

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 4689 - L2 Version 3  
Chandra X-Ray Center

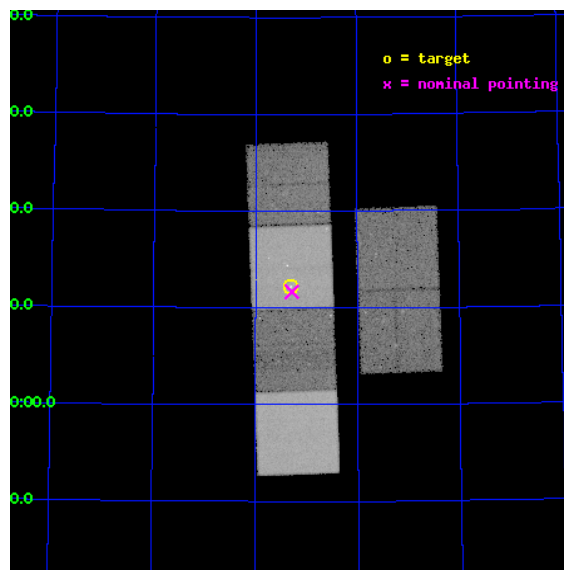
L2 Processing Date : Dec 1 2012

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>A</b>	<b>Summary</b>	<b>17</b>
A.1	Status . . . . .	17
A.2	Comments . . . . .	17

# 1 Front

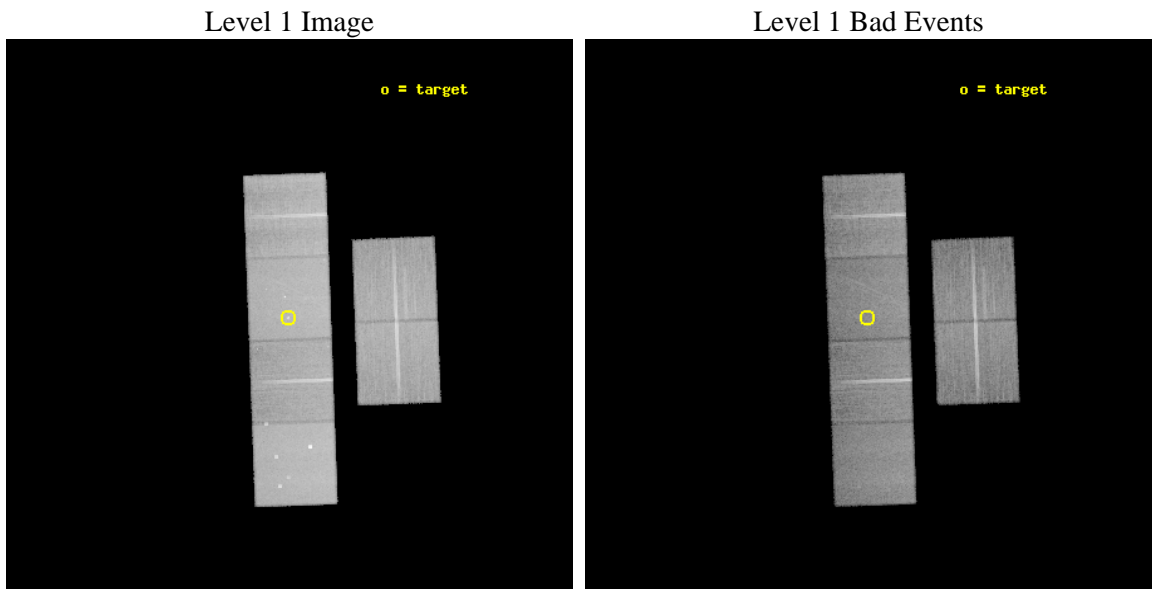
seq_num	600344	Sequence number
obs_id	4689	Observation id
title	X-ray Census of Supermassive Black Holes: I. New Observations	Prop
observer	Dr. Michael Loewenstein	Principal investigator
object	NGC 2787	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	139.8275	Observer's specified target RA [deg]
dec_targ	69.203333	Observer's specified target Dec [deg]
ra_nom	139.82178208907	Nominal RA [deg]
dec_nom	69.194377652497	Nominal Dec [deg]
roll_nom	267.90087310007	Nominal Roll [deg]
revision	3	Processing version of data
ontime	31241.599883616	Sum of GTIs [s]
livetime	30845.999934457	Livetime [s]
ontime2	31228.635992587	Sum of GTIs [s]
ontime3	31241.599883616	Sum of GTIs [s]
ontime5	31241.599883616	Sum of GTIs [s]
ontime6	31241.599883616	Sum of GTIs [s]
ontime7	31241.599883616	Sum of GTIs [s]
ontime8	31241.599883616	Sum of GTIs [s]
l2events	368215	Number of level 2 events



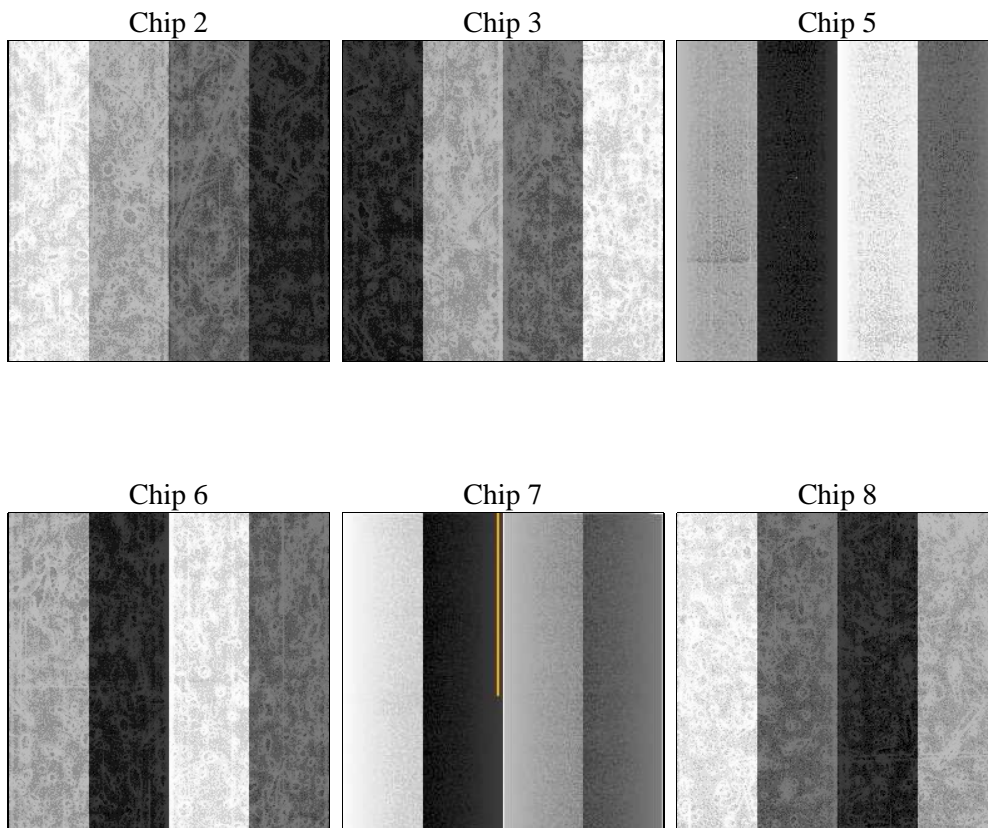
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	31110.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	31241.599883616	Sum of GTIs [s]
caldbver	4.5.2	&#160	ontime2	31228.635992587	Sum of GTIs [s]
date	2012-12-01T09:31:00	Date and time of file creation	ontime3	31241.599883616	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	31241.599883616	Sum of GTIs [s]
			ontime6	31241.599883616	Sum of GTIs [s]
			ontime7	31241.599883616	Sum of GTIs [s]
			ontime8	31241.599883616	Sum of GTIs [s]
			l1events	1655361	Number of level 1 events

