

# V&V Reference Report

## L2 ASCDS Version : 10.2.4

Observation 52651 - L2 Version 1  
Chandra X-Ray Center

L2 Processing Date : Jul 9 2014

## Contents

|          |                               |          |
|----------|-------------------------------|----------|
| <b>1</b> | <b>Front</b>                  | <b>2</b> |
| <b>2</b> | <b>OBI</b>                    | <b>3</b> |
| 2.1      | OBI . . . . .                 | 3        |
| 2.1.1    | Images . . . . .              | 3        |
| 2.1.2    | Bias . . . . .                | 3        |
| 2.1.3    | Parameters . . . . .          | 4        |
| 2.1.4    | Events . . . . .              | 4        |
| 2.2      | Compared Parameters . . . . . | 5        |
| 2.3      | Star Slots . . . . .          | 6        |
| 2.4      | FID Slots . . . . .           | 6        |
| <b>A</b> | <b>Summary</b>                | <b>7</b> |
| A.1      | Status . . . . .              | 7        |
| A.2      | Comments . . . . .            | 7        |

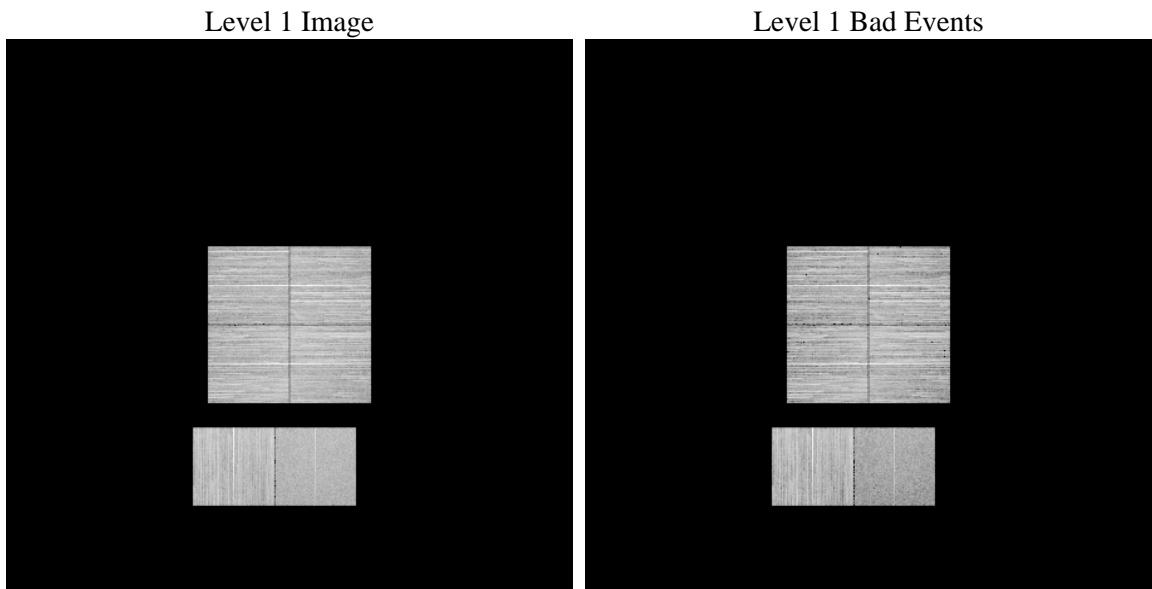
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 52651   | 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   | 61.064595670672                                 | Nominal RA [deg]                            |
| dec_nom  | -14.055874774893                                | Nominal Dec [deg]                           |
| roll_nom | 128.4626476782                                  | Nominal Roll [deg]                          |
| revision | 1   | Processing version of data                  |
| ontime   | 8437.7916483879                                 | Sum of GTIs [s]                             |
| livetime | 8330.9472499079                                 | Livetime [s]                                |
| ontime0  | 8437.7506083846                                 | Sum of GTIs [s]                             |
| ontime1  | 8437.7095683813                                 | Sum of GTIs [s]                             |
| ontime2  | 8437.668528378                                  | Sum of GTIs [s]                             |
| ontime3  | 8437.8326883912                                 | Sum of GTIs [s]                             |
| ontime6  | 8437.6274883747                                 | Sum of GTIs [s]                             |
| ontime7  | 8437.7916483879                                 | Sum of GTIs [s]                             |
| l2events | 173765  | Number of level 2 events                    |

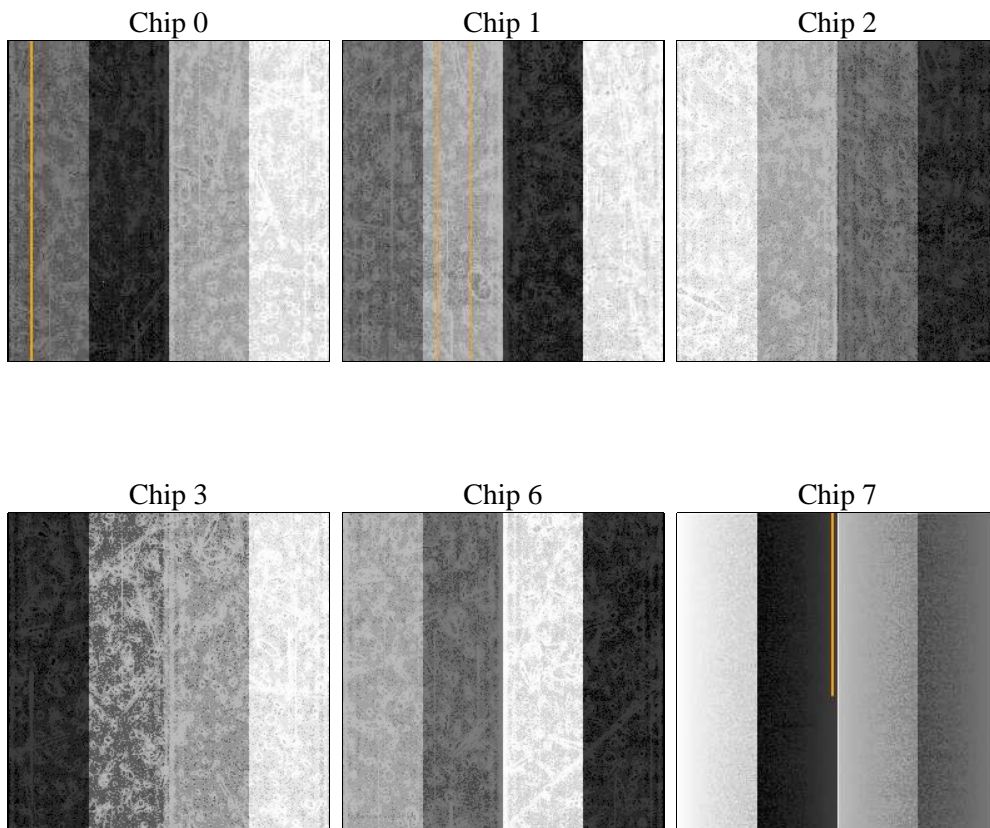
## 2 OBI

### 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         | 8437.7916483879 | Sum of GTIs [s]                         |
| caldsver | 4.6.2               | &#160                          | ontime0        | 8437.7506083846 | Sum of GTIs [s]                         |
| date     | 2014-07-09T23:47:11 | Date and time of file creation | ontime1        | 8437.7095683813 | Sum of GTIs [s]                         |
| revision | 1                   | Processing version of data     | ontime2        | 8437.668528378  | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 8437.8326883912 | Sum of GTIs [s]                         |
|          |                     |                                | ontime6        | 8437.6274883747 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 8437.7916483879 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 847673          | 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  | 135709 | 145924 | 148831 | 145024 | 155399 | 116786 | grade 0 events | 12981  | 12791  | 13703  | 13430  | 13203  | 6945  |
| rejected events | 109513 | 119743 | 122065 | 118831 | 128033 | 64980  |                | 9%     | 8%     | 9%     | 9%     | 8%     | 5%    |
| rejected %      | 80%    | 82%    | 82%    | 81%    | 82%    | 55%    | grade 1 events | 73     | 64     | 74     | 76     | 55     | 102   |
|                 |        |        |        |        |        |        |                | 0%     | 0%     | 0%     | 0%     | 0%     | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 5459   | 5686   | 5298   | 5038   | 5660   | 12588 |
|                 |        |        |        |        |        |        |                | 4%     | 3%     | 3%     | 3%     | 3%     | 10%   |
|                 |        |        |        |        |        |        | grade 3 events | 1815   | 1702   | 1876   | 1862   | 1824   | 4106  |
|                 |        |        |        |        |        |        |                | 1%     | 1%     | 1%     | 1%     | 1%     | 3%    |
|                 |        |        |        |        |        |        | grade 4 events | 1799   | 1718   | 1816   | 1793   | 1837   | 4149  |
|                 |        |        |        |        |        |        |                | 1%     | 1%     | 1%     | 1%     | 1%     | 3%    |
|                 |        |        |        |        |        |        | grade 5 events | 2765   | 2847   | 2601   | 3002   | 2975   | 7302  |
|                 |        |        |        |        |        |        |                | 2%     | 1%     | 1%     | 2%     | 1%     | 6%    |
|                 |        |        |        |        |        |        | grade 6 events | 4152   | 4299   | 4079   | 4079   | 4852   | 24039 |
|                 |        |        |        |        |        |        |                | 3%     | 2%     | 2%     | 2%     | 3%     | 20%   |
|                 |        |        |        |        |        |        | grade 7 events | 106665 | 116817 | 119384 | 115744 | 124993 | 57555 |
|                 |        |        |        |        |        |        |                | 78%    | 80%    | 80%    | 79%    | 80%    | 49%   |

## 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                   | 61.06459567067179    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 0                   | -14.05587477489274   | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 0.0                 | 128.4626476782008    | [s] Primary exposure time             | 3.2       | 3.2     |
| [mm] SIM focus pos                | -1.429586           | -0.6828225247311905  |                                       |           |         |
| [mm] SIM defocus                  | 0.1037507710433287  | 0.8505141146731063   |                                       |           |         |
| [mm] SIM translation stage pos    | 250.455976          | 250.466033080201     |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | -0.01005468664627074 |                                       |           |         |
| [s] Observation start time (MET)  | 521179138.590519    | 521179137.56552      |                                       |           |         |
| Observation start date            | 2014-07-08T03:58:59 | 2014-07-08T03:58:57  |                                       |           |         |
| [s] Observation end time (MET)    | 521191506.241204    | 521191505.2162       |                                       |           |         |
| Observation end date              | 2014-07-08T07:25:06 | 2014-07-08T07:25:05  |                                       |           |         |
| 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)      | 2014.07.10      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 8.4377916483879 |

### A.2 Comments