

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 60727 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Oct 28 2012

## Contents

|          |                               |          |
|----------|-------------------------------|----------|
| <b>1</b> | <b>Front</b>                  | <b>2</b> |
| <b>2</b> | <b>OBI</b>                    | <b>3</b> |
| 2.1      | OBI . . . . .                 | 3        |
| 2.1.1    | Images . . . . .              | 3        |
| 2.1.2    | Bias . . . . .                | 3        |
| 2.1.3    | Parameters . . . . .          | 4        |
| 2.1.4    | Events . . . . .              | 4        |
| 2.2      | Compared Parameters . . . . . | 5        |
| 2.3      | Star Slots . . . . .          | 6        |
| 2.4      | FID Slots . . . . .           | 6        |
| <b>A</b> | <b>Summary</b>                | <b>7</b> |
| A.1      | Status . . . . .              | 7        |
| A.2      | Comments . . . . .            | 7        |

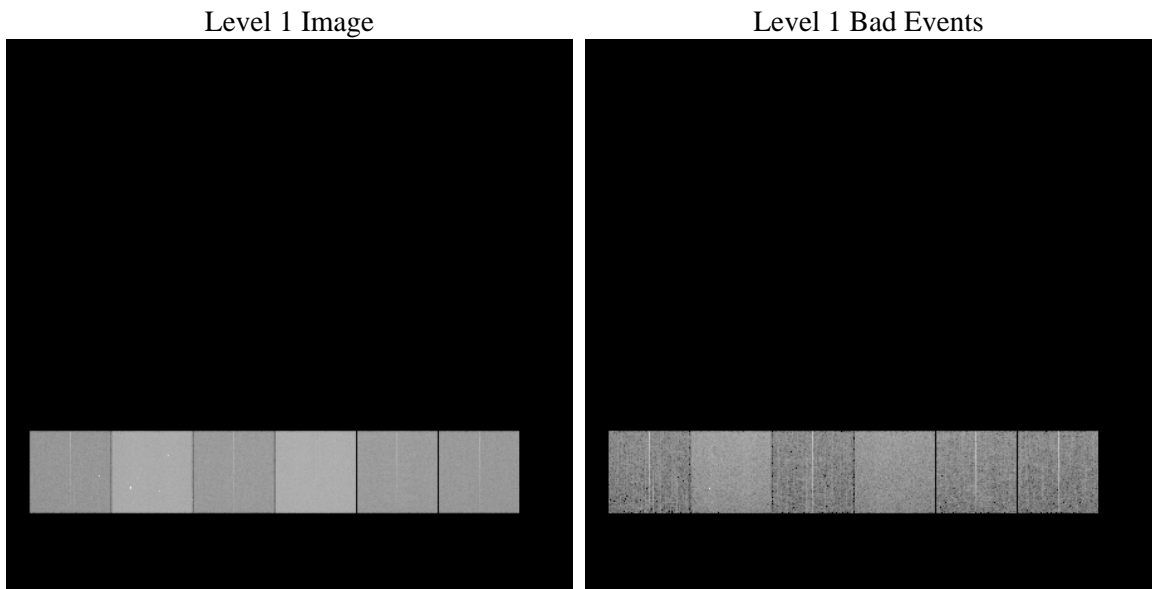
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 60727   | 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   | 296.19471305578                                 | Nominal RA [deg]                            |
| dec_nom  | -70.871450536449                                | Nominal Dec [deg]                           |
| roll_nom | 60.529536765484                                 | Nominal Roll [deg]                          |
| revision | 3   | Processing version of data                  |
| ontime   | 11384.03297624                                  | Sum of GTIs [s]                             |
| livetime | 11239.881496053                                 | Livetime [s]                                |
| ontime4  | 5013.8769017458                                 | Sum of GTIs [s]                             |
| ontime5  | 11380.750916153                                 | Sum of GTIs [s]                             |
| ontime6  | 5640.9437457621                                 | Sum of GTIs [s]                             |
| ontime7  | 11384.03297624                                  | Sum of GTIs [s]                             |
| ontime8  | 5665.3182384968                                 | Sum of GTIs [s]                             |
| ontime9  | 5406.039293617                                  | Sum of GTIs [s]                             |
| l2events | 1688995   | Number of level 2 events                    |

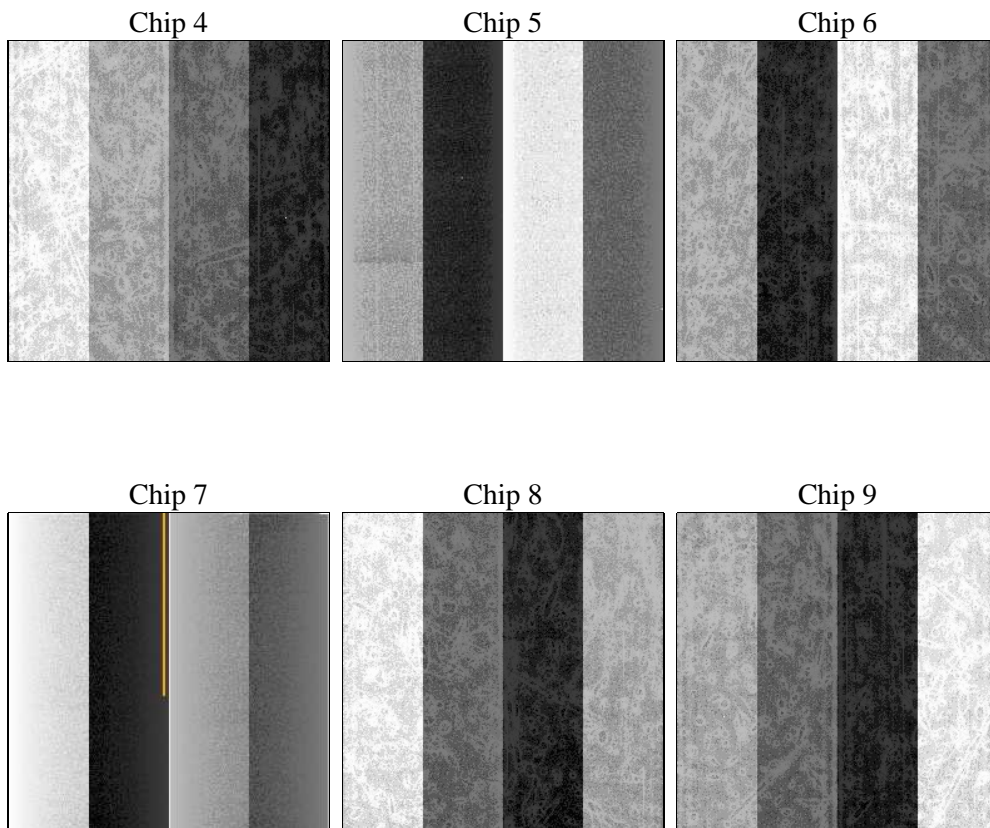
## 2 OBI

### 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         | 11384.03297624  | Sum of GTIs [s]                         |
| caldbver | 4.5.2               | &#160                          | ontime4        | 5013.8769017458 | Sum of GTIs [s]                         |
| date     | 2012-10-28T14:37:42 | Date and time of file creation | ontime5        | 11380.750916153 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime6        | 5640.9437457621 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 11384.03297624  | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 5665.3182384968 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 5406.039293617  | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 2063504         | 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  | 231441 | 493194 | 271936 | 532413 | 281459 | 253061 | grade 0 events | 111981 | 102225 | 127671 | 118750 | 130406 | 118425 |
| rejected events | 38682  | 72583  | 38519  | 59263  | 43857  | 38063  |                | 48%    | 20%    | 46%    | 22%    | 46%    | 46%    |
| rejected %      | 16%    | 14%    | 14%    | 11%    | 15%    | 15%    | grade 1 events | 765    | 359    | 626    | 323    | 661    | 657    |
|                 |        |        |        |        |        |        |                | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
|                 |        |        |        |        |        |        | grade 2 events | 30769  | 147608 | 40362  | 104648 | 41347  | 37112  |
|                 |        |        |        |        |        |        |                | 13%    | 29%    | 14%    | 19%    | 14%    | 14%    |
|                 |        |        |        |        |        |        | grade 3 events | 12870  | 27412  | 14454  | 47525  | 15224  | 13670  |
|                 |        |        |        |        |        |        |                | 5%     | 5%     | 5%     | 8%     | 5%     | 5%     |
|                 |        |        |        |        |        |        | grade 4 events | 12541  | 26571  | 14372  | 47160  | 15297  | 13730  |
|                 |        |        |        |        |        |        |                | 5%     | 5%     | 5%     | 8%     | 5%     | 5%     |
|                 |        |        |        |        |        |        | grade 5 events | 2321   | 12693  | 2752   | 11214  | 3243   | 2768   |
|                 |        |        |        |        |        |        |                | 1%     | 2%     | 1%     | 2%     | 1%     | 1%     |
|                 |        |        |        |        |        |        | grade 6 events | 24816  | 116913 | 36683  | 155102 | 35436  | 32061  |
|                 |        |        |        |        |        |        |                | 10%    | 23%    | 13%    | 29%    | 12%    | 12%    |
|                 |        |        |        |        |        |        | grade 7 events | 35378  | 59413  | 35016  | 47691  | 39845  | 34638  |
|                 |        |        |        |        |        |        |                | 15%    | 12%    | 12%    | 8%     | 14%    | 13%    |

## 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                   | 296.1947130557791    |
| [deg] Pointing Dec                | 0                   | -70.87145053644923   |
| [deg] Pointing Roll               | 0.0                 | 60.52953676548446    |
| [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)  | 170414140.124583    | 170414139.09986      |
| Observation start date            | 2003-05-27T09:15:40 | 2003-05-27T09:15:39  |
| [s] Observation end time (MET)    | 170428014.525172    | 170428013.50045      |
| Observation end date              | 2003-05-27T13:06:55 | 2003-05-27T13:06:53  |
| 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)      | 2012.12.06     |
| V&V Edition                | 1              |
| V&V Disposition and Status | OK             |
| V&V Charge Time            | 11.38403297624 |

### A.2 Comments