

# V&V Reference Report

## L2 ASCDS Version : 10.4.2.1

Observation 17266 - L2 Version 1  
Chandra X-Ray Center

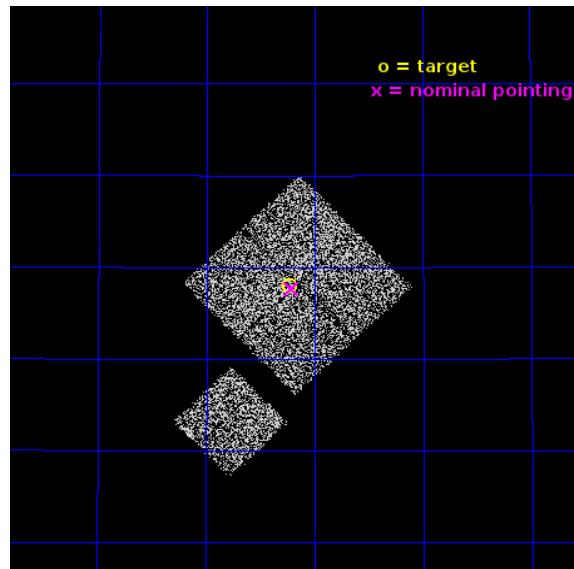
L2 Processing Date : Dec 4 2015

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# 1 Front

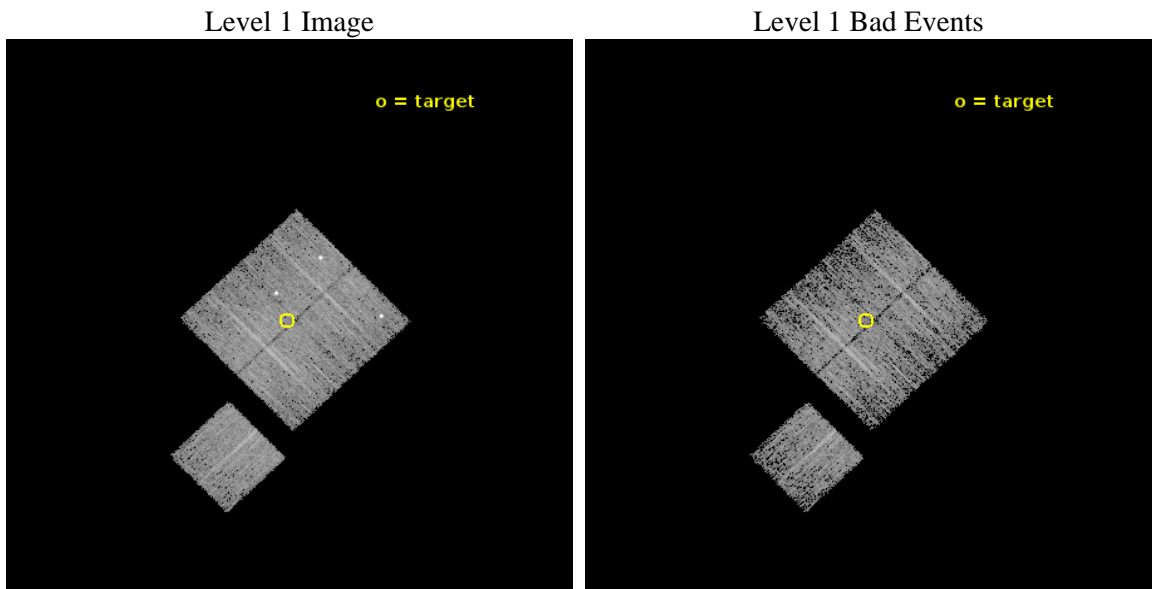
seq_num	801511	Sequence number
obs_id	17266	Observation id
title	Perseus: A New, Low-Redshift Anchor for Cluster Cosmology	Proposal
observer	Prof. Steven Allen	Principal investigator
object	Perseus cluster	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	51.05703	Observer's specified target RA [deg]
dec_targ	40.967283	Observer's specified target Dec [deg]
ra_nom	51.053907781805	Nominal RA [deg]
dec_nom	40.961336956597	Nominal Dec [deg]
roll_nom	225.89897894066	Nominal Roll [deg]
revision	1	Processing version of data
ontime	4770.858966589	Sum of GTIs [s]
livetime	4708.5241819352	Livetime [s]
ontime0	4774.0000368357	Sum of GTIs [s]
ontime1	4774.0000368357	Sum of GTIs [s]
ontime2	4774.0000368357	Sum of GTIs [s]
ontime3	4770.858966589	Sum of GTIs [s]
ontime6	4774.0000368357	Sum of GTIs [s]
l2events	13813	Number of level 2 events



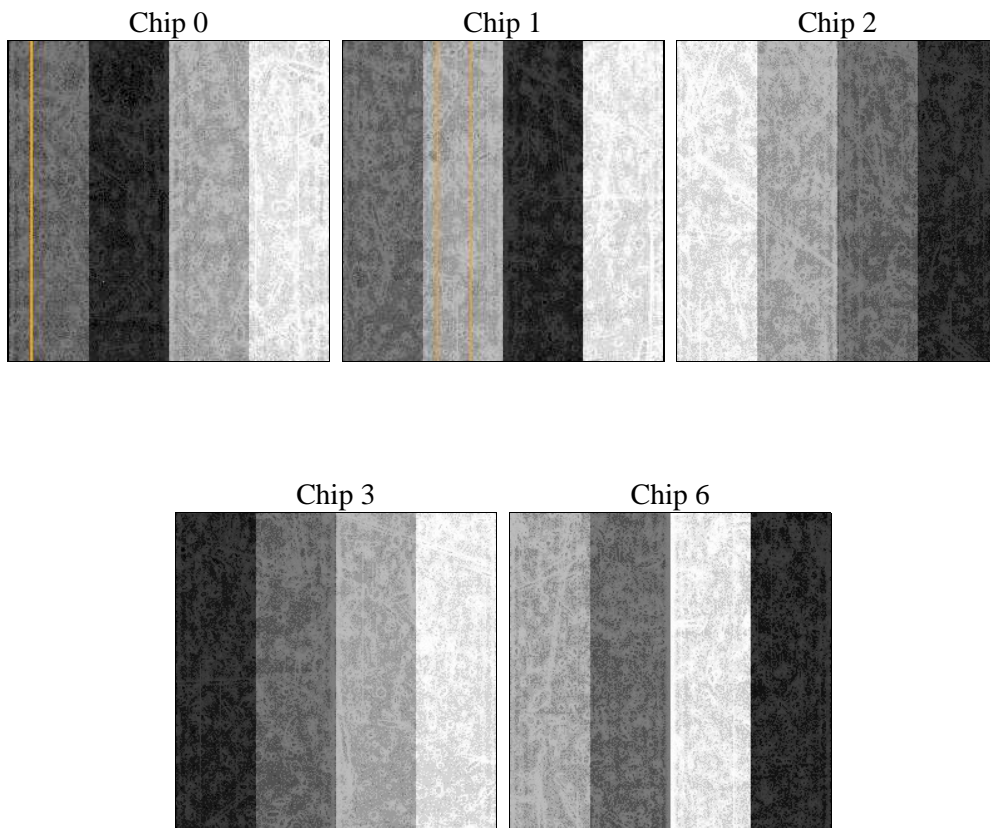
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.4.2.1	Processing system revision	ontime	4770.858966589	Sum of GTIs [s]
caldsver	4.6.10a	&#160	ontime0	4774.0000368357	Sum of GTIs [s]
date	2015-12-04T19:32:23	Date and time of file creation	ontime1	4774.0000368357	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	4774.0000368357	Sum of GTIs [s]
			ontime3	4770.858966589	Sum of GTIs [s]
			ontime6	4774.0000368357	Sum of GTIs [s]
			l1events	144020	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	29050	29270	29193	28018	28489
rejected events	24302	23029	26160	24976	25251
rejected %	83%	78%	89%	89%	88%

