

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 55109 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Feb 25 2012

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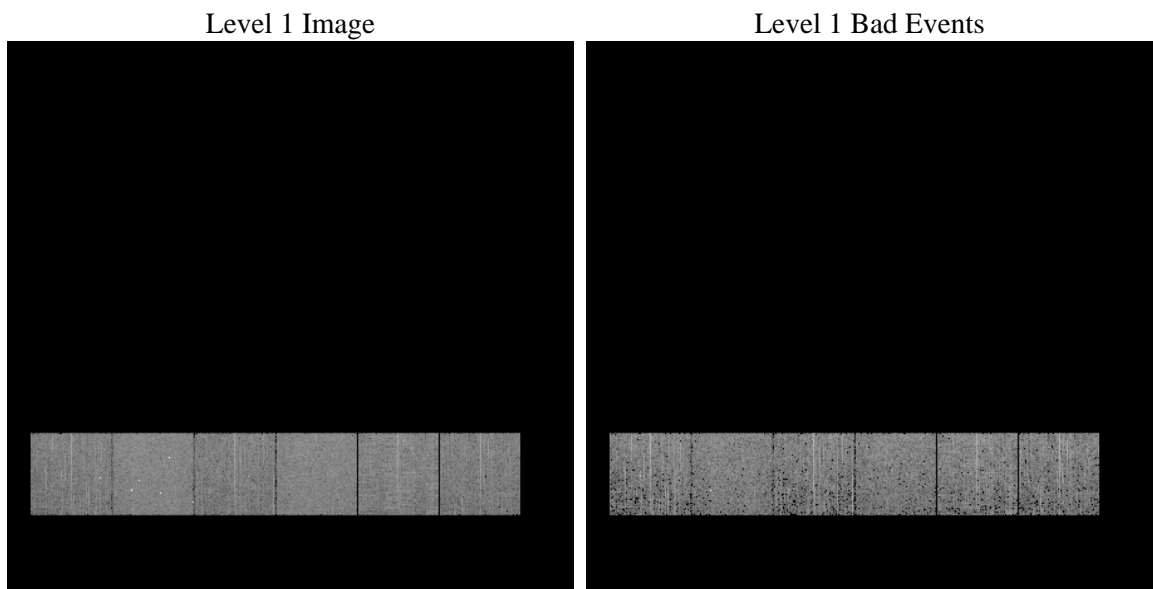
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 55109   | Observation id                              |
| title    | ACIS-456789 diagnostics                         | Proposal title                              |
| observer | CHANDRA engineering request/realtime commanding | Principal investig                          |
| object   | &#160   | Source name                                 |
| dtcycle  | 0   | &#160                                       |
| cycle    | P   | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 0.0   | Observer's specified target RA [deg]        |
| dec_targ | 0.0   | Observer's specified target Dec [deg]       |
| ra_nom   | 354.42204774464                                 | Nominal RA [deg]                            |
| dec_nom  | 1.9811043673391                                 | Nominal Dec [deg]                           |
| roll_nom | 286.63143792361                                 | Nominal Roll [deg]                          |
| revision | 2   | Processing version of data                  |
| ontime   | 3192.7168022394                                 | Sum of GTIs [s]                             |
| livetime | 3152.2886996662                                 | Livetime [s]                                |
| ontime4  | 3192.5936822295                                 | Sum of GTIs [s]                             |
| ontime5  | 3192.6757622361                                 | Sum of GTIs [s]                             |
| ontime6  | 3192.6347222328                                 | Sum of GTIs [s]                             |
| ontime7  | 3192.7168022394                                 | Sum of GTIs [s]                             |
| ontime8  | 3192.5526422262                                 | Sum of GTIs [s]                             |
| ontime9  | 3192.7578422427                                 | Sum of GTIs [s]                             |
| l2events | 129508  | Number of level 2 events                    |

