

# V&V Reference Report

## L2 ASCDS Version : 10.3

Observation 52329 - L2 Version 1  
Chandra X-Ray Center

L2 Processing Date : Nov 9 2014

## 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        |

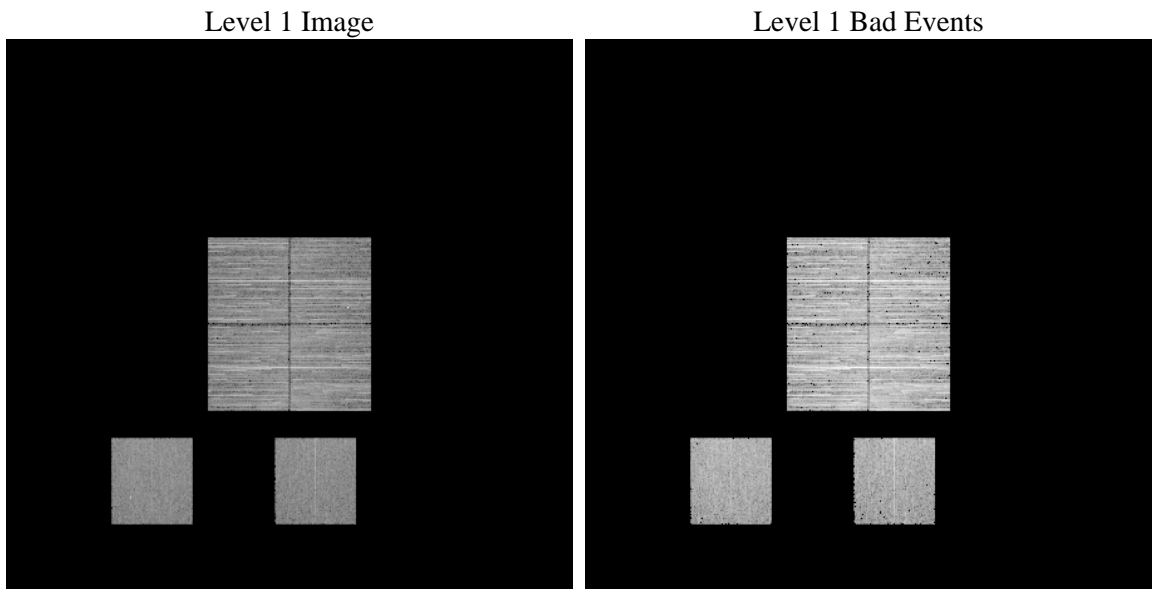
# 1 Front

|          |                                                 |                                             |
|----------|-------------------------------------------------|---------------------------------------------|
| seq_num  | &#160                                           | Sequence number                             |
| obs_id   | 52329                                           | Observation id                              |
| title    | ACIS-012357 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   | 48.289131195175                                 | Nominal RA [deg]                            |
| dec_nom  | -7.0861977642027                                | Nominal Dec [deg]                           |
| roll_nom | 9.2345896540169                                 | Nominal Roll [deg]                          |
| revision | 1                                               | Processing version of data                  |
| ontime   | 4540.7999831438                                 | Sum of GTIs [s]                             |
| livetime | 4483.3016396157                                 | Livetime [s]                                |
| ontime0  | 4540.7999831438                                 | Sum of GTIs [s]                             |
| ontime1  | 4540.7999831438                                 | Sum of GTIs [s]                             |
| ontime2  | 4540.7999831438                                 | Sum of GTIs [s]                             |
| ontime3  | 4540.7999831438                                 | Sum of GTIs [s]                             |
| ontime5  | 4540.7999831438                                 | Sum of GTIs [s]                             |
| ontime7  | 4540.7999831438                                 | Sum of GTIs [s]                             |
| l2events | 103453                                          | Number of level 2 events                    |

