

# V&V Reference Report

## L2 ASCDS Version : 10.4.3

Observation 51371 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Dec 31 2015

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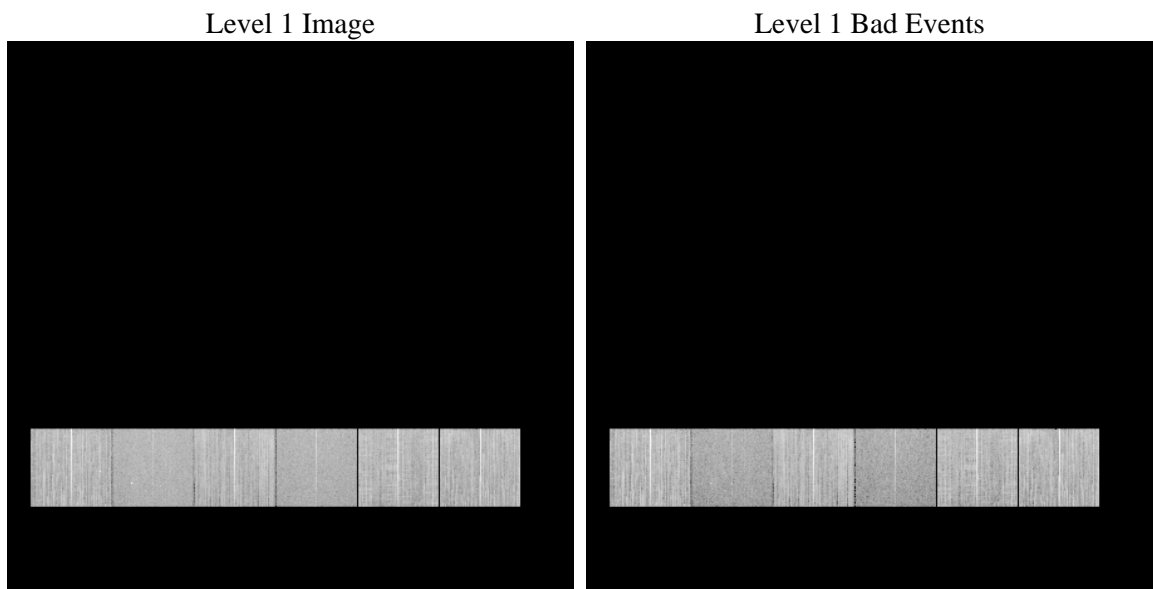
# 1 Front

seq_num	&#160	Sequence number
obs_id	51371	Observation id
title	ACIS-456789 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	232.25469628603	Nominal RA [deg]
dec_nom	-66.366773646127	Nominal Dec [deg]
roll_nom	123.63733931809	Nominal Roll [deg]
revision	2	Processing version of data
ontime	8251.5210528374	Sum of GTIs [s]
livetime	8147.0353247969	Livetime [s]
ontime4	8251.3979327679	Sum of GTIs [s]
ontime5	8251.4800127745	Sum of GTIs [s]
ontime6	8251.4389728308	Sum of GTIs [s]
ontime7	8251.5210528374	Sum of GTIs [s]
ontime8	8251.3568928242	Sum of GTIs [s]
ontime9	8251.5620927811	Sum of GTIs [s]
l2events	186635	Number of level 2 events

