

# V&V Reference Report

## L2 ASCDS Version : 10.4.2.1

Observation 17281 - L2 Version 1  
Chandra X-Ray Center

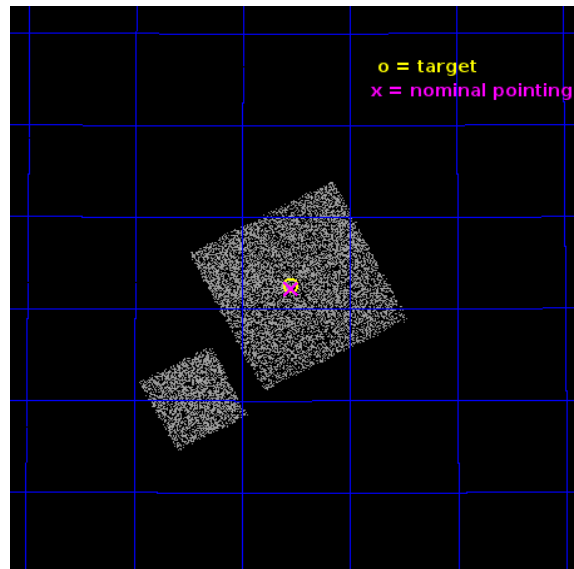
L2 Processing Date : Dec 11 2015

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# 1 Front

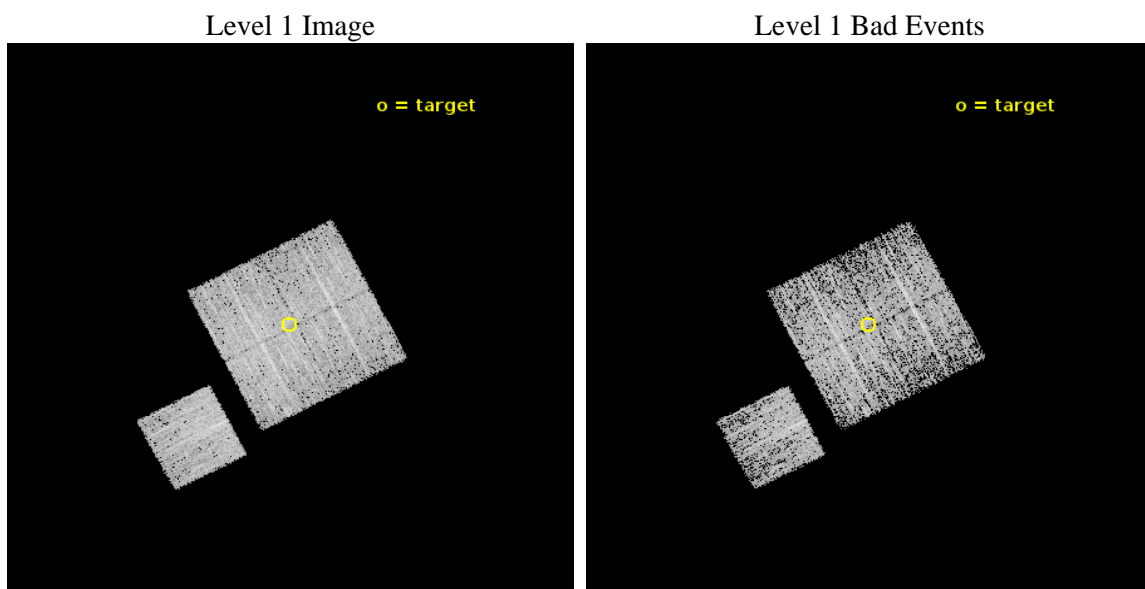
seq_num	801526	Sequence number
obs_id	17281	Observation id
title	Perseus: A New, Low-Redshift Anchor for Cluster Cosmology	Proposal
observer	Prof. Steven Allen	Principal investigator
object	Perseus cluster	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	48.88661	Observer's specified target RA [deg]
dec_targ	41.376467	Observer's specified target Dec [deg]
ra_nom	48.885761820132	Nominal RA [deg]
dec_nom	41.370074038852	Nominal Dec [deg]
roll_nom	242.59677531068	Nominal Roll [deg]
revision	1	Processing version of data
ontime	4766.293915391	Sum of GTIs [s]
livetime	4704.0187764919	Livetime [s]
ontime0	4772.4528161287	Sum of GTIs [s]
ontime1	4769.3528258801	Sum of GTIs [s]
ontime2	4772.5348961353	Sum of GTIs [s]
ontime3	4766.293915391	Sum of GTIs [s]
ontime6	4772.4117760658	Sum of GTIs [s]
l2events	15446	Number of level 2 events



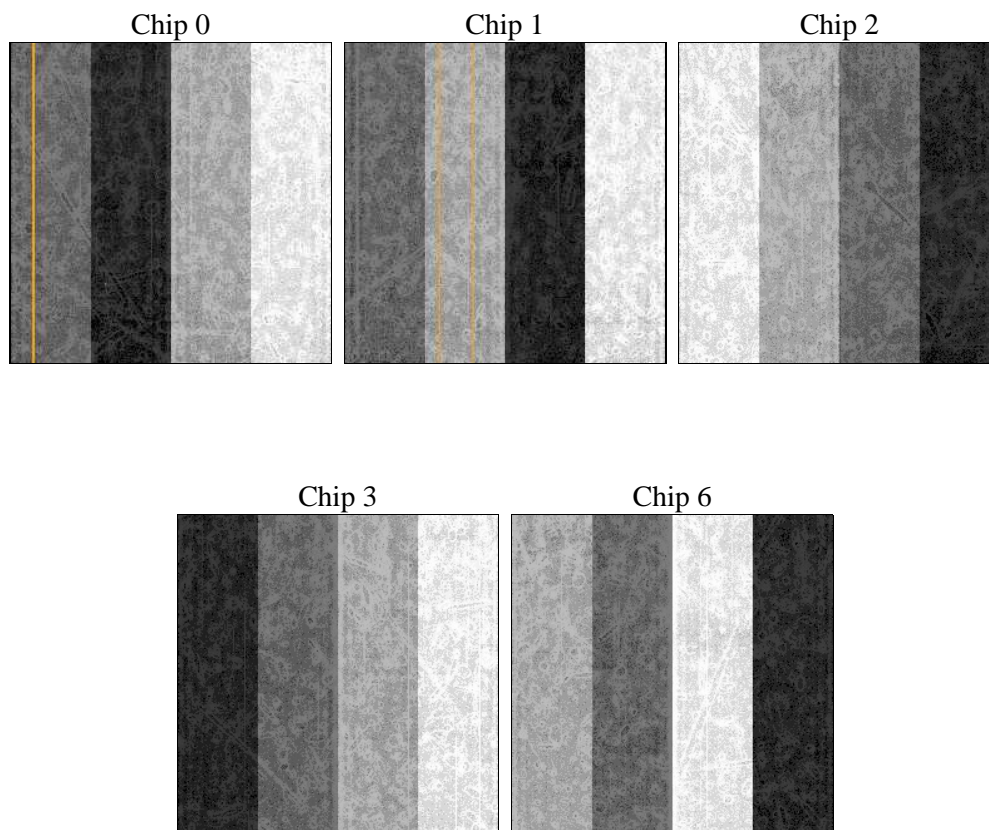
## 2 OBI

### 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	4766.293915391	Sum of GTIs [s]
caldsver	4.6.10a	&#160	ontime0	4772.4528161287	Sum of GTIs [s]
date	2015-12-12T03:09:50	Date and time of file creation	ontime1	4769.3528258801	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	4772.5348961353	Sum of GTIs [s]
			ontime3	4766.293915391	Sum of GTIs [s]
			ontime6	4772.4117760658	Sum of GTIs [s]
			l1events	124564	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	22676	23278	26489	25796	26325
rejected events	19200	19544	23110	22144	22602
rejected %	84%	83%	87%	85%	85%

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	1429	1583	1436	1650	1564
	6%	6%	5%	6%	5%
grade 1 events	18	13	20	19	11
	0%	0%	0%	0%	0%
grade 2 events	811	842	764	717	798
	3%	3%	2%	2%	3%
grade 3 events	322	304	285	306	344
	1%	1%	1%	1%	1%
grade 4 events	303	322	284	336	322
	1%	1%	1%	1%	1%
grade 5 events	1131	1184	1143	1310	1306
	4%	5%	4%	5%	4%
grade 6 events	614	688	613	647	704
	2%	2%	2%	2%	2%
grade 7 events	18048	18342	21944	20811	21276
	79%	78%	82%	80%	80%

