

# V&V Reference Report

## L2 ASCDS Version : 10.2.1

Observation 16291 - L2 Version 2  
Chandra X-Ray Center

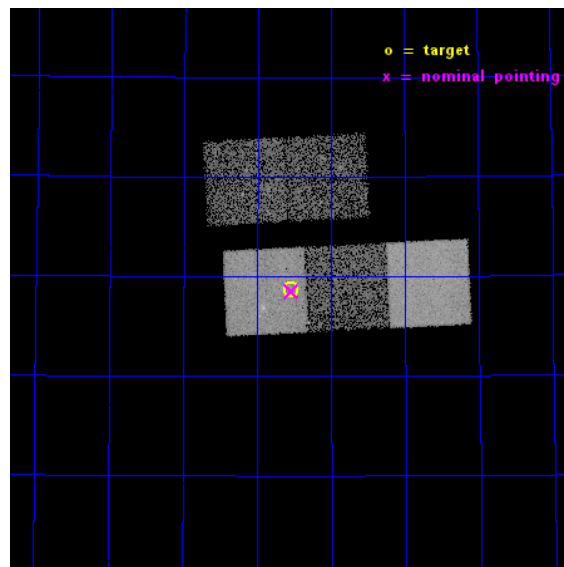
L2 Processing Date : Dec 10 2014

## 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

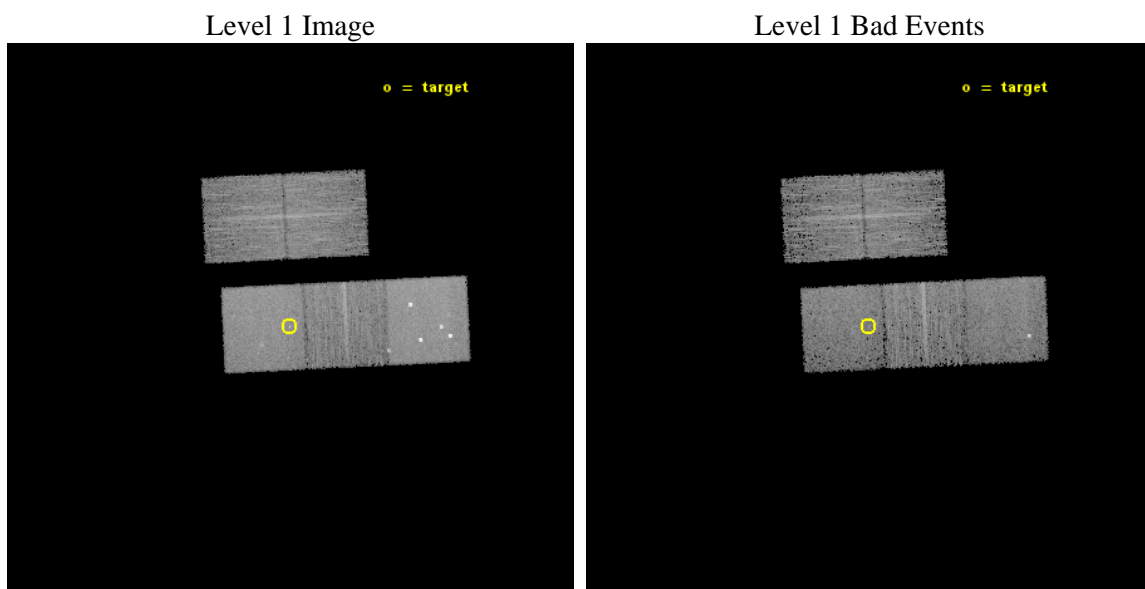
seq_num	901122	Sequence number
obs_id	16291	Observation id
title	Exploring low stellar mass galaxies in large dark matter halos	Pro
observer	Dr. Stephen Murray	Principal investigator
object	UGC06732	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	176.388333	Observer's specified target RA [deg]
dec_targ	58.977778	Observer's specified target Dec [deg]
ra_nom	176.38483115791	Nominal RA [deg]
dec_nom	58.975304160398	Nominal Dec [deg]
roll_nom	177.20336896668	Nominal Roll [deg]
revision	2	Processing version of data
ontime	11068.941416144	Sum of GTIs [s]
liveltime	10924.317547706	Livetime [s]
ontime2	11068.777256131	Sum of GTIs [s]
ontime3	11068.818296134	Sum of GTIs [s]
ontime5	11068.900376141	Sum of GTIs [s]
ontime6	11068.859336138	Sum of GTIs [s]
ontime7	11068.941416144	Sum of GTIs [s]
l2events	82522	Number of level 2 events



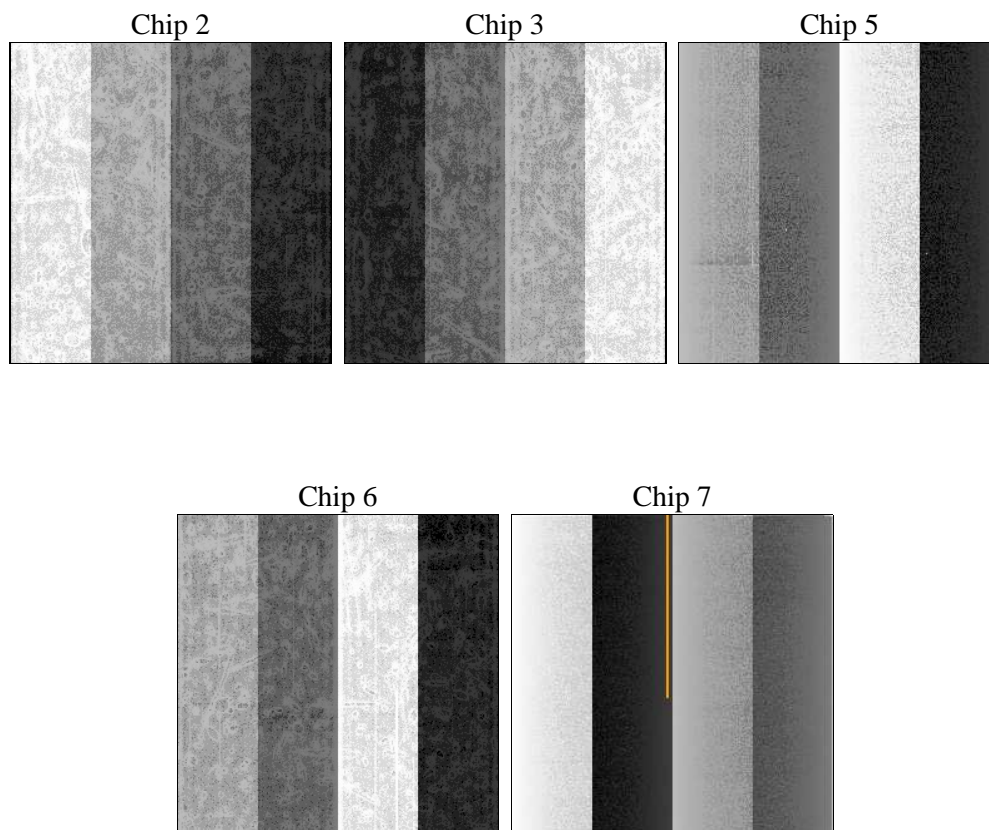
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	11000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	11068.941416144	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime2	11068.777256131	Sum of GTIs [s]
date	2014-12-10T16:22:25	Date and time of file creation	ontime3	11068.818296134	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	11068.900376141	Sum of GTIs [s]
			ontime6	11068.859336138	Sum of GTIs [s]
			ontime7	11068.941416144	Sum of GTIs [s]
			l1events	315708	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	50700	47043	95542	51490	70933
rejected events	45059	41347	45516	45285	40291
rejected %	88%	87%	47%	87%	56%

