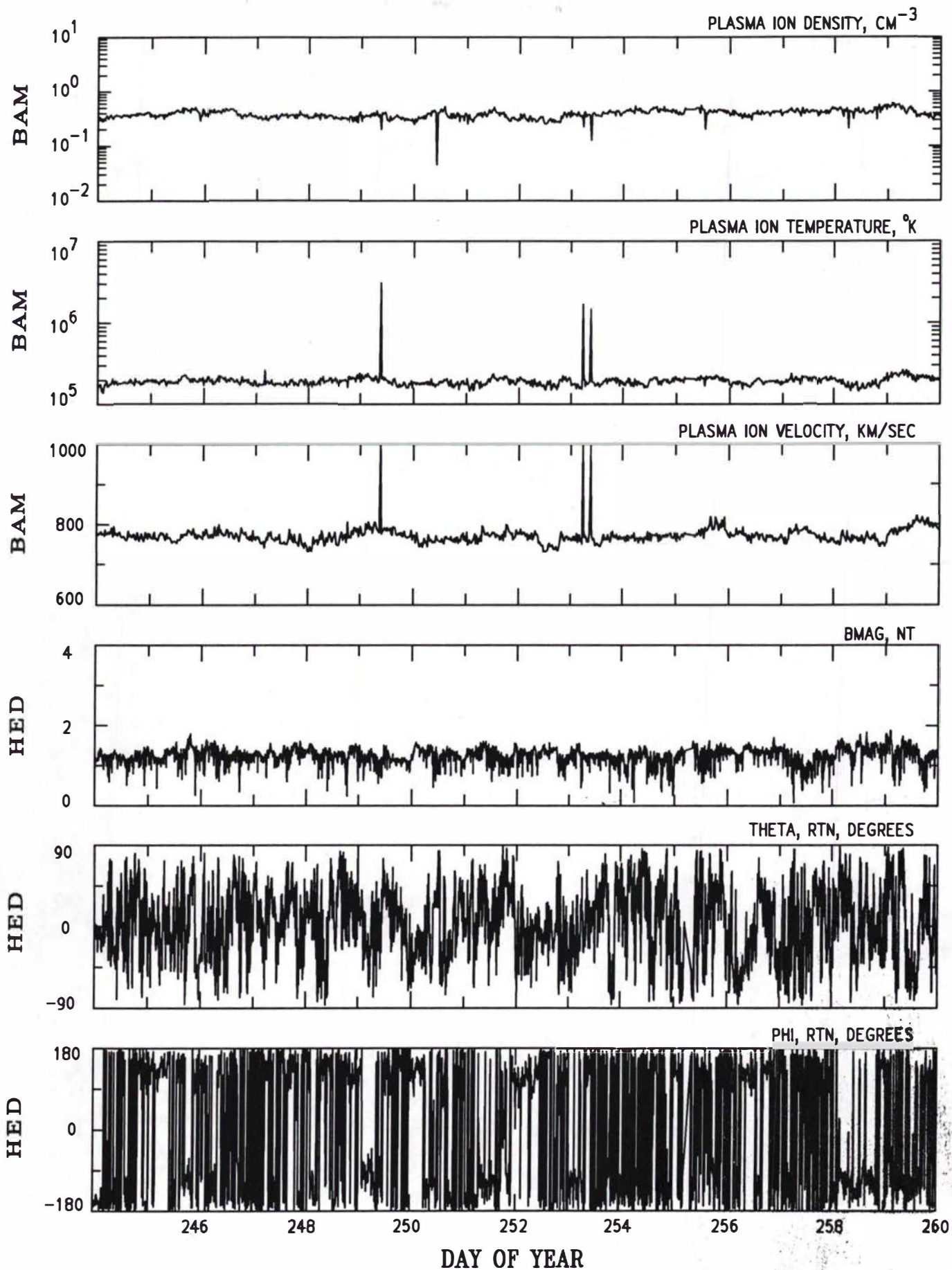


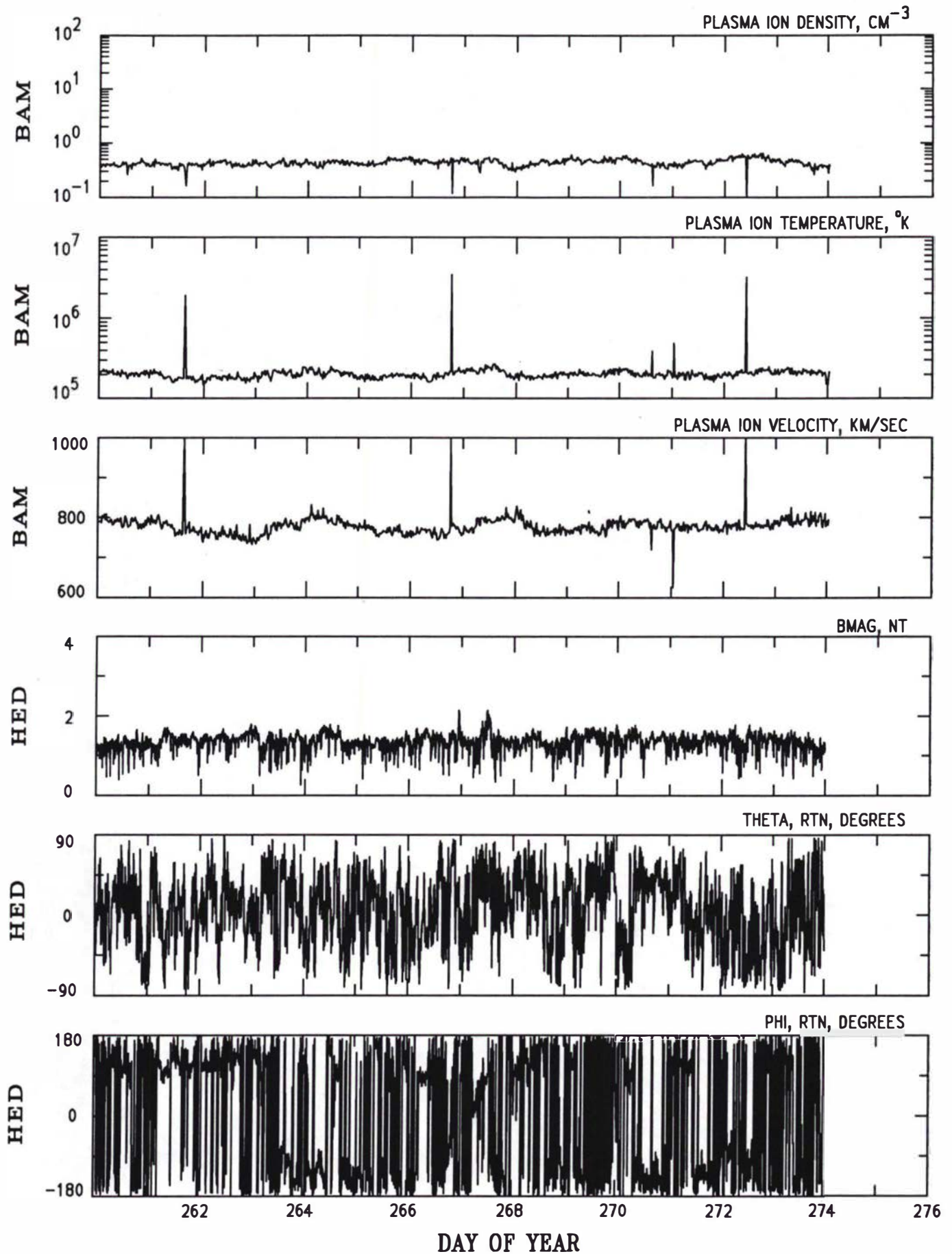
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

94 244 SEP 1 00:00:00.000 - 94 260 SEP 17 00:00:00.000



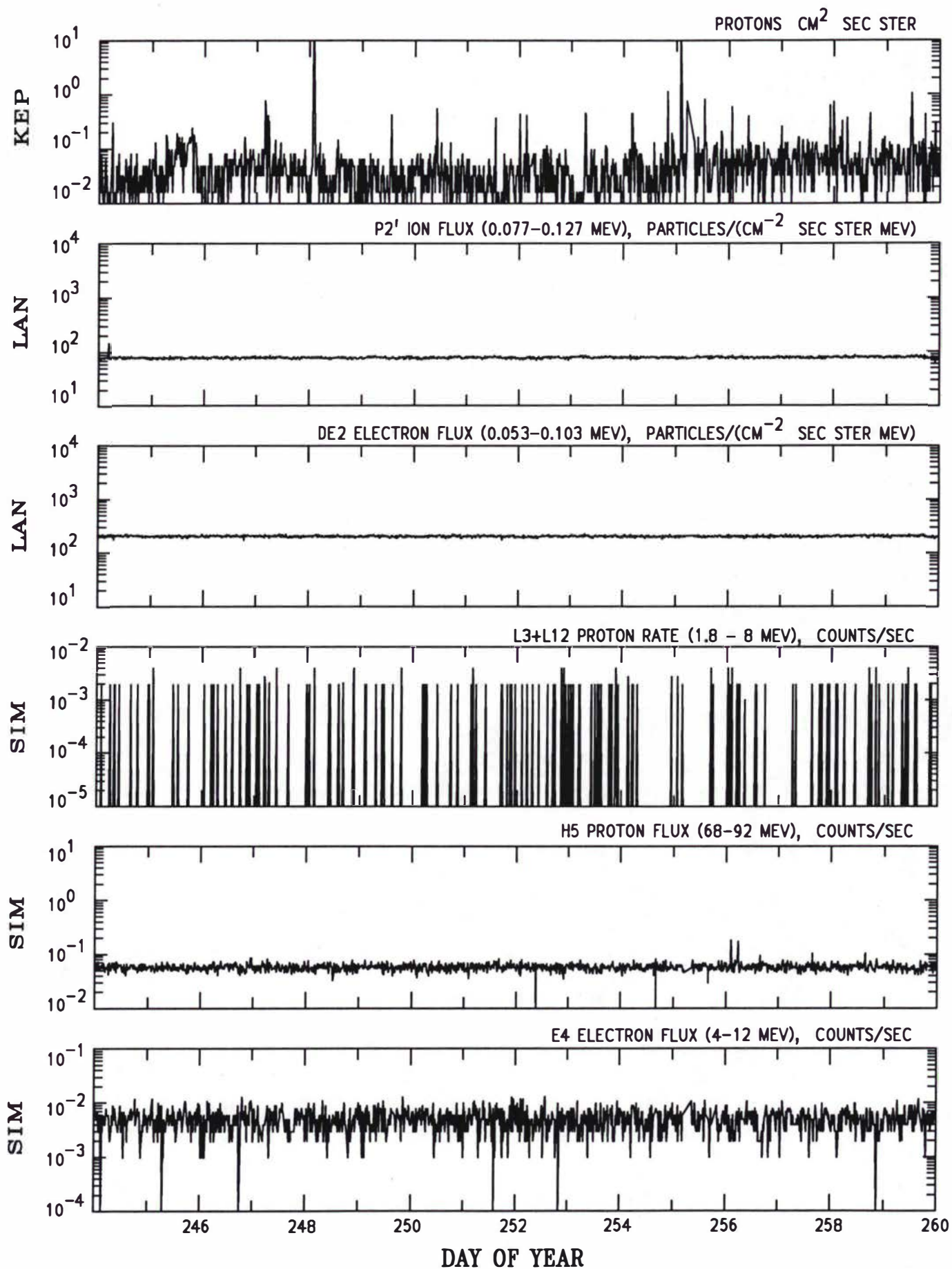
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

94 260 SEP 17 00:00:00.000 - 94 276 OCT 3 00:00:00.000



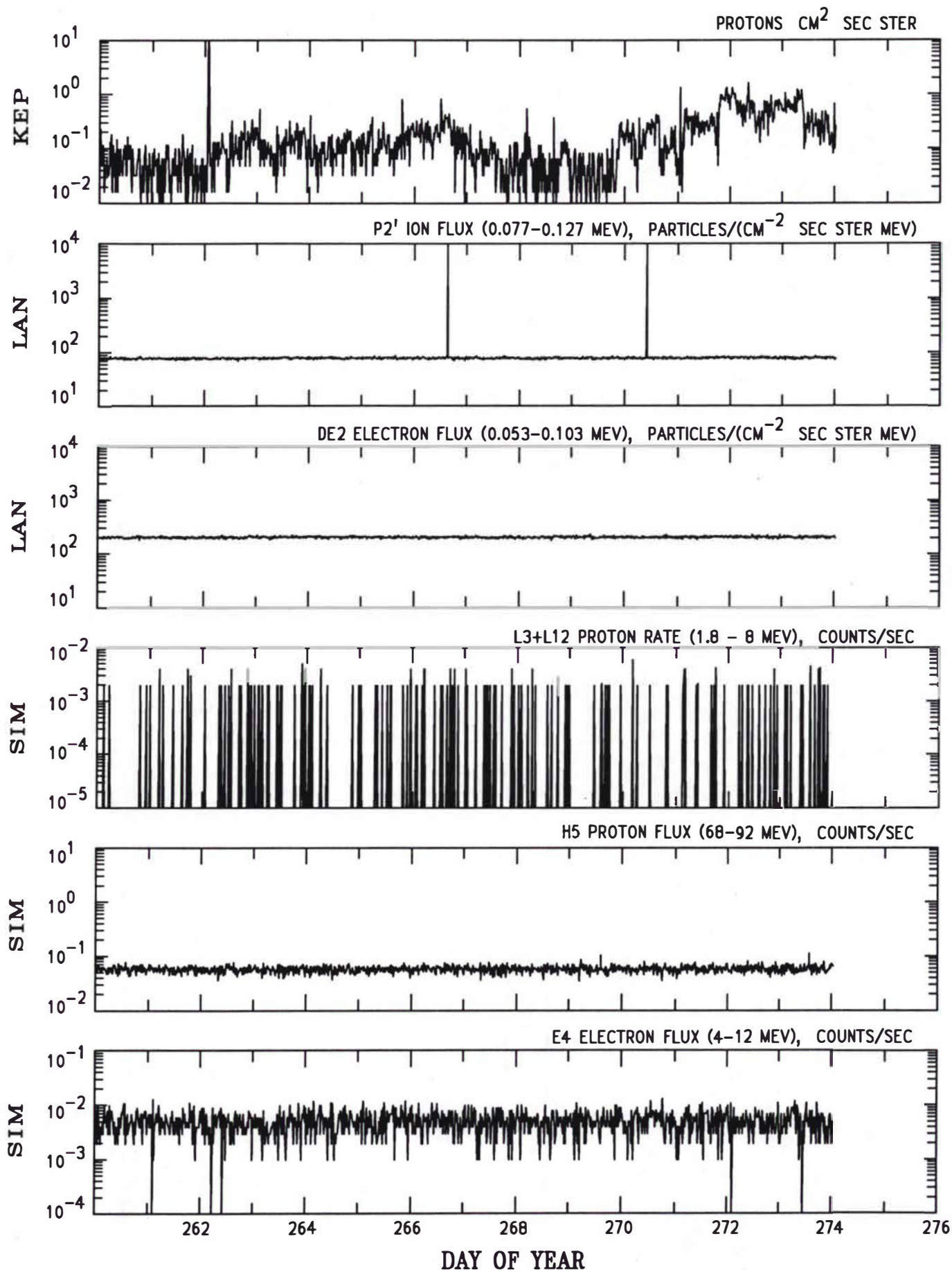
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

94 244 SEP 1 00:00:00.000 - 94 260 SEP 17 00:00:00.000



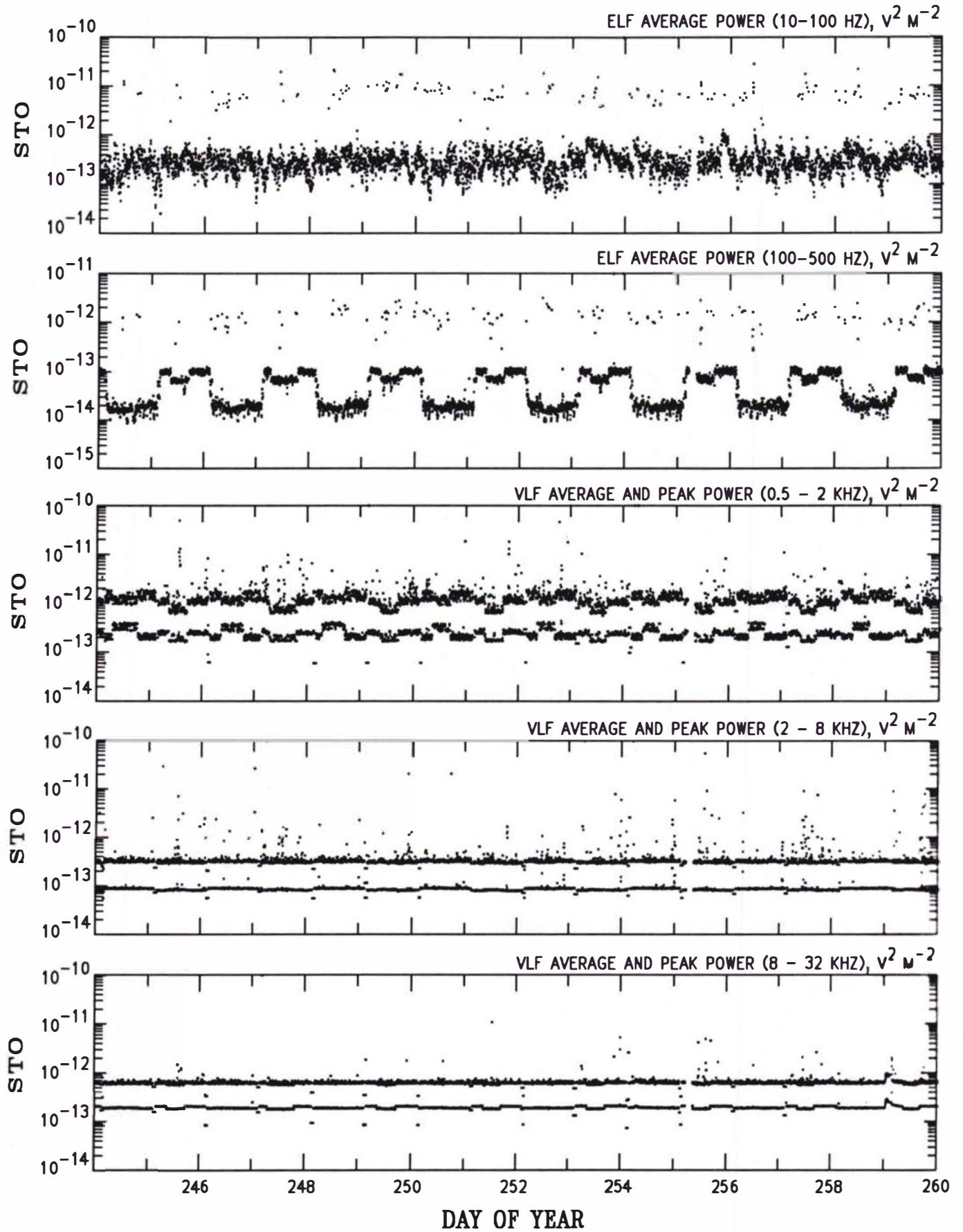
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

94 260 SEP 17 00:00:00.000 - 94 276 OCT 3 00:00:00.000



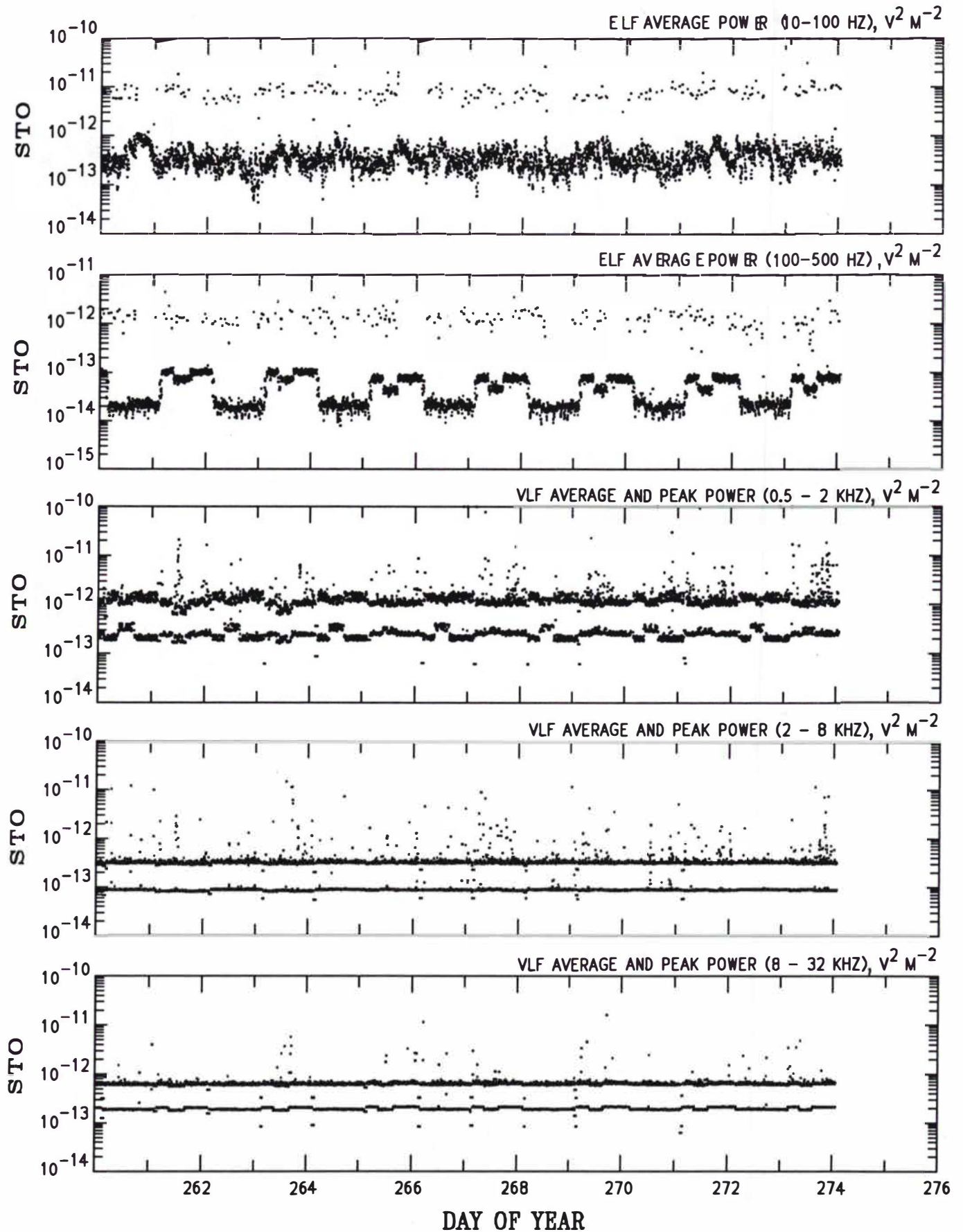
ULYSSES CDR - PLASMA WAVE

94 244 SEP 1 00:00:00.000 - 94 260 SEP 17 00:00:00.000



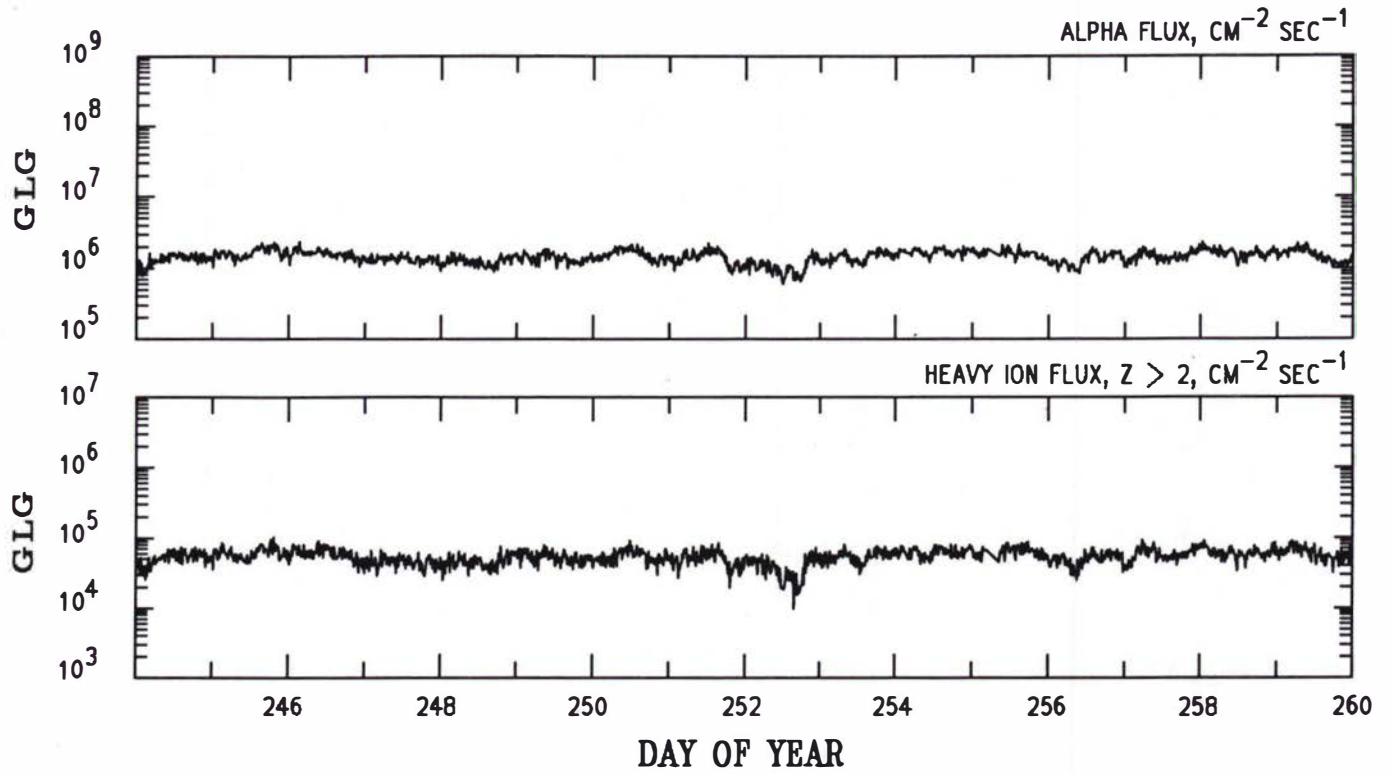
ULYSSES CDR - PLASMA WAVE

94 260 SEP 17 00:00:00.000 - 94 276 OCT 3 00:00:00.000



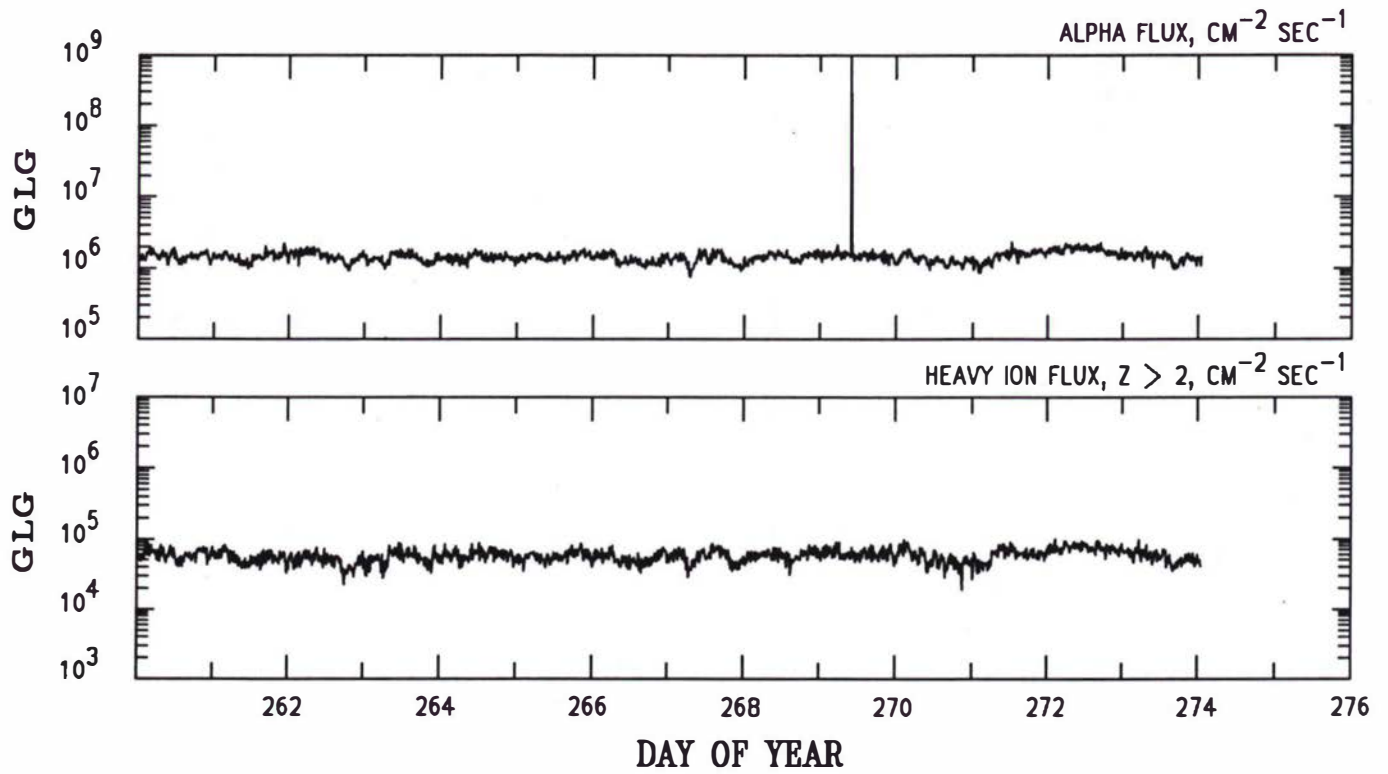
ULYSSES CDR - SOLAR WIND ION COMPOSITION

94 244 SEP 1 00:00:00.000 - 94 260 SEP 17 00:00:00.000



ULYSSES CDR - SOLAR WIND ION COMPOSITION

94 260 SEP 17 00:00:00.000 - 94 276 OCT 3 00:00:00.000



.94.244.00.10.53.578

HUS monthly long term thermal data

818

RET

E002 2ARADTMP S/C

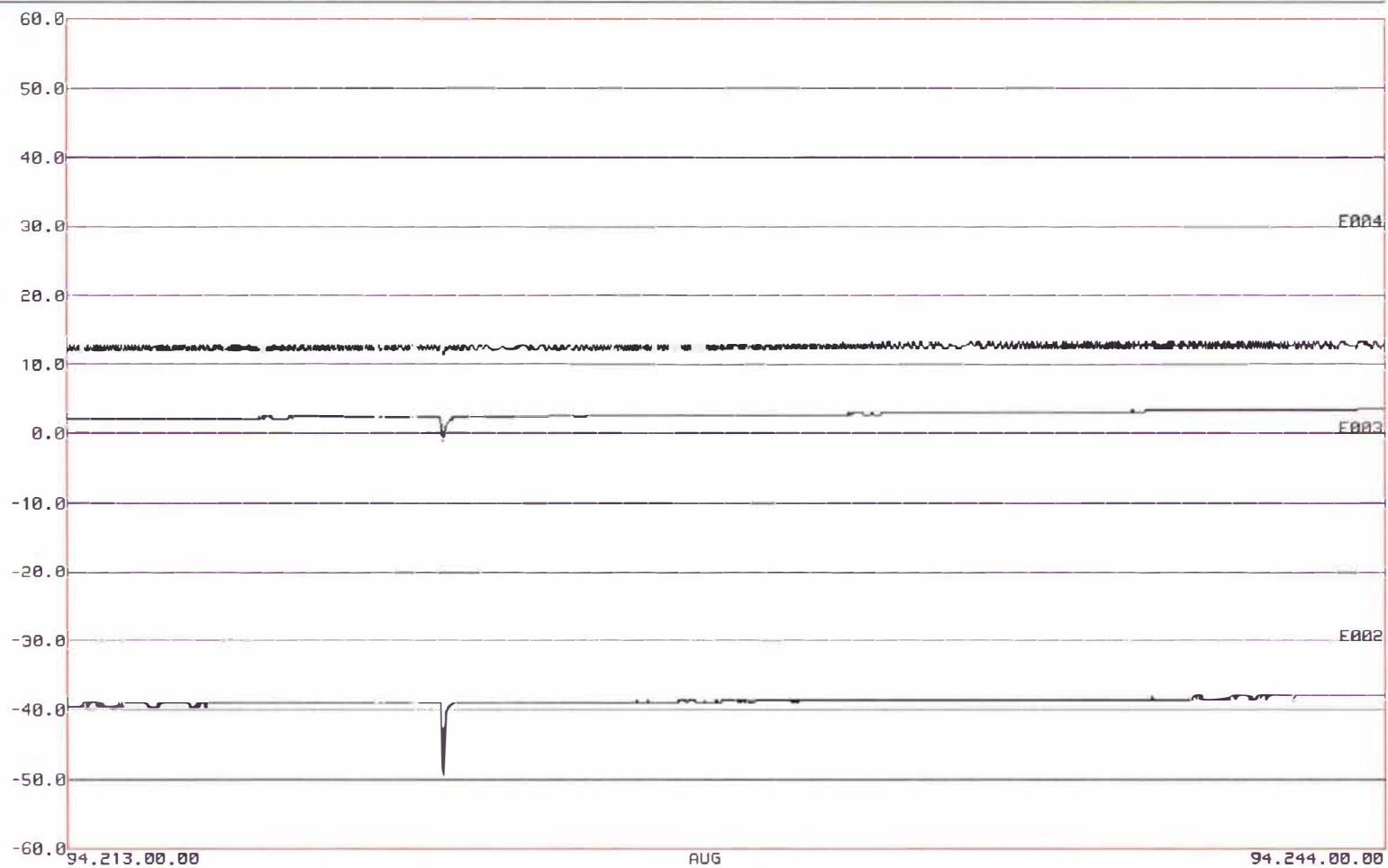
3.7

E003 2BSENTMP S/C

-38.0

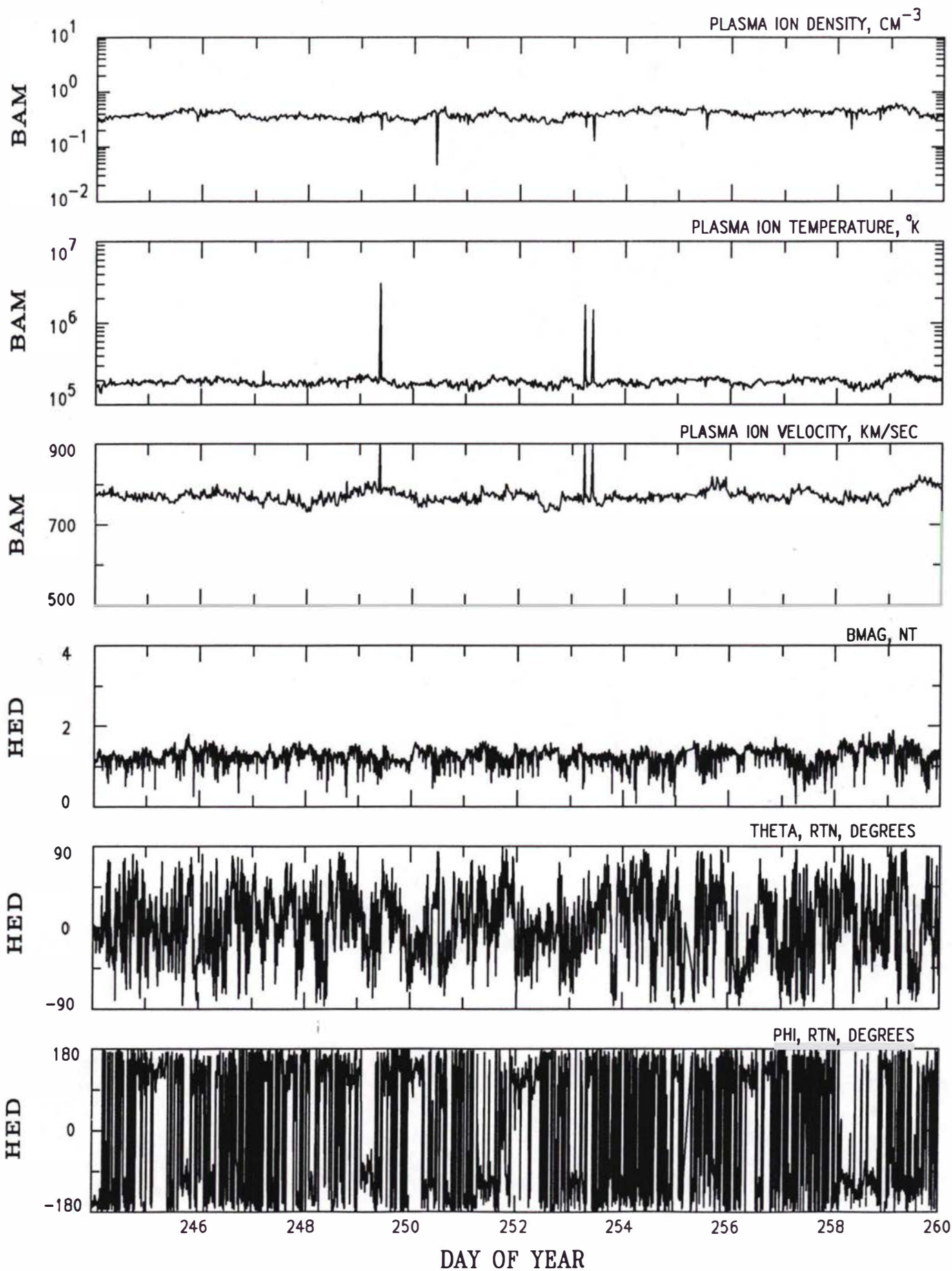
E004 2ASENSTMP EX

13.18



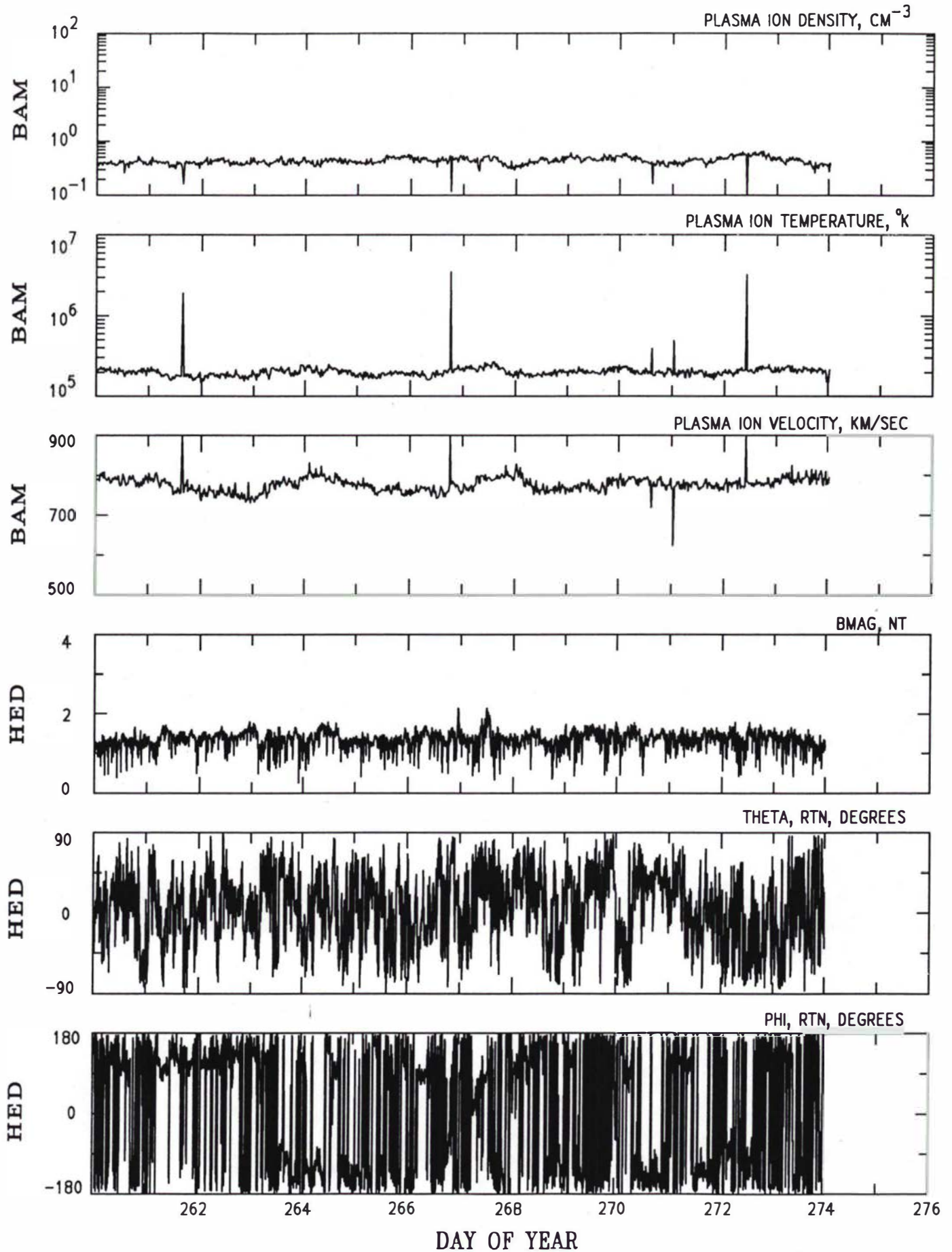
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

94 244 SEP 1 00:00:00.000 - 94 260 SEP 17 00:00:00.000



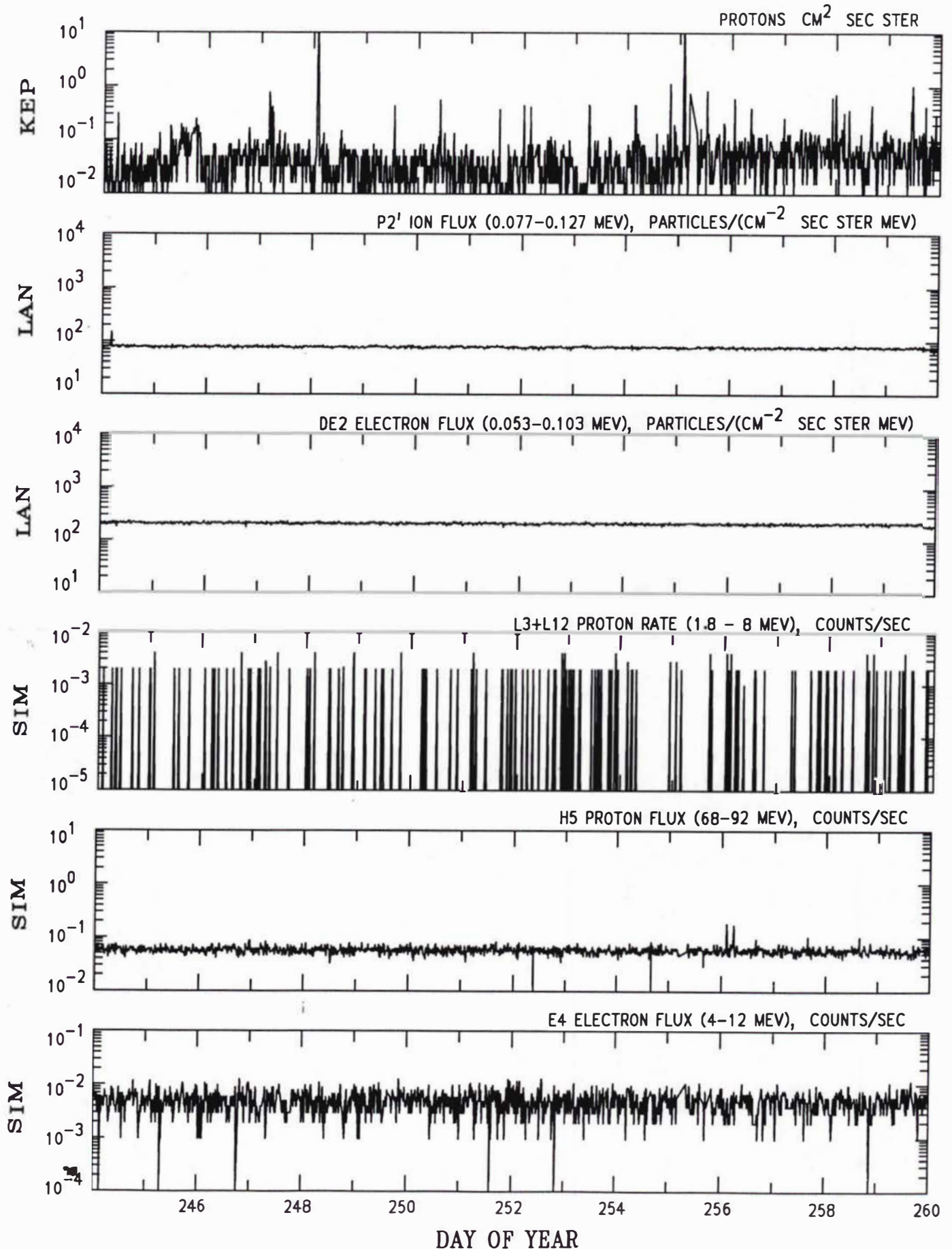
ULYSSES CDR - SOLAR WIND PLASMA AND MAGNETIC FIELD

94 260 SEP 17 00:00:00.000 - 94 276 OCT 3 00:00:00.000



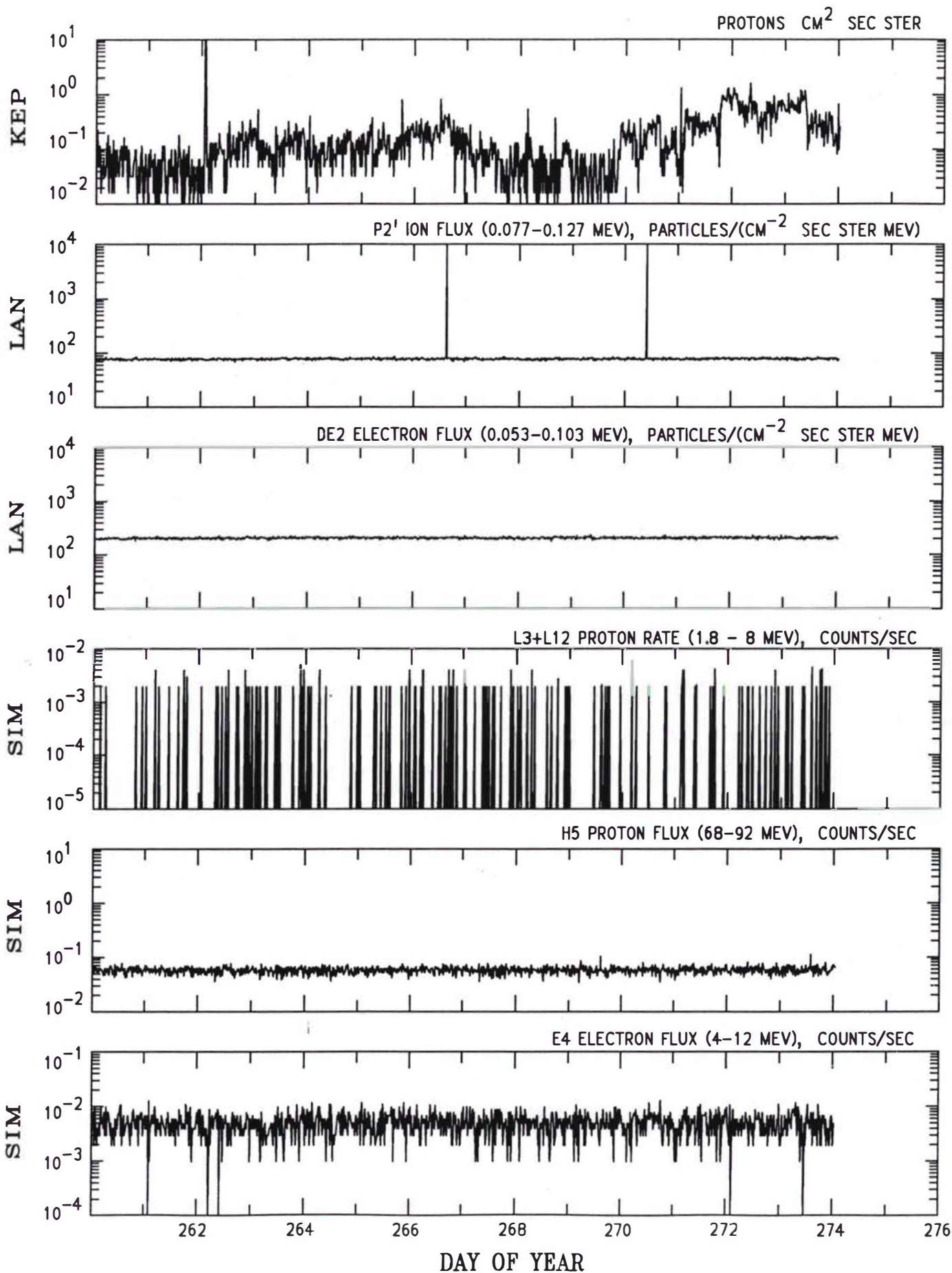
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

94 244 SEP 1 00:00:00.000 - 94 260 SEP 17 00:00:00.000



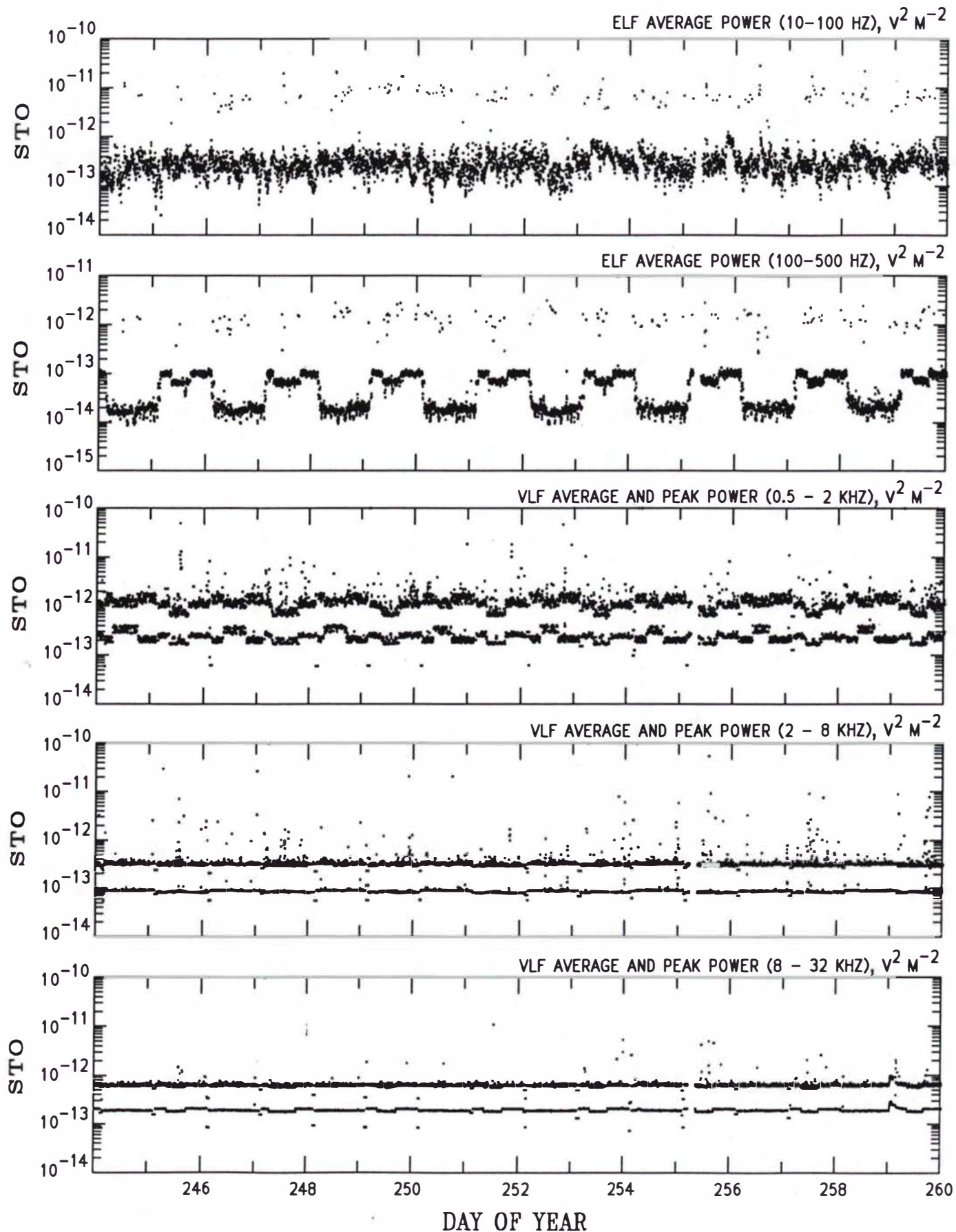
ULYSSES CDR - ENERGETIC PARTICLES, LOW ENERGY IONS AND COSMIC RAY

94 260 SEP 17 00:00:00.000 - 94 276 OCT 3 00:00:00.000



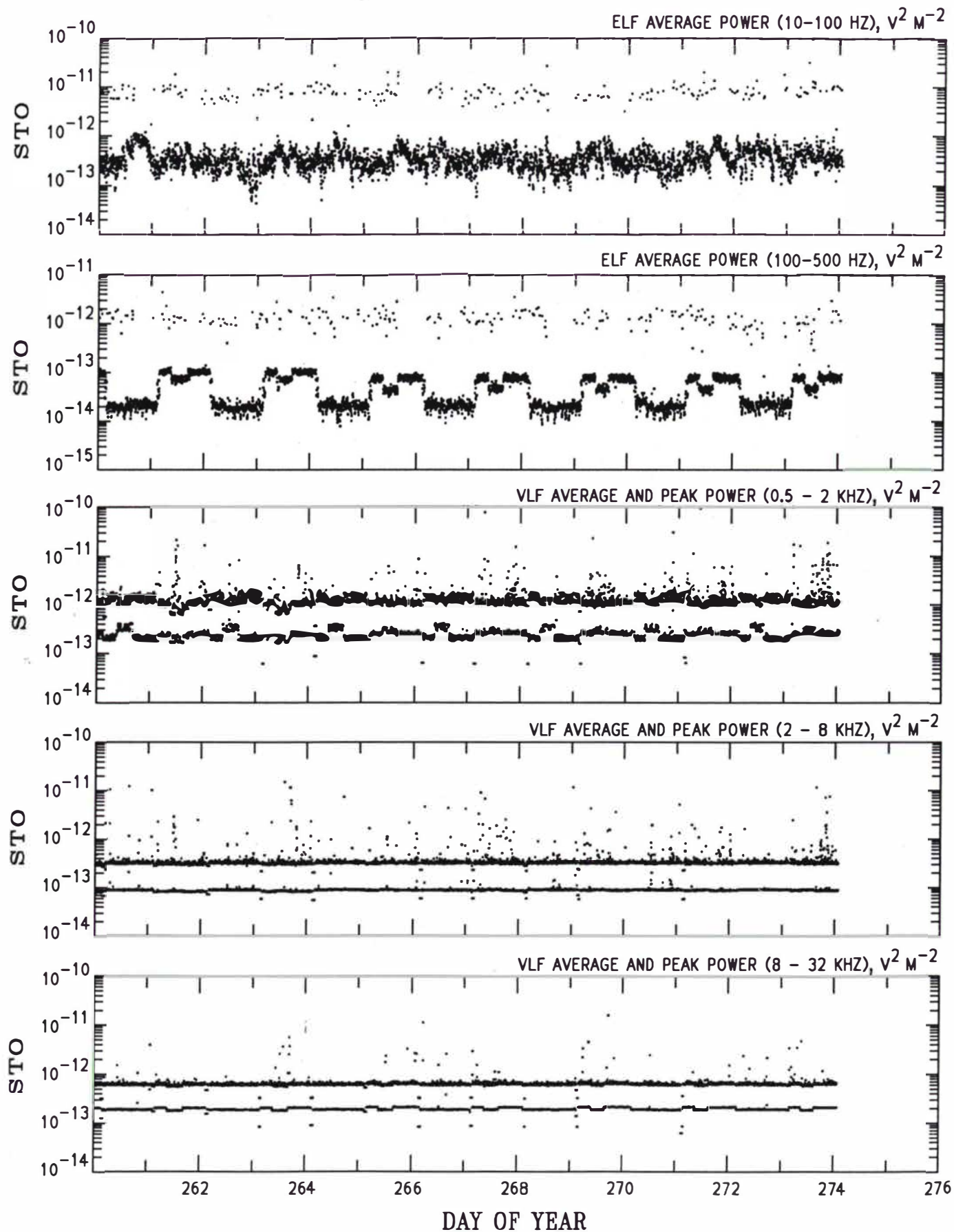
ULYSSES CDR - PLASMA WAVE

94 244 SEP 1 00:00:00.000 - 94 260 SEP 17 00:00:00.000



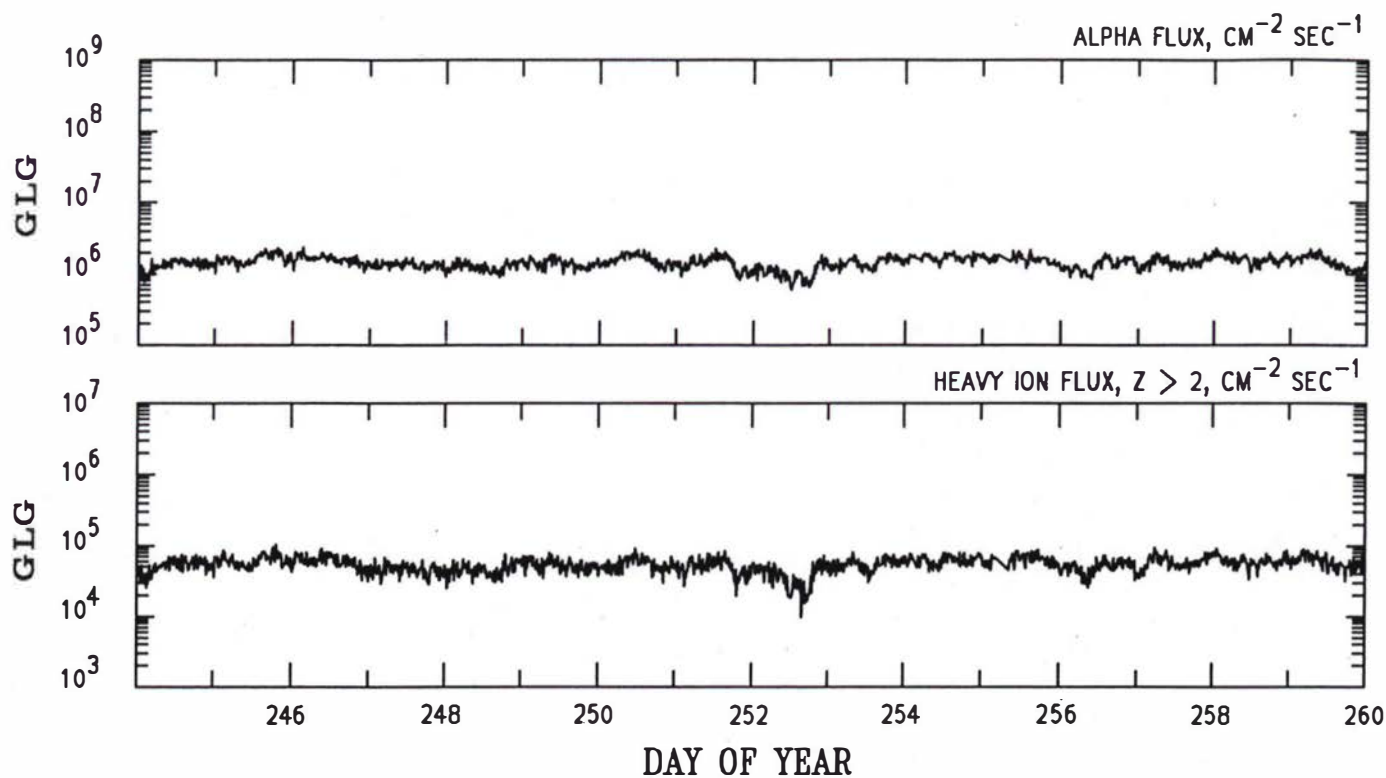
ULYSSES CDR - PLASMA WAVE

94 260 SEP 17 00:00:00.000 - 94 276 OCT 3 00:00:00.000



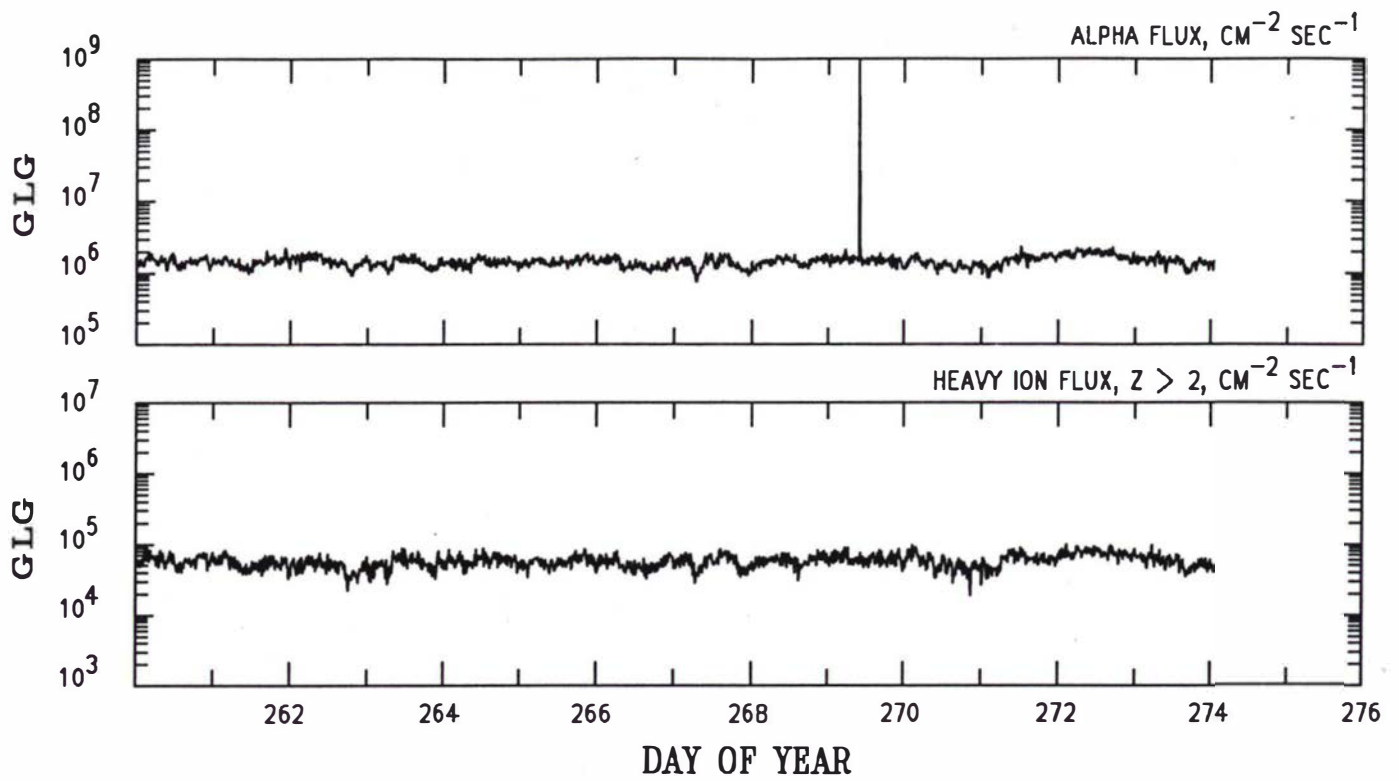
ULYSSES CDR - SOLAR WIND ION COMPOSITION

94 244 SEP 1 00:00:00.000 - 94 260 SEP 17 00:00:00.000



ULYSSES CDR - SOLAR WIND ION COMPOSITION

94 260 SEP 17 00:00:00.000 - 94 276 OCT 3 00:00:00.000



From max91@selvax.DNET.NASA.GOV Fri Aug 26 13:32 PDT 1994
Date: Fri, 26 Aug 94 16:32:10 -0400
From: max91@selvax.DNET.NASA.GOV
To: "khurley@sunspot.ssl.berkeley.edu"@EAST.DNET.NASA.GOV (SENT TO @OPER.SELVAX)
Subject: COORDINATED OBSERVING ADVISORY - SPARTAN 201-2 MISSION TO LAUNCH IN SEPT.

SPARTAN 201 EXPERIMENT ON SHUTTLE MISSION STS-64
From John Kohl and Leonard Strachan - S.A.O.

The second flight of the SPARTAN 201 coronal physics experiment is timed to coincide with the polar passage of the Ulysses spacecraft. Since this SPARTAN mission will be launched from the shuttle Discovery, no delays resulting from the delayed mission of Endeavor are expected.

The primary goal of the SPARTAN 201-2 mission is to study the physical properties of the corona over the south solar pole so that the information from the Ulysses particles and fields experiments can be related to their correct solar origins. The Spartan instruments are designed to characterize the plasma conditions of the extended corona by determining values for electron densities; proton thermal and nonthermal random velocity distributions, densities, and bulk flow velocities. Densities and outflow velocities of O5+ and Fe11+ can be determined as well.

Spartan 201 consists of an Ultraviolet Coronal Spectrometer (UVCS) provided by SAO and a White Light coronagraph (WLC) provided by GSFC. The white light instrument will measure the visible polarized radiance and the uv instrument will measure profiles and intensities of H I Ly-alpha and intensities of O VI 1032/1037 and Fe XII 1242 at heliocentric heights from 1.25 to 3.5 solar radii from sun center. The spectral and spatial resolution elements (FWHM) for the Spartan/UVCS are shown below:

Spectral Line (Angstrom)	Observed Quantity	Spectral Res. (Angstrom)	Spatial Res. (arc min.)
H I 1216	Profile	0.25	0.5 x 2.5
H I 1216	Intensity	2.0	4.0 x 5.0
Fe XII 1242	Intensity	2.0	4.0 x 5.0
O VI 1032/1037	Intensity	1.7	2.5 x 5.0

This Spartan mission needs coordinated ground based observations during the flight but additional coverage several days before and after the flight can aid in determining the three dimensional structure of coronal features. Observations mapping coronal features are of interest for a full solar rotation following the flight. For the first flight, collaborative observations included those from Yohkoh, Mauna Loa Solar Observatory, the National Solar Observatories, the Very Large Array radio telescope, the EISCAT observatory, and other ground based observatories. Magnetic and H-alpha observations are useful in determining large-scale magnetic field patterns. World-wide participation will help provide 24 hour/day collaborative observations for the upcoming mission. With simultaneous, multiwavelength observations, we hope to obtain as complete as possible a description of the coronal regions where coronal heating and acceleration of the solar wind is believed to take place.

The Spartan 201 satellite will be deployed by the space shuttle on Mission STS-64 which has a launch date scheduled for 9 September 1994. Spartan observations begin 3 days, 23 hours, 15 minutes after launch and end 5 days, 18 hours, 45 minutes after launch. For a nominal launch on 9 September at 20:30 UT these times correspond to:

Start of 1st Observation: 13 Sept 19:45 UT
End of last Observation: 15 Sept 15:15 UT

The duration of the Spartan flight is almost two days (43.5 hours). Primary targets are the south polar hole and the streamer belt surrounding the polar coronal holes. A detailed timeline of observing sequences will be made available on the day following the shuttle launch (10 September 1994). Changes to the final observing plan are expected to be minor and will be provided on the day of Spartan deployment.

THE COORDINATOR ASKS TO BE INFORMED OF ANY SPECIAL COLLABORATIVE OBSERVATIONAL EFFORTS. THE OBJECTIVE IS TO HELP MAXIMIZE THE OVERALL SCIENTIFIC RETURN BY INFORMING THE COMMUNITY OF PLANNED EFFORTS. PLEASE SEND A BRIEF DESCRIPTION OF SPECIAL OBSERVING PLANS TO:

akiplinger@selvax.sel.bldrdoc.gov
or 303-497-3645 FAX

The SPARTAN team requests that observing reports of collaborative observations that exist be sent directly to:

Primary Contact for Collaborations: John L. Kohl (SAO)
Address: Smithsonian Astrophysical Observatory Phone: 617-495-7377
 Mail Stop 50 Email: kohl@cfa.harvard.edu
 60 Garden Street Telex:
 Cambridge, MA 02138 USA Fax: 617-495-7455

From max91@selvax.DNET.NASA.GOV Mon Aug 29 17:54 PDT 1994
Date: Mon, 29 Aug 94 20:55:03 -0400
From: max91@selvax.DNET.NASA.GOV
To: "boblin@sunspot.ssl.berkeley.edu"@EAST.DNET.NASA.GOV (SENT TO @OPER.SELVAX)
Subject: COORDINATED OBSERVING SUPPORT OF SPARTAN 201-2 - White light Coronagraph

SPARTAN 201-2 EXPERIMENT ON SHUTTLE MISSION STS-64
FROM RICHARD FISHER AND MADHULIKA GUHATHAKURTA - GSFC

PART II: UPDATE FROM THE WHITE LIGHT CORONOGRAPH TEAM

SPARTAN 201 is making its second flight on space shuttle Discovery on mission STS-64, scheduled to launch on 9 September 1994. The payload for the SPARTAN 201-2 mission consists of a White Light Coronagraph (WLC) provided by Nasa/Goddard Space Flight Center and an Ultraviolet Coronagraph (the UVC described in the first announcement) provided by the Smithsonian Astrophysical Observatory. SPARTAN 201-2, which is deployed and retrieved by the space shuttle is expected to carry out 43 hours of solar coronal observations. The first deployment is planned for 13 September.

The White Light Coronagraph determines the distributions of electron density from polarized radiance and absolute radiance observations of closed and open magnetic structures between 1.4 and 6 solar radii from sun center. The WLC is the most recent version of the space-borne externally occulted Lyot coronagraph, whose predecessors include experiments flown by HAO on balloons, the Skylab Apollo Telescope Mount, sounding rockets, and the Solar Maximum Mission. WLC uses a rotating half-wave plate, a linear polarizer, a serrated occulting disk for occulting the disk at 1.4 solar radius, and a linear, wide dynamic range detector CCD camera to measure the intensity and polarization of broad band visible coronal radiation. The distance between pixel centers of the CCD camera is 22.5 arcseconds. Observations out to 6 solar radii from sun-center will be obtained within a sector of 60 degrees in width centered on the UVC radial scan capability.

The purpose of the SPARTAN 201 instruments is to provide a body of data that can be used to address a broad range of questions regarding the nature of the extended solar corona and the generation of the solar wind. The primary scientific goal of the second flight is to study the physical properties of the corona over the south polar region of the sun in coordination with direct detection of solar wind particles by Ulysses.

Four coronal targets will be selected just prior to deployment. Coordinates for the targets will be announced 35 hours before deployment. Updates of the coordinates may be issued at 12 and possibly 8 hours prior to deployment. Once deployed, SPARTAN automatically executes the pre-programmed maneuvers on each target. Three of the primary targets for the second flight are the south polar hole and streamers on the east and west limbs. Space-based Yohkoh observations will be used to identify transient activity as late as 8 hours prior to deployment. Observations of the fourth target may involve repeat observations of the southern coronal hole or they may involve observations of transients.

Additional supporting observations:

Prominence monitors, coronagraphs, and interplanetary scintillation arrays can provide useful correlative measurements of temperature, density and velocity diagnostics of the lower and upper corona. In particular, synoptic observations of coronal and photospheric/chromospheric features FOR ONE WEEK BEFORE AND AFTER the flight will be very useful in determining the three dimensional structure of the coronal features. During the first flight, the WLC observed several polar plumes/rays in both the south and the north polar coronal holes extending all the way to 6 solar radii. Disk or limb observations that aid in identifying the origins of such rays would be extremely useful. Ca K-line observations of network features are valuable as well.

ADDITIONAL ADVISORY INFORMATION WILL BE ISSUED AS NEEDED.

ADDITIONAL QUESTIONS ABOUT COORDINATED OBSERVATIONS MAY BE
ADDRESSED TO SELVAX::AKIPLINGER (DECNET)
OR akiplinger@selvax.sel.bldrdoc.gov
ph: 303-497-5892

THE SPARTAN TEAM REQUESTS THAT OBSERVING REPORTS OF COLLABORATIVE
OBSERVATIONS THAT MAY SUPPORT OBSERVATIONS OBTAINED WITH THE WHITE LIGHT
CORONAGRAPH BE SENT DIRECTLY TO:

RICHARD FISHER
NASA/GSFC MC 682
GREENBELT, MD 20771
EMAIL fisher@c682h.gsfc.nasa.gov
301-286-5682

OR

MADHULIKA GUHATHAKURTA
NASA/GSFC MC 682
GREENBELT, MD 20771
lika@madhu.gsfc.nasa.gov
301-286-0722

From MALLOZZI@ssl.msfc.nasa.gov Fri Sep 2 11:48 PDT 1994
Date: Fri, 2 Sep 1994 13:48:58 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3149

BATSEARCH PROGRAM

BATSE BURST # 3149
EVENT OF 1994 SEP 1 DAY OF YEAR=244
EVENT CROSSING TIME AT BATSE : 76952. S. OR 21:22:32.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 48.000 -49.000
BATSE PEAK COUNTING RATE: 1100 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 1/ 9/ 94 IS:
RA= 145.606 DEC= -48.531 DIST= 2.743 AU
BATSE-ULYSSES DISTANCE = 410344922. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=120.53 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -695.34 SECS.
CROSSING TIME AT ULYSSES IS 76257. S. OR 21:10:56 +/- 244.13 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 1/ 9/ 94 IS:
RA= 100.671 DEC= 23.500 DIST= 1.764 AU
MARS-BATSE DISTANCE = 263932304. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 93.66 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -56.26 SECS.
CROSSING TIME AT MARS IS 76896. S. OR 21:21:35 +/- 151.68 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3149	940901	9596	76952	1100	048	-49

BATSE BURST TRIGGER

NO.: 03149

TIME: TJD=9596 SECONDS=76952

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=052.7 AZIMUTH=190.8 ERROR= DEGREES

COMMENTS:

WEAK DOUBLE-PEAK BURST OF TOTAL DURATION APPROX. 30 SECONDS.
OBSERVED ABOVE 300 KEV.

6 / 9 / 94

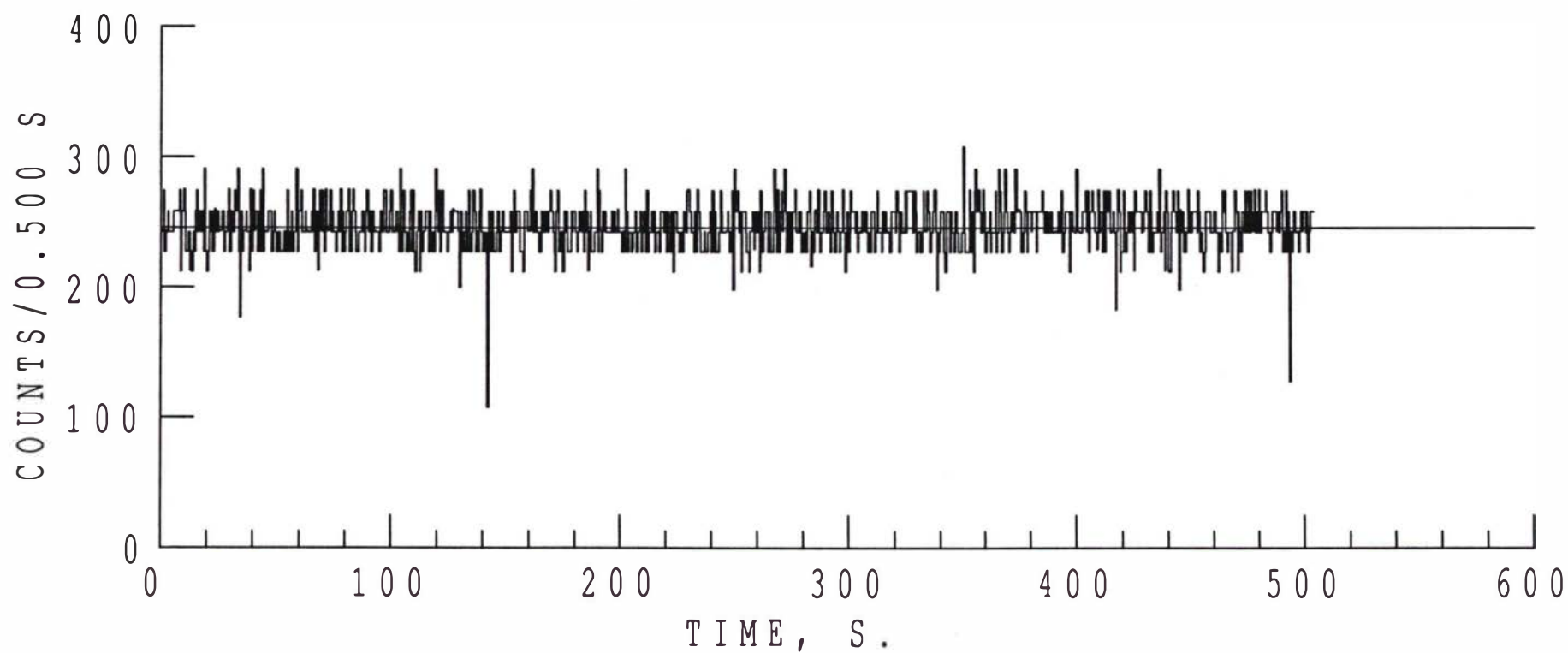
ULYSSES RT

1 / 9 / 94 75996.227 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From MALLOZZI@ssl.msfc.nasa.gov Fri Sep 2 11:46 PDT 1994
Date: Fri, 2 Sep 1994 13:46:42 -0500 (CDT)
From: "ROBERT S. MALLOZZI 205-544-6257" <MALLOZZI@ssl.msfc.nasa.gov>
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 03150

TIME: TJD=9596 SECONDS=85189

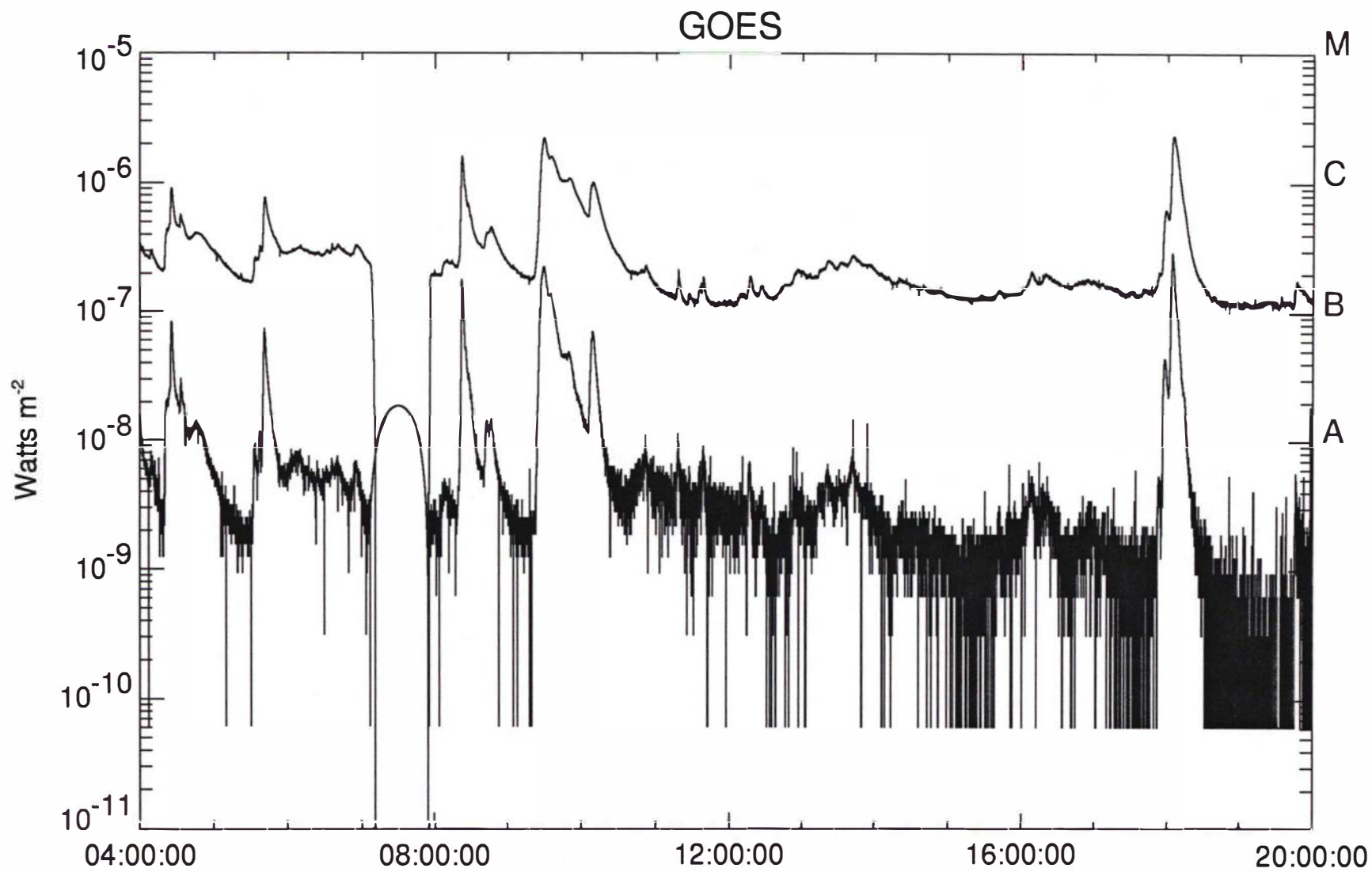
TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON SAA ENTRY.



Data Start: 94/09/01, 0000:00

Plot created: 94/09/02, 1913

Channel

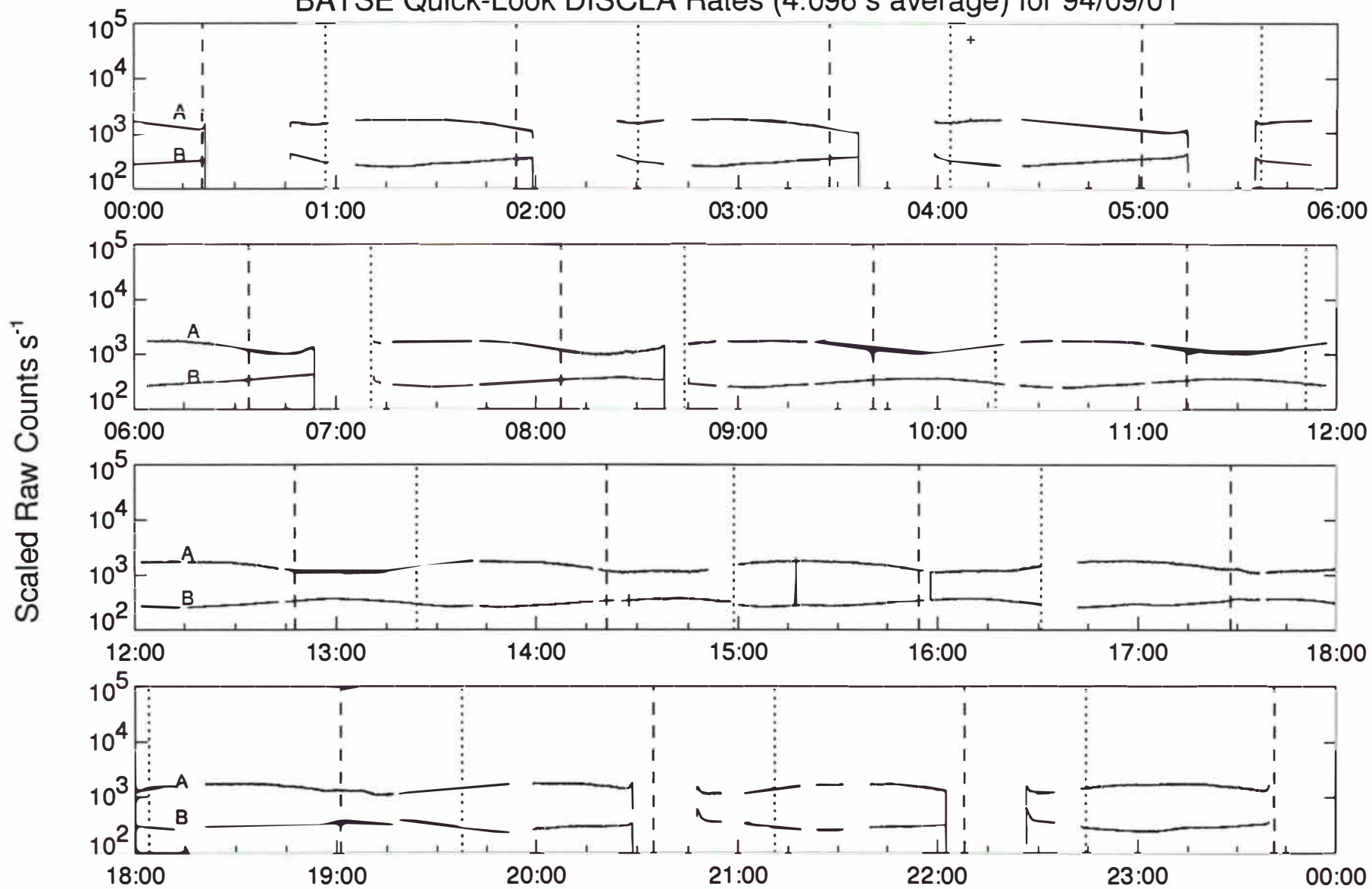
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/01

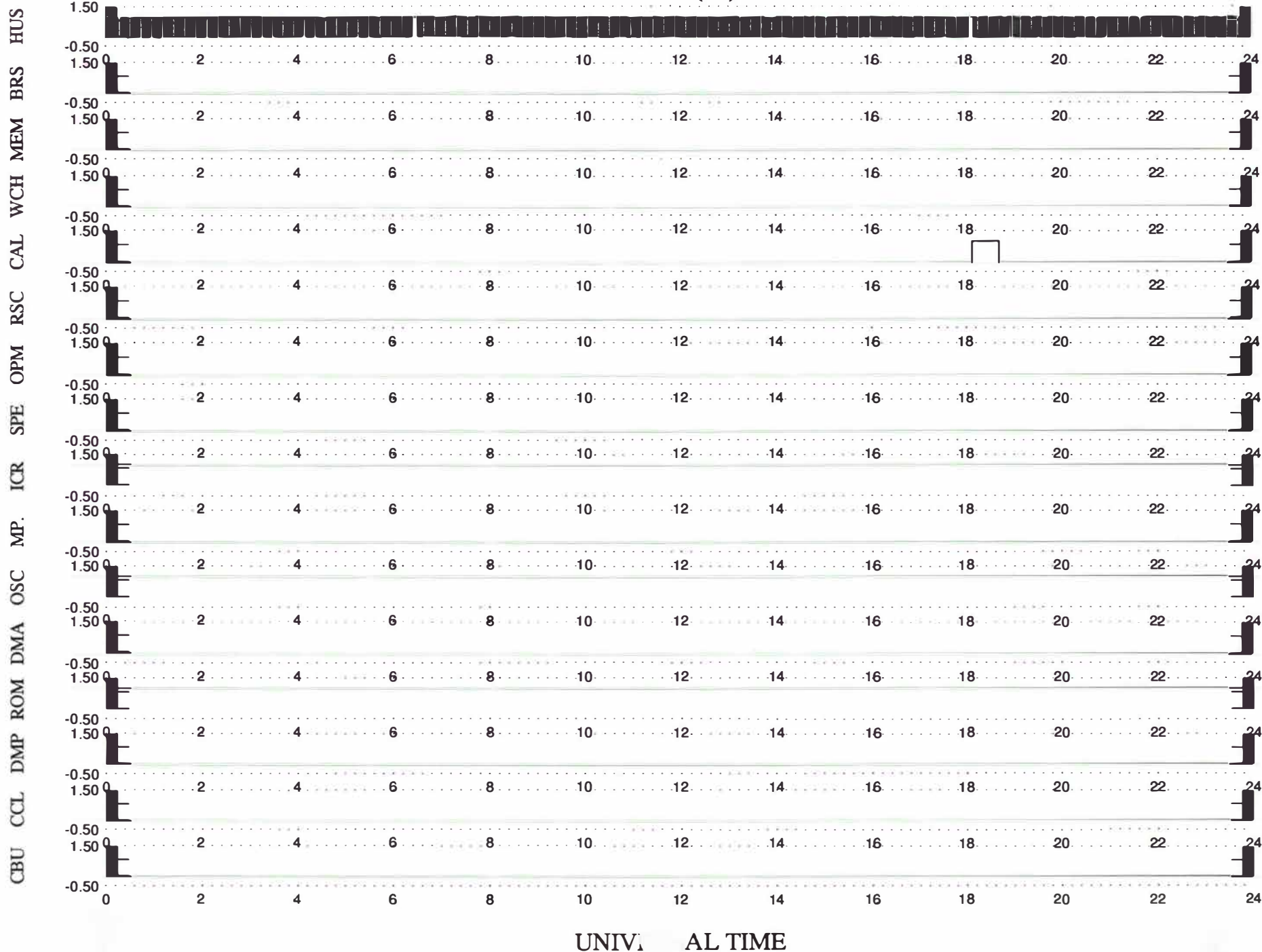


Current Time: 94/09/02, 1900 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

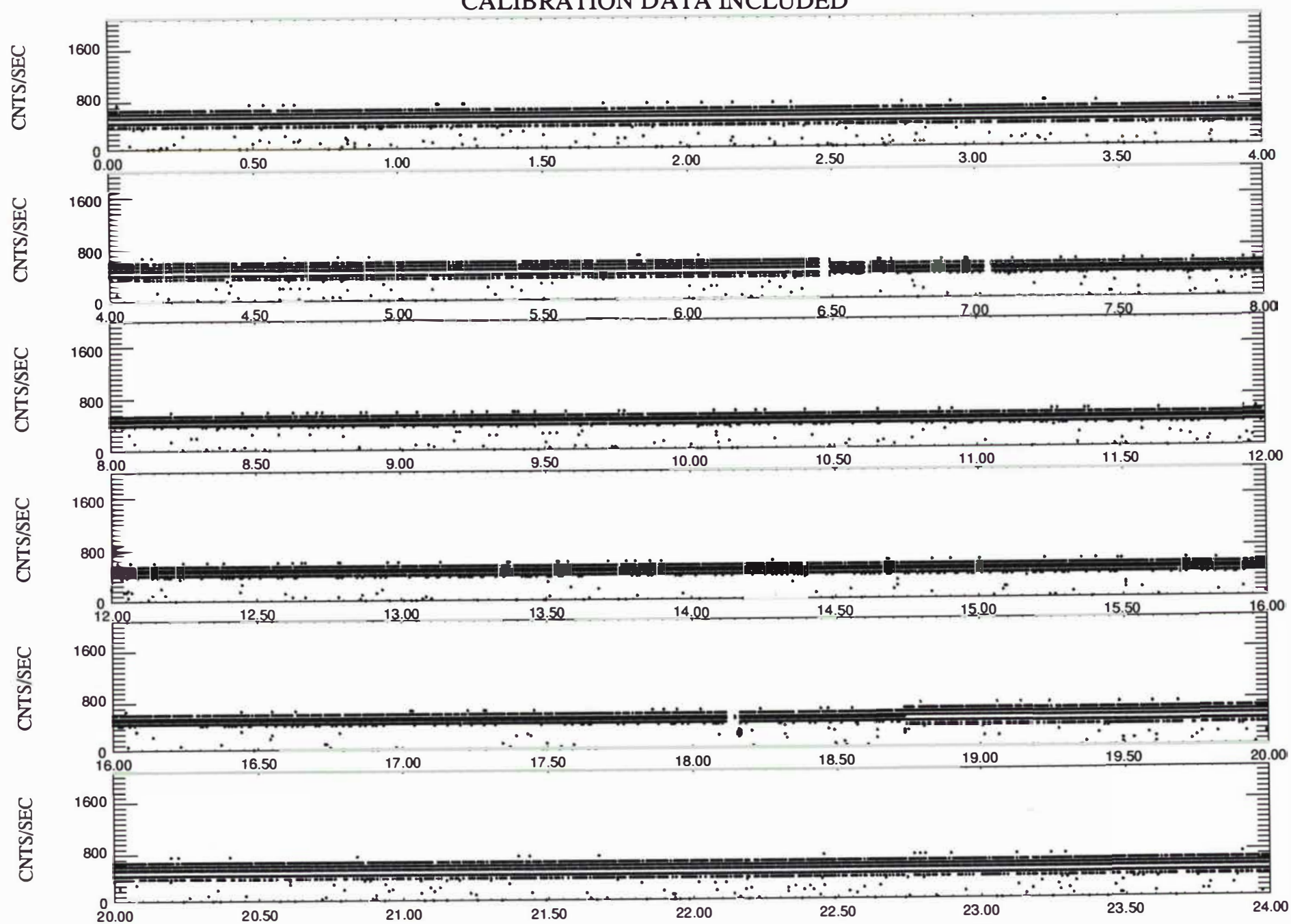
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

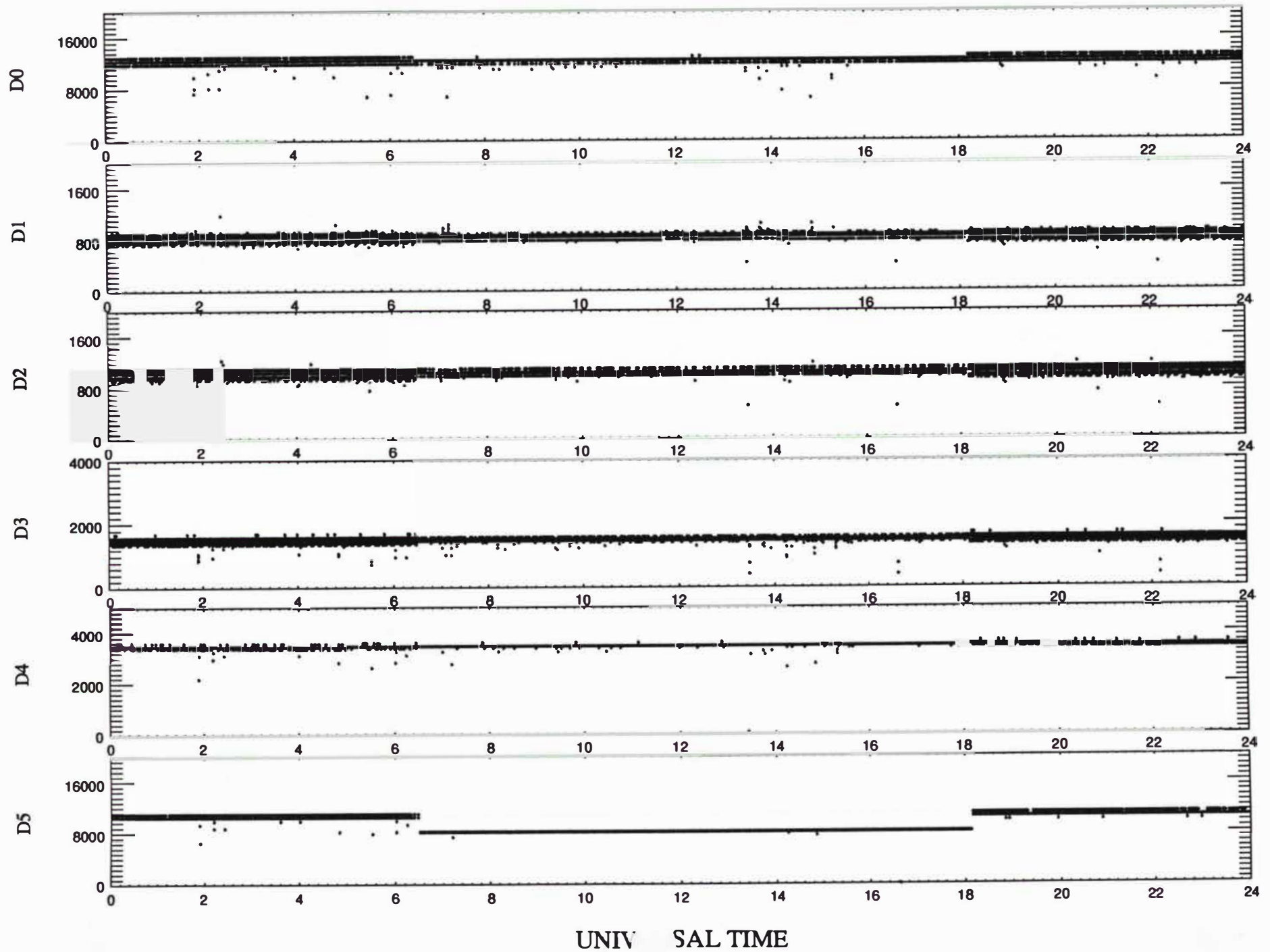
NO BURST (11)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From SHARIFF@ssl.msfc.nasa.gov Sat Sep 3 16:10 PDT 1994
Date: Sat, 3 Sep 1994 18:11:23 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3151

BATSEARCH PROGRAM

BATSE BURST # 3151
EVENT OF 1994 SEP 2 DAY OF YEAR=245
EVENT CROSSING TIME AT BATSE : 47298. S. OR 13:08:18.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 49.000 -12.000
BATSE PEAK COUNTING RATE: 1000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 2/ 9/ 94 IS:
RA= 145.887 DEC= -48.722 DIST= 2.738 AU
BATSE-ULYSSES DISTANCE = 409577823. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 94.52 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -107.74 SECS.
CROSSING TIME AT ULYSSES IS 47190. S. OR 13:06:30 +/- 284.82 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 2/ 9/ 94 IS:
RA= 101.358 DEC= 23.467 DIST= 1.759 AU
MARS-BATSE DISTANCE = 263093168. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=117.72 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -408.22 SECS.
CROSSING TIME AT MARS IS 46890. S. OR 13:01:29 +/- 128.68 SECONDS

No

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3151	940902	9597	47298	1000	049	-12

NO.: 03151

BATSE BURST TRIGGER

TIME: TJD=9597 SECONDS=47298

TYPE: BURST

SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=074.5 AZIMUTH=156.6 ERROR= DEGREES

COMMENTS:

BURST, SINGLE PULSE LASTING ~30 SECONDS. NOT VISIBLE ABOVE 300KEV.

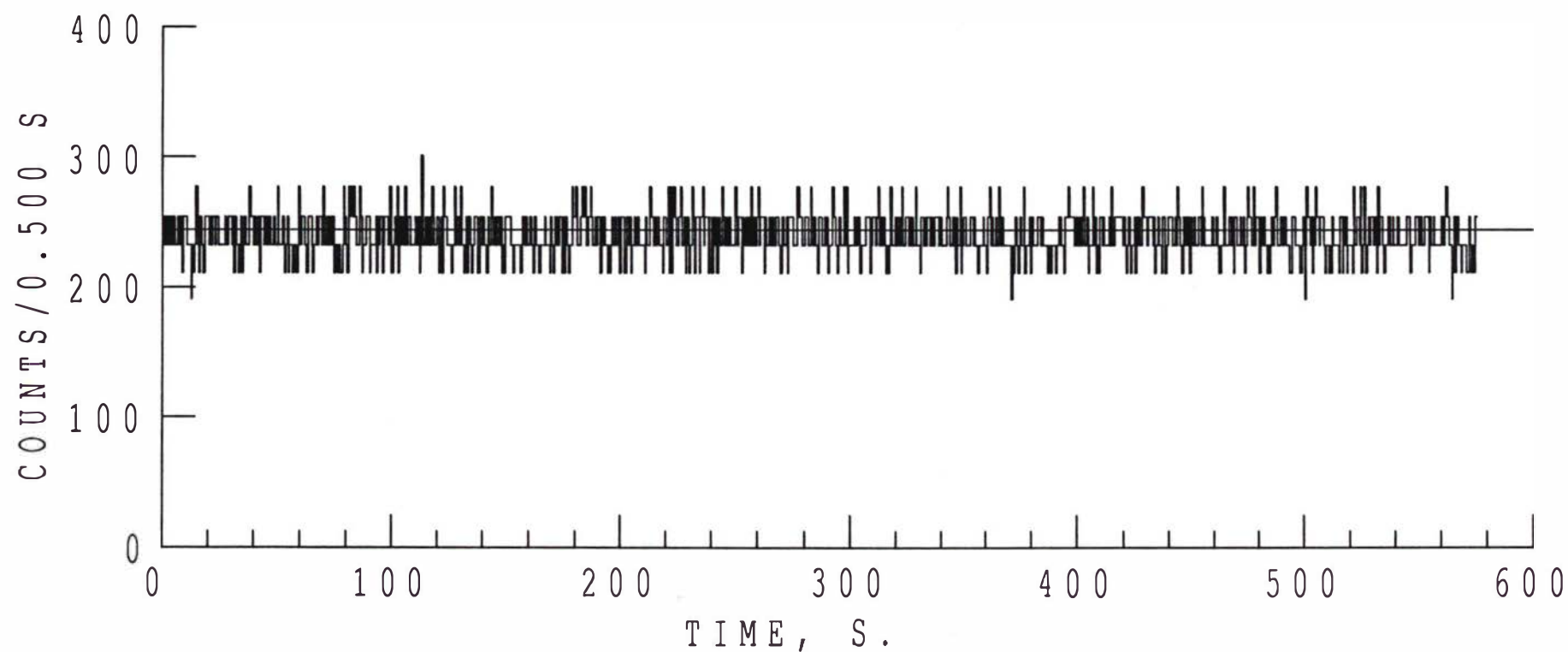
6 / 9 / 94

ULYSSES RT

2 / 9 / 94 46908.160 s

0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



From SHARIFF@ssl.msfc.nasa.gov Sat Sep 3 16:12 PDT 1994
Date: Sat, 3 Sep 1994 18:13:14 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3152

BATSEARCH PROGRAM

BATSE BURST # 3152
EVENT OF 1994 SEP 2 DAY OF YEAR=245
EVENT CROSSING TIME AT BATSE : 52192. S. OR 14:29:52.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 50.000 -14.000
BATSE PEAK COUNTING RATE: 140000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 2/ 9/ 94 IS:
RA= 145.911 DEC= -48.738 DIST= 2.737 AU
BATSE-ULYSSES DISTANCE = 409512837. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 96.66 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -158.38 SECS.
CROSSING TIME AT ULYSSES IS 52034. S. OR 14:27:13 +/- 283.15 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 2/ 9/ 94 IS:
RA= 101.358 DEC= 23.467 DIST= 1.759 AU
MARS-BATSE DISTANCE = 263093168. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=117.35 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -403.20 SECS.
CROSSING TIME AT MARS IS 51789. S. OR 14:23:08 +/- 129.21 SECONDS

No

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3152	940902	9597	52192	140000	050	-14

BATSE BURST TRIGGER

NO.: 03152

TIME: TJD=9597 SECONDS=52192

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

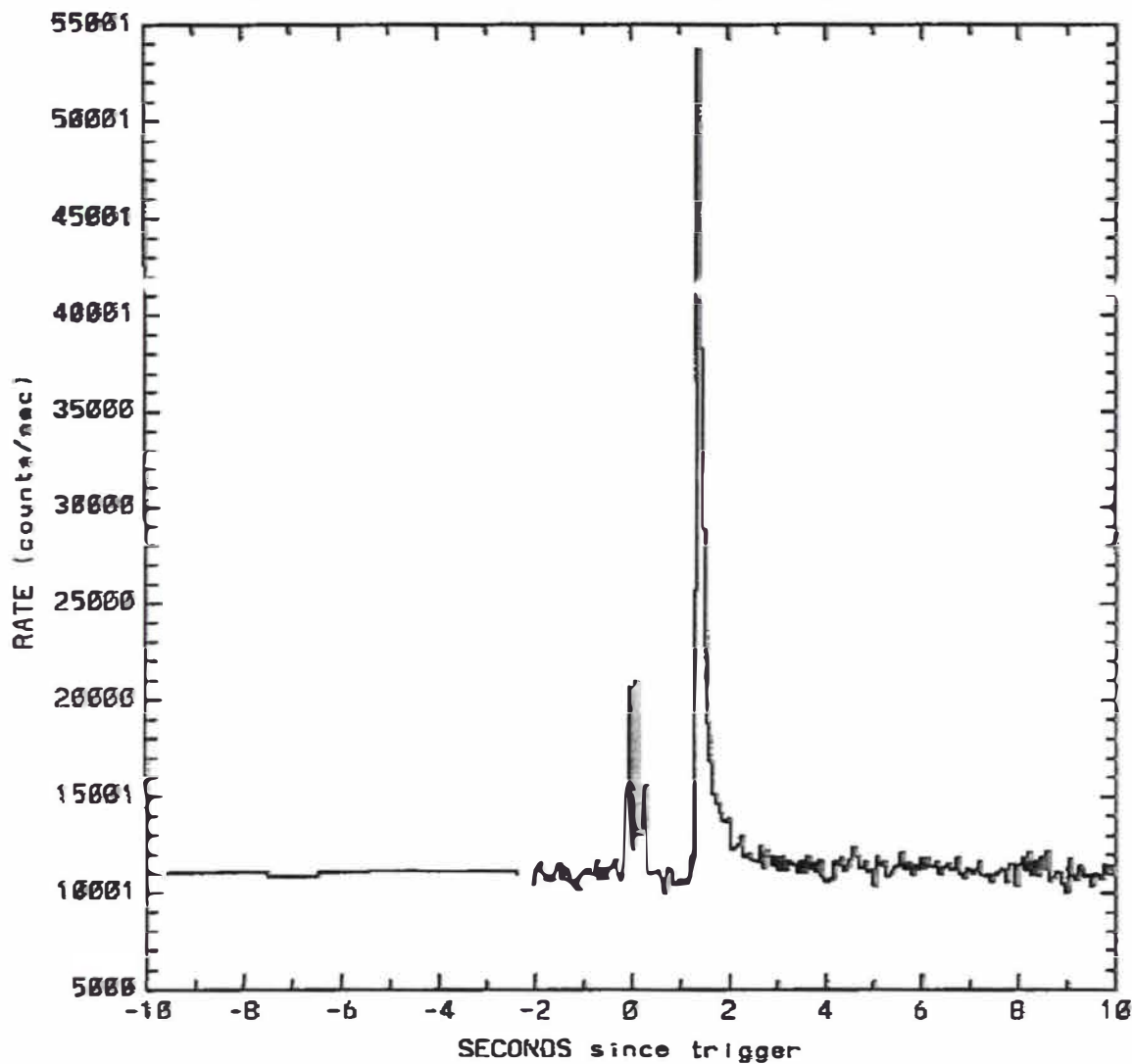
INTENSITY: COUNTS/CM2

LOCATION: ZENITH=072.6 AZIMUTH=157.6 ERROR= DEGREES

COMMENTS:

BURST, STRONG, COMPLEX, LASTING ~2 SECONDS. VISIBLE ABOVE 300KEV.

DISCSC Data for K. Hurley. No. 3152



28-SEP-1994 11:47:43

Created by MOPS 80
(Burst Display)
Version 12.22

Trigger # . 3152

Trigger Time:
9597 / 52192.242Burst Data Type:
-----Deadtime
Corrected: K
Background Data
Type: PREB + DISCLA
Minimum Integ. Time:
8.864 second(s)Detectors [7..8]:
-6543---Discriminators:
[1. 2]Quality Mask:
80ISP1

6 / 9 / 94

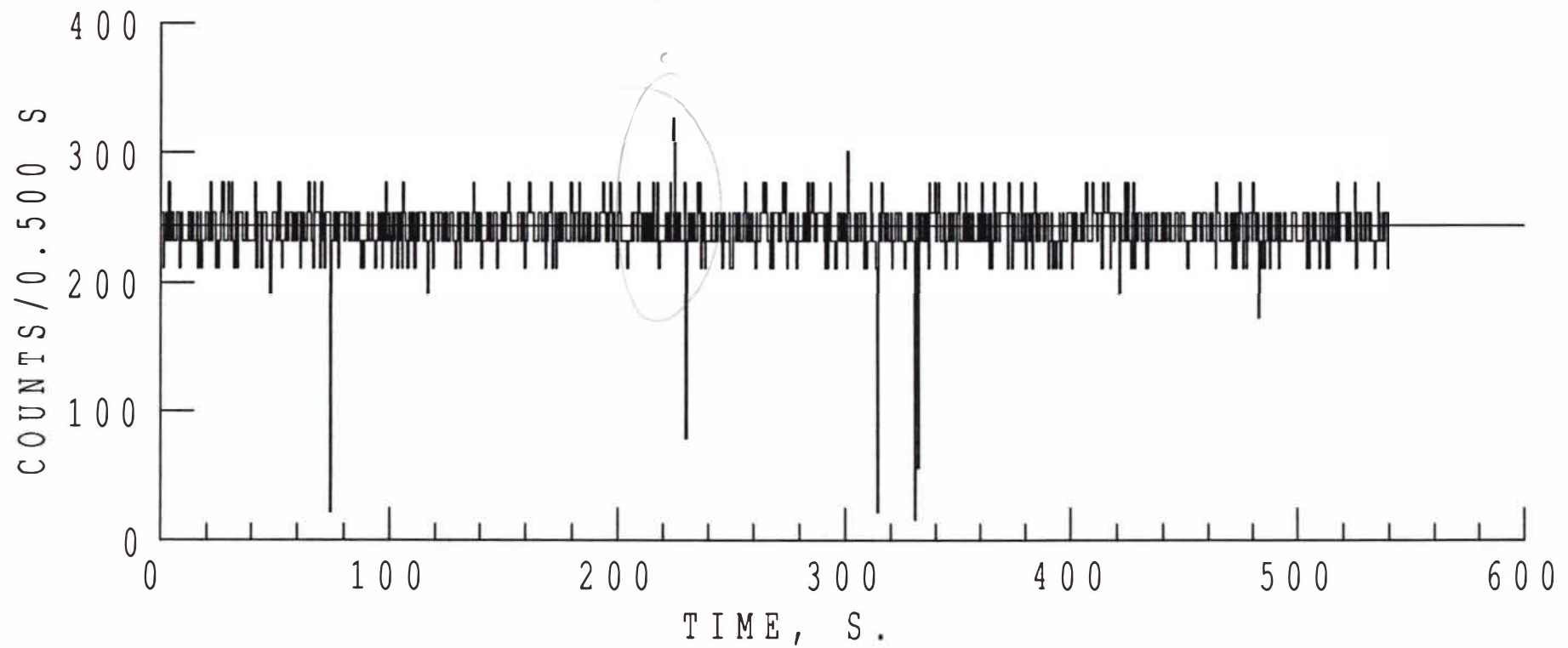
ULYSSES RT

2 / 9 / 94 51768.242 s

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From SHARIFF@ssl.msfc.nasa.gov Sat Sep 3 16:25 PDT 1994
Date: Sat, 3 Sep 1994 18:26:21 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3153

BATSEARCH PROGRAM

BATSE BURST # 3153
EVENT OF 1994 SEP 2 DAY OF YEAR=245
EVENT CROSSING TIME AT BATSE : 61205. S. OR 17:00:05.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 191.000 -65.000
BATSE PEAK COUNTING RATE: 3500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 2/ 9/ 94 IS:
RA= 145.957 DEC= -48.769 DIST= 2.737 AU
BATSE-ULYSSES DISTANCE = 409389321. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=151.45 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH=-1199.53 SECS.
CROSSING TIME AT ULYSSES IS 60005. S. OR 16:40:05 +/- 145.09 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 2/ 9/ 94 IS:
RA= 101.358 DEC= 23.467 DIST= 1.759 AU
MARS-BATSE DISTANCE = 263093168. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 68.99 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 314.61 SECS.
CROSSING TIME AT MARS IS 61520. S. OR 17:05:19 +/- 147.01 SECONDS

No

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3153	940902	9597	61205	3500	191	-65

BATSE BURST TRIGGER

NO.: 03153

TIME: TJD=9597 SECONDS=61205

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=038.5 AZIMUTH=281.9 ERROR= DEGREES

COMMENTS:

BURST, TWO PULSES LASTING ~25 SECONDS. NOT VISIBLE ABOVE 300KEV.