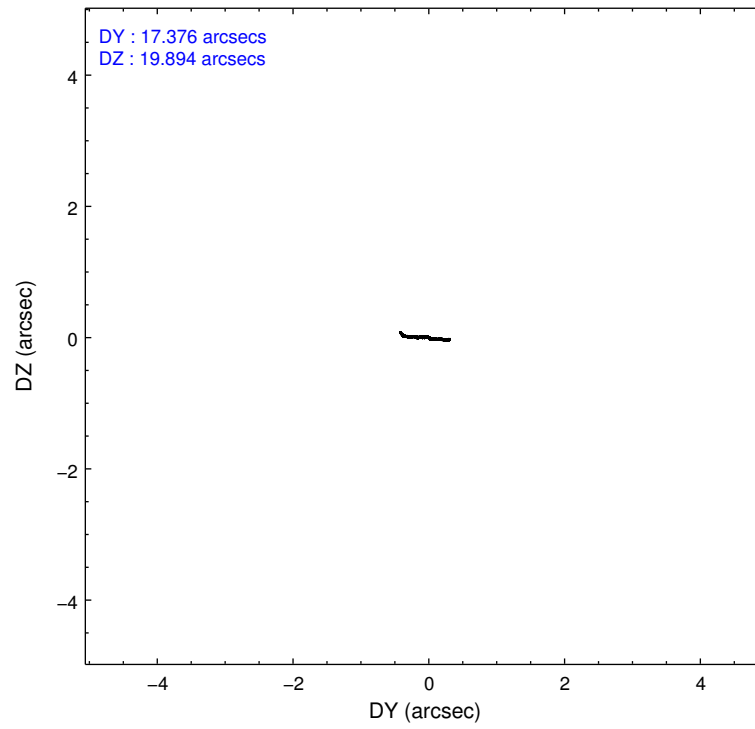
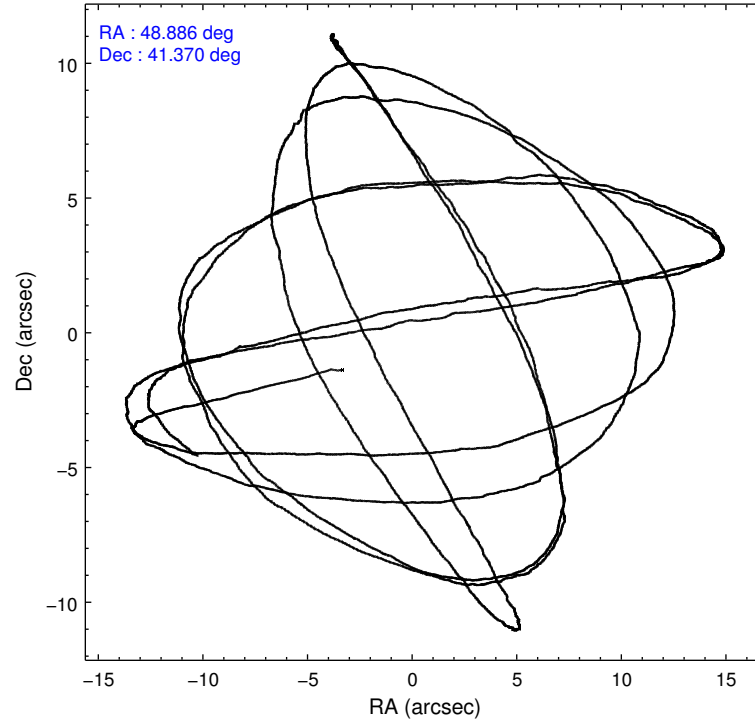


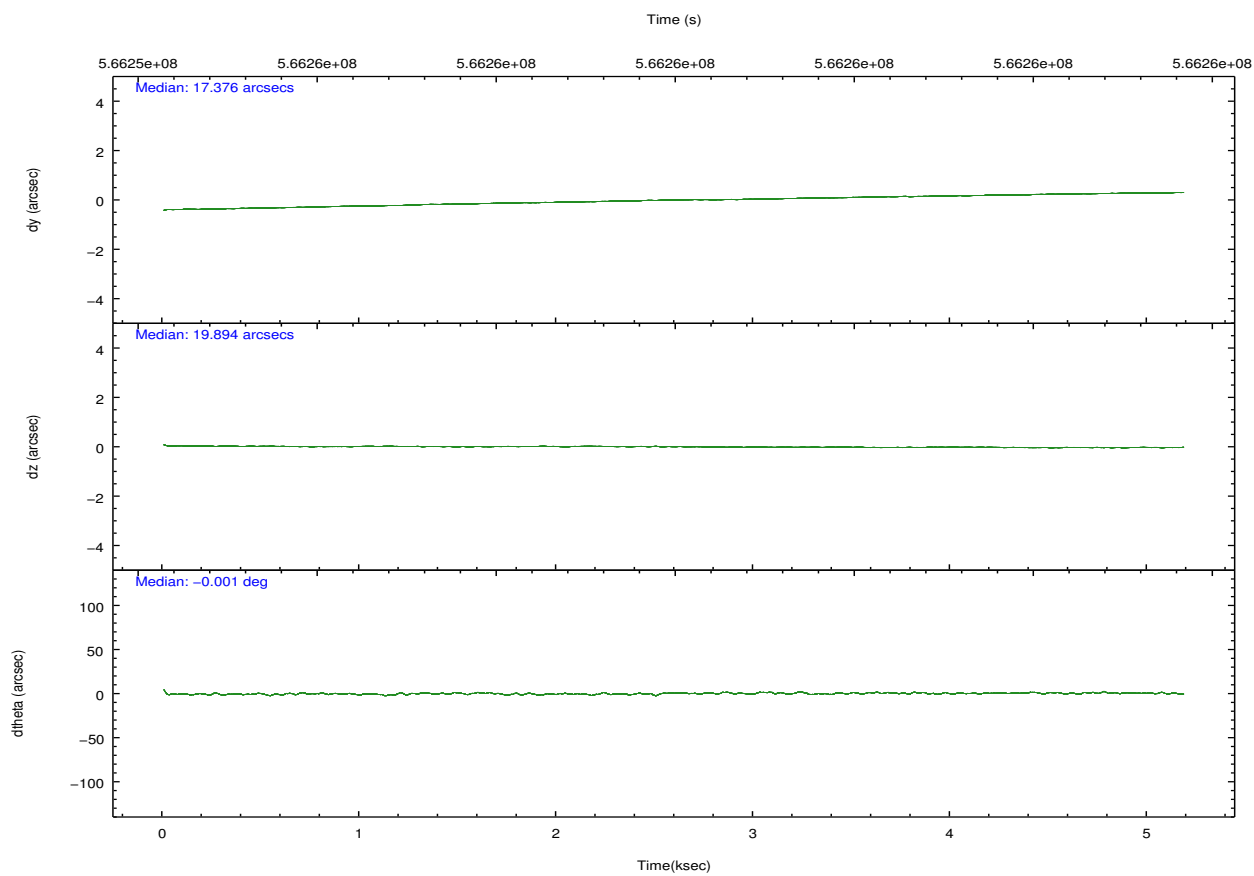
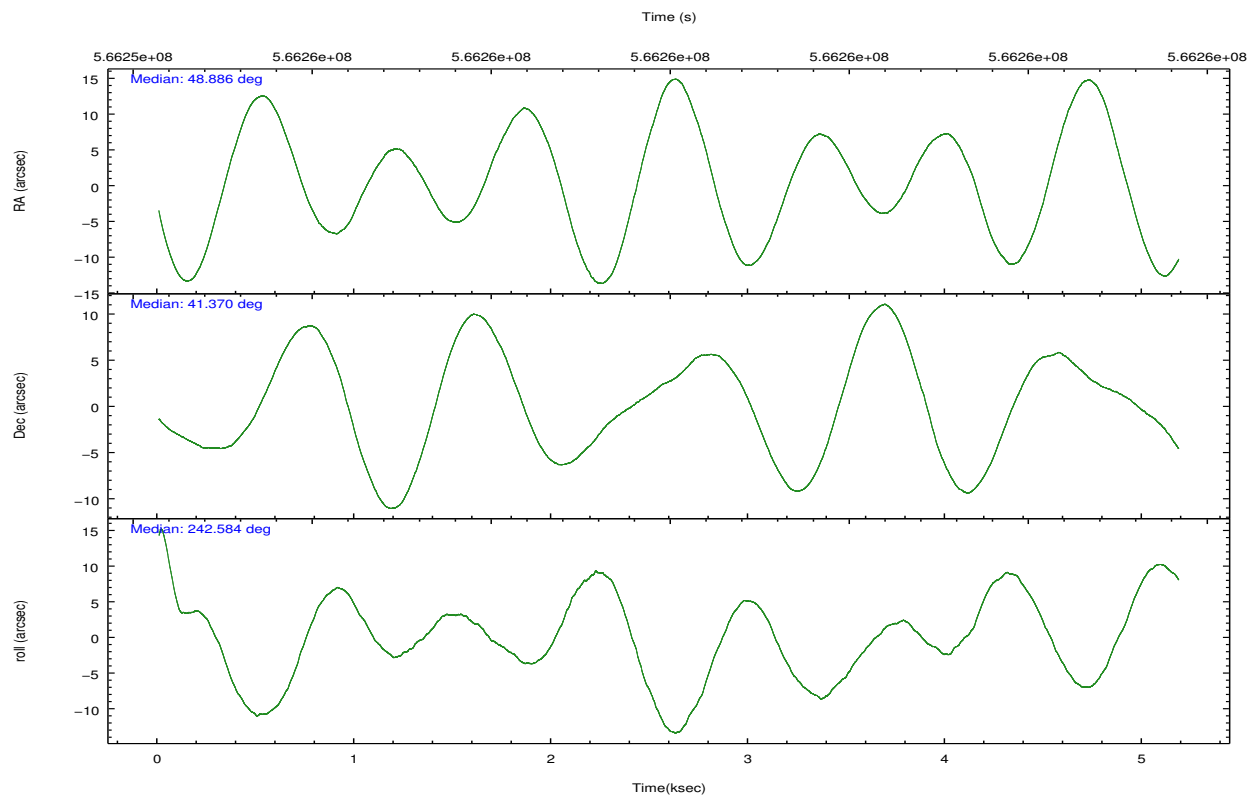
## 2.2 Compared Parameters

