

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 13134 - L2 Version 3  
Chandra X-Ray Center

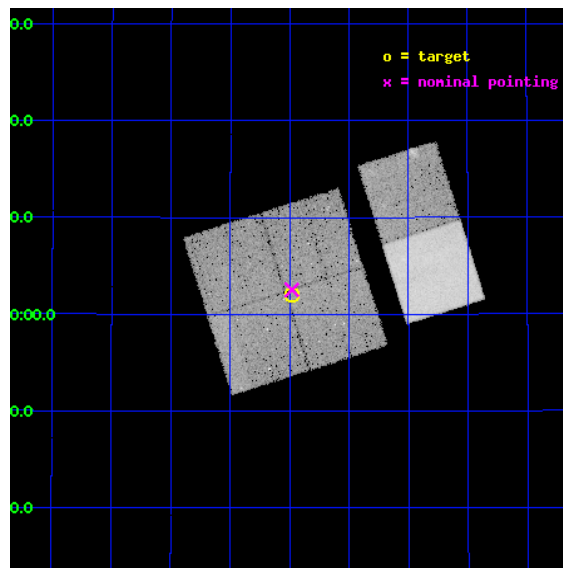
L2 Processing Date : Feb 7 2012

## 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	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 4 . . . . .	9
2.4.2	Slot 5 . . . . .	10
2.4.3	Slot 6 . . . . .	11
2.4.4	Slot 7 . . . . .	12
2.5	FID Slots . . . . .	13
2.5.1	Slot 0 . . . . .	13
2.5.2	Slot 1 . . . . .	14
2.5.3	Slot 2 . . . . .	15
<b>A</b>	<b>Summary</b>	<b>16</b>
A.1	Status . . . . .	16
A.2	Comments . . . . .	16

# 1 Front

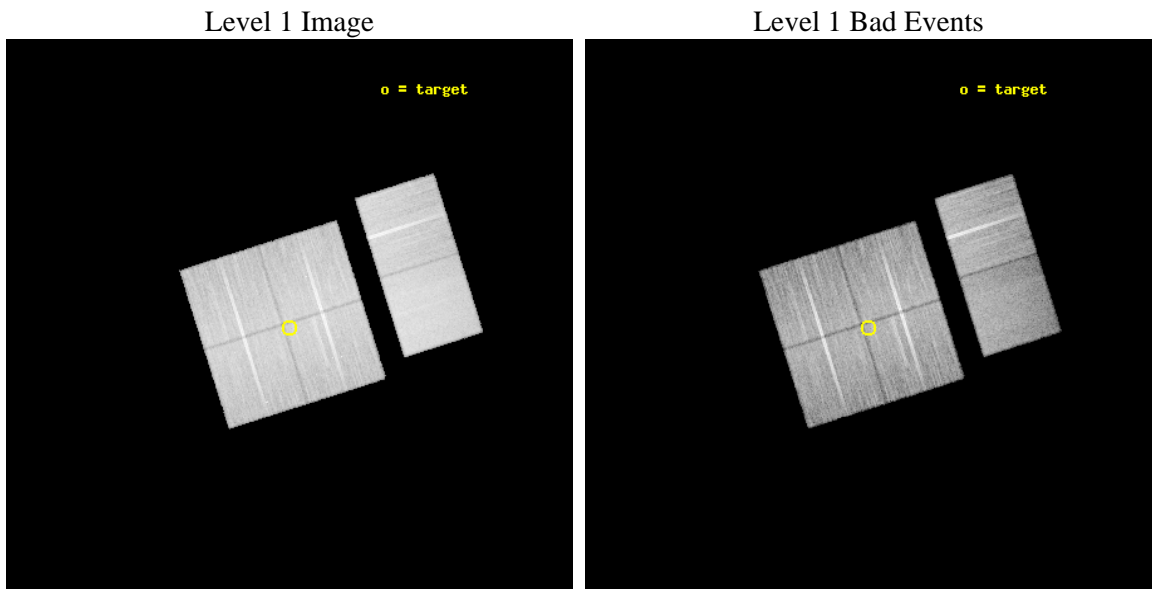
seq_num	702510	Sequence number
obs_id	13134	Observation id
title	Detailed X-ray spectra of IR-selected AGN in the Bootes field	Prop
observer	Dr Stephen Murray	Principal investigator
object	XBootes IRAGN Field 3	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	218.245417	Observer's specified target RA [deg]
dec_targ	34.034222	Observer's specified target Dec [deg]
ra_nom	218.24546056475	Nominal RA [deg]
dec_nom	34.042302059845	Nominal Dec [deg]
roll_nom	72.471614670808	Nominal Roll [deg]
revision	3	Processing version of data
ontime	28047.958885312	Sum of GTIs [s]
livetime	27692.798741453	Livetime [s]
ontime0	28051.199895561	Sum of GTIs [s]
ontime1	28047.958895266	Sum of GTIs [s]
ontime2	28041.476884604	Sum of GTIs [s]
ontime3	28047.958885312	Sum of GTIs [s]
ontime6	28051.199895561	Sum of GTIs [s]
ontime7	28051.199895561	Sum of GTIs [s]
l2events	202539	Number of level 2 events



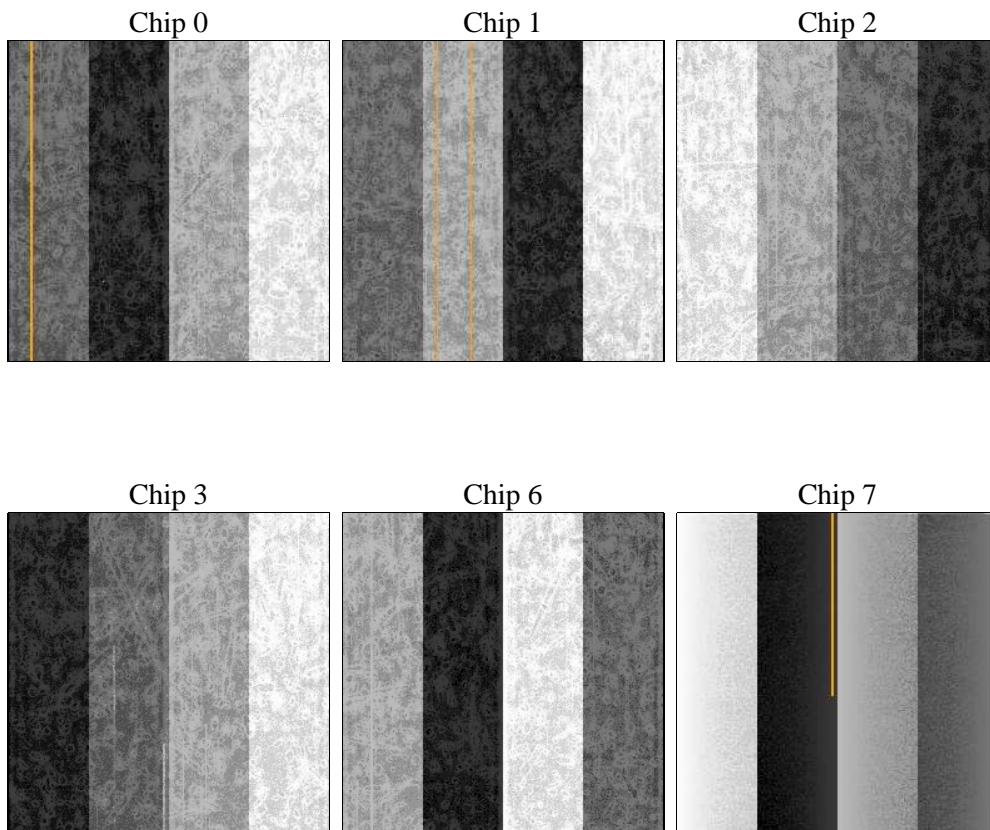
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	28000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	28047.958885312	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime0	28051.199895561	Sum of GTIs [s]
date	2012-02-07T19:17:46	Date and time of file creation	ontime1	28047.958895266	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	28041.476884604	Sum of GTIs [s]
			ontime3	28047.958885312	Sum of GTIs [s]
			ontime6	28051.199895561	Sum of GTIs [s]
			ontime7	28051.199895561	Sum of GTIs [s]
			l1events	1233093	Number of level 1 events

