

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 54008 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Jan 24 2013

## 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

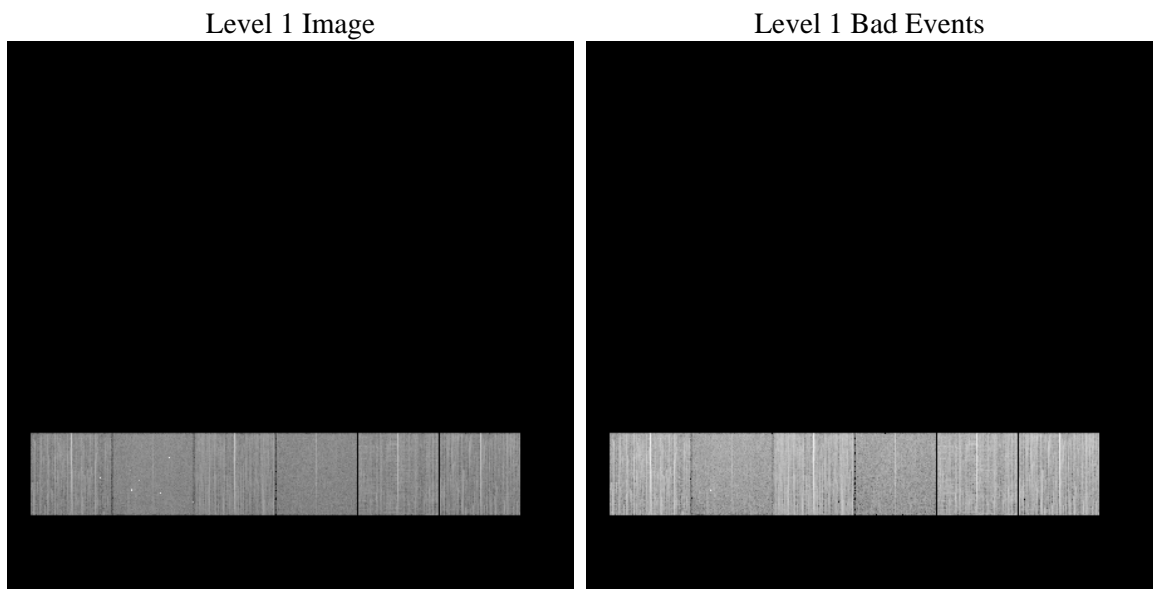
# 1 Front

seq_num	&#160	Sequence number
obs_id	54008	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	173.97396419971	Nominal RA [deg]
dec_nom	42.021099295097	Nominal Dec [deg]
roll_nom	99.689570937545	Nominal Roll [deg]
revision	2	Processing version of data
ontime	7401.5999724865	Sum of GTIs [s]
livetime	7307.8764569264	Livetime [s]
ontime4	7401.5999724865	Sum of GTIs [s]
ontime5	7401.5999724865	Sum of GTIs [s]
ontime6	7401.5999724865	Sum of GTIs [s]
ontime7	7401.5999724865	Sum of GTIs [s]
ontime8	7401.5999724865	Sum of GTIs [s]
ontime9	7401.5999724865	Sum of GTIs [s]
l2events	228690	Number of level 2 events

