

# V&V Reference Report

## L2 ASCDS Version : 10.3.3

Observation 16771 - L2 Version 1  
Chandra X-Ray Center

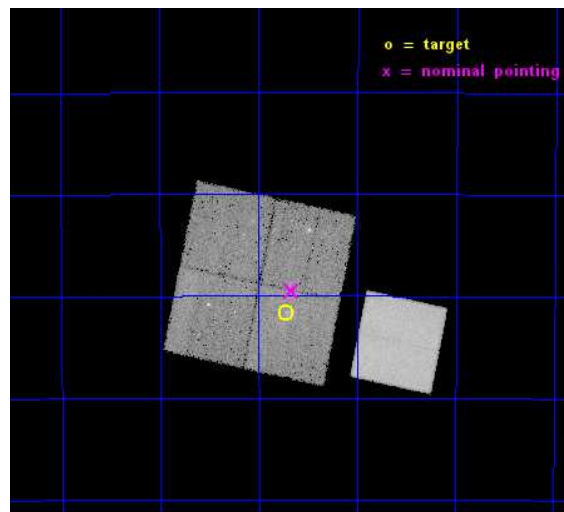
L2 Processing Date : Jan 23 2015

## 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

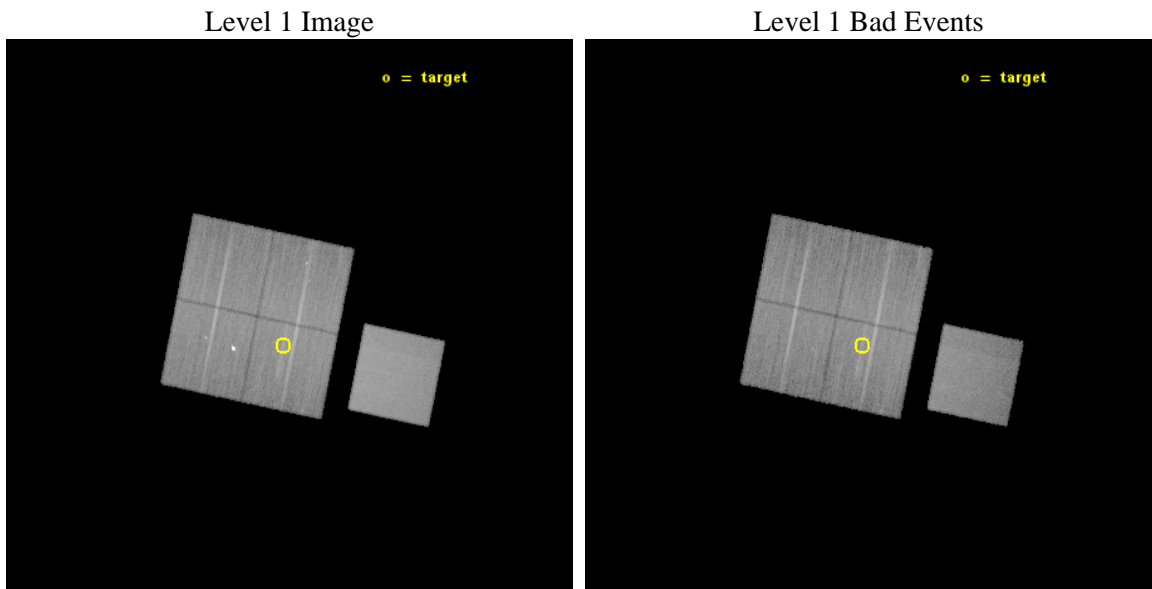
seq_num	502289	Sequence number
obs_id	16771	Observation id
title	HESS~J1640-465: Powering the most luminous gamma-ray source in the Galaxy	Proposal title
observer	Dr Eric Gotthelf	Principal investigator
object	CXOU J164043.5-463135	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	250.18125	Observer's specified target RA [deg]
dec_targ	-46.526389	Observer's specified target Dec [deg]
ra_nom	250.1672589724	Nominal RA [deg]
dec_nom	-46.491463786634	Nominal Dec [deg]
roll_nom	101.69853964478	Nominal Roll [deg]
revision	1	Processing version of data
ontime	40061.259317994	Sum of GTIs [s]
livetime	39537.829472334	Livetime [s]
ontime0	40064.400308251	Sum of GTIs [s]
ontime1	40054.977347493	Sum of GTIs [s]
ontime2	40064.400308251	Sum of GTIs [s]
ontime3	40061.259317994	Sum of GTIs [s]
ontime7	40064.400308251	Sum of GTIs [s]
l2events	213182	Number of level 2 events



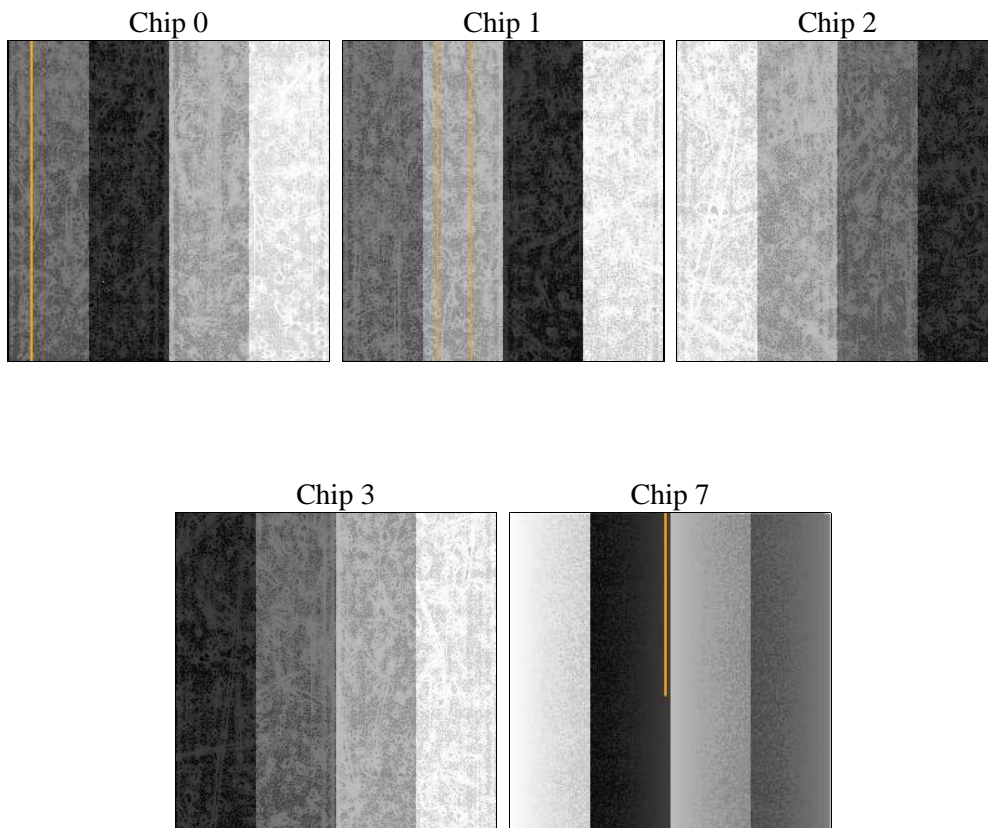
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	40000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.3	Processing system revision	ontime	40061.259317994	Sum of GTIs [s]
caldbver	4.6.6	&#160	ontime0	40064.400308251	Sum of GTIs [s]
date	2015-01-23T16:51:24	Date and time of file creation	ontime1	40054.977347493	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	40064.400308251	Sum of GTIs [s]
			ontime3	40061.259317994	Sum of GTIs [s]
			ontime7	40064.400308251	Sum of GTIs [s]
			l1events	1058540	Number of level 1 events

