

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 60990 - L2 Version 4  
Chandra X-Ray Center

L2 Processing Date : Mar 8 2013

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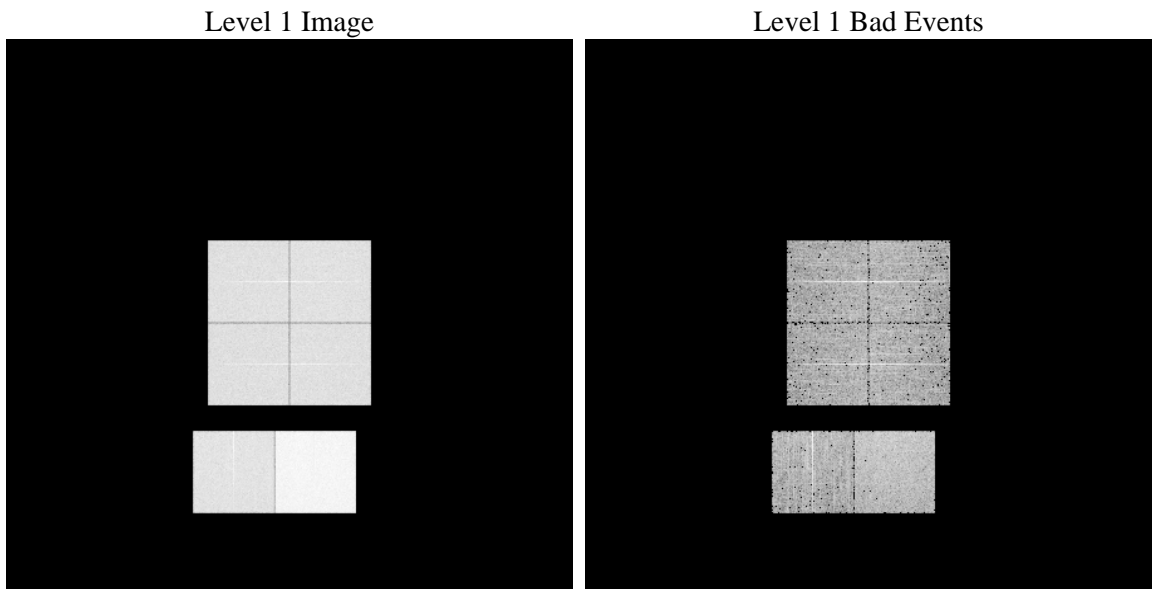
# 1 Front

seq_num	&#160	Sequence number
obs_id	60990	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	123.88643899894	Nominal RA [deg]
dec_nom	46.327052776024	Nominal Dec [deg]
roll_nom	76.252886049667	Nominal Roll [deg]
revision	4	Processing version of data
ontime	7797.0759630501	Sum of GTIs [s]
livetime	7698.3446923705	Livetime [s]
ontime0	3817.9340087473	Sum of GTIs [s]
ontime1	3895.7169064879	Sum of GTIs [s]
ontime2	3599.8924570382	Sum of GTIs [s]
ontime3	3681.0836130679	Sum of GTIs [s]
ontime6	3956.3628664613	Sum of GTIs [s]
ontime7	7797.0759630501	Sum of GTIs [s]
l2events	1209201	Number of level 2 events