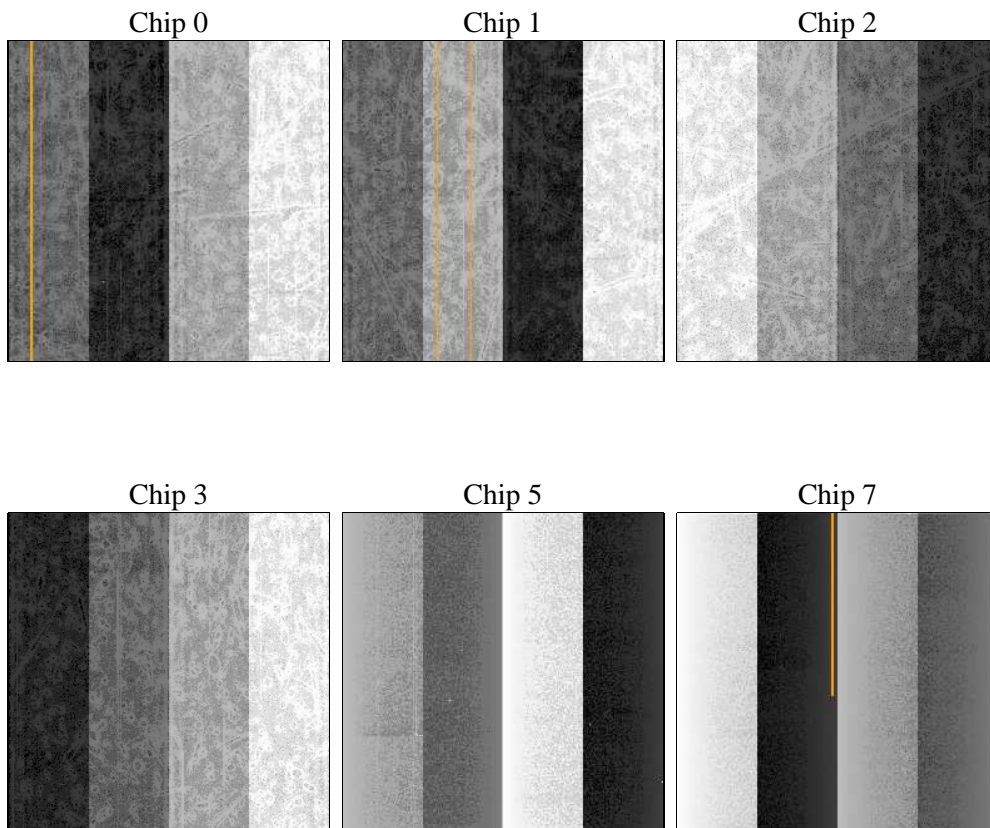
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |                                         |
|----------|---------------------|--------------------------------|----------------|-----------------|-----------------------------------------|
| obi_num  | 1                   | Obi number                     | sched_exp_time | 0.0             | [s] Scheduled observation exposure time |
| ascdsver | 10.3                | Processing system revision     | ontime         | 4540.7999831438 | Sum of GTIs [s]                         |
| caldsver | 4.6.4               | &#160                          | ontime0        | 4540.7999831438 | Sum of GTIs [s]                         |
| date     | 2014-11-10T02:59:58 | Date and time of file creation | ontime1        | 4540.7999831438 | Sum of GTIs [s]                         |
| revision | 1                   | Processing version of data     | ontime2        | 4540.7999831438 | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 4540.7999831438 | Sum of GTIs [s]                         |
|          |                     |                                | ontime5        | 4540.7999831438 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 4540.7999831438 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 474412          | Number of level 1 events                |

### 2.1.4 Events

|                 | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 5 | ccd 7 |                | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 5 | ccd 7 |
|-----------------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 81228 | 80248 | 88050 | 91001 | 67926 | 65959 | grade 0 events | 6604  | 6204  | 7041  | 6675  | 2133  | 3422  |
| rejected events | 67805 | 66049 | 74772 | 77857 | 39445 | 38900 |                | 8%    | 7%    | 7%    | 7%    | 3%    | 5%    |
| rejected %      | 83%   | 82%   | 84%   | 85%   | 58%   | 58%   | grade 1 events | 38    | 19    | 39    | 50    | 59    | 41    |
|                 |       |       |       |       |       |       |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |       |       |       |       |       |       | grade 2 events | 2943  | 4236  | 2637  | 2740  | 10691 | 6787  |
|                 |       |       |       |       |       |       |                | 3%    | 5%    | 2%    | 3%    | 15%   | 10%   |
|                 |       |       |       |       |       |       | grade 3 events | 942   | 892   | 907   | 896   | 864   | 2063  |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 0%    | 1%    | 3%    |
|                 |       |       |       |       |       |       | grade 4 events | 917   | 827   | 942   | 1005  | 815   | 2014  |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 1%    | 3%    |
|                 |       |       |       |       |       |       | grade 5 events | 1624  | 1537  | 1558  | 1644  | 2959  | 3890  |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 4%    | 5%    |
|                 |       |       |       |       |       |       | grade 6 events | 2273  | 2369  | 2014  | 2096  | 14525 | 13310 |
|                 |       |       |       |       |       |       |                | 2%    | 2%    | 2%    | 2%    | 21%   | 20%   |
|                 |       |       |       |       |       |       | grade 7 events | 65887 | 64164 | 72912 | 75895 | 35880 | 34432 |
|                 |       |       |       |       |       |       |                | 81%   | 79%   | 82%   | 83%   | 52%   | 52%   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-012357         | ACIS-012357          | 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                   | 48.28913119517466    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 0                   | -7.086197764202651   | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 0.0                 | 9.234589654016858    | [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)  | 531922289.236787    | 531922288.21179      |                                       |           |         |
| Observation start date            | 2014-11-09T12:11:29 | 2014-11-09T12:11:28  |                                       |           |         |
| [s] Observation end time (MET)    | 531930282.187232    | 531930281.16223      |                                       |           |         |
| Observation end date              | 2014-11-09T14:24:42 | 2014-11-09T14:24:41  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## **2.3 Star Slots**

## **2.4 FID Slots**

## A Summary

### A.1 Status

|                            |                 |
|----------------------------|-----------------|
| V&V Scientist              | Joy Nichols     |
| V&V Date (YYYY-MM-DD)      | 2014.11.10      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 4.5407999831438 |

### A.2 Comments