

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 60447 - L2 Version 4  
Chandra X-Ray Center

L2 Processing Date : Apr 23 2013

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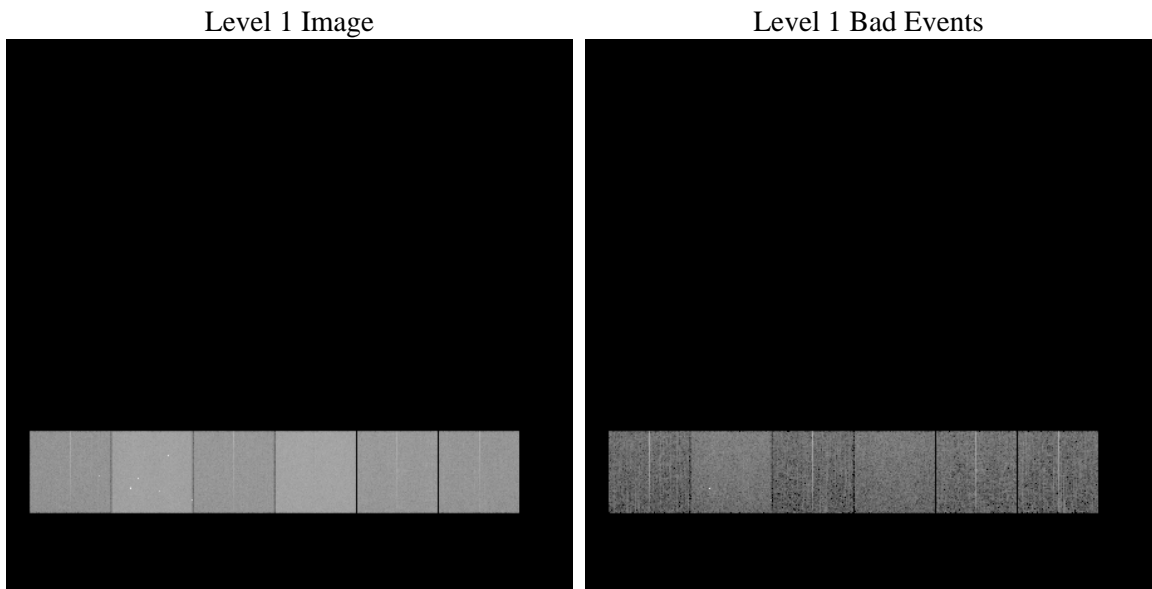
# 1 Front

seq_num	&#160	Sequence number
obs_id	60447	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	130.93737584888	Nominal RA [deg]
dec_nom	65.01088348087	Nominal Dec [deg]
roll_nom	124.82683110365	Nominal Roll [deg]
revision	4	Processing version of data
ontime	8463.9999684691	Sum of GTIs [s]
livetime	8356.8237044595	Livetime [s]
ontime4	4879.9115436971	Sum of GTIs [s]
ontime5	8463.9999684691	Sum of GTIs [s]
ontime6	5288.2344535291	Sum of GTIs [s]
ontime7	8463.9999684691	Sum of GTIs [s]
ontime8	5482.2997528017	Sum of GTIs [s]
ontime9	5067.4528274238	Sum of GTIs [s]
l2events	1227568	Number of level 2 events