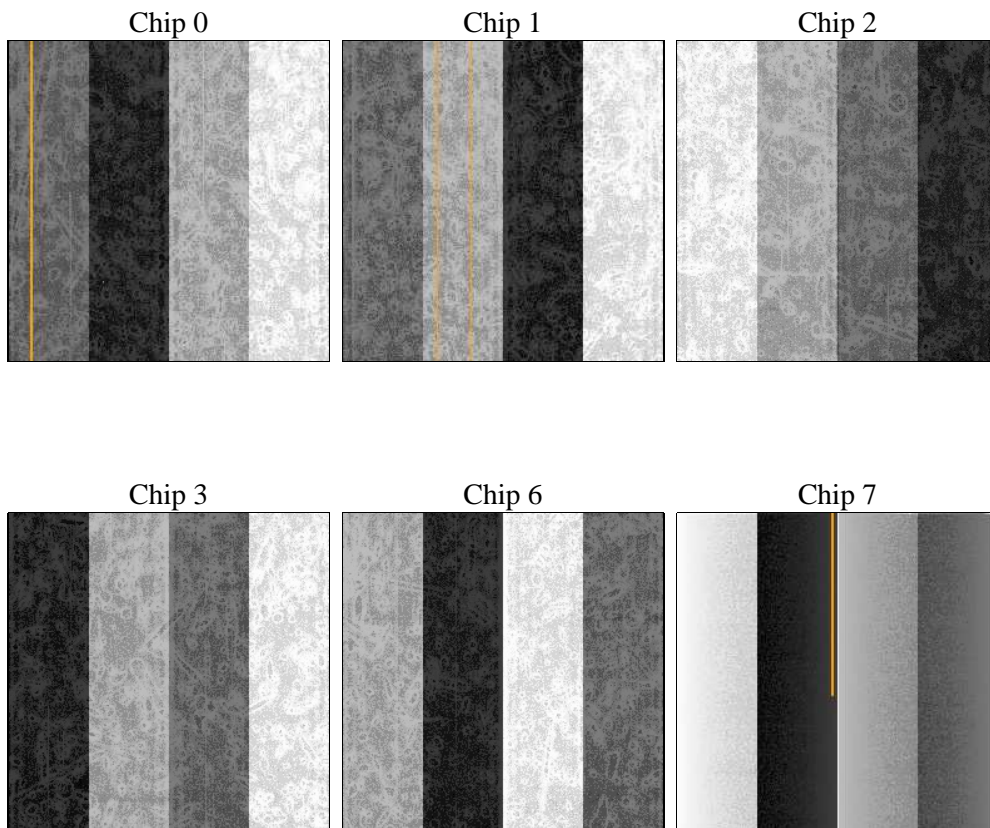
## 2 OBI

### 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	7797.0759630501	Sum of GTIs [s]
caldsver	4.5.6	&#160	ontime0	3817.9340087473	Sum of GTIs [s]
date	2013-03-08T19:55:06	Date and time of file creation	ontime1	3895.7169064879	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	3599.8924570382	Sum of GTIs [s]
			ontime3	3681.0836130679	Sum of GTIs [s]
			ontime6	3956.3628664613	Sum of GTIs [s]
			ontime7	7797.0759630501	Sum of GTIs [s]
			l1events	1434158	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	200614	206051	192721	197564	220612	416596	grade 0 events	96965	98934	94076	96328	104316	94197
rejected events	24829	26311	24950	25905	28852	40484		48%	48%	48%	48%	47%	22%
rejected %	12%	12%	12%	13%	13%	9%	grade 1 events	534	456	533	553	552	264
								0%	0%	0%	0%	0%	0%
							grade 2 events	30770	31614	28244	29298	33038	83185
								15%	15%	14%	14%	14%	19%
							grade 3 events	11434	11610	10988	11203	12001	38188
								5%	5%	5%	5%	5%	9%
							grade 4 events	11348	11399	10853	11077	12067	37697
								5%	5%	5%	5%	5%	9%
							grade 5 events	1872	1877	1701	1848	2013	7911
								0%	0%	0%	0%	0%	1%
							grade 6 events	25268	26183	23610	23753	30338	122845
								12%	12%	12%	12%	13%	29%
							grade 7 events	22423	23978	22716	23504	26287	32309
								11%	11%	11%	11%	11%	7%

## 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	On-chip summing requested	N	N
Observation mode	SECONDARY	SECONDARY	Subarray requested	NONE	NONE
[deg] Pointing RA	0	123.8864389989397	Alternating exposures requested	N	N
[deg] Pointing Dec	0	46.32705277602443	[s] Primary exposure time	0.000000	3.2
[deg] Pointing Roll	0.0	76.25288604966677			
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.7524282956875696			
[mm] SIM translation stage pos	-233.592463	250.466033080201			
[mm] SIM translation stage offset	0	-0.01005468664627074			
[s] Observation start time (MET)	151460208.329303	151460207.30459			
Observation start date	2002-10-20T00:16:48	2002-10-20T00:16:47			
[s] Observation end time (MET)	151488186.730465	151488185.70575			
Observation end date	2002-10-20T08:03:07	2002-10-20T08:03:05			
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)	2013.03.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.7970759630501

## A.2 Comments

A spatial region of the original bias map for CCD = 1 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 = 1 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:  
(896,1),(953,1),(953,24),(896,147)