

# V&V Reference Report

## L2 ASCDS Version : 10.4.2.1

Observation 17261 - L2 Version 1  
Chandra X-Ray Center

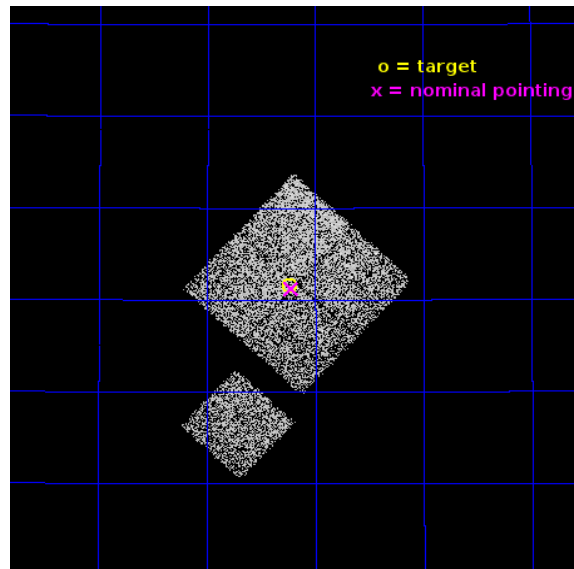
L2 Processing Date : Dec 2 2015

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# 1 Front

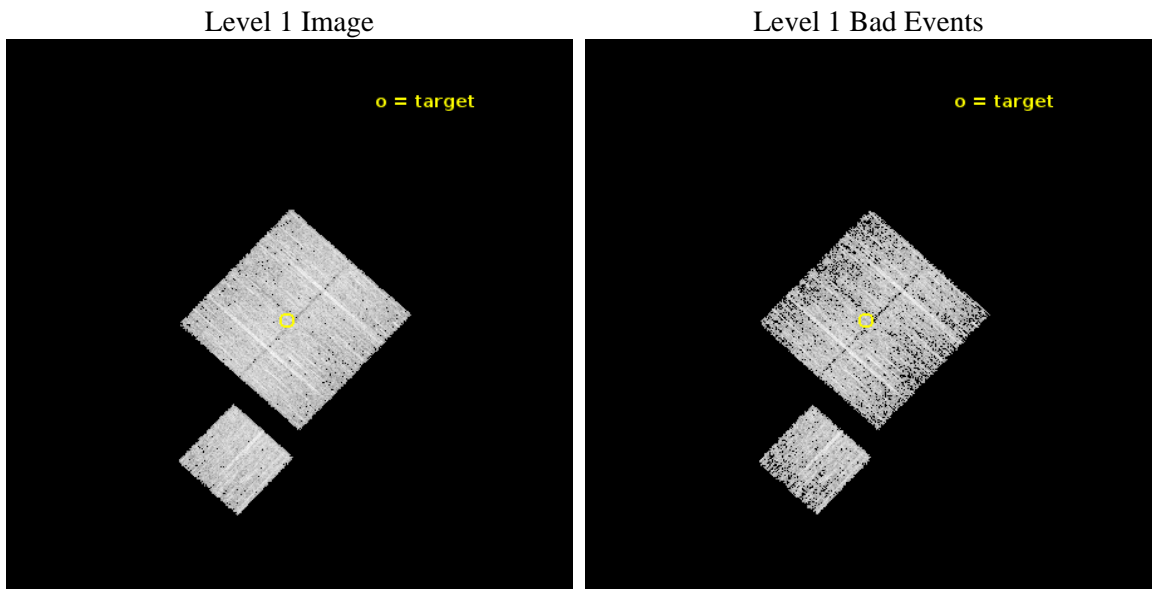
seq_num	801506	Sequence number
obs_id	17261	Observation id
title	Perseus: A New, Low-Redshift Anchor for Cluster Cosmology	Proposal
observer	Prof. Steven Allen	Principal investigator
object	Perseus cluster	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	50.05852	Observer's specified target RA [deg]
dec_targ	41.025956	Observer's specified target Dec [deg]
ra_nom	50.055051282623	Nominal RA [deg]
dec_nom	41.020229587325	Nominal Dec [deg]
roll_nom	222.901321085	Nominal Roll [deg]
revision	1	Processing version of data
ontime	5064.8216094971	Sum of GTIs [s]
livetime	4998.6459865016	Livetime [s]
ontime0	5064.6984895468	Sum of GTIs [s]
ontime1	5061.5985292196	Sum of GTIs [s]
ontime2	5064.7805695534	Sum of GTIs [s]
ontime3	5064.8216094971	Sum of GTIs [s]
ontime6	5064.6574494839	Sum of GTIs [s]
l2events	19710	Number of level 2 events



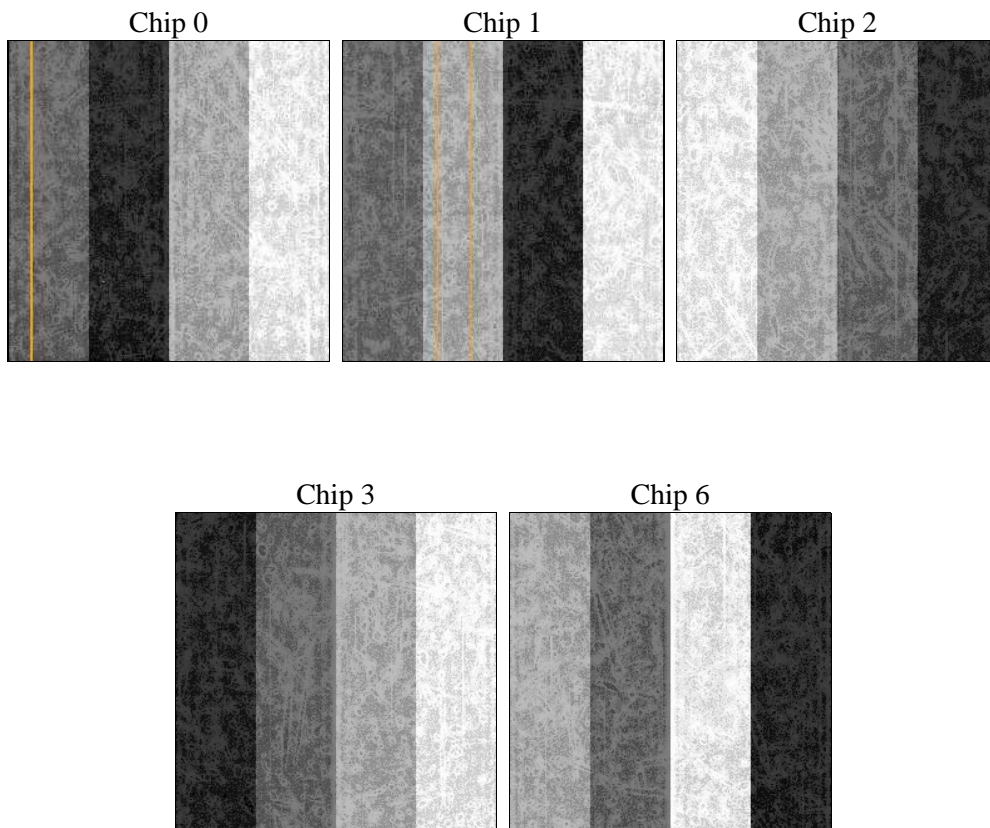
## 2 OBI

### 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	5064.8216094971	Sum of GTIs [s]
caldsver	4.6.10a	&#160	ontime0	5064.6984895468	Sum of GTIs [s]
date	2015-12-02T15:38:37	Date and time of file creation	ontime1	5061.5985292196	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	5064.7805695534	Sum of GTIs [s]
			ontime3	5064.8216094971	Sum of GTIs [s]
			ontime6	5064.6574494839	Sum of GTIs [s]
			l1events	147945	Number of level 1 events

