

# V&V Reference Report

## L2 ASCDS Version : 10.3

Observation 16828 - L2 Version 2  
Chandra X-Ray Center

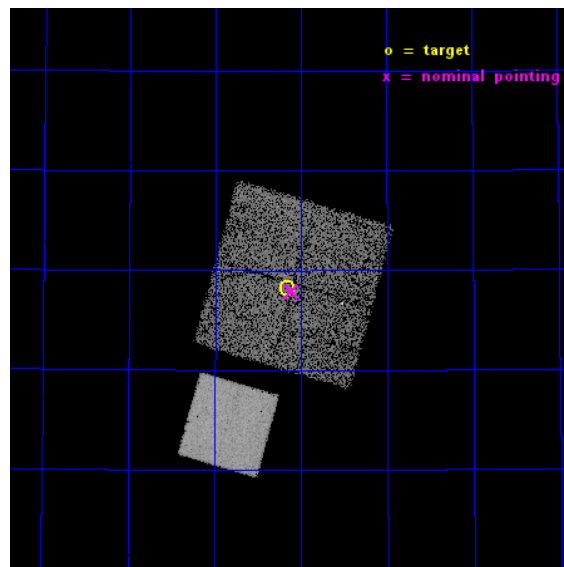
L2 Processing Date : Dec 1 2014

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# 1 Front

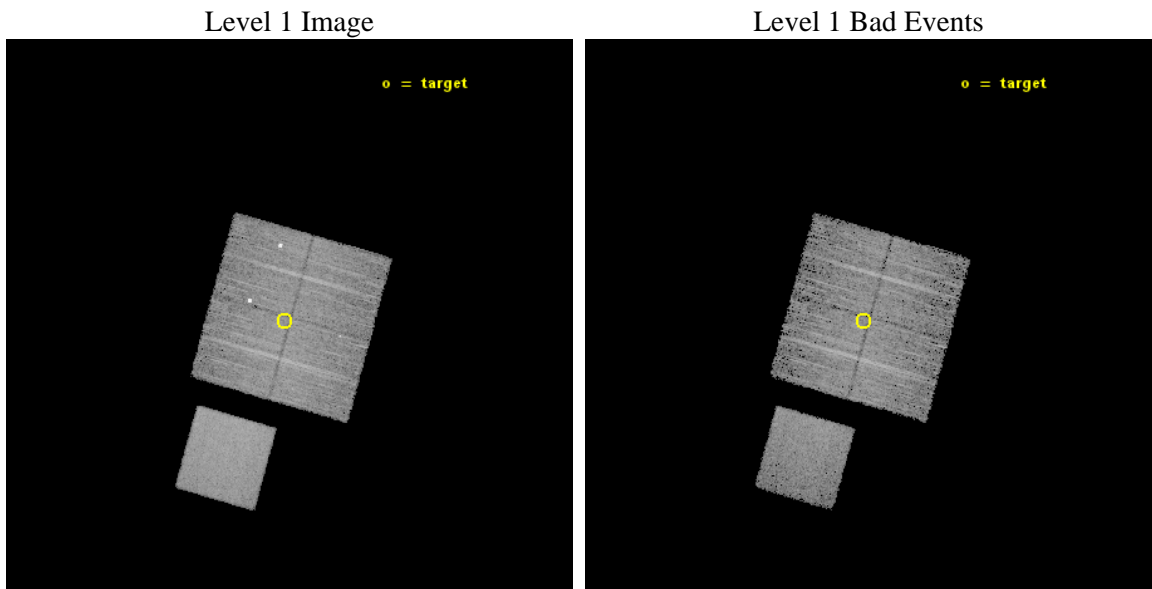
seq_num	502346	Sequence number
obs_id	16828	Observation id
title	Snap-shot survey of unidentified Fermi sources	Proposal title
observer	Dr. Blagoy Rangelov	Principal investigator
object	2FGL J0340.5+5307	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	55.041796	Observer's specified target RA [deg]
dec_targ	53.137469	Observer's specified target Dec [deg]
ra_nom	55.0281695515	Nominal RA [deg]
dec_nom	53.131720293087	Nominal Dec [deg]
roll_nom	195.80827118118	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10068.800077438	Sum of GTIs [s]
liveltime	9937.2437918838	Livetime [s]
ontime0	10068.800077438	Sum of GTIs [s]
ontime1	10065.659016609	Sum of GTIs [s]
ontime2	10068.800077438	Sum of GTIs [s]
ontime3	10068.800077438	Sum of GTIs [s]
ontime7	10068.800077438	Sum of GTIs [s]
l2events	51458	Number of level 2 events



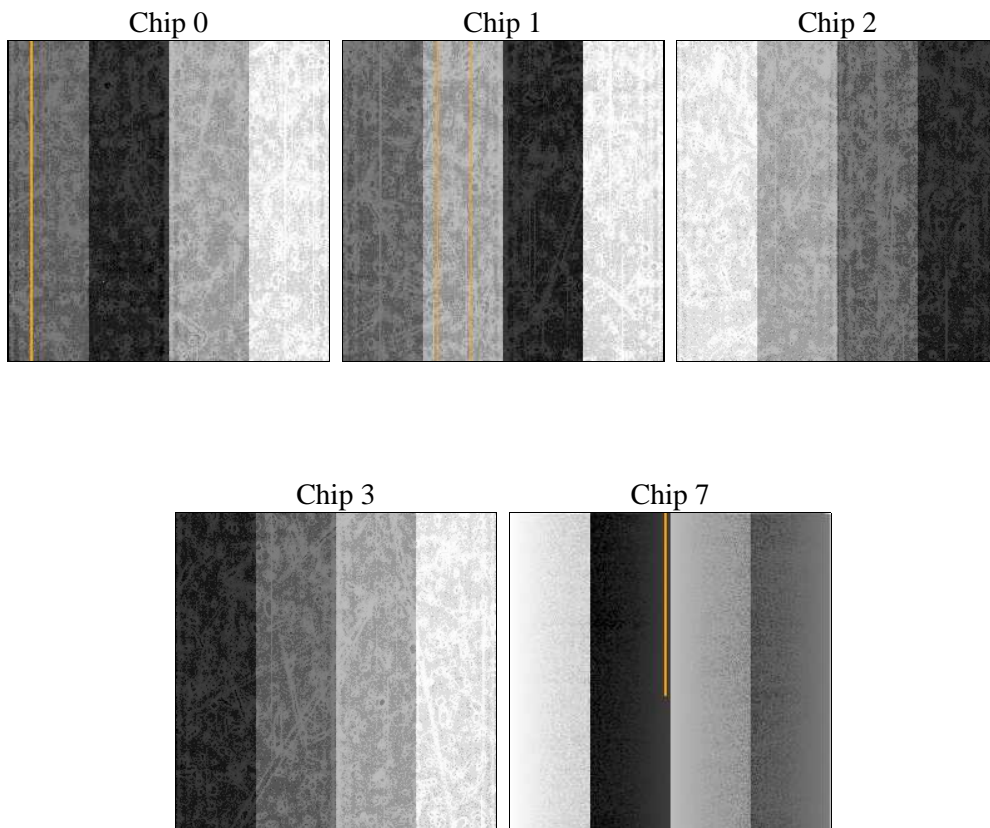
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	10068.800077438	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime0	10068.800077438	Sum of GTIs [s]
date	2014-12-01T17:28:22	Date and time of file creation	ontime1	10065.659016609	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	10068.800077438	Sum of GTIs [s]
			ontime3	10068.800077438	Sum of GTIs [s]
			ontime7	10068.800077438	Sum of GTIs [s]
			l1events	278818	Number of level 1 events

