

V&V Reference Report

L2 ASCDS Version : 10.2.1

Observation 52880 - L2 Version 2
Chandra X-Ray Center

L2 Processing Date : Apr 7 2014

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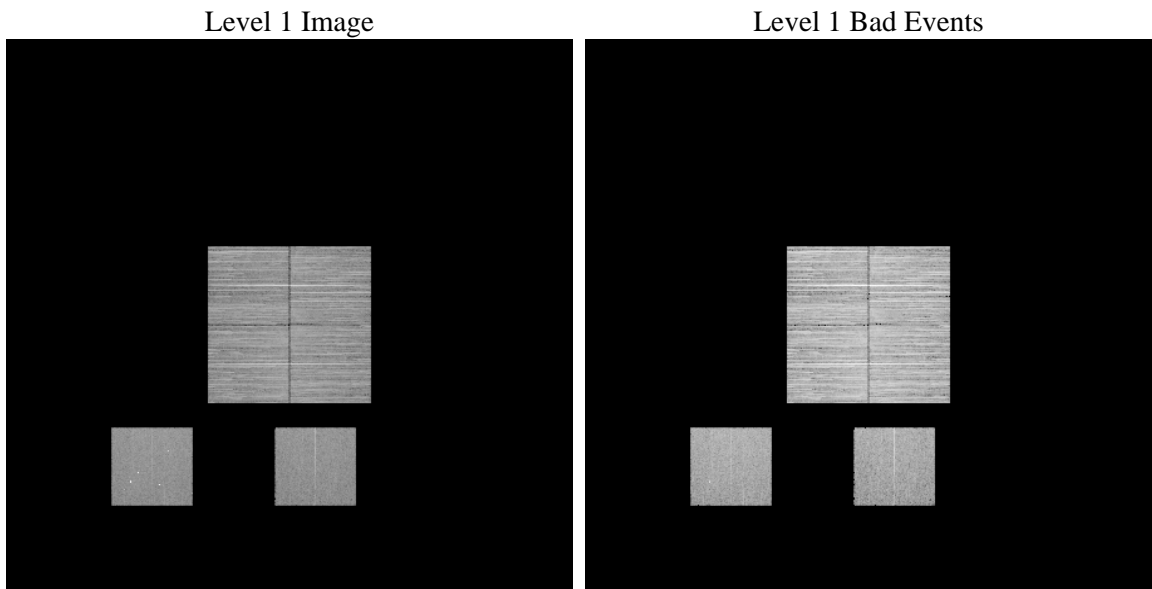
1 Front

| | | |
|----------|---|---|
| seq_num | | Sequence number |
| obs_id | 52880 | Observation id |
| title | ACIS-012357 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 [deg] |
| dec_targ | 0.0 | Observer's specified target Dec [deg] |
| ra_nom | 254.90879011662 | Nominal RA [deg] |
| dec_nom | 4.8065615293088 | Nominal Dec [deg] |
| roll_nom | 83.261125673549 | Nominal Roll [deg] |
| revision | 2 | Processing version of data |
| ontime | 8198.3999695182 | Sum of GTIs [s] |
| livetime | 8094.5868926203 | Livetime [s] |
| ontime0 | 8198.3999695182 | Sum of GTIs [s] |
| ontime1 | 8198.3999695182 | Sum of GTIs [s] |
| ontime2 | 8198.3999695182 | Sum of GTIs [s] |
| ontime3 | 8198.3999695182 | Sum of GTIs [s] |
| ontime5 | 8198.3999695182 | Sum of GTIs [s] |
| ontime7 | 8198.3999695182 | Sum of GTIs [s] |
| l2events | 199983 | Number of level 2 events |