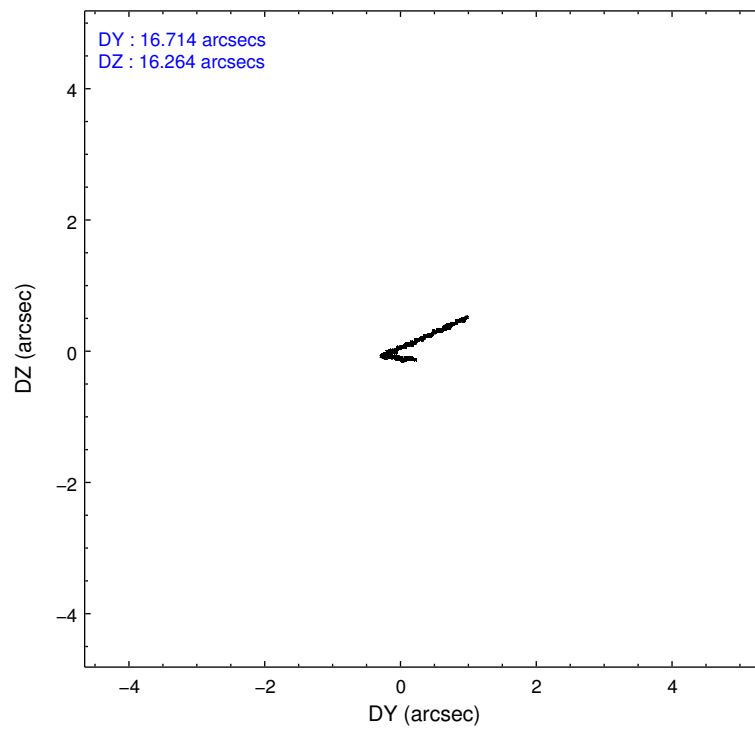
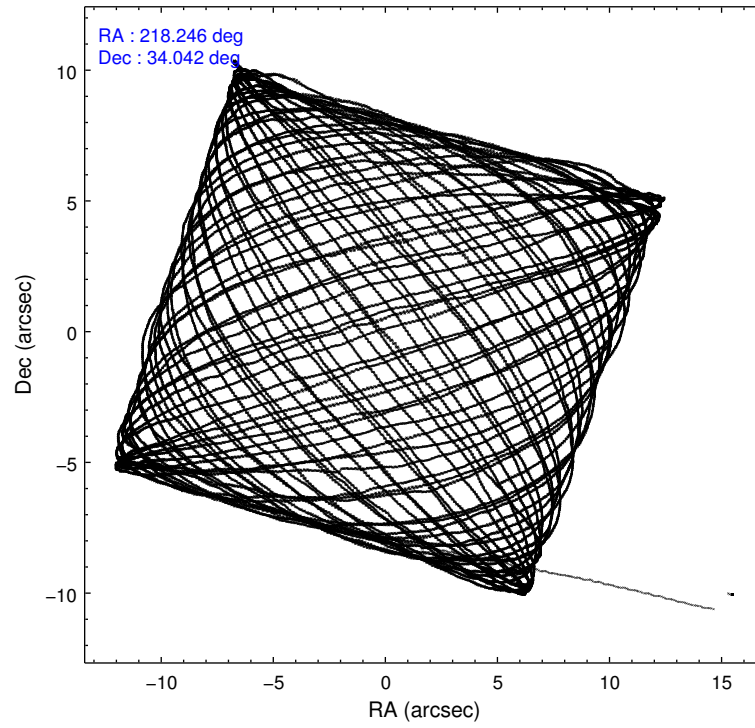
### 2.1.4 Events

