

# V&V Reference Report

## L2 ASCDS Version : 10.4.2.1

Observation 17259 - L2 Version 1  
Chandra X-Ray Center

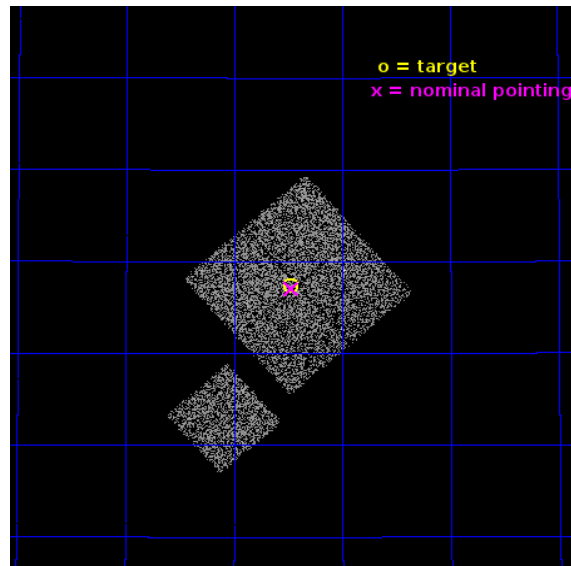
L2 Processing Date : Dec 4 2015

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# 1 Front

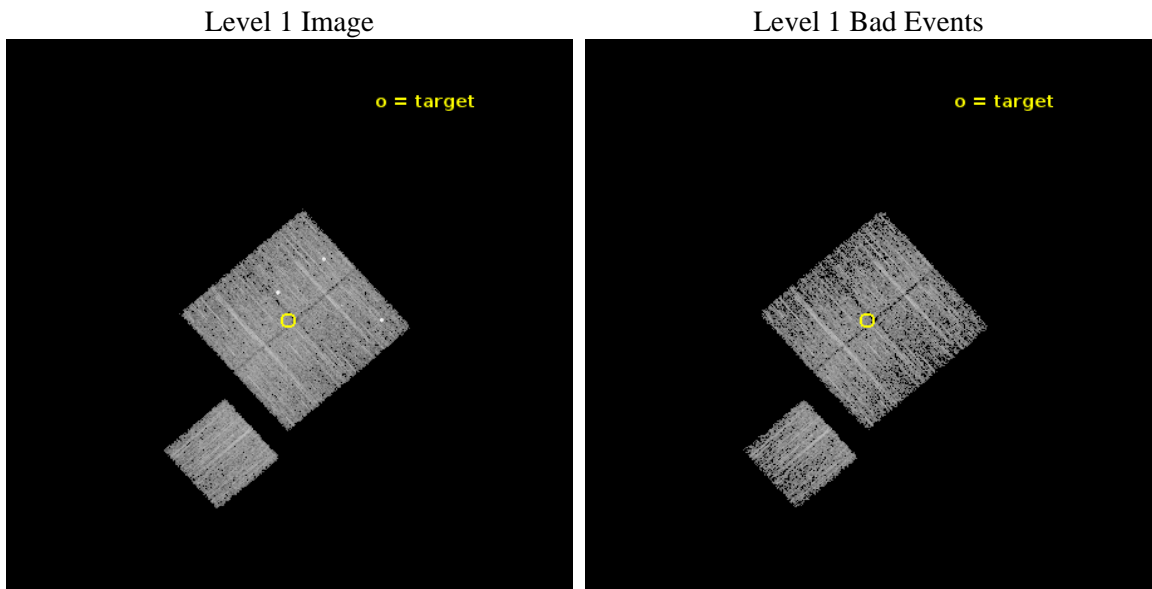
seq_num	801504	Sequence number
obs_id	17259	Observation id
title	Perseus: A New, Low-Redshift Anchor for Cluster Cosmology	Proposal
observer	Prof. Steven Allen	Principal investigator
object	Perseus cluster	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.37038	Observer's specified target RA [deg]
dec_targ	40.956861	Observer's specified target Dec [deg]
ra_nom	49.367747577111	Nominal RA [deg]
dec_nom	40.950791085468	Nominal Dec [deg]
roll_nom	228.60978775944	Nominal Roll [deg]
revision	1	Processing version of data
ontime	4772.6924700737	Sum of GTIs [s]
livetime	4710.3337293471	Livetime [s]
ontime0	4772.5693501234	Sum of GTIs [s]
ontime1	4772.6103900671	Sum of GTIs [s]
ontime2	4772.65143013	Sum of GTIs [s]
ontime3	4772.6924700737	Sum of GTIs [s]
ontime6	4772.5282999277	Sum of GTIs [s]
l2events	15106	Number of level 2 events



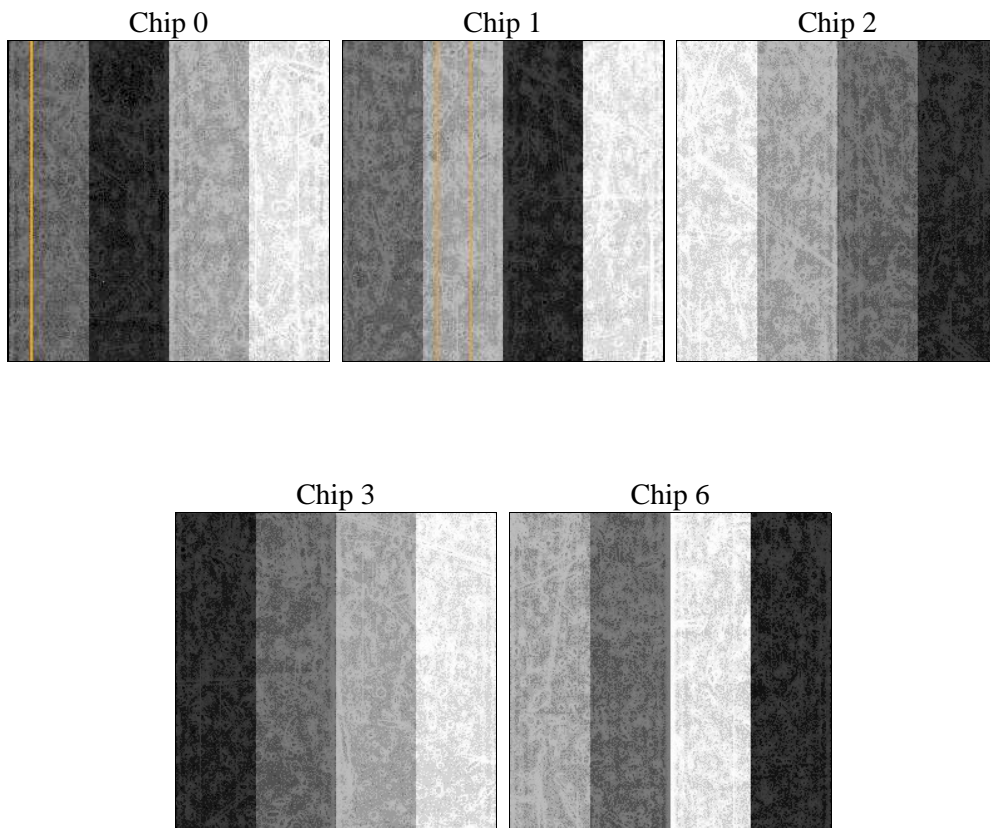
## 2 OBI

### 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	4772.6924700737	Sum of GTIs [s]
caldsver	4.6.10a	&#160	ontime0	4772.5693501234	Sum of GTIs [s]
date	2015-12-04T19:32:33	Date and time of file creation	ontime1	4772.6103900671	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	4772.65143013	Sum of GTIs [s]
			ontime3	4772.6924700737	Sum of GTIs [s]
			ontime6	4772.5282999277	Sum of GTIs [s]
			l1events	144926	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	26577	31462	29946	27891	29050
rejected events	21616	24934	26559	24414	25746
rejected %	81%	79%	88%	87%	88%

