

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 55203 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Feb 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        |

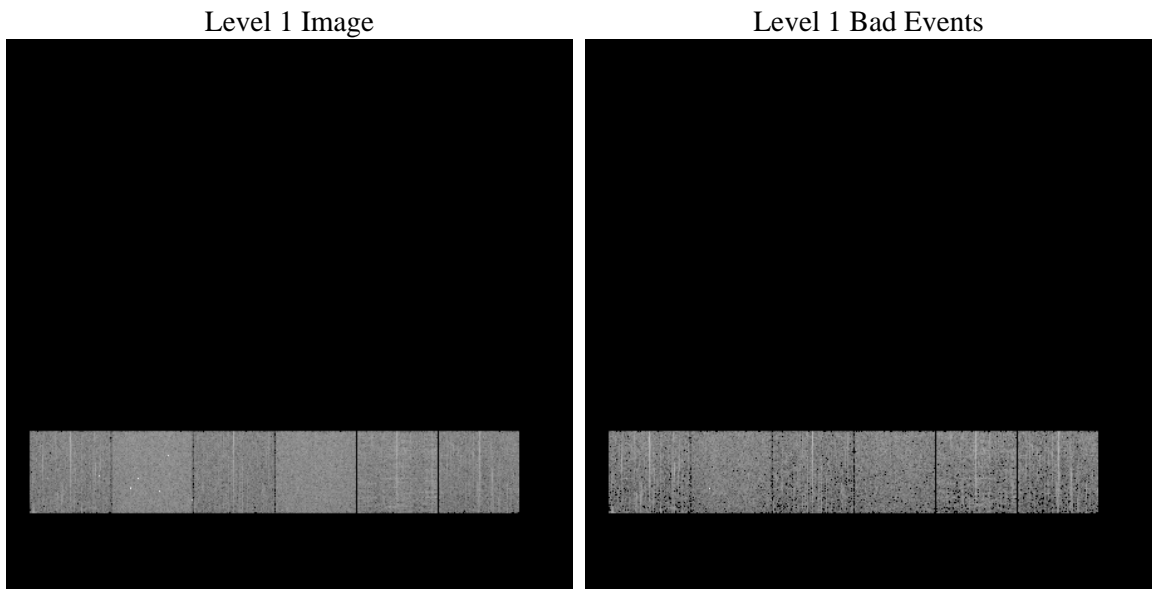
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 55203   | 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   | 322.02694177536                                 | Nominal RA [deg]                            |
| dec_nom  | -19.008049142934                                | Nominal Dec [deg]                           |
| roll_nom | 296.93645972242                                 | Nominal Roll [deg]                          |
| revision | 2   | Processing version of data                  |
| ontime   | 3283.0430040956                                 | Sum of GTIs [s]                             |
| livetime | 3241.4711367665                                 | Livetime [s]                                |
| ontime4  | 3282.9198840857                                 | Sum of GTIs [s]                             |
| ontime5  | 3283.0019640923                                 | Sum of GTIs [s]                             |
| ontime6  | 3282.960924089                                  | Sum of GTIs [s]                             |
| ontime7  | 3283.0430040956                                 | Sum of GTIs [s]                             |
| ontime8  | 3282.8788440824                                 | Sum of GTIs [s]                             |
| ontime9  | 3283.0840440989                                 | Sum of GTIs [s]                             |
| l2events | 130825  | Number of level 2 events                    |

