

# V&V Reference Report

## L2 ASCDS Version : 10.4.2.1

Observation 51537 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Nov 2 2015

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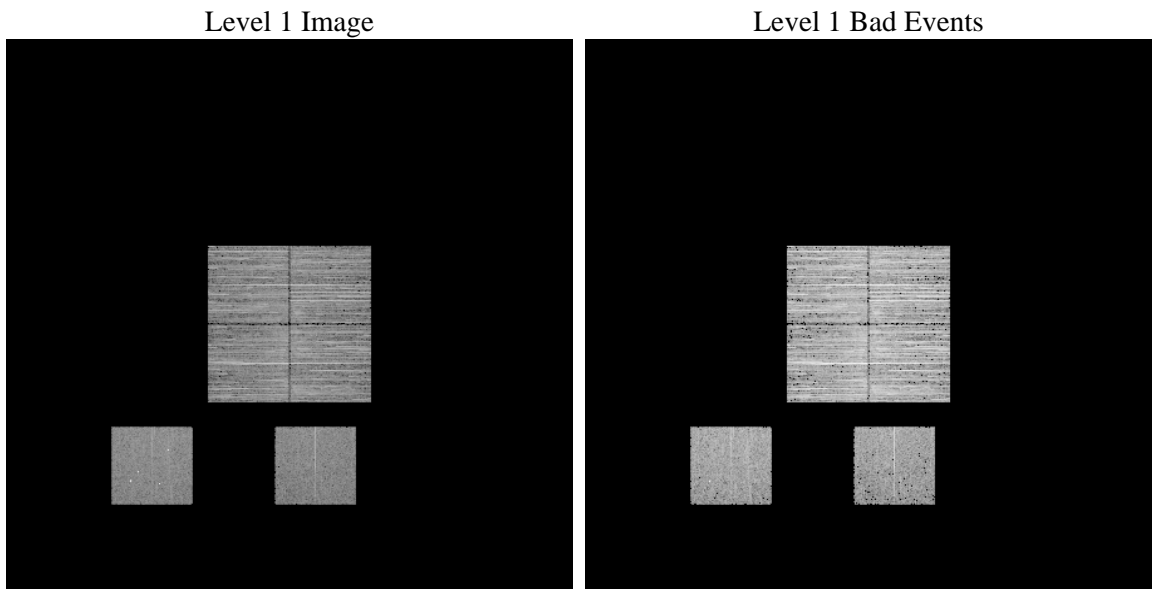
# 1 Front

seq_num	&#160	Sequence number
obs_id	51537	Observation id
title	ACIS-012357 diagnostics	Proposal title
observer	CHANDRA engineering request/realtime commanding	Principal investig
object	&#160	Source name
dtcycle	0	&#160
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	28.976618567362	Nominal RA [deg]
dec_nom	31.179173676158	Nominal Dec [deg]
roll_nom	193.38162091406	Nominal Roll [deg]
revision	2	Processing version of data
ontime	3273.4152255058	Sum of GTIs [s]
livetime	3231.9652709065	Livetime [s]
ontime0	3273.4152255058	Sum of GTIs [s]
ontime1	3273.4152950048	Sum of GTIs [s]
ontime2	3275.9263092279	Sum of GTIs [s]
ontime3	3273.4152255058	Sum of GTIs [s]
ontime5	3275.8852692842	Sum of GTIs [s]
ontime7	3273.4152255058	Sum of GTIs [s]
l2events	77869	Number of level 2 events

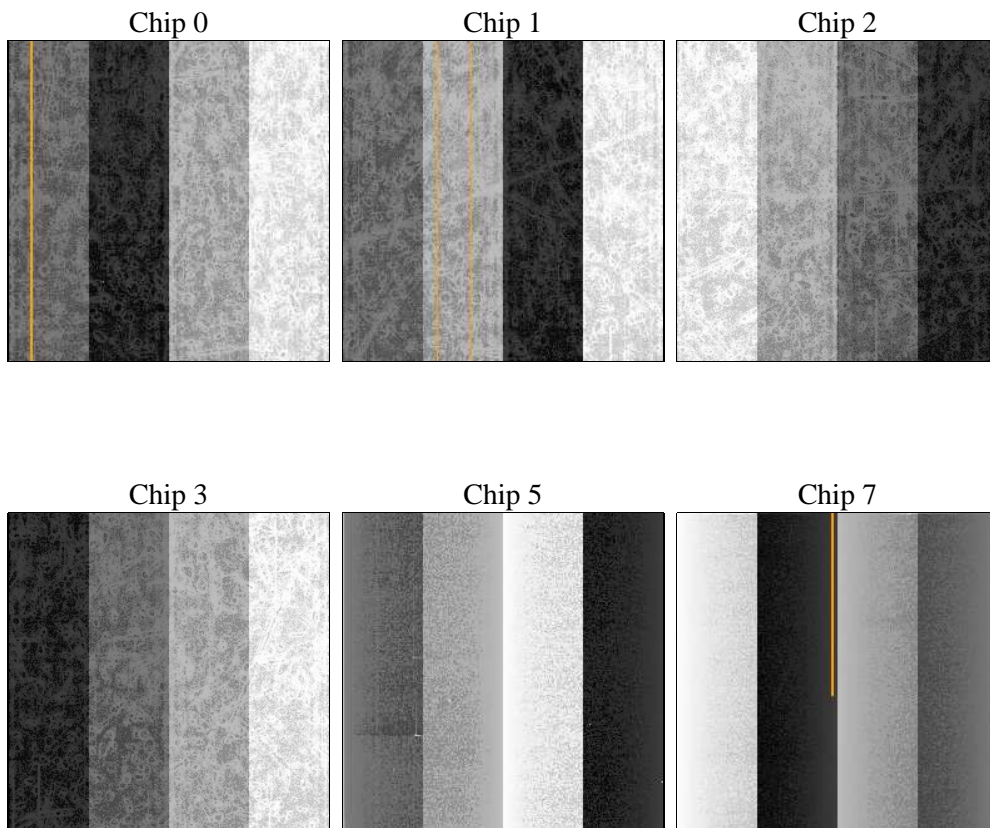
## 2 OBI

### 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	10.4.2.1	Processing system revision	ontime	3273.4152255058	Sum of GTIs [s]
caldbver	4.6.10a	&#160	ontime0	3273.4152255058	Sum of GTIs [s]
date	2015-11-02T22:43:37	Date and time of file creation	ontime1	3273.4152950048	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	3275.9263092279	Sum of GTIs [s]
			ontime3	3273.4152255058	Sum of GTIs [s]
			ontime5	3275.8852692842	Sum of GTIs [s]
			ontime7	3273.4152255058	Sum of GTIs [s]
			l1events	396351	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	69803	73972	68960	72127	60044	51445	grade 0 events	4453	4264	4545	4563	3948	2592
rejected events	60617	64845	59971	63056	33548	29702		6%	5%	6%	6%	6%	5%
rejected %	86%	87%	86%	87%	55%	57%	grade 1 events	32	24	40	30	100	54
								0%	0%	0%	0%	0%	0%
							grade 2 events	1987	2010	1835	1750	9413	5652
								2%	2%	2%	2%	15%	10%
							grade 3 events	665	636	640	683	835	1687
								0%	0%	0%	0%	1%	3%
							grade 4 events	643	652	624	666	818	1641
								0%	0%	0%	0%	1%	3%
							grade 5 events	1170	1182	1102	1319	2706	3291
								1%	1%	1%	1%	4%	6%
							grade 6 events	1438	1565	1345	1409	11482	10171
								2%	2%	1%	1%	19%	19%
							grade 7 events	59415	63639	58829	61707	30742	26357
								85%	86%	85%	85%	51%	51%

## 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	28.9766185673617
[deg] Pointing Dec	0	31.17917367615825
[deg] Pointing Roll	0.0	193.3816209140579
[mm] SIM focus pos	-1.429586	-1.428180813131781
[mm] SIM defocus	0.1037507710433287	0.1051558262725154
[mm] SIM translation stage pos	250.455976	250.466033080201
[mm] SIM translation stage offset	0	-0.01005468664627074
[s] Observation start time (MET)	562507268.791487	562507267.76649
Observation start date	2015-10-29T12:01:09	2015-10-29T12:01:07
[s] Observation end time (MET)	562533037.292944	562533036.26794
Observation end date	2015-10-29T19:10:37	2015-10-29T19:10:36
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
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	Beth Sundheim
V&V Date (YYYY-MM-DD)	2015.11.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.2734152255058

## A.2 Comments

A spatial region of the original bias map for CCD = 2 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 ( $\sim 20$  eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 2 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation.