

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 59370 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Dec 30 2012

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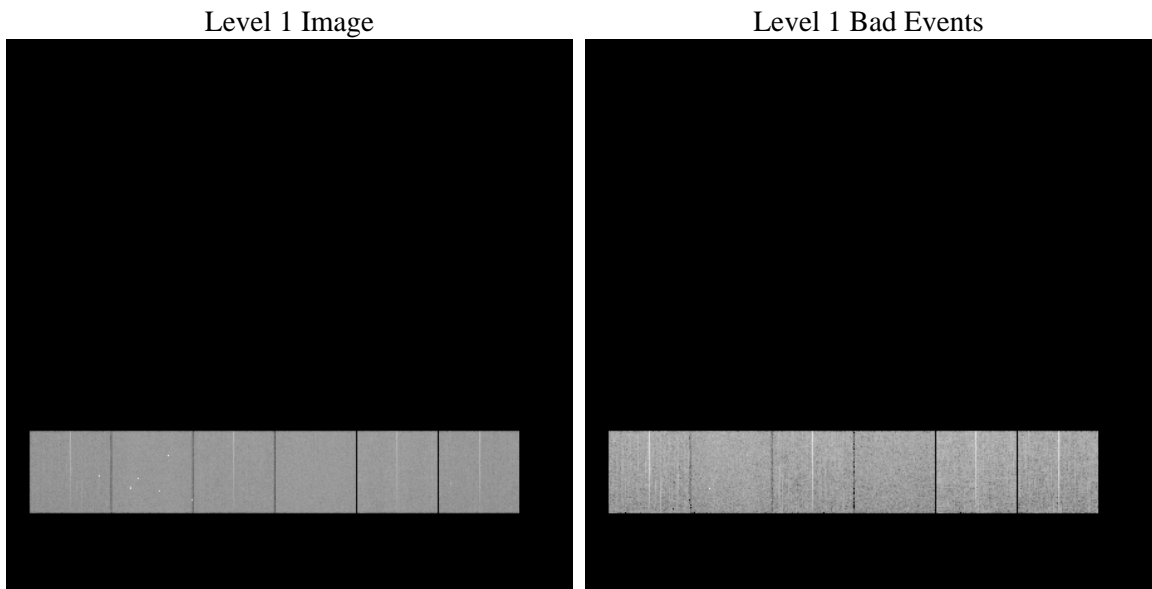
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 59370   | 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   | 59.89150763044                                  | Nominal RA [deg]                            |
| dec_nom  | 4.327345172534                                  | Nominal Dec [deg]                           |
| roll_nom | 74.297919065975                                 | Nominal Roll [deg]                          |
| revision | 3   | Processing version of data                  |
| ontime   | 8184.7895862162                                 | Sum of GTIs [s]                             |
| livetime | 8081.1488521869                                 | Livetime [s]                                |
| ontime4  | 7448.9635381401                                 | Sum of GTIs [s]                             |
| ontime5  | 8184.7485462129                                 | Sum of GTIs [s]                             |
| ontime6  | 8051.8272537589                                 | Sum of GTIs [s]                             |
| ontime7  | 8184.7895862162                                 | Sum of GTIs [s]                             |
| ontime8  | 8184.6254262328                                 | Sum of GTIs [s]                             |
| ontime9  | 7841.286465019                                  | Sum of GTIs [s]                             |
| l2events | 1016728   | Number of level 2 events                    |

