

# V&V Reference Report

## L2 ASCDS Version : 10.4.2.1

Observation 17258 - L2 Version 1  
Chandra X-Ray Center

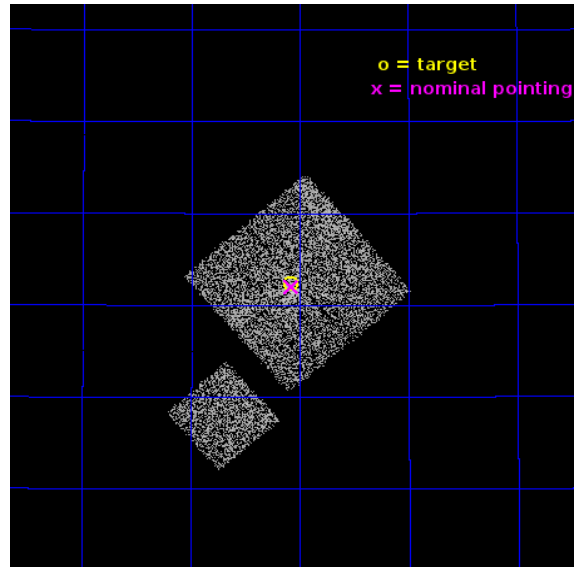
L2 Processing Date : Dec 4 2015

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# 1 Front

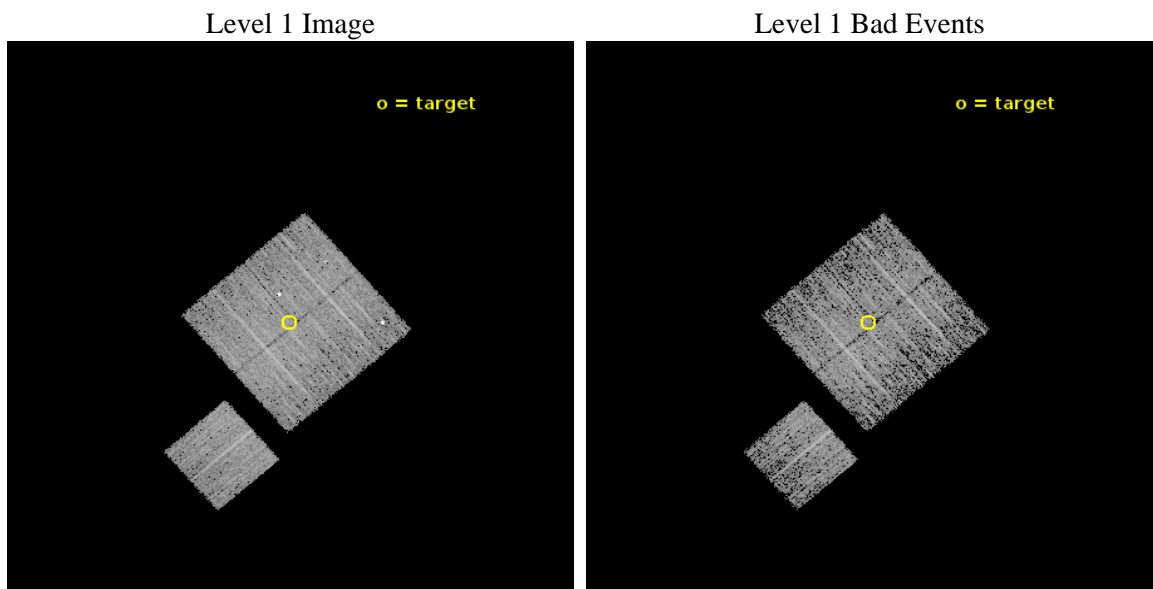
seq_num	801503	Sequence number
obs_id	17258	Observation id
title	Perseus: A New, Low-Redshift Anchor for Cluster Cosmology	Proposal
observer	Prof. Steven Allen	Principal investigator
object	Perseus cluster	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.27248	Observer's specified target RA [deg]
dec_targ	40.706256	Observer's specified target Dec [deg]
ra_nom	49.269763591729	Nominal RA [deg]
dec_nom	40.700220706671	Nominal Dec [deg]
roll_nom	228.99918497822	Nominal Roll [deg]
revision	1	Processing version of data
ontime	5067.7809154987	Sum of GTIs [s]
livetime	5001.5666269917	Livetime [s]
ontime0	5070.7988557816	Sum of GTIs [s]
ontime1	5070.8398957253	Sum of GTIs [s]
ontime2	5070.8809357882	Sum of GTIs [s]
ontime3	5067.7809154987	Sum of GTIs [s]
ontime6	5070.7578157187	Sum of GTIs [s]
l2events	15124	Number of level 2 events



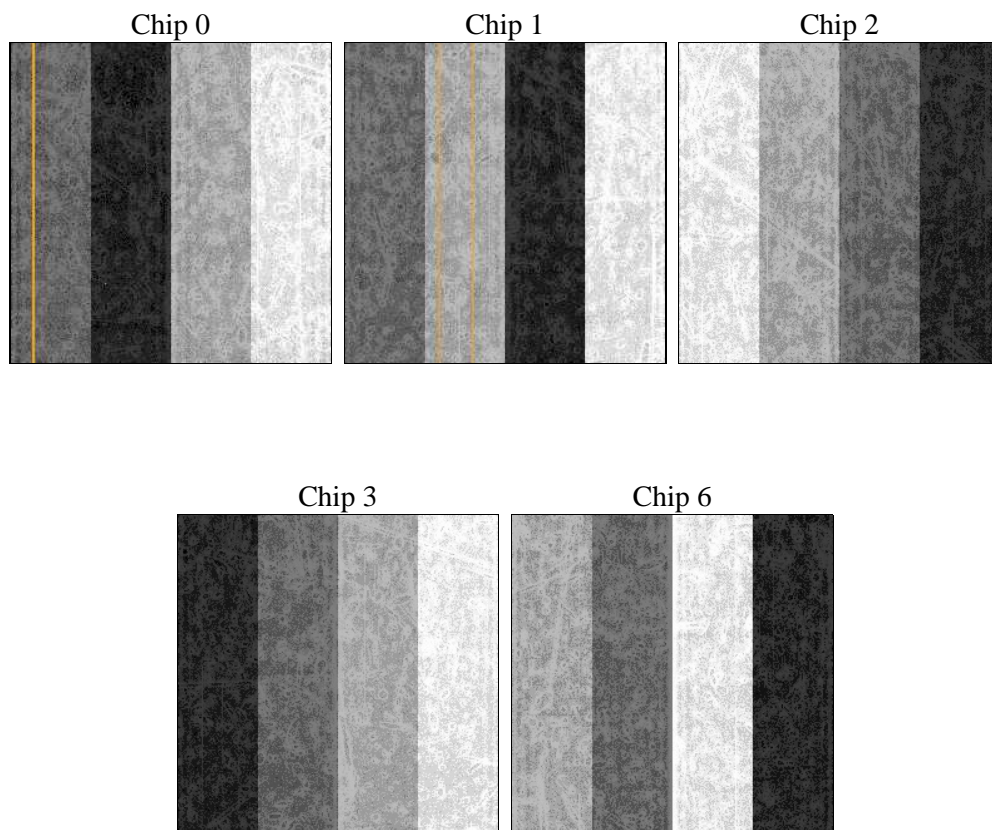
## 2 OBI

### 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	5067.7809154987	Sum of GTIs [s]
caldsver	4.6.10a	&#160	ontime0	5070.7988557816	Sum of GTIs [s]
date	2015-12-04T06:19:27	Date and time of file creation	ontime1	5070.8398957253	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	5070.8809357882	Sum of GTIs [s]
			ontime3	5067.7809154987	Sum of GTIs [s]
			ontime6	5070.7578157187	Sum of GTIs [s]
			l1events	146626	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	29177	30136	30235	28915	28163
rejected events	24116	24400	26698	25515	24837
rejected %	82%	80%	88%	88%	88%

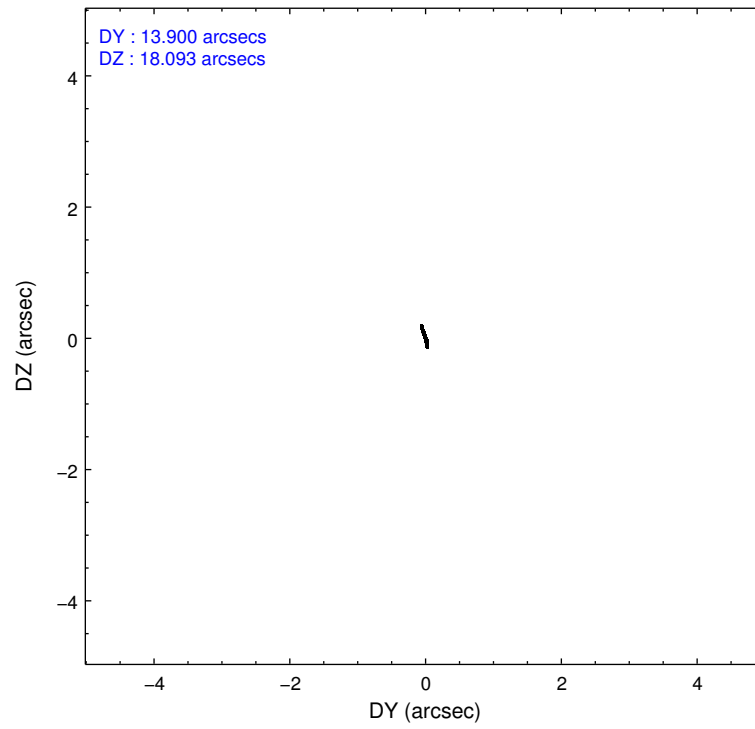
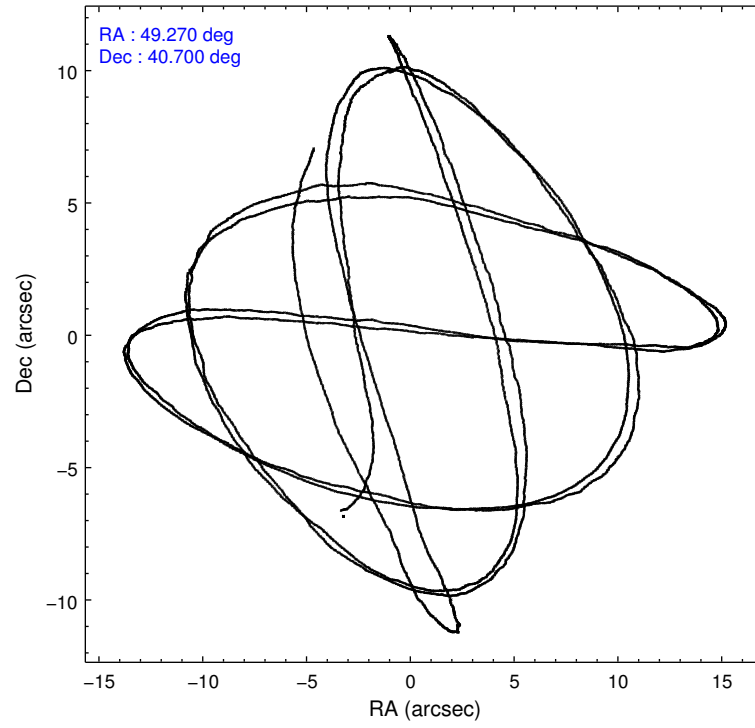
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2810	3204	1408	1328	1120
	9%	10%	4%	4%	3%
grade 1 events	24	22	18	16	10
	0%	0%	0%	0%	0%
grade 2 events	881	995	840	695	751
	3%	3%	2%	2%	2%
grade 3 events	324	371	316	340	332
	1%	1%	1%	1%	1%
grade 4 events	342	381	349	346	300
	1%	1%	1%	1%	1%
grade 5 events	1275	1402	1156	1458	1402
	4%	4%	3%	5%	4%
grade 6 events	709	790	630	693	824
	2%	2%	2%	2%	2%
grade 7 events	22812	22971	25518	24039	23424
	78%	76%	84%	83%	83%