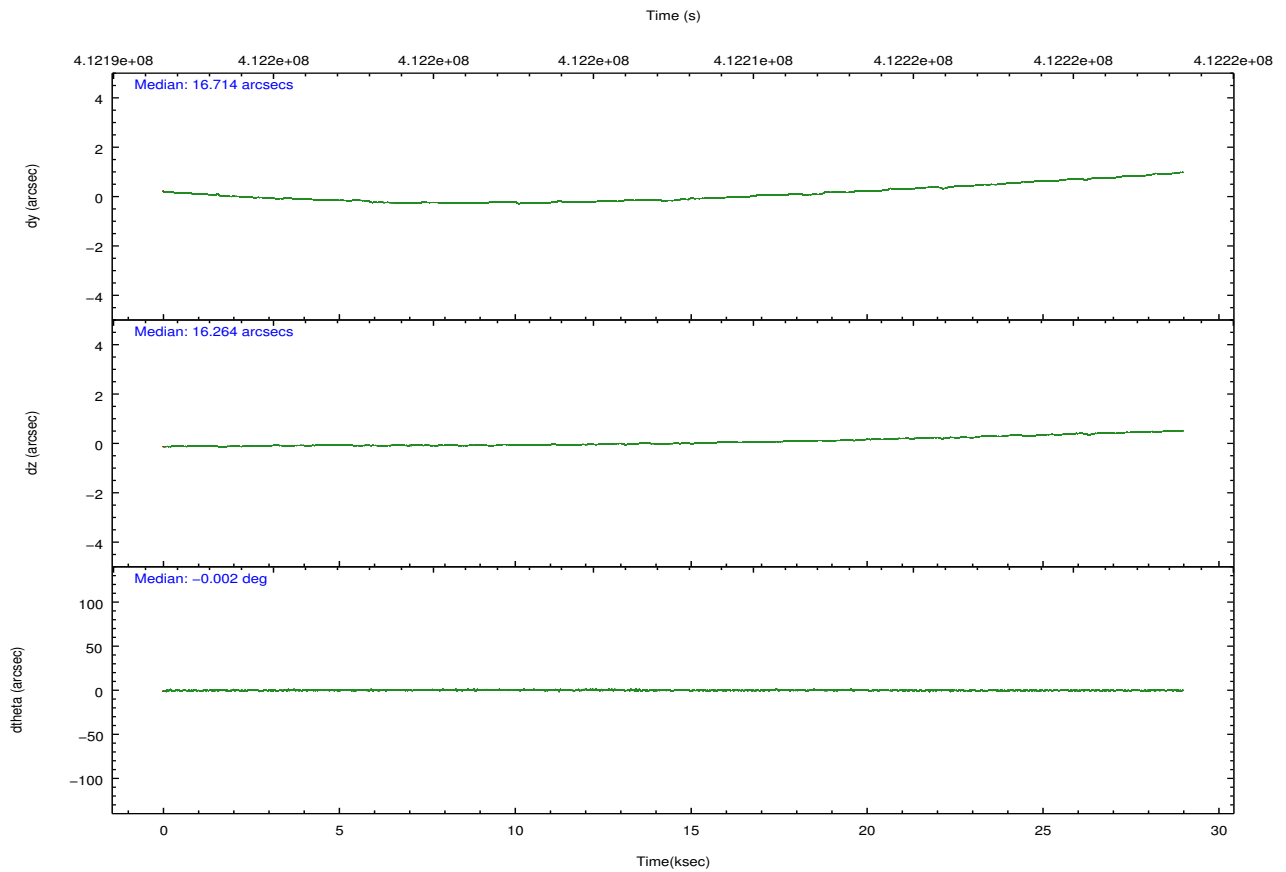
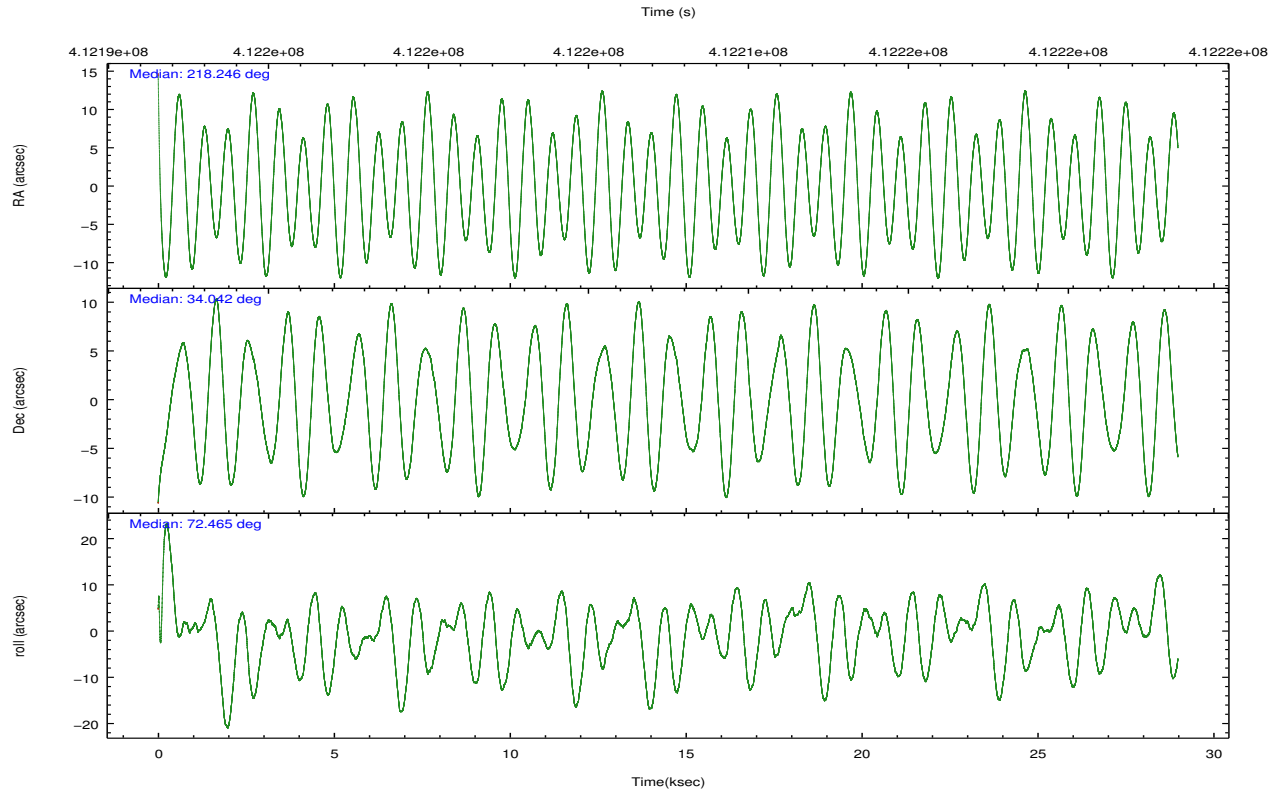
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	186816	189291	202175	194726	210782	249303	grade 0 events	7499	8962	7942	7165	8223	10205
rejected events	164871	164269	180534	174102	187316	138286		4%	4%	3%	3%	3%	4%
rejected %	88%	86%	89%	89%	88%	55%	grade 1 events	102	84	122	124	104	312
								0%	0%	0%	0%	0%	0%
							grade 2 events	5545	5906	5148	4629	5258	22632
								2%	3%	2%	2%	2%	9%
							grade 3 events	2418	2550	2245	2289	2334	9748
								1%	1%	1%	1%	1%	3%
							grade 4 events	2183	2546	2259	2187	2461	9633
								1%	1%	1%	1%	1%	3%
							grade 5 events	8151	8641	7986	9510	9310	25702
								4%	4%	3%	4%	4%	10%
							grade 6 events	4305	5062	4052	4358	5193	58825
								2%	2%	2%	2%	2%	23%
							grade 7 events	156613	155540	172421	164464	177899	112246
								83%	82%	85%	84%	84%	45%

## 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	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	218.252752	218.2454605647514	CCD I2 on	Y	Y
[deg] Pointing Dec	34.015478	34.04230205984548	CCD I3 on	Y	Y
[deg] Pointing Roll	72.258833	72.47161467080807	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O2	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	412193969.184000	412192185.08662	CCD S5 on	N	N
Observation start date	2011-01-23T18:18:23	2011-01-23T17:49:45	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	412221969.184000	412222702.4132	On-chip summing requested	N	N
Observation end date	2011-01-24T02:05:03	2011-01-24T02:18:22	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



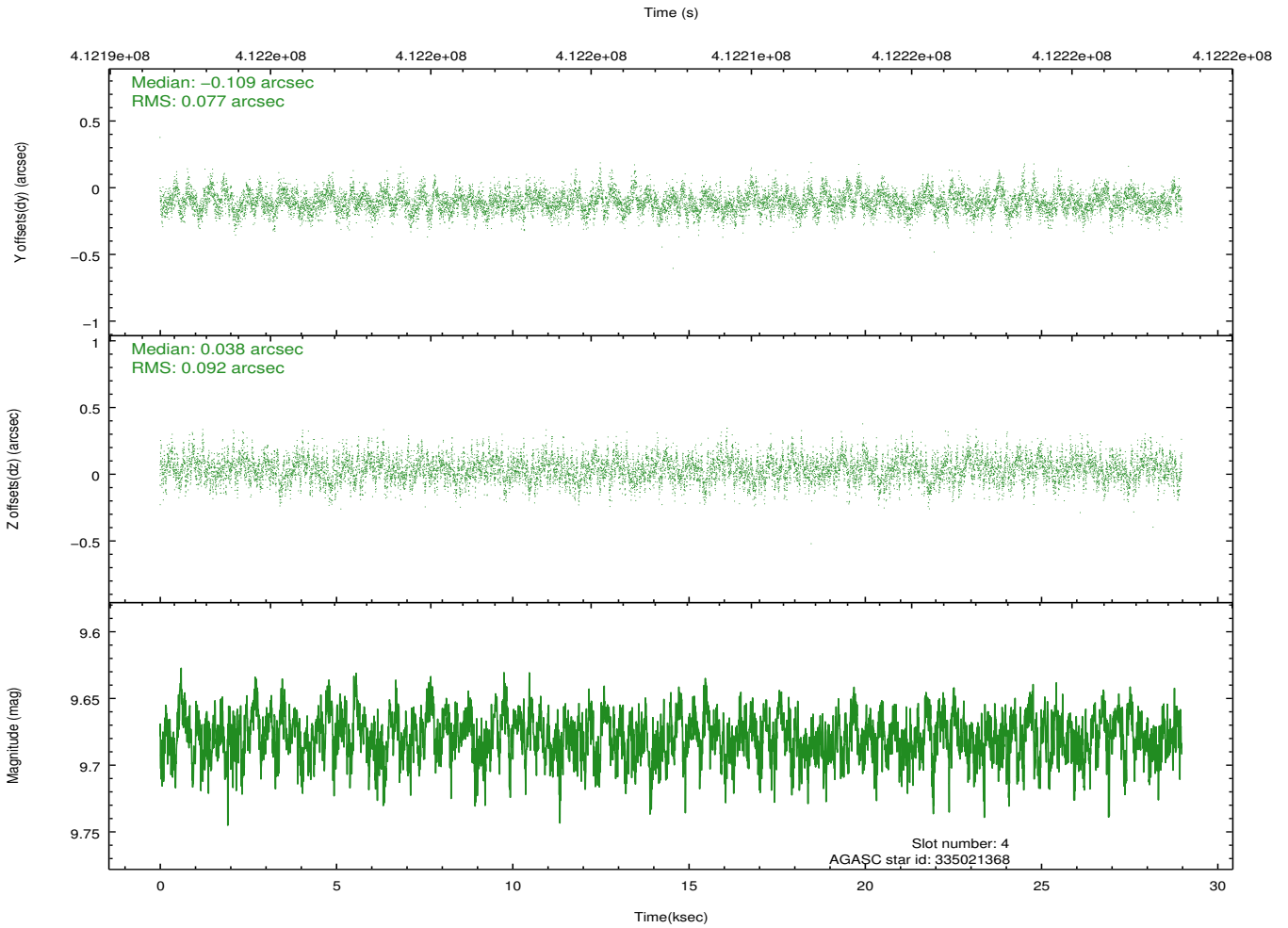
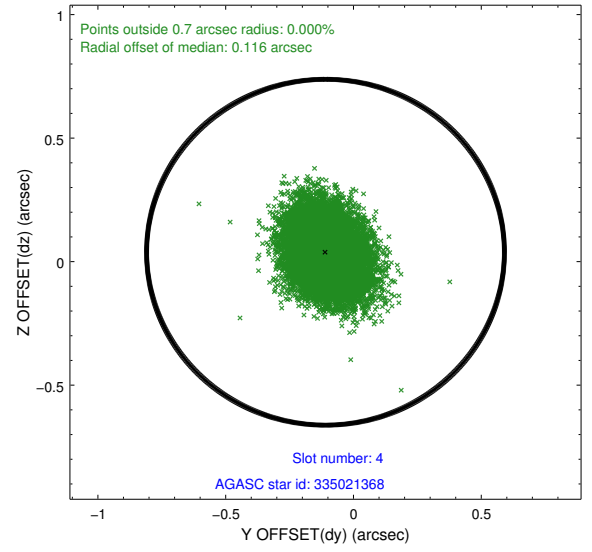
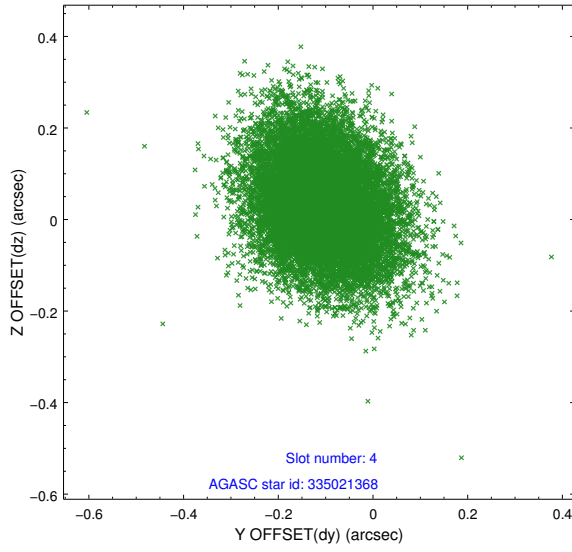


### Slot Statistics

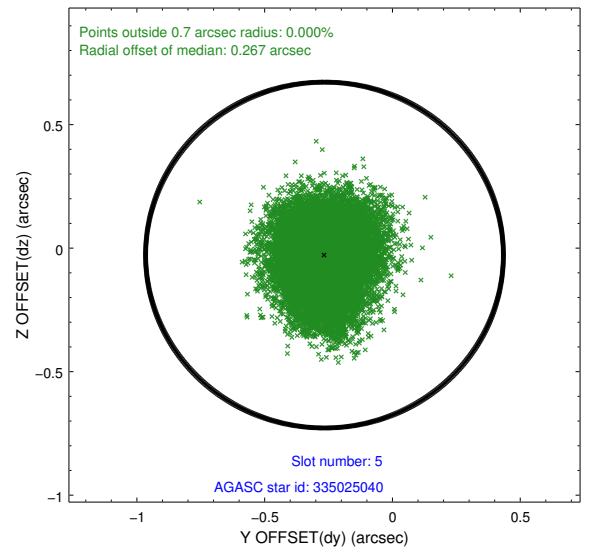
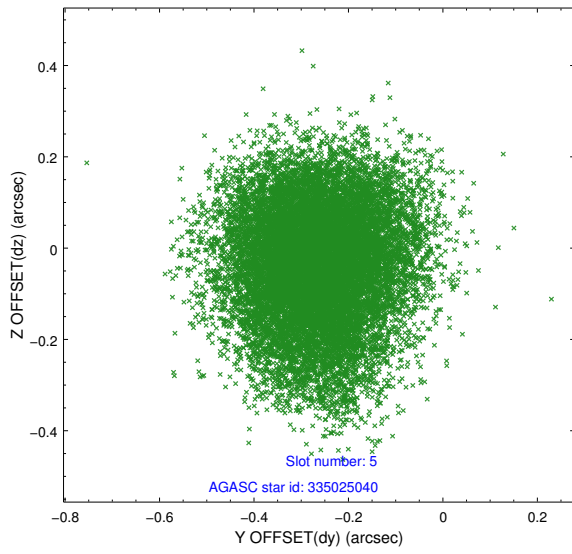
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.02	7070	0.048	-0.035	0.014	0.029	0.000000	0.000000	922.62	-840.02
1	FID	ACIS-I-5	7.01	7070	-0.217	0.048	0.014	0.034	0.000000	0.000000	-1825.70	1057.53
2	FID	ACIS-I-6	7.03	7069	0.078	0.058	0.008	0.013	0.000000	0.000000	388.12	1702.12
3	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
4	GUIDE	335021368	9.68	14119	-0.109	0.038	0.126	0.209	217.529643	33.934817	-927.49	1971.14
5	GUIDE	335025040	9.89	14097	-0.266	-0.028	0.173	0.274	218.601670	34.305240	1311.45	-669.33
6	GUIDE	335025848	9.68	14107	0.181	-0.247	0.197	0.329	217.530531	33.778292	-1464.22	1800.31
7	GUIDE	335029528	10.37	13838	0.199	0.248	0.253	0.421	218.786422	33.290416	-1992.40	-2323.81

