

# V&V Reference Report

## L2 ASCDS Version : 10.4.2.1

Observation 17275 - L2 Version 1  
Chandra X-Ray Center

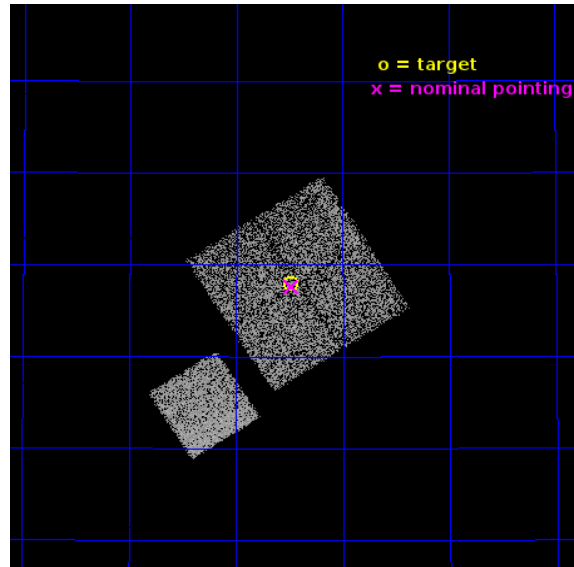
L2 Processing Date : Dec 10 2015

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# 1 Front

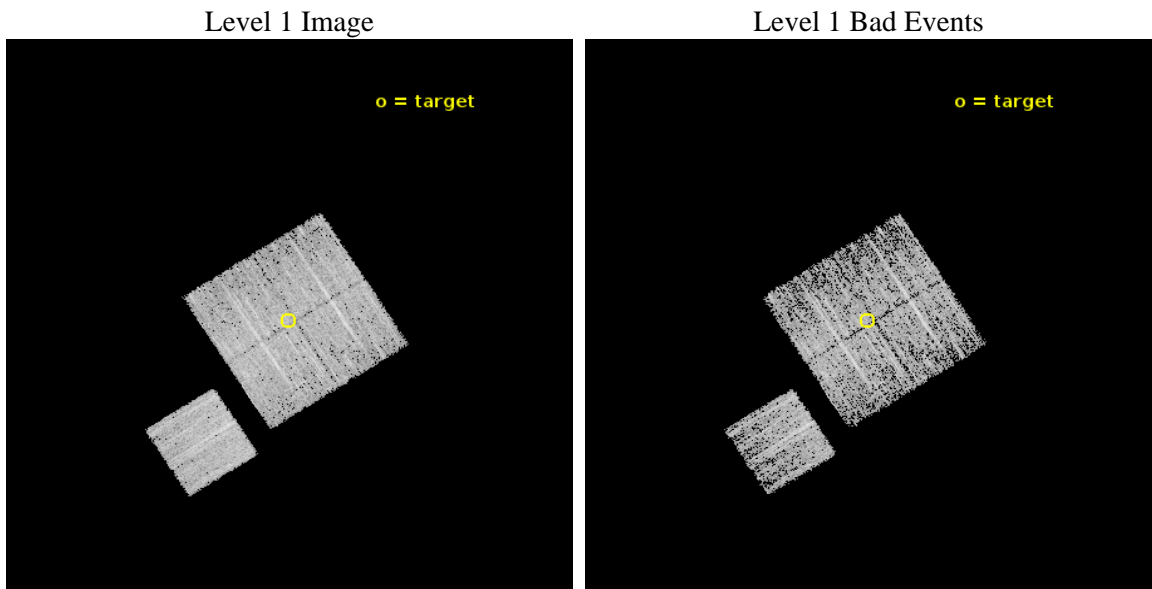
seq_num	801520	Sequence number
obs_id	17275	Observation id
title	Perseus: A New, Low-Redshift Anchor for Cluster Cosmology	Proposal
observer	Prof. Steven Allen	Principal investigator
object	Perseus cluster	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.87232	Observer's specified target RA [deg]
dec_targ	41.966689	Observer's specified target Dec [deg]
ra_nom	49.870674001831	Nominal RA [deg]
dec_nom	41.96039784721	Nominal Dec [deg]
roll_nom	237.38616932871	Nominal Roll [deg]
revision	1	Processing version of data
ontime	4772.9600846767	Sum of GTIs [s]
livetime	4710.5978473683	Livetime [s]
ontime0	4769.6959346533	Sum of GTIs [s]
ontime1	4772.8780046701	Sum of GTIs [s]
ontime2	4772.919044733	Sum of GTIs [s]
ontime3	4772.9600846767	Sum of GTIs [s]
ontime6	4772.7959246635	Sum of GTIs [s]
l2events	22496	Number of level 2 events



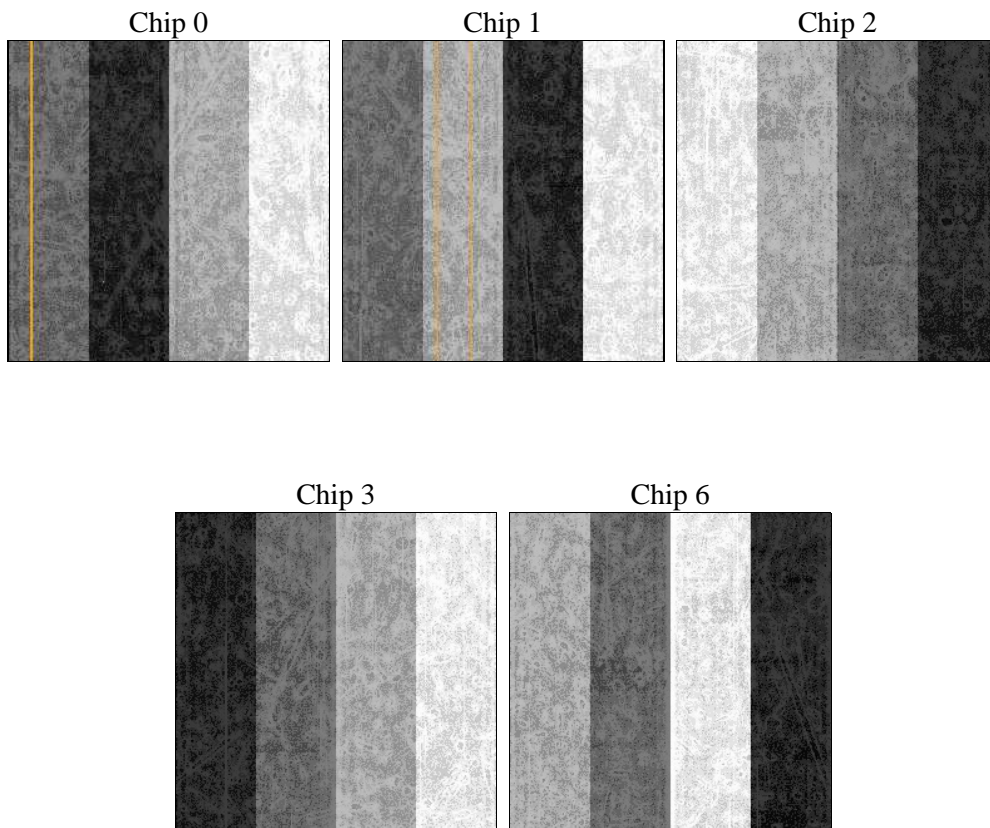
## 2 OBI

### 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	4772.9600846767	Sum of GTIs [s]
caldsver	4.6.10a	&#160	ontime0	4769.6959346533	Sum of GTIs [s]
date	2015-12-10T13:02:31	Date and time of file creation	ontime1	4772.8780046701	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	4772.919044733	Sum of GTIs [s]
			ontime3	4772.9600846767	Sum of GTIs [s]
			ontime6	4772.7959246635	Sum of GTIs [s]
			l1events	137437	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	26200	24392	28529	26231	32085
rejected events	21852	20176	23462	22399	24174
rejected %	83%	82%	82%	85%	75%

