

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 55501 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Feb 8 2012

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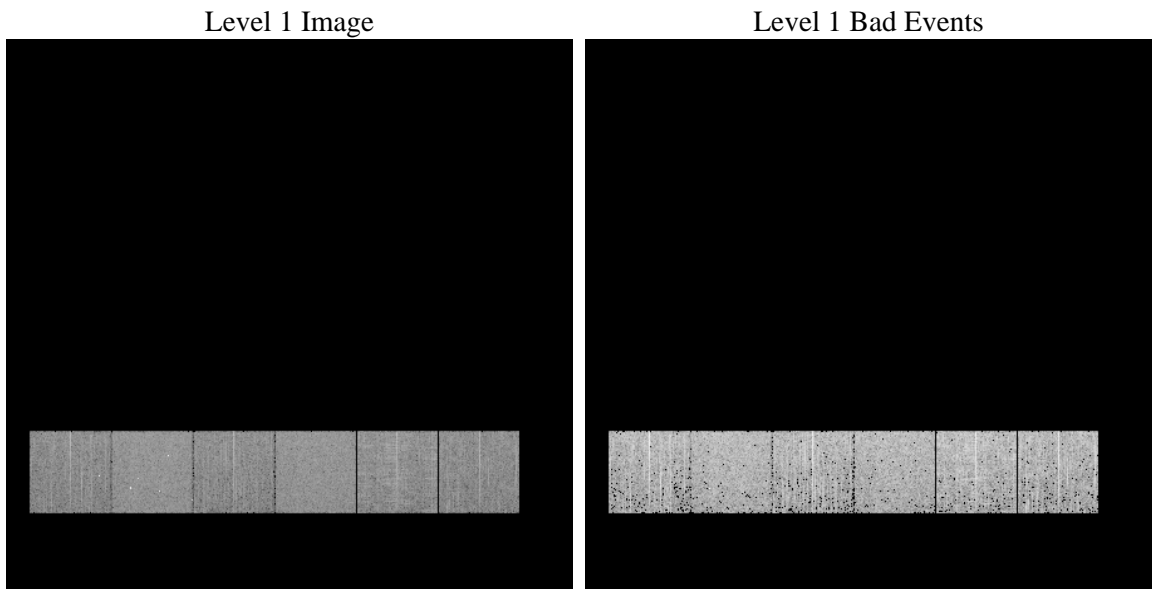
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 55501   | Observation id                              |
| title    | ACIS-456789 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   | 199.29281599414                                 | Nominal RA [deg]                            |
| dec_nom  | 13.385975897179                                 | Nominal Dec [deg]                           |
| roll_nom | 199.39283588882                                 | Nominal Roll [deg]                          |
| revision | 2   | Processing version of data                  |
| ontime   | 3283.1999878287                                 | Sum of GTIs [s]                             |
| livetime | 3241.6261326772                                 | Livetime [s]                                |
| ontime4  | 3283.1999878287                                 | Sum of GTIs [s]                             |
| ontime5  | 3283.1999878287                                 | Sum of GTIs [s]                             |
| ontime6  | 3283.1999878287                                 | Sum of GTIs [s]                             |
| ontime7  | 3283.1999878287                                 | Sum of GTIs [s]                             |
| ontime8  | 3283.1999878287                                 | Sum of GTIs [s]                             |
| ontime9  | 3283.1999878287                                 | Sum of GTIs [s]                             |
| l2events | 140825  | Number of level 2 events                    |

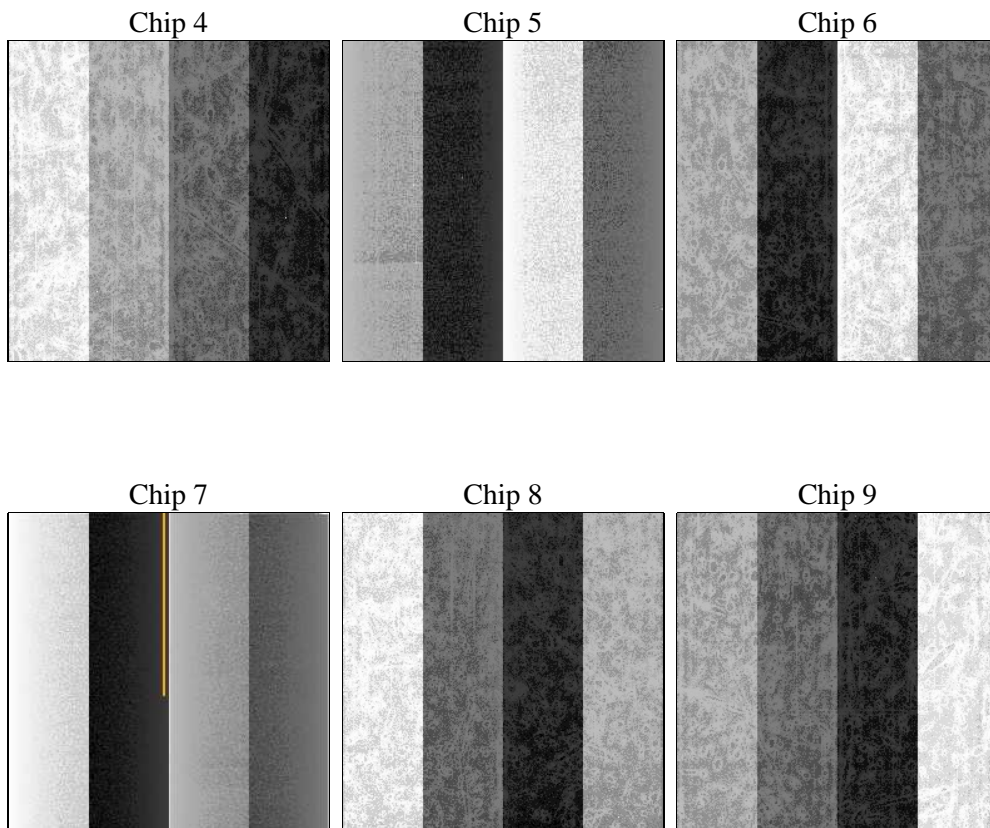
## 2 OBI

### 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 | 8.4.3               | Processing system revision     | ontime         | 3283.1999878287 | Sum of GTIs [s]                         |
| caldsver | 4.4.7               | &#160                          | ontime4        | 3283.1999878287 | Sum of GTIs [s]                         |
| date     | 2012-02-08T08:27:50 | Date and time of file creation | ontime5        | 3283.1999878287 | Sum of GTIs [s]                         |
| revision | 2                   | Processing version of data     | ontime6        | 3283.1999878287 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 3283.1999878287 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 3283.1999878287 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 3283.1999878287 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 304149          | Number of level 1 events                |

### 2.1.4 Events

|                 | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |                | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|-----------------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 44917 | 58946 | 45690 | 56384 | 53059 | 45153 | grade 0 events | 11837 | 5652  | 10824 | 5688  | 12390 | 11117 |
| rejected events | 24256 | 24276 | 24632 | 23572 | 27164 | 24237 |                | 26%   | 9%    | 23%   | 10%   | 23%   | 24%   |
| rejected %      | 54%   | 41%   | 53%   | 41%   | 51%   | 53%   | grade 1 events | 105   | 84    | 58    | 45    | 71    | 76    |
|                 |       |       |       |       |       |       |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |       |       |       |       |       |       | grade 2 events | 3337  | 11820 | 3916  | 7124  | 4992  | 3645  |
|                 |       |       |       |       |       |       |                | 7%    | 20%   | 8%    | 12%   | 9%    | 8%    |
|                 |       |       |       |       |       |       | grade 3 events | 1378  | 1581  | 1373  | 3018  | 1971  | 1435  |
|                 |       |       |       |       |       |       |                | 3%    | 2%    | 3%    | 5%    | 3%    | 3%    |
|                 |       |       |       |       |       |       | grade 4 events | 1425  | 1514  | 1362  | 2958  | 1932  | 1418  |
|                 |       |       |       |       |       |       |                | 3%    | 2%    | 2%    | 5%    | 3%    | 3%    |
|                 |       |       |       |       |       |       | grade 5 events | 1423  | 3303  | 1506  | 3811  | 1994  | 1656  |
|                 |       |       |       |       |       |       |                | 3%    | 5%    | 3%    | 6%    | 3%    | 3%    |
|                 |       |       |       |       |       |       | grade 6 events | 2702  | 14141 | 3601  | 14044 | 4637  | 3315  |
|                 |       |       |       |       |       |       |                | 6%    | 23%   | 7%    | 24%   | 8%    | 7%    |
|                 |       |       |       |       |       |       | grade 7 events | 22710 | 20851 | 23050 | 19696 | 25072 | 22491 |
|                 |       |       |       |       |       |       |                | 50%   | 35%   | 50%   | 34%   | 47%   | 49%   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-456789         | ACIS-456789          | 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                   | 199.2928159941386    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 0                   | 13.38597589717948    | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 0.0                 | 199.3928358888165    | [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)  | 419695858.900293    | 419695857.87529      |                                       |           |         |
| Observation start date            | 2011-04-20T14:10:59 | 2011-04-20T14:10:57  |                                       |           |         |
| [s] Observation end time (MET)    | 419707201.550882    | 419707200.52588      |                                       |           |         |
| Observation end date              | 2011-04-20T17:20:02 | 2011-04-20T17:20:00  |                                       |           |         |
| 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)      | 2012.02.10      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 3.2831999878287 |

### **A.2 Comments**