

# V&V Reference Report

## L2 ASCDS Version : 10.1.1

Observation 15970 - L2 Version 2  
Chandra X-Ray Center

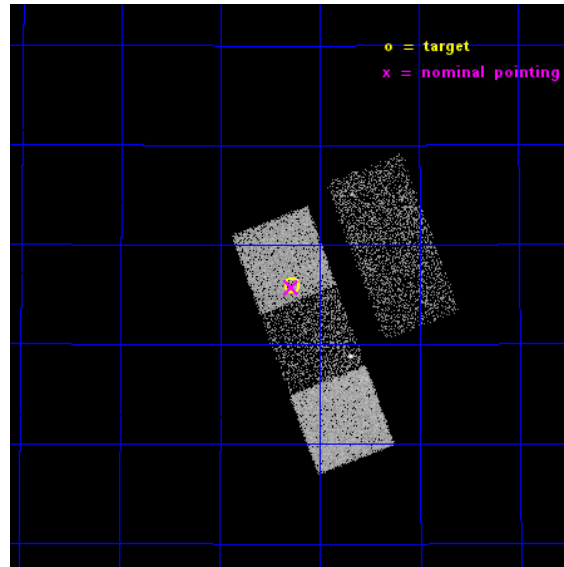
L2 Processing Date : Dec 8 2014

## 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

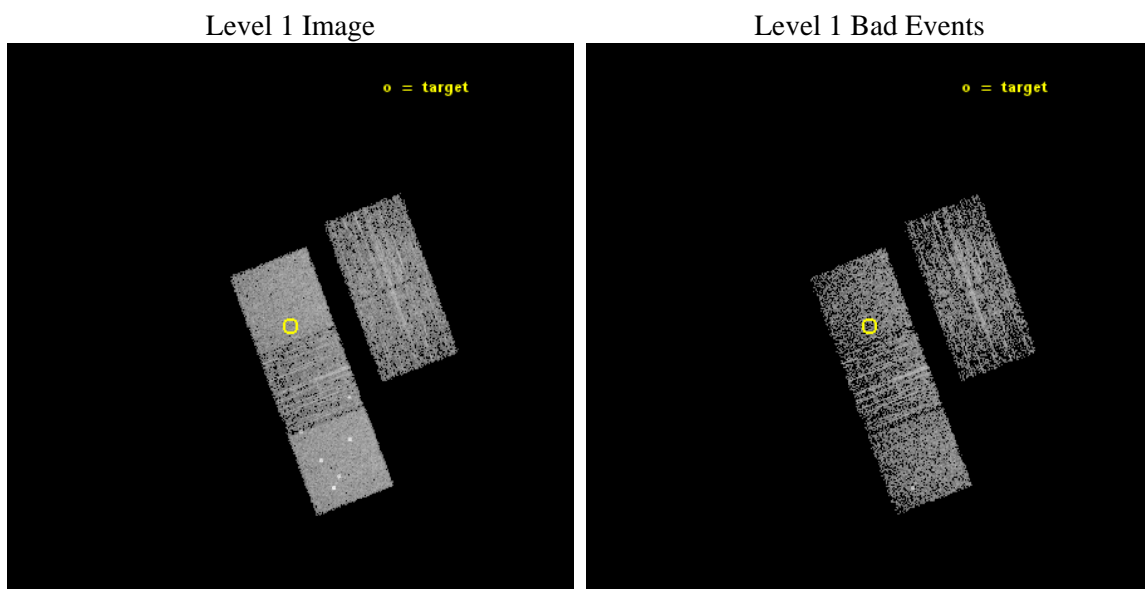
seq_num	502203	Sequence number
obs_id	15970	Observation id
title	Where Have All The Central Compact Objects Gone?	Proposal title
observer	Dr. Eric Gotthelf	Principal investigator
object	PSR J0335+4555	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	53.819167	Observer's specified target RA [deg]
dec_targ	45.9315	Observer's specified target Dec [deg]
ra_nom	53.821689823202	Nominal RA [deg]
dec_nom	45.92890301422	Nominal Dec [deg]
roll_nom	249.15118334252	Nominal Roll [deg]
revision	2	Processing version of data
ontime	3567.9831169844	Sum of GTIs [s]
livetime	3521.36479085	Livetime [s]
ontime2	3567.8189569712	Sum of GTIs [s]
ontime3	3567.8599969745	Sum of GTIs [s]
ontime5	3567.9420769811	Sum of GTIs [s]
ontime6	3567.9010369778	Sum of GTIs [s]
ontime7	3567.9831169844	Sum of GTIs [s]
l2events	28169	Number of level 2 events



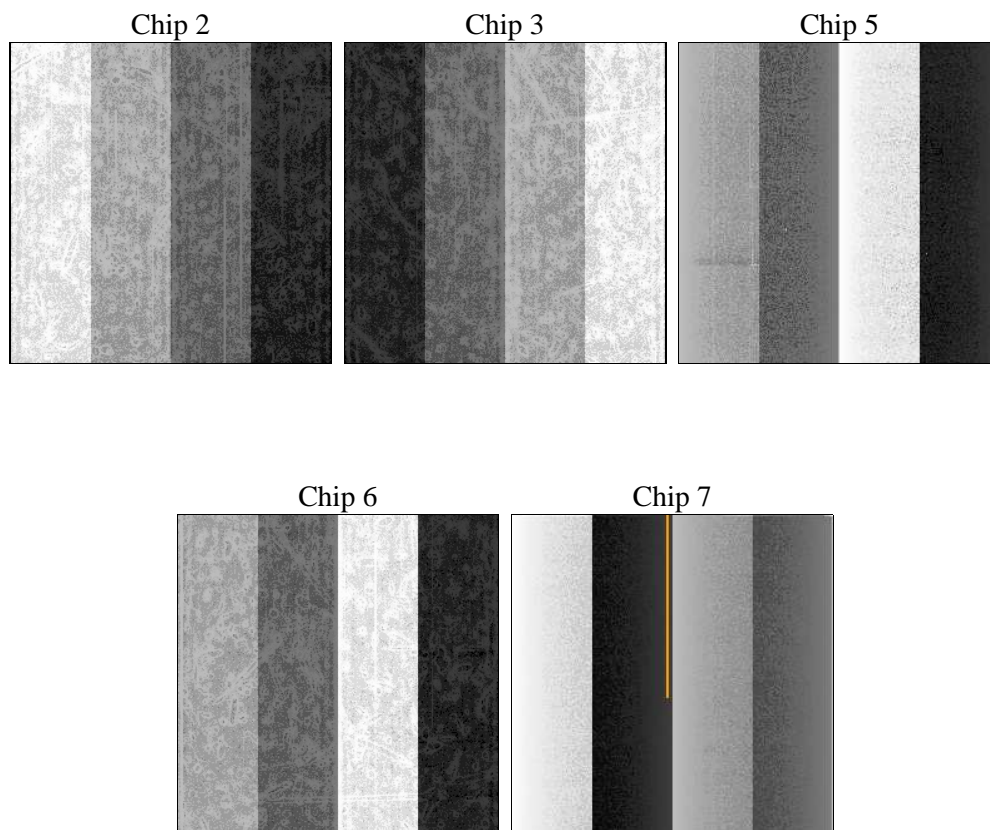
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	3500.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	3567.9831169844	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime2	3567.8189569712	Sum of GTIs [s]
date	2014-12-08T12:13:16	Date and time of file creation	ontime3	3567.8599969745	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	3567.9420769811	Sum of GTIs [s]
			ontime6	3567.9010369778	Sum of GTIs [s]
			ontime7	3567.9831169844	Sum of GTIs [s]
			l1events	103099	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	15016	16410	30577	17465	23631
rejected events	13187	14492	14896	15247	13424
rejected %	87%	88%	48%	87%	56%