### 2.1.4 Events

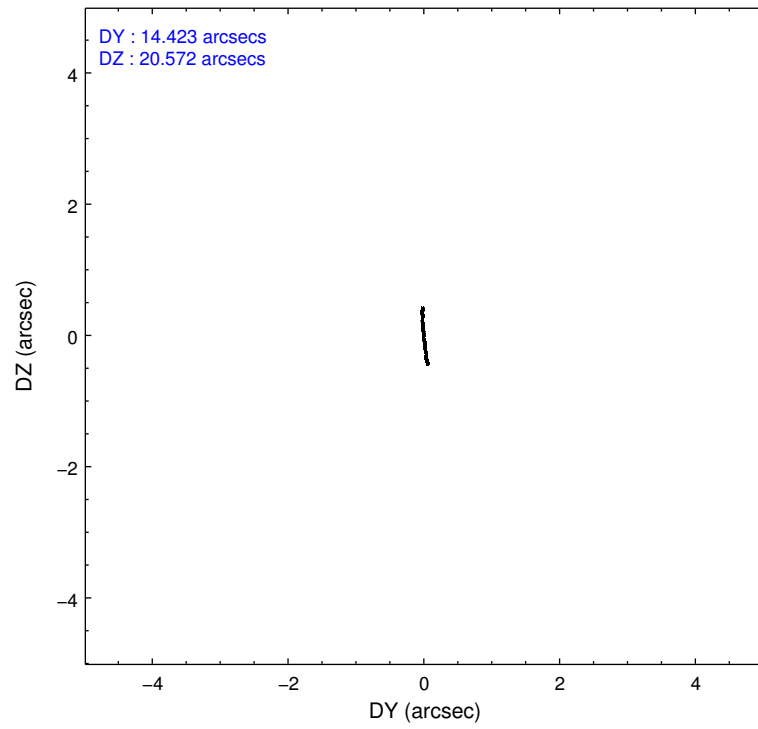
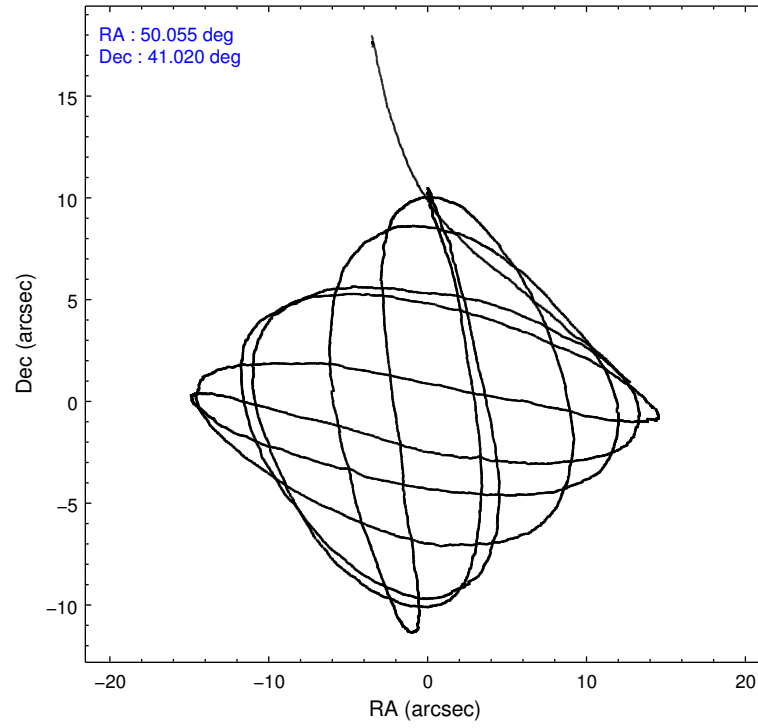
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	29748	29522	29702	29691	29282
rejected events	25110	23403	25730	25344	25599
rejected %	84%	79%	86%	85%	87%

