

# V&V Reference Report

## L2 ASCDS Version : 10.4.3.1

Observation 17695 - L2 Version 1  
Chandra X-Ray Center

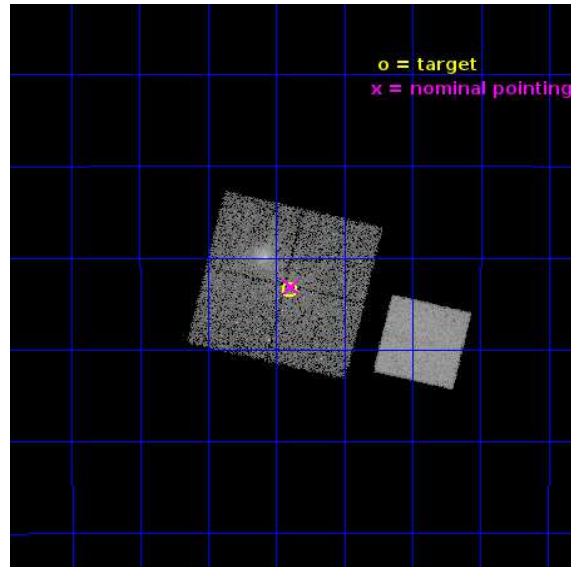
L2 Processing Date : May 30 2016

## 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

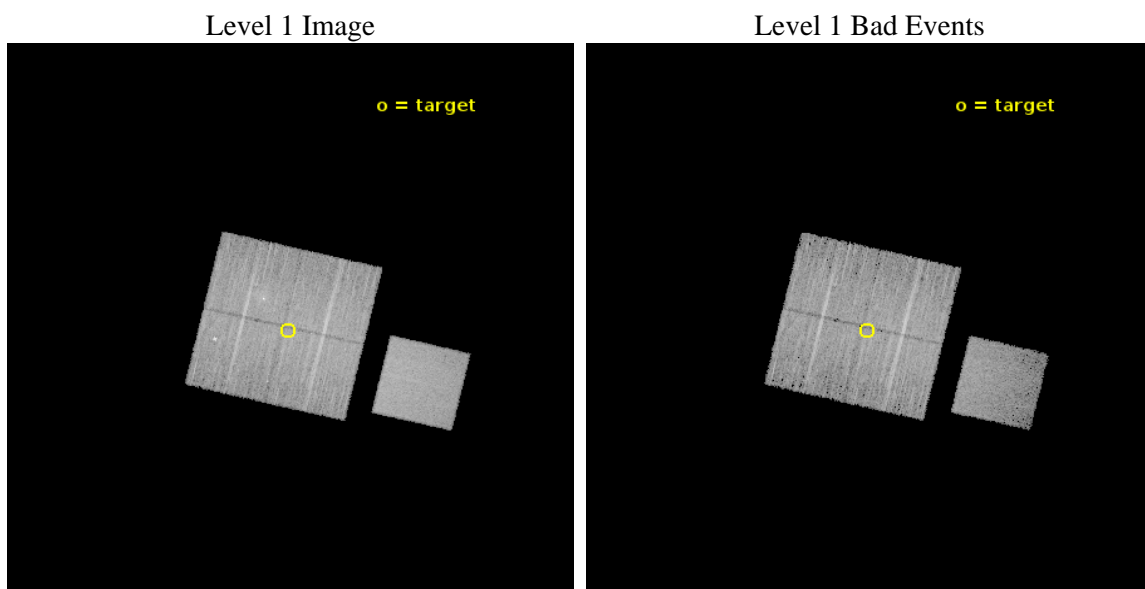
seq_num	201023	Sequence number
obs_id	17695	Observation id
title	X-rays from the Young Massive Cluster Cl 1813-178	Proposal title
observer	Gordon Garmire	Principal investigator
object	Cl 1813-178	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	273.35125	Observer's specified target RA [deg]
dec_targ	-17.891889	Observer's specified target Dec [deg]
ra_nom	273.34698928499	Nominal RA [deg]
dec_nom	-17.885731517639	Nominal Dec [deg]
roll_nom	103.31261329448	Nominal Roll [deg]
revision	1	Processing version of data
ontime	13057.200100541	Sum of GTIs [s]
livetime	12886.598168657	Livetime [s]
ontime0	13050.917959929	Sum of GTIs [s]
ontime1	13057.200100541	Sum of GTIs [s]
ontime2	13054.059010148	Sum of GTIs [s]
ontime3	13057.200100541	Sum of GTIs [s]
ontime7	13057.200100541	Sum of GTIs [s]
l2events	76712	Number of level 2 events



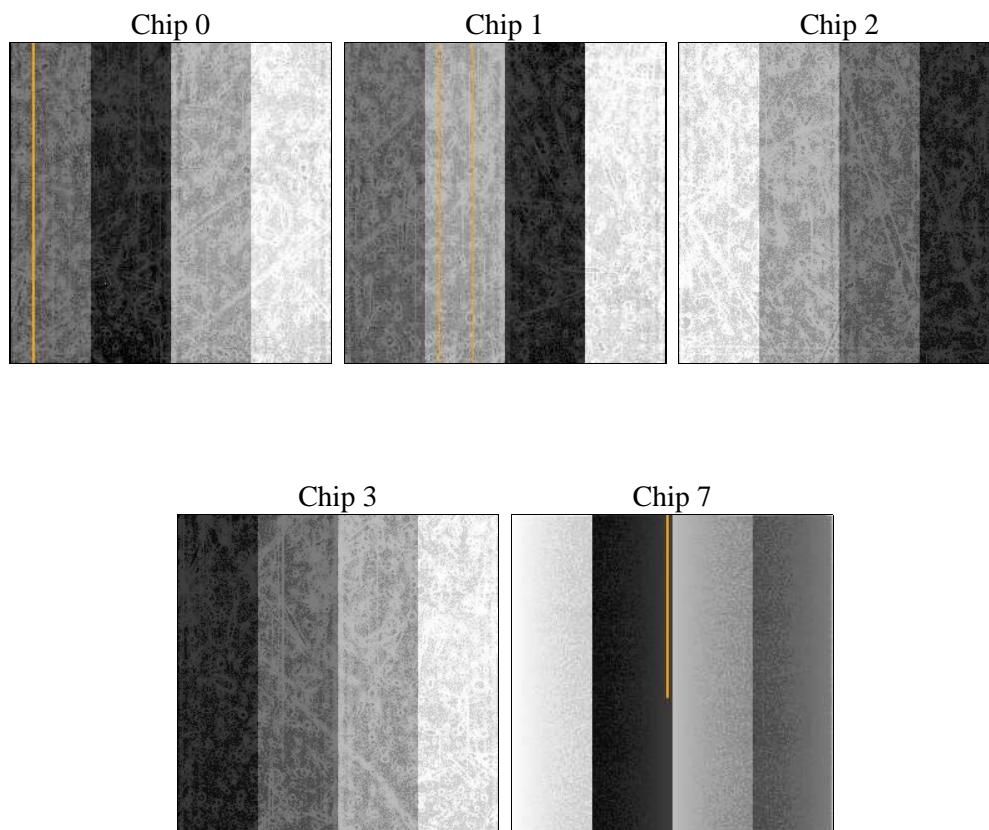
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	13000.000000	[s] Scheduled observation exposure time
ascdsver	10.4.3.1	Processing system revision	ontime	13057.200100541	Sum of GTIs [s]
caldbver	4.7.1	&#160	ontime0	13050.917959929	Sum of GTIs [s]
date	2016-05-30T17:55:29	Date and time of file creation	ontime1	13057.200100541	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	13054.059010148	Sum of GTIs [s]
			ontime3	13057.200100541	Sum of GTIs [s]
			ontime7	13057.200100541	Sum of GTIs [s]
			l1events	395602	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	76531	72925	79899	80257	85990
rejected events	62772	61594	69918	70418	46123
rejected %	82%	84%	87%	87%	53%