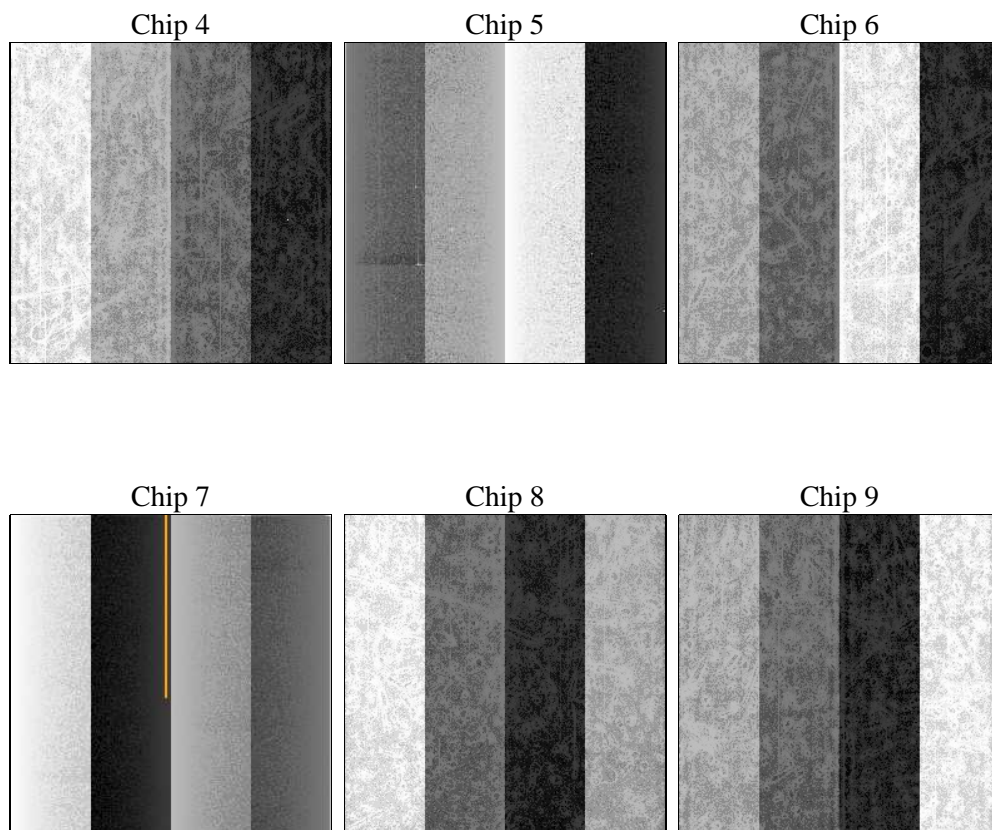
## 2 OBI

### 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	10.4.3	Processing system revision	ontime	8251.5210528374	Sum of GTIs [s]
caldsver	4.7.0	&#160	ontime4	8251.3979327679	Sum of GTIs [s]
date	2015-12-31T19:37:34	Date and time of file creation	ontime5	8251.4800127745	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	8251.4389728308	Sum of GTIs [s]
			ontime7	8251.5210528374	Sum of GTIs [s]
			ontime8	8251.3568928242	Sum of GTIs [s]
			ontime9	8251.5620927811	Sum of GTIs [s]
			l1events	960868	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	172702	141043	173139	129812	172922	171250	grade 0 events	11078	4537	10033	5930	13105	10111
rejected events	150924	82776	151290	77566	139657	149505		6%	3%	5%	4%	7%	5%
rejected %	87%	58%	87%	59%	80%	87%	grade 1 events	105	272	60	99	95	61
								0%	0%	0%	0%	0%	0%
							grade 2 events	4383	20907	4717	12905	7392	4626
								2%	14%	2%	9%	4%	2%
							grade 3 events	1638	1889	1460	4077	2739	1617
								0%	1%	0%	3%	1%	0%
							grade 4 events	1619	1906	1542	3897	2757	1578
								0%	1%	0%	3%	1%	0%
							grade 5 events	3713	7155	3508	8780	4787	4003
								2%	5%	2%	6%	2%	2%
							grade 6 events	3060	29028	4097	25437	7272	3813
								1%	20%	2%	19%	4%	2%
							grade 7 events	147106	75349	147722	68687	134775	145441
								85%	53%	85%	52%	77%	84%

## 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	Number of optional ACIS chips dropped	0	0
Observation mode	SECONDARY	SECONDARY	On-chip summing requested	N	N
[deg] Pointing RA	0	232.2546962860319	Subarray requested	NONE	NONE
[deg] Pointing Dec	0	-66.36677364612734	Alternating exposures requested	N	N
[deg] Pointing Roll	0.0	123.6373393180878	[s] Primary exposure time	3.2	3.2
[mm] SIM focus pos	-1.429586	-0.6828225247311905			
[mm] SIM defocus	0.1037507710433287	0.8505141146731063			
[mm] SIM translation stage pos	250.455976	250.466033080201			
[mm] SIM translation stage offset	0	-0.01005468664627074			
[s] Observation start time (MET)	567757288.338956	567757287.31396			
Observation start date	2015-12-29T06:21:28	2015-12-29T06:21:27			
[s] Observation end time (MET)	567768097.98957	567768096.96457			
Observation end date	2015-12-29T09:21:38	2015-12-29T09:21:36			
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)	2015.12.31
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.2515210528374

## A.2 Comments

A spatial region of the original bias map for CCD = 6 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 = 6 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation.