

# V&V Reference Report

## L2 ASCDS Version : 8.5

Observation 59999 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Dec 10 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        |

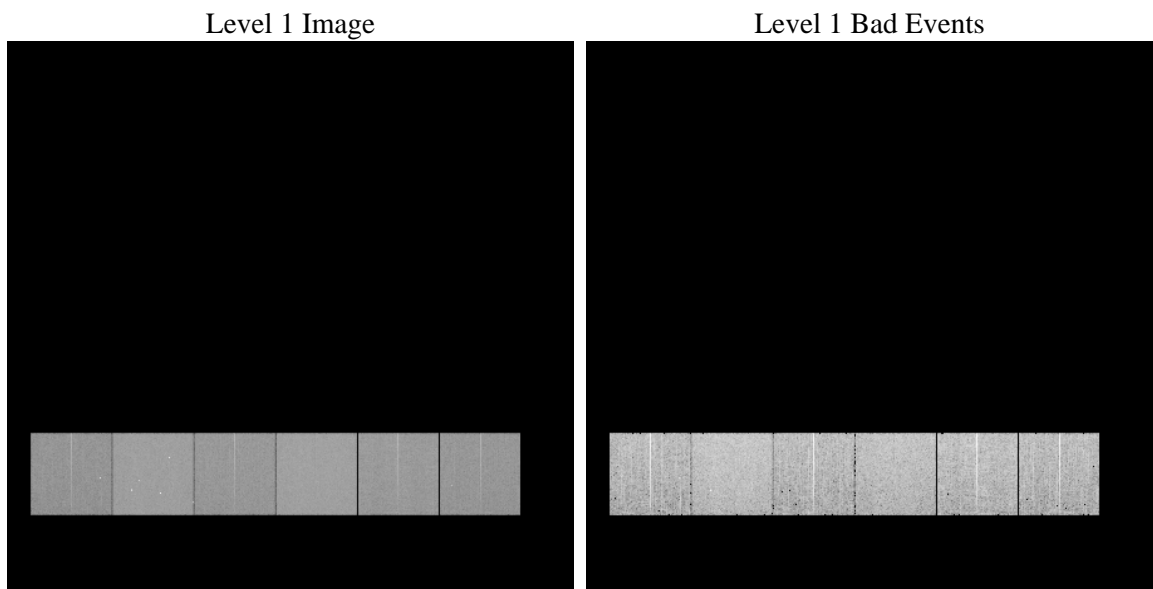
# 1 Front

|          |   |   |
|----------|---|---|
| seq_num  | &#160   | Sequence number                             |
| obs_id   | 59999   | 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   | 21.028675030607                                 | Nominal RA [deg]                            |
| dec_nom  | 4.2022638304741                                 | Nominal Dec [deg]                           |
| roll_nom | 331.30591555247                                 | Nominal Roll [deg]                          |
| revision | 3   | Processing version of data                  |
| ontime   | 7602.9481176138                                 | Sum of GTIs [s]                             |
| livetime | 7506.6750106028                                 | Livetime [s]                                |
| ontime4  | 5240.7271050513                                 | Sum of GTIs [s]                             |
| ontime5  | 7602.9070776105                                 | Sum of GTIs [s]                             |
| ontime6  | 5736.0658844709                                 | Sum of GTIs [s]                             |
| ontime7  | 7602.9481176138                                 | Sum of GTIs [s]                             |
| ontime8  | 5940.1651216447                                 | Sum of GTIs [s]                             |
| ontime9  | 5522.6917190254                                 | Sum of GTIs [s]                             |
| l2events | 1019745   | Number of level 2 events                    |