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2707	3945	1214	1076	1117
	9%	13%	4%	3%	3%
grade 1 events	32	16	19	19	12
	0%	0%	0%	0%	0%
grade 2 events	776	876	650	677	806
	2%	2%	2%	2%	2%
grade 3 events	297	359	303	306	295
	1%	1%	1%	1%	1%
grade 4 events	267	319	310	336	267
	0%	1%	1%	1%	0%
grade 5 events	1178	1237	1108	1379	1242
	4%	4%	3%	4%	4%
grade 6 events	708	749	558	652	758
	2%	2%	1%	2%	2%
grade 7 events	23085	21769	25031	23573	23992
	79%	74%	85%	84%	84%

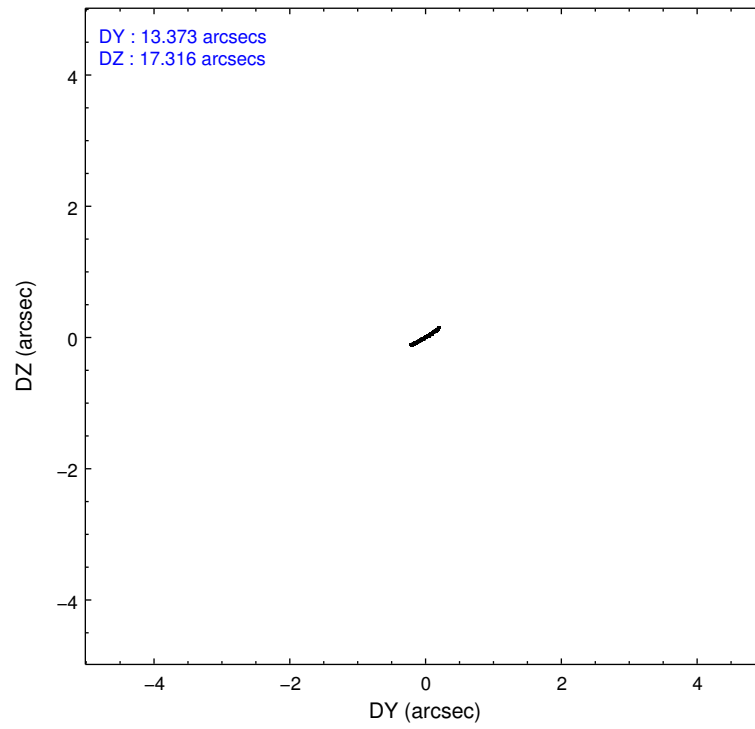
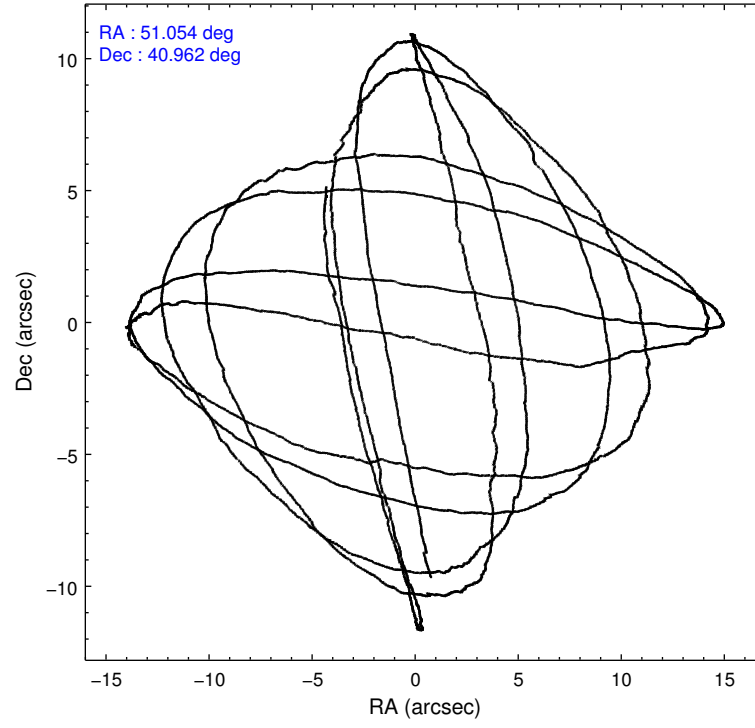