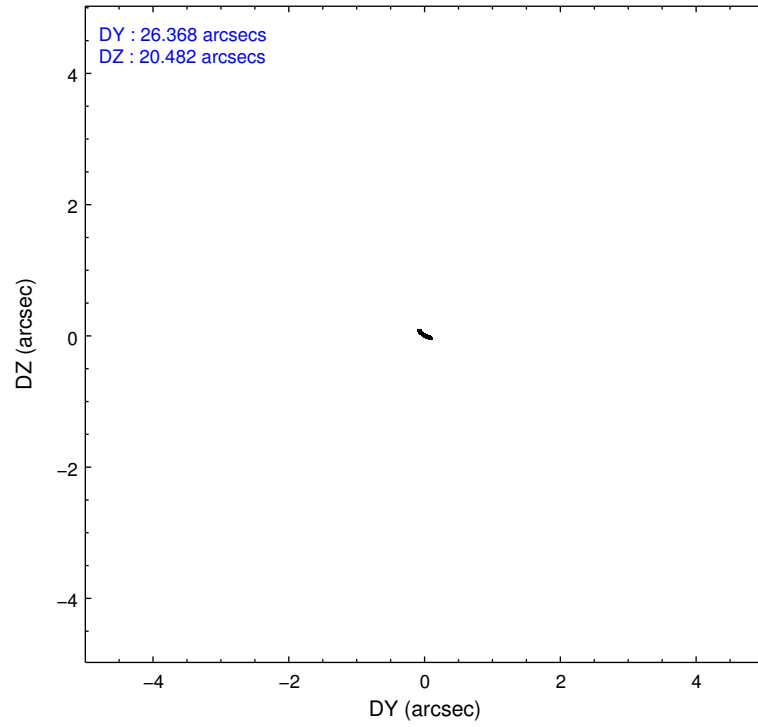
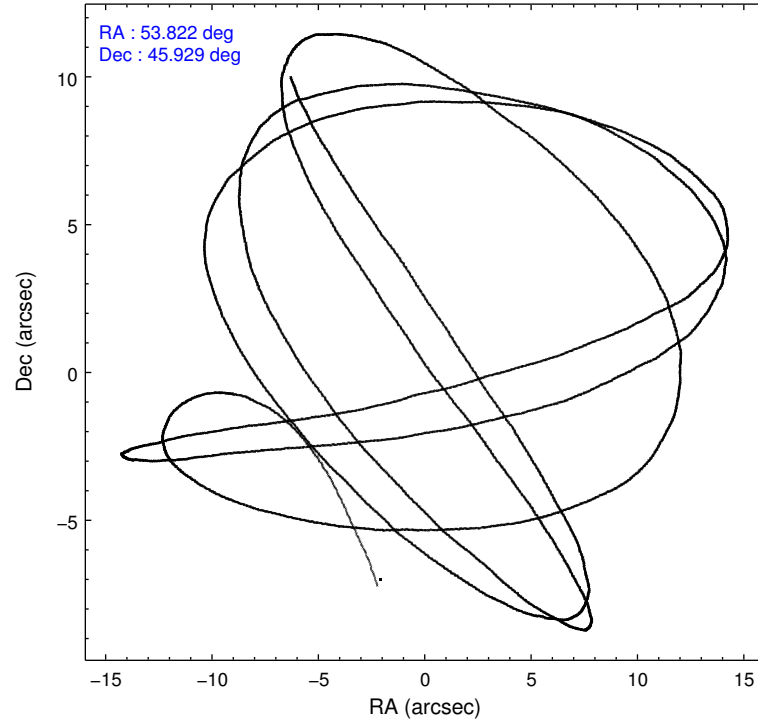
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	659	674	2820	866	899
	4%	4%	9%	4%	3%
grade 1 events	11	13	92	3	26
	0%	0%	0%	0%	0%
grade 2 events	431	448	4544	450	2123
	2%	2%	14%	2%	8%
grade 3 events	193	206	457	226	831
	1%	1%	1%	1%	3%
grade 4 events	180	199	476	229	860
	1%	1%	1%	1%	3%
grade 5 events	699	897	2055	950	2395
	4%	5%	6%	5%	10%
grade 6 events	367	393	7398	449	5500
	2%	2%	24%	2%	23%
grade 7 events	12476	13580	12735	14292	10997
	83%	82%	41%	81%	46%

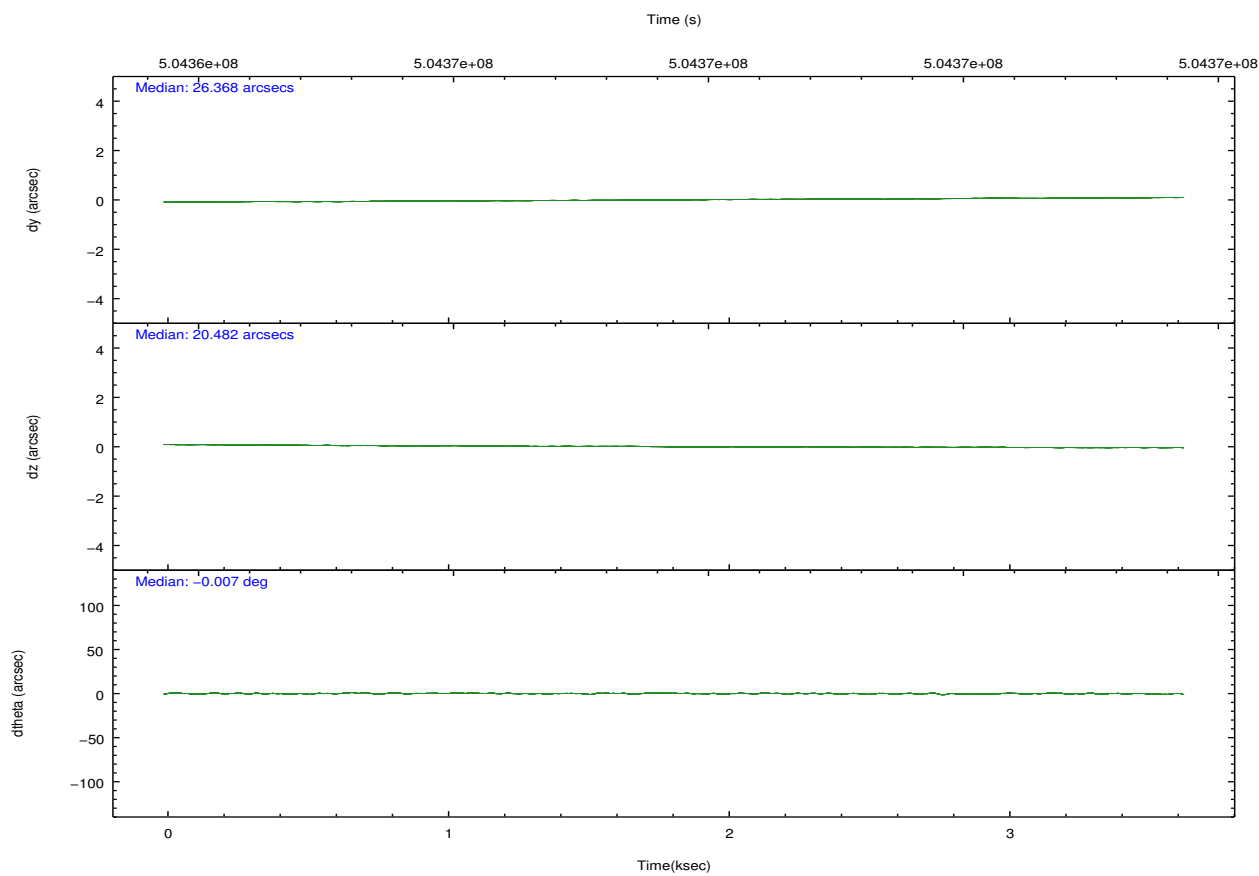
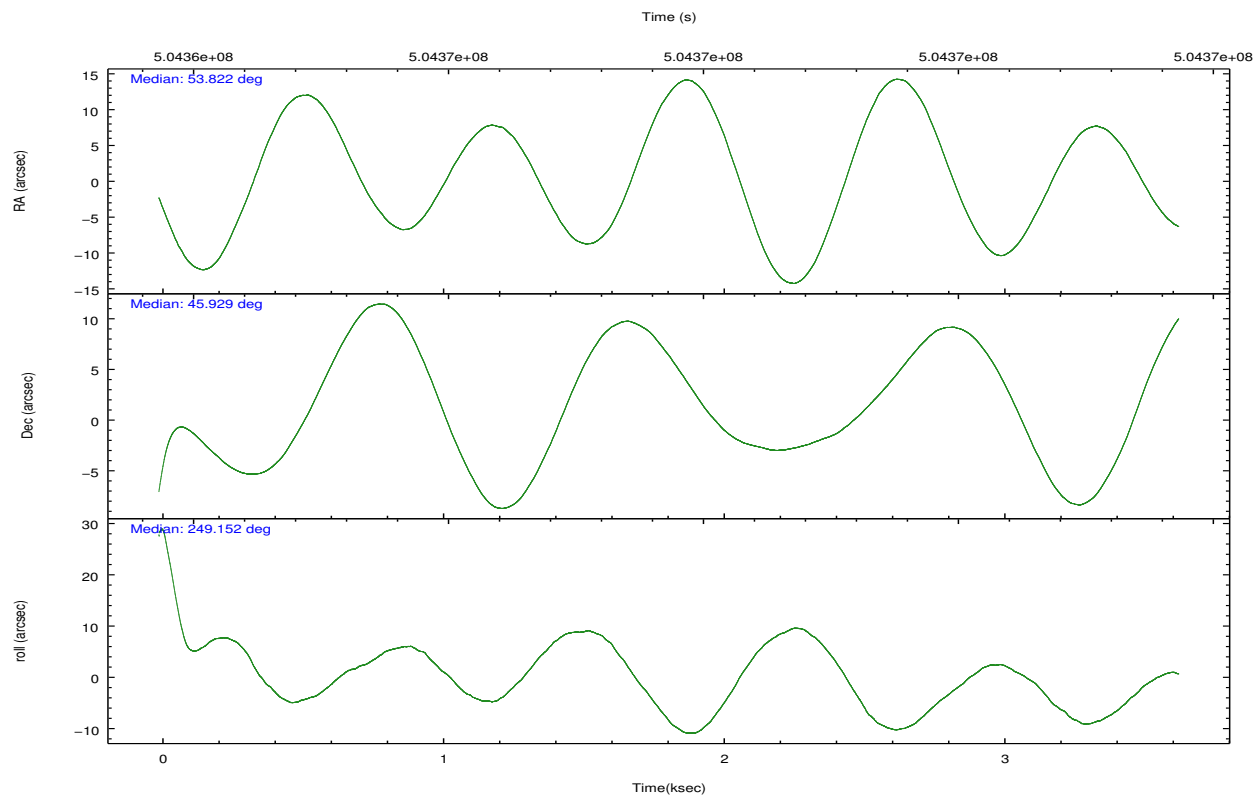


