

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 61423 - L2 Version 3  
Chandra X-Ray Center

L2 Processing Date : Sep 26 2012

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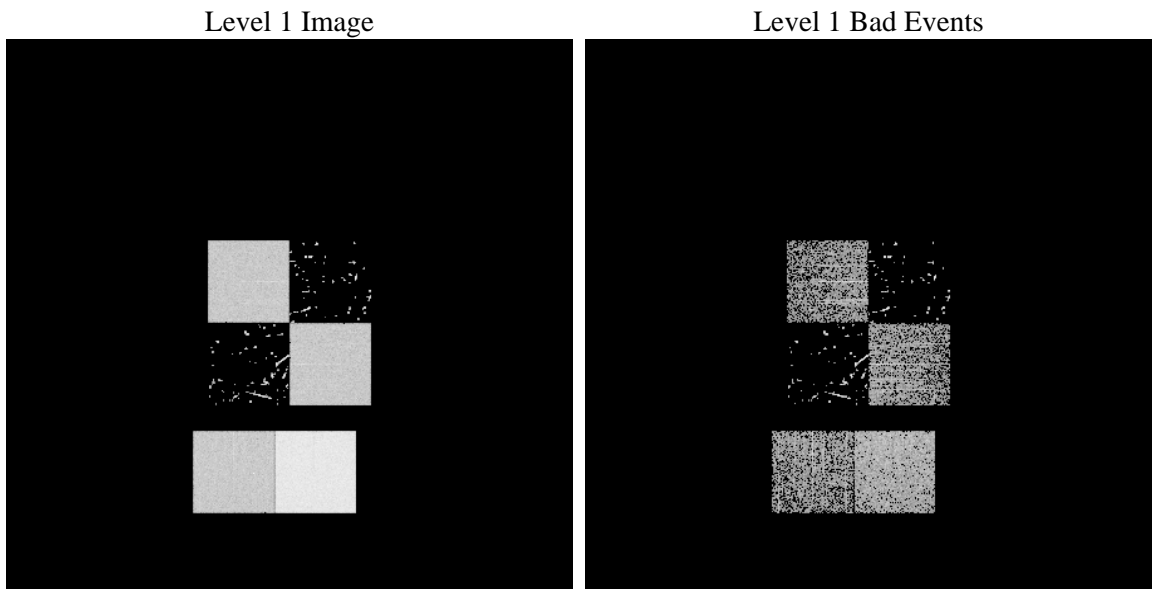
# 1 Front

seq_num	&#160	Sequence number
obs_id	61423	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 are from which exps? P[rimary] S[econdar
ra_targ	0.0	Observer's specified target RA [deg]
dec_targ	0.0	Observer's specified target Dec [deg]
ra_nom	321.04623365523	Nominal RA [deg]
dec_nom	-60.017018279769	Nominal Dec [deg]
roll_nom	290.87448308273	Nominal Roll [deg]
revision	3	Processing version of data
ontime	3251.7276017219	Sum of GTIs [s]
livetime	3218.703701742	Livetime [s]
ontime0	1139.3368409872	Sum of GTIs [s]
ontime1	1065.5249599367	Sum of GTIs [s]
ontime2	557.34500050545	Sum of GTIs [s]
ontime3	1114.9674809724	Sum of GTIs [s]
ontime6	1118.9264409691	Sum of GTIs [s]
ontime7	3251.7276017219	Sum of GTIs [s]
l2events	385687	Number of level 2 events

