

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 15101 - L2 Version 2  
Chandra X-Ray Center

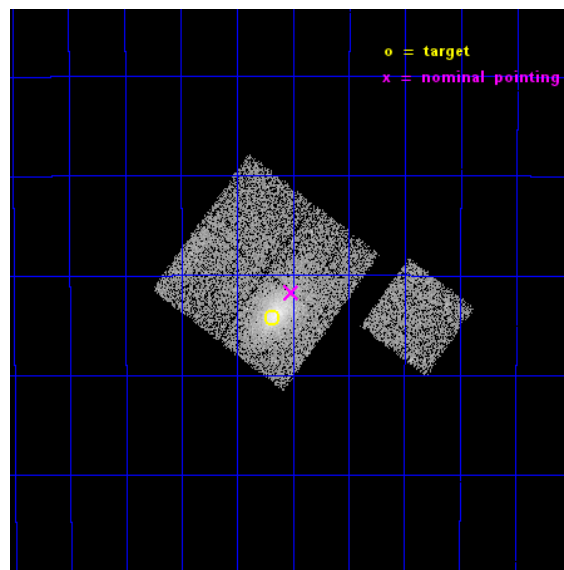
L2 Processing Date : Dec 2 2014

## 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

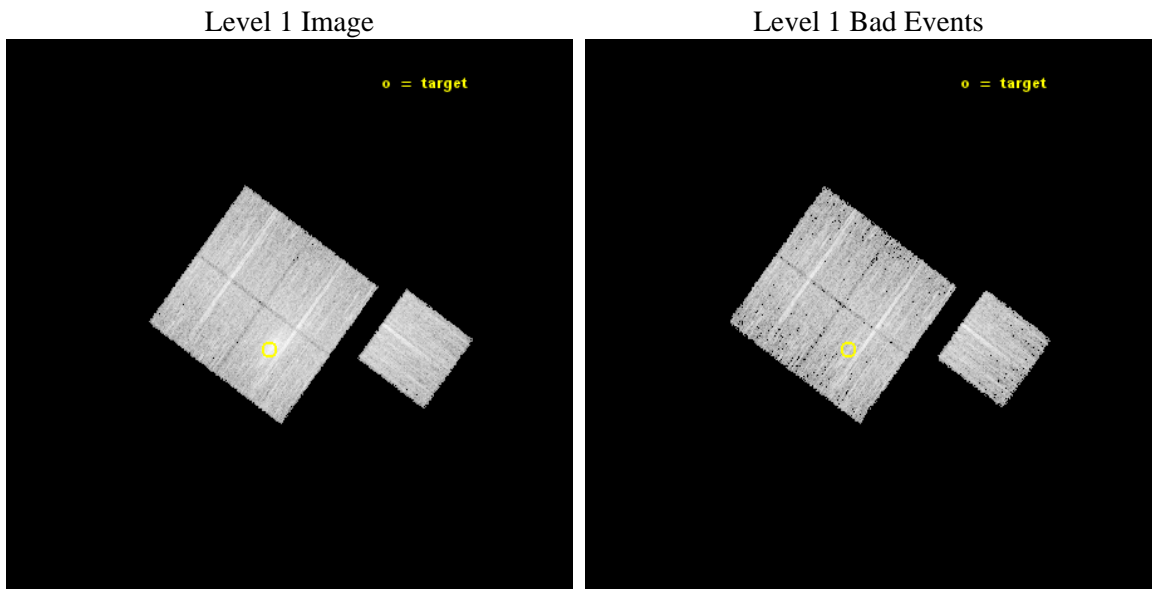
seq_num	801230	Sequence number
obs_id	15101	Observation id
title	A Chandra-Planck Legacy Program for Massive Clusters of Galaxies	P
observer	Dr. Christine Jones	Principal investigator
object	G002.74-56.18	Source name
dtycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	334.672083	Observer's specified target RA [deg]
dec_targ	-38.904667	Observer's specified target Dec [deg]
ra_nom	334.62837389999	Nominal RA [deg]
dec_nom	-38.862227263429	Nominal Dec [deg]
roll_nom	126.36251570396	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10772.50008285	Sum of GTIs [s]
livetime	10631.749438669	Livetime [s]
ontime0	10772.50008285	Sum of GTIs [s]
ontime1	10772.50008285	Sum of GTIs [s]
ontime2	10772.50008285	Sum of GTIs [s]
ontime3	10772.50008285	Sum of GTIs [s]
ontime6	10772.50008285	Sum of GTIs [s]
l2events	39674	Number of level 2 events



