

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 10060 - L2 Version 2  
Chandra X-Ray Center

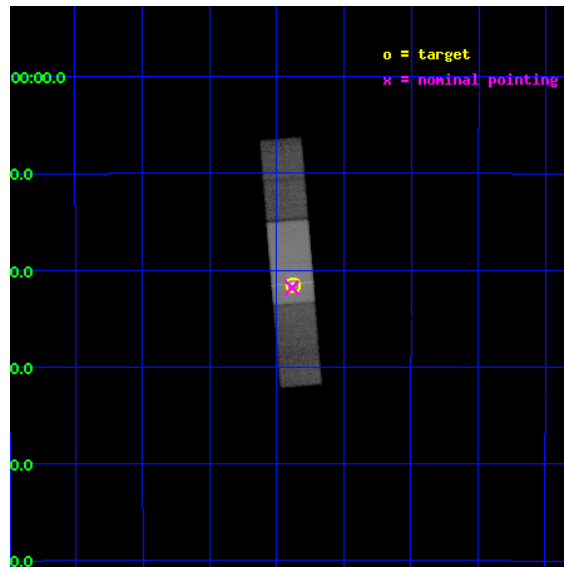
L2 Processing Date : Jun 11 2012

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# 1 Front

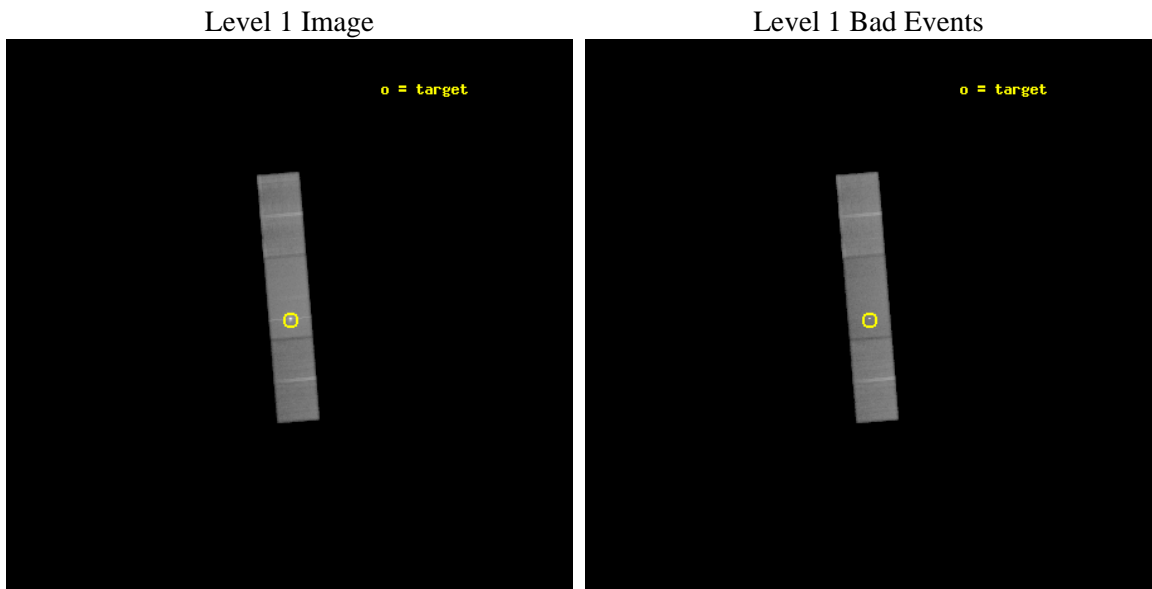
seq_num	401024	Sequence number
obs_id	10060	Observation id
title	Variability in Quiescent Neutron Star Binaries in Dense Globular Clusters	Proposal title
observer	Prof. Craig Heinke	Principal investigator
object	NGC 6440	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	267.219583	Observer's specified target RA [deg]
dec_targ	-20.359583	Observer's specified target Dec [deg]
ra_nom	267.22191583122	Nominal RA [deg]
dec_nom	-20.363920530321	Nominal Dec [deg]
roll_nom	265.20075961624	Nominal Roll [deg]
revision	2	Processing version of data
ontime	50374.400750637	Sum of GTIs [s]
livetime	49114.610979025	Livetime [s]
ontime6	50372.759730577	Sum of GTIs [s]
ontime7	50374.400750637	Sum of GTIs [s]
ontime8	50374.400750637	Sum of GTIs [s]
l2events	295694	Number of level 2 events



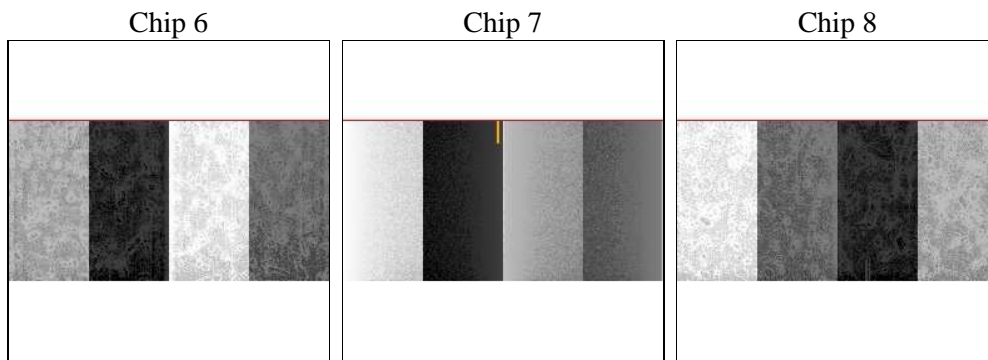
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	50200.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	50374.400750637	Sum of GTIs [s]
caldsver	4.4.10	&#160	ontime6	50372.759730577	Sum of GTIs [s]
date	2012-06-11T02:32:47	Date and time of file creation	ontime7	50374.400750637	Sum of GTIs [s]
revision	2	Processing version of data	ontime8	50374.400750637	Sum of GTIs [s]
			l1events	1141780	Number of level 1 events

### 2.1.4 Events

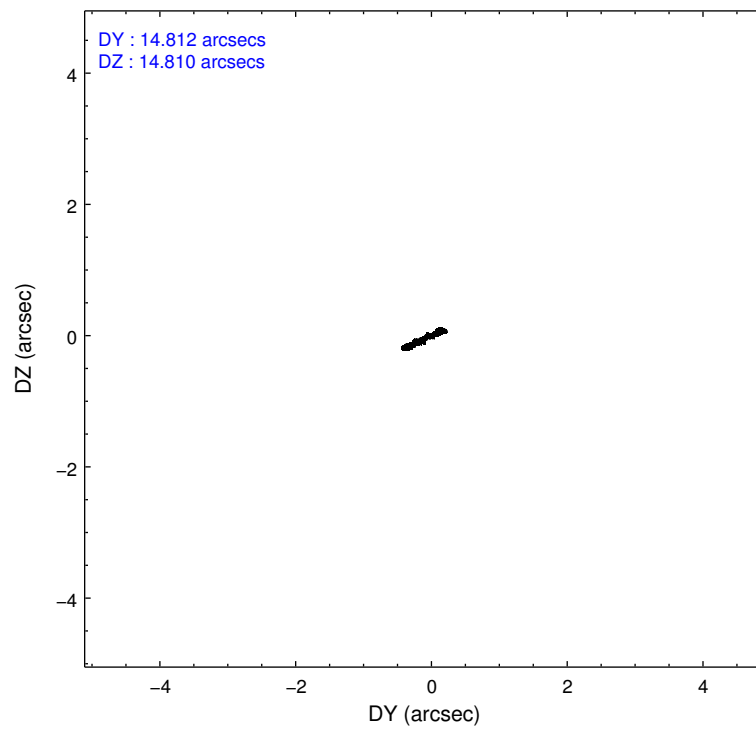
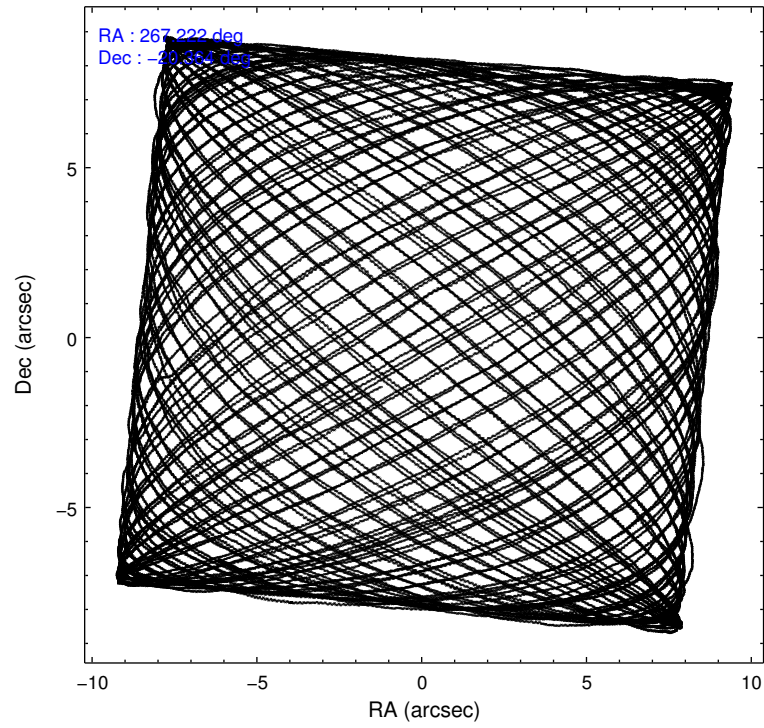
	<b>ccd 6</b>	<b>ccd 7</b>	<b>ccd 8</b>
level 1 events	300294	460499	380987
rejected events	258271	230681	293749
rejected %	<b>86%</b>	<b>50%</b>	<b>77%</b>