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	48.884060	48.88576182013233
[deg] Pointing Dec	41.397671	41.37007403885194
[deg] Pointing Roll	242.389210	242.5967753106813
[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)	566254590.184000	566254043.75367
Observation start date	2015-12-11T20:55:22	2015-12-11T20:47:23
[s] Observation end time (MET)	566259590.184000	566259724.8164901
Observation end date	2015-12-11T22:18:42	2015-12-11T22:22:04
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



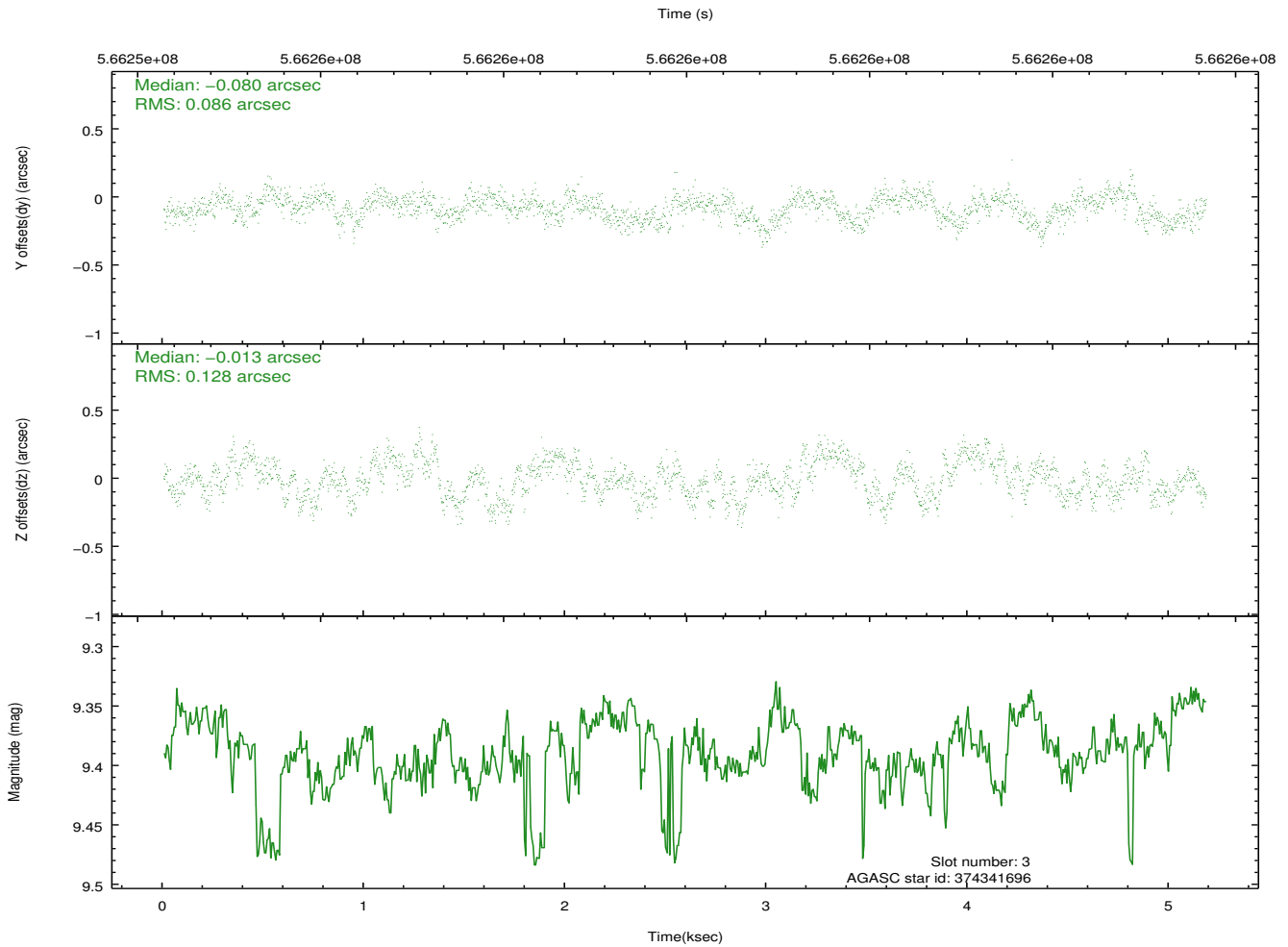
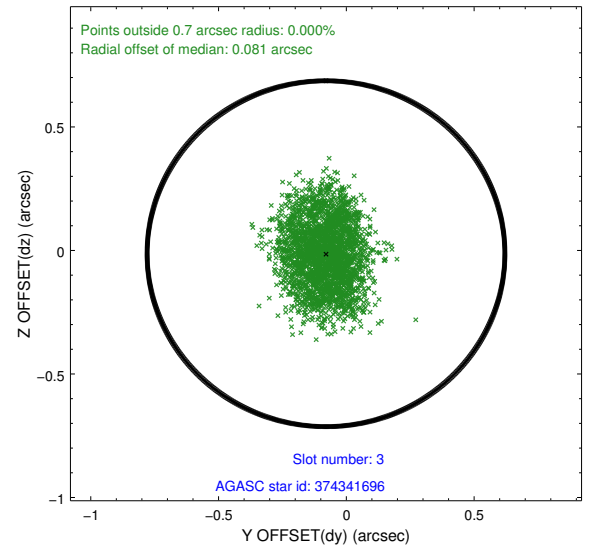
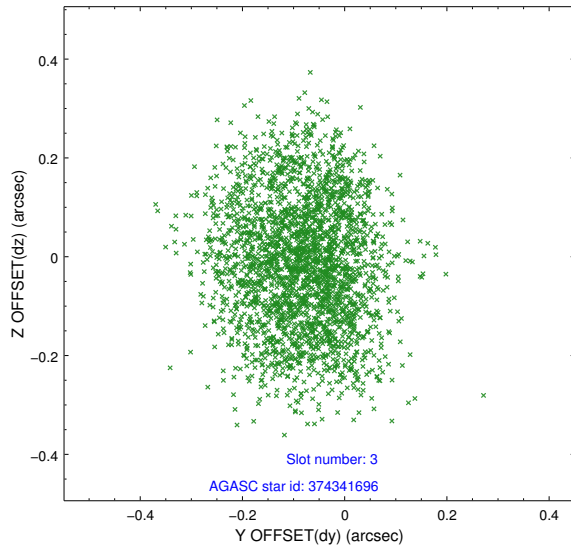


