

# V&V Reference Report

## L2 ASCDS Version : 10.3.3

Observation 16684 - L2 Version 1  
Chandra X-Ray Center

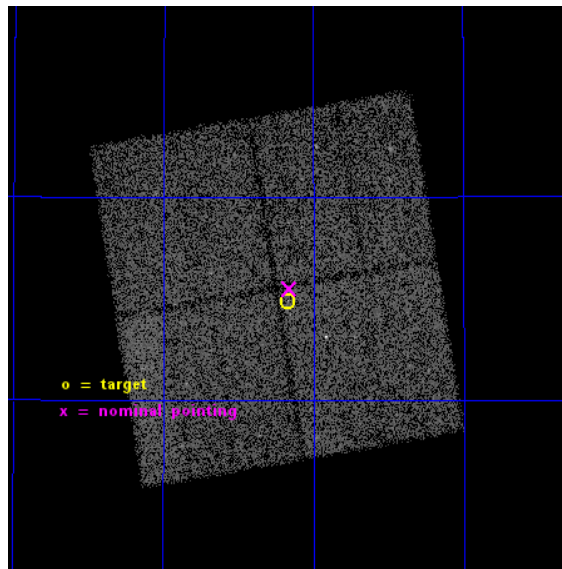
L2 Processing Date : May 9 2015

## 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

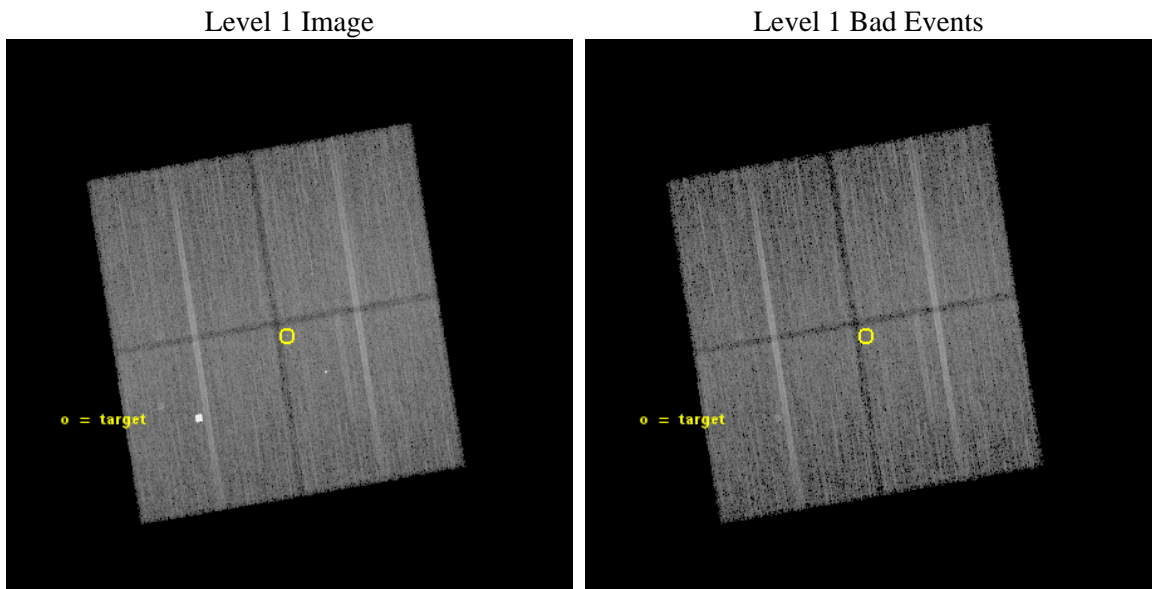
seq_num	201005	Sequence number
obs_id	16684	Observation id
title	The Secret Lives of Cepheids: Are Cepheids X-ray Variables?	Propos
observer	Prof. Edward Guinan	Principal investigator
object	delta Cep	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	337.292917	Observer's specified target RA [deg]
dec_targ	58.415194	Observer's specified target Dec [deg]
ra_nom	337.28976444139	Nominal RA [deg]
dec_nom	58.425082646429	Nominal Dec [deg]
roll_nom	80.498403802956	Nominal Roll [deg]
revision	1	Processing version of data
ontime	40087.920312285	Sum of GTIs [s]
livetime	39564.142121108	Livetime [s]
ontime0	40087.797172308	Sum of GTIs [s]
ontime1	40090.979202509	Sum of GTIs [s]
ontime2	40091.020242572	Sum of GTIs [s]
ontime3	40087.920312285	Sum of GTIs [s]
l2events	75362	Number of level 2 events



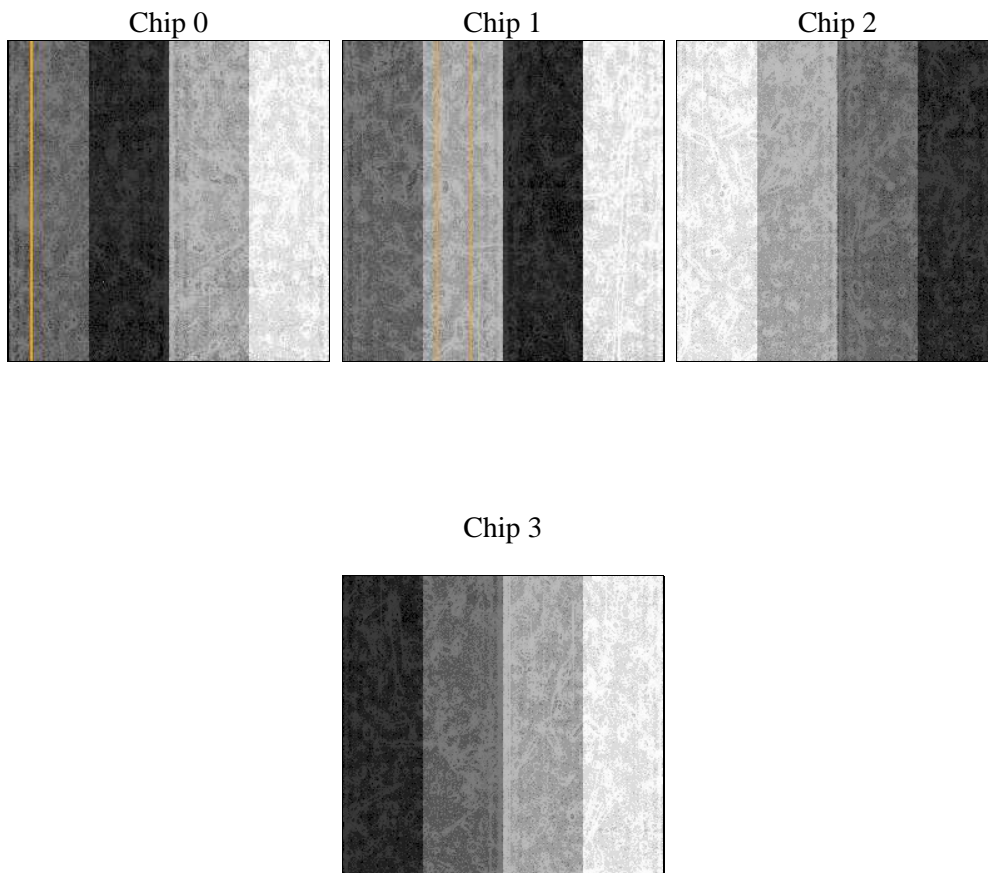
## 2 OBI

### 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	40087.920312285	Sum of GTIs [s]
caldsver	4.6.7	&#160	ontime0	40087.797172308	Sum of GTIs [s]
date	2015-05-09T15:30:45	Date and time of file creation	ontime1	40090.979202509	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	40091.020242572	Sum of GTIs [s]
			ontime3	40087.920312285	Sum of GTIs [s]
			l1events	732781	Number of level 1 events

### 2.1.4 Events

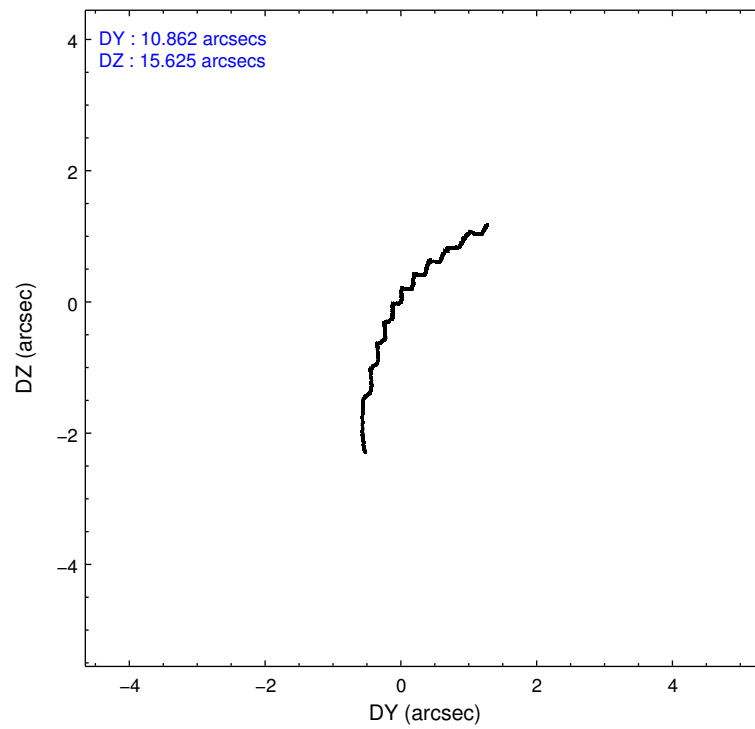
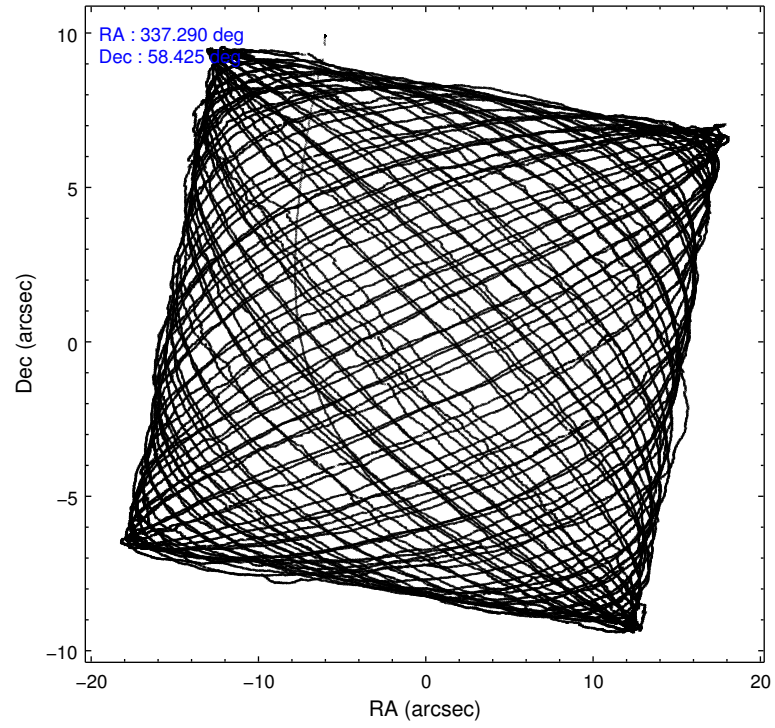
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	166617	197430	185709	183025
rejected events	144696	147745	164467	160740
rejected %	86%	74%	88%	87%

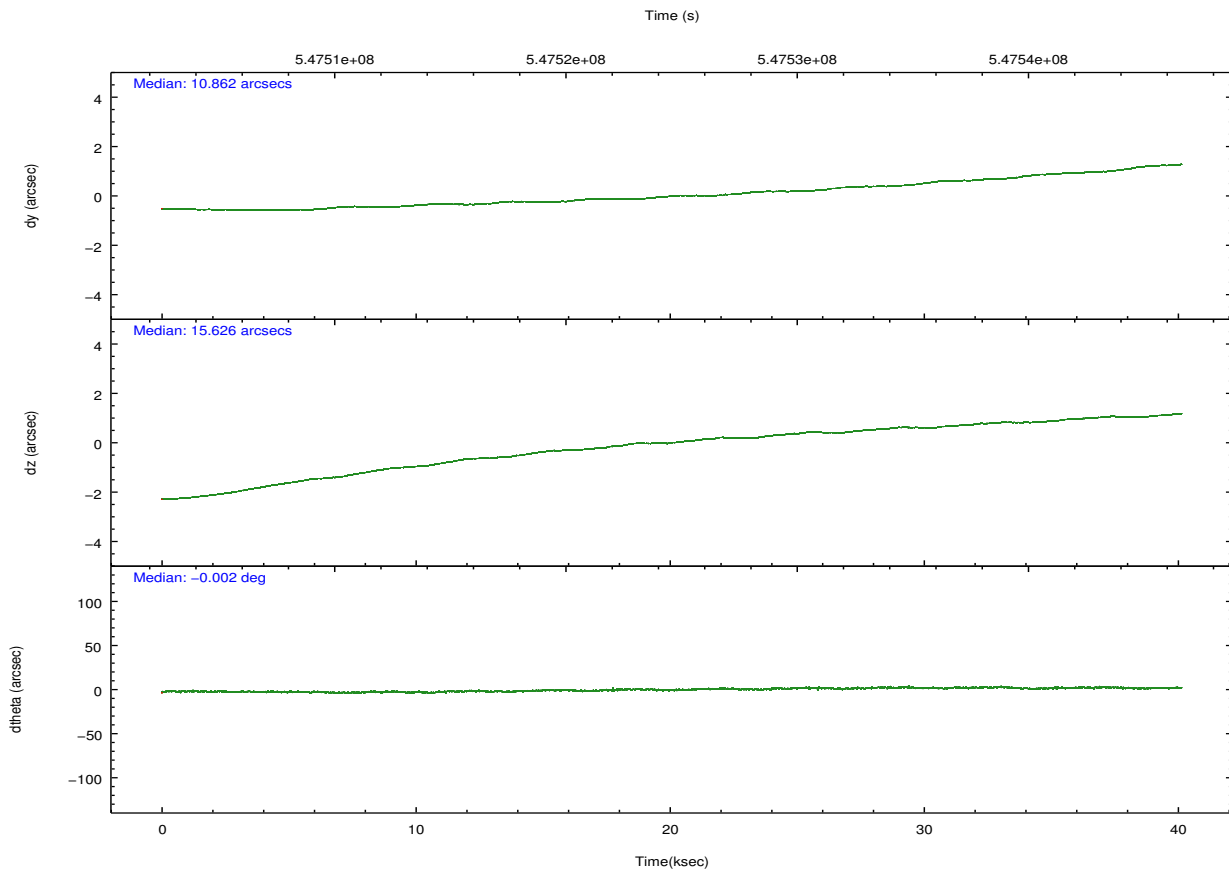
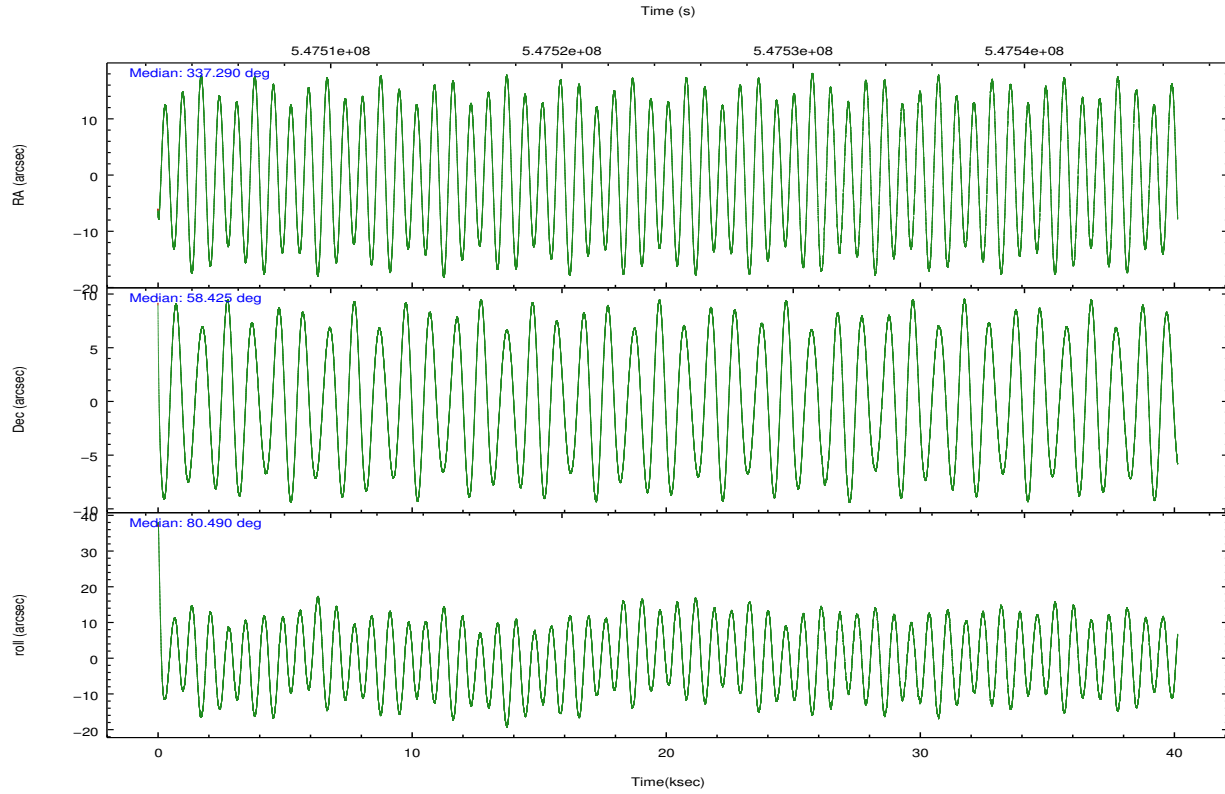
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	7401	20862	7398	8551
	4%	10%	3%	4%
grade 1 events	110	156	96	119
	0%	0%	0%	0%
grade 2 events	5571	18519	5310	4804
	3%	9%	2%	2%
grade 3 events	2258	2367	2132	2214
	1%	1%	1%	1%
grade 4 events	2048	2396	2239	2233
	1%	1%	1%	1%
grade 5 events	8769	9119	7864	9648
	5%	4%	4%	5%
grade 6 events	4645	5545	4166	4483
	2%	2%	2%	2%
grade 7 events	135815	138466	156504	150973
	81%	70%	84%	82%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	337.308366	337.2897644413875	Subarray requested	NONE	NONE
[deg] Pointing Dec	58.399262	58.42508264642876	Alternating exposures requested	N	N
[deg] Pointing Roll	80.273865	80.49840380295622	[s] Primary exposure time	0.000000	3.1
[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)	547504641.184000	547503449.38226			
Observation start date	2015-05-08T20:36:14	2015-05-08T20:17:29			
[s] Observation end time (MET)	547544641.184000	547545198.1471			
Observation end date	2015-05-09T07:42:54	2015-05-09T07:53:18			
Read mode	TIMED	TIMED			

## 2.3 Aspect



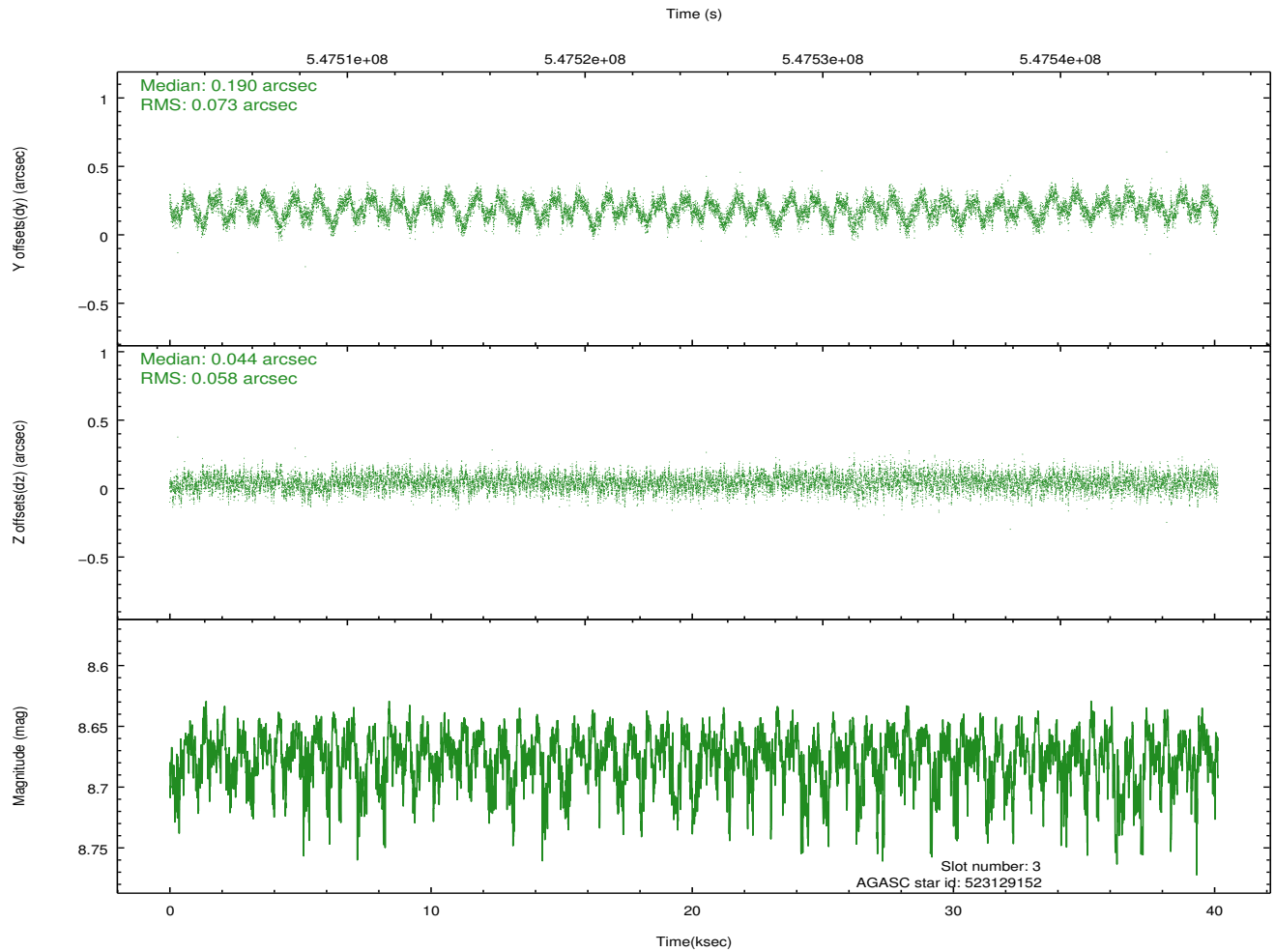
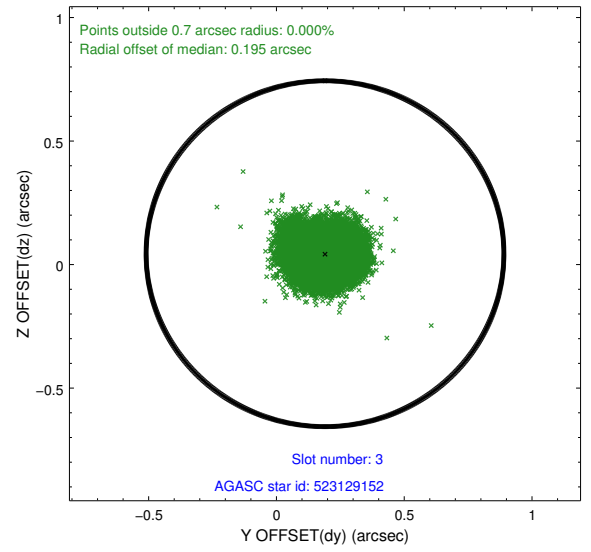
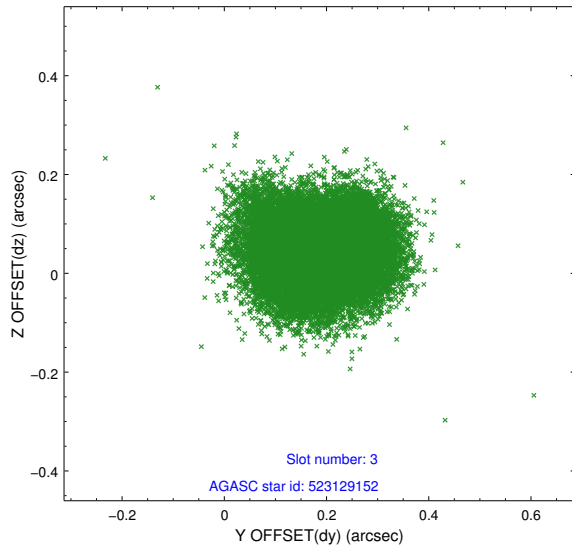


### Slot Statistics

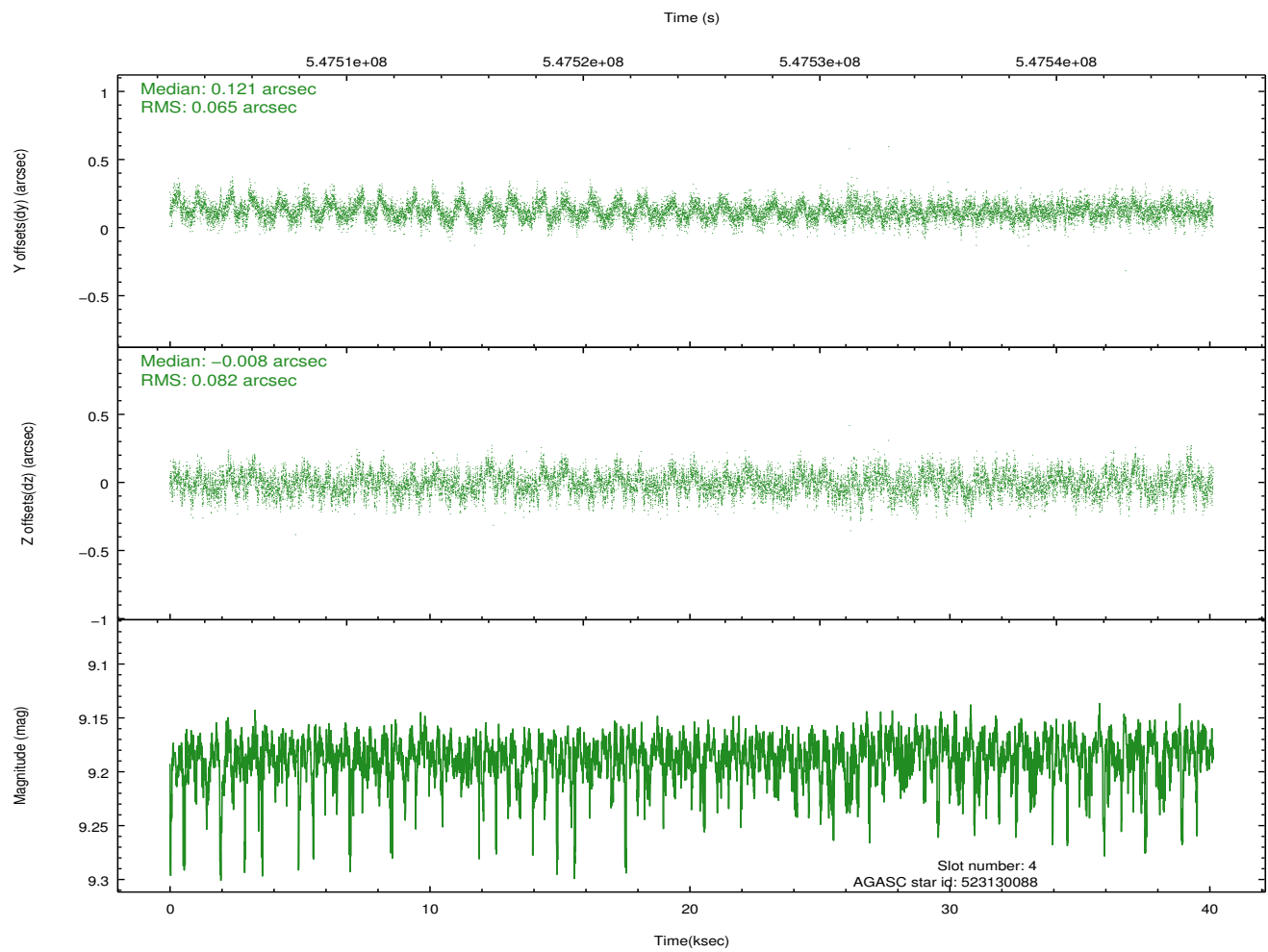
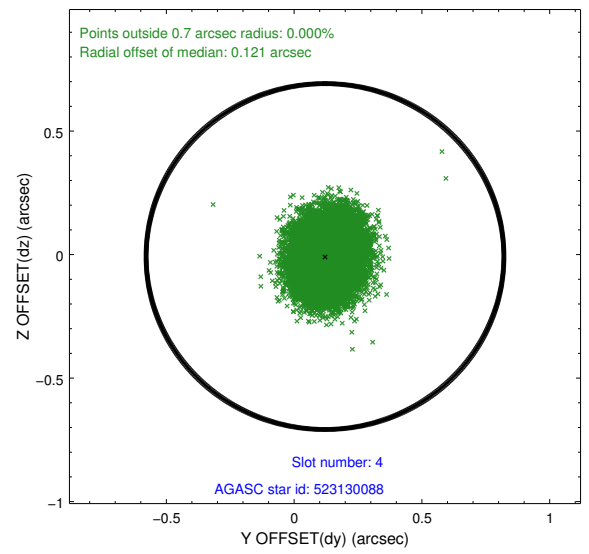
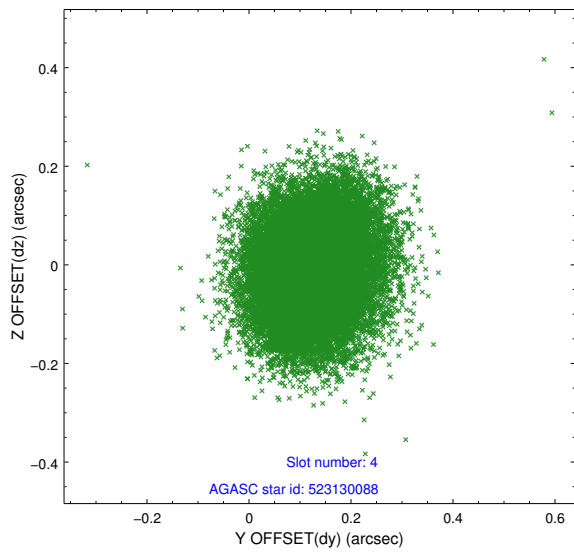
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.14	9789	0.072	-0.057	0.025	0.039	0.000000	0.000000	928.69	-839.08
1	FID		ACIS-I-5	7.12	9788	-0.229	0.064	0.017	0.022	0.000000	0.000000	-1819.72	1058.49
2	FID		ACIS-I-6	7.12	9790	0.064	0.061	0.025	0.039	0.000000	0.000000	394.20	1703.02
3	GUIDE	used	523129152	8.67	19573	0.190	0.044	0.101	0.158	337.297948	57.894228	-1795.19	-287.13
4	GUIDE	used	523130088	9.19	19565	0.121	-0.008	0.111	0.181	337.592628	58.020060	-1252.90	-764.66
5	GUIDE	used	523635184	8.48	19567	-0.122	-0.273	0.137	0.198	337.162690	58.845771	1538.78	539.41
6	GUIDE	used	523636232	7.94	19576	-0.380	0.159	0.089	0.147	338.394341	58.896443	2121.66	-1684.47
7	GUIDE	used	523644128	8.90	19569	0.182	0.066	0.114	0.196	338.709613	58.802422	1898.36	-2327.33

