

# V&V Reference Report

## L2 ASCDS Version : 10.4.2.1

Observation 17267 - L2 Version 1  
Chandra X-Ray Center

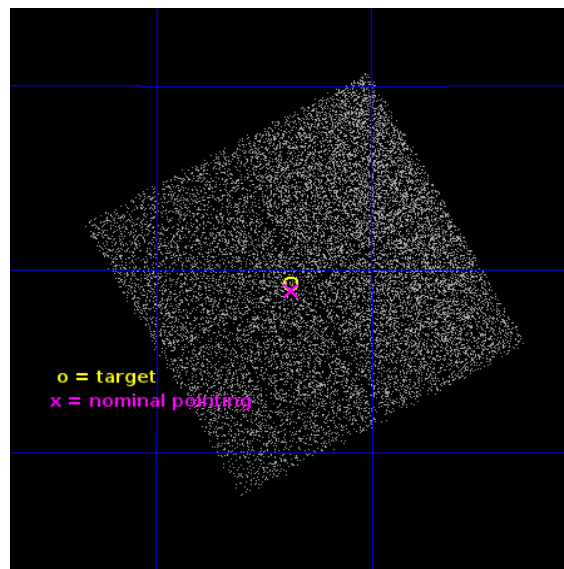
L2 Processing Date : Dec 12 2015

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# 1 Front

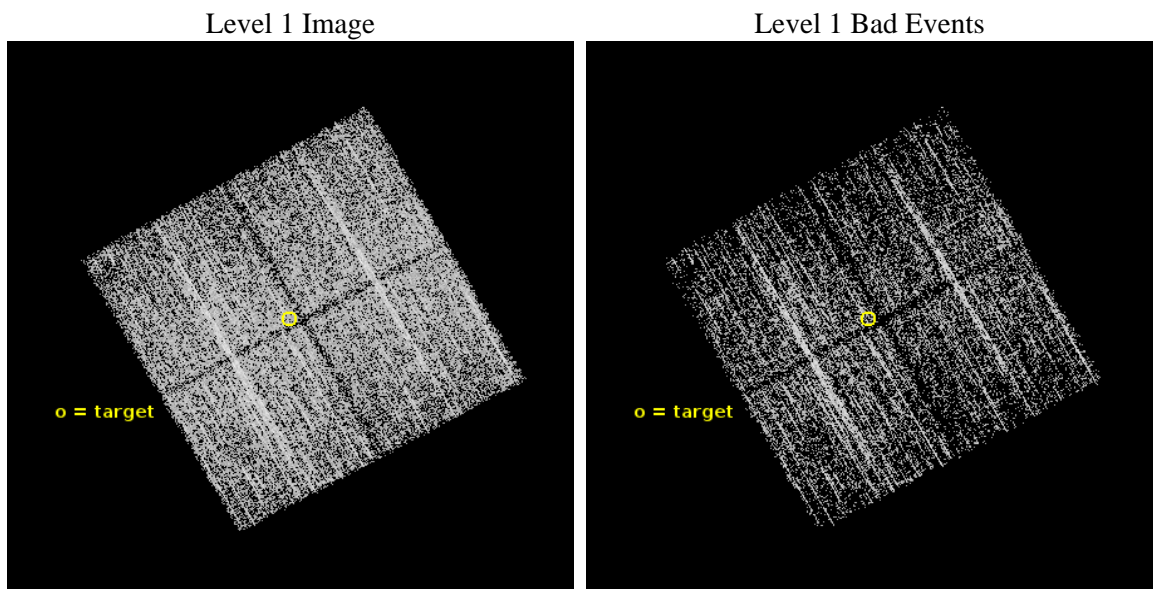
seq_num	801512	Sequence number
obs_id	17267	Observation id
title	Perseus: A New, Low-Redshift Anchor for Cluster Cosmology	Proposal
observer	Prof. Steven Allen	Principal investigator
object	Perseus cluster	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	50.5941	Observer's specified target RA [deg]
dec_targ	41.320553	Observer's specified target Dec [deg]
ra_nom	50.593222918823	Nominal RA [deg]
dec_nom	41.314218033902	Nominal Dec [deg]
roll_nom	240.80503840359	Nominal Roll [deg]
revision	1	Processing version of data
ontime	5087.1000392437	Sum of GTIs [s]
livetime	5020.6333321624	Livetime [s]
ontime0	5087.1000392437	Sum of GTIs [s]
ontime1	5087.1000392437	Sum of GTIs [s]
ontime2	5087.1000392437	Sum of GTIs [s]
ontime3	5087.1000392437	Sum of GTIs [s]
l2events	17849	Number of level 2 events



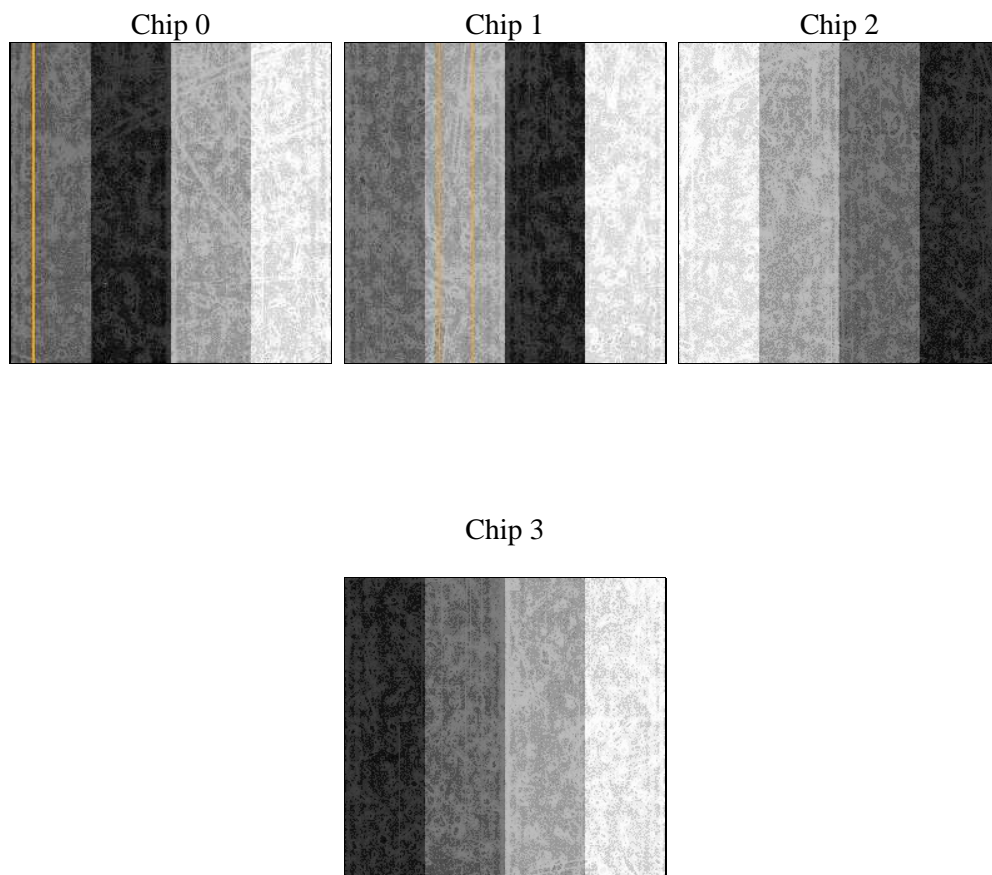
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.4.2.1	Processing system revision	ontime	5087.1000392437	Sum of GTIs [s]
caldsver	4.6.10a	&#160	ontime0	5087.1000392437	Sum of GTIs [s]
date	2015-12-12T19:35:28	Date and time of file creation	ontime1	5087.1000392437	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	5087.1000392437	Sum of GTIs [s]
			ontime3	5087.1000392437	Sum of GTIs [s]
			l1events	117685	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	29114	28426	31551	28594
rejected events	23120	21740	27626	24791
rejected %	79%	76%	87%	86%