### 2.1.4 Events

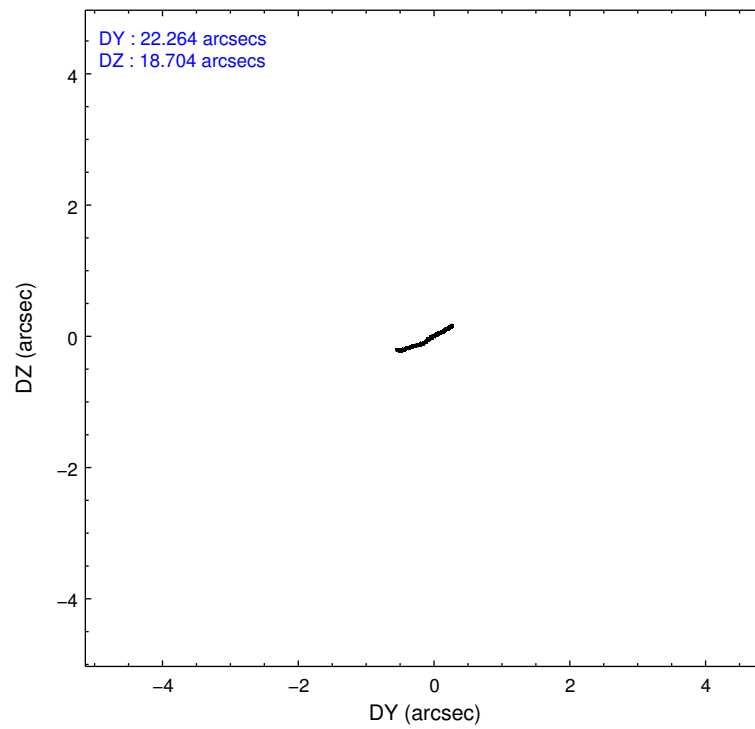
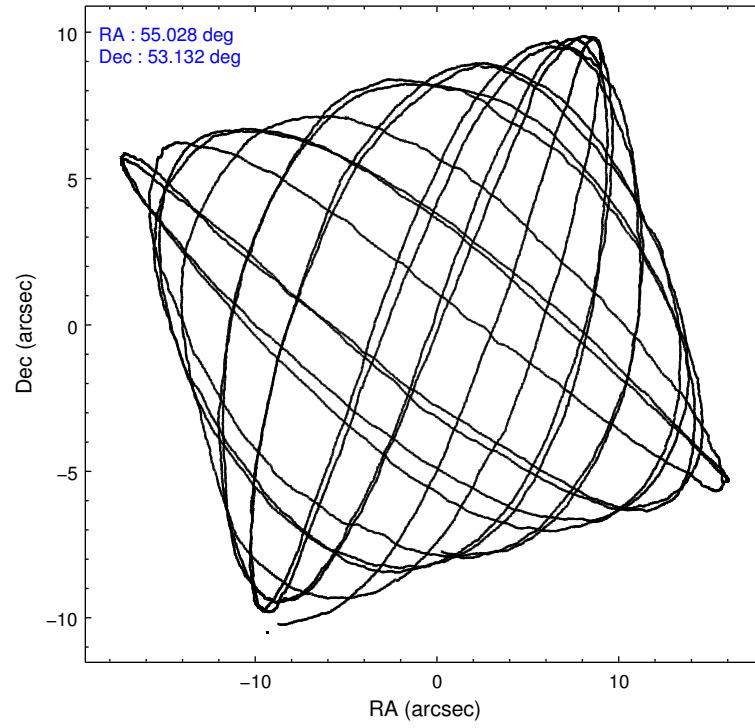
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	47647	53828	53714	51607	72022
rejected events	41322	40976	47413	45650	41265
rejected %	86%	76%	88%	88%	57%

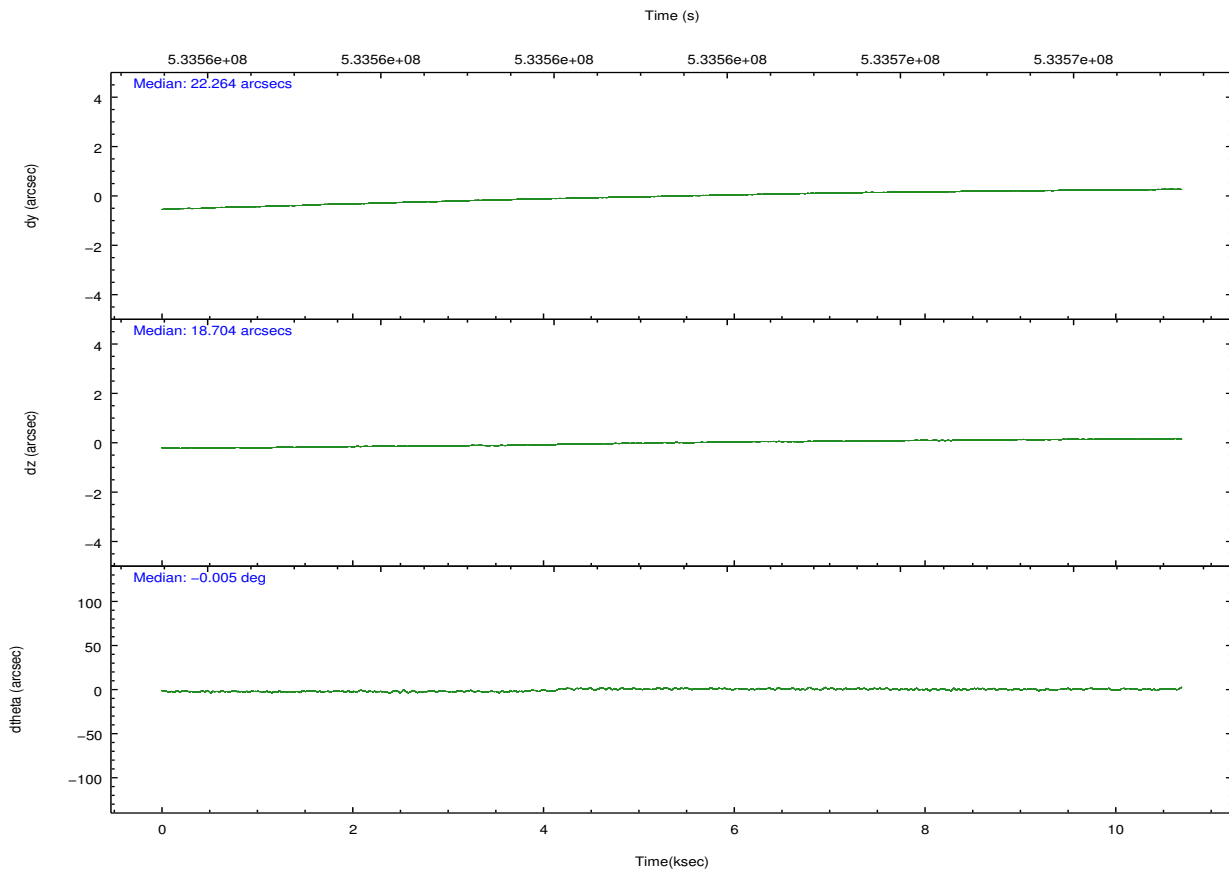
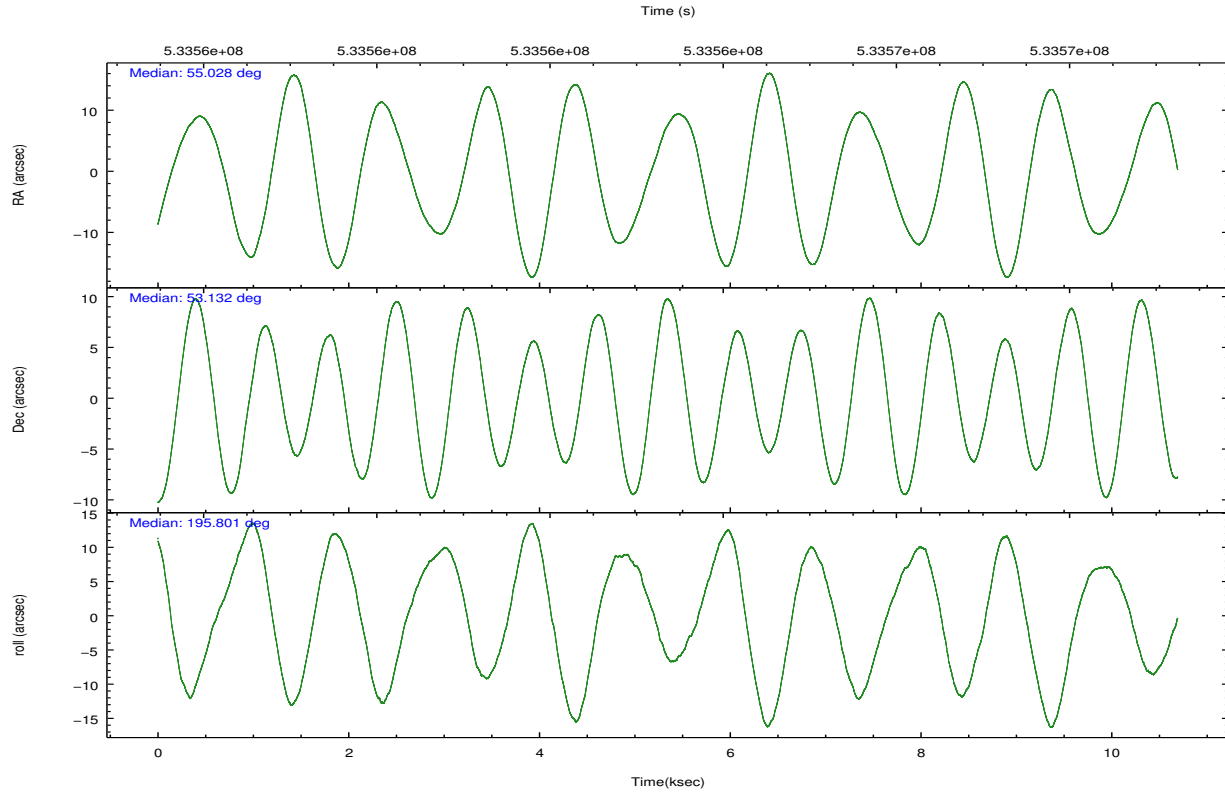
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	2138	8288	2353	1991	2475
	4%	15%	4%	3%	3%
grade 1 events	27	66	26	41	103
	0%	0%	0%	0%	0%
grade 2 events	1555	1674	1504	1411	6247
	3%	3%	2%	2%	8%
grade 3 events	689	700	634	618	2632
	1%	1%	1%	1%	3%
grade 4 events	623	704	628	656	2435
	1%	1%	1%	1%	3%
grade 5 events	2479	2637	2346	2771	7388
	5%	4%	4%	5%	10%
grade 6 events	1321	1490	1184	1282	16979
	2%	2%	2%	2%	23%
grade 7 events	38815	38269	45039	42837	33763
	81%	71%	83%	83%	46%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	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	55.060041	55.02816955149978	CCD I2 on	Y	Y
[deg] Pointing Dec	53.151590	53.13172029308749	CCD I3 on	Y	Y
[deg] Pointing Roll	195.574077	195.8082711811786	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	N	N
[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)	533558706.184000	533557512.82785	CCD S5 on	N	N
Observation start date	2014-11-28T10:43:59	2014-11-28T10:25:12	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	533568706.184000	533569057.40349	On-chip summing requested	N	N
Observation end date	2014-11-28T13:30:39	2014-11-28T13:37:37	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