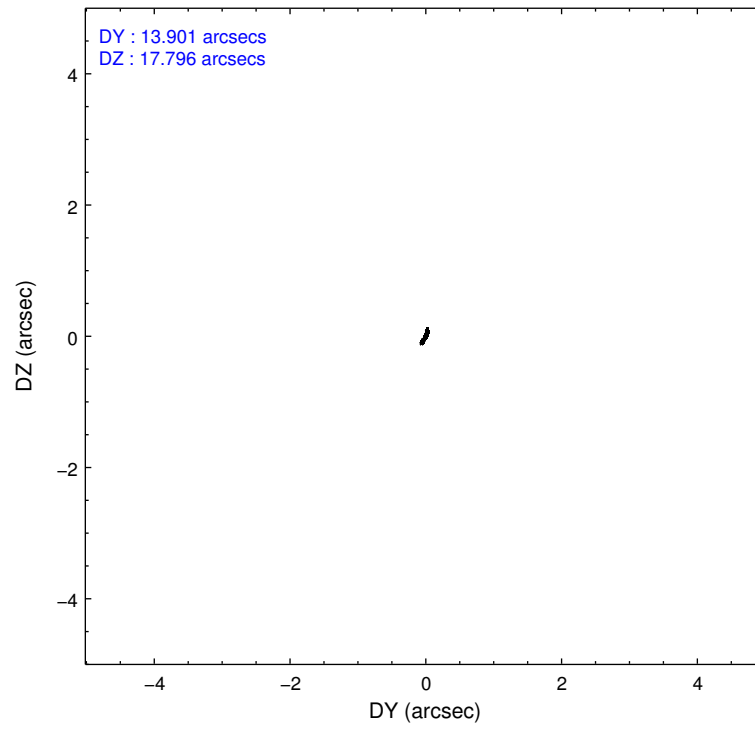
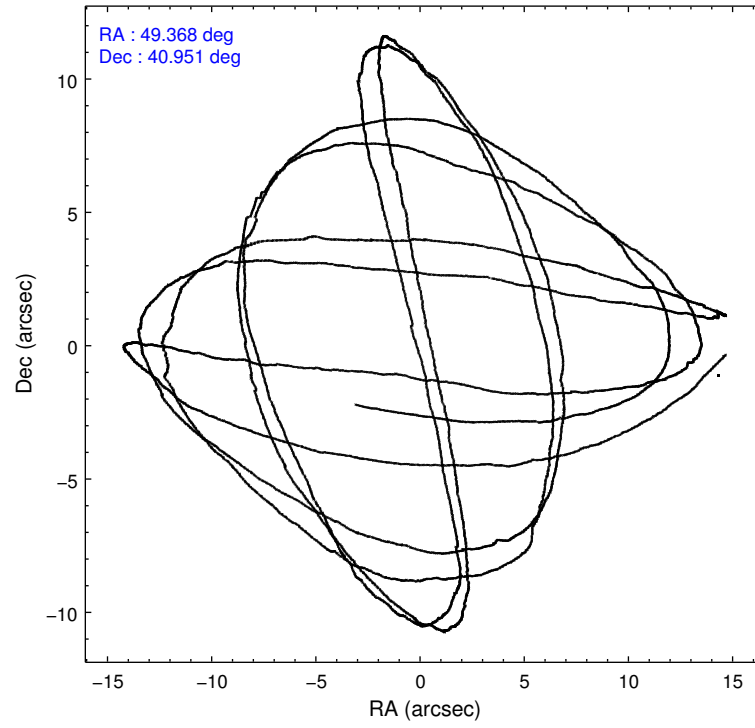
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2881	4165	1358	1495	1159
	10%	13%	4%	5%	3%
grade 1 events	20	29	24	14	11
	0%	0%	0%	0%	0%
grade 2 events	782	897	774	674	725
	2%	2%	2%	2%	2%
grade 3 events	337	333	324	350	293
	1%	1%	1%	1%	1%
grade 4 events	312	356	328	330	325
	1%	1%	1%	1%	1%
grade 5 events	1130	1252	1155	1422	1320
	4%	3%	3%	5%	4%
grade 6 events	654	784	607	629	810
	2%	2%	2%	2%	2%
grade 7 events	20461	23646	25376	22977	24407
	76%	75%	84%	82%	84%

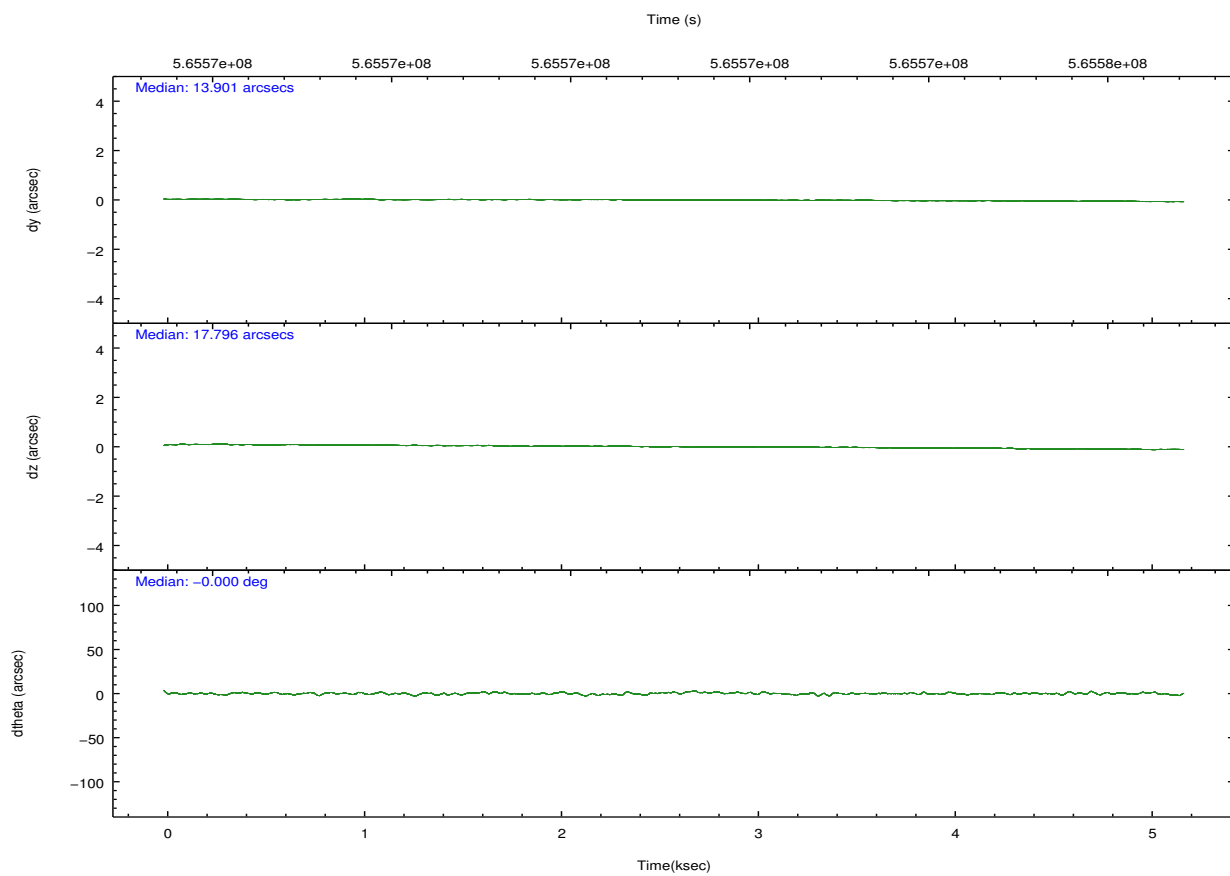
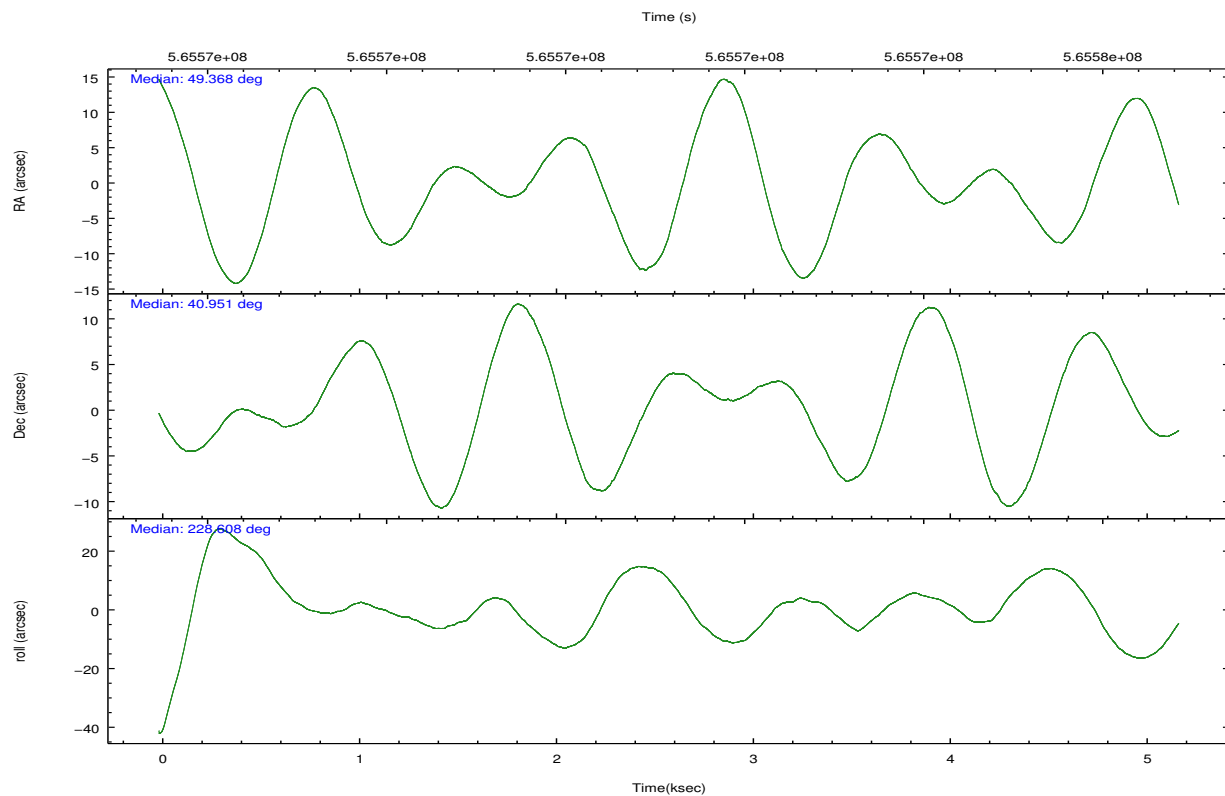