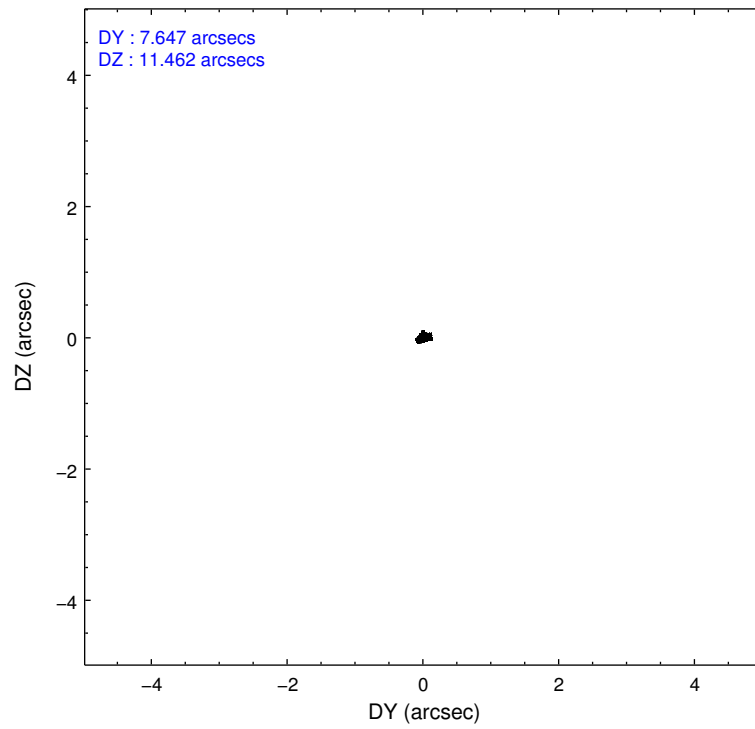
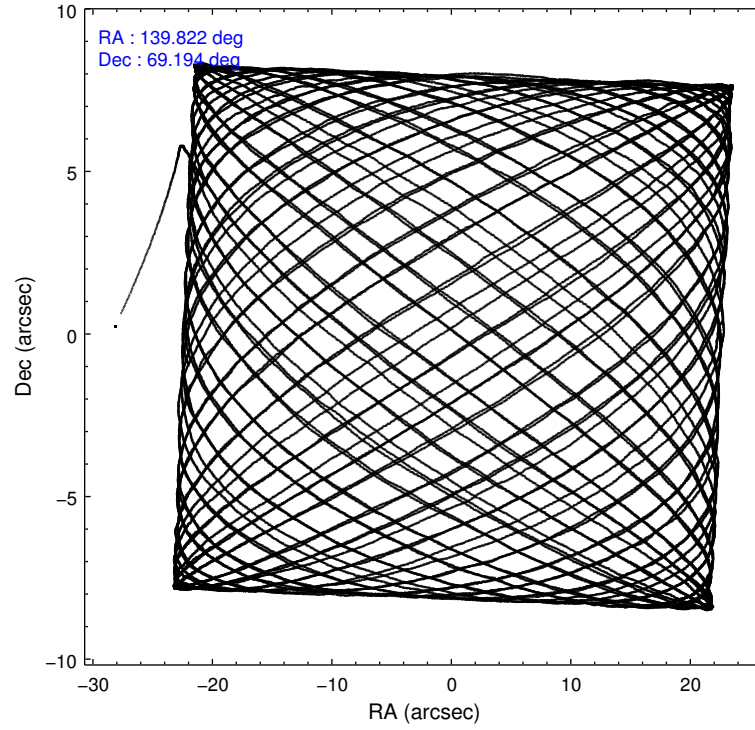
### 2.1.4 Events

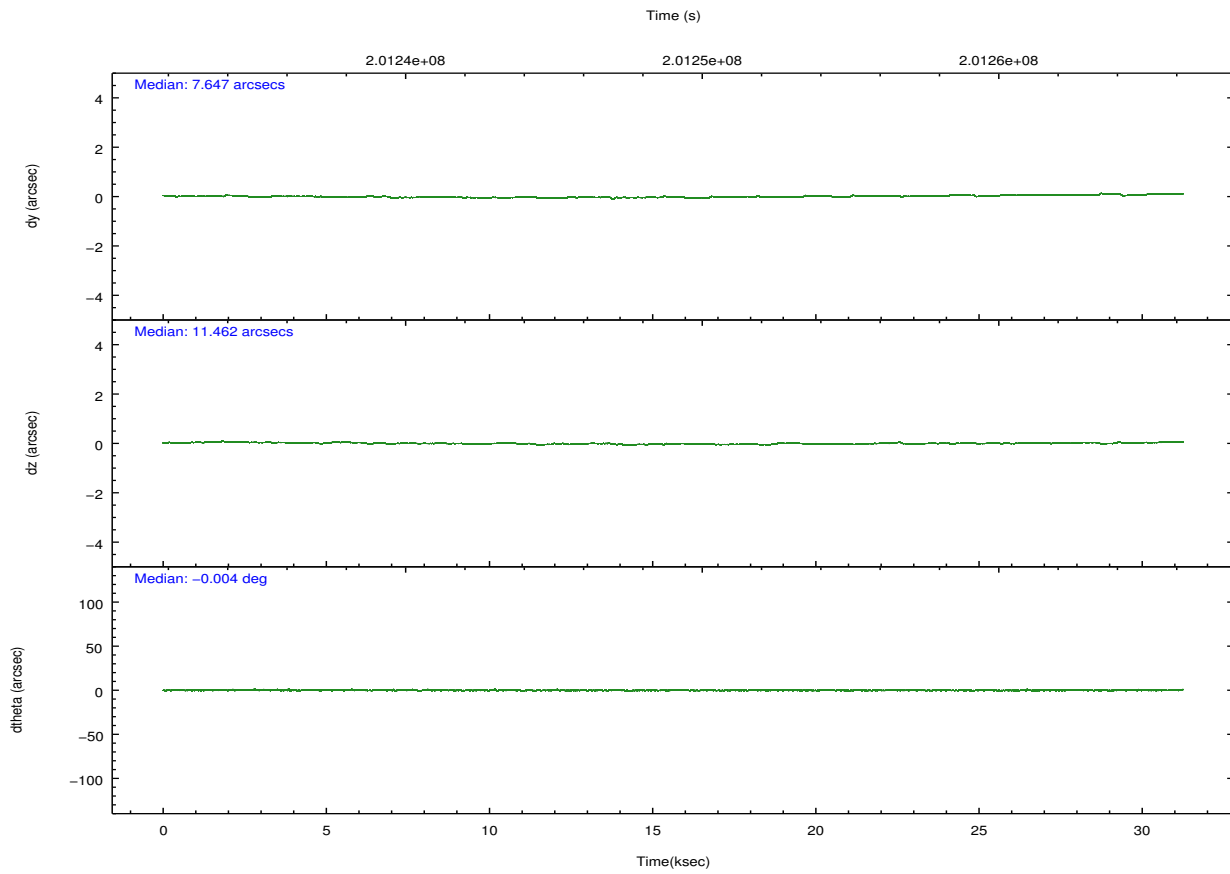
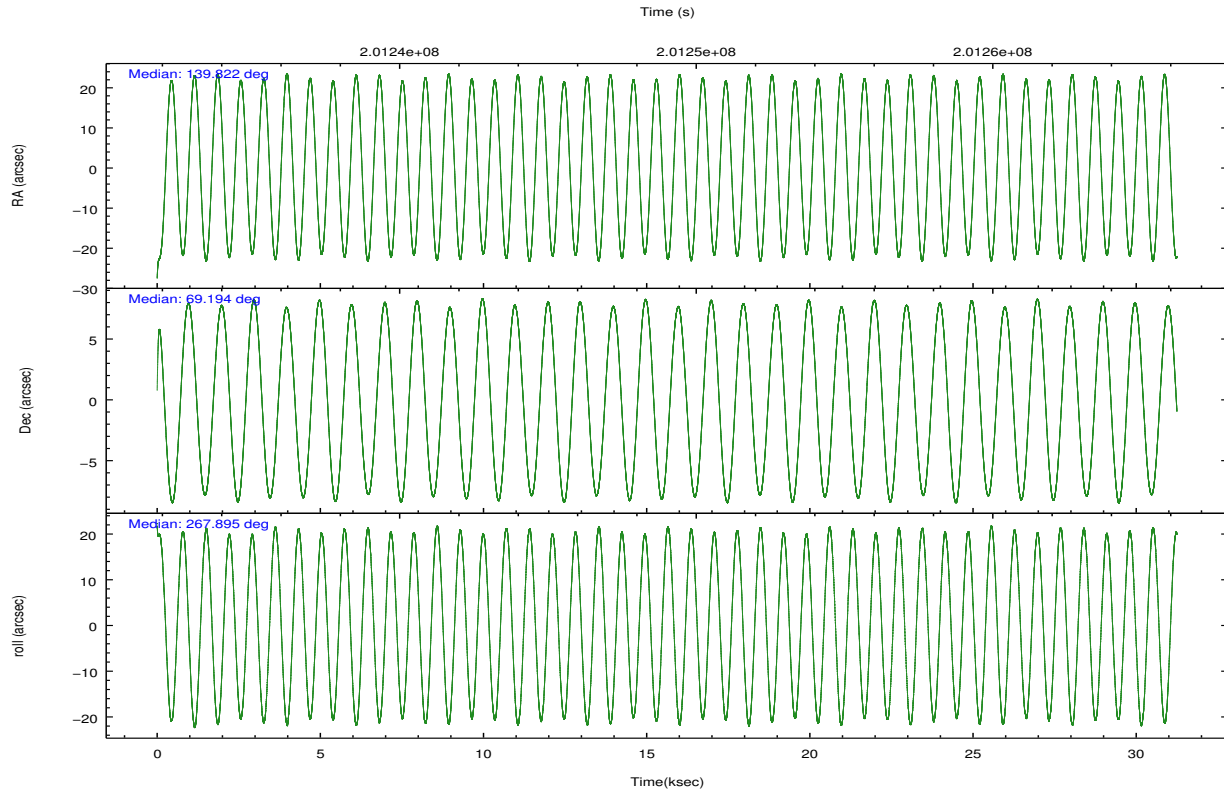
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	237254	228100	348450	233803	316792	290962	grade 0 events	12328	11503	18771	11270	12069	19232
rejected events	210153	202143	190393	206267	188119	230754		5%	5%	5%	4%	3%	6%
rejected %	88%	88%	54%	88%	59%	79%	grade 1 events	154	136	424	109	331	216
								0%	0%	0%	0%	0%	0%
							grade 2 events	5554	4979	46568	5699	25888	13554
								2%	2%	13%	2%	8%	4%
							grade 3 events	2564	2697	6176	2765	11617	6286
								1%	1%	1%	1%	3%	2%
							grade 4 events	2650	2555	5932	2700	11525	6071
								1%	1%	1%	1%	3%	2%
							grade 5 events	9085	10151	25426	10622	29982	13804
								3%	4%	7%	4%	9%	4%
							grade 6 events	4503	4725	83816	5594	70038	16144
								1%	2%	24%	2%	22%	5%
							grade 7 events	200416	191354	161337	195044	155342	215655
								84%	83%	46%	83%	49%	74%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	139.784989	139.8217820890704	Subarray requested	NONE	NONE
[deg] Pointing Dec	69.218270	69.19437765249688	Alternating exposures requested	N	N
[deg] Pointing Roll	267.778648	267.9008731000659	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	201233529.184000	201232184.0336			
Observation start date	2004-05-18T02:11:05	2004-05-18T01:49:44			
[s] Observation end time (MET)	201264639.184000	201265404.28507			
Observation end date	2004-05-18T10:49:35	2004-05-18T11:03:24			
Read mode	TIMED	TIMED			

## 2.3 Aspect



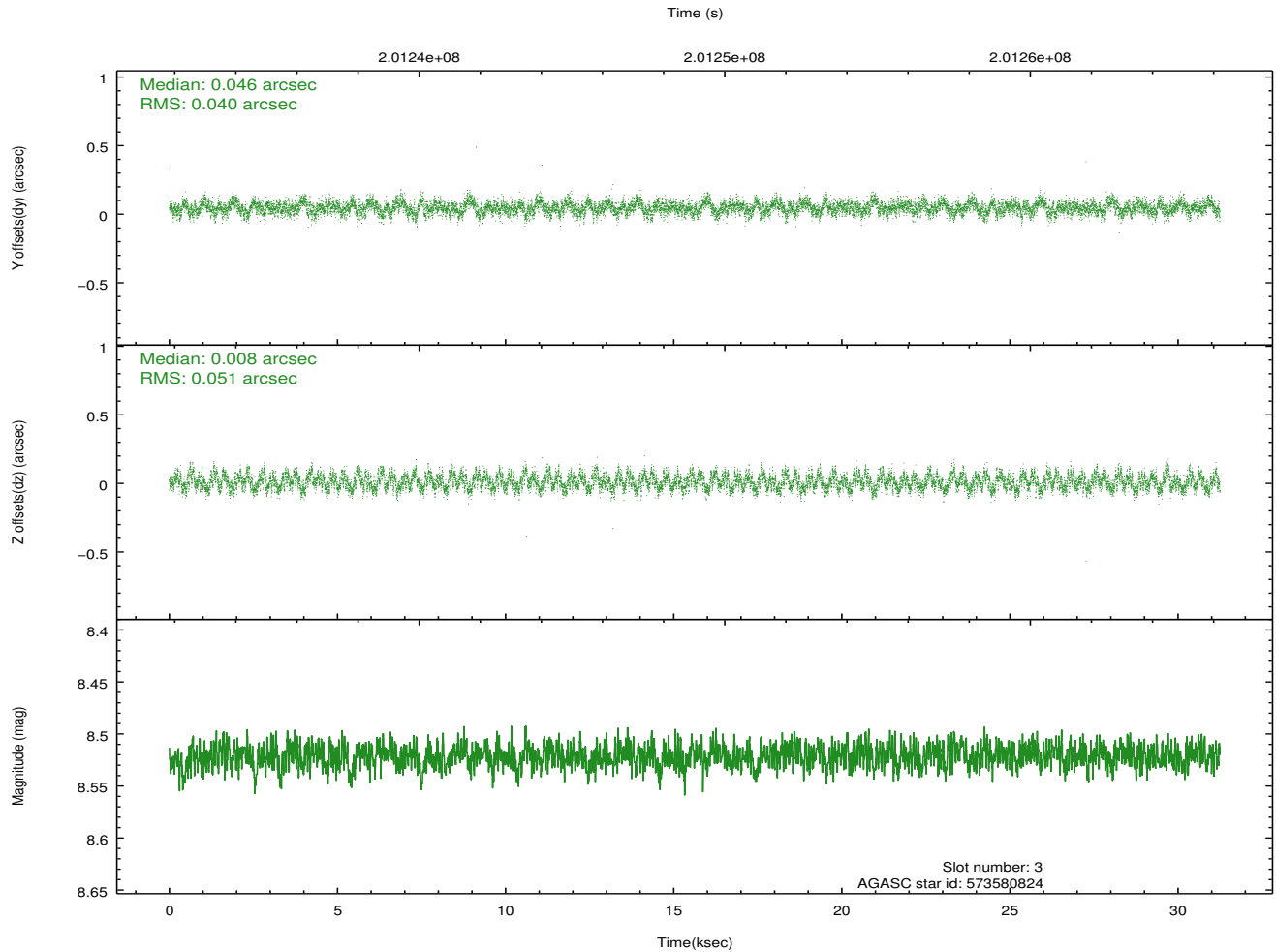
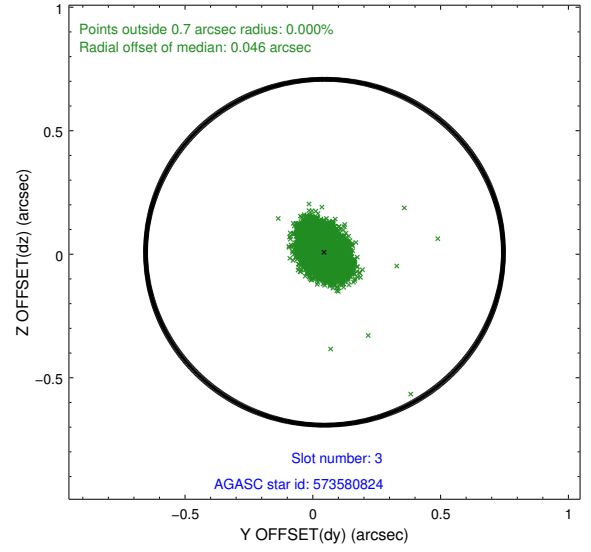
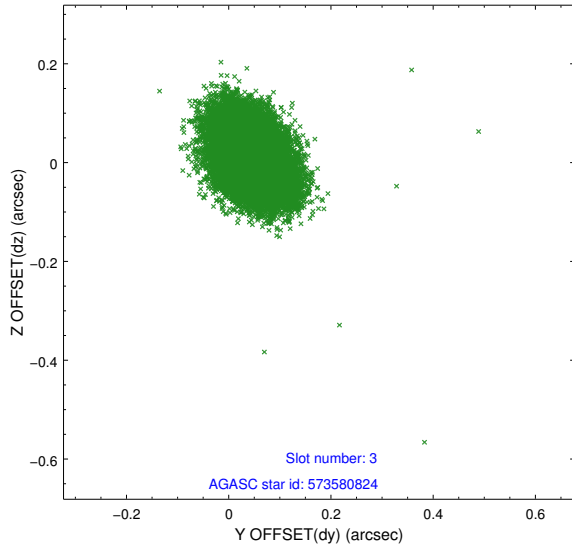


### Slot Statistics

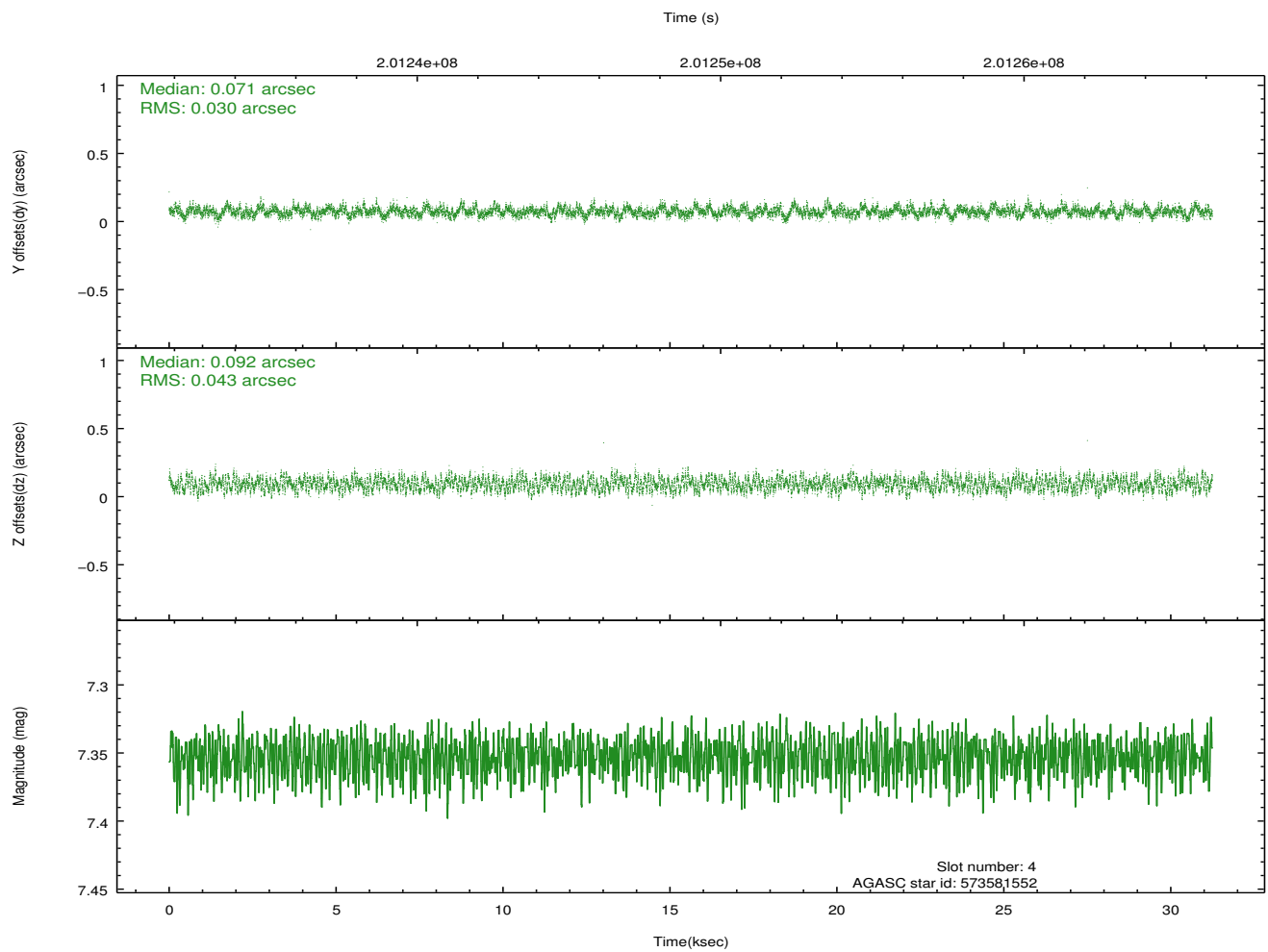
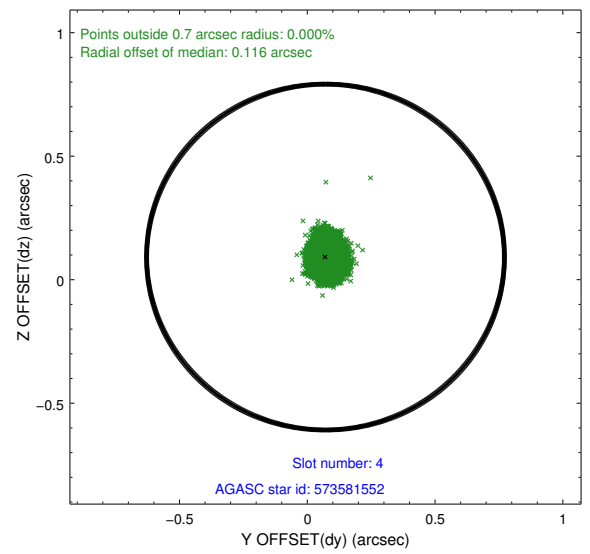
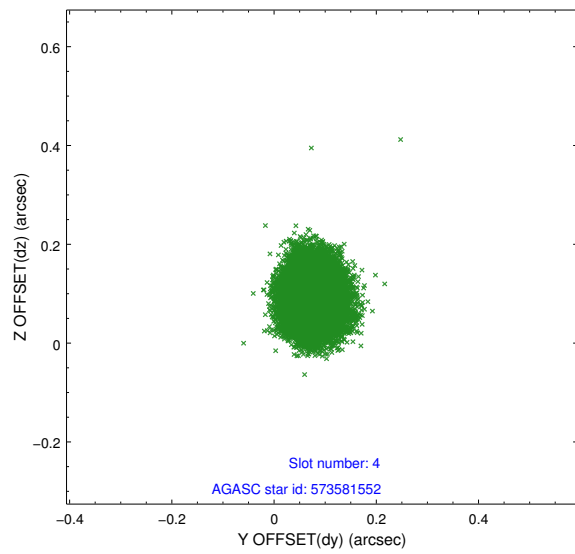
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	7622	-0.026	-0.012	0.007	0.012	0.000000	0.000000	-760.43	-1732.71
1	FID	ACIS-S-4	7.20	7622	0.068	0.016	0.006	0.011	0.000000	0.000000	2152.89	175.75
2	FID	ACIS-S-5	7.23	7620	-0.073	0.005	0.007	0.012	0.000000	0.000000	-1813.26	169.45
3	GUIDE	573580824	8.52	15240	0.046	0.008	0.069	0.111	139.317201	69.093462	470.43	-582.84
4	GUIDE	573581552	7.35	15244	0.071	0.092	0.057	0.087	141.027156	68.861240	1205.83	1660.99
5	GUIDE	573582400	8.52	15241	0.055	-0.018	0.073	0.121	137.975421	69.043191	686.46	-2304.48
6	GUIDE	573583888	8.07	15236	-0.032	-0.060	0.060	0.094	138.092051	69.084957	534.54	-2156.05
7	GUIDE	573576200	6.96	15240	-0.143	-0.019	0.048	0.073	139.379850	69.873523	-2339.05	-593.16

## 2.4 Star Slots

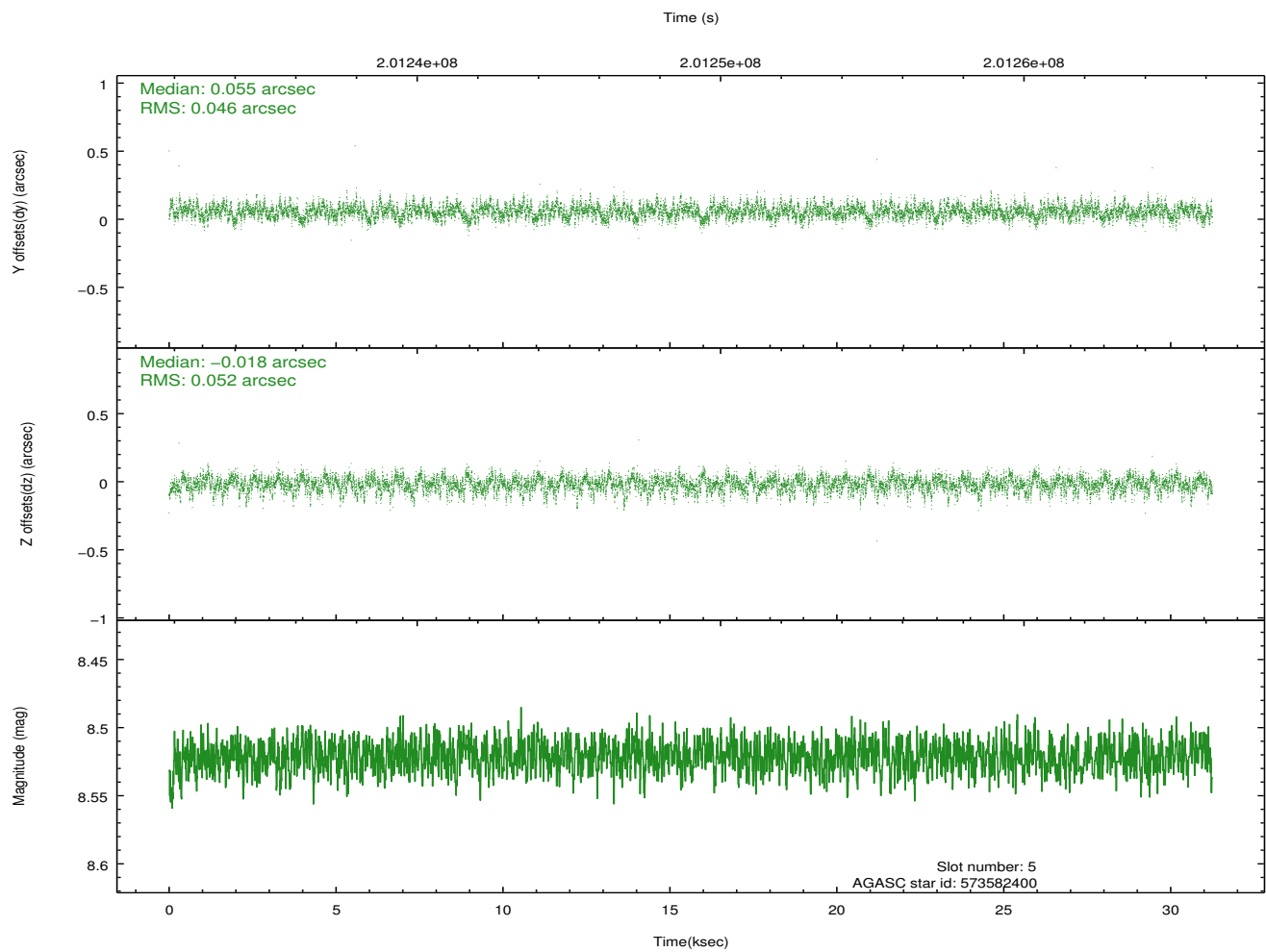
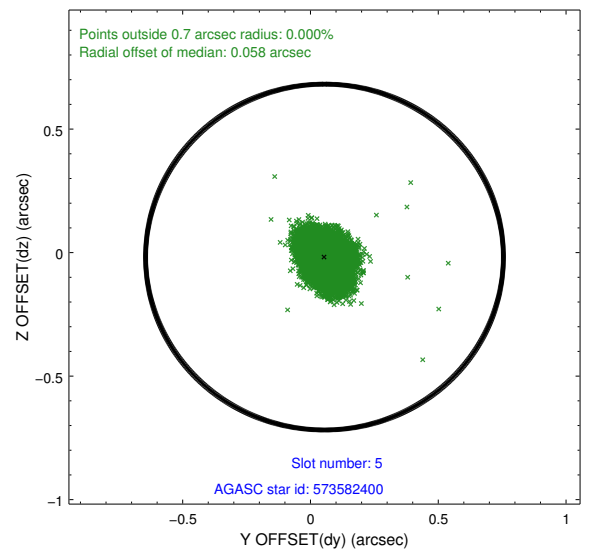
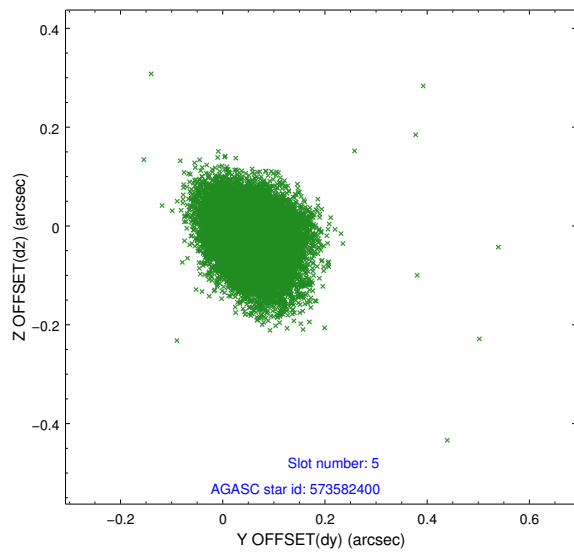
### 2.4.1 Slot 3



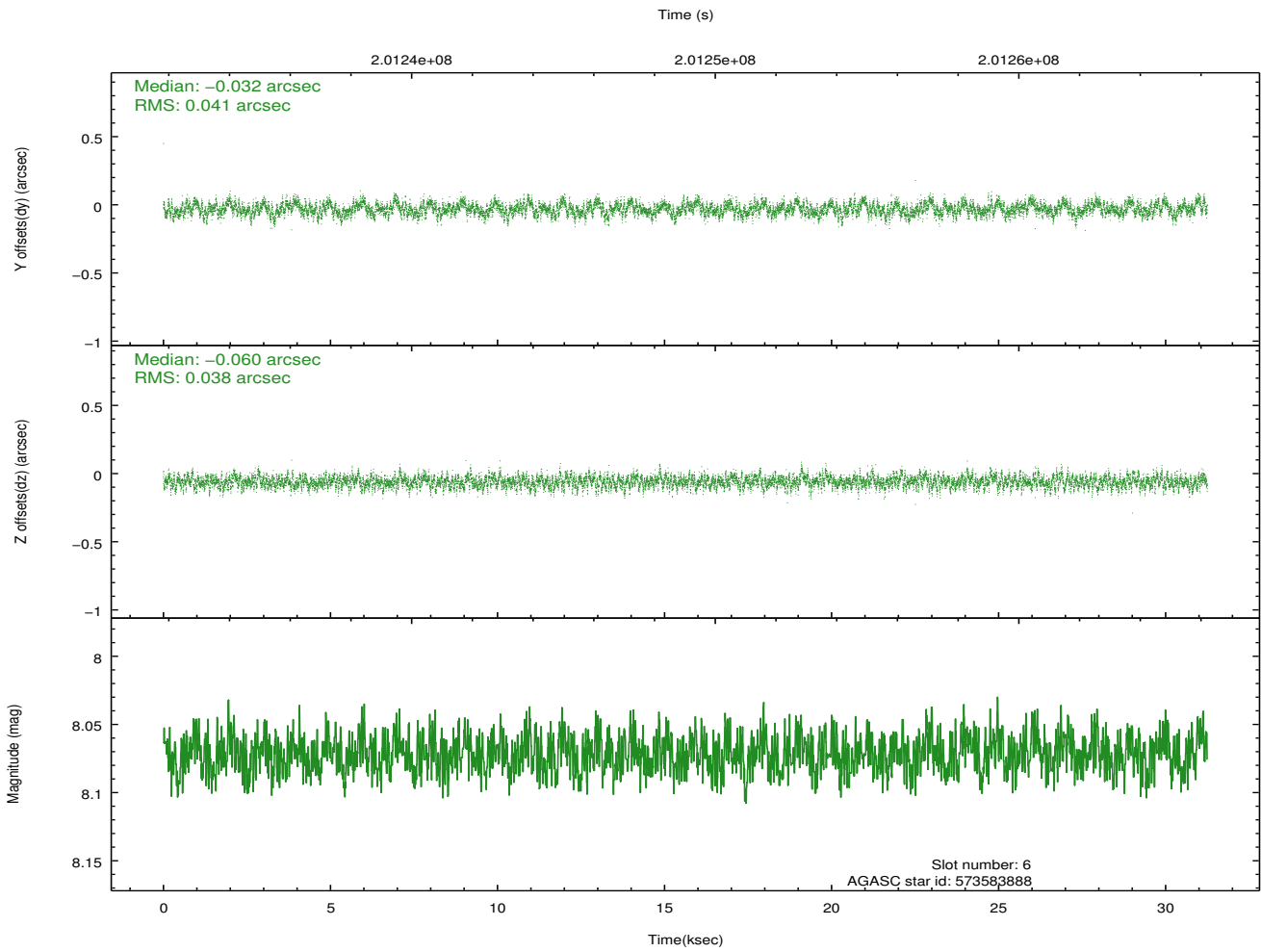
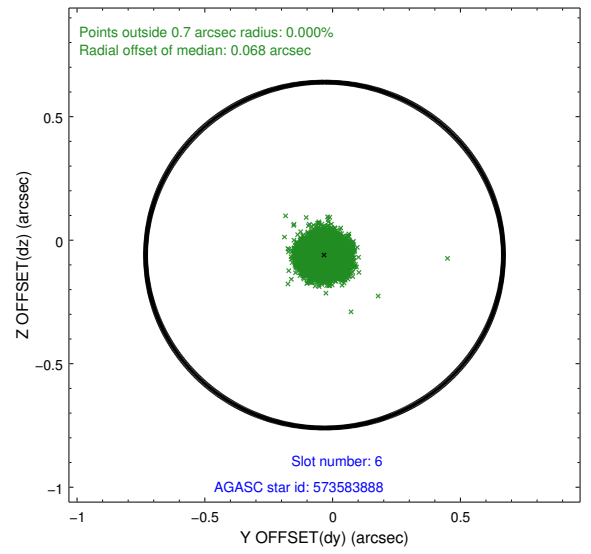
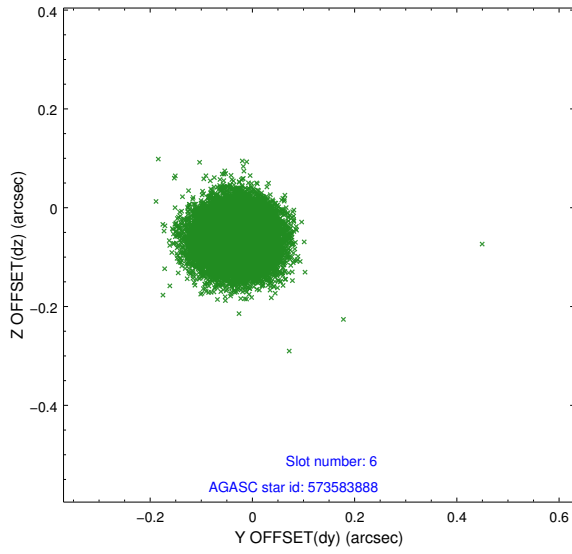
## 2.4.2 Slot 4