## 2.4 Star Slots

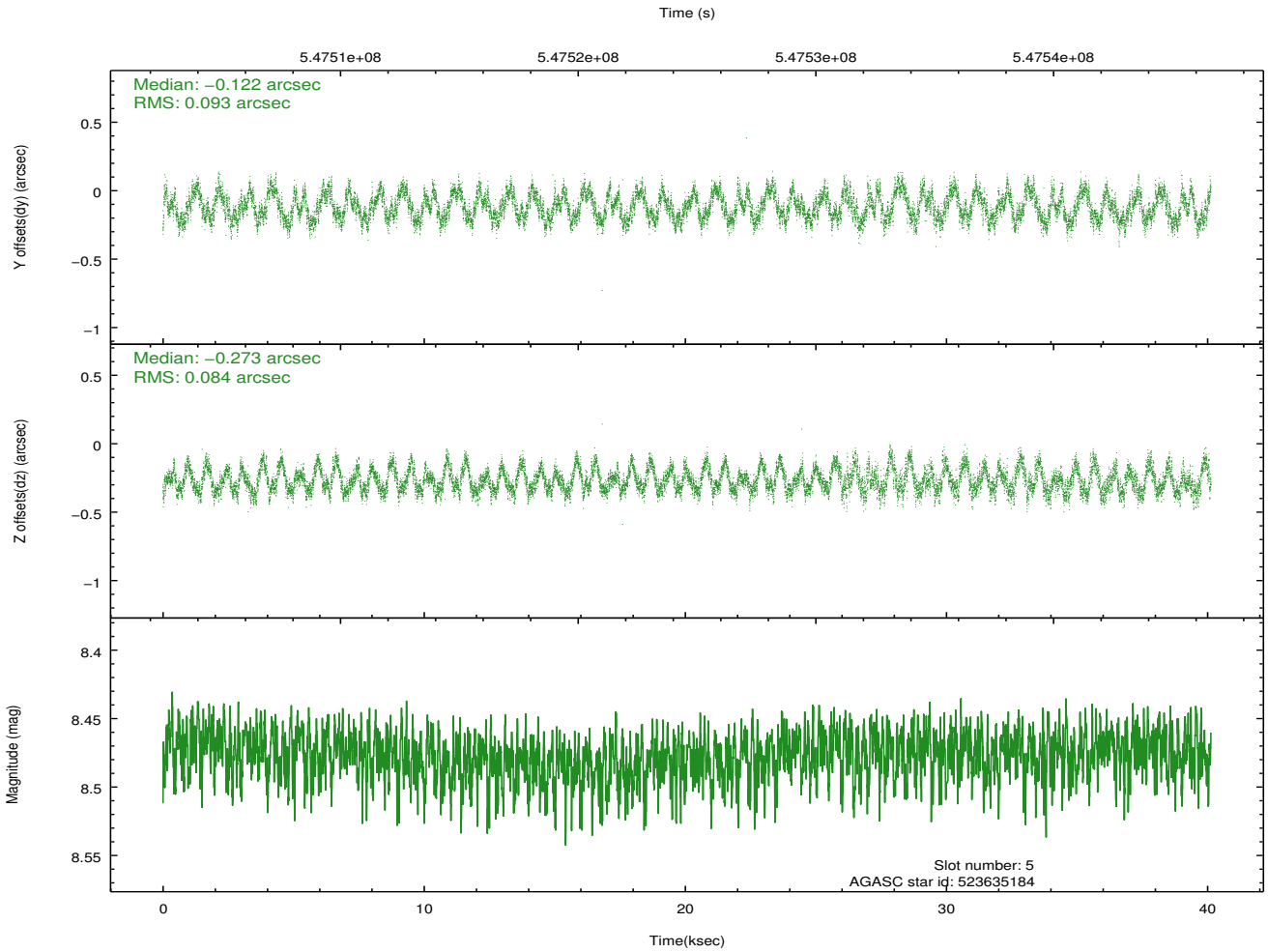
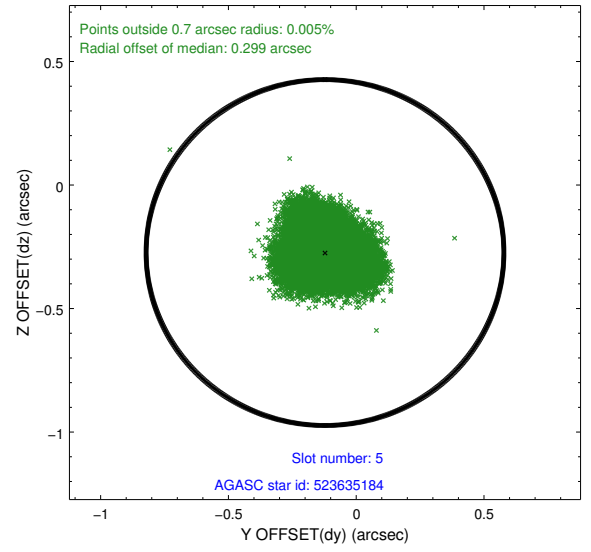
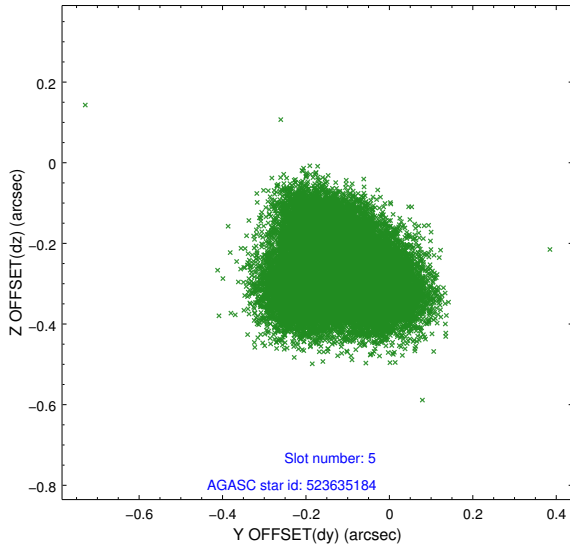
### 2.4.1 Slot 3



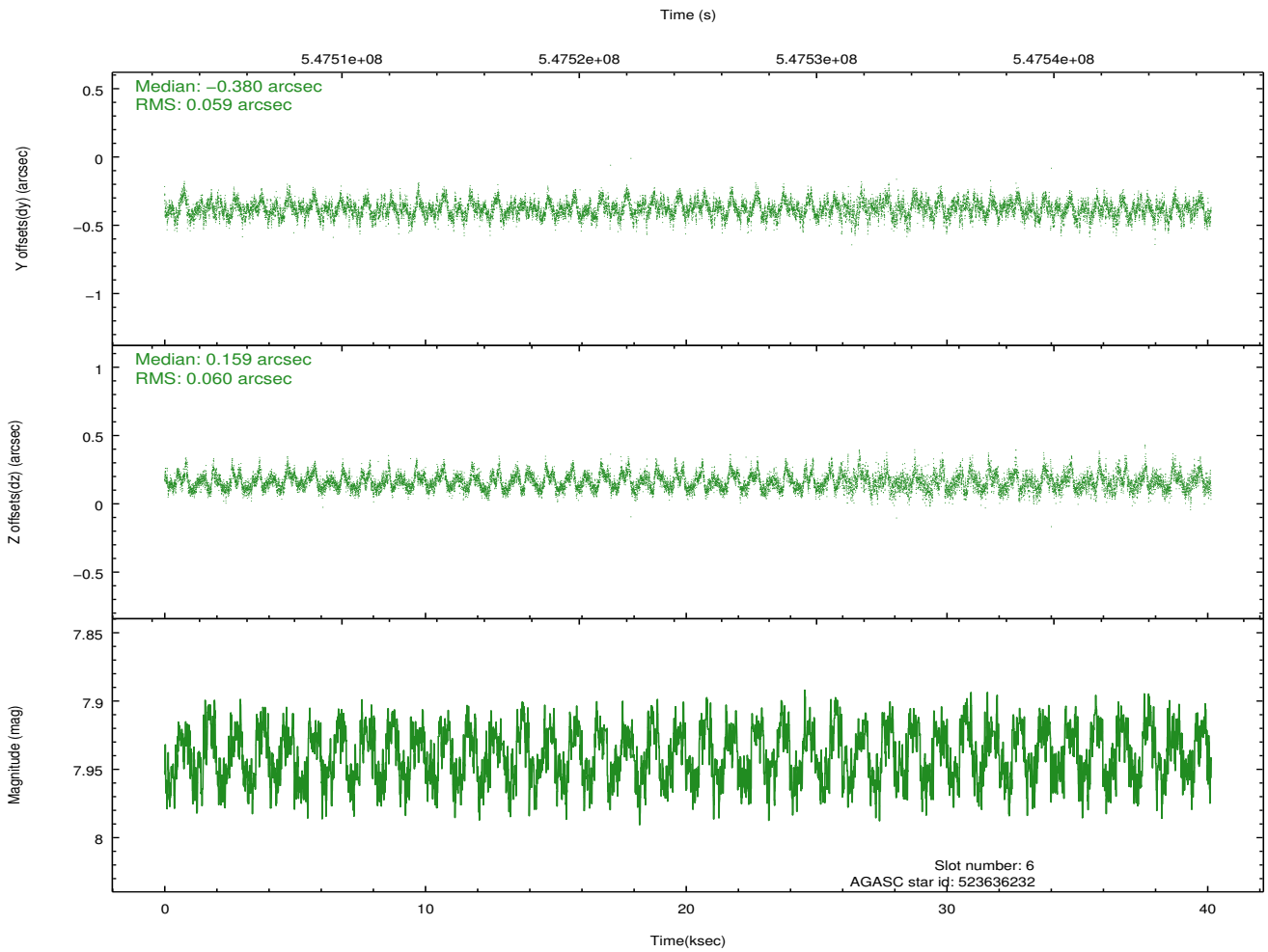
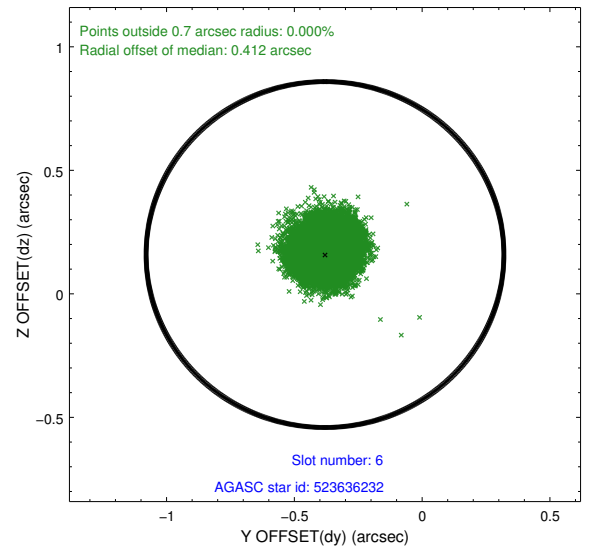
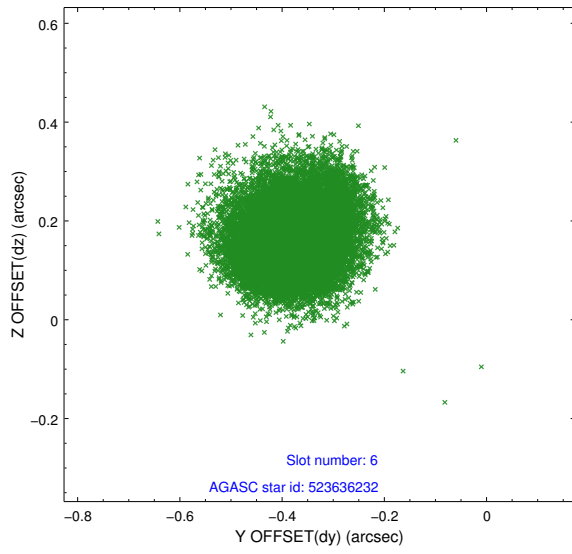
## 2.4.2 Slot 4



