

# V&V Reference Report

## L2 ASCDS Version : 10.2.4

Observation 52474 - L2 Version 1  
Chandra X-Ray Center

L2 Processing Date : Sep 12 2014

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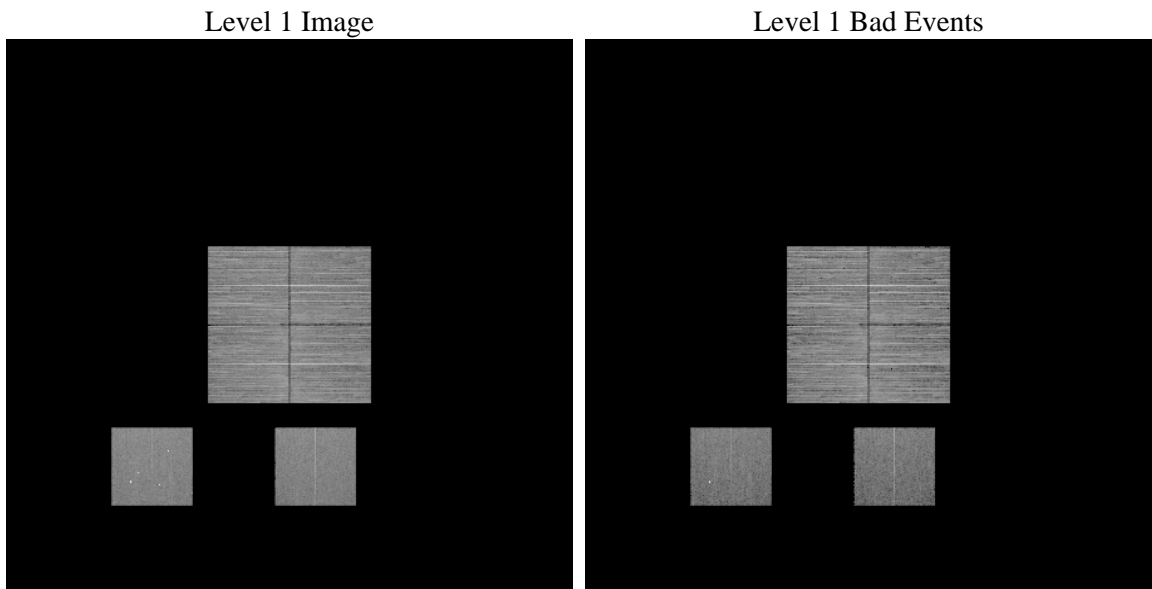
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 52474   | 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   | 346.68768613053                                 | Nominal RA [deg]                            |
| dec_nom  | 20.500797563081                                 | Nominal Dec [deg]                           |
| roll_nom | 188.17181540228                                 | Nominal Roll [deg]                          |
| revision | 1   | Processing version of data                  |
| ontime   | 8463.9999685287                                 | Sum of GTIs [s]                             |
| livetime | 8356.8237045183                                 | Livetime [s]                                |
| ontime0  | 8463.9999685287                                 | Sum of GTIs [s]                             |
| ontime1  | 8463.9999685287                                 | Sum of GTIs [s]                             |
| ontime2  | 8463.9999685287                                 | Sum of GTIs [s]                             |
| ontime3  | 8463.9999685287                                 | Sum of GTIs [s]                             |
| ontime5  | 8463.9999685287                                 | Sum of GTIs [s]                             |
| ontime7  | 8463.9999685287                                 | Sum of GTIs [s]                             |
| l2events | 201803  | Number of level 2 events                    |

