

# V&V Reference Report

## L2 ASCDS Version : 10.4.1

Observation 51688 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Aug 24 2015

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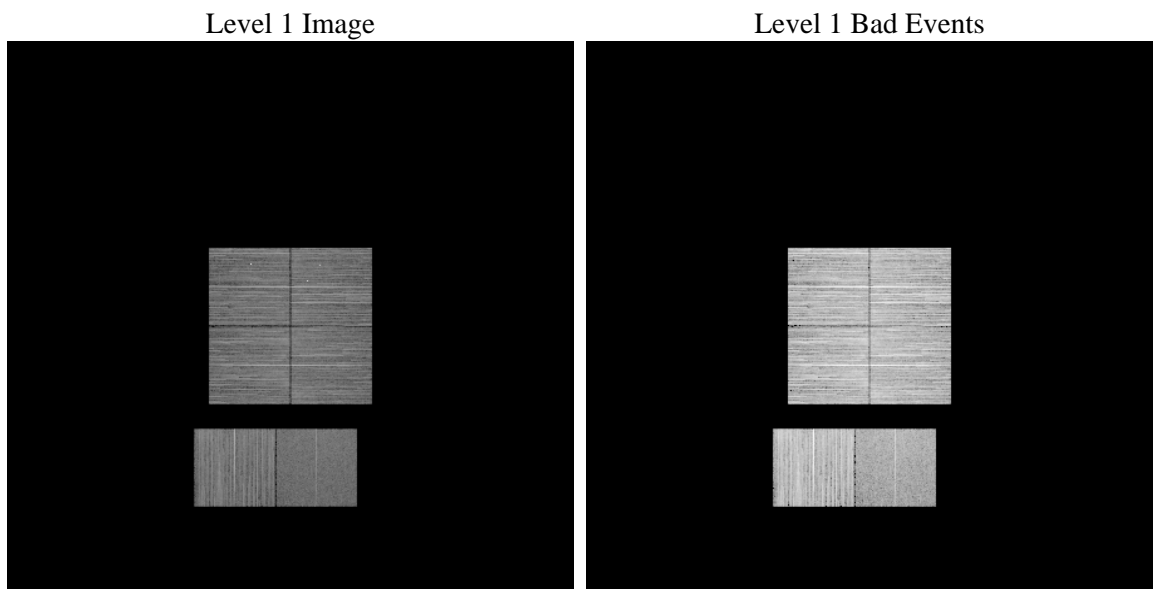
# 1 Front

seq_num	&#160	Sequence number
obs_id	51688	Observation id
title	ACIS-012367 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	348.97792613648	Nominal RA [deg]
dec_nom	-6.9844407113098	Nominal Dec [deg]
roll_nom	108.37816761697	Nominal Roll [deg]
revision	2	Processing version of data
ontime	8256.000123024	Sum of GTIs [s]
livetime	8151.4576782998	Livetime [s]
ontime0	8256.000123024	Sum of GTIs [s]
ontime1	8256.000123024	Sum of GTIs [s]
ontime2	8256.000123024	Sum of GTIs [s]
ontime3	8256.000123024	Sum of GTIs [s]
ontime6	8256.000123024	Sum of GTIs [s]
ontime7	8256.000123024	Sum of GTIs [s]
l2events	170468	Number of level 2 events