7 / 9 / 94

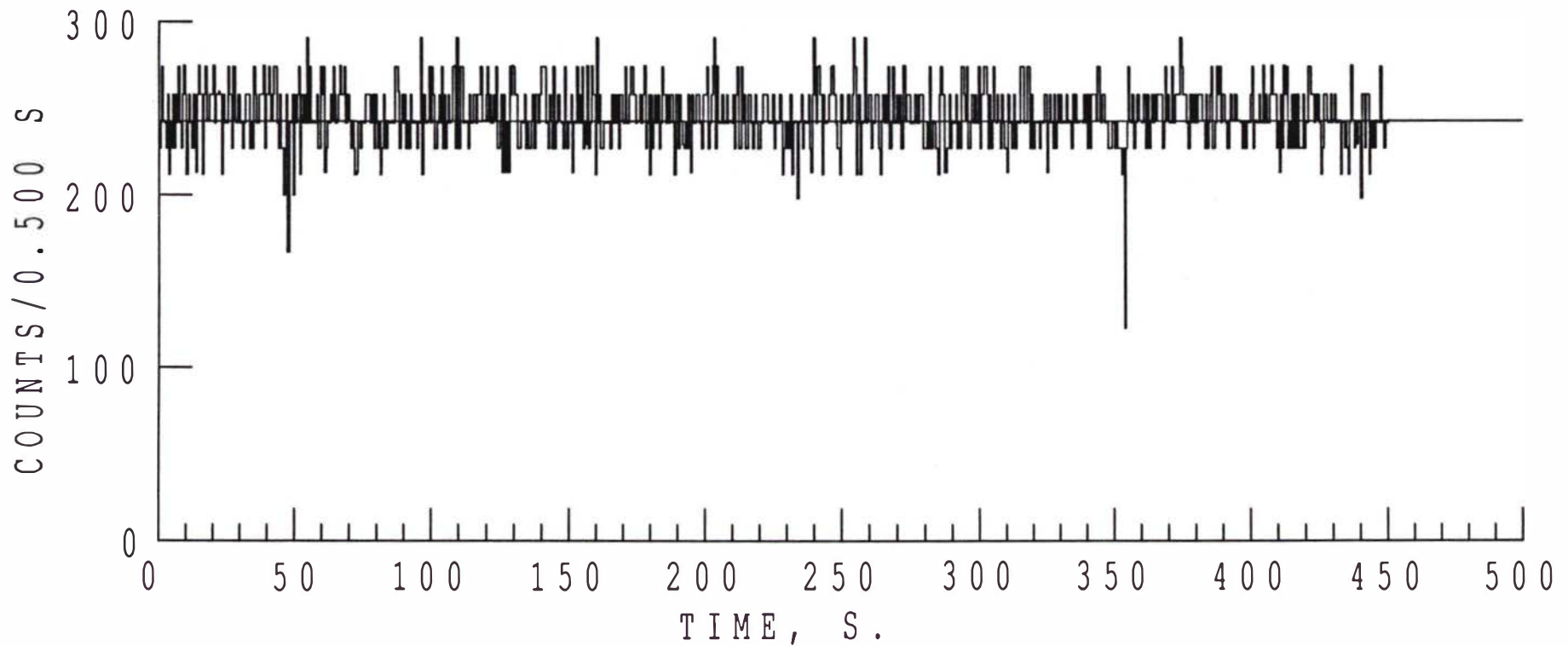
ULYSSES RT

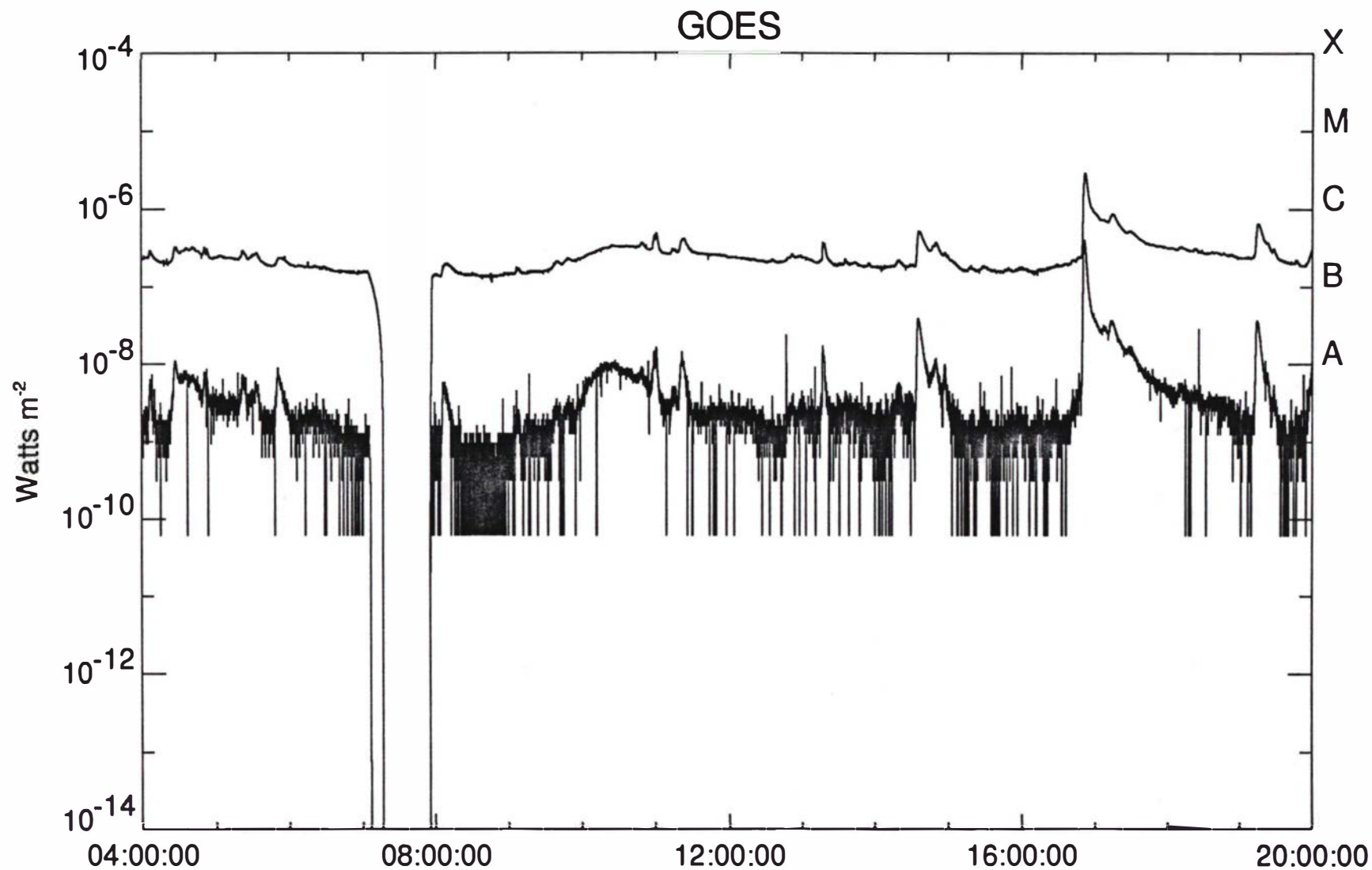
4 / 9 / 94 14992.235 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

M= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





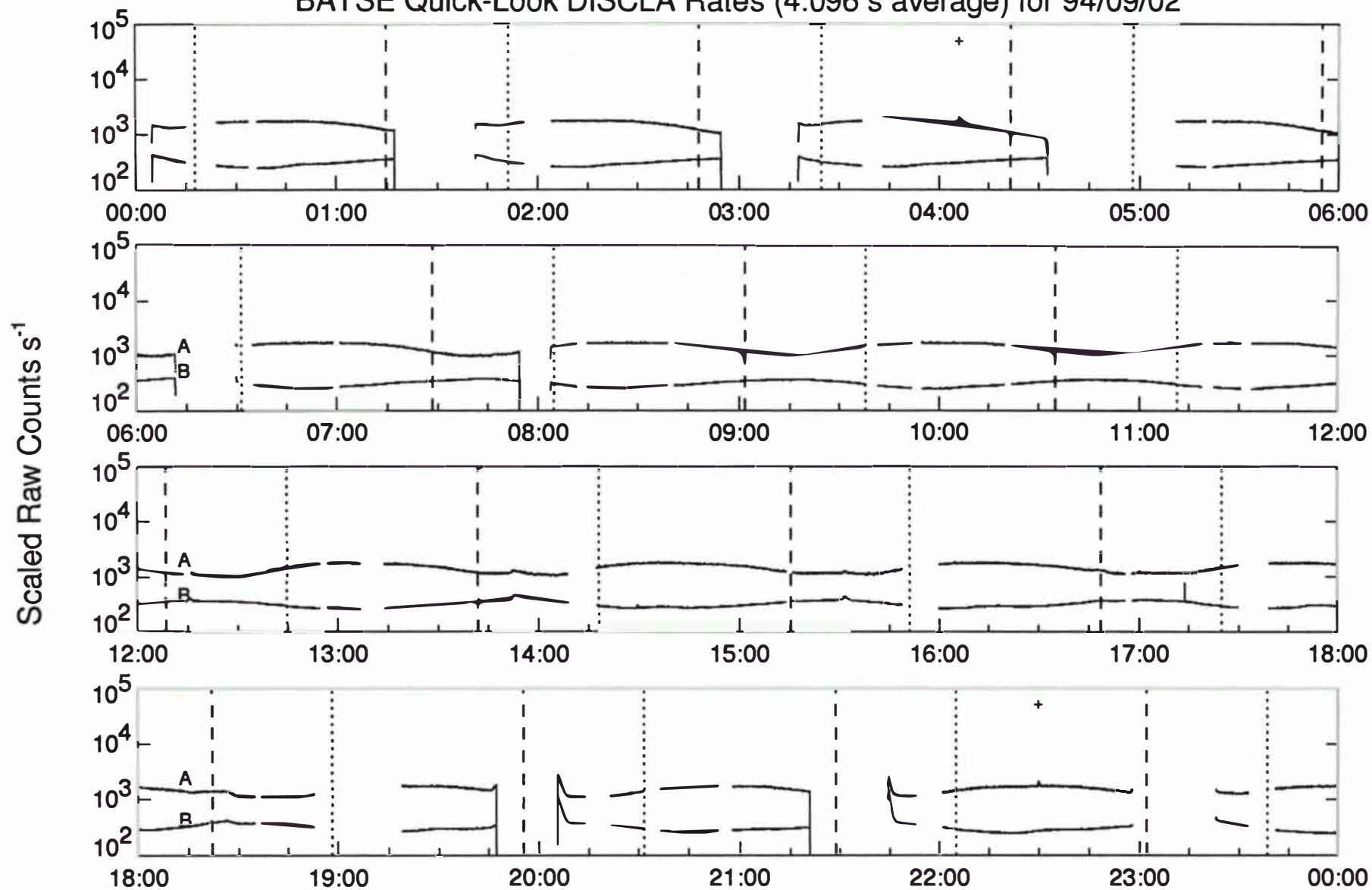
Data Start: 94/09/02, 0000:01

Plot created: 94/09/07, 1322

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/02

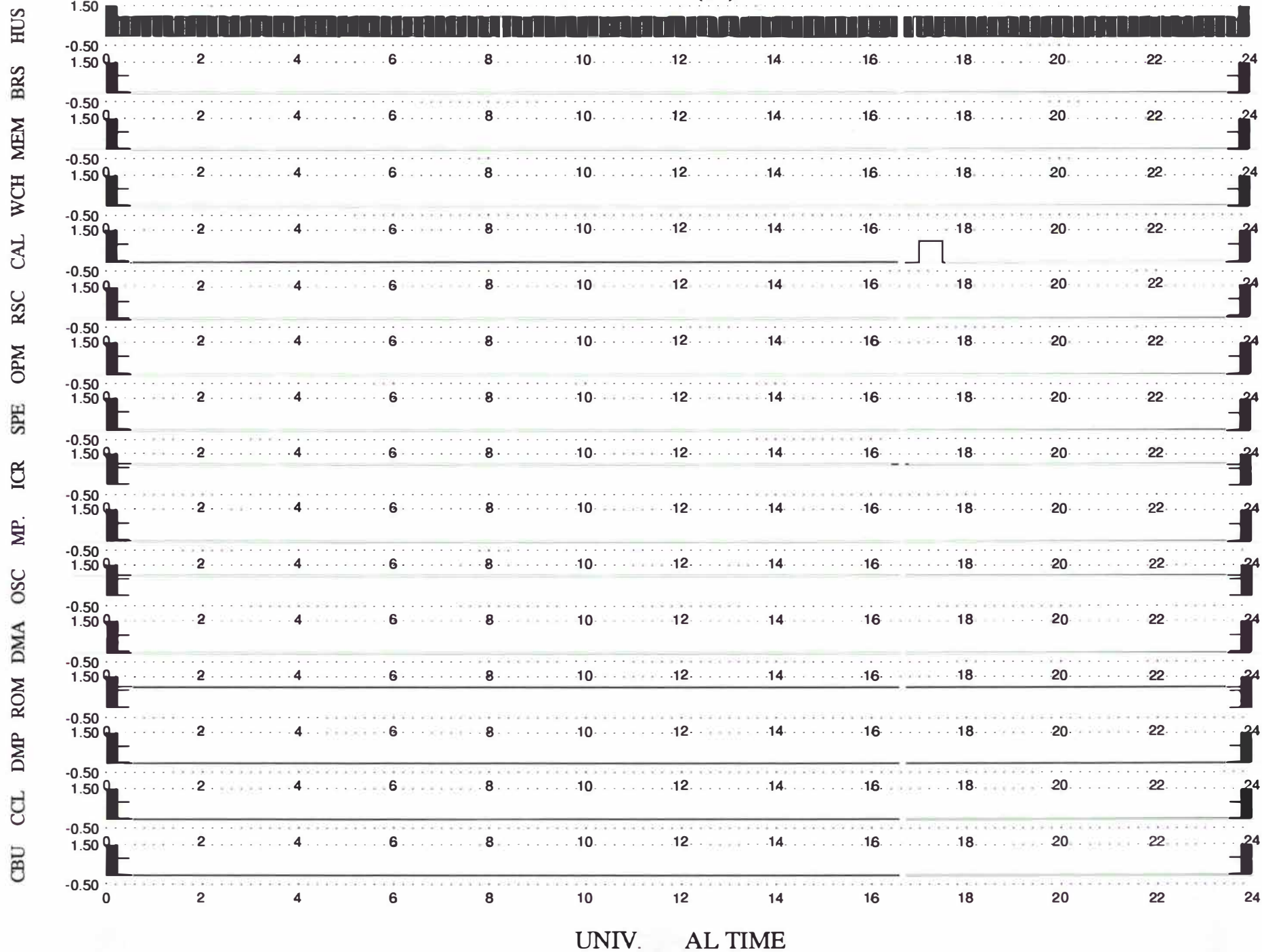


Current Time: 94/09/07, 1333 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

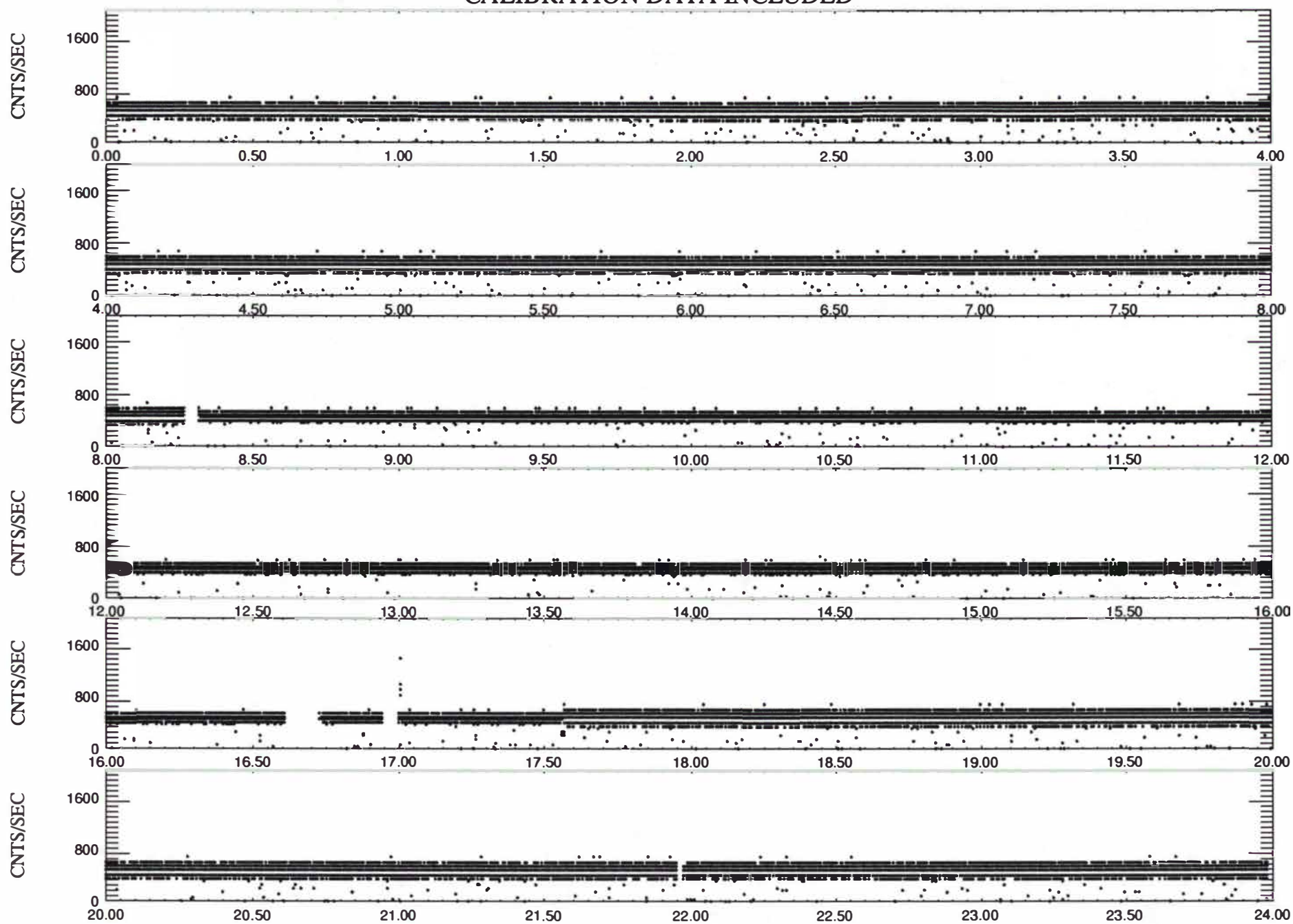
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

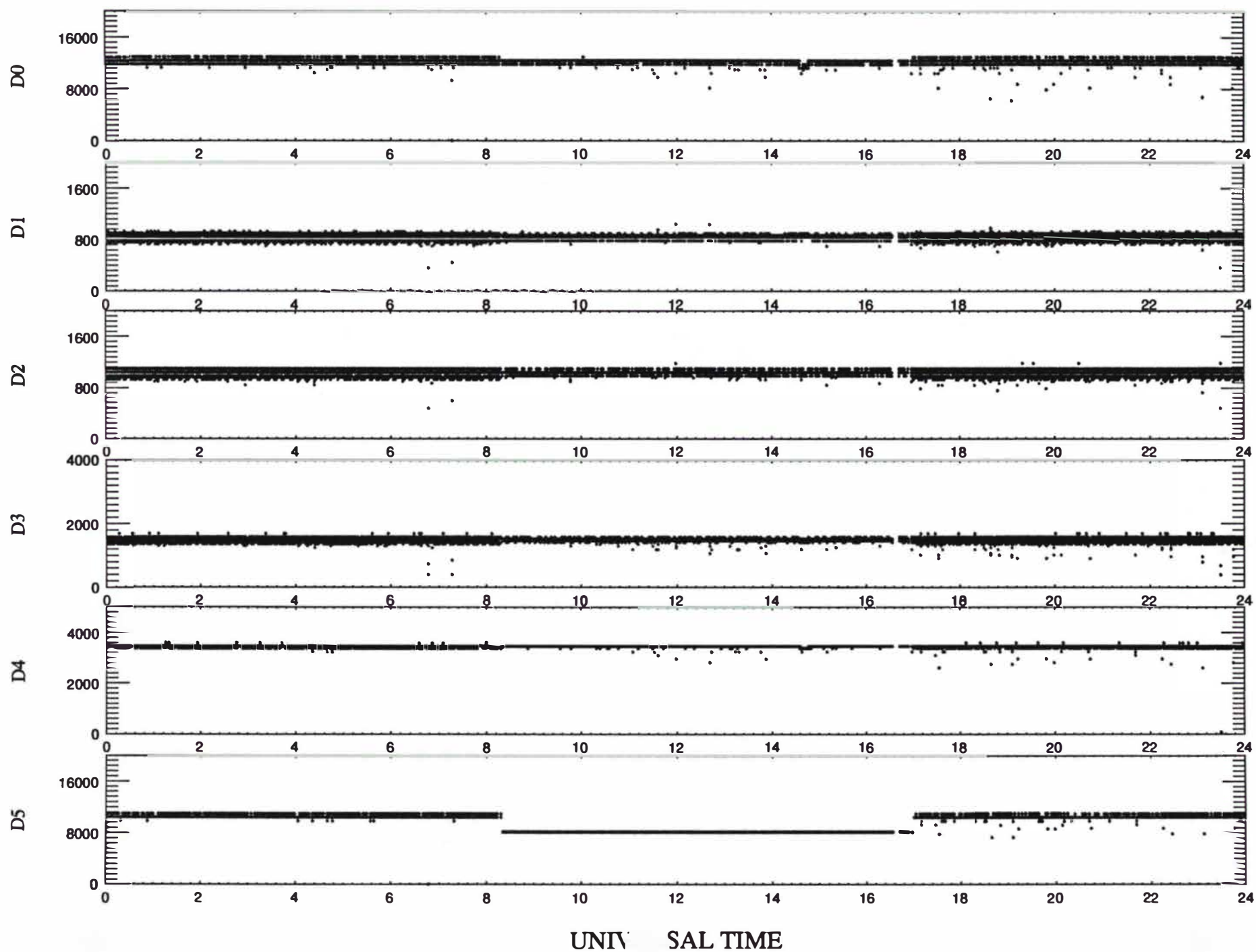
NO BURST (11)

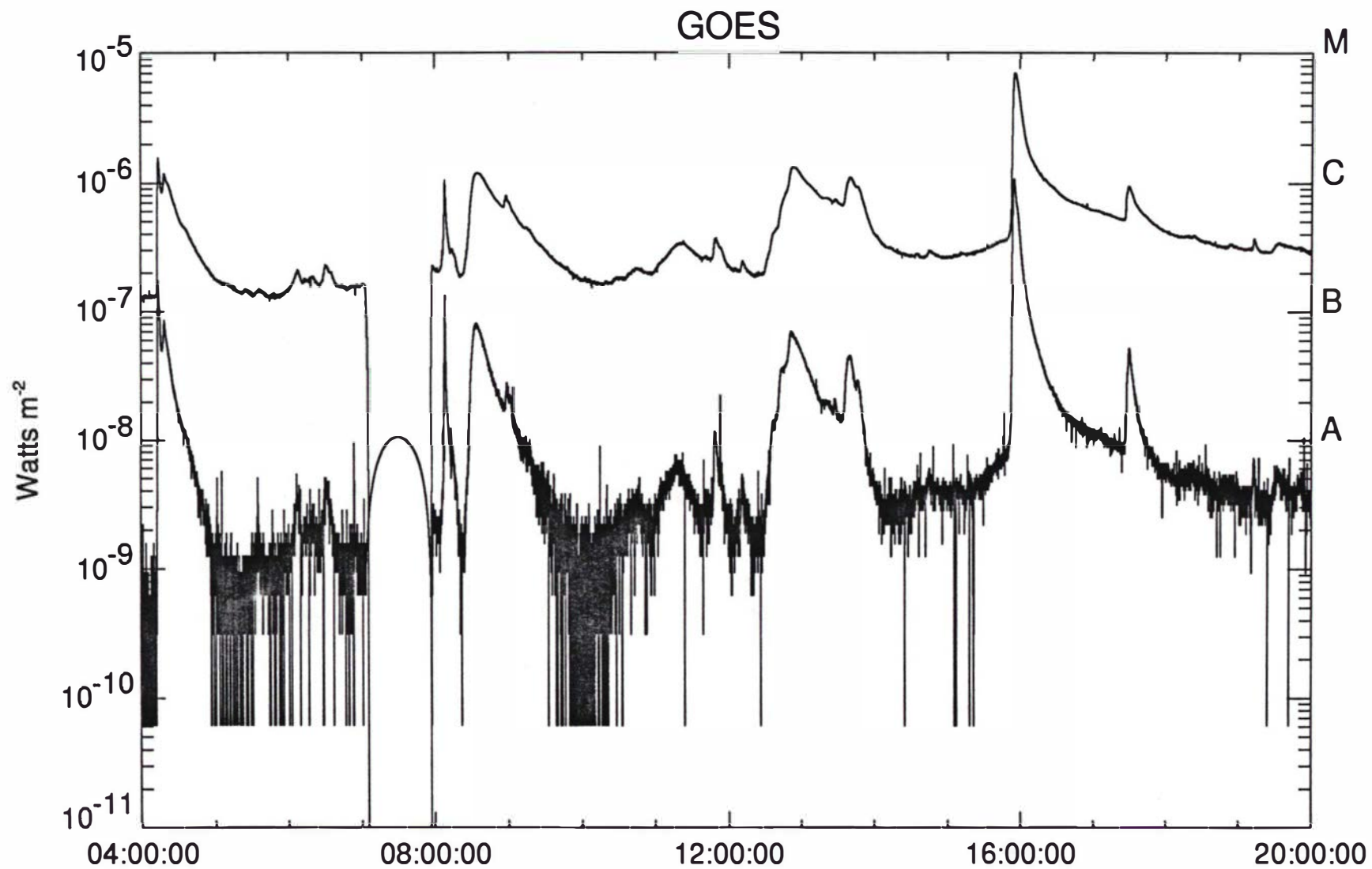


CALIBRATION DATA INCLUDED



UNIV. TIME





Data Start: 94/09/03, 0000:01

Plot created: 94/09/07, 1322

Channel

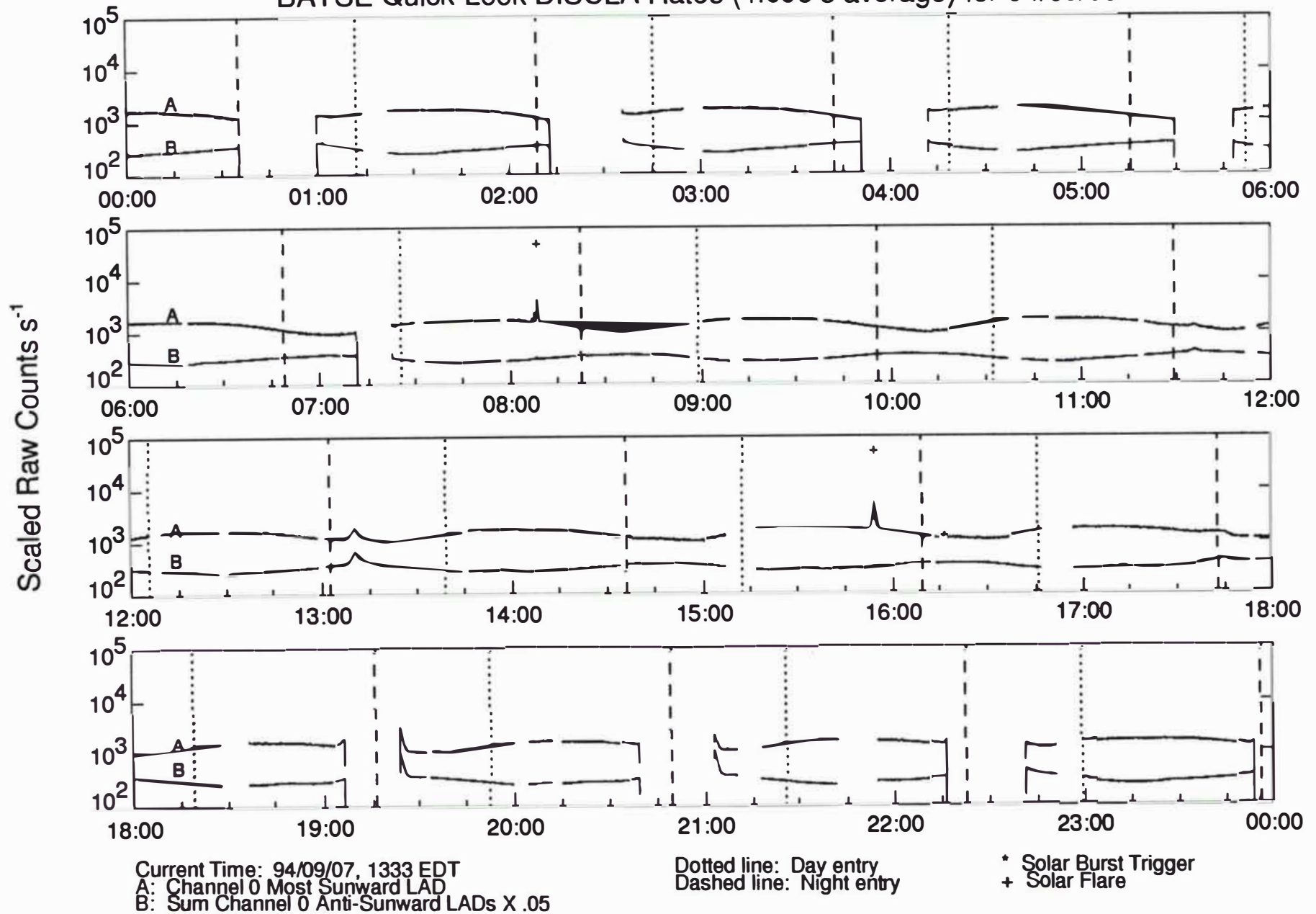
1 (1.0 - 8.0 Angstroms)

Background not subtracted

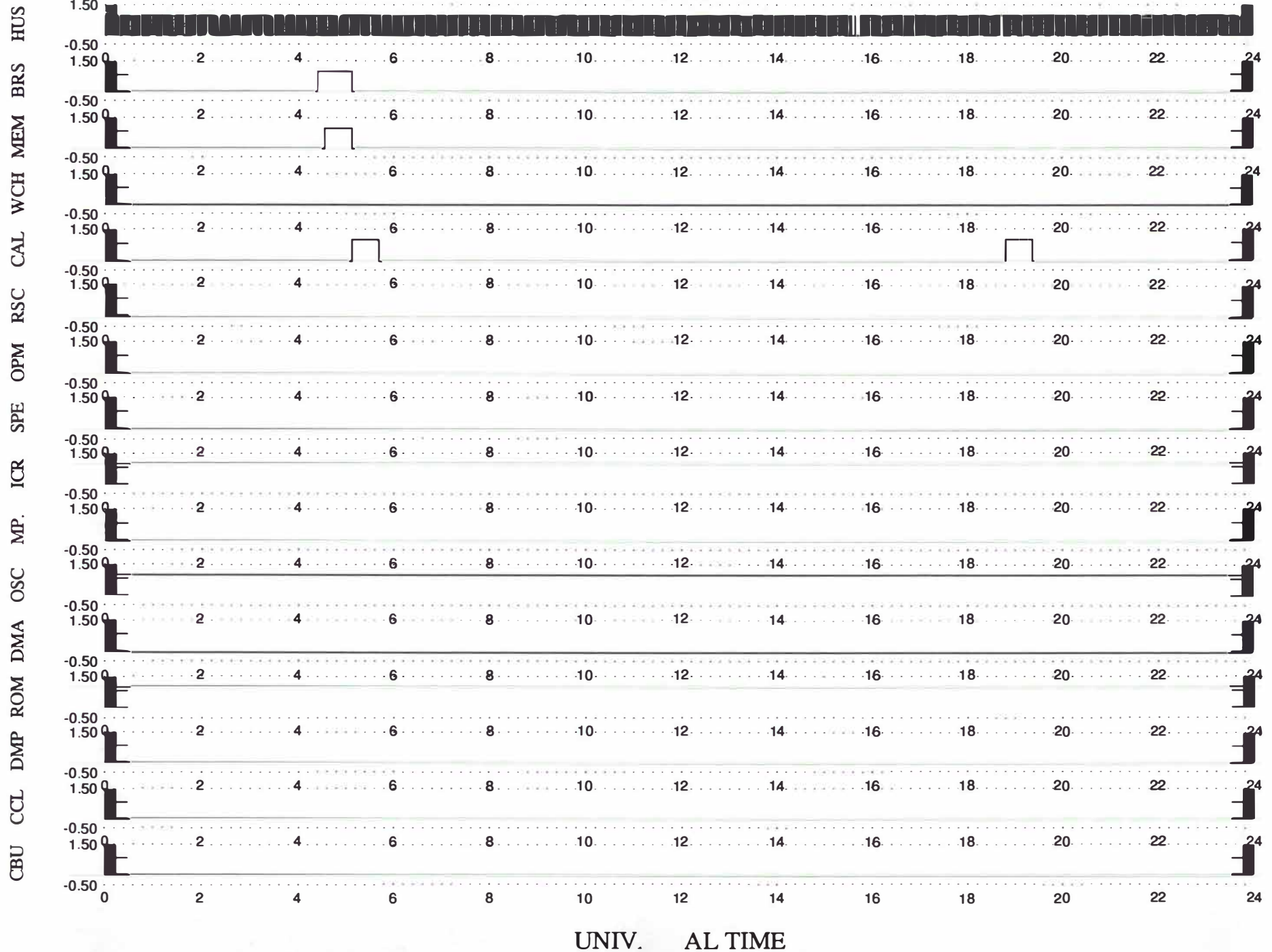
2 (0.5 - 4.0 Angstroms)

Background not subtracted

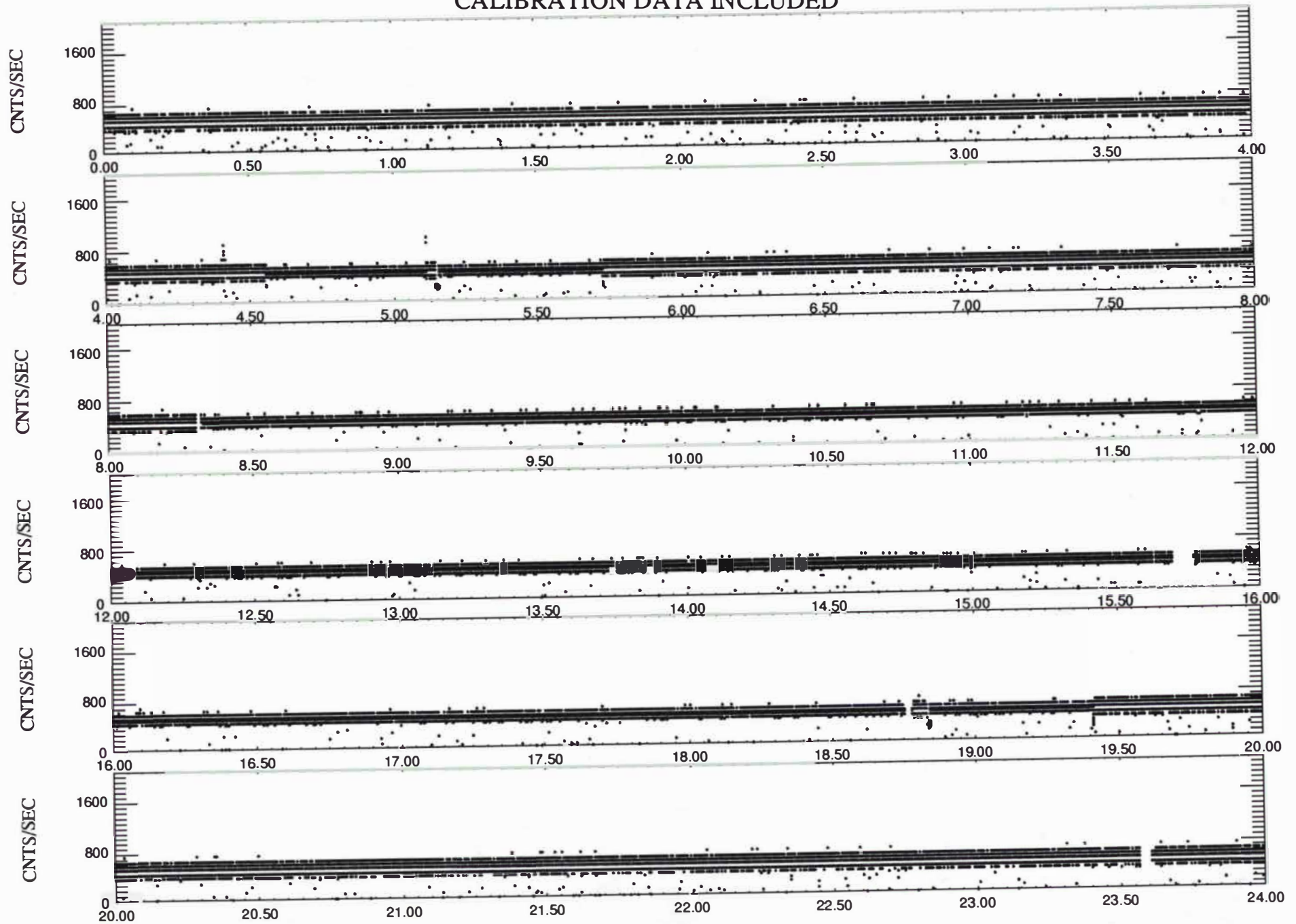
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/03



BURST NUMBER 12

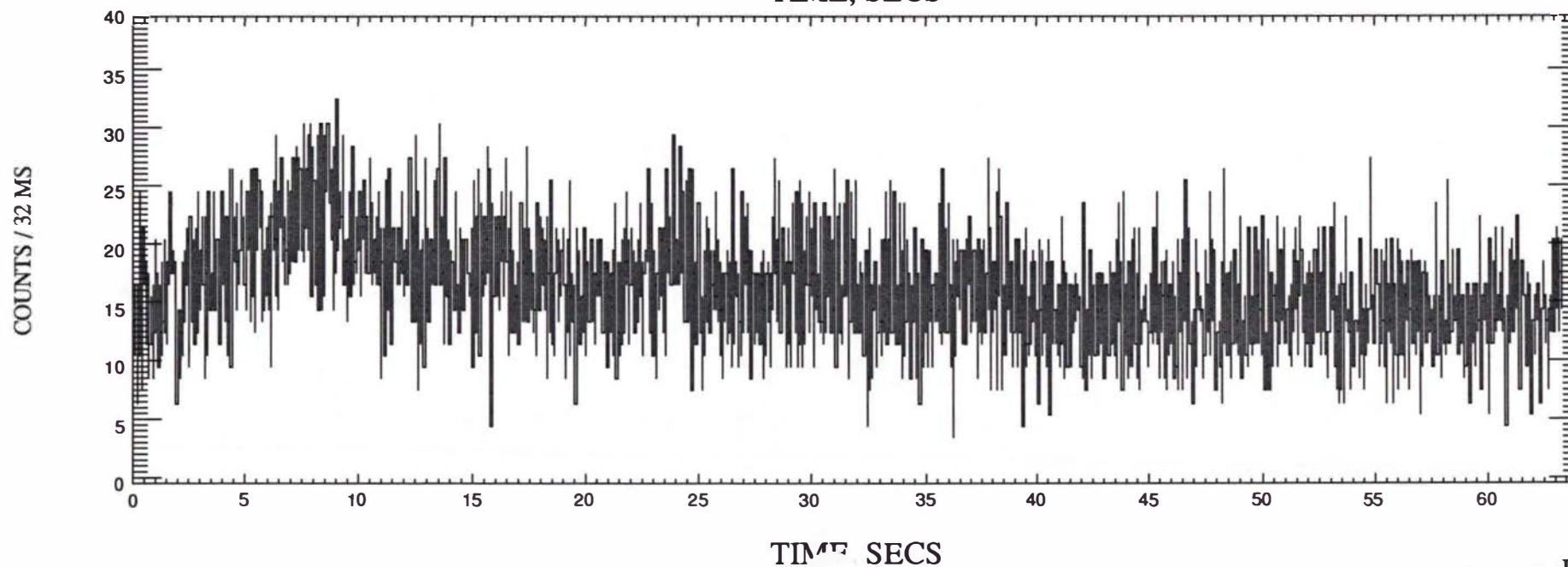
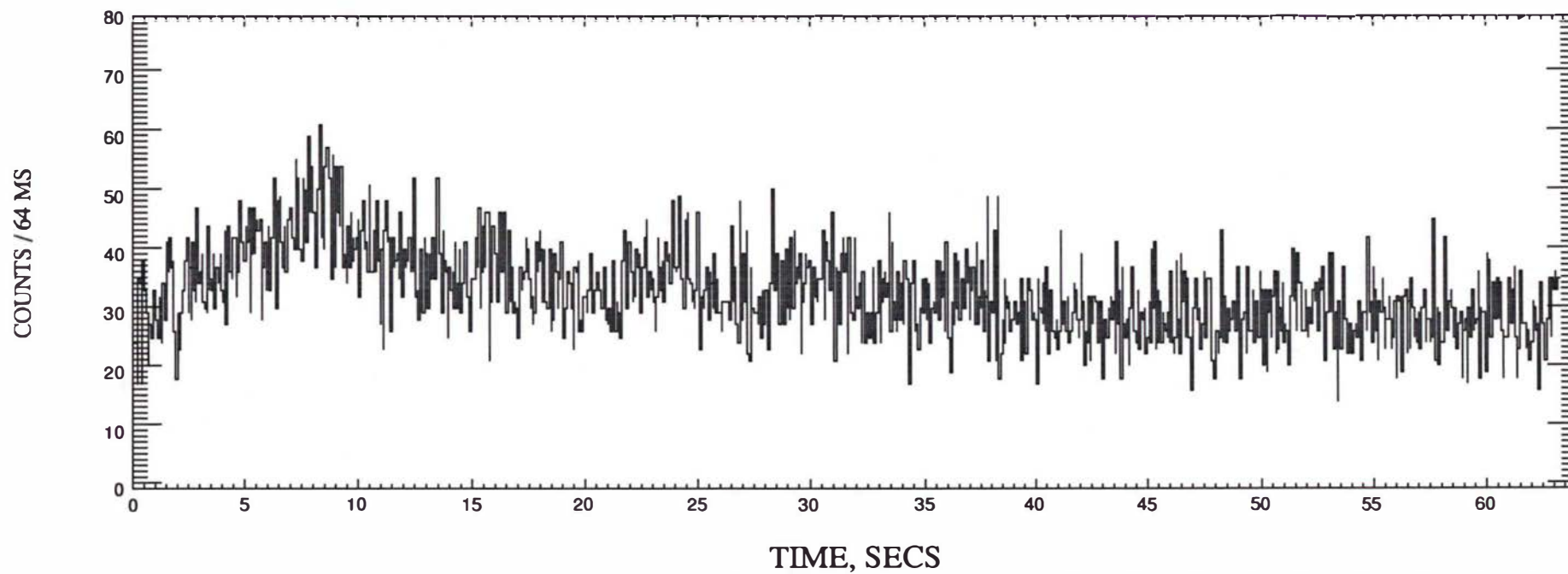


CALIBRATION DATA INCLUDED

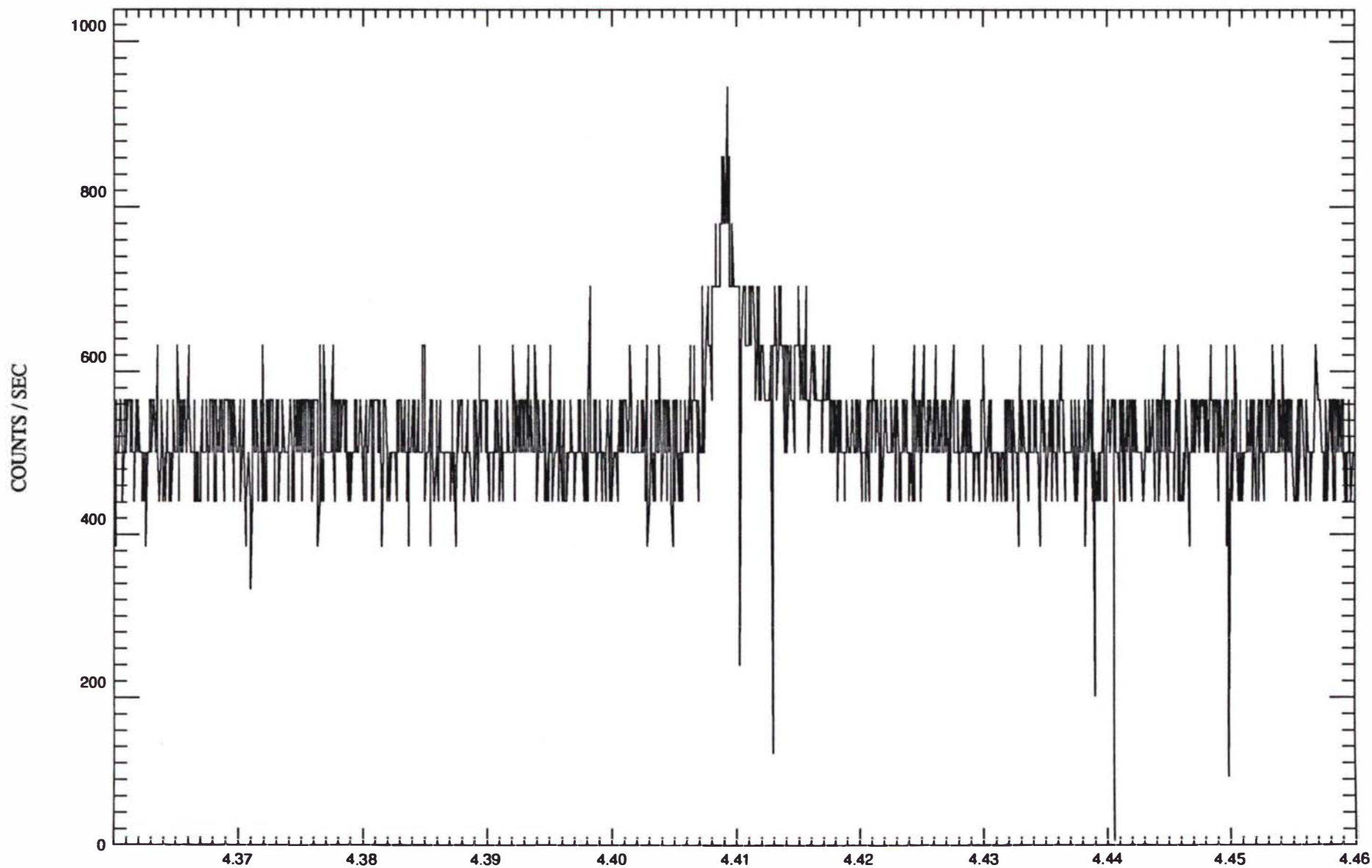


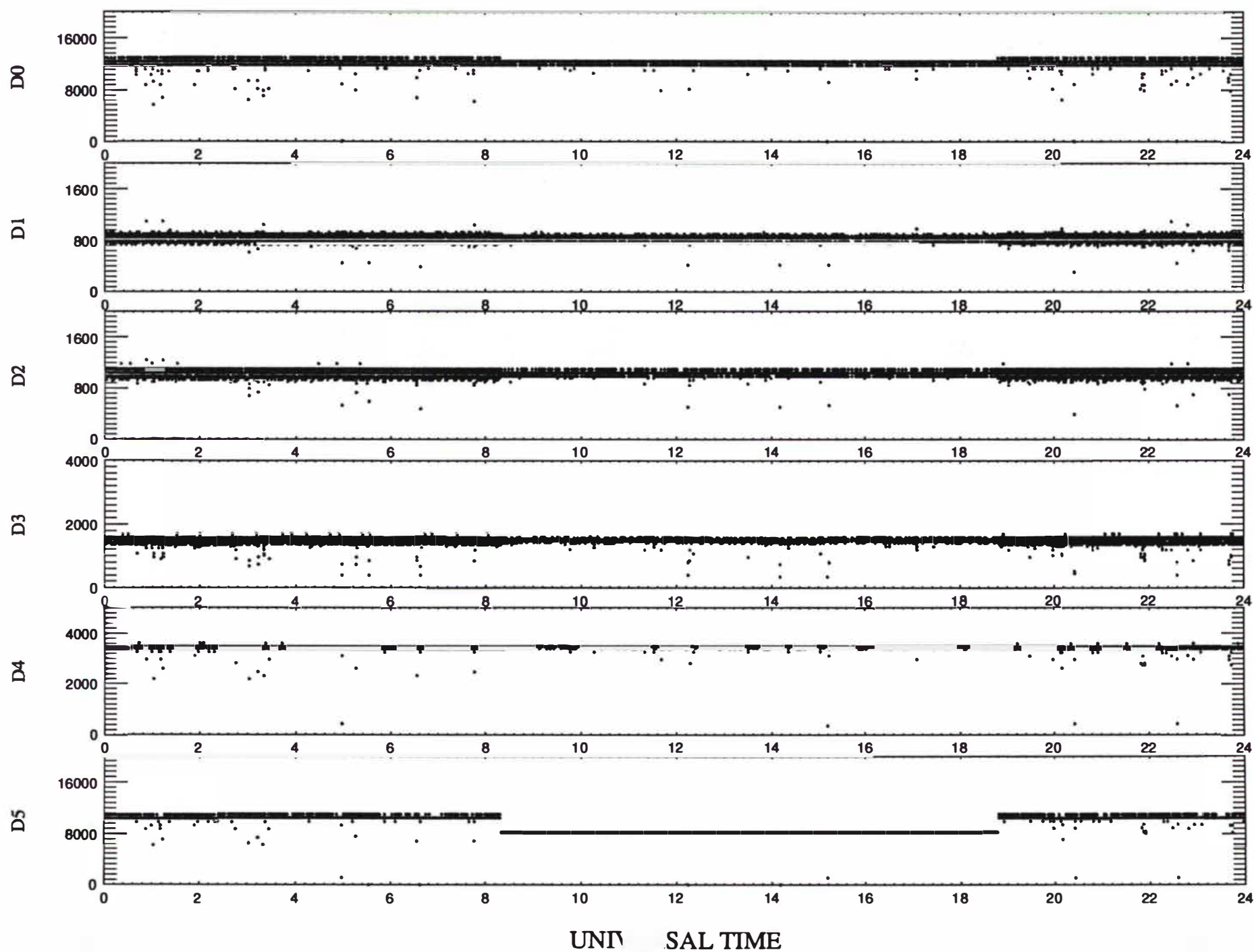
UNIV. CAL TIME

Burst Counter 12 at UT= 4.408976520962 h=15872.315 s 04:24:32.315



CALIBRATION DATA INCLUDED





From HENZE@ssl.msfc.nasa.gov Mon Sep 5 15:42 PDT 1994
Date: Mon, 5 Sep 1994 17:42:54 -0500 (CDT)
From: HENZE@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3155

BATSEARCH PROGRAM

BATSE BURST # 3155
EVENT OF 1994 SEP 4 DAY OF YEAR=247
EVENT CROSSING TIME AT BATSE : 14392. S. OR 03:59:52.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 247.000 42.000
BATSE PEAK COUNTING RATE: 7500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 4/ 9/ 94 IS:
RA= 146.589 DEC= -49.198 DIST= 2.725 AU
BATSE-ULYSSES DISTANCE = 407672469. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 53.54 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 808.11 SECS.
CROSSING TIME AT ULYSSES IS 15200. S. OR 04:13:20 +/- 252.15 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 4/ 9/ 94 IS:
RA= 102.726 DEC= 23.395 DIST= 1.747 AU
MARS-BATSE DISTANCE = 261394544. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 73.26 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 251.12 SECS.
CROSSING TIME AT MARS IS 14643. S. OR 04:04:03 +/- 148.78 SECONDS

RI NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3155	940904	9599	14392	7500	247	+42

BATSE BURST TRIGGER

NO.: 03155

TIME: TJD=9599 SECONDS=14392

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=136.1 AZIMUTH=354.5 ERROR= DEGREES

COMMENTS:

SINGLE SPIKE, DUR.~7 S. WEAKLY VISIBLE ABOVE 300 KEV.

ULYSSES RT

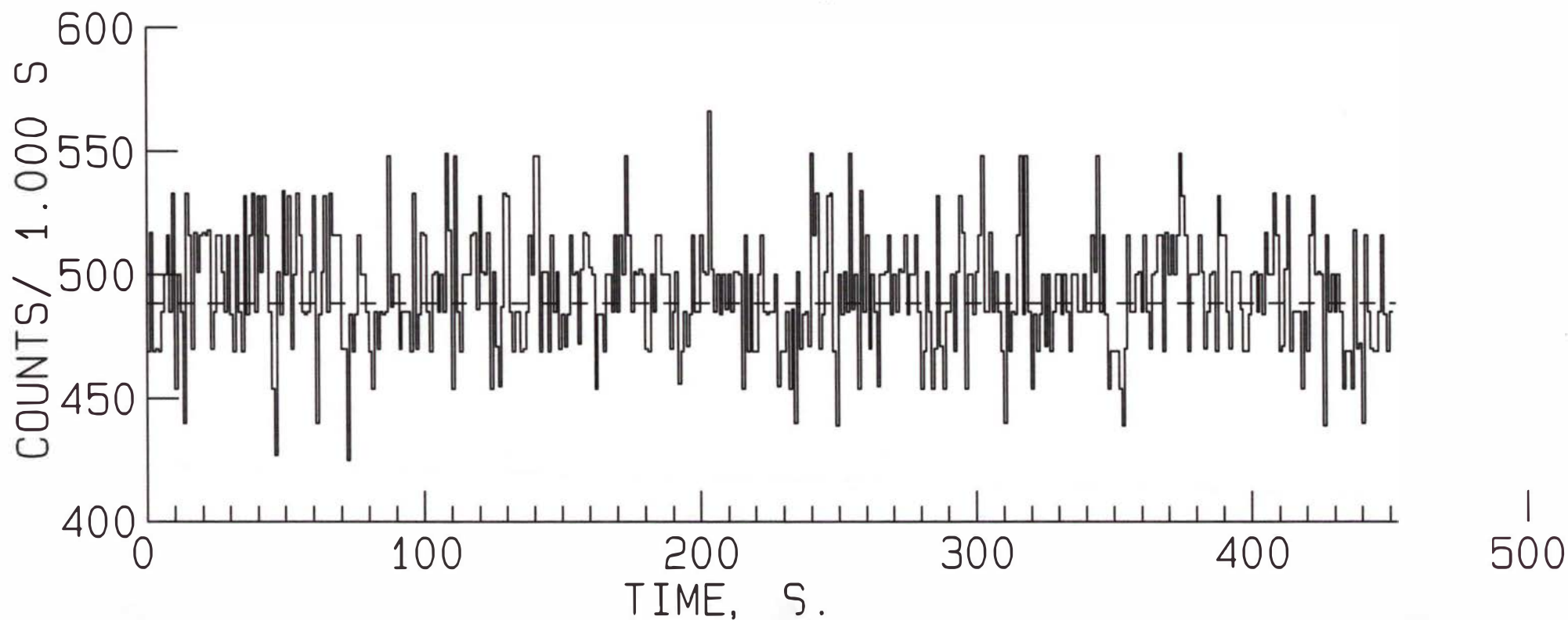
16 / 11 / 91

4/ 9/94 14992.235 s

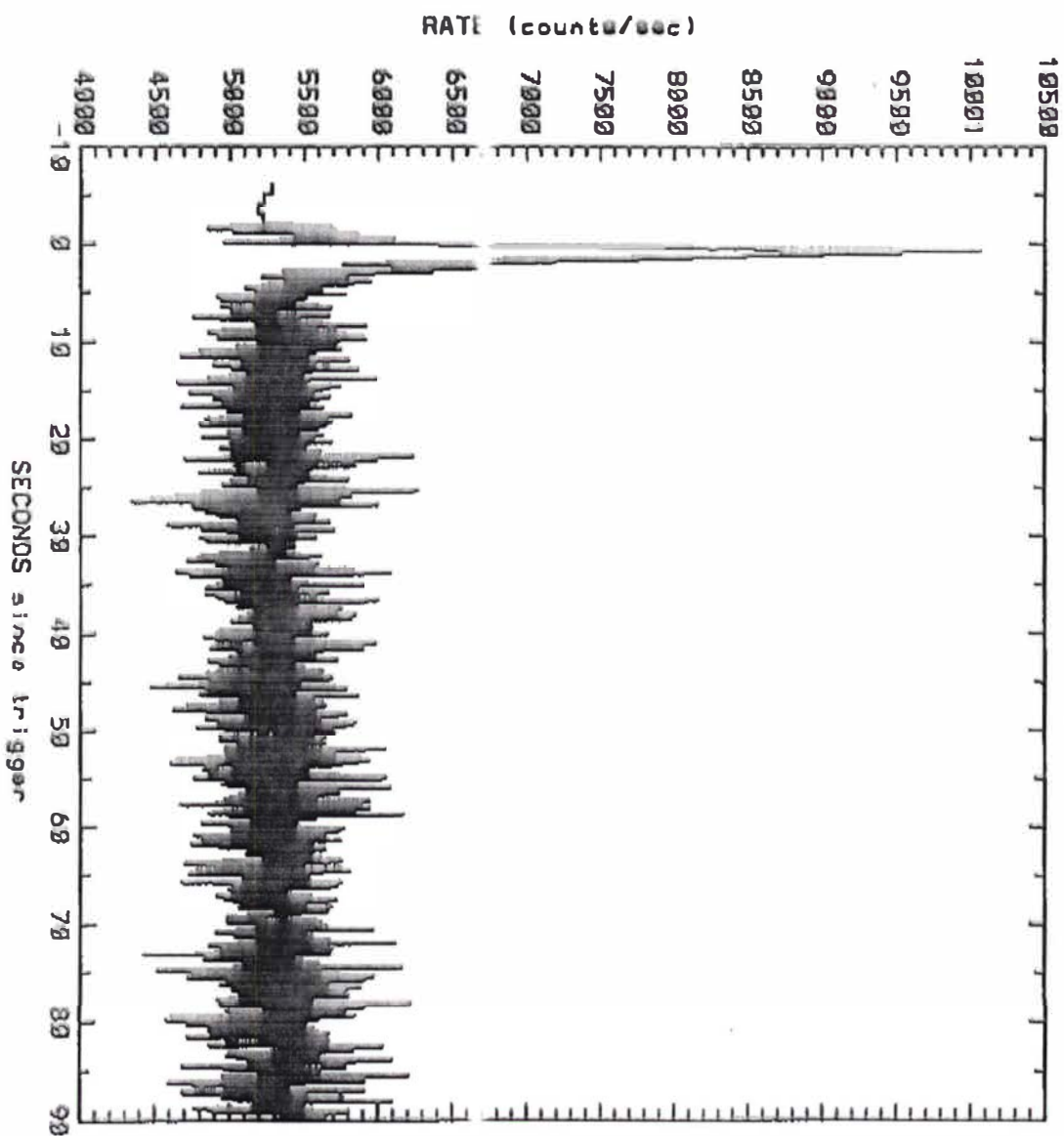
0.250 S INTERVALS REGROUPED BY 4

22- 148 keV

N= 10 M= 2
>3.0 SIGMA FLUCTUATIONS



DISCSC Data for K. Hurley, No. 3155



26-SEP-1991 10:02:17

Created by XPS BD
(Burst Display)
Version 2.22

Trigger = 3155

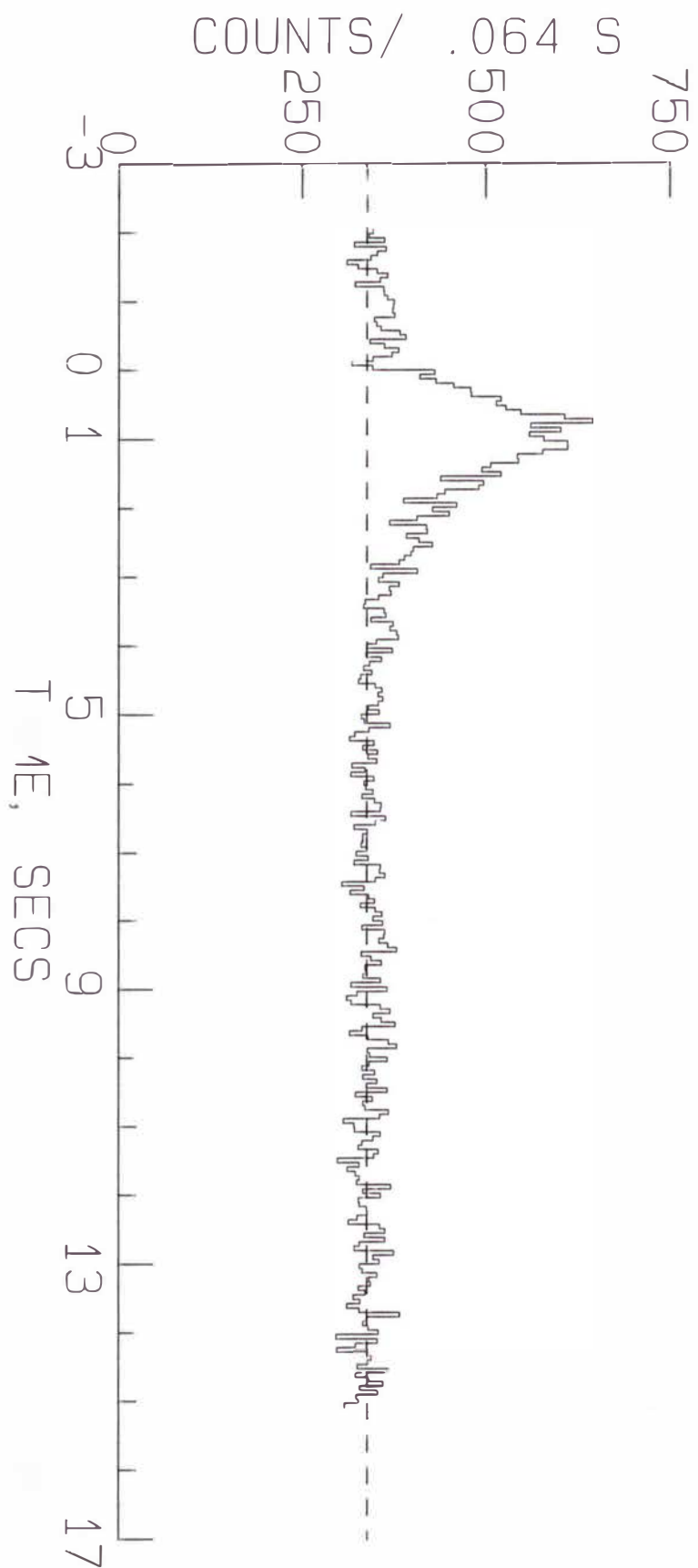
Trigger Time:
9599 / 1091.986Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: PEB + DISCSCMinimum Integ. Time:
9.964 secondsDelays (7.01,
---3-1-Discriminator:
(1, 2)Quality Mask:
B01SP1

BATSE

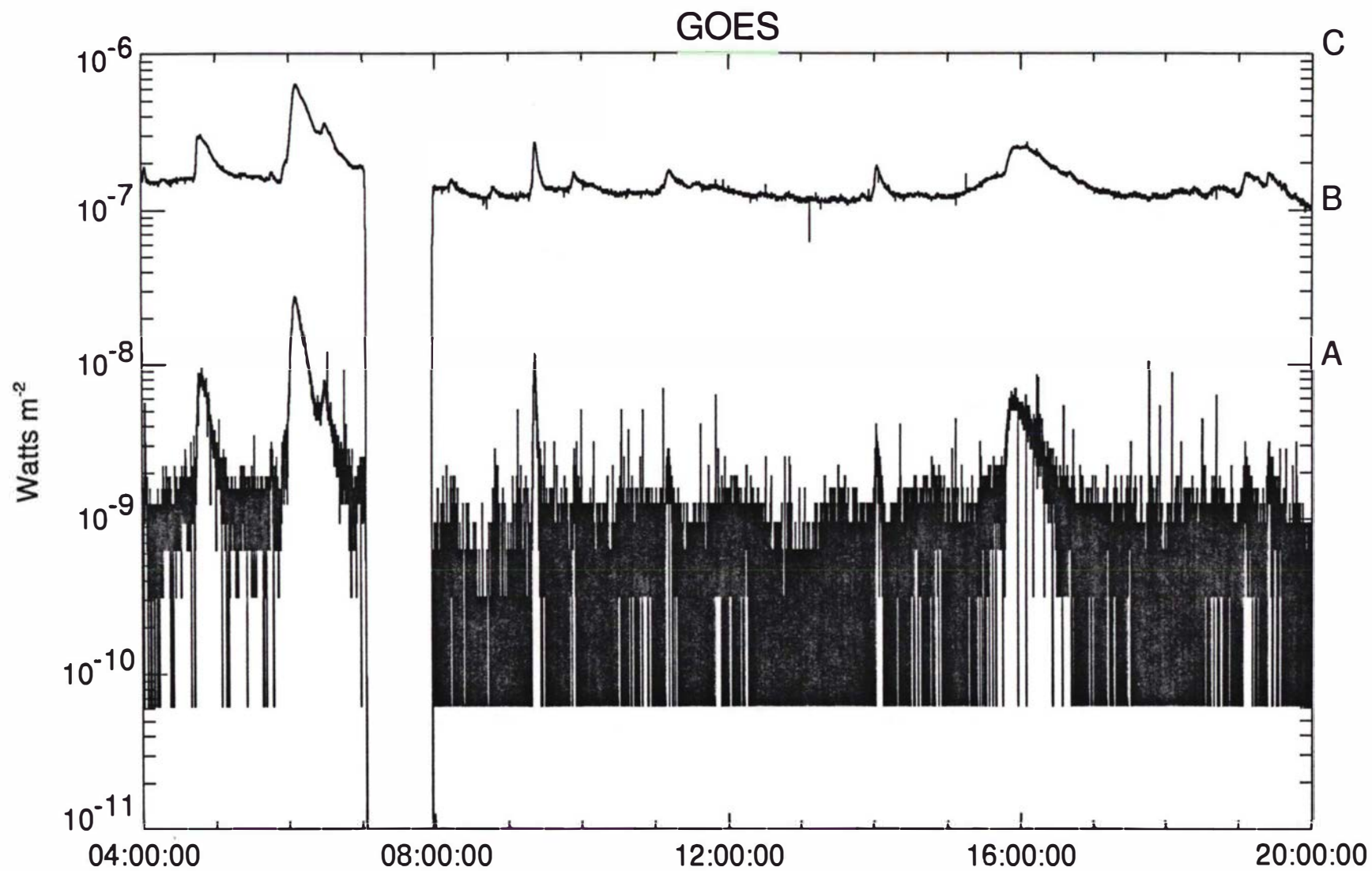
04/09/94

14391.986

25- 100 keV



15 / 10 / 94



Data Start: 94/09/04, 0000:02

Plot created: 94/09/07, 1323

Channel

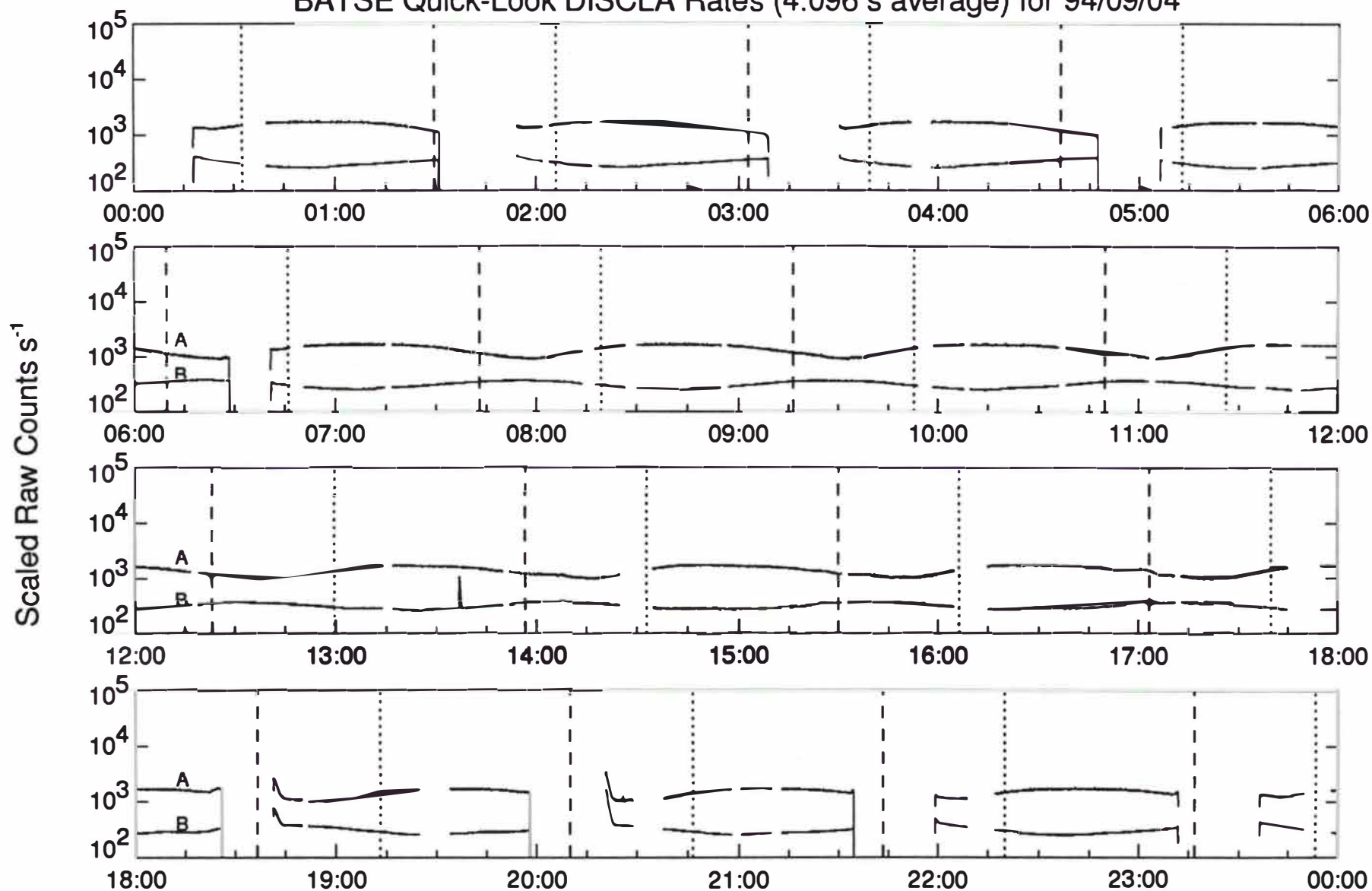
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/04

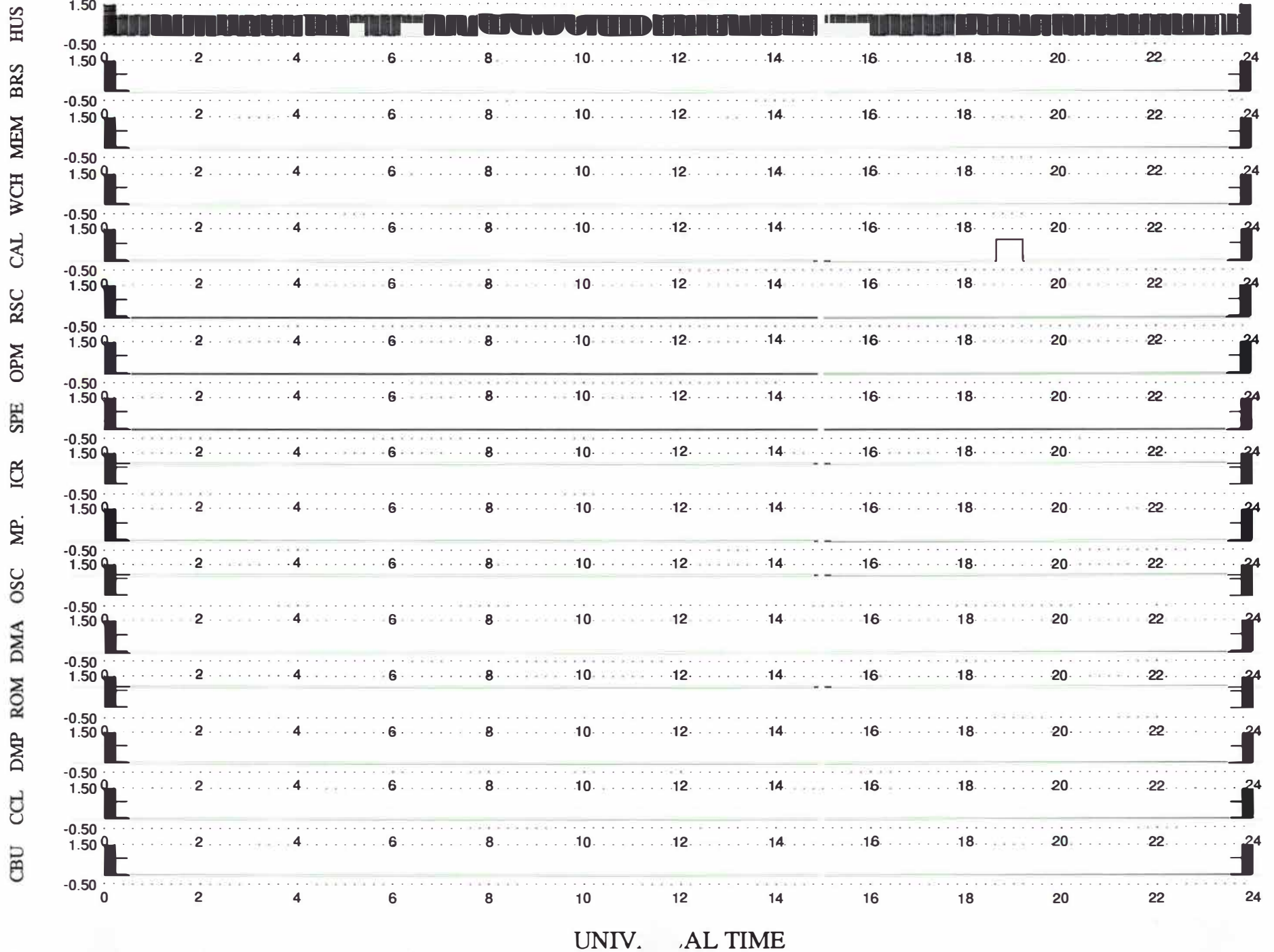


Current Time: 94/09/07, 1333 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

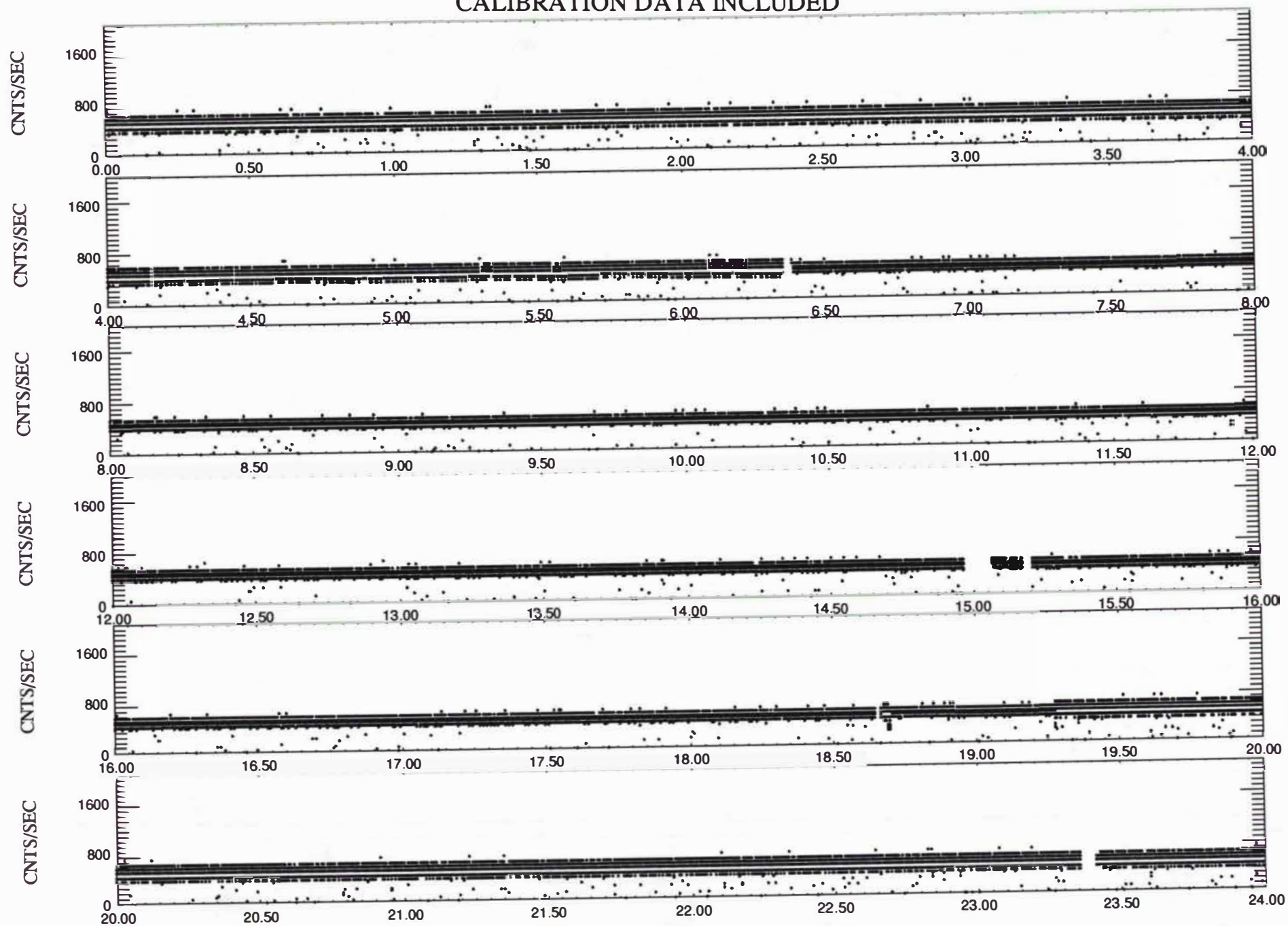
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

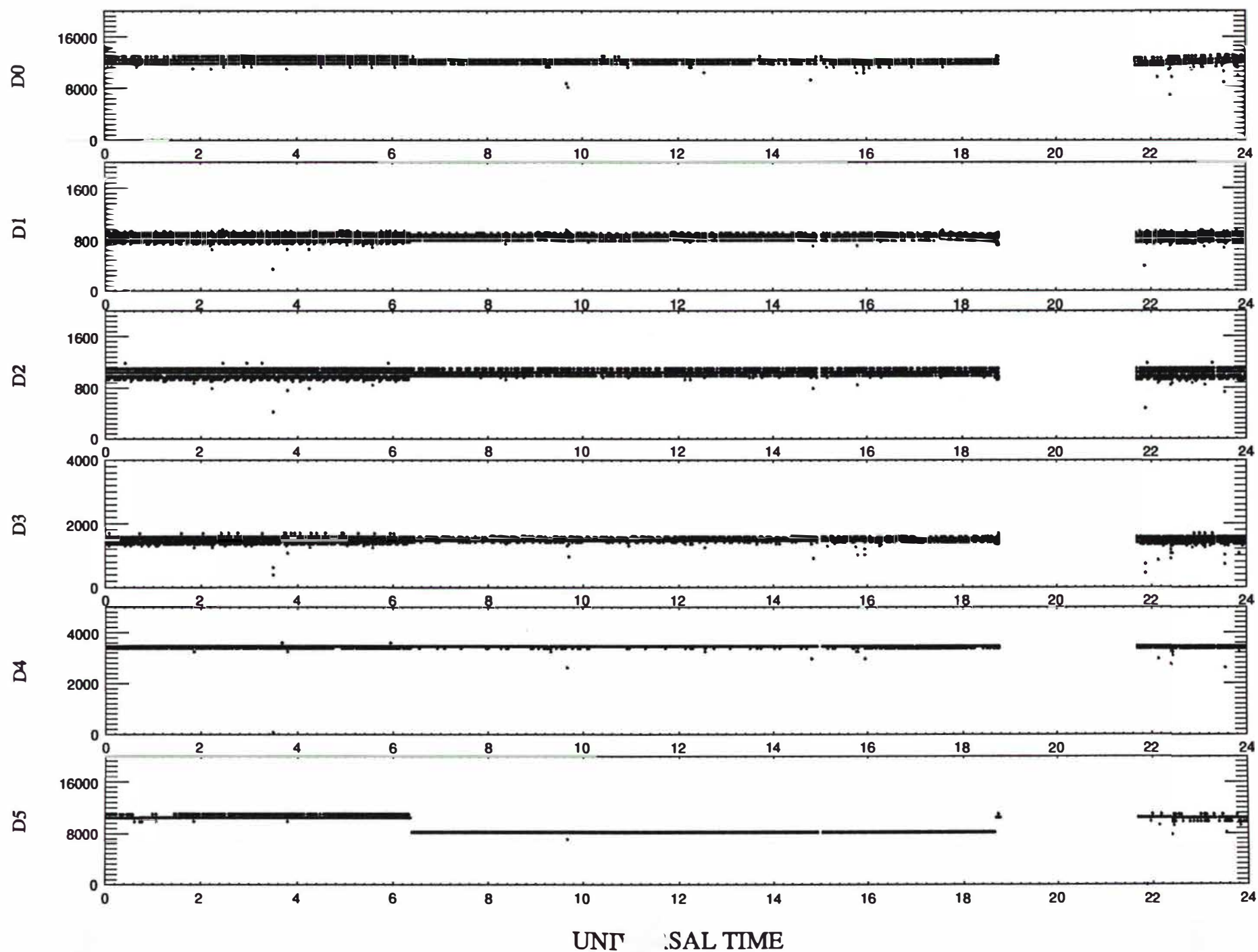
NO BURST (12)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From KOSHUT@ssl.msfc.nasa.gov Tue Sep 6 11:47 PDT 1994
Date: Tue, 6 Sep 1994 13:48:27 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3156

BATSEARCH PROGRAM

BATSE BURST # 3156
EVENT OF 1994 SEP 5 DAY OF YEAR=248
EVENT CROSSING TIME AT BATSE : 80147. S. OR 22:15:47.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 276.000 2.000
BATSE PEAK COUNTING RATE: 3000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 5/ 9/ 94 IS:
RA= 147.370 DEC= -49.731 DIST= 2.711 AU
BATSE-ULYSSES DISTANCE = 405563597. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 64.54 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 581.59 SECS.
CROSSING TIME AT ULYSSES IS 80729. S. OR 22:25:28 +/- 270.89 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 5/ 9/ 94 IS:
RA= 103.407 DEC= 23.355 DIST= 1.742 AU
MARS-BATSE DISTANCE = 260535072. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 26.36 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 778.69 SECS.
CROSSING TIME AT MARS IS 80926. S. OR 22:28:45 +/- 78.82 SECONDS

No

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3156	940905	9600	80147	3000	276	+02

BATSE BURST TRIGGER

NO.: 3156

TIME: TJD=9600 SECONDS=80147

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=128 AZIMUTH=288. ERROR= DEGREES

COMMENTS:

BURST OF ~ 330 SECONDS DURATION. NOT OBSERVED ABOVE 300 KEV. THE TIME HISTORY CONSISTS OF 4 PULSES, WITH ~ 100 SECONDS BETWEEN EACH PEAK. THE BURST BEGINS AT ~ TRIGGER - 200 SECONDS, AND THE FIRST PEAK IS AT ~ TRIGGER - 175 SECONDS. THE FOURTH PEAK IS THE MOST INTENSE (PEAK RATE ~ 3000 C/S) AND IS OBSERVED AT ~ TRIGGER + 90 SECONDS.

8 / 9 / 94

ULYSSES RT

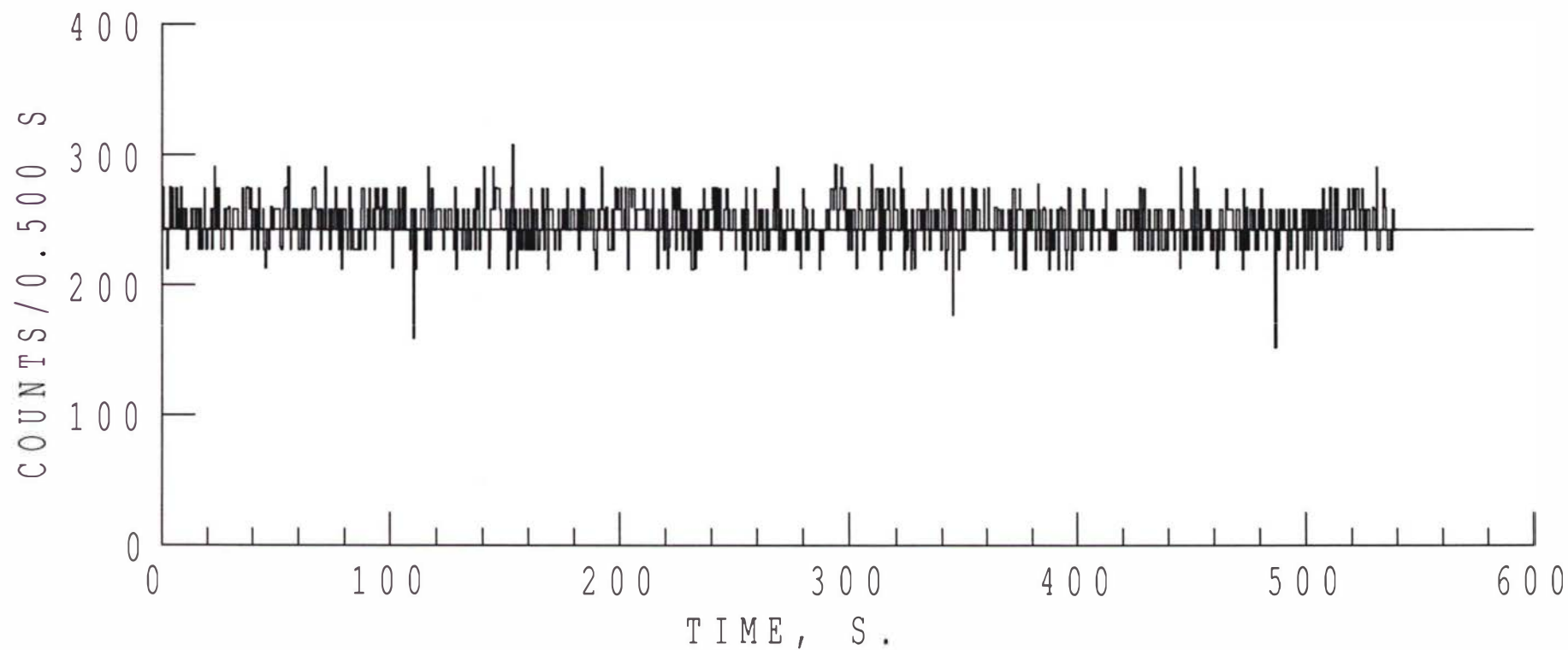
5 / 9 / 94 80460.234 s

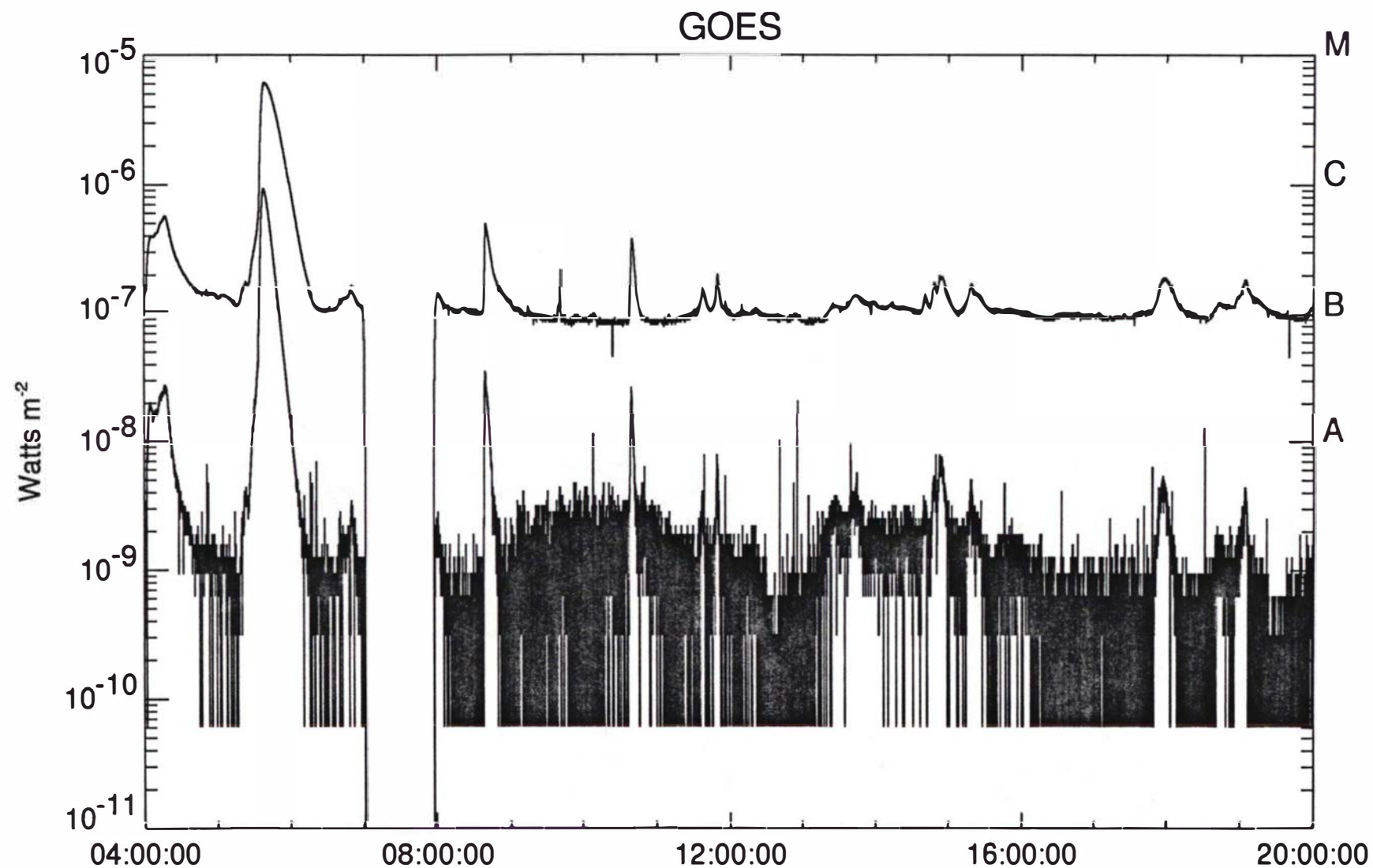
0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





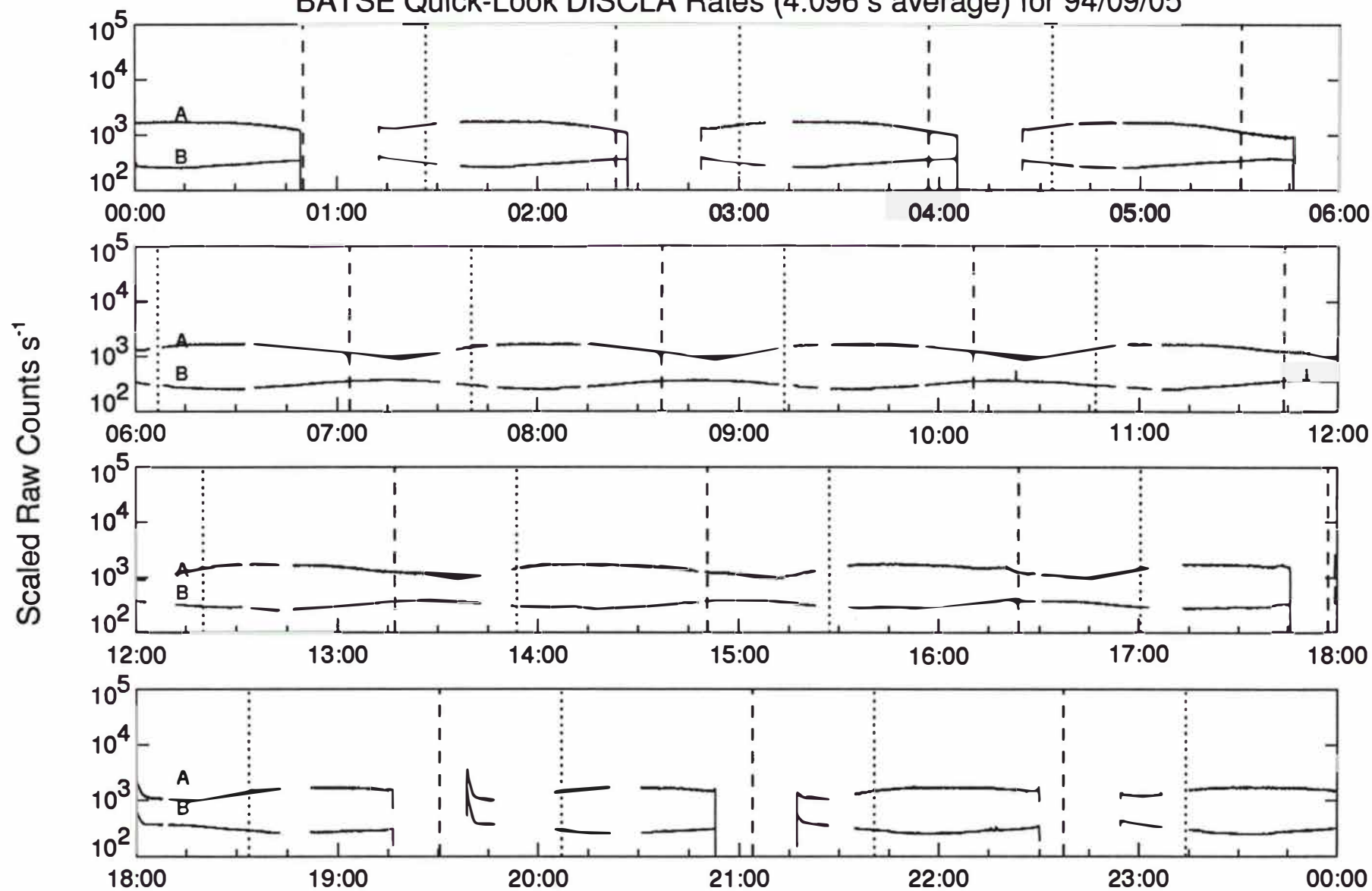
Data Start: 94/09/05, 0000:00

Plot created: 94/09/07, 1324

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/05

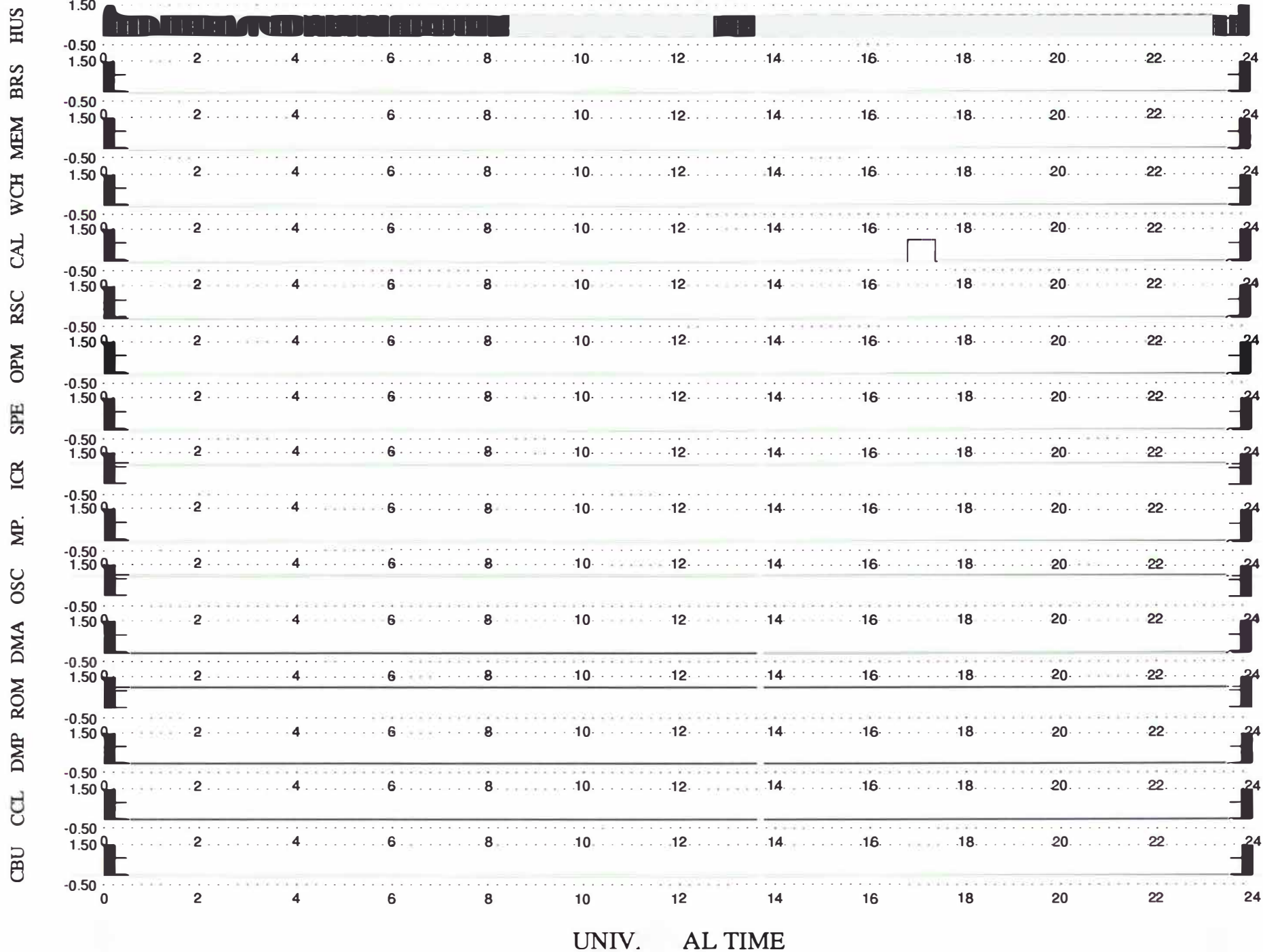


Current Time: 94/09/07, 1334 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

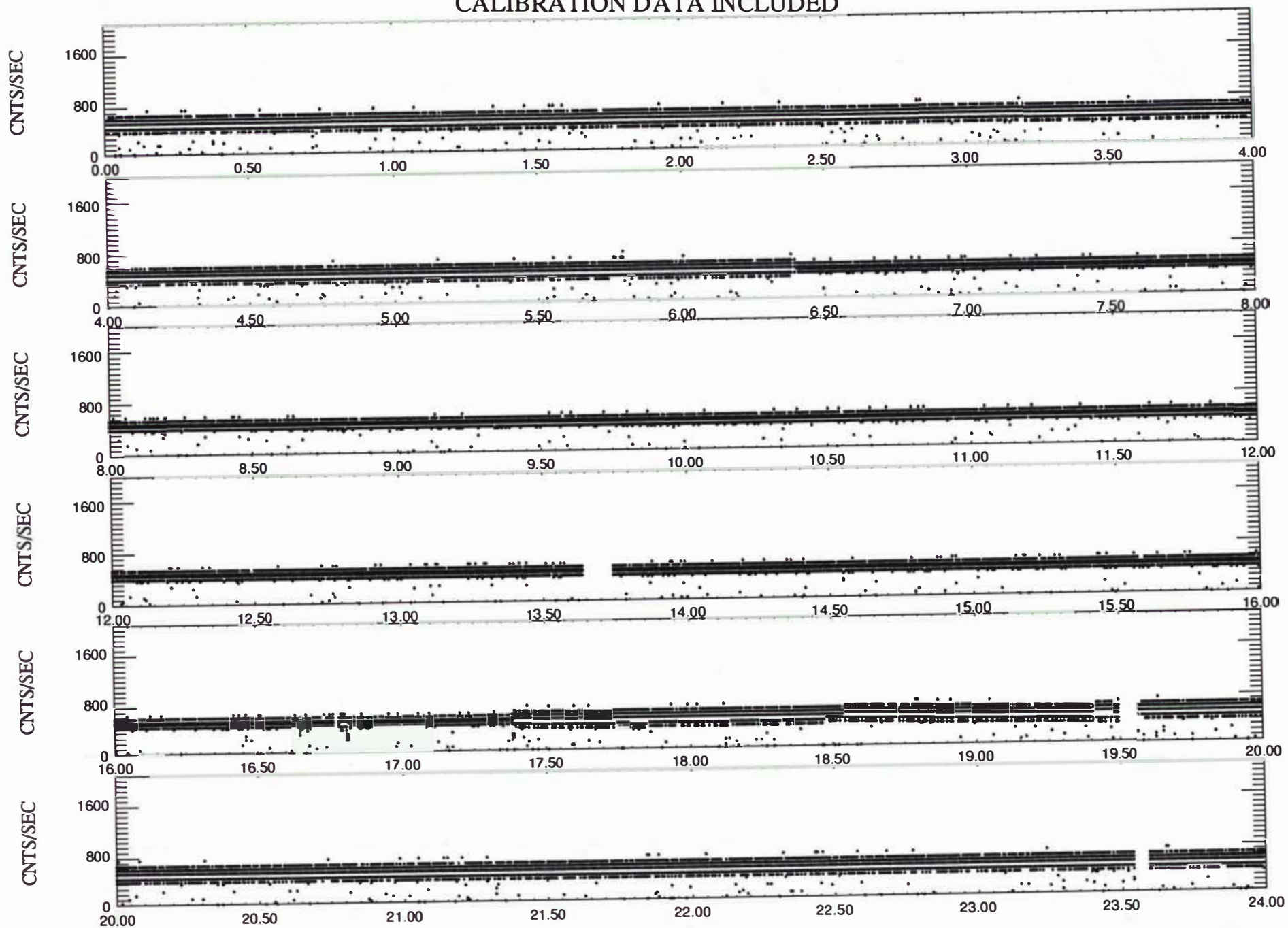
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

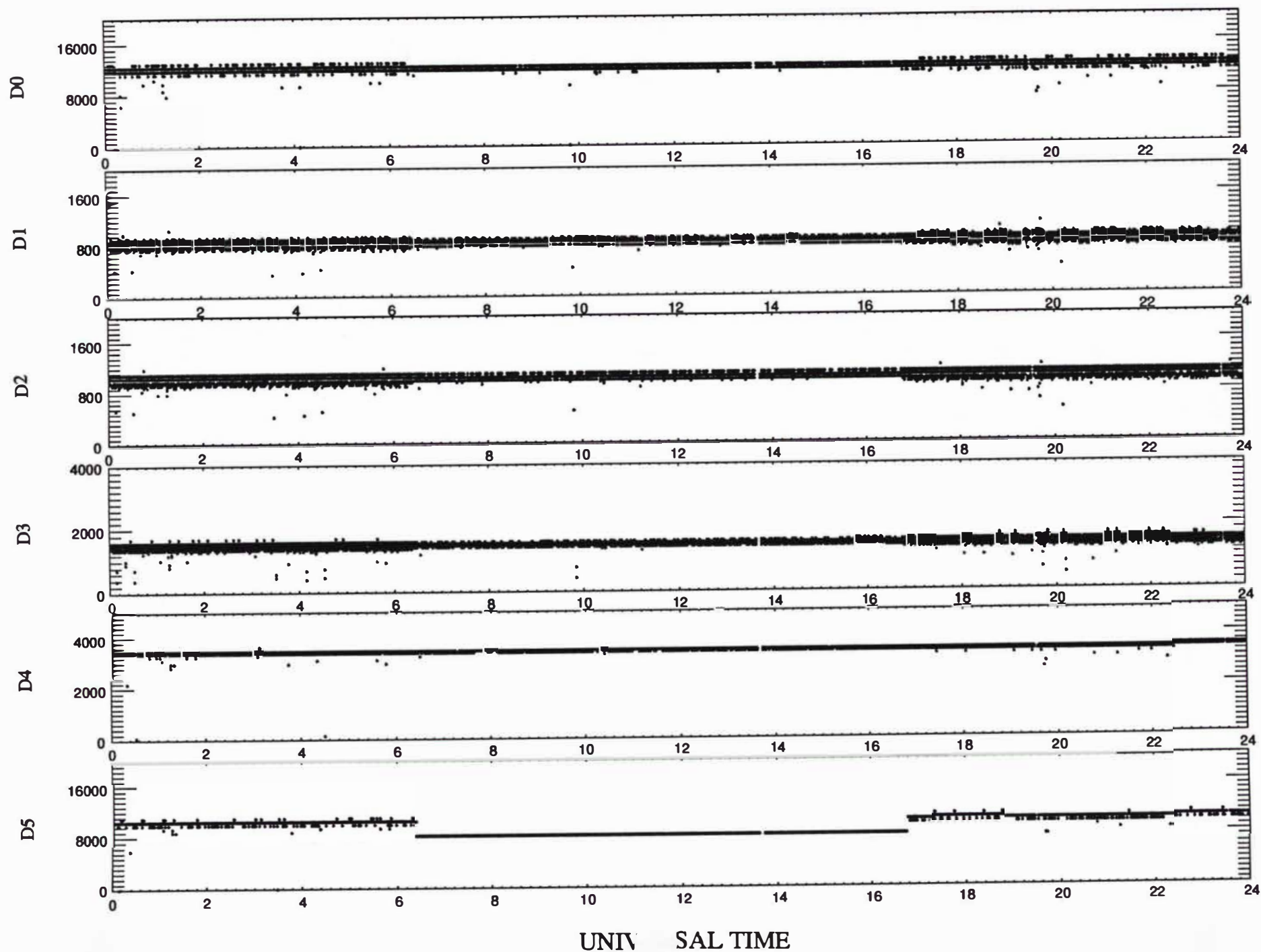
NO BURST (12)



CALIBRATION DATA INCLUDED



UNIV AL TIME



From HAGEDON@ssl.msfc.nasa.gov Wed Sep 7 13:14 PDT 1994
Date: Wed, 7 Sep 1994 15:14:47 -0500 (CDT)
From: HAGEDON@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3158

TIME: TJD=9601 SECONDS=61504

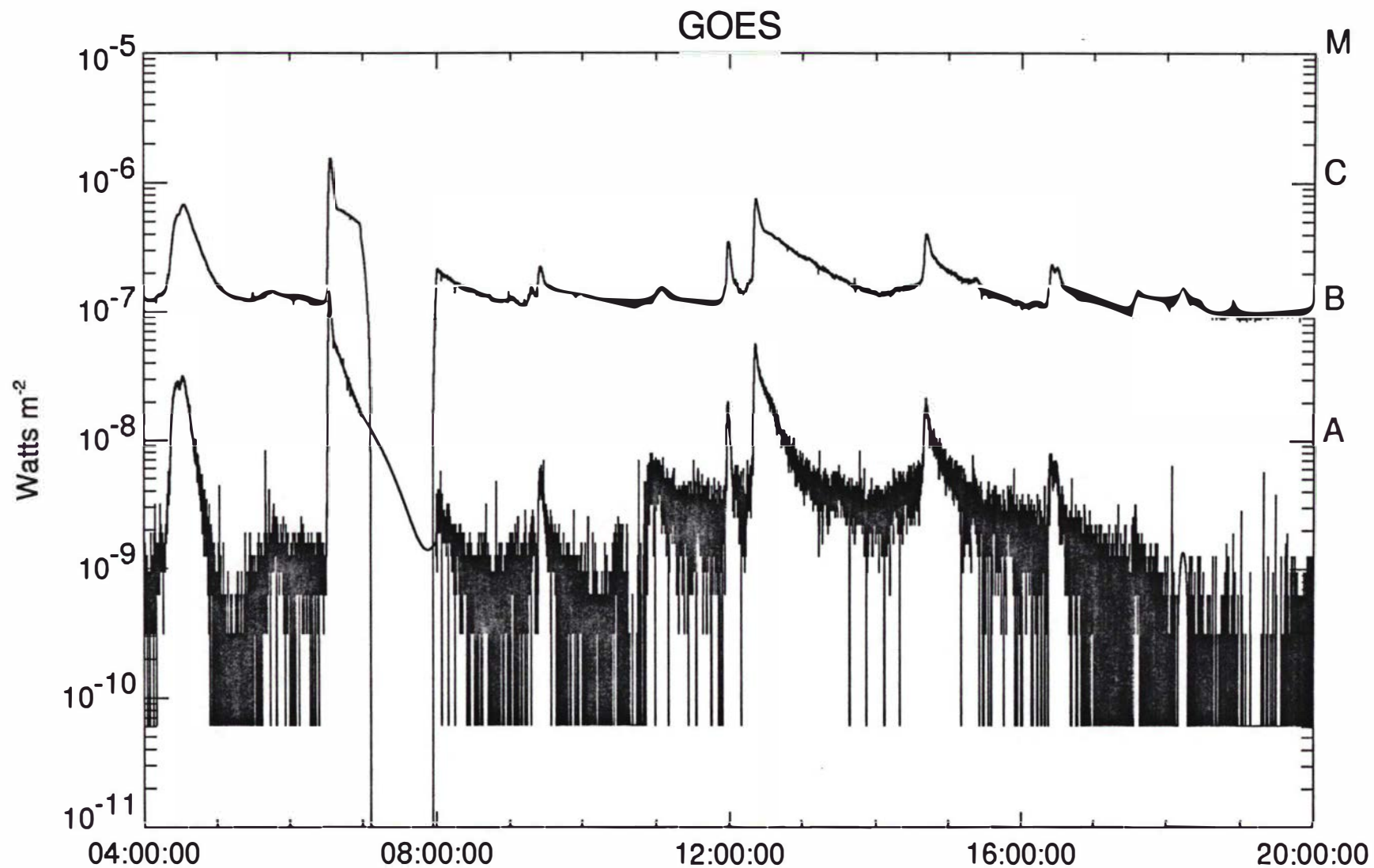
TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY.



Data Start: 94/09/06, 0000:00

Plot created: 94/09/07, 1324

Channel

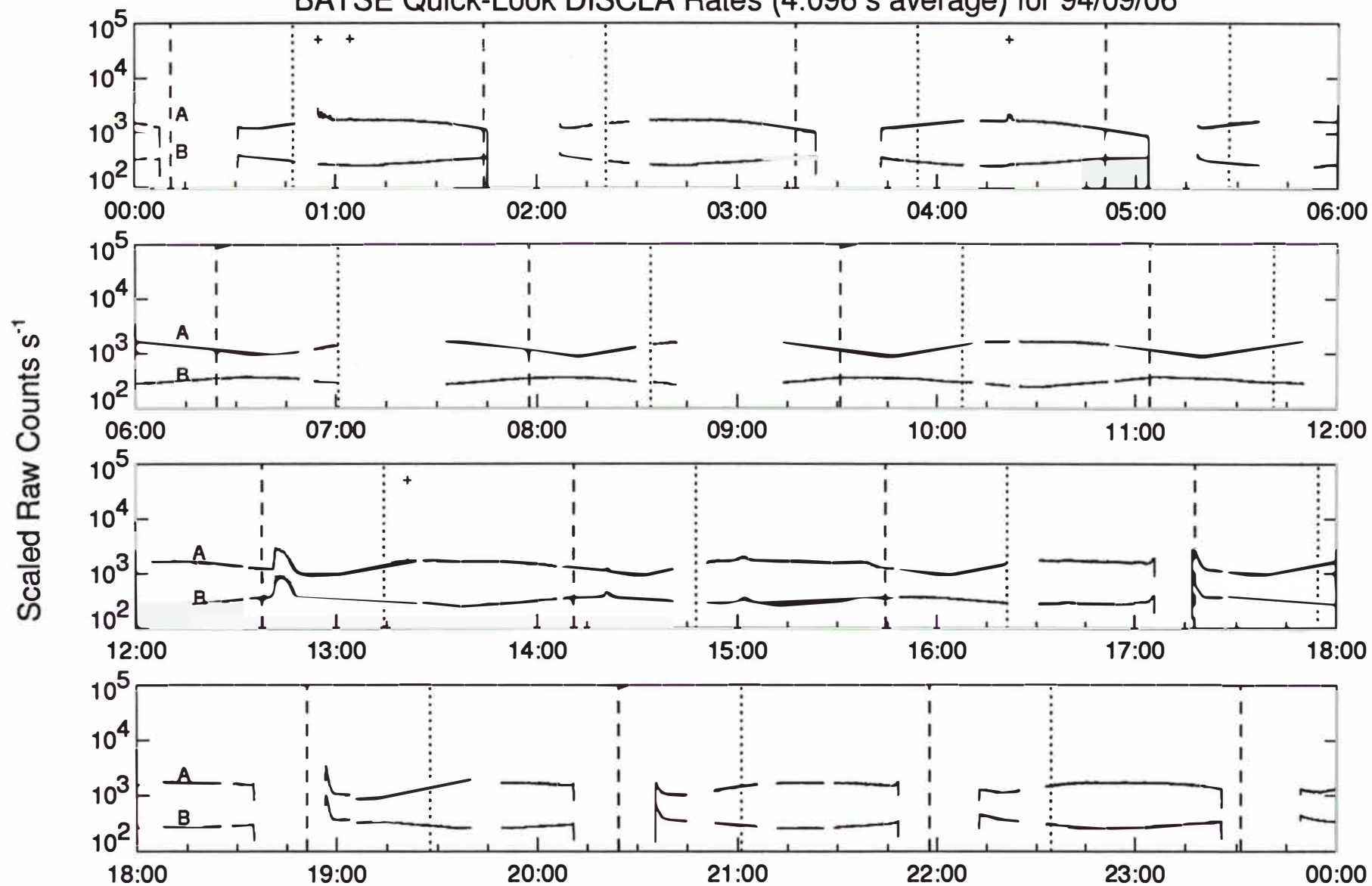
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/06

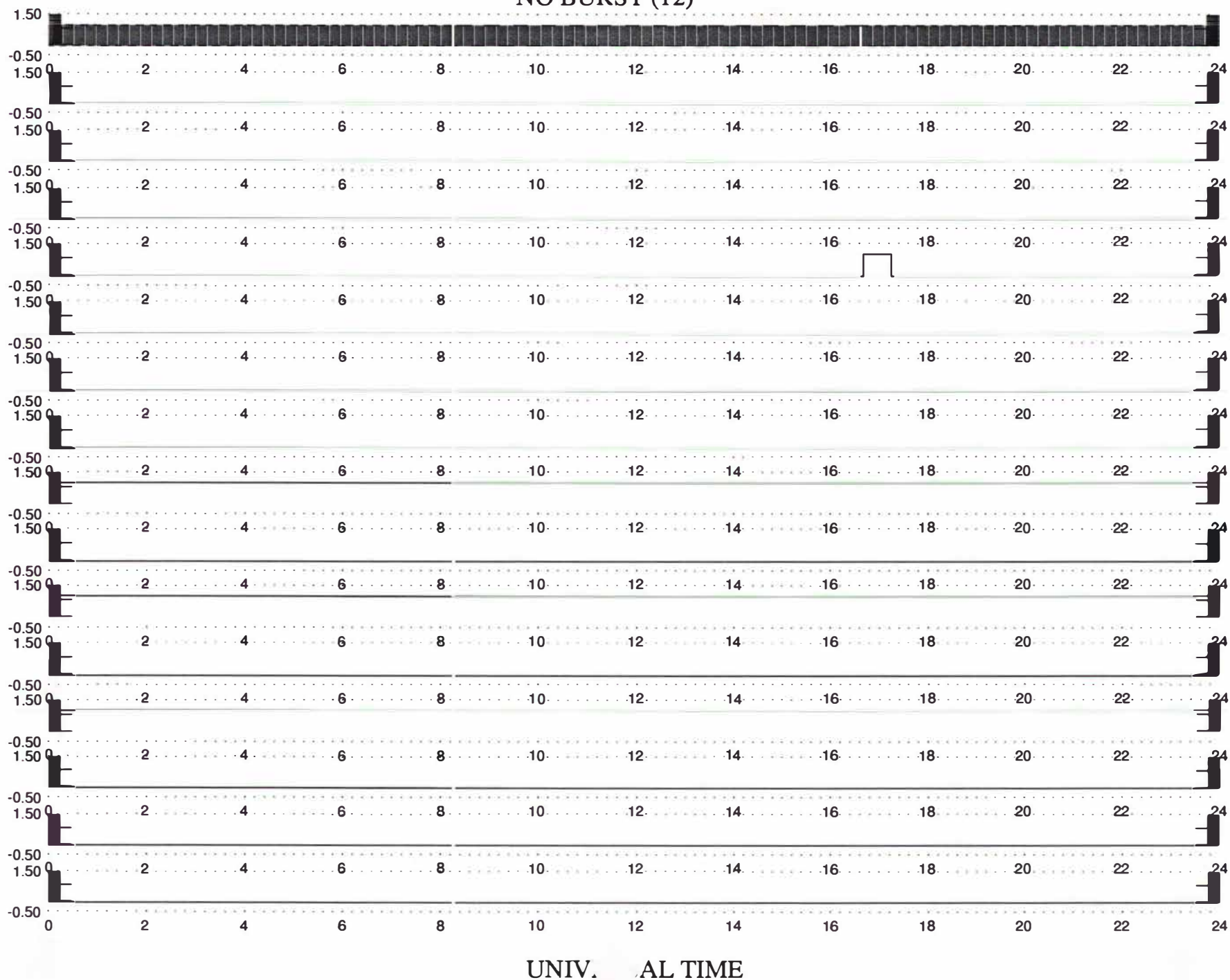


Current Time: 94/09/07, 1703 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

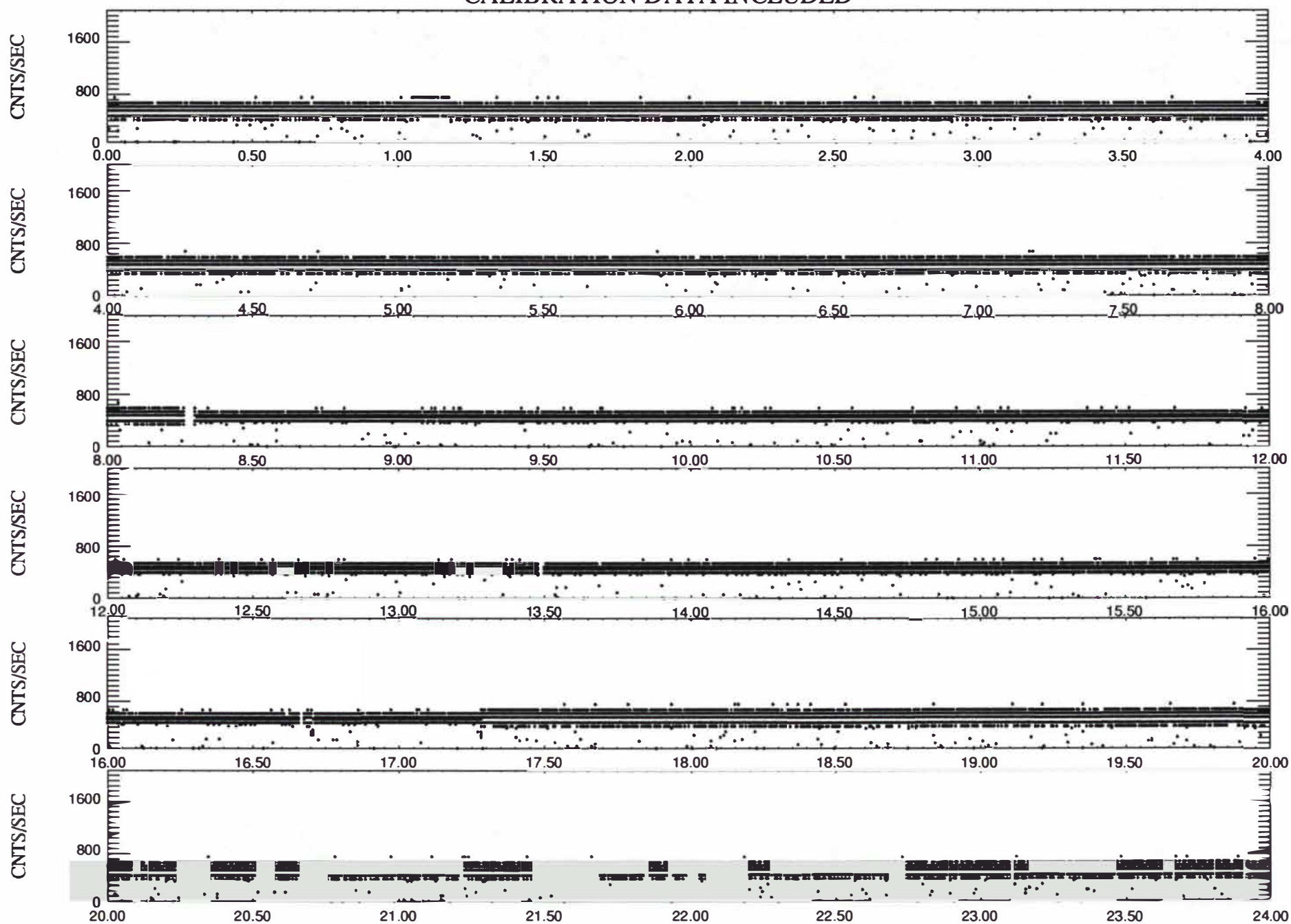
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

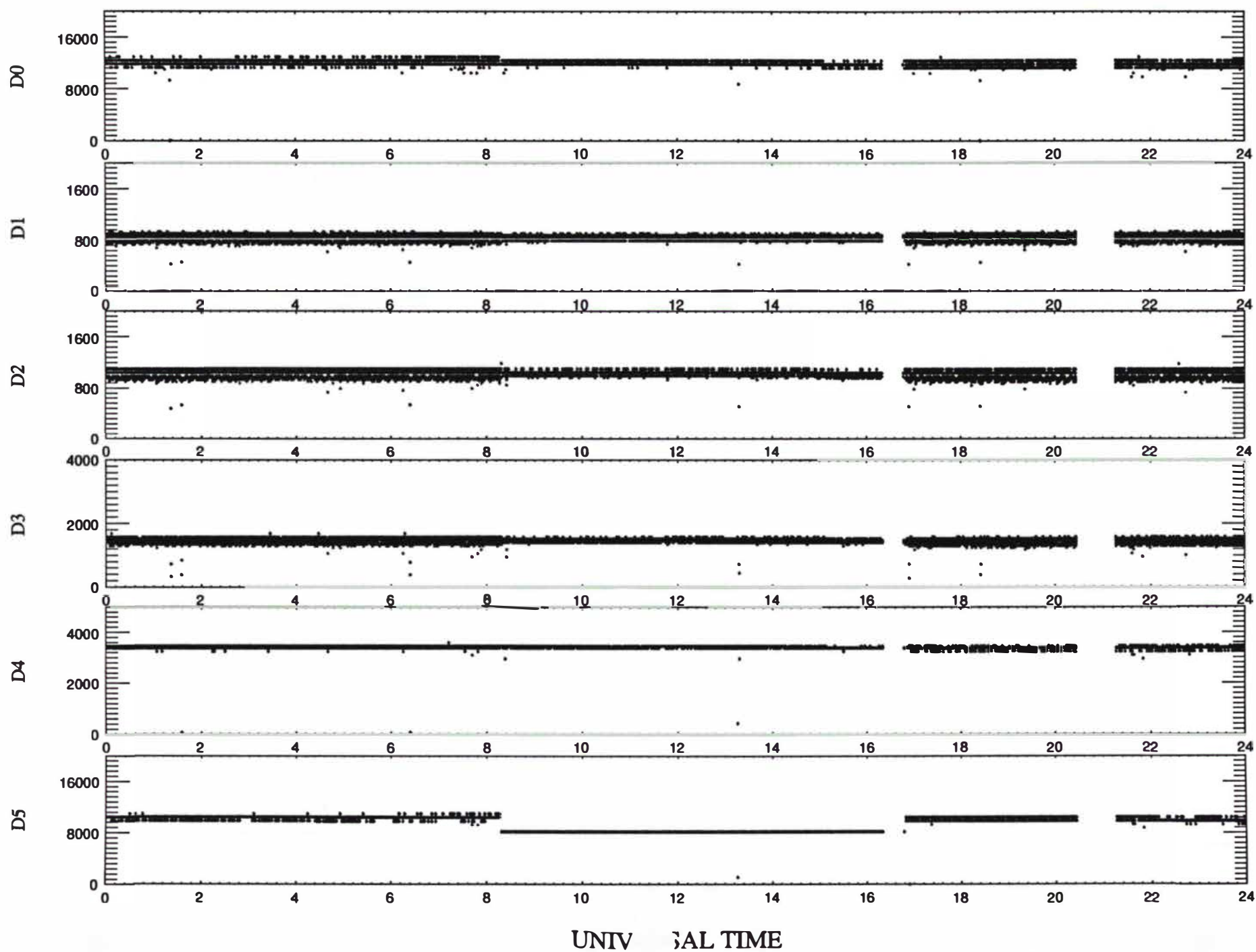
CBU CCL DMP ROM DMA OSC MP. ICR SPE OPM RSC CAL WCH MEM BRS HUS



CALIBRATION DATA INCLUDED



UNIV. TIME



From DEAL@ssl.msfc.nasa.gov Fri Sep 9 09:13 PDT 1994
Date: Fri, 9 Sep 1994 11:14:57 -0500 (CDT)
From: DEAL@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3159

BATSEARCH PROGRAM

BATSE BURST # 3159
EVENT OF 1994 SEP 7 DAY OF YEAR=250
EVENT CROSSING TIME AT BATSE : 30336. S. OR 08:25:36.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 105.000 73.000
BATSE PEAK COUNTING RATE: 4300 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 7/ 9/ 94 IS:
RA= 148.015 DEC= -50.173 DIST= 2.700 AU
BATSE-ULYSSES DISTANCE = 403848494. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 53.31 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 804.90 SECS.
CROSSING TIME AT ULYSSES IS 31141. S. OR 08:39:00 +/- 249.76 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 7/ 9/ 94 IS:
RA= 104.762 DEC= 23.266 DIST= 1.730 AU
MARS-BATSE DISTANCE = 258795952. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=130.27 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -557.95 SECS.
CROSSING TIME AT MARS IS 29778. S. OR 08:16:18 +/- 105.89 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3159	940907	9602	30336	4300	105	+73

BATSE BURST TRIGGER

NO.: 3159

TIME: TJD=9602 SECONDS=30336

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=119.8 AZIMUTH=072.4 ERROR= DEGREES

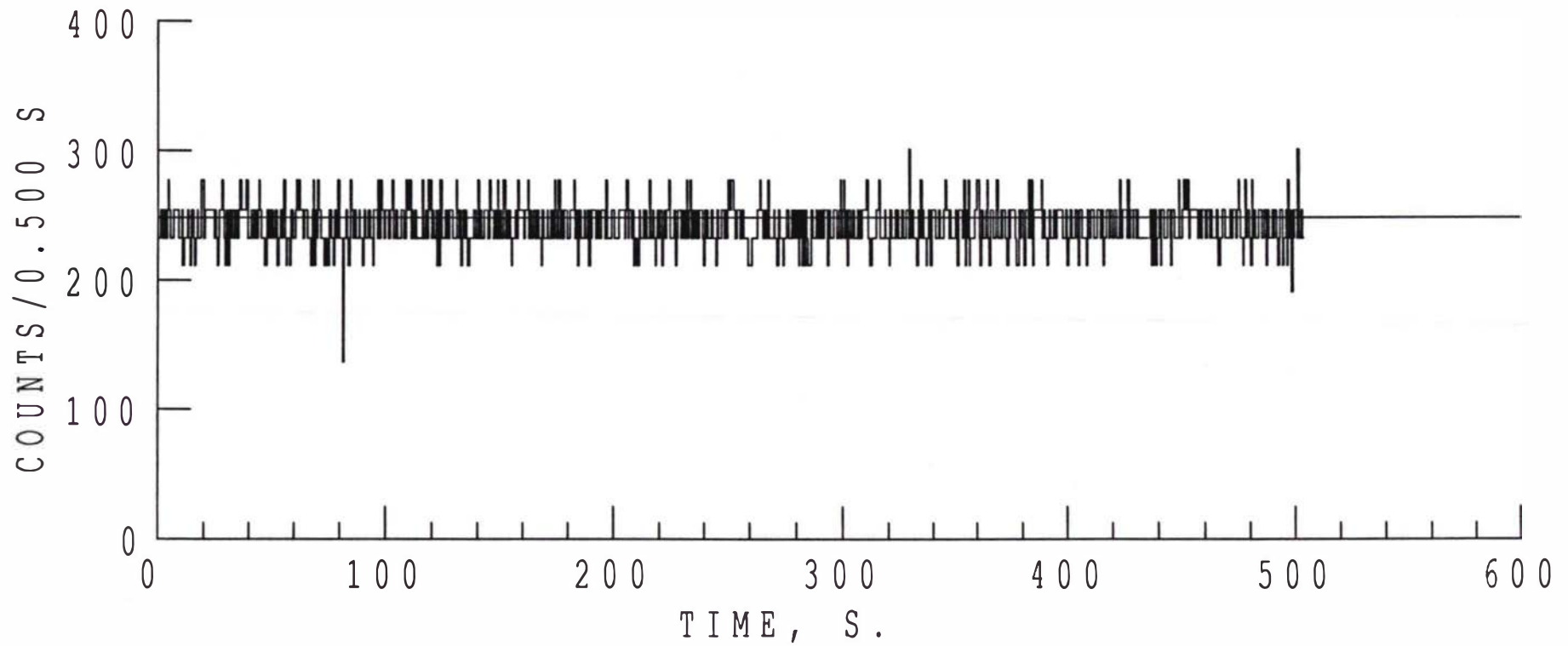
COMMENTS:

DOUBLE PEAK BURST. FIRST PEAK LASTING ~3S. SECOND PEAK LASTING ~5S.
NOT VISIBLE ABOVE 300 KEV.