### Slot Statistics

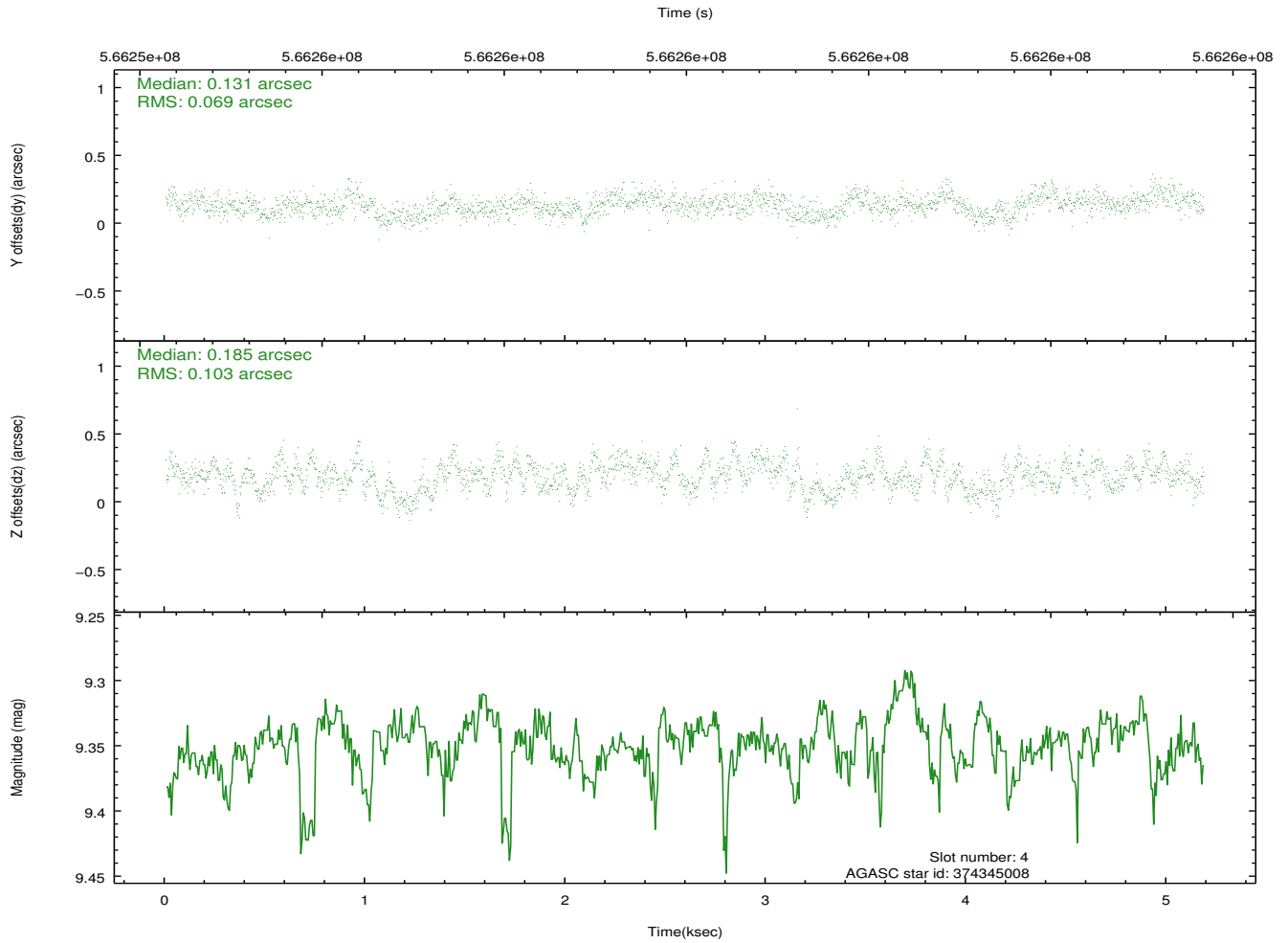
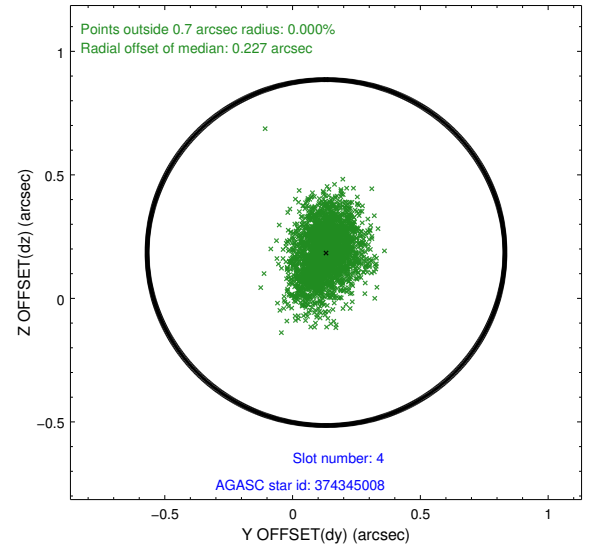
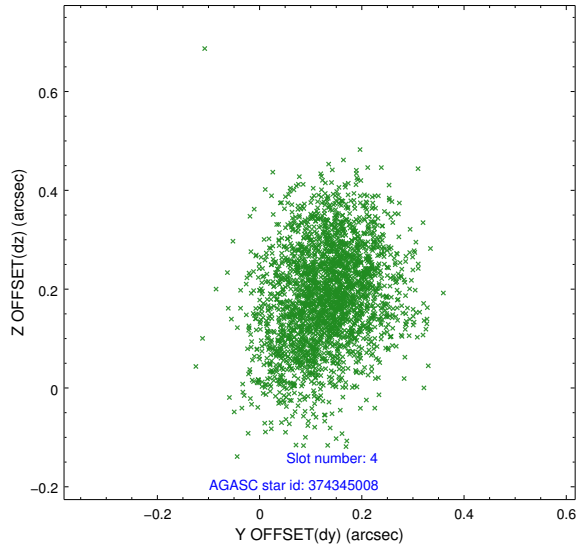
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.25	1264	-0.151	-0.104	0.009	0.015	0.000000	0.000000	921.88	-843.73
1	FID		ACIS-I-4	7.18	1264	0.205	0.147	0.011	0.019	0.000000	0.000000	2142.95	1055.71
2	FID		ACIS-I-6	7.26	1264	-0.151	0.022	0.011	0.017	0.000000	0.000000	389.32	1699.13
3	GUIDE	used	374341696	9.39	2526	-0.080	-0.013	0.169	0.261	48.090921	41.493062	678.82	-2058.36
4	GUIDE	used	374345008	9.35	2524	0.131	0.185	0.132	0.217	48.768668	41.619367	-562.31	-644.66
5	GUIDE	used	374353904	8.34	2527	-0.014	0.052	0.089	0.143	48.175092	41.439059	748.27	-1767.35
6	GUIDE	used	374355168	8.54	2527	-0.012	0.084	0.110	0.174	48.517523	41.466988	236.12	-992.16
7	GUIDE	used	373826120	8.90	2525	-0.022	-0.307	0.109	0.170	49.738165	41.186341	-408.65	2397.32