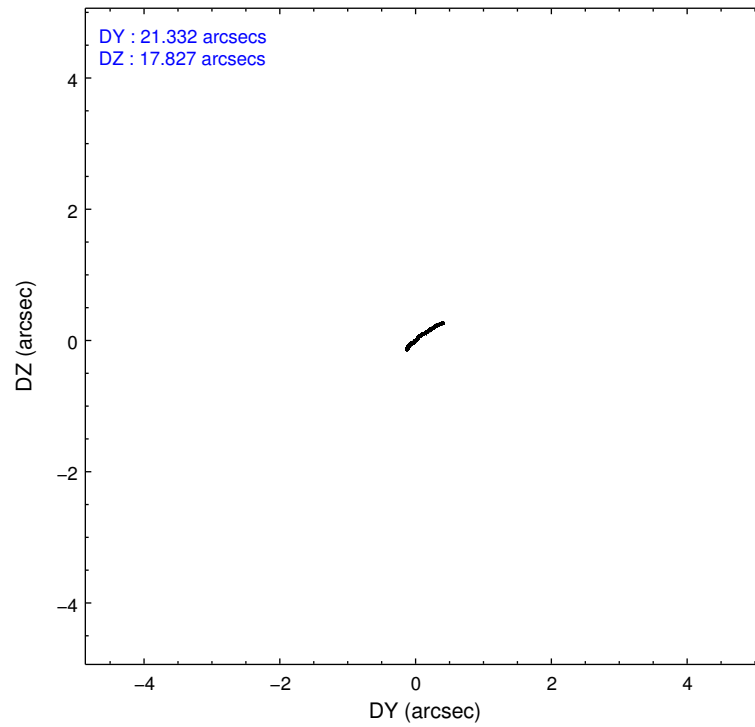
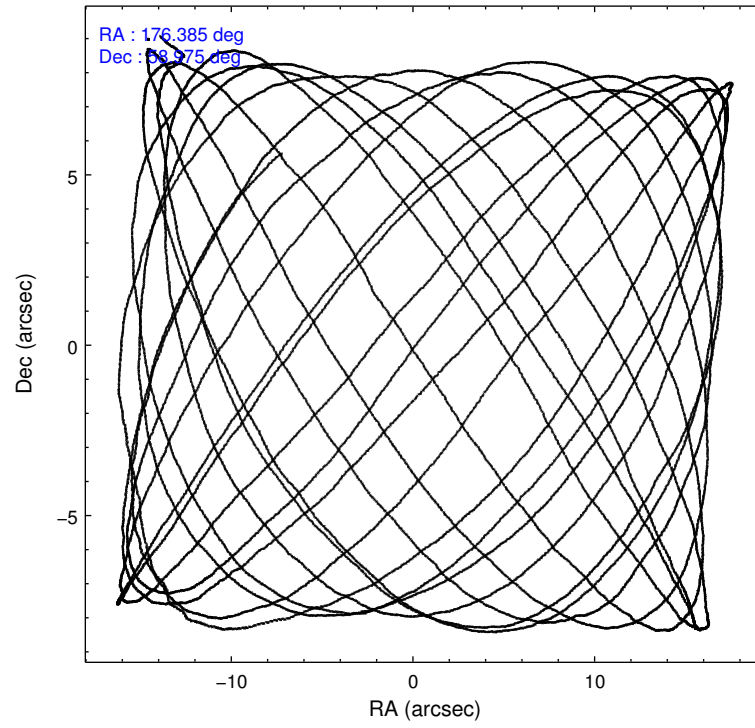
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	1984	1951	11024	1978	2730
	3%	4%	11%	3%	3%
grade 1 events	30	23	274	22	95
	0%	0%	0%	0%	0%
grade 2 events	1382	1279	14483	1412	6358
	2%	2%	15%	2%	8%
grade 3 events	549	599	1261	653	2500
	1%	1%	1%	1%	3%
grade 4 events	585	624	1137	623	2454
	1%	1%	1%	1%	3%
grade 5 events	2146	2757	5940	2584	7030
	4%	5%	6%	5%	9%
grade 6 events	1141	1243	22137	1540	16603
	2%	2%	23%	2%	23%
grade 7 events	42883	38567	39286	42678	33163
	84%	81%	41%	82%	46%

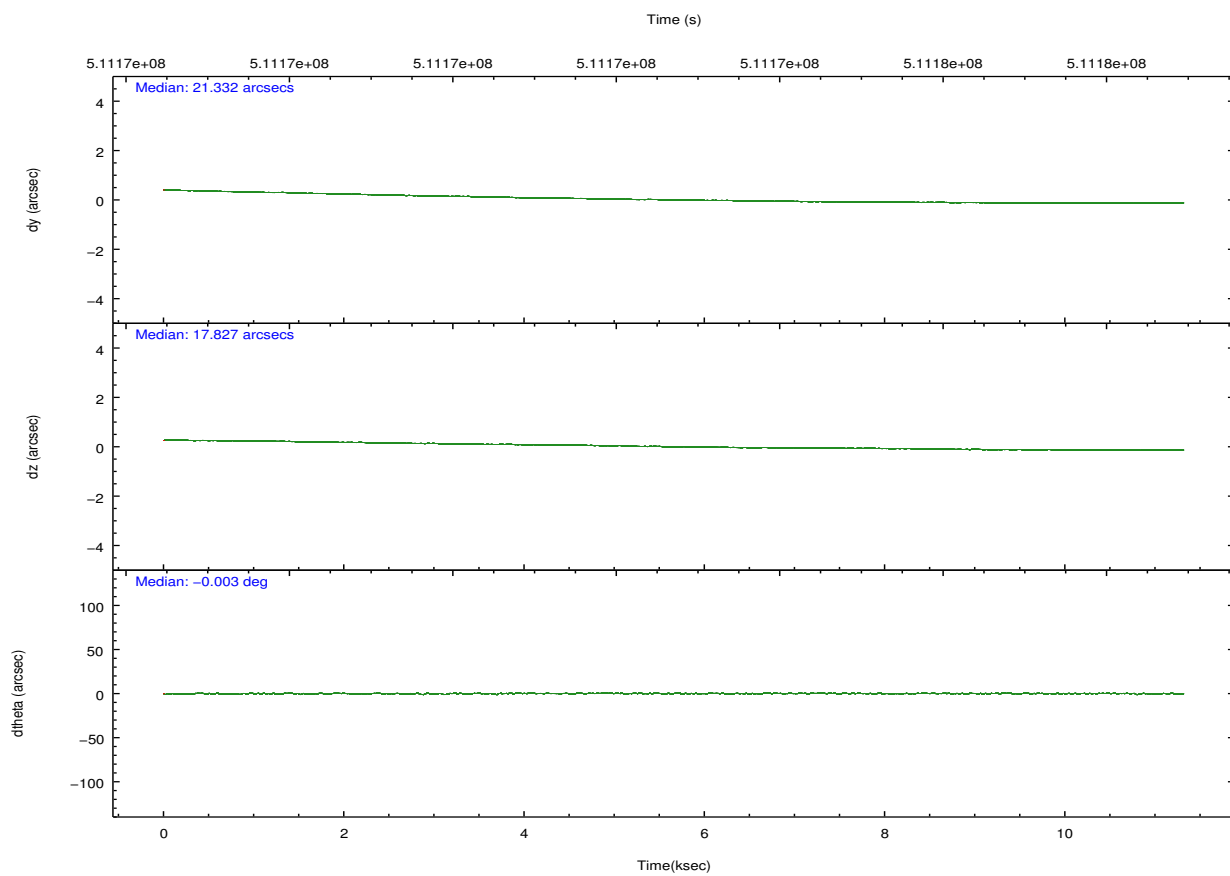
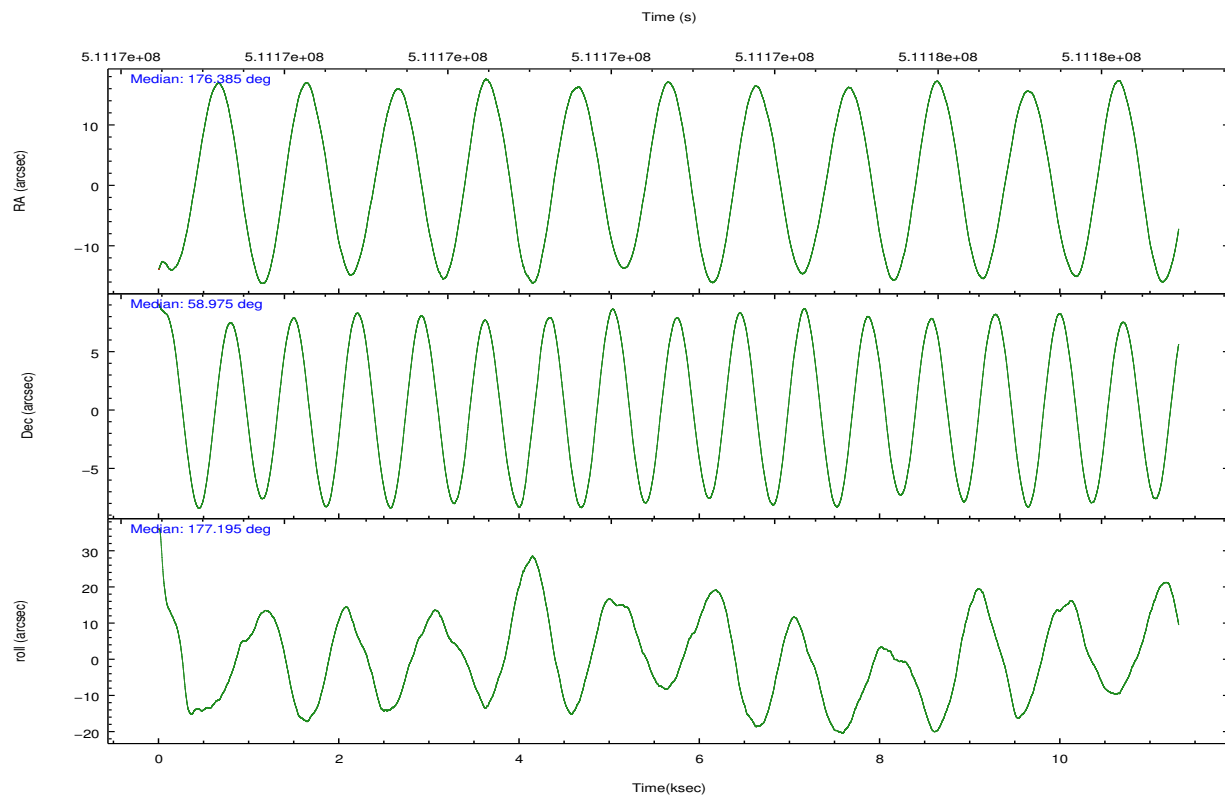