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	6694	4997	4429	4326	3737
	8%	6%	5%	5%	4%
grade 1 events	60	50	53	48	135
	0%	0%	0%	0%	0%
grade 2 events	2882	2312	2134	1981	8925
	3%	3%	2%	2%	10%
grade 3 events	1106	1028	902	944	3174
	1%	1%	1%	1%	3%
grade 4 events	1015	983	911	886	3156
	1%	1%	1%	1%	3%
grade 5 events	2870	2877	2571	3335	8564
	3%	3%	3%	4%	9%
grade 6 events	2065	2018	1610	1712	20894
	2%	2%	2%	2%	24%
grade 7 events	59839	58660	67289	67025	37405
	78%	80%	84%	83%	43%

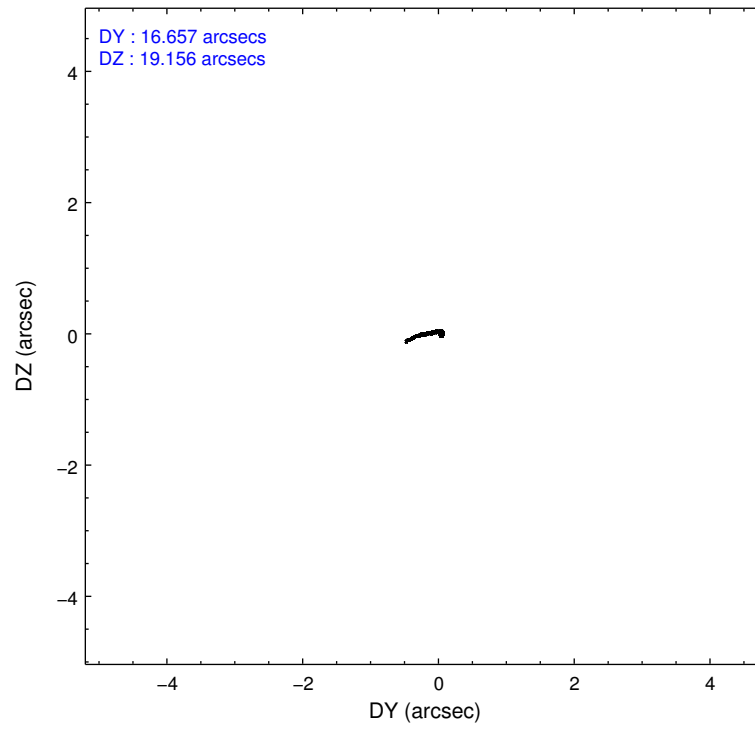
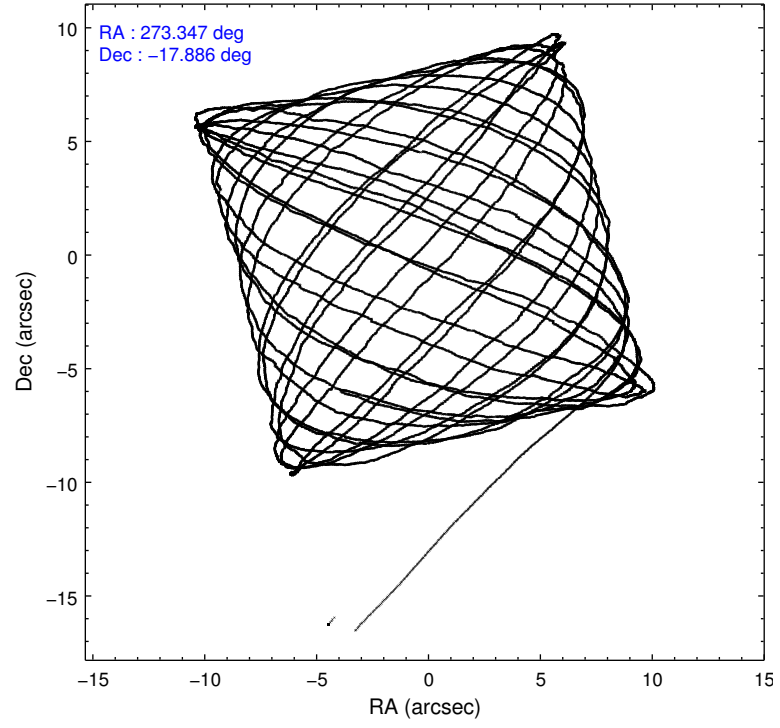


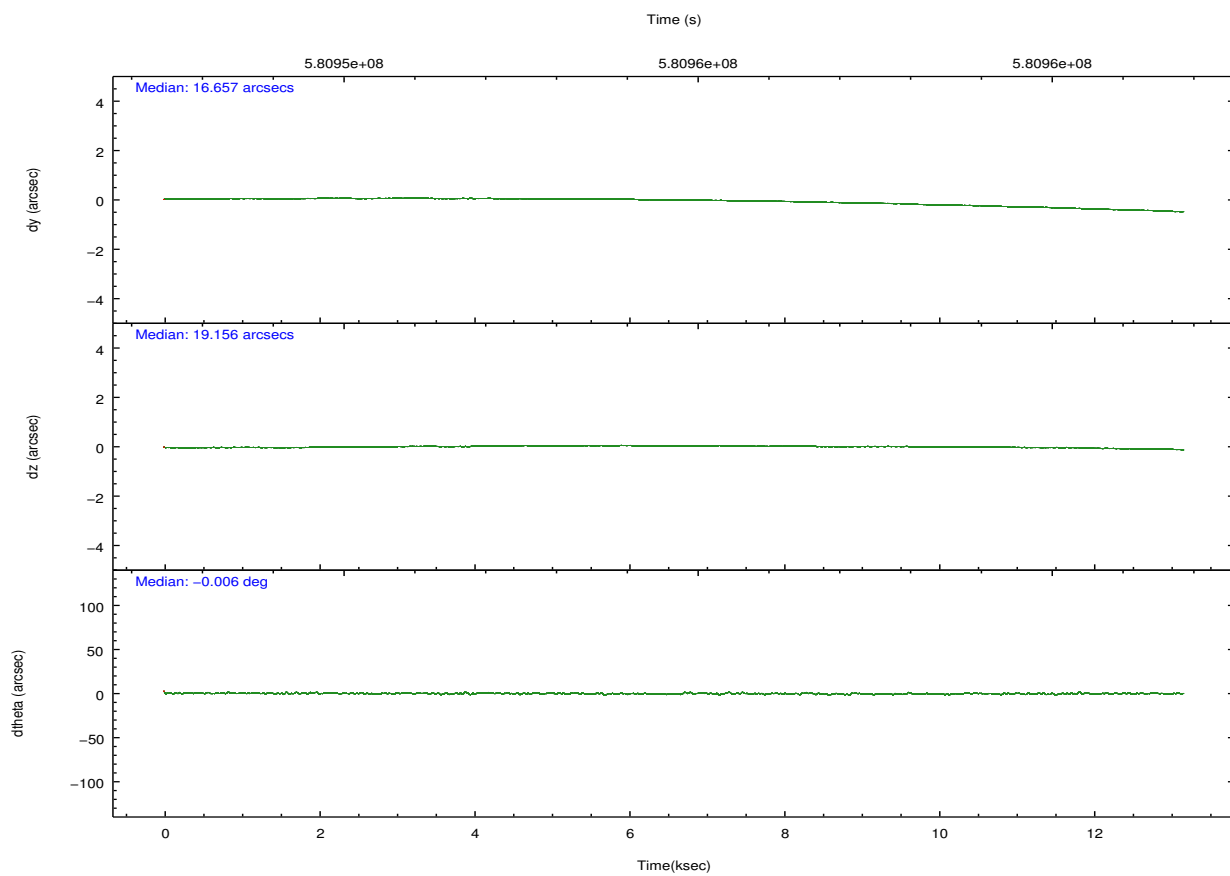
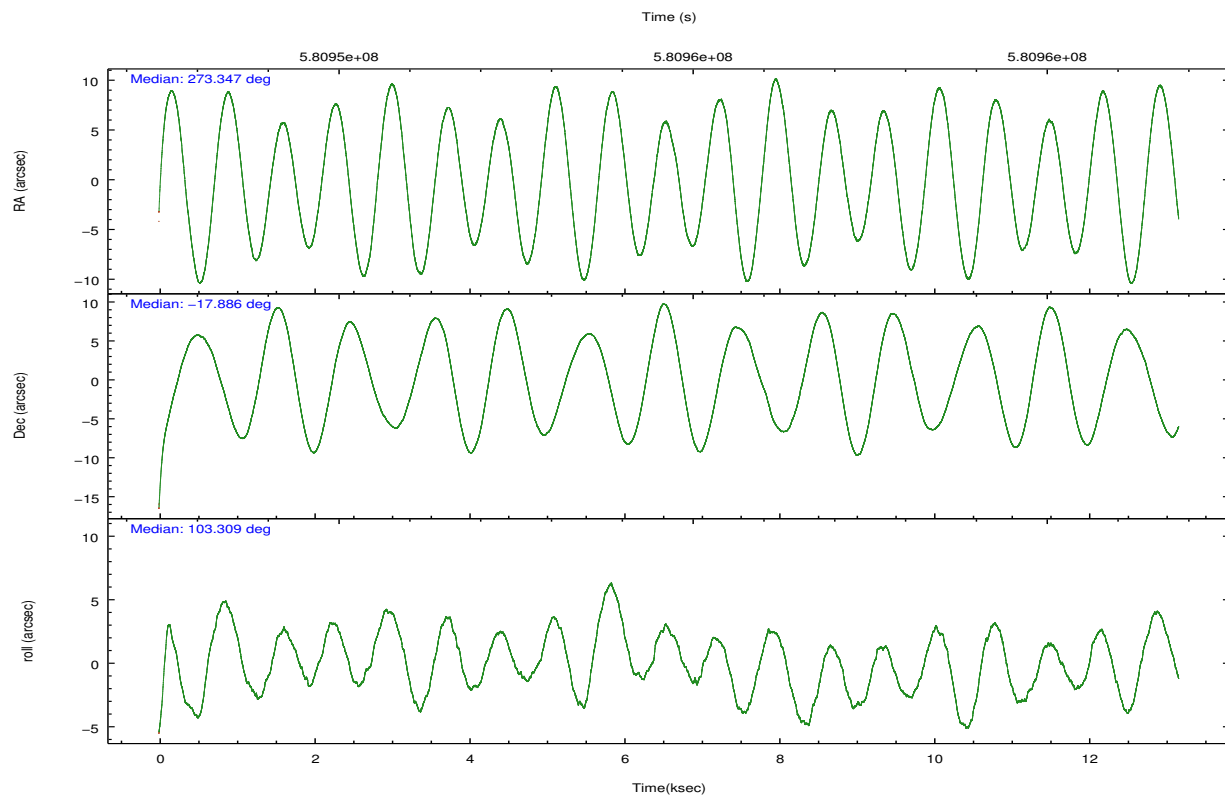
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-01237	ACIS-01237
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	273.366933	273.3469892849926
[deg] Pointing Dec	-17.905720	-17.88573151763897
[deg] Pointing Roll	103.110064	103.3126132944769
[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)	580948245.184000	580947138.6764801
Observation start date	2016-05-29T22:29:37	2016-05-29T22:12:18
[s] Observation end time (MET)	580961245.184000	580962209.76484
Observation end date	2016-05-30T02:06:17	2016-05-30T02:23:29
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	N
CCD S3 on	O2	Y
CCD S4 on	N	N
CCD S5 on	N	N
Number of optional ACIS chips dropped	1	1
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



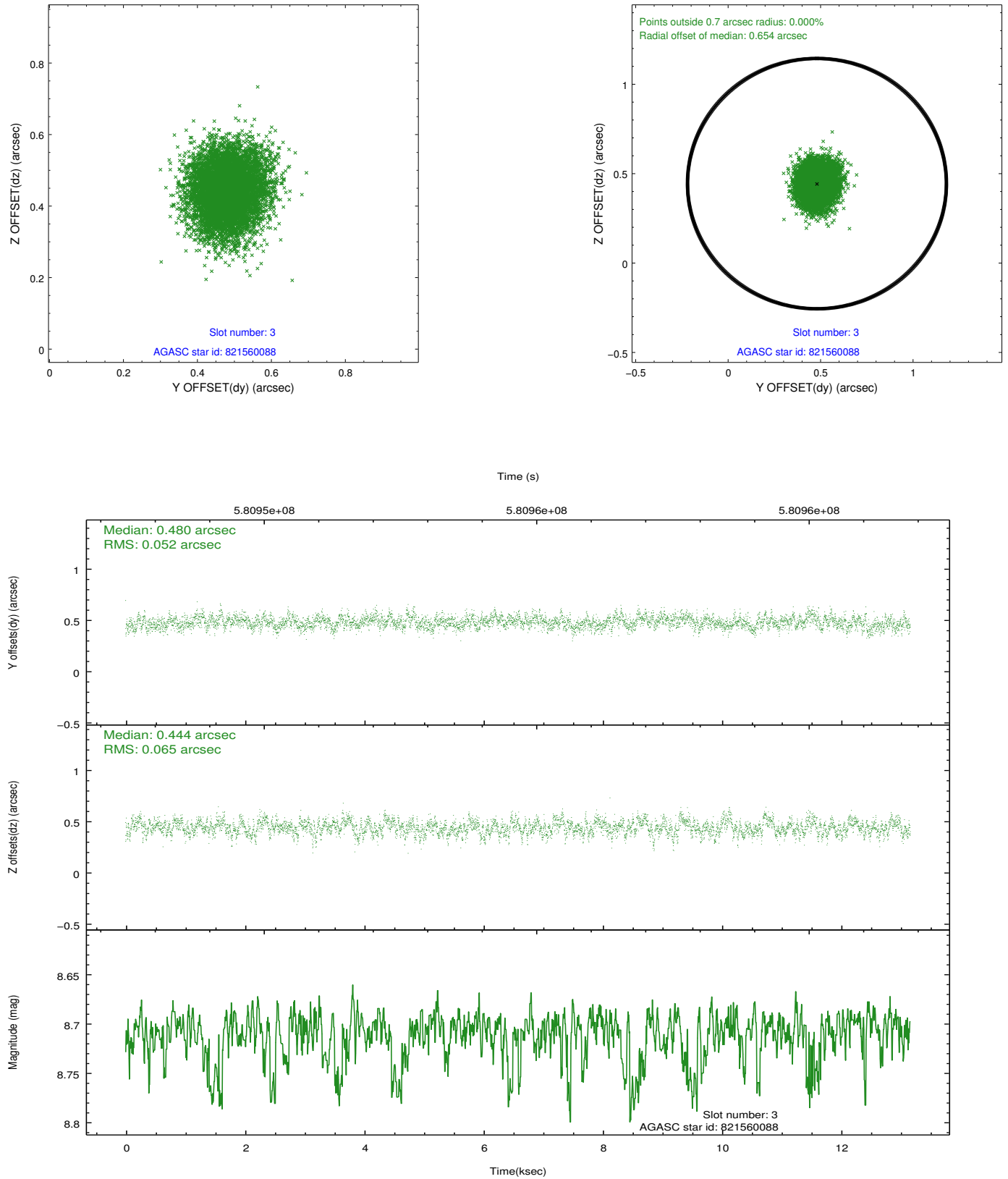


### Slot Statistics

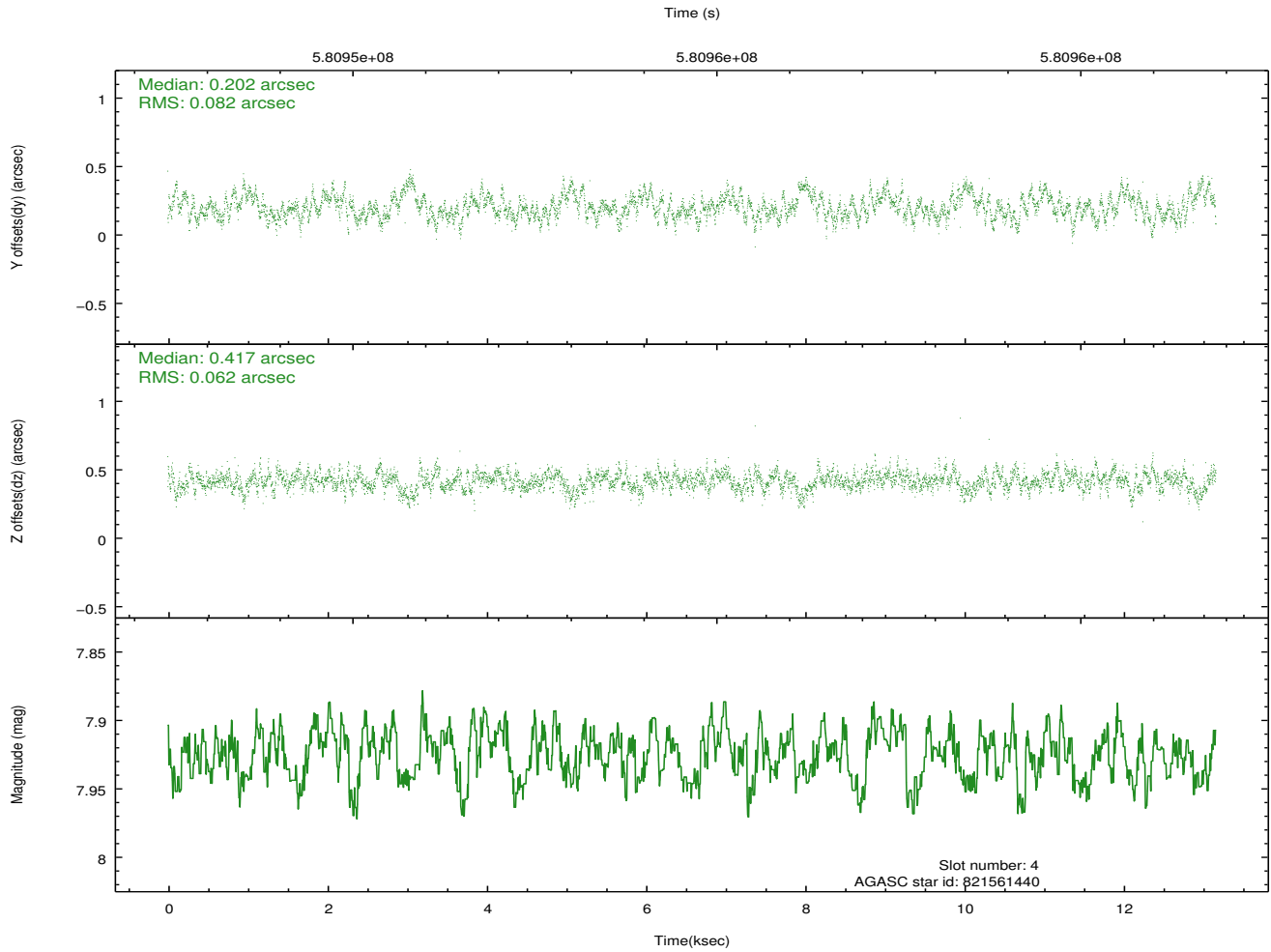
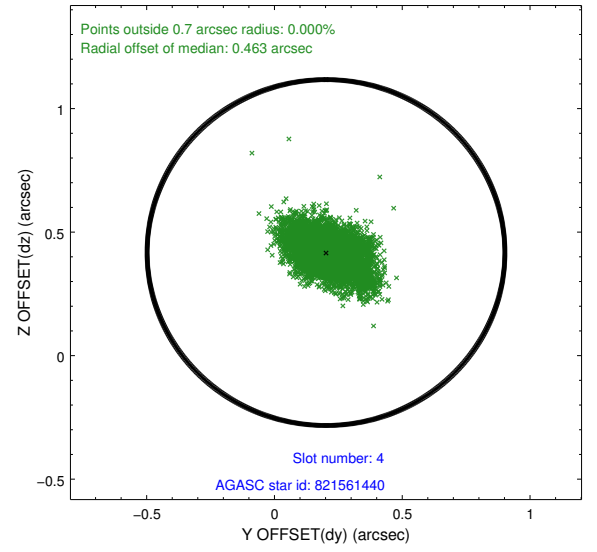
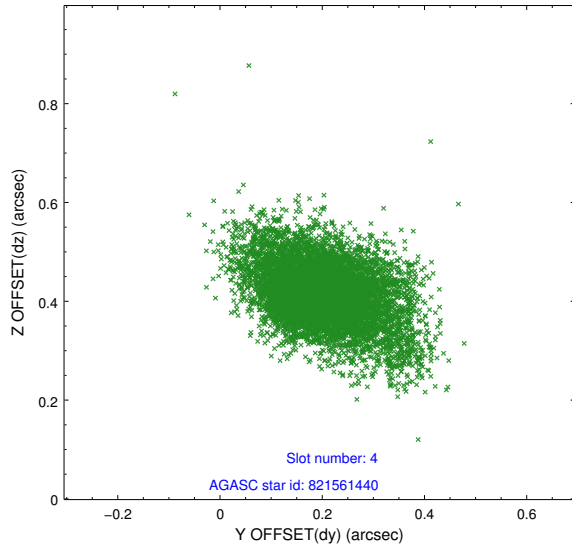
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.26	3212	-0.060	-0.030	0.009	0.016	0.000000	0.000000	922.83	-842.83
1	FID		ACIS-I-4	7.20	3212	0.401	0.073	0.011	0.017	0.000000	0.000000	2143.42	1056.97
2	FID		ACIS-I-5	7.24	3212	-0.439	0.027	0.009	0.016	0.000000	0.000000	-1825.20	1054.94
3	GUIDE	used	821560088	8.71	6417	0.480	0.444	0.089	0.143	273.864625	-18.357017	-1969.39	-1286.70
4	GUIDE	used	821561440	7.93	6422	0.202	0.417	0.105	0.188	273.991252	-17.607934	555.11	-2328.35
5	GUIDE	used	821561928	8.17	6421	0.129	0.051	0.090	0.147	273.412393	-18.388173	-1726.24	242.49
6	GUIDE	used	821570064	6.60	6423	-0.441	-0.407	0.066	0.109	273.185111	-17.414521	1863.24	207.18
7	GUIDE	used	821569872	8.40	6419	-0.375	-0.507	0.095	0.147	272.633264	-17.757585	1085.31	2329.76