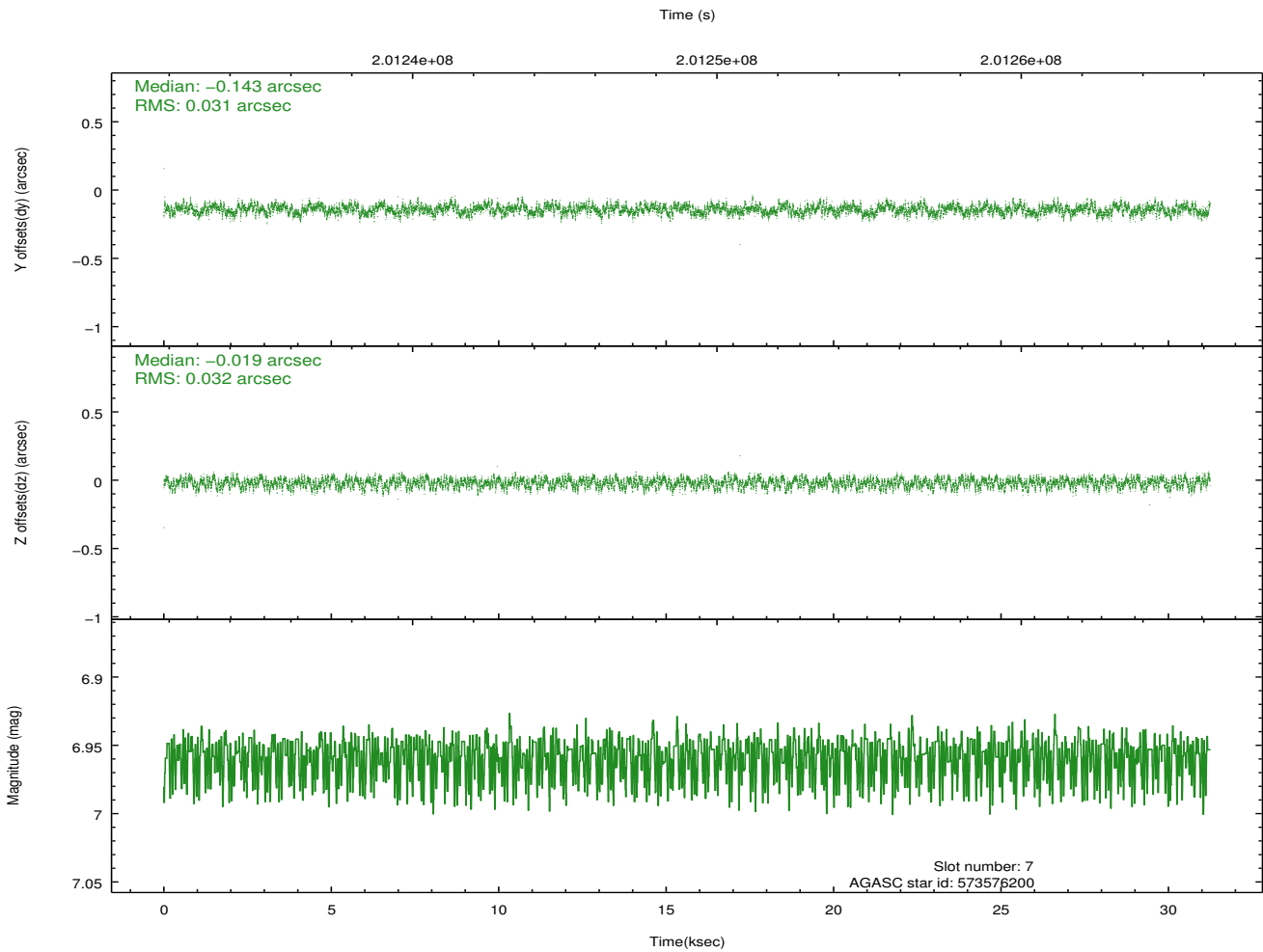
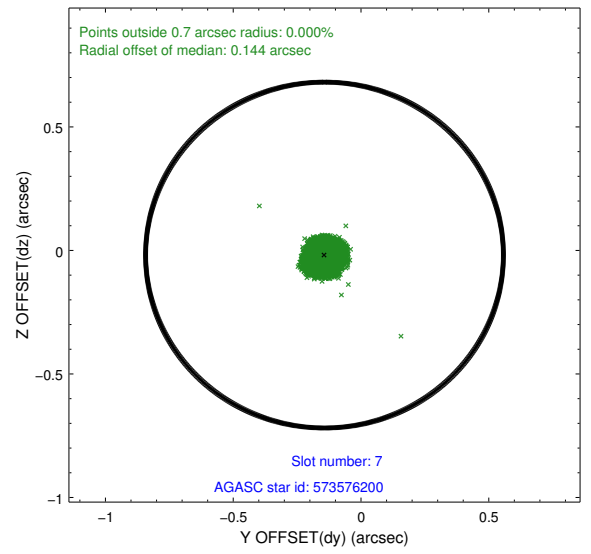
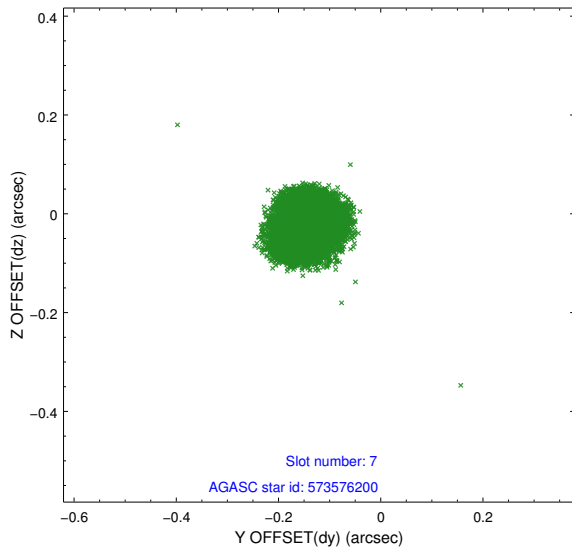
### 2.4.3 Slot 5



