# V&V Reference Report
# L2 ASCDS Version : 7.6.7.1

### Observation 59931 - L2 Version 002
### Chandra X-Ray Center

### L2 Processing Date : Apr 8 2006

# Contents

# 1   Front

| | |
|---|---|
| seq_num | &#160 |
| obs_id | 59931 |
| title | ACIS-456789 diagnostics |
| observer | CHANDRA engineering request/realtime commanding |
| object | &#160 |
| ra_targ | 0.0 |
| dec_targ | 0.0 |
| ra_nom | 108.88781082469 |
| dec_nom | 20.825727423516 |
| roll_nom | 80.188404356191 |
| revision | 2 |
| ontime | 8408.0 |
| livetime | 8375.15625 |
| ontime4 | 5107.9503493607 |
| ontime5 | 8408.0 |
| ontime6 | 5506.3061416447 |
| ontime7 | 8408.0 |
| ontime8 | 5892.3830598295 |
| ontime9 | 5663.8971332014 |
| l2events | 762622 |

# 2 OBI

## 2.1 OBI

### 2.1.1 Images



Level 1 Image



Level 1 Bad Events

### 2.1.2 Bias



Chip 4



Chip 5



Chip 6



Chip 7



Chip 8



Chip 9
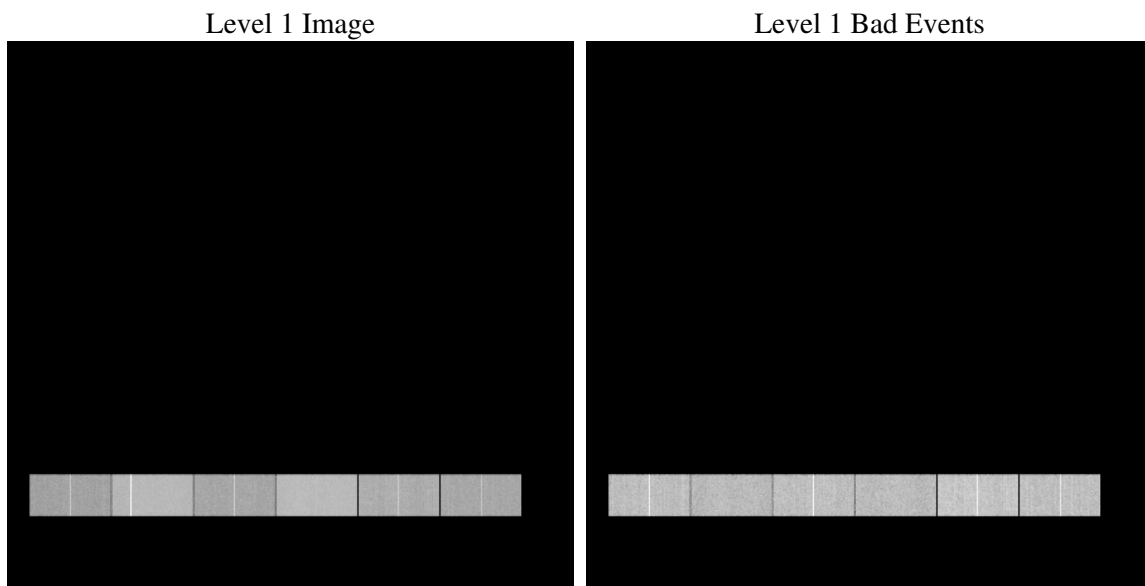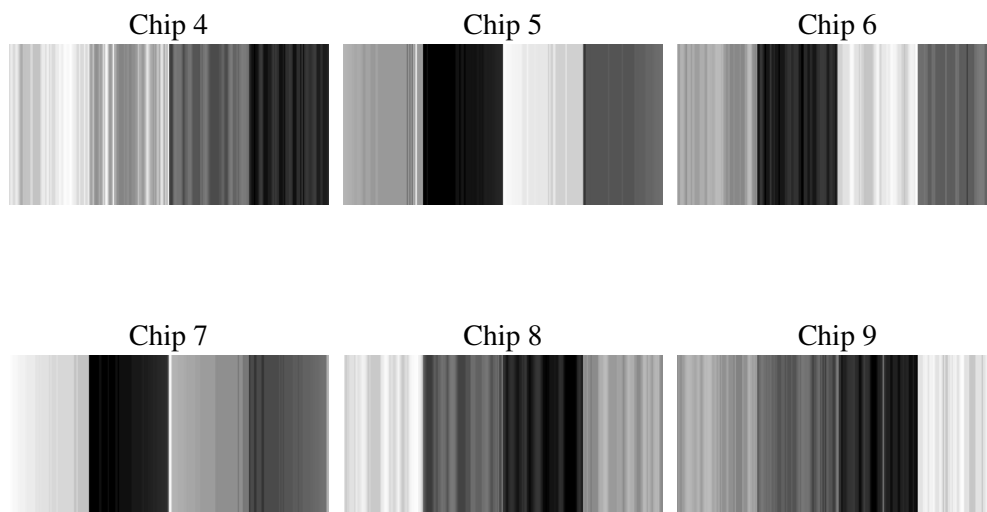
### 2.1.3 Parameters

| | |
|---|---|
| obi_num | 0 |
| ascdsver | 7.6.7.1 |
| caldbver | 3.2.1 |
| date | 2006-04-09T00:13:16 |
| revision | 2 |

| | |
|---|---|
| sched_exp_time | 0.0 |
| ontime | 8409.2886380553 |
| ontime4 | 5108.6343585253 |
| ontime5 | 8409.2886380553 |
| ontime6 | 5506.9900714457 |
| ontime7 | 8409.2886380553 |
| ontime8 | 5893.6716978848 |
| ontime9 | 5664.5811423361 |
| l1events | 1440252 |