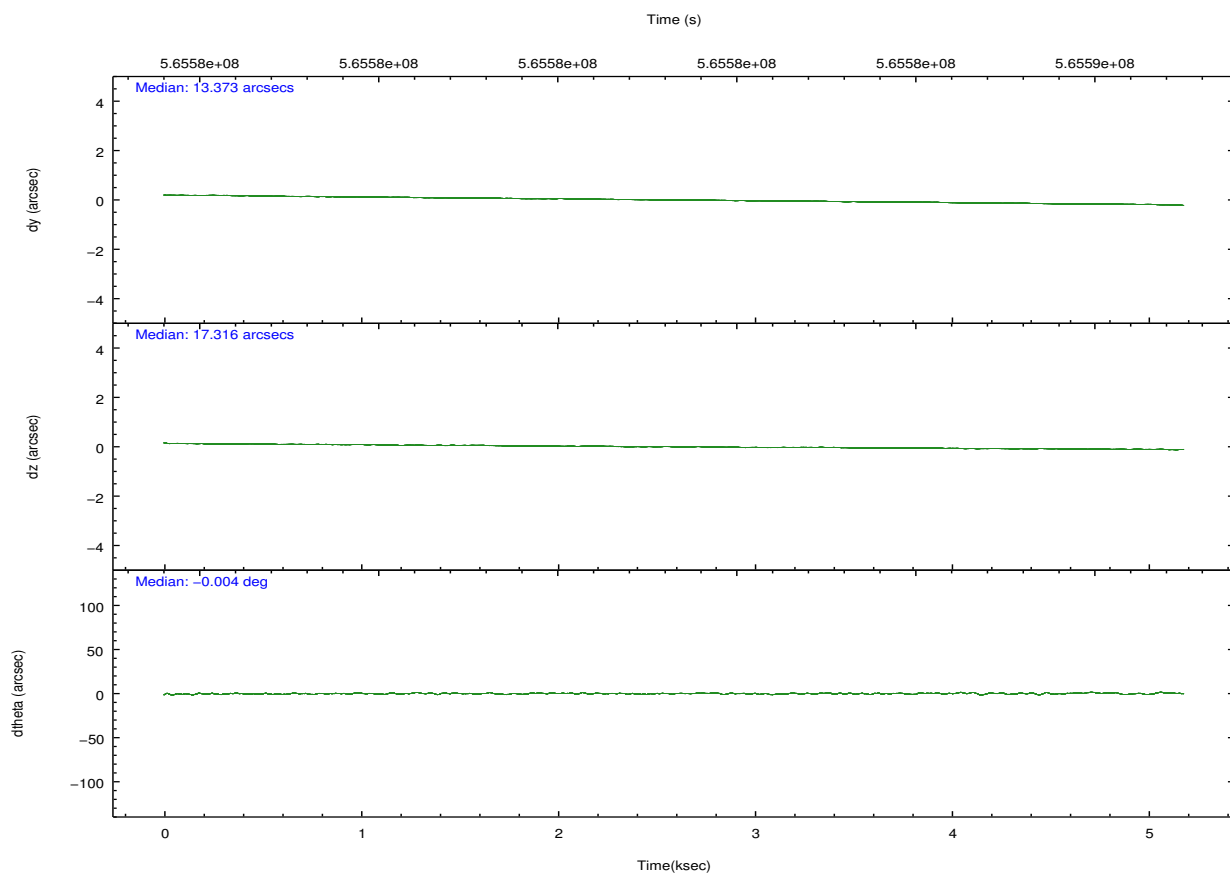
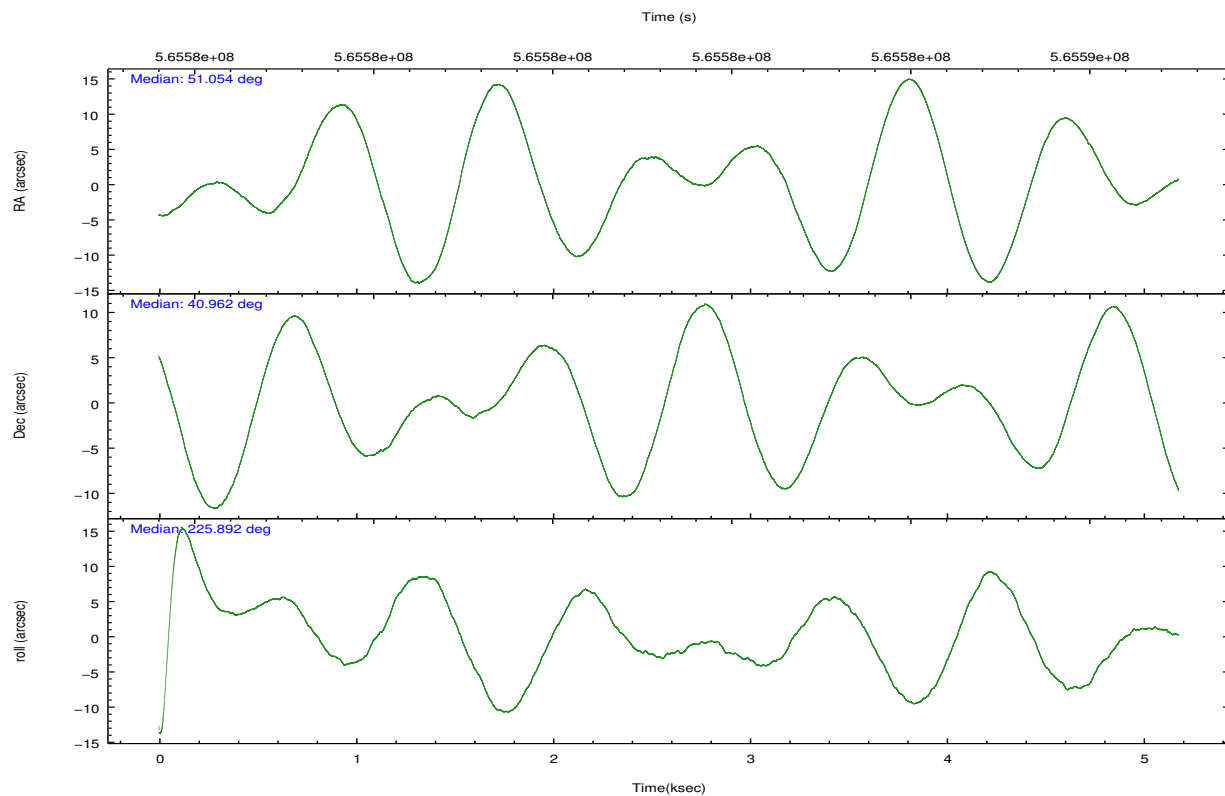
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-01236	ACIS-01236
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	51.062684	51.05390778180472
[deg] Pointing Dec	40.988166	40.96133695659697
[deg] Pointing Roll	225.684536	225.8989789406609
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-233.592463	-233.5874344608287
[mm] SIM translation stage offset	0	-0.005018542100998502
[s] Observation start time (MET)	565581231.184000	565580822.17803
Observation start date	2015-12-04T01:52:43	2015-12-04T01:47:02
[s] Observation end time (MET)	565586231.184000	565587528.2409101
Observation end date	2015-12-04T03:16:03	2015-12-04T03:38:48
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	Y	Y
CCD I1 on	Y	Y
CCD I2 on	Y	Y
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O1	Y
CCD S3 on	N	N
CCD S4 on	N	N
CCD S5 on	N	N
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