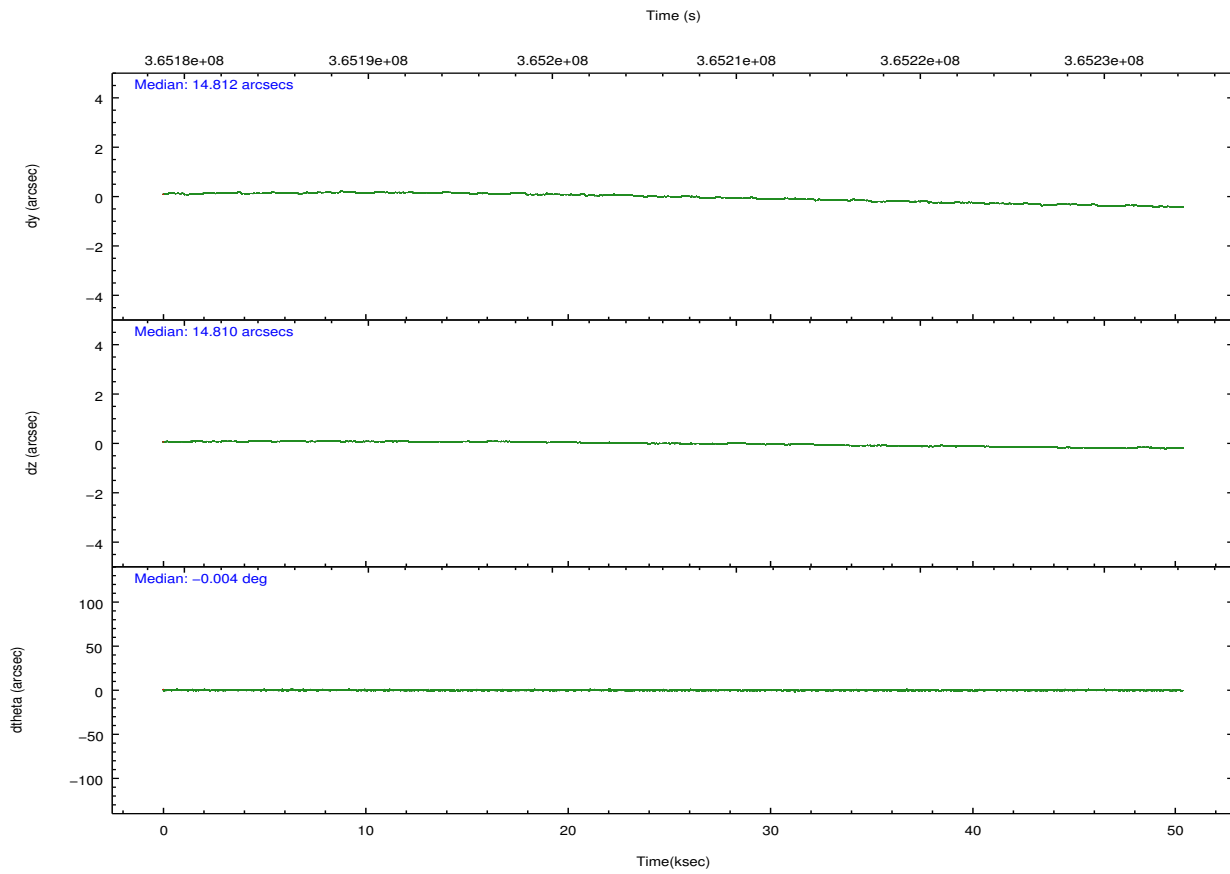
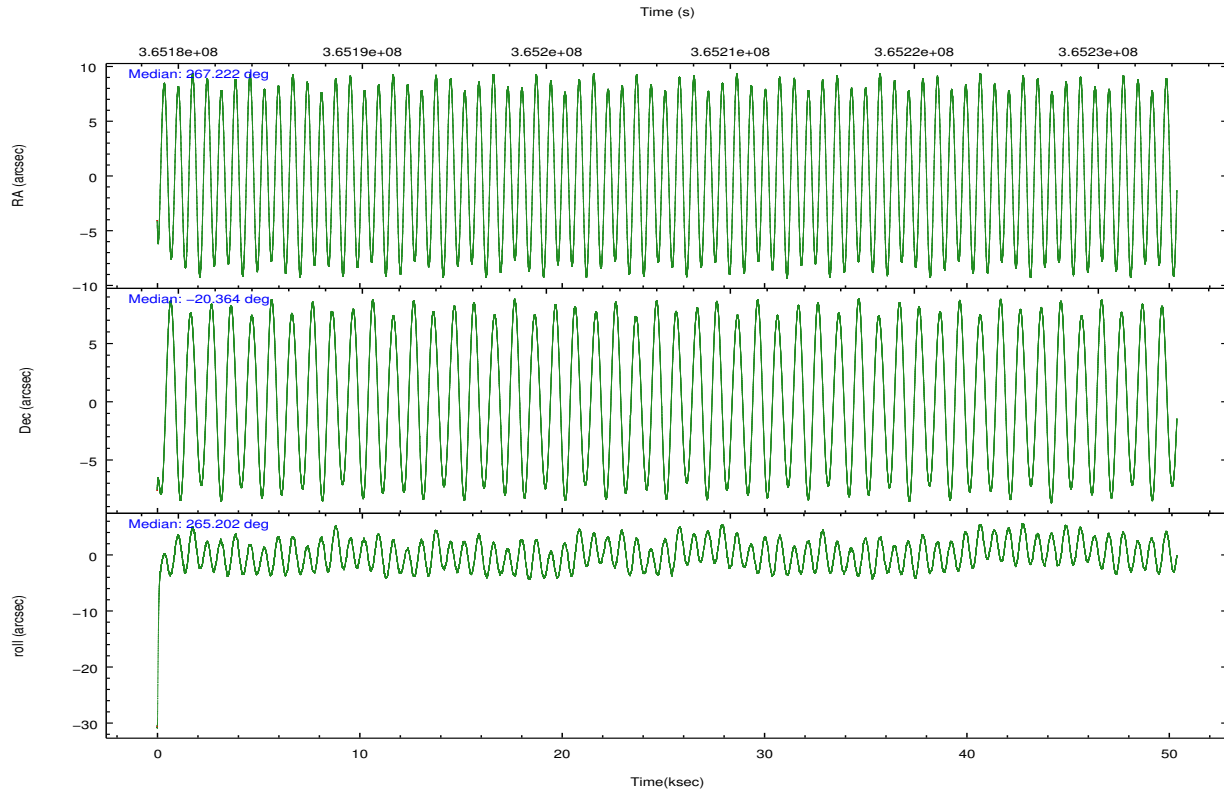
	<b>ccd 6</b>	<b>ccd 7</b>	<b>ccd 8</b>
grade 0 events	18315	29058	27388
	6%	6%	7%
grade 1 events	129	1102	224
	0%	0%	0%
grade 2 events	8124	50669	19168
	2%	11%	5%
grade 3 events	4180	22691	9406
	1%	4%	2%
grade 4 events	4164	22377	8531
	1%	4%	2%
grade 5 events	13325	39462	17920
	4%	8%	4%
grade 6 events	7240	105034	22747
	2%	22%	5%
grade 7 events	244817	190106	275603
	81%	41%	72%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-678	ACIS-678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	267.209143	267.2219158312209	CCD I2 on	N	N
[deg] Pointing Dec	-20.339326	-20.36392053032096	CCD I3 on	N	N
[deg] Pointing Roll	265.039701	265.2007596162373	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O2	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	O1	Y
[s] Observation start time (MET)	365181554.184000	365180809.84463	CCD S5 on	N	N
Observation start date	2009-07-28T15:18:08	2009-07-28T15:06:49	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	365231754.184000	365232400.14721	On-chip summing requested	N	N
Observation end date	2009-07-29T05:14:48	2009-07-29T05:26:40	Subarray requested	CUSTOM	1/2
Read mode	TIMED	TIMED	Subarray start row	257	257
			Subarray row count	512	512
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.6