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2029	1775	2773	1785	4849
	7%	7%	9%	6%	15%
grade 1 events	19	16	25	15	26
	0%	0%	0%	0%	0%
grade 2 events	919	934	974	717	1292
	3%	3%	3%	2%	4%
grade 3 events	396	350	351	334	440
	1%	1%	1%	1%	1%
grade 4 events	324	361	384	331	509
	1%	1%	1%	1%	1%
grade 5 events	1168	1326	1175	1304	1305
	4%	5%	4%	4%	4%
grade 6 events	681	799	592	668	838
	2%	3%	2%	2%	2%
grade 7 events	20664	18831	22255	21077	22826
	78%	77%	78%	80%	71%

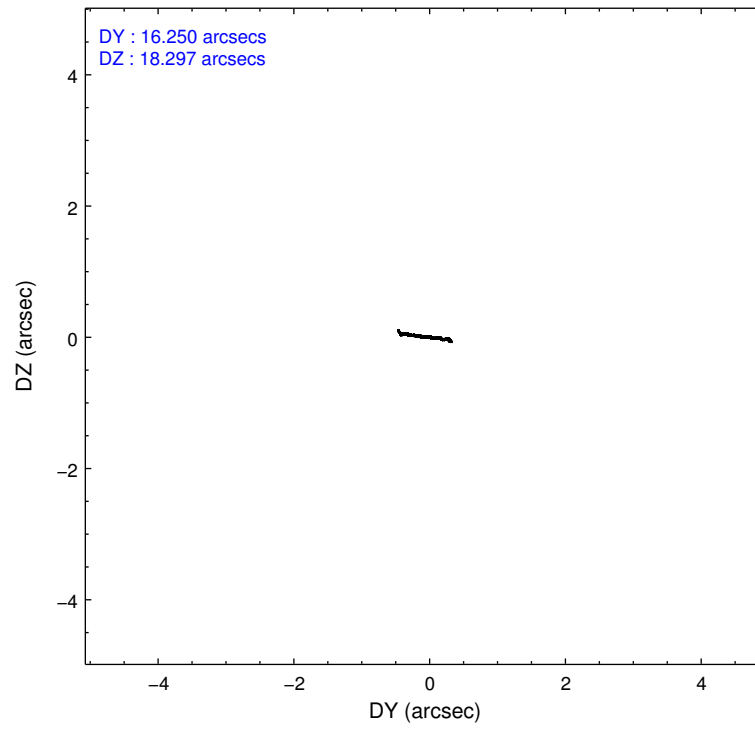
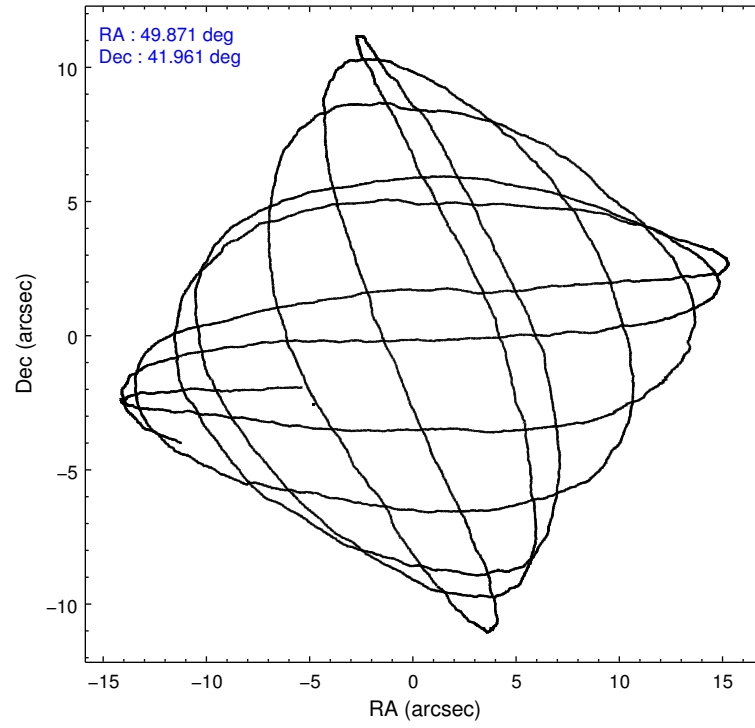


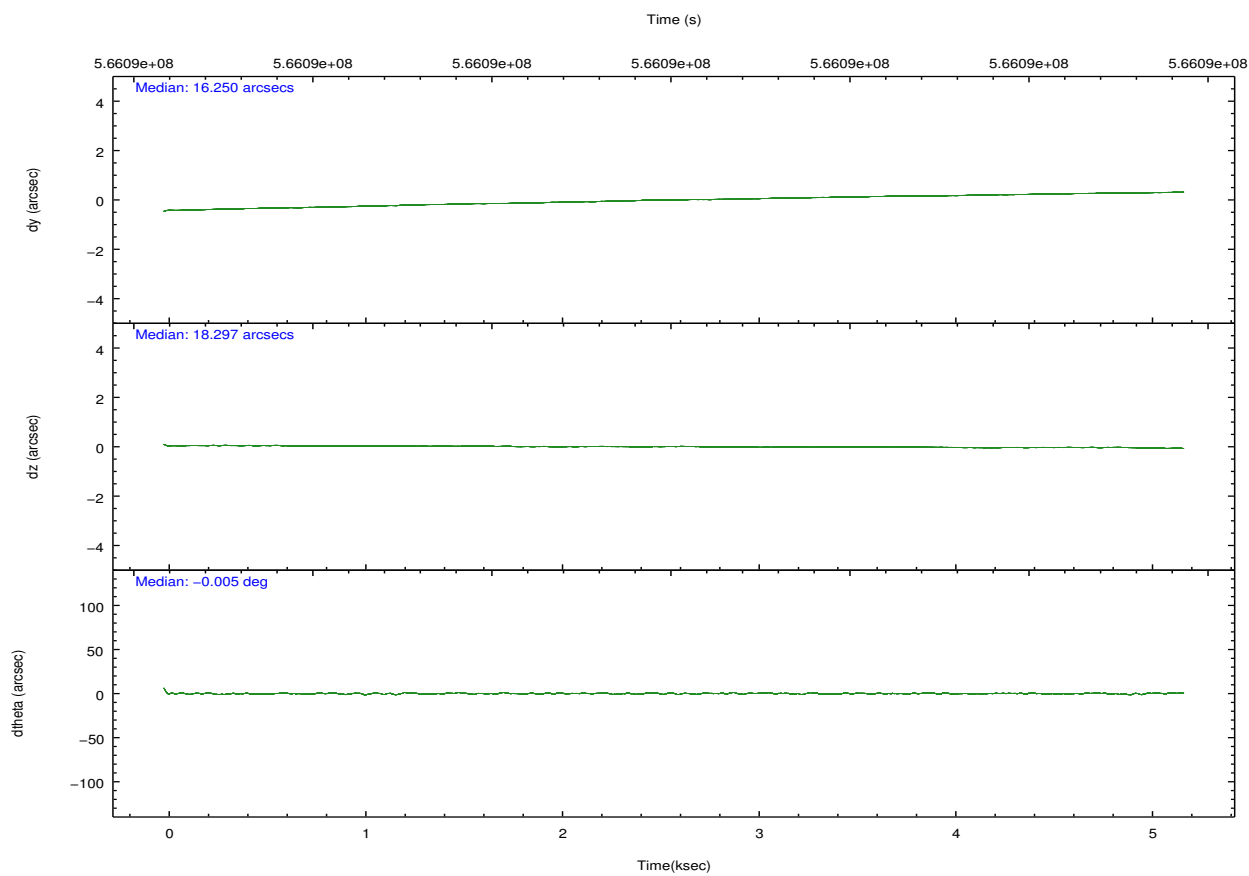
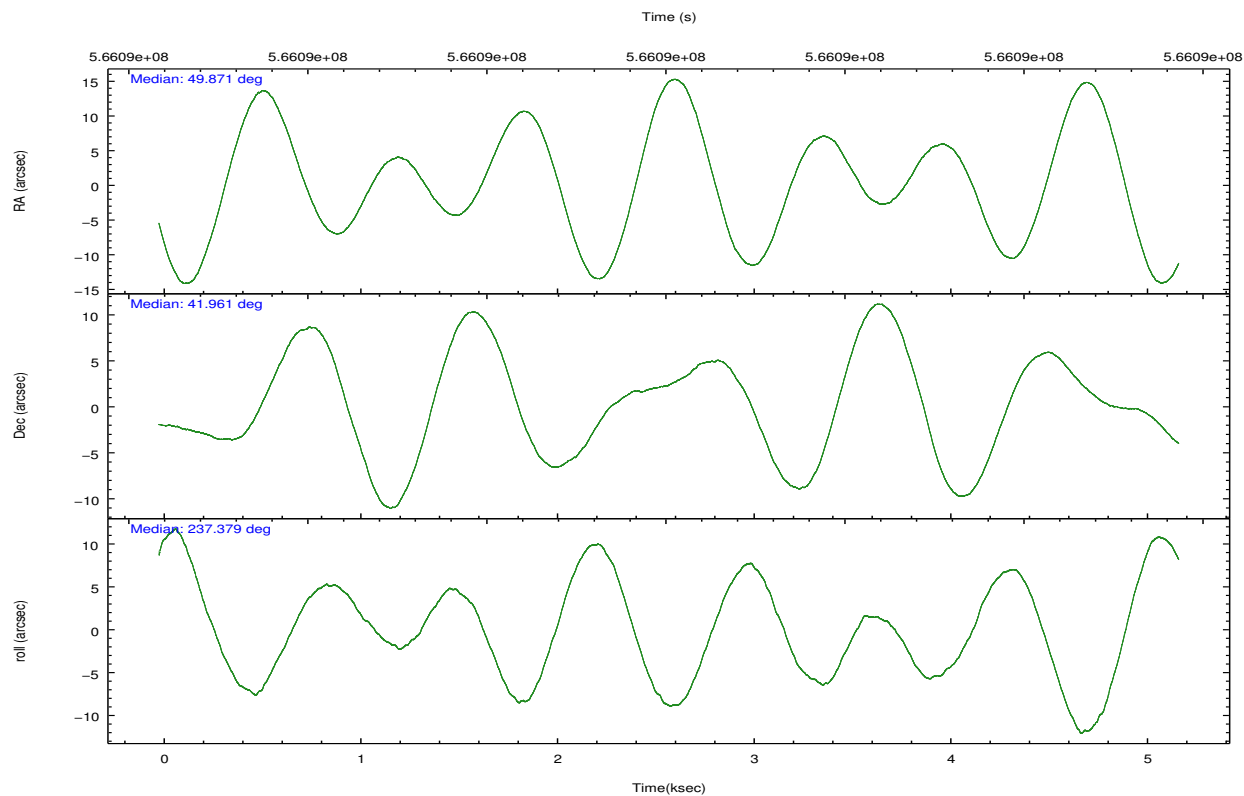
## 2.2 Compared Parameters

