

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 61960 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Aug 31 2012

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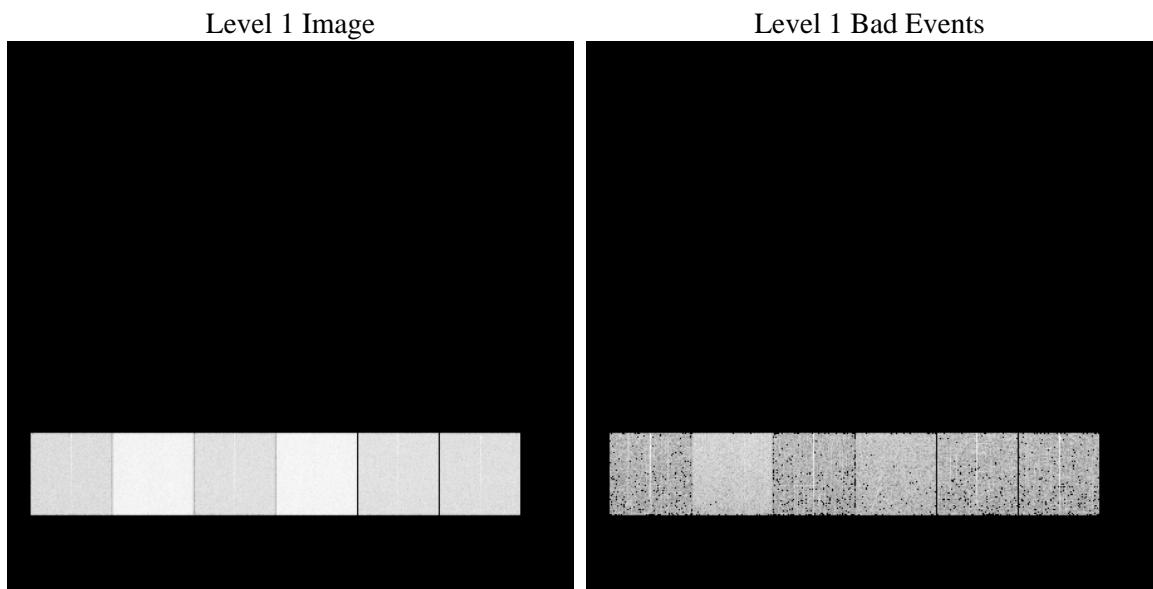
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 61960   | 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   | 6.4690559485708                                 | Nominal RA [deg]                            |
| dec_nom  | 38.275337211362                                 | Nominal Dec [deg]                           |
| roll_nom | 136.872822736                                   | Nominal Roll [deg]                          |
| revision | 3   | Processing version of data                  |
| ontime   | 4762.4902708232                                 | Sum of GTIs [s]                             |
| livetime | 4702.1847513867                                 | Livetime [s]                                |
| ontime4  | 2040.0356185734                                 | Sum of GTIs [s]                             |
| ontime5  | 5125.479571864                                  | Sum of GTIs [s]                             |
| ontime6  | 2195.6054584086                                 | Sum of GTIs [s]                             |
| ontime7  | 4762.4902708232                                 | Sum of GTIs [s]                             |
| ontime8  | 2236.0298838615                                 | Sum of GTIs [s]                             |
| ontime9  | 2145.0755142719                                 | Sum of GTIs [s]                             |
| l2events | 1357728   | Number of level 2 events                    |