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	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	49.374713	49.36774757711095	CCD I2 on	Y	Y
[deg] Pointing Dec	40.977929	40.95079108546766	CCD I3 on	Y	Y
[deg] Pointing Roll	228.396544	228.6097877594432	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	O1	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	565570145.184000	565569768.57741	CCD S5 on	N	N
Observation start date	2015-12-03T22:47:57	2015-12-03T22:42:48	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	565575145.184000	565575278.97772	On-chip summing requested	N	N
Observation end date	2015-12-04T00:11:17	2015-12-04T00:14:38	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



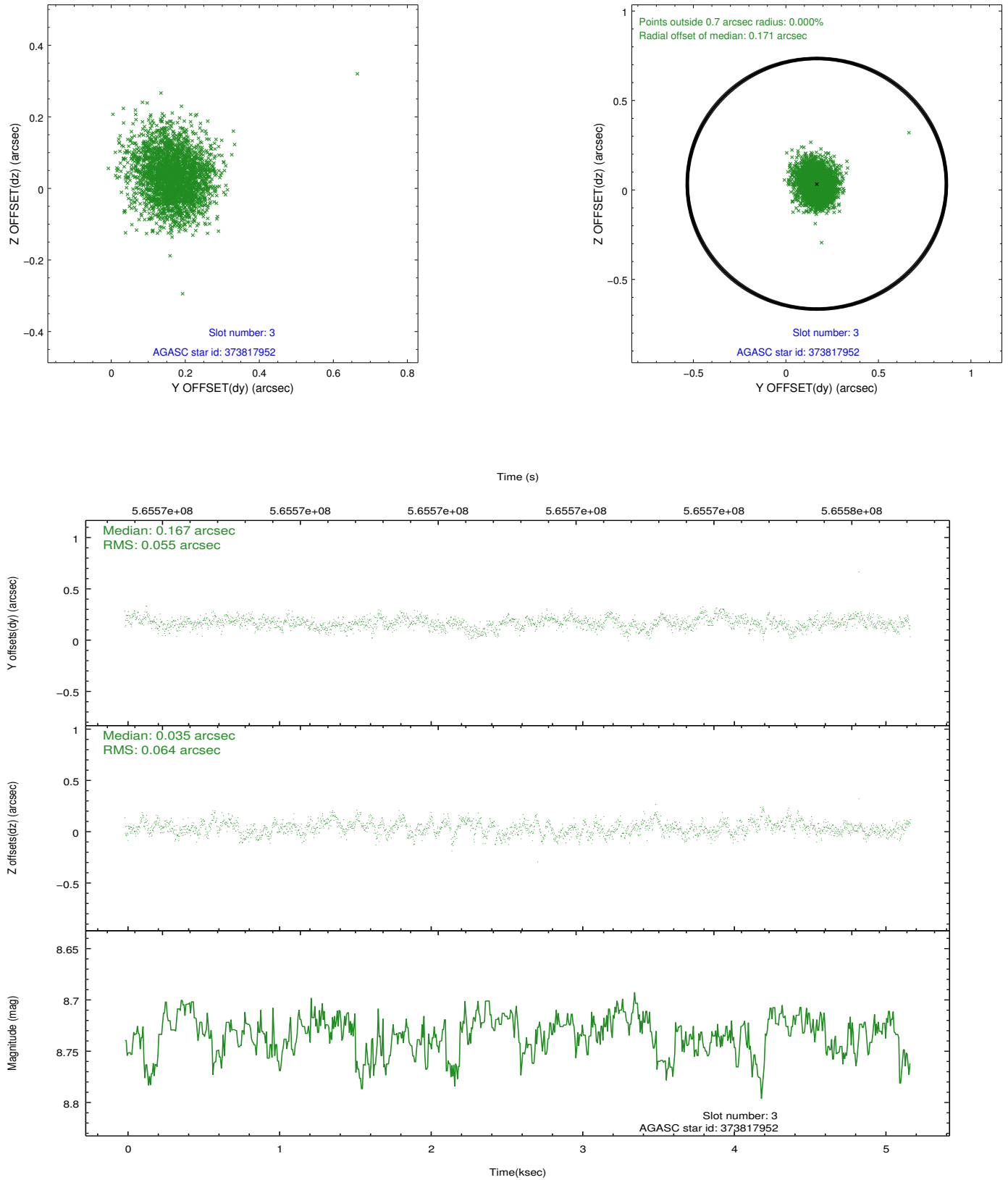


### Slot Statistics

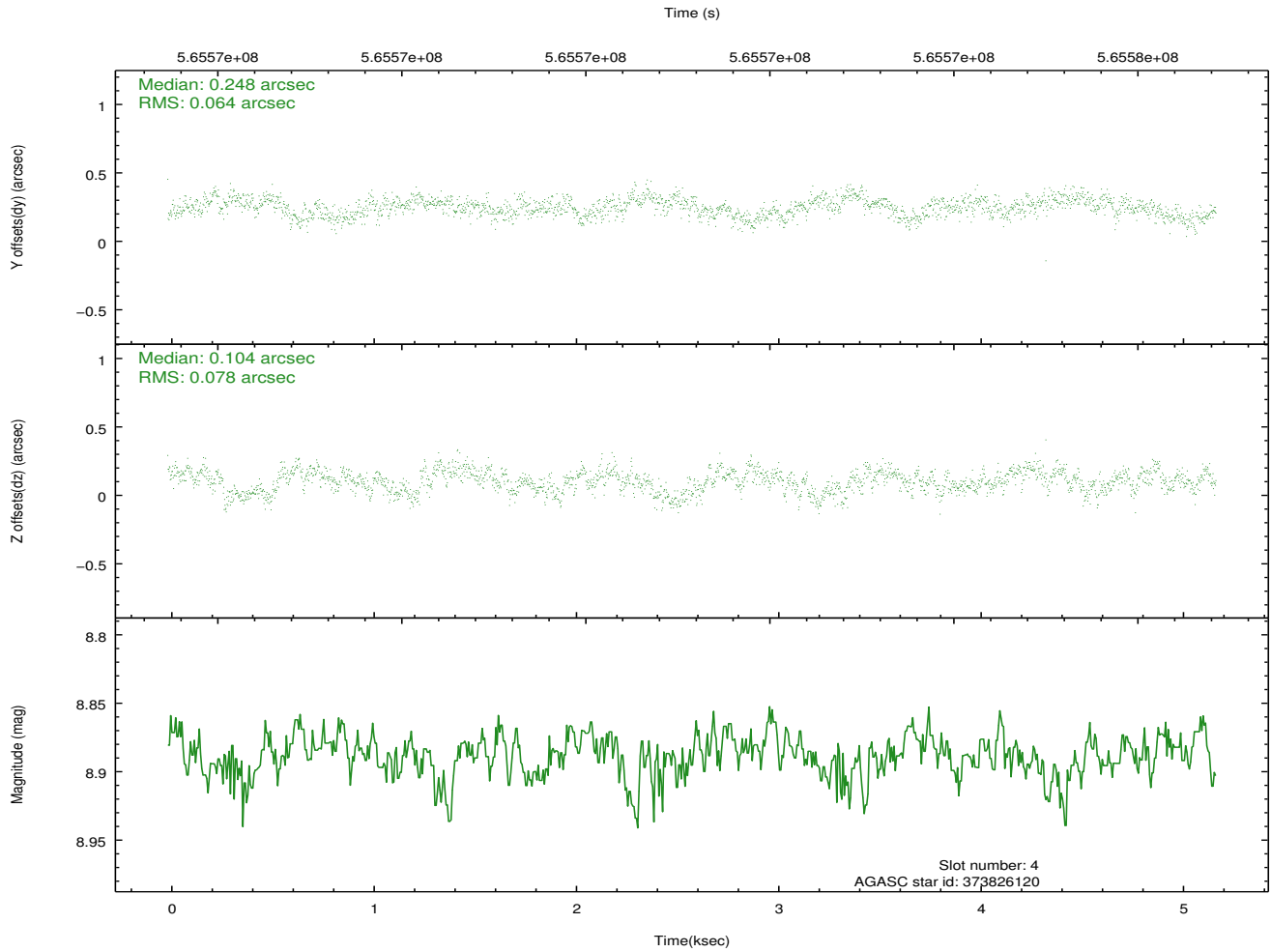
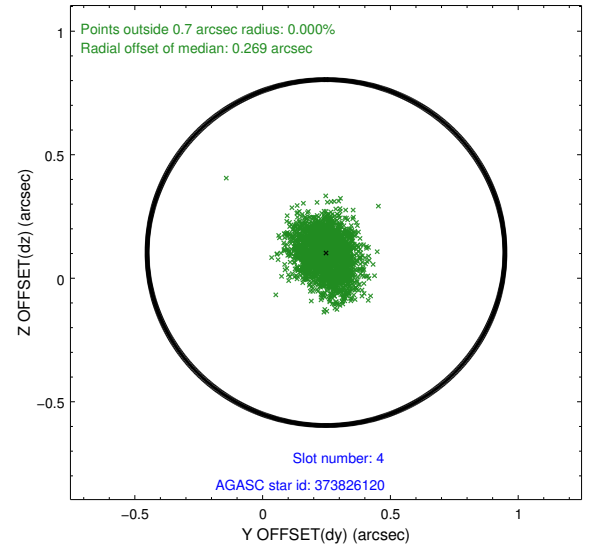
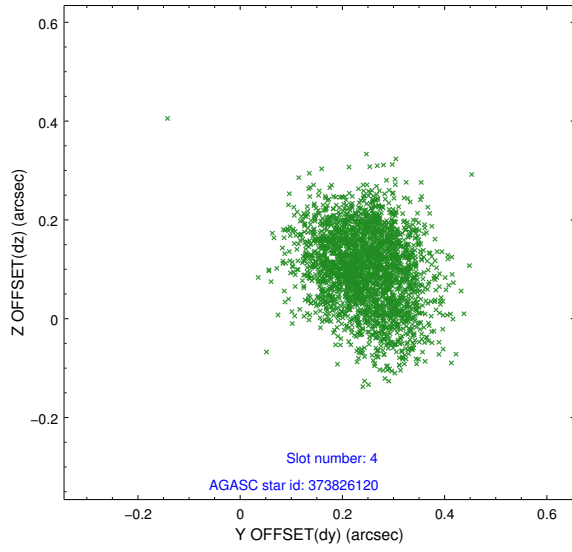
lot	status	used	id	mag	n_pts	med_dy	med_dz	drl	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.25	1264	-0.020	-0.015	0.009	0.015	0.000000	0.000000	925.55	-841.57
1	FID		ACIS-I-2	7.15	1264	-0.307	-0.136	0.007	0.011	0.000000	0.000000	-768.18	-848.67
2	FID		ACIS-I-4	7.18	1264	0.229	0.218	0.007	0.012	0.000000	0.000000	2145.21	1057.89
3	GUIDE	used	373817952	8.73	2526	0.167	0.035	0.089	0.145	49.913424	40.978510	-976.41	1090.39
4	GUIDE	used	373826120	8.89	2526	0.248	0.104	0.107	0.173	49.738165	41.186341	-1216.04	237.07
5	GUIDE	used	373831072	9.45	2526	-0.349	-0.200	0.153	0.249	49.776828	40.594328	300.49	1736.84
6	BAD	used	373830768	9.73	2365	-0.476	-0.522	0.166	0.321	48.797176	41.169770	519.38	-1631.48
7	GUIDE	used	374352576	9.69	2522	0.381	0.555	0.160	0.257	48.746850	41.454001	-160.19	-2409.19

