

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.2

Observation 60219 - L2 Version <sub>e</sub>1  
Chandra X-Ray Center

L2 Processing Date : May 17 2006

## Contents

|          |                               |           |
|----------|-------------------------------|-----------|
| <b>1</b> | <b>Front</b>                  | <b>2</b>  |
| <b>2</b> | <b>OBI Primary</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      | Aspect . . . . .              | 6         |
| 2.4      | Star Slots . . . . .          | 8         |
| 2.5      | FID Slots . . . . .           | 8         |
| <b>3</b> | <b>OBI Secondary</b>          | <b>8</b>  |
| 3.1      | OBI . . . . .                 | 8         |
| 3.1.1    | Images . . . . .              | 8         |
| 3.1.2    | Bias . . . . .                | 8         |
| 3.1.3    | Parameters . . . . .          | 9         |
| 3.1.4    | Events . . . . .              | 9         |
| <b>A</b> | <b>Summary</b>                | <b>10</b> |
| A.1      | Status . . . . .              | 10        |
| A.2      | Comments . . . . .            | 10        |

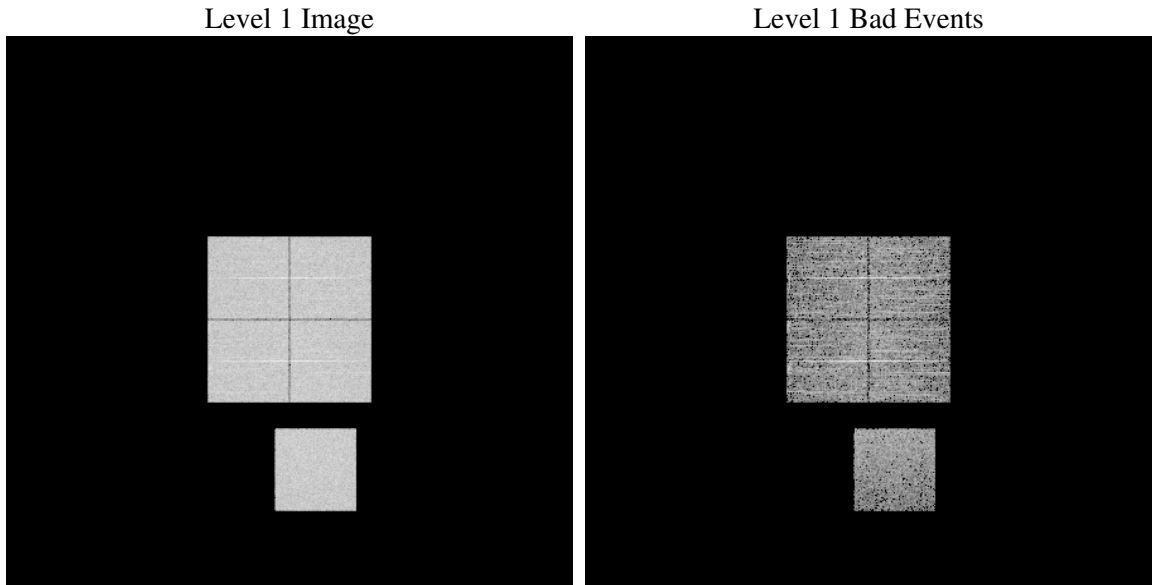
# 1 Front

|          |   |
|----------|---|
| seq_num  | &#160   |
| obs_id   | 60219   |
| title    | ACIS-01237 diagnostics                          |
| observer | CHANDRA engineering request/realtime commanding |
| object   | &#160   |
| dtcycle  | 0   |
| cycle    | P   |
| ra_targ  | 0.0   |
| dec_targ | 0.0   |
| ra_nom   | 113.99811146011                                 |
| dec_nom  | -18.028543342853                                |
| roll_nom | 233.47991391803                                 |
| revision | 2   |
| ontime   | 5325.8713786304                                 |
| livetime | 2589.4639650794                                 |
| ontime0  | 5326.0355086923                                 |
| ontime1  | 5325.9944986403                                 |
| ontime2  | 5325.9534286857                                 |
| ontime3  | 5325.9124186337                                 |
| ontime7  | 5325.8713786304                                 |
| l2events | 384585  |

