

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 59694 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Dec 22 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        |

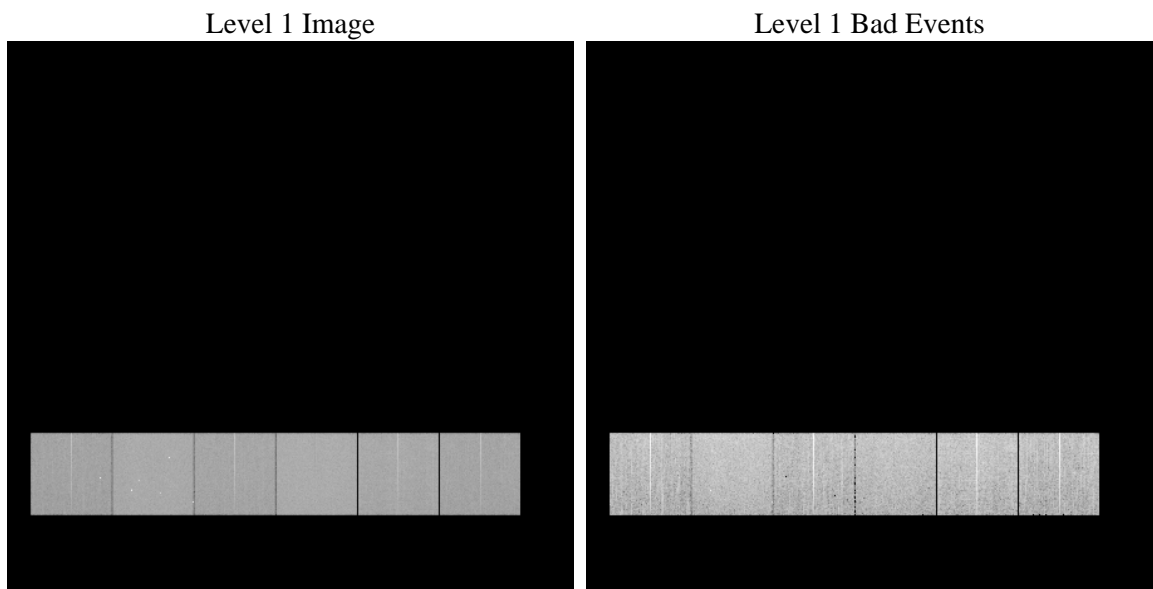
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 59694   | 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   | 346.57403999406                                 | Nominal RA [deg]                            |
| dec_nom  | -12.986629021537                                | Nominal Dec [deg]                           |
| roll_nom | 119.25933093798                                 | Nominal Roll [deg]                          |
| revision | 3   | Processing version of data                  |
| ontime   | 10127.873652965                                 | Sum of GTIs [s]                             |
| livetime | 9999.6284184976                                 | Livetime [s]                                |
| ontime4  | 7950.0675264895                                 | Sum of GTIs [s]                             |
| ontime5  | 10127.914692968                                 | Sum of GTIs [s]                             |
| ontime6  | 8497.7503359914                                 | Sum of GTIs [s]                             |
| ontime7  | 10127.873652965                                 | Sum of GTIs [s]                             |
| ontime8  | 8812.1686424315                                 | Sum of GTIs [s]                             |
| ontime9  | 8306.4105379283                                 | Sum of GTIs [s]                             |
| l2events | 1323555   | Number of level 2 events                    |