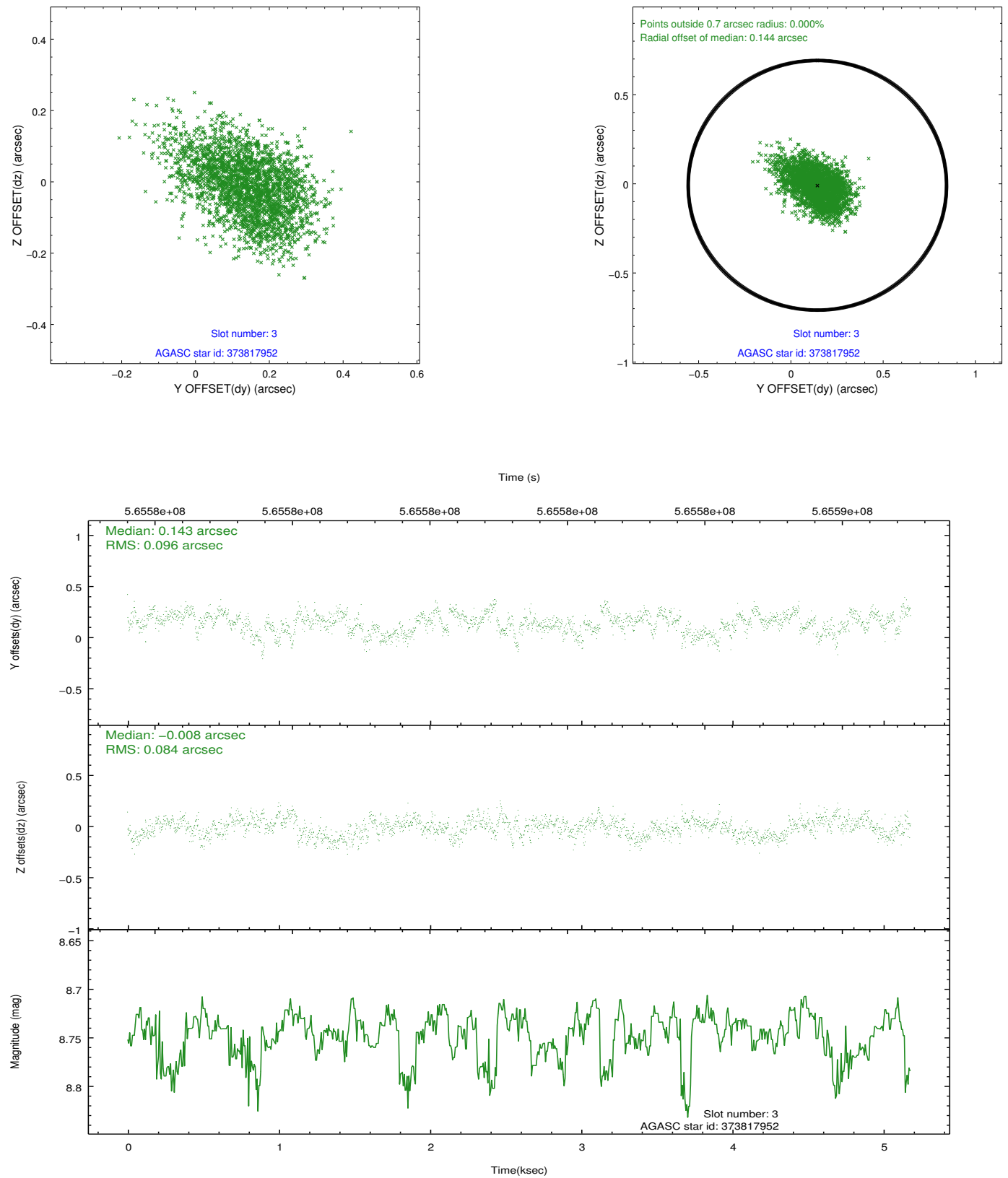


### Slot Statistics

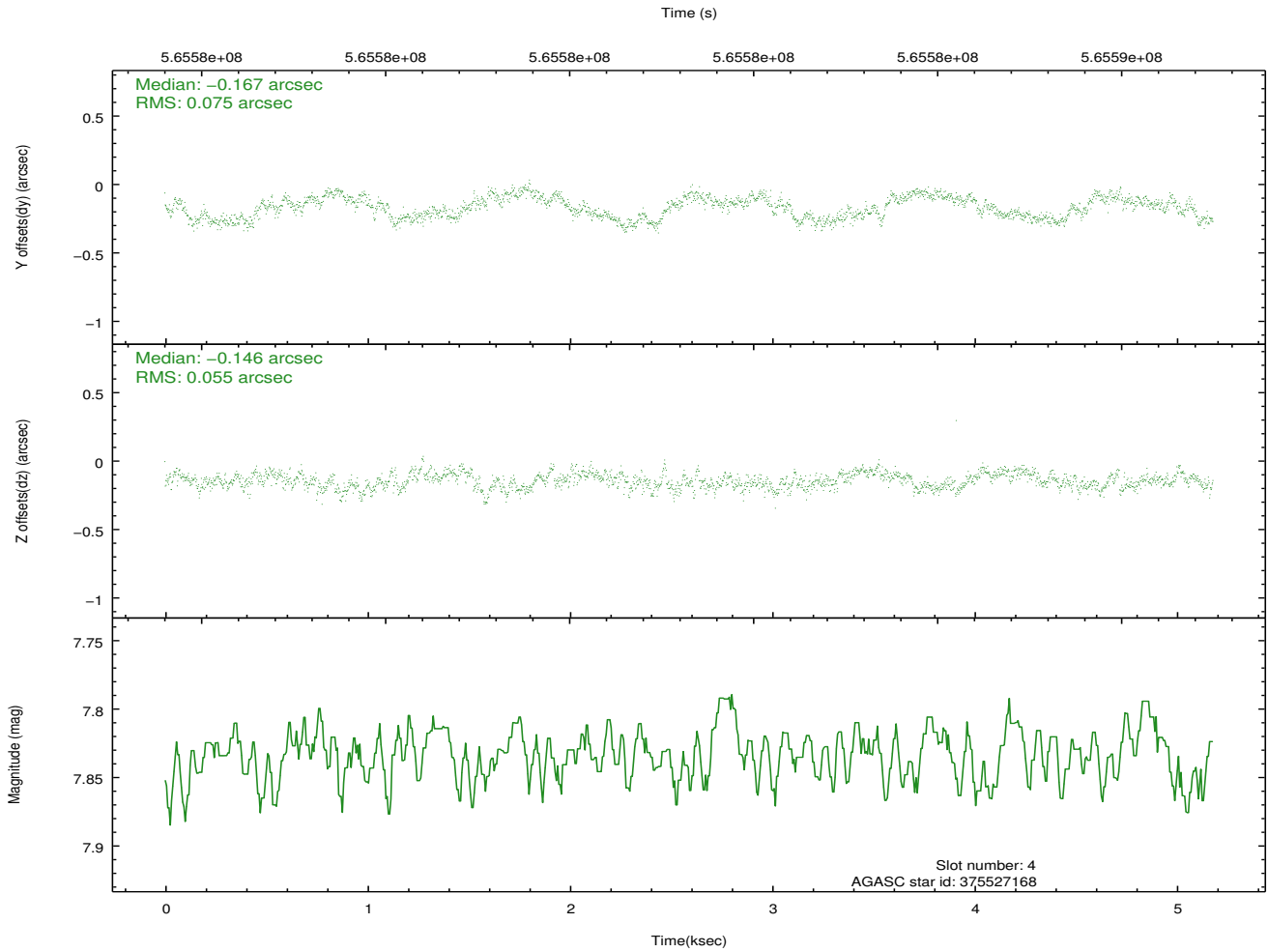
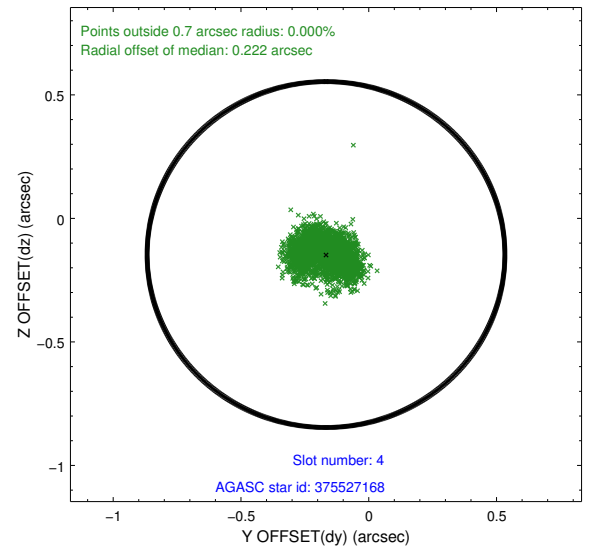
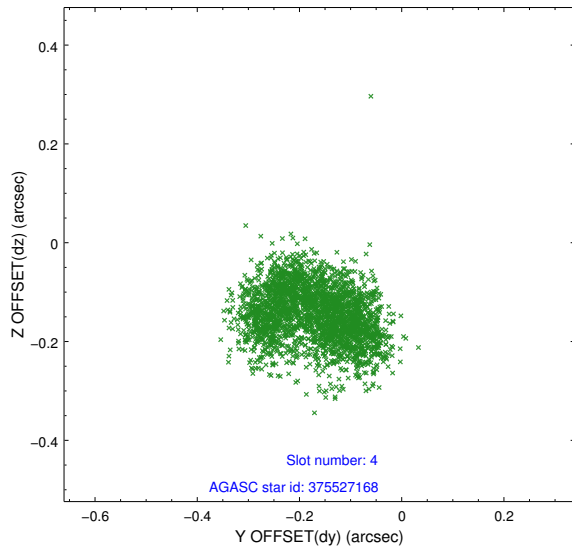
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.27	1264	-0.037	-0.100	0.008	0.014	0.000000	0.000000	926.12	-841.06
1	FID		ACIS-I-4	7.18	1263	0.333	0.111	0.008	0.013	0.000000	0.000000	2147.13	1058.40
2	FID		ACIS-I-5	7.27	1264	-0.394	0.060	0.006	0.013	0.000000	0.000000	-1820.79	1057.43
3	GUIDE	used	373817952	8.74	2527	0.143	-0.008	0.135	0.218	49.913424	40.978510	2193.02	-2224.46
4	GUIDE	used	375527168	7.83	2527	-0.167	-0.146	0.102	0.148	50.968367	40.629276	1105.24	717.41
5	GUIDE	used	375530408	8.96	2525	0.059	-0.215	0.112	0.183	51.688550	40.591610	-177.68	2217.36
6	GUIDE	used	375534552	8.21	2527	0.133	0.204	0.099	0.161	50.877490	41.206927	-212.84	-907.87
7	GUIDE	used	376046208	8.16	2527	-0.163	0.159	0.101	0.161	51.749247	41.273134	-2037.00	607.31

