

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 59053 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Mar 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        |

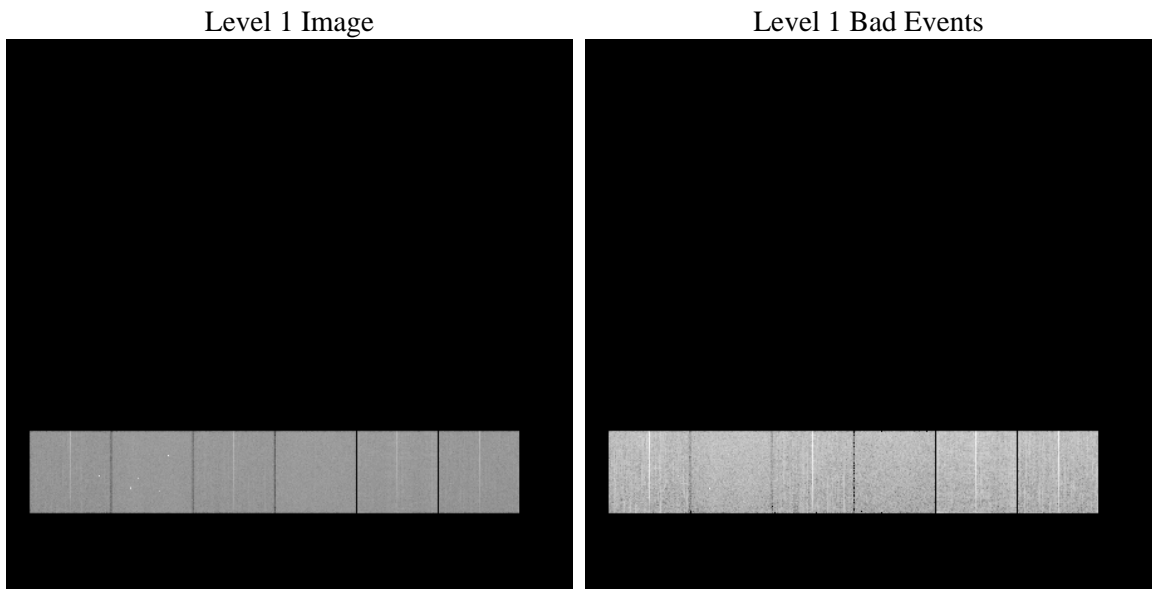
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 59053   | 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   | 192.98135742765                                 | Nominal RA [deg]                            |
| dec_nom  | 14.003814124448                                 | Nominal Dec [deg]                           |
| roll_nom | 145.30750922592                                 | Nominal Roll [deg]                          |
| revision | 2   | Processing version of data                  |
| ontime   | 7795.1999709606                                 | Sum of GTIs [s]                             |
| livetime | 7696.4924552224                                 | Livetime [s]                                |
| ontime4  | 7318.7767867148                                 | Sum of GTIs [s]                             |
| ontime5  | 7795.1999709606                                 | Sum of GTIs [s]                             |
| ontime6  | 7555.3677591383                                 | Sum of GTIs [s]                             |
| ontime7  | 7795.1999709606                                 | Sum of GTIs [s]                             |
| ontime8  | 7694.729821384                                  | Sum of GTIs [s]                             |
| ontime9  | 7467.8617298305                                 | Sum of GTIs [s]                             |
| l2events | 937446  | Number of level 2 events                    |