## 2.4 Star Slots

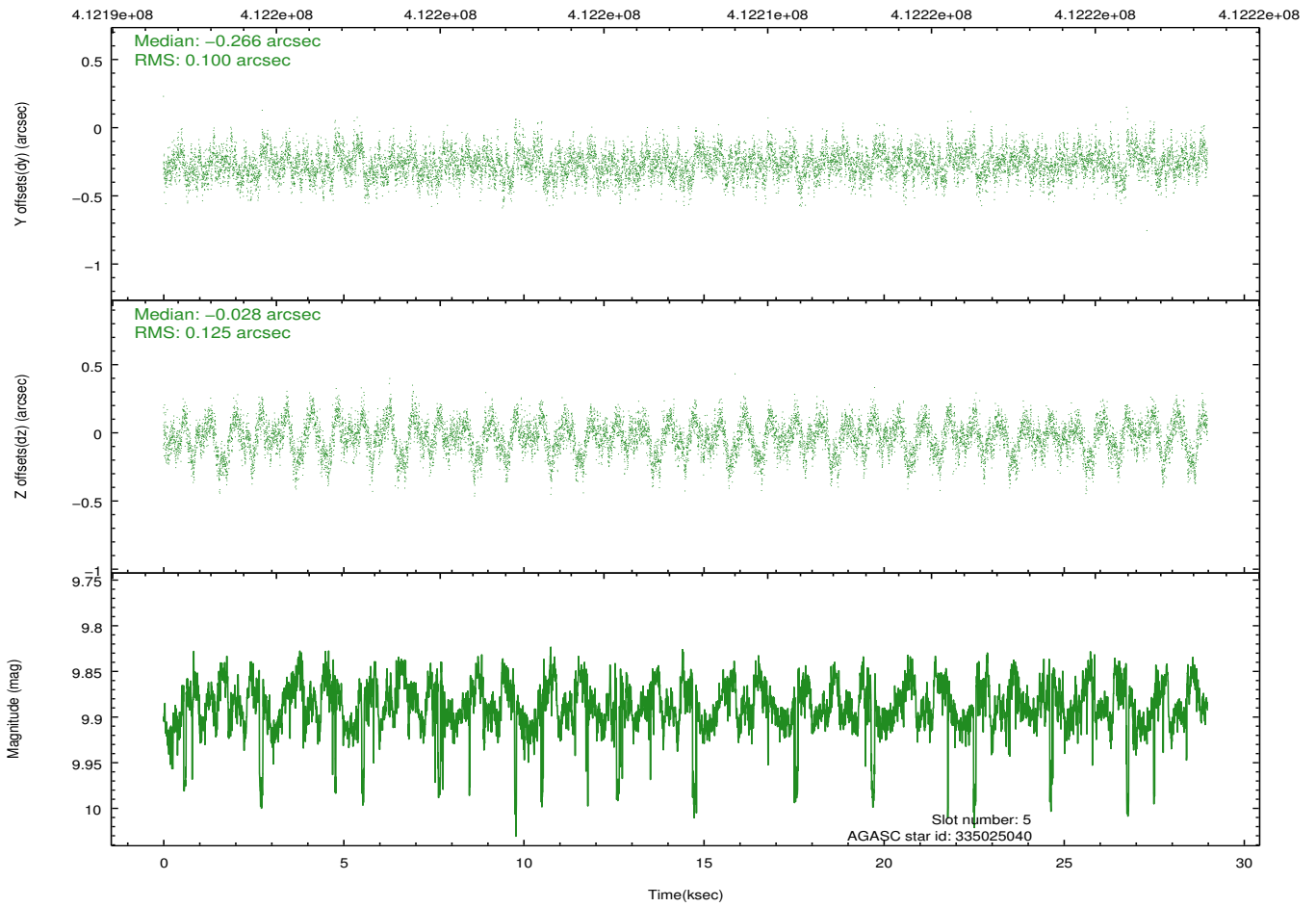
### 2.4.1 Slot 4



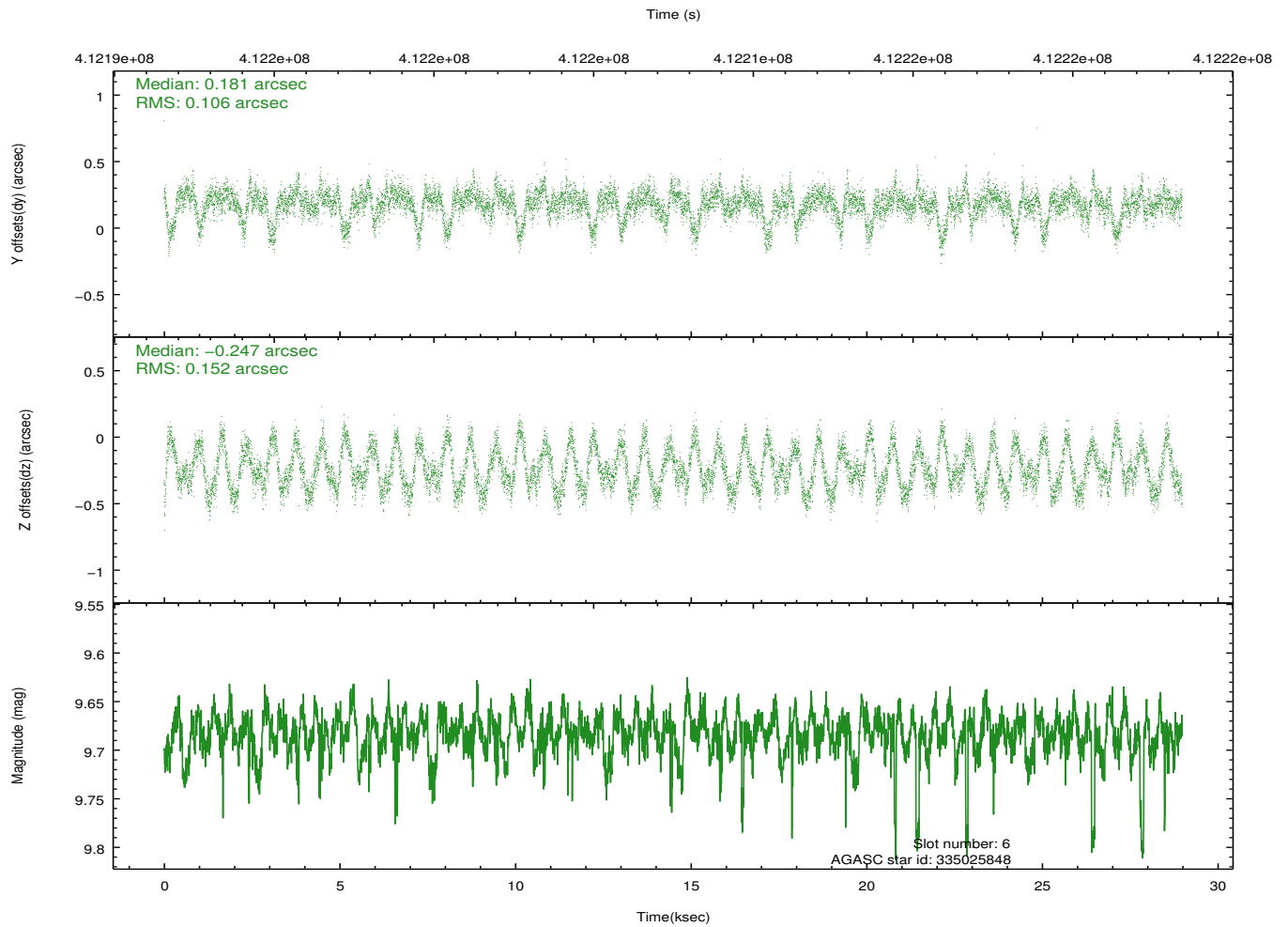
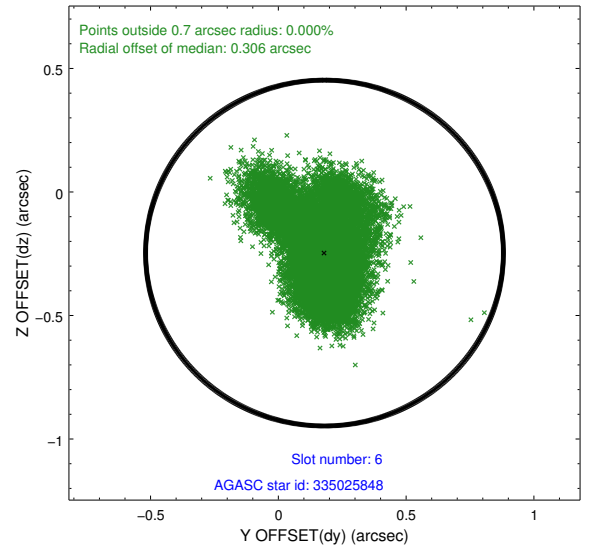