## 2.4 Star Slots

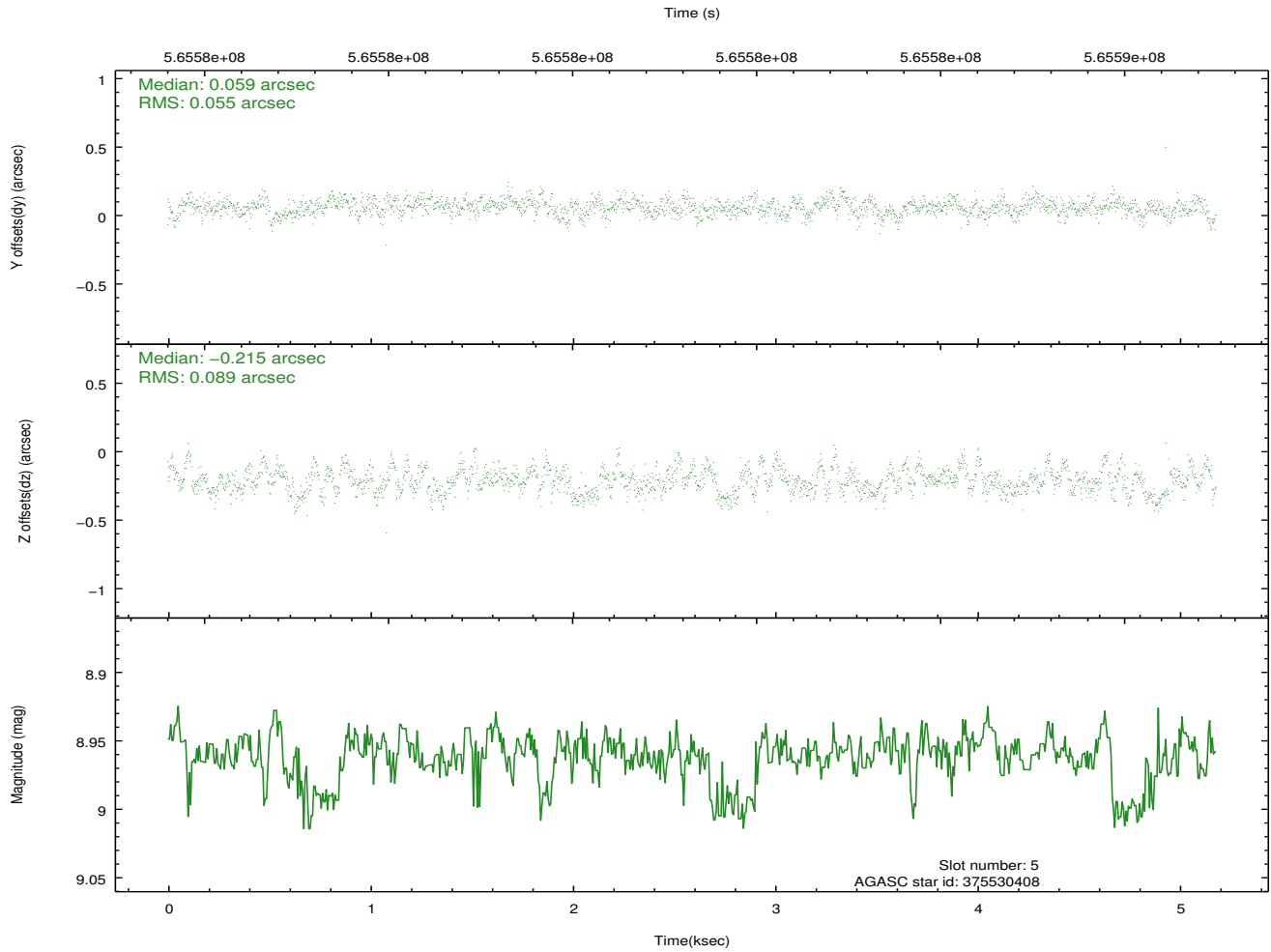
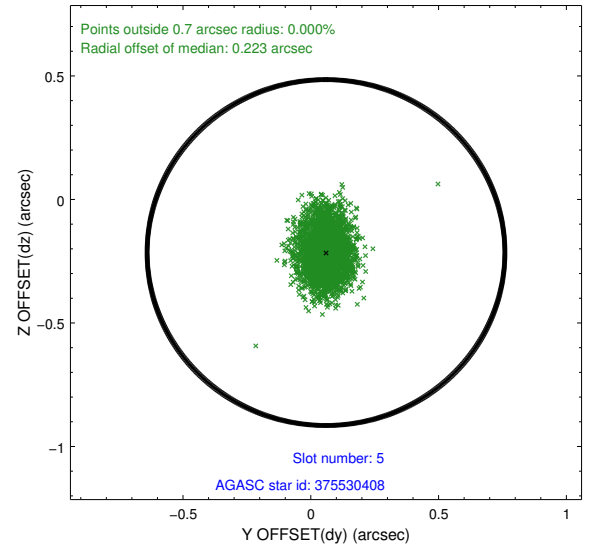
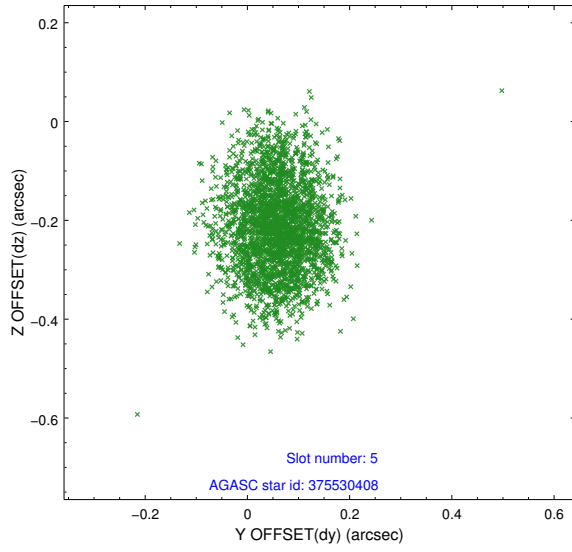
### 2.4.1 Slot 3