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	49.872356	49.87067400183092
[deg] Pointing Dec	41.988002	41.96039784721014
[deg] Pointing Roll	237.176354	237.3861693287136
[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)	566087583.184000	566087207.5692199
Observation start date	2015-12-09T22:31:55	2015-12-09T22:26:47
[s] Observation end time (MET)	566092583.184000	566092717.4570301
Observation end date	2015-12-09T23:55:15	2015-12-09T23:58:37
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



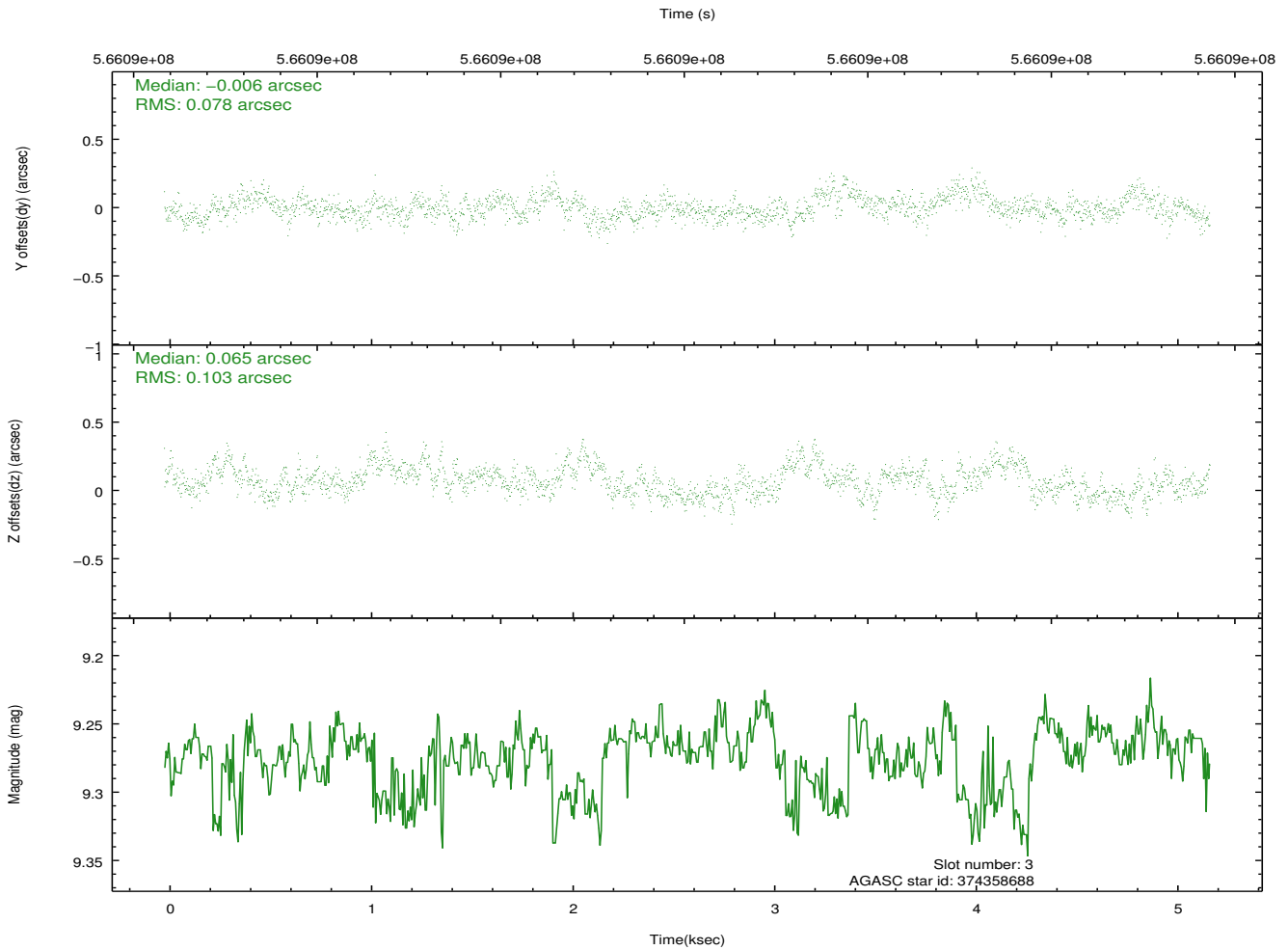
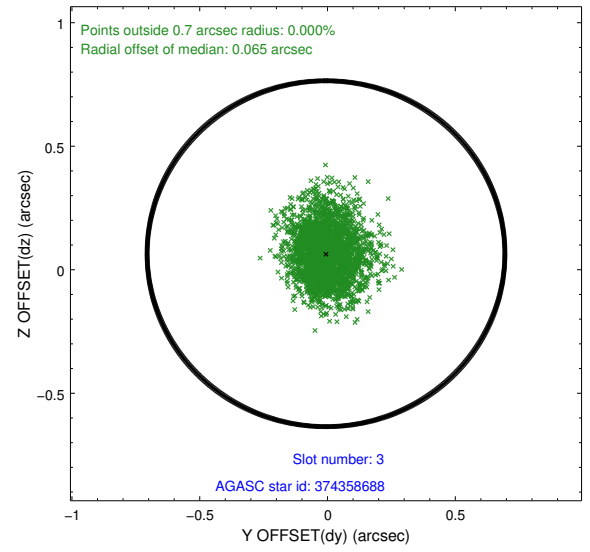
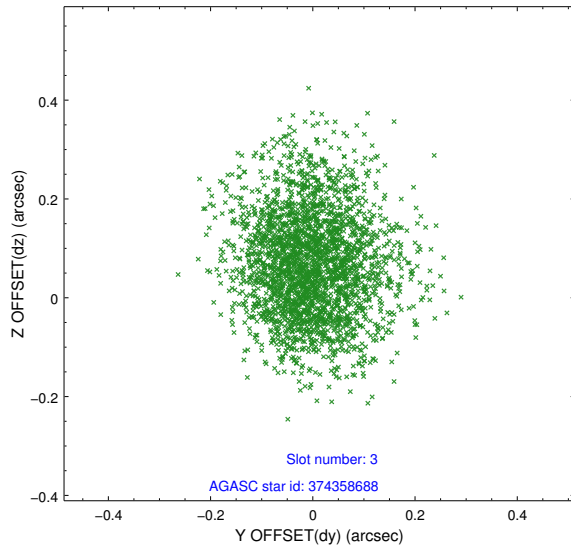


