

# V&V Reference Report

## L2 ASCDS Version : 10.4.2.1

Observation 17269 - L2 Version 1  
Chandra X-Ray Center

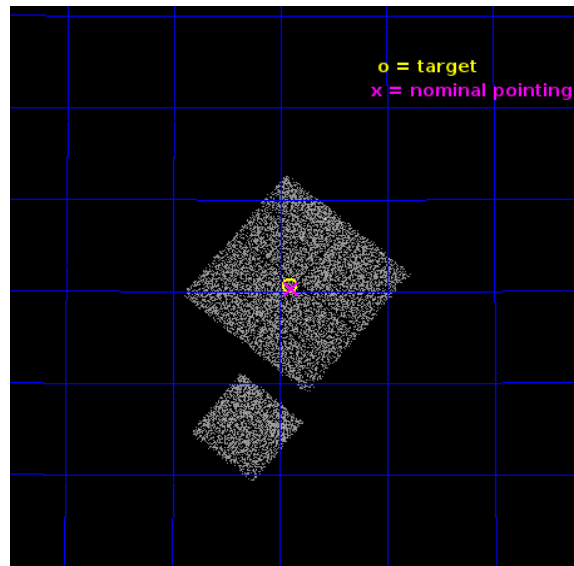
L2 Processing Date : Dec 1 2015

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# 1 Front

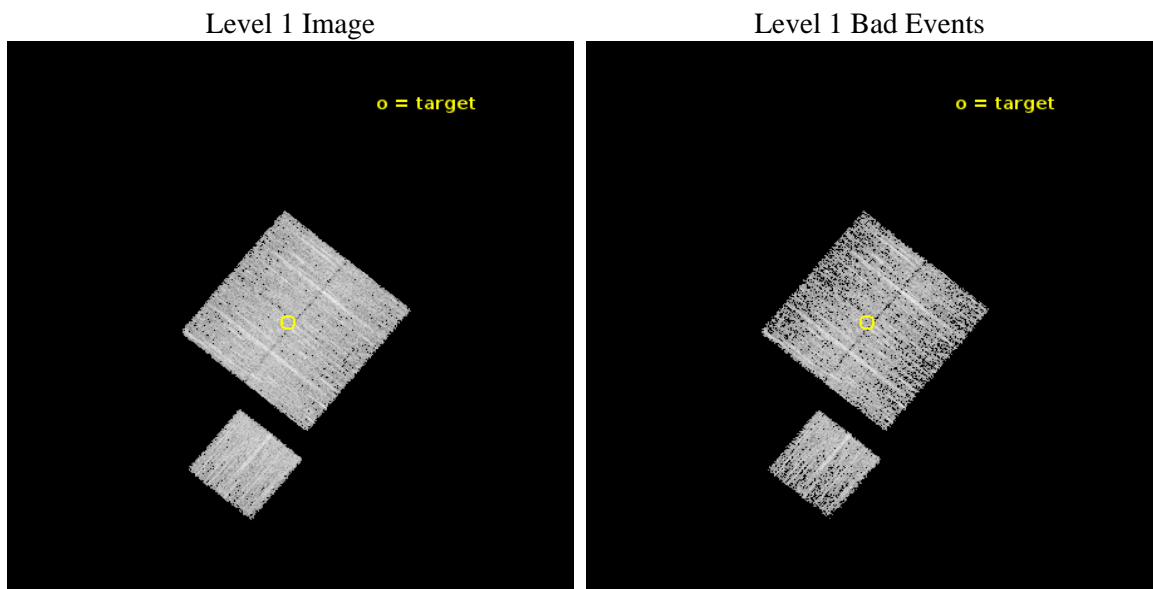
seq_num	801514	Sequence number
obs_id	17269	Observation id
title	Perseus: A New, Low-Redshift Anchor for Cluster Cosmology	Proposal
observer	Prof. Steven Allen	Principal investigator
object	Perseus cluster	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	50.97772	Observer's specified target RA [deg]
dec_targ	41.677558	Observer's specified target Dec [deg]
ra_nom	50.973686206784	Nominal RA [deg]
dec_nom	41.671830252239	Nominal Dec [deg]
roll_nom	219.28883357863	Nominal Roll [deg]
revision	1	Processing version of data
ontime	4776.9804832935	Sum of GTIs [s]
livetime	4714.5657165174	Livetime [s]
ontime0	4776.8573633432	Sum of GTIs [s]
ontime1	4773.7573531866	Sum of GTIs [s]
ontime2	4776.9394433498	Sum of GTIs [s]
ontime3	4776.9804832935	Sum of GTIs [s]
ontime6	4776.8163232803	Sum of GTIs [s]
l2events	14769	Number of level 2 events



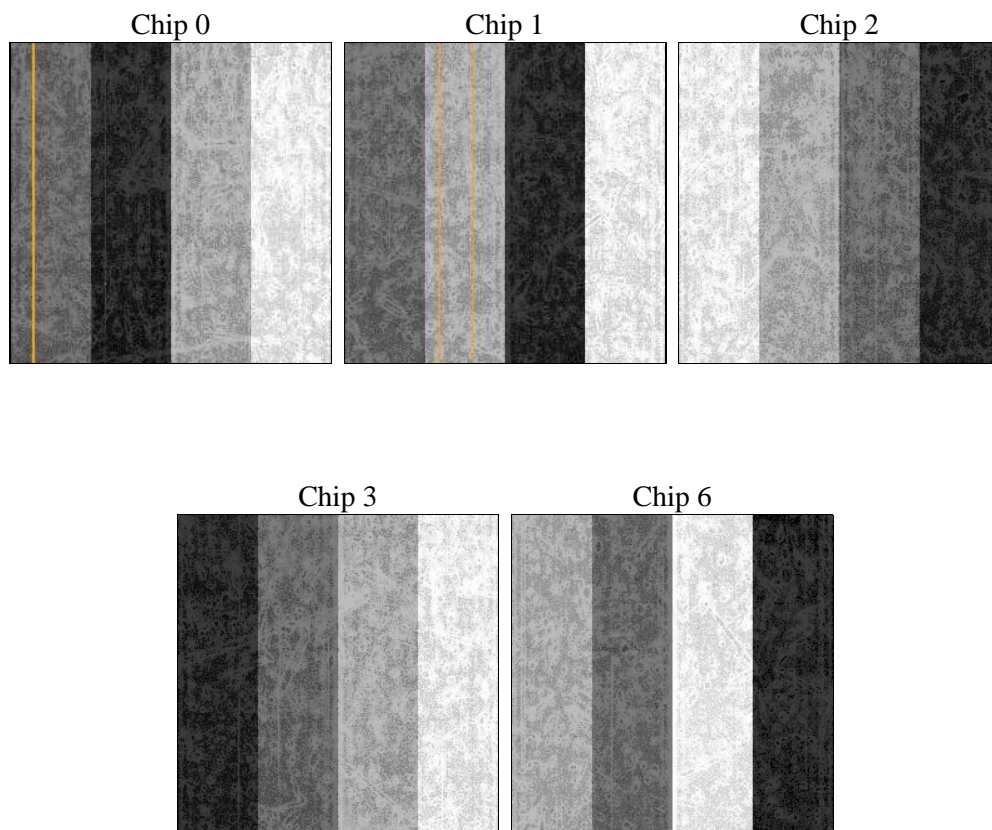
## 2 OBI

### 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	4776.9804832935	Sum of GTIs [s]
caldsver	4.6.10a	&#160	ontime0	4776.8573633432	Sum of GTIs [s]
date	2015-12-01T20:27:25	Date and time of file creation	ontime1	4773.7573531866	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	4776.9394433498	Sum of GTIs [s]
			ontime3	4776.9804832935	Sum of GTIs [s]
			ontime6	4776.8163232803	Sum of GTIs [s]
			l1events	136152	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	25955	26046	28331	27662	28158
rejected events	22378	22324	24975	24541	24562
rejected %	86%	85%	88%	88%	87%