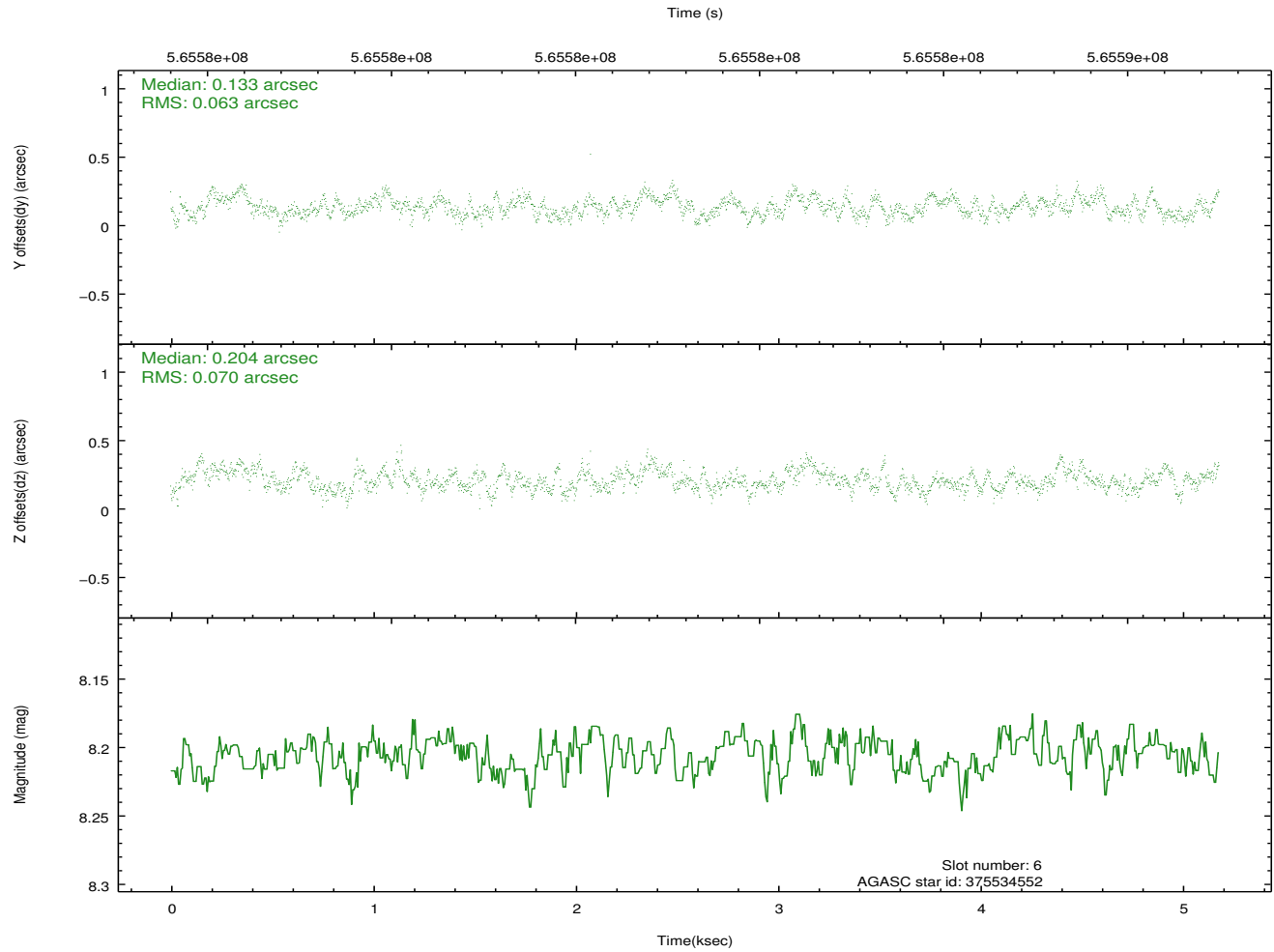
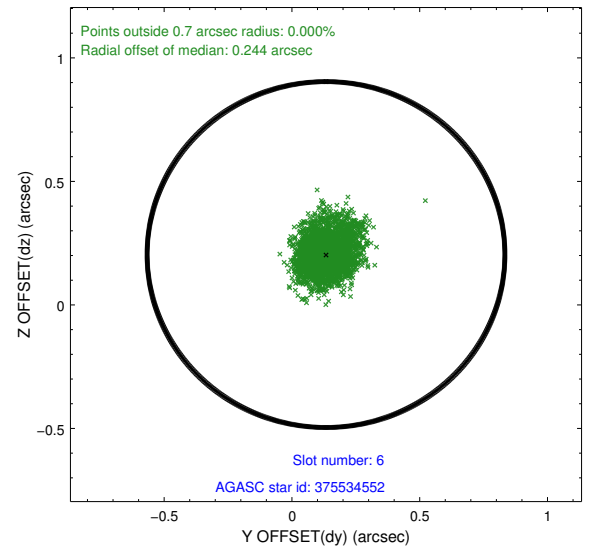
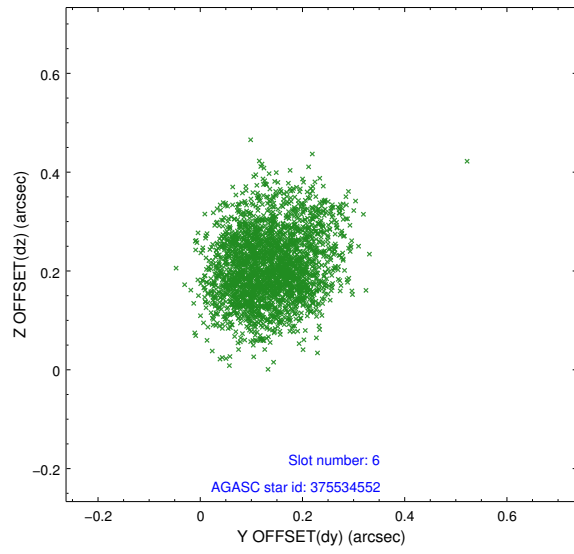
## 2.4.2 Slot 4



### 2.4.3 Slot 5

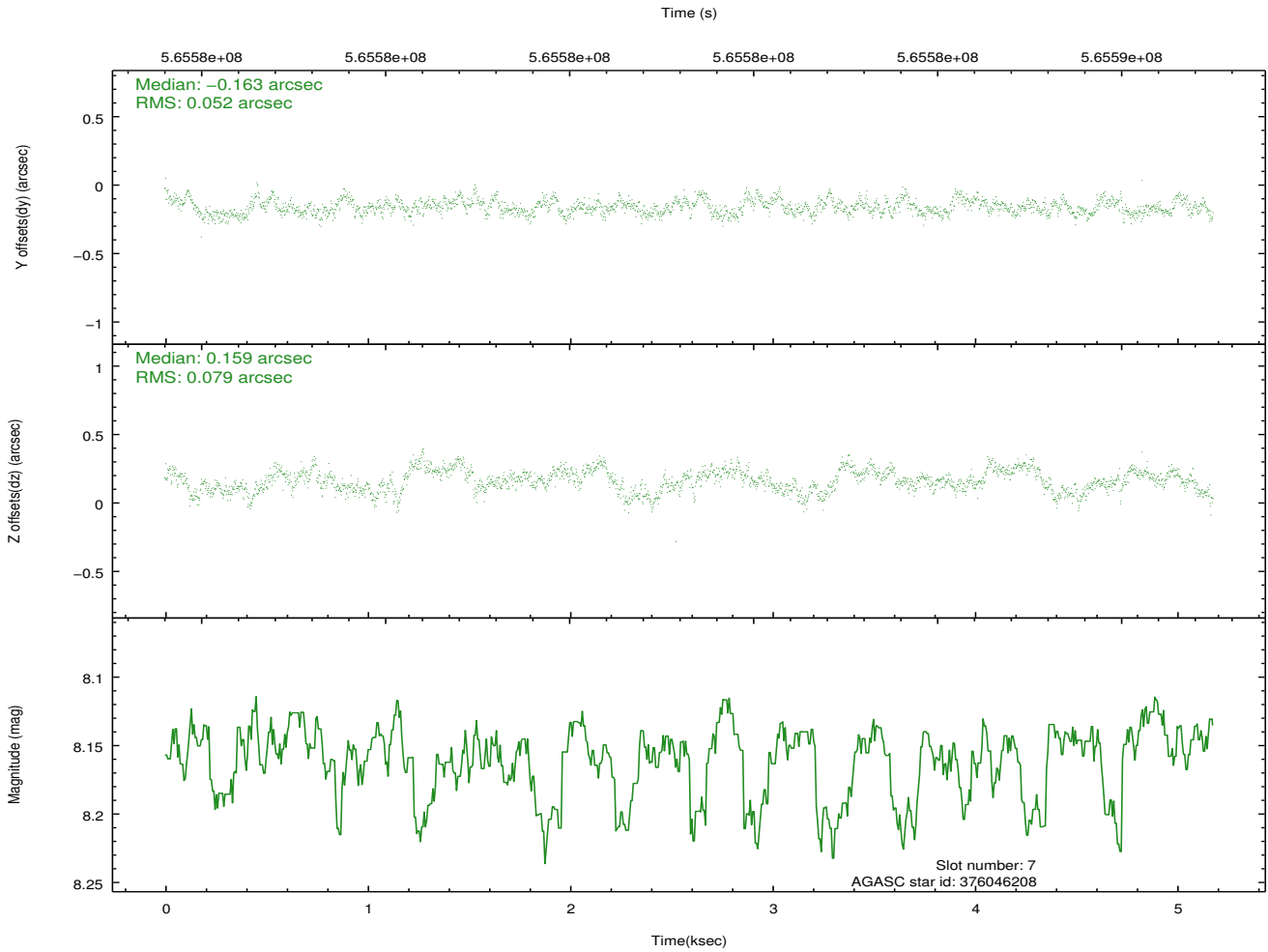
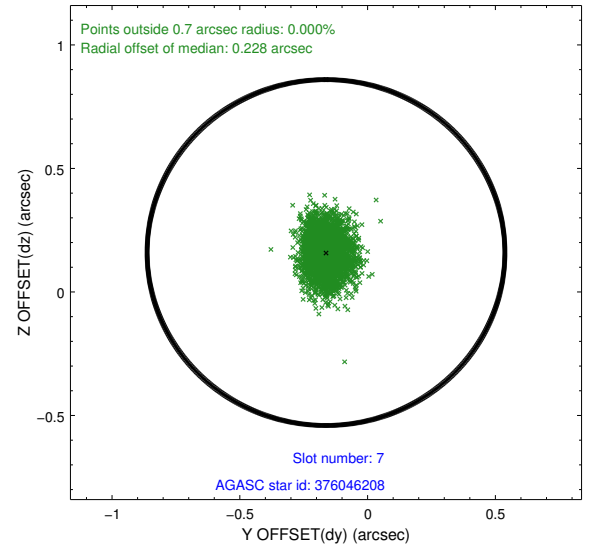
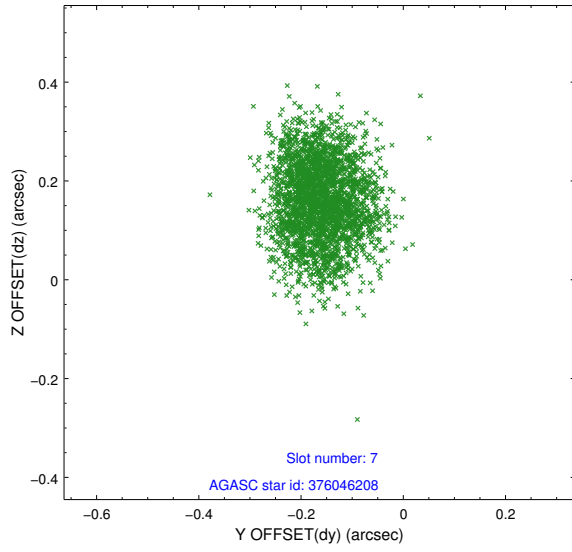