9 / 9 / 94

ULYSSES RT
7 / 9 / 94 30888.008 s
0 - 0 keV

M= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



GROUSE/LLWL

burstlog

Tue Sep 13 10:49:58 1994

4

=====
SUMMARY
=====

Date (UTC)	TJD	SOD	Trig#	Hunts_RA (J2000)	Hunts_DEC	Hunts_error	BACO-Hunts	Raw data
1/29/94	9381	38599	2793	125.75	27.73	? 0.6035	4.3 deg	
3/29/94	9440	42636	2896	179.98	8.24	? 1.731	~4 deg	
4/28/94	9470	38193	2952	350.59	-0.98	2.063 32.8 deg	59. deg	
6/23/94	9526	19547	3040	249.88	11.22	7.809 2.4 deg	5.3 deg	
8/27/94	9591	19087	3139	280.42	-5.11	4.365 ?	9.6 deg - 191.5	
8/28/94	9592	24439	3141	340.56	50.57	? 3.839	8.3 deg - 190.48	
9/07/94	9602	30336	3159	105.71	73.56	? 6.252	18.6 deg - 223.18	

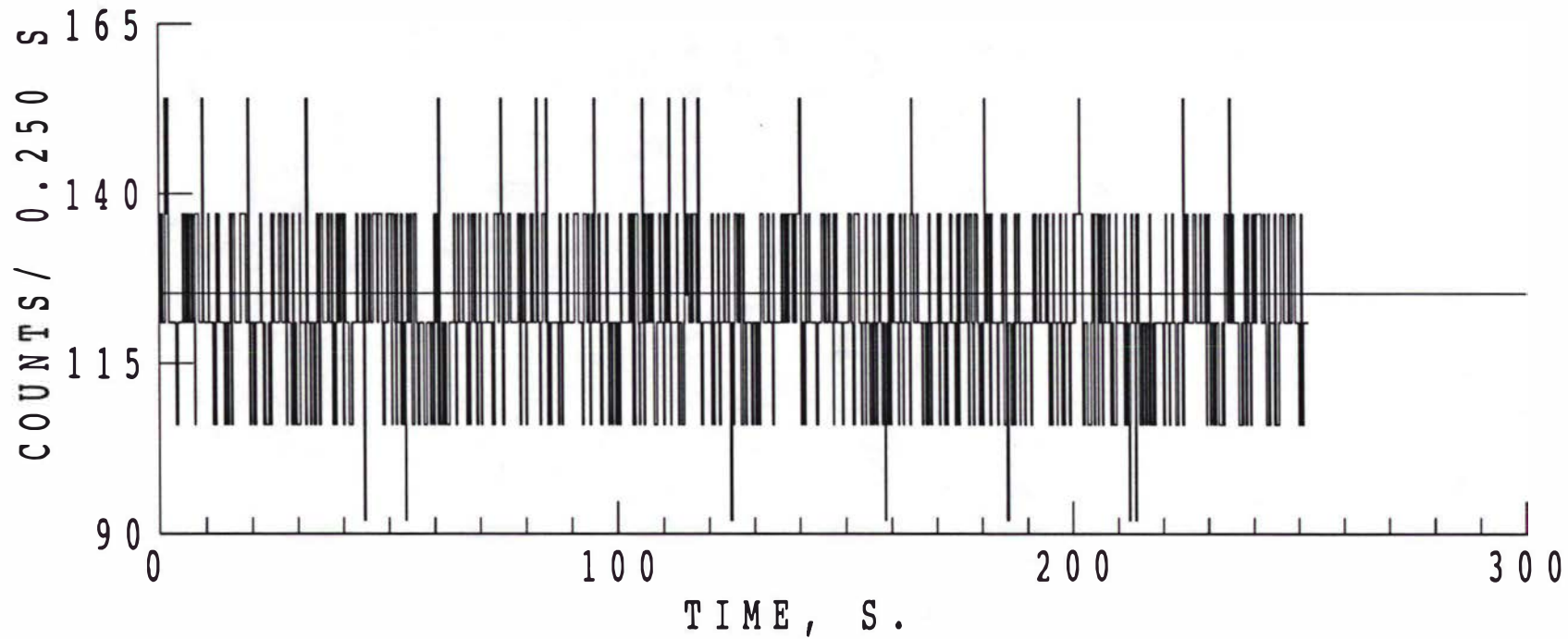
WATCH

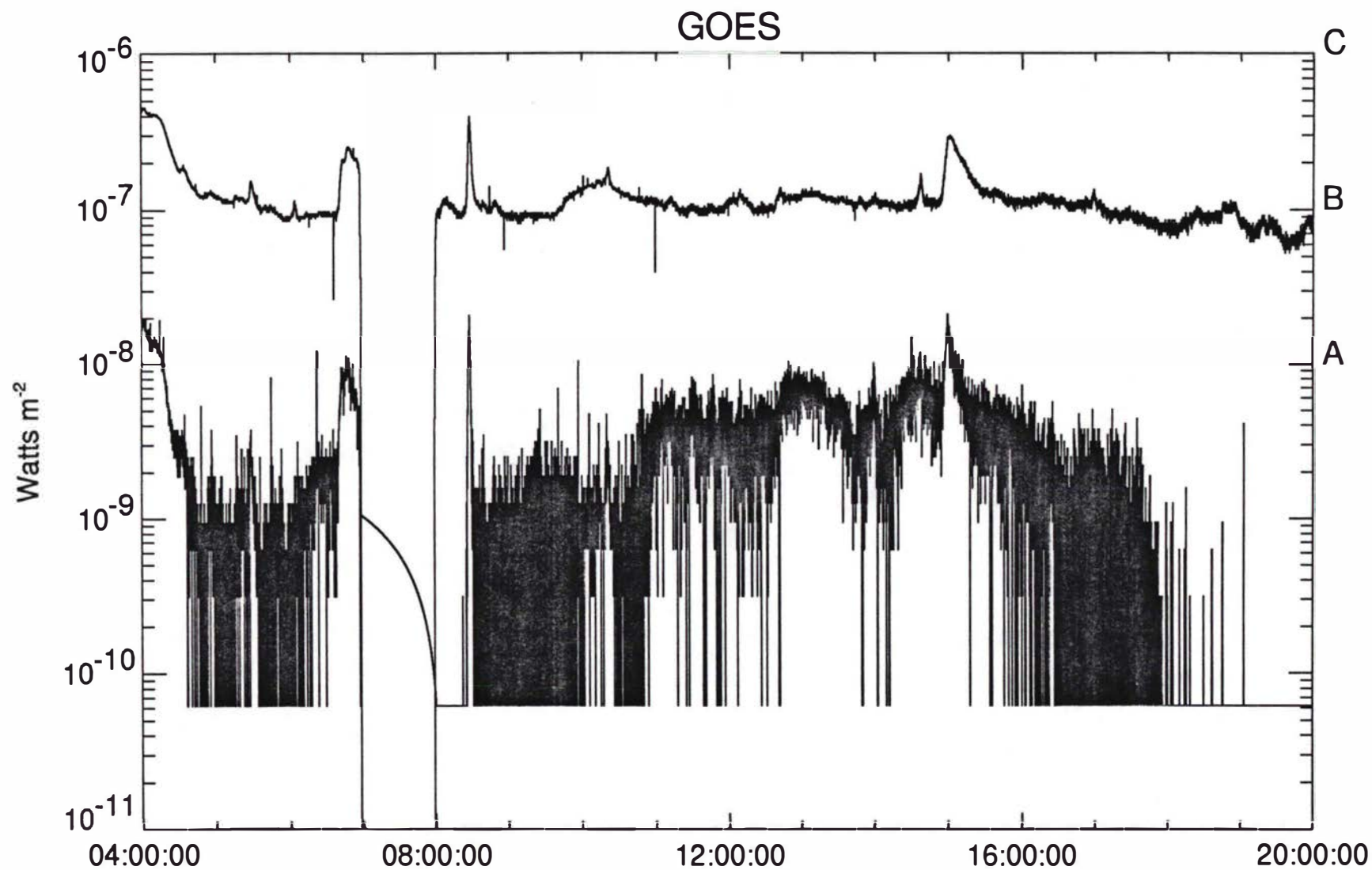
ULYSSES RT
7 / 9 / 94 72792.203 s
0 - 0 keV

13 / 2 / 98

N= 10 M=10
>4.0 SIGMA FLUCTUATIONS

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





Data Start: 94/09/07, 0000:01

Plot created: 94/09/08, 1407

Channel

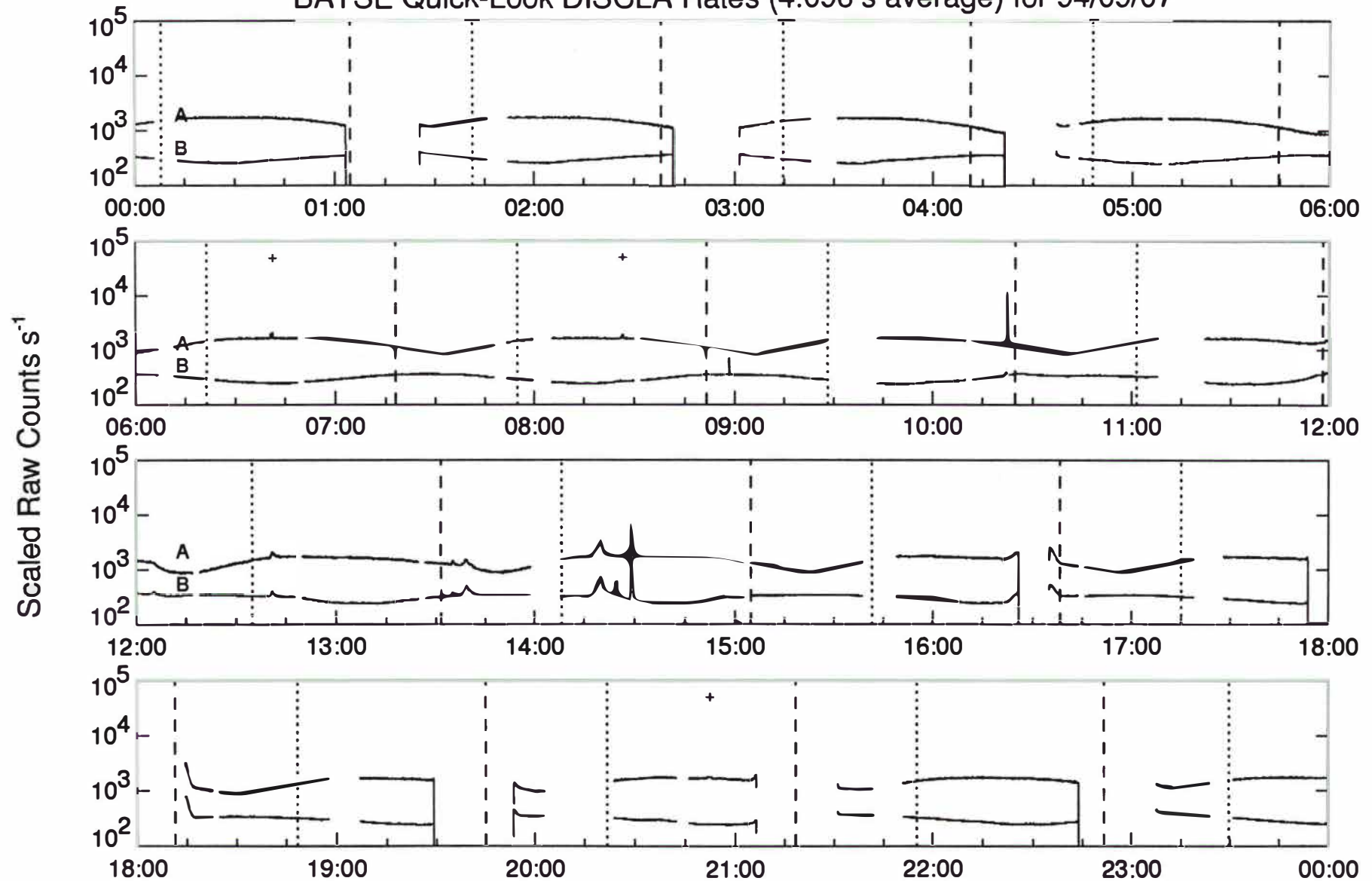
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/07

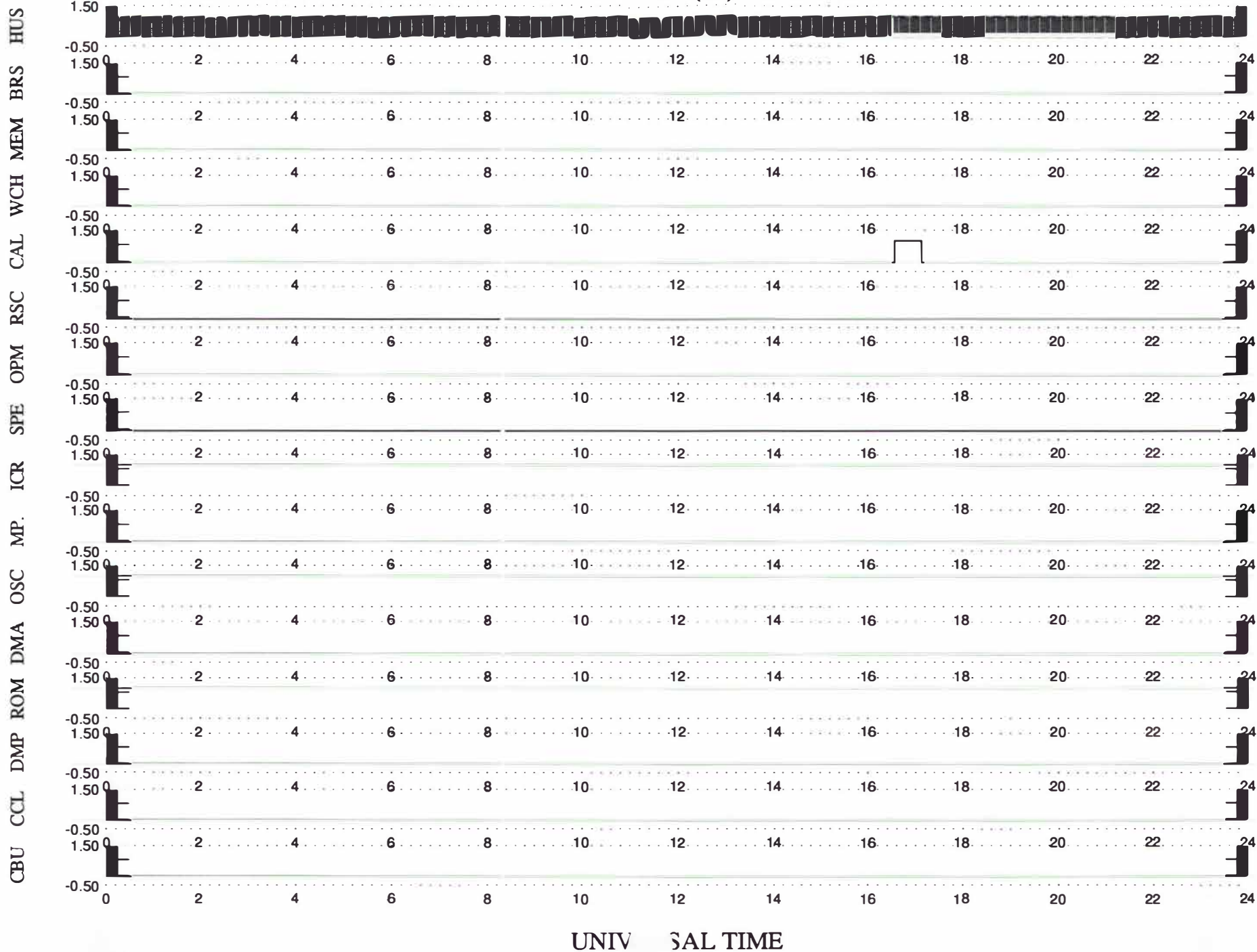


Current Time: 94/09/09, 1637 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

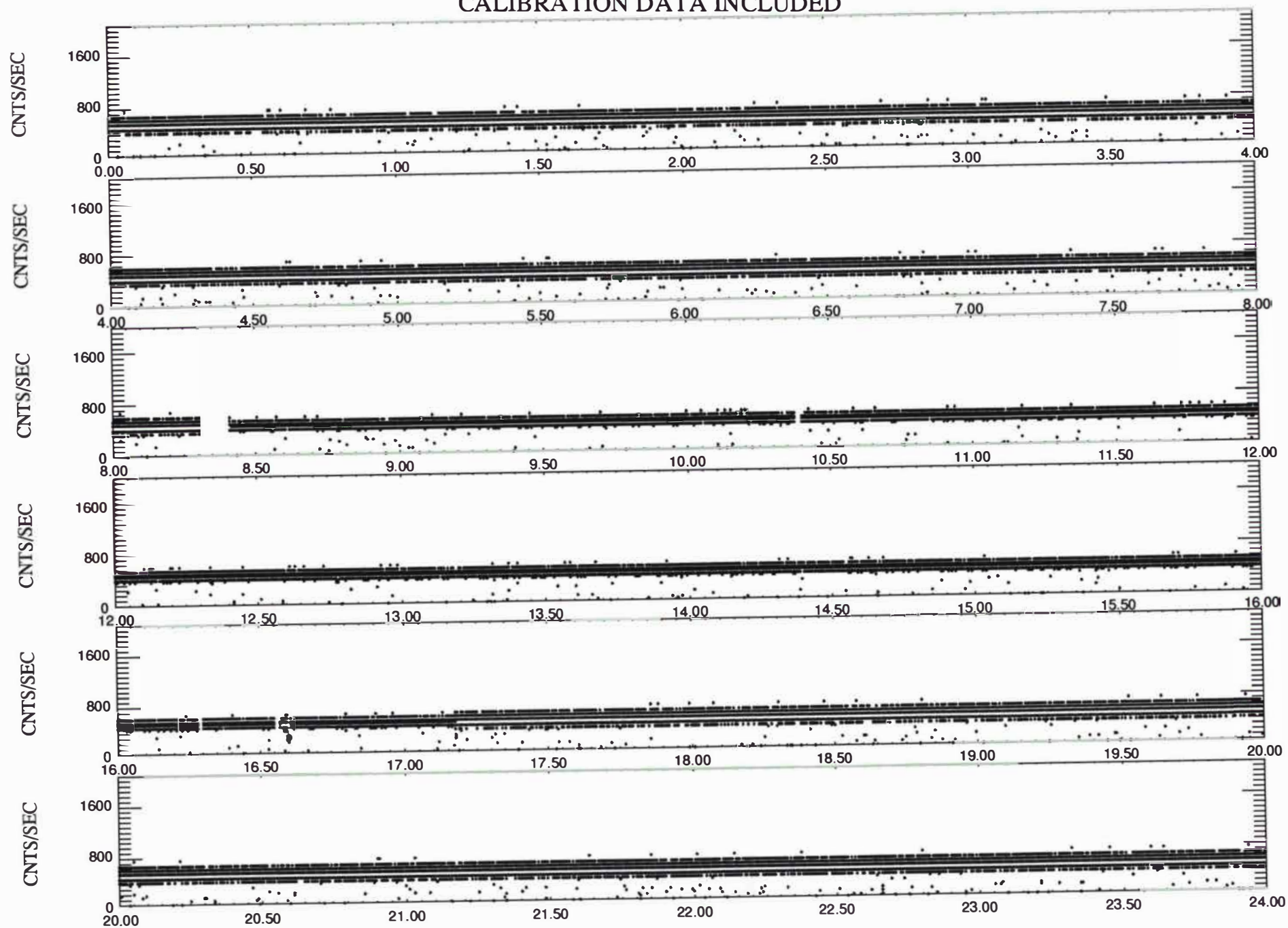
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

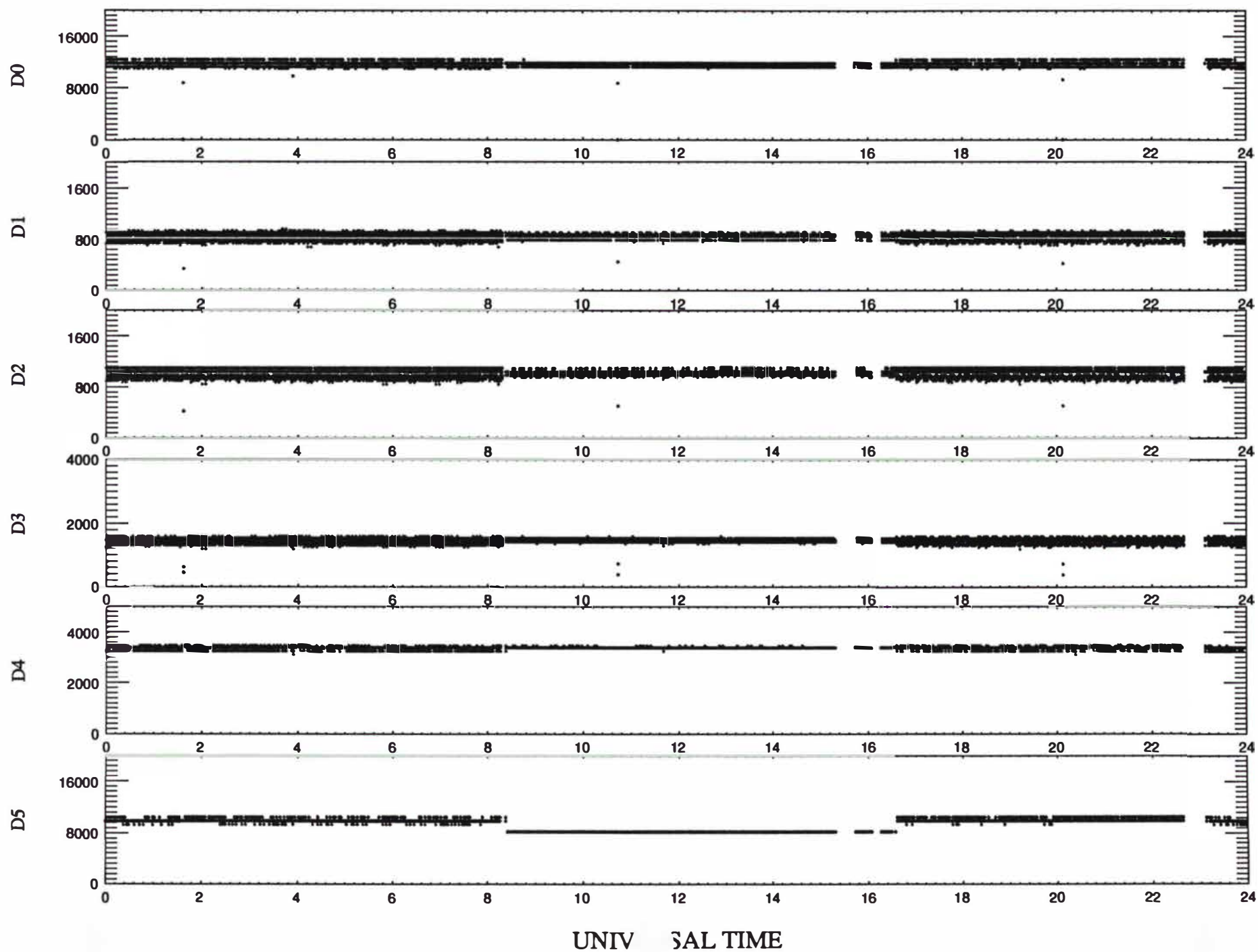
NO BURST (12)

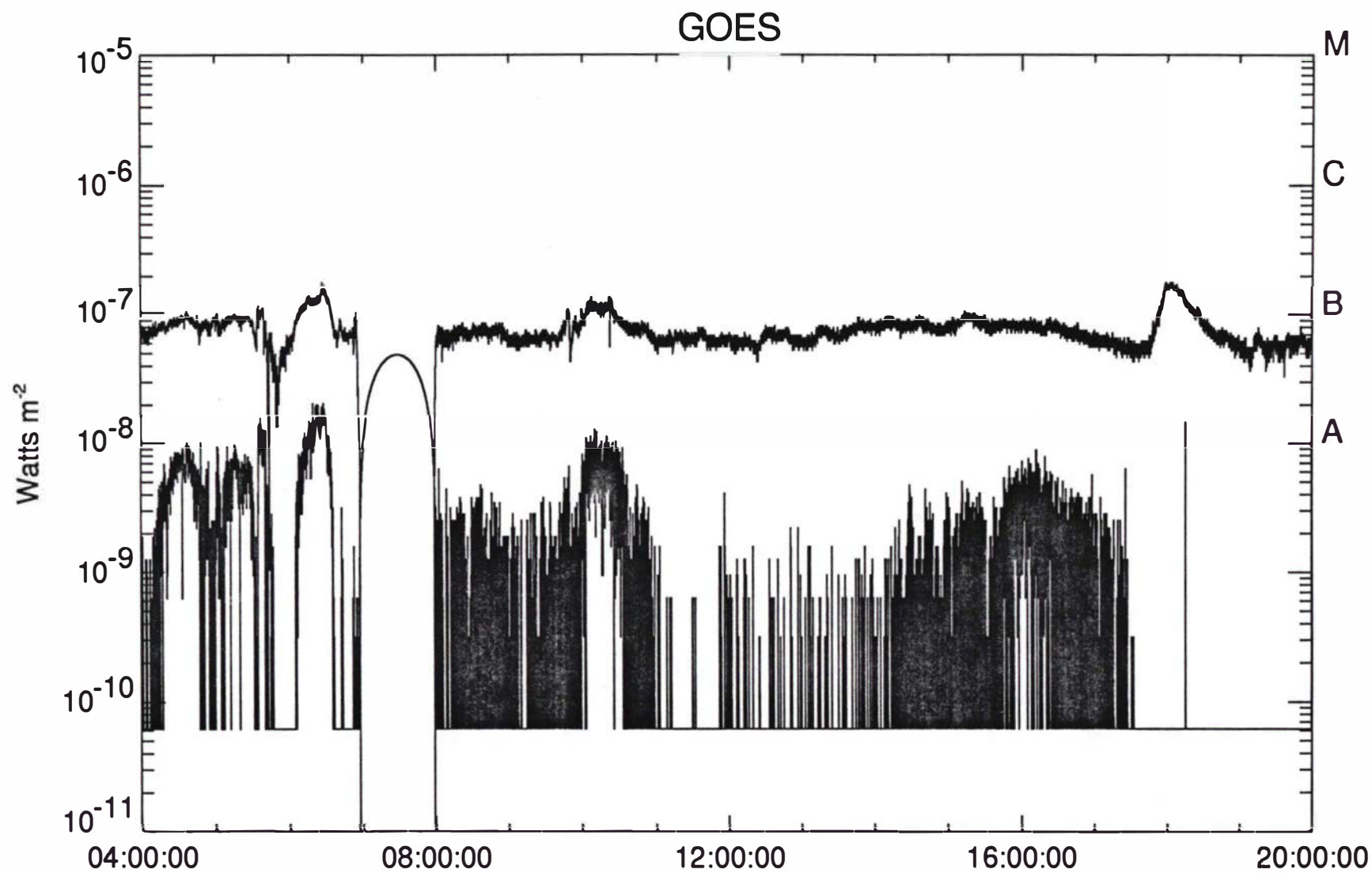


CALIBRATION DATA INCLUDED



UNIV SAL TIME





Data Start: 94/09/08, 0000:02

Plot created: 94/09/09, 1632

Channel

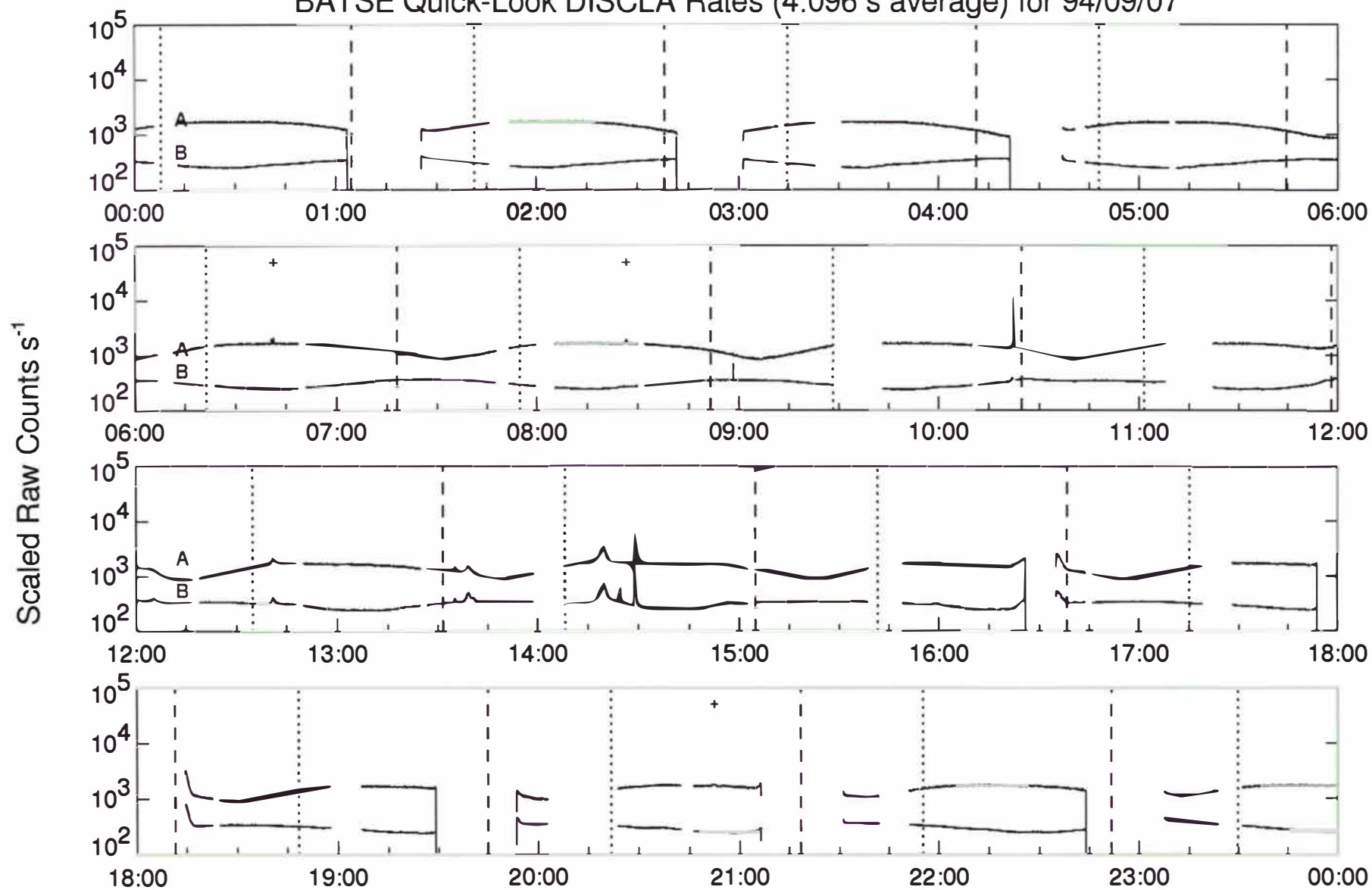
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/07

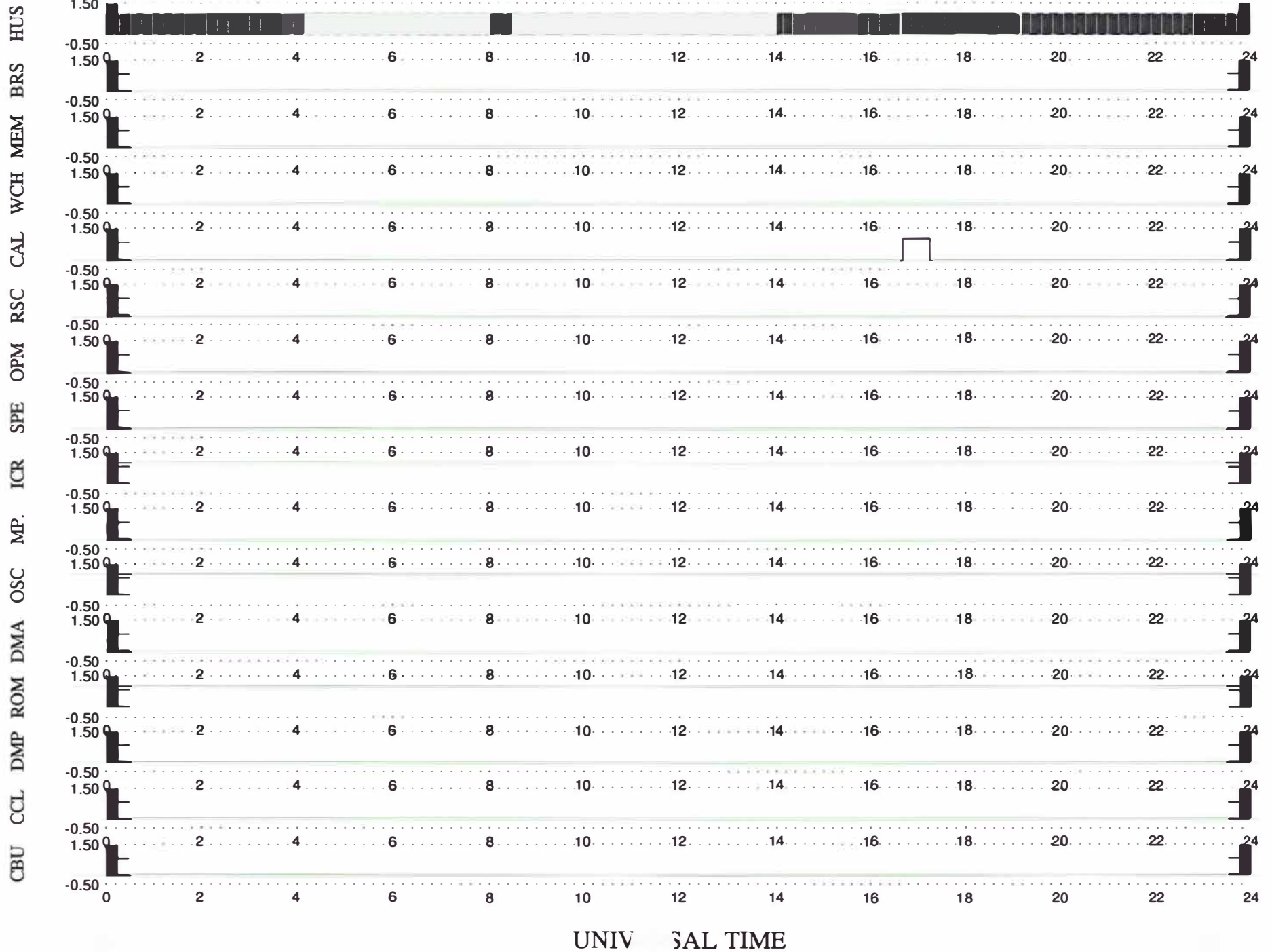


Current Time: 94/09/09, 1637 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

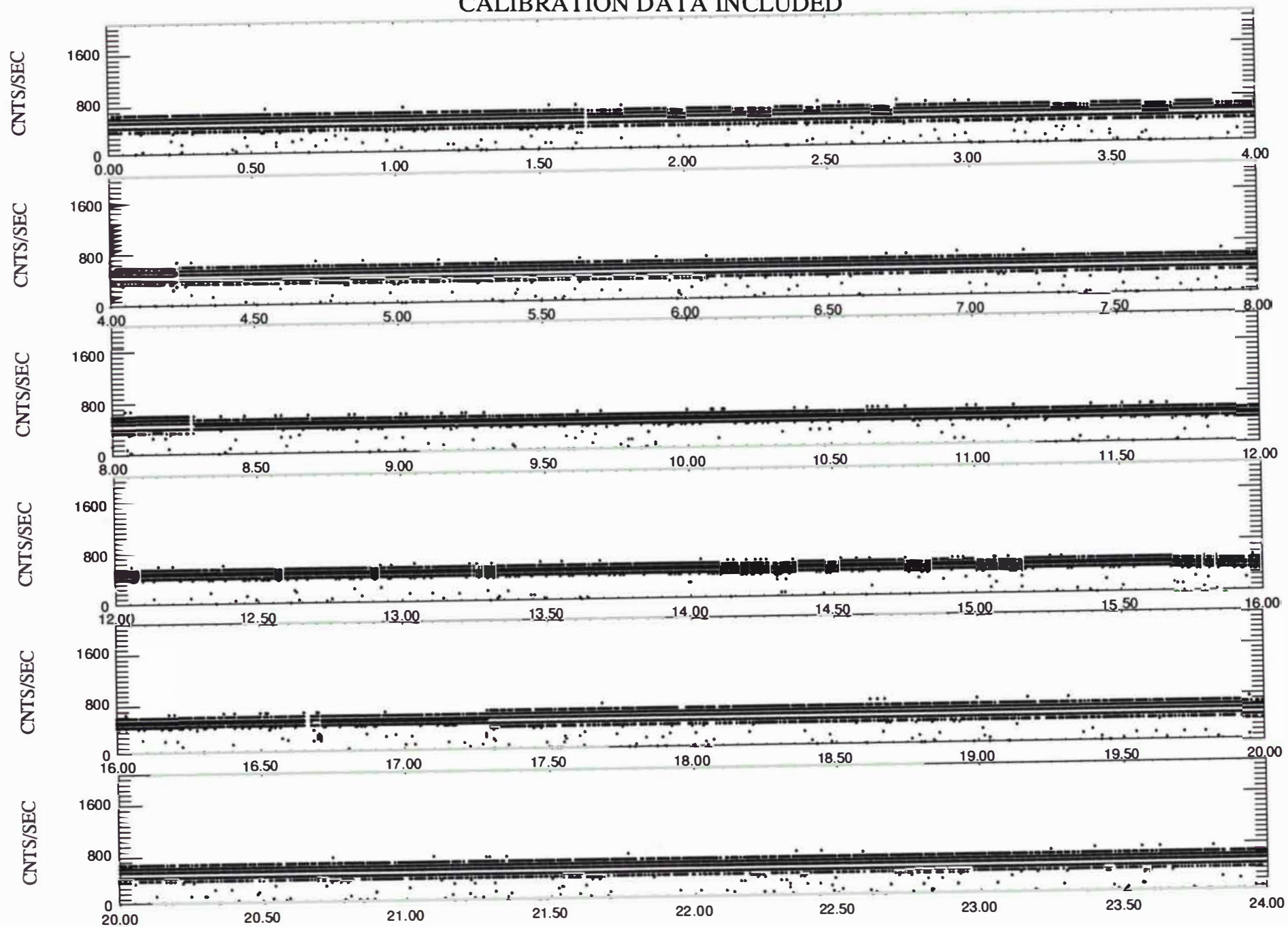
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

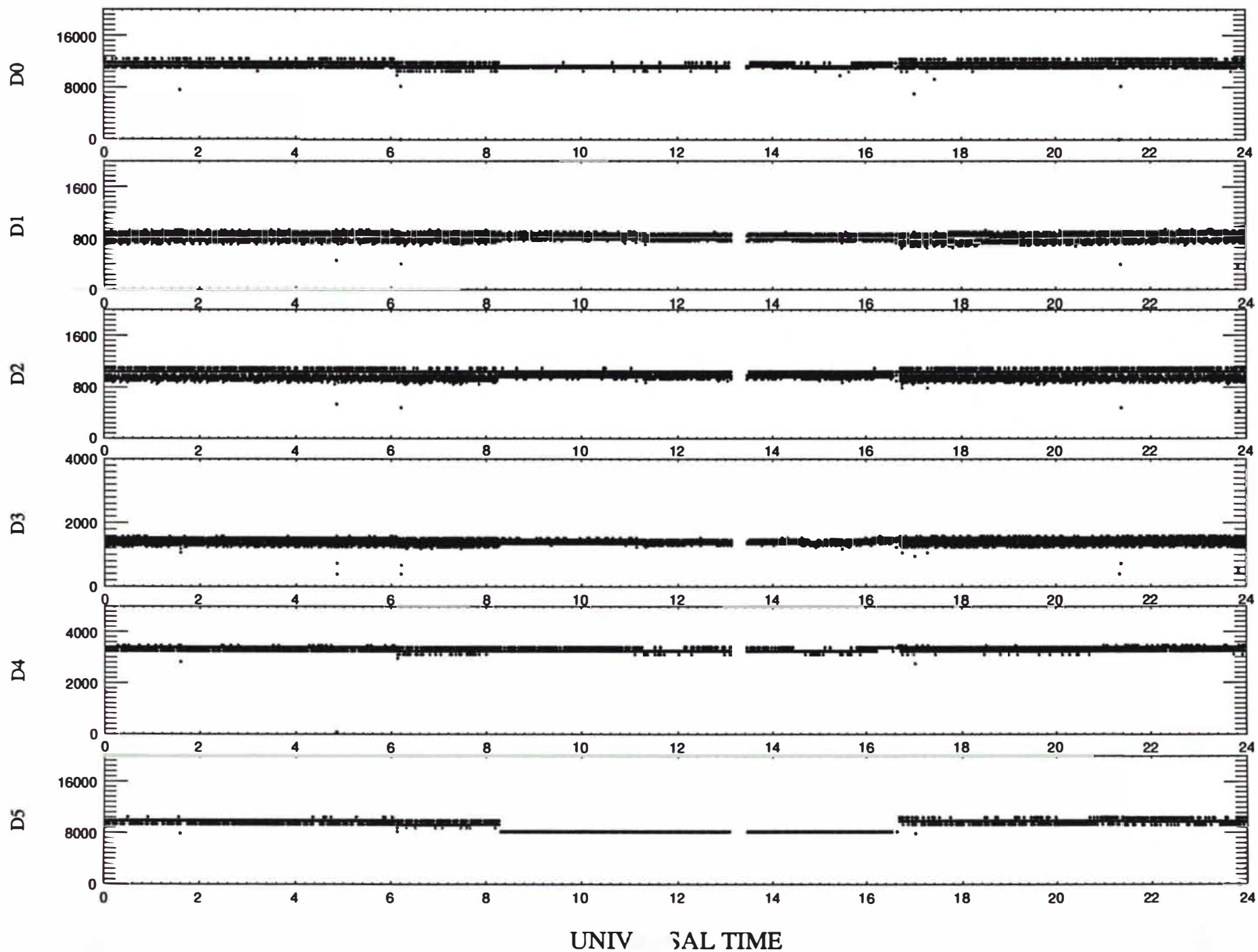
NO BURST (12)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From SHARIFF@ssl.msfc.nasa.gov Sat Sep 10 15:40 PDT 1994
Date: Sat, 10 Sep 1994 17:41:59 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3160

BATSEARCH PROGRAM

BATSE BURST # 3160
EVENT OF 1994 SEP 9 DAY OF YEAR=252
EVENT CROSSING TIME AT BATSE : 18139. S. OR 05:02:19.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 58.000 3.000
BATSE PEAK COUNTING RATE: 3200 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 9/ 9/ 94 IS:
RA= 148.874 DEC= -50.763 DIST= 2.684 AU
BATSE-ULYSSES DISTANCE = 401581152. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 87.12 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 67.21 SECS.
CROSSING TIME AT ULYSSES IS 18206. S. OR 05:03:26 +/- 283.29 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 9/ 9/ 94 IS:
RA= 106.107 DEC= 23.168 DIST= 1.718 AU
MARS-BATSE DISTANCE = 257030160. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=129.32 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -543.26 SECS.
CROSSING TIME AT MARS IS 17596. S. OR 04:53:15 +/- 106.91 SECONDS

ND

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3160	940909	9604	18139	3200	058	+03

BATSE BURST TRIGGER

NO.: 03160

TIME: TJD=9604 SECONDS=18139

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=079.0 AZIMUTH=139.1 ERROR= DEGREES

COMMENTS:
BURST, SINGLE PULSE WITH SUBSTRUCTURE, LASTING~ 2 SECONDS. WEAKLY VISIBLE ABOVE
300KEV.

From SHARIFF@ssl.msfc.nasa.gov Sat Sep 10 15:38 PDT 1994
Date: Sat, 10 Sep 1994 17:39:45 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 03161

TIME: TJD=9604 SECONDS=49449

TYPE: FLARE SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SOLAR FLARE, GOES B1.5, LASTING ~40 SECONDS. NOT VISIBLE ABOVE 100KEV.

12 / 9 / 94

ULYSSES RT

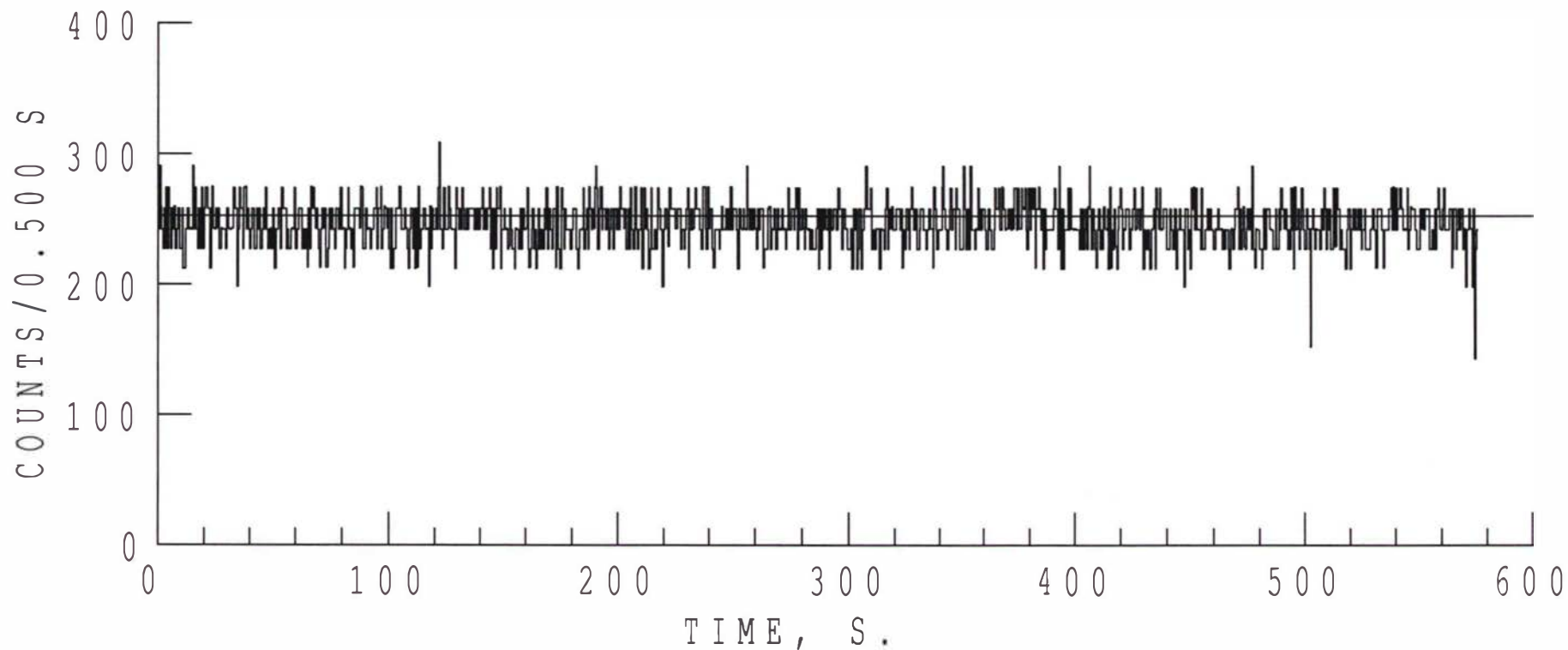
9 / 9 / 94 17928.184 s

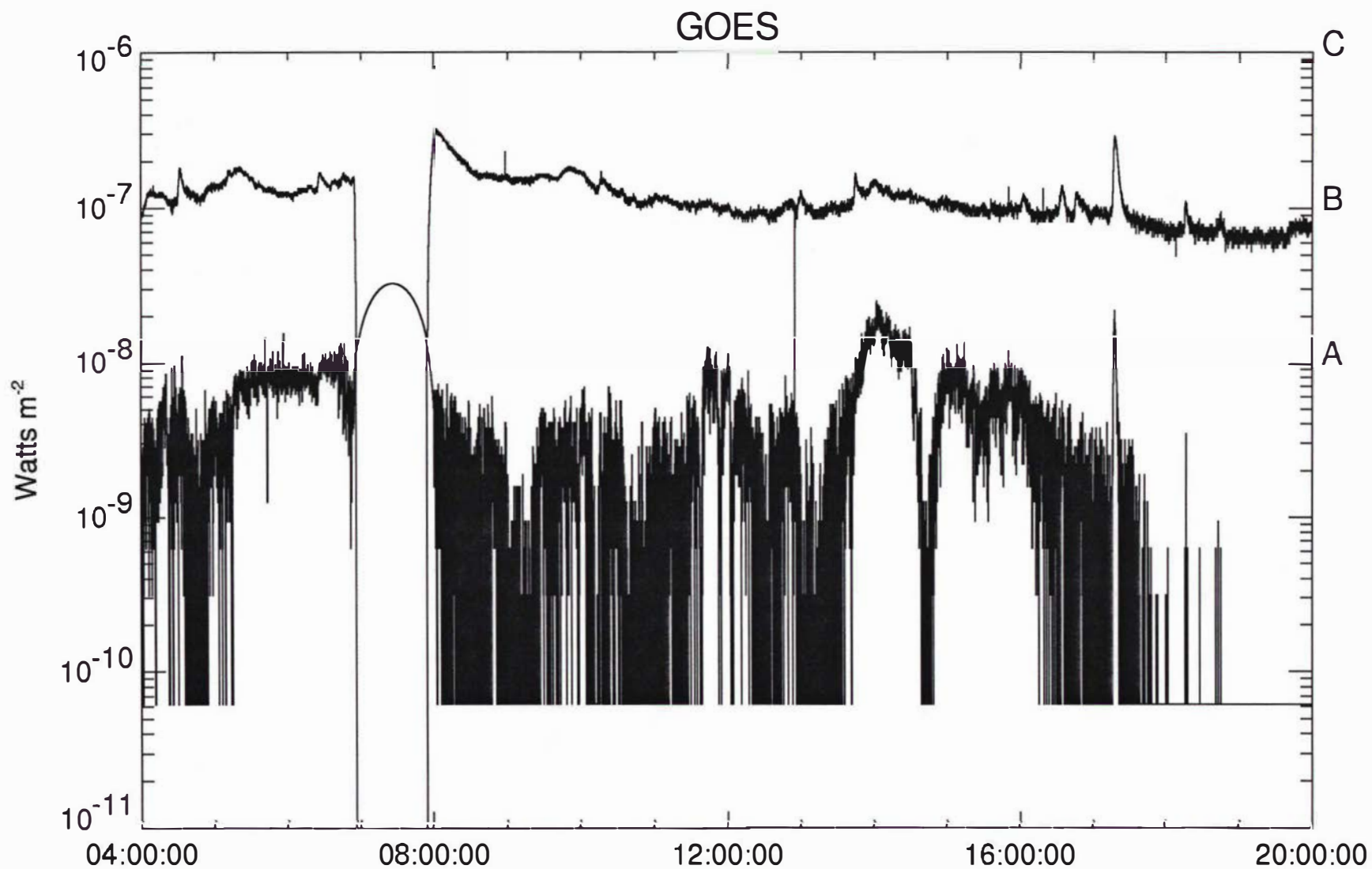
0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





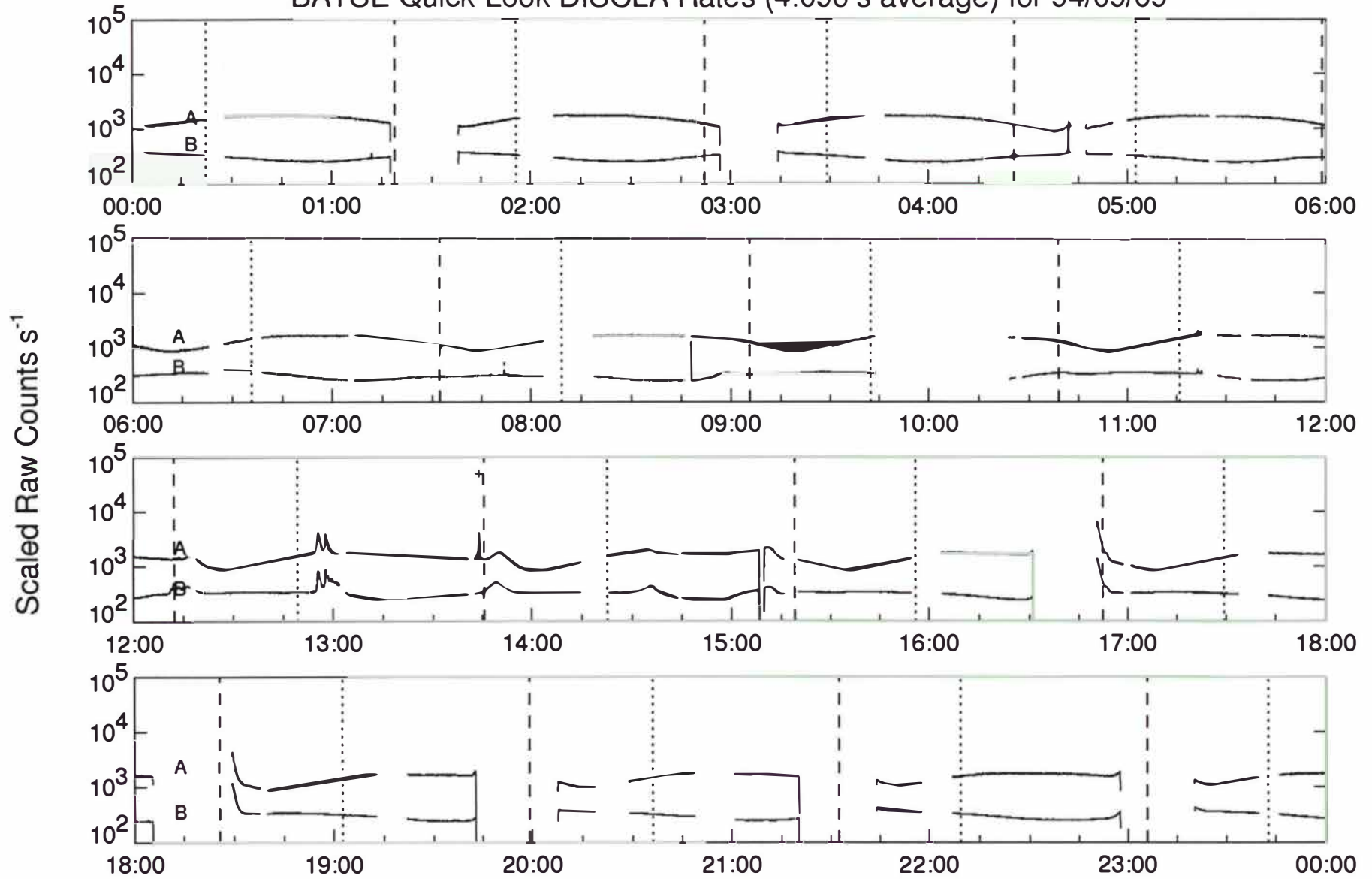
Data Start: 94/09/09, 0000:02

Plot created: 94/09/12, 1345

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/09

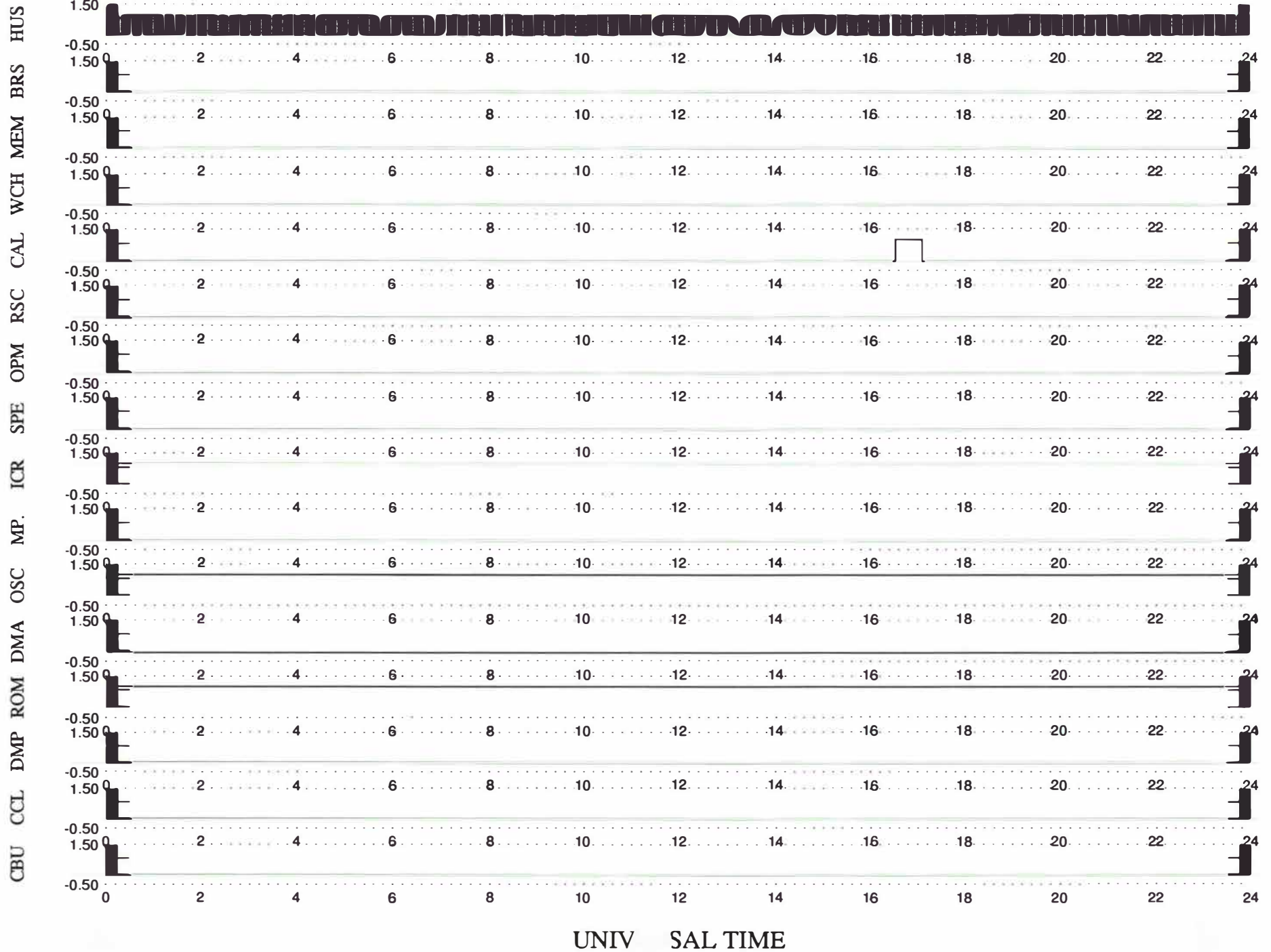


Current Time: 94/09/12, 1342 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

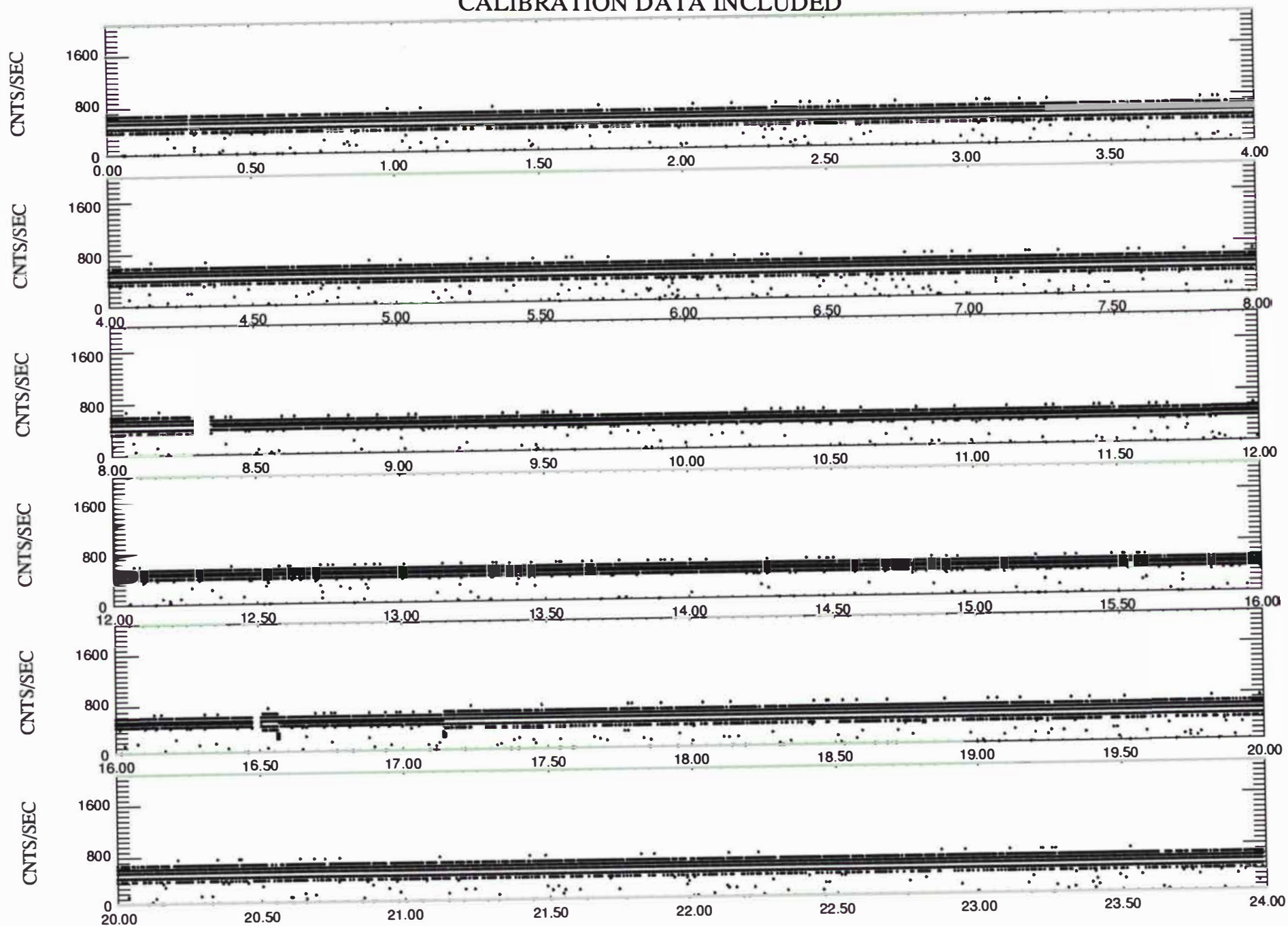
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

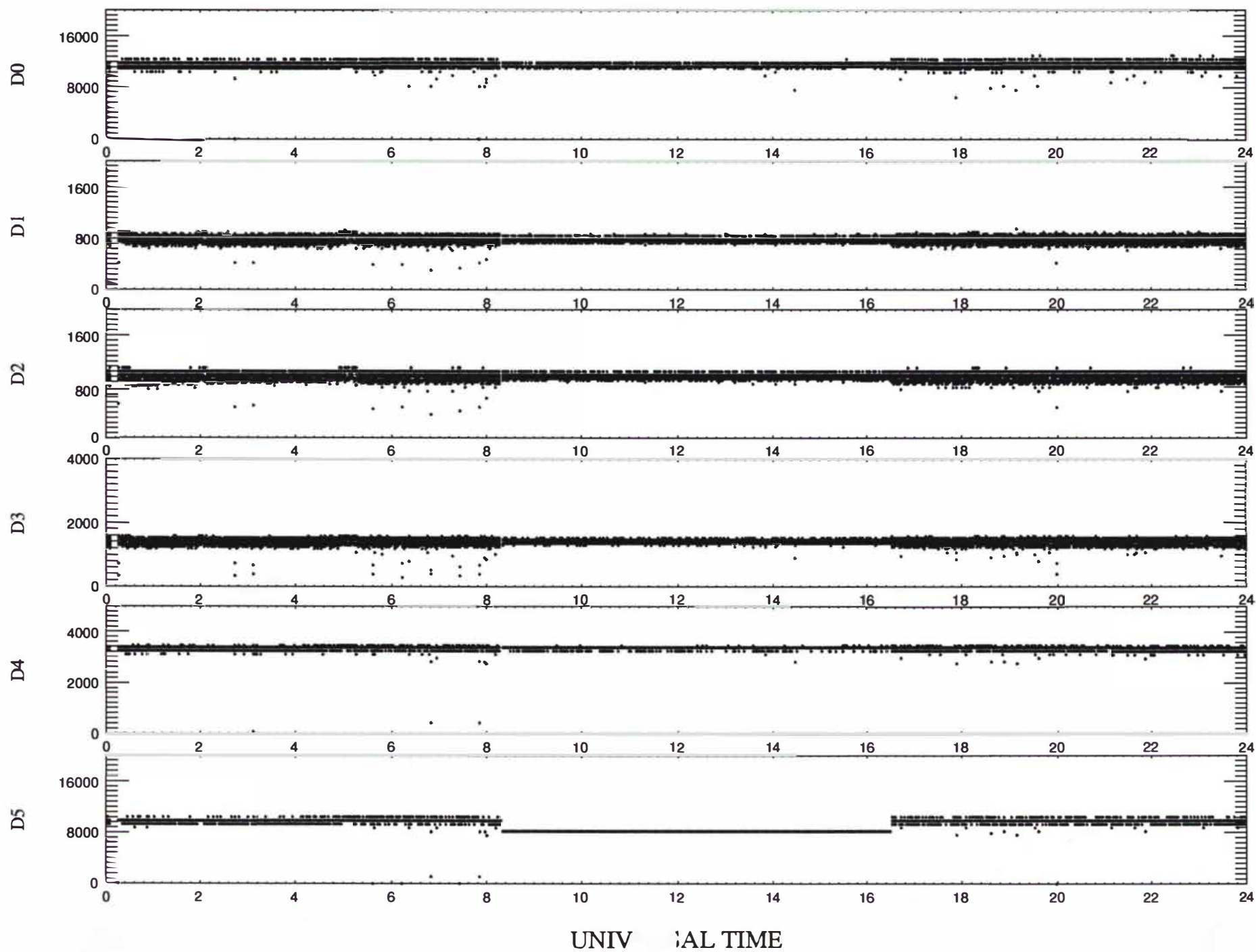
NO BURST (12)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From HAGEDON@ssl.msfc.nasa.gov Mon Sep 12 07:36 PDT 1994
Date: Mon, 12 Sep 1994 9:19:49 -0500 (CDT)
From: HAGEDON@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3162

TIME: TJD=9605 SECONDS=56961

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY.

From HAGEDON@fender.msfc.nasa.gov Mon Sep 12 07:43 PDT 1994
Date: Mon, 12 Sep 1994 9:45:11 -0500 (CDT)
From: HAGEDON@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3163

BATSEARCH PROGRAM

BATSE BURST # 3163
EVENT OF 1994 SEP 10 DAY OF YEAR=253
EVENT CROSSING TIME AT BATSE : 70284. S. OR 19:31:24.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 332.000 -34.000
BATSE PEAK COUNTING RATE: 17000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 10/ 9/ 94 IS:
RA= 149.634 DEC= -51.286 DIST= 2.671 AU
BATSE-ULYSSES DISTANCE = 399601111. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 85.31 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 108.96 SECS.
CROSSING TIME AT ULYSSES IS 70393. S. OR 19:33:12 +/- 282.30 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 10/ 9/ 94 IS:
RA= 106.776 DEC= 23.115 DIST= 1.712 AU
MARS-BATSE DISTANCE = 256137360. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 40.84 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 646.40 SECS.
CROSSING TIME AT MARS IS 70930. S. OR 19:42:10 +/- 106.81 SECONDS

RI

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3163	940910	9605	70284	17000	332	-34

NO.: 3163 BATSE BURST TRIGGER

TIME: TJD=9605 SECONDS=70284

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=98 AZIMUTH=226 ERROR= DEGREES

COMMENTS:
BURST. DOUBLE-PEAKED EVENT. FIRST PEAK HAS FAST RISE, SLOWER DECAY,
DUR.~12 SEC. SECOND PEAK HAS MORE SUBSTRUCTURE, DUR.~17 SEC.
TOTAL DUR.~32 SEC. BOTH PEAKS VISIBLE ABOVE 300 KEV.

Helio corr removed

Date: Feb 4 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

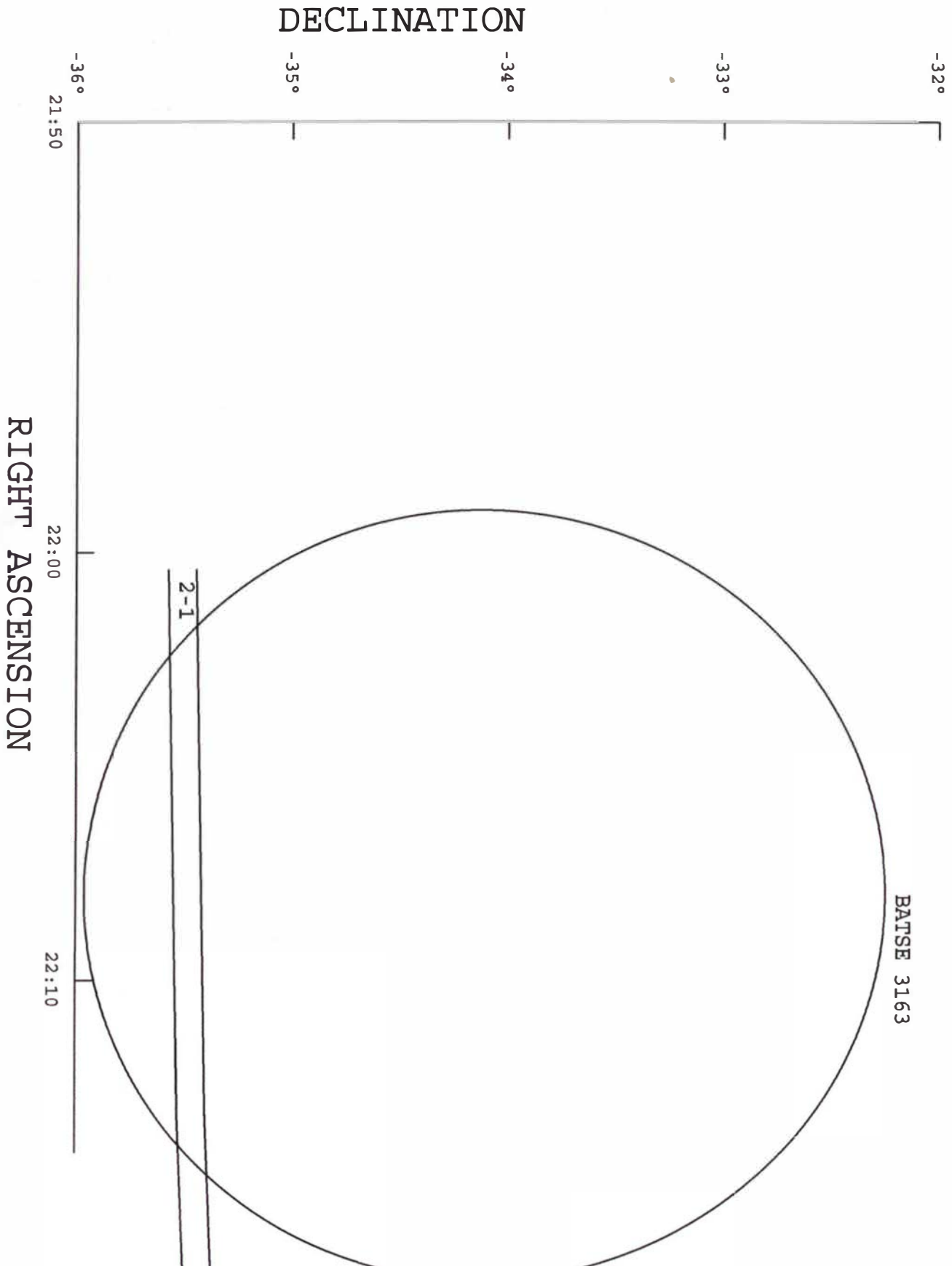
- ☐ 2.042 s subtracted for bursts prior to June 25 1992 and DISCSC programs prior to Version 2.16 (August 28 1992)? ~~N/A~~
- ☒ BATSE ephemeris for T₀?
- ☒ Error circle position and radius from public catalog used?
- ☐ If MER data were used, is a 30 ms systematic error included? ~~N/A~~

3. PVO Data

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

G=GALACTIC EQUATOR

2 BATSE



EVENT OF SEP 10, 1994 19:31

4/ 2/98

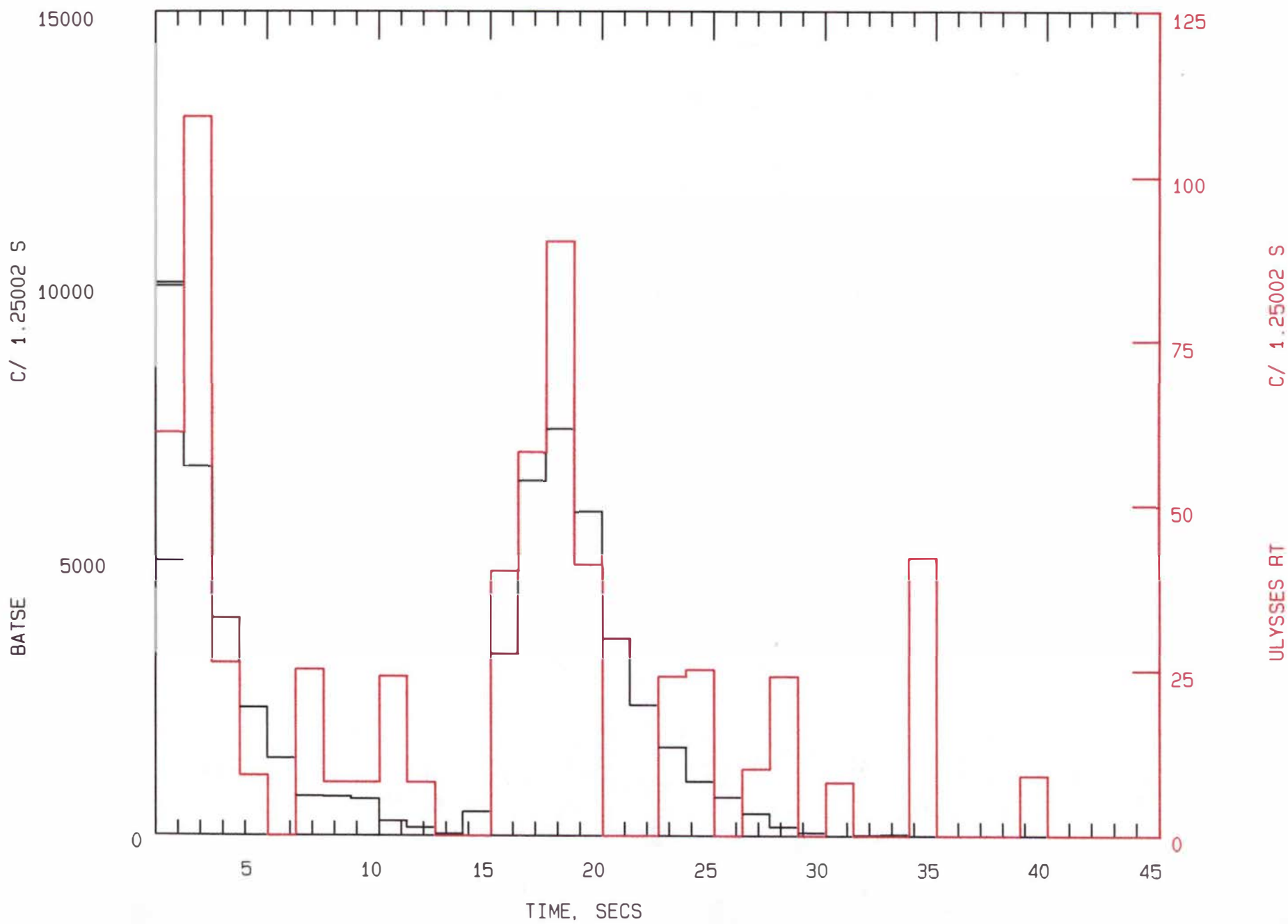
BATSE

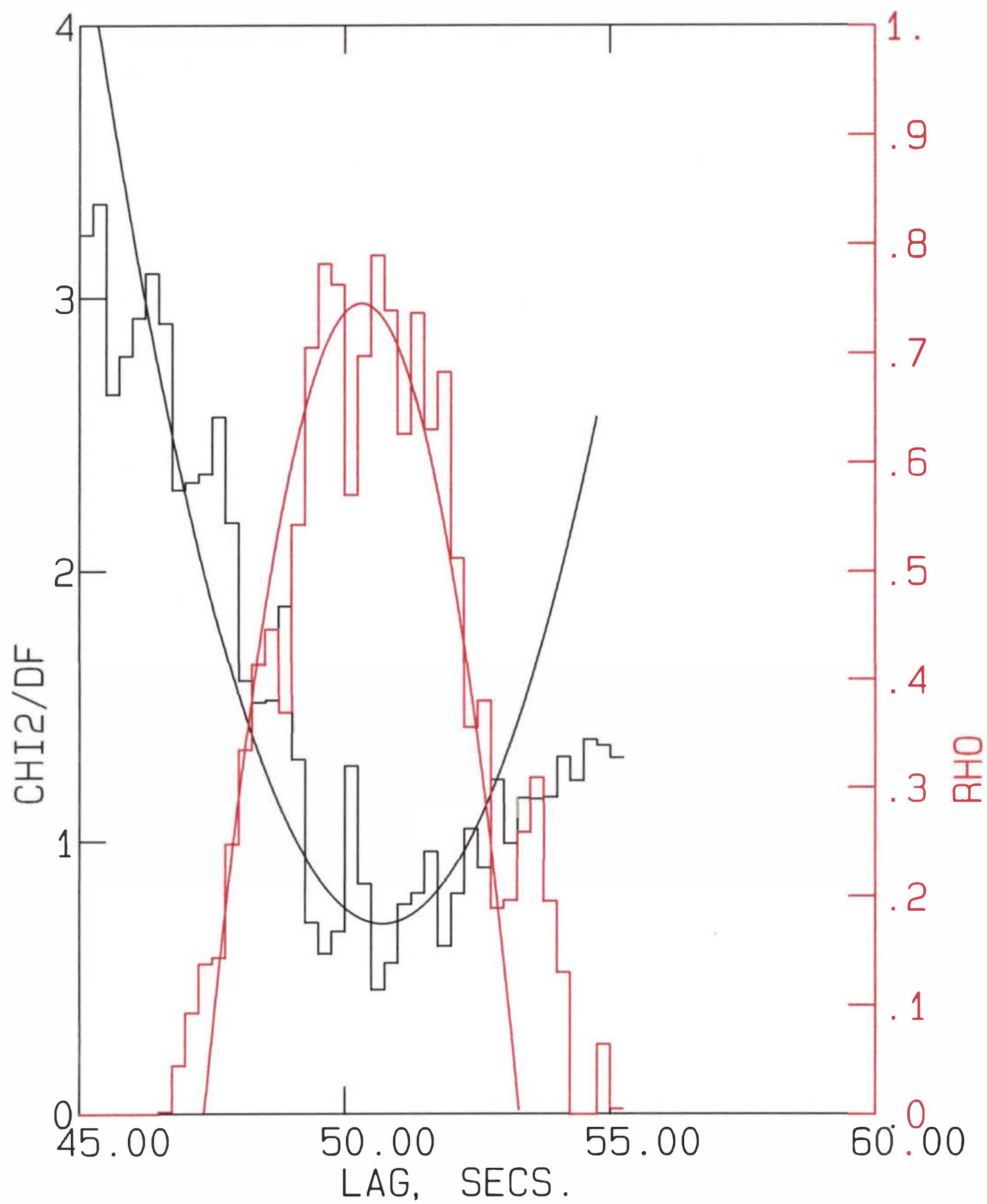
-ULYSSES RT CORRELATION

10/ 9/94

70284.465

4/ 2/98





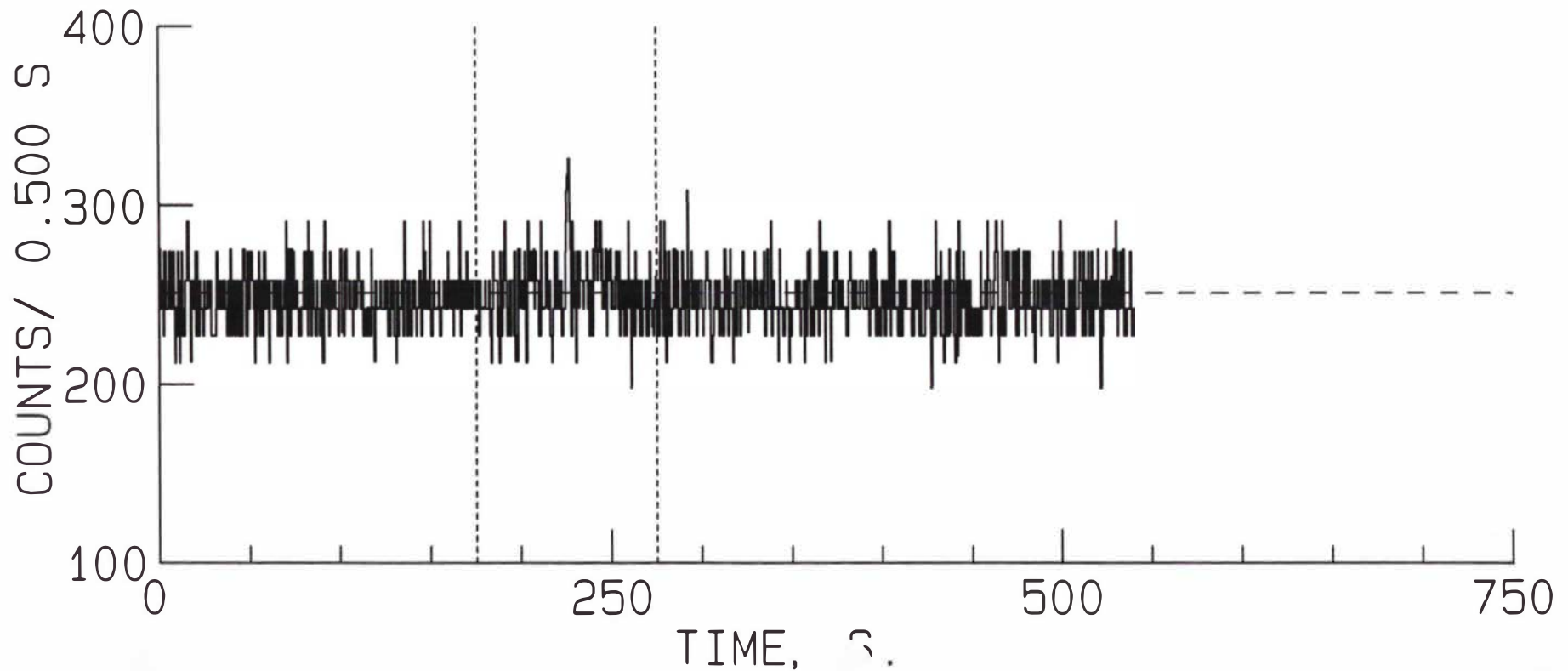
ULYSSES RT

4 / 2 / 98

10 / 9 / 94 70128.001 s

0.250 S INTERVALS REGROUPED BY 2
22- 148 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



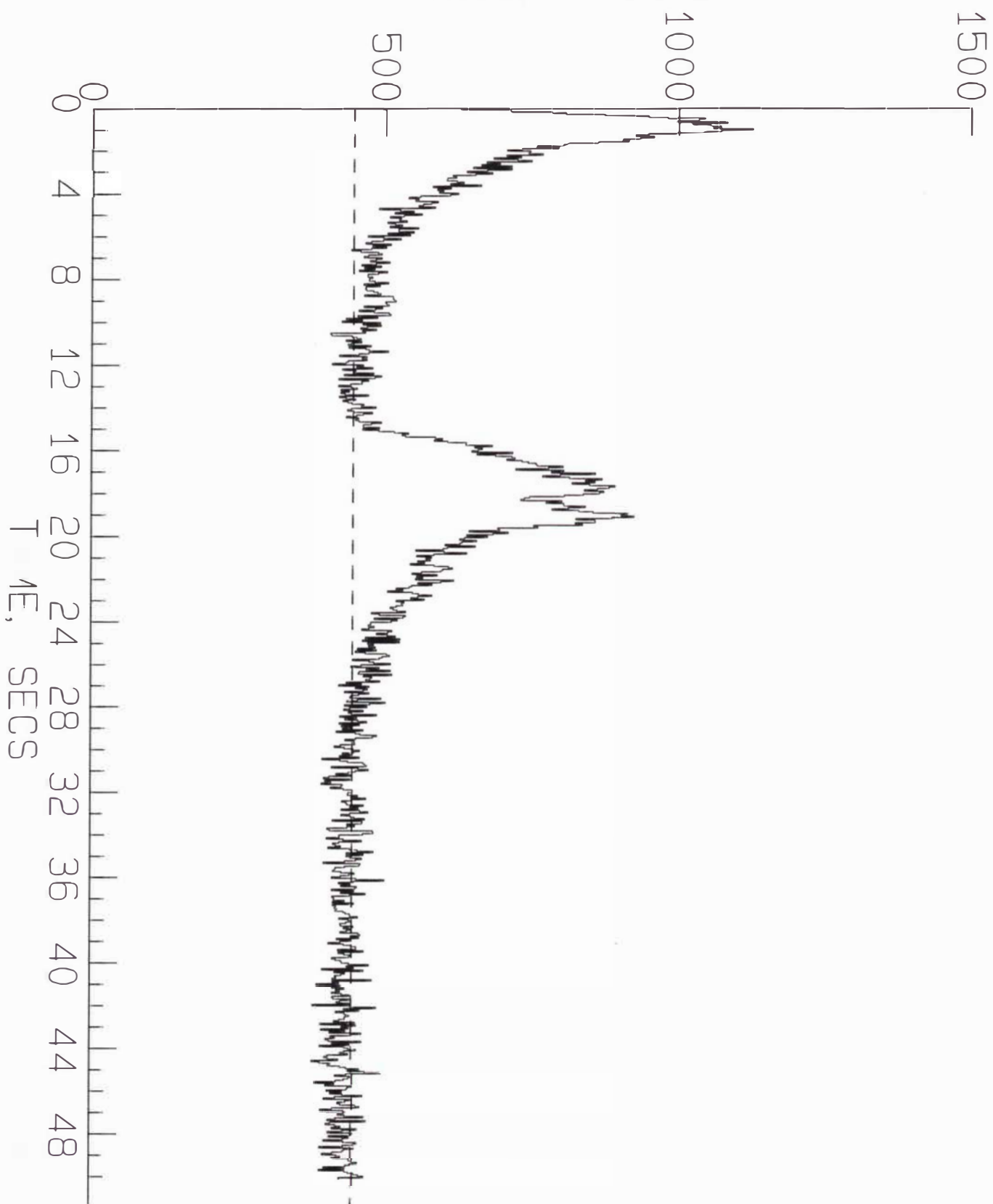
BATSE

10/09/94

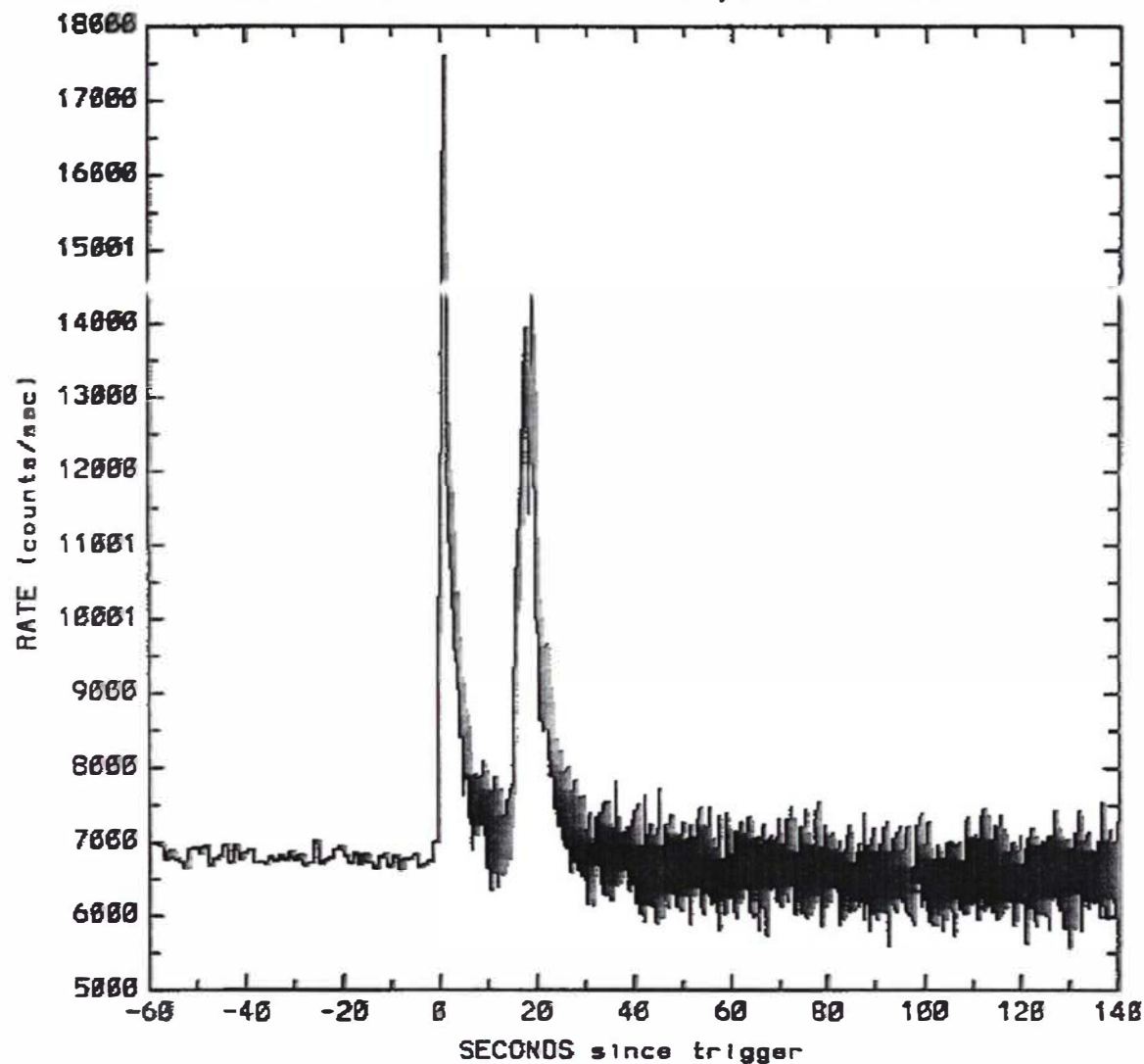
70284.465

25- 100 keV

COUNTS/ .064 S



DISCSC Data for K. Hurley. No. 3163



19-SEP-1994 17:15:45

Created by MOPS BD
(Burst Display)
Version 12.22

Trigger #: 3163

Trigger Time:
9685 / 78284.466Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: FREE + DISCSCMinimum Integ. Time:
0.064 secondsDetectors [1..6]:
76-----Discriminators:
[1, 2]Quality Mask:
BDISP1

From HAGEDON@fender.msfc.nasa.gov Mon Sep 12 07:47 PDT 1994
Date: Mon, 12 Sep 1994 9:48:54 -0500 (CDT)
From: HAGEDON@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3164

BATSEARCH PROGRAM

BATSE BURST # 3164
EVENT OF 1994 SEP 10 DAY OF YEAR=253
EVENT CROSSING TIME AT BATSE : 78317. S. OR 21:45:17.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 226.000 7.000
BATSE PEAK COUNTING RATE: 3100 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 10/ 9/ 94 IS:
RA= 149.679 DEC= -51.317 DIST= 2.670 AU
BATSE-ULYSSES DISTANCE = 399484906. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 92.96 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -68.72 SECS.
CROSSING TIME AT ULYSSES IS 78248. S. OR 21:44:08 +/- 280.00 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 10/ 9/ 94 IS:
RA= 106.776 DEC= 23.115 DIST= 1.712 AU
MARS-BATSE DISTANCE = 256137360. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 66.56 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 339.91 SECS.
CROSSING TIME AT MARS IS 78657. S. OR 21:50:56 +/- 141.25 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3164	940910	9605	78317	3100	226	+07

BATSE BURST TRIGGER

NO.: 3164

TIME: TJD=9605 SECONDS=78317

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=100 AZIMUTH=336 ERROR= DEGREES

COMMENTS:

BURST. SINGLE PULSE. DUR.~15 SEC. NOT VISIBLE ABOVE 300 KEV.

12 / 9 / 94

ULYSSES RT

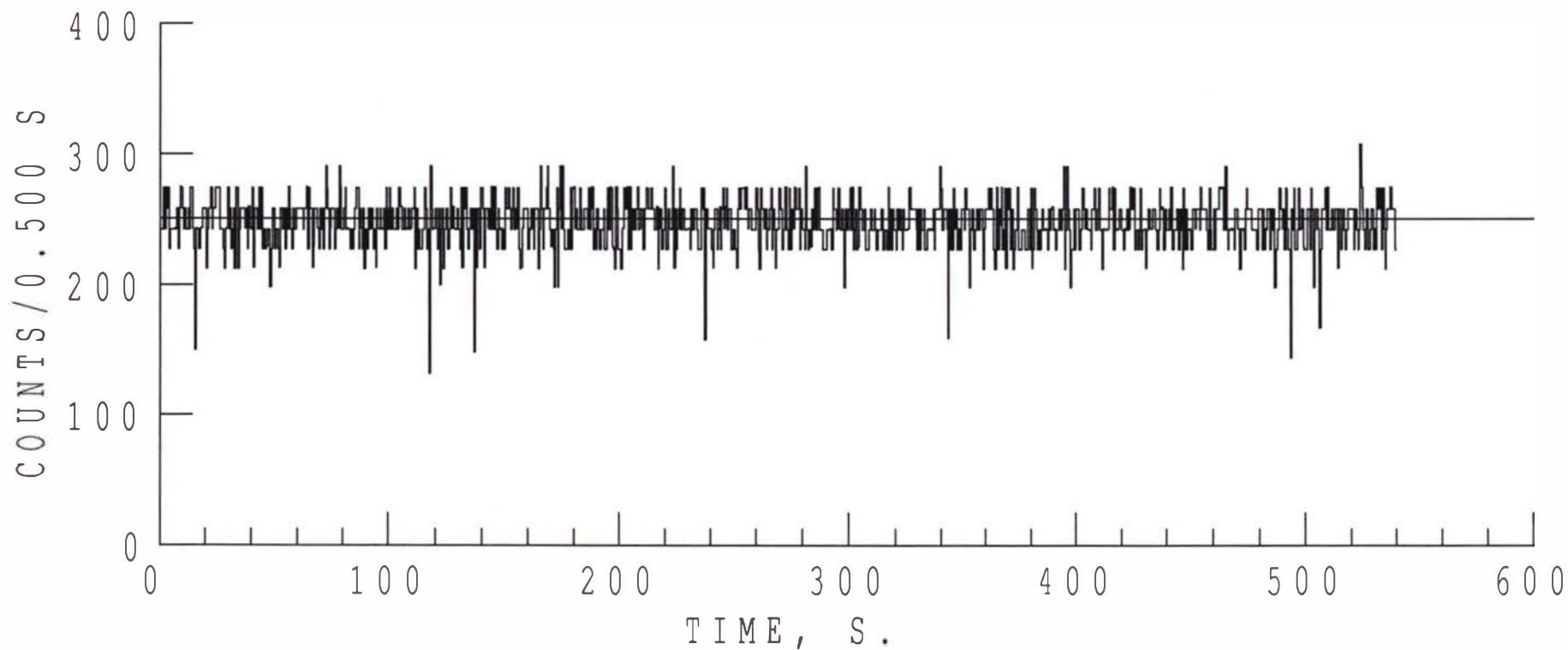
10 / 9 / 94 77976.125 s

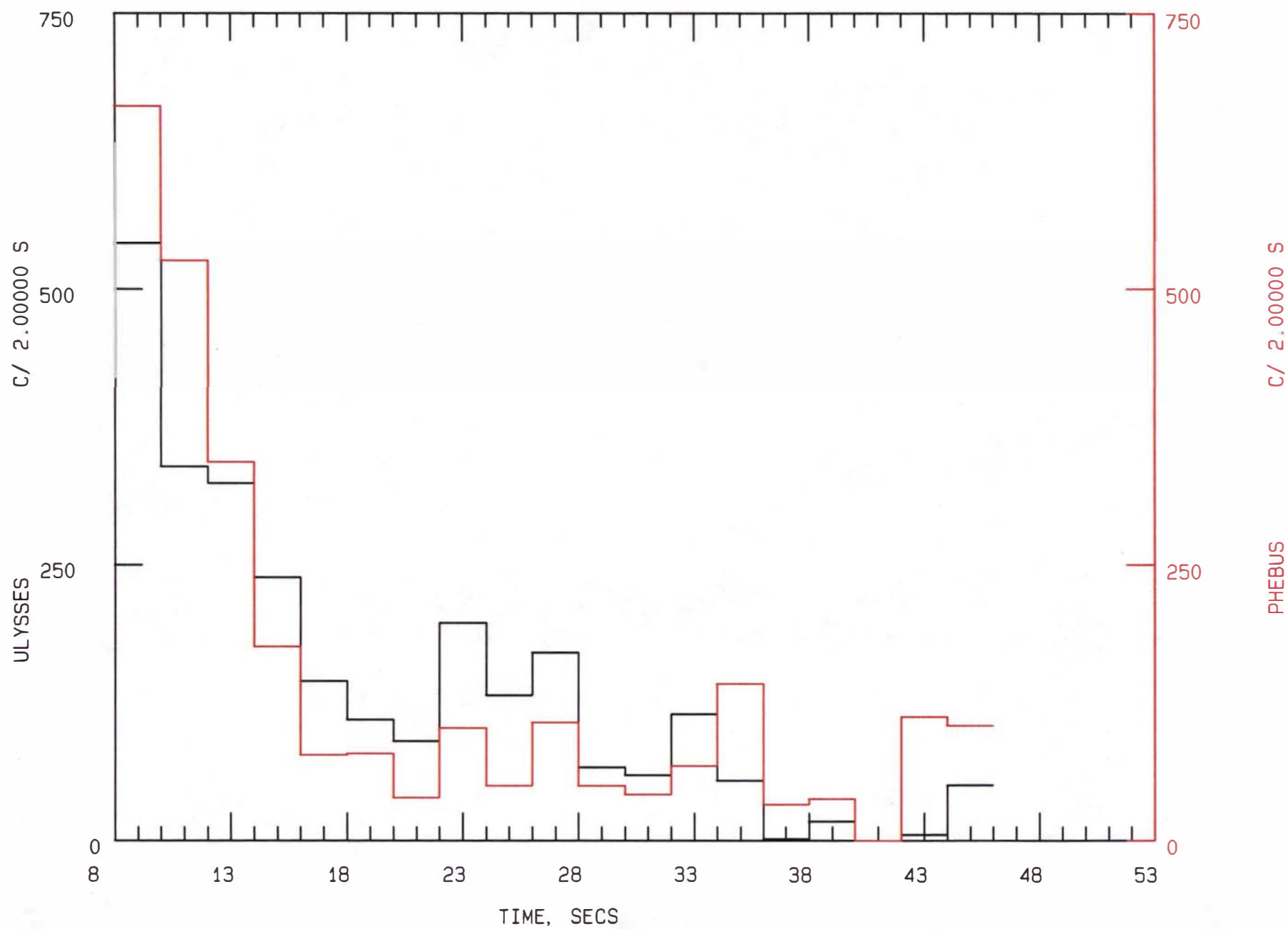
0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



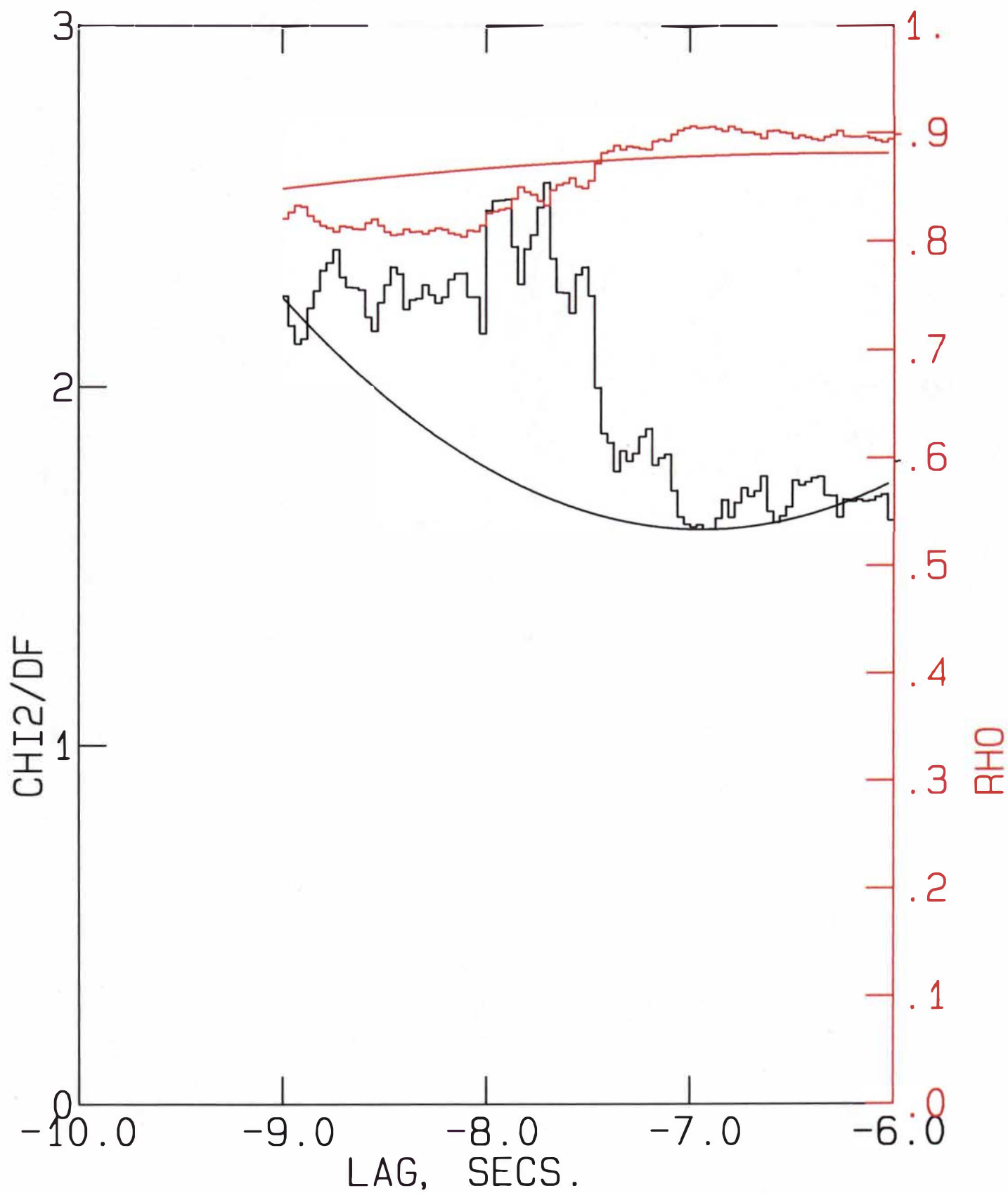


10/12/99

ULYSSES - PHEBUS CORRELATION

10/09/94

85836.986



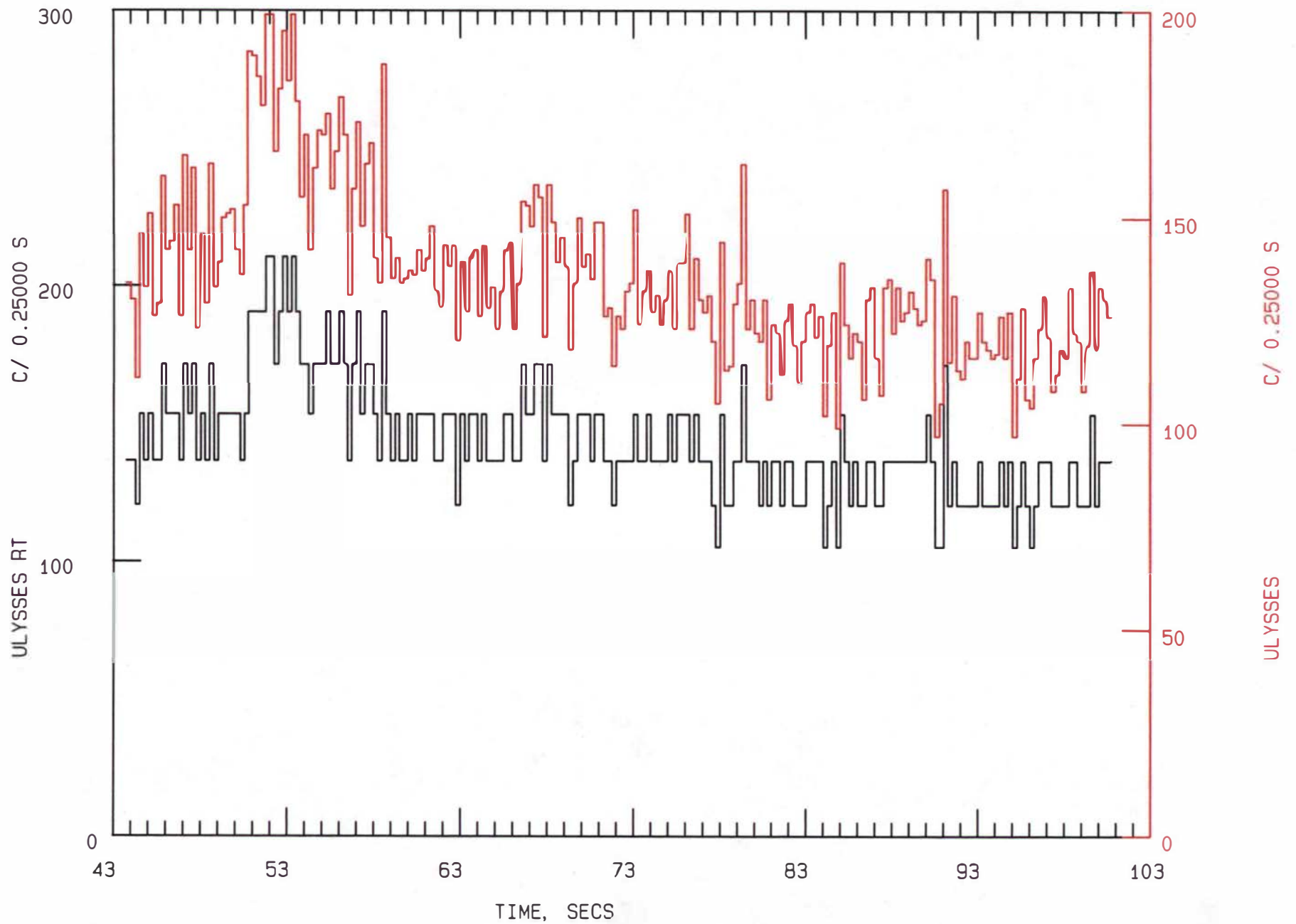
ULYSSES RT-ULYSSES

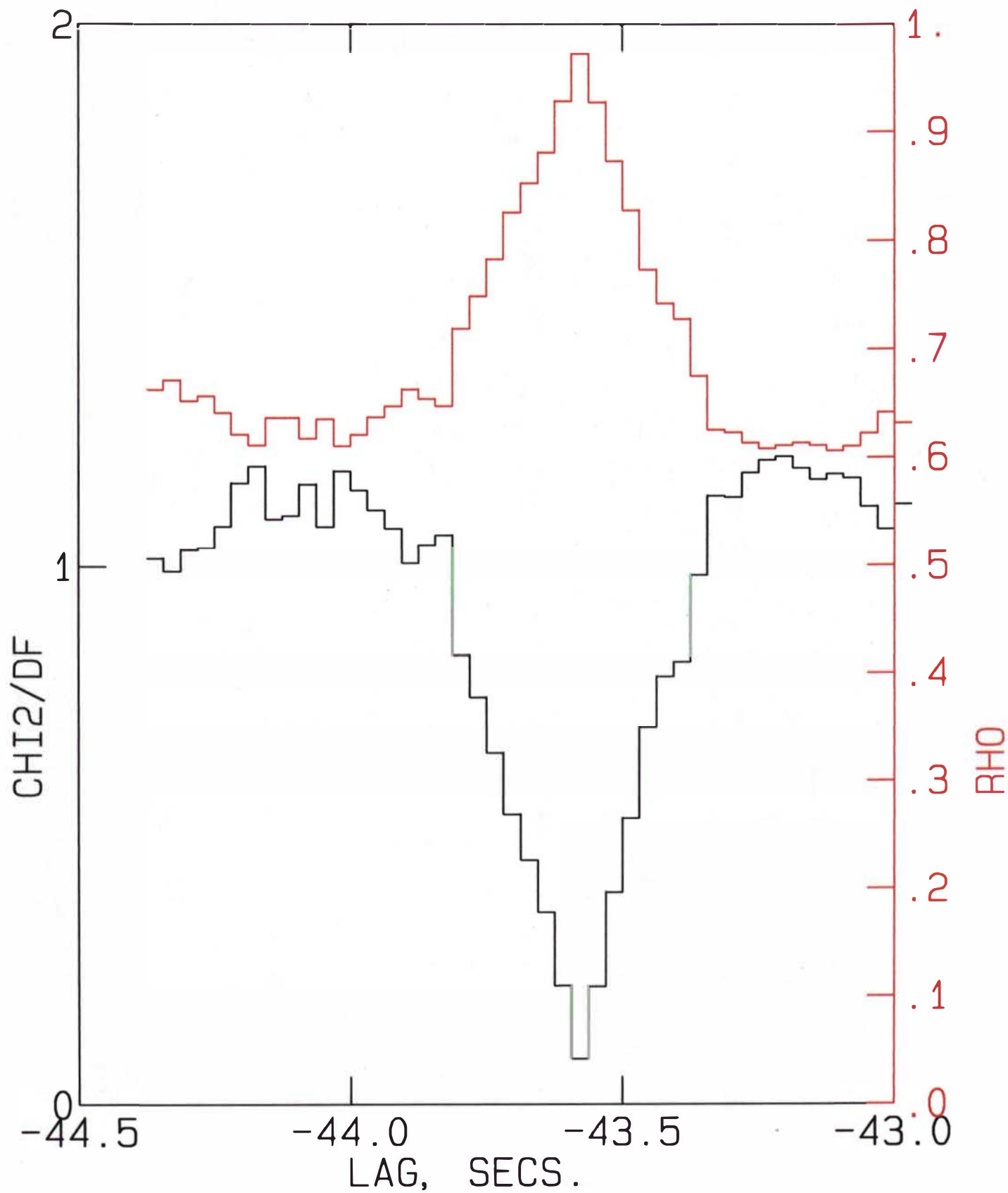
CORRELATION

10/ 9/94

85785.997

10/12/99

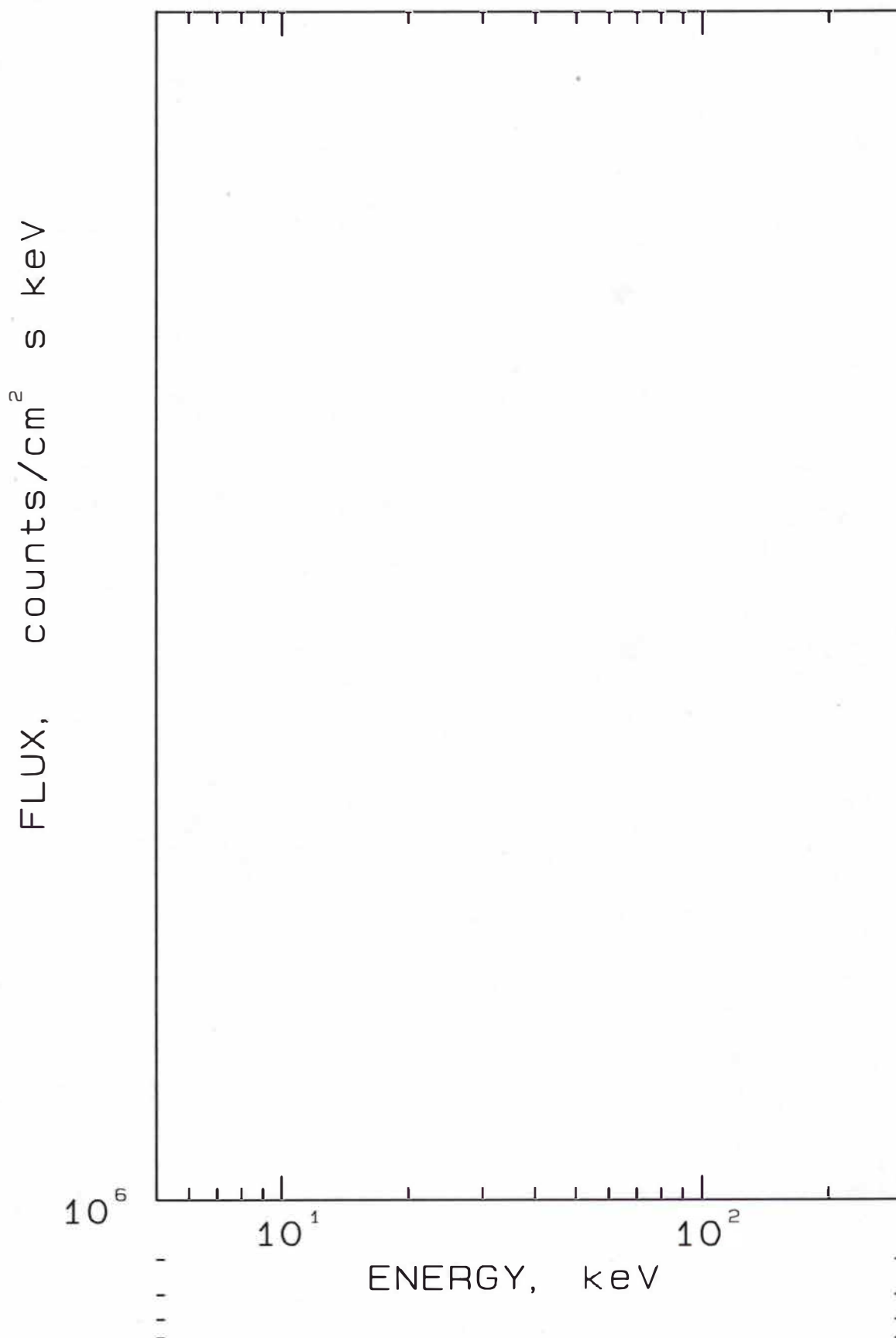




ULYSSES 10/09/94 85836.992

10/12/99

SPECTRUM INTEGRATED OVER 39.9 SECONDS, INTERVALS 0 TO 30



ULYSSES 10/09/94 85836.992 BURST SPECTRAL COUNT RATES

4- 18 keV

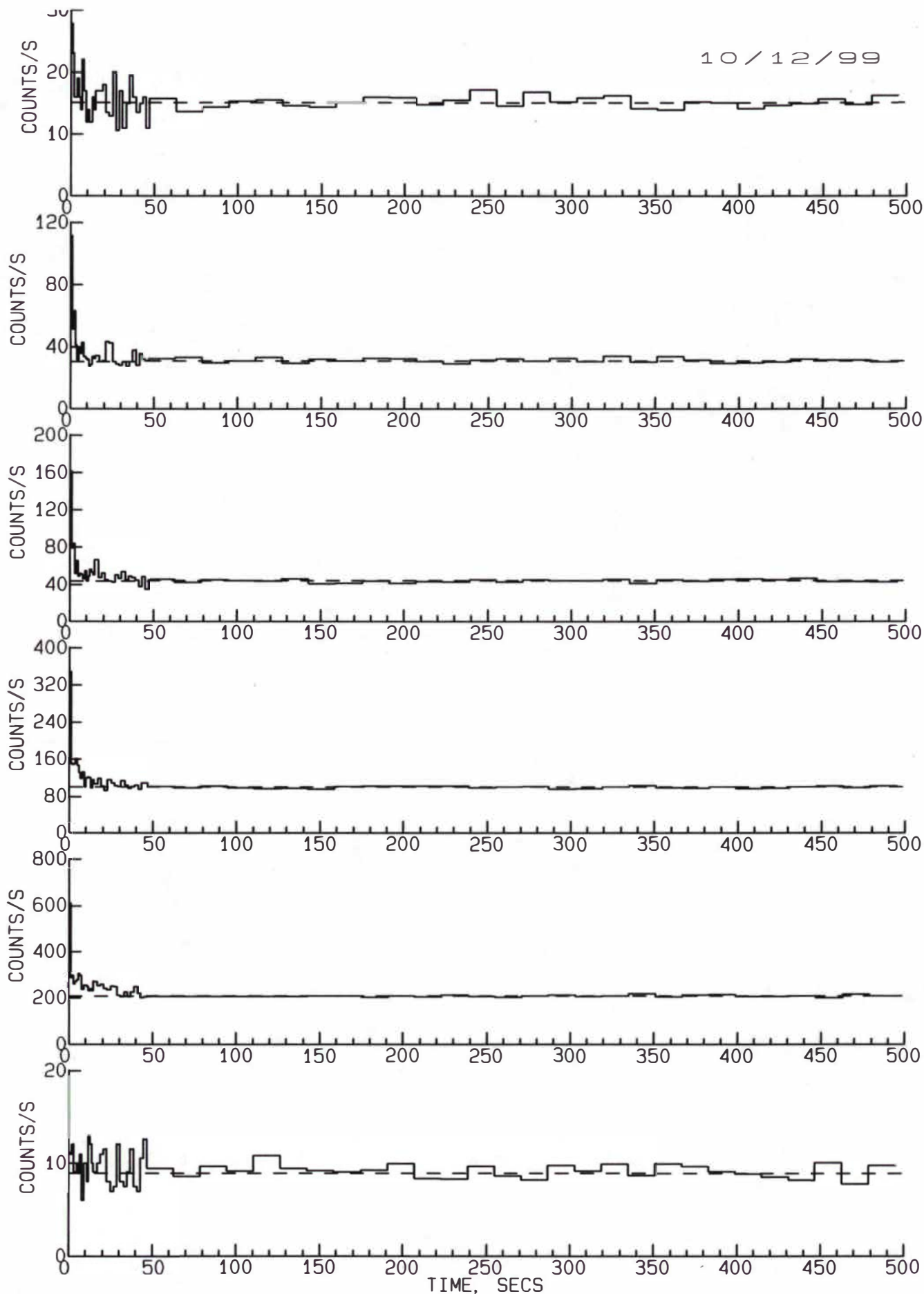
18- 46 keV

46- 73 keV

73-101 keV

101-129 keV

129-147 keV

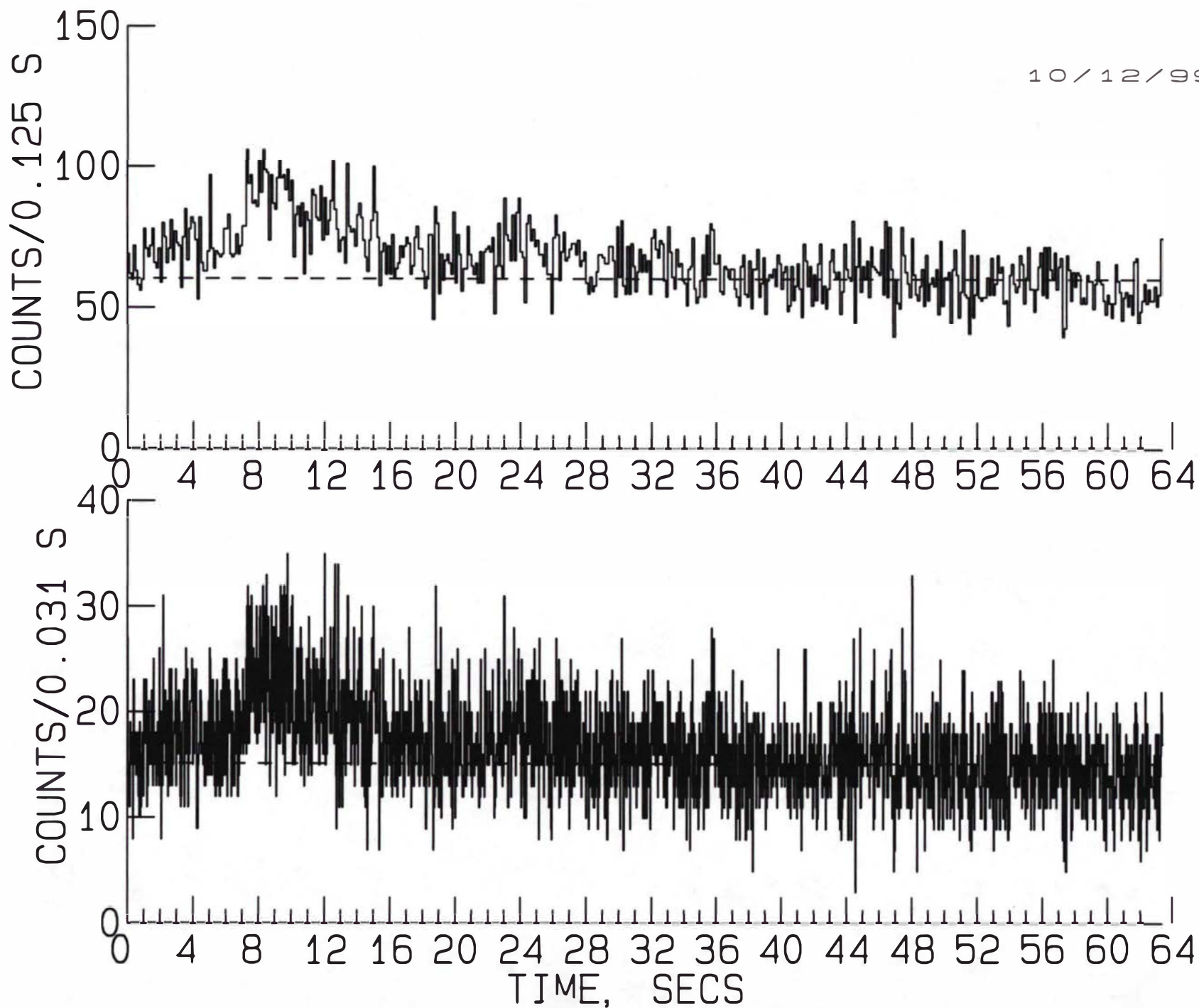


ULYSSES

10/09/94

Ttrig=85836.986

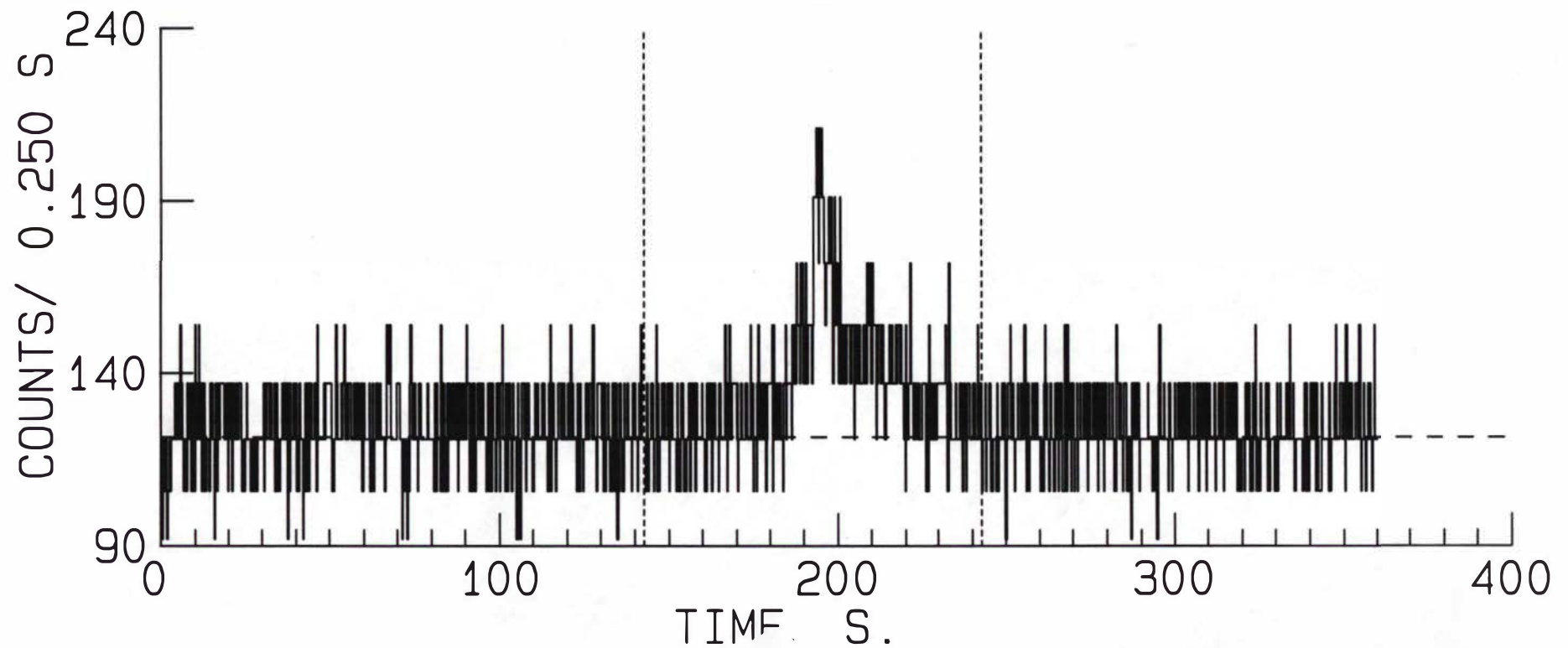
22- 148 keV



ULYSSES RT
10/ 9/94 85644.007 s
22- 148 keV

10/12/99

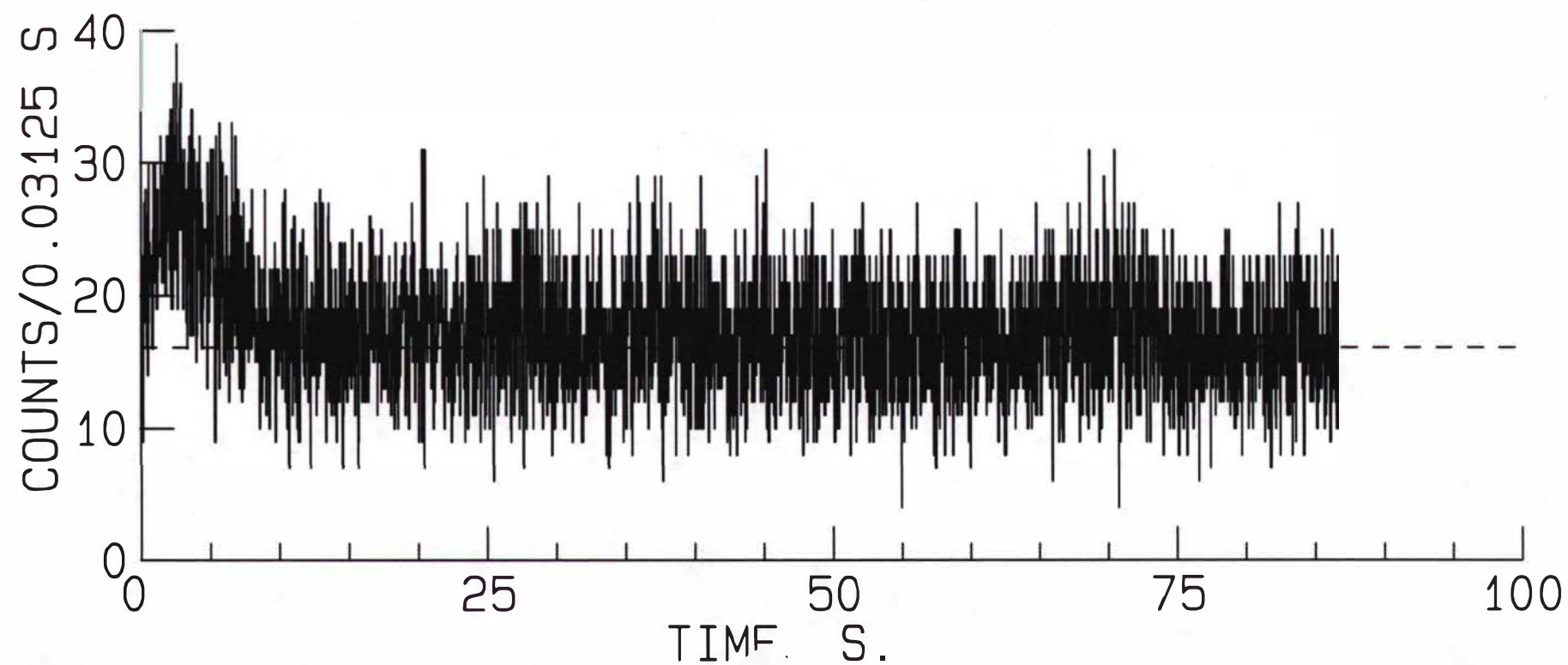
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS

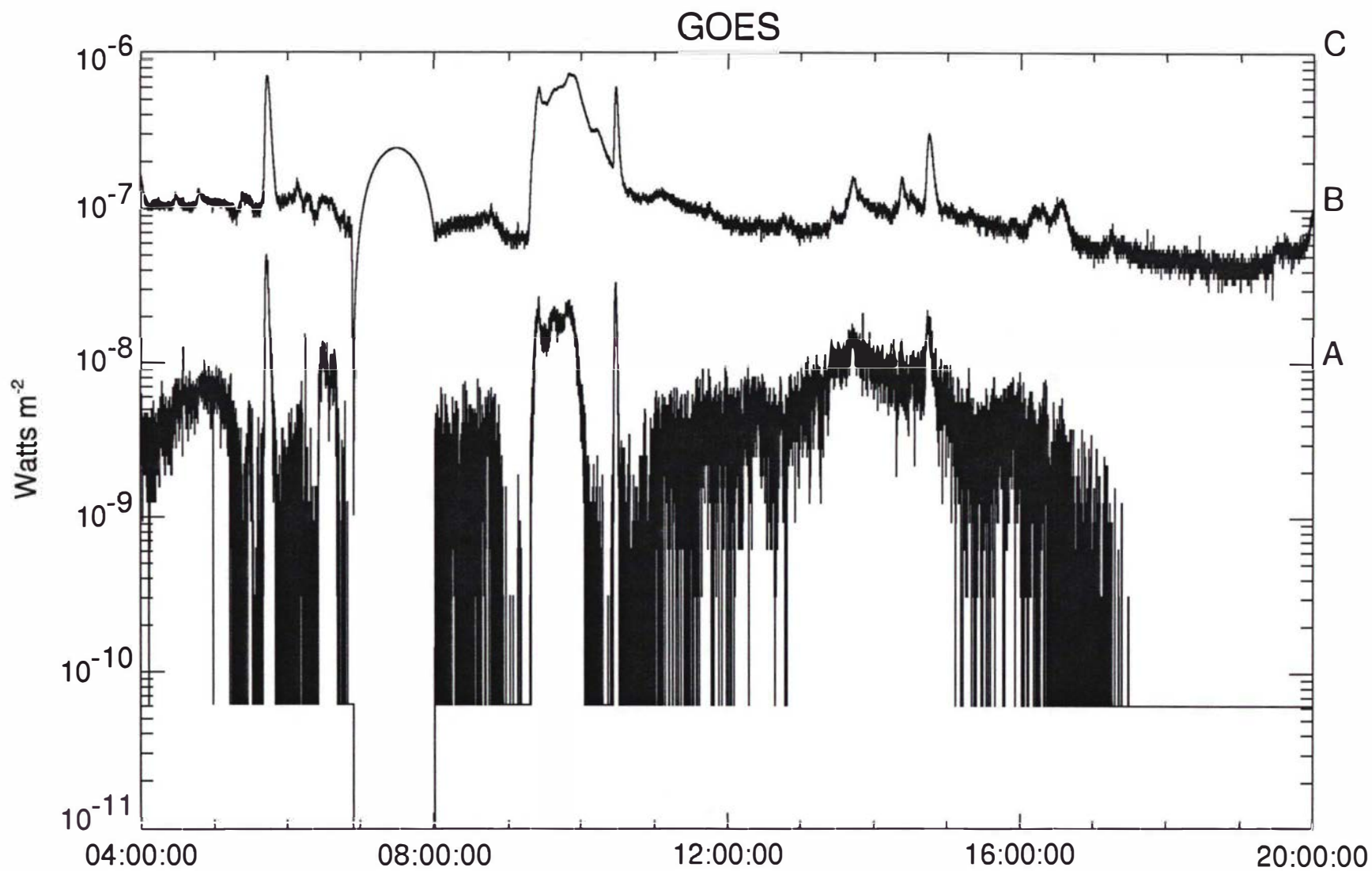


PHEBUS

10/ 9/94 86276.044 s

100- 1600 keV





Data Start: 94/09/10, 0000:00

Plot created: 94/09/12, 1346

Channel

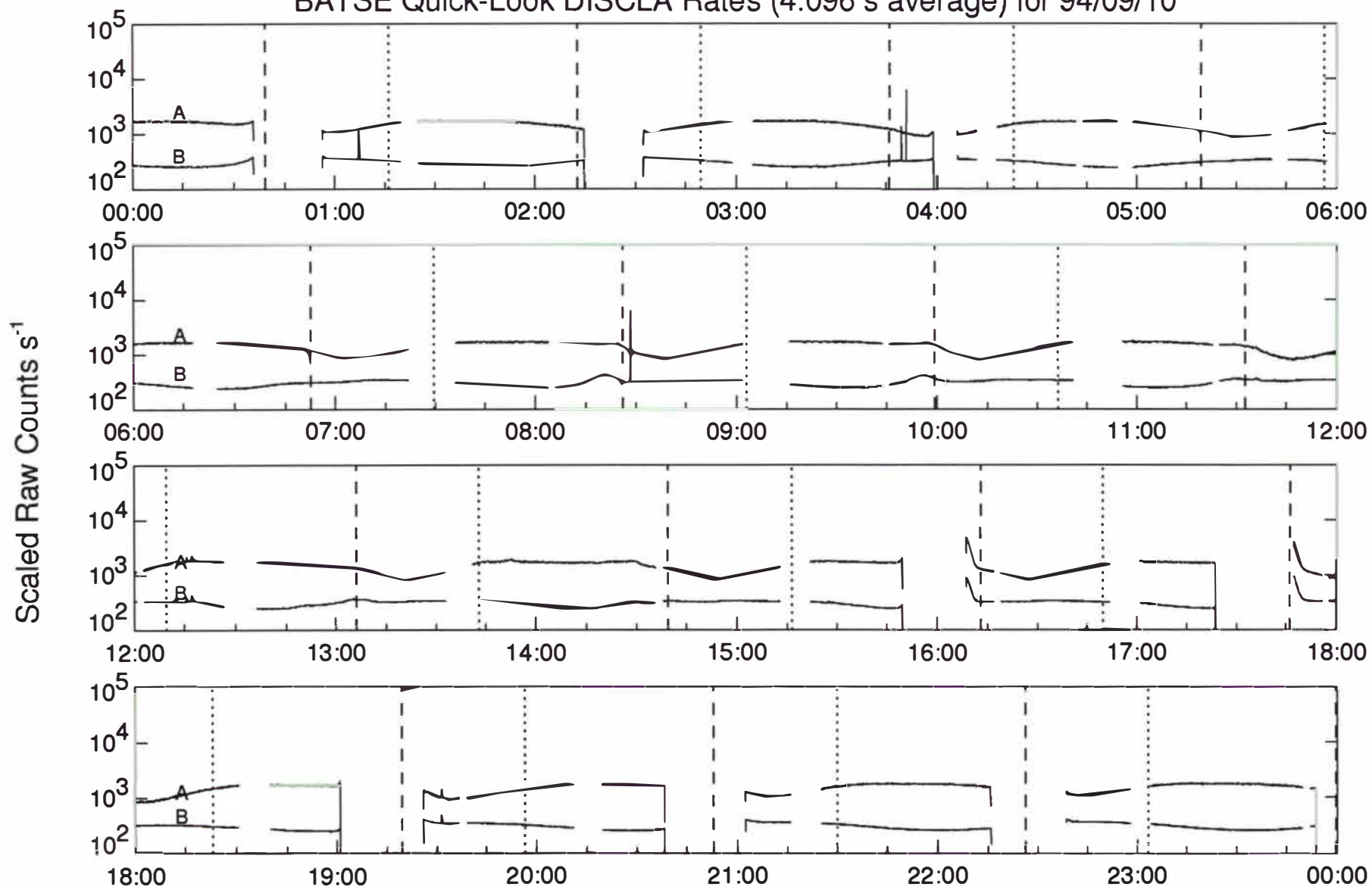
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/10

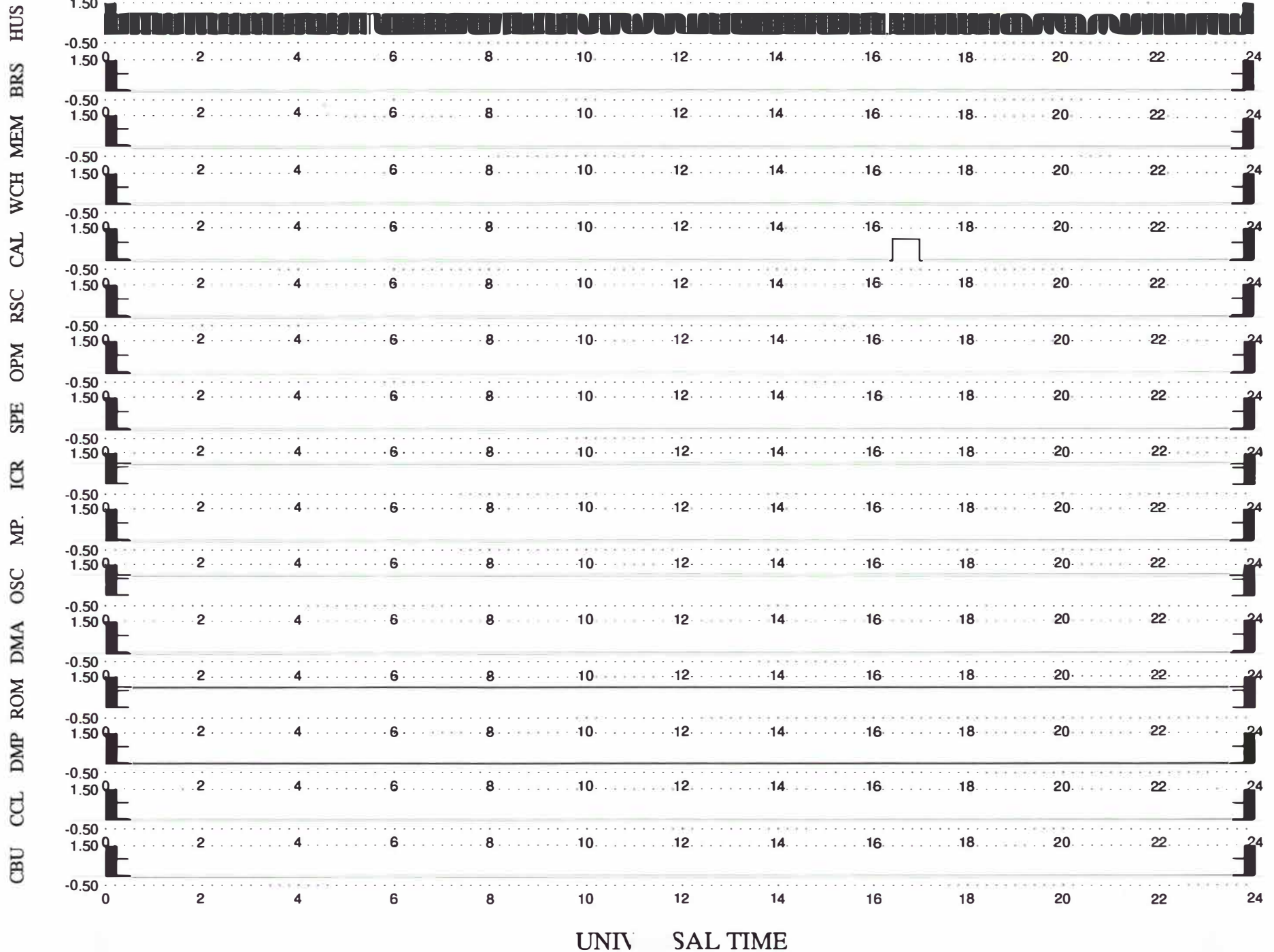


Current Time: 94/09/12, 1342 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

