

# V&V Reference Report

## L2 ASCDS Version : 10.3.3

Observation 52058 - L2 Version 1  
Chandra X-Ray Center

L2 Processing Date : Feb 21 2015

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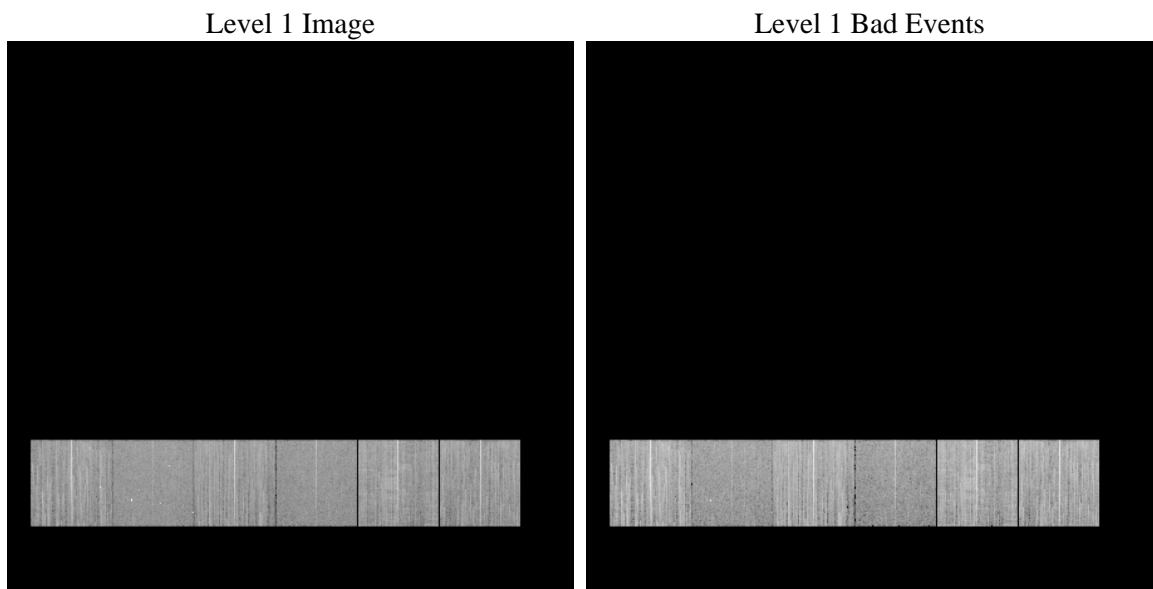
# 1 Front

|          |                                                 |                                             |
|----------|-------------------------------------------------|---------------------------------------------|
| seq_num  | &#160                                           | Sequence number                             |
| obs_id   | 52058                                           | 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   | 155.54515424102                                 | Nominal RA [deg]                            |
| dec_nom  | -13.712355364191                                | Nominal Dec [deg]                           |
| roll_nom | 4.8023134553239                                 | Nominal Roll [deg]                          |
| revision | 1                                               | Processing version of data                  |
| ontime   | 8438.400125742                                  | Sum of GTIs [s]                             |
| livetime | 8331.5480223553                                 | Livetime [s]                                |
| ontime4  | 8438.400125742                                  | Sum of GTIs [s]                             |
| ontime5  | 8438.400125742                                  | Sum of GTIs [s]                             |
| ontime6  | 8438.400125742                                  | Sum of GTIs [s]                             |
| ontime7  | 8438.400125742                                  | Sum of GTIs [s]                             |
| ontime8  | 8438.400125742                                  | Sum of GTIs [s]                             |
| ontime9  | 8438.400125742                                  | Sum of GTIs [s]                             |
| l2events | 192923                                          | Number of level 2 events                    |