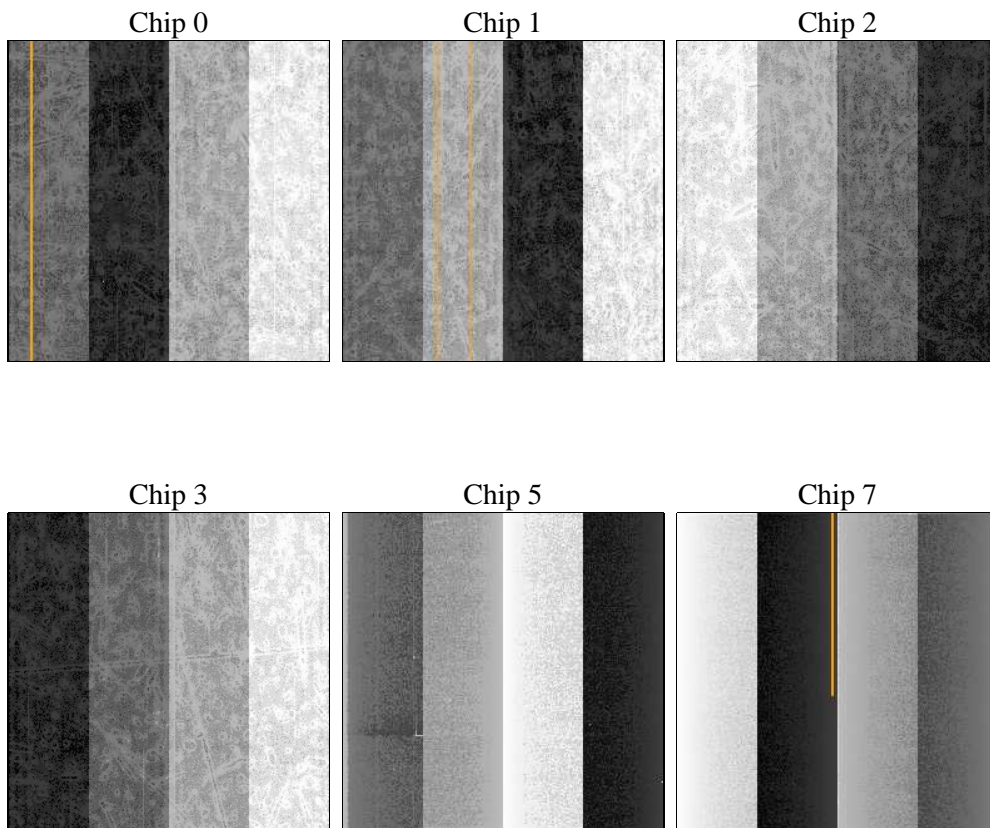
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 1                   | Obi number                     | sched_exp_time | 0.0             | [s] Scheduled observation exposure time |
| ascdsver | 10.2.4              | Processing system revision     | ontime         | 8463.9999685287 | Sum of GTIs [s]                         |
| caldsver | 4.6.3               | &#160                          | ontime0        | 8463.9999685287 | Sum of GTIs [s]                         |
| date     | 2014-09-12T17:36:13 | Date and time of file creation | ontime1        | 8463.9999685287 | Sum of GTIs [s]                         |
| revision | 1                   | Processing version of data     | ontime2        | 8463.9999685287 | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 8463.9999685287 | Sum of GTIs [s]                         |
|          |                     |                                | ontime5        | 8463.9999685287 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 8463.9999685287 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 856826          | 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  | 155241 | 145243 | 154905 | 149630 | 133222 | 118585 | grade 0 events | 13075  | 12651  | 13349  | 13281  | 9070  | 6991  |
| rejected events | 129134 | 118892 | 128801 | 123541 | 73039  | 66361  |                | 8%     | 8%     | 8%     | 8%     | 6%    | 5%    |
| rejected %      | 83%    | 81%    | 83%    | 82%    | 54%    | 55%    | grade 1 events | 78     | 60     | 82     | 62     | 135   | 82    |
|                 |        |        |        |        |        |        |                | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 5402   | 5654   | 5034   | 5073   | 21322 | 12807 |
|                 |        |        |        |        |        |        |                | 3%     | 3%     | 3%     | 3%     | 16%   | 10%   |
|                 |        |        |        |        |        |        | grade 3 events | 1768   | 1789   | 1826   | 1830   | 1929  | 4198  |
|                 |        |        |        |        |        |        |                | 1%     | 1%     | 1%     | 1%     | 1%    | 3%    |
|                 |        |        |        |        |        |        | grade 4 events | 1756   | 1772   | 1869   | 1830   | 1873  | 4209  |
|                 |        |        |        |        |        |        |                | 1%     | 1%     | 1%     | 1%     | 1%    | 3%    |
|                 |        |        |        |        |        |        | grade 5 events | 2755   | 2826   | 2631   | 3030   | 5865  | 7183  |
|                 |        |        |        |        |        |        |                | 1%     | 1%     | 1%     | 2%     | 4%    | 6%    |
|                 |        |        |        |        |        |        | grade 6 events | 4106   | 4485   | 4026   | 4075   | 25989 | 24019 |
|                 |        |        |        |        |        |        |                | 2%     | 3%     | 2%     | 2%     | 19%   | 20%   |
|                 |        |        |        |        |        |        | grade 7 events | 126301 | 116006 | 126088 | 120449 | 67039 | 59096 |
|                 |        |        |        |        |        |        |                | 81%    | 79%    | 81%    | 80%    | 50%   | 49%   |

## 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                   | 346.6876861305323    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 0                   | 20.50079756308065    | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 0.0                 | 188.1718154022754    | [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)  | 526892054.307269    | 526892053.28227      |                                       |           |         |
| Observation start date            | 2014-09-12T06:54:14 | 2014-09-12T06:54:13  |                                       |           |         |
| [s] Observation end time (MET)    | 526904809.407977    | 526904808.38298      |                                       |           |         |
| Observation end date              | 2014-09-12T10:26:49 | 2014-09-12T10:26:48  |                                       |           |         |
| 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)      | 2014.09.12      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 8.4639999685287 |

### A.2 Comments