## 2.4.4 Slot 6



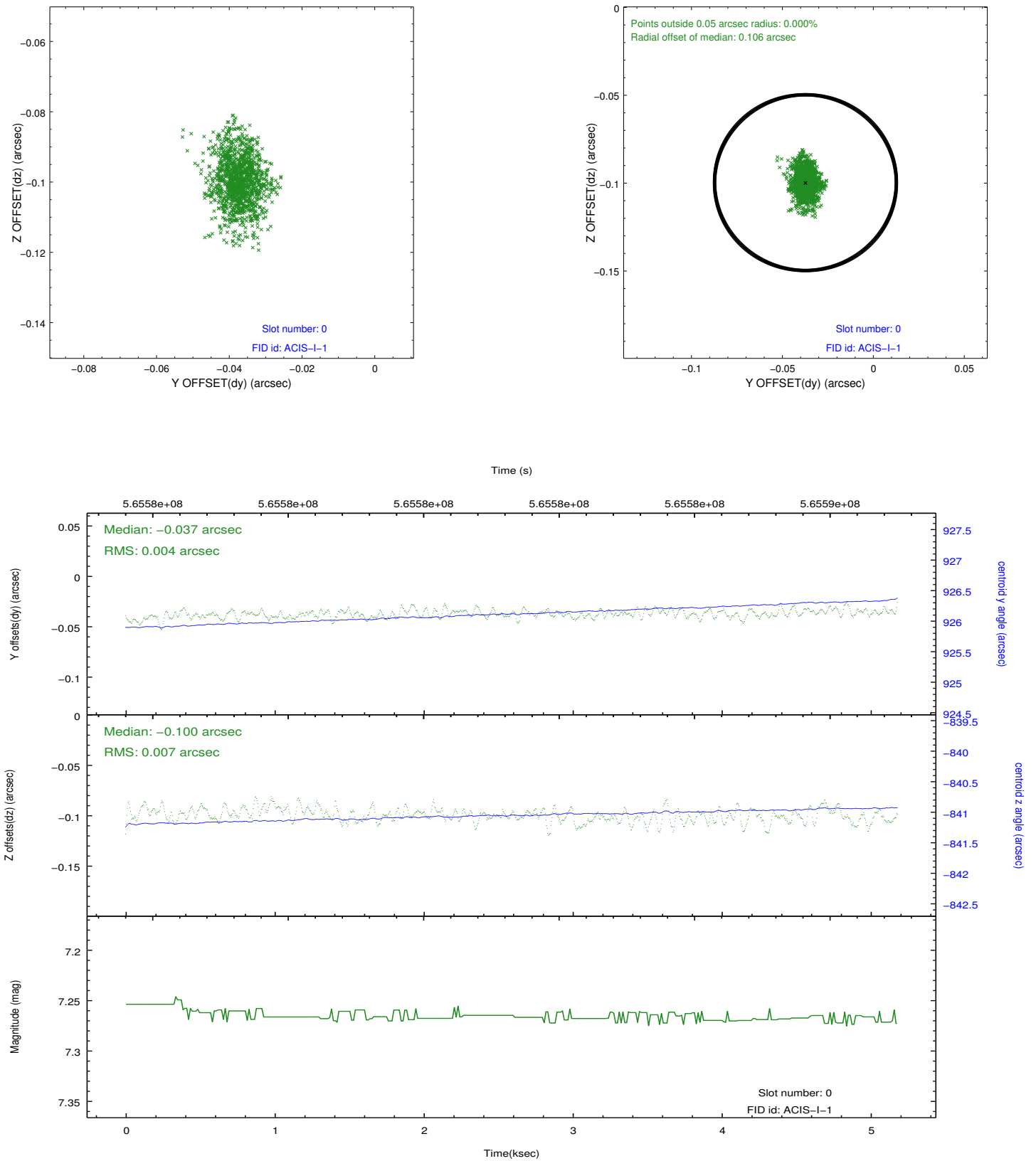


## 2.4.5 Slot 7

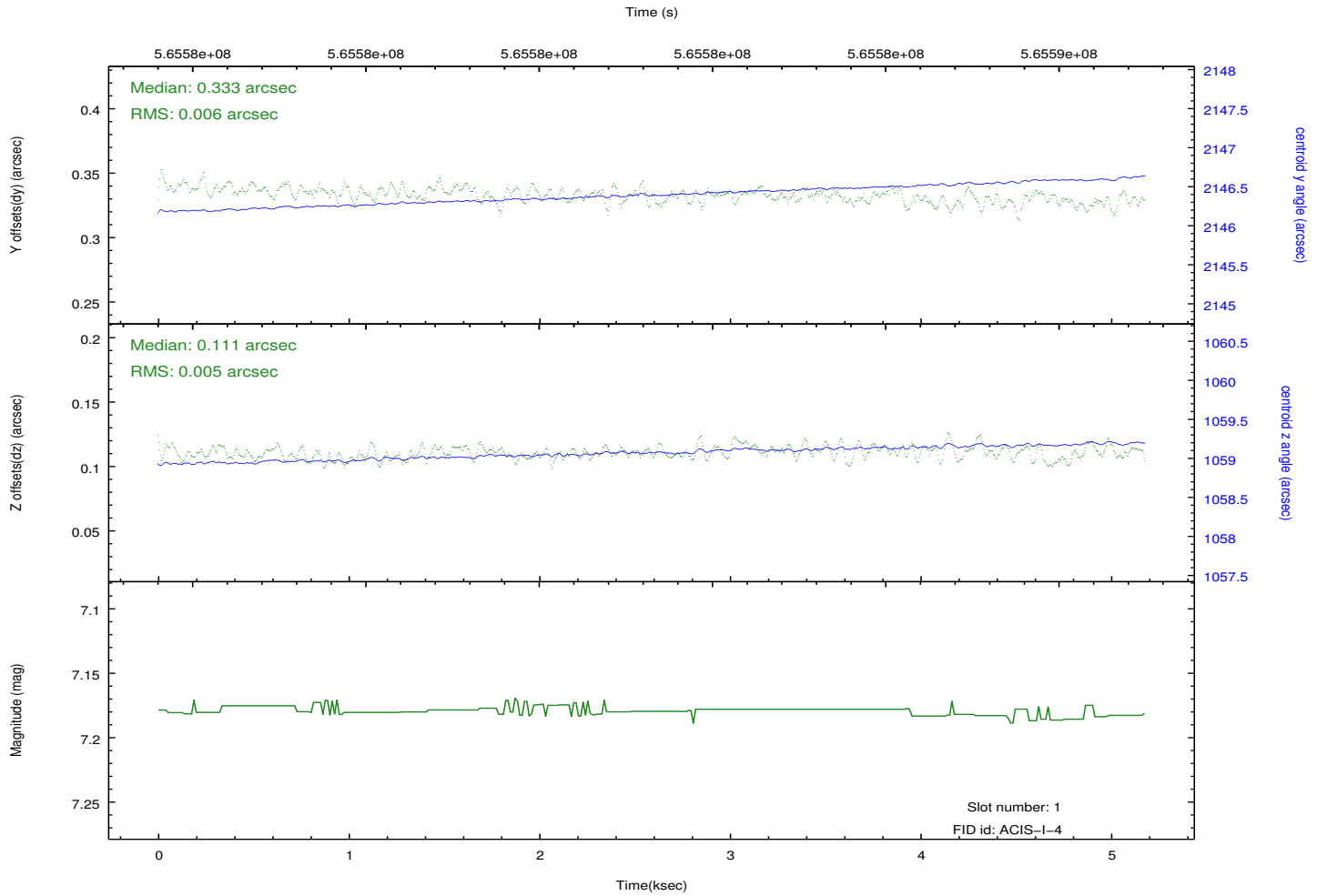
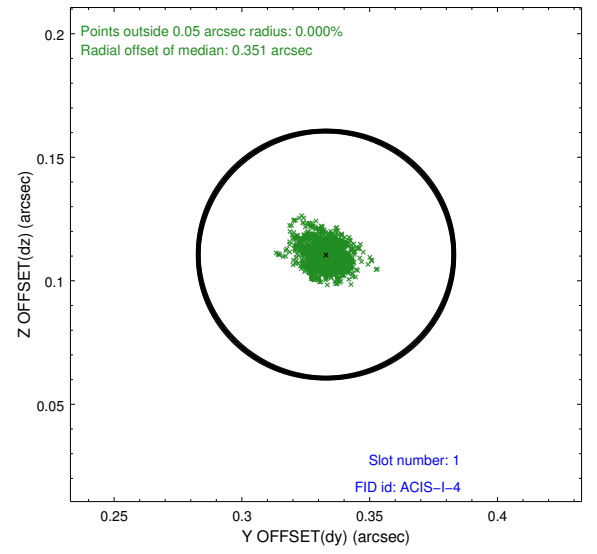
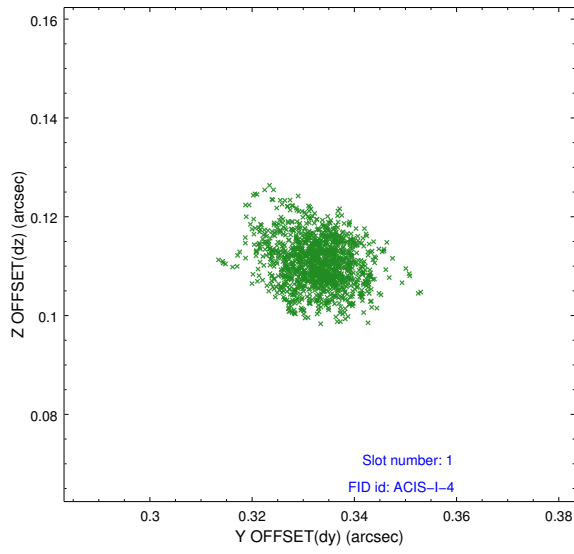


