



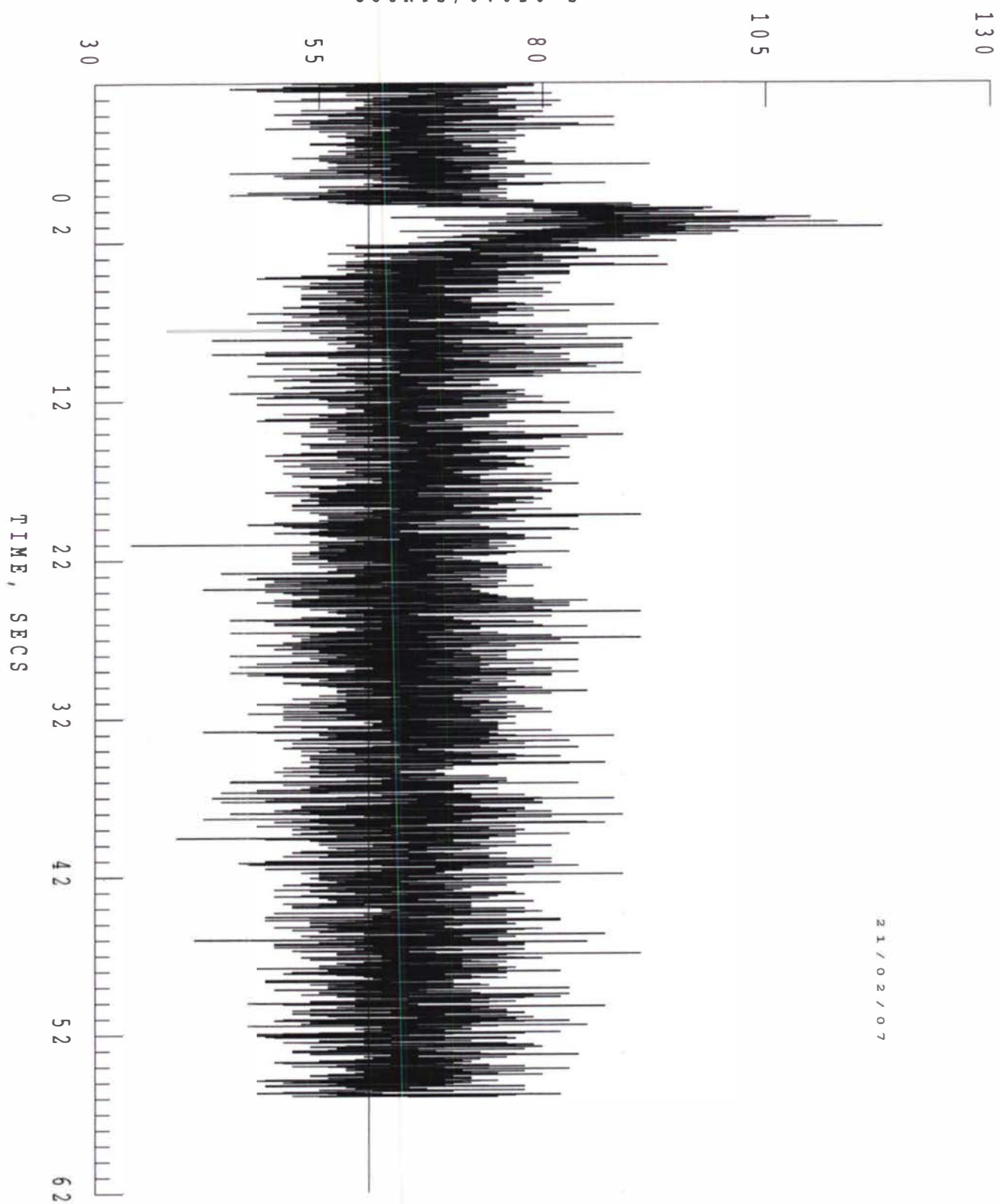
SUZAKU

21/02/07

76005.233

50- 240 keV

COUNTS/0.016 S



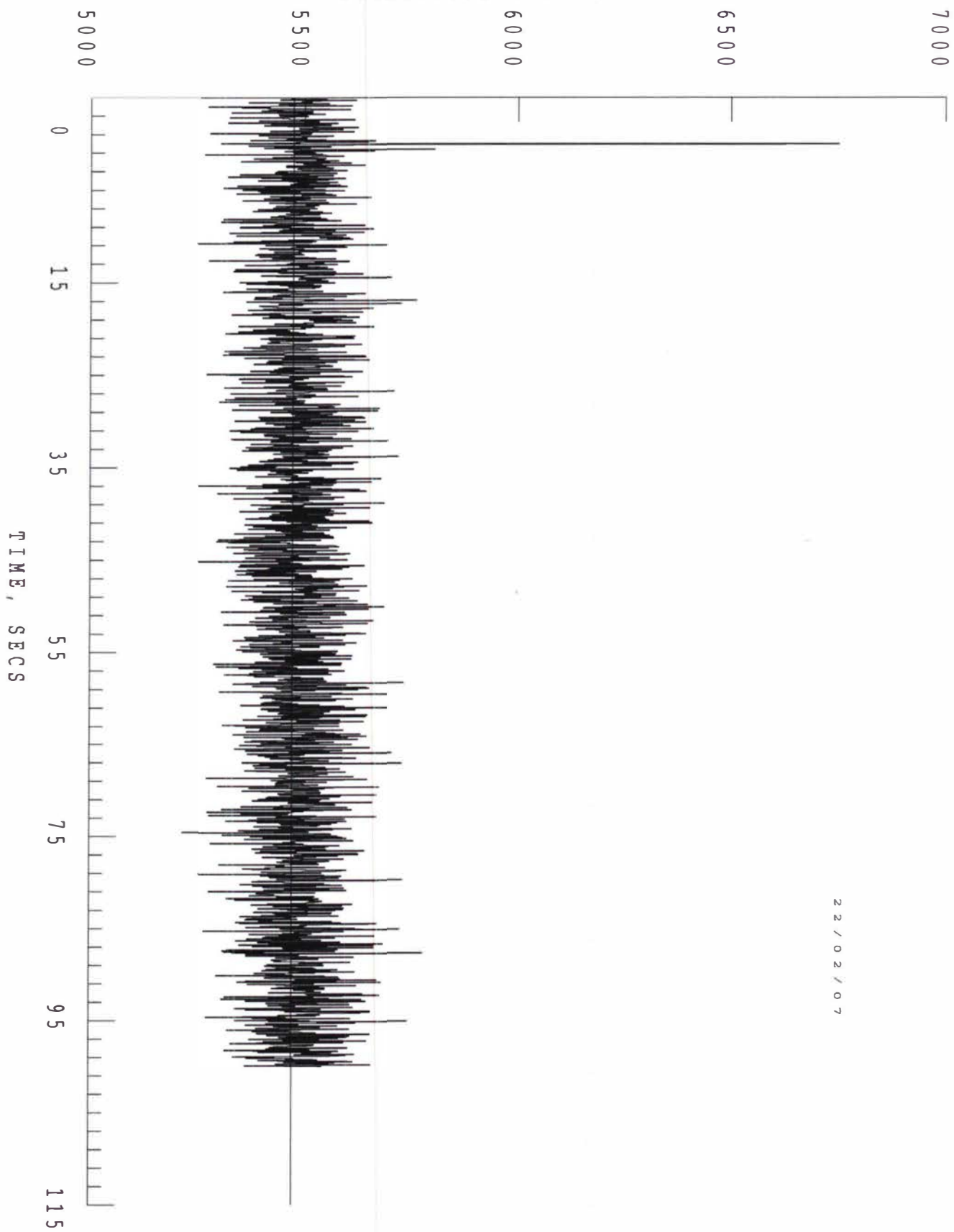
INTEGRAL

21/02/07

81860.400

100-10000 keV

COUNTS/0.050 S



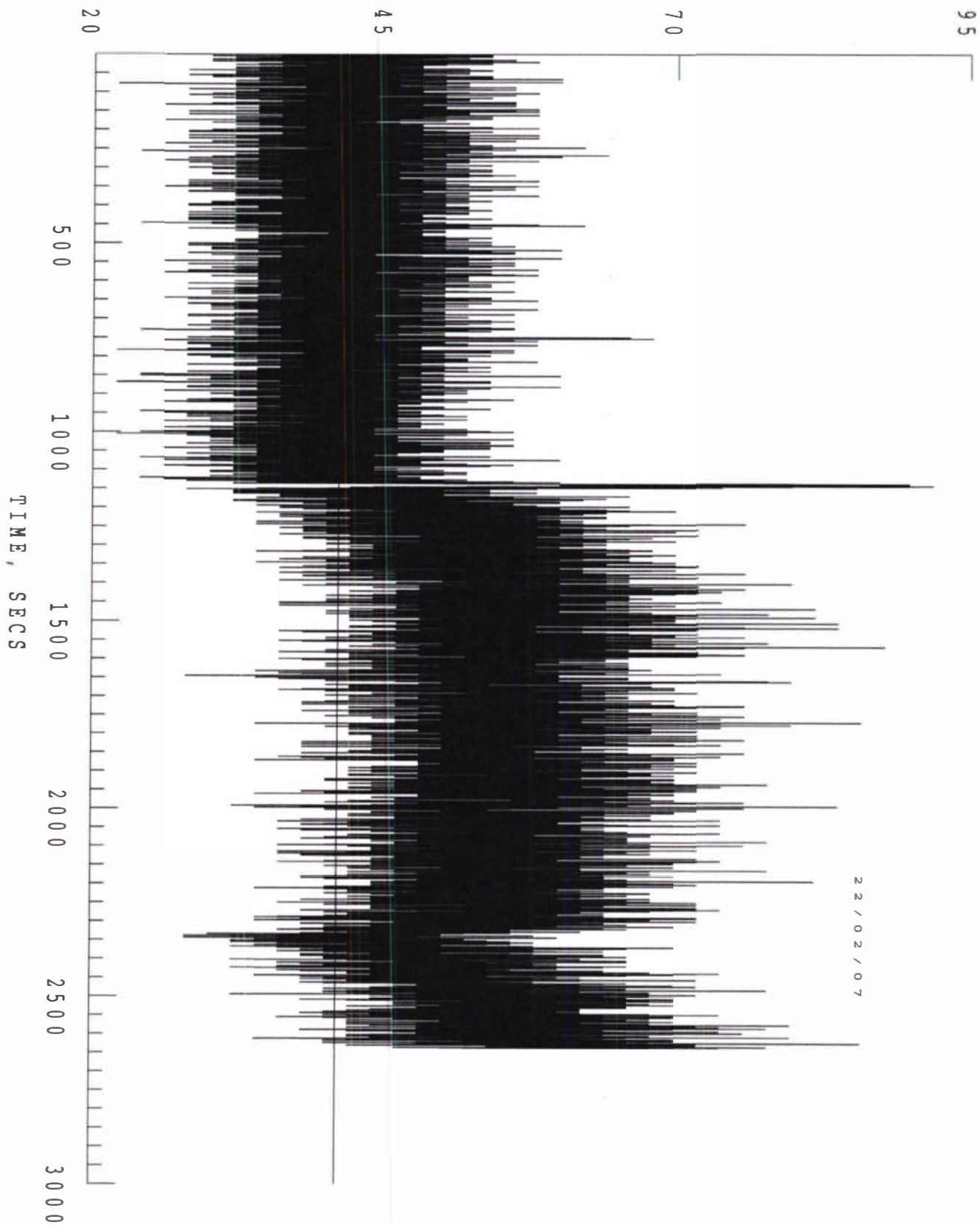
MS01

21/02/07

80538.674

50 - 3000 keV

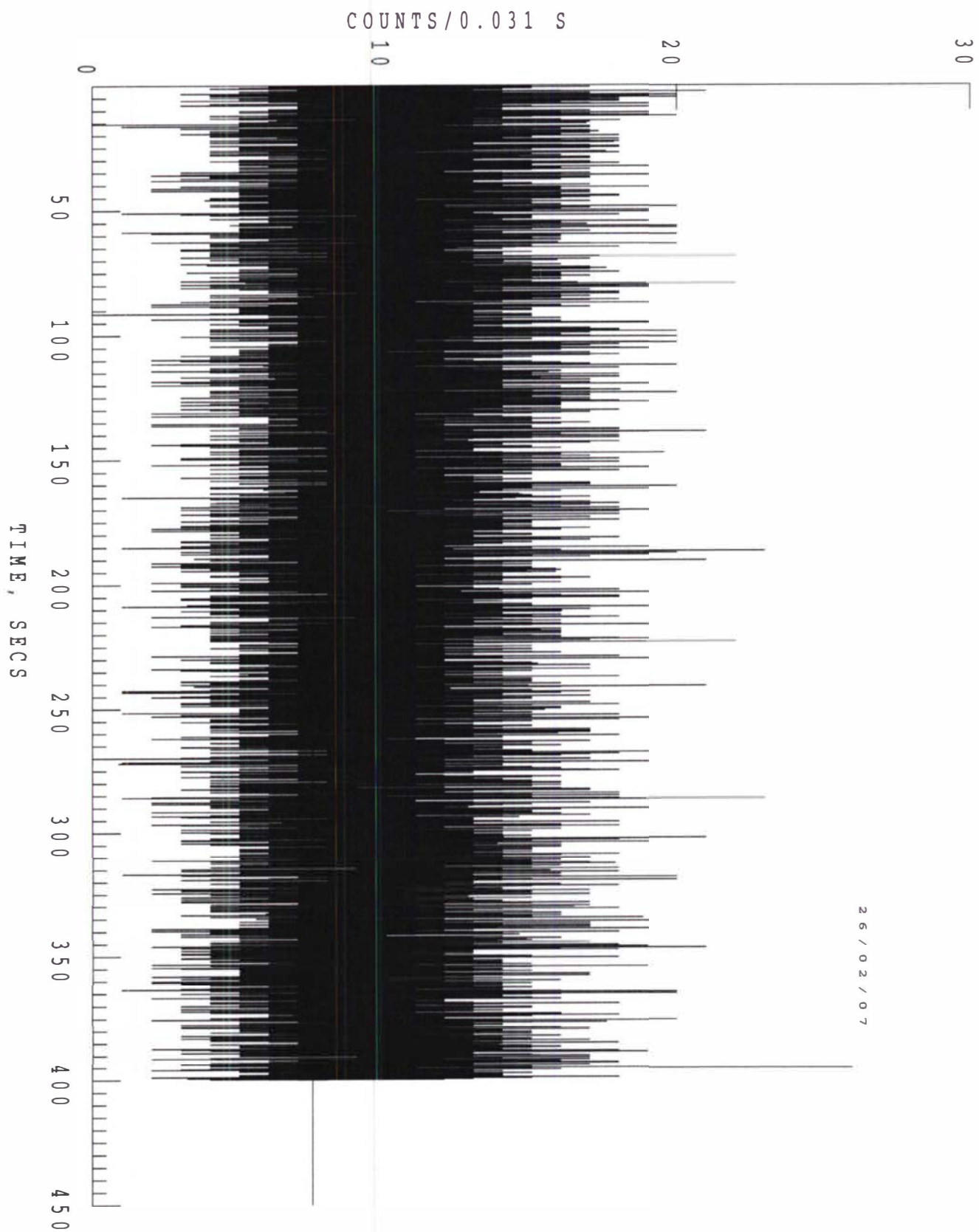
COUNTS/0.250 S



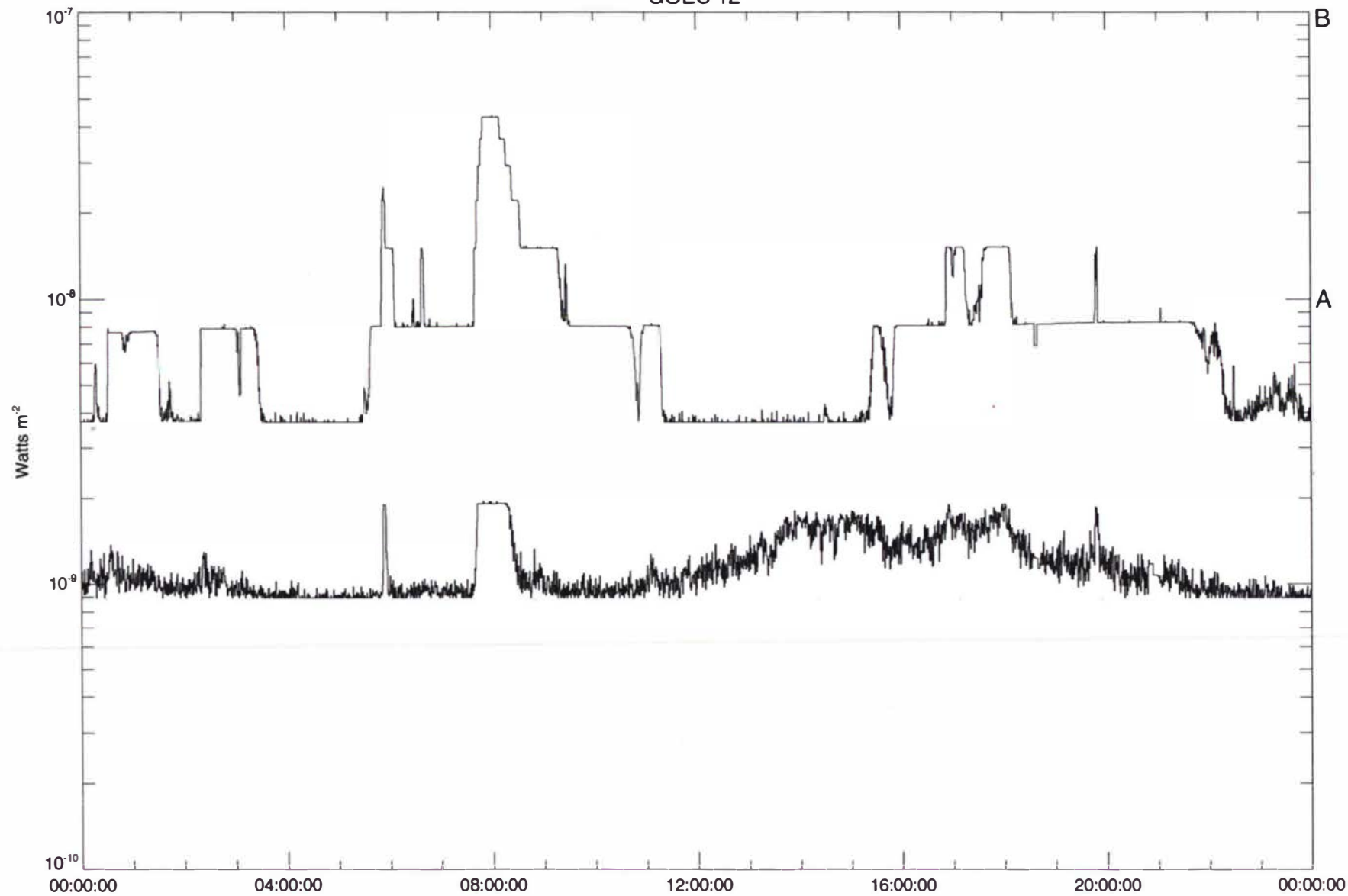
HESSI

21/02/07 81660.000 (INTEGRAL_20070221_81860)

25- 150 keV



GOES 12



Data Start: 07/02/21, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)
2 (0.5 - 4.0 Angstroms)

Background not subtracted
Background not subtracted

Plot created: 07/02/24, 0921

Sample average = 10

Date: Mar 18 '09

BURST TRIANGULATION CHECKLIST

1. Ulysses Data N/A

- ☐ 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 N/A

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

3. For INTEGRAL events N/A

- ☐ 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?

 CROSSING TIME PROGRAM

EVENT CROSSING TIME AT KONUS : 27115.590 S. OR 07:31:55.590
 COORDINATES ARE 312.480 -19.540 1452822.00 (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 205.600 -26.100
 EVENT CROSSING TIME AT EARTH WILL BE FOUND
 \rCOORDINATES ARE .000 .000 .00 (RA, DEC, DIST.)
 COORDINATES OF THIS OBJECT ARE:
 DISTANCE FROM EARTH= 0. KM., OR .0000 A.U.
 RA= .000 DEGREES, OR 0.H 0.M .0S
 DEC= .000 DEGREES, OR 0.D 0.M .0S
 DISTANCE BETWEEN OBJECTS 1 AND 2 = 1452822.
 ANGLE WHICH 1ST OBJECT-2ND OBJECT VECTOR
 MAKES WITH GRB ARRIVAL DIRECTION= 95.66
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= -.47779 SECS.
 CROSSING TIME AT EARTH IS 27115.1122 S. OR 07:31:55.112

 CROSSING TIME PROGRAM

EVENT CROSSING TIME AT KONUS : 27115.590 S. OR 07:31:55.590
 COORDINATES ARE 312.480 -19.540 1452822.00 (RA, DEC, DIST.)
 BURST ARRIVAL DIRECTION: 24.300 -5.400
 EVENT CROSSING TIME AT EARTH WILL BE FOUND
 \rCOORDINATES ARE .000 .000 .00 (RA, DEC, DIST.)
 COORDINATES OF THIS OBJECT ARE:
 DISTANCE FROM EARTH= 0. KM., OR .0000 A.U.
 RA= .000 DEGREES, OR 0.H 0.M .0S
 DEC= .000 DEGREES, OR 0.D 0.M .0S
 DISTANCE BETWEEN OBJECTS 1 AND 2 = 1452822.
 ANGLE WHICH 1ST OBJECT-2ND OBJECT VECTOR
 MAKES WITH GRB ARRIVAL DIRECTION= 71.08
 LIGHT TRAVEL TIME ALONG PROJECTED PATH= 1.57109 SECS.
 CROSSING TIME AT EARTH IS 27117.1611 S. OR 07:31:57.161

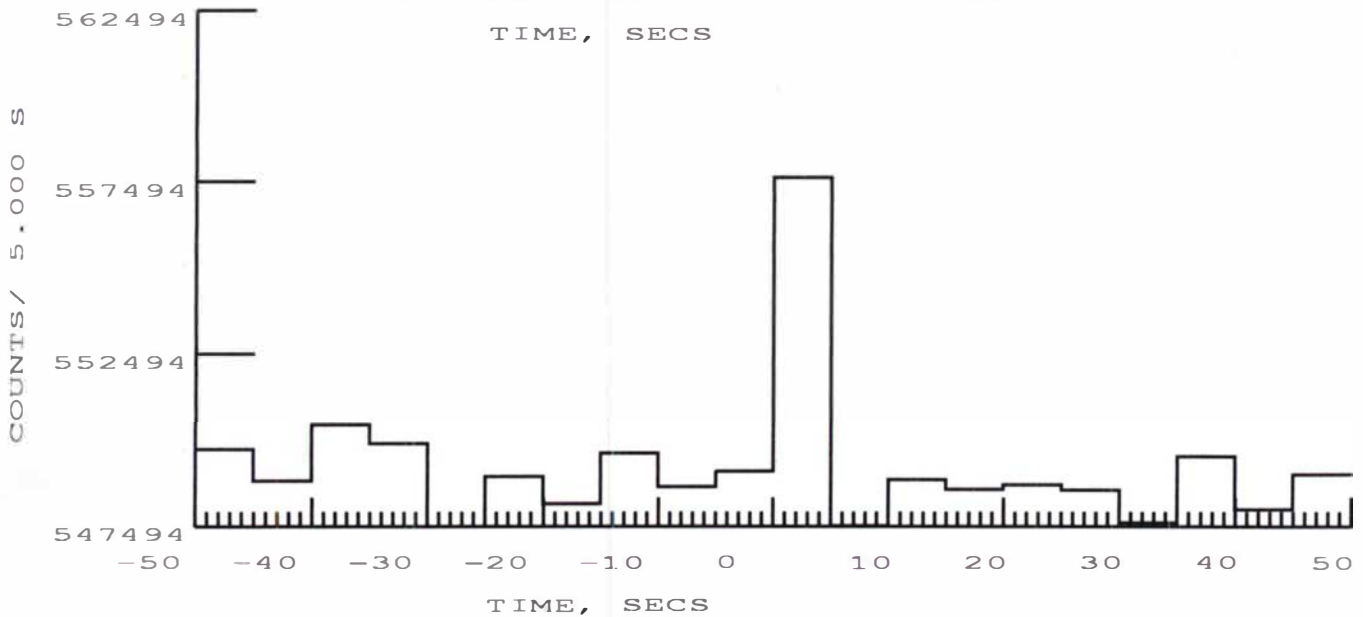
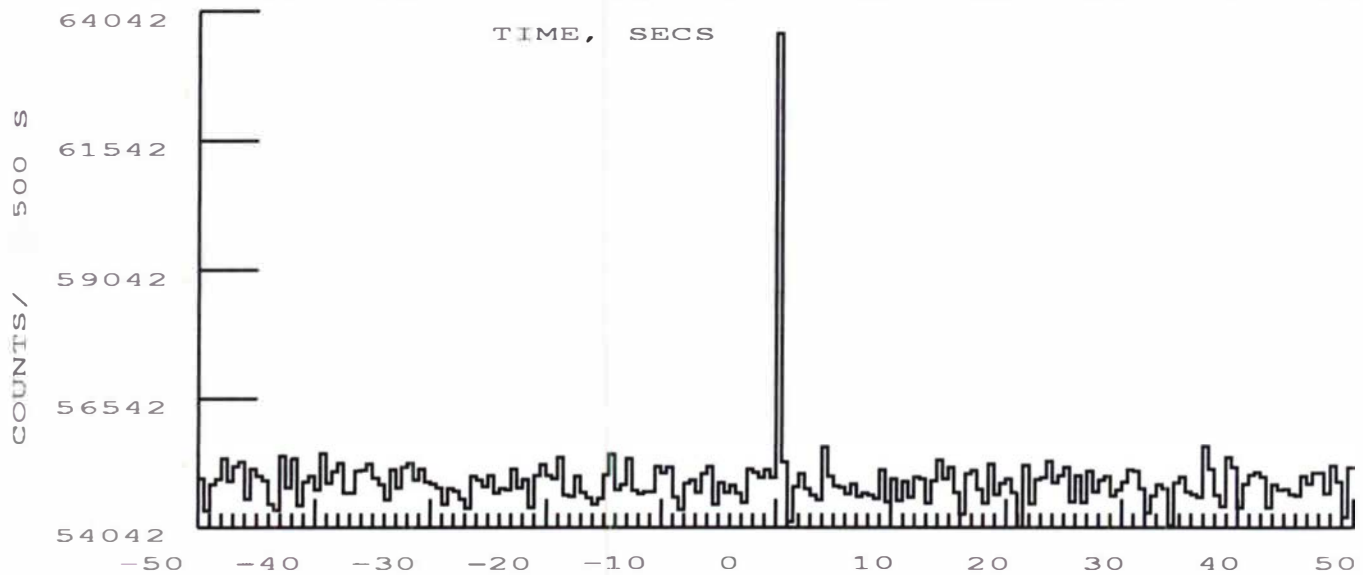
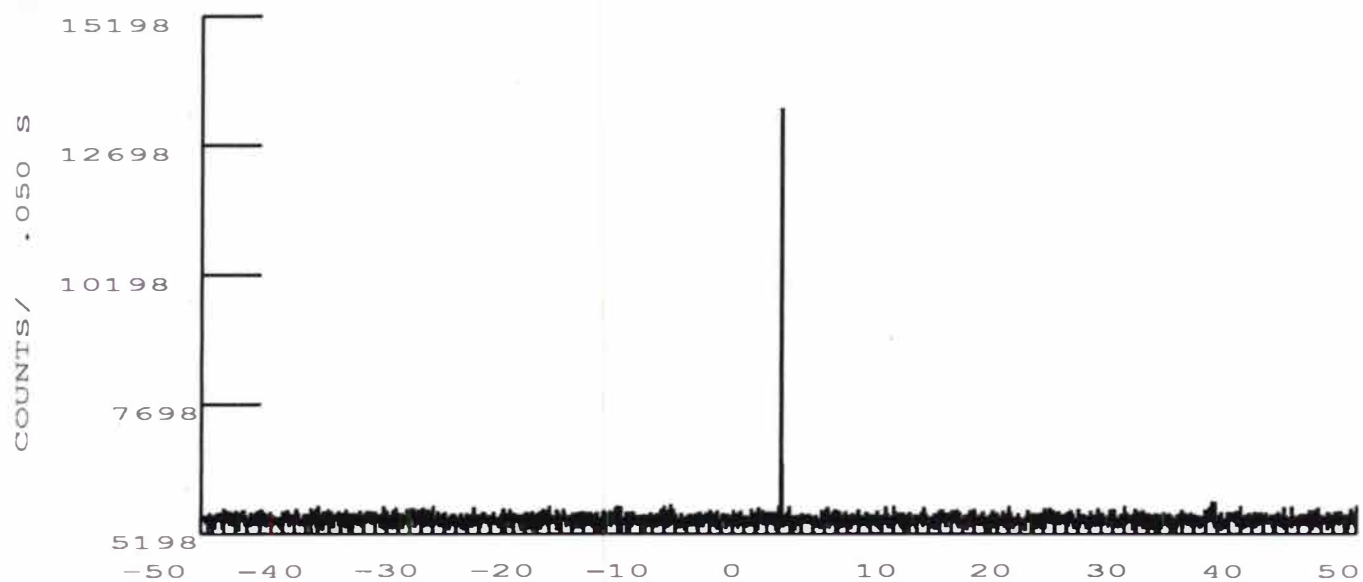
INTEGRAL

22/02/07

27115.000

07:31:55.0

18/07/14



N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

G=GALACTIC EQUATOR

1 KONUS1

2 MO

Two possible error boxes are at

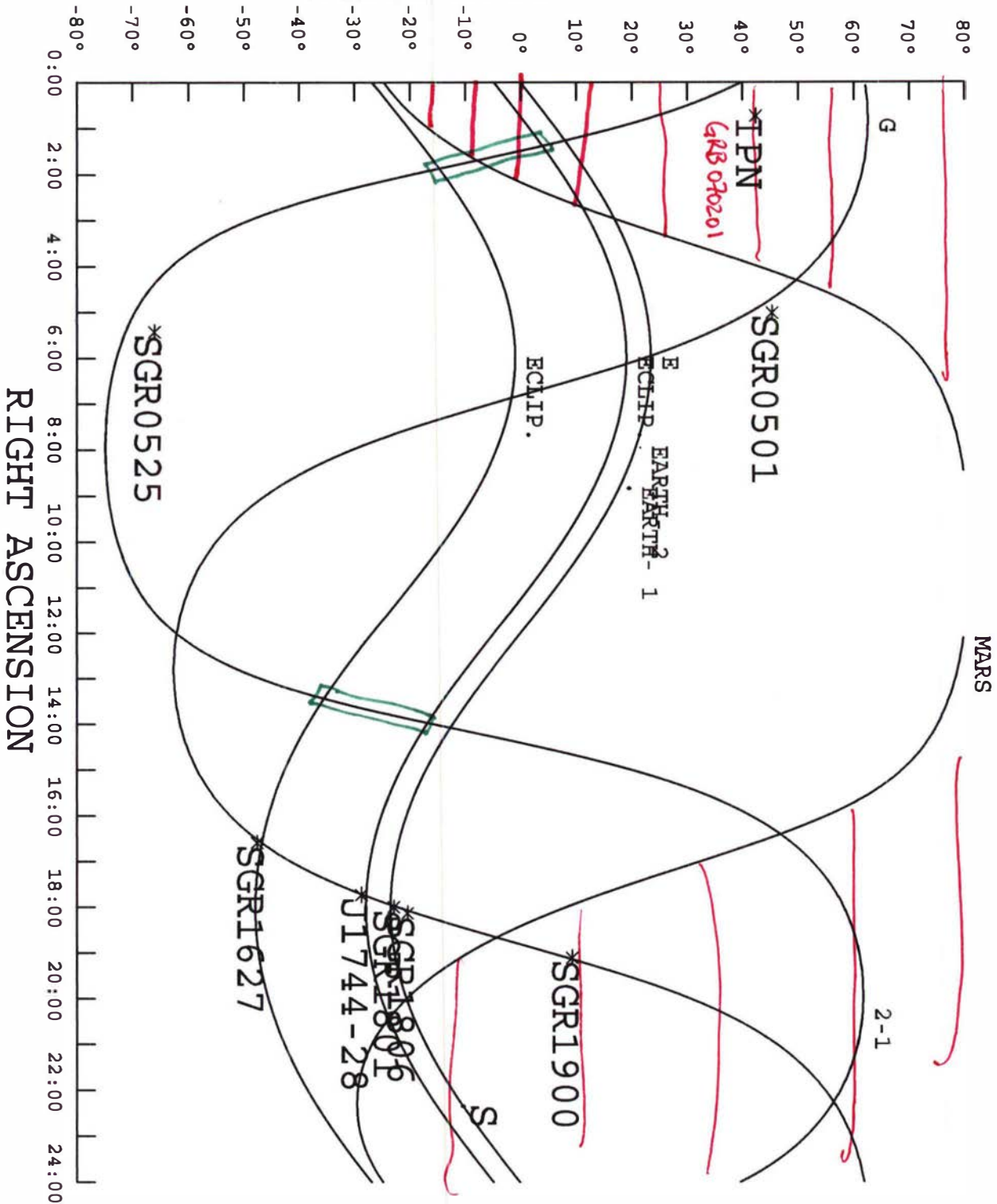
$\alpha, \delta = 205.6, -26.1$

or $\alpha, \delta = 24.3, -5.4$

DECLINATION

EVENT OF FEB 22, 2007 7:31

18 / 3 / 9



KONUS1

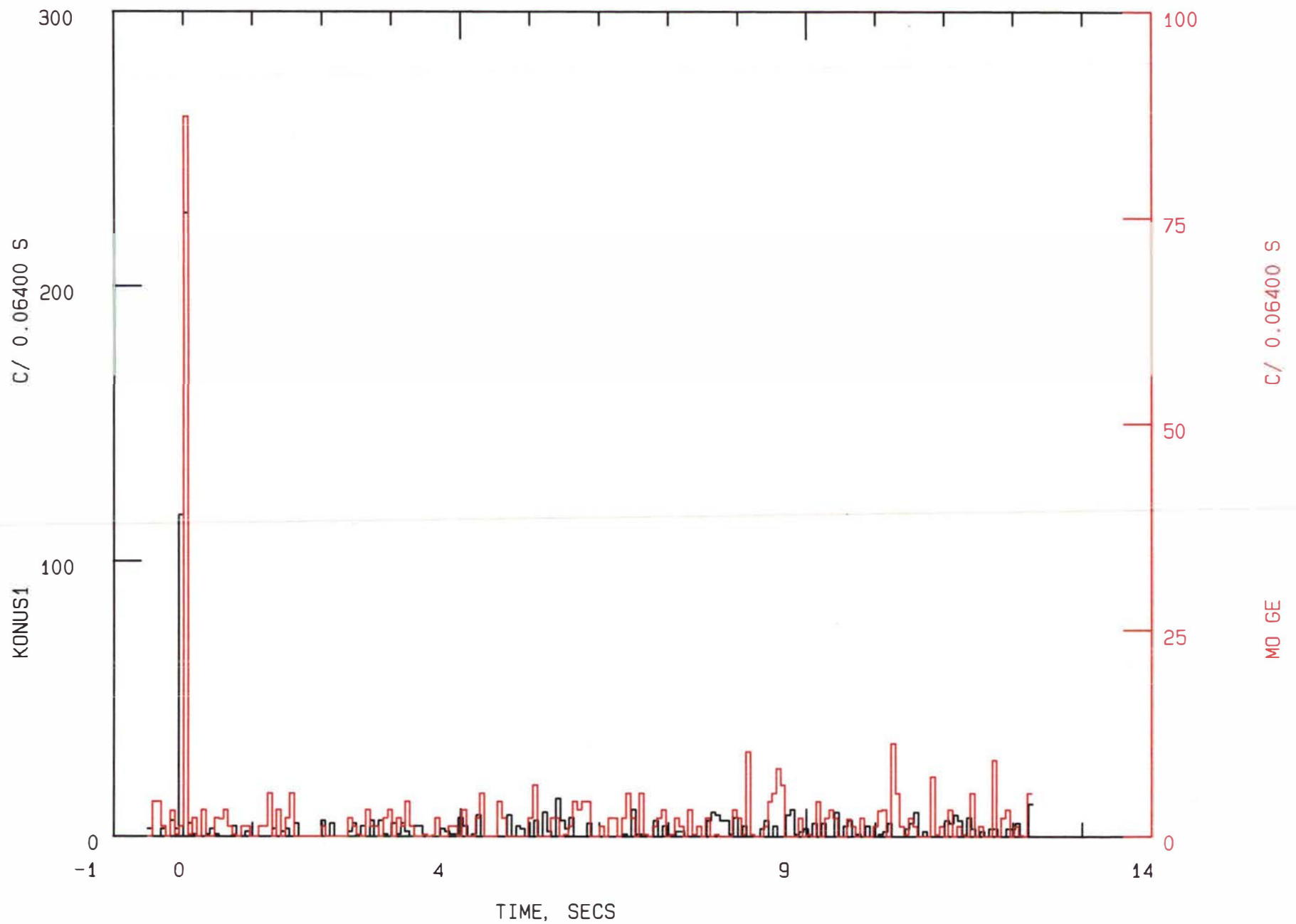
-MO GE

CORRELATION

22/02/07

27115.590

18/ 3/ 9



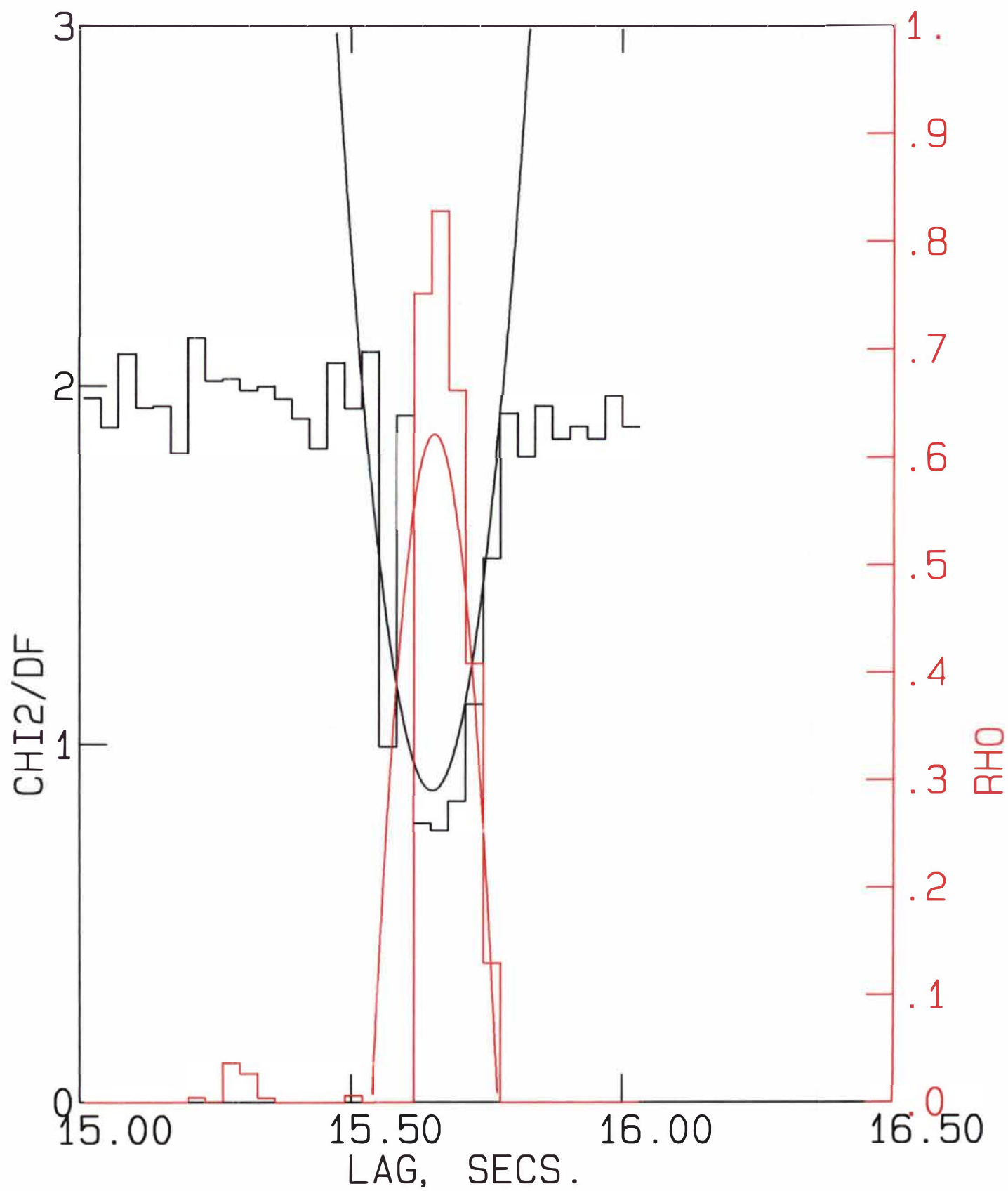
KONUS1

-MO GE

CORRELATION

22/02/07

27115.590



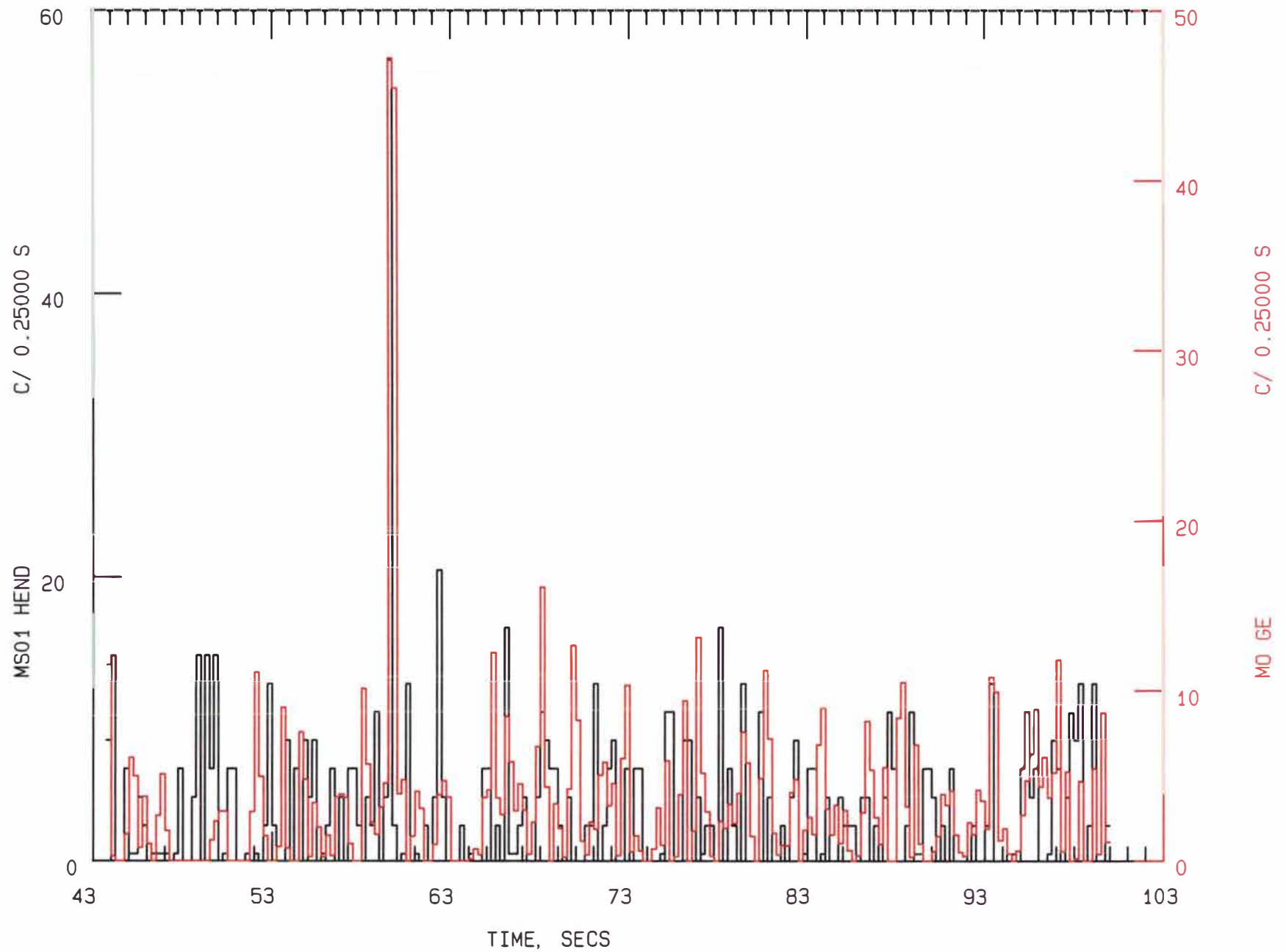
MS01 HEND -MO GE

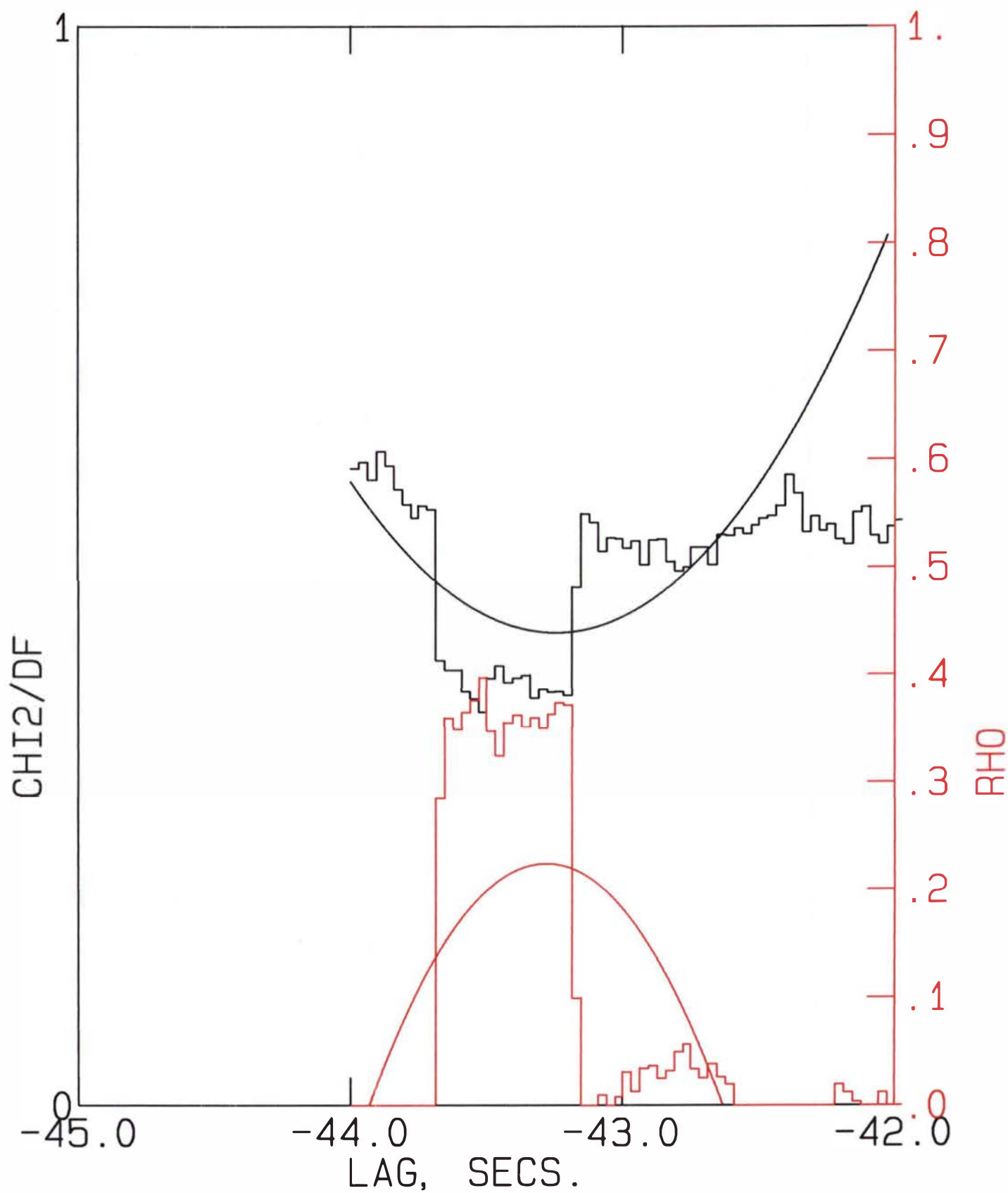
CORRELATION

22/02/07

26937.834

18/ 3/ 9

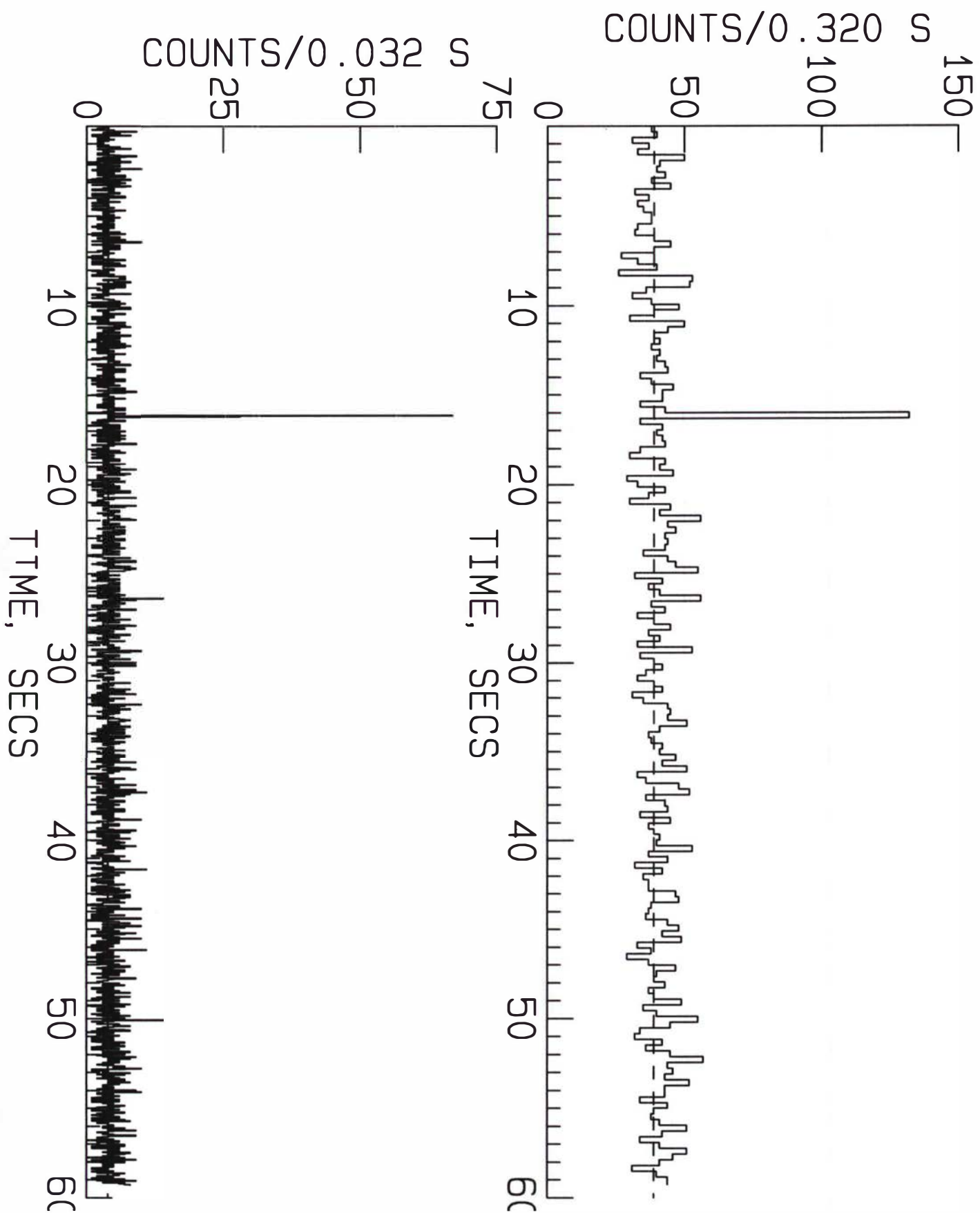




MO GE

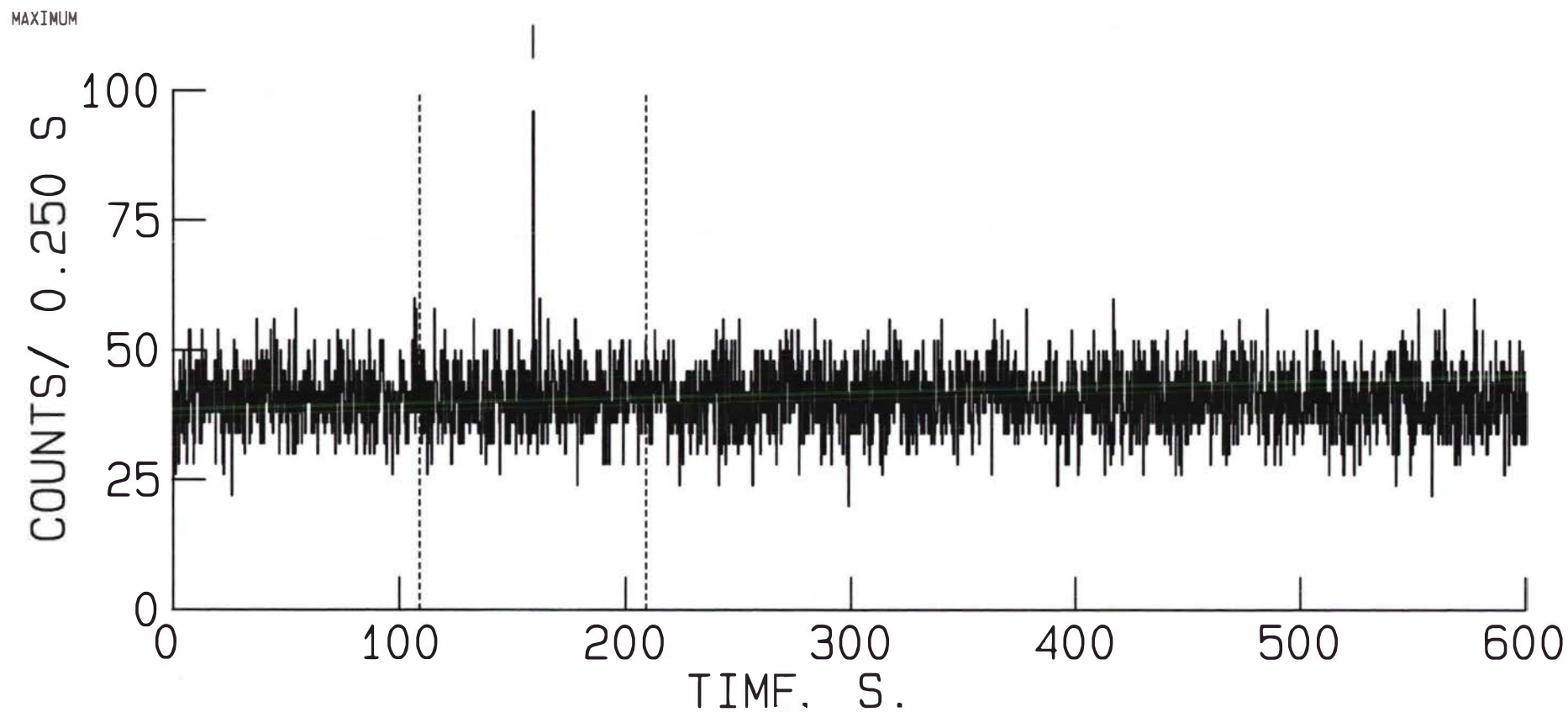
22/02/07 26980.131

116- 337 keV



MS01 HEND
22/02/07 26838.082 s
50-3000 keV

18/03/09



KONUS1

22/02/07

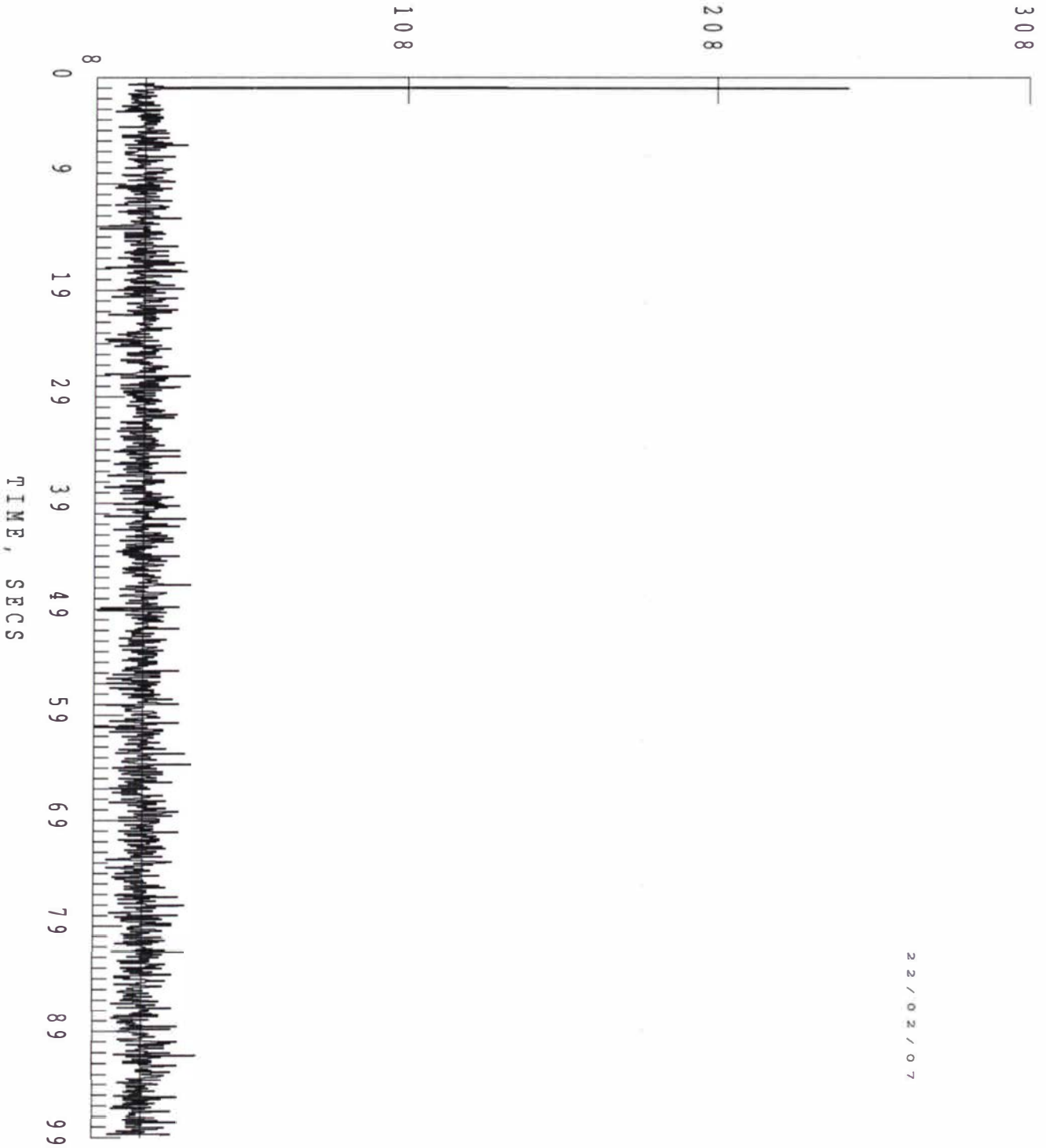
27115.590

A

50 - 200 keV

07:31:55

COUNTS/0.064 S



22/02/07

KONUS HRES 20070222 27115

TRIGGER TIME: 22/02/07 DOY 053 Julian 2454154.81383 UT = 07.532 07:31:55 (27115.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

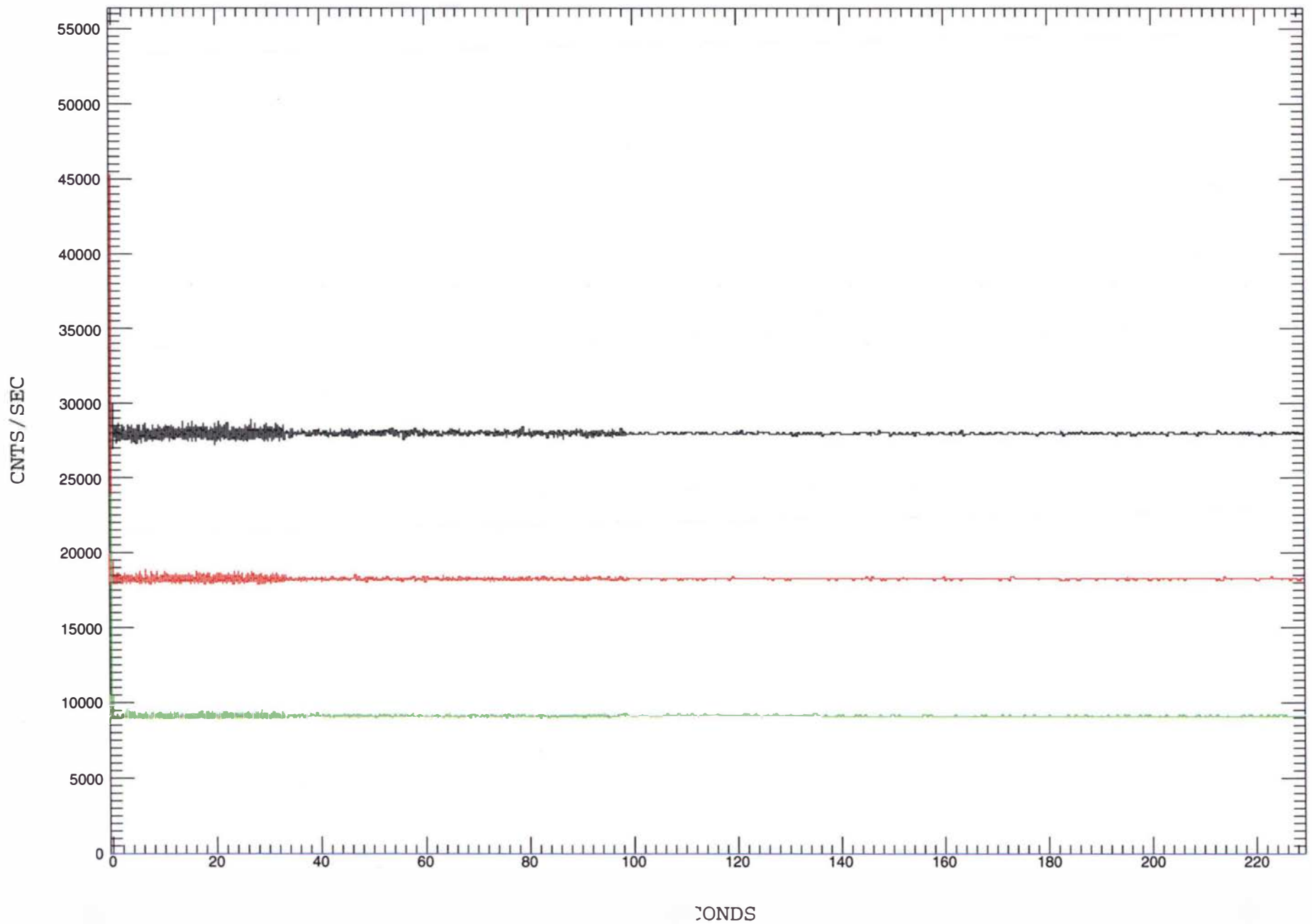
Chan 4 : [> 10 MeV]

Channel 1 + 27000

Channel 2 + 18000

Channel 3 + 9000

Channel 4 + 0



MO GE

22/02/07 26979.933

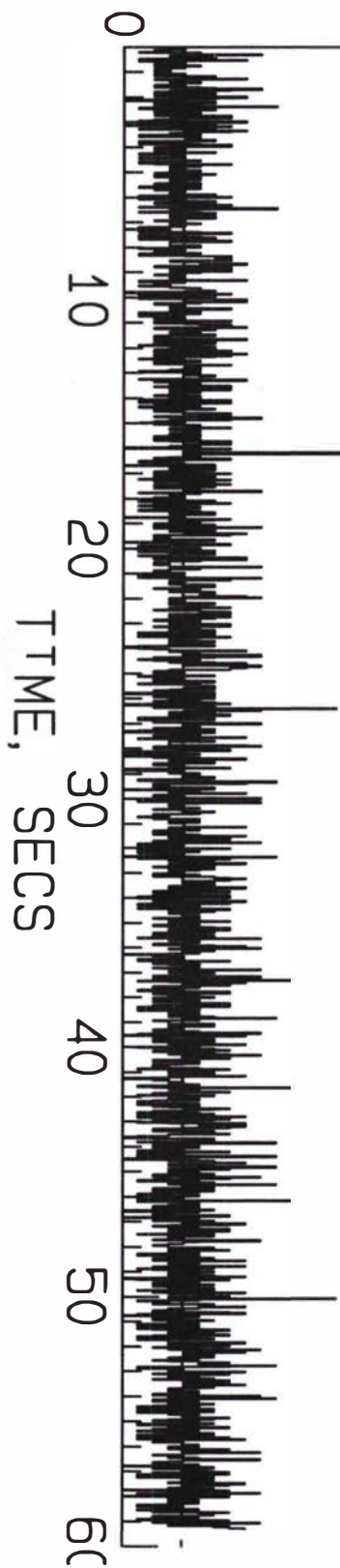
116- 337 keV

COUNTS/0.032 S

25

50

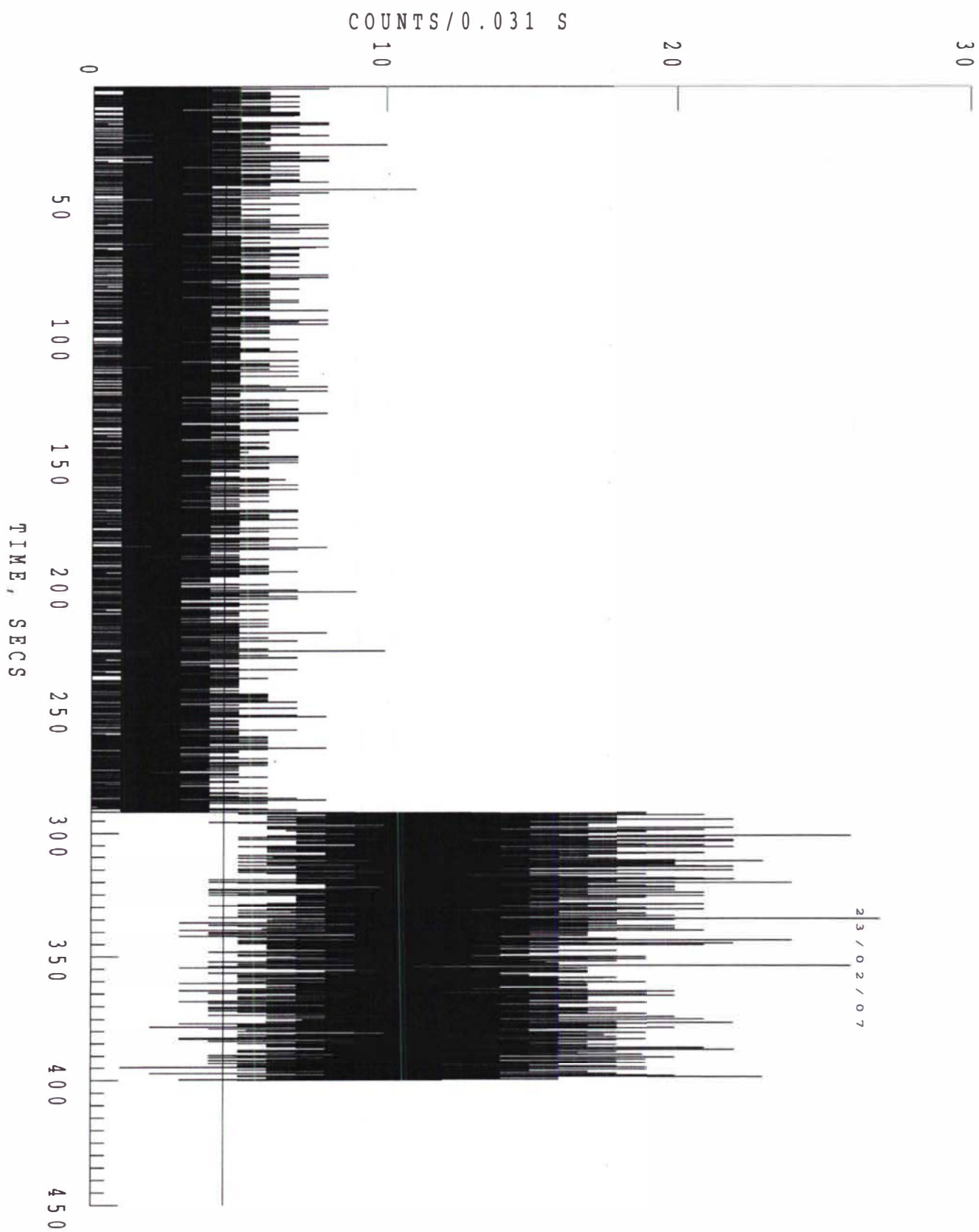
75



HESSI

22/02/07 26915.000 (KONUS1_20070222_27115)

25- 150 keV



From jayc@milkyway.gsfc.nasa.gov Thu Feb 22 10:17:53 2007
X-ASG-Debug-ID: 1172168416-47a800130000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
~Barracuda-Connect: milkyway.gsfc.nasa.gov[128.183.16.143]
-Barracuda-Start-Time: 1172168416
X-ASG-Whitelist: Sender
Mime-Version: 1.0
Date: Thu, 22 Feb 2007 13:18:14 -0500
To: "val" <val@mail.ioffe.ru>, "Kevin Hurley" <khurley@ssl.berkeley.edu>,
"Kazutaka Yamaoka" <yamaoka@phys.aoyama.ac.jp>,
"Roland Vanderspek" <roland@space.mit.edu>,
"Masanori Ohno" <ohno@hirax7.hepl.hiroshima-u.ac.jp>,
"Hans Krimm" <krimm@milkyway.gsfc.nasa.gov>,
"Sergey Golenetskii" <golen@mail.ioffe.ru>
From: jayc@milkyway.gsfc.nasa.gov
X-ASG-Orig-Subj: Re: intense short hard GRB detected by Konus-Wind on February 2
(today ~11 hours ago)
Subject: Re: intense short hard GRB detected by Konus-Wind on February 22
(today ~11 hours ago)
Cc: "val" <val@mail.ioffe.ru>
X-Greylist: Sender IP whitelisted, not delayed by milter-greylist-2.0.2 (milkywa
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

Swift was in the SAA at this time.

At 8:56 PM +0300 2/22/07, val wrote:

>Dear colleagues,

>

>A bright short hard GRB triggered Konus-Wind
at 2007-02-22 T0=27115.590 s UT (07:31:55.590).

The burst light curve shows two pulses with a total duration of ~0.045 s.

>The peak count rate is ~5x10⁴ cts/sec.

>The source of the burst is in the south ecliptic hemisphere.

>

>Any other detections?

--

Jay Cummings

From yamaoka@phys.aoyama.ac.jp Thu Feb 22 17:09:06 2007
X-ASG-Debug-ID: 1172193074-2f6e00230000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: scmailgw2.scop.aoyama.ac.jp[133.2.251.195]
-Barracuda-Start-Time: 1172193074
To: val@mail.ioffe.ru
Cc: khurley@ssl.berkeley.edu, jayc@milkyway.gsfc.nasa.gov,
roland@space.mit.edu, ohno@hirax7.hepl.hiroshima-u.ac.jp,
krimm@milkyway.gsfc.nasa.gov, golen@mail.ioffe.ru,
yamaoka@phys.aoyama.ac.jp
X-ASG-Orig-Subj: Re: intense short hard GRB detected by Konus-Wind on February 2
(today ~11 hours ago)
Subject: Re: intense short hard GRB detected by Konus-Wind on February 22
(today ~11 hours ago)
Mime-Version: 1.0
Content-Transfer-Encoding: 7bit
Date: Fri, 23 Feb 2007 08:57:35 +0900
From: Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>
X-Dispatcher: imput version 20000228(IM140)
X-Barracuda-Bayes: INNOCENT GLOBAL 0.0023 1.0000 -2.0057
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.9433

Rule breakdown below

pts	rule name	description
0.00	UNPARSEABLE_RELAY	Informational: message has unparseable relay

Dear colleagues,

Suzaku data have just come in, but the burst signals cannot be seen in the light curve.

Unfortunately the burst was probably occulted by the earth.

Valentin, sorry for waiting for the data and no detection.

Best regards,
Kazu

From: Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>
Subject: Re: intense short hard GRB detected by Konus-Wind on February 22 (today
Date: Fri, 23 Feb 2007 05:21:54 +0900
Message-ID: <20070223052154G.yamaoka@phys.aoyama.ac.jp>

>
> Dear Valentin and colleagues,
>
> The Suzaku data is not available yet.
> I checked whether the Suzaku is at the SAA or not,
> and found that it was not at the SAA.
> Today's downlink will start from 2007/02/22 23:10.
> I expect to detect this bright GRB with the WAM.

>
> Best regards,
> Kazu
> on behalf of the Suzaku WAM team

> From: "val" <val@mail.ioffe.ru>
> Subject: intense short hard GRB detected by Konus-Wind on February 22 (today ~
> Date: Thu, 22 Feb 2007 20:56:06 +0300
> Message-ID: <004001c756aa\$beba2dd0\$ade055c2@home>

KONUS2

22/02/07

81793.979

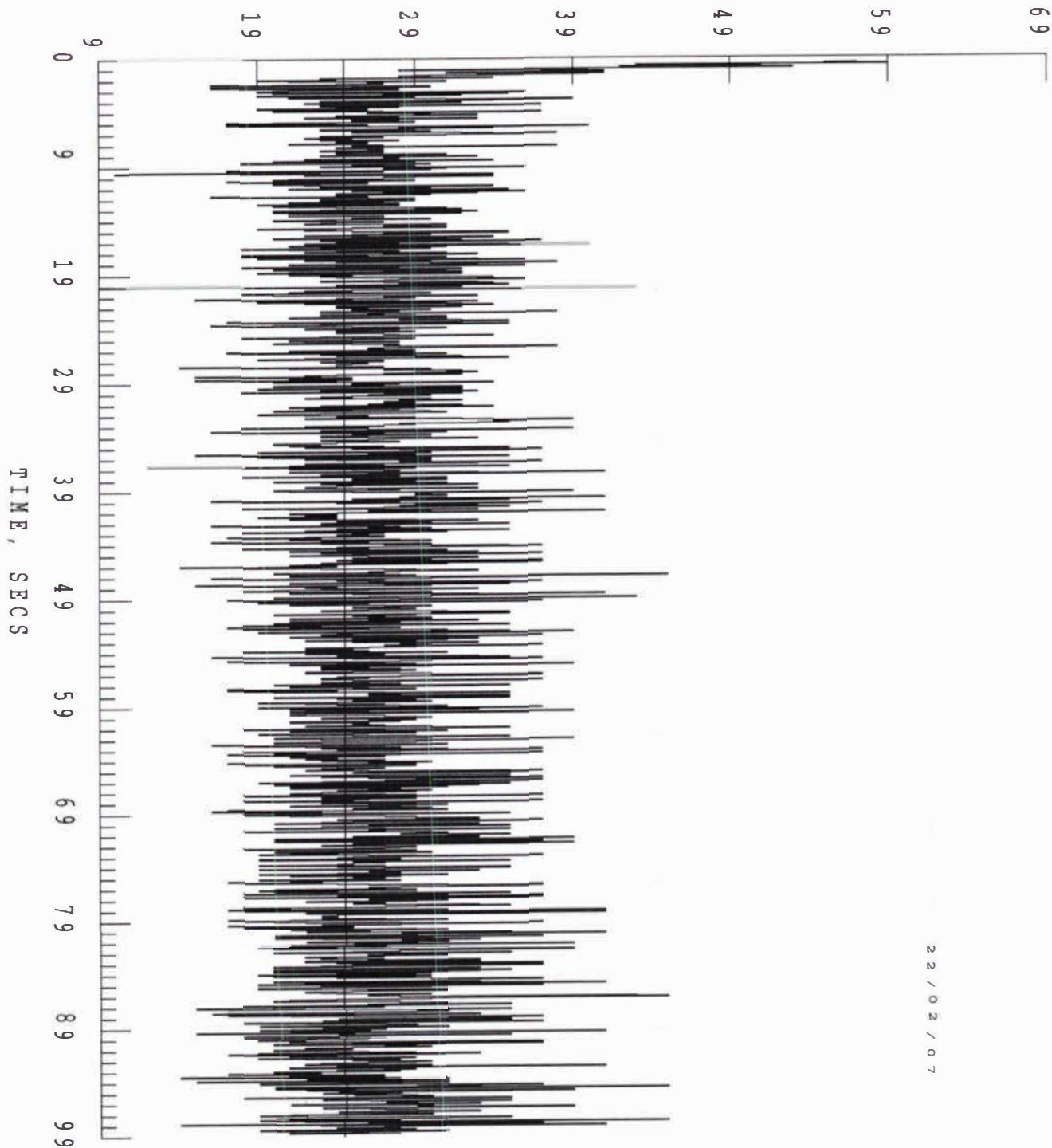
B

50 - 200 keV

22:43:14

SGR1806

COUNTS/0.064 S



22/02/07

KONUS HRES 20070222 81793

TRIGGER TIME: 22/02/07 DOY 053 Julian 2454155.44668 UT = 22.720 22:43:13 (81793.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

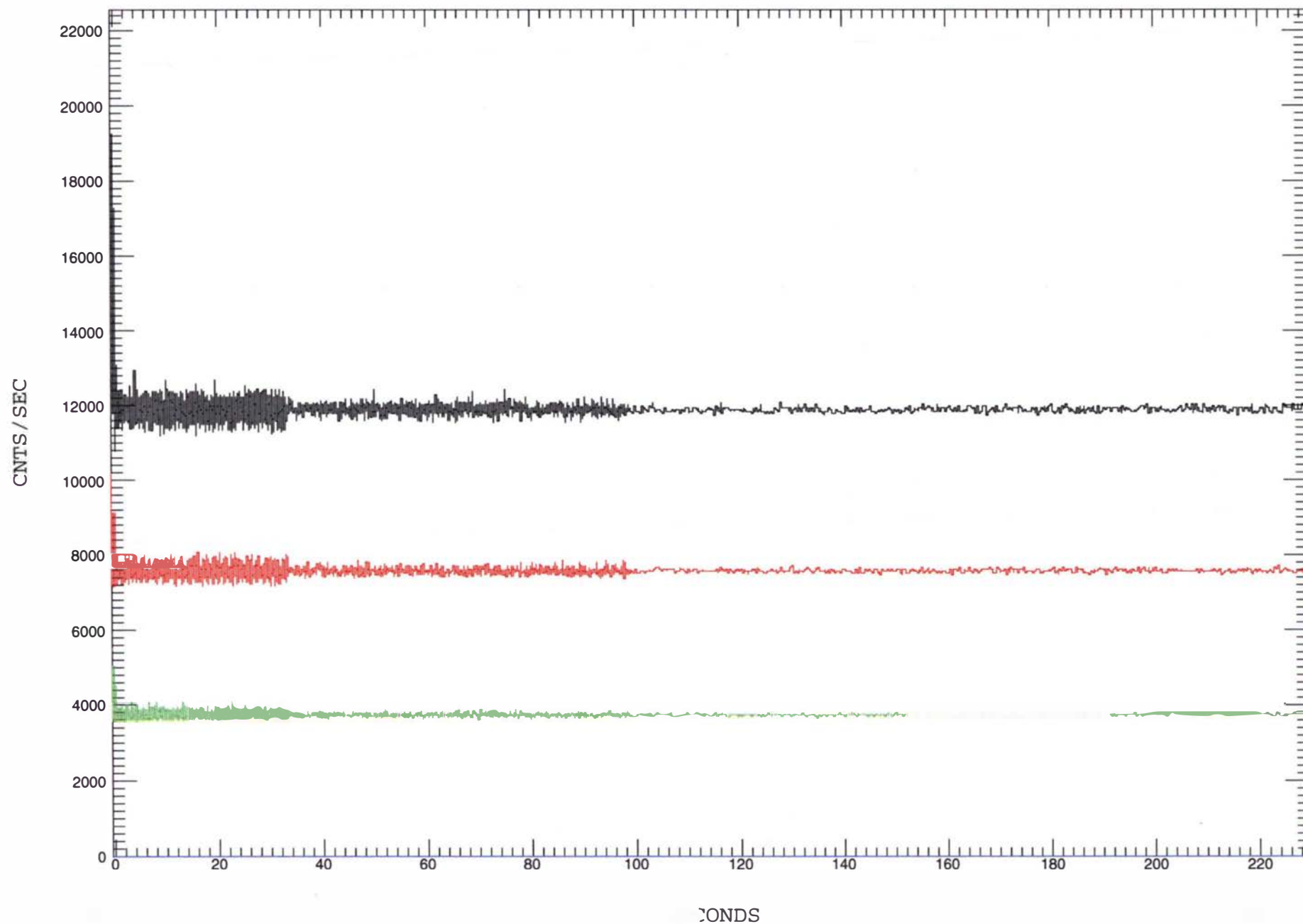
Chan 4 : [> 10 MeV]

Channel 1 + 10800

Channel 2 + 7200

Channel 3 + 3600

Channel 4 + 0



MS01

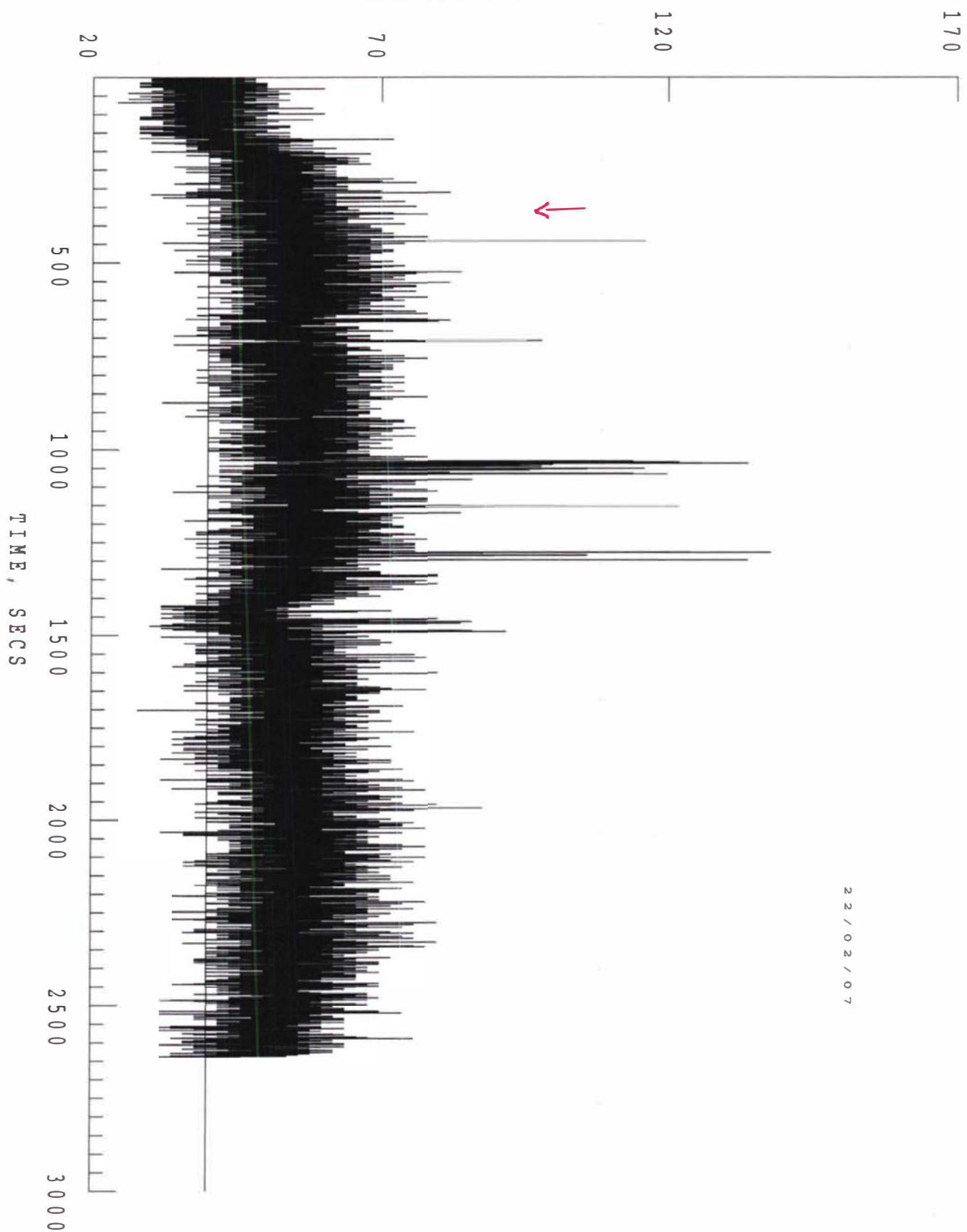
22/02/07

80477.105

50 - 3000 keV

MCT ~ 80832

COUNTS/0.250 S



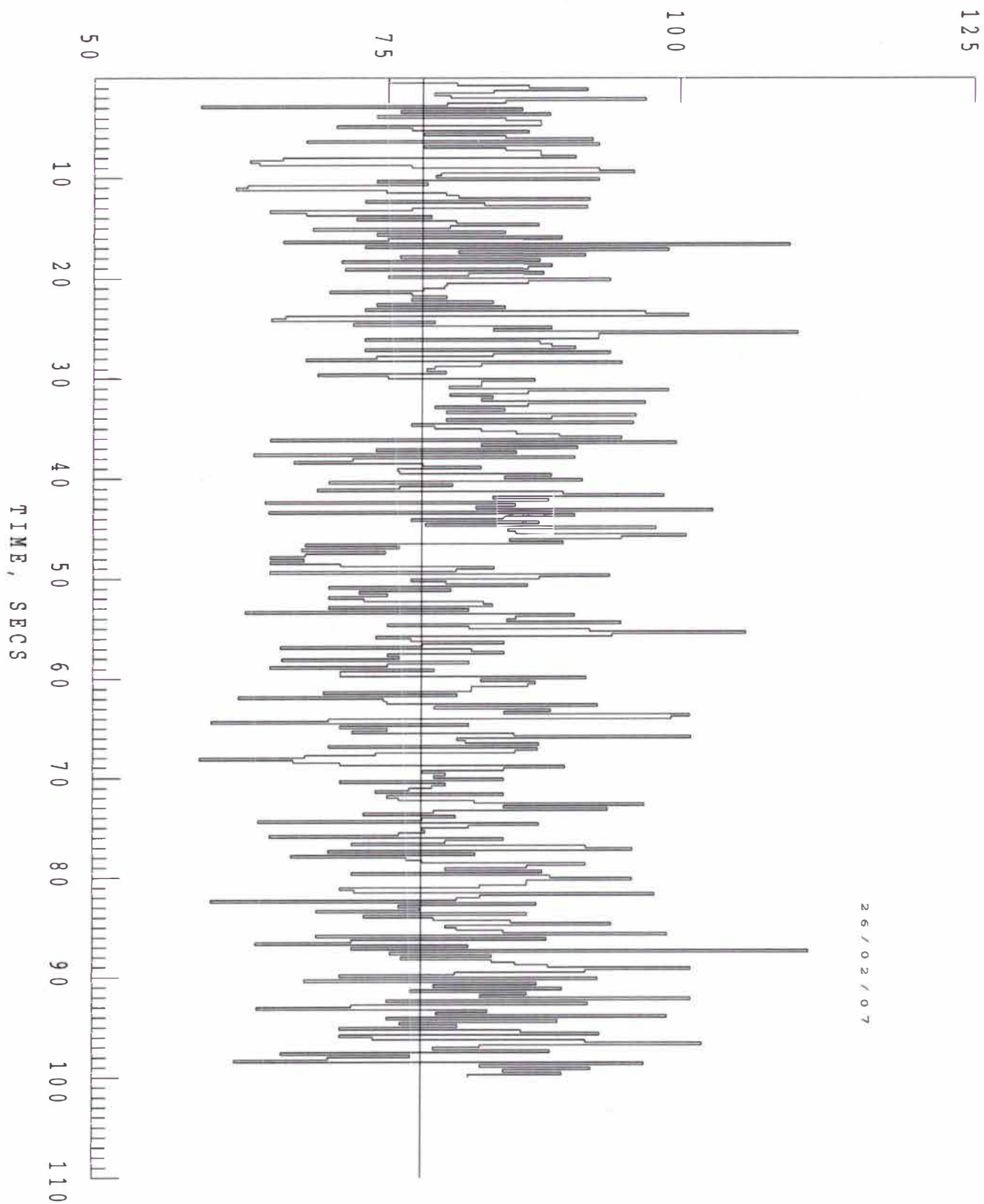
22/02/07

HESSI

22/02/07 81743.000 (KONUS_SGR_20070222_81793)

25- 150 keV

COUNTS/0.250 S



26/02/07

From jayc@milkyway.gsfc.nasa.gov Fri Feb 23 06:59:19 2007
X-ASG-Debug-ID: 1172242902-465c00030000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: milkyway.gsfc.nasa.gov[128.183.16.143]
-Barracuda-Start-Time: 1172242902
X-ASG-Whitelist: Sender
Mime-Version: 1.0
Date: Fri, 23 Feb 2007 09:59:42 -0500
To: "val" <val@mail.ioffe.ru>, "Kevin Hurley" <khurley@ssl.berkeley.edu>,
"Kazutaka Yamaoka" <yamaoka@phys.aoyama.ac.jp>,
"Roland Vanderspek" <roland@space.mit.edu>,
"Masanori Ohno" <ohno@hirax7.hepl.hiroshima-u.ac.jp>,
"Hans Krimm" <krimm@milkyway.gsfc.nasa.gov>,
"Sergey Golenetskii" <golen@mail.ioffe.ru>
From: jayc@milkyway.gsfc.nasa.gov
X-ASG-Orig-Subj: Re: SGR burst detected by Konus-Wind on February 22
Subject: Re: SGR burst detected by Konus-Wind on February 22
Cc: "val" <val@mail.ioffe.ru>
X-Greylist: Sender IP whitelisted, not delayed by milter-greylist-2.0.2 (milkywa
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

BAT sees nothing at this time. SGR 1806-20 and SGR 1801-23 were above the horizon but out of the FOV. SGR 1627-41 was below the horizon. We probably would have seen something if it was from one of the objects above the horizon.