## 2.2 Compared Parameters

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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	176.431814	176.3848311579078	Subarray requested	NONE	NONE
[deg] Pointing Dec	58.988125	58.97530416039801	Alternating exposures requested	N	N
[deg] Pointing Roll	177.006451	177.2033689666844	[s] Primary exposure time	0.000000	3.1
[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)	511167359.184000	511166355.32508			
Observation start date	2014-03-14T06:54:52	2014-03-14T06:39:15			
[s] Observation end time (MET)	511178359.184000	511179507.1008			
Observation end date	2014-03-14T09:58:12	2014-03-14T10:18:27			
Read mode	TIMED	TIMED			

## 2.3 Aspect



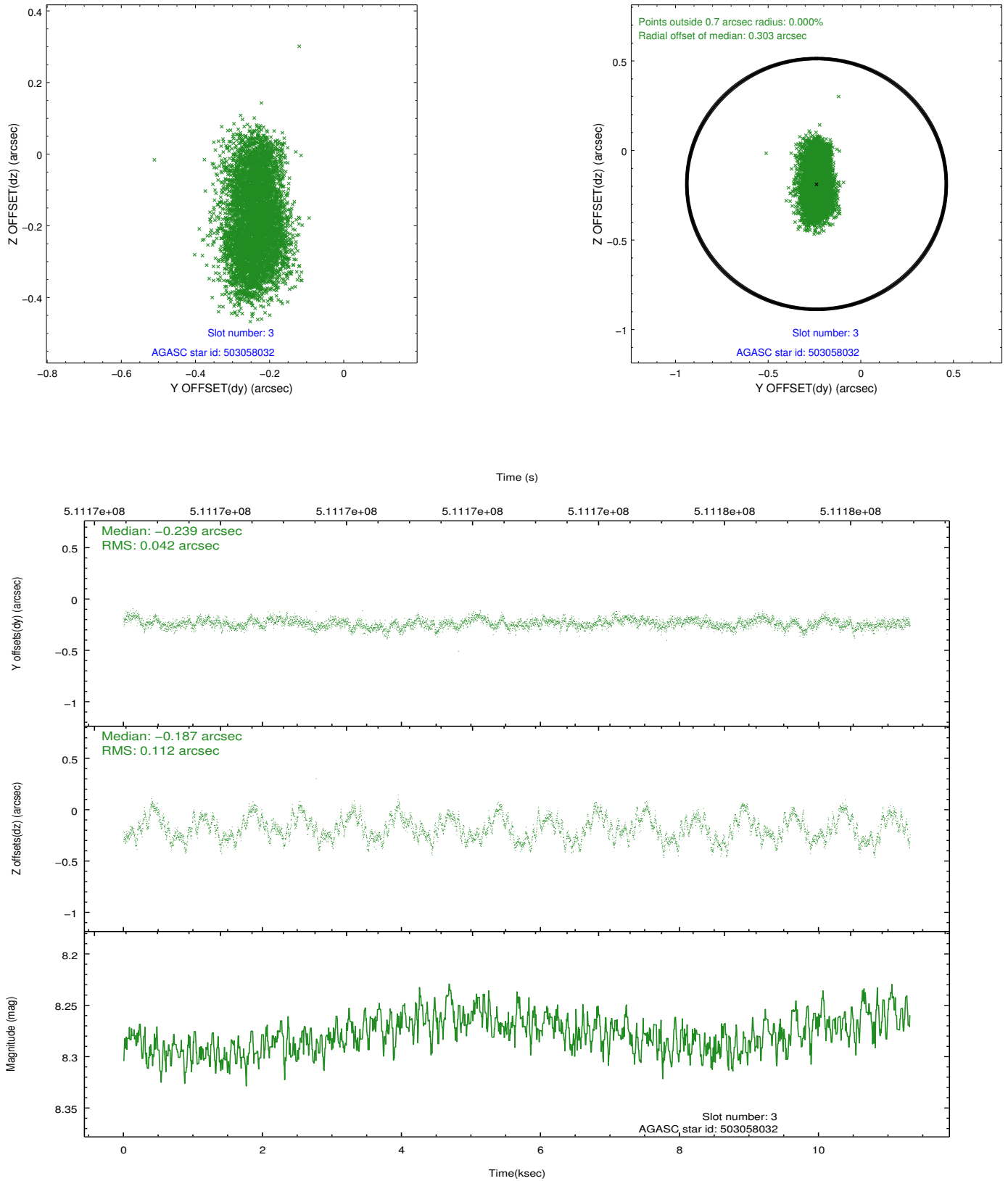


### Slot Statistics

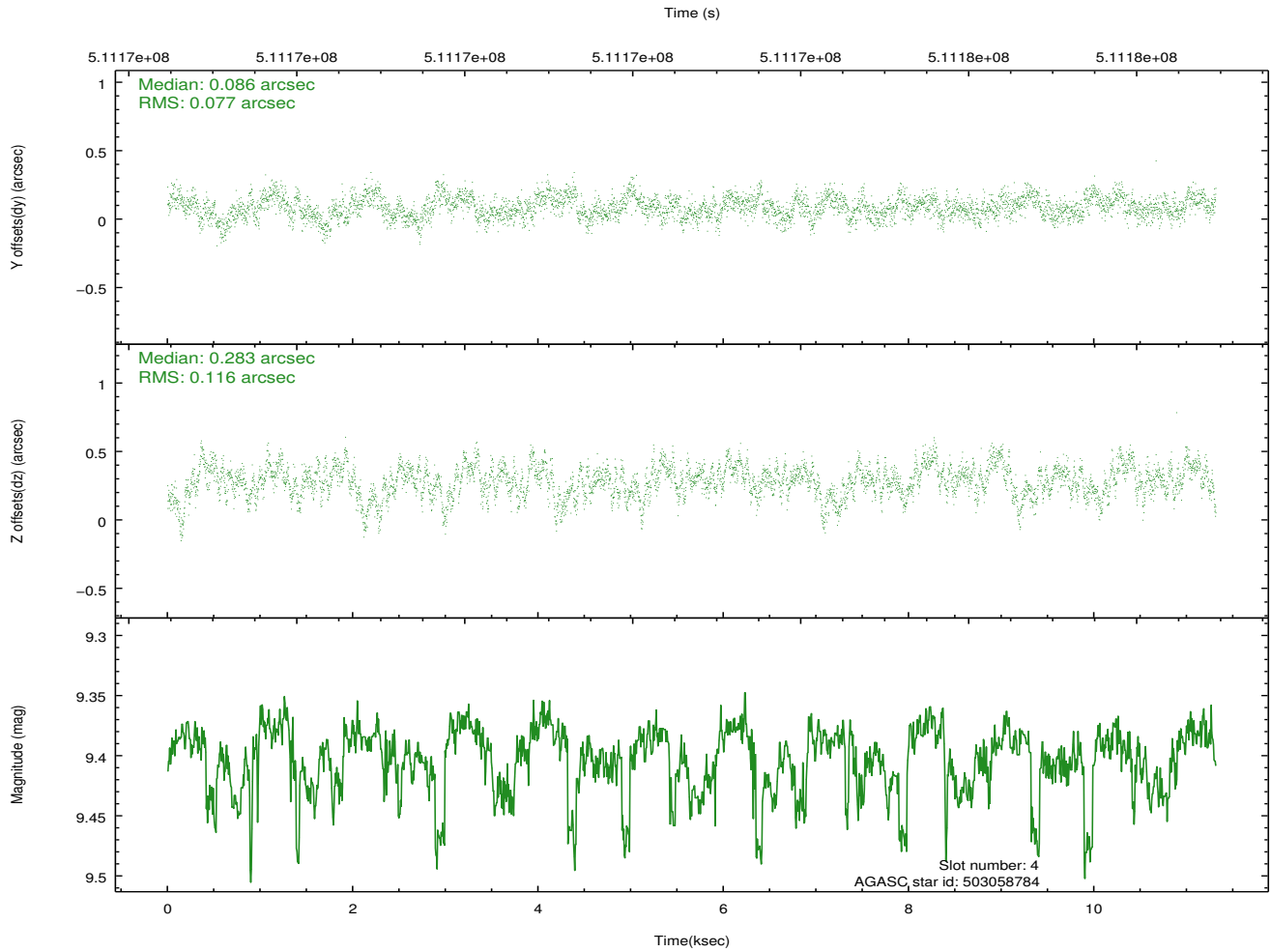
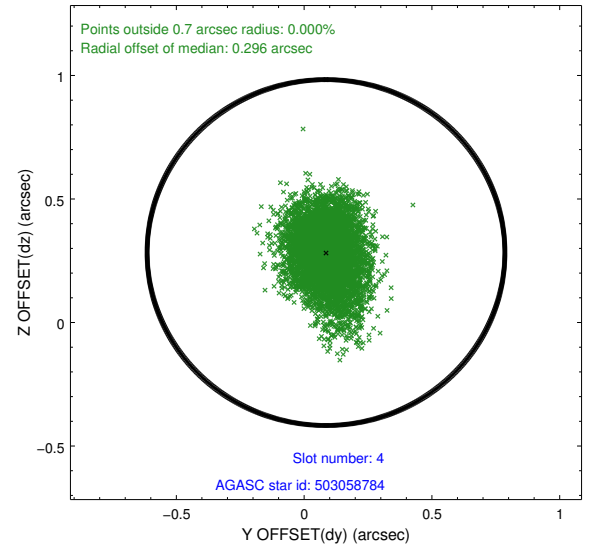
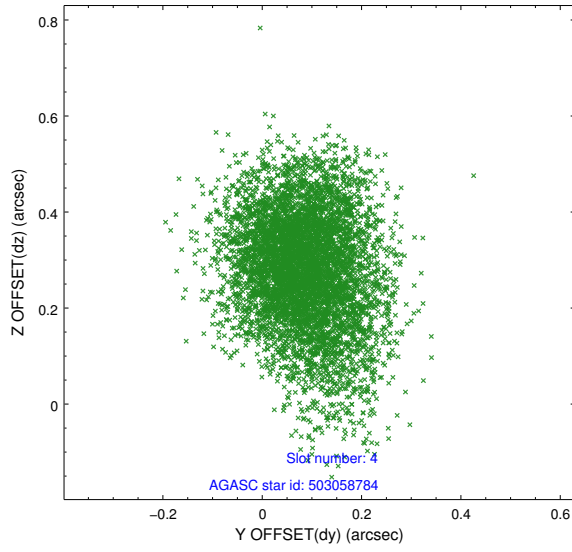
lot	status	used	id	mag	n_pts	med_dy	med_dz	drl	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-2	7.03	2760	-0.115	-0.065	0.008	0.013	0.000000	0.000000	-774.67	-1739.33
1	FID		ACIS-S-4	7.12	2760	0.279	0.073	0.007	0.012	0.000000	0.000000	2138.83	168.79
2	FID		ACIS-S-5	7.15	2760	-0.195	0.001	0.010	0.017	0.000000	0.000000	-1826.98	162.97
3	GUIDE	used	503058032	8.28	5518	-0.239	-0.187	0.130	0.211	175.962146	58.411045	775.61	2118.25
4	GUIDE	used	503058784	9.40	5511	0.086	0.283	0.147	0.245	177.197718	59.012089	-1412.82	-167.72
5	GUIDE	used	503059584	9.90	5501	-0.243	-0.318	0.262	0.409	175.637894	58.477554	1397.77	1905.64
6	GUIDE	used	503061296	8.46	5519	0.266	0.190	0.113	0.177	176.644541	59.209106	-349.68	-814.82
7	BAD	used	503056528	10.20	5260	0.124	0.002	0.224	0.396	177.645117	58.535441	-2361.22	1488.86

