

# V&V Reference Report

## L2 ASCDS Version : 8.5.1

Observation 59867 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Dec 15 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        |

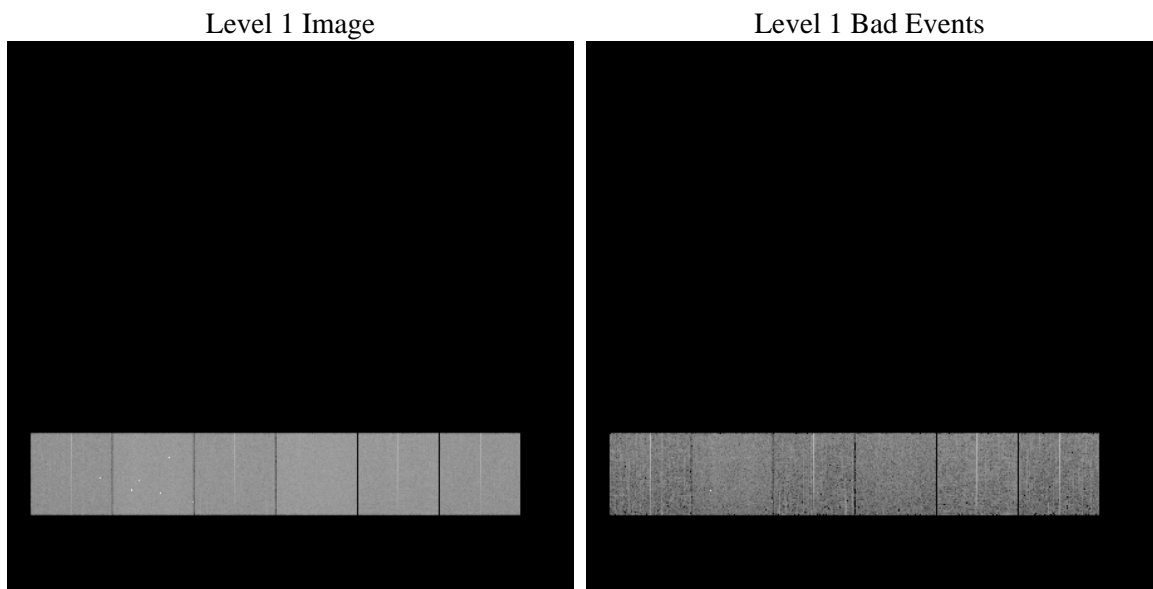
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 59867   | 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   | 107.97331438299                                 | Nominal RA [deg]                            |
| dec_nom  | 35.981182648583                                 | Nominal Dec [deg]                           |
| roll_nom | 188.20528482498                                 | Nominal Roll [deg]                          |
| revision | 3   | Processing version of data                  |
| ontime   | 6639.9999752641                                 | Sum of GTIs [s]                             |
| livetime | 6555.9202974493                                 | Livetime [s]                                |
| ontime4  | 5201.2598825097                                 | Sum of GTIs [s]                             |
| ontime5  | 6639.9999752641                                 | Sum of GTIs [s]                             |
| ontime6  | 5535.0399625003                                 | Sum of GTIs [s]                             |
| ontime7  | 6639.9999752641                                 | Sum of GTIs [s]                             |
| ontime8  | 5758.4530472159                                 | Sum of GTIs [s]                             |
| ontime9  | 5479.7286319137                                 | Sum of GTIs [s]                             |
| l2events | 895937  | Number of level 2 events                    |