## 2.3 Aspect



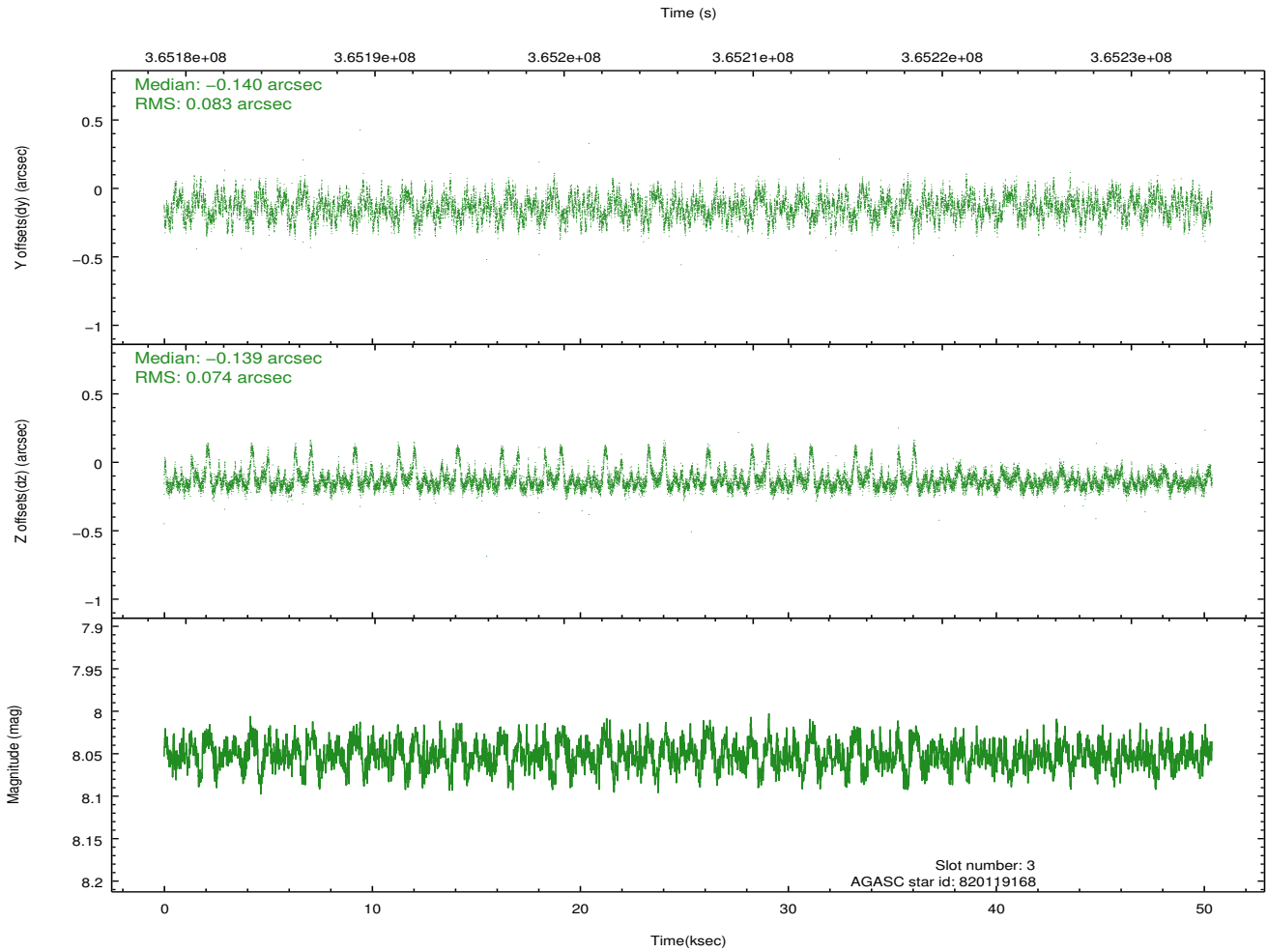
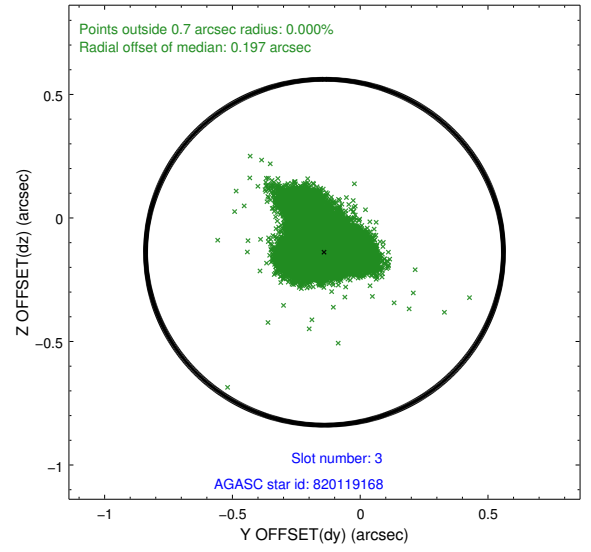
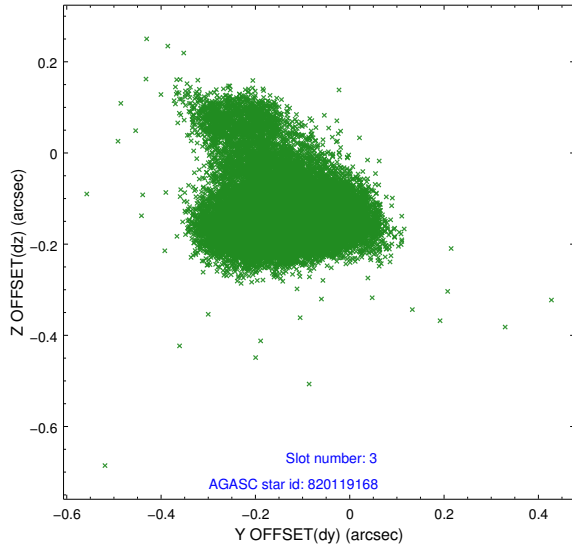