## 2.4 Star Slots

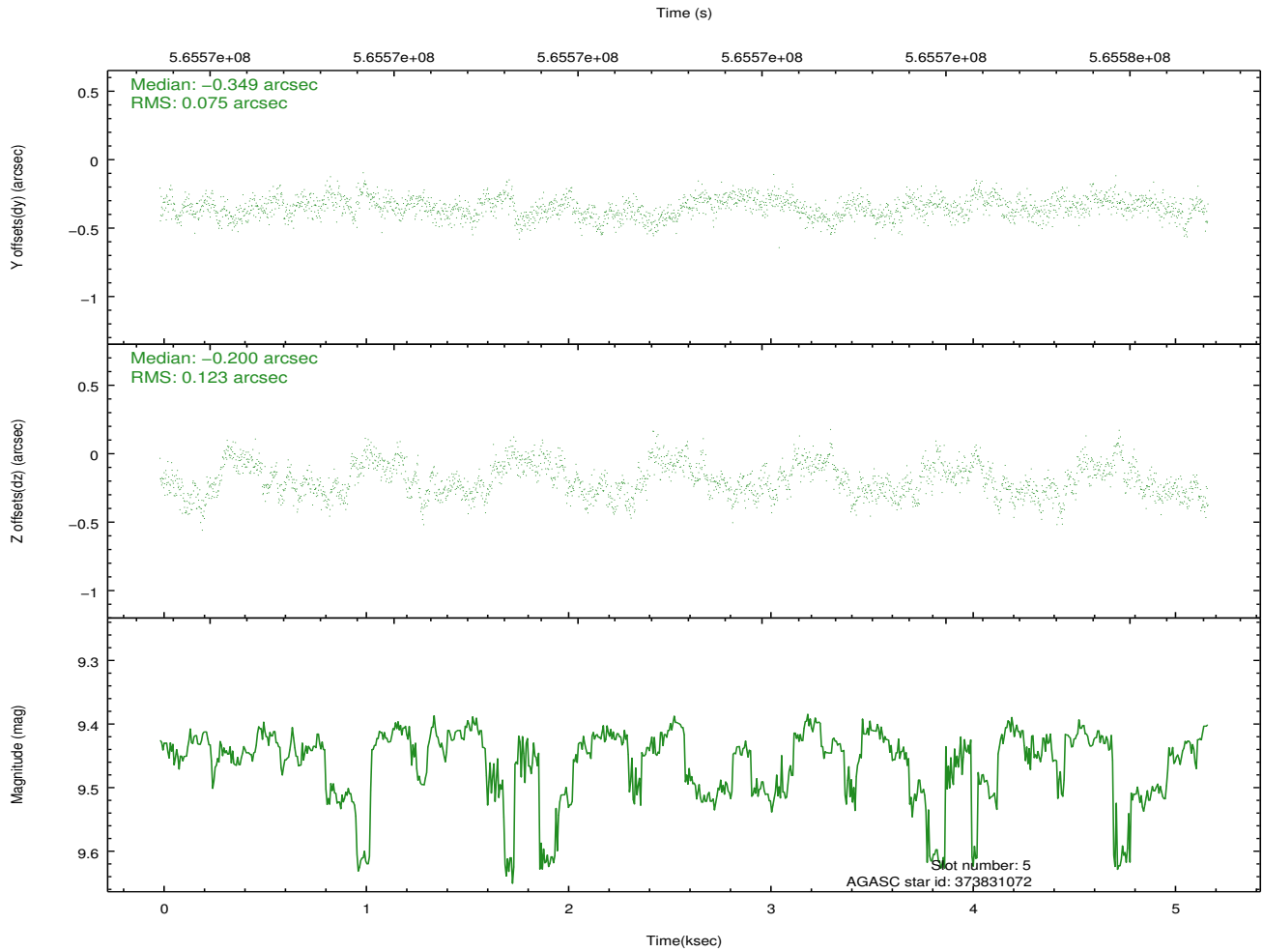
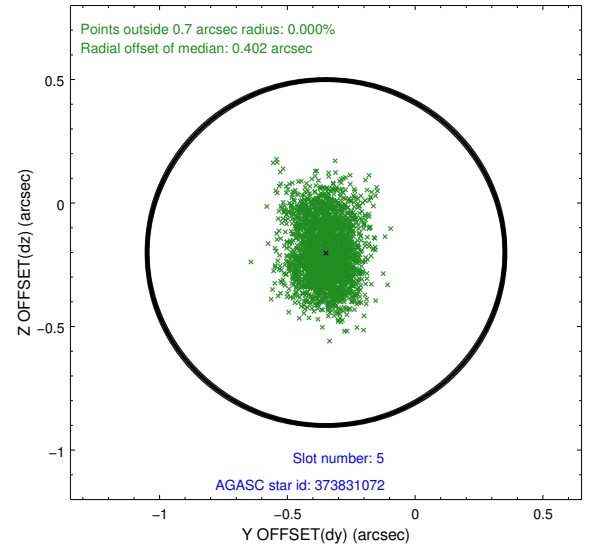
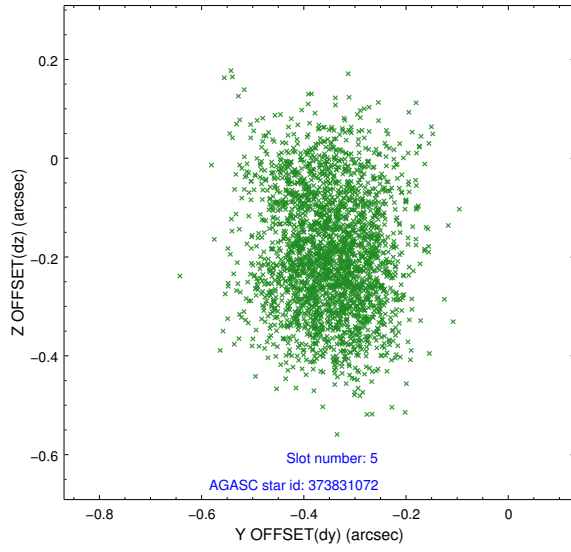