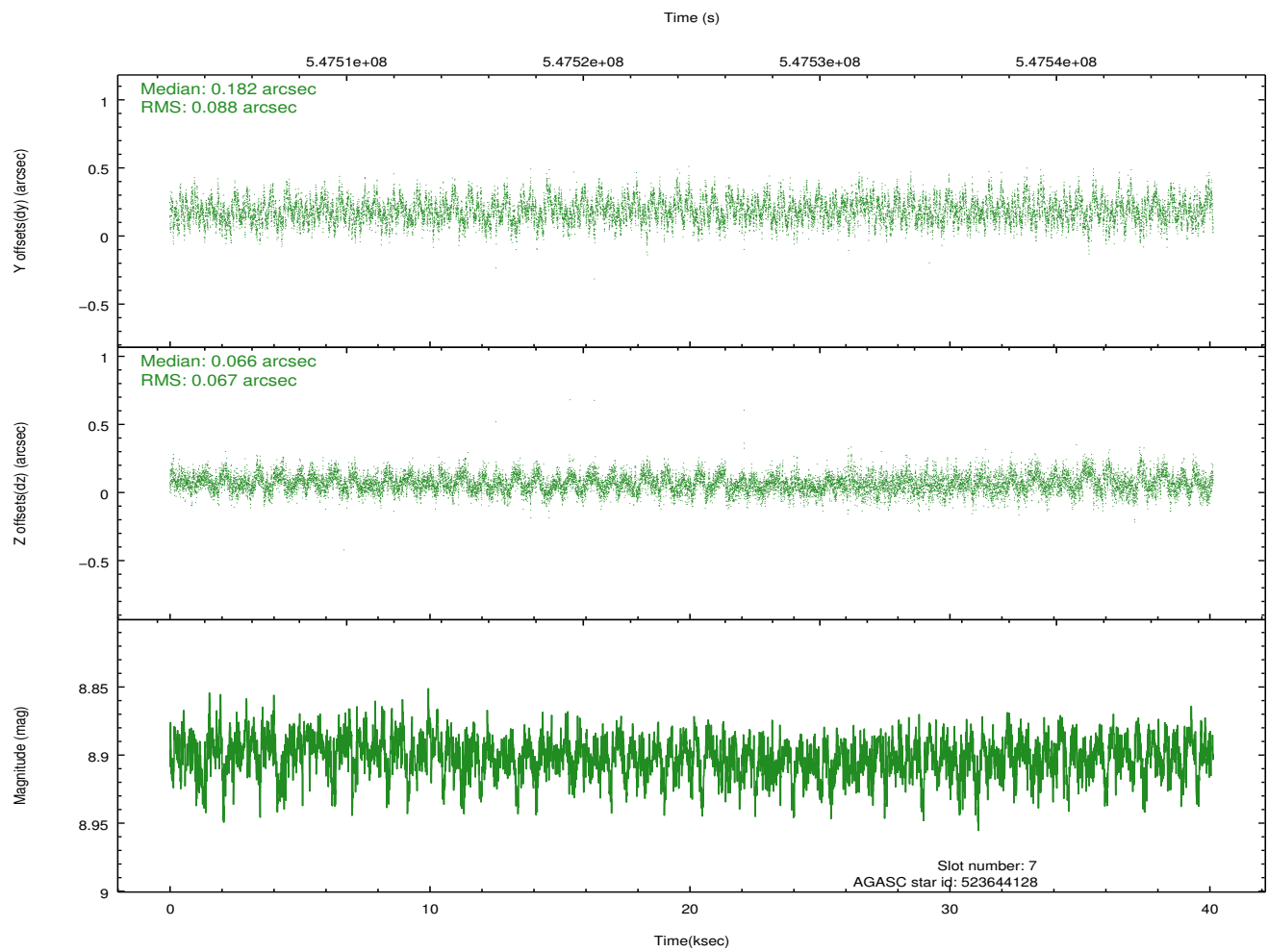
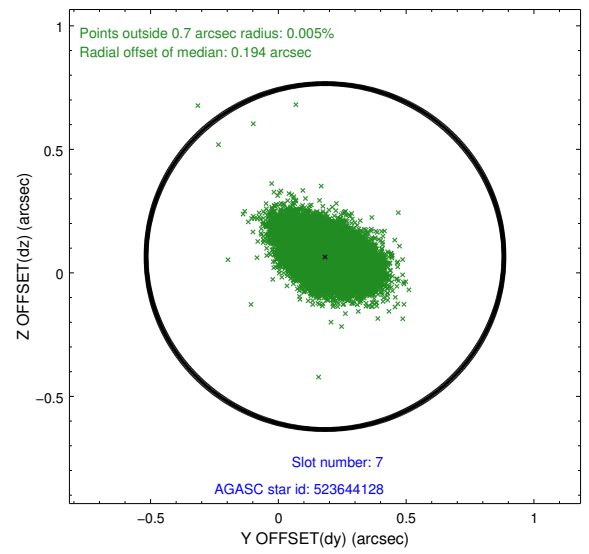
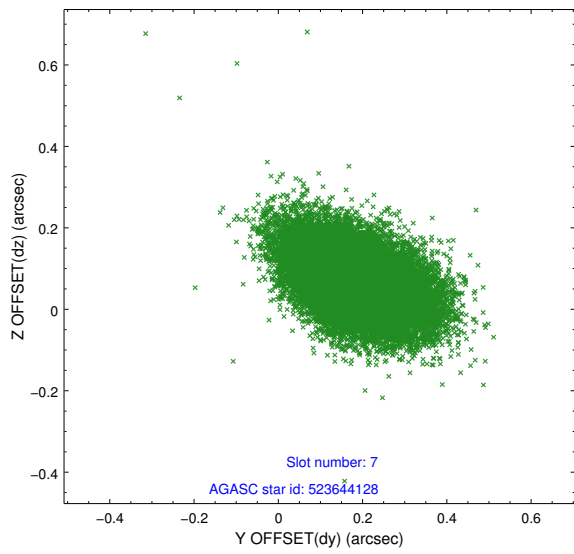
### 2.4.3 Slot 5