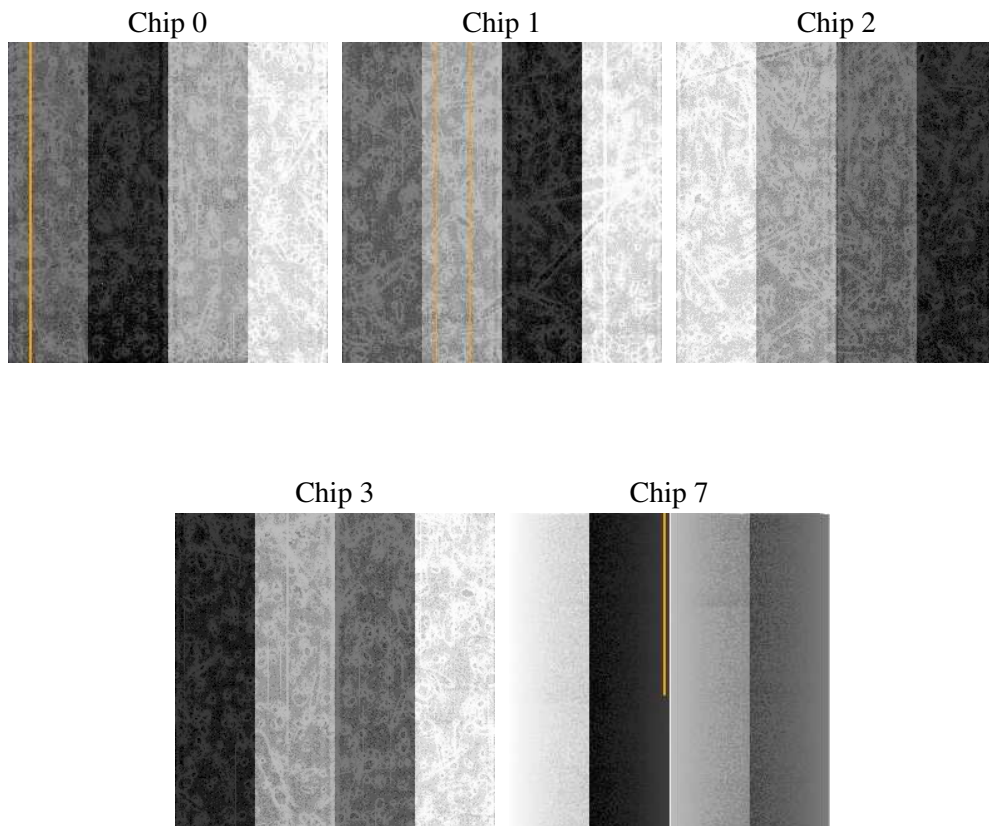
## 2 OBI Primary

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 0                   |
| ascdsver | 7.6.7.2             |
| caldbver | 3.2.2               |
| date     | 2006-05-17T16:15:17 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 0.0             |
| ontime         | 5331.0873727798 |
| ontime0        | 5331.0873727798 |
| ontime1        | 5331.0873727798 |
| ontime2        | 5331.0873727798 |
| ontime3        | 5331.0873727798 |
| ontime7        | 5331.0873727798 |
| llevents       | 505039          |

### 2.1.4 Events

|                 | ccd 0 | ccd 1 | ccd 2  | ccd 3  | ccd 7  |
|-----------------|-------|-------|--------|--------|--------|
| level 1 events  | 99113 | 99569 | 101703 | 101821 | 102833 |
| rejected events | 19094 | 20275 | 20752  | 20938  | 19147  |
| rejected %      | 19%   | 20%   | 20%    | 20%    | 18%    |