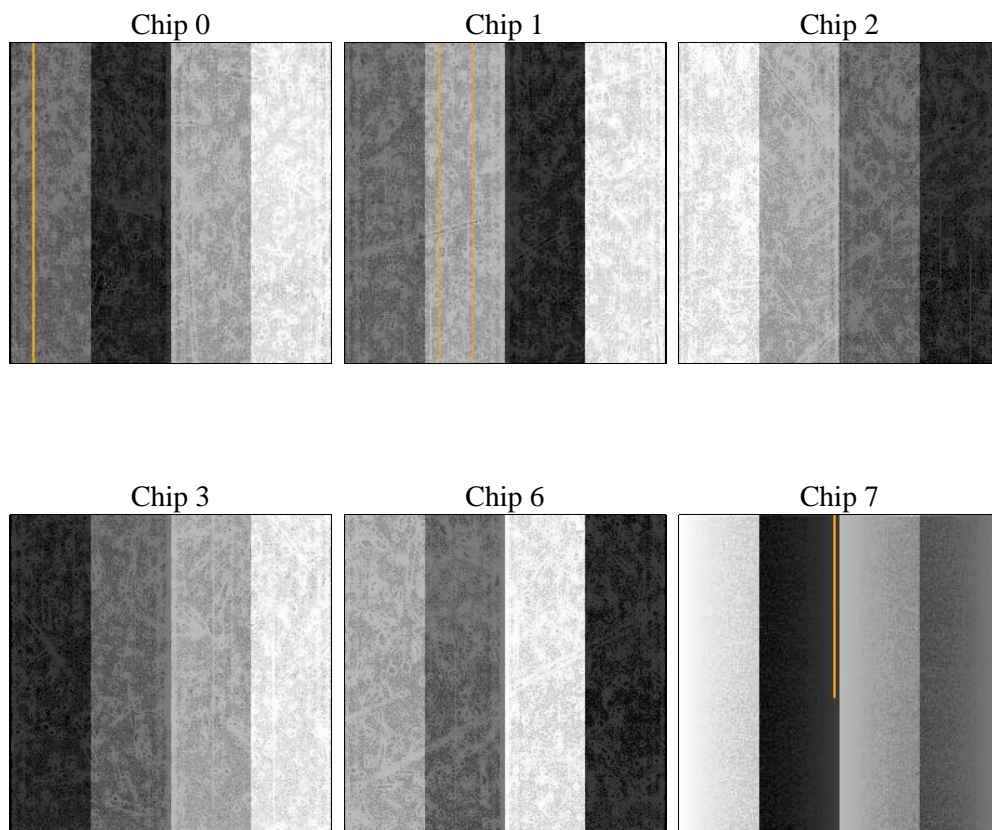
## 2 OBI

### 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	10.4.1	Processing system revision	ontime	8256.000123024	Sum of GTIs [s]
caldsver	4.6.8	&#160	ontime0	8256.000123024	Sum of GTIs [s]
date	2015-08-24T17:34:49	Date and time of file creation	ontime1	8256.000123024	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	8256.000123024	Sum of GTIs [s]
			ontime3	8256.000123024	Sum of GTIs [s]
			ontime6	8256.000123024	Sum of GTIs [s]
			ontime7	8256.000123024	Sum of GTIs [s]
			l1events	892900	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	154845	158782	152912	149291	158523	118547	grade 0 events	14410	14492	12632	12843	11837	6505
rejected events	124235	129576	127480	123054	131760	67894		9%	9%	8%	8%	7%	5%
rejected %	80%	81%	83%	82%	83%	57%	grade 1 events	86	77	68	62	63	88
								0%	0%	0%	0%	0%	0%
							grade 2 events	8086	6504	5022	5439	6241	12623
								5%	4%	3%	3%	3%	10%
							grade 3 events	1671	1617	1704	1689	1626	3792
								1%	1%	1%	1%	1%	3%
							grade 4 events	1755	1630	1787	1792	1654	3723
								1%	1%	1%	1%	1%	3%
							grade 5 events	2859	2863	2604	3084	2908	7065
								1%	1%	1%	2%	1%	5%
							grade 6 events	4688	4963	4287	4474	5405	24010
								3%	3%	2%	2%	3%	20%
							grade 7 events	121290	126636	124808	119908	128789	60741
								78%	79%	81%	80%	81%	51%

## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-012367	ACIS-012367
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	SECONDARY	SECONDARY
[deg] Pointing RA	0	348.9779261364827
[deg] Pointing Dec	0	-6.984440711309846
[deg] Pointing Roll	0.0	108.3781676169689
[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)	556104203.3407741	556104202.31577
Observation start date	2015-08-16T09:23:23	2015-08-16T09:23:22
[s] Observation end time (MET)	556115517.291412	556115516.26641
Observation end date	2015-08-16T12:31:57	2015-08-16T12:31:56
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)	2015.08.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.256000123024

## A.2 Comments

A spatial region of the original bias map for CCD = 1 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 = 1 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation.