

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 60406 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Nov 10 2012

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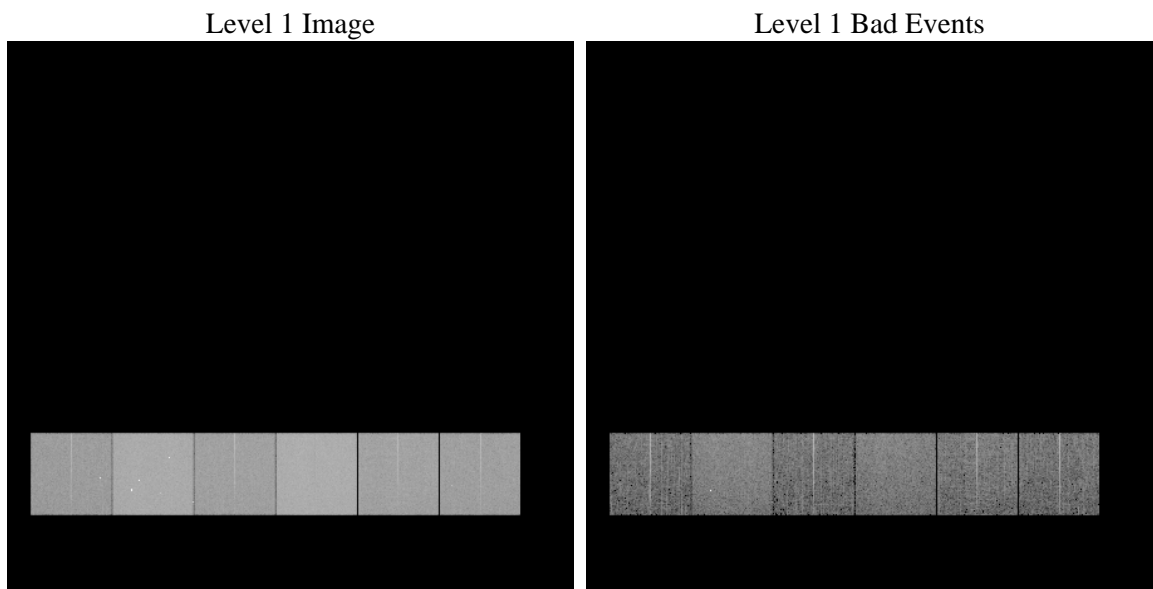
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 60406   | 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   | 183.00015573866                                 | Nominal RA [deg]                            |
| dec_nom  | -49.971380857353                                | Nominal Dec [deg]                           |
| roll_nom | 56.915368275607                                 | Nominal Roll [deg]                          |
| revision | 3   | Processing version of data                  |
| ontime   | 8459.3894884288                                 | Sum of GTIs [s]                             |
| livetime | 8352.2716050935                                 | Livetime [s]                                |
| ontime4  | 4845.3305500746                                 | Sum of GTIs [s]                             |
| ontime5  | 8459.3484484255                                 | Sum of GTIs [s]                             |
| ontime6  | 5412.5028552413                                 | Sum of GTIs [s]                             |
| ontime7  | 8459.3894884288                                 | Sum of GTIs [s]                             |
| ontime8  | 5581.0320242941                                 | Sum of GTIs [s]                             |
| ontime9  | 5286.1043186188                                 | Sum of GTIs [s]                             |
| l2events | 1213887   | Number of level 2 events                    |

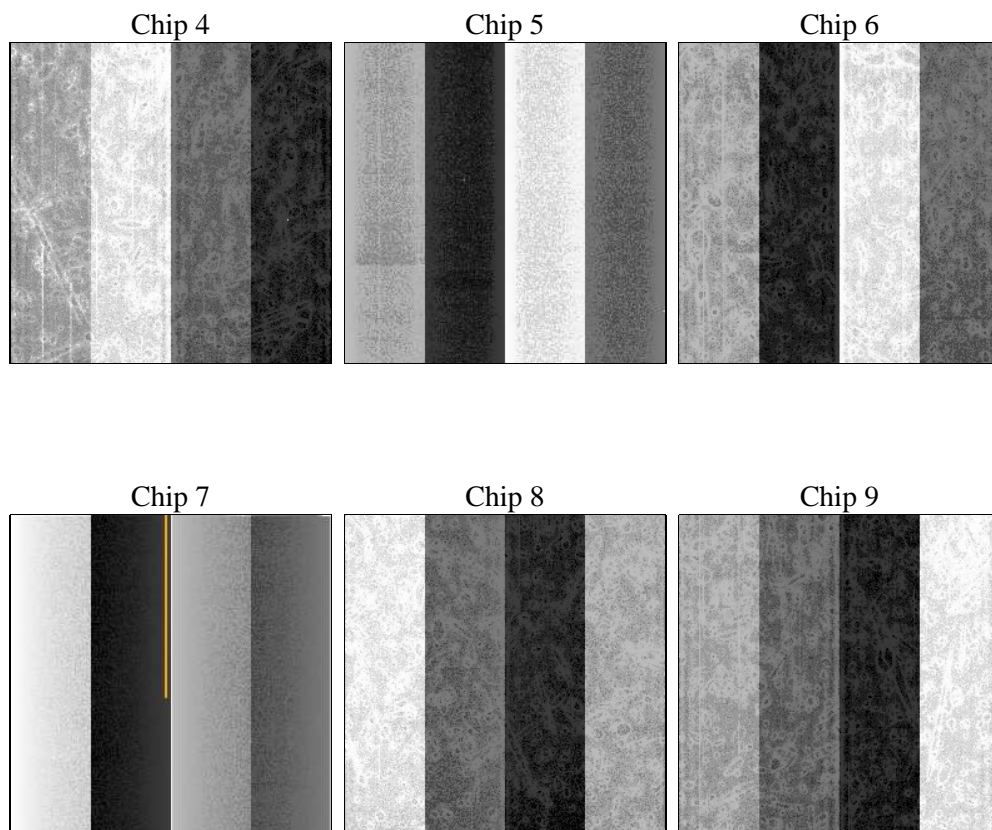
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 1                   | Obi number                     | sched_exp_time | 0.0             | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5               | Processing system revision     | ontime         | 8459.3894884288 | Sum of GTIs [s]                         |
| caldbver | 4.5.2               | &#160                          | ontime4        | 4845.3305500746 | Sum of GTIs [s]                         |
| date     | 2012-11-10T21:46:06 | Date and time of file creation | ontime5        | 8459.3484484255 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime6        | 5412.5028552413 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 8459.3894884288 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 5581.0320242941 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 5286.1043186188 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1533223         | 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  | 191470 | 322894 | 224151 | 346132 | 236823 | 211753 | grade 0 events | 91475 | 60794 | 102939 | 73819  | 107424 | 97483 |
| rejected events | 34557  | 55311  | 35543  | 45675  | 40160  | 34910  |                | 47%   | 18%   | 45%    | 21%    | 45%    | 46%   |
| rejected %      | 18%    | 17%    | 15%    | 13%    | 16%    | 16%    | grade 1 events | 635   | 224   | 484    | 200    | 561    | 536   |
|                 |        |        |        |        |        |        |                | 0%    | 0%    | 0%     | 0%     | 0%     | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 24993 | 96956 | 32714  | 65965  | 34599  | 30721 |
|                 |        |        |        |        |        |        |                | 13%   | 30%   | 14%    | 19%    | 14%    | 14%   |
|                 |        |        |        |        |        |        | grade 3 events | 10329 | 16138 | 11549  | 30430  | 12798  | 11232 |
|                 |        |        |        |        |        |        |                | 5%    | 4%    | 5%     | 8%     | 5%     | 5%    |
|                 |        |        |        |        |        |        | grade 4 events | 10247 | 15598 | 11662  | 29819  | 12734  | 11279 |
|                 |        |        |        |        |        |        |                | 5%    | 4%    | 5%     | 8%     | 5%     | 5%    |
|                 |        |        |        |        |        |        | grade 5 events | 2065  | 9298  | 2539   | 8461   | 2970   | 2521  |
|                 |        |        |        |        |        |        |                | 1%    | 2%    | 1%     | 2%     | 1%     | 1%    |
|                 |        |        |        |        |        |        | grade 6 events | 19869 | 78184 | 29744  | 100542 | 29108  | 26128 |
|                 |        |        |        |        |        |        |                | 10%   | 24%   | 13%    | 29%    | 12%    | 12%   |
|                 |        |        |        |        |        |        | grade 7 events | 31857 | 45702 | 32520  | 36896  | 36629  | 31853 |
|                 |        |        |        |        |        |        |                | 16%   | 14%   | 14%    | 10%    | 15%    | 15%   |

## 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                   | 183.0001557386581    |
| [deg] Pointing Dec                | 0                   | -49.97138085735316   |
| [deg] Pointing Roll               | 0.0                 | 56.91536827560659    |
| [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)  | 190794472.250143    | 190794471.22543      |
| Observation start date            | 2004-01-18T06:27:52 | 2004-01-18T06:27:51  |
| [s] Observation end time (MET)    | 190817165.751133    | 190817164.72641      |
| Observation end date              | 2004-01-18T12:46:06 | 2004-01-18T12:46:04  |
| 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       | 0.000000  | 3.2     |

## 2.3 Star Slots

## 2.4 FID Slots

## A Summary

### A.1 Status

|                            |                 |
|----------------------------|-----------------|
| V&V Scientist              | Beth Sundheim   |
| V&V Date (YYYY-MM-DD)      | 2012.12.18      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 8.4593894884288 |

### A.2 Comments