At 11:32 AM +0300 2/23/07, val wrote:
>Dear colleagues,

>A SGR burst triggered Konus-Wind
>at 2007-02-22 T0=81793.979 s UT (22:43:13.979).
>The burst light curve shows a single pulse with a duration of ~1.0 sec.
>The peak count rate is ~6000 cts/sec.
>The source of the burst is in the north ecliptic hemisphere not far from
>the ecliptic plane.
>
>Any other detections?

--
Jay Cummings

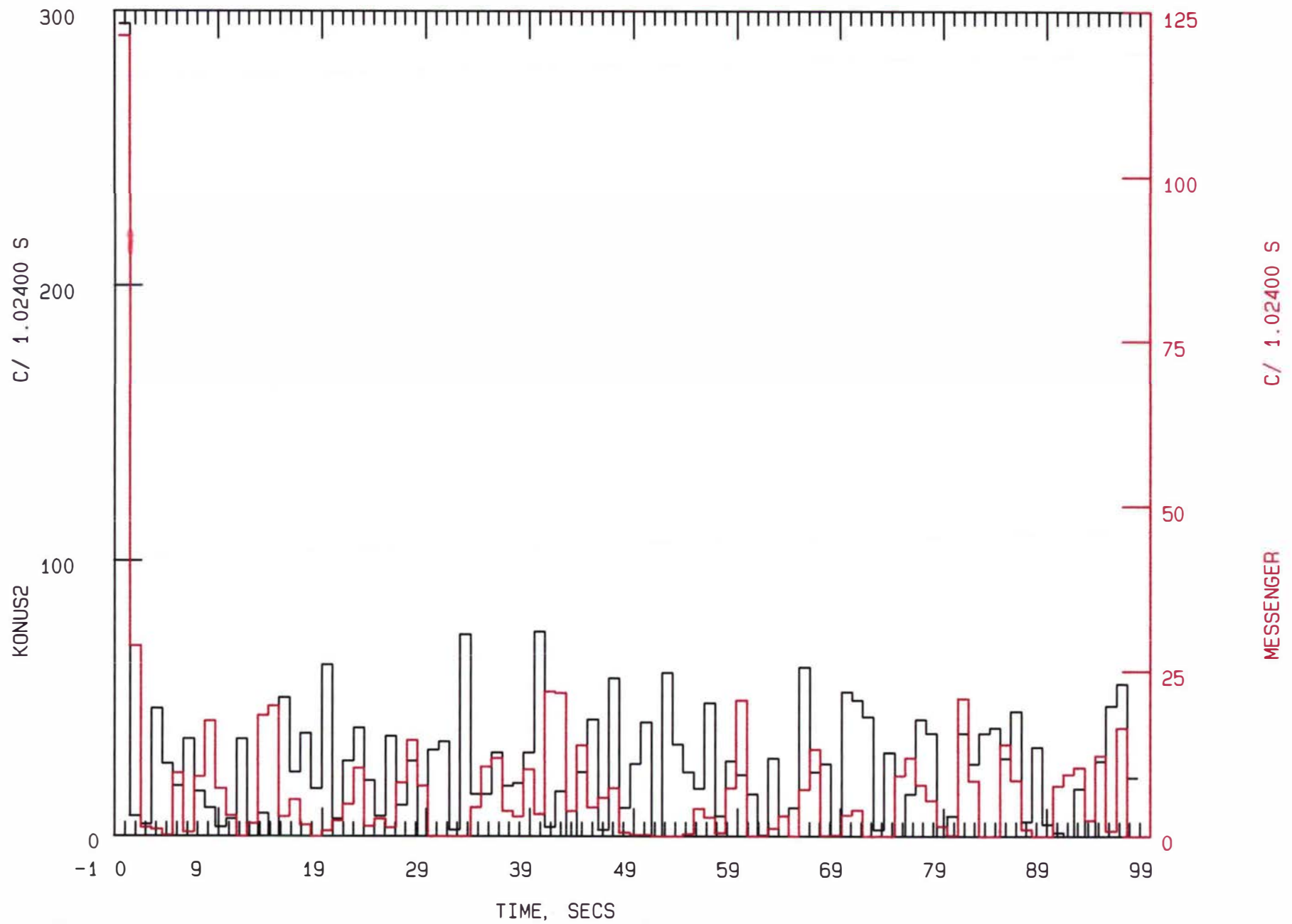
KONUS2

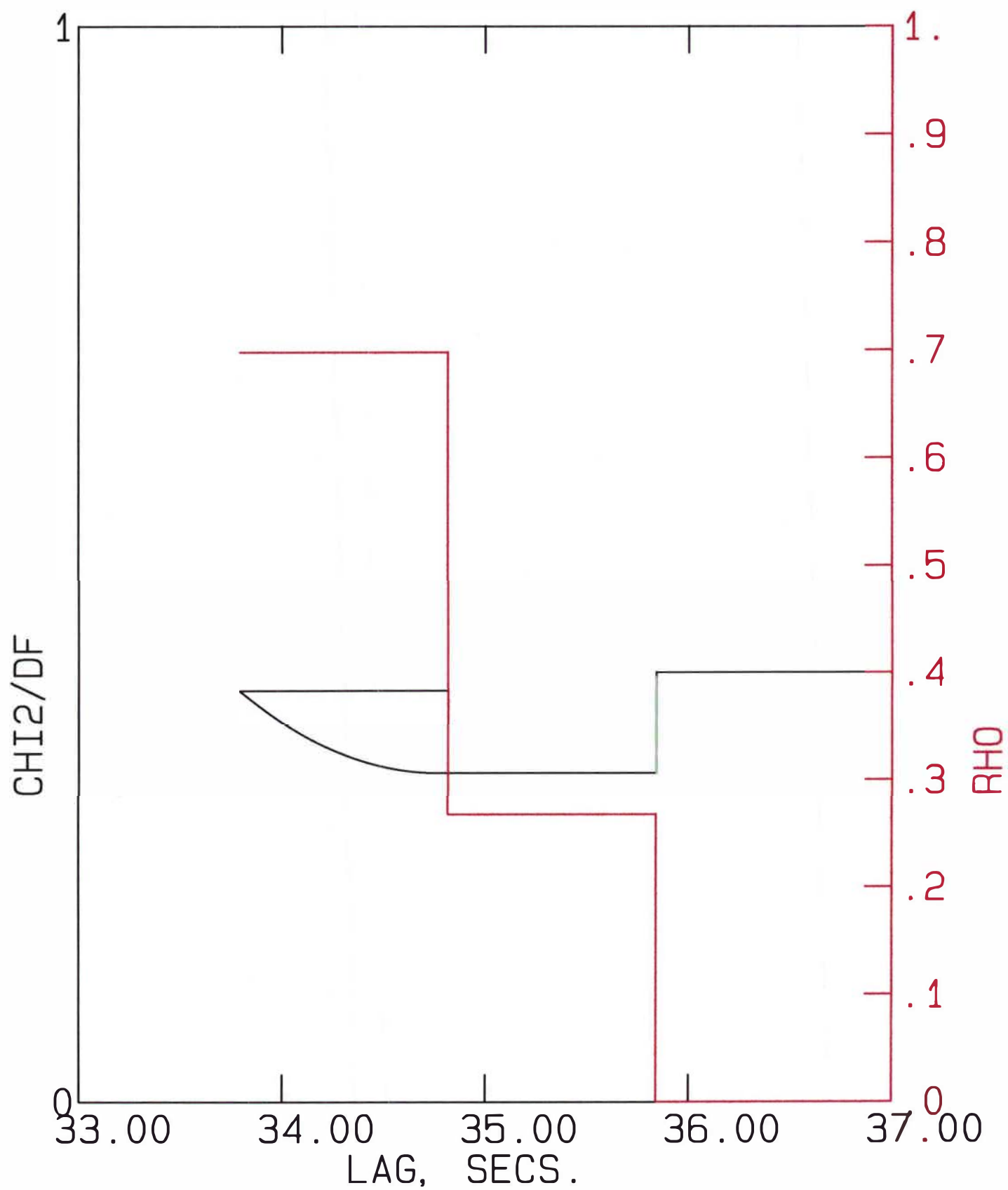
-MESSENGER CORRELATION

22/02/07

81793.979

7/ 5/ 7





EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

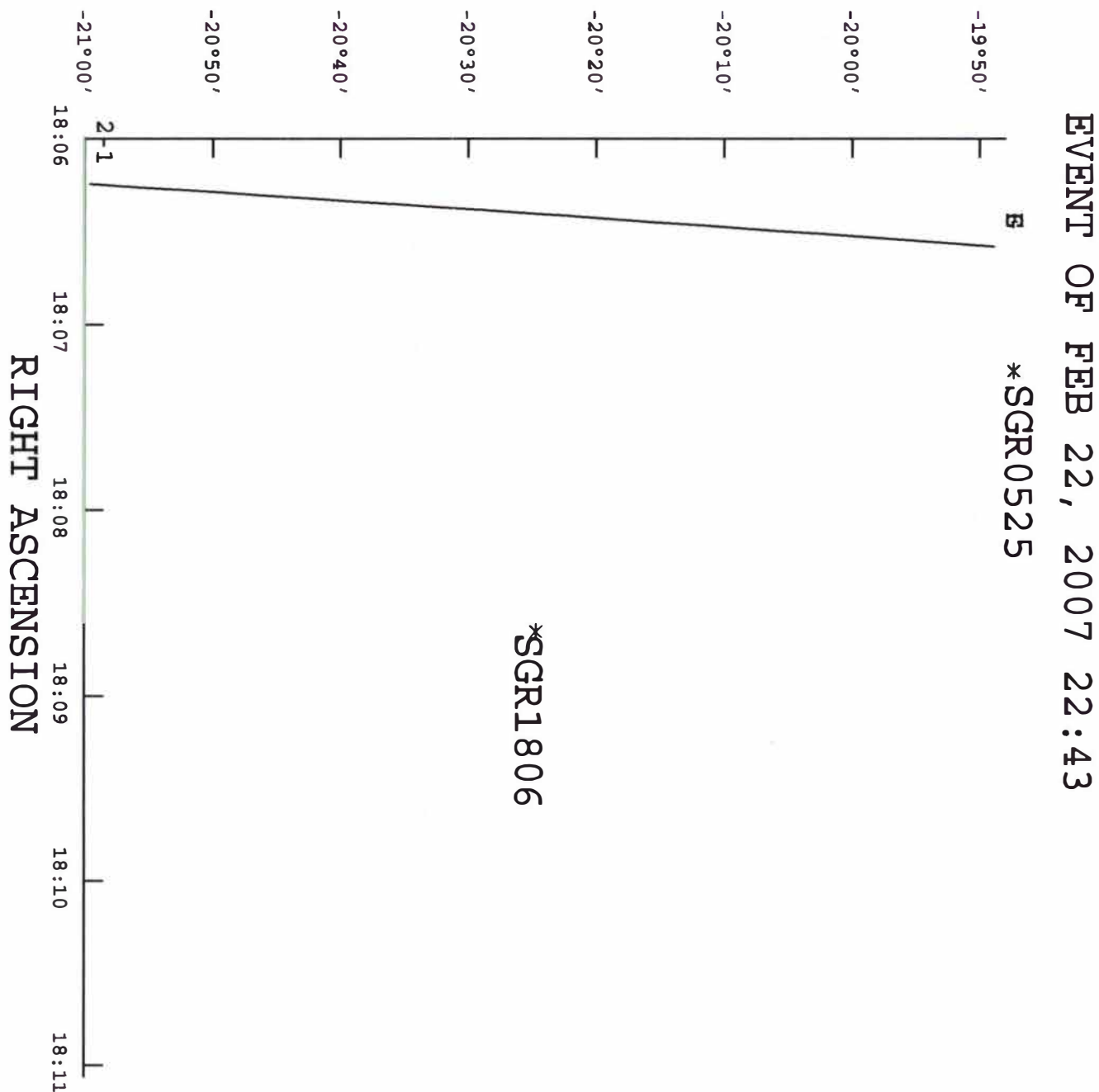
E=ECLIPTIC

G=GALACTIC EQUATOR

1 KONUS2

2 MESSENGER

DECLINATION



7 / 5 / 7

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

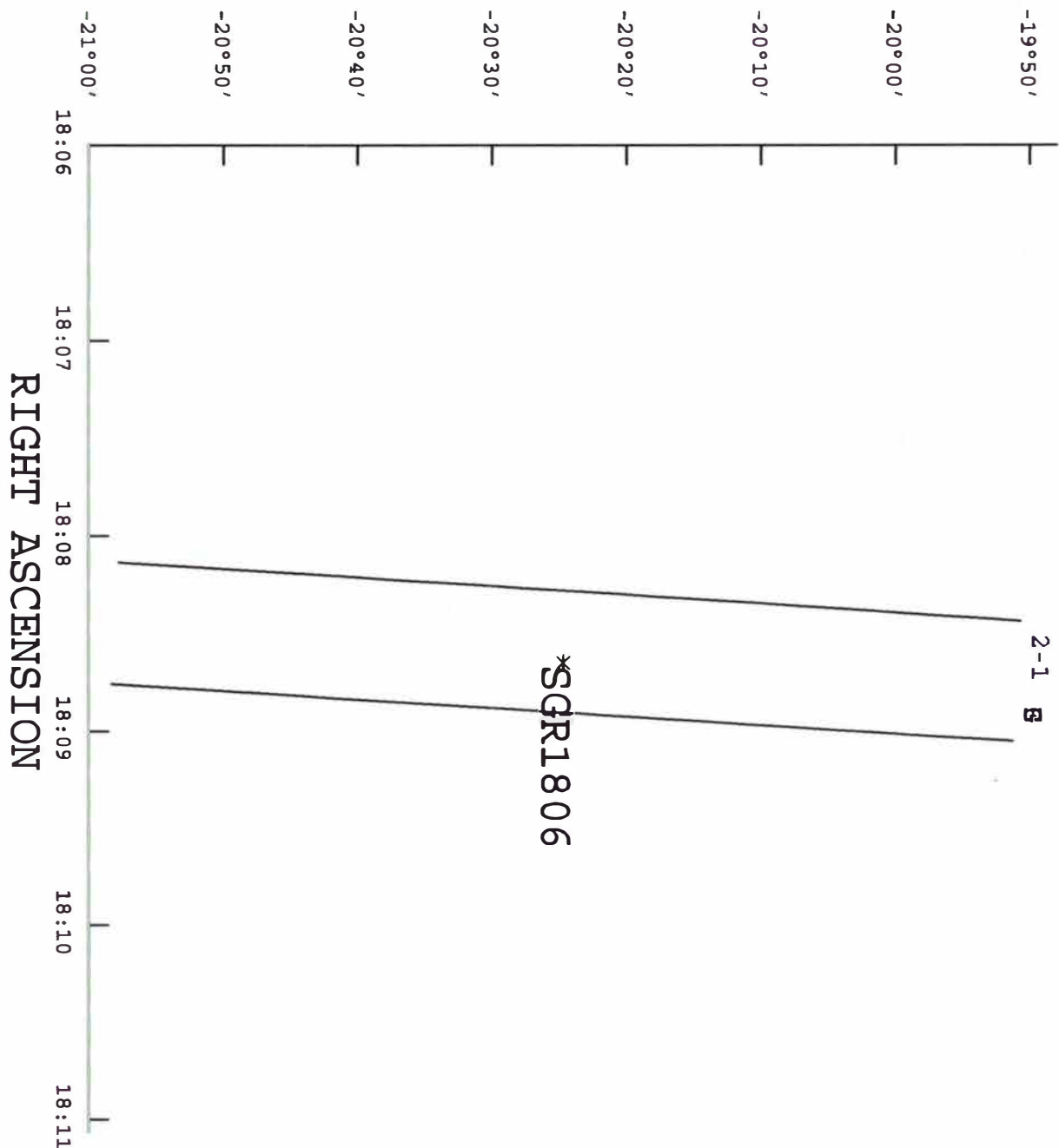
E=ECLIPTIC

G=GALACTIC EQUATOR

1 KONUS2

2 MESSENGER

DECLINATION



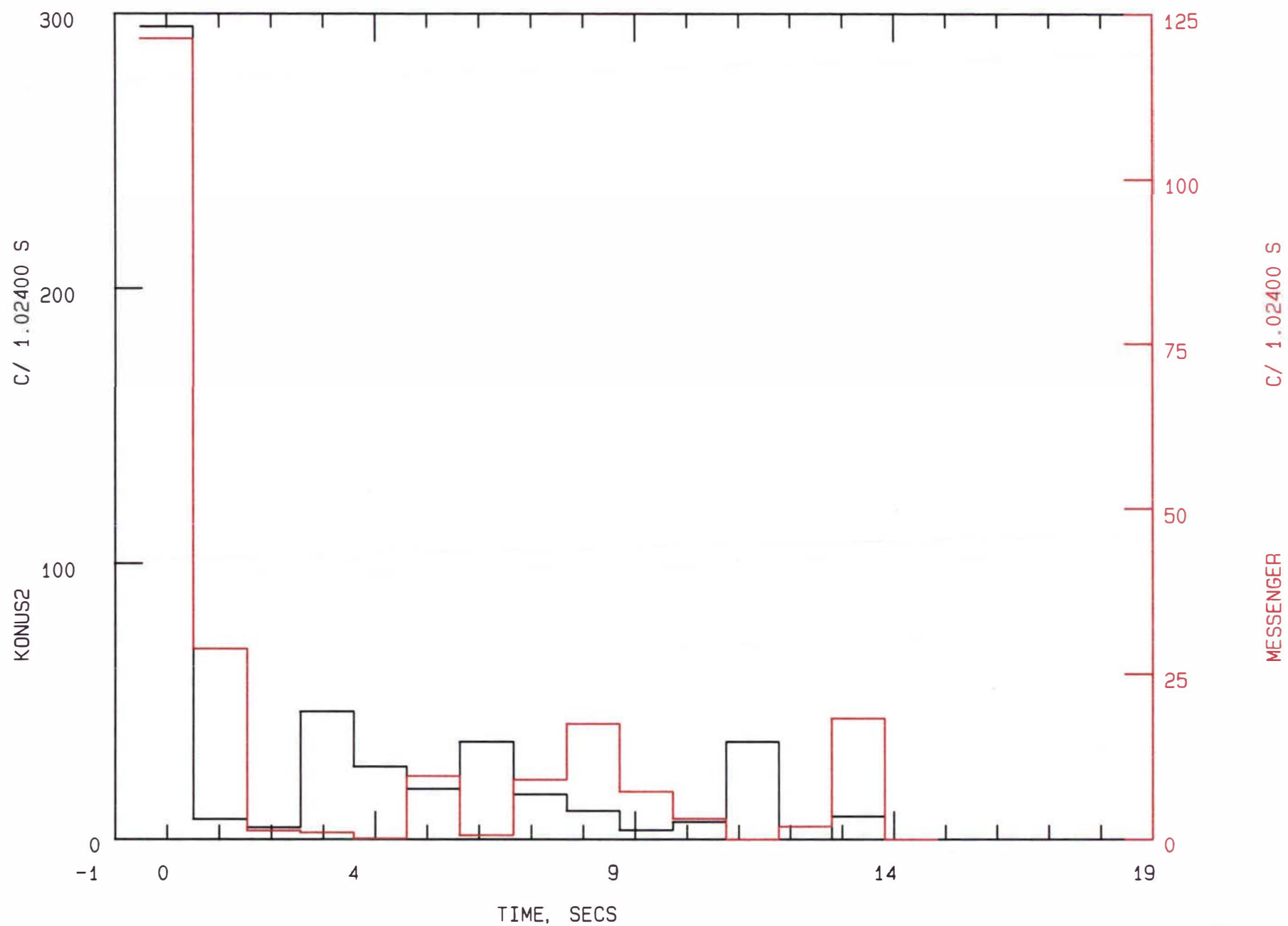
KONUS2

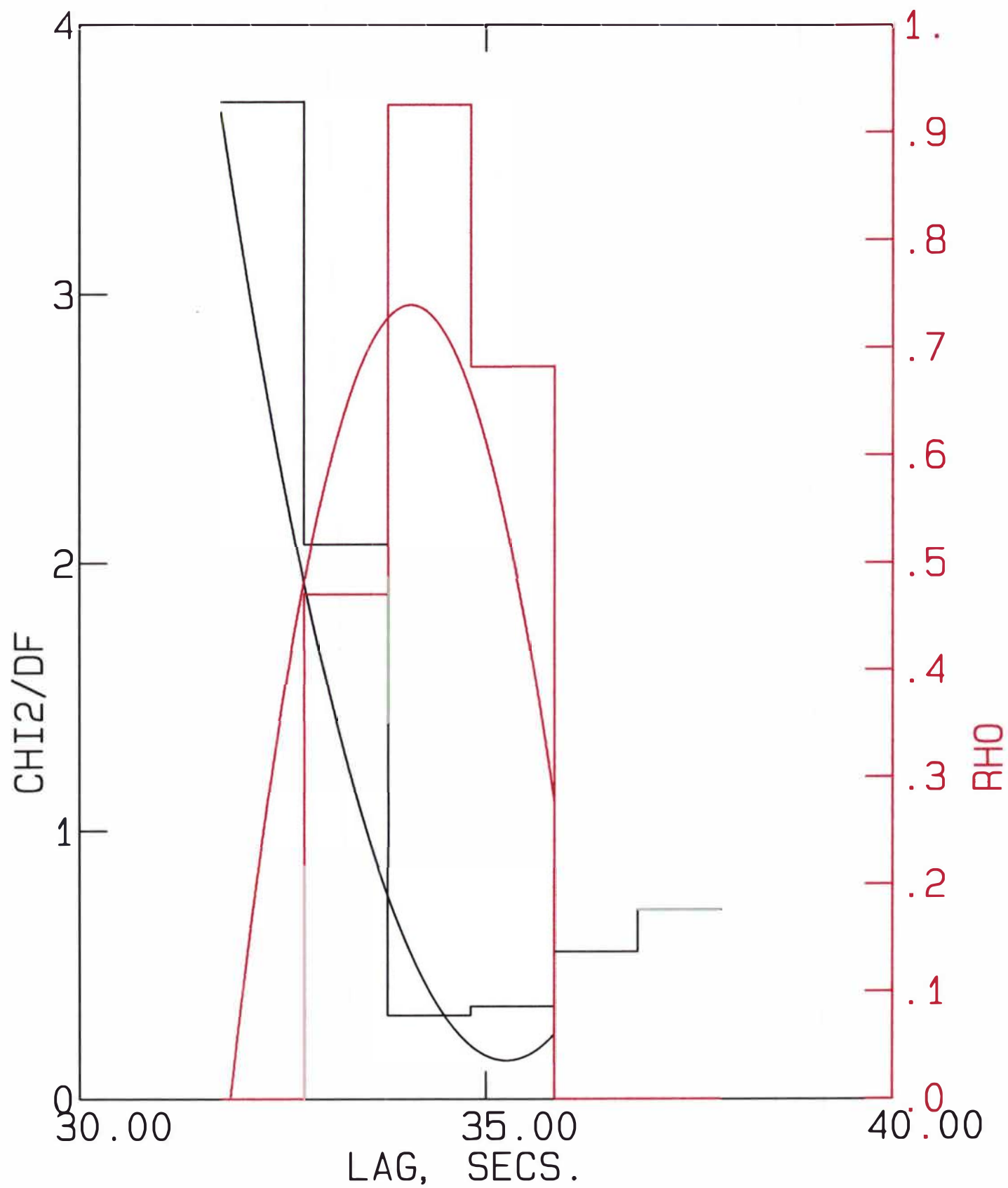
-MESSENGER CORRELATION

22/02/07

81793.979

8/ 5/ 7





25/04/07

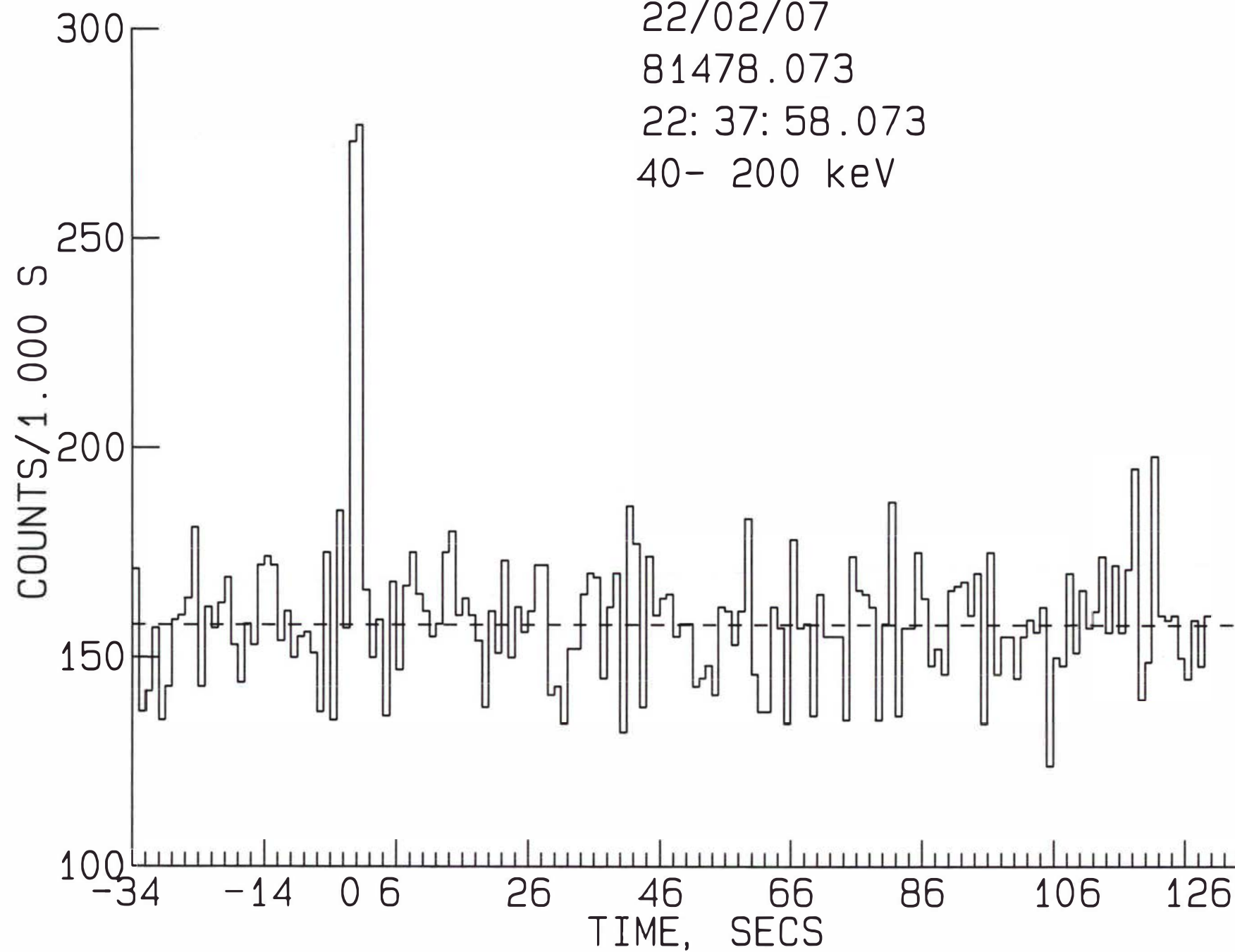
MESSENGER

22/02/07

81478.073

22: 37: 58.073

40- 200 keV



From yamaoka@phys.aoyama.ac.jp Fri Feb 23 05:37:58 2007
 X-ASG-Debug-ID: 1172238010-1c4d00180000-LqZNIK
 X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
 X-Barracuda-Connect: scmailgw2.scop.aoyama.ac.jp[133.2.251.195]
 X-Barracuda-Start-Time: 1172238010
 To: val@mail.ioffe.ru
 Cc: khurley@ssl.berkeley.edu, jayc@milkyway.gsfc.nasa.gov,
 roland@space.mit.edu, ohno@hirax7.hepl.hiroshima-u.ac.jp,
 krimm@milkyway.gsfc.nasa.gov, golen@mail.ioffe.ru
 Cc: yamaoka@phys.aoyama.ac.jp
 X-ASG-Orig-Subj: Re: SGR burst detected by Konus-Wind on February 22
 Subject: Re: SGR burst detected by Konus-Wind on February 22
 Mime-Version: 1.0
 Content-Transfer-Encoding: 7bit
 Date: Fri, 23 Feb 2007 22:39:17 +0900
 From: Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>
 X-Dispatcher: imput version 20000228(IM140)
 X-Barracuda-Bayes: INNOCENT GLOBAL 0.3743 1.0000 -0.0721
 X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
 X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.9483

Rule breakdown below

pts	rule name	description
0.00	UNPARSEABLE_RELAY	Informational: message has unparseable relay

Dear Valentin,

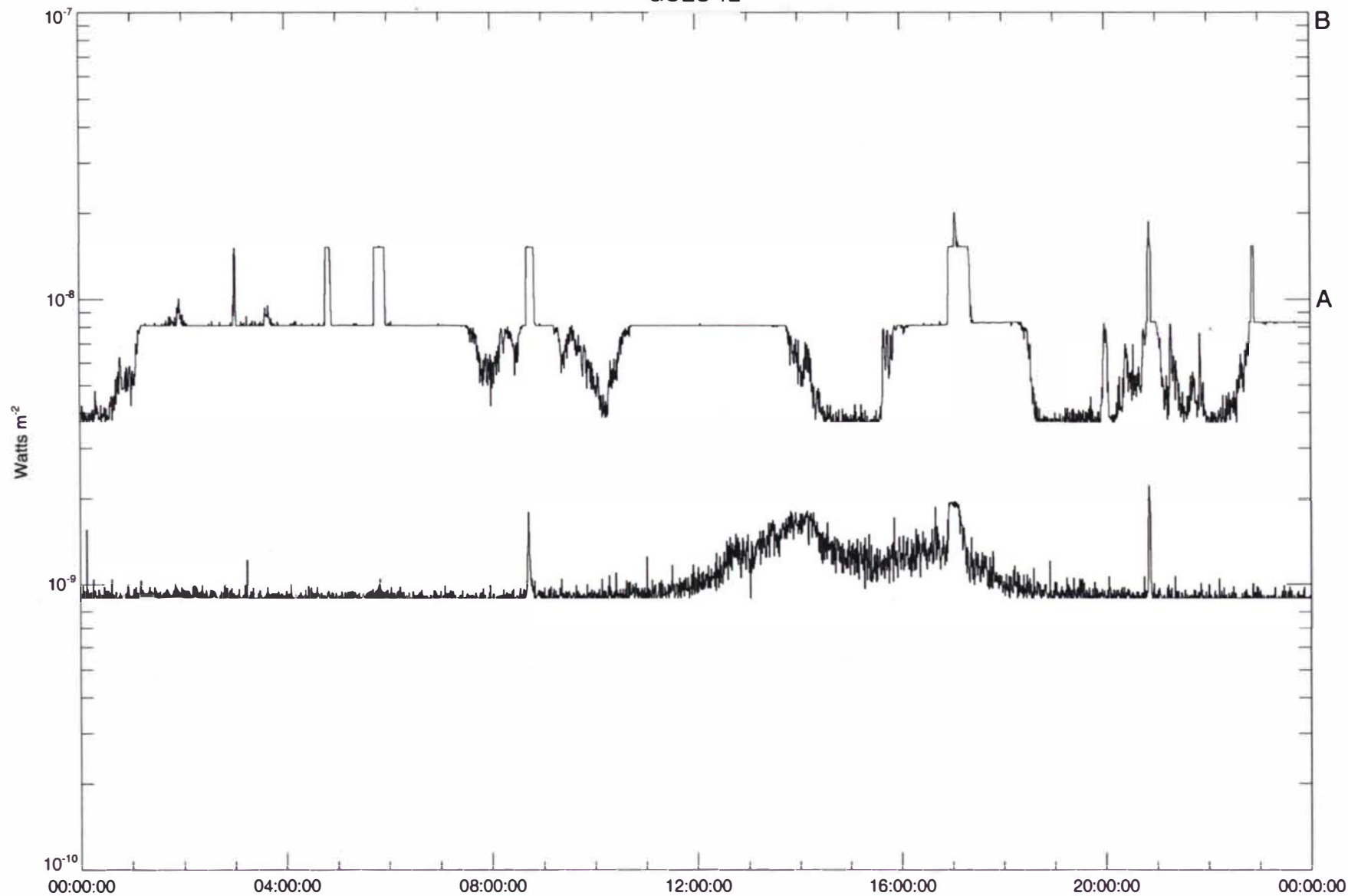
This burst was detected for 2 seconds with the WAM,
 but did not trigger due to its softness of the spectrum.

Best regards,
 Kazu
 on behalf of the Suzaku WAM team

From: "val" <val@mail.ioffe.ru>
 Subject: SGR burst detected by Konus-Wind on February 22
 Date: Fri, 23 Feb 2007 11:32:27 +0300
 Message-ID: <001901c75725\$b6b01cf0\$ade055c2@home>

> Dear colleagues,
 >
 > A SGR burst triggered Konus-Wind
 > at 2007-02-22 T0=81793.979 s UT (22:43:13.979).
 > The burst light curve shows a single pulse with a duration of ~1.0 sec.
 > The peak count rate is ~6000 cts/sec.
 > The source of the burst is in the north ecliptic hemisphere not far from
 > the ecliptic plane.
 >
 > Any other detections?
 >
 >

GOES 12



Data Start: 07/02/22, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Background not subtracted

Plot created: 07/02/25, 0921

Sample average = 10

From vxw@capella.gsfc.nasa.gov Thu Feb 22 17:22:07 2007
X-ASG-Debug-ID: 1172193870-2dc200410000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
X-Barracuda-Connect: capella.gsfc.nasa.gov[128.183.16.187]
X-Barracuda-Start-Time: 1172193870
X-ASG-Whitelist: Sender
Date: Thu, 22 Feb 2007 20:24:30 -0500
From: Bacodine <vxw@capella.gsfc.nasa.gov>
To: khurley@ssl.berkeley.edu
X-ASG-Orig-Subj: GCN/SWIFT BAT LIGHTCURVE
Subject: GCN/SWIFT_BAT_LIGHTCURVE
Mime-Version: 1.0
Content-Disposition: inline
User-Agent: Mutt/1.4.1i
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

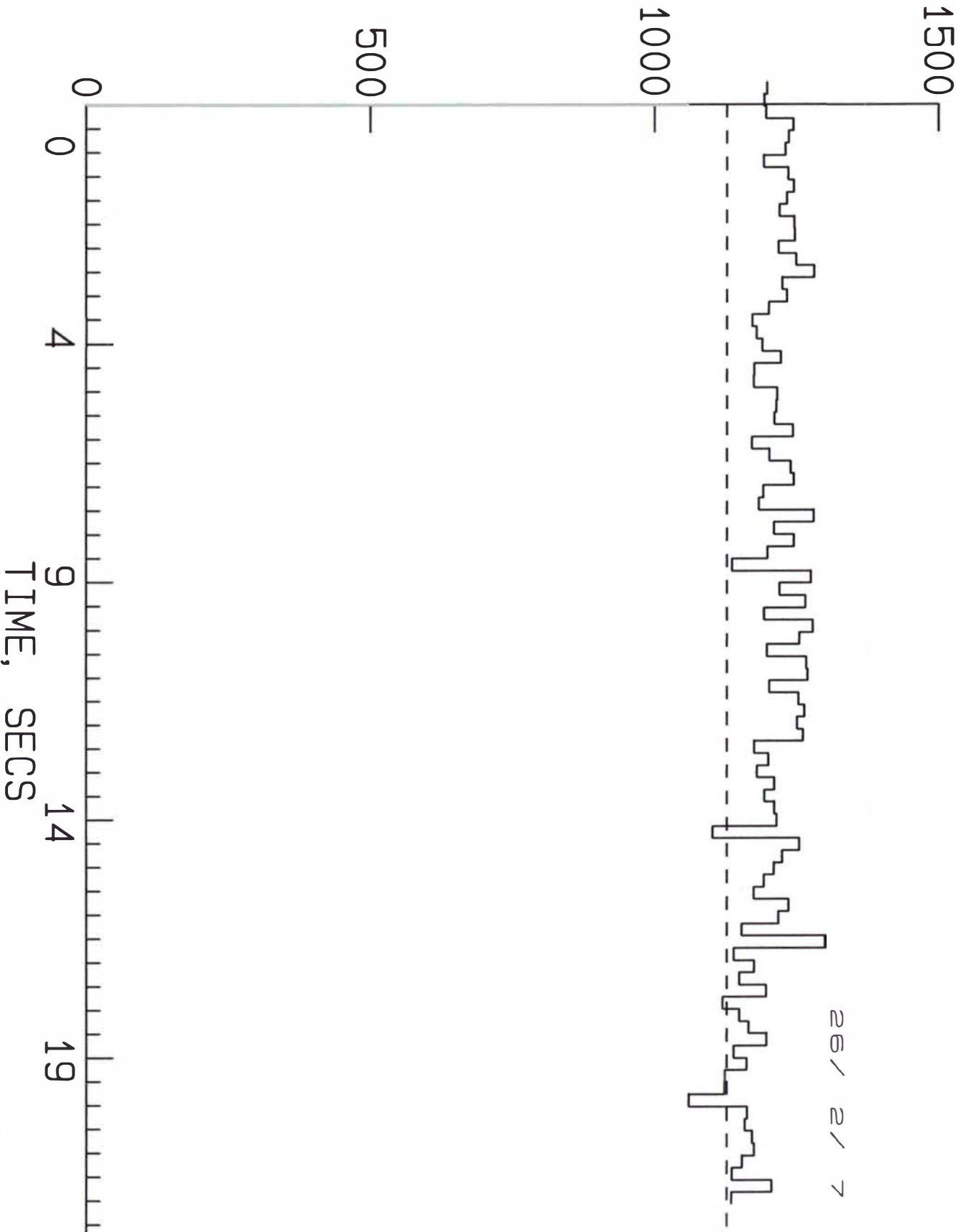
TITLE: GCN/SWIFT NOTICE
NOTICE_DATE: Fri 23 Feb 07 01:24:14 UT
NOTICE_TYPE: Swift-BAT GRB Lightcurve
TRIGGER_NUM: 261664, Seg_Num: 0
GRB_RA: 153.452d {+10h 13m 49s} (J2000),
153.560d {+10h 14m 15s} (current),
152.693d {+10h 10m 46s} (1950)
GRB_DEC: +43.121d {+43d 07' 16"} (J2000),
+43.086d {+43d 05' 08"} (current),
+43.369d {+43d 22' 10"} (1950)
GRB_DATE: 14154 TJD; 54 DOY; 07/02/23
GRB_TIME: 4500.68 SOD {01:15:00.68} UT
TRIGGER_INDEX: 474
RB_PHI: 173.39 [deg]
RB_THETA: 28.18 [deg]
DELTA_TIME: -5.00 [sec]
TRIGGER_DUR: 3.072 [sec]
SOLN_STATUS: 0x3
RATE_SIGNIF: 8.42 [sigma]
IMAGE_SIGNIF: 7.24 [sigma]
LC_URL: sw00261664000msb.lc
SUN_POSTN: 335.93d {+22h 23m 43s} -10.03d {-10d 01' 36"}
SUN_DIST: 146.88 [deg] Sun_angle= -11.8 [hr] (East of Sun)
MOON_POSTN: 43.61d {+02h 54m 26s} +21.43d {+21d 25' 41"}
MOON_DIST: 88.99 [deg]
MOON_ILLUM: 36 [%]
GAL_COORDS: 175.77, 54.45 [deg] galactic lon,lat of the burst (or transient)
ECL_COORDS: 138.82, 29.83 [deg] ecliptic lon,lat of the burst (or transient)
COMMENTS: SWIFT-BAT GRB Lightcurve.
COMMENTS:
COMMENTS: The next comments were copied from the BAT_POS Notice:
COMMENTS: This is a rate trigger.
COMMENTS: A point_source was found.
COMMENTS: This does not match any source in the on-board catalog.
COMMENTS: This does not match any source in the ground catalog.
COMMENTS: This is a GRB.
COMMENTS: This trigger occurred at longitude,latitude = 16.74,-17.73 [deg]

SWIFT

23/02/07 4500.682

25- 100 keV

COUNTS/0.256 S



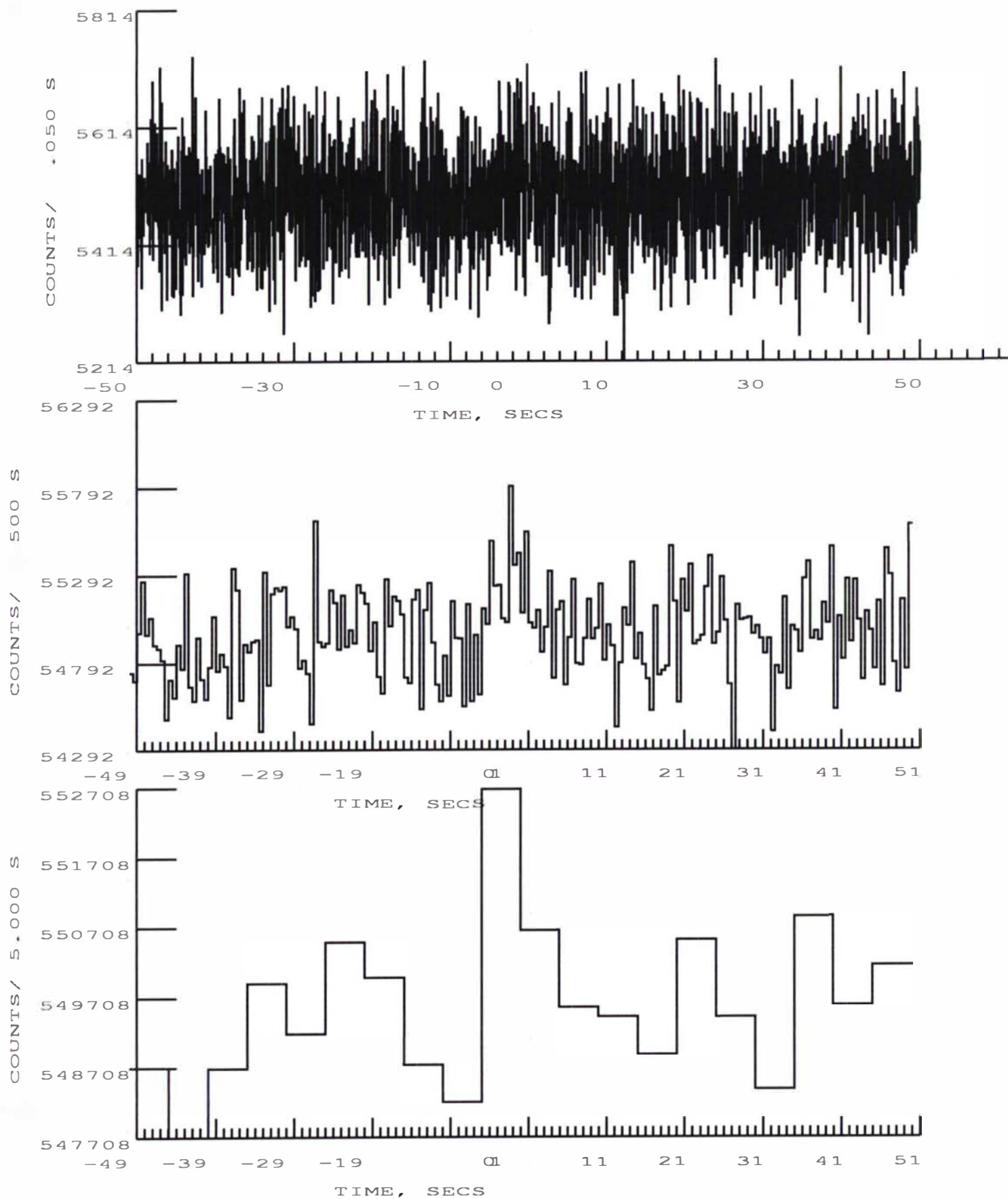
INTEGRAL

23/02/07

4500.000

01:15:00.0

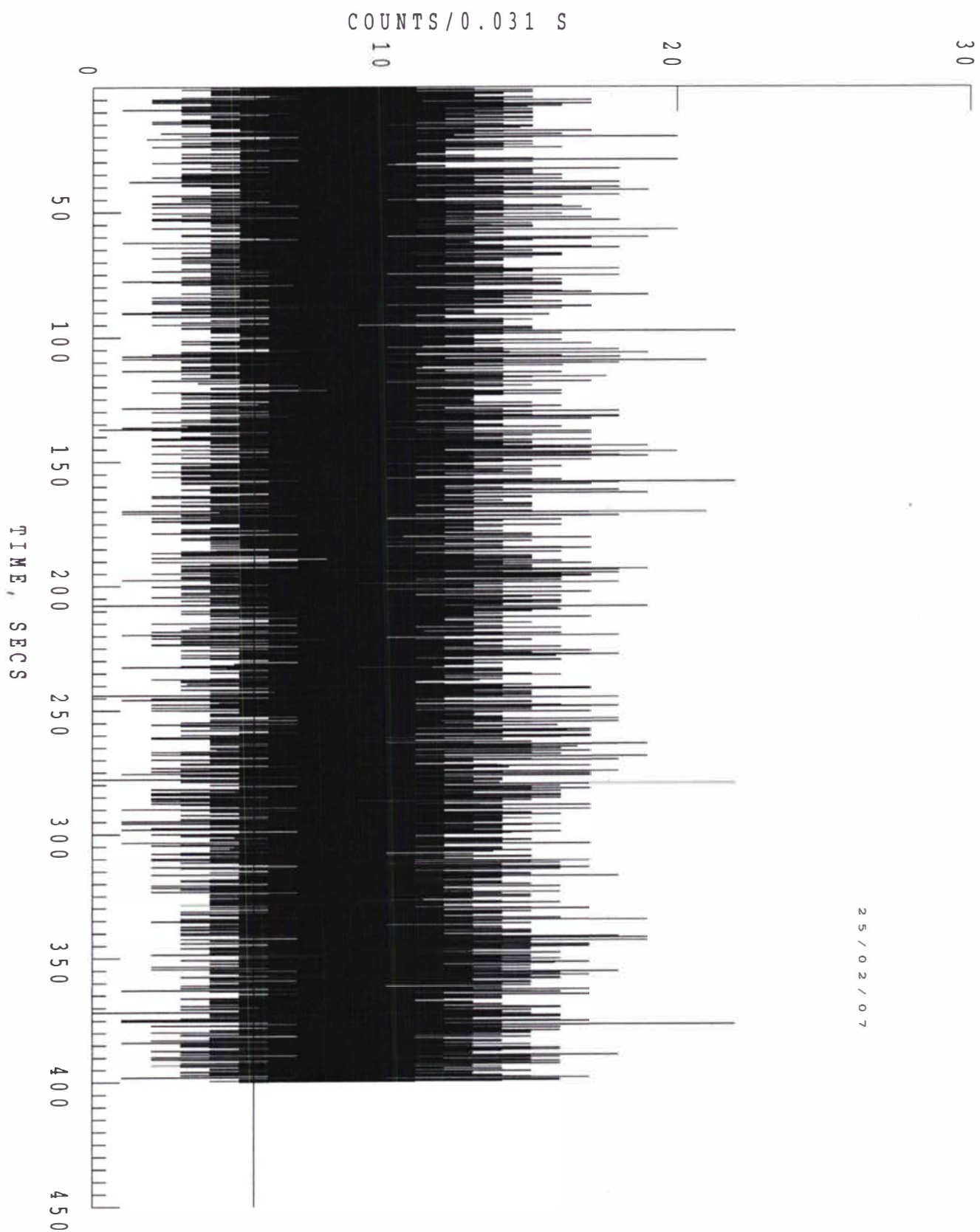
18/07/14



HESSI

23/02/07 4300.000 (GSwift-BAT_261664_0_20070223_

25- 150 keV

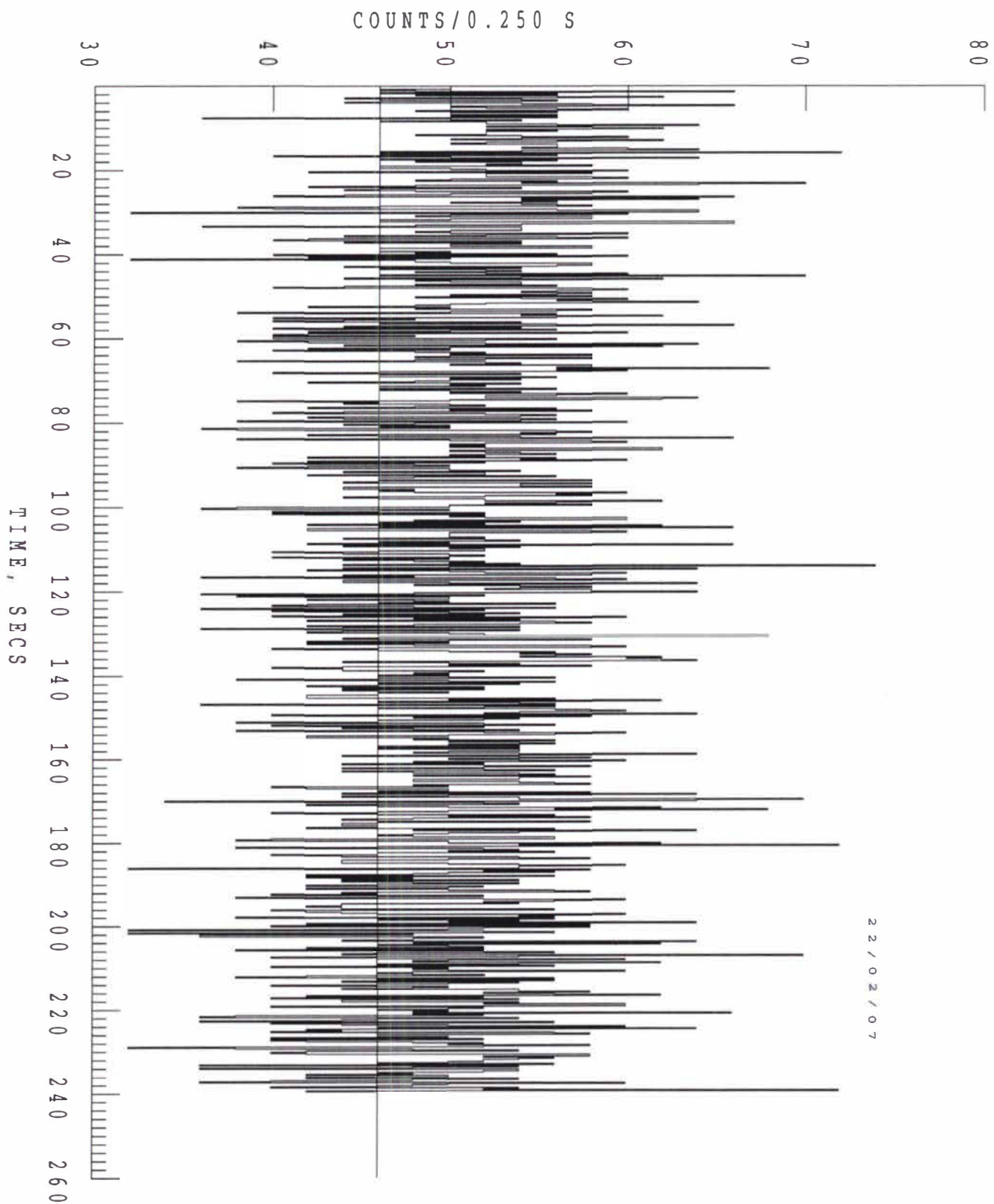


MS01

23/02/07

3136.942

50 - 3000 keV



From jayc@milkyway.gsfc.nasa.gov Sat Feb 24 07:51:12 2007

X-ASG-Debug-ID: 1172332410-774700310000-LqZNIK

X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi

-Barracuda-Connect: milkyway.gsfc.nasa.gov[128.183.16.143]

-Barracuda-Start-Time: 1172332410

X-ASG-Whitelist: Sender

Mime-Version: 1.0

Date: Sat, 24 Feb 2007 10:52:39 -0500

To: "val" <val@mail.ioffe.ru>, "Kevin Hurley" <khurley@ssl.berkeley.edu>,
"Kazutaka Yamaoka" <yamaoka@phys.aoyama.ac.jp>,
"Roland Vanderspek" <roland@space.mit.edu>,
"Masanori Ohno" <ohno@hirax7.hepl.hiroshima-u.ac.jp>,
"Hans Krimm" <krimm@milkyway.gsfc.nasa.gov>,
"Sergey Golenetskii" <golen@mail.ioffe.ru>

From: jayc@milkyway.gsfc.nasa.gov

X-ASG-Orig-Subj: Re: continued SGR activity - SGR burst detected by Konus-Wind
February 23

Subject: Re: continued SGR activity - SGR burst detected by Konus-Wind on
February 23

Cc: "Rafail Aptekar" <aptekar@mail.ioffe.ru>,
"Dmitry Frederiks" <fred@mail.ioffe.ru>, "val" <val@mail.ioffe.ru>

X-Greylist: Sender succeeded SMTP AUTH authentication, not delayed by milter-gre

X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

28636

BAT sees a large burst from SGR 1806-20 at 07:57:16 and another
very large burst at 08:03:52. These bursts were not large enough
to trigger an automated response (the threshold is rather high).

At 1:00 PM +0300 2/24/07, val wrote:

Dear colleagues,

>A SGR burst triggered Konus-Wind

>at 2007-02-23 T0=29029.420 s UT (08:03:49.420).

>The burst light curve shows a single pulse with a duration of ~1.2 sec.

>The peak count rate is ~5000 cts/sec.

>The source of the burst is in the north ecliptic hemisphere not far from
>the ecliptic plane.

>

>Any other detections?

>

>

>Best wishes,

>

>Valentin

--

Jay Cummings

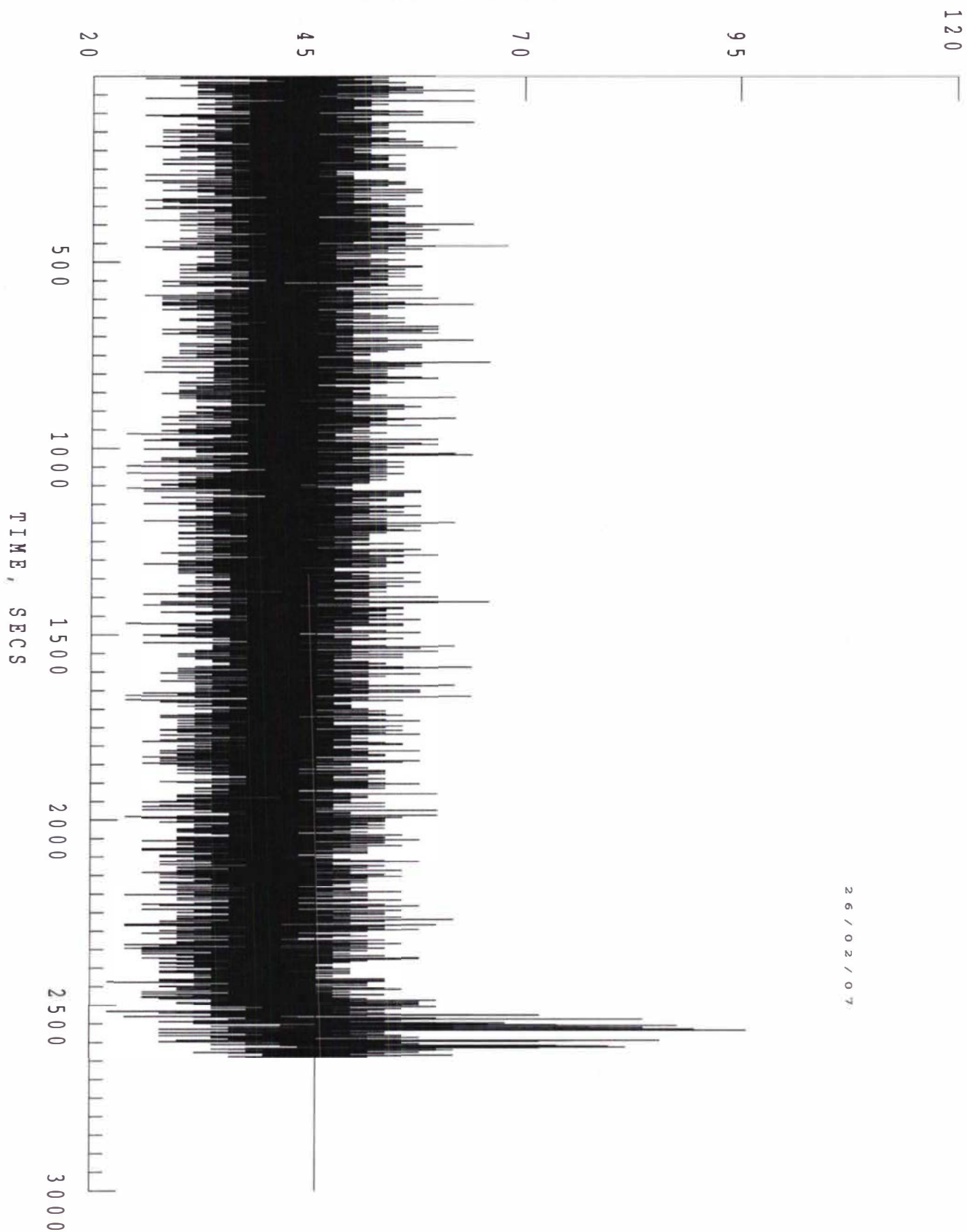
MS01

23/02/07

27316.504

50 - 3000 keV

COUNTS/0.250 S

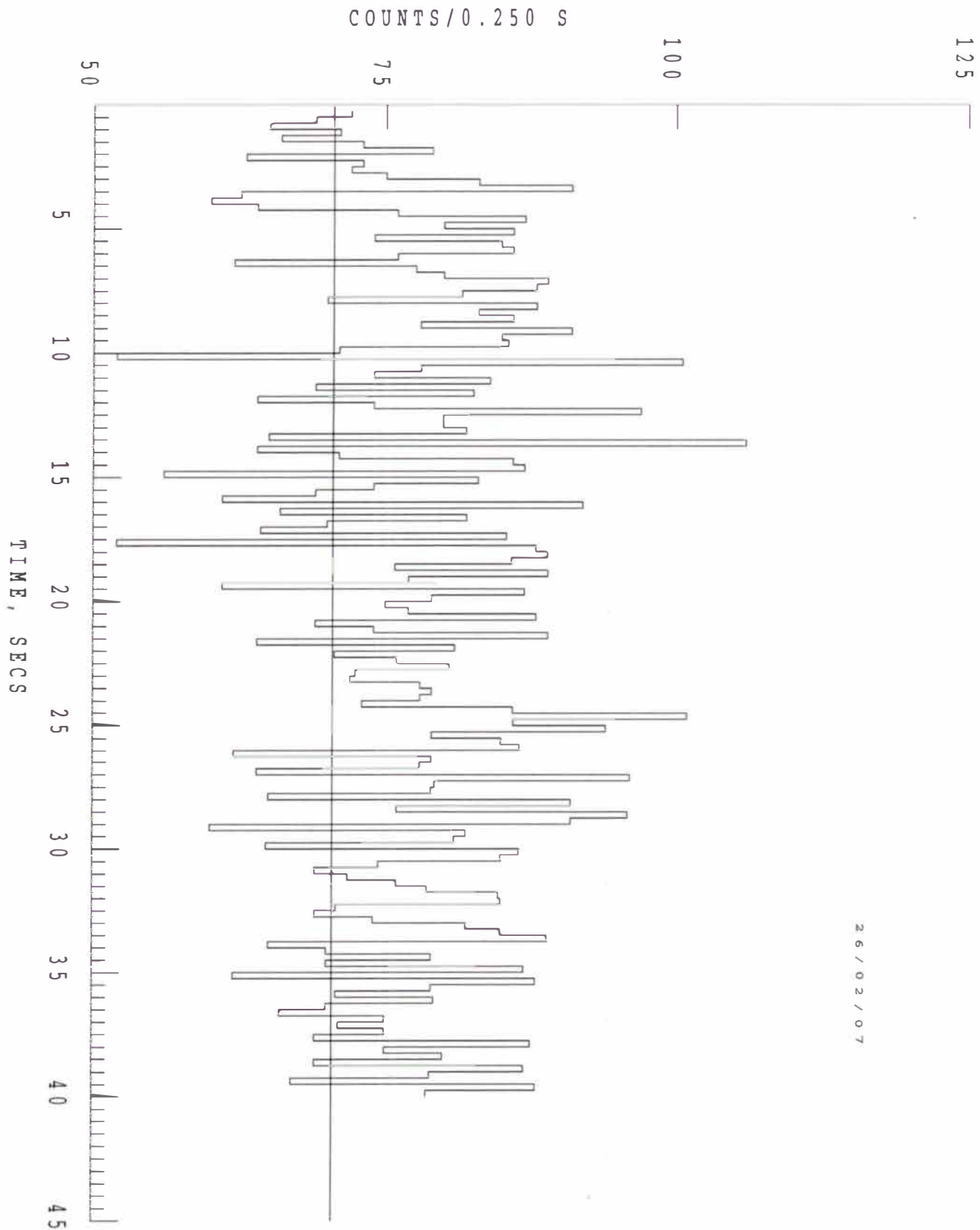


26/02/07

HESSI

23/02/07 28616.000 (SWIFT_SGR_20070223_28636)

25- 150 keV

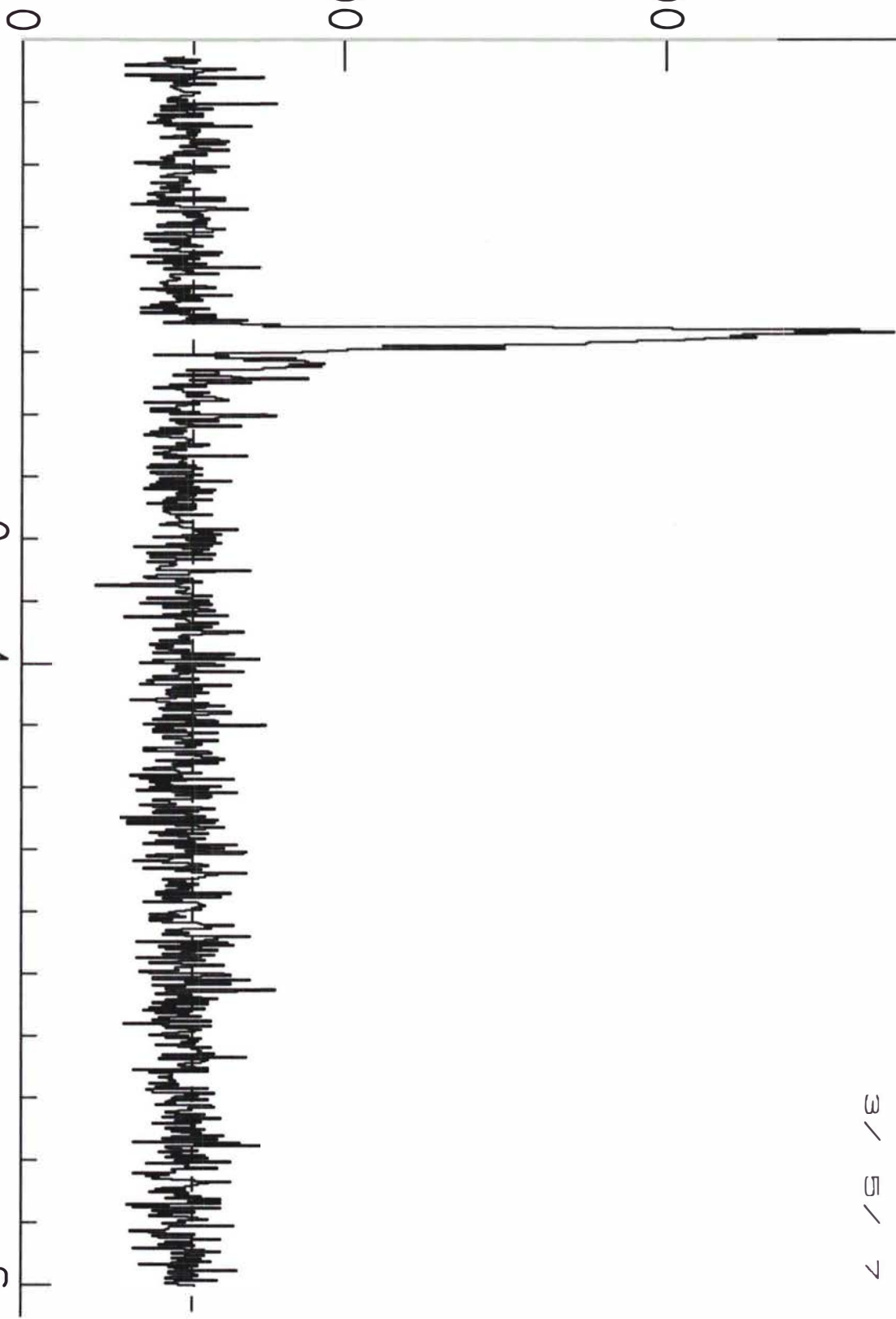


SWIFT

07/02/23 28638.080
30- 300 keV

COUNTS/0.010 S

300
200
100
0



TIME, SECS

From yamaoka@phys.aoyama.ac.jp Sat Feb 24 13:38:56 2007
 X-ASG-Debug-ID: 1172353271-2c6c002a0000-LqZNIK
 X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
 -Barracuda-Connect: scmailgw1.scop.aoyama.ac.jp[133.2.251.194]
 -Barracuda-Start-Time: 1172353271
 To: jayc@milkyway.gsfc.nasa.gov
 Cc: val@mail.ioffe.ru, khurley@ssl.berkeley.edu, roland@space.mit.edu,
 ohno@hirax7.hepl.hiroshima-u.ac.jp, krimm@milkyway.gsfc.nasa.gov,
 golen@mail.ioffe.ru, aptekar@mail.ioffe.ru, fred@mail.ioffe.ru
 X-ASG-Orig-Subj: Re: continued SGR activity - SGR burst detected by Konus-Wind
 February 23
 Subject: Re: continued SGR activity - SGR burst detected by Konus-Wind on
 February 23
 Mime-Version: 1.0
 Content-Transfer-Encoding: 7bit
 Date: Sun, 25 Feb 2007 06:40:14 +0900
 From: Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>
 X-Dispatcher: imput version 20000228(IM140)
 X-Barracuda-Bayes: INNOCENT GLOBAL 0.0003 1.0000 -2.0191
 X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
 X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.9588

Rule breakdown below

pts	rule name	description
0.00	UNPARSEABLE_RELAY	Informational: message has unparseable relay

Dear Valentin and Jay,

We did not detect both SGR bursts.
 SGR 1806-20 was occulted by the Earth.

Best regards,
 Kazu
 on behalf of the Suzaku WAM team

From: jayc@milkyway.gsfc.nasa.gov
 Subject: Re: continued SGR activity - SGR burst detected by Konus-Wind on Febru
 Date: Sat, 24 Feb 2007 10:52:39 -0500
 Message-ID: <p06230924c2060e534b4f@[192.168.1.47]>

> BAT sees a large burst from SGR 1806-20 at 07:57:16 and another
 > very large burst at 08:03:52. These bursts were not large enough
 > to trigger an automated response (the threshold is rather high).
 >
 > At 1:00 PM +0300 2/24/07, val wrote:
 > >Dear colleagues,
 > >
 > >A SGR burst triggered Konus-Wind
 > >at 2007-02-23 T0=29029.420 s UT (08:03:49.420).
 > >The burst light curve shows a single pulse with a duration of ~1.2 sec.
 > >The peak count rate is ~5000 cts/sec.
 > >The source of the burst is in the north ecliptic hemisphere not far from
 > >the ecliptic plane.
 > >
 > >Any other detections?
 > >
 > >

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

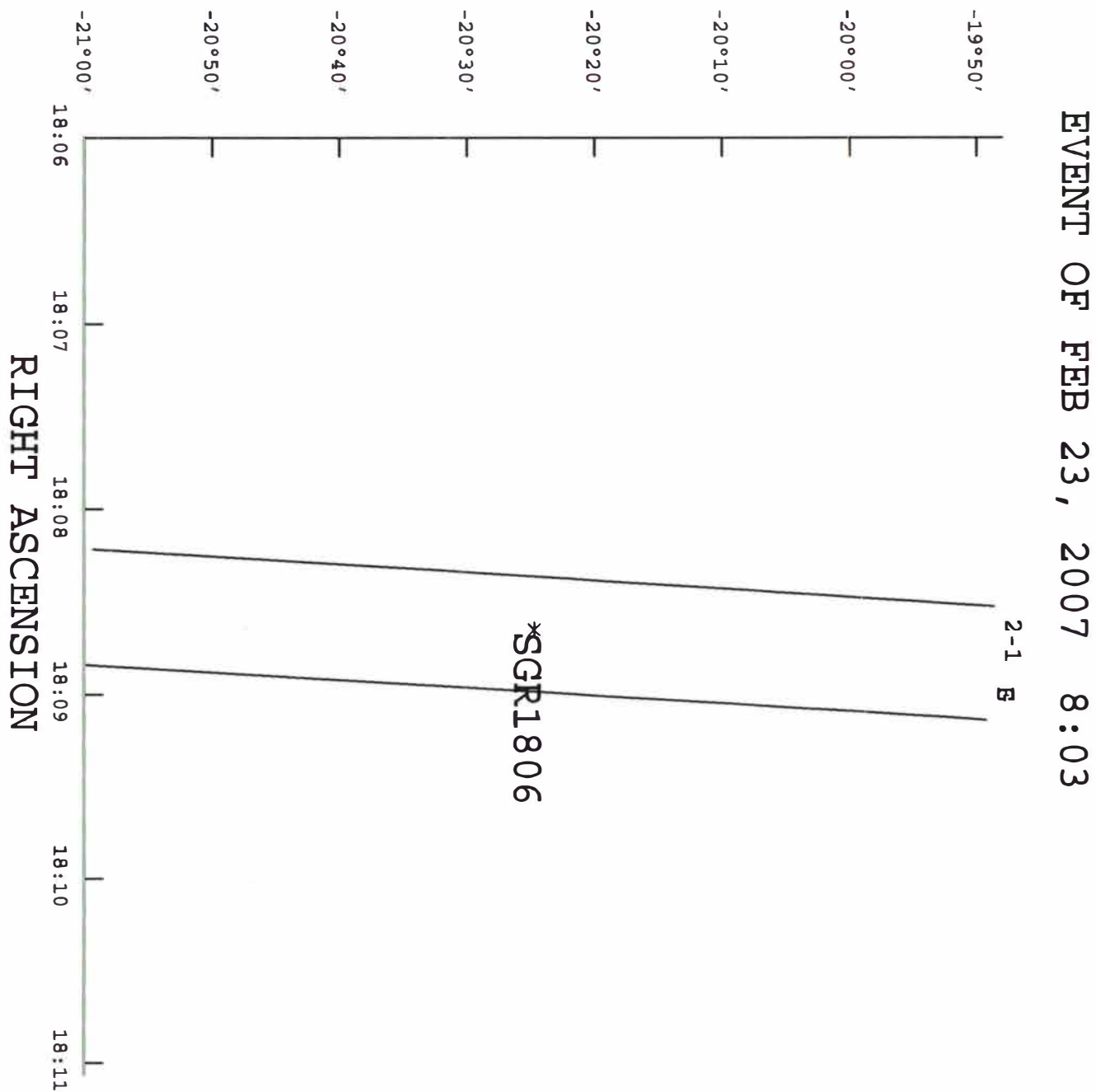
E=ECLIPTIC

G=GALACTIC EQUATOR

1 KONUS2

2 MESSENGER

DECLINATION



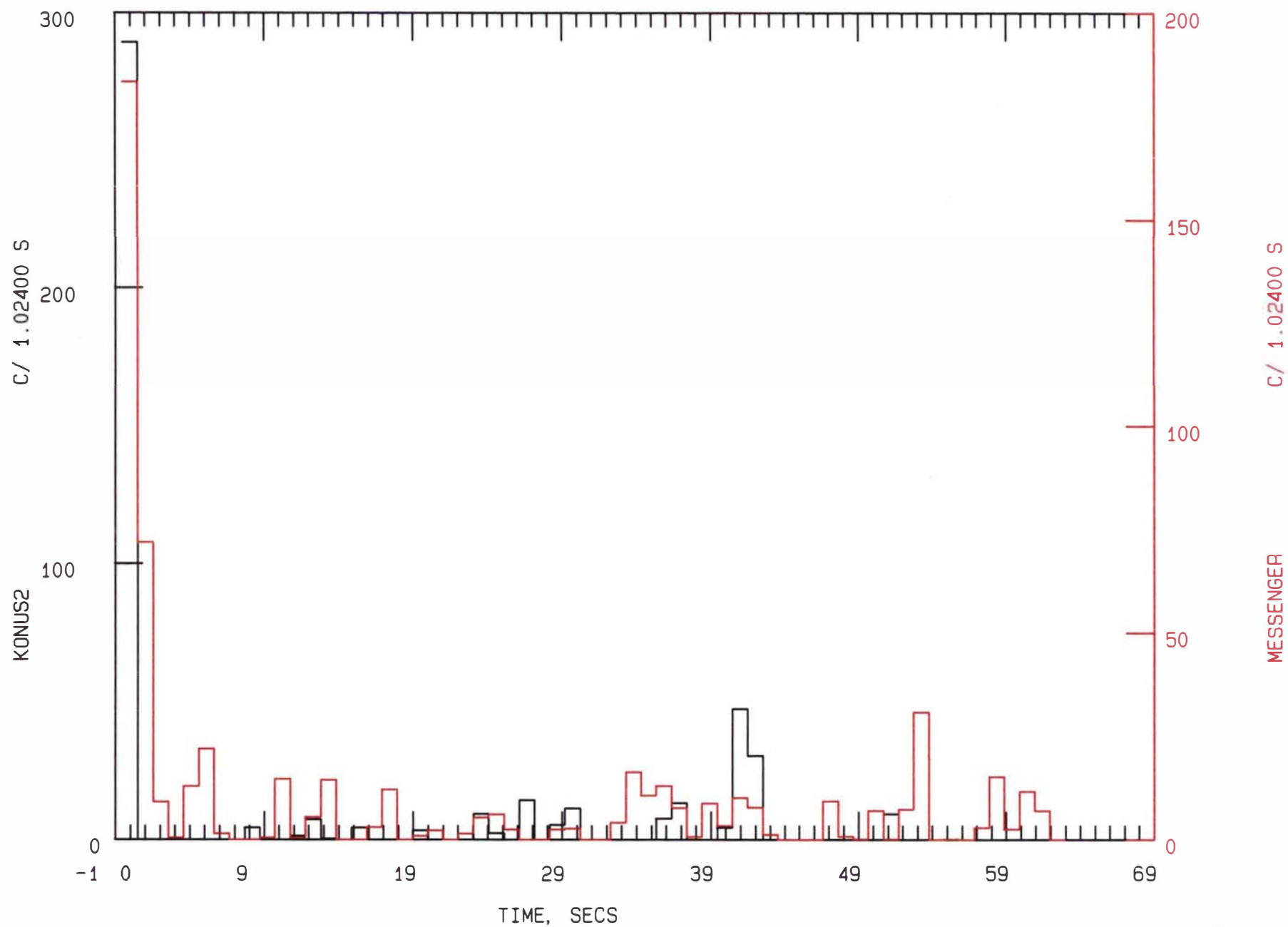
KONUS2

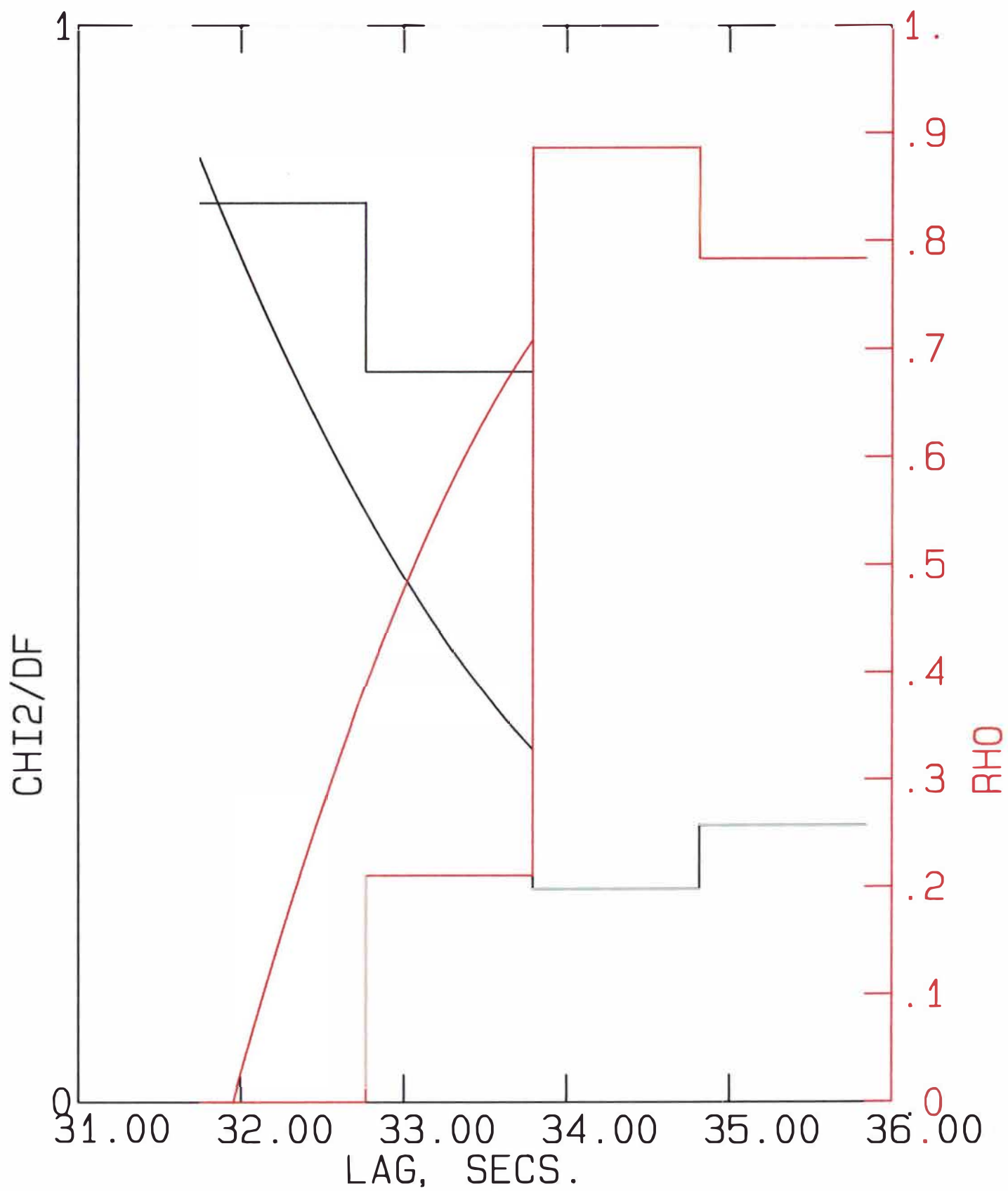
-MESSENGER CORRELATION

23/02/07

29029.420

8/ 5/ 7





25/04/07

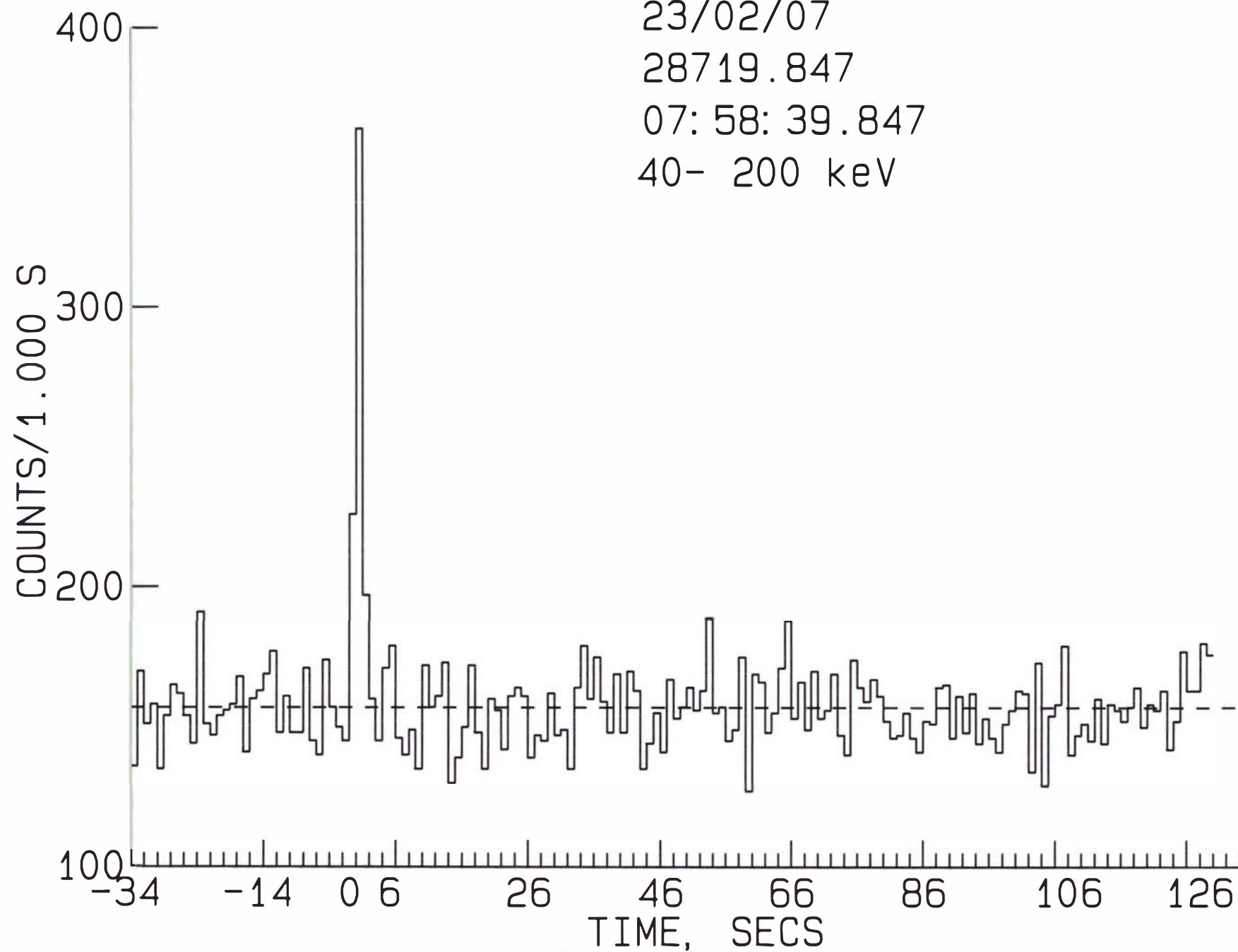
MESSENGER

23/02/07

28719.847

07:58:39.847

40- 200 keV



KONUS2

23/02/07

29029.420

50 - 200 keV

SGR 1806E
08:03:49

59

49

39

29

19

COUNTS/0.064 S

9
0
9
19
29
39
49
59
69
79
89
99

TIME, SECS

23/02/07

KONUS HRES 20070223 29029

TRIGGER TIME: 23/02/07 DOY 054 Julian 2454155.83598 UT = 08.064 08:03:49 (29029.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

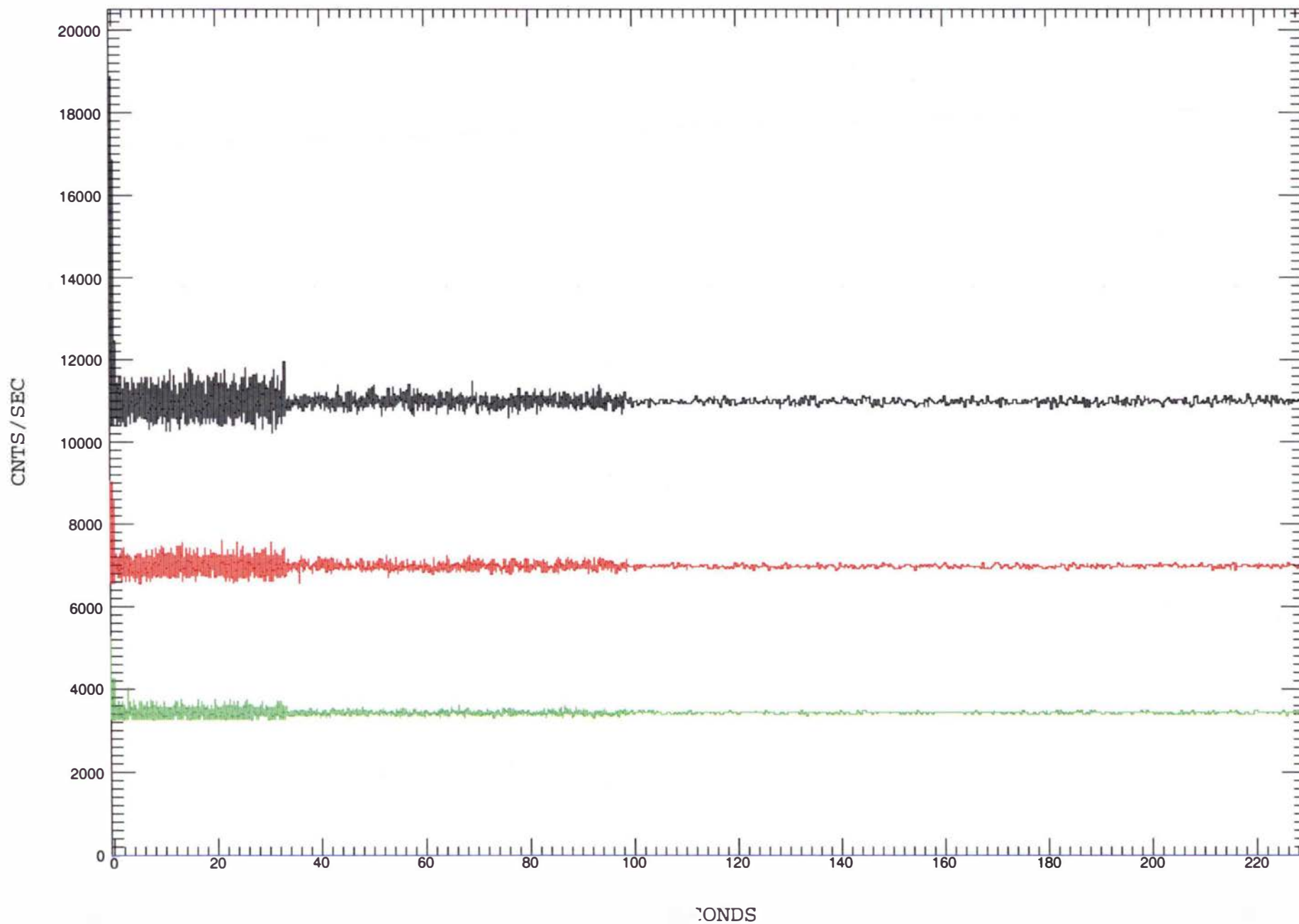
Chan 4 : [> 10 MeV]

Channel 1 + 9900

Channel 2 + 6600

Channel 3 + 3300

Channel 4 + 0



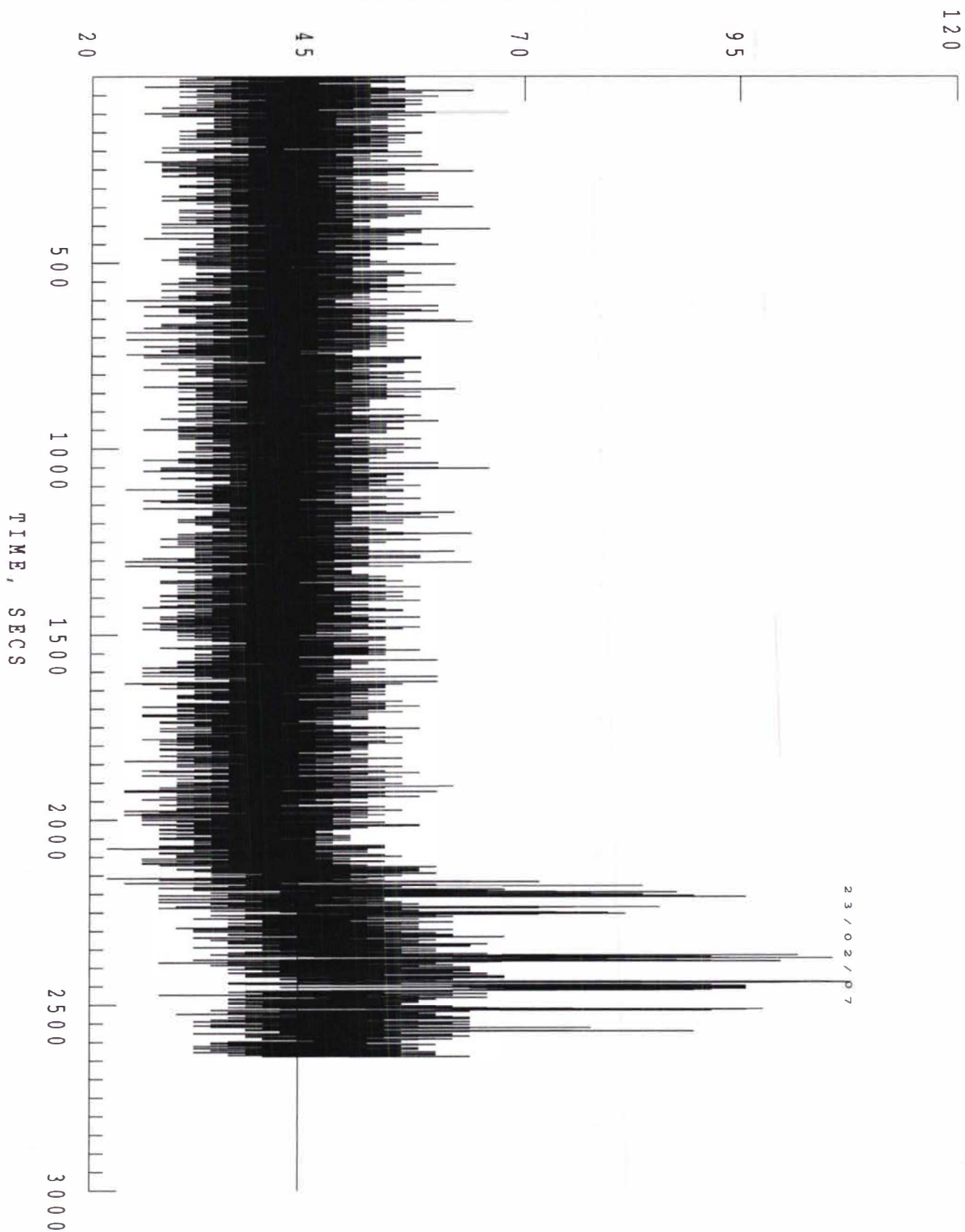
MS01

23/02/07

27676.490

50 - 3000 keV

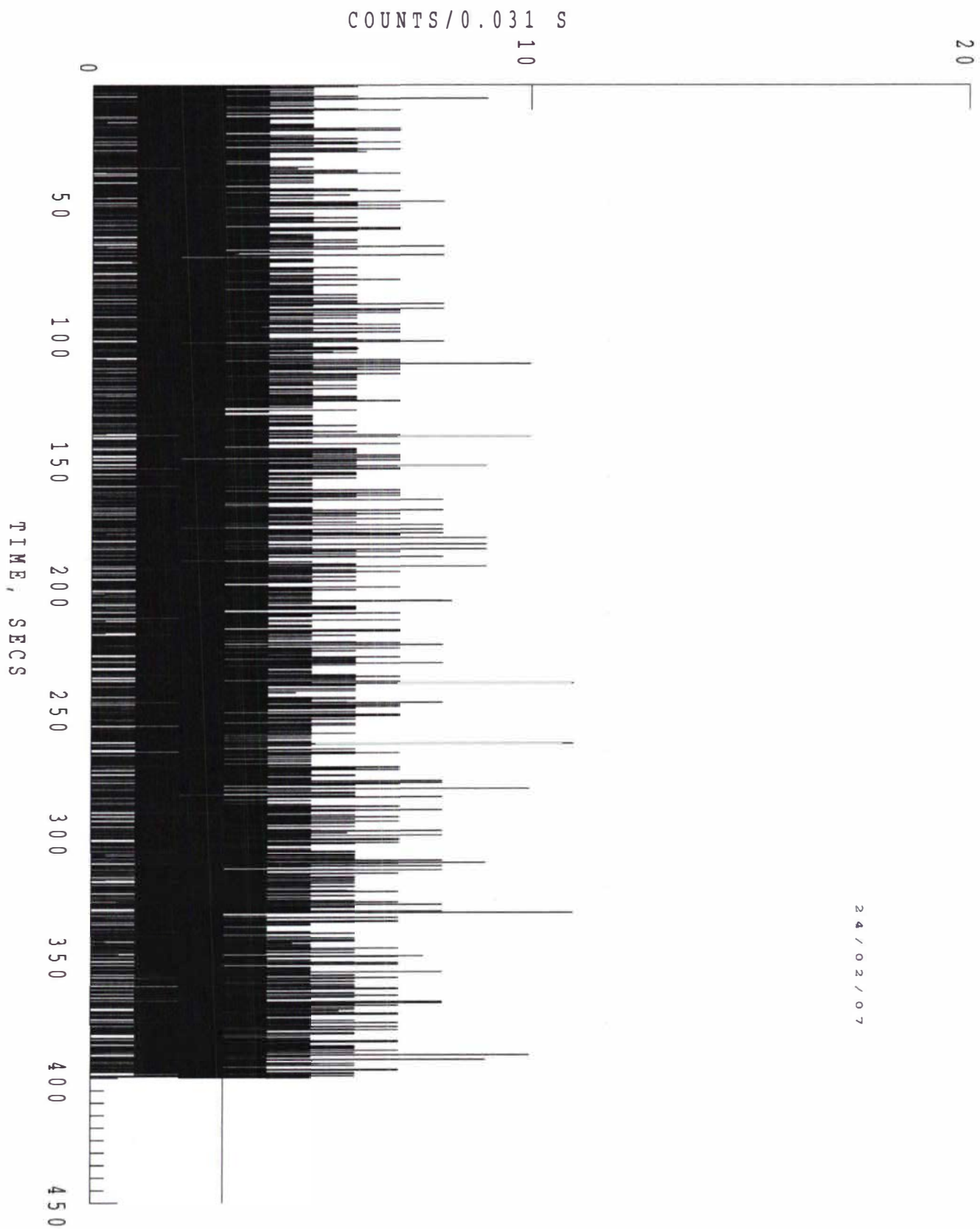
COUNTS/0.250 S



HESSI

23/02/07 28829.000 (KONUS2_20070223_29029)

25- 150 keV



From jayc@milkyway.gsfc.nasa.gov Sat Feb 24 07:51:12 2007
X-ASG-Debug-ID: 1172332410-774700310000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
X-Barracuda-Connect: milkyway.gsfc.nasa.gov[128.183.16.143]
X-Barracuda-Start-Time: 1172332410
X-ASG-Whitelist: Sender
Mime-Version: 1.0
Date: Sat, 24 Feb 2007 10:52:39 -0500
To: "val" <val@mail.ioffe.ru>, "Kevin Hurley" <khurley@ssl.berkeley.edu>,
"Kazutaka Yamaoka" <yamaoka@phys.aoyama.ac.jp>,
"Roland Vanderspek" <roland@space.mit.edu>,
"Masanori Ohno" <ohno@hirax7.hepl.hiroshima-u.ac.jp>,
"Hans Krimm" <krimm@milkyway.gsfc.nasa.gov>,
"Sergey Golenetskii" <golen@mail.ioffe.ru>
From: jayc@milkyway.gsfc.nasa.gov
X-ASG-Orig-Subj: Re: continued SGR activity - SGR burst detected by Konus-Wind
February 23
Subject: Re: continued SGR activity - SGR burst detected by Konus-Wind on
February 23
Cc: "Rafail Aptekar" <aptekar@mail.ioffe.ru>,
"Dmitry Frederiks" <fred@mail.ioffe.ru>, "val" <val@mail.ioffe.ru>
X-Greylist: Sender succeeded SMTP AUTH authentication, not delayed by milter-gre
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

BAT sees a large burst from SGR 1806-20 at 07:57:16 and another
very large burst at 08:03:52. These bursts were not large enough
to trigger an automated response (the threshold is rather high).