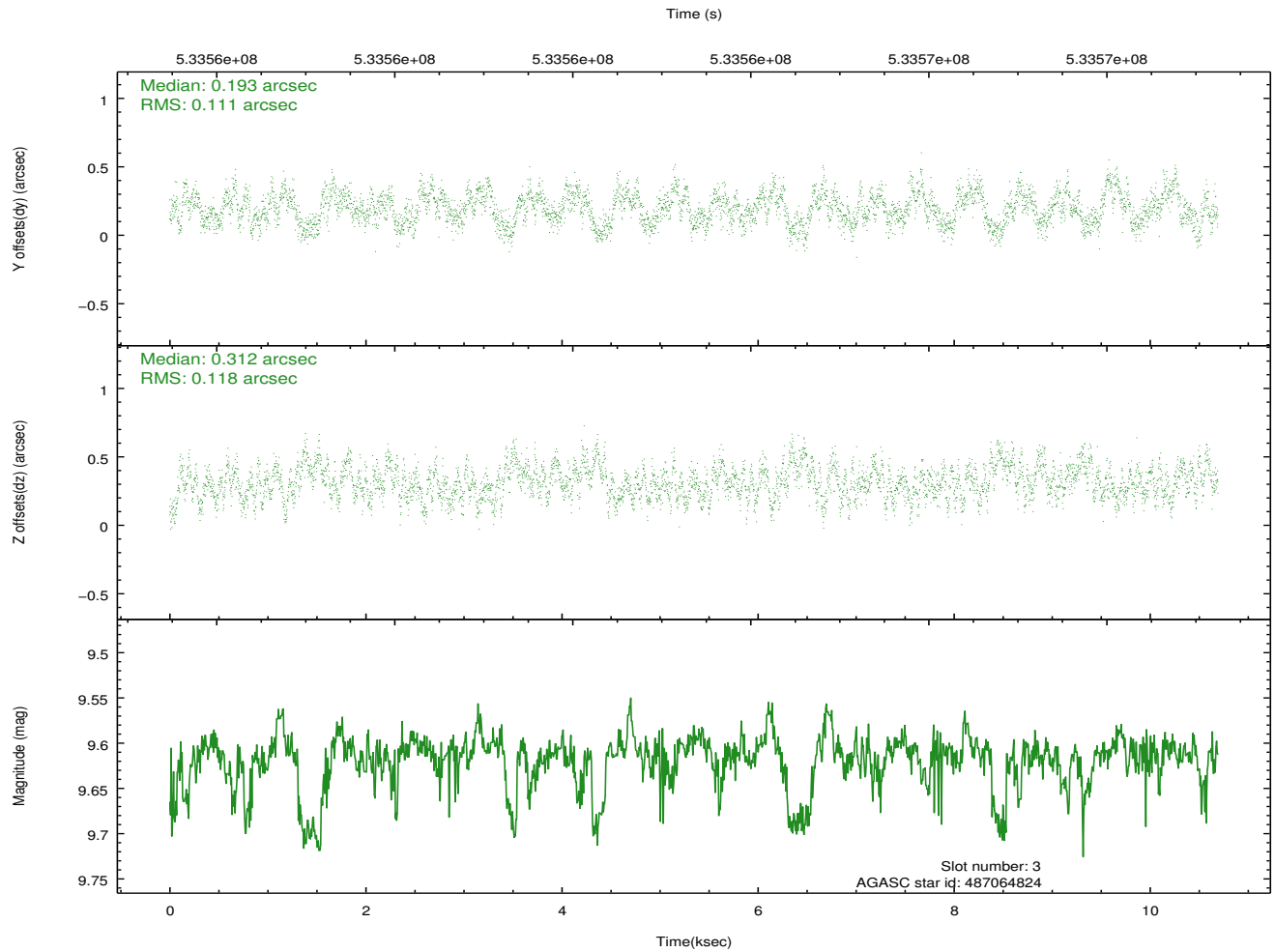
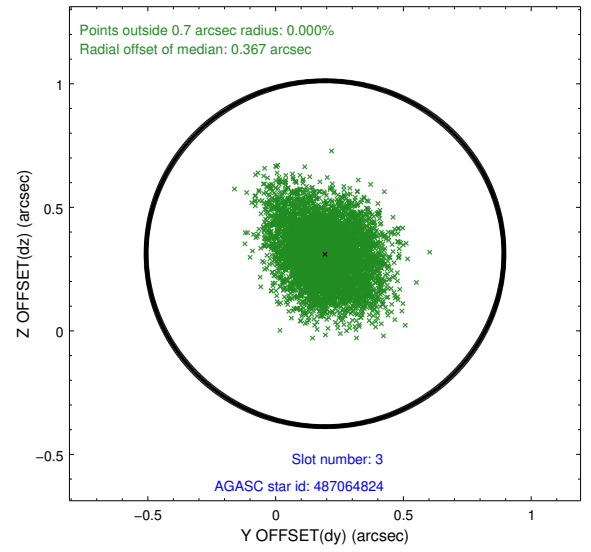
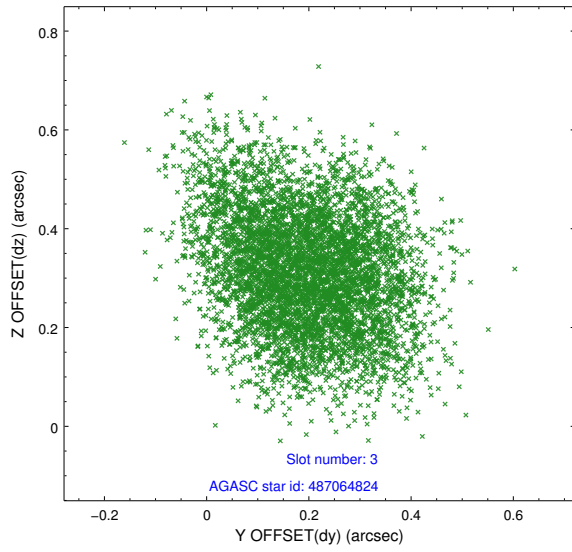