### 2.4.4 Slot 6

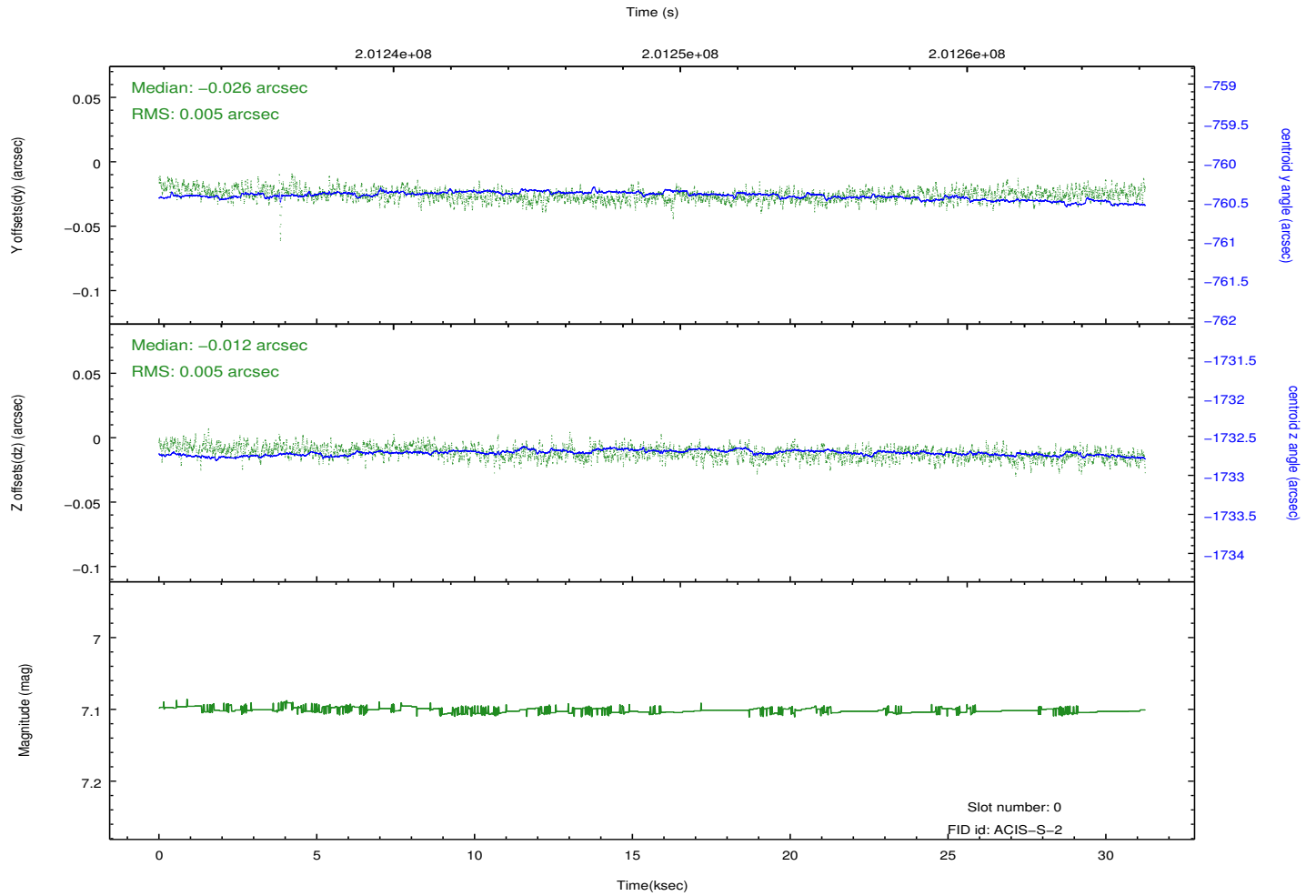
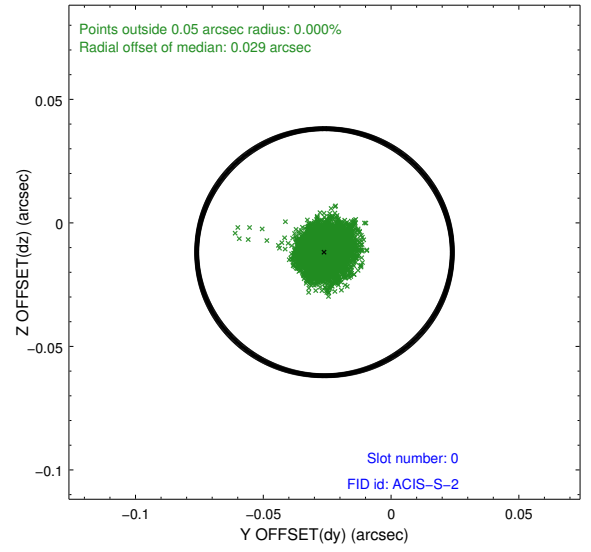
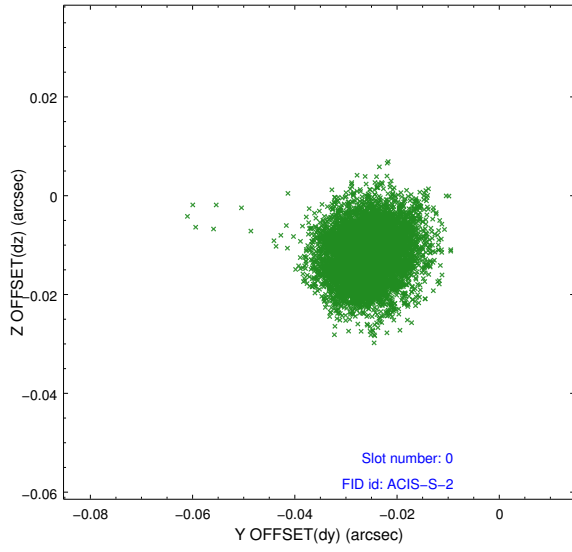


## 2.4.5 Slot 7

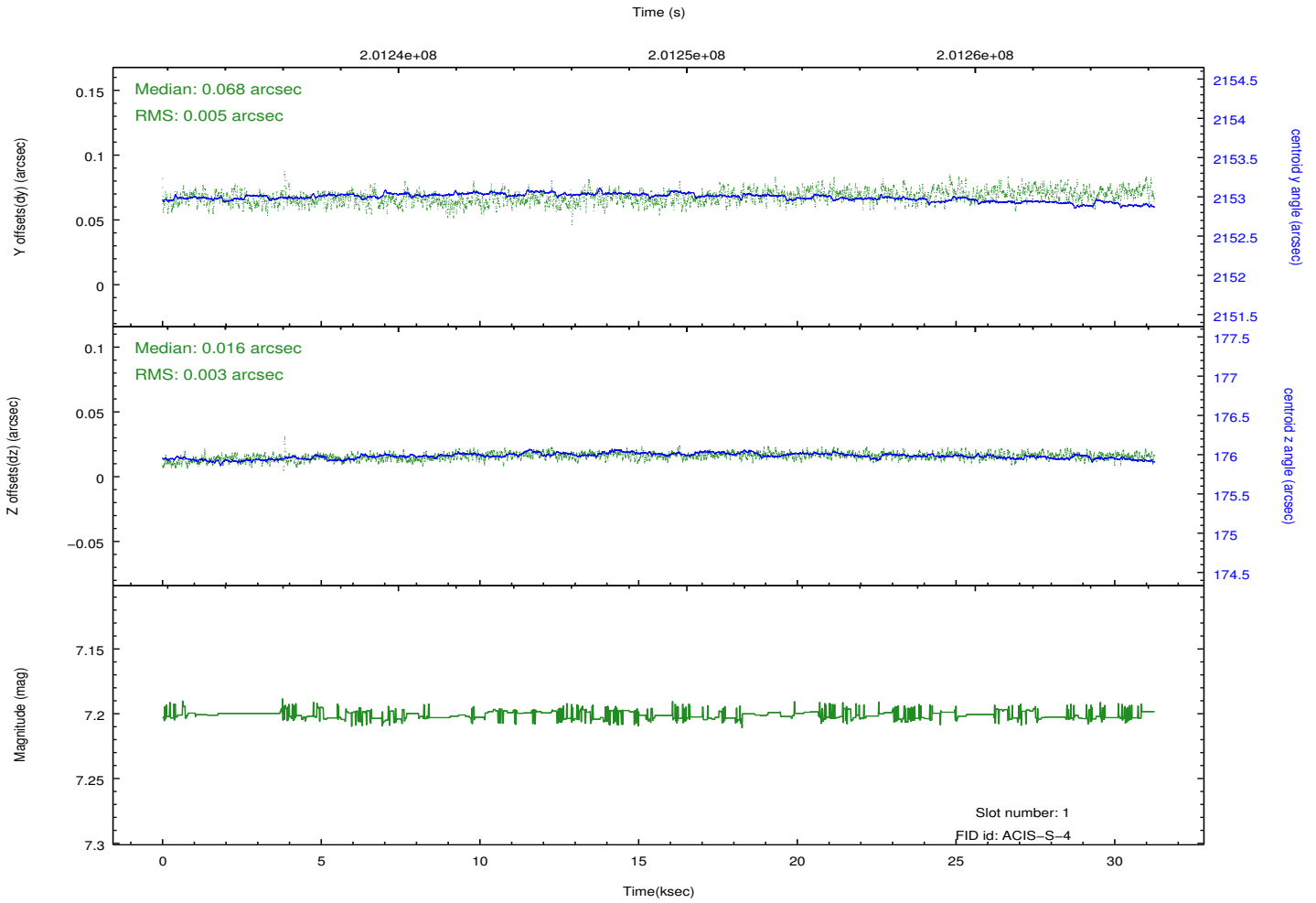
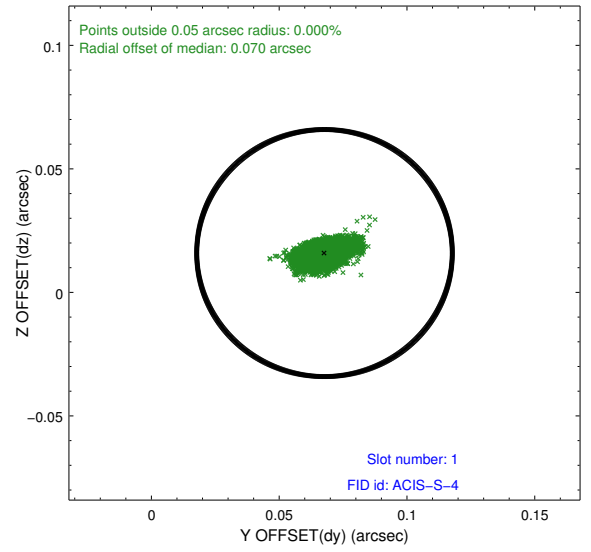
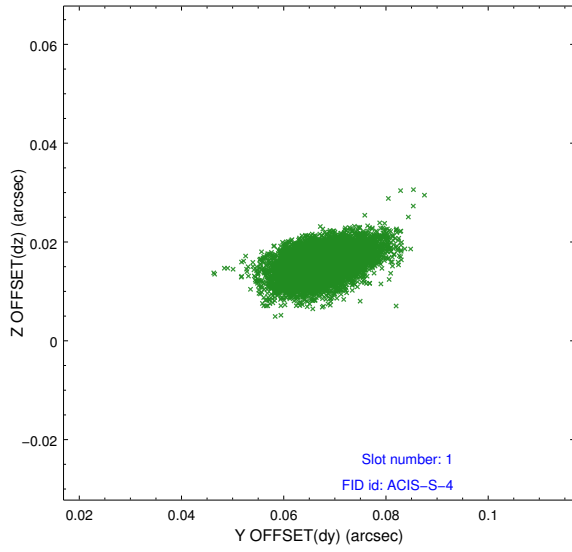