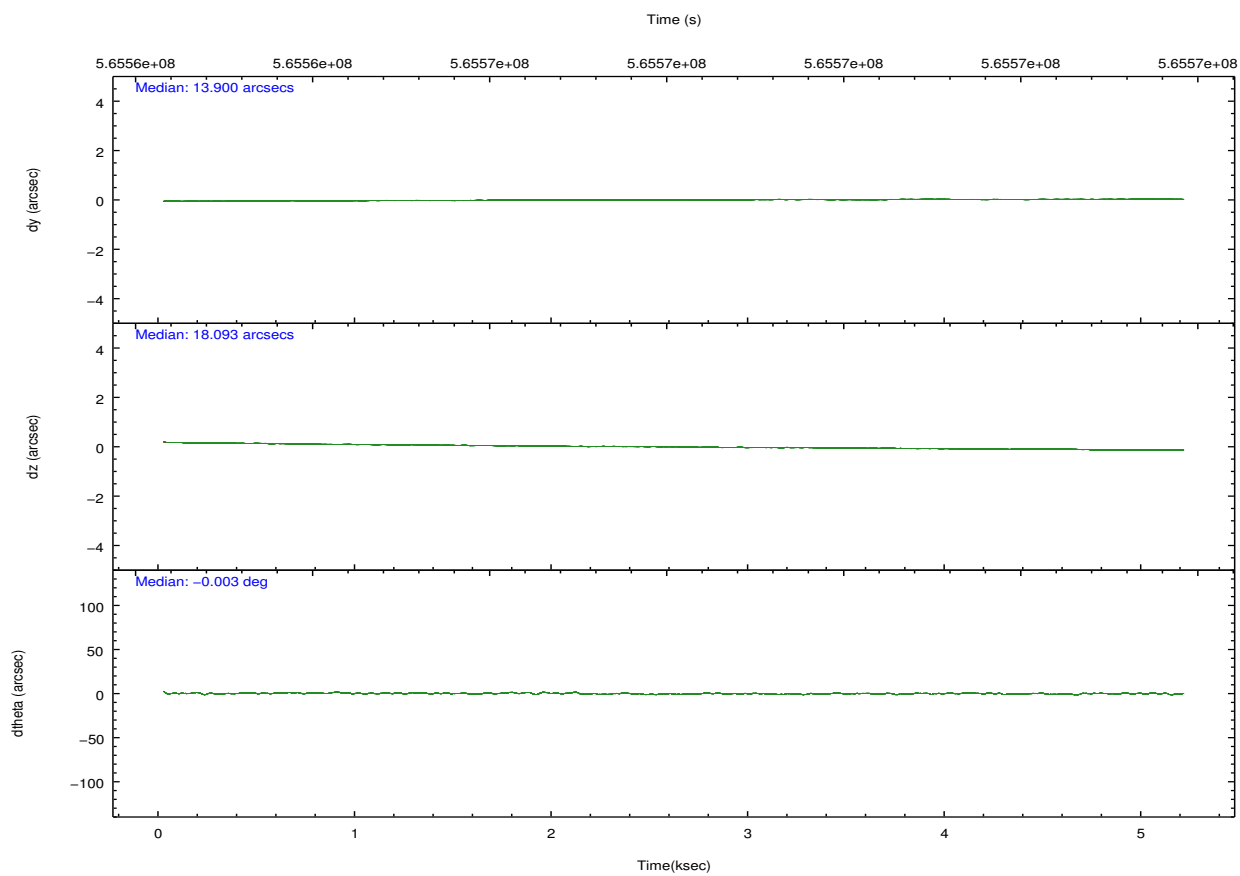
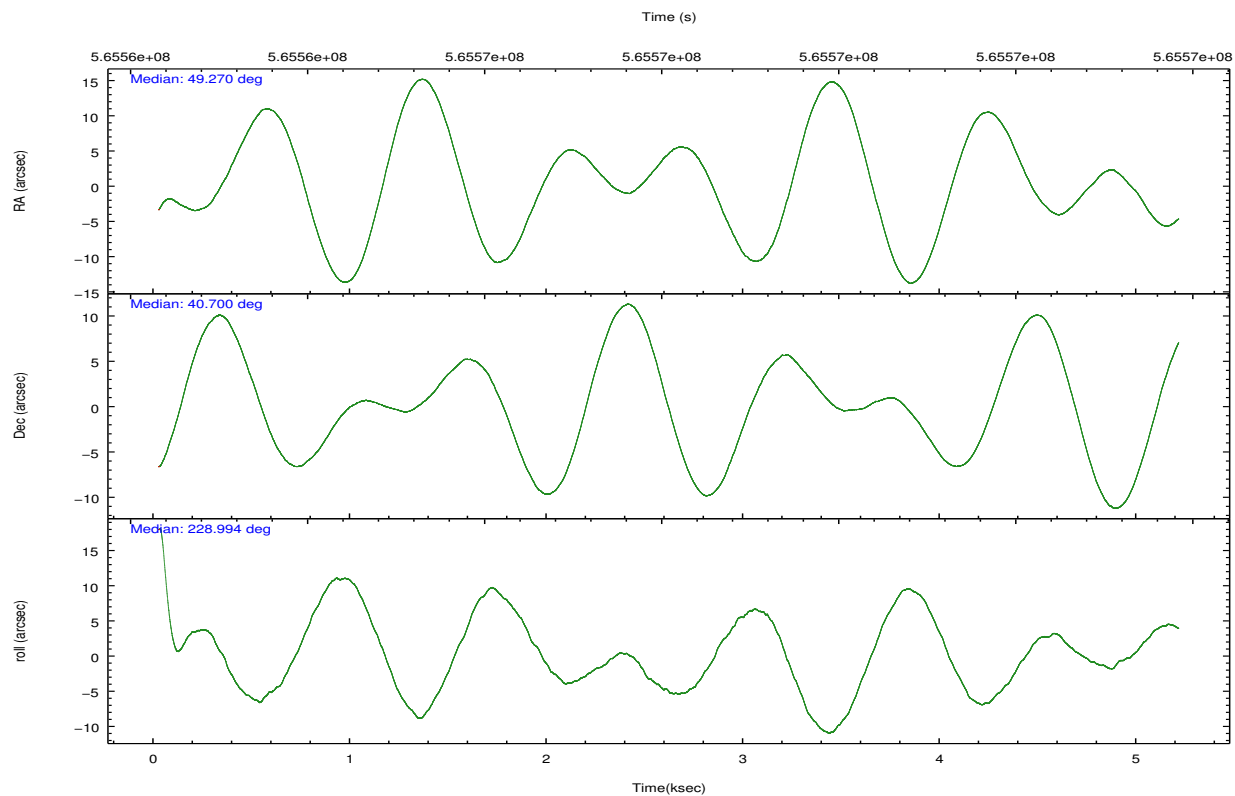


## 2.2 Compared Parameters

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	49.276610	49.26976359172929	CCD I2 on	Y	Y
[deg] Pointing Dec	40.727337	40.70022070667063	CCD I3 on	Y	Y
[deg] Pointing Roll	228.785994	228.9991849782201	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)	565564635.184000	565563427.92705	CCD S5 on	N	N
Observation start date	2015-12-03T21:16:07	2015-12-03T20:57:07	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	565569635.184000	565569768.57741	On-chip summing requested	N	N
Observation end date	2015-12-03T22:39:27	2015-12-03T22:42:48	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