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23567	ACIS-23567	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	53.814983	53.82168982320184	CCD I2 on	O2	Y
[deg] Pointing Dec	45.956008	45.9289030142203	CCD I3 on	O3	Y
[deg] Pointing Roll	248.999233	249.1511833425229	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O4	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	N	N
[s] Observation start time (MET)	504365176.184000	504363521.17585	CCD S5 on	N	N
Observation start date	2013-12-25T13:25:09	2013-12-25T12:58:41	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	504368676.184000	504369213.51366	On-chip summing requested	N	N
Observation end date	2013-12-25T14:23:29	2013-12-25T14:33:33	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



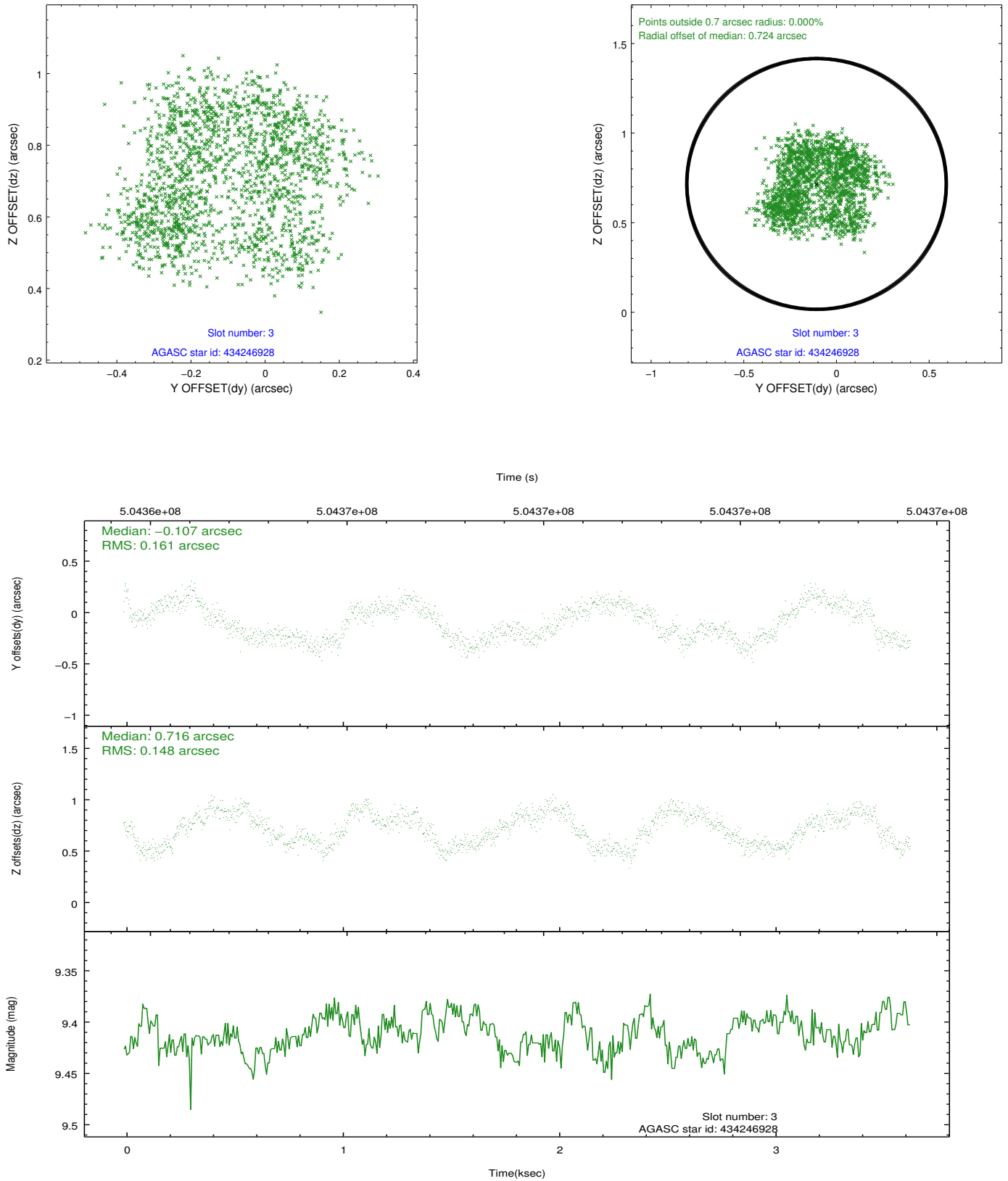


### Slot Statistics

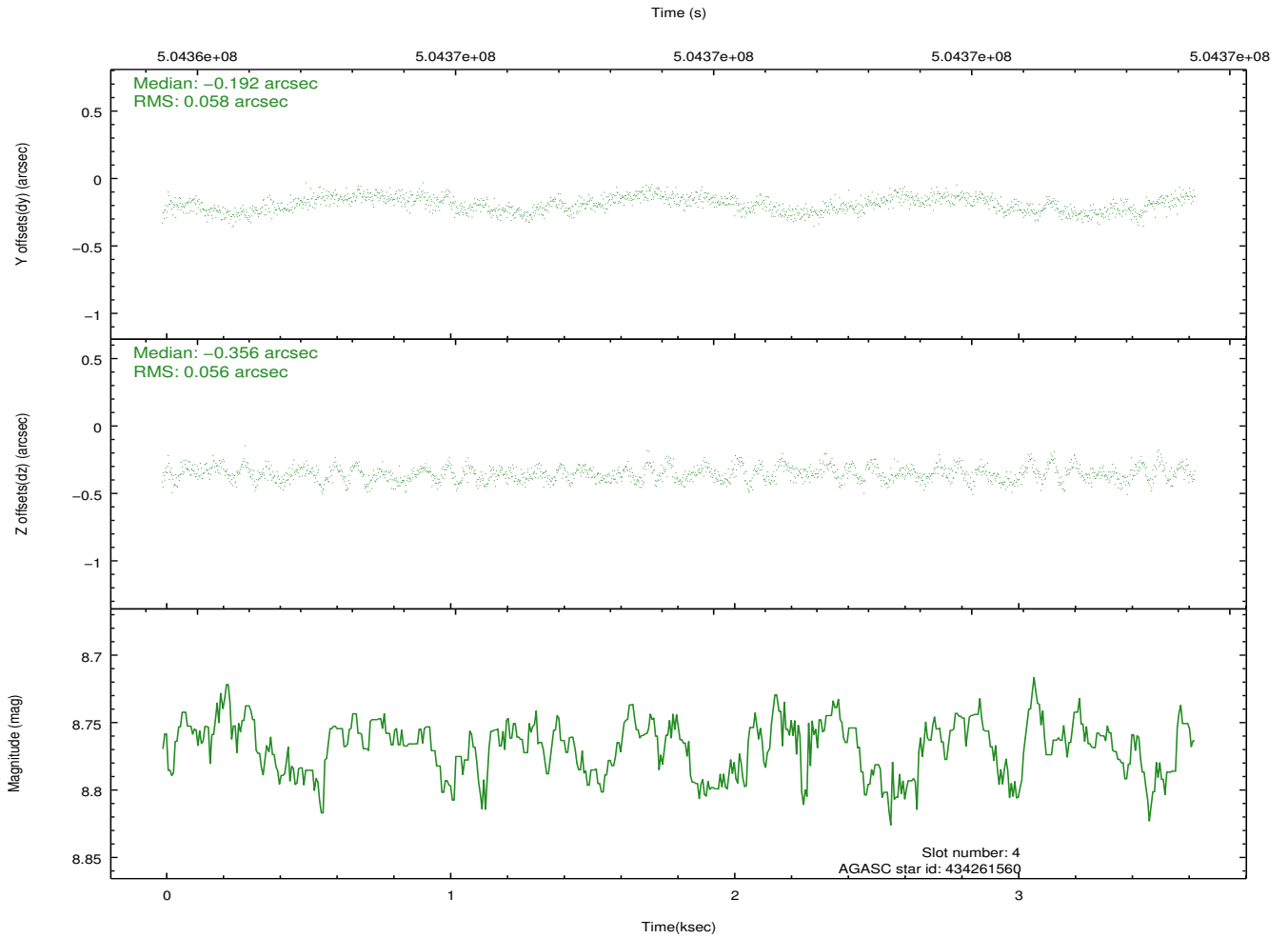
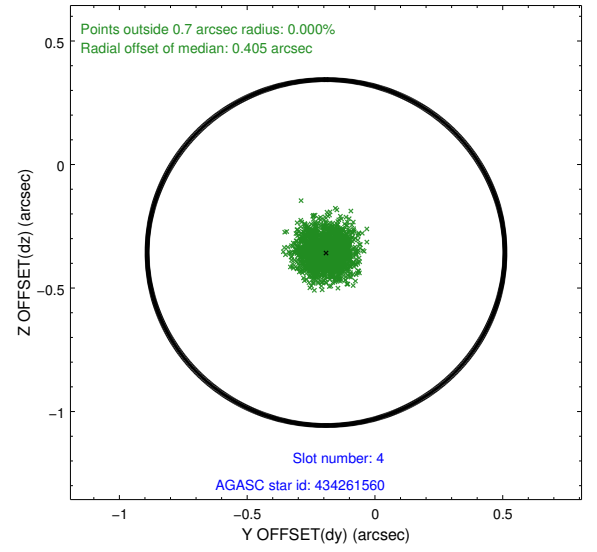
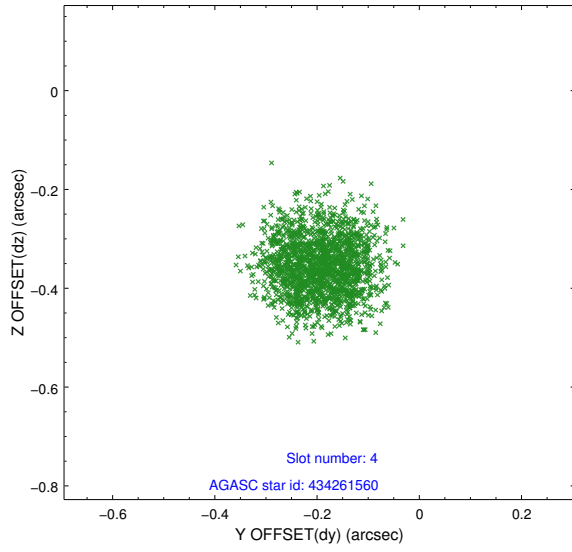
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.04	887	0.061	-0.065	0.006	0.012	0.000000	0.000000	916.50	-1737.63
1	FID		ACIS-S-5	7.09	887	-0.190	0.012	0.006	0.010	0.000000	0.000000	-1831.85	158.12
2	FID		ACIS-S-6	7.18	887	0.108	0.064	0.006	0.010	0.000000	0.000000	380.13	804.16
3	GUIDE	used	434246928	9.41	1771	-0.107	0.716	0.243	0.327	53.459596	45.440653	2051.42	-172.97
4	GUIDE	used	434261560	8.77	1769	-0.192	-0.356	0.088	0.136	54.339882	45.631034	615.23	1651.09
5	GUIDE	used	434255416	7.15	1774	0.025	0.141	0.059	0.099	54.018962	46.584483	-2293.67	-338.95
6	GUIDE	used	434246976	9.44	1772	0.102	-0.361	0.149	0.246	53.580536	45.324098	2334.13	260.76
7	GUIDE	used	434247640	9.46	1772	0.177	-0.148	0.301	0.401	53.833183	45.429840	1753.02	722.00

