

# V&V Reference Report

## L2 ASCDS Version : 10.3.1

Observation 16985 - L2 Version 1  
Chandra X-Ray Center

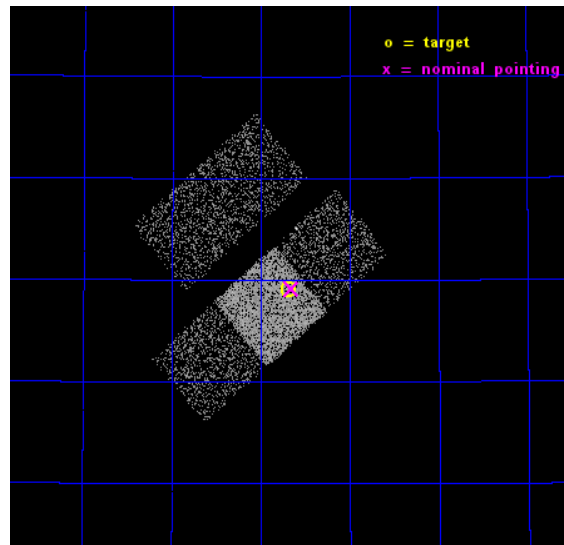
L2 Processing Date : Jan 5 2015

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# 1 Front

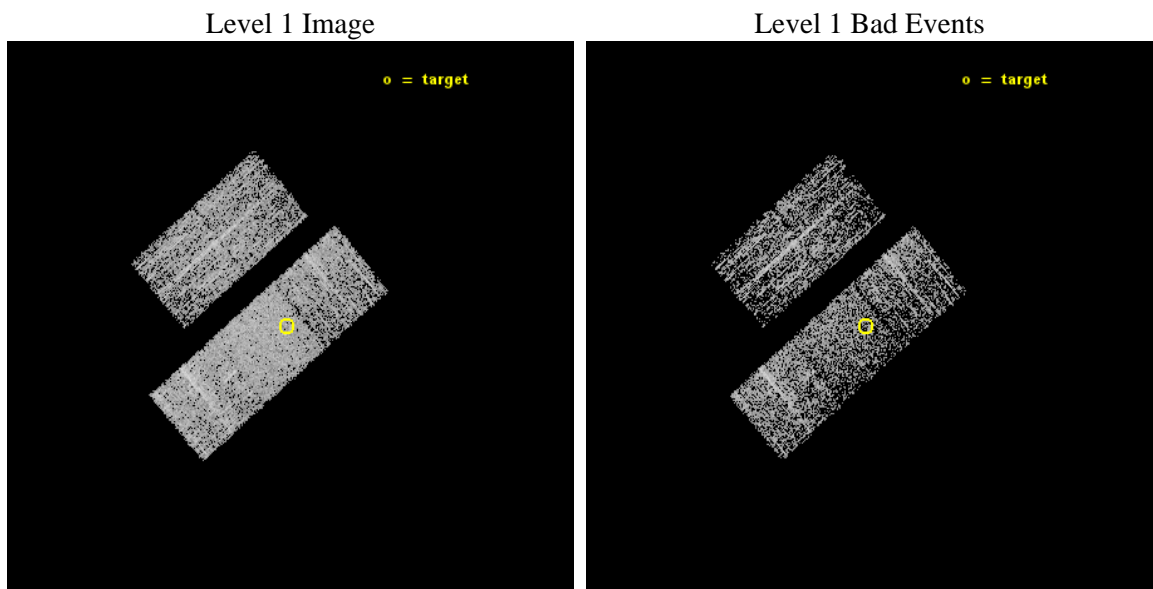
seq_num	601178	Sequence number
obs_id	16985	Observation id
title	Super-massive black holes and nuclear star clusters in late type galaxies	Proposal title
observer	Elena Gallo	Principal investigator
object	UGC4499	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	129.422917	Observer's specified target RA [deg]
dec_targ	51.652361	Observer's specified target Dec [deg]
ra_nom	129.41421222264	Nominal RA [deg]
dec_nom	51.652462331479	Nominal Dec [deg]
roll_nom	139.22991089688	Nominal Roll [deg]
revision	1	Processing version of data
ontime	2452.1000188589	Sum of GTIs [s]
livetime	2420.0615269027	Livetime [s]
ontime2	2452.0064477921	Sum of GTIs [s]
ontime3	2452.0885277987	Sum of GTIs [s]
ontime6	2452.1000188589	Sum of GTIs [s]
ontime7	2452.1000188589	Sum of GTIs [s]
ontime8	2445.7653271556	Sum of GTIs [s]
l2events	11511	Number of level 2 events



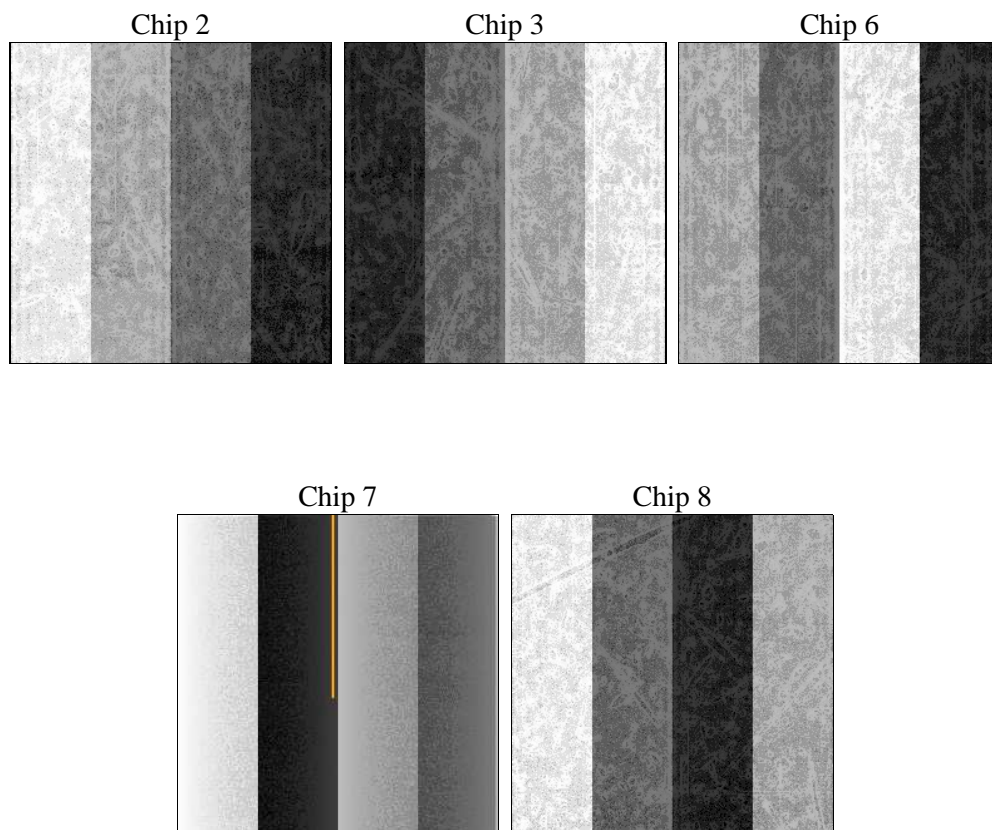
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	2680.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	2452.1000188589	Sum of GTIs [s]
caldsver	4.6.5	&#160	ontime2	2452.0064477921	Sum of GTIs [s]
date	2015-01-06T04:29:45	Date and time of file creation	ontime3	2452.0885277987	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	2452.1000188589	Sum of GTIs [s]
			ontime7	2452.1000188589	Sum of GTIs [s]
			ontime8	2445.7653271556	Sum of GTIs [s]
			l1events	68080	Number of level 1 events