### 2.1.4 Events

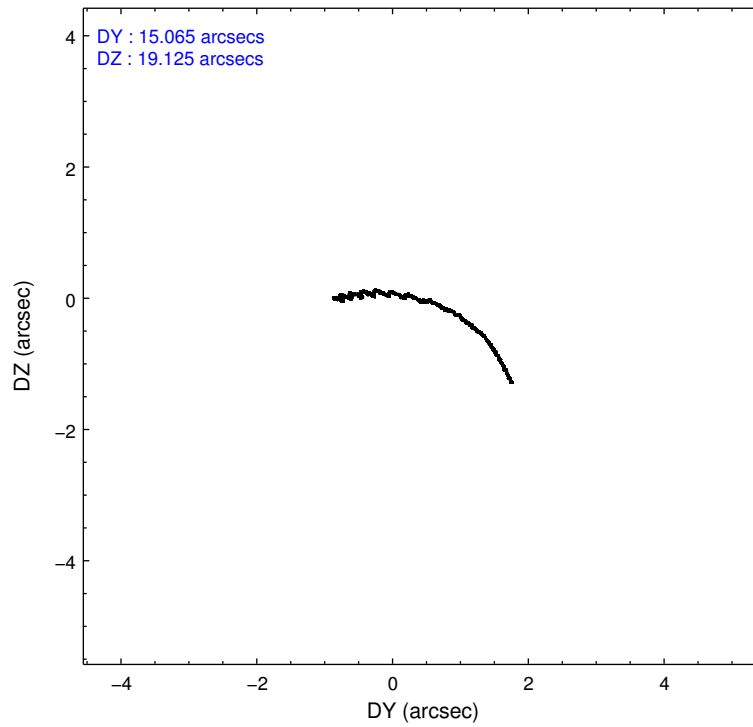
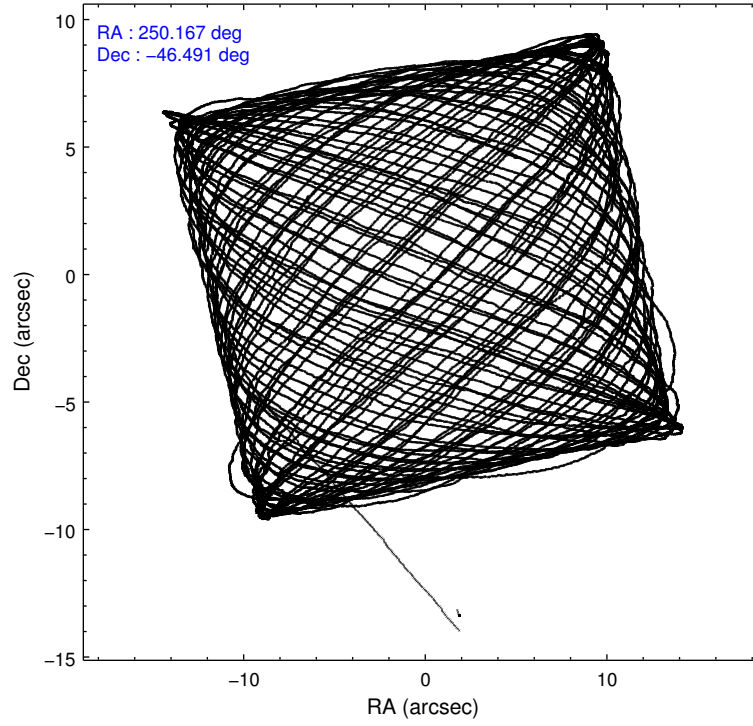
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	183691	201788	202853	198194	272014
rejected events	157300	160576	175289	169763	151257
rejected %	85%	79%	86%	85%	55%

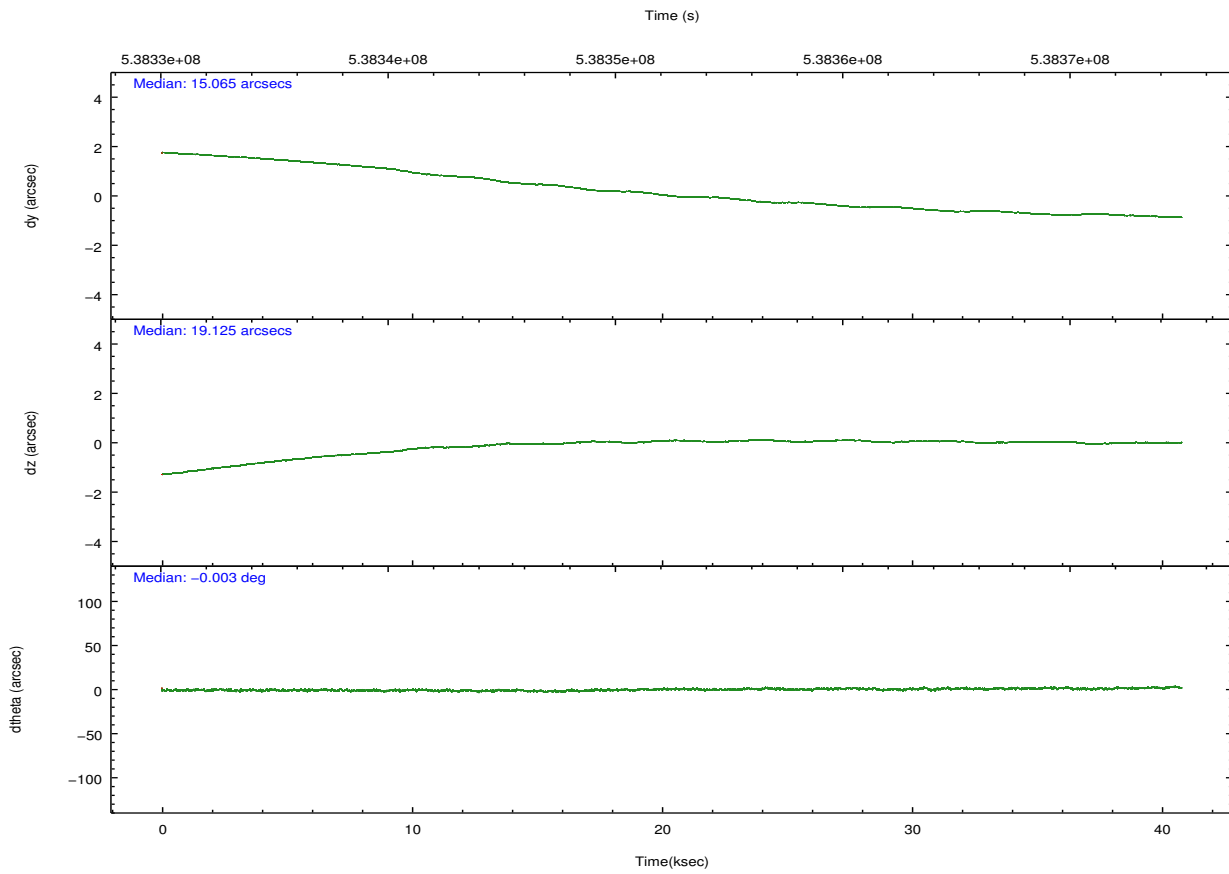
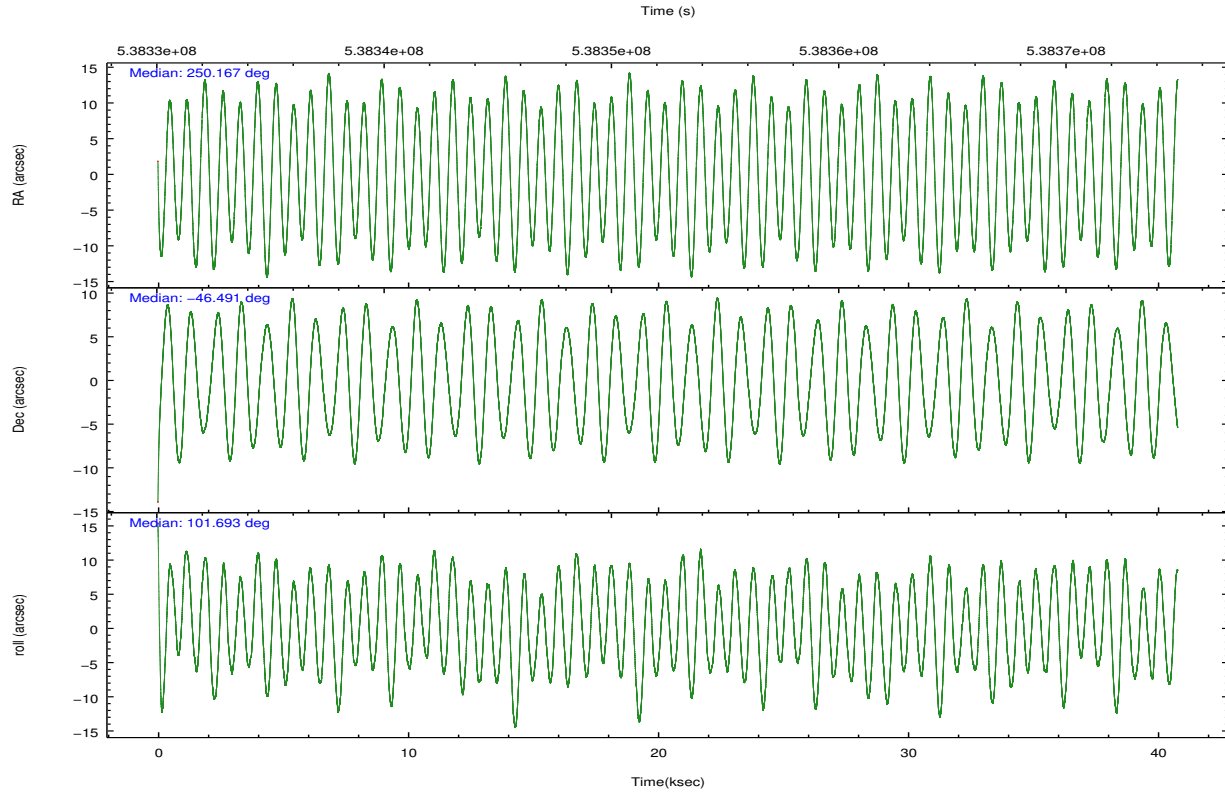
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	10530	23344	11854	12446	11029
	5%	11%	5%	6%	4%
grade 1 events	122	144	140	146	354
	0%	0%	0%	0%	0%
grade 2 events	6060	6751	6021	5675	25623
	3%	3%	2%	2%	9%
grade 3 events	2591	2684	2430	2667	10342
	1%	1%	1%	1%	3%
grade 4 events	2327	2676	2557	2676	10151
	1%	1%	1%	1%	3%
grade 5 events	9061	9785	8645	10376	27425
	4%	4%	4%	5%	10%
grade 6 events	4884	5763	4705	4972	63612
	2%	2%	2%	2%	23%
grade 7 events	148116	150641	166501	159236	123478
	80%	74%	82%	80%	45%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	250.194051	250.167258972397	CCD I2 on	Y	Y
[deg] Pointing Dec	-46.512007	-46.49146378663355	CCD I3 on	Y	Y
[deg] Pointing Roll	101.509286	101.6985396447814	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	N	N
[mm] SIM translation stage pos	-225.694963	-225.7025416751365	CCD S3 on	O1	Y
[mm] SIM translation stage offset	-7.8975	-7.889911327793158	CCD S4 on	N	N
[s] Observation start time (MET)	538332861.184000	538330838.15652	CCD S5 on	N	N
Observation start date	2015-01-22T16:53:14	2015-01-22T16:20:38	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	538372861.184000	538373847.67142	On-chip summing requested	N	N
Observation end date	2015-01-23T03:59:54	2015-01-23T04:17:27	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





