

# V&V Reference Report

## L2 ASCDS Version : 10.4.1

Observation 51773 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Jul 13 2015

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Star Slots . . . . .	6
2.4	FID Slots . . . . .	6
<b>A</b>	<b>Summary</b>	<b>7</b>
A.1	Status . . . . .	7
A.2	Comments . . . . .	7

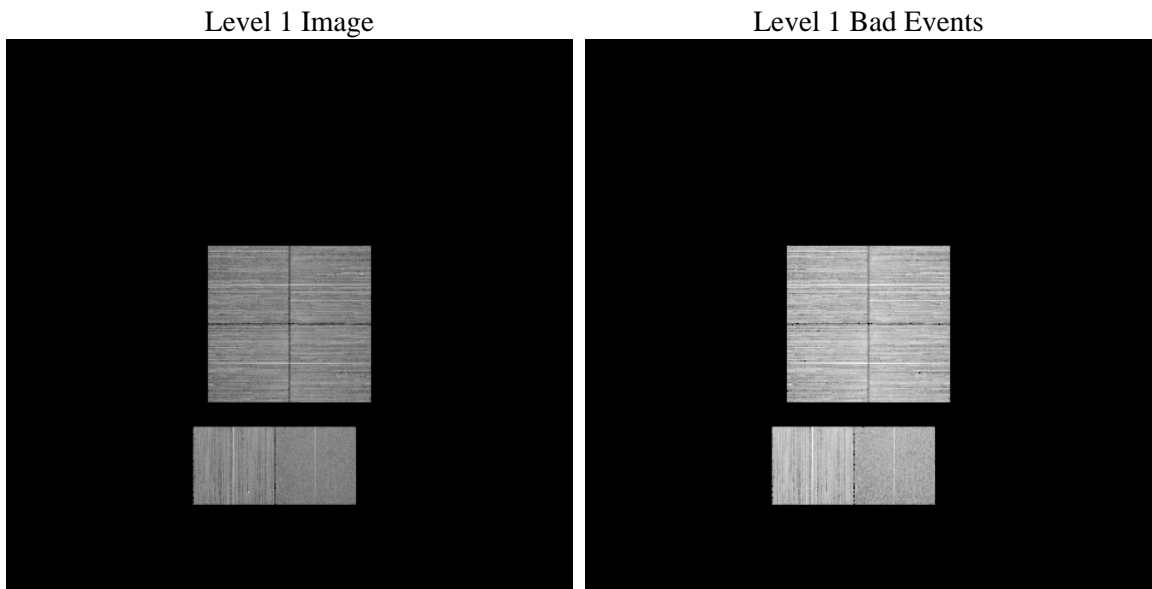
# 1 Front

seq_num	&#160	Sequence number
obs_id	51773	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	297.10069637389	Nominal RA [deg]
dec_nom	-10.543307238841	Nominal Dec [deg]
roll_nom	142.32559135876	Nominal Roll [deg]
revision	2	Processing version of data
ontime	8083.2001204491	Sum of GTIs [s]
livetime	7980.8457734052	Livetime [s]
ontime0	8083.2001204491	Sum of GTIs [s]
ontime1	8083.2001204491	Sum of GTIs [s]
ontime2	8083.2001204491	Sum of GTIs [s]
ontime3	8083.2001204491	Sum of GTIs [s]
ontime6	8083.2001204491	Sum of GTIs [s]
ontime7	8083.2001204491	Sum of GTIs [s]
l2events	146545	Number of level 2 events