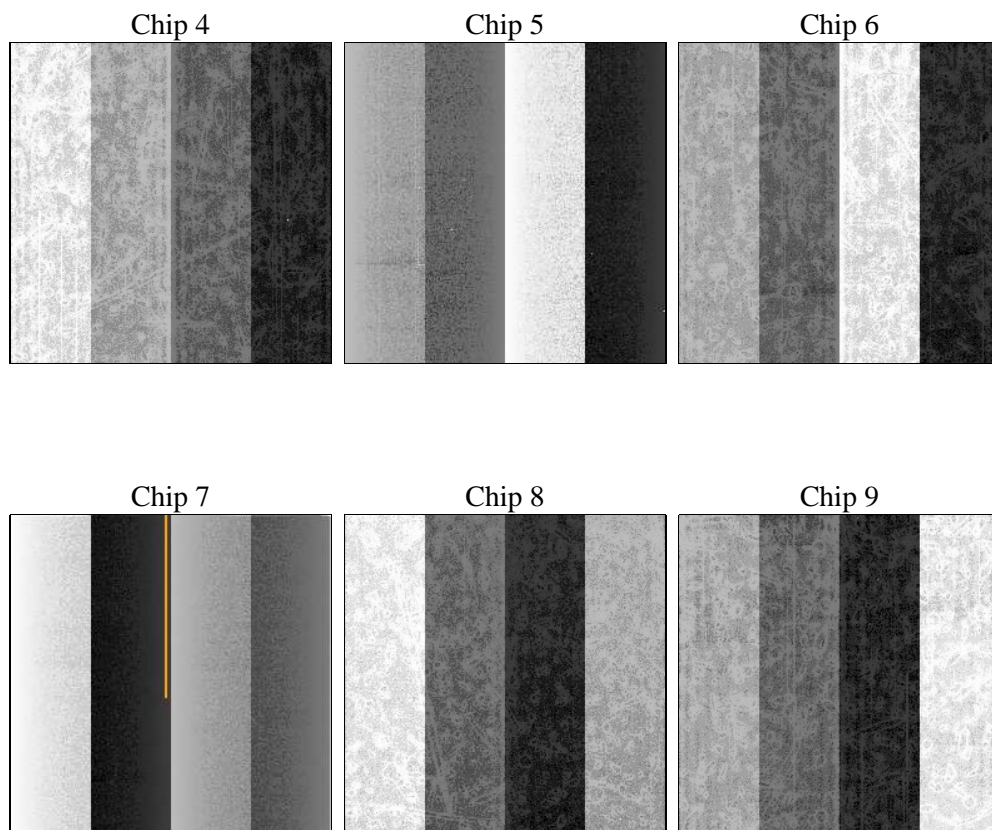
## 2 OBI

### 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	8.5.1.1	Processing system revision	ontime	7401.5999724865	Sum of GTIs [s]
caldsver	4.5.5	&#160	ontime4	7401.5999724865	Sum of GTIs [s]
date	2013-01-24T20:14:51	Date and time of file creation	ontime5	7401.5999724865	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	7401.5999724865	Sum of GTIs [s]
			ontime7	7401.5999724865	Sum of GTIs [s]
			ontime8	7401.5999724865	Sum of GTIs [s]
			ontime9	7401.5999724865	Sum of GTIs [s]
			l1events	857070	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	146285	130986	155984	118387	153126	152302	grade 0 events	18555	10169	16384	8537	18675	15998
rejected events	113101	68030	123161	62532	112424	120875		12%	7%	10%	7%	12%	10%
rejected %	77%	51%	78%	52%	73%	79%	grade 1 events	125	170	64	81	107	96
								0%	0%	0%	0%	0%	0%
							grade 2 events	5853	22311	6498	13573	8198	6057
								4%	17%	4%	11%	5%	3%
							grade 3 events	2203	2228	2167	4683	3074	2157
								1%	1%	1%	3%	2%	1%
							grade 4 events	2282	2317	2101	4759	3049	2119
								1%	1%	1%	4%	1%	1%
							grade 5 events	2935	5856	3003	7276	3829	3332
								2%	4%	1%	6%	2%	2%
							grade 6 events	4291	25931	5673	24303	7706	5096
								2%	19%	3%	20%	5%	3%
							grade 7 events	110041	62004	120094	55175	108488	117447
								75%	47%	76%	46%	70%	77%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	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	173.9739641997093	Subarray requested	NONE	NONE
[deg] Pointing Dec	0	42.02109929509665	Alternating exposures requested	N	N
[deg] Pointing Roll	0.0	99.68957093754452	[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)	474989302.765192	474989301.74019			
Observation start date	2013-01-19T13:28:23	2013-01-19T13:28:21			
[s] Observation end time (MET)	475006922.516142	475006921.49114			
Observation end date	2013-01-19T18:22:03	2013-01-19T18:22:01			
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)	2013.01.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.4015999724865

## 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 = 6 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:  
(707,1),(729,1),(729,613),(707,657)