### Slot Statistics

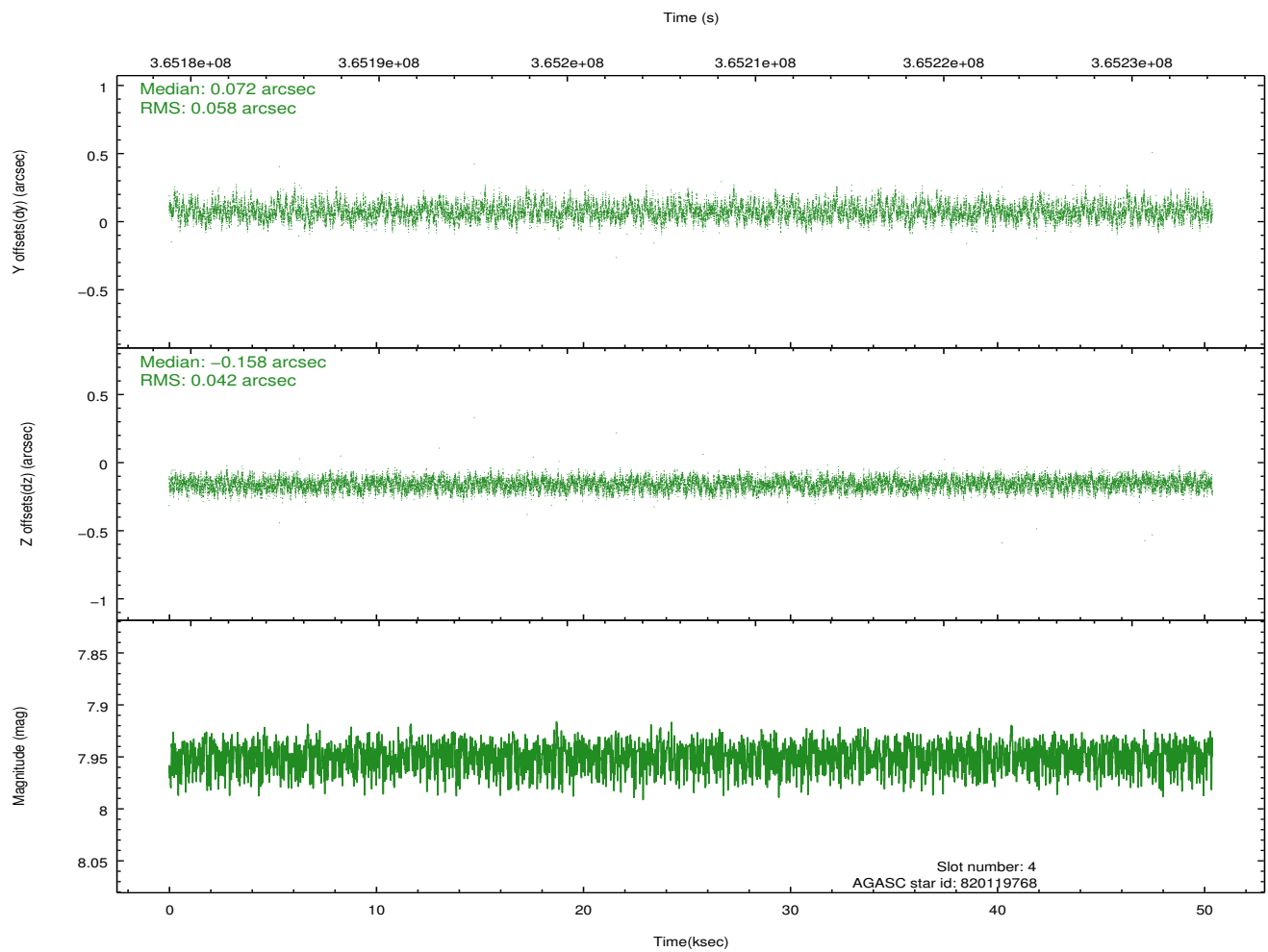
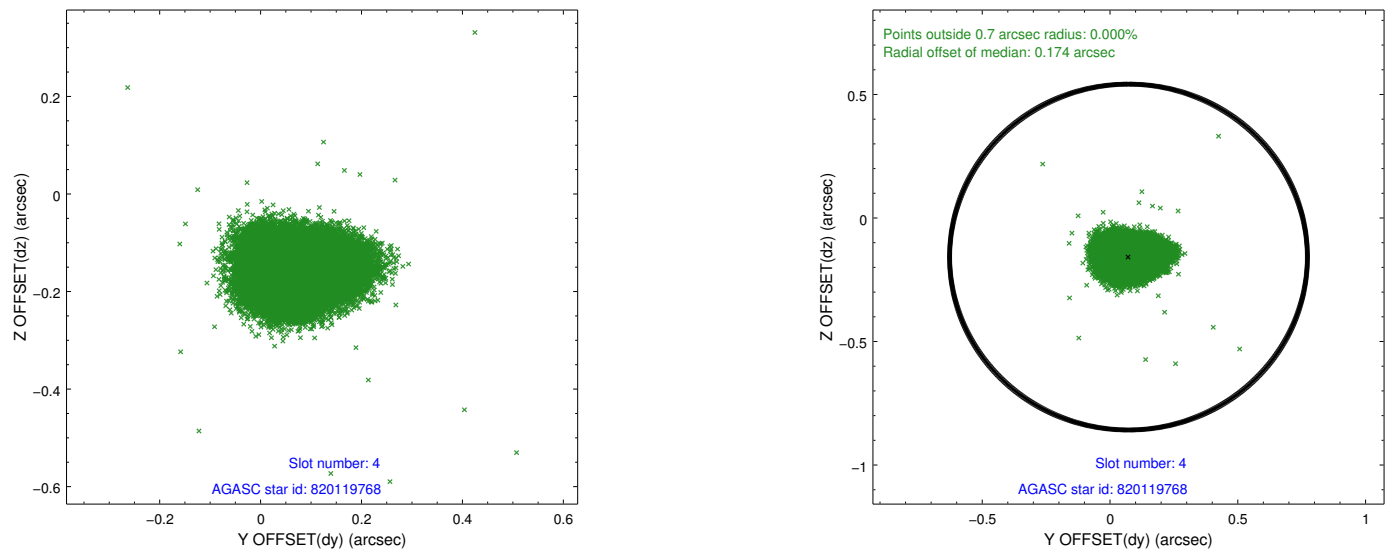
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.92	12291	-0.089	-0.028	0.008	0.014	0.000000	0.000000	-767.80	-1736.20
1	FID	ACIS-S-4	7.01	12292	0.196	0.050	0.006	0.010	0.000000	0.000000	2145.75	172.41
2	FID	ACIS-S-5	7.03	12292	-0.138	-0.014	0.009	0.015	0.000000	0.000000	-1820.73	165.96
3	GUIDE	820119168	8.05	24577	-0.140	-0.139	0.111	0.209	267.932854	-19.779597	-2213.21	2268.78
4	GUIDE	820119768	7.95	24575	0.072	-0.158	0.076	0.121	267.398392	-20.006729	-1247.79	534.39
5	GUIDE	820121744	6.75	24580	-0.043	0.296	0.053	0.083	267.173633	-19.779615	-1997.23	-293.53
6	GUIDE	820641816	7.19	24582	0.051	-0.117	0.061	0.097	267.363435	-20.830907	1718.39	670.22
7	GUIDE	820644800	8.85	24557	0.054	0.103	0.075	0.119	267.803773	-20.964535	2073.23	2186.77

## 2.4 Star Slots

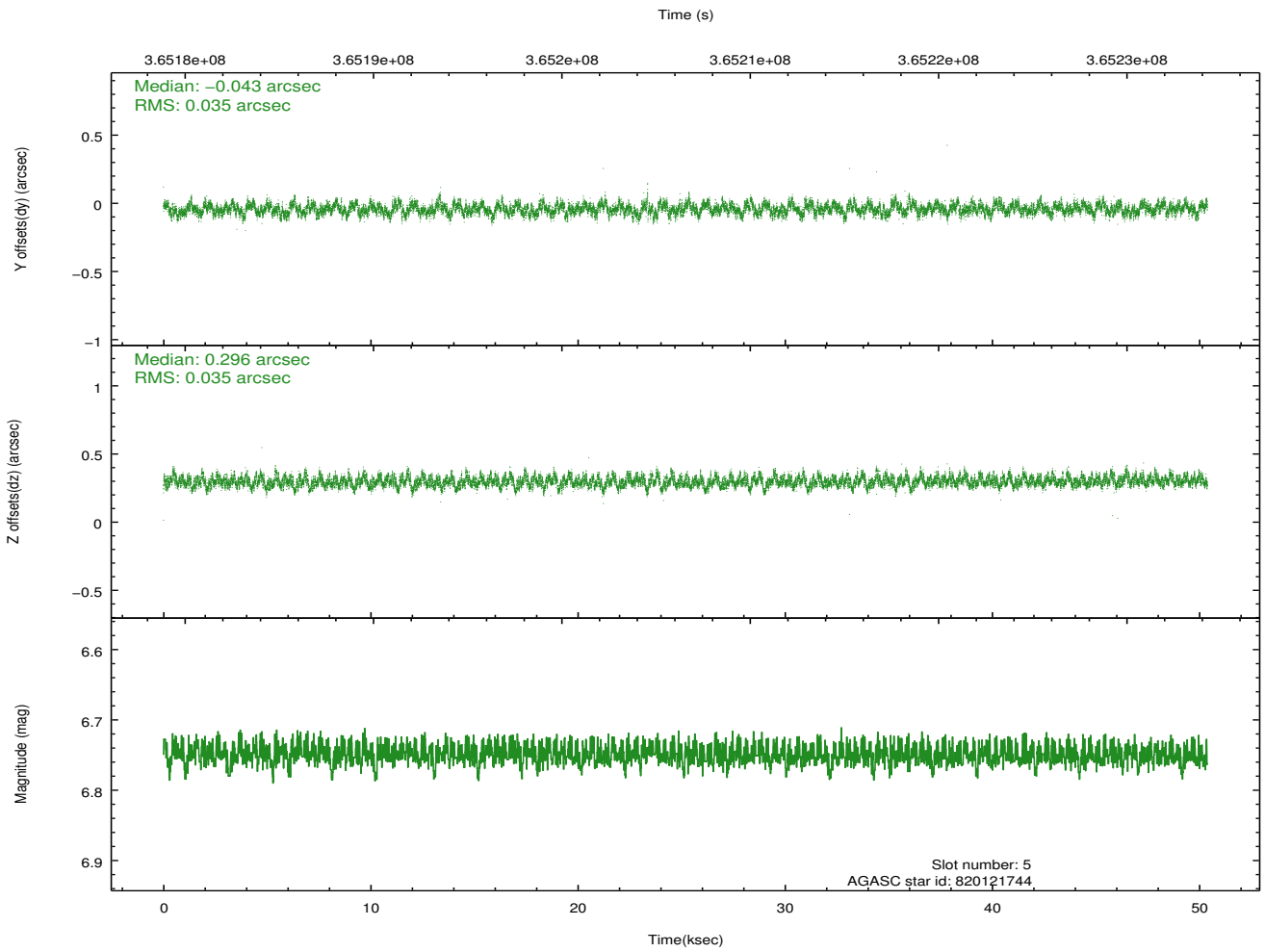
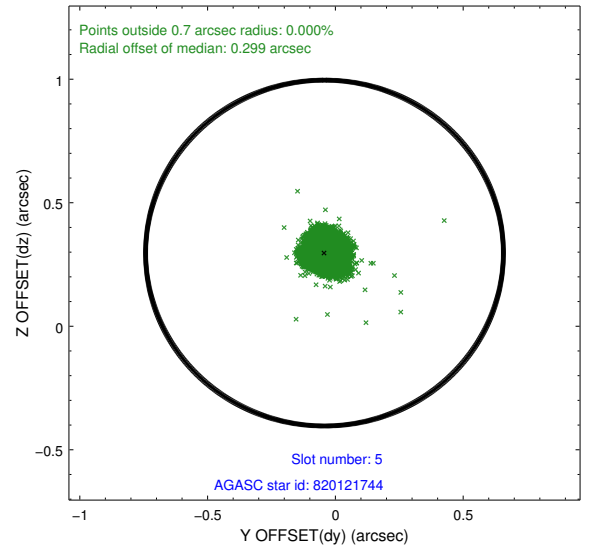
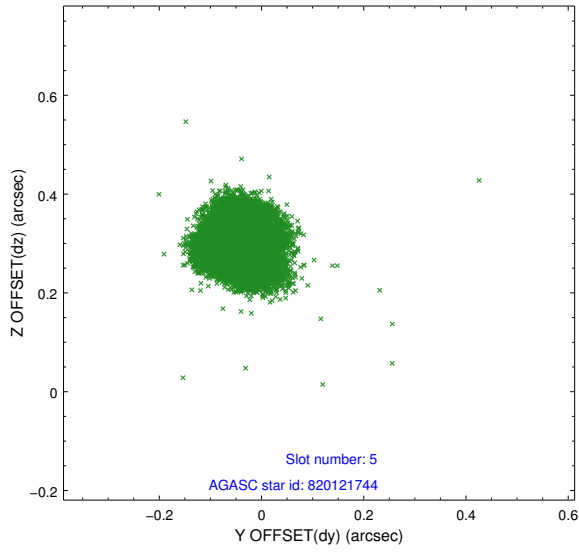
### 2.4.1 Slot 3



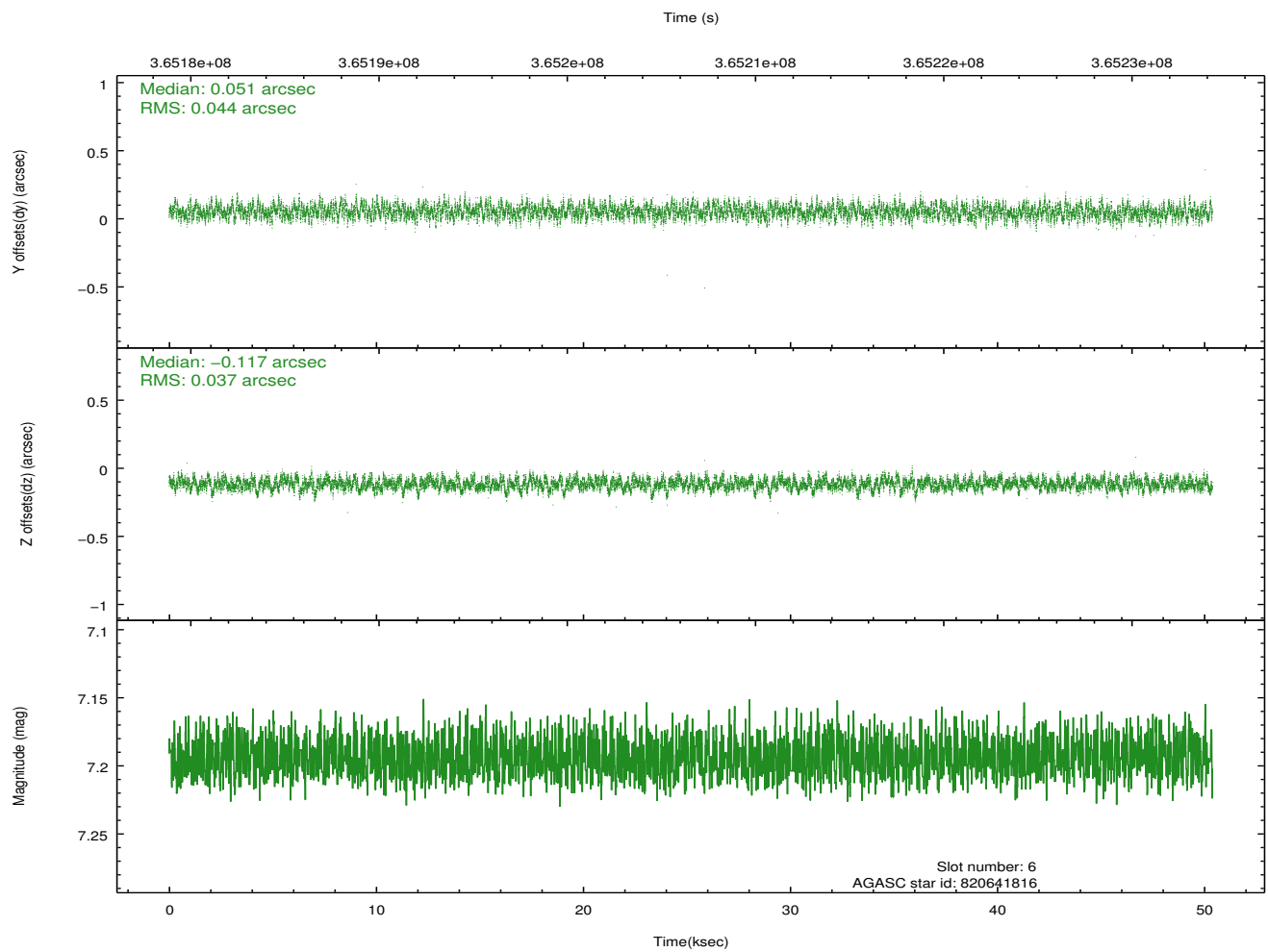
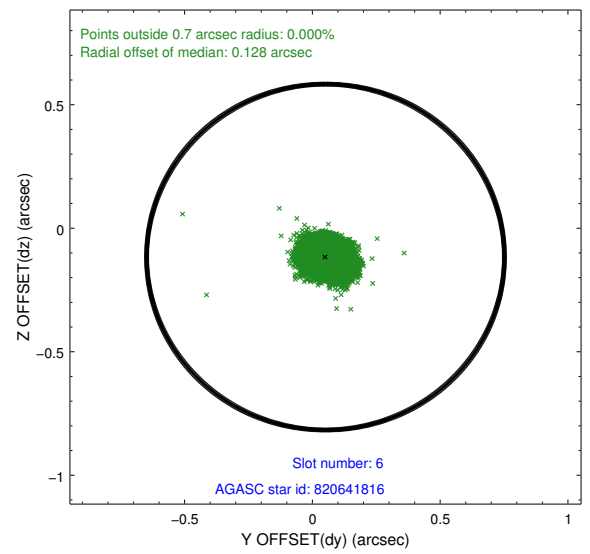
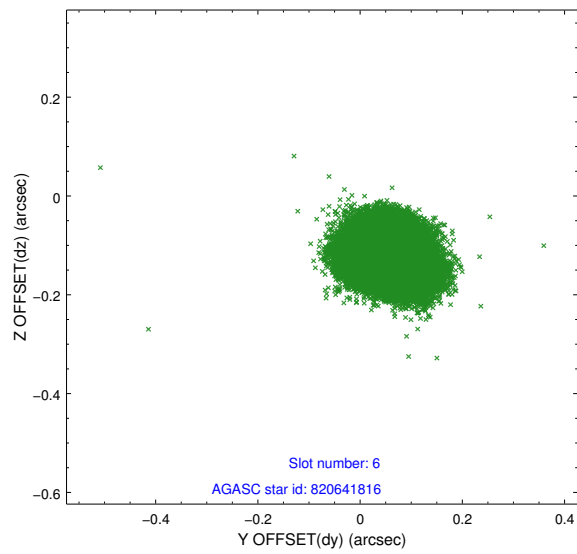
## 2.4.2 Slot 4



