

V&V Reference Report

L2 ASCDS Version : 8.3.3.1

Observation 62347 - L2 Version 6
Chandra X-Ray Center

L2 Processing Date : Dec 6 2010

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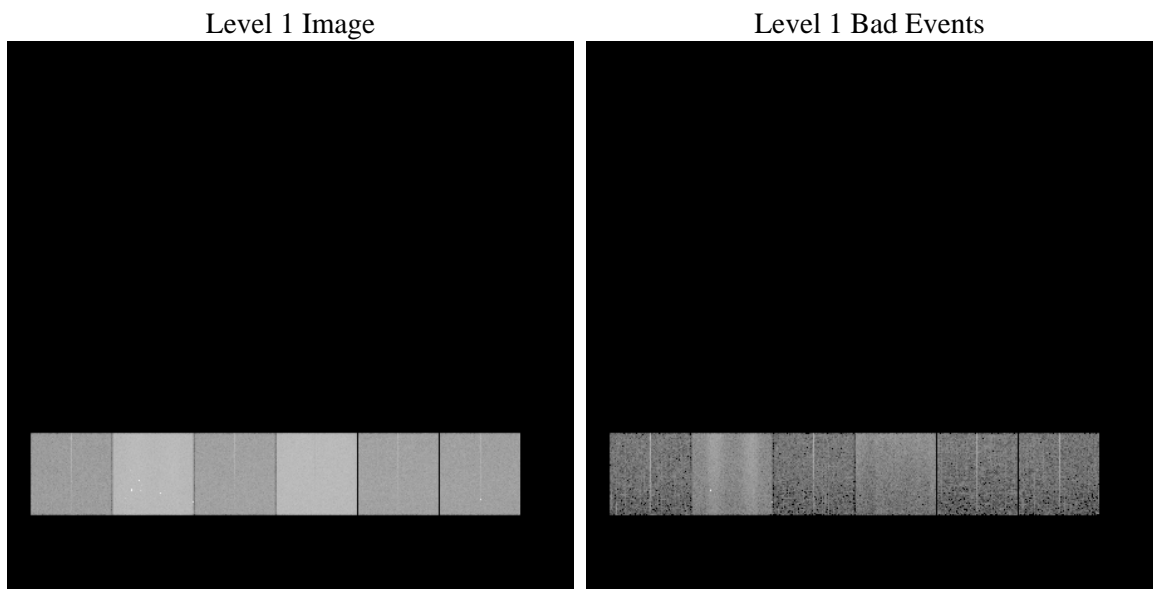
1 Front

| | | |
|----------|---|---|
| seq_num | | Sequence number |
| obs_id | 62347 | Observation id |
| title | ACIS-456789 diagnostics | Proposal title |
| observer | CHANDRA engineering request/realtime commanding | Principal investig |
| object | | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 0.0 | Observer's specified target RA |
| dec_targ | 0.0 | Observer's specified target Dec |
| ra_nom | 130.33184030803 | Nominal RA |
| dec_nom | 70.923258955044 | Nominal Dec |
| roll_nom | 70.907339080672 | Nominal Roll |
| revision | 6 | Processing version of data |
| ontime | 3928.1309394613 | Sum of GTIs [s] |
| livetime | 3878.3905802693 | Livetime [s] |
| ontime4 | 1462.5726404116 | Sum of GTIs [s] |
| ontime5 | 4184.1693293527 | Sum of GTIs [s] |
| ontime6 | 1649.6877964735 | Sum of GTIs [s] |
| ontime7 | 3928.1309394613 | Sum of GTIs [s] |
| ontime8 | 1662.6518567055 | Sum of GTIs [s] |
| ontime9 | 1636.7236763835 | Sum of GTIs [s] |
| l2events | 1284114 | Number of level 2 events |