At 1:00 PM +0300 2/24/07, val wrote:

Dear colleagues,

>A SGR burst triggered Konus-Wind
>at 2007-02-23 T0=29029.420 s UT (08:03:49.420).
>The burst light curve shows a single pulse with a duration of ~1.2 sec.
>The peak count rate is ~5000 cts/sec.
>The source of the burst is in the north ecliptic hemisphere not far from
>the ecliptic plane.
>
>Any other detections?
>
>
>Best wishes,
>
>Valentin

--
Jay Cummings

From yamaoka@phys.aoyama.ac.jp Sat Feb 24 13:38:56 2007
 X-ASG-Debug-ID: 1172353271-2c6c002a0000-LqZNIK
 X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
 -Barracuda-Connect: scmailgw1.scop.aoyama.ac.jp[133.2.251.194]
 -Barracuda-Start-Time: 1172353271
 To: jayc@milkyway.gsfc.nasa.gov
 Cc: val@mail.ioffe.ru, khurley@ssl.berkeley.edu, roland@space.mit.edu,
 ohno@hirax7.hepl.hiroshima-u.ac.jp, krimm@milkyway.gsfc.nasa.gov,
 golen@mail.ioffe.ru, aptekar@mail.ioffe.ru, fred@mail.ioffe.ru
 X-ASG-Orig-Subj: Re: continued SGR activity - SGR burst detected by Konus-Wind
 February 23
 Subject: Re: continued SGR activity - SGR burst detected by Konus-Wind on
 February 23
 Mime-Version: 1.0
 Content-Transfer-Encoding: 7bit
 Date: Sun, 25 Feb 2007 06:40:14 +0900
 From: Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>
 X-Dispatcher: imput version 20000228(IM140)
 X-Barracuda-Bayes: INNOCENT GLOBAL 0.0003 1.0000 -2.0191
 X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
 X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.9588

Rule breakdown below

pts	rule name	description
0.00	UNPARSEABLE_RELAY	Informational: message has unparseable relay

Dear Valentin and Jay,

We did not detect both SGR bursts.
 SGR 1806-20 was occulted by the Earth.

Best regards,
 Kazu
 on behalf of the Suzaku WAM team

From: jayc@milkyway.gsfc.nasa.gov
 Subject: Re: continued SGR activity - SGR burst detected by Konus-Wind on Febru
 Date: Sat, 24 Feb 2007 10:52:39 -0500
 Message-ID: <p06230924c2060e534b4f@[192.168.1.47]>

> BAT sees a large burst from SGR 1806-20 at 07:57:16 and another
 > very large burst at 08:03:52. These bursts were not large enough
 > to trigger an automated response (the threshold is rather high).
 >
 > At 1:00 PM +0300 2/24/07, val wrote:
 > >Dear colleagues,
 > >
 > >A SGR burst triggered Konus-Wind
 > >at 2007-02-23 T0=29029.420 s UT (08:03:49.420).
 > >The burst light curve shows a single pulse with a duration of ~1.2 sec.
 > >The peak count rate is ~5000 cts/sec.
 > >The source of the burst is in the north ecliptic hemisphere not far from
 > >the ecliptic plane.
 > >
 > >Any other detections?
 > >
 > >

25/04/07

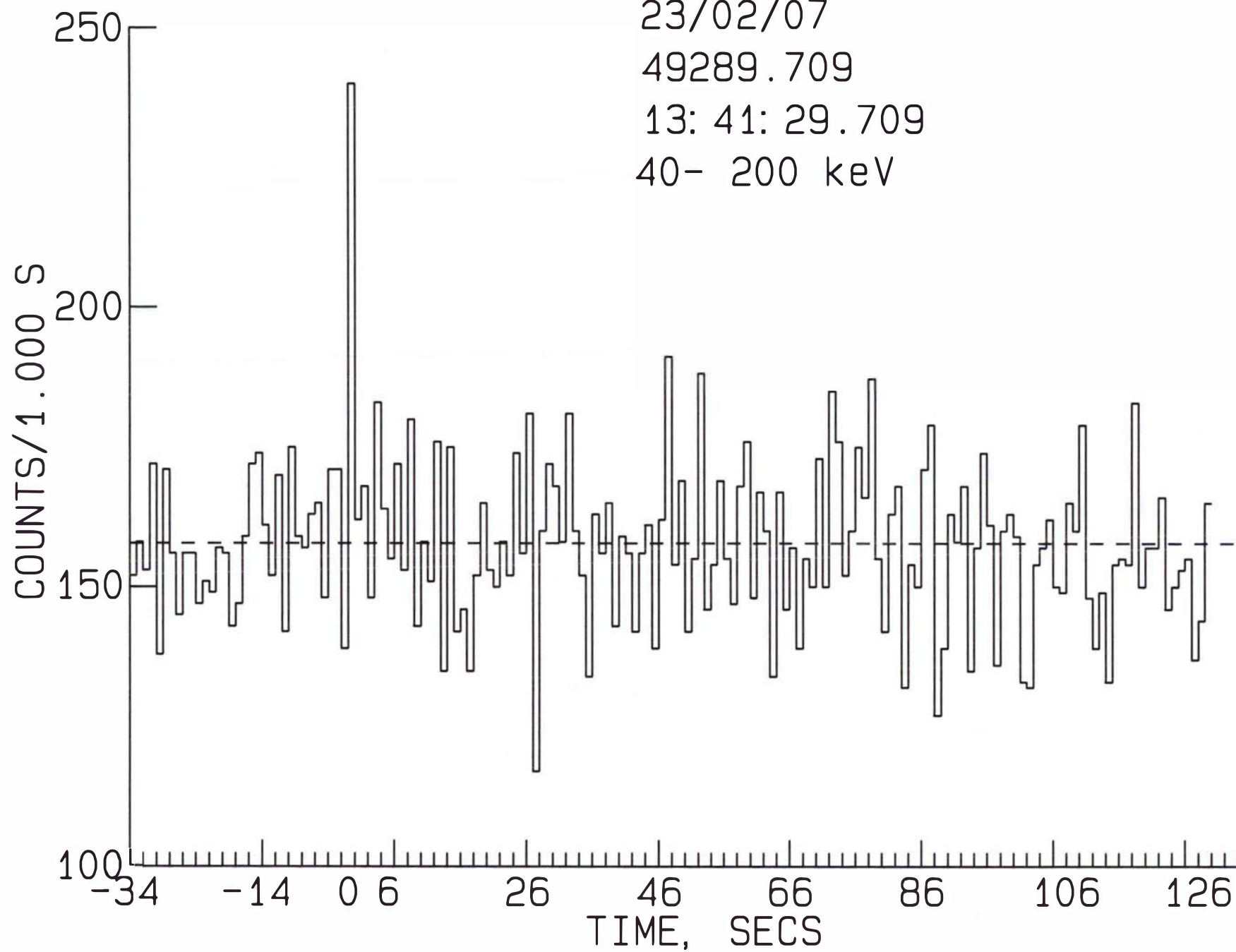
MESSENGER

23/02/07

49289.709

13: 41: 29.709

40- 200 keV

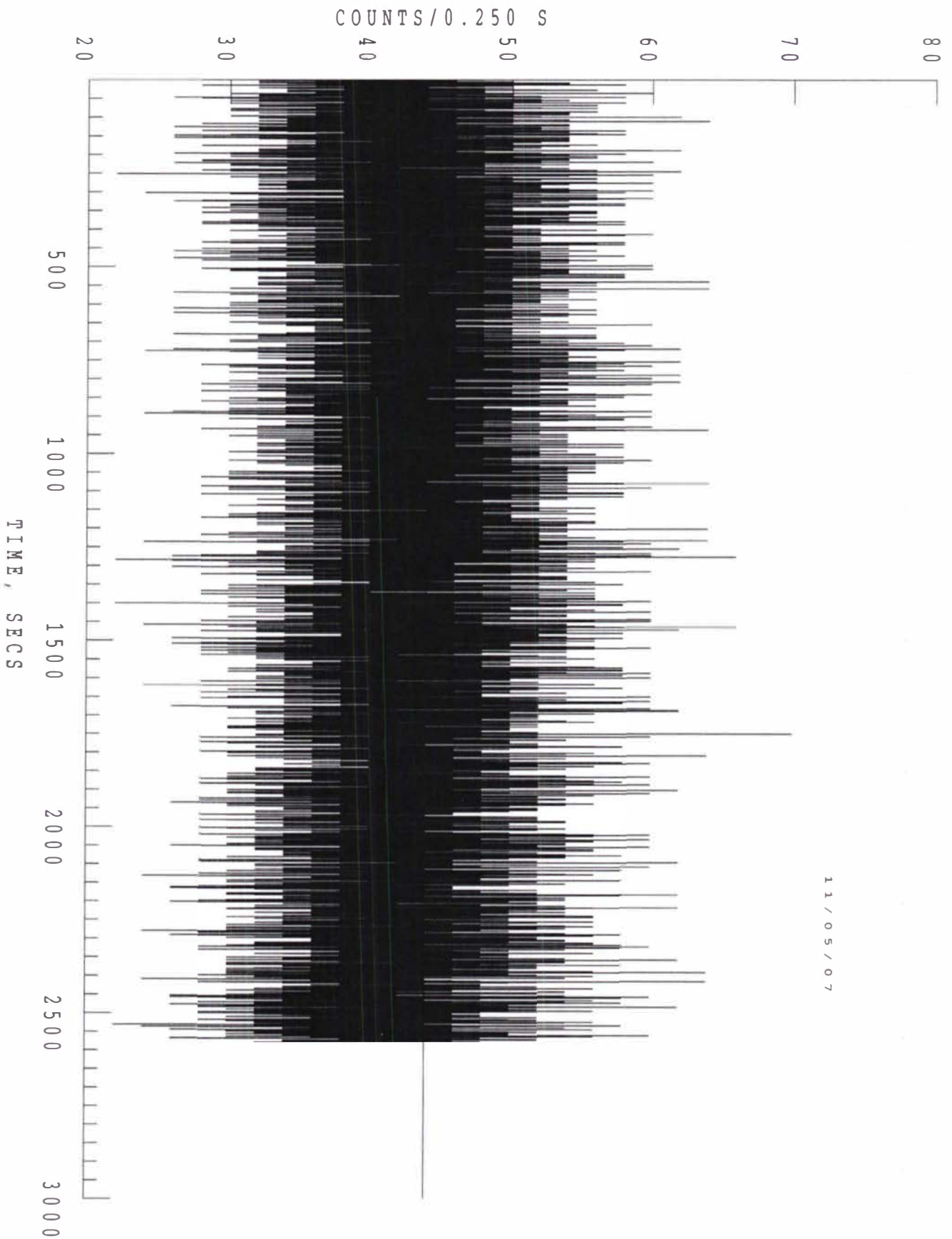


MS01

23/02/07

55275.989

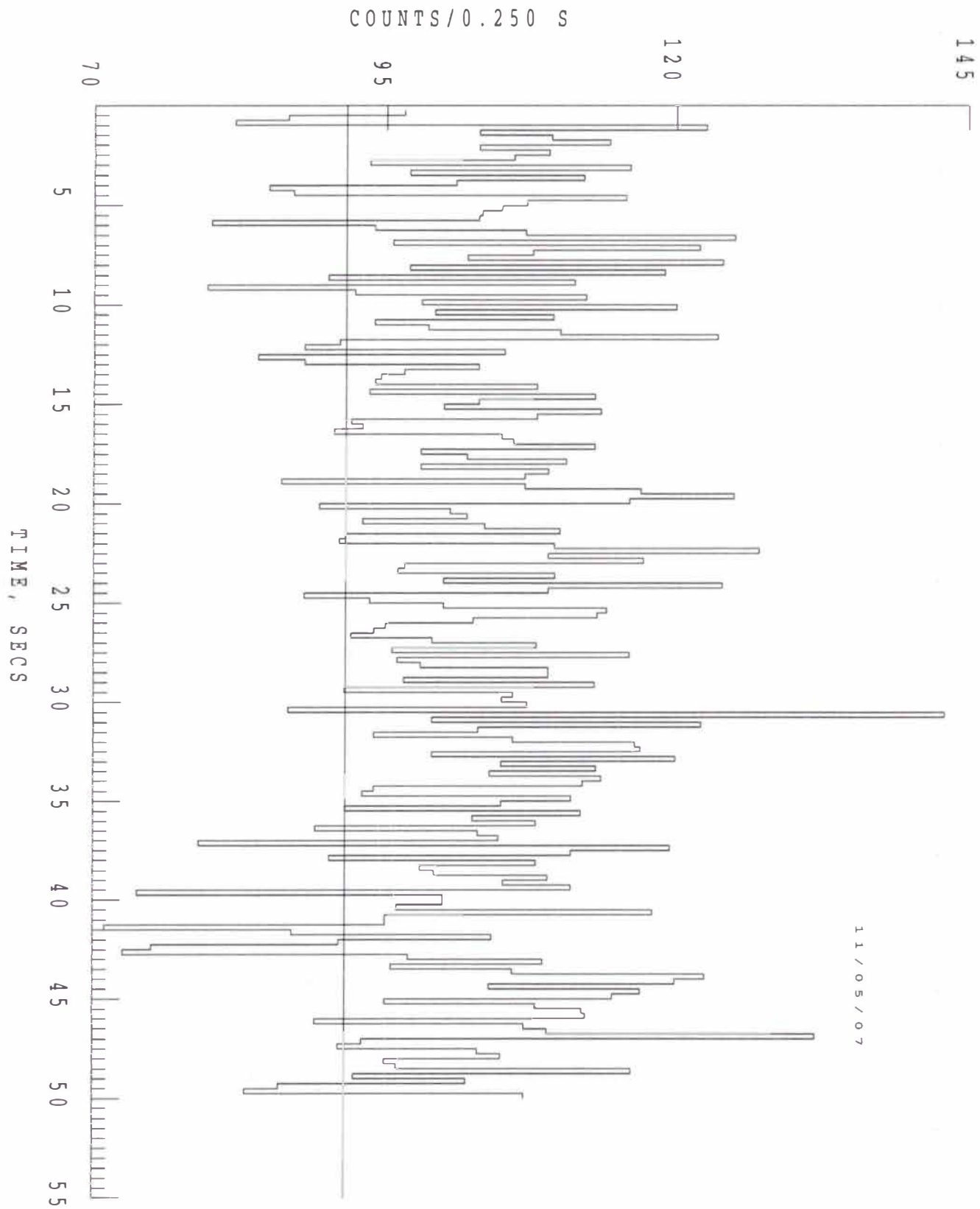
50- 3000 keV



HESSI

23/02/07 56559.000 (SUZAKU_20070223_56584)

25- 150 keV



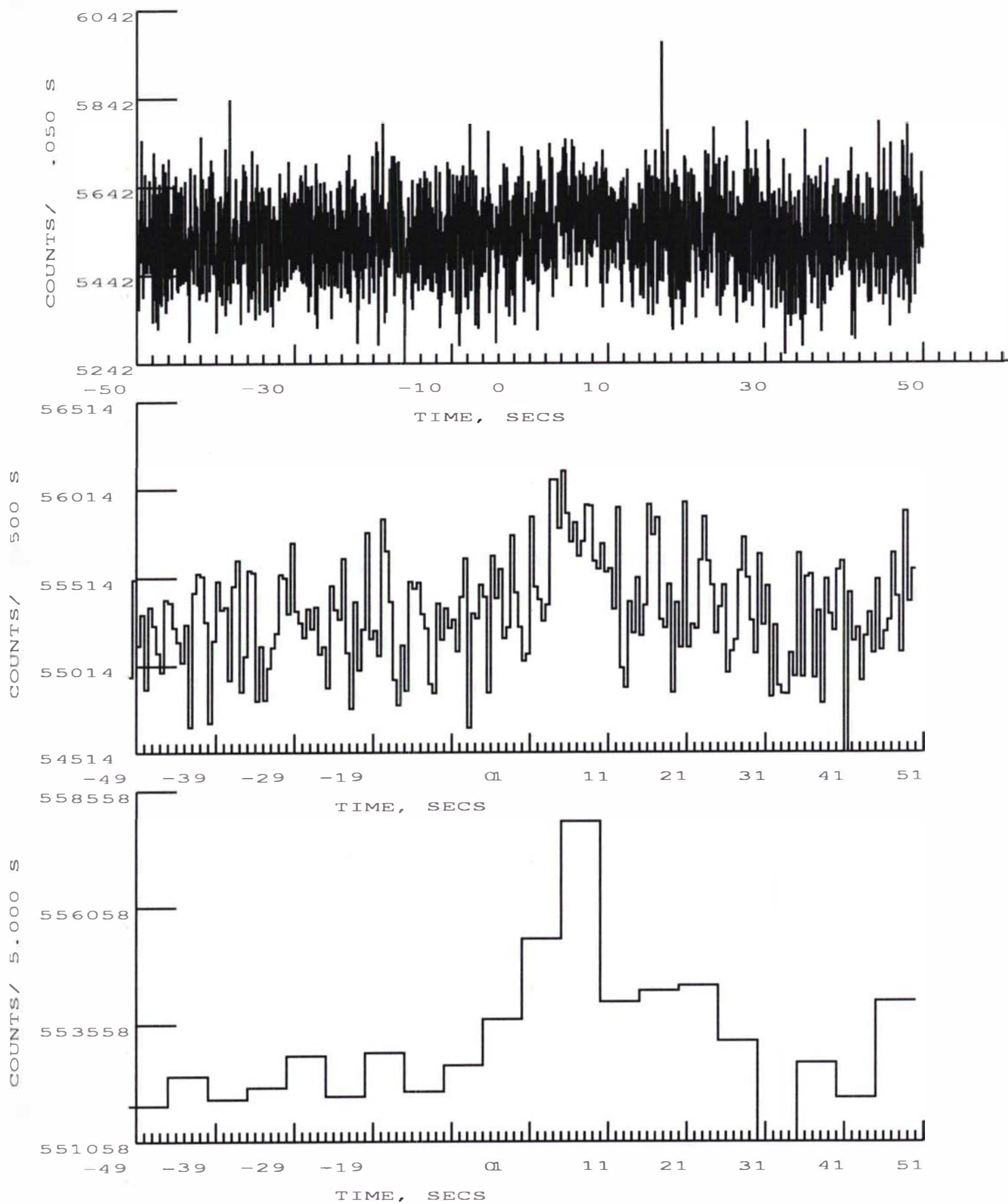
INTEGRAL

23/02/07

56584.000

15:43:04.0

18/07/14



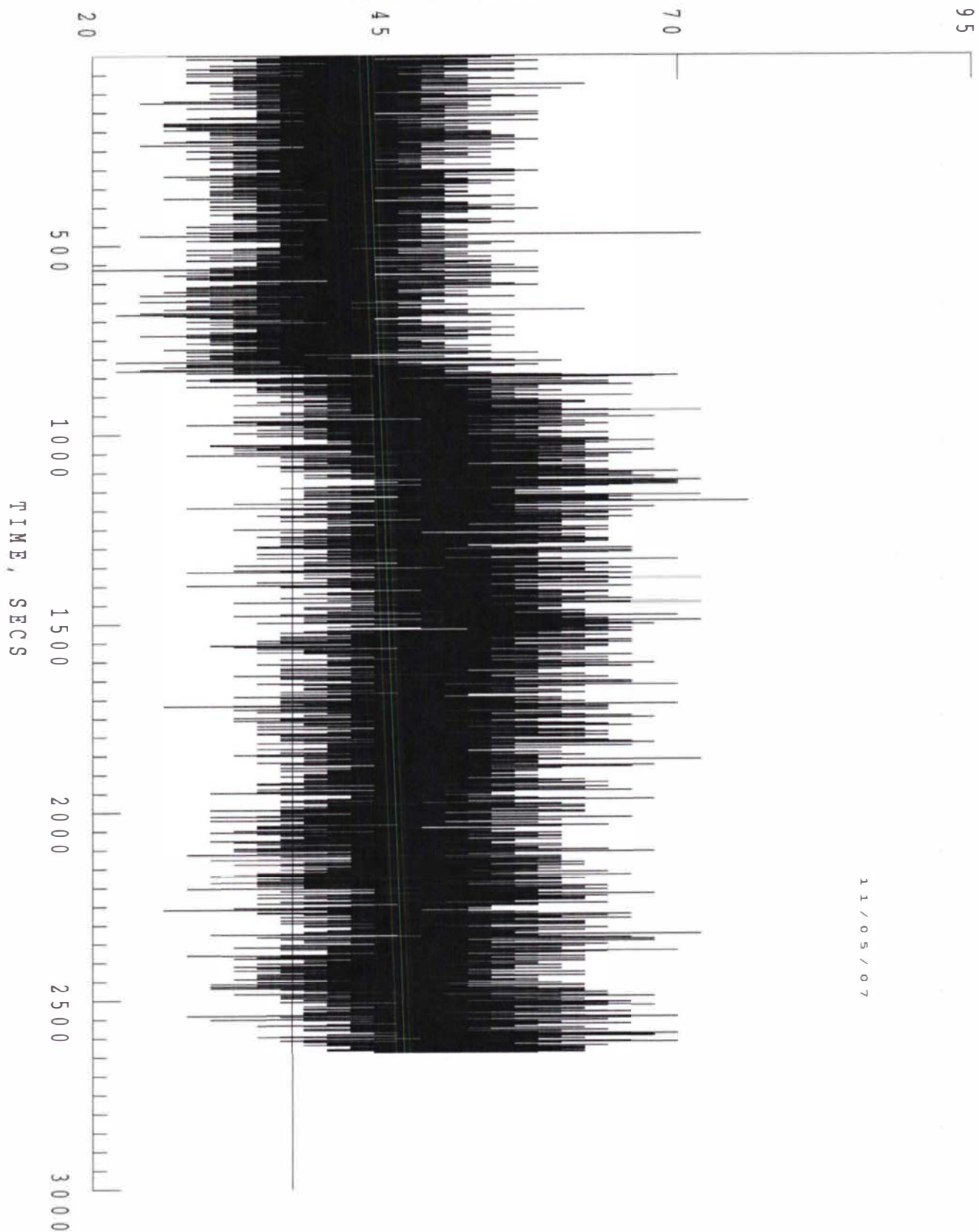
MS01

23/02/07

71655.689

50 - 3000 keV

COUNTS/0.250 S



From williams@sunspot.ssl.berkeley.edu Fri May 11 11:22:48 2007
X-ASG-Debug-ID: 1178907779-2e1400030000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
"-Barracuda-Connect: gammaburst.ssl.berkeley.edu[128.32.98.141]
-Barracuda-Start-Time: 1178907779
Date: Fri, 11 May 2007 11:32:44 -0700 (PDT)
From: williams@ssl.berkeley.edu
To: khurley@ssl.berkeley.edu
X-ASG-Orig-Subj: No_RHESSI_data_for_SUZAKU_20070223_73000
Subject: No_RHESSI_data_for_SUZAKU_20070223_73000
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
X-ASG-Whitelist: Sender (Per-User)

HESSI 25 to 150 keV Counts
Created 11-May-2007 11:21:42.00
Detectors: 3r 4r 5r 6r 8r 9r
columns: time (sec) counts (summed over detectors)
time_interval = 0.500000
No SAA
No Eclipse
Full time range in non-SAA data gap
No Data Available For This Time Range
Do Not Retry

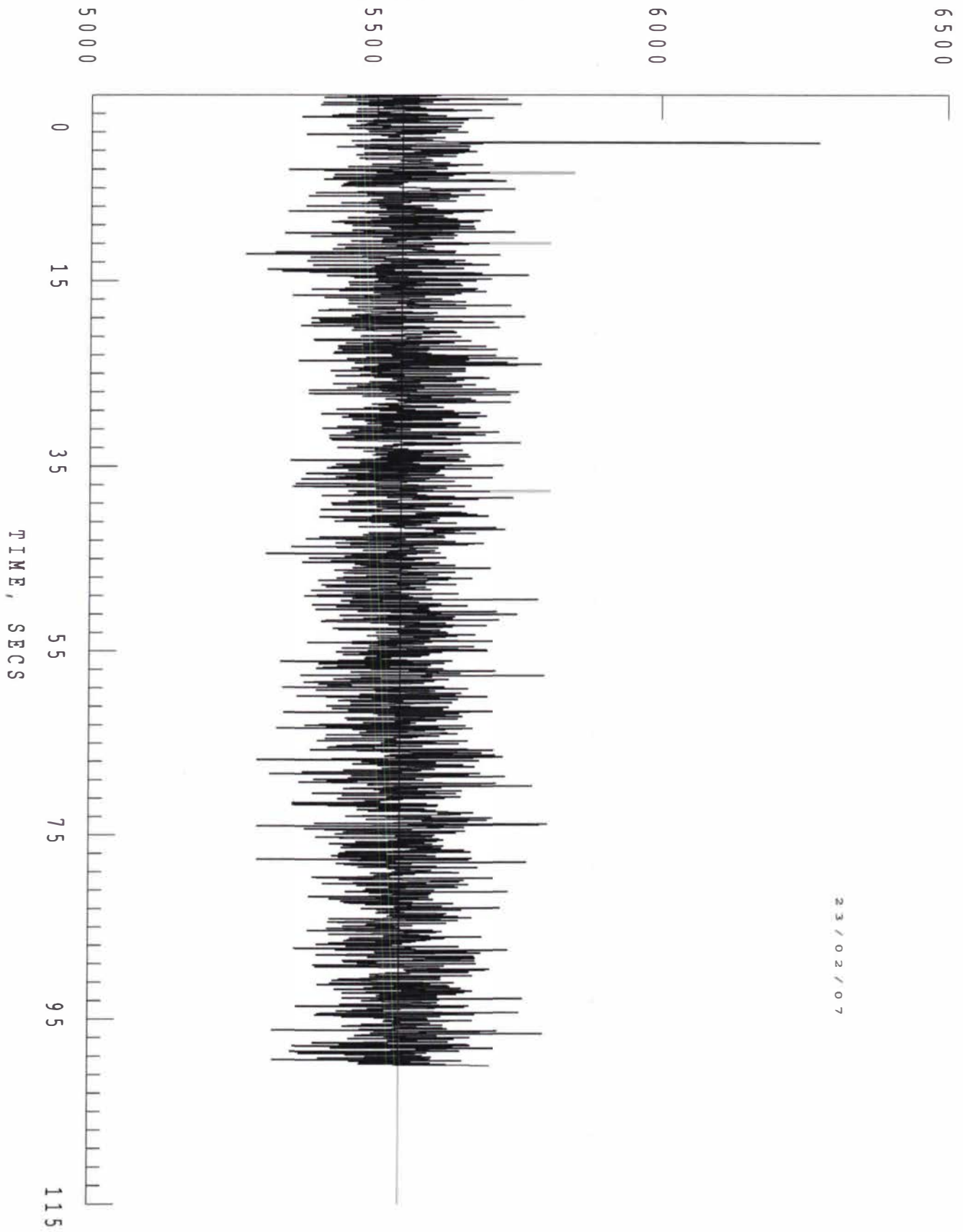
INTEGRAL

23/02/07

84901.065

100-10000 keV

COUNTS/0.050 S



23/02/07

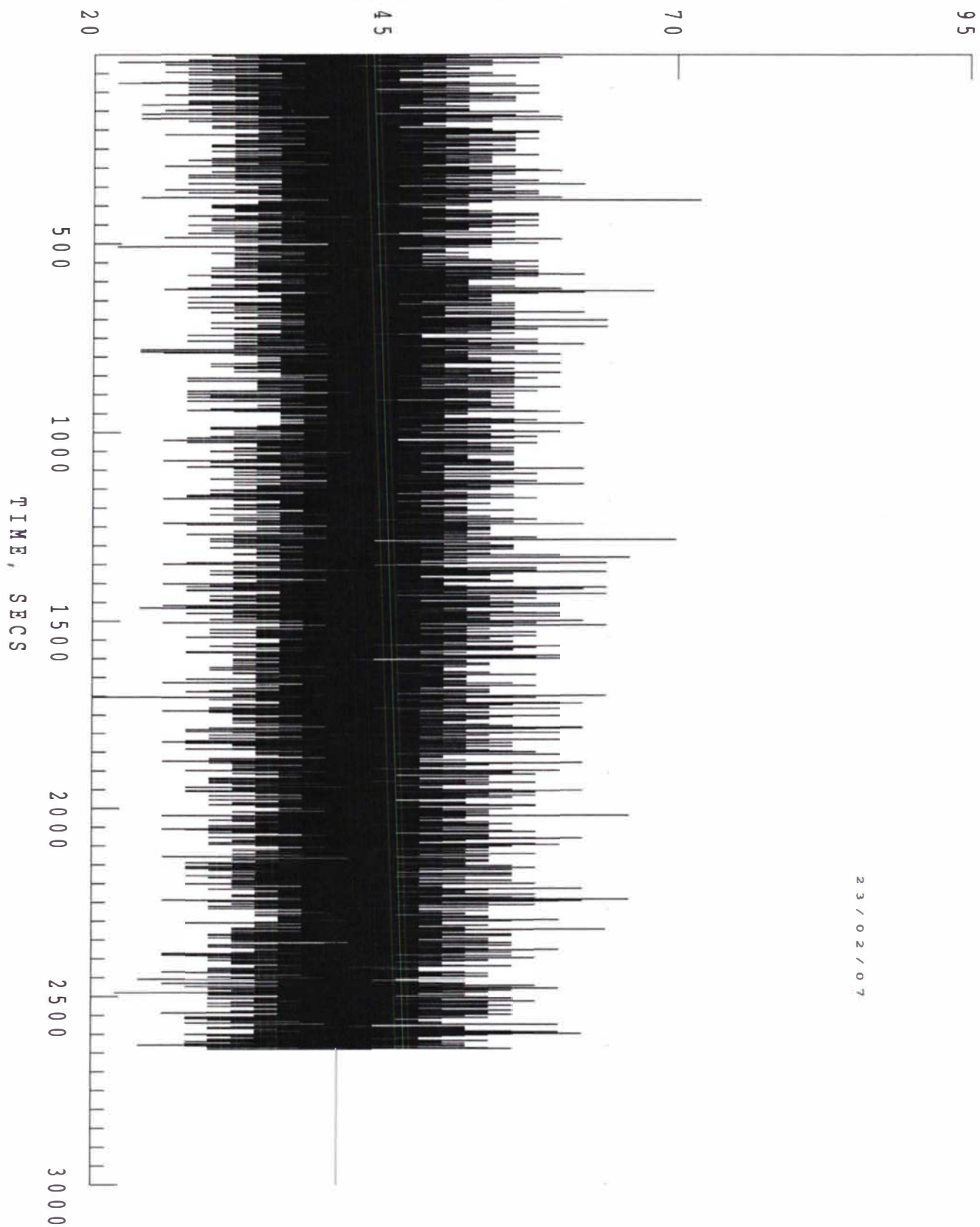
MS01

23/02/07

83535.481

50 - 3000 keV

COUNTS/0.250 S

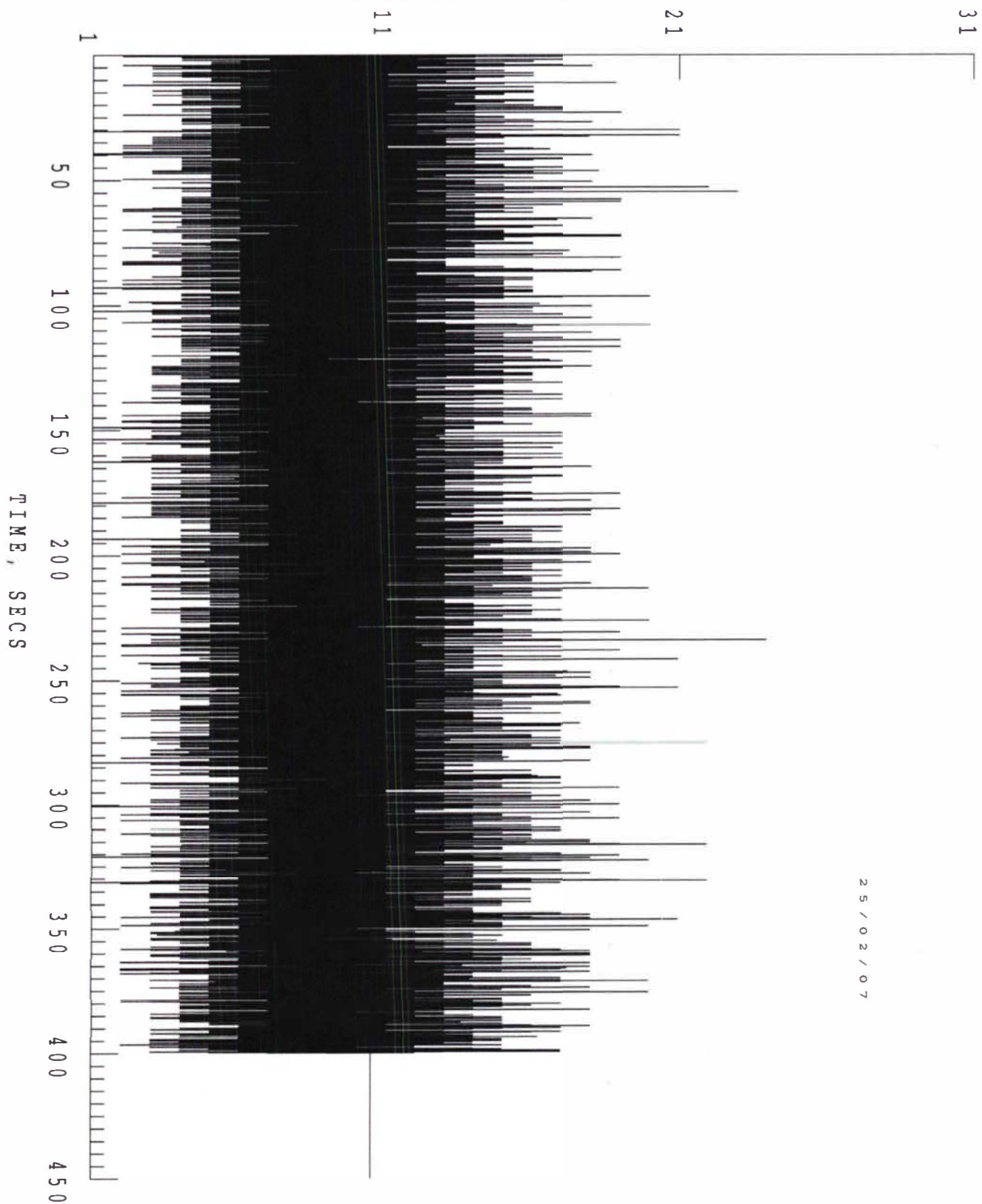


HESSI

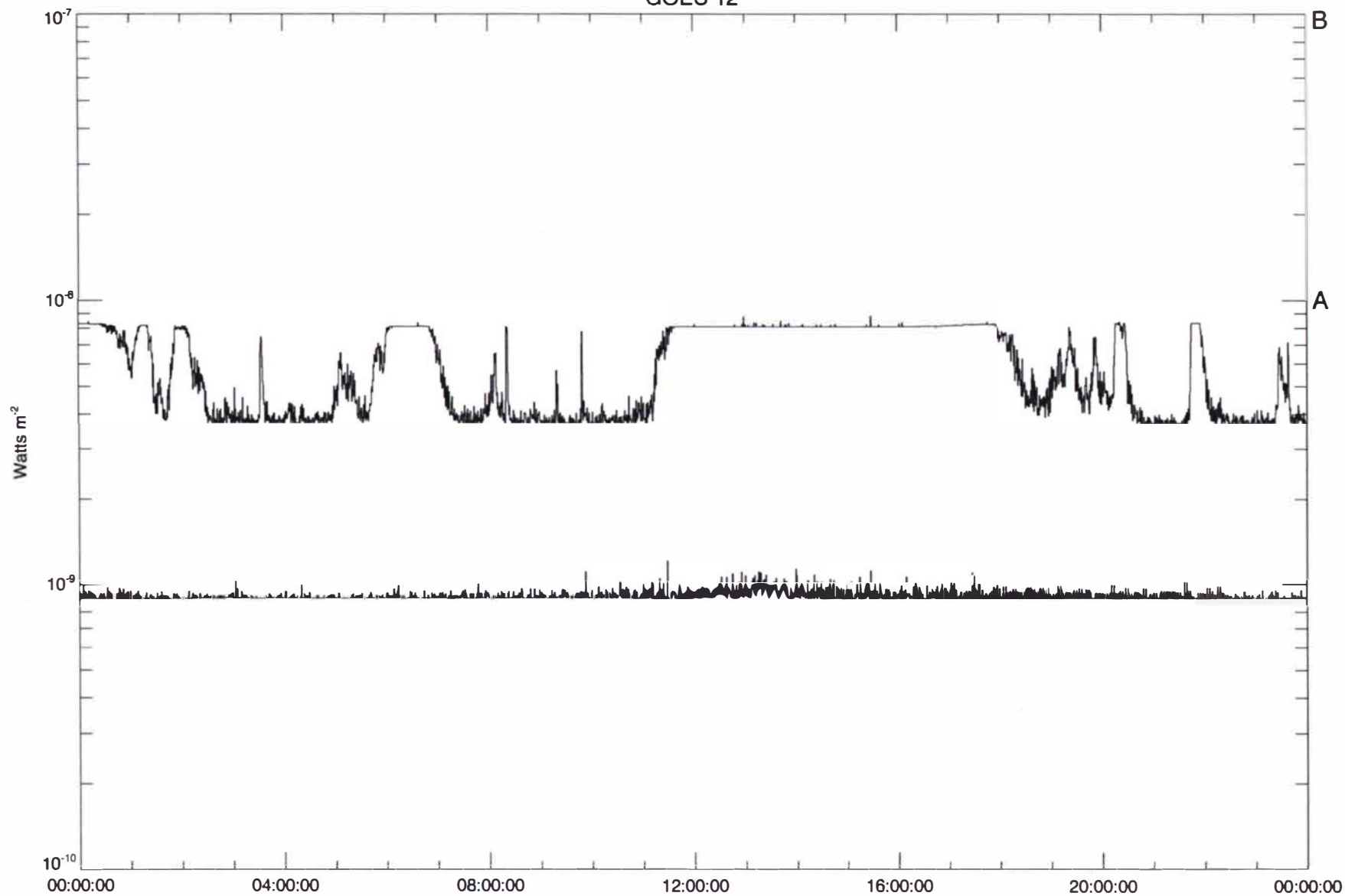
23/02/07 84701.000 (INTEGRAL_20070223_84901)

25- 150 keV

COUNTS/0.031 S



GOES 12



Data Start: 07/02/23, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Background not subtracted

Plot created: 07/02/26, 0921

Sample average = 10

25/04/07

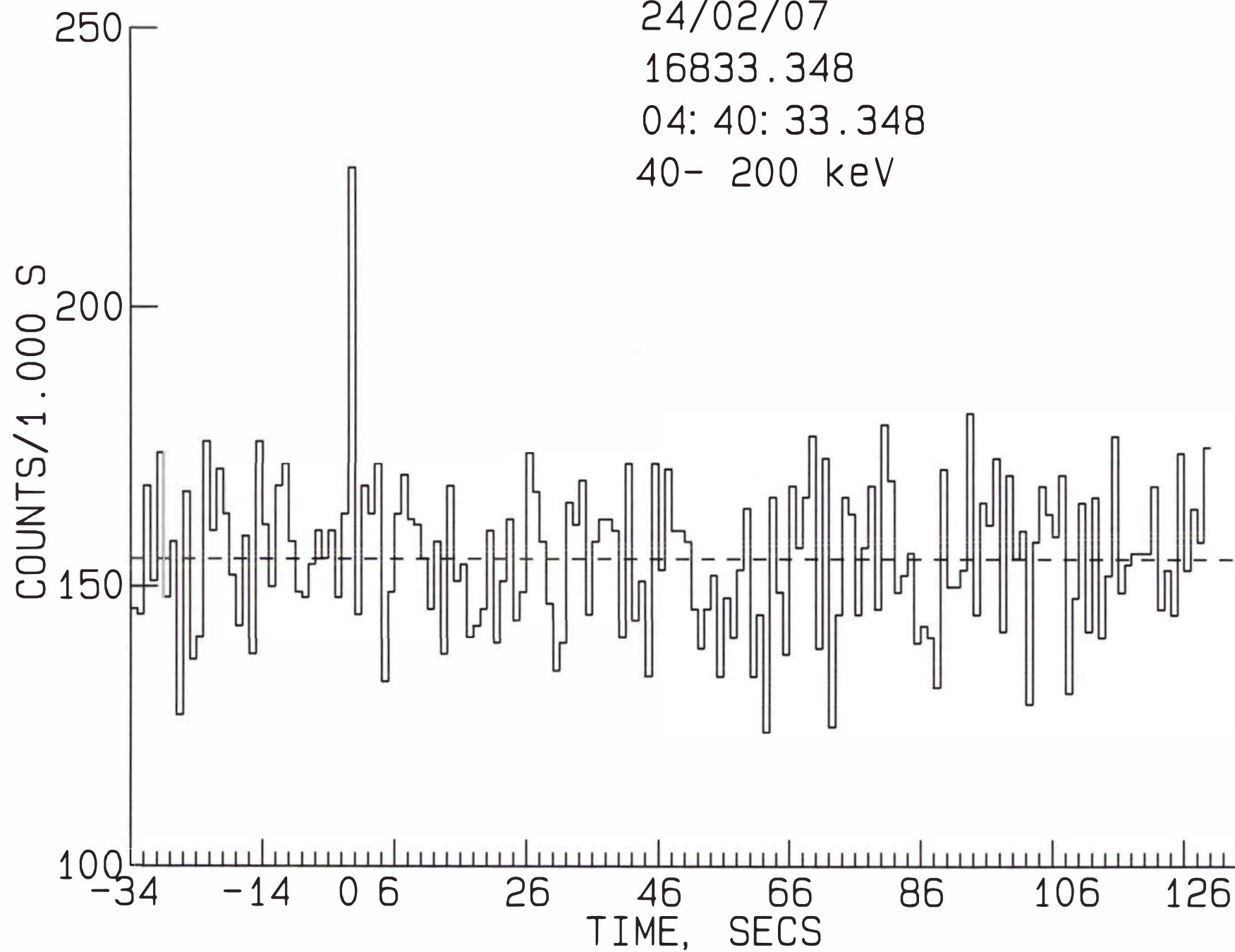
MESSENGER

24/02/07

16833.348

04: 40: 33.348

40- 200 keV



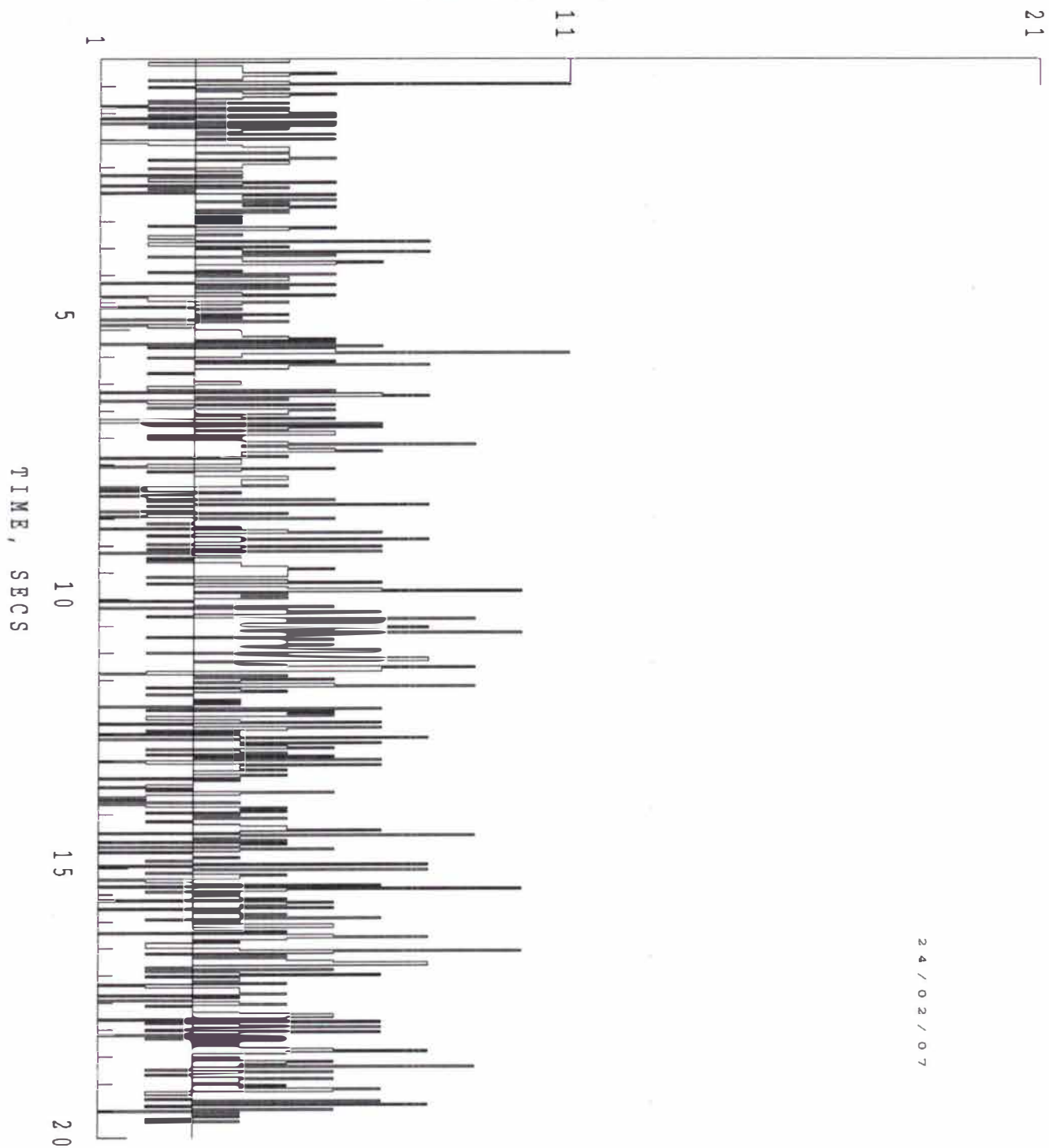
MO

24/02/07

32619.849

116- 337 keV

COUNTS/0.032 S



24/02/07

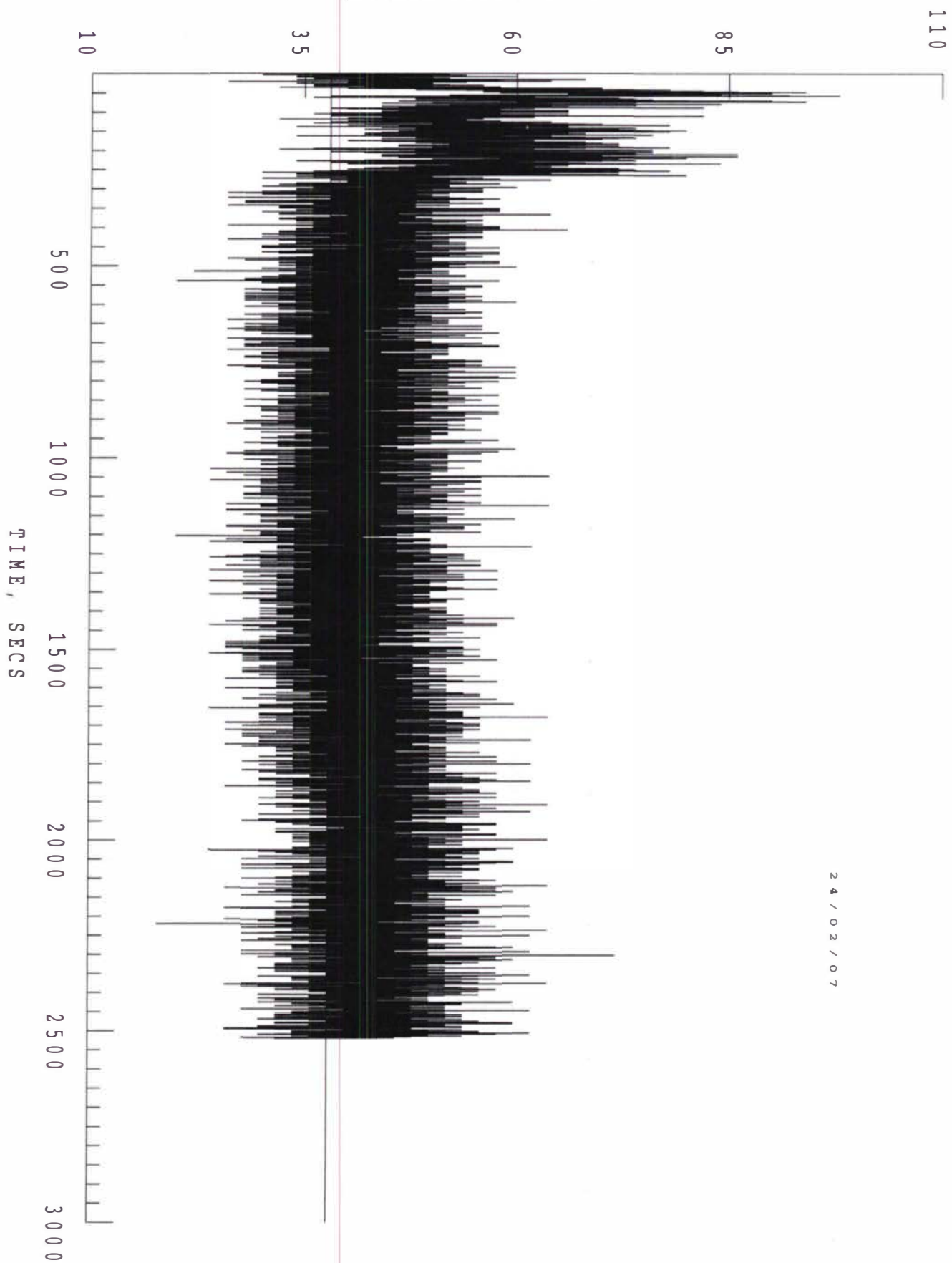
MS01

24/02/07

31274.851

50 - 3000 keV

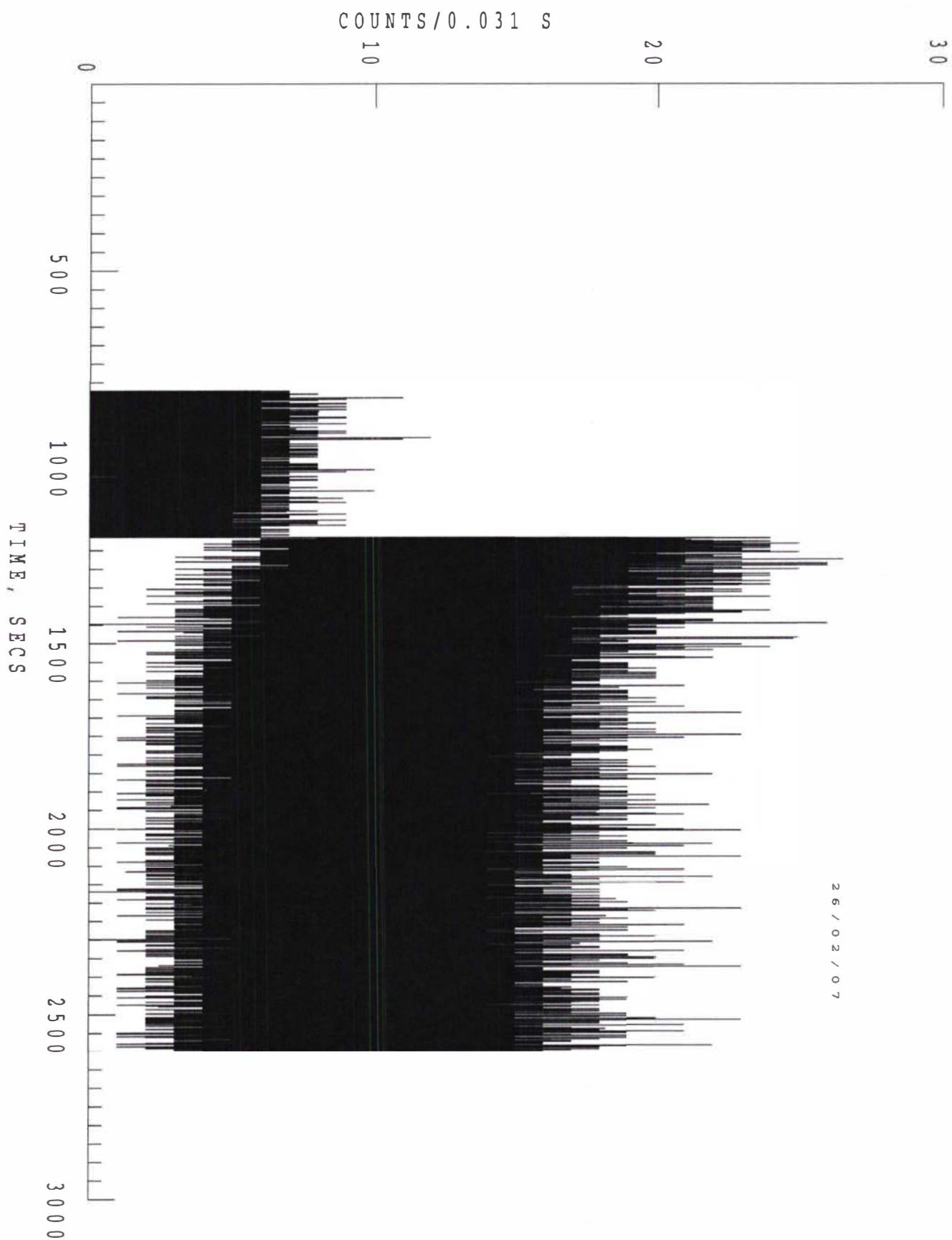
COUNTS/0.250 S



HESSI

24/02/07 31319.000 (MO_GE_20070224_32619)

25- 150 keV



Date: Oct 12 2010

BURST TRIANGULATION CHECKLIST

1. Suzaku Data

- ☐ 1 second timing error corrected? (Jan 1 – Apr 24 2009)

2. AGILE Data

- ☐ 1 second timing error corrected?

3. MESSENGER Data

- ☐ Coarse or Precision oscillator (C or P bronte.jhuapl.edu/spice/kernels/sclk/timekeeping/OPS_TIME_ENGR.txt)?
- ☐ Timing checked after ~ 1 week?

4. For Konus events

- ☒ Konus ecliptic latitude used with latest calibration?

5. 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). For later data, was timing checked after ~1 week?
- ☐ 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?

6. For 3 or More Spacecraft events

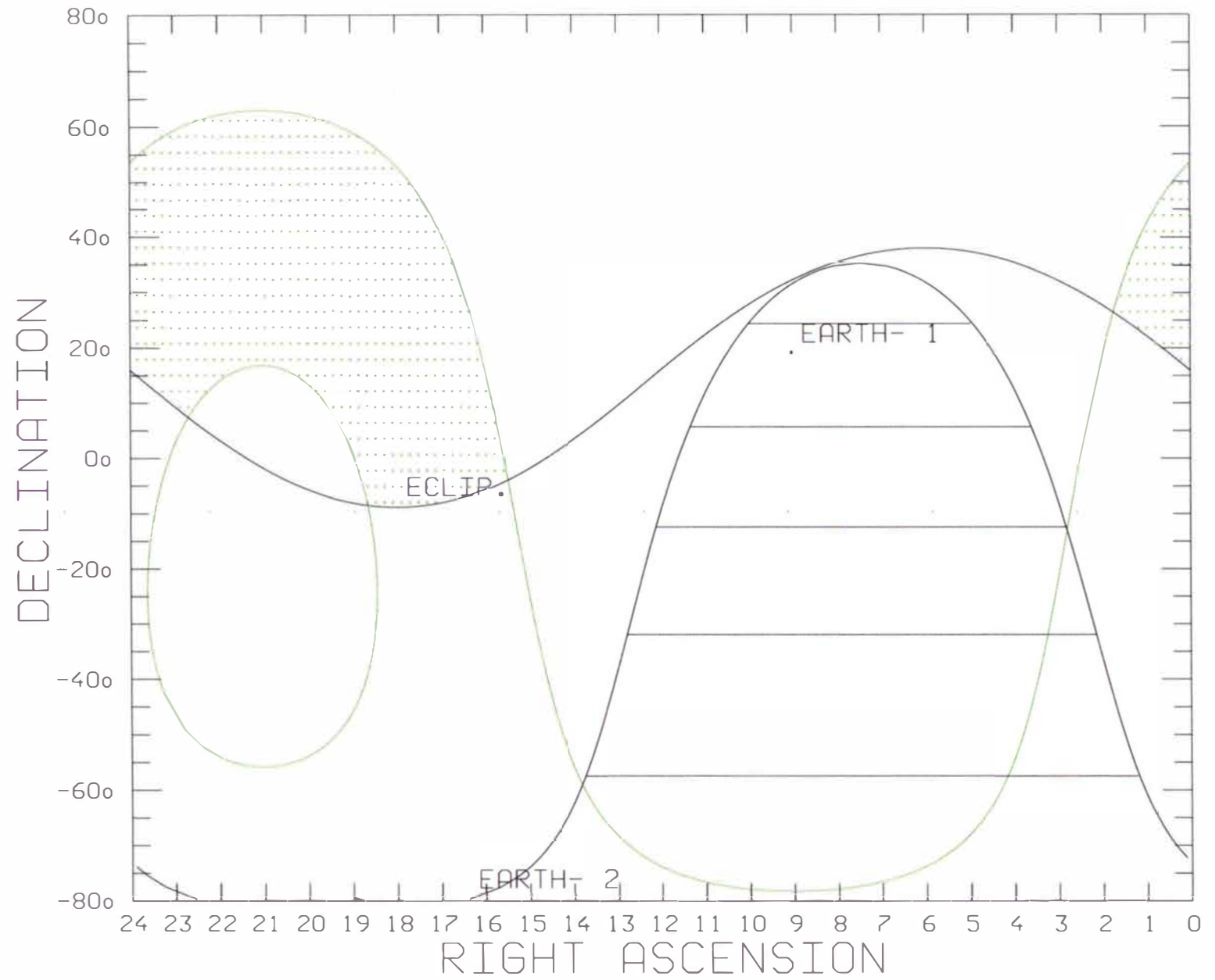
- ☐ $\Sigma 3\Delta t$'s calculated, and/or BMAPSUM executed?

7. For INTEGRAL events

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

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

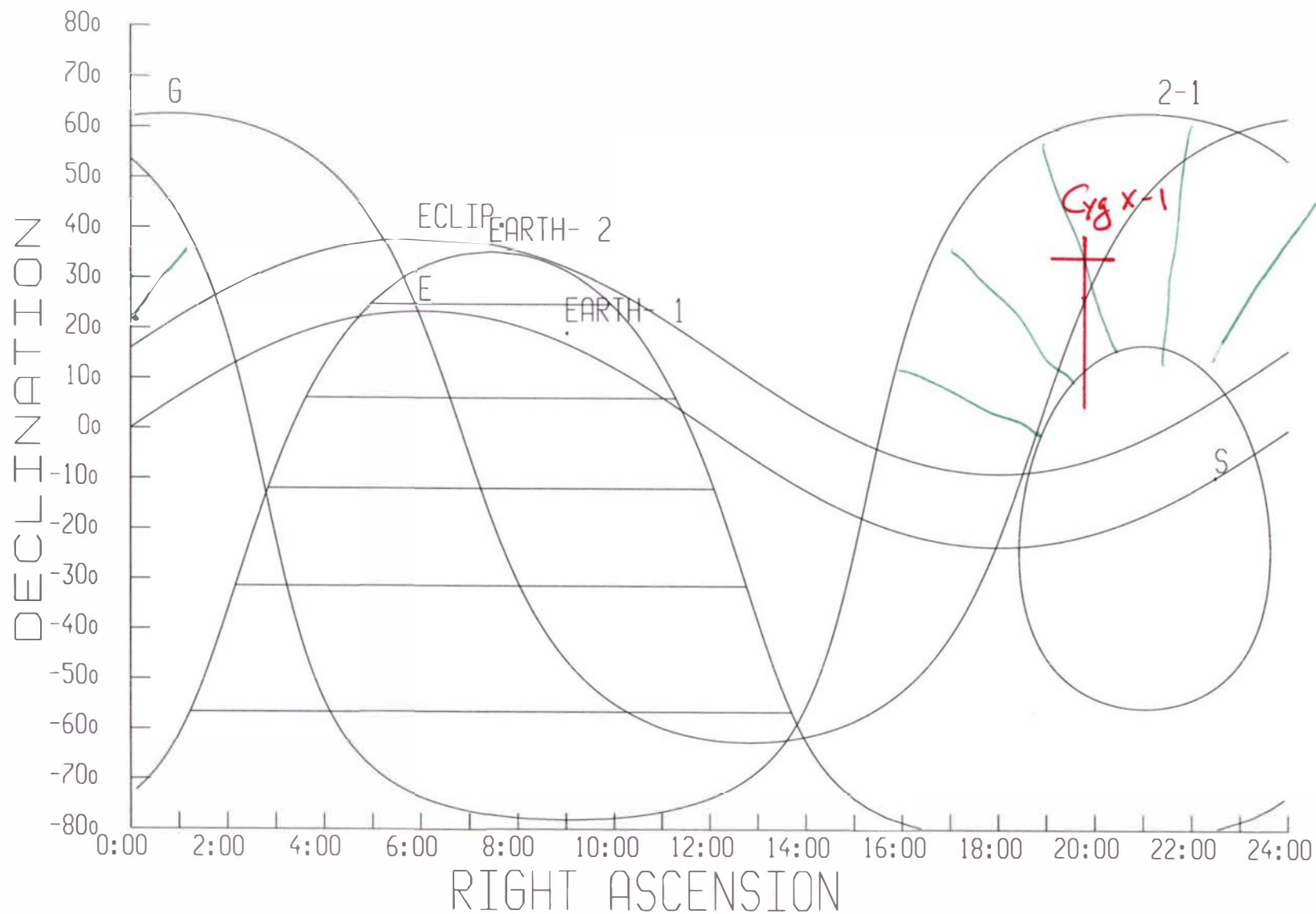
Possible Cyg X-1 outburst



EVENT OF FEB 24, 2007 11:41

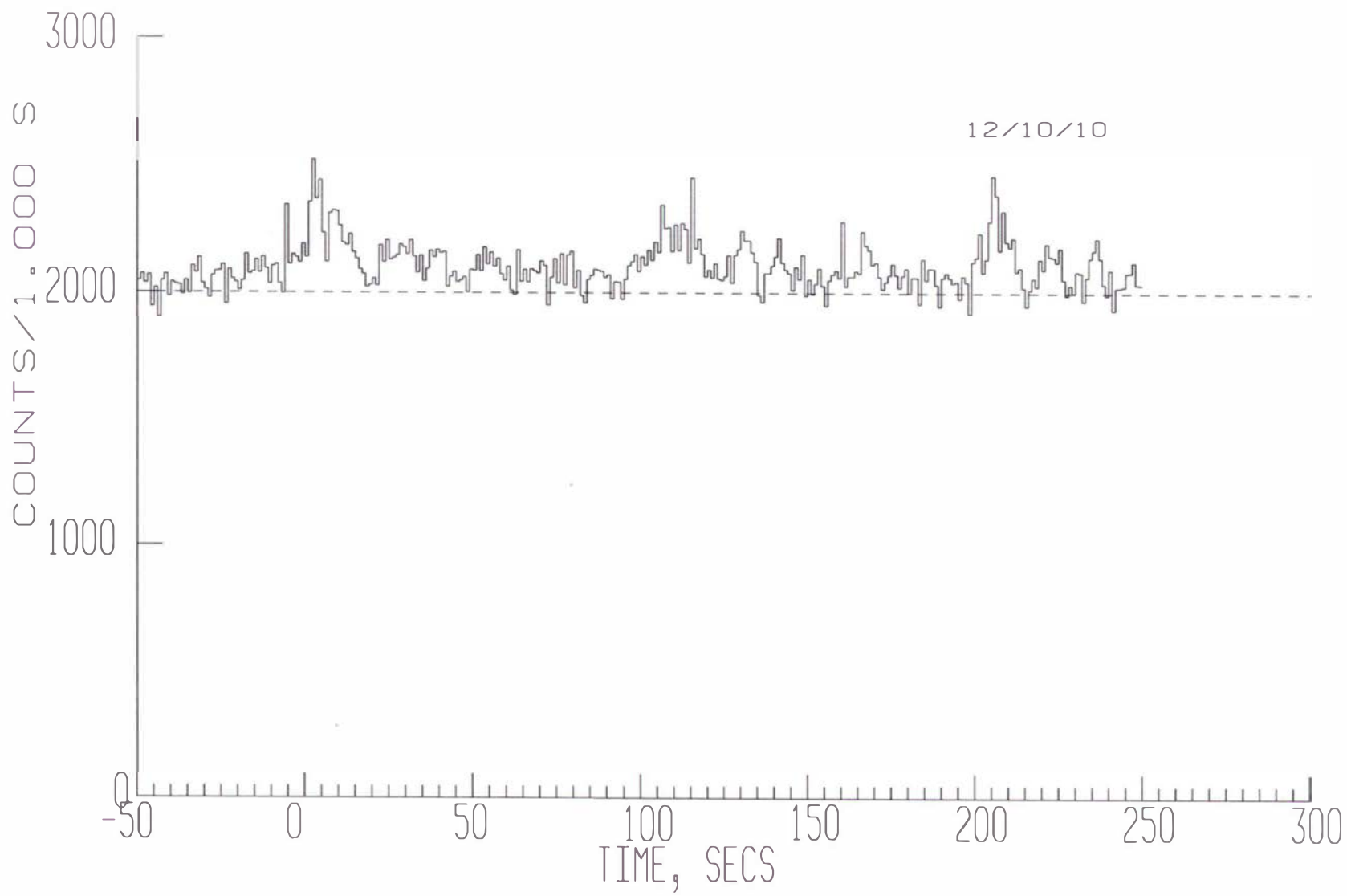
12/10/2010

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



SUZAKU

24/02/07 43061.723
50- 240 keV



KONUS

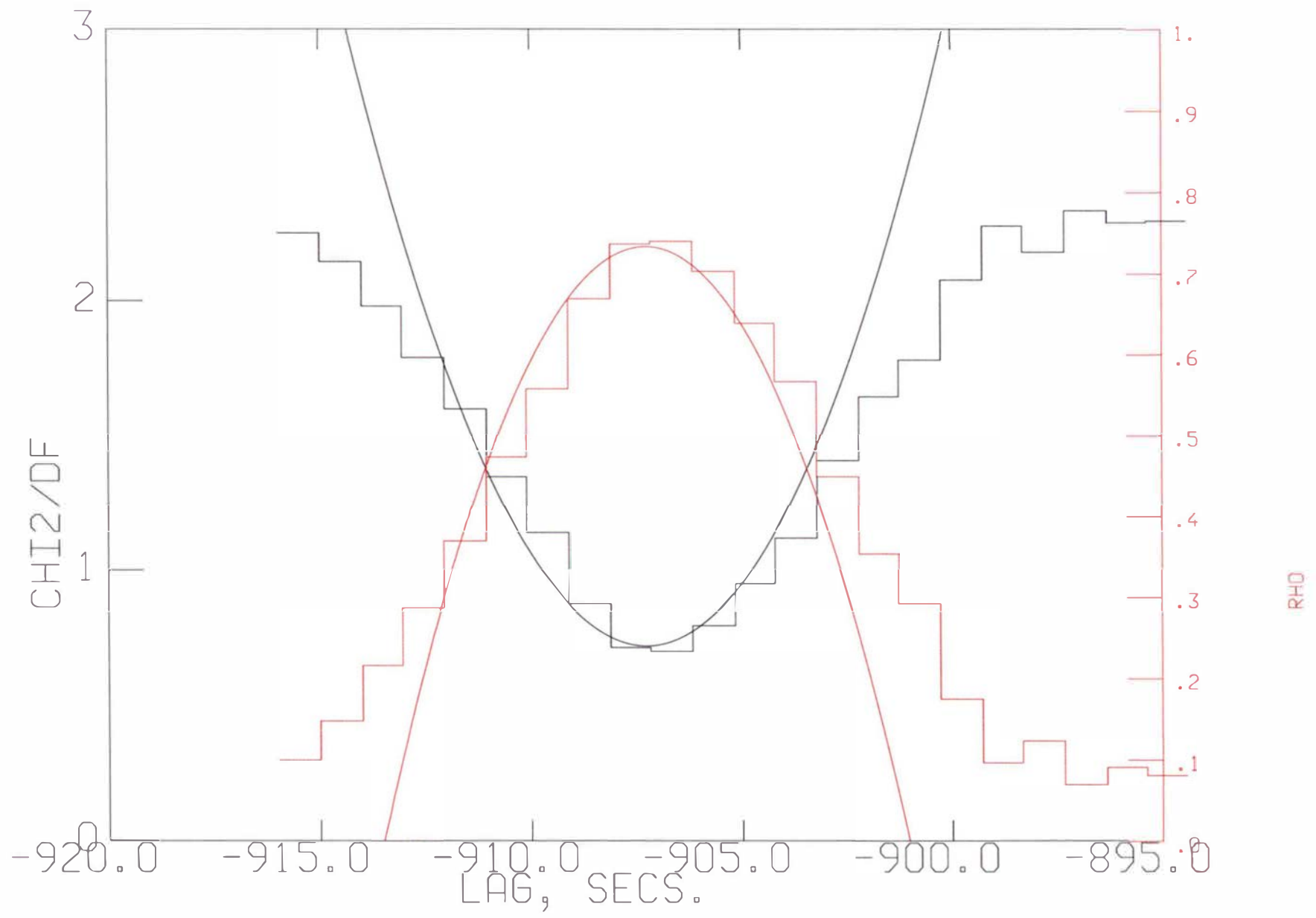
-SUZAKU

CORRELATION

24/02/07

42102.141

12/10/10



KONUS

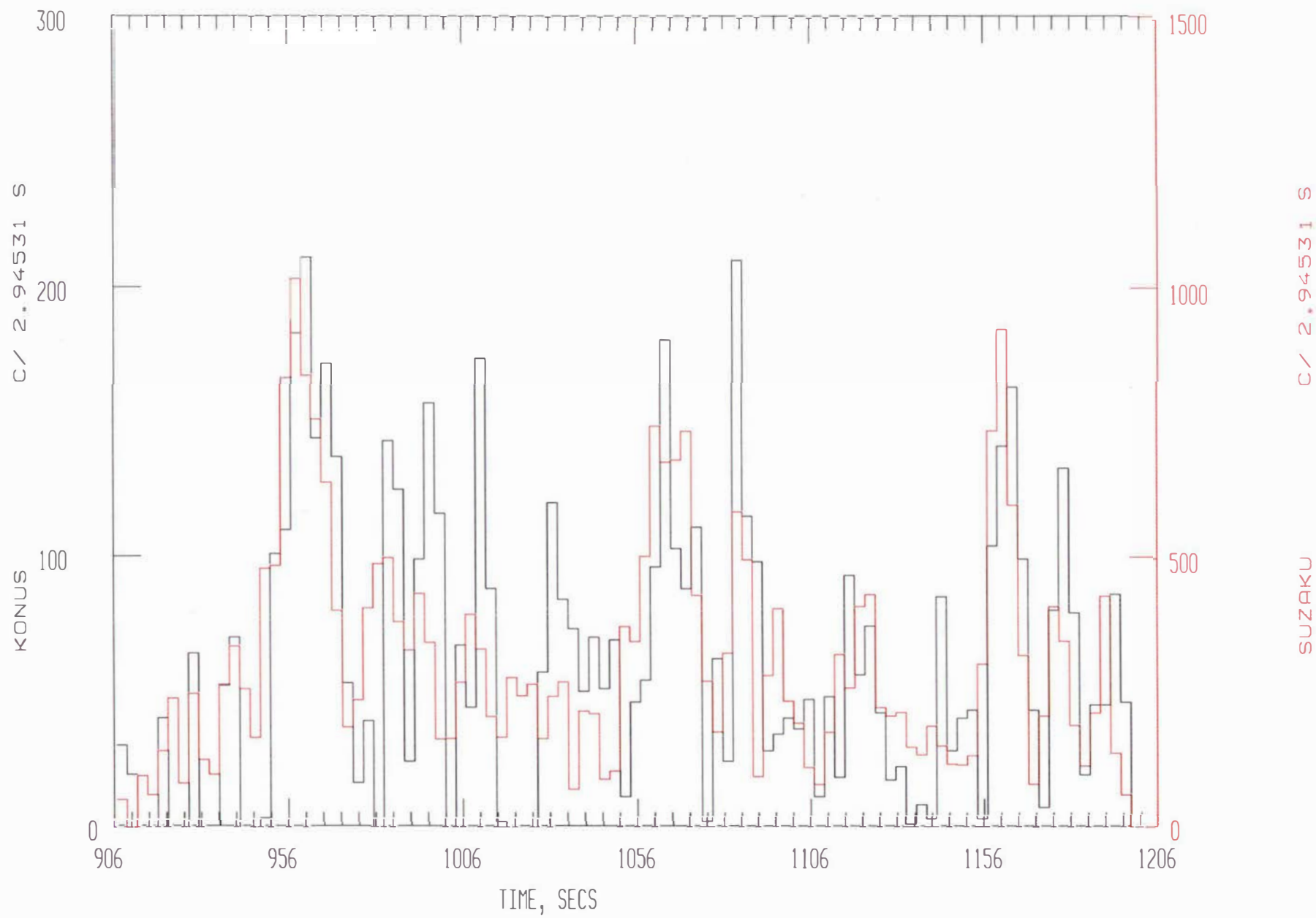
-SUZAKU

CORRELATION

24/02/07

42102.141

12/10/10



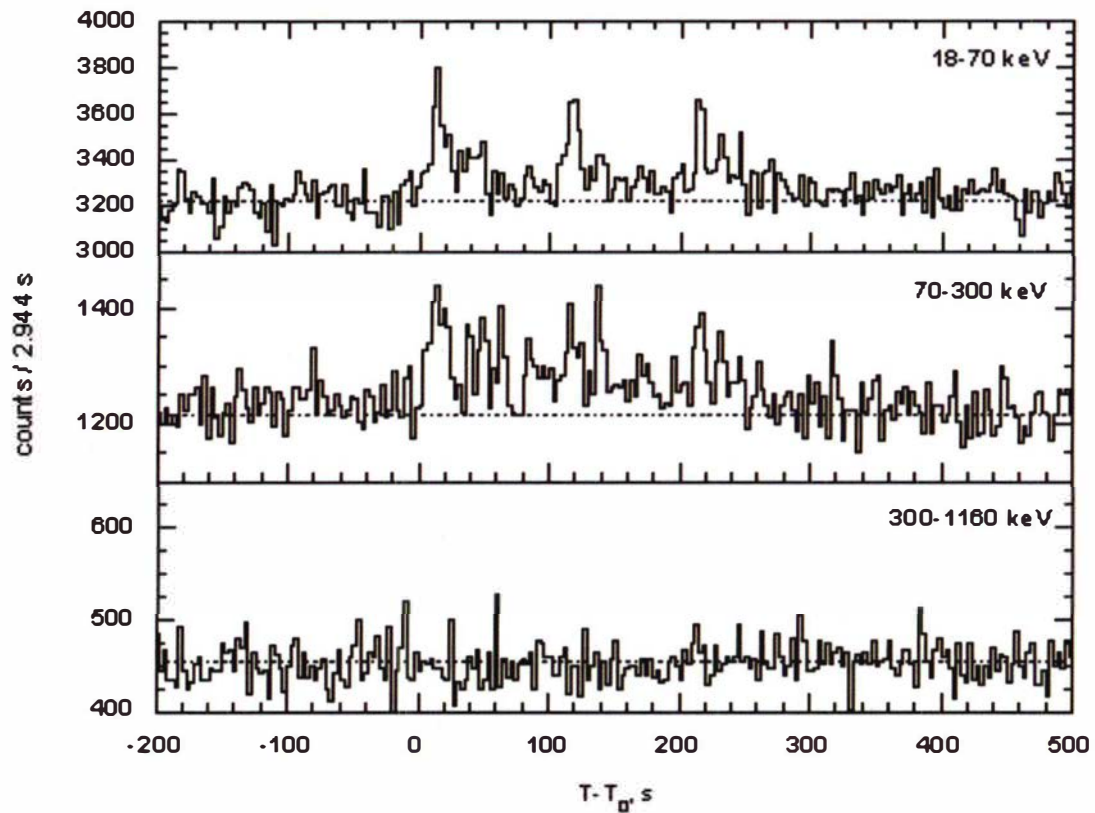
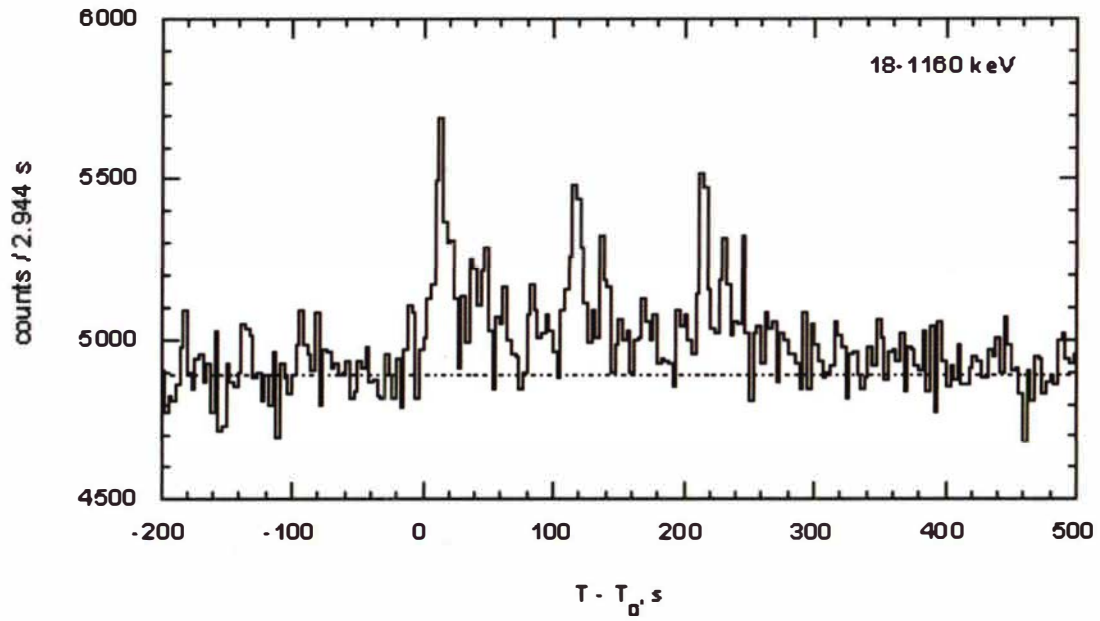
Konus-Wind GRB 070224

$T_0 = 43050$ s UT (11:57:30)

