

# V&V Reference Report

## L2 ASCDS Version : 8.5

Observation 59981 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Dec 10 2012

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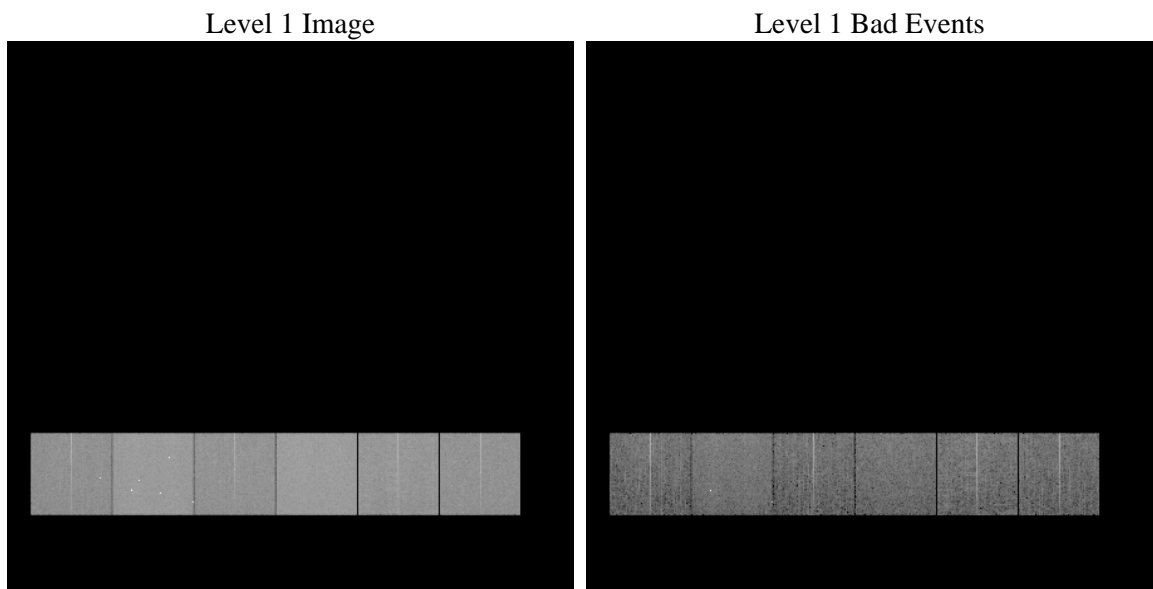
# 1 Front

|          |                                                 |                                             |
|----------|-------------------------------------------------|---------------------------------------------|
| seq_num  | &#160                                           | Sequence number                             |
| obs_id   | 59981                                           | 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   | 37.972036881865                                 | Nominal RA [deg]                            |
| dec_nom  | 21.987781650281                                 | Nominal Dec [deg]                           |
| roll_nom | 172.55214912114                                 | Nominal Roll [deg]                          |
| revision | 3                                               | Processing version of data                  |
| ontime   | 7851.8935201168                                 | Sum of GTIs [s]                             |
| livetime | 7752.4681165224                                 | Livetime [s]                                |
| ontime4  | 5288.1597692966                                 | Sum of GTIs [s]                             |
| ontime5  | 7851.8524801135                                 | Sum of GTIs [s]                             |
| ontime6  | 5728.973965317                                  | Sum of GTIs [s]                             |
| ontime7  | 7851.8935201168                                 | Sum of GTIs [s]                             |
| ontime8  | 5978.4467865527                                 | Sum of GTIs [s]                             |
| ontime9  | 5638.3498165011                                 | Sum of GTIs [s]                             |
| l2events | 1032750                                         | Number of level 2 events                    |

