

# V&V Reference Report

## L2 ASCDS Version : 10.1.1

Observation 53082 - L2 Version 1  
Chandra X-Ray Center

L2 Processing Date : Jan 19 2014

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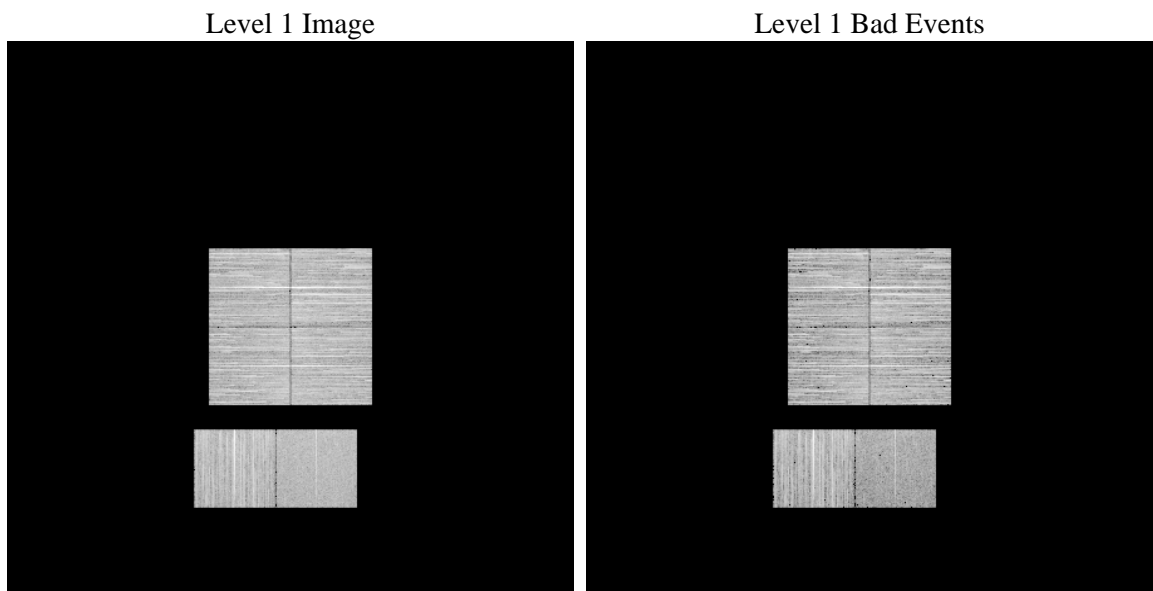
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 53082   | Observation id                              |
| title    | ACIS-012367 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   | 144.99703506256                                 | Nominal RA [deg]                            |
| dec_nom  | 10.028581097839                                 | Nominal Dec [deg]                           |
| roll_nom | 62.913620543346                                 | Nominal Roll [deg]                          |
| revision | 1   | Processing version of data                  |
| ontime   | 6630.1228916049                                 | Sum of GTIs [s]                             |
| livetime | 6546.1682833707                                 | Livetime [s]                                |
| ontime0  | 6630.1639316082                                 | Sum of GTIs [s]                             |
| ontime1  | 6630.2049716115                                 | Sum of GTIs [s]                             |
| ontime2  | 6630.3999753594                                 | Sum of GTIs [s]                             |
| ontime3  | 6630.0818516016                                 | Sum of GTIs [s]                             |
| ontime6  | 6630.3999753594                                 | Sum of GTIs [s]                             |
| ontime7  | 6630.1228916049                                 | Sum of GTIs [s]                             |
| l2events | 147729  | Number of level 2 events                    |