43050

No HESSI data

S2



KONUS

24/02/07 42102.141

10- 50 keV

50- 200 keV 200- 750 keV

COUNTS/2.945 S

4300

DETECTOR 2 - N. ECLIPHTIC

3300

2300

1300

300

500

1000

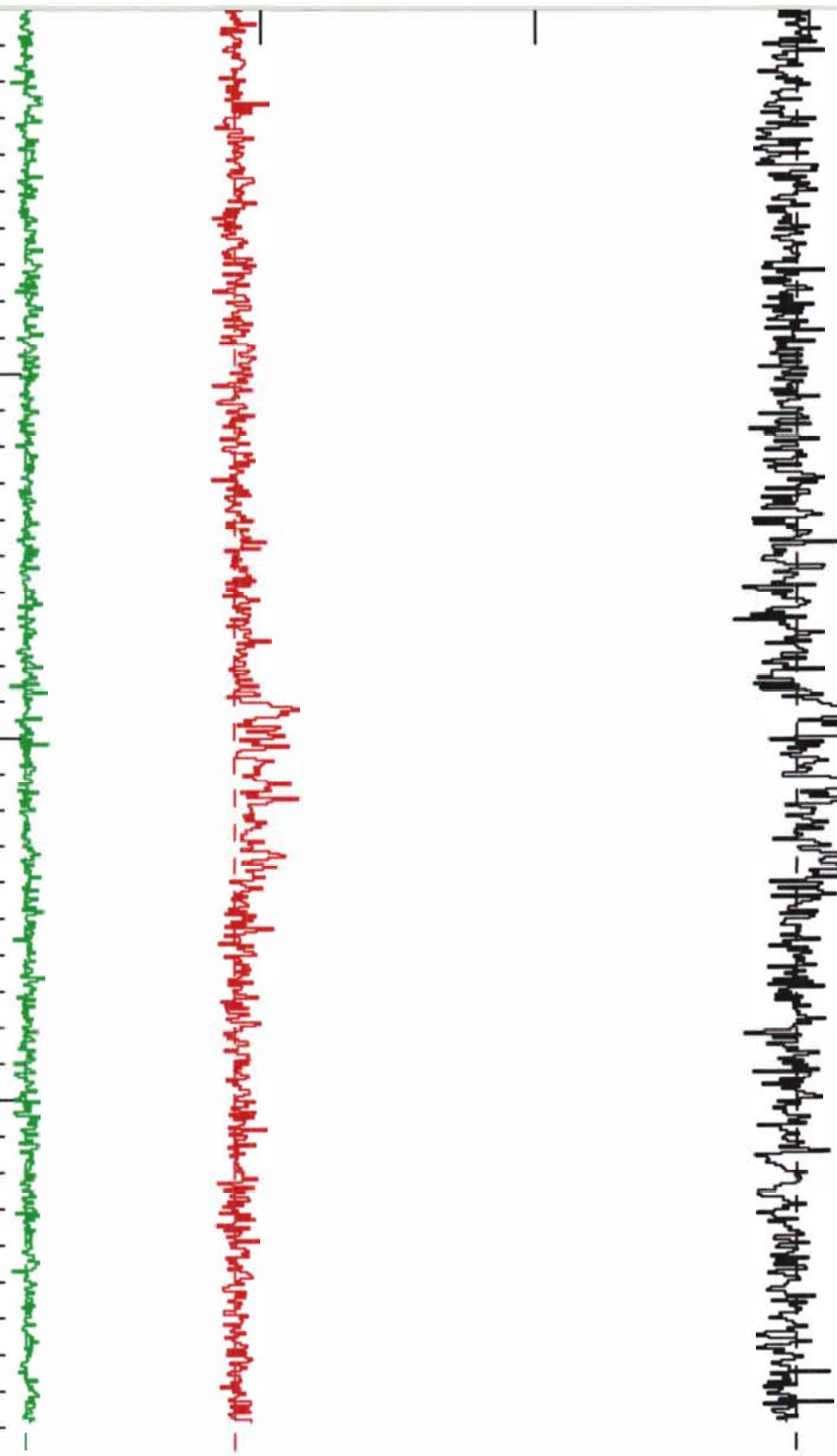
1500

2

TIME, SECS

01/03/07

Suzaku T_0



KONUS

24/02/07 42102.141

10- 50 keV

50- 200 keV 200- 750 keV

COUNTS/2.945 S

3400

DETECTOR 1 - S. ECLIPTEIC

2400

1400

400

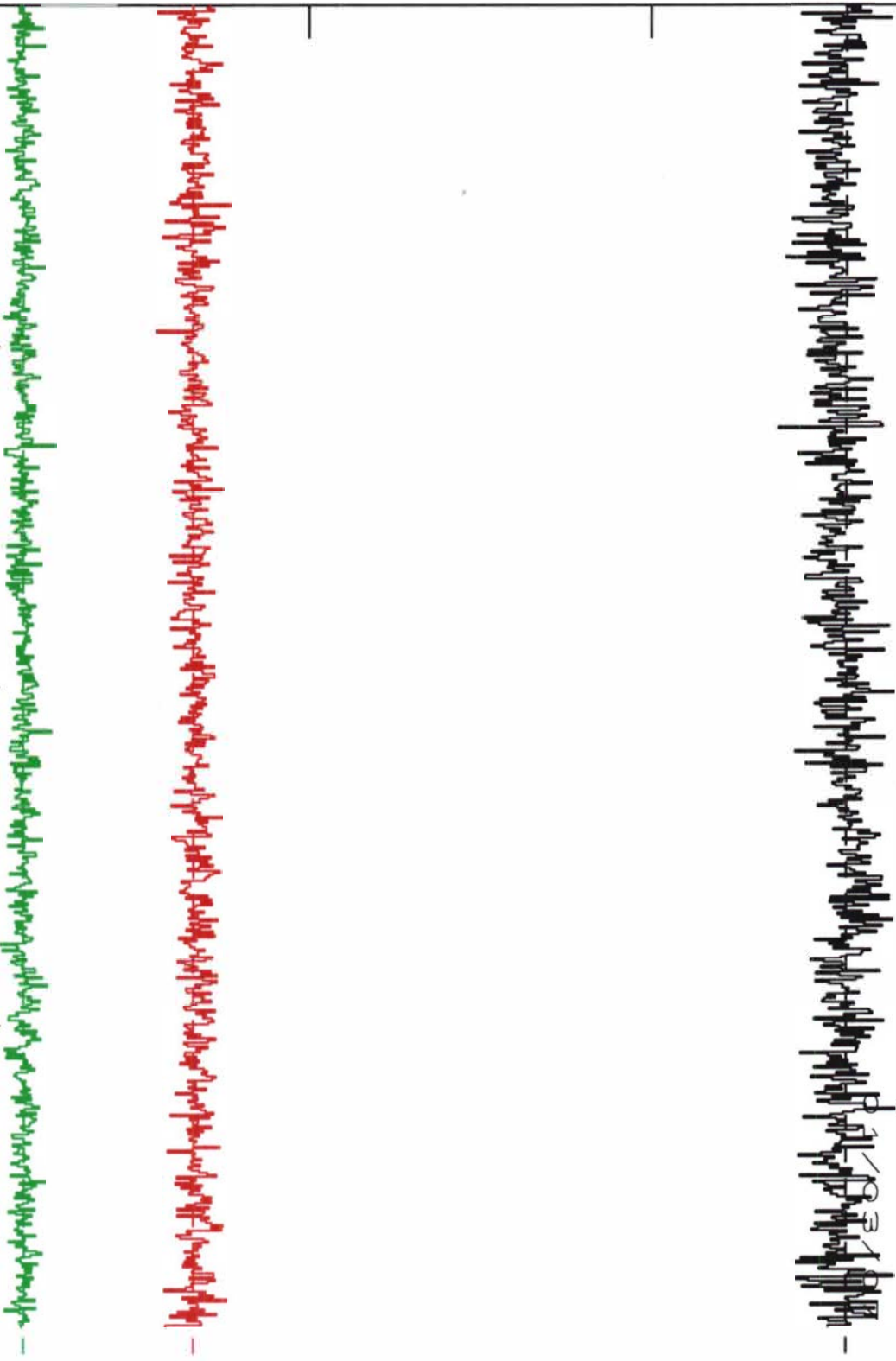
500

1000

1500

2

TIME, SECS



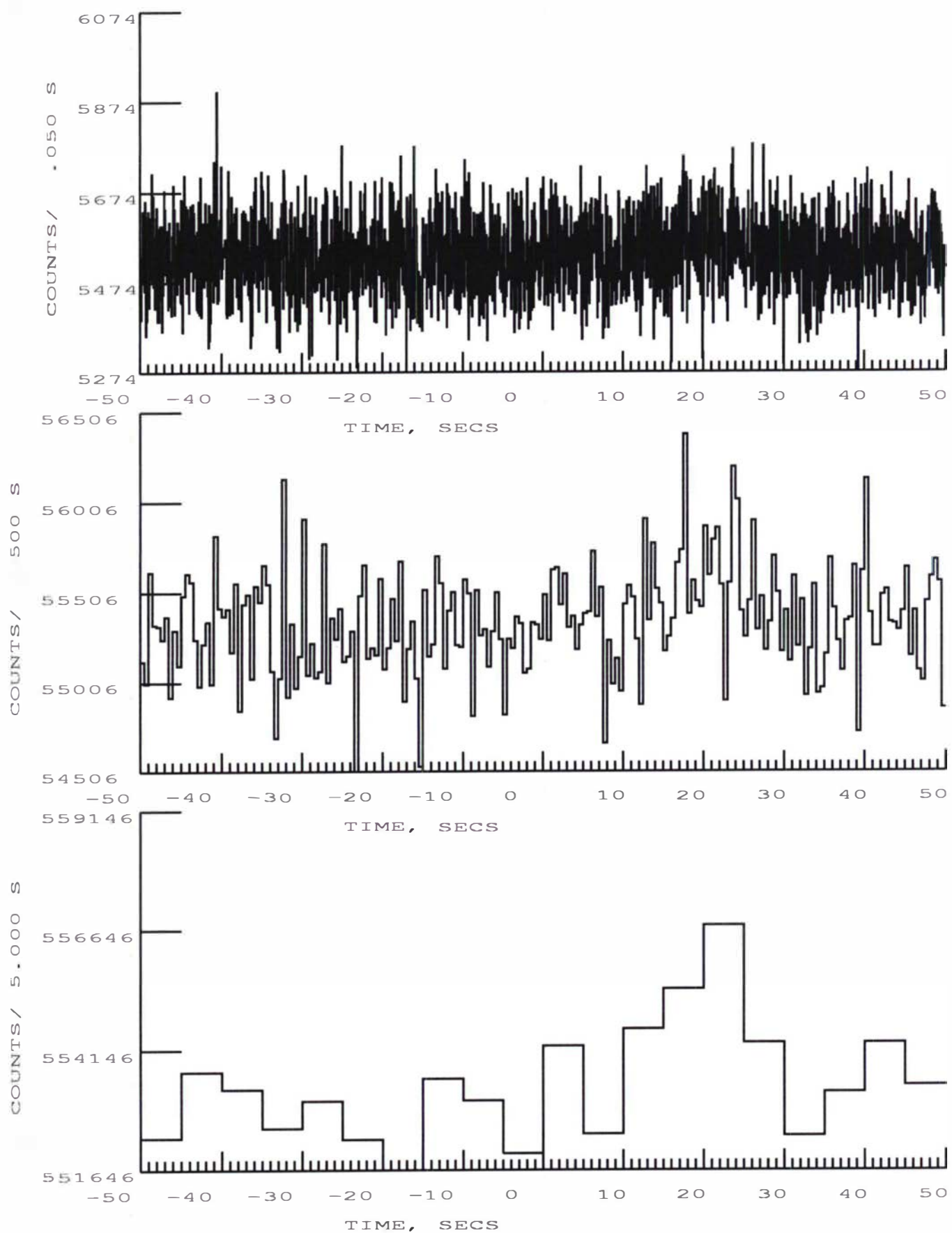
INTEGRAL

24/02/07

43050.000

11:57:30.0

18/07/14



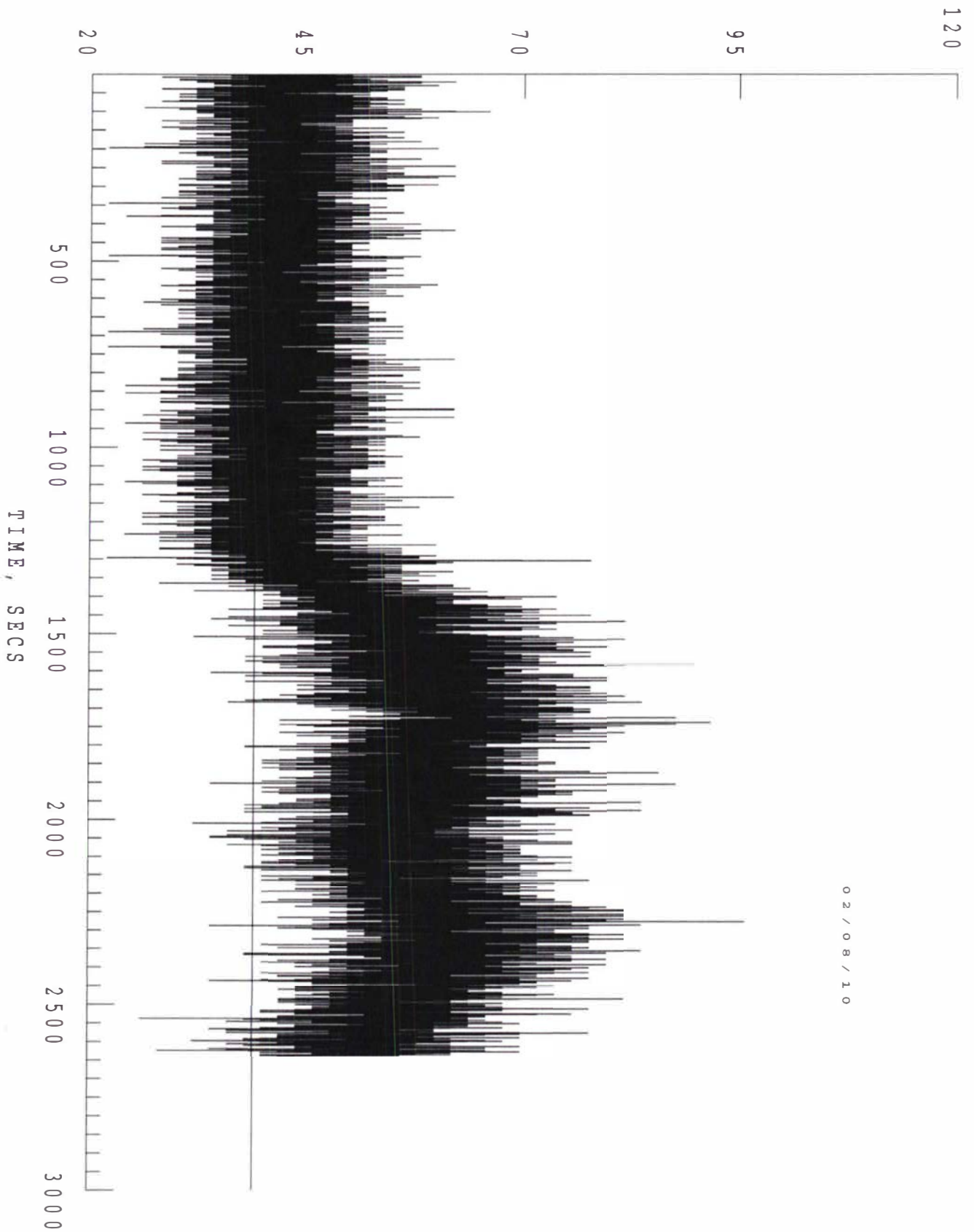
MS01

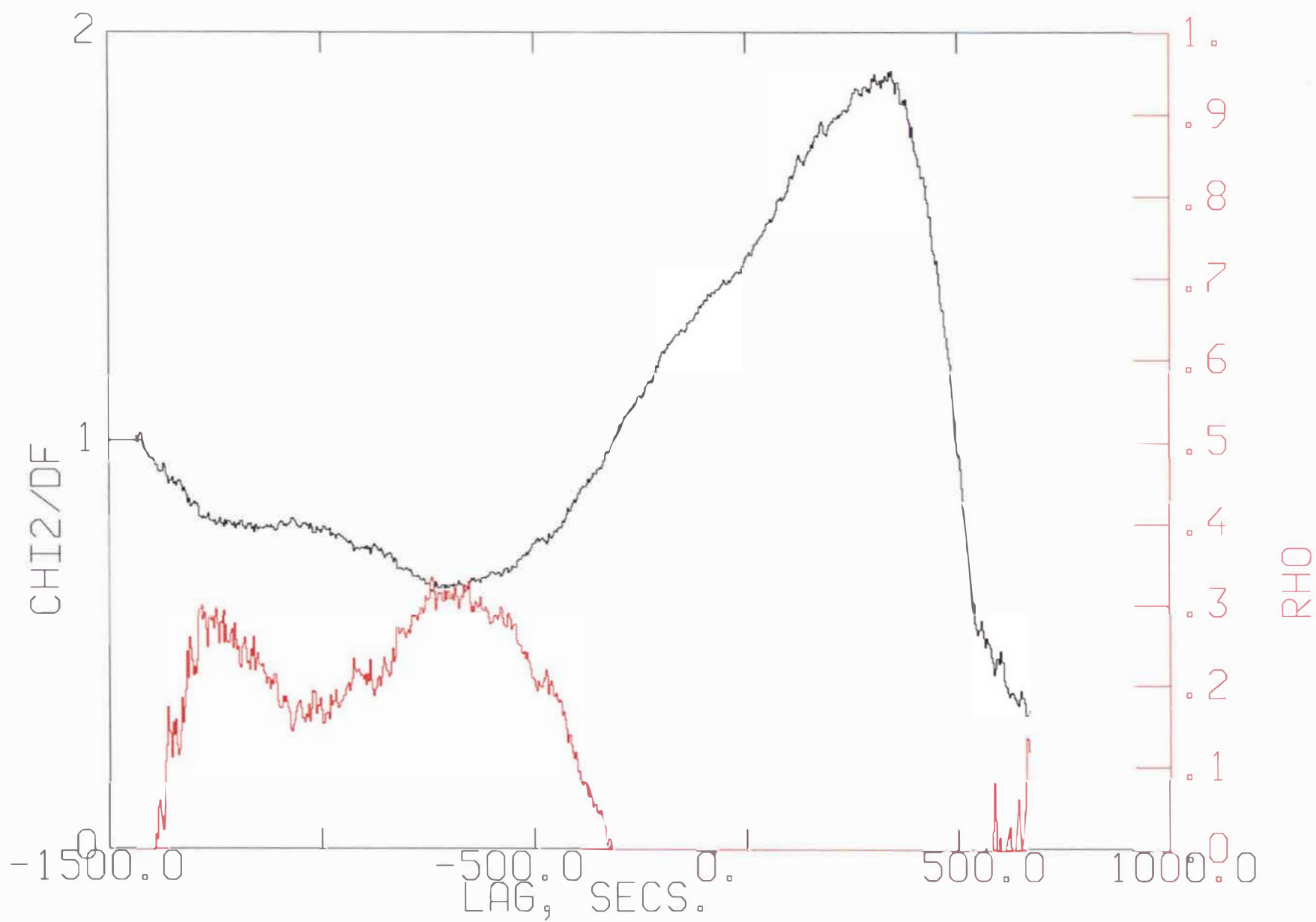
24/02/07

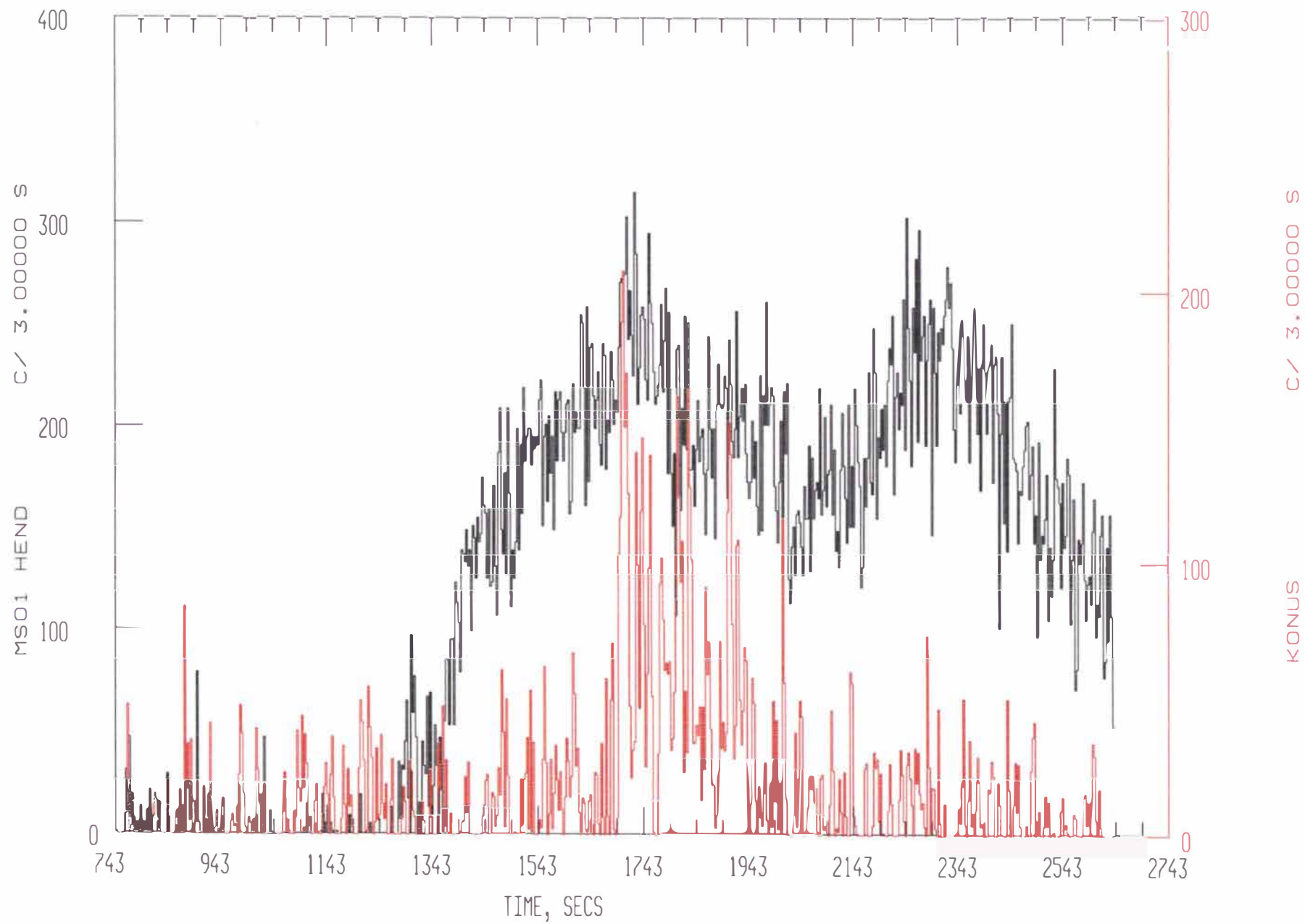
41713.701

50 - 3000 keV

COUNTS/0.250 S







From palmer@lanl.gov Mon Feb 26 11:32:27 2007
X-ASG-Debug-ID: 1172518492-5615000a0000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
X-Barracuda-Connect: mailwasher.lanl.gov[192.65.95.54]
X-Barracuda-Start-Time: 1172518492

Mime-Version: 1.0

Date: Mon, 26 Feb 2007 12:33:46 -0700

To: "Valentin Pal'shin" <val@mail.ioffe.ru>,
Kevin Hurley <khurley@ssl.berkeley.edu>,
Jay Cummings <jayc@milkyway.gsfc.nasa.gov>,
Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>,
Roland Vanderspek <roland@space.mit.edu>,
Sergey Golenetskii <golen@mail.ioffe.ru>,
Hans Krimm <krimm@milkyway.gsfc.nasa.gov>,
Masanori Ohno <ohno@hirax7.hepl.hiroshima-u.ac.jp>

From: David Palmer <palmer@lanl.gov>

X-ASG-Orig-Subj: Re: long soft GRB detected by K-W on February 24 in the waiting mode - possible outburst from Cyg X-1

Subject: Re: long soft GRB detected by K-W on February 24 in the waiting mode - possible outburst from Cyg X-1

Cc: val <val@mail.ioffe.ru>

X-PMX-Version: 4.7.1.128075

X-Barracuda-Bayes: INNOCENT GLOBAL 0.0000 1.0000 -2.0210

X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.9765

Rule breakdown below

pts	rule name	description
-----	-----------	-------------

Content-Transfer-Encoding: 8bit

-MIME-Autoconverted: from quoted-printable to 8bit by sunspot.ssl.berkeley.edu

No, BAT was looking at [ra, dec, roll] = [45.600, -22.861 261.886] at this time.

However, we have noticed that Cyg X-1 (or something in that FOV) has been 'noisy' these past few days.

At 9:37 PM +0300 07-02-26, Valentin Pal'shin wrote:

>Dear colleagues,

>

>Konus-Wind observed long soft multipeaked GRB

>started at 2007-02-24 ~43050 s UT (11:57:30)

>and lasted ~~300 sec~~ (see the attached figure).

>The burst source is in the north ecliptic latitude.

>Combining the ecliptic latitude with the burst softness

>we may suggest that it originated from Cyg X-1.

>

>Any other detections?

>

>Was Cyg X-1 in the BAT FoV at this time?

>

>

>Best wishes,

>

Valentin

>

>

>

>--

From yamaoka@phys.aoyama.ac.jp Mon Feb 26 10:39:11 2007
 X-ASG-Debug-ID: 1172515295-2fb3001b0000-LqZNIK
 X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
 X-Barracuda-Connect: scmailgw1.scop.aoyama.ac.jp[133.2.251.194]
 X-Barracuda-Start-Time: 1172515295
 To: val@mail.ioffe.ru
 Cc: khurley@ssl.berkeley.edu, jayc@milkyway.gsfc.nasa.gov,
 roland@space.mit.edu, golen@mail.ioffe.ru,
 krimm@milkyway.gsfc.nasa.gov, ohno@hirax7.hepl.hiroshima-u.ac.jp,
 palmer@lanl.gov
 Cc: yamaoka@phys.aoyama.ac.jp
 X-ASG-Orig-Subj: Re: long soft GRB detected by K-W on February 24 in the waiting
 mode - possible outburst from Cyg X-1
 Subject: Re: long soft GRB detected by K-W on February 24 in the waiting
 mode - possible outburst from Cyg X-1
 Mime-Version: 1.0
 Content-Transfer-Encoding: 7bit
 Date: Tue, 27 Feb 2007 03:40:16 +0900
 From: Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>
 X-Dispatcher: imput version 20000228(IM140)
 X-Barracuda-Bayes: INNOCENT GLOBAL 0.1177 1.0000 -1.2876
 X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
 X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.9762

Rule breakdown below

pts	rule name	description
0.00	UNPARSEABLE_RELAY	Informational: message has unparseable relay

ear Valentin and colleagues,

We detected this soft burst in the TRN mode with
 1-sec time resolution.
 If you want the TRN data, please let me know.

Best regards,
 Kazu
 on behalf of the Suzaku WAM team

From: "Valentin Pal'shin" <val@mail.ioffe.ru>
 Subject: long soft GRB detected by K-W on February 24 in the waiting mode - poss
 Date: Mon, 26 Feb 2007 21:37:18 +0300
 Message-ID: <45E328DE.8070104@mail.ioffe.ru>

> Dear colleagues,
 >
 > Konus-Wind observed long soft multipeaked GRB
 > started at 2007-02-24 ~43050 s UT (11:57:30)
 > and lasted ~300 sec (see the attached figure).
 > The burst source is in the north ecliptic latitude.
 > Combining the ecliptic latitude with the burst softness
 > we may suggest that it originated from Cyg X-1.
 >
 > Any other detections?

Was Cyg X-1 in the BAT FoV at this time?

>
 >
 > Best wishes,
 >

Date: Aug 3 2010

BURST TRIANGULATION CHECKLIST

1. Suzaku Data

- ☐ 1 second timing error corrected? (Jan 1 – Apr 24 2009)

2. AGILE Data

- ☐ 1 second timing error corrected?

3. MESSENGER Data

- ☒ Coarse or fine oscillator? C
- ☒ Timing checked after ~ 1 week?

4. For Konus events

- ☒ Konus ecliptic latitude used with latest calibration?

5. 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?

6. For 3 or More Spacecraft events

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

7. For INTEGRAL events

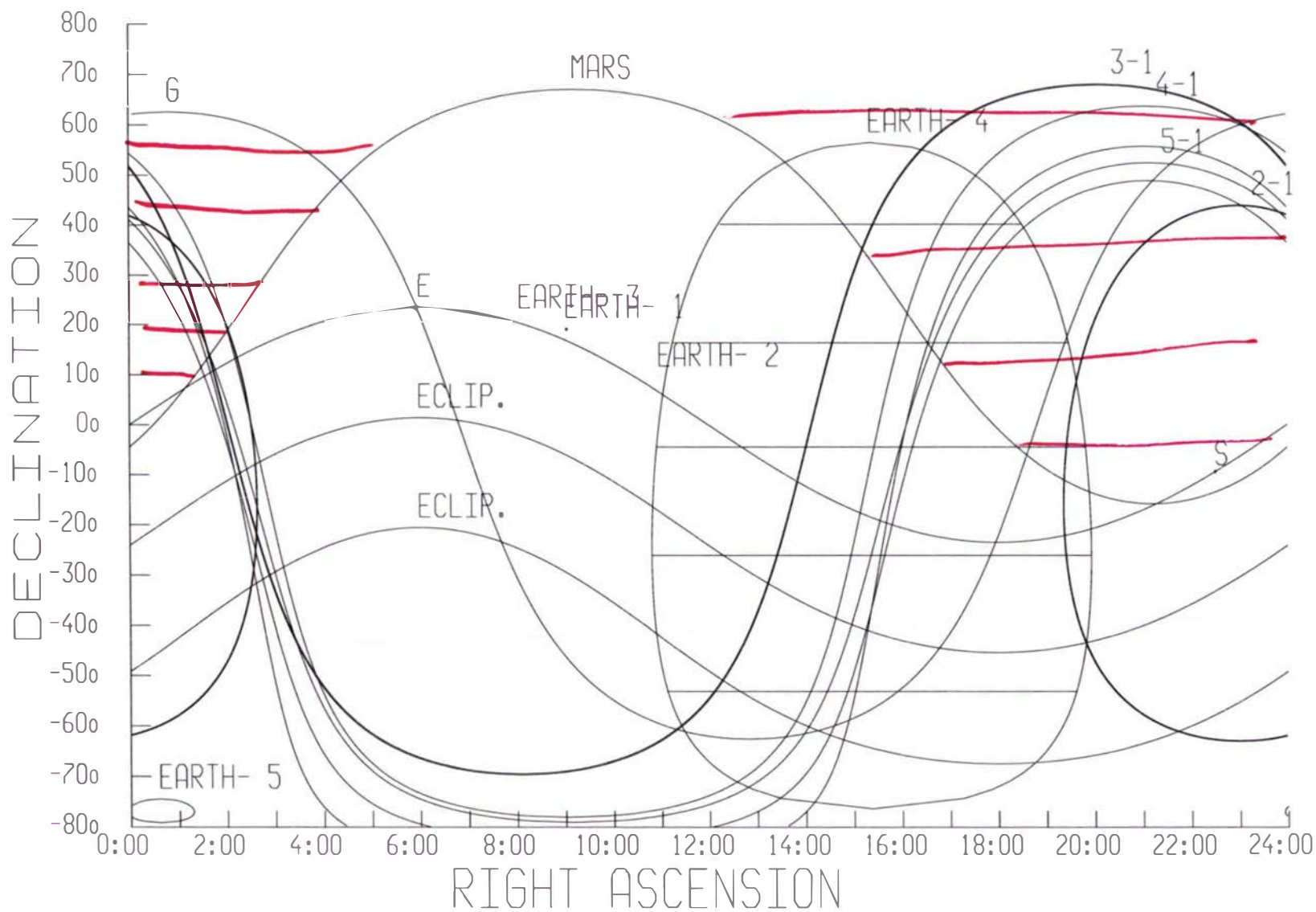
- ☐ INTEGRAL SPI-ACS website checked for bursts that weren't transmitted automatically?
- ☐ 125 ms added to INTEGRAL SPI-ACS time for bursts prior to April 2 2004 11:00 UT?
- ☐ Updated ephemeris used for bursts prior to September 30, 2003?

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

N-N = CORRELATION BETWEEN SATELLITES N AND N
 EARTH-N = EARTH AS SEEN FROM SATELLITE N
 S=SUN
 1 KONUS1
 2 MESSENGER
 3 MO
 4 HESSI
 5 INTEGRAL

EVENT OF FEB 24, 2007 18:52

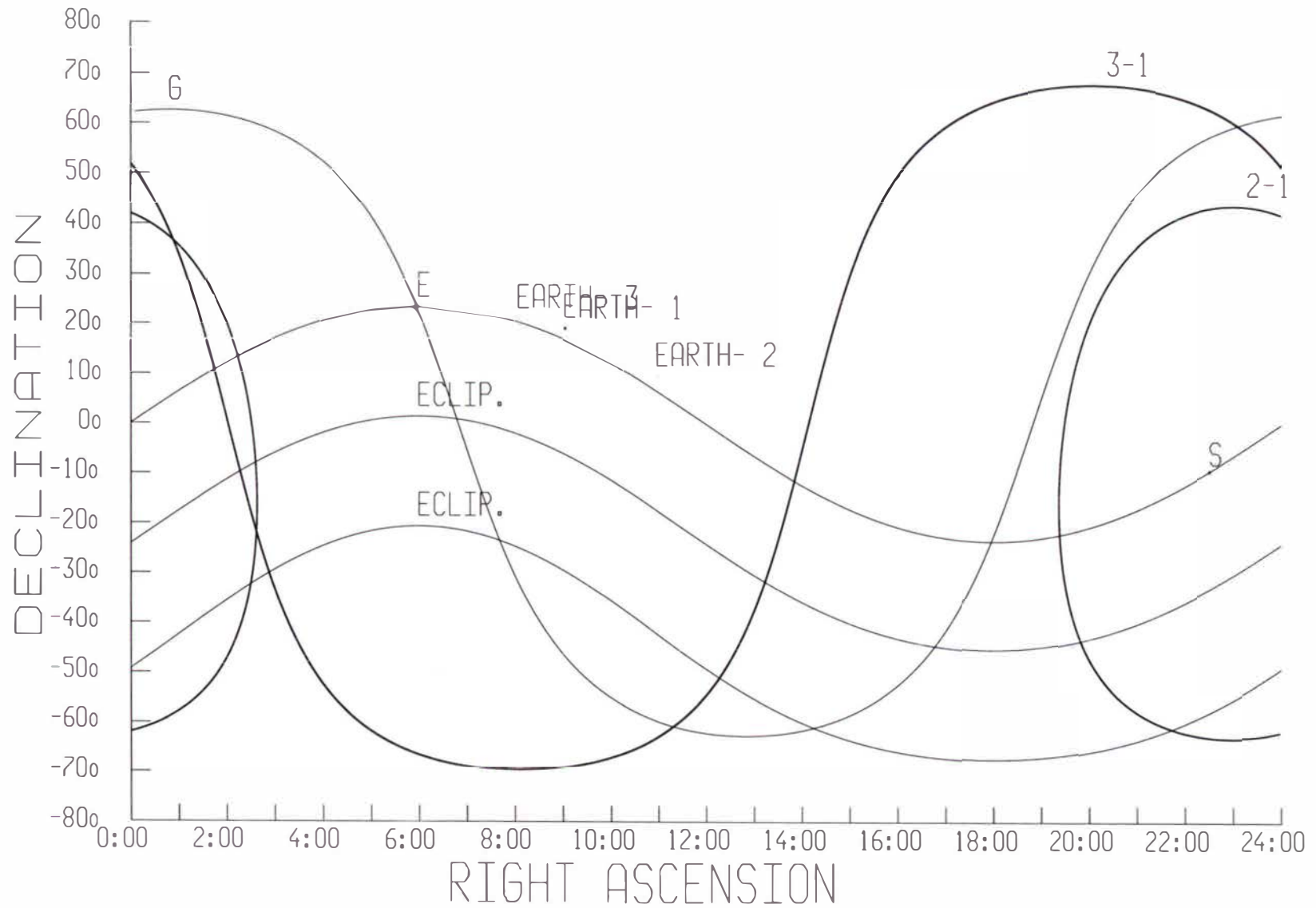
03/08/2010

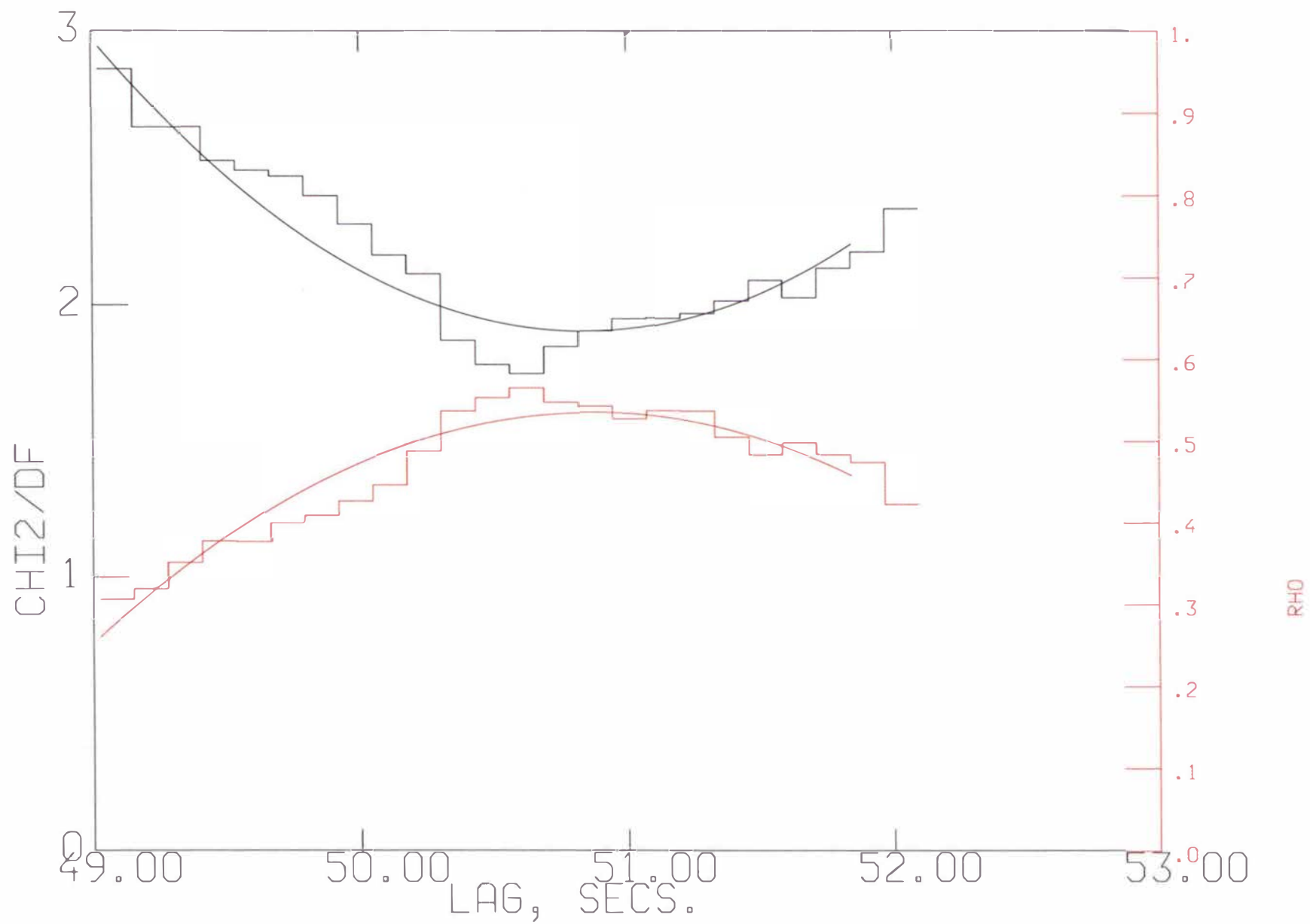


EVENT OF FEB 24, 2007 18:52

03/08/2010

N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 KONUS1 2 MESSENGER 3 MO





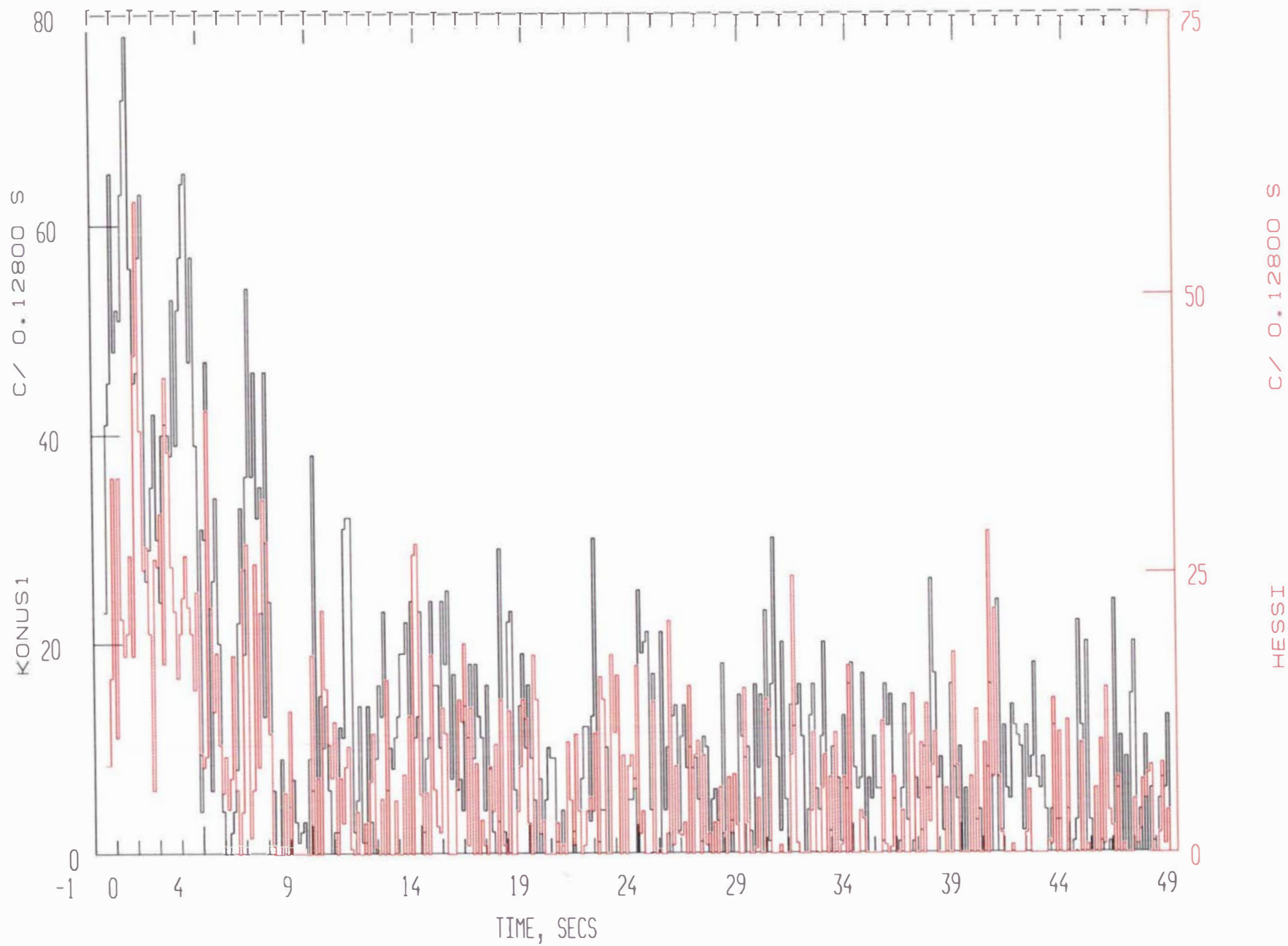
KONUS1

-HESSI

CORRELATION

24/02/07 67954.145

3/ 8/10



KONUS1

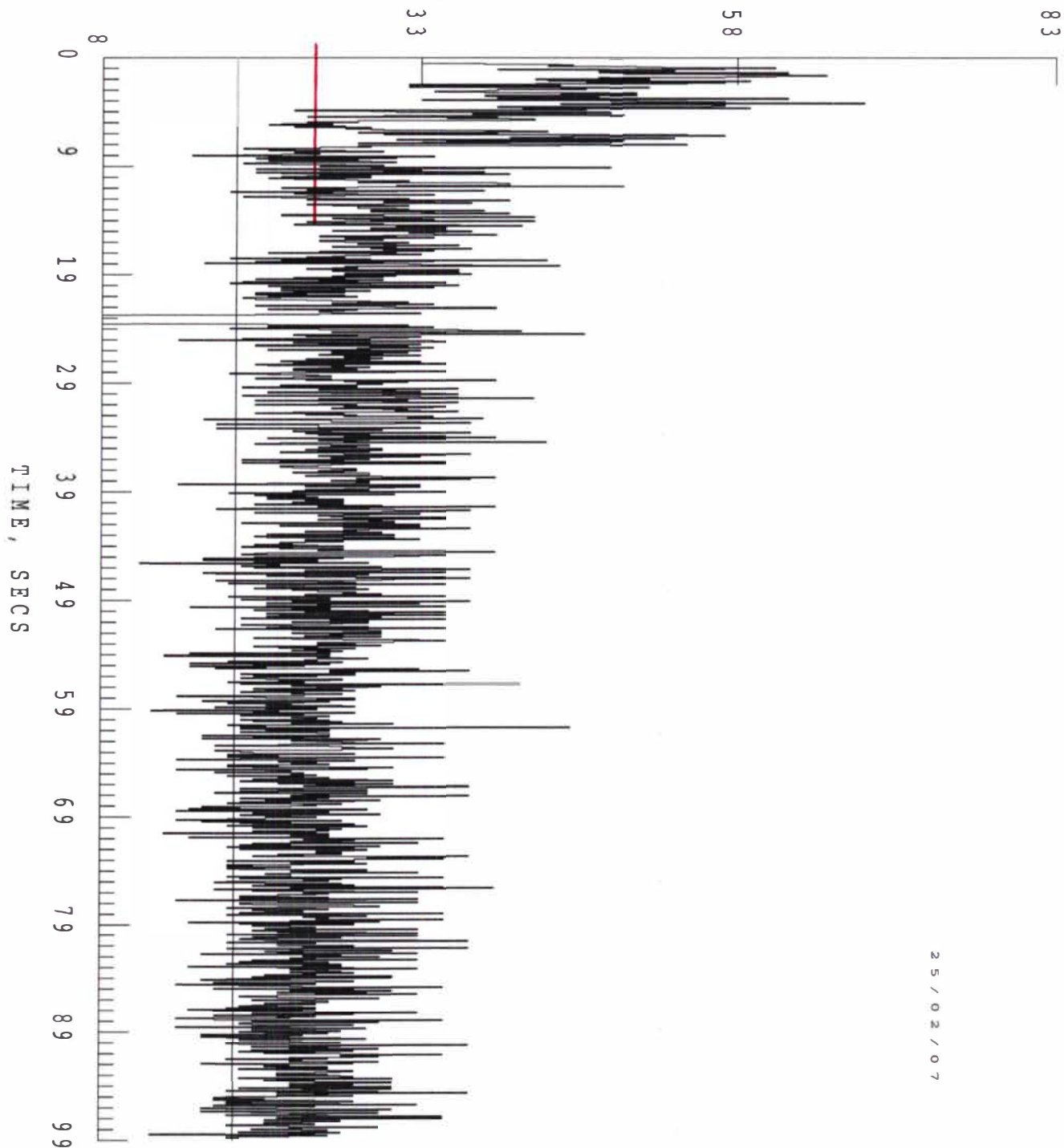
24/02/07

67954.145

50 - 200 keV

18:52:34

COUNTS/0.064 S



KONUS HRES 20070224 67954

TRIGGER TIME: 24/02/07 DOY 055 Julian 2454157.28650 UT = 18.876 18:52:34 (67954.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

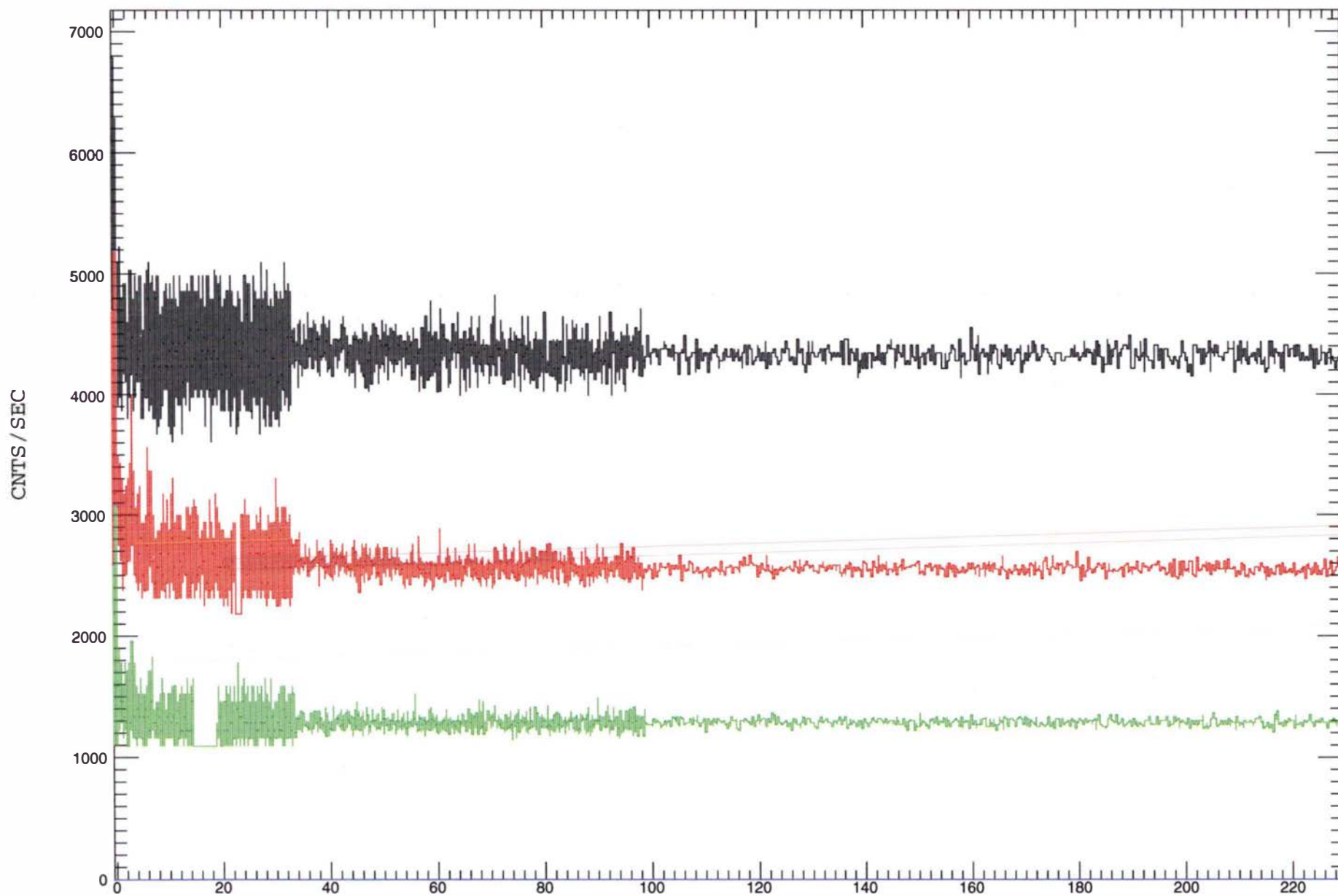
Chan 4 : [> 10 MeV]

Channel 1 + 3300

Channel 2 + 2200

Channel 3 + 1100

Channel 4 + 0



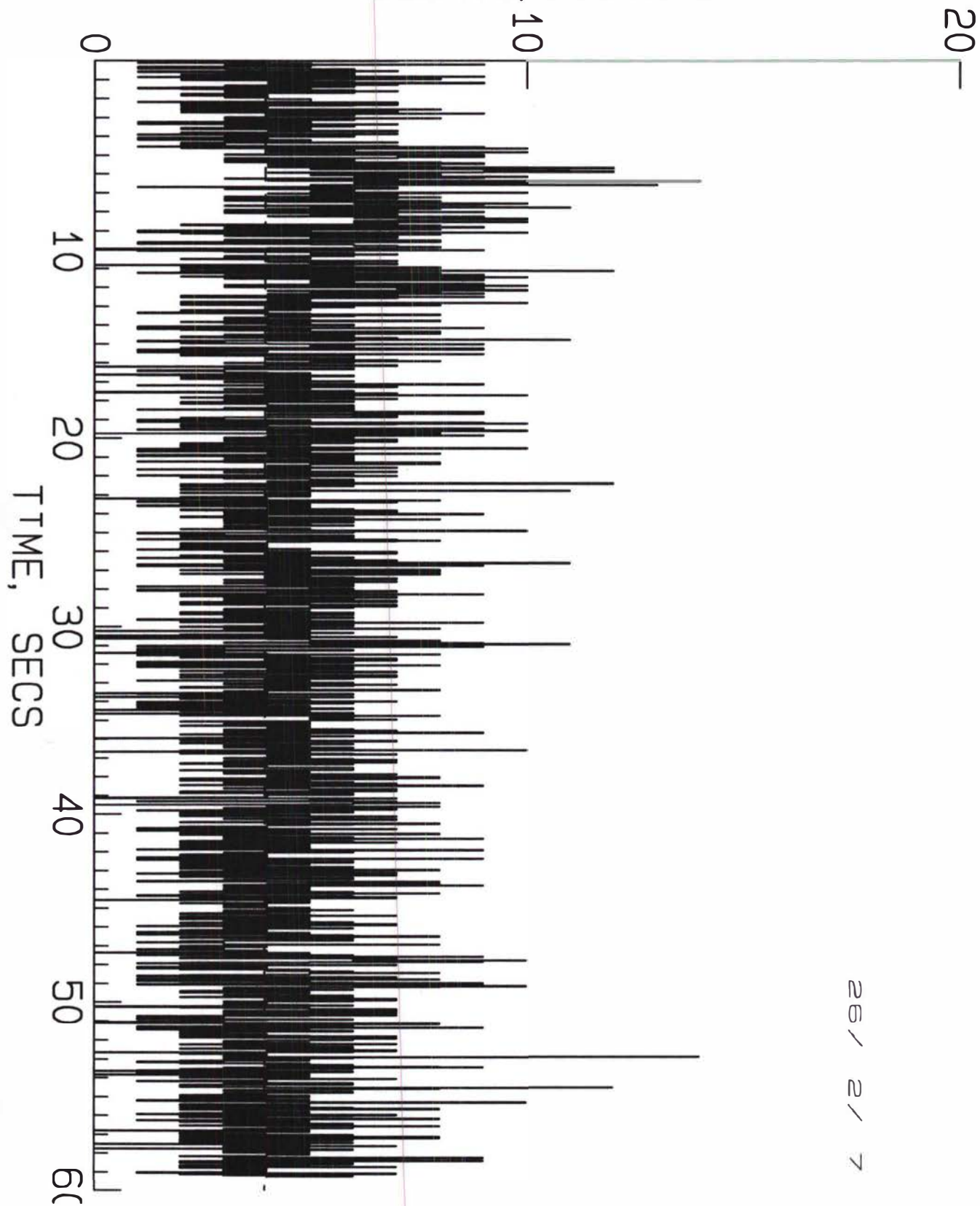
CONDS

MO GE

24/02/07 67932.988

116- 337 keV

COUNTS/0.032 S



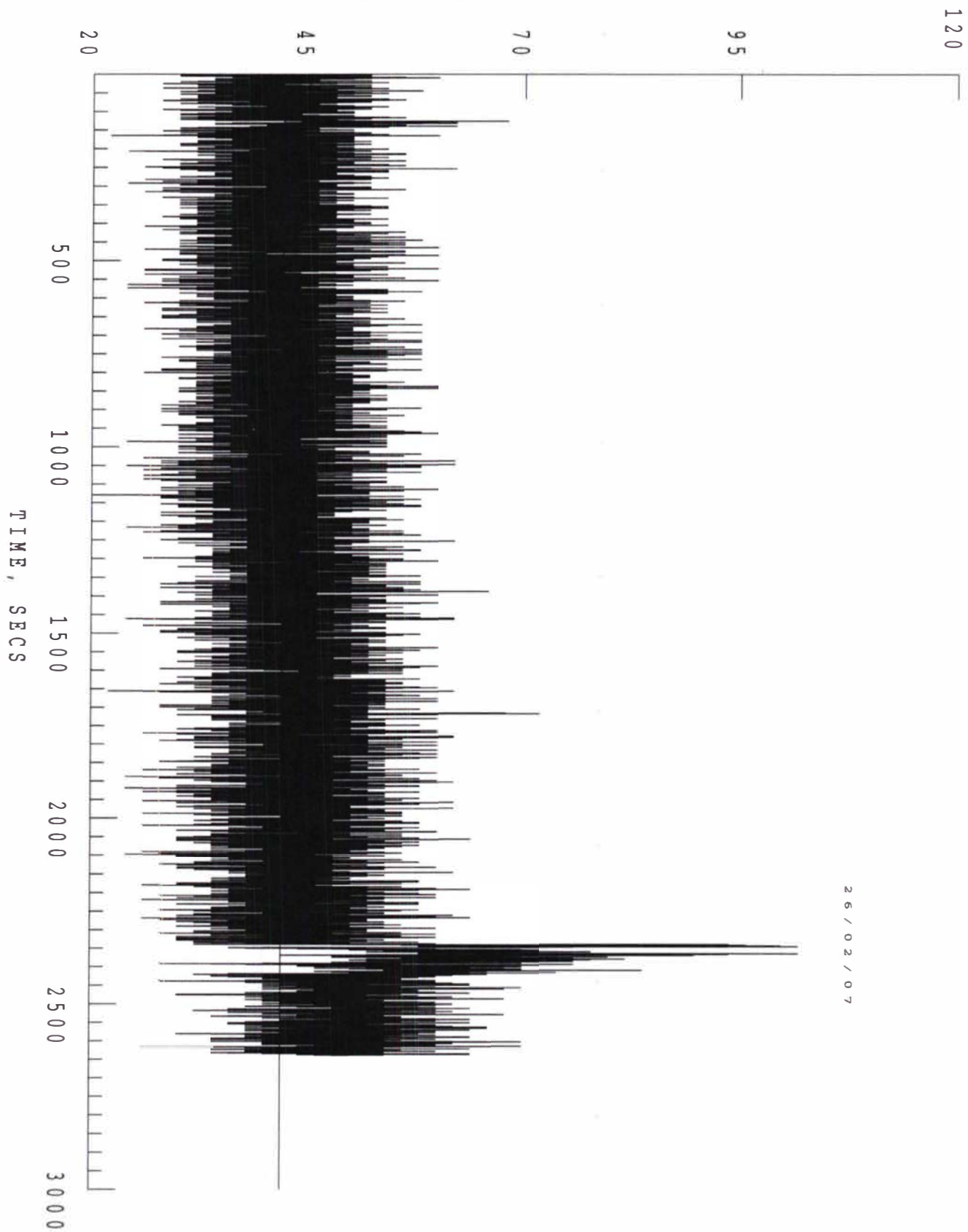
MS01

24/02/07

67814.189

50 - 3000 keV

COUNTS/0.250 S



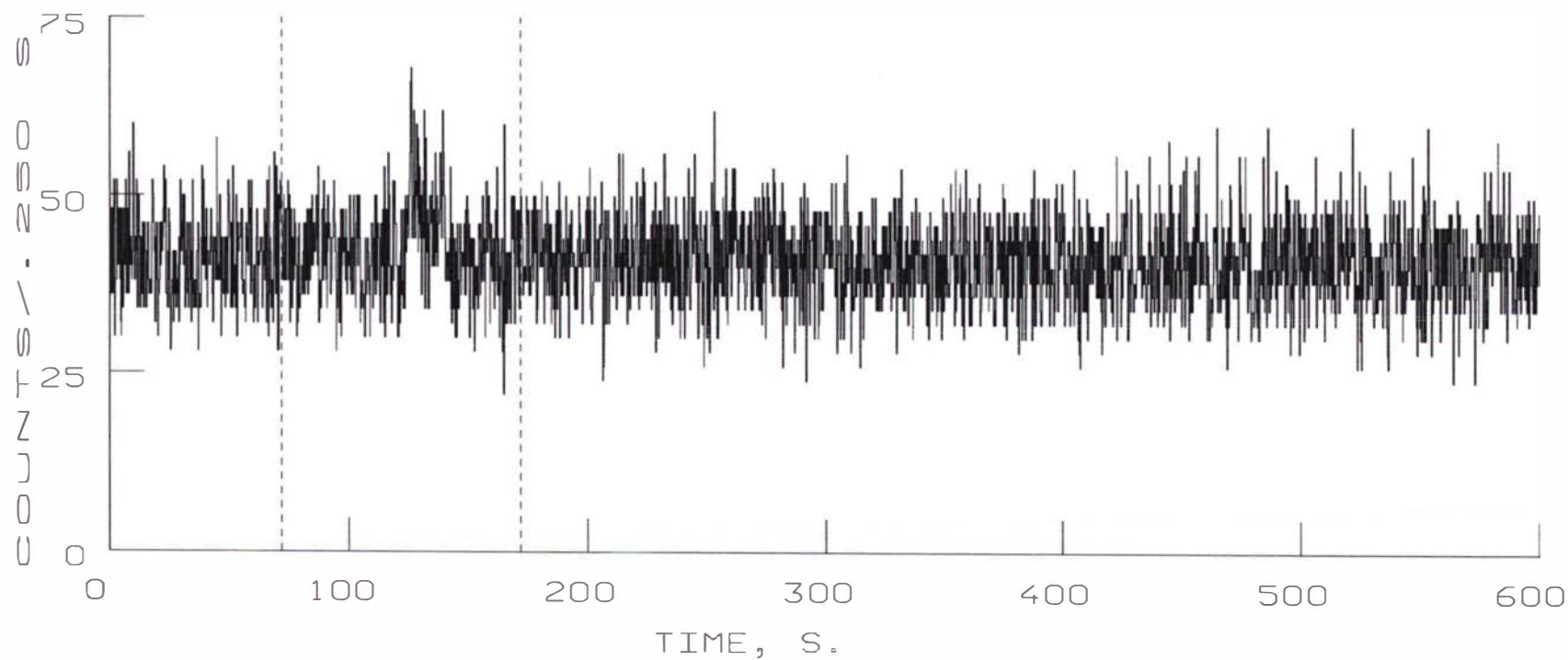
MS01 HEND

02/08/2010

24/02/2007 67814.188 s

50-3000 keV

N= 10 M=40
>4.0 SIGMA FLUCTUATIONS



MO GE

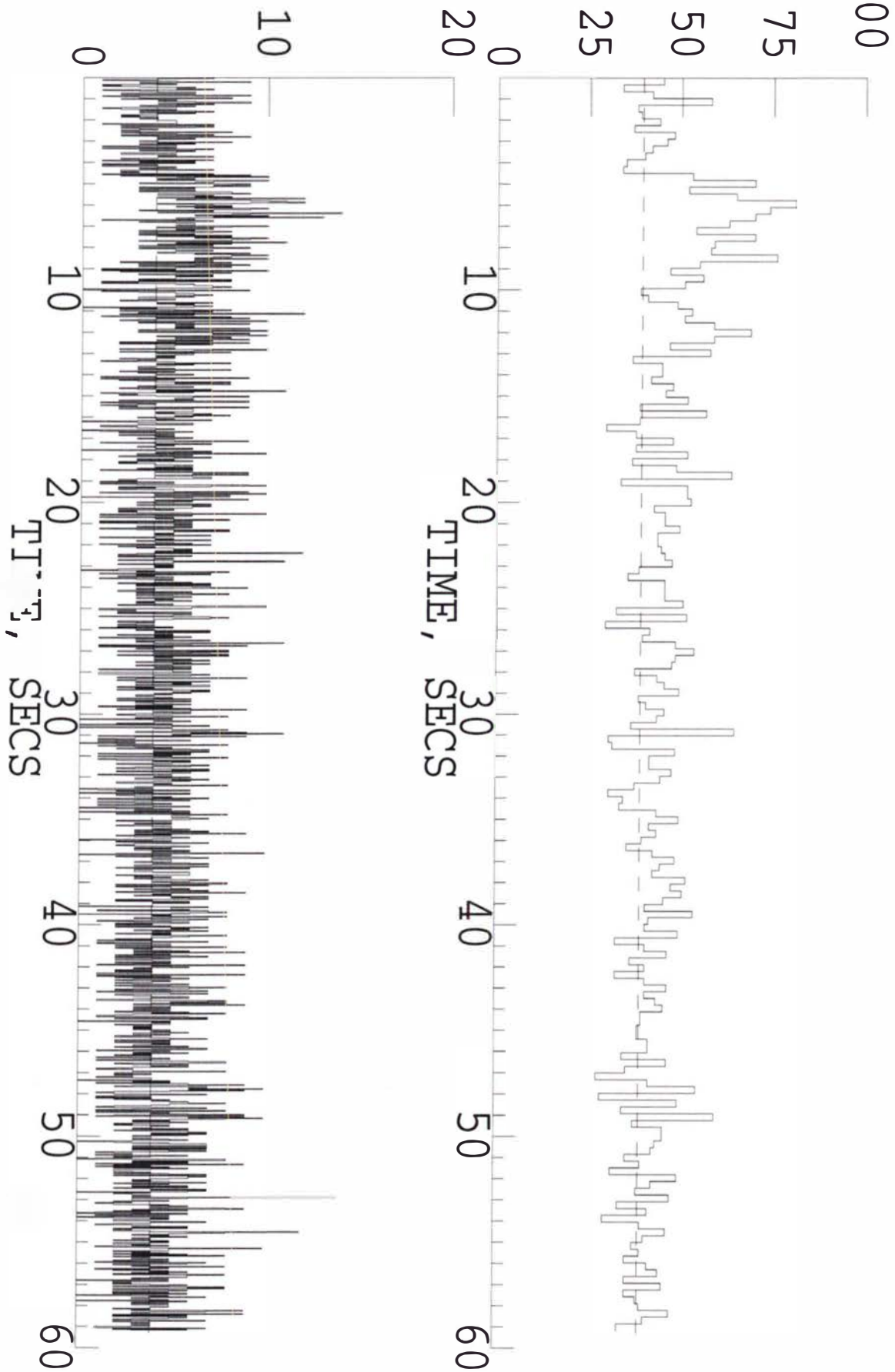
24/02/07

67933.200

116- 337 keV

COUNTS/ .032 S

COUNTS/ .320 S



02/08/2010

21/07/10

MESSENGER

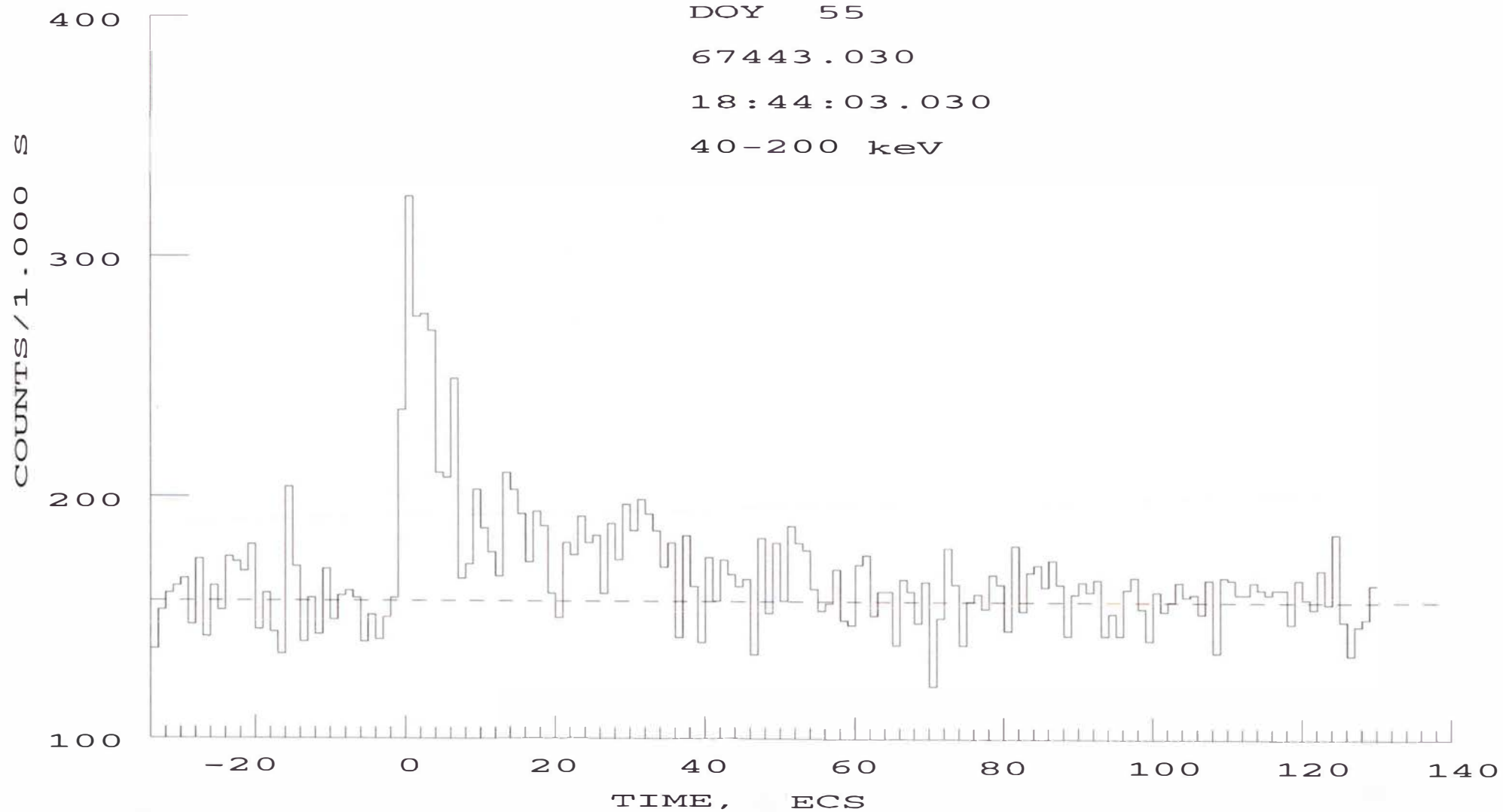
24/02/07

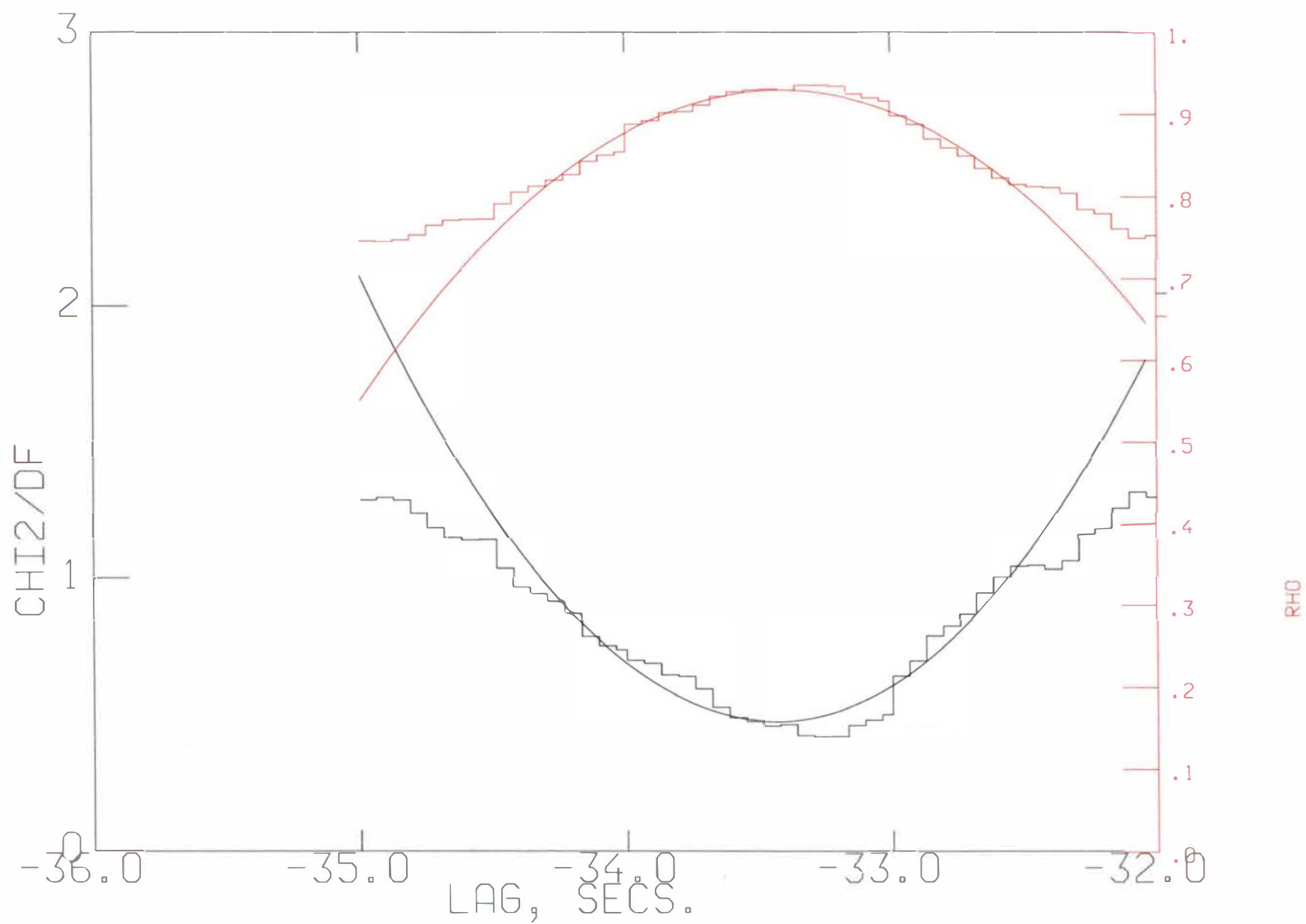
DOY 55

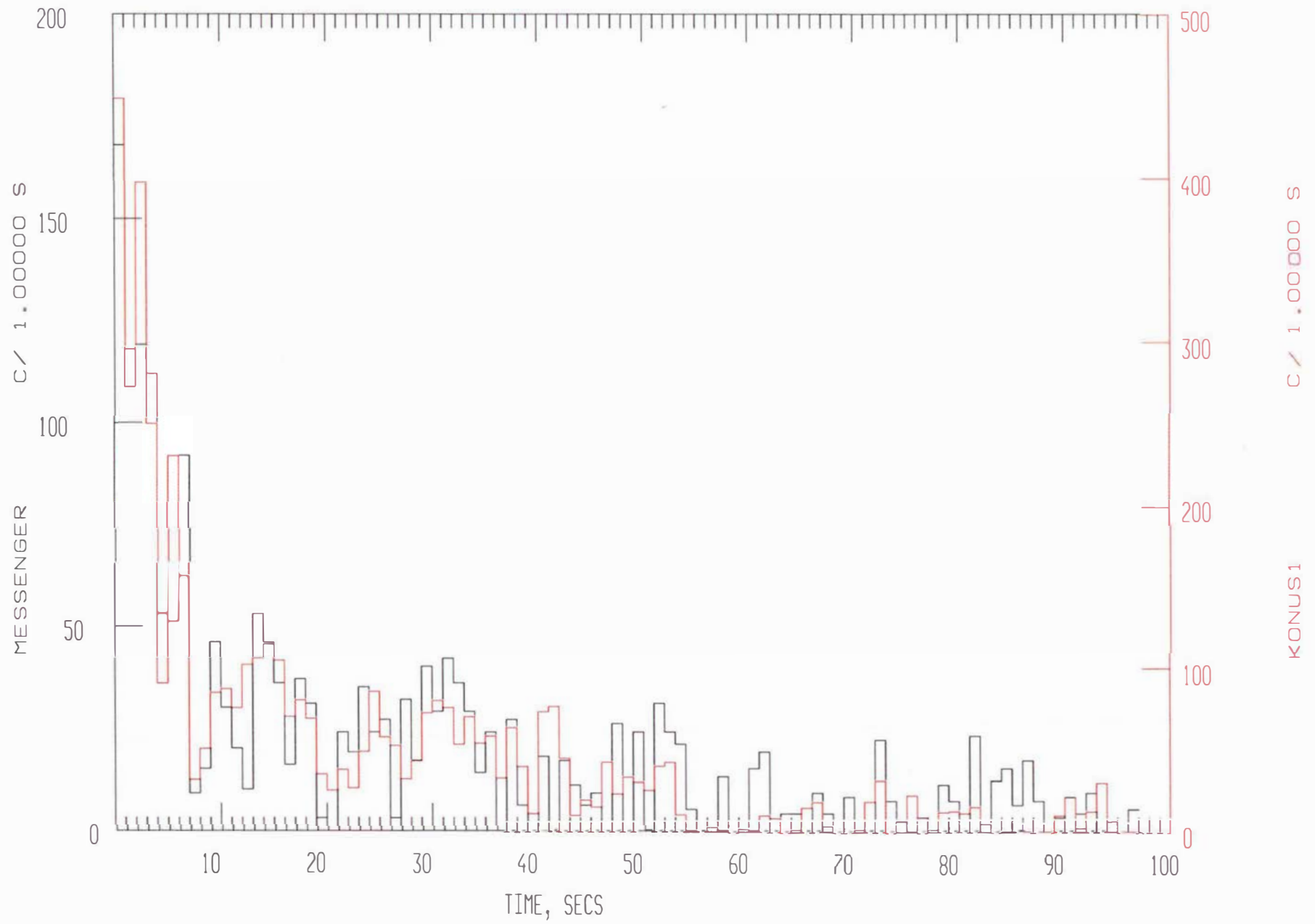
67443.030

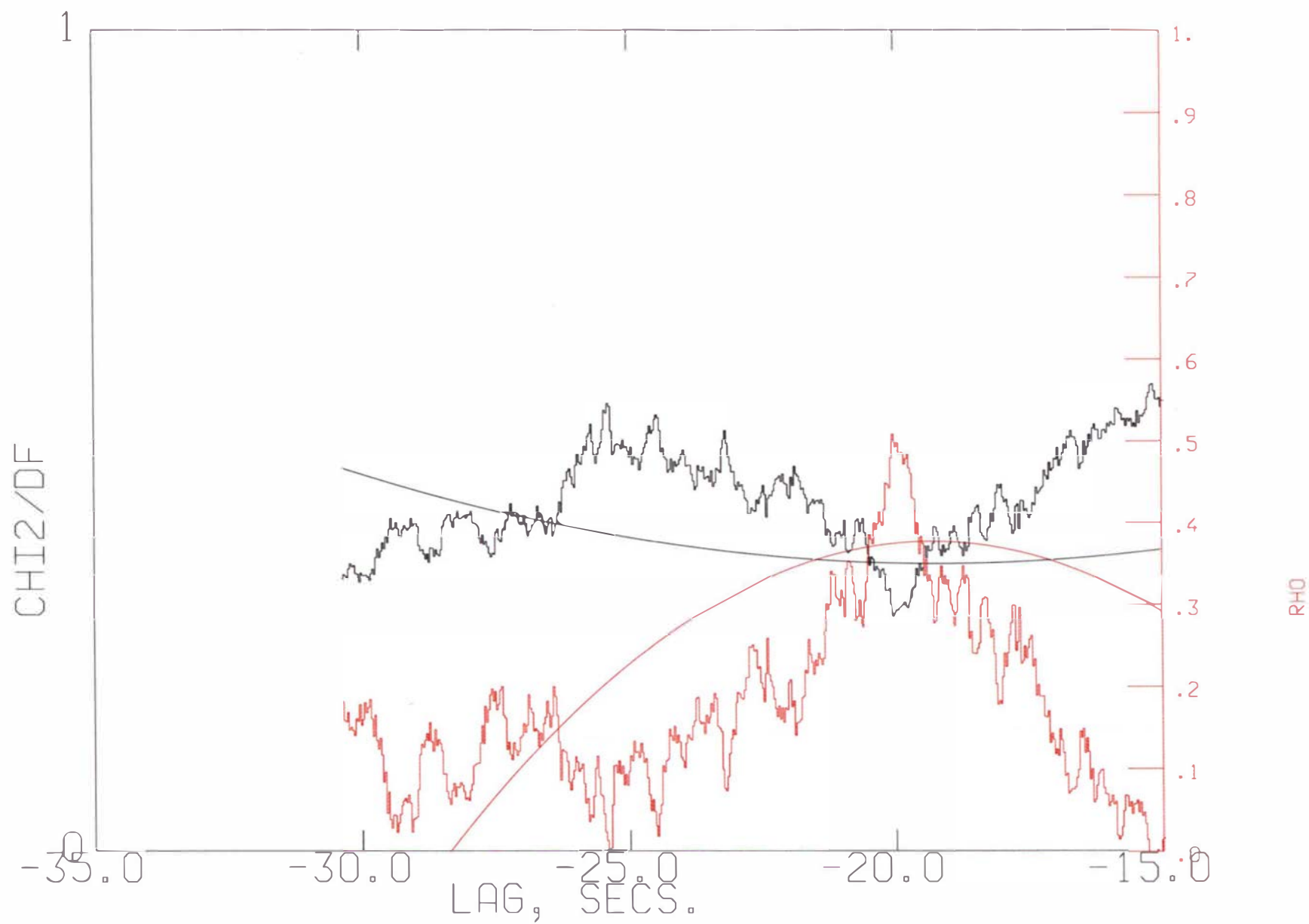
18:44:03.030

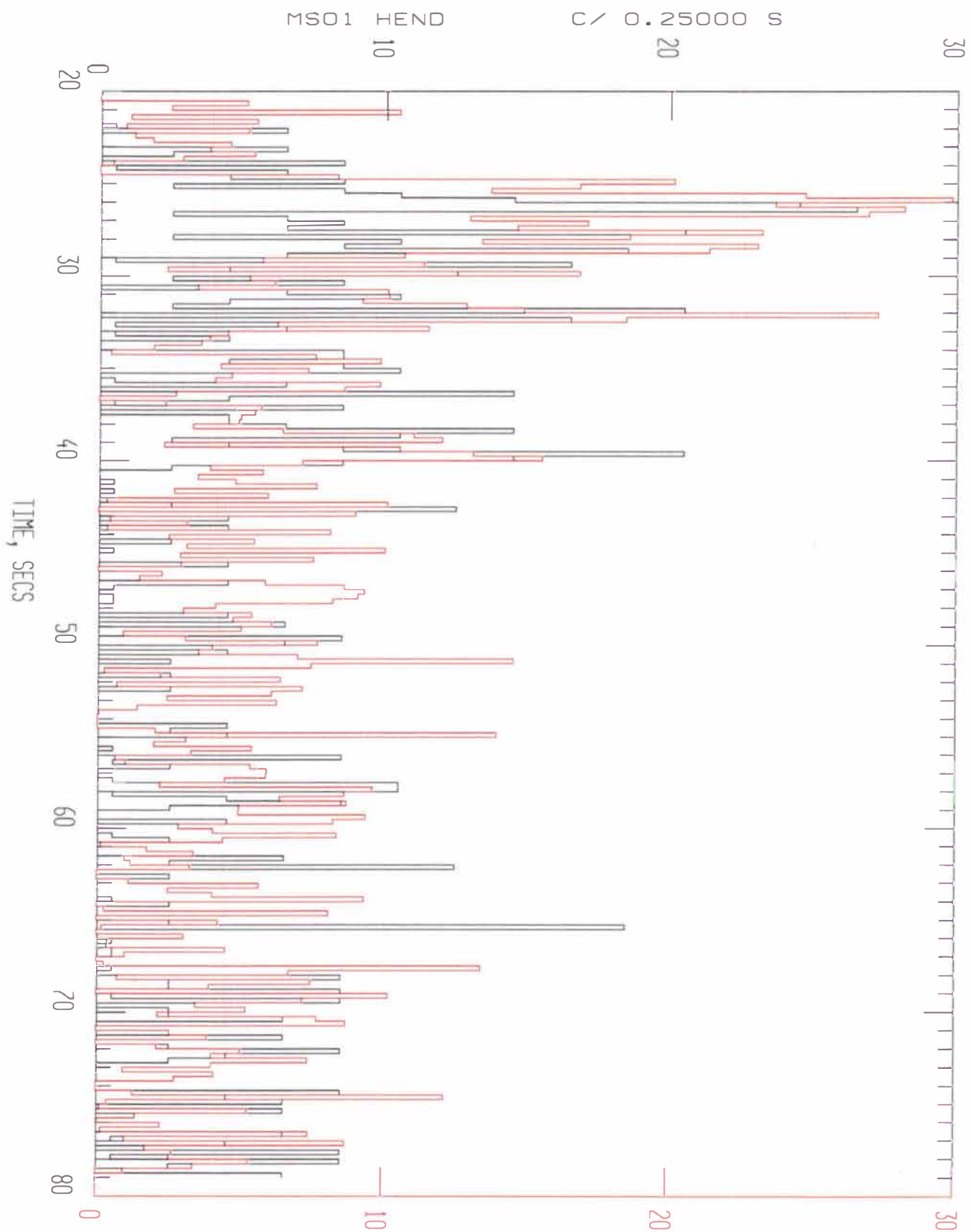
40-200 keV

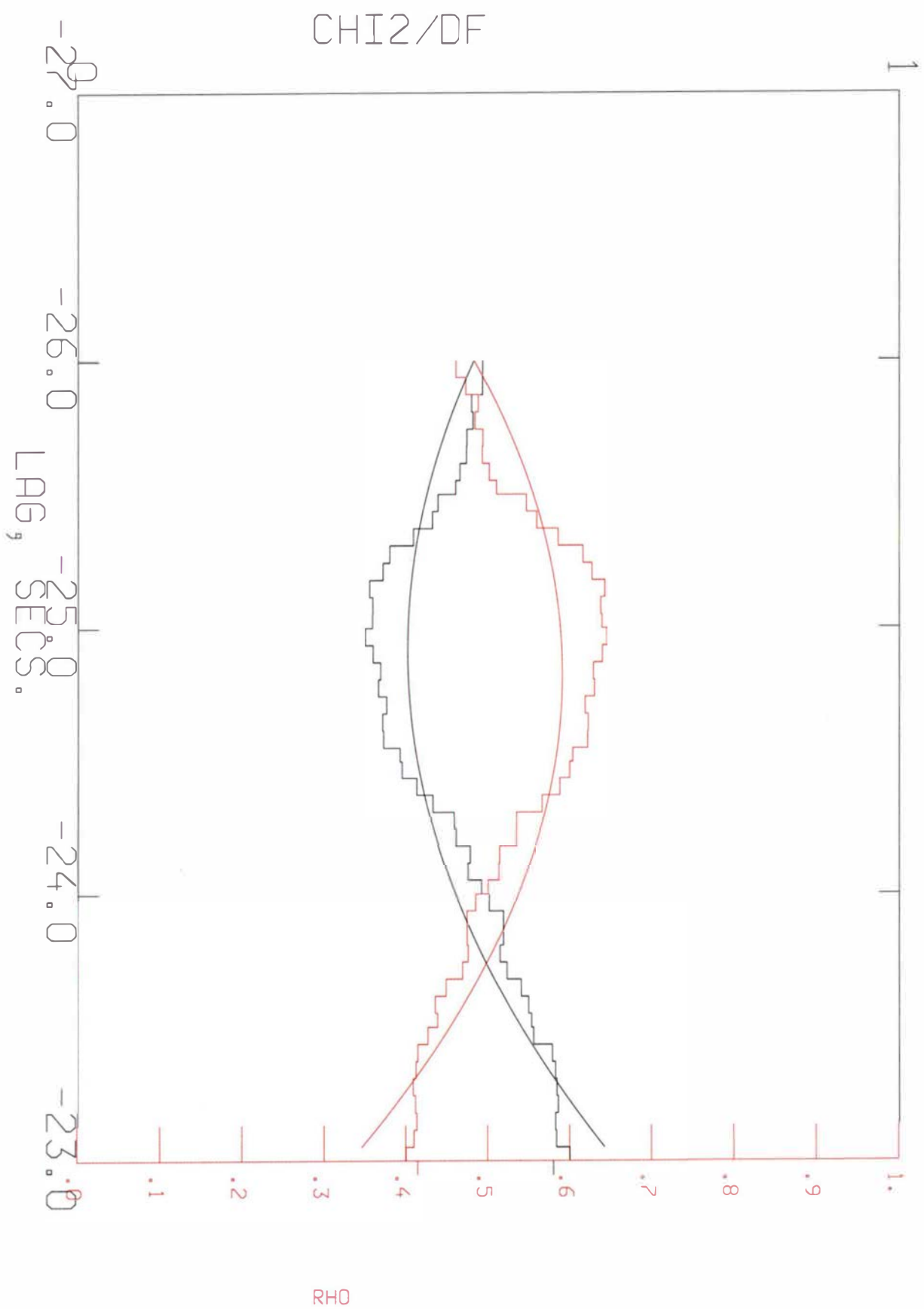


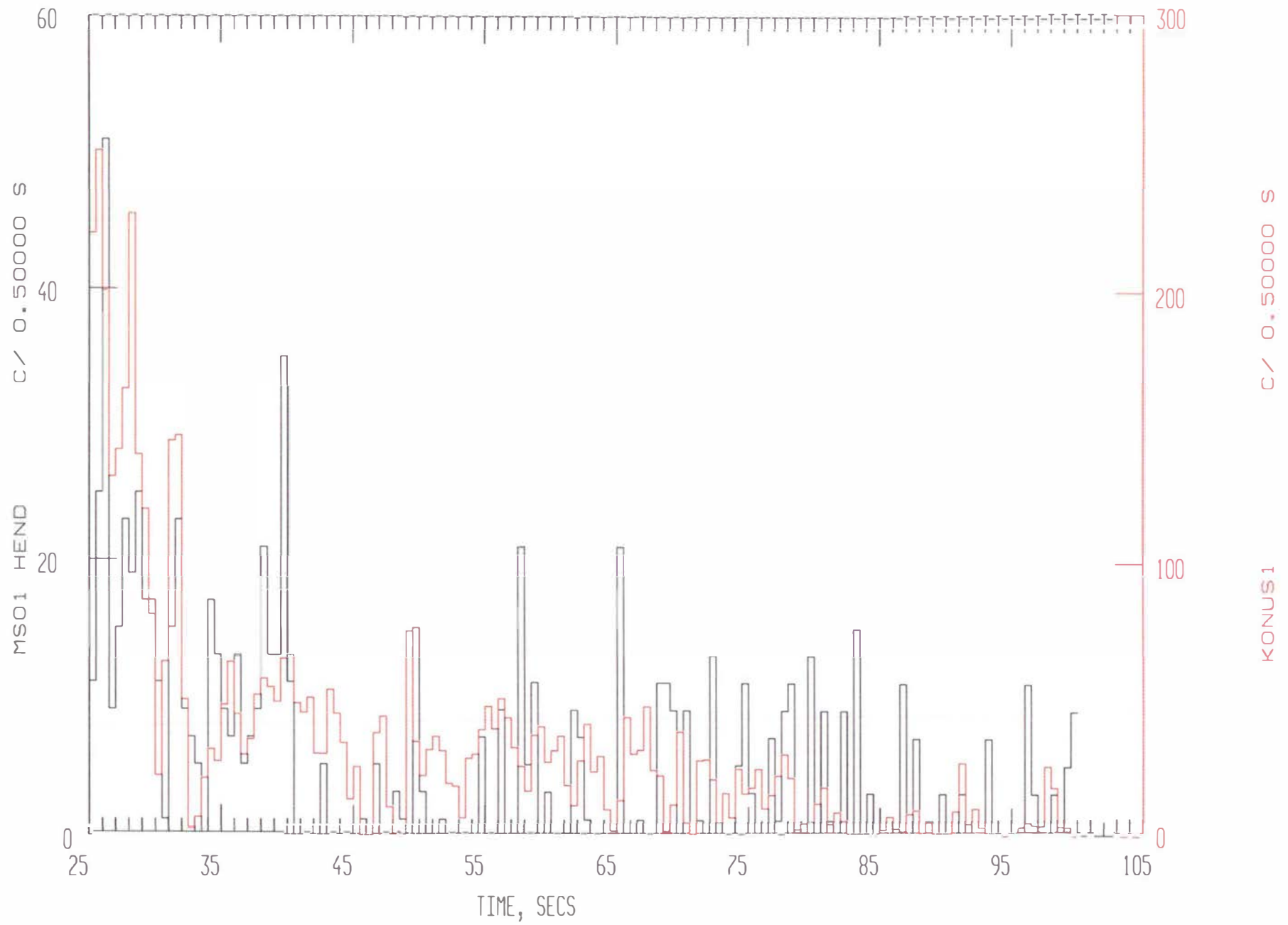








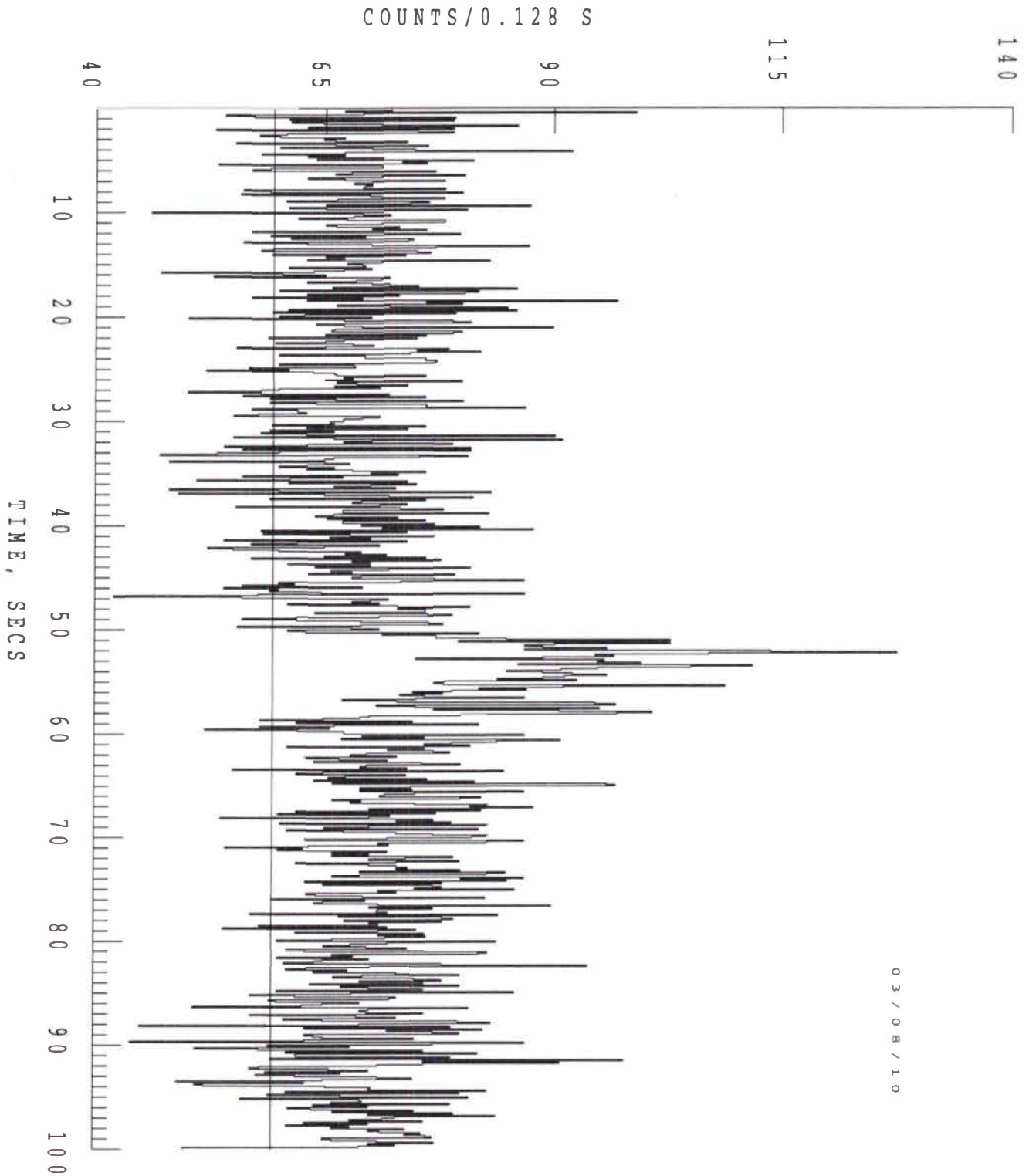


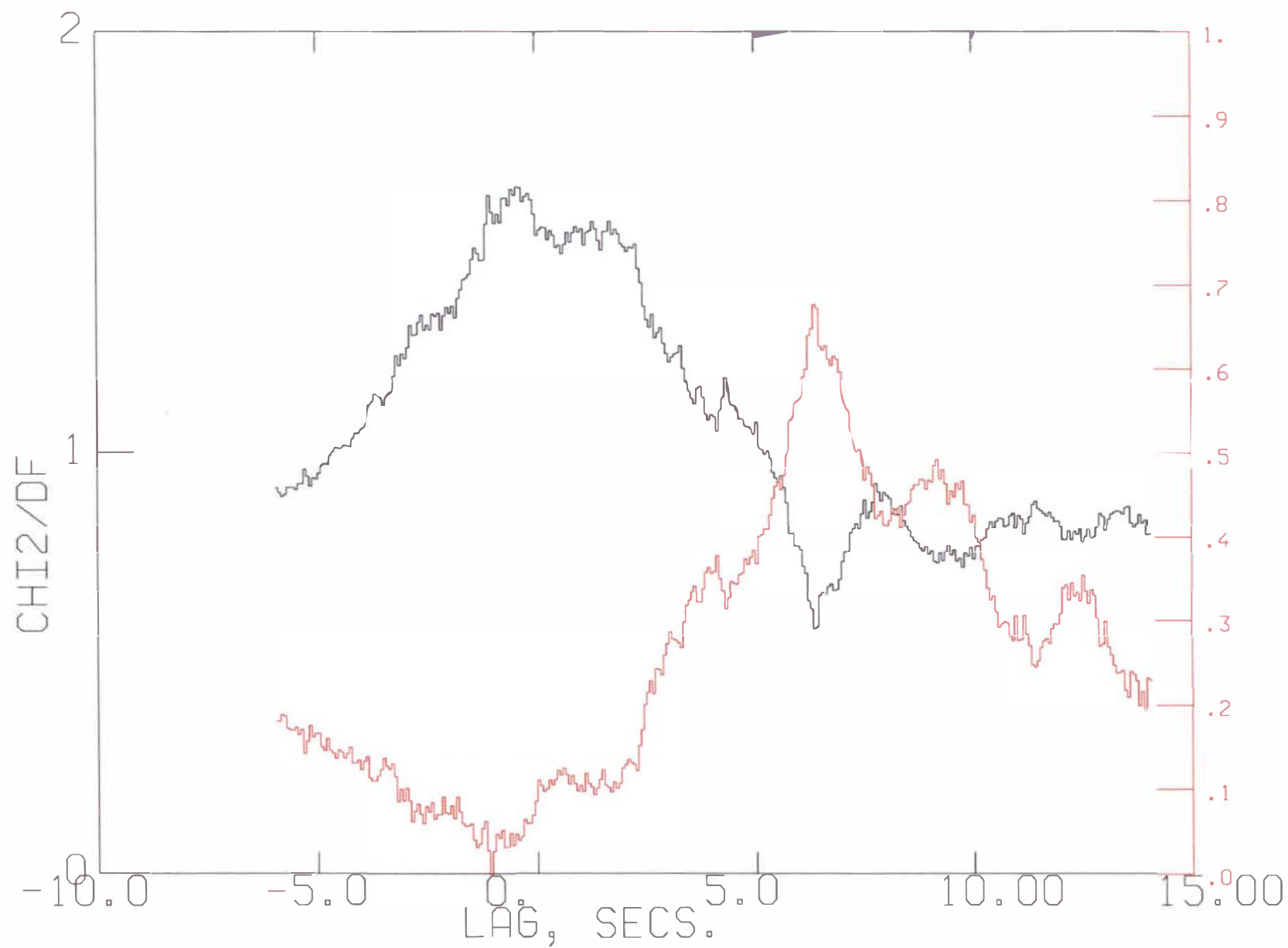


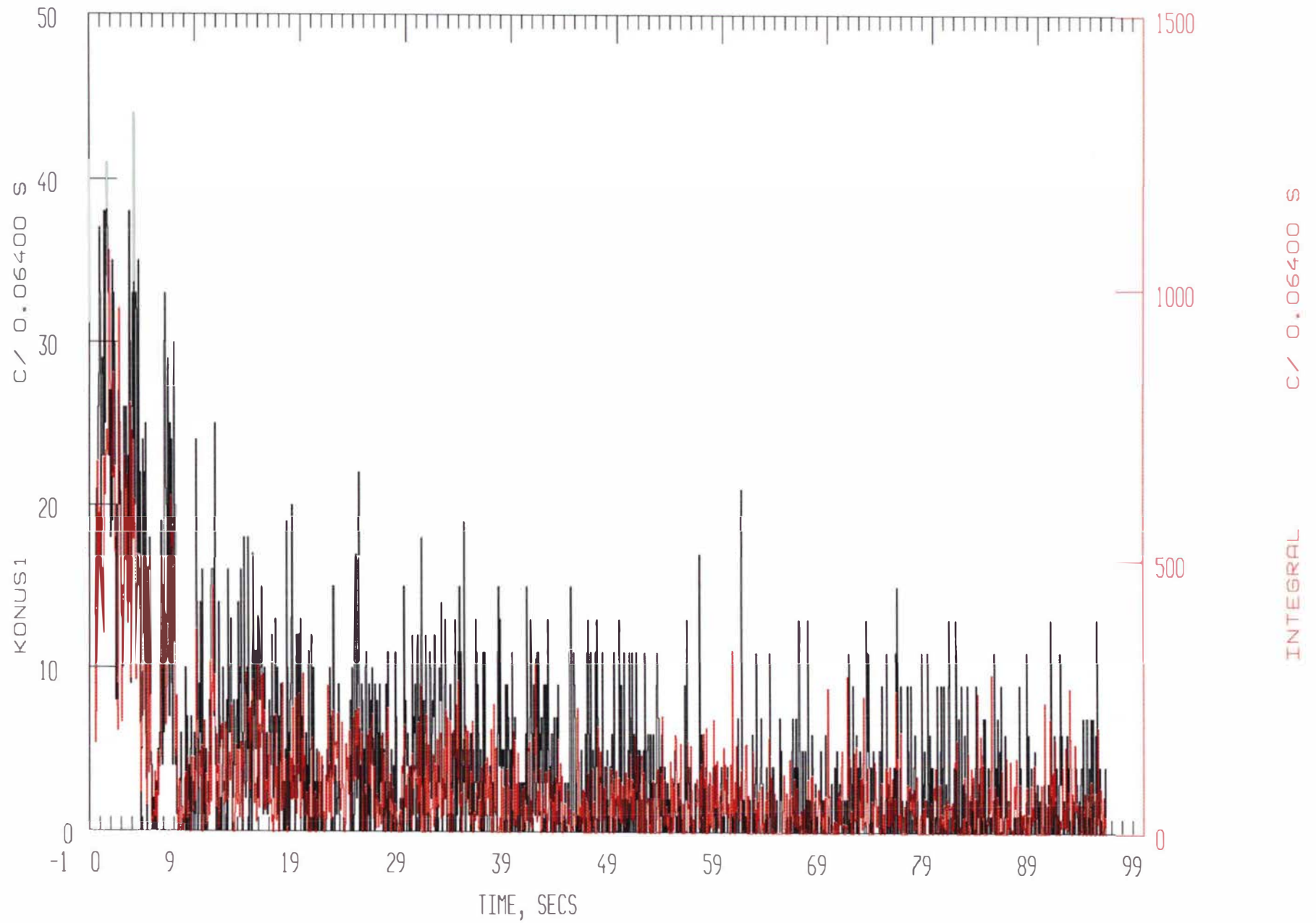
HESSI

24/02/07 67904.000 (konus_20070224_67954)