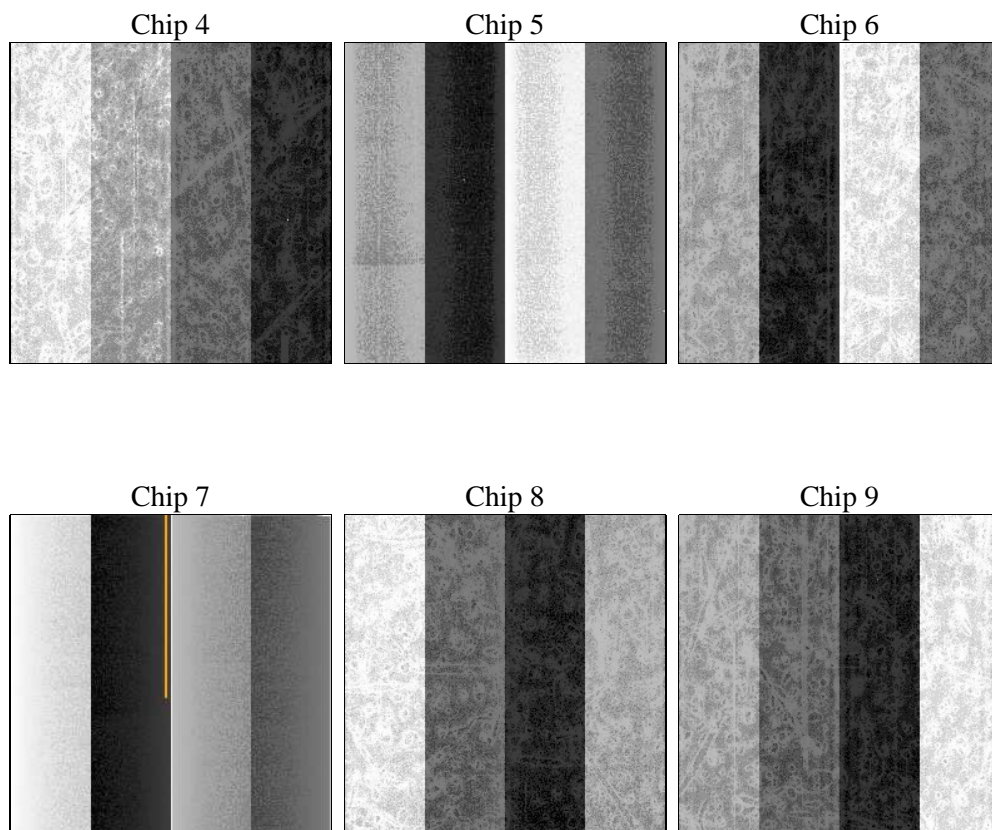
## 2 OBI

### 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                 | Processing system revision     | ontime         | 7602.9481176138 | Sum of GTIs [s]                         |
| caldsver | 4.5.4               | &#160                          | ontime4        | 5240.7271050513 | Sum of GTIs [s]                         |
| date     | 2012-12-10T11:10:24 | Date and time of file creation | ontime5        | 7602.9070776105 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime6        | 5736.0658844709 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 7602.9481176138 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 5940.1651216447 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 5522.6917190254 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1392255         | 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  | 187465 | 272499 | 212909 | 287293 | 230949 | 201140 | grade 0 events | 82568 | 47082 | 90449 | 56468 | 96001 | 85364 |
| rejected events | 46802  | 59488  | 47560  | 52500  | 54590  | 47565  |                | 44%   | 17%   | 42%   | 19%   | 41%   | 42%   |
| rejected %      | 24%    | 21%    | 22%    | 18%    | 23%    | 23%    | grade 1 events | 673   | 213   | 484   | 212   | 524   | 561   |
|                 |        |        |        |        |        |        |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 22706 | 77515 | 28838 | 52124 | 31648 | 26739 |
|                 |        |        |        |        |        |        |                | 12%   | 28%   | 13%   | 18%   | 13%   | 13%   |
|                 |        |        |        |        |        |        | grade 3 events | 9514  | 12288 | 10648 | 23812 | 11823 | 10033 |
|                 |        |        |        |        |        |        |                | 5%    | 4%    | 5%    | 8%    | 5%    | 4%    |
|                 |        |        |        |        |        |        | grade 4 events | 9469  | 12171 | 10407 | 23496 | 11766 | 9903  |
|                 |        |        |        |        |        |        |                | 5%    | 4%    | 4%    | 8%    | 5%    | 4%    |
|                 |        |        |        |        |        |        | grade 5 events | 2616  | 8857  | 2851  | 8938  | 3671  | 3140  |
|                 |        |        |        |        |        |        |                | 1%    | 3%    | 1%    | 3%    | 1%    | 1%    |
|                 |        |        |        |        |        |        | grade 6 events | 18052 | 66297 | 26682 | 81461 | 27306 | 23269 |
|                 |        |        |        |        |        |        |                | 9%    | 24%   | 12%   | 28%   | 11%   | 11%   |
|                 |        |        |        |        |        |        | grade 7 events | 41867 | 48076 | 42550 | 40782 | 48210 | 42131 |
|                 |        |        |        |        |        |        |                | 22%   | 17%   | 19%   | 14%   | 20%   | 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                   | 21.02867503060658     | Alternating exposures requested | N         | N       |
| [deg] Pointing Dec                | 0                   | 4.202263830474059     | [s] Primary exposure time       | 3.2       | 3.2     |
| [deg] Pointing Roll               | 0.0                 | 331.3059155524732     |                                 |           |         |
| [mm] SIM focus pos                | -0.684267           | -0.6828225247311905   |                                 |           |         |
| [mm] SIM defocus                  | 0                   | 0.8505141146731063    |                                 |           |         |
| [mm] SIM translation stage pos    | -190.132523         | 250.4635187648994     |                                 |           |         |
| [mm] SIM translation stage offset | 0                   | -0.007540371344731511 |                                 |           |         |
| [s] Observation start time (MET)  | 214556002.800911    | 214556001.77591       |                                 |           |         |
| Observation start date            | 2004-10-19T06:53:23 | 2004-10-19T06:53:21   |                                 |           |         |
| [s] Observation end time (MET)    | 214576767.25184     | 214576766.22684       |                                 |           |         |
| Observation end date              | 2004-10-19T12:39:27 | 2004-10-19T12:39:26   |                                 |           |         |
| 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)      | 2013.01.03      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 7.6029481176138 |

### A.2 Comments