### 2.1.4 Events

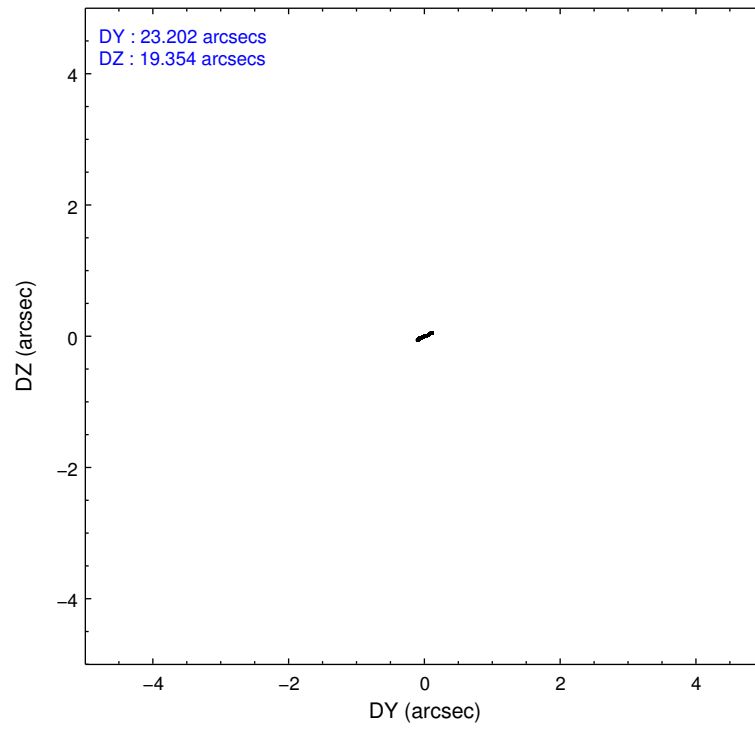
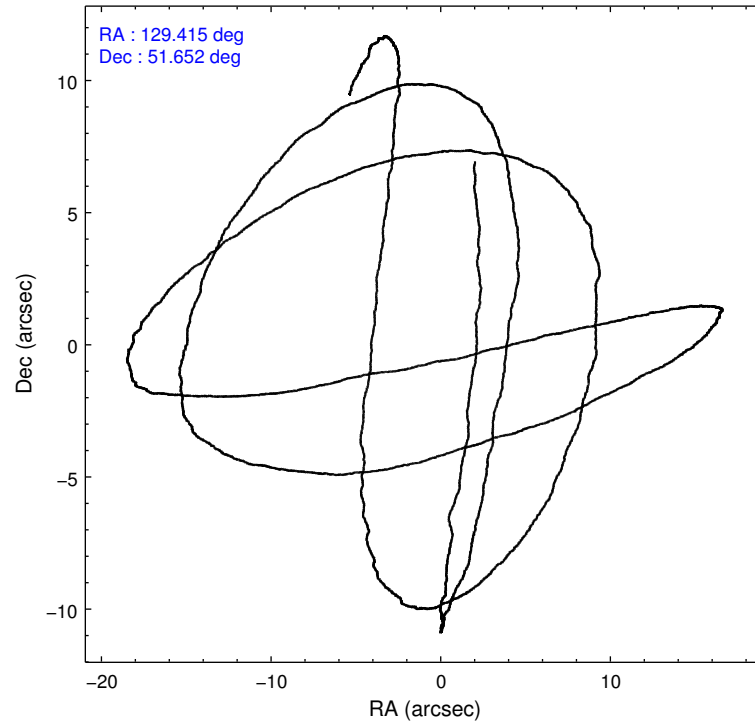
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	10968	12331	11961	16138	16682
rejected events	9610	11067	10435	9356	12879
rejected %	87%	89%	87%	57%	77%

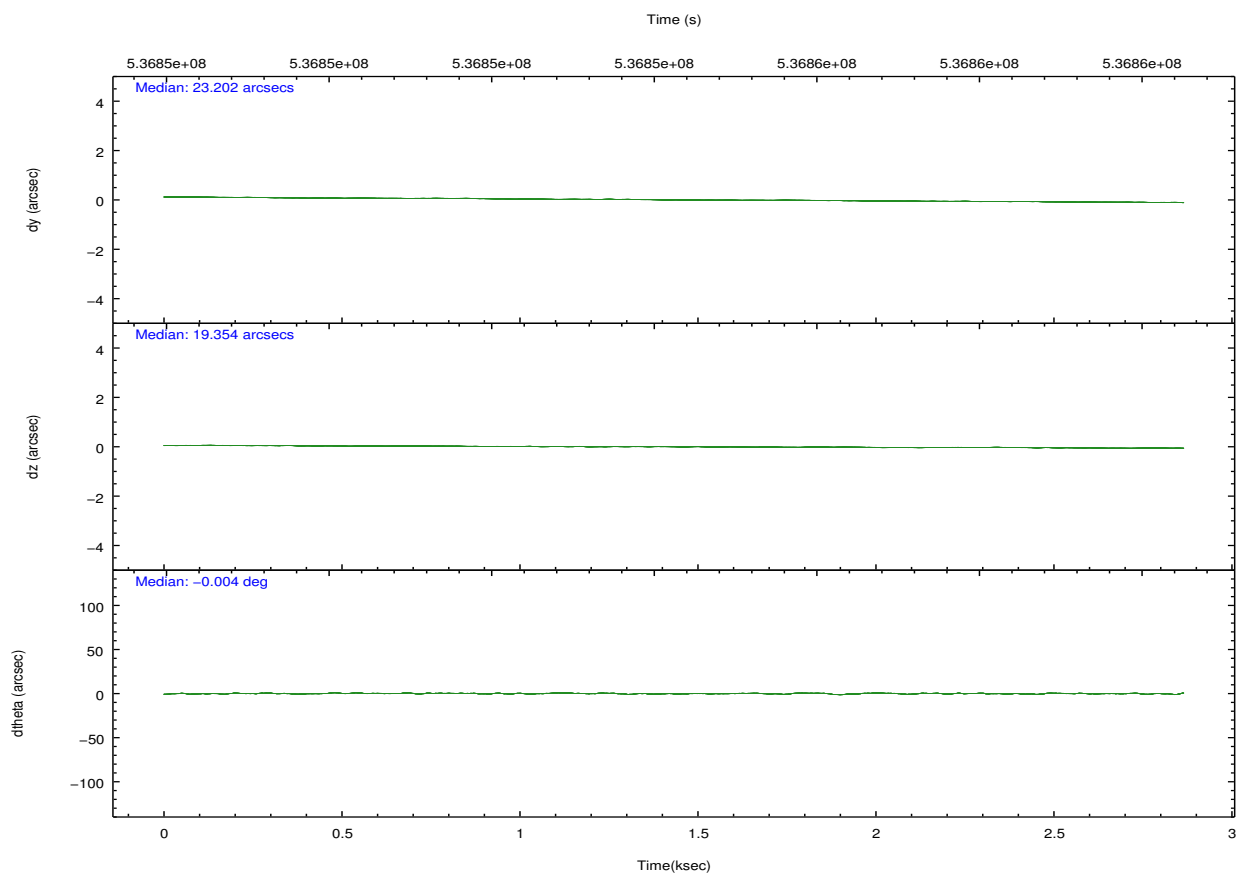
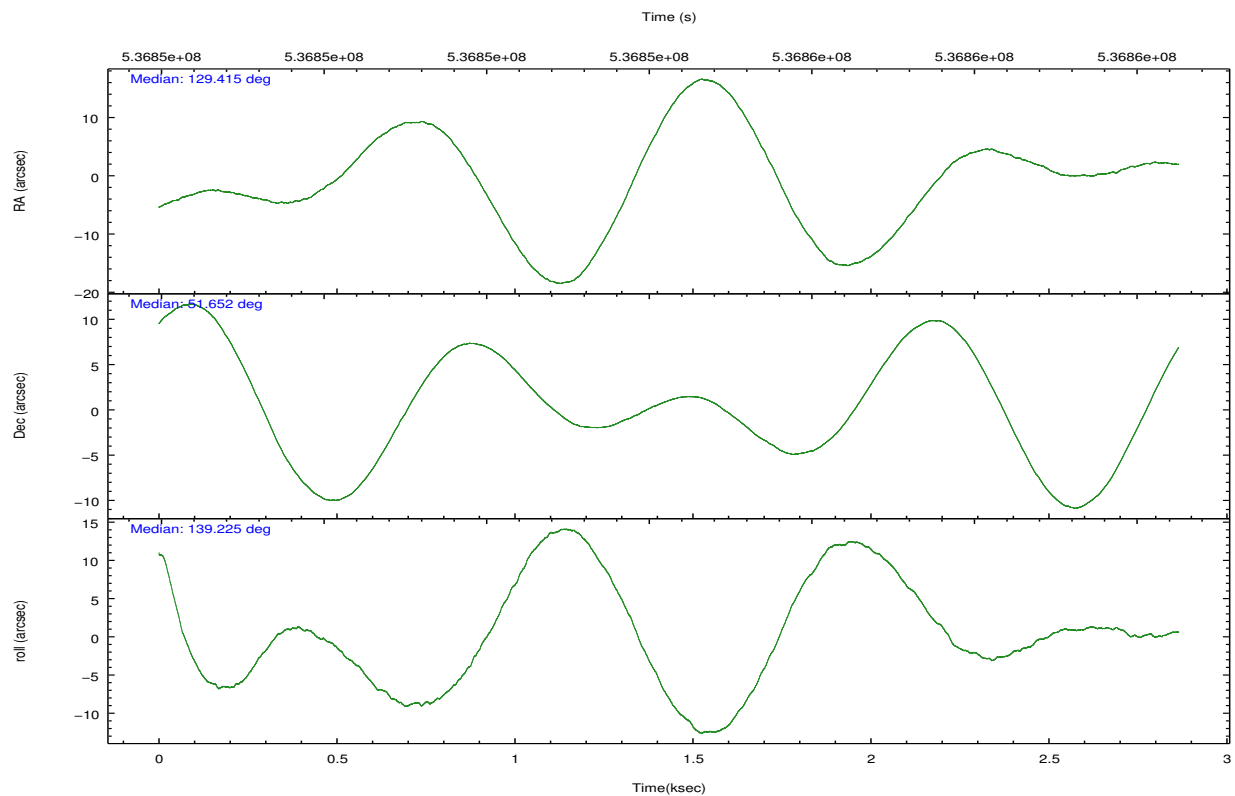
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	510	455	521	524	955
	4%	3%	4%	3%	5%
grade 1 events	4	8	4	16	13
	0%	0%	0%	0%	0%
grade 2 events	292	263	330	1399	991
	2%	2%	2%	8%	5%
grade 3 events	124	104	137	557	391
	1%	0%	1%	3%	2%
grade 4 events	152	138	160	538	358
	1%	1%	1%	3%	2%
grade 5 events	475	632	598	1583	822
	4%	5%	4%	9%	4%
grade 6 events	281	304	378	3772	1114
	2%	2%	3%	23%	6%
grade 7 events	9130	10427	9833	7749	12038
	83%	84%	82%	48%	72%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23678	ACIS-23678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	129.457713	129.4142122226445	CCD I2 on	O2	Y
[deg] Pointing Dec	51.647756	51.65246233147899	CCD I3 on	O1	Y
[deg] Pointing Roll	139.039157	139.229910896883	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	536853304.184000	536852774.74899	CCD S5 on	N	N
Observation start date	2015-01-05T13:53:57	2015-01-05T13:46:14	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	536855984.184000	536856917.28673	On-chip summing requested	N	N
Observation end date	2015-01-05T14:38:37	2015-01-05T14:55:17	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