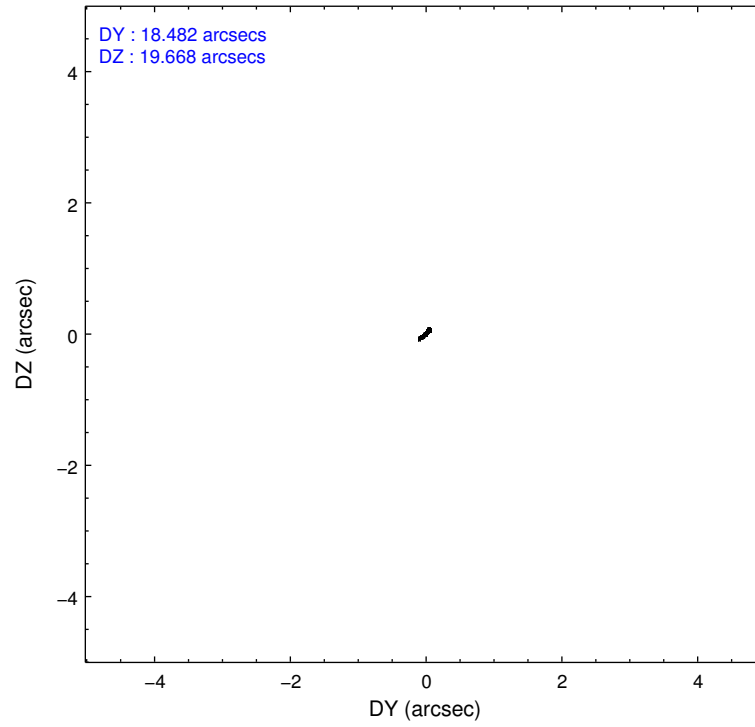
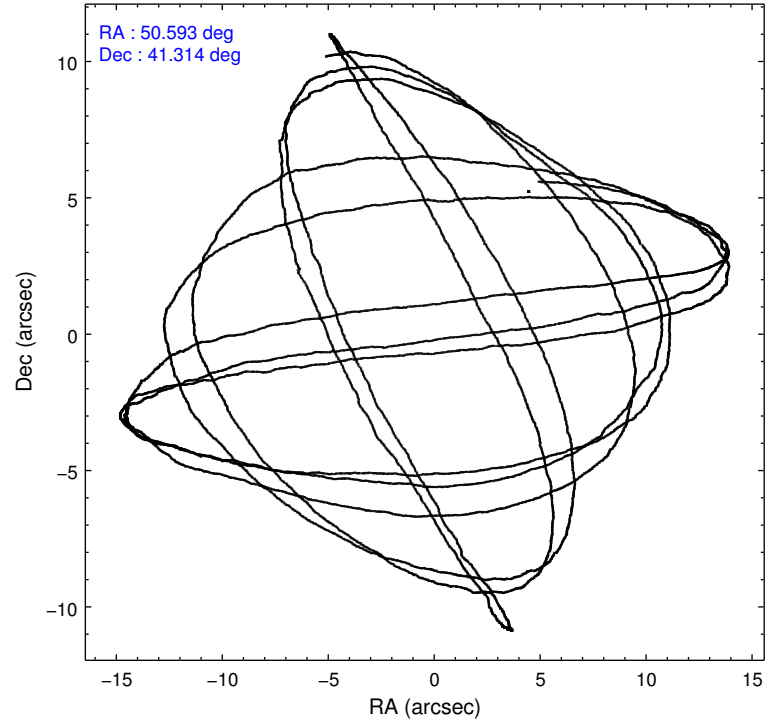
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	3334	3669	1789	1709
	11%	12%	5%	5%
grade 1 events	20	18	24	13
	0%	0%	0%	0%
grade 2 events	1114	1202	811	722
	3%	4%	2%	2%
grade 3 events	437	425	351	378
	1%	1%	1%	1%
grade 4 events	414	450	350	351
	1%	1%	1%	1%
grade 5 events	1239	1221	1165	1400
	4%	4%	3%	4%
grade 6 events	697	947	631	647
	2%	3%	1%	2%
grade 7 events	21859	20494	26430	23374
	75%	72%	83%	81%