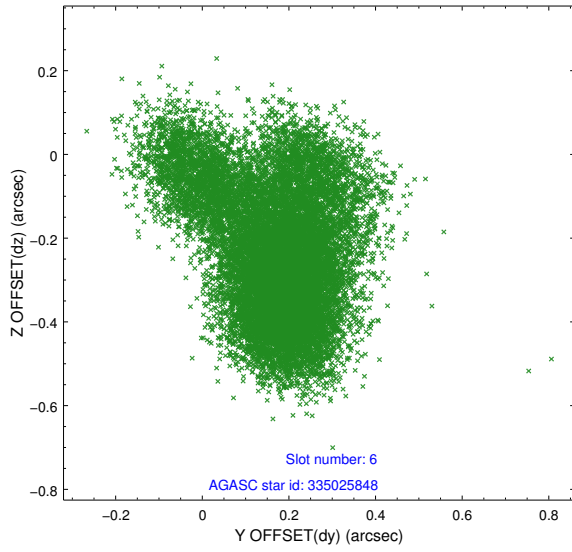
## 2.4.2 Slot 5



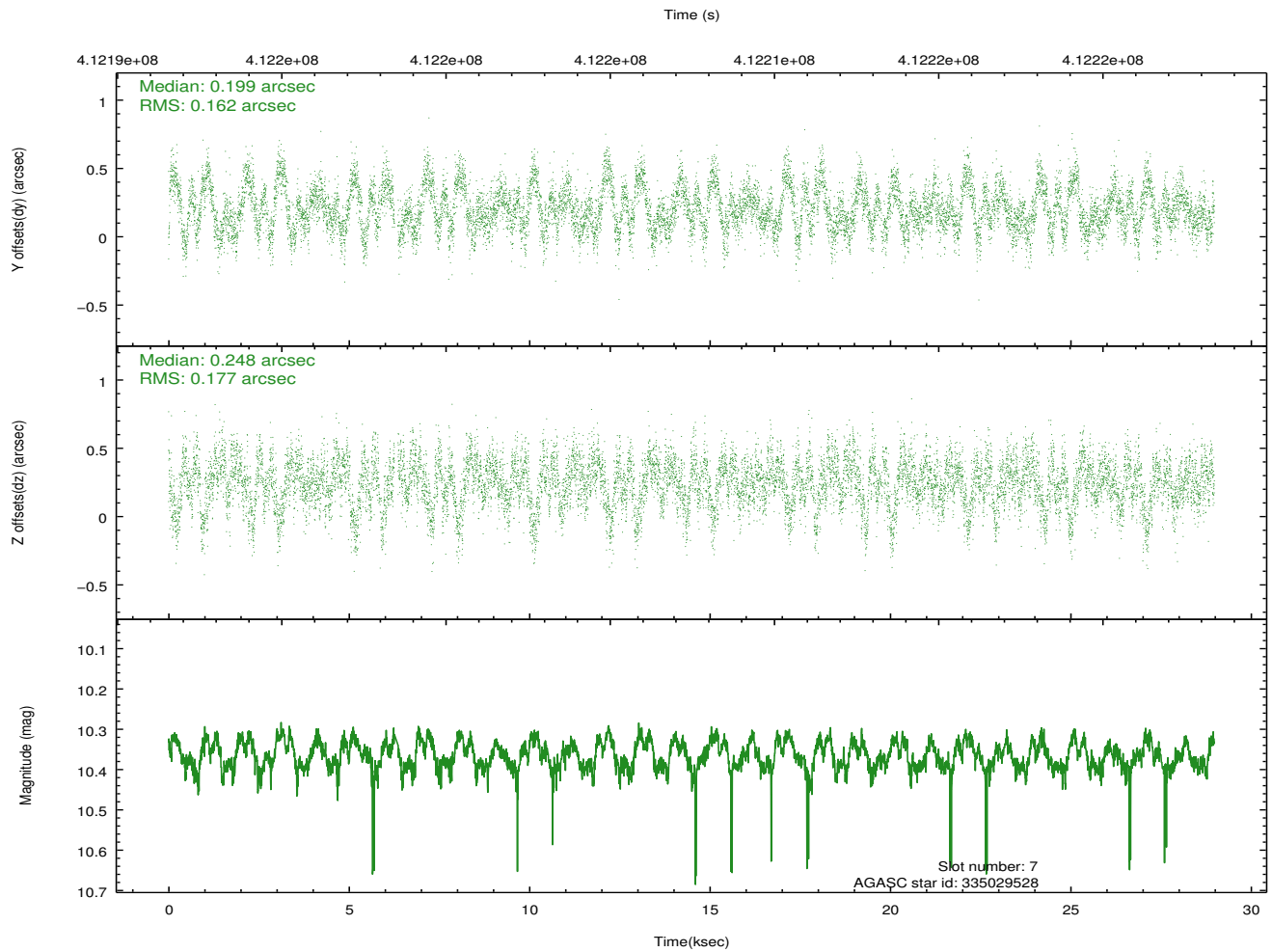
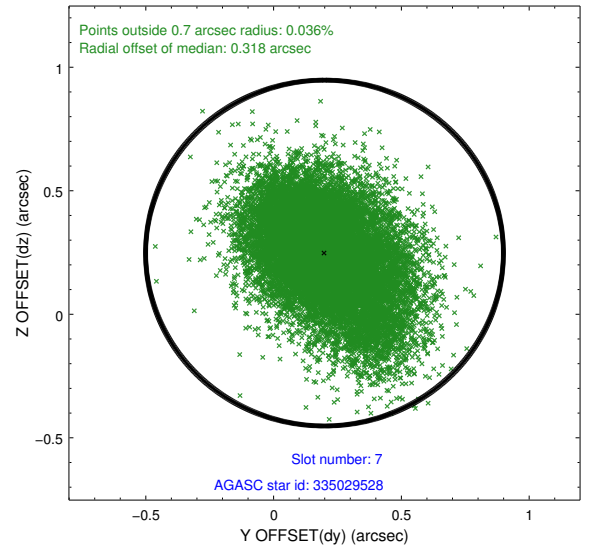
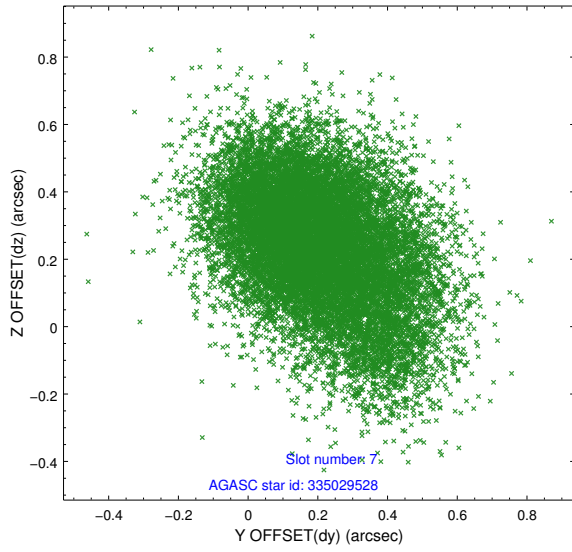
Time (s)