## 2.4 Star Slots

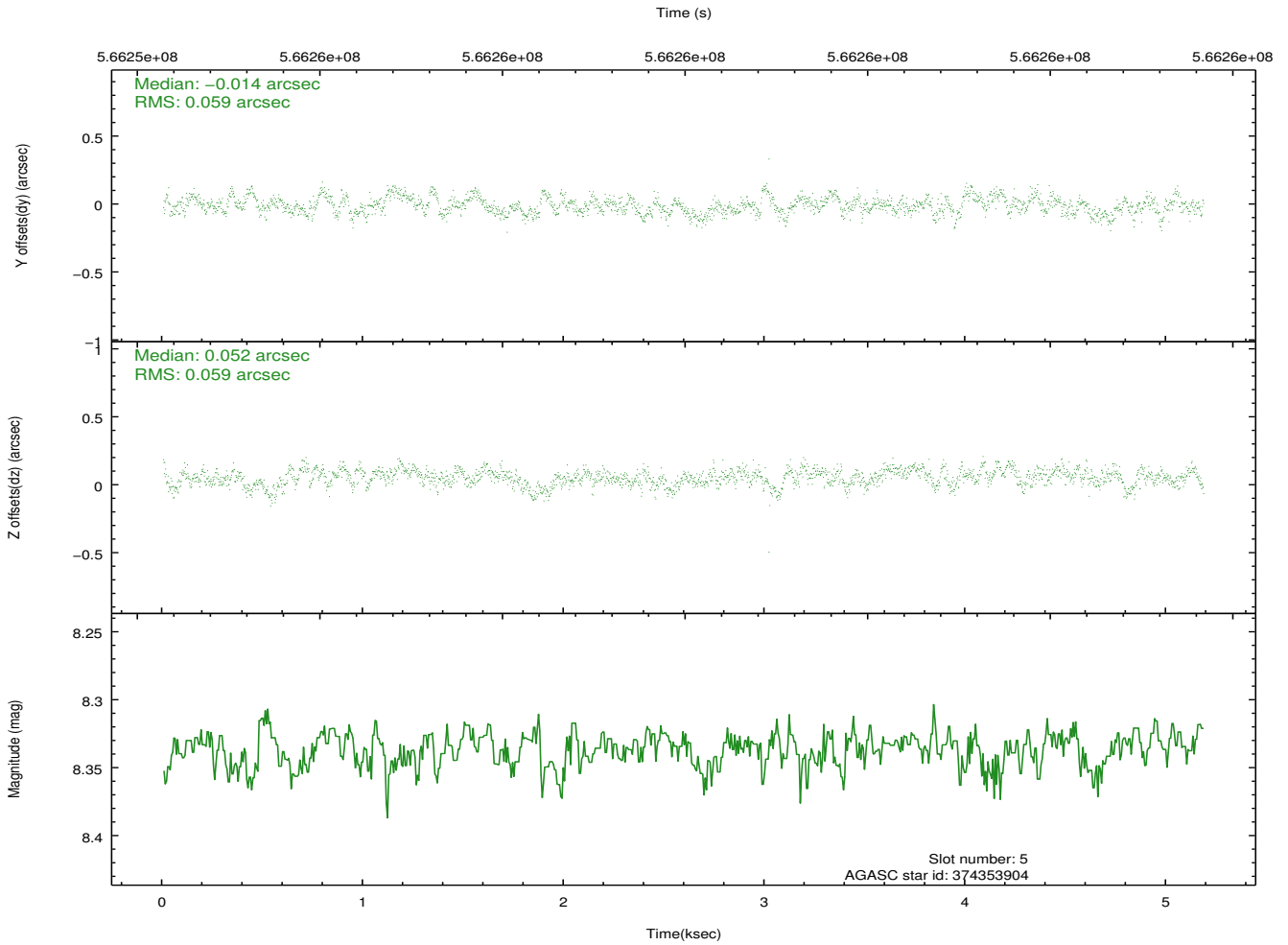
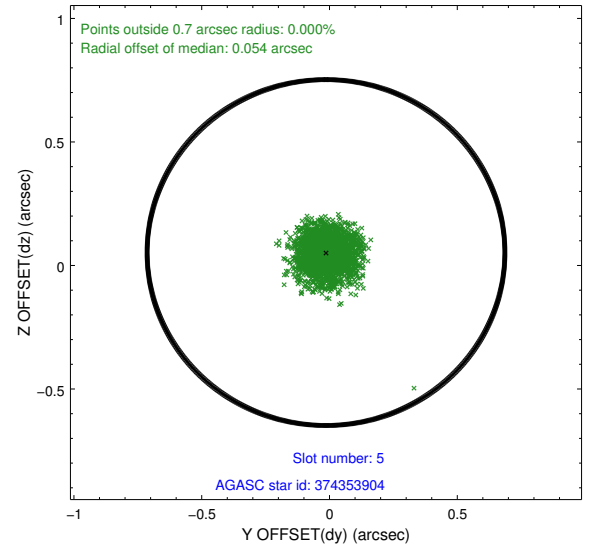
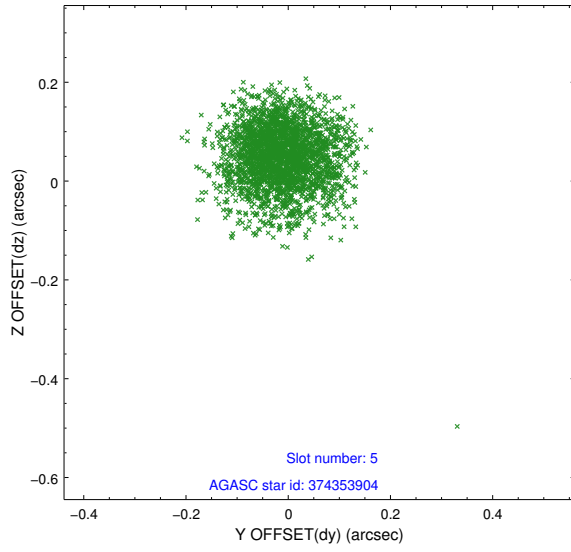
### 2.4.1 Slot 3



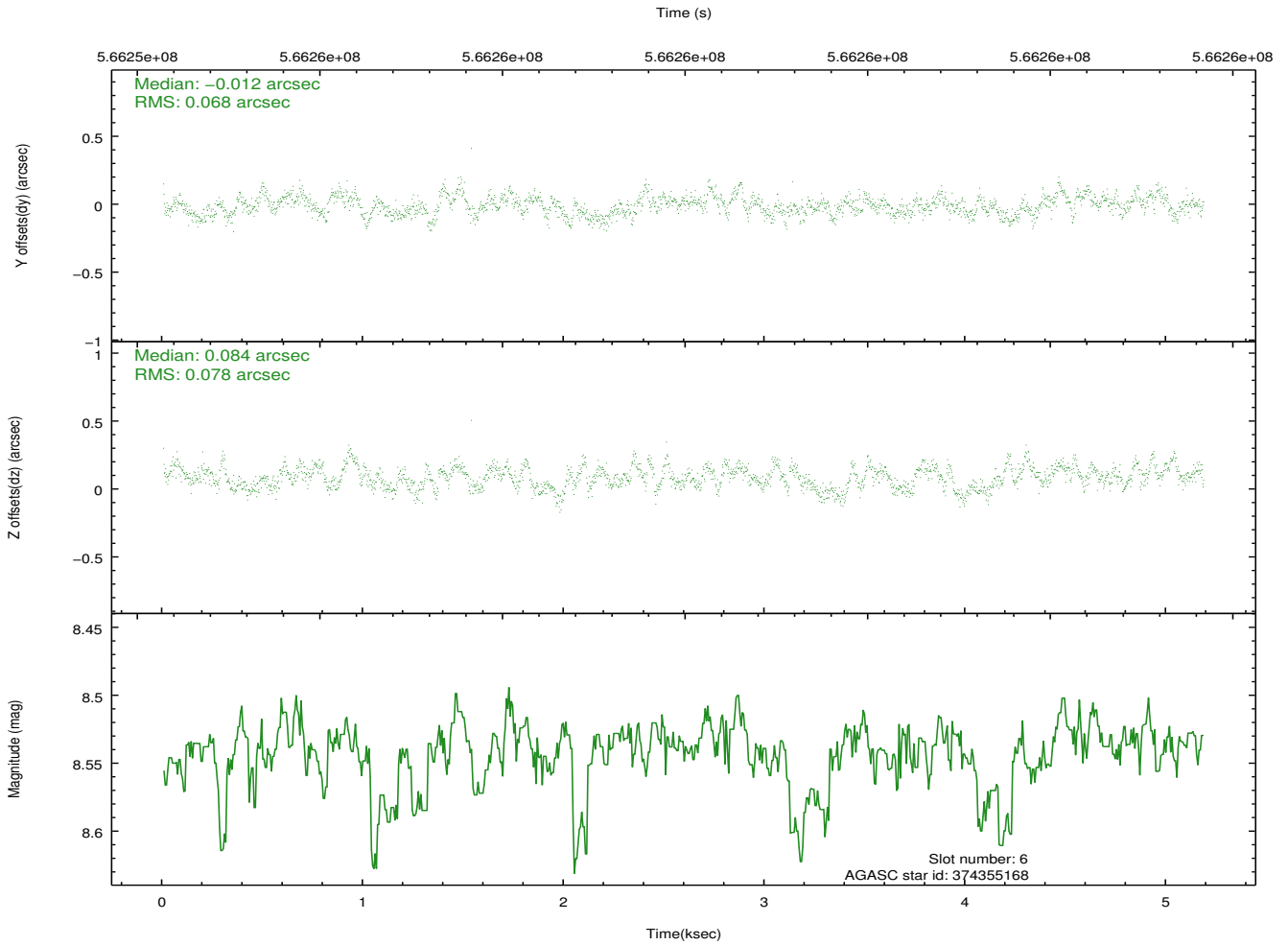
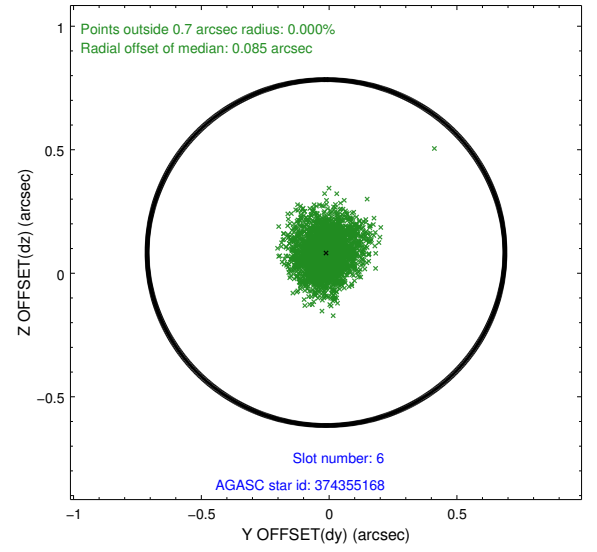
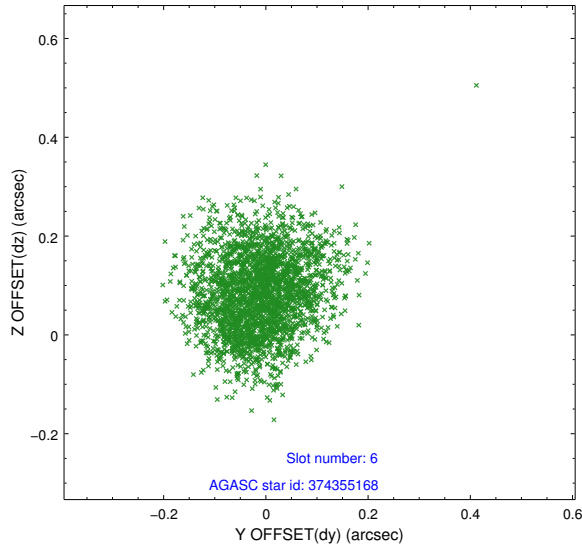
## 2.4.2 Slot 4