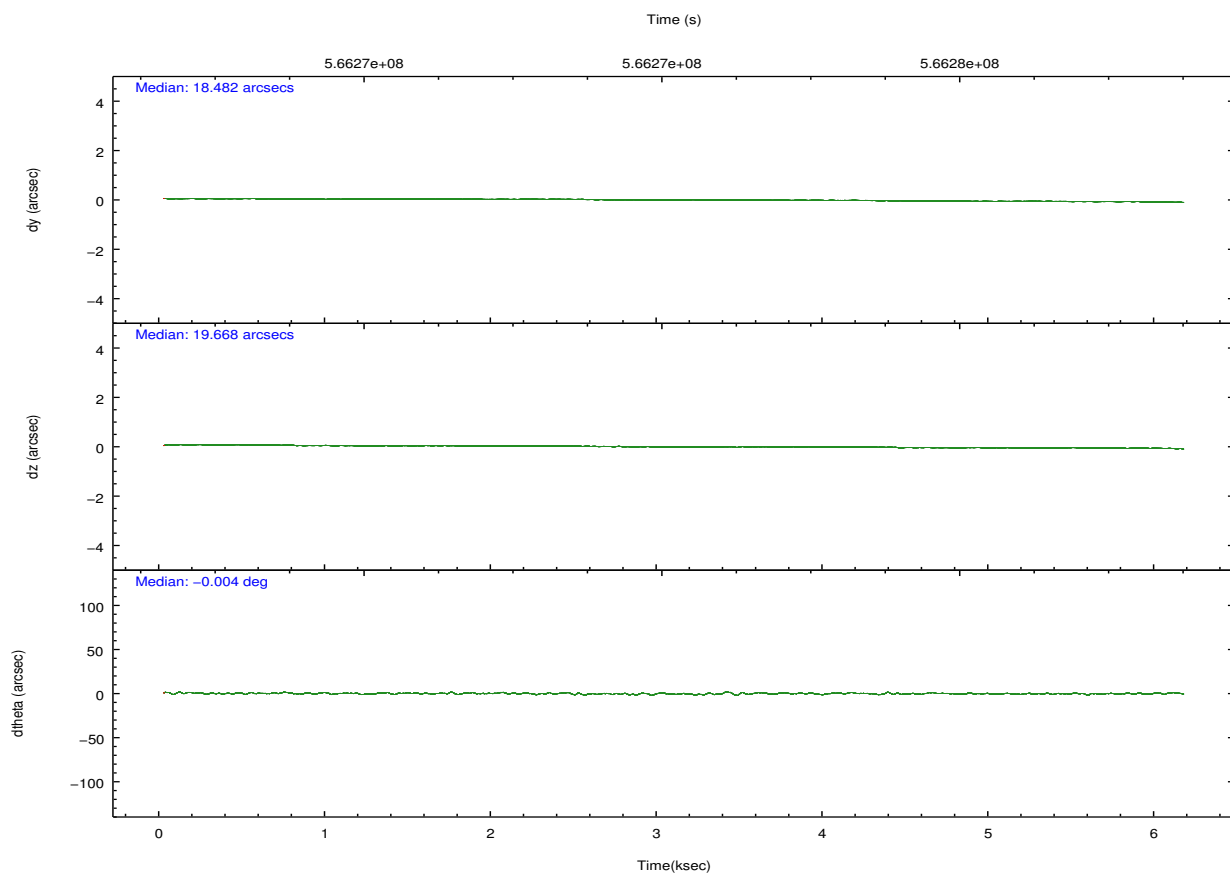
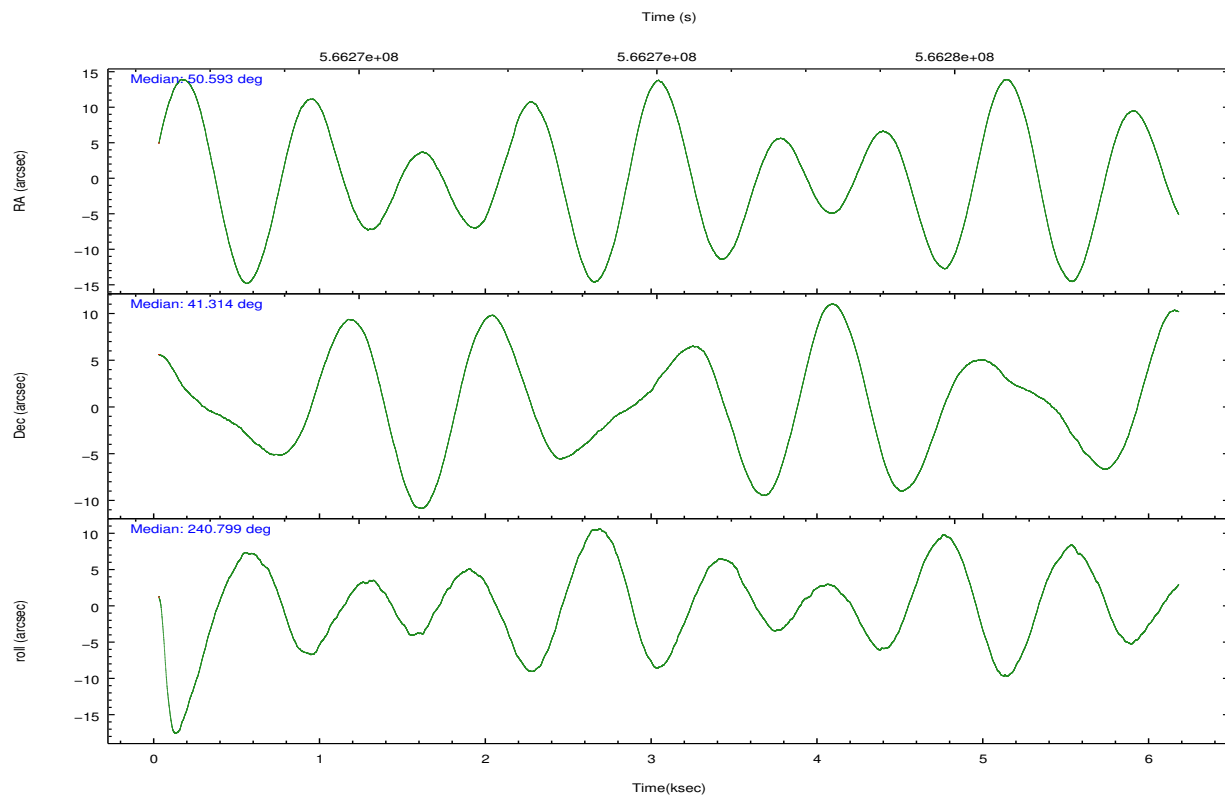


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	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	50.592445	50.59322291882291	CCD I2 on	Y	Y
[deg] Pointing Dec	41.341804	41.31421803390177	CCD I3 on	Y	Y
[deg] Pointing Roll	240.596827	240.8050384035933	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	N
[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)	566272159.184000	566270797.89212	CCD S5 on	N	N
Observation start date	2015-12-12T01:48:11	2015-12-12T01:26:37	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	566277159.184000	566277303.0549901	On-chip summing requested	N	N
Observation end date	2015-12-12T03:11:31	2015-12-12T03:15:03	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