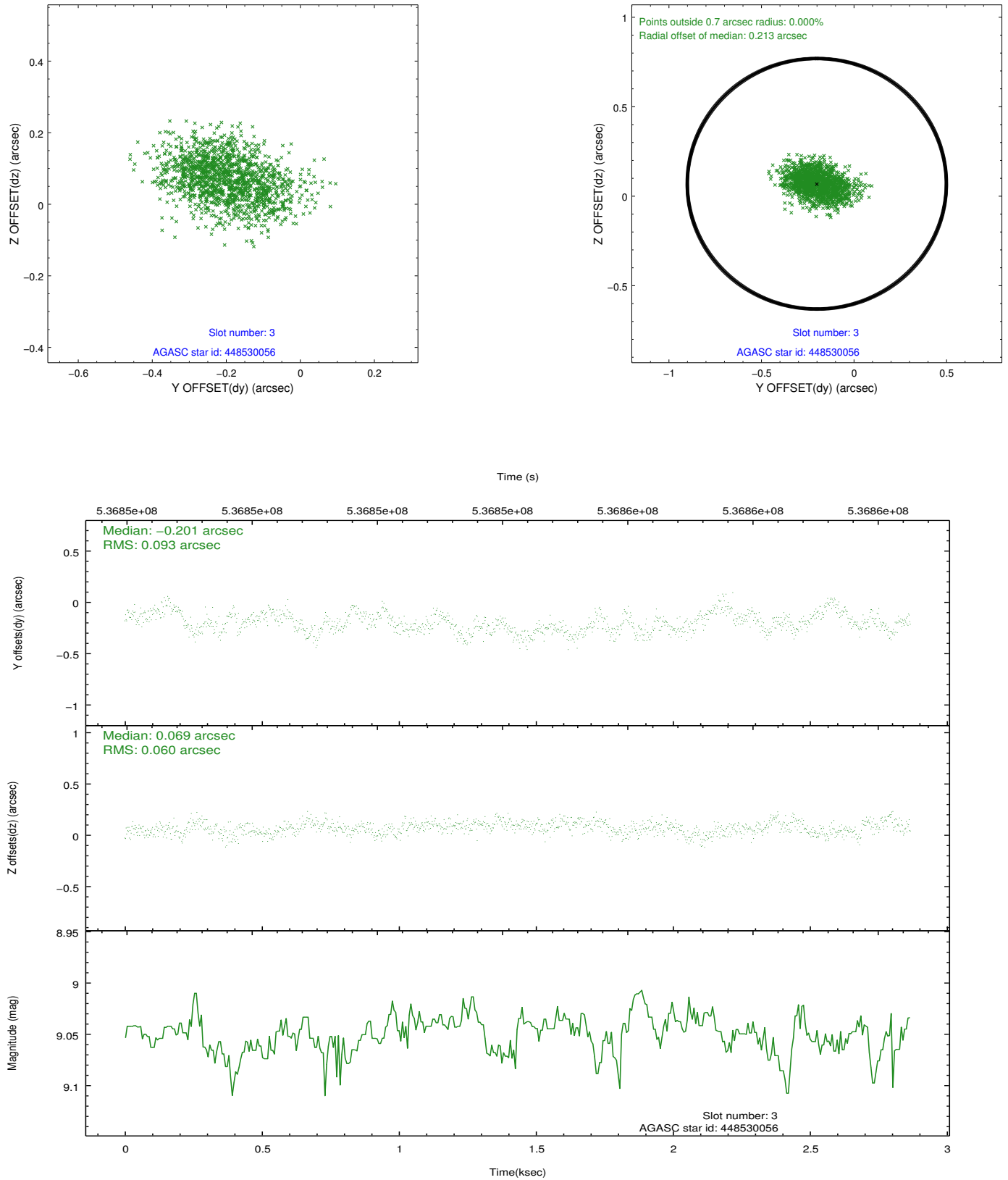
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.12	699	-0.148	-0.092	0.007	0.011	0.000000	0.000000	-776.56	-1740.88
1	FID		ACIS-S-4	7.22	699	0.361	0.096	0.006	0.012	0.000000	0.000000	2136.20	165.43
2	FID		ACIS-S-5	7.22	699	-0.245	0.005	0.007	0.011	0.000000	0.000000	-1826.63	161.60
3	GUIDE	used	448530056	9.05	1398	-0.201	0.069	0.117	0.194	129.061289	52.184713	1930.06	-887.64
4	GUIDE	used	448532080	7.65	1399	0.074	-0.046	0.092	0.136	129.430742	52.030831	950.48	-1001.58
5	GUIDE	used	448533432	7.49	1399	0.242	0.088	0.074	0.122	130.093932	51.751815	-820.81	-1216.91
6	GUIDE	used	448533536	8.98	1397	-0.175	-0.276	0.115	0.181	128.275990	51.410117	1456.72	2368.40
7	GUIDE	used	448535496	6.80	1398	0.059	0.161	0.086	0.136	130.179057	51.430747	-1727.05	-475.92