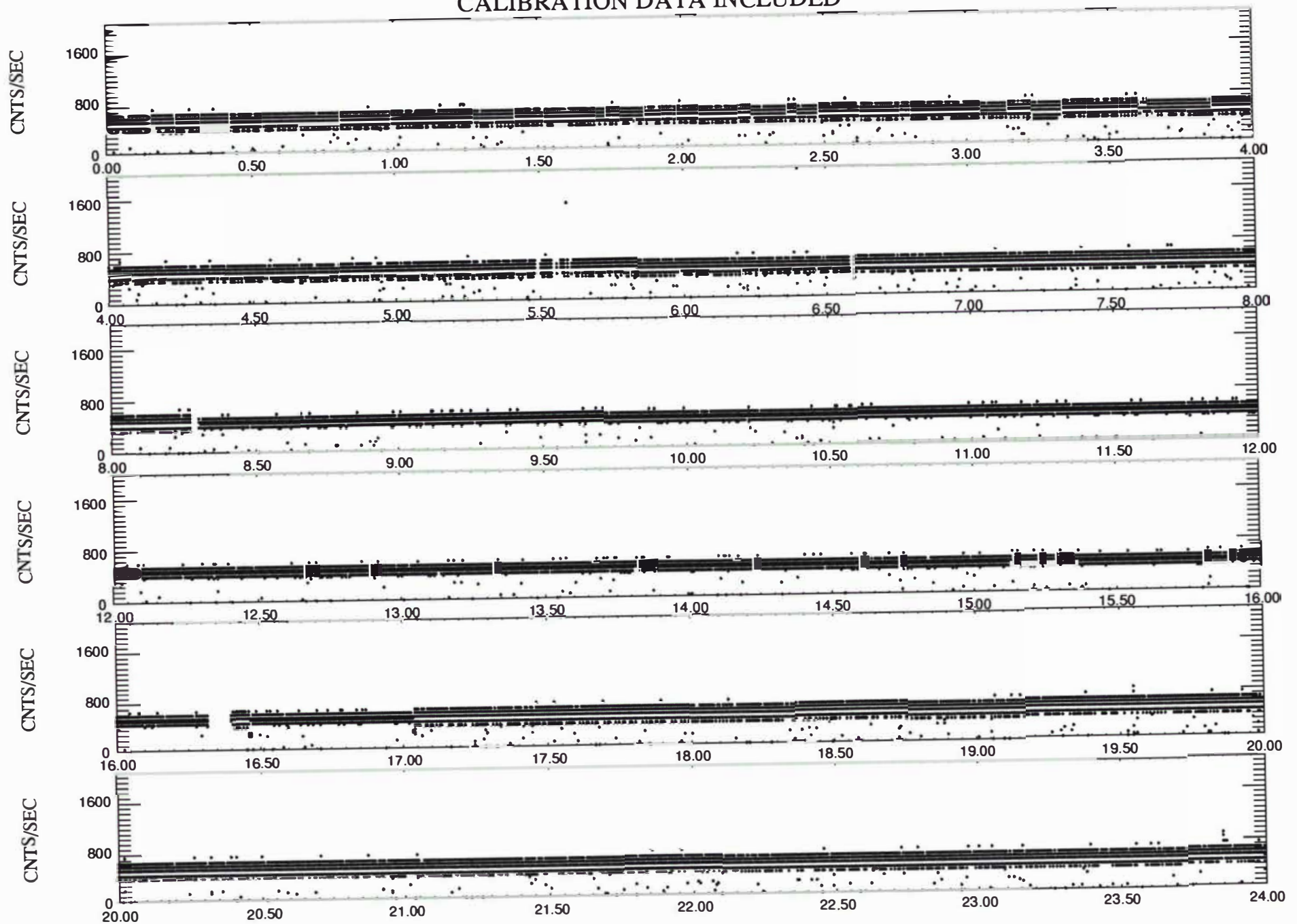
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

BURST NUMBER 13

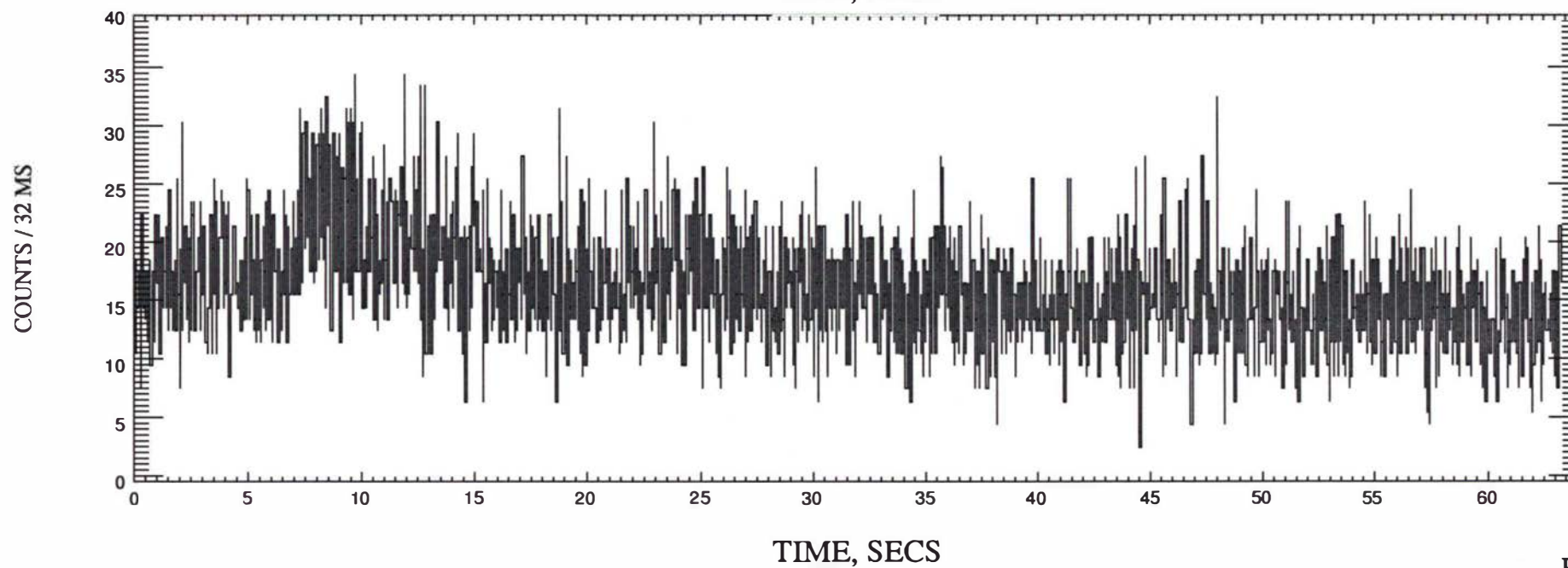
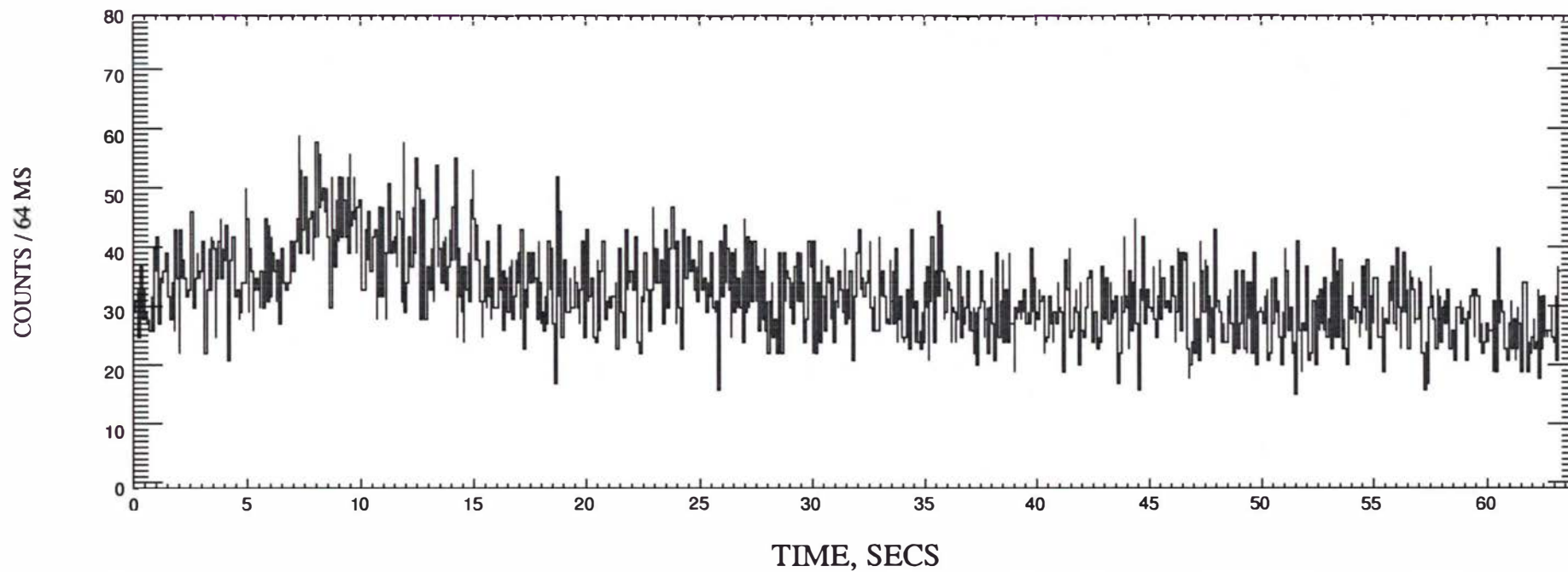


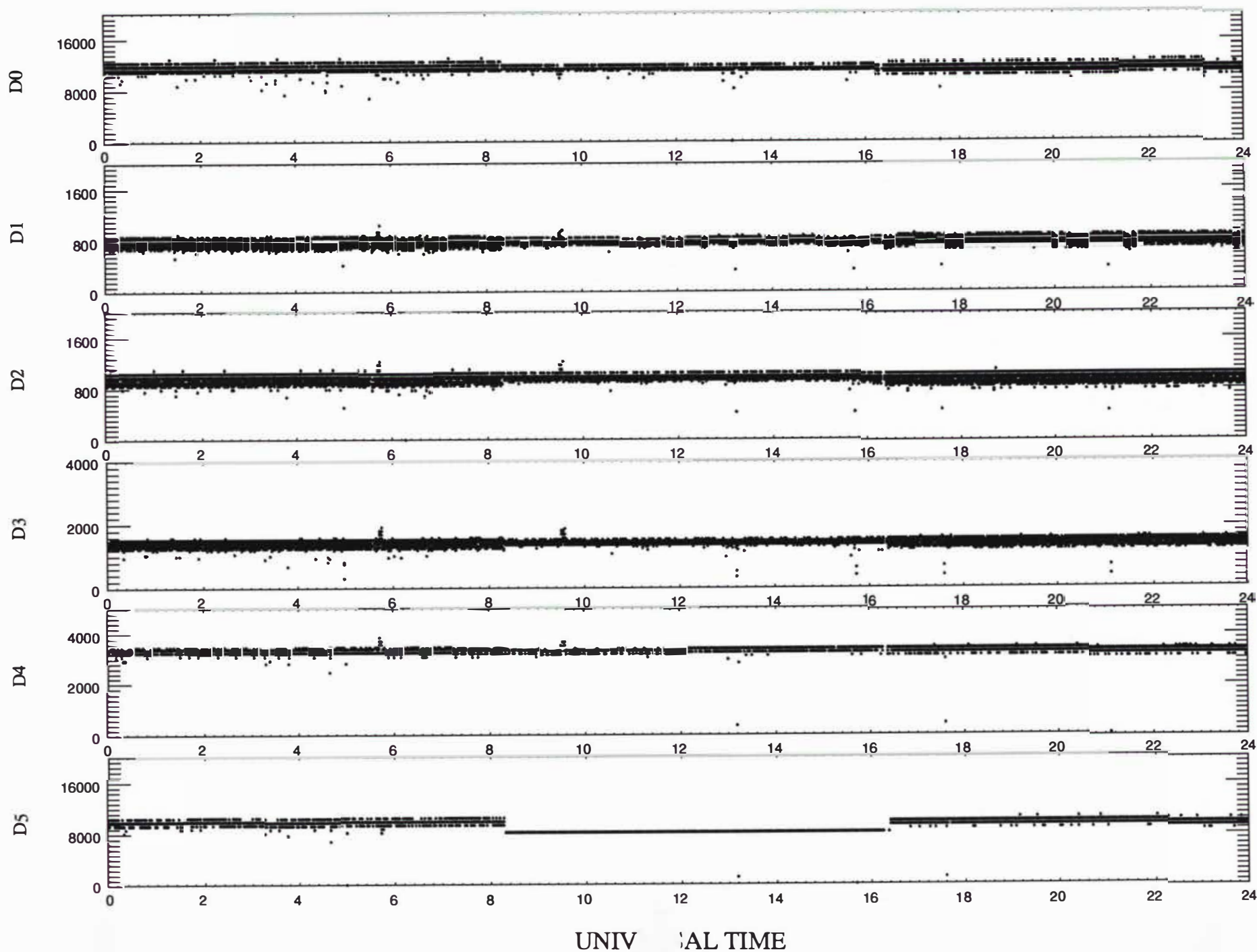
CALIBRATION DATA INCLUDED



UNIV SAL TIME

Burst Counter 13 at UT=23.843608970642 h=85836.992 s 23:50:36.992





Date: Aug 2 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

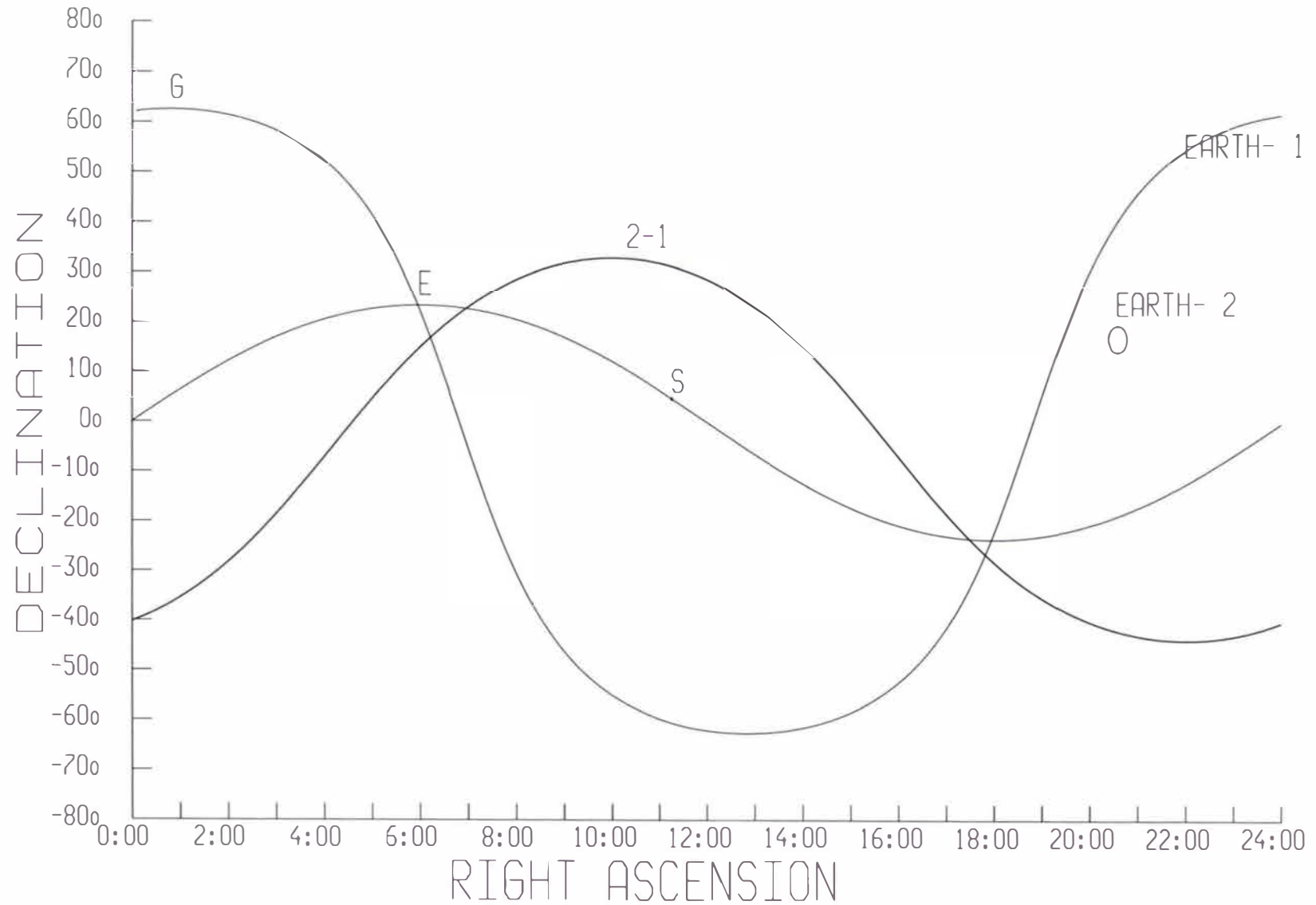
3. PVO Data

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

EVENT OF SEP 11, 1994 1:03

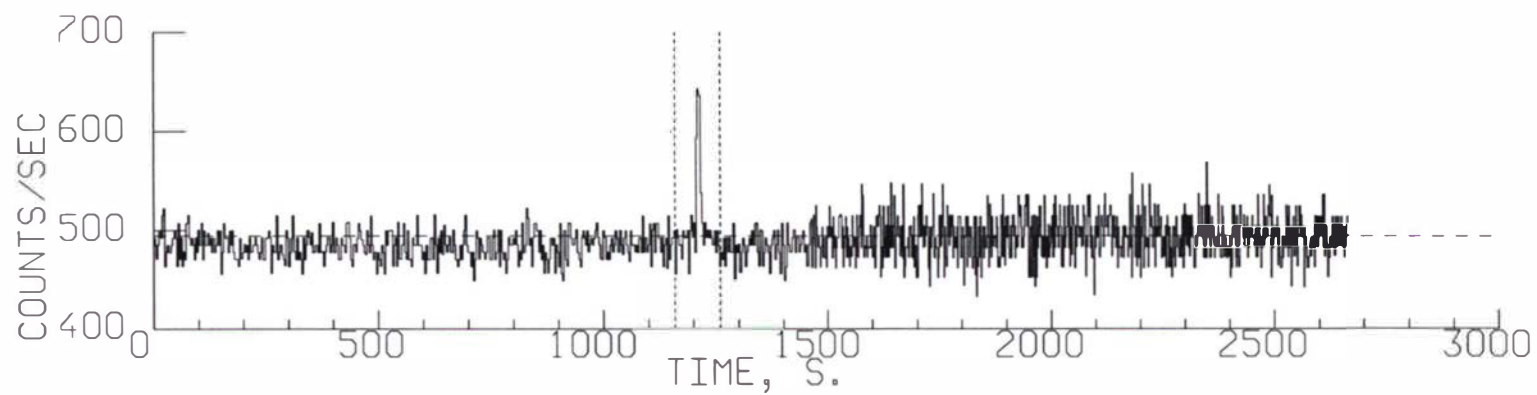
09/08/2011

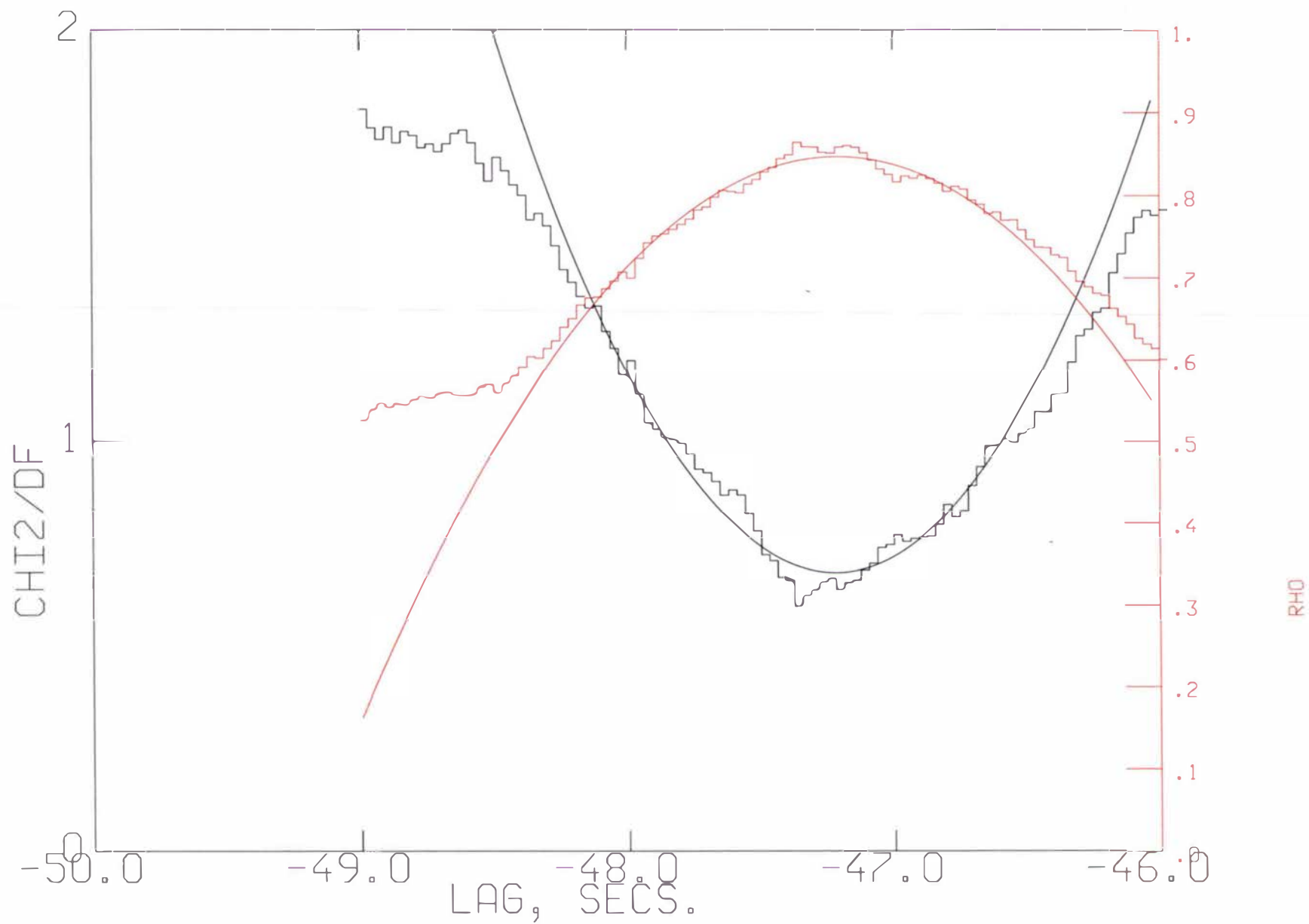
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 PHEBUS

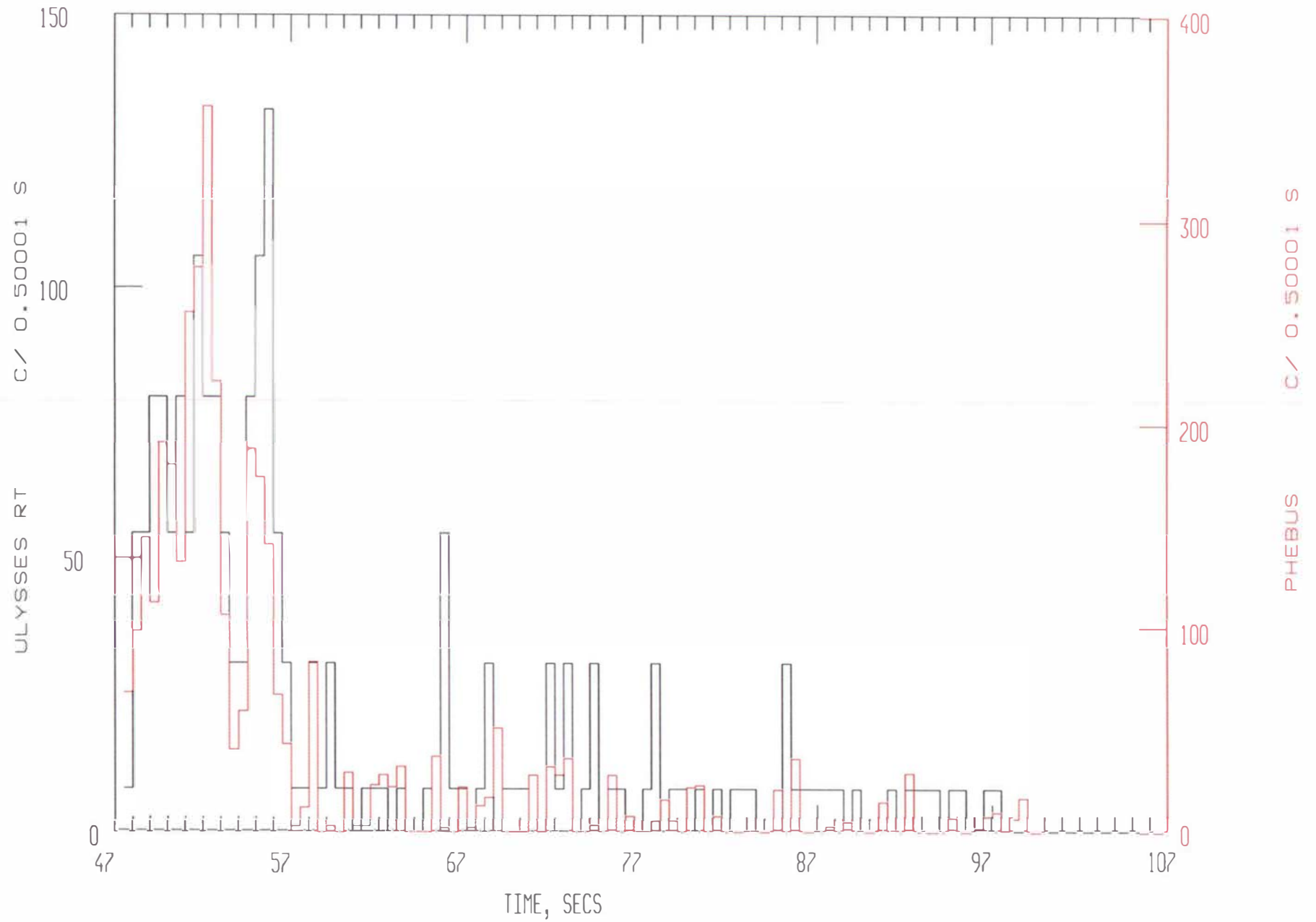


ULYSSES RT
11/ 9/94 2628.317 s
INTERVALS REGROUPED BY 6
22- 148 keV

9/ 8/11



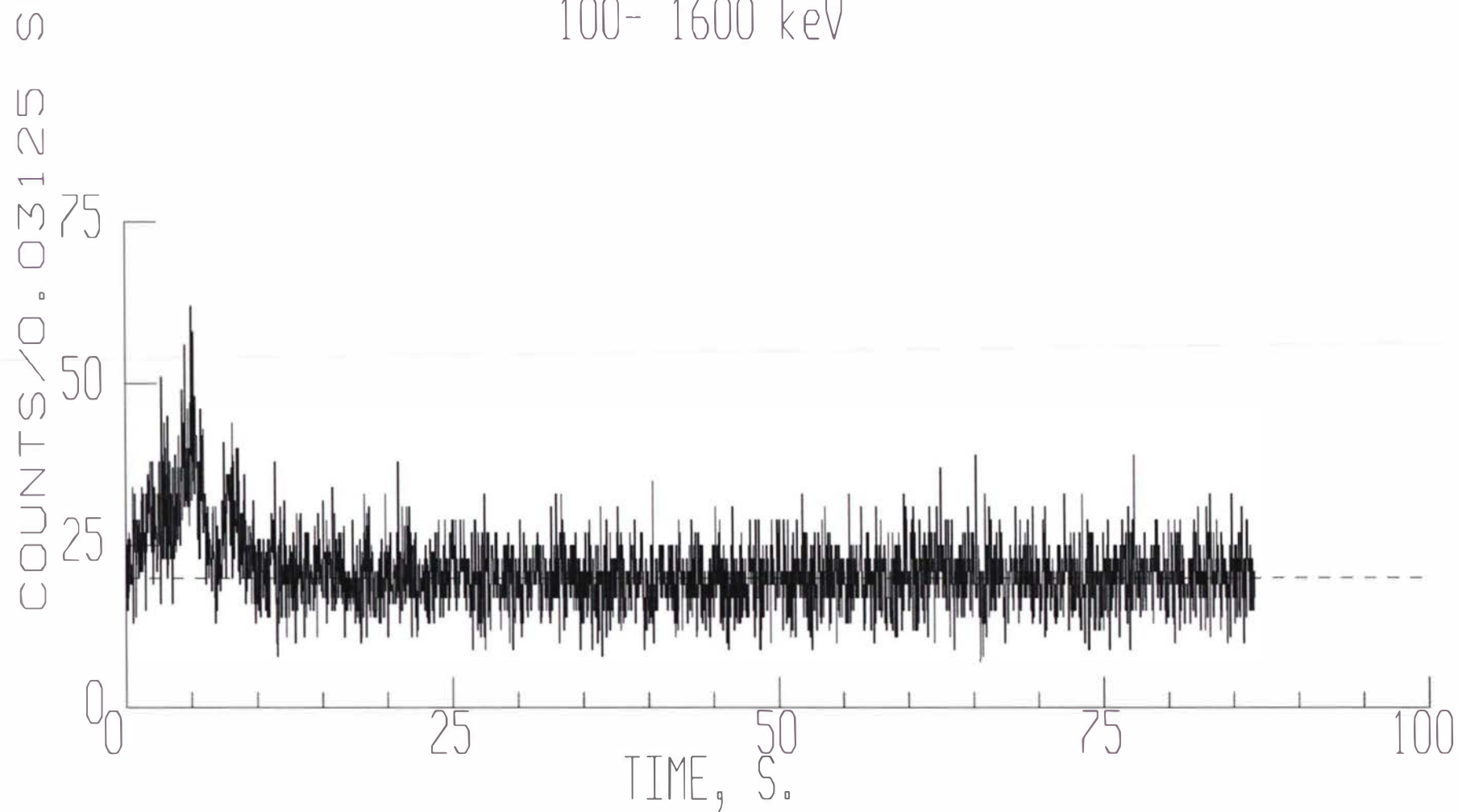




PHEBUS

11/ 9/94 3960.572 s

100- 1600 keV



2 2 / 2 / 9 5

U L Y S S E S R T

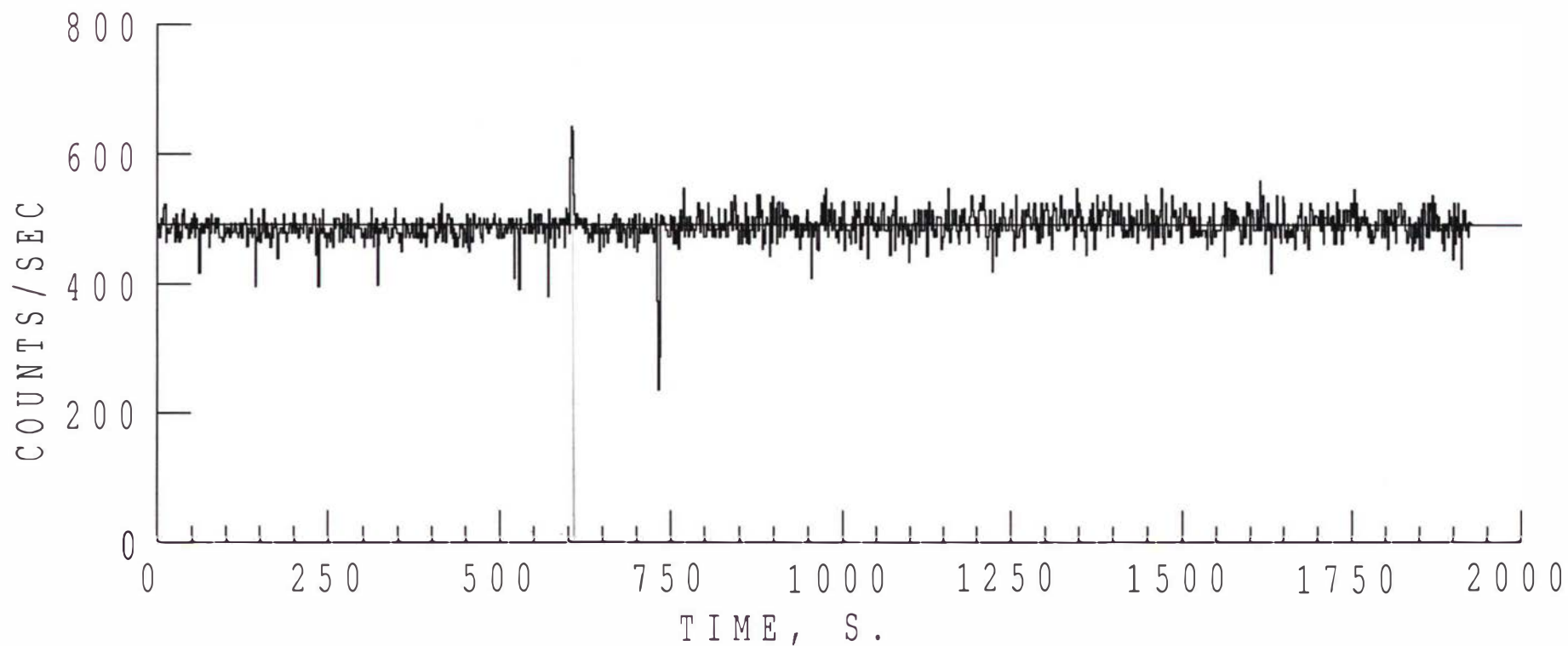
1 1 / 9 / 9 4 2 6 2 8 . 3 1 7 s

0 . 2 5 0 s I N T E R V A L S R E G R O U P E D B Y 6

0 - 0 k e V

W = 10 M = 2

> 4.0 SIGMA FLUCTUATIONS



From DEAL@ssl.msfc.nasa.gov Mon Sep 12 09:05 PDT 1994
Date: Mon, 12 Sep 1994 11:06:24 -0500 (CDT)
From: DEAL@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 03165

TIME: TJD=9606 SECONDS=47171

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
ELECTRON EVENT

From DEAL@ssl.msfc.nasa.gov Mon Sep 12 09:26 PDT 1994
Date: Mon, 12 Sep 1994 11:27:36 -0500 (CDT)
From: DEAL@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3166

BATSEARCH PROGRAM

BATSE BURST # 3166
EVENT OF 1994 SEP 11 DAY OF YEAR=254
EVENT CROSSING TIME AT BATSE : 59260. S. OR 16:27:40.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 35.000 -59.000
BATSE PEAK COUNTING RATE: 2900 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 11/ 9/ 94 IS:
RA= 150.055 DEC= -51.575 DIST= 2.664 AU
BATSE-ULYSSES DISTANCE = 398511079. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=122.41 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -712.46 SECS.
CROSSING TIME AT ULYSSES IS 58548. S. OR 16:15:47 +/- 234.02 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 11/ 9/ 94 IS:
RA= 107.442 DEC= 23.059 DIST= 1.706 AU
MARS-BATSE DISTANCE = 255238048. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 78.88 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 164.13 SECS.
CROSSING TIME AT MARS IS 59424. S. OR 16:30:24 +/- 147.53 SECONDS

No

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3166	940911	9606	59260	2900	035	-59

BATSE BURST TRIGGER

NO.: 03166

TIME: TJD=9606 SECONDS=59260

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=053.0 AZIMUTH=206.0 ERROR= DEGREES

COMMENTS:

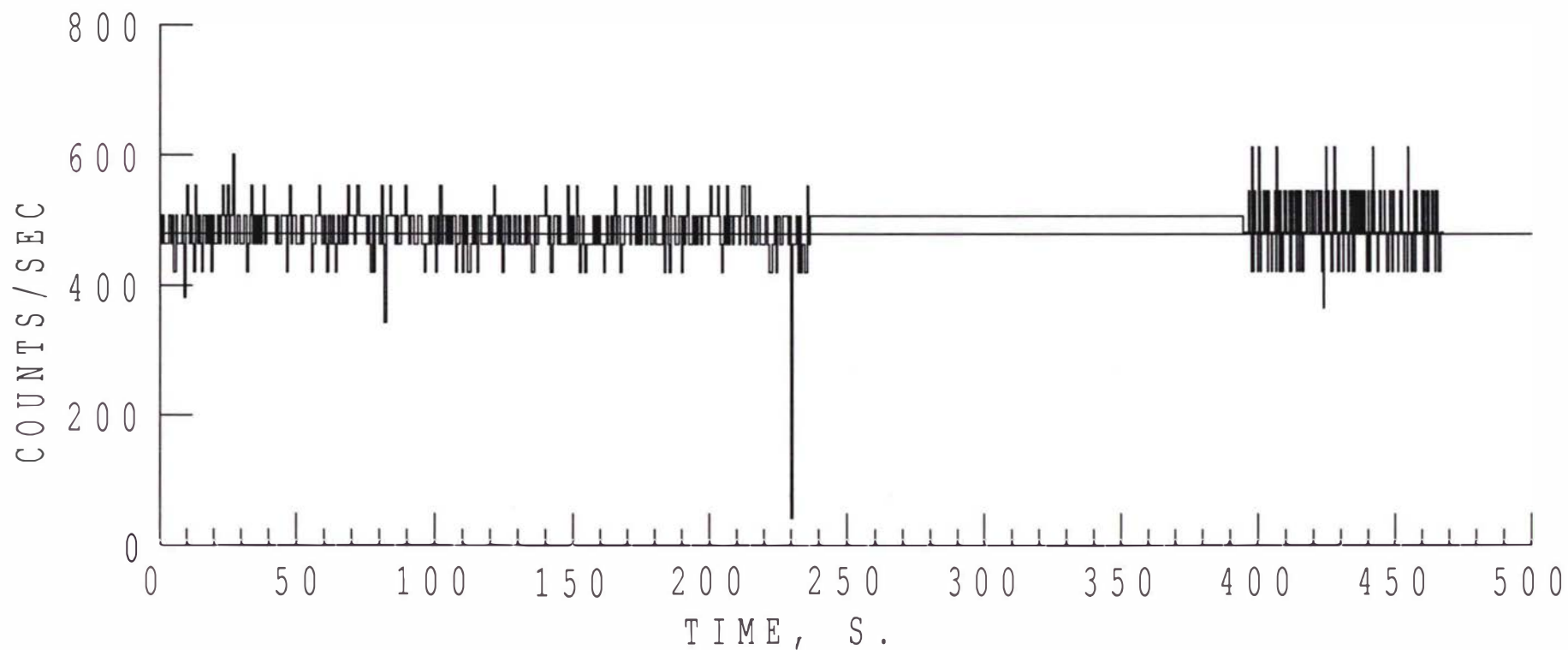
BURST LASTING APPROX. 5S. NOT VISIBLE ABOVE 300KEV.

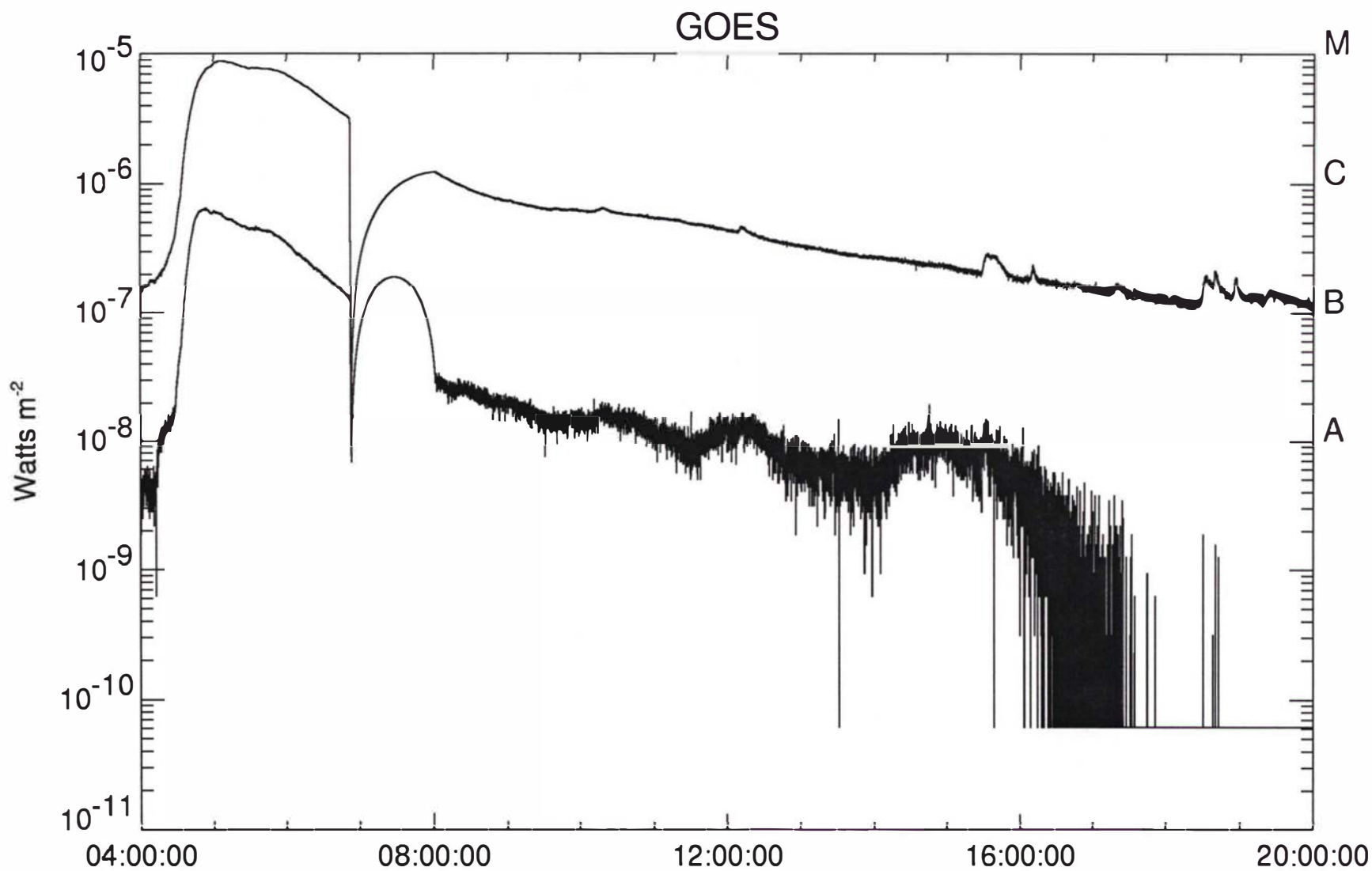
12 / 9 / 94

ULYSSES RT
11 / 9 / 94 58320.246 s
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





Data Start: 94/09/11, 0000:01

Plot created: 94/09/12, 1347

Channel

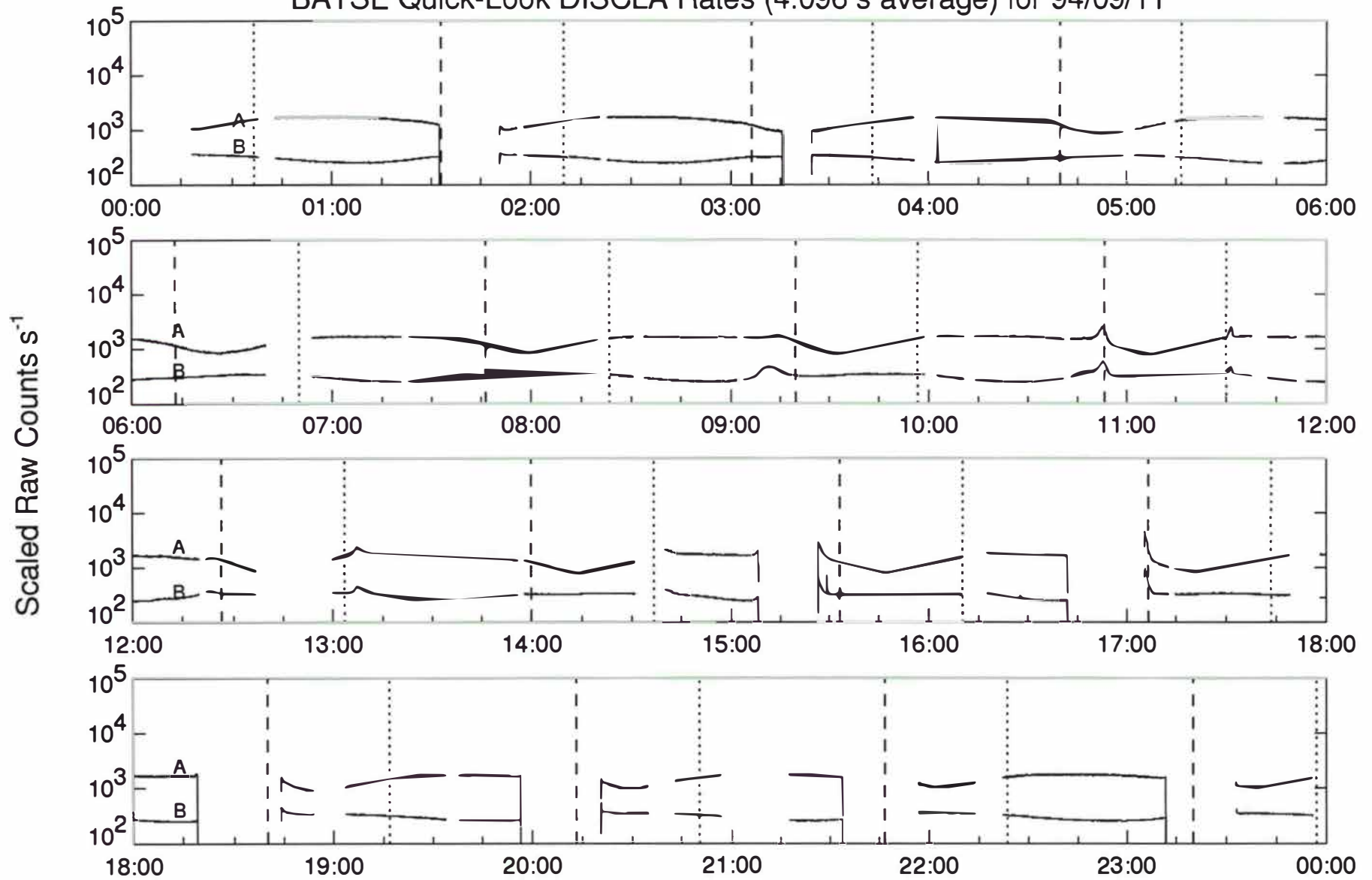
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/11

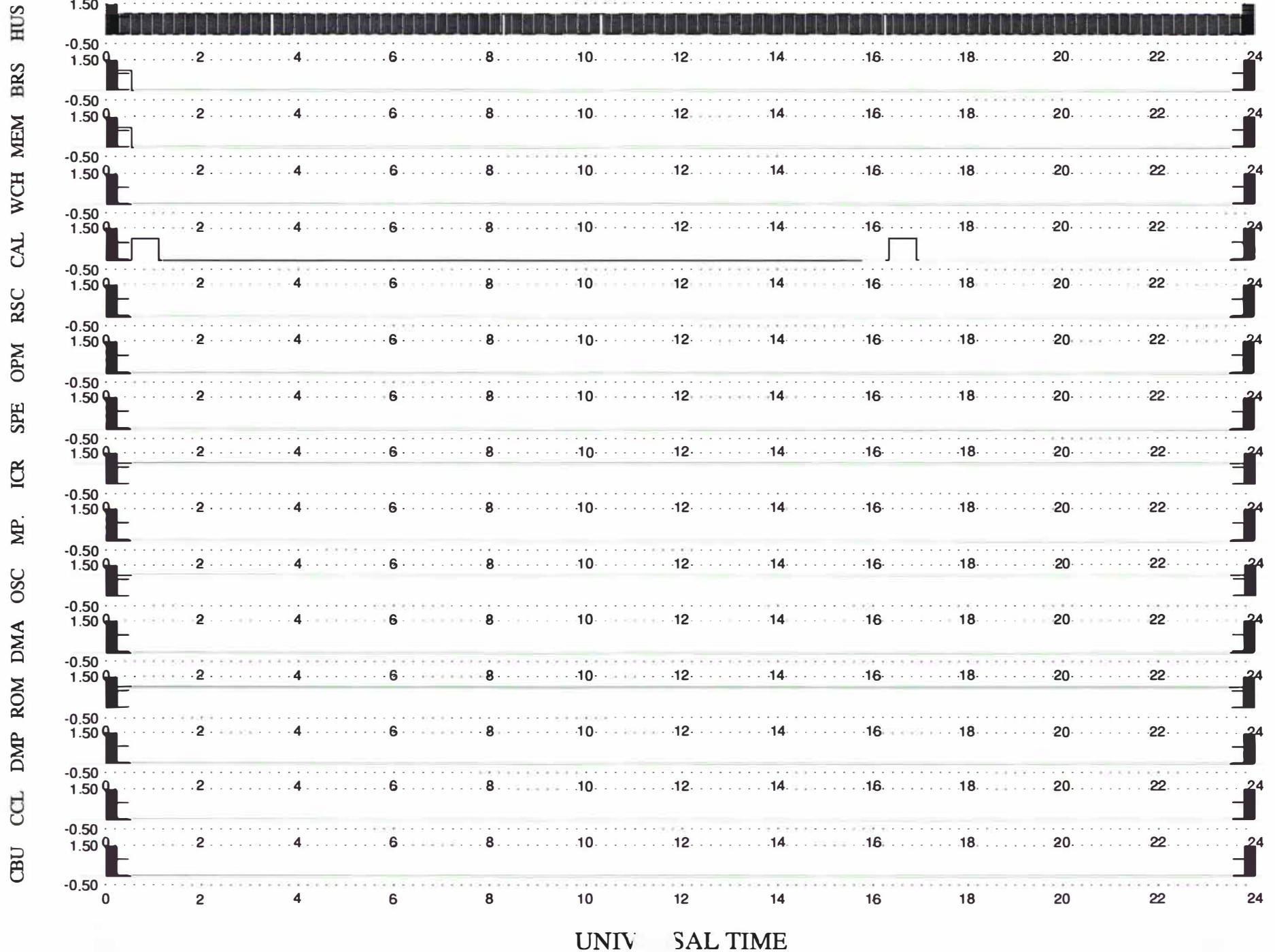


Current Time: 94/09/12, 1342 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

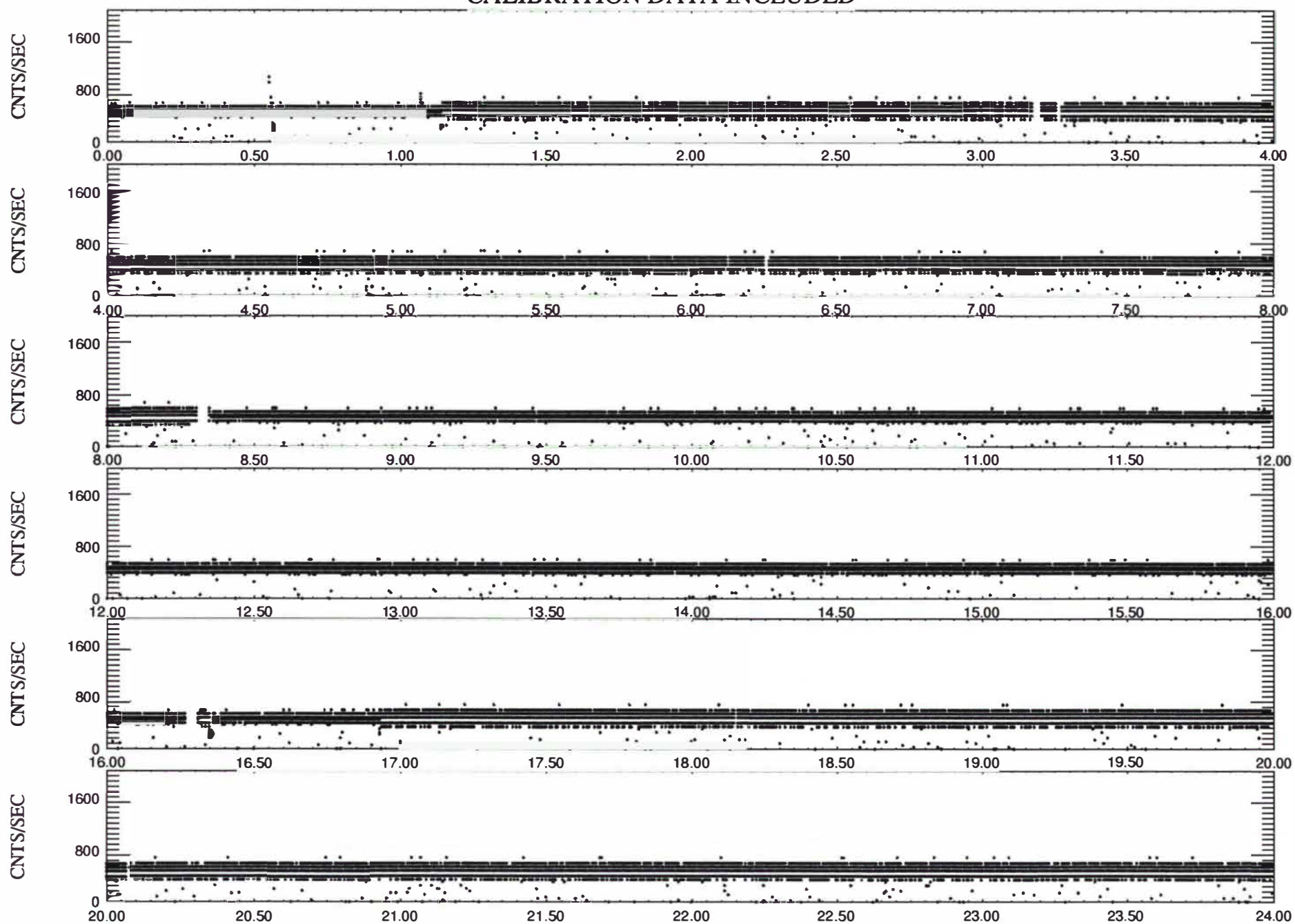
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

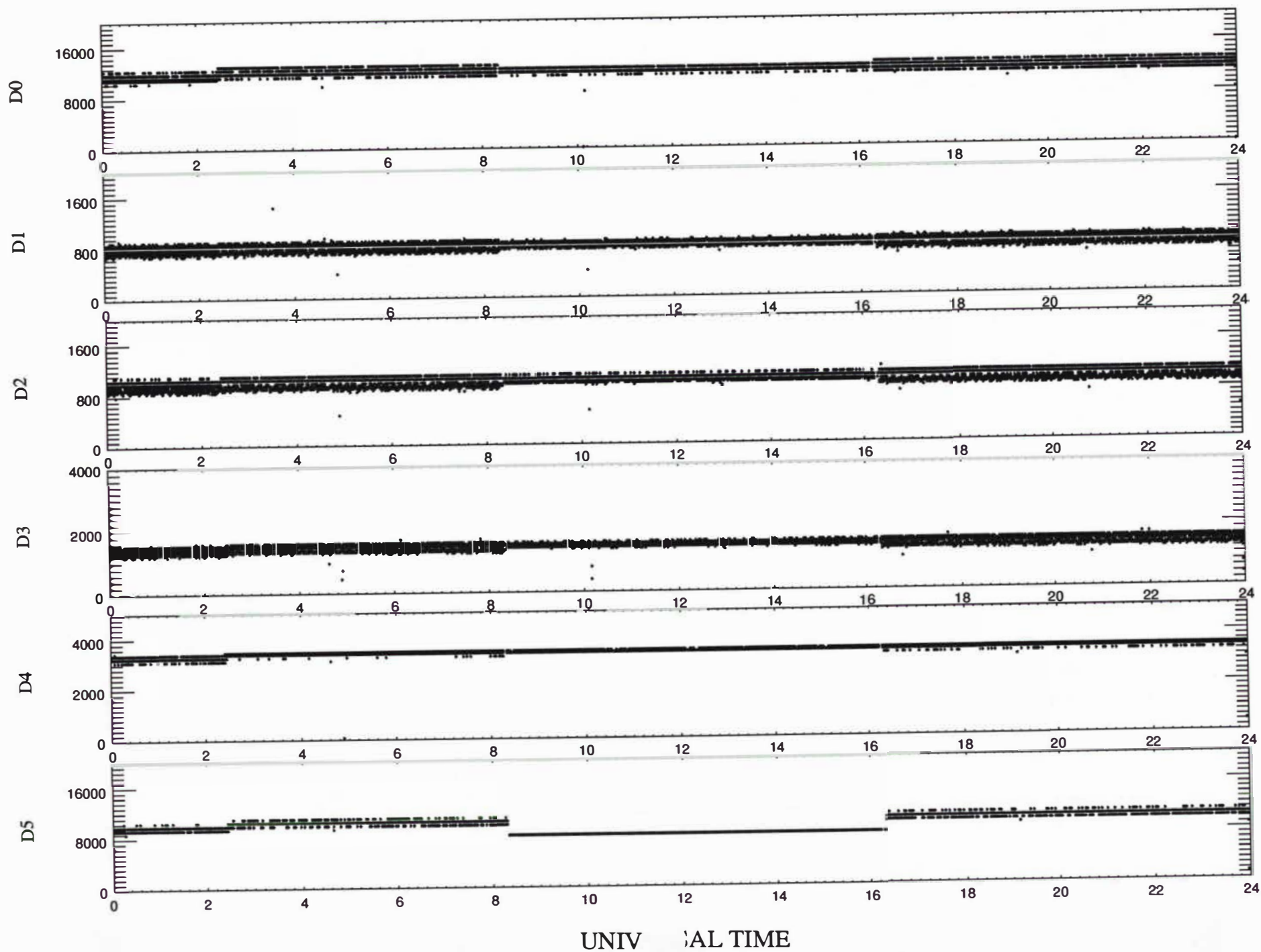
NO BURST (13)

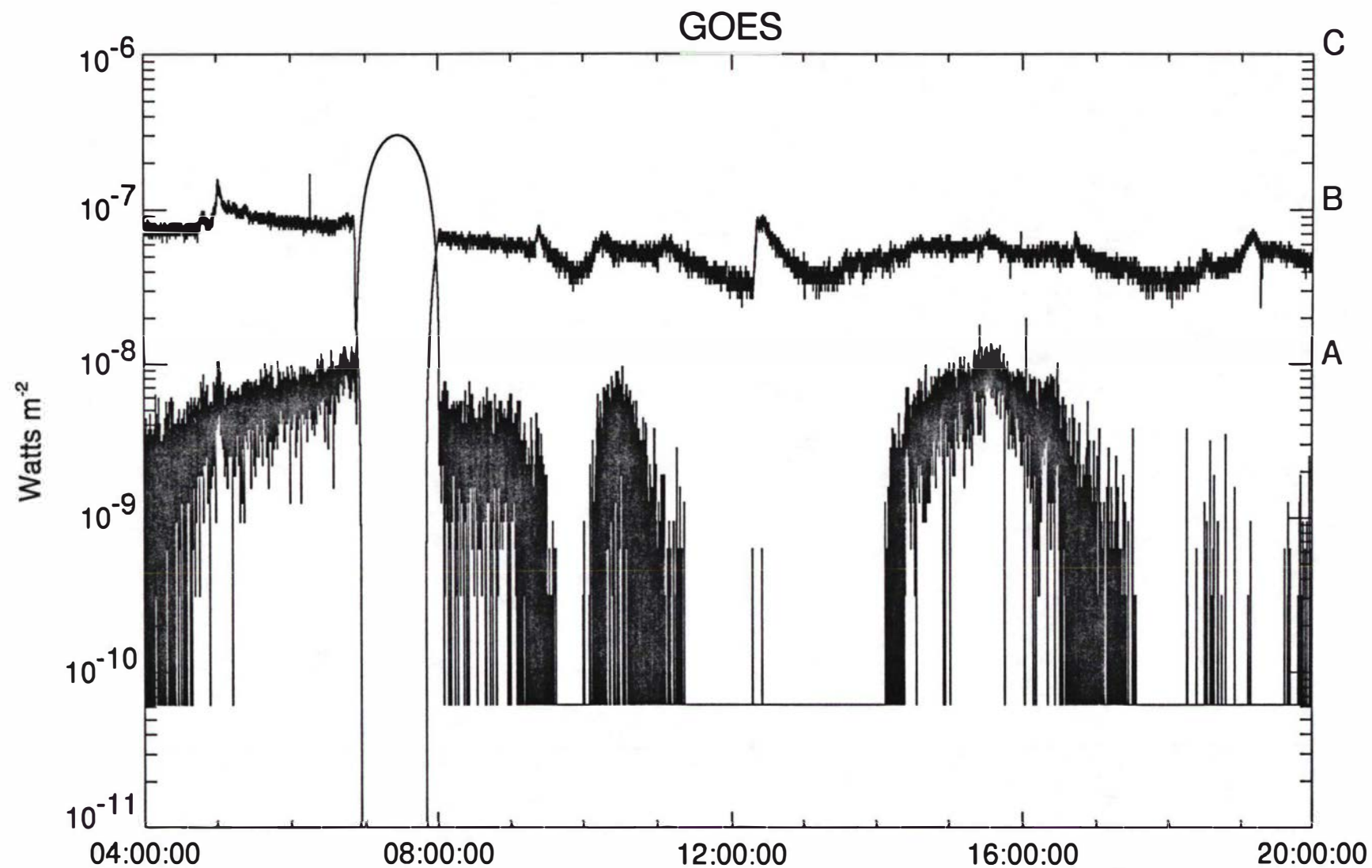


CALIBRATION DATA INCLUDED



UNIV SAL TIME





Data Start: 94/09/12, 0000:01

Plot created: 94/09/13, 1533

Channel

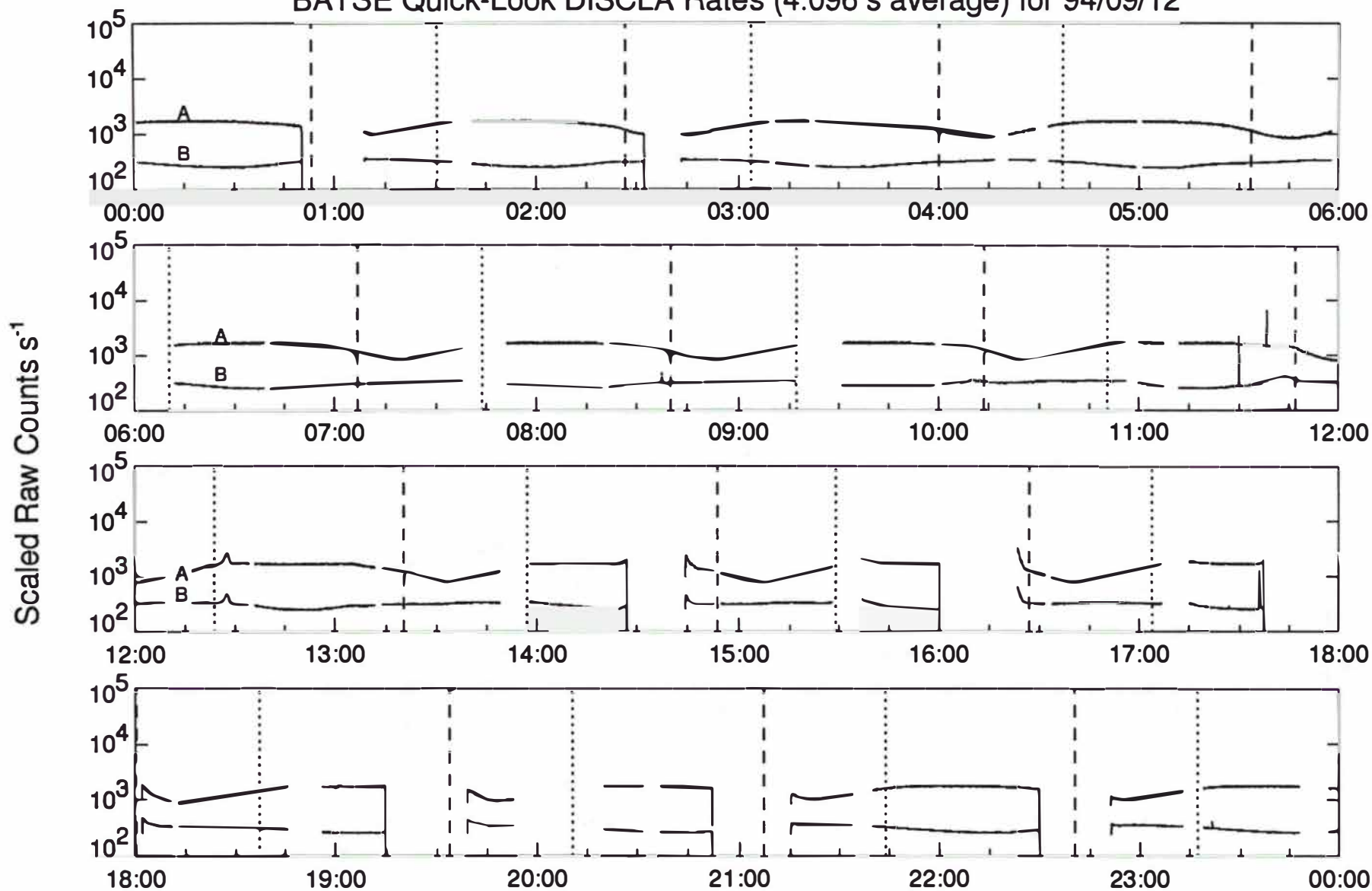
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/12

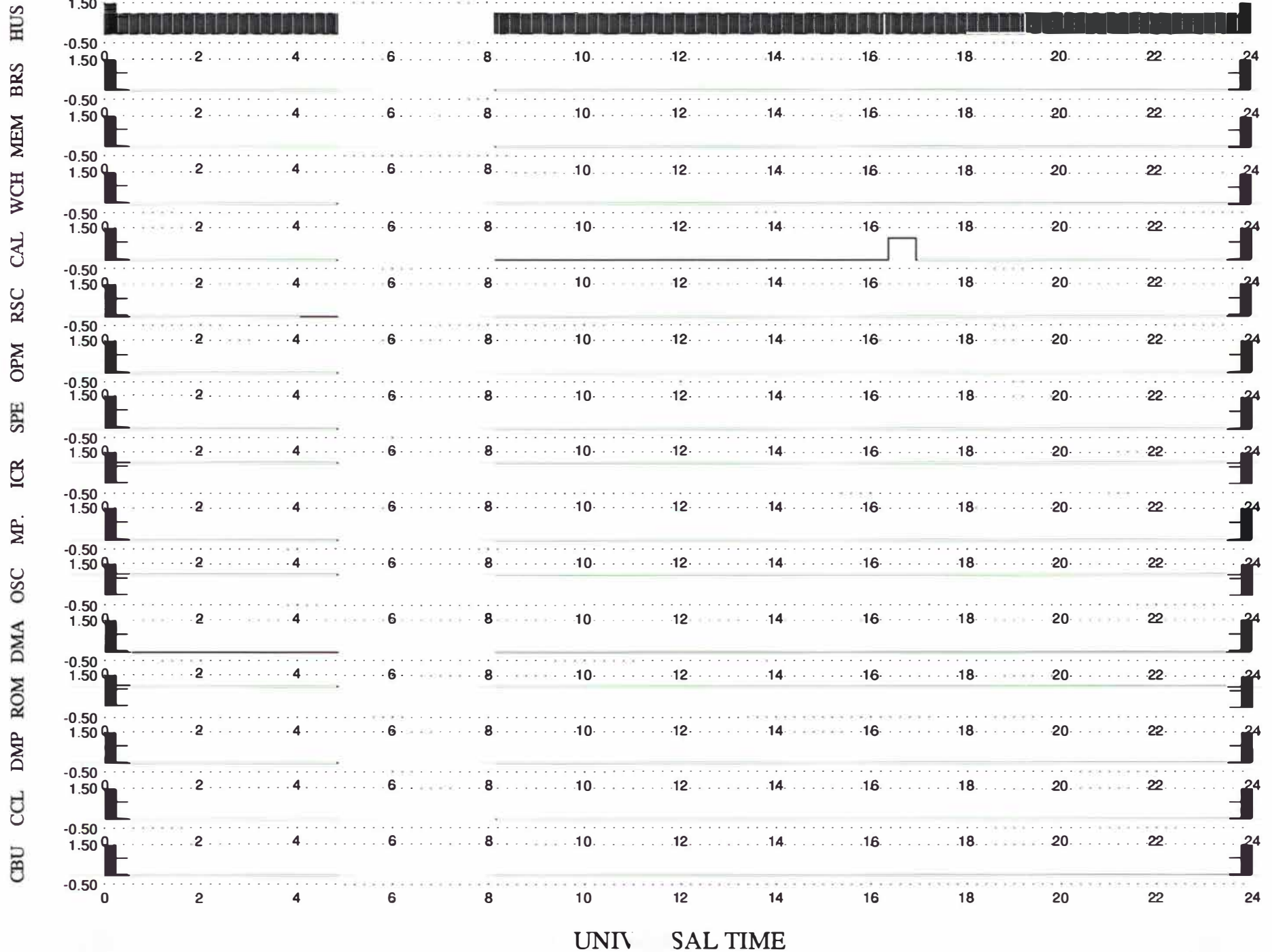


Current Time: 94/09/13, 2105 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

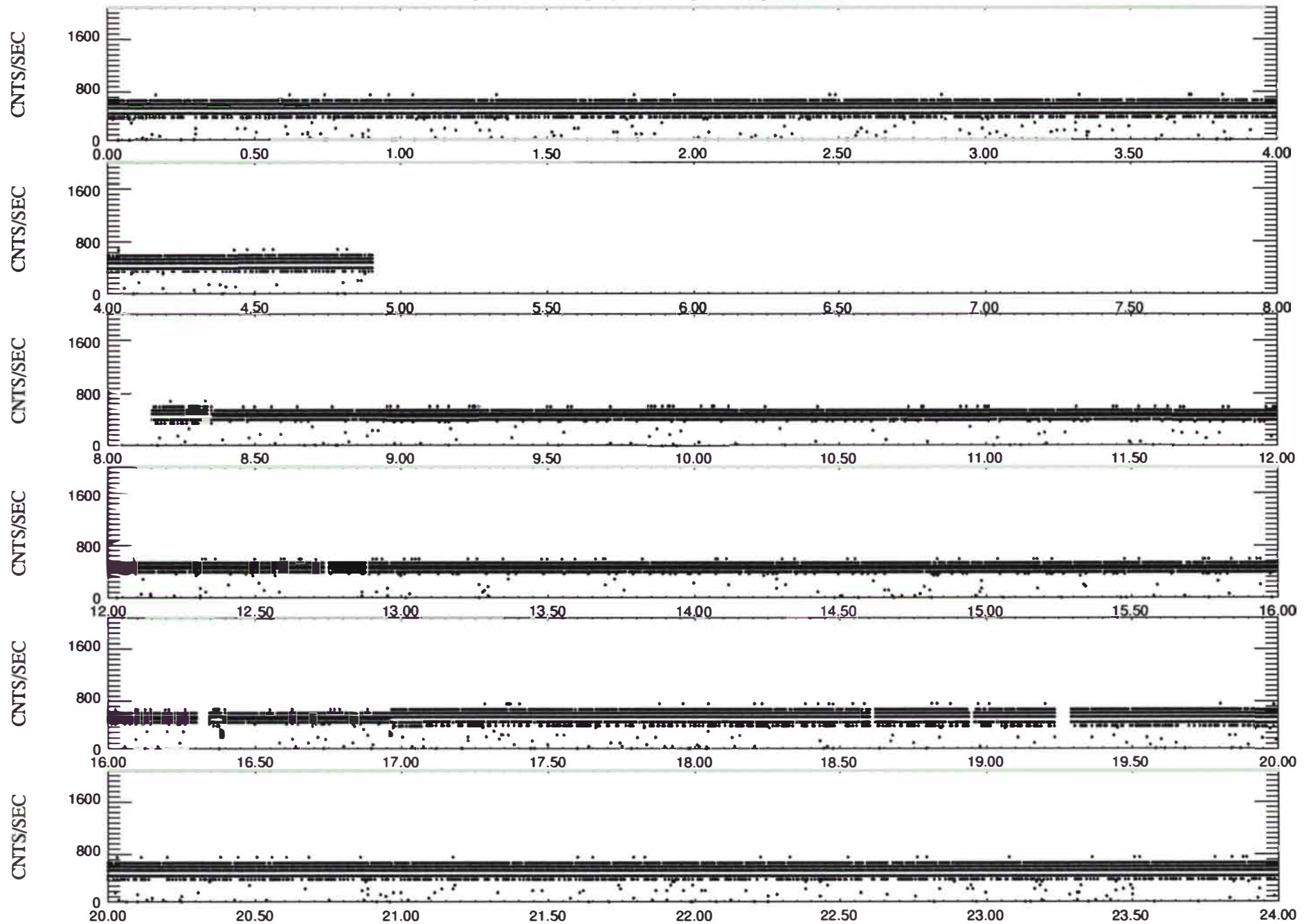
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

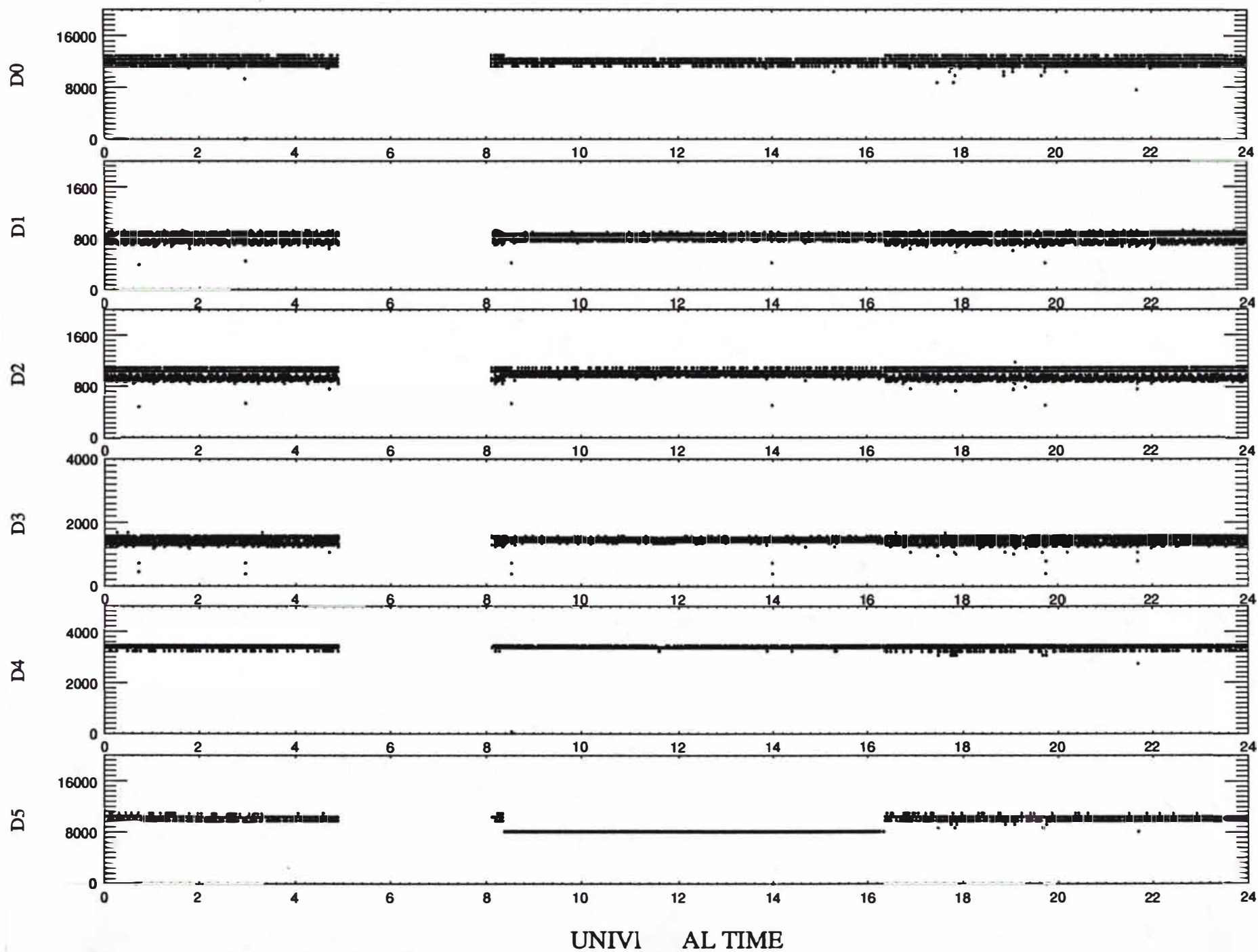
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From HAGEDON@fender.msfc.nasa.gov Wed Sep 14 14:04 PDT 1994
Date: Wed, 14 Sep 1994 16:05:55 -0500 (CDT)
From: HAGEDON@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3167

BATSEARCH PROGRAM

BATSE BURST # 3167
EVENT OF 1994 SEP 13 DAY OF YEAR=256
EVENT CROSSING TIME AT BATSE : 53000. S. OR 14:43:20.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 170.000 34.000
BATSE PEAK COUNTING RATE: 1700 C/S

ND

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 13/ 9/ 94 IS:
RA= 151.006 DEC= -52.229 DIST= 2.648 AU
BATSE-ULYSSES DISTANCE = 396100246. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 92.19 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -50.38 SECS.
CROSSING TIME AT ULYSSES IS 52950. S. OR 14:42:29 +/- 278.46 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 13/ 9/ 94 IS:
RA= 108.767 DEC= 22.941 DIST= 1.694 AU
MARS-BATSE DISTANCE = 253419920. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=125.83 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -494.83 SECS.
CROSSING TIME AT MARS IS 52505. S. OR 14:35:05 +/- 111.47 SECONDS

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3167	940913	9608	53000	1700	170	+34

BATSE BURST TRIGGER

NO.: 3167

TIME: TJD=9608 SECONDS=53000

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=87 AZIMUTH=33 ERROR= DEGREES

COMMENTS:

BURST. WEAK SINGLE PULSE. DUR.~20 SEC. NOT VISIBLE ABOVE 300 KEV.

3 / 2 / 95

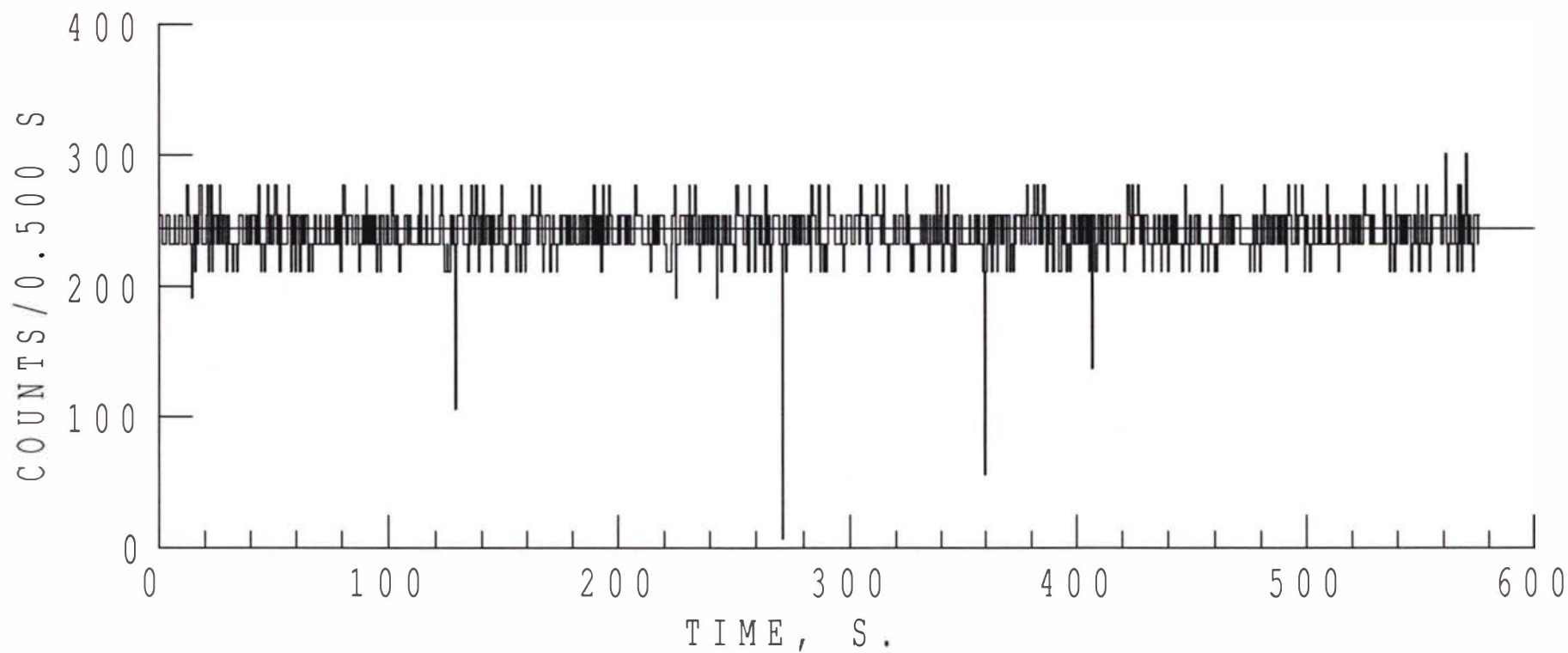
ULYSSES RT

13 / 9 / 94 52668.031 s

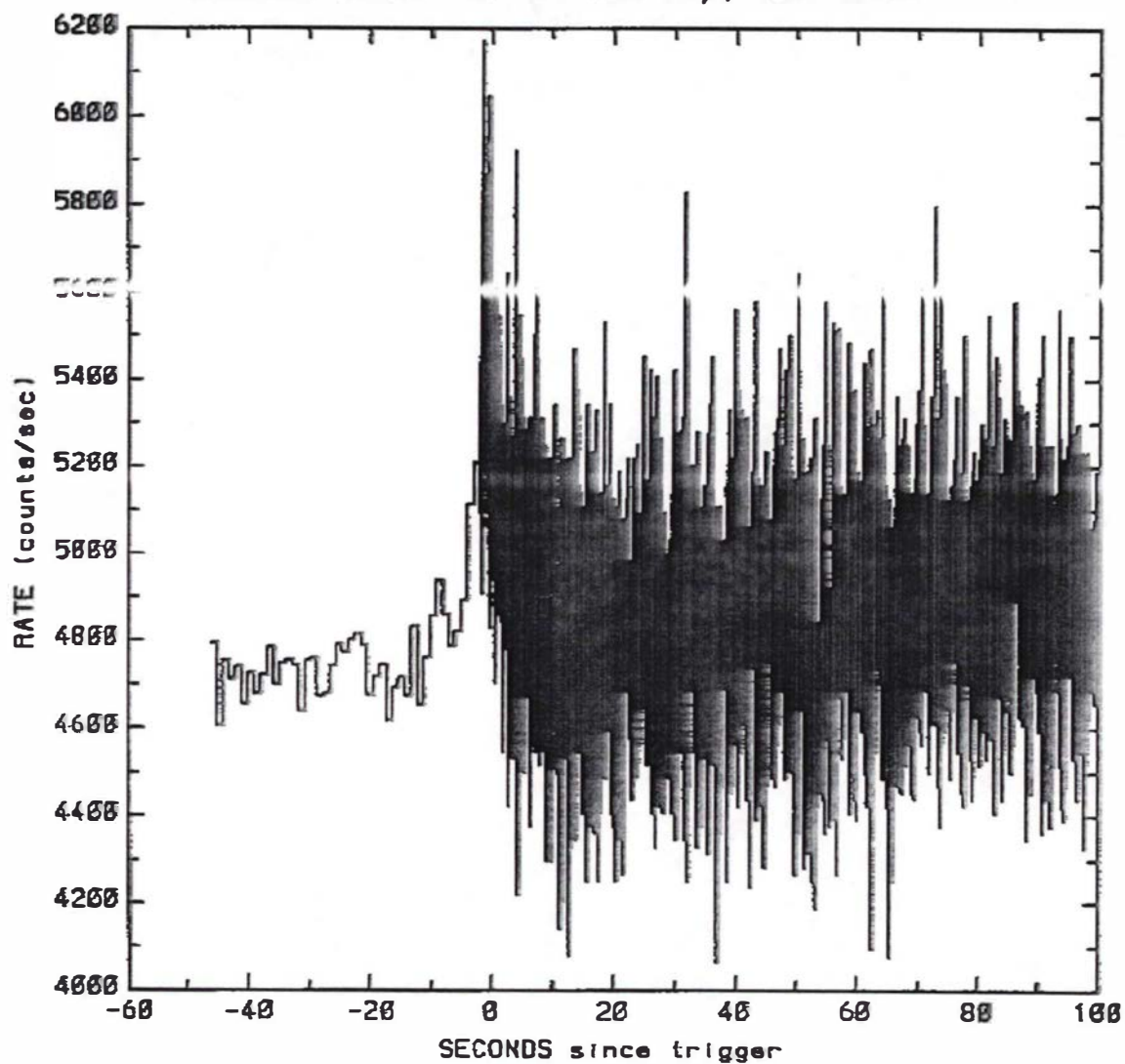
0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



DISCSC Data for K. Hurley, No. 3167



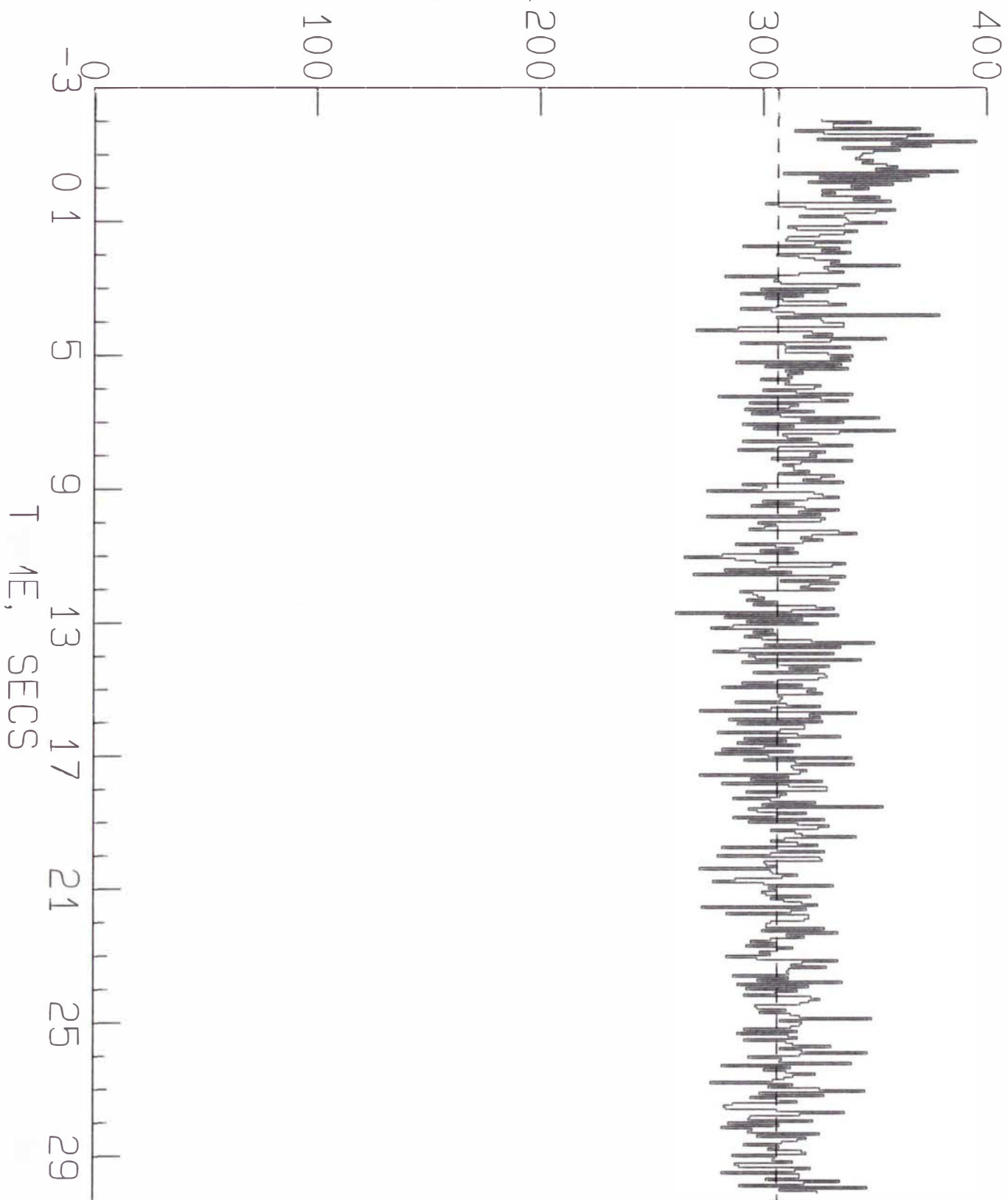
BATSE

13/09/94

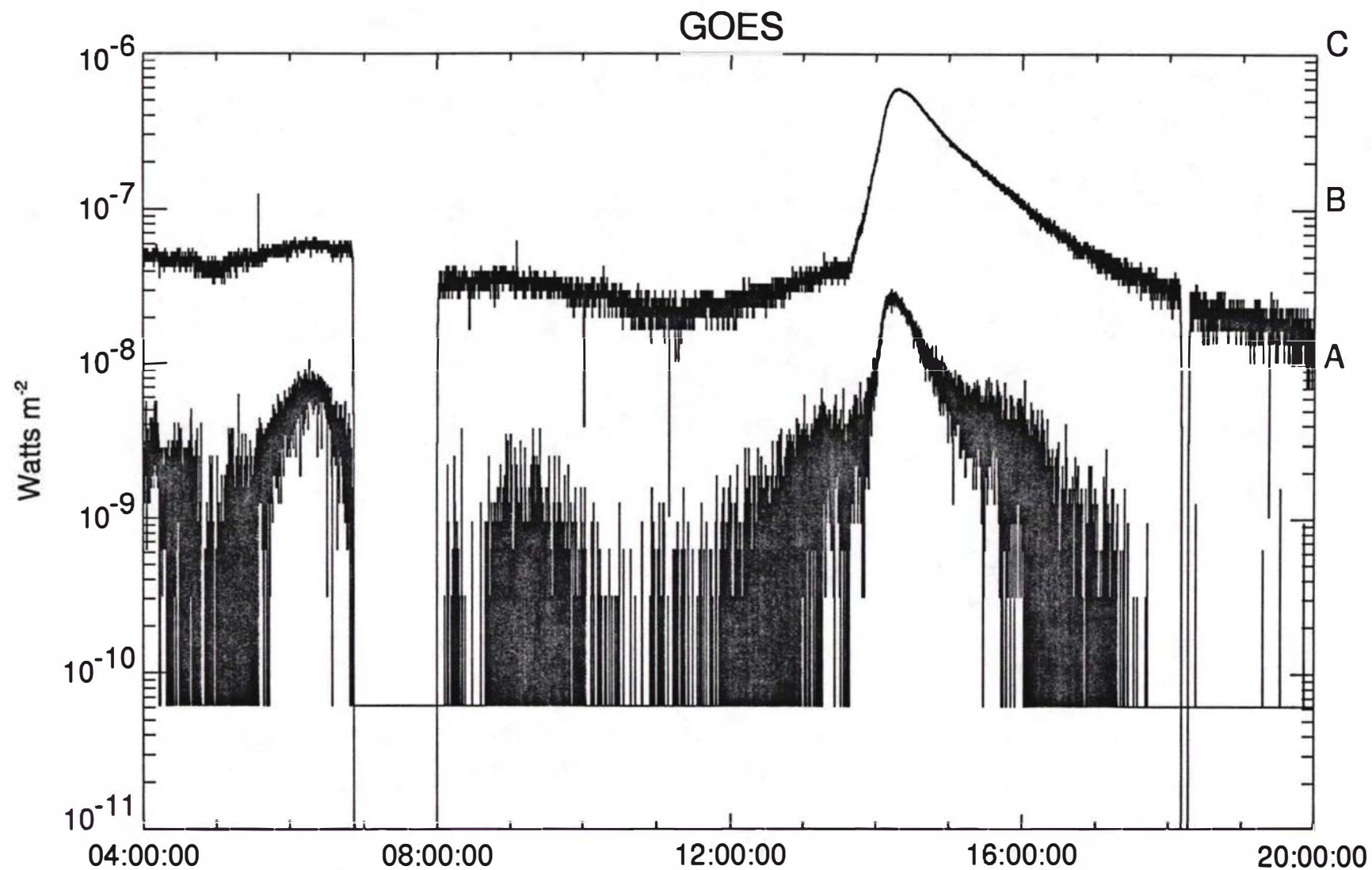
53000.881

25- 100 keV

COUNTS/ .064 S



15/10/94



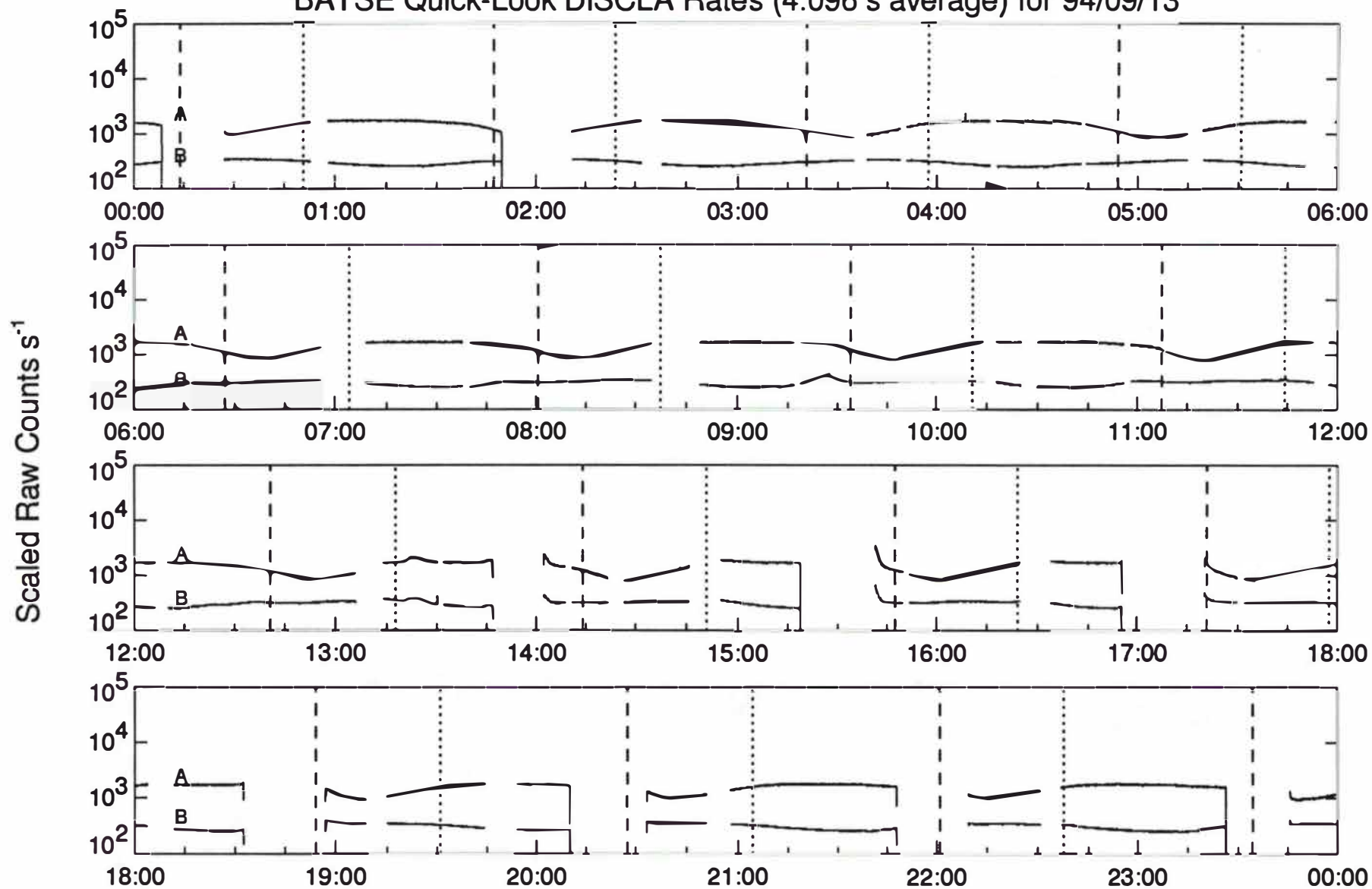
Data Start: 94/09/13, 0000:02

Plot created: 94/09/14, 1107

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/13



Current Time: 94/09/14, 1909 EDT

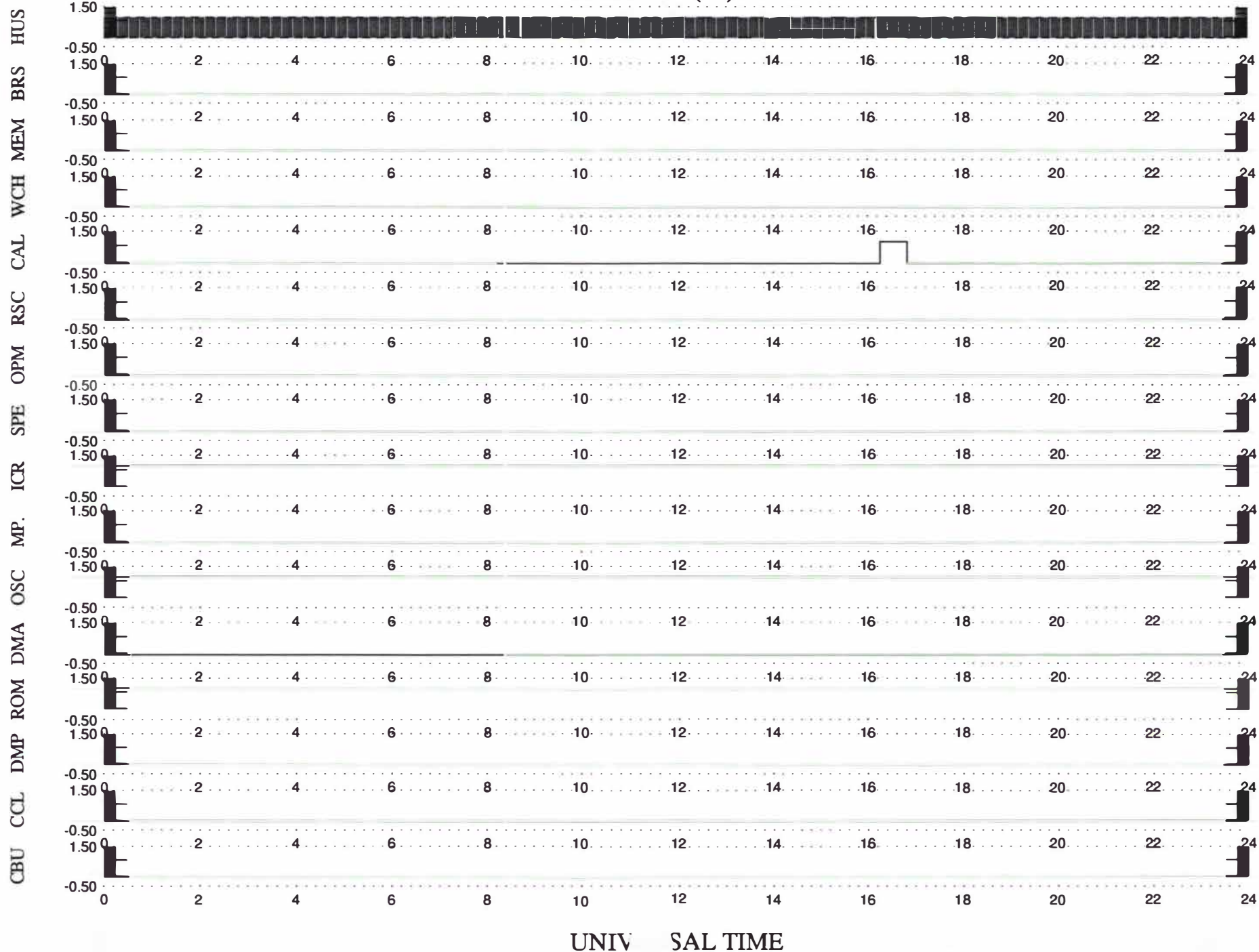
A: Channel 0 Most Sunward LAD

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

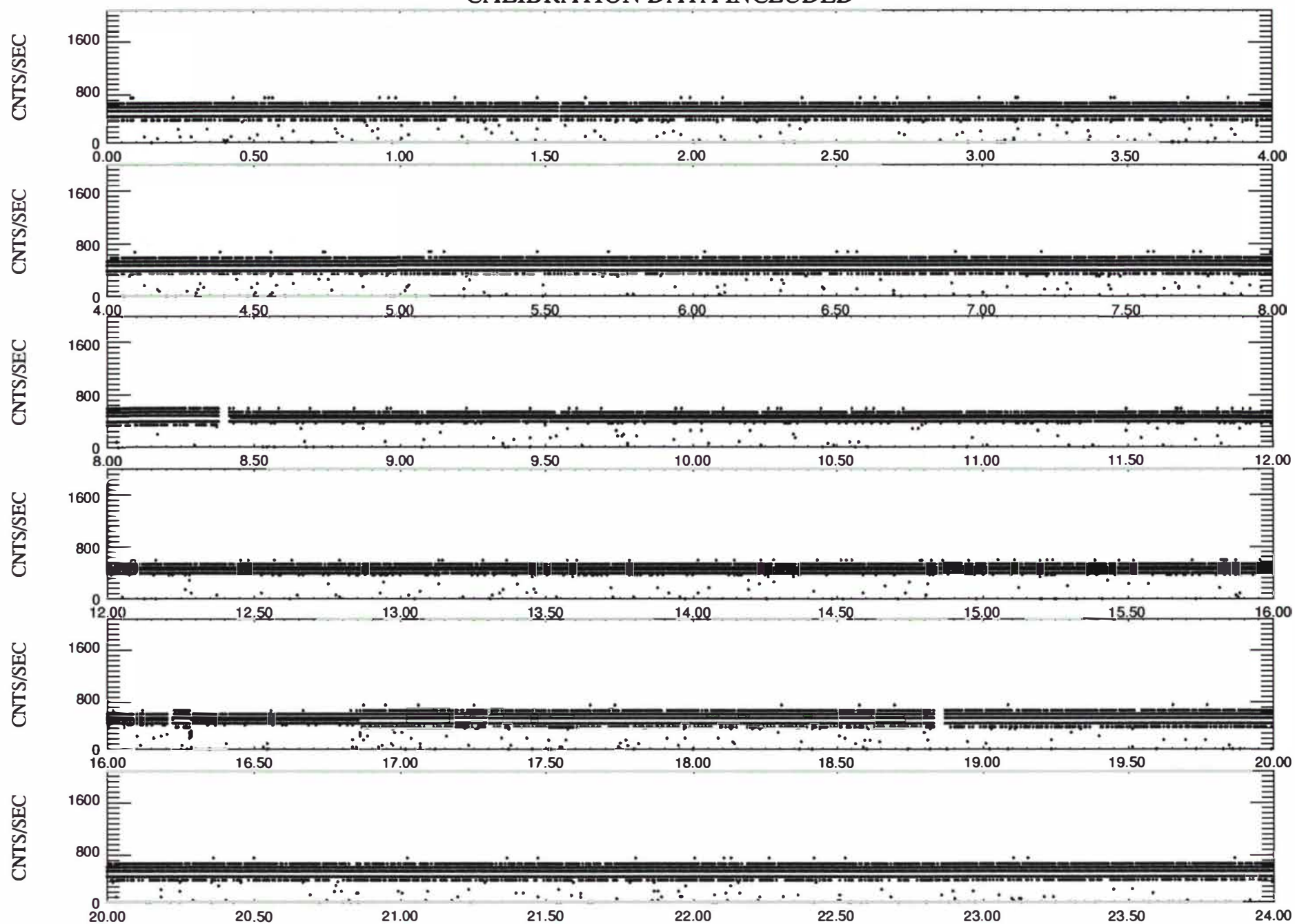
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

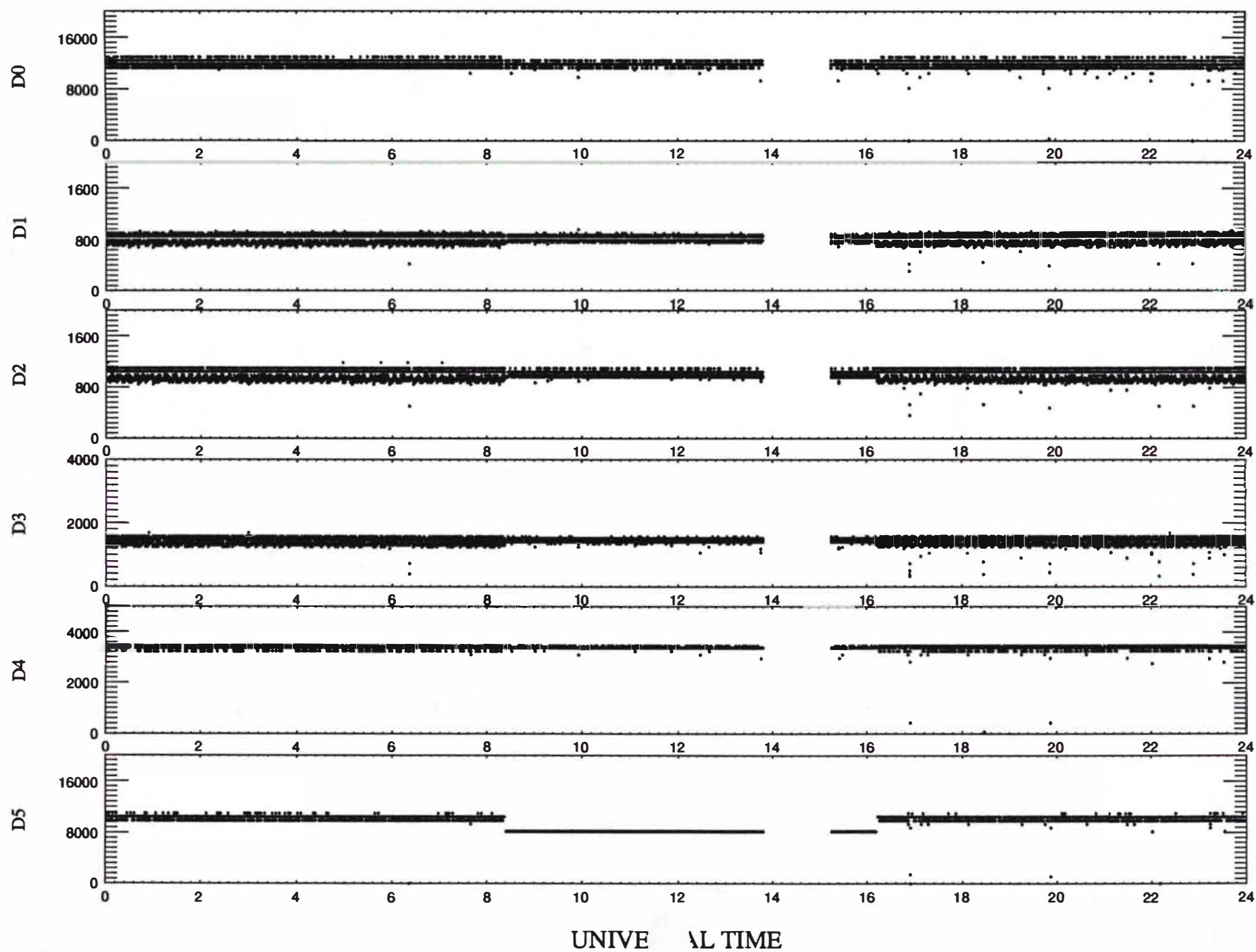
NO BURST (13)

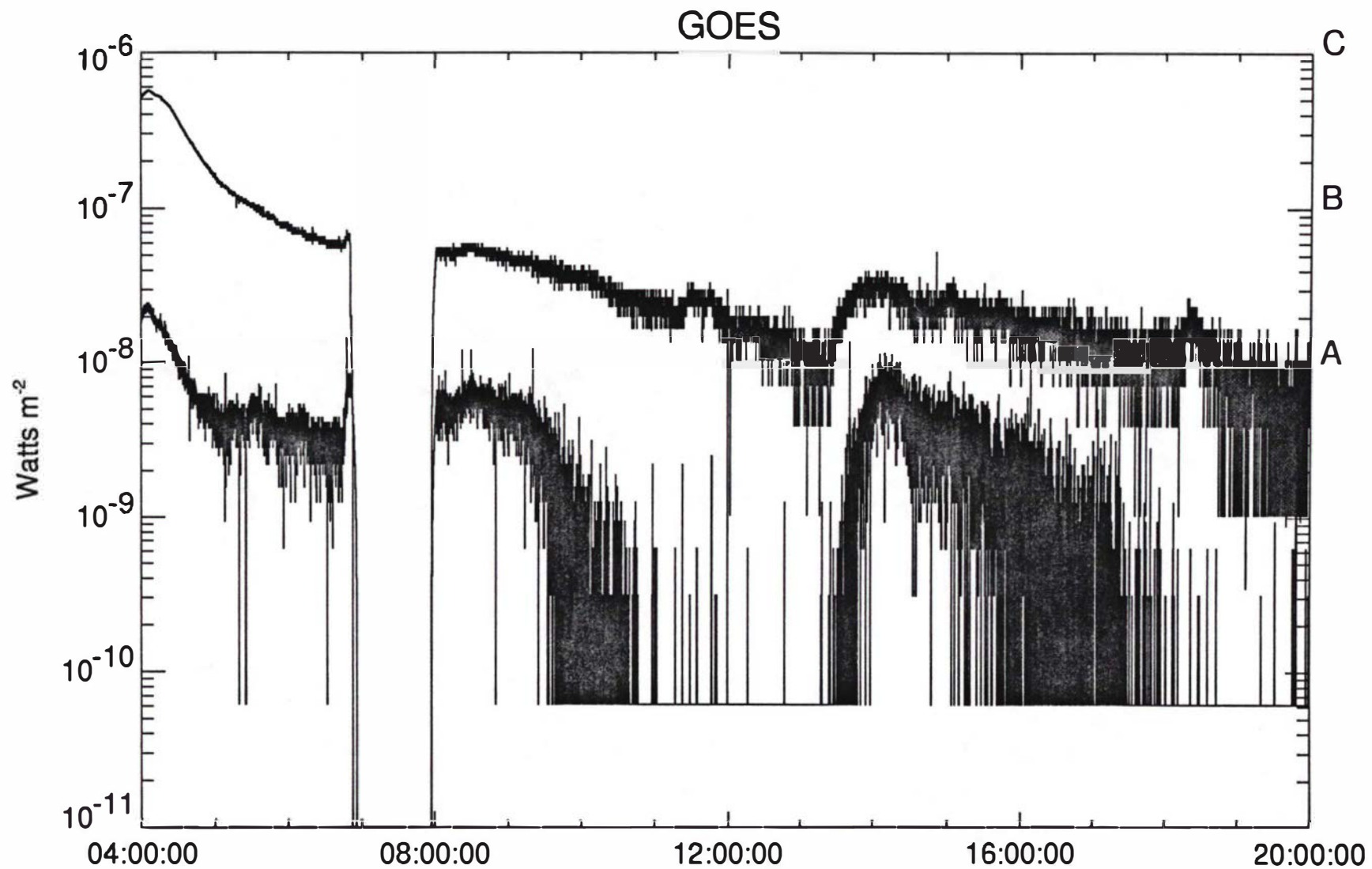


CALIBRATION DATA INCLUDED



UNIV SAL TIME





Data Start: 94/09/14, 0000:00

Plot created: 94/09/15, 1210

Channel

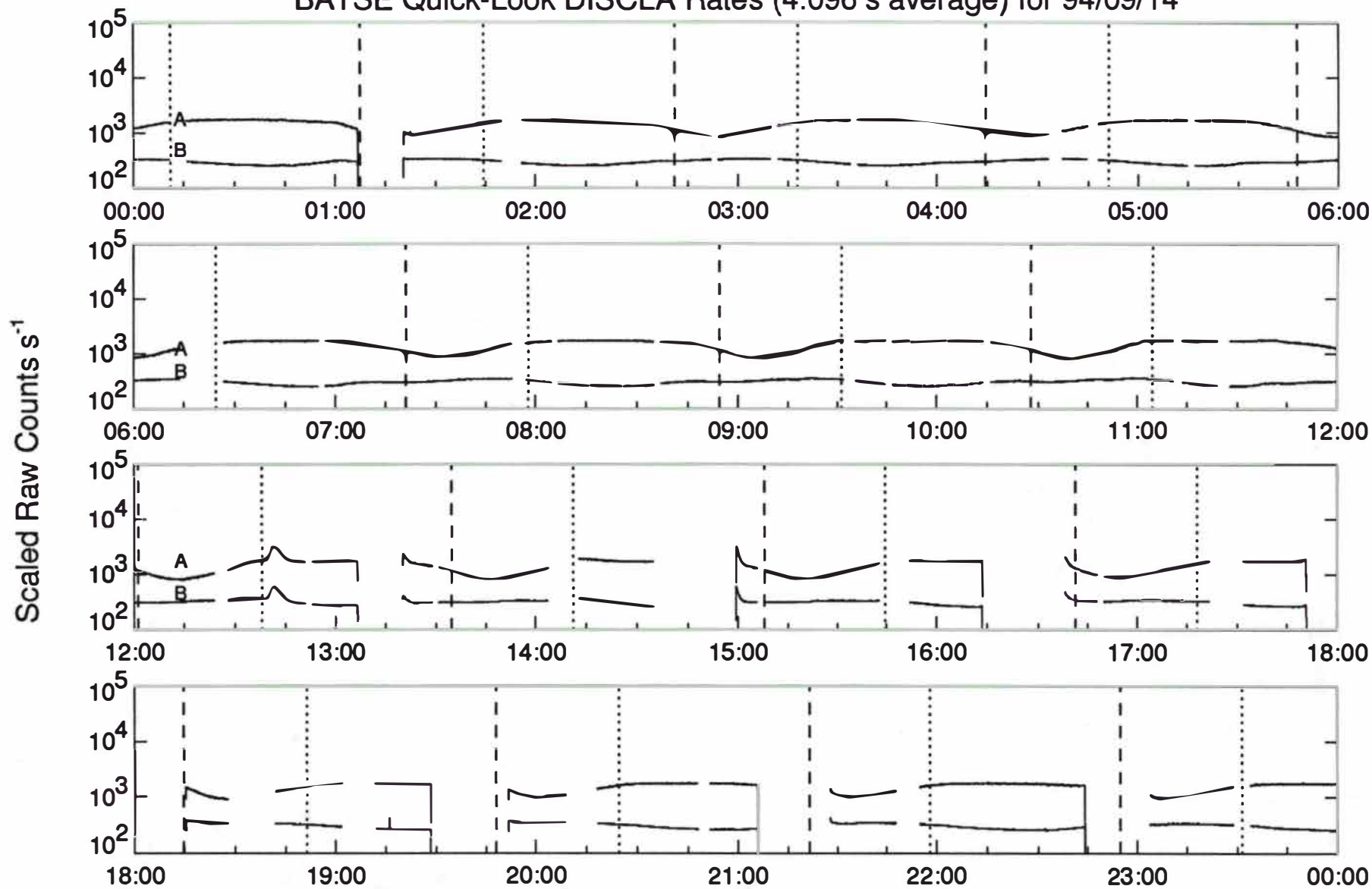
1 (1.0 - 8.0 Angstroms)

Background not subtracted

2 (0.5 - 4.0 Angstroms)

Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/14

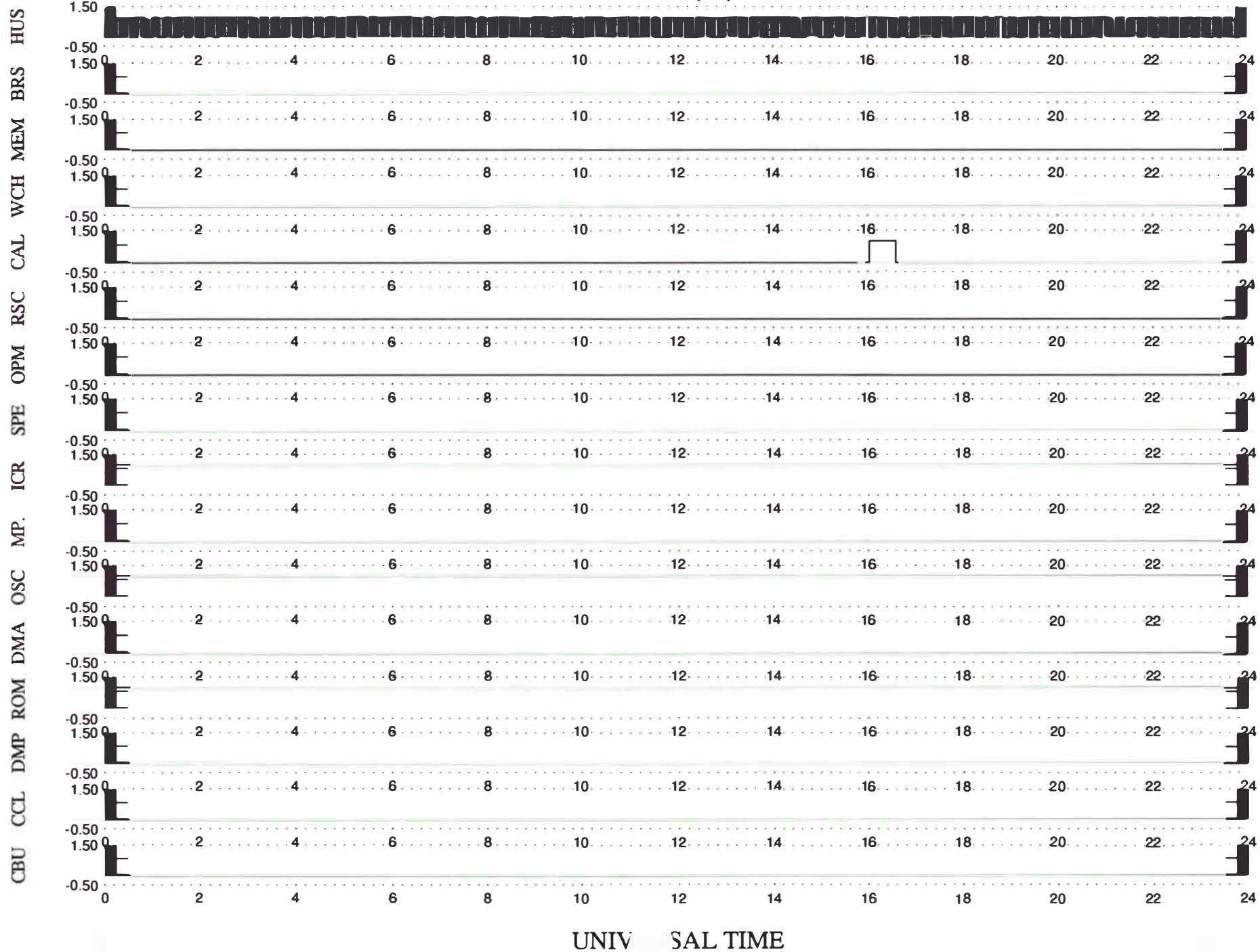


Current Time: 94/09/15, 1211 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

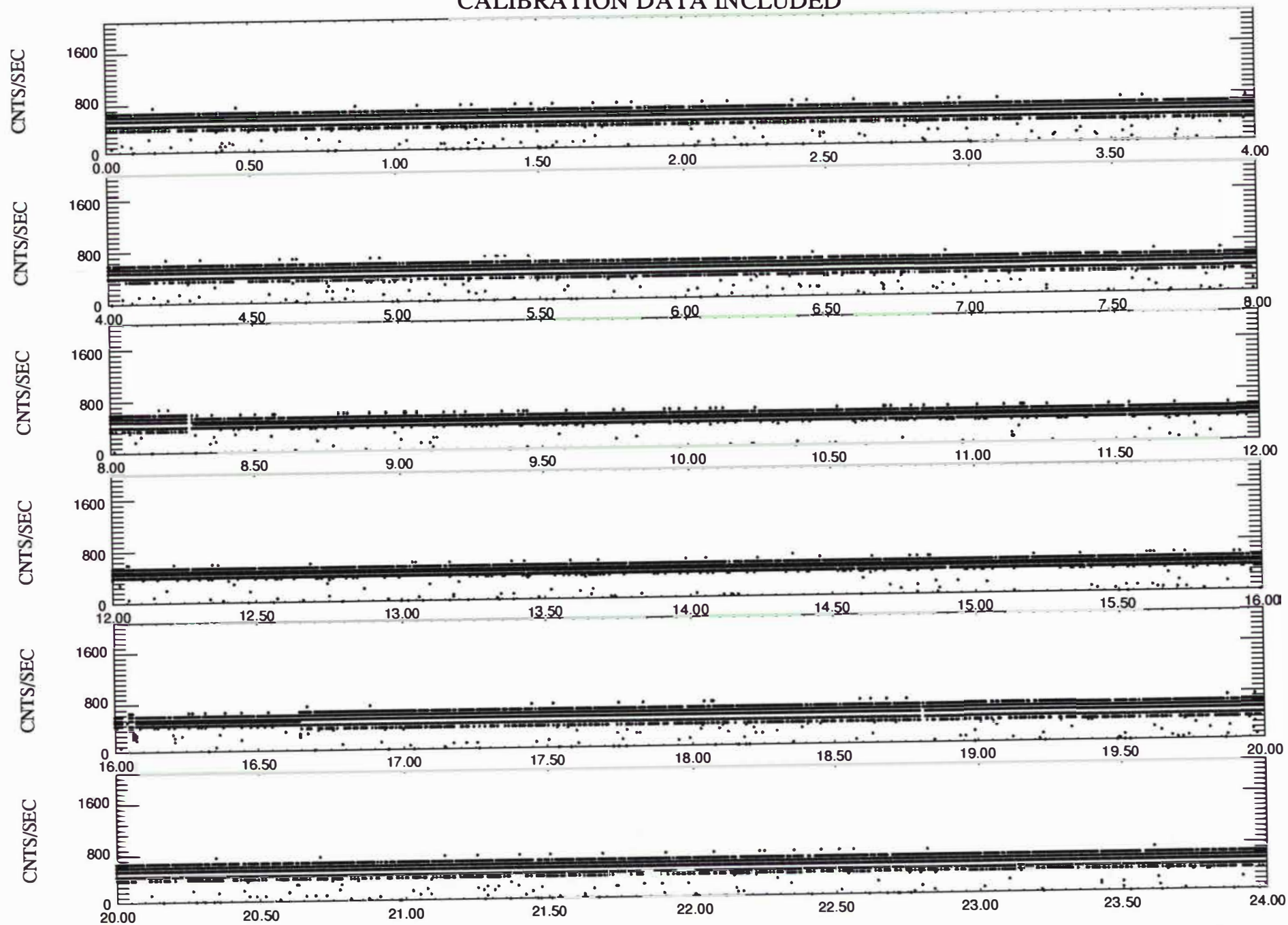
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

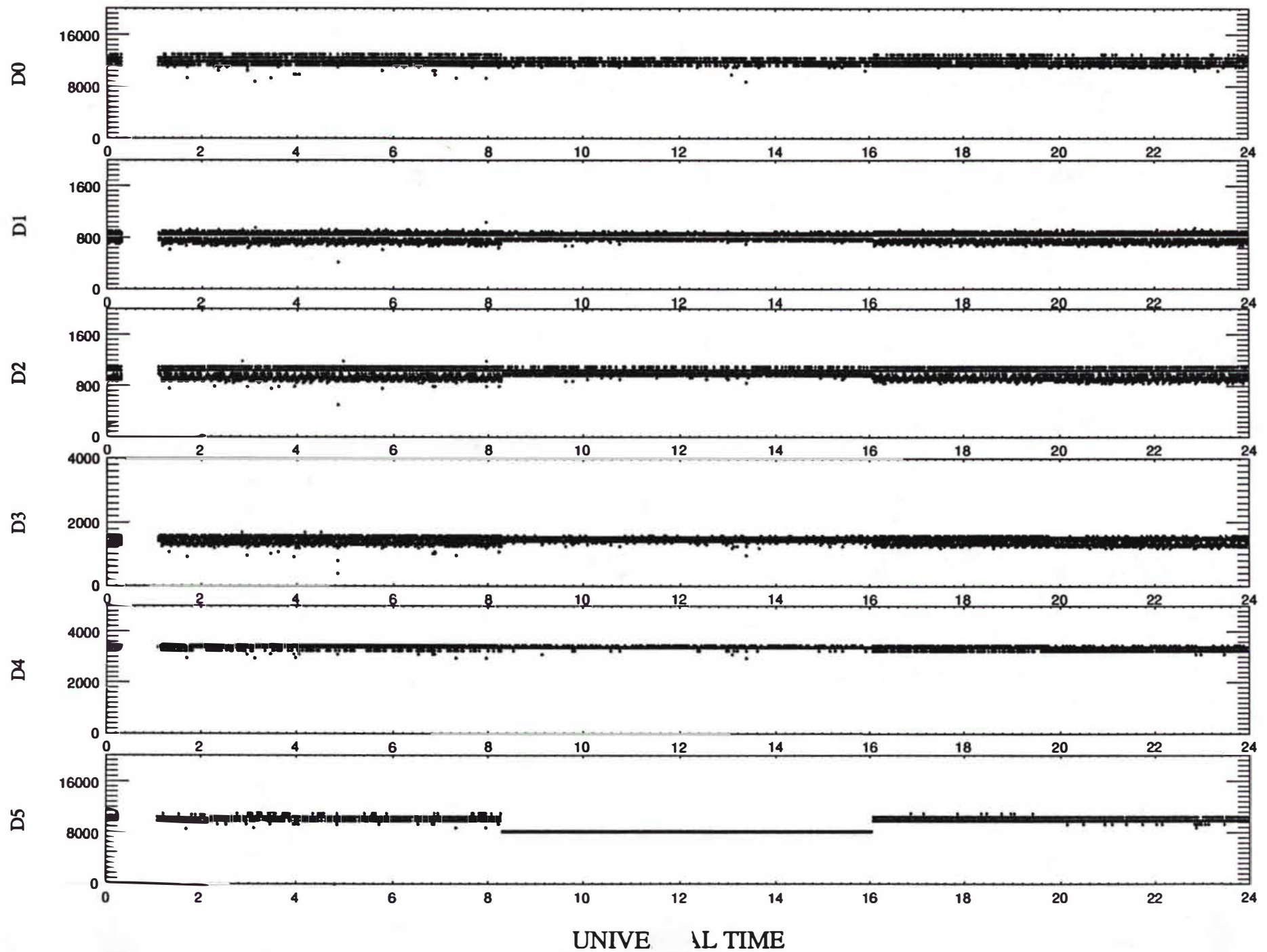
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From MALLOZZI@ssl.msfc.nasa.gov Fri Sep 16 11:58 PDT 1994
Date: Fri, 16 Sep 1994 13:59:46 -0500 (CDT)
From: MALLOZZI@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3168

BATSEARCH PROGRAM

BATSE BURST # 3168
EVENT OF 1994 SEP 15 DAY OF YEAR=258
EVENT CROSSING TIME AT BATSE : 24739. S. OR 06:52:19.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 219.000 48.000
BATSE PEAK COUNTING RATE: 2100 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 15/ 9/ 94 IS:
RA= 151.850 DEC= -52.806 DIST= 2.634 AU
BATSE-ULYSSES DISTANCE = 393999257. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 64.22 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 571.57 SECS.
CROSSING TIME AT ULYSSES IS 25311. S. OR 07:01:50 +/- 264.14 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 15/ 9/ 94 IS:
RA= 110.082 DEC= 22.813 DIST= 1.682 AU
MARS-BATSE DISTANCE = 251576048. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 95.06 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -73.99 SECS.
CROSSING TIME AT MARS IS 24665. S. OR 06:51:05 +/- 144.00 SECONDS

RI

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3168	940915	9610	24739	2100	219	+48

BATSE BURST TRIGGER

NO.: 03168

TIME: TJD=9610 SECONDS=24739

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=121.9 AZIMUTH=012.5 ERROR= DEGREES

COMMENTS:

SINGLE PEAK BURST OF DURATION APPROX. 30 SECONDS.
NO EMISSION OBSERVED ABOVE 300 KEV.