50- 200 keV



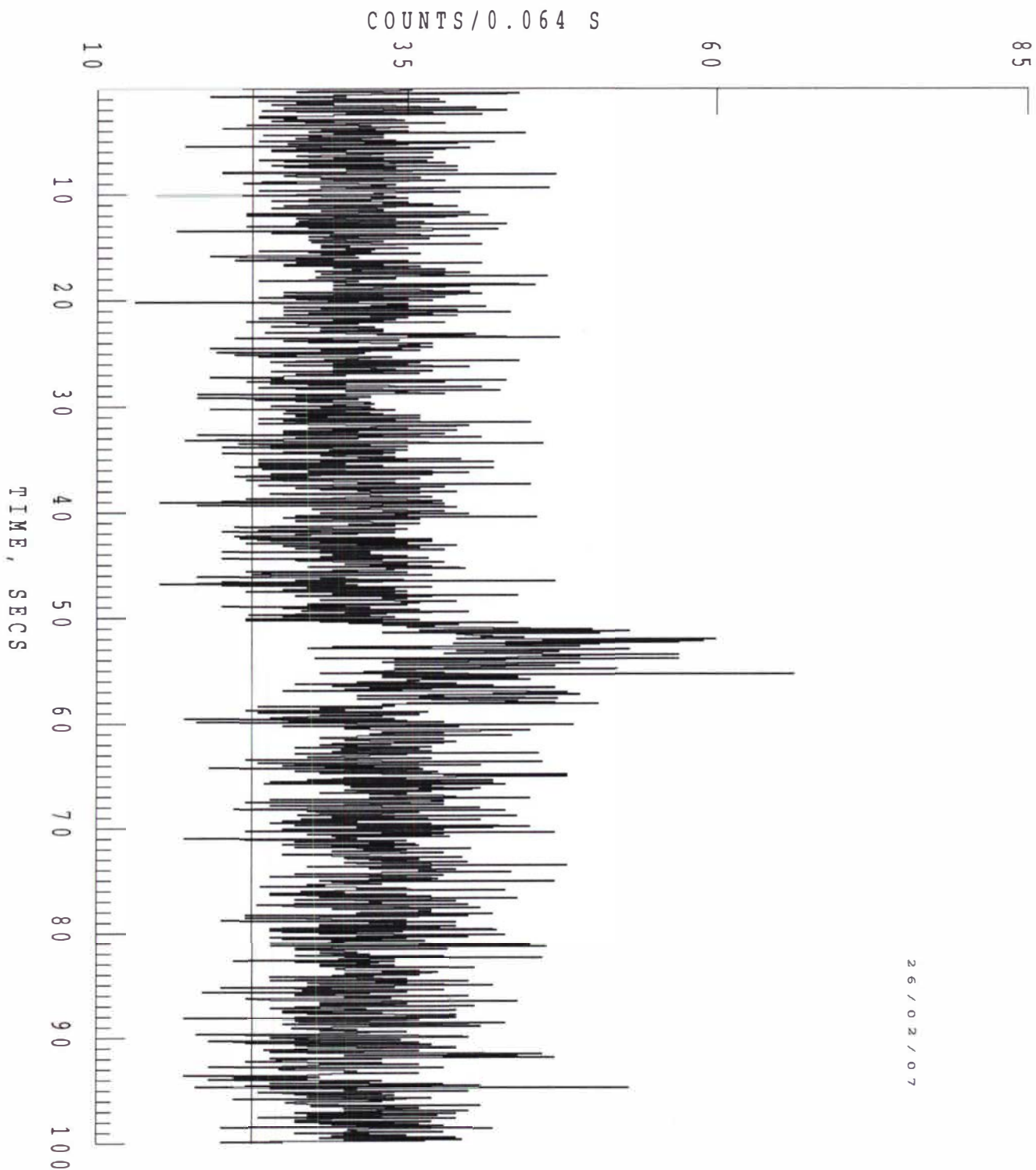




HESSI

24/02/07 67904.000 (KONUS_20070224_67954)

50 - 200 keV



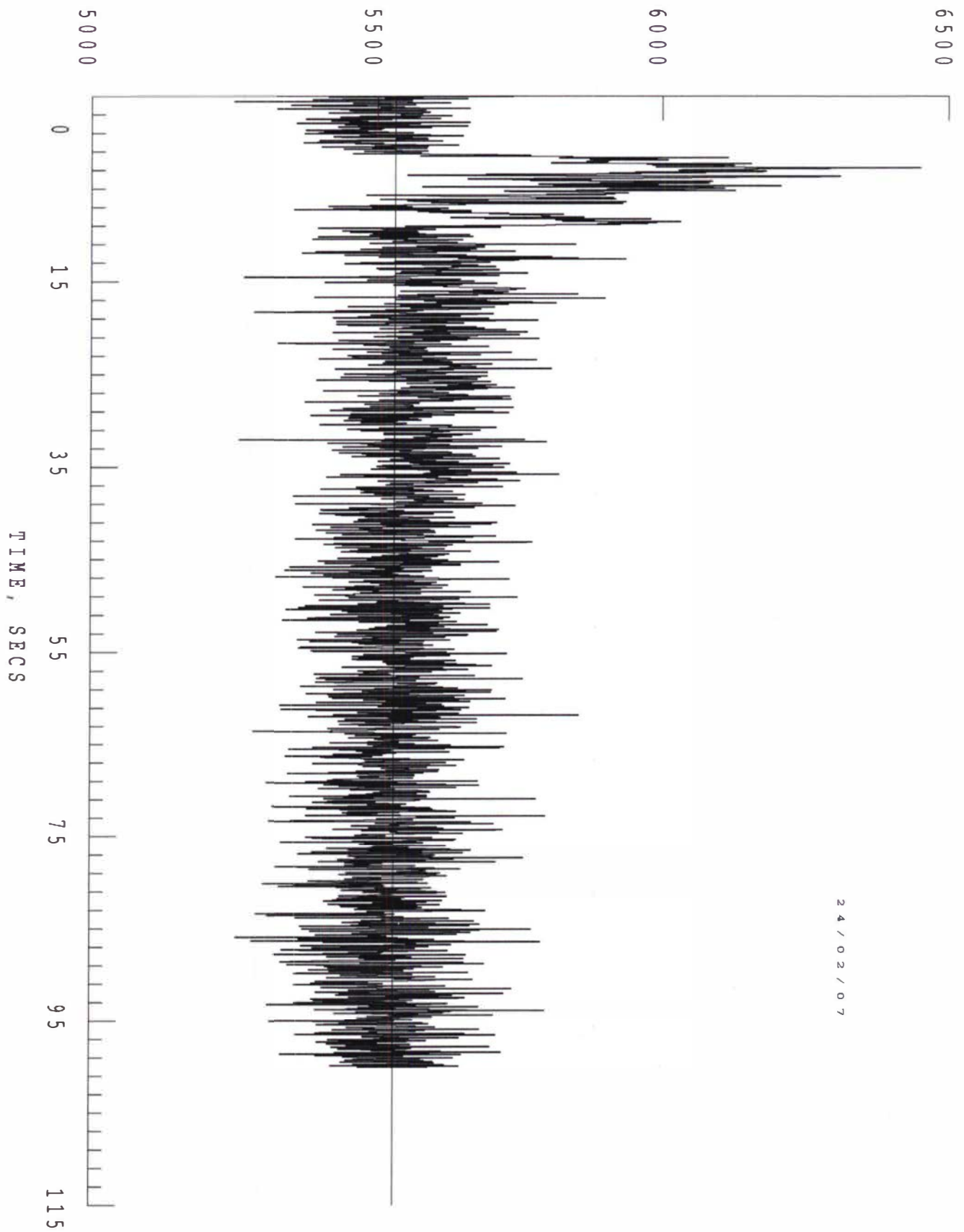
INTEGRAL

24/02/07

67953.608

100-10000 keV

COUNTS/0.050 S



From palmer@lanl.gov Mon Feb 26 11:43:30 2007
X-ASG-Debug-ID: 1172519154-558100240000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: mailwasher.lanl.gov[192.65.95.54]
-Barracuda-Start-Time: 1172519154

Mime-Version: 1.0

Date: Mon, 26 Feb 2007 12:44:48 -0700

To: "Valentin Pal'shin" <val@mail.ioffe.ru>,
Kevin Hurley <khurley@ssl.berkeley.edu>,
Jay Cummings <jayc@milkyway.gsfc.nasa.gov>,
Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>,
Roland Vanderspek <roland@space.mit.edu>,
Sergey Golenetskii <golen@mail.ioffe.ru>,
Hans Krimm <krimm@milkyway.gsfc.nasa.gov>,
Masanori Ohno <ohno@hirax7.hepl.hiroshima-u.ac.jp>

From: David Palmer <palmer@lanl.gov>

X-ASG-Orig-Subj: Re: yet another GRB (GRB 070224C) triggered Konus-Wind on
February 24 (Konus-SPI-ACS annulus)

Subject: Re: yet another GRB (GRB 070224C) triggered Konus-Wind on
February 24 (Konus-SPI-ACS annulus)

Cc: val <val@mail.ioffe.ru>

X-PMX-Version: 4.7.1.128075

X-Barracuda-Bayes: INNOCENT GLOBAL 0.0000 1.0000 -2.0210

X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.9765

Rule breakdown below

pts	rule name	description
-----	-----------	-------------

Content-Transfer-Encoding: 8bit

-MIME-Autoconverted: from quoted-printable to 8bit by sunspot.ssl.berkeley.edu

BAT sees nothing at the time.  We were pointing at [180.125, -1.120 94.270].

At 10:42 PM +0300 07-02-26, Valentin Pal'shin wrote:

>Dear colleagues,

>

>A long hard GRB triggered Konus-Wind at

>2007-02-24 T0=67954.145_s UT (18:52:34.145)

>(see the attached figure).

>The burst source is in the south ecliptic hemisphere

>not far from the ecliptic plane.

>This burst also triggered INTEGRAL-SPI-ACS.

>We have triangulated it to the Konus-SPI-ACS annulus

>centered at RA=316.934 (21h 07m 44s) Dec=-24.309 (-24d 18' 31"),

>whose radius is 74.852 +/- 0.401 deg (3 sigma).

>This annulus is far from the Swift GRB 070224.

>

>Any other detections?

>

>Best wishes,

>

>Valentin

>

>

--

>Valentin Pal'shin

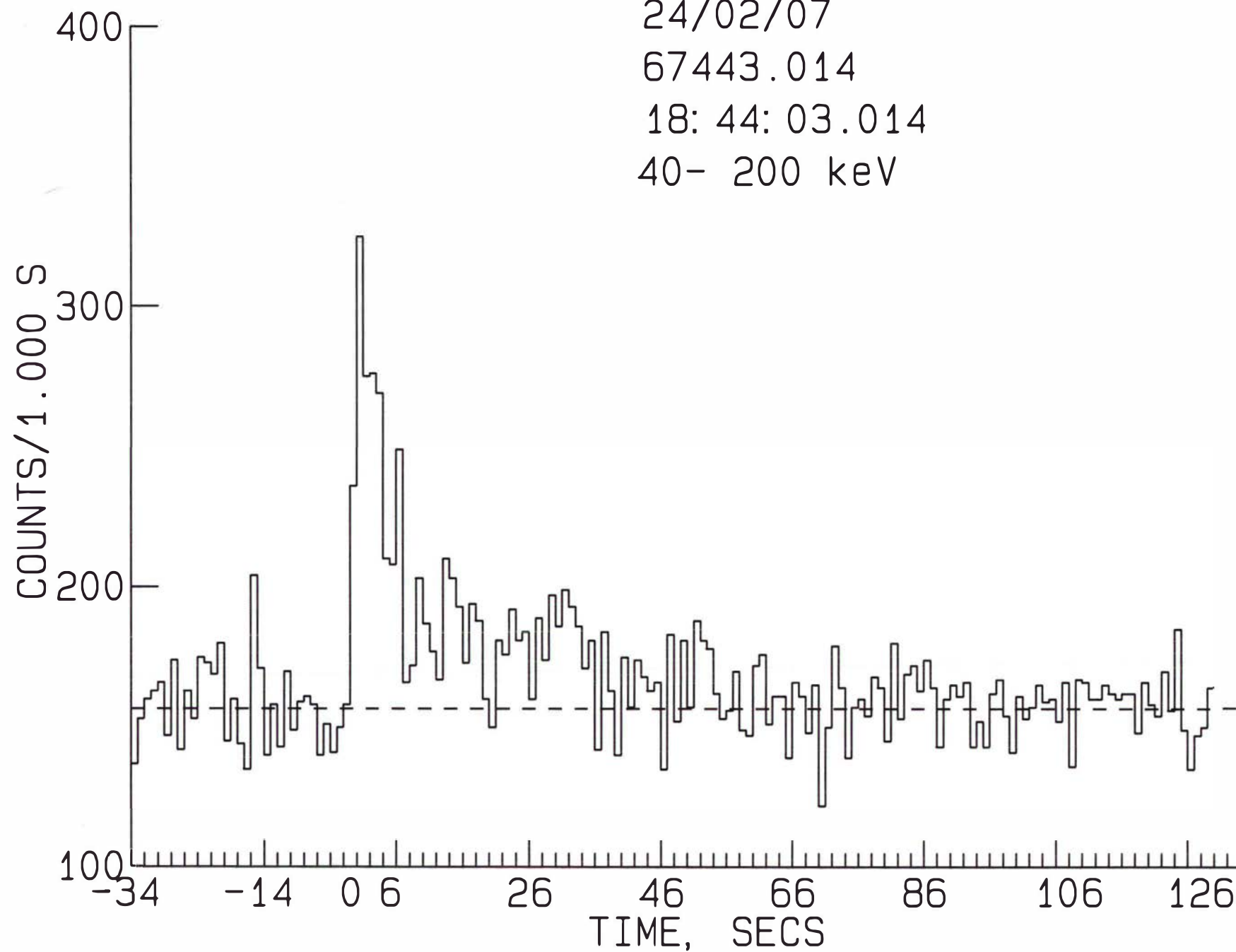
>

>Ioffe Physico-Technical Institute

>Laboratory for Experimental Astrophysics

25/04/07

MESSENGER
24/02/07
67443.014
18: 44: 03.014
40- 200 keV



From yamaoka@phys.aoyama.ac.jp Mon Feb 26 11:40:29 2007
 X-ASG-Debug-ID: 1172518974-5584001f0000-LqZNIK
 X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
 -Barracuda-Connect: scmailgw1.scop.aoyama.ac.jp[133.2.251.194]
 -Barracuda-Start-Time: 1172518974
 To: val@mail.ioffe.ru
 Cc: khurley@ssl.berkeley.edu, jayc@milkyway.gsfc.nasa.gov,
 roland@space.mit.edu, golen@mail.ioffe.ru,
 krimm@milkyway.gsfc.nasa.gov, ohno@hirax7.hepl.hiroshima-u.ac.jp,
 palmer@lanl.gov
 Cc: yamaoka@phys.aoyama.ac.jp
 X-ASG-Orig-Subj: Re: yet another GRB (GRB 070224C) triggered Konus-Wind on
 February 24 (Konus-SPI-ACS annulus)
 Subject: Re: yet another GRB (GRB 070224C) triggered Konus-Wind on
 February 24 (Konus-SPI-ACS annulus)
 Mime-Version: 1.0
 Content-Transfer-Encoding: 7bit
 Date: Tue, 27 Feb 2007 04:41:54 +0900
 From: Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>
 X-Dispatcher: imput version 20000228(IM140)
 X-Barracuda-Bayes: INNOCENT GLOBAL 0.4850 1.0000 0.0000
 X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
 X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.9765
 Rule breakdown below

pts	rule name	description
0.00	UNPARSEABLE_RELAY	Informational: message has unparseable relay

ear Valentin,

Unfortunately, Suzaku was at the SAA.

Best regards,

Kazu

on behalf of the Suzaku WAM team

From: "Valentin Pal'shin" <val@mail.ioffe.ru>
 Subject: yet another GRB (GRB 070224C) triggered Konus-Wind on February 24 (Kon
 Date: Mon, 26 Feb 2007 22:42:07 +0300
 Message-ID: <45E3380F.2010909@mail.ioffe.ru>

> Dear colleagues,

>

> A long hard GRB triggered Konus-Wind at

> 2007-02-24 T0=67954.145 s UT (18:52:34.145)

> (see the attached figure).

> The burst source is in the south ecliptic hemisphere

> not far from the ecliptic plane.

> This burst also triggered INTEGRAL-SPI-ACS.

> We have triangulated it to the Konus-SPI-ACS annulus

> centered at RA=316.934 (21h 07m 44s) Dec=-24.309 (-24d 18' 31"),

> whose radius is 74.852 +/- 0.401 deg (3 sigma).

> This annulus is far from the Swift GRB 070224.

Any other detections?

>

> Best wishes,

>

> Valentin

From vxw@capella.gsfc.nasa.gov Sat Feb 24 12:29:44 2007
X-ASG-Debug-ID: 1172349129-10a200030000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: capella.gsfc.nasa.gov[128.183.16.187]
-Barracuda-Start-Time: 1172349129
X-ASG-Whitelist: Sender
Date: Sat, 24 Feb 2007 15:32:08 -0500
From: Bacodine <vxw@capella.gsfc.nasa.gov>
To: khurley@ssl.berkeley.edu
X-ASG-Orig-Subj: GCN/SWIFT BAT LIGHTCURVE
Subject: GCN/SWIFT_BAT_LIGHTCURVE
Mime-Version: 1.0
Content-Disposition: inline
User-Agent: Mutt/1.4.1i
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

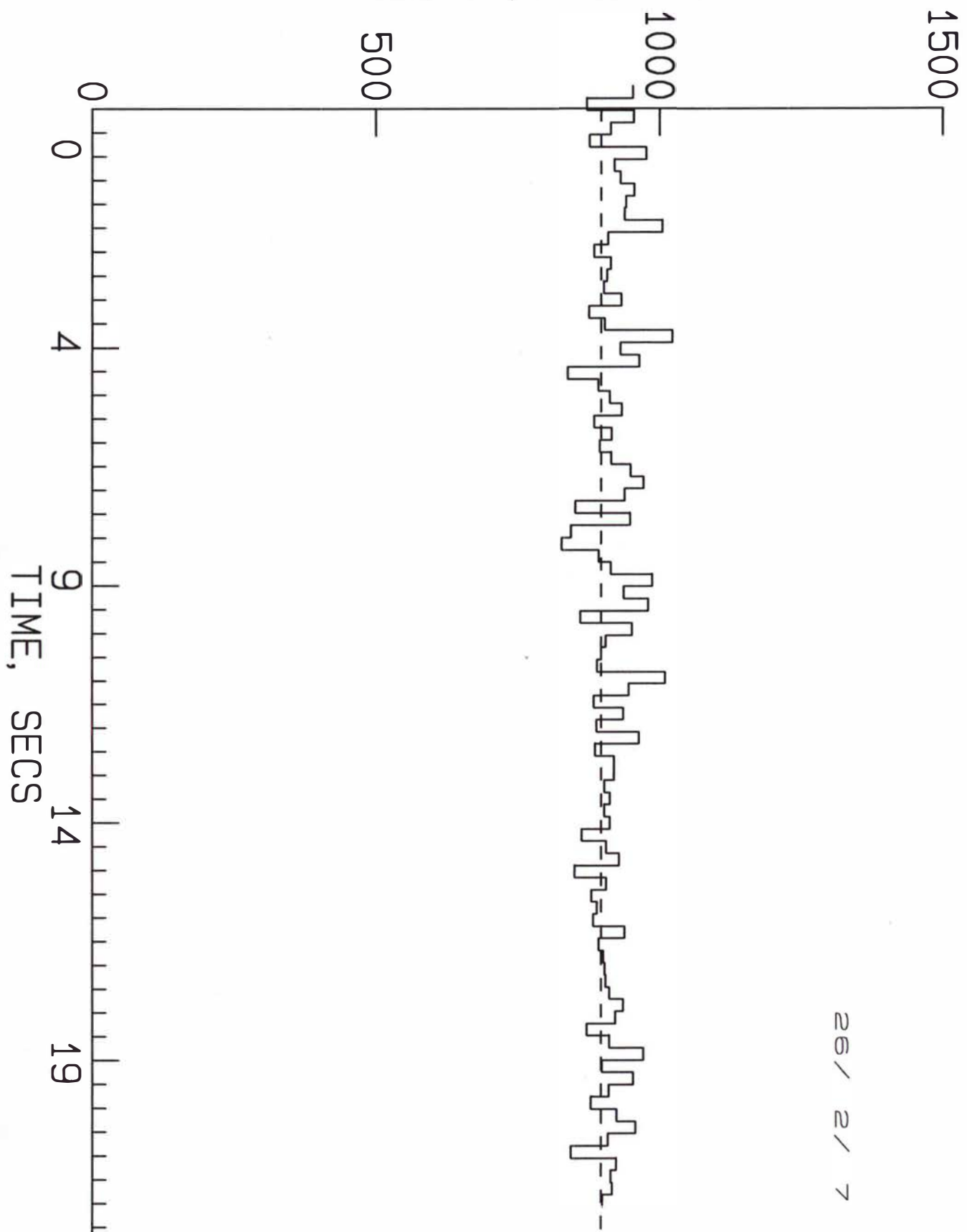
TITLE: GCN/SWIFT NOTICE
NOTICE_DATE: Sat 24 Feb 07 20:31:53 UT
NOTICE_TYPE: Swift-BAT GRB Lightcurve
TRIGGER_NUM: 261880, Seg_Num: 0
GRB_RA: 178.990d {+11h 55m 58s} (J2000),
179.081d {+11h 56m 19s} (current),
178.351d {+11h 53m 24s} (1950)
GRB_DEC: -13.340d {-13d 20' 23"} (J2000),
-13.380d {-13d 22' 46"} (current),
-13.062d {-13d 03' 41"} (1950)
GRB_DATE: 14155 TJD; 55 DOY; 07/02/24
GRB_TIME: 73678.21 SOD {20:27:58.21} UT
TRIGGER_INDEX: 20000
RB_PHI: -0.44 [deg]
RB_THETA: 12.25 [deg]
DELTA_TIME: 0.00 [sec]
TRIGGER_DUR: 64.000 [sec]
SOLN_STATUS: 0x13
RATE_SIGNIF: 0.00 [sigma]
IMAGE_SIGNIF: 7.50 [sigma]
LC_URL: sw00261880000msb.lc
SUN_POSTN: 337.64d {+22h 30m 33s} -9.37d {-09d 21' 55"}
SUN_DIST: 148.85 [deg] Sun_angle= 10.6 [hr] (West of Sun)
MOON_POSTN: 70.21d {+04h 40m 51s} +27.54d {+27d 32' 10"}
MOON_DIST: 112.70 [deg]
MOON_ILLUM: 56 [%]
GAL_COORDS: 282.79, 47.35 [deg] galactic lon,lat of the burst (or transient)
ECL_COORDS: 184.47, -12.62 [deg] ecliptic lon,lat of the burst (or transient)
COMMENTS: SWIFT-BAT GRB Lightcurve.
COMMENTS:
COMMENTS: The next comments were copied from the BAT_POS Notice:
COMMENTS: This is an image trigger.
COMMENTS: A point_source was found.
COMMENTS: This does not match any source in the on-board catalog.
COMMENTS: This does not match any source in the ground catalog.
COMMENTS: This is a GRB.
COMMENTS: This trigger occurred at longitude,latitude = 79.57,-16.28 [deg]

SWIFT

24/02/07 73678.214

25- 100 keV

COUNTS/0.256 S



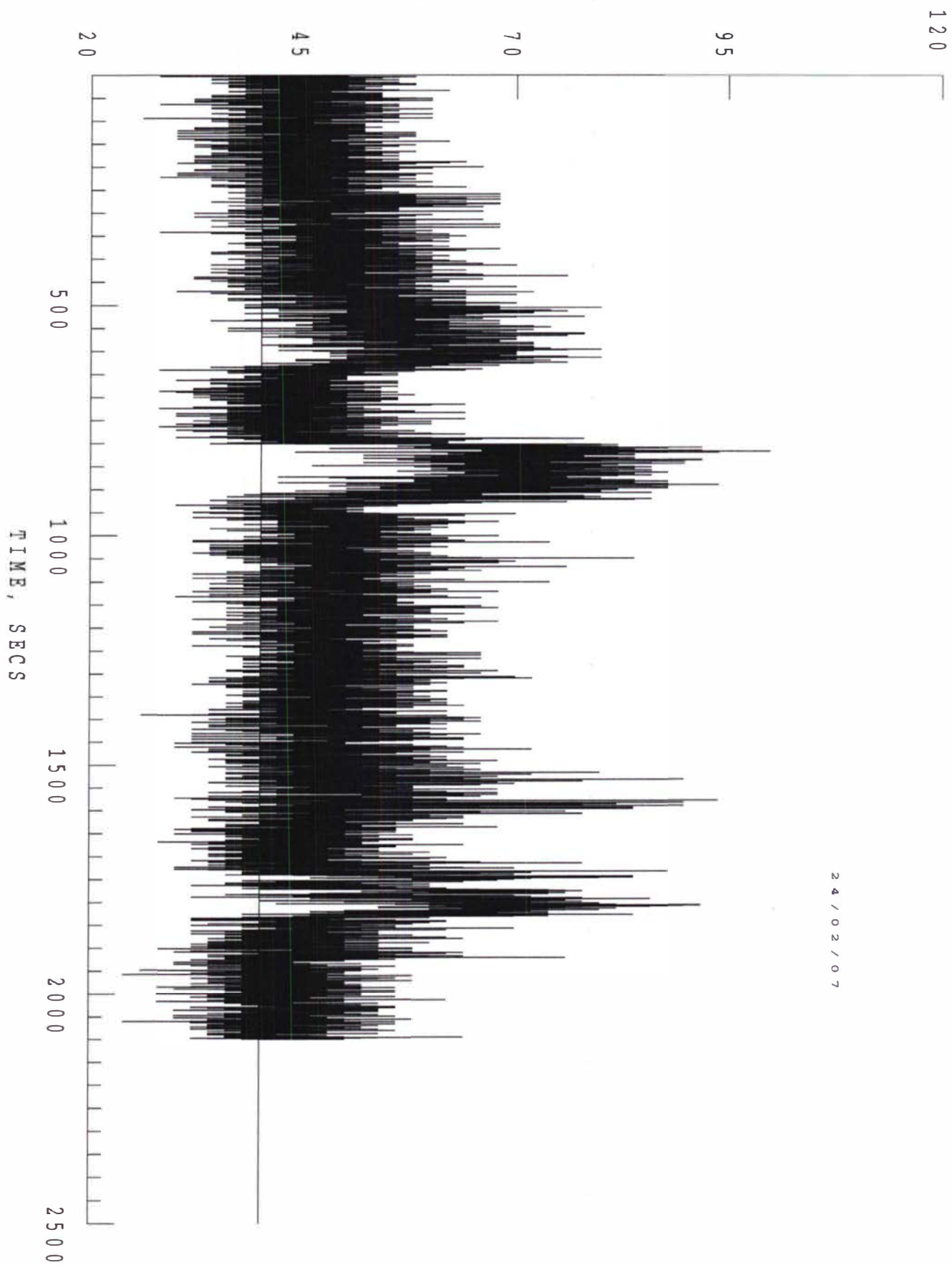
MS01

24/02/07

72314.102

50 - 3000 keV

COUNTS/0.250 S

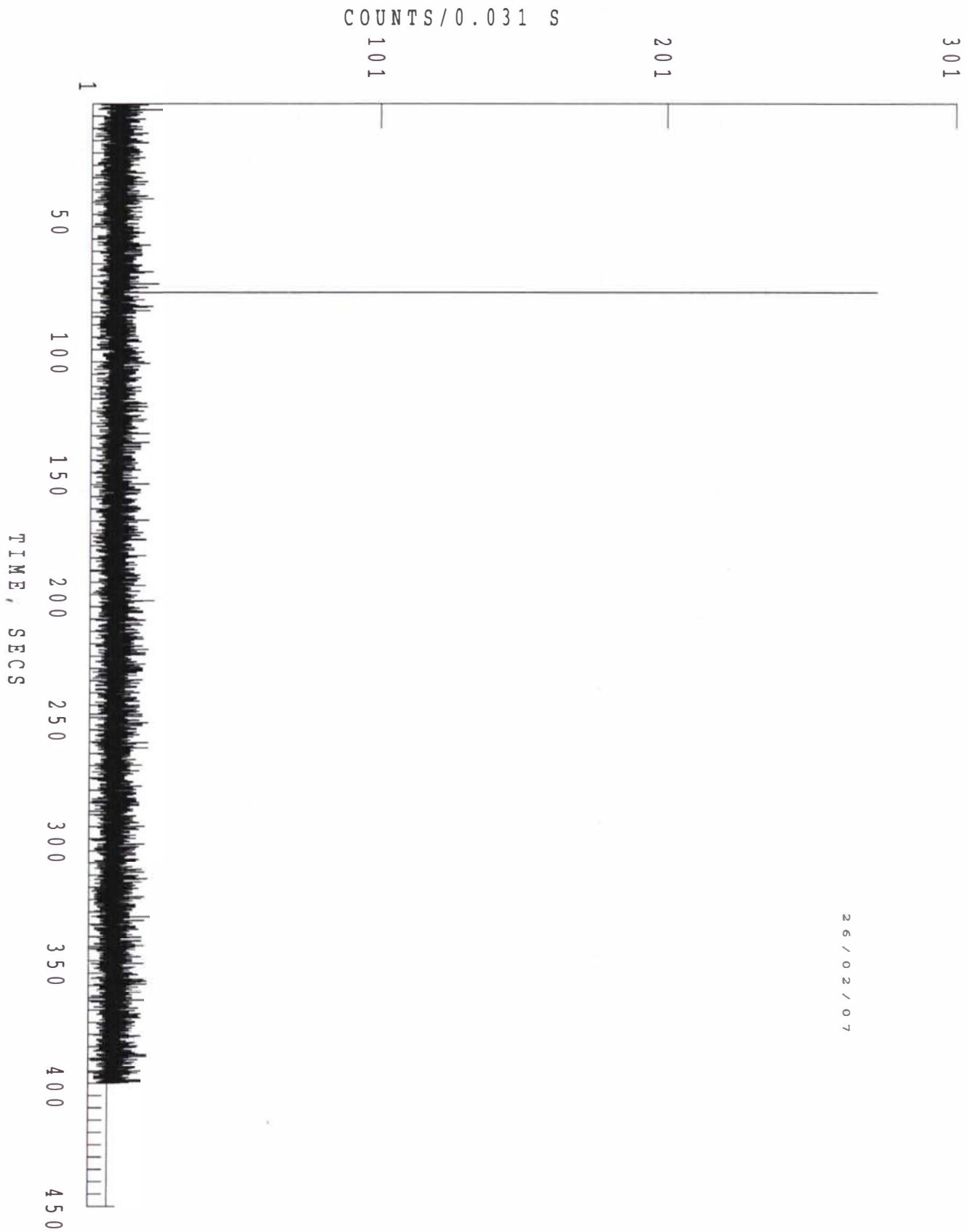


24/02/07

HESSI

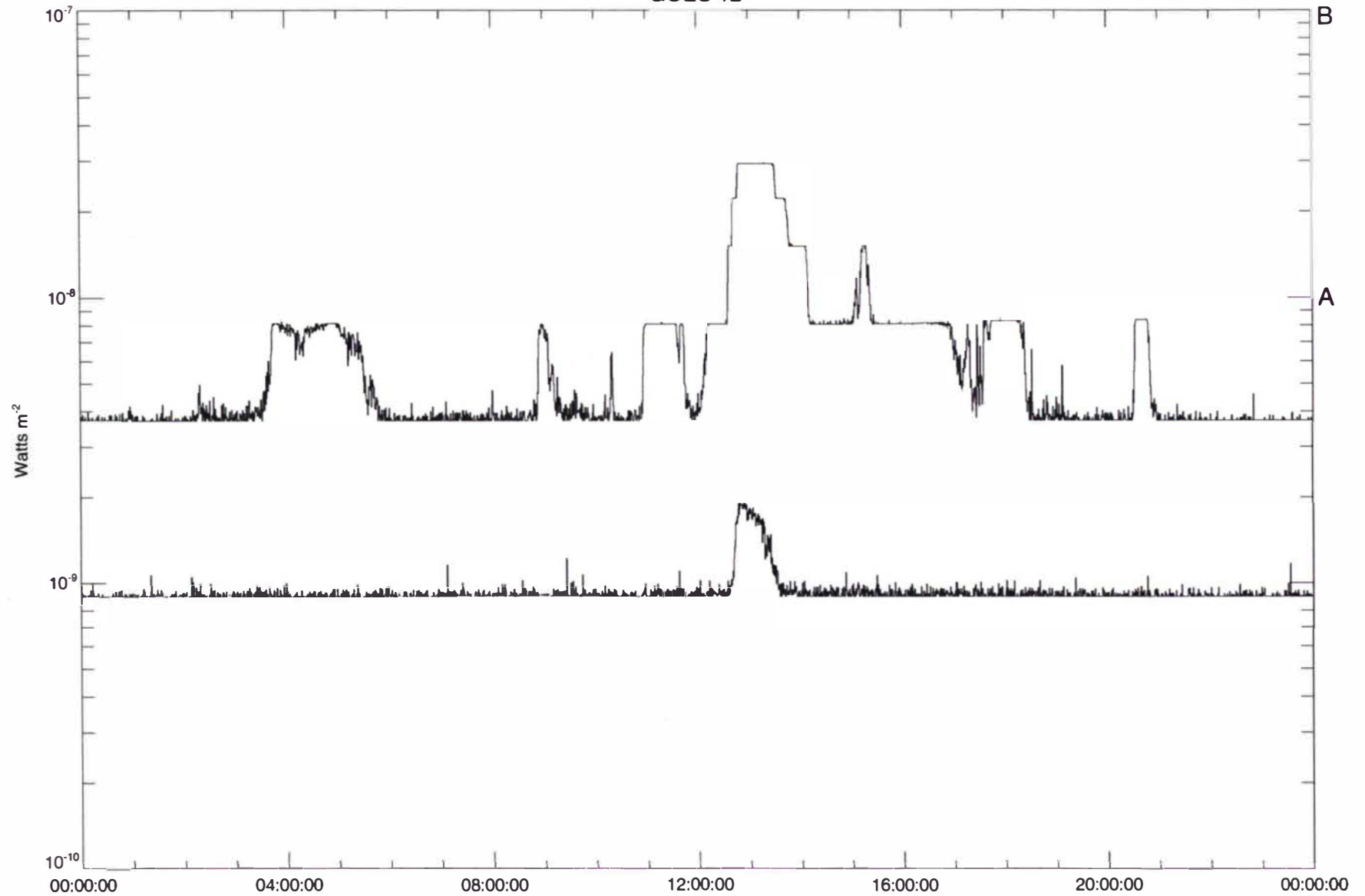
24/02/07 73478.000 (GSwift-BAT_261880_0_20070224_

25- 150 keV



26 / 02 / 07

GOES 12



Data Start: 07/02/24, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Plot created: 07/02/27, 0921

Sample average = 10

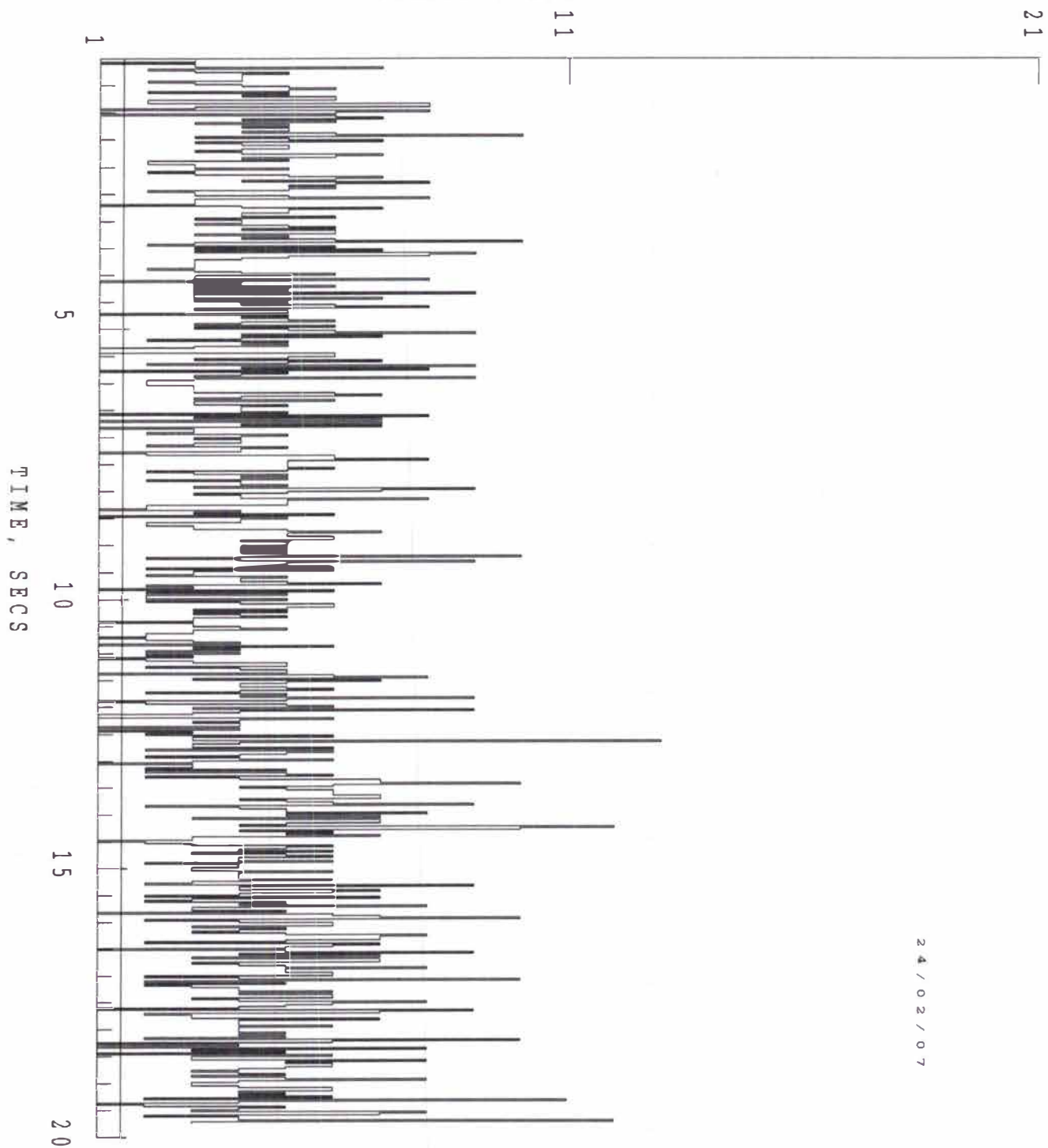
MO

25/02/07

8235.426

116- 337 keV

COUNTS/0.032 S



24/02/07

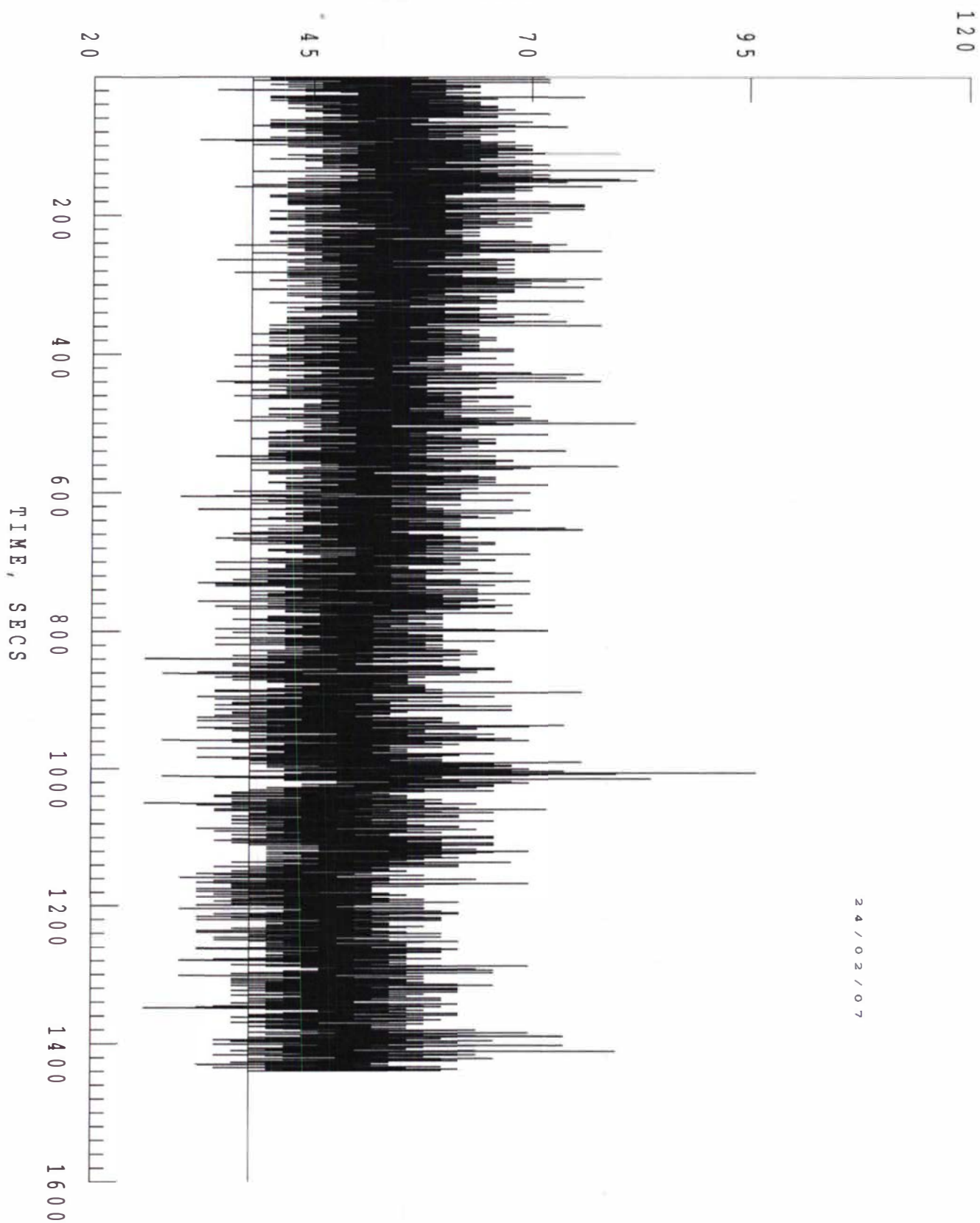
MS01

25/02/07

6913.724

50 - 3000 keV

COUNTS/0.250 S



24/02/07

HESSI

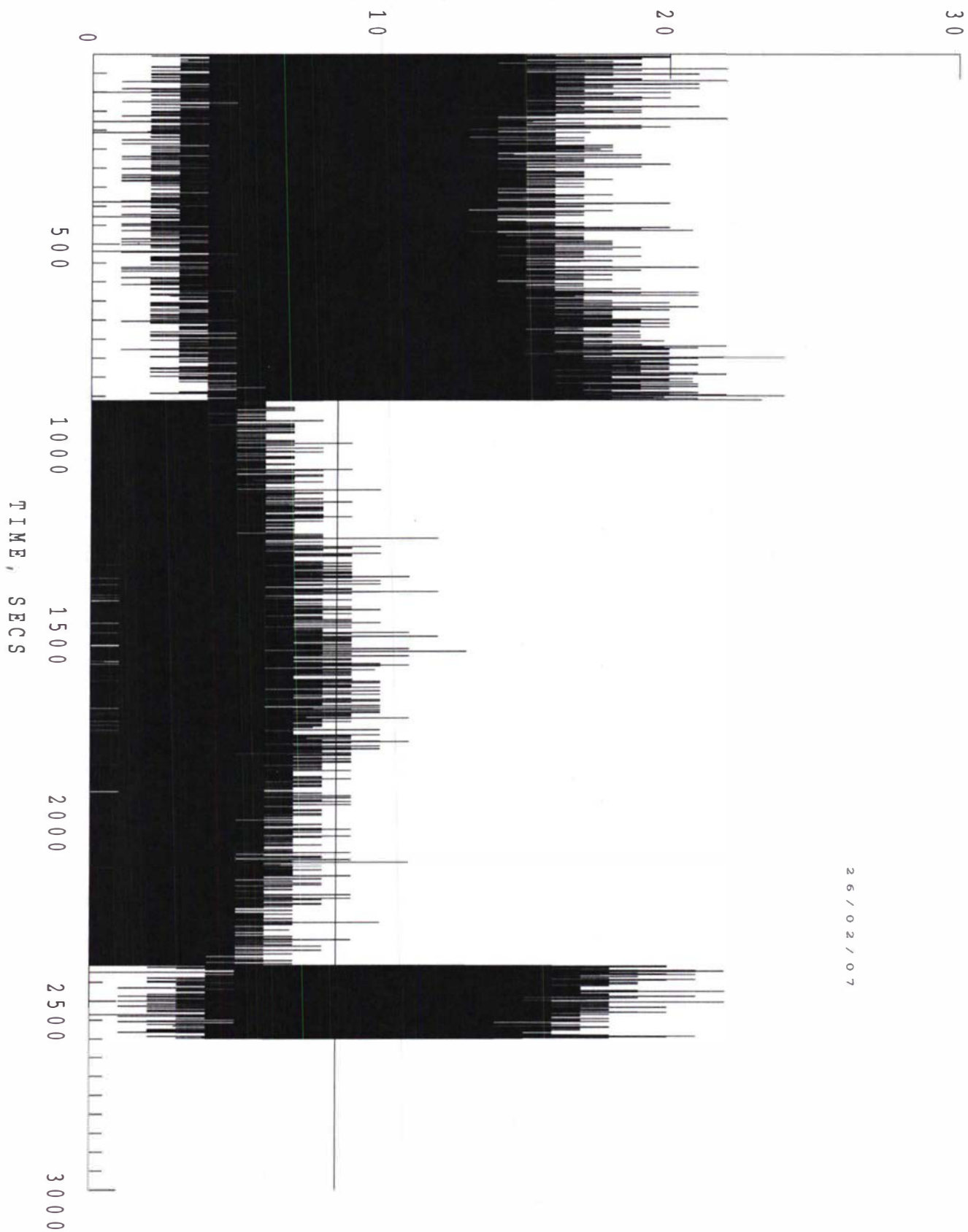
25/02/07

6935.000

(MO_GE_20070225_08235)

25- 150 keV

COUNTS/0.031 S



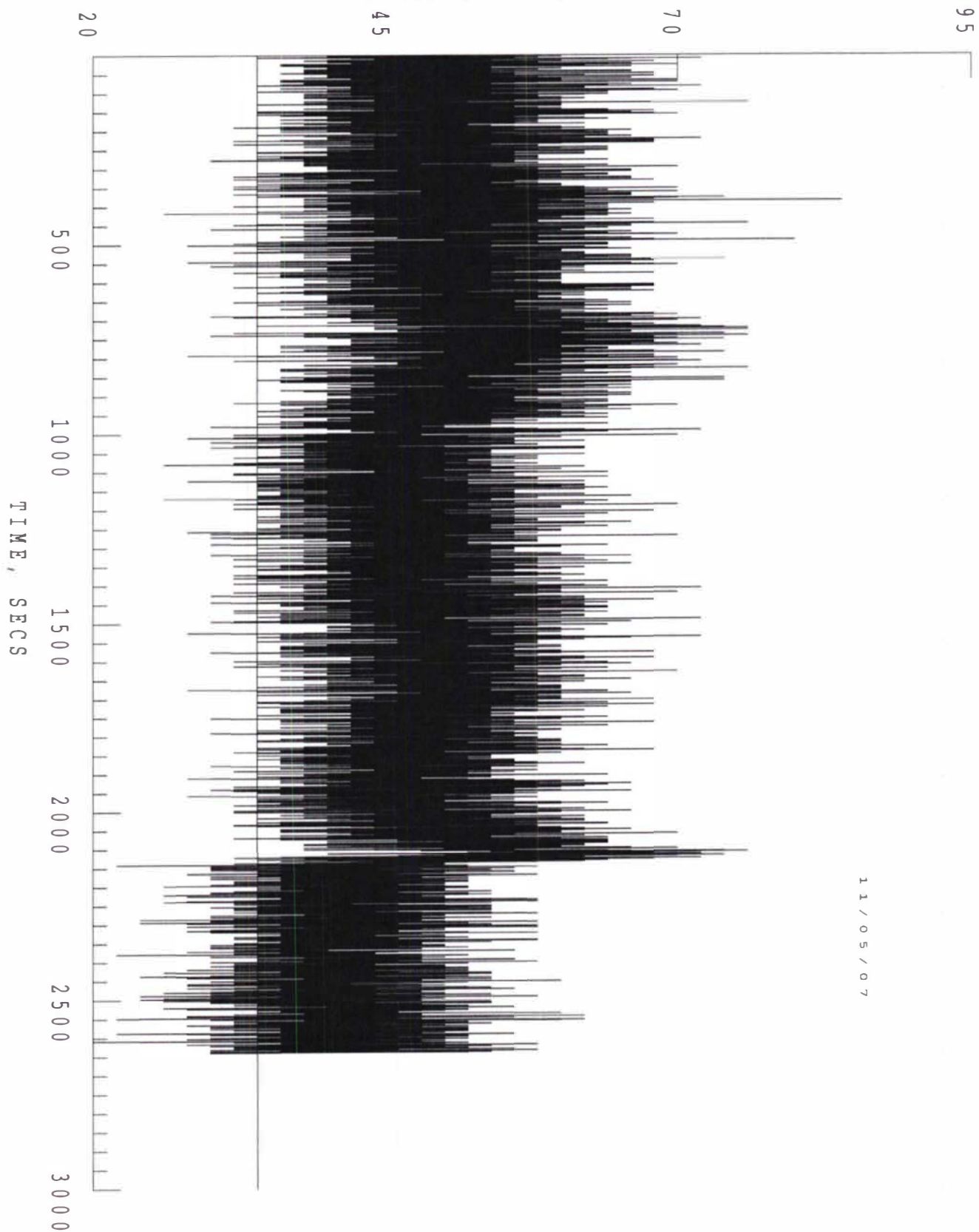
MS01

25/02/07

14173.585

50 - 3000 keV

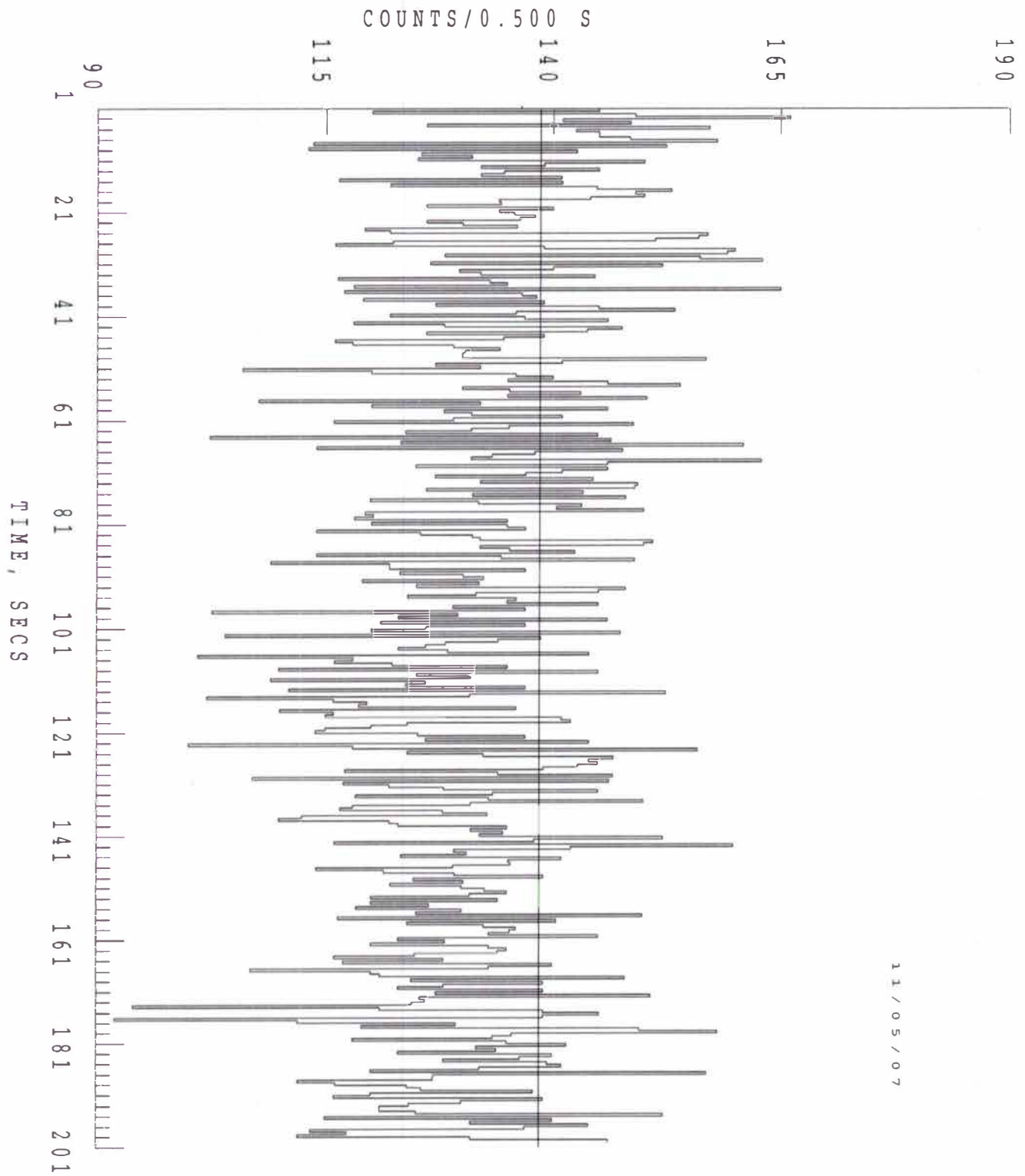
COUNTS/0.250 S



HESSI

25/02/07 15405.000 (SUZAKU_20070225_15505)

25- 150 keV



11/05/07

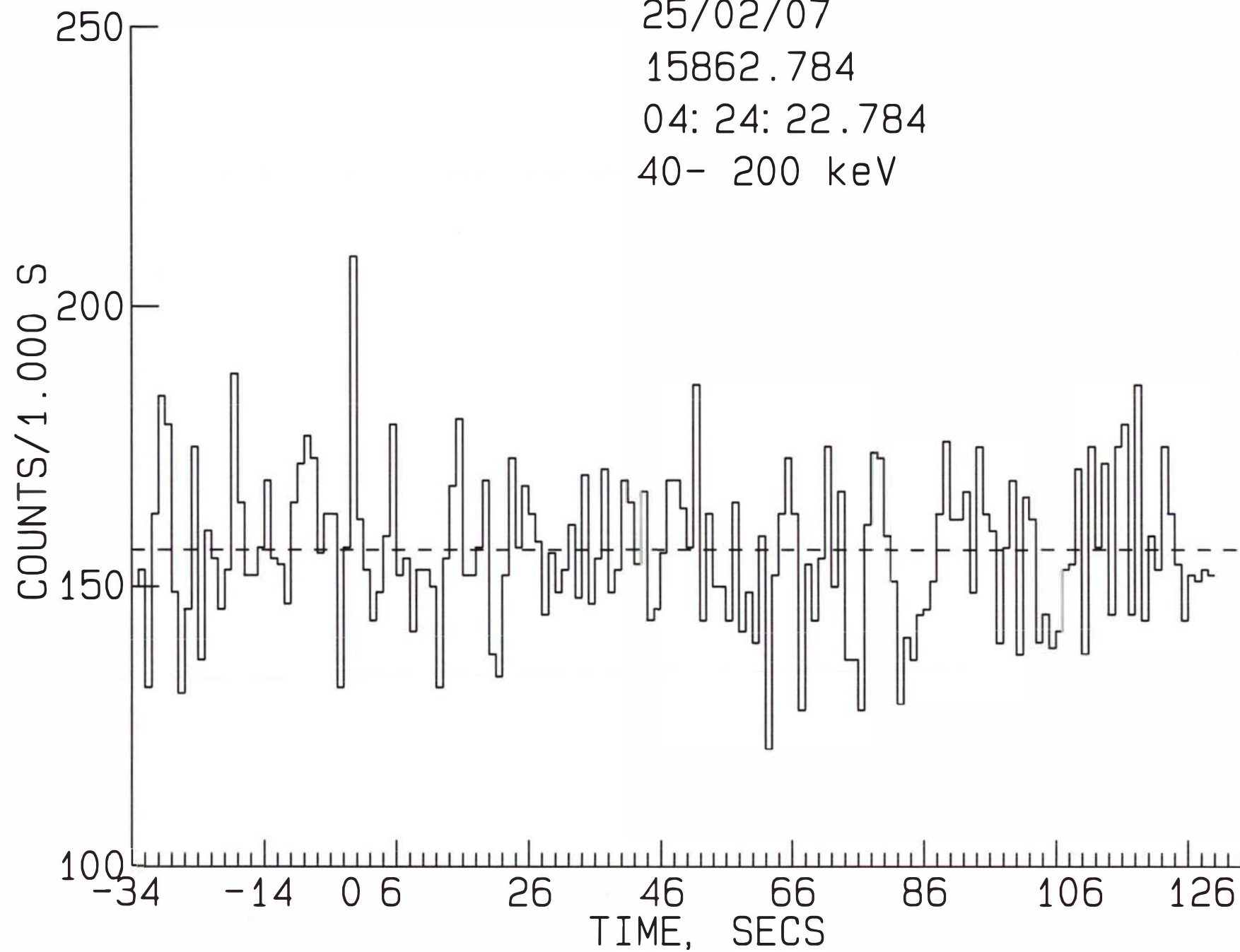
MESSENGER

25/02/07

15862.784

04:24:22.784

40- 200 keV



Date: Aug 3 2010

BURST TRIANGULATION CHECKLIST

1. Suzaku Data

- ☐ 1 second timing error corrected? (Jan 1 – Apr 24 2009)

2. AGILE Data

- ☐ 1 second timing error corrected?

3. MESSENGER Data

- ☐ Coarse or fine oscillator?
- ☐ Timing checked after ~ 1 week?

4. For Konus events

- ☒ Konus ecliptic latitude used with latest calibration?

5. 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?

6. For 3 or More Spacecraft events

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

7. For INTEGRAL events

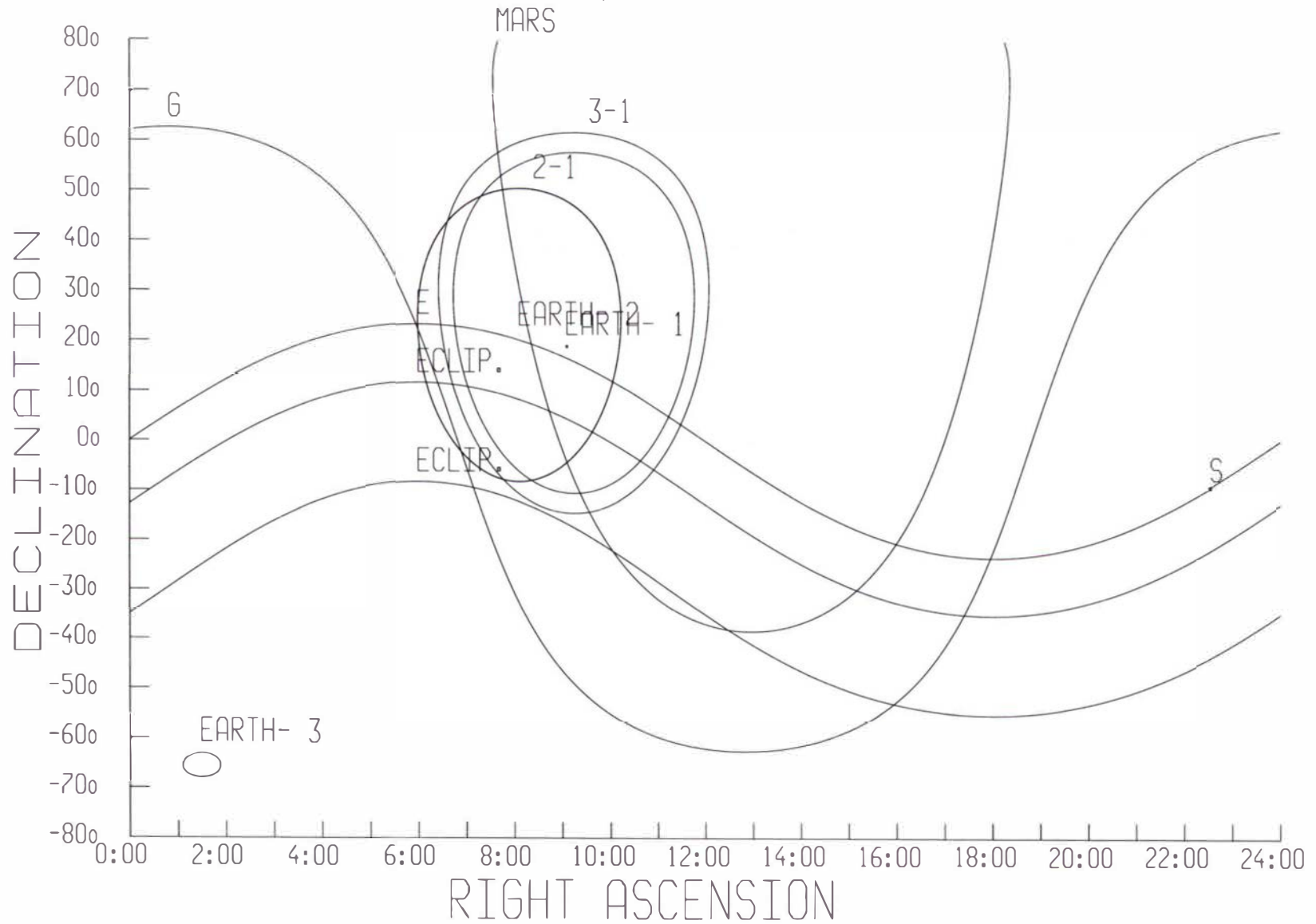
- ☐ INTEGRAL SPI-ACS website checked for bursts that weren't transmitted automatically?
- ☐ 125 ms added to INTEGRAL SPI-ACS time for bursts prior to April 2 2004 11:00 UT?
- ☐ Updated ephemeris used for bursts prior to September 30, 2003?

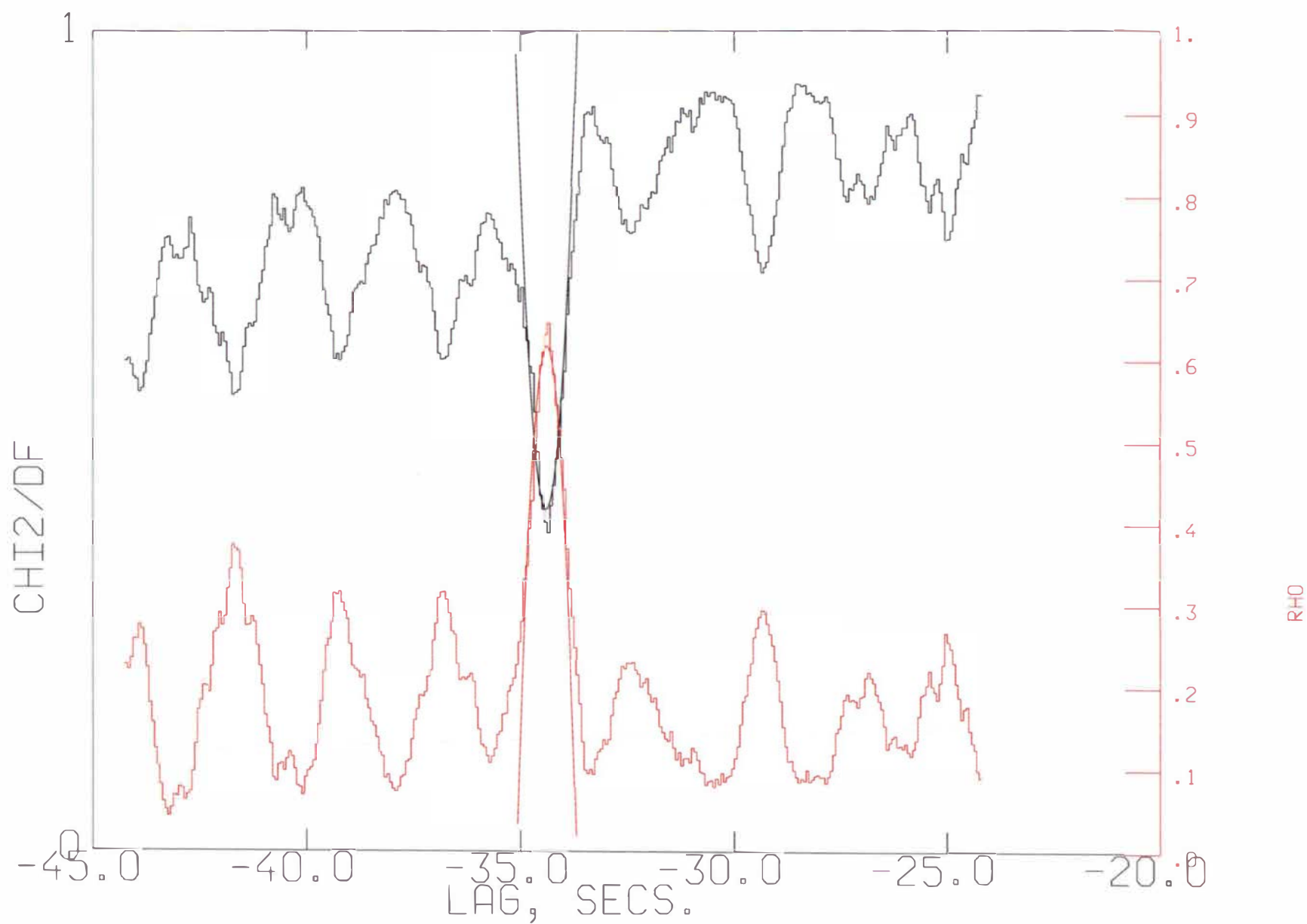
☒ ACCESS and MBL4 databases updated, with identical times?