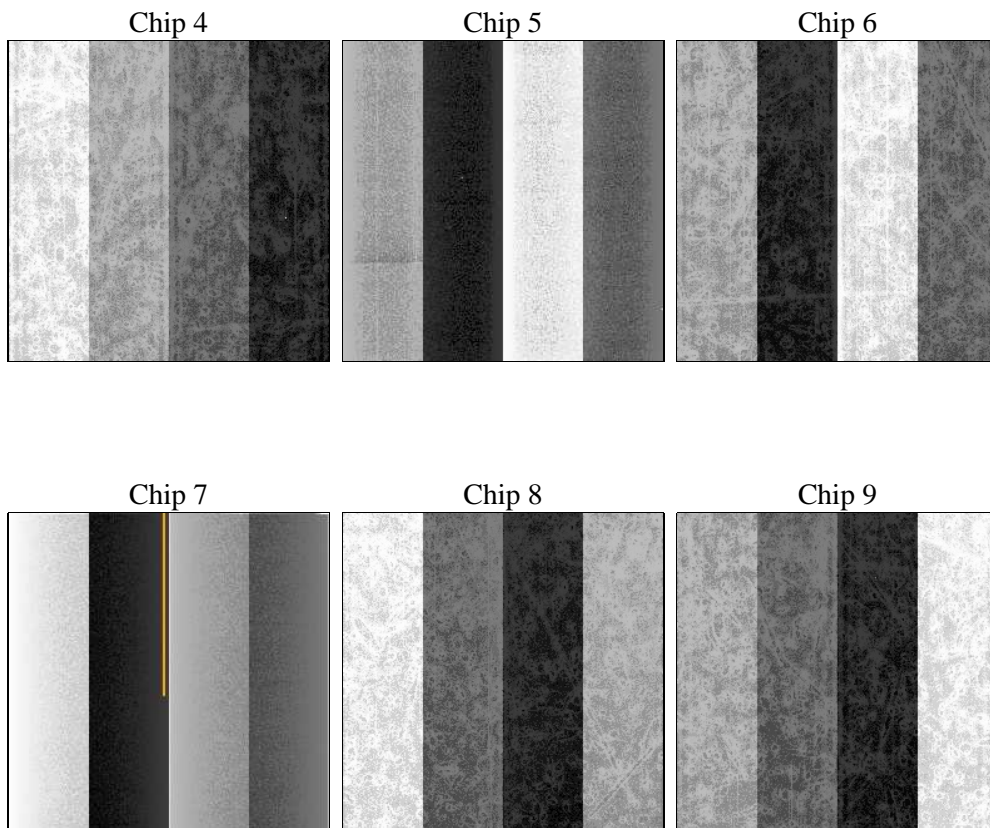
## 2 OBI

### 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 | 8.4.3               | Processing system revision     | ontime         | 7795.1999709606 | Sum of GTIs [s]                         |
| caldsver | 4.4.8               | &#160                          | ontime4        | 7318.7767867148 | Sum of GTIs [s]                         |
| date     | 2012-03-28T22:52:28 | Date and time of file creation | ontime5        | 7795.1999709606 | Sum of GTIs [s]                         |
| revision | 2                   | Processing version of data     | ontime6        | 7555.3677591383 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 7795.1999709606 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 7694.729821384  | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 7467.8617298305 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1397620         | 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  | 214911 | 238748 | 228471 | 245111 | 248516 | 221863 | grade 0 events | 85795 | 37341 | 86815 | 43495 | 91964 | 84891 |
| rejected events | 67000  | 62178  | 66038  | 56118  | 74428  | 66594  |                | 39%   | 15%   | 37%   | 17%   | 37%   | 38%   |
| rejected %      | 31%    | 26%    | 28%    | 22%    | 29%    | 30%    | grade 1 events | 844   | 180   | 504   | 179   | 582   | 512   |
|                 |        |        |        |        |        |        |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 23048 | 62037 | 28473 | 41204 | 31161 | 26681 |
|                 |        |        |        |        |        |        |                | 10%   | 25%   | 12%   | 16%   | 12%   | 12%   |
|                 |        |        |        |        |        |        | grade 3 events | 9999  | 9932  | 10258 | 18484 | 11744 | 9864  |
|                 |        |        |        |        |        |        |                | 4%    | 4%    | 4%    | 7%    | 4%    | 4%    |
|                 |        |        |        |        |        |        | grade 4 events | 9917  | 9849  | 10186 | 18166 | 11621 | 10061 |
|                 |        |        |        |        |        |        |                | 4%    | 4%    | 4%    | 7%    | 4%    | 4%    |
|                 |        |        |        |        |        |        | grade 5 events | 3671  | 9195  | 4133  | 9721  | 4908  | 4357  |
|                 |        |        |        |        |        |        |                | 1%    | 3%    | 1%    | 3%    | 1%    | 1%    |
|                 |        |        |        |        |        |        | grade 6 events | 19211 | 57476 | 26776 | 67726 | 27660 | 23844 |
|                 |        |        |        |        |        |        |                | 8%    | 24%   | 11%   | 27%   | 11%   | 10%   |
|                 |        |        |        |        |        |        | grade 7 events | 62426 | 52738 | 61326 | 46136 | 68876 | 61653 |
|                 |        |        |        |        |        |        |                | 29%   | 22%   | 26%   | 18%   | 27%   | 27%   |

## 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                   | 192.9813574276522    | Alternating exposures requested | N         | N       |
| [deg] Pointing Dec                | 0                   | 14.003814124448      | [s] Primary exposure time       | 3.2       | 3.2     |
| [deg] Pointing Roll               | 0.0                 | 145.3075092259249    |                                 |           |         |
| [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)  | 259527045.506505    | 259527044.48151      |                                 |           |         |
| Observation start date            | 2006-03-23T18:50:46 | 2006-03-23T18:50:44  |                                 |           |         |
| [s] Observation end time (MET)    | 259539667.357092    | 259539666.33209      |                                 |           |         |
| Observation end date              | 2006-03-23T22:21:07 | 2006-03-23T22:21:06  |                                 |           |         |
| 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)      | 2012.03.30      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 7.7951999709606 |

### A.2 Comments