## 2.4 Star Slots

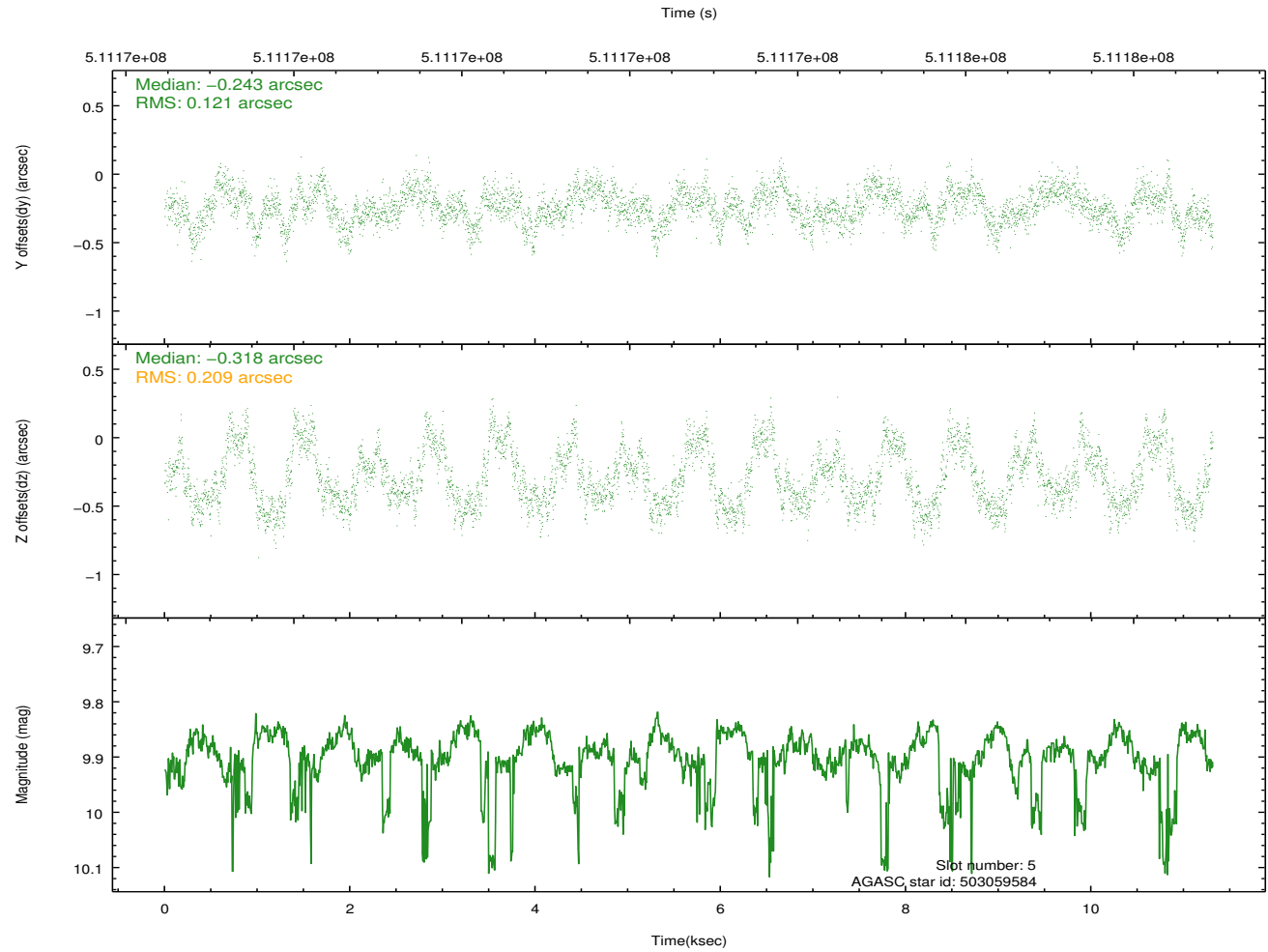
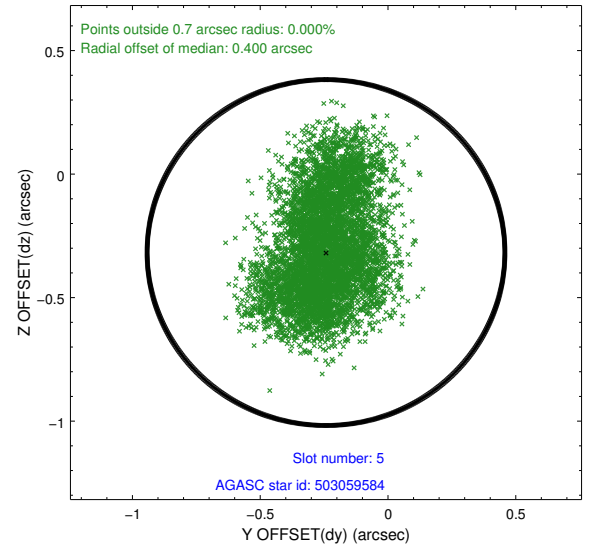
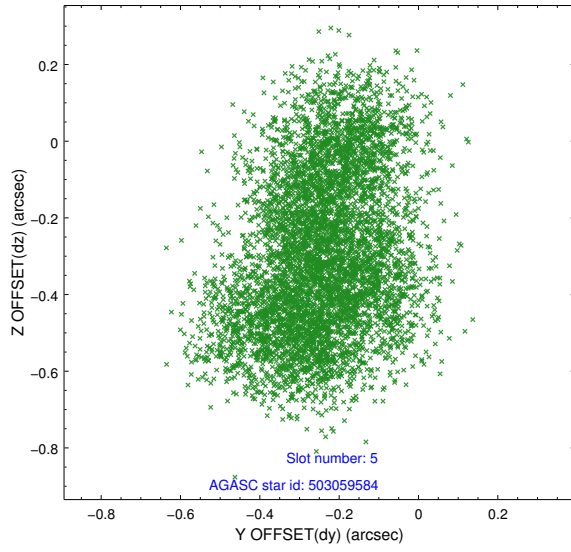
### 2.4.1 Slot 3