### 2.4.1 Slot 3



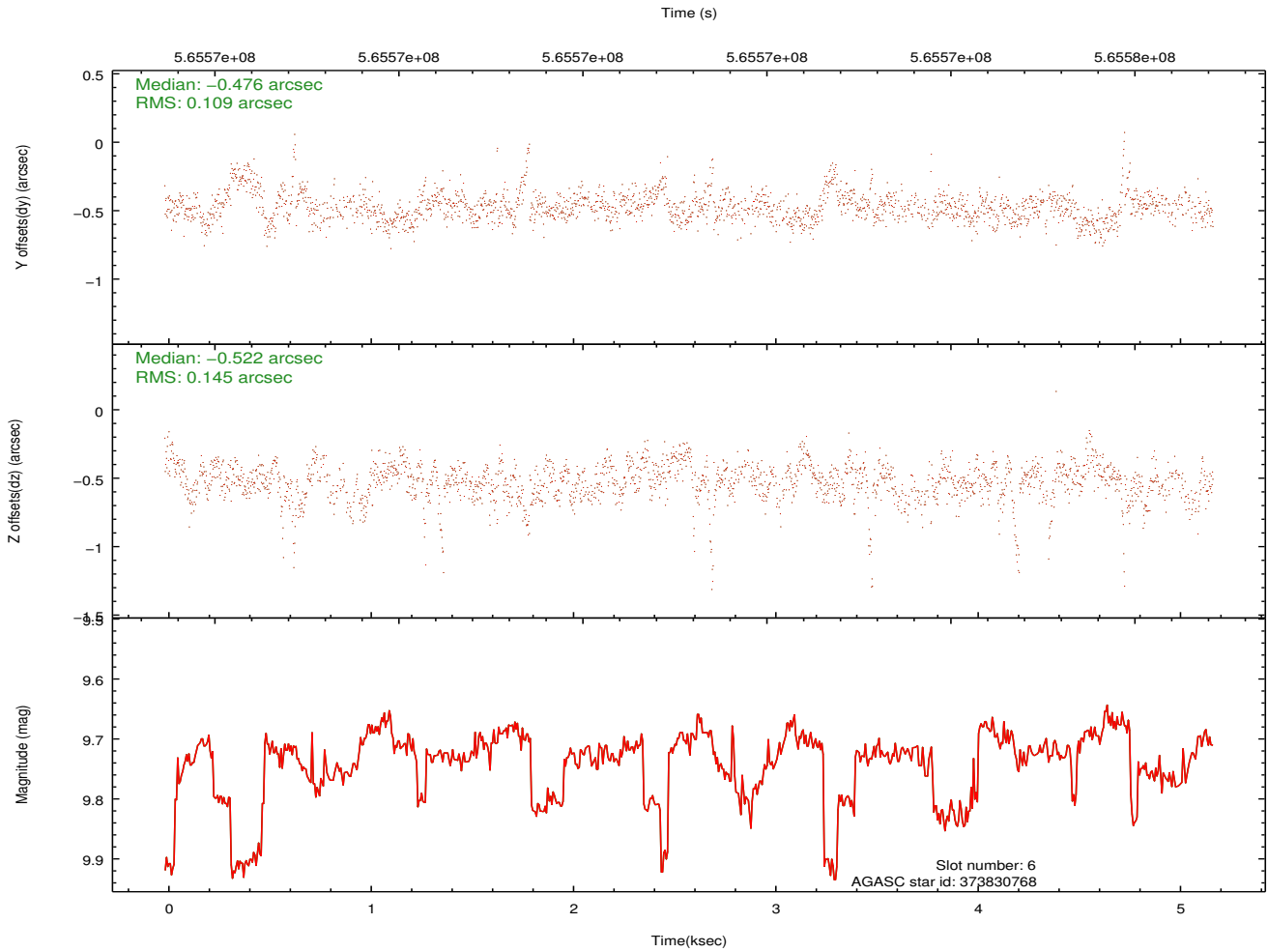
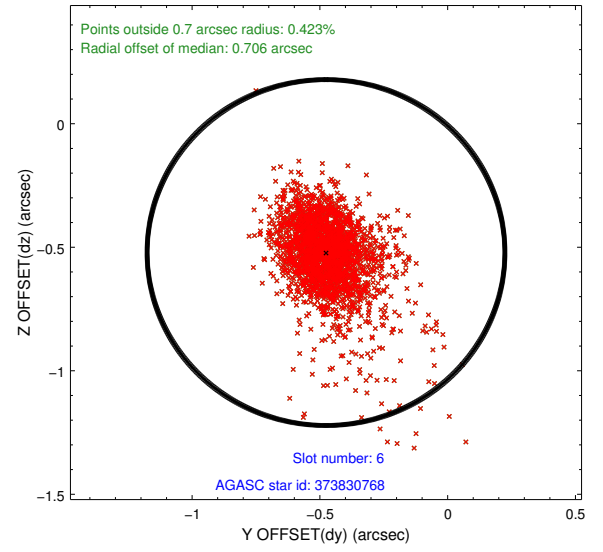
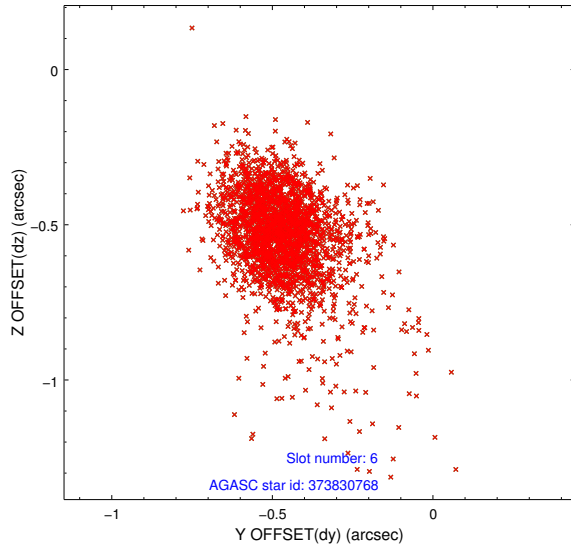
## 2.4.2 Slot 4