### Slot Statistics

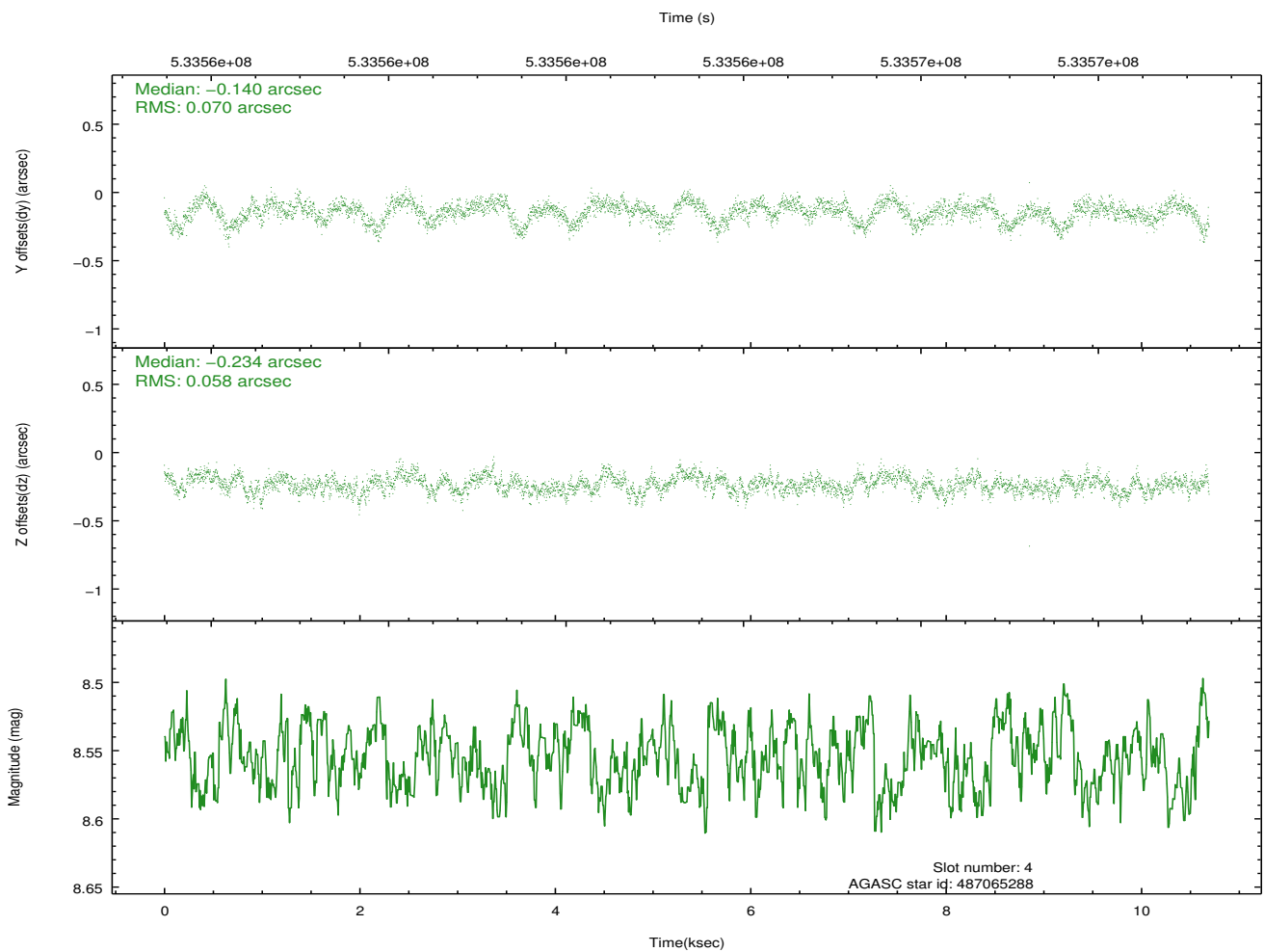
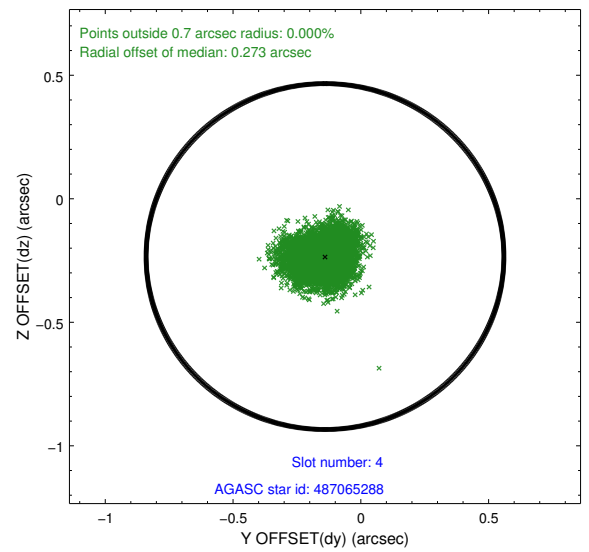
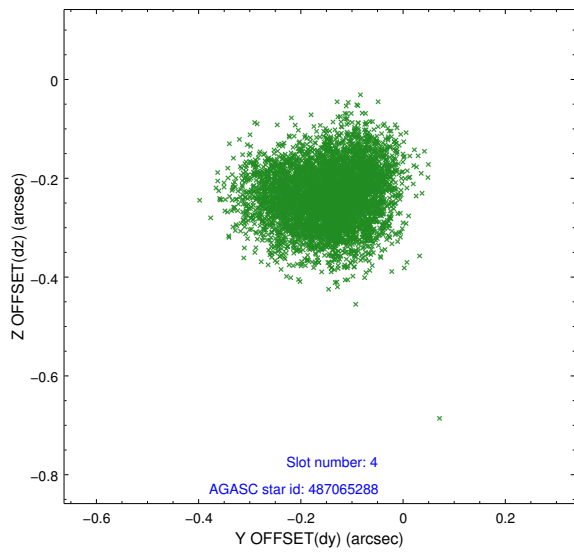
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-2	7.03	2608	-0.120	-0.088	0.015	0.023	0.000000	0.000000	-777.21	-848.86
1	FID		ACIS-I-4	7.07	2608	0.334	0.093	0.015	0.028	0.000000	0.000000	2136.99	1057.37
2	FID		ACIS-I-5	7.11	2608	-0.311	0.064	0.017	0.025	0.000000	0.000000	-1830.68	1055.57
3	GUIDE	used	487064824	9.61	5214	0.193	0.312	0.174	0.273	54.209163	53.581358	1334.49	-1988.48
4	GUIDE	used	487065288	8.55	5211	-0.140	-0.234	0.098	0.157	54.230566	52.888519	1987.63	418.24
5	GUIDE	used	487066216	8.24	5216	-0.054	0.387	0.074	0.121	55.265571	53.293177	-562.11	-372.39
6	GUIDE	used	487070008	9.39	5211	0.157	-0.232	0.113	0.184	55.764242	52.735304	-1077.96	1848.14
7	GUIDE	used	487067472	9.02	5215	-0.154	-0.236	0.104	0.162	54.580829	52.599080	1542.27	1631.99