### Slot Statistics

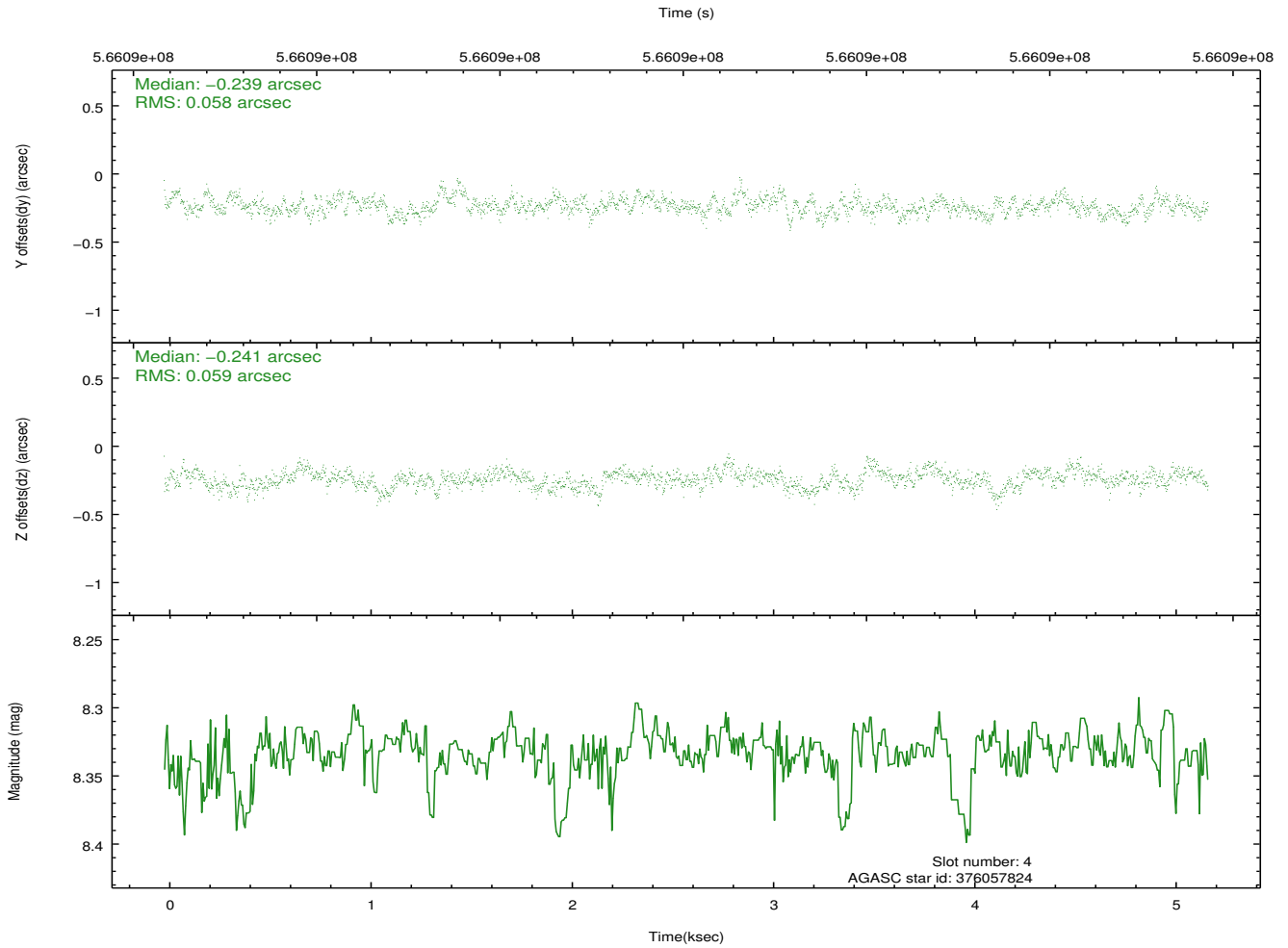
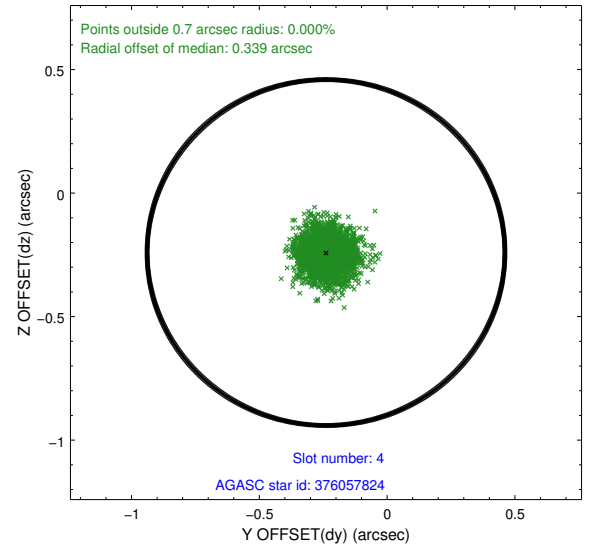
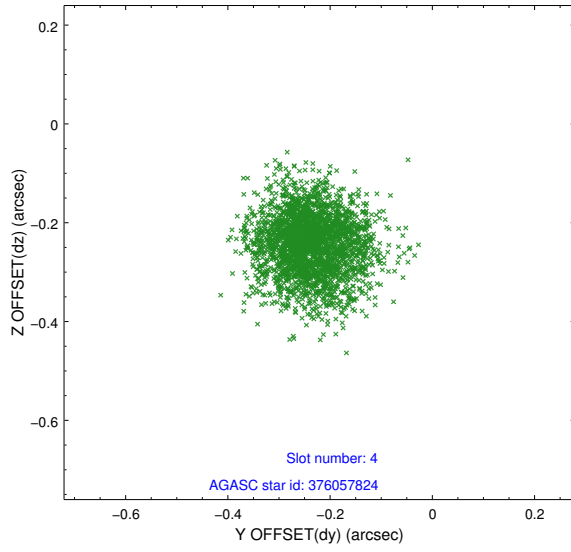
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.24	1265	-0.031	-0.024	0.009	0.016	0.000000	0.000000	923.21	-841.97
1	FID		ACIS-I-4	7.19	1265	0.380	0.056	0.018	0.026	0.000000	0.000000	2144.22	1057.38
2	FID		ACIS-I-5	7.25	1265	-0.446	0.039	0.018	0.026	0.000000	0.000000	-1823.80	1056.37
3	GUIDE	used	374358688	9.27	2531	-0.006	0.065	0.135	0.229	49.259903	42.100043	543.31	-1595.82
4	GUIDE	used	376057824	8.33	2528	-0.239	-0.241	0.088	0.143	50.665569	41.926280	-972.95	1900.71
5	GUIDE	used	376068632	8.75	2530	0.183	0.125	0.117	0.187	50.582093	42.167240	-1575.55	1238.65
6	GUIDE	used	376070040	8.39	2531	0.033	-0.184	0.112	0.179	50.072031	41.897206	-16.23	627.64
7	GUIDE	used	374357368	7.78	2530	0.020	0.238	0.076	0.120	49.396079	42.675115	-1397.81	-2400.58

