

# V&V Reference Report

## L2 ASCDS Version : 8.5

Observation 59964 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Dec 11 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        |

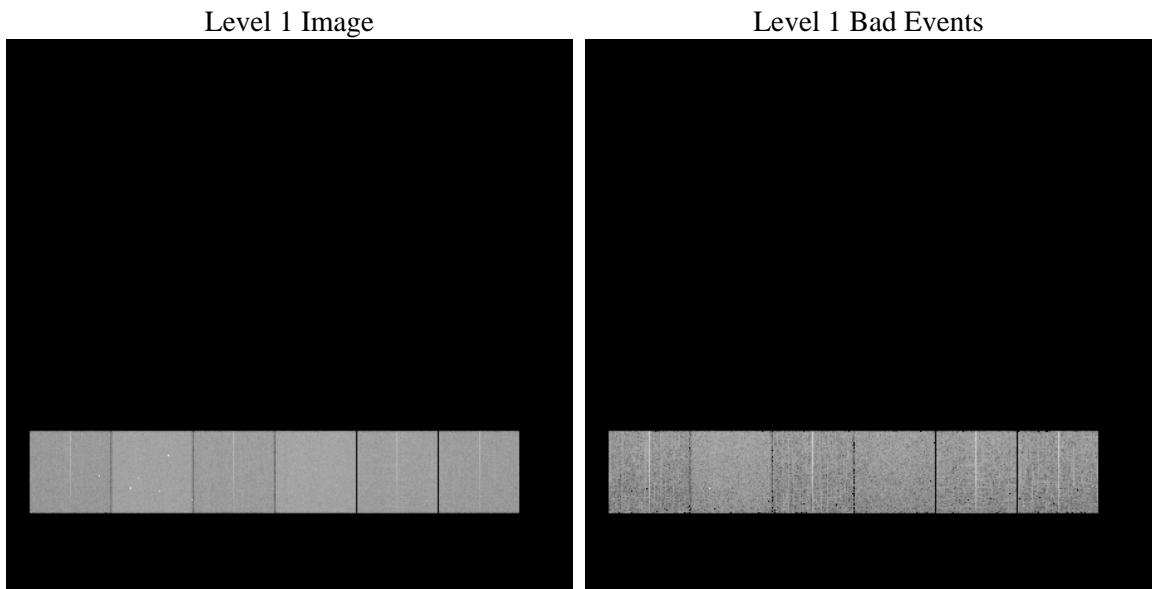
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 59964   | Observation id                              |
| title    | ACIS-456789 diagnostics                         | Proposal title                              |
| observer | CHANDRA engineering request/realtime commanding | Principal investig                          |
| object   | &#160   | Source name                                 |
| dtycycle | 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   | 53.024867307515                                 | Nominal RA [deg]                            |
| dec_nom  | 16.015631435497                                 | Nominal Dec [deg]                           |
| roll_nom | 0.5158855043455                                 | Nominal Roll [deg]                          |
| revision | 3   | Processing version of data                  |
| ontime   | 6773.9769665599                                 | Sum of GTIs [s]                             |
| livetime | 6688.2007914101                                 | Livetime [s]                                |
| ontime4  | 4984.8373483419                                 | Sum of GTIs [s]                             |
| ontime5  | 6773.9359265566                                 | Sum of GTIs [s]                             |
| ontime6  | 5341.3851902485                                 | Sum of GTIs [s]                             |
| ontime7  | 6773.9769665599                                 | Sum of GTIs [s]                             |
| ontime8  | 5568.1712899208                                 | Sum of GTIs [s]                             |
| ontime9  | 5257.2432014942                                 | Sum of GTIs [s]                             |
| l2events | 917870  | Number of level 2 events                    |