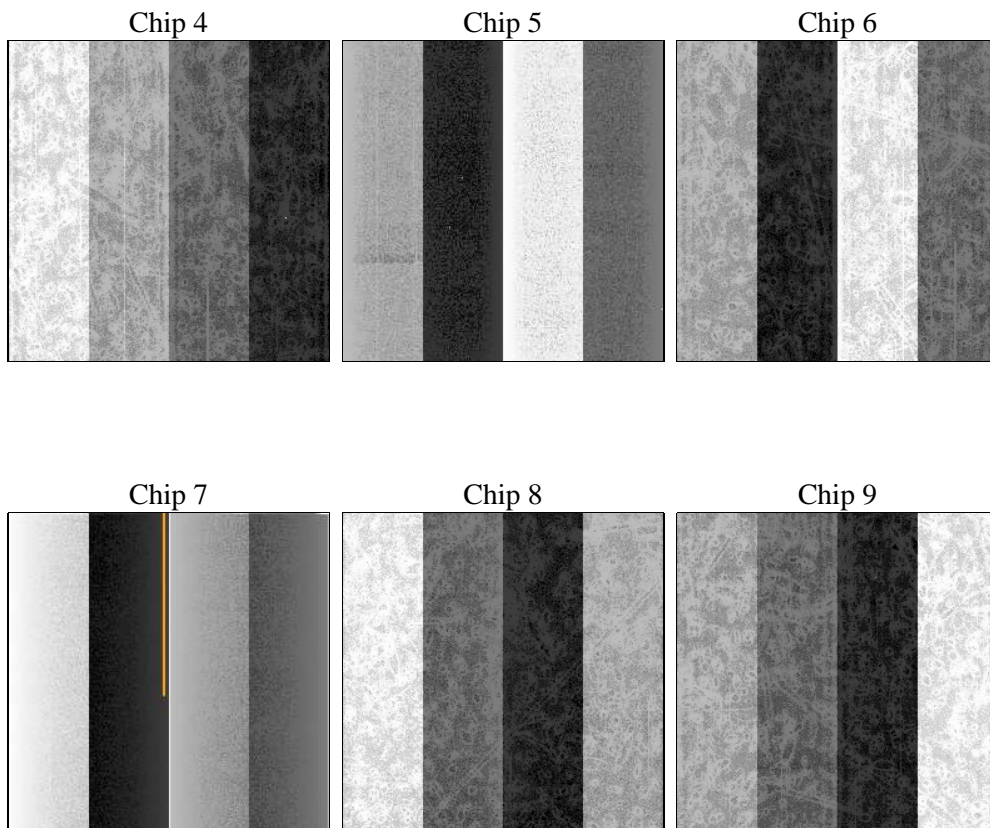
## 2 OBI

### 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 | 8.5.1.1             | Processing system revision     | ontime         | 8184.7895862162 | Sum of GTIs [s]                         |
| caldsver | 4.5.5               | &#160                          | ontime4        | 7448.9635381401 | Sum of GTIs [s]                         |
| date     | 2012-12-31T00:41:39 | Date and time of file creation | ontime5        | 8184.7485462129 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime6        | 8051.8272537589 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 8184.7895862162 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 8184.6254262328 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 7841.286465019  | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1481222         | 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  | 222994 | 252382 | 246823 | 258897 | 265703 | 234423 | grade 0 events | 92733 | 39024 | 98598 | 46746 | 104165 | 94642 |
| rejected events | 66398  | 63616  | 66354  | 56395  | 73696  | 64285  |                | 41%   | 15%   | 39%   | 18%   | 39%    | 40%   |
| rejected %      | 29%    | 25%    | 26%    | 21%    | 27%    | 27%    | grade 1 events | 763   | 234   | 487   | 171   | 557    | 549   |
|                 |        |        |        |        |        |        |                | 0%    | 0%    | 0%    | 0%    | 0%     | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 24042 | 70968 | 31987 | 45128 | 34583  | 29177 |
|                 |        |        |        |        |        |        |                | 10%   | 28%   | 12%   | 17%   | 13%    | 12%   |
|                 |        |        |        |        |        |        | grade 3 events | 10474 | 9570  | 11509 | 19930 | 12810  | 11044 |
|                 |        |        |        |        |        |        |                | 4%    | 3%    | 4%    | 7%    | 4%     | 4%    |
|                 |        |        |        |        |        |        | grade 4 events | 10660 | 9384  | 11304 | 19940 | 12671  | 11177 |
|                 |        |        |        |        |        |        |                | 4%    | 3%    | 4%    | 7%    | 4%     | 4%    |
|                 |        |        |        |        |        |        | grade 5 events | 3555  | 8814  | 3950  | 9193  | 4909   | 4034  |
|                 |        |        |        |        |        |        |                | 1%    | 3%    | 1%    | 3%    | 1%     | 1%    |
|                 |        |        |        |        |        |        | grade 6 events | 20270 | 61904 | 29186 | 73107 | 30030  | 25928 |
|                 |        |        |        |        |        |        |                | 9%    | 24%   | 11%   | 28%   | 11%    | 11%   |
|                 |        |        |        |        |        |        | grade 7 events | 60497 | 52484 | 59802 | 44682 | 65978  | 57872 |
|                 |        |        |        |        |        |        |                | 27%   | 20%   | 24%   | 17%   | 24%    | 24%   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               |
|-----------------------------------|---------------------|----------------------|
| Instrument                        | ACIS                | ACIS                 |
| Detector                          | ACIS-456789         | ACIS-456789          |
| Grating                           | NONE                | NONE                 |
| Data mode                         | FAINT               | FAINT                |
| Observation mode                  | SECONDARY           | SECONDARY            |
| [deg] Pointing RA                 | 0                   | 59.89150763043956    |
| [deg] Pointing Dec                | 0                   | 4.327345172534021    |
| [deg] Pointing Roll               | 0.0                 | 74.29791906597536    |
| [mm] SIM focus pos                | -0.684267           | -0.6828225247311905  |
| [mm] SIM defocus                  | 0                   | 0.8505141146731063   |
| [mm] SIM translation stage pos    | -190.132523         | 250.466033080201     |
| [mm] SIM translation stage offset | 0                   | -0.01005468664627074 |
| [s] Observation start time (MET)  | 246542115.304977    | 246542114.27997      |
| Observation start date            | 2005-10-24T11:55:15 | 2005-10-24T11:55:14  |
| [s] Observation end time (MET)    | 246564872.356026    | 246564871.33102      |
| Observation end date              | 2005-10-24T18:14:32 | 2005-10-24T18:14:31  |
| Read mode                         | TIMED               | TIMED                |

| Parameter                       | Planned   | Actual  |
|---------------------------------|-----------|---------|
| Obspar format version number    | 7         | 7       |
| Obspar file type                | PREDICTED | ACTUAL  |
| Obspar update status            | NONE      | UPDATED |
| On-chip summing requested       | N         | N       |
| Subarray requested              | NONE      | NONE    |
| Alternating exposures requested | N         | N       |
| [s] Primary exposure time       | 3.2       | 3.2     |

## **2.3 Star Slots**

## **2.4 FID Slots**

## A Summary

### A.1 Status

|                            |                 |
|----------------------------|-----------------|
| V&V Scientist              | Jen Lauer       |
| V&V Date (YYYY-MM-DD)      | 2013.01.28      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 8.1847895862162 |

### A.2 Comments