

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 53392 - L2 Version 1  
Chandra X-Ray Center

L2 Processing Date : Sep 15 2013

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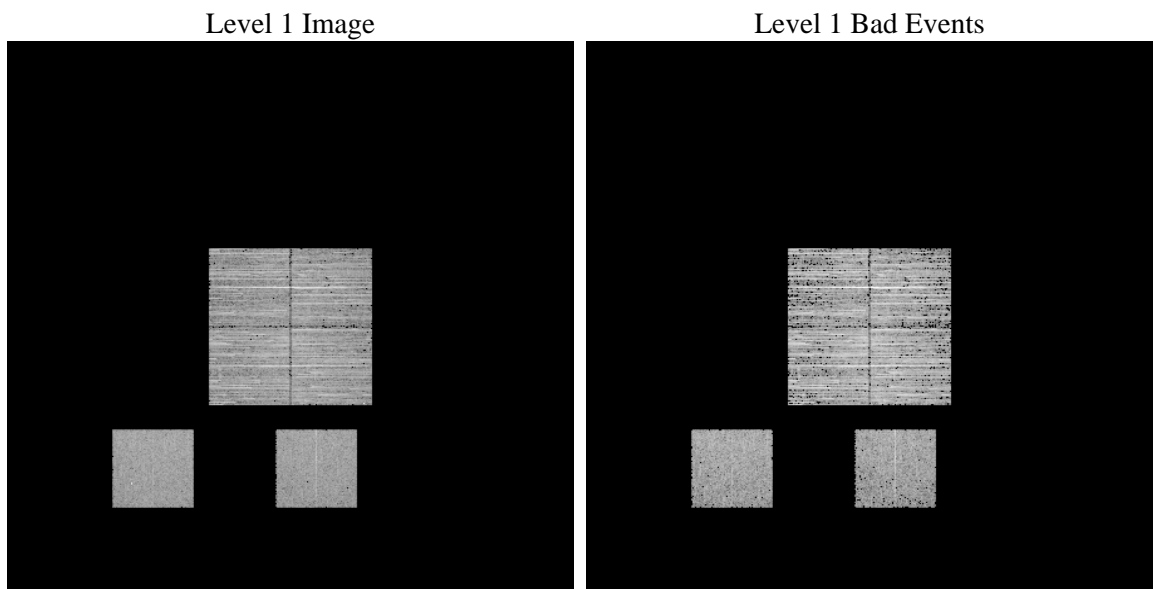
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 53392   | Observation id                              |
| title    | ACIS-012357 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   | 336.99215273946                                 | Nominal RA [deg]                            |
| dec_nom  | -26.671243548822                                | Nominal Dec [deg]                           |
| roll_nom | 324.69018791435                                 | Nominal Roll [deg]                          |
| revision | 1   | Processing version of data                  |
| ontime   | 3289.4106833339                                 | Sum of GTIs [s]                             |
| livetime | 3247.7581846162                                 | Livetime [s]                                |
| ontime0  | 3289.3696433306                                 | Sum of GTIs [s]                             |
| ontime1  | 3289.3286033273                                 | Sum of GTIs [s]                             |
| ontime2  | 3289.287563324                                  | Sum of GTIs [s]                             |
| ontime3  | 3289.4517233372                                 | Sum of GTIs [s]                             |
| ontime5  | 3289.2465233207                                 | Sum of GTIs [s]                             |
| ontime7  | 3289.4106833339                                 | Sum of GTIs [s]                             |
| l2events | 88501   | Number of level 2 events                    |