## 2.4 Star Slots

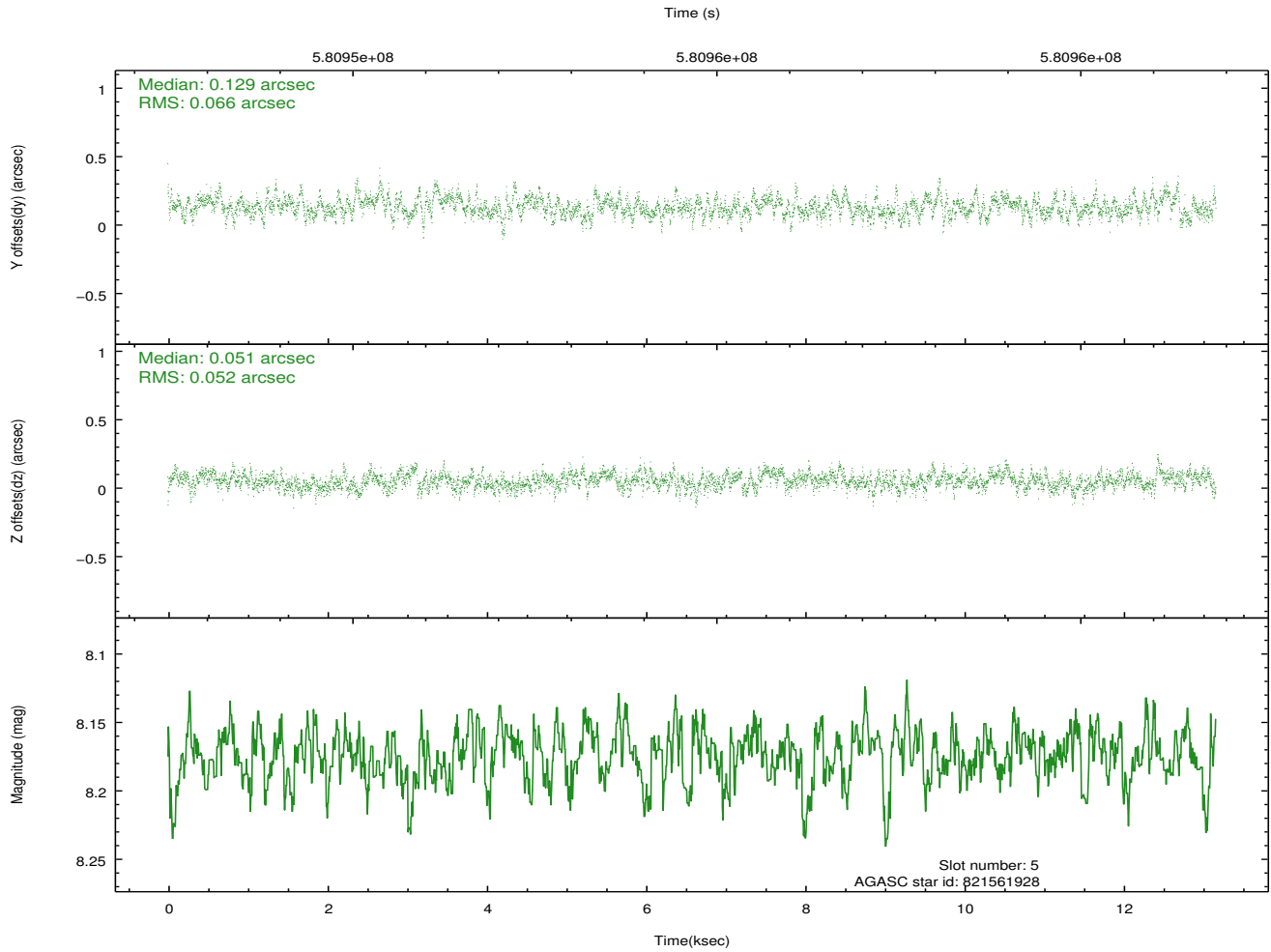
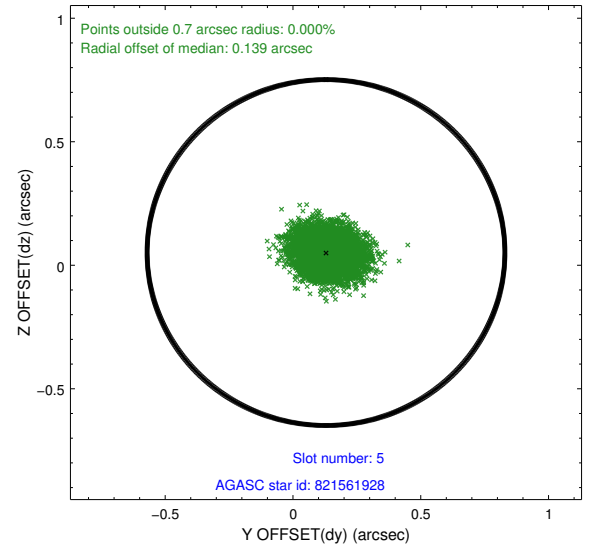
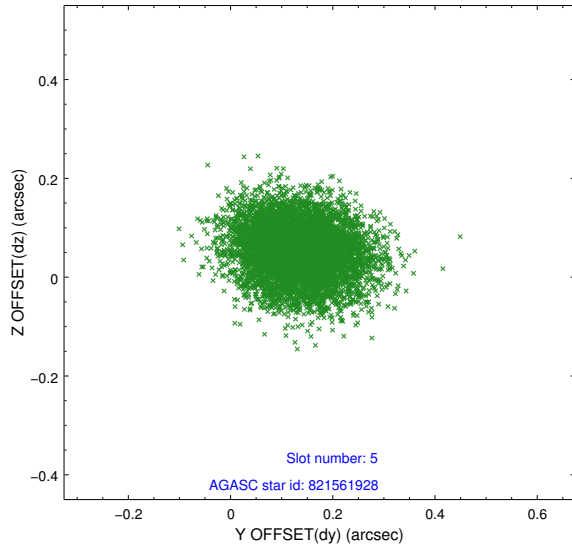
### 2.4.1 Slot 3