### 2.4.3 Slot 5

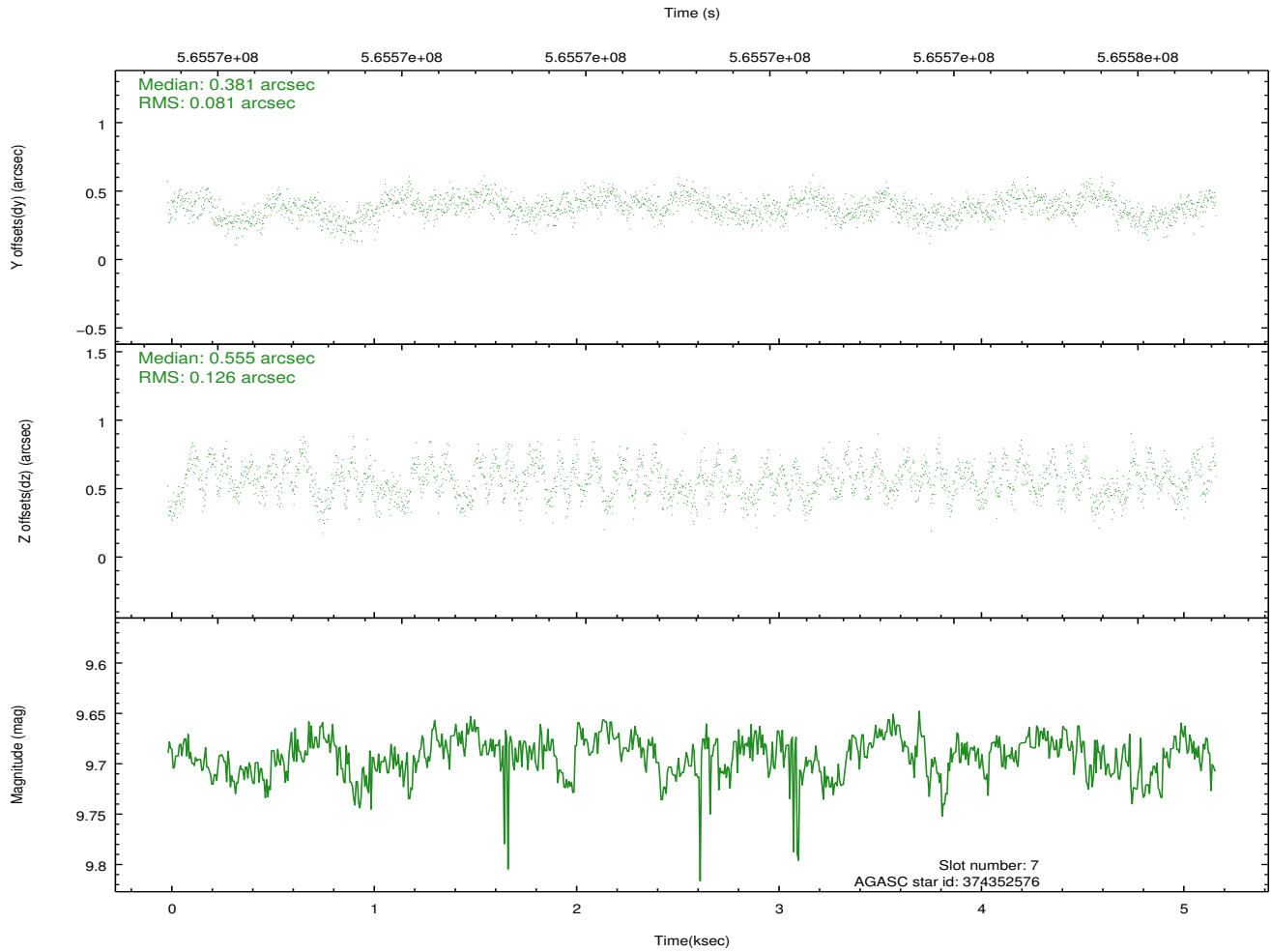
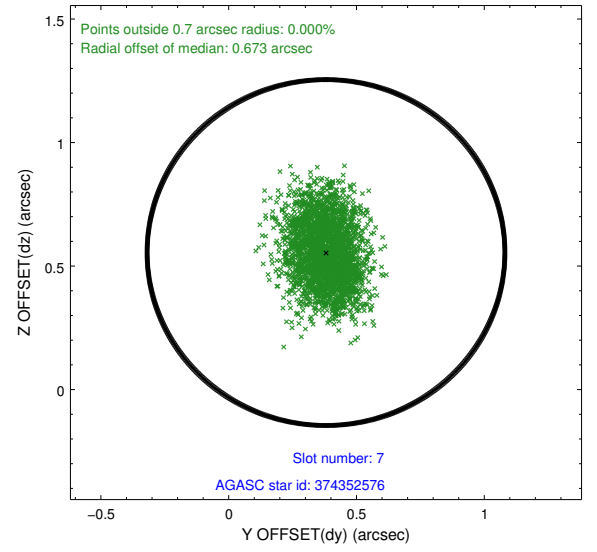
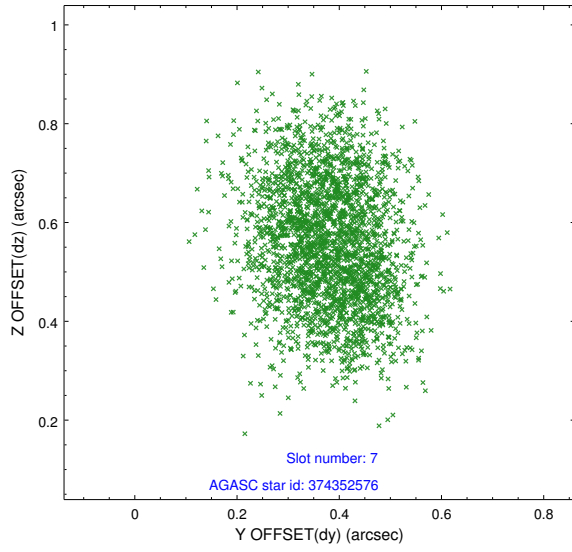