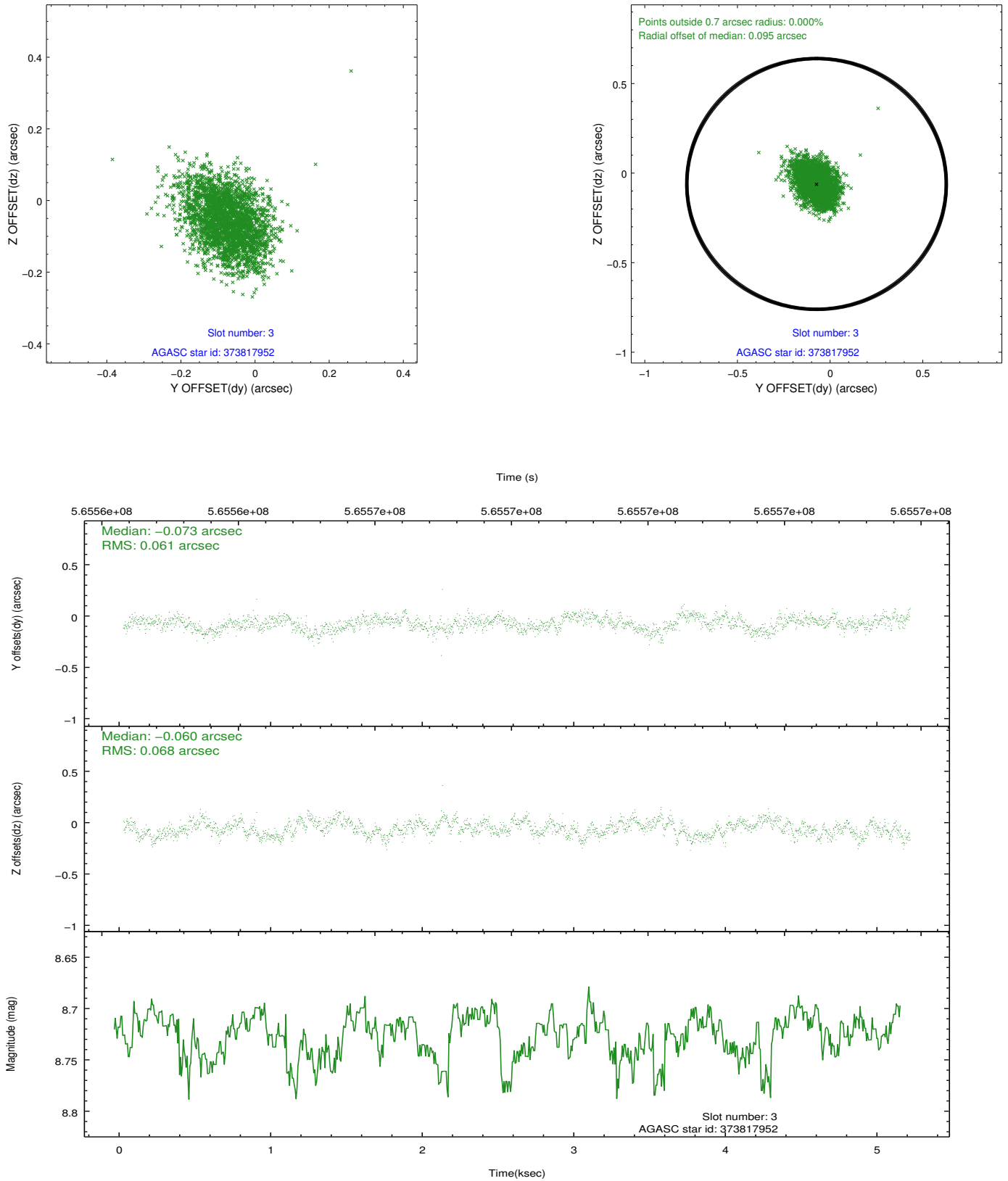


### Slot Statistics

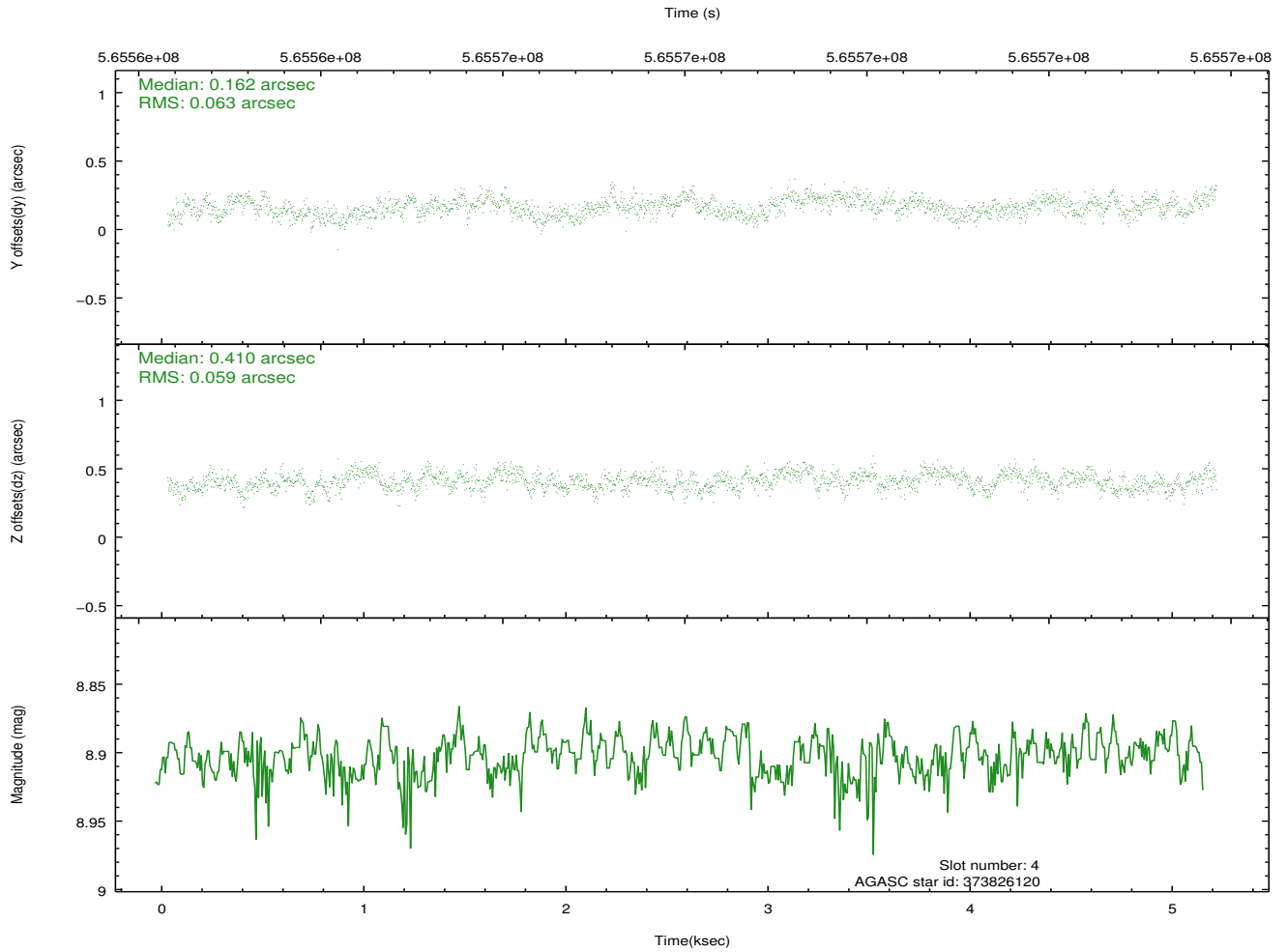
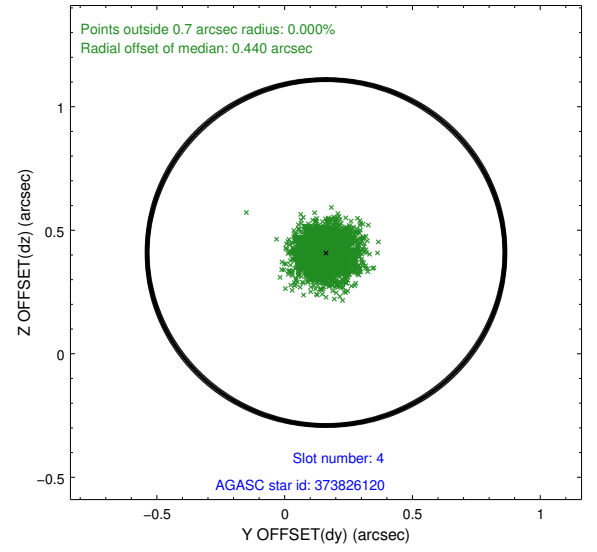
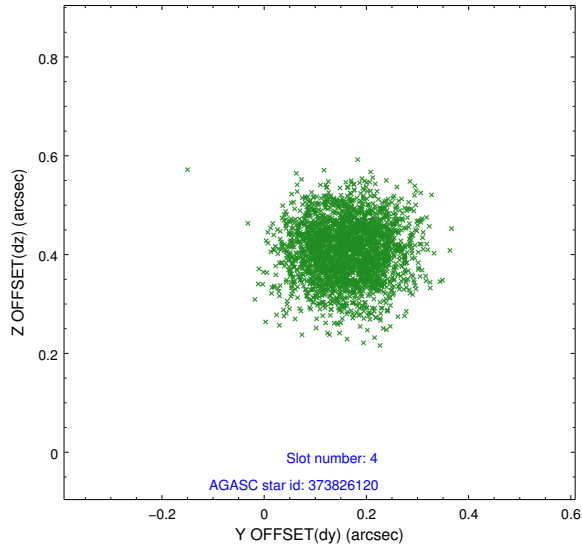
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.26	1266	-0.042	-0.003	0.009	0.015	0.000000	0.000000	925.57	-841.76
1	FID		ACIS-I-4	7.20	1266	0.343	0.047	0.007	0.012	0.000000	0.000000	2146.60	1057.53
2	FID		ACIS-I-5	7.26	1266	-0.398	0.028	0.008	0.015	0.000000	0.000000	-1821.33	1056.61
3	GUIDE	used	373817952	8.73	2532	-0.073	-0.060	0.097	0.156	49.913424	40.978510	-1825.02	702.35
4	GUIDE	used	373826120	8.90	2530	0.162	0.410	0.092	0.145	49.738165	41.186341	-2069.63	-149.45
5	GUIDE	used	373828904	9.06	2531	0.072	-0.036	0.148	0.220	48.512060	40.522603	1925.81	-1093.92
6	GUIDE	used	373831808	8.83	2532	-0.407	-0.250	0.118	0.186	49.325689	40.033510	1790.29	1747.54
7	GUIDE	used	373823248	9.45	2529	0.252	-0.064	0.196	0.333	48.121833	40.647190	2281.19	-2195.25