### 2.4.3 Slot 6

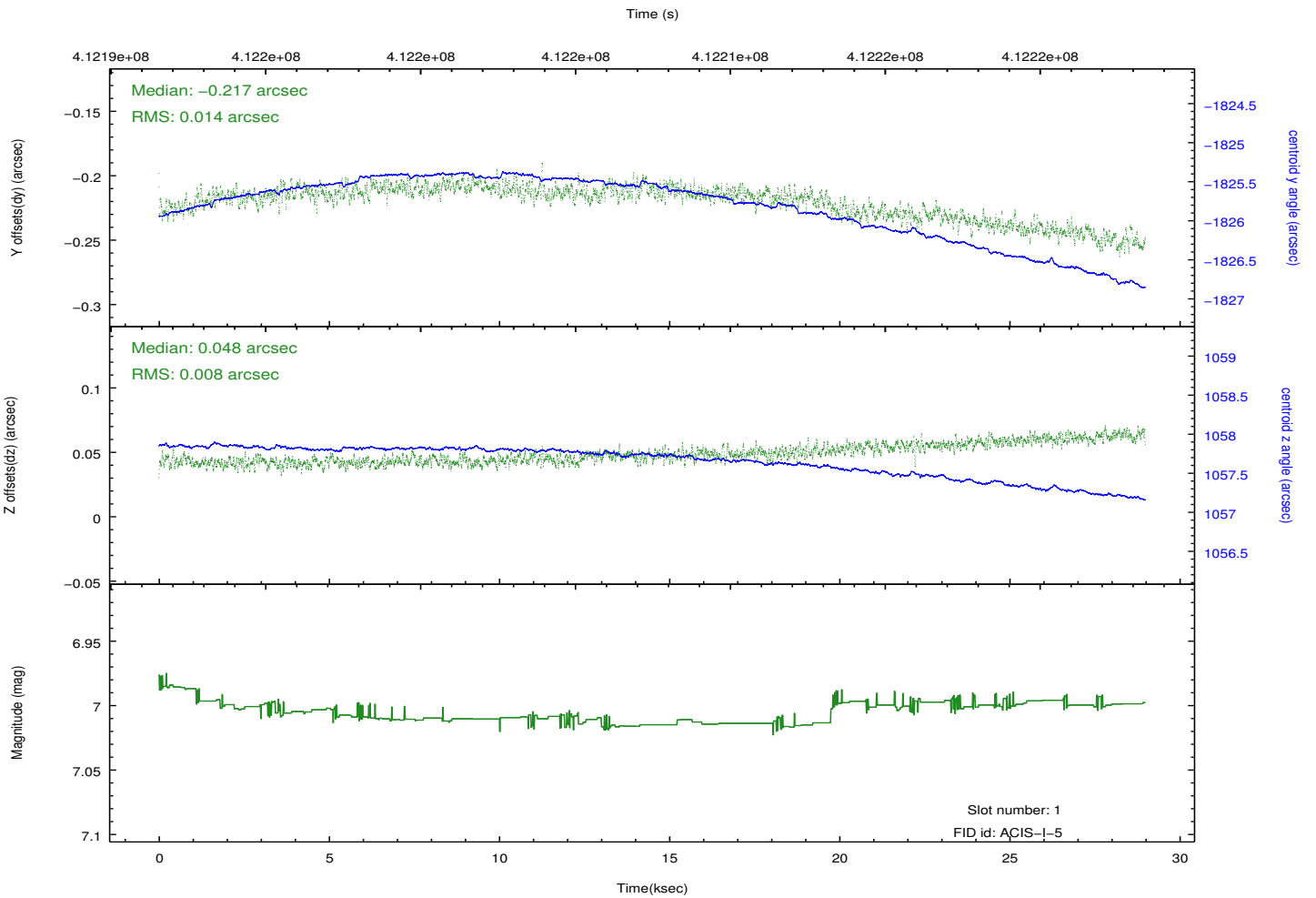
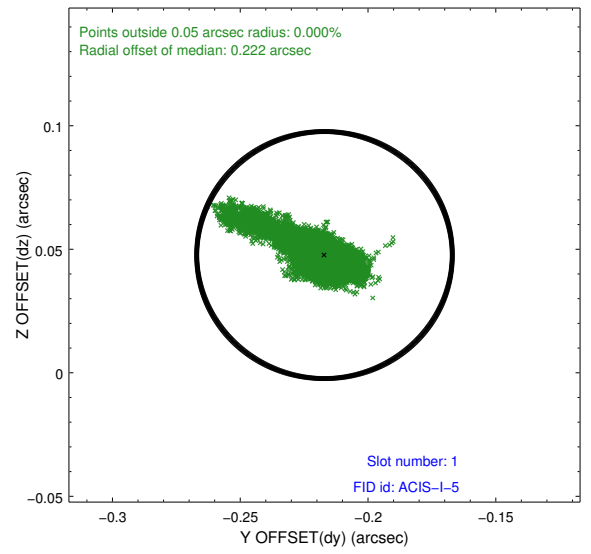
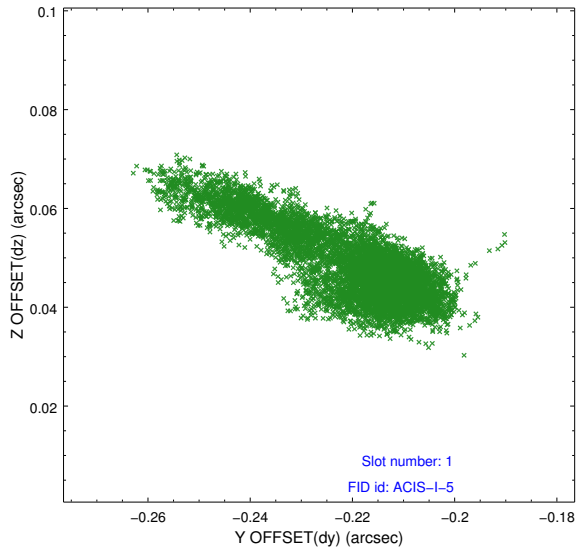