## 2.4 Star Slots

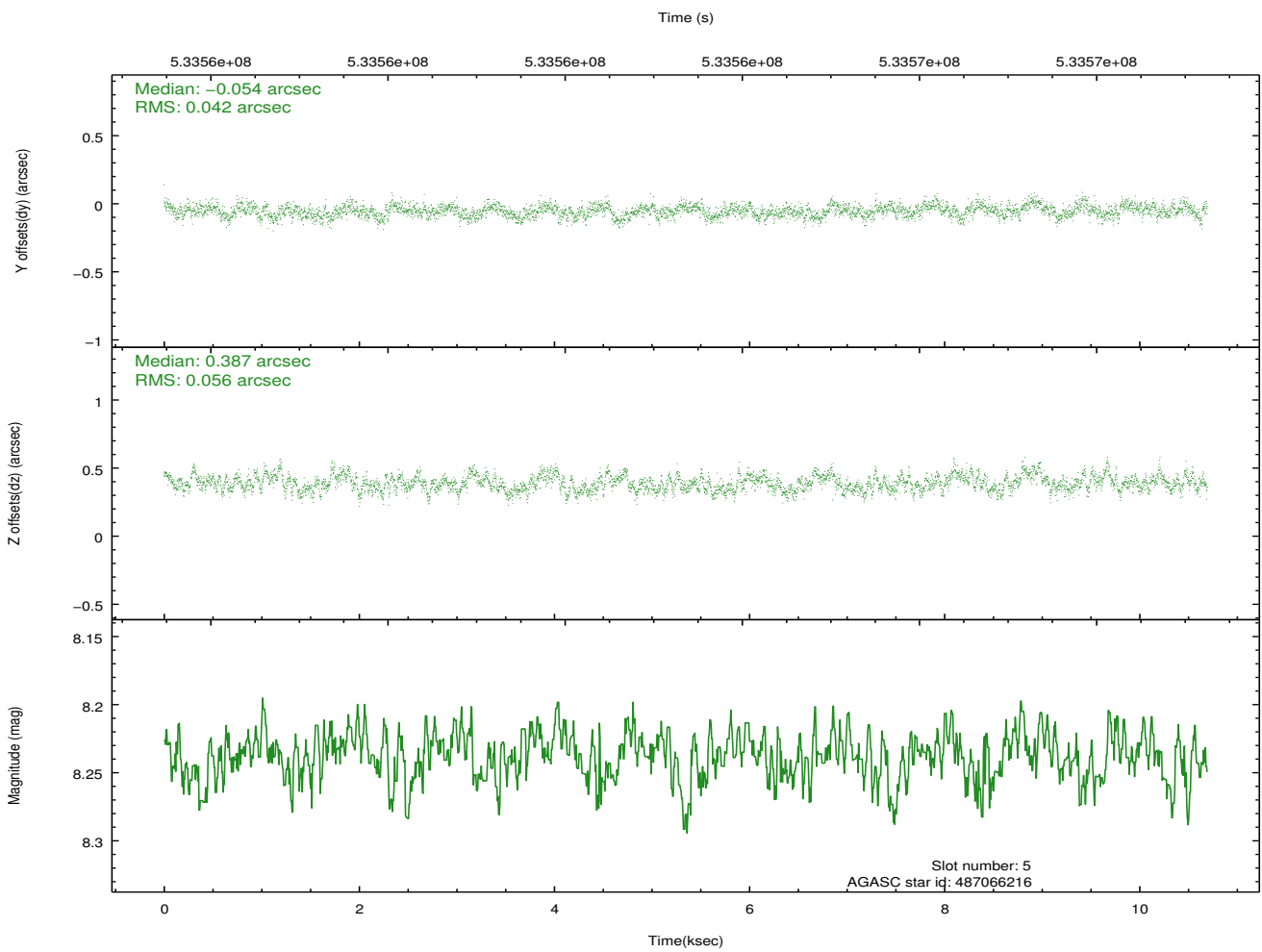
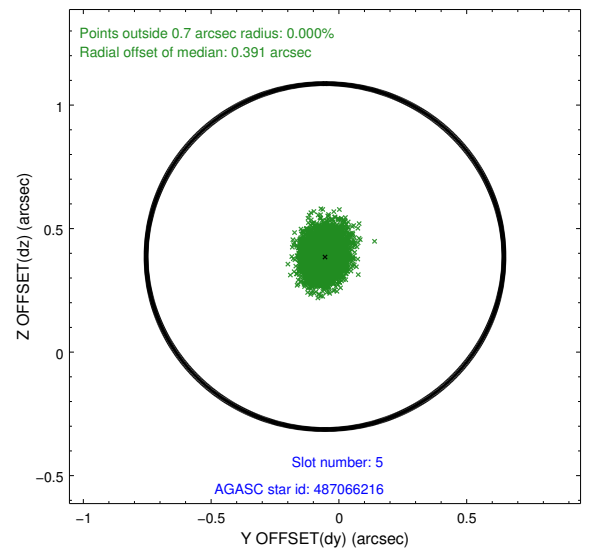
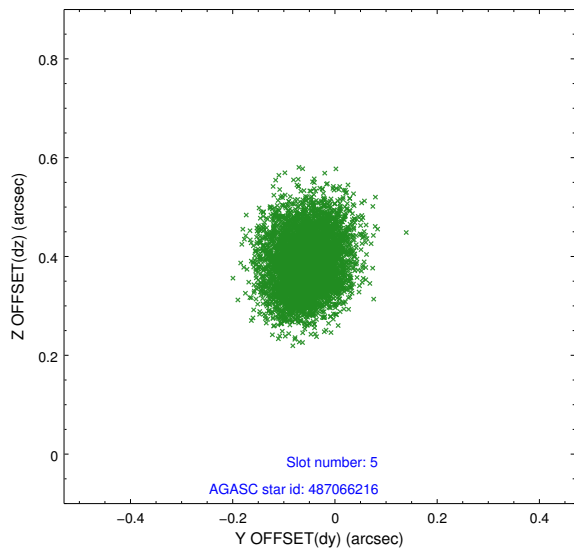
### 2.4.1 Slot 3



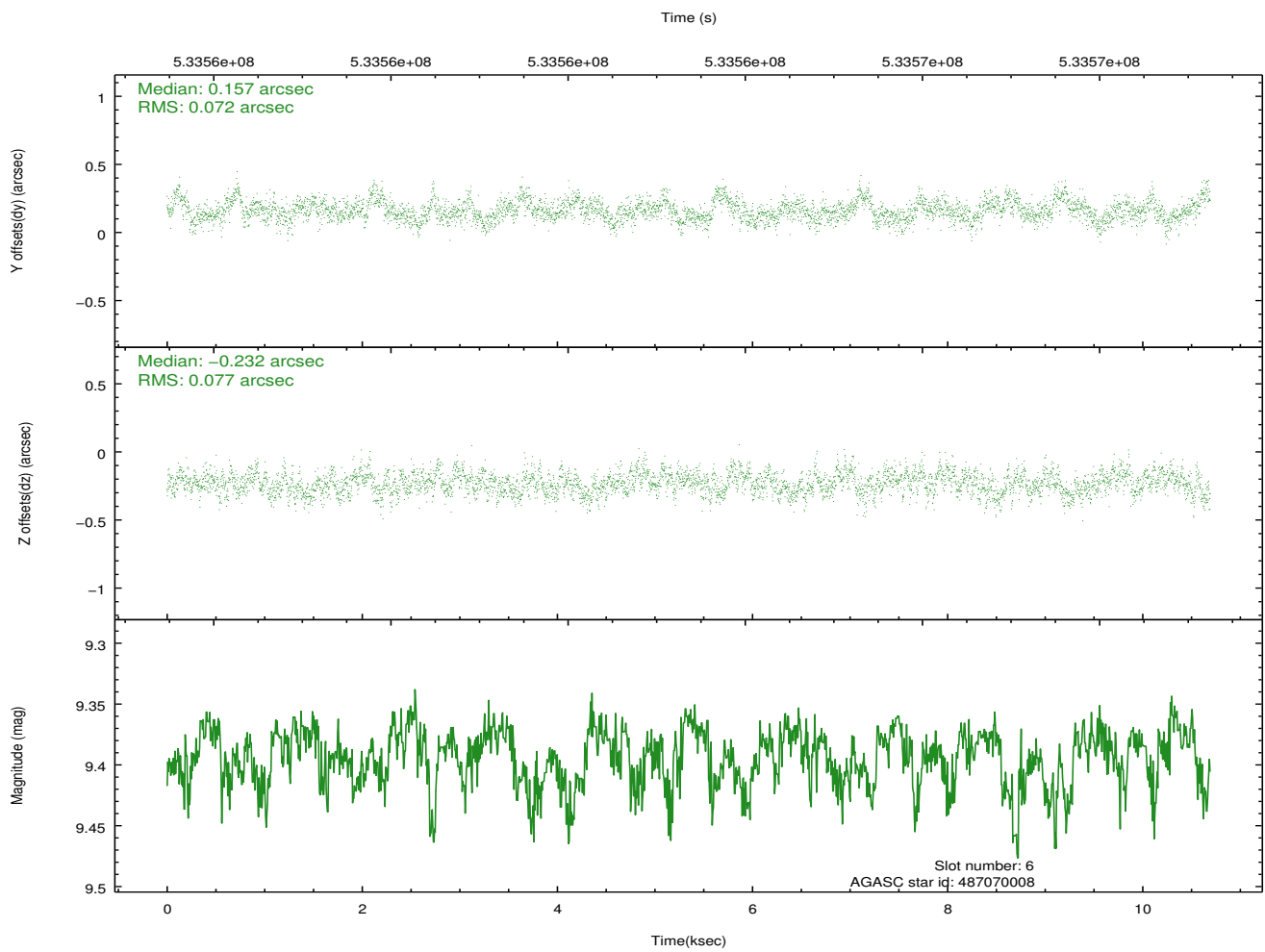
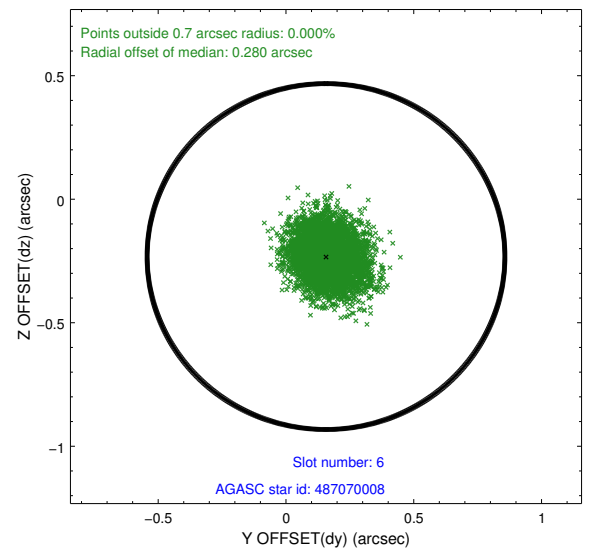
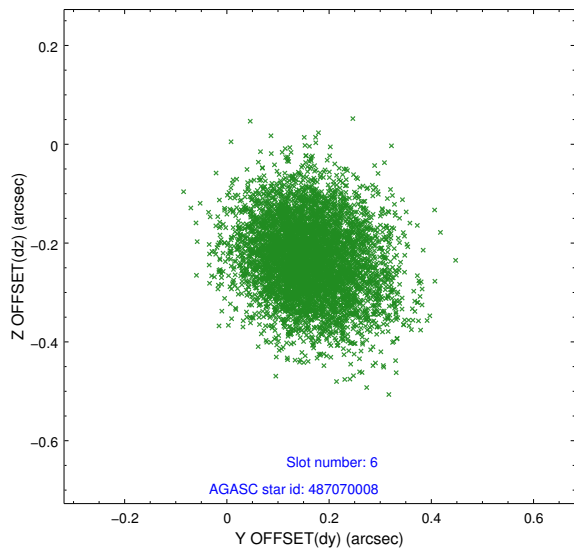
## 2.4.2 Slot 4