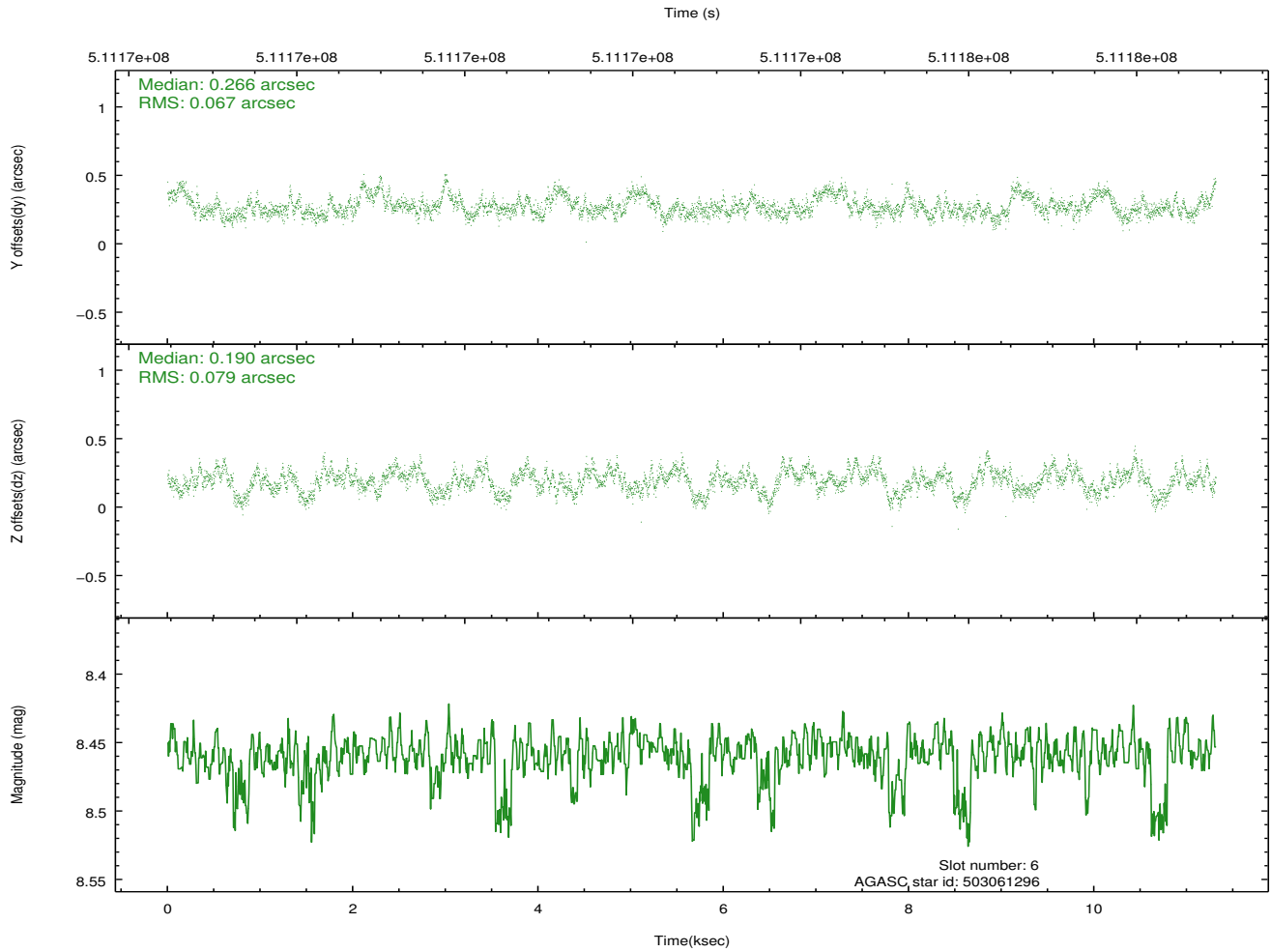
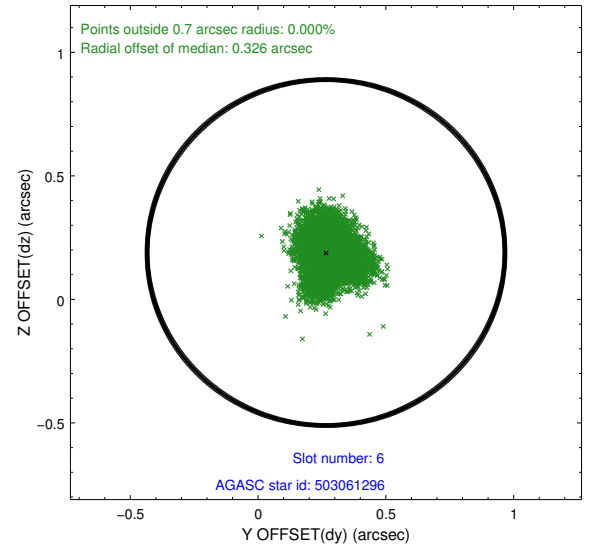
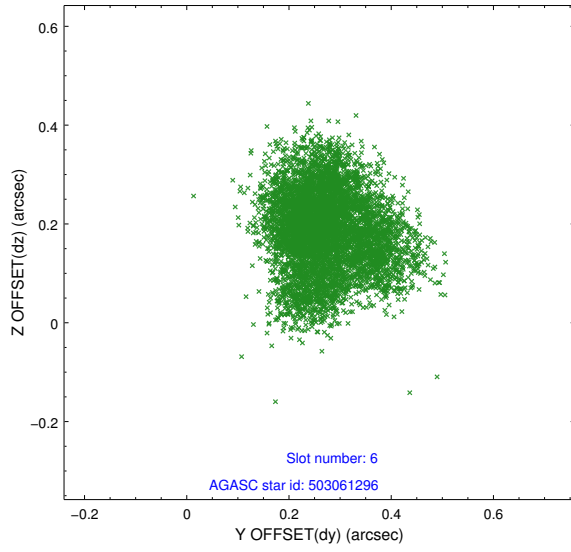