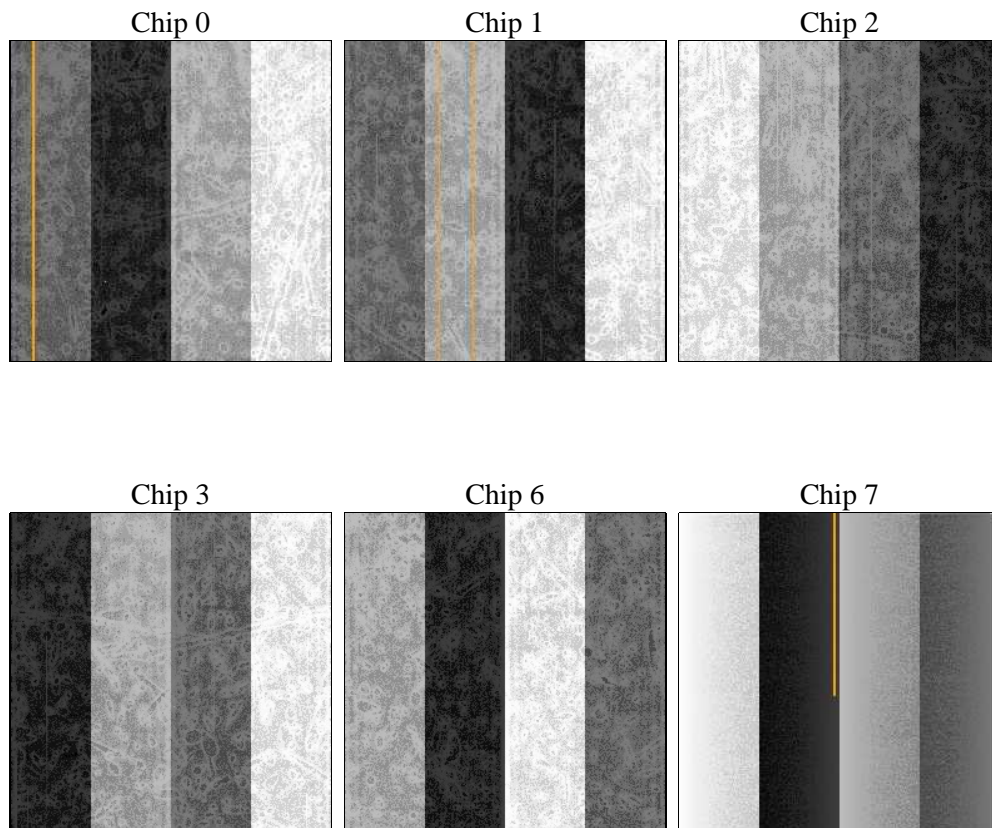
## 2 OBI Primary

### 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	8.4.5	Processing system revision	ontime	3251.7276017219	Sum of GTIs [s]
caldbver	4.5.1.1	&#160	ontime0	1139.3368409872	Sum of GTIs [s]
date	2012-09-26T07:29:18	Date and time of file creation	ontime1	1065.5249599367	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	557.34500050545	Sum of GTIs [s]
			ontime3	1114.9674809724	Sum of GTIs [s]
			ontime6	1118.9264409691	Sum of GTIs [s]
			ontime7	3251.7276017219	Sum of GTIs [s]
			l1events	882604	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	72403	221599	228706	72824	76195	210877	grade 0 events	35633	219501	226187	36162	37314	50967
rejected events	7442	2347	3481	8334	8044	15045		49%	99%	98%	49%	48%	24%
rejected %	10%	1%	1%	11%	10%	7%	grade 1 events	209	361	433	176	188	140
								0%	0%	0%	0%	0%	0%
							grade 2 events	11453	185	263	11222	11701	44076
								15%	0%	0%	15%	15%	20%
							grade 3 events	4220	131	154	4078	4262	20095
								5%	0%	0%	5%	5%	9%
							grade 4 events	4153	100	97	4099	4139	19815
								5%	0%	0%	5%	5%	9%
							grade 5 events	604	203	266	559	605	3353
								0%	0%	0%	0%	0%	1%
							grade 6 events	9502	165	177	8929	10735	60879
								13%	0%	0%	12%	14%	28%
							grade 7 events	6629	953	1129	7599	7251	11552
								9%	0%	0%	10%	9%	5%