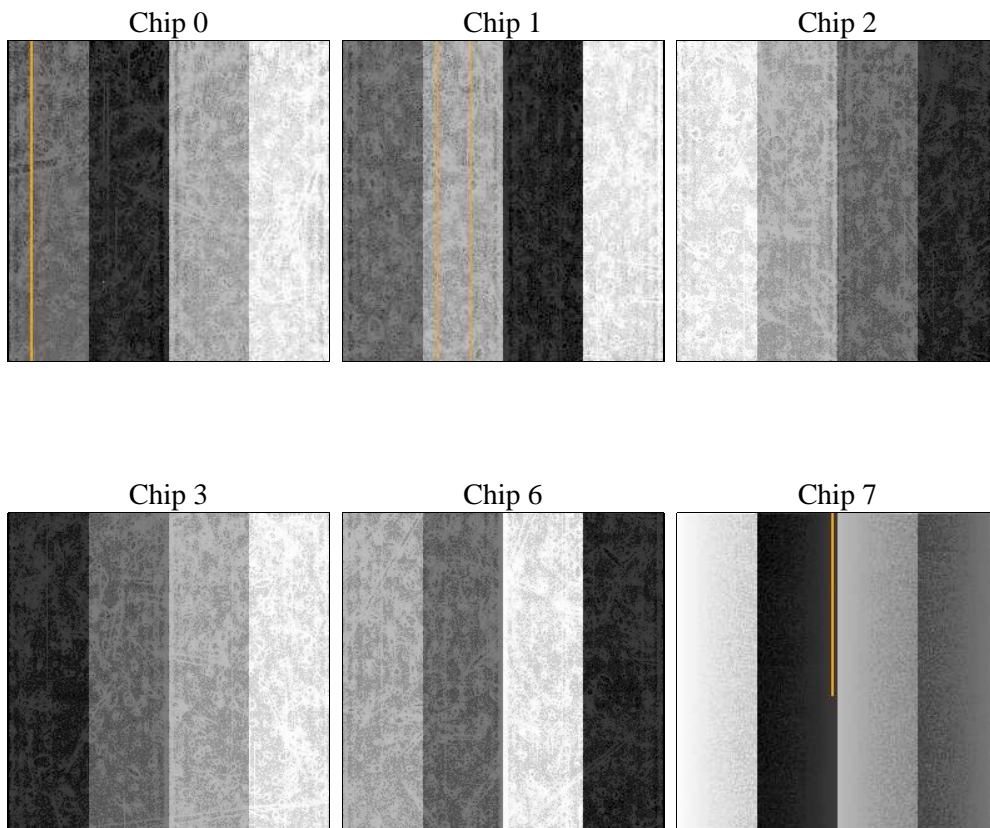
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	0.0	[s] Scheduled observation exposure time
ascdsver	10.4.1	Processing system revision	ontime	8083.2001204491	Sum of GTIs [s]
caldbver	4.6.8	&#160	ontime0	8083.2001204491	Sum of GTIs [s]
date	2015-07-13T21:02:42	Date and time of file creation	ontime1	8083.2001204491	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	8083.2001204491	Sum of GTIs [s]
			ontime3	8083.2001204491	Sum of GTIs [s]
			ontime6	8083.2001204491	Sum of GTIs [s]
			ontime7	8083.2001204491	Sum of GTIs [s]
			l1events	858796	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	137507	150639	144923	151694	156039	117994	grade 0 events	10474	12613	10987	10908	10760	5890
rejected events	116201	126612	123401	130240	130973	70609		7%	8%	7%	7%	6%	4%
rejected %	84%	84%	85%	85%	83%	59%	grade 1 events	57	53	52	88	55	75
								0%	0%	0%	0%	0%	0%
							grade 2 events	4591	5119	4515	4387	7592	11935
								3%	3%	3%	2%	4%	10%
							grade 3 events	1595	1490	1529	1535	1603	3816
								1%	0%	1%	1%	1%	3%
							grade 4 events	1495	1485	1568	1642	1514	3626
								1%	0%	1%	1%	0%	3%
							grade 5 events	2836	2791	2662	3254	2929	7320
								2%	1%	1%	2%	1%	6%
							grade 6 events	3697	3963	3477	3541	4214	23303
								2%	2%	2%	2%	2%	19%
							grade 7 events	112762	123125	120133	126339	127372	62029
								82%	81%	82%	83%	81%	52%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	OVERRIDE	OVERRIDE
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	297.100696373894	Subarray requested	NONE	NONE
[deg] Pointing Dec	0	-10.54330723884094	Alternating exposures requested	N	N
[deg] Pointing Roll	0.0	142.325591358765	[s] Primary exposure time	3.2	3.2
SIM focus pos (mm)	-0.68282252473119	-0.68282252473119			
[mm] SIM defocus	0.8505140384245534	0.8505140384245534			
SIM translation stage pos (mm)	250.4660330802	250.4660330802			
[mm] SIM translation stage offset	-0.01005726120527584	-0.01005726120527584			
[s] Observation start time (MET)	552677956.147889	552677956.147889			
Observation start date	2015-07-07T17:39:16	2015-07-07T17:39:16			
[s] Observation end time (MET)	552687505.2461571	552687505.2461571			
Observation end date	2015-07-07T20:18:25	2015-07-07T20:18:25			
Read mode	TIMED	TIMED			

## 2.3 Star Slots

## 2.4 FID Slots

# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2015.07.14
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.0832001204491

## A.2 Comments

A spatial region of the original bias map for CCD = 3 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 = 3 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:  
(33,1),(53,1),(53,1024),(33,1024)