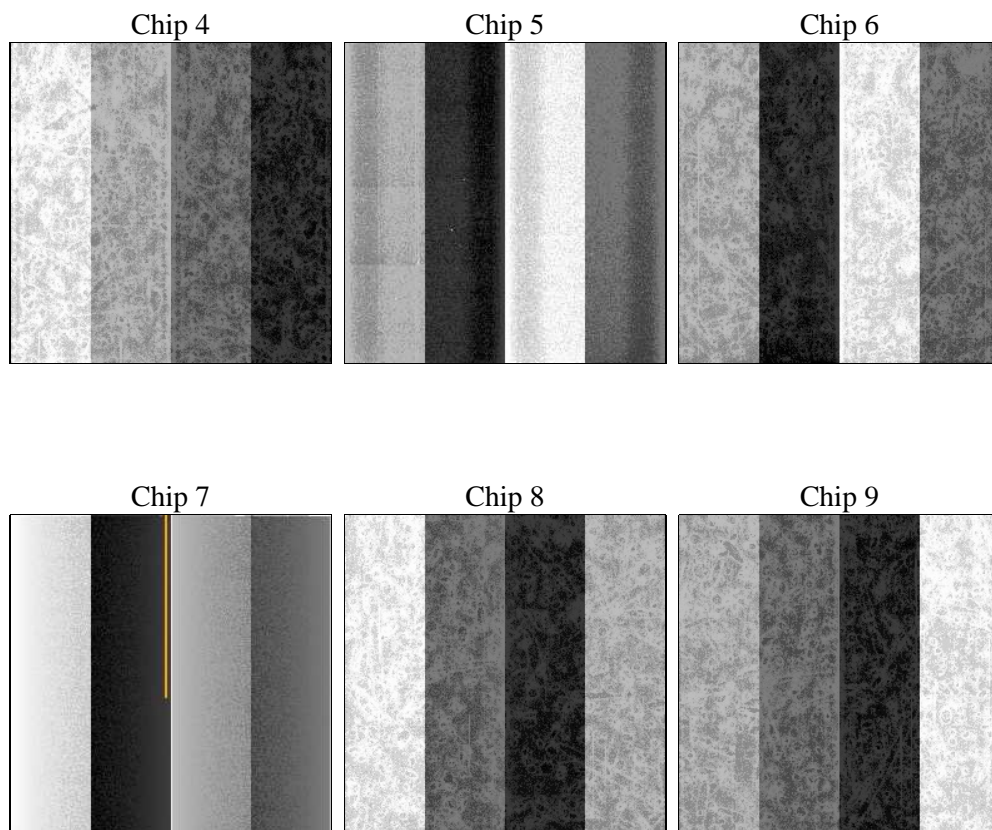
2 OBI

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 | Scheduled observation exposure time |
| ascdsver | 8.3.3.1 | ASCDS version number | ontime | 3928.1309394613 | Sum of GTIs [s] |
| caldsver | 4.4.0 | | ontime4 | 1462.5726404116 | Sum of GTIs [s] |
| date | 2010-12-06T17:29:39 | Date and time of file creation | ontime5 | 4184.1693293527 | Sum of GTIs [s] |
| revision | 4 | Processing version of data | ontime6 | 1649.6877964735 | Sum of GTIs [s] |
| | | | ontime7 | 3928.1309394613 | Sum of GTIs [s] |
| | | | ontime8 | 1662.6518567055 | Sum of GTIs [s] |
| | | | ontime9 | 1636.7236763835 | Sum of GTIs [s] |
| | | | l1events | 1520899 | 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 | 150765 | 415957 | 178599 | 421885 | 181916 | 171777 | grade 0 events | 29542 | 38678 | 41423 | 67614 | 54584 | 46454 |
| rejected events | 26690 | 69386 | 26237 | 43758 | 26273 | 24666 | | 19% | 9% | 23% | 16% | 30% | 27% |
| rejected % | 17% | 16% | 14% | 10% | 14% | 14% | grade 1 events | 117 | 167 | 164 | 145 | 204 | 183 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 66583 | 134298 | 72703 | 105895 | 62167 | 64474 |
| | | | | | | | | 44% | 32% | 40% | 25% | 34% | 37% |
| | | | | | | | grade 3 events | 2994 | 18384 | 4157 | 32942 | 5855 | 4795 |
| | | | | | | | | 1% | 4% | 2% | 7% | 3% | 2% |
| | | | | | | | grade 4 events | 3014 | 15888 | 4361 | 29232 | 5724 | 4803 |
| | | | | | | | | 1% | 3% | 2% | 6% | 3% | 2% |
| | | | | | | | grade 5 events | 1241 | 7233 | 1464 | 6000 | 1627 | 1456 |
| | | | | | | | | 0% | 1% | 0% | 1% | 0% | 0% |
| | | | | | | | grade 6 events | 22829 | 140917 | 30314 | 144024 | 27955 | 27473 |
| | | | | | | | | 15% | 33% | 16% | 34% | 15% | 15% |
| | | | | | | | grade 7 events | 24445 | 60392 | 24013 | 36033 | 23800 | 22139 |
| | | | | | | | | 16% | 14% | 13% | 8% | 13% | 12% |

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 | 130.3318403080285 | Alternating exposures requested | N | N |
| Pointing Dec | 0 | 70.92325895504408 | Primary exposure time | 3.2 | 3.2 |
| Pointing Roll | 0.0 | 70.90733908067223 | | | |
| SIM focus pos (mm) | -0.684267 | -0.7809083437167272 | | | |
| SIM defocus (mm) | 0 | 0.7524282956875696 | | | |
| SIM translation stage pos (mm) | -190.132523 | 250.466033080201 | | | |
| SIM translation stage offset (mm) | 0 | -0.01005468664627074 | | | |
| Observation start time | 56676133.747641 | 56676132.979186 | | | |
| Observation start date | 1999-10-18T23:22:14 | 1999-10-18T23:22:12 | | | |
| Observation end time | 56703581.19863 | 56703580.430175 | | | |
| Observation end date | 1999-10-19T06:59:41 | 1999-10-19T06:59:40 | | | |
| 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) | 2010.12.07 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 3.9281309394613 |

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.

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The focal plane temperature is approximately -110C during this observation.

The ACIS CTI correction has not been calibrated at this temperature because it was early in the mission, and ACIS had not yet been lowered to the standard -119.7 C. Both front- and back-illuminated chips are affected. However, a T_GAIN correction has been applied to the BI chips

(ACIS-5 and ACIS-7) data included here.