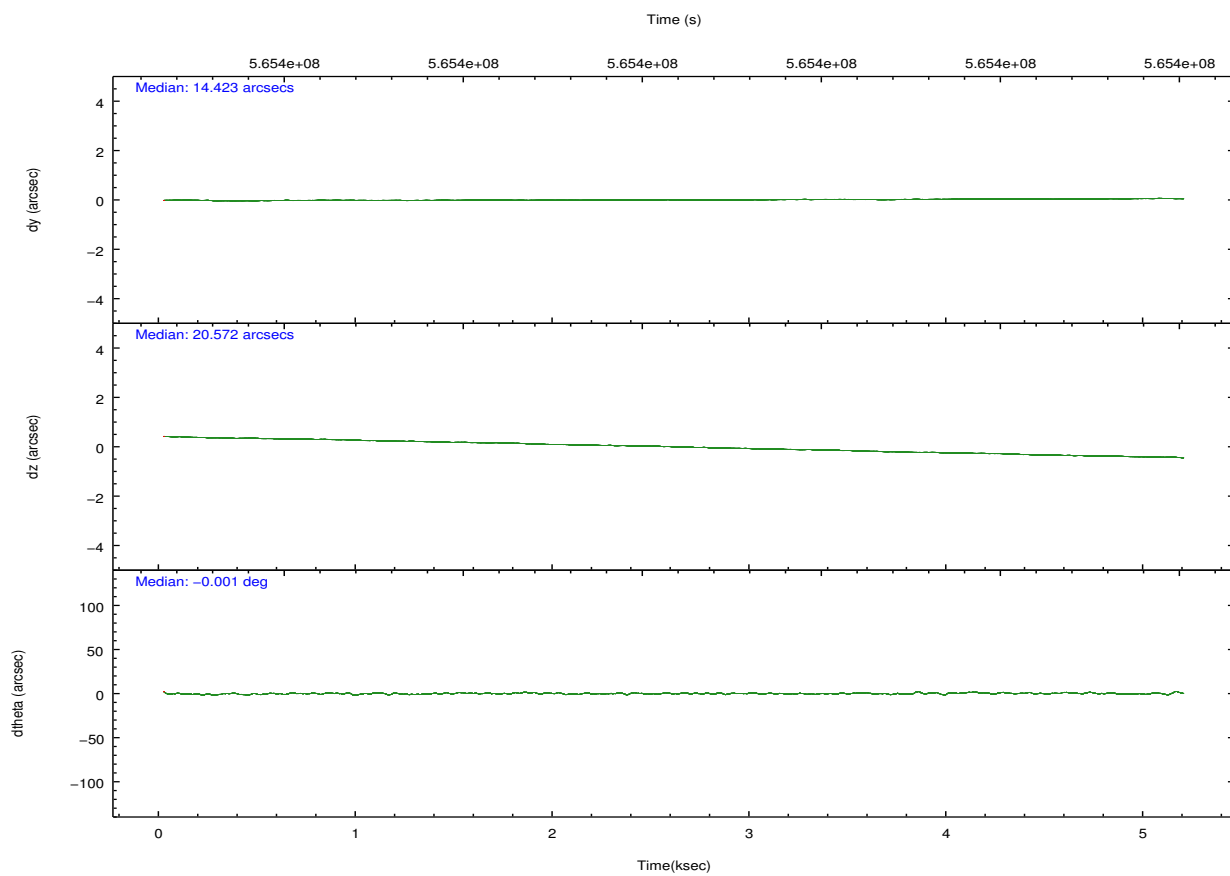
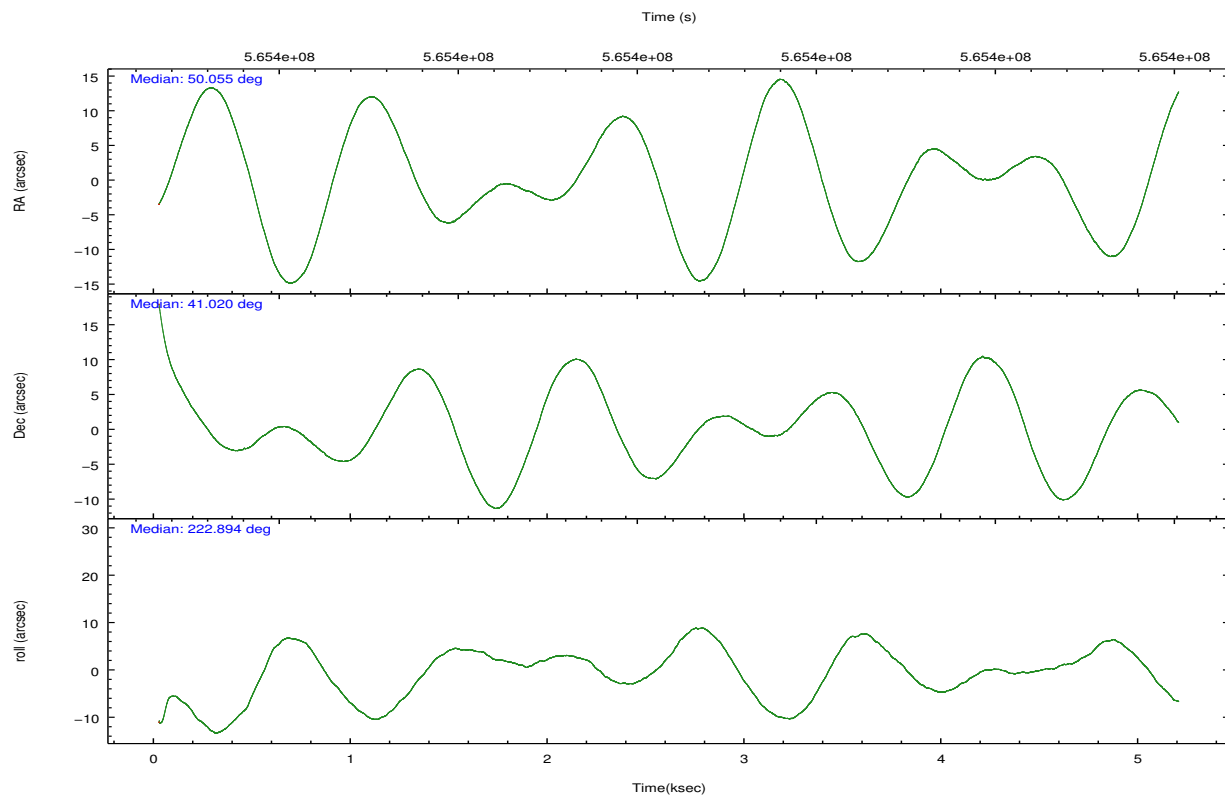
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2212	3174	1707	2067	1362
	7%	10%	5%	6%	4%
grade 1 events	24	19	19	21	13
	0%	0%	0%	0%	0%
grade 2 events	978	1206	909	819	826
	3%	4%	3%	2%	2%
grade 3 events	369	421	376	386	353
	1%	1%	1%	1%	1%
grade 4 events	356	439	348	372	365
	1%	1%	1%	1%	1%
grade 5 events	1358	1437	1215	1514	1424
	4%	4%	4%	5%	4%
grade 6 events	732	887	642	708	781
	2%	3%	2%	2%	2%
grade 7 events	23719	21939	24486	23804	24158
	79%	74%	82%	80%	82%

## 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	50.065621	50.05505128262291	CCD I2 on	Y	Y
[deg] Pointing Dec	41.046595	41.02022958732457	CCD I3 on	Y	Y
[deg] Pointing Roll	222.685720	222.9013210849994	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)	565395792.184000	565394543.79248	CCD S5 on	N	N
Observation start date	2015-12-01T22:22:04	2015-12-01T22:02:23	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	565400792.184000	565401083.8053499	On-chip summing requested	N	N
Observation end date	2015-12-01T23:45:24	2015-12-01T23:51:23	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



