

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 58442 - L2 Version 3
Chandra X-Ray Center

L2 Processing Date : May 1 2012

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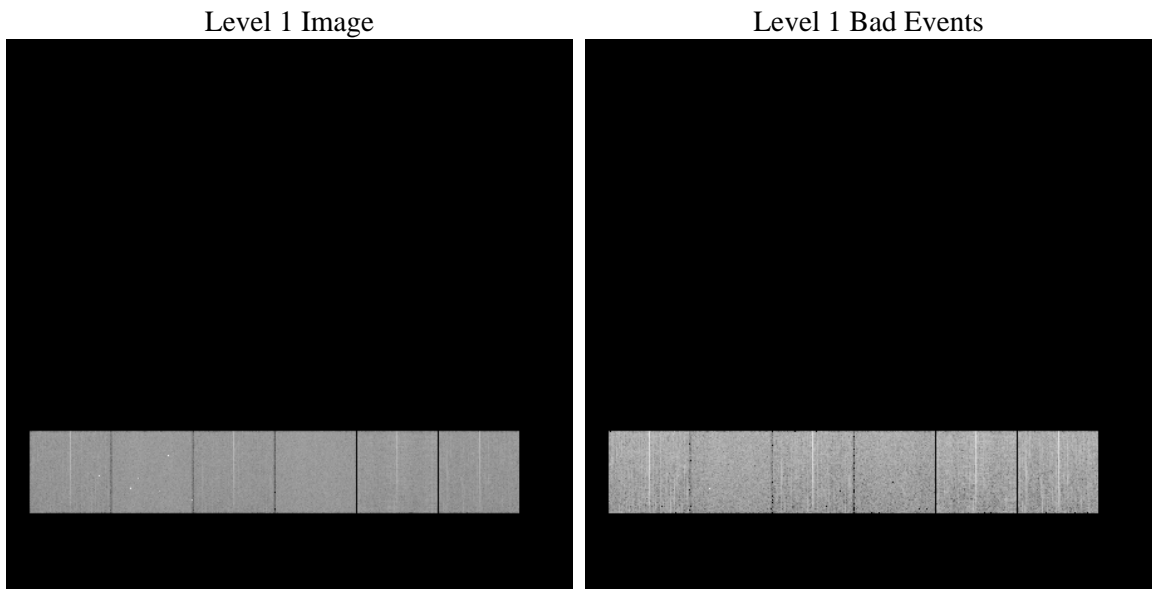
1 Front

| | | |
|----------|---|---|
| seq_num | | Sequence number |
| obs_id | 58442 | Observation id |
| title | ACIS-456789 diagnostics | Proposal title |
| observer | CHANDRA engineering request/realtime commanding | Principal investig |
| object | | Source name |
| dtycle | 0 | |
| cycle | P | events from which exps? 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 | 169.20790838948 | Nominal RA [deg] |
| dec_nom | -0.62697770847306 | Nominal Dec [deg] |
| roll_nom | 256.03867399656 | Nominal Roll [deg] |
| revision | 3 | Processing version of data |
| ontime | 5730.7549180984 | Sum of GTIs [s] |
| livetime | 5658.1886486792 | Livetime [s] |
| ontime4 | 5730.6317980886 | Sum of GTIs [s] |
| ontime5 | 5730.7138780951 | Sum of GTIs [s] |
| ontime6 | 5730.6728380919 | Sum of GTIs [s] |
| ontime7 | 5730.7549180984 | Sum of GTIs [s] |
| ontime8 | 5730.5907580853 | Sum of GTIs [s] |
| ontime9 | 5730.7959581017 | Sum of GTIs [s] |
| l2events | 542745 | Number of level 2 events |