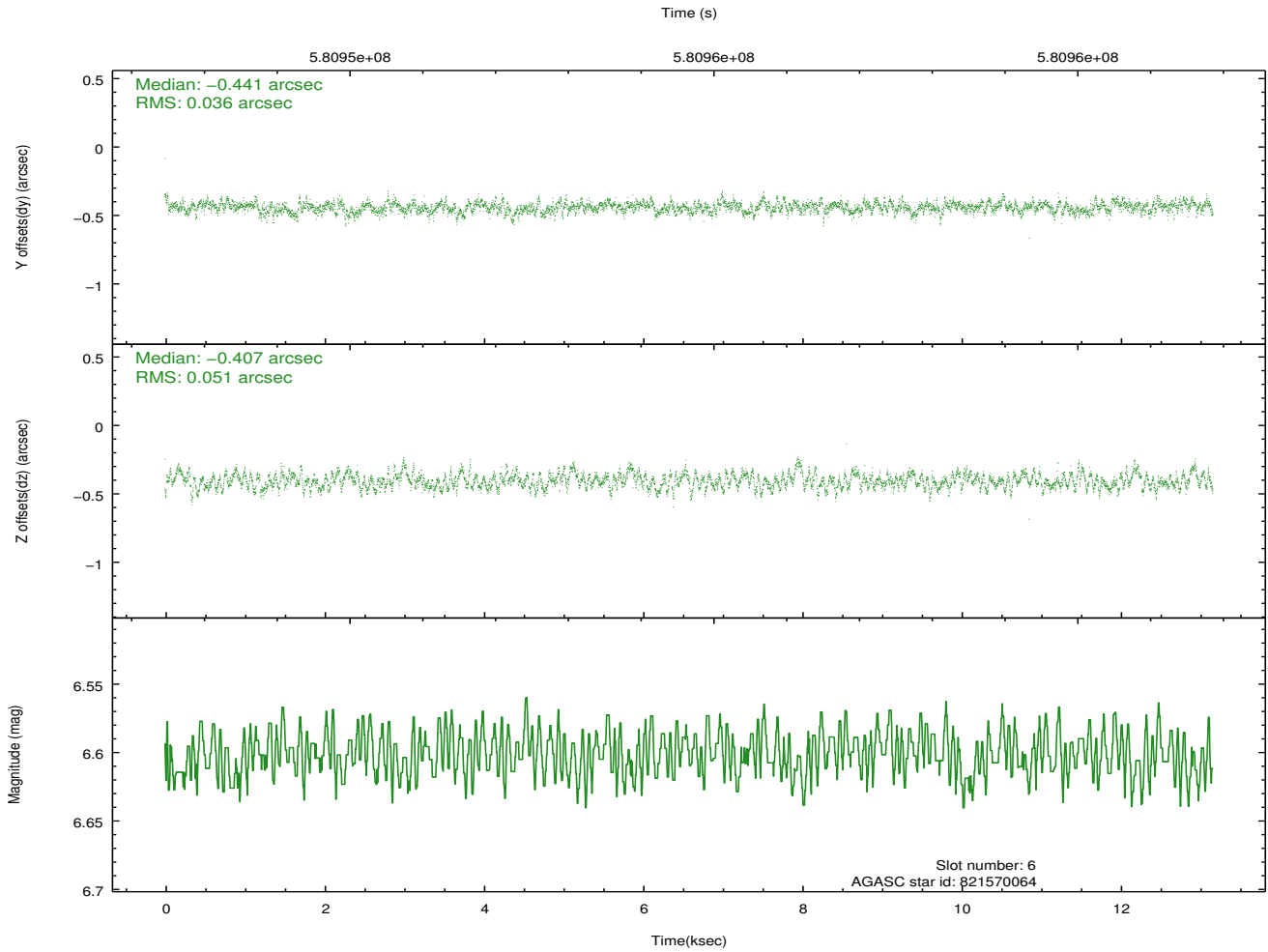
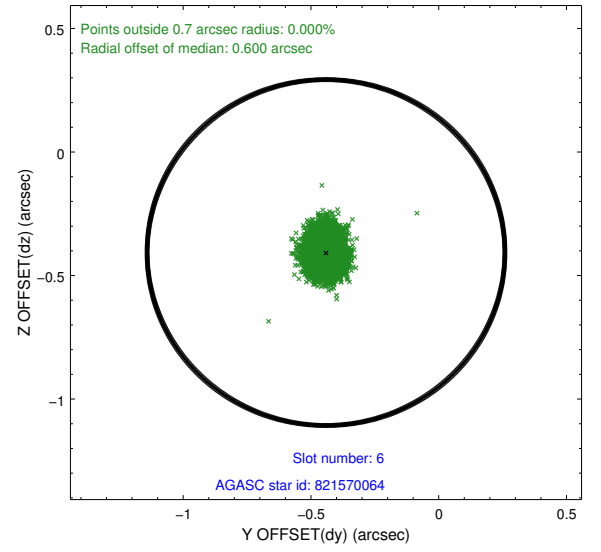
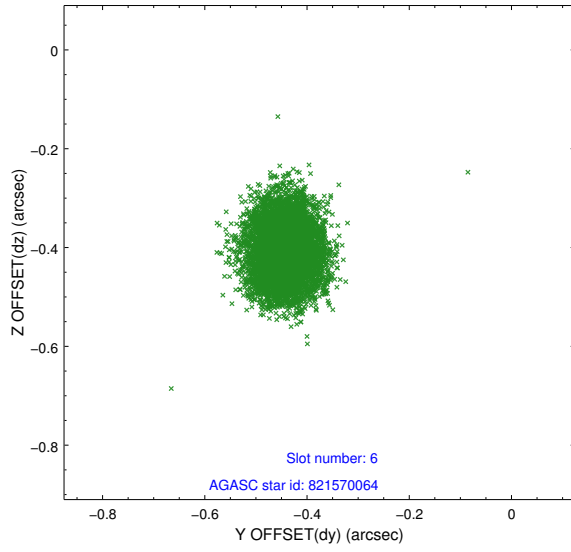
## 2.4.2 Slot 4



### 2.4.3 Slot 5

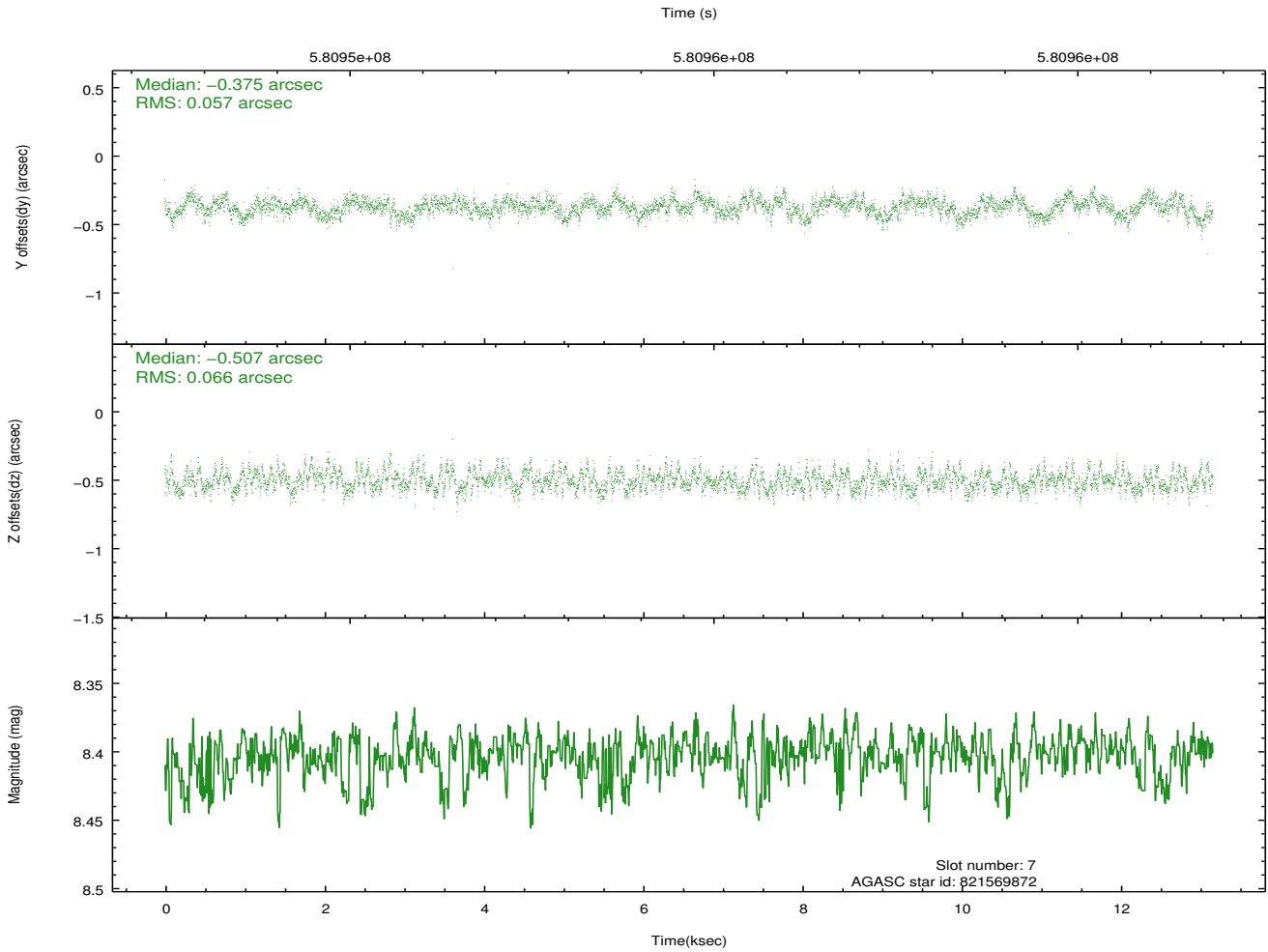
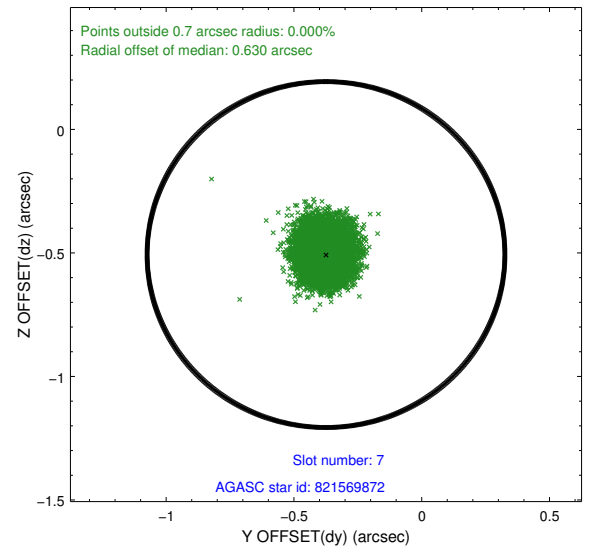
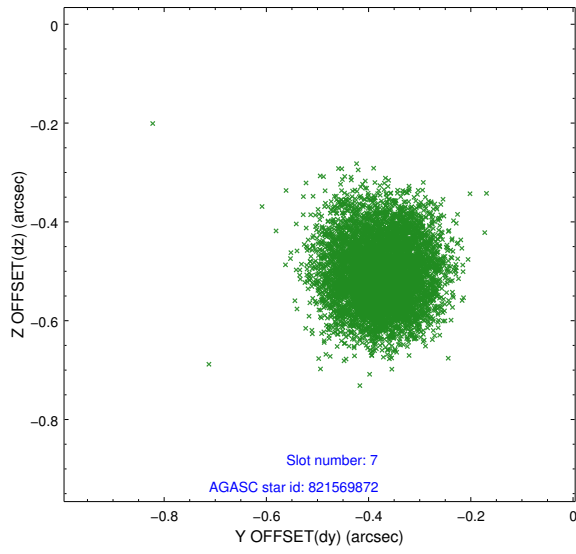