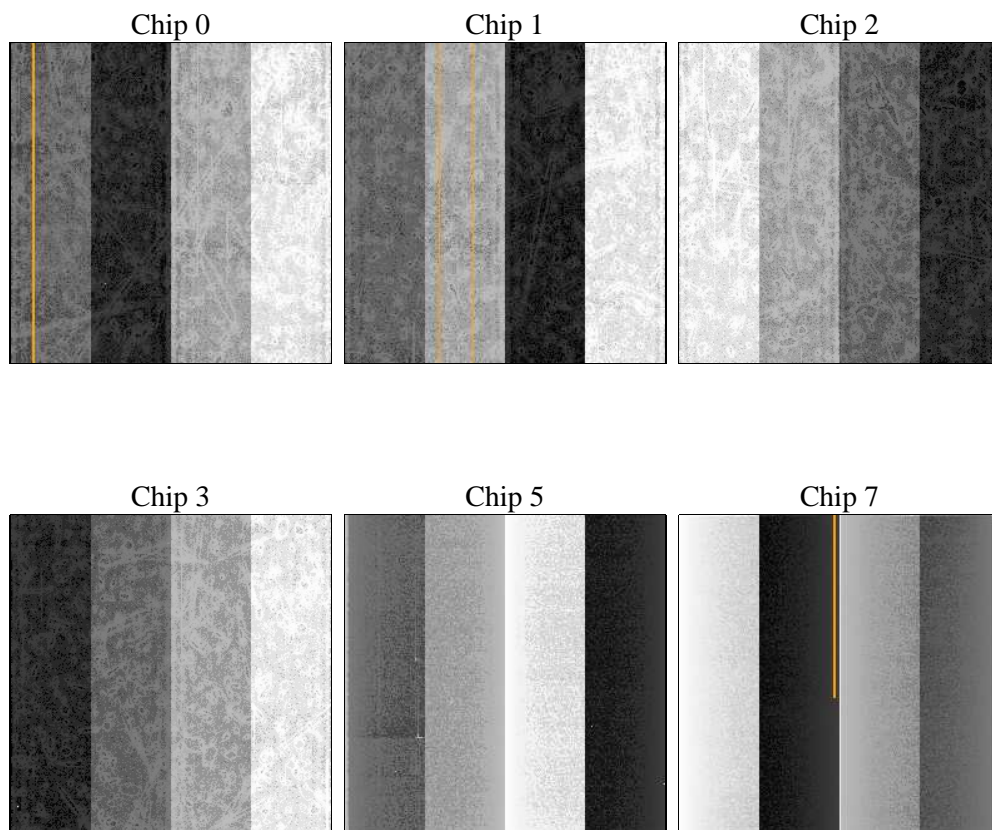
## 2 OBI

### 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 | 10                  | Processing system revision     | ontime         | 3289.4106833339 | Sum of GTIs [s]                         |
| caldbver | 4.5.8               | &#160                          | ontime0        | 3289.3696433306 | Sum of GTIs [s]                         |
| date     | 2013-09-15T04:32:51 | Date and time of file creation | ontime1        | 3289.3286033273 | Sum of GTIs [s]                         |
| revision | 1                   | Processing version of data     | ontime2        | 3289.287563324  | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 3289.4517233372 | Sum of GTIs [s]                         |
|          |                     |                                | ontime5        | 3289.2465233207 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 3289.4106833339 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 320523          | Number of level 1 events                |

### 2.1.4 Events

|                 | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 5 | ccd 7 |                | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 5 | ccd 7 |
|-----------------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 51759 | 52395 | 58623 | 59531 | 50826 | 47389 | grade 0 events | 5983  | 5848  | 6401  | 6596  | 2234  | 3188  |
| rejected events | 39994 | 40425 | 46346 | 47085 | 27642 | 25571 |                | 11%   | 11%   | 10%   | 11%   | 4%    | 6%    |
| rejected %      | 77%   | 77%   | 79%   | 79%   | 54%   | 53%   | grade 1 events | 30    | 28    | 34    | 31    | 41    | 34    |
|                 |       |       |       |       |       |       |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |       |       |       |       |       |       | grade 2 events | 2363  | 2566  | 2337  | 2310  | 8612  | 5314  |
|                 |       |       |       |       |       |       |                | 4%    | 4%    | 3%    | 3%    | 16%   | 11%   |
|                 |       |       |       |       |       |       | grade 3 events | 820   | 789   | 860   | 874   | 797   | 1836  |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 1%    | 3%    |
|                 |       |       |       |       |       |       | grade 4 events | 763   | 786   | 845   | 819   | 689   | 1726  |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 1%    | 3%    |
|                 |       |       |       |       |       |       | grade 5 events | 1111  | 1111  | 1075  | 1249  | 2238  | 2909  |
|                 |       |       |       |       |       |       |                | 2%    | 2%    | 1%    | 2%    | 4%    | 6%    |
|                 |       |       |       |       |       |       | grade 6 events | 1836  | 1981  | 1834  | 1847  | 10852 | 9754  |
|                 |       |       |       |       |       |       |                | 3%    | 3%    | 3%    | 3%    | 21%   | 20%   |
|                 |       |       |       |       |       |       | grade 7 events | 38853 | 39286 | 45237 | 45805 | 25363 | 22628 |
|                 |       |       |       |       |       |       |                | 75%   | 74%   | 77%   | 76%   | 49%   | 47%   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-012357         | ACIS-012357          | 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                   | 336.9921527394596    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 0                   | -26.67124354882151   | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 0.0                 | 324.690187914345     | [s] Primary exposure time             | 3.2       | 3.2     |
| [mm] SIM focus pos                | -1.429586           | -1.428180813131781   |                                       |           |         |
| [mm] SIM defocus                  | 0.1037507710433287  | 0.1051558262725154   |                                       |           |         |
| [mm] SIM translation stage pos    | 250.455976          | 250.466033080201     |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | -0.01005468664627074 |                                       |           |         |
| [s] Observation start time (MET)  | 495586685.032719    | 495586684.00772      |                                       |           |         |
| Observation start date            | 2013-09-14T22:58:05 | 2013-09-14T22:58:04  |                                       |           |         |
| [s] Observation end time (MET)    | 495592660.783045    | 495592659.75805      |                                       |           |         |
| Observation end date              | 2013-09-15T00:37:41 | 2013-09-15T00:37:39  |                                       |           |         |
| 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)      | 2013.09.15      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 3.2894106833339 |

### A.2 Comments