

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 61166 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Oct 9 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        |

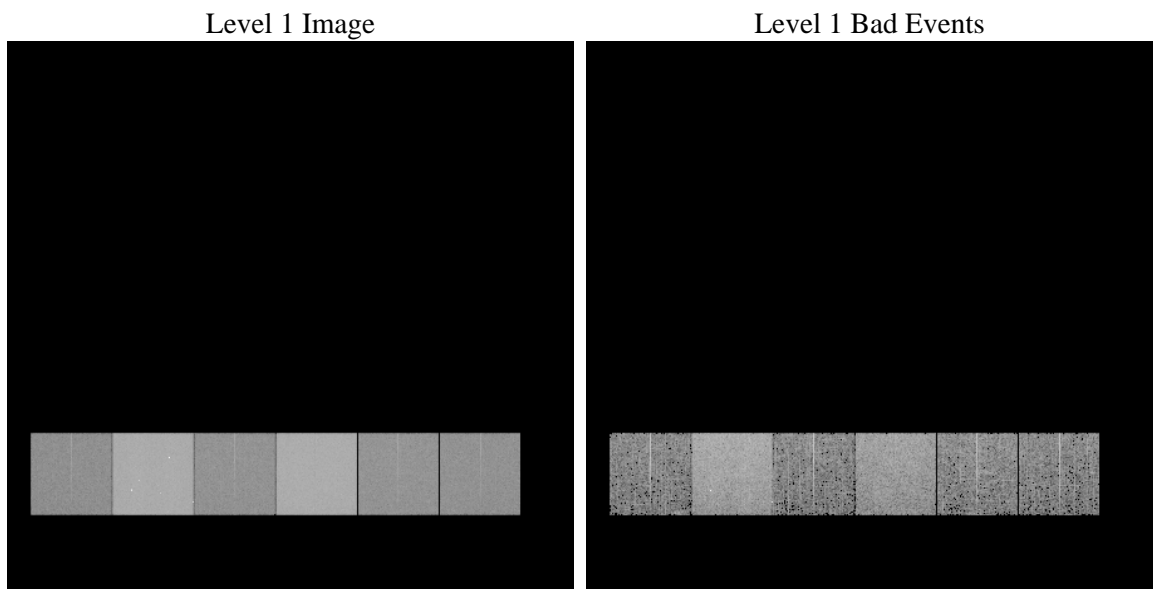
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 61166   | 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   | 289.9883197042                                  | Nominal RA [deg]                            |
| dec_nom  | -30.973193346906                                | Nominal Dec [deg]                           |
| roll_nom | 77.637900149905                                 | Nominal Roll [deg]                          |
| revision | 3   | Processing version of data                  |
| ontime   | 7714.6663550735                                 | Sum of GTIs [s]                             |
| livetime | 7616.9786044711                                 | Livetime [s]                                |
| ontime4  | 2807.6901748478                                 | Sum of GTIs [s]                             |
| ontime5  | 8307.7215147316                                 | Sum of GTIs [s]                             |
| ontime6  | 3014.1637640297                                 | Sum of GTIs [s]                             |
| ontime7  | 7714.6663550735                                 | Sum of GTIs [s]                             |
| ontime8  | 3096.1005781591                                 | Sum of GTIs [s]                             |
| ontime9  | 2991.4763049483                                 | Sum of GTIs [s]                             |
| l2events | 1317451   | Number of level 2 events                    |