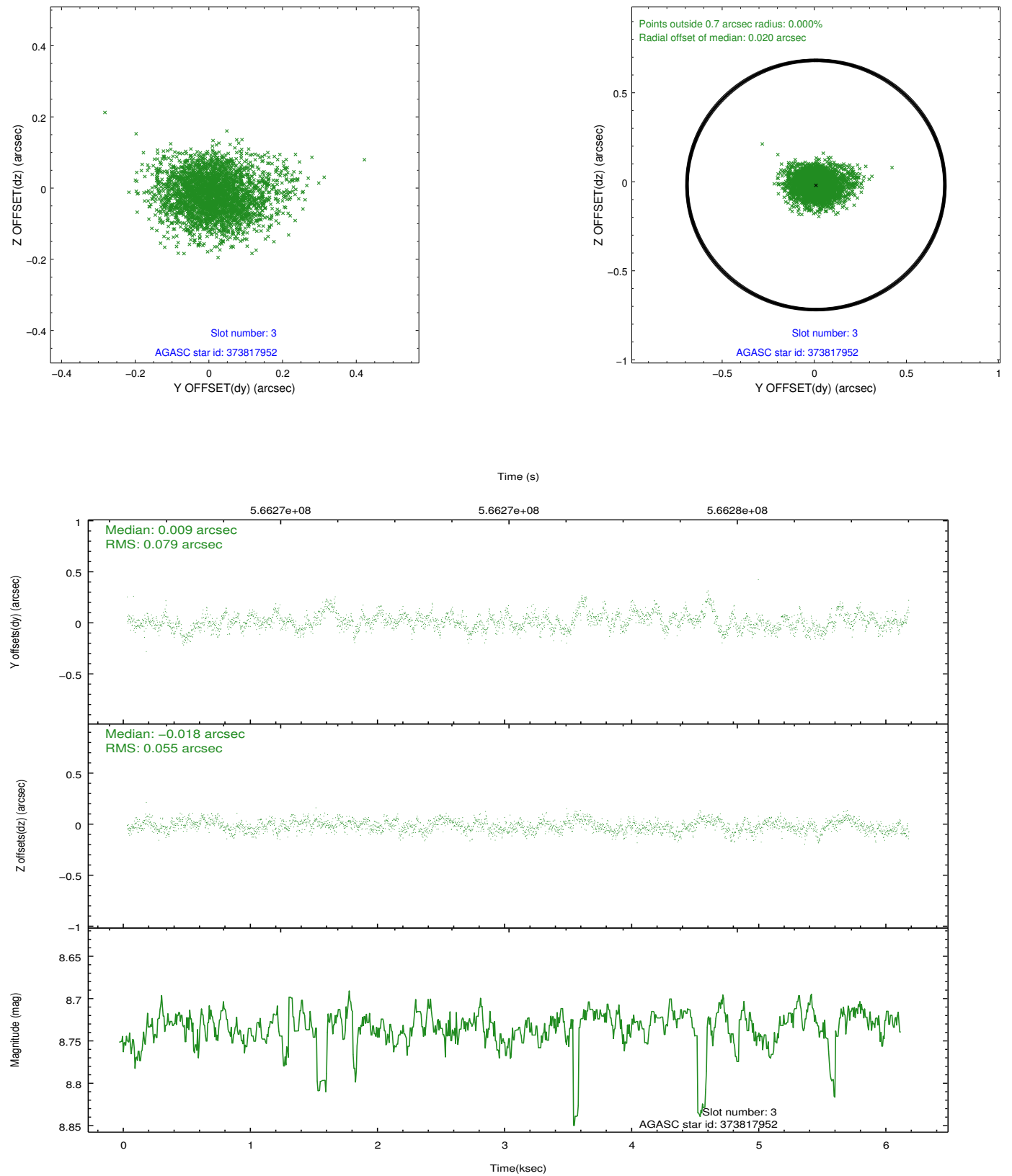


### Slot Statistics

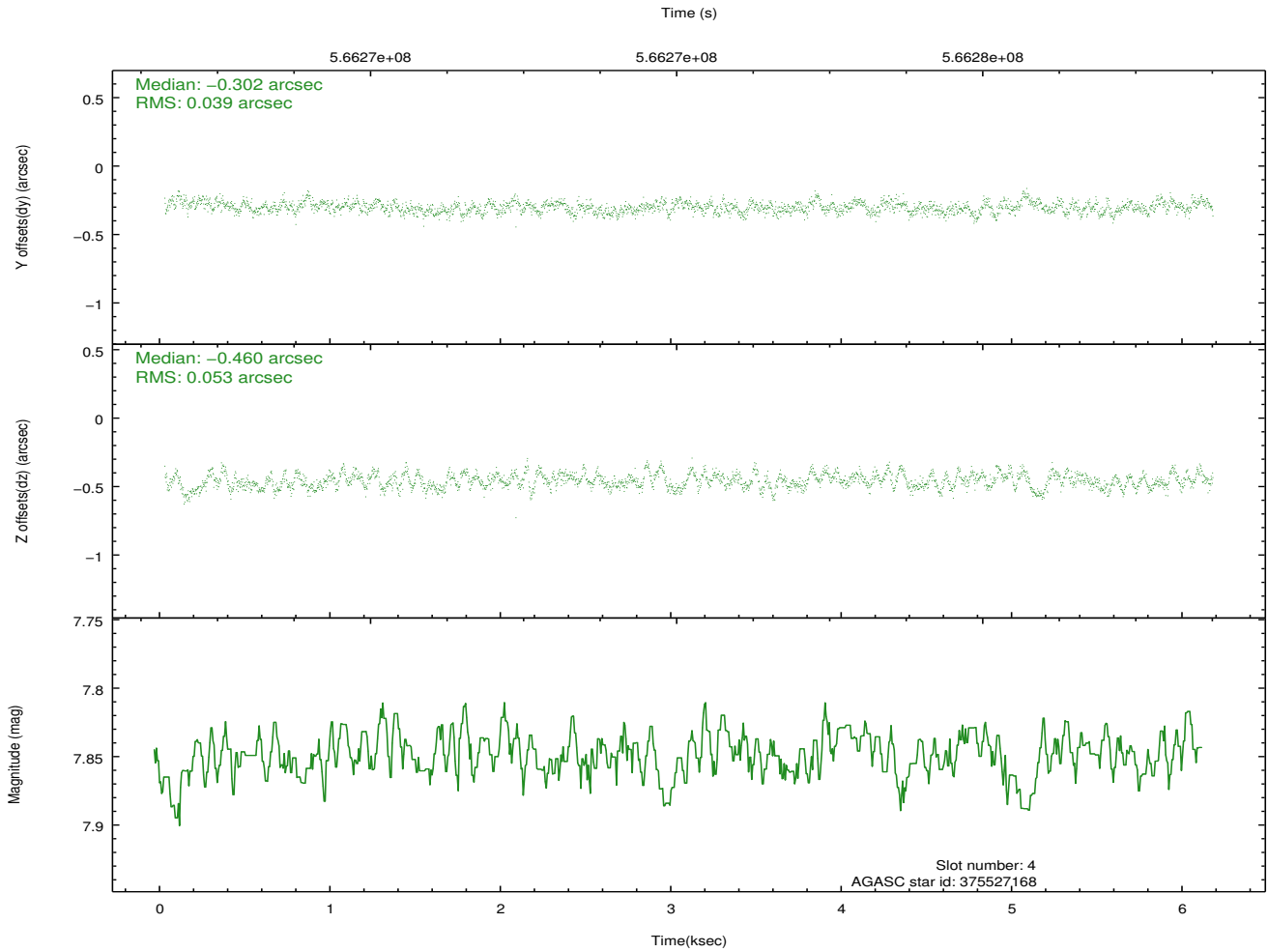
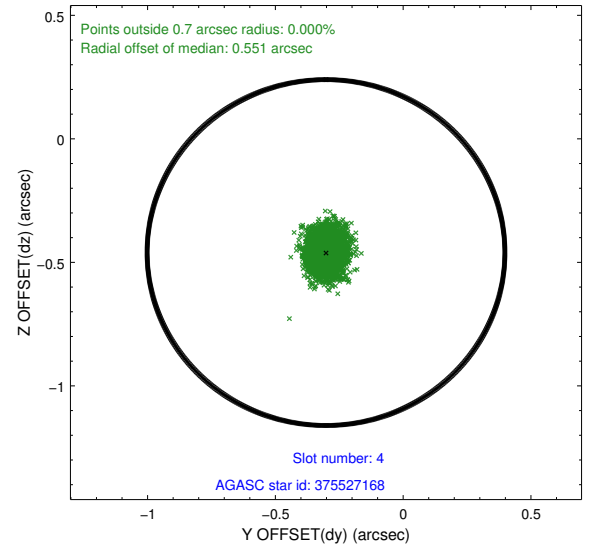
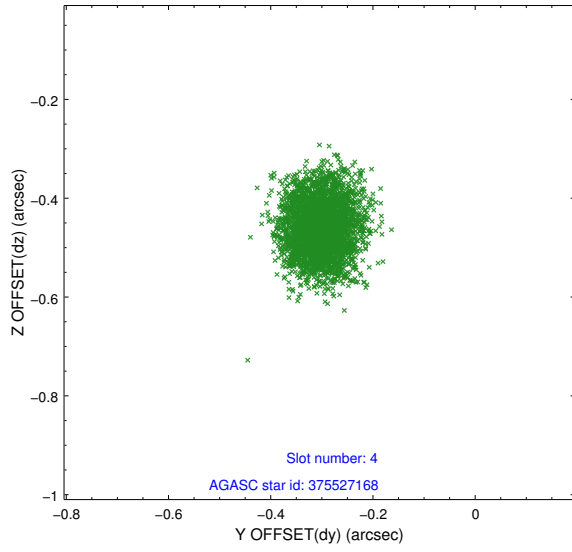
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-2	7.15	1501	-0.196	-0.053	0.010	0.019	0.000000	0.000000	-773.45	-849.84
1	FID		ACIS-I-4	7.19	1501	0.489	0.120	0.007	0.012	0.000000	0.000000	2140.78	1056.12
2	FID		ACIS-I-5	7.25	1501	-0.395	0.002	0.011	0.017	0.000000	0.000000	-1826.32	1054.81
3	GUIDE	used	373817952	8.73	3000	0.009	-0.018	0.099	0.173	49.913424	40.978510	2039.89	-968.99
4	GUIDE	used	375527168	7.85	3001	-0.302	-0.460	0.071	0.112	50.968367	40.629276	1729.22	2152.46
5	GUIDE	used	376070040	8.40	3001	0.269	0.291	0.077	0.129	50.072031	41.897206	-1059.21	-2197.62
6	GUIDE	used	376070440	6.98	3001	-0.154	-0.133	0.091	0.151	51.289107	41.257301	-667.43	1786.86
7	GUIDE	used	376057824	8.34	3000	0.166	0.322	0.085	0.135	50.665569	41.926280	-1928.43	-861.28

