

# V&V Reference Report

## L2 ASCDS Version : 7.6.10

Observation 61956 - L2 Version 001  
Chandra X-Ray Center

L2 Processing Date : Jun 5 2007

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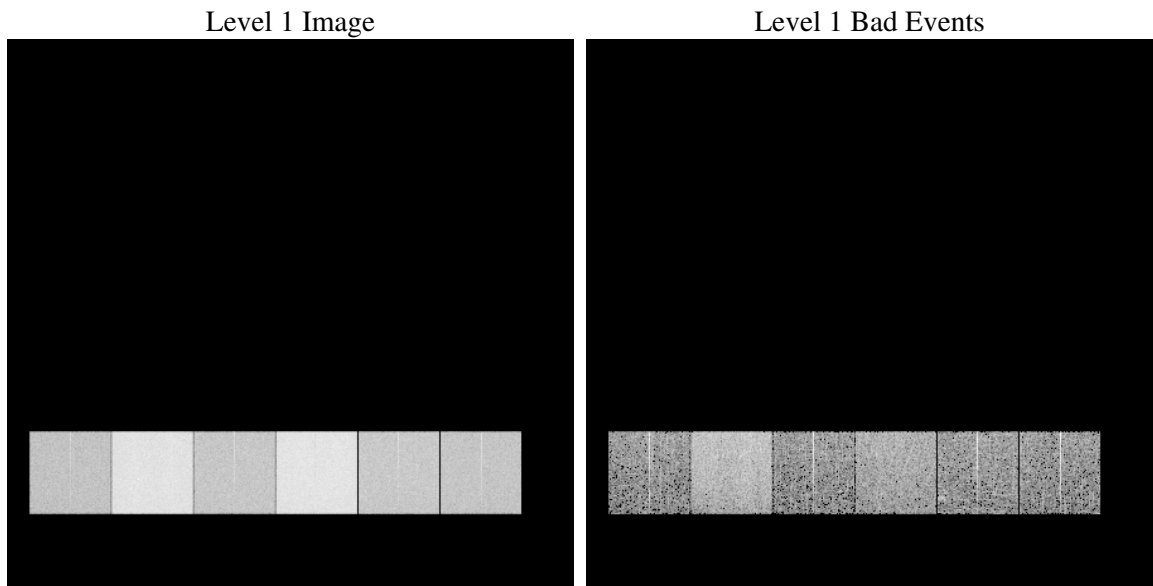
# 1 Front

|          |   |
|----------|---|
| seq_num  | &#160   |
| obs_id   | 61956   |
| title    | ACIS-456789 diagnostics                         |
| observer | CHANDRA engineering request/realtime commanding |
| object   | &#160   |
| dtcycle  | 0   |
| cycle    | P   |
| ra_targ  | 0.0   |
| dec_targ | 0.0   |
| ra_nom   | 314.03110614959                                 |
| dec_nom  | -28.008625180775                                |
| roll_nom | 310.06576192976                                 |
| revision | 3   |
| ontime   | 4821.0333778411                                 |
| livetime | 4759.9865503331                                 |
| ontime4  | 2046.8459741324                                 |
| ontime5  | 5199.9403372705                                 |
| ontime6  | 2150.5179346651                                 |
| ontime7  | 4821.0333778411                                 |
| ontime8  | 2254.313334316                                  |
| ontime9  | 2120.9804880917                                 |
| l2events | 1353262   |

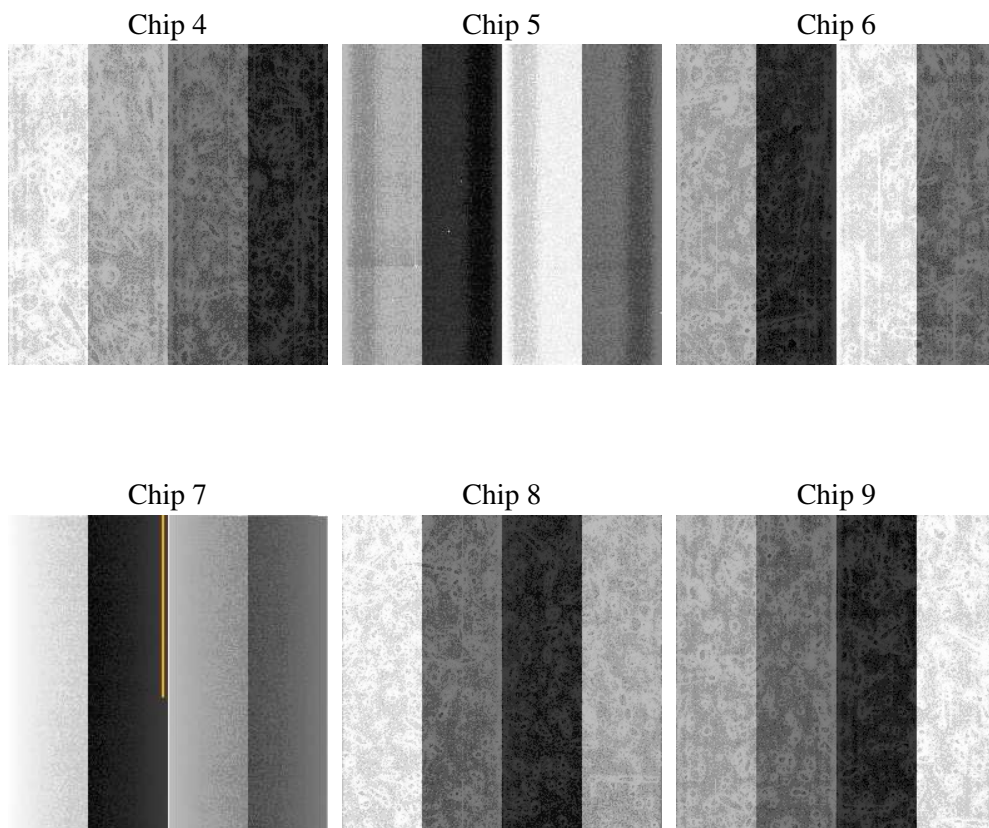
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 0                   |
| ascdsver | 7.6.10              |
| caldbver | 3.4.0               |
| date     | 2007-06-05T13:48:18 |
| revision | 3                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 0.0             |
| ontime         | 4821.0333778411 |
| ontime4        | 2046.8459741324 |
| ontime5        | 5199.9403372705 |
| ontime6        | 2150.5179346651 |
| ontime7        | 4821.0333778411 |
| ontime8        | 2254.313334316  |
| ontime9        | 2120.9804880917 |
| l1events       | 1554732         |