## 2.4.4 Slot 6

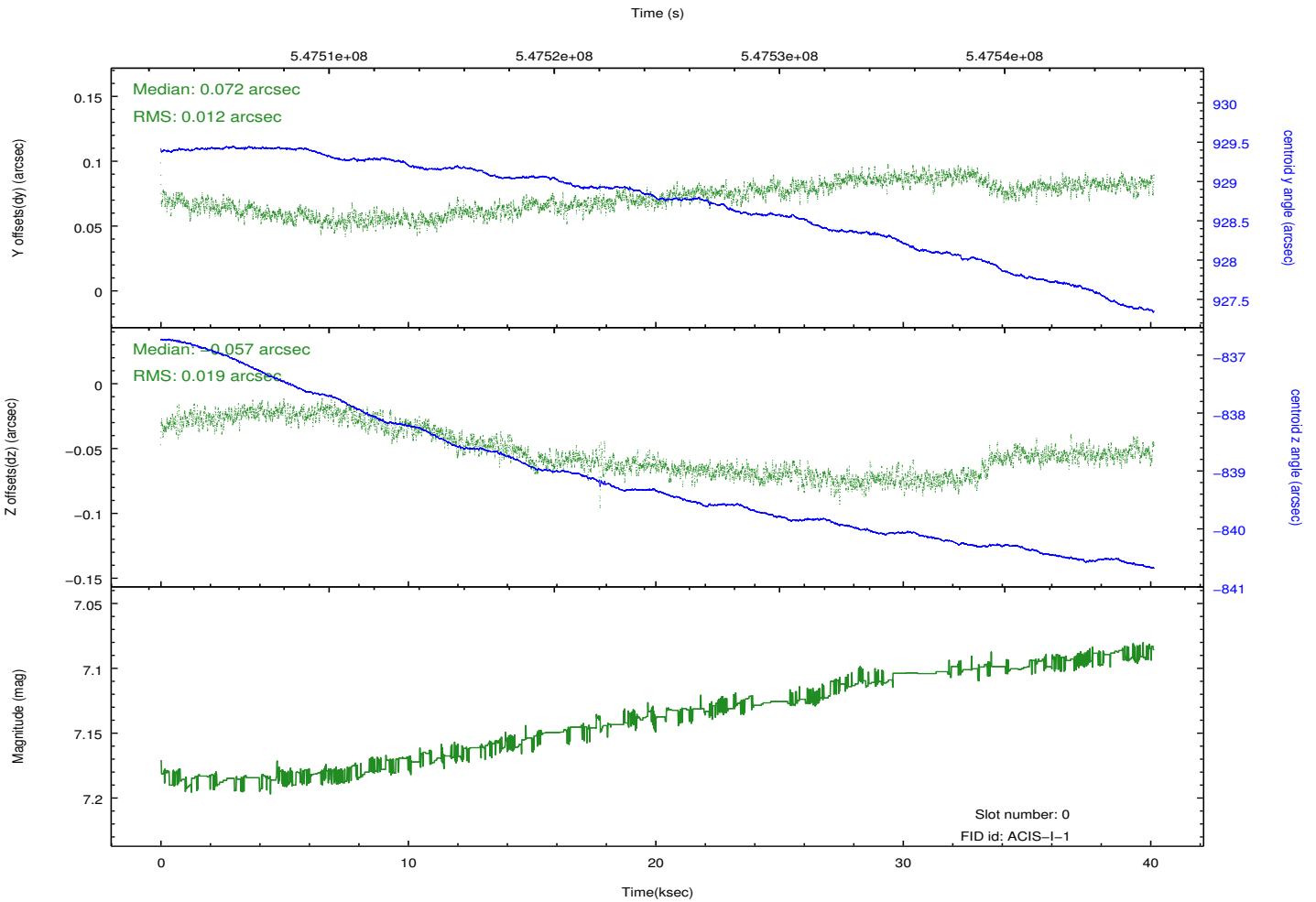
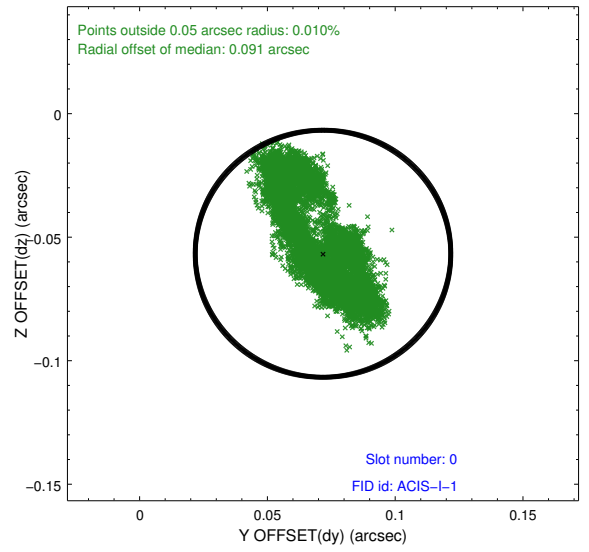
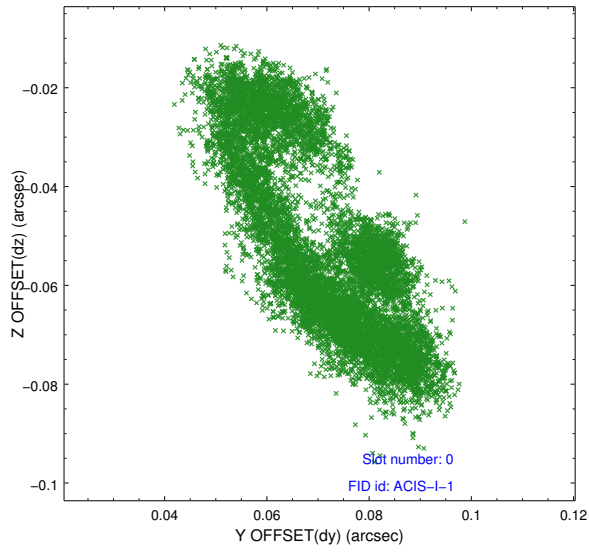


## 2.4.5 Slot 7

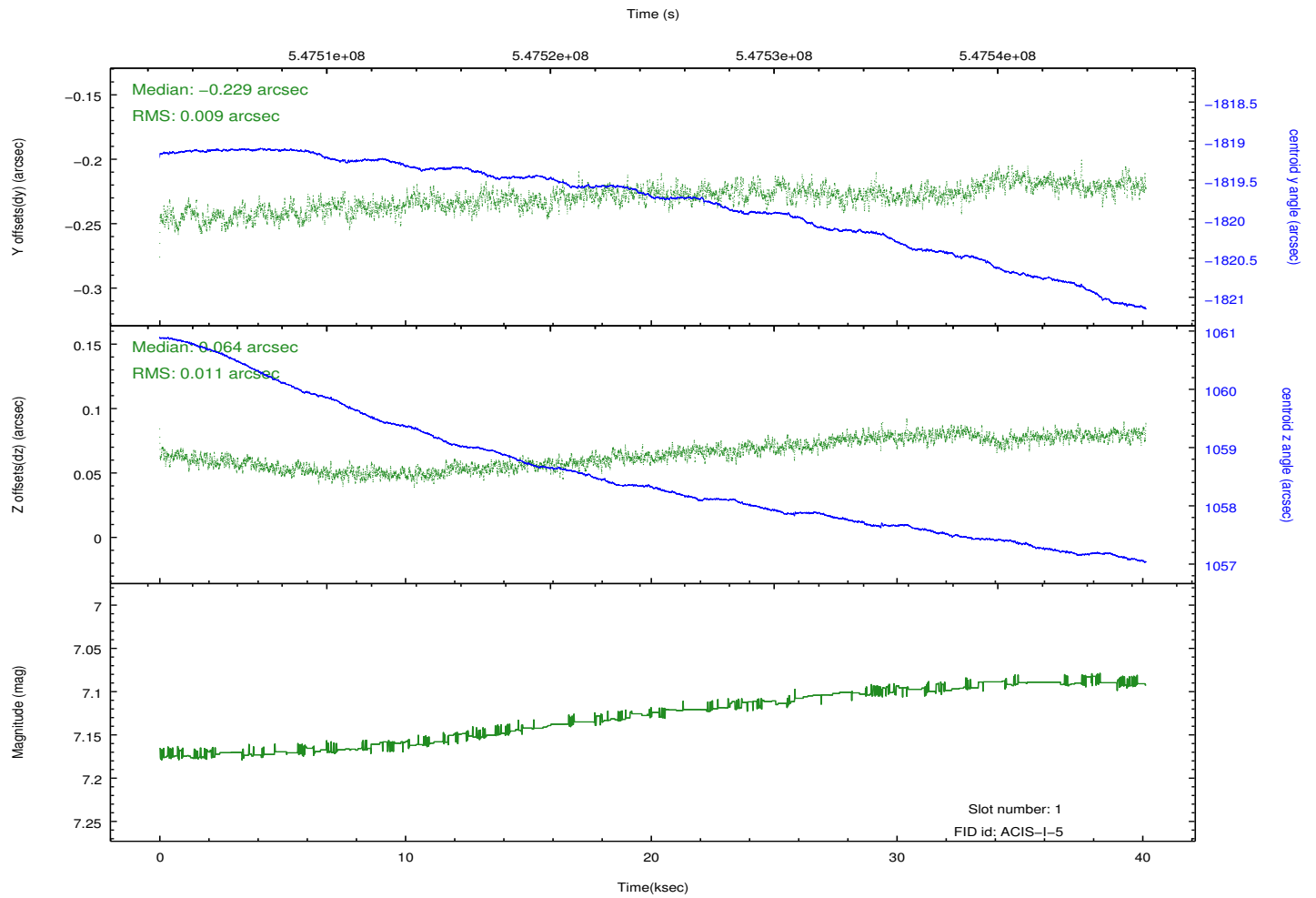
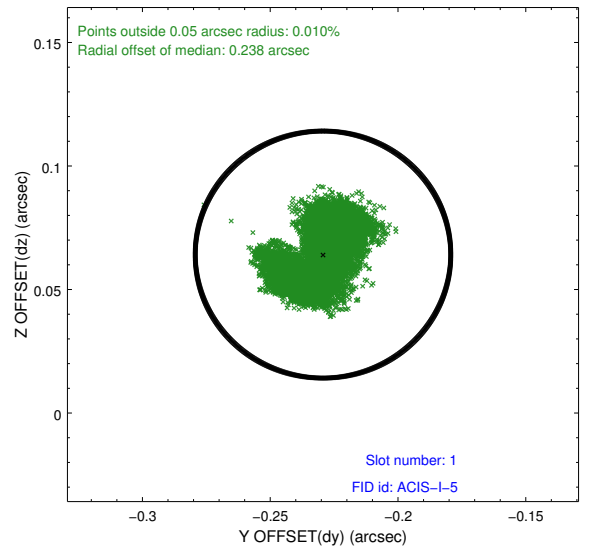
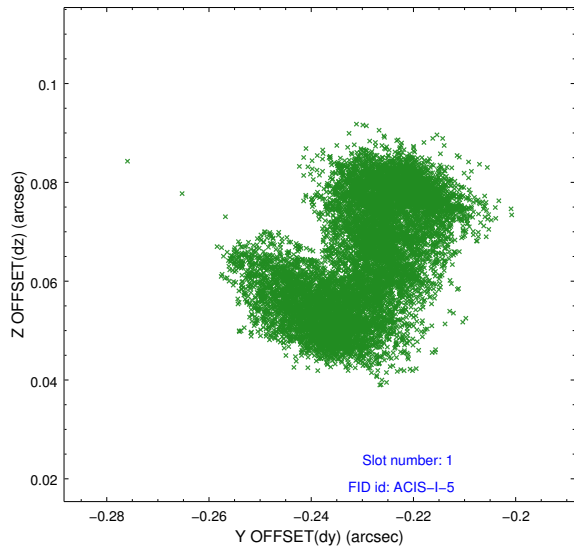