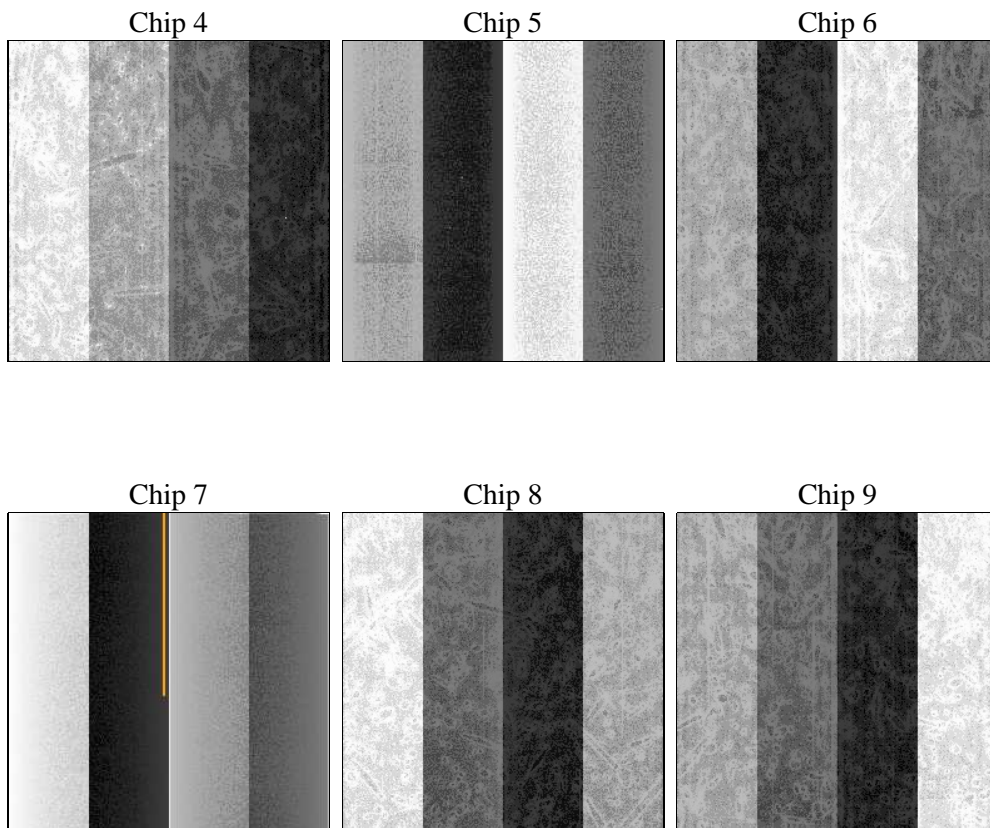
## 2 OBI

### 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	8463.9999684691	Sum of GTIs [s]
caldbver	4.5.6	&#160	ontime4	4879.9115436971	Sum of GTIs [s]
date	2013-04-23T17:56:51	Date and time of file creation	ontime5	8463.9999684691	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	5288.2344535291	Sum of GTIs [s]
			ontime7	8463.9999684691	Sum of GTIs [s]
			ontime8	5482.2997528017	Sum of GTIs [s]
			ontime9	5067.4528274238	Sum of GTIs [s]
			l1events	1534550	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	195272	326238	222214	347716	235568	207542	grade 0 events	93286	62234	102986	75217	108416	95159
rejected events	34324	54788	33595	43106	38682	34958		47%	19%	46%	21%	46%	45%
rejected %	17%	16%	15%	12%	16%	16%	grade 1 events	673	325	444	209	498	525
								0%	0%	0%	0%	0%	0%
							grade 2 events	25939	98216	32240	67010	34343	29817
								13%	30%	14%	19%	14%	14%
							grade 3 events	10553	16271	11578	30895	12565	10927
								5%	4%	5%	8%	5%	5%
							grade 4 events	10583	16224	11898	30289	12659	10899
								5%	4%	5%	8%	5%	5%
							grade 5 events	2097	9740	2379	8327	2896	2430
								1%	2%	1%	2%	1%	1%
							grade 6 events	20587	78505	29917	101199	28903	25782
								10%	24%	13%	29%	12%	12%
							grade 7 events	31554	44723	30772	34570	35288	32003
								16%	13%	13%	9%	14%	15%

## 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	On-chip summing requested	N	N
Observation mode	SECONDARY	SECONDARY	Subarray requested	NONE	NONE
[deg] Pointing RA	0	130.9373758488793	Alternating exposures requested	N	N
[deg] Pointing Dec	0	65.01088348086982	[s] Primary exposure time	0.000000	3.2
[deg] Pointing Roll	0.0	124.8268311036539			
[mm] SIM focus pos	-0.684267	-0.7809083437167272			
[mm] SIM defocus	0	0.7524282956875696			
[mm] SIM translation stage pos	-190.132523	250.466033080201			
[mm] SIM translation stage offset	0	-0.01005468664627074			
[s] Observation start time (MET)	188278857.690663	188278856.66595			
Observation start date	2003-12-20T03:40:58	2003-12-20T03:40:56			
[s] Observation end time (MET)	188302977.991711	188302976.967			
Observation end date	2003-12-20T10:22:58	2003-12-20T10:22:56			
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)	2013.04.24
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.4639999684691

## 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:  
(846,1),(873,1),(873,1024),(846,1024)