

# V&V Reference Report

## L2 ASCDS Version : 10.2.4

Observation 52506 - L2 Version 1  
Chandra X-Ray Center

L2 Processing Date : Sep 1 2014

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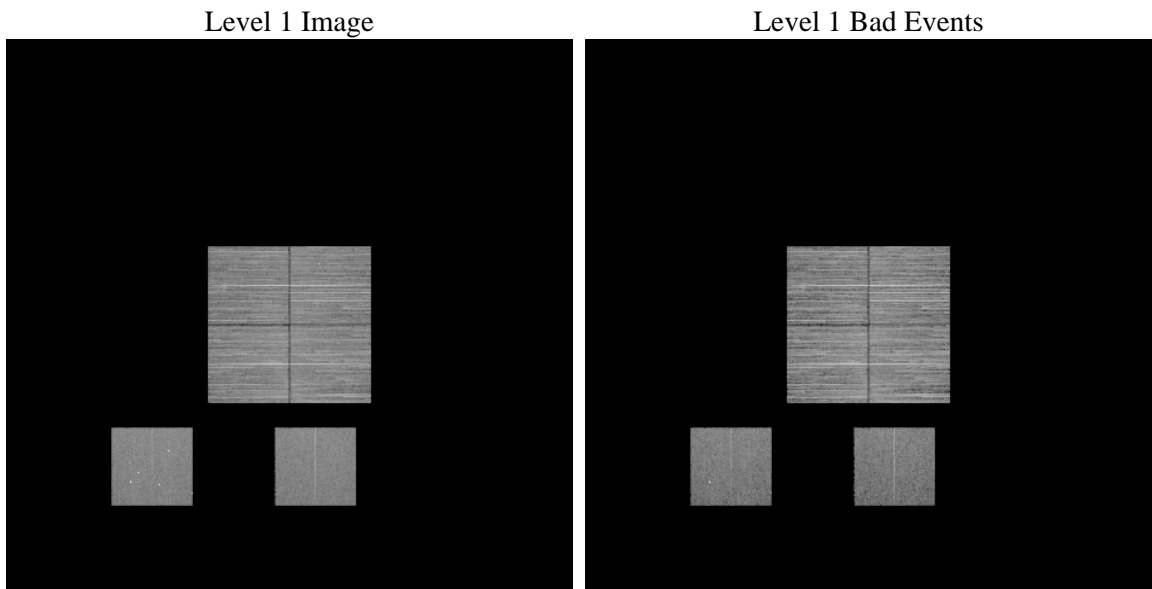
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 52506   | 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   | 359.97140992054                                 | Nominal RA [deg]                            |
| dec_nom  | 11.006682354616                                 | Nominal Dec [deg]                           |
| roll_nom | 133.78334314702                                 | Nominal Roll [deg]                          |
| revision | 1   | Processing version of data                  |
| ontime   | 8262.0364959836                                 | Sum of GTIs [s]                             |
| livetime | 8157.4176150703                                 | Livetime [s]                                |
| ontime0  | 8261.9954559803                                 | Sum of GTIs [s]                             |
| ontime1  | 8261.954415977                                  | Sum of GTIs [s]                             |
| ontime2  | 8261.9133759737                                 | Sum of GTIs [s]                             |
| ontime3  | 8262.0775359869                                 | Sum of GTIs [s]                             |
| ontime5  | 8261.8723359704                                 | Sum of GTIs [s]                             |
| ontime7  | 8262.0364959836                                 | Sum of GTIs [s]                             |
| l2events | 244499  | Number of level 2 events                    |

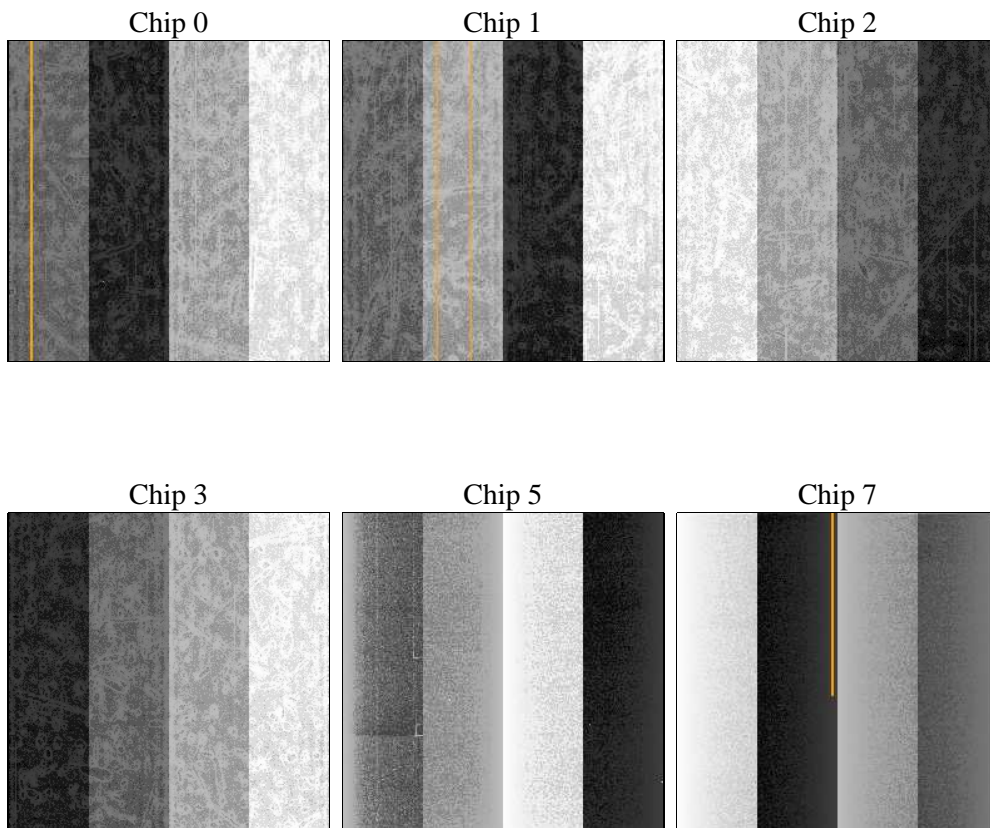
## 2 OBI

### 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 | 10.2.4              | Processing system revision     | ontime         | 8262.0364959836 | Sum of GTIs [s]                         |
| caldsver | 4.6.2               | &#160                          | ontime0        | 8261.9954559803 | Sum of GTIs [s]                         |
| date     | 2014-09-01T18:53:15 | Date and time of file creation | ontime1        | 8261.954415977  | Sum of GTIs [s]                         |
| revision | 1                   | Processing version of data     | ontime2        | 8261.9133759737 | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 8262.0775359869 | Sum of GTIs [s]                         |
|          |                     |                                | ontime5        | 8261.8723359704 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 8262.0364959836 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 933781          | 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  | 148236 | 167115 | 166562 | 173784 | 146676 | 131408 | grade 0 events | 16258  | 15934  | 16974  | 16978  | 12156 | 8816  |
| rejected events | 114838 | 132865 | 132837 | 139561 | 76890  | 71191  |                | 10%    | 9%     | 10%    | 9%     | 8%    | 6%    |
| rejected %      | 77%    | 79%    | 79%    | 80%    | 52%    | 54%    | grade 1 events | 79     | 78     | 114    | 102    | 153   | 92    |
|                 |        |        |        |        |        |        |                | 0%     | 0%     | 0%     | 0%     | 0%    | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 6881   | 7708   | 6598   | 6615   | 24661 | 15094 |
|                 |        |        |        |        |        |        |                | 4%     | 4%     | 3%     | 3%     | 16%   | 11%   |
|                 |        |        |        |        |        |        | grade 3 events | 2262   | 2086   | 2309   | 2351   | 2280  | 4707  |
|                 |        |        |        |        |        |        |                | 1%     | 1%     | 1%     | 1%     | 1%    | 3%    |
|                 |        |        |        |        |        |        | grade 4 events | 2118   | 2260   | 2273   | 2387   | 2113  | 4613  |
|                 |        |        |        |        |        |        |                | 1%     | 1%     | 1%     | 1%     | 1%    | 3%    |
|                 |        |        |        |        |        |        | grade 5 events | 2992   | 3073   | 2731   | 3198   | 6419  | 7807  |
|                 |        |        |        |        |        |        |                | 2%     | 1%     | 1%     | 1%     | 4%    | 5%    |
|                 |        |        |        |        |        |        | grade 6 events | 5982   | 6375   | 5713   | 5999   | 28838 | 27173 |
|                 |        |        |        |        |        |        |                | 4%     | 3%     | 3%     | 3%     | 19%   | 20%   |
|                 |        |        |        |        |        |        | grade 7 events | 111664 | 129601 | 129850 | 136154 | 70056 | 63106 |
|                 |        |        |        |        |        |        |                | 75%    | 77%    | 77%    | 78%    | 47%   | 48%   |

## 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                   | 359.9714099205381     | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 0                   | 11.00668235461558     | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 0.0                 | 133.7833431470178     | [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          | 250.4635187648994     |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | -0.007540371344731511 |                                       |           |         |
| [s] Observation start time (MET)  | 525943841.104589    | 525943840.07959       |                                       |           |         |
| Observation start date            | 2014-09-01T07:30:41 | 2014-09-01T07:30:40   |                                       |           |         |
| [s] Observation end time (MET)    | 525953650.355132    | 525953649.33013       |                                       |           |         |
| Observation end date              | 2014-09-01T10:14:10 | 2014-09-01T10:14:09   |                                       |           |         |
| 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)      | 2014.09.02      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 8.2620364959836 |

### A.2 Comments