## 2.4 Star Slots

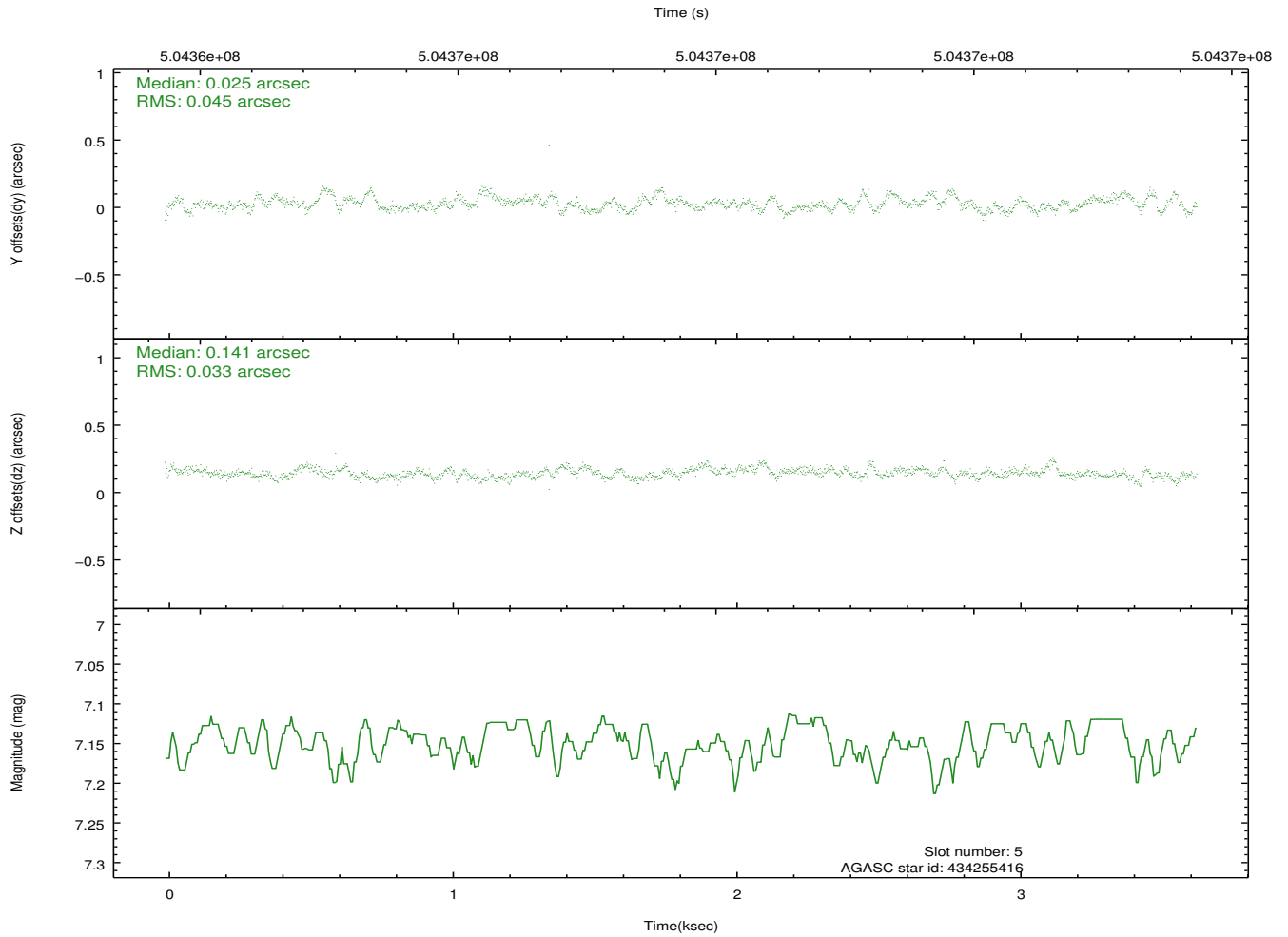
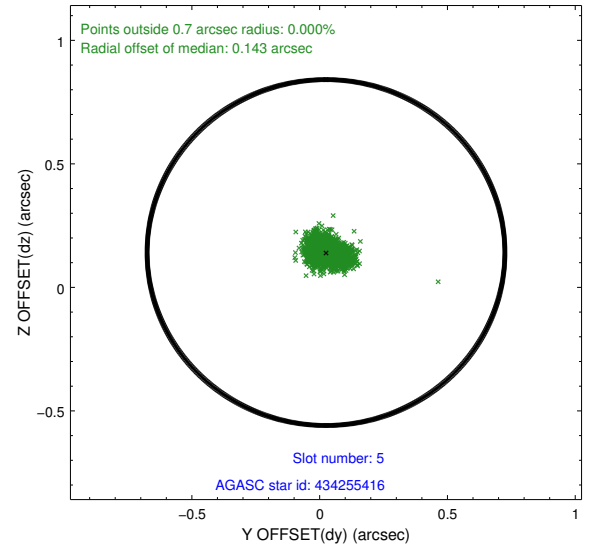
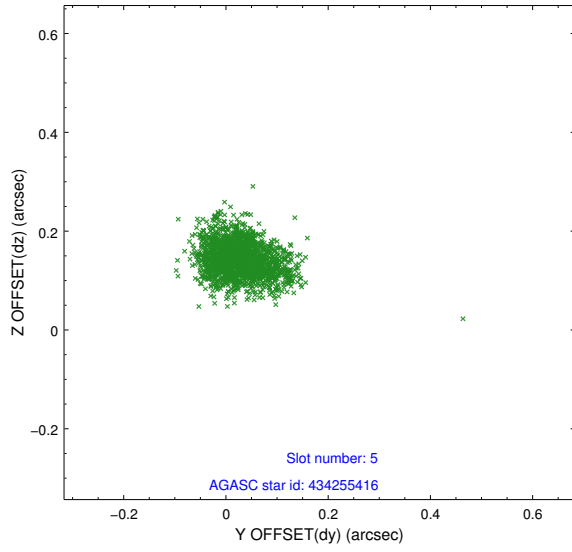
### 2.4.1 Slot 3