Helio corr removed

Date: Feb 4 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

3. PVO Data

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

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

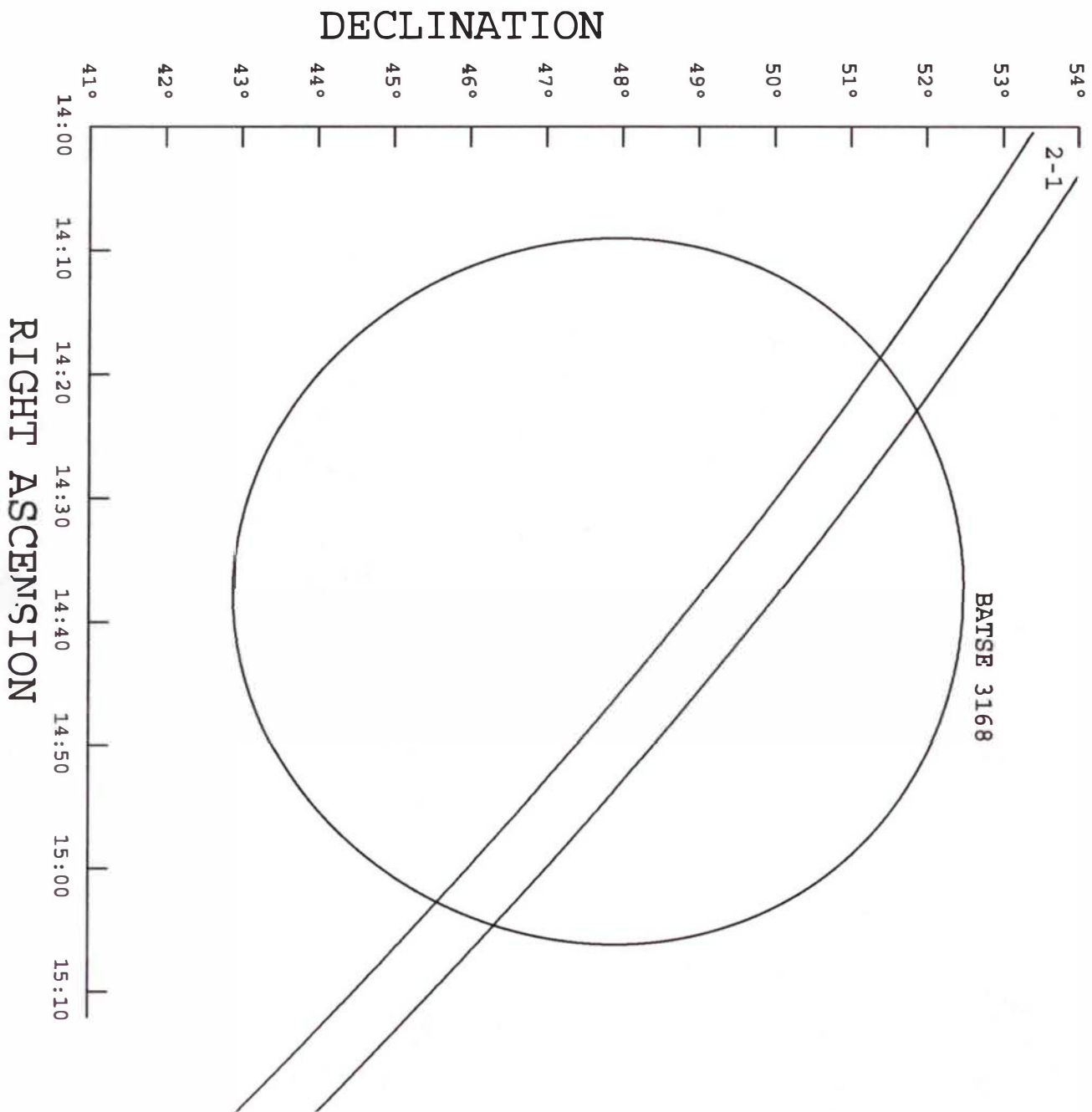
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF SEP 15, 1994 7:01

6 / 3/98



N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

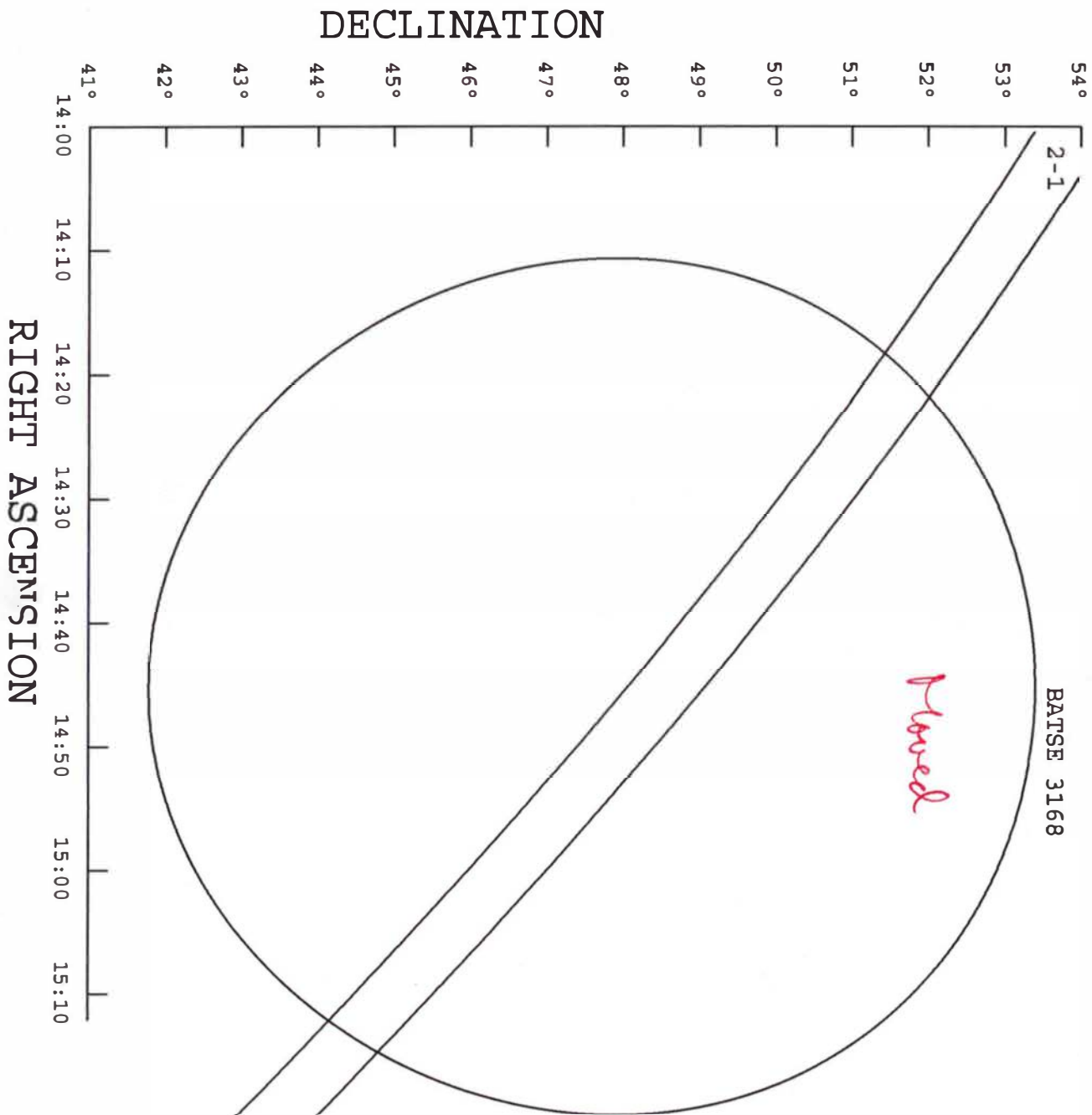
G=GALACTIC EQUATOR

1 ULYSSES

2 BATSE

EVENT OF SEP 15, 1994 7:01

4 / 2/98



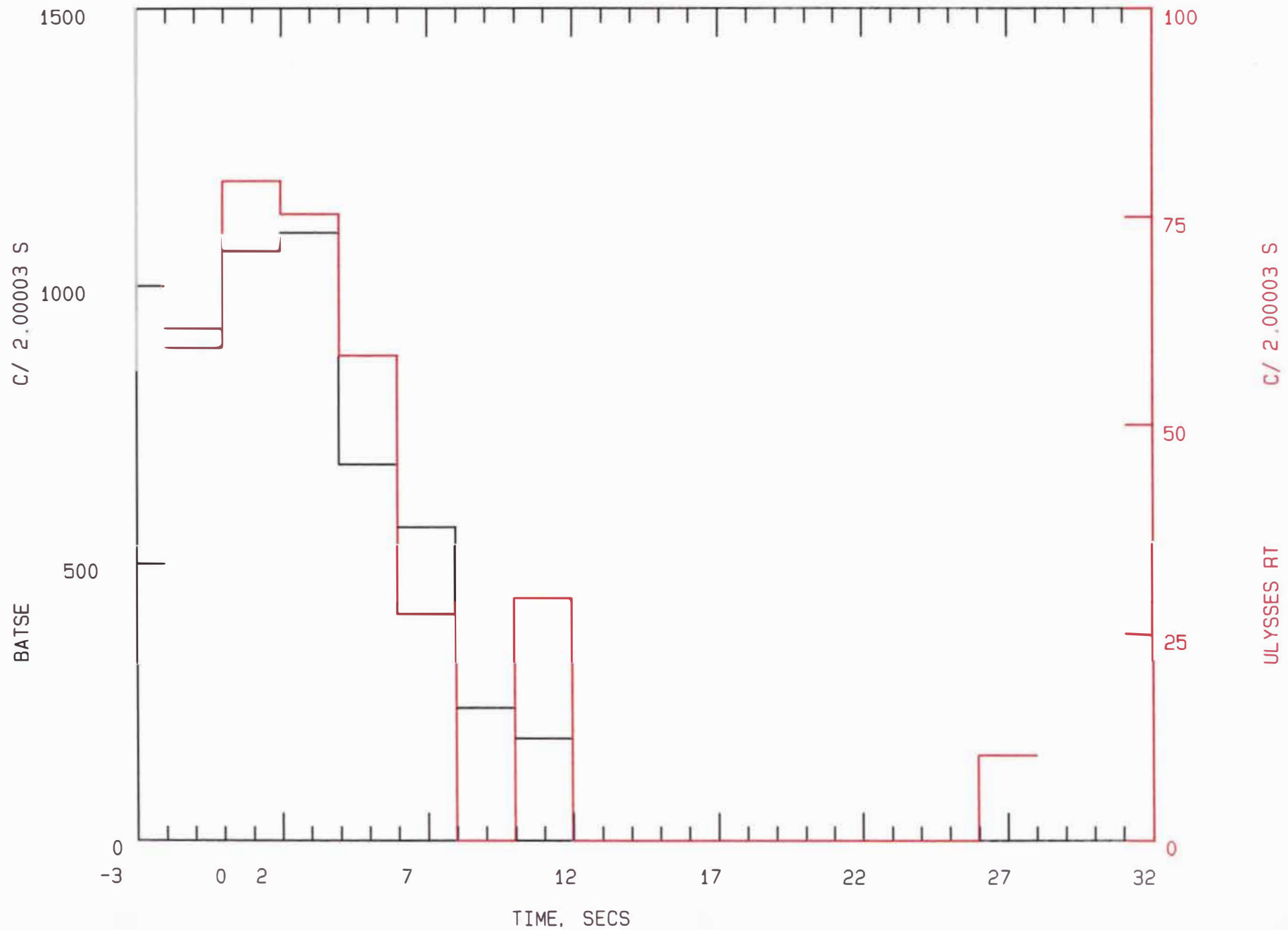
BATSE

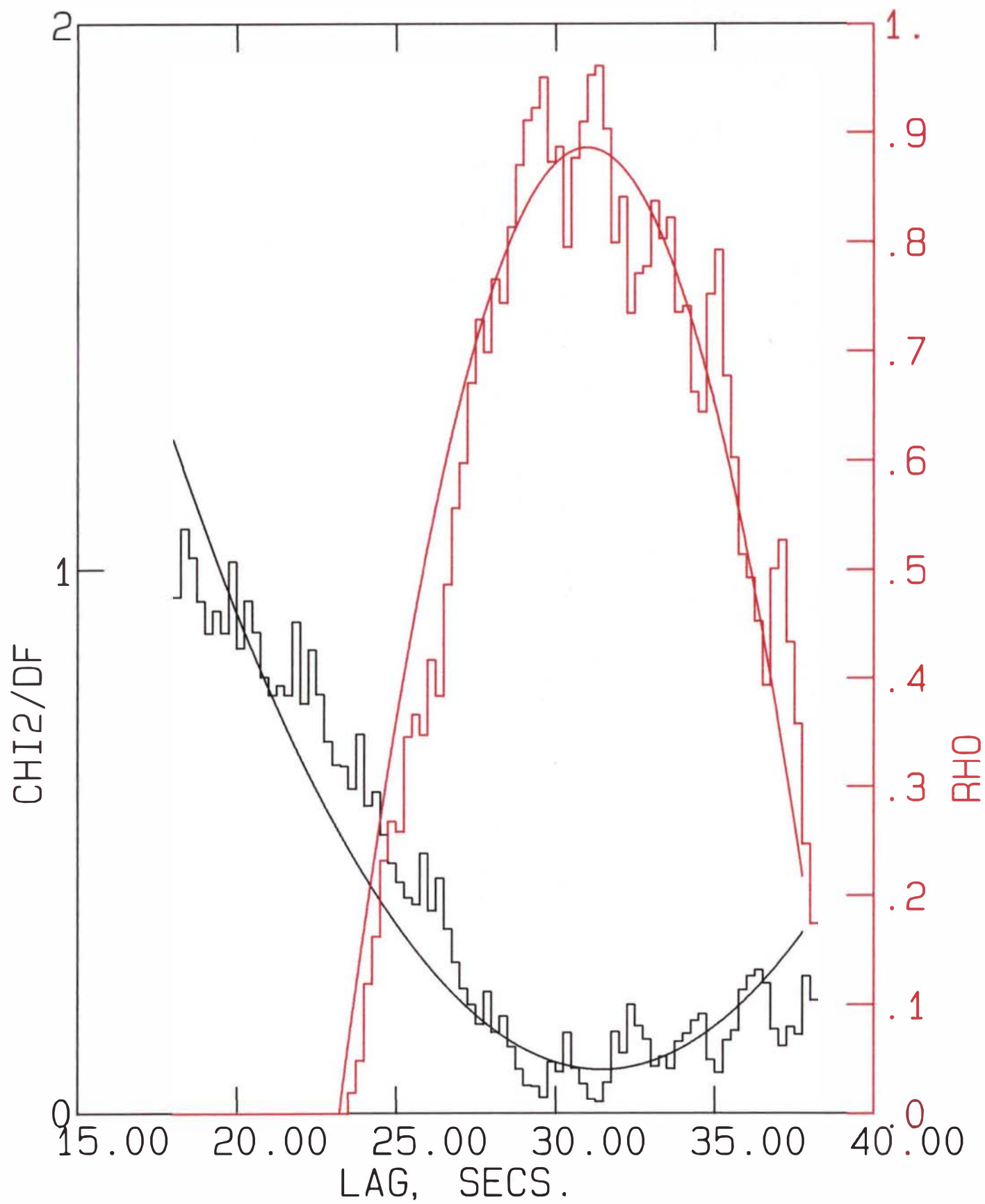
-ULYSSES RT CORRELATION

15/ 9/94

24739.506

4/ 2/98



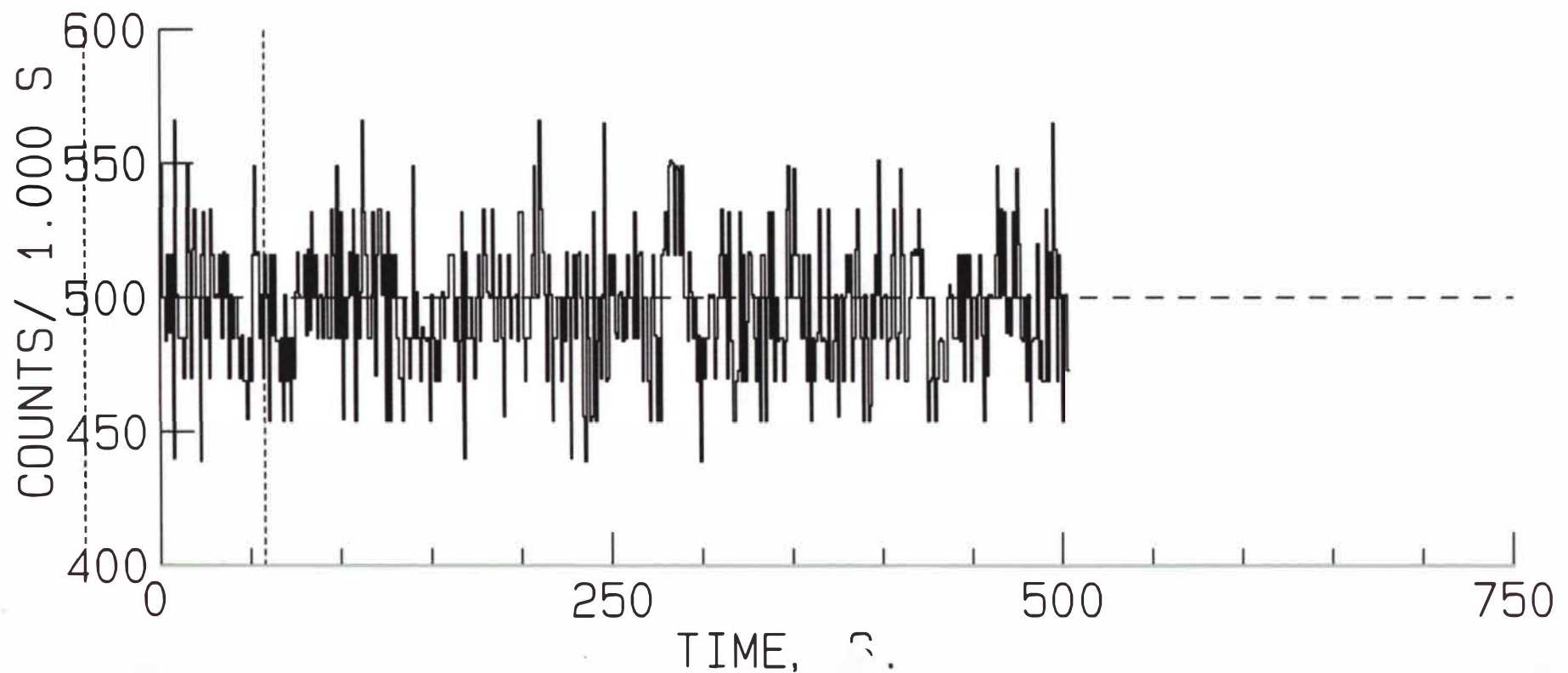


ULYSSES RT

4 / 2 / 98

15 / 9 / 94 25056.211 s

0.250 S INTERVALS REGROUPED BY 4
22- 148 keV



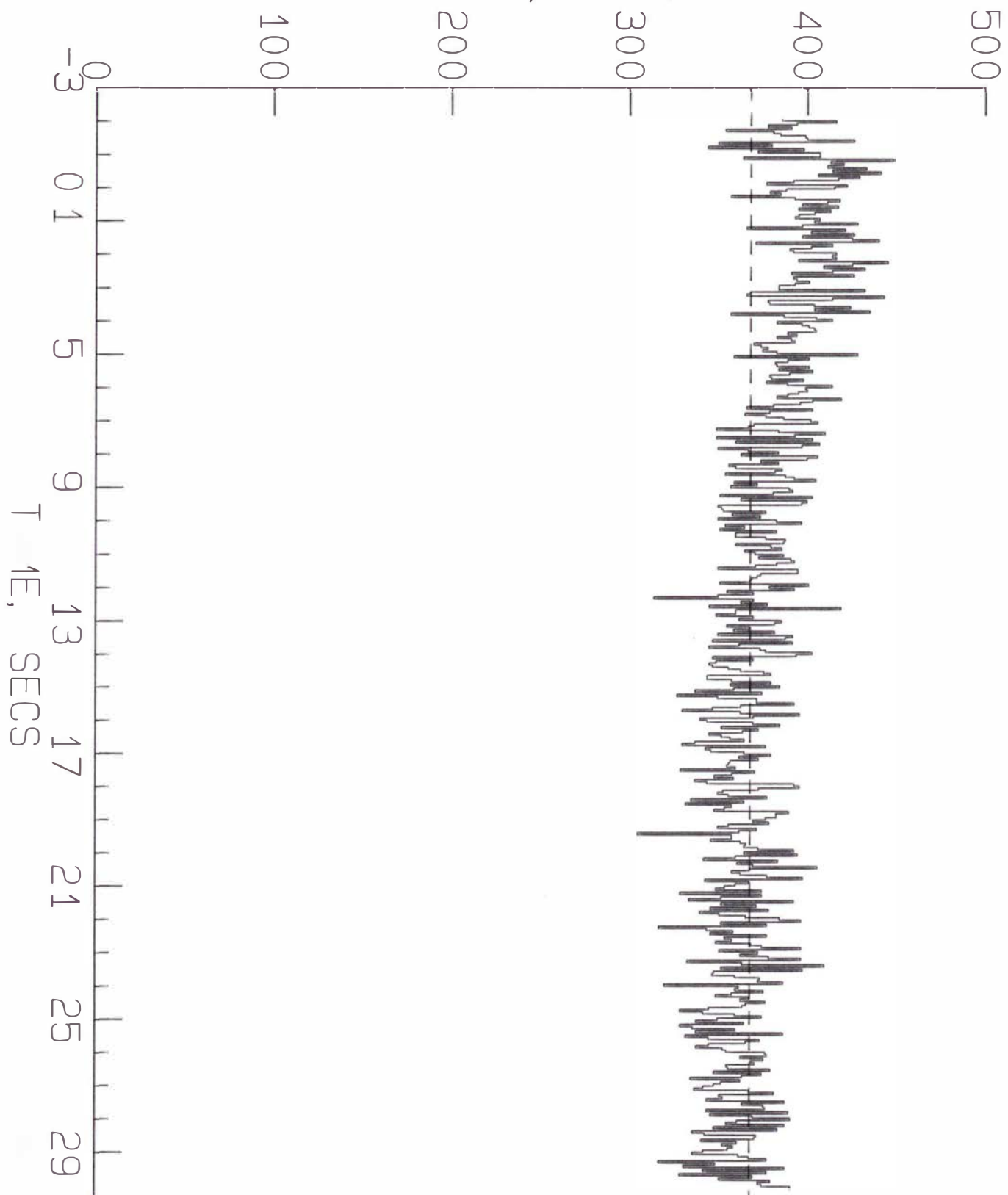
BATSE

15/09/94

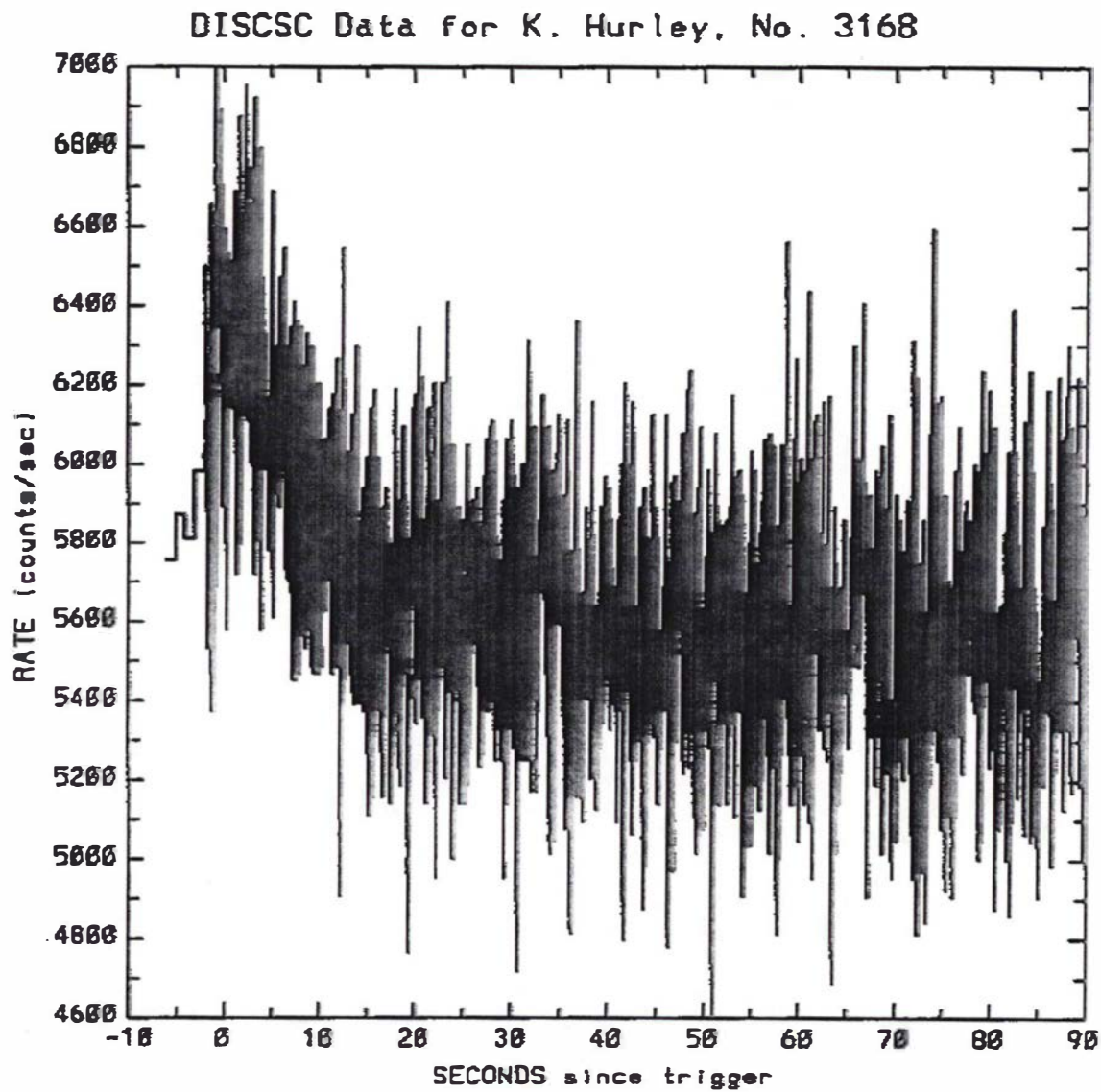
24739.506

25- 100 keV

COUNTS/ .064 S



5/11/94



26-OCT-1994 14:09:16

Created by KOPS 80
(Burst Display)
Version 2.22

Trigger # : 3168

Trigger Time:
9618 / 24739.566

Burst Data Type:
DISCSC

Deadtime
Corrected: K

Background Data
Type: PREB + DISCLA

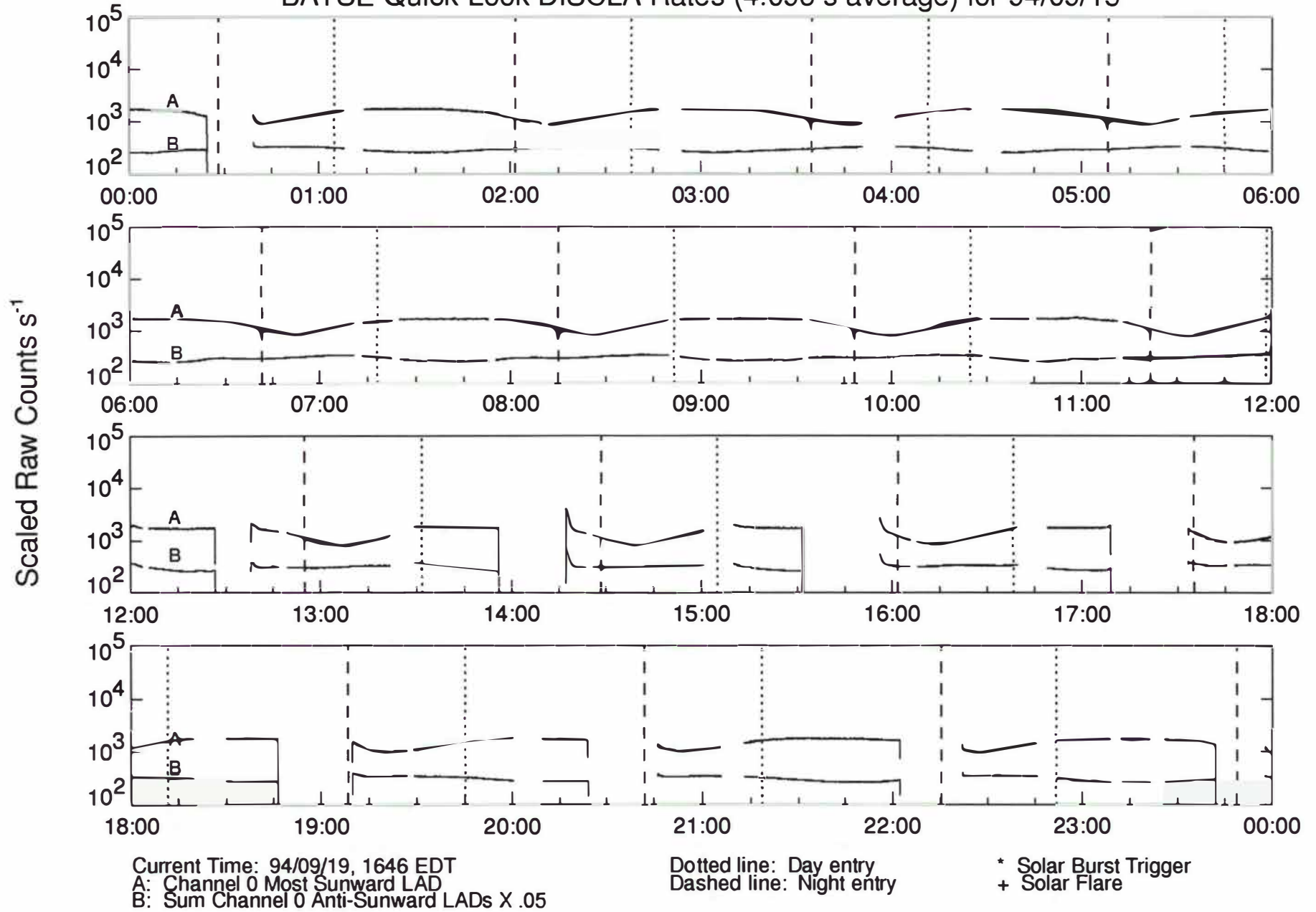
Kinetic Integ. Time:
8.064 second(s)

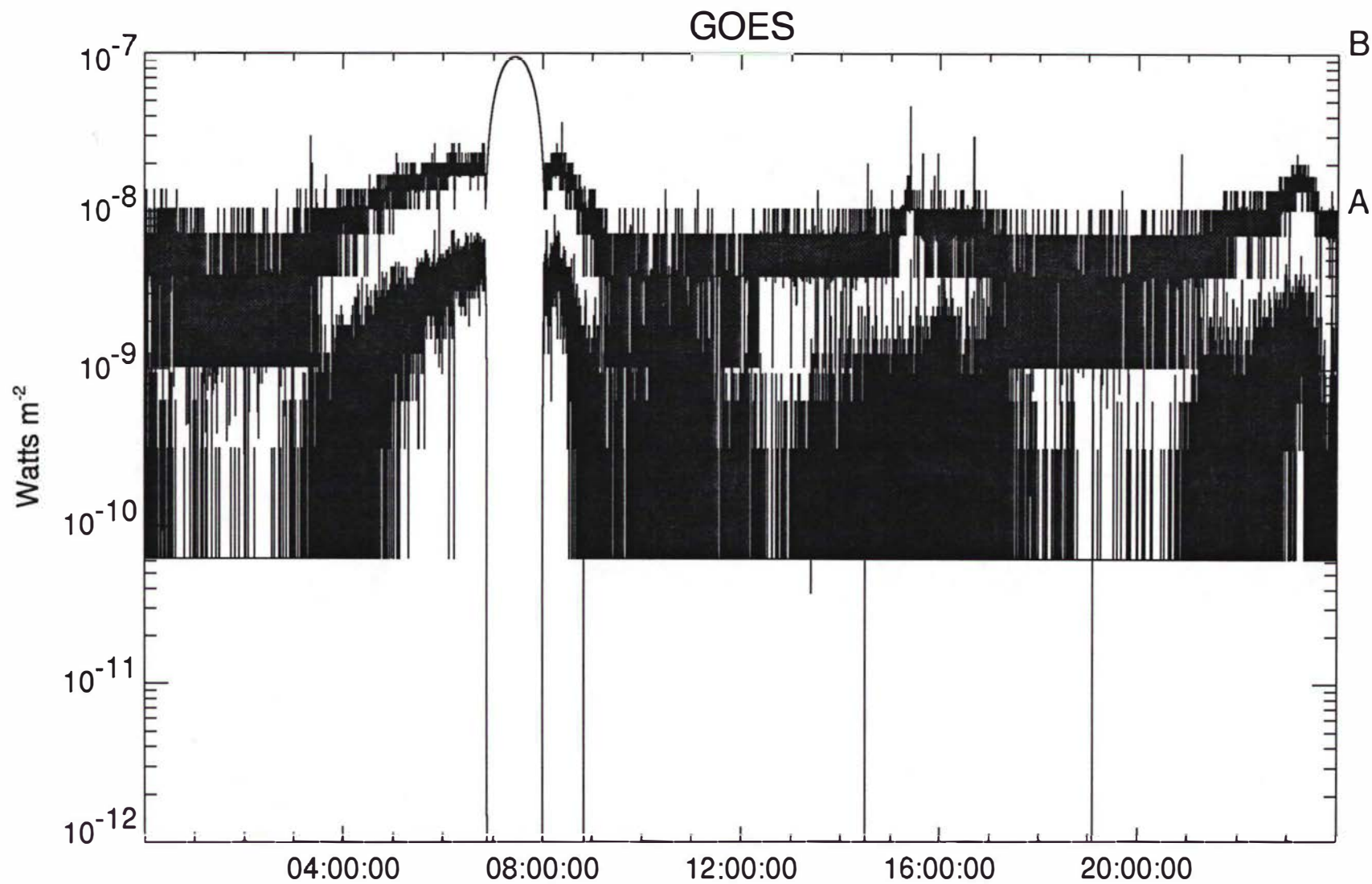
Detectors [7..8]:
---3-1-

Discriminators:
(1. 2)

Quality Mask:
80ISP1

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/15





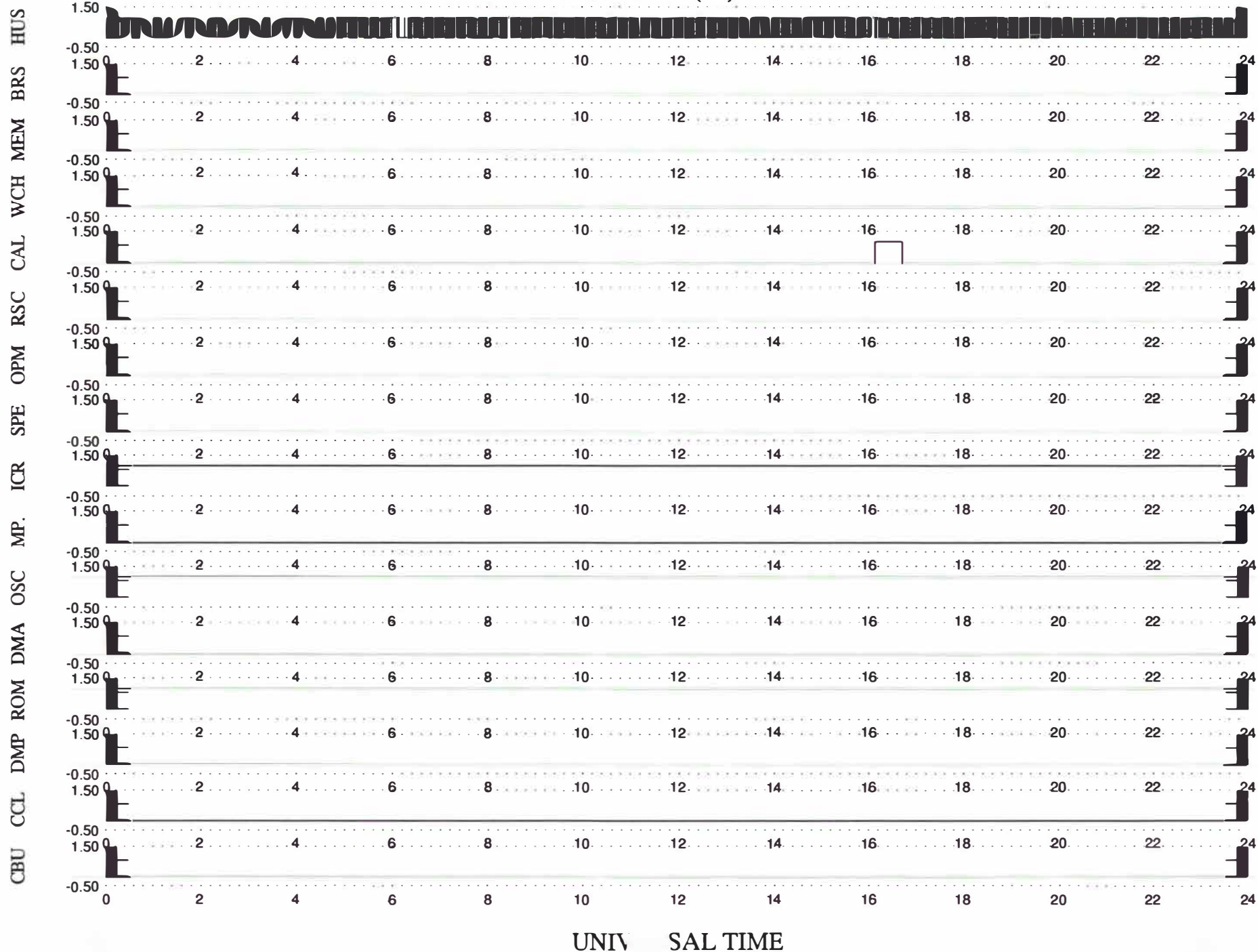
Data Start: 94/09/15, 0000:00

Plot created: 94/09/16, 1931

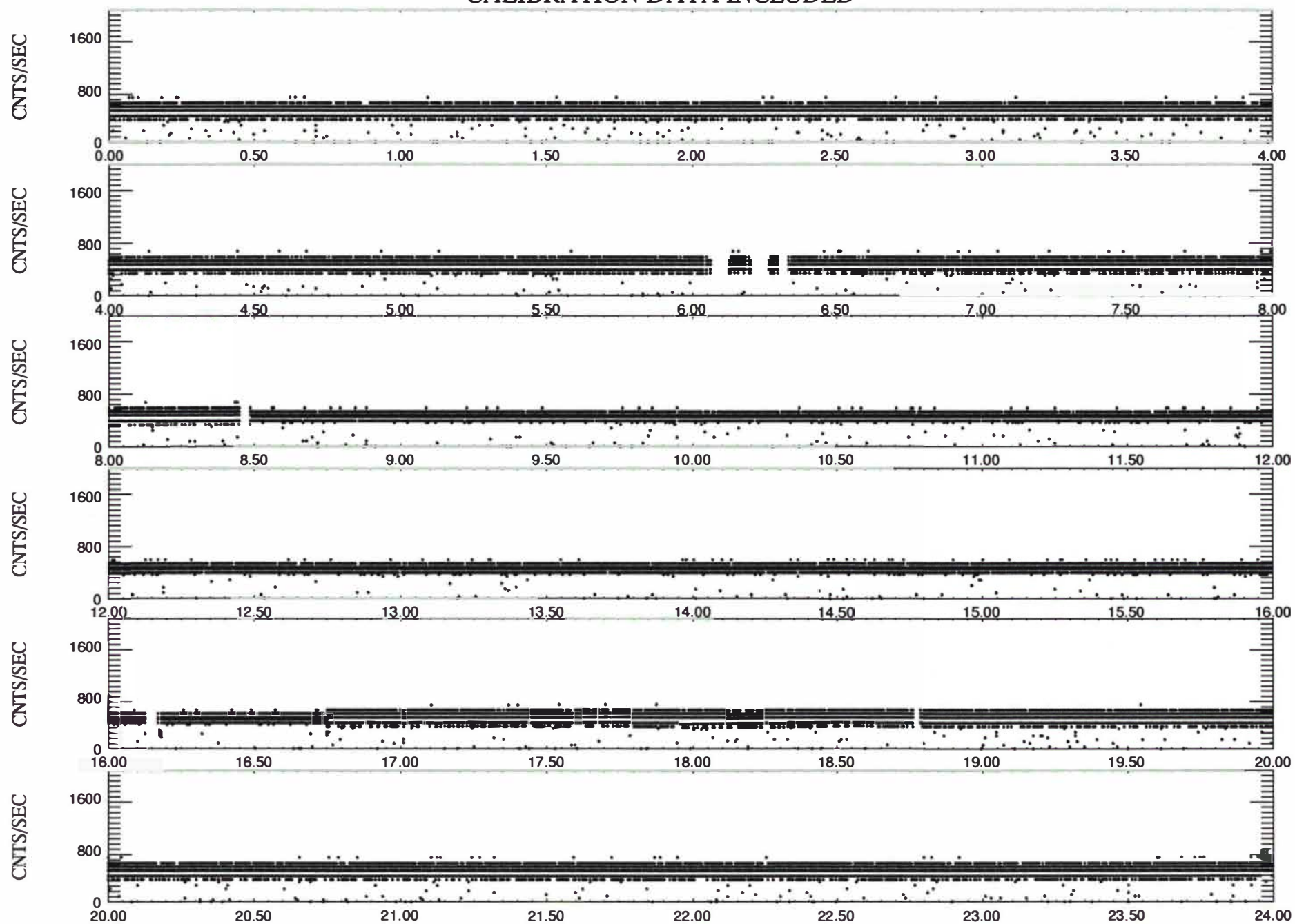
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

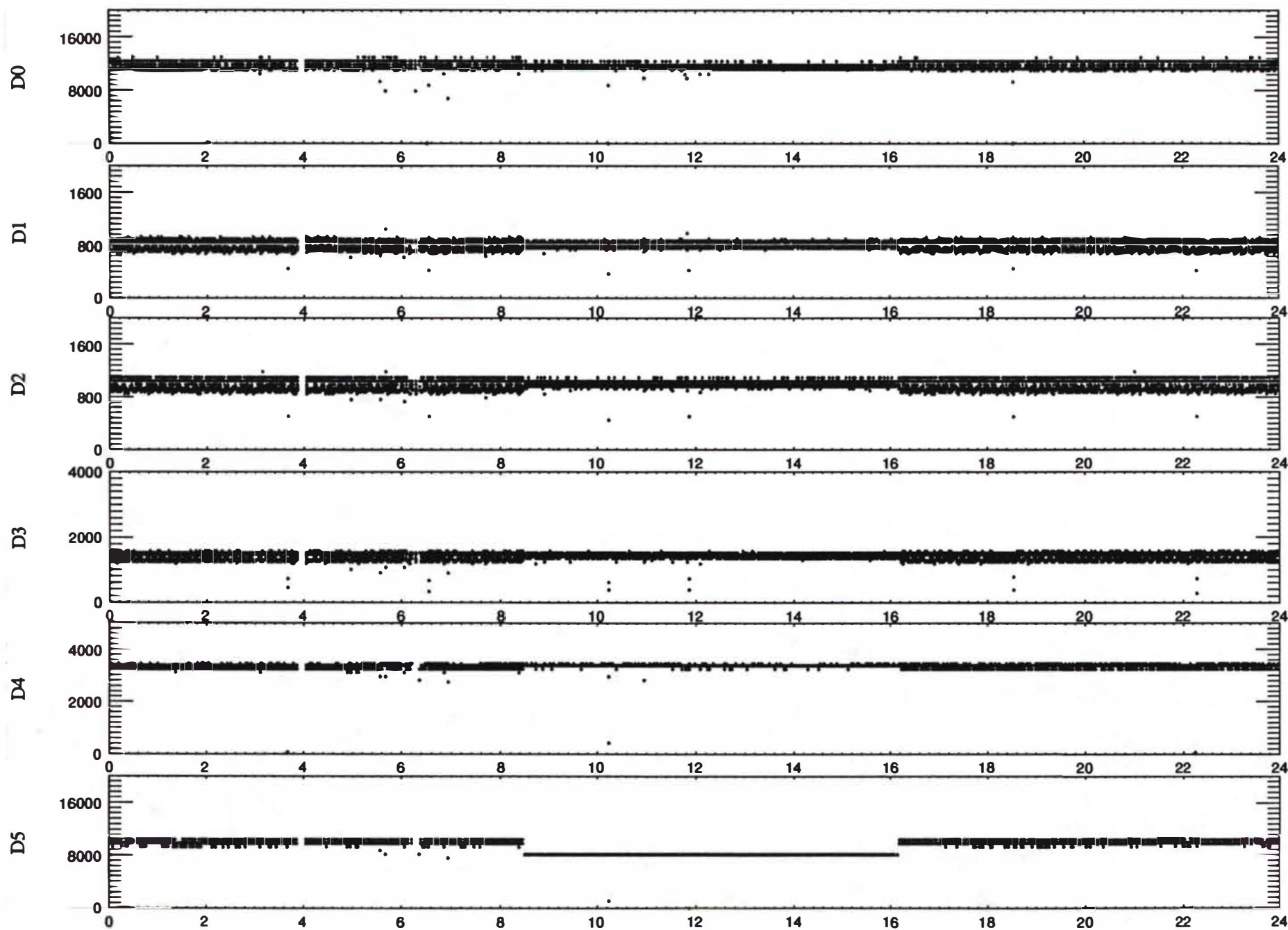
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



UNIVI AL TIME

From HAGEDON@fender.msfc.nasa.gov Mon Sep 19 09:38 PDT 1994
Date: Mon, 19 Sep 1994 11:40:07 -0500 (CDT)
From: HAGEDON@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3169

BATSEARCH PROGRAM

BATSE BURST # 3169
EVENT OF 1994 SEP 16 DAY OF YEAR=259
EVENT CROSSING TIME AT BATSE : 63649. S. OR 17:40:49.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 119.000 22.000
BATSE PEAK COUNTING RATE: 1800 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 16/ 9/ 94 IS:
RA= 152.604 DEC= -53.319 DIST= 2.621 AU
BATSE-ULYSSES DISTANCE = 392153860. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 99.26 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -210.45 SECS.
CROSSING TIME AT ULYSSES IS 63439. S. OR 17:37:18 +/- 270.95 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 16/ 9/ 94 IS:
RA= 110.735 DEC= 22.746 DIST= 1.675 AU
MARS-BATSE DISTANCE = 250644496. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=172.32 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -828.56 SECS.
CROSSING TIME AT MARS IS 62820. S. OR 17:27:00 +/- 6.81 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3169	940916	9611	63649	1800	119	+22

BATSE BURST TRIGGER

NO.: 3169

TIME: TJD=9611 SECONDS=63649

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=68 AZIMUTH=75 ERROR= DEGREES

COMMENTS:

BURST. WEAK SINGLE PULSE. DUR.~40 SEC. STARTS AT ~T-15 SEC.
NOT VISIBLE ABOVE 300 KEV.

19 / 9 / 94

ULYSSES RT

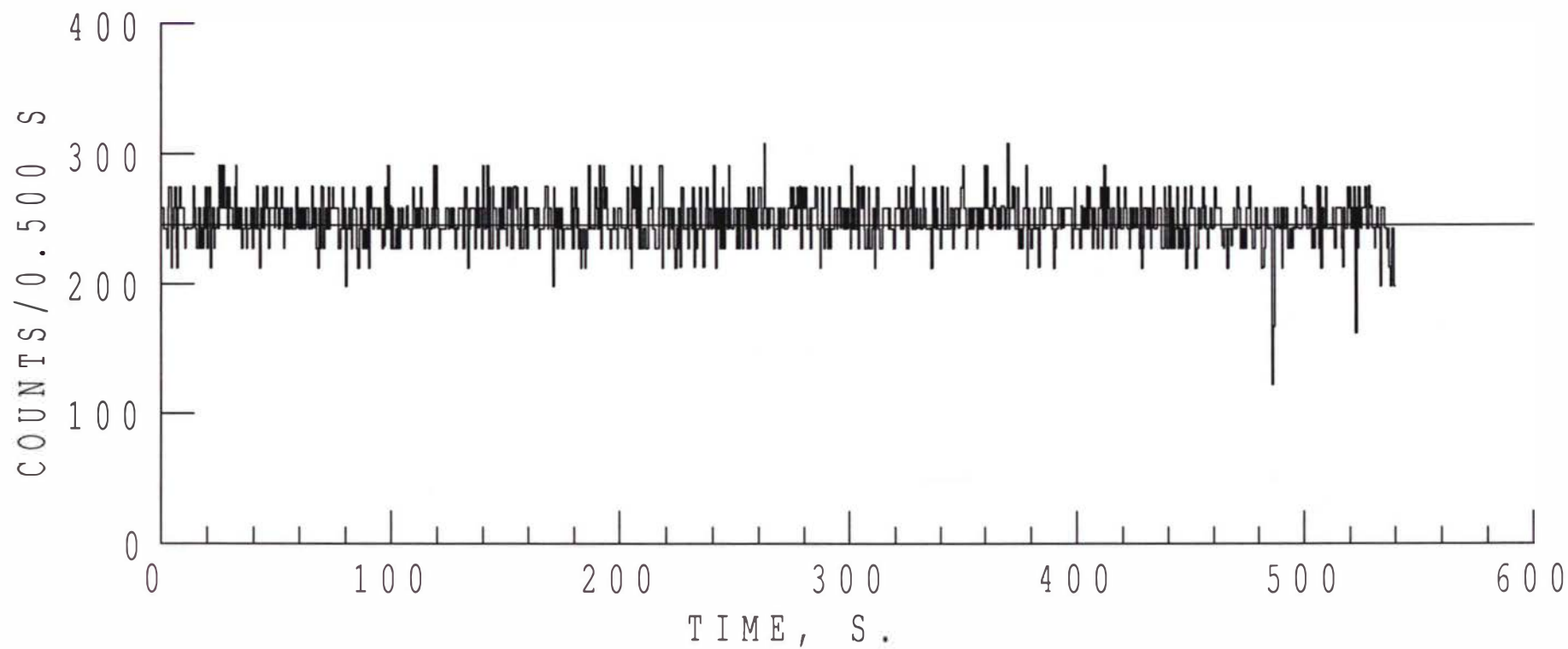
16 / 9 / 94 63180.039 s

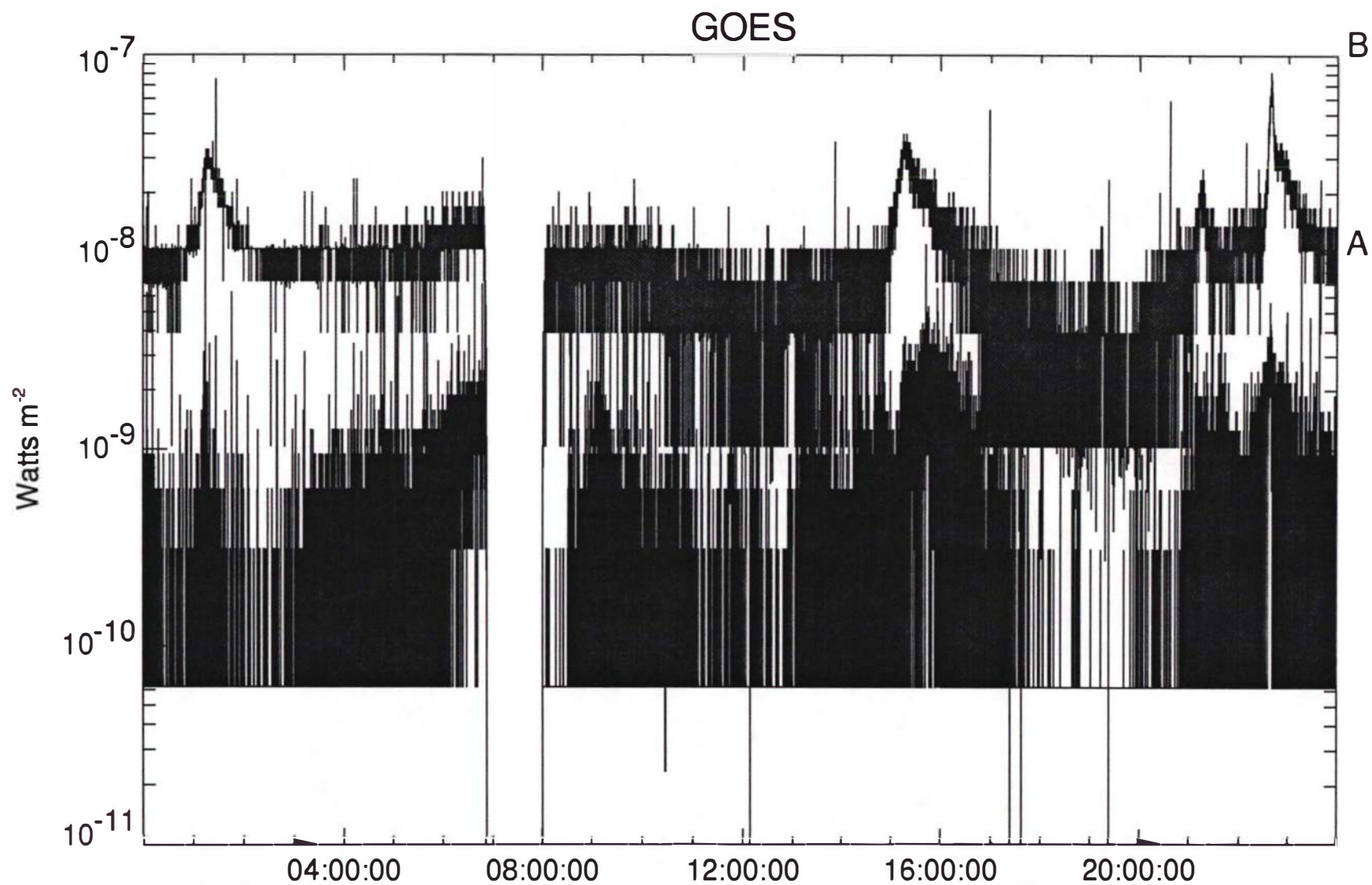
0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





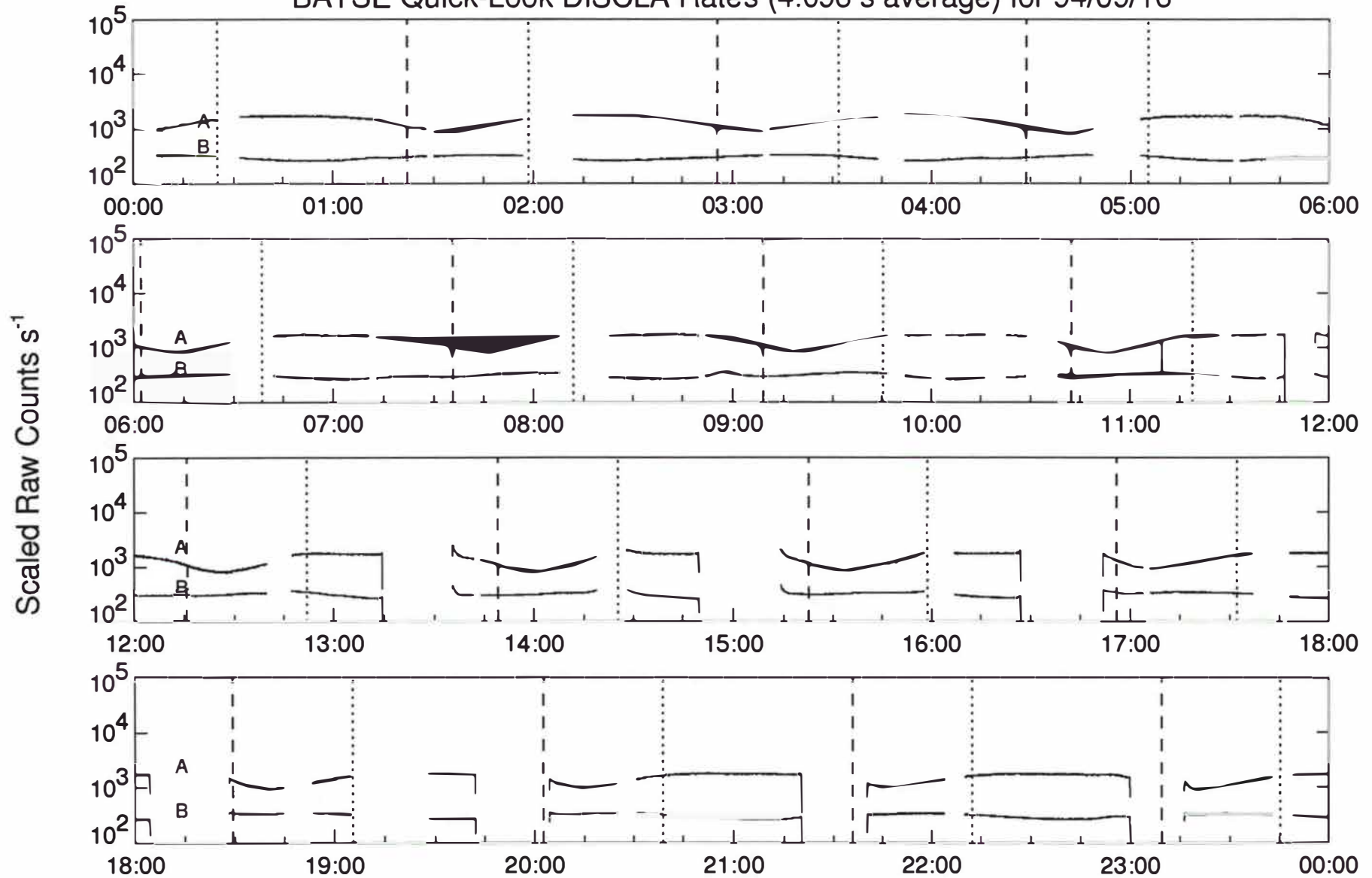
Data Start: 94/09/16, 0000:01

Plot created: 94/09/19, 1648

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/16

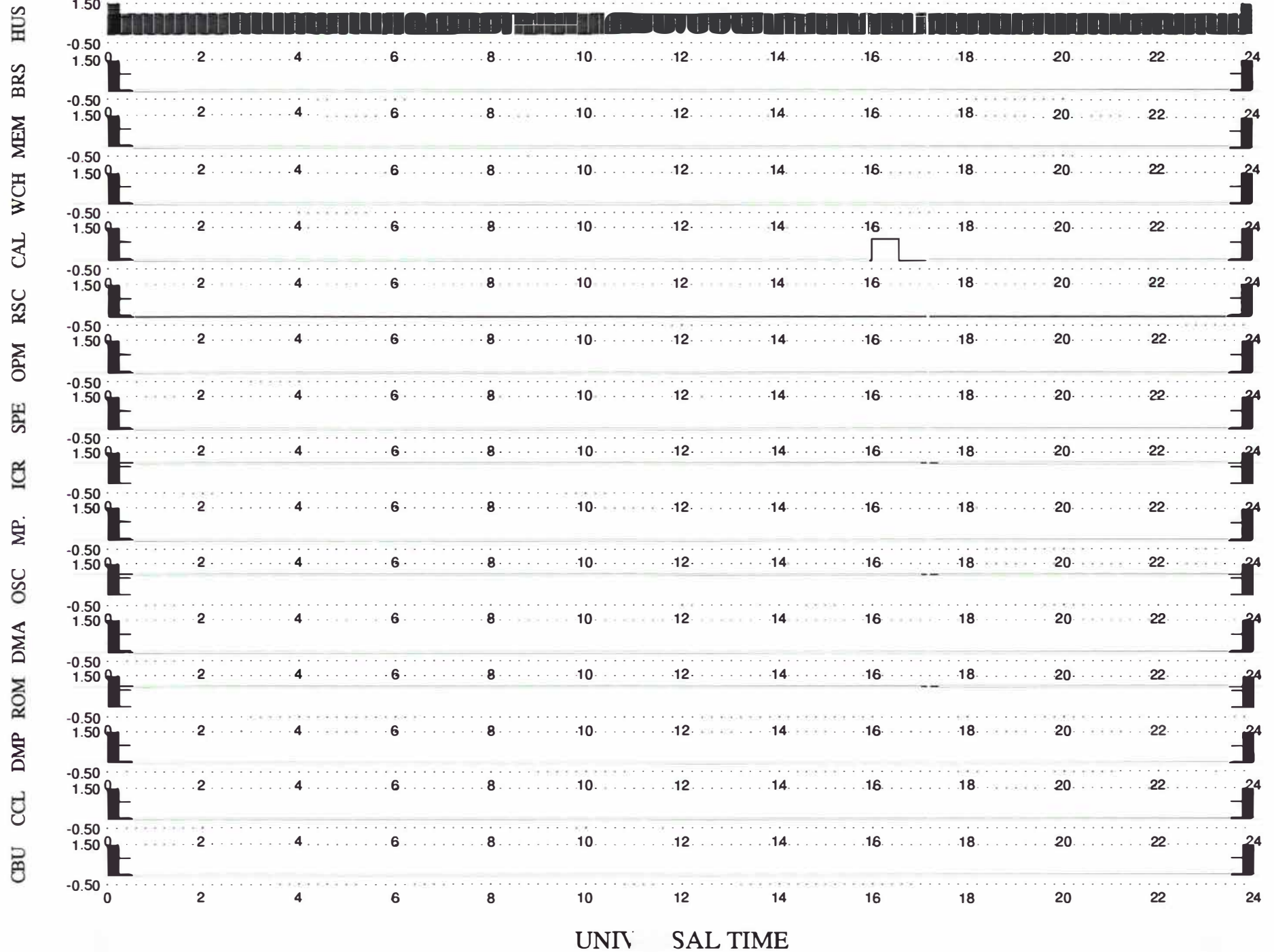


Current Time: 94/09/19, 1646 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

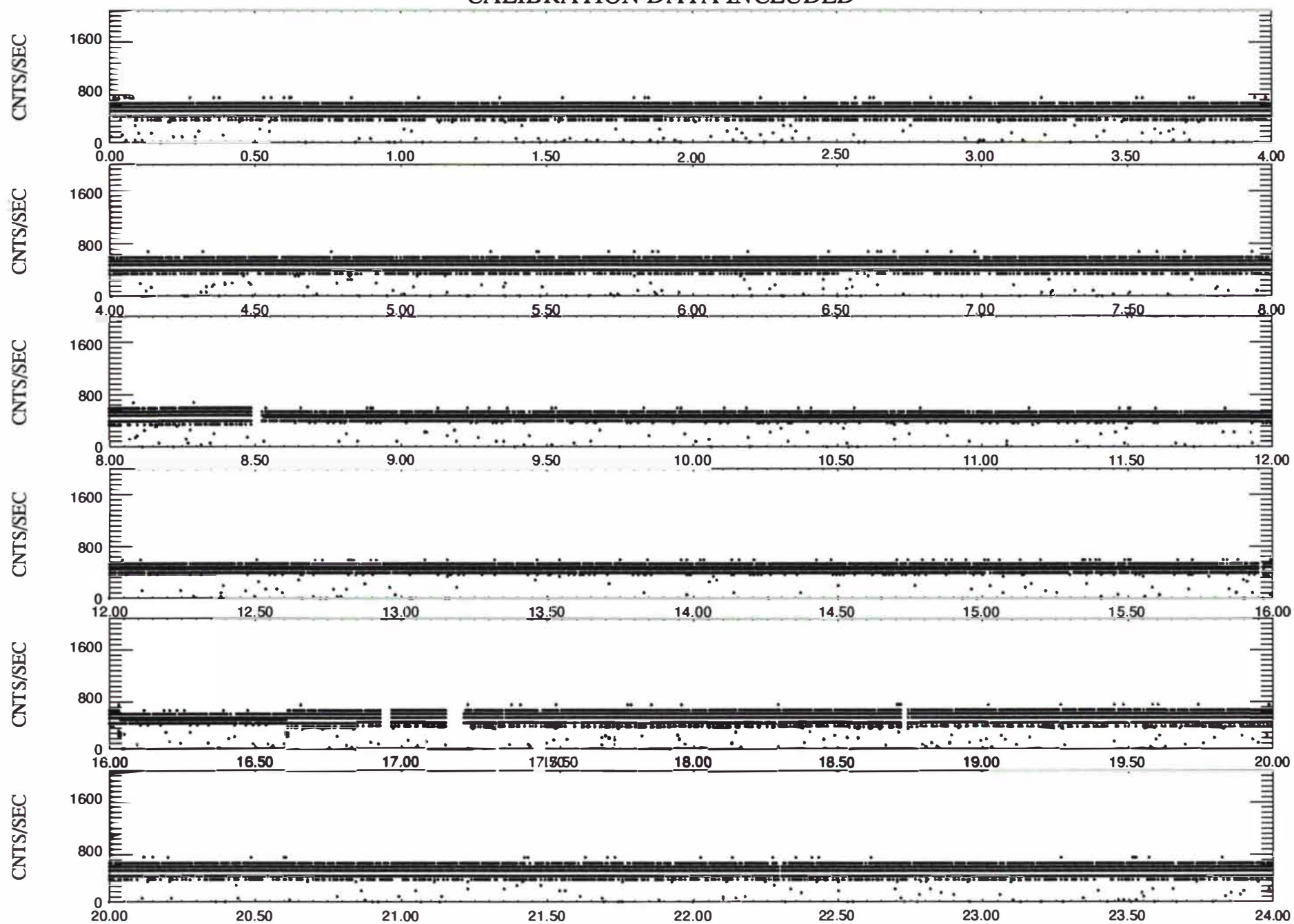
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

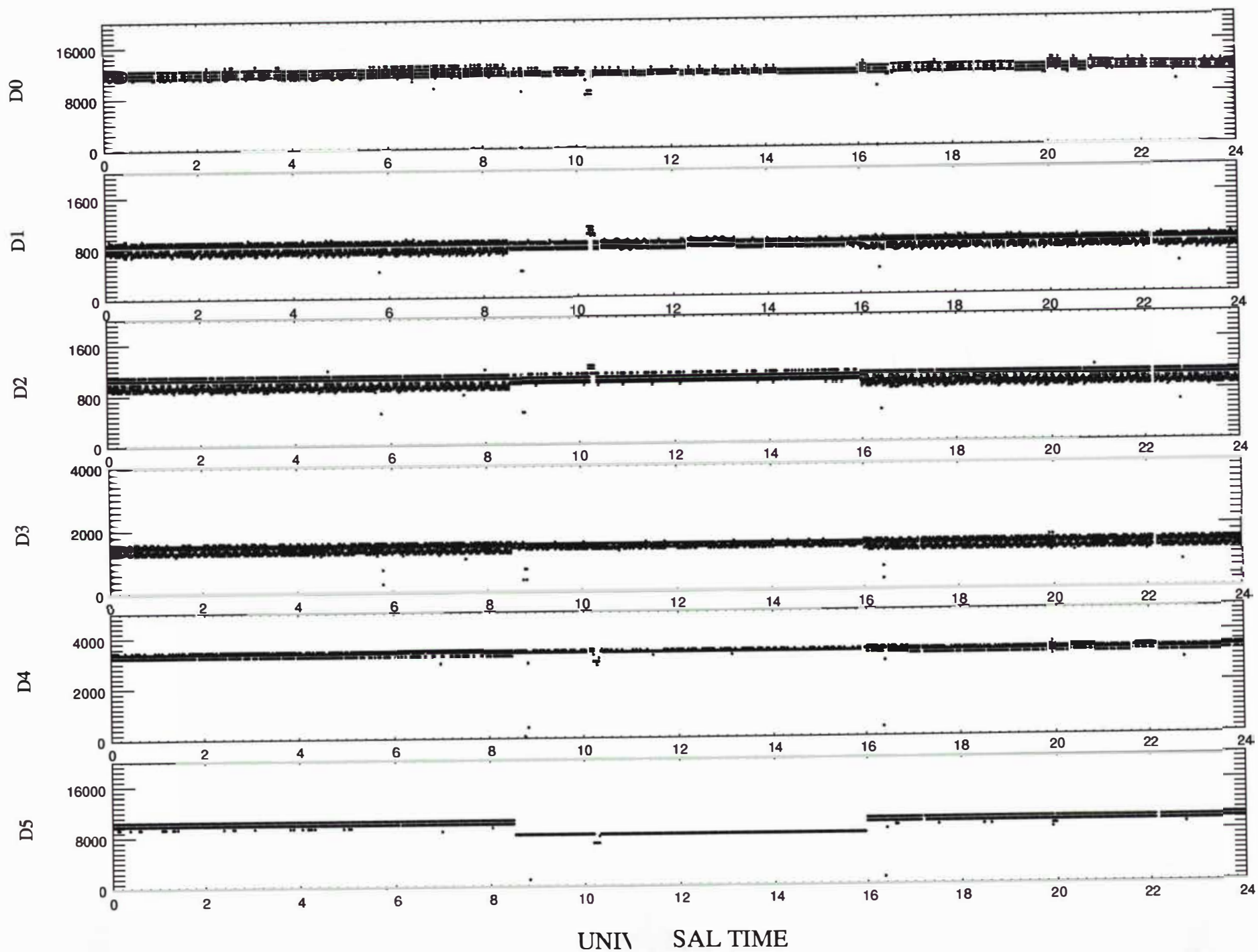
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From RICHARDSON@ssl.msfc.nasa.gov Mon Sep 19 09:36 PDT 1994
Date: Mon, 19 Sep 1994 11:37:27 -0500 (CDT)
From: RICHARDSON@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3171

BATSEARCH PROGRAM

BATSE BURST # 3171
EVENT OF 1994 SEP 17 DAY OF YEAR=260
EVENT CROSSING TIME AT BATSE : 62163. S. OR 17:16:03.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 92.000 4.000
BATSE PEAK COUNTING RATE: 1500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 17/ 9/ 94 IS:
RA= 153.124 DEC= -53.672 DIST= 2.613 AU
BATSE-ULYSSES DISTANCE = 390903503. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=103.25 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -298.85 SECS.
CROSSING TIME AT ULYSSES IS 61864. S. OR 17:11:04 +/- 265.82 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 17/ 9/ 94 IS:
RA= 111.386 DEC= 22.677 DIST= 1.669 AU
MARS-BATSE DISTANCE = 249706544. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=153.53 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -745.60 SECS.
CROSSING TIME AT MARS IS 61417. S. OR 17:03:37 +/- 53.14 SECONDS

No

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3171	940917	9612	62163	1500	092	+04

BATSE BURST TRIGGER

NO.: 3171

TIME: TJD=9612 SECONDS=62163

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=59.0 AZIMUTH=109.7 ERROR= DEGREES

COMMENTS:

GRB, WITH STRUCTURE. LASTING APROX. 60S. VISIBLE ABOVE 300KEV.

19 / 9 / 94

ULYSSES RT

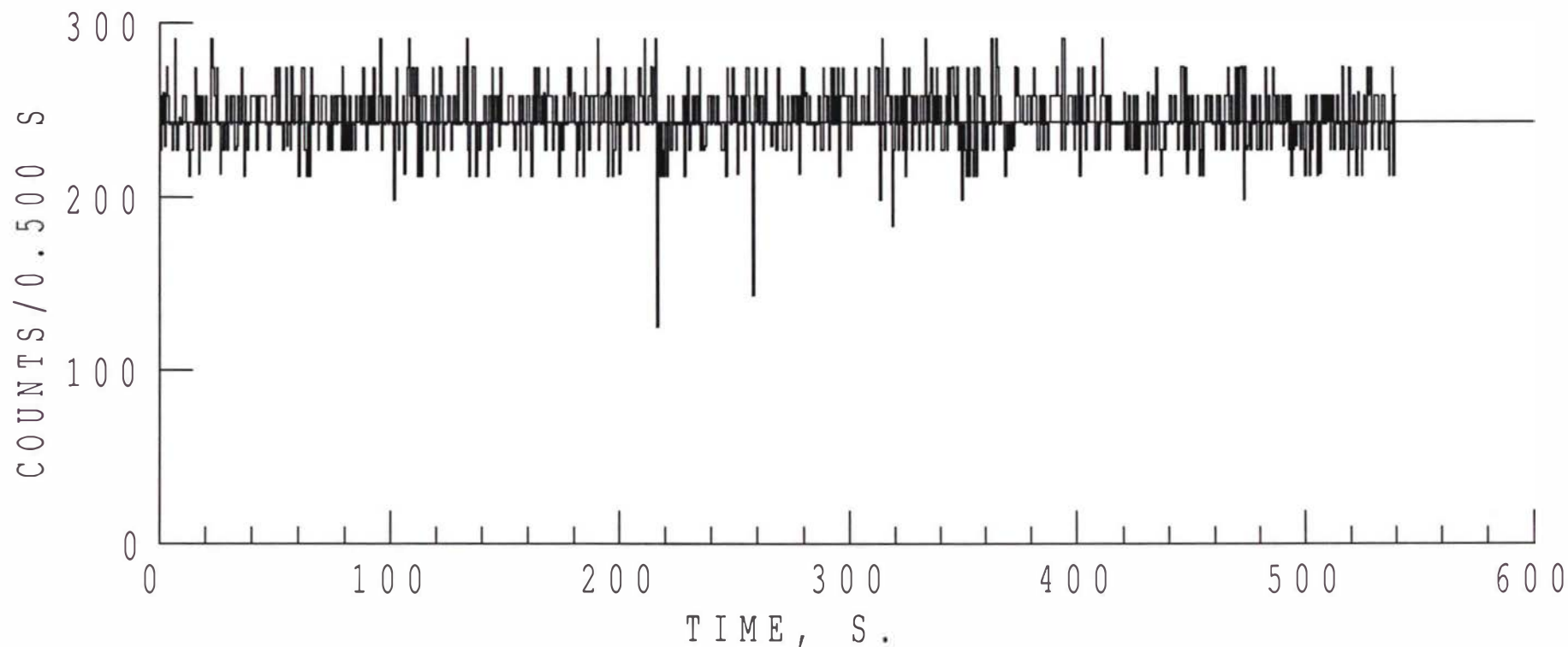
17 / 9 / 94 61596.207 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From RICHARDSON@ssl.msfc.nasa.gov Mon Sep 19 09:31 PDT 1994

Date: Mon, 19 Sep 1994 11:30:31 -0500 (CDT)

From: RICHARDSON@ssl.msfc.nasa.gov

To: burst@comptel.unh.edu, grobad@estec.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu

Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3170

TIME: TJD=9612 SECONDS=45179

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

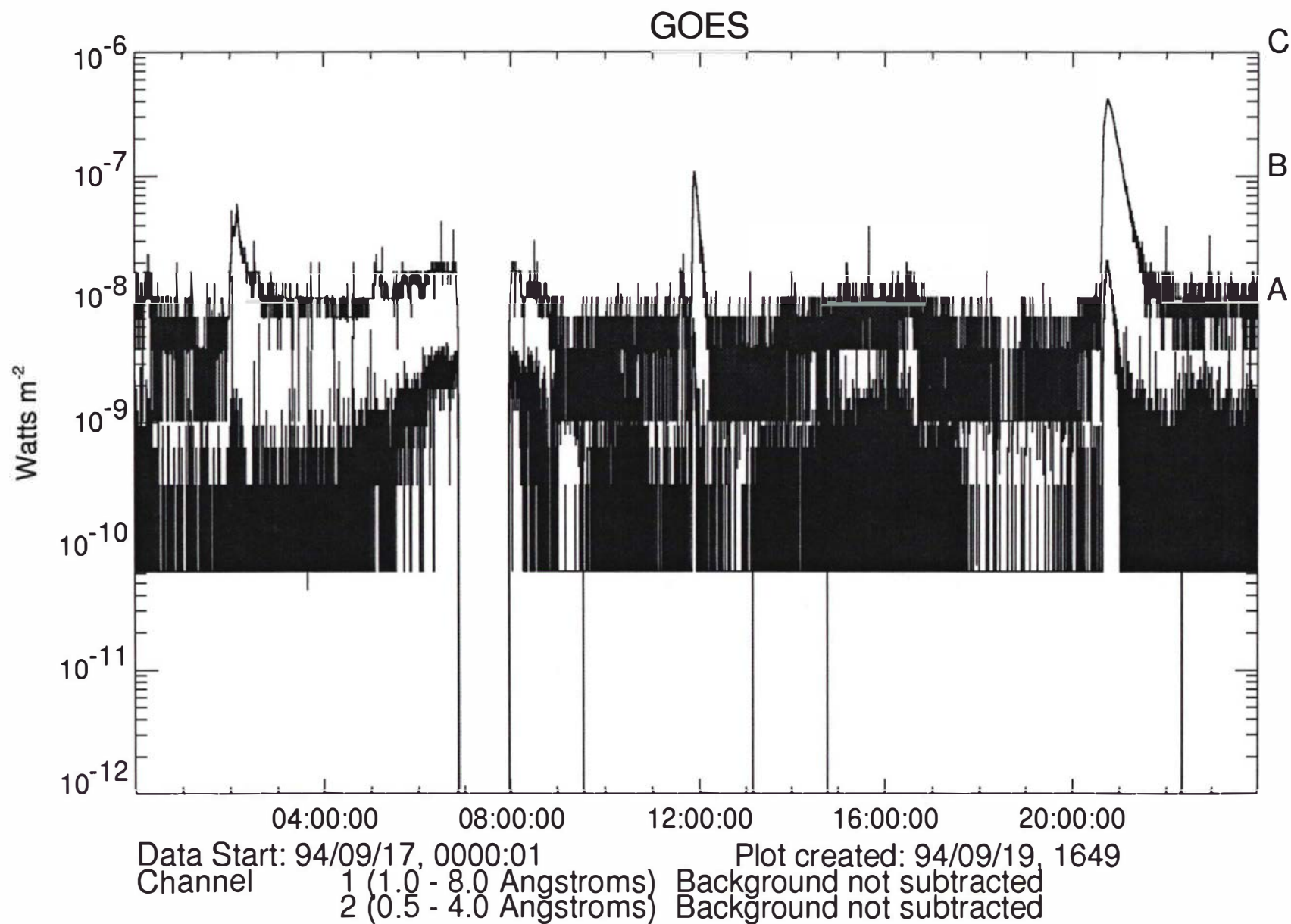
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

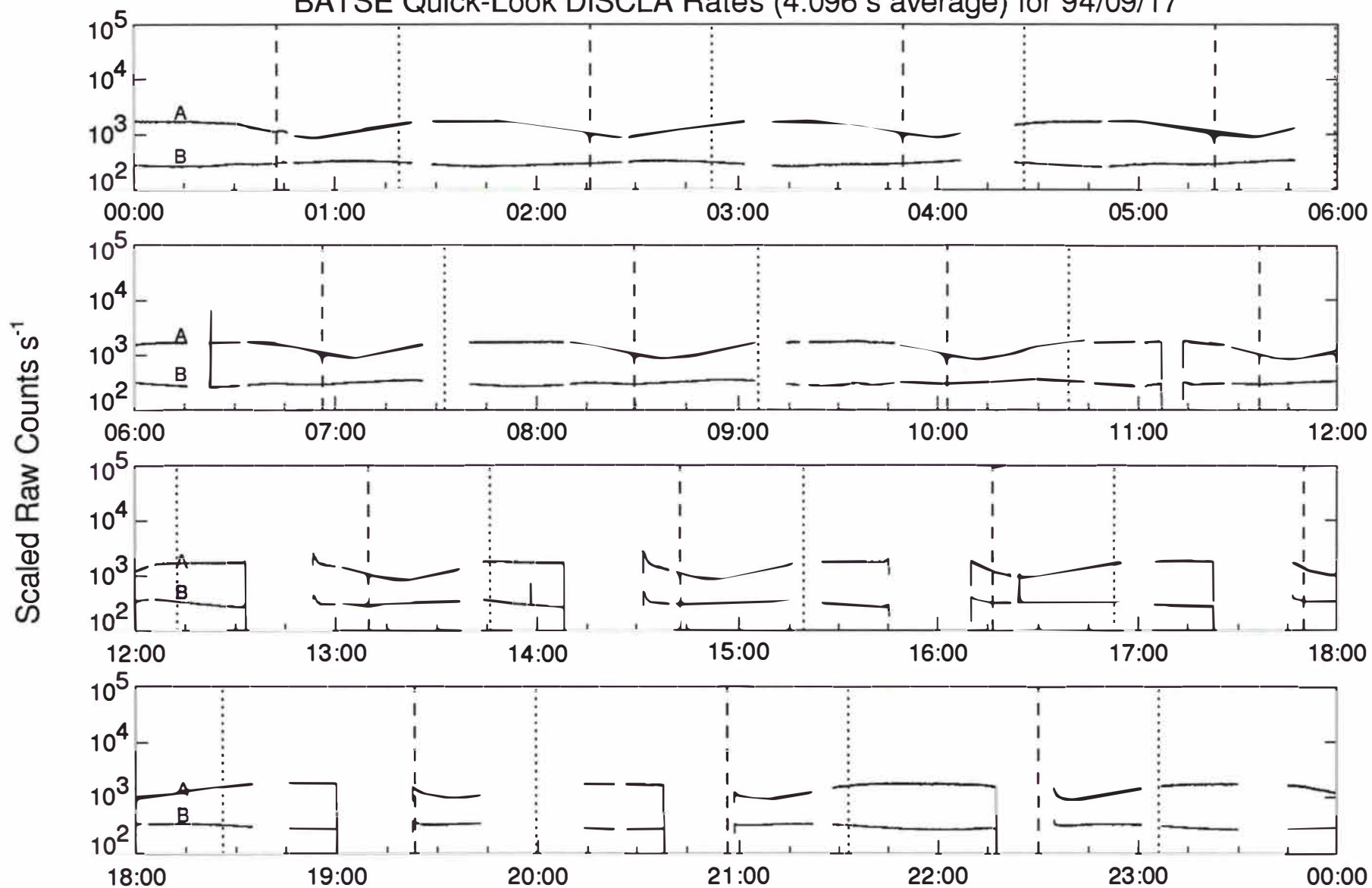
LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SAA ENTRY



BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/17

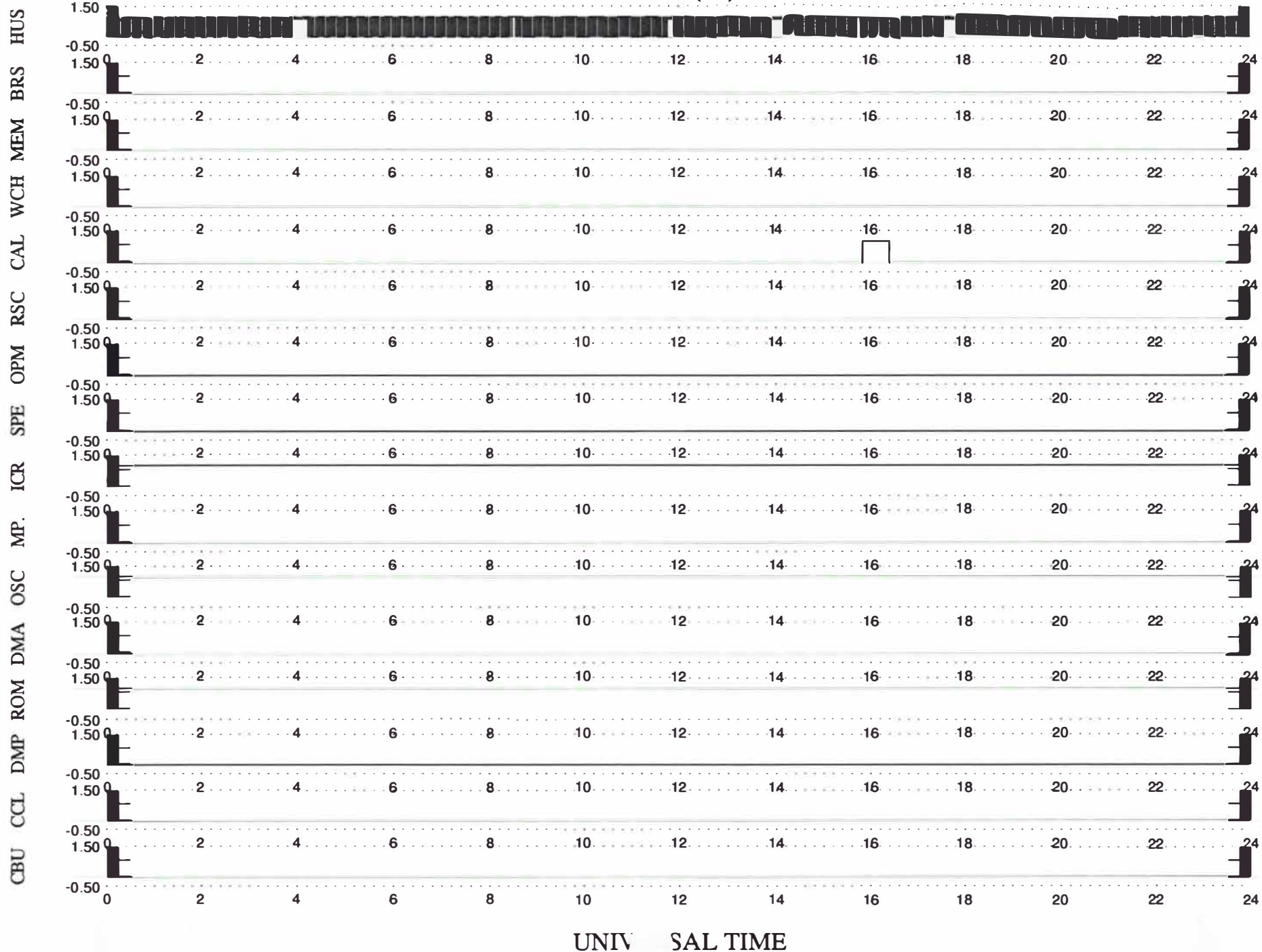


Current Time: 94/09/19, 1646 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

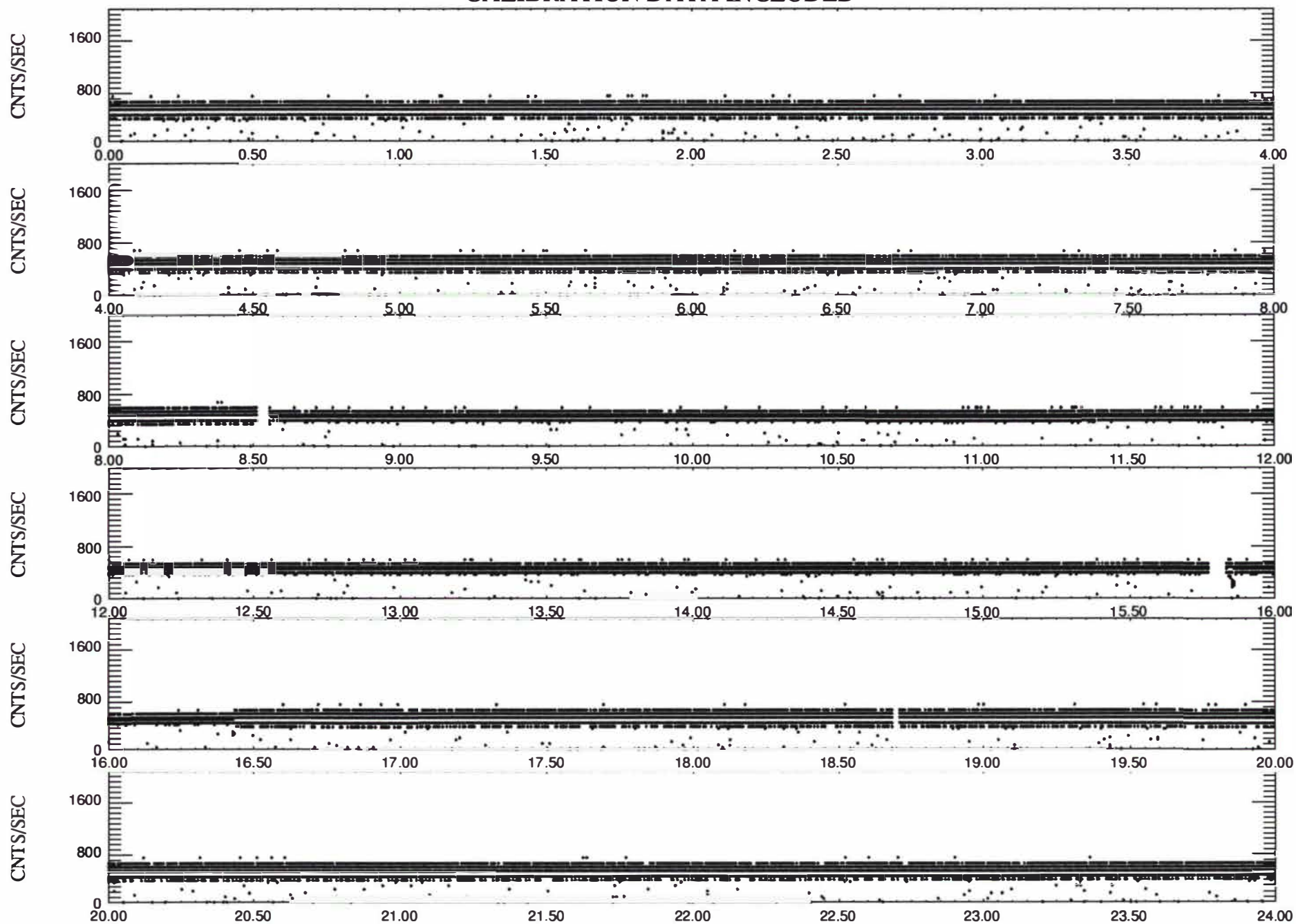
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

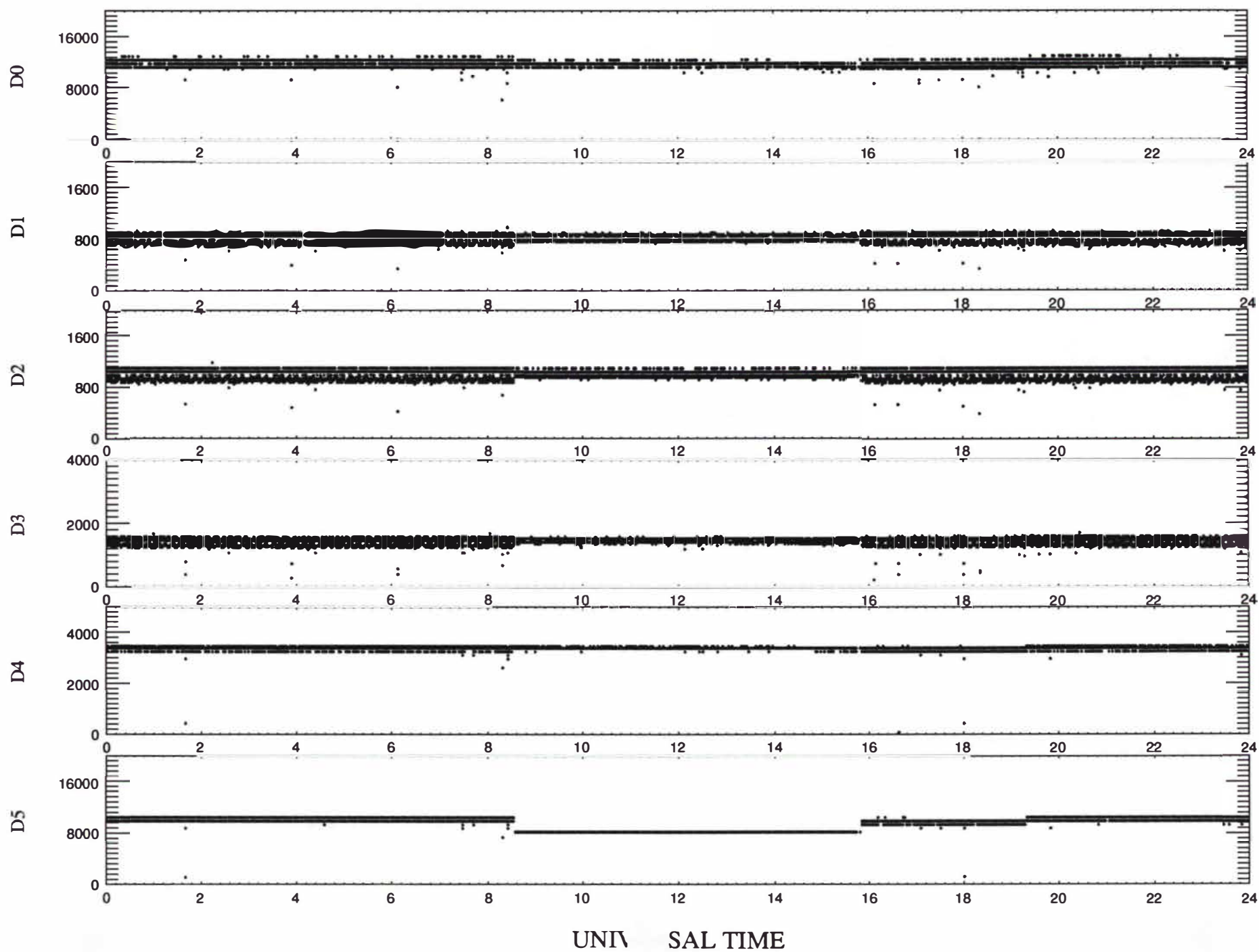
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From RICHARDSON@ssl.msfc.nasa.gov Tue Sep 20 09:25 PDT 1994

Date: Tue, 20 Sep 1994 11:27:03 -0500 (CDT)

From: RICHARDSON@ssl.msfc.nasa.gov

To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu

Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3172

TIME: TJD=9613 SECONDS=42683

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SAA ENTRY

From RICHARDSON@ssl.msfc.nasa.gov Tue Sep 20 09:33 PDT 1994
Date: Tue, 20 Sep 1994 11:34:53 -0500 (CDT)
From: RICHARDSON@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3173

BATSEARCH PROGRAM

No

BATSE BURST # 3173
EVENT OF 1994 SEP 18 DAY OF YEAR=261
EVENT CROSSING TIME AT BATSE : 53474. S. OR 14:51:14.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 65.000 3.000
BATSE PEAK COUNTING RATE: 51000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 18/ 9/ 94 IS:
RA= 153.608 DEC= -53.999 DIST= 2.605 AU
BATSE-ULYSSES DISTANCE = 389759400. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 88.39 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 36.50 SECS.
CROSSING TIME AT ULYSSES IS 53511. S. OR 14:51:50 +/- 276.18 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 18/ 9/ 94 IS:
RA= 112.034 DEC= 22.605 DIST= 1.663 AU
MARS-BATSE DISTANCE = 248762160. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=130.43 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -538.07 SECS.
CROSSING TIME AT MARS IS 52936. S. OR 14:42:15 +/- 101.50 SECONDS

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3173	940918	9613	53474	51000	065	+03

BATSE BURST TRIGGER

NO.: 3173

TIME: TJD=9613 SECONDS=53474

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=73.7 AZIMUTH=133.8 ERROR= DEGREES

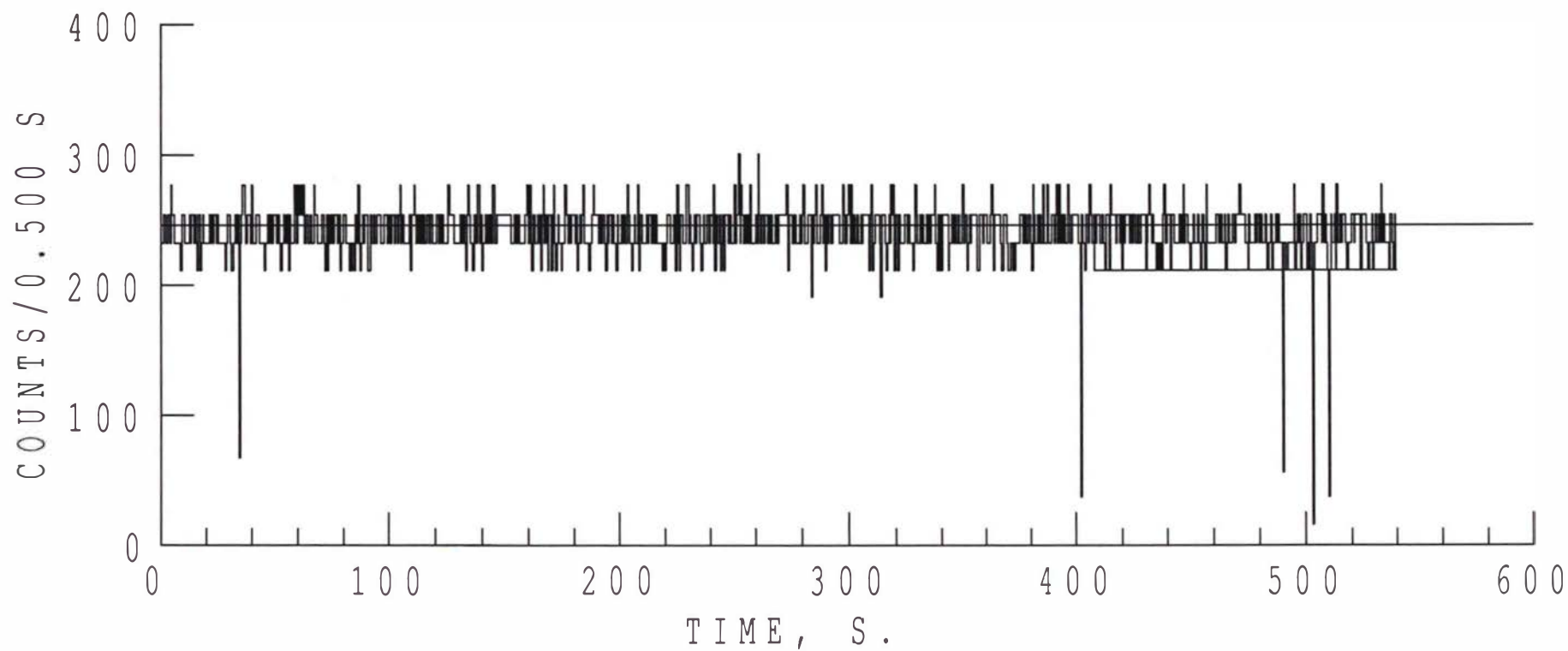
COMMENTS:

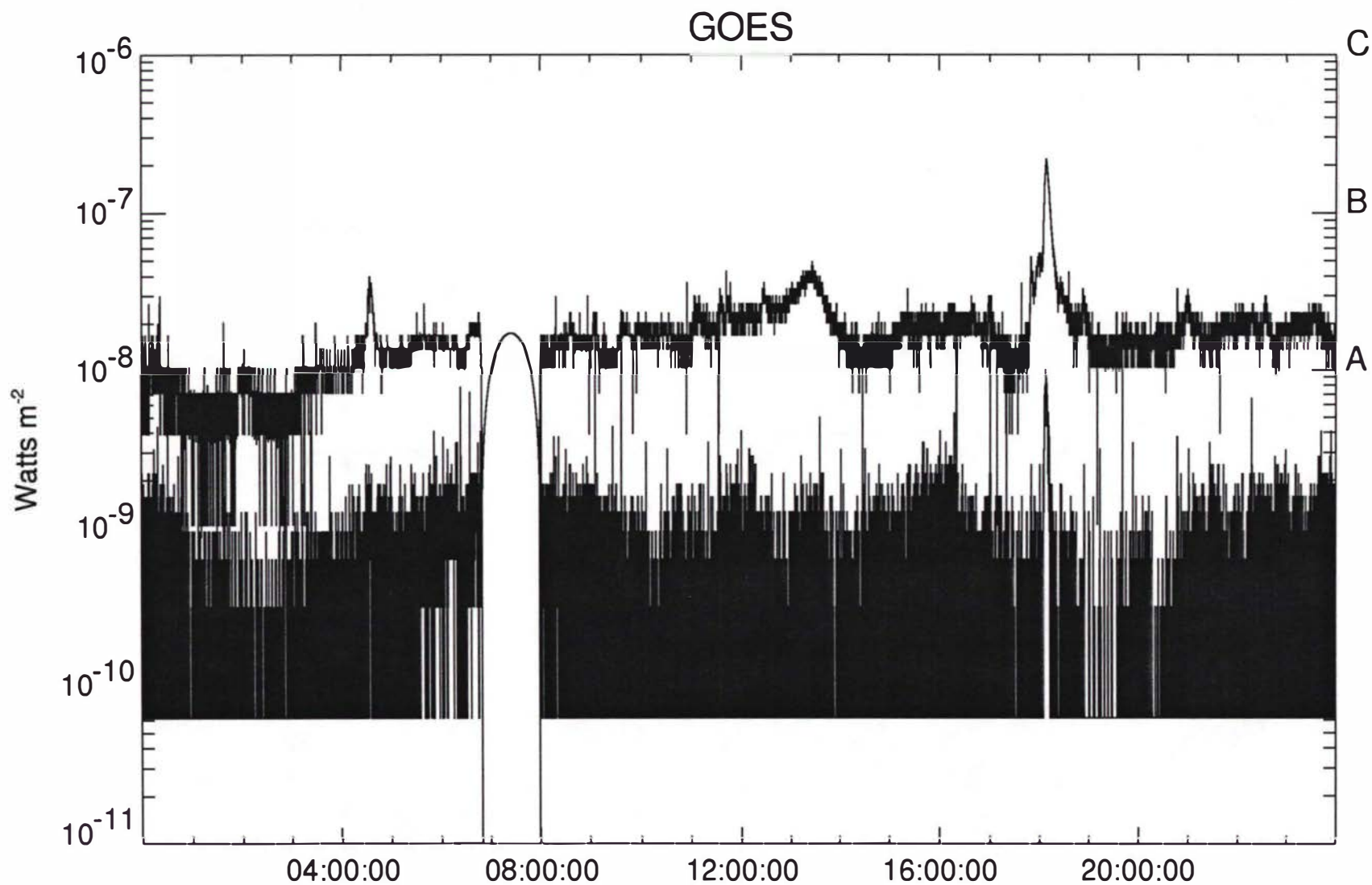
GRB. SPIKE WITH STRUCTURE. LASTING APPROX. 0.2S. VISIBLE ABOVE 300KEV.

20 / 9 / 94

ULYSSES RT
18 / 9 / 94 53244.262 s
0 - 0 keV

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS





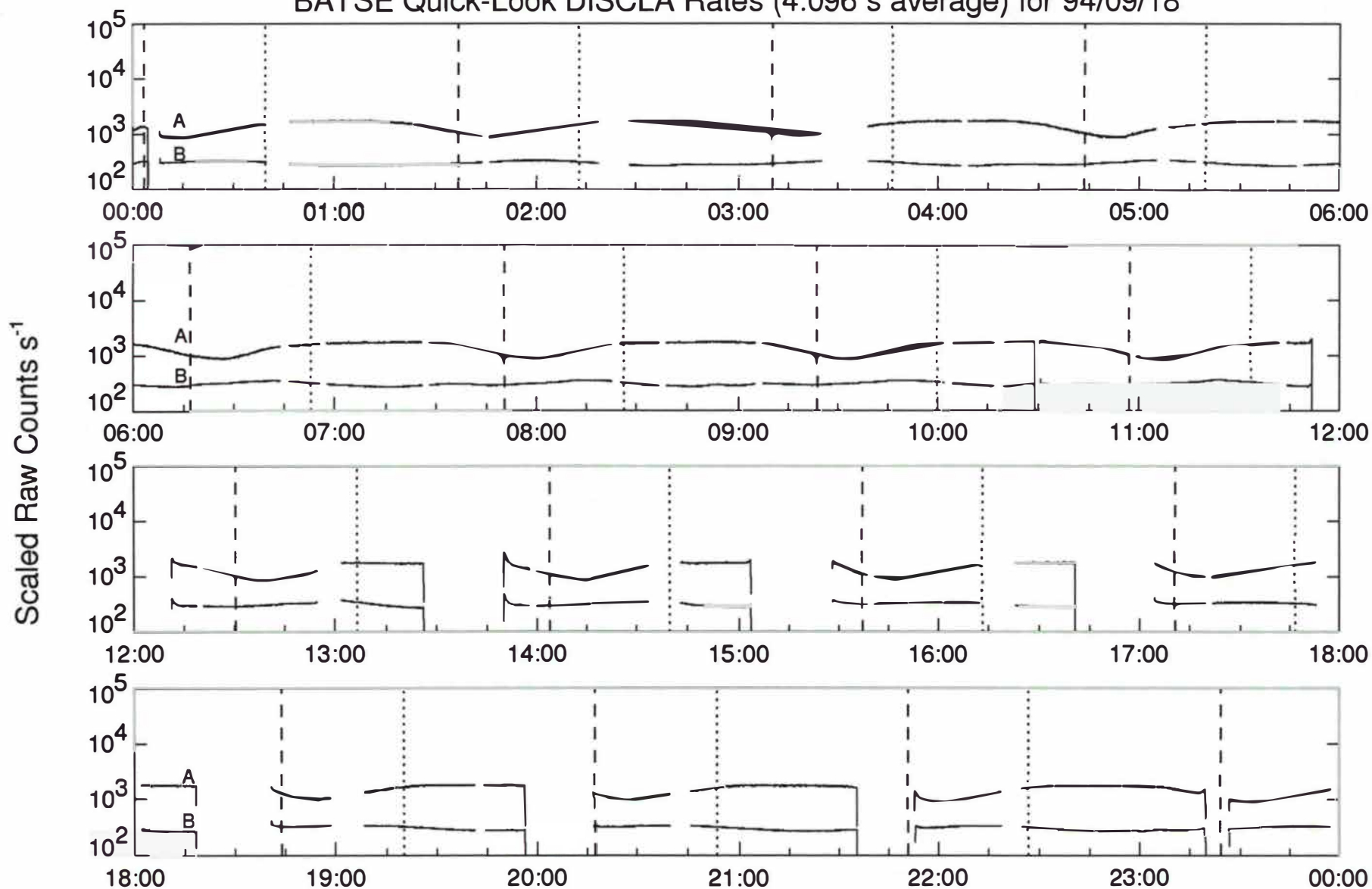
Data Start: 94/09/18, 0000:02

Plot created: 94/09/19, 1650

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/18

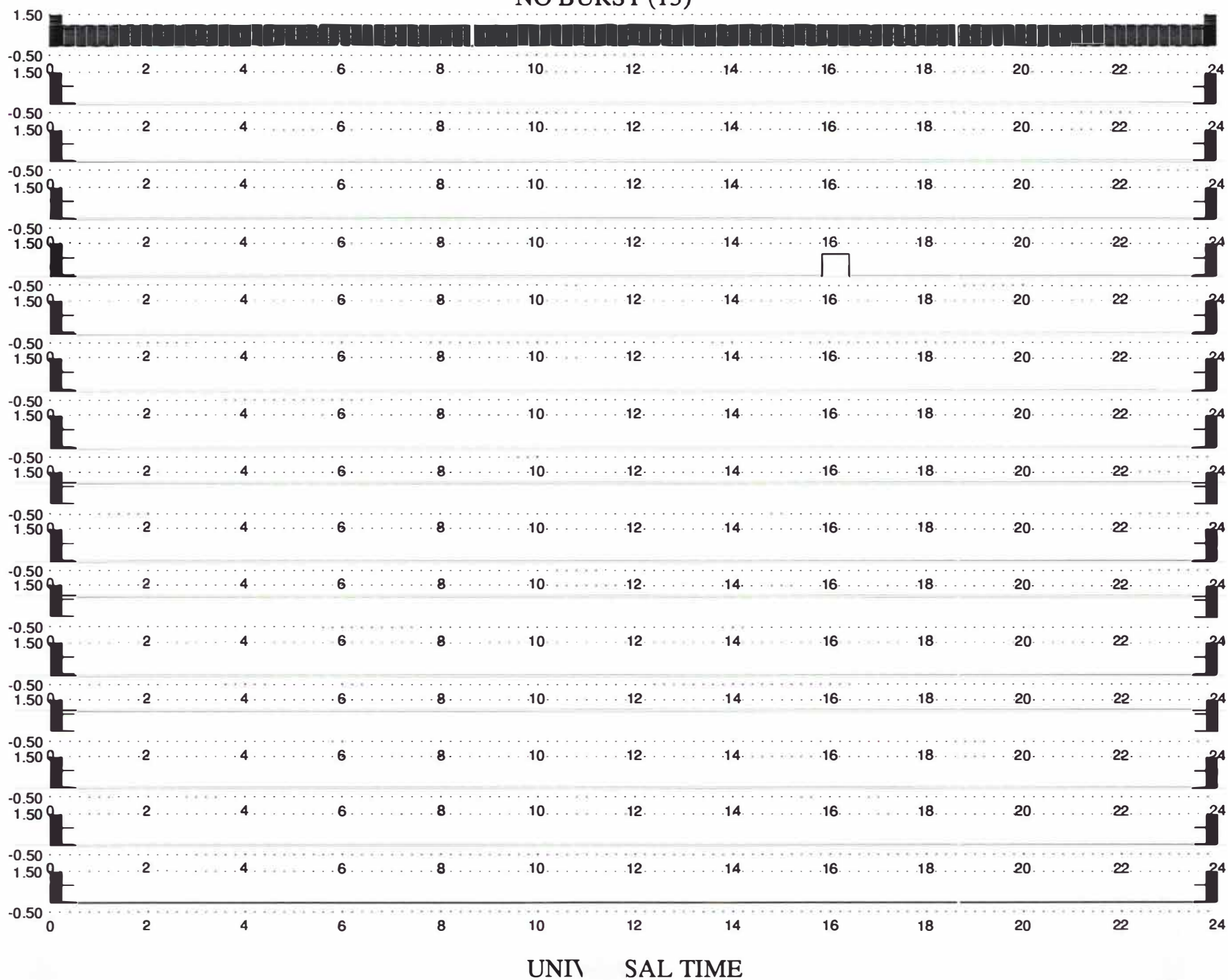


Current Time: 94/09/19, 1646 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

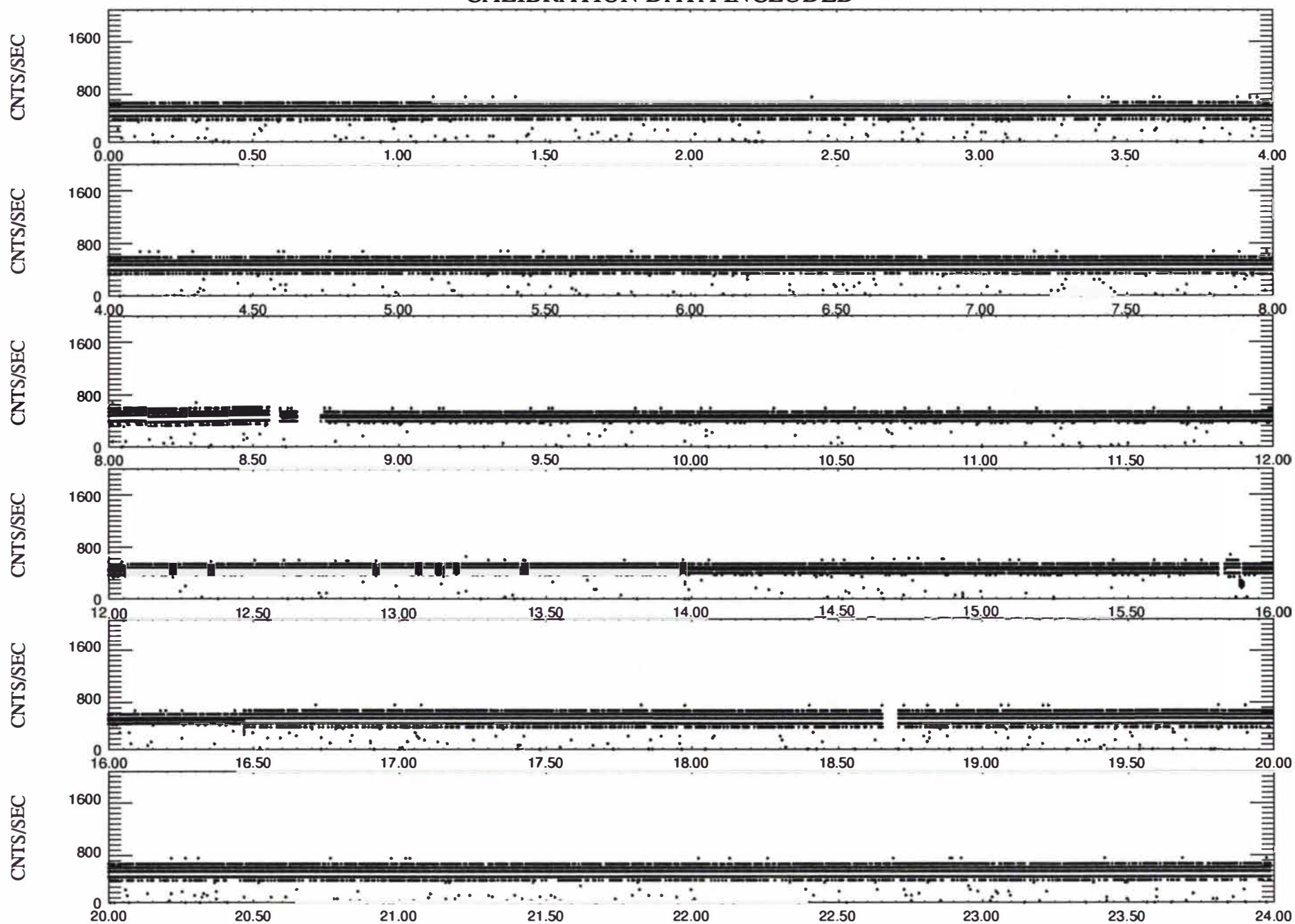
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

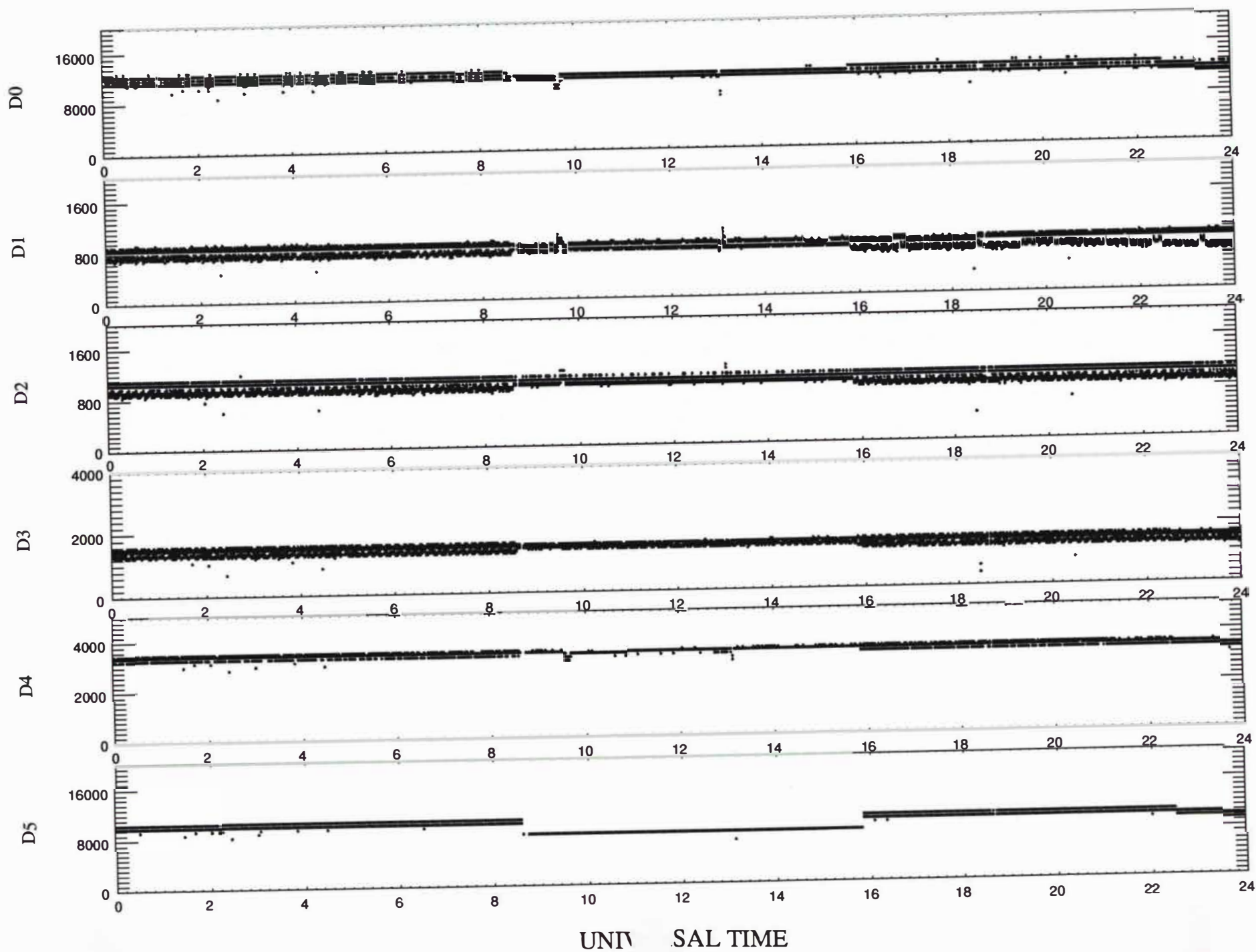
CBU	CCL	DMP	ROM	DMA	OSC	MP.	ICR	SPE	OPM	RSC	CAL	WCH	MEM	BRS	HUS
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From HAGEDON@fender.msfc.nasa.gov Wed Sep 21 07:15 PDT 1994
Date: Wed, 21 Sep 1994 9:16:59 -0500 (CDT)
From: HAGEDON@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3174

BATSEARCH PROGRAM

BATSE BURST # 3174
EVENT OF 1994 SEP 19 DAY OF YEAR=262
EVENT CROSSING TIME AT BATSE : 2542. S. OR 00:42:22.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 207.000 41.000
BATSE PEAK COUNTING RATE: 1950 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 19/ 9/ 94 IS:
RA= 153.829 DEC= -54.148 DIST= 2.602 AU
BATSE-ULYSSES DISTANCE = 389238727. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 74.53 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= 346.40 SECS.
CROSSING TIME AT ULYSSES IS 2888. S. OR 00:48:08 +/- 272.51 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 19/ 9/ 94 IS:
RA= 112.679 DEC= 22.532 DIST= 1.656 AU
MARS-BATSE DISTANCE = 247811360. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=101.47 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -164.40 SECS.
CROSSING TIME AT MARS IS 2378. S. OR 00:39:37 +/- 138.15 SECONDS

NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3174	940919	9614	02542	1950	207	+41

BATSE BURST TRIGGER

NO.: 3174

TIME: TJD=9614 SECONDS=02542

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=111 AZIMUTH=13 ERROR= DEGREES

COMMENTS:

BURST. SINGLE PULSE. FASTER RISE THAN DECAY. DUR.~75 SEC.
NOT VISIBLE ABOVE 300 KEV.