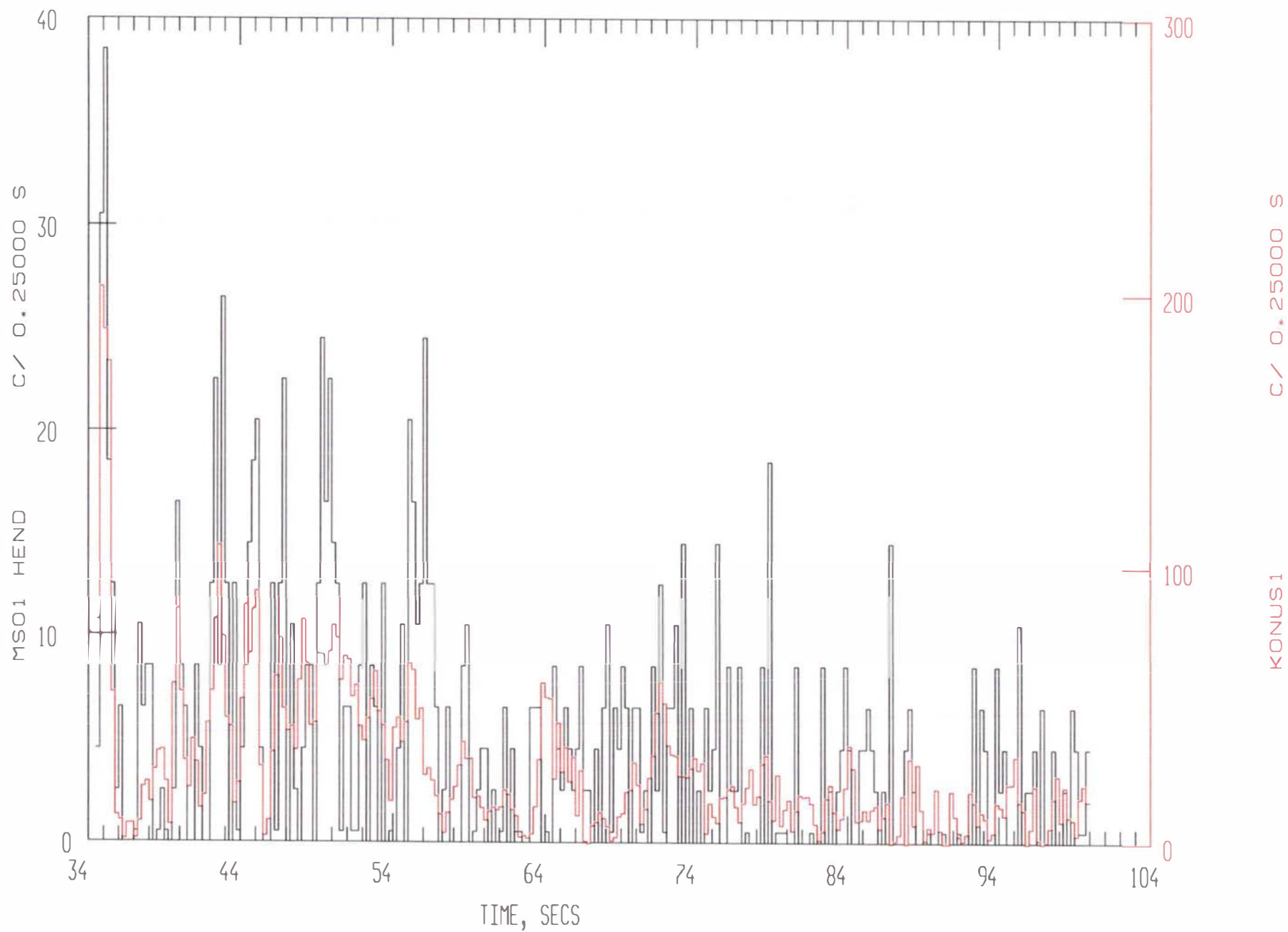
EVENT OF FEB 25, 2007 6:58

03/08/2010

N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN
1 KONUS1
E=ECLIPTIC
2 MO
G=GALACTIC EQUATOR
3 INTEGRAL







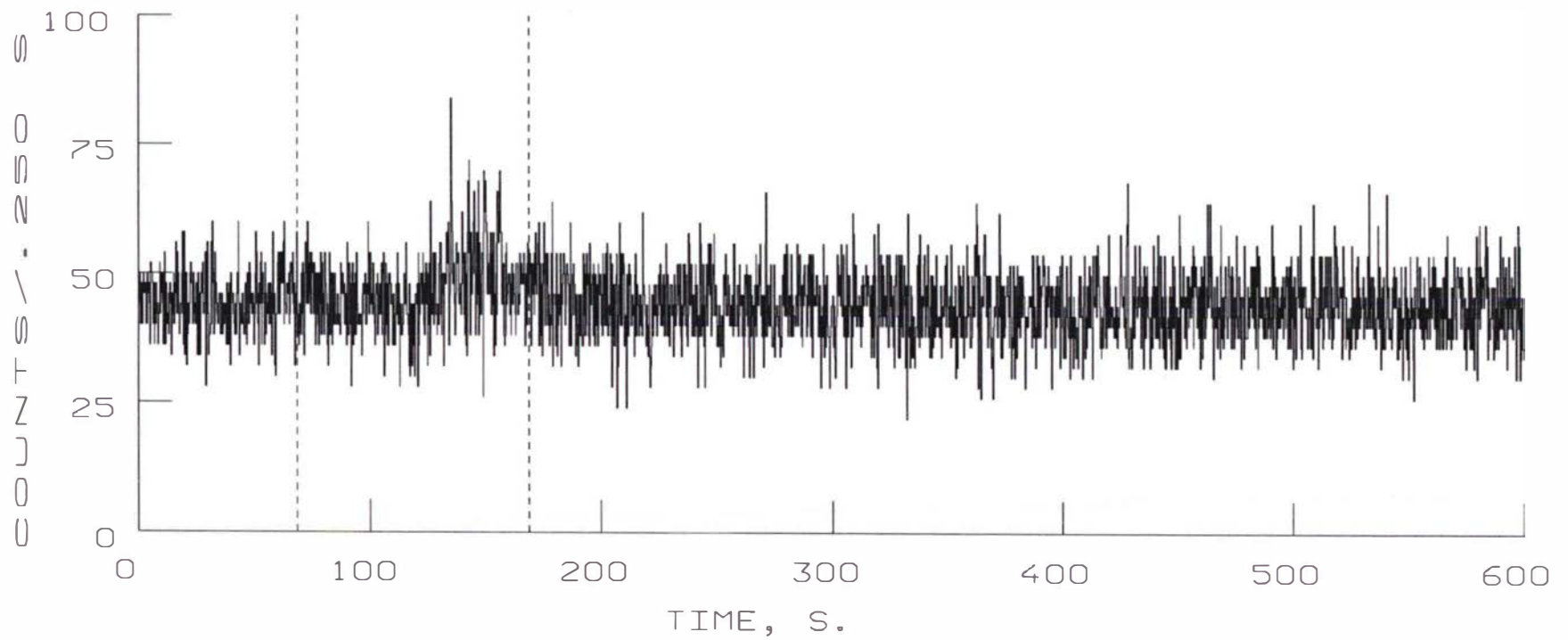
MS01 HEND

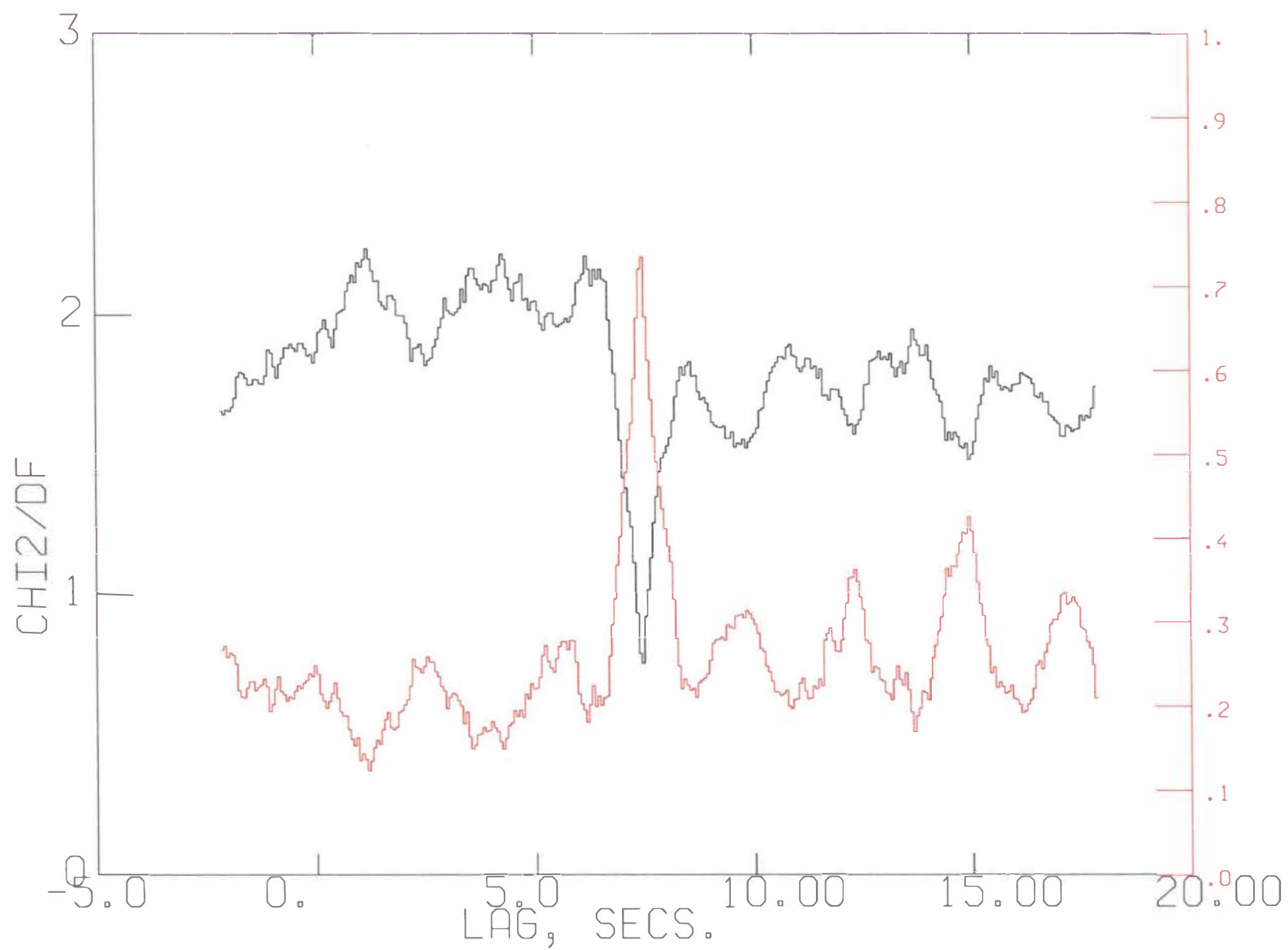
03/08/2010

25/02/2007 25873.363 s

50-3000 keV

N= 10 M=80
>4.0 SIGMA FLUCTUATIONS





KONUS1

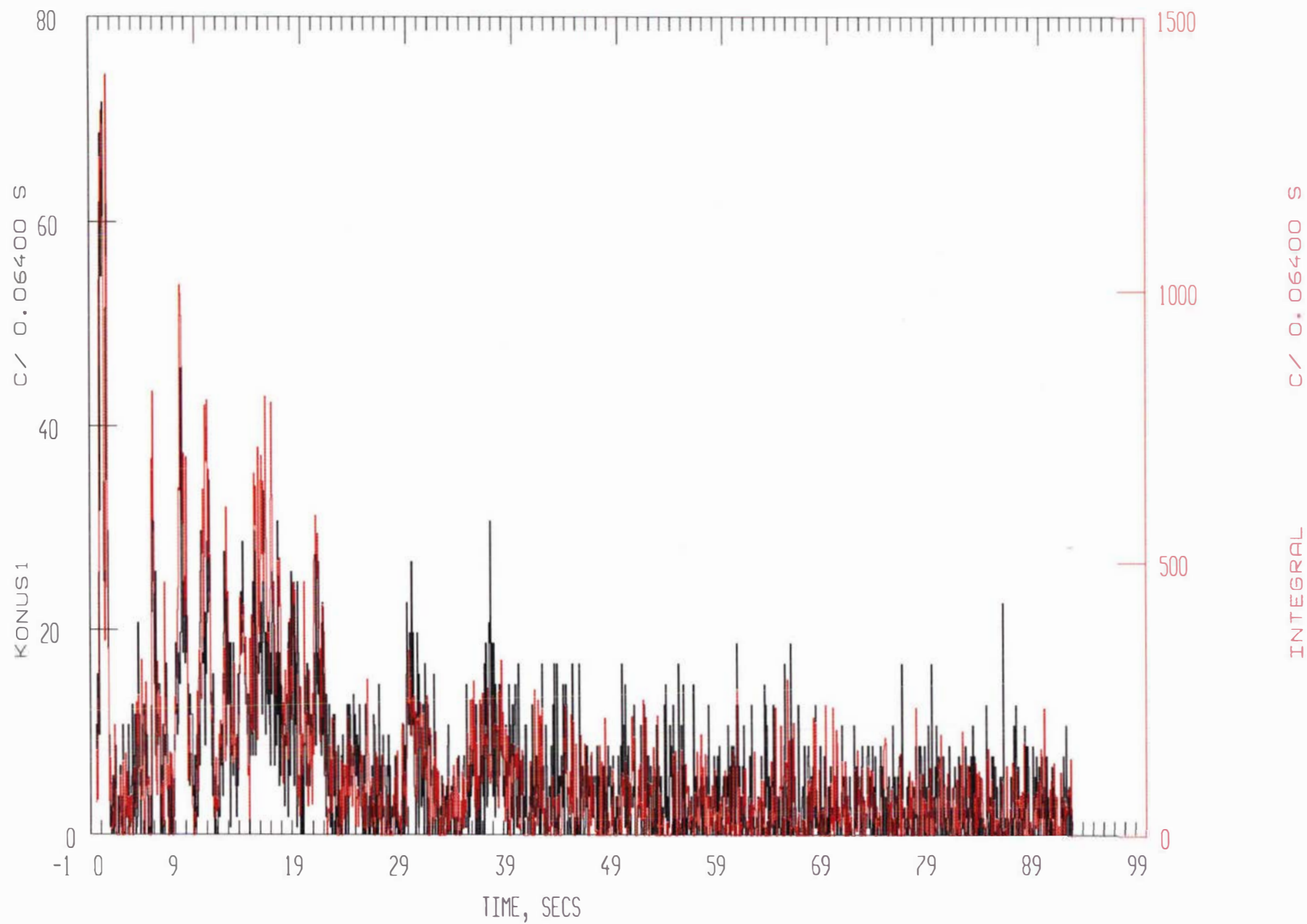
-INTEGRAL

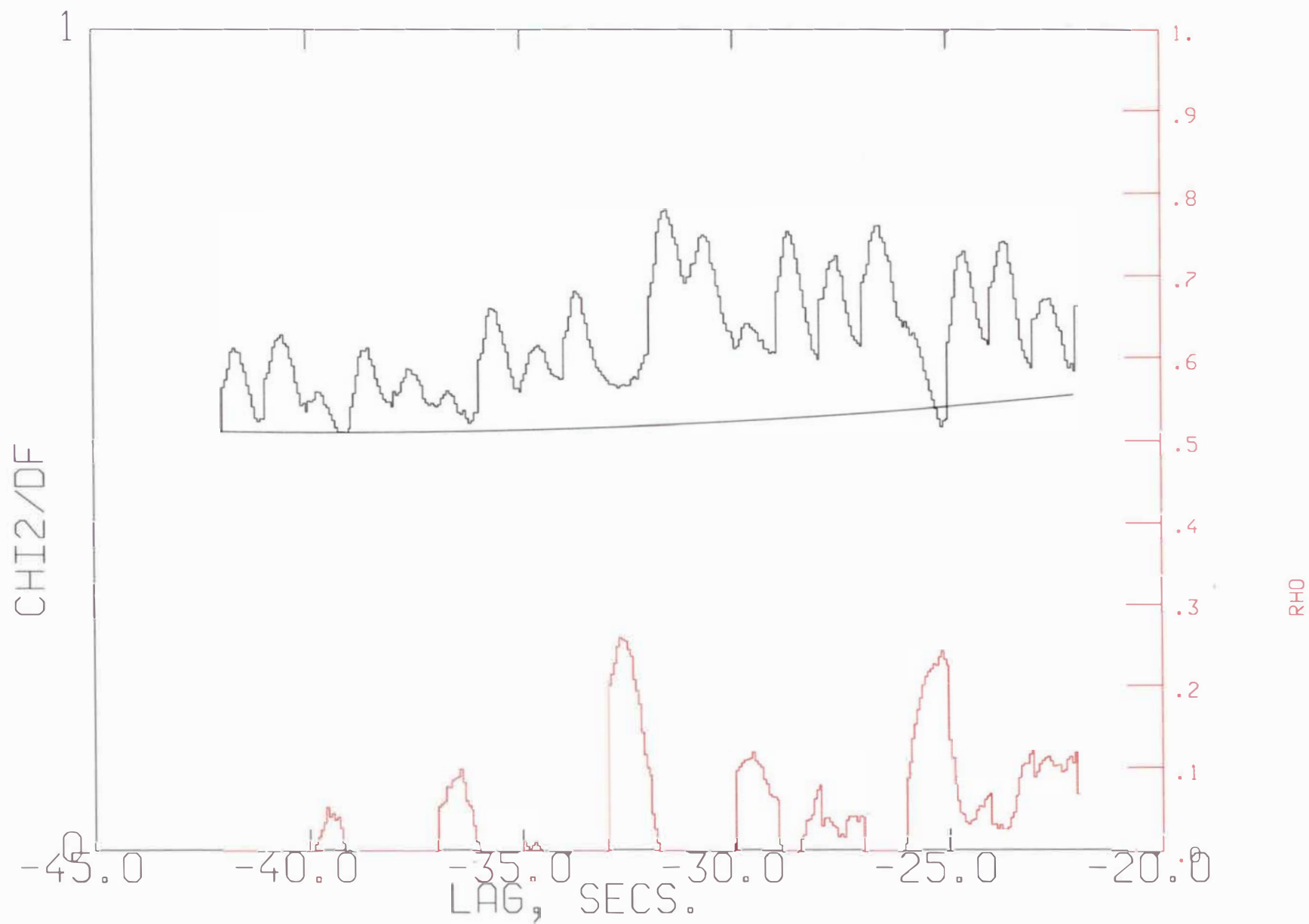
CORRELATION

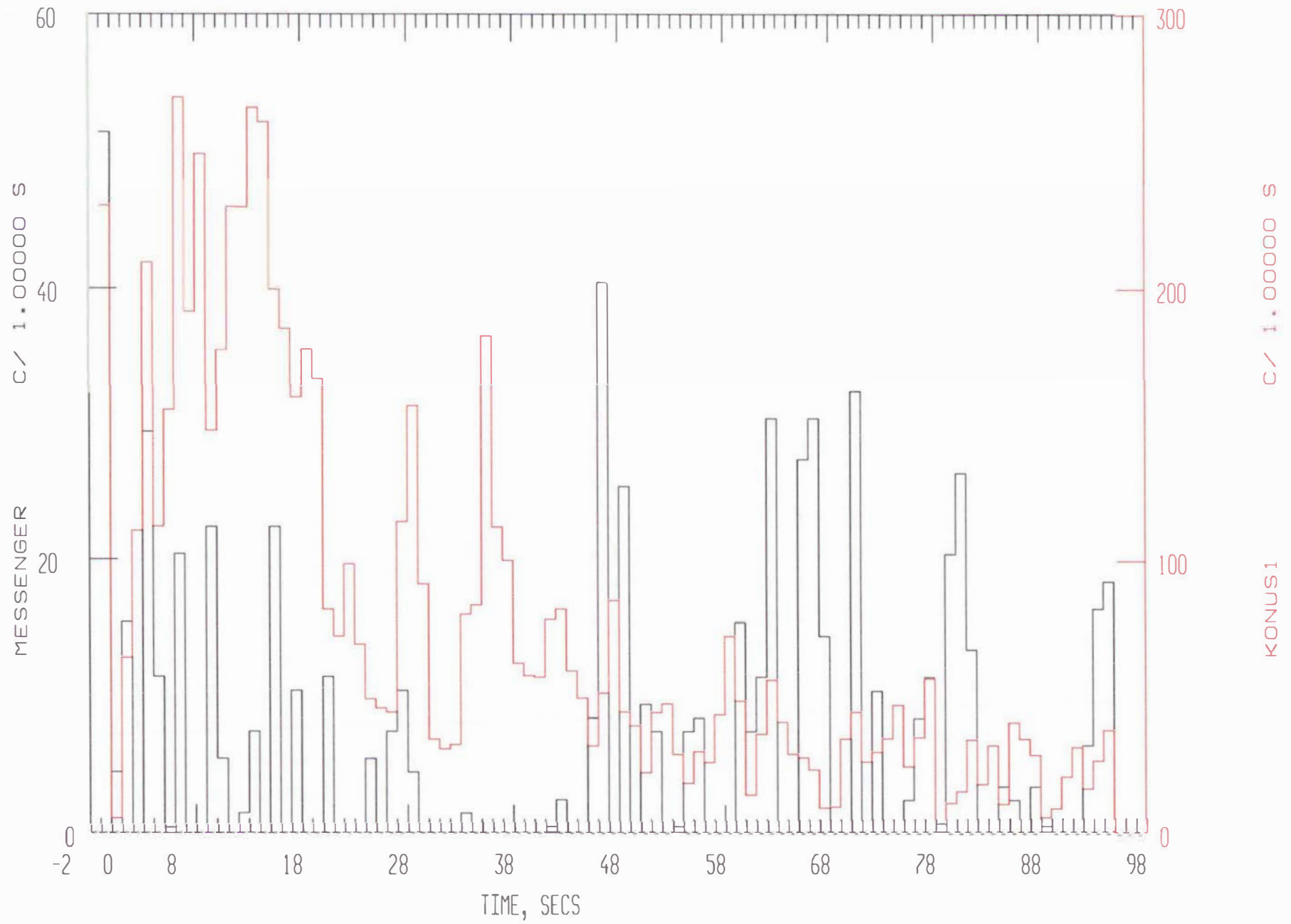
25/02/07

25095.310

3/ 8/10







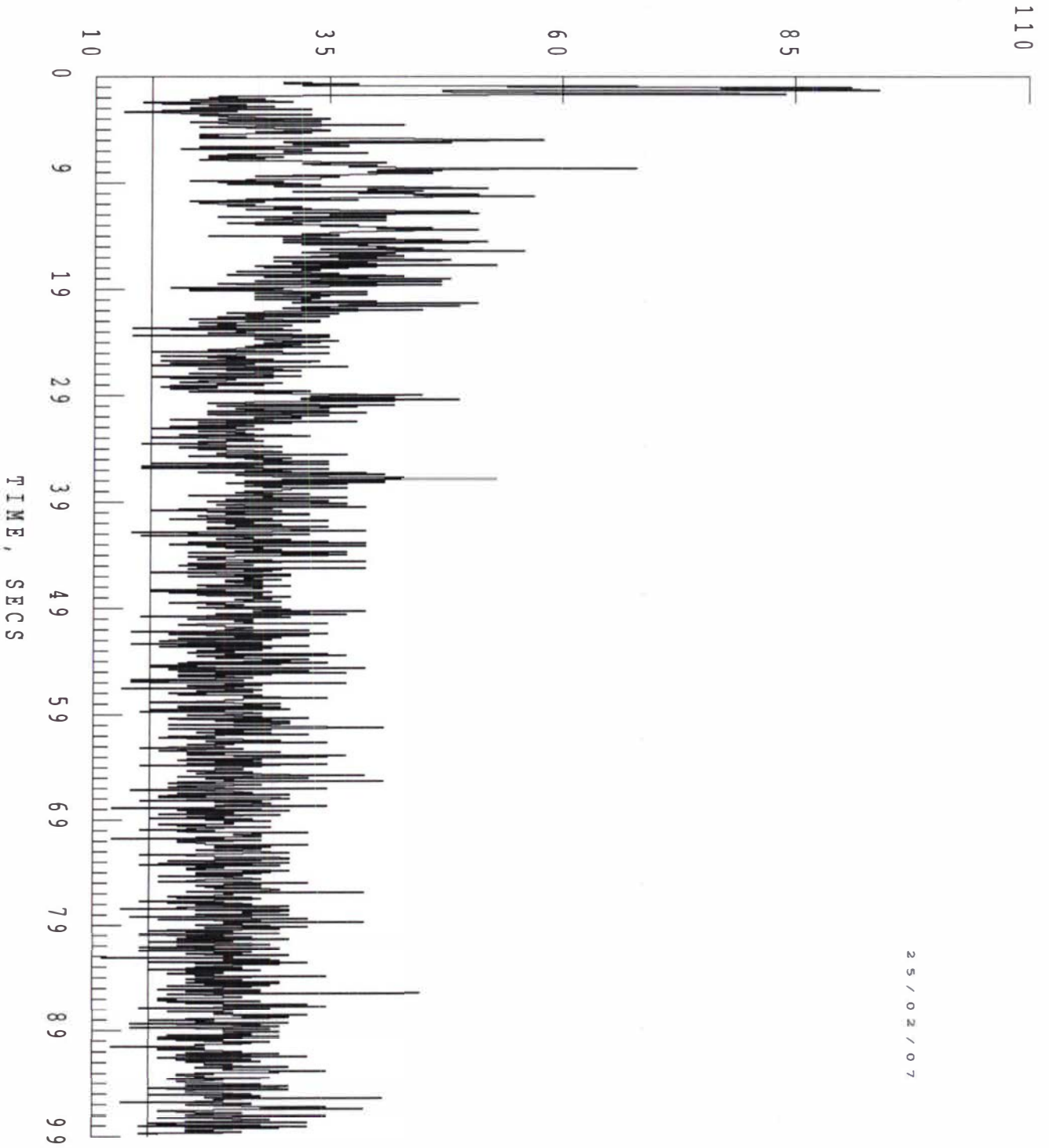
KONUS1

25/02/07

25095.310

50 - 200 keV

COUNTS/0.064 S



25/02/07

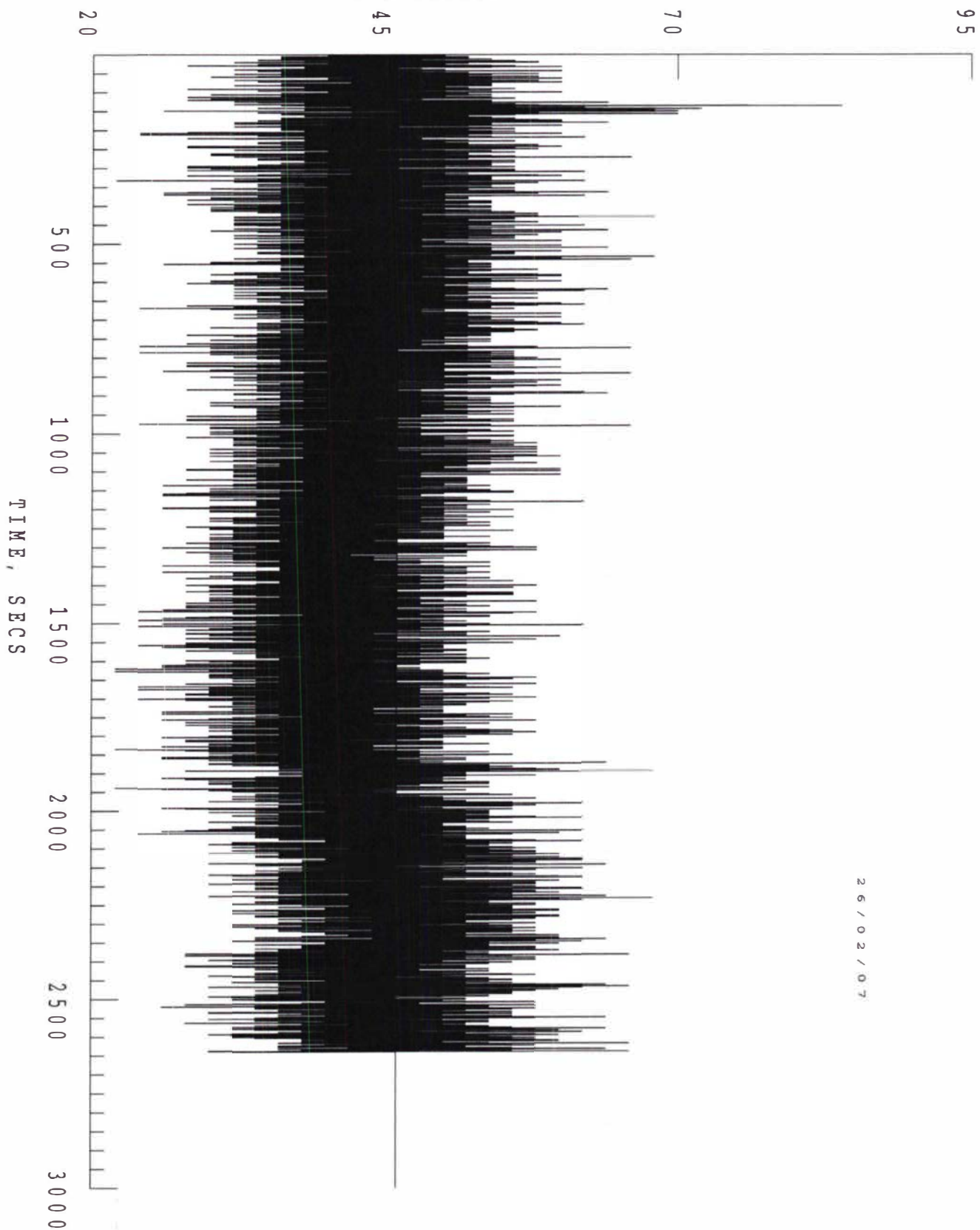
MS01

25/02/07

25873.363

50 - 3000 keV

COUNTS/0.250 S



26/02/07

From williams@sunspot.ssl.berkeley.edu Wed May 16 13:19:42 2007
X-ASG-Debug-ID: 1179346797-43c900390000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
"-Barracuda-Connect: gammaburst.ssl.berkeley.edu[128.32.98.141]
-Barracuda-Start-Time: 1179346797
Date: Wed, 16 May 2007 13:29:42 -0700 (PDT)
From: williams@ssl.berkeley.edu
To: khurley@ssl.berkeley.edu
X-ASG-Orig-Subj: No_RHESSI_data_for_konus_20070225_25089
Subject: No_RHESSI_data_for_konus_20070225_25089
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
X-ASG-Whitelist: Sender (Per-User)

HESSI 50 to 200 keV Counts
Created 16-May-2007 13:18:39.00
Detectors: 3r 4r 5r 6r 8r 9r
columns: time (sec) counts (summed over detectors)
time_interval = 0.0640000
Full time range in SAA
No Eclipse
No non-SAA data gap
No Data Available For This Time Range
Do Not Retry

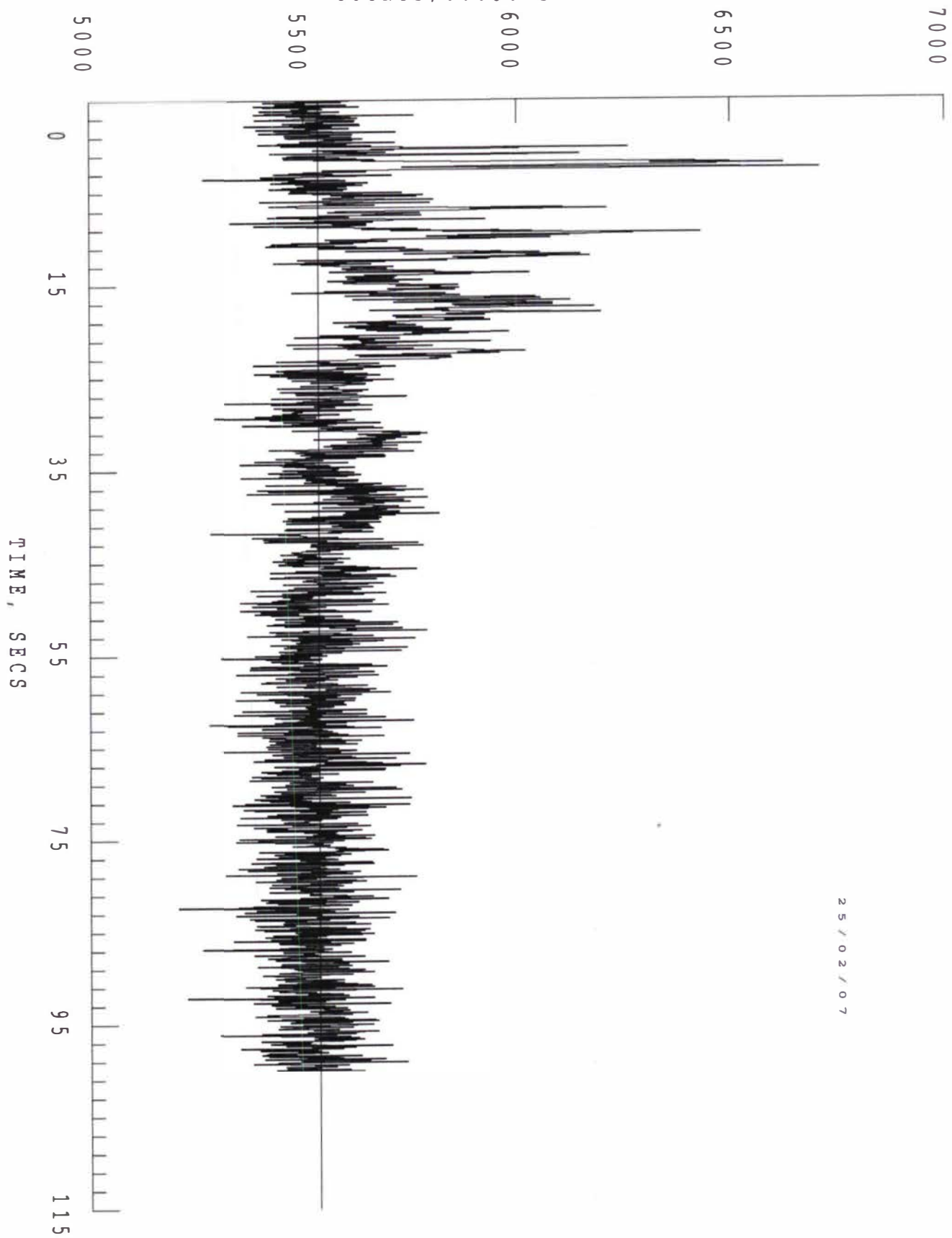
INTEGRAL

25/02/07

25089.484

100-10000 keV

COUNTS/0.050 S



From palmer@lanl.gov Mon Feb 26 09:04:50 2007
 X-ASG-Debug-ID: 1172509624-7b0b000e0000-LqZNIK
 X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
 X-Barracuda-Connect: mailwasher.lanl.gov[192.65.95.54]
 -Barracuda-Start-Time: 1172509624
 Mime-Version: 1.0
 Date: Mon, 26 Feb 2007 10:05:46 -0700
 To: craigm@milkyway.gsfc.nasa.gov, dmopalmer@gmail.com, efenimore@lanl.gov,
 gehrels@gsfc.nasa.gov, jayc@milkyway.gsfc.nasa.gov,
 koss@milkyway.gsfc.nasa.gov, krimm@milkyway.gsfc.nasa.gov,
 lmb@milkyway.gsfc.nasa.gov, "Kassandra M. Mclean" <kmclean@lanl.gov>,
 michael@milkyway.gsfc.nasa.gov, palmer@lanl.gov,
 parsons@milkyway.gsfc.nasa.gov, scott@milkyway.gsfc.nasa.gov,
 takanori@milkyway.gsfc.nasa.gov, tueller@milkyway.gsfc.nasa.gov,
 gsato@astro.isas.jaxa.jp, ohno@milkyway.gsfc.nasa.gov,
 tilan.ukwatta@gmail.com, skinner@cesr.fr

From: David Palmer <palmer@lanl.gov>

X-ASG-Orig-Subj: Daily Report 2007-02-26

Subject: Daily Report 2007-02-26

Cc: golen@mail.ioffe.ru, Kevin Hurley <khurley@ssl.berkeley.edu>,
 news-hxd-ipn@amalthea.phys.s.u-tokyo.ac.jp,
 ohno@hirax7.hepl.hiroshima-u.ac.jp, val@mail.ioffe.ru,
 yamaoka@phys.aoyama.ac.jp, swank@milkyway.gsfc.nasa.gov

X-PMX-Version: 4.7.1.128075

X-Barracuda-Bayes: INNOCENT GLOBAL 0.1210 1.0000 -1.2682

X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.9756

Rule breakdown below

pts	rule name	description
-----	-----------	-------------

Out-of-field burst, 14k counts/27 seconds at 194079490 -> 2007-02-25
 06:58:10 (Triggers #261929-261930) while pointing at [50.613, -37.238
 263.379]

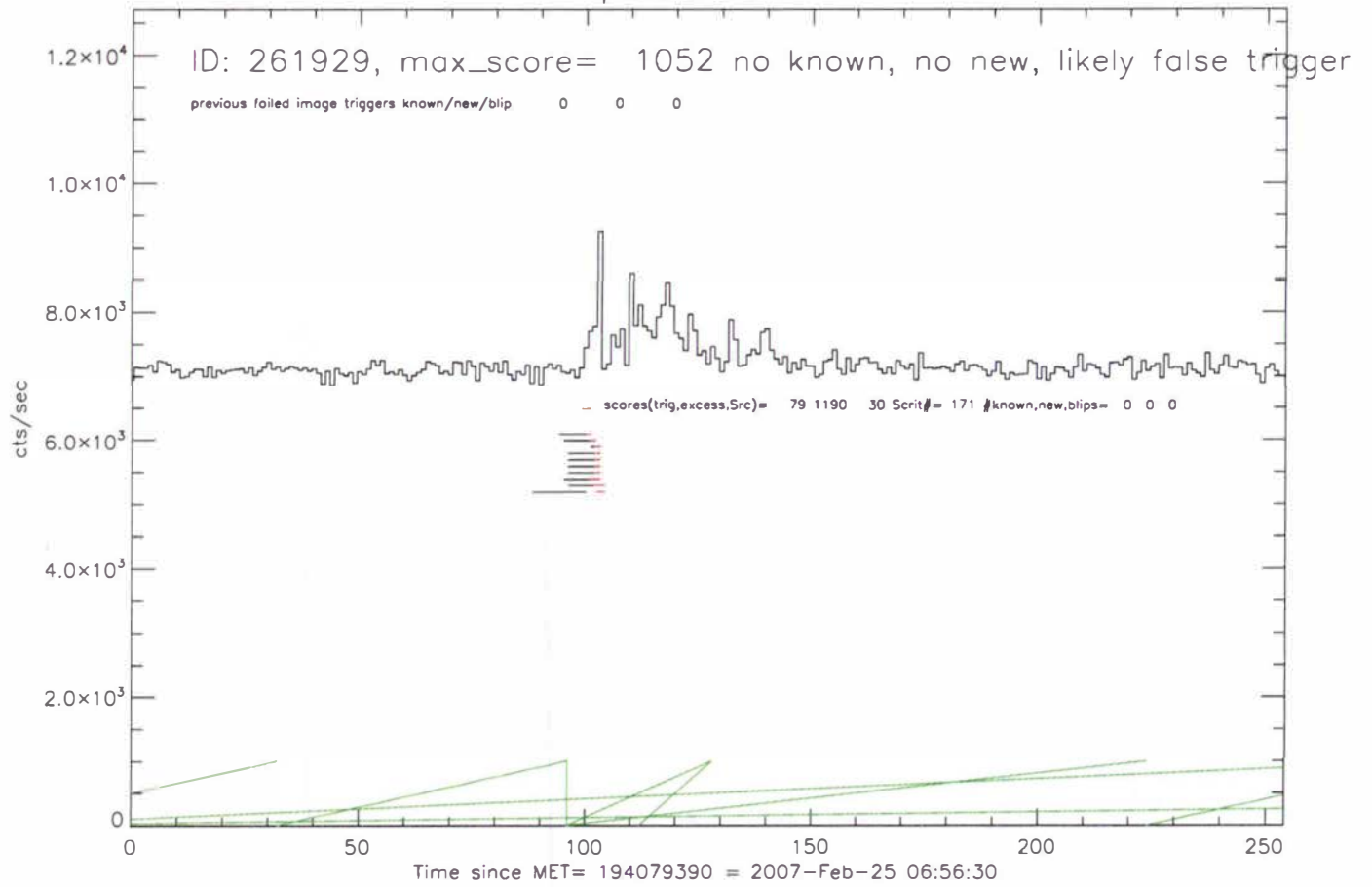
GRB 070224 was detected at 5.95 sigma during the 64 second interval before the one that triggered at 7.5 sigma

A 5-minute image found a 6.1 sigma blip at (221.077, -46.393) at
 2007-02-24 08:51 . Simbad shows nothing at that location. Not worth
 believing in and not worth a follow-up unless we see it again.

As Jay Cummings pointed out, SGR 1806-20 is active again,. Here are
 the burst times for this, and their integration times and
 intensities. (Duplicates have not been weeded out.) The 2007-02-23
 08:03:54 burst is the most intense we've seen in nearly two years.

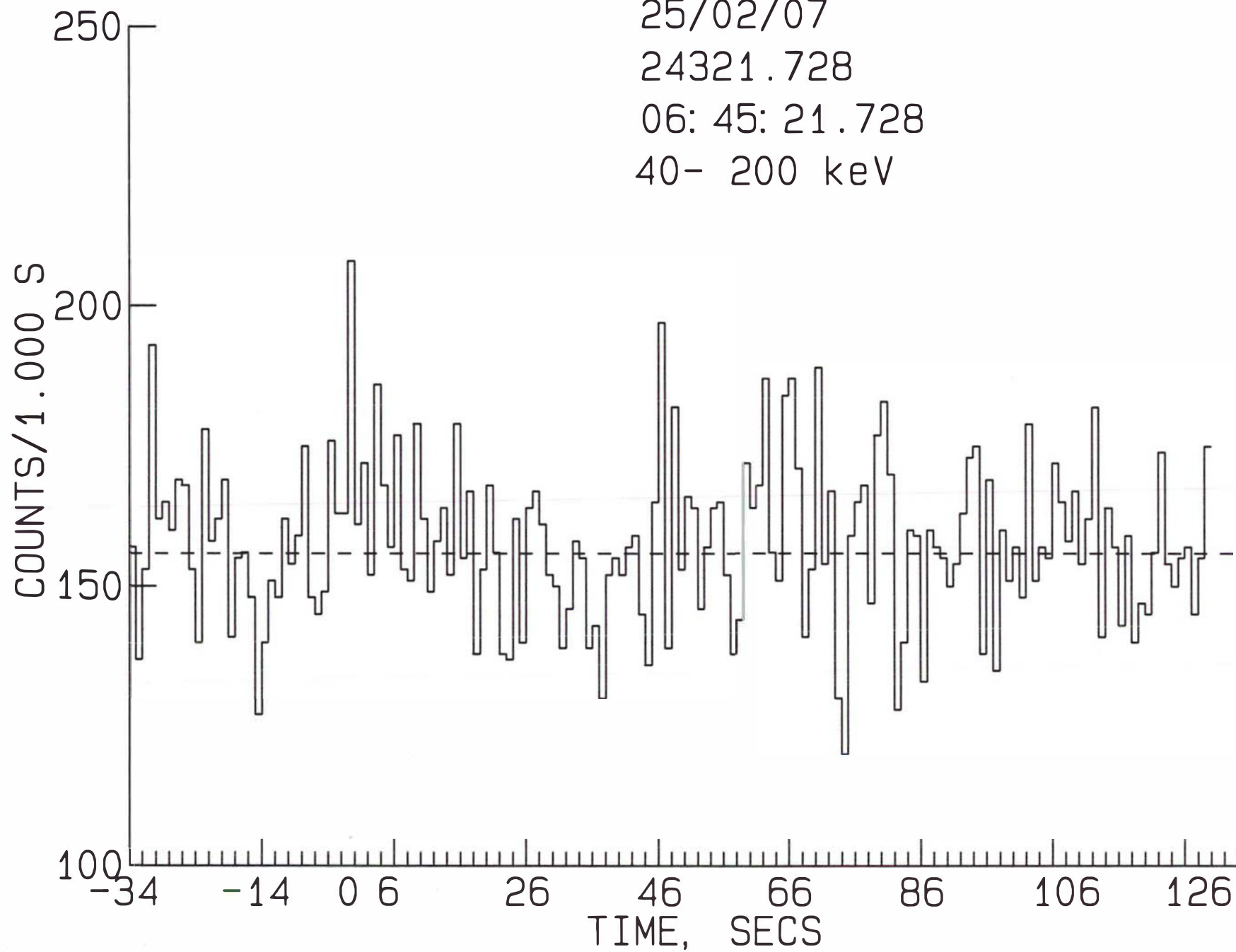
2007-01-21 06:06:16.692000	= MET 191052376.692	0.0320	21
2007-01-26 08:14:17.200000	= MET 191492057.200	0.0160	27
2007-01-29 08:51:27.028000	= MET 191753487.028	0.0160	44
2007-01-29 08:51:27.032000	= MET 191753487.032	0.0080	33
2007-02-01 07:08:37.824000	= MET 192006517.824	0.0320	39
2007-02-07 04:15:31.328000	= MET 192514531.328	0.1280	408
2007-02-07 04:15:31.388000	= MET 192514531.388	0.0640	303
2007-02-15 22:54:24.100000	= MET 193272864.100	0.0640	198
2007-02-16 13:46:02.232000	= MET 193326362.232	0.0320	42
2007-02-19 20:22:04.744000	= MET 193609324.744	0.0080	28

parse errors 1 1



10/05/07

MESSENGER
25/02/07
24321.728
06:45:21.728
40- 200 keV



From yamaoka@phys.aoyama.ac.jp Tue Feb 27 01:45:04 2007
 X-ASG-Debug-ID: 1172569645-735e00330000-LqZNIK
 X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
 -Barracuda-Connect: scmailgw1.scop.aoyama.ac.jp[133.2.251.194]
 -Barracuda-Start-Time: 1172569645
 To: palmer@lanl.gov
 Cc: craigm@milkyway.gsfc.nasa.gov, dmopalmer@gmail.com, efenimore@lanl.gov,
 gehrels@gsfc.nasa.gov, jayc@milkyway.gsfc.nasa.gov,
 koss@milkyway.gsfc.nasa.gov, krimm@milkyway.gsfc.nasa.gov,
 lmb@milkyway.gsfc.nasa.gov, kmclean@lanl.gov,
 michael@milkyway.gsfc.nasa.gov, parsons@milkyway.gsfc.nasa.gov,
 scott@milkyway.gsfc.nasa.gov, takanori@milkyway.gsfc.nasa.gov,
 tueller@milkyway.gsfc.nasa.gov, gsato@astro.isas.jaxa.jp,
 ohno@milkyway.gsfc.nasa.gov, tilan.ukwatta@gmail.com, skinner@cesr.fr,
 golen@mail.ioffe.ru, khurley@ssl.berkeley.edu,
 news-hxd-ipn@amalthea.phys.s.u-tokyo.ac.jp,
 ohno@hirax7.hepl.hiroshima-u.ac.jp, val@mail.ioffe.ru,
 swank@milkyway.gsfc.nasa.gov
 Cc: yamaoka@phys.aoyama.ac.jp
 X-ASG-Orig-Subj: Re: Daily Report 2007-02-26
 Subject: Re: Daily Report 2007-02-26
 Mime-Version: 1.0
 Content-Transfer-Encoding: 7bit
 Date: Tue, 27 Feb 2007 18:47:19 +0900
 From: Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>
 X-Dispatcher: imput version 20000228(IM140)
 X-Barracuda-Bayes: INNOCENT GLOBAL 0.4810 1.0000 0.0000
 X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
 X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.9821

Rule breakdown below

pts	rule name	description
0.00	UNPARSEABLE_RELAY	Informational: message has unparseable relay

Dear David,

> Out-of-field burst, 14k counts/27 seconds at 194079490 -> 2007-02-25
 > 06:58:10 (Triggers #261929-261930) while pointing at [50.613, -37.238
 > 263.379] **25090**

The WAM did not detect this burst probably due to the earth occultaion.

> GRB 070224 was detected at 5.95 sigma during the 64 second interval
 > before the one that triggered at 7.5 sigma

Suzaku was at the SAA.

> A 5-minute image found a 6.1 sigma blip at (221.077, -46.393) at
 > 2007-02-24 08:51 . Simbad shows nothing at that location. Not worth
 > believing in and not worth a follow-up unless we see it again.

We cannot see any increase around this time.

For SGR bursts, I will report later.

We have rights to trigger Suzaku ToO observation of four known SGRs
 (PI:Nakagawa), so I will be very happy if you could provide us information
 about the Swift/BAT detection.

Best regards,

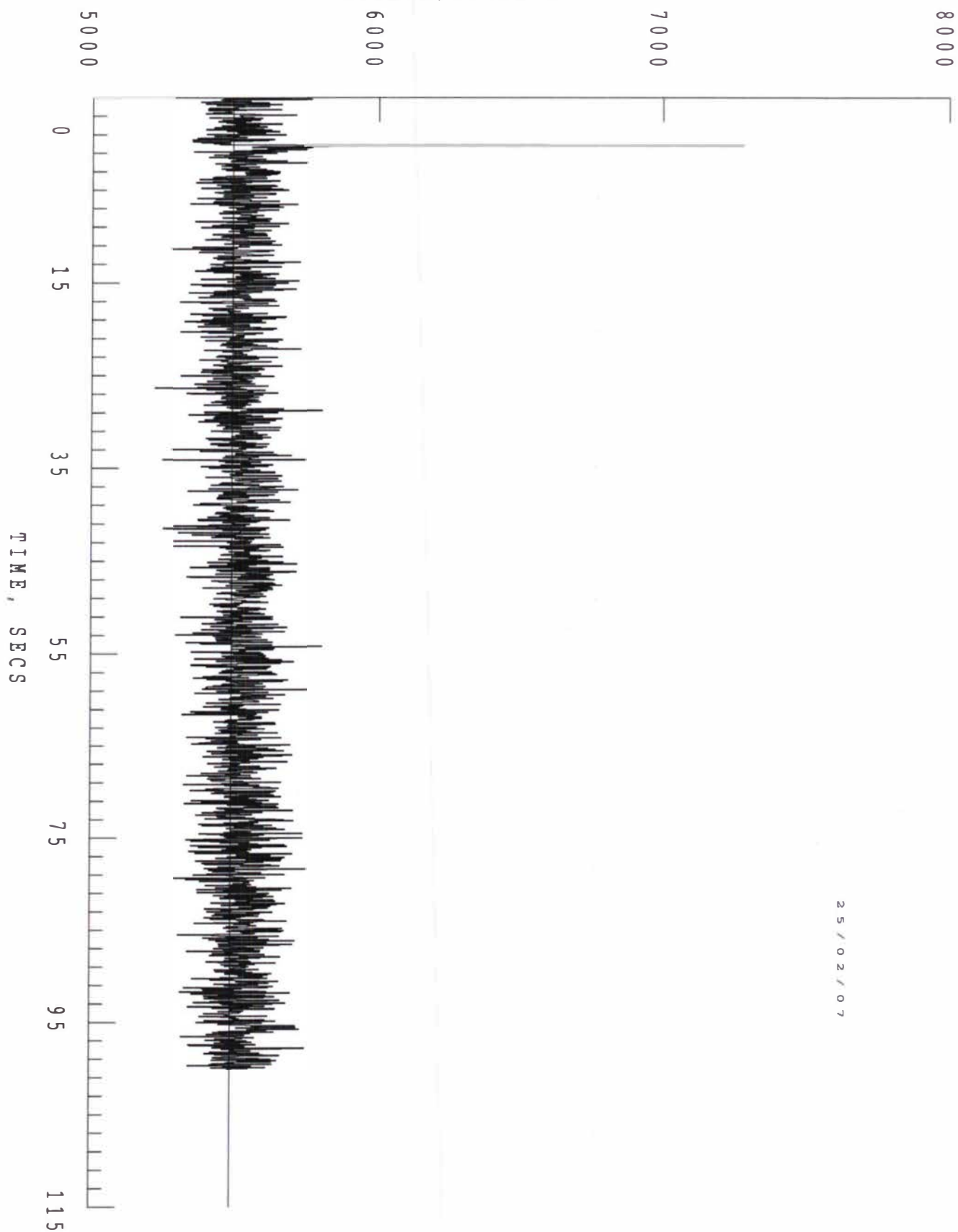
INTEGRAL

25/02/07

40350.500

100-10000 keV

COUNTS/0.050 S



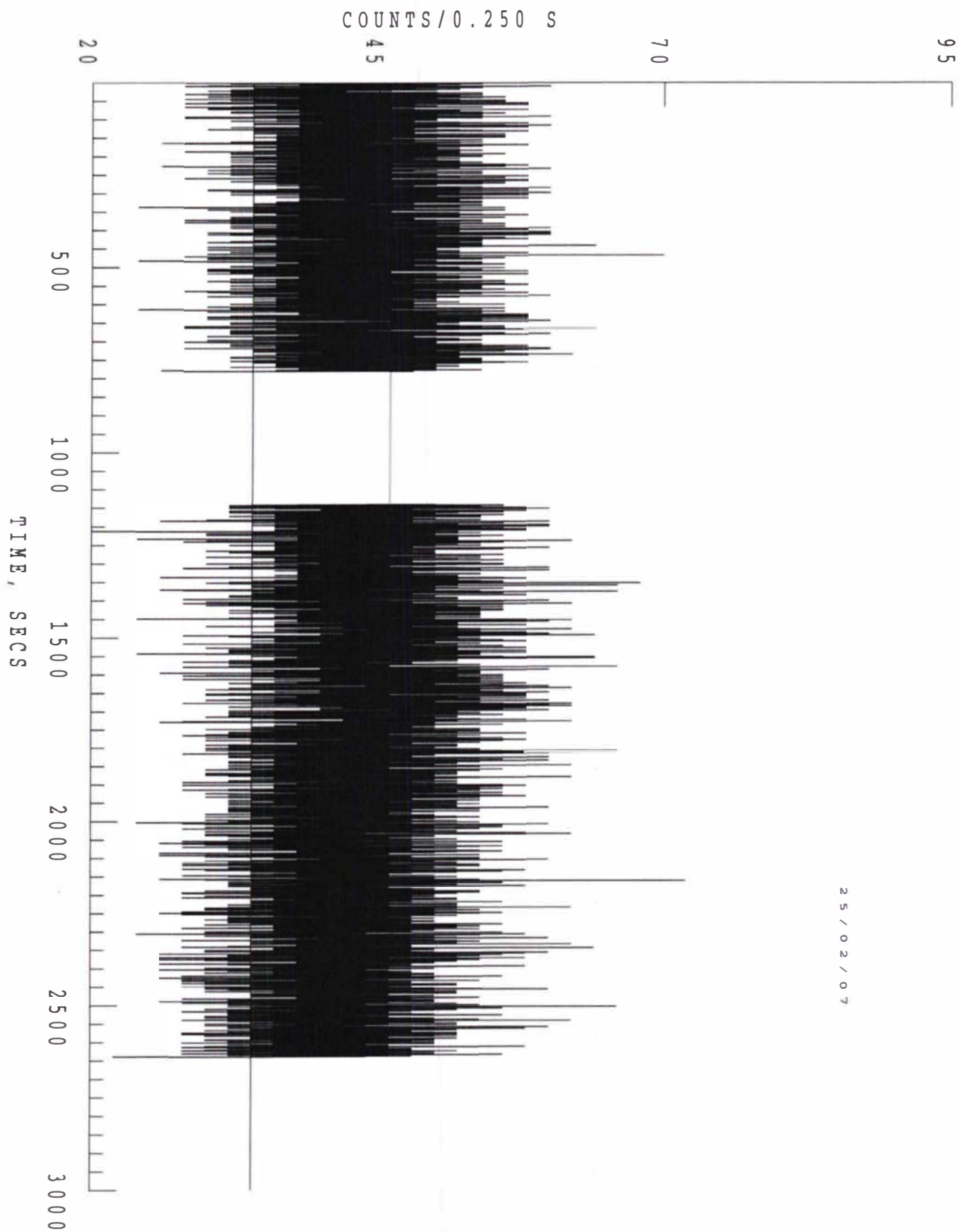
25 / 02 / 07

MS01

25/02/07

39013.142

50 - 3000 keV

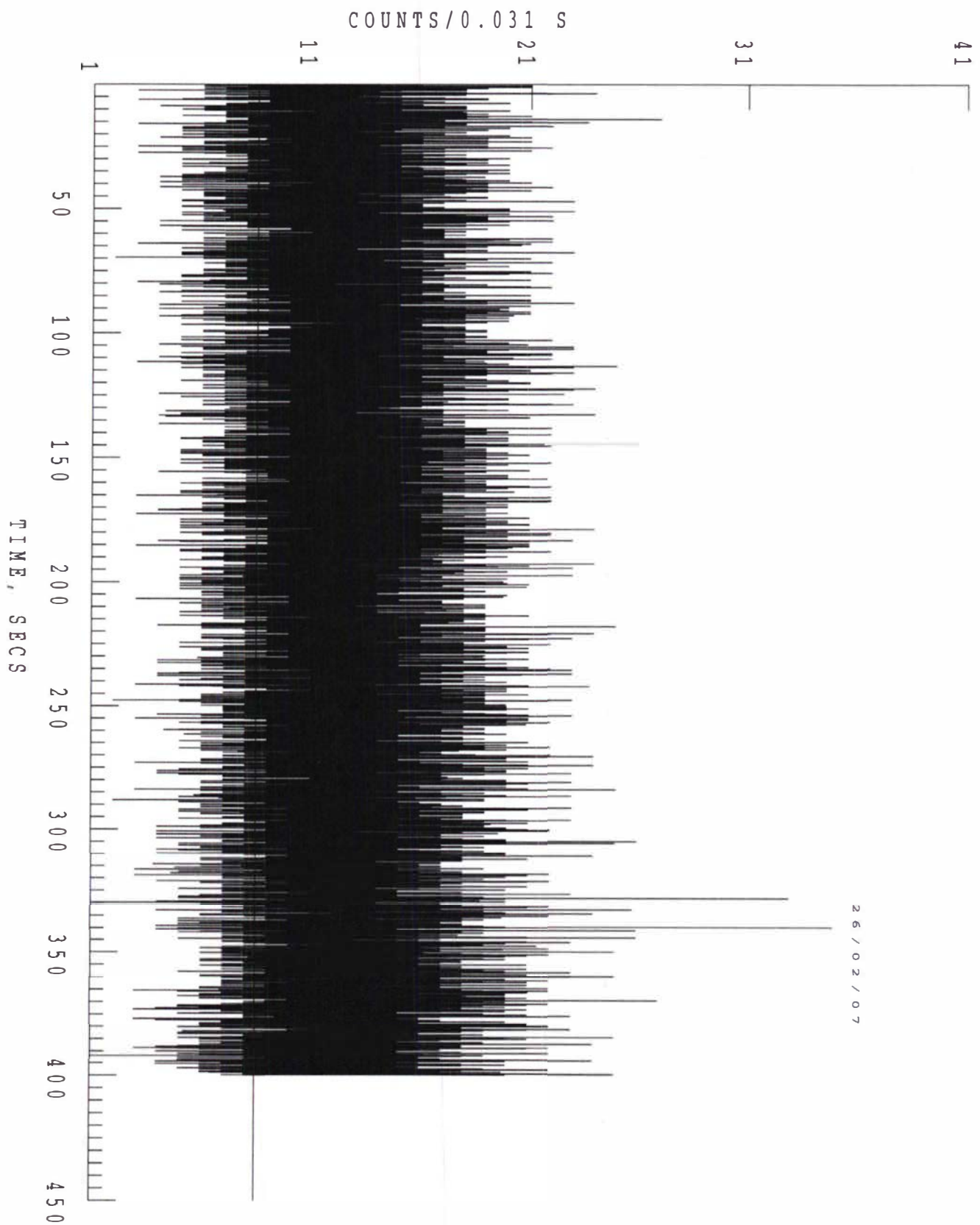


25 / 02 / 07

HESSI

25/02/07 40150.000 (INTEGRAL_20070225_40350)

25- 150 keV



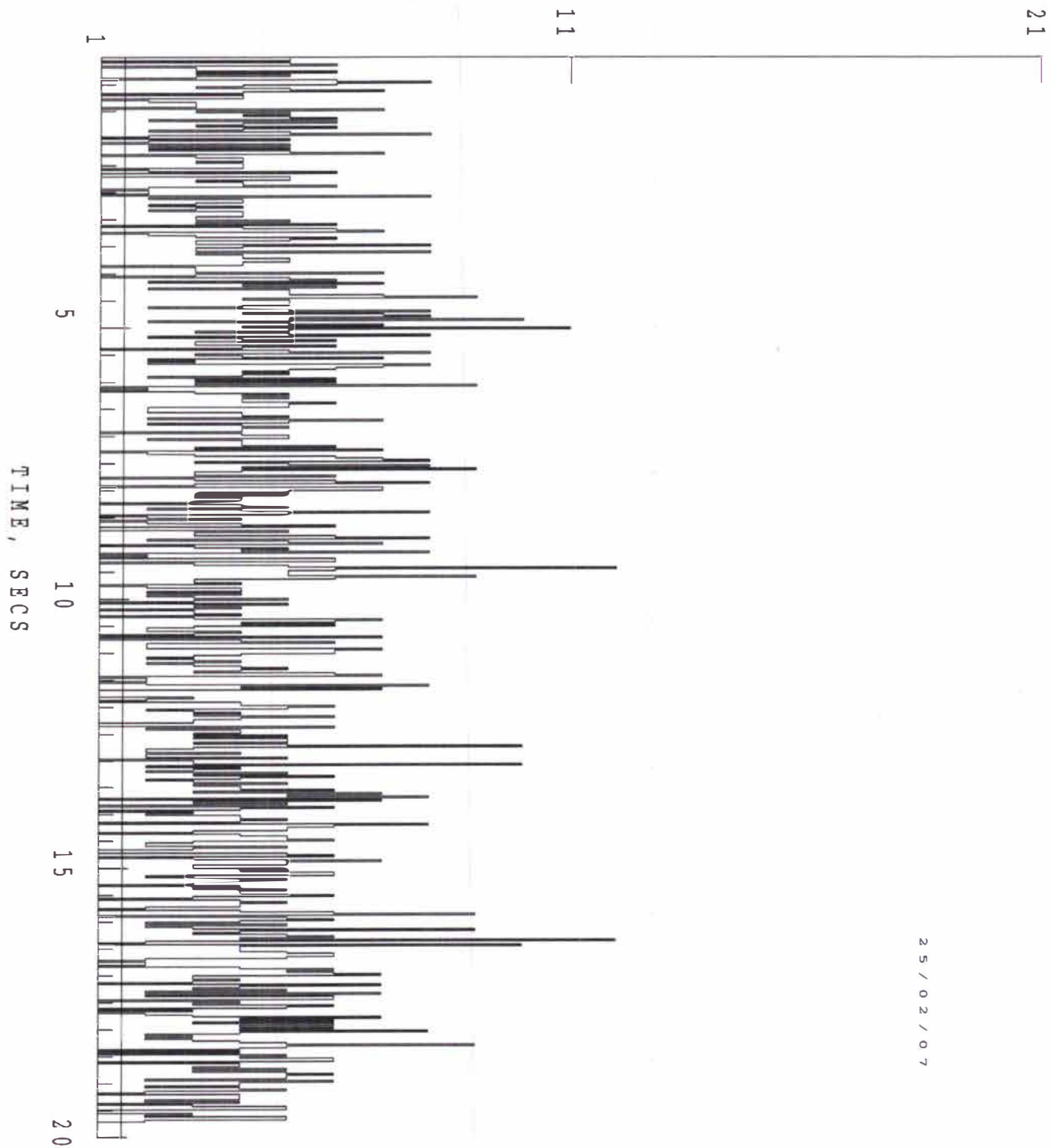
MO

25/02/07

56175.831

116- 337 keV

COUNTS/0.032 S



25/02/07

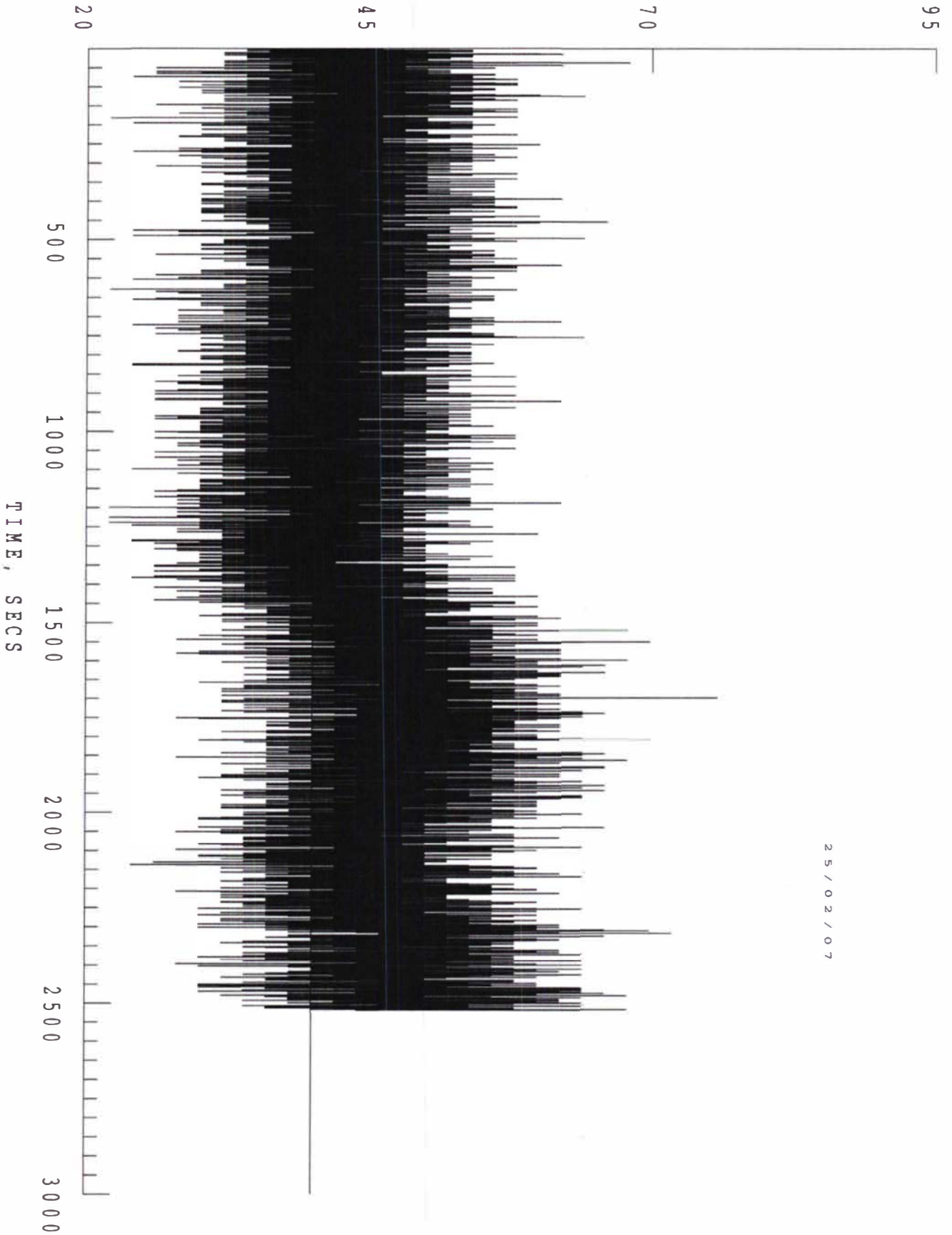
MS01

25/02/07

54852.842

50 - 3000 keV

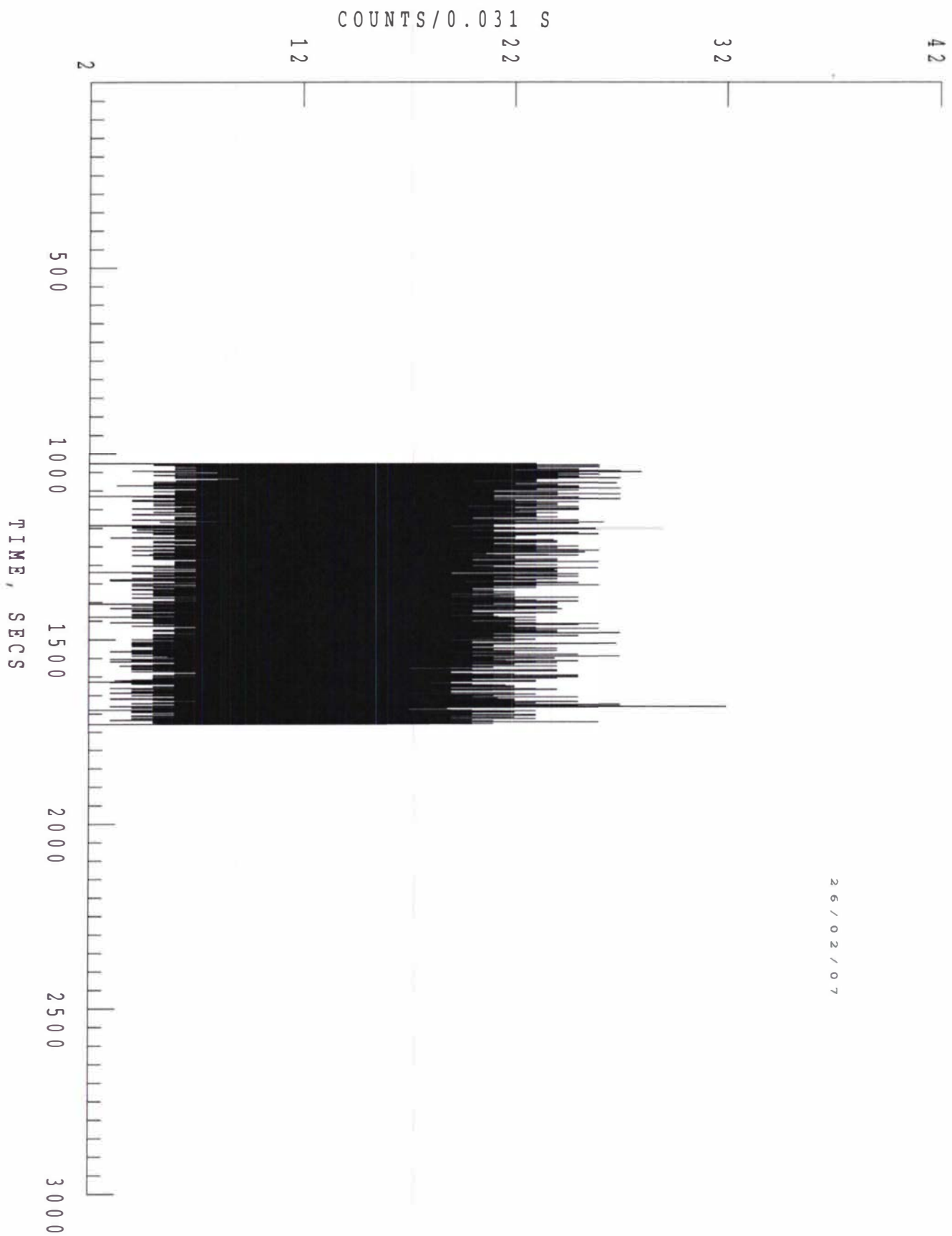
COUNTS/0.250 S

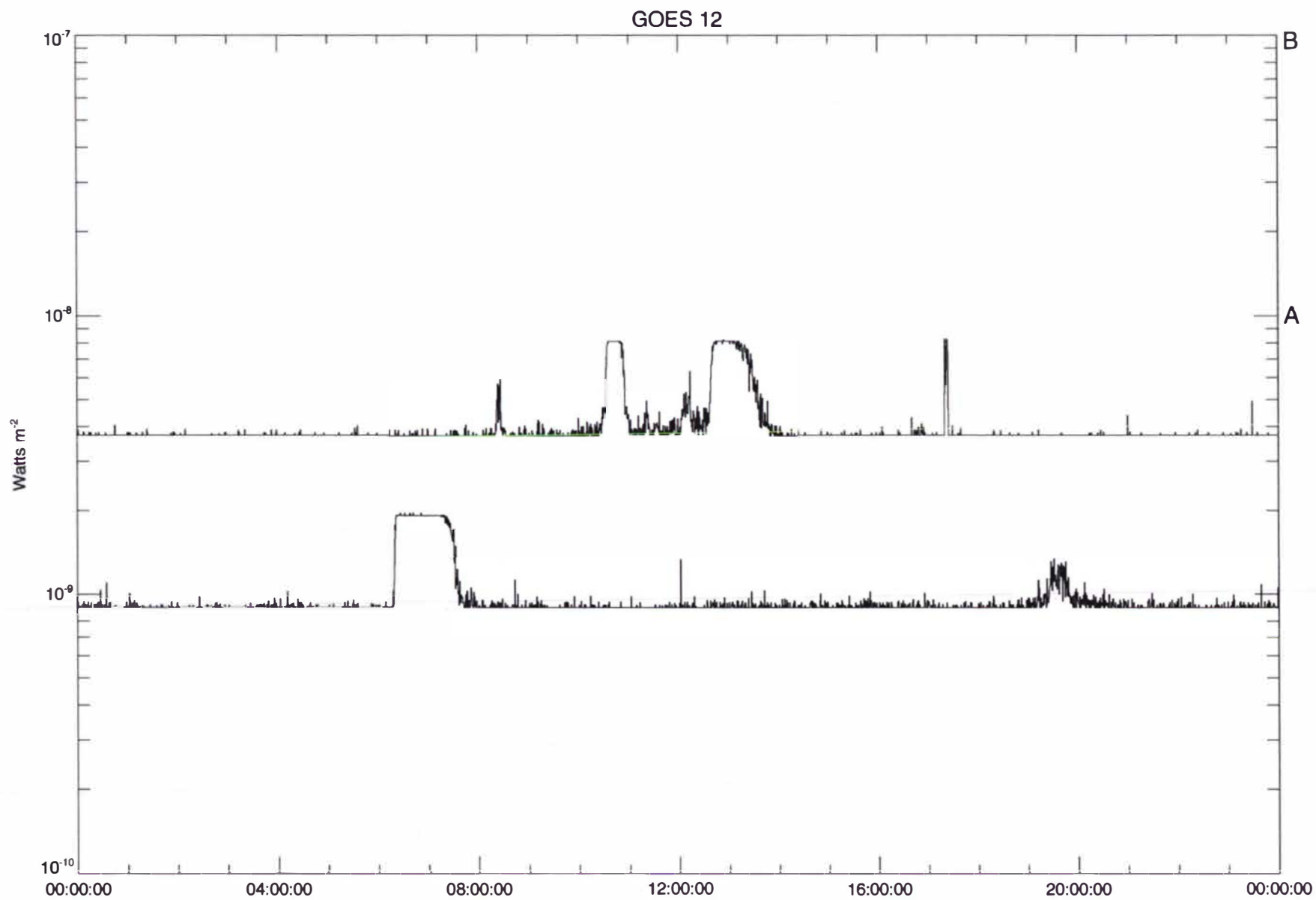


HESSI

25/02/07 54875.000 (MO_GE_20070225_56175)

25- 150 keV





Data Start: 07/02/25, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

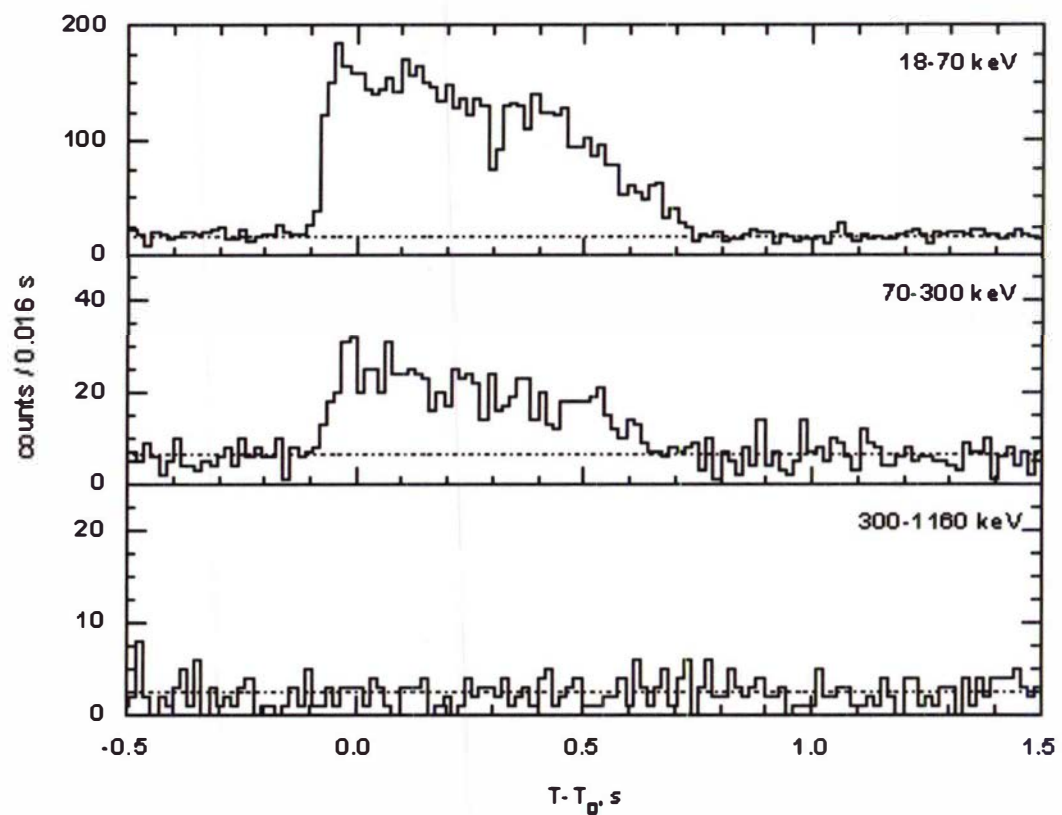
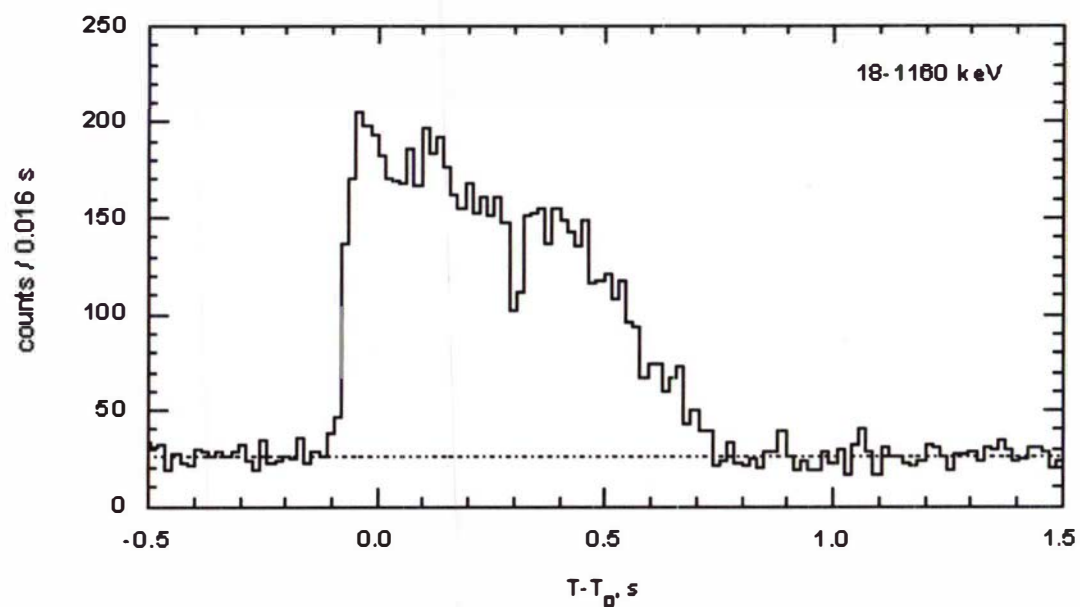
Plot created: 07/02/28, 0921

Sample average = 10

KONUS-WIND GRB 070226
 $T_0 = 2959.581$ s UT (00:49:19.581)

SGR 1806

S2 02959



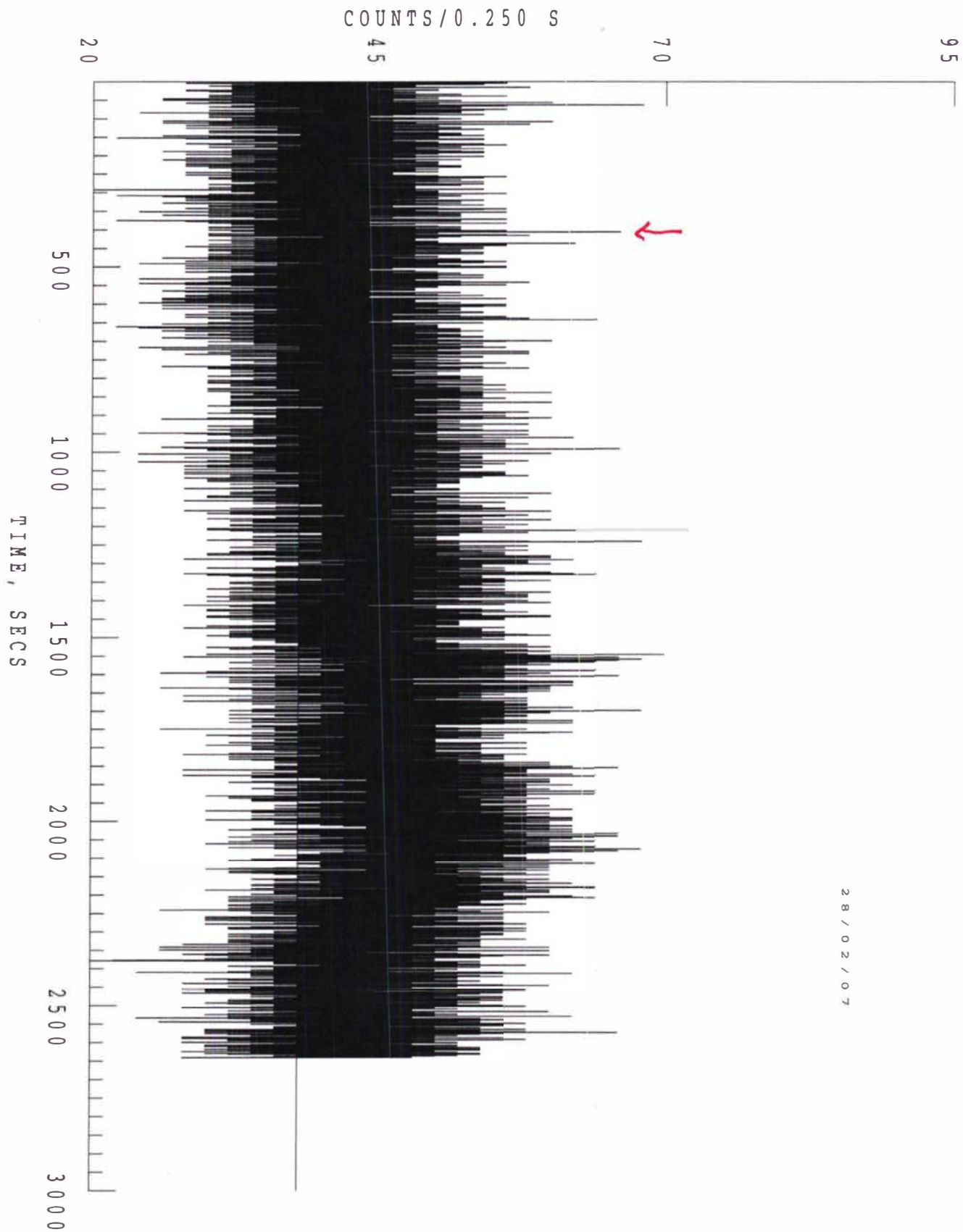
MS01

26/02/07

1632.220

50 - 3000 keV

MCT ~ 2050



28 / 02 / 07

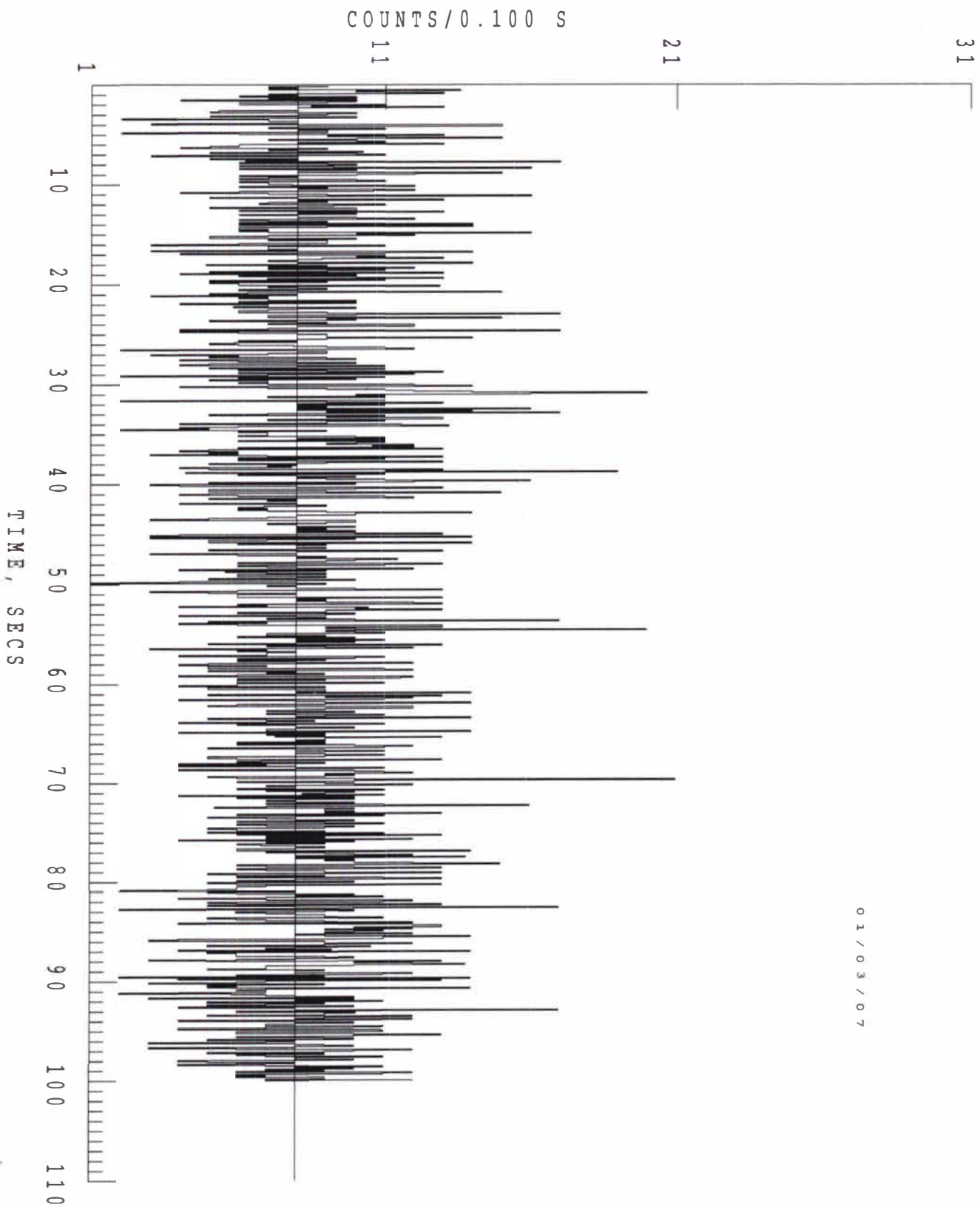
HESSI

26/02/07

2909.000

(konus_sgr_20070226_02959)

25- 150 keV



From palmer@lanl.gov Wed Feb 28 07:44:25 2007
X-ASG-Debug-ID: 1172677611-093600320000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: mailwasher.lanl.gov[192.65.95.54]
-Barracuda-Start-Time: 1172677611

Mime-Version: 1.0

Date: Wed, 28 Feb 2007 08:45:33 -0700

To: "Valentin Pal'shin" <val@mail.ioffe.ru>,
Kevin Hurley <khurley@ssl.berkeley.edu>,
Jay Cummings <jayc@milkyway.gsfc.nasa.gov>,
Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>,
Roland Vanderspek <roland@space.mit.edu>,
Sergey Golenetskii <golen@mail.ioffe.ru>,
Hans Krimm <krimm@milkyway.gsfc.nasa.gov>,
Masanori Ohno <ohno@hirax7.hepl.hiroshima-u.ac.jp>

From: David Palmer <palmer@lanl.gov>

X-ASG-Orig-Subj: Re: ongoing SGR activity - SGR burst detected by Konus-Wind on
February 26

Subject: Re: ongoing SGR activity - SGR burst detected by Konus-Wind on
February 26

Cc: val <val@mail.ioffe.ru>

X-PMX-Version: 4.7.1.128075

X-Barracuda-Bayes: INNOCENT GLOBAL 0.0000 1.0000 -2.0210

X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.9929

Rule breakdown below

pts	rule name	description
-----	-----------	-------------

Content-Transfer-Encoding: 8bit

-MIME-Autoconverted: from quoted-printable to 8bit by sunspot.ssl.berkeley.edu

BAT sees nothing at 2007-02-26 T0=2959.581 s UT (00:49:19.581)

At the time we were pointing at [52.746, 43.926
258.851], so SGR 1806-20 was probably behind the
Earth.

The identified BAT SGR 1806-20 bursts this year

191052376.692	->	2007-01-21 06:06:16	
191492057.200	->	2007-01-26 08:14:17	
191753487.028	->	2007-01-29 08:51:27	
192006517.824	->	2007-02-01 07:08:37	
192514531.388	->	2007-02-07 04:15:31	
193272864.100	->	2007-02-15 22:54:24	
193326362.232	->	2007-02-16 13:46:02	
193609324.744	->	2007-02-19 20:22:04	
193863568.000	->	2007-02-22 18:59:28	
193863696.000	->	2007-02-22 19:01:36	
193863726.656	->	2007-02-22 19:02:06	<- moderate
193910176.000	->	2007-02-23 07:56:16	
193910238.184	->	2007-02-23 07:57:18	
193910634.304	->	2007-02-23 08:03:54	<- huge
193921788.576	->	2007-02-23 11:09:48	
194025931.908	->	2007-02-24 16:05:31	
194061301.708	->	2007-02-25 01:55:01	
194101064.088	->	2007-02-25 12:57:44	
194159296.000	->	2007-02-26 05:08:16	
194159359.768	->	2007-02-26 05:09:19	
194263703.060	->	2007-02-27 10:08:23	
194274623.112	->	2007-02-27 13:10:23	

25/04/07

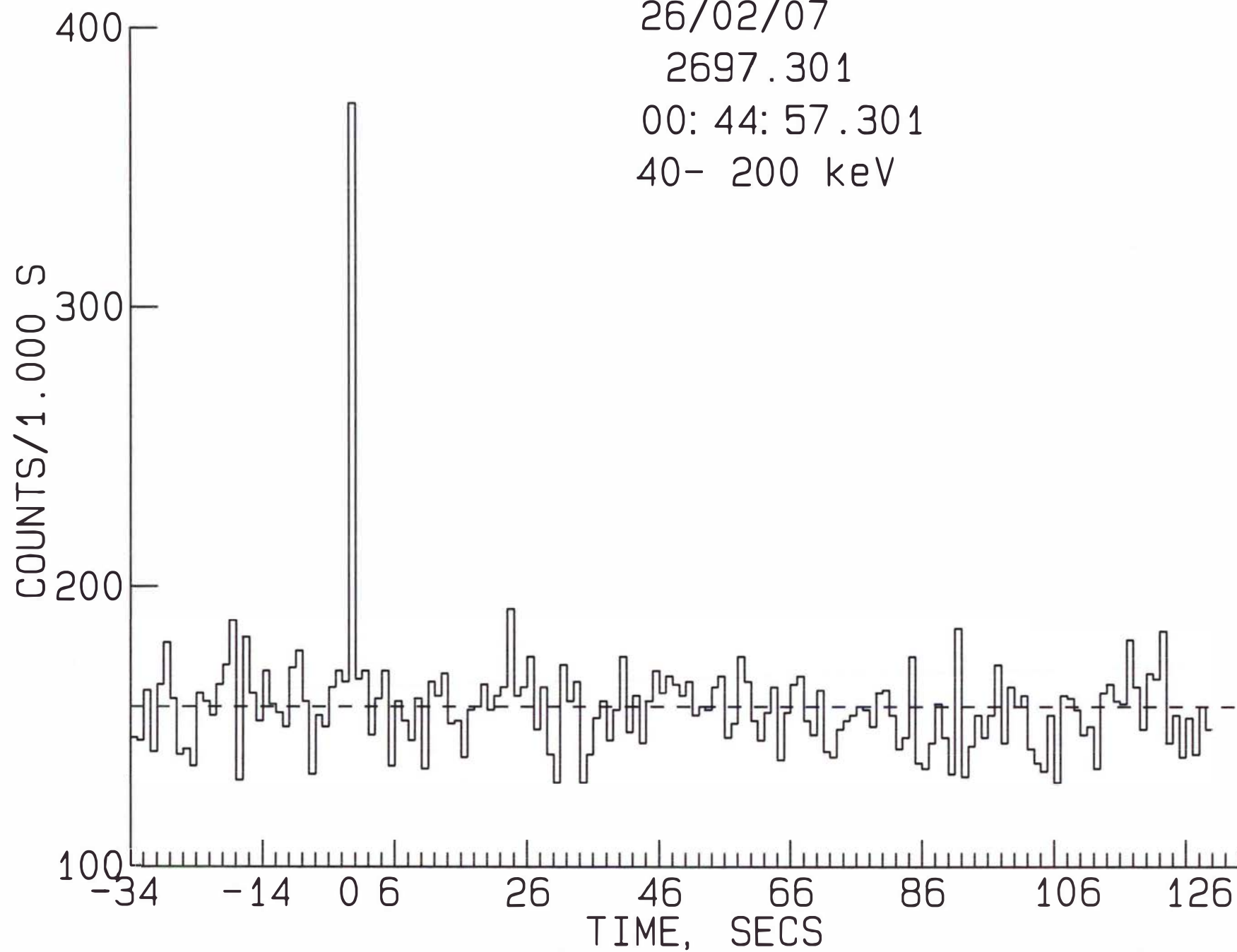
MESSENGER

26/02/07

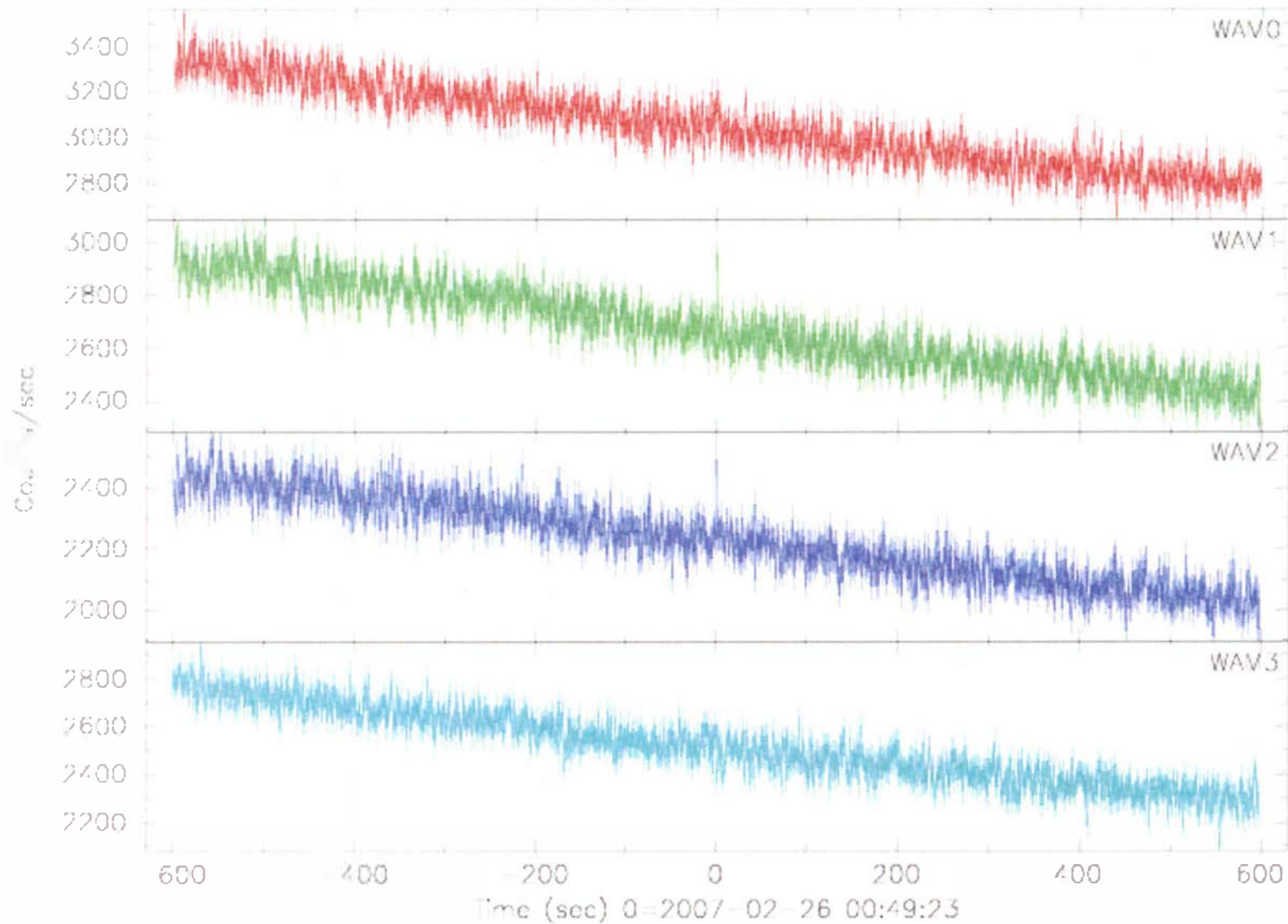
2697.301

00: 44: 57.301

40- 200 keV



trn200/0226004923_4wom_in012.ccd



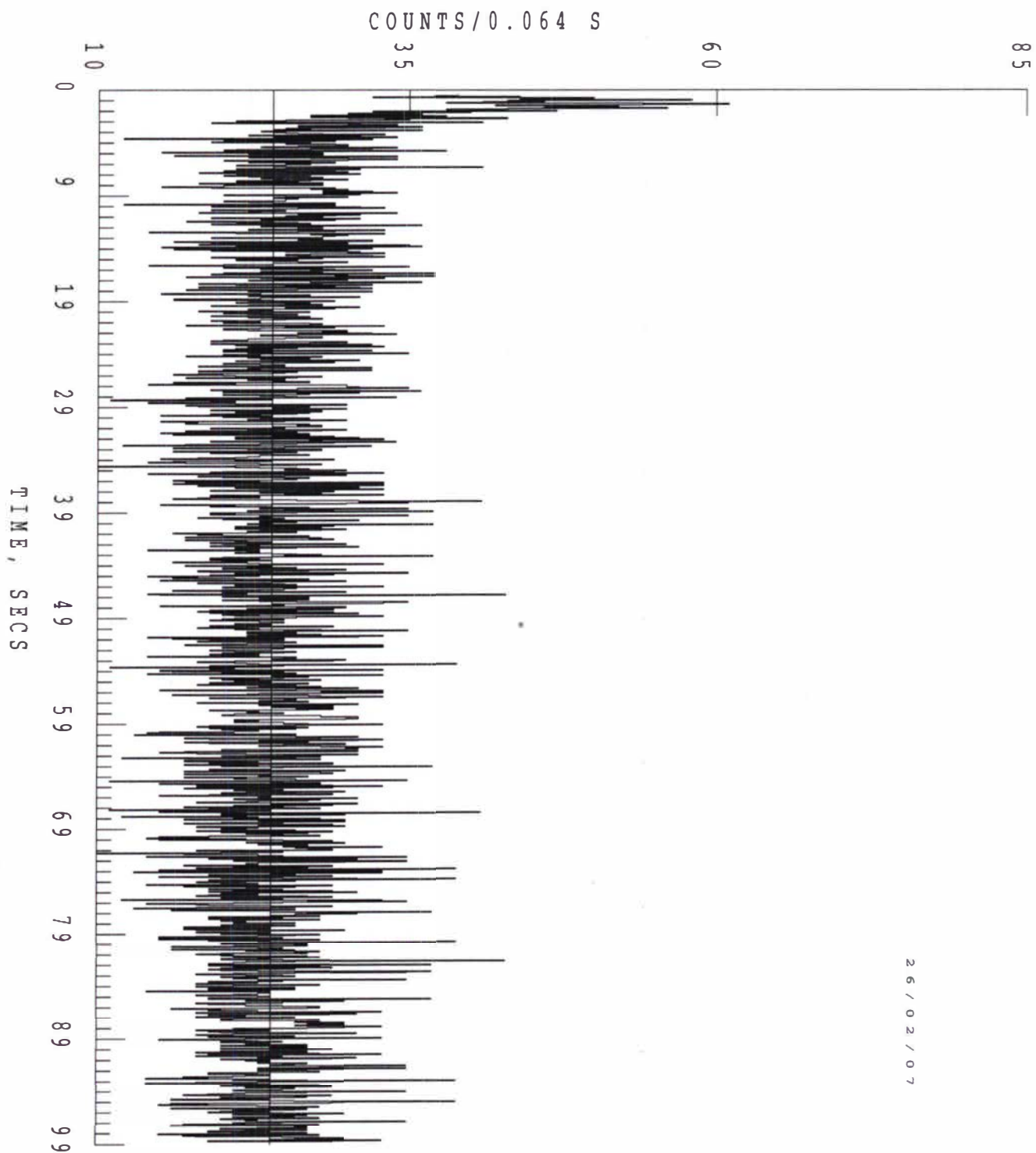
KONUS1

26/02/07

20504.122

50 - 200 keV

05:41:44



KONUS HRES 20070225 25095

TRIGGER TIME: 25/02/07 DOY 056 Julian 2454157.79045 UT = 06.971 06:58:15 (25095.000 secs)

Chan 1 : [15 - 50 keV]

Chan 2 : [50 - 200 keV]

Chan 3 : [200 - 770 keV]