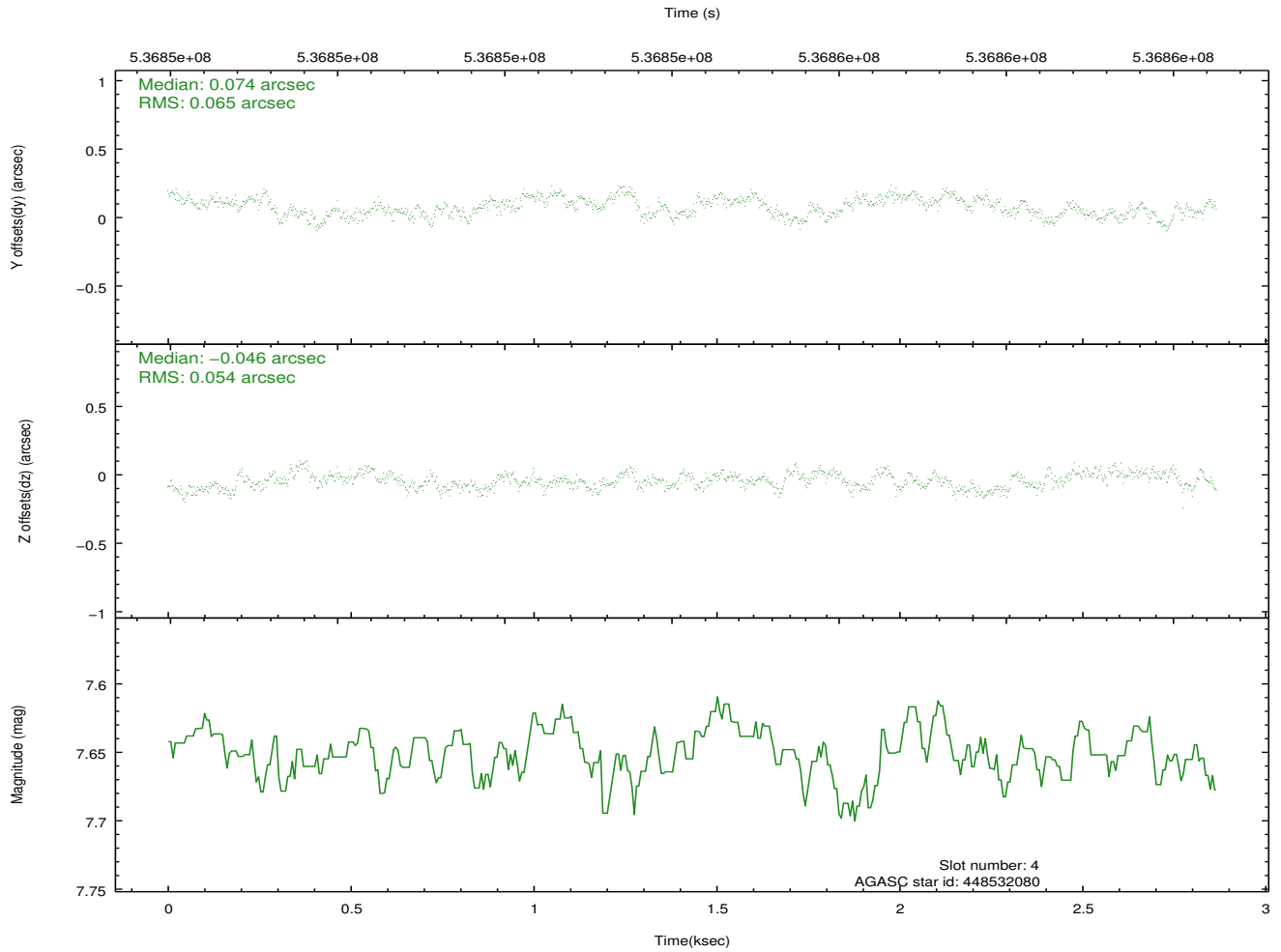
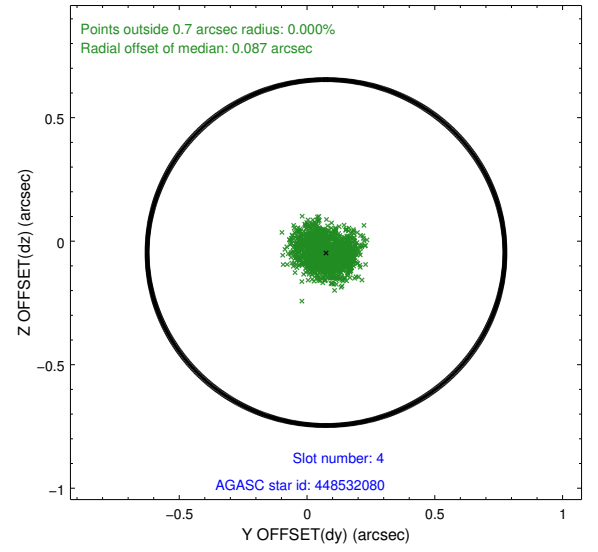
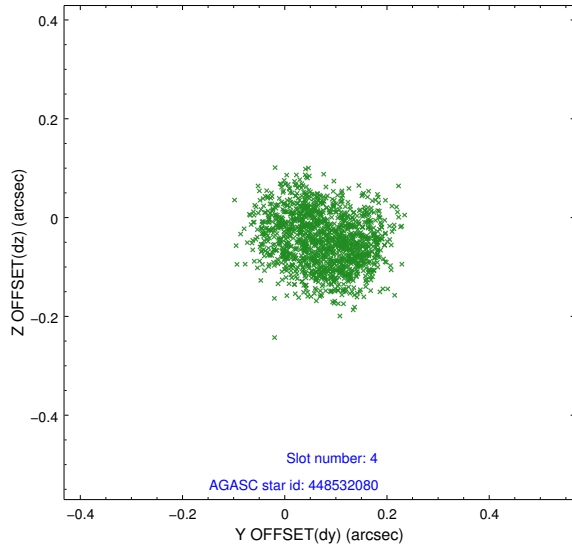