21 / 9 / 94

ULYSSES RT

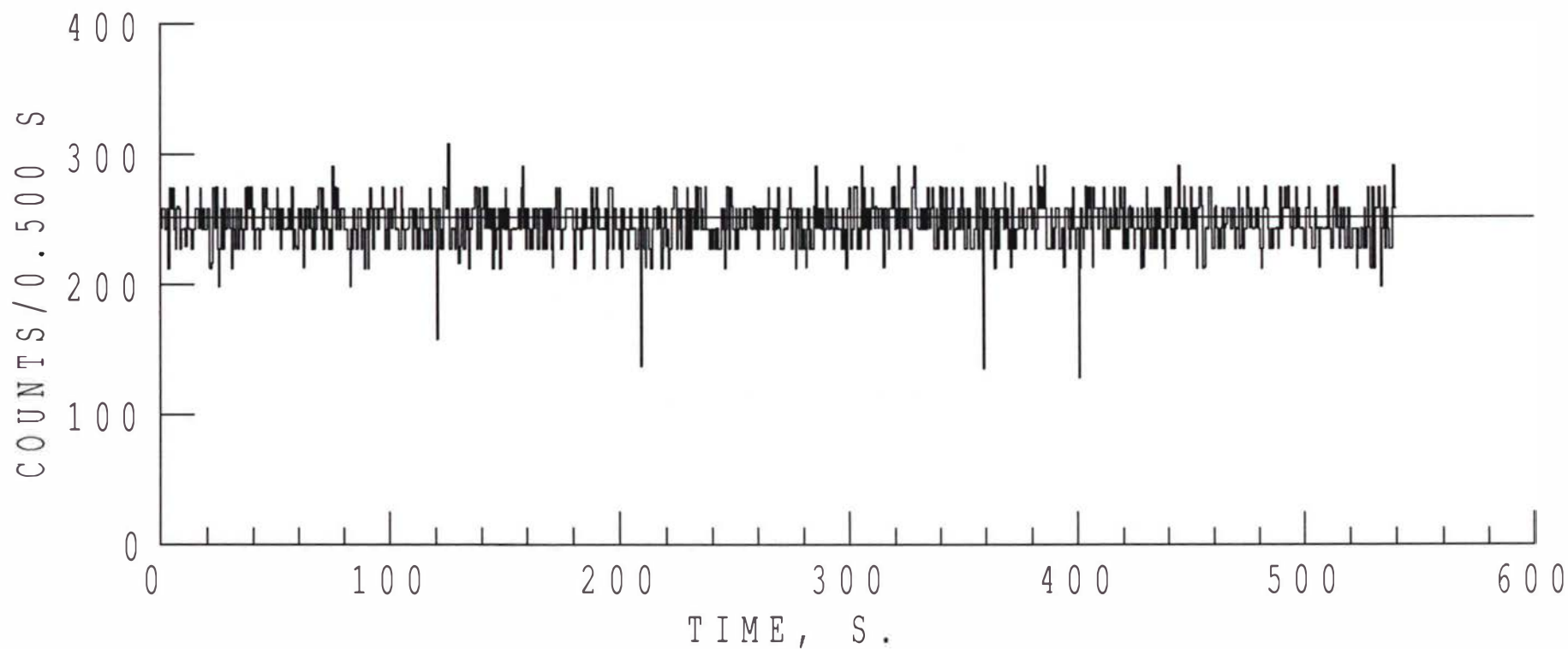
19 / 9 / 94 2628.108 s

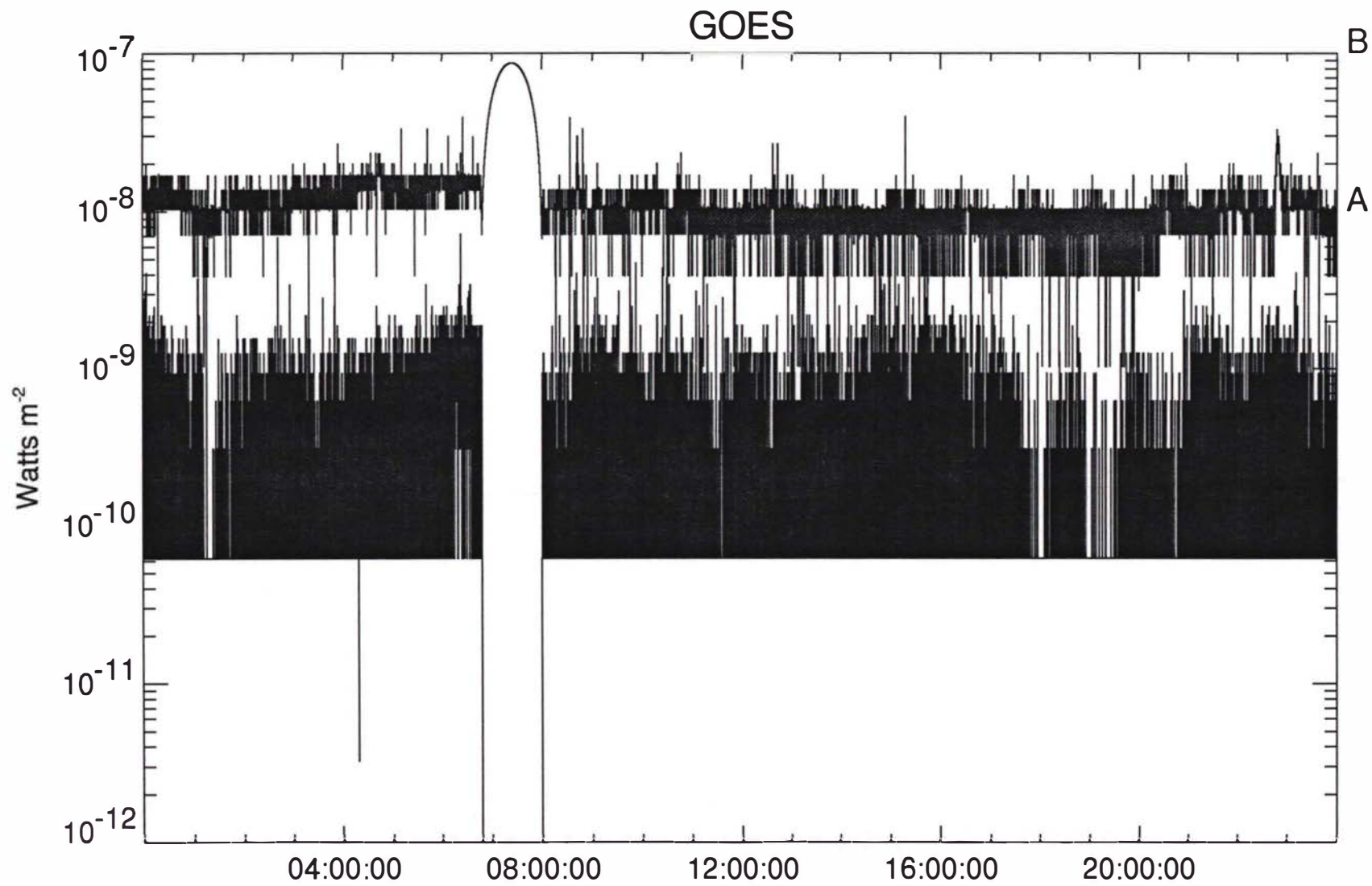
0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





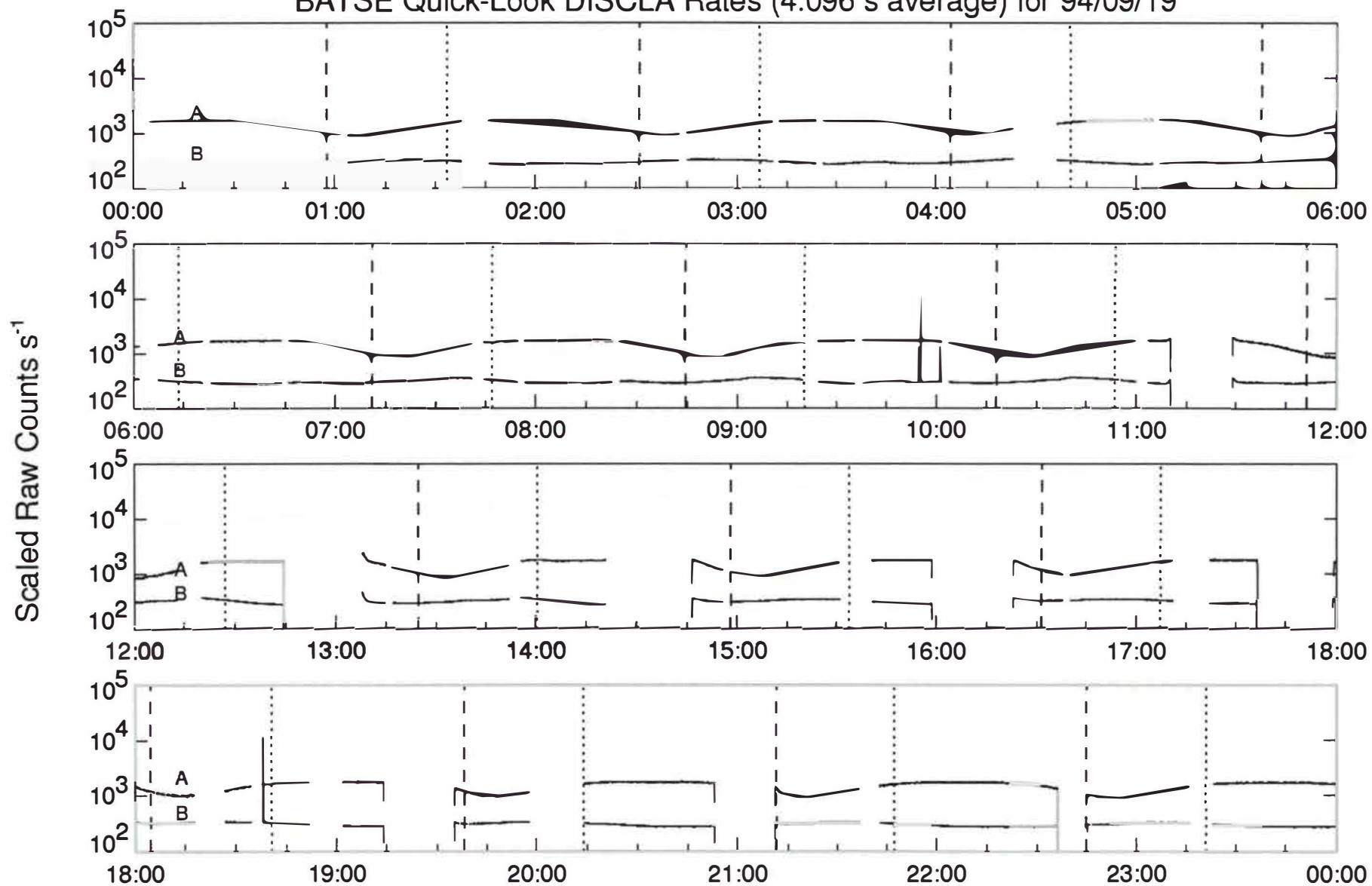
Data Start: 94/09/19, 0000:00

Plot created: 94/09/20, 1603

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/19

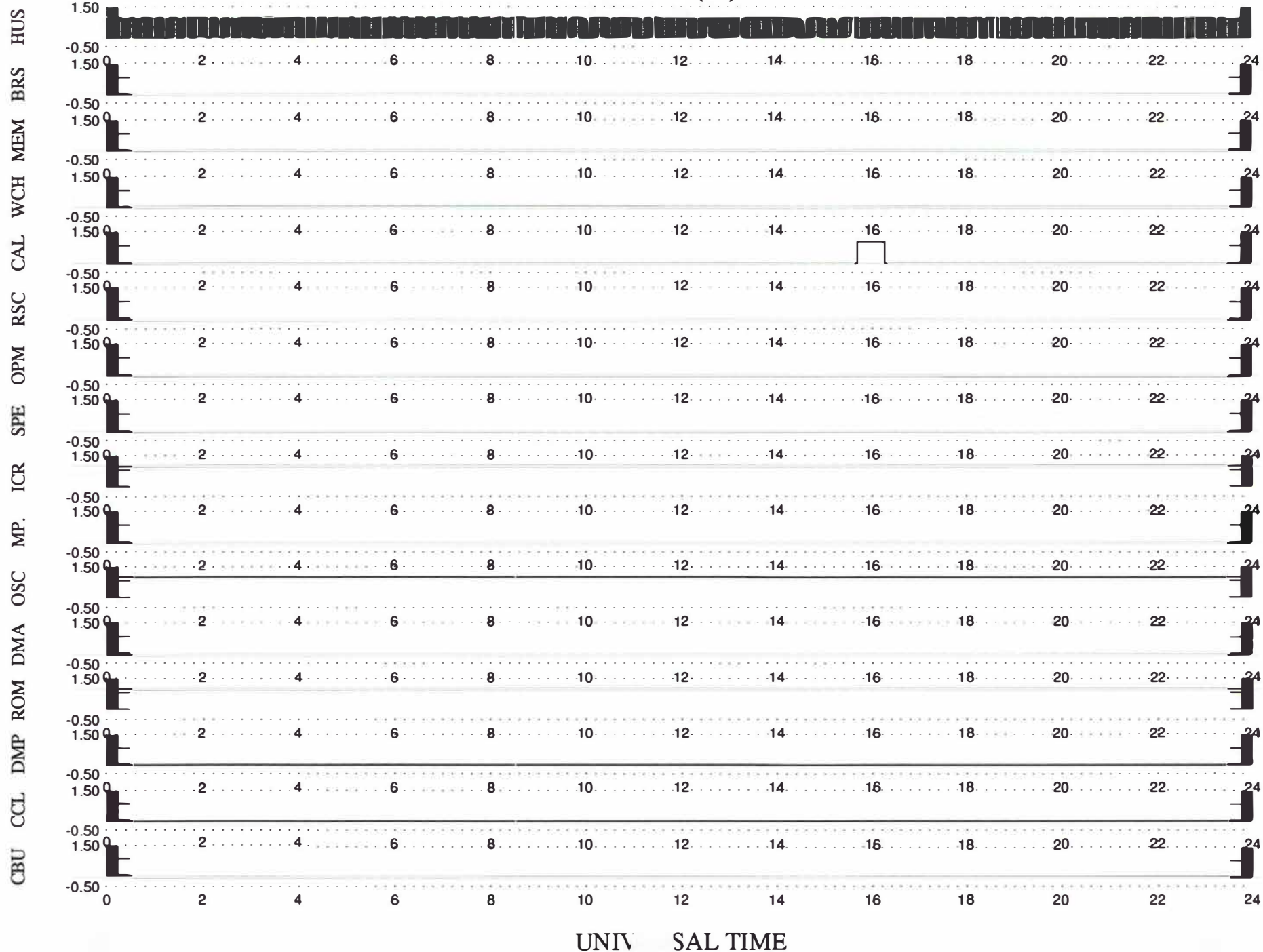


Current Time: 94/09/20, 1610 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

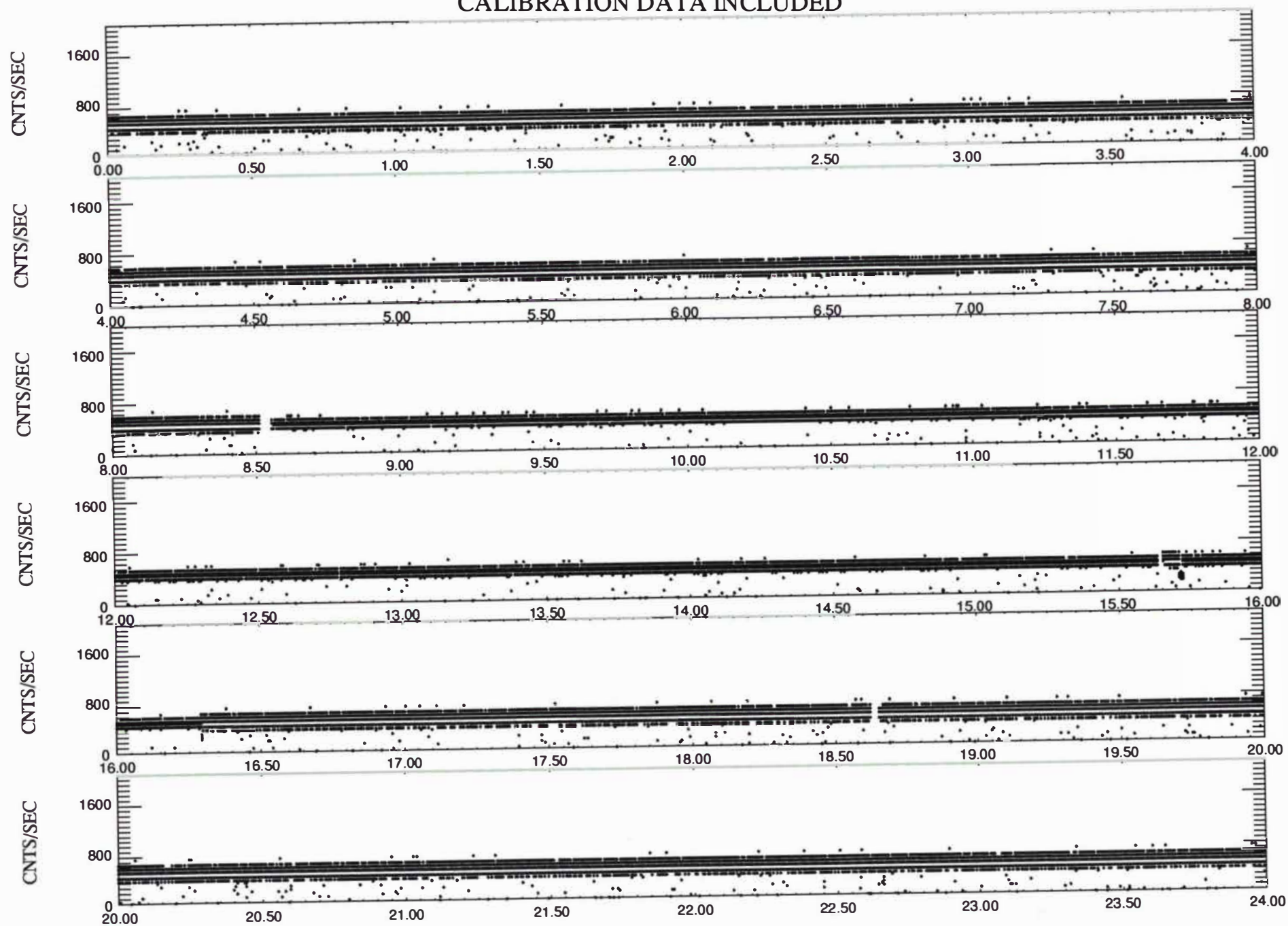
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

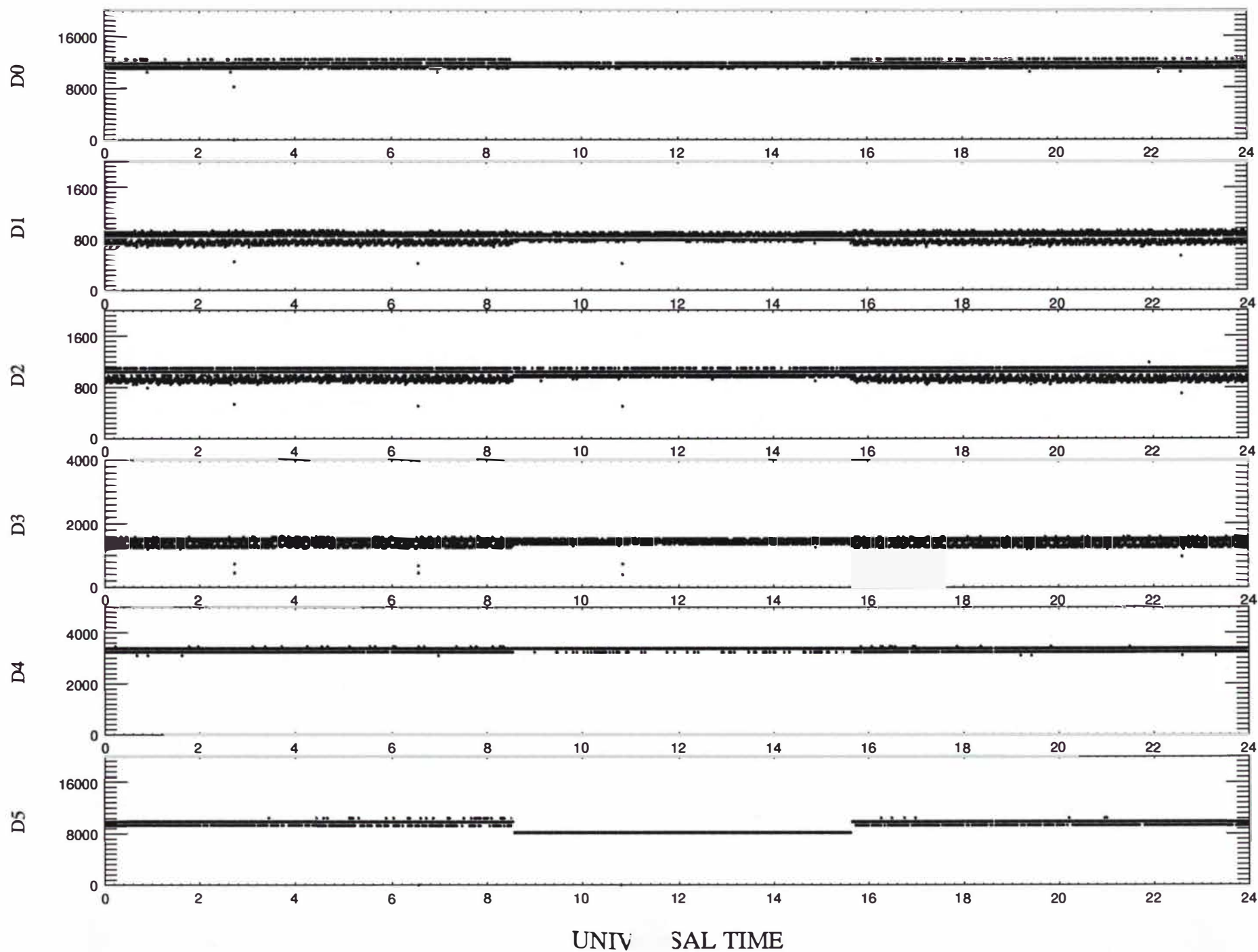
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From KOSHUT@ssl.msfc.nasa.gov Wed Sep 21 10:29 PDT 1994
Date: Wed, 21 Sep 1994 12:31:16 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3175

TIME: TJD=9615 SECONDS=37663

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON ENTRY INTO SAA.

From KOSHUT@ssl.msfc.nasa.gov Wed Sep 21 10:31 PDT 1994
Date: Wed, 21 Sep 1994 12:33:26 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3176

TIME: TJD=9615 SECONDS=49149

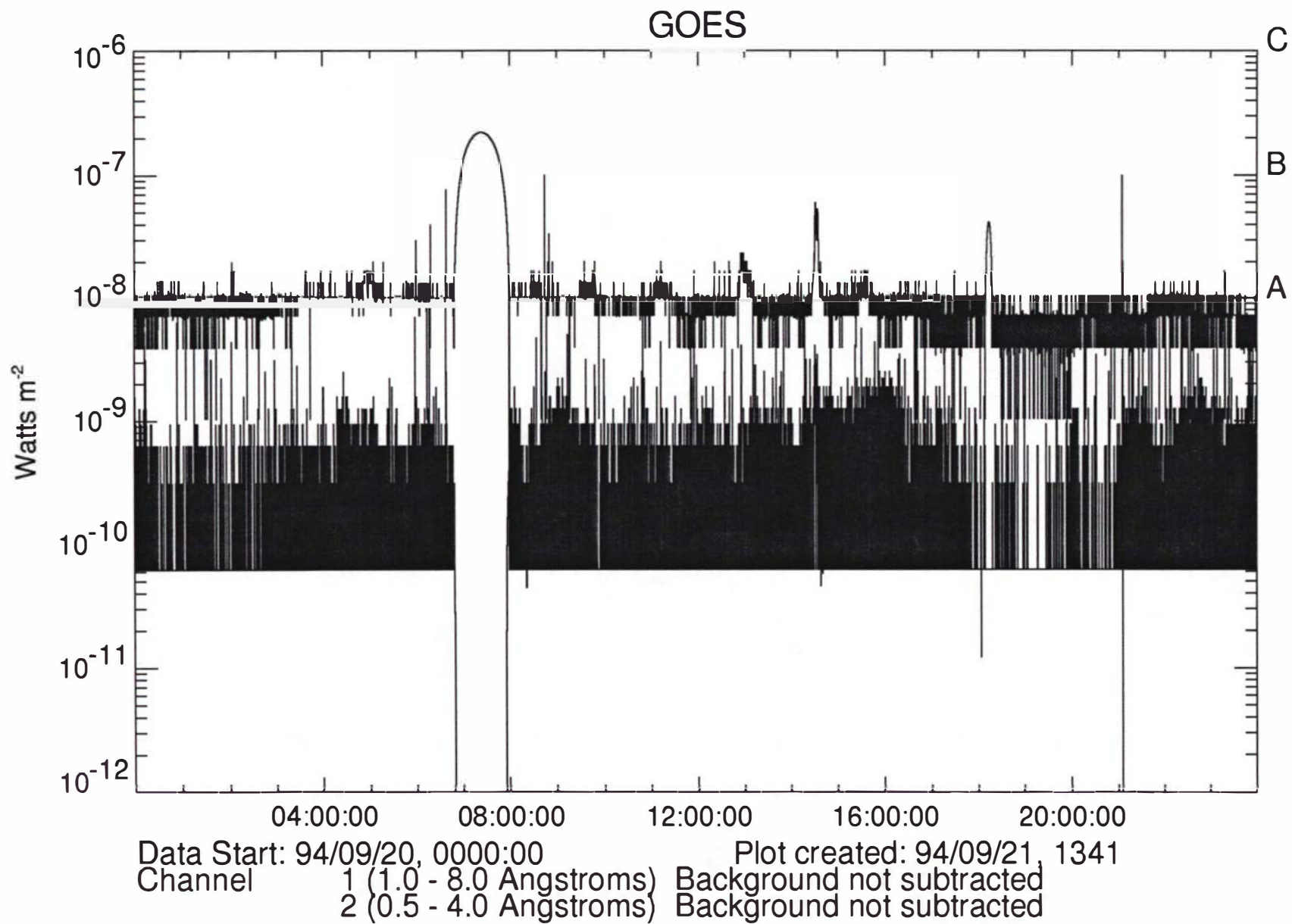
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

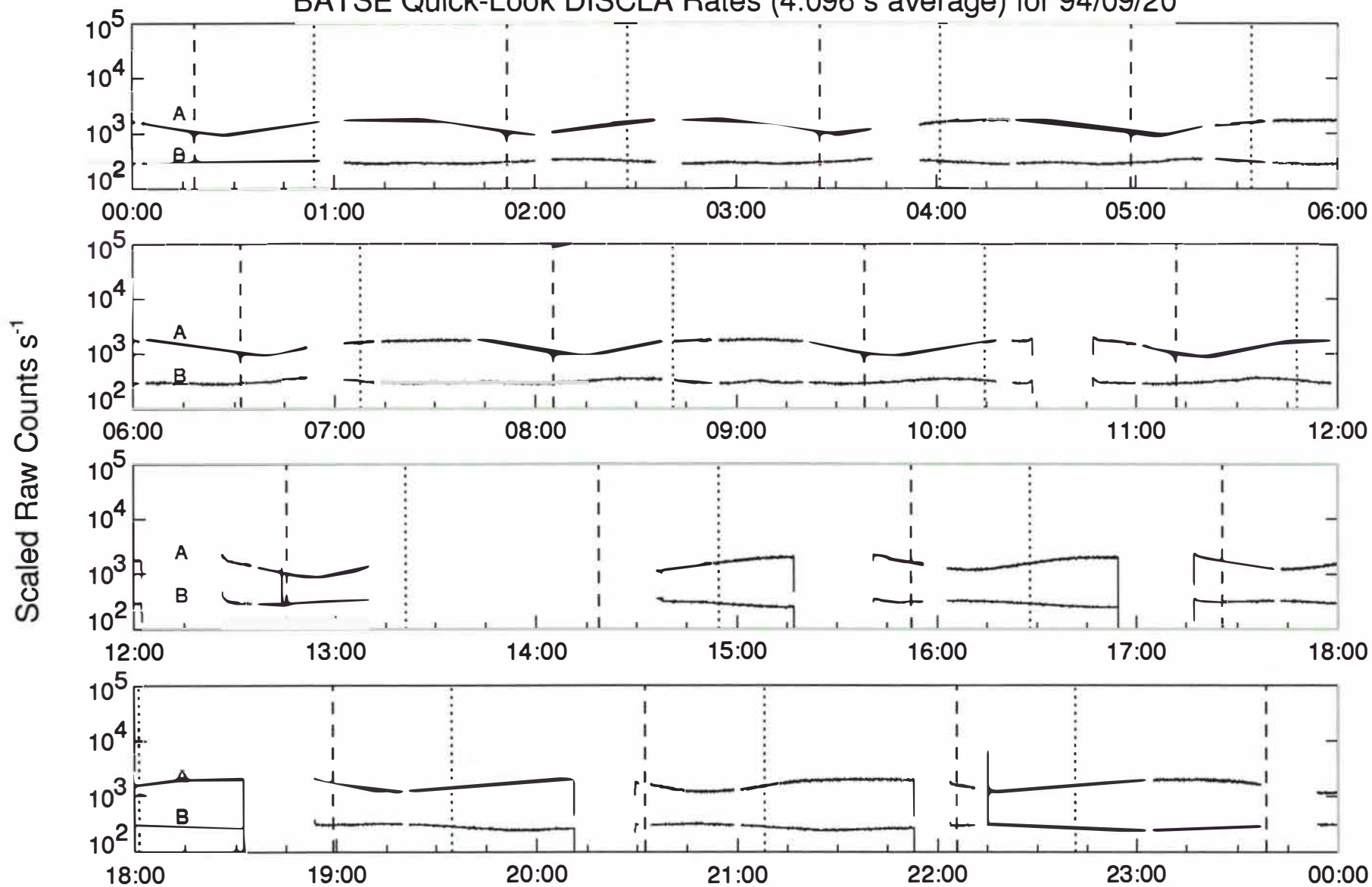
INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON ENTRY INTO SAA.



BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/20



Current Time: 94/09/22, 1314 EDT

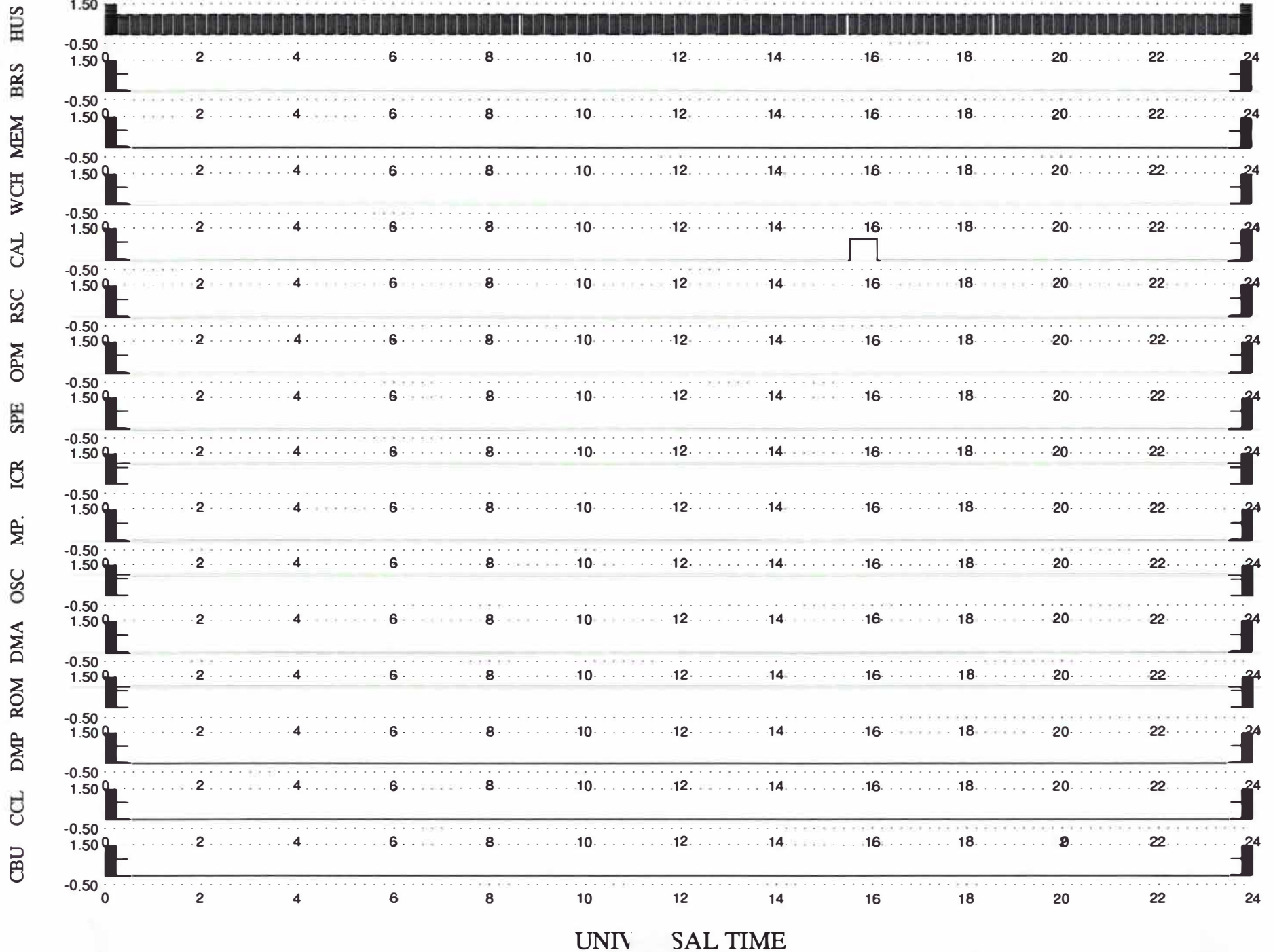
A: Channel 0 Most Sunward LAD

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

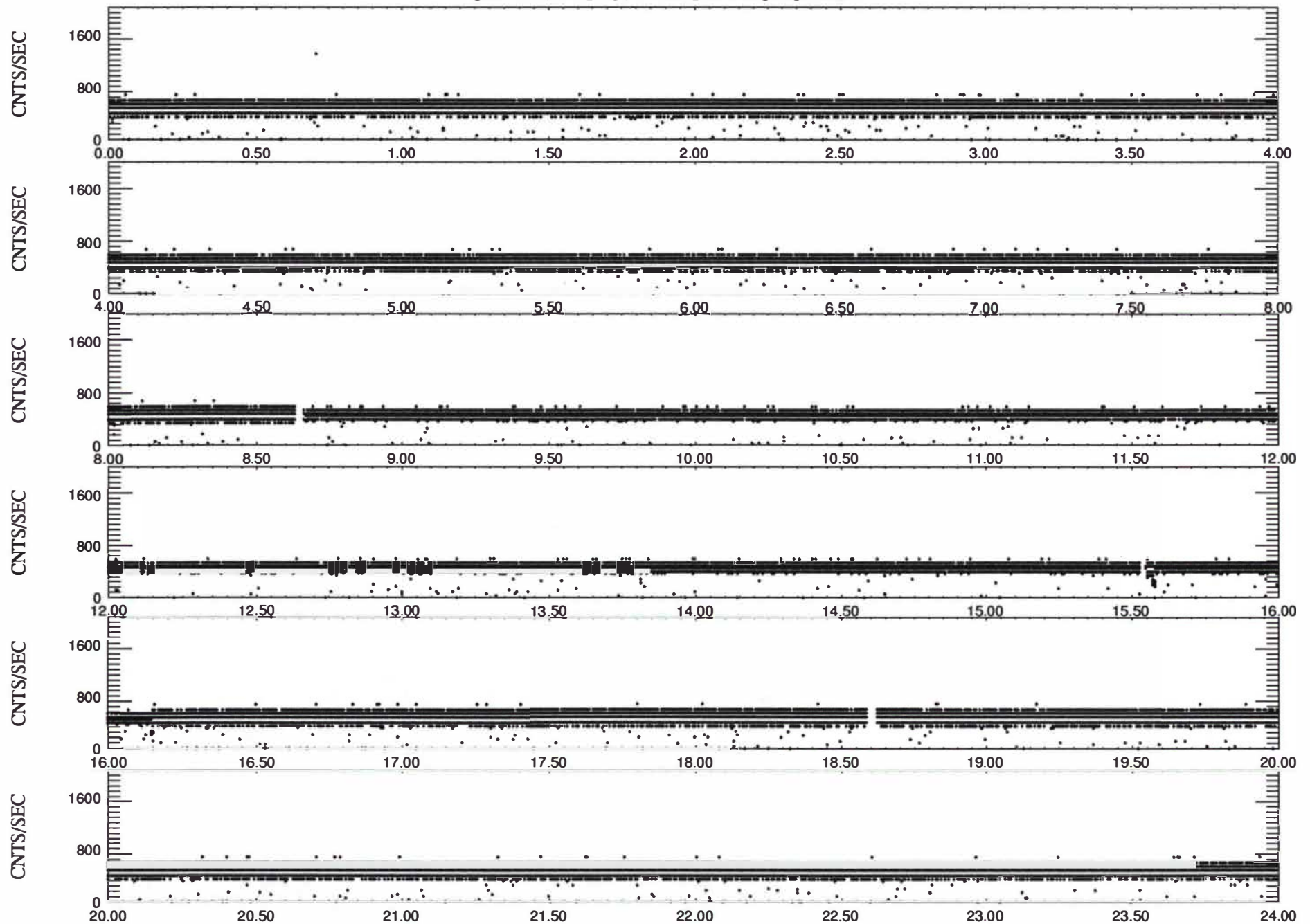
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

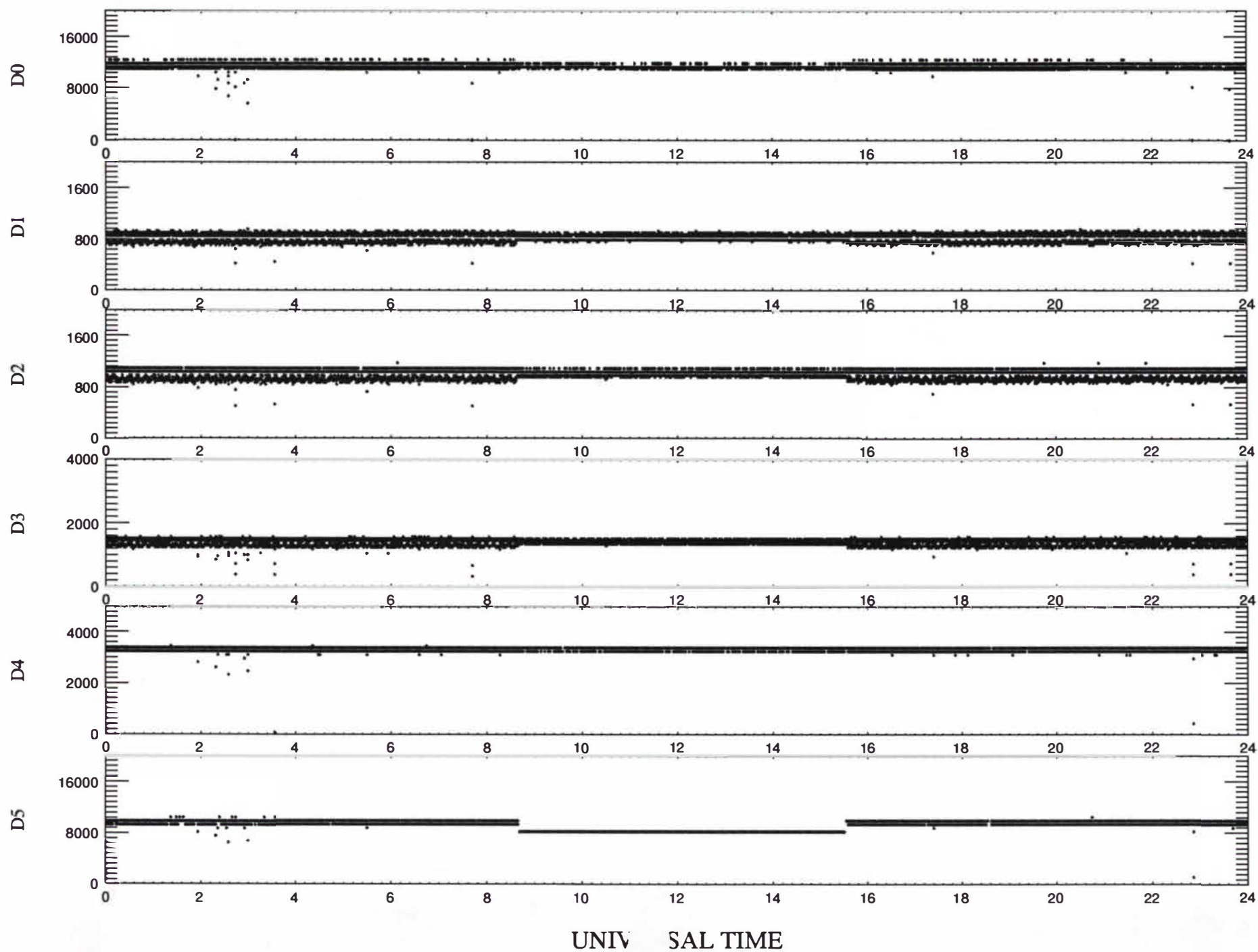
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From DEAL@ssl.msfc.nasa.gov Fri Sep 23 10:56 PDT 1994
Date: Fri, 23 Sep 1994 12:57:55 -0500 (CDT)
From: DEAL@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3177

BATSEARCH PROGRAM

BATSE BURST # 3177
EVENT OF 1994 SEP 21 DAY OF YEAR=264
EVENT CROSSING TIME AT BATSE : 11328. S. OR 03:08:48.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 114.000 26.000
BATSE PEAK COUNTING RATE: 5500 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 21/ 9/ 94 IS:
RA= 155.000 DEC= -54.929 DIST= 2.584 AU
BATSE-ULYSSES DISTANCE = 386549510. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 91.78 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -39.94 SECS.
CROSSING TIME AT ULYSSES IS 11288. S. OR 03:08:08 +/- 273.14 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 21/ 9/ 94 IS:
RA= 113.962 DEC= 22.378 DIST= 1.644 AU
MARS-BATSE DISTANCE = 245890336. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=176.38 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -818.56 SECS.
CROSSING TIME AT MARS IS 10509. S. OR 02:55:09 +/- 3.43 SECONDS

No

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3177	940921	9616	11328	5500	114	+26

BATSE BURST TRIGGER

NO.: 03177

TIME: TJD=9616 SECONDS=11328

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=118.1 AZIMUTH=299.9 ERROR= DEGREES

COMMENTS:

BURST LASTING ~10S. MARGINALLY VISIBLE ABOVE 300 KEV.

23 / 9 / 94

ULYSSES RT

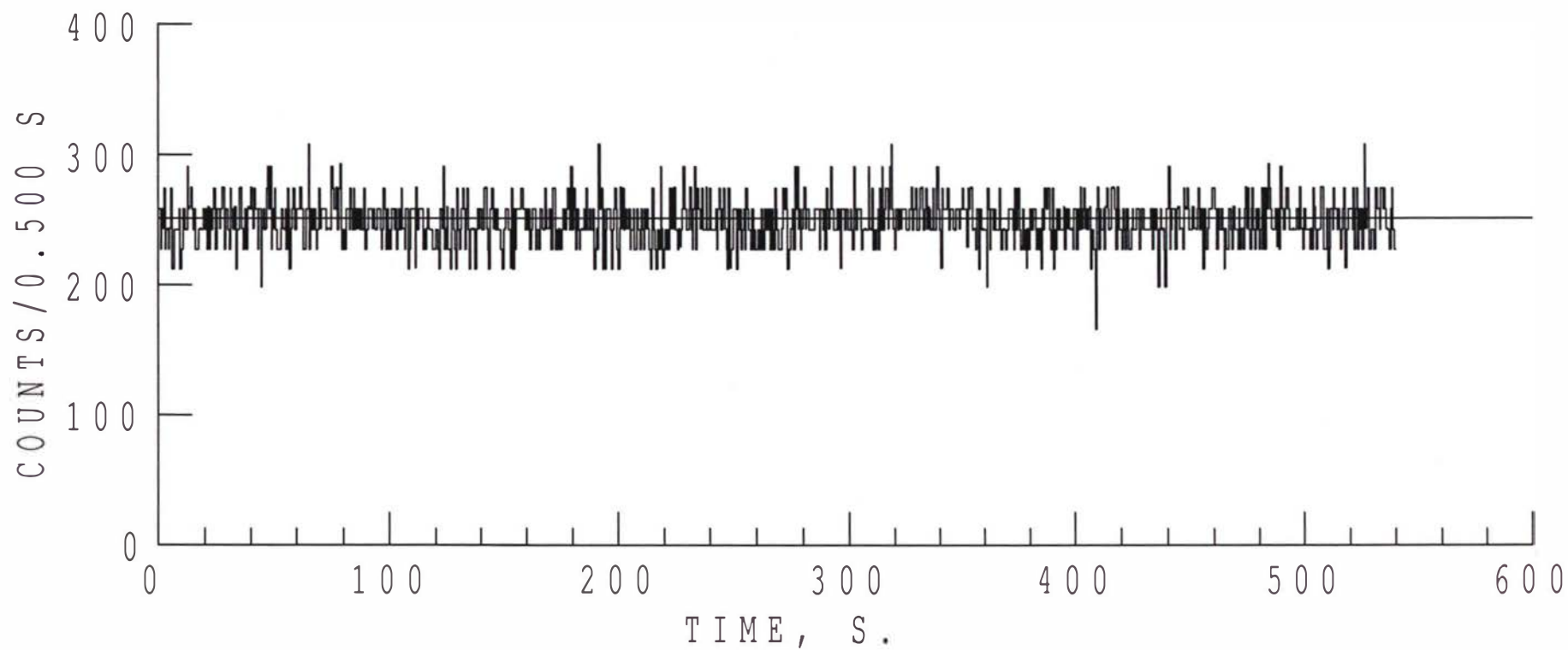
21 / 9 / 94 11016.176 s

0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS



From MEEGAN@ssl.msfc.nasa.gov Tue Sep 27 11:01 PDT 1994
Date: Tue, 27 Sep 1994 13:02:51 -0500 (CDT)
From: MEEGAN@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 03178

TIME: TJD=9616 SECONDS=18493

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:Y

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= 41. AZIMUTH=356. ERROR= DEGREES

COMMENTS:

INTENSE SINGLE PULSE LASTING ABOUT 25 S. SEEN ABOVE 300 KEV.
ALSO SEEN BY COMPTTEL. IPN ARC AVAILABLE.

Helio corr removed

Date: Feb 4 '98

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

- ☐ 2.042 s subtracted for bursts prior to June 25 1992 and DISCSC programs prior to Version 2.16 (August 28 1992)? *N/A*
- ☒ BATSE ephemeris for T₀?
- ☒ Error circle position and radius from public catalog used?
- ☐ If MER data were used, is a 30 ms systematic error included? *N/A*

3. PVO Data

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

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

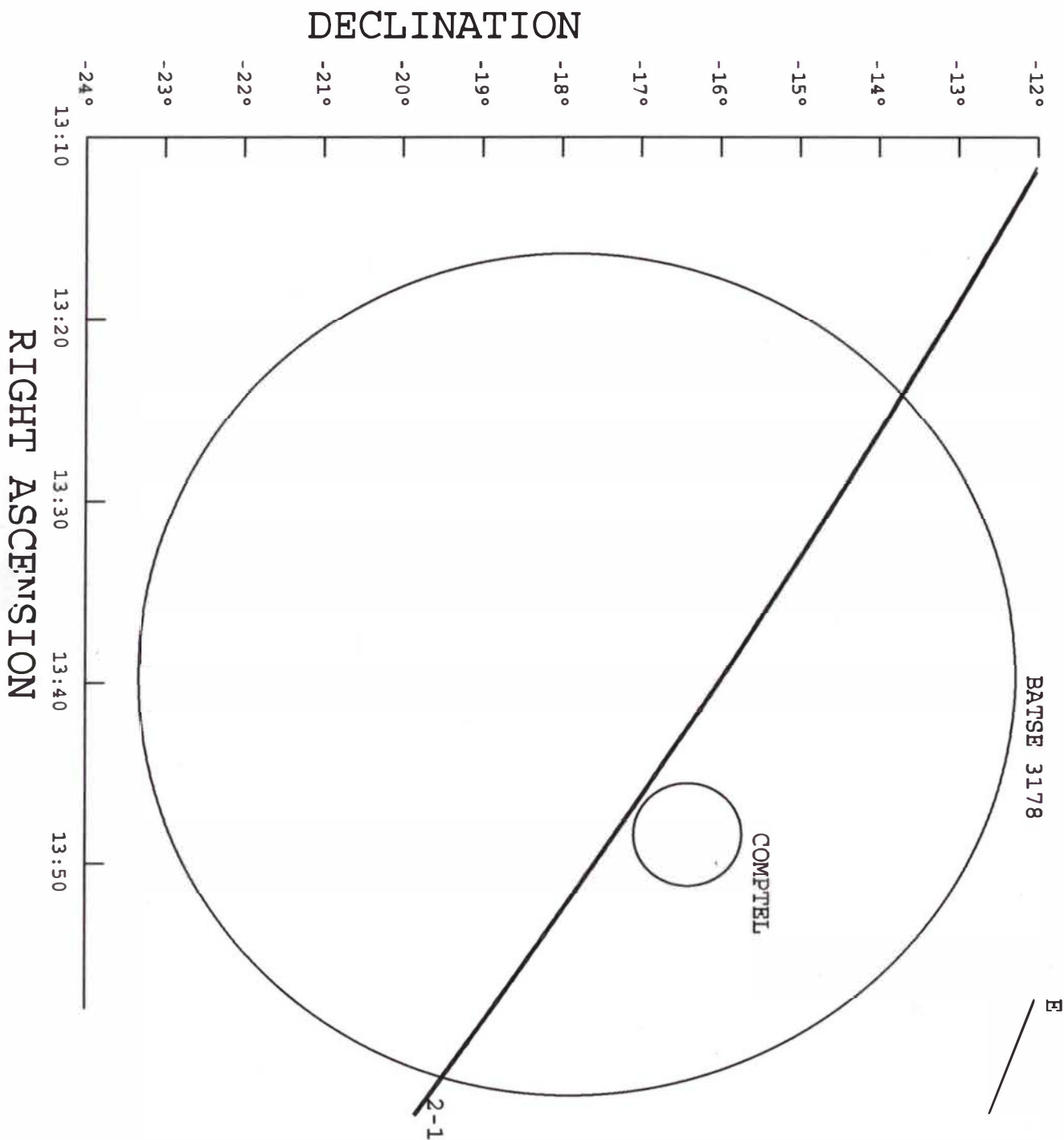
G=GALACTIC EQUATOR

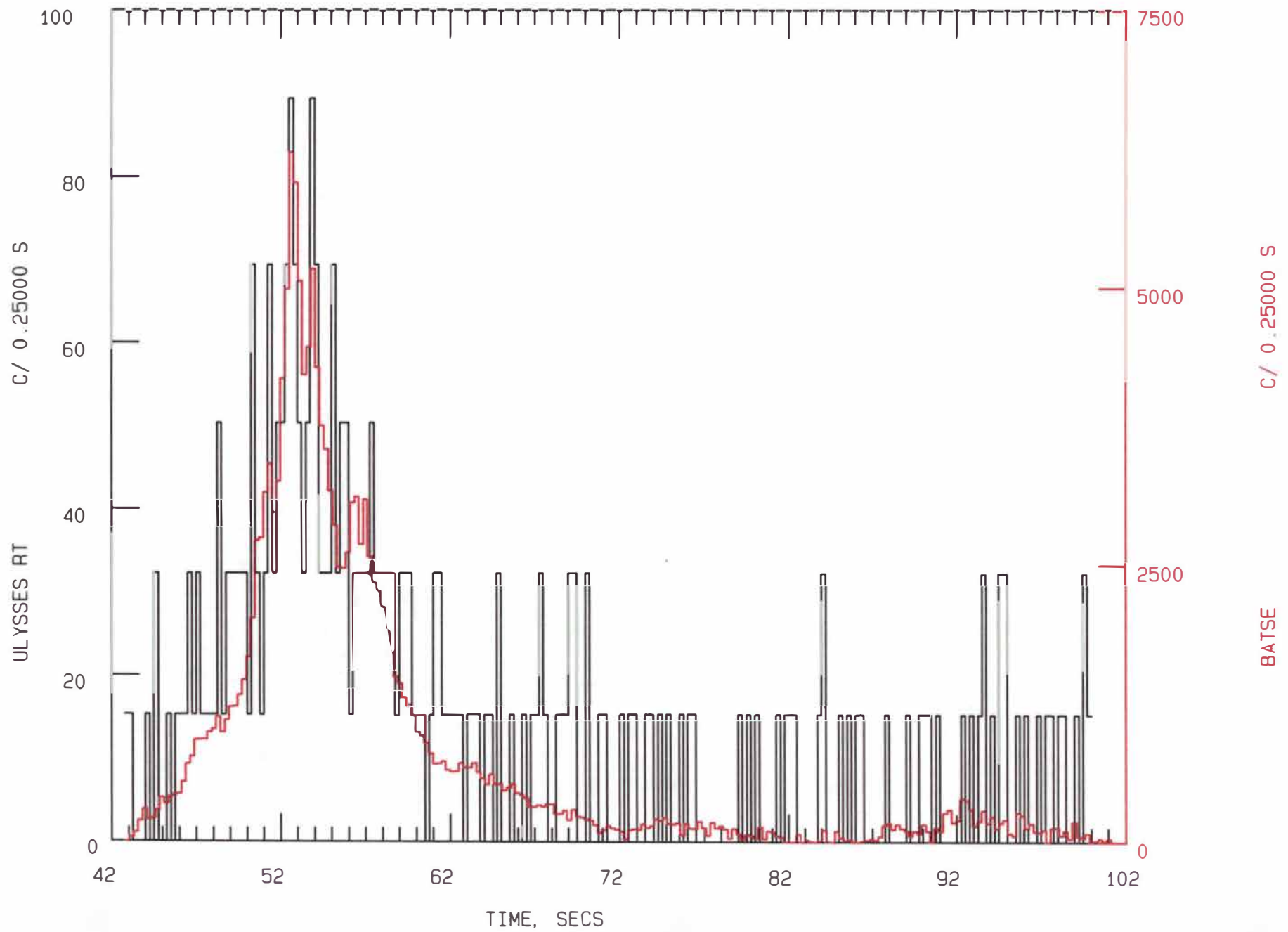
1 ULYSSES

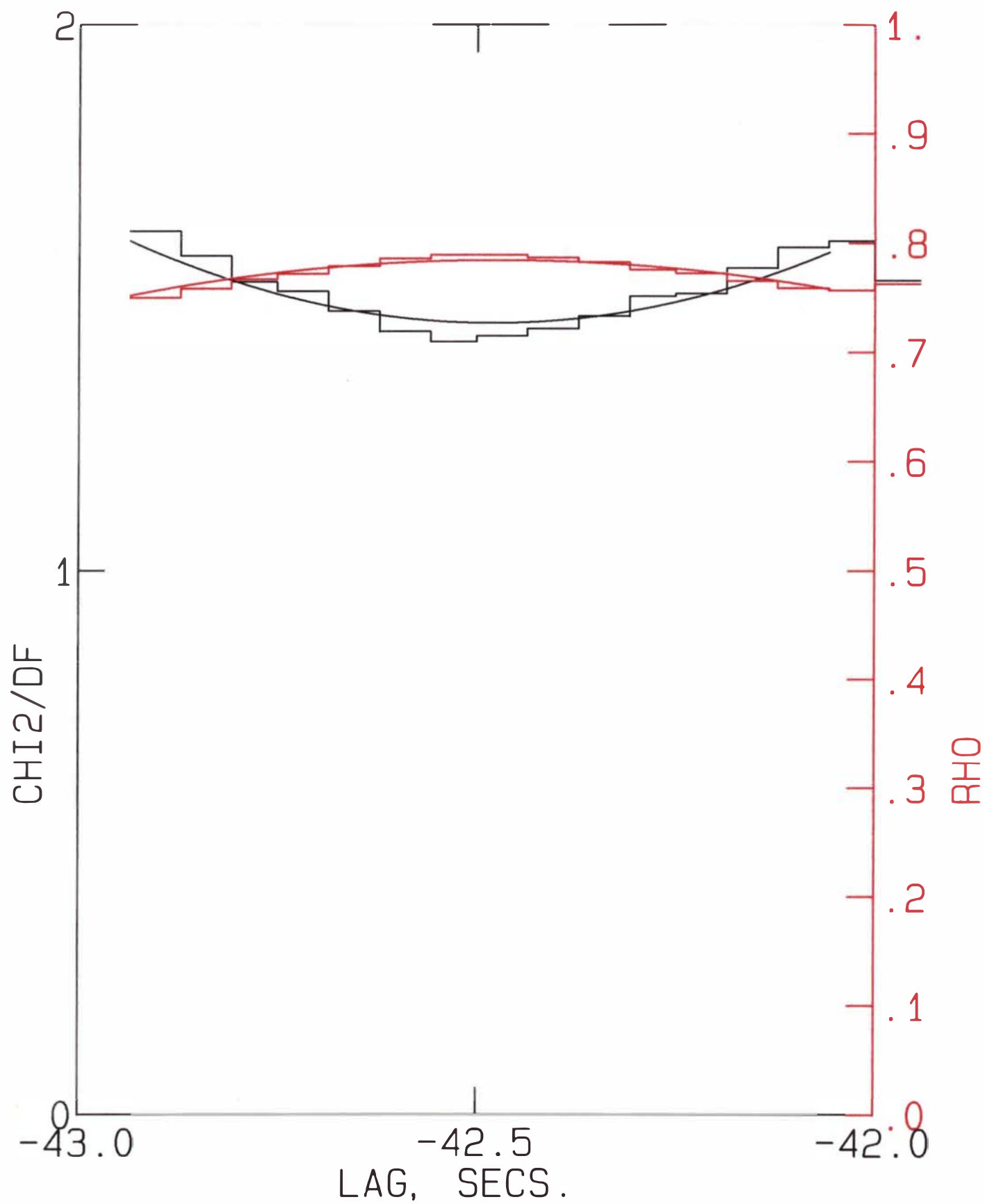
2 BATSE

EVENT OF SEP 21, 1994 4:54

4 / 2/98



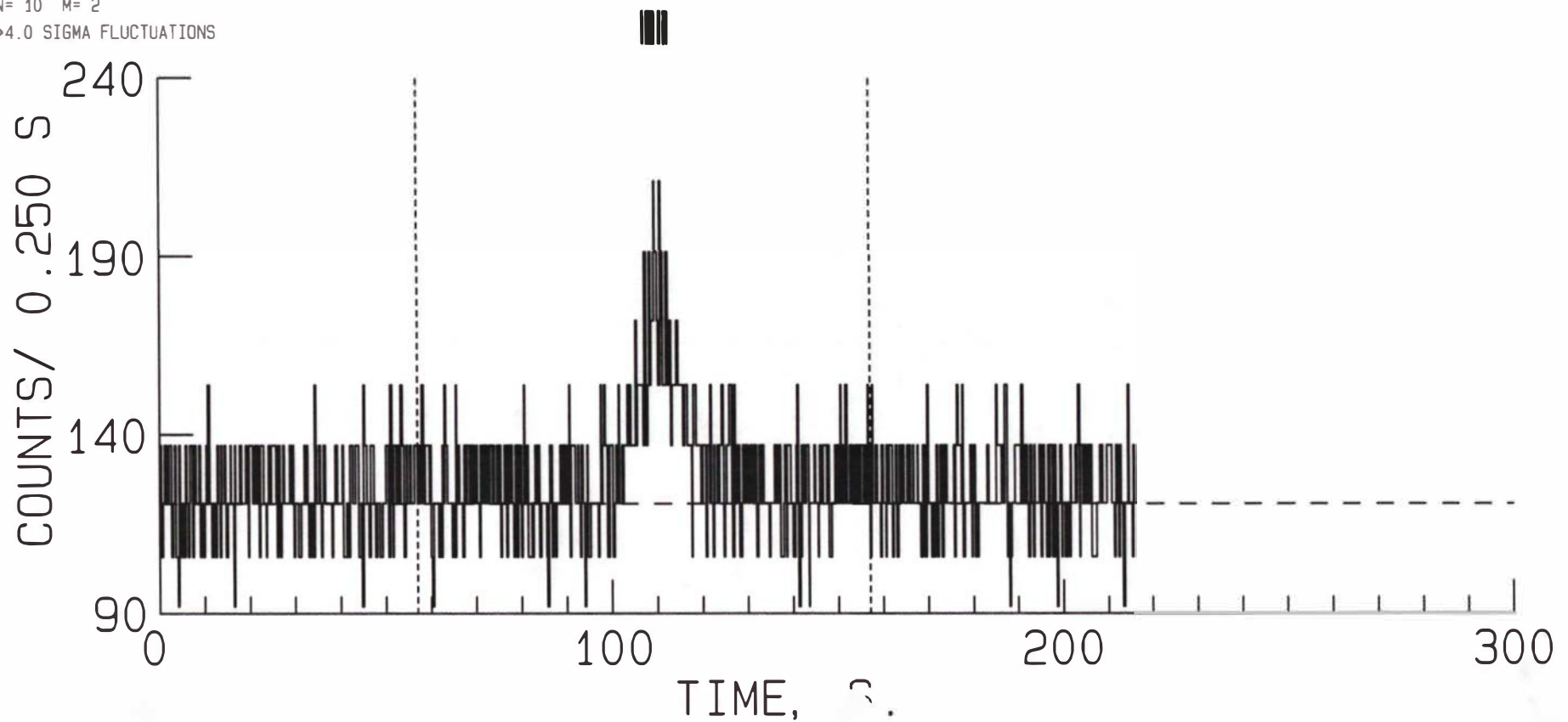




ULYSSES RT
21/ 9/94 17640.039 s
22- 147 keV

4 / 2 / 98

N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



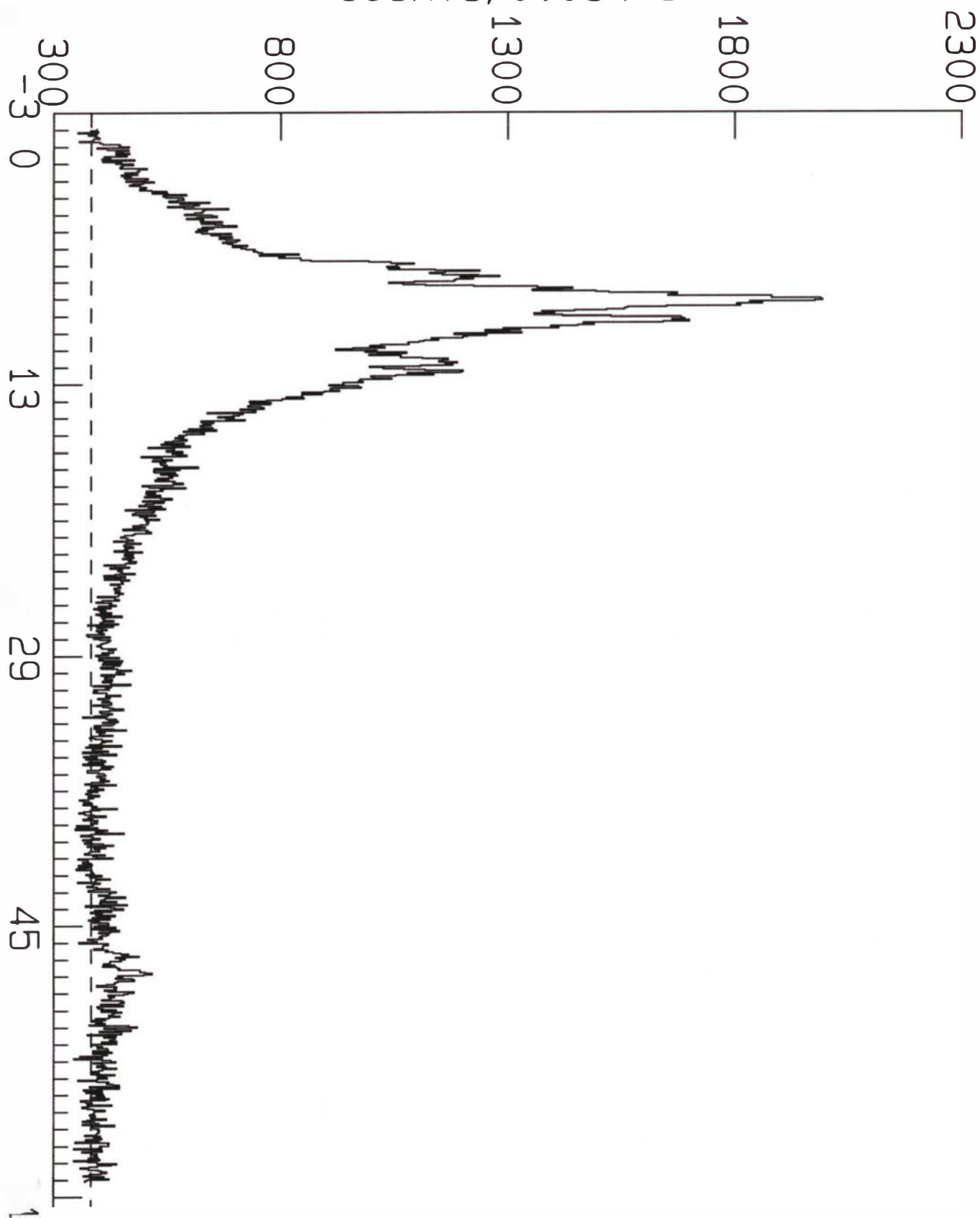
BATSE

21/09/94

18493.106

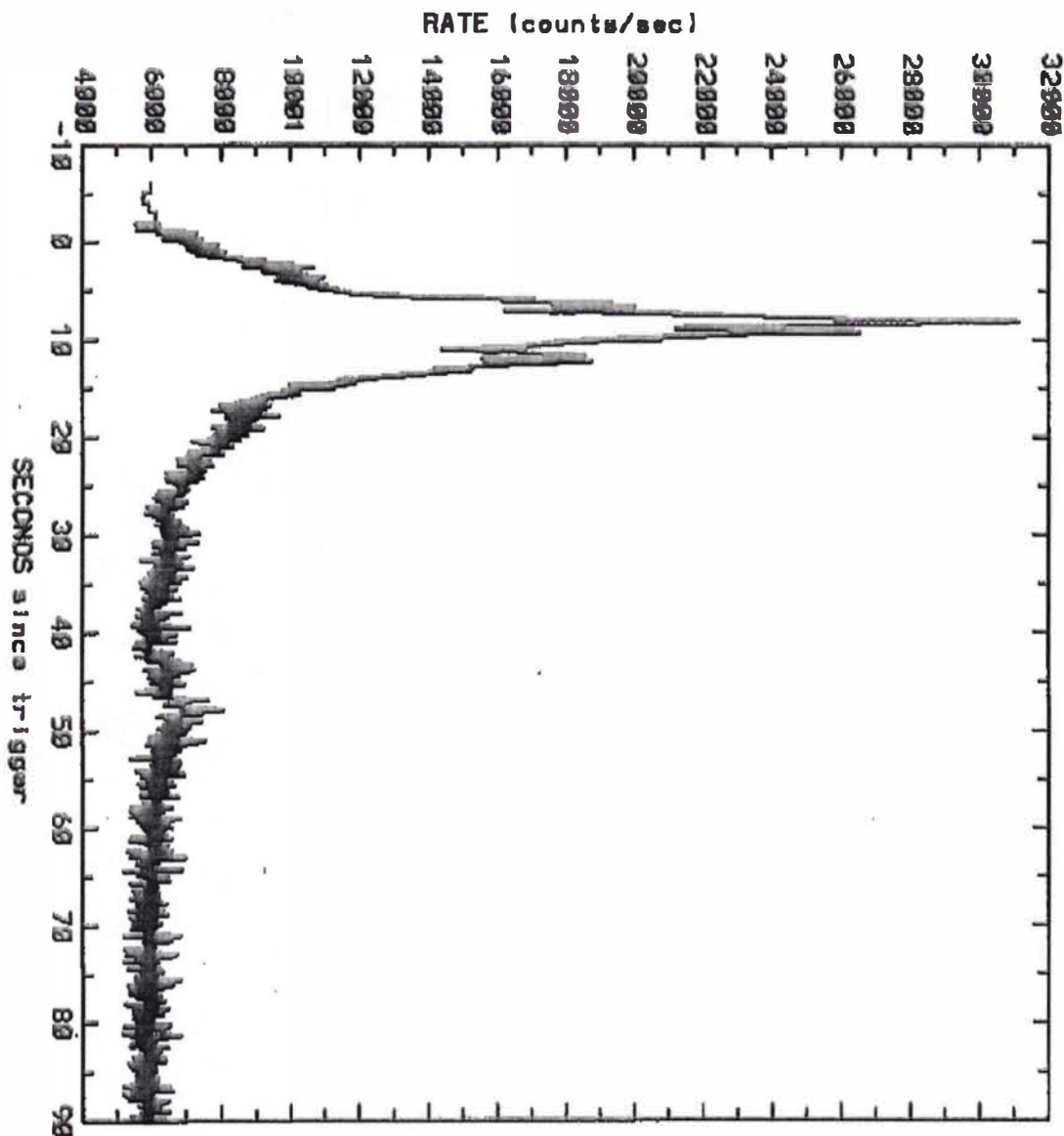
25- 100 keV

COUNTS/0.064 S



940921

DISCSC Data for K. Hurley, No. 3178



23-NOV-1995 16:29:08

Created by NOPS BD
(Burst Display)
Version 12.25

Trigger # . 3178

Trigger Time:
9616 / 18493.196Burst Data Type:
DISCSCDeadtime
Corrected: NBackground Data
Type: PHEB + DISCSCMinimum Integ. Time:
9.064 secondsDetectors (7.0):
-----2-8Discriminators:
1 1 + 2 1Quality Mask:
EDISY1

From root Tue Oct 4 14:06 1994
 Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)
 id AA01789; Tue, 4 Oct 94 14:06:16
 Received: from sangam.ncst.ernet.in by sunspot.ssl.berkeley.edu (5.0/SMI-SVR4)
 id AA09220; Tue, 4 Oct 1994 14:15:47 +0800
 Received: from soochak.ncst.ernet.in (soochak.ncst.ernet.in [144.16.11.100]) by sangam.ncst.ernet.in
 From: kmarar@isac.ernet.in
 Received: from nic.iisc.ernet.in (twisha.ece.iisc.ernet.in [144.16.64.4]) by soochak.ncst.ernet.in
 Received: by nic.iisc.ernet.in (ERNET-IISc/AT&T UNIX SYS V.3.2)
 id AA15091; Wed, 5 Oct 94 02:51:30 EST
 Message-Id: <9410050751.AA15091@nic.iisc.ernet.in>
 Received: by vigyan.iisc.ernet.in (smail2.3)
 id AA24209; 5 Oct 94 02:18:52 EST (Wed)
 To: vigyan!khurley@sunspot.ssl.berkeley.edu, vigyan!kmarar@isac.ncst.ernet.in
 Date: Mon Oct 3 14:14:08 1994
 Content-Length: 2592
 Status: R

Oct 3, 1994

Dear Kevin,
 Kindly recall my fax to you dated 25 June 94. Since then the SROSS-C2 orbit has been brought down to 430 x 620 km. Our instrument is working very satisfactorily. I am giving below the times of trigger of a few more events from our experiment. Kindly check them with your list. The events marked ** may please be looked up first.

SROSS-C2 GRB CANDIDATE EVENTS

Event orbit	Event date (d m y)	time(UT)			
		h	m	s	
1126	19 July 94	06	00	05	** 110 TRIG
1296	30 July 94	11	01	31	** 110 DATE YET
1358	3 Aug 94	13	14	52	110 TRIG
1448	9 Aug 94	11	52	31	110 DATE YET
1650	22 Aug 94	20	23	20	** TRIGGER
2095	21 sep 94	05	08	19	** RI

** Most likely genuine from temporal profile

2. You had asked for the earth centre position and distance of SROSS-C2 for the events. Is it enough if we give you the state vector of the satellite corresponding to equator crossing for an orbit close to our event?

3. Do you have a software which we can use for determining the area of the celestial sphere blocked by the earth at the event time when our SROSS-C2 detects the events? I suppose this is what you had asked earlier. We wish to use your software to double-check our calculations. Can you send me a copy of your software through email with a sample input and output for checking the same.

My email address is : kmarar@isac.ernet.in (Please note the change)

In case you have problem in getting the correct gateway Please contact Prof.Edward Nather at the U of Texas at Austin (Astronomy Department) and check with him how he contacts me regularly.

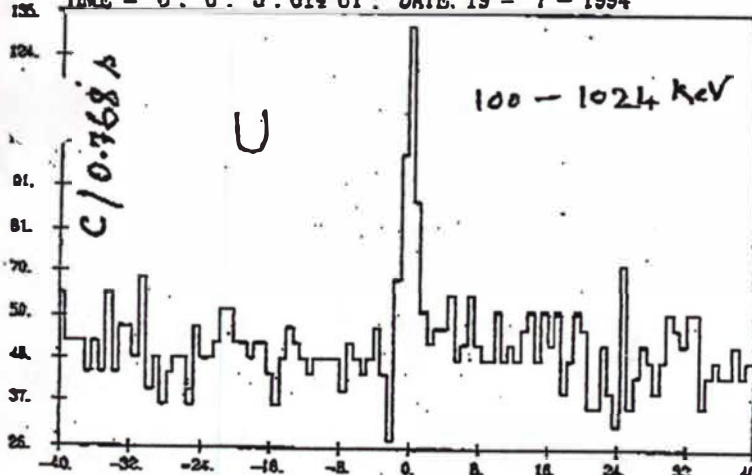
His email address is nather@astro.as.utexas.edu

Kindly inform me when you receive this message.

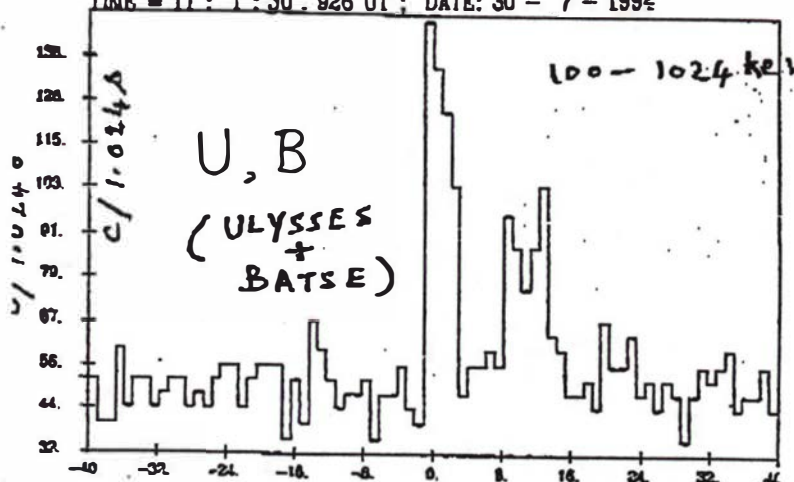
Many thanks
Krishnan

SKROSS-C2 GRB CANDIDATES

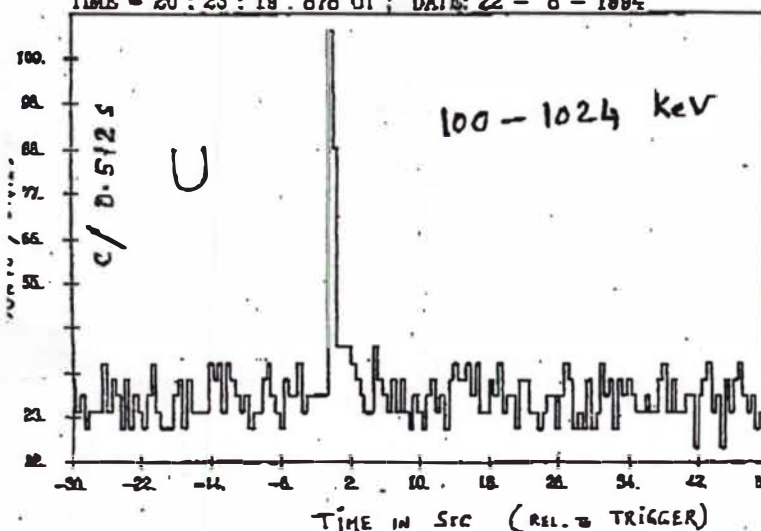
t-40s - t+ 65s 768 ms ch2. norb= 11284 ra=196.7 dec=-40.4
TIME = 6 : 0 : 5.614 UT : DATE: 19 - 7 - 1994



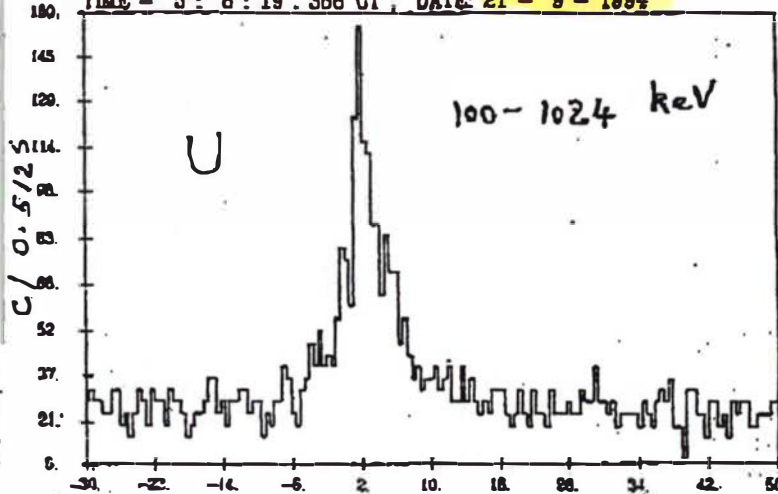
t-40s - t+ 65s 1024 ms ch2. norb= 12956 ra=154.8 dec=-45.3
TIME = 11 : 1 : 30.926 UT : DATE: 30 - 7 - 1994



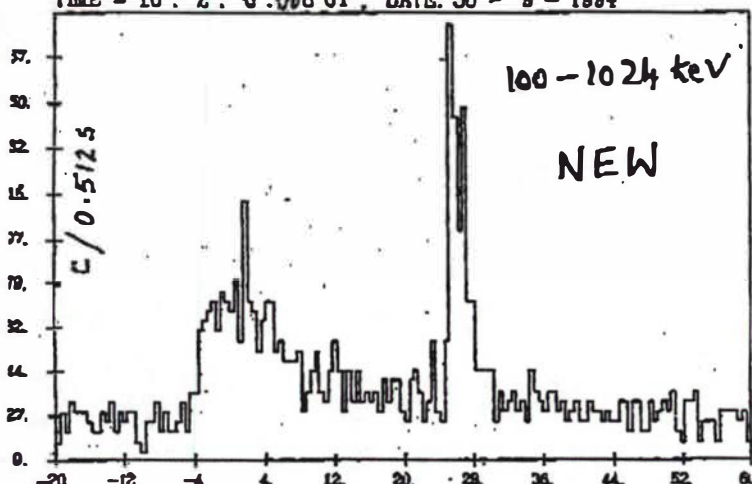
t-30s - t+ 50s 512 ms ch2. norb= 16502 ra=35.1 dec=-42.1
TIME = 20 : 23 : 19.878 UT : DATE: 22 - 8 - 1994



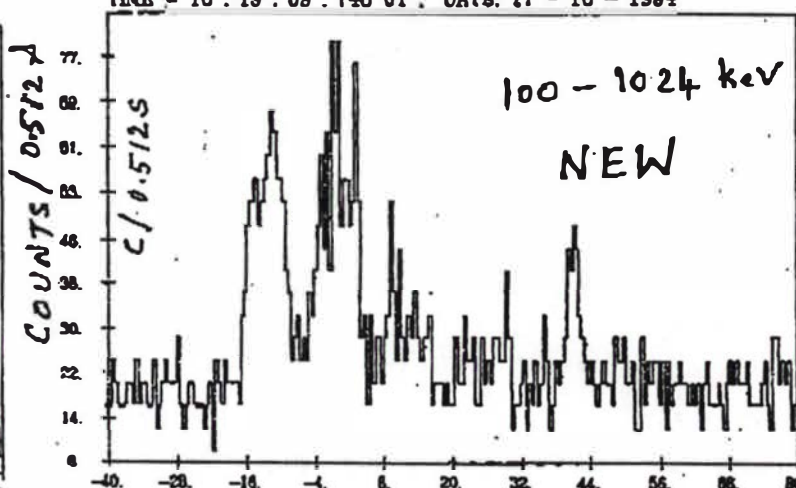
t-30s - t+ 50s 512 ms ch2. norb= 20951 ra=238.5 dec=-47.3
TIME = 5 : 8 : 19.368 UT : DATE: 21 - 9 - 1994



t-20s - t+ 60s 512 ms ch2. norb= 22341 ra=182.5 dec=-45.9
TIME = 10 : 2 : 6.008 UT : DATE: 30 - 9 - 1994



t-40s - t+ 60s 512 ms ch2. norb= 24922 ra=98.5 dec=-41.8
TIME = 10 : 19 : 58.748 UT : DATE: 17 - 10 - 1994



TIME IN SEC.

PAGE 2 OF 2

U = CONFIRMED BY ULYSSES

To : DR. KEVIN HURLEY

2 PAGES

इसरो उग्रह केन्द्र
अन्तरिक्ष विभाग
भारत सरकार

इकाई पत्तन मार्ग, विमानपुरा डाक घर,
बैंगलूर-560 017, भारत

नार : "उग्रह" टेलिक्स : 0845-325 और 769

दूरभाषी : 566251



ISRO SATELLITE CENTRE

DEPARTMENT OF SPACE
GOVERNMENT OF INDIA

AIRPORT ROAD, VEMANAPURA P.O.,
BANGALORE-560 017, INDIA

Telegram : UPAGRAH Tellex : 0845-325 & 769

Telephone : 566251

Nov 29, 1994

Dear Kevin,

I am extremely thankful to your letter dated Oct 31. I am very sorry that our mail does not work always. Our fax numbers have changed and the new numbers are : 91-80-526-9490 or 91-80-526-5407.

I am enclosing the time histories of SROSS-C2 GRB events in orbits 1126 (19 Jul 94), 1296 (30 Jul 94), 1650 (22 Aug 94) and 2095 (21 Sep 94) all of which I believe were detected by Ulysses also. The time profile of our event in orbit 1448 for which you had written a possible rate increase is also enclosed. I do not now believe that this event (Orbit 1448) is confirmed. ALL PROFILES CORRESPOND TO THE ENERGY RANGE 100 - 1024 KEV.

In addition we are sending the temporal profiles of our new events in orbit 2234 (30 Sep 94) and 2492 (17 Oct 94). I hope that you will receive this fax message satisfactorily and that the annotations in the figures are clear. If not, please let me know.

New events

Event orbit	Event date (d m y)	time(UT) h m s
2234	30 Sep 94	10 2 6.008
2492	17 Oct 94	10 19 59.748

Kindly check in your Ulysses data the above two new events and confirm.

I am now hopeful that we can start contributing to your interplanetary network. I wonder whether any of our four Ulysses/SROSS-C2 events could be confirmed by GRAMAT satellite also!

With best regards,

sincerely yours,

Krishnan
(Krishnan)

t- 1s to t+ 8s 32 ms res. north=16502 ra= 35.1 dec=-42.1

TIME = 20 : 23 : 19 . 878 UT ; DATE: 22 - 8 - 1994

100-1024 keV

SROSS-C2

ULYSSES - CONFIRMED

t-20s - t+60s 512 ms ch2. north=14481 ra= 96.0 dec=-40.0

TIME = 11 : 52 : 31 . 500 UT ; DATE: 9 - 8 - 1994

100-1024 keV

DOUBTFUL OF
CONFIRMATION

From root Wed Sep 21 08:18 1994

Received: by space6.ssl.berkeley.edu (AIX 2.1 2/4.03)

id AA01414; Wed, 21 Sep 94 08:18:01

eived: from xtelab.gsfc.nasa.gov by sunspot.ssl.berkeley.edu (5.0/SMI-SVR4)

id AA26799; Wed, 21 Sep 1994 08:28:16 +0800

Received: (from scott@localhost) by xtelab.gsfc.nasa.gov (LHEA9404/940426.s1) id LAA07315; Wed,

Date: Wed, 21 Sep 1994 11:28:48 -0400

From: Scott Barthelmy <scott@xtelab.gsfc.nasa.gov>

Message-Id: <199409211528.LAA07315@xtelab.gsfc.nasa.gov>

To: khurley@space6.ssl.berkeley.edu, khurley@sunspot.ssl.berkeley.edu

Subject: grb940921.18493

Cc: cline@tgrs.gsfc.nasa.gov, gehrels@lheavx.gsfc.nasa.gov,

palmer@tgrs.gsfc.nasa.gov, scott@xtelab.gsfc.nasa.gov

Content-Length: 817

Status: R

Kevin,

There was a fairly bright GRB last night. I just sent you the usual BACODINE light curves faxed. It got fairly intense and is fairly fluent, so I think there is a good chance for a Ulysses detection and IPN arc. Unfortunately it is close to the sun (~ 32 deg) so it is only a potential radio target.

The BACODINE position is RA=208.1 Dec=-15.5 (J2000). It was 32deg

off the Z-axis so Comptel got a position: RA=206.4 Dec=-16.6 (J2000).

I have alerted the EGRET people and they have started their procedures.

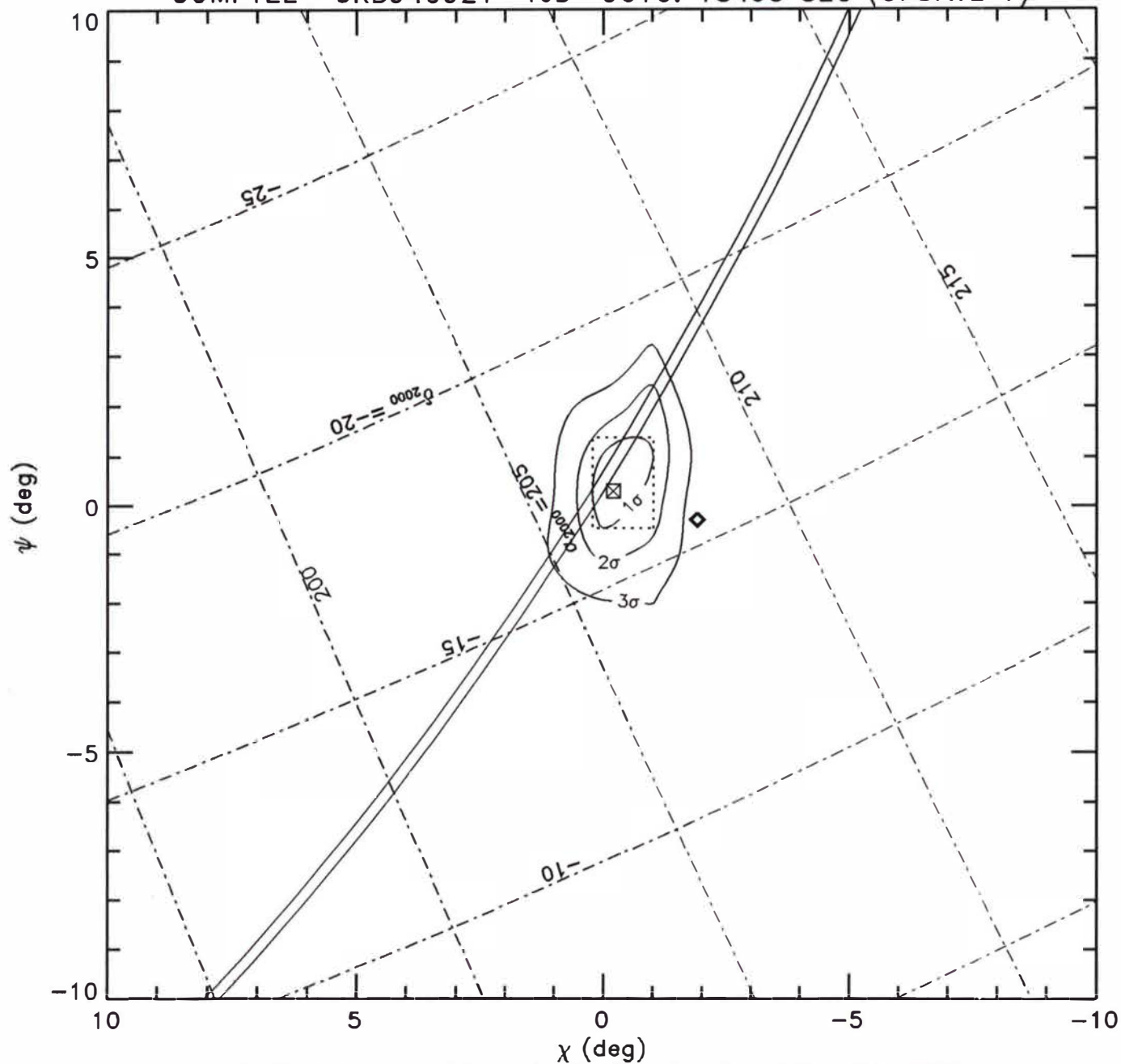
Give the length of an IPN arc through the COMPTEL 3-sigma contour (about 5deg)

David Palmer says he would NOT invoke his VLA ToO. So I am saying not to pull out the stops on any Ulysses effort. However, if EGRET is able to produce a 1-2deg circle then things would change.

and so it goes,

scott

COMPTTEL- GRB940921 TJD 9616: 18493 SEC (UPDATE 1)



[CHI, PSI] [α_{2000} , δ_{2000}]	[CHI, PSI] [α_{2000} , δ_{2000}]
◆ [-1.90, -0.29] [208.10, -15.50] BATSE (BACODINE)	☒ [-0.20, 0.30] [206.76, -16.76] Max Lik Position
	1 [-1.01, -0.47] [207.19, -15.72] 1 σ Error Box Coords
	2 [-1.01, 1.38] [208.01, -17.39]
	3 [0.22, 1.38] [206.84, -17.92]
	4 [0.22, -0.47] [206.02, -16.24]

From palmer@tgrs.gsfc.nasa.gov Wed Sep 21 07:06 PDT 1994
X-Sender: palmer@hotdog.gsfc.nasa.gov
Mime-Version: 1.0
Date: Wed, 21 Sep 1994 10:08:34 -0500
To: khurley@sunspot.ssl.berkeley.edu
From: palmer@tgrs.gsfc.nasa.gov
Subject: GRB940921
Cc: Schaefer@tgrs.gsfc.nasa.gov, scott@xtelab.gsfc.nasa.gov

As you have probably seen, GRB940921 went off at 18493 seconds (5:08:13) in the Comptel field of view, with a Comptel position of 206.44, -16.57.

It is not well-placed for optical observation, but it might be observable by radio, if it is worth doing (i.e. a narrow IPN strip along the 3-degree diameter Comptel 3-sigma error region. With EGRET position.)

I estimate that Ulysses would have recieved the GRB signal at 17743 seconds (04:55:43 UT). When do you expect that data to be downlinked and available?

Thank you,

David Palmer

NO.: 03179
TIME: TJD=9616 SECONDS=35167

TYPE: SAA ENT SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY

BATSE BURST TRIGGER

NO.: 03180

TIME: TJD=9616 SECONDS=46646

TYPE: SAA ENT SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY

BATSE BURST TRIGGER

NO.: 03181

TIME: TJD=9617 SECONDS=32656

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON ENTRY INTO SAA.

BATSE BURST TRIGGER

NO.: 03182

TIME: TJD=9617 SECONDS=44151

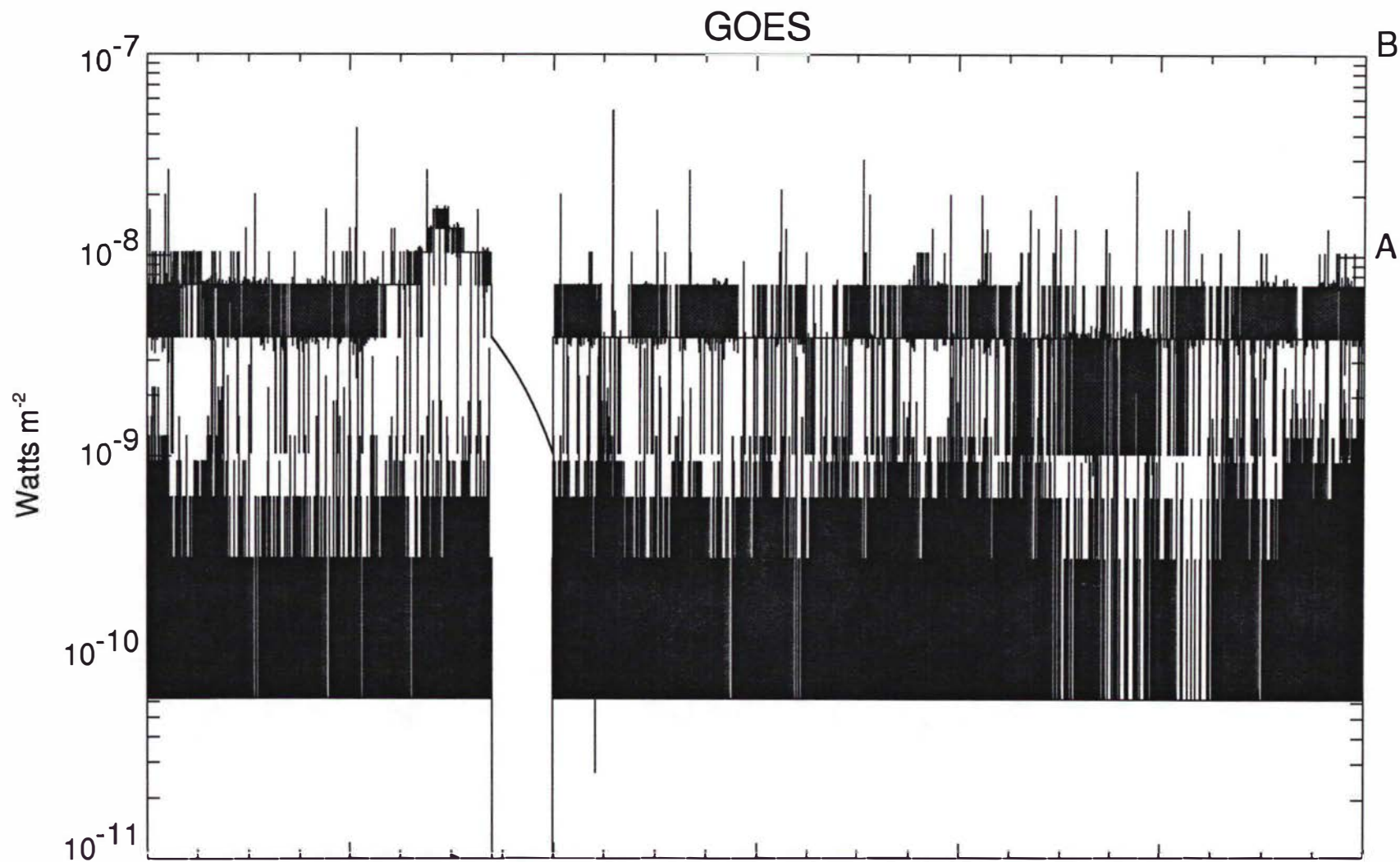
TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON ENTRY INTO SAA.



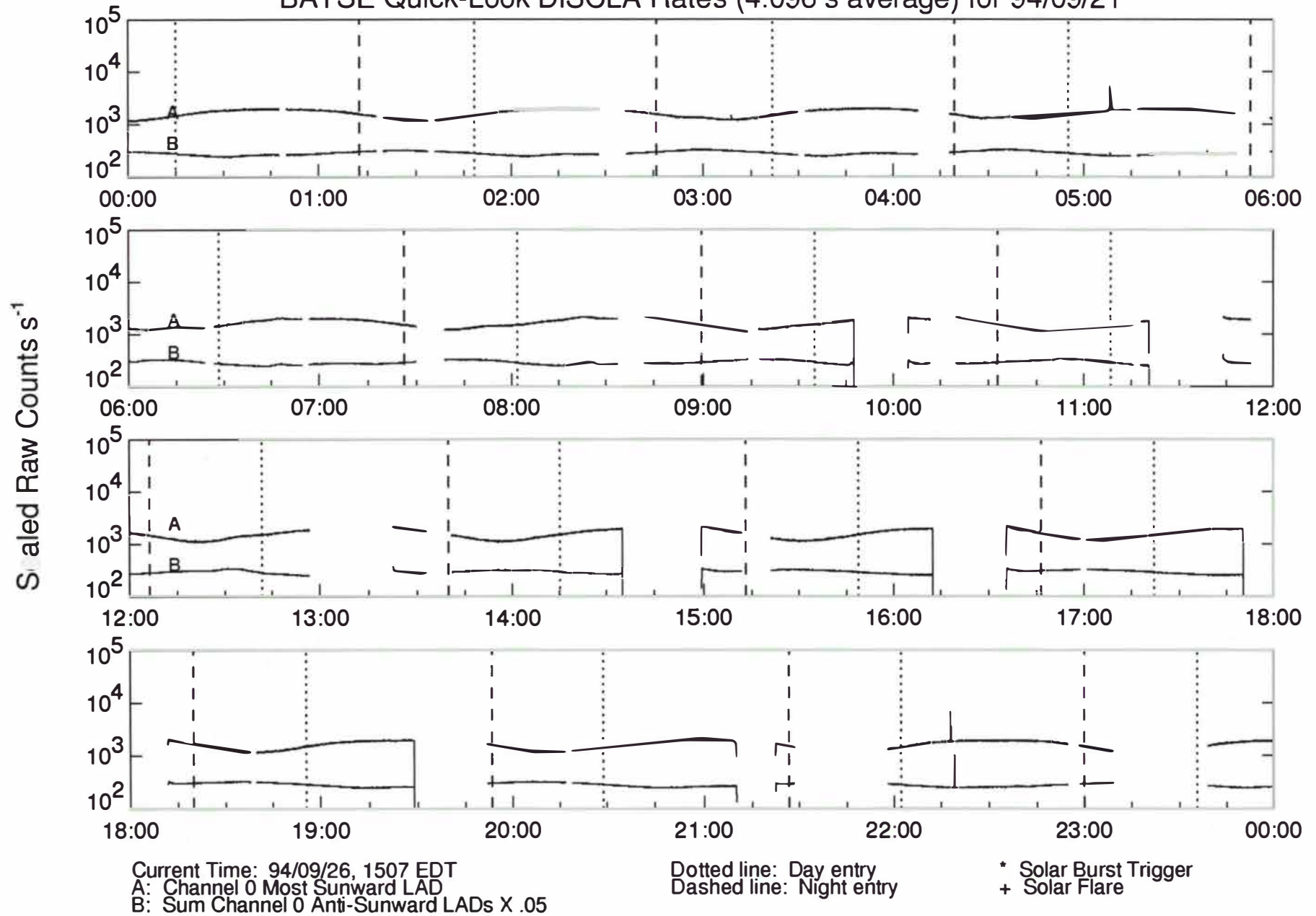
Data Start: 94/09/21, 0000:01

Plot created: 94/09/22, 1316

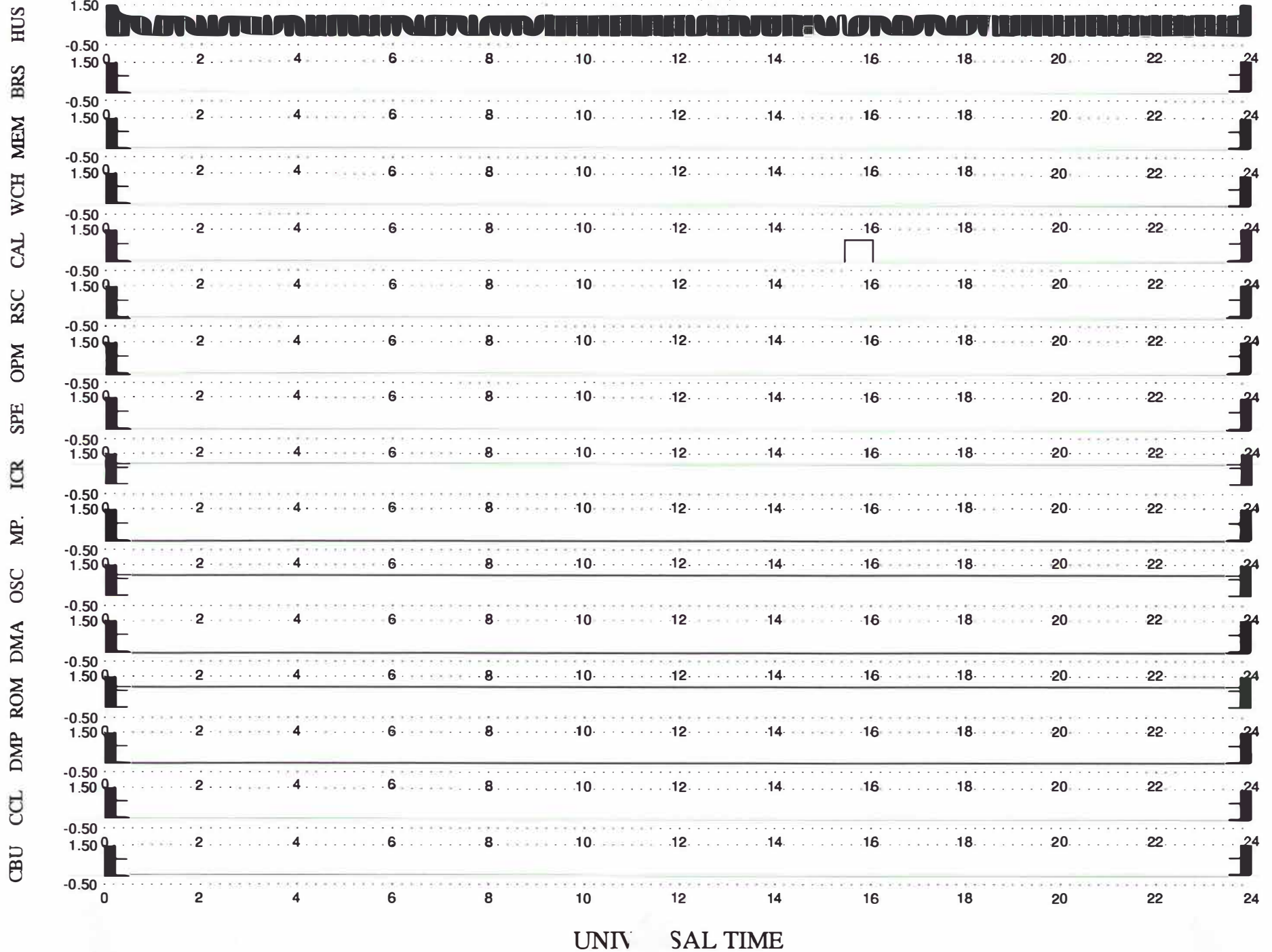
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

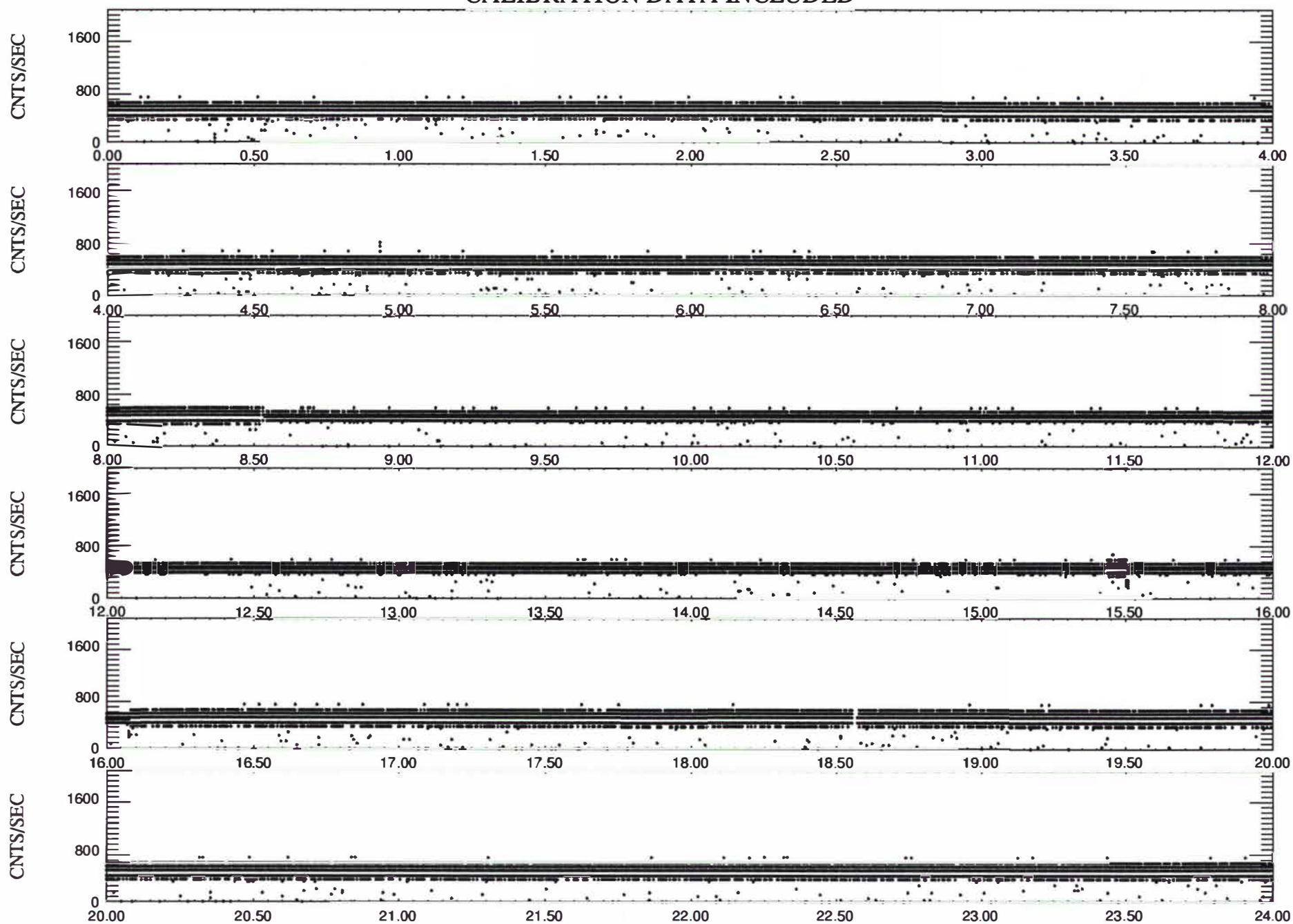
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/21



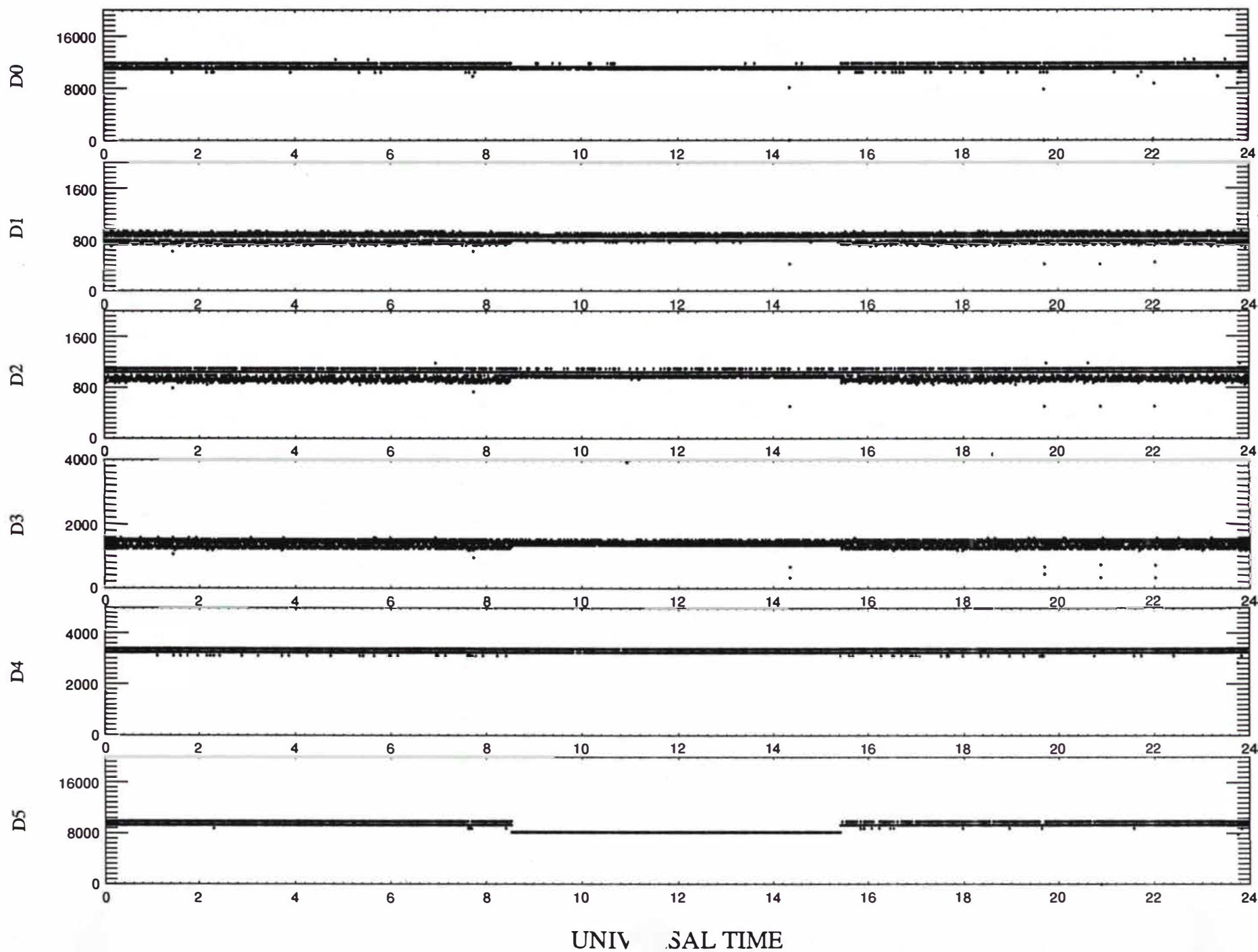
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



BATSE BURST TRIGGER

NO.: 03183

TIME: TJD=9618 SECONDS=30185

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SAA ENTRY (PARTICLES).

BATSE BURST TRIGGER

NO.: 03184

TIME: TJD=9618 SECONDS=41635

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SAA ENTRY (PARTICLES).

BATSE BURST TRIGGER

NO.: 03185

TIME: TJD=9618 SECONDS=47466

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

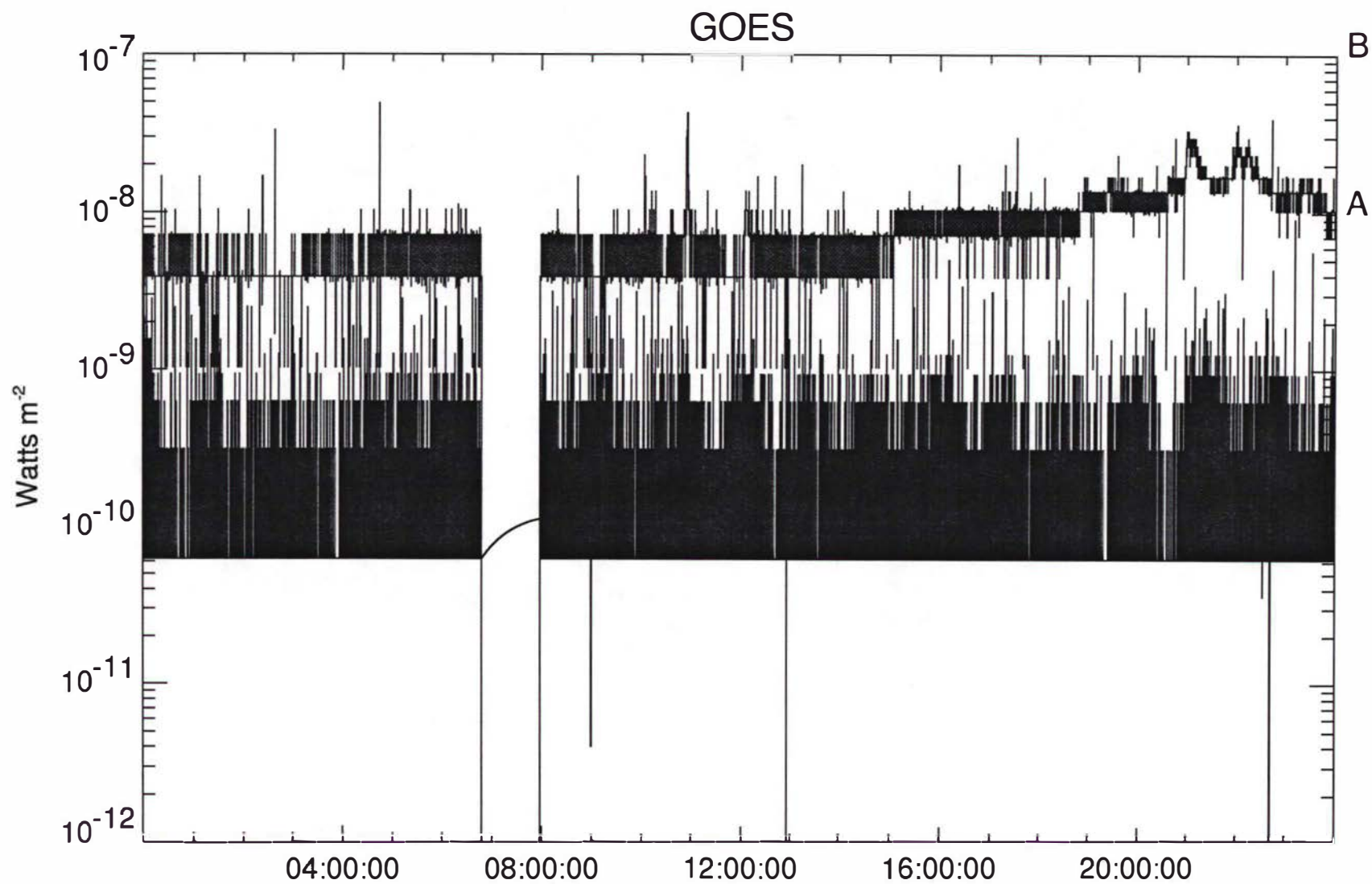
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

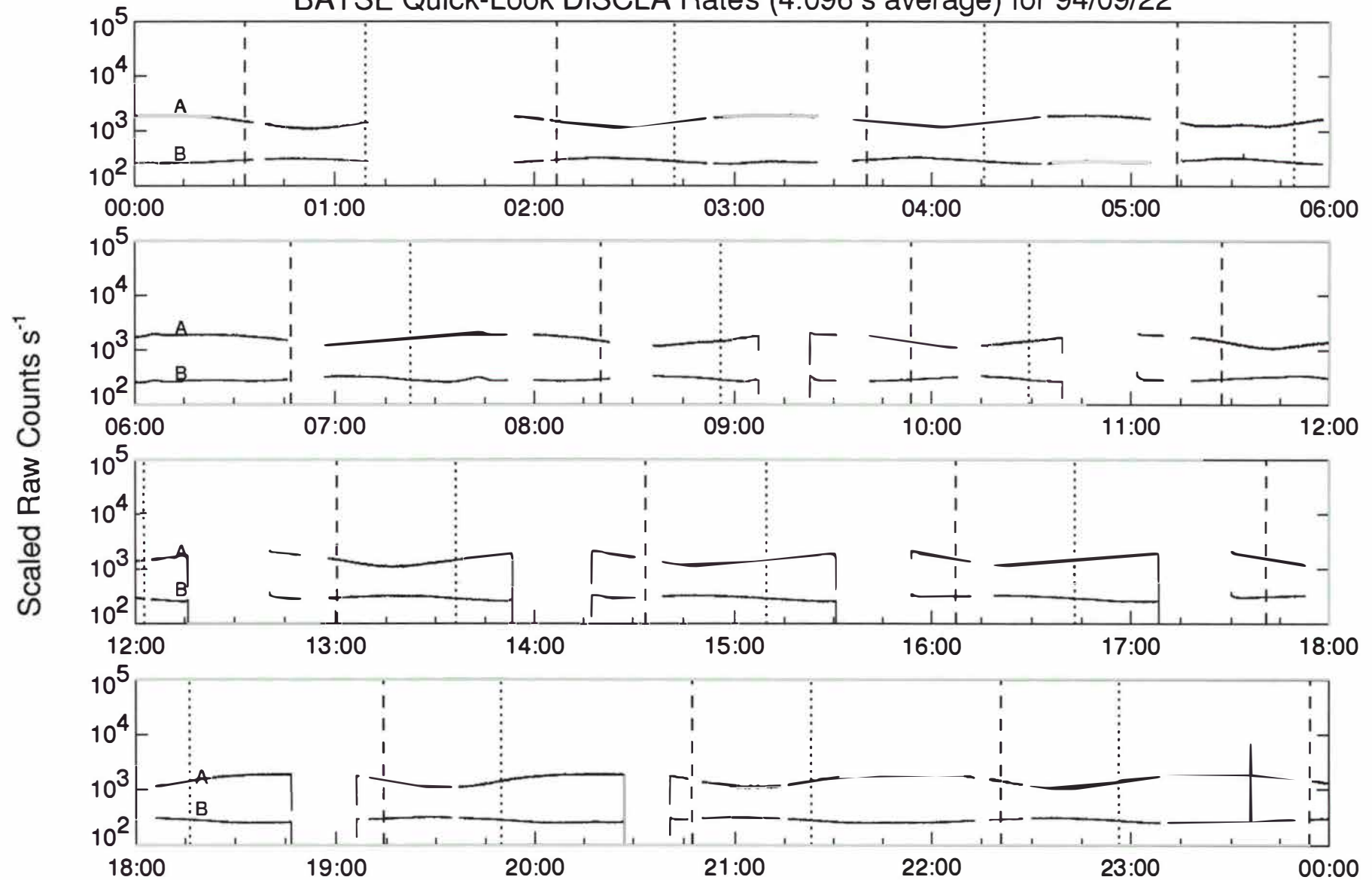
SAA ENTRY (PARTICLES).



Data Start: 94/09/22, 0000:02 Plot created: 94/09/26, 1522

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

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/22

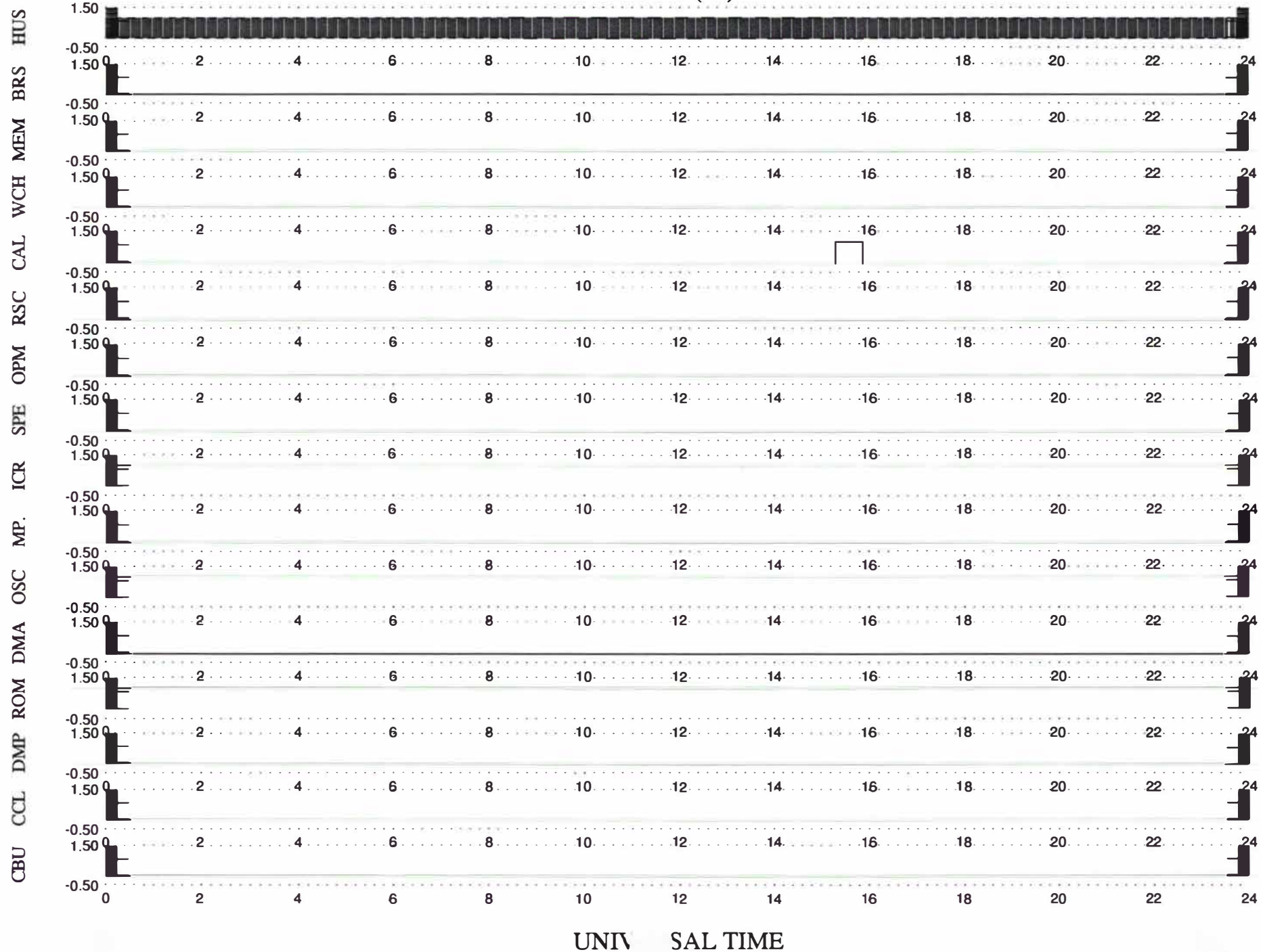


Current Time: 94/09/26, 1507 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

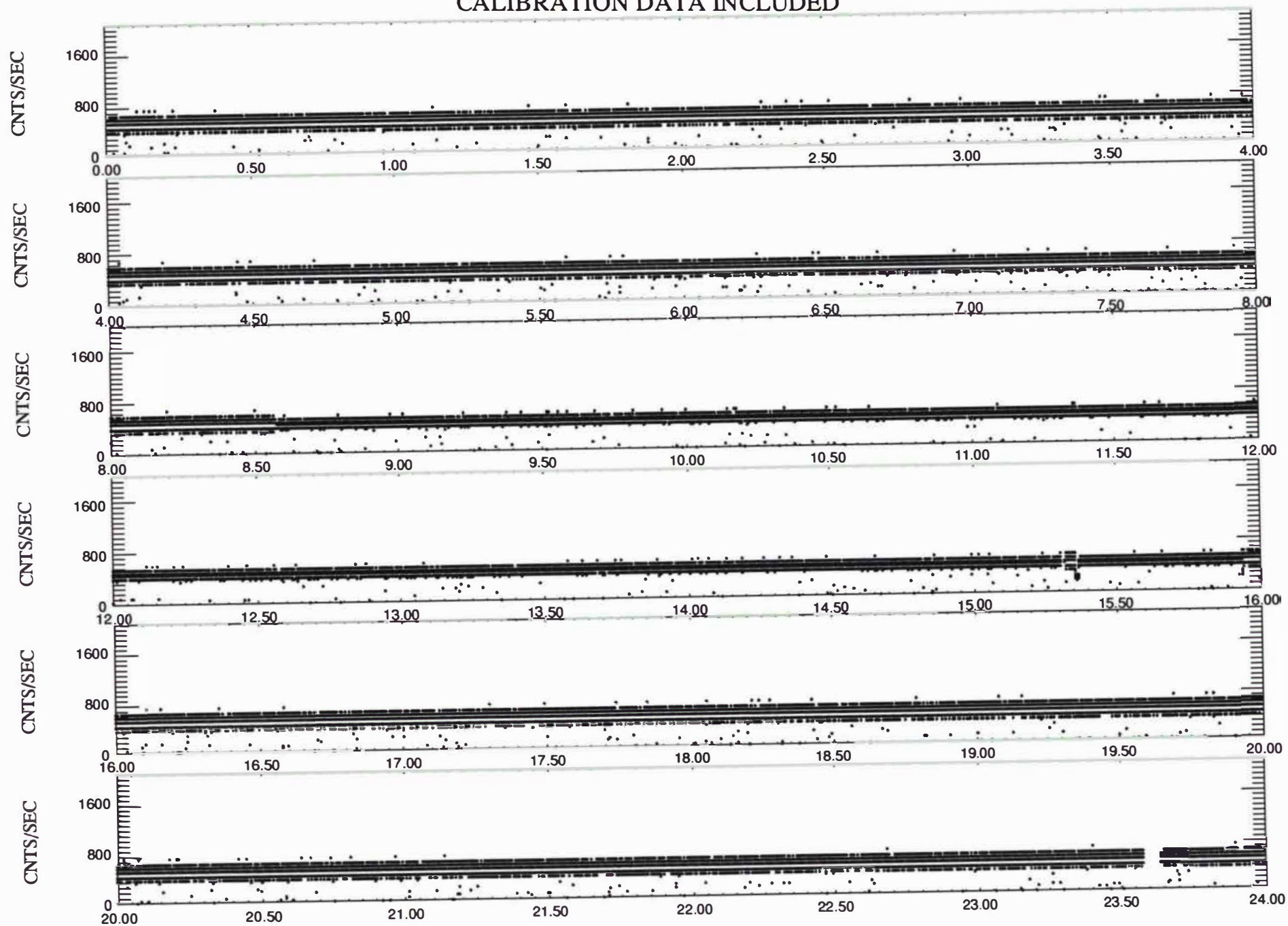
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

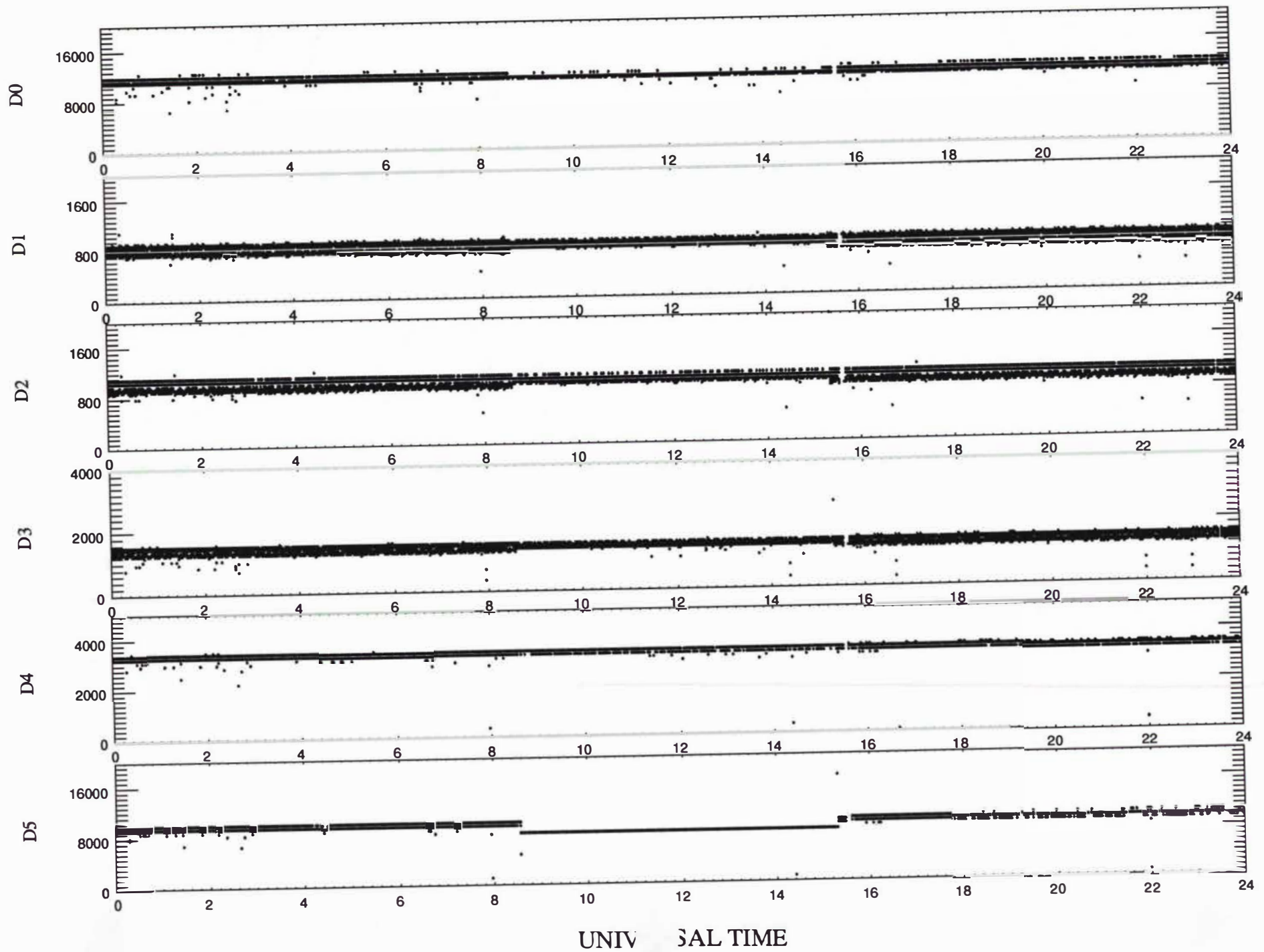
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



BATSE BURST TRIGGER

NO.: 03186

TIME: TJD=9619 SECONDS=33387

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SAA ENTRY (PARTICLES)

BATSE BURST TRIGGER

NO.: 03187

TIME: TJD=9619 SECONDS=39132

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SAA ENTRY (PARTICLE)

BATSE BURST TRIGGER

NO.: 03188

TIME: TJD=9619 SECONDS=44917

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

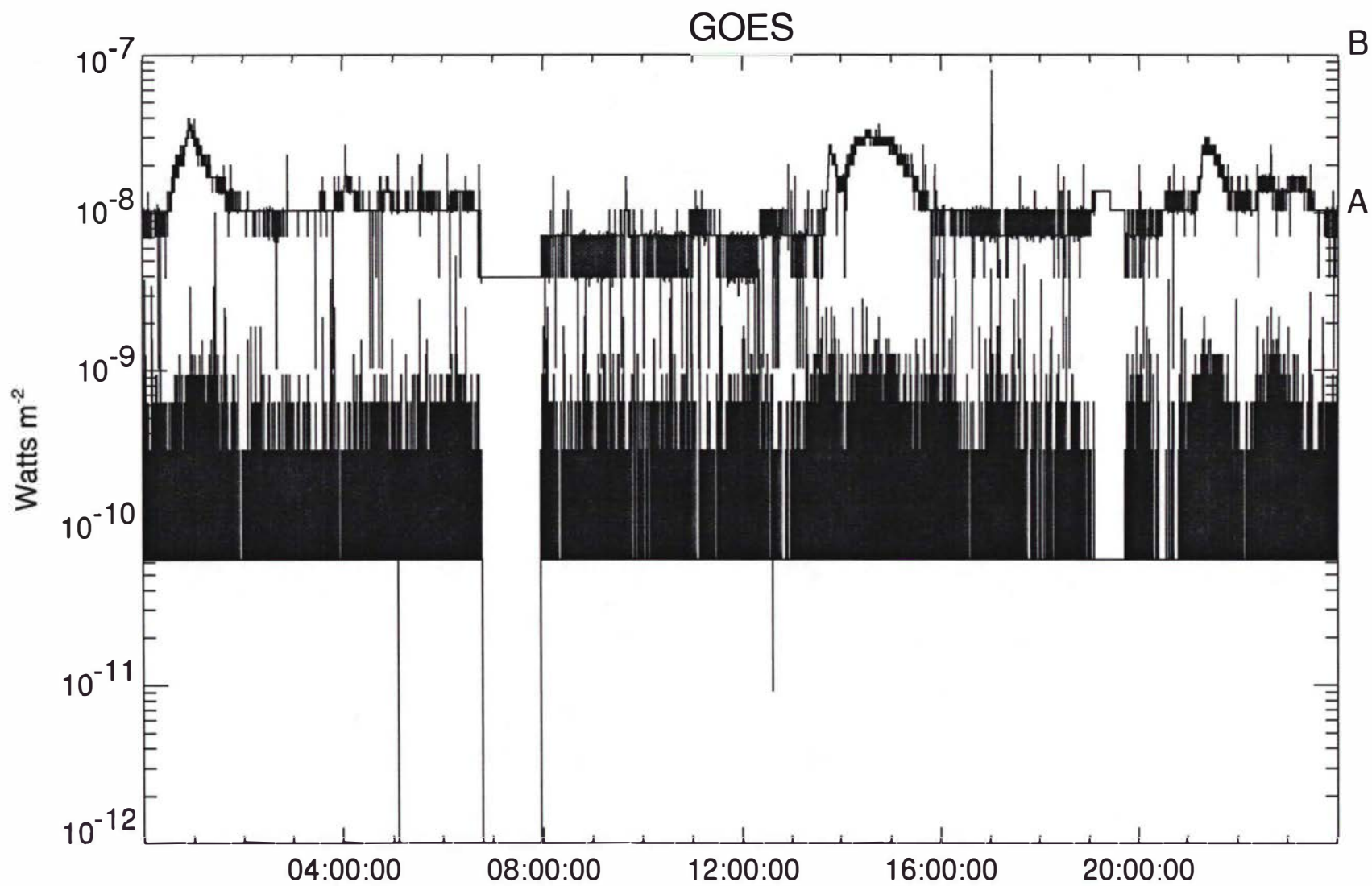
SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SAA ENTRY (PARTICLES)



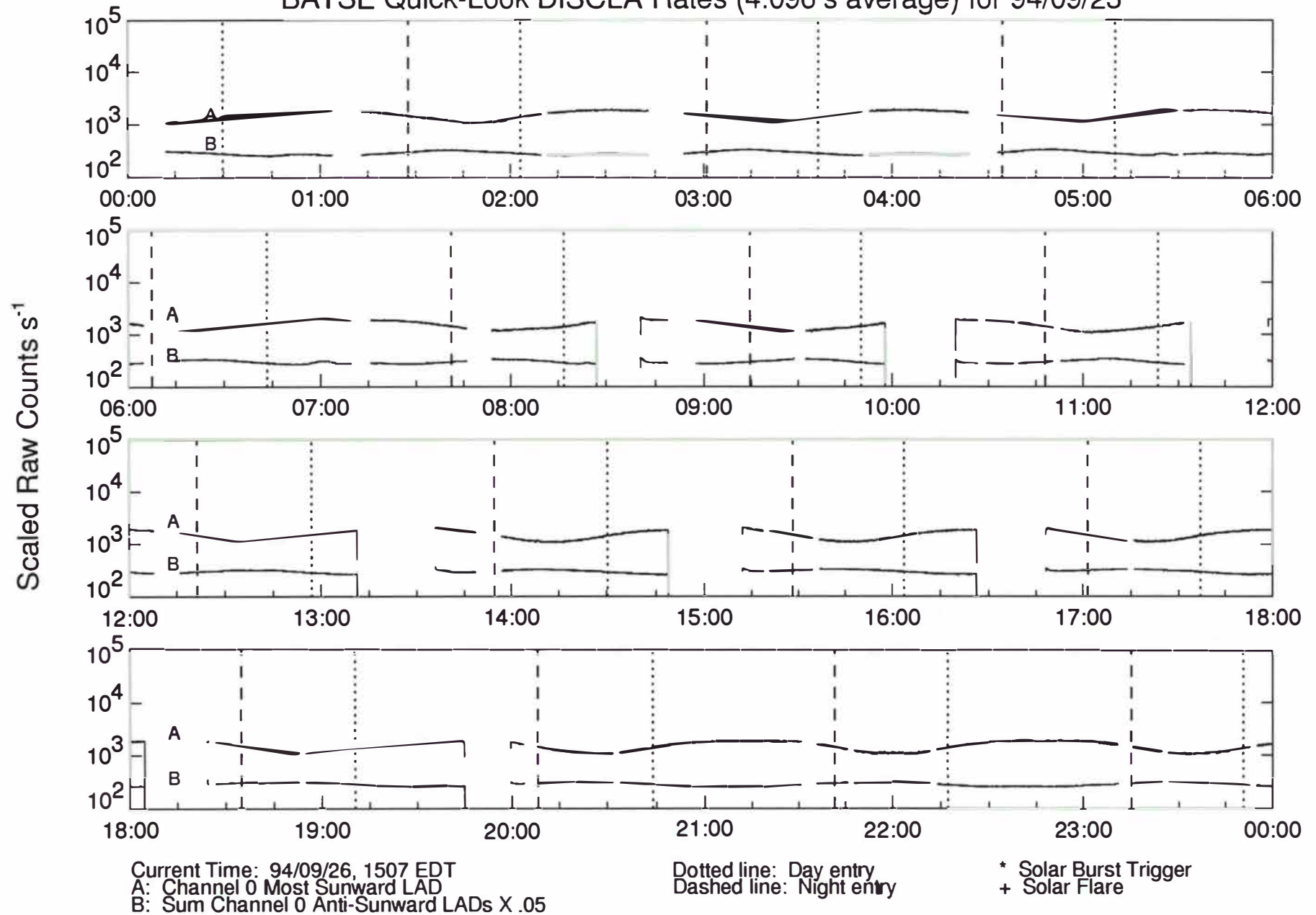
Data Start: 94/09/23, 0000:02

Plot created: 94/09/26, 1523

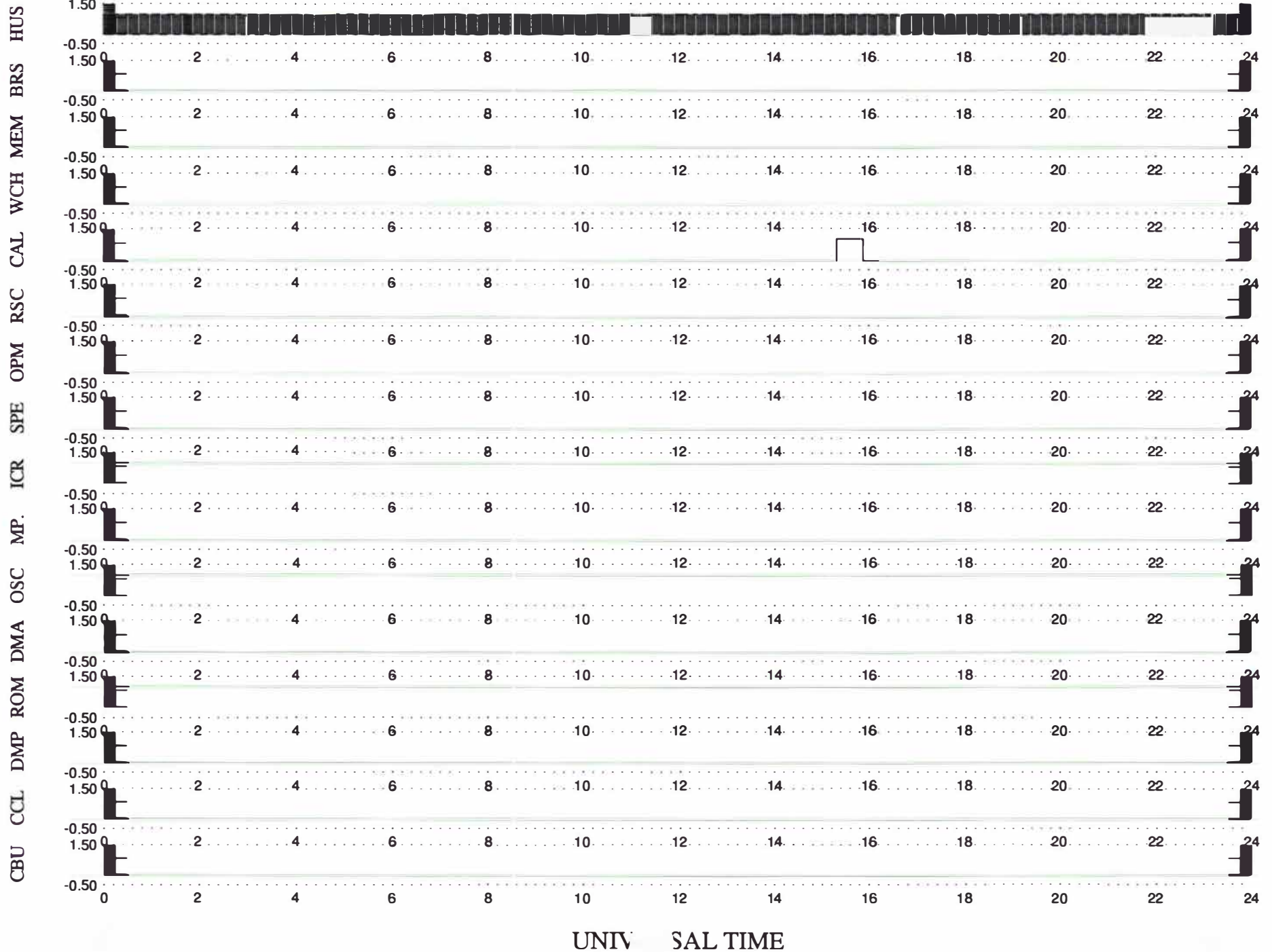
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

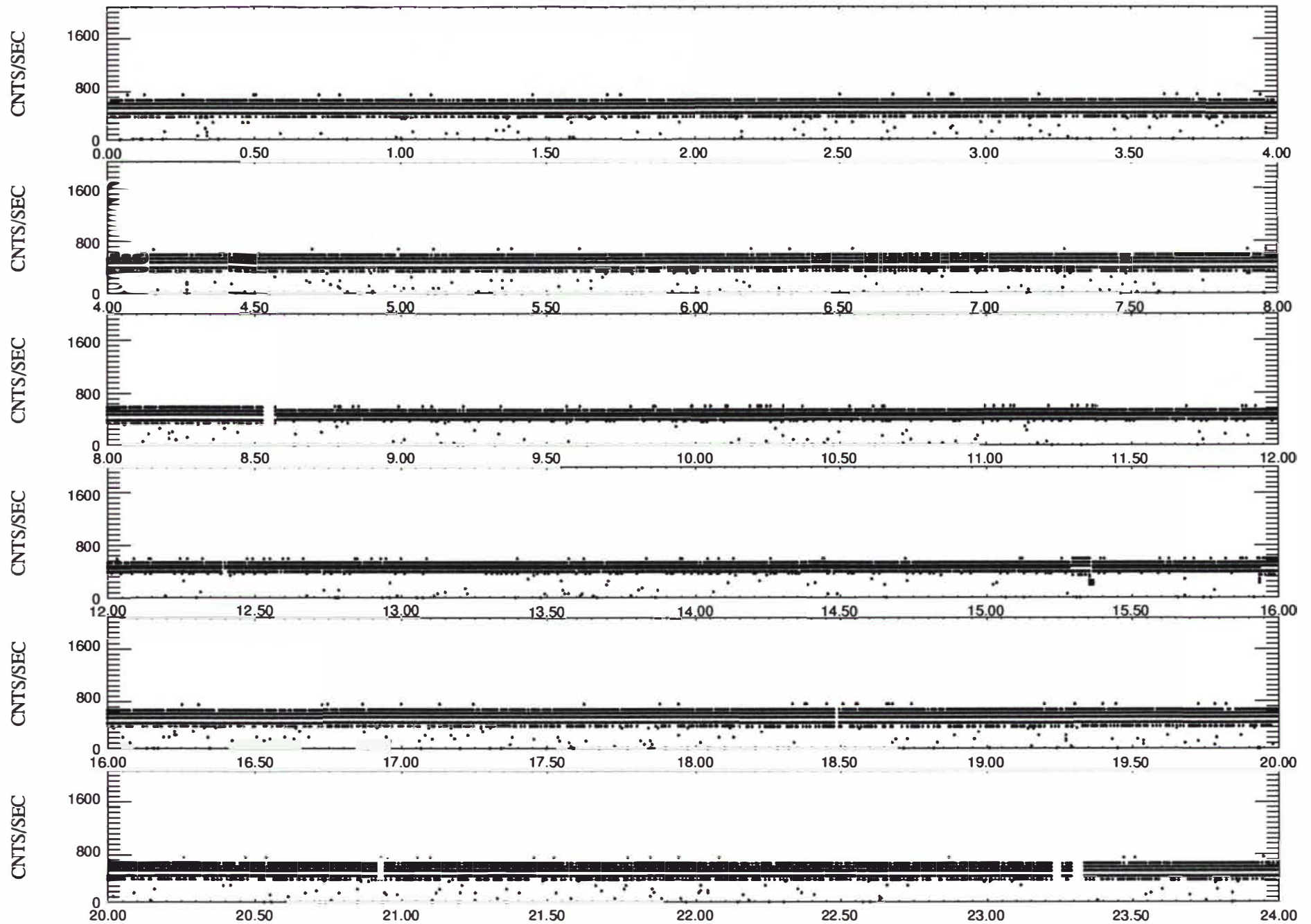
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/23



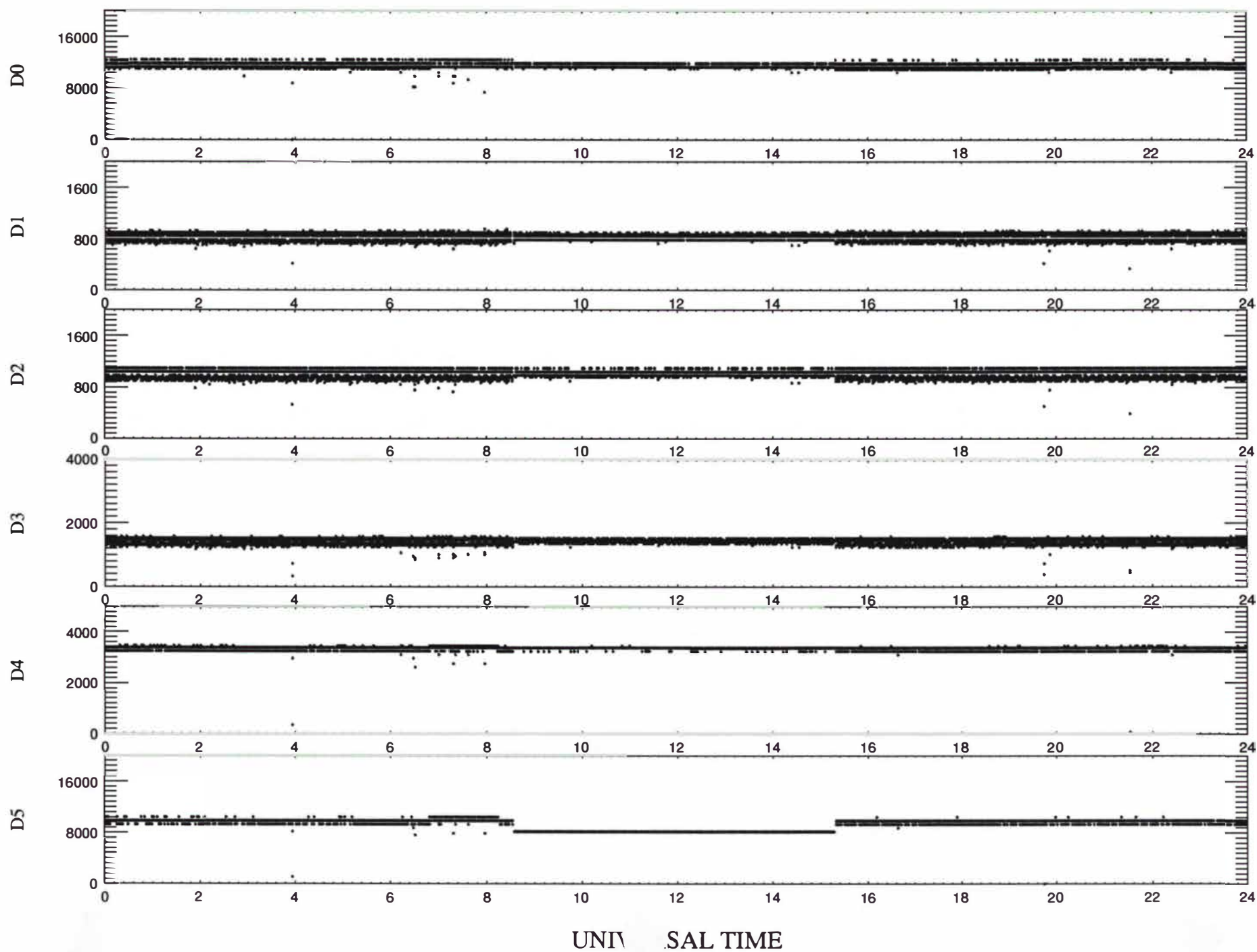
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



NO.: 3189

TIME: TJD=9620 SECONDS=30886

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY.