## 2.5 FID Slots

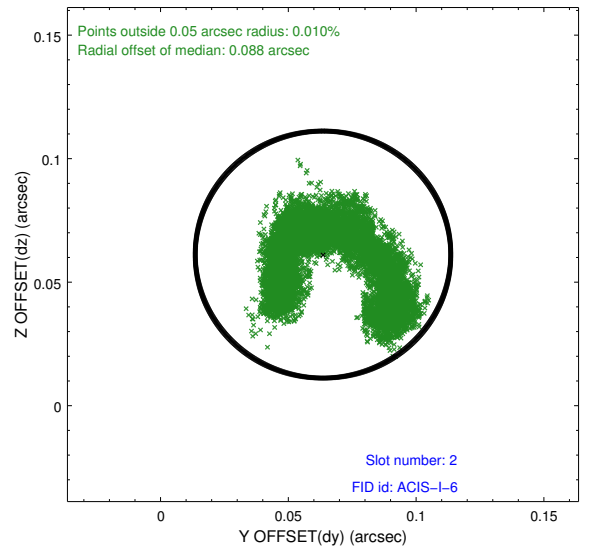
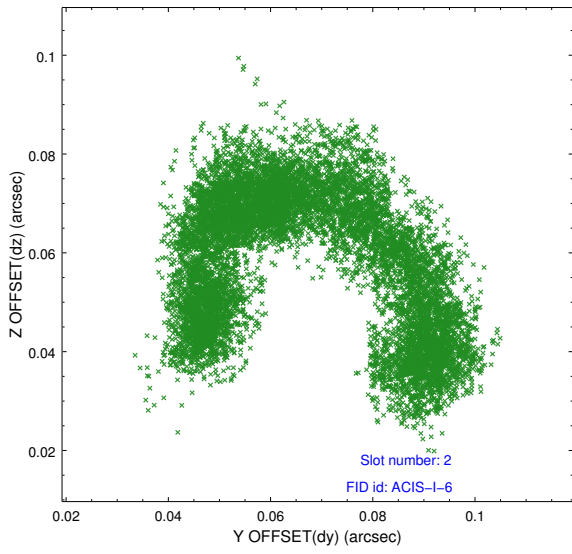
### 2.5.1 Slot 0



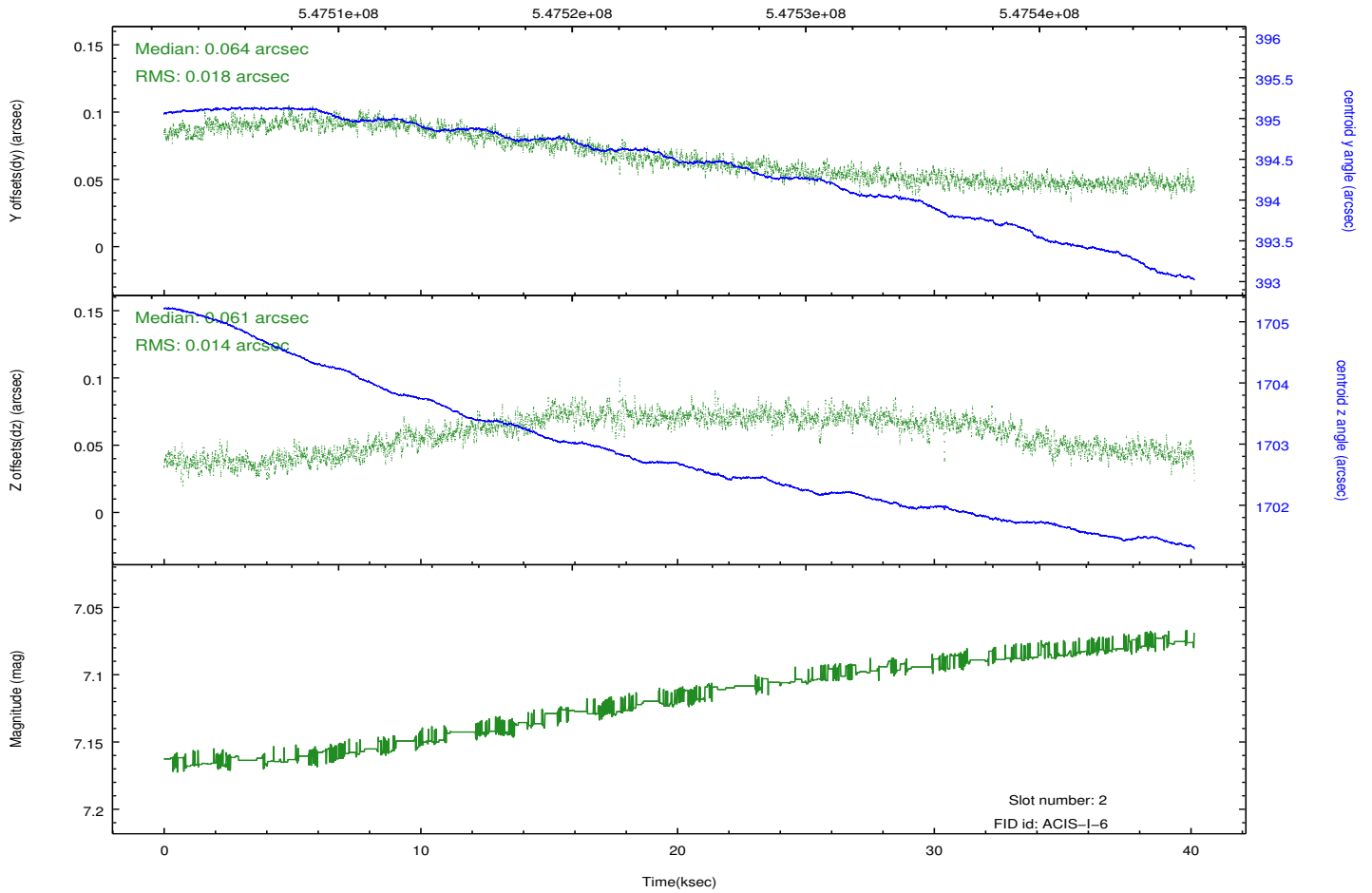
## 2.5.2 Slot 1



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2015.05.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	40.087920312285

## A.2 Comments