## 2.4 Star Slots

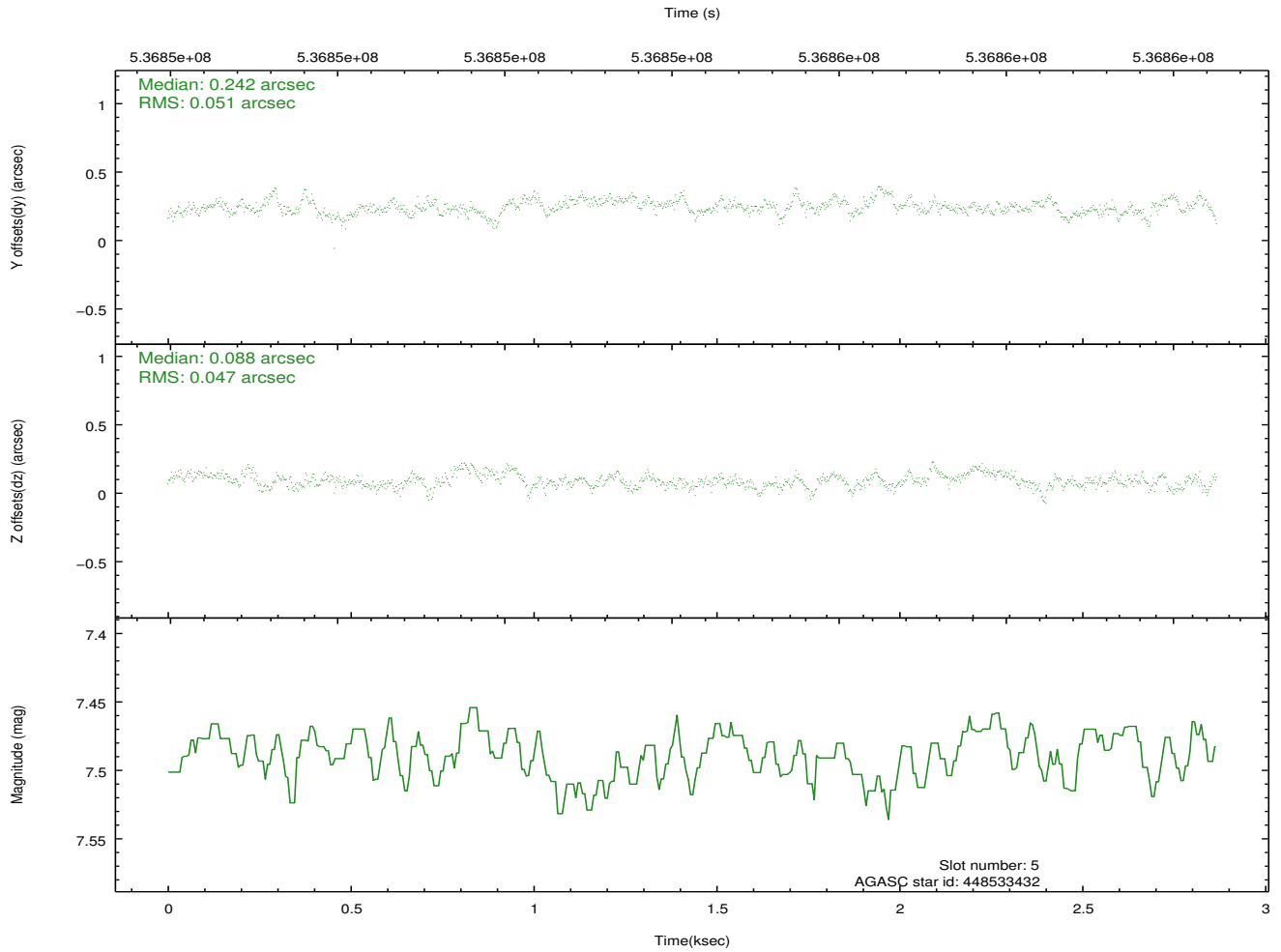
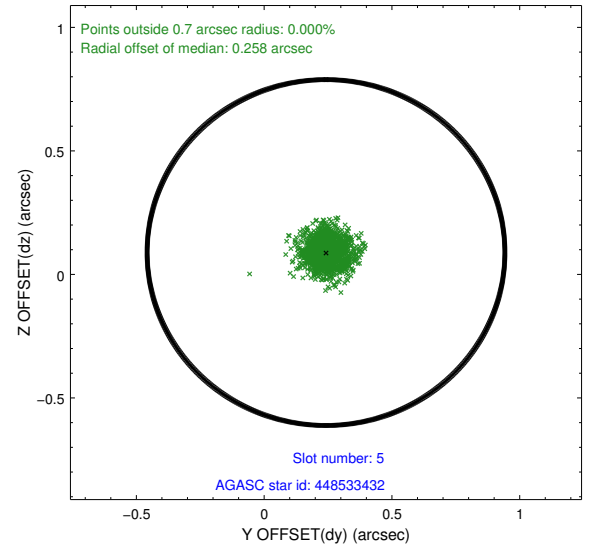
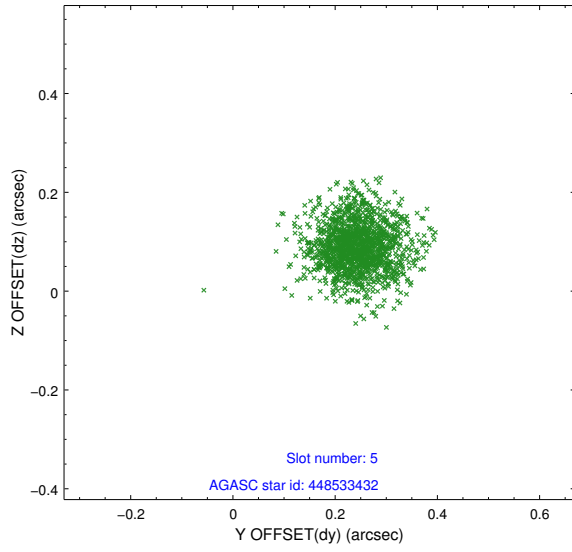
### 2.4.1 Slot 3