BATSE BURST TRIGGER

NO.: 3190

TIME: TJD=9620 SECONDS=36624

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY.

BATSE BURST TRIGGER

NO.: 3191

TIME: TJD=9620 SECONDS=42413

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY.

BATSE BURST TRIGGER

NO.: 3192

TIME: TJD=9620 SECONDS=51389

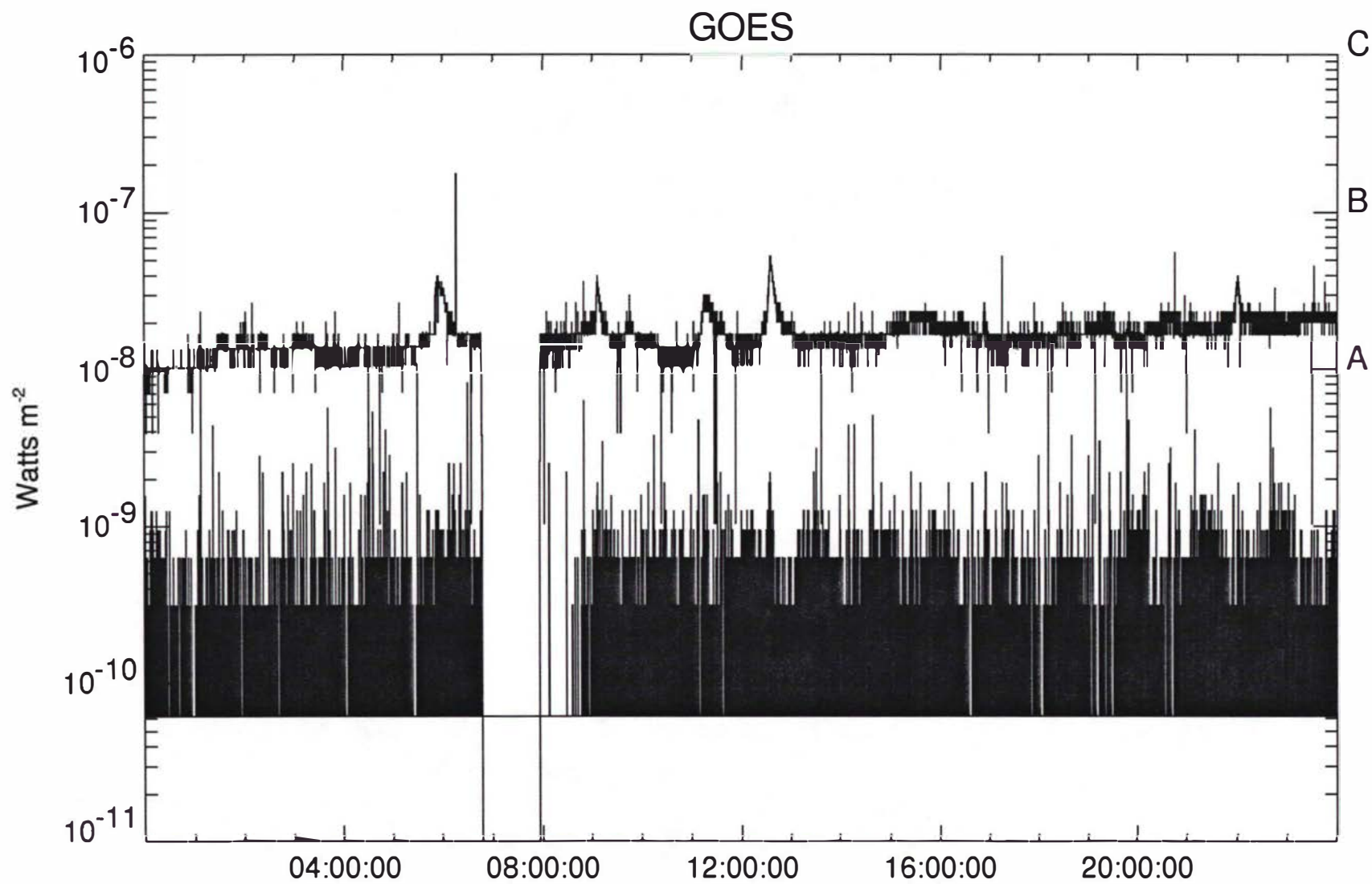
TYPE: TGF SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TGF. DUR.~7 MILLISECONDS. WEAKLY VISIBLE BELOW 100 KEV.
STRONGEST ABOVE 300 KEV.



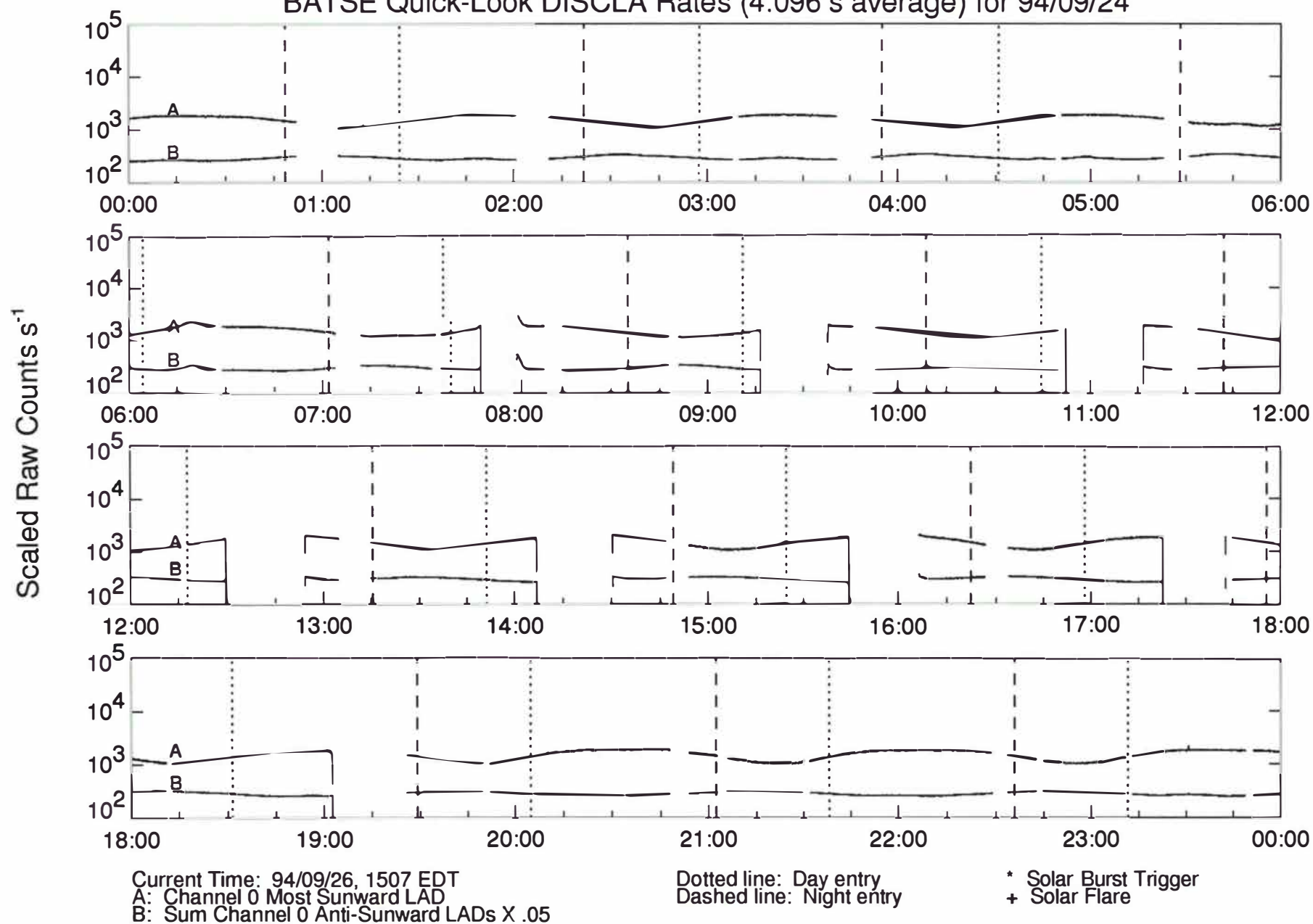
Data Start: 94/09/24, 0000:00

Plot created: 94/09/26, 1523

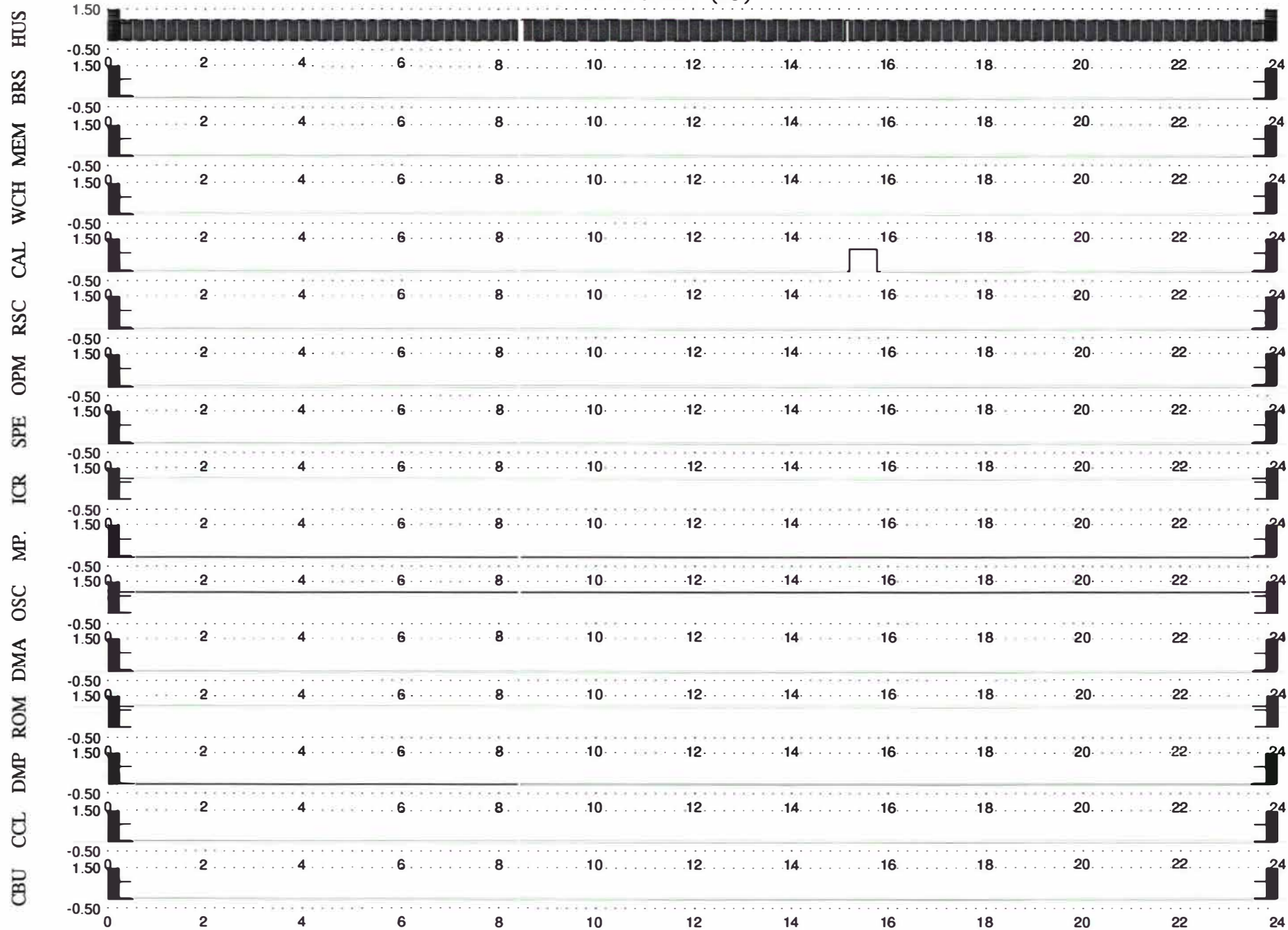
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

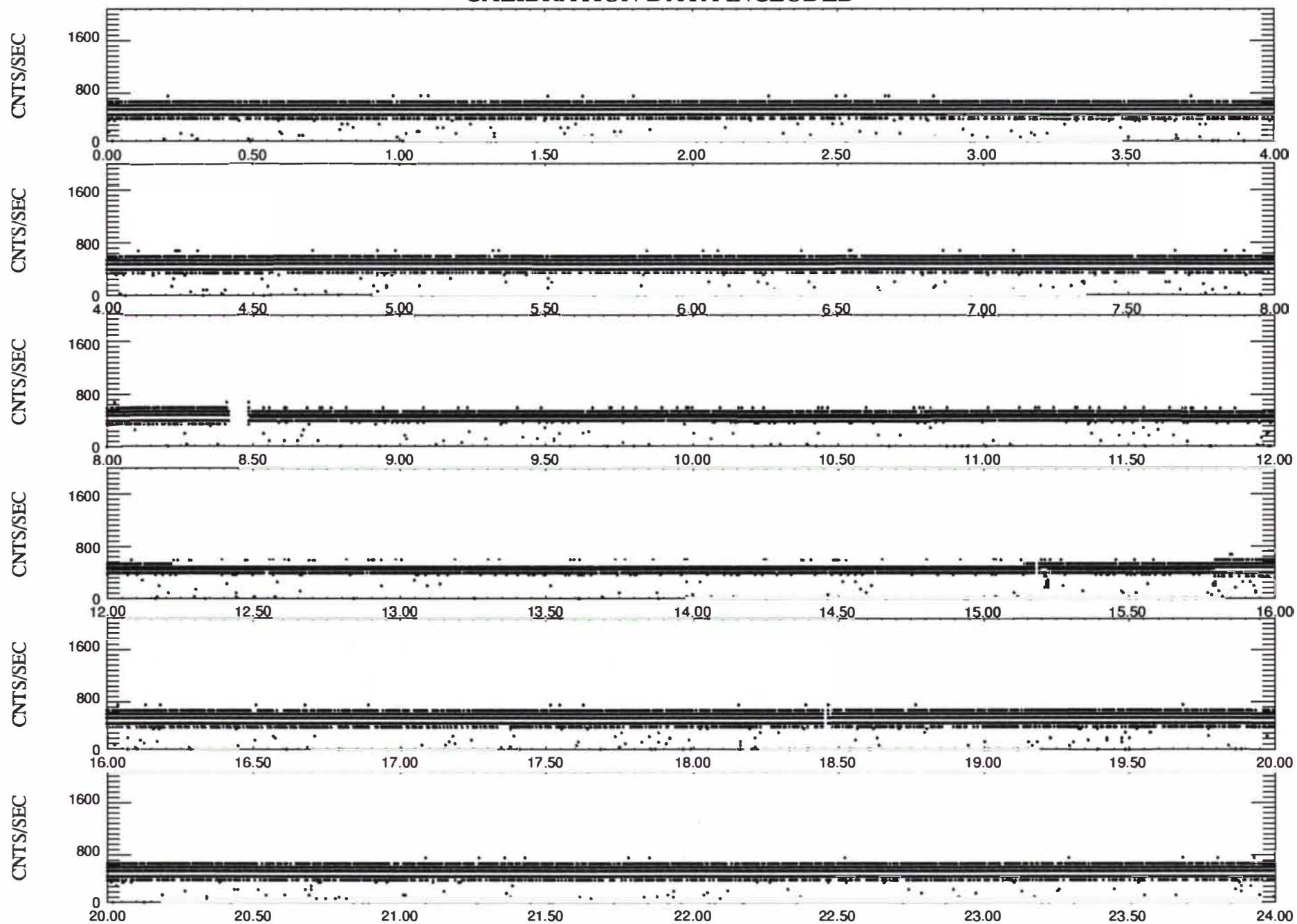
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/24



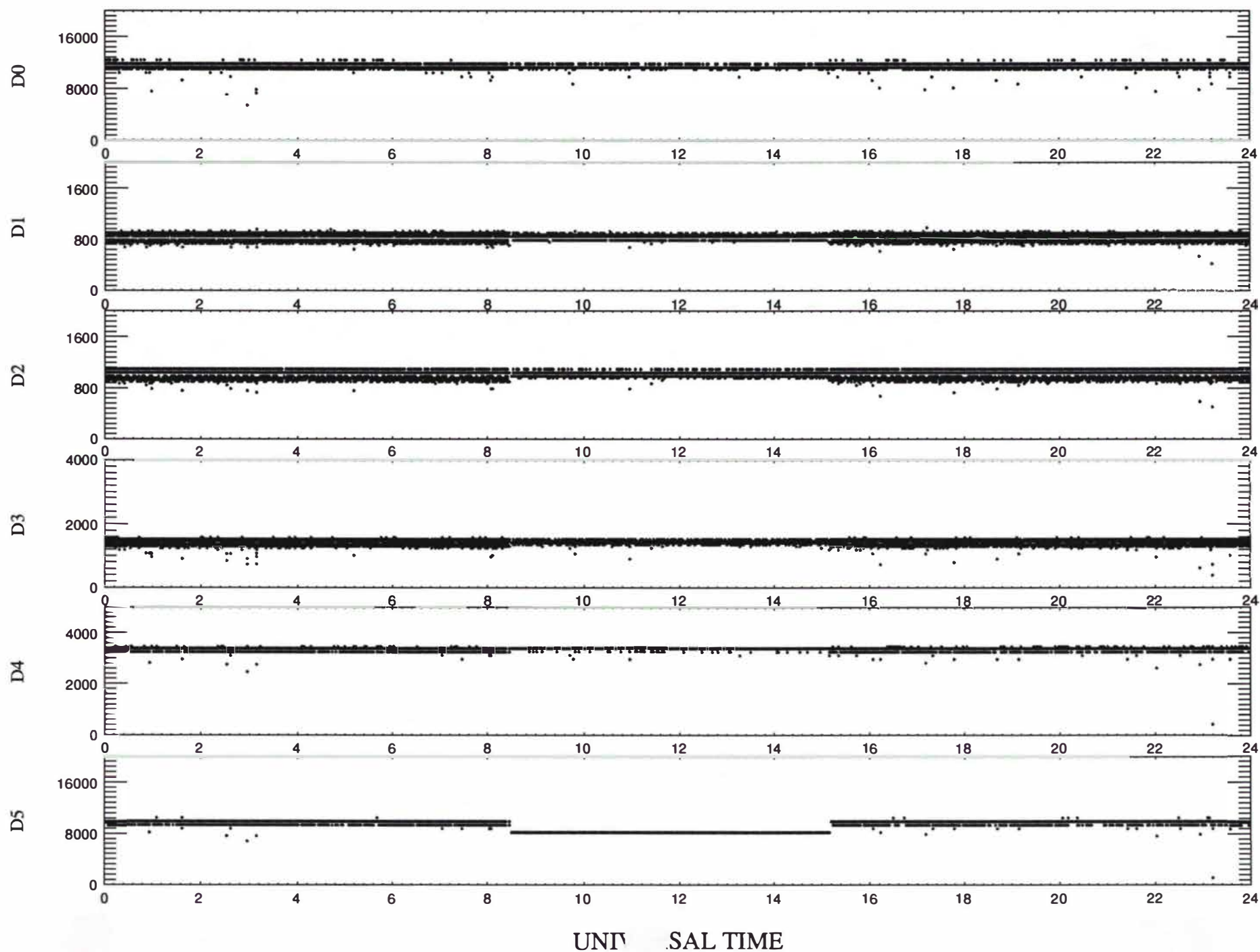
UNIV SAL TIME



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From HAGEDON@fender.msfc.nasa.gov Mon Sep 26 11:23 PDT 1994
Date: Mon, 26 Sep 1994 13:25:10 -0500 (CDT)
From: HAGEDON@fender.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3193

BATSEARCH PROGRAM

BATSE BURST # 3193
EVENT OF 1994 SEP 25 DAY OF YEAR=268
EVENT CROSSING TIME AT BATSE : 58321. S. OR 16:12:01.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 107.000 -21.000
BATSE PEAK COUNTING RATE: 3000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 25/ 9/ 94 IS:
RA= 157.691 DEC= -56.684 DIST= 2.545 AU
BATSE-ULYSSES DISTANCE = 380727553. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION=128.63 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -792.86 SECS.
CROSSING TIME AT ULYSSES IS 57528. S. OR 15:58:48 +/- 210.20 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 25/ 9/ 94 IS:
RA= 116.493 DEC= 22.047 DIST= 1.617 AU
MARS-BATSE DISTANCE = 241969856. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=135.97 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -580.28 SECS.
CROSSING TIME AT MARS IS 57741. S. OR 16:02:20 +/- 88.59 SECONDS

100

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3193	940925	9620	58321	3000	107	-21

BATSE BURST TRIGGER

NO.: 3193

TIME: TJD=9620 SECONDS=58321

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=124 AZIMUTH=356 ERROR= DEGREES

COMMENTS:

BURST. SINGLE PULSE. FAST RISE, SLOW DECAY. DUR. ~80 SEC.
NOT VISIBLE ABOVE 300 KEV.

26 / 9 / 94

ULYSSES RT

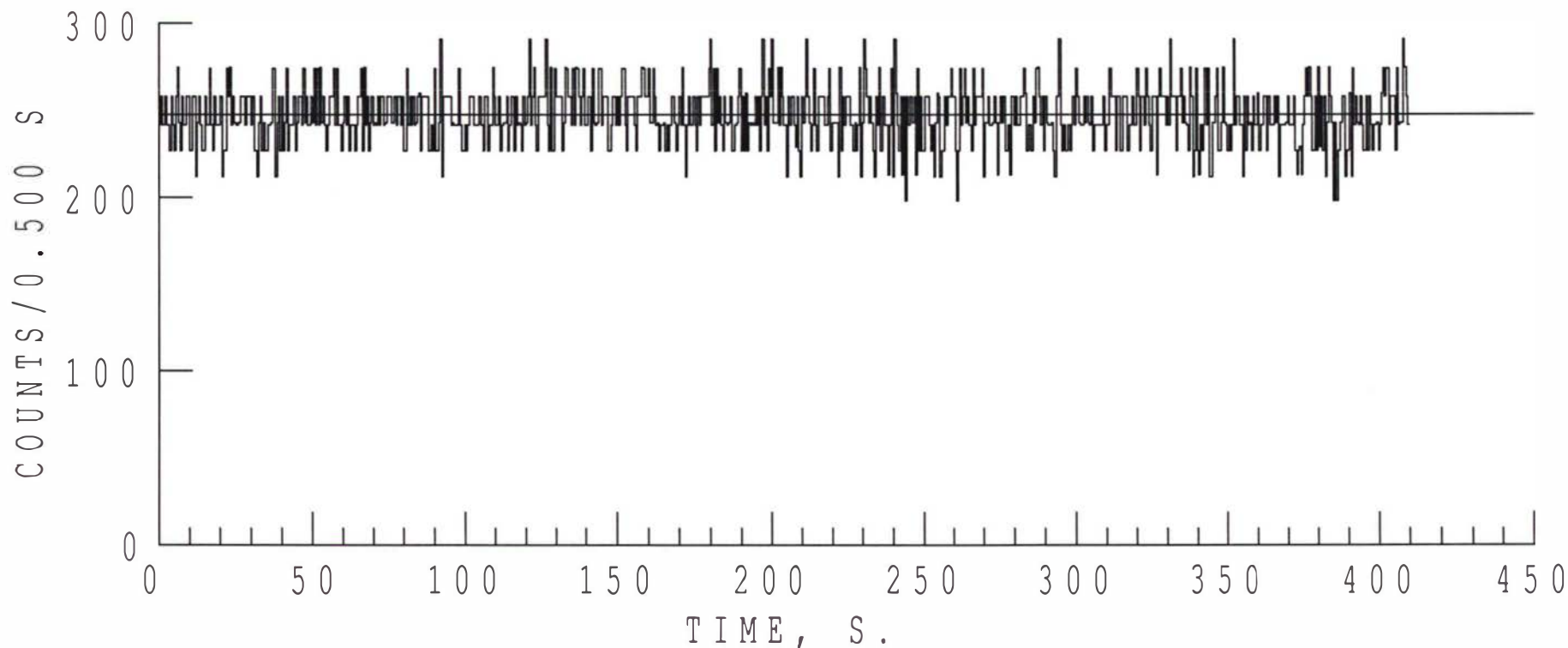
25 / 9 / 94 57312.047 s

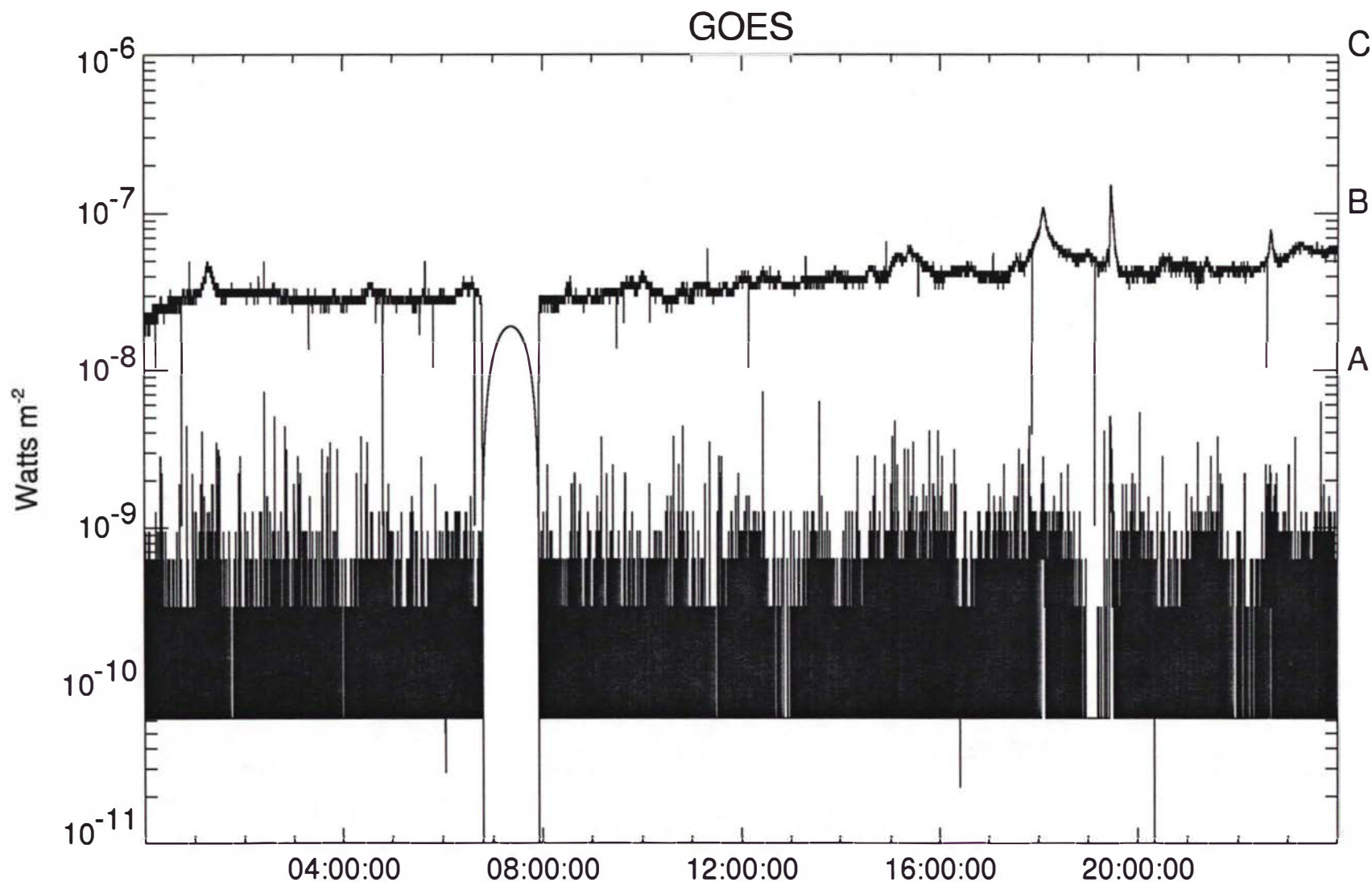
0.250 S INTERVALS REGROUPED BY 2

0 - 0 keV

N= 10 M= 2

>4.0 SIGMA FLUCTUATIONS





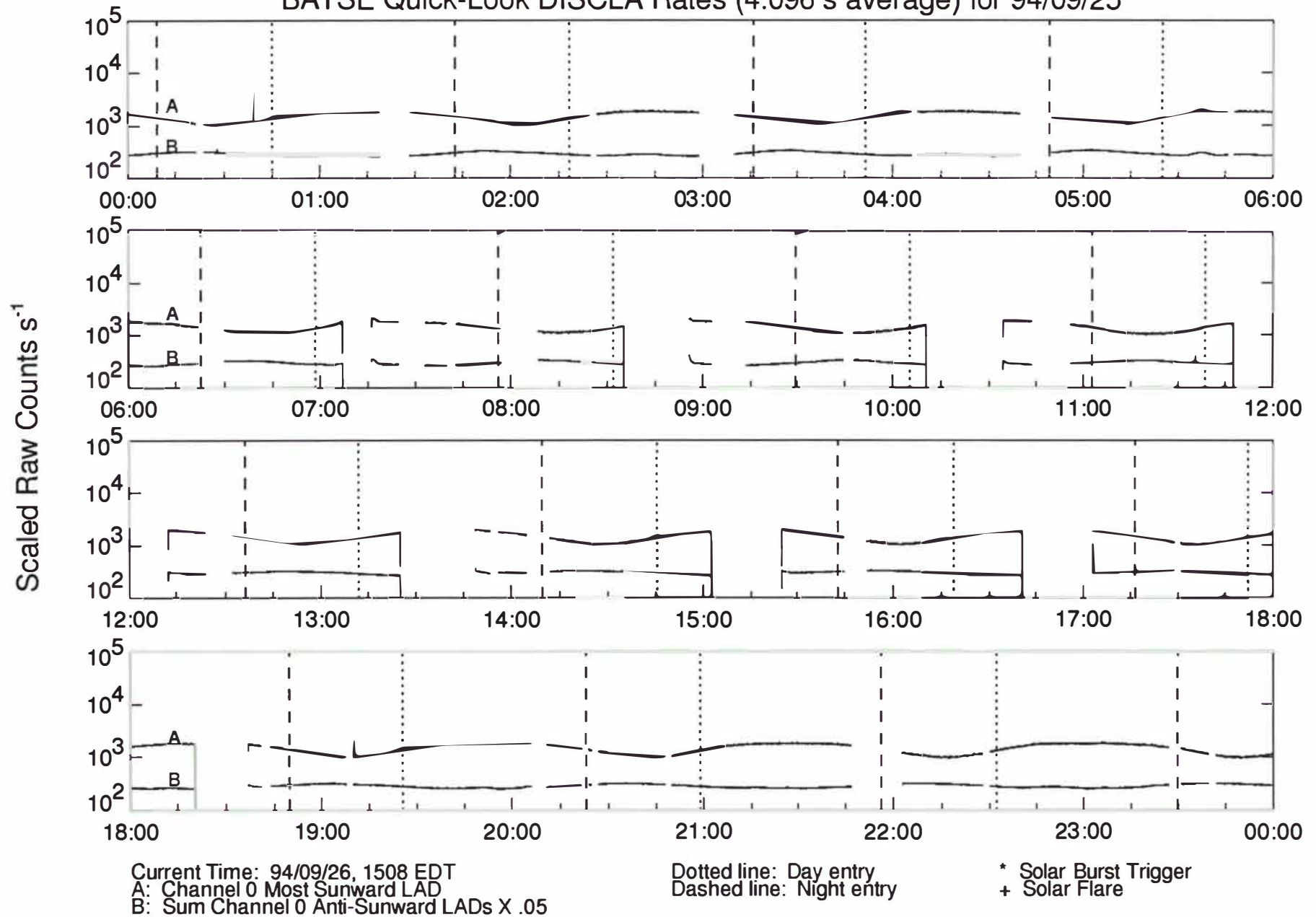
Data Start: 94/09/25, 0000:01

Plot created: 94/09/26, 1524

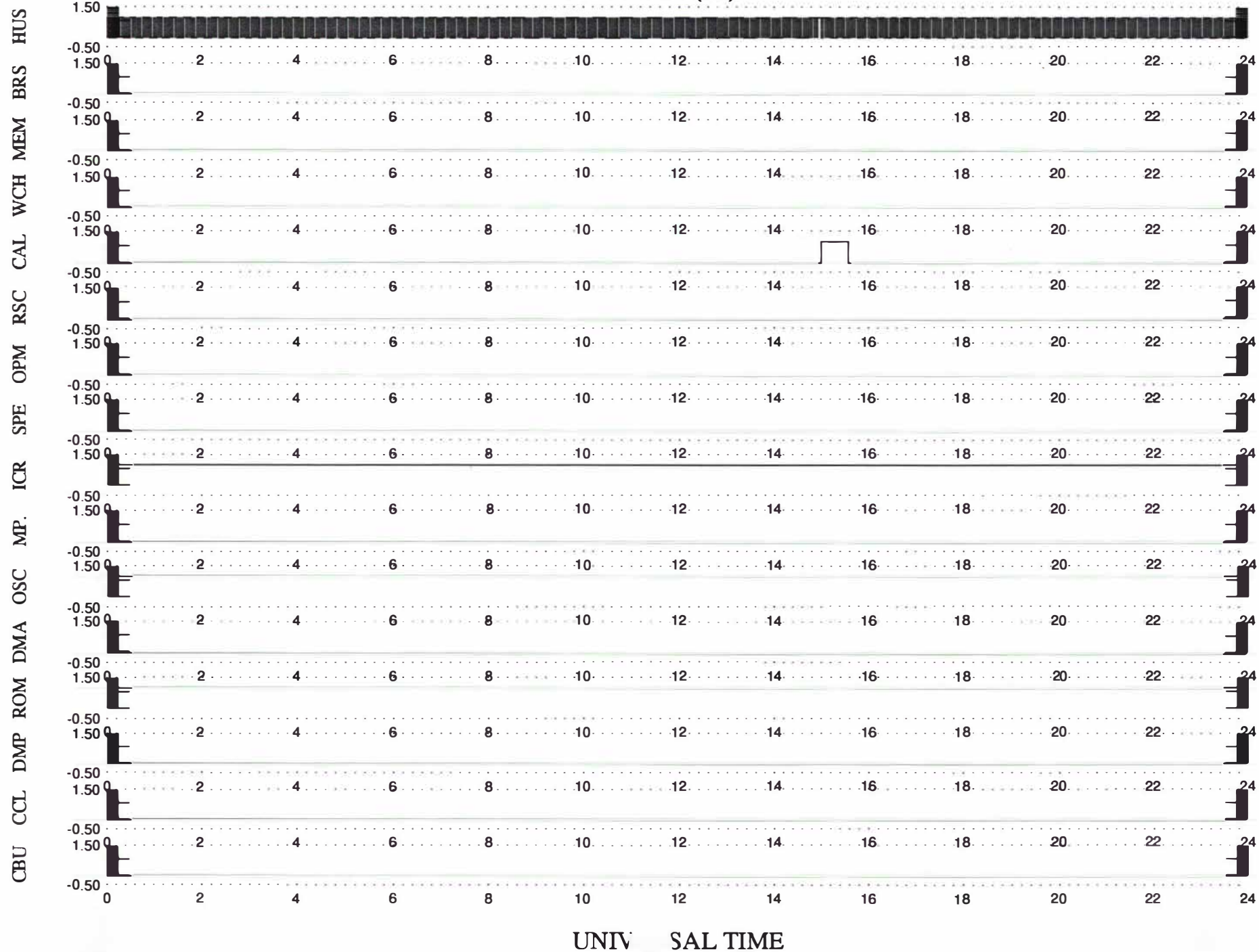
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

Channel 2 (0.5 - 4.0 Angstroms) Background not subtracted

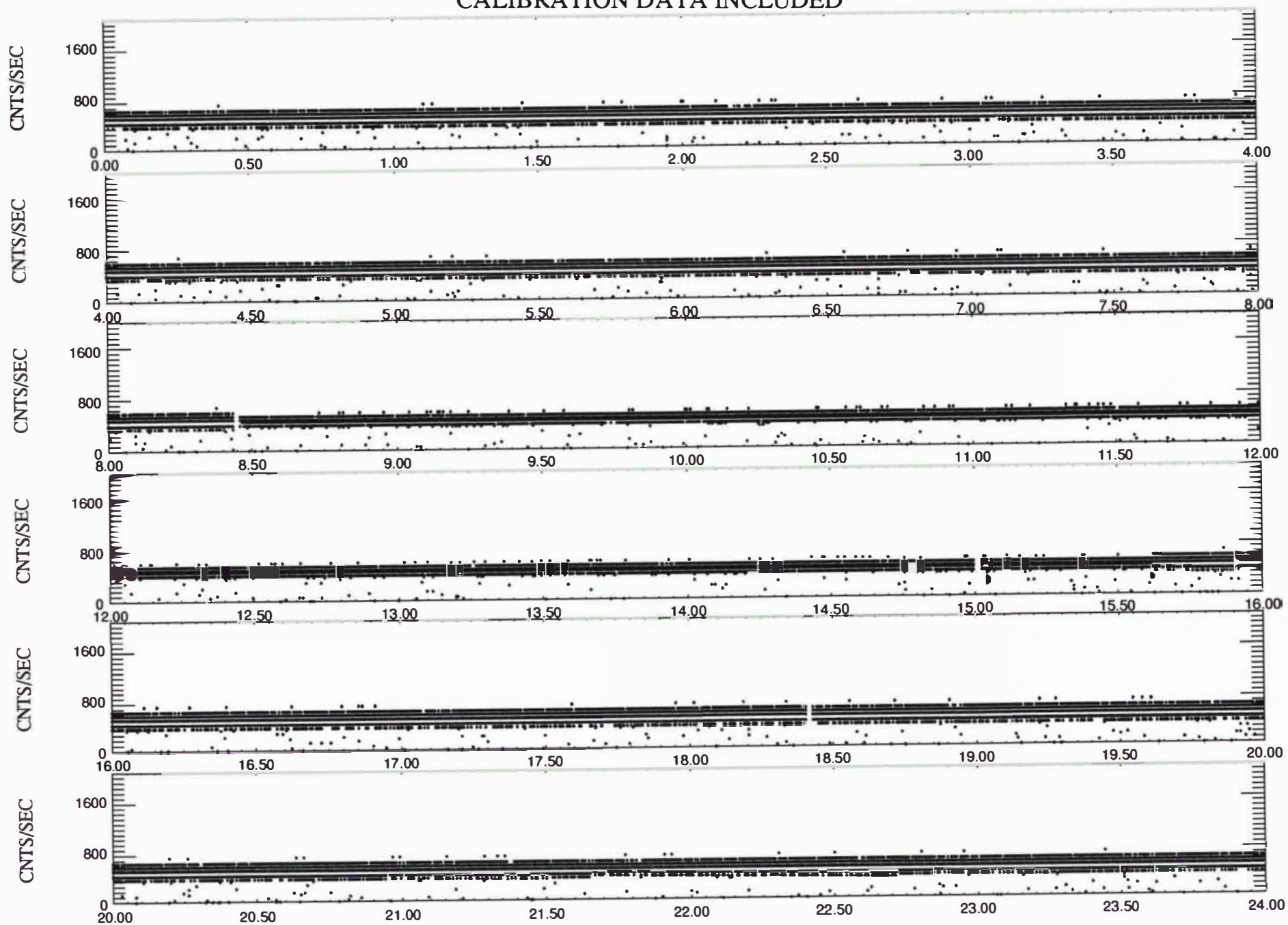
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/25



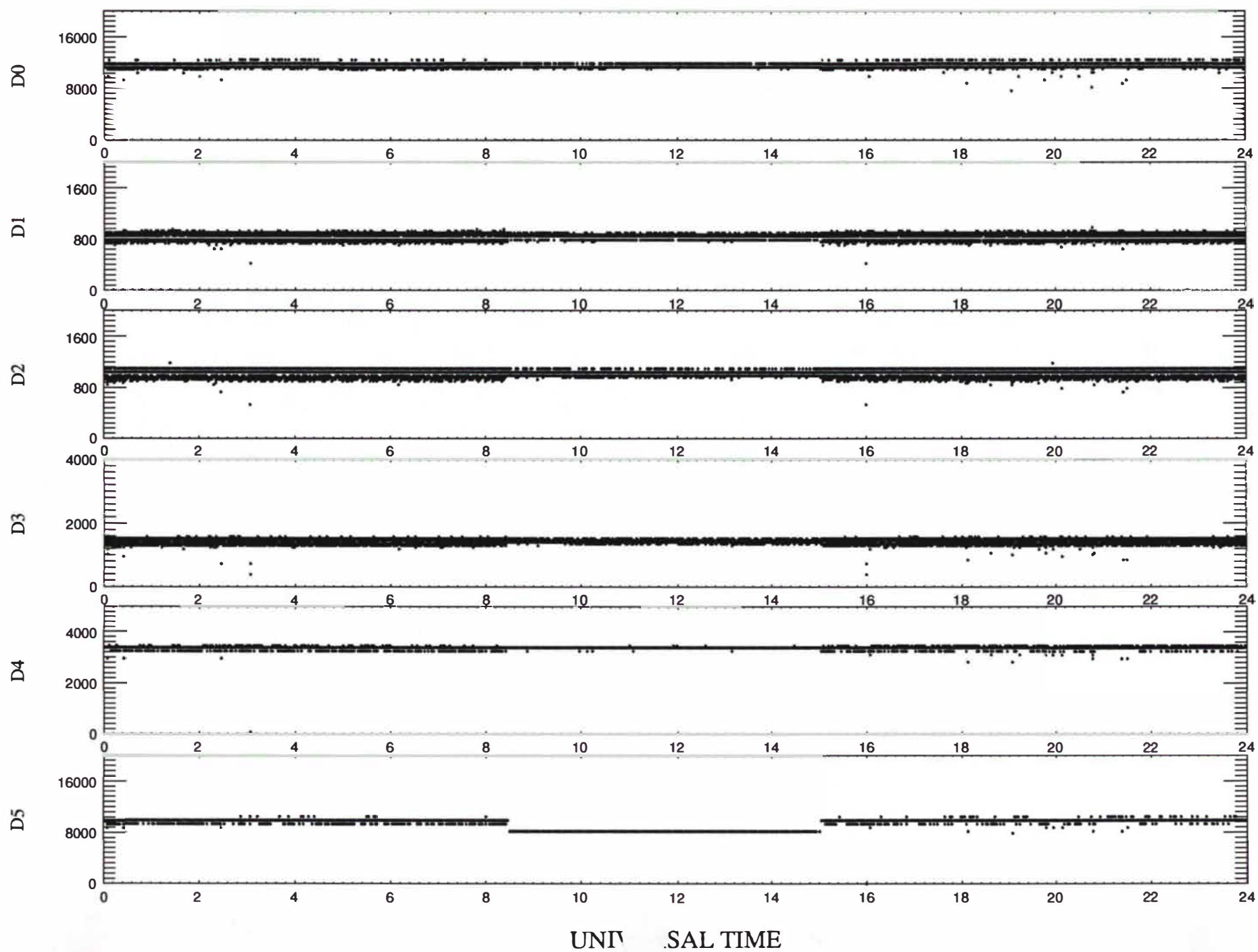
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



From KOSHUT@ssl.msfc.nasa.gov Tue Sep 27 08:49 PDT 1994
Date: Tue, 27 Sep 1994 10:51:24 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 03194

TIME: TJD=9621 SECONDS=28384

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON ENTRY INTO SAA.

From KOSHUT@ssl.msfc.nasa.gov Tue Sep 27 08:52 PDT 1994
Date: Tue, 27 Sep 1994 10:53:58 -0500 (CDT)
From: KOSHUT@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 03195

TIME: TJD=9621 SECONDS=39903

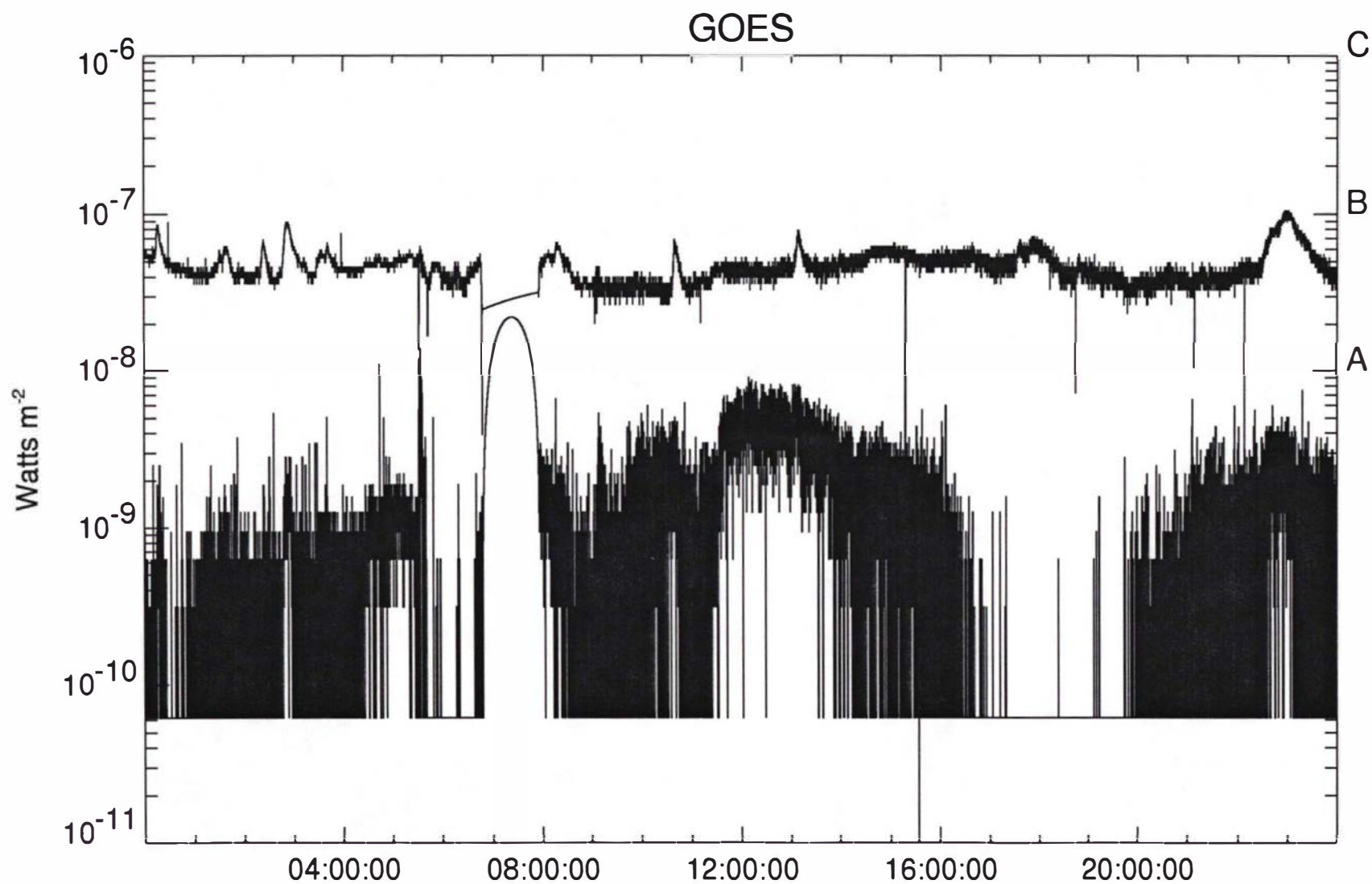
TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
TRIGGERED ON ENTRY INTO SAA.



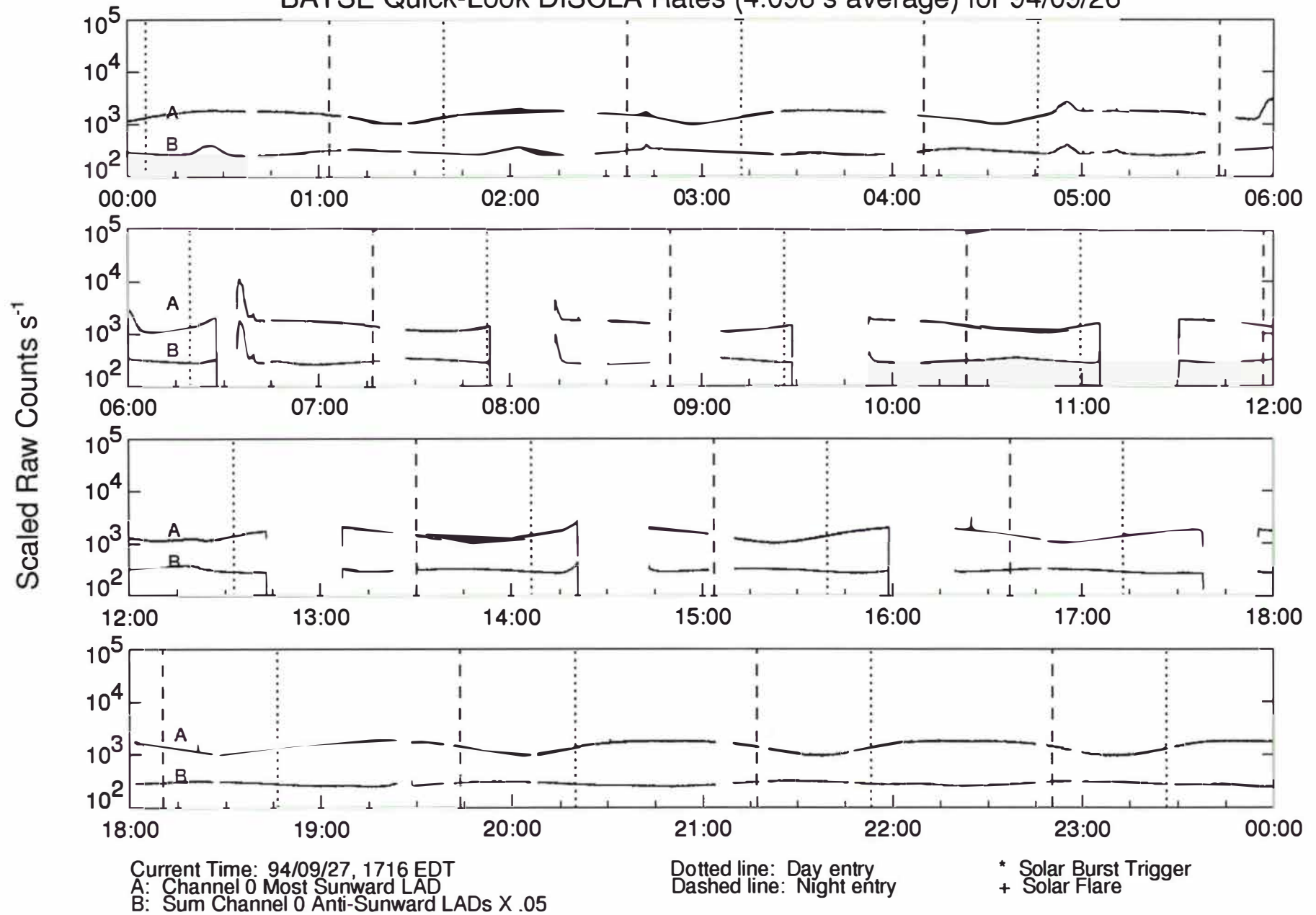
Data Start: 94/09/26, 0000:01

Plot created: 94/09/27, 1719

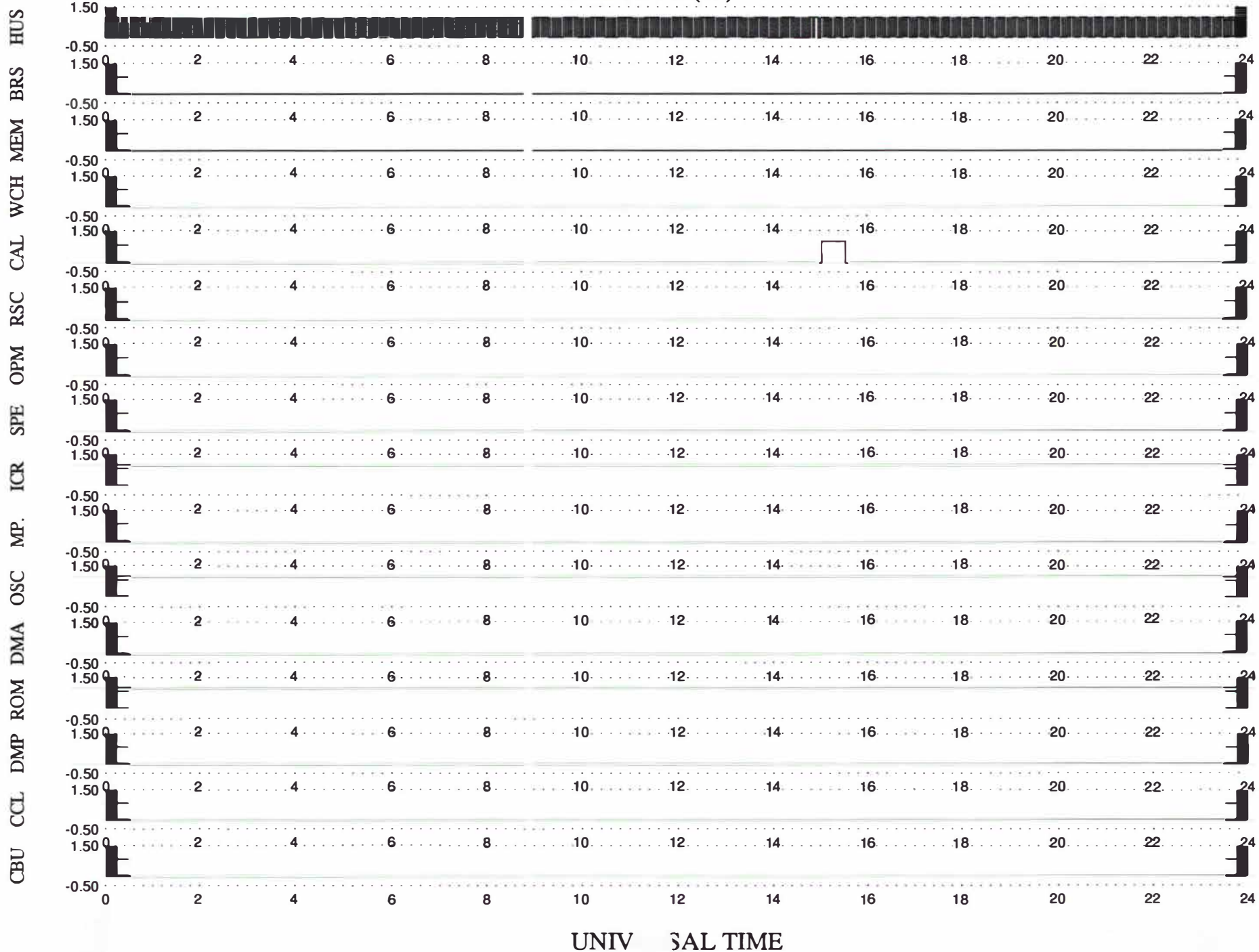
Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

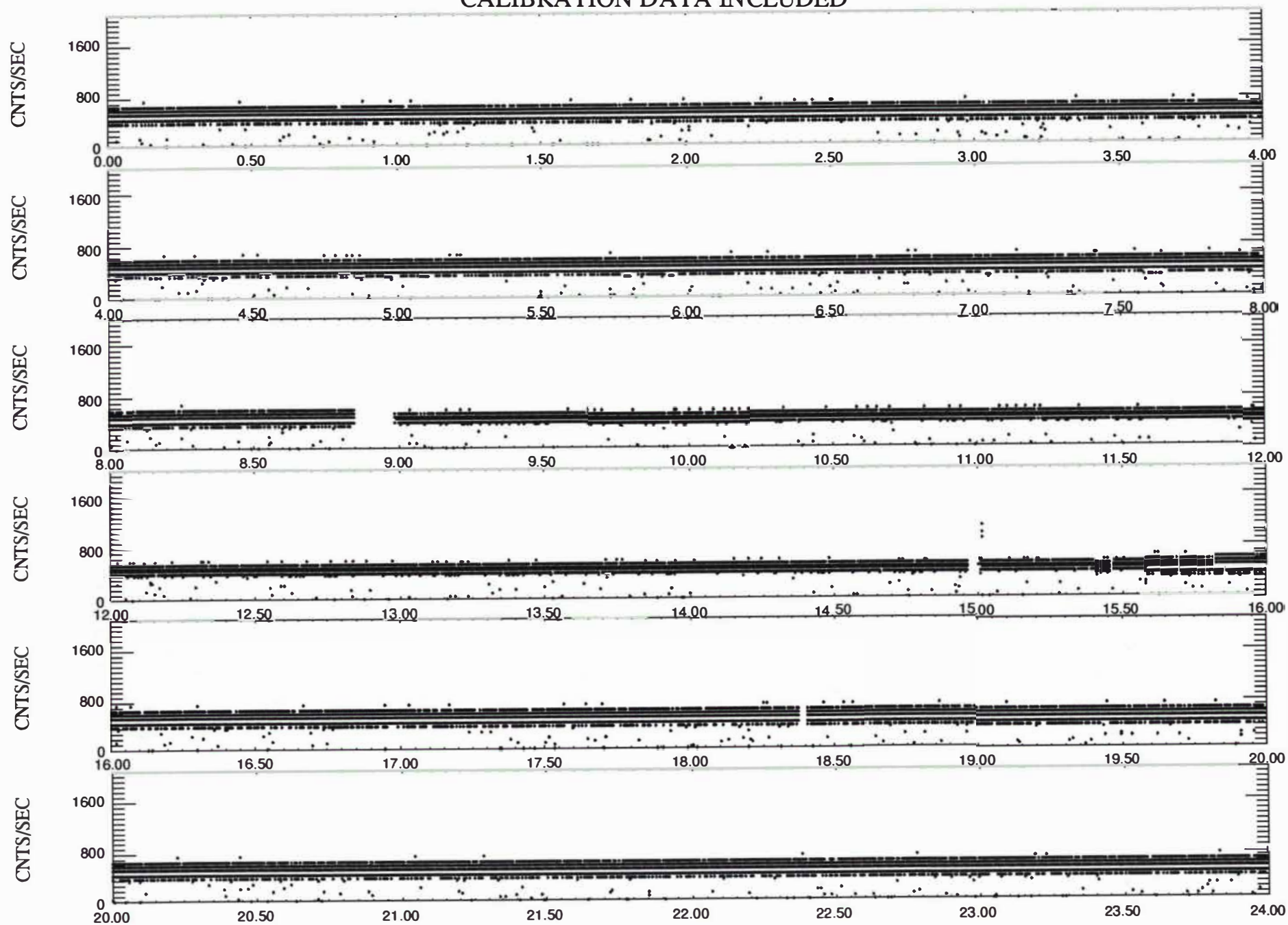
BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/26



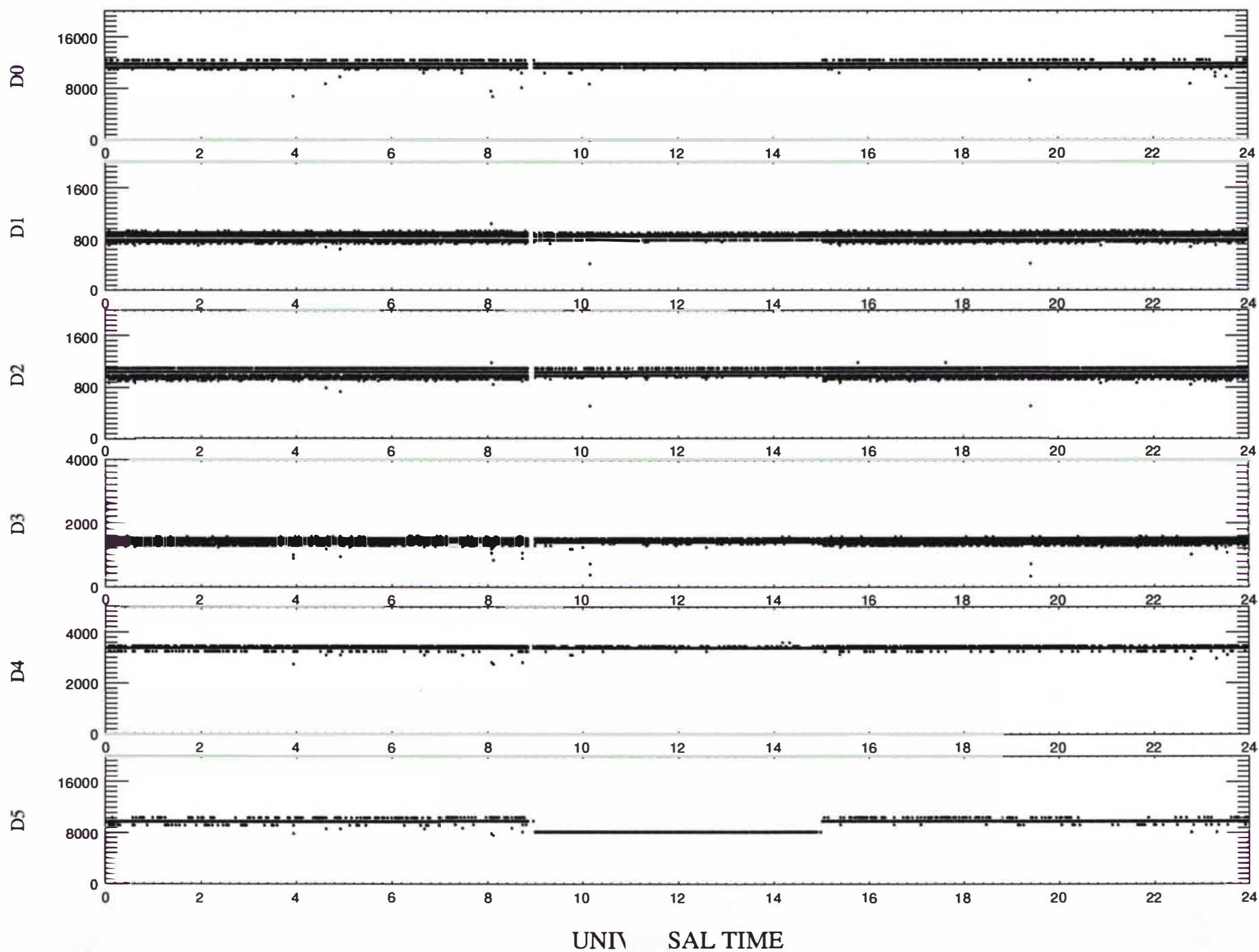
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



2 2 / 2 / 9 5

U L Y S S E S R T

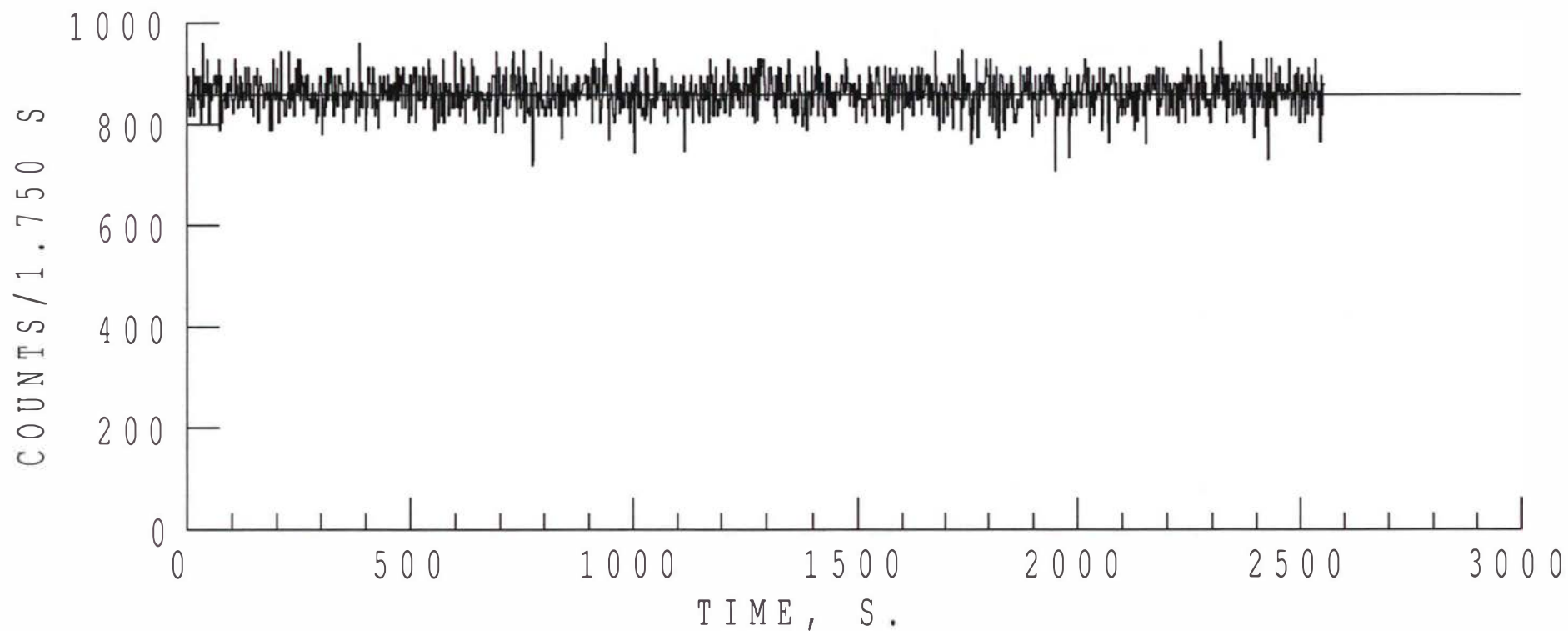
2 7 / 9 / 9 4 7 4 6 6 4 . 0 5 5 s

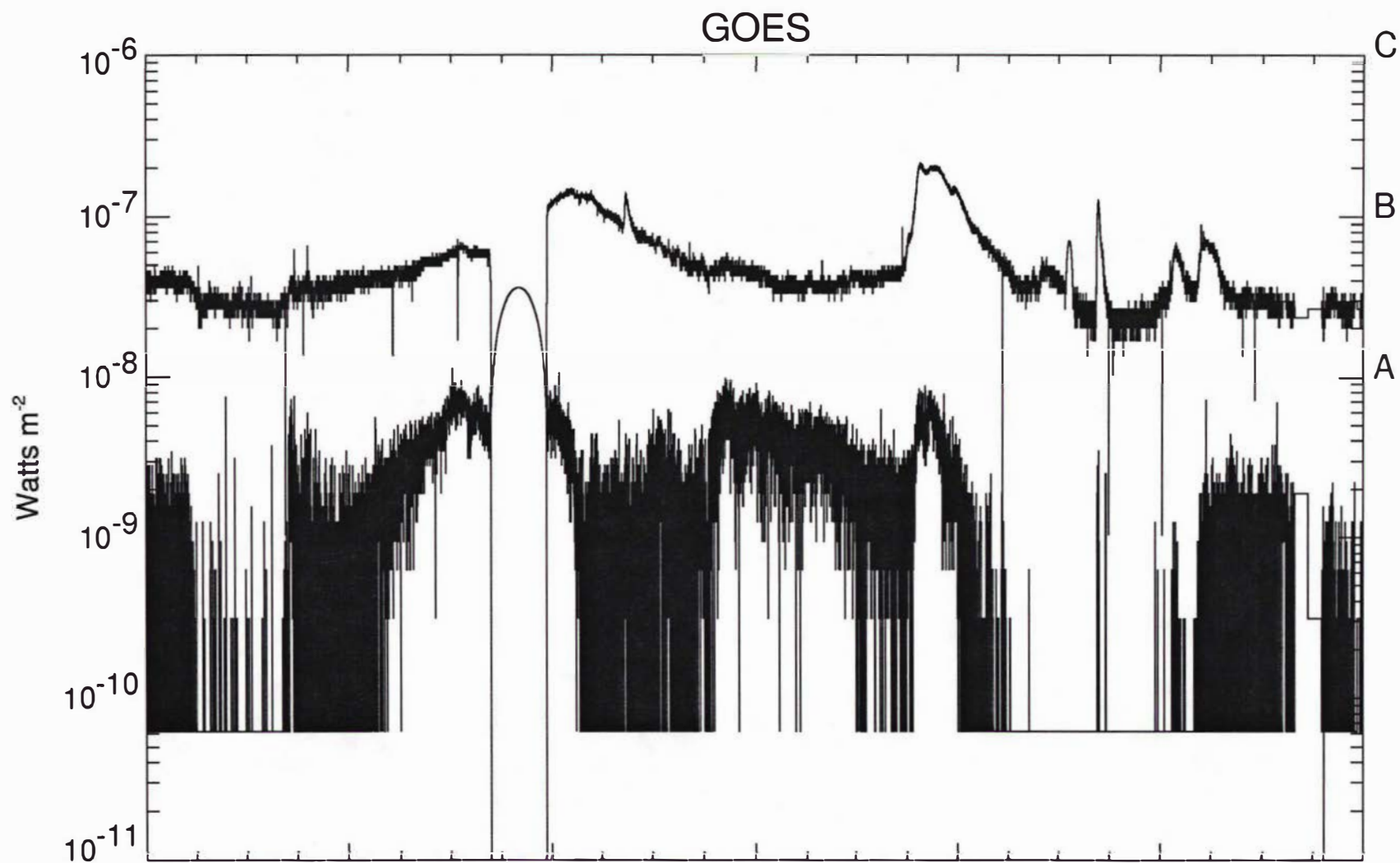
0 . 2 5 0 S I N T E R V A L S R E G R O U P E D B Y 7

0 - 0 k e V

N = 10 M = 2

> 4.0 SIGMA FLUCTUATIONS



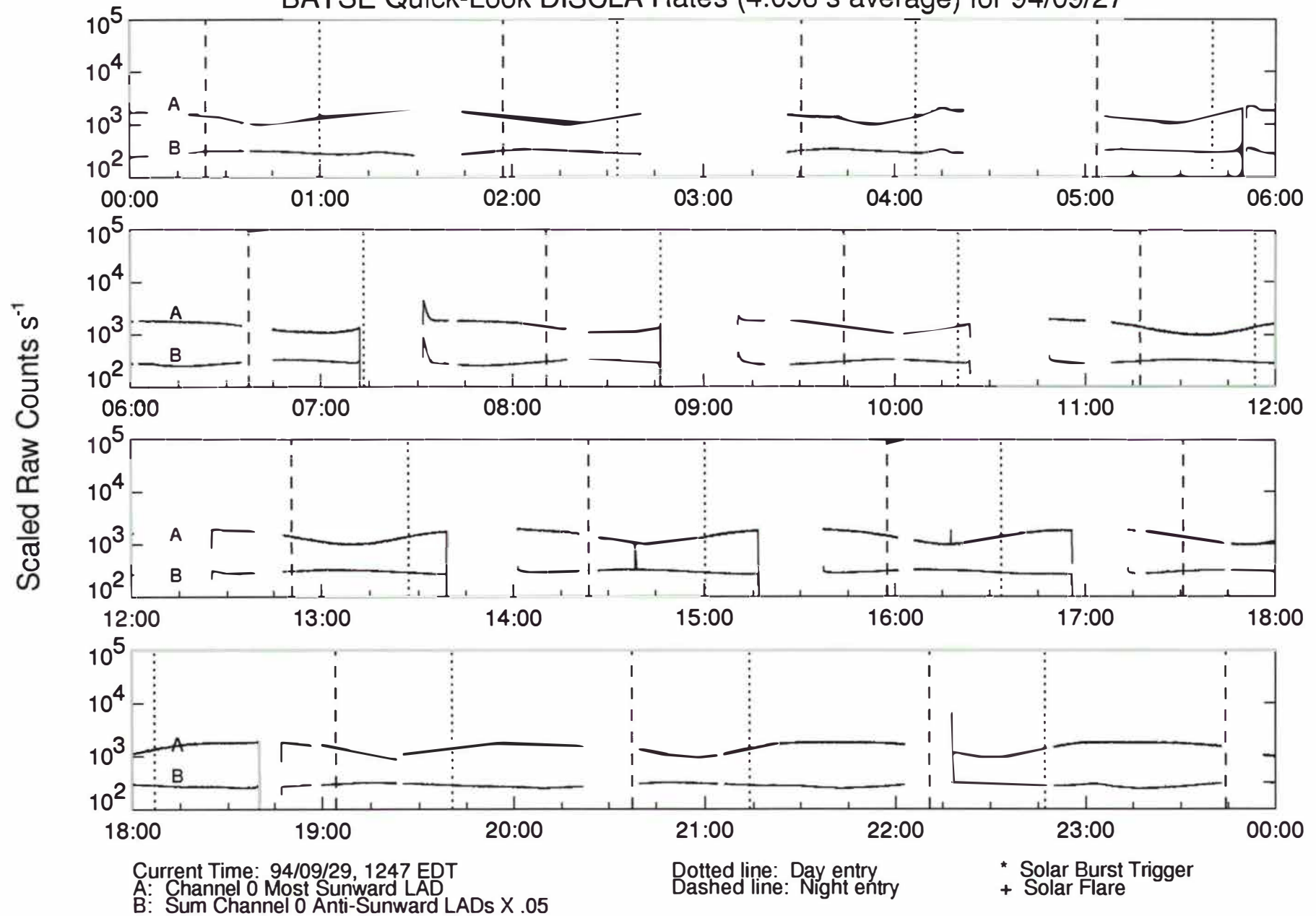


Data Start: 94/09/27, 0000:02

Plot created: 94/09/28, 1508

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

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/27



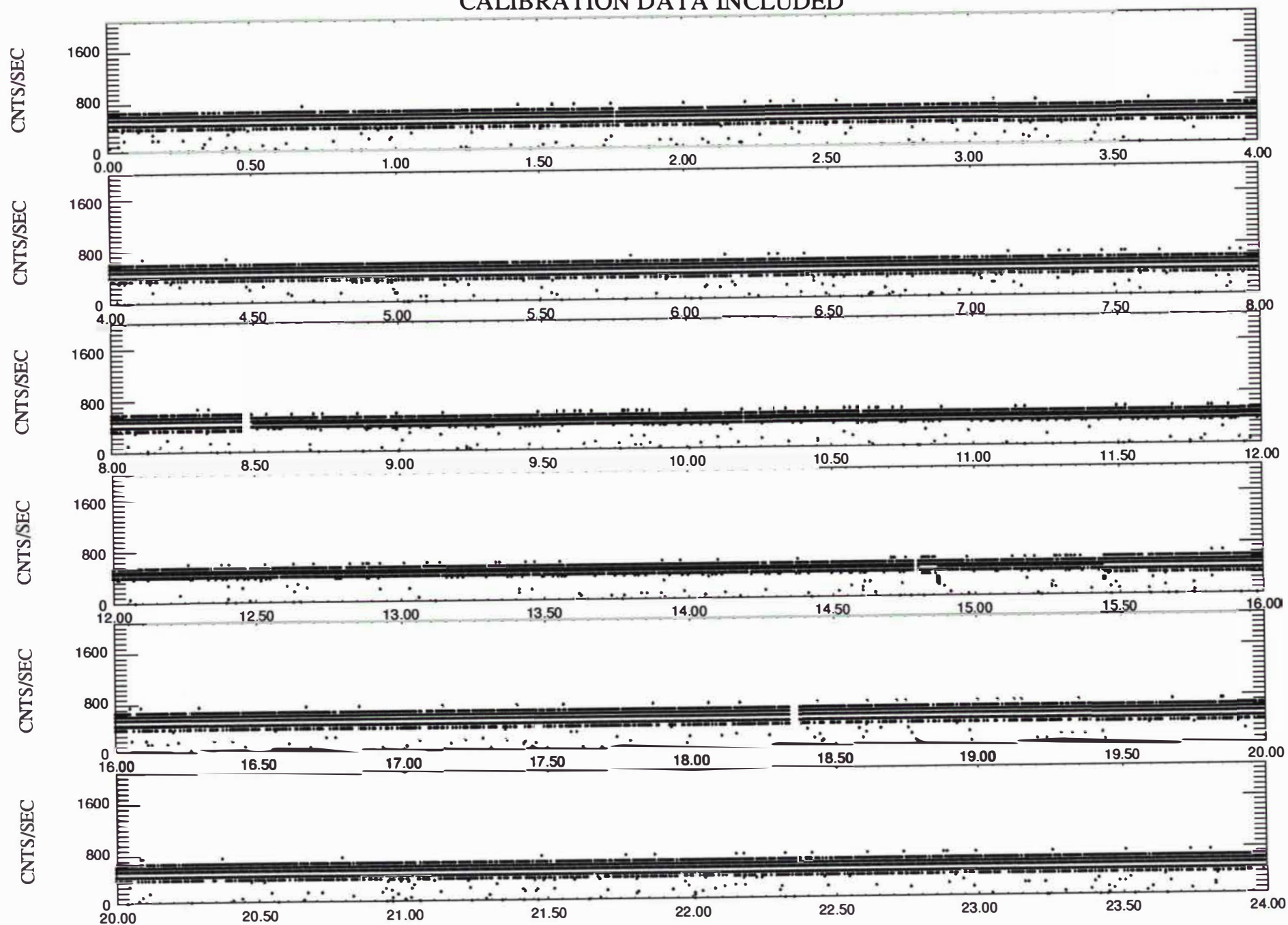
NO BURST (13)

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

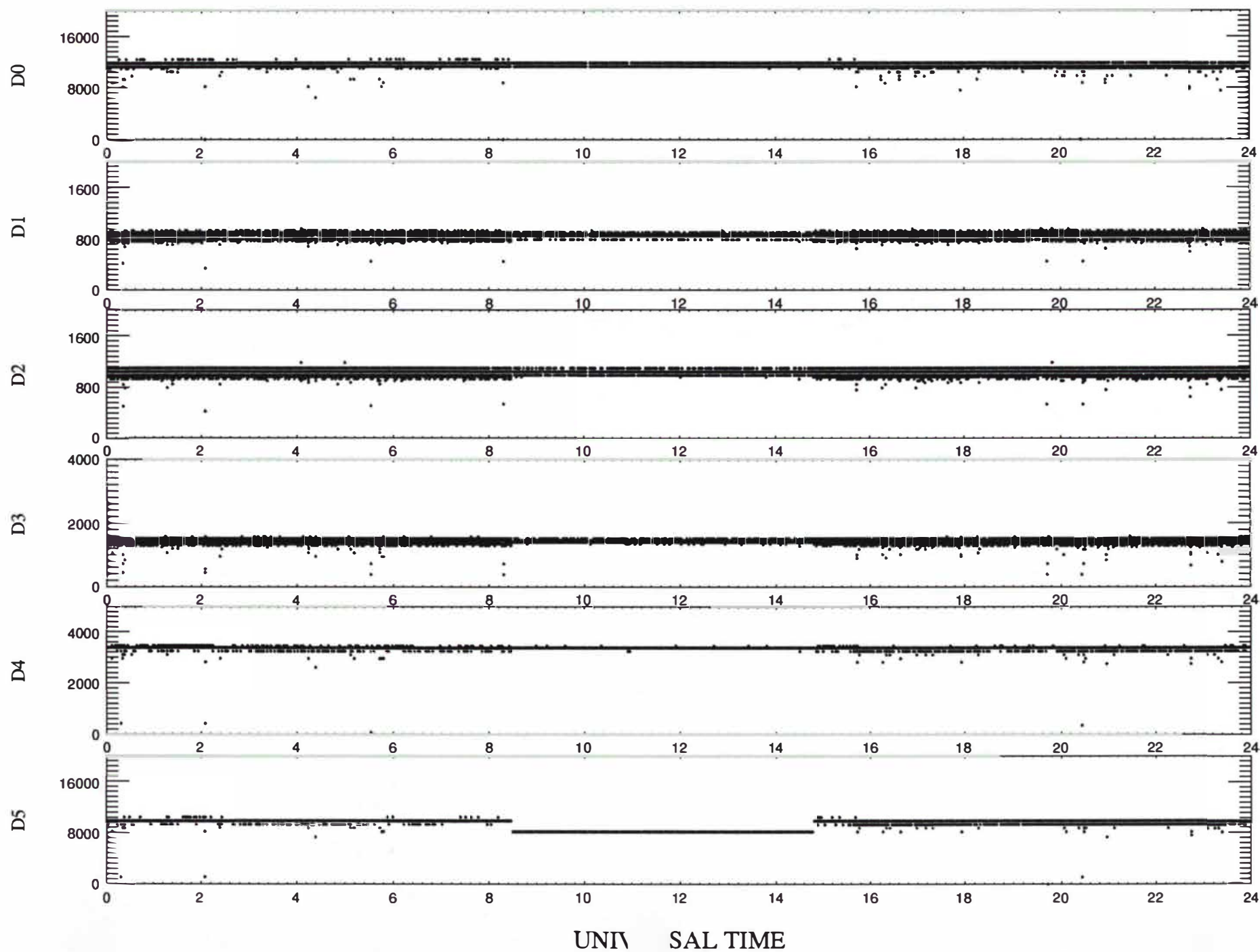


UNIV SAL TIME

CALIBRATION DATA INCLUDED



UNIV SAL TIME



From DEAL@ssl.msfc.nasa.gov Thu Sep 29 11:16 PDT 1994

Date: Thu, 29 Sep 1994 13:18:28 -0500 (CDT)

From: DEAL@ssl.msfc.nasa.gov

To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu

Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 03199

TIME: TJD=9623 SECONDS=23371

TYPE: SAA ENT SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:

SAA ENTRY (PARTICLES)

From DEAL@ssl.msfc.nasa.gov Fri Sep 30 09:19 PDT 1994
Date: Fri, 30 Sep 1994 11:22:14 -0500 (CDT)
From: DEAL@ssl.msfc.nasa.gov
To: khurley@sunspot.ssl.berkeley.edu
Subject: Crossing Windows for BATSE Burst 3200

BATSEARCH PROGRAM

BATSE BURST # 3200
EVENT OF 1994 SEP 28 DAY OF YEAR=271
EVENT CROSSING TIME AT BATSE : 31079. S. OR 08:37:59.0
COORDINATES ARE 0.000 0.000 6800. (RA, DEC, DIST.)
BURST ARRIVAL DIRECTION: 153.000 26.000
BATSE PEAK COUNTING RATE: 8000 C/S

EVENT CROSSING TIME AT ULYSSES WILL BE FOUND
INTERPOLATED POSITION OF ULYSSES ON 28/ 9/ 94 IS:
RA= 159.403 DEC= -57.761 DIST= 2.522 AU
BATSE-ULYSSES DISTANCE = 377292673. KM.
ANGLE WHICH BATSE-ULYSSES VECTOR MAKES WITH GRB ARRIVAL DIRECTION= 96.07 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -133.00 SECS.
CROSSING TIME AT ULYSSES IS 30946. S. OR 08:35:46 +/- 265.25 SECONDS

EVENT CROSSING TIME AT MARS WILL BE FOUND
POSITION OF MARS ON 28/ 9/ 94 IS:
RA= 118.360 DEC= 21.779 DIST= 1.597 AU
MARS-BATSE DISTANCE = 238959936. KM.
ANGLE WHICH BATSE-MARS VECTOR MAKES WITH GRB ARRIVAL DIRECTION=148.14 DEG.
LIGHT TRAVEL TIME ALONG PROJECTED PATH= -677.00 SECS.
CROSSING TIME AT MARS IS 30402. S. OR 08:26:42 +/- 62.77 SECONDS

~~RI~~ NO

BATSE #	Date	TJD	sec	Max ct/s	RA	Dec
3200	940928	9623	31079	8000	153	+26

BATSE BURST TRIGGER

NO.: 03200

TIME: TJD=9623 SECONDS=31079

TYPE: BURST SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH=083.3 AZIMUTH=302.1 ERROR= DEGREES

COMMENTS:
BURST LASTING ~7S. VISIBLE ABOVE 300KEV.

ULYSSES RT

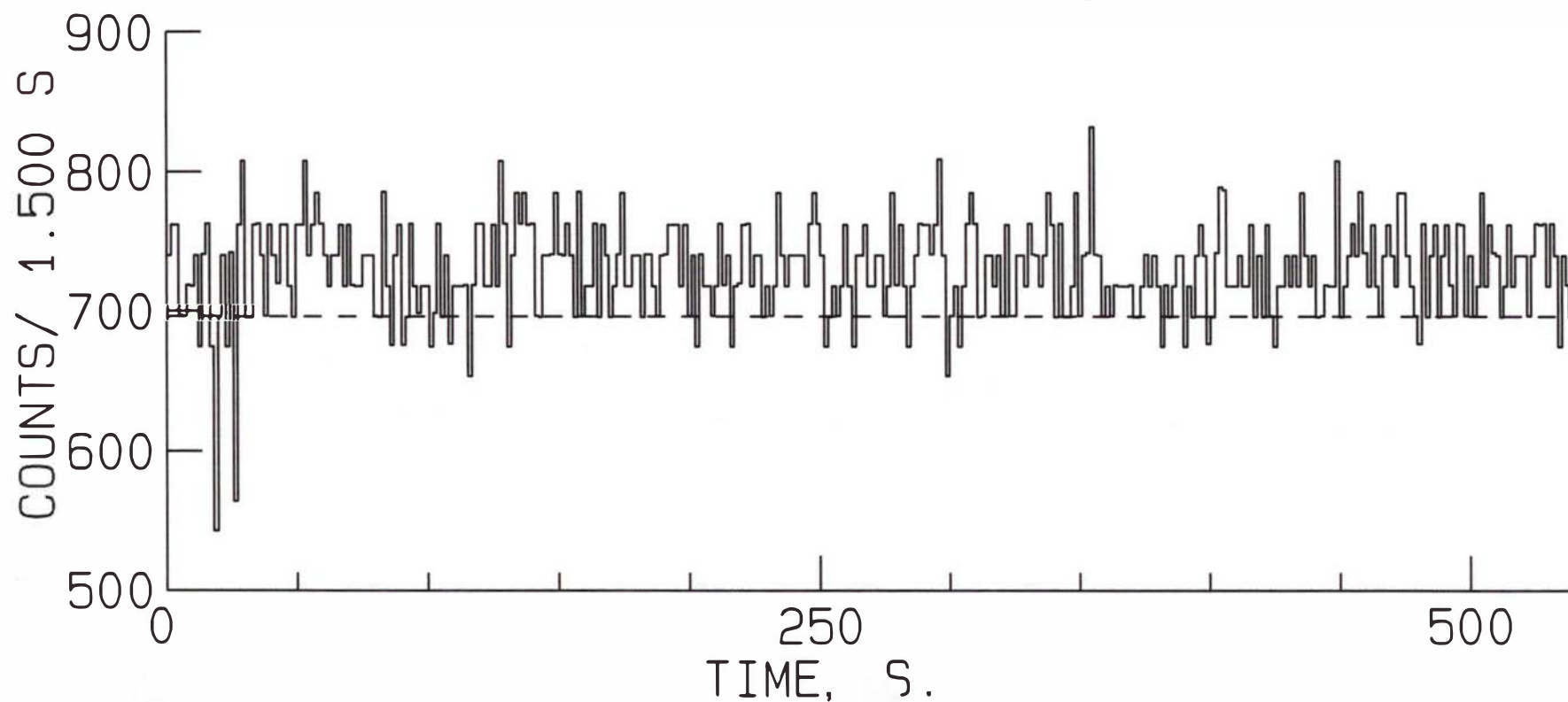
16 / 11 / 93

28 / 9 / 94 30672.027 s

0.500 S INTERVALS REGROUPED BY 3

22- 148 keV

N= 10 M= 1
>3.0 SIGMA FLUCTUATIONS |



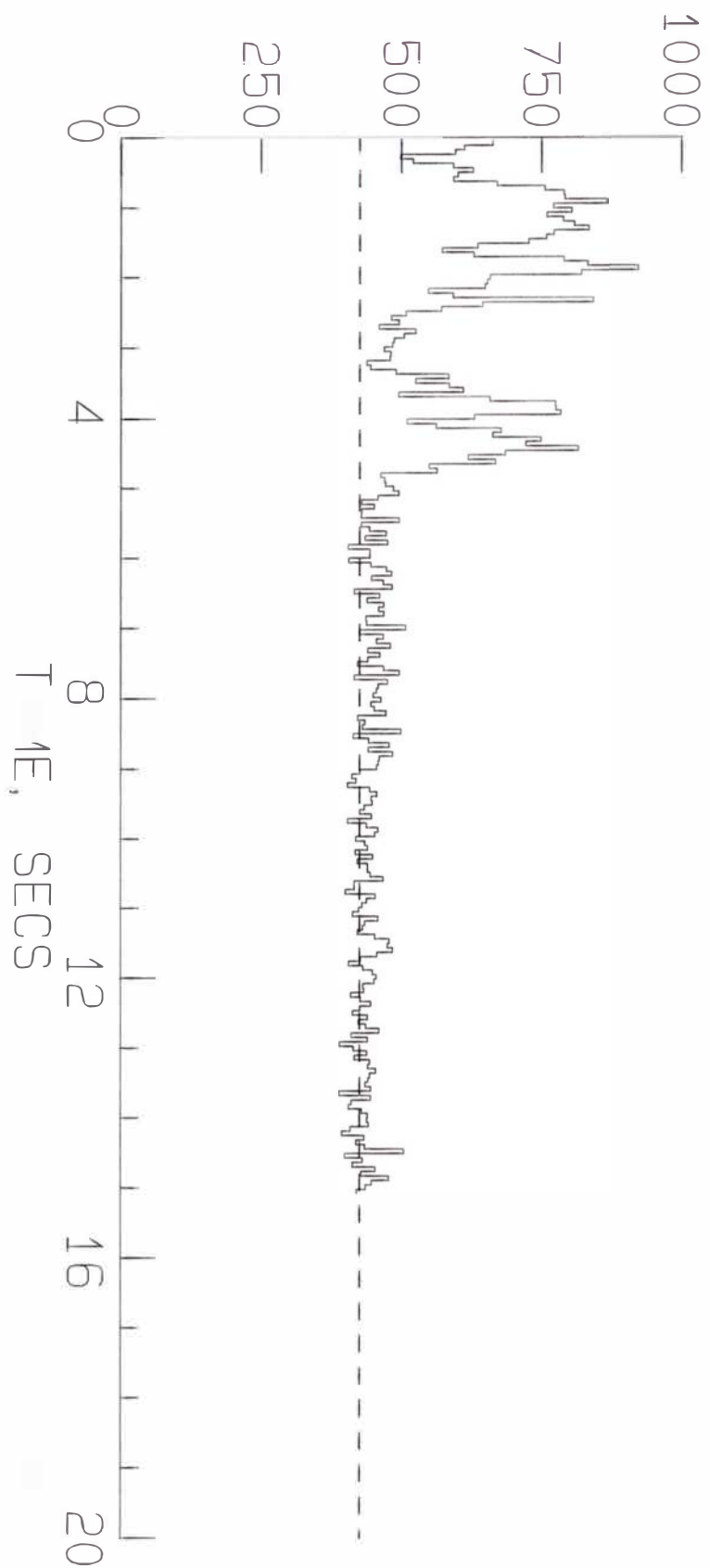
BATSE

28/09/94

31079.602

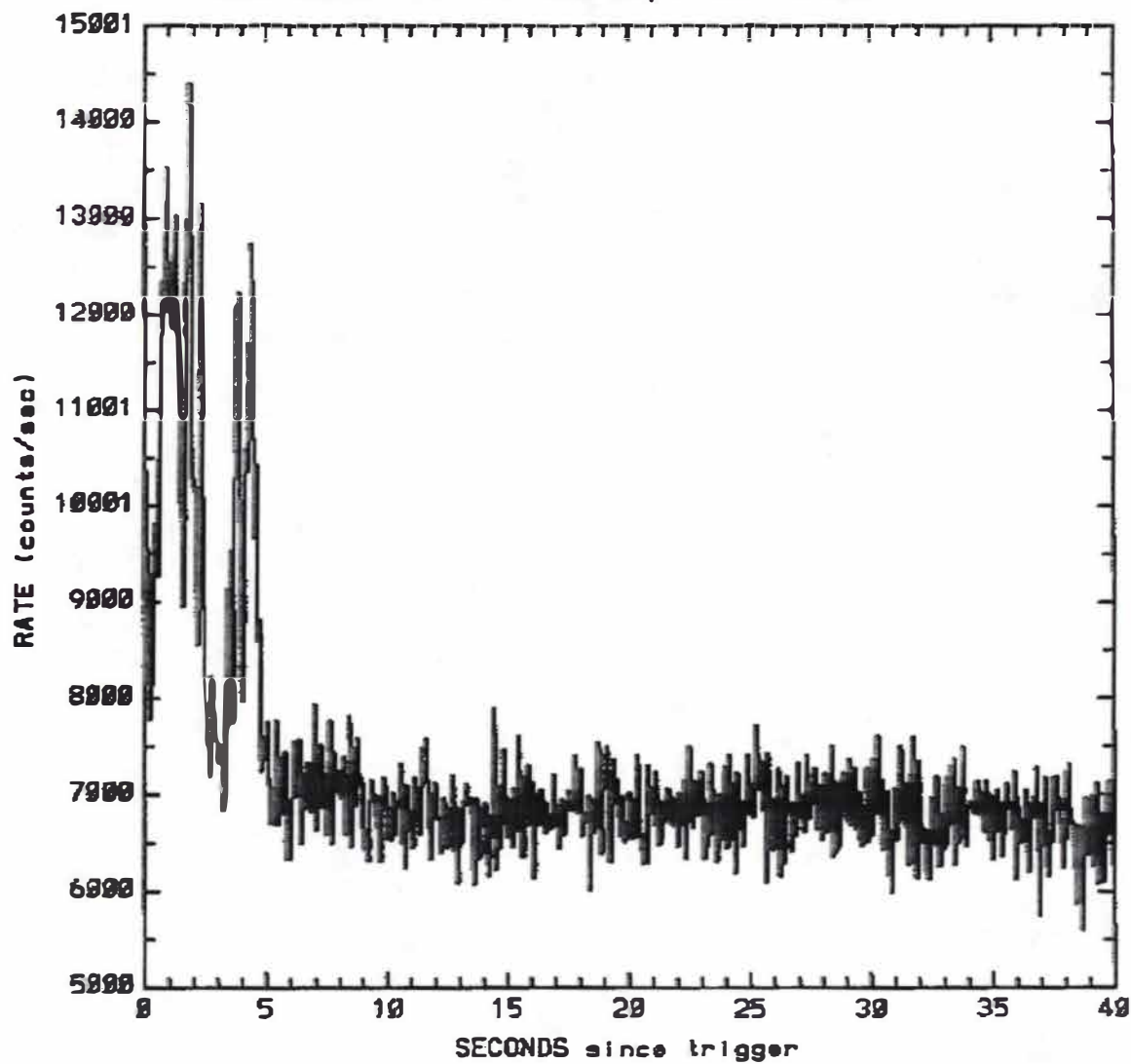
25- 100 keV

COUNTS/ .064 S



20/10/94

MER Data for K. Hurley, No. 3200



23-OCT-1994 12:02:37

Created by MOPS BD
(Burst Display)
Version 2.22

Trigger # : 3200

Trigger Time:
9423 / 31879.682Burst Data Type:
MERDeadtime
Corrected: MBackground Data
Type: CONTMinimum Integ. Time:
9.864 secondsDetectors [7..9]:
----32--Channels:
[0..6]Quality Mask:
80ISP1

BATSE BURST TRIGGER

NO.: 03196

TIME: TJD=9622 SECONDS=25880

TYPE: SAA SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY (PARTICLES)

BATSE BURST TRIGGER

NO.: 03197

TIME: TJD=9622 SECONDS=37398

TYPE: SAA ENT SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY (PARTICLES)

BATSE BURST TRIGGER

NO.: 03198

TIME: TJD=9622 SECONDS=67174

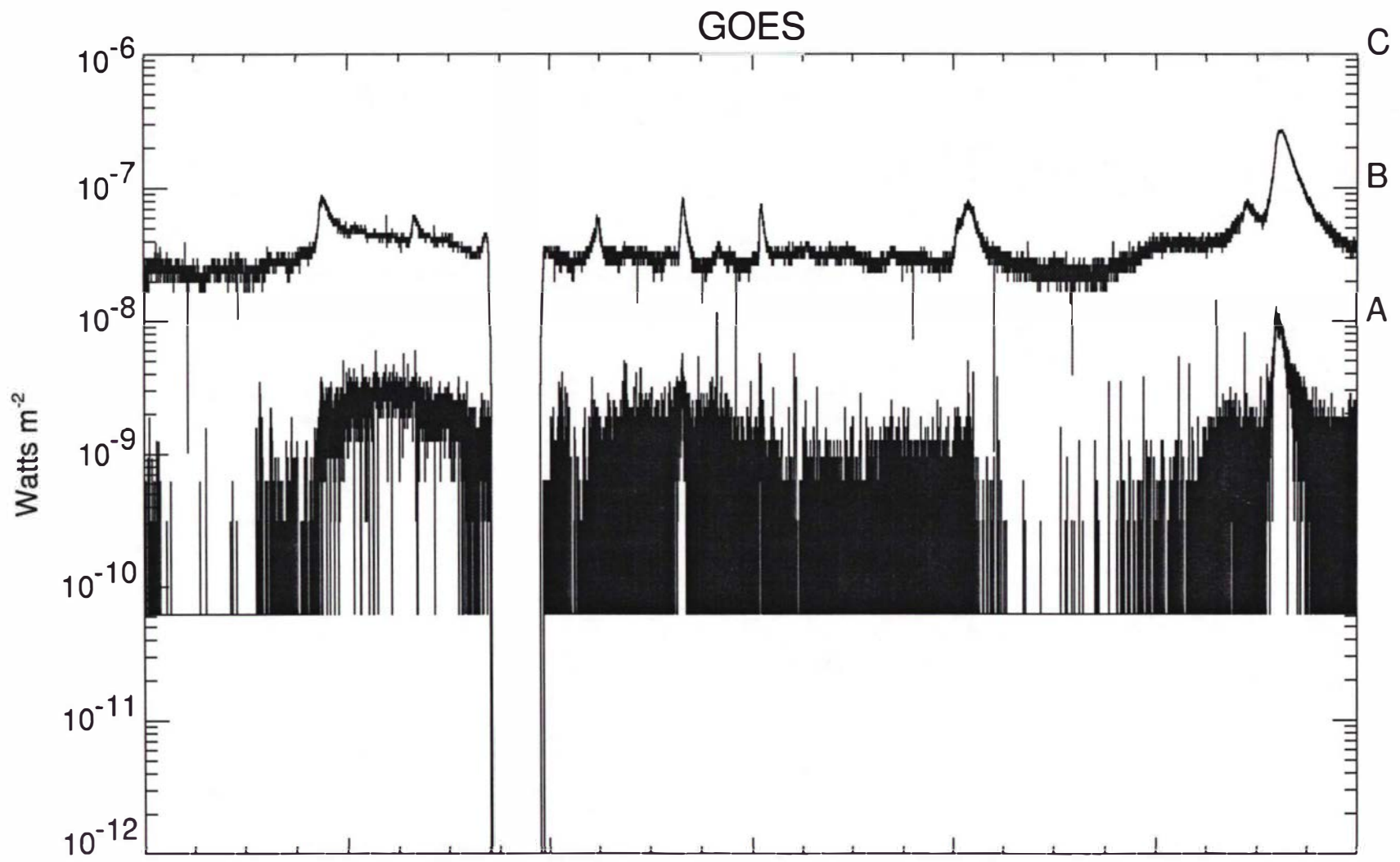
TYPE: SAA ENT SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY (PARTICLES)

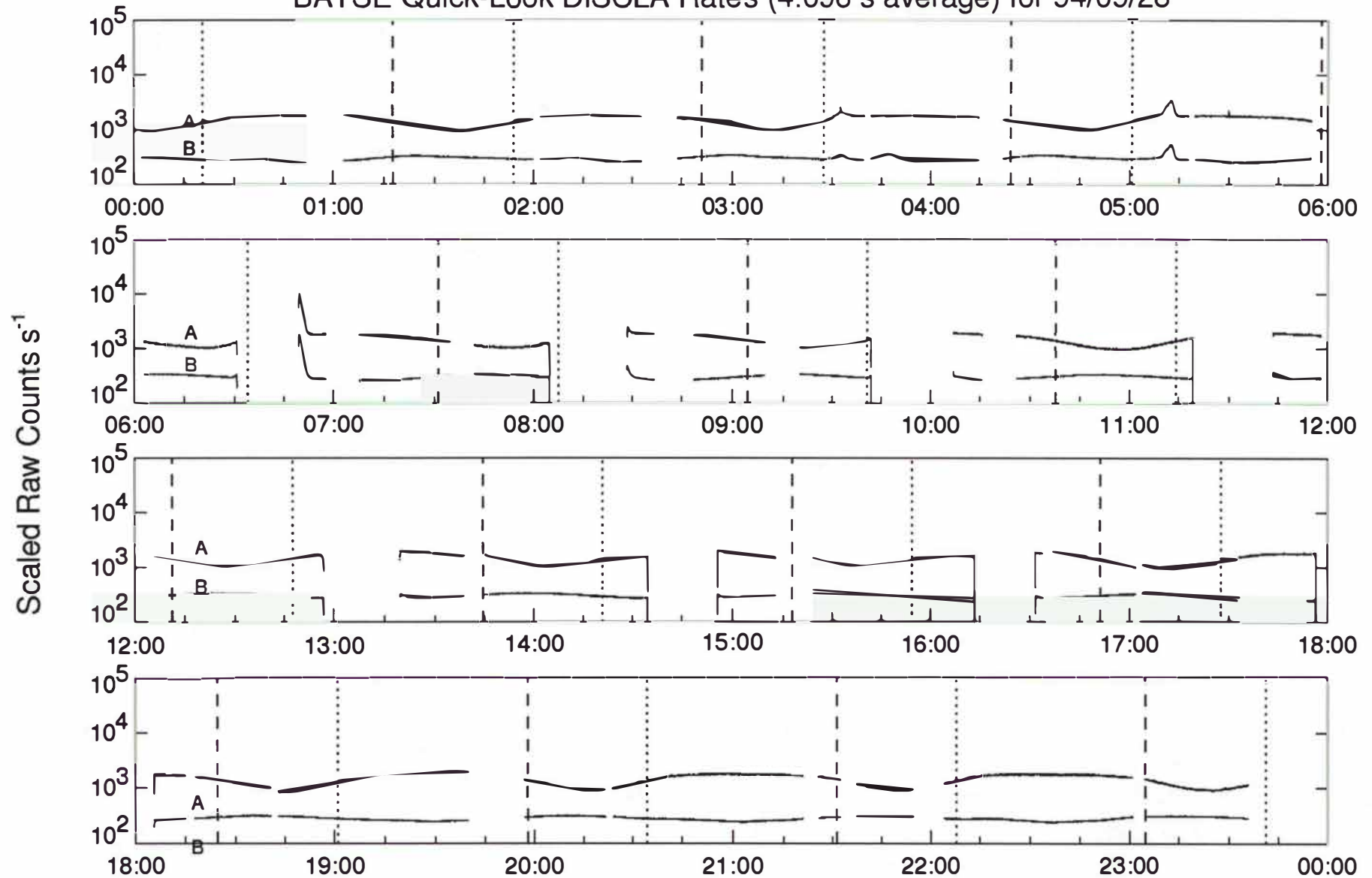


Data Start: 94/09/28, 0000:00

Plot created: 94/09/29, 1250

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

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/28

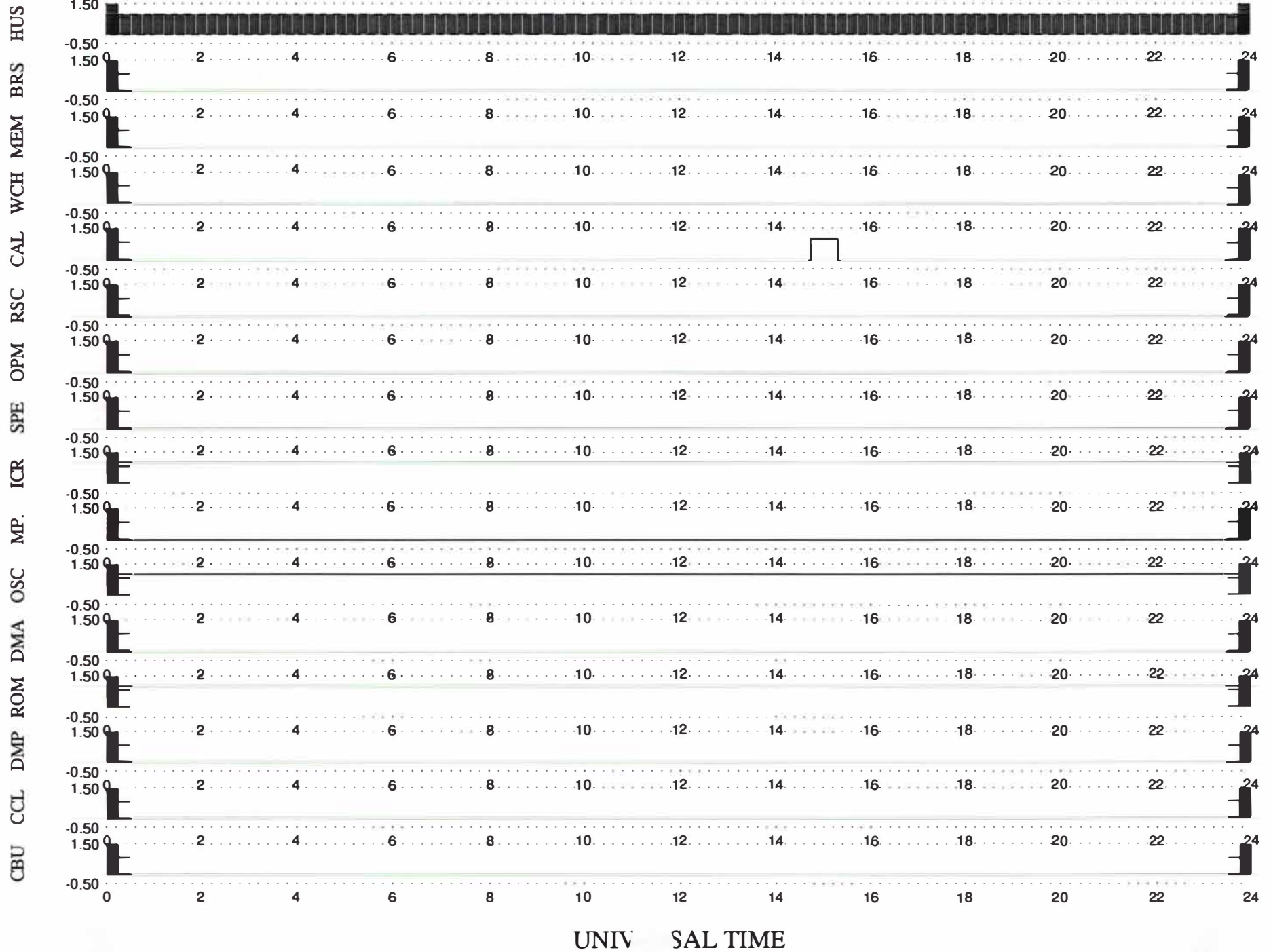


Current Time: 94/10/05, 1949 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

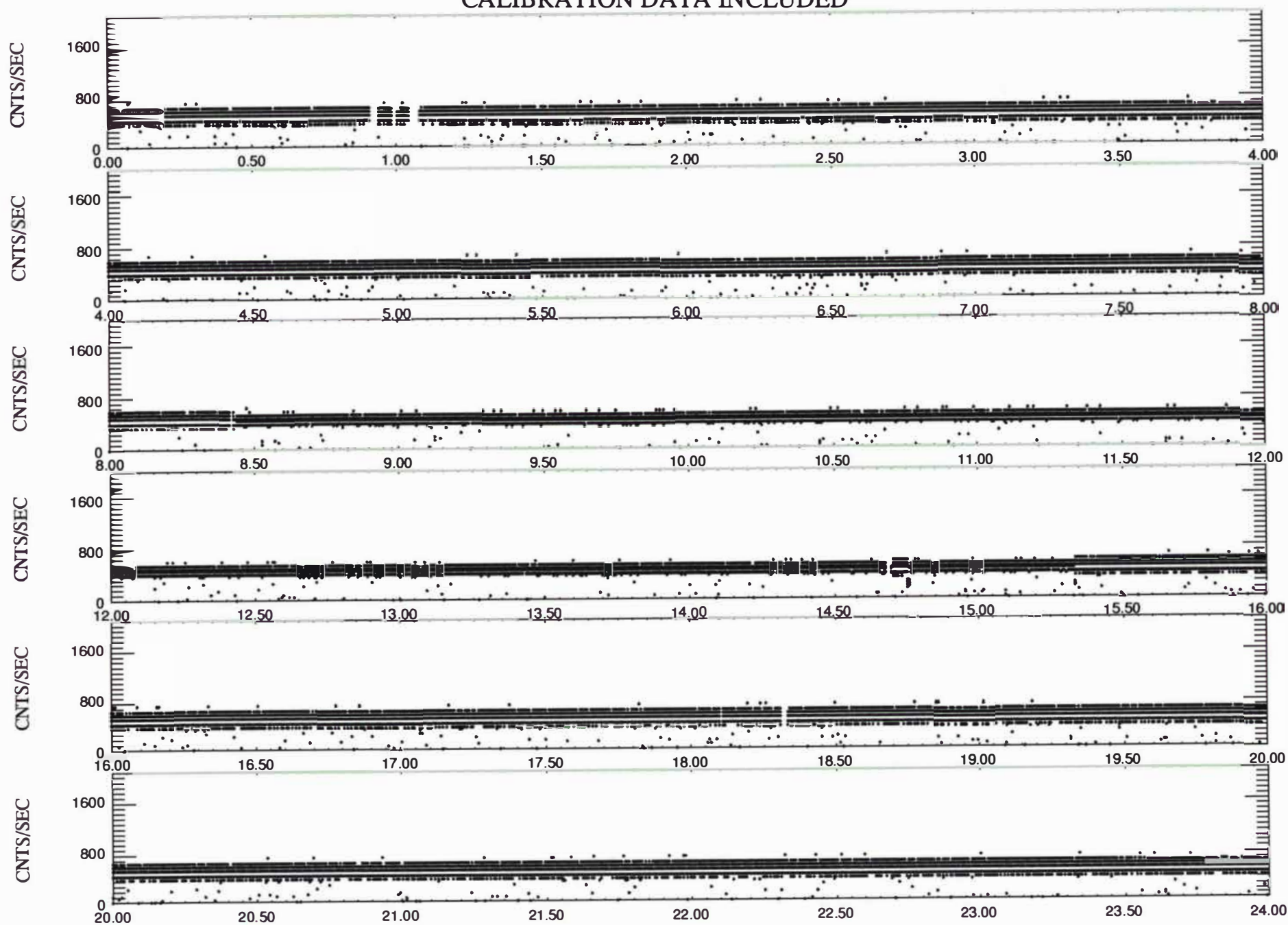
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

