

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 54527 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Aug 30 2012

## 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

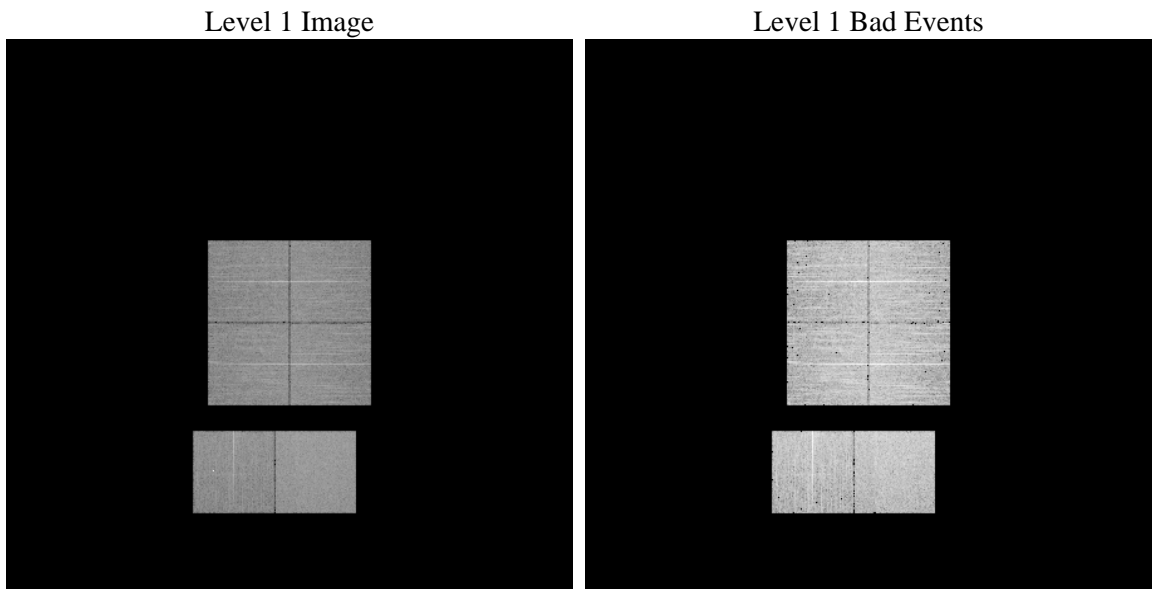
# 1 Front

seq_num	&#160	Sequence number
obs_id	54527	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	269.13930994334	Nominal RA [deg]
dec_nom	-47.189309869129	Nominal Dec [deg]
roll_nom	349.02880214806	Nominal Roll [deg]
revision	3	Processing version of data
ontime	8287.9999691844	Sum of GTIs [s]
livetime	8183.0523231401	Livetime [s]
ontime0	8287.9999691844	Sum of GTIs [s]
ontime1	8287.9999691844	Sum of GTIs [s]
ontime2	8287.9999691844	Sum of GTIs [s]
ontime3	8287.9999691844	Sum of GTIs [s]
ontime6	8287.9999691844	Sum of GTIs [s]
ontime7	8287.9999691844	Sum of GTIs [s]
l2events	251557	Number of level 2 events

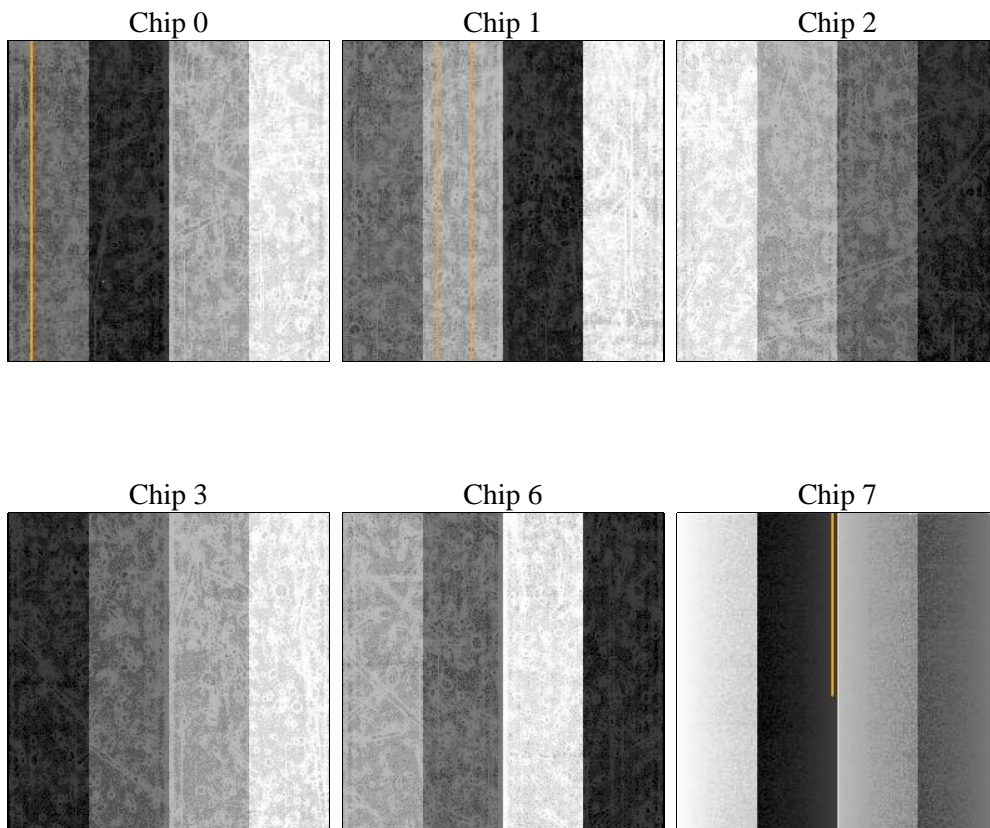
## 2 OBI

### 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	8.4.5	Processing system revision	ontime	8287.9999691844	Sum of GTIs [s]
caldbver	4.5.1.1	&#160	ontime0	8287.9999691844	Sum of GTIs [s]
date	2012-08-30T16:31:17	Date and time of file creation	ontime1	8287.9999691844	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	8287.9999691844	Sum of GTIs [s]
			ontime3	8287.9999691844	Sum of GTIs [s]
			ontime6	8287.9999691844	Sum of GTIs [s]
			ontime7	8287.9999691844	Sum of GTIs [s]
			l1events	572320	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	85465	88228	90291	93606	92521	122209	grade 0 events	20319	20043	21339	21266	21994	10662
rejected events	46267	48617	50658	53780	50253	55189		23%	22%	23%	22%	23%	8%
rejected %	54%	55%	56%	57%	54%	45%	grade 1 events	127	105	143	141	140	113
								0%	0%	0%	0%	0%	0%
							grade 2 events	7423	7859	7042	7193	7590	14482
								8%	8%	7%	7%	8%	11%
							grade 3 events	2765	2725	2667	2723	2784	5933
								3%	3%	2%	2%	3%	4%
							grade 4 events	2666	2644	2665	2776	2751	5915
								3%	2%	2%	2%	2%	4%
							grade 5 events	3102	3332	3074	3633	3468	8661
								3%	3%	3%	3%	3%	7%
							grade 6 events	6041	6353	5937	5889	7163	30052
								7%	7%	6%	6%	7%	24%
							grade 7 events	43022	45167	47424	49985	46631	46391
								50%	51%	52%	53%	50%	37%

## 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	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	269.1393099433411	Subarray requested	NONE	NONE
[deg] Pointing Dec	0	-47.18930986912873	Alternating exposures requested	N	N
[deg] Pointing Roll	0.0	349.0288021480563	[s] Primary exposure time	3.2	3.2
[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)	456966345.498491	456966344.47349			
Observation start date	2012-06-24T23:05:45	2012-06-24T23:05:44			
[s] Observation end time (MET)	456978848.449158	456978847.42416			
Observation end date	2012-06-25T02:34:08	2012-06-25T02:34:07			
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)	2012.09.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.2879999691844

## 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:  
(680,243),(703,243),(703,785),(680,785)