

# V&V Reference Report

## L2 ASCDS Version : 10.2.1

Observation 52908 - L2 Version 1  
Chandra X-Ray Center

L2 Processing Date : Mar 21 2014

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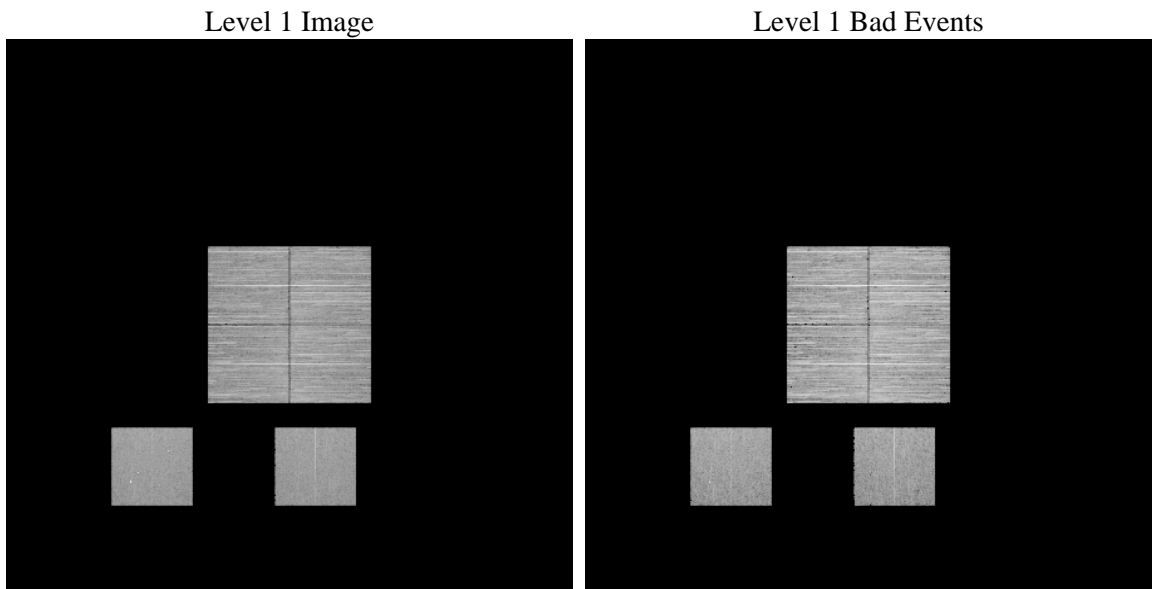
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 52908   | 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   | 201.75274439815                                 | Nominal RA [deg]                            |
| dec_nom  | -6.5311831448468                                | Nominal Dec [deg]                           |
| roll_nom | 155.59566390673                                 | Nominal Roll [deg]                          |
| revision | 1   | Processing version of data                  |
| ontime   | 8102.3999698758                                 | Sum of GTIs [s]                             |
| livetime | 7999.8025027777                                 | Livetime [s]                                |
| ontime0  | 8037.5784367919                                 | Sum of GTIs [s]                             |
| ontime1  | 8044.061229527                                  | Sum of GTIs [s]                             |
| ontime2  | 8034.3373864889                                 | Sum of GTIs [s]                             |
| ontime3  | 8027.8559886813                                 | Sum of GTIs [s]                             |
| ontime5  | 8102.3999698758                                 | Sum of GTIs [s]                             |
| ontime7  | 8102.3999698758                                 | Sum of GTIs [s]                             |
| l2events | 201326  | Number of level 2 events                    |

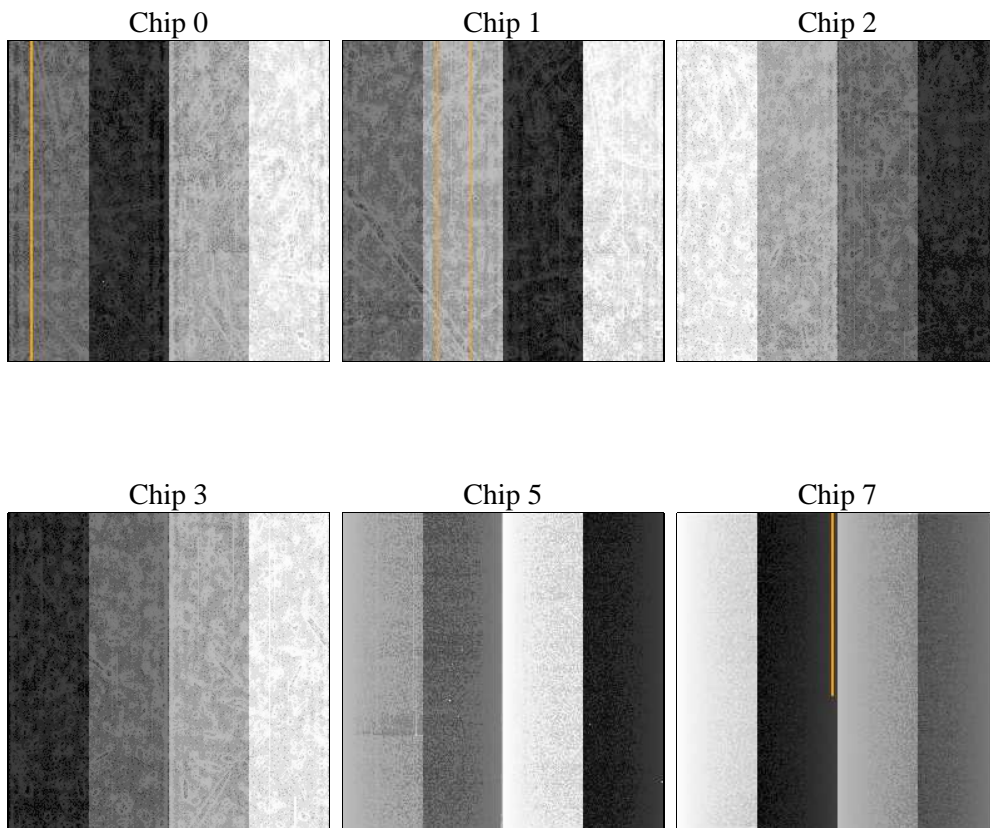
## 2 OBI

### 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 | 10.2.1              | Processing system revision     | ontime         | 8102.3999698758 | Sum of GTIs [s]                         |
| caldsver | 4.6.0               | &#160                          | ontime0        | 8037.5784367919 | Sum of GTIs [s]                         |
| date     | 2014-03-22T03:31:59 | Date and time of file creation | ontime1        | 8044.061229527  | Sum of GTIs [s]                         |
| revision | 1                   | Processing version of data     | ontime2        | 8034.3373864889 | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 8027.8559886813 | Sum of GTIs [s]                         |
|          |                     |                                | ontime5        | 8102.3999698758 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 8102.3999698758 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 806536          | 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  | 135515 | 151048 | 135249 | 146656 | 121615 | 116453 | grade 0 events | 13882  | 13228  | 14270  | 14415  | 5139  | 7180  |
| rejected events | 108306 | 123397 | 108178 | 119098 | 68544  | 65894  |                | 10%    | 8%     | 10%    | 9%     | 4%    | 6%    |
| rejected %      | 79%    | 81%    | 79%    | 81%    | 56%    | 56%    | grade 1 events | 70     | 51     | 79     | 90     | 108   | 79    |
|                 |        |        |        |        |        |        |                | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 5716   | 6496   | 5396   | 5594   | 20159 | 12862 |
|                 |        |        |        |        |        |        |                | 4%     | 4%     | 3%     | 3%     | 16%   | 11%   |
|                 |        |        |        |        |        |        | grade 3 events | 1919   | 1850   | 1795   | 1871   | 1853  | 3959  |
|                 |        |        |        |        |        |        |                | 1%     | 1%     | 1%     | 1%     | 1%    | 3%    |
|                 |        |        |        |        |        |        | grade 4 events | 1815   | 1847   | 1856   | 1903   | 1649  | 3951  |
|                 |        |        |        |        |        |        |                | 1%     | 1%     | 1%     | 1%     | 1%    | 3%    |
|                 |        |        |        |        |        |        | grade 5 events | 2621   | 2630   | 2609   | 2891   | 5211  | 6648  |
|                 |        |        |        |        |        |        |                | 1%     | 1%     | 1%     | 1%     | 4%    | 5%    |
|                 |        |        |        |        |        |        | grade 6 events | 4480   | 4854   | 4340   | 4364   | 25466 | 23724 |
|                 |        |        |        |        |        |        |                | 3%     | 3%     | 3%     | 2%     | 20%   | 20%   |
|                 |        |        |        |        |        |        | grade 7 events | 105012 | 120092 | 104904 | 115528 | 62030 | 58050 |
|                 |        |        |        |        |        |        |                | 77%    | 79%    | 77%    | 78%    | 51%   | 49%   |

## 2.2 Compared Parameters

| Parameter                         | Planned              | Actual               |
|-----------------------------------|----------------------|----------------------|
| Instrument                        | ACIS                 | ACIS                 |
| Detector                          | ACIS-012357          | ACIS-012357          |
| Grating                           | NONE                 | NONE                 |
| Data mode                         | FAINT                | FAINT                |
| Observation mode                  | SECONDARY            | SECONDARY            |
| [deg] Pointing RA                 | 0                    | 201.7527443981473    |
| [deg] Pointing Dec                | 0                    | -6.531183144846799   |
| [deg] Pointing Roll               | 0.0                  | 155.5956639067274    |
| SIM focus pos (mm)                | -1.4281808131        | -1.4281808131        |
| [mm] SIM defocus                  | 0.1051557500557434   | 0.1051557500557434   |
| SIM translation stage pos (mm)    | 250.4660330802       | 250.4660330802       |
| [mm] SIM translation stage offset | -0.01005726120527584 | -0.01005726120527584 |
| [s] Observation start time (MET)  | 511812462.573166     | 511812462.573166     |
| Observation start date            | 2014-03-21T18:07:43  | 2014-03-21T18:07:42  |
| [s] Observation end time (MET)    | 511820884.20566      | 511820884.20566      |
| Observation end date              | 2014-03-21T20:28:04  | 2014-03-21T20:28:04  |
| 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              | Beth Sundheim   |
| V&V Date (YYYY-MM-DD)      | 2014.03.22      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 8.1023999698758 |

### A.2 Comments