### 2.1.4 Events

| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|---|---|---|---|---|---|---|
| level 1 events | 173662 | 325558 | 194187 | 319491 | 230150 | 197204 |
| rejected events | 99609 | 85392 | 102779 | 89341 | 119950 | 101876 |
| rejected % | 57% | 26% | 52% | 27% | 52% | 51% |

| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|---|---|---|---|---|---|---|
| grade 0 events | 13840 | 30599 | 13045 | 28981 | 23405 | 15942 |
| | 7% | 9% | 6% | 9% | 10% | 8% |
| grade 1 events | 108 | 86 | 82 | 120 | 144 | 102 |
| | 0% | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 77634 | 116658 | 89398 | 83417 | 92546 | 87407 |
| | 44% | 35% | 46% | 26% | 40% | 44% |
| grade 3 events | 2333 | 3274 | 2141 | 12086 | 3840 | 2552 |
| | 1% | 1% | 1% | 3% | 1% | 1% |
| grade 4 events | 2397 | 3196 | 2111 | 12080 | 3856 | 2573 |
| | 1% | 0% | 1% | 3% | 1% | 1% |
| grade 5 events | 2672 | 6349 | 2586 | 7964 | 3538 | 2910 |
| | 1% | 1% | 1% | 2% | 1% | 1% |
| grade 6 events | 23923 | 86574 | 30264 | 93711 | 31738 | 29350 |
| | 13% | 26% | 15% | 29% | 13% | 14% |
| grade 7 events | 50755 | 78822 | 54560 | 81132 | 71083 | 56368 |
| | 29% | 24% | 28% | 25% | 30% | 28% |

## 2.2  Compared Parameters

| Parameter | Planned | Actual |
|---|---|---|
| Instrument | ACIS | ACIS |
| Detector | ACIS-456789 | ACIS-456789 |
| Grating | NONE | NONE |
| Data mode | CC33_FAINT | CC33_FAINT |
| Observation mode | SECONDARY | SECONDARY |
| Pointing RA | 0 | 108.8878108246929 |
| Pointing Dec | 0 | 20.82572742351615 |
| Pointing Roll | 0.0 | 80.1884043561907 |
| SIM focus pos (mm) | -0.684267 | -0.7809083437167272 |
| SIM defocus (mm) | 0 | 0.7524282956875696 |
| SIM translation stage pos (mm) | -190.132523 | 250.466033080201 |
| SIM translation stage offset (mm) | 0 | -0.01005468664627074 |
| Observation start time | 218899807.445828 | 218899806.42082 |
| Observation start date | 2004-12-08T13:30:07 | 2004-12-08T13:30:06 |
| Observation end time | 218921822.396819 | 218921821.37181 |
| Observation end date | 2004-12-08T19:37:02 | 2004-12-08T19:37:01 |
| Read mode | CONTINUOUS | CONTINUOUS |

| Parameter | Planned | Actual |
|---|---|---|
| Obspar format version number | 6 | 6 |
| Obspar file type | PREDICTED | ACTUAL |
| Obspar update status | NONE | UPDATED |
| On-chip summing requested | N | N |
| Subarray requested | NONE | NONE |
| Alternating exposures requested | N | N |
| Primary exposure time | 0 | 0 |

## 2.3 Aspect

**2.4　Star Slots**

**2.5　FID Slots**

# A   Summary

## A.1   Status

| V&V Scientist | Beth Sundheim |
|---|---|
| V&V Date (YYYY-MM-DD) | 2006.04.10 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 8.408 |

## A.2   Comments

```
The fits keyword value of TIMEDEL in the Level 1 and Level 2
event file headers are incorrect in this version of the processing.
The
value in the event files should be 0.00285 s. This value is appropriate

since the TIMEs between events can be separated by only 0.00285 s.
The value of the keyword TIMEDEL in the exr0 and stat1 files is
1.4592 s, which is the correct value for these files. The data in the
event files are correct. The correct value of TIMEDEL=0.00285 was used

to calculate the arrival time of each event, but the TIMEDEL value was
changed in a subsequent step of the code to the incorrect value of
1.4592 s,
which was then recorded in the header. There is the potential for the
event
times to become corrupted if the user reproceses the data. To fix this
problem,
the user should update the value of TIMEDEL in the header of their
event-data
file. They can do this using, e.g., dmhedit:

dmhedit infile='acisfxxxxx_000N002_evt1.fits' filelist=none
operation=add
key=TIMEDEL value=0.00285
```