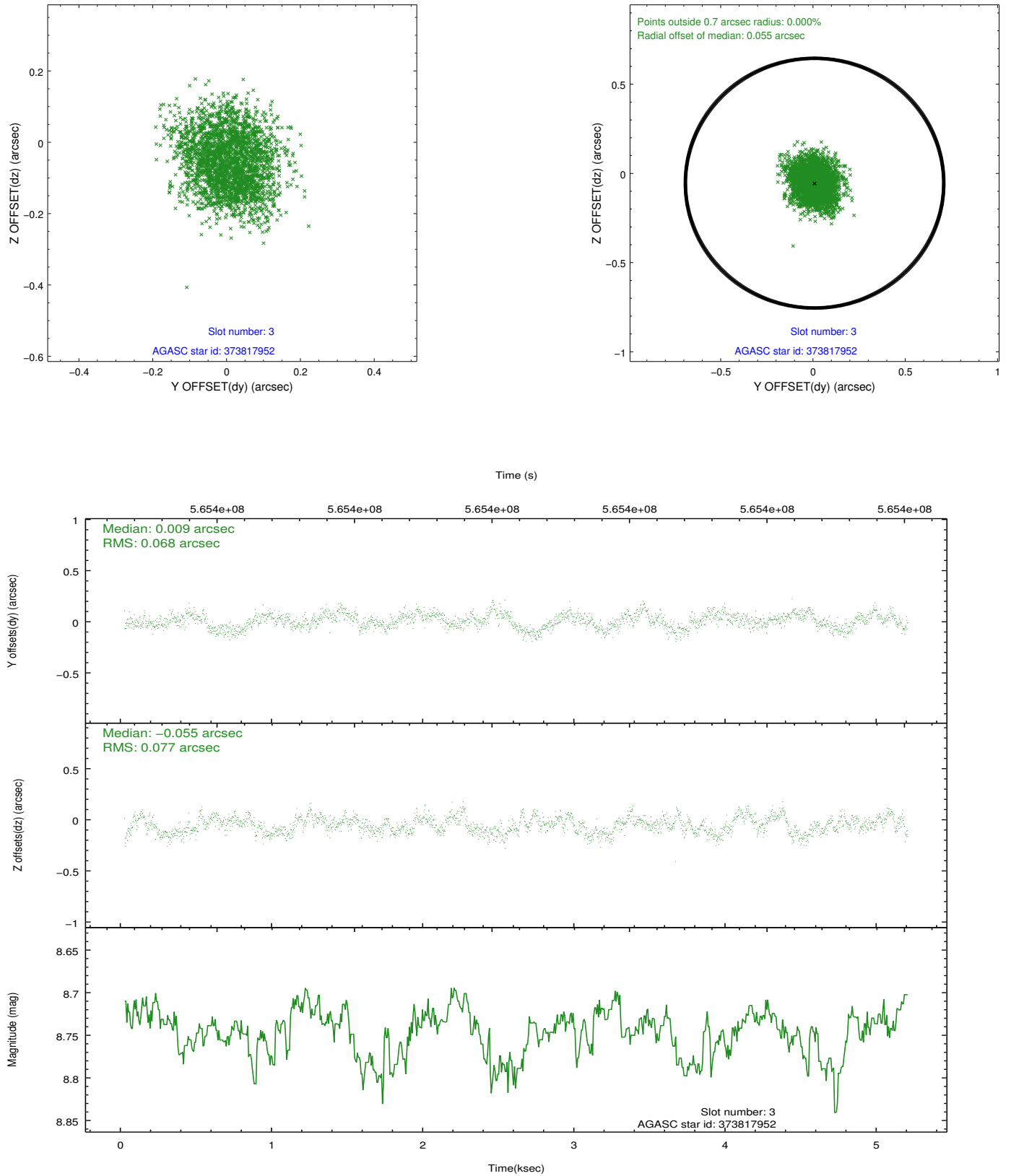


### Slot Statistics

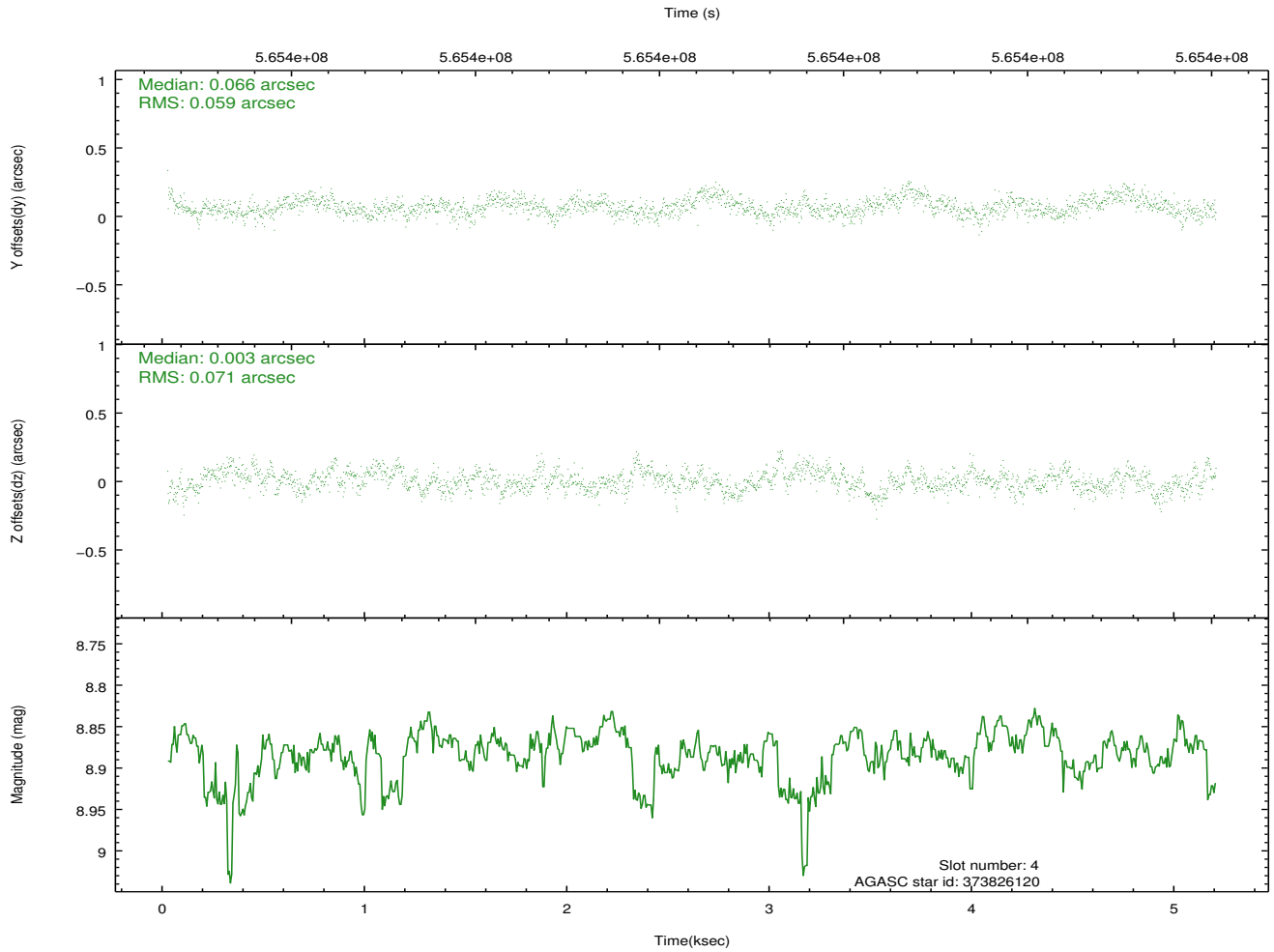
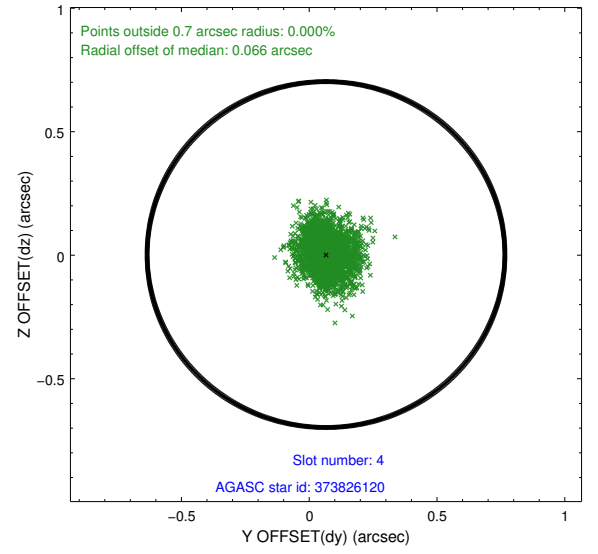
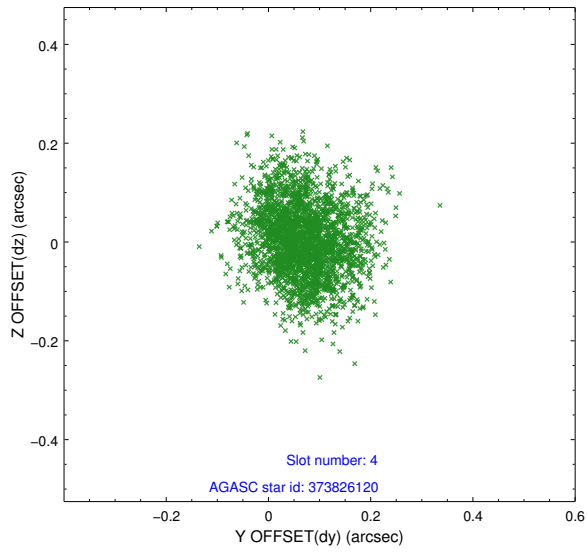
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.24	1264	-0.119	-0.089	0.013	0.022	0.000000	0.000000	924.91	-844.41
1	FID		ACIS-I-4	7.20	1262	0.152	0.117	0.011	0.016	0.000000	0.000000	2145.90	1054.98
2	FID		ACIS-I-6	7.25	1264	-0.130	0.038	0.010	0.016	0.000000	0.000000	392.35	1698.45
3	GUIDE	used	373817952	8.74	2527	0.009	-0.055	0.111	0.174	49.913424	40.978510	470.57	-99.89
4	GUIDE	used	373826120	8.88	2527	0.066	0.003	0.099	0.161	49.738165	41.186341	310.83	-972.09
5	GUIDE	used	375526240	8.75	2527	0.009	-0.201	0.090	0.143	51.034416	40.968783	-1755.33	1980.57
6	GUIDE	used	375534552	8.19	2527	-0.100	-0.052	0.099	0.159	50.877490	41.206927	-2014.89	1060.32
7	GUIDE	used	376070040	8.38	2526	0.016	0.301	0.083	0.139	50.072031	41.897206	-2088.72	-2238.25