### 2.4.3 Slot 5

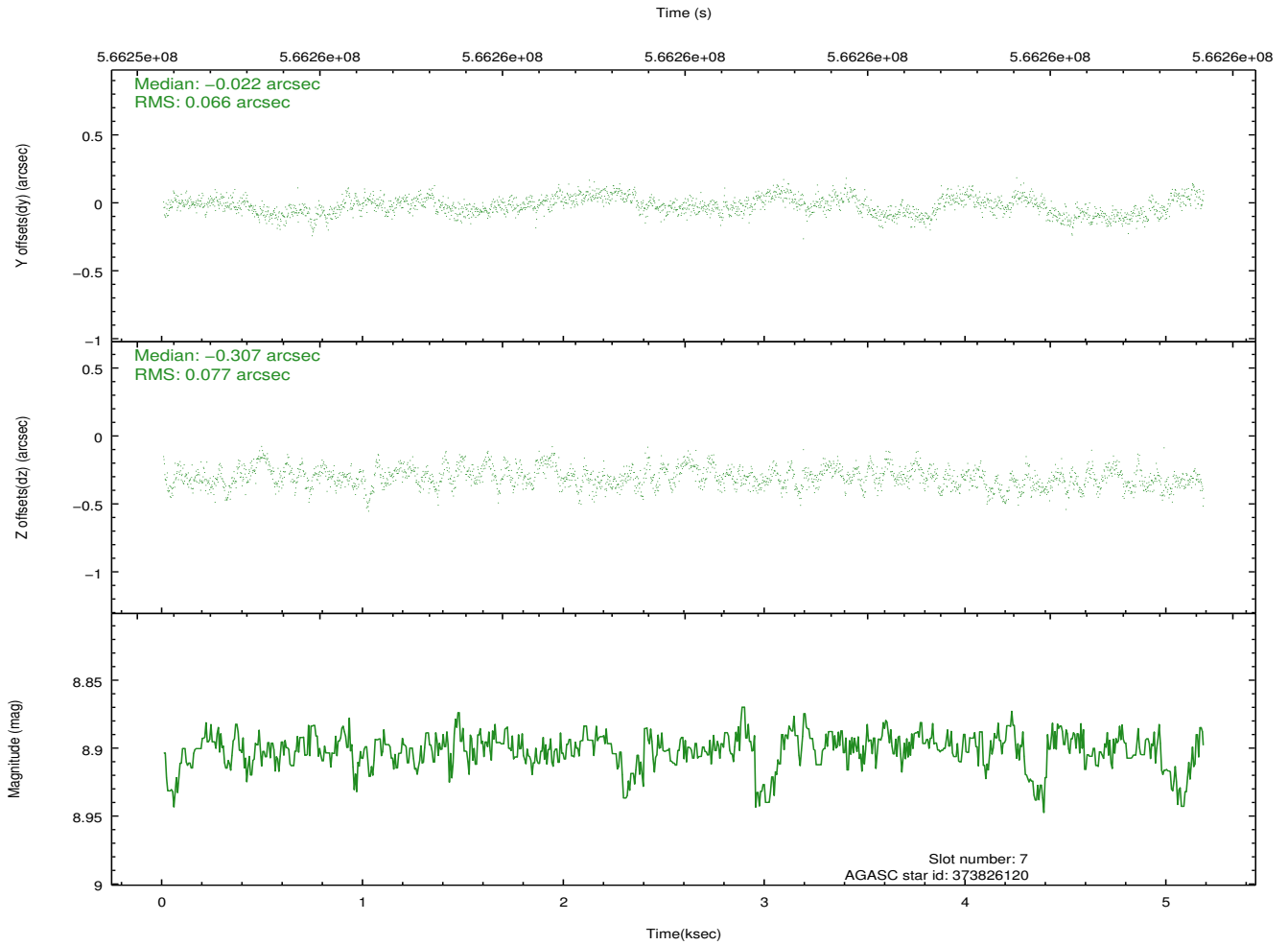
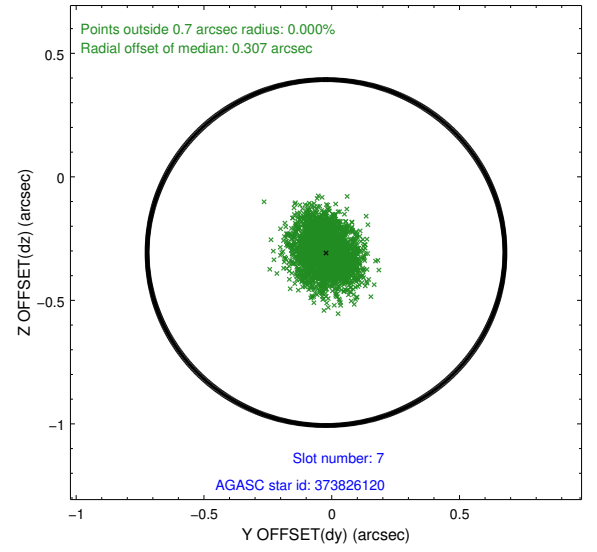
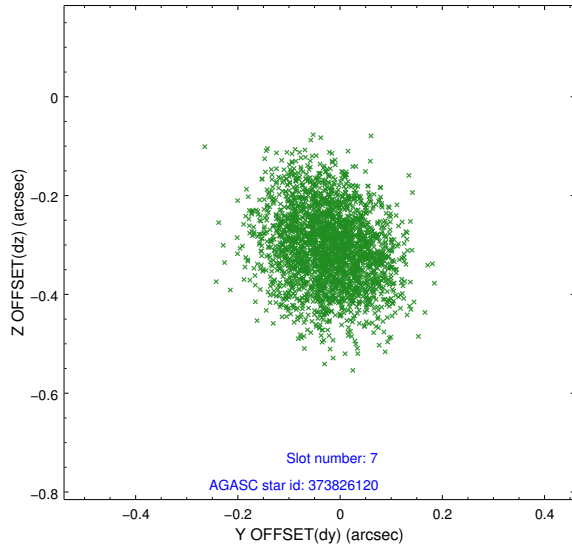