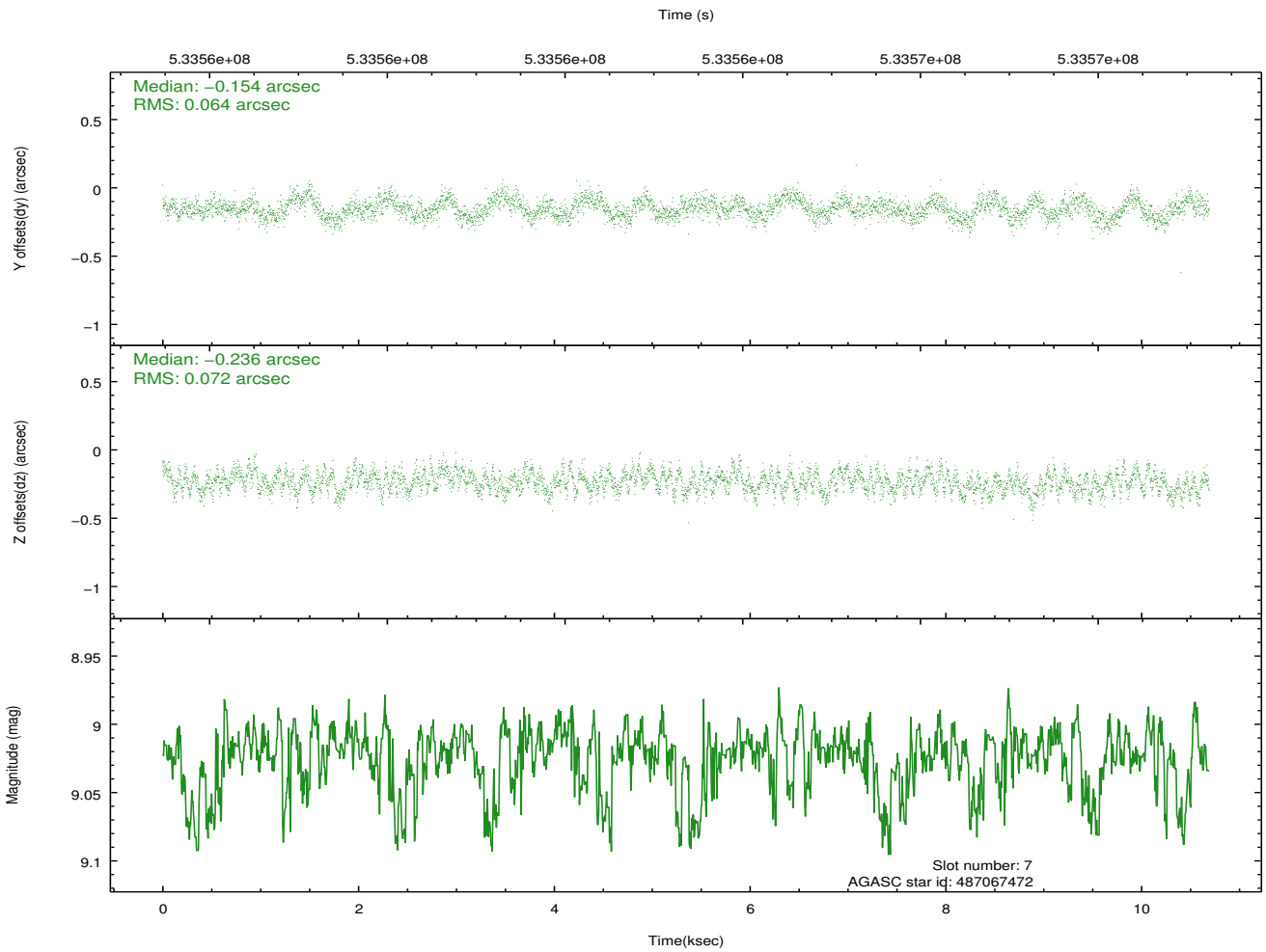
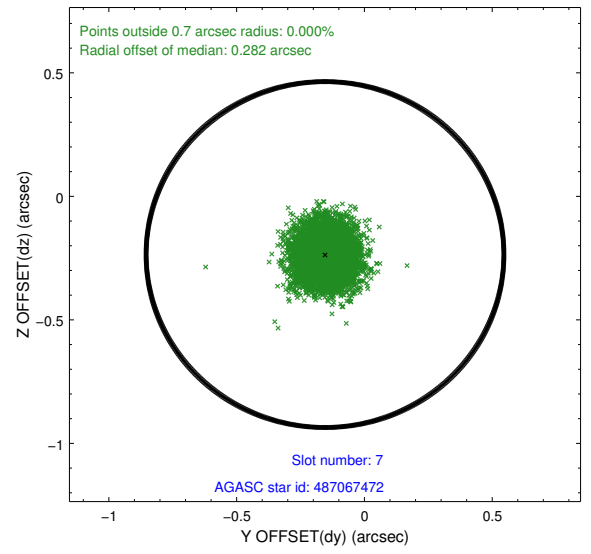
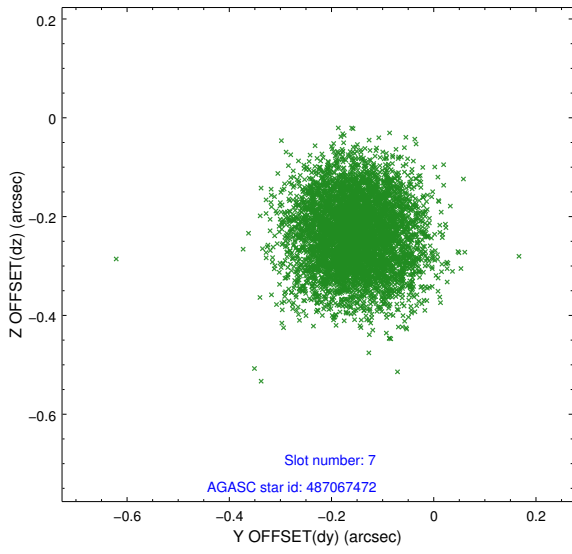
### 2.4.3 Slot 5