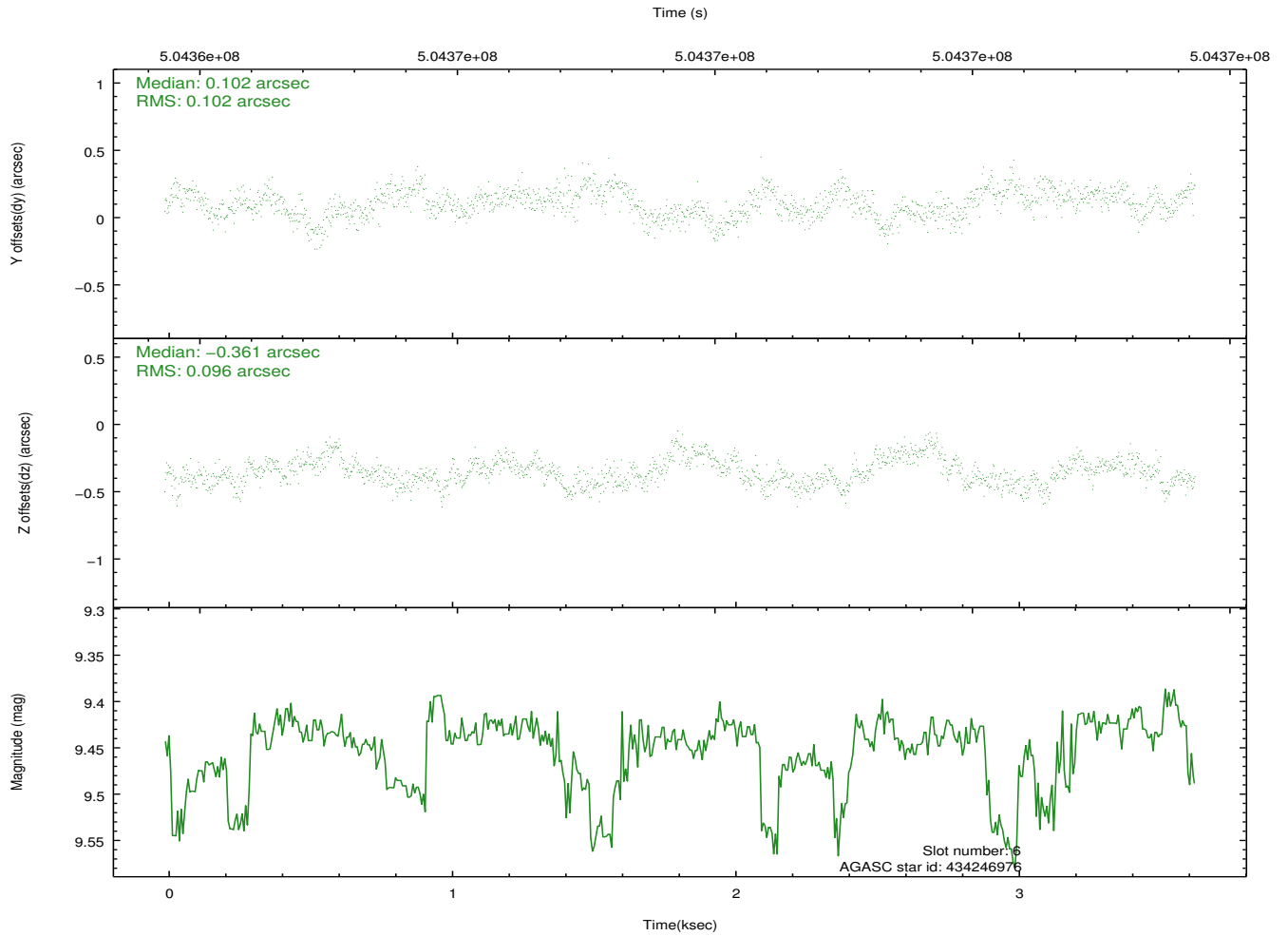
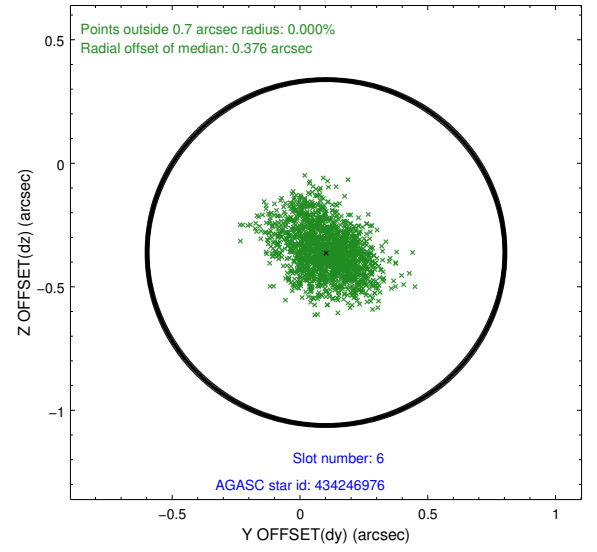
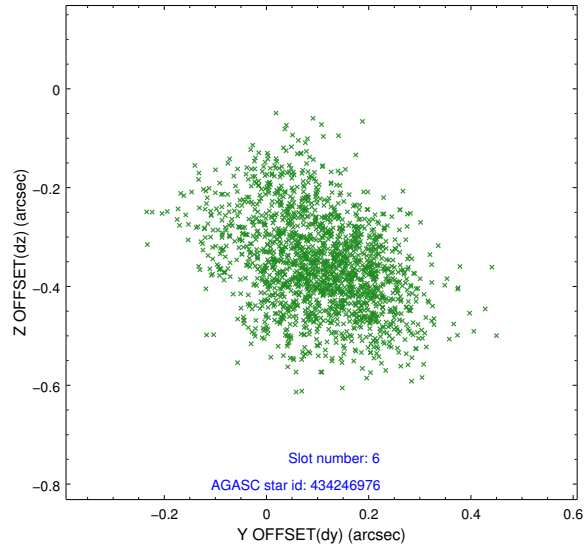