## 2.4.4 Slot 6



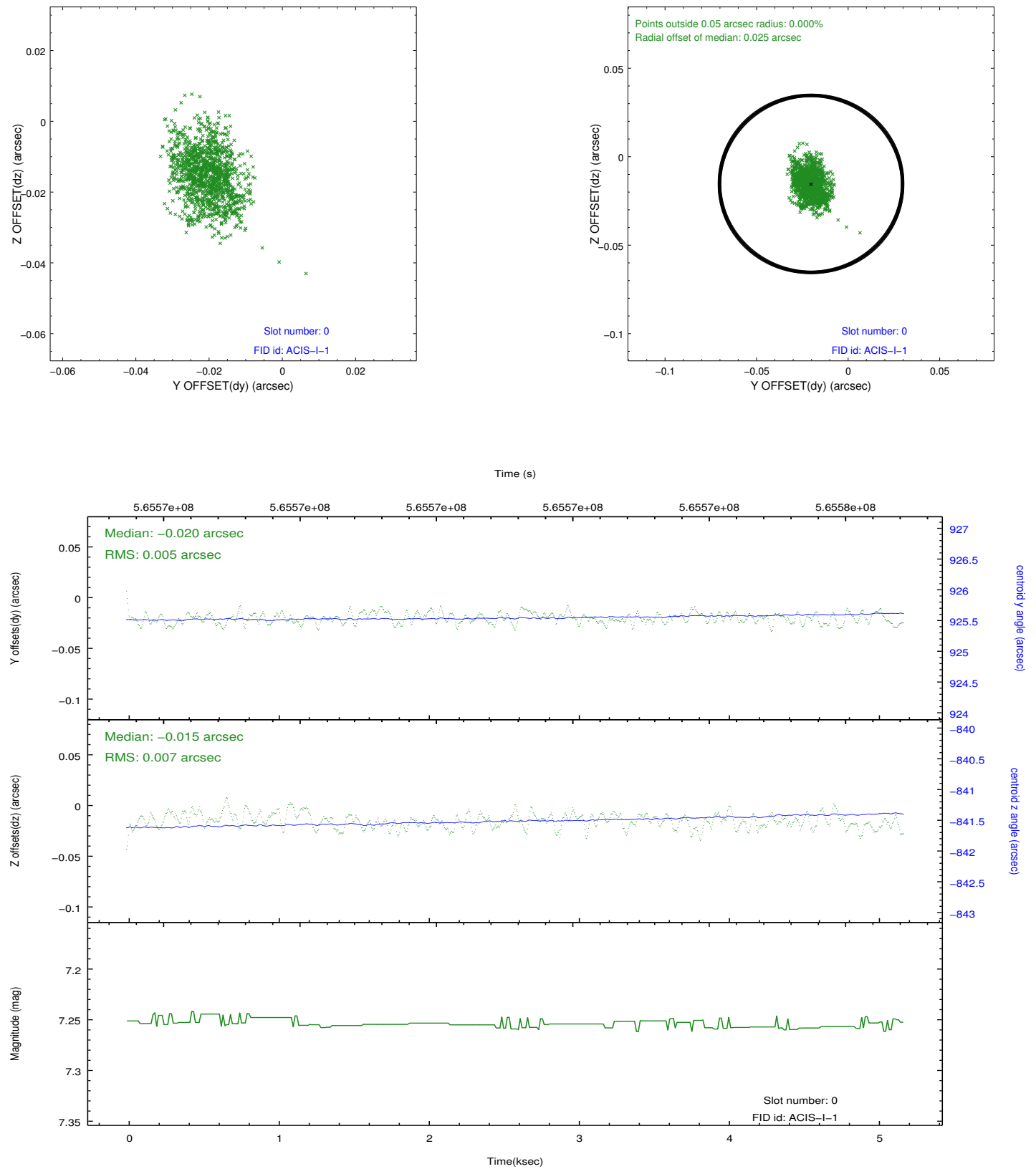


## 2.4.5 Slot 7

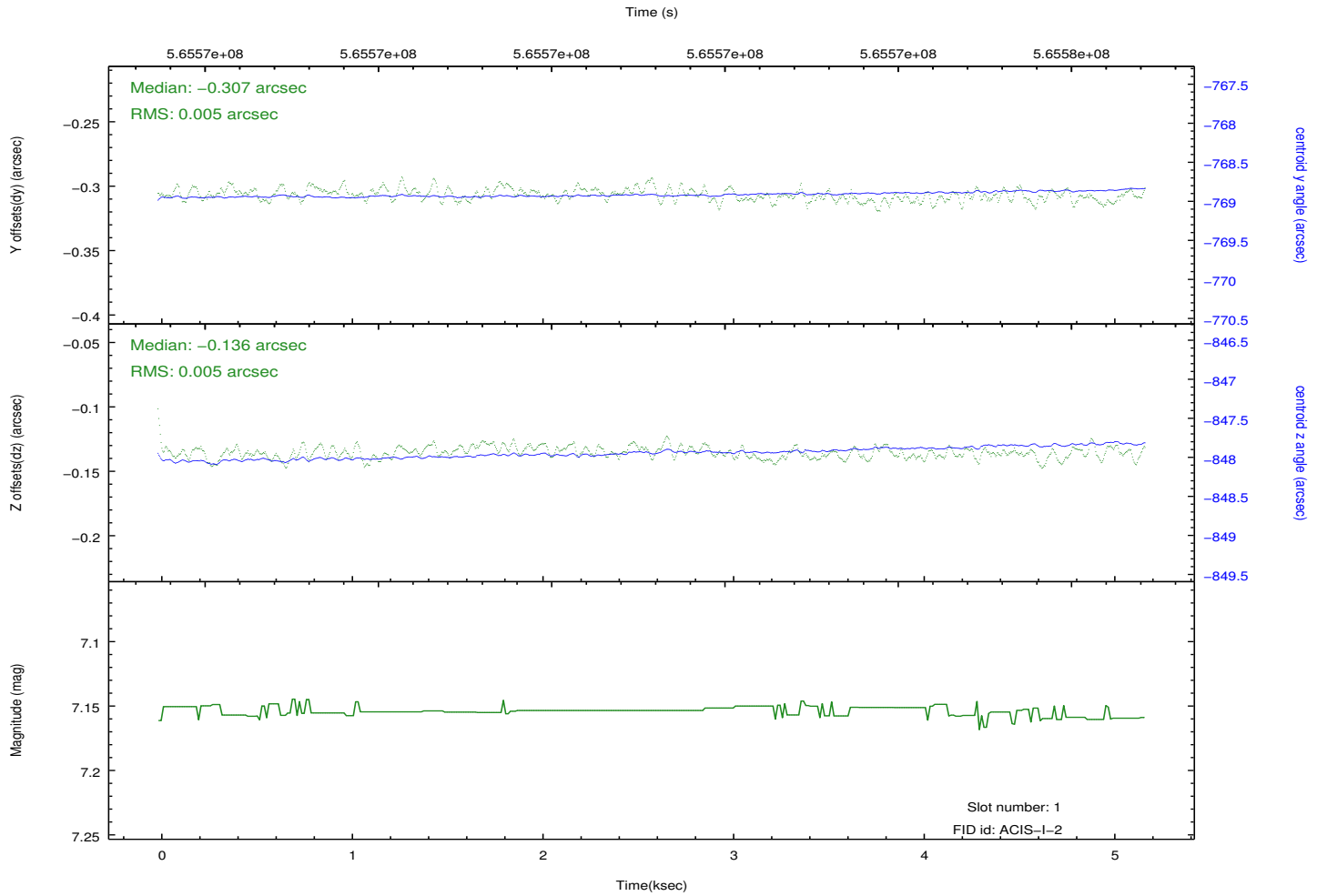
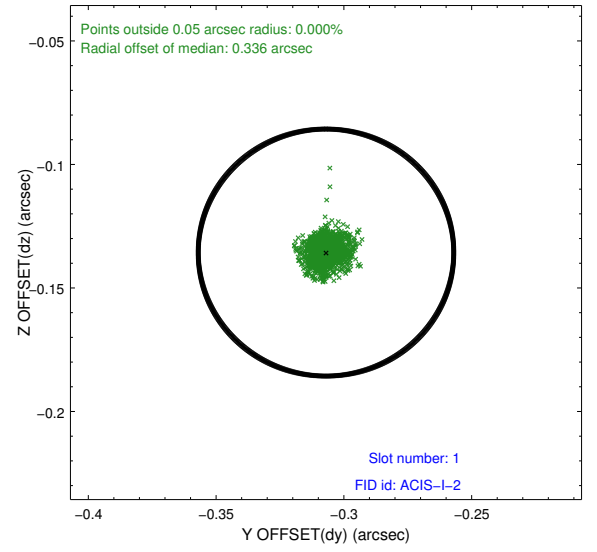
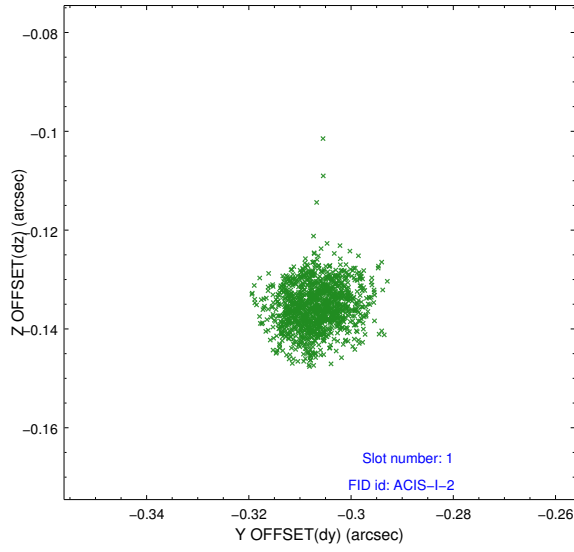