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	1377	1363	1369	1150	1347
	5%	5%	4%	4%	4%
grade 1 events	10	12	15	21	15
	0%	0%	0%	0%	0%
grade 2 events	838	847	824	673	786
	3%	3%	2%	2%	2%
grade 3 events	328	367	300	318	325
	1%	1%	1%	1%	1%
grade 4 events	319	368	289	345	371
	1%	1%	1%	1%	1%
grade 5 events	1293	1284	1166	1420	1311
	4%	4%	4%	5%	4%
grade 6 events	717	779	575	637	768
	2%	2%	2%	2%	2%
grade 7 events	21073	21026	23793	23098	23235
	81%	80%	83%	83%	82%

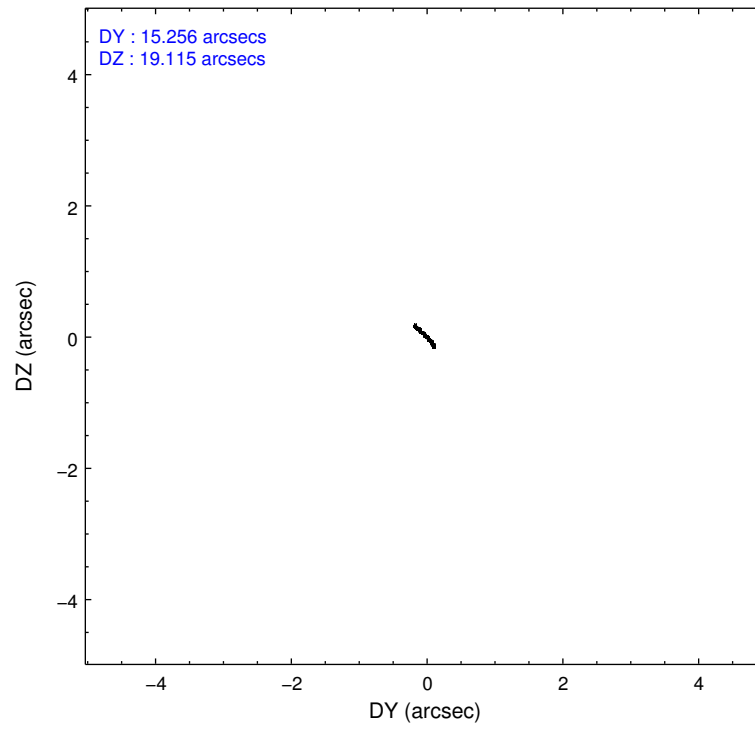
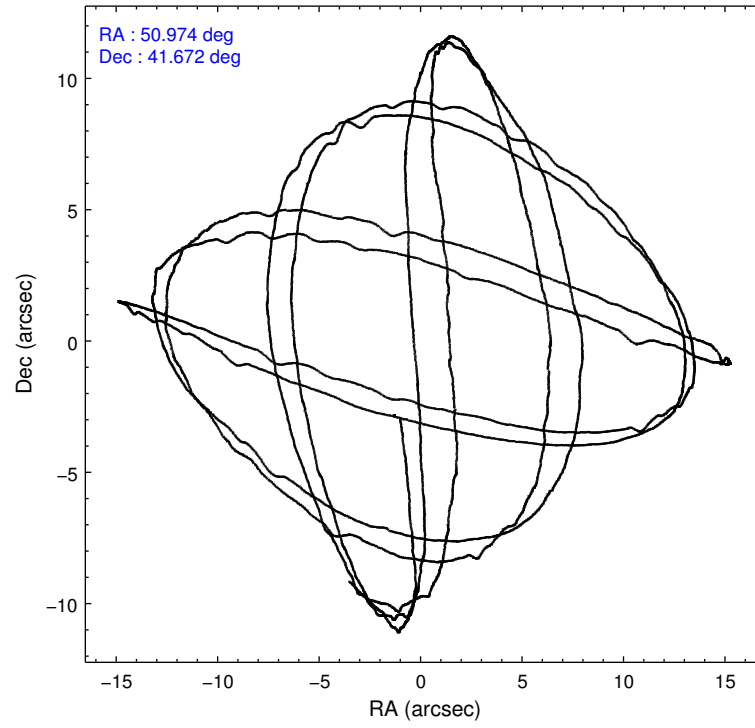


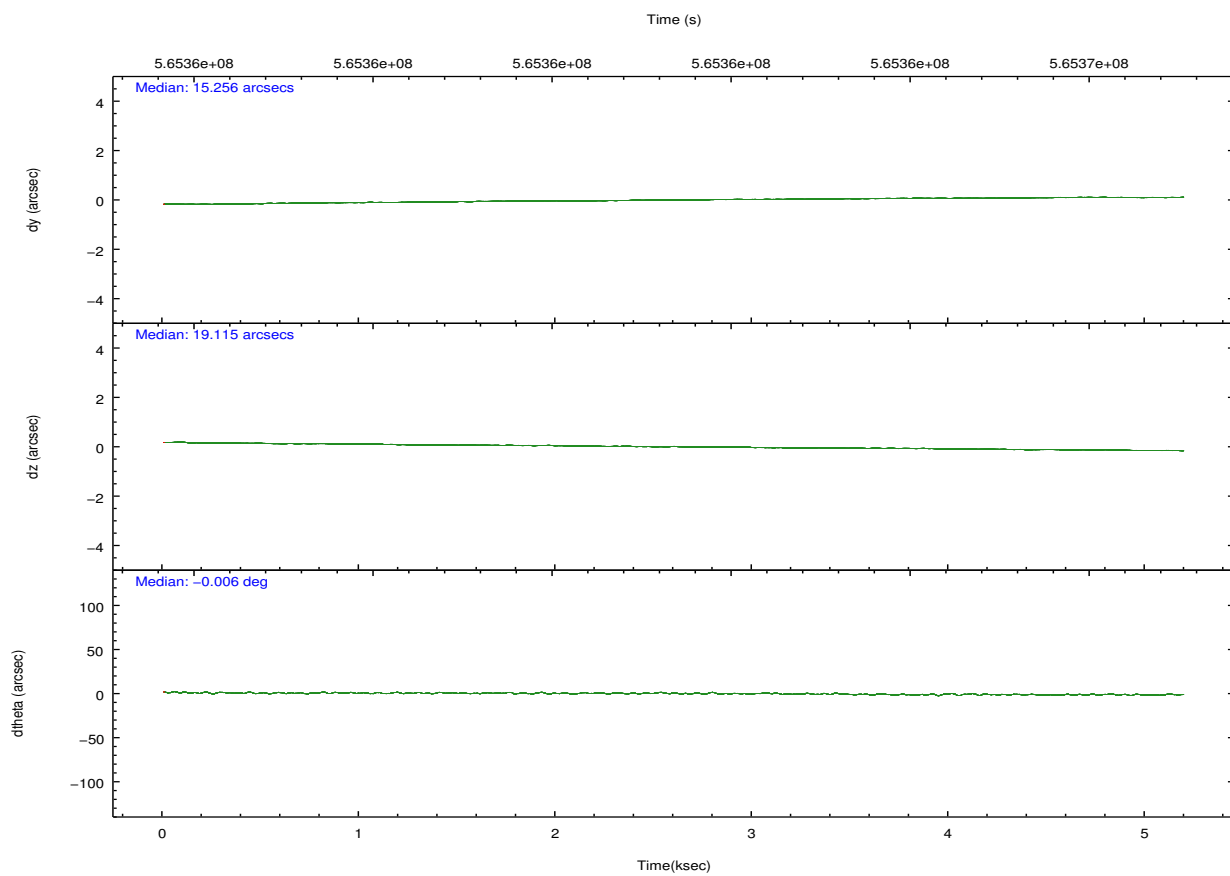
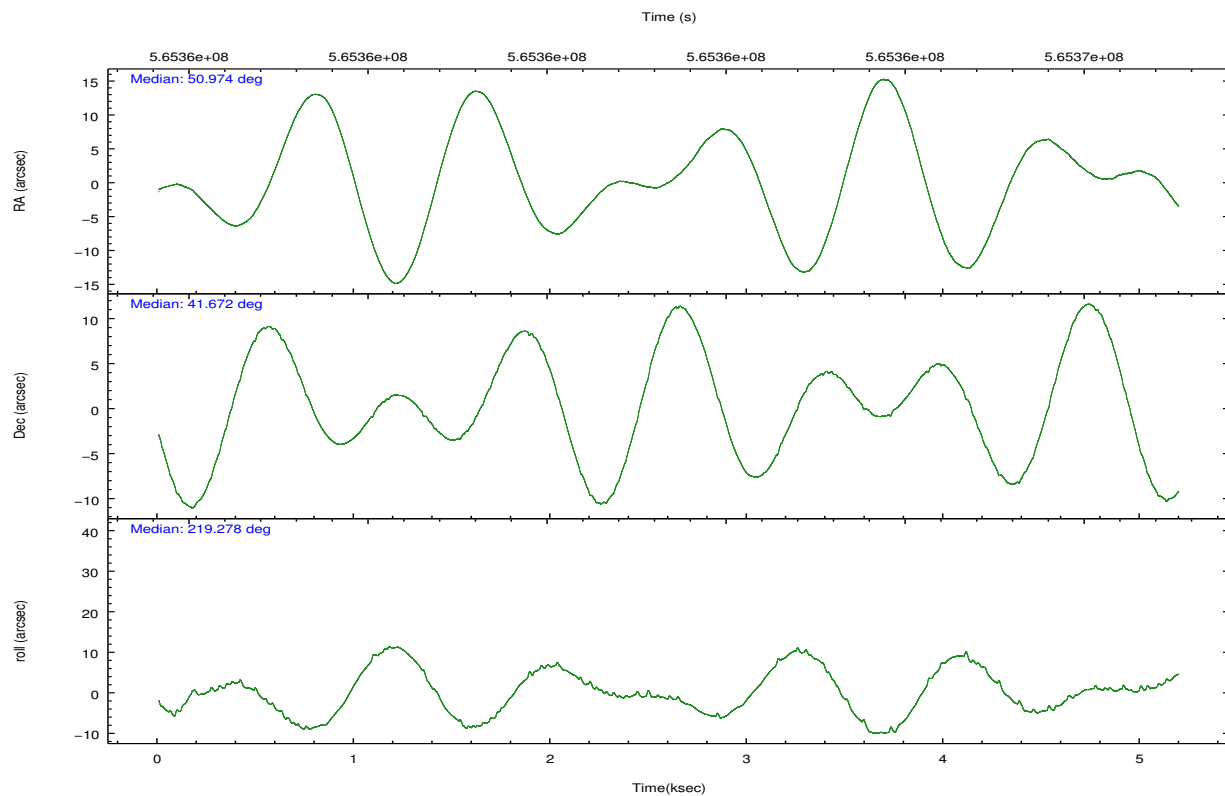
## 2.2 Compared Parameters