## 2.4.4 Slot 6



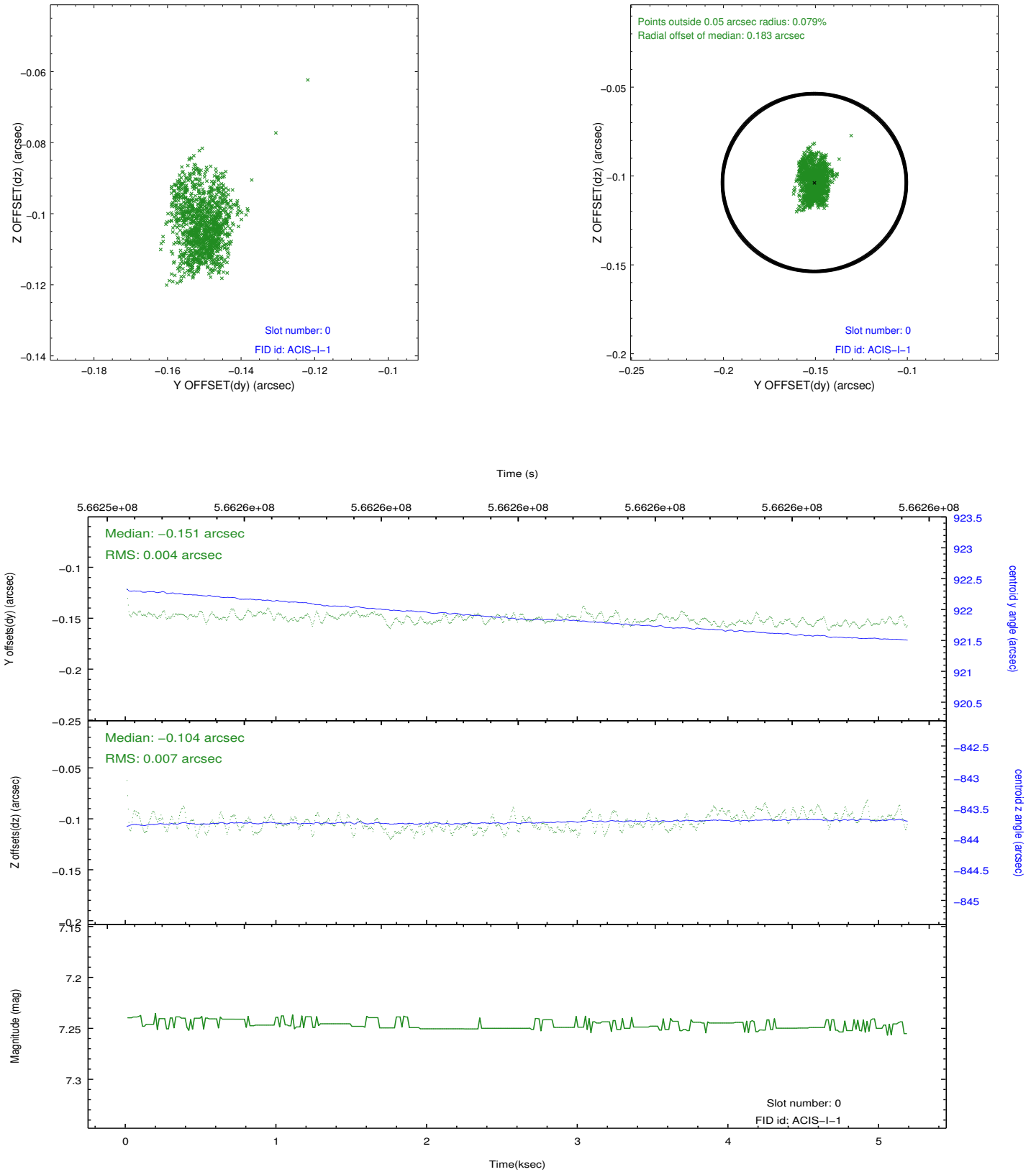


## 2.4.5 Slot 7

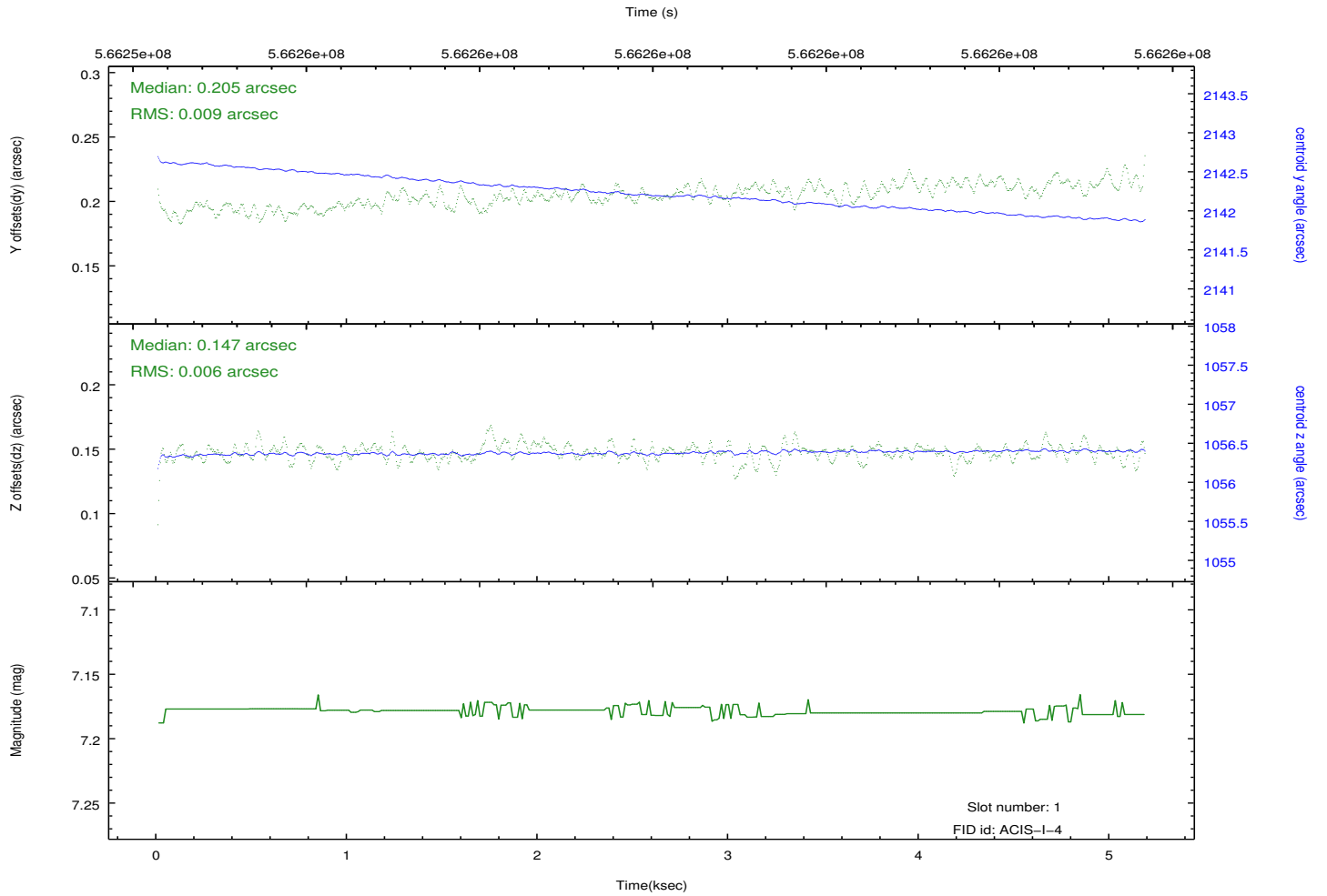
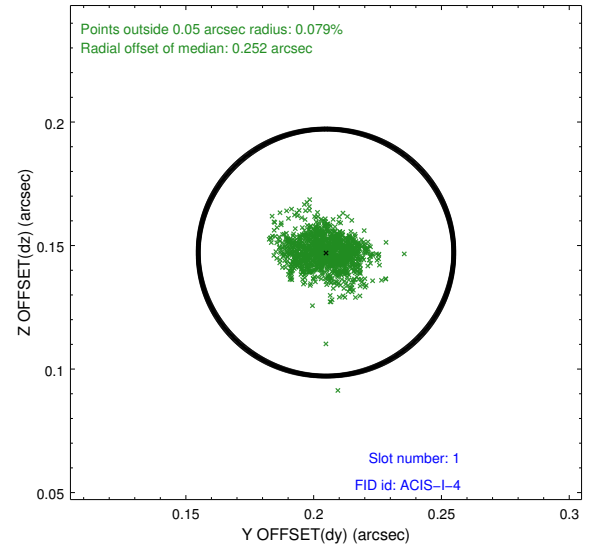
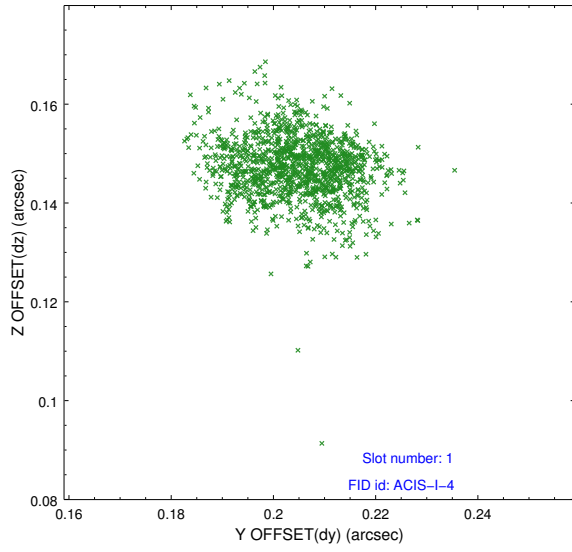