## 2.4.2 Slot 4



### 2.4.3 Slot 5

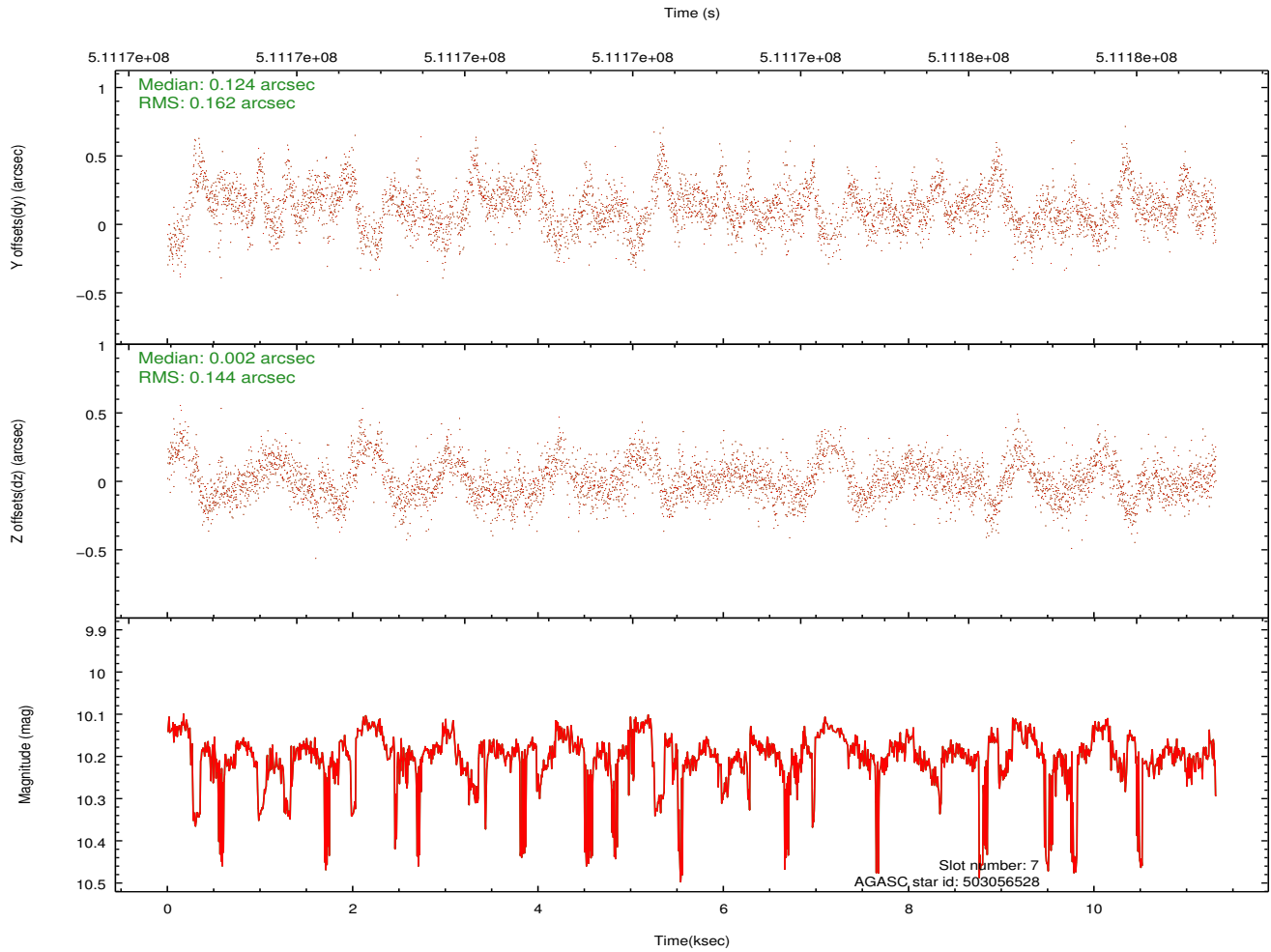
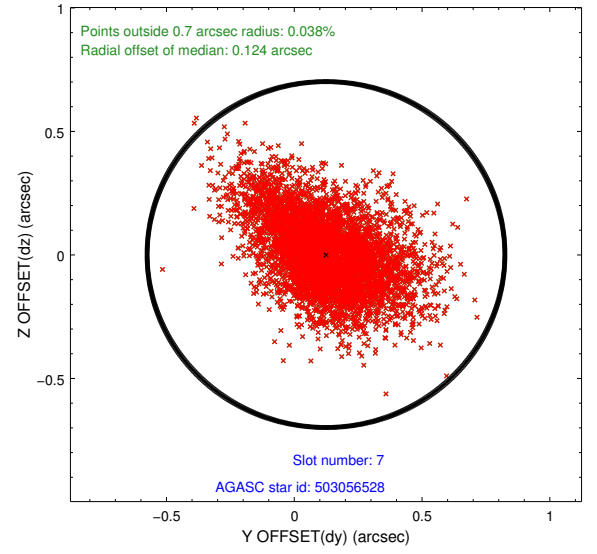
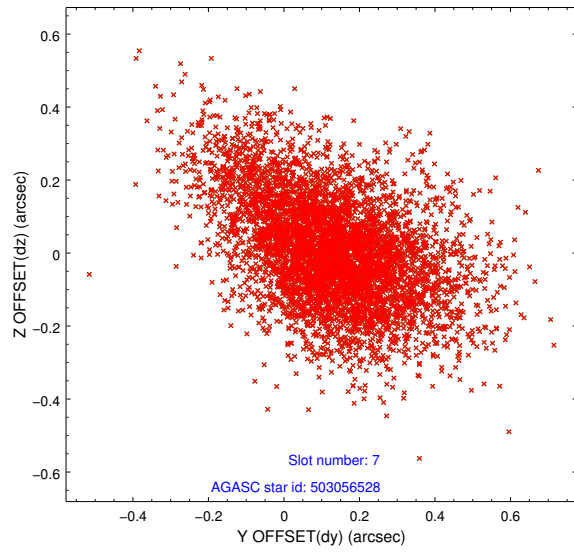