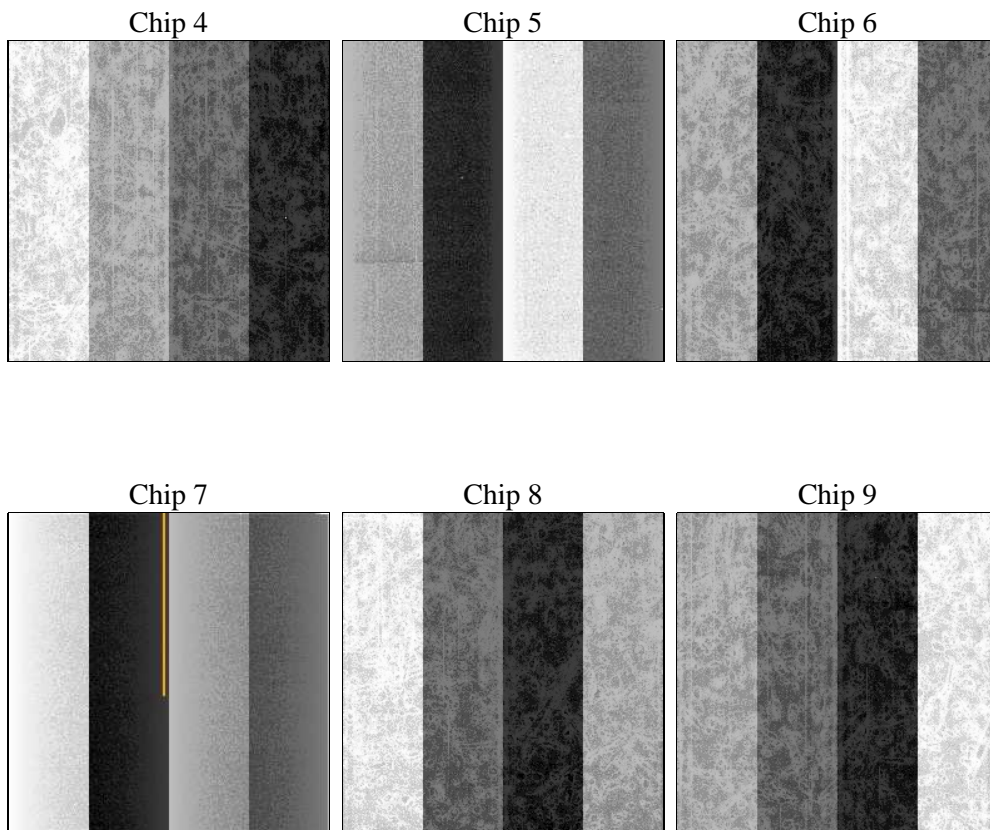
2 OBI

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 | 8.4.4 | Processing system revision | ontime | 5730.7549180984 | Sum of GTIs [s] |
| caldbver | 4.4.9 | | ontime4 | 5730.6317980886 | Sum of GTIs [s] |
| date | 2012-05-01T22:59:13 | Date and time of file creation | ontime5 | 5730.7138780951 | Sum of GTIs [s] |
| revision | 3 | Processing version of data | ontime6 | 5730.6728380919 | Sum of GTIs [s] |
| | | | ontime7 | 5730.7549180984 | Sum of GTIs [s] |
| | | | ontime8 | 5730.5907580853 | Sum of GTIs [s] |
| | | | ontime9 | 5730.7959581017 | Sum of GTIs [s] |
| | | | l1events | 900228 | 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 | 142687 | 156040 | 144102 | 156999 | 156225 | 144175 | grade 0 events | 50309 | 19794 | 49603 | 23910 | 51622 | 47964 |
| rejected events | 56391 | 48380 | 52062 | 45322 | 56946 | 55712 | | 35% | 12% | 34% | 15% | 33% | 33% |
| rejected % | 39% | 31% | 36% | 28% | 36% | 38% | grade 1 events | 468 | 458 | 290 | 100 | 334 | 372 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 13360 | 39249 | 16203 | 24179 | 17921 | 15351 |
| | | | | | | | | 9% | 25% | 11% | 15% | 11% | 10% |
| | | | | | | | grade 3 events | 5764 | 5144 | 5733 | 10806 | 6907 | 5856 |
| | | | | | | | | 4% | 3% | 3% | 6% | 4% | 4% |
| | | | | | | | grade 4 events | 5780 | 5048 | 5845 | 10690 | 6720 | 5766 |
| | | | | | | | | 4% | 3% | 4% | 6% | 4% | 3% |
| | | | | | | | grade 5 events | 2890 | 6683 | 3063 | 7755 | 3819 | 3365 |
| | | | | | | | | 2% | 4% | 2% | 4% | 2% | 2% |
| | | | | | | | grade 6 events | 11123 | 38487 | 14685 | 42159 | 16178 | 13573 |
| | | | | | | | | 7% | 24% | 10% | 26% | 10% | 9% |
| | | | | | | | grade 7 events | 52993 | 41177 | 48680 | 37400 | 52724 | 51928 |
| | | | | | | | | 37% | 26% | 33% | 23% | 33% | 36% |

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 | On-chip summing requested | N | N |
| Observation mode | SECONDARY | SECONDARY | Subarray requested | NONE | NONE |
| [deg] Pointing RA | 0 | 169.2079083894807 | Alternating exposures requested | N | N |
| [deg] Pointing Dec | 0 | -0.6269777084730619 | [s] Primary exposure time | 3.2 | 3.2 |
| [deg] Pointing Roll | 0.0 | 256.0386739965567 | | | |
| [mm] SIM focus pos | -0.684267 | -0.7809083437167272 | | | |
| [mm] SIM defocus | 0 | 0.7524282956875696 | | | |
| [mm] SIM translation stage pos | -190.132523 | 250.466033080201 | | | |
| [mm] SIM translation stage offset | 0 | -0.01005468664627074 | | | |
| [s] Observation start time (MET) | 292424620.905431 | 292424619.88043 | | | |
| Observation start date | 2007-04-08T13:03:41 | 2007-04-08T13:03:39 | | | |
| [s] Observation end time (MET) | 292439458.806138 | 292439457.78114 | | | |
| Observation end date | 2007-04-08T17:10:59 | 2007-04-08T17:10:57 | | | |
| 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) | 2012.05.04 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 5.7307549180984 |

A.2 Comments

A spatial region of the original bias map for CCD = 9 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~ 20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 9 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by chip coords:

(451,1), (576,1), (576,155), (451,196)