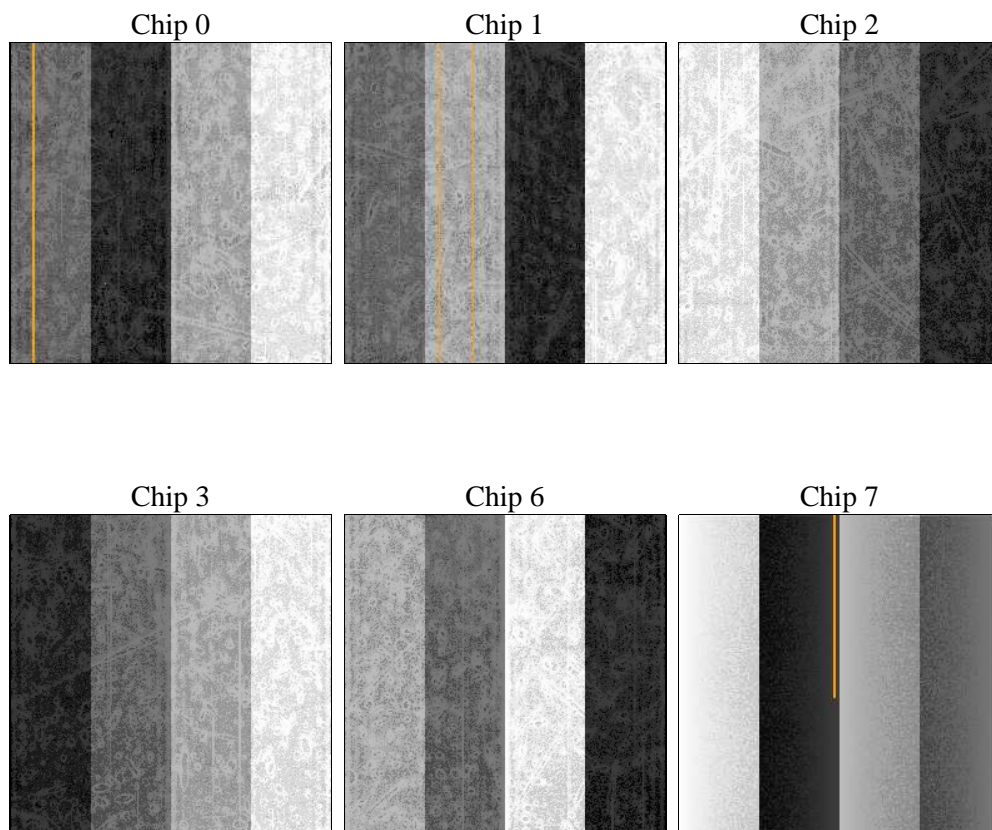
## 2 OBI

### 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 | 10.1.1              | Processing system revision     | ontime         | 6630.1228916049 | Sum of GTIs [s]                         |
| caldbver | 4.6.0               | &#160                          | ontime0        | 6630.1639316082 | Sum of GTIs [s]                         |
| date     | 2014-01-20T04:25:57 | Date and time of file creation | ontime1        | 6630.2049716115 | Sum of GTIs [s]                         |
| revision | 1                   | Processing version of data     | ontime2        | 6630.3999753594 | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 6630.0818516016 | Sum of GTIs [s]                         |
|          |                     |                                | ontime6        | 6630.3999753594 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 6630.1228916049 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 670263          | Number of level 1 events                |

### 2.1.4 Events

|                 | ccd 0  | ccd 1  | ccd 2  | ccd 3  | ccd 6  | ccd 7 |                | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 |
|-----------------|--------|--------|--------|--------|--------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 112010 | 124211 | 111140 | 115432 | 112741 | 94729 | grade 0 events | 11184 | 11102 | 11551 | 11752 | 11468 | 6062  |
| rejected events | 89579  | 101628 | 88692  | 92787  | 89285  | 51625 |                | 9%    | 8%    | 10%   | 10%   | 10%   | 6%    |
| rejected %      | 79%    | 81%    | 79%    | 80%    | 79%    | 54%   | grade 1 events | 62    | 43    | 73    | 68    | 46    | 50    |
|                 |        |        |        |        |        |       |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |        |        |        |        |        |       | grade 2 events | 4596  | 4761  | 4384  | 4266  | 4822  | 10623 |
|                 |        |        |        |        |        |       |                | 4%    | 3%    | 3%    | 3%    | 4%    | 11%   |
|                 |        |        |        |        |        |       | grade 3 events | 1530  | 1509  | 1558  | 1615  | 1553  | 3563  |
|                 |        |        |        |        |        |       |                | 1%    | 1%    | 1%    | 1%    | 1%    | 3%    |
|                 |        |        |        |        |        |       | grade 4 events | 1577  | 1537  | 1496  | 1608  | 1546  | 3471  |
|                 |        |        |        |        |        |       |                | 1%    | 1%    | 1%    | 1%    | 1%    | 3%    |
|                 |        |        |        |        |        |       | grade 5 events | 2129  | 2291  | 2042  | 2569  | 2409  | 5818  |
|                 |        |        |        |        |        |       |                | 1%    | 1%    | 1%    | 2%    | 2%    | 6%    |
|                 |        |        |        |        |        |       | grade 6 events | 3544  | 3674  | 3465  | 3404  | 4072  | 19385 |
|                 |        |        |        |        |        |       |                | 3%    | 2%    | 3%    | 2%    | 3%    | 20%   |
|                 |        |        |        |        |        |       | grade 7 events | 87388 | 99294 | 86571 | 90150 | 86825 | 45757 |
|                 |        |        |        |        |        |       |                | 78%   | 79%   | 77%   | 78%   | 77%   | 48%   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-012367         | ACIS-012367          | 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                   | 144.9970350625591    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 0                   | 10.02858109783931    | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 0.0                 | 62.91362054334618    | [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)  | 506523870.232036    | 506523869.20704      |                                       |           |         |
| Observation start date            | 2014-01-19T13:04:30 | 2014-01-19T13:04:29  |                                       |           |         |
| [s] Observation end time (MET)    | 506530987.832427    | 506530986.80743      |                                       |           |         |
| Observation end date              | 2014-01-19T15:03:08 | 2014-01-19T15:03:06  |                                       |           |         |
| 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)      | 2014.01.21      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 6.6301228916049 |

### A.2 Comments