|                | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 7 |
|----------------|-------|-------|-------|-------|-------|
| grade 0 events | 44199 | 43734 | 45489 | 45434 | 14820 |
|                | 44%   | 43%   | 44%   | 44%   | 14%   |
| grade 1 events | 217   | 230   | 296   | 269   | 40    |
|                | 0%    | 0%    | 0%    | 0%    | 0%    |
| grade 2 events | 13933 | 14024 | 13544 | 13726 | 25344 |
|                | 14%   | 14%   | 13%   | 13%   | 24%   |
| grade 3 events | 5211  | 5156  | 5357  | 5360  | 6020  |
|                | 5%    | 5%    | 5%    | 5%    | 5%    |
| grade 4 events | 5235  | 5019  | 5239  | 5319  | 5951  |
|                | 5%    | 5%    | 5%    | 5%    | 5%    |
| grade 5 events | 1157  | 1226  | 1252  | 1255  | 2438  |
|                | 1%    | 1%    | 1%    | 1%    | 2%    |
| grade 6 events | 11535 | 11458 | 11413 | 11145 | 31651 |
|                | 11%   | 11%   | 11%   | 10%   | 30%   |
| grade 7 events | 17626 | 18722 | 19113 | 19313 | 16569 |
|                | 17%   | 18%   | 18%   | 18%   | 16%   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual                | Parameter                       | Planned   | Actual  |
|-----------------------------------|---------------------|-----------------------|---------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                  | Obspar format version number    | 6         | 6       |
| Detector                          | ACIS-01237          | ACIS-01237            | 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                   | 113.9981114601133     | Alternating exposures requested | N         | Y       |
| Pointing Dec                      | 0                   | -18.02854334285313    | Primary exposure time           | 0.000000  | 3       |
| Pointing Roll                     | 0.0                 | 233.4799139180264     | Secondary exposure time         | N/A       | 3.2     |
| SIM focus pos (mm)                | -0.782348           | -0.6828225247311905   | Duty cycle                      | N/A       | 1       |
| SIM defocus (mm)                  | 0                   | 0.8505141146731063    |                                 |           |         |
| SIM translation stage pos (mm)    | -233.592463         | 250.4635187648994     |                                 |           |         |
| SIM translation stage offset (mm) | 0                   | -0.007540371344731511 |                                 |           |         |
| Observation start time            | 201989992.192073    | 201989991.16706       |                                 |           |         |
| Observation start date            | 2004-05-26T20:19:52 | 2004-05-26T20:19:51   |                                 |           |         |
| Observation end time              | 202011301.943014    | 202011300.918         |                                 |           |         |
| Observation end date              | 2004-05-27T02:15:02 | 2004-05-27T02:15:00   |                                 |           |         |
| Read mode                         | TIMED               | TIMED                 |                                 |           |         |