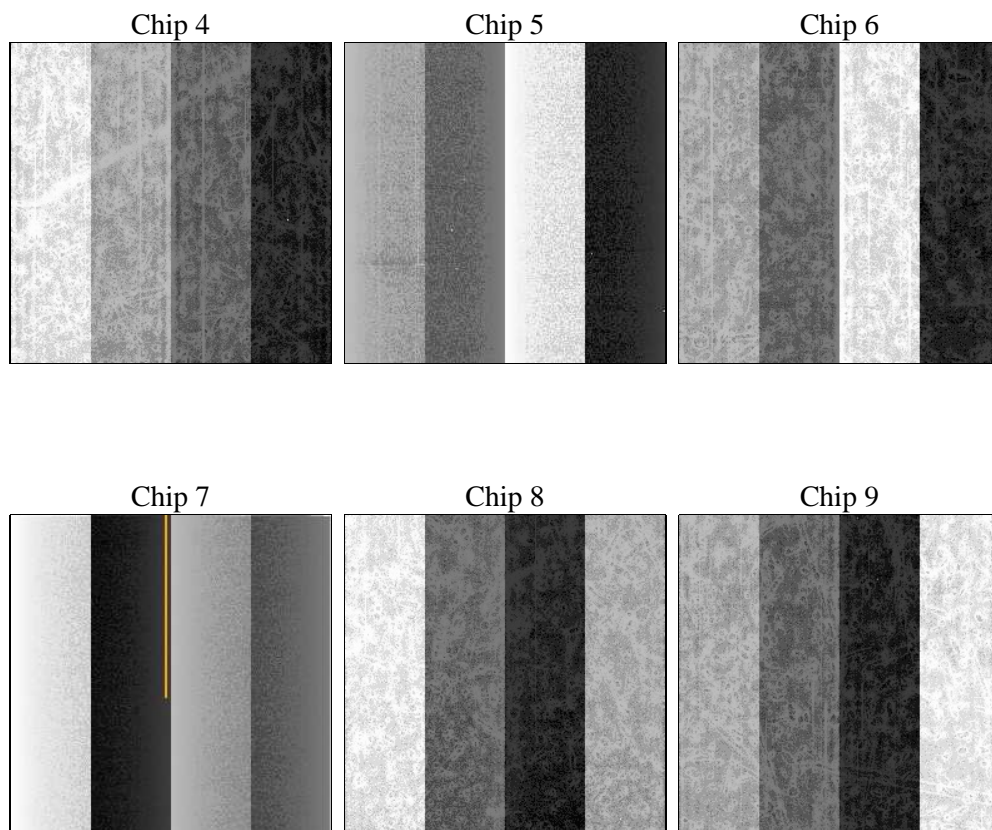
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 0.0             | [s] Scheduled observation exposure time |
| ascdsver | 8.4.3               | Processing system revision     | ontime         | 3192.7168022394 | Sum of GTIs [s]                         |
| caldsver | 4.4.8               | &#160                          | ontime4        | 3192.5936822295 | Sum of GTIs [s]                         |
| date     | 2012-02-25T07:06:44 | Date and time of file creation | ontime5        | 3192.6757622361 | Sum of GTIs [s]                         |
| revision | 2                   | Processing version of data     | ontime6        | 3192.6347222328 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 3192.7168022394 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 3192.5526422262 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 3192.7578422427 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 296640          | Number of level 1 events                |

