

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 53620 - L2 Version 2  
Chandra X-Ray Center

L2 Processing Date : Jun 28 2013

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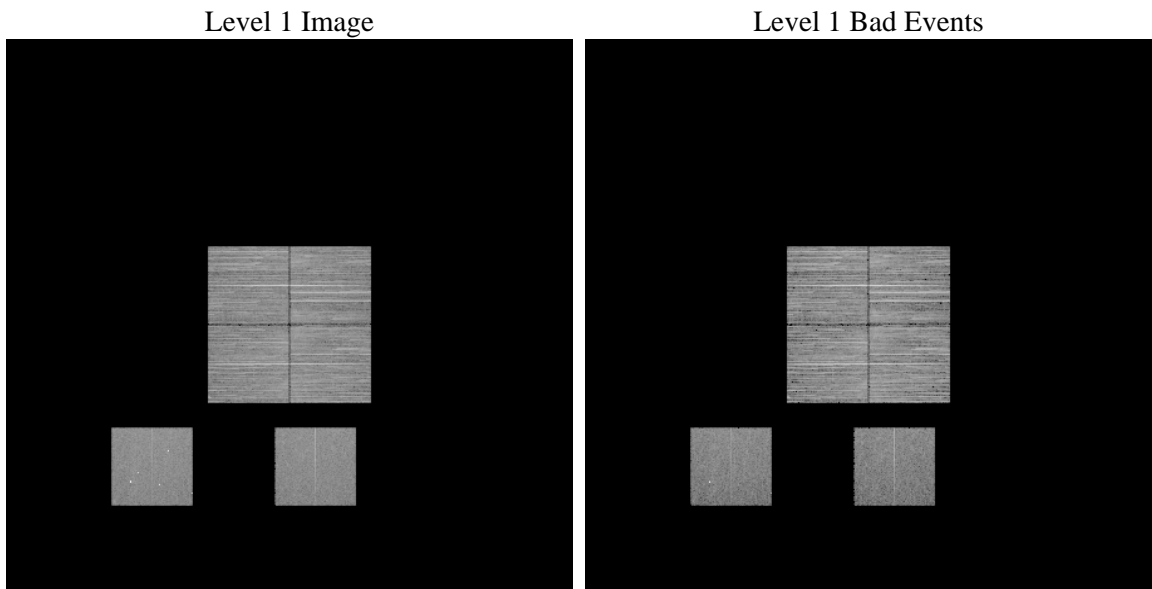
# 1 Front

seq_num	&#160	Sequence number
obs_id	53620	Observation id
title	ACIS-012357 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	268.76900426577	Nominal RA [deg]
dec_nom	-39.358296749006	Nominal Dec [deg]
roll_nom	247.38029034954	Nominal Roll [deg]
revision	2	Processing version of data
ontime	7564.7999718785	Sum of GTIs [s]
livetime	7469.0099196589	Livetime [s]
ontime0	7564.7999718785	Sum of GTIs [s]
ontime1	7564.7800431848	Sum of GTIs [s]
ontime2	7564.7390031815	Sum of GTIs [s]
ontime3	7564.7999718785	Sum of GTIs [s]
ontime5	7564.6979631782	Sum of GTIs [s]
ontime7	7564.7999718785	Sum of GTIs [s]
l2events	212655	Number of level 2 events