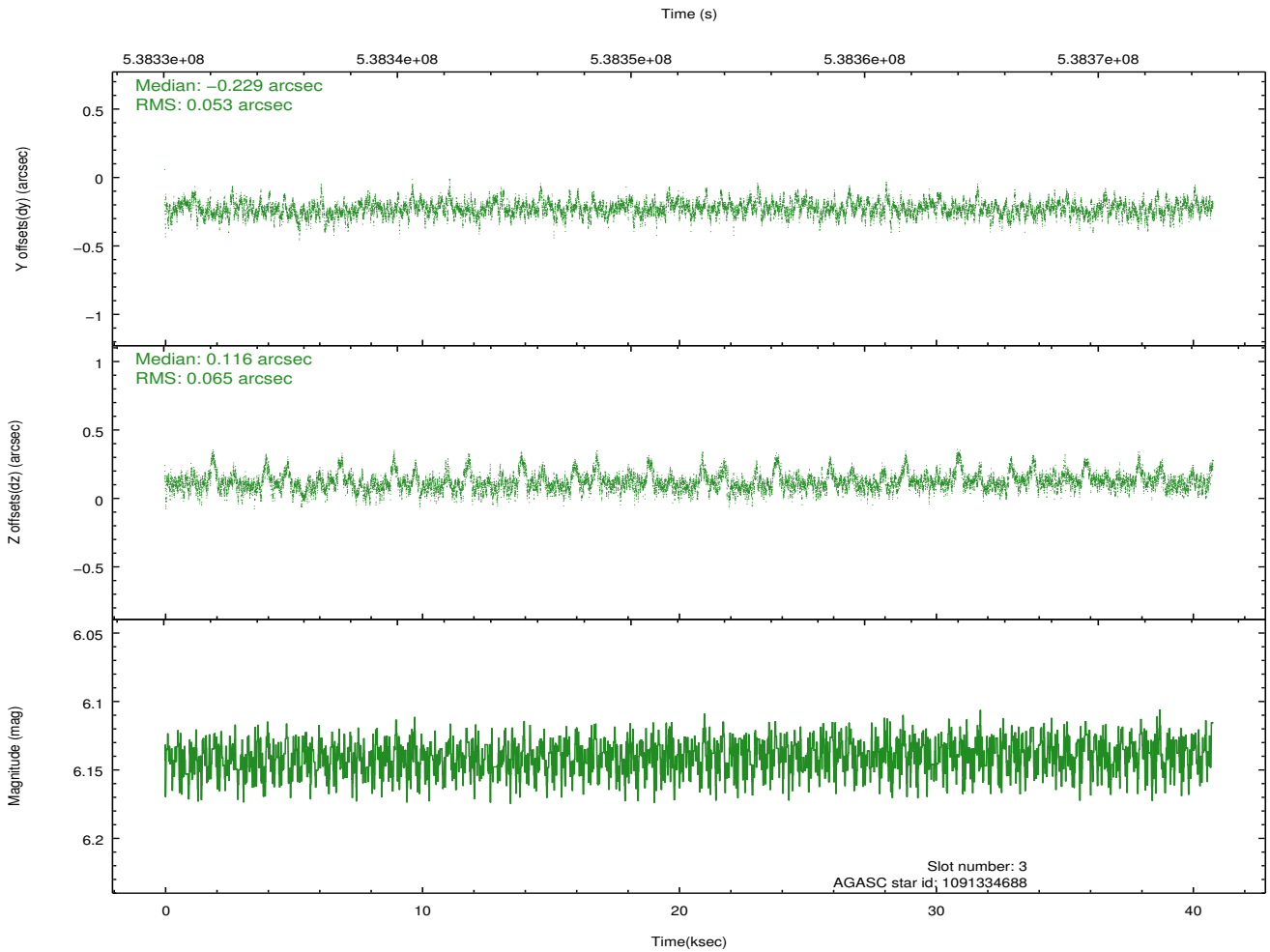
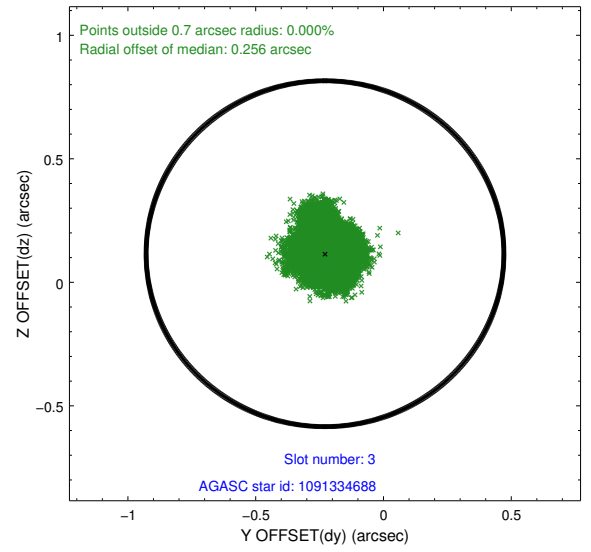
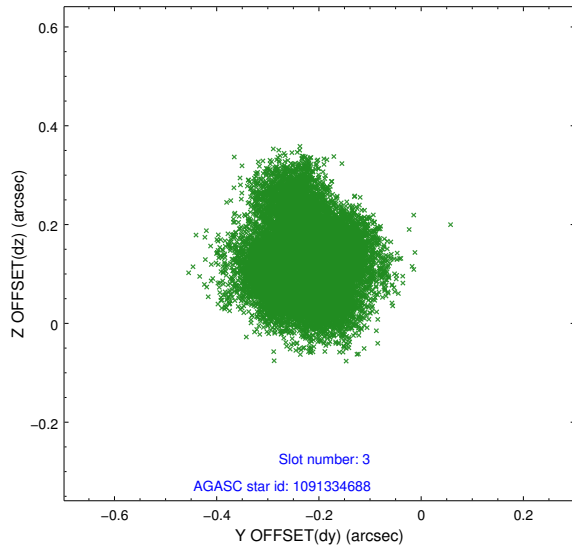
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-2	7.03	9948	-0.170	-0.048	0.016	0.026	0.000000	0.000000	-770.71	-1010.00
1	FID		ACIS-I-4	6.98	9950	0.244	0.107	0.013	0.025	0.000000	0.000000	2143.68	896.30
2	FID		ACIS-I-5	7.07	9949	-0.177	0.011	0.014	0.023	0.000000	0.000000	-1824.15	893.00
3	GUIDE	used	1091334688	6.14	19898	-0.229	0.116	0.088	0.153	250.764858	-46.070295	1268.73	-1712.80
4	GUIDE	used	1091838488	9.42	19884	0.211	0.574	0.144	0.243	251.127983	-46.881927	-1776.31	-1982.88
5	GUIDE	used	1091193912	8.90	19887	-0.188	0.008	0.113	0.178	250.208472	-45.834358	2383.11	-521.87
6	GUIDE	used	1091704704	10.09	19873	0.212	-0.343	0.205	0.326	249.457504	-47.039620	-1508.80	2151.10
7	GUIDE	used	1091706496	8.39	19888	0.006	-0.365	0.094	0.154	249.546894	-47.245288	-2277.80	2077.67