### 2.1.4 Events

|                 | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |                | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|-----------------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 44865 | 59292 | 44611 | 53426 | 50901 | 43545 | grade 0 events | 11627 | 5882  | 10201 | 5070  | 11663 | 10421 |
| rejected events | 25575 | 25656 | 24796 | 23841 | 26926 | 24410 |                | 25%   | 9%    | 22%   | 9%    | 22%   | 23%   |
| rejected %      | 57%   | 43%   | 55%   | 44%   | 52%   | 56%   | grade 1 events | 90    | 186   | 38    | 35    | 61    | 58    |
|                 |       |       |       |       |       |       |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |       |       |       |       |       |       | grade 2 events | 2912  | 12249 | 4016  | 6867  | 4605  | 3389  |
|                 |       |       |       |       |       |       |                | 6%    | 20%   | 9%    | 12%   | 9%    | 7%    |
|                 |       |       |       |       |       |       | grade 3 events | 1334  | 1092  | 1254  | 2560  | 1837  | 1251  |
|                 |       |       |       |       |       |       |                | 2%    | 1%    | 2%    | 4%    | 3%    | 2%    |
|                 |       |       |       |       |       |       | grade 4 events | 1366  | 1170  | 1273  | 2551  | 1844  | 1345  |
|                 |       |       |       |       |       |       |                | 3%    | 1%    | 2%    | 4%    | 3%    | 3%    |
|                 |       |       |       |       |       |       | grade 5 events | 1325  | 2819  | 1429  | 3343  | 1856  | 1546  |
|                 |       |       |       |       |       |       |                | 2%    | 4%    | 3%    | 6%    | 3%    | 3%    |
|                 |       |       |       |       |       |       | grade 6 events | 2560  | 14155 | 3662  | 13382 | 4723  | 3321  |
|                 |       |       |       |       |       |       |                | 5%    | 23%   | 8%    | 25%   | 9%    | 7%    |
|                 |       |       |       |       |       |       | grade 7 events | 23651 | 21739 | 22738 | 19618 | 24312 | 22214 |
|                 |       |       |       |       |       |       |                | 52%   | 36%   | 50%   | 36%   | 47%   | 51%   |

## 2.2 Compared Parameters

| Parameter                         | Planned              | Actual               |
|-----------------------------------|----------------------|----------------------|
| Instrument                        | ACIS                 | ACIS                 |
| Detector                          | ACIS-456789          | ACIS-456789          |
| Grating                           | NONE                 | NONE                 |
| Data mode                         | FAINT                | FAINT                |
| Observation mode                  | SECONDARY            | SECONDARY            |
| [deg] Pointing RA                 | 0                    | 354.4220477446373    |
| [deg] Pointing Dec                | 0                    | 1.981104367339139    |
| [deg] Pointing Roll               | 0.0                  | 286.6314379236107    |
| [mm] SIM focus pos                | -1.4281808131        | -1.4281808131        |
| [mm] SIM defocus                  | 0.1051557500557434   | 0.1051557500557434   |
| [mm] SIM translation stage pos    | 250.4660330802       | 250.4660330802       |
| [mm] SIM translation stage offset | -0.01005726120527584 | -0.01005726120527584 |
| [s] Observation start time (MET)  | 435461443.801453     | 435461443.801453     |
| Observation start date            | 2011-10-20T01:30:44  | 2011-10-20T01:30:43  |
| [s] Observation end time (MET)    | 435465990.201043     | 435465990.201043     |
| Observation end date              | 2011-10-20T02:46:30  | 2011-10-20T02:46:30  |
| Read mode                         | TIMED                | TIMED                |

| Parameter                             | Planned   | Actual   |
|---------------------------------------|-----------|----------|
| Obspar format version number          | 7         | 7        |
| Obspar file type                      | PREDICTED | ACTUAL   |
| Obspar update status                  | OVERRIDE  | OVERRIDE |
| Number of optional ACIS chips dropped | 0         | 0        |
| On-chip summing requested             | N         | N        |
| Subarray requested                    | NONE      | NONE     |
| Alternating exposures requested       | N         | N        |
| [s] Primary exposure time             | 3.2       | 3.2      |

## 2.3 Star Slots

## 2.4 FID Slots

## A Summary

### A.1 Status

|                            |                 |
|----------------------------|-----------------|
| V&V Scientist              | Jen Lauer       |
| V&V Date (YYYY-MM-DD)      | 2012.02.27      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 3.1927168022394 |

### A.2 Comments