## 2.4 Star Slots

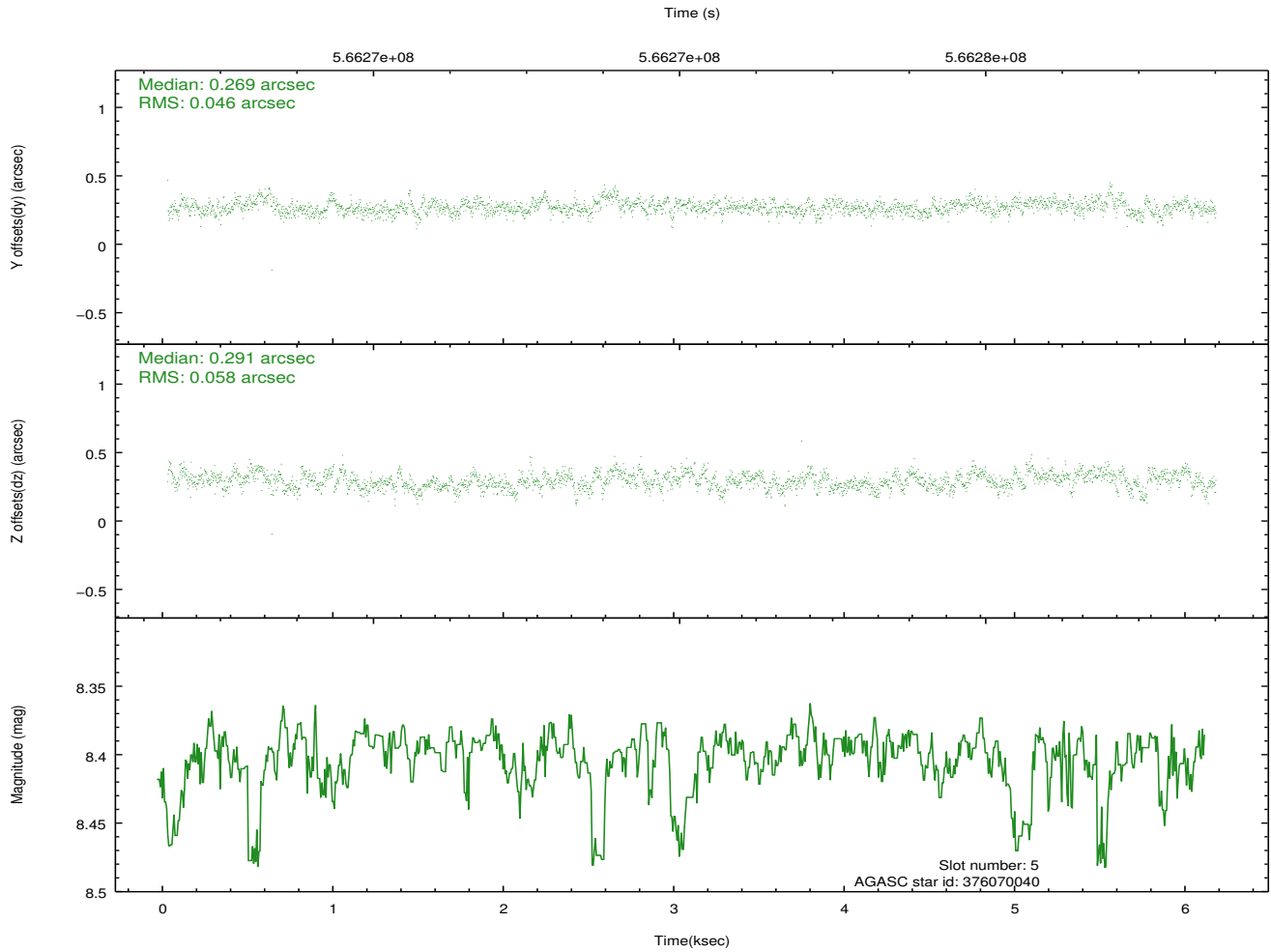
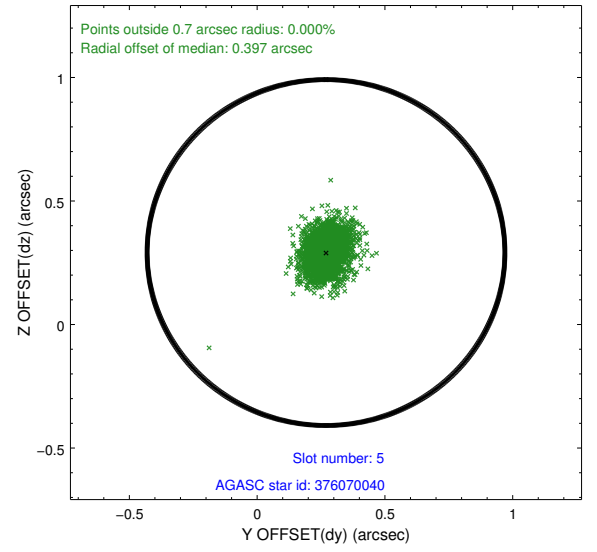
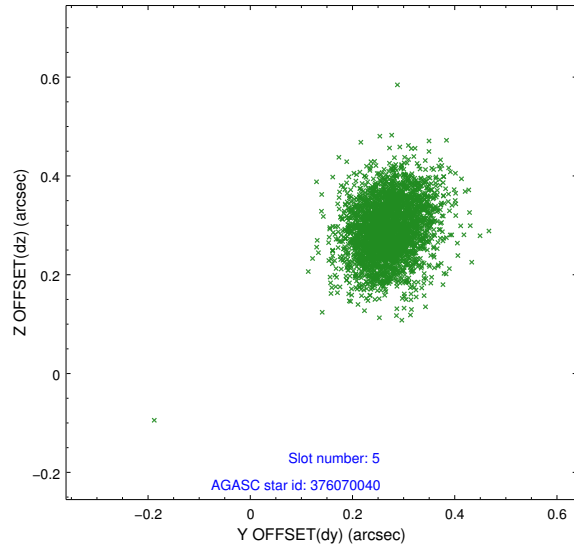
### 2.4.1 Slot 3