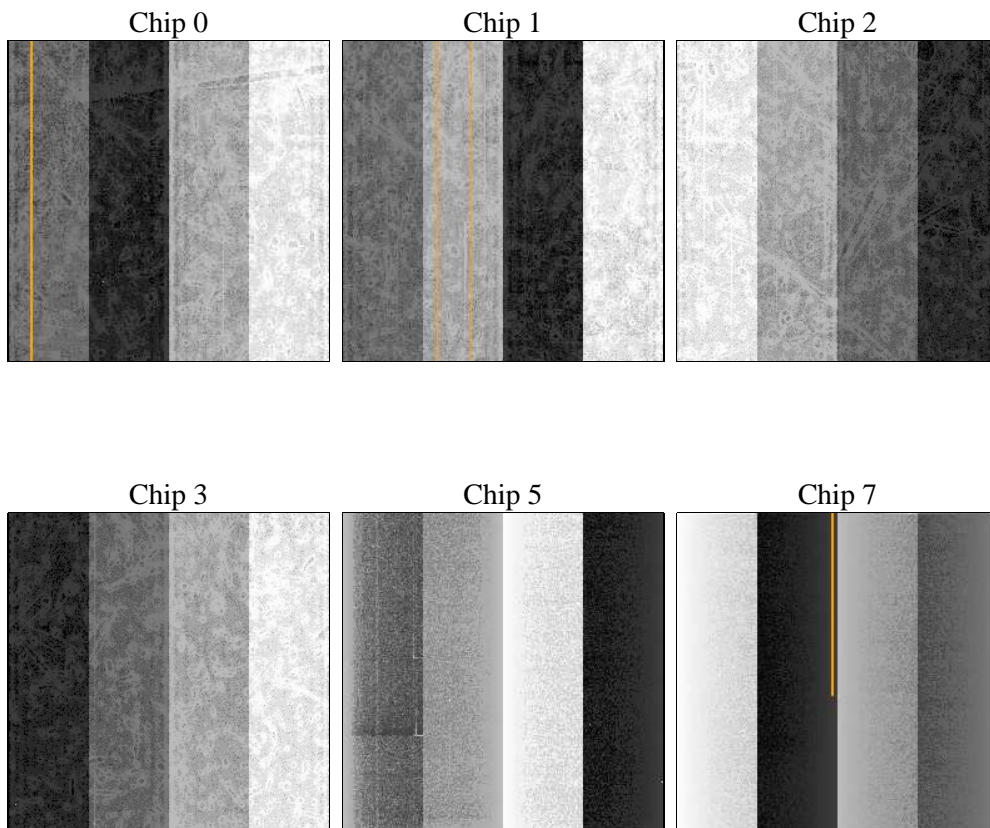
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	0.0	[s] Scheduled observation exposure time
ascdsver	10	Processing system revision	ontime	7564.7999718785	Sum of GTIs [s]
caldsver	4.5.6	&#160	ontime0	7564.7999718785	Sum of GTIs [s]
date	2013-06-28T15:13:36	Date and time of file creation	ontime1	7564.7800431848	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	7564.7390031815	Sum of GTIs [s]
			ontime3	7564.7999718785	Sum of GTIs [s]
			ontime5	7564.6979631782	Sum of GTIs [s]
			ontime7	7564.7999718785	Sum of GTIs [s]
			l1events	792173	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 5	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 5	ccd 7
level 1 events	136183	139647	135677	143335	123630	113701	grade 0 events	14752	14754	15462	15488	8676	7673
rejected events	107271	110419	106435	114004	65309	61283		10%	10%	11%	10%	7%	6%
rejected %	78%	79%	78%	79%	52%	53%	grade 1 events	77	60	79	94	196	87
								0%	0%	0%	0%	0%	0%
							grade 2 events	5844	6110	5697	5592	21354	12881
								4%	4%	4%	3%	17%	11%
							grade 3 events	1987	1964	2006	2041	2053	4393
								1%	1%	1%	1%	1%	3%
							grade 4 events	2001	1967	2005	2103	2003	4327
								1%	1%	1%	1%	1%	3%
							grade 5 events	2608	2655	2469	2891	5555	6773
								1%	1%	1%	2%	4%	5%
							grade 6 events	4599	4689	4335	4368	24768	23605
								3%	3%	3%	3%	20%	20%
							grade 7 events	104315	107448	103624	110758	59025	53962
								76%	76%	76%	77%	47%	47%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012357	ACIS-012357	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	OVERRIDE	OVERRIDE
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	268.7690042657705	Subarray requested	NONE	NONE
[deg] Pointing Dec	0	-39.35829674900633	Alternating exposures requested	N	N
[deg] Pointing Roll	0.0	247.3802903495354	[s] Primary exposure time	3.2	3.2
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)	488045009.321923	488045009.321923			
Observation start date	2013-06-19T16:03:29	2013-06-19T16:03:29			
[s] Observation end time (MET)	488054166.64328	488054166.64328			
Observation end date	2013-06-19T18:36:07	2013-06-19T18:36:06			
Read mode	TIMED	TIMED			

## 2.3 Star Slots

## 2.4 FID Slots

# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2013.06.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.5647999718785

## A.2 Comments

The bias map for CCD\_ID = 2 suffered from anomalously high bias values in an 'exacto-knife'-shaped area of the bias file. Pixels in the event data that have been bias-corrected by one of the affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD\_ID = 2 has been recreated for this processing to remove this anomaly. The bias map was reconstructed using scaled data from a comparable bias map for another observation to replace pixels affected by the anomaly.