## 2.3 Aspect



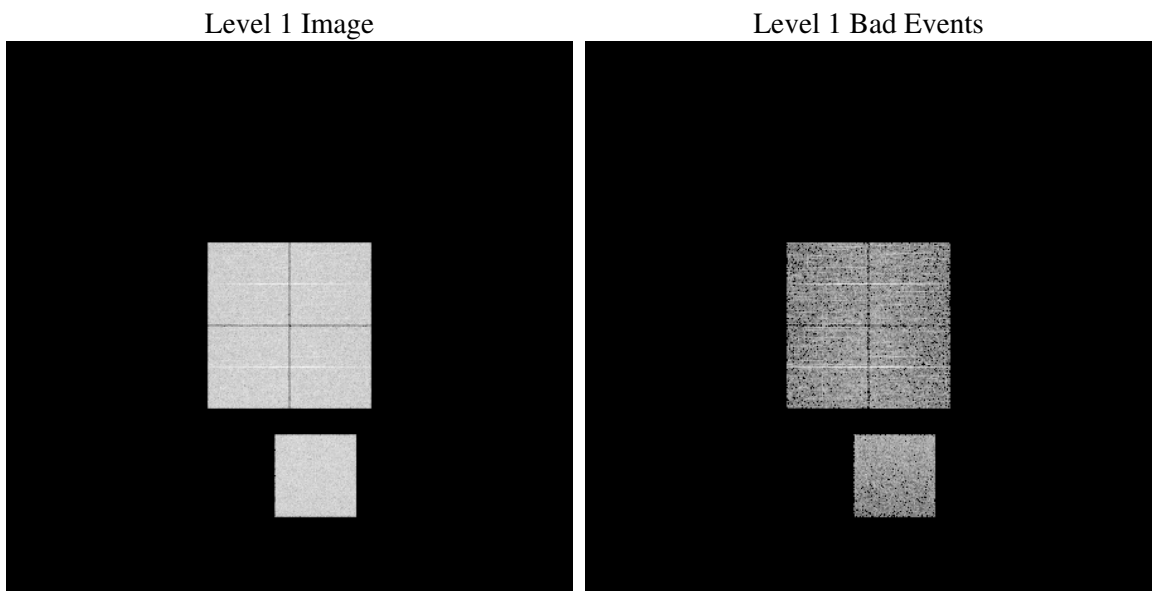
## 2.4 Star Slots

## 2.5 FID Slots

# 3 OBI Secondary

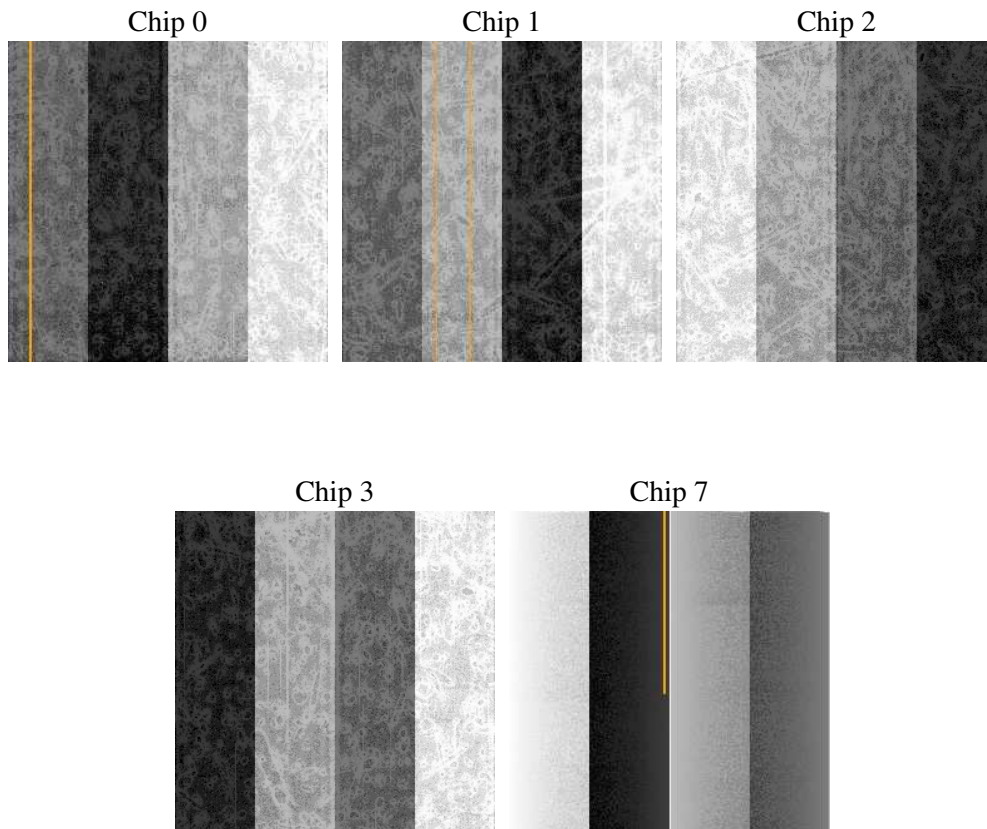
## 3.1 OBI

### 3.1.1 Images



### 3.1.2 Bias





### 3.1.3 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 0                   |
| ascdsver | 7.6.7.2             |
| caldsver | 3.2.2               |
| date     | 2006-05-17T16:22:33 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 0.0             |
| ontime         | 2800.2585525513 |
| ontime0        | 2803.4995925426 |
| ontime1        | 2803.4995925426 |
| ontime2        | 2803.4995925426 |
| ontime3        | 2800.2585525513 |
| ontime7        | 2800.2585525513 |
| l1events       | 532032          |

### 3.1.4 Events

|                 | ccd 0  | ccd 1  | ccd 2  | ccd 3  | ccd 7  |
|-----------------|--------|--------|--------|--------|--------|
| level 1 events  | 104554 | 104859 | 107484 | 105825 | 109310 |
| rejected events | 19388  | 19596  | 21281  | 20237  | 20481  |
| rejected %      | 18%    | 18%    | 19%    | 19%    | 18%    |

|                | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 7 |
|----------------|-------|-------|-------|-------|-------|
| grade 0 events | 46743 | 46688 | 48267 | 48045 | 15006 |
|                | 44%   | 44%   | 44%   | 45%   | 13%   |
| grade 1 events | 287   | 230   | 323   | 296   | 41    |
|                | 0%    | 0%    | 0%    | 0%    | 0%    |
| grade 2 events | 15086 | 15149 | 14644 | 14443 | 27222 |
|                | 14%   | 14%   | 13%   | 13%   | 24%   |
| grade 3 events | 5479  | 5510  | 5715  | 5612  | 6277  |
|                | 5%    | 5%    | 5%    | 5%    | 5%    |
| grade 4 events | 5488  | 5524  | 5660  | 5673  | 6119  |
|                | 5%    | 5%    | 5%    | 5%    | 5%    |
| grade 5 events | 1241  | 1260  | 1255  | 1316  | 2361  |
|                | 1%    | 1%    | 1%    | 1%    | 2%    |
| grade 6 events | 12478 | 12497 | 12027 | 11909 | 34309 |
|                | 11%   | 11%   | 11%   | 11%   | 31%   |
| grade 7 events | 17752 | 18001 | 19593 | 18531 | 17975 |
|                | 16%   | 17%   | 18%   | 17%   | 16%   |

## A Summary

### A.1 Status

|                            |            |
|----------------------------|------------|
| V&V Scientist              | Jen Lauer  |
| V&V Date (YYYY-MM-DD)      | 2006.05.17 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 8.12367297 |

### A.2 Comments