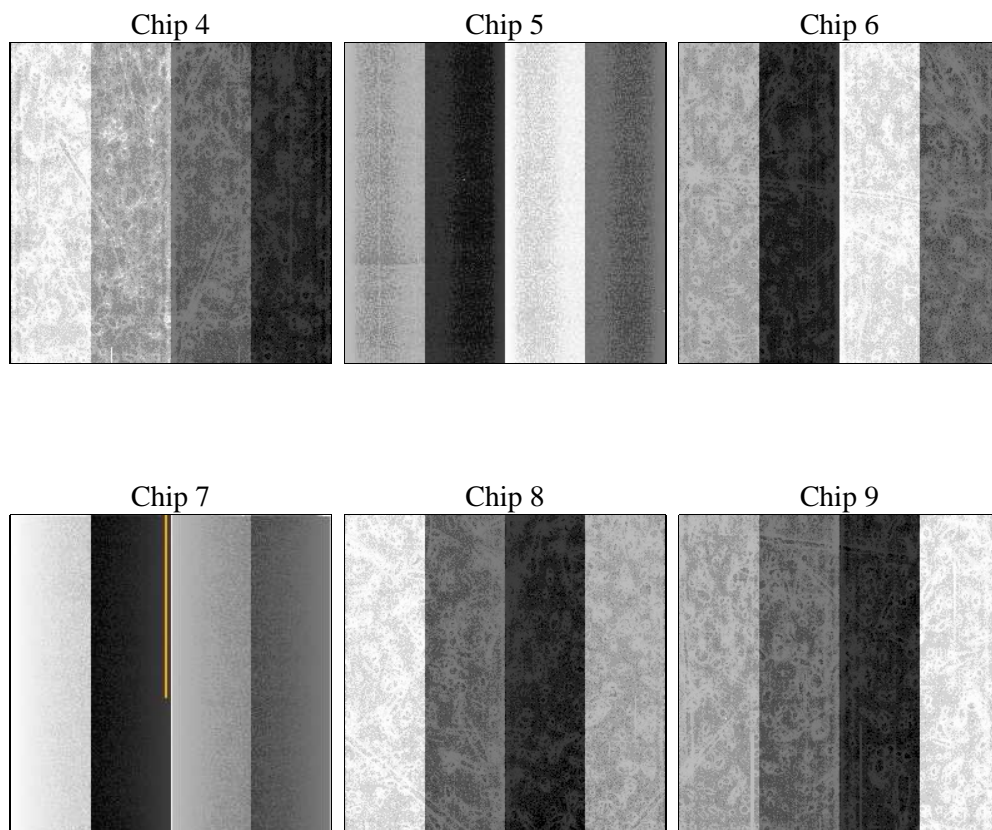
## 2 OBI

### 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         | 7714.6663550735 | Sum of GTIs [s]                         |
| caldsver | 4.5.2               | &#160                          | ontime4        | 2807.6901748478 | Sum of GTIs [s]                         |
| date     | 2012-10-09T07:02:12 | Date and time of file creation | ontime5        | 8307.7215147316 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime6        | 3014.1637640297 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 7714.6663550735 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 3096.1005781591 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 2991.4763049483 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1566037         | 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  | 156444 | 433000 | 178749 | 439835 | 186660 | 171349 | grade 0 events | 75666 | 90718  | 85050 | 100994 | 88775 | 81809 |
| rejected events | 22212  | 56859  | 22403  | 41470  | 25229  | 22114  |                | 48%   | 20%    | 47%   | 22%    | 47%   | 47%   |
| rejected %      | 14%    | 13%    | 12%    | 9%     | 13%    | 12%    | grade 1 events | 392   | 405    | 420   | 256    | 440   | 420   |
|                 |        |        |        |        |        |        |                | 0%    | 0%     | 0%    | 0%     | 0%    | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 23709 | 134695 | 27020 | 88397  | 28700 | 26581 |
|                 |        |        |        |        |        |        |                | 15%   | 31%    | 15%   | 20%    | 15%   | 15%   |
|                 |        |        |        |        |        |        | grade 3 events | 8270  | 23568  | 9660  | 40018  | 10301 | 9436  |
|                 |        |        |        |        |        |        |                | 5%    | 5%     | 5%    | 9%     | 5%    | 5%    |
|                 |        |        |        |        |        |        | grade 4 events | 8336  | 23544  | 9715  | 40206  | 10341 | 9285  |
|                 |        |        |        |        |        |        |                | 5%    | 5%     | 5%    | 9%     | 5%    | 5%    |
|                 |        |        |        |        |        |        | grade 5 events | 1494  | 10519  | 1699  | 8124   | 1871  | 1684  |
|                 |        |        |        |        |        |        |                | 0%    | 2%     | 0%    | 1%     | 1%    | 0%    |
|                 |        |        |        |        |        |        | grade 6 events | 18406 | 103757 | 24901 | 128912 | 23484 | 22124 |
|                 |        |        |        |        |        |        |                | 11%   | 23%    | 13%   | 29%    | 12%   | 12%   |
|                 |        |        |        |        |        |        | grade 7 events | 20171 | 45794  | 20284 | 32928  | 22748 | 20010 |
|                 |        |        |        |        |        |        |                | 12%   | 10%    | 11%   | 7%     | 12%   | 11%   |

## 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                   | 289.9883197041992    | Alternating exposures requested | N         | N       |
| [deg] Pointing Dec                | 0                   | -30.97319334690624   | [s] Primary exposure time       | 3.2       | 3.2     |
| [deg] Pointing Roll               | 0.0                 | 77.63790014990464    |                                 |           |         |
| [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)  | 140297445.369341    | 140297444.34462      |                                 |           |         |
| Observation start date            | 2002-06-12T19:30:45 | 2002-06-12T19:30:44  |                                 |           |         |
| [s] Observation end time (MET)    | 140321434.470323    | 140321433.4456       |                                 |           |         |
| Observation end date              | 2002-06-13T02:10:34 | 2002-06-13T02:10:33  |                                 |           |         |
| 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)      | 2012.10.19      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 7.7146663550735 |

### A.2 Comments