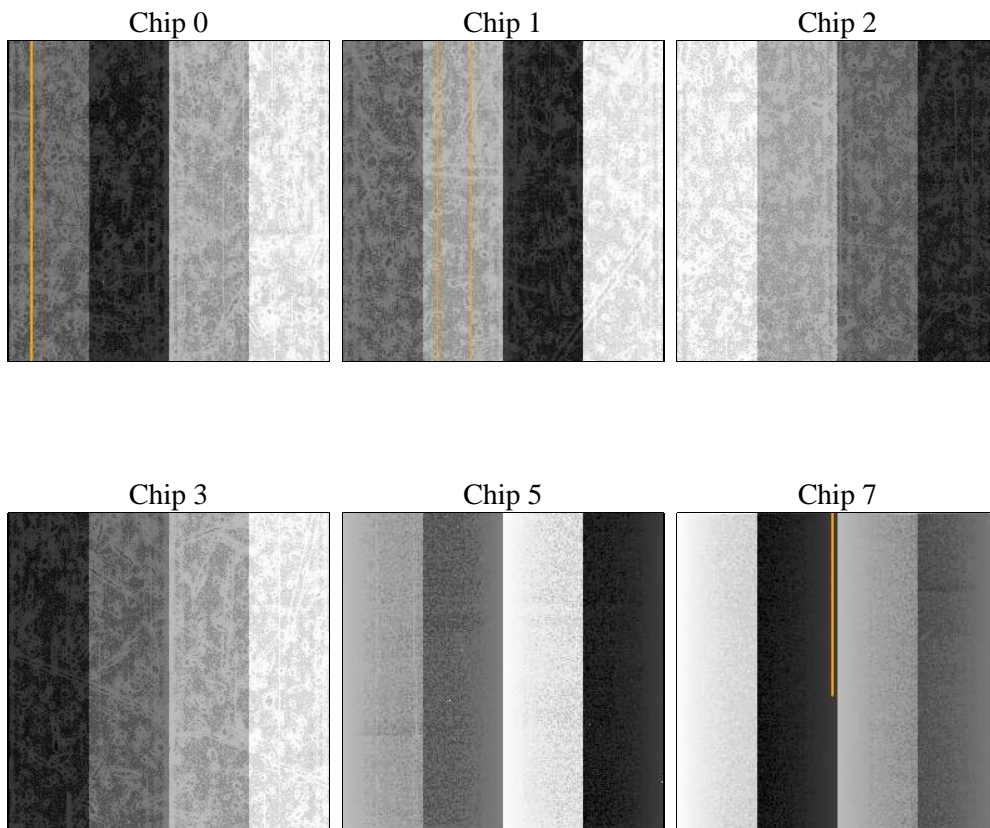
2 OBI

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 | [s] Scheduled observation exposure time |
| ascdsver | 10.2.1 | Processing system revision | ontime | 8198.3999695182 | Sum of GTIs [s] |
| caldsver | 4.6.1 | | ontime0 | 8198.3999695182 | Sum of GTIs [s] |
| date | 2014-04-07T16:47:16 | Date and time of file creation | ontime1 | 8198.3999695182 | Sum of GTIs [s] |
| revision | 2 | Processing version of data | ontime2 | 8198.3999695182 | Sum of GTIs [s] |
| | | | ontime3 | 8198.3999695182 | Sum of GTIs [s] |
| | | | ontime5 | 8198.3999695182 | Sum of GTIs [s] |
| | | | ontime7 | 8198.3999695182 | Sum of GTIs [s] |
| | | | l1events | 844935 | Number of level 1 events |

2.1.4 Events

| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 5 | ccd 7 | | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 5 | ccd 7 |
|-----------------|--------|--------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|-------|-------|
| level 1 events | 147679 | 152680 | 154092 | 149542 | 125370 | 115572 | grade 0 events | 13448 | 12809 | 13738 | 13974 | 8350 | 6842 |
| rejected events | 120933 | 125866 | 127522 | 122582 | 68301 | 64879 | | 9% | 8% | 8% | 9% | 6% | 5% |
| rejected % | 81% | 82% | 82% | 81% | 54% | 56% | grade 1 events | 69 | 53 | 75 | 85 | 181 | 83 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 5735 | 6321 | 5377 | 5333 | 20374 | 12754 |
| | | | | | | | | 3% | 4% | 3% | 3% | 16% | 11% |
| | | | | | | | grade 3 events | 1871 | 1747 | 1816 | 1810 | 1671 | 3988 |
| | | | | | | | | 1% | 1% | 1% | 1% | 1% | 3% |
| | | | | | | | grade 4 events | 1728 | 1725 | 1787 | 1897 | 1634 | 3904 |
| | | | | | | | | 1% | 1% | 1% | 1% | 1% | 3% |
| | | | | | | | grade 5 events | 2690 | 2710 | 2550 | 3015 | 5254 | 6877 |
| | | | | | | | | 1% | 1% | 1% | 2% | 4% | 5% |
| | | | | | | | grade 6 events | 4233 | 4494 | 4129 | 4214 | 25590 | 23782 |
| | | | | | | | | 2% | 2% | 2% | 2% | 20% | 20% |
| | | | | | | | grade 7 events | 117905 | 122821 | 124620 | 119214 | 62316 | 57342 |
| | | | | | | | | 79% | 80% | 80% | 79% | 49% | 49% |

2.2 Compared Parameters

| Parameter | Planned | Actual |
|-----------------------------------|----------------------|----------------------|
| Instrument | ACIS | ACIS |
| Detector | ACIS-012357 | ACIS-012357 |
| Grating | NONE | NONE |
| Data mode | FAINT | FAINT |
| Observation mode | SECONDARY | SECONDARY |
| [deg] Pointing RA | 0 | 254.9087901166198 |
| [deg] Pointing Dec | 0 | 4.806561529308801 |
| [deg] Pointing Roll | 0.0 | 83.26112567354896 |
| SIM focus pos (mm) | -1.4281808131 | -1.4281808131 |
| [mm] SIM defocus | 0.1051557500557434 | 0.1051557500557434 |
| SIM translation stage pos (mm) | 250.4660330802 | 250.4660330802 |
| [mm] SIM translation stage offset | -0.01005726120527584 | -0.01005726120527584 |
| [s] Observation start time (MET) | 512918240.834133 | 512918240.834133 |
| Observation start date | 2014-04-03T13:17:21 | 2014-04-03T13:17:20 |
| [s] Observation end time (MET) | 512927789.94228 | 512927789.94228 |
| Observation end date | 2014-04-03T15:56:30 | 2014-04-03T15:56:29 |
| Read mode | TIMED | TIMED |

| Parameter | Planned | Actual |
|---------------------------------------|-----------|----------|
| Obspar format version number | 7 | 7 |
| Obspar file type | PREDICTED | ACTUAL |
| Obspar update status | OVERRIDE | OVERRIDE |
| Number of optional ACIS chips dropped | 0 | 0 |
| On-chip summing requested | N | N |
| Subarray requested | NONE | NONE |
| Alternating exposures requested | N | N |
| [s] Primary exposure time | 3.2 | 3.2 |

2.3 Star Slots

2.4 FID Slots

A Summary

A.1 Status

| | |
|----------------------------|-----------------|
| V&V Scientist | Jen Lauer |
| V&V Date (YYYY-MM-DD) | 2014.04.07 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 8.1983999695182 |

A.2 Comments

A spatial region of the original bias map for CCD = 0 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 = 0 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:
(477,615),(496,615),(496,825),(477,834)