## 2.4.4 Slot 6



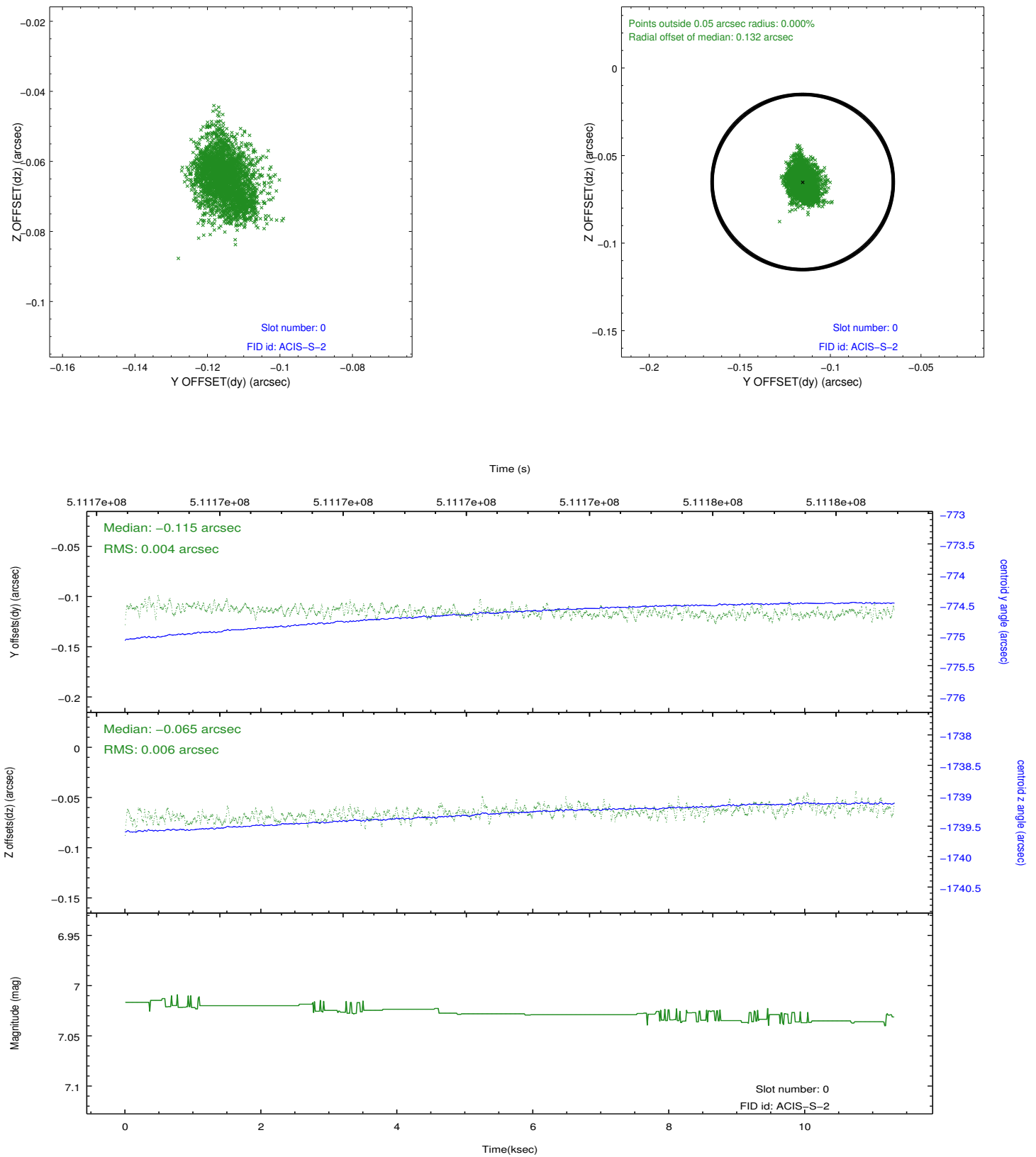


## 2.4.5 Slot 7

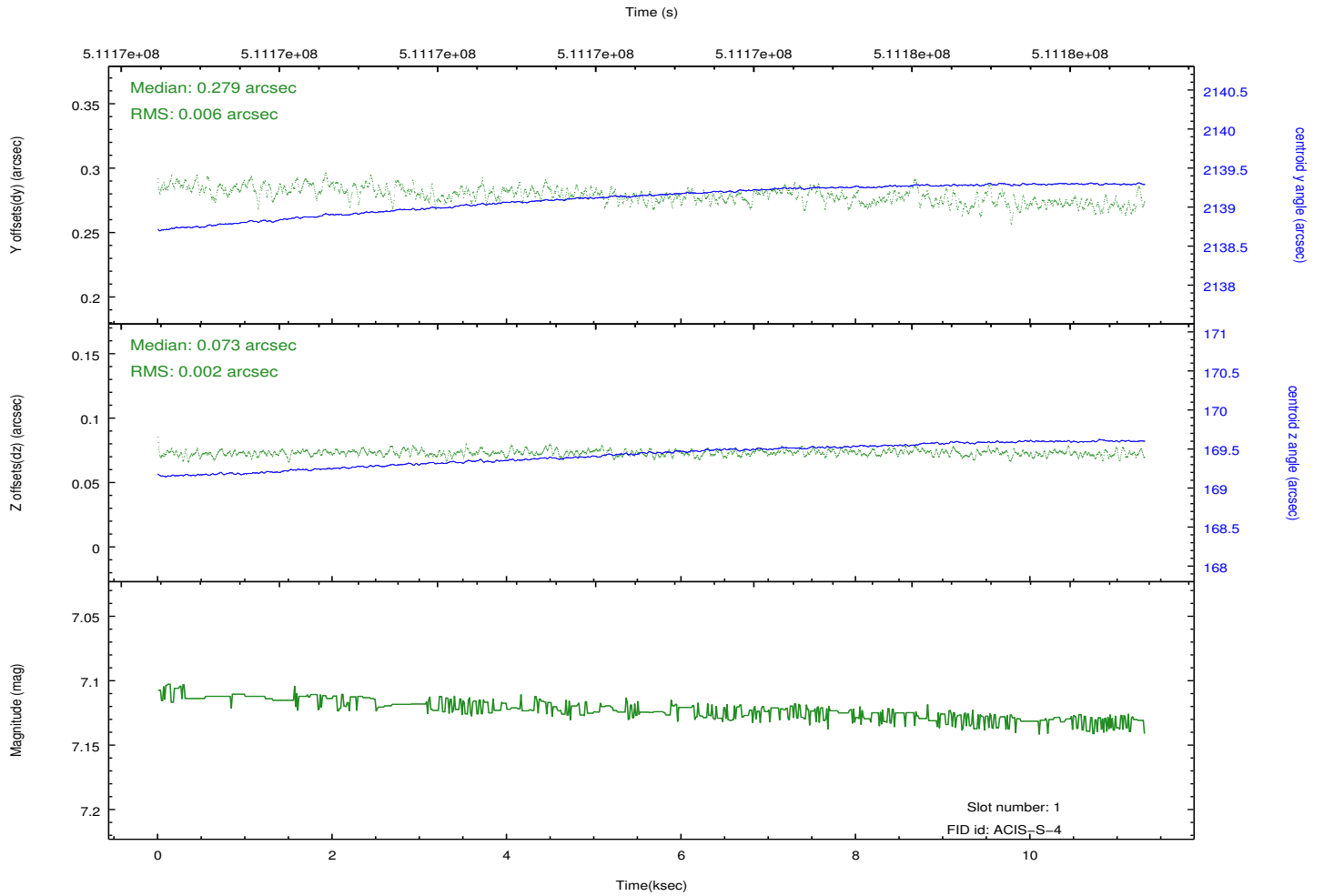
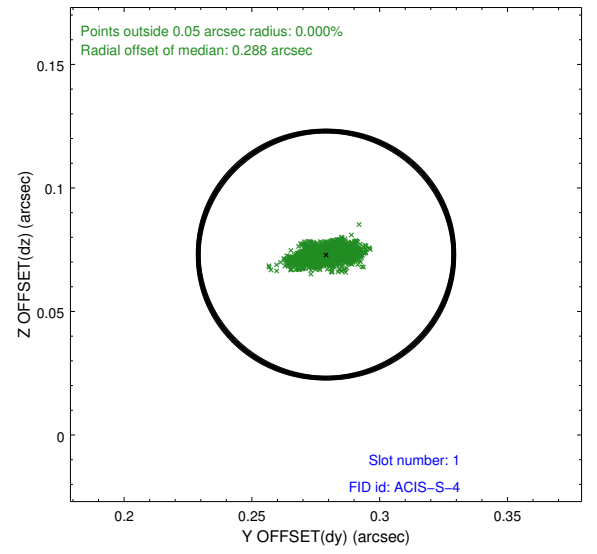
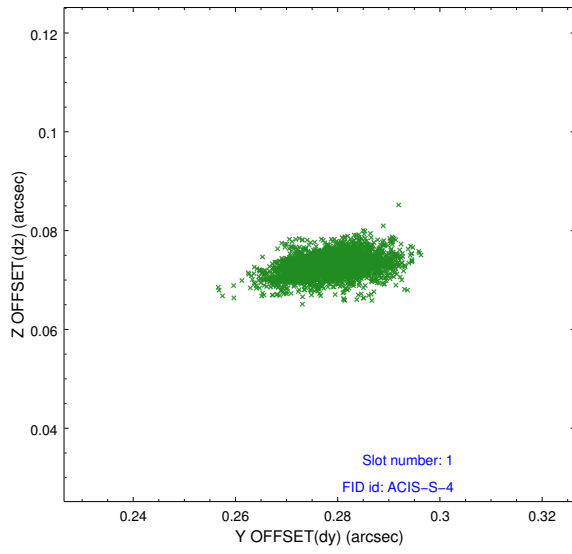