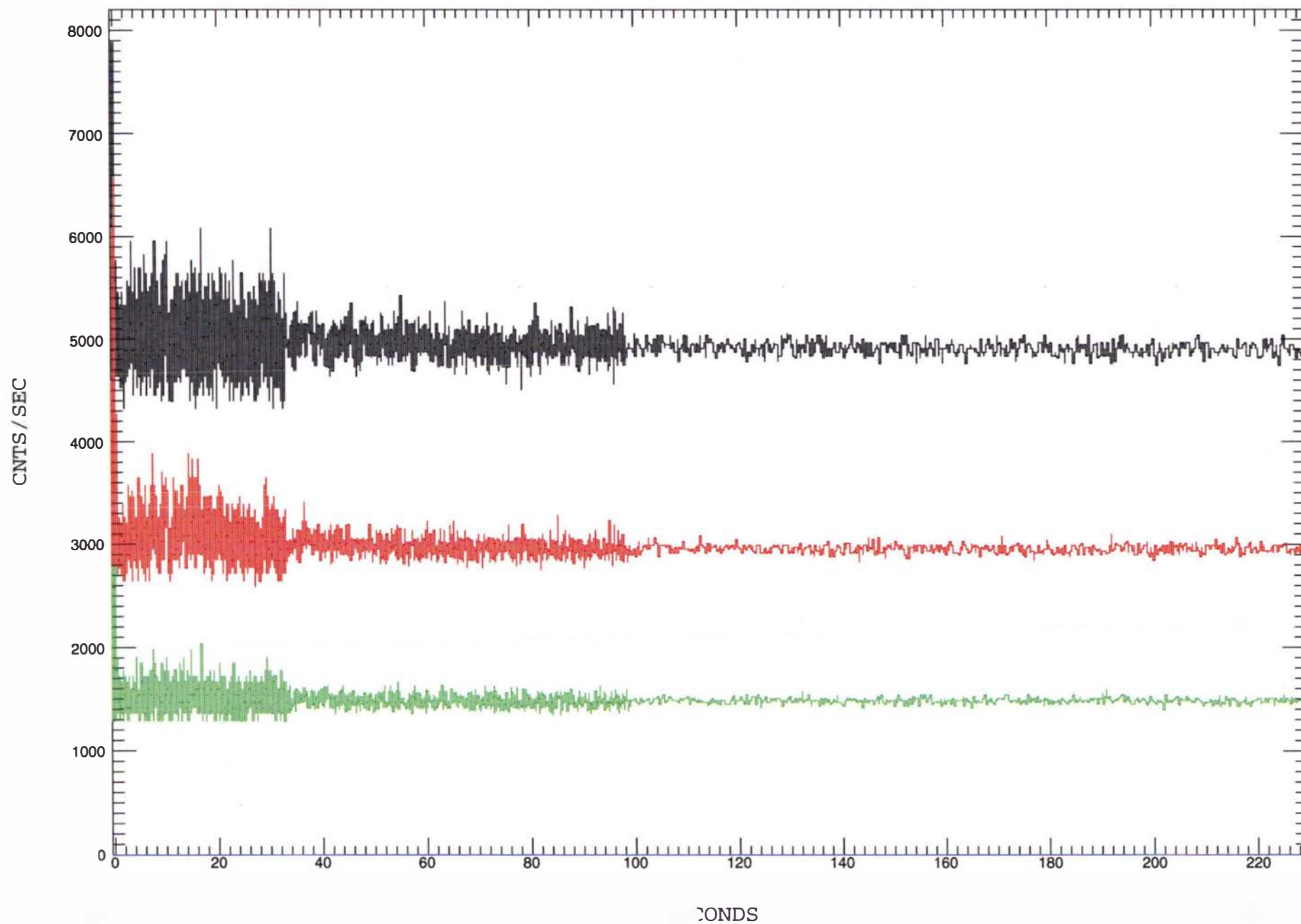
Chan 4 : [> 10 MeV]

Channel 1 + 3900

Channel 2 + 2600

Channel 3 + 1300

Channel 4 + 0



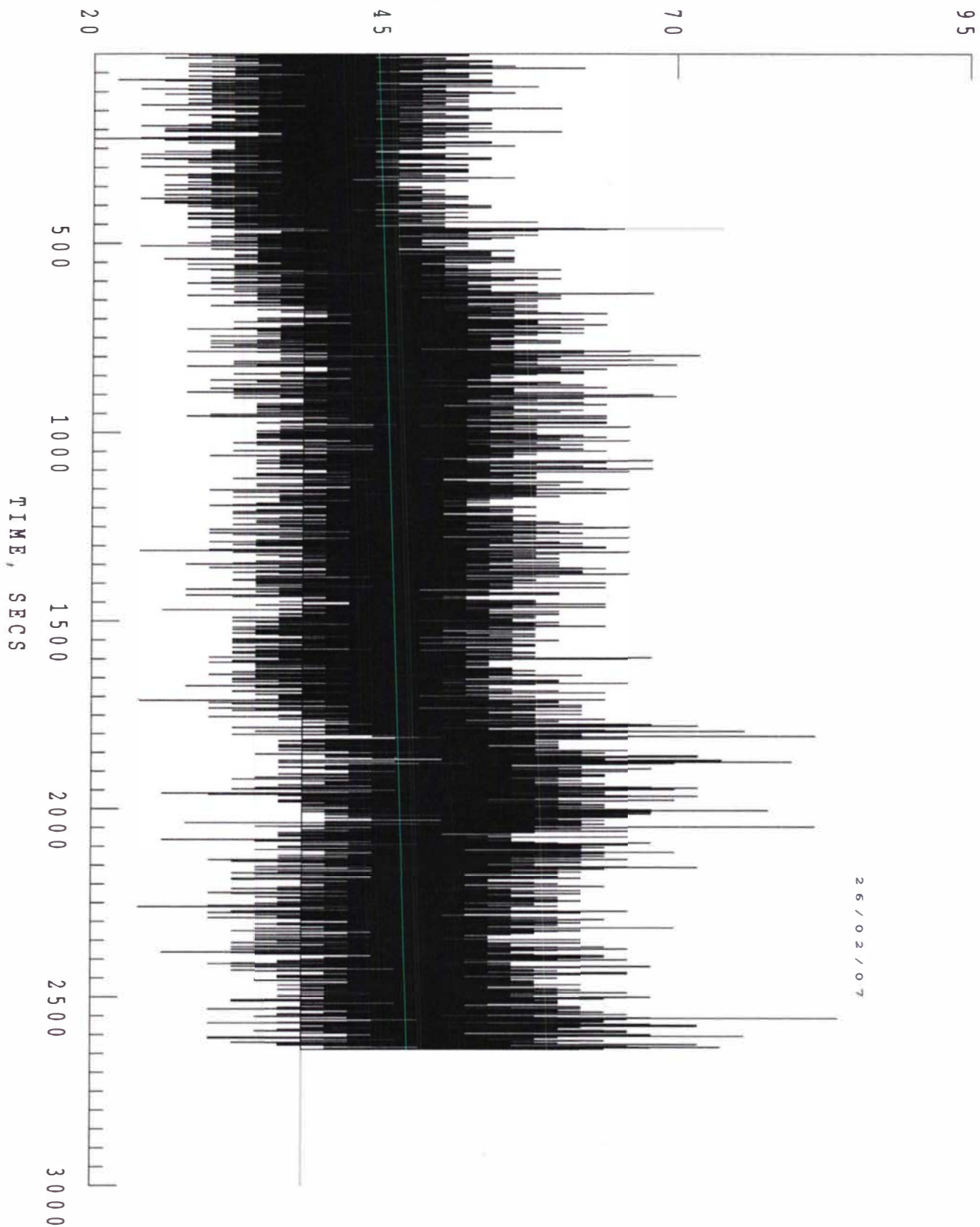
MS01

26/02/07

19151.899

50 - 3000 keV

COUNTS/0.250 S

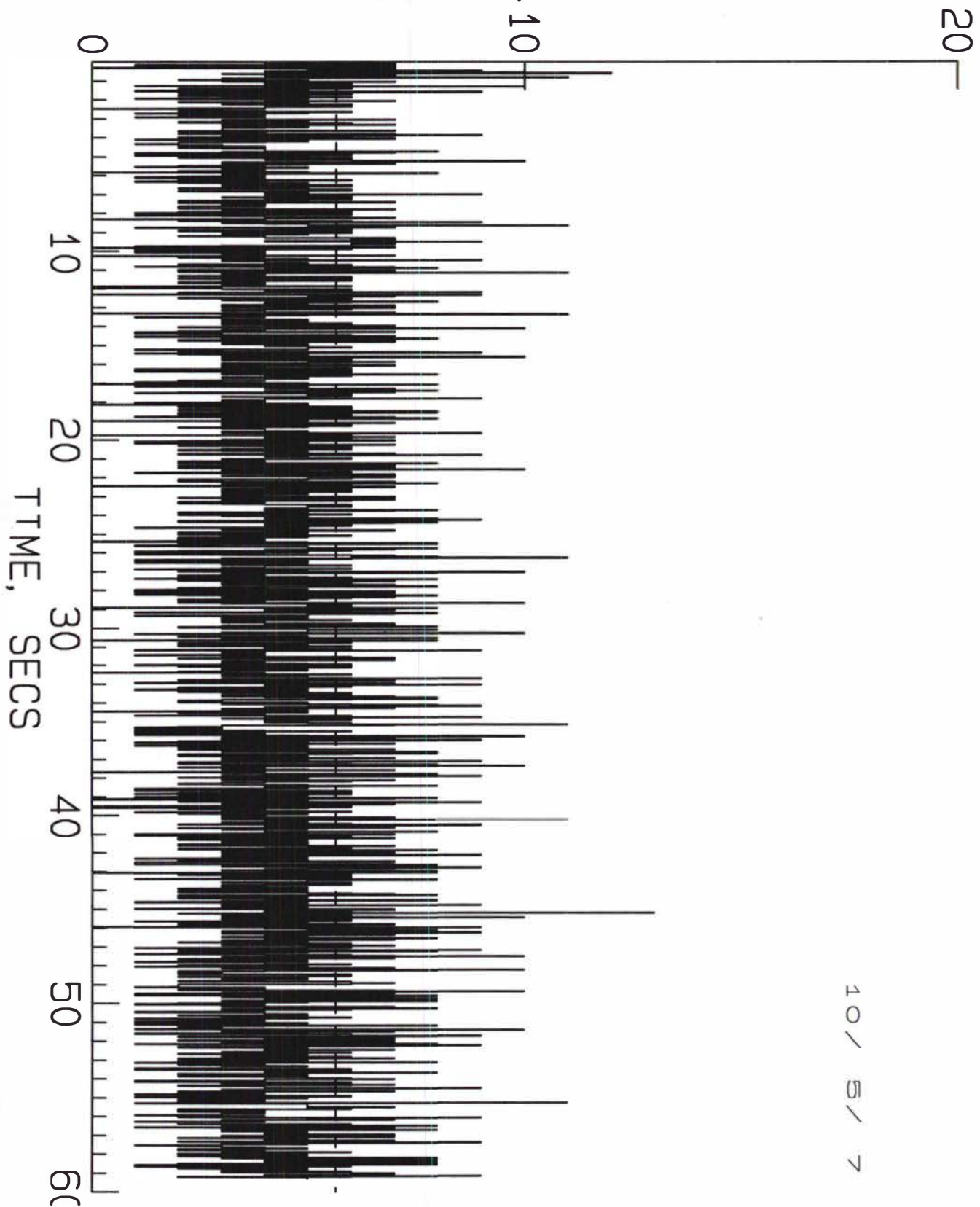


MO GE

26/02/07 20559.917

116- 337 keV

COUNTS/0.032 S



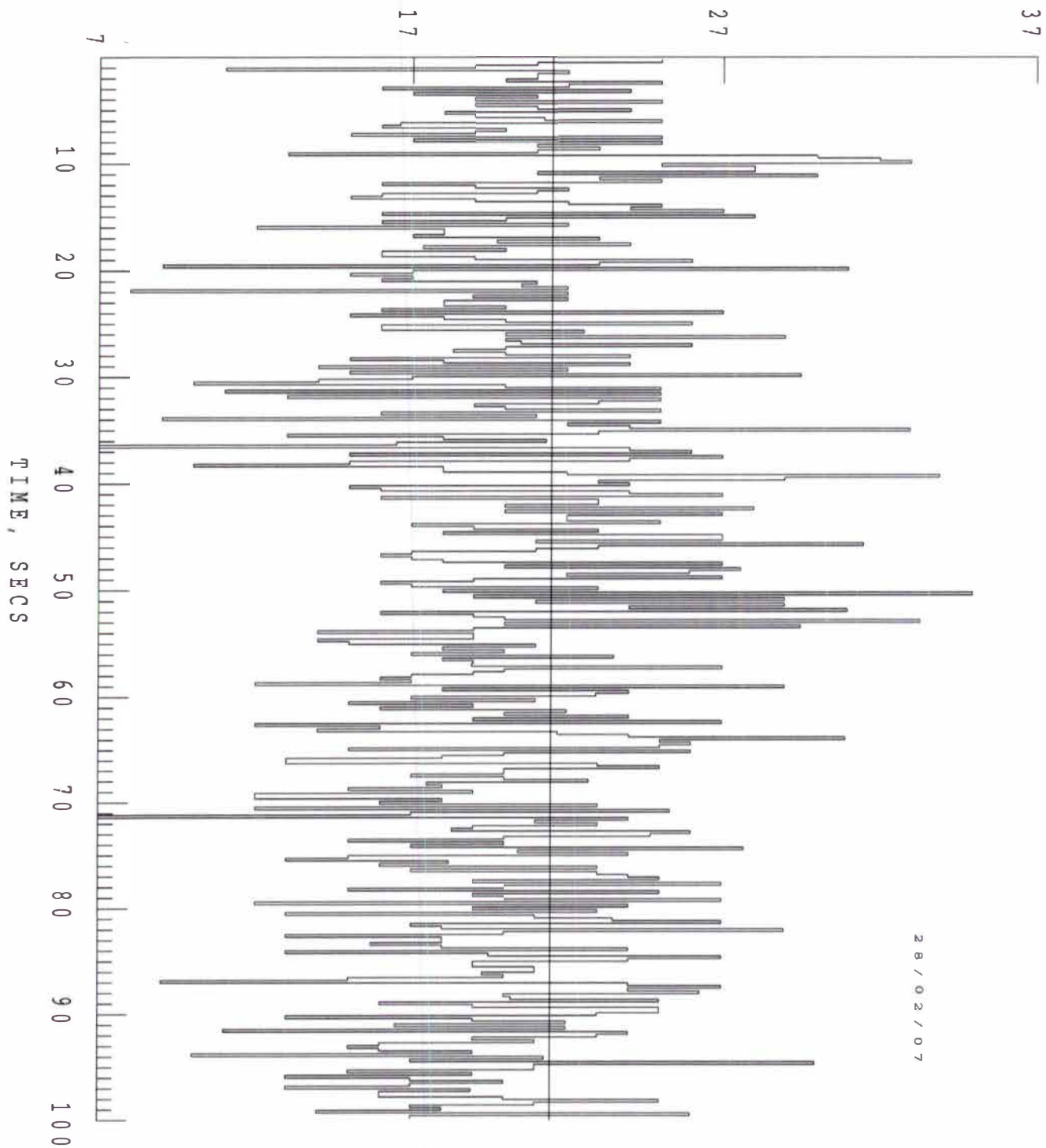
10 / 5 / 7

HESSI

26/02/07 20454.000 (KONUS_20070226_20504)

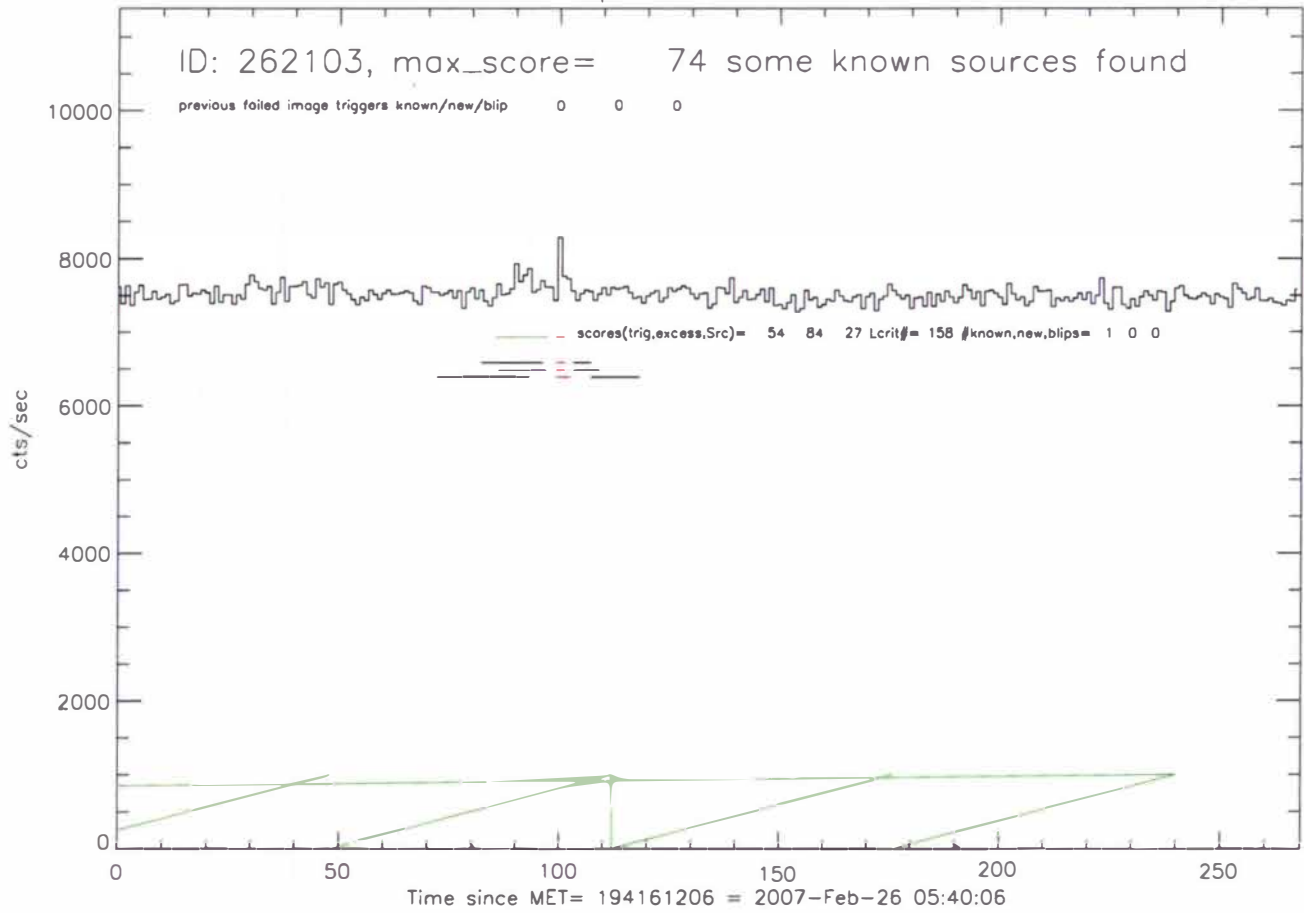
50- 200 keV

COUNTS/0.256 S



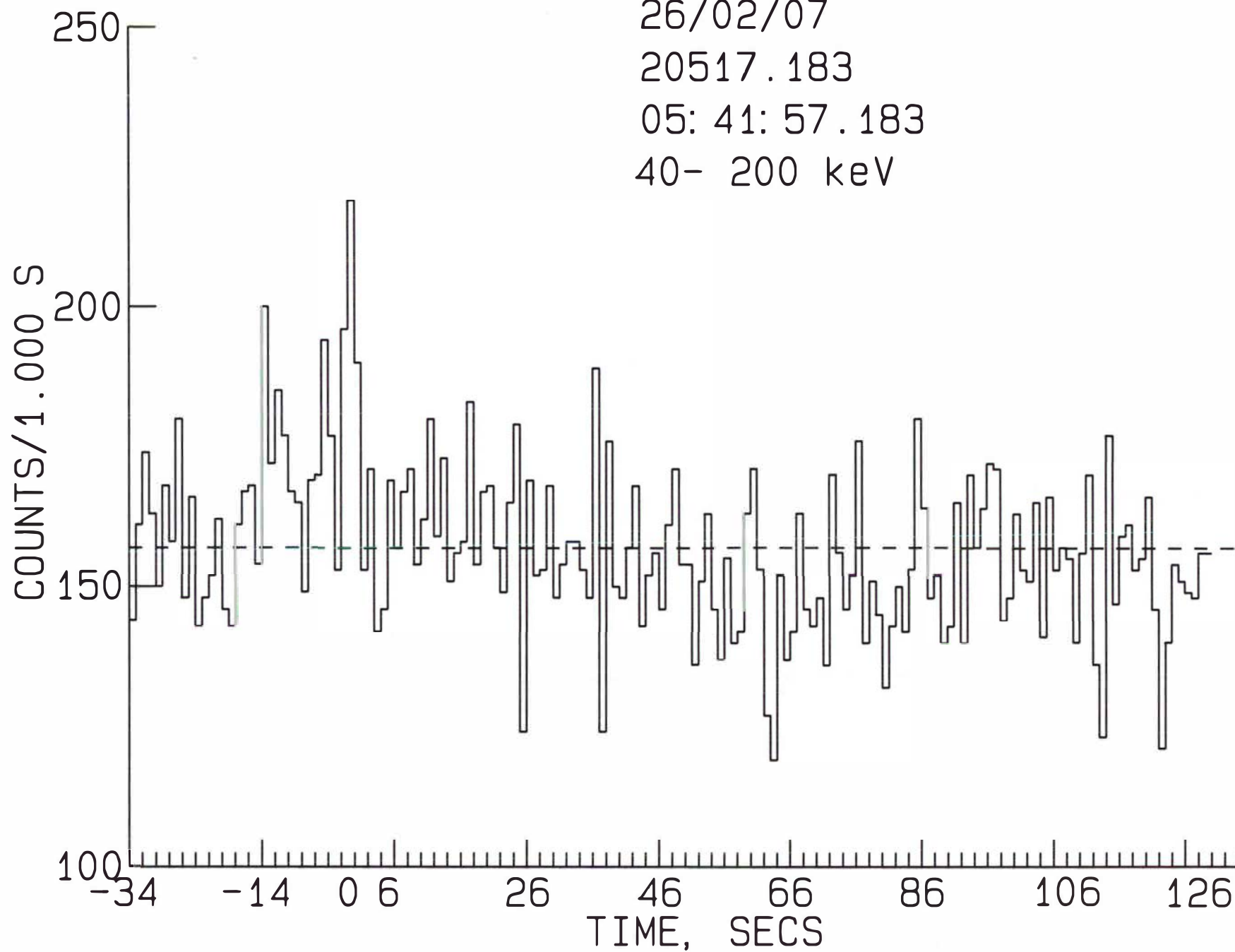
SWIFT

parse errors 1 1



25/04/07

MESSENGER
26/02/07
20517.183
05: 41: 57.183
40- 200 keV



From yamaoka@phys.aoyama.ac.jp Tue Feb 27 01:21:21 2007
 X-ASG-Debug-ID: 1172568218-698000290000-LqZNIK
 X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
 X-Barracuda-Connect: scmailgw2.scop.aoyama.ac.jp[133.2.251.195]
 -Barracuda-Start-Time: 1172568218
 To: val@mail.ioffe.ru
 Cc: khurley@ssl.berkeley.edu, jayc@milkyway.gsfc.nasa.gov,
 roland@space.mit.edu, golen@mail.ioffe.ru,
 krimm@milkyway.gsfc.nasa.gov, ohno@hirax7.hepl.hiroshima-u.ac.jp,
 palmer@lanl.gov, yamaoka@phys.aoyama.ac.jp
 X-ASG-Orig-Subj: Re: long GRB detected by K-W on February 26 (today)
 Subject: Re: long GRB detected by K-W on February 26 (today)
 Mime-Version: 1.0
 Content-Transfer-Encoding: 7bit
 Date: Tue, 27 Feb 2007 18:23:00 +0900
 From: Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>
 X-Dispatcher: input version 20000228(IM140)
 X-Barracuda-Bayes: INNOCENT GLOBAL 0.1135 1.0000 -1.3126
 X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
 X-Barracuda-Spam-Report: Code version 3.1, rules version 3.1.9819
 Rule breakdown below

pts	rule name	description
0.00	UNPARSEABLE_RELAY	Informational: message has unparseable relay

Dear Valentin,

We don't detect any signals from this burst.

Best regards,
 Kazu
 on behalf of the Suzaku WAM team

From: Kazutaka Yamaoka <yamaoka@phys.aoyama.ac.jp>
 Subject: Re: long GRB detected by K-W on February 26 (today)
 Date: Tue, 27 Feb 2007 04:08:52 +0900
 Message-ID: <20070227040852E.yamaoka@phys.aoyama.ac.jp>

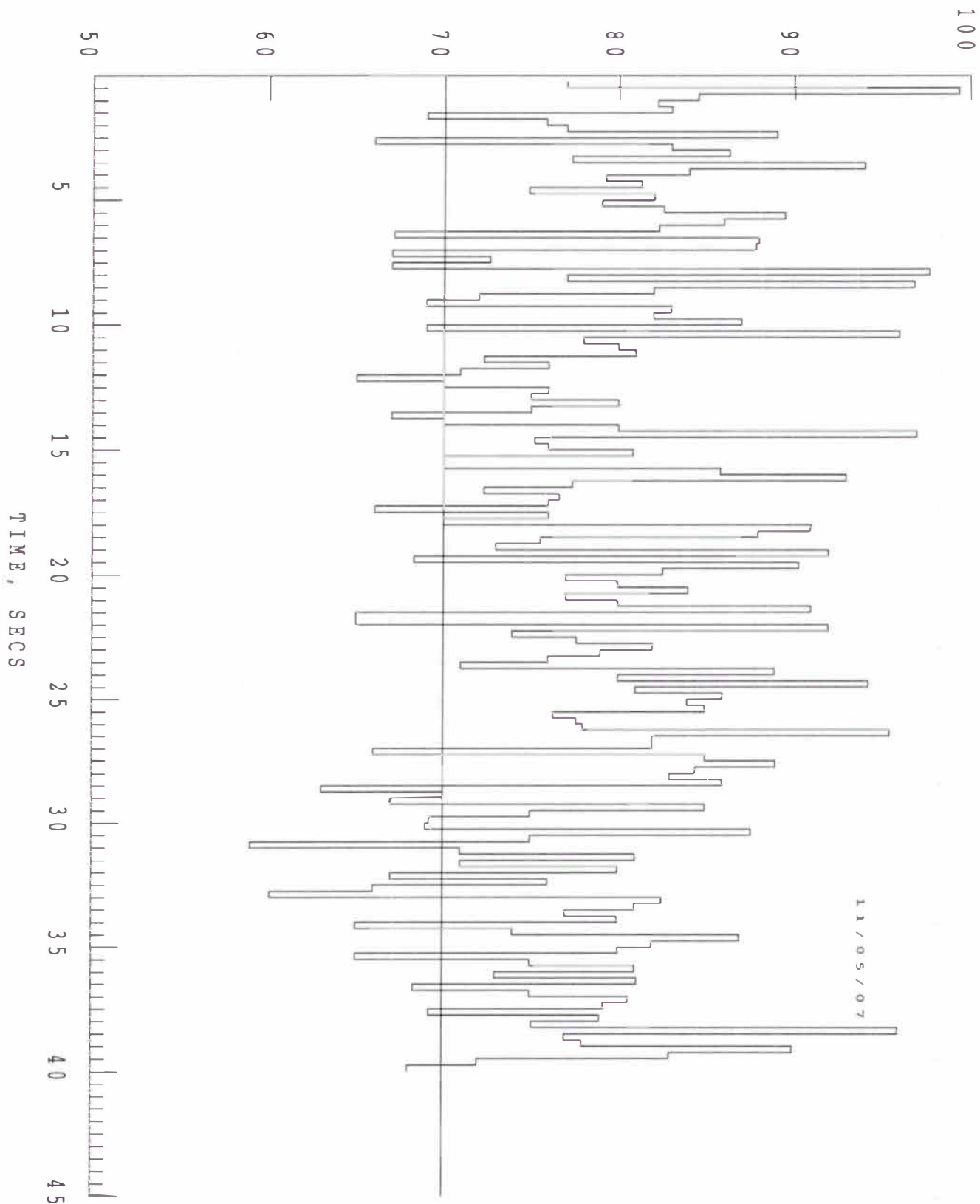
>
 > Dear Valentin and colleagues,
 >
 > The Suzaku data taken from 2007/02/25 02:35
 > will be downlinked soon.
 > The first contact will start on 2007/02/26 19:34(UT).
 >
 > Best regards,
 > Kazu
 >
 > From: "Valentin Pal'shin" <val@mail.ioffe.ru>
 > Subject: long GRB detected by K-W on February 26 (today)
 > Date: Mon, 26 Feb 2007 22:00:03 +0300
 > Message-ID: <45E32E33.5060803@mail.ioffe.ru>
 >
 > > Dear colleagues,
 >
 > > A long rather hard GRB triggered Konus-Wind at
 > > 2007-02-26 T0=20504.122 s UT (05:41:44.122).
 > > The burst shows a single pulse with a 2-sec long peak
 > > with a total duration of ~40 sec.

HESSI

26/02/07 69613.000 (SUZAKU_20070226_69633)

25- 150 keV

COUNTS/0.250 S



25/04/07

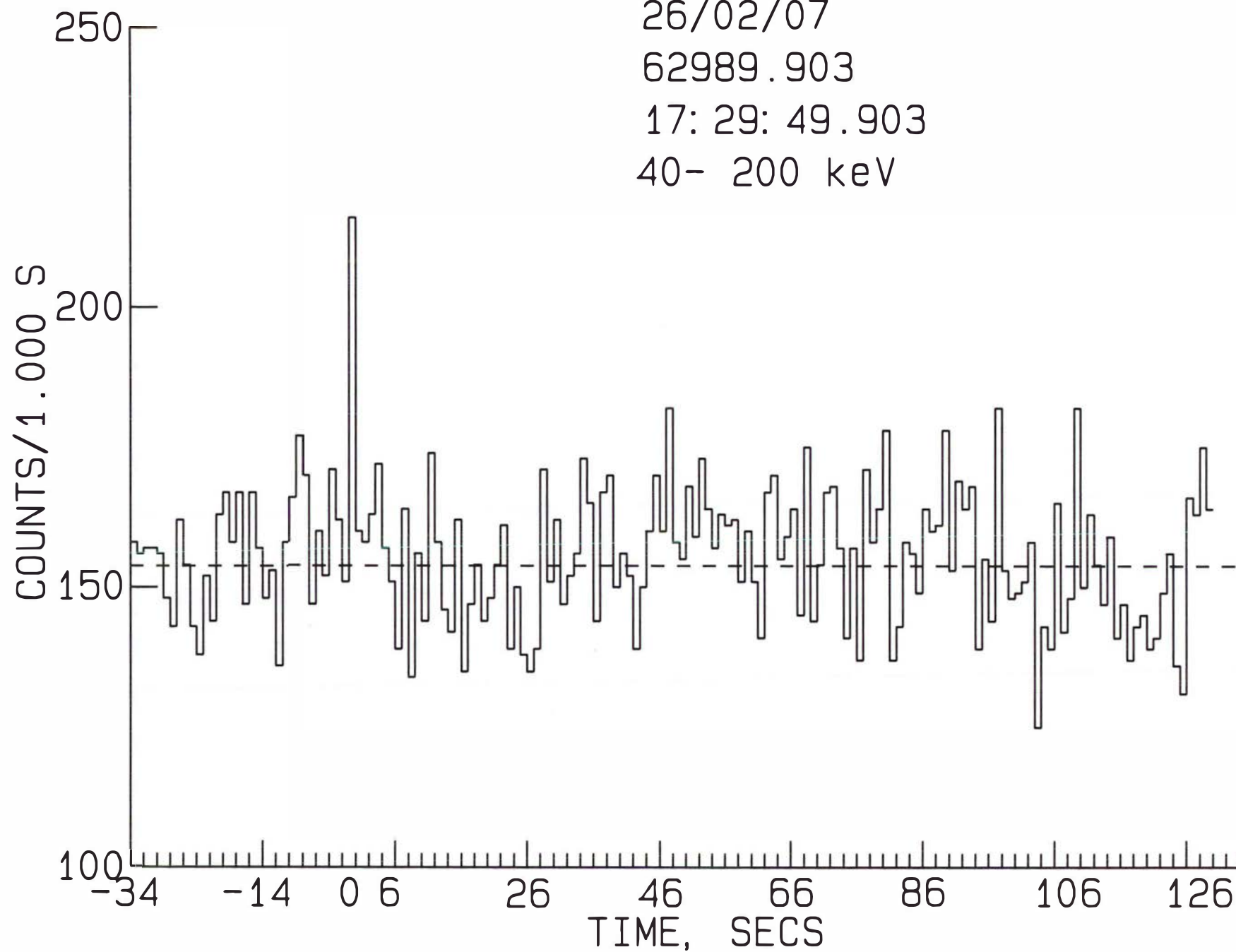
MESSENGER

26/02/07

62989.903

17: 29: 49.903

40- 200 keV



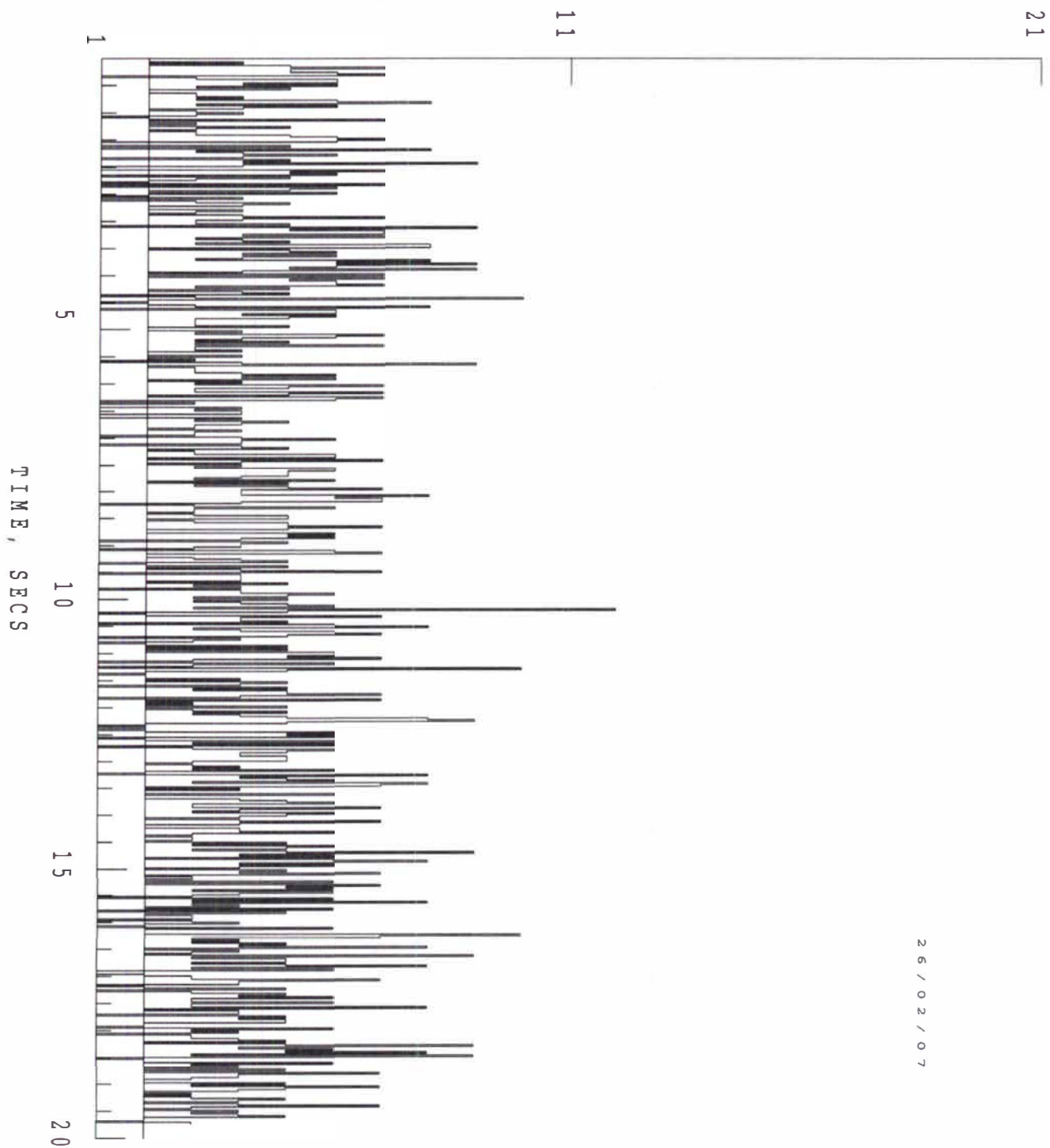
MO

26/02/07

65337.783

116- 337 keV

COUNTS/0.032 S



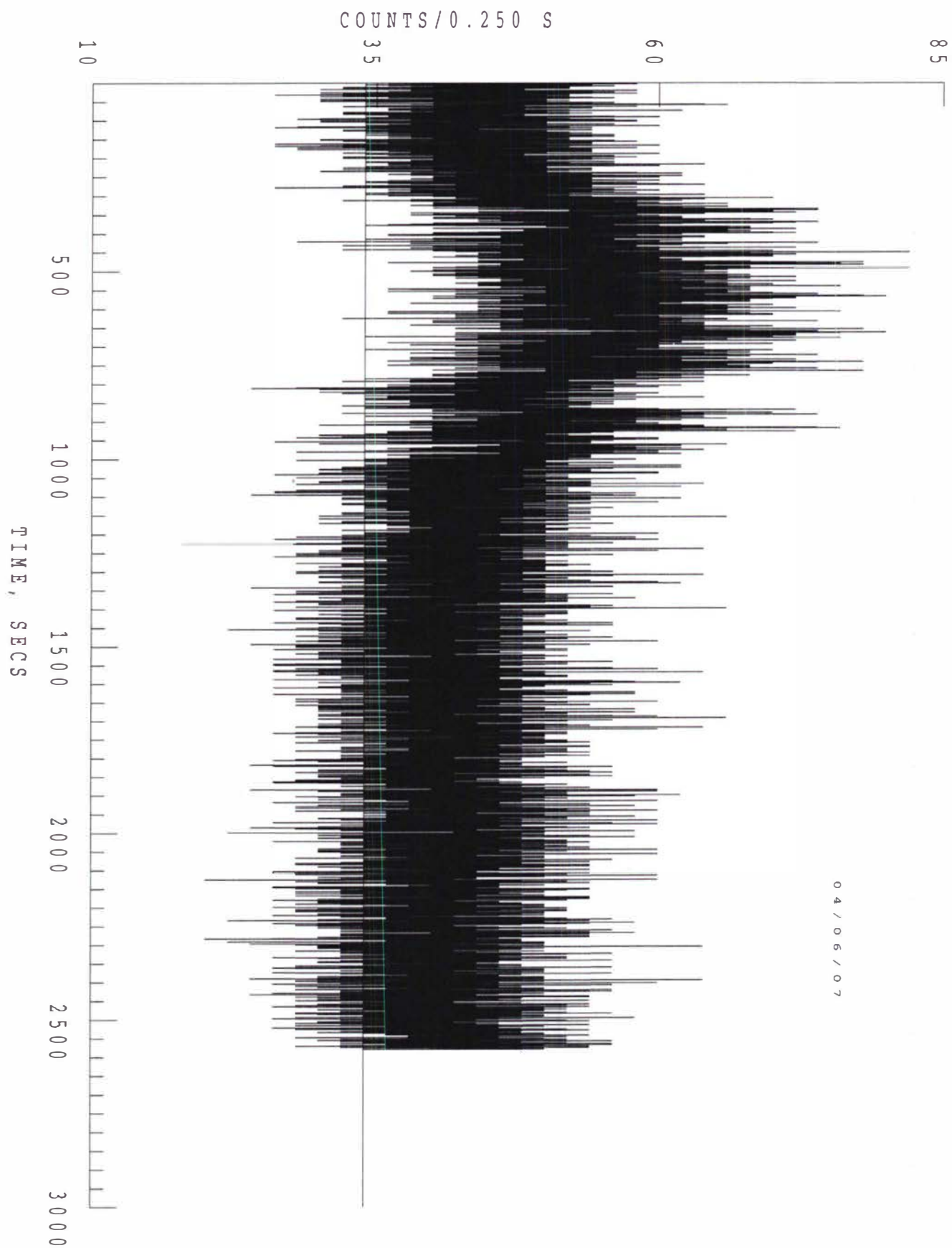
26/02/07

MS01

26/02/07

64030.148

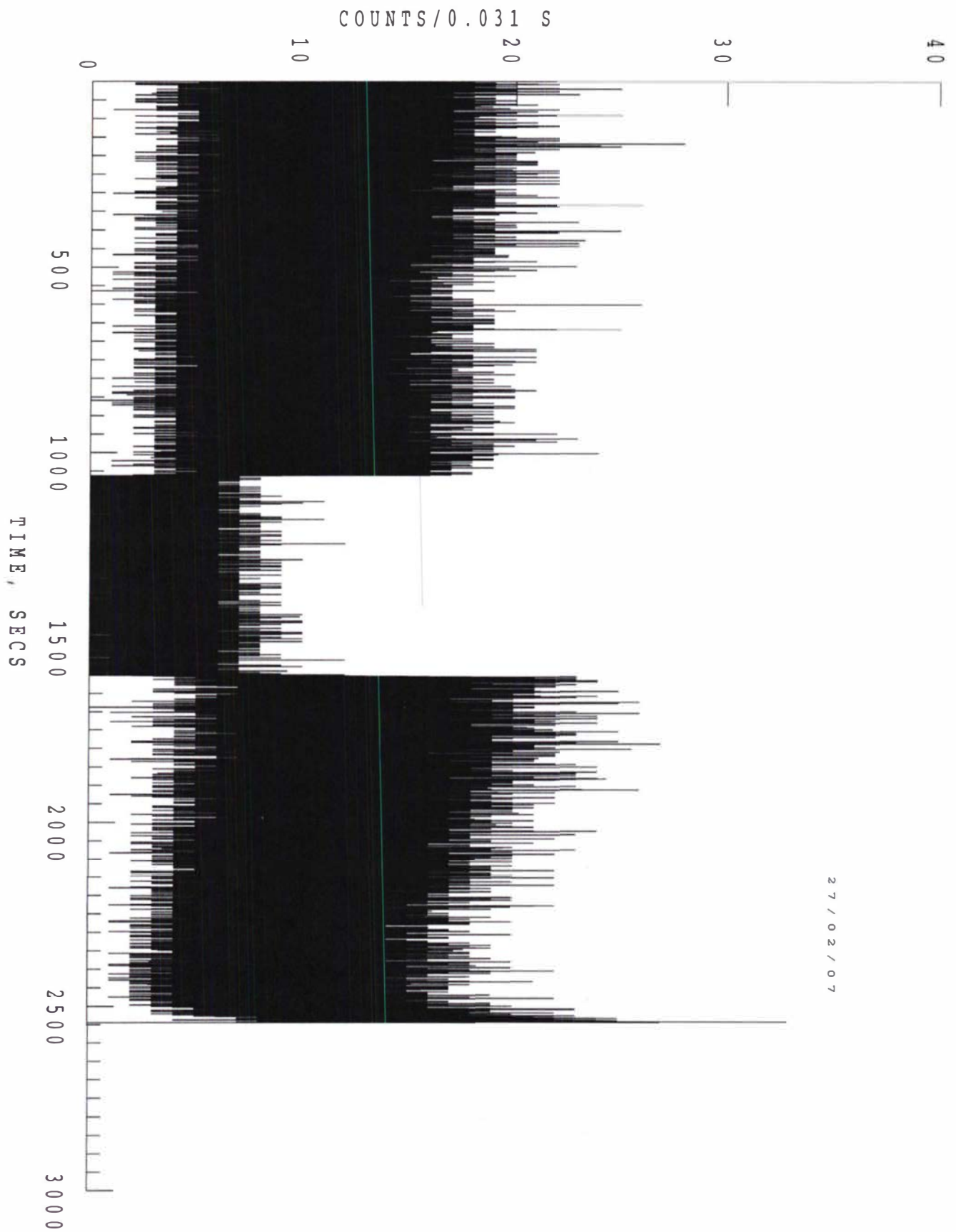
50 - 3000 keV



HESSI

26/02/07 64037.000 (MO_GE_20070226_65337)

25- 150 keV



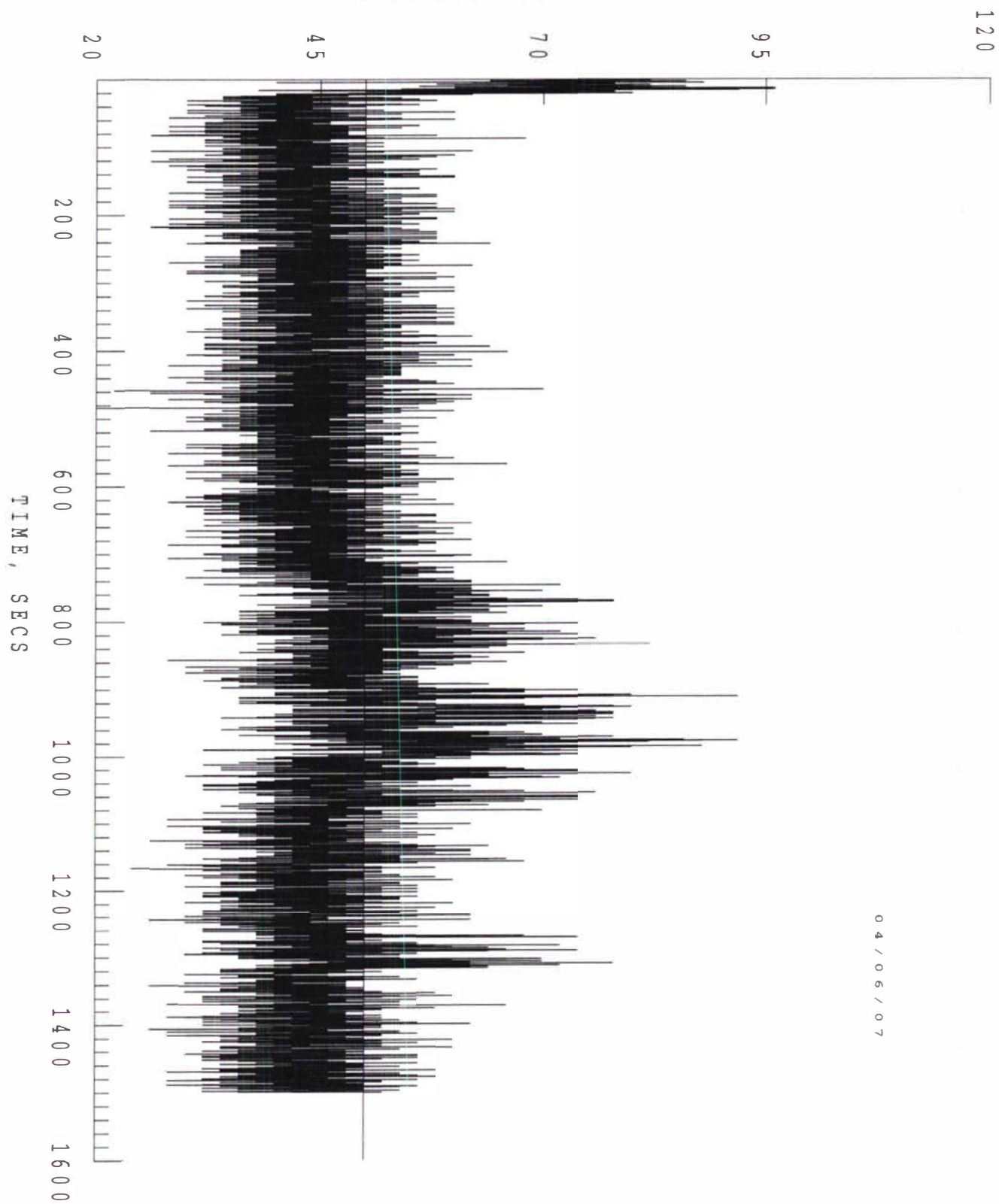
MS01

26/02/07

69430.063

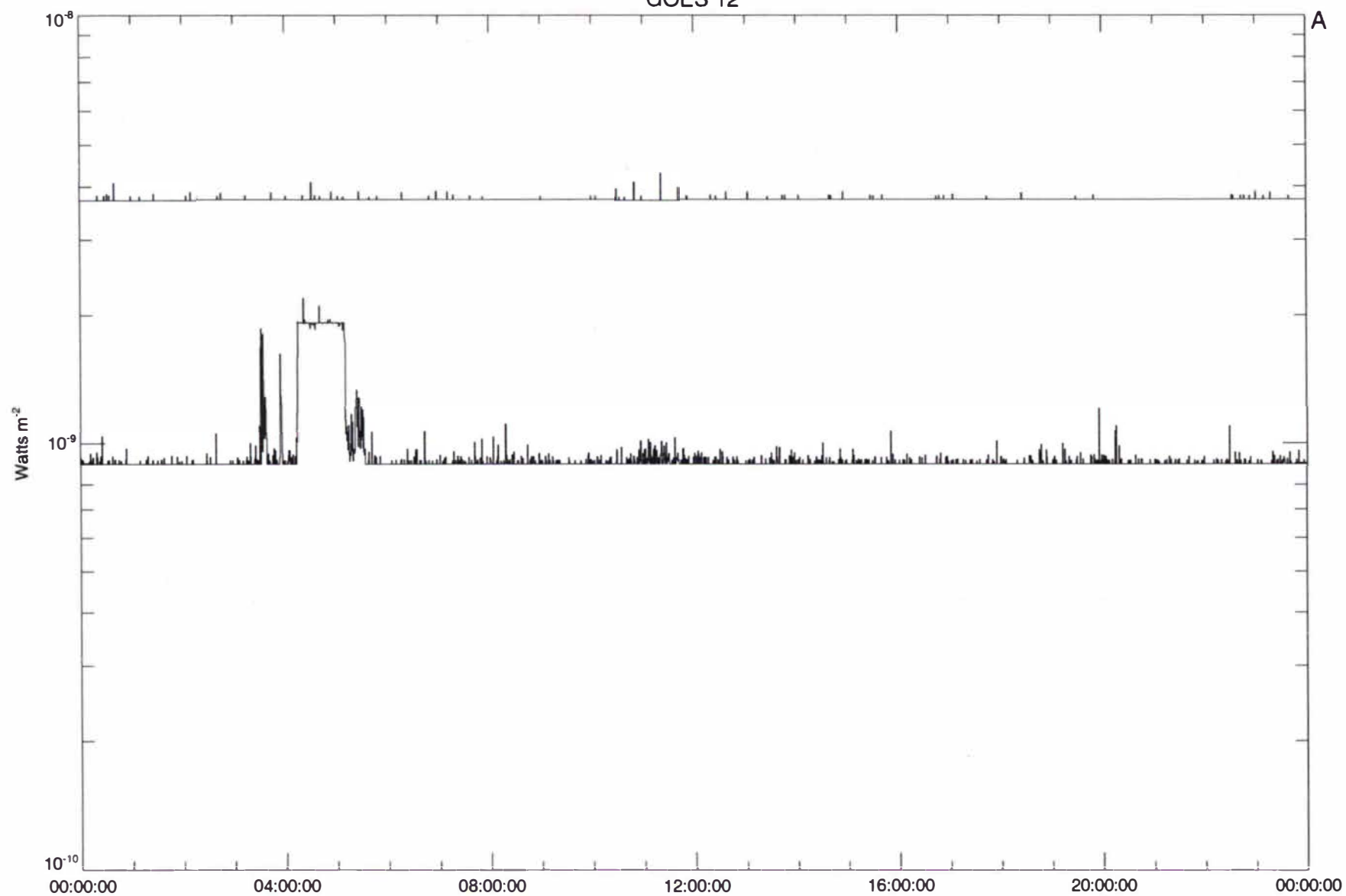
50 - 3000 keV

COUNTS/0.250 S



04/06/07

GOES 12



Data Start: 07/02/26, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Plot created: 07/03/01, 0921

Sample average = 10

25/04/07

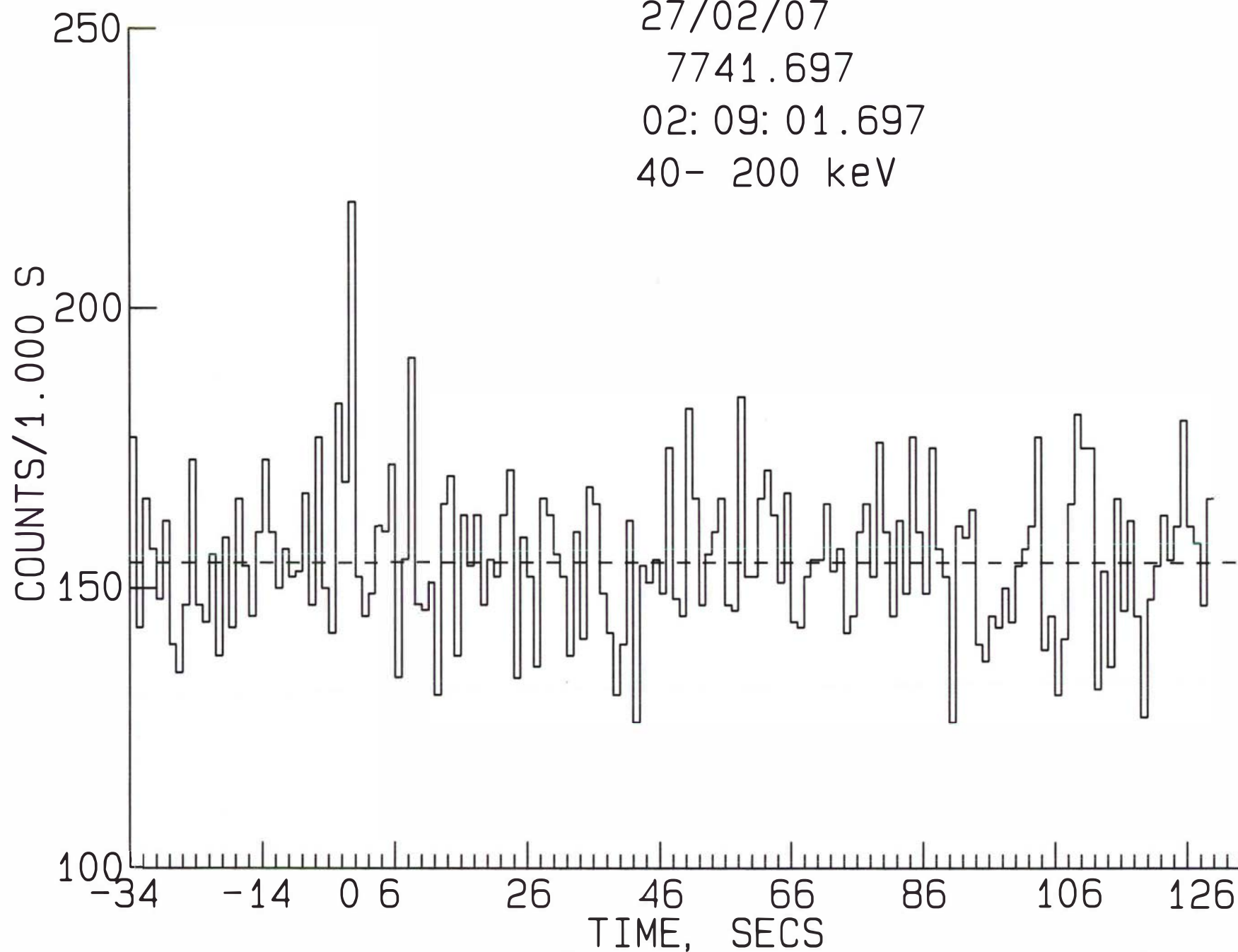
MESSENGER

27/02/07

7741.697

02:09:01.697

40- 200 keV



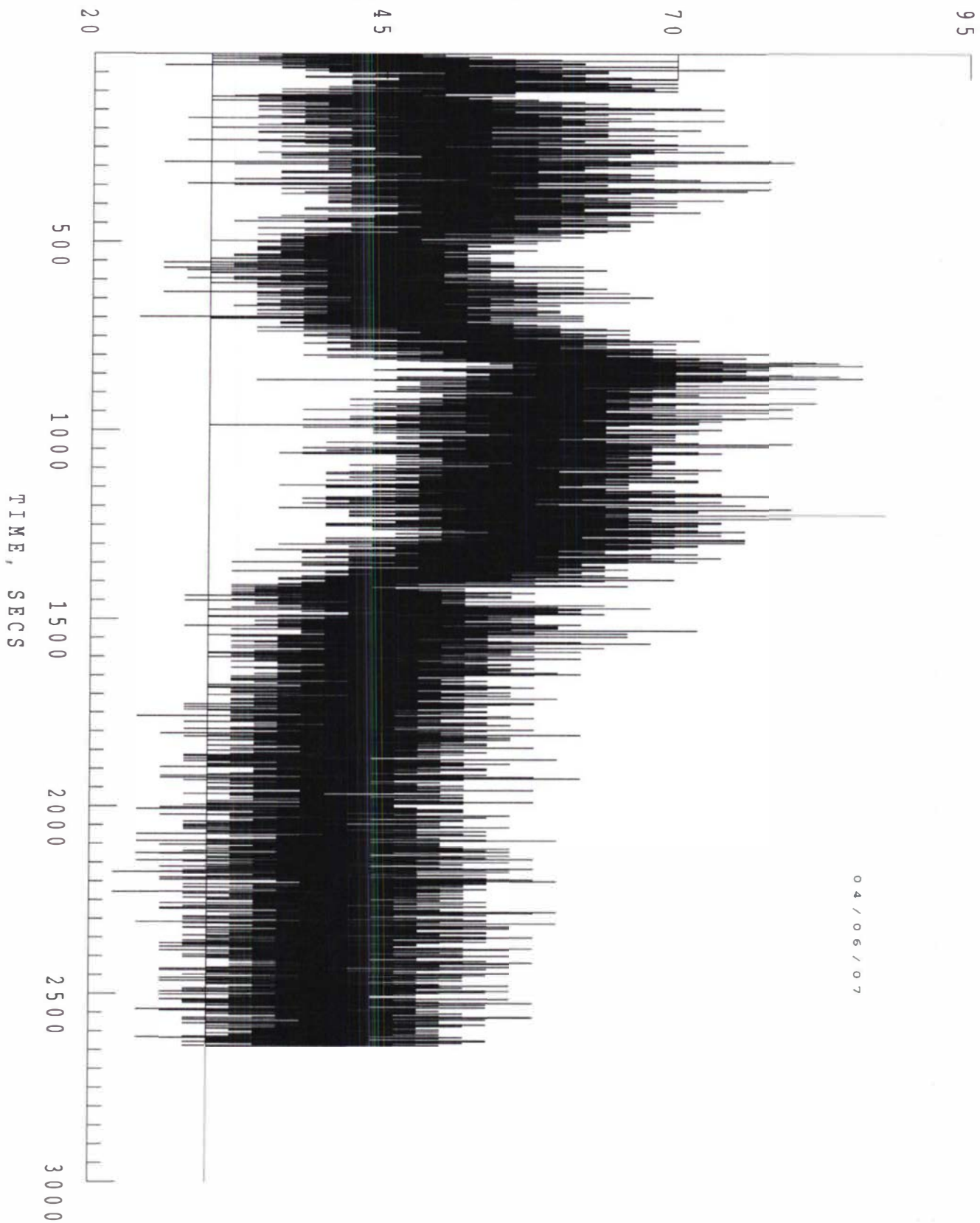
MS01

27/02/07

41048.995

50 - 3000 keV

COUNTS/0.250 S



From williams@sunspot.ssl.berkeley.edu Fri May 11 11:52:44 2007
X-ASG-Debug-ID: 1178909576-345200150000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
~Barracuda-Connect: gammaburst.ssl.berkeley.edu[128.32.98.141]
-Barracuda-Start-Time: 1178909576
Date: Fri, 11 May 2007 12:02:41 -0700 (PDT)
From: williams@ssl.berkeley.edu
To: khurley@ssl.berkeley.edu
X-ASG-Orig-Subj: No_RHESSI_data_for_SUZAKU_20070227_42394
Subject: No_RHESSI_data_for_SUZAKU_20070227_42394
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu
X-ASG-Whitelist: Sender (Per-User)

HESSI 25 to 150 keV Counts
Created 11-May-2007 11:51:37.00
Detectors: 3r 4r 5r 6r 8r 9r
columns: time (sec) counts (summed over detectors)
time_interval = 0.250000
Full time range in SAA
No Eclipse
No non-SAA data gap
No Data Available For This Time Range
Do Not Retry

Date: Jan 4 2011

BURST TRIANGULATION CHECKLIST

1. Suzaku Data

- ☐ 1 second timing error corrected? (Jan 1 – Apr 24 2009)

2. AGILE Data

- ☐ 1 second timing error corrected?

3. MESSENGER Data

- ☐ Coarse or Precision oscillator (C or P bronte.jhuapl.edu/spice/kernels/sclk/timekeeping/OPS_TIME_ENGR.txt)?
- ☐ Timing checked after ~ 1 week?

4. For Konus events

- ☐ Konus ecliptic latitude used with latest calibration?

5. 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). For later data, was timing checked after ~1 week?
- ☒ 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?

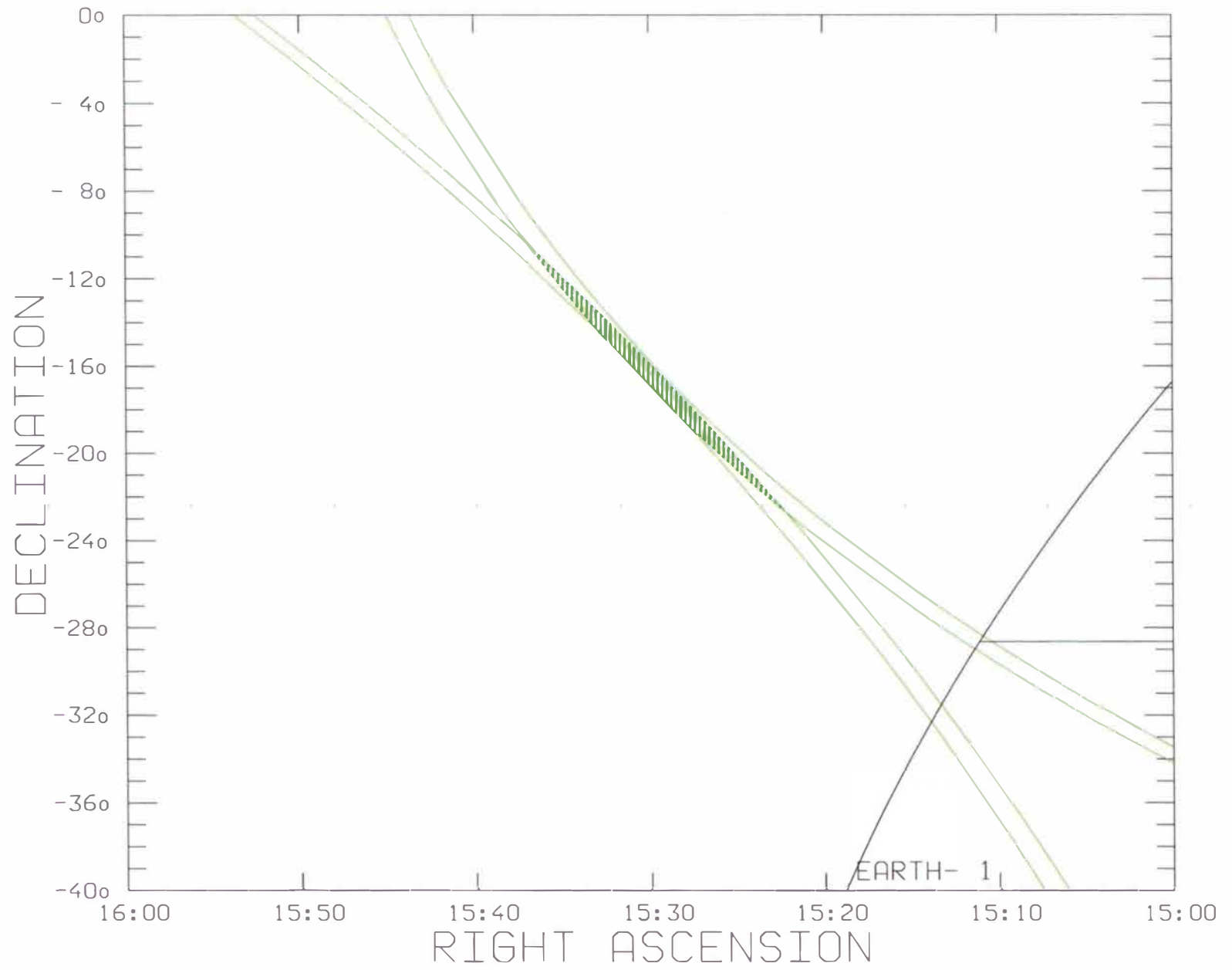
6. For 3 or More Spacecraft events

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

7. For INTEGRAL events

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

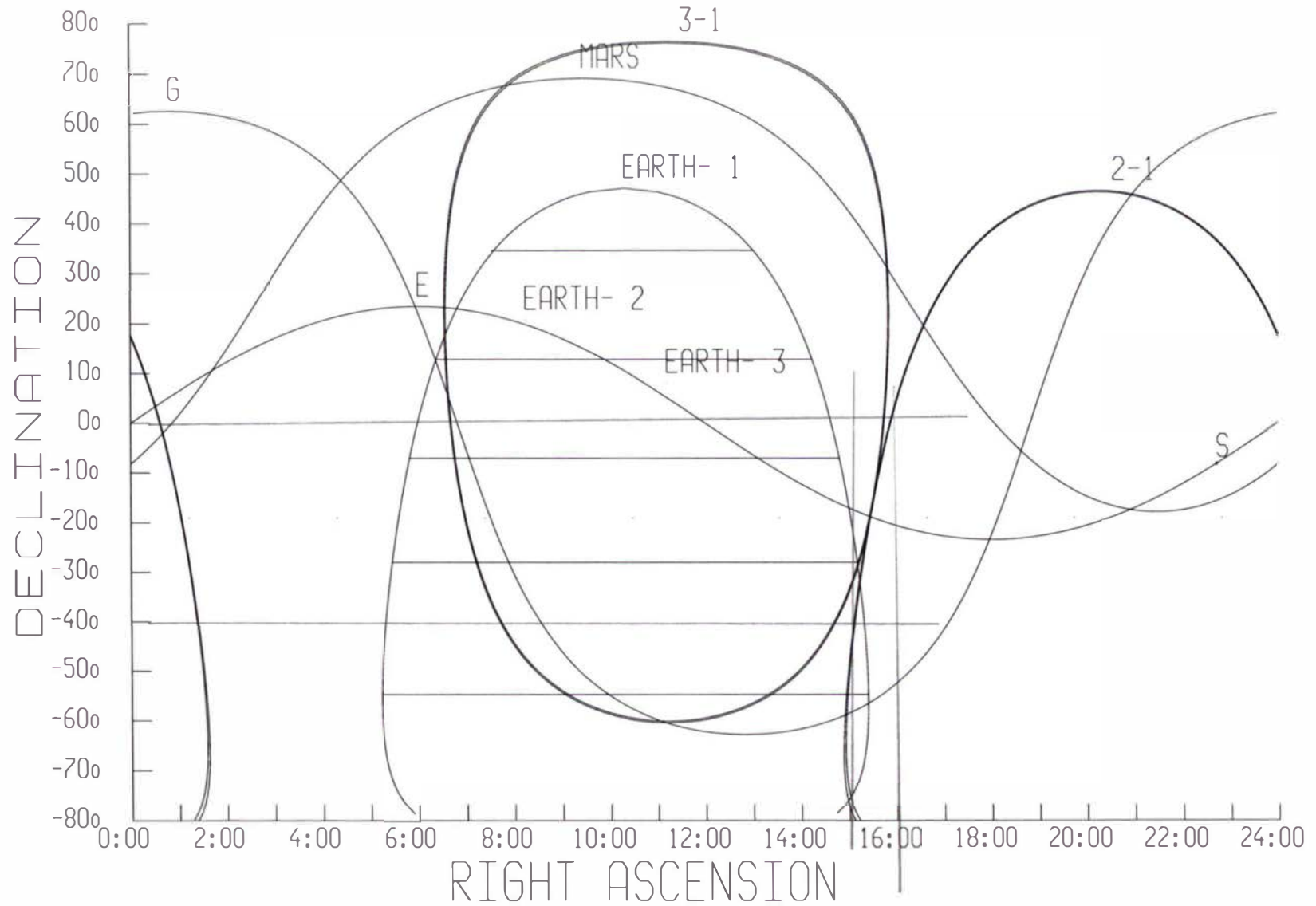
-
- ☒ ACCESS and MBL4 databases updated, with identical times?

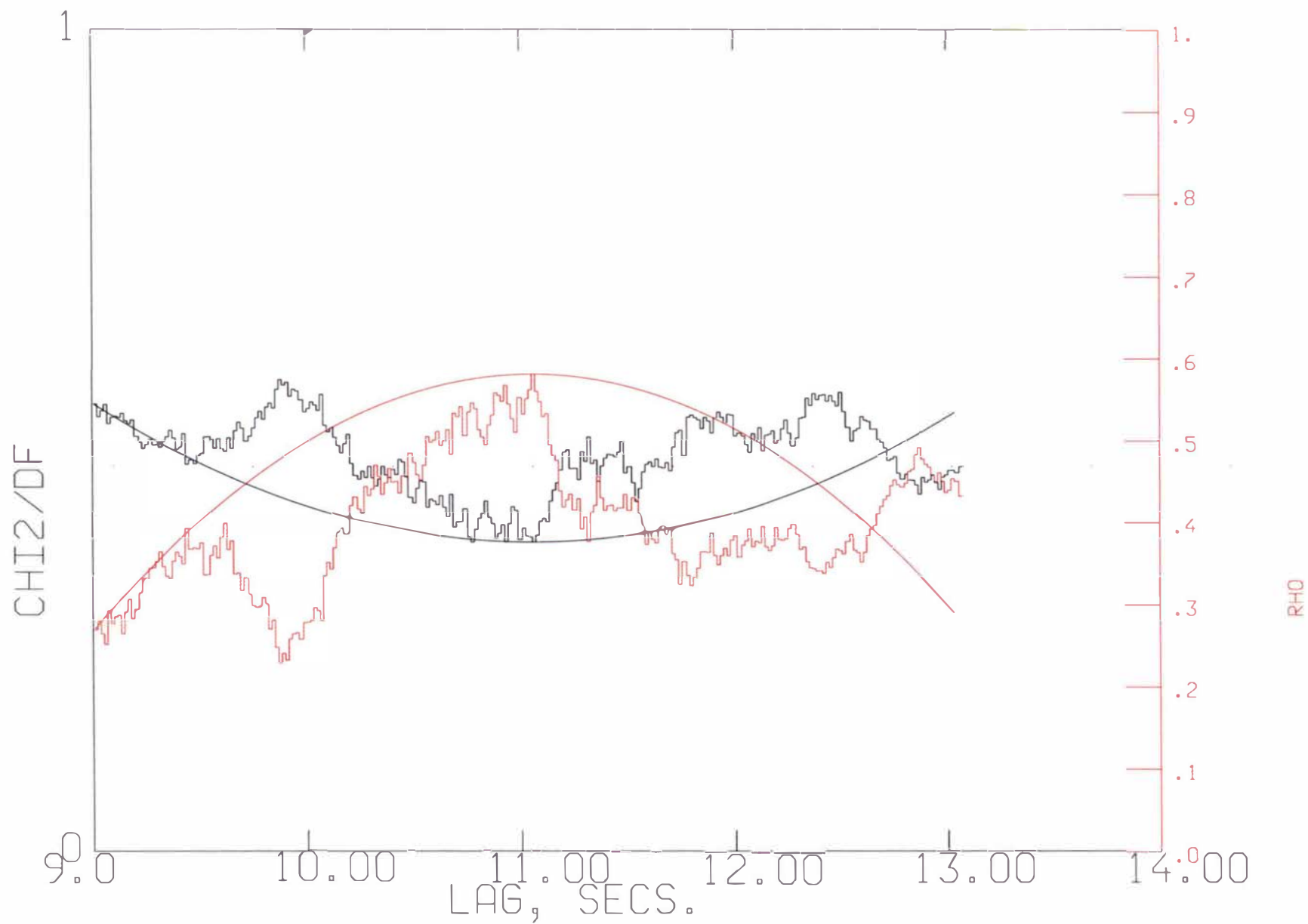


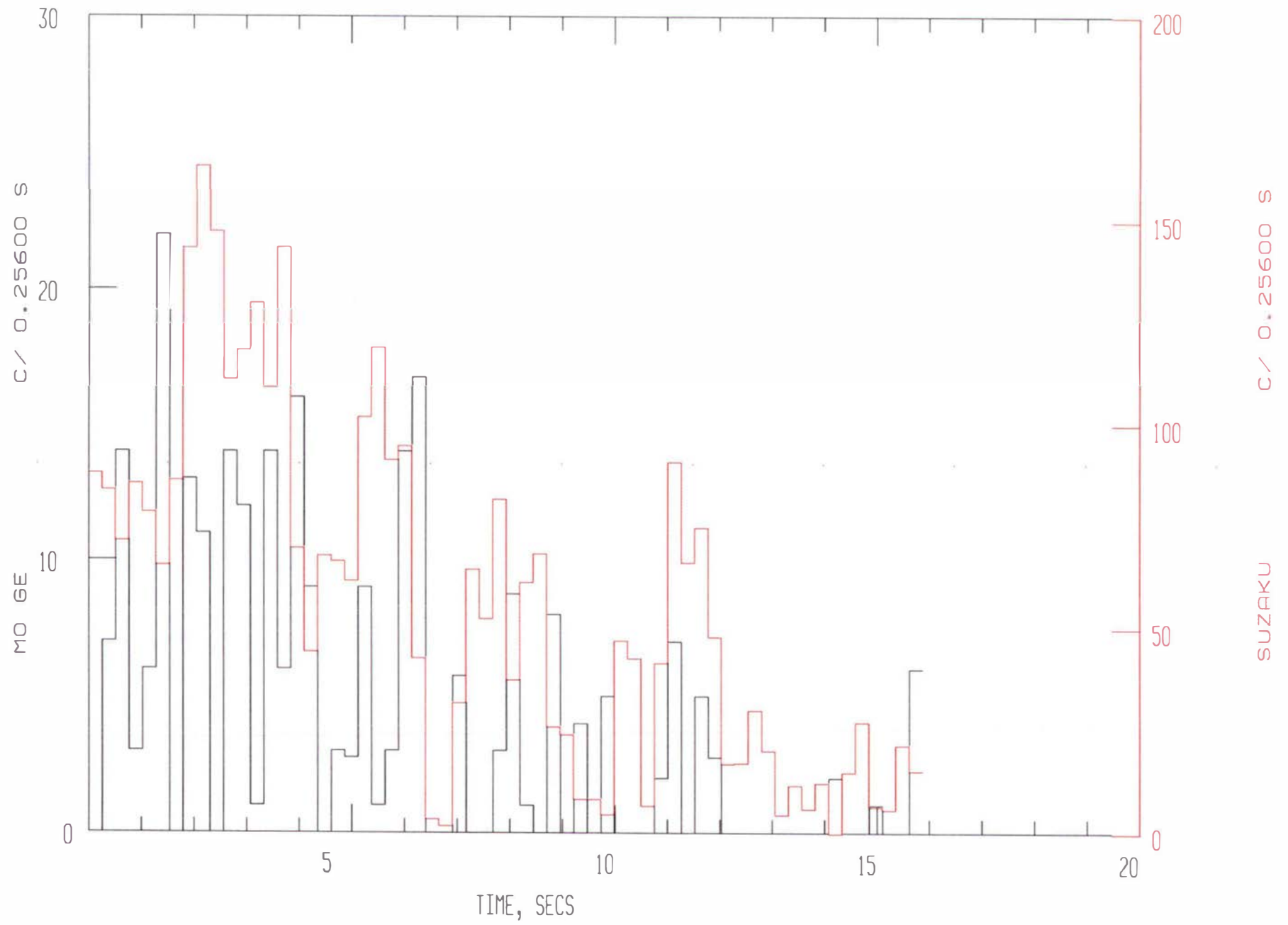
EVENT OF FEB 27, 2007 21:39

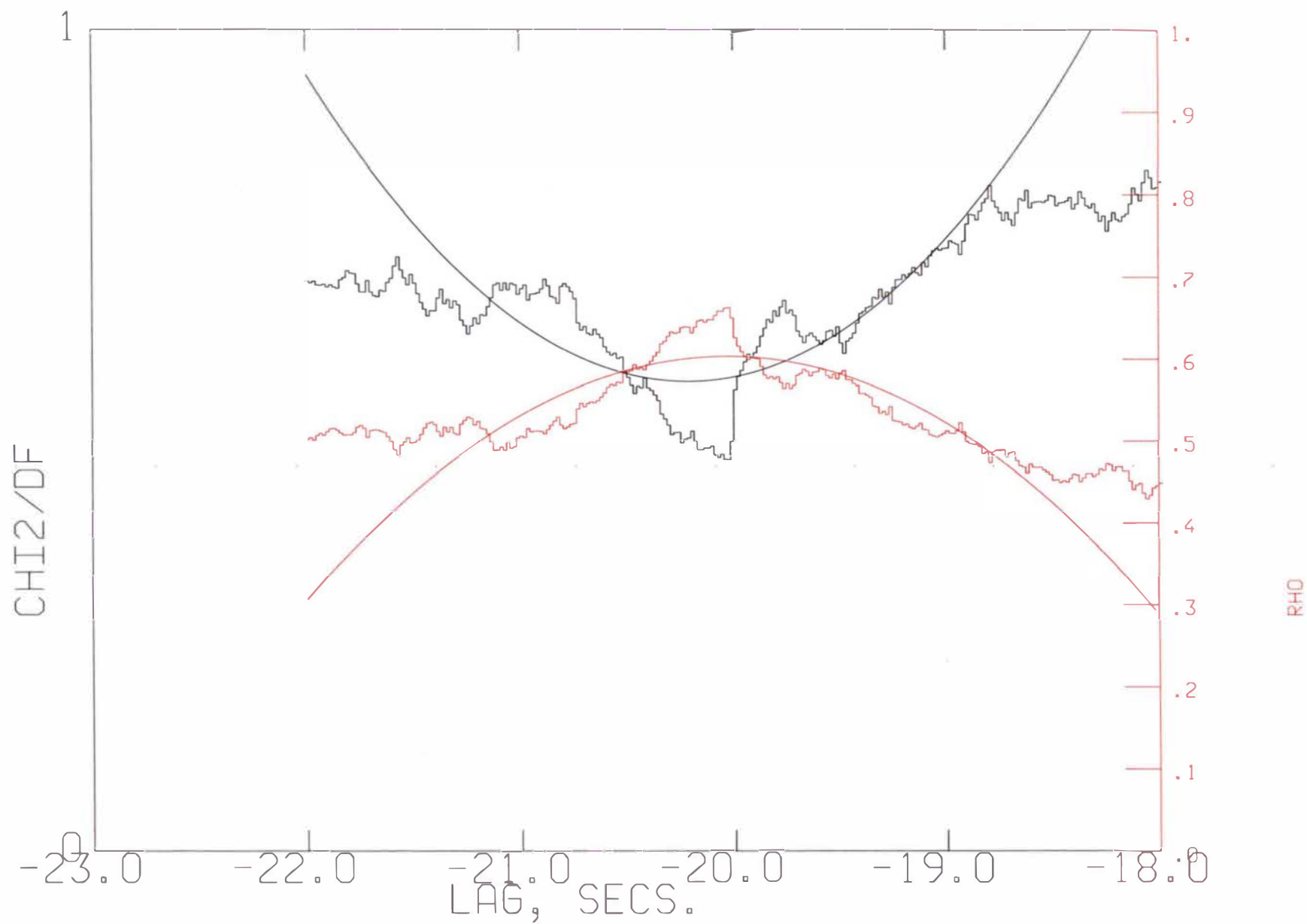
04/01/2011

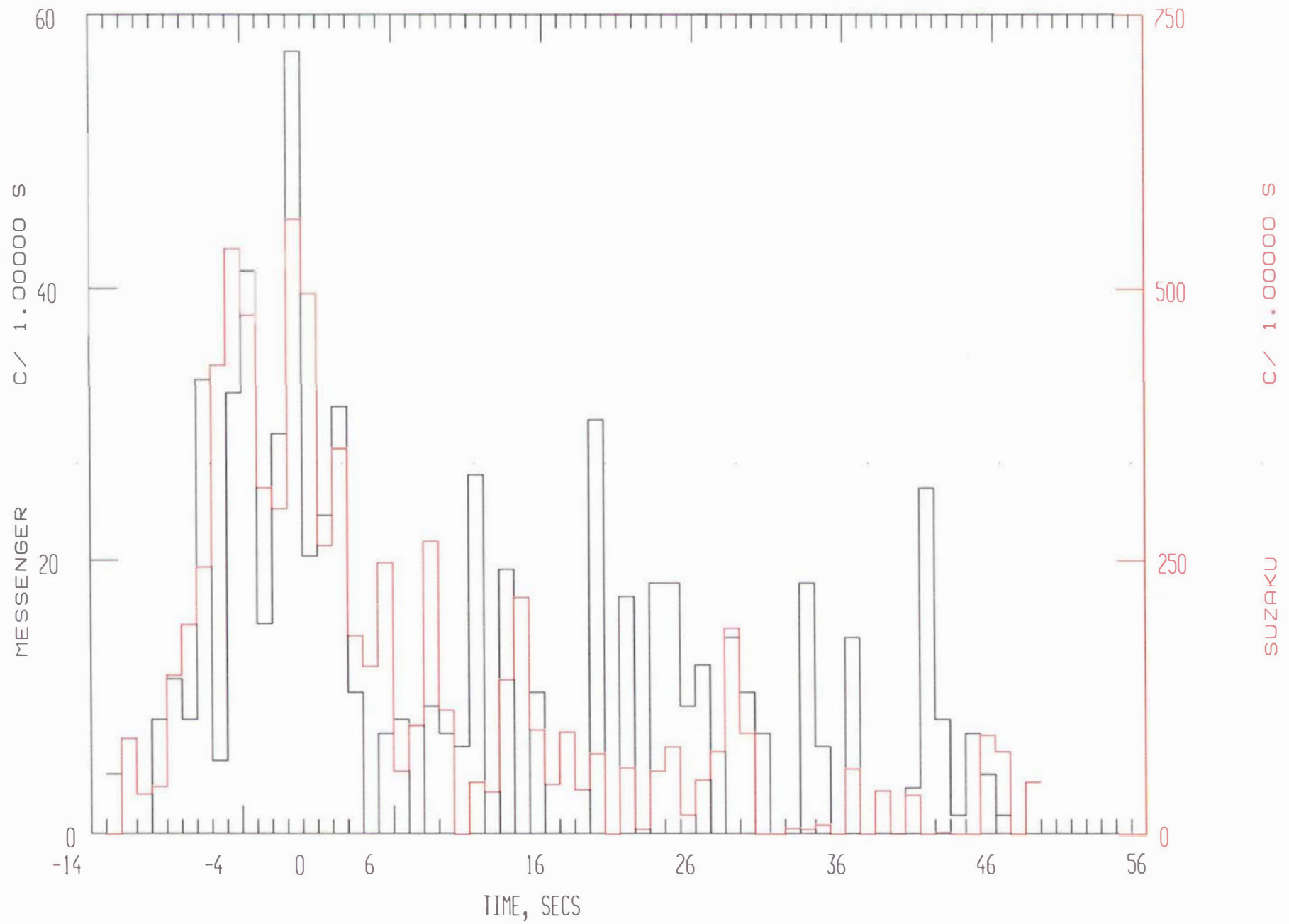
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN
1 SUZAKU
E=ECLIPTIC
2 MO
G=GALACTIC EQUATOR
3 MESSENGER