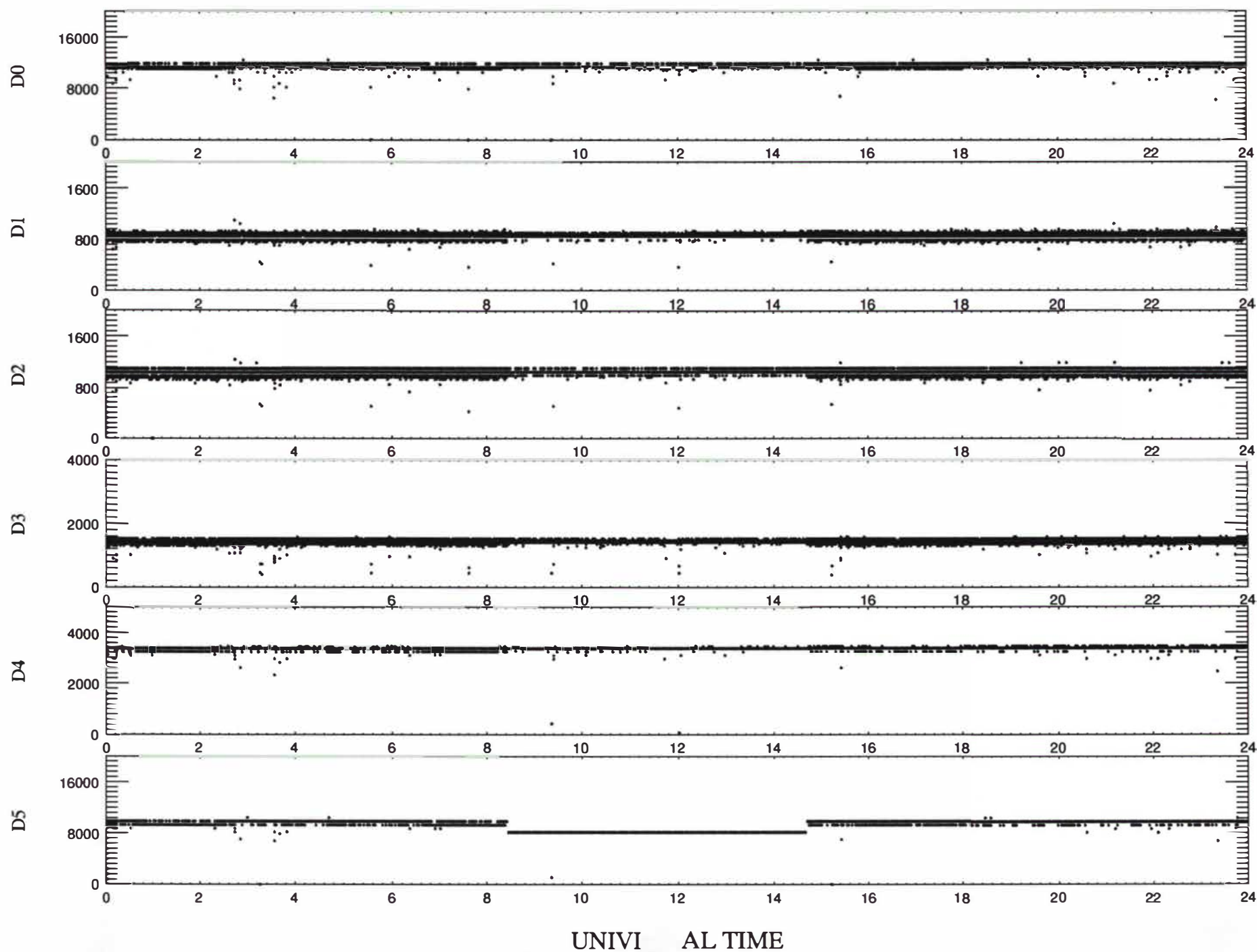
NO BURST (13)



CALIBRATION DATA INCLUDED



UNIV SAL TIME



Date: Aug 2 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

2. BATSE Data

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

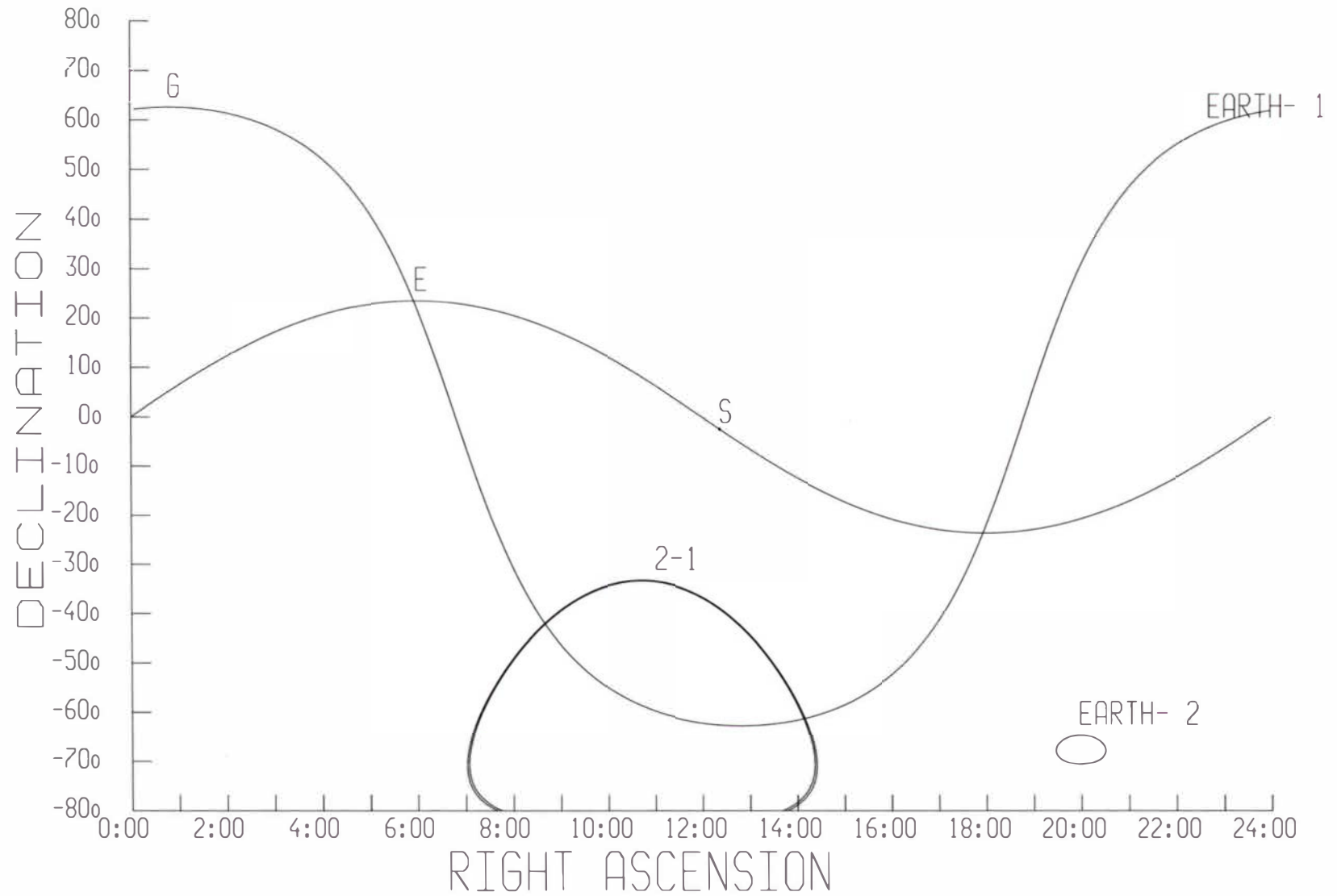
3. PVO Data

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

EVENT OF SEP 29, 1994 16:10

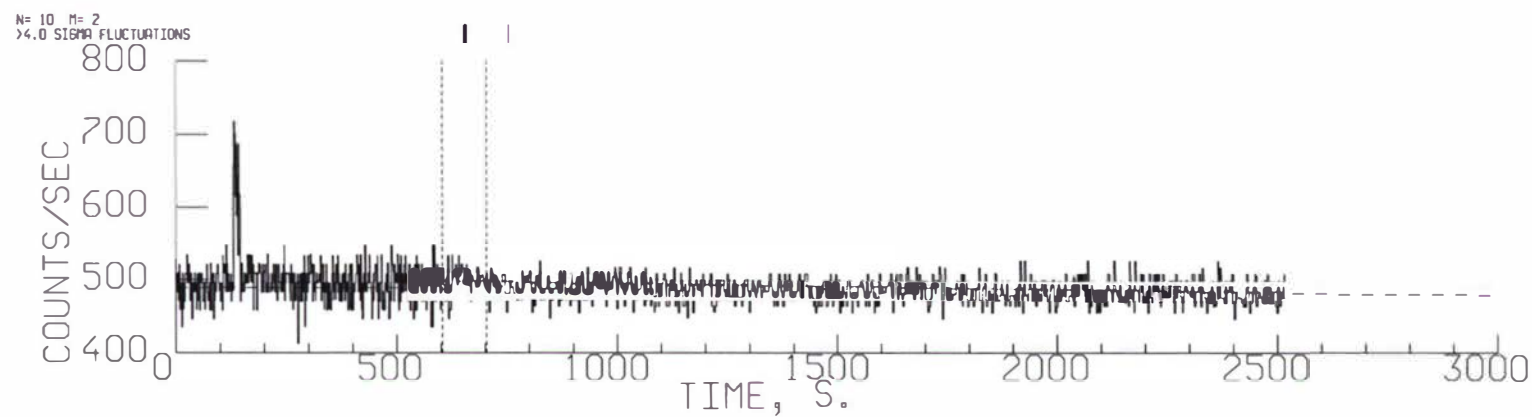
09/08/2011

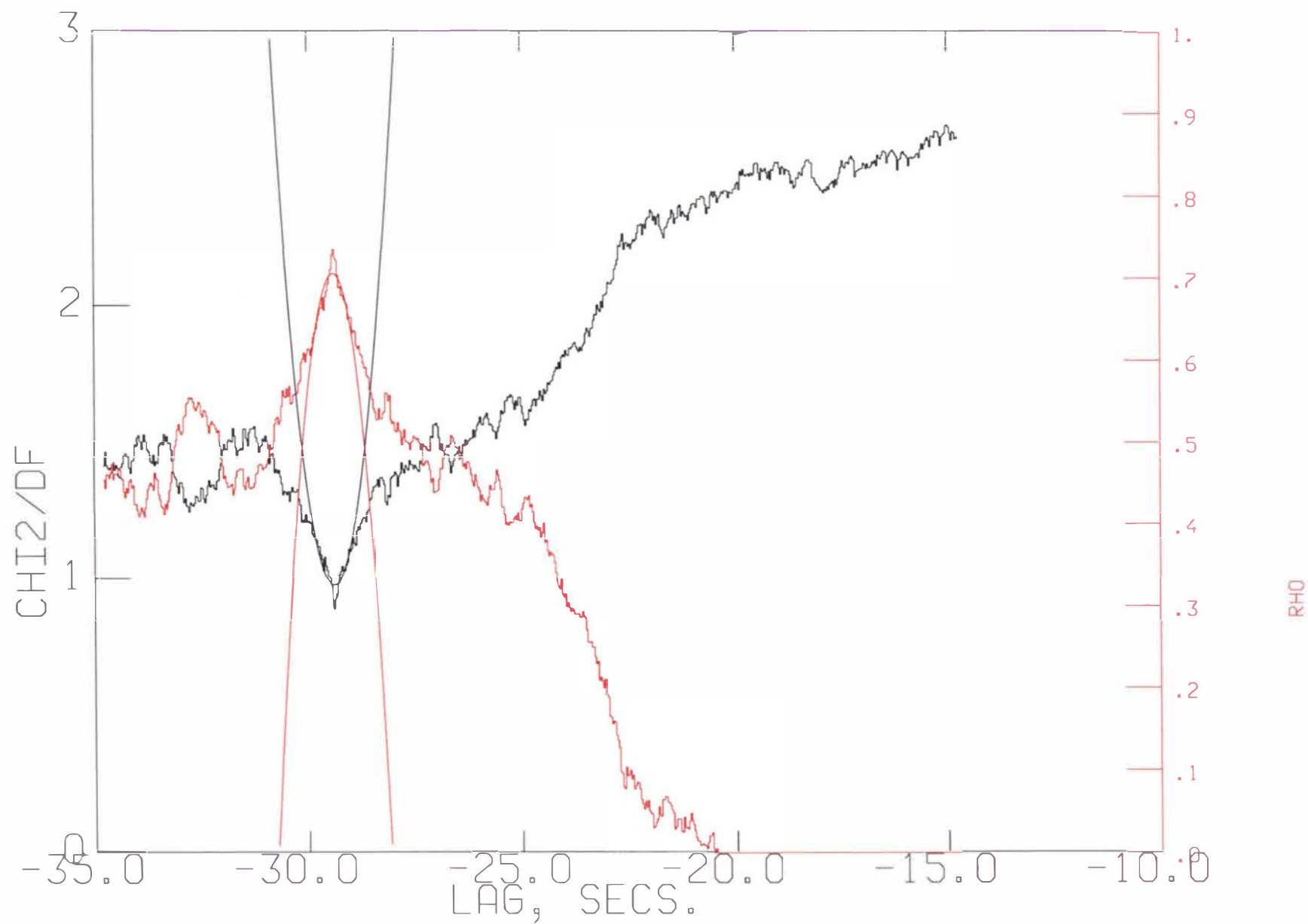
N-M = CORRELATION BETWEEN SATELLITES N AND M
EARTH-N = EARTH AS SEEN FROM SATELLITE N
S=SUN E=ECLIPTIC G=GALACTIC EQUATOR
1 ULYSSES 2 PHEBUS

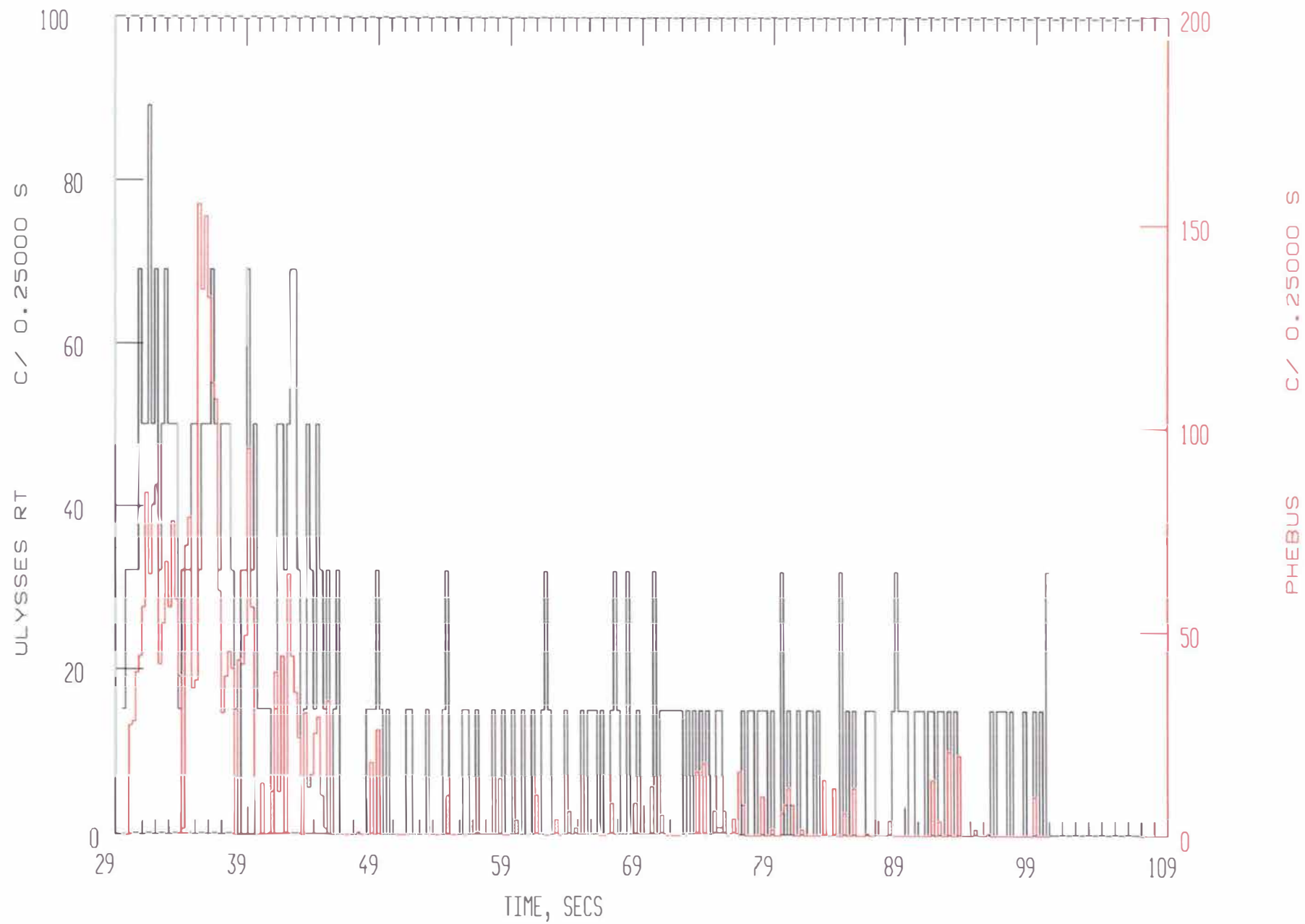


ULYSSES RT
29/ 9/94 58104.227 s
INTERVALS REGROUPED BY 5
22- 147 keV

9/ 8/11







PHEBUS

29/ 9/94 59366.699 s

100- 1600 keV

s

COUNTS/0.03125

75

50

25

0

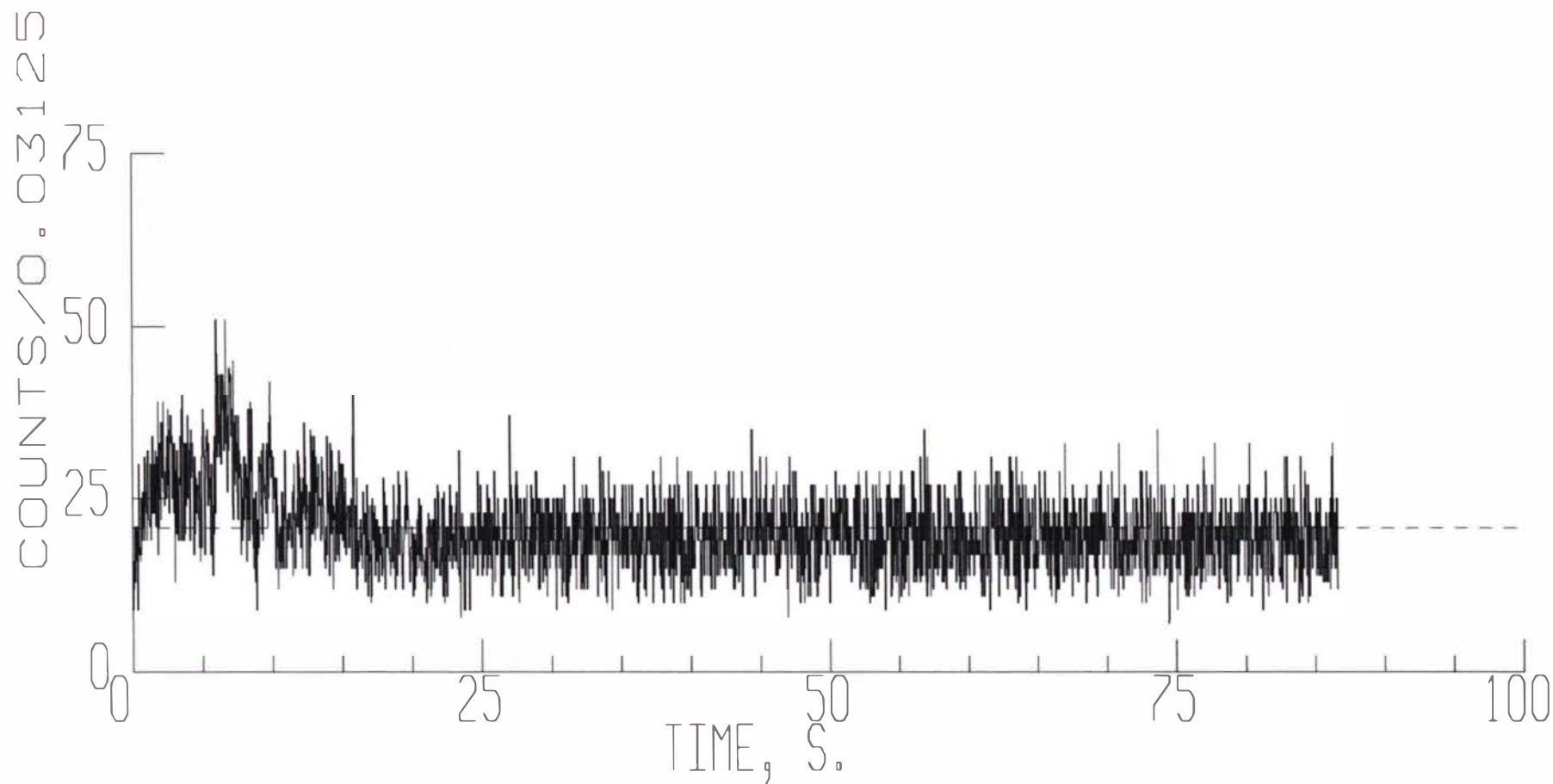
25

50

75

100

TIME, S.



From RICHARDSON@ssl.msfc.nasa.gov Fri Sep 30 08:18 PDT 1994
Date: Fri, 30 Sep 1994 10:20:33 -0500 (CDT)
From: RICHARDSON@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 3202

TIME: TJD=9624 SECONDS=32376

TYPE: ELECTRO SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY

2 2 / 2 / 9 5

U L Y S S E S R T

2 9 / 9 / 9 4 5 8 1 0 4 . 2 2 7 s

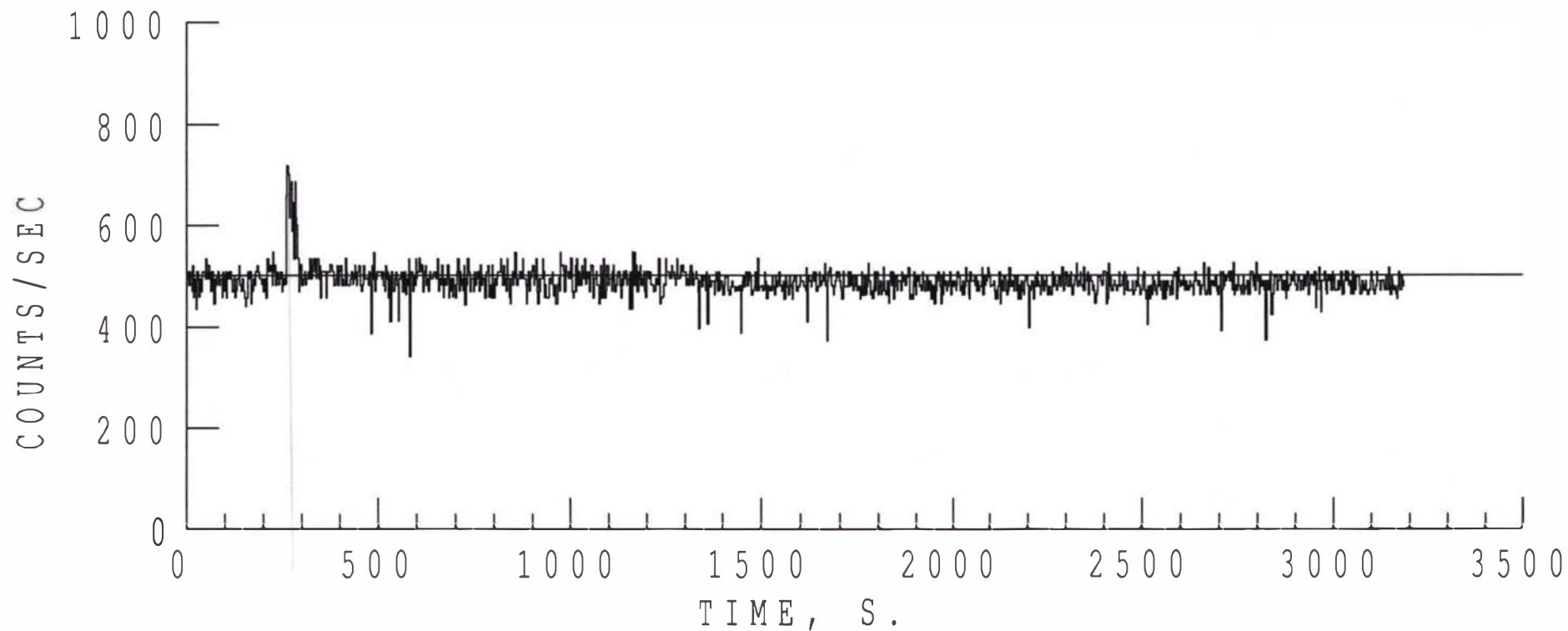
0 . 5 0 0 S I N T E R V A L S R E G R O U P E D B Y 5

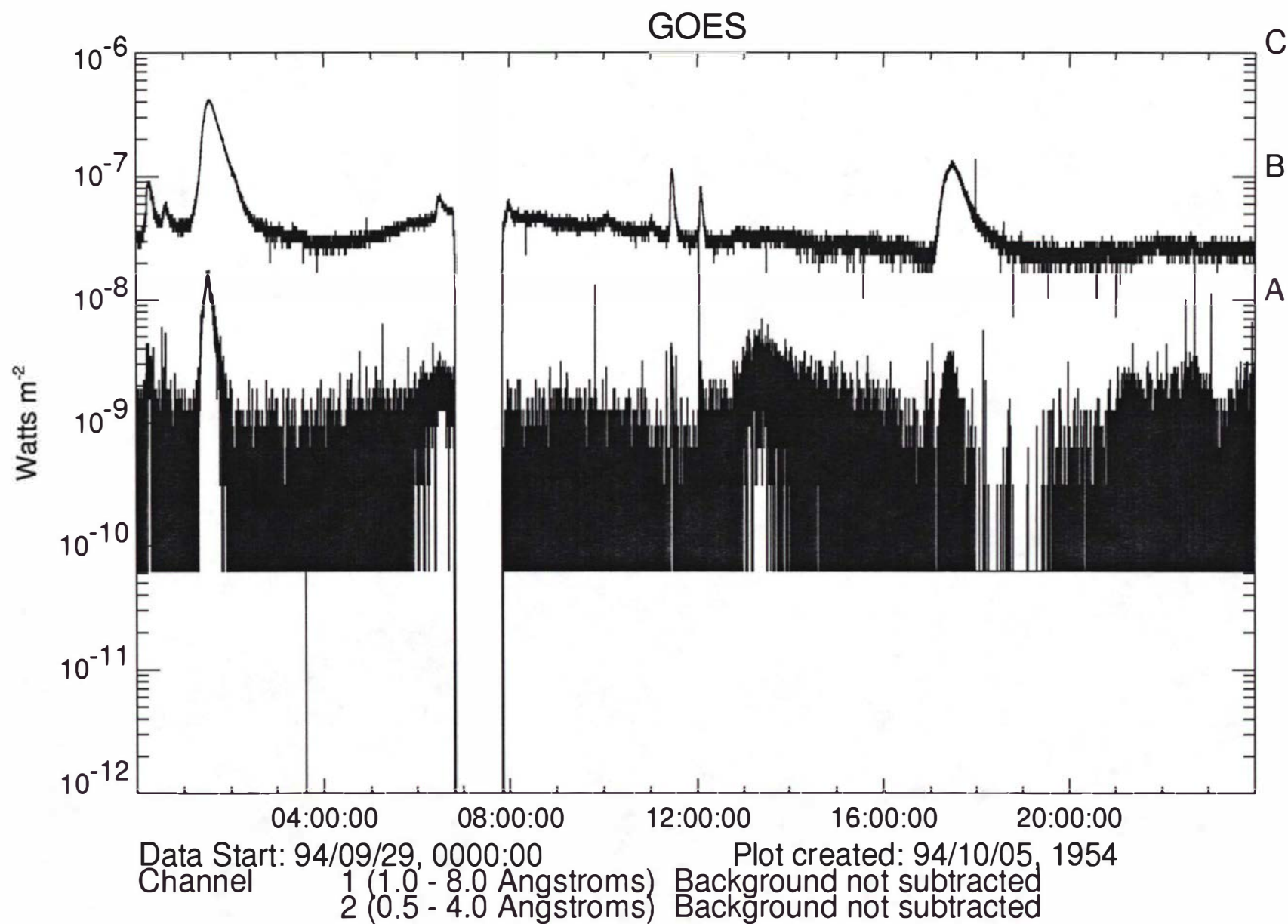
0 - 0 k e V

| |

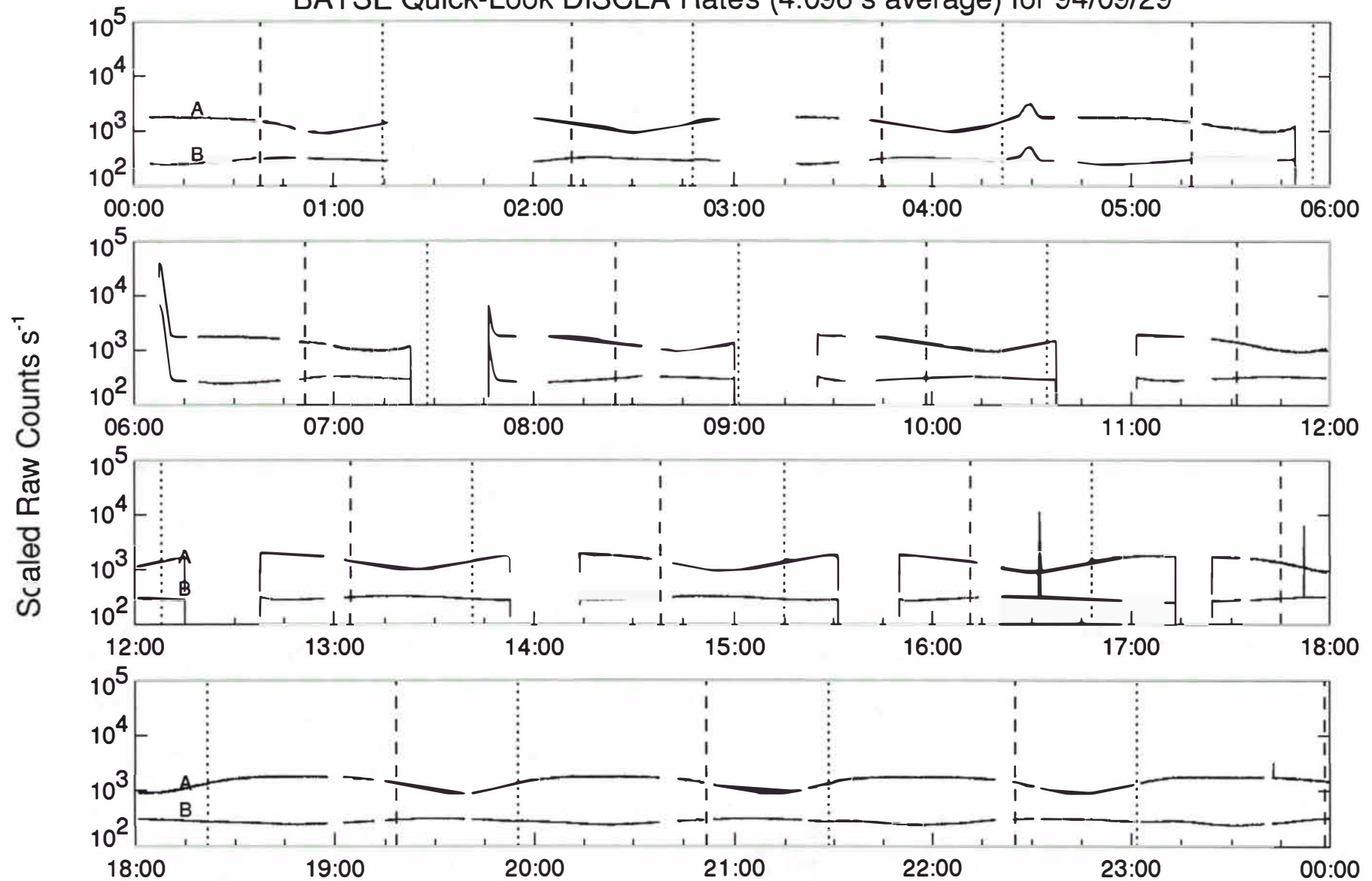
W = 10 M = 2

> 4.0 SIGMA FLUCTUATIONS





BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/29

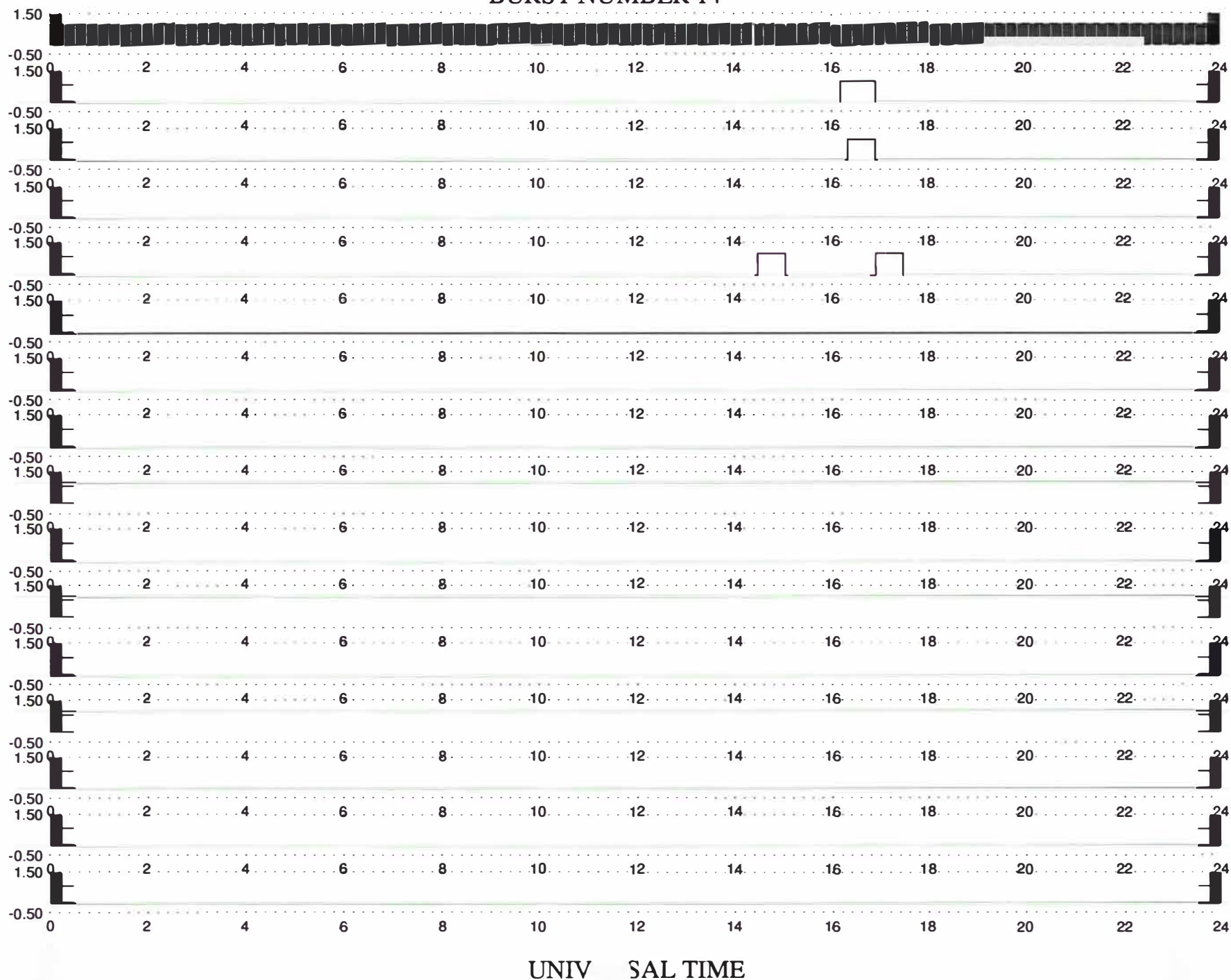


Current Time: 94/10/05, 1949 EDT
 A: Channel 0 Most Sunward LAD
 B: Sum Channel 0 Anti-Sunward LADs X .05

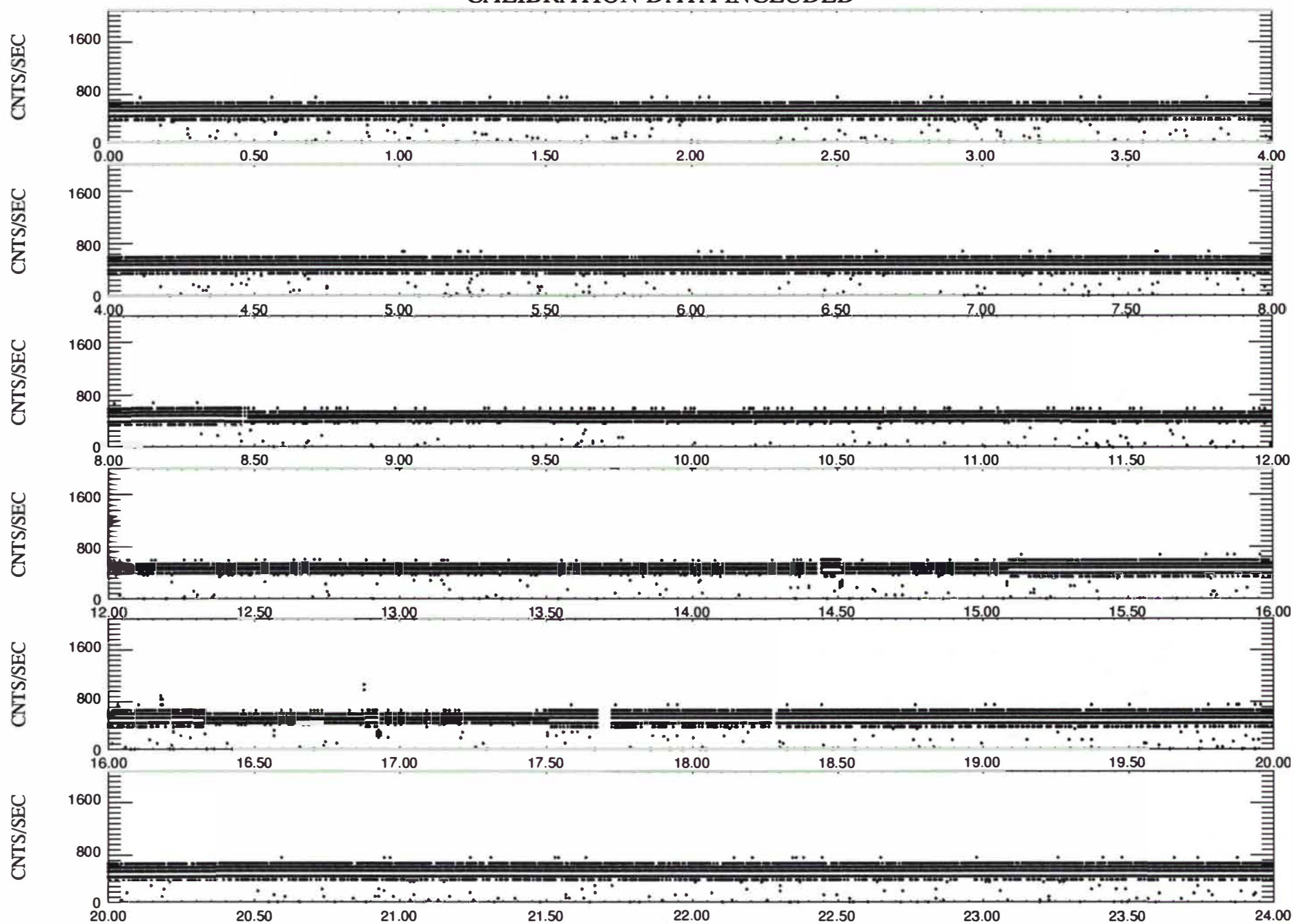
Dotted line: Day entry
 Dashed line: Night entry

* Solar Burst Trigger
 + Solar Flare

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

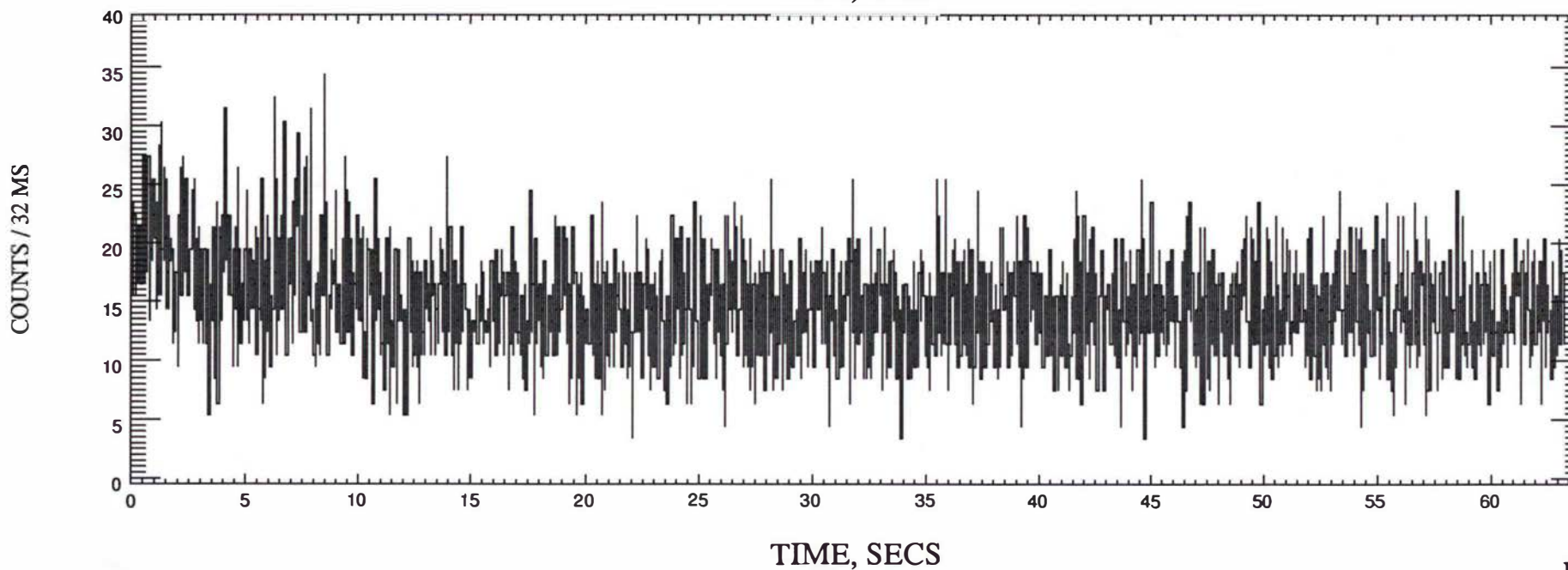
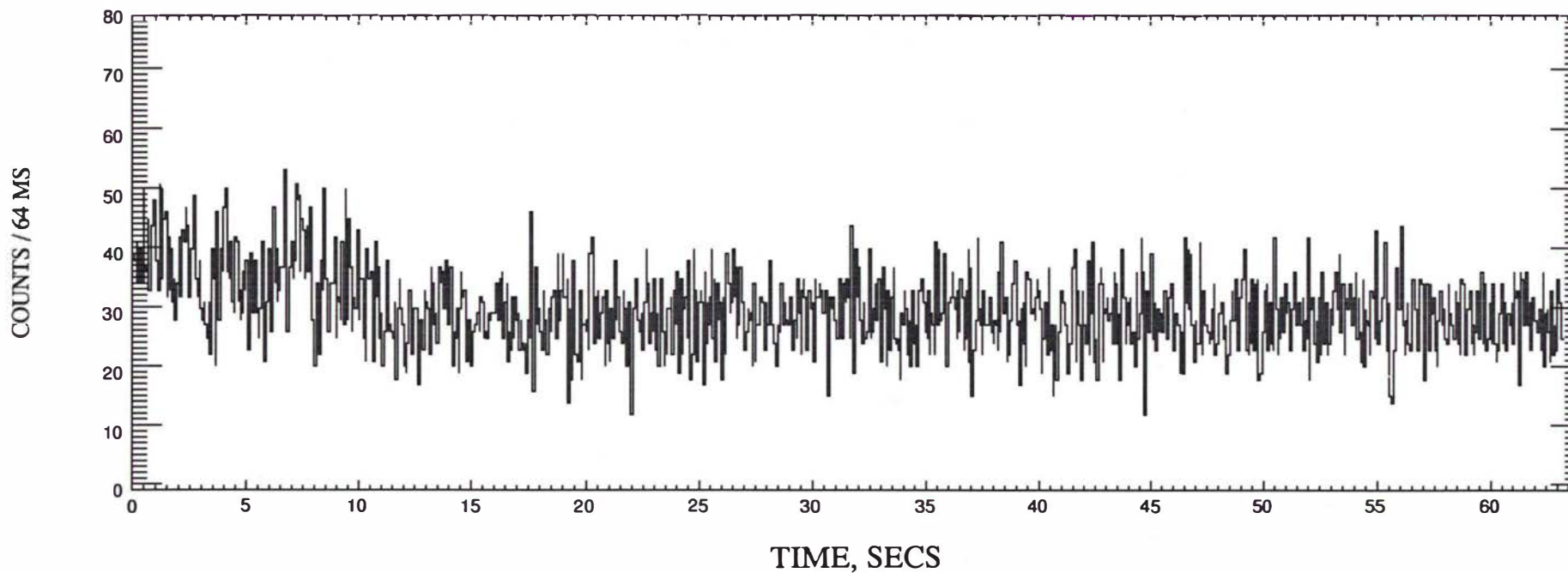


CALIBRATION DATA INCLUDED

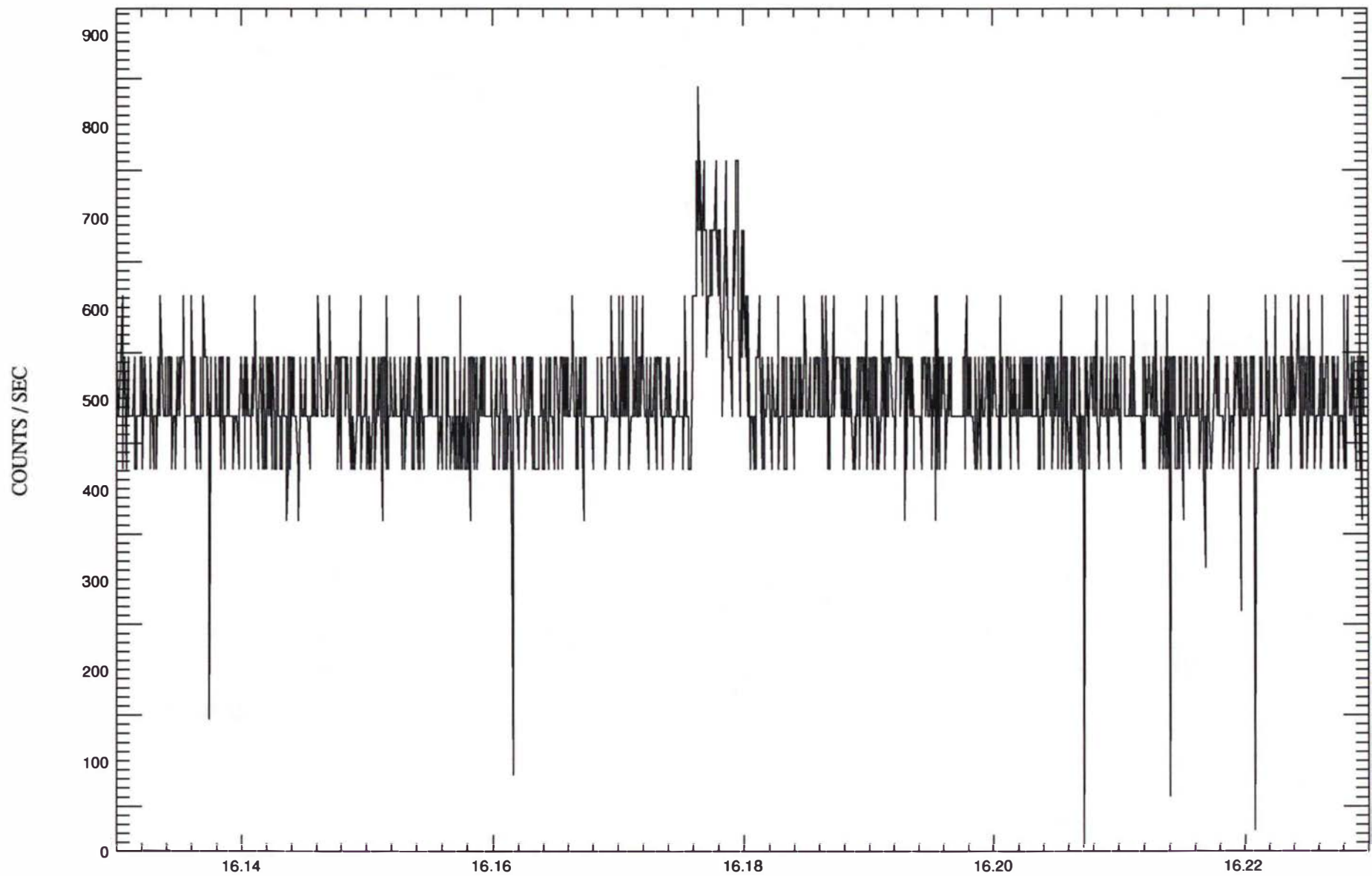


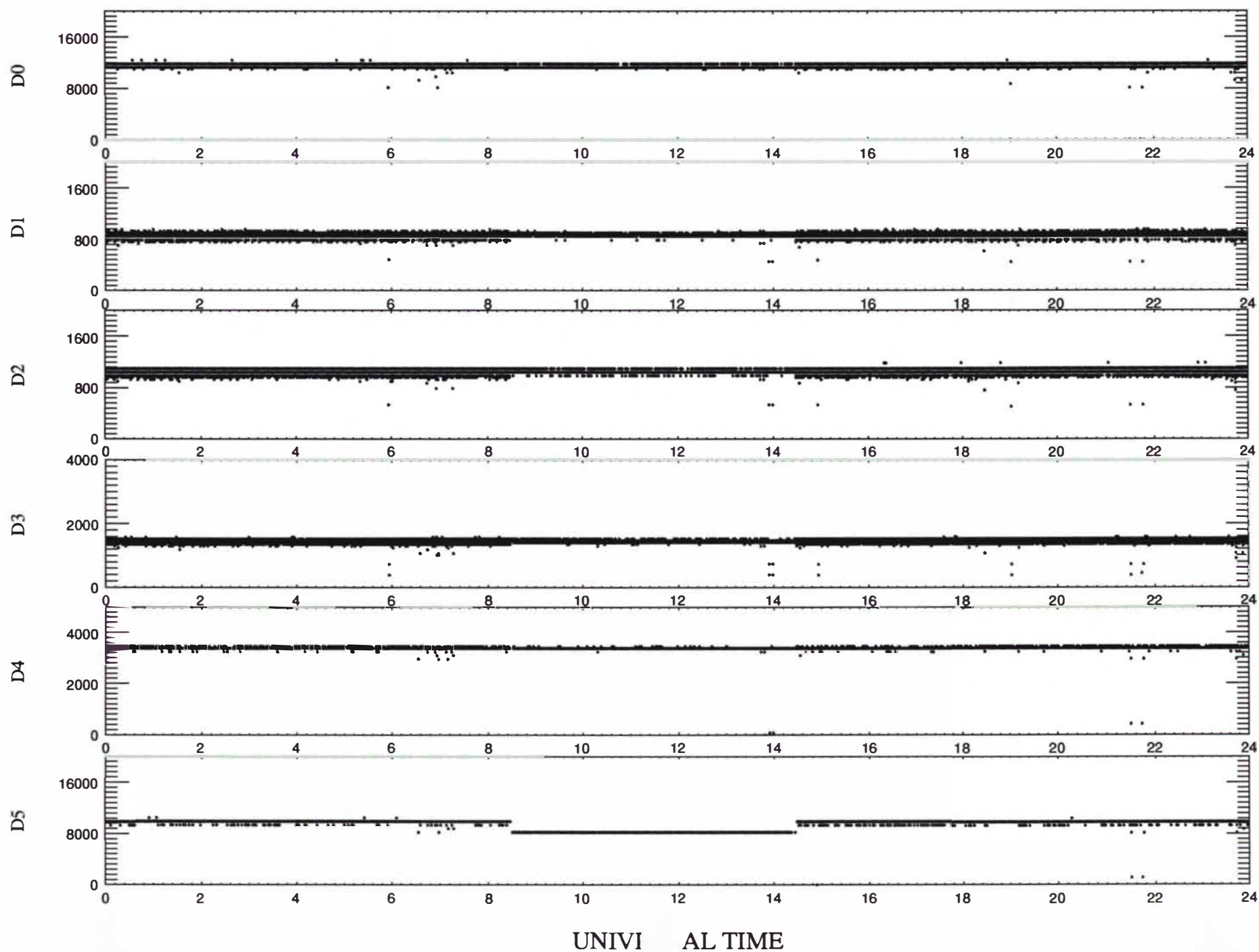
UNIV SAL TIME

Burst Counter 14 at UT=16.179610176086 h=58246.597 s 16:10:46.597



CALIBRATION DATA INCLUDED





From SHARIFF@ssl.msfc.nasa.gov Sat Oct 1 13:51 PDT 1994
Date: Sat, 1 Oct 1994 15:53:42 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 03203

TIME: TJD=9625 SECONDS=18383

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY (PARTICLES).

From SHARIFF@ssl.msfc.nasa.gov Sat Oct 1 13:53 PDT 1994
Date: Sat, 1 Oct 1994 15:55:56 -0500 (CDT)
From: SHARIFF@ssl.msfc.nasa.gov
To: burst@comptel.unh.edu, grobad@vmprofs.estec.esa.nl,
LHEAVXCLINE@ssl.msfc.nasa.gov, LHEAVXBARTHELMY@ssl.msfc.nasa.gov,
15733SCHAEFER@ssl.msfc.nasa.gov, CASS09BAND@ssl.msfc.nasa.gov,
CASS09GRUBER@ssl.msfc.nasa.gov, CASS09MATTESON@ssl.msfc.nasa.gov,
PACIESAS@ssl.msfc.nasa.gov, HORACK@ssl.msfc.nasa.gov,
khurley@sunspot.ssl.berkeley.edu
Subject: Burst Trigger Message

BATSE BURST TRIGGER

NO.: 03204

TIME: TJD=9625 SECONDS=29865

TYPE: PARTICL SOLAR FLARE TRIGGER SIGNAL:N

SIGNIFICANCE: SIGMA

INTENSITY: COUNTS/CM2

LOCATION: ZENITH= AZIMUTH= ERROR= DEGREES

COMMENTS:
SAA ENTRY (PARTICLES).

Date: Jun 20 '03

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

- ☒ Jim Schmidling's stat file correction applied?
- ☒ Final ephemeris used?
- ☒ Final, CDROM data used?
- ☐ Is the order of the data in CORREL such that a vernier is done on the data with the best time resolution? No

2. BATSE Data

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

3. NEAR Data

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

N-M = CORRELATION BETWEEN SATELLITES N AND M

EARTH-N = EARTH AS SEEN FROM SATELLITE N

S=SUN

E=ECLIPTIC

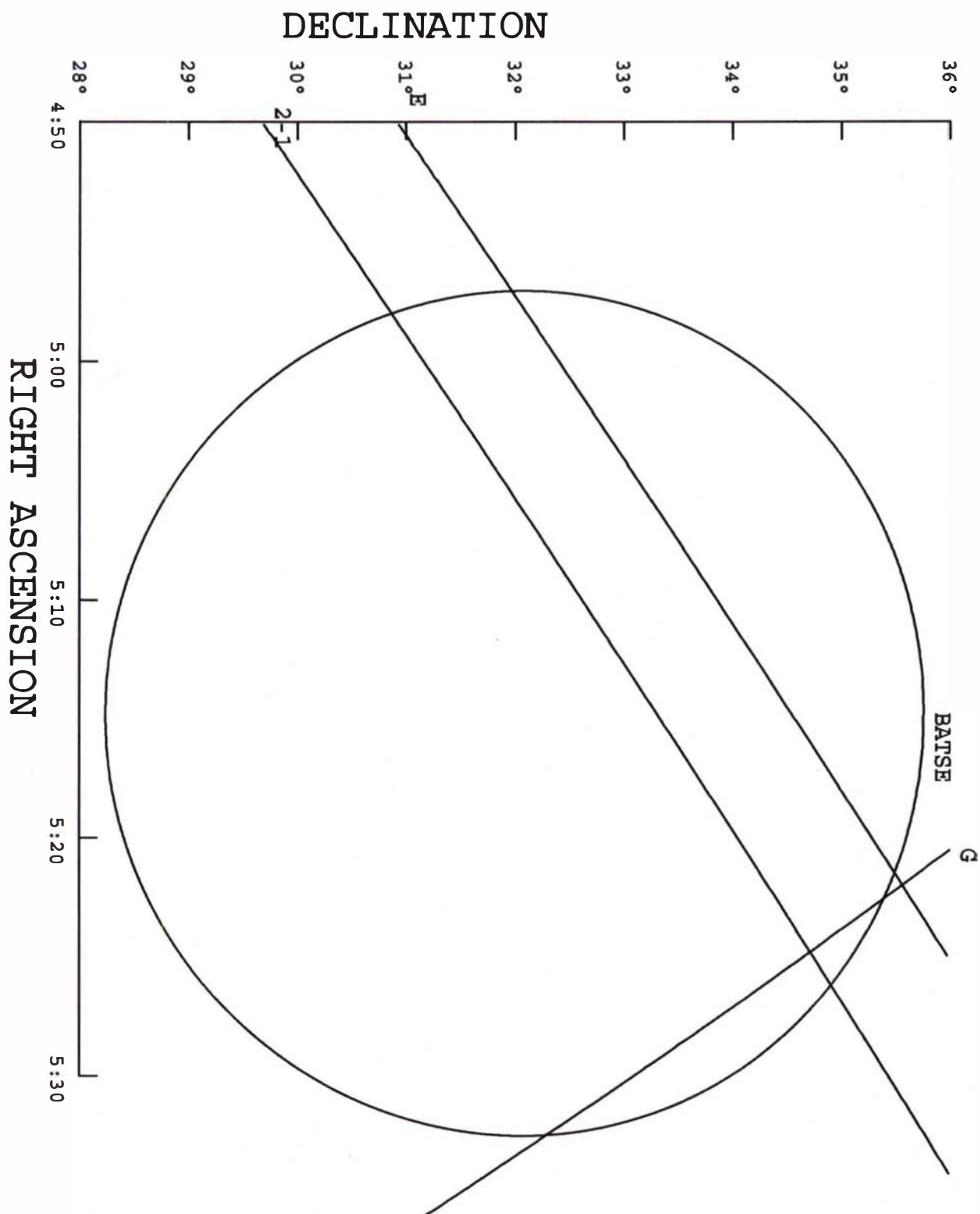
G=GALACTIC EQUATOR

1 BATSE

2 ULYSSES

EVENT OF SEP 30, 1994 6:23

20 / 6 / 3



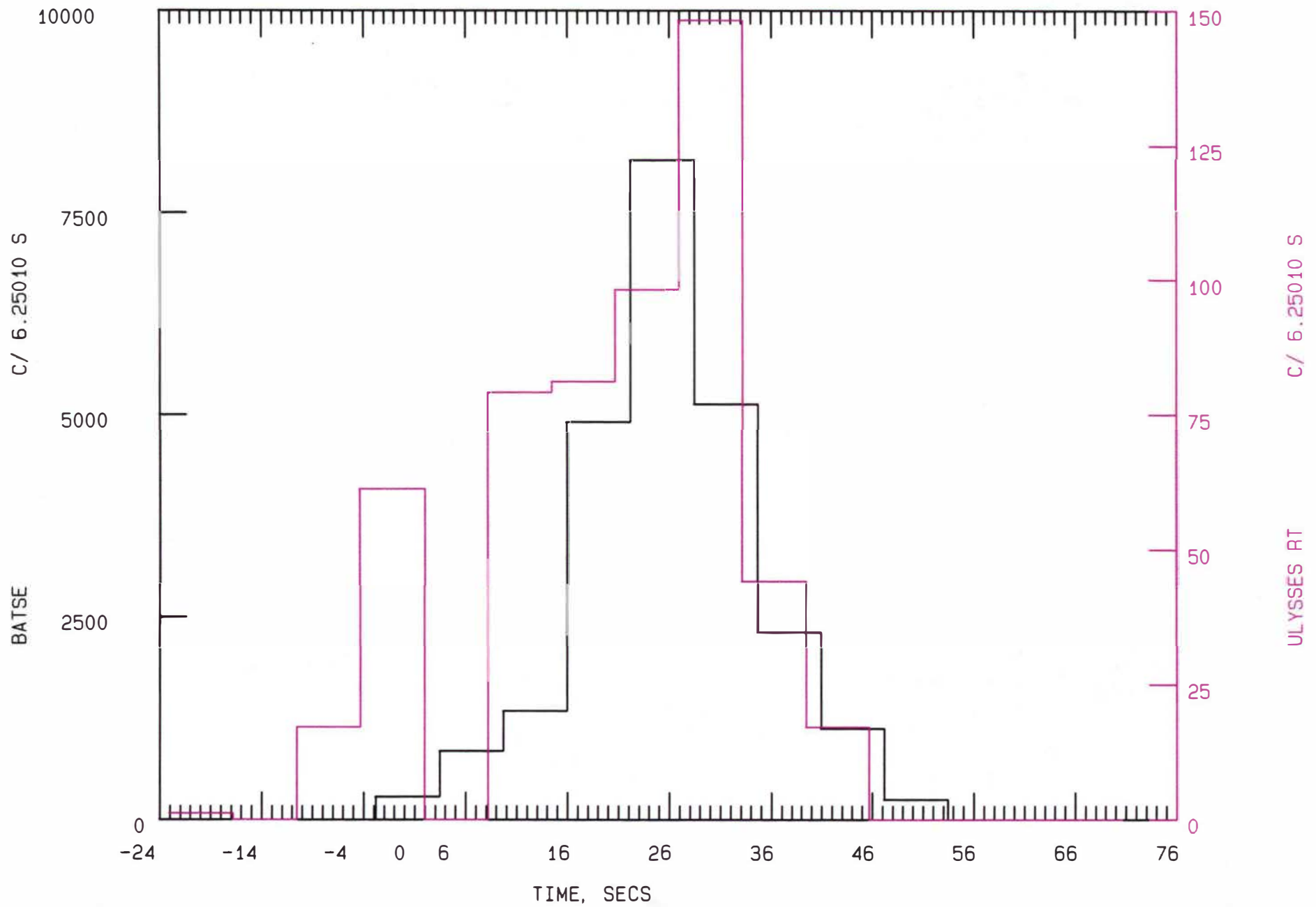
BATSE

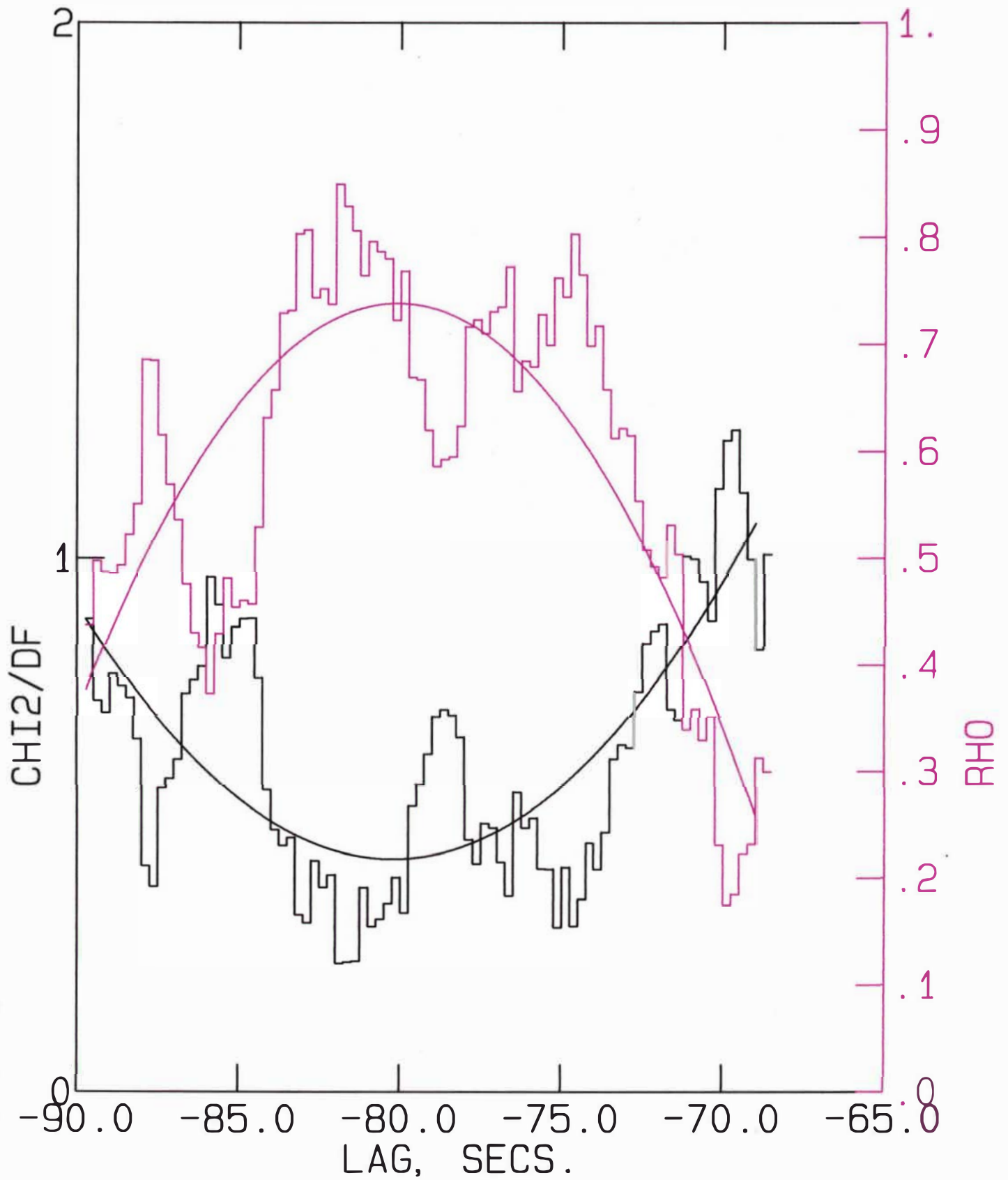
-ULYSSES RT CORRELATION

30/09/94

23016.625

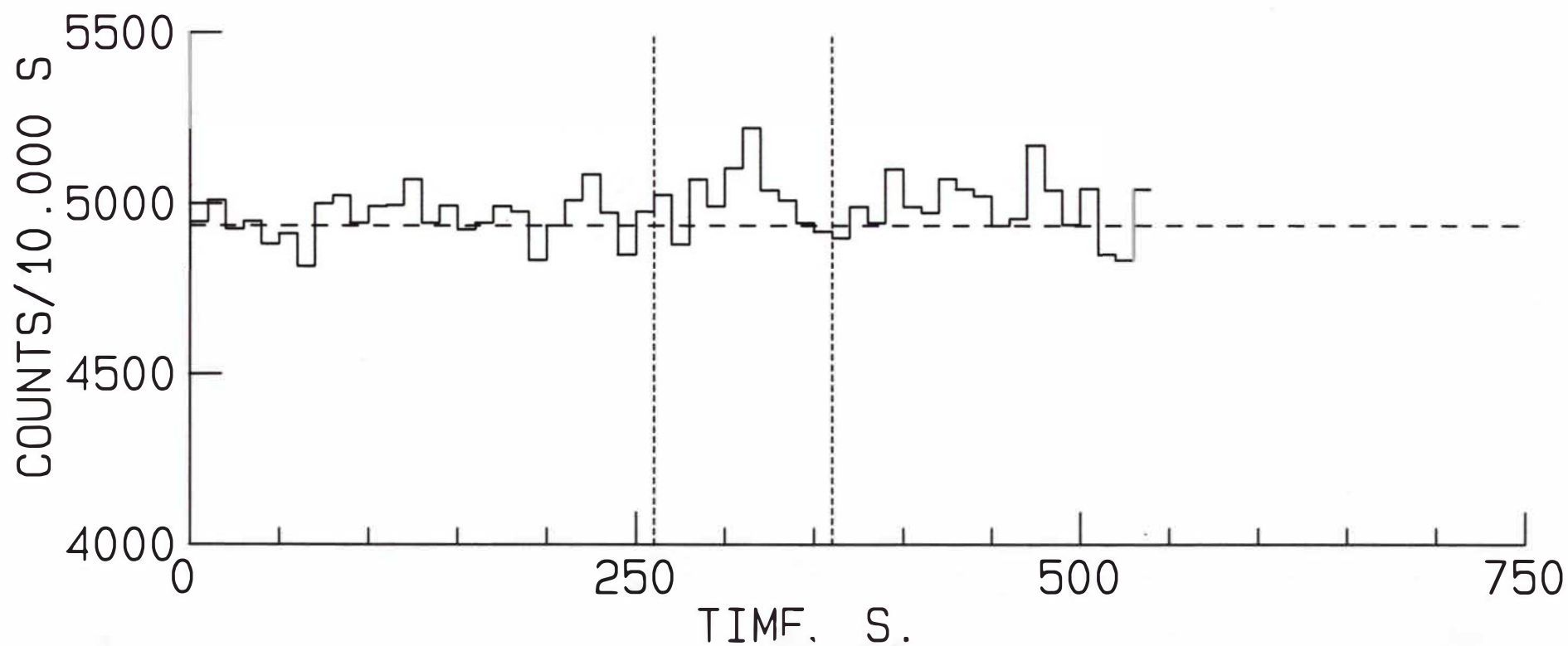
20/ 6/ 3





ULYSSES RT
30/ 9/94 23256.115 s
0.250 S INTERVALS REGROUPED BY 40
22- 147 keV

20 / 6 / 3



Date: Aug 9 2011

BURST TRIANGULATION CHECKLIST

1. Ulysses Data

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

Done by eye

2. BATSE Data

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

3. PVO Data

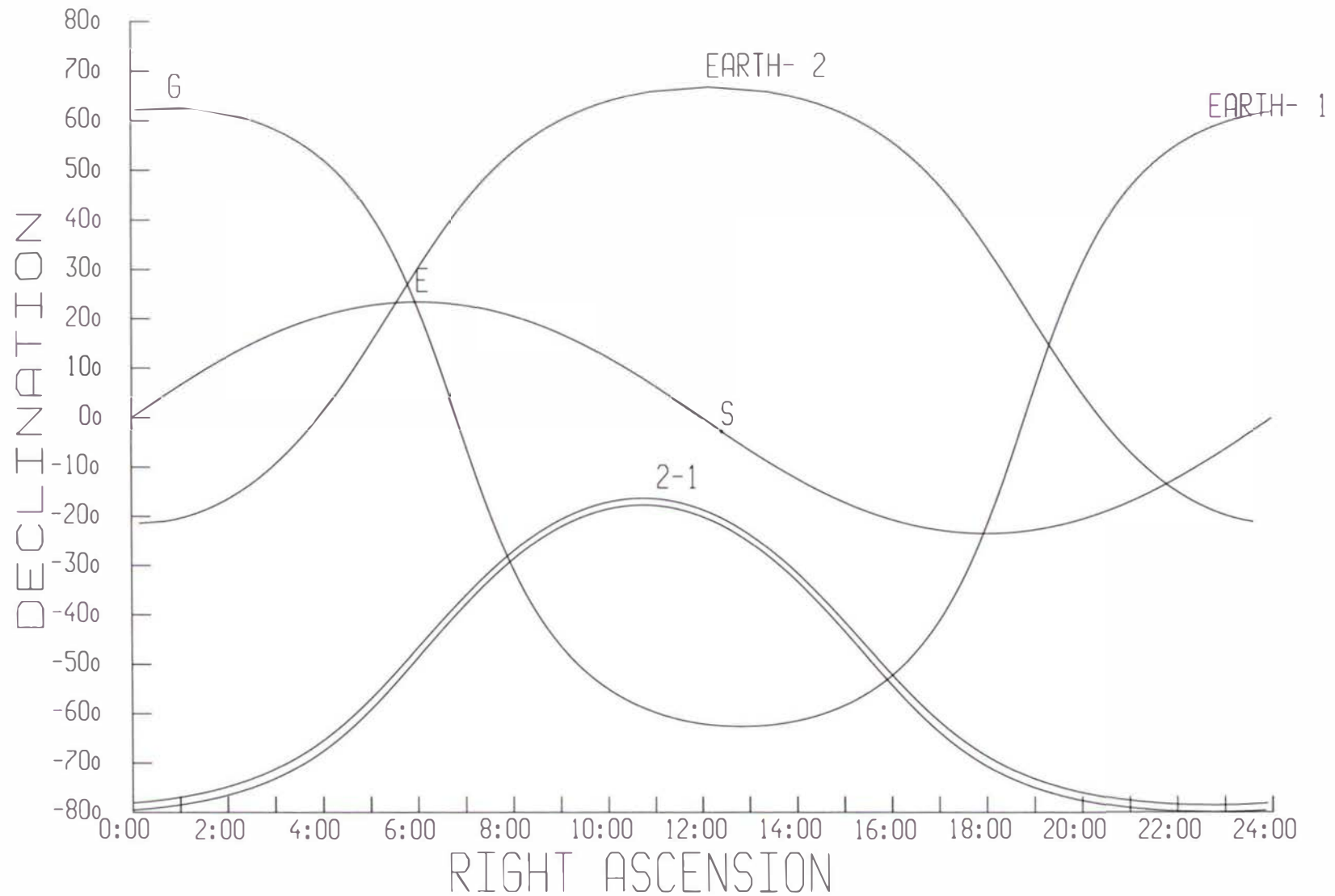
- ☐ Ephemeris of PVO used (not Venus)?
- ☐ 2000 coordinates used?
- ☐ Geocentric time used?

☒ ACCESS and MBL databases updated with identical times?

EVENT OF SEP 30, 1994 9:47

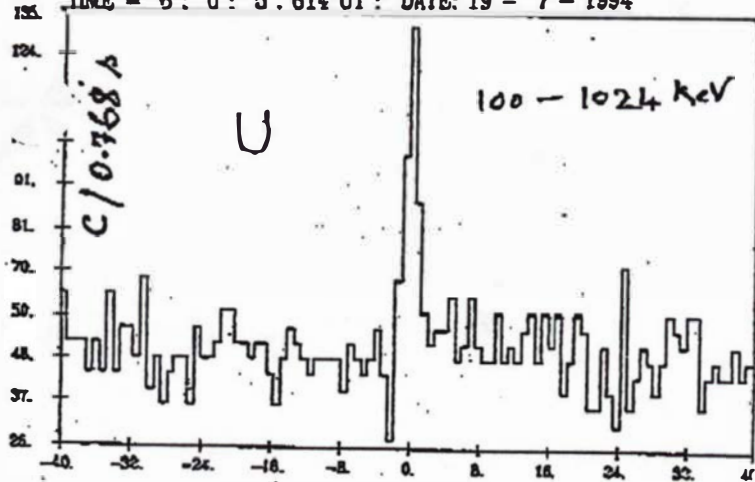
09/08/2011

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

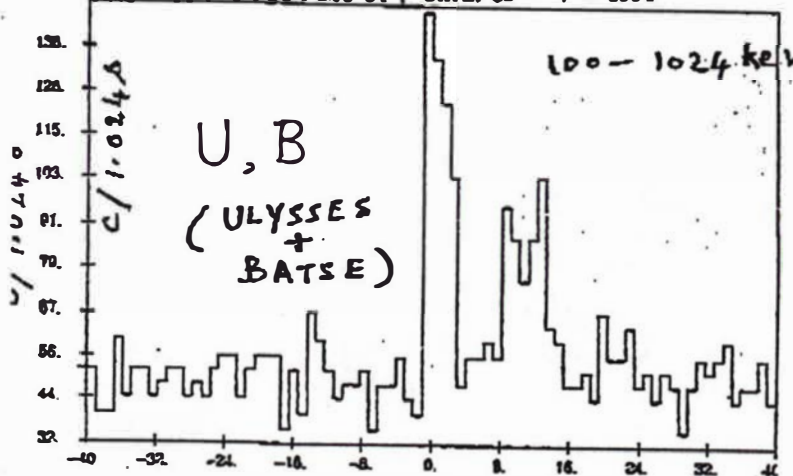


SKROSS-C2 GRB CANDIDATES

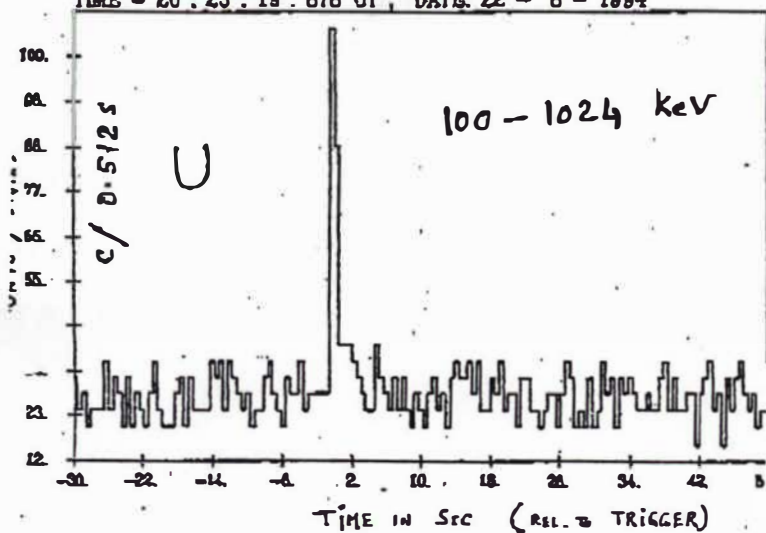
t-40s - t+ 65s 768 ms ch2. norb= 11284 ra=196.7 dec=-40.4
TIME = 6: 0: 5.614 UT; DATE: 19 - 7 - 1994



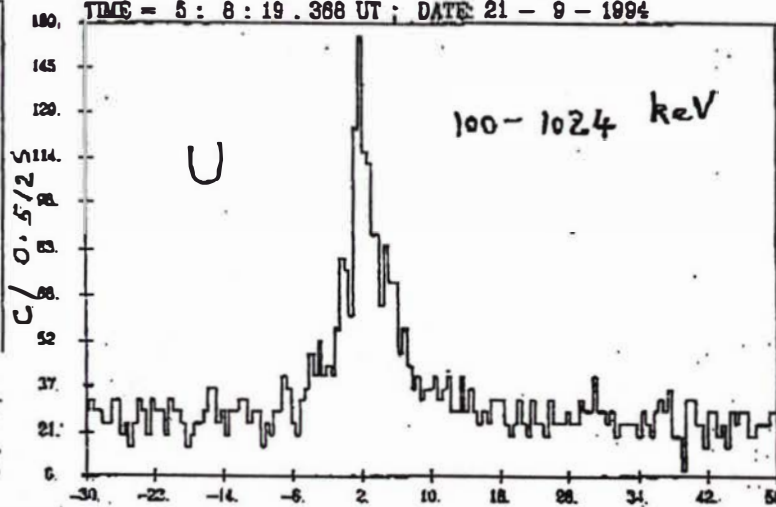
t-40s - t+ 65s 1024 ms ch2. norb= 12966 ra=154.8 dec=-45.3
TIME = 11: 1: 30.926 UT; DATE: 30 - 7 - 1994



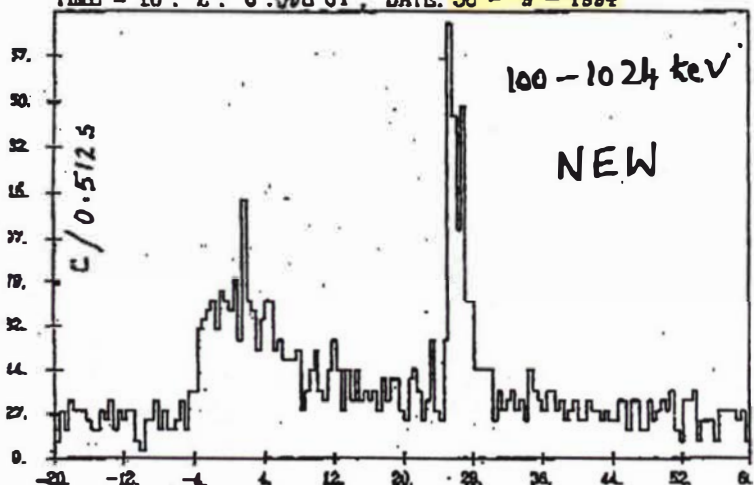
t-30s - t+ 56s 512 ms ch2. norb= 18502 ra=35.1 dec=-42.1.
TIME = 20: 23: 19.878 UT; DATE: 22 - 8 - 1994



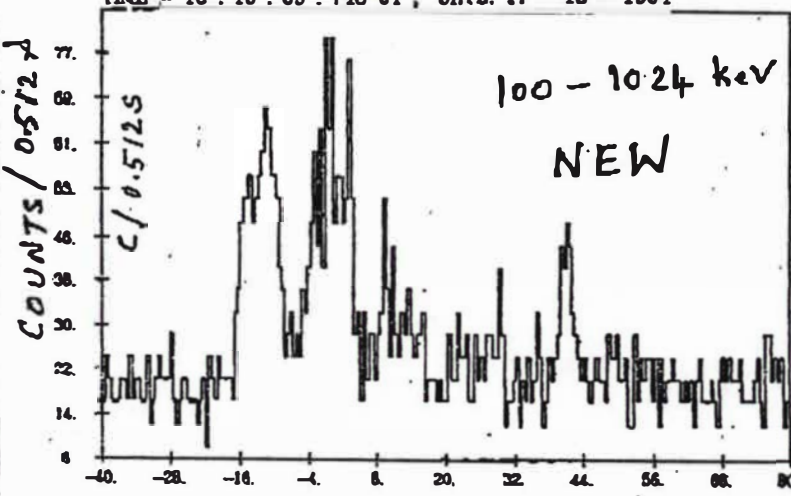
t-30s - t+ 56s 512 ms ch2. norb= 20851 ra=238.5 dec=-47.9
TIME = 5: 8: 19.388 UT; DATE: 21 - 9 - 1994



t-20s - t+ 60s 512 ms ch2. norb= 22341 ra=182.5 dec=-45.9
TIME = 10: 2: 6.008 UT; DATE: 30 - 9 - 1994



t-40s - t+ 60s 512 ms ch2. norb= 24922 ra=98.5 dec=-41.8
TIME = 10: 19: 59.748 UT; DATE: 17 - 10 - 1994



TIME IN SEC.

PAGE 2 OF
2

U = CONFIRMED BY ULYSSES

To : DR. KEVIN HURLEY

2 PAGES

इसरो उपग्रह केन्द्र
अन्तरिक्ष विभाग
भारत सरकार

हवाई पत्तन मार्ग, विमानपुरा डाक घर,
बेगलूर-560 017, भारत

फ़ार: "उपग्रह" टेलिफ़ोन: 0845-325 और 769

दूरभाषी : 566251



ISRO SATELLITE CENTRE

DEPARTMENT OF SPACE
GOVERNMENT OF INDIA

AIRPORT ROAD, VIMANAPURA P.O.,
BANGALORE-560 017, INDIA

Telegram : UPAGRAH Tel: 0845-325 & 769

Telephone : 566251

Nov 29, 1994

Dear Kevin,

I am extremely thankful to your letter dated Oct 31. I am very sorry that our mail does not work always. Our fax numbers have changed and the new numbers are : 91-80-526-5490 or 91-80-526-5407.

I am enclosing the time histories of SROSS-C2 GRB events in orbits 1126 (19 Jul 94), 1296 (30 Jul 94), 1650 (22 Aug 94) and 2095 (21 Sep 94) all of which I believe were detected by Ulysses also. The time profile of our event in orbit 1448 for which you had written a possible rate increase is also enclosed. I do not now believe that this event (Orbit 1448) is confirmed. ALL PROFILES CORRESPOND TO THE ENERGY RANGE 100 - 1024 KEV.

In addition we are sending the temporal profiles of our new events in orbit 2234 (30 Sep 94) and 2492 (17 Oct 94). I hope that you will receive this fax message satisfactorily and that the annotations in the figures are clear. If not, please let me know.

New events

Event orbit	Event date (d m y)	time(UT) h m s
2234	30 Sep 94	10 2 6.008
2492	17 Oct 94	10 19 59.748

Kindly check in your Ulysses data the above two new events and confirm.

I am now hopeful that we can start contributing to your interplanetary network. I wonder whether any of our four Ulysses/SROSS-C2 events could be confirmed by GRAMAT satellite also!

With best regards,

sincerely yours,

Krishnan
(Krishnan)

t- 1s to t+ 8s 32 ms res. north=1650/2 ra= 35.1 dec=-42.1
TIME = 20 : 23 : 19.878 UT ; DATE: 22 - 8 - 1994

100-1024 KEV

SROSS-C2

ULYSSES - CONFIRMED

t-20s - t+60s 512 ms ch2. north=1448/1 ra= 96.0 dec=-40.0
TIME = 11 : 52 : 31.500 UT ; DATE: 9 - 8 - 1994

100-1024 KEV

DOUBTFUL OF
CONFIRMATION

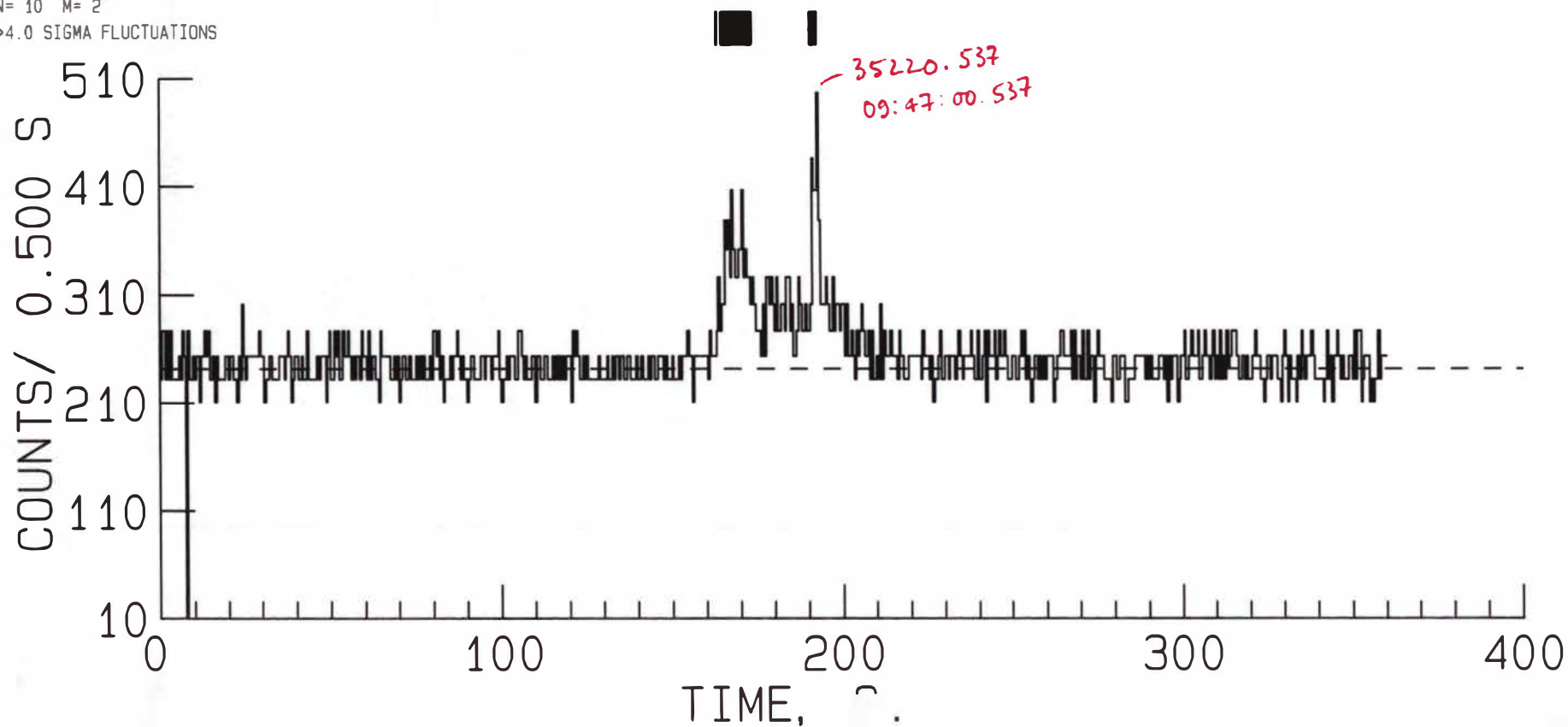
ULYSSES RT

29/10/97

30/ 9/94 35028.066 s

22- 147 keV

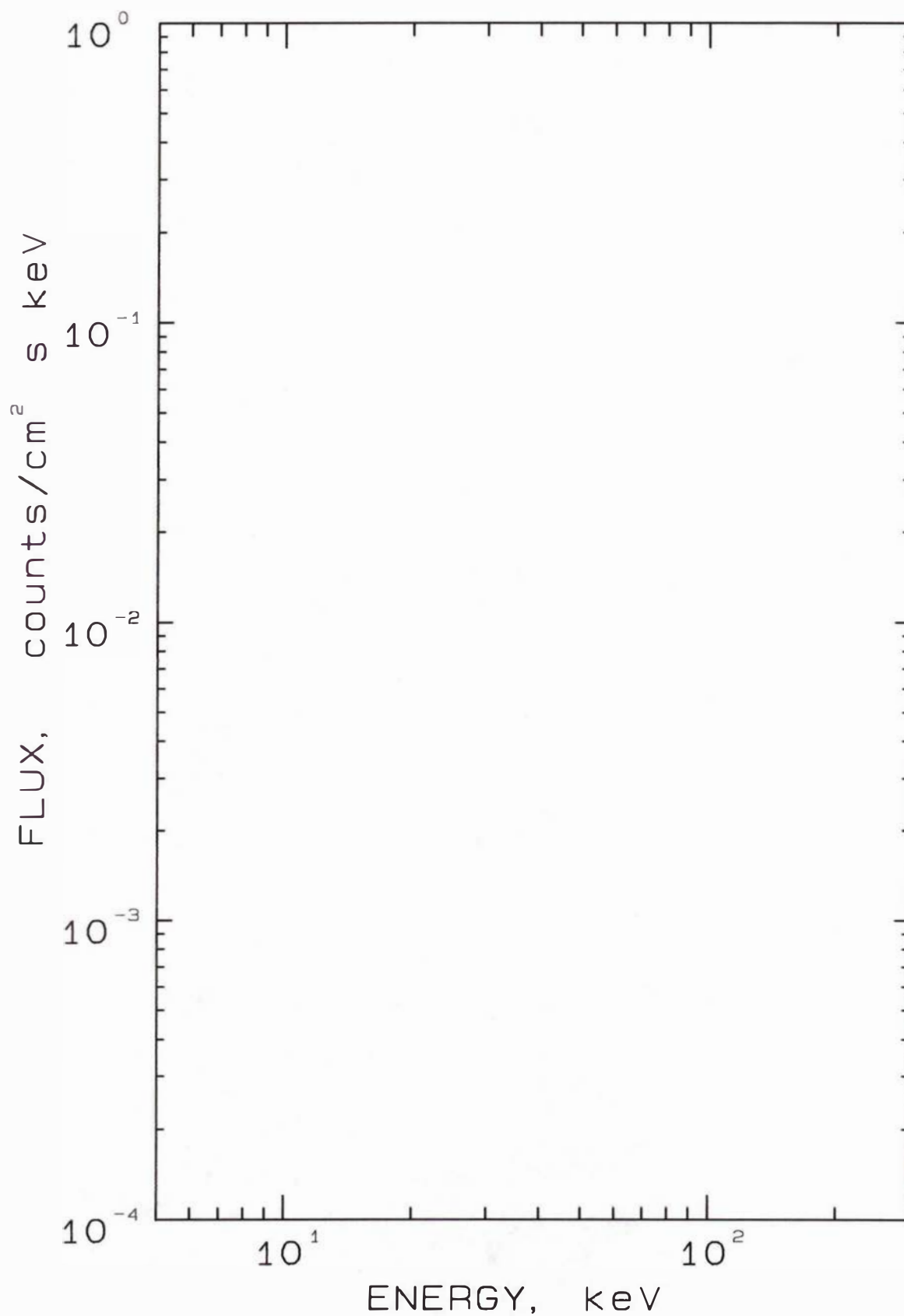
N= 10 M= 2
>4.0 SIGMA FLUCTUATIONS



ULYSSES 30/09/94 35194.066

29/10/97

SPECTRUM INTEGRATED OVER 111.1 SECONDS, INTERVALS 2 TO 37

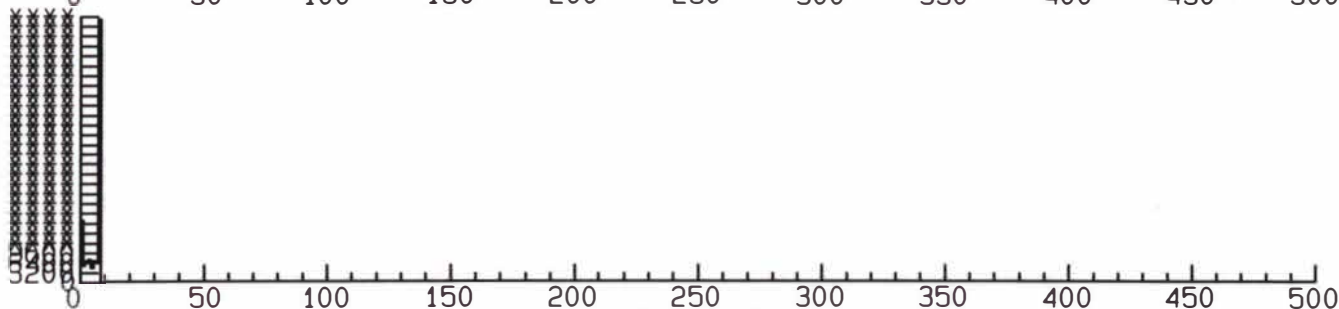


29/10/97

ULYSSES 30/09/94 35194.066 BURST SPECTRAL COUNT RATES

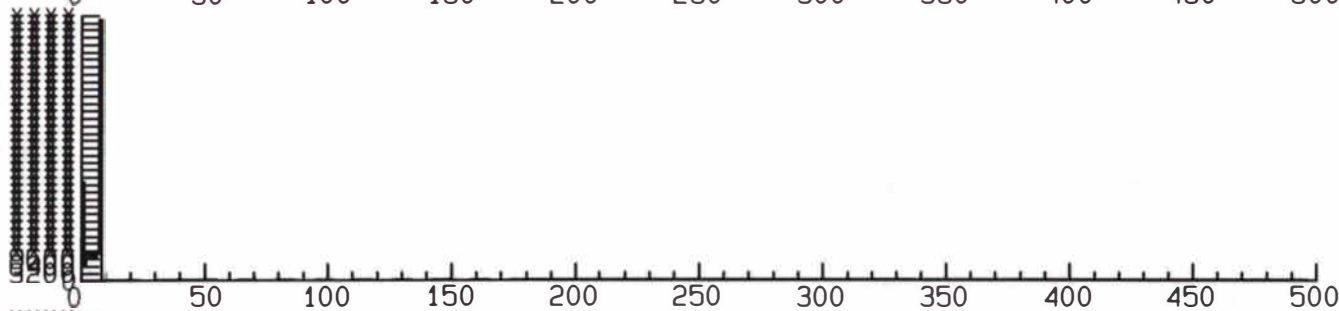
4- 18 keV

COUNTS/S



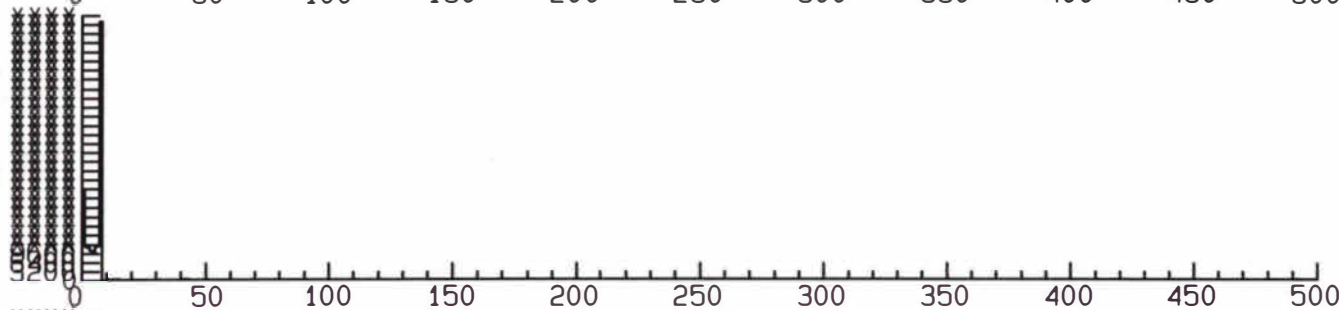
18- 46 keV

COUNTS/S



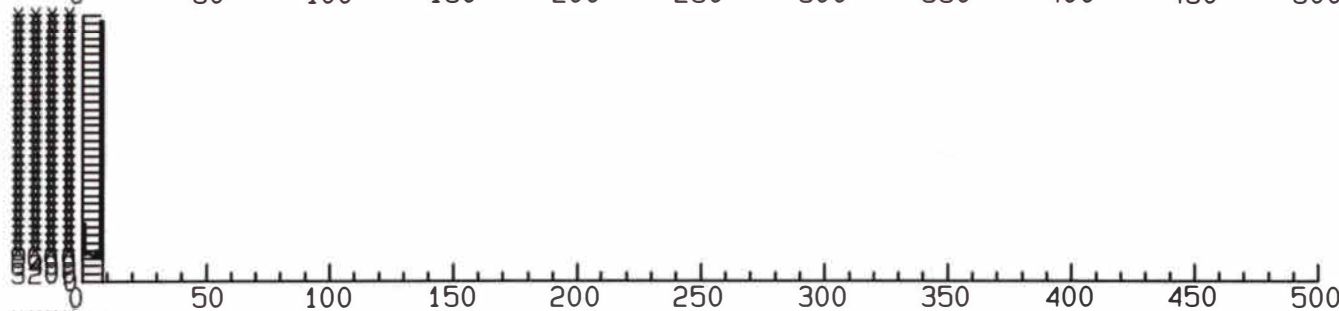
46- 73 keV

COUNTS/S



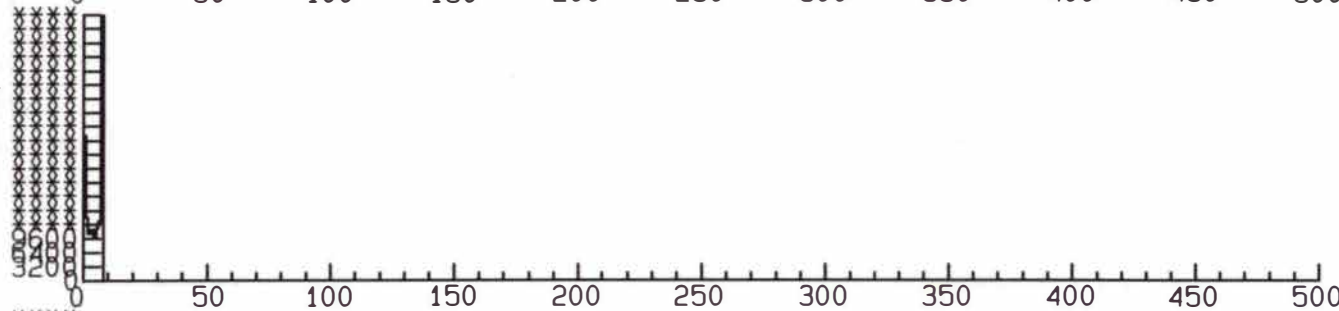
73-101 keV

COUNTS/S



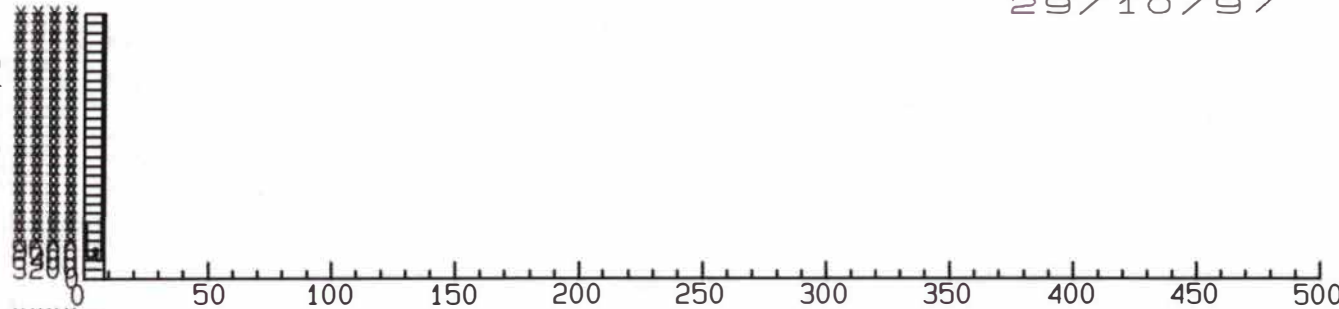
101-128 keV

COUNTS/S



128-147 keV

COUNTS/S



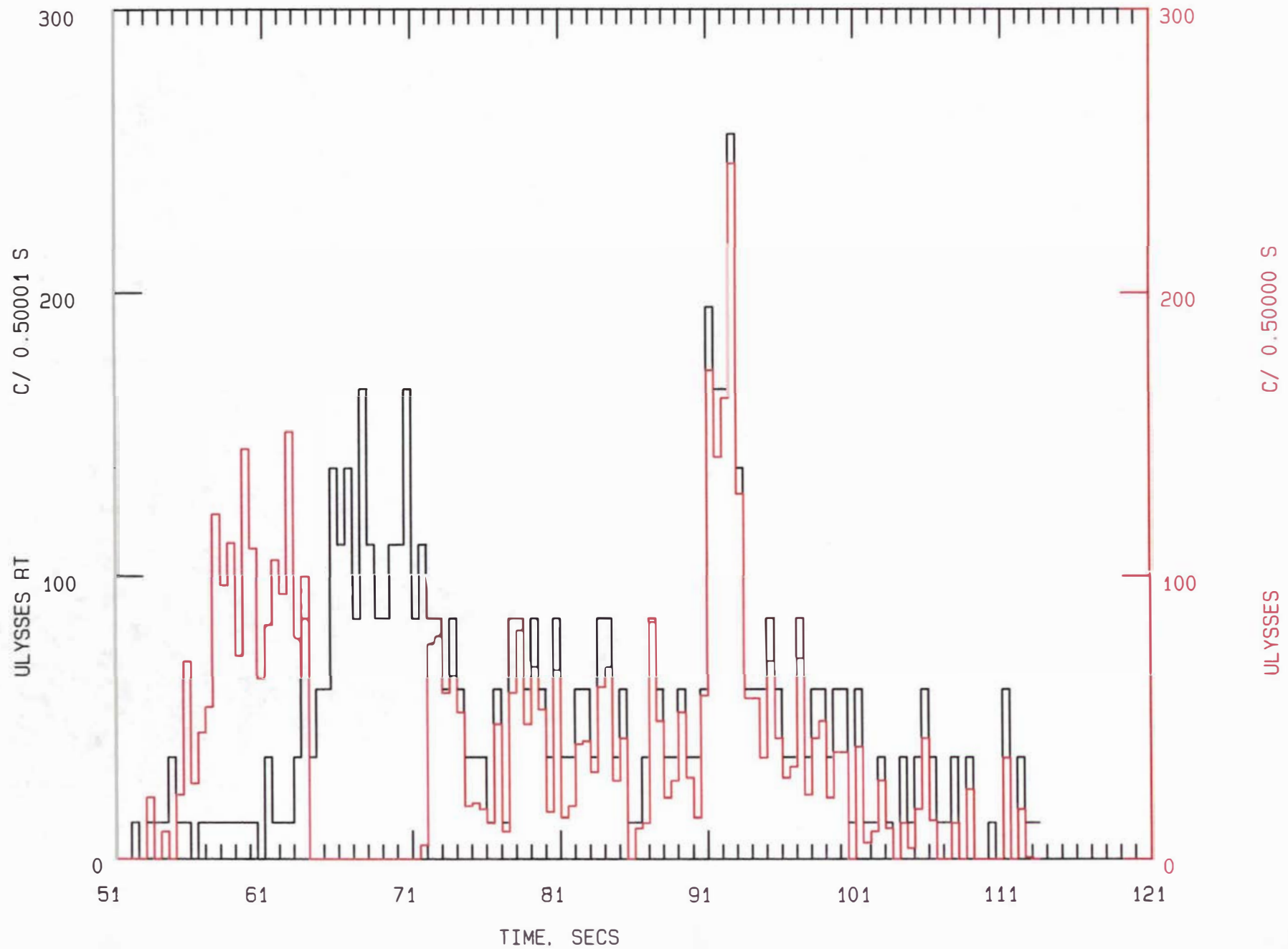
ULYSSES RT-ULYSSES

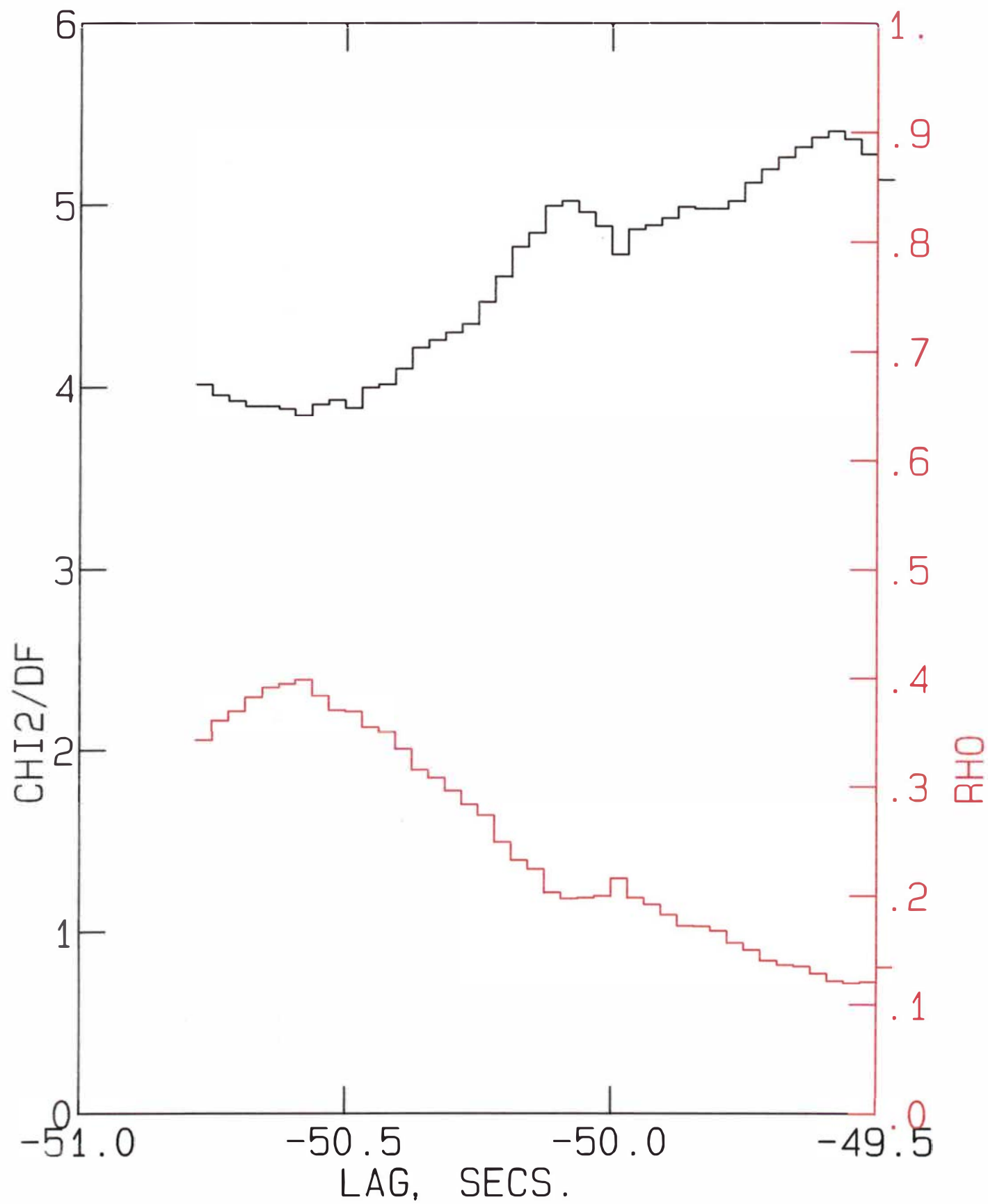
CORRELATION

30/ 9/94

35128.037

29/10/97





ULYSSES

30/09/94

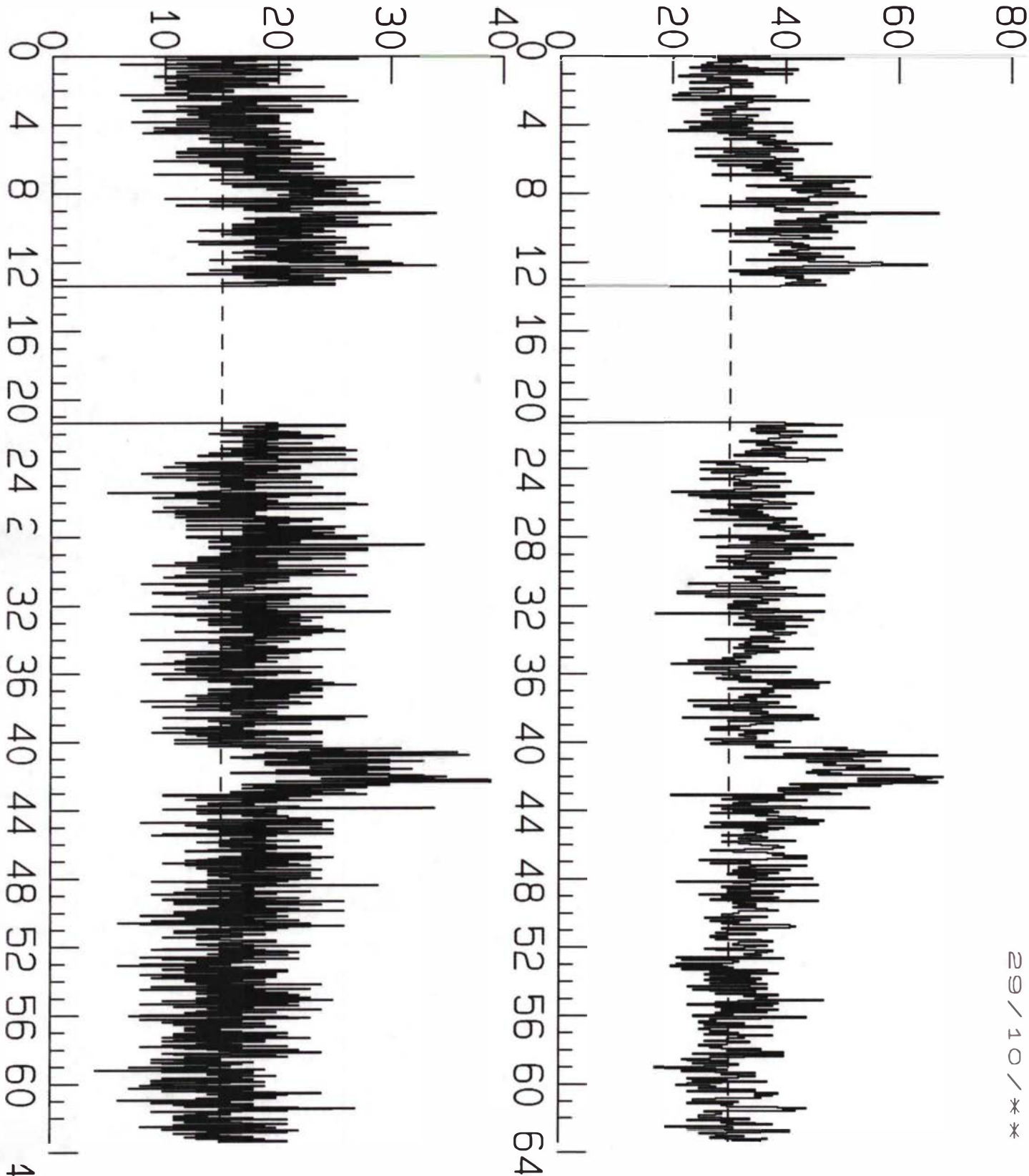
Ttrig=34682.033

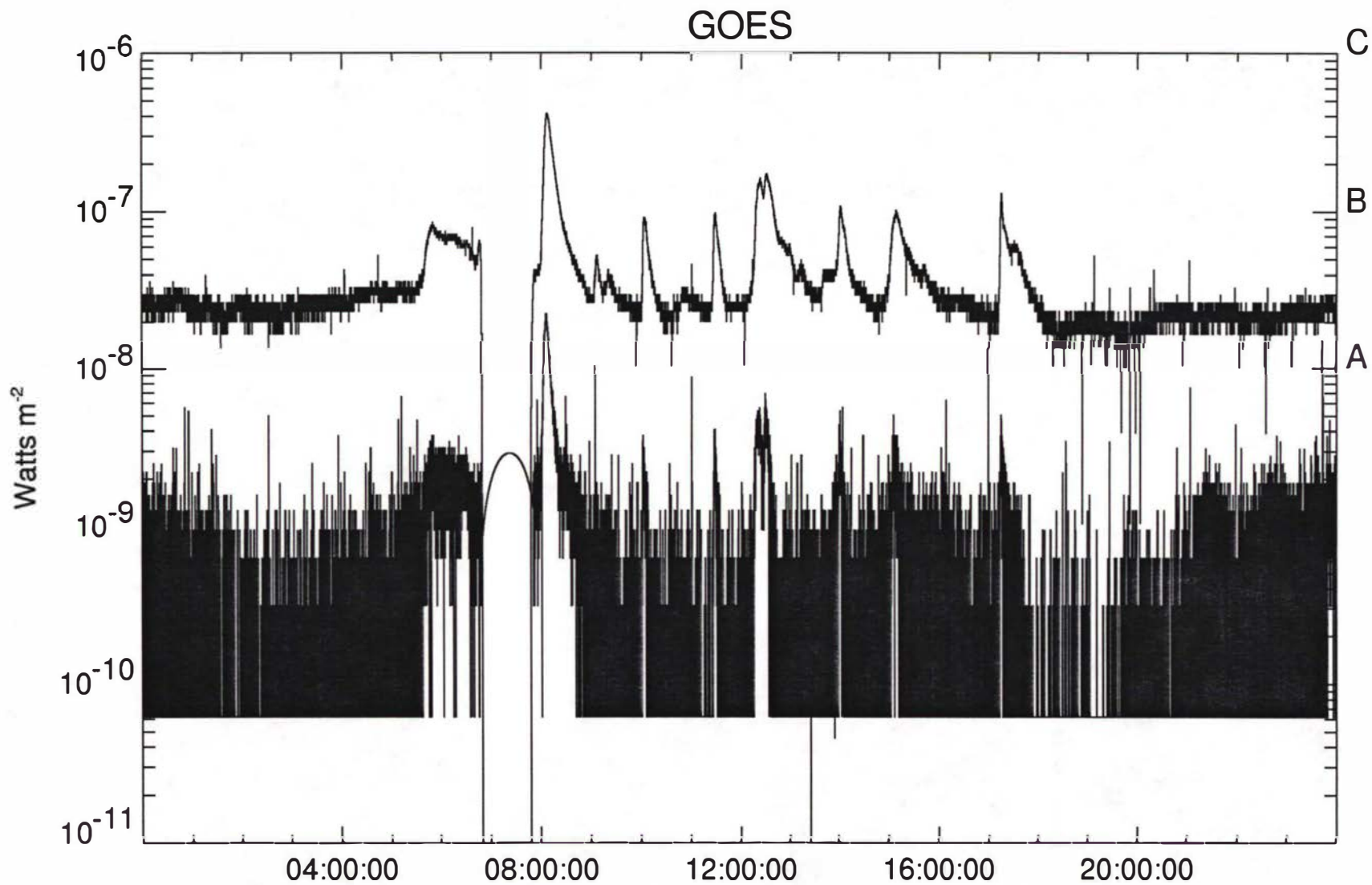
22- 147 keV

29/10/1994

COUNTS/0.031 S

COUNTS/0.062 S





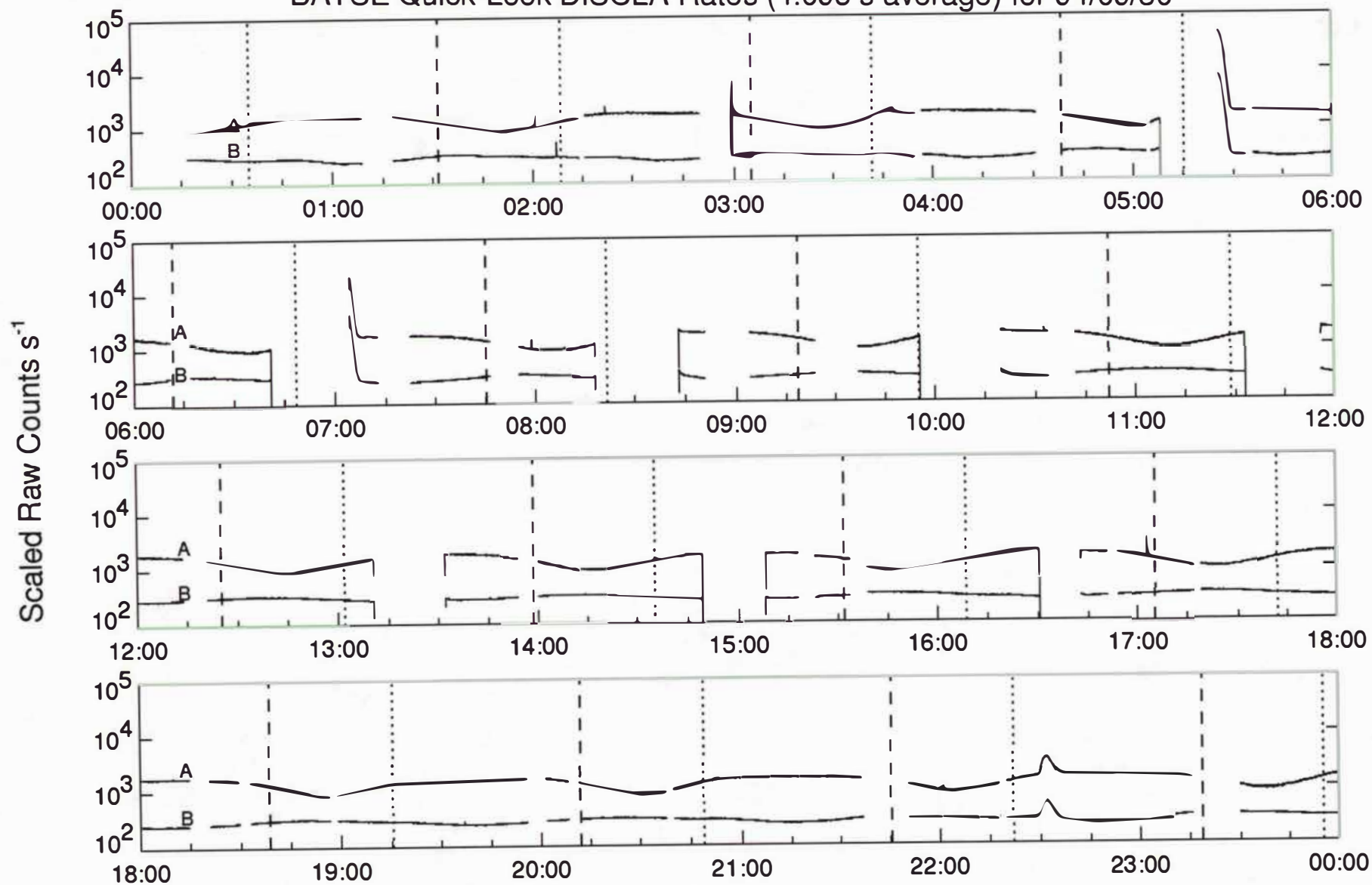
Data Start: 94/09/30, 0000:01

Plot created: 94/10/05, 1955

Channel 1 (1.0 - 8.0 Angstroms) Background not subtracted

2 (0.5 - 4.0 Angstroms) Background not subtracted

BATSE Quick-Look DISCLA Rates (4.096 s average) for 94/09/30

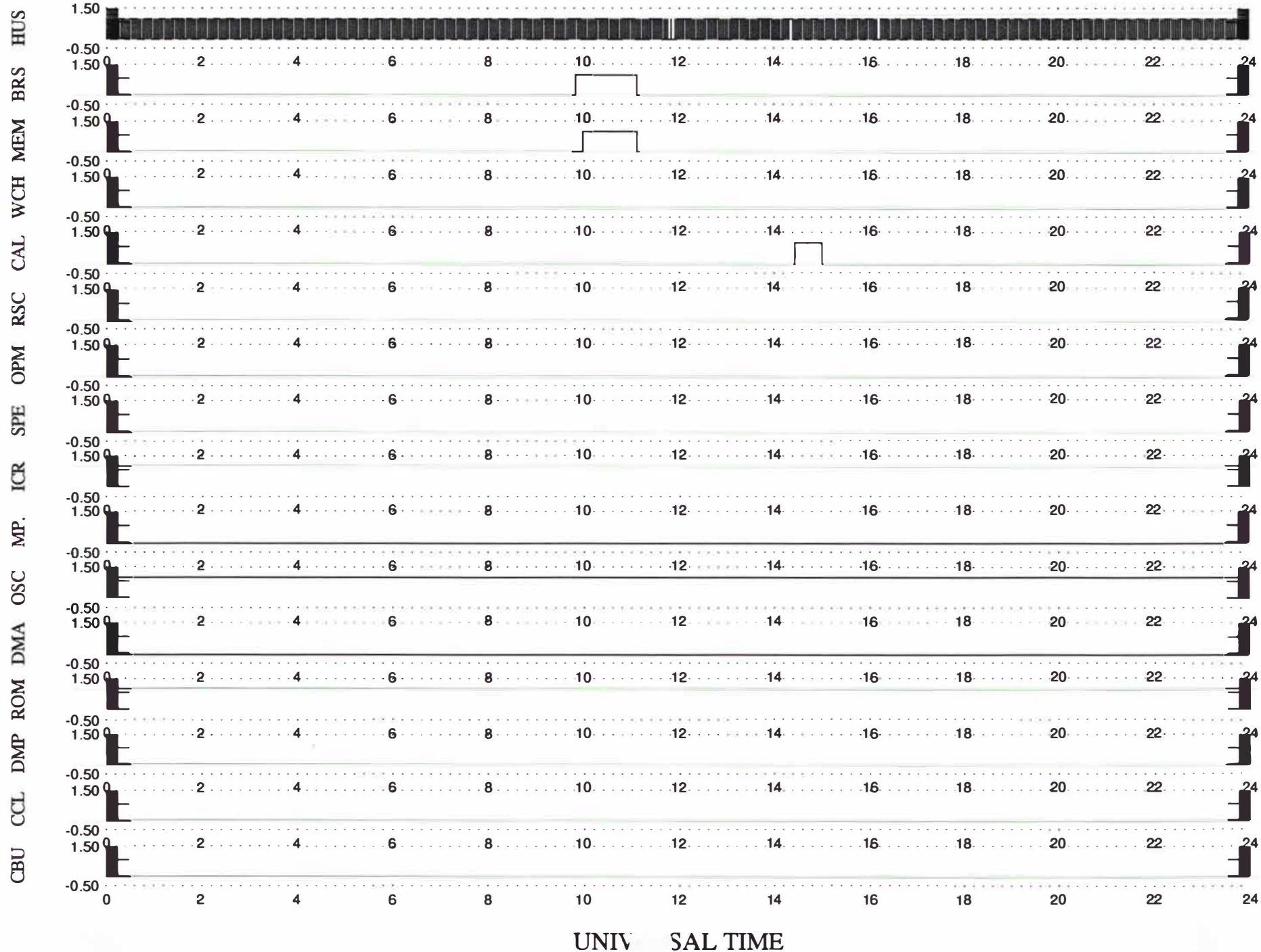


Current Time: 94/10/05, 1949 EDT
A: Channel 0 Most Sunward LAD
B: Sum Channel 0 Anti-Sunward LADs X .05

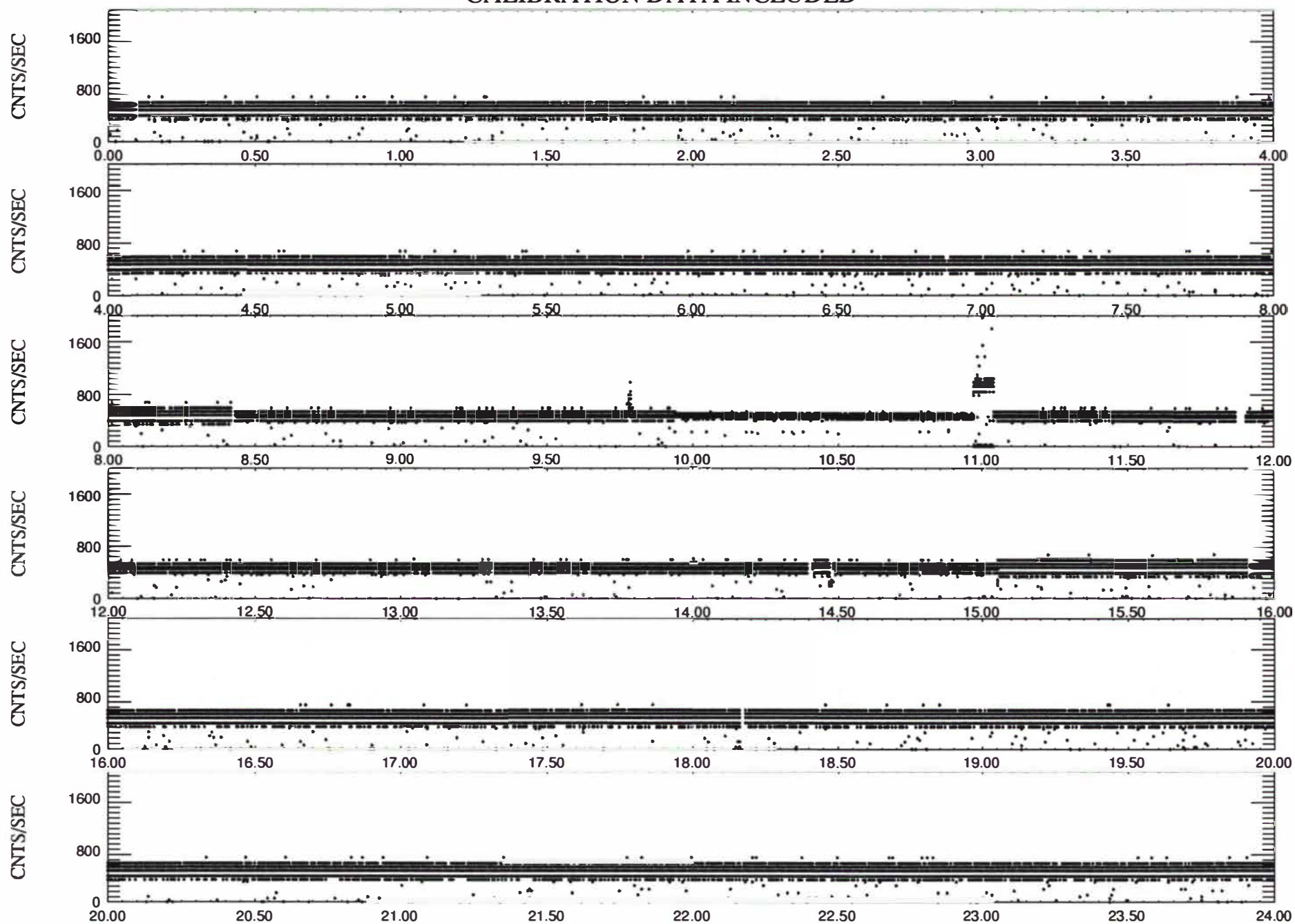
Dotted line: Day entry
Dashed line: Night entry

* Solar Burst Trigger
+ Solar Flare

BURST NUMBER 15



CALIBRATION DATA INCLUDED



UNIV SAL TIME

Burst Counter 15 at UT= 9.776129464044 h=35194.066 s 09:46:34.066