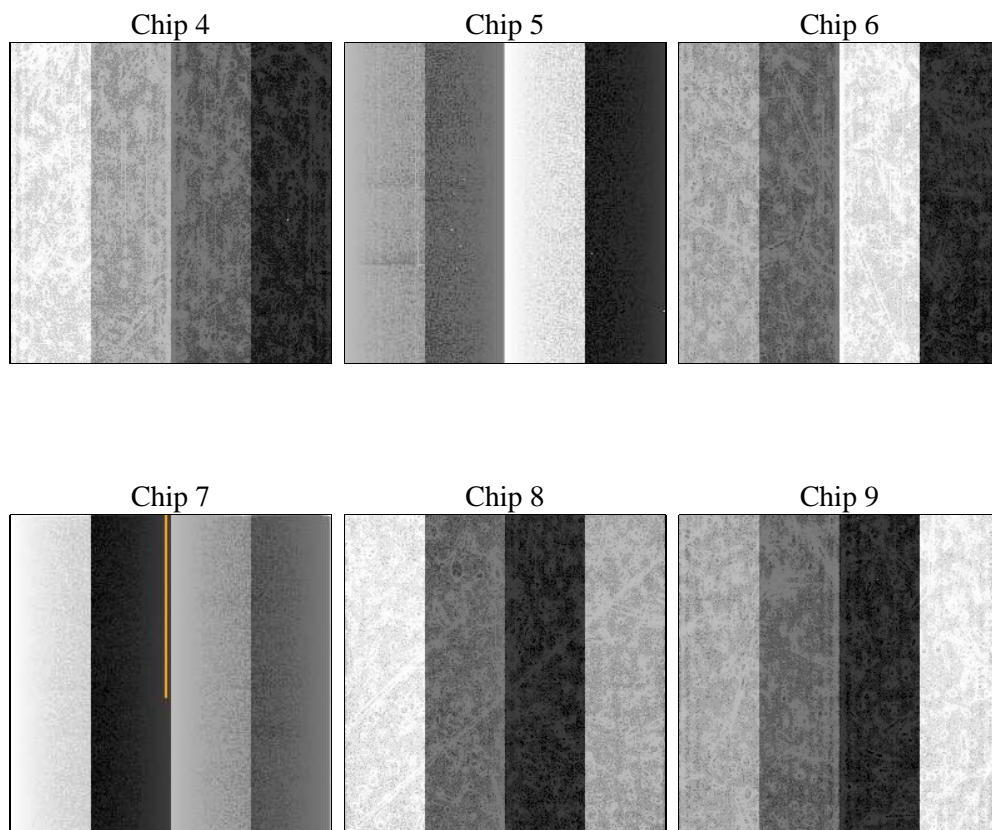
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                |                                         |
|----------|---------------------|--------------------------------|----------------|----------------|-----------------------------------------|
| obi_num  | 2                   | Obi number                     | sched_exp_time | 0.0            | [s] Scheduled observation exposure time |
| ascdsver | 10.3.3              | Processing system revision     | ontime         | 8438.400125742 | Sum of GTIs [s]                         |
| caldbver | 4.6.6               | &#160                          | ontime4        | 8438.400125742 | Sum of GTIs [s]                         |
| date     | 2015-02-21T21:22:10 | Date and time of file creation | ontime5        | 8438.400125742 | Sum of GTIs [s]                         |
| revision | 1                   | Processing version of data     | ontime6        | 8438.400125742 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 8438.400125742 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 8438.400125742 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 8438.400125742 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 868423         | 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  | 157254 | 128973 | 153707 | 118633 | 159830 | 150026 | grade 0 events | 13652  | 4916  | 11361  | 6117  | 14335  | 11697  |
| rejected events | 131461 | 74206  | 128143 | 69140  | 125562 | 125115 |                | 8%     | 3%    | 7%     | 5%    | 8%     | 7%     |
| rejected %      | 83%    | 57%    | 83%    | 58%    | 78%    | 83%    | grade 1 events | 120    | 158   | 59     | 86    | 86     | 79     |
|                 |        |        |        |        |        |        |                | 0%     | 0%    | 0%     | 0%    | 0%     | 0%     |
|                 |        |        |        |        |        |        | grade 2 events | 5117   | 20051 | 6188   | 12410 | 7663   | 5265   |
|                 |        |        |        |        |        |        |                | 3%     | 15%   | 4%     | 10%   | 4%     | 3%     |
|                 |        |        |        |        |        |        | grade 3 events | 1783   | 1691  | 1578   | 3633  | 2592   | 1736   |
|                 |        |        |        |        |        |        |                | 1%     | 1%    | 1%     | 3%    | 1%     | 1%     |
|                 |        |        |        |        |        |        | grade 4 events | 1701   | 1594  | 1565   | 3482  | 2497   | 1689   |
|                 |        |        |        |        |        |        |                | 1%     | 1%    | 1%     | 2%    | 1%     | 1%     |
|                 |        |        |        |        |        |        | grade 5 events | 3028   | 5807  | 2973   | 6925  | 4006   | 3369   |
|                 |        |        |        |        |        |        |                | 1%     | 4%    | 1%     | 5%    | 2%     | 2%     |
|                 |        |        |        |        |        |        | grade 6 events | 3549   | 26539 | 4879   | 23870 | 7189   | 4528   |
|                 |        |        |        |        |        |        |                | 2%     | 20%   | 3%     | 20%   | 4%     | 3%     |
|                 |        |        |        |        |        |        | grade 7 events | 128304 | 68217 | 125104 | 62110 | 121462 | 121663 |
|                 |        |        |        |        |        |        |                | 81%    | 52%   | 81%    | 52%   | 75%    | 81%    |

## 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                 | Number of optional ACIS chips dropped | 0         | 0       |
| Observation mode                  | SECONDARY           | SECONDARY             | On-chip summing requested             | N         | N       |
| [deg] Pointing RA                 | 0                   | 155.5451542410151     | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 0                   | -13.712355364191      | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 0.0                 | 4.802313455323942     | [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          | 250.4635187648994     |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | -0.007540371344731511 |                                       |           |         |
| [s] Observation start time (MET)  | 540835007.083909    | 540835006.05891       |                                       |           |         |
| Observation start date            | 2015-02-20T15:56:47 | 2015-02-20T15:56:46   |                                       |           |         |
| [s] Observation end time (MET)    | 540843930.7344069   | 540843929.70941       |                                       |           |         |
| Observation end date              | 2015-02-20T18:25:31 | 2015-02-20T18:25:29   |                                       |           |         |
| 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)      | 2015.02.21     |
| V&V Edition                | 1              |
| V&V Disposition and Status | OK             |
| V&V Charge Time            | 8.438400125742 |

### A.2 Comments