## 2.5 FID Slots

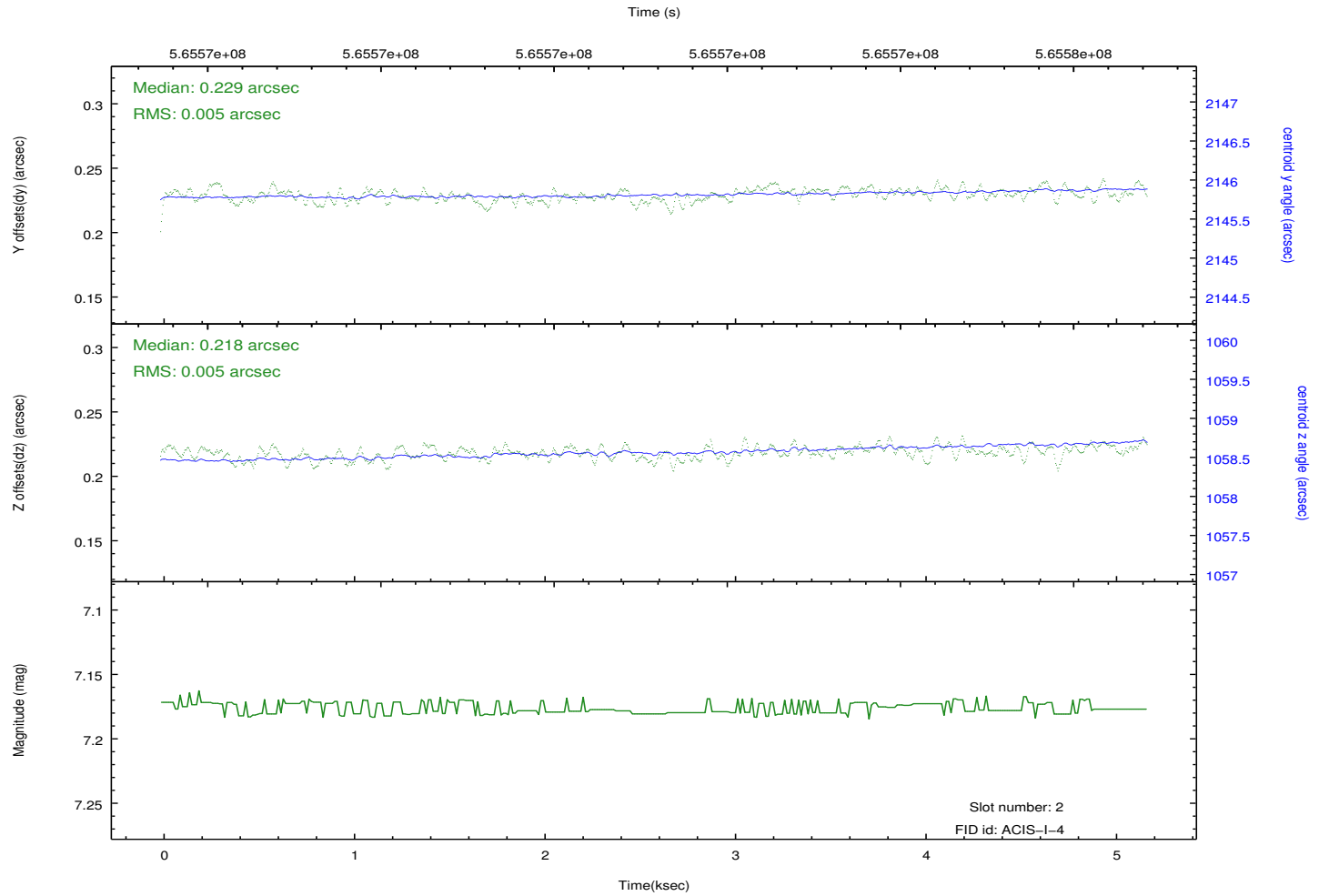
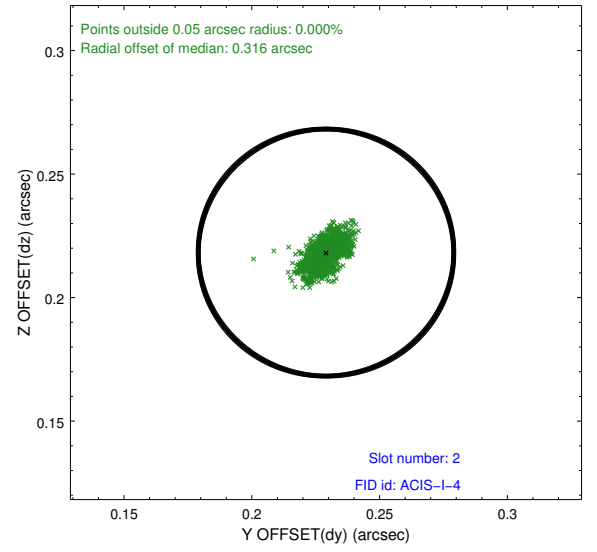
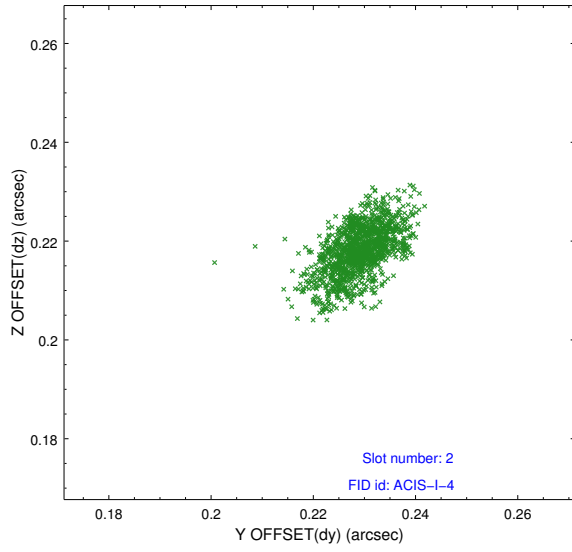
### 2.5.1 Slot 0



## 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	4.7726924700737

### A.2 Comments