

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 56066 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Jul 2 2012

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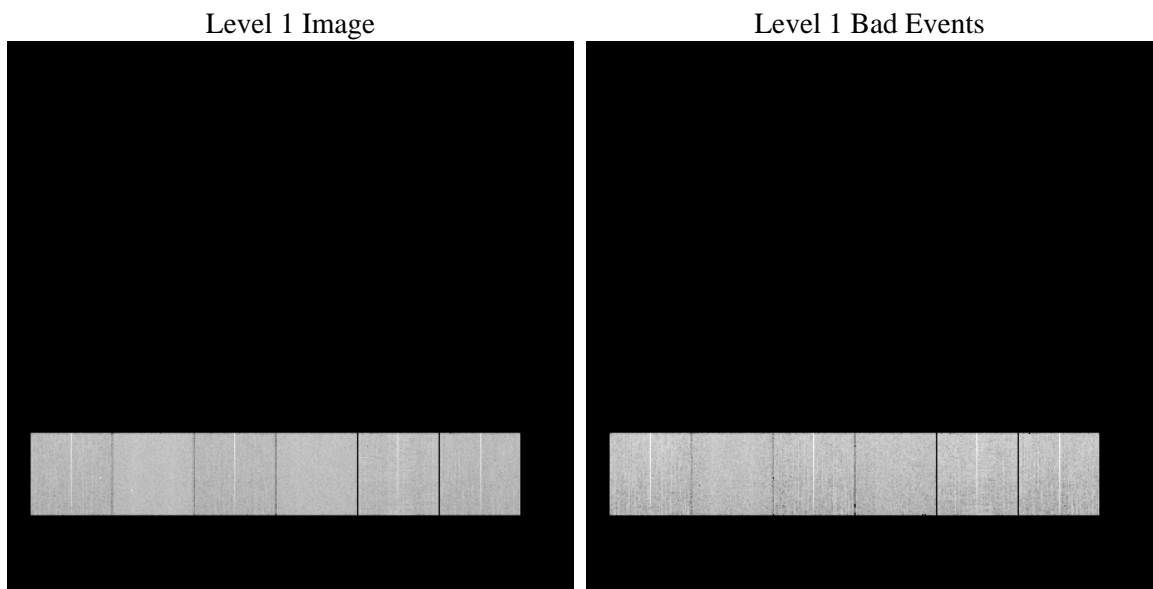
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 56066   | 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   | 317.48963353901                                 | Nominal RA [deg]                            |
| dec_nom  | 11.472696038761                                 | Nominal Dec [deg]                           |
| roll_nom | 207.1412805498                                  | Nominal Roll [deg]                          |
| revision | 2   | Processing version of data                  |
| ontime   | 8274.9385383129                                 | Sum of GTIs [s]                             |
| livetime | 8170.156283971                                  | Livetime [s]                                |
| ontime4  | 8271.5744179487                                 | Sum of GTIs [s]                             |
| ontime5  | 8274.8974983096                                 | Sum of GTIs [s]                             |
| ontime6  | 8274.8564583063                                 | Sum of GTIs [s]                             |
| ontime7  | 8274.9385383129                                 | Sum of GTIs [s]                             |
| ontime8  | 8274.7743782997                                 | Sum of GTIs [s]                             |
| ontime9  | 8274.9795783162                                 | Sum of GTIs [s]                             |
| l2events | 404372  | Number of level 2 events                    |