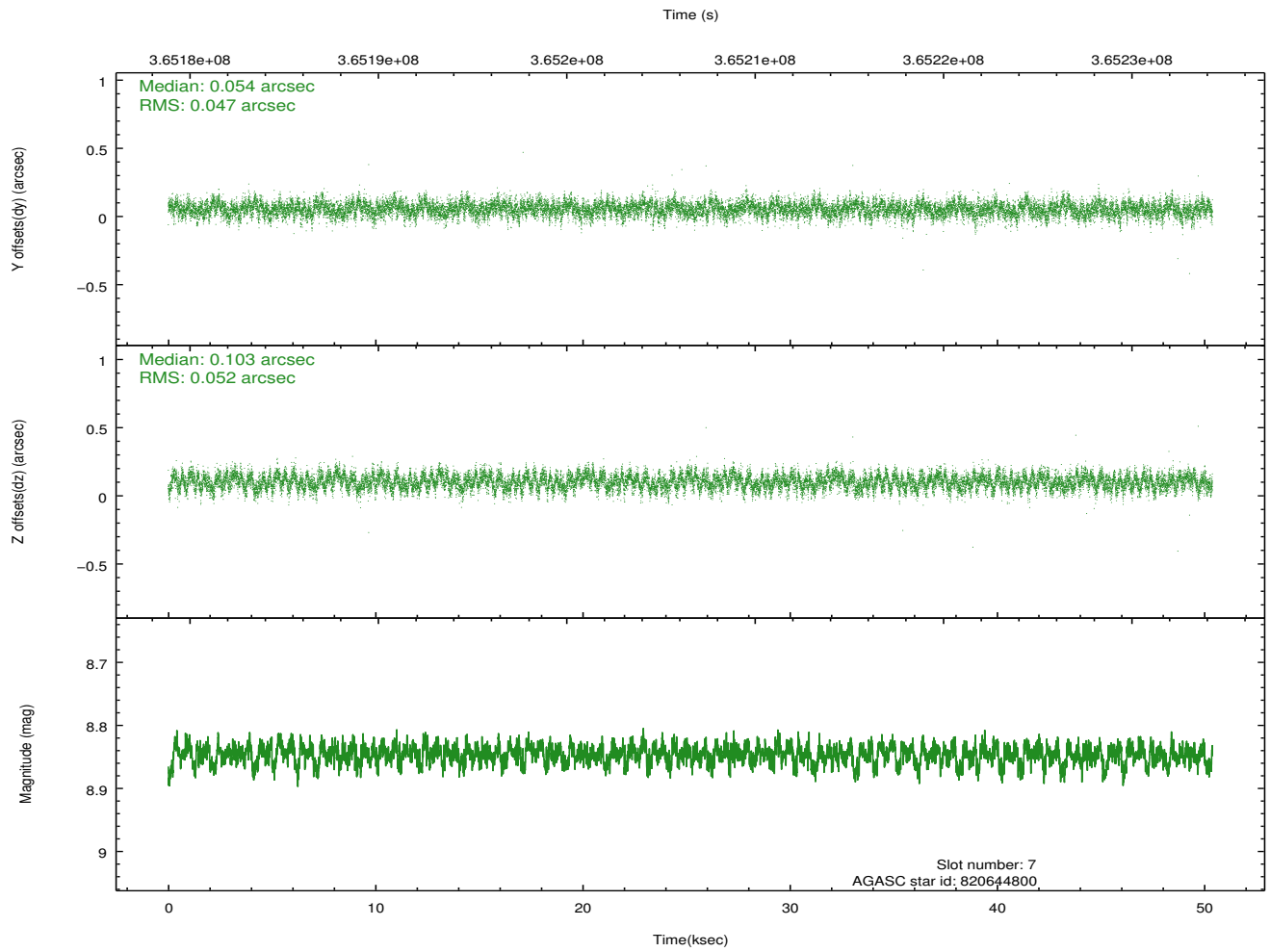
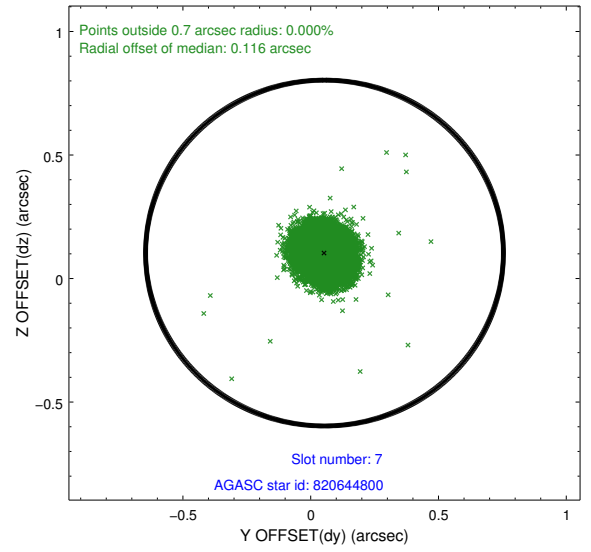
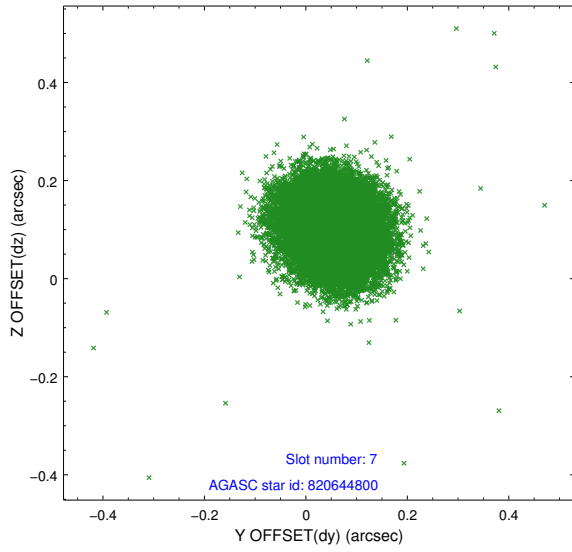
### 2.4.3 Slot 5



## 2.4.4 Slot 6

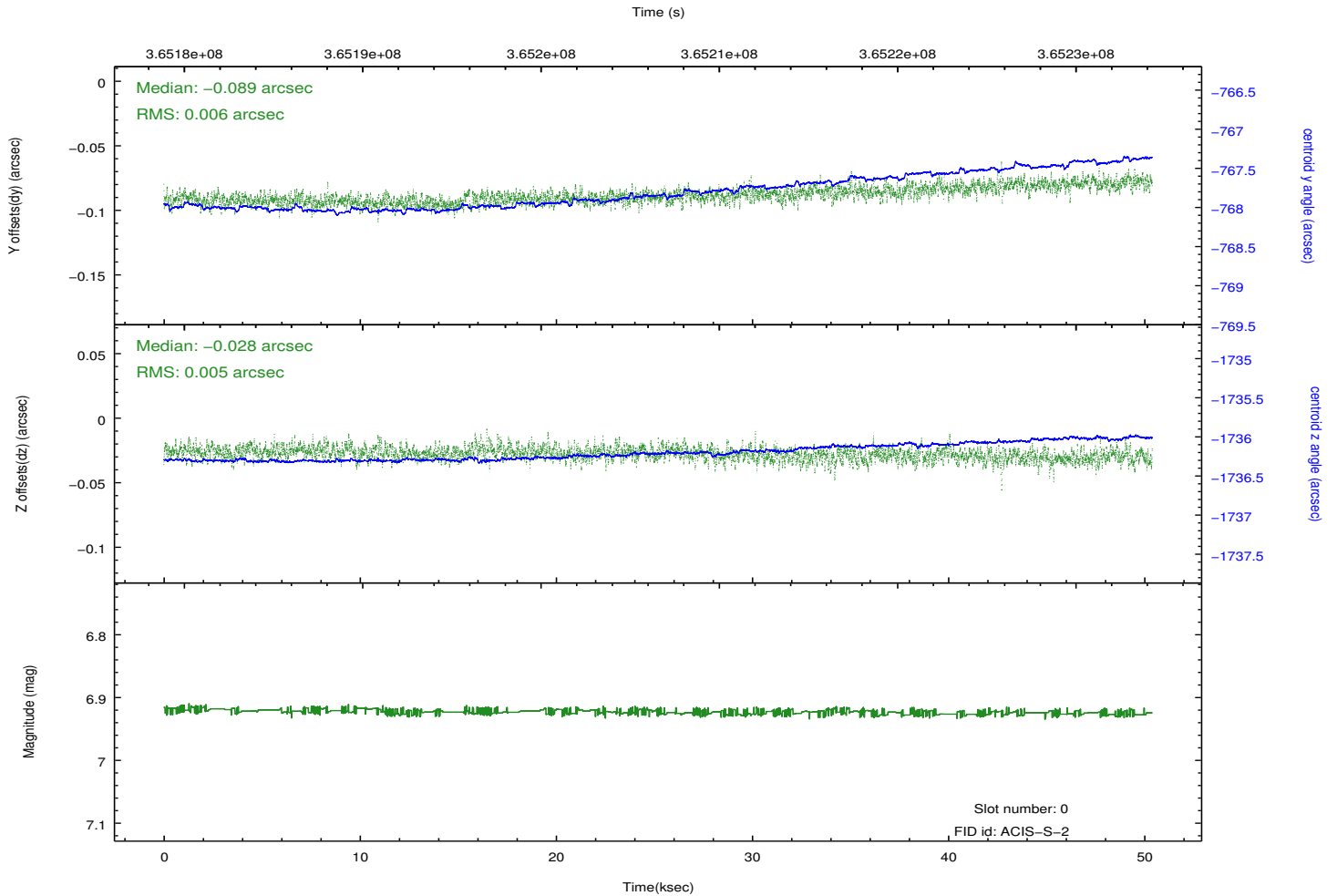
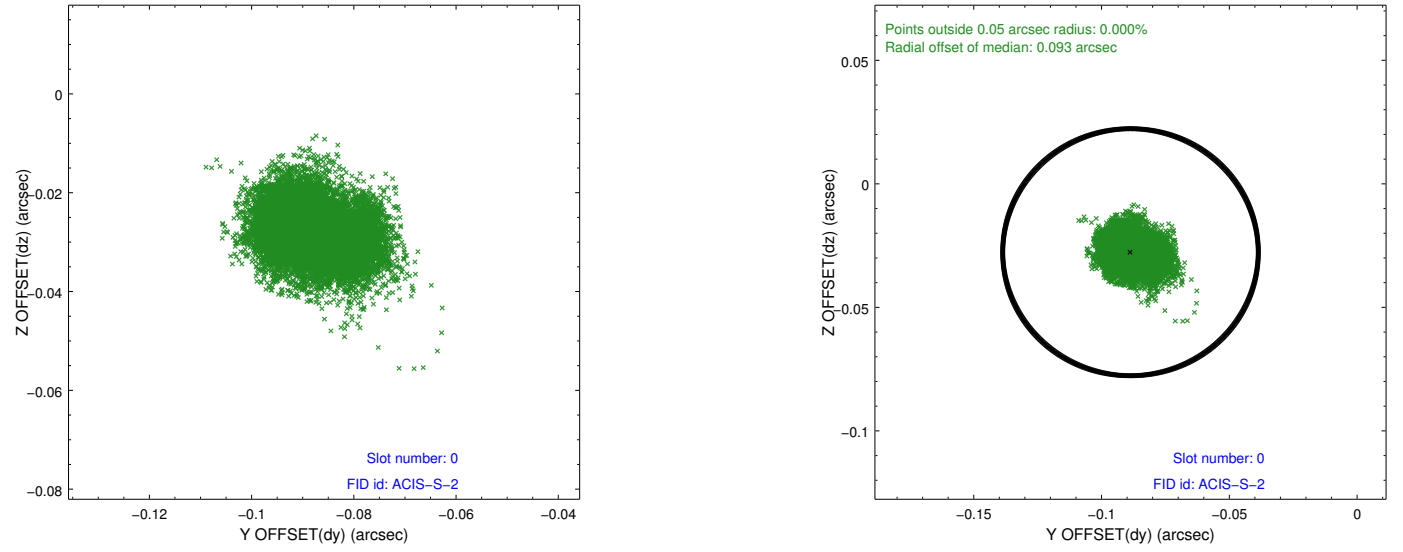


### 2.4.5 Slot 7

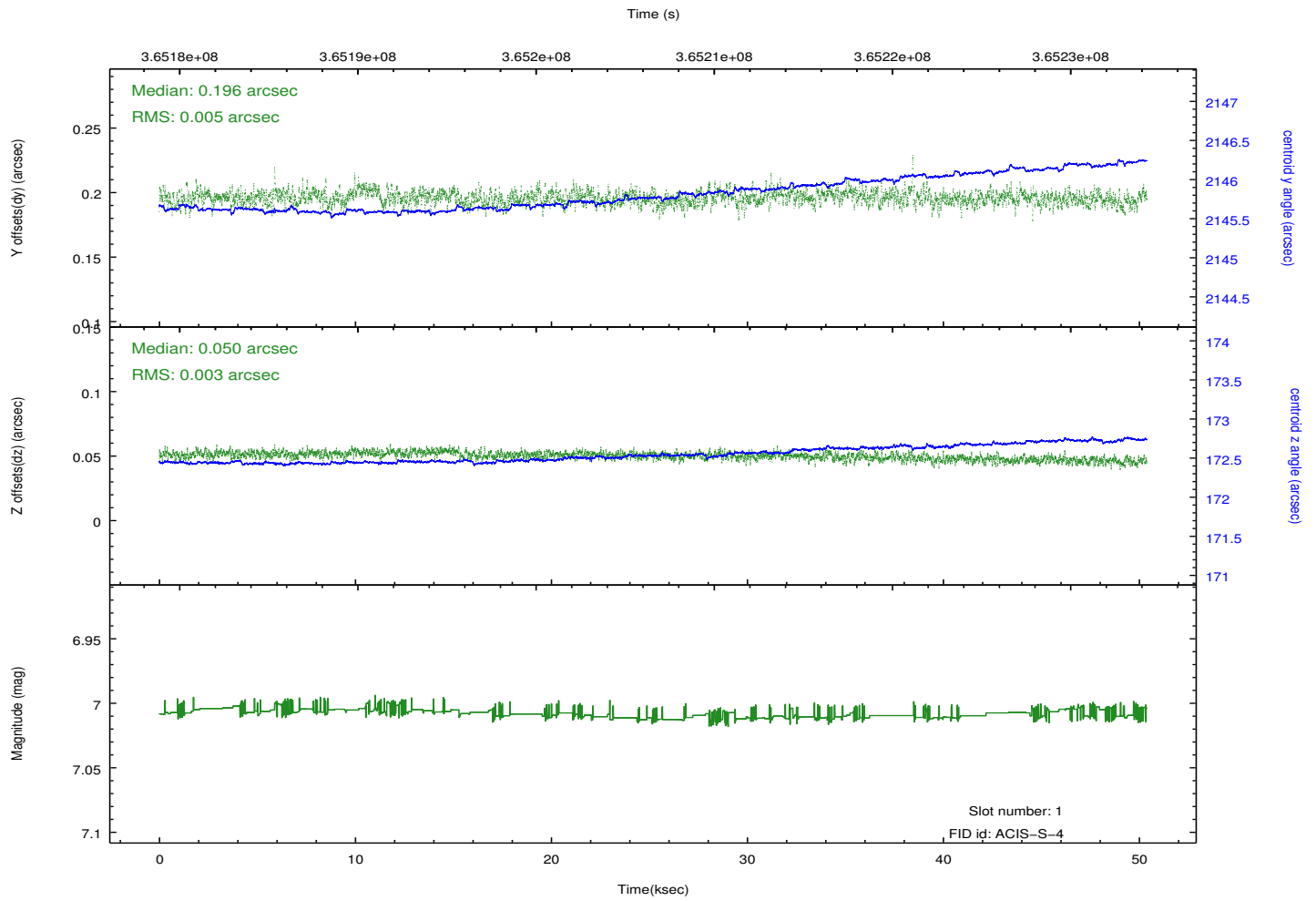
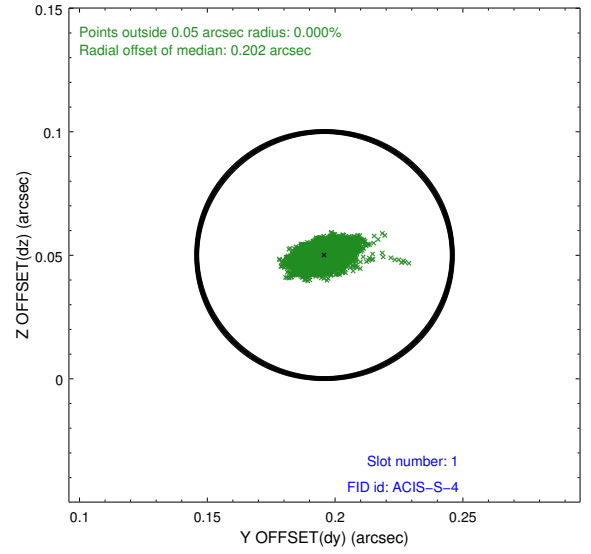
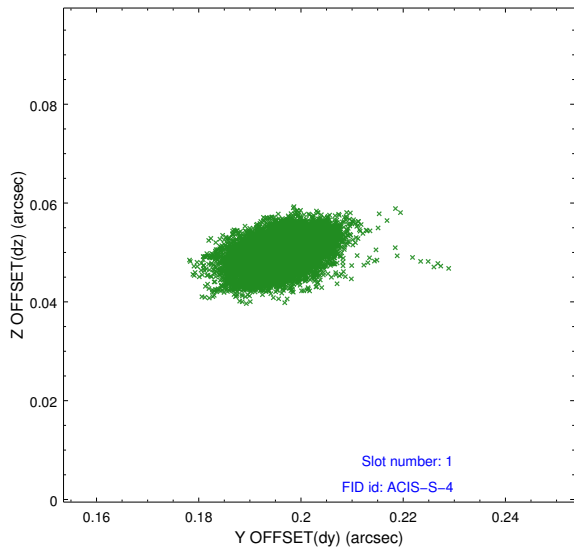