## 2.4.2 Slot 4



### 2.4.3 Slot 5

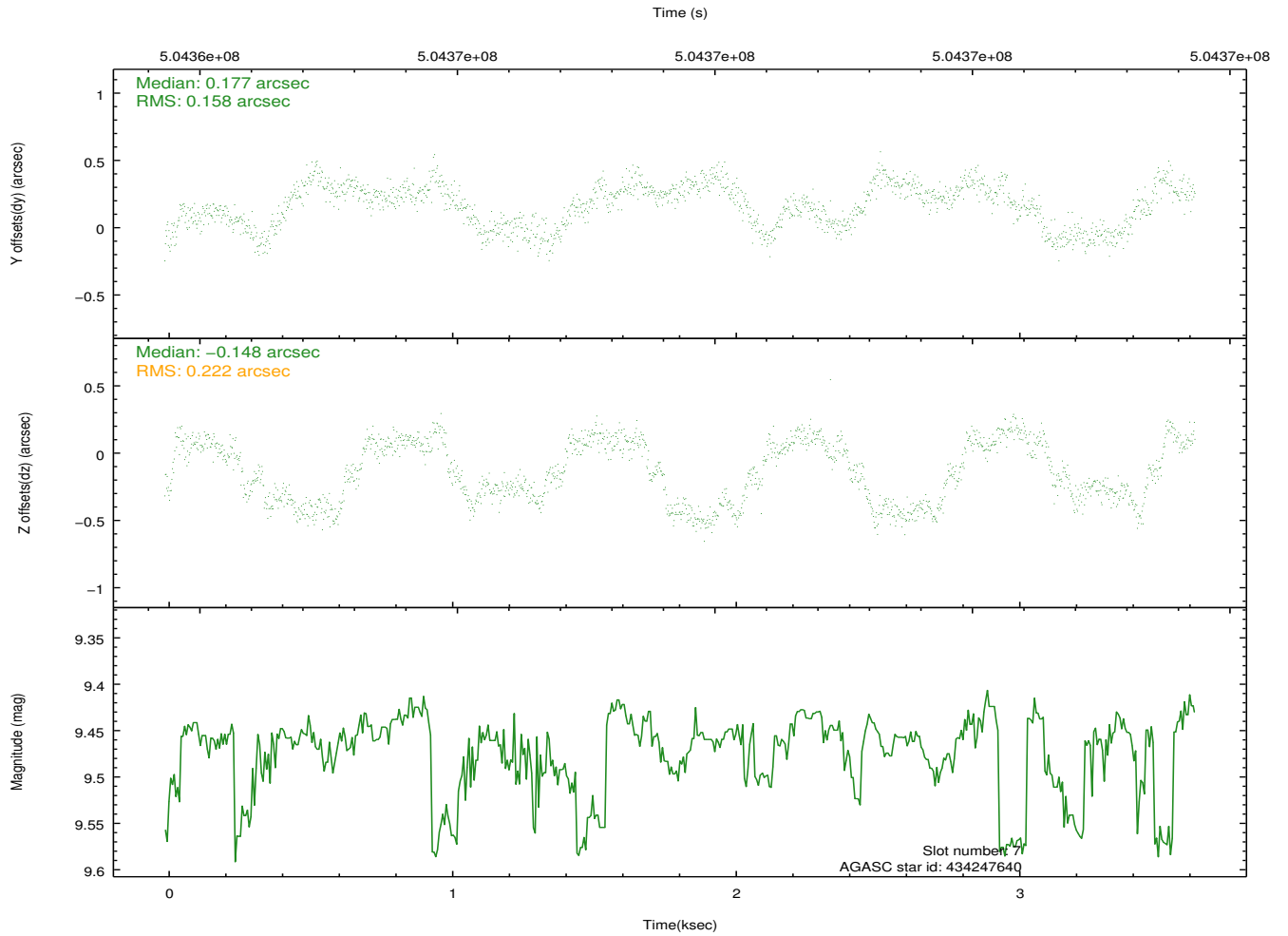
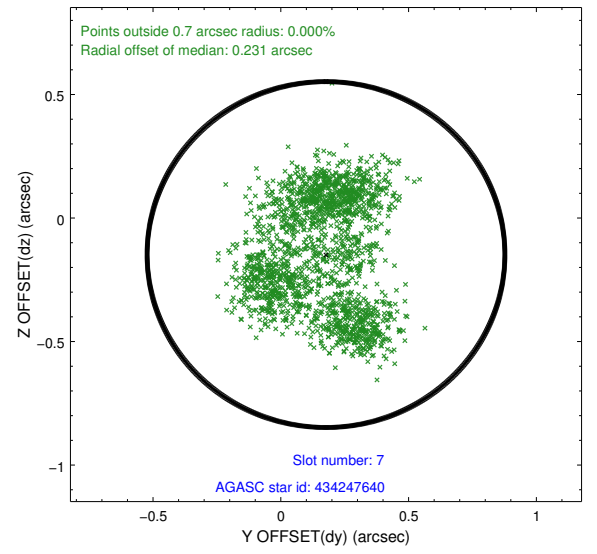
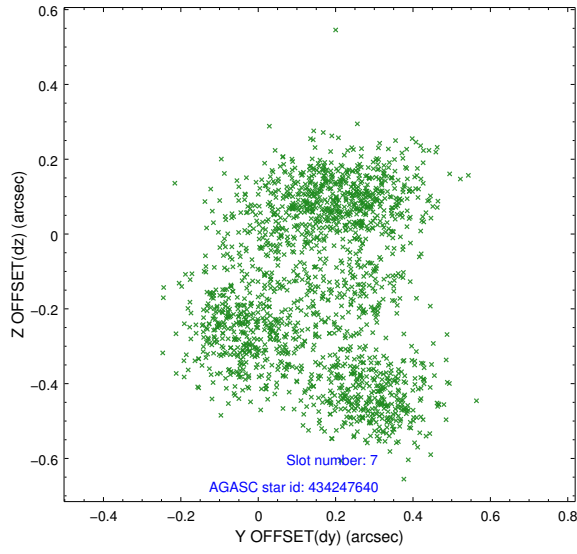