## 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	321.0462336552334	Alternating exposures requested	Y	Y
[deg] Pointing Dec	0	-60.01701827976941	[s] Primary exposure time	4	4
[deg] Pointing Roll	0.0	290.8744830827318	[s] Secondary exposure time	3.2	3.2
[mm] SIM focus pos	-0.782348	-0.6828225247311905	Duty cycle	1	1
[mm] SIM defocus	0	0.8505141146731063			
[mm] SIM translation stage pos	-233.592463	250.466033080201			
[mm] SIM translation stage offset	0	-0.01005468664627074			
[s] Observation start time (MET)	120844777.027419	120844776.25895			
Observation start date	2001-10-30T15:59:37	2001-10-30T15:59:36			
[s] Observation end time (MET)	120856421.027882	120856420.25941			
Observation end date	2001-10-30T19:13:41	2001-10-30T19:13:40			
Read mode	TIMED	TIMED			

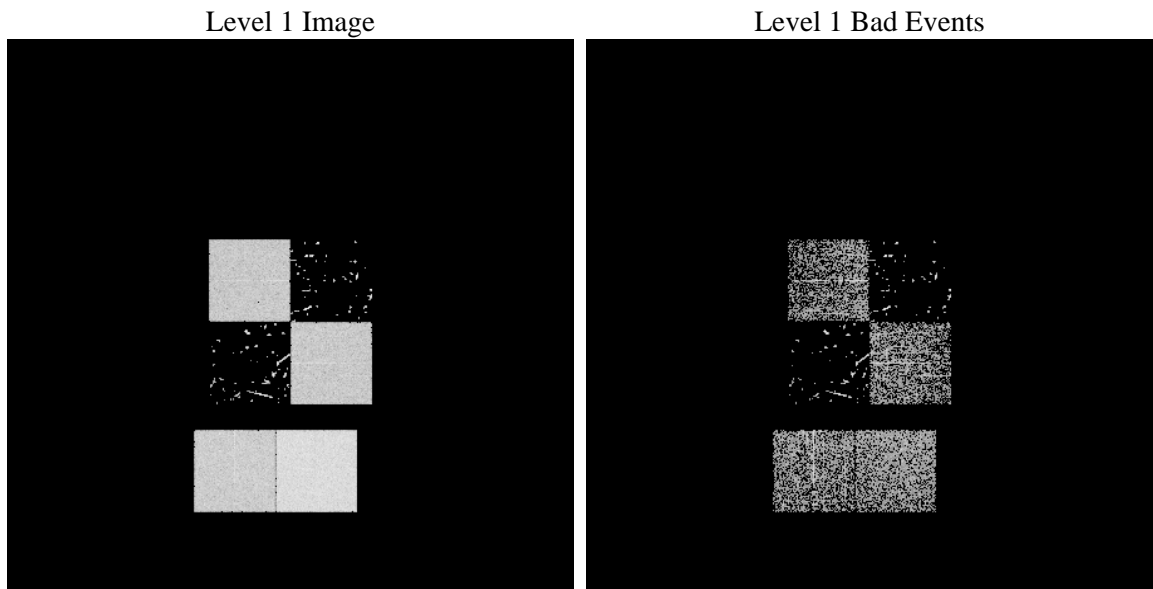
## 2.3 Star Slots

## 2.4 FID Slots

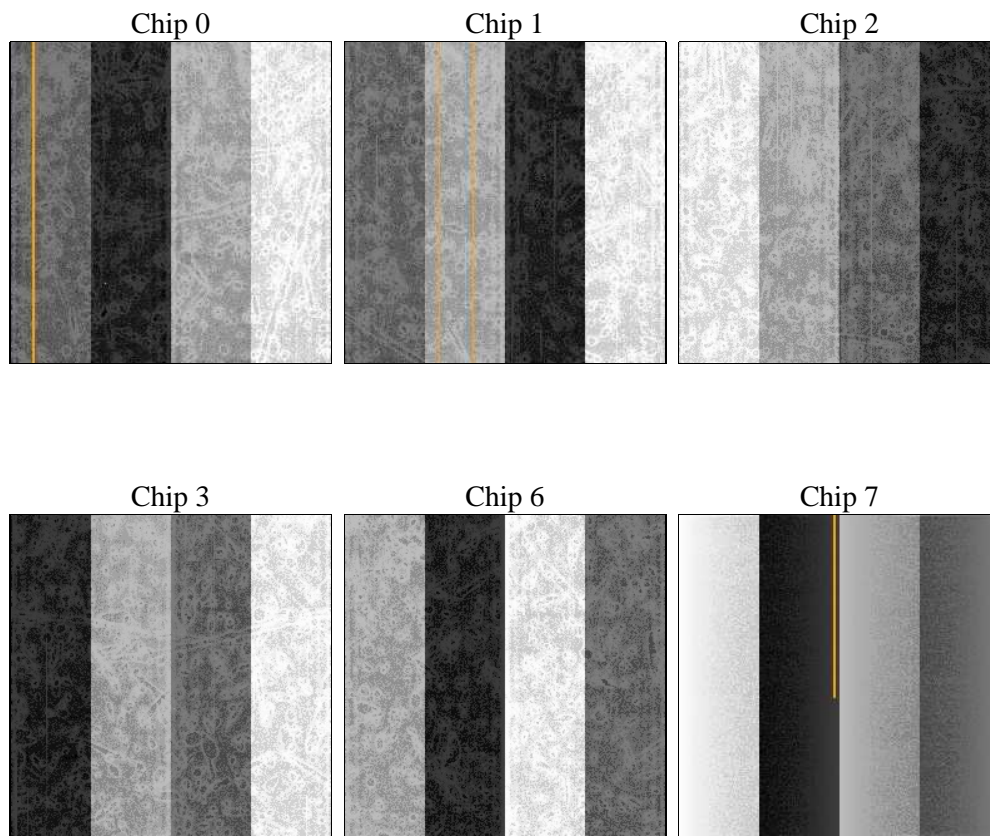
# 3 OBI Secondary

## 3.1 OBI

### 3.1.1 Images



### 3.1.2 Bias



### 3.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	0.0	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision			
caldbver	4.5.1.1	&#160	ontime	1328.8263964653	Sum of GTIs [s]
date	2012-09-26T07:27:33	Date and time of file creation	ontime0	696.82359814644	Sum of GTIs [s]
			ontime1	644.96695828438	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	337.06815910339	Sum of GTIs [s]
			ontime3	706.35568697751	Sum of GTIs [s]
			ontime6	771.36751794815	Sum of GTIs [s]