## 2.4.4 Slot 6



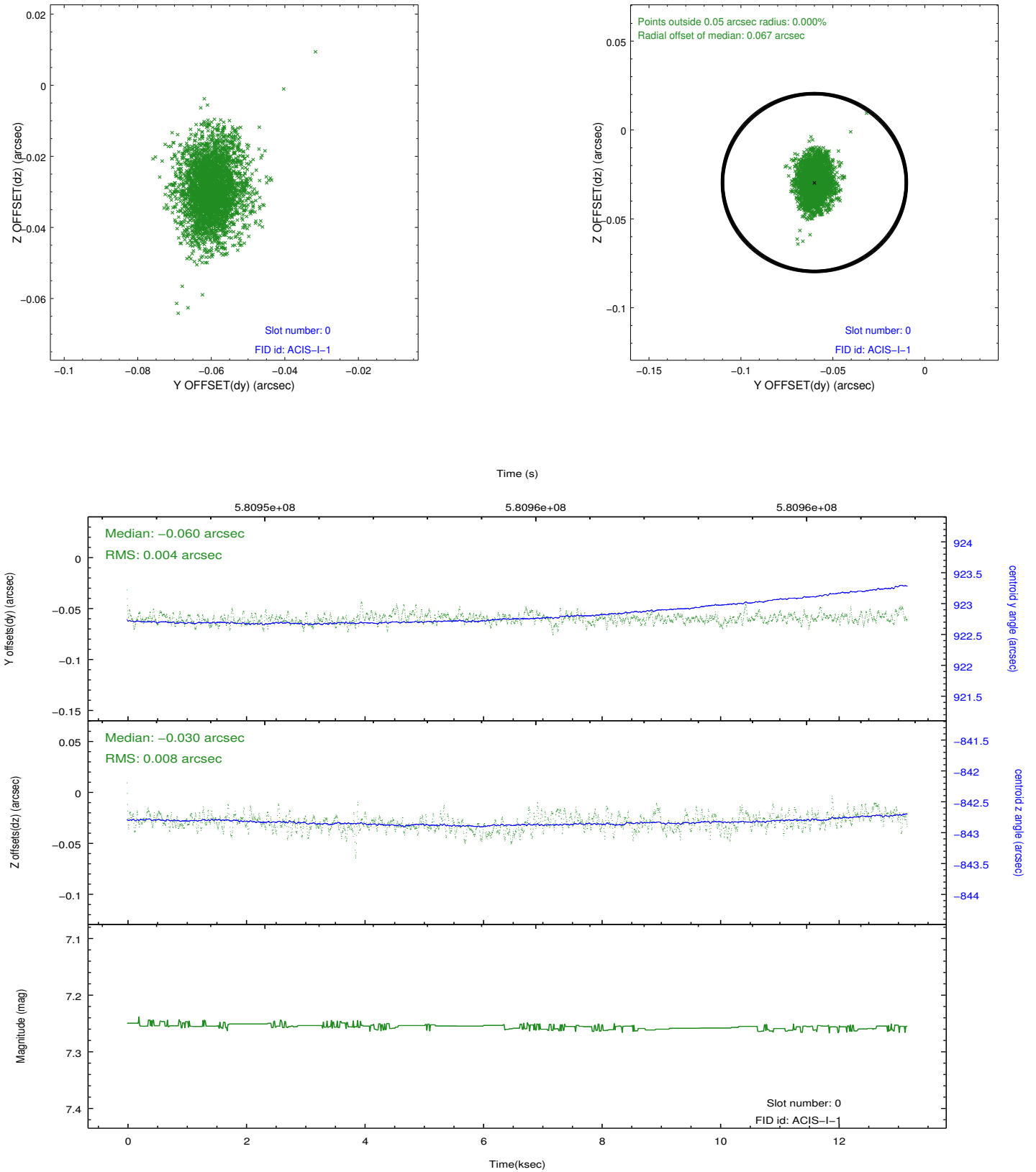


## 2.4.5 Slot 7

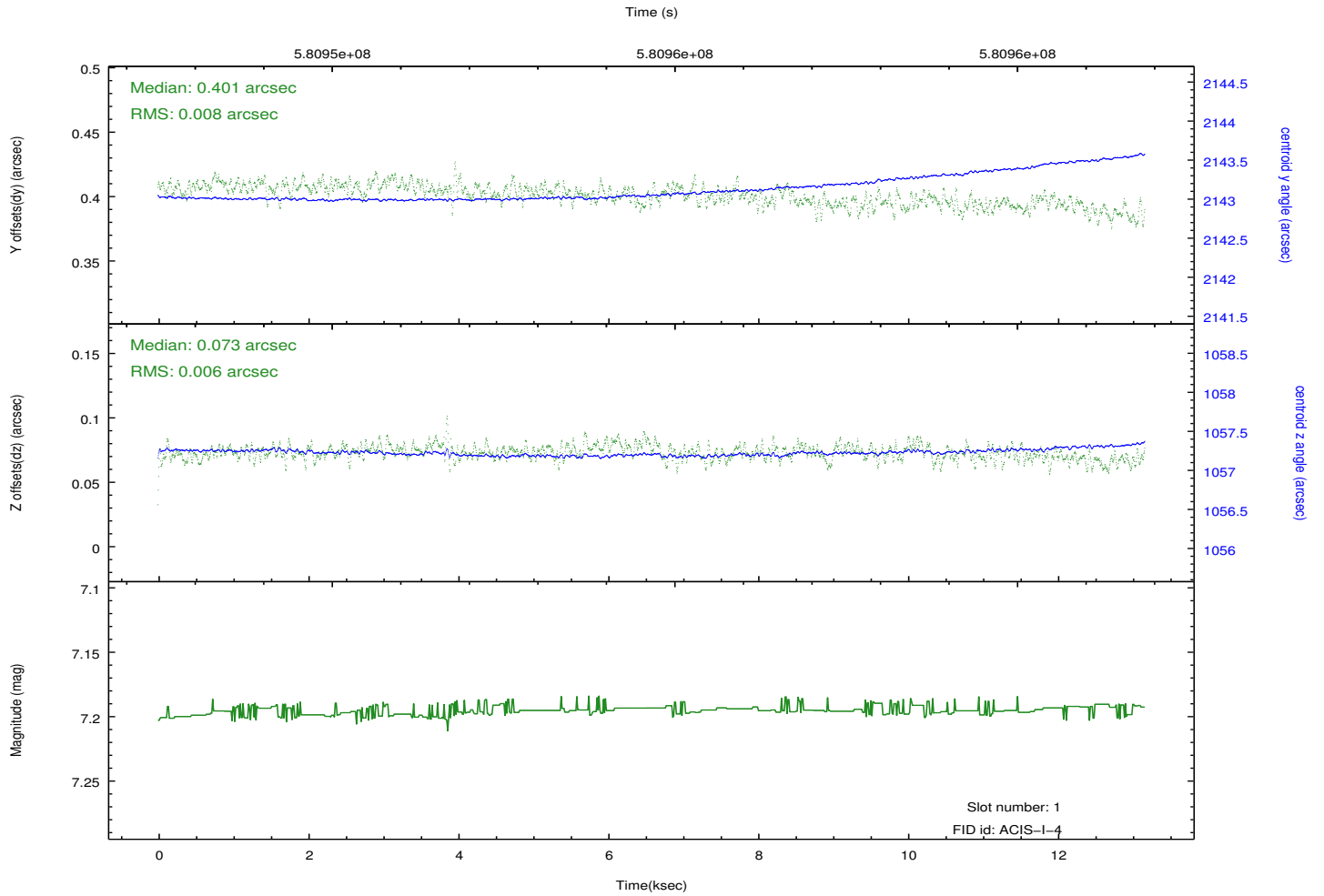
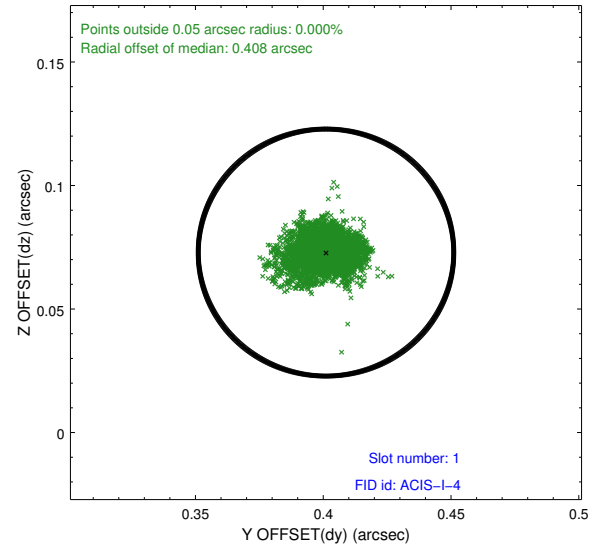
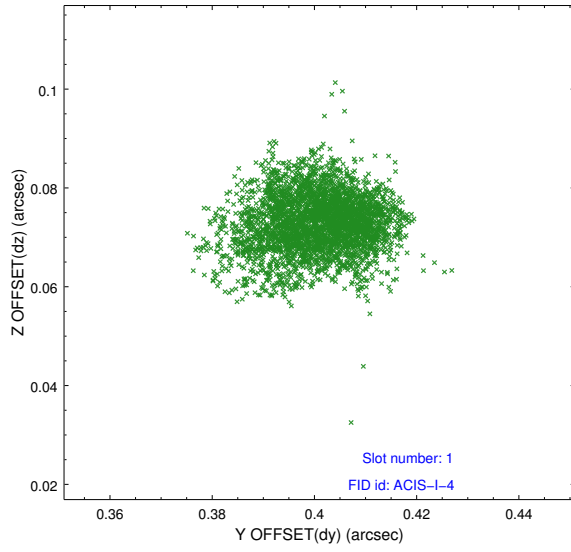


## 2.5 FID Slots

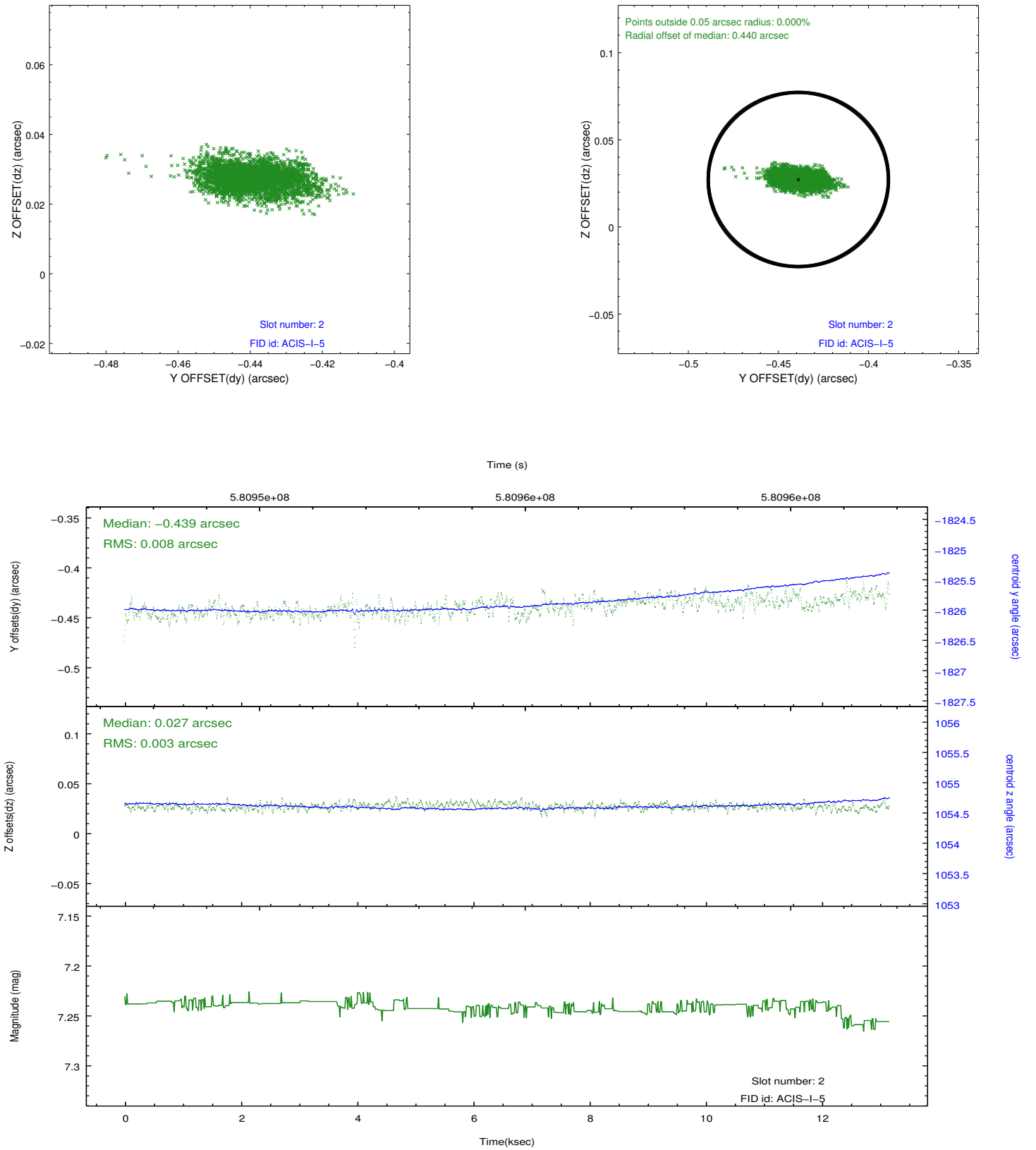
### 2.5.1 Slot 0



## 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)	2016.05.31
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	13.057200100541

### A.2 Comments

Optional chip S2 not included.