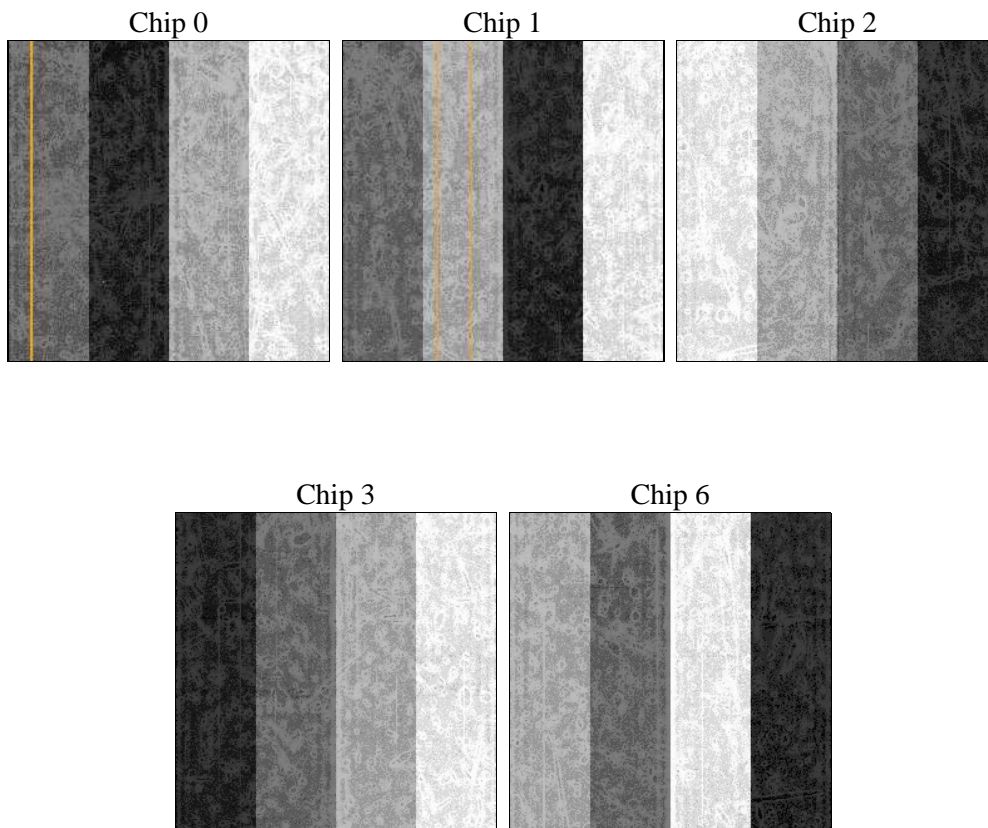
## 2 OBI

### 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	Processing system revision	ontime	10772.50008285	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime0	10772.50008285	Sum of GTIs [s]
date	2014-12-02T18:33:59	Date and time of file creation	ontime1	10772.50008285	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	10772.50008285	Sum of GTIs [s]
			ontime3	10772.50008285	Sum of GTIs [s]
			ontime6	10772.50008285	Sum of GTIs [s]
			l1events	275524	Number of level 1 events