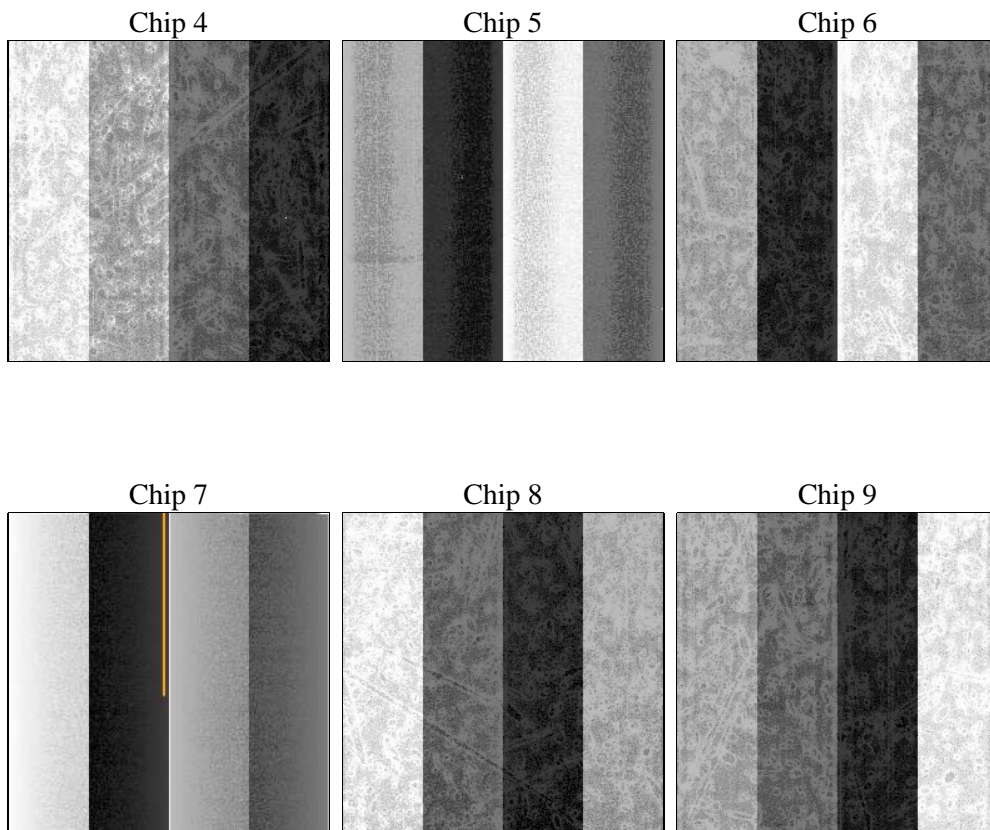
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 2                   | Obi number                     | sched_exp_time | 0.0             | [s] Scheduled observation exposure time |
| ascdsver | 8.5                 | Processing system revision     | ontime         | 6773.9769665599 | Sum of GTIs [s]                         |
| caldbver | 4.5.4               | &#160                          | ontime4        | 4984.8373483419 | Sum of GTIs [s]                         |
| date     | 2012-12-11T23:46:45 | Date and time of file creation | ontime5        | 6773.9359265566 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime6        | 5341.3851902485 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 6773.9769665599 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 5568.1712899208 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 5257.2432014942 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1239710         | 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  | 172041 | 235012 | 193507 | 246097 | 207911 | 185142 | grade 0 events | 76840 | 41028 | 83156 | 48793 | 88346 | 79257 |
| rejected events | 40953  | 50417  | 41635  | 43017  | 45912  | 42179  |                | 44%   | 17%   | 42%   | 19%   | 42%   | 42%   |
| rejected %      | 23%    | 21%    | 21%    | 17%    | 22%    | 22%    | grade 1 events | 585   | 166   | 434   | 158   | 482   | 462   |
|                 |        |        |        |        |        |        |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 21149 | 67444 | 26535 | 45483 | 28783 | 24810 |
|                 |        |        |        |        |        |        |                | 12%   | 28%   | 13%   | 18%   | 13%   | 13%   |
|                 |        |        |        |        |        |        | grade 3 events | 8794  | 10687 | 9490  | 20227 | 10618 | 9341  |
|                 |        |        |        |        |        |        |                | 5%    | 4%    | 4%    | 8%    | 5%    | 5%    |
|                 |        |        |        |        |        |        | grade 4 events | 8965  | 10739 | 9629  | 20264 | 10765 | 9402  |
|                 |        |        |        |        |        |        |                | 5%    | 4%    | 4%    | 8%    | 5%    | 5%    |
|                 |        |        |        |        |        |        | grade 5 events | 2265  | 7673  | 2552  | 7497  | 3114  | 2781  |
|                 |        |        |        |        |        |        |                | 1%    | 3%    | 1%    | 3%    | 1%    | 1%    |
|                 |        |        |        |        |        |        | grade 6 events | 16699 | 56435 | 24307 | 70174 | 24775 | 21555 |
|                 |        |        |        |        |        |        |                | 9%    | 24%   | 12%   | 28%   | 11%   | 11%   |
|                 |        |        |        |        |        |        | grade 7 events | 36744 | 40840 | 37404 | 33501 | 41028 | 37534 |
|                 |        |        |        |        |        |        |                | 21%   | 17%   | 19%   | 13%   | 19%   | 20%   |

## 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                   | 53.02486730751534    | Alternating exposures requested | N         | N       |
| [deg] Pointing Dec                | 0                   | 16.01563143549741    | [s] Primary exposure time       | 3.2       | 3.2     |
| [deg] Pointing Roll               | 0.0                 | 0.5158855043454966   |                                 |           |         |
| [mm] SIM focus pos                | -0.684267           | -0.7809083437167272  |                                 |           |         |
| [mm] SIM defocus                  | 0                   | 0.7524282956875696   |                                 |           |         |
| [mm] SIM translation stage pos    | -190.132523         | 250.466033080201     |                                 |           |         |
| [mm] SIM translation stage offset | 0                   | -0.01005468664627074 |                                 |           |         |
| [s] Observation start time (MET)  | 217067302.113478    | 217067301.08847      |                                 |           |         |
| Observation start date            | 2004-11-17T08:28:22 | 2004-11-17T08:28:21  |                                 |           |         |
| [s] Observation end time (MET)    | 217089241.214463    | 217089240.18946      |                                 |           |         |
| Observation end date              | 2004-11-17T14:34:01 | 2004-11-17T14:34:00  |                                 |           |         |
| 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)      | 2013.01.02      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 6.7739769665599 |

## A.2 Comments