## 2.4 Star Slots

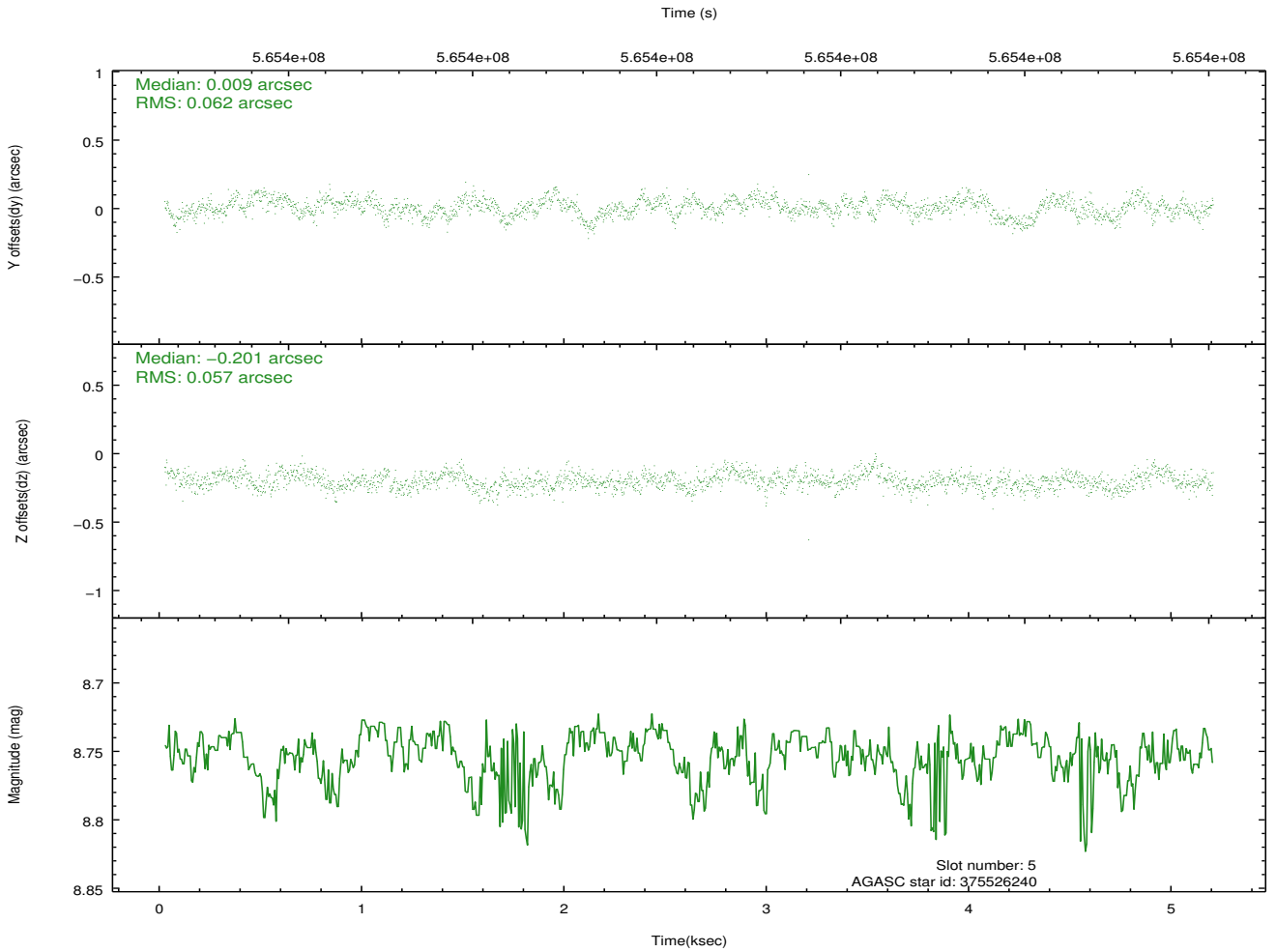
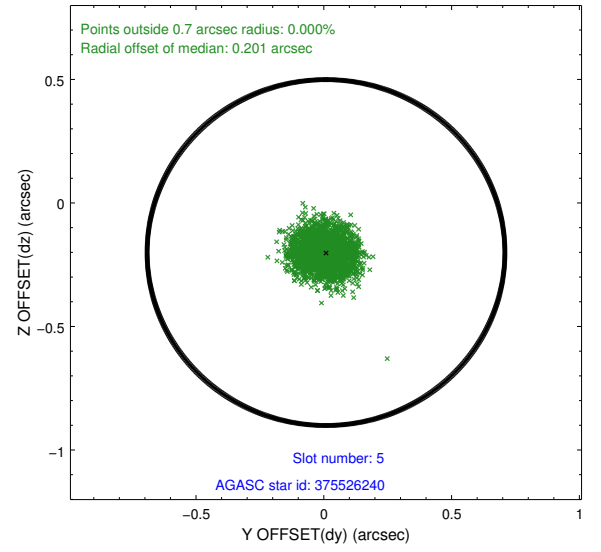
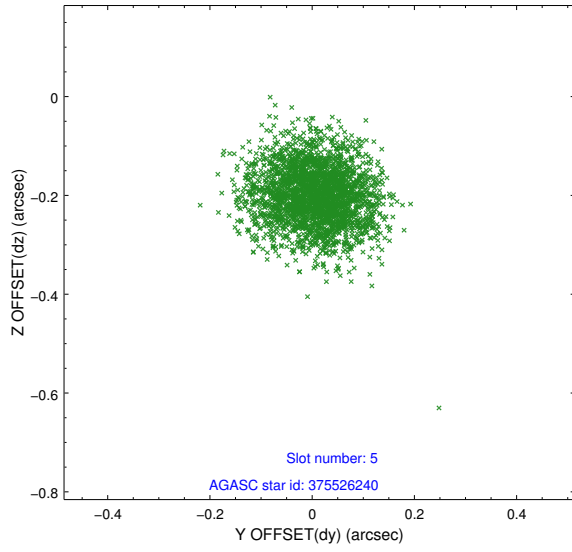
### 2.4.1 Slot 3



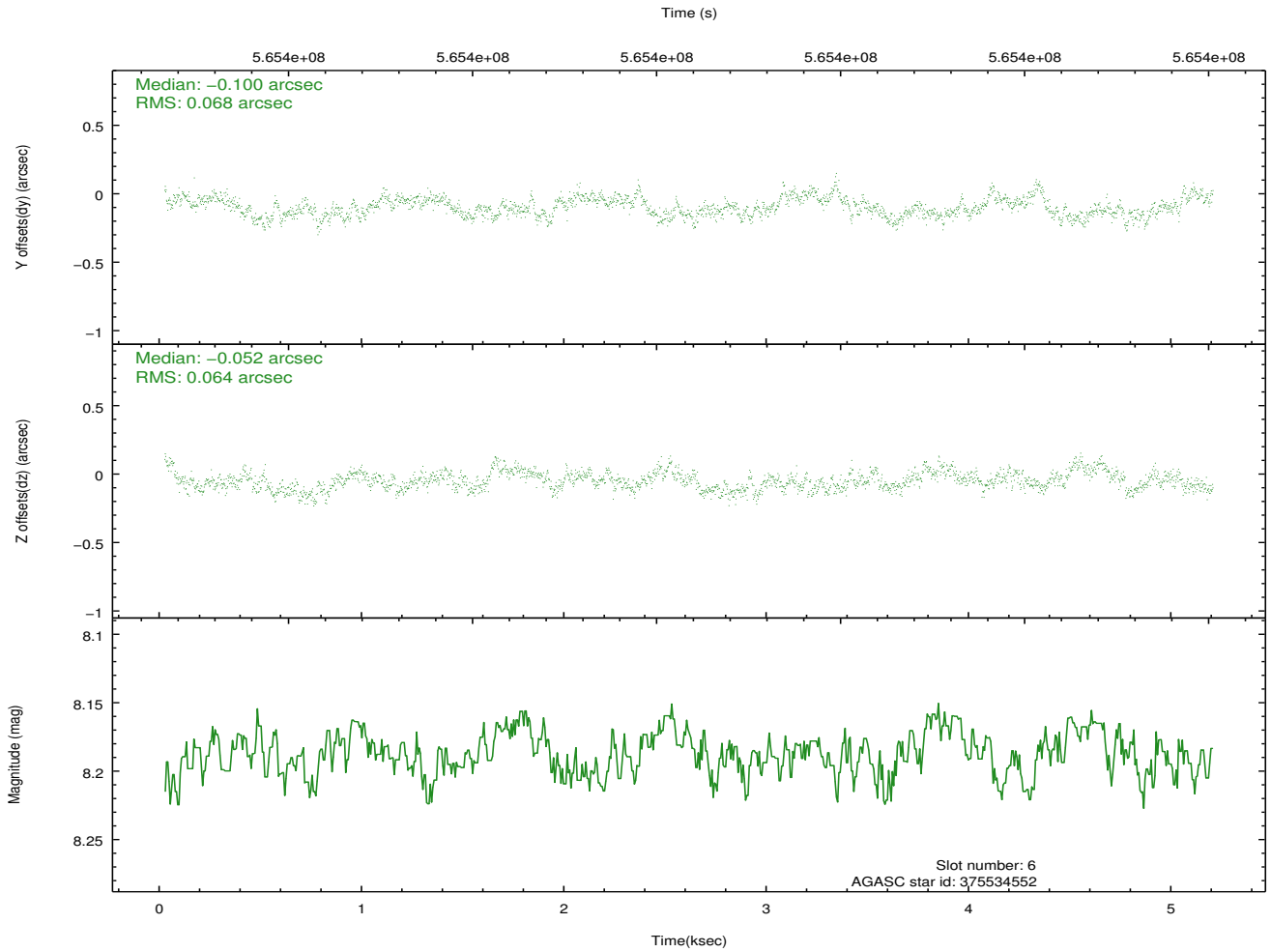
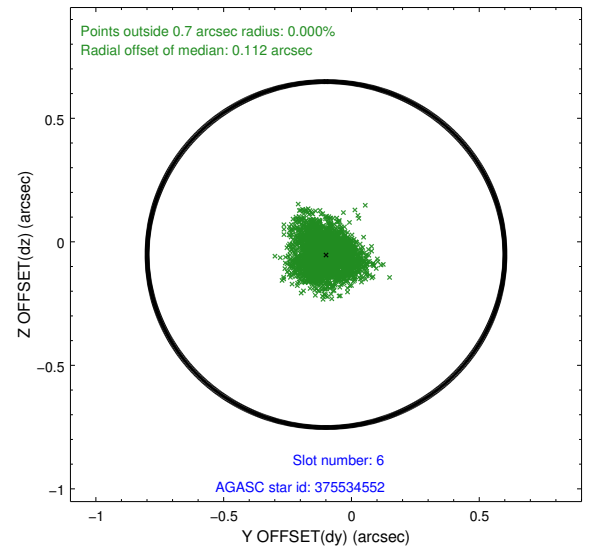
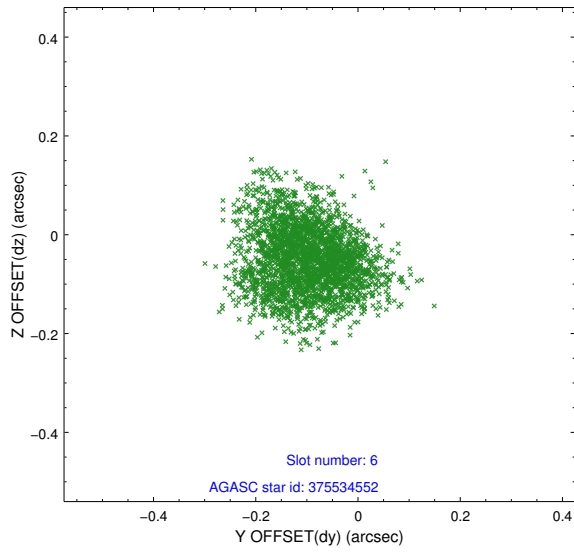
## 2.4.2 Slot 4