## 2.4 Star Slots

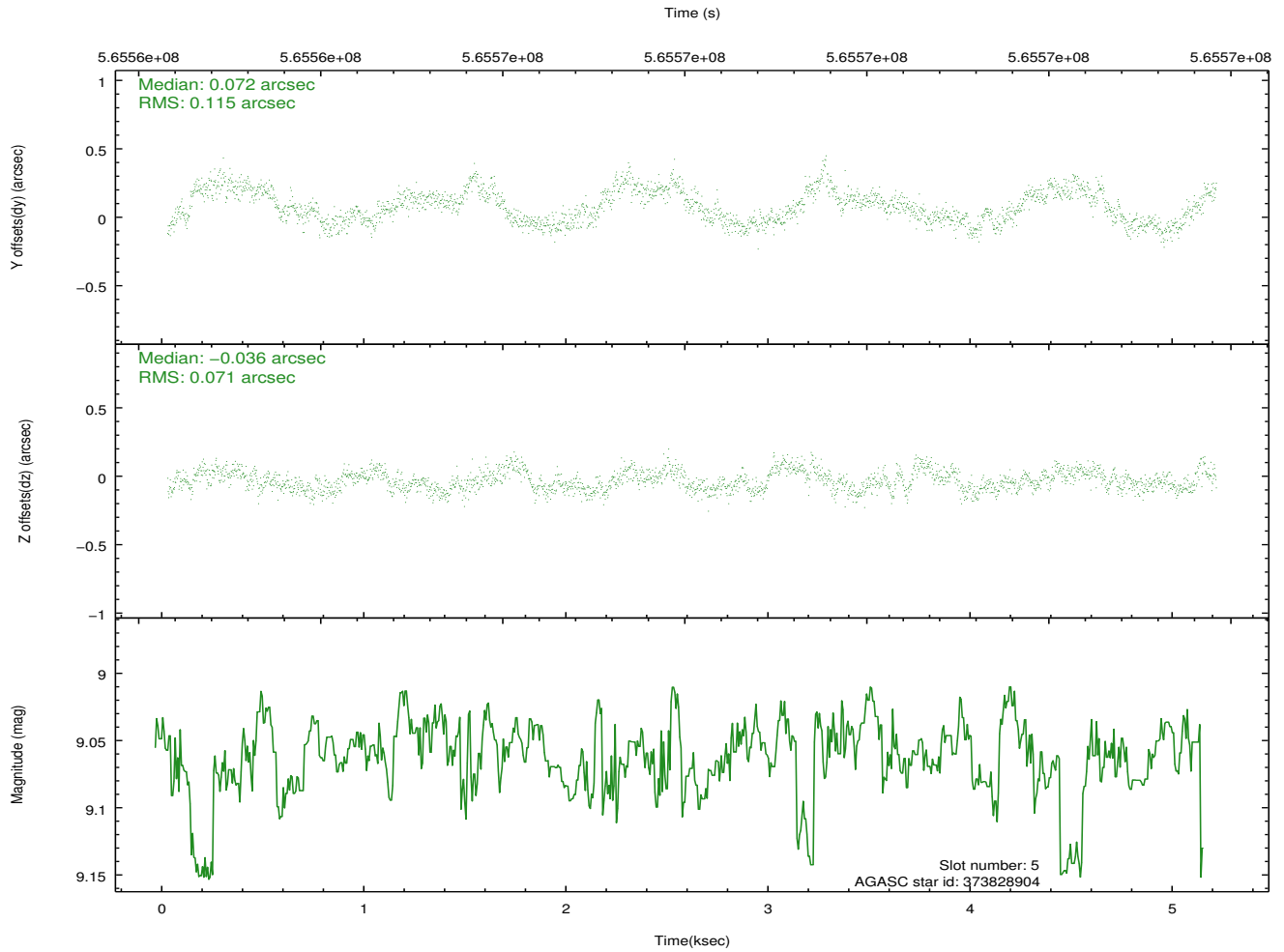
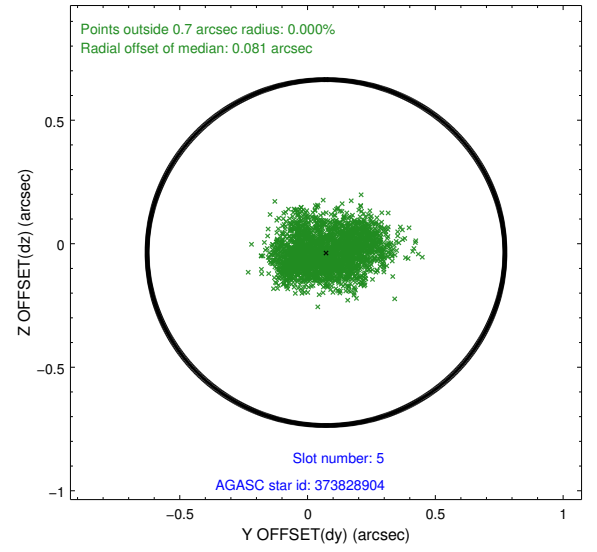
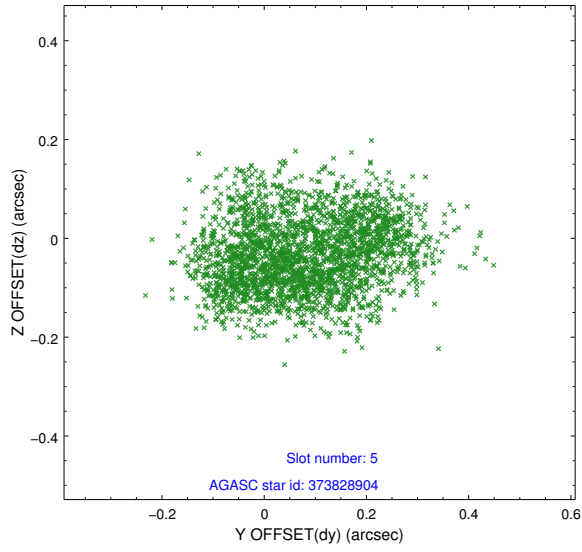
### 2.4.1 Slot 3



