

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 60226 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Dec 1 2012

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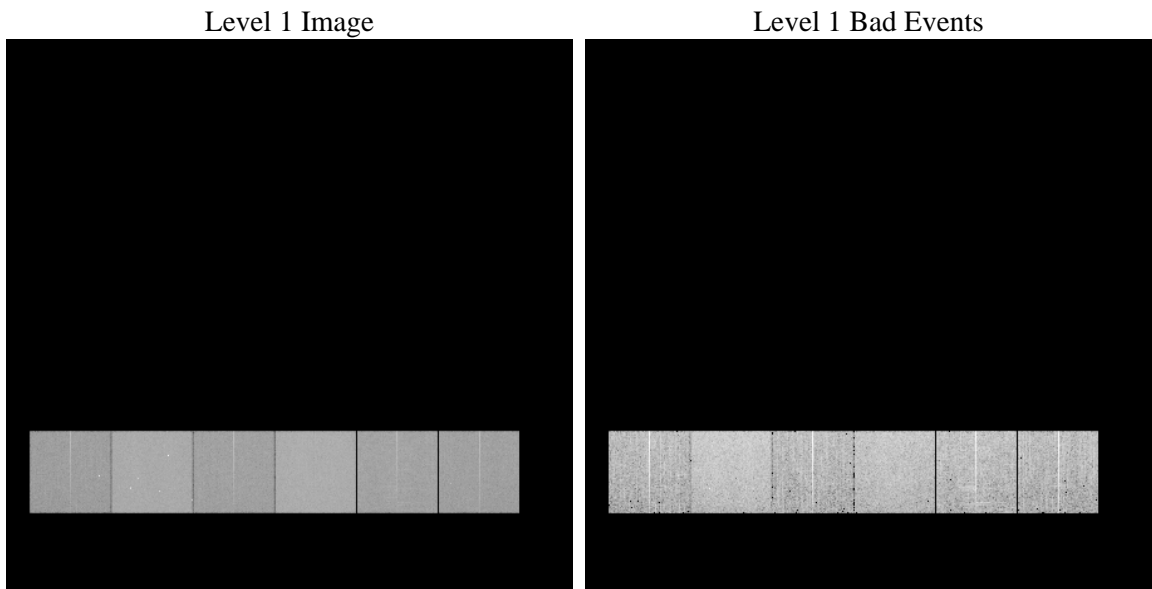
# 1 Front

|          |                                                 |                                             |
|----------|-------------------------------------------------|---------------------------------------------|
| seq_num  | &#160                                           | Sequence number                             |
| obs_id   | 60226                                           | 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   | 107.99958448565                                 | Nominal RA [deg]                            |
| dec_nom  | -13.028614871588                                | Nominal Dec [deg]                           |
| roll_nom | 236.30444601486                                 | Nominal Roll [deg]                          |
| revision | 3                                               | Processing version of data                  |
| ontime   | 8457.599968493                                  | Sum of GTIs [s]                             |
| livetime | 8350.5047451366                                 | Livetime [s]                                |
| ontime4  | 5330.7842440605                                 | Sum of GTIs [s]                             |
| ontime5  | 8457.599968493                                  | Sum of GTIs [s]                             |
| ontime6  | 5706.0231951177                                 | Sum of GTIs [s]                             |
| ontime7  | 8457.599968493                                  | Sum of GTIs [s]                             |
| ontime8  | 5930.404520452                                  | Sum of GTIs [s]                             |
| ontime9  | 5641.2038498819                                 | Sum of GTIs [s]                             |
| l2events | 1174946                                         | Number of level 2 events                    |

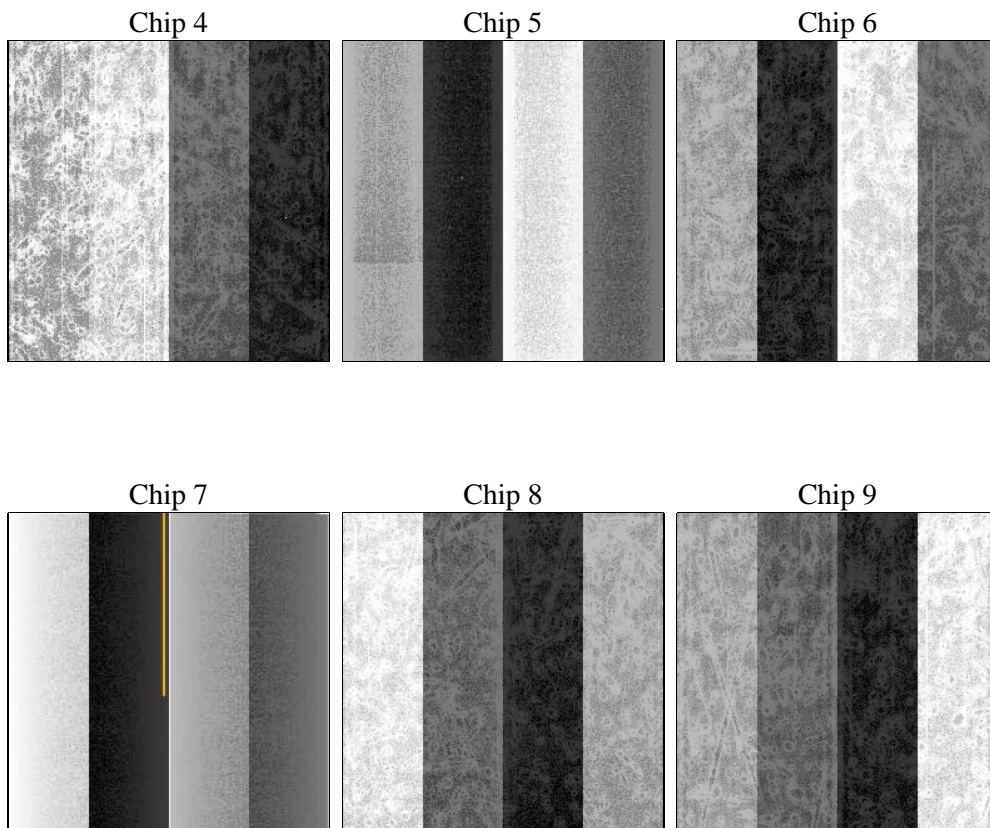
## 2 OBI

### 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         | 8457.599968493  | Sum of GTIs [s]                         |
| caldsver | 4.5.2               | &#160                          | ontime4        | 5330.7842440605 | Sum of GTIs [s]                         |
| date     | 2012-12-01T18:34:23 | Date and time of file creation | ontime5        | 8457.599968493  | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime6        | 5706.0231951177 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 8457.599968493  | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 5930.404520452  | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 5641.2038498819 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1530762         | 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  | 201007 | 311831 | 224400 | 333955 | 242132 | 217437 | grade 0 events | 92846 | 55167 | 98939 | 68162 | 105425 | 95724 |
| rejected events | 41760  | 59805  | 42507  | 51618  | 48385  | 43197  |                | 46%   | 17%   | 44%   | 20%   | 43%    | 44%   |
| rejected %      | 20%    | 19%    | 18%    | 15%    | 19%    | 19%    | grade 1 events | 675   | 277   | 525   | 228   | 553    | 562   |
|                 |        |        |        |        |        |        |                | 0%    | 0%    | 0%    | 0%    | 0%     | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 25180 | 91893 | 31430 | 61822 | 34061  | 29995 |
|                 |        |        |        |        |        |        |                | 12%   | 29%   | 14%   | 18%   | 14%    | 13%   |
|                 |        |        |        |        |        |        | grade 3 events | 10677 | 14630 | 11243 | 28020 | 12657  | 11333 |
|                 |        |        |        |        |        |        |                | 5%    | 4%    | 5%    | 8%    | 5%     | 5%    |
|                 |        |        |        |        |        |        | grade 4 events | 10587 | 14573 | 11208 | 28161 | 12532  | 11057 |
|                 |        |        |        |        |        |        |                | 5%    | 4%    | 4%    | 8%    | 5%     | 5%    |
|                 |        |        |        |        |        |        | grade 5 events | 2518  | 9583  | 2811  | 9354  | 3481   | 2972  |
|                 |        |        |        |        |        |        |                | 1%    | 3%    | 1%    | 2%    | 1%     | 1%    |
|                 |        |        |        |        |        |        | grade 6 events | 19957 | 75763 | 29073 | 96172 | 29072  | 26131 |
|                 |        |        |        |        |        |        |                | 9%    | 24%   | 12%   | 28%   | 12%    | 12%   |
|                 |        |        |        |        |        |        | grade 7 events | 38567 | 49945 | 39171 | 42036 | 44351  | 39663 |
|                 |        |        |        |        |        |        |                | 19%   | 16%   | 17%   | 12%   | 18%    | 18%   |

## 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                   | 107.999584485652      |
| [deg] Pointing Dec                | 0                   | -13.02861487158757    |
| [deg] Pointing Roll               | 0.0                 | 236.3044460148618     |
| [mm] SIM focus pos                | -0.684267           | -0.6828225247311905   |
| [mm] SIM defocus                  | 0                   | 0.8505141146731063    |
| [mm] SIM translation stage pos    | -190.132523         | 250.4635187648994     |
| [mm] SIM translation stage offset | 0                   | -0.007540371344731511 |
| [s] Observation start time (MET)  | 201533192.721906    | 201533191.6969        |
| Observation start date            | 2004-05-21T13:26:33 | 2004-05-21T13:26:31   |
| [s] Observation end time (MET)    | 201556349.522929    | 201556348.49792       |
| Observation end date              | 2004-05-21T19:52:30 | 2004-05-21T19:52:28   |
| 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              | Jen Lauer      |
| V&V Date (YYYY-MM-DD)      | 2012.12.17     |
| V&V Edition                | 1              |
| V&V Disposition and Status | OK             |
| V&V Charge Time            | 8.457599968493 |

### A.2 Comments