

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 57108 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Jun 7 2012

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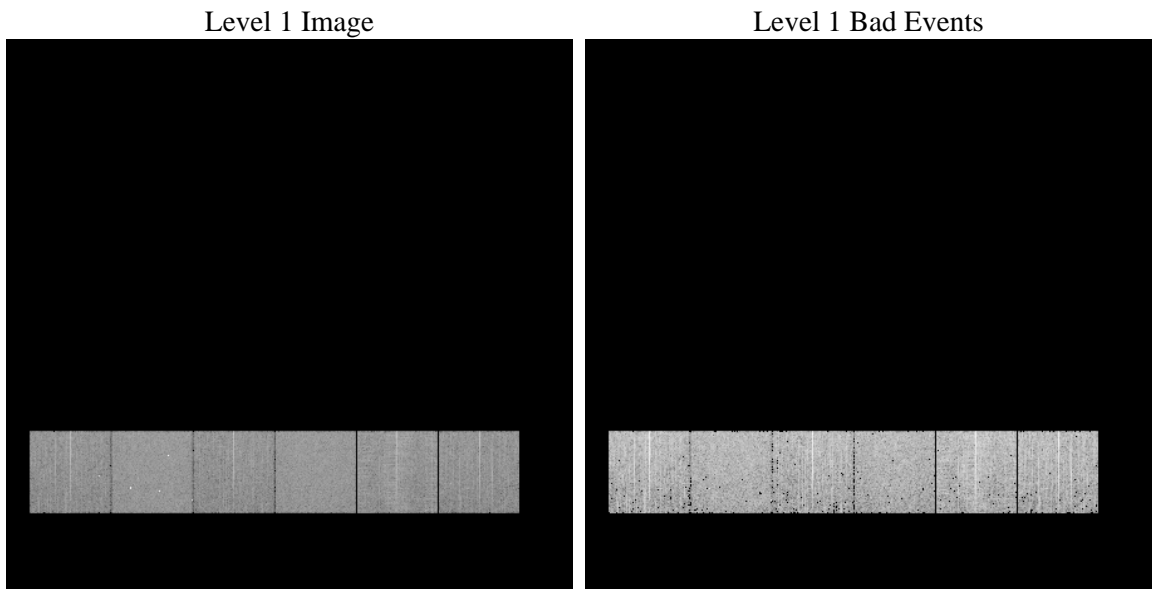
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 57108   | 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   | 24.874240450006                                 | Nominal RA [deg]                            |
| dec_nom  | -27.52117458863                                 | Nominal Dec [deg]                           |
| roll_nom | 148.12321627421                                 | Nominal Roll [deg]                          |
| revision | 2   | Processing version of data                  |
| ontime   | 3270.1874931455                                 | Sum of GTIs [s]                             |
| livetime | 3228.7784100368                                 | Livetime [s]                                |
| ontime4  | 3273.0601266026                                 | Sum of GTIs [s]                             |
| ontime5  | 3270.1874931455                                 | Sum of GTIs [s]                             |
| ontime6  | 3273.1011666059                                 | Sum of GTIs [s]                             |
| ontime7  | 3270.1874931455                                 | Sum of GTIs [s]                             |
| ontime8  | 3273.0190865993                                 | Sum of GTIs [s]                             |
| ontime9  | 3270.1874832511                                 | Sum of GTIs [s]                             |
| l2events | 209594  | Number of level 2 events                    |