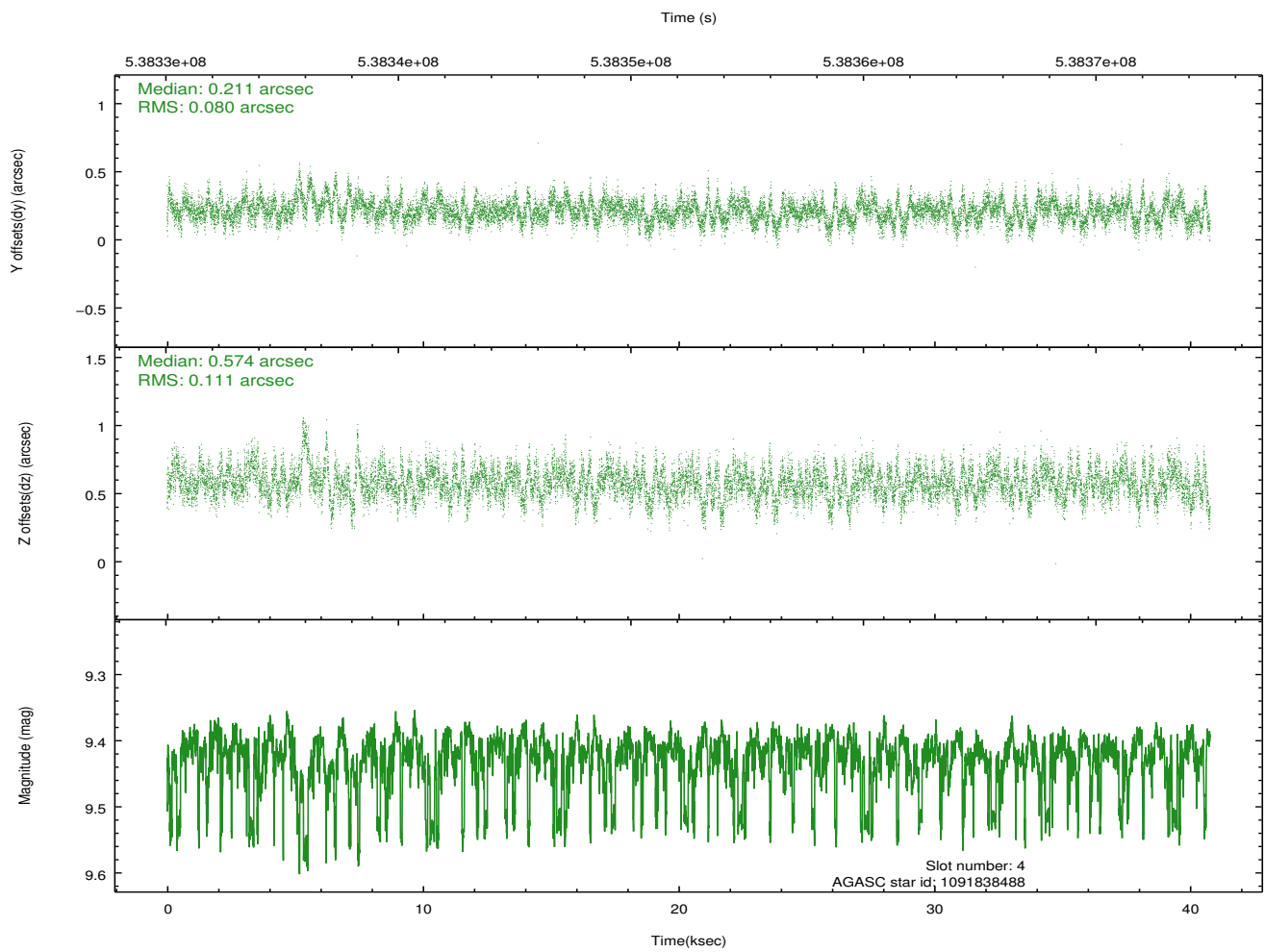
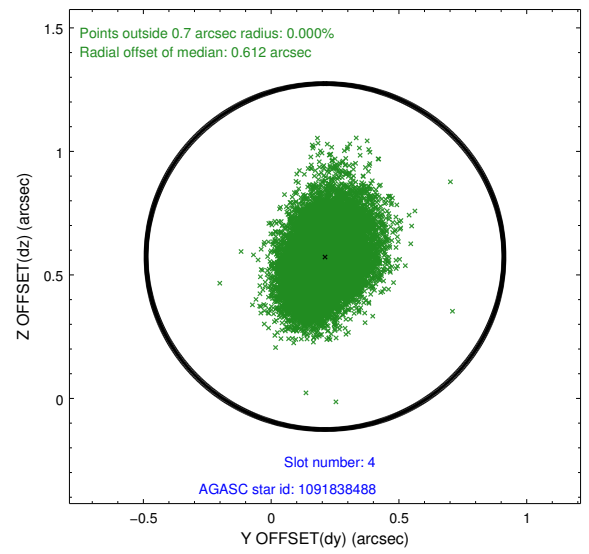
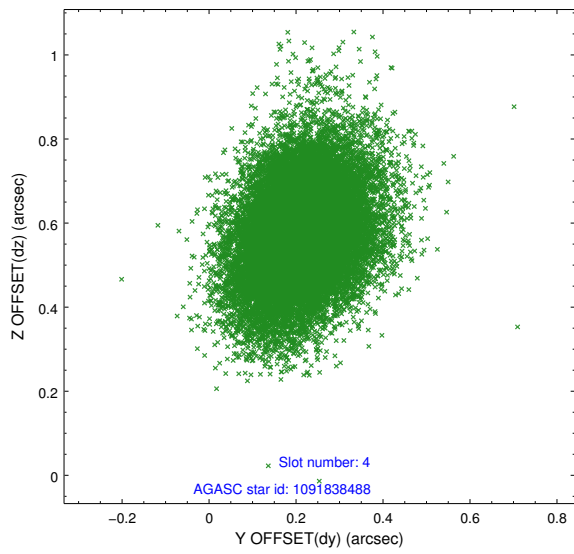
∞

## 2.4 Star Slots

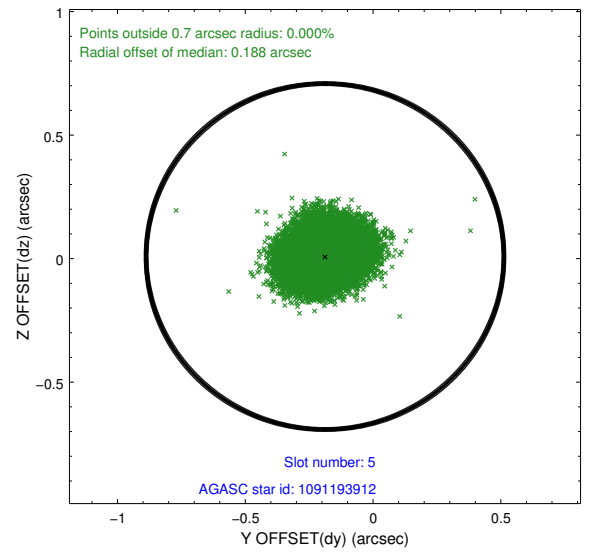
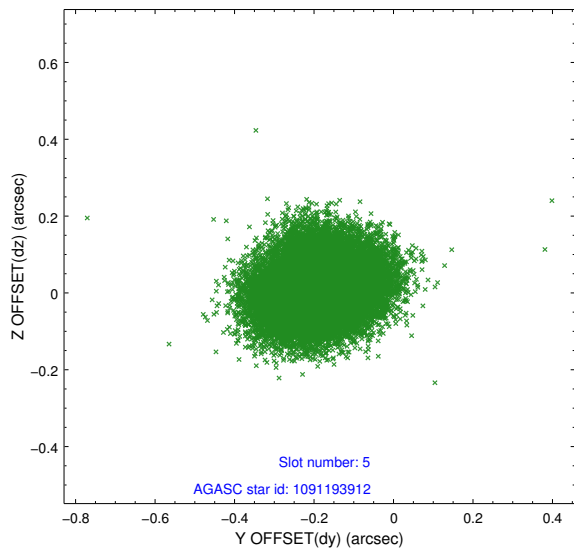
### 2.4.1 Slot 3