			ontime7	1328.8263964653	Sum of GTIs [s]
			l1events	570007	Number of level 1 events

### 3.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	45138	167389	171869	46547	52840	86224
rejected events	4852	1008	1098	5297	5797	6475
rejected %	10%	0%	0%	11%	10%	7%

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	22270	165996	170378	23063	25617	20424
	49%	99%	99%	49%	48%	23%
grade 1 events	104	221	249	126	139	45
	0%	0%	0%	0%	0%	0%
grade 2 events	7140	121	132	7100	8265	17847
	15%	0%	0%	15%	15%	20%
grade 3 events	2544	80	85	2642	2920	8220
	5%	0%	0%	5%	5%	9%
grade 4 events	2489	82	75	2724	2765	8176
	5%	0%	0%	5%	5%	9%
grade 5 events	357	148	145	400	466	1346
	0%	0%	0%	0%	0%	1%
grade 6 events	5843	102	101	5721	7476	25082
	12%	0%	0%	12%	14%	29%
grade 7 events	4391	639	704	4771	5192	5084
	9%	0%	0%	10%	9%	5%



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.09.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.5805539981872

## A.2 Comments

During this observation, an ACIS Threshold-Plane Anomaly occurred. The flight s/w is intended to delay 'start events' until after 'end bias dump'. For some unknown reason, it occasionally fails to do so, and if the overlap lasts for more than a minute or so, one or more FEPs experience a firmware latch-up that renders them useless until they are power cycled. The anomaly occurred for chips I1 and I2. No event data were recorded for these chips; the bright spots on the affected chips are due to known hot pixels.