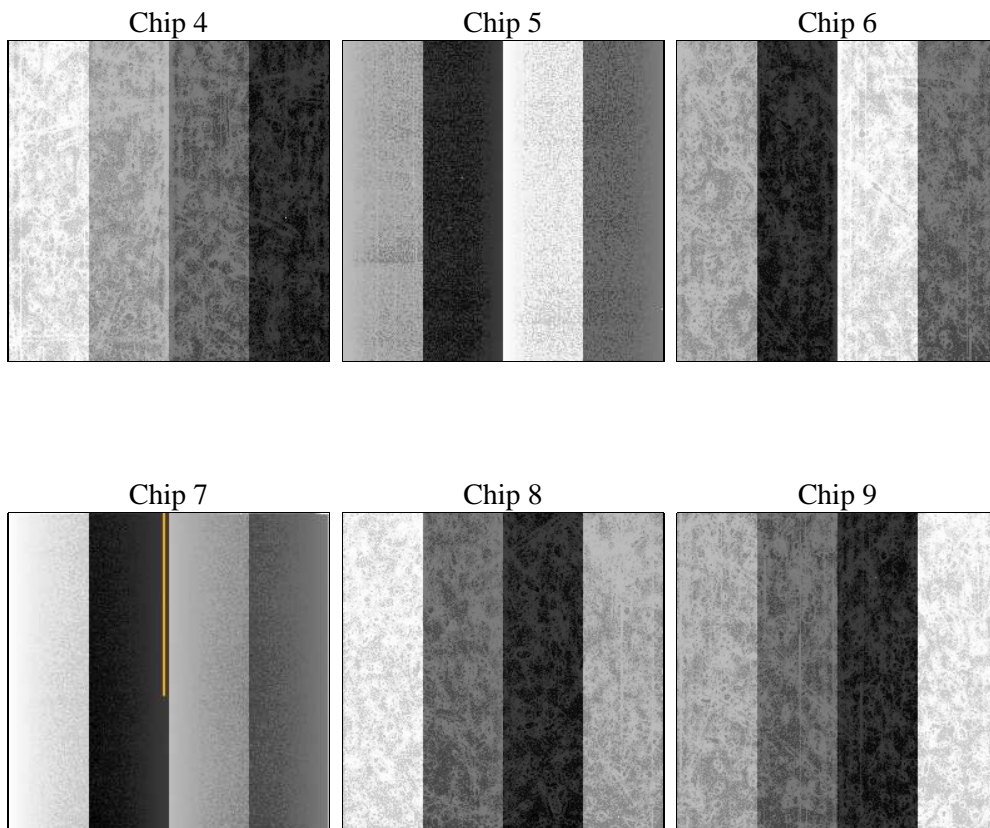
## 2 OBI

### 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 | 8.4.5               | Processing system revision     | ontime         | 3270.1874931455 | Sum of GTIs [s]                         |
| caldsver | 4.4.10              | &#160                          | ontime4        | 3273.0601266026 | Sum of GTIs [s]                         |
| date     | 2012-06-07T04:43:32 | Date and time of file creation | ontime5        | 3270.1874931455 | Sum of GTIs [s]                         |
| revision | 2                   | Processing version of data     | ontime6        | 3273.1011666059 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 3270.1874931455 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 3273.0190865993 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 3270.1874832511 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 421833          | 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  | 64223 | 78337 | 63805 | 75323 | 75010 | 65135 | grade 0 events | 17563 | 8548  | 16995 | 8918  | 19017 | 16896 |
| rejected events | 33355 | 29582 | 31451 | 27915 | 36505 | 33492 |                | 27%   | 10%   | 26%   | 11%   | 25%   | 25%   |
| rejected %      | 51%   | 37%   | 49%   | 37%   | 48%   | 51%   | grade 1 events | 172   | 184   | 109   | 63    | 126   | 128   |
|                 |       |       |       |       |       |       |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |       |       |       |       |       |       | grade 2 events | 5081  | 17004 | 5668  | 10410 | 7296  | 5616  |
|                 |       |       |       |       |       |       |                | 7%    | 21%   | 8%    | 13%   | 9%    | 8%    |
|                 |       |       |       |       |       |       | grade 3 events | 2141  | 2224  | 2065  | 4401  | 2772  | 2212  |
|                 |       |       |       |       |       |       |                | 3%    | 2%    | 3%    | 5%    | 3%    | 3%    |
|                 |       |       |       |       |       |       | grade 4 events | 2108  | 2176  | 2124  | 4379  | 2691  | 2130  |
|                 |       |       |       |       |       |       |                | 3%    | 2%    | 3%    | 5%    | 3%    | 3%    |
|                 |       |       |       |       |       |       | grade 5 events | 1785  | 4175  | 1792  | 4554  | 2327  | 2058  |
|                 |       |       |       |       |       |       |                | 2%    | 5%    | 2%    | 6%    | 3%    | 3%    |
|                 |       |       |       |       |       |       | grade 6 events | 3975  | 18803 | 5502  | 19300 | 6729  | 4789  |
|                 |       |       |       |       |       |       |                | 6%    | 24%   | 8%    | 25%   | 8%    | 7%    |
|                 |       |       |       |       |       |       | grade 7 events | 31398 | 25223 | 29550 | 23298 | 34052 | 31306 |
|                 |       |       |       |       |       |       |                | 48%   | 32%   | 46%   | 30%   | 45%   | 48%   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-456789         | ACIS-456789          | Obspar file type                      | PREDICTED | ACTUAL  |
| Grating                           | NONE                | NONE                 | Obspar update status                  | NONE      | UPDATED |
| Data mode                         | FAINT               | FAINT                | Number of optional ACIS chips dropped | 0         | 0       |
| Observation mode                  | SECONDARY           | SECONDARY            | On-chip summing requested             | N         | N       |
| [deg] Pointing RA                 | 0                   | 24.87424045000643    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 0                   | -27.52117458863036   | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 0.0                 | 148.1232162742102    | [s] Primary exposure time             | 3.2       | 3.2     |
| [mm] SIM focus pos                | -1.429586           | -0.6828225247311905  |                                       |           |         |
| [mm] SIM defocus                  | 0.1037507710433287  | 0.8505141146731063   |                                       |           |         |
| [mm] SIM translation stage pos    | 250.455976          | 250.466033080201     |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | -0.01005468664627074 |                                       |           |         |
| [s] Observation start time (MET)  | 358689288.745449    | 358689287.72046      |                                       |           |         |
| Observation start date            | 2009-05-14T11:54:49 | 2009-05-14T11:54:47  |                                       |           |         |
| [s] Observation end time (MET)    | 358710206.946492    | 358710205.92151      |                                       |           |         |
| Observation end date              | 2009-05-14T17:43:27 | 2009-05-14T17:43:25  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## **2.3 Star Slots**

## **2.4 FID Slots**

## A Summary

### A.1 Status

|                            |                 |
|----------------------------|-----------------|
| V&V Scientist              | Jen Lauer       |
| V&V Date (YYYY-MM-DD)      | 2012.06.11      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 3.2701874931455 |

### A.2 Comments