SUZAKU

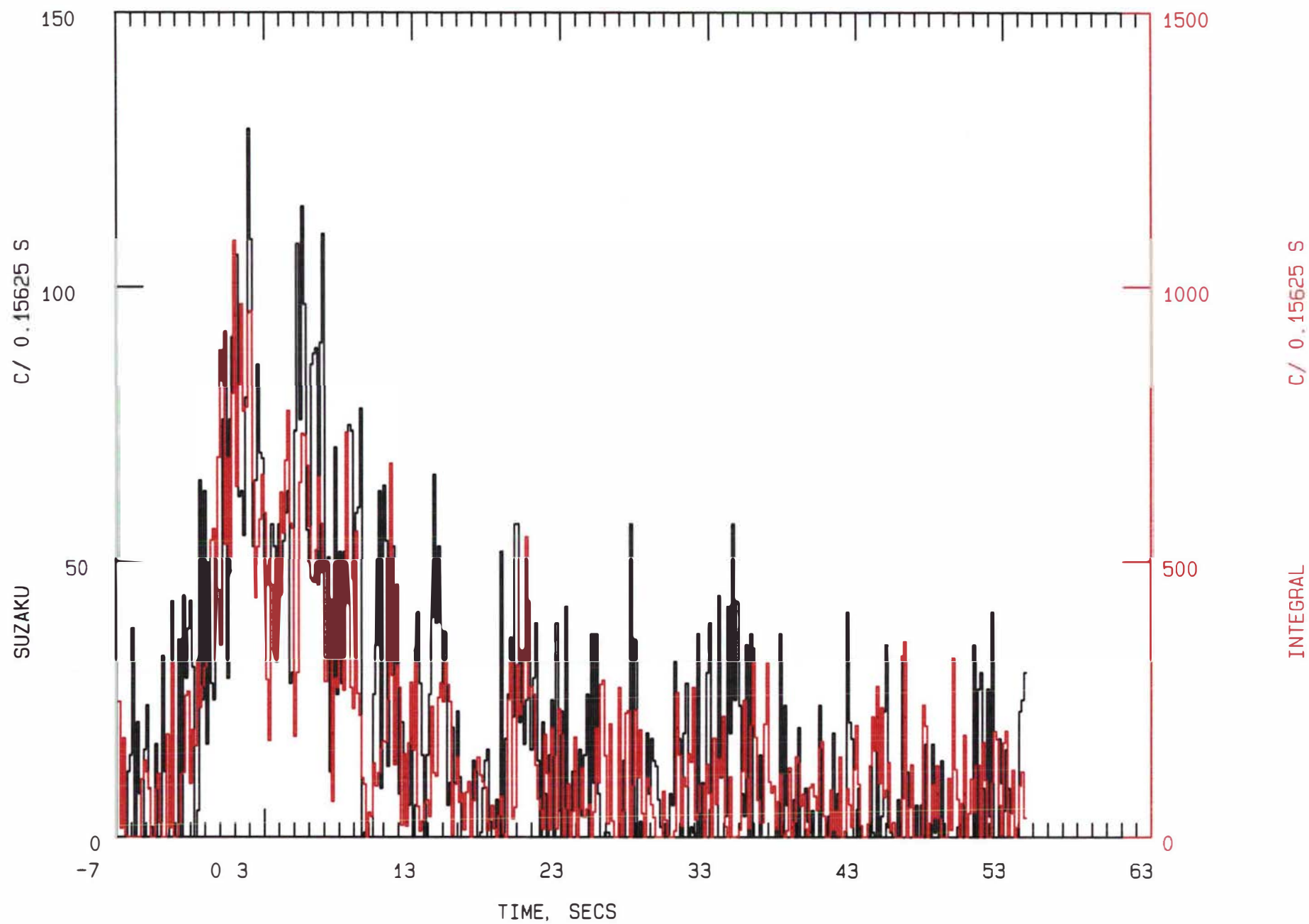
-INTEGRAL

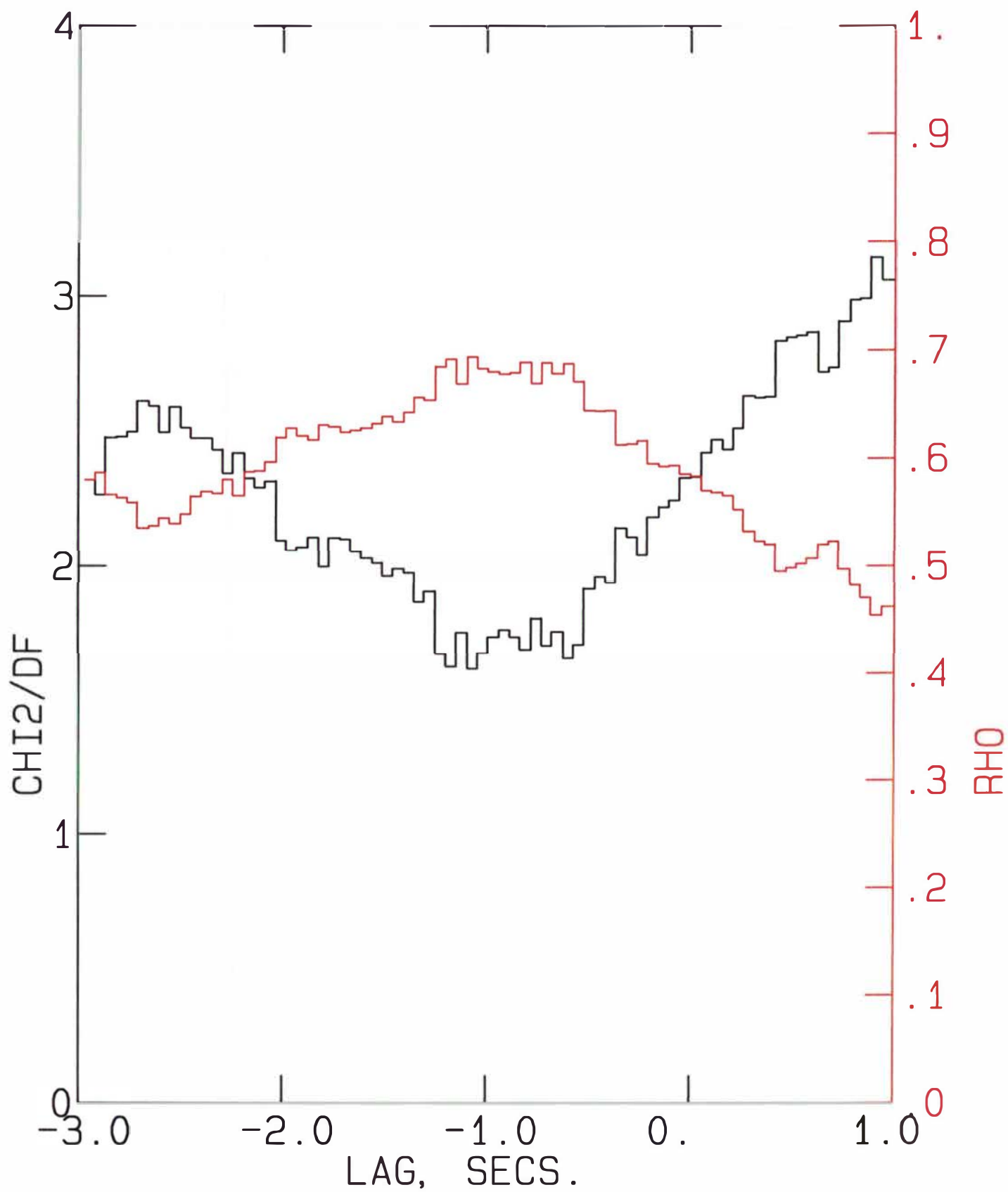
CORRELATION

27/02/07

77964.184

22/ 5/ 7



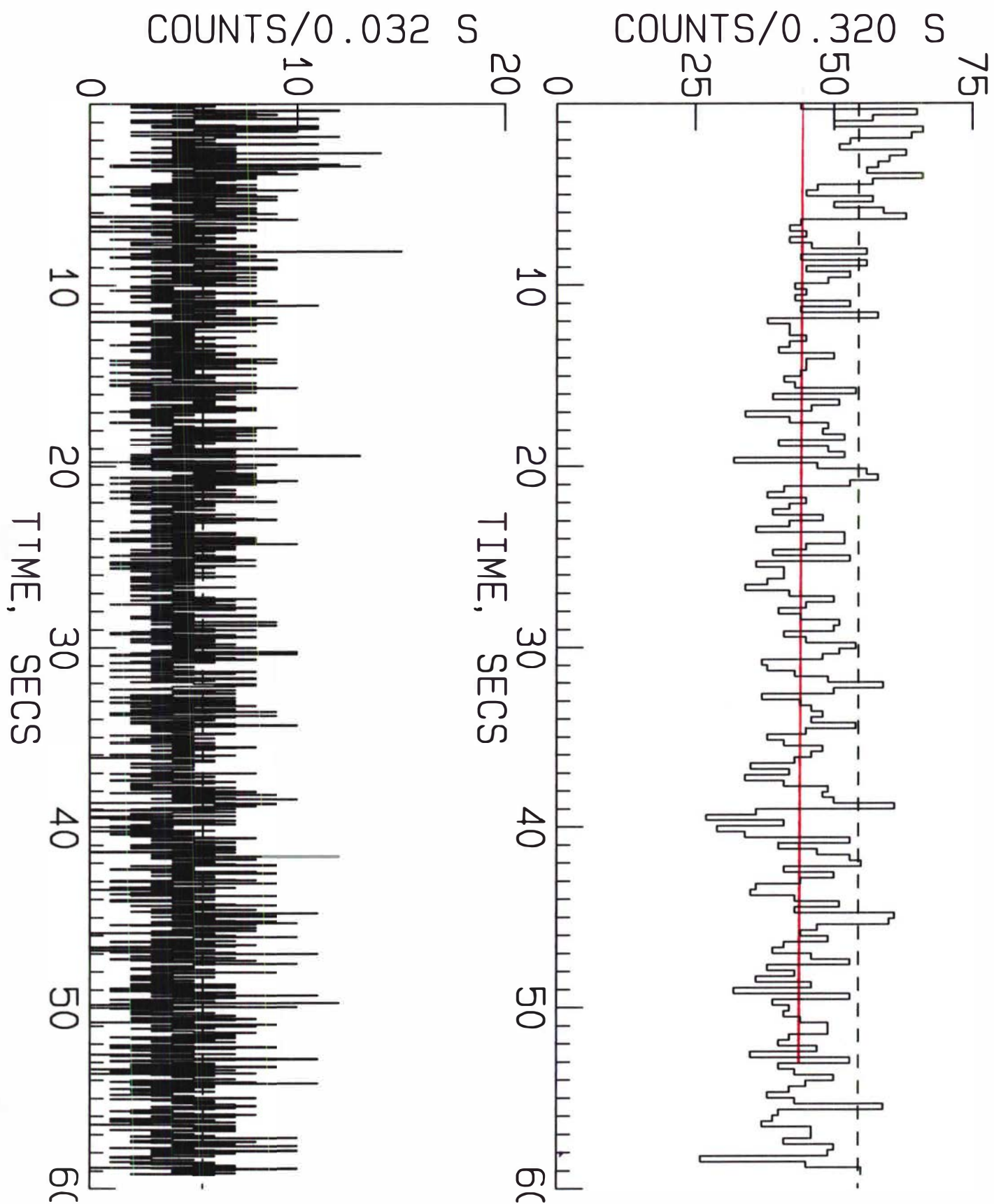


MO GE

27/02/07 77561.419

116- 337 keV

22 / 5 / 7

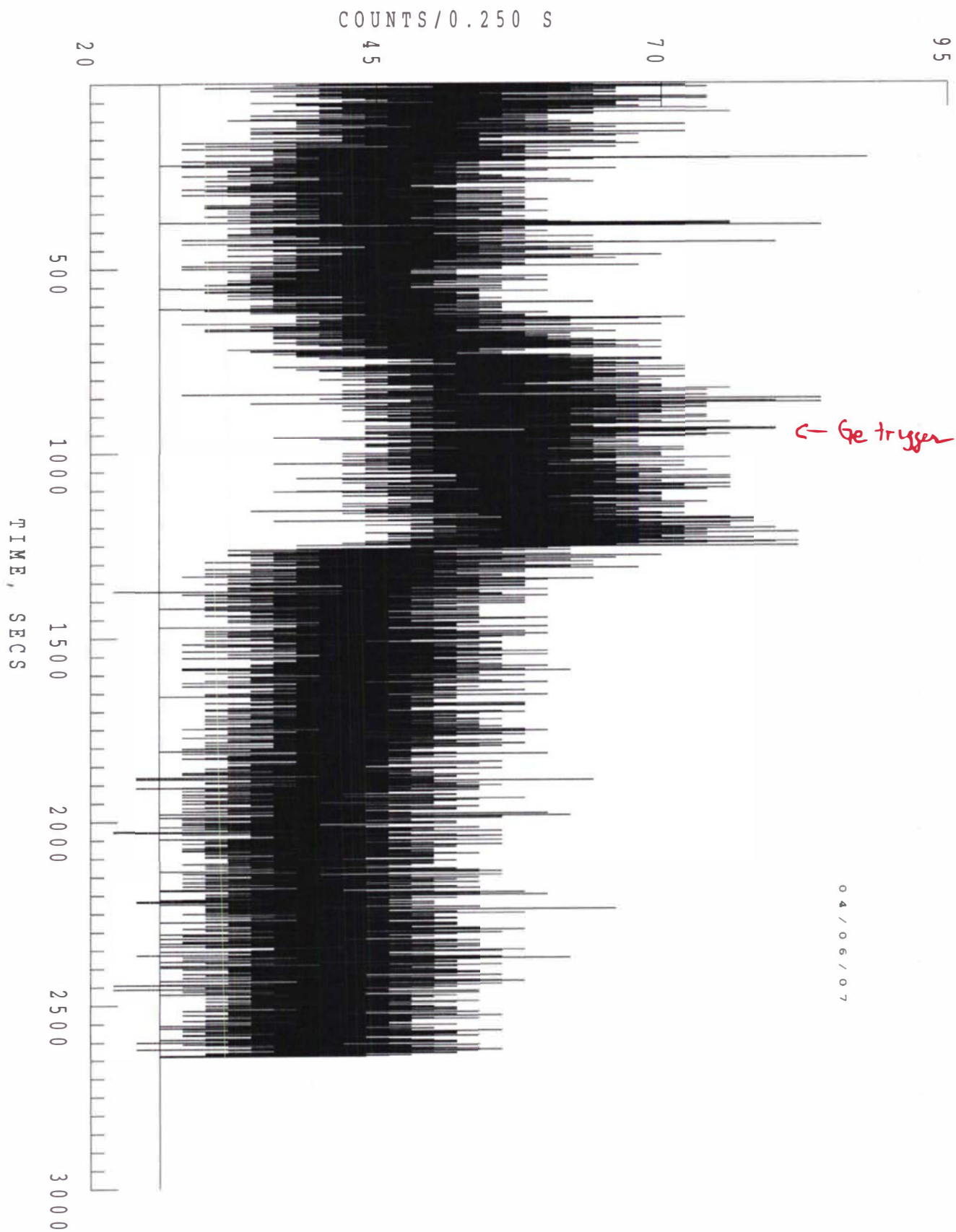


MS01

27/02/07

76628.345

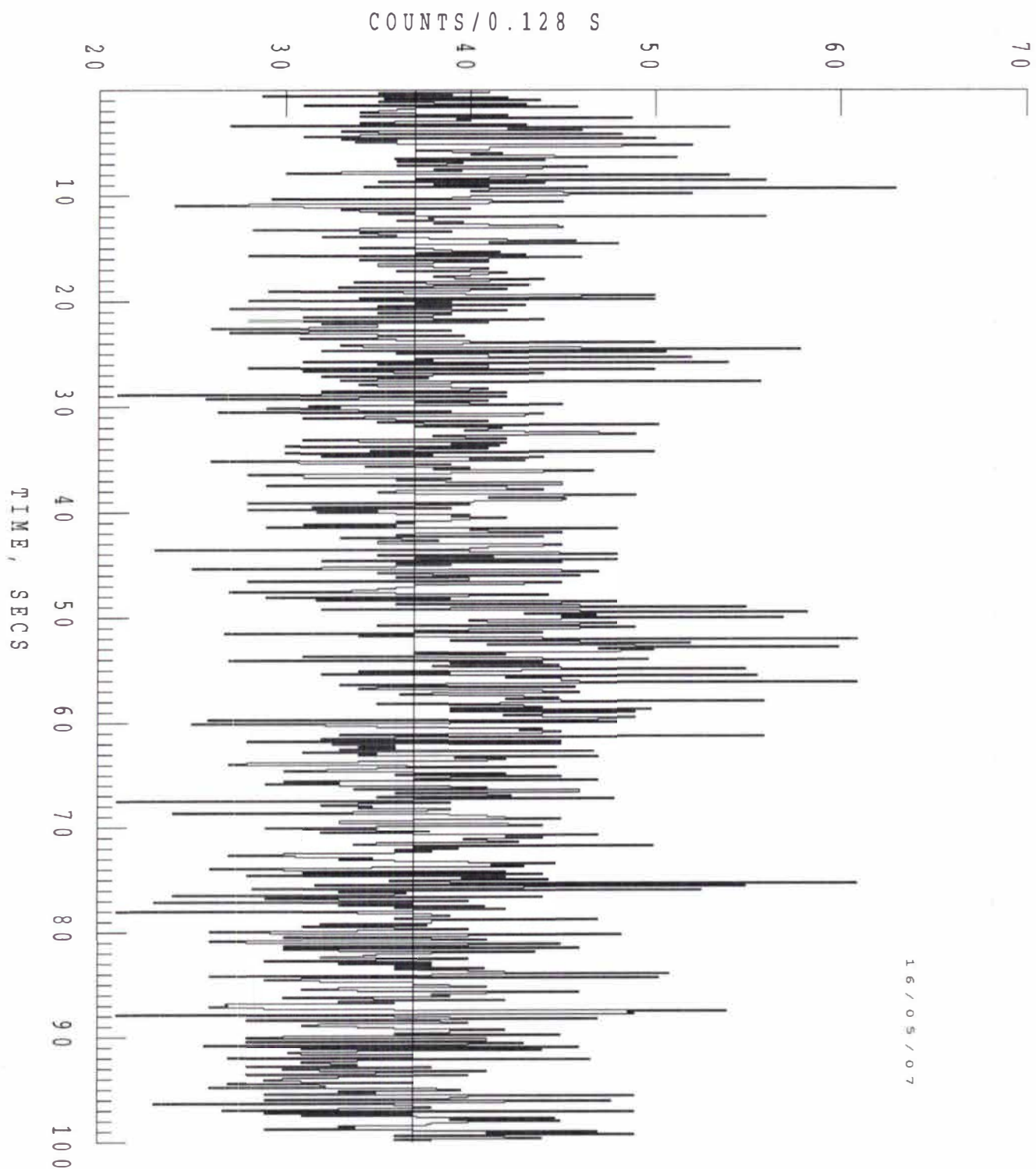
50 - 3000 keV



HESSI

27/02/07 77914.000 (SUZAKU_20070227_77964)

50 - 200 keV



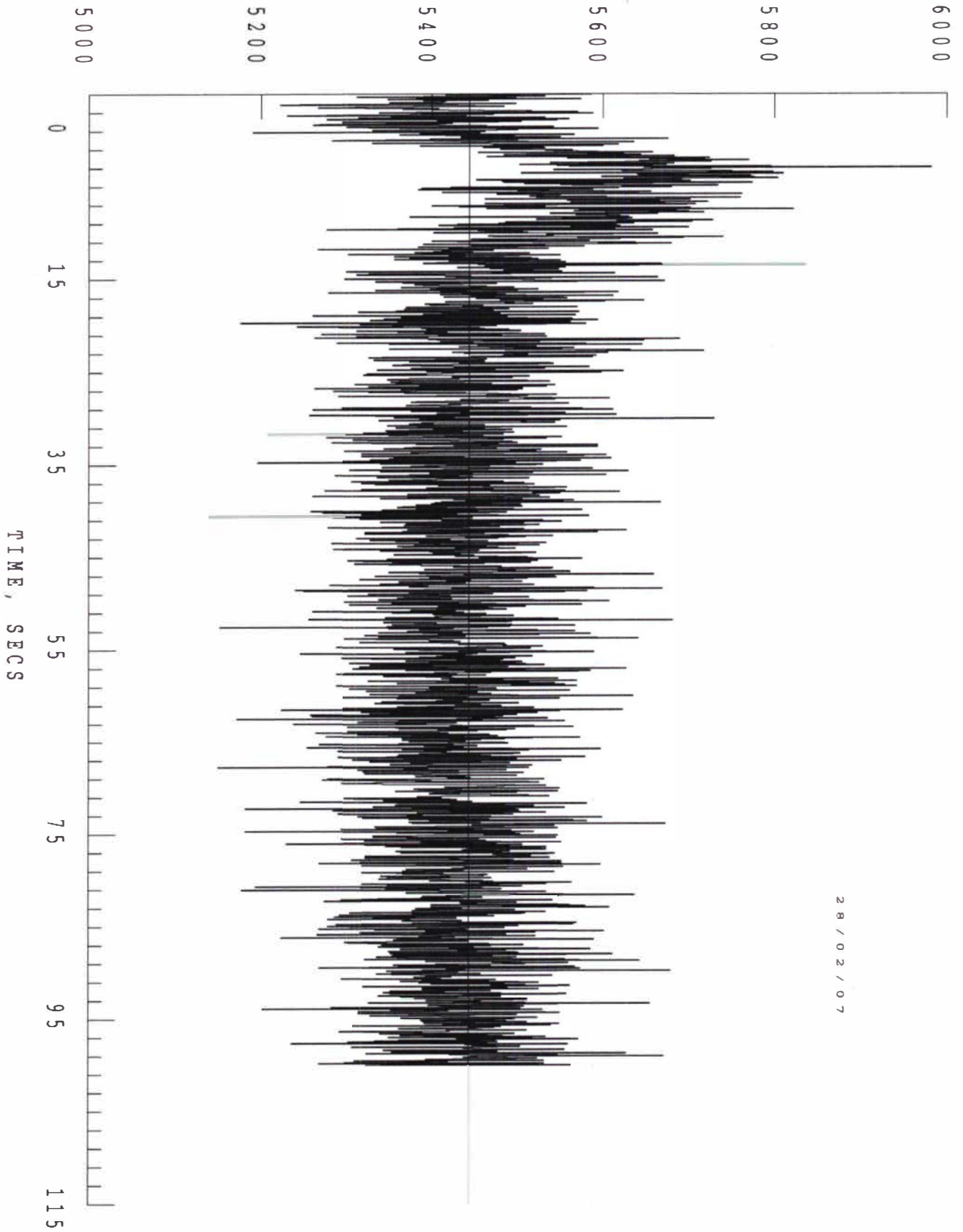
INTEGRAL

27/02/07

77962.119

100-10000 keV

COUNTS/0.050 S



28/02/07

10/05/07

MESSENGER

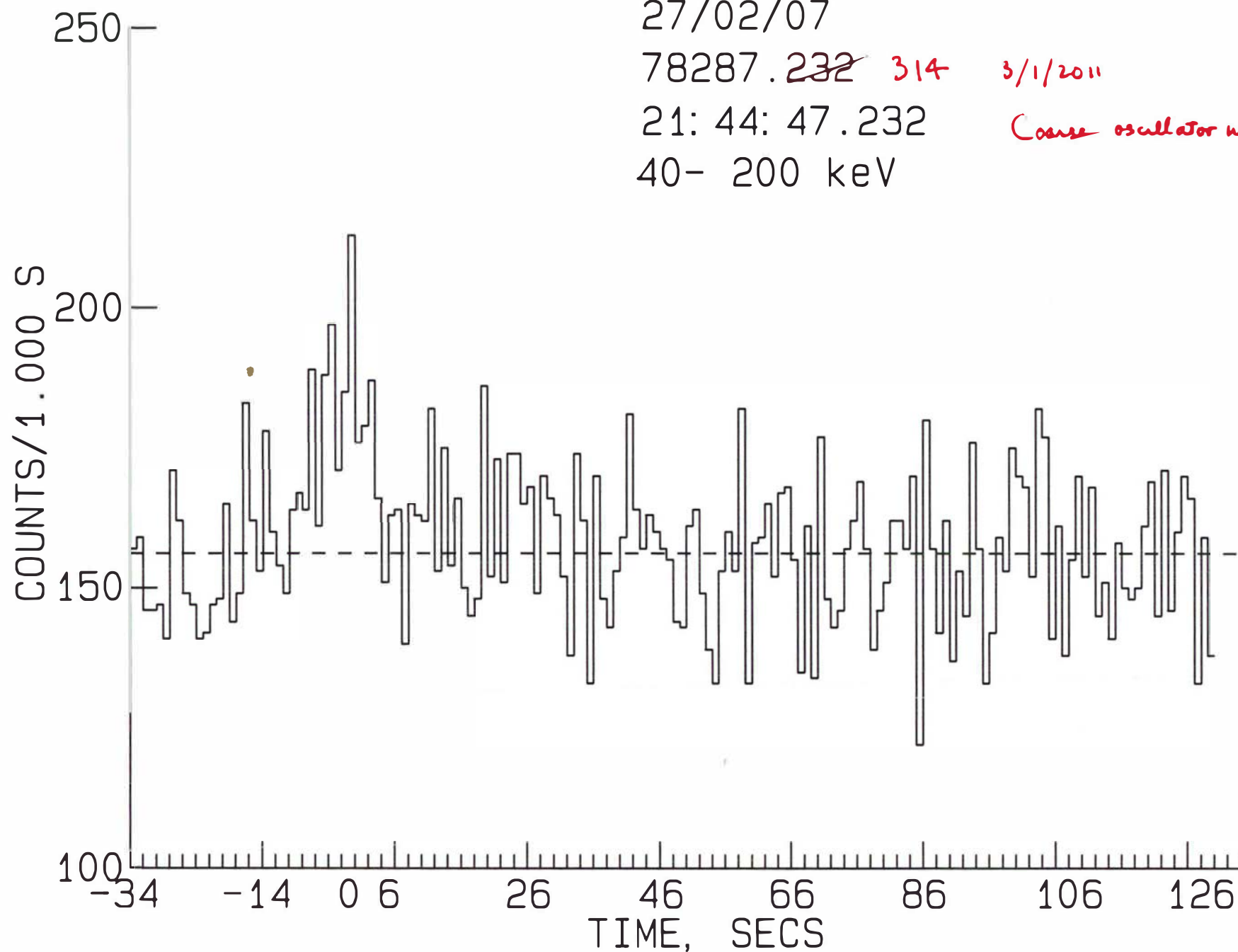
27/02/07

78287.232 ~~232~~ 314 3/1/2011

21: 44: 47.232

Coarse oscillator mode

40- 200 keV



From gcncirc@capella.gsfc.nasa.gov Tue Feb 27 22:40:20 2007
X-ASG-Debug-ID: 1172644965-0922001c0000-LqZNIK
X-Barracuda-URL: http://mailwall.ssl.berkeley.edu:8000/cgi-bin/mark.cgi
-Barracuda-Connect: capella.gsfc.nasa.gov[128.183.16.187]
-Barracuda-Start-Time: 1172644965
X-ASG-Whitelist: Sender
From: GCN Circulars <gcncirc@capella.gsfc.nasa.gov>
X-ASG-Orig-Subj: GRB 070227: Swift detection of a burst in ground analysis
Subject: GRB 070227: Swift detection of a burst in ground analysis
To: khurley@ssl.berkeley.edu
Date: Wed, 28 Feb 2007 01:42:45 -0500 (EST)
Project: GCN (GRB Coordinates Network)
Phone: 301-286-3106 (voice) (-1684 fax)
Pager: 3013463733@mmode.com
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit
X-Barracuda-Virus-Scanned: by Barracuda Spam Firewall at ssl.berkeley.edu

TITLE: GCN CIRCULAR
NUMBER: 6156
SUBJECT: GRB 070227: Swift detection of a burst in ground analysis
DATE: 07/02/28 06:42:44 GMT
FROM: Claudio Pagani at PSU/Swift-XRT <pagani@astro.psu.edu>

C. Pagani (PSU), M. M. Chester (PSU), J. R. Cummings (NASA/UMBC),
D. M. Palmer (LANL), T. Sakamoto (NASA/ORAU) and L. Vetere (PSU)
report on behalf of the Swift Team:

At 2007-02-27 22:59⁸⁰⁵¹⁹ Swift-BAT detected GRB 070227 (trigger 262347).
The burst was not found automatically onboard, because a planned
slew terminated the trigger prematurely. The burst was found later
in ground analysis. Swift did not slew to the burst, and a target
of opportunity observation for this burst will be uploaded at
the next command opportunity (around 1400 UT).

The BAT position is RA, Dec 120.566, -46.305 (J2000)
RA: +08h 02m 16s
Dec: -46d 18' 17"

~ 7s long
 1.6×10^{-6}

with an estimated error circle of 3 arcmin. The burst was
in the extreme partially coded field of view, the coding
was 3.4%.

The burst as seen by BAT was a single peak at least 8 seconds
long. We have detailed information for only T-2 to T+8 sec.
Since the burst was weak and on the edge of the FOV, and
because of the subsequent slew, we can not determine if
additional emission occurred.

MCT ~ 80922

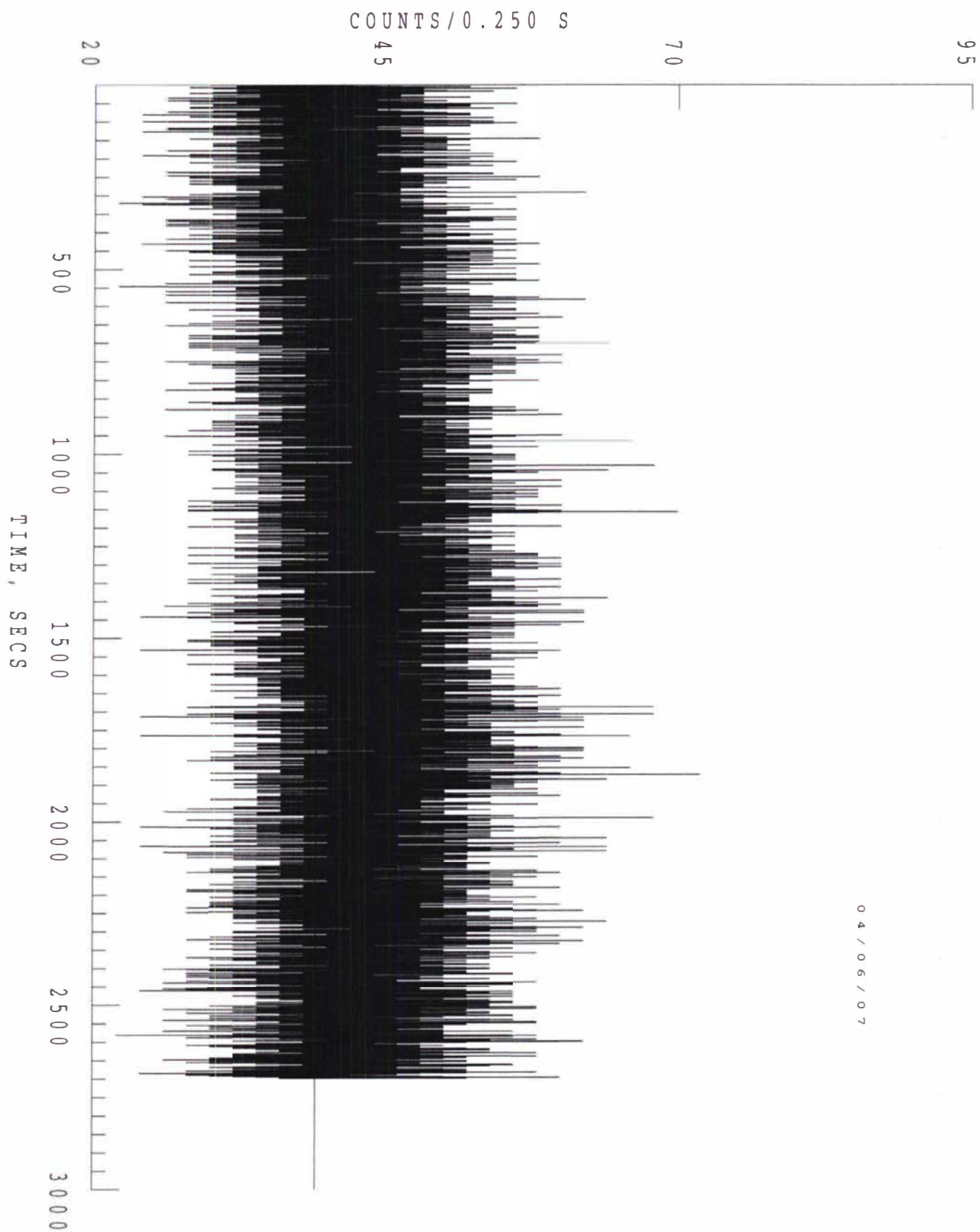
MES CT ~ 80826

MS01

27/02/07

79148.302

50 - 3000 keV



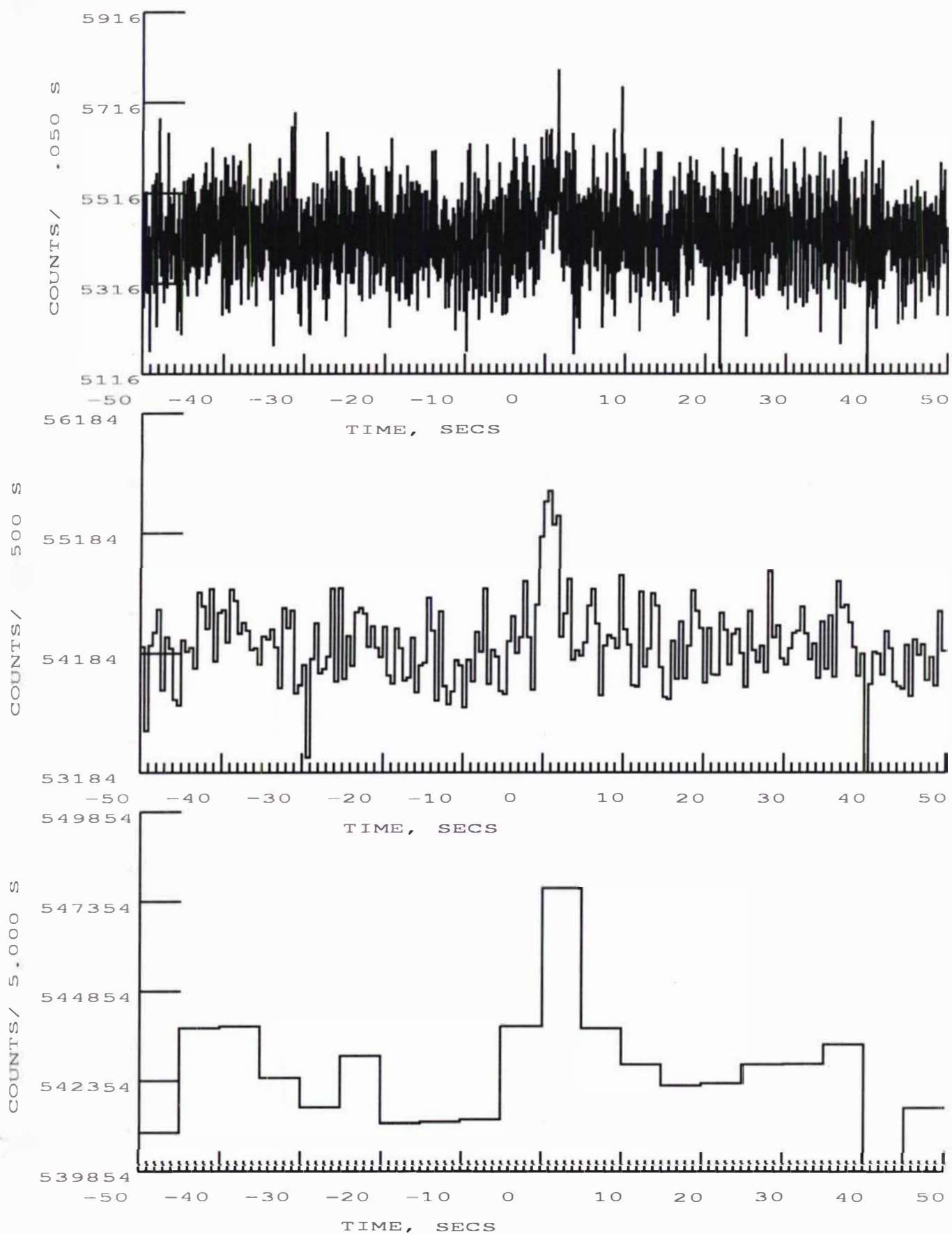
INTEGRAL

27/02/07

80519.000

22:21:59.0

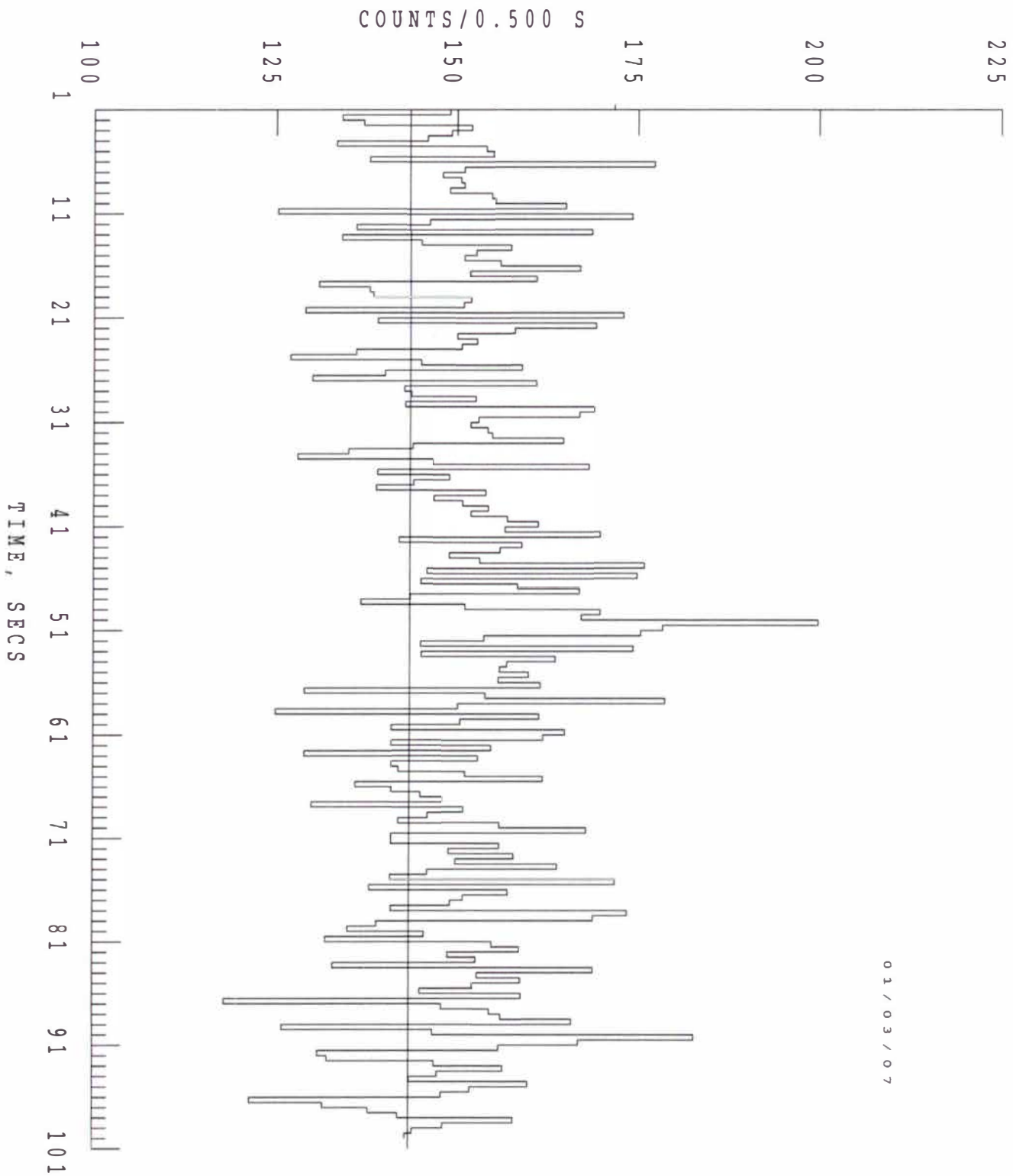
18/07/14



HESSI

27/02/07 80469.000 (SWIFT_20070227_80519)

25- 150 keV



10/05/07

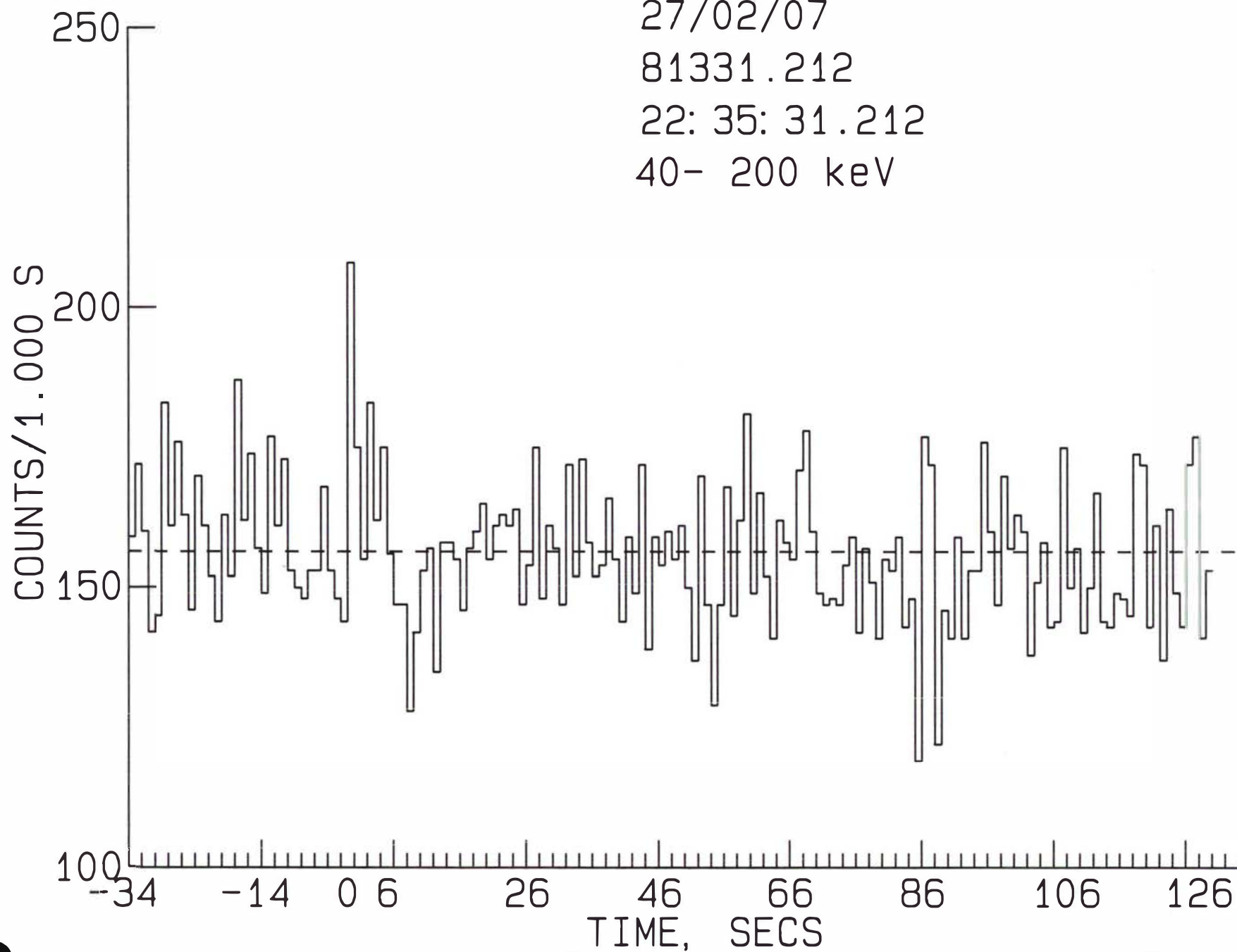
MESSENGER

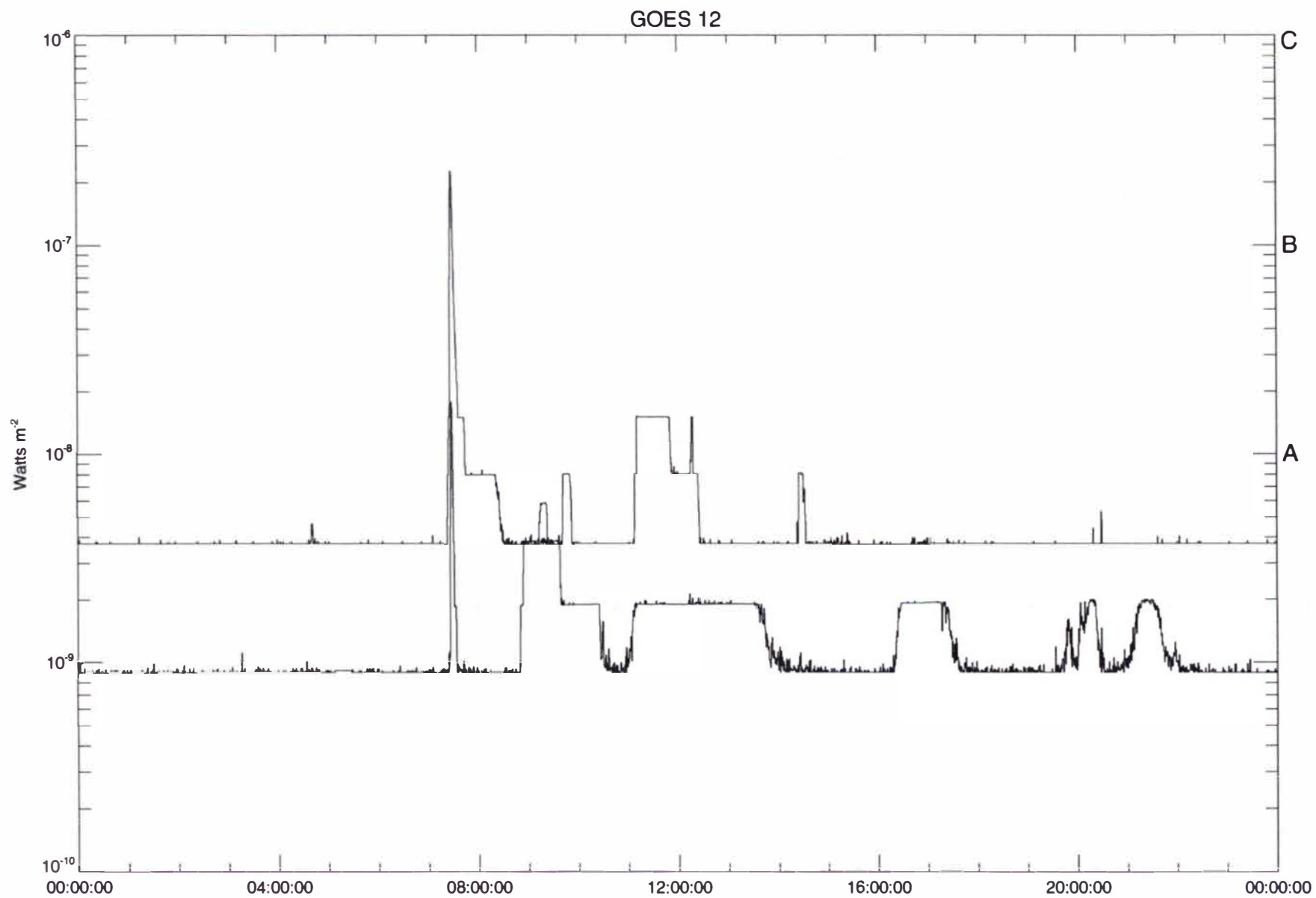
27/02/07

81331.212

22:35:31.212

40- 200 keV





Data Start: 07/02/27, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Background not subtracted

Plot created: 07/03/02, 0921

Sample average = 10

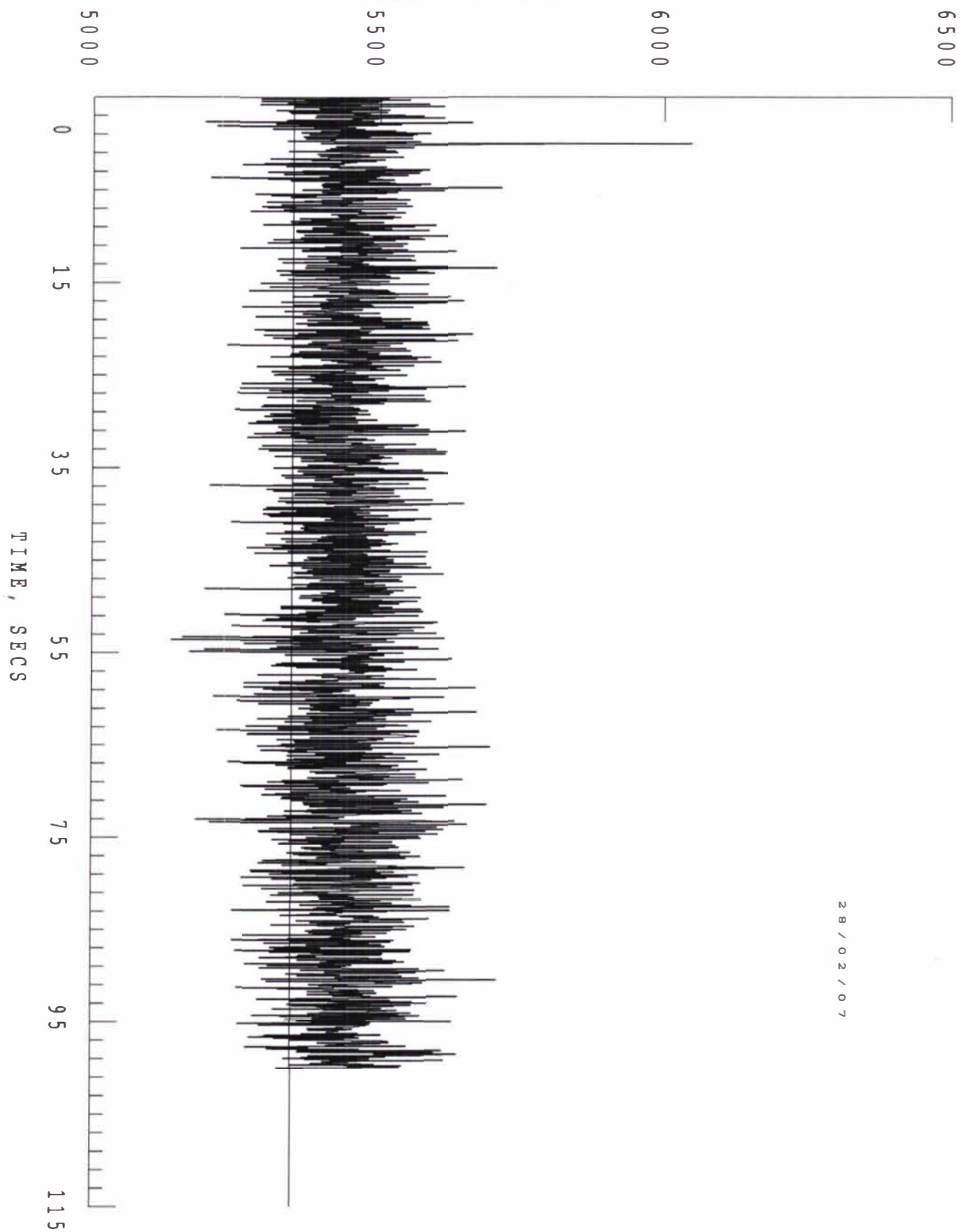
INTEGRAL

28/02/07

28437.241

100-10000 keV

COUNTS/0.050 S



28/02/07

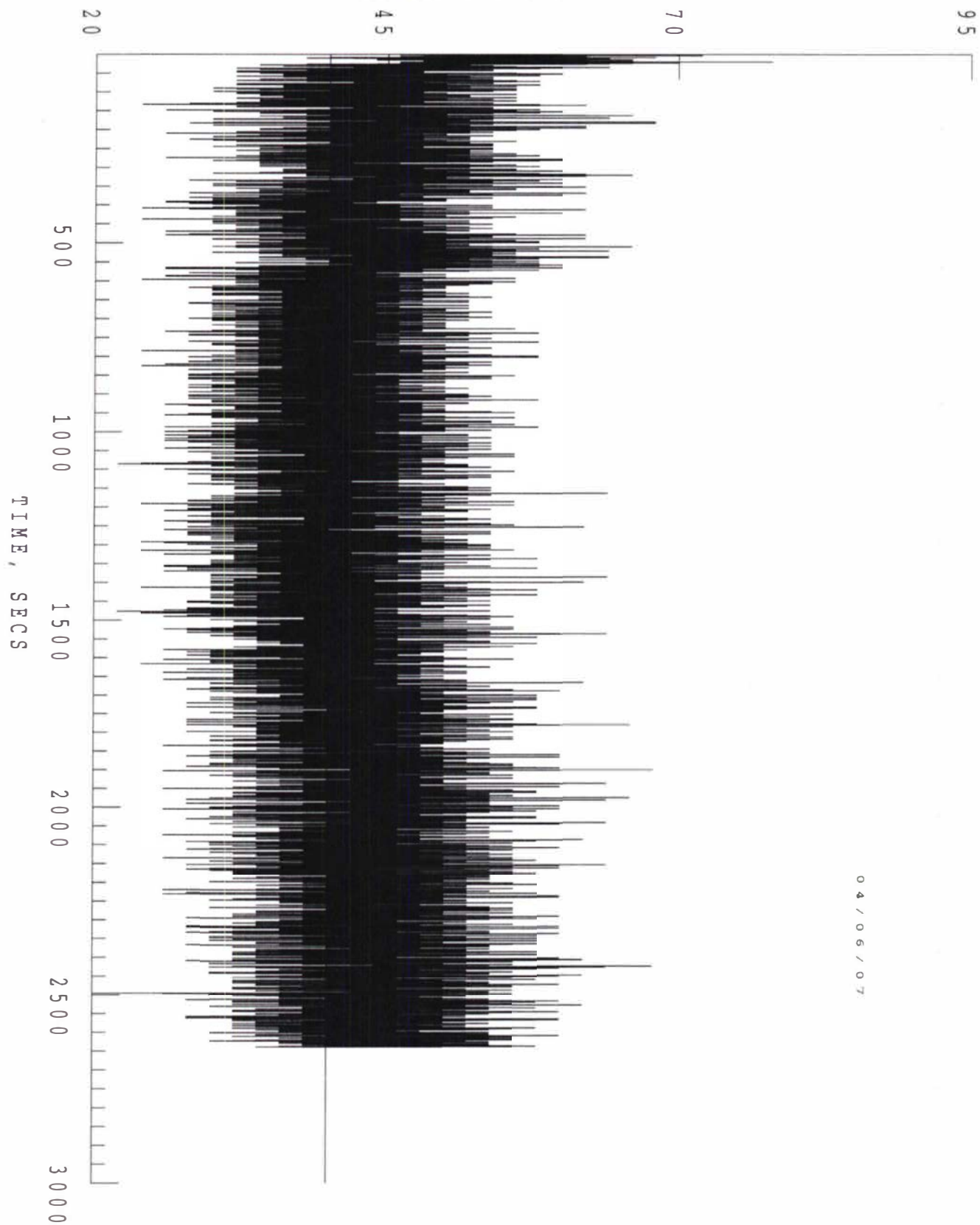
MS01

28/02/07

27127.682

50- 3000 keV

COUNTS/0.250 S



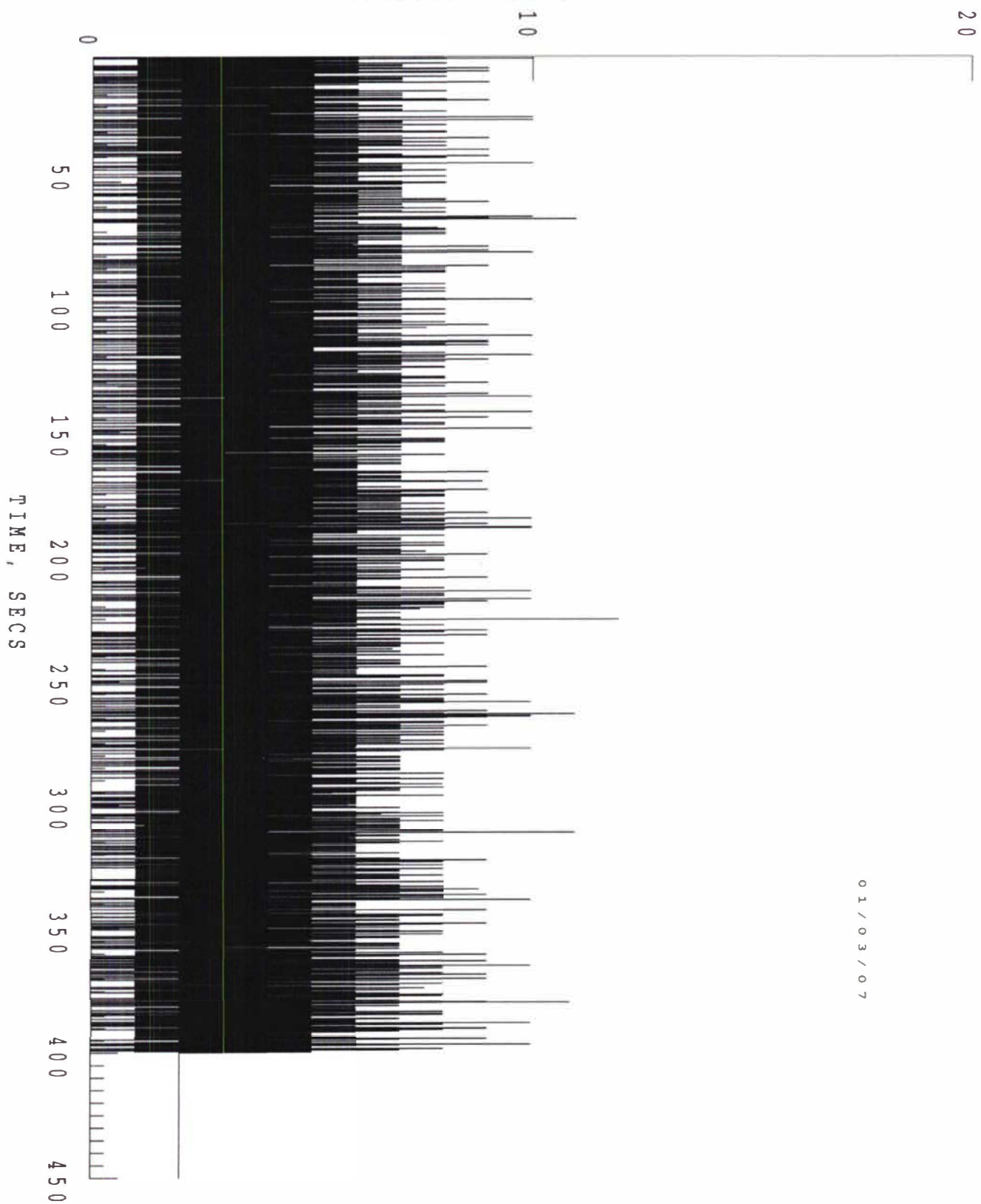
04/06/07

HESSI

28/02/07 28237.000 (INTEGRAL_20070228_28437)

25- 150 keV

COUNTS/0.031 S



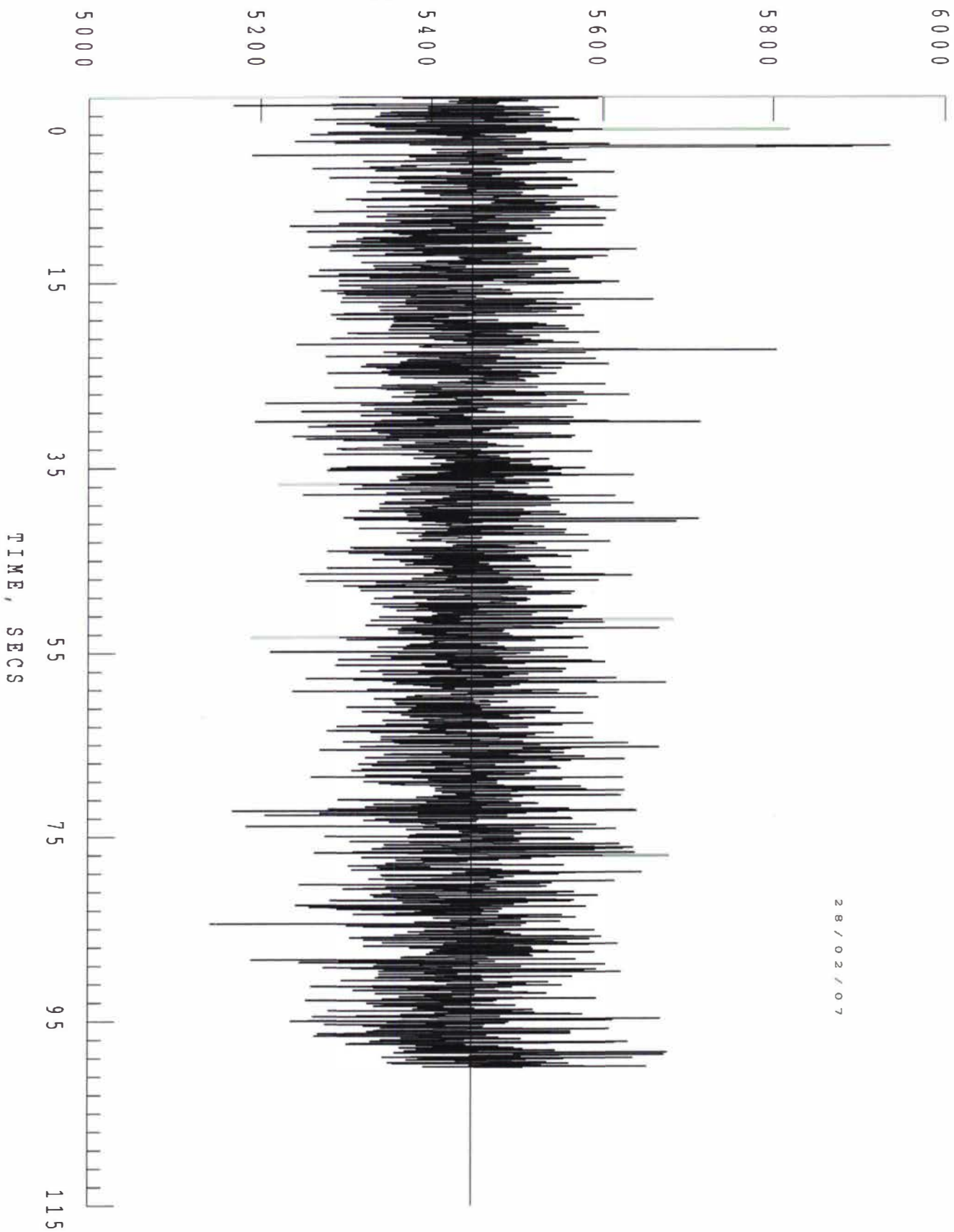
INTEGRAL

28/02/07

35257.898

100-10000 keV

COUNTS/0.050 S



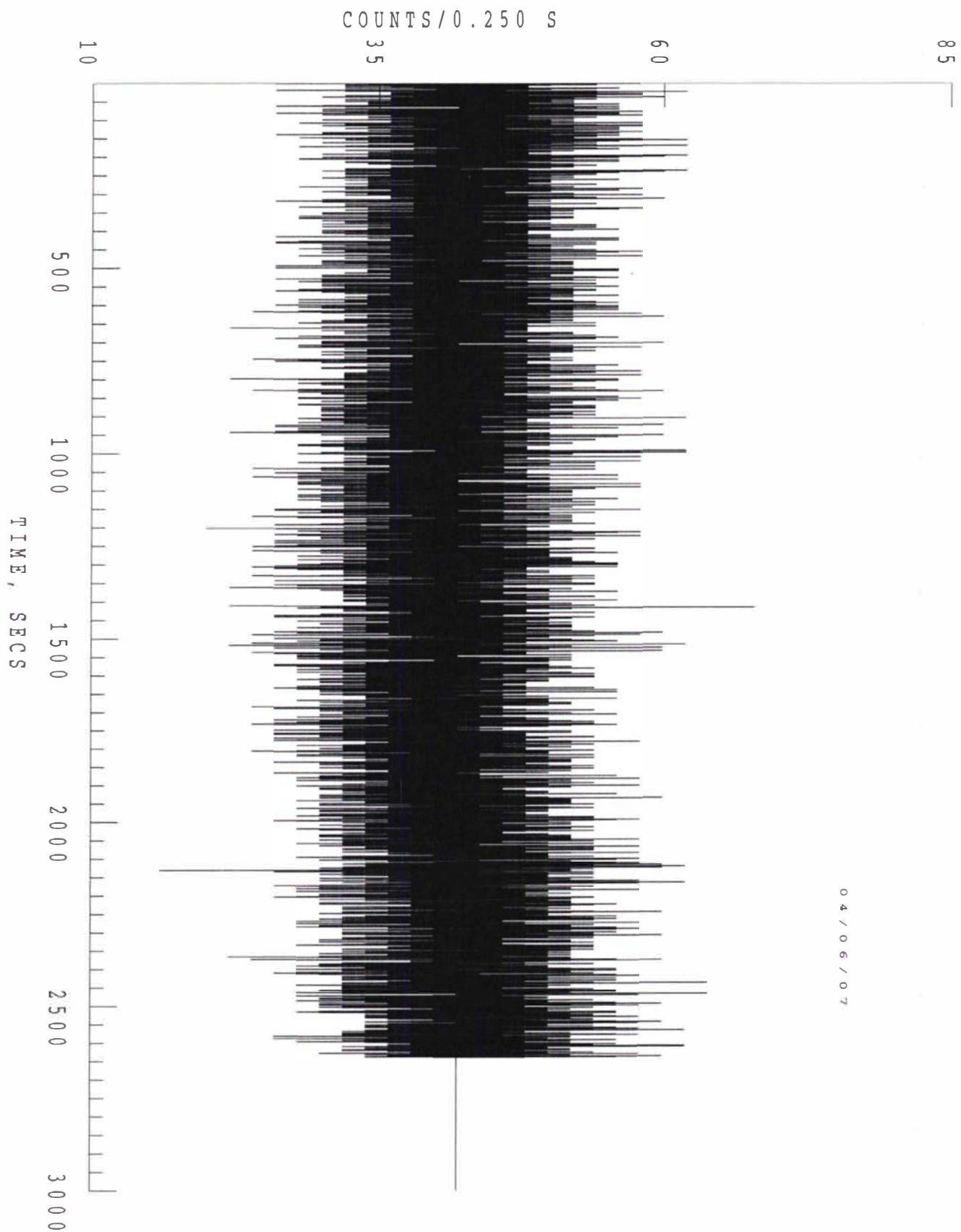
28/02/07

MS01

28/02/07

33907.555

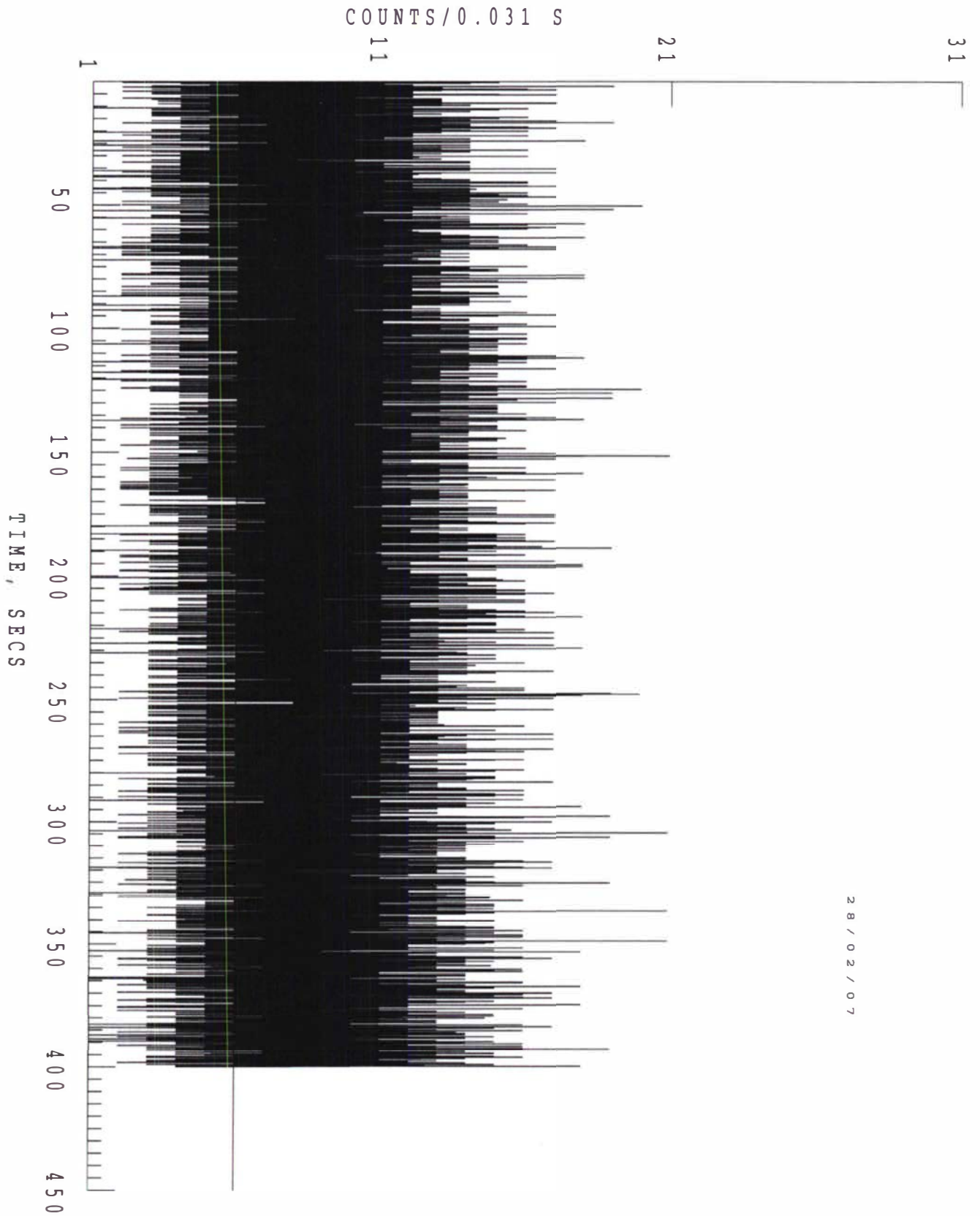
50 - 3000 keV



HESSI

28/02/07 35057.000 (INTEGRAL_20070228_35257)

25- 150 keV



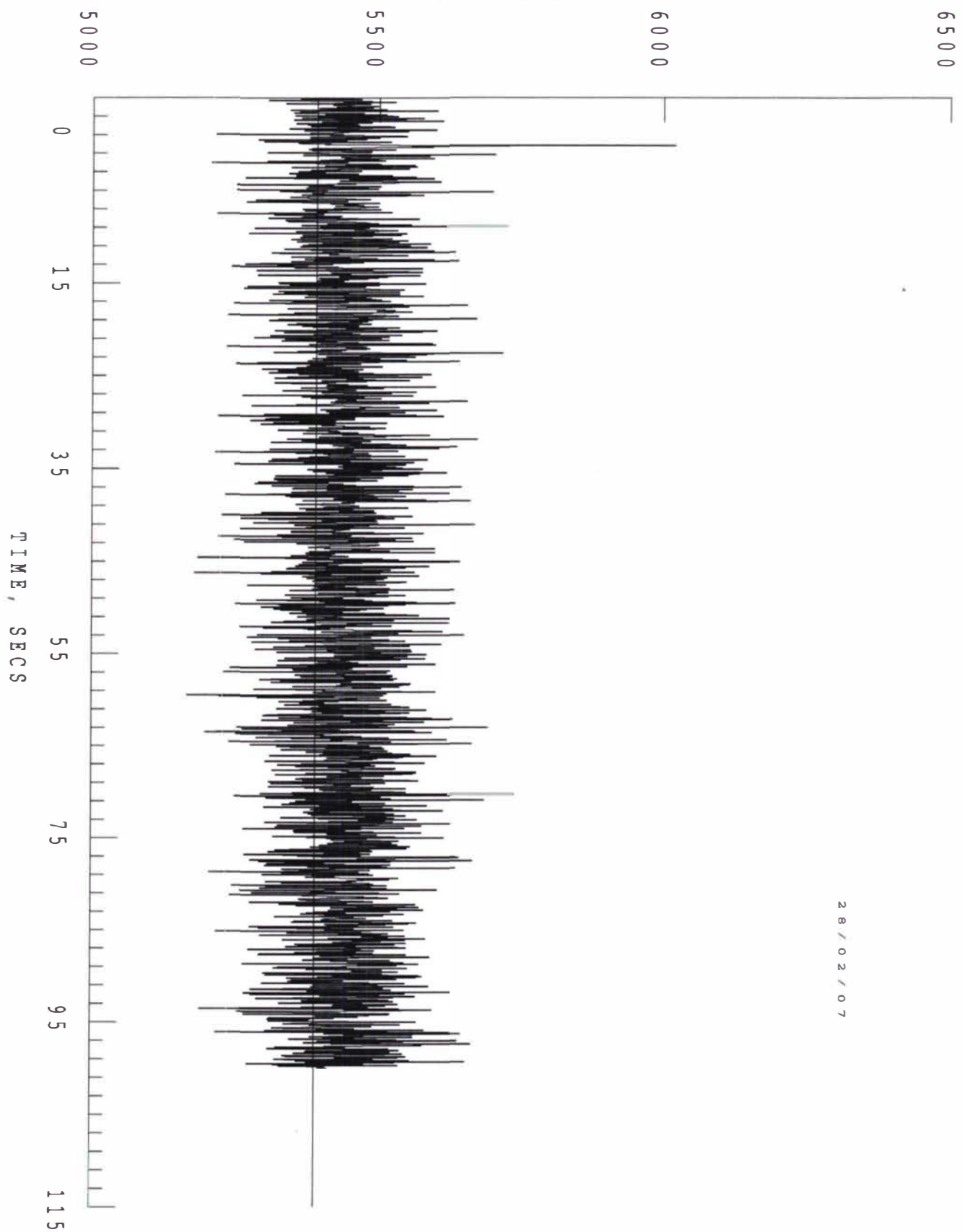
INTEGRAL

28/02/07

39375.303

100-10000 keV

COUNTS/0.050 S



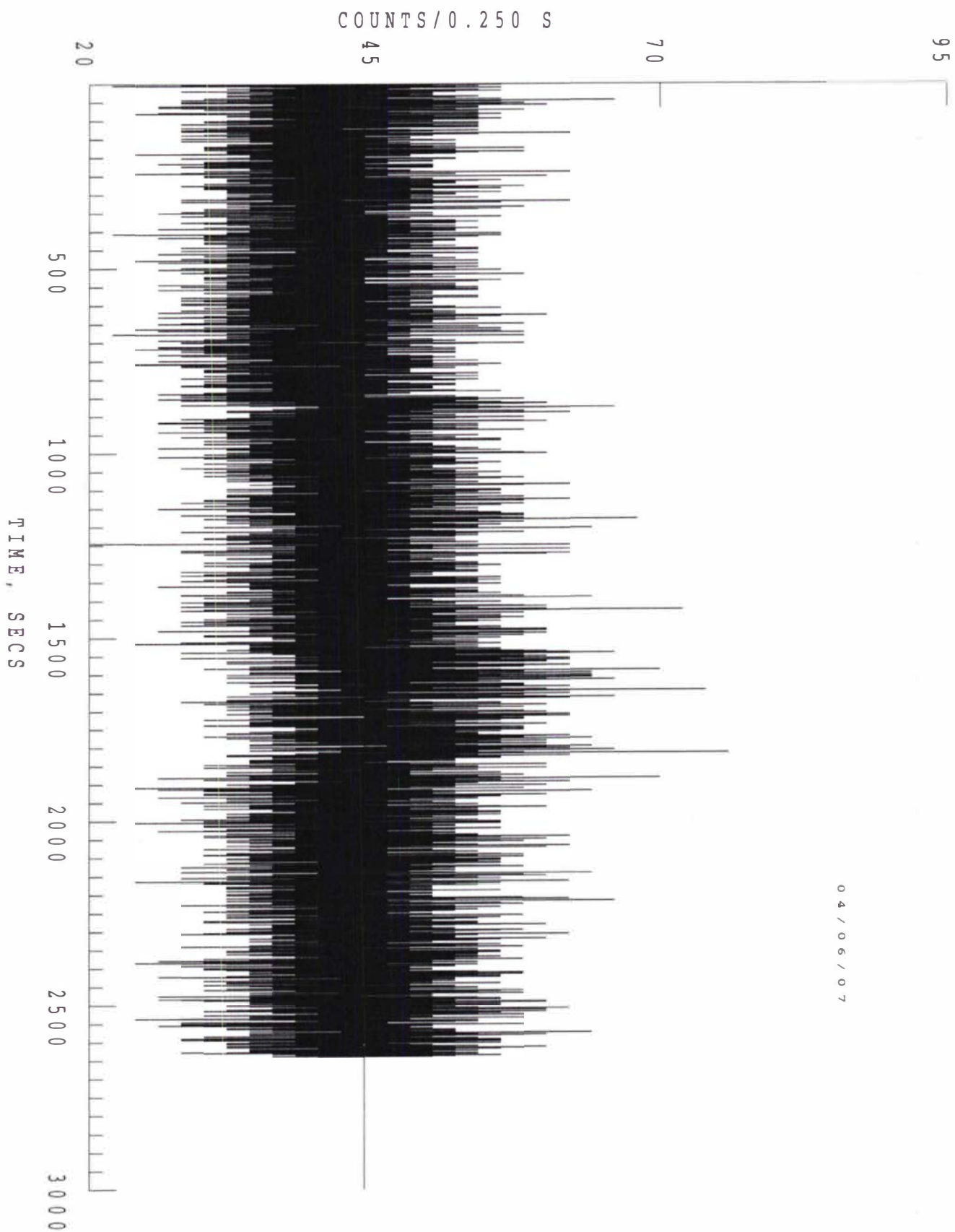
28/02/07

MS01

28/02/07

38047.484

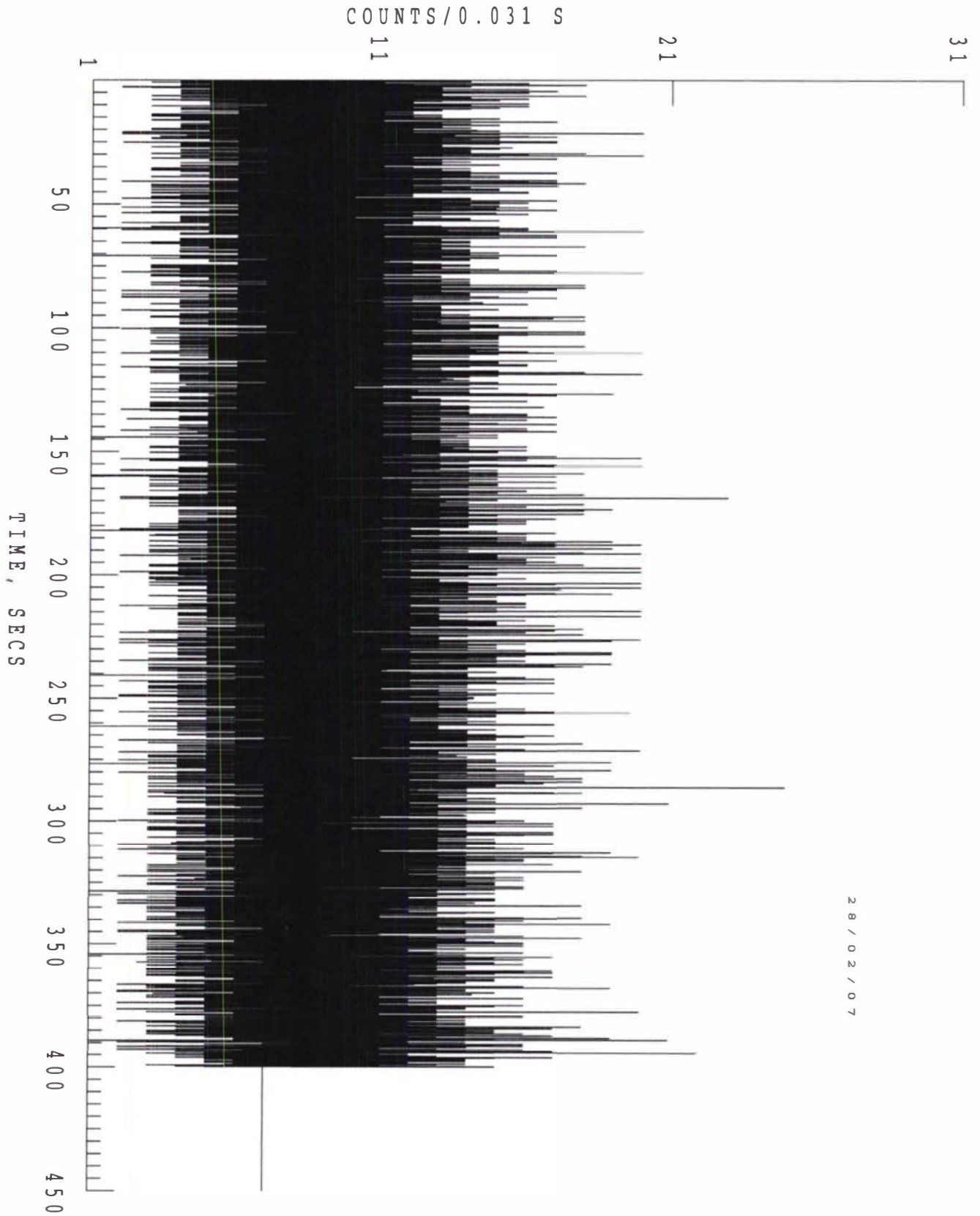
50 - 3000 keV



HESSI

28/02/07 39175.000 (INTEGRAL_20070228_39375)

25- 150 keV



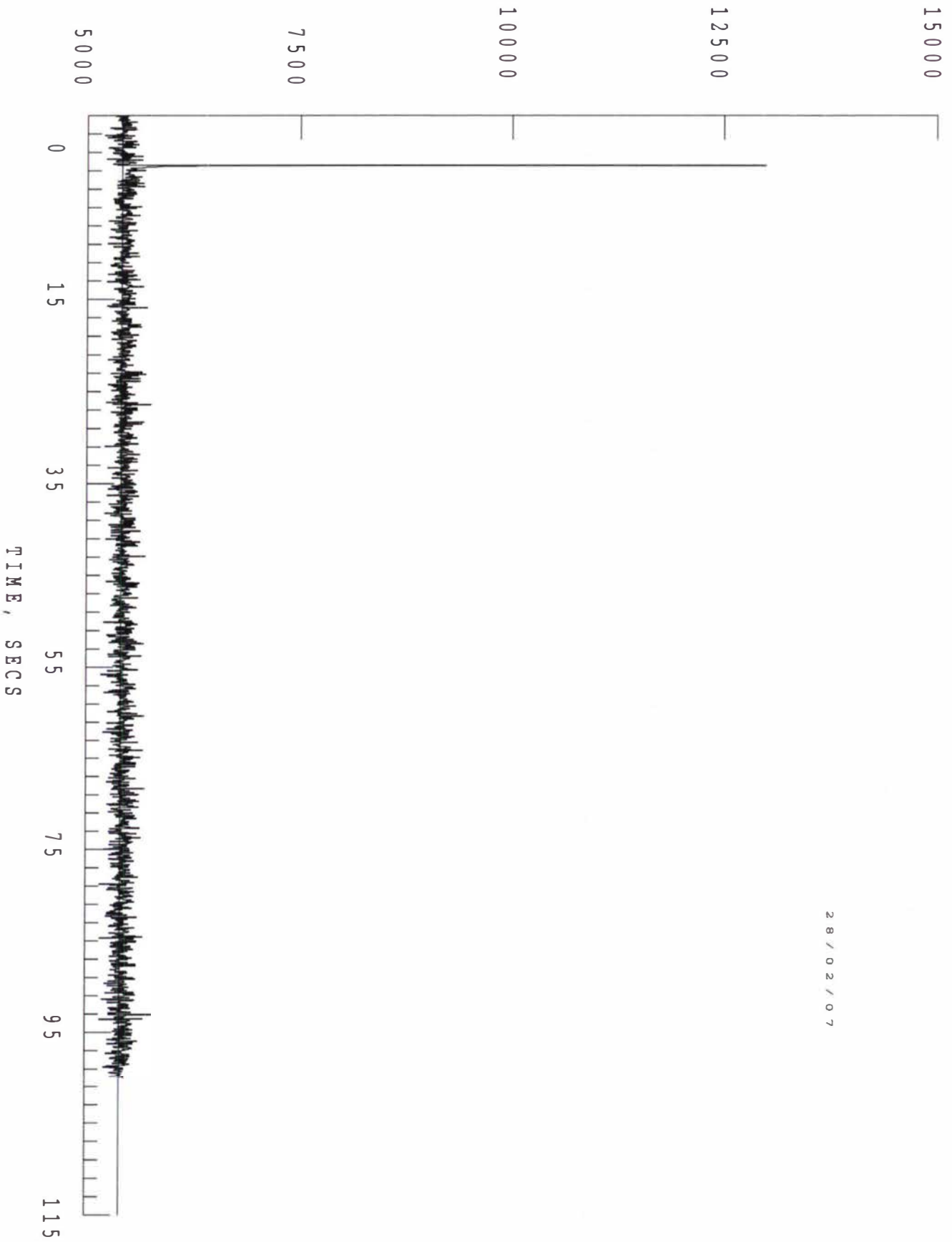
INTEGRAL

28/02/07

50670.152

100-10000 keV

COUNTS/0.050 S



28/02/07

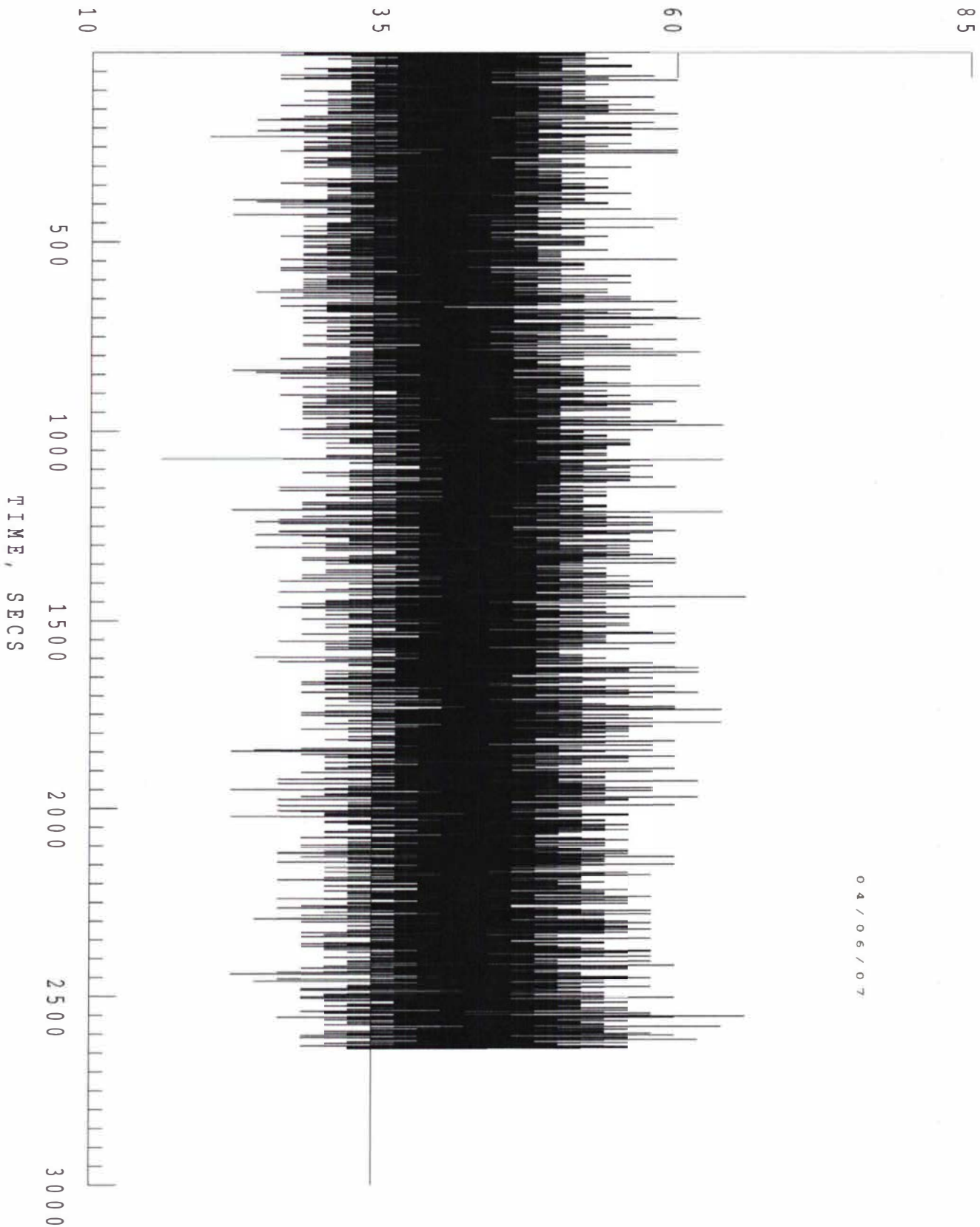
MS01

28/02/07

49327.275

50- 3000 keV

COUNTS/0.250 S



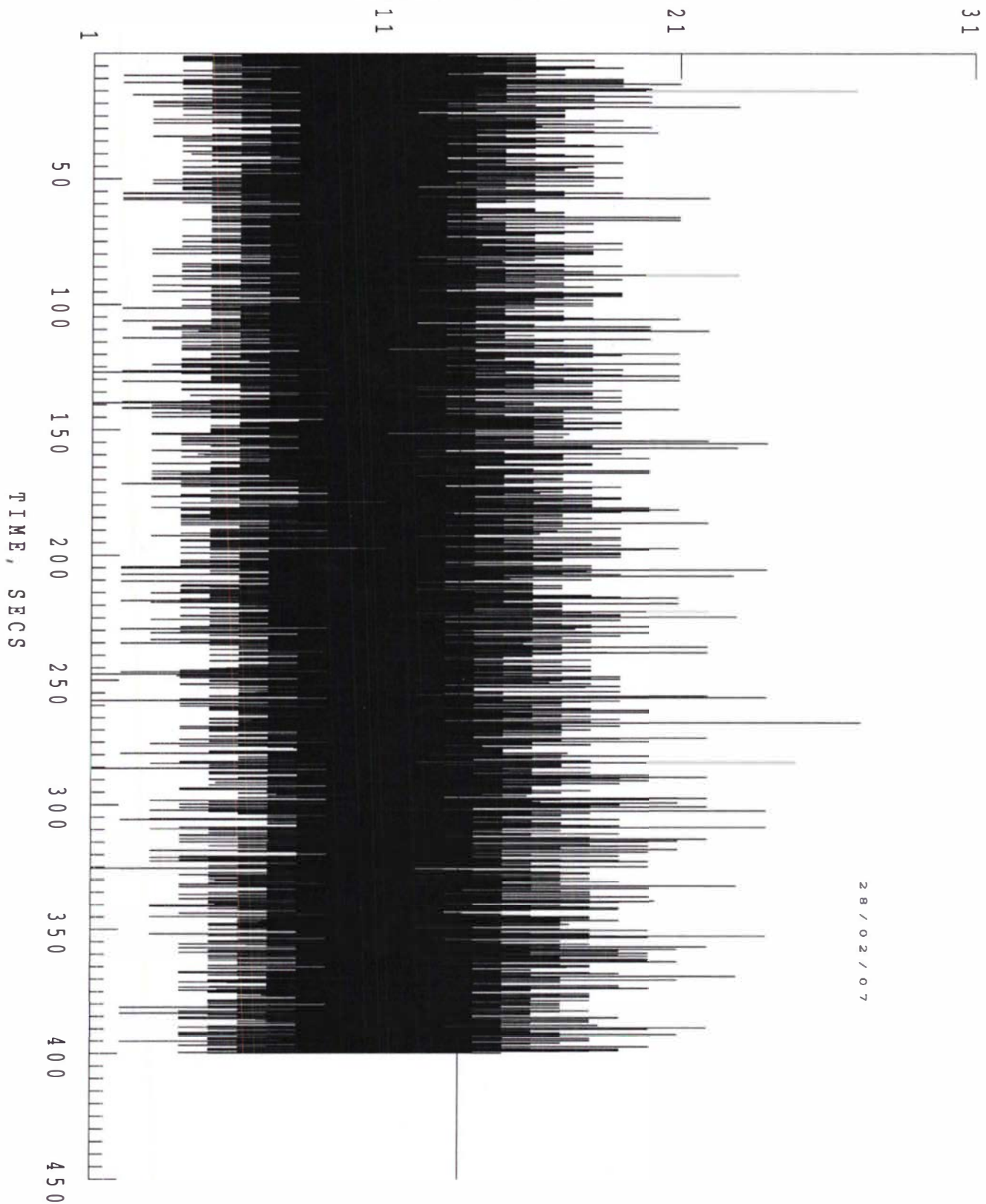
04/06/07

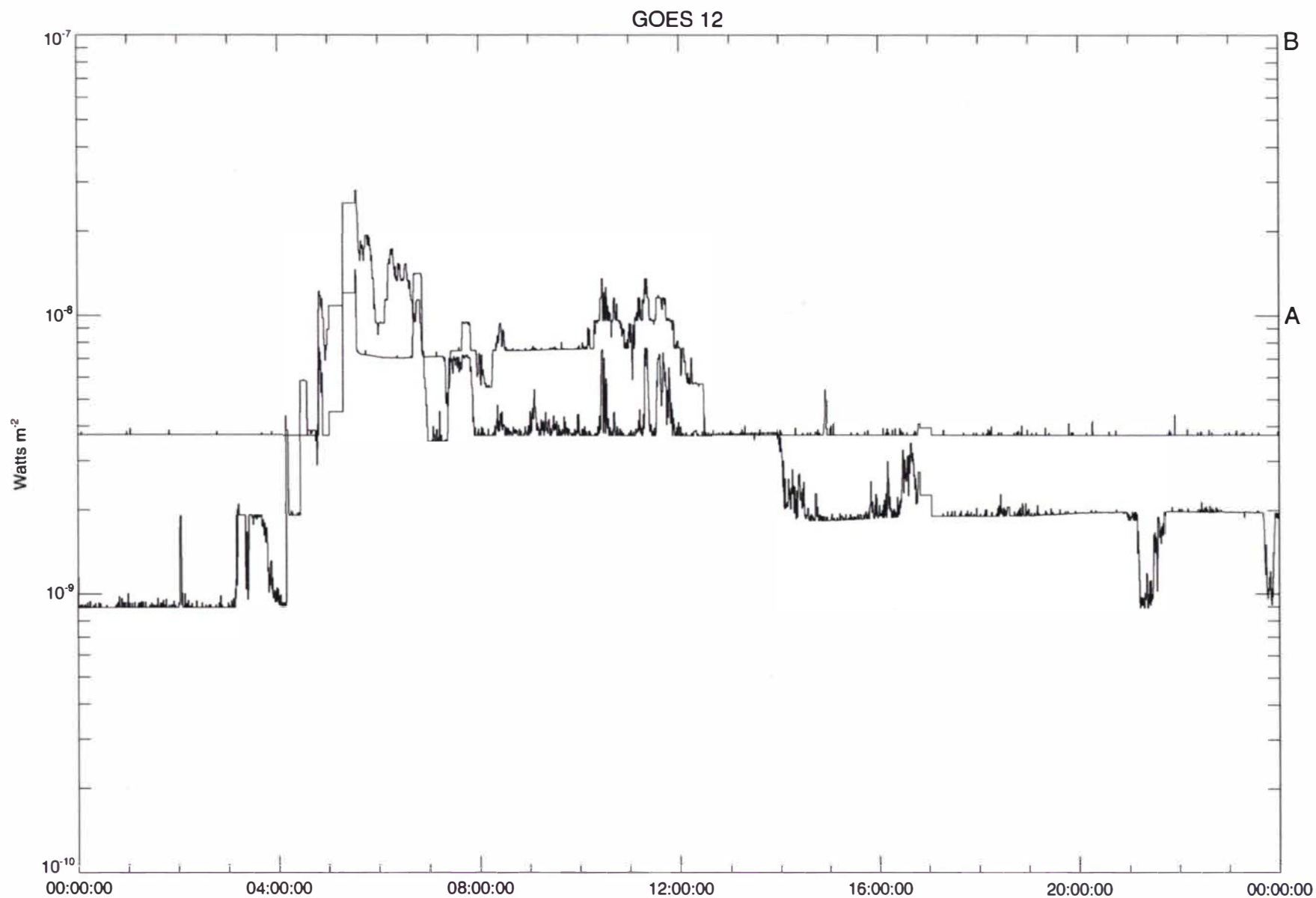
HESSI

28/02/07 50470.000 (INTEGRAL_20070228_50670)

25- 150 keV

COUNTS/0.031 S





Data Start: 07/02/28, 0000:00

Channel

1 (1.0 - 8.0 Angstroms)

2 (0.5 - 4.0 Angstroms)

Background not subtracted

Background not subtracted

Plot created: 07/03/03, 0921

Sample average = 10