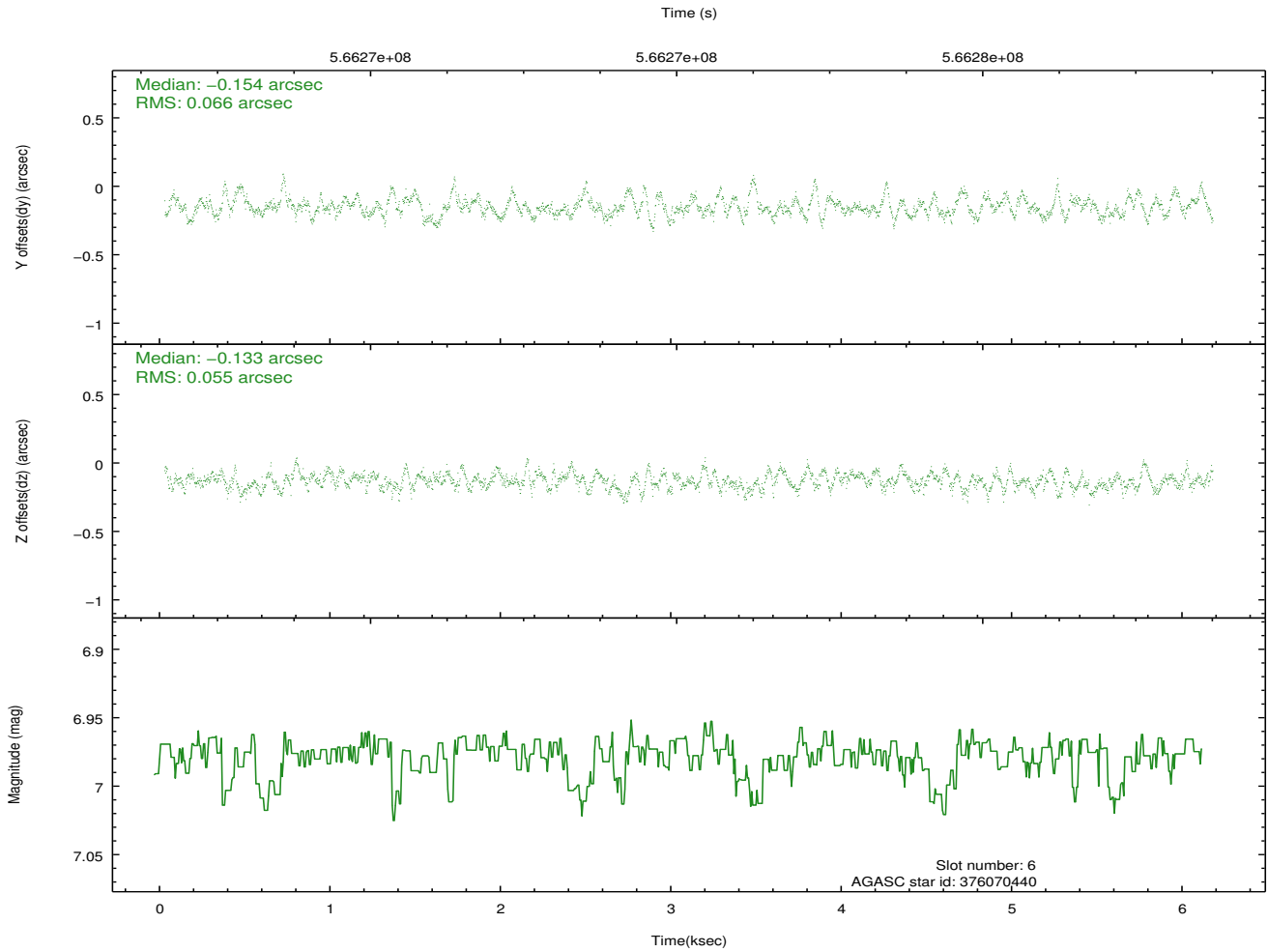
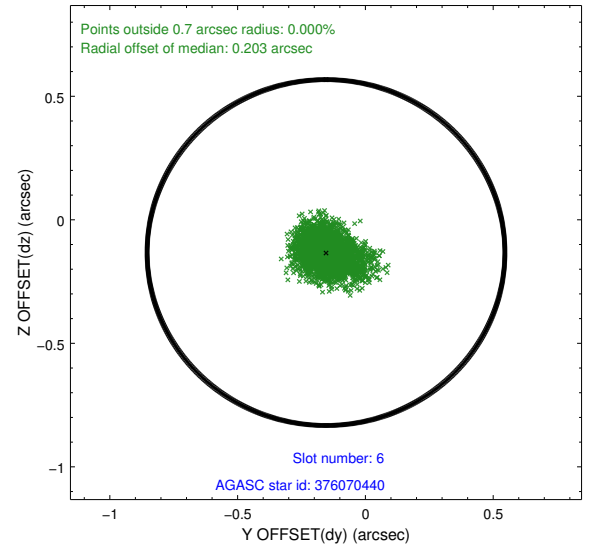
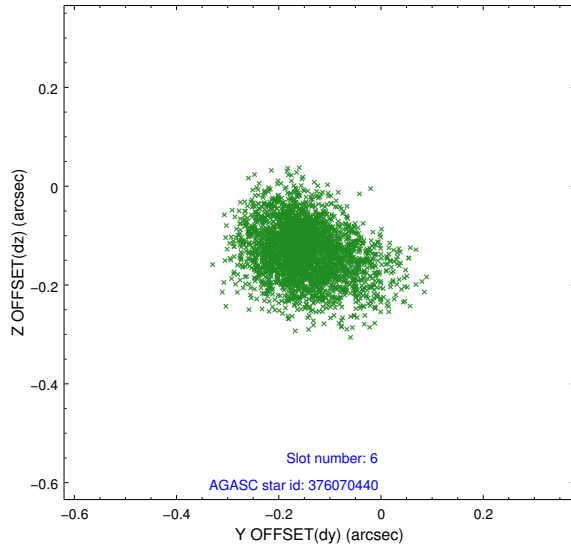
## 2.4.2 Slot 4