## 2.4 Star Slots

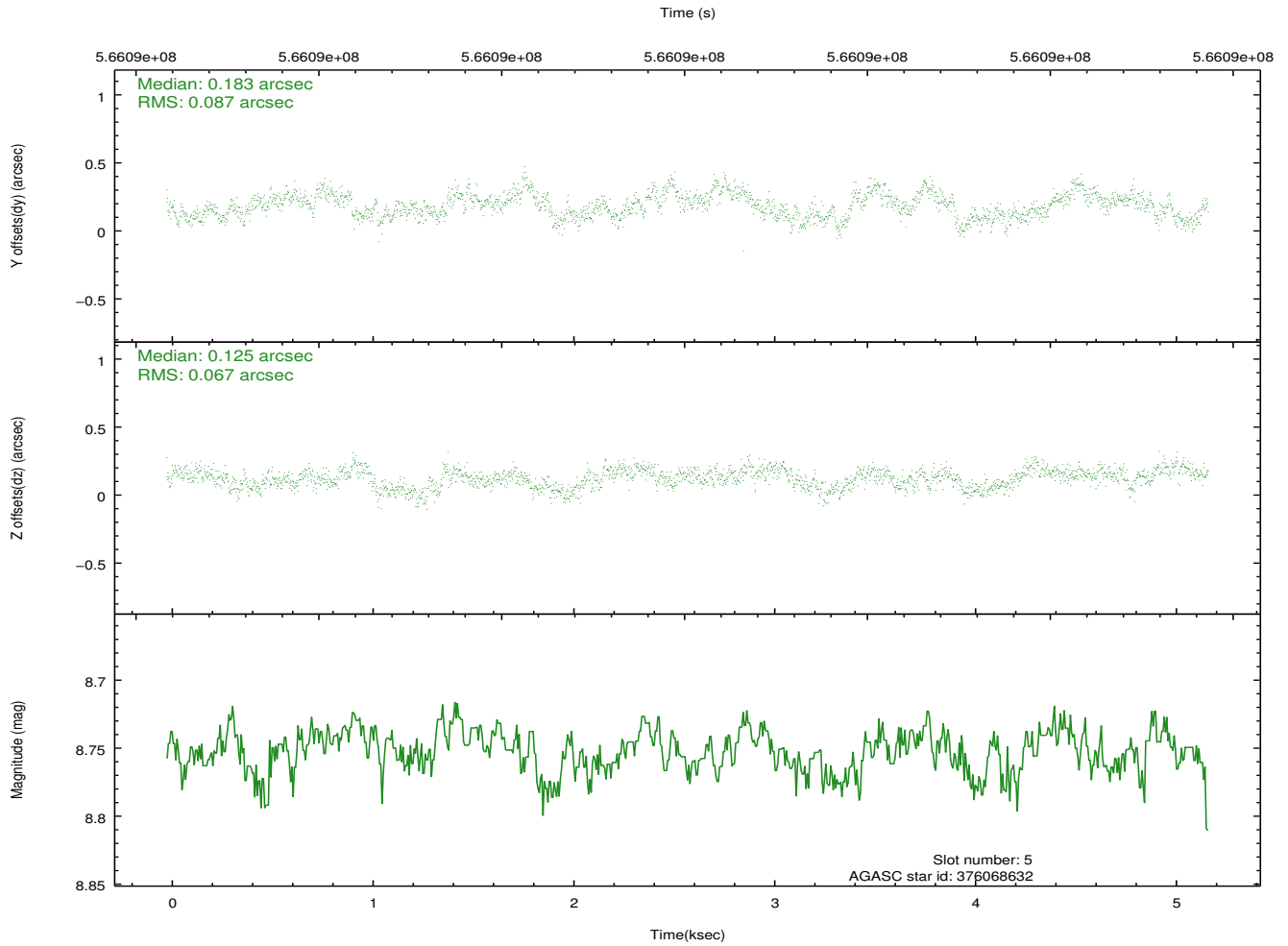
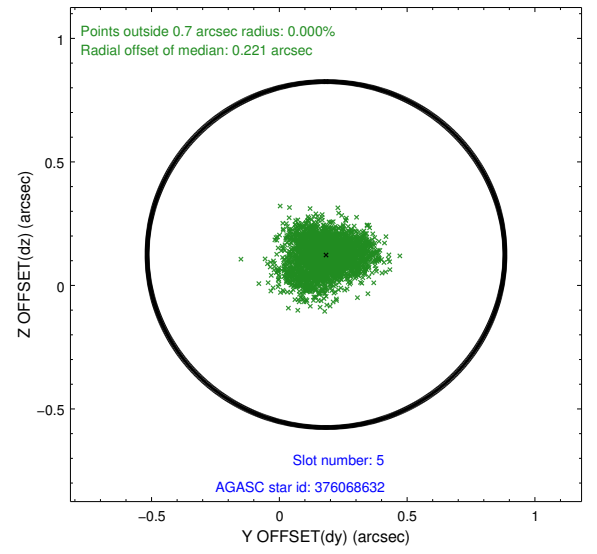
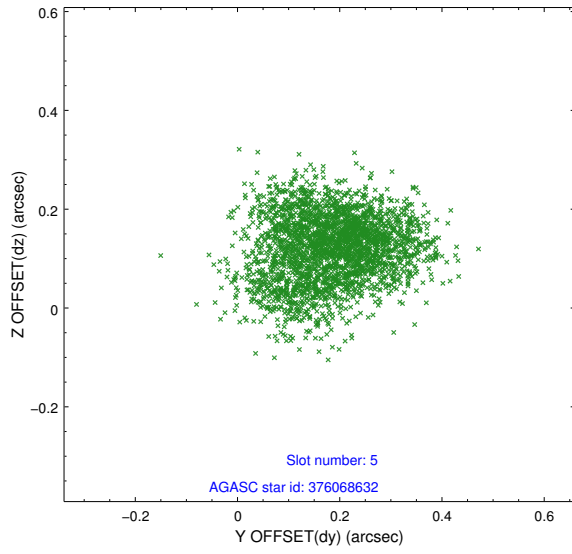
### 2.4.1 Slot 3