## 2.4.4 Slot 6

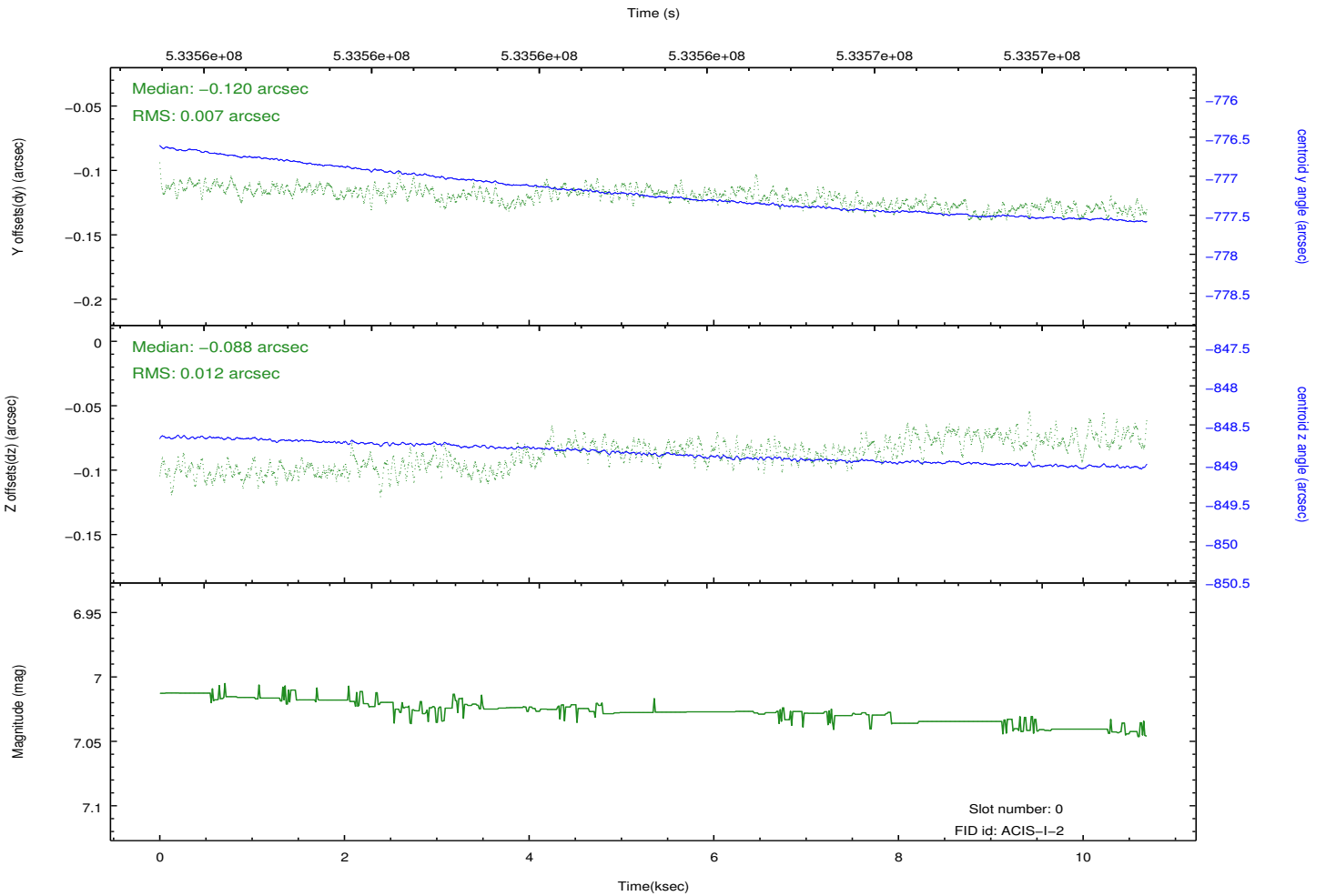
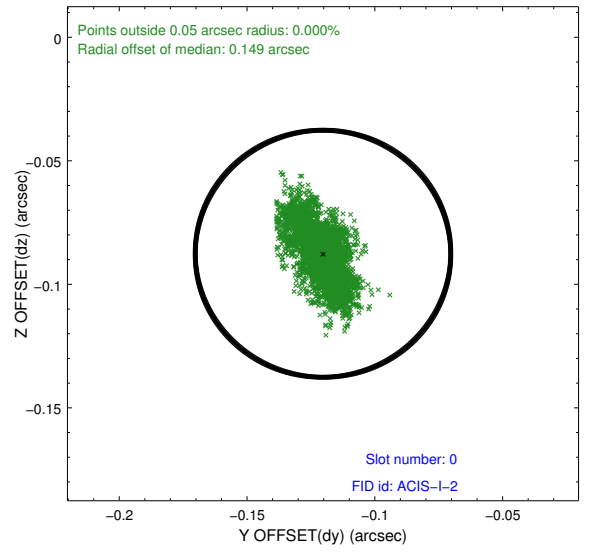
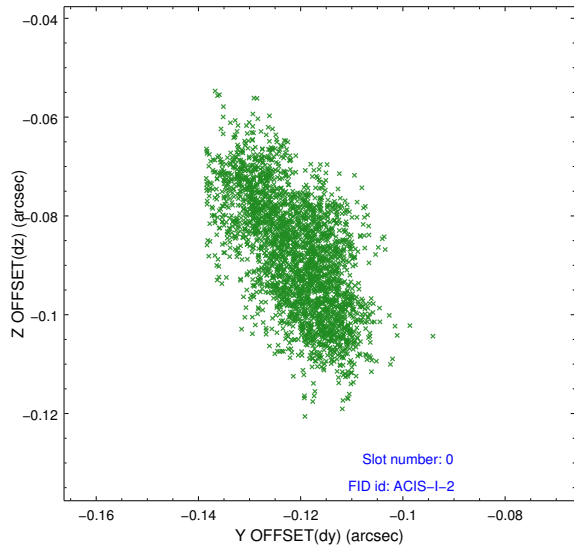


## 2.4.5 Slot 7

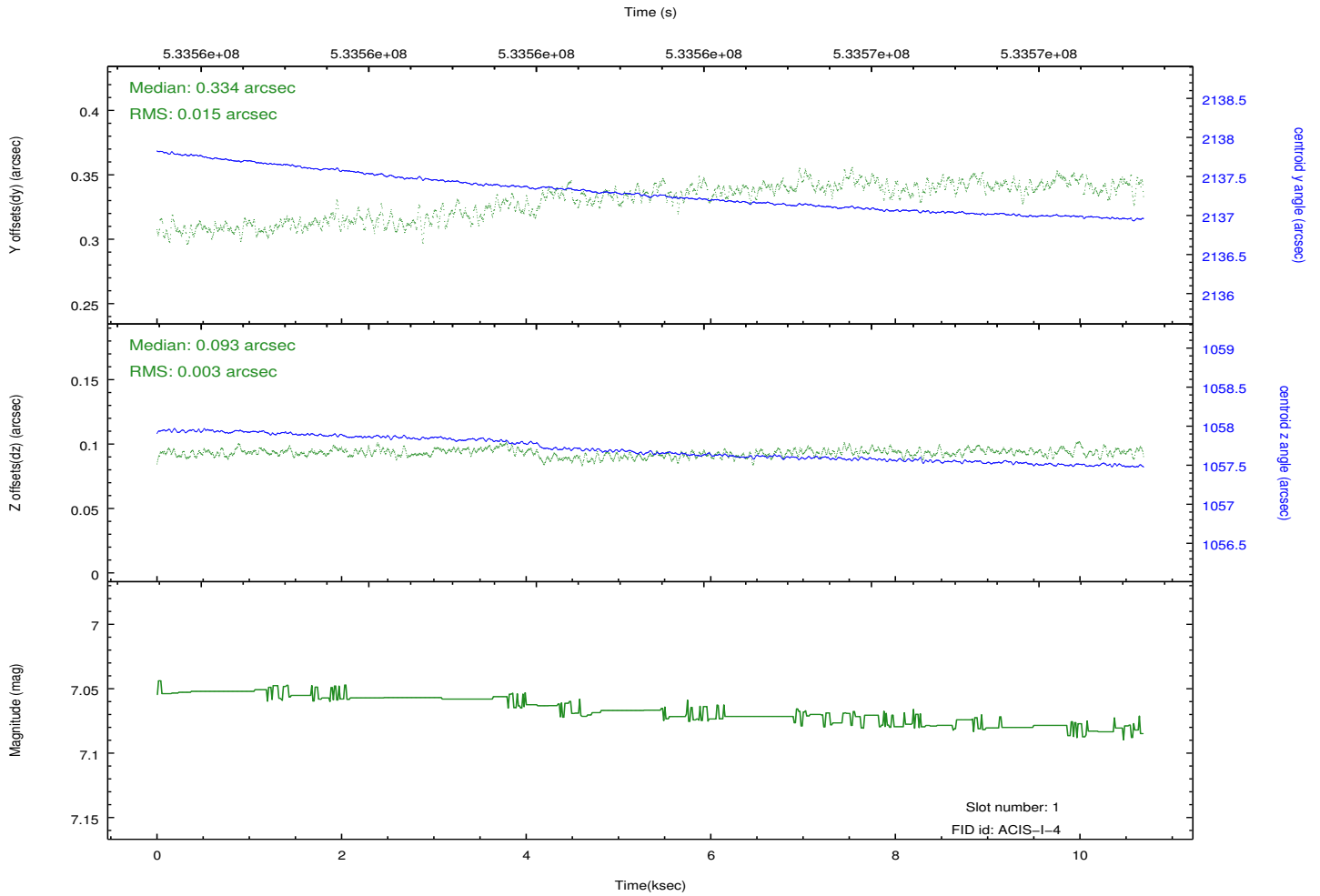
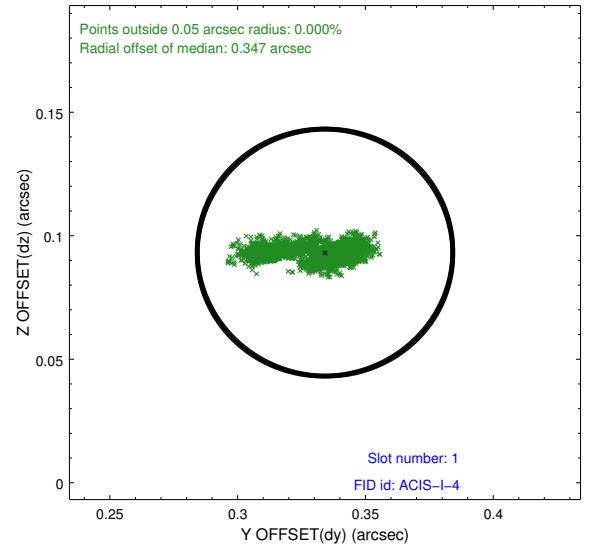
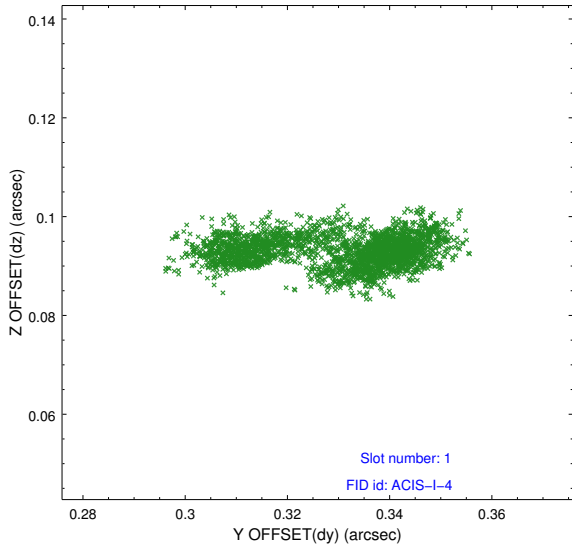