### 2.1.4 Events

|                 | ccd 4  | ccd 5  | ccd 6  | ccd 7  | ccd 8  | ccd 9  |
|-----------------|--------|--------|--------|--------|--------|--------|
| level 1 events  | 171009 | 395178 | 192954 | 410000 | 202524 | 183067 |
| rejected events | 18654  | 41524  | 18511  | 26996  | 20410  | 18629  |
| rejected %      | 10%    | 10%    | 9%     | 6%     | 10%    | 10%    |

|                | ccd 4 | ccd 5  | ccd 6 | ccd 7  | ccd 8  | ccd 9 |
|----------------|-------|--------|-------|--------|--------|-------|
| grade 0 events | 85652 | 80583  | 95790 | 98819  | 101119 | 90870 |
|                | 50%   | 20%    | 49%   | 24%    | 49%    | 49%   |
| grade 1 events | 450   | 242    | 437   | 258    | 493    | 439   |
|                | 0%    | 0%     | 0%    | 0%     | 0%     | 0%    |
| grade 2 events | 28614 | 133990 | 30694 | 83990  | 32404  | 29510 |
|                | 16%   | 33%    | 15%   | 20%    | 16%    | 16%   |
| grade 3 events | 8958  | 21346  | 10560 | 39285  | 11368  | 10126 |
|                | 5%    | 5%     | 5%    | 9%     | 5%     | 5%    |
| grade 4 events | 8945  | 21245  | 10363 | 39085  | 11529  | 9974  |
|                | 5%    | 5%     | 5%    | 9%     | 5%     | 5%    |
| grade 5 events | 1309  | 7961   | 1548  | 5547   | 1562   | 1456  |
|                | 0%    | 2%     | 0%    | 1%     | 0%     | 0%    |
| grade 6 events | 20647 | 97752  | 27794 | 123411 | 26516  | 24721 |
|                | 12%   | 24%    | 14%   | 30%    | 13%    | 13%   |
| grade 7 events | 16434 | 32059  | 15768 | 19605  | 17533  | 15971 |
|                | 9%    | 8%     | 8%    | 4%     | 8%     | 8%    |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                       | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number    | 6         | 6       |
| 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    |
| Pointing RA                       | 0                   | 314.0311061495926    | Alternating exposures requested | N         | N       |
| Pointing Dec                      | 0                   | -28.00862518077547   | Primary exposure time           | 3.2       | 3.2     |
| Pointing Roll                     | 0.0                 | 310.0657619297614    |                                 |           |         |
| SIM focus pos (mm)                | -0.684267           | -0.6828225247311905  |                                 |           |         |
| SIM defocus (mm)                  | 0                   | 0.8505141146731063   |                                 |           |         |
| SIM translation stage pos (mm)    | -190.132523         | 250.466033080201     |                                 |           |         |
| SIM translation stage offset (mm) | 0                   | -0.01005468664627074 |                                 |           |         |
| Observation start time            | 83423909.530177     | 83423908.761709      |                                 |           |         |
| Observation start date            | 2000-08-23T13:18:30 | 2000-08-23T13:18:28  |                                 |           |         |
| Observation end time              | 83434419.88057099   | 83434419.112103      |                                 |           |         |
| Observation end date              | 2000-08-23T16:13:40 | 2000-08-23T16:13:39  |                                 |           |         |
| 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)      | 2007.06.05 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 4.82103337 |

## A.2 Comments

Focal plane temperature is warmer than -118.7 C degrees during the entire observation. This temperature is the upper limit of the verified ACIS calibration for the front-illuminated chips. The focal plane temperature is warmer than -116.7 degrees C for approximately the first 4 ksec of this observation. This temperature is the upper limit of the verified ACIS calibration for the back-illuminated chips. The ACIS spectral response calibration is less accurate at these warmer temperatures than it is at -119.7 C. Users whose science objectives depend on the most accurate spectral response (ie: fitting line-rich spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response should not notice an effect.