

# V&V Reference Report

## L2 ASCDS Version : 10.2.1

Observation 52872 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Apr 7 2014

## 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

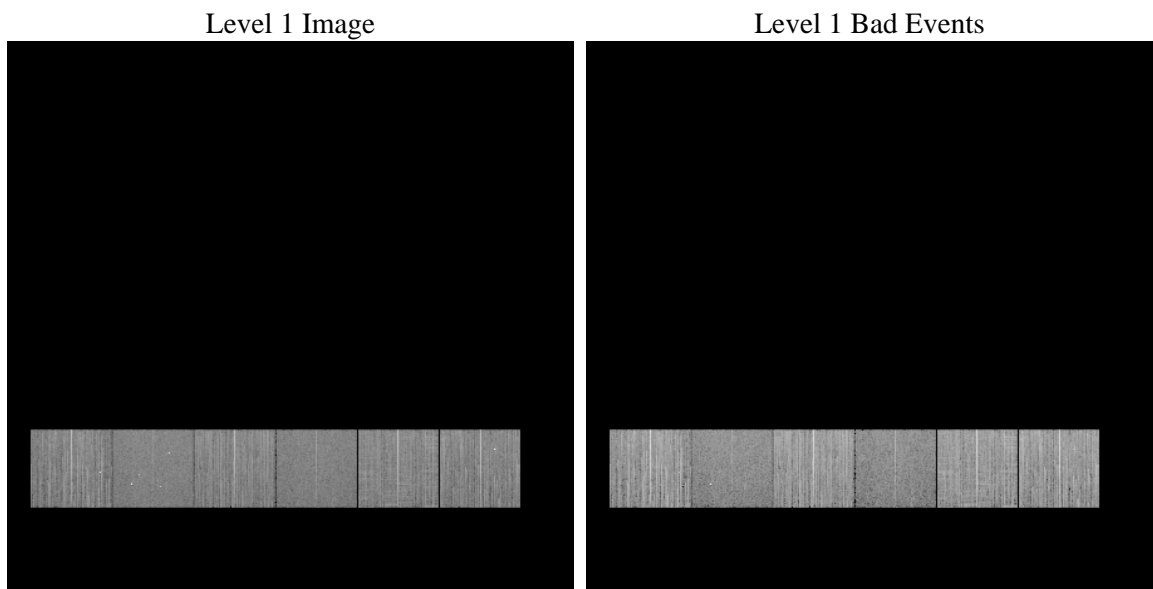
# 1 Front

seq_num	&#160	Sequence number
obs_id	52872	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	139.14607126445	Nominal RA [deg]
dec_nom	-23.543150461369	Nominal Dec [deg]
roll_nom	289.5959438688	Nominal Roll [deg]
revision	2	Processing version of data
ontime	8137.5999697447	Sum of GTIs [s]
livetime	8034.5567790533	Livetime [s]
ontime4	8137.5999697447	Sum of GTIs [s]
ontime5	8137.5999697447	Sum of GTIs [s]
ontime6	8137.5999697447	Sum of GTIs [s]
ontime7	8137.5999697447	Sum of GTIs [s]
ontime8	8137.5999697447	Sum of GTIs [s]
ontime9	8137.5999697447	Sum of GTIs [s]
l2events	200956	Number of level 2 events

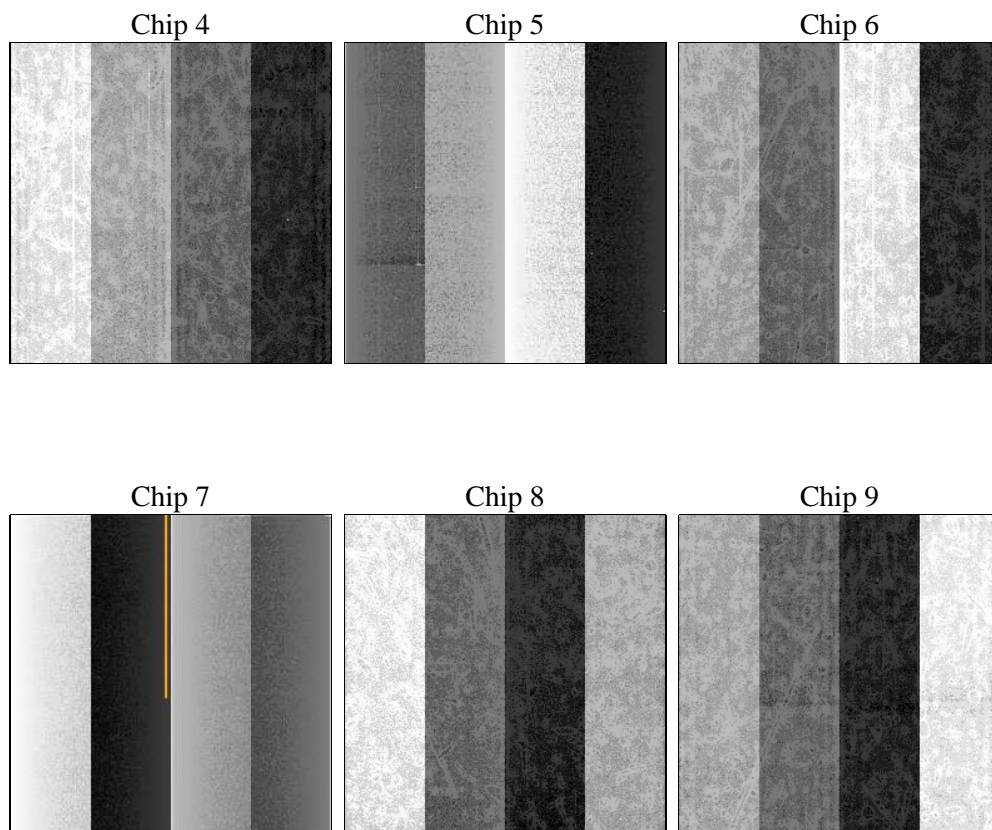
## 2 OBI

### 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	10.2.1	Processing system revision	ontime	8137.5999697447	Sum of GTIs [s]
caldbver	4.6.1	&#160	ontime4	8137.5999697447	Sum of GTIs [s]
date	2014-04-07T19:44:27	Date and time of file creation	ontime5	8137.5999697447	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	8137.5999697447	Sum of GTIs [s]
			ontime7	8137.5999697447	Sum of GTIs [s]
			ontime8	8137.5999697447	Sum of GTIs [s]
			ontime9	8137.5999697447	Sum of GTIs [s]
			l1events	813680	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	139100	123850	141421	113519	149244	146546	grade 0 events	15900	7464	13835	7441	16477	13855
rejected events	111142	67318	113894	62912	113078	117032		11%	6%	9%	6%	11%	9%
rejected %	79%	54%	80%	55%	75%	79%	grade 1 events	140	328	62	87	86	63
								0%	0%	0%	0%	0%	0%
							grade 2 events	5106	20969	5667	12593	7685	7936
								3%	16%	4%	11%	5%	5%
							grade 3 events	1899	2020	1902	4260	2797	1880
								1%	1%	1%	3%	1%	1%
							grade 4 events	1922	2009	1855	4215	2730	1832
								1%	1%	1%	3%	1%	1%
							grade 5 events	2899	5886	2938	7121	3923	3198
								2%	4%	2%	6%	2%	2%
							grade 6 events	3668	25041	4748	22986	7207	4505
								2%	20%	3%	20%	4%	3%
							grade 7 events	107566	60133	110414	54816	108339	113277
								77%	48%	78%	48%	72%	77%

## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-456789	ACIS-456789
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	SECONDARY	SECONDARY
[deg] Pointing RA	0	139.14607126445
[deg] Pointing Dec	0	-23.54315046136945
[deg] Pointing Roll	0.0	289.595943868795
SIM focus pos (mm)	-1.4281808131	-1.4281808131
[mm] SIM defocus	0.1051557500557434	0.1051557500557434
SIM translation stage pos (mm)	250.4660330802	250.4660330802
[mm] SIM translation stage offset	-0.01005726120527584	-0.01005726120527584
[s] Observation start time (MET)	513147801.896799	513147801.896799
Observation start date	2014-04-06T05:03:22	2014-04-06T05:03:21
[s] Observation end time (MET)	513157347.935866	513157347.935866
Observation end date	2014-04-06T07:42:28	2014-04-06T07:42:27
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	OVERRIDE	OVERRIDE
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)	2014.04.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.1375999697447

## 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 = 5 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:  
(444,1),(468,1),(468,67),(444,79)