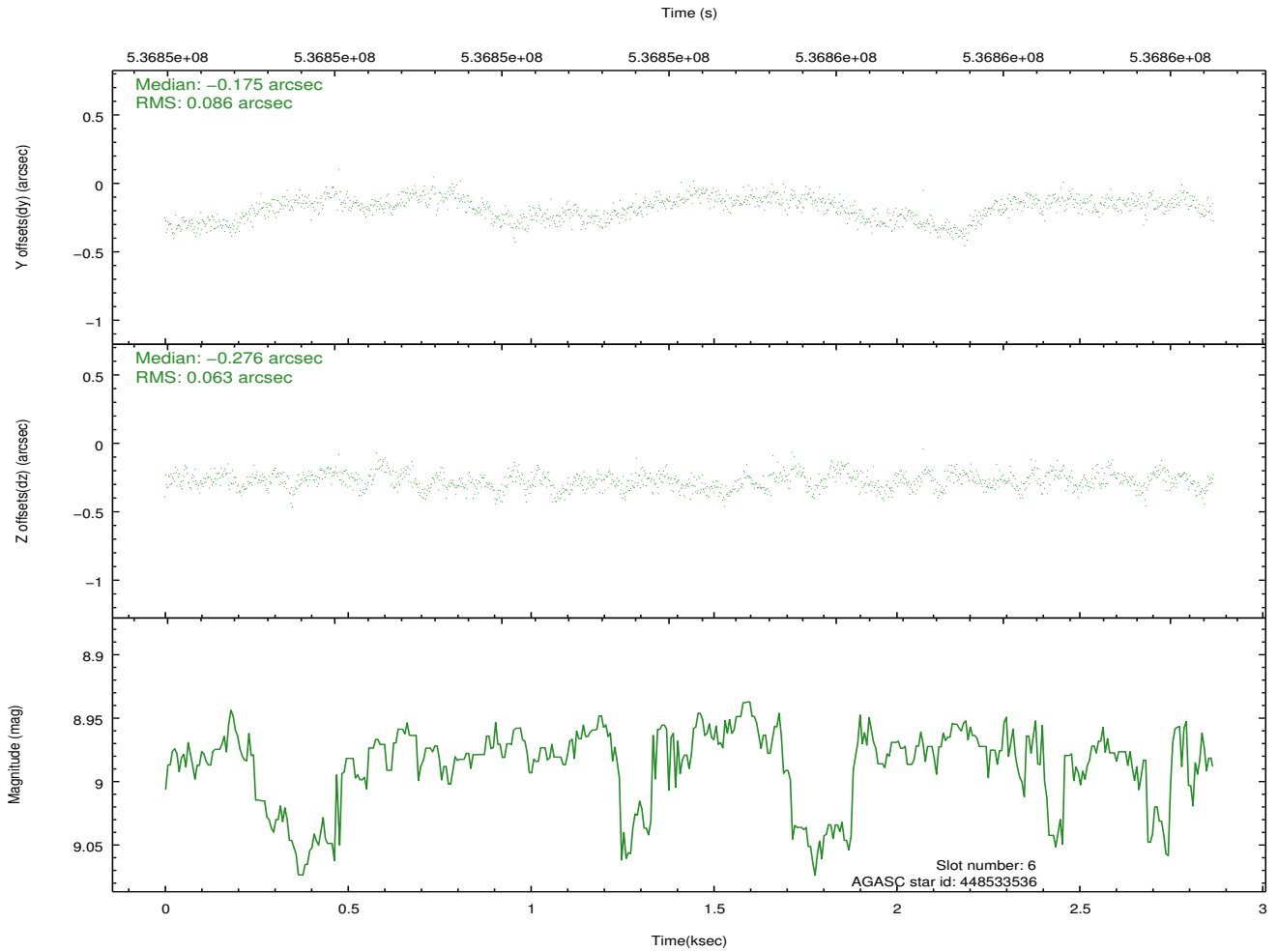
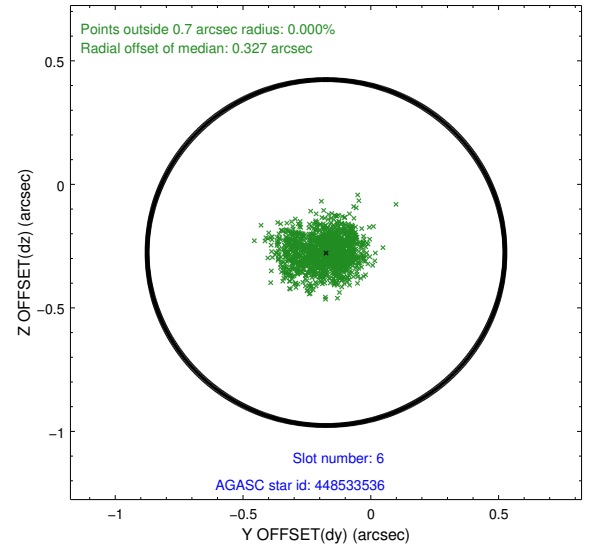
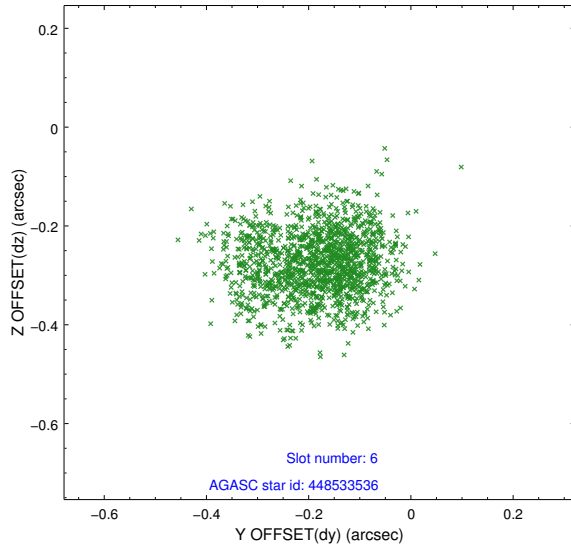
## 2.4.2 Slot 4



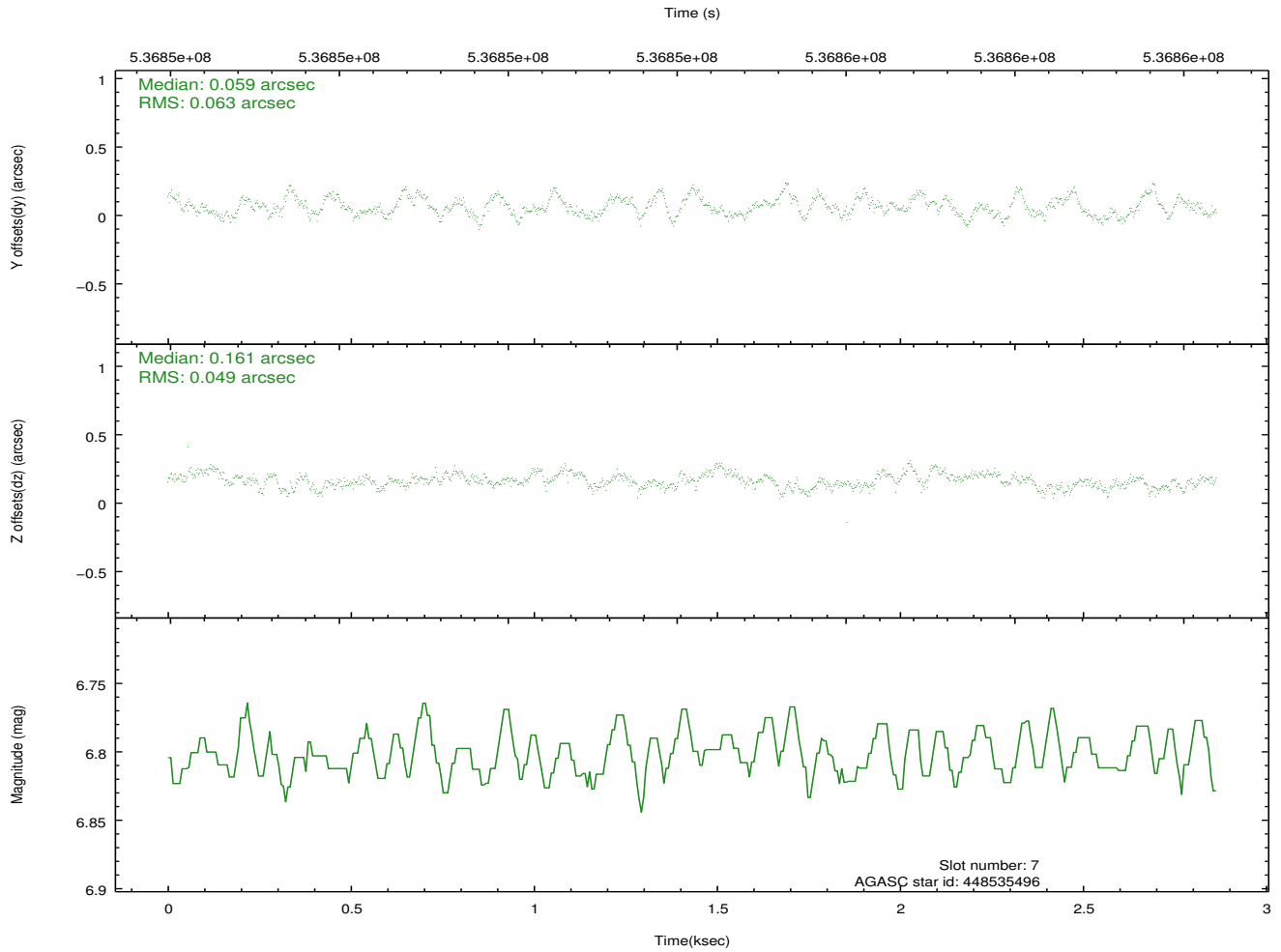
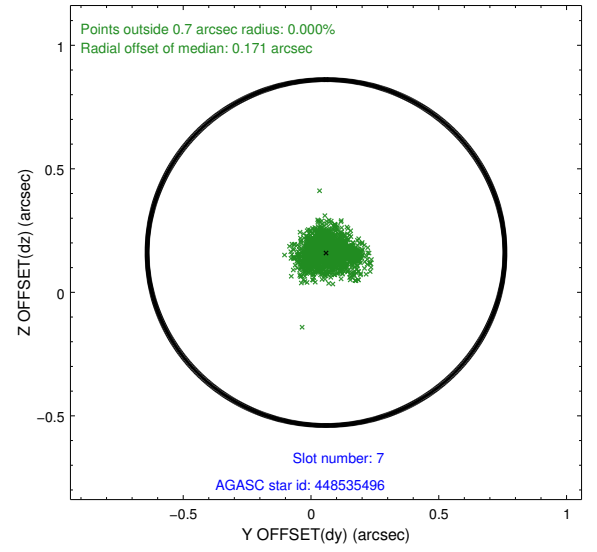
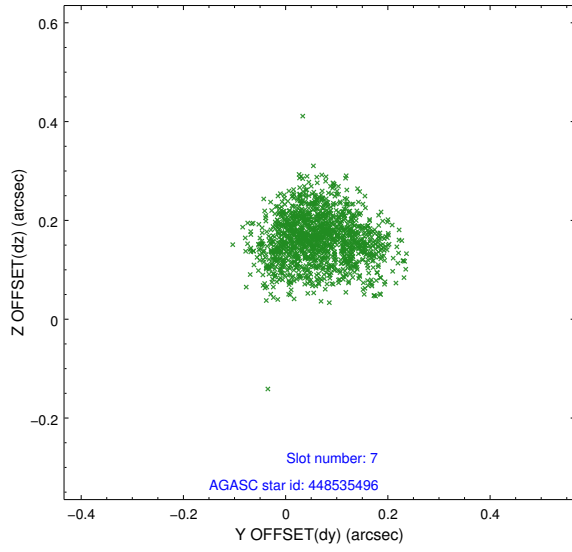
### 2.4.3 Slot 5