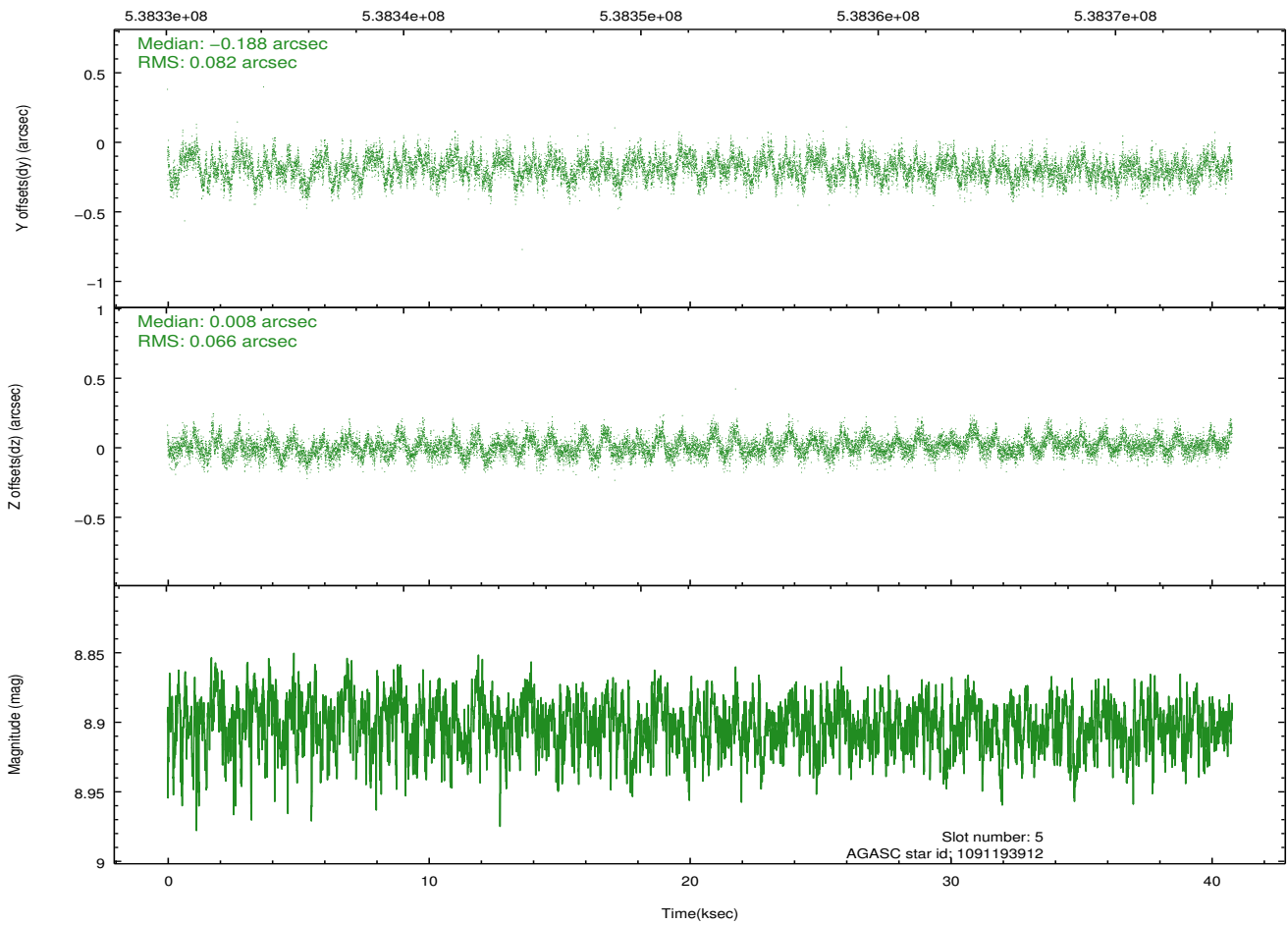
## 2.4.2 Slot 4



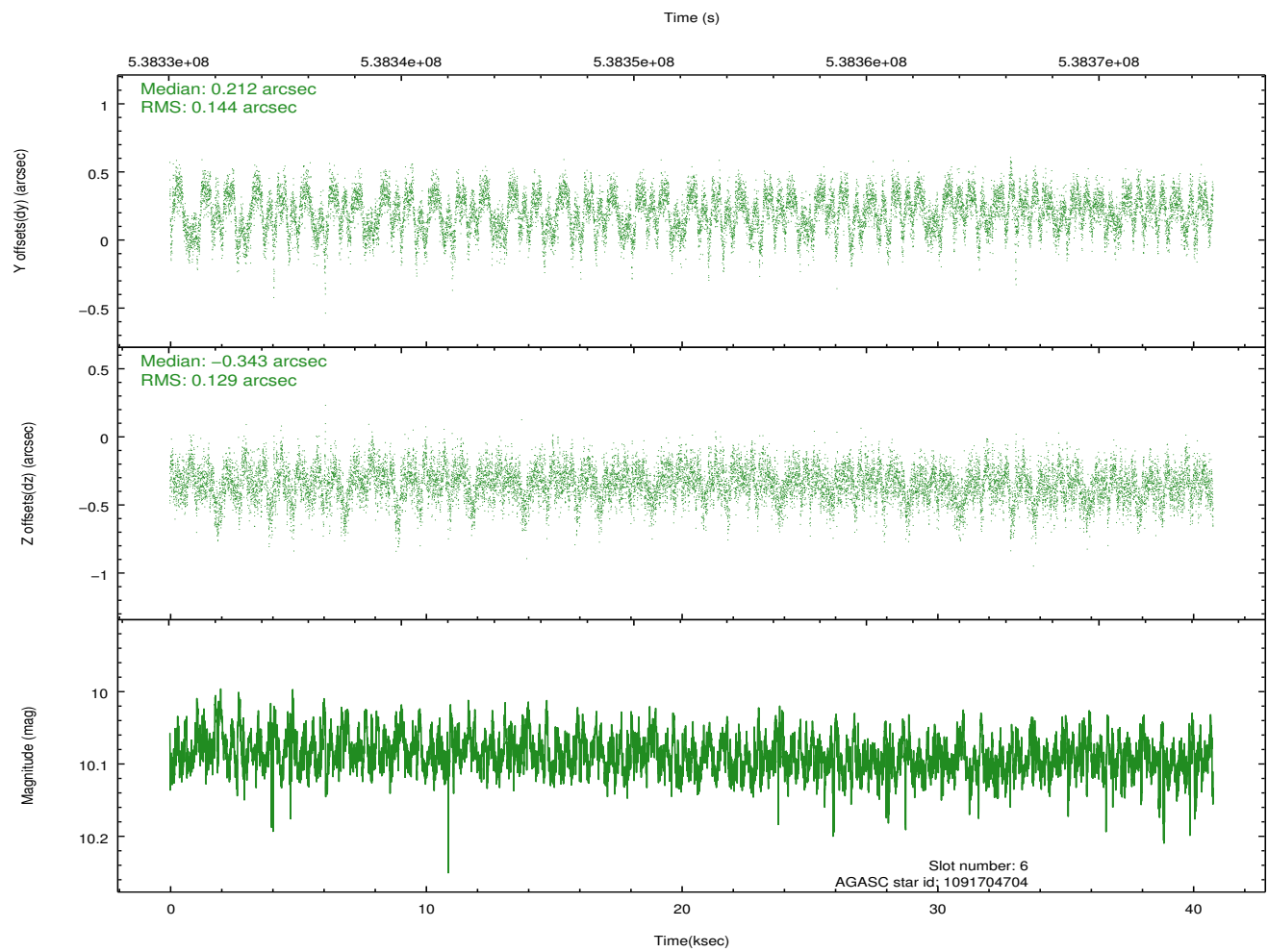
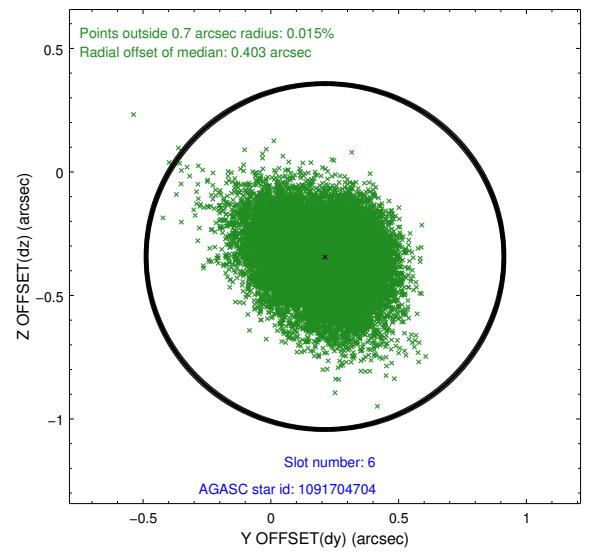
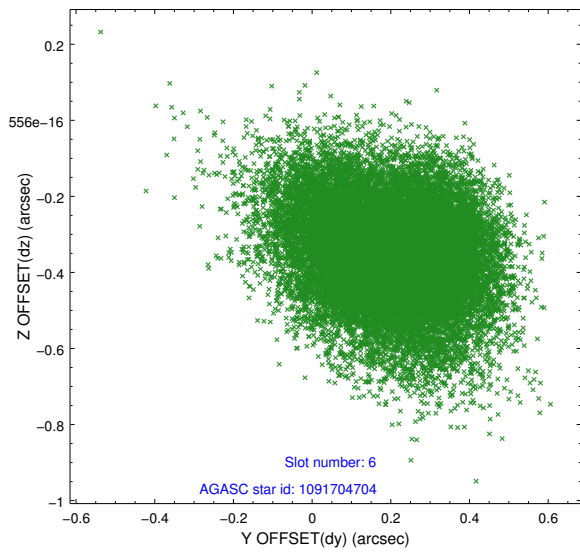
### 2.4.3 Slot 5