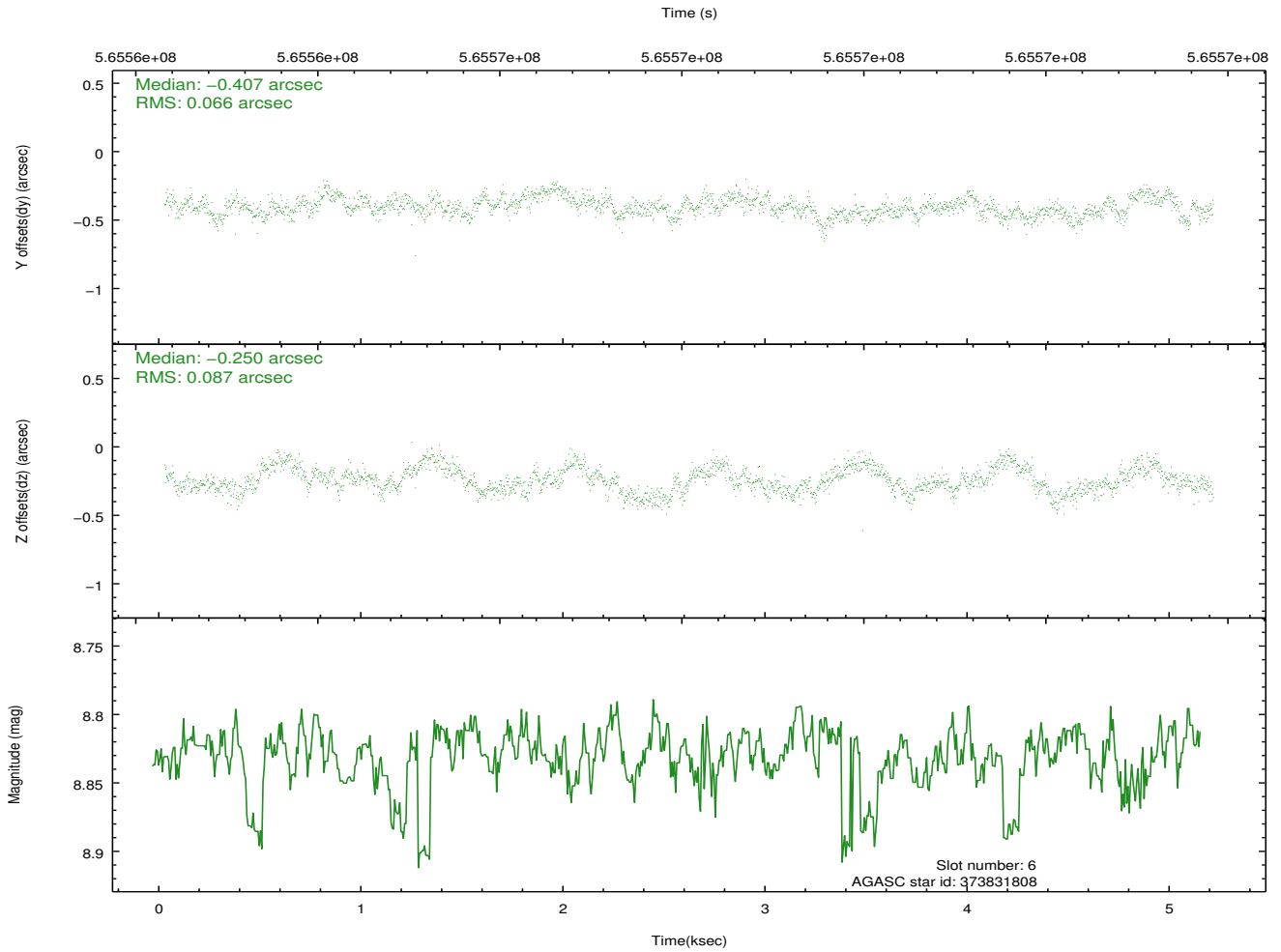
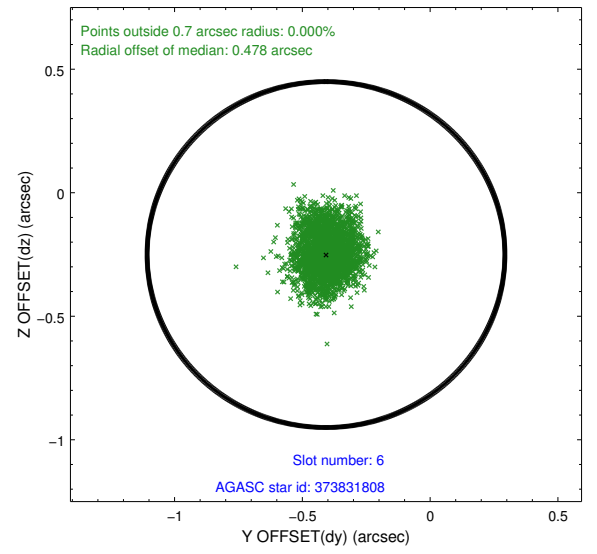
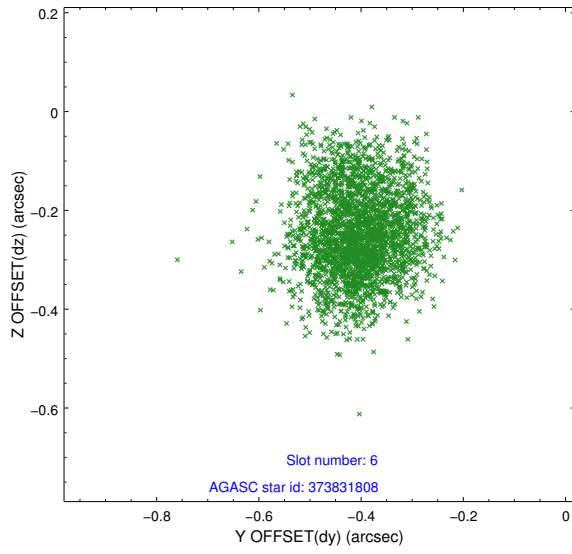
## 2.4.2 Slot 4