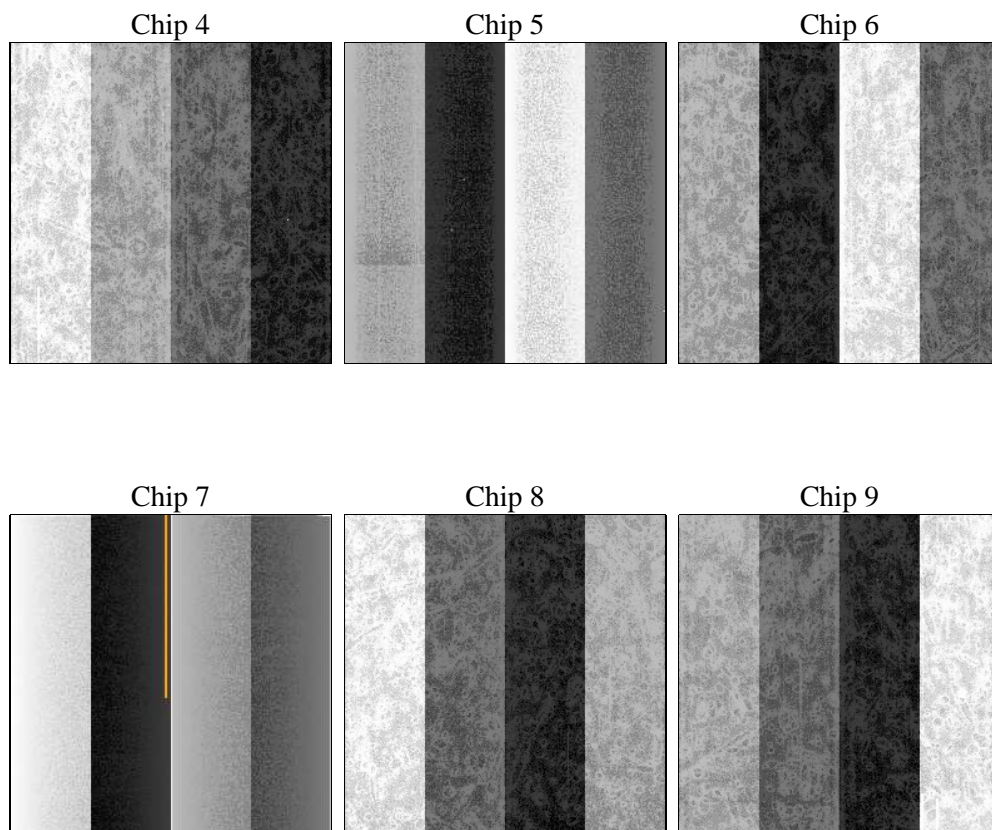
## 2 OBI

### 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         | 7851.8935201168 | Sum of GTIs [s]                         |
| caldsver | 4.5.4               | &#160                          | ontime4        | 5288.1597692966 | Sum of GTIs [s]                         |
| date     | 2012-12-11T01:05:41 | Date and time of file creation | ontime5        | 7851.8524801135 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime6        | 5728.973965317  | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 7851.8935201168 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 5978.4467865527 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 5638.3498165011 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1422253         | 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  | 191771 | 285059 | 212534 | 292920 | 235658 | 204311 | grade 0 events | 82620 | 47596 | 88865 | 56676 | 96308 | 84988 |
| rejected events | 50226  | 62301  | 49080  | 51631  | 56429  | 48906  |                | 43%   | 16%   | 41%   | 19%   | 40%   | 41%   |
| rejected %      | 26%    | 21%    | 23%    | 17%    | 23%    | 23%    | grade 1 events | 719   | 375   | 522   | 188   | 580   | 631   |
|                 |        |        |        |        |        |        |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |        |        |        |        |        |        | grade 2 events | 21939 | 82195 | 28019 | 52960 | 31571 | 26325 |
|                 |        |        |        |        |        |        |                | 11%   | 28%   | 13%   | 18%   | 13%   | 12%   |
|                 |        |        |        |        |        |        | grade 3 events | 9443  | 11888 | 10270 | 23773 | 12163 | 10280 |
|                 |        |        |        |        |        |        |                | 4%    | 4%    | 4%    | 8%    | 5%    | 5%    |
|                 |        |        |        |        |        |        | grade 4 events | 9408  | 11928 | 10058 | 23710 | 11894 | 10057 |
|                 |        |        |        |        |        |        |                | 4%    | 4%    | 4%    | 8%    | 5%    | 4%    |
|                 |        |        |        |        |        |        | grade 5 events | 2655  | 9638  | 3030  | 9206  | 3622  | 3132  |
|                 |        |        |        |        |        |        |                | 1%    | 3%    | 1%    | 3%    | 1%    | 1%    |
|                 |        |        |        |        |        |        | grade 6 events | 18135 | 69151 | 26242 | 84170 | 27293 | 23755 |
|                 |        |        |        |        |        |        |                | 9%    | 24%   | 12%   | 28%   | 11%   | 11%   |
|                 |        |        |        |        |        |        | grade 7 events | 46852 | 52288 | 45528 | 42237 | 52227 | 45143 |
|                 |        |        |        |        |        |        |                | 24%   | 18%   | 21%   | 14%   | 22%   | 22%   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               |
|-----------------------------------|---------------------|----------------------|
| Instrument                        | ACIS                | ACIS                 |
| Detector                          | ACIS-456789         | ACIS-456789          |
| Grating                           | NONE                | NONE                 |
| Data mode                         | FAINT               | FAINT                |
| Observation mode                  | SECONDARY           | SECONDARY            |
| [deg] Pointing RA                 | 0                   | 37.97203688186494    |
| [deg] Pointing Dec                | 0                   | 21.98778165028115    |
| [deg] Pointing Roll               | 0.0                 | 172.5521491211367    |
| [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)  | 215697643.75207     | 215697642.72706      |
| Observation start date            | 2004-11-01T12:00:44 | 2004-11-01T12:00:42  |
| [s] Observation end time (MET)    | 215720757.503108    | 215720756.47809      |
| Observation end date              | 2004-11-01T18:25:58 | 2004-11-01T18:25:56  |
| Read mode                         | TIMED               | TIMED                |

| Parameter                       | Planned   | Actual  |
|---------------------------------|-----------|---------|
| Obspar format version number    | 7         | 7       |
| Obspar file type                | PREDICTED | ACTUAL  |
| Obspar update status            | NONE      | UPDATED |
| On-chip summing requested       | N         | N       |
| Subarray requested              | NONE      | NONE    |
| Alternating exposures requested | N         | N       |
| [s] Primary exposure time       | 3.2       | 3.2     |

## 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            | 7.8518935201168 |

### A.2 Comments