

# V&V Reference Report

## L2 ASCDS Version : 10.2.4

Observation 52417 - L2 Version 1  
Chandra X-Ray Center

L2 Processing Date : Oct 5 2014

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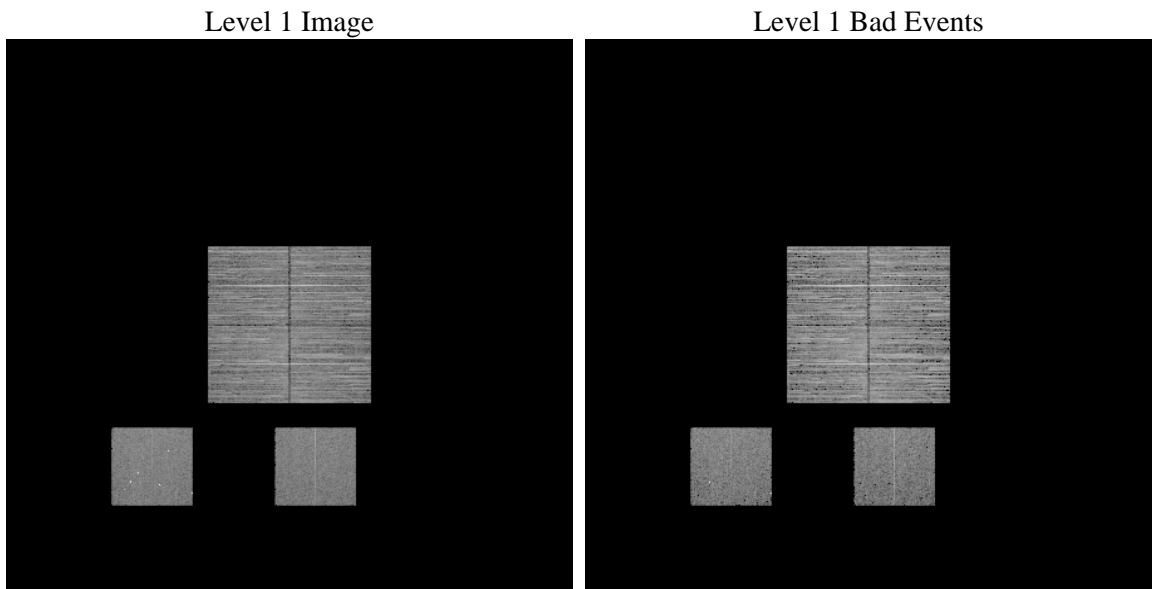
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 52417   | 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   | 13.969608350634                                 | Nominal RA [deg]                            |
| dec_nom  | 31.986952352282                                 | Nominal Dec [deg]                           |
| roll_nom | 174.05372444459                                 | Nominal Roll [deg]                          |
| revision | 1   | Processing version of data                  |
| ontime   | 4998.3999814391                                 | Sum of GTIs [s]                             |
| livetime | 4935.107231199                                  | Livetime [s]                                |
| ontime0  | 4998.3999814391                                 | Sum of GTIs [s]                             |
| ontime1  | 4998.3999814391                                 | Sum of GTIs [s]                             |
| ontime2  | 4998.3999814391                                 | Sum of GTIs [s]                             |
| ontime3  | 4998.3999814391                                 | Sum of GTIs [s]                             |
| ontime5  | 4998.3999814391                                 | Sum of GTIs [s]                             |
| ontime7  | 4998.3999814391                                 | Sum of GTIs [s]                             |
| l2events | 114600  | Number of level 2 events                    |

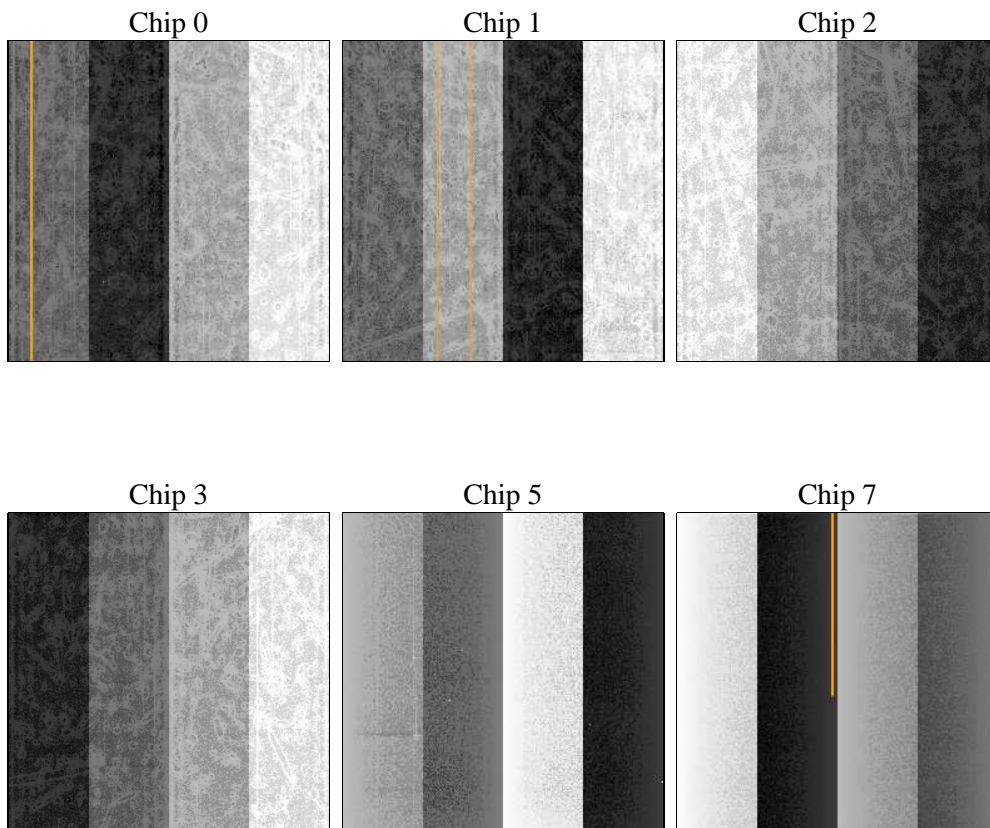
## 2 OBI

### 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         | 4998.3999814391 | Sum of GTIs [s]                         |
| caldsver | 4.6.3               | &#160                          | ontime0        | 4998.3999814391 | Sum of GTIs [s]                         |
| date     | 2014-10-06T00:09:13 | Date and time of file creation | ontime1        | 4998.3999814391 | Sum of GTIs [s]                         |
| revision | 1                   | Processing version of data     | ontime2        | 4998.3999814391 | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 4998.3999814391 | Sum of GTIs [s]                         |
|          |                     |                                | ontime5        | 4998.3999814391 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 4998.3999814391 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 497491          | 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  | 84114 | 86918 | 88474 | 88077 | 80341 | 69567 | grade 0 events | 7314  | 7156  | 7472  | 7566  | 7237  | 3922  |
| rejected events | 69228 | 71941 | 73981 | 73268 | 43320 | 39626 |                | 8%    | 8%    | 8%    | 8%    | 9%    | 5%    |
| rejected %      | 82%   | 82%   | 83%   | 83%   | 53%   | 56%   | grade 1 events | 35    | 41    | 52    | 43    | 446   | 49    |
|                 |       |       |       |       |       |       |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |       |       |       |       |       |       | grade 2 events | 3108  | 3378  | 2787  | 2915  | 11962 | 7547  |
|                 |       |       |       |       |       |       |                | 3%    | 3%    | 3%    | 3%    | 14%   | 10%   |
|                 |       |       |       |       |       |       | grade 3 events | 1056  | 917   | 1050  | 1063  | 1123  | 2396  |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 1%    | 3%    |
|                 |       |       |       |       |       |       | grade 4 events | 1024  | 982   | 1024  | 1074  | 1179  | 2351  |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 1%    | 3%    |
|                 |       |       |       |       |       |       | grade 5 events | 1746  | 1694  | 1545  | 1944  | 3934  | 4189  |
|                 |       |       |       |       |       |       |                | 2%    | 1%    | 1%    | 2%    | 4%    | 6%    |
|                 |       |       |       |       |       |       | grade 6 events | 2488  | 2668  | 2252  | 2298  | 15838 | 13977 |
|                 |       |       |       |       |       |       |                | 2%    | 3%    | 2%    | 2%    | 19%   | 20%   |
|                 |       |       |       |       |       |       | grade 7 events | 67343 | 70082 | 72292 | 71174 | 38622 | 35136 |
|                 |       |       |       |       |       |       |                | 80%   | 80%   | 81%   | 80%   | 48%   | 50%   |

## 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                   | 13.96960835063448    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 0                   | 31.98695235228226    | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 0.0                 | 174.0537244445918    | [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)  | 528916853.769725    | 528916852.74473      |                                       |           |         |
| Observation start date            | 2014-10-05T17:20:54 | 2014-10-05T17:20:52  |                                       |           |         |
| [s] Observation end time (MET)    | 528923469.120093    | 528923468.09509      |                                       |           |         |
| Observation end date              | 2014-10-05T19:11:09 | 2014-10-05T19:11:08  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Star Slots

## 2.4 FID Slots

## A Summary

### A.1 Status

|                            |                 |
|----------------------------|-----------------|
| V&V Scientist              | Joy Nichols     |
| V&V Date (YYYY-MM-DD)      | 2014.10.06      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 4.9983999814391 |

### A.2 Comments