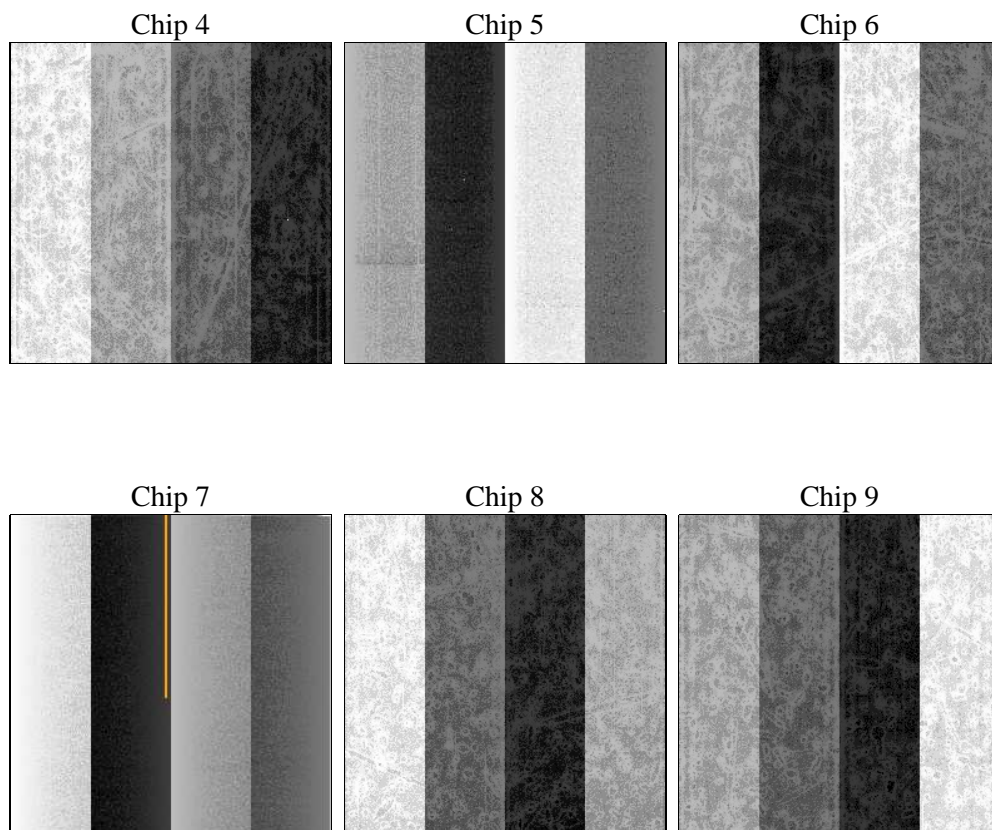
## 2 OBI

### 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 | 8.5.1.1             | Processing system revision     | ontime         | 10127.873652965 | Sum of GTIs [s]                         |
| caldsver | 4.5.5               | &#160                          | ontime4        | 7950.0675264895 | Sum of GTIs [s]                         |
| date     | 2012-12-22T15:21:52 | Date and time of file creation | ontime5        | 10127.914692968 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime6        | 8497.7503359914 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 10127.873652965 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 8812.1686424315 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 8306.4105379283 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1821672         | 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  | 260143 | 332675 | 287535 | 350740 | 315422 | 275157 | grade 0 events | 112289 | 56350 | 119763 | 68125 | 127927 | 114572 |
| rejected events | 65761  | 73079  | 66256  | 65400  | 76605  | 65919  |                | 43%    | 16%   | 41%    | 19%   | 40%    | 41%    |
| rejected %      | 25%    | 21%    | 23%    | 18%    | 24%    | 23%    | grade 1 events | 916    | 392   | 648    | 226   | 723    | 715    |
|                 |        |        |        |        |        |        |                | 0%     | 0%    | 0%     | 0%    | 0%     | 0%     |
|                 |        |        |        |        |        |        | grade 2 events | 31025  | 92292 | 37910  | 62849 | 42435  | 35776  |
|                 |        |        |        |        |        |        |                | 11%    | 27%   | 13%    | 17%   | 13%    | 13%    |
|                 |        |        |        |        |        |        | grade 3 events | 12853  | 15291 | 13964  | 28119 | 15737  | 13464  |
|                 |        |        |        |        |        |        |                | 4%     | 4%    | 4%     | 8%    | 4%     | 4%     |
|                 |        |        |        |        |        |        | grade 4 events | 13085  | 15283 | 13760  | 28607 | 15502  | 13508  |
|                 |        |        |        |        |        |        |                | 5%     | 4%    | 4%     | 8%    | 4%     | 4%     |
|                 |        |        |        |        |        |        | grade 5 events | 3810   | 11408 | 4234   | 11581 | 5348   | 4427   |
|                 |        |        |        |        |        |        |                | 1%     | 3%    | 1%     | 3%    | 1%     | 1%     |
|                 |        |        |        |        |        |        | grade 6 events | 25130  | 80380 | 35882  | 97640 | 37216  | 31918  |
|                 |        |        |        |        |        |        |                | 9%     | 24%   | 12%    | 27%   | 11%    | 11%    |
|                 |        |        |        |        |        |        | grade 7 events | 61035  | 61279 | 61374  | 53593 | 70534  | 60777  |
|                 |        |        |        |        |        |        |                | 23%    | 18%   | 21%    | 15%   | 22%    | 22%    |

## 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                   | 346.5740399940593     | Alternating exposures requested | N         | N       |
| [deg] Pointing Dec                | 0                   | -12.98662902153699    | [s] Primary exposure time       | 3.2       | 3.2     |
| [deg] Pointing Roll               | 0.0                 | 119.2593309379765     |                                 |           |         |
| [mm] SIM focus pos                | -0.684267           | -0.7809083437167272   |                                 |           |         |
| [mm] SIM defocus                  | 0                   | 0.7524282956875696    |                                 |           |         |
| [mm] SIM translation stage pos    | -190.132523         | 250.4635187648994     |                                 |           |         |
| [mm] SIM translation stage offset | 0                   | -0.007540371344731511 |                                 |           |         |
| [s] Observation start time (MET)  | 230275975.460354    | 230275974.43535       |                                 |           |         |
| Observation start date            | 2005-04-19T05:32:55 | 2005-04-19T05:32:54   |                                 |           |         |
| [s] Observation end time (MET)    | 230297723.911343    | 230297722.88634       |                                 |           |         |
| Observation end date              | 2005-04-19T11:35:24 | 2005-04-19T11:35:22   |                                 |           |         |
| 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)      | 2013.01.15      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 10.127873652965 |

### A.2 Comments