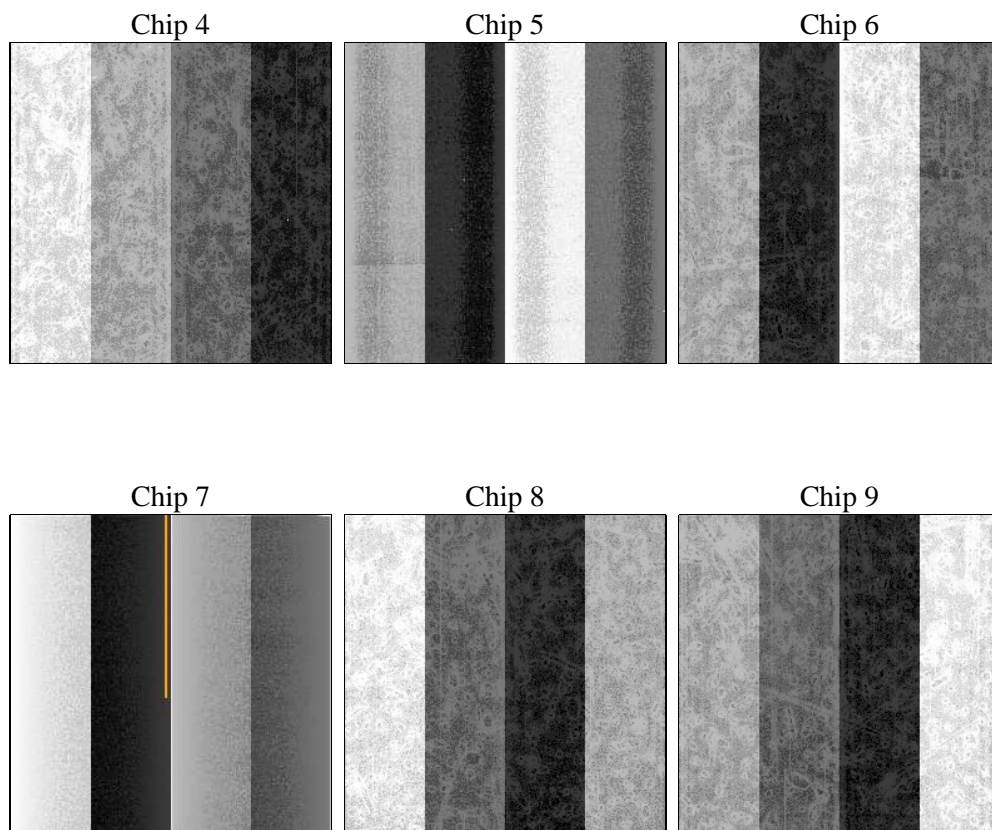
## 2 OBI

### 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               | Processing system revision     | ontime         | 6639.9999752641 | Sum of GTIs [s]                         |
| caldbver | 4.5.5               | &#160                          | ontime4        | 5201.2598825097 | Sum of GTIs [s]                         |
| date     | 2012-12-16T02:19:16 | Date and time of file creation | ontime5        | 6639.9999752641 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime6        | 5535.0399625003 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 6639.9999752641 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 5758.4530472159 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 5479.7286319137 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1203285         | 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  | 172763 | 220958 | 189908 | 230154 | 207250 | 182252 | grade 0 events | 77956 | 36854 | 81912 | 46330 | 87542 | 79212 |
| rejected events | 39882  | 45962  | 39211  | 37935  | 45566  | 38504  |                | 45%   | 16%   | 43%   | 20%   | 42%   | 43%   |
| rejected %      | 23%    | 20%    | 20%    | 16%    | 21%    | 21%    | grade 1 events | 557   | 250   | 423   | 137   | 515   | 472   |
|                 |        |        |        |        |        |        |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 20357 | 66197 | 25885 | 42657 | 28275 | 24486 |
|                 |        |        |        |        |        |        |                | 11%   | 29%   | 13%   | 18%   | 13%   | 13%   |
|                 |        |        |        |        |        |        | grade 3 events | 8928  | 9175  | 9334  | 19003 | 10603 | 9321  |
|                 |        |        |        |        |        |        |                | 5%    | 4%    | 4%    | 8%    | 5%    | 5%    |
|                 |        |        |        |        |        |        | grade 4 events | 8820  | 8815  | 9458  | 18763 | 10458 | 9201  |
|                 |        |        |        |        |        |        |                | 5%    | 3%    | 4%    | 8%    | 5%    | 5%    |
|                 |        |        |        |        |        |        | grade 5 events | 2247  | 7012  | 2499  | 6839  | 3107  | 2698  |
|                 |        |        |        |        |        |        |                | 1%    | 3%    | 1%    | 2%    | 1%    | 1%    |
|                 |        |        |        |        |        |        | grade 6 events | 16820 | 53955 | 24108 | 65466 | 24806 | 21528 |
|                 |        |        |        |        |        |        |                | 9%    | 24%   | 12%   | 28%   | 11%   | 11%   |
|                 |        |        |        |        |        |        | grade 7 events | 37078 | 38700 | 36289 | 30959 | 41944 | 35334 |
|                 |        |        |        |        |        |        |                | 21%   | 17%   | 19%   | 13%   | 20%   | 19%   |

## 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                   | 107.9733143829889    | Alternating exposures requested | N         | N       |
| [deg] Pointing Dec                | 0                   | 35.98118264858346    | [s] Primary exposure time       | 3.2       | 3.2     |
| [deg] Pointing Roll               | 0.0                 | 188.2052848249818    |                                 |           |         |
| [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)  | 221599796.967434    | 221599795.94243      |                                 |           |         |
| Observation start date            | 2005-01-08T19:29:57 | 2005-01-08T19:29:55  |                                 |           |         |
| [s] Observation end time (MET)    | 221617066.168213    | 221617065.1432       |                                 |           |         |
| Observation end date              | 2005-01-09T00:17:46 | 2005-01-09T00:17:45  |                                 |           |         |
| 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)      | 2013.01.08      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 6.6399999752641 |

### A.2 Comments