### 2.4.3 Slot 5

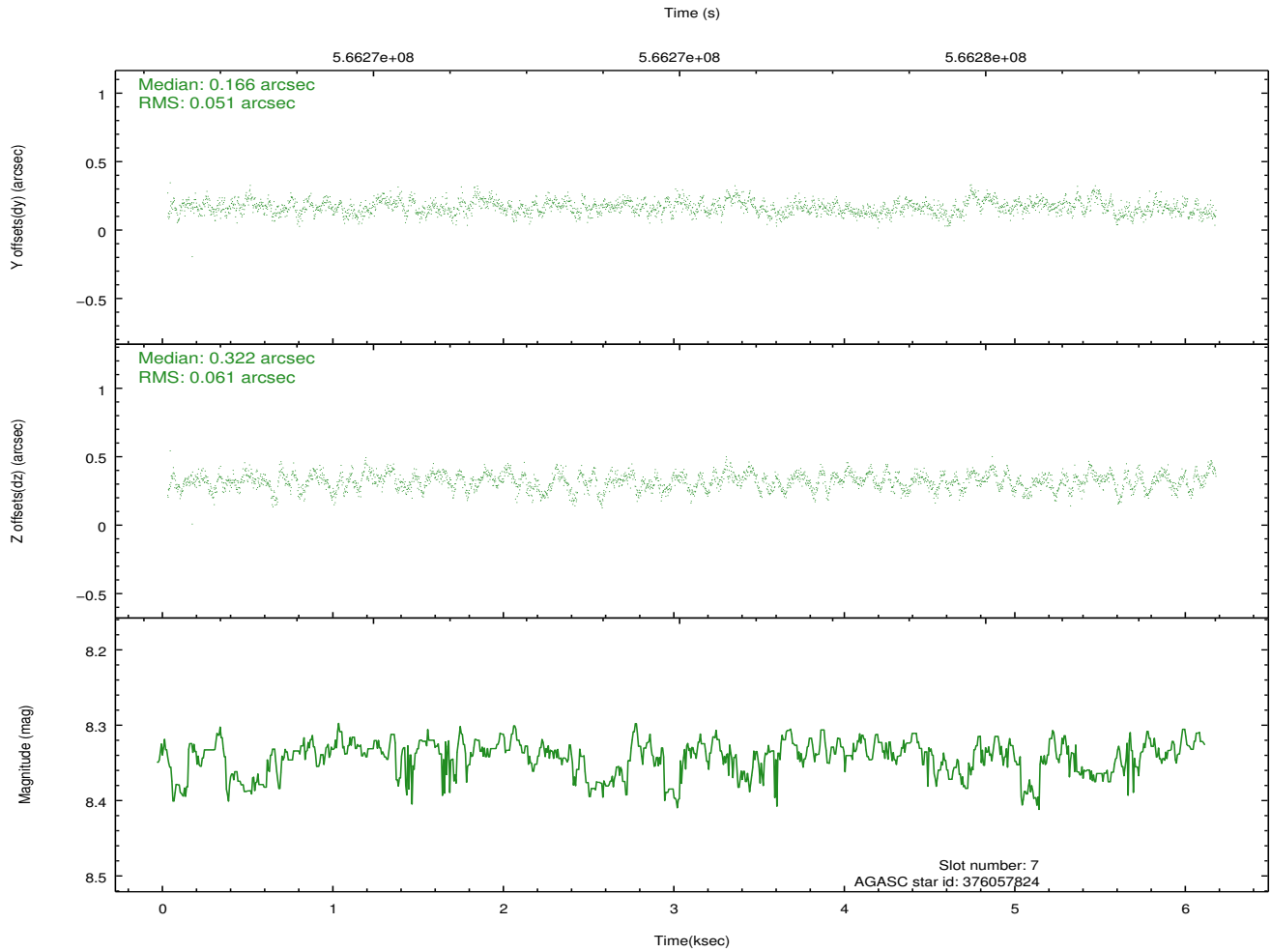
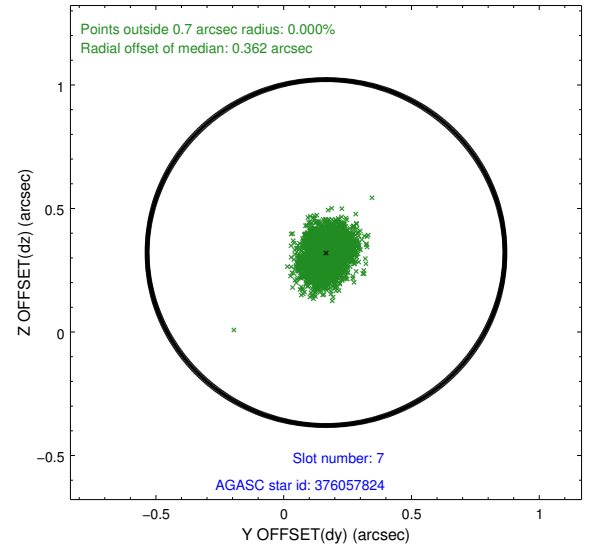
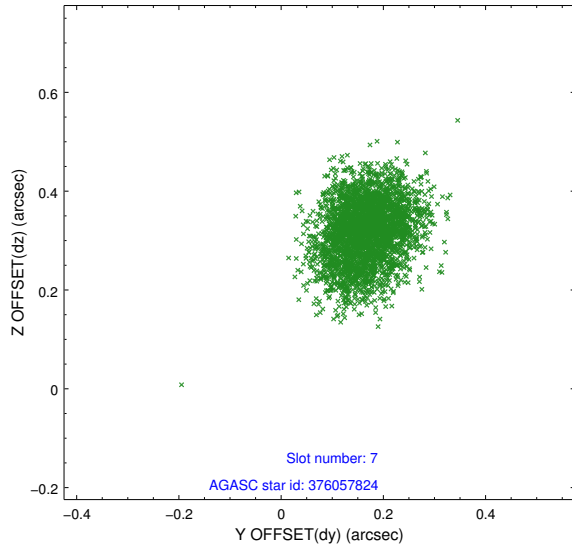