## 2.5 FID Slots

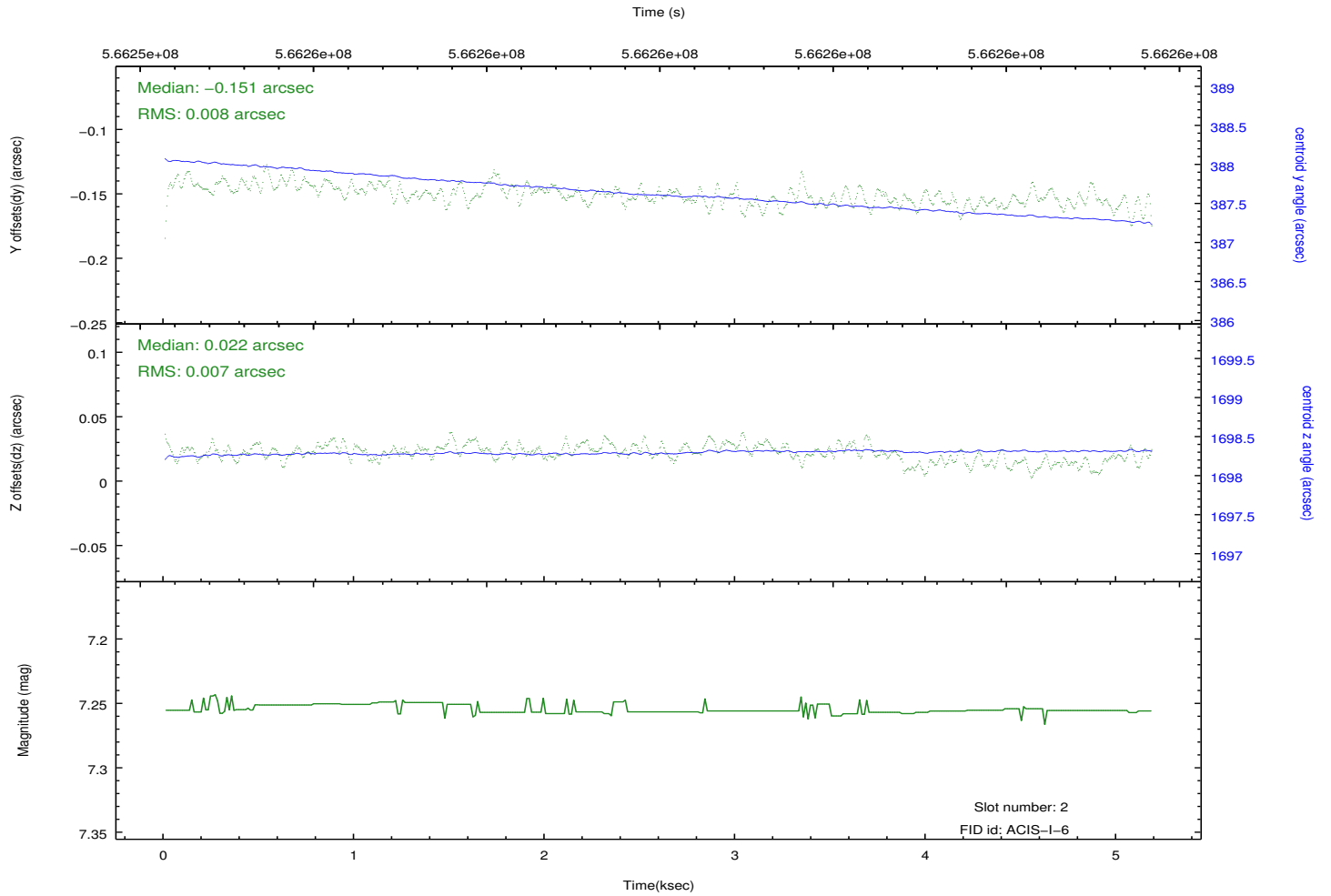
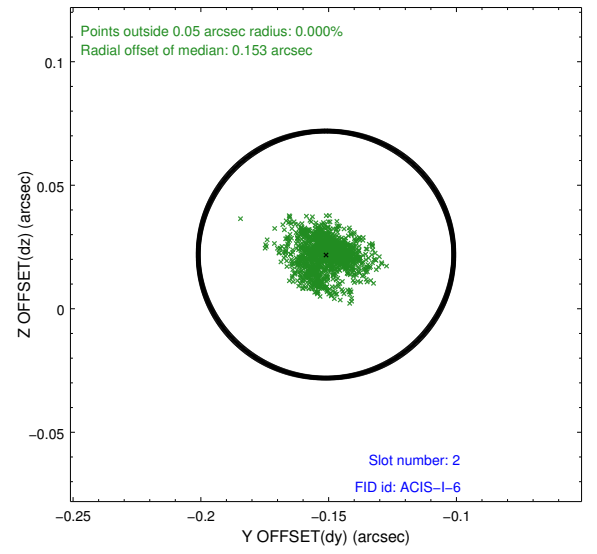
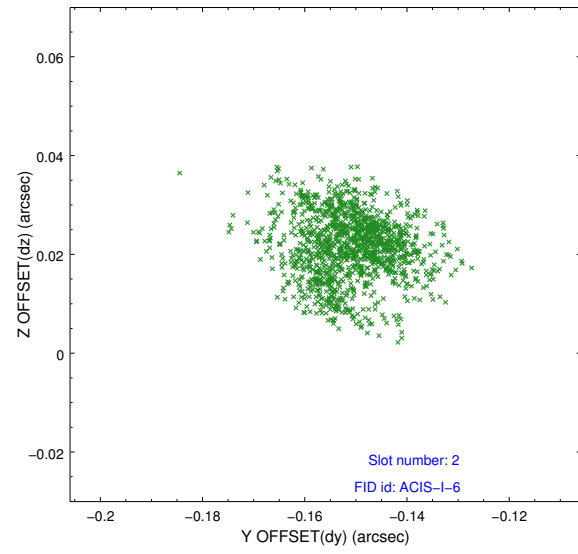
### 2.5.1 Slot 0



## 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)	2015.12.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.766293915391

### A.2 Comments