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	50.986619	50.97368620678387
[deg] Pointing Dec	41.697810	41.67183025223903
[deg] Pointing Roll	219.071545	219.2888335786327
[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)	565361289.184000	565360913.5405999
Observation start date	2015-12-01T12:47:01	2015-12-01T12:41:53
[s] Observation end time (MET)	565366289.184000	565367292.11597
Observation end date	2015-12-01T14:10:21	2015-12-01T14:28:12
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



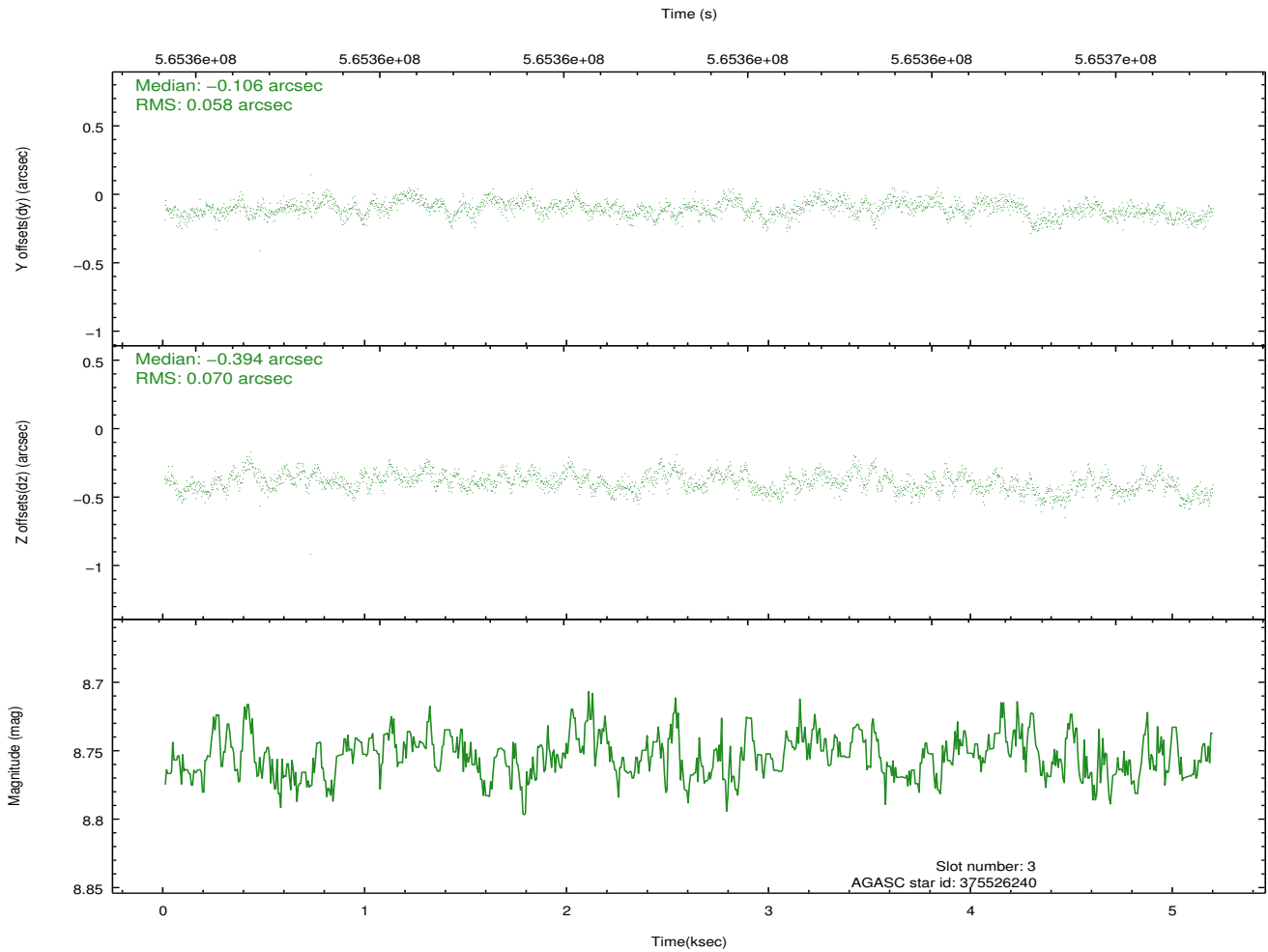
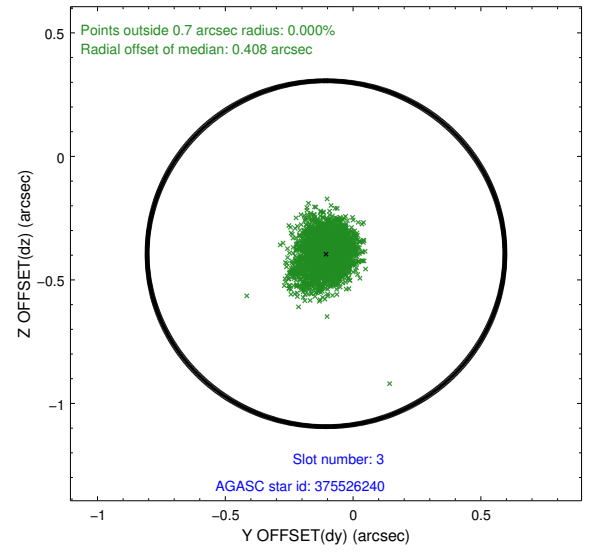
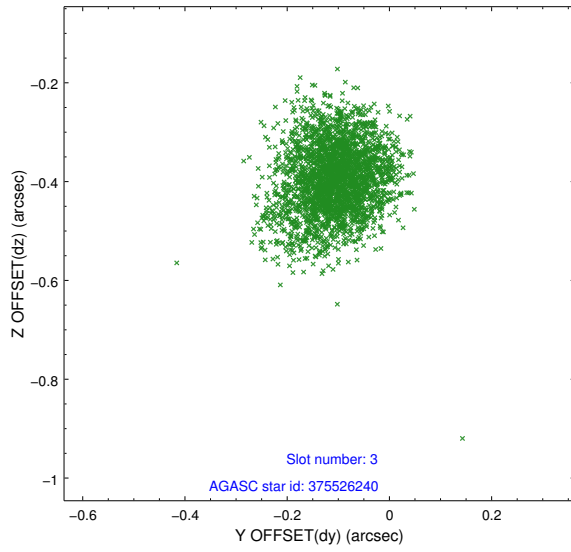


### Slot Statistics

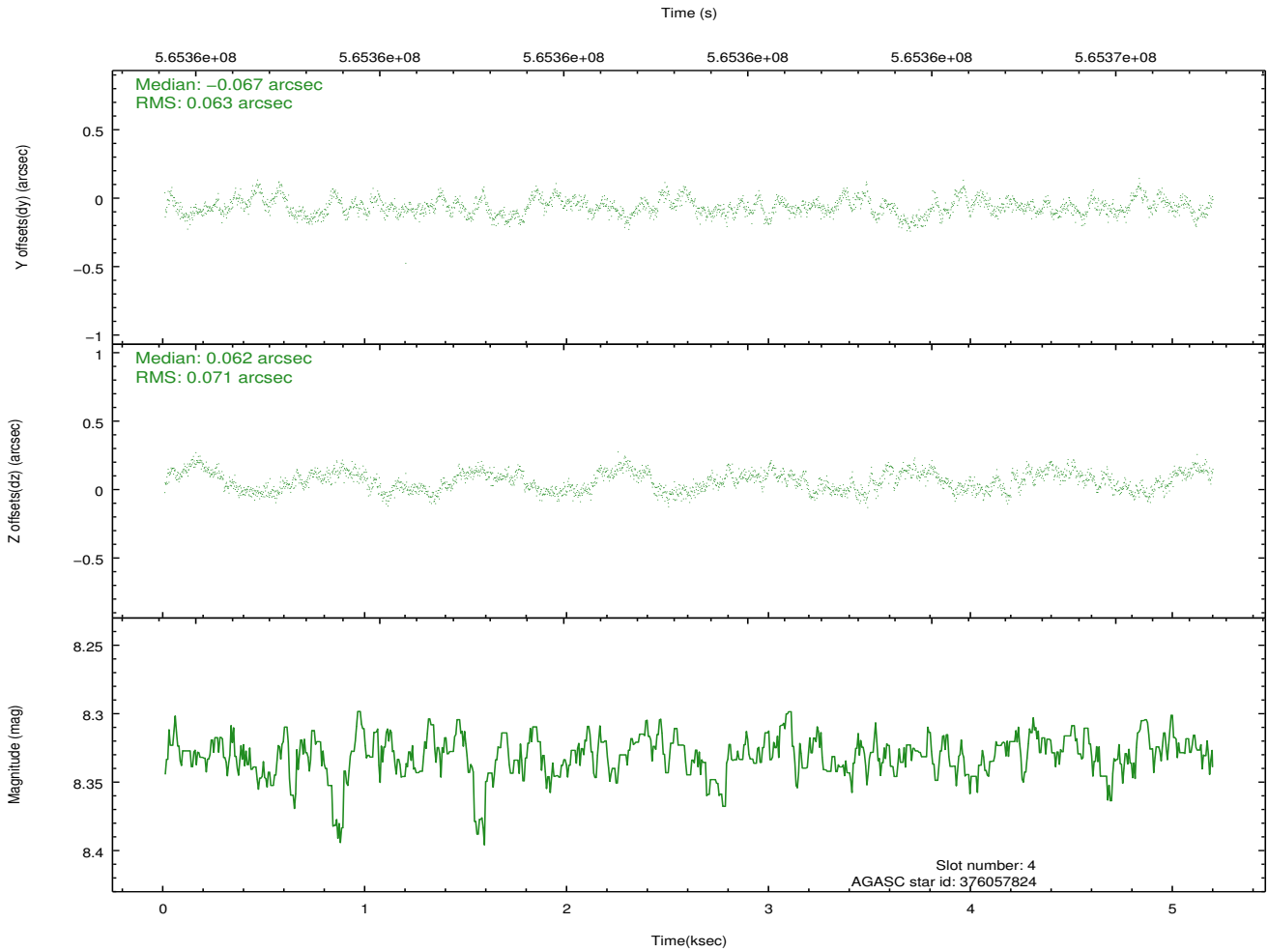
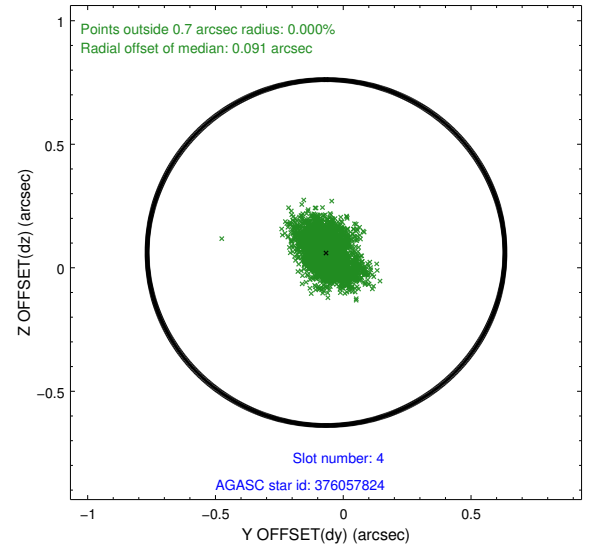
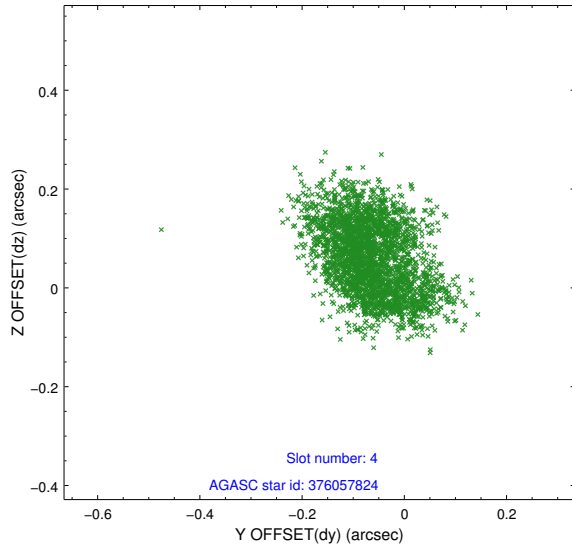
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.26	1267	0.152	-0.049	0.009	0.016	0.000000	0.000000	924.43	-842.80
1	FID		ACIS-I-2	7.15	1267	-0.114	0.037	0.009	0.016	0.000000	0.000000	-769.28	-849.88
2	FID		ACIS-I-5	7.26	1267	-0.131	0.085	0.010	0.019	0.000000	0.000000	-1824.80	1054.00
3	GUIDE	used	375526240	8.75	2533	-0.106	-0.394	0.097	0.154	51.034416	40.968783	1553.06	2119.59
4	GUIDE	used	376057824	8.33	2533	-0.067	0.062	0.102	0.160	50.665569	41.926280	149.18	-1180.29
5	GUIDE	used	376068632	8.76	2531	0.296	0.528	0.117	0.192	50.582093	42.167240	-227.90	-1994.46
6	GUIDE	used	376070040	8.41	2533	-0.022	-0.044	0.103	0.173	50.072031	41.897206	1442.49	-2112.53
7	GUIDE	used	376070440	6.96	2532	-0.099	-0.152	0.118	0.197	51.289107	41.257301	363.42	1744.78

## 2.4 Star Slots

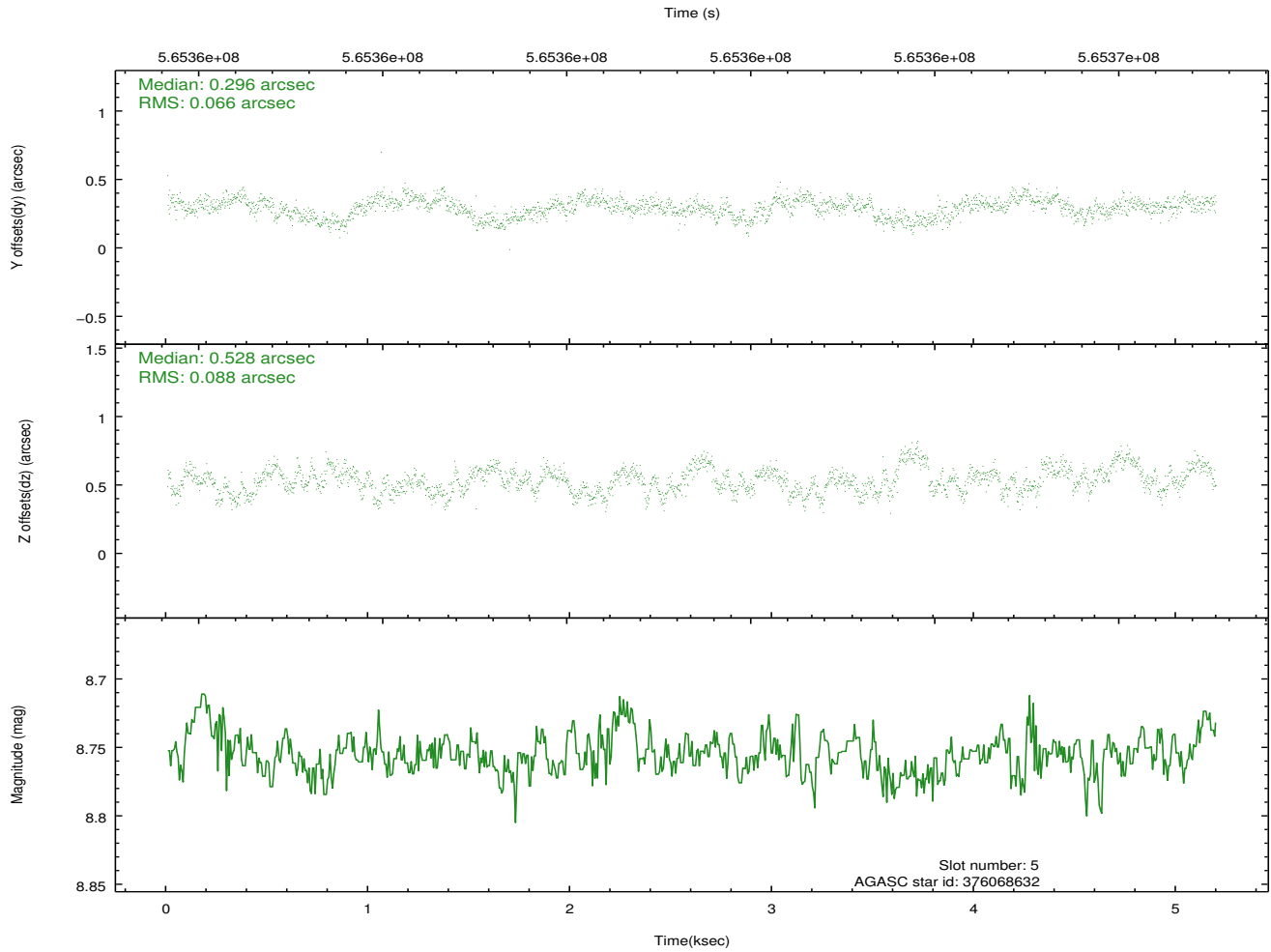
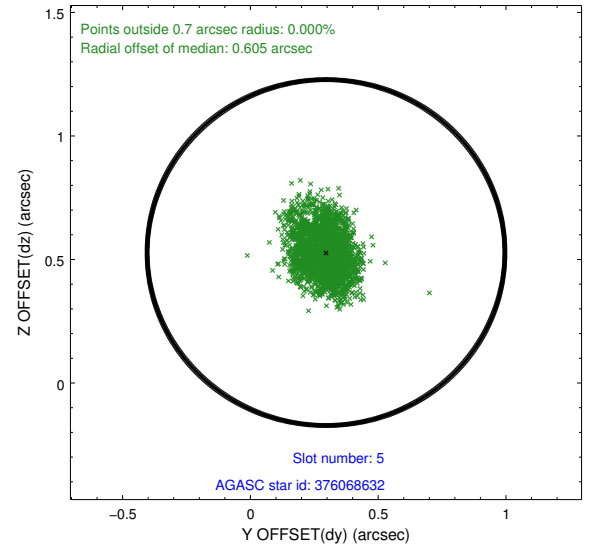
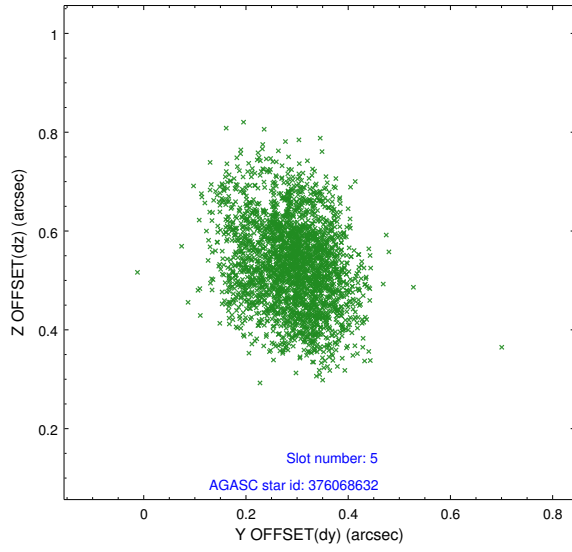
### 2.4.1 Slot 3



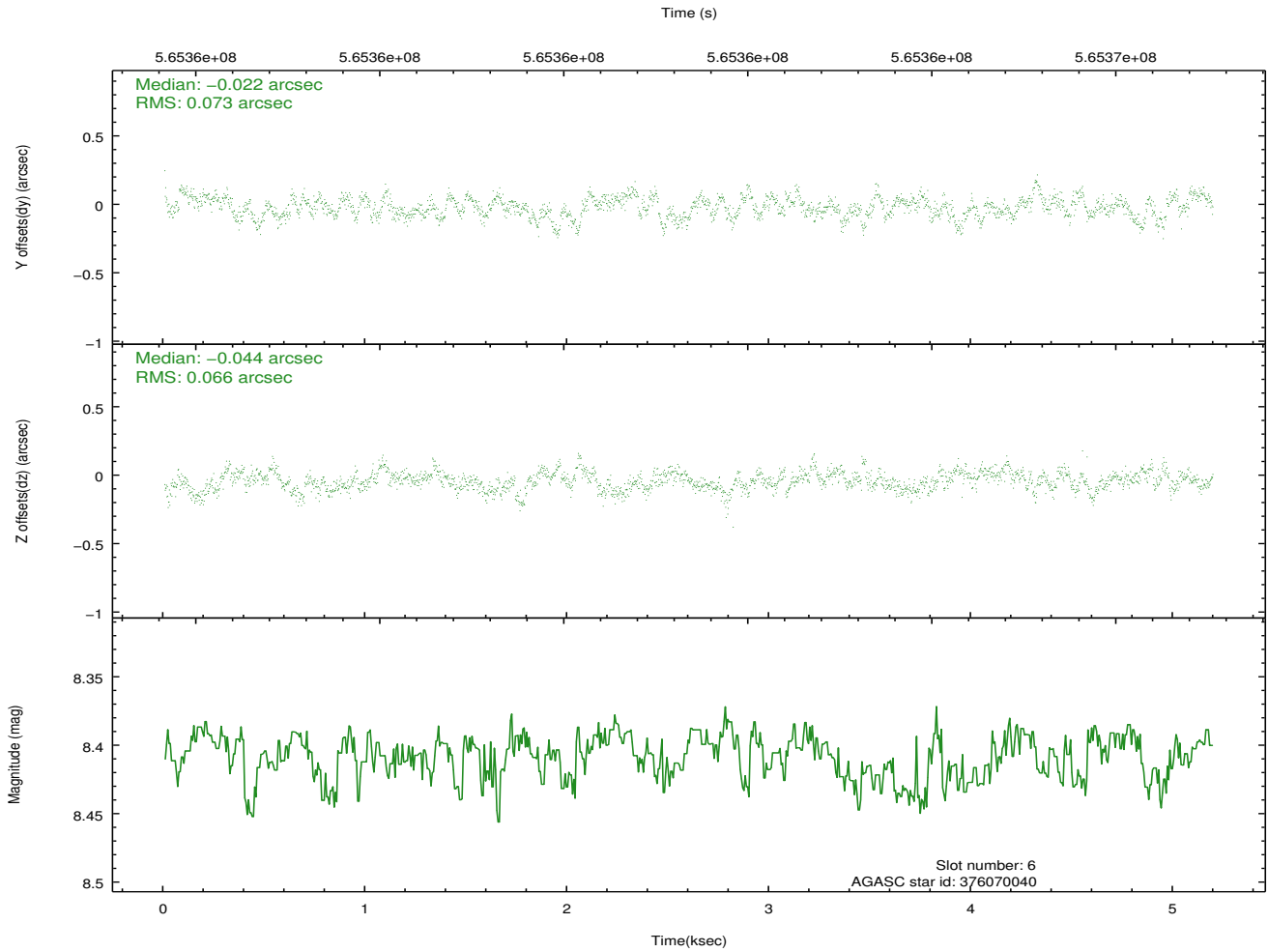
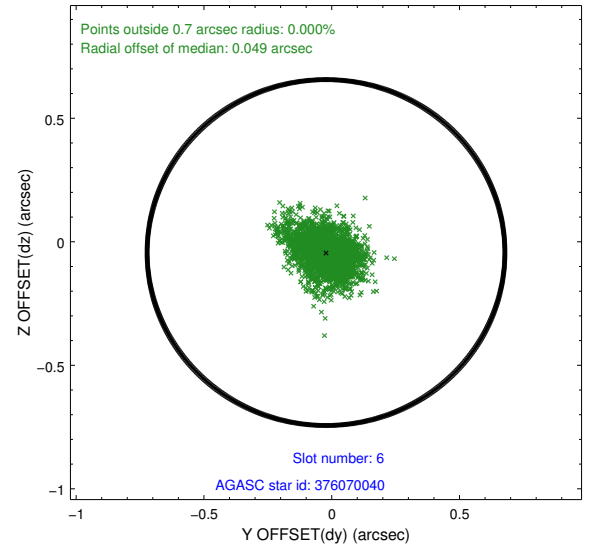
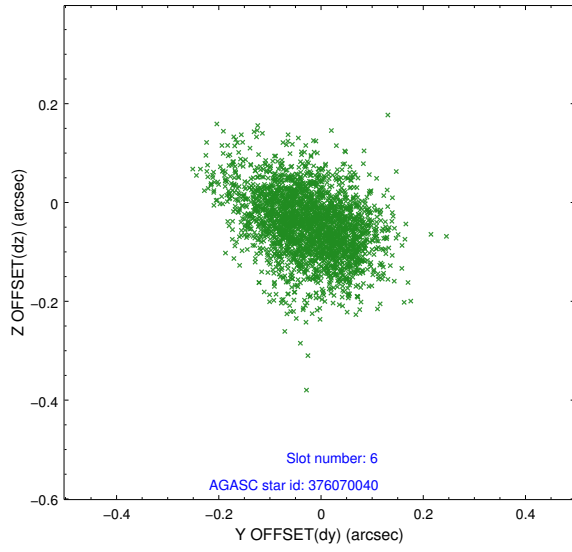
## 2.4.2 Slot 4



### 2.4.3 Slot 5

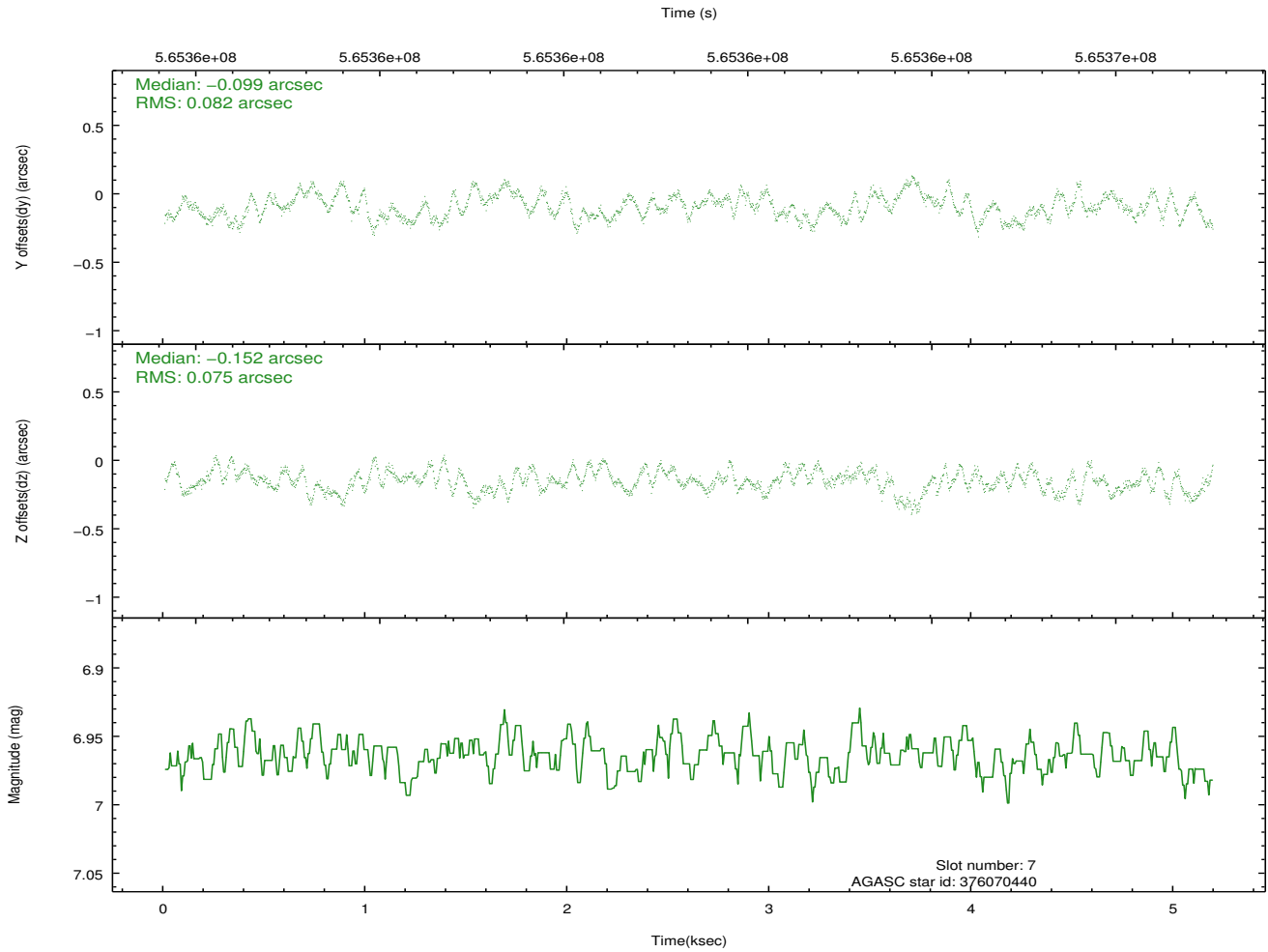
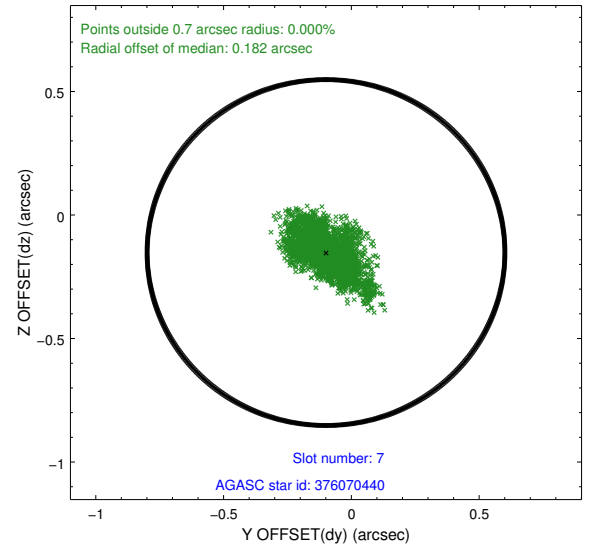
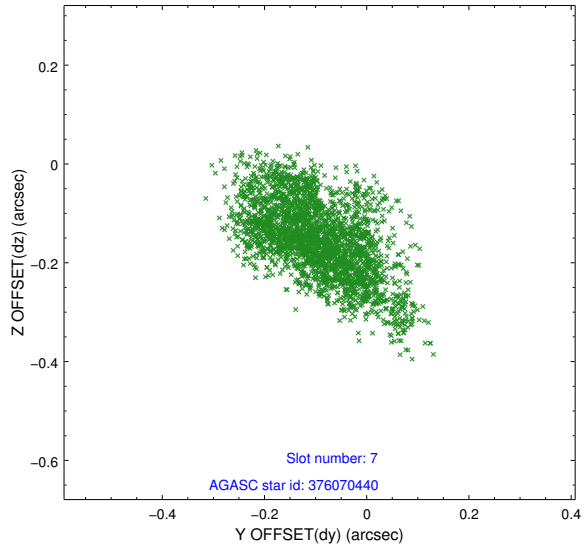