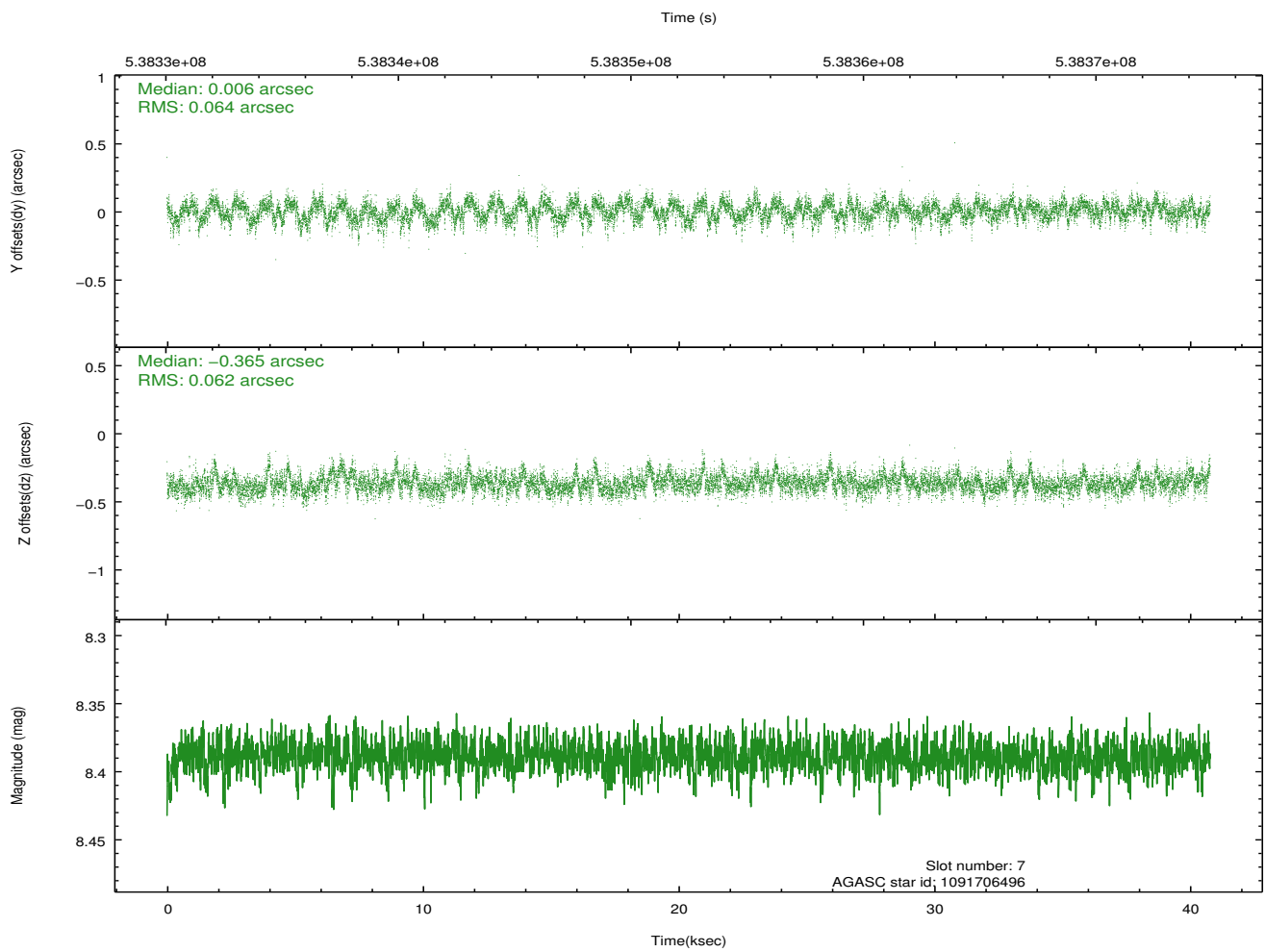
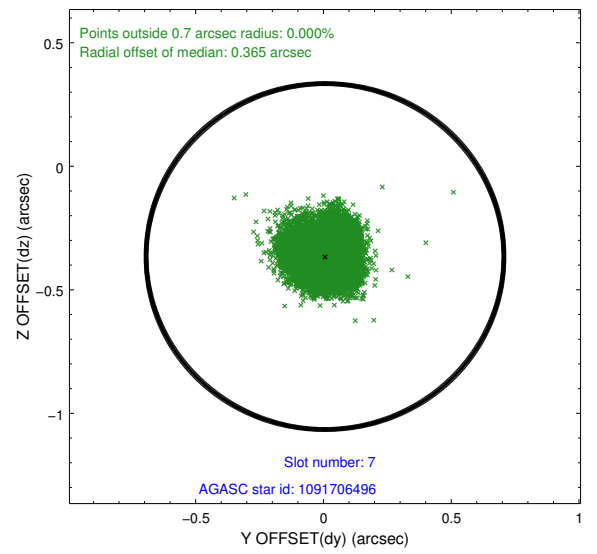
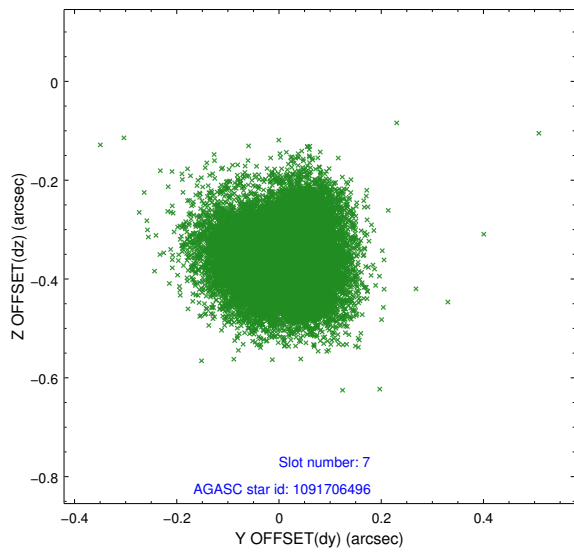
Time (s)



