# V&V Reference Report
# L2 ASCDS Version : 10.4.3.1

Observation 51026 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : May 15 2016

## Contents

# 1 Front

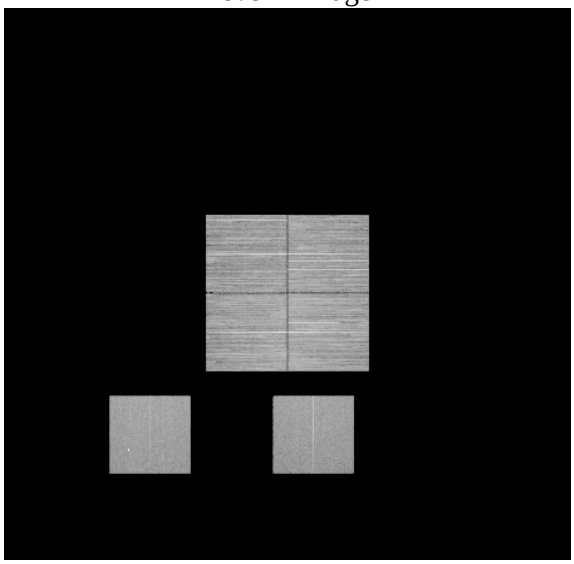
| | | |
|---|---|---|
| seq_num |   | Sequence number |
| obs_id | 51026 | Observation id |
| title | ACIS-012357 diagnostics | Proposal title |
| observer | CHANDRA engineering request/realtime commanding | Principal investig |
| object |   | Source name |
| dtycycle | 0 |   |
| cycle | P | events from 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 | 81.82644446844 | Nominal RA [deg] |
| dec_nom | -40.543904001331 | Nominal Dec [deg] |
| roll_nom | 333.88091150816 | Nominal Roll [deg] |
| revision | 1 | Processing version of data |
| ontime | 8230.0183979273 | Sum of GTIs [s] |
| livetime | 8125.8049494506 | Livetime [s] |
| ontime0 | 8229.9773578644 | Sum of GTIs [s] |
| ontime1 | 8229.9363179207 | Sum of GTIs [s] |
| ontime2 | 8229.8952778578 | Sum of GTIs [s] |
| ontime3 | 8230.059437871 | Sum of GTIs [s] |
| ontime5 | 8229.8542379141 | Sum of GTIs [s] |
| ontime7 | 8230.0183979273 | Sum of GTIs [s] |
| l2events | 182627 | Number of level 2 events |

# 2 OBI

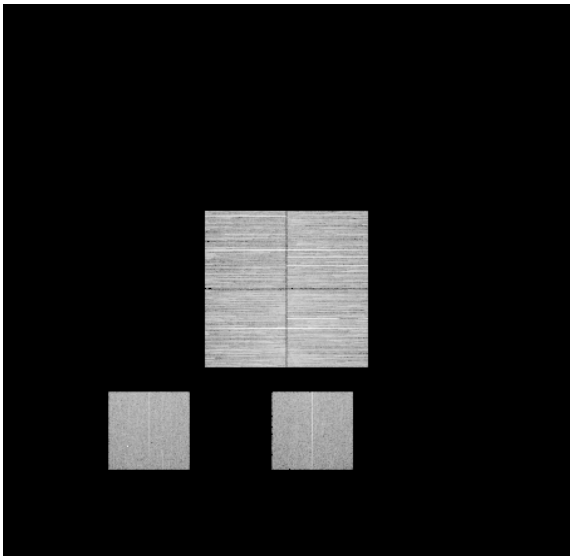
## 2.1 OBI

### 2.1.1 Images

Level 1 Image

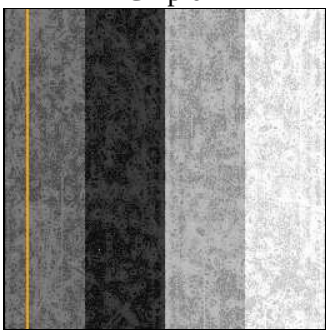


Level 1 Bad Events

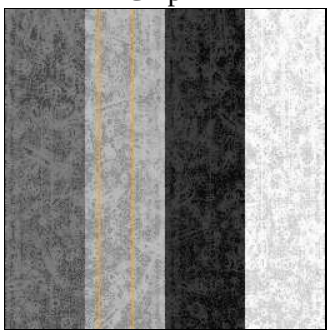


### 2.1.2 Bias

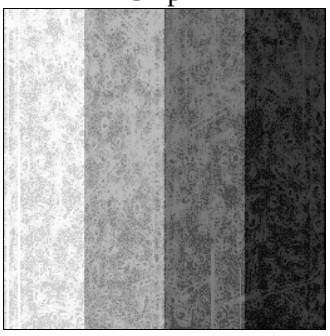
Chip 0



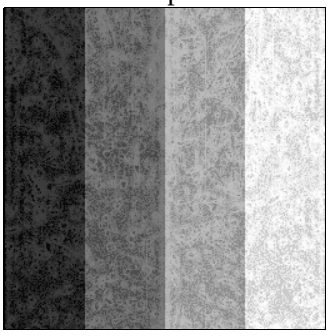
Chip 1



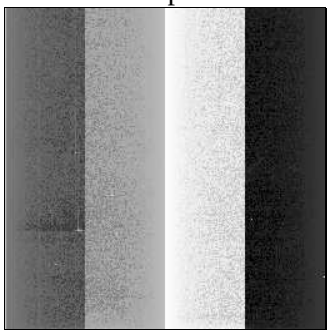
Chip 2



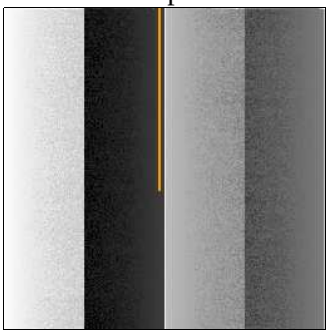
Chip 3



Chip 5



Chip 7



### 2.1.3 Parameters

| | | |
|---|---|---|
| obi_num | 0 | Obi number |
| ascdsver | 10.4.3.1 | Processing system revision |
| caldbver | 4.7.1 |   |
| date | 2016-05-15T12:00:40 | Date and time of file creation |
| revision | 1 | Processing version of data |

| | | |
|---|---|---|
| sched_exp_time | 0.0 | [s] Scheduled observation exposure time |
| ontime | 8230.0183979273 | Sum of GTIs [s] |
| ontime0 | 8229.9773578644 | Sum of GTIs [s] |
| ontime1 | 8229.9363179207 | Sum of GTIs [s] |
| ontime2 | 8229.8952778578 | Sum of GTIs [s] |
| ontime3 | 8230.059437871 | Sum of GTIs [s] |
| ontime5 | 8229.8542379141 | Sum of GTIs [s] |
| ontime7 | 8230.0183979273 | Sum of GTIs [s] |
| l1events | 995497 | Number of level 1 events |

### 2.1.4 Events

| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 5 | ccd 7 |
|---|---|---|---|---|---|---|
| level 1 events | 158523 | 175848 | 181871 | 197768 | 145884 | 135603 |
| rejected events | 138308 | 155627 | 161834 | 177617 | 86692 | 82514 |
| rejected % | 87% | 88% | 88% | 89% | 59% | 60% |

| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 5 | ccd 7 |
|---|---|---|---|---|---|---|
| grade 0 events | 9398 | 8818 | 9681 | 9748 | 4071 | 5424 |
| | 5% | 5% | 5% | 4% | 2% | 3% |
| grade 1 events | 60 | 55 | 77 | 84 | 191 | 119 |
| | 0% | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 4594 | 4770 | 4313 | 4195 | 21853 | 13426 |
| | 2% | 2% | 2% | 2% | 14% | 9% |
| grade 3 events | 1483 | 1431 | 1444 | 1472 | 1811 | 4003 |
| | 0% | 0% | 0% | 0% | 1% | 2% |
| grade 4 events | 1487 | 1481 | 1468 | 1492 | 1733 | 3740 |
| | 0% | 0% | 0% | 0% | 1% | 2% |
| grade 5 events | 3260 | 3300 | 3094 | 3745 | 7056 | 8825 |
| | 2% | 1% | 1% | 1% | 4% | 6% |
| grade 6 events | 3314 | 3780 | 3186 | 3318 | 29915 | 26661 |
| | 2% | 2% | 1% | 1% | 20% | 19% |
| grade 7 events | 134927 | 152213 | 158608 | 173714 | 79254 | 73405 |
| | 85% | 86% | 87% | 87% | 54% | 54% |

## 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 | 81.82644446844023 |
| [deg] Pointing Dec | 0 | -40.54390400133059 |
| [deg] Pointing Roll | 0.0 | 333.8809115081602 |
| SIM focus pos (mm) | -0.78090834371673 | -0.78090834371673 |
| [mm] SIM defocus | 0.7524282194390134 | 0.7524282194390134 |
| SIM translation stage pos (mm) | 250.4660330802 | 250.4660330802 |
| [mm] SIM translation stage offset | -0.01005726120527584 | -0.01005726120527584 |
| [s] Observation start time (MET) | 579638459.601591 | 579638459.601591 |
| Observation start date | 2016-05-14T18:41:00 | 2016-05-14T18:40:59 |
| [s] Observation end time (MET) | 579648009.2861381 | 579648009.2861381 |
| Observation end date | 2016-05-14T21:20:09 | 2016-05-14T21:20:09 |
| 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 | Joy Nichols |
| V&V Date (YYYY-MM-DD) | 2016.05.16 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 8.2300183979273 |

## A.2 Comments