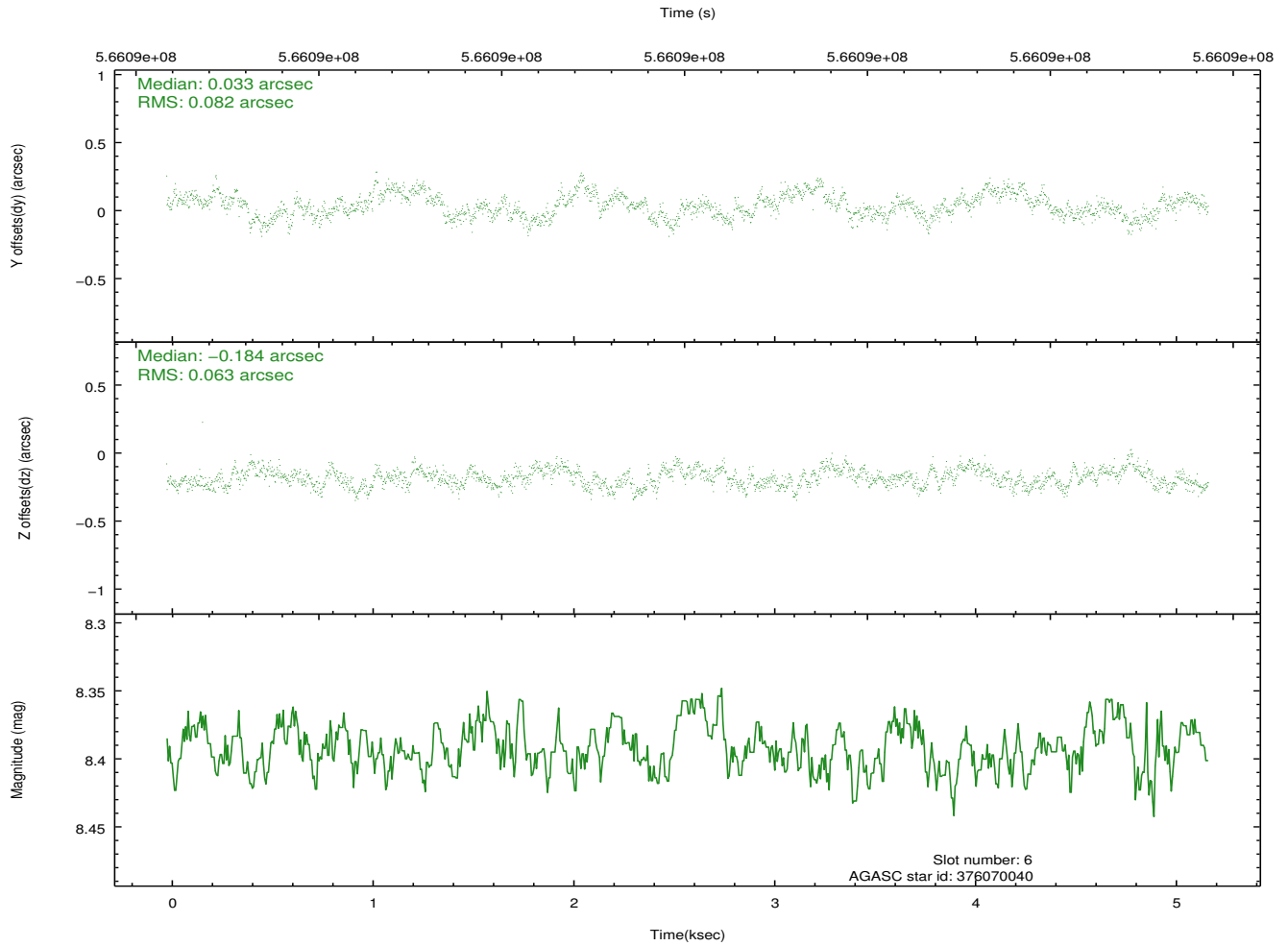
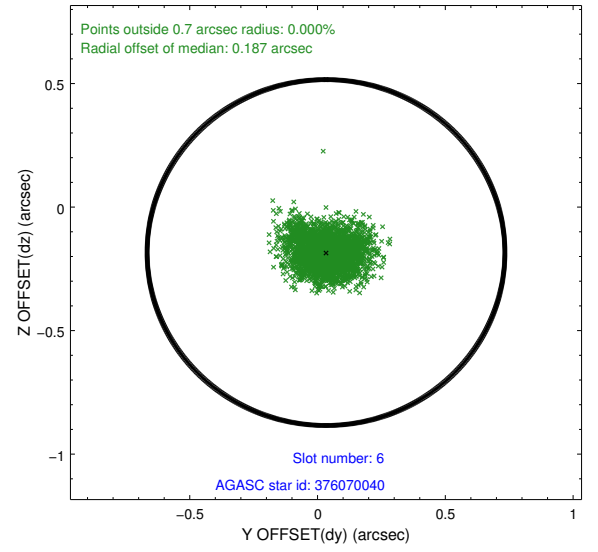
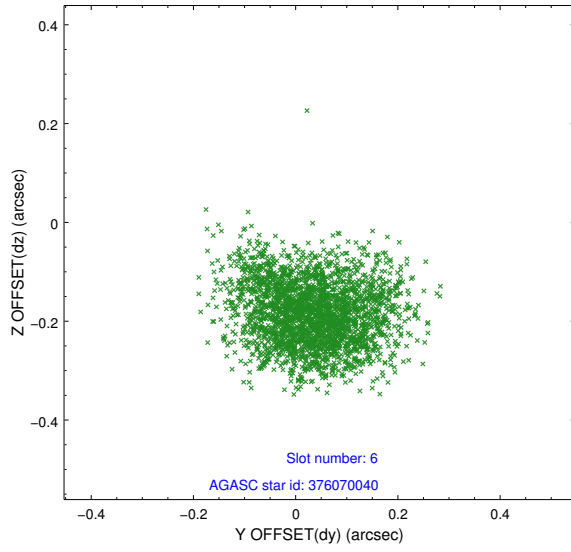
## 2.4.2 Slot 4



### 2.4.3 Slot 5

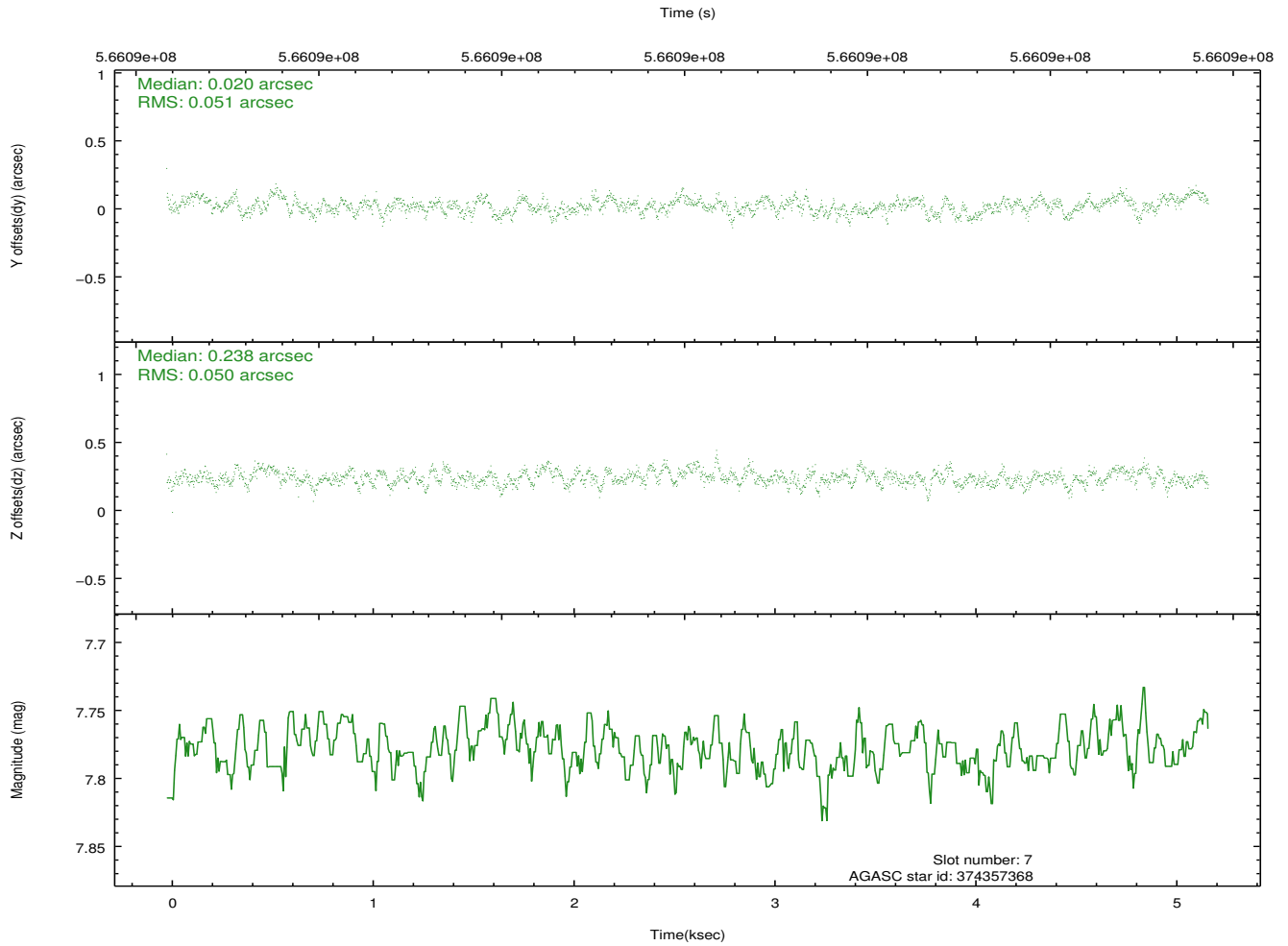
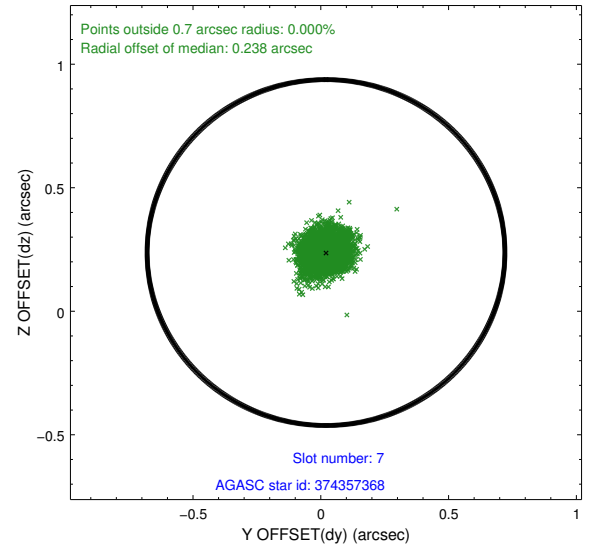
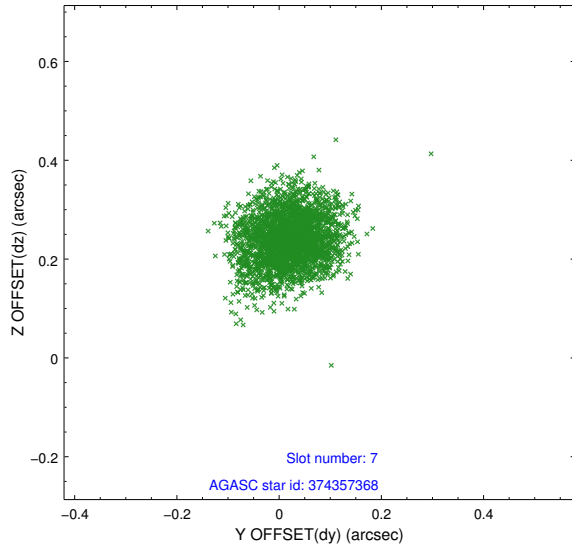