## 2.4.4 Slot 7

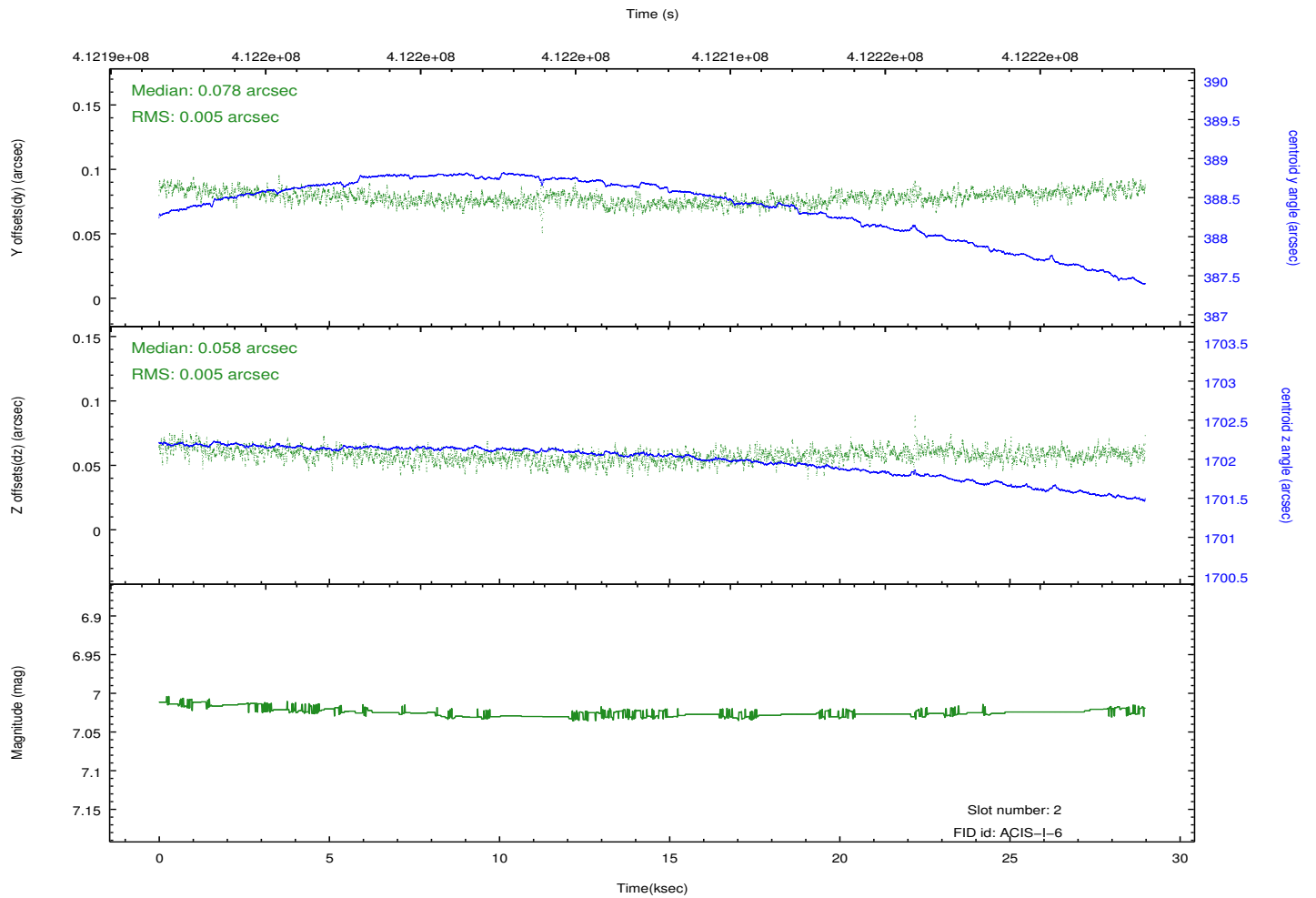
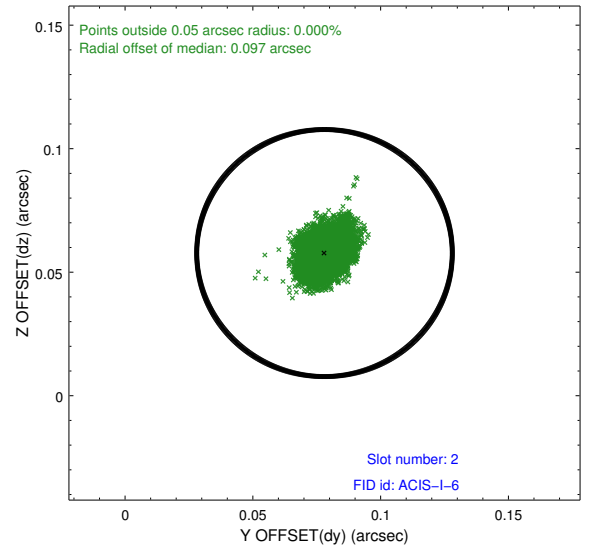
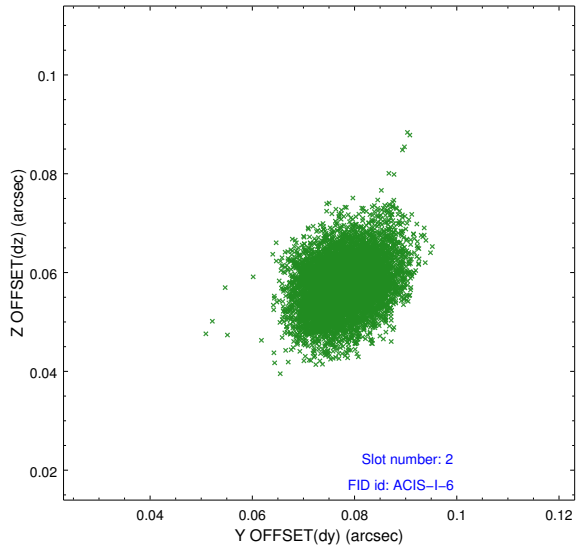




## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.02.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	28.047958885312

## A.2 Comments

The guide star in slot 3 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this guide star from the solution.

===

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.