## 2.4.4 Slot 6



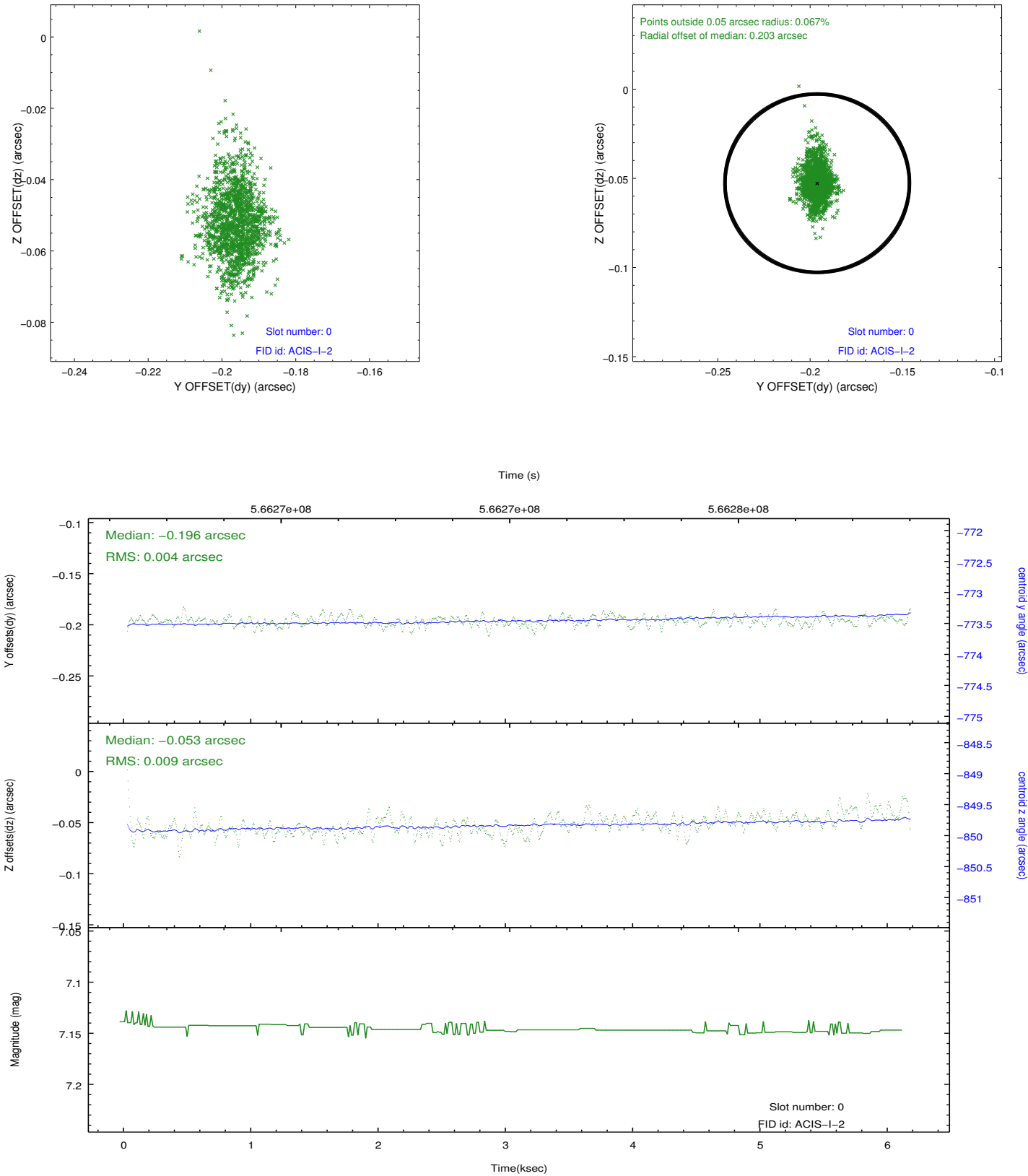


## 2.4.5 Slot 7

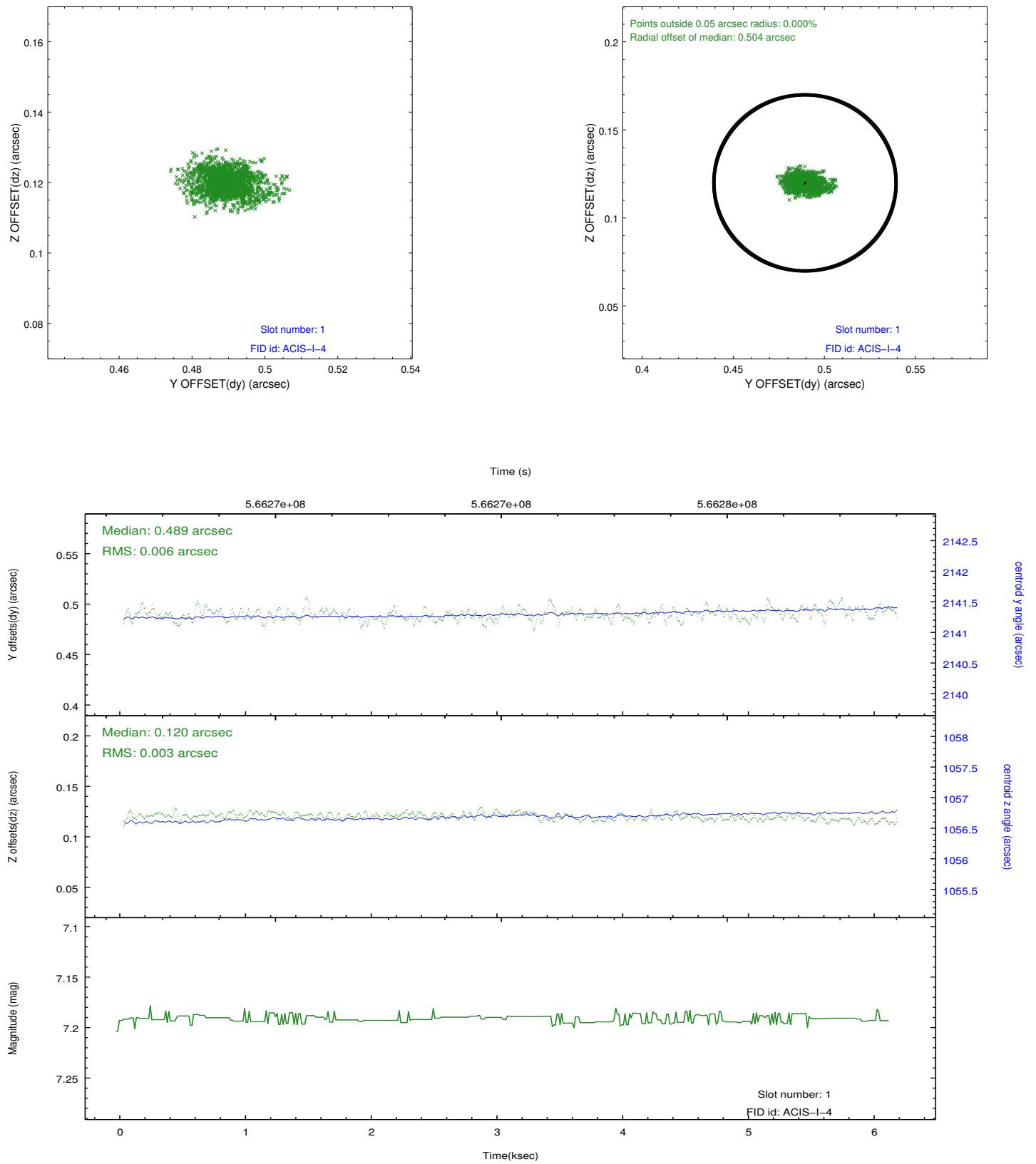


## 2.5 FID Slots

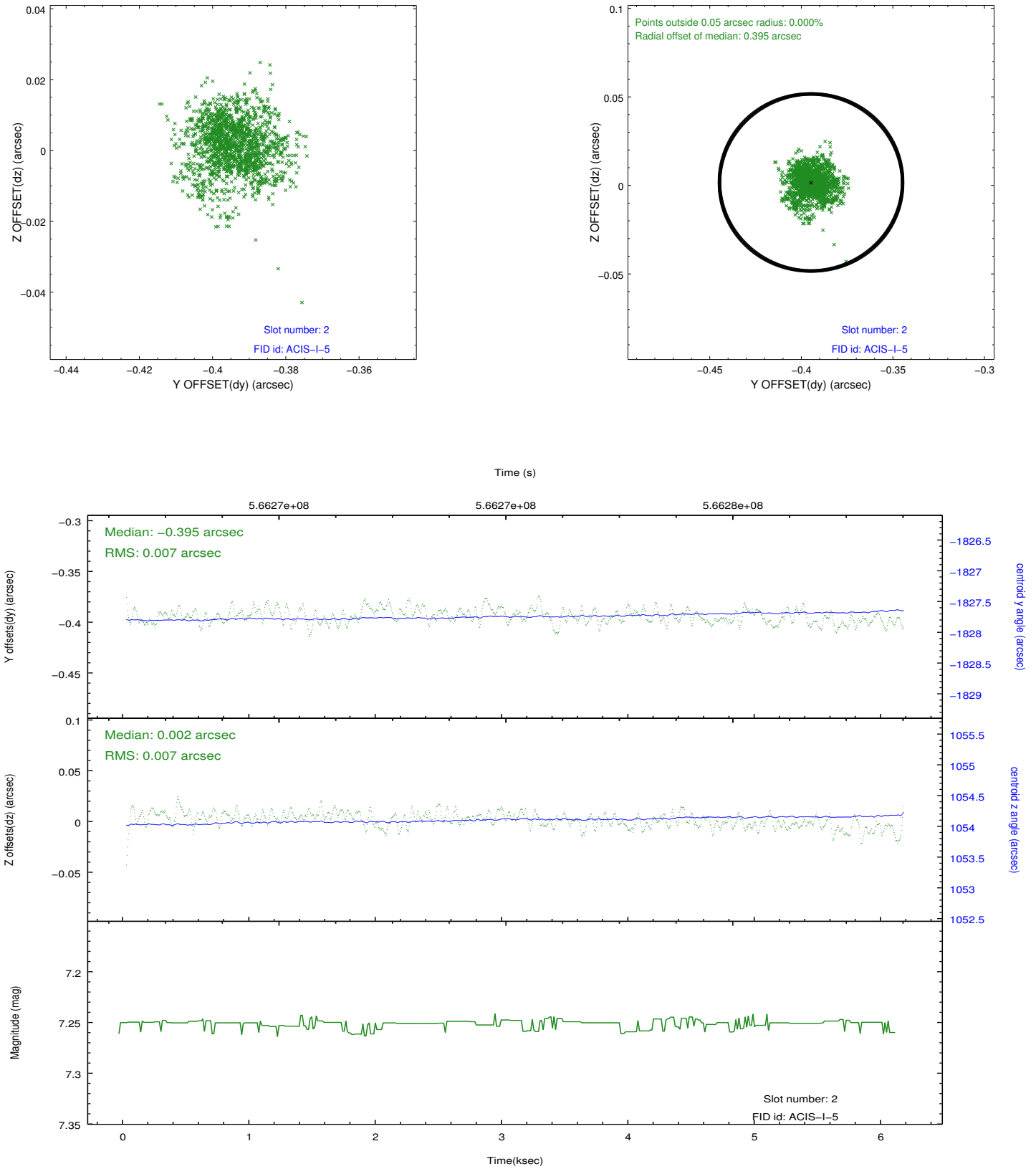
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2015.12.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.0871000392437

### A.2 Comments

Optional chip S2 was dropped.