## 2.4.4 Slot 6



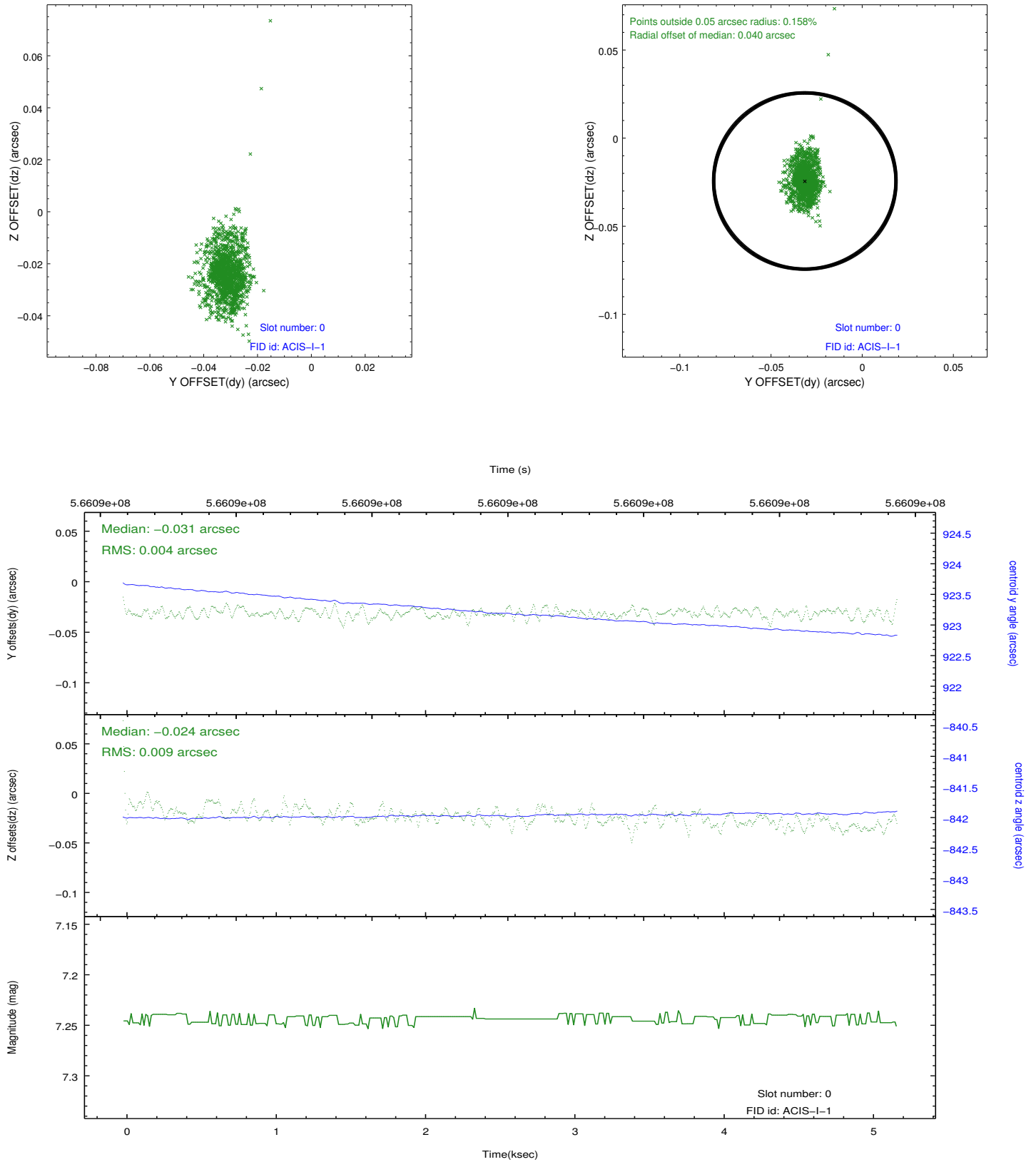


## 2.4.5 Slot 7

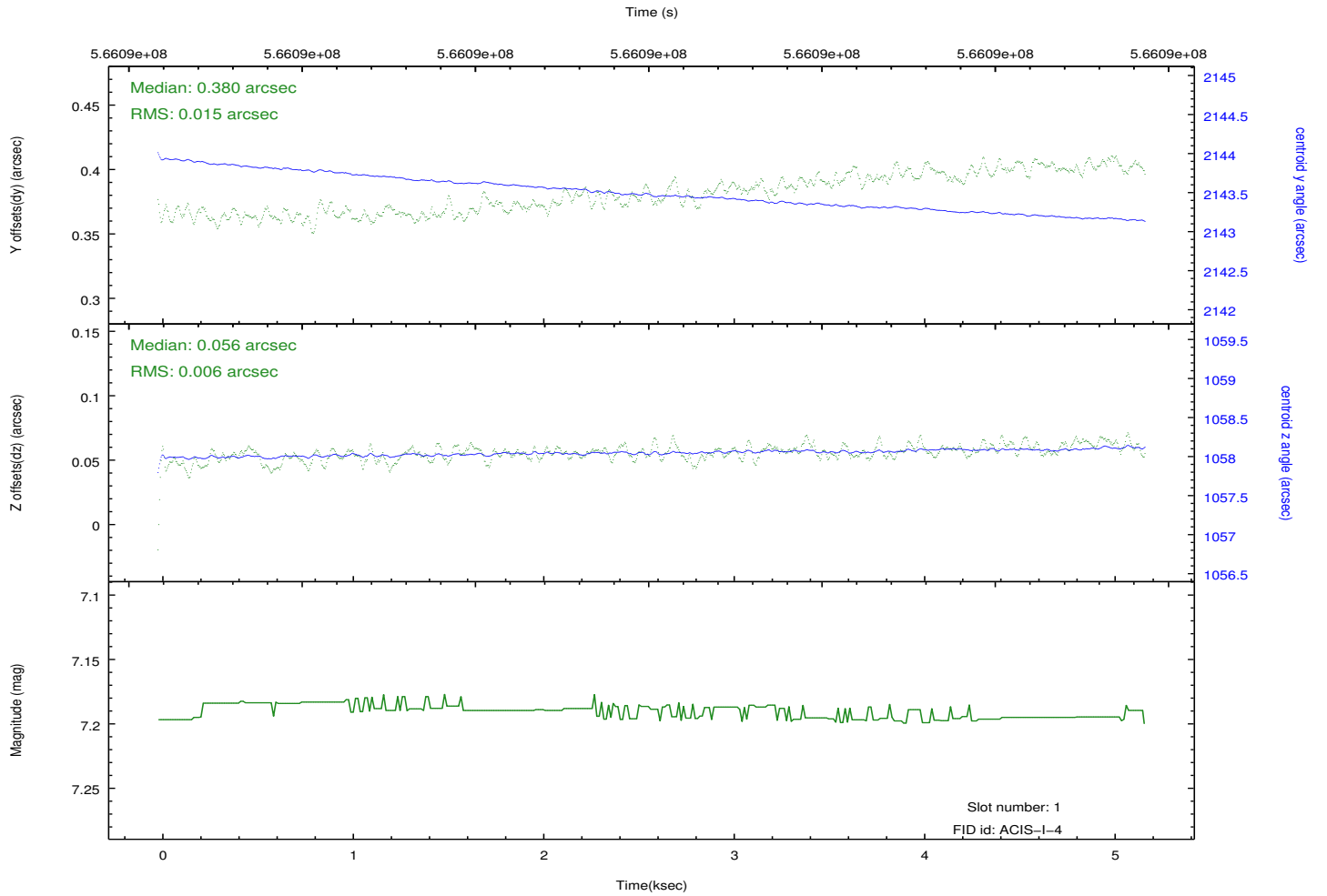
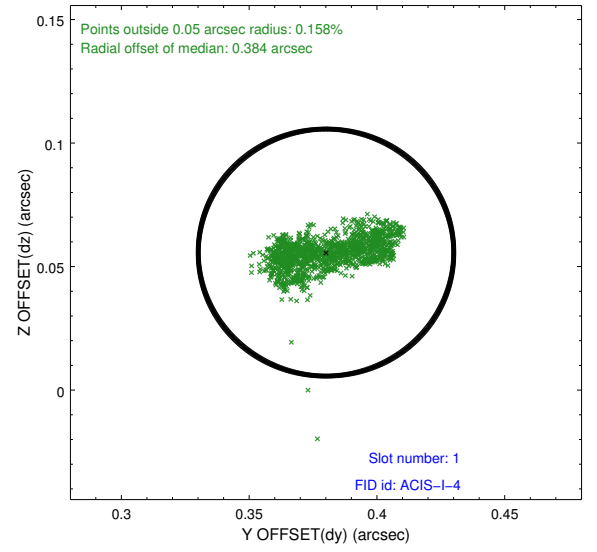
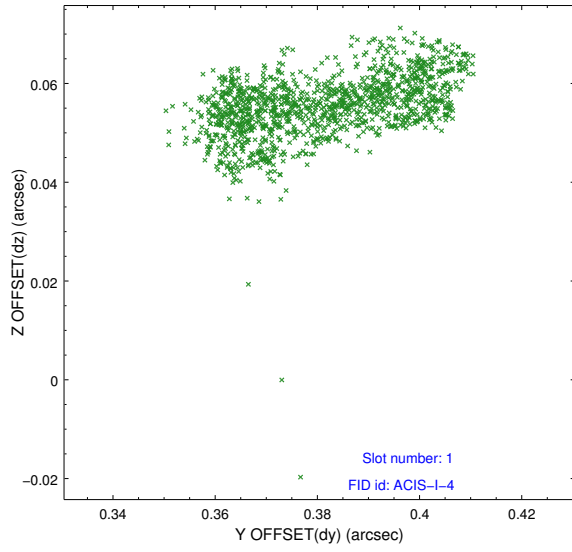