## 2.5 FID Slots

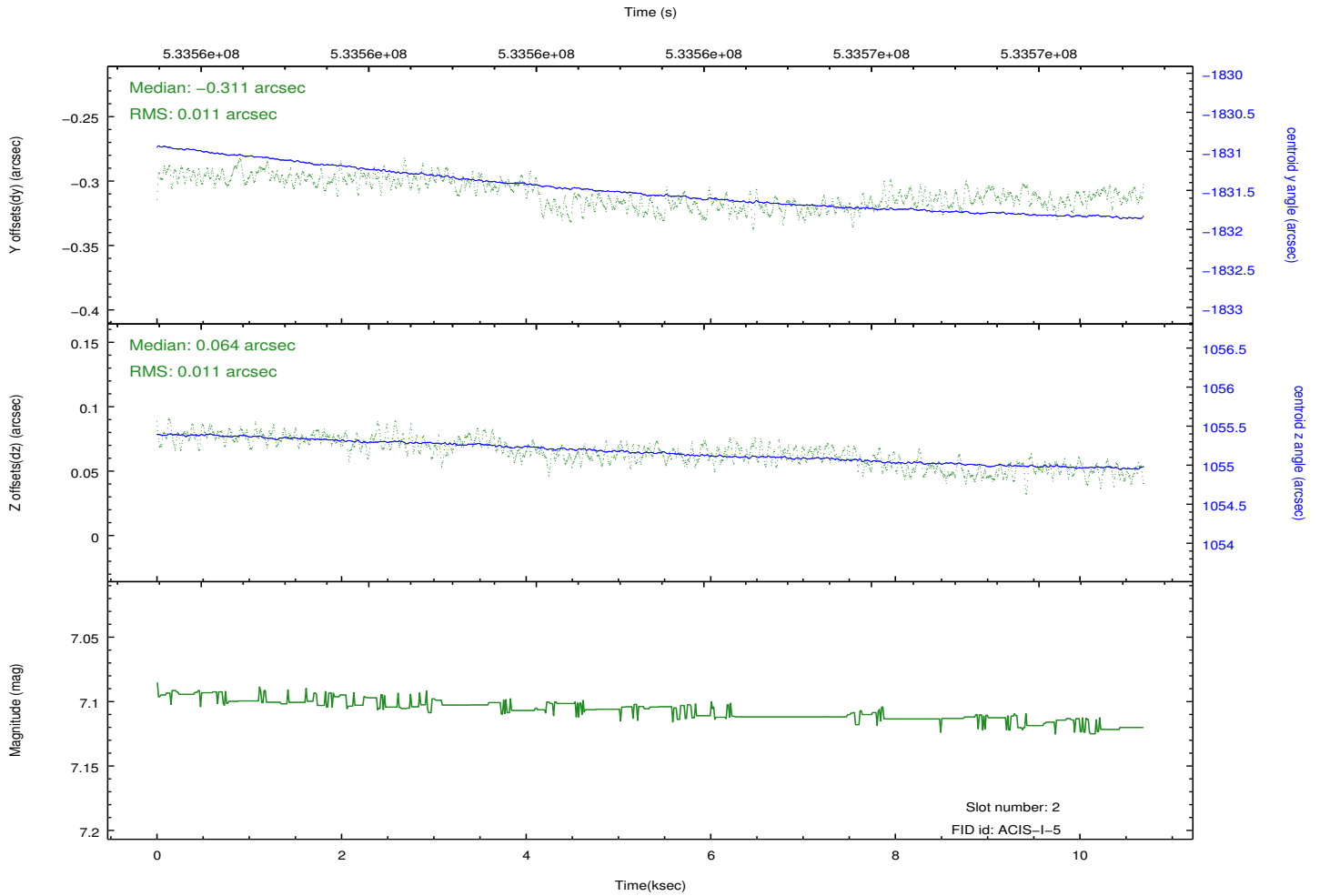
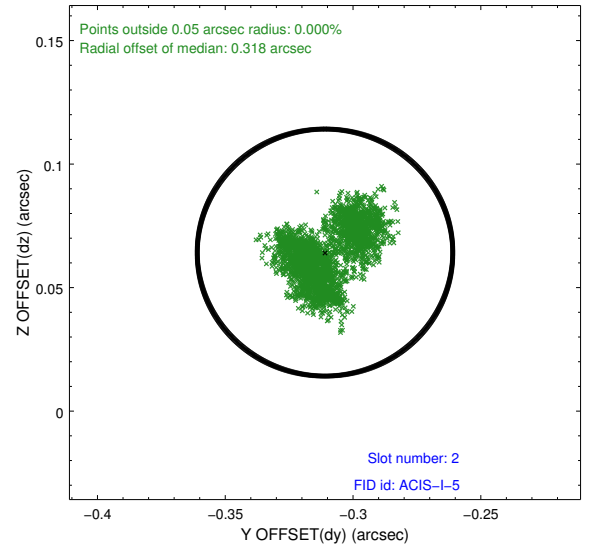
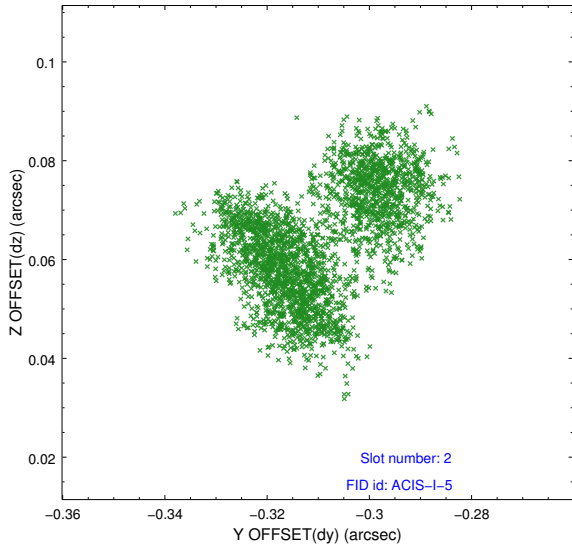
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.068800077438

## A.2 Comments

A spatial region of the original bias map for CCD = 2 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 = 2 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 sky coords:

(54.83439,53.02843), (54.83848,53.01992), (55.06158,53.05808), (55.05754,53.06660).