## 2.4.4 Slot 6

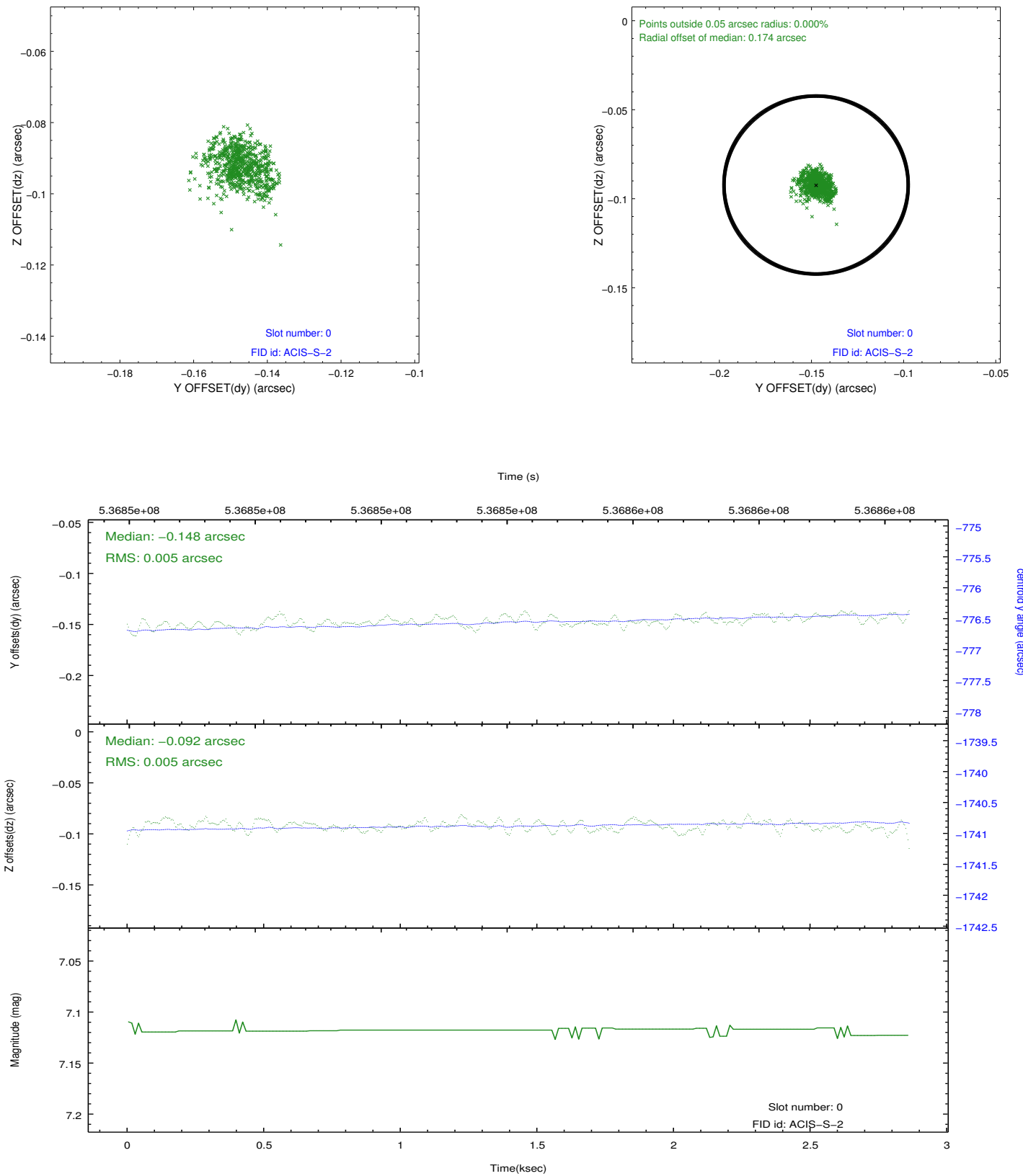


## 2.4.5 Slot 7

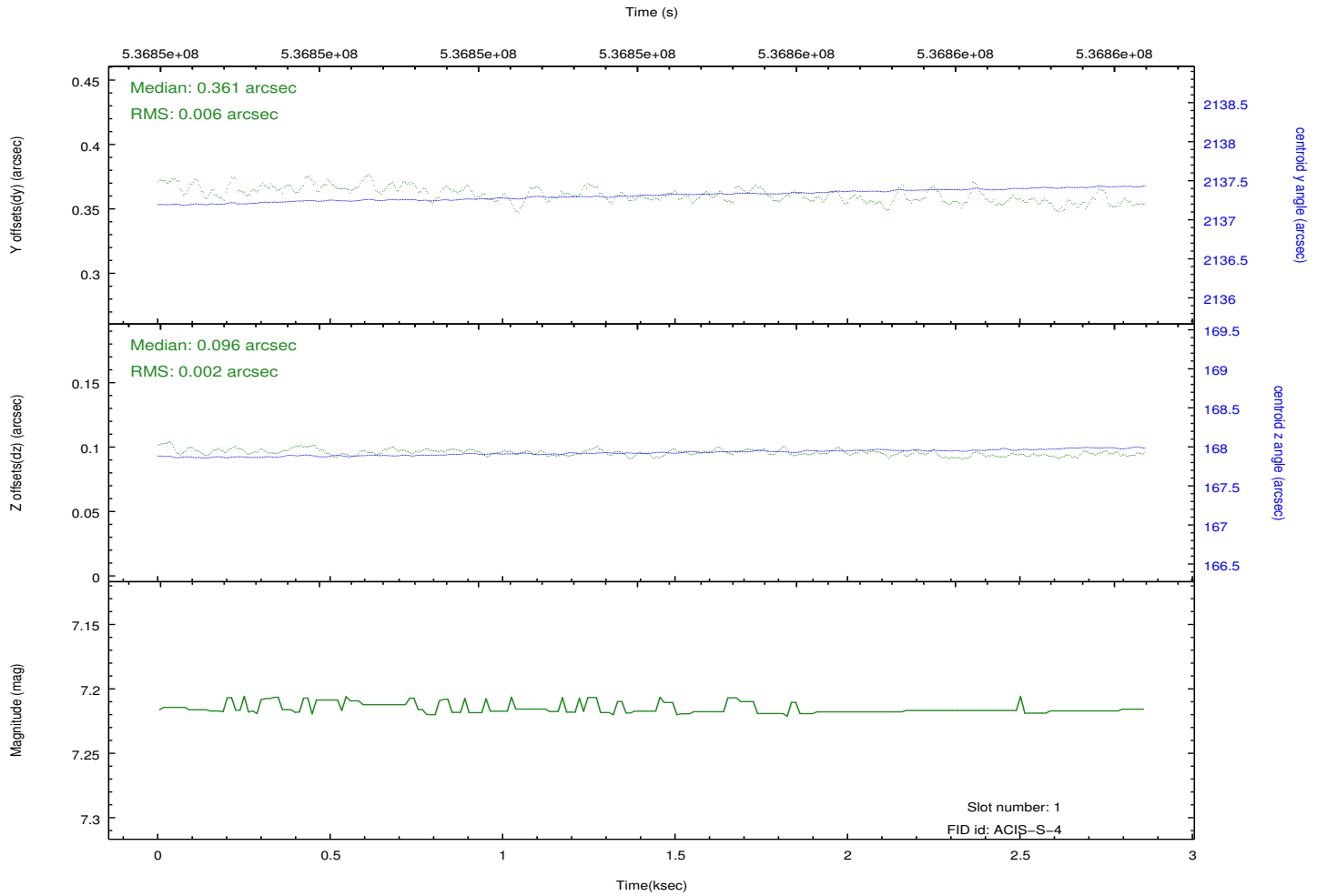
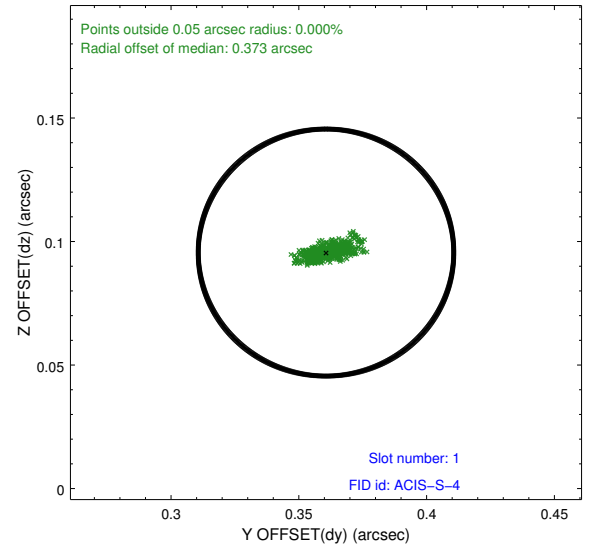
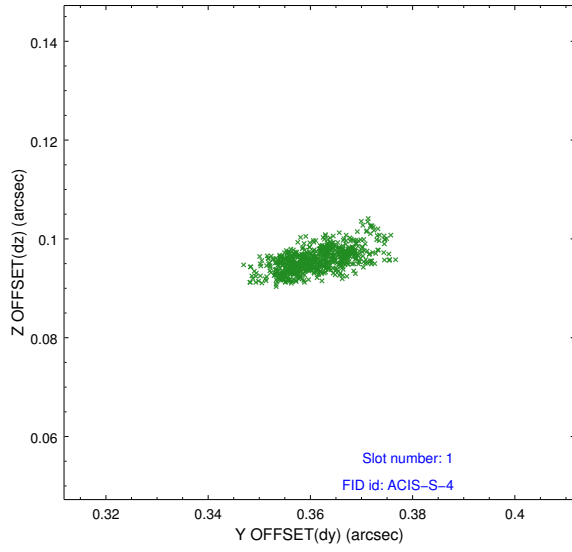