## 2.4.4 Slot 6

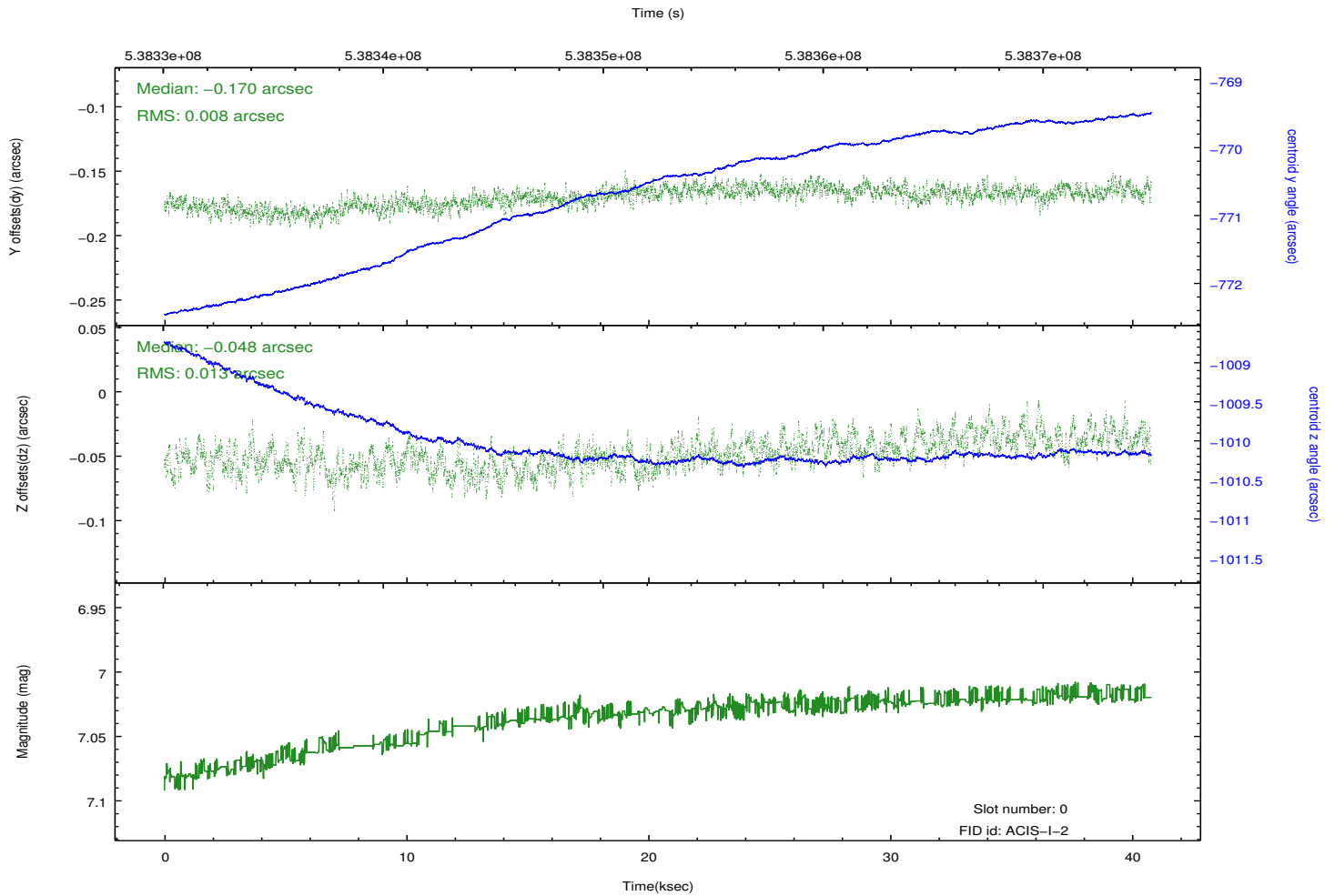
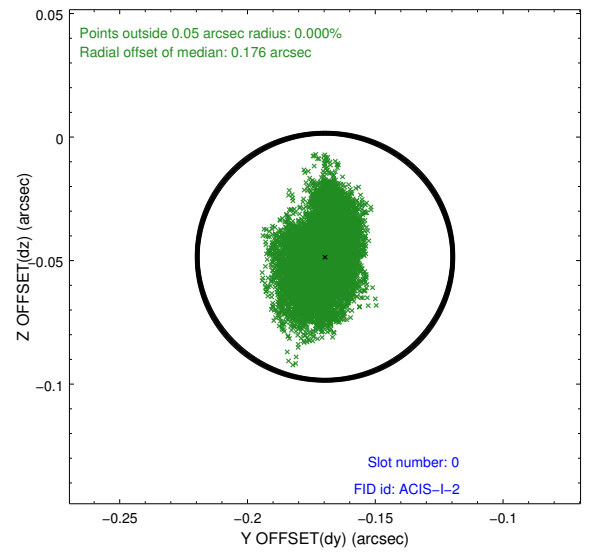
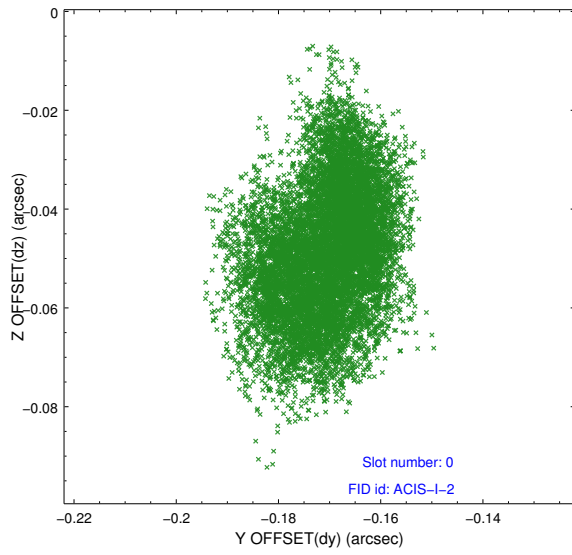


## 2.4.5 Slot 7

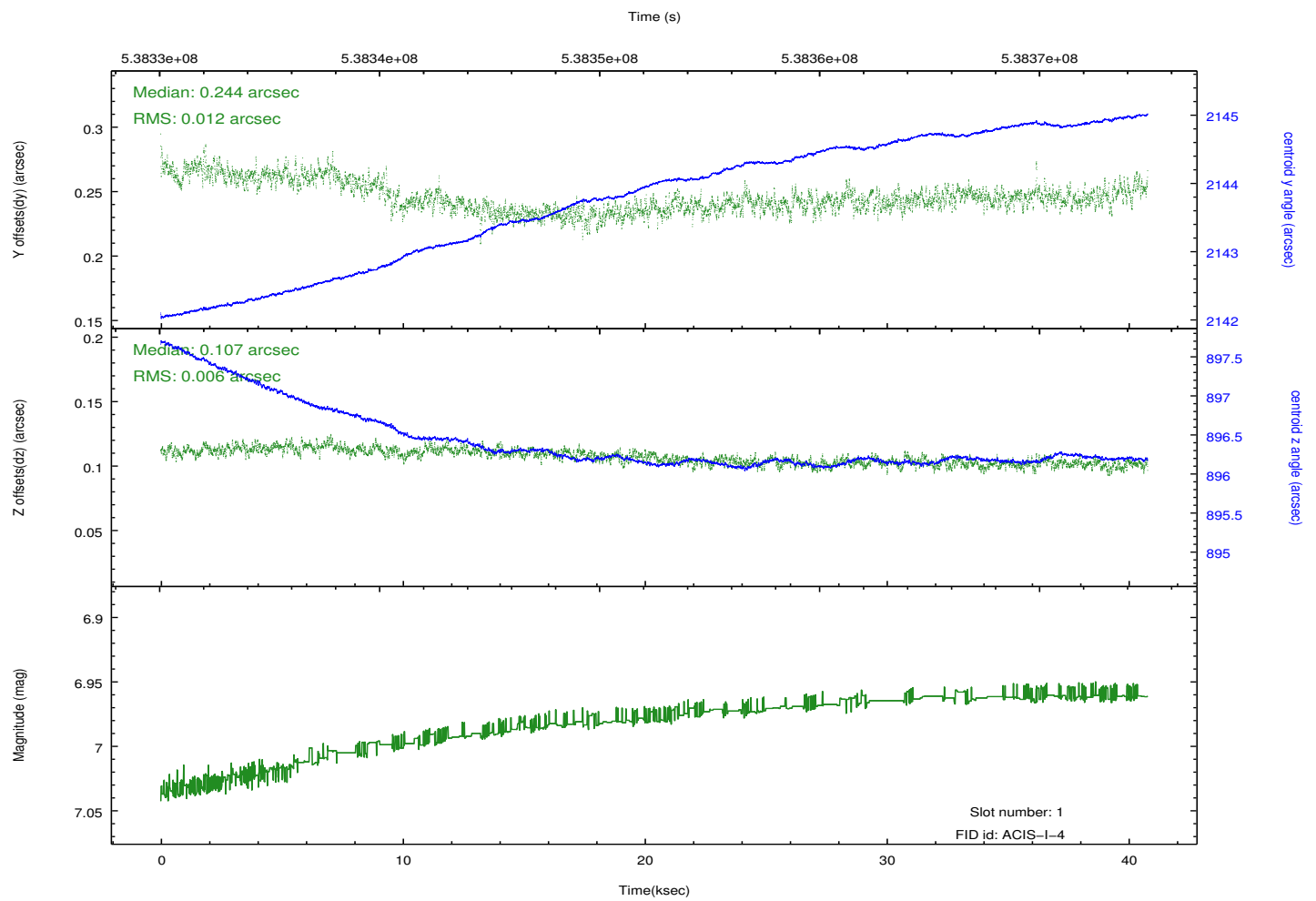
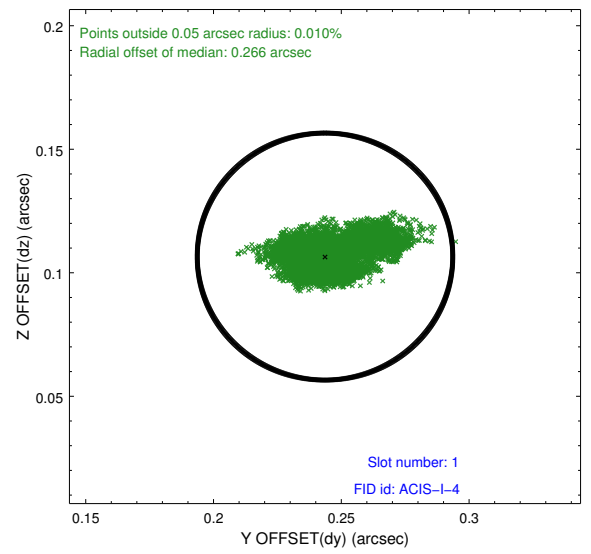
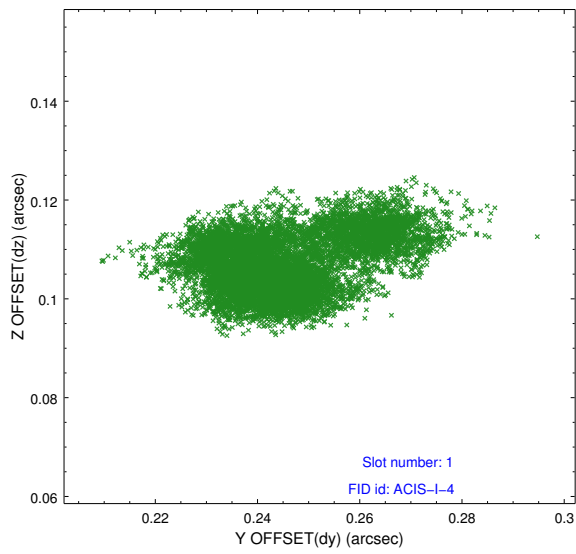


