

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 54590 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : May 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

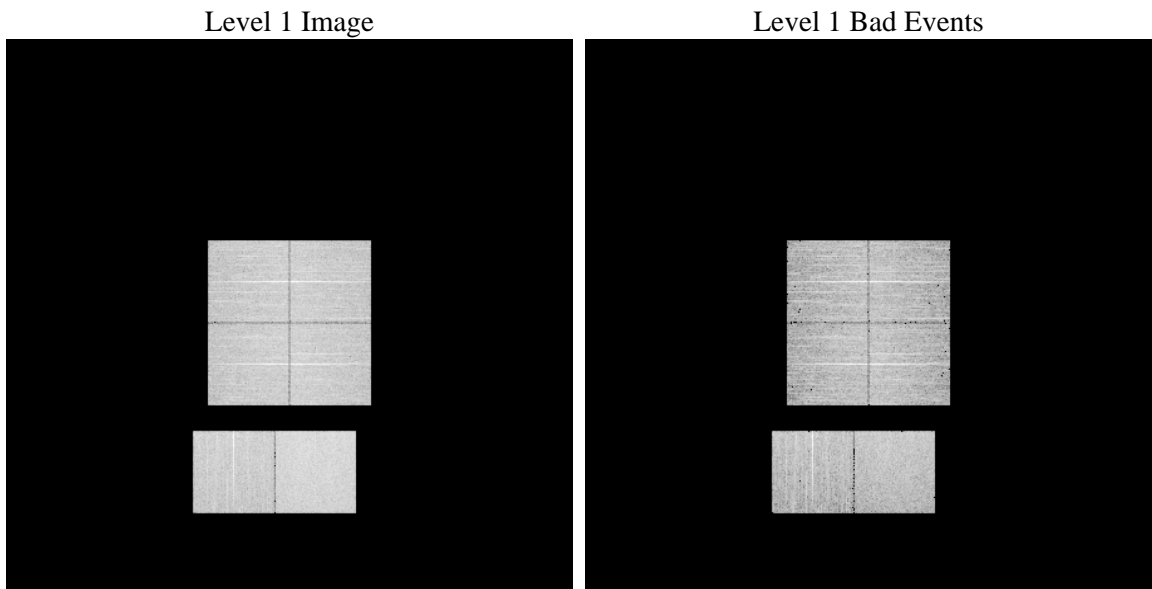
# 1 Front

seq_num	&#160	Sequence number
obs_id	54590	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	240.03628896533	Nominal RA [deg]
dec_nom	-46.985500454429	Nominal Dec [deg]
roll_nom	357.50508848076	Nominal Roll [deg]
revision	2	Processing version of data
ontime	8287.0495319963	Sum of GTIs [s]
livetime	8182.11392096	Livetime [s]
ontime0	8287.008491993	Sum of GTIs [s]
ontime1	8286.9674519897	Sum of GTIs [s]
ontime2	8286.9264119864	Sum of GTIs [s]
ontime3	8287.0905719995	Sum of GTIs [s]
ontime6	8286.8853719831	Sum of GTIs [s]
ontime7	8287.0495319963	Sum of GTIs [s]
l2events	258924	Number of level 2 events