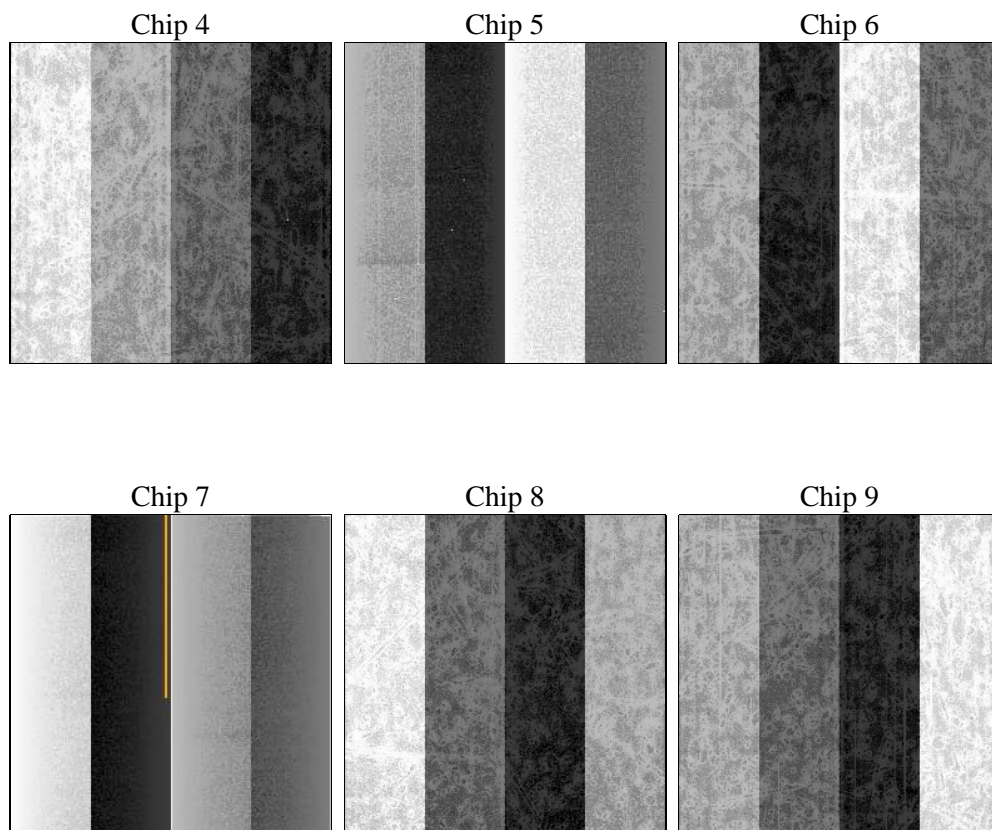
## 2 OBI

### 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 | 8.4.5               | Processing system revision     | ontime         | 8274.9385383129 | Sum of GTIs [s]                         |
| caldsver | 4.5.0               | &#160                          | ontime4        | 8271.5744179487 | Sum of GTIs [s]                         |
| date     | 2012-07-02T05:48:15 | Date and time of file creation | ontime5        | 8274.8974983096 | Sum of GTIs [s]                         |
| revision | 2                   | Processing version of data     | ontime6        | 8274.8564583063 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 8274.9385383129 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 8274.7743782997 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 8274.9795783162 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 883590          | 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  | 135314 | 165899 | 132720 | 161308 | 154226 | 134123 | grade 0 events | 32909 | 9847  | 30745 | 15589 | 35749 | 31479 |
| rejected events | 78189  | 71169  | 71818  | 67767  | 79217  | 74645  |                | 24%   | 5%    | 23%   | 9%    | 23%   | 23%   |
| rejected %      | 57%    | 42%    | 54%    | 42%    | 51%    | 55%    | grade 1 events | 308   | 210   | 174   | 128   | 243   | 225   |
|                 |        |        |        |        |        |        |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 8802  | 35223 | 11970 | 20586 | 14502 | 10546 |
|                 |        |        |        |        |        |        |                | 6%    | 21%   | 9%    | 12%   | 9%    | 7%    |
|                 |        |        |        |        |        |        | grade 3 events | 4075  | 3591  | 3884  | 8013  | 5552  | 4005  |
|                 |        |        |        |        |        |        |                | 3%    | 2%    | 2%    | 4%    | 3%    | 2%    |
|                 |        |        |        |        |        |        | grade 4 events | 3946  | 3291  | 3882  | 8043  | 5285  | 3976  |
|                 |        |        |        |        |        |        |                | 2%    | 1%    | 2%    | 4%    | 3%    | 2%    |
|                 |        |        |        |        |        |        | grade 5 events | 3985  | 8248  | 3941  | 10268 | 5425  | 4558  |
|                 |        |        |        |        |        |        |                | 2%    | 4%    | 2%    | 6%    | 3%    | 3%    |
|                 |        |        |        |        |        |        | grade 6 events | 7421  | 42818 | 10438 | 41334 | 13942 | 9492  |
|                 |        |        |        |        |        |        |                | 5%    | 25%   | 7%    | 25%   | 9%    | 7%    |
|                 |        |        |        |        |        |        | grade 7 events | 73868 | 62671 | 67686 | 57347 | 73528 | 69842 |
|                 |        |        |        |        |        |        |                | 54%   | 37%   | 50%   | 35%   | 47%   | 52%   |

## 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                   | 317.4896335390056    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 0                   | 11.47269603876141    | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 0.0                 | 207.1412805498048    | [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)  | 398704759.817299    | 398704758.7923       |                                       |           |         |
| Observation start date            | 2010-08-20T15:19:20 | 2010-08-20T15:19:18  |                                       |           |         |
| [s] Observation end time (MET)    | 398717393.967946    | 398717392.94295      |                                       |           |         |
| Observation end date              | 2010-08-20T18:49:54 | 2010-08-20T18:49:52  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## **2.3 Star Slots**

## **2.4 FID Slots**

## A Summary

### A.1 Status

|                            |                 |
|----------------------------|-----------------|
| V&V Scientist              | Beth Sundheim   |
| V&V Date (YYYY-MM-DD)      | 2012.07.11      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 8.2749385383129 |

### A.2 Comments