## 2.5 FID Slots

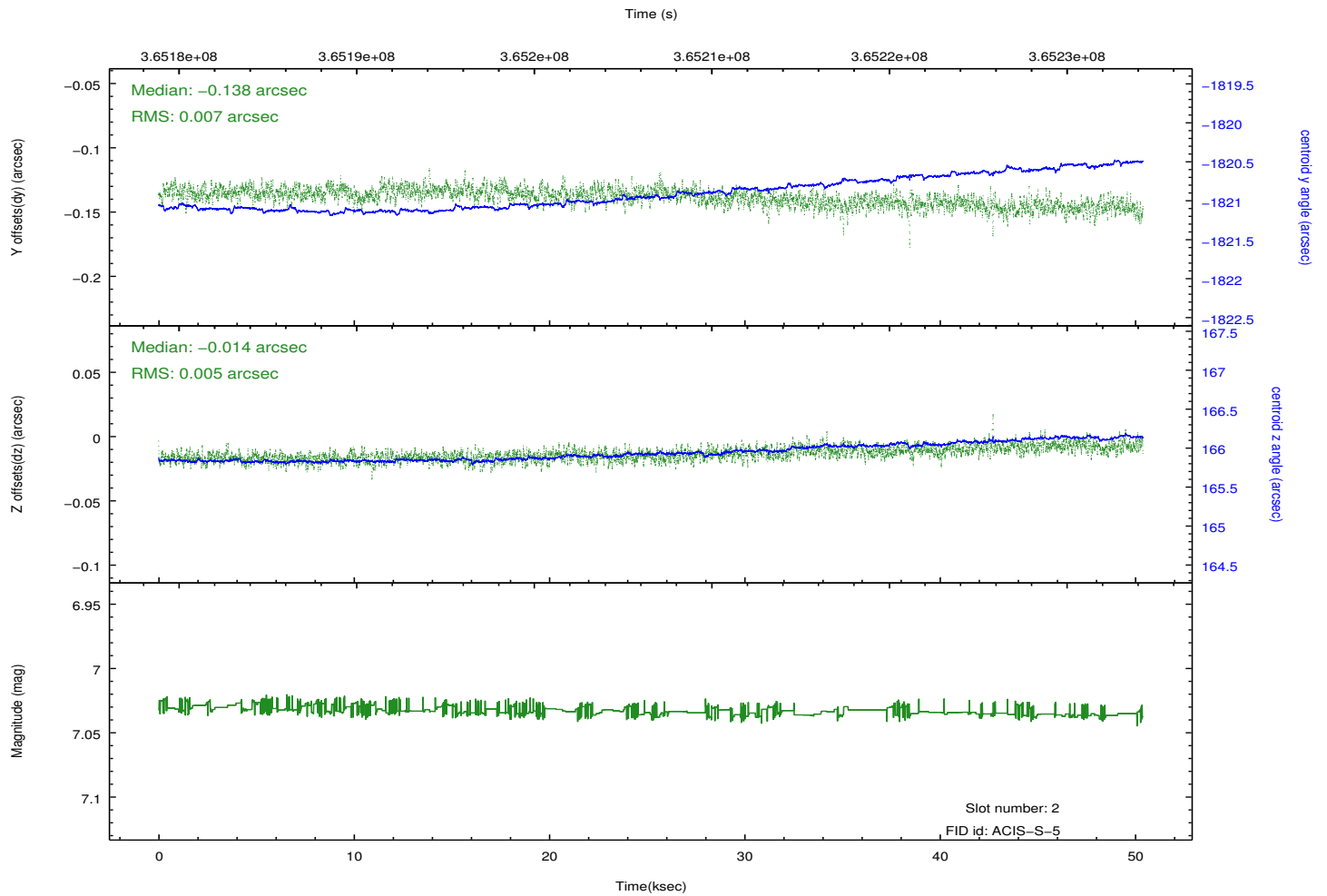
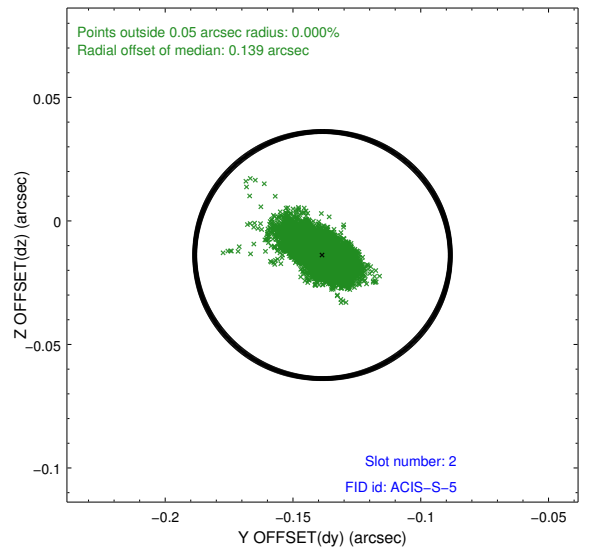
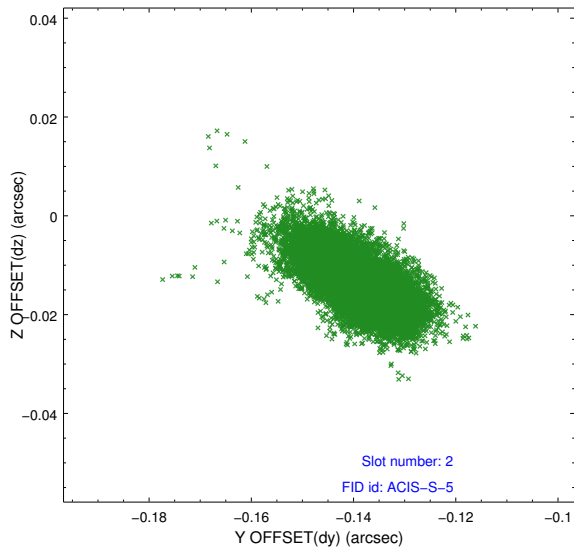
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.06.14
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	50.3744007

## A.2 Comments