## 2.5 FID Slots

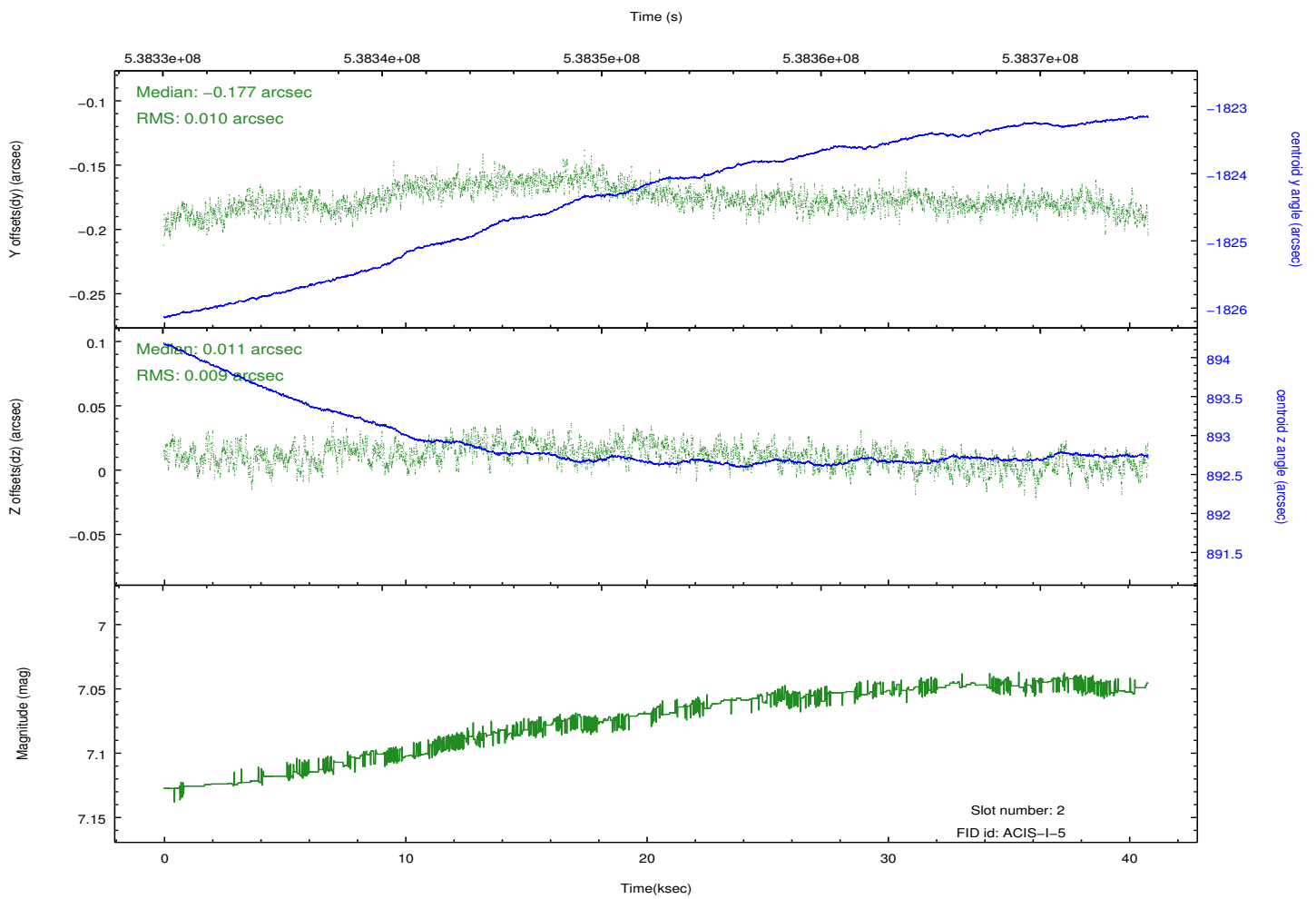
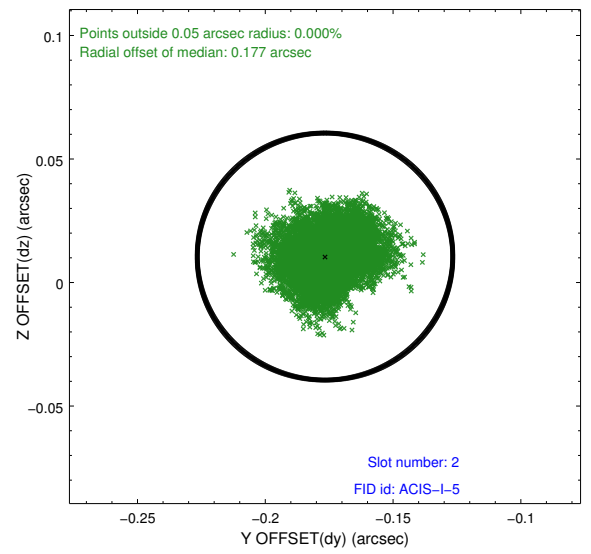
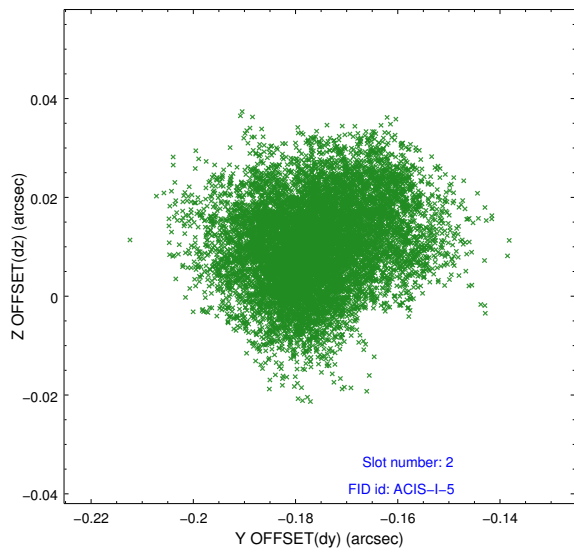
### 2.5.1 Slot 0



## 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)	2015.01.23
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	40.061259317994

### A.2 Comments