

# V&V Reference Report

## L2 ASCDS Version : 8.5

Observation 60082 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Dec 7 2012

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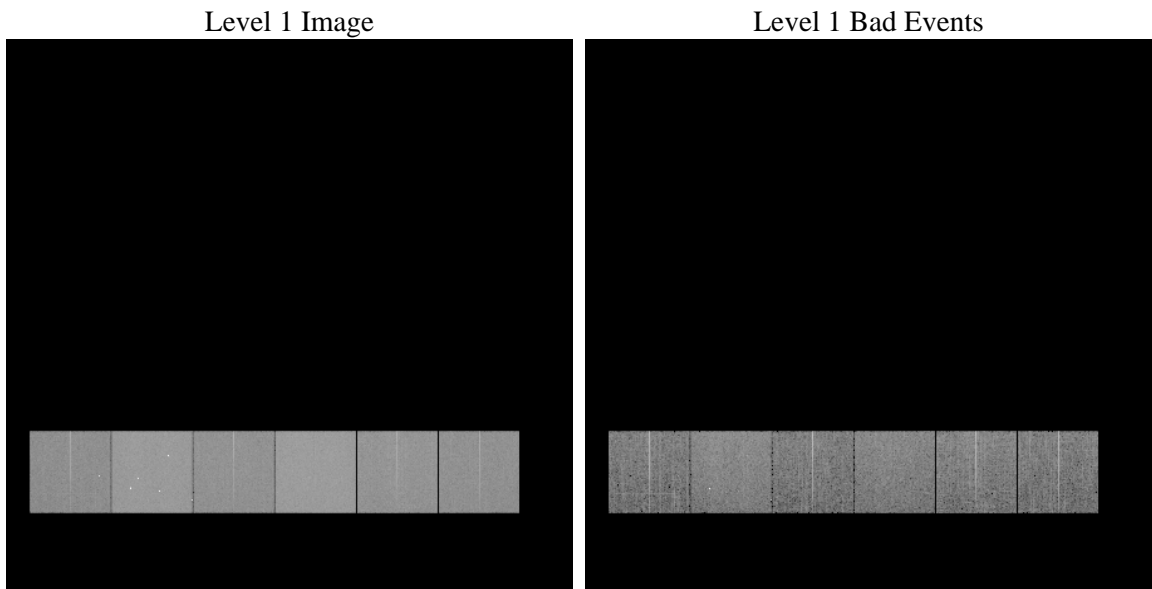
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 60082   | 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   | 129.96590204773                                 | Nominal RA [deg]                            |
| dec_nom  | -33.000645475479                                | Nominal Dec [deg]                           |
| roll_nom | 148.44655867589                                 | Nominal Roll [deg]                          |
| revision | 3   | Processing version of data                  |
| ontime   | 8179.1999695301                                 | Sum of GTIs [s]                             |
| livetime | 8075.630014593                                  | Livetime [s]                                |
| ontime4  | 5233.1640045345                                 | Sum of GTIs [s]                             |
| ontime5  | 8179.1999695301                                 | Sum of GTIs [s]                             |
| ontime6  | 5813.2983363867                                 | Sum of GTIs [s]                             |
| ontime7  | 8179.1999695301                                 | Sum of GTIs [s]                             |
| ontime8  | 6033.6847116947                                 | Sum of GTIs [s]                             |
| ontime9  | 5635.0449929237                                 | Sum of GTIs [s]                             |
| l2events | 1110658   | Number of level 2 events                    |

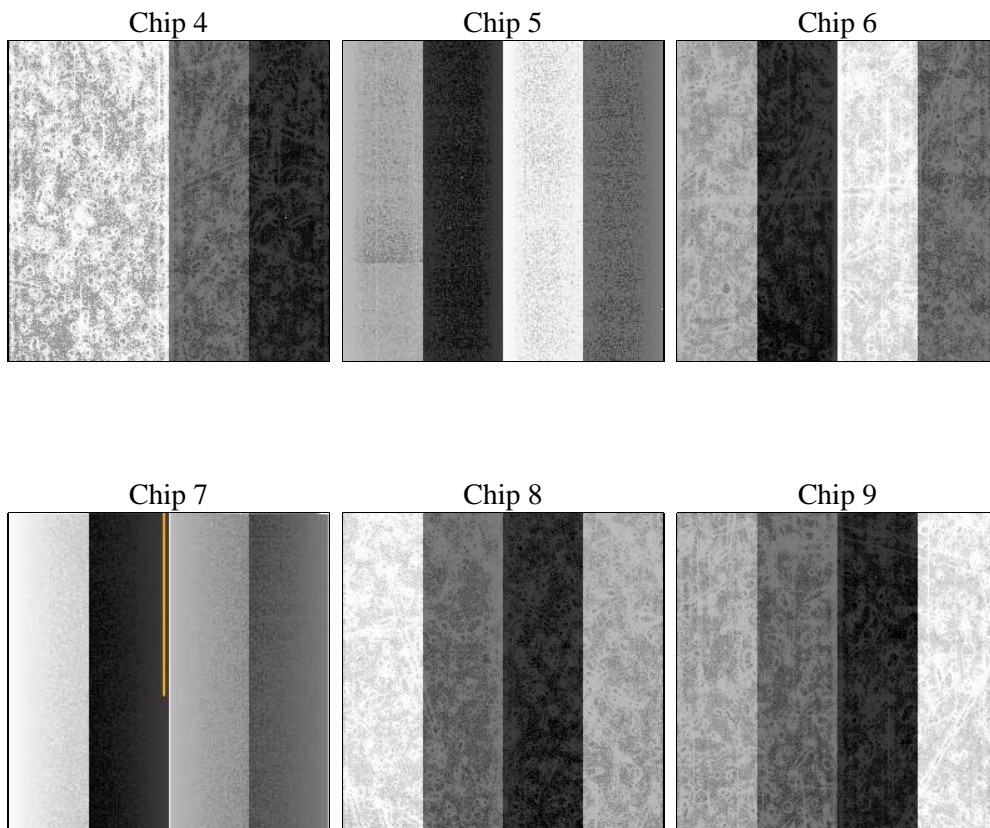
## 2 OBI

### 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         | 8179.1999695301 | Sum of GTIs [s]                         |
| caldsver | 4.5.4               | &#160                          | ontime4        | 5233.1640045345 | Sum of GTIs [s]                         |
| date     | 2012-12-07T22:50:12 | Date and time of file creation | ontime5        | 8179.1999695301 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime6        | 5813.2983363867 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 8179.1999695301 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 6033.6847116947 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 5635.0449929237 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1498030         | 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  | 196130 | 305760 | 224220 | 316195 | 243314 | 212411 | grade 0 events | 88246 | 54072 | 96886 | 63032 | 103525 | 91752 |
| rejected events | 47007  | 64358  | 47077  | 54800  | 54655  | 46965  |                | 44%   | 17%   | 43%   | 19%   | 42%    | 43%   |
| rejected %      | 23%    | 21%    | 20%    | 17%    | 22%    | 22%    | grade 1 events | 685   | 363   | 504   | 168   | 557    | 578   |
|                 |        |        |        |        |        |        |                | 0%    | 0%    | 0%    | 0%    | 0%     | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 23277 | 90507 | 31095 | 57928 | 33434  | 28597 |
|                 |        |        |        |        |        |        |                | 11%   | 29%   | 13%   | 18%   | 13%    | 13%   |
|                 |        |        |        |        |        |        | grade 3 events | 9921  | 13010 | 11204 | 26297 | 12634  | 10846 |
|                 |        |        |        |        |        |        |                | 5%    | 4%    | 4%    | 8%    | 5%     | 5%    |
|                 |        |        |        |        |        |        | grade 4 events | 9971  | 12757 | 10980 | 26127 | 12354  | 10720 |
|                 |        |        |        |        |        |        |                | 5%    | 4%    | 4%    | 8%    | 5%     | 5%    |
|                 |        |        |        |        |        |        | grade 5 events | 2576  | 9397  | 2947  | 9186  | 3552   | 3110  |
|                 |        |        |        |        |        |        |                | 1%    | 3%    | 1%    | 2%    | 1%     | 1%    |
|                 |        |        |        |        |        |        | grade 6 events | 19397 | 73803 | 28873 | 91168 | 28651  | 25414 |
|                 |        |        |        |        |        |        |                | 9%    | 24%   | 12%   | 28%   | 11%    | 11%   |
|                 |        |        |        |        |        |        | grade 7 events | 42057 | 51851 | 41731 | 42289 | 48607  | 41394 |
|                 |        |        |        |        |        |        |                | 21%   | 16%   | 18%   | 13%   | 19%    | 19%   |

## 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                   | 129.9659020477274    | Alternating exposures requested | N         | N       |
| [deg] Pointing Dec                | 0                   | -33.00064547547924   | [s] Primary exposure time       | 3.2       | 3.2     |
| [deg] Pointing Roll               | 0.0                 | 148.4465586758863    |                                 |           |         |
| [mm] SIM focus pos                | -0.684267           | -0.7809083437167272  |                                 |           |         |
| [mm] SIM defocus                  | 0                   | 0.7524282956875696   |                                 |           |         |
| [mm] SIM translation stage pos    | -190.132523         | 250.466033080201     |                                 |           |         |
| [mm] SIM translation stage offset | 0                   | -0.01005468664627074 |                                 |           |         |
| [s] Observation start time (MET)  | 209758209.236665    | 209758208.21167      |                                 |           |         |
| Observation start date            | 2004-08-24T18:10:09 | 2004-08-24T18:10:08  |                                 |           |         |
| [s] Observation end time (MET)    | 209781878.537718    | 209781877.51273      |                                 |           |         |
| Observation end date              | 2004-08-25T00:44:39 | 2004-08-25T00:44:37  |                                 |           |         |
| 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)      | 2012.12.27      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 8.1791999695301 |

### A.2 Comments