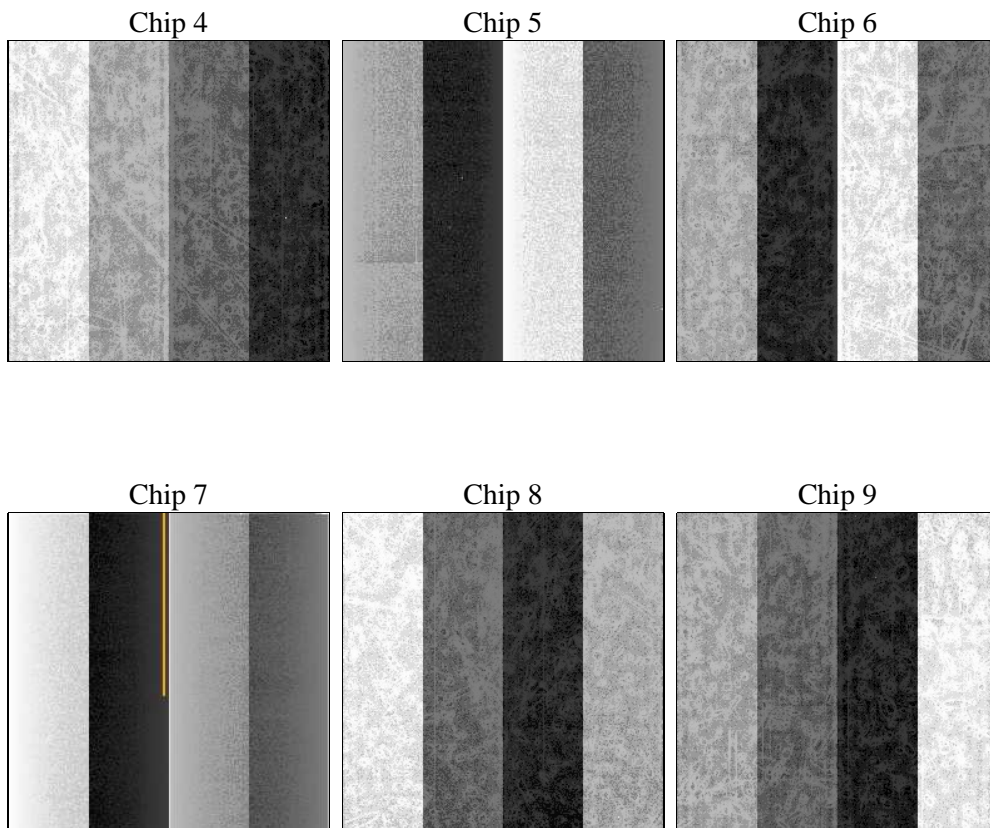
## 2 OBI

### 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 | 8.4.3               | Processing system revision     | ontime         | 3283.0430040956 | Sum of GTIs [s]                         |
| caldsver | 4.4.8               | &#160                          | ontime4        | 3282.9198840857 | Sum of GTIs [s]                         |
| date     | 2012-02-22T08:11:04 | Date and time of file creation | ontime5        | 3283.0019640923 | Sum of GTIs [s]                         |
| revision | 2                   | Processing version of data     | ontime6        | 3282.960924089  | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 3283.0430040956 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 3282.8788440824 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 3283.0840440989 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 291953          | 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  | 44050 | 59747 | 41888 | 54431 | 49628 | 42209 | grade 0 events | 10746 | 5726  | 9830  | 5192  | 11017 | 9820  |
| rejected events | 25219 | 25549 | 22663 | 23452 | 25948 | 23533 |                | 24%   | 9%    | 23%   | 9%    | 22%   | 23%   |
| rejected %      | 57%   | 42%   | 54%   | 43%   | 52%   | 55%   | grade 1 events | 99    | 162   | 59    | 51    | 85    | 57    |
|                 |       |       |       |       |       |       |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |       |       |       |       |       |       | grade 2 events | 3073  | 11593 | 3505  | 6702  | 4545  | 3242  |
|                 |       |       |       |       |       |       |                | 6%    | 19%   | 8%    | 12%   | 9%    | 7%    |
|                 |       |       |       |       |       |       | grade 3 events | 1349  | 1337  | 1364  | 2783  | 1724  | 1278  |
|                 |       |       |       |       |       |       |                | 3%    | 2%    | 3%    | 5%    | 3%    | 3%    |
|                 |       |       |       |       |       |       | grade 4 events | 1271  | 1318  | 1254  | 2750  | 1666  | 1278  |
|                 |       |       |       |       |       |       |                | 2%    | 2%    | 2%    | 5%    | 3%    | 3%    |
|                 |       |       |       |       |       |       | grade 5 events | 1450  | 3365  | 1571  | 3697  | 1893  | 1615  |
|                 |       |       |       |       |       |       |                | 3%    | 5%    | 3%    | 6%    | 3%    | 3%    |
|                 |       |       |       |       |       |       | grade 6 events | 2392  | 14224 | 3272  | 13552 | 4728  | 3058  |
|                 |       |       |       |       |       |       |                | 5%    | 23%   | 7%    | 24%   | 9%    | 7%    |
|                 |       |       |       |       |       |       | grade 7 events | 23670 | 22022 | 21033 | 19704 | 23970 | 21861 |
|                 |       |       |       |       |       |       |                | 53%   | 36%   | 50%   | 36%   | 48%   | 51%   |

## 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                | Number of optional ACIS chips dropped | 0         | 0       |
| Observation mode                  | SECONDARY           | SECONDARY            | On-chip summing requested             | N         | N       |
| [deg] Pointing RA                 | 0                   | 322.0269417753556    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 0                   | -19.00804914293391   | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 0.0                 | 296.9364597224179    | [s] Primary exposure time             | 3.2       | 3.2     |
| [mm] SIM focus pos                | -1.429586           | -1.428180813131781   |                                       |           |         |
| [mm] SIM defocus                  | 0.1037507710433287  | 0.1051558262725154   |                                       |           |         |
| [mm] SIM translation stage pos    | 250.455976          | 250.466033080201     |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | -0.01005468664627074 |                                       |           |         |
| [s] Observation start time (MET)  | 431602822.899012    | 431602821.87398      |                                       |           |         |
| Observation start date            | 2011-09-05T09:40:23 | 2011-09-05T09:40:21  |                                       |           |         |
| [s] Observation end time (MET)    | 431609893.349383    | 431609892.32435      |                                       |           |         |
| Observation end date              | 2011-09-05T11:38:13 | 2011-09-05T11:38:12  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Star Slots

## 2.4 FID Slots

## A Summary

### A.1 Status

|                            |                 |
|----------------------------|-----------------|
| V&V Scientist              | Jen Lauer       |
| V&V Date (YYYY-MM-DD)      | 2012.02.22      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 3.2830430040956 |

### A.2 Comments