## 2.5 FID Slots

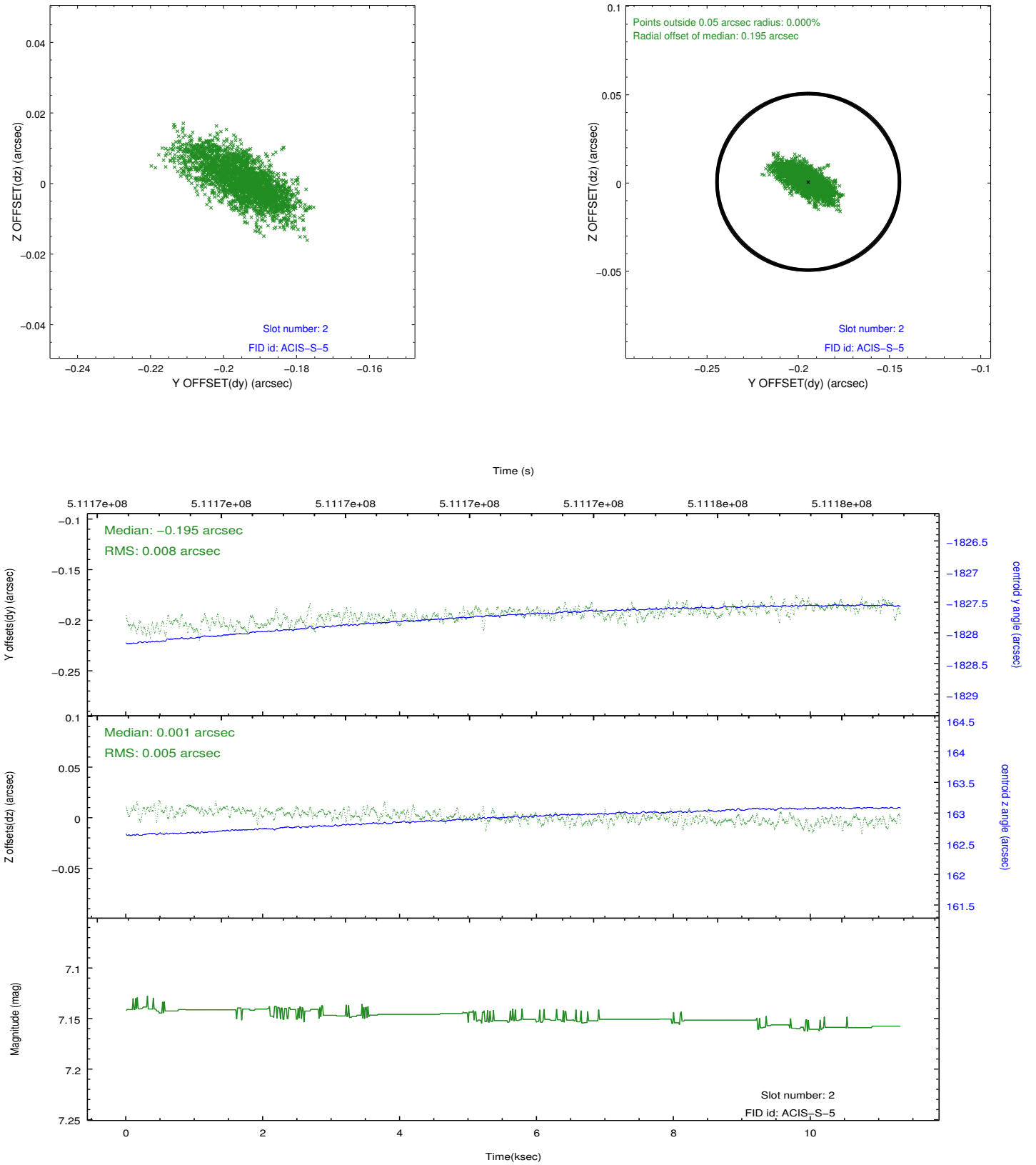
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	11.068941416144

## 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.