## 2.5 FID Slots

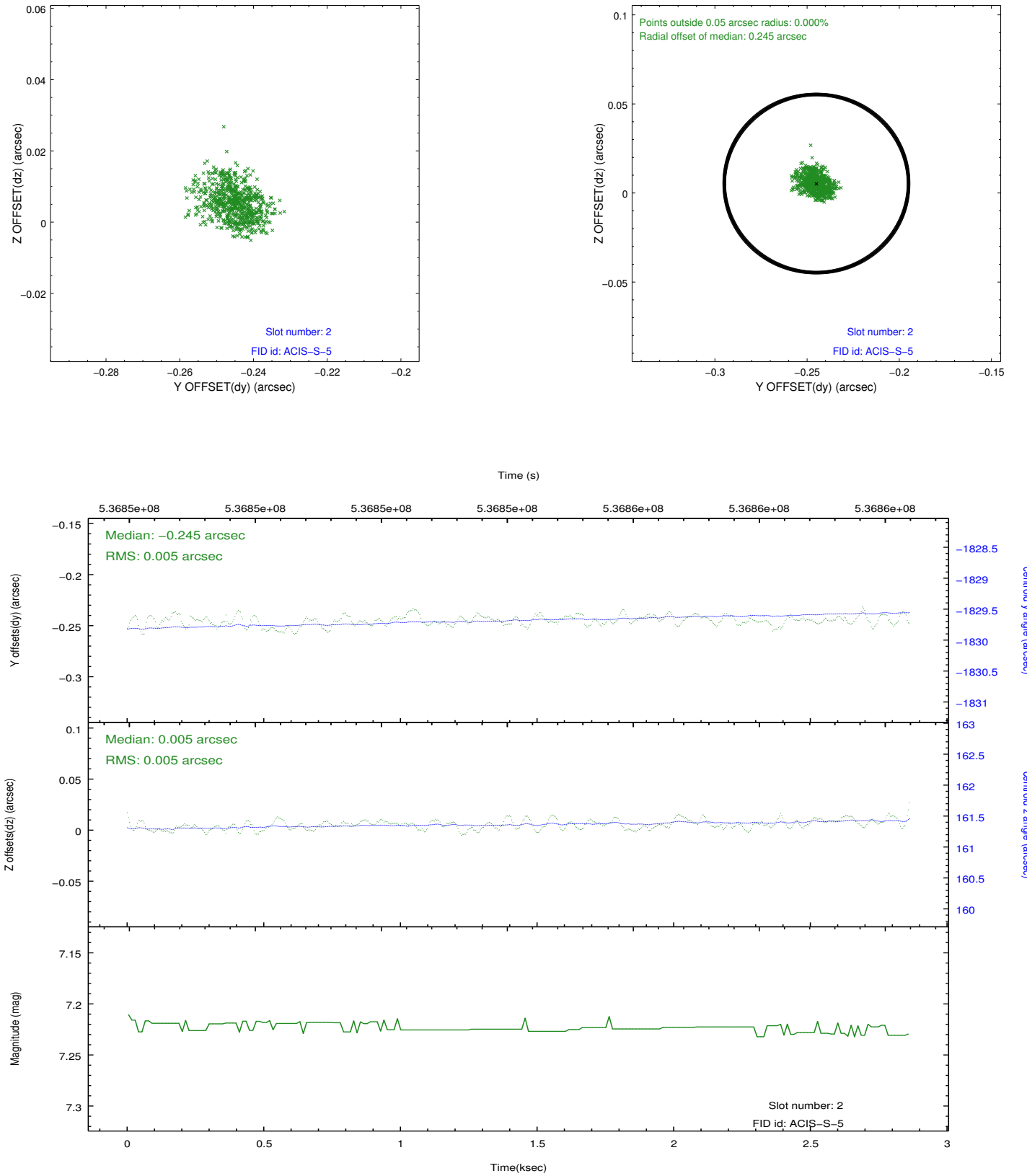
### 2.5.1 Slot 0



## 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)	2015.01.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	2.4521000188589

### A.2 Comments