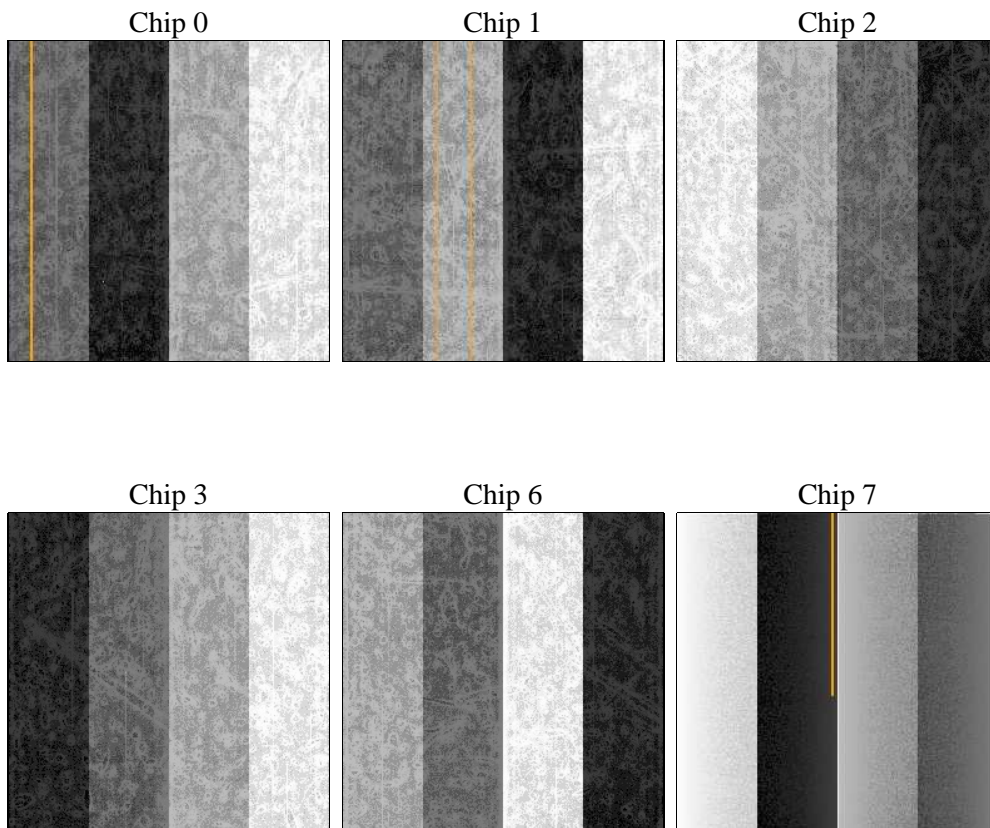
## 2 OBI

### 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	8.4.4	Processing system revision	ontime	8287.0495319963	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime0	8287.008491993	Sum of GTIs [s]
date	2012-05-30T19:15:51	Date and time of file creation	ontime1	8286.9674519897	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	8286.9264119864	Sum of GTIs [s]
			ontime3	8287.0905719995	Sum of GTIs [s]
			ontime6	8286.8853719831	Sum of GTIs [s]
			ontime7	8287.0495319963	Sum of GTIs [s]
			l1events	590963	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	91518	91885	91571	94424	96658	124907	grade 0 events	20775	19350	21677	21945	20073	10307
rejected events	51067	50640	50834	53195	54094	57249		22%	21%	23%	23%	20%	8%
rejected %	55%	55%	55%	56%	55%	45%	grade 1 events	107	95	115	114	96	109
								0%	0%	0%	0%	0%	0%
							grade 2 events	7998	9573	7143	7347	9711	15200
								8%	10%	7%	7%	10%	12%
							grade 3 events	2593	2577	2891	2800	2417	5456
								2%	2%	3%	2%	2%	4%
							grade 4 events	2654	2534	2760	2765	2527	5452
								2%	2%	3%	2%	2%	4%
							grade 5 events	3059	3038	2959	3460	3091	8042
								3%	3%	3%	3%	3%	6%
							grade 6 events	6431	7211	6266	6372	7836	31243
								7%	7%	6%	6%	8%	25%
							grade 7 events	47901	47507	47760	49621	50907	49098
								52%	51%	52%	52%	52%	39%

## 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	240.0362889653299
[deg] Pointing Dec	0	-46.98550045442948
[deg] Pointing Roll	0.0	357.5050884807616
[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)	454226306.13127	454226305.10627
Observation start date	2012-05-24T05:58:26	2012-05-24T05:58:25
[s] Observation end time (MET)	454236306.031801	454236305.0068
Observation end date	2012-05-24T08:45:06	2012-05-24T08:45:05
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	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.06.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.2870495319963

## 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. The pixels affected by the anomaly are bounded by chip coords:  
(417,1),(488,1),(488,156),(417,191)