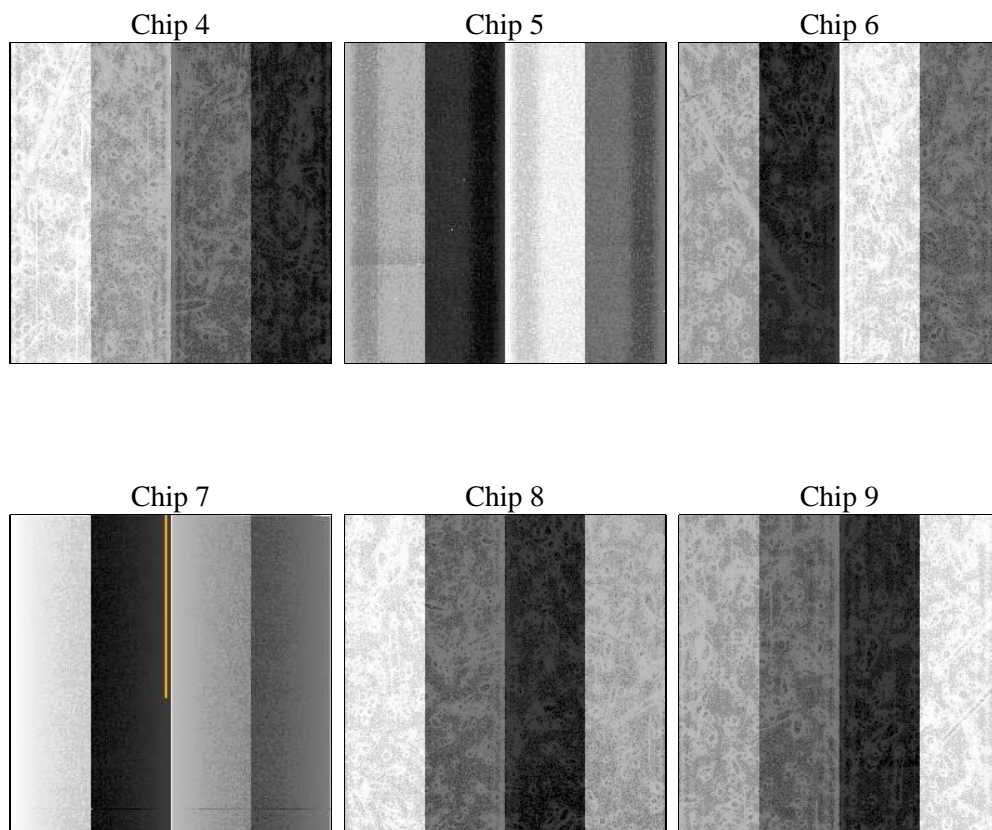
## 2 OBI

### 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         | 4762.4902708232 | Sum of GTIs [s]                         |
| caldsver | 4.5.1.1             | &#160                          | ontime4        | 2040.0356185734 | Sum of GTIs [s]                         |
| date     | 2012-09-01T01:24:54 | Date and time of file creation | ontime5        | 5125.479571864  | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime6        | 2195.6054584086 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 4762.4902708232 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 2236.0298838615 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 2145.0755142719 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1556511         | 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  | 172021 | 391427 | 198394 | 405674 | 202386 | 186609 | grade 0 events | 87303 | 81209  | 99252 | 98213  | 101746 | 93353 |
| rejected events | 18652  | 40236  | 18569  | 25181  | 20097  | 18344  |                | 50%   | 20%    | 50%   | 24%    | 50%    | 50%   |
| rejected %      | 10%    | 10%    | 9%     | 6%     | 9%     | 9%     | grade 1 events | 484   | 228    | 472   | 287    | 506    | 457   |
|                 |        |        |        |        |        |        |                | 0%    | 0%     | 0%    | 0%     | 0%     | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 27469 | 132572 | 31044 | 85215  | 32093  | 29584 |
|                 |        |        |        |        |        |        |                | 15%   | 33%    | 15%   | 21%    | 15%    | 15%   |
|                 |        |        |        |        |        |        | grade 3 events | 9503  | 21439  | 11114 | 39082  | 11457  | 10386 |
|                 |        |        |        |        |        |        |                | 5%    | 5%     | 5%    | 9%     | 5%     | 5%    |
|                 |        |        |        |        |        |        | grade 4 events | 9177  | 21073  | 10849 | 38538  | 11274  | 10468 |
|                 |        |        |        |        |        |        |                | 5%    | 5%     | 5%    | 9%     | 5%     | 5%    |
|                 |        |        |        |        |        |        | grade 5 events | 1255  | 7843   | 1476  | 5423   | 1534   | 1433  |
|                 |        |        |        |        |        |        |                | 0%    | 2%     | 0%    | 1%     | 0%     | 0%    |
|                 |        |        |        |        |        |        | grade 6 events | 20654 | 96588  | 28380 | 121290 | 26580  | 25536 |
|                 |        |        |        |        |        |        |                | 12%   | 24%    | 14%   | 29%    | 13%    | 13%   |
|                 |        |        |        |        |        |        | grade 7 events | 16176 | 30475  | 15807 | 17626  | 17196  | 15392 |
|                 |        |        |        |        |        |        |                | 9%    | 7%     | 7%    | 4%     | 8%     | 8%    |

## 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                   | 6.469055948570815    | Alternating exposures requested | N         | N       |
| [deg] Pointing Dec                | 0                   | 38.27533721136231    | [s] Primary exposure time       | 0.000000  | 3.2     |
| [deg] Pointing Roll               | 0.0                 | 136.8728227360011    |                                 |           |         |
| [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)  | 82967315.06299999   | 82967314.29460099    |                                 |           |         |
| Observation start date            | 2000-08-18T06:28:35 | 2000-08-18T06:28:34  |                                 |           |         |
| [s] Observation end time (MET)    | 82977825.413        | 82977824.644995      |                                 |           |         |
| Observation end date              | 2000-08-18T09:23:45 | 2000-08-18T09:23:44  |                                 |           |         |
| Read mode                         | TIMED               | TIMED                |                                 |           |         |

## **2.3 Star Slots**

## **2.4 FID Slots**

## **A Summary**

### **A.1 Status**

|                            |                 |
|----------------------------|-----------------|
| V&V Scientist              | Jen Lauer       |
| V&V Date (YYYY-MM-DD)      | 2012.09.06      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 4.7624902708232 |

### **A.2 Comments**