### 2.1.4 Events

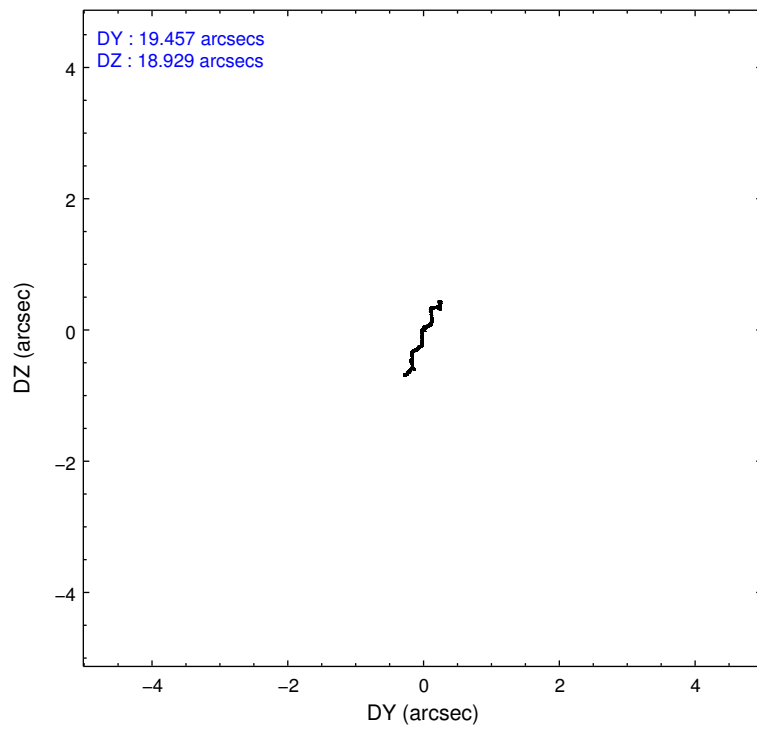
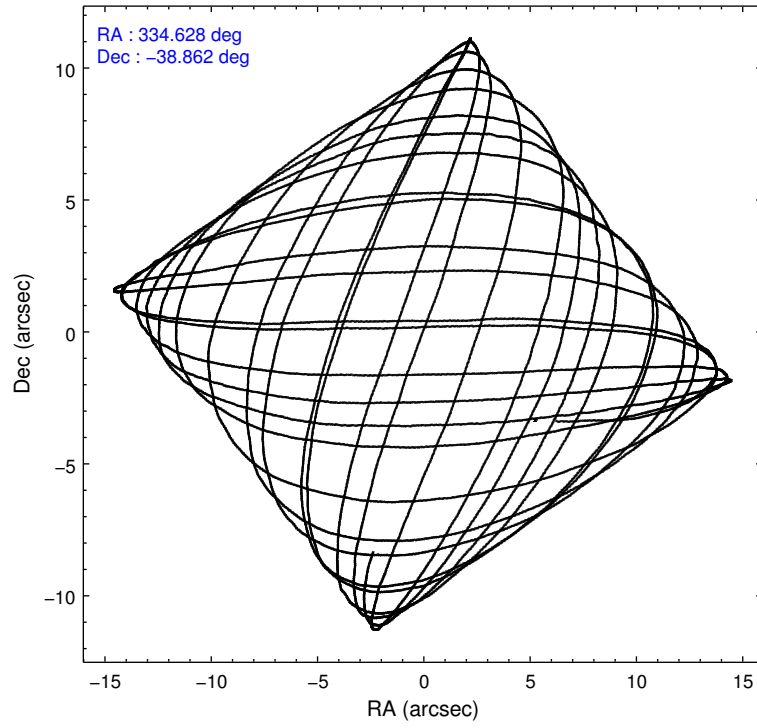
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	49115	50418	54652	65809	55530
rejected events	42620	43154	47126	48583	48811
rejected %	86%	85%	86%	73%	87%