## 2.5 FID Slots

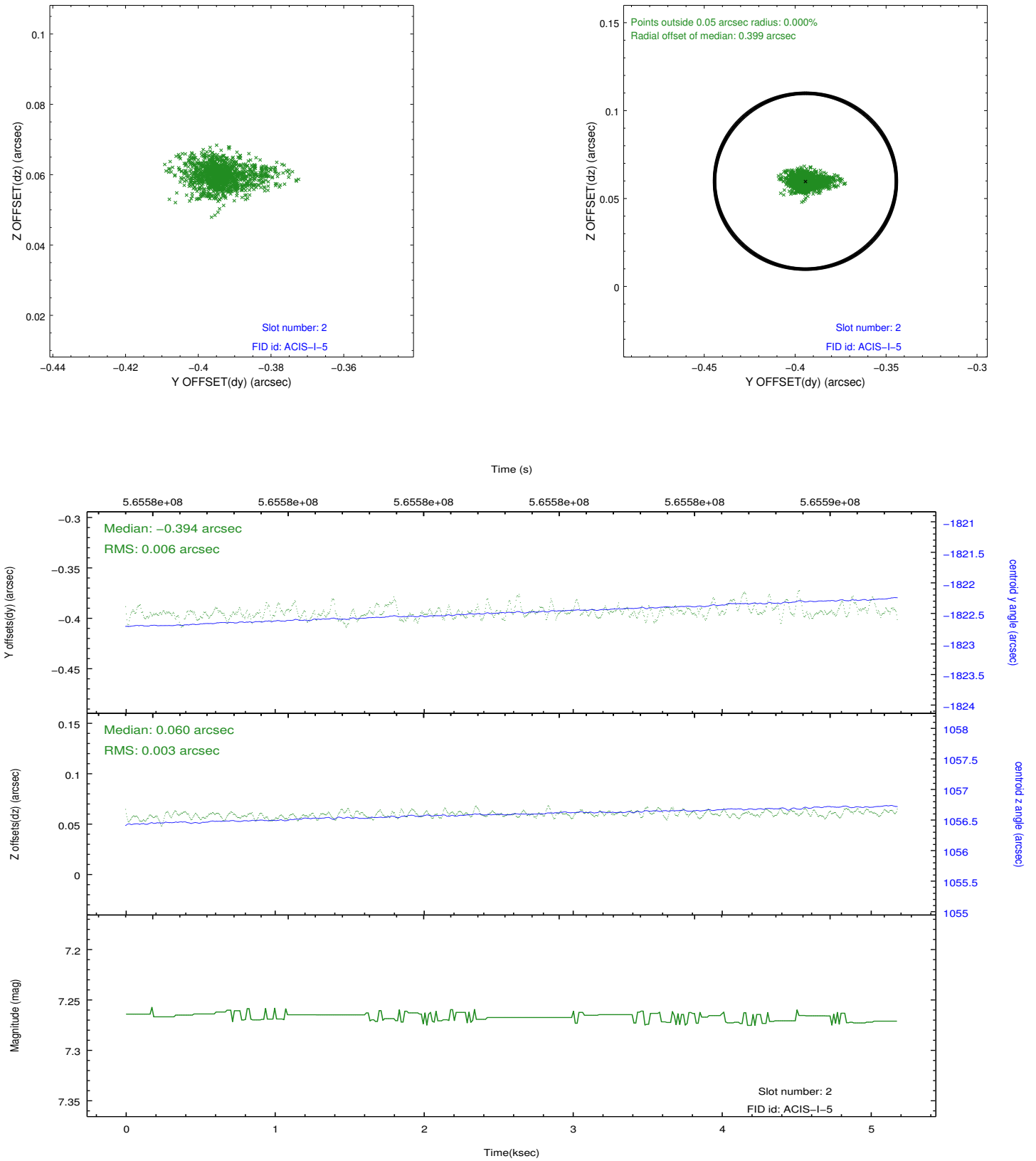
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.12.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.770858966589

### A.2 Comments