## 2.4.4 Slot 6



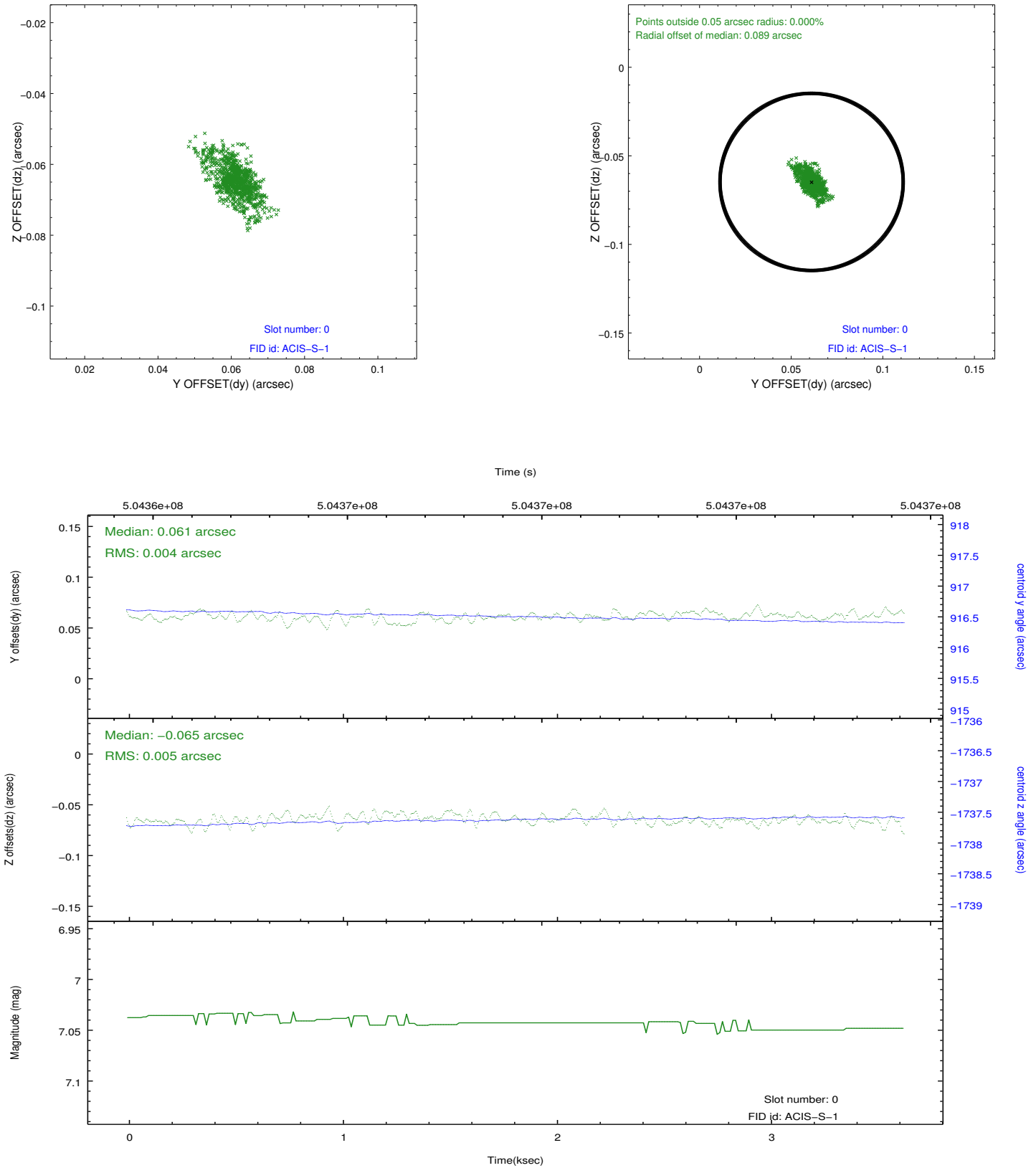


## 2.4.5 Slot 7

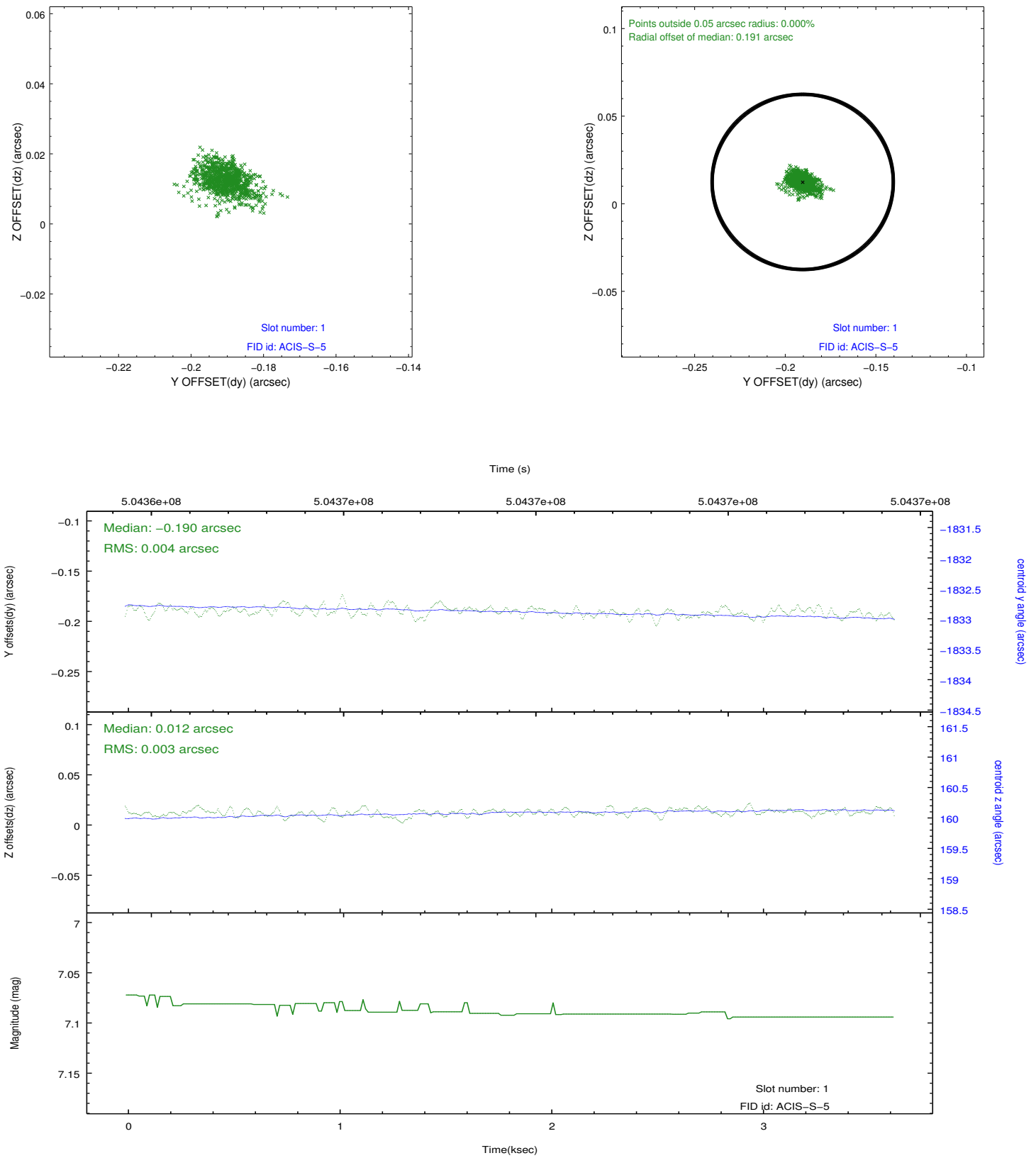


## 2.5 FID Slots

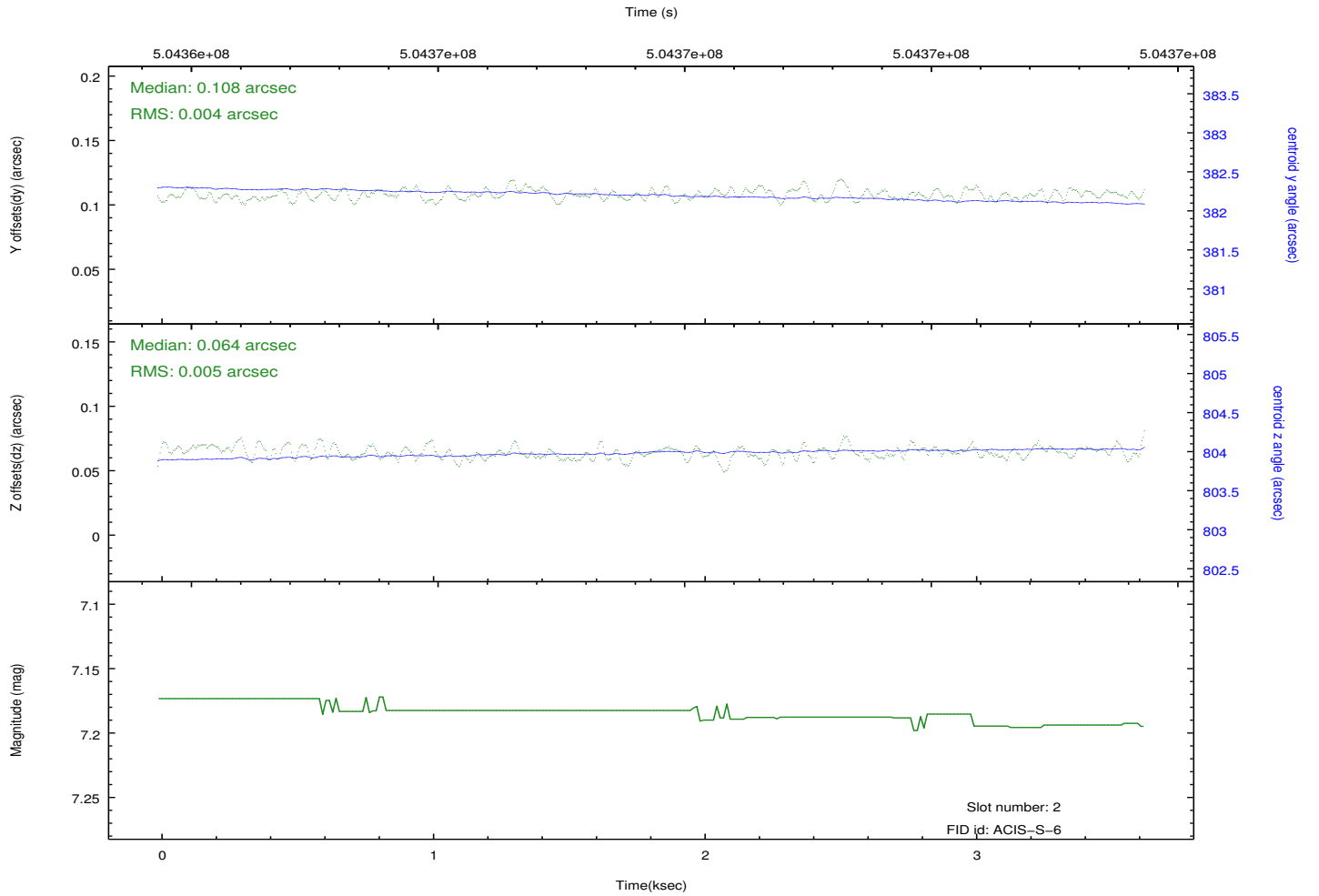
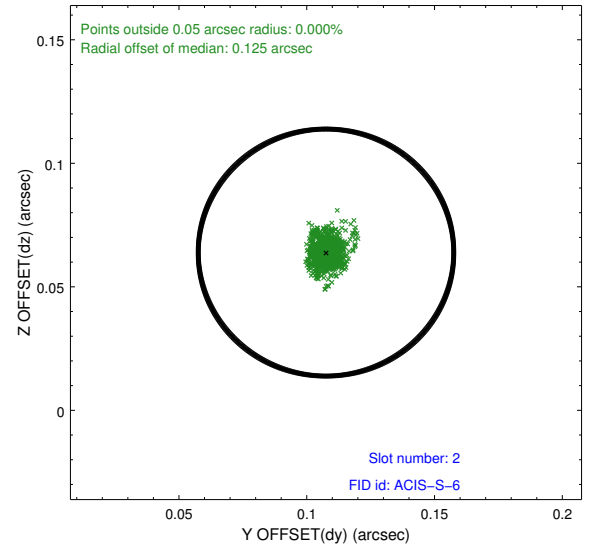
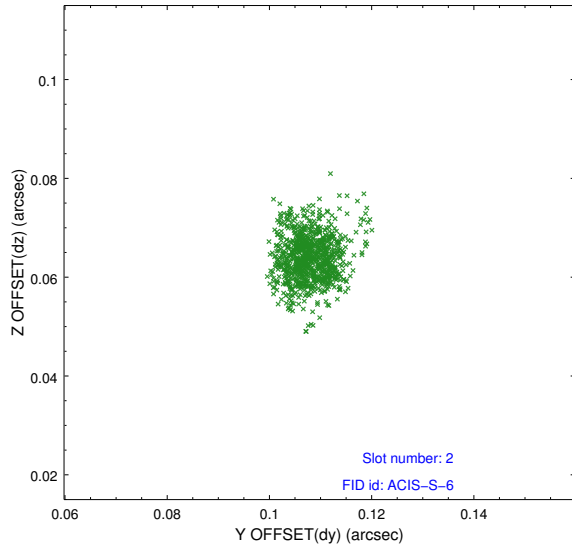
### 2.5.1 Slot 0



## 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)	2014.12.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.5679831169844

## A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.