### 2.4.3 Slot 5

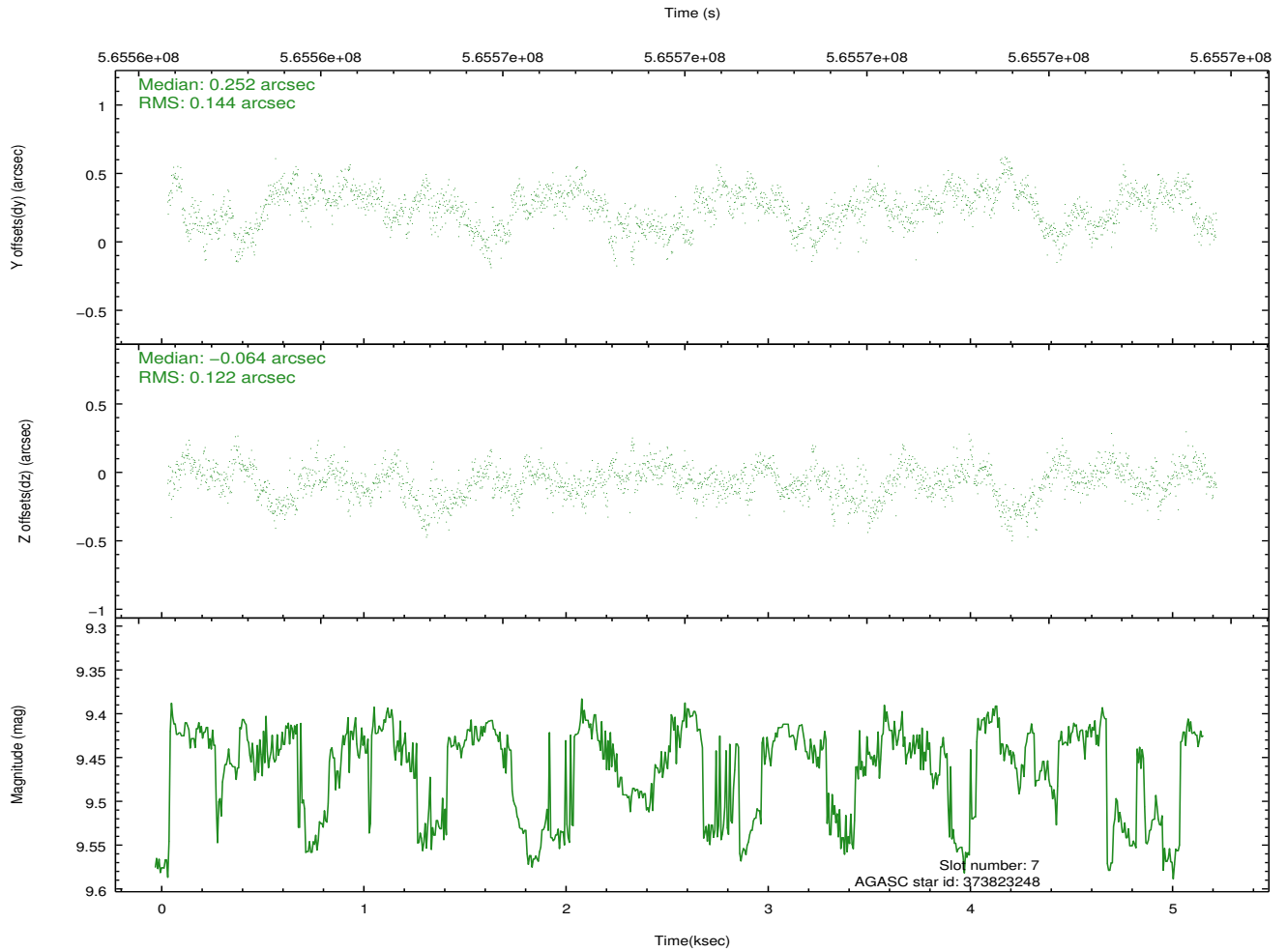
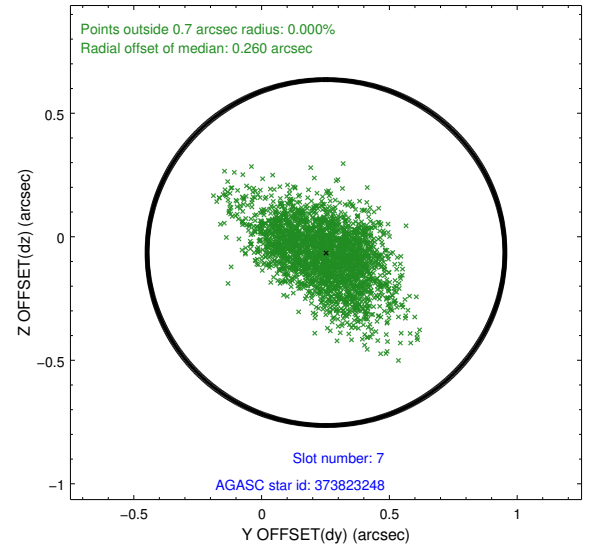
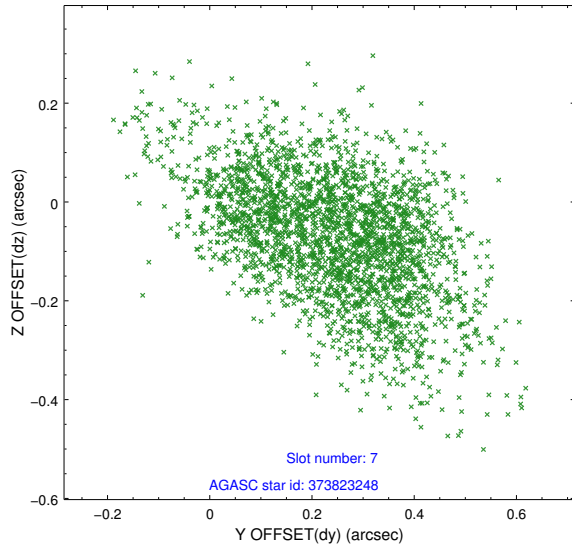