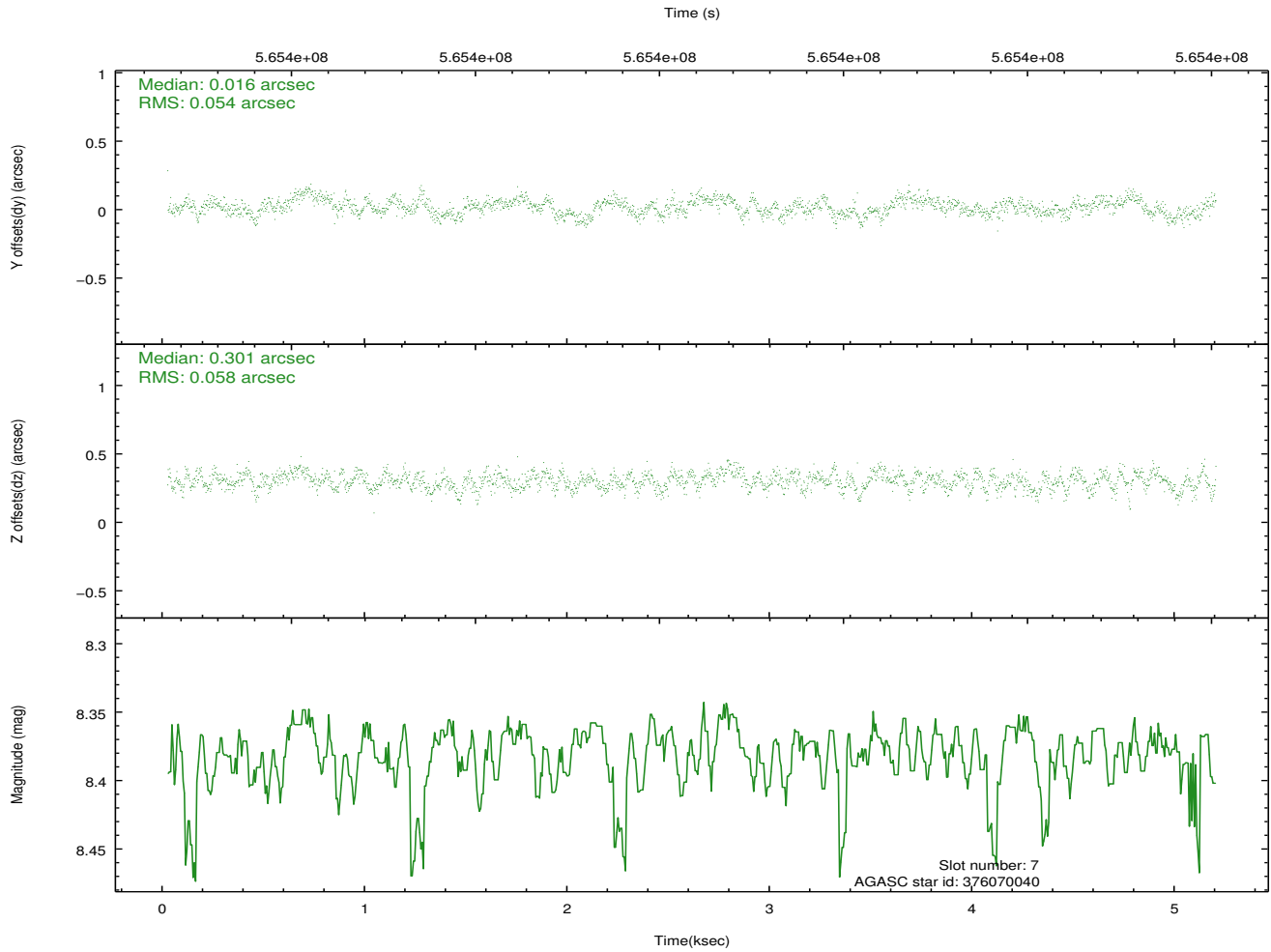
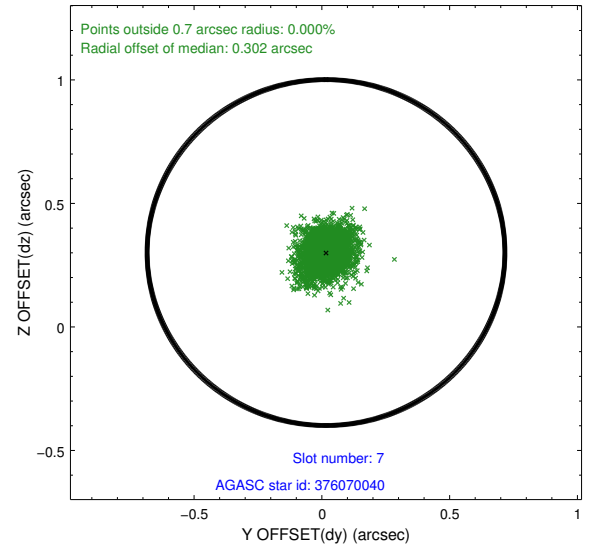
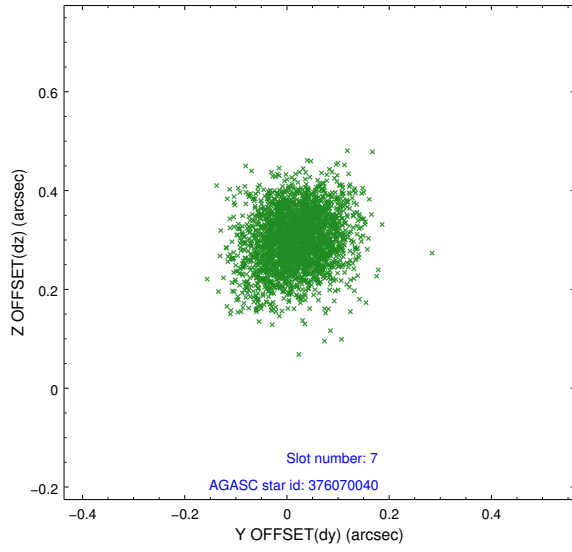
### 2.4.3 Slot 5



## 2.4.4 Slot 6

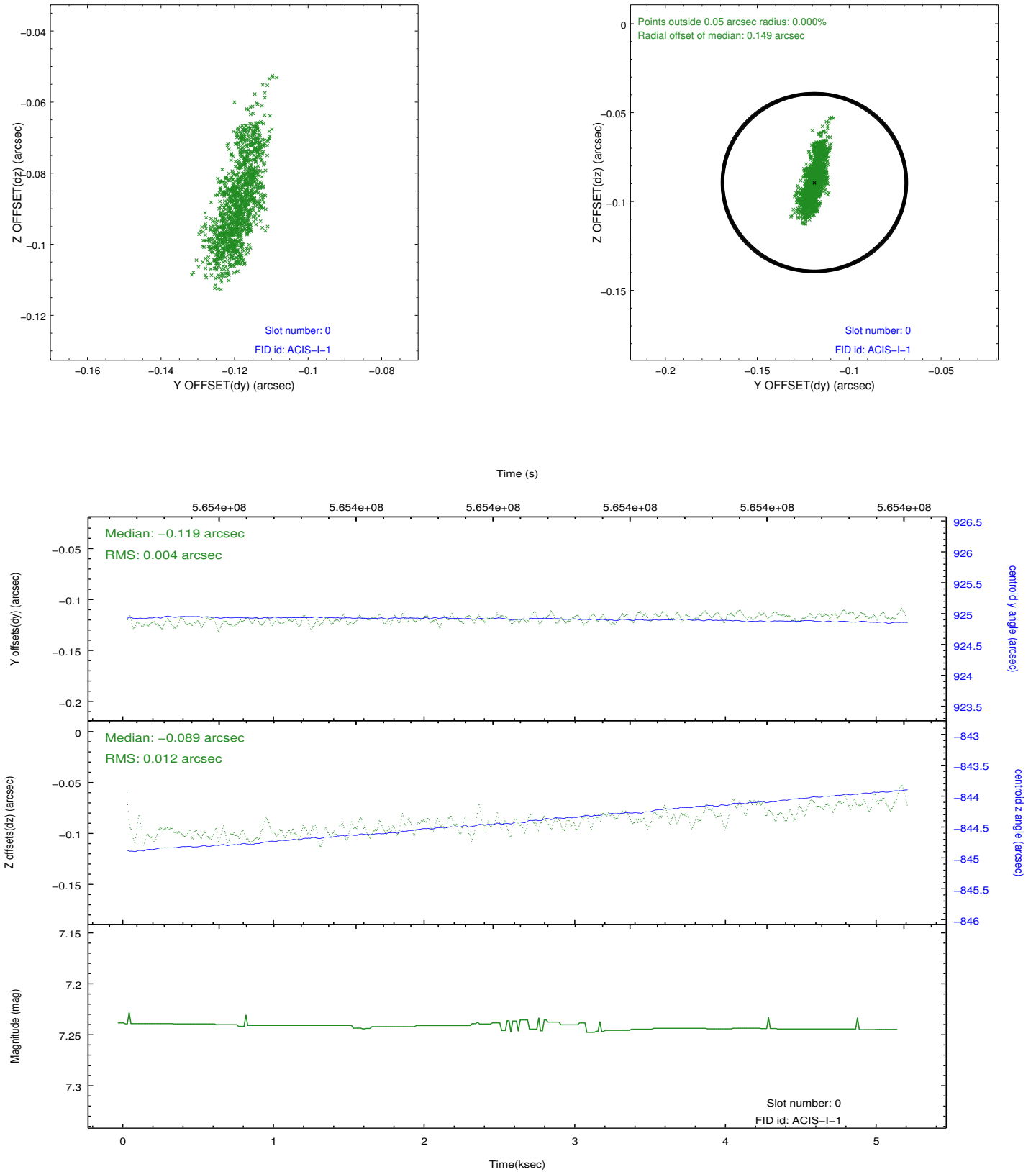


## 2.4.5 Slot 7

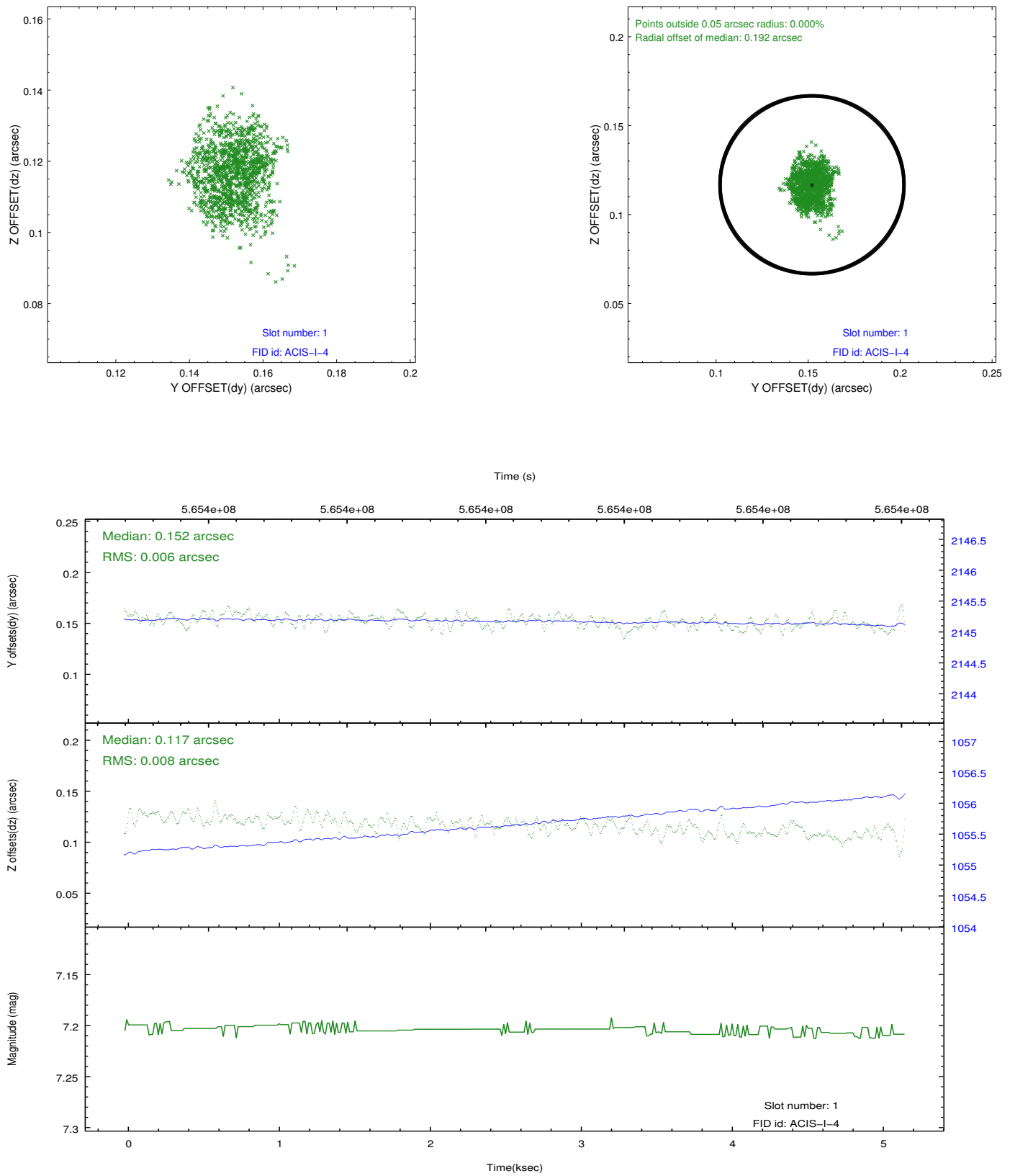


## 2.5 FID Slots

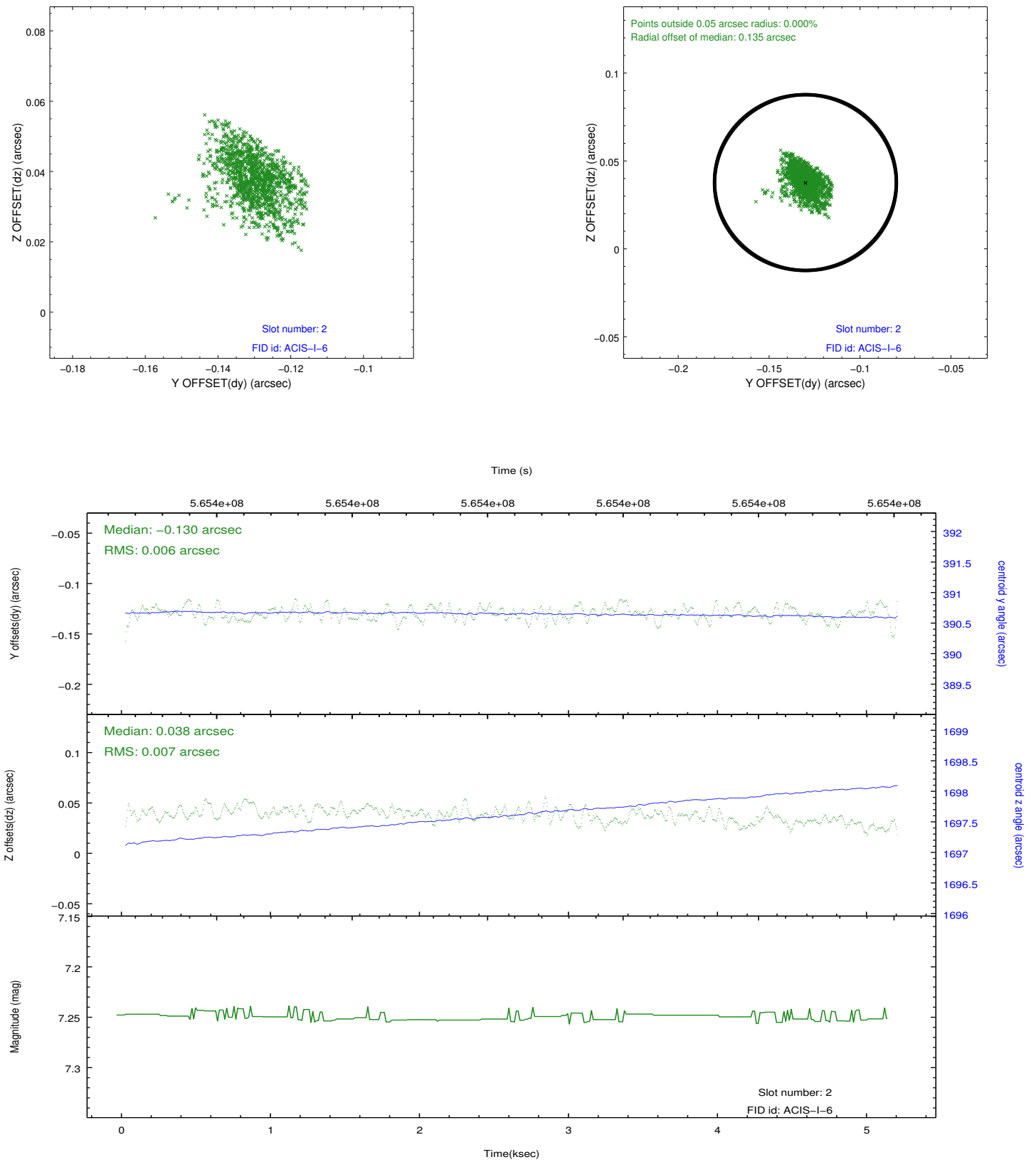
### 2.5.1 Slot 0



## 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)	2015.12.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.0648216094971

### A.2 Comments