## 2.4.4 Slot 6



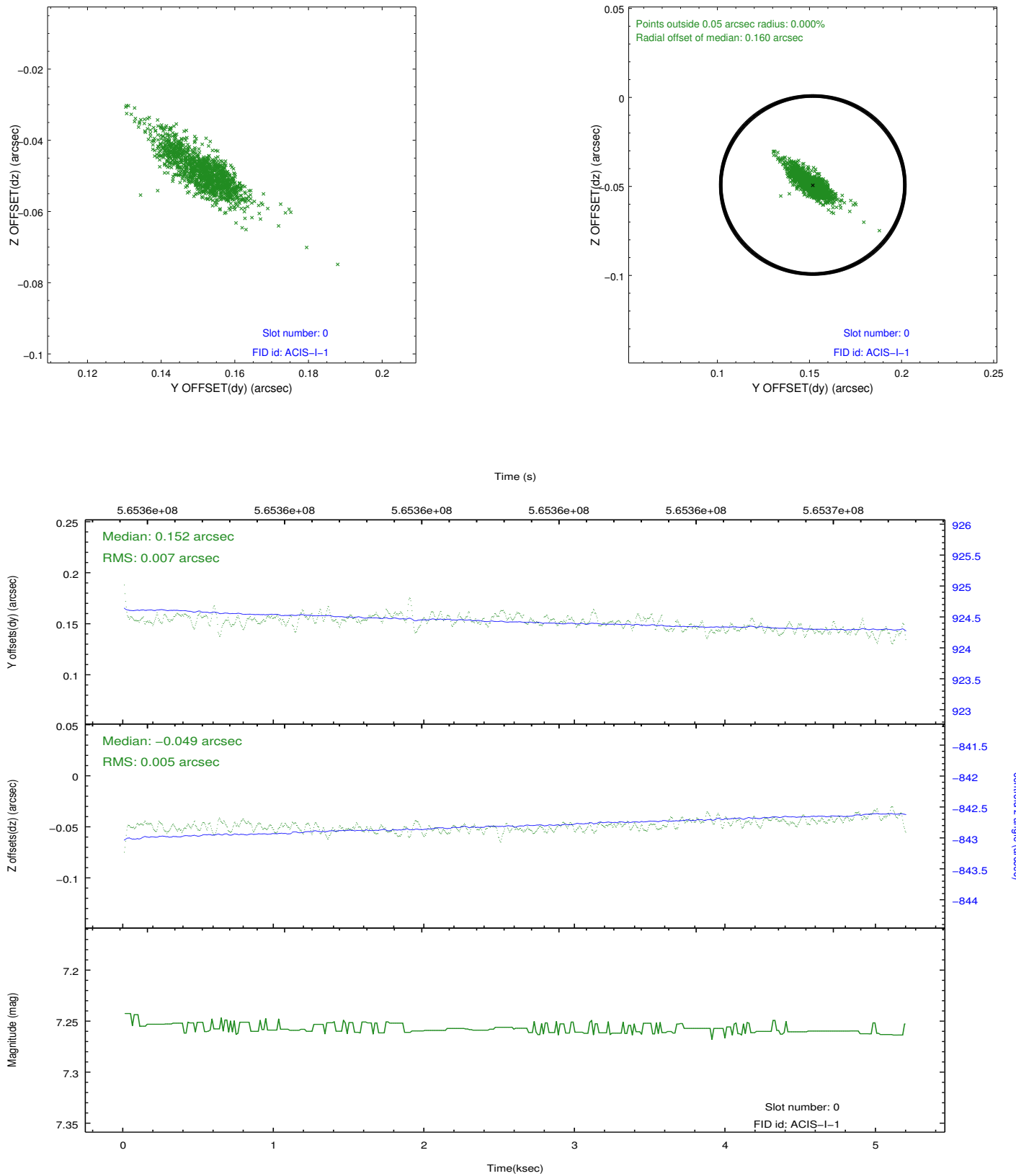


## 2.4.5 Slot 7

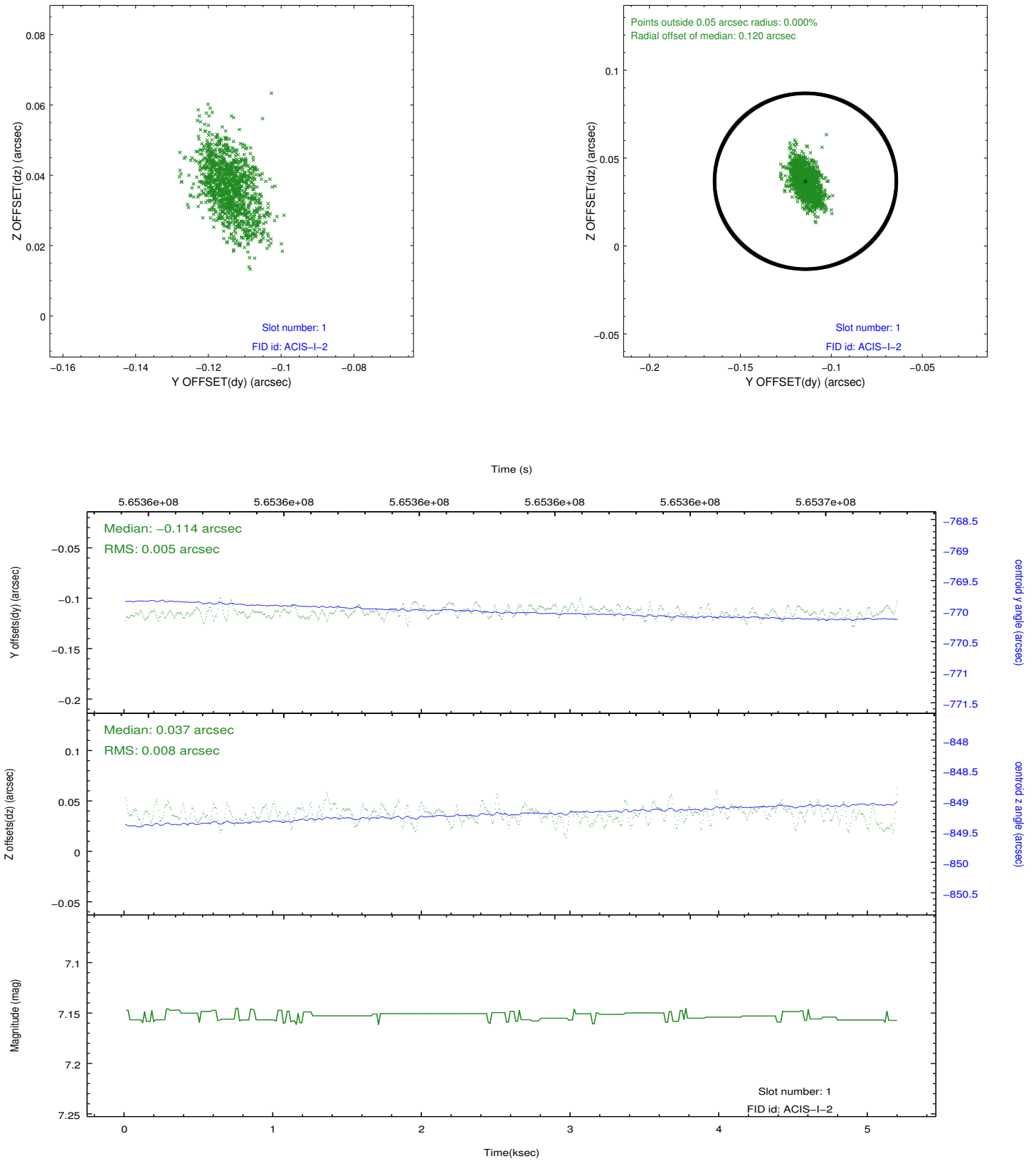


## 2.5 FID Slots

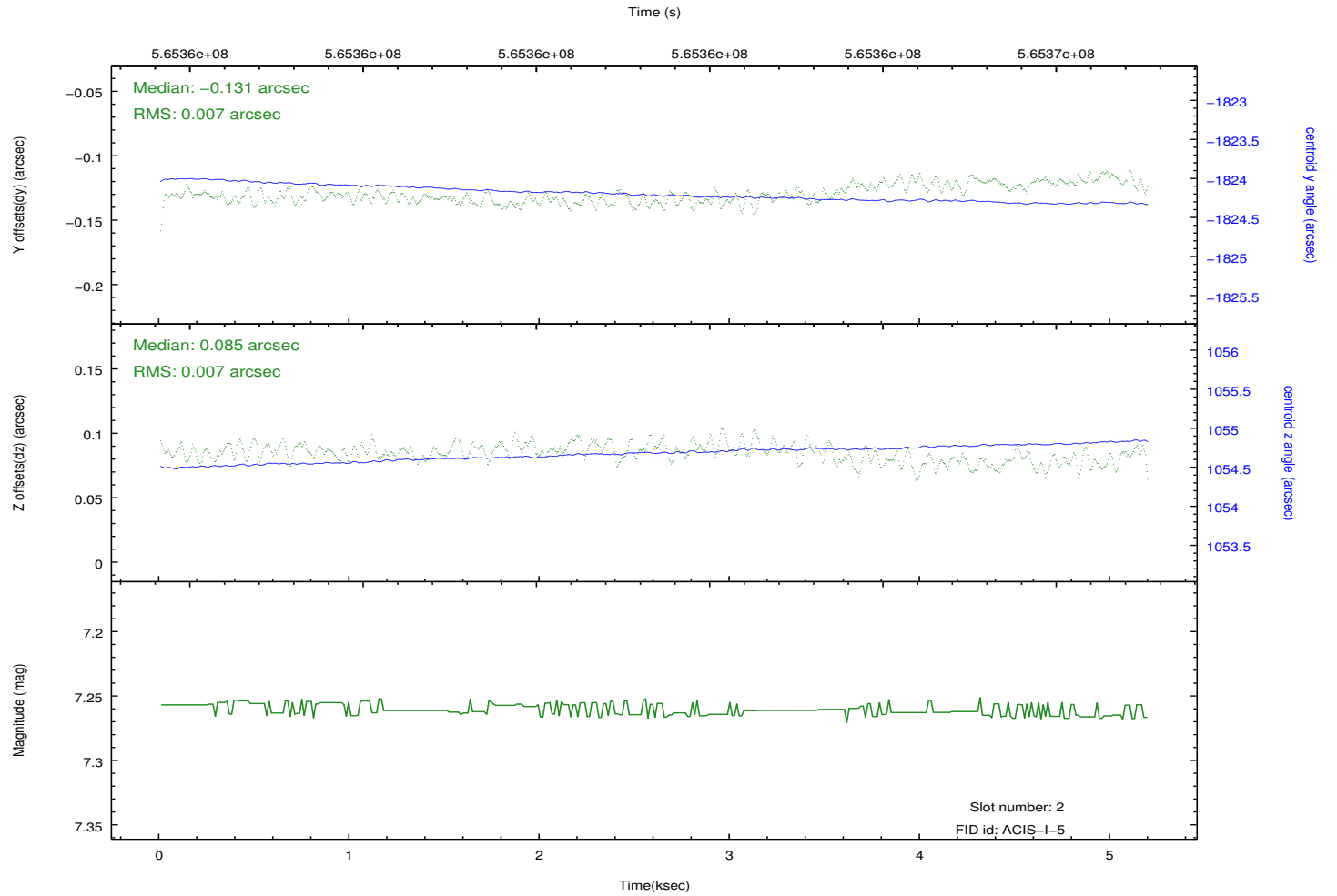
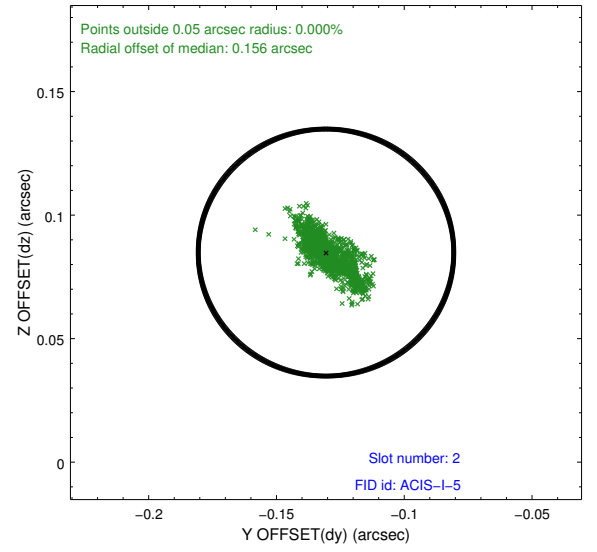
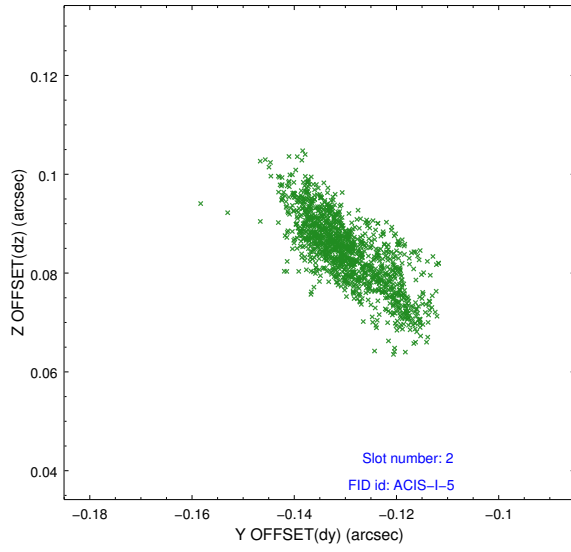
### 2.5.1 Slot 0



## 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)	2015.12.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.7769804832935

### A.2 Comments