## 2.4.4 Slot 6



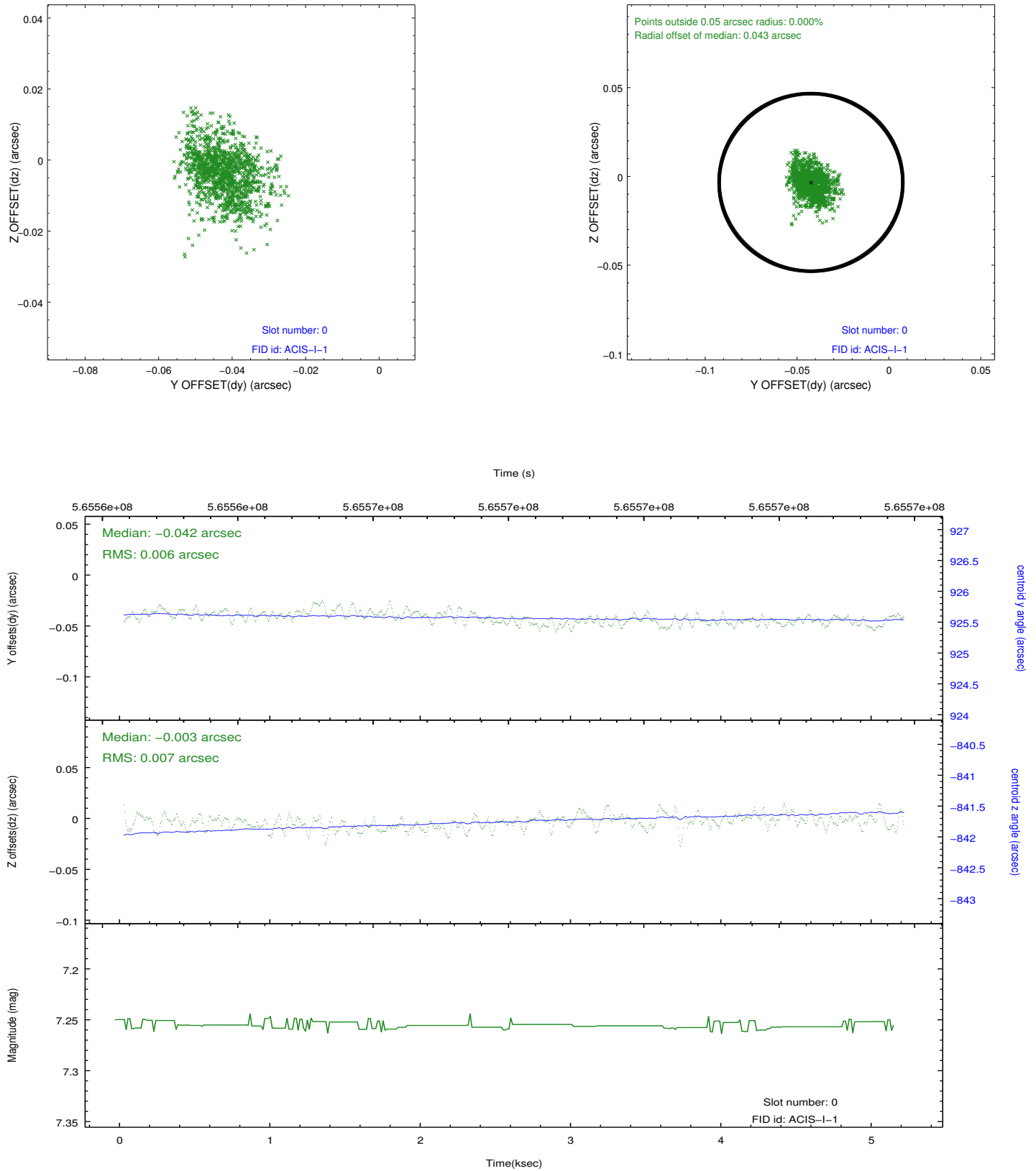


## 2.4.5 Slot 7

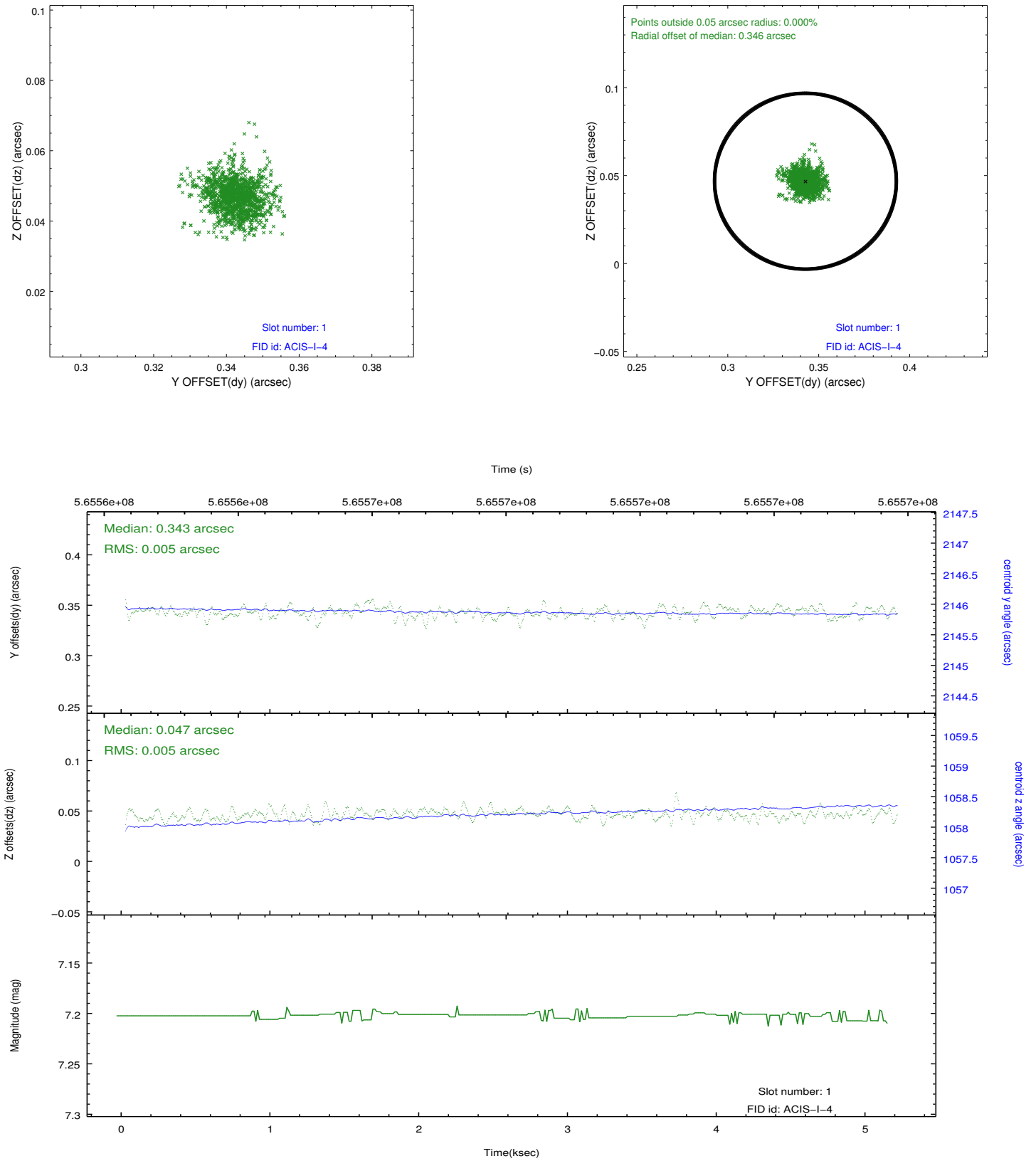


## 2.5 FID Slots

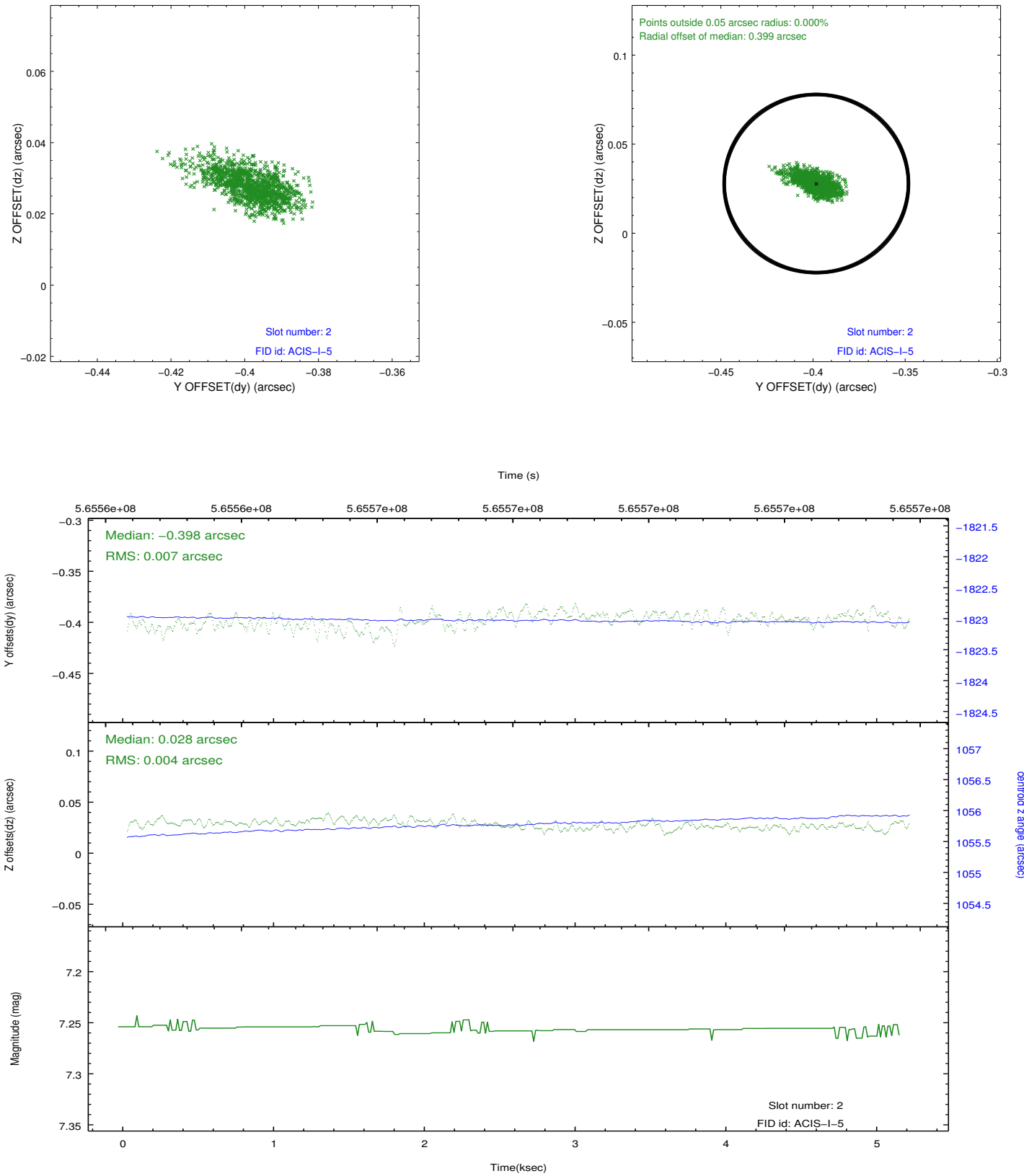
### 2.5.1 Slot 0



## 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)	2015.12.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.0677809154987

### A.2 Comments