## 2.5 FID Slots

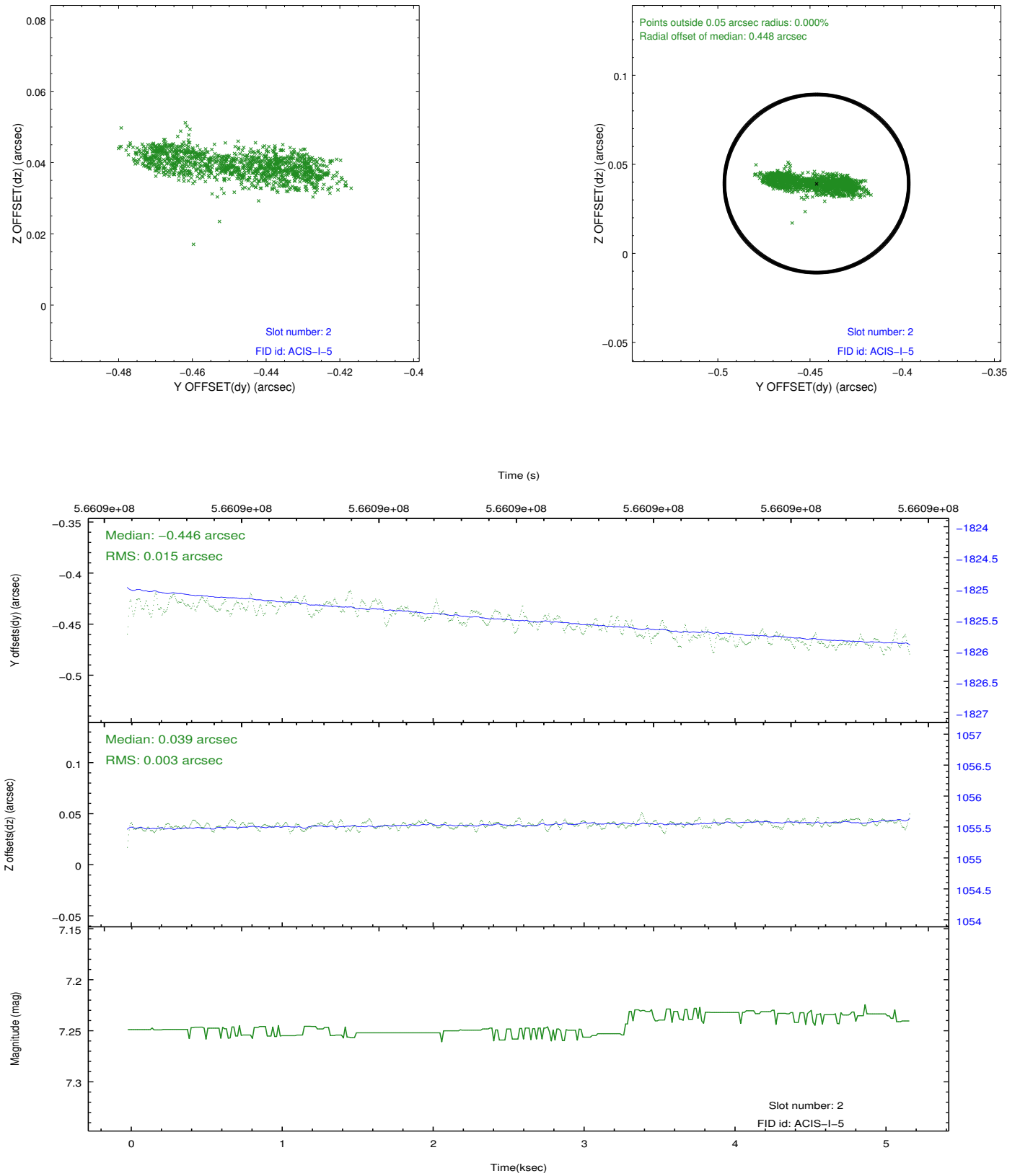
### 2.5.1 Slot 0



## 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)	2015.12.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.7729600846767

### A.2 Comments