## 2.5 FID Slots

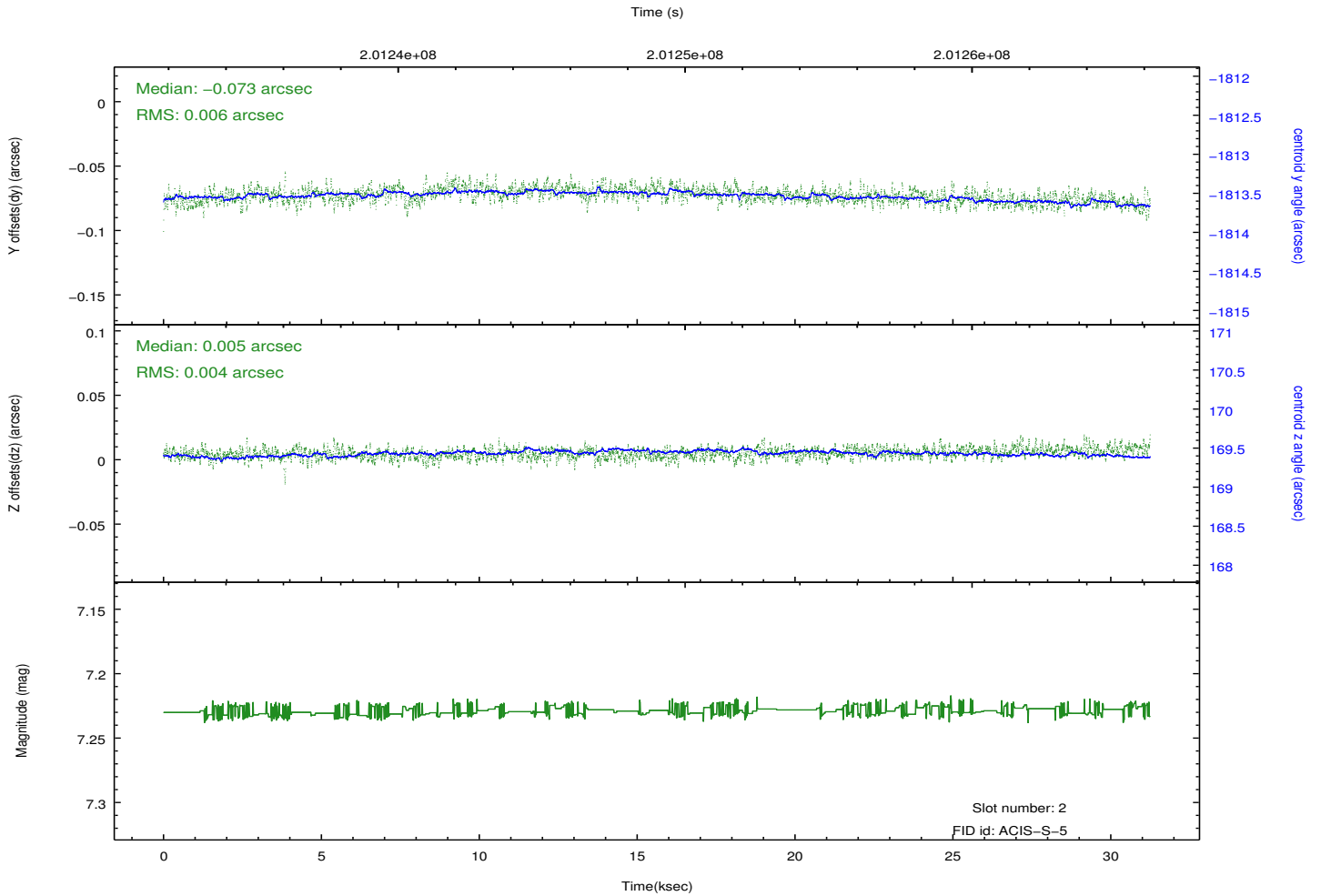
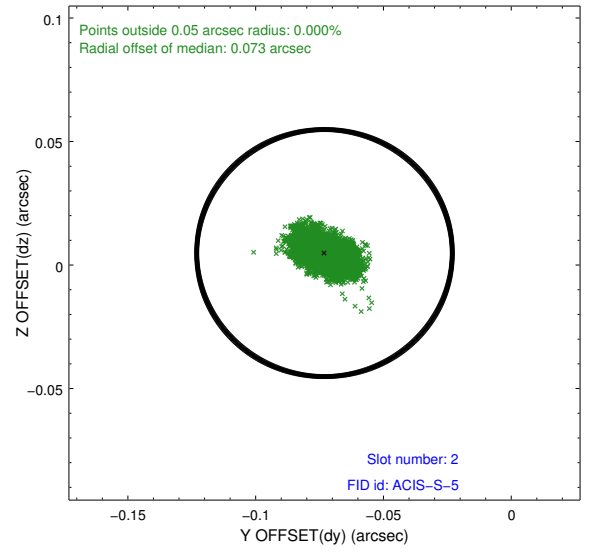
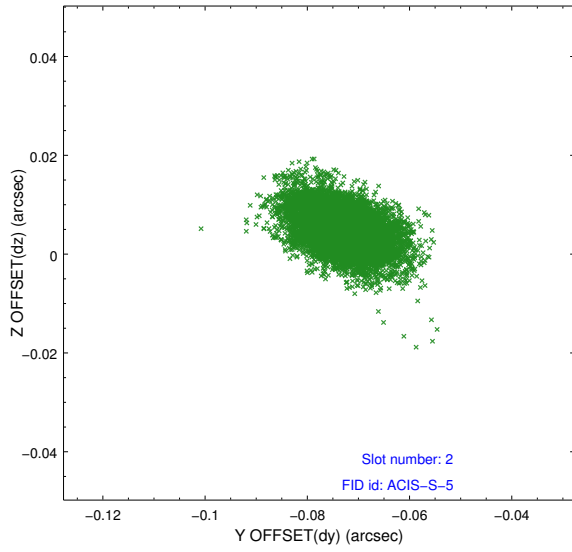
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.12.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	31.241

## A.2 Comments