

# V&V Reference Report

## L2 ASCDS Version : 8.5

Observation 59923 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Dec 12 2012

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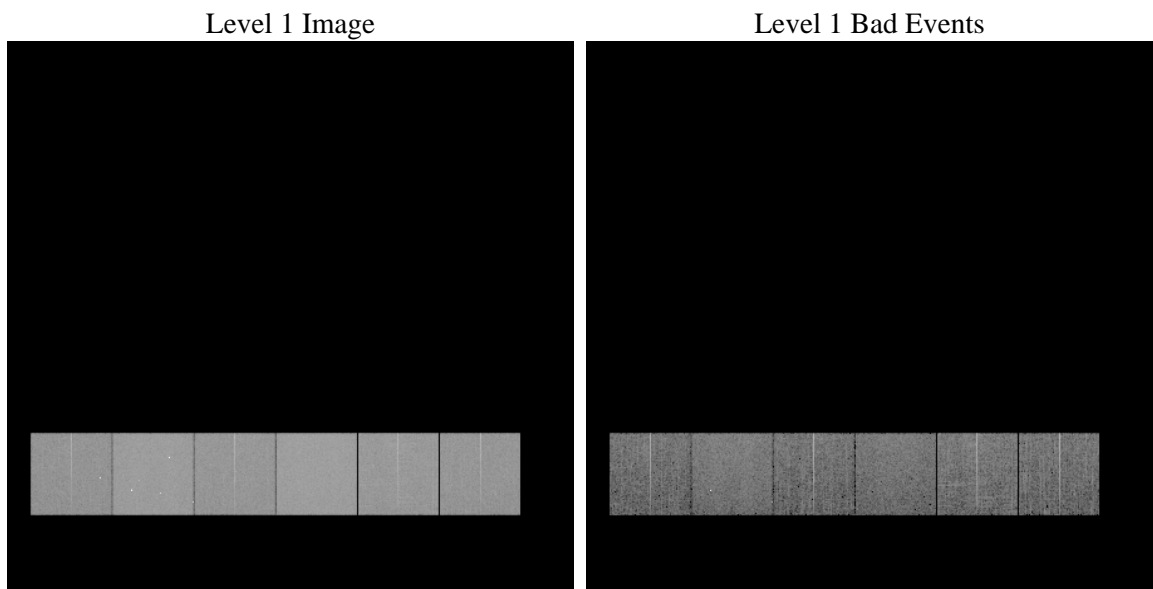
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 59923   | 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   | 112.76945026644                                 | Nominal RA [deg]                            |
| dec_nom  | 42.114155854119                                 | Nominal Dec [deg]                           |
| roll_nom | 115.54498229857                                 | Nominal Roll [deg]                          |
| revision | 3   | Processing version of data                  |
| ontime   | 7800.1127424836                                 | Sum of GTIs [s]                             |
| livetime | 7701.3430182743                                 | Livetime [s]                                |
| ontime4  | 5745.2146300972                                 | Sum of GTIs [s]                             |
| ontime5  | 7800.0717024803                                 | Sum of GTIs [s]                             |
| ontime6  | 6166.5816082656                                 | Sum of GTIs [s]                             |
| ontime7  | 7800.1127424836                                 | Sum of GTIs [s]                             |
| ontime8  | 6388.0312050283                                 | Sum of GTIs [s]                             |
| ontime9  | 6020.8605270982                                 | Sum of GTIs [s]                             |
| l2events | 1051766   | Number of level 2 events                    |

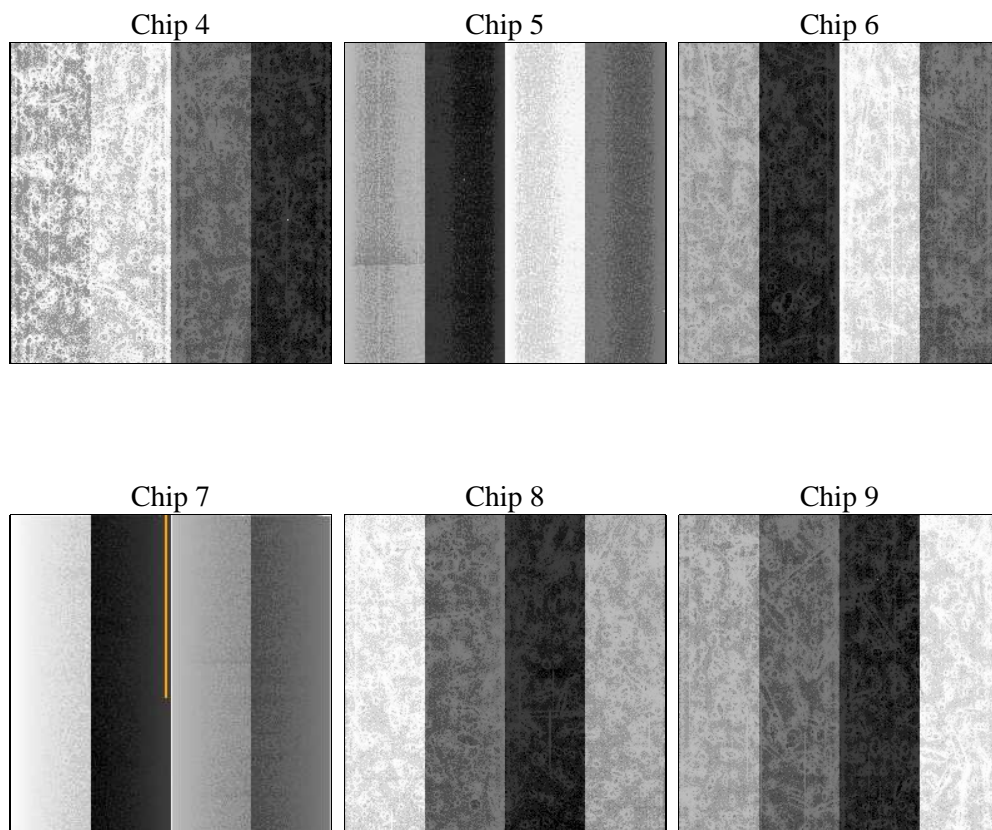
## 2 OBI

### 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                 | Processing system revision     | ontime         | 7800.1127424836 | Sum of GTIs [s]                         |
| caldsver | 4.5.4               | &#160                          | ontime4        | 5745.2146300972 | Sum of GTIs [s]                         |
| date     | 2012-12-12T19:53:41 | Date and time of file creation | ontime5        | 7800.0717024803 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime6        | 6166.5816082656 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 7800.1127424836 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 6388.0312050283 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 6020.8605270982 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1411349         | 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  | 196107 | 268469 | 218873 | 280755 | 237934 | 209211 | grade 0 events | 88094 | 44422 | 93849 | 56335 | 99903 | 90029 |
| rejected events | 44564  | 57272  | 45329  | 46779  | 53617  | 46090  |                | 44%   | 16%   | 42%   | 20%   | 41%   | 43%   |
| rejected %      | 22%    | 21%    | 20%    | 16%    | 22%    | 22%    | grade 1 events | 713   | 296   | 505   | 193   | 559   | 574   |
|                 |        |        |        |        |        |        |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 23942 | 77777 | 30211 | 51605 | 32597 | 27819 |
|                 |        |        |        |        |        |        |                | 12%   | 28%   | 13%   | 18%   | 13%   | 13%   |
|                 |        |        |        |        |        |        | grade 3 events | 10094 | 11979 | 10851 | 23372 | 12160 | 10396 |
|                 |        |        |        |        |        |        |                | 5%    | 4%    | 4%    | 8%    | 5%    | 4%    |
|                 |        |        |        |        |        |        | grade 4 events | 10027 | 11639 | 10769 | 23263 | 11910 | 10475 |
|                 |        |        |        |        |        |        |                | 5%    | 4%    | 4%    | 8%    | 5%    | 5%    |
|                 |        |        |        |        |        |        | grade 5 events | 2598  | 9438  | 2980  | 8320  | 3723  | 3148  |
|                 |        |        |        |        |        |        |                | 1%    | 3%    | 1%    | 2%    | 1%    | 1%    |
|                 |        |        |        |        |        |        | grade 6 events | 19386 | 65380 | 27864 | 79401 | 27747 | 24402 |
|                 |        |        |        |        |        |        |                | 9%    | 24%   | 12%   | 28%   | 11%   | 11%   |
|                 |        |        |        |        |        |        | grade 7 events | 41253 | 47538 | 41844 | 38266 | 49335 | 42368 |
|                 |        |        |        |        |        |        |                | 21%   | 17%   | 19%   | 13%   | 20%   | 20%   |

## 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                | On-chip summing requested       | N         | N       |
| Observation mode                  | SECONDARY           | SECONDARY            | Subarray requested              | NONE      | NONE    |
| [deg] Pointing RA                 | 0                   | 112.769450266444     | Alternating exposures requested | N         | N       |
| [deg] Pointing Dec                | 0                   | 42.11415585411902    | [s] Primary exposure time       | 3.2       | 3.2     |
| [deg] Pointing Roll               | 0.0                 | 115.5449822985749    |                                 |           |         |
| [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)  | 219317870.114614    | 219317869.08962      |                                 |           |         |
| Observation start date            | 2004-12-13T09:37:50 | 2004-12-13T09:37:49  |                                 |           |         |
| [s] Observation end time (MET)    | 219366906.116818    | 219366905.09183      |                                 |           |         |
| Observation end date              | 2004-12-13T23:15:06 | 2004-12-13T23:15:05  |                                 |           |         |
| 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)      | 2013.01.04      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 7.8001127424836 |

### A.2 Comments