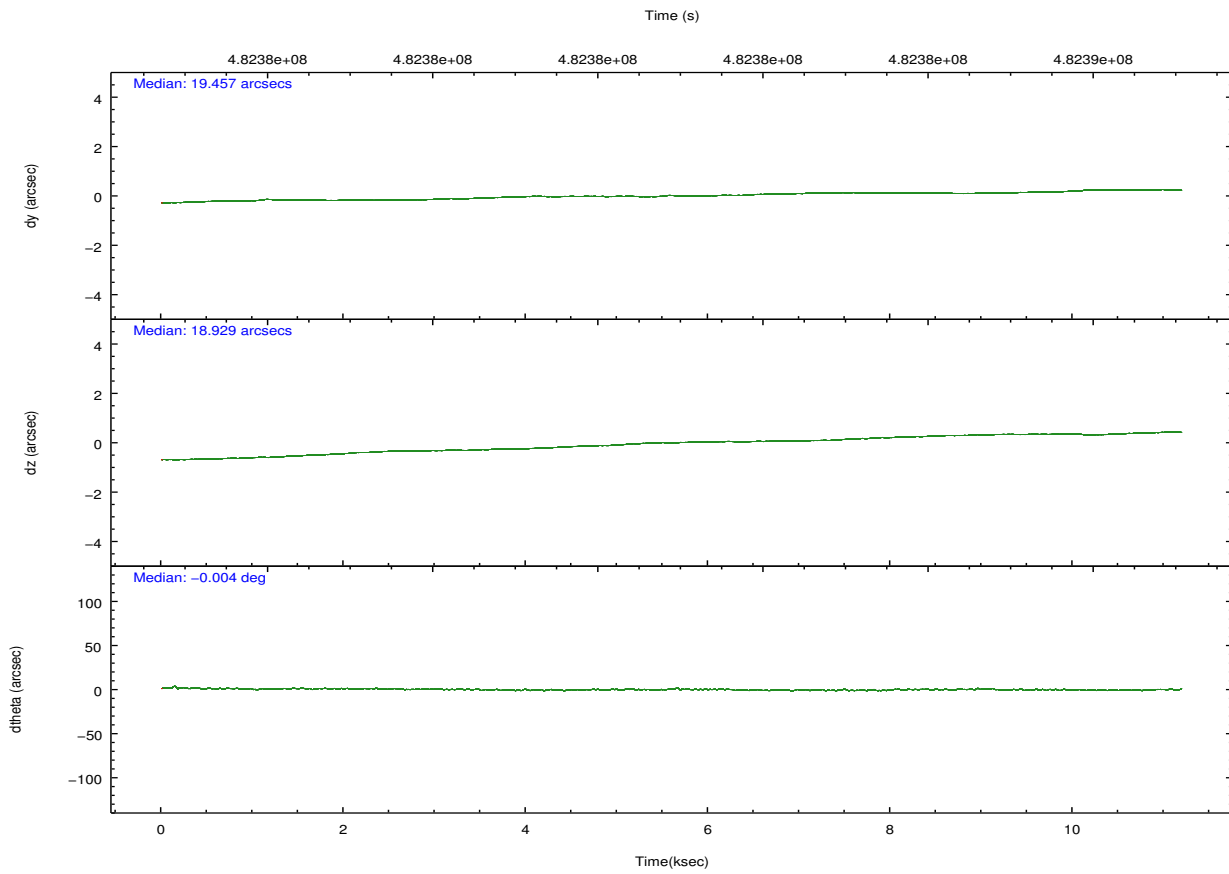
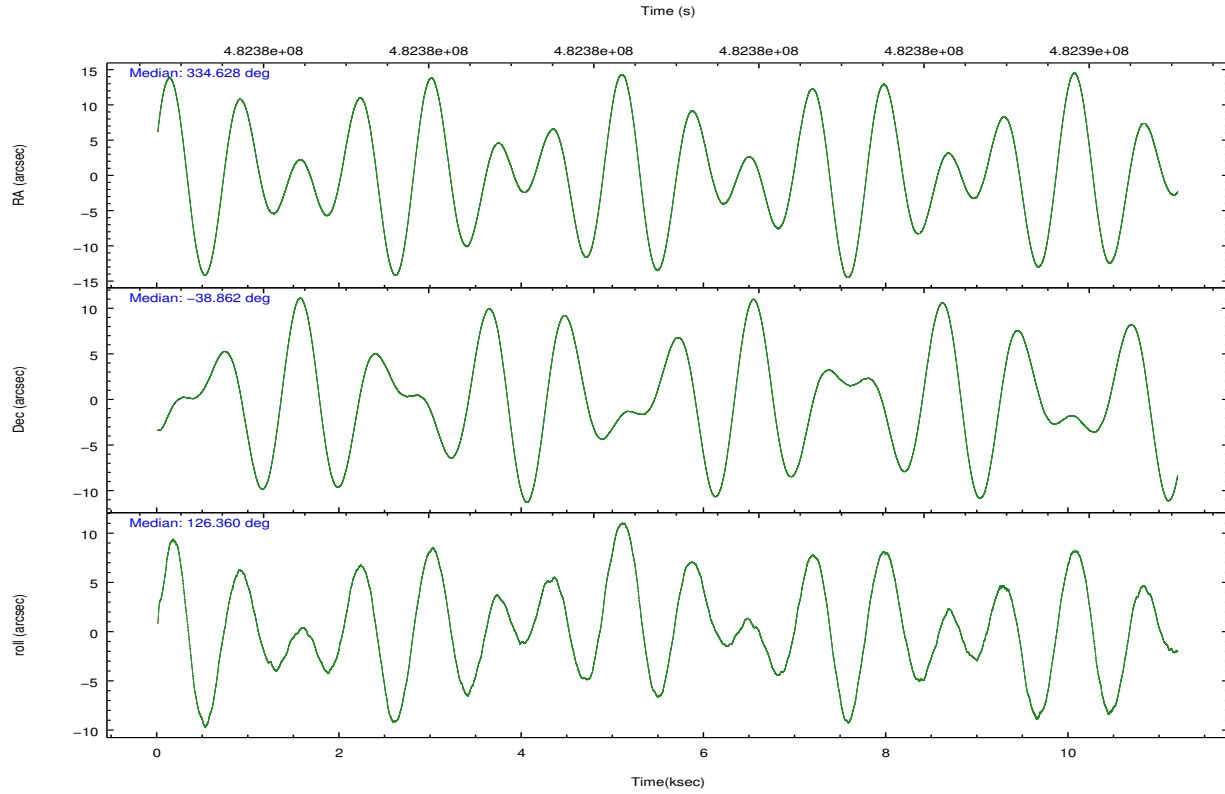
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2333	2664	3300	11151	2407
	4%	5%	6%	16%	4%
grade 1 events	30	30	42	74	22
	0%	0%	0%	0%	0%
grade 2 events	1619	1745	1679	2479	1502
	3%	3%	3%	3%	2%
grade 3 events	657	675	662	1028	680
	1%	1%	1%	1%	1%
grade 4 events	636	677	678	997	667
	1%	1%	1%	1%	1%
grade 5 events	2525	2624	2337	2813	2693
	5%	5%	4%	4%	4%
grade 6 events	1253	1506	1209	1574	1464
	2%	2%	2%	2%	2%
grade 7 events	40062	40497	44745	45693	46095
	81%	80%	81%	69%	83%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	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	334.660744	334.6283738999921	CCD I2 on	Y	Y
[deg] Pointing Dec	-38.873126	-38.86222726342891	CCD I3 on	Y	Y
[deg] Pointing Roll	126.174148	126.3625157039634	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	O1	Y
[mm] SIM translation stage pos	-225.842463	-225.8458576473255	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.75	-7.746595355604228	CCD S4 on	N	N
[s] Observation start time (MET)	482375500.184000	482374859.17699	CCD S5 on	N	N
Observation start date	2013-04-15T01:10:33	2013-04-15T01:00:59	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	482386500.184000	482387424.14017	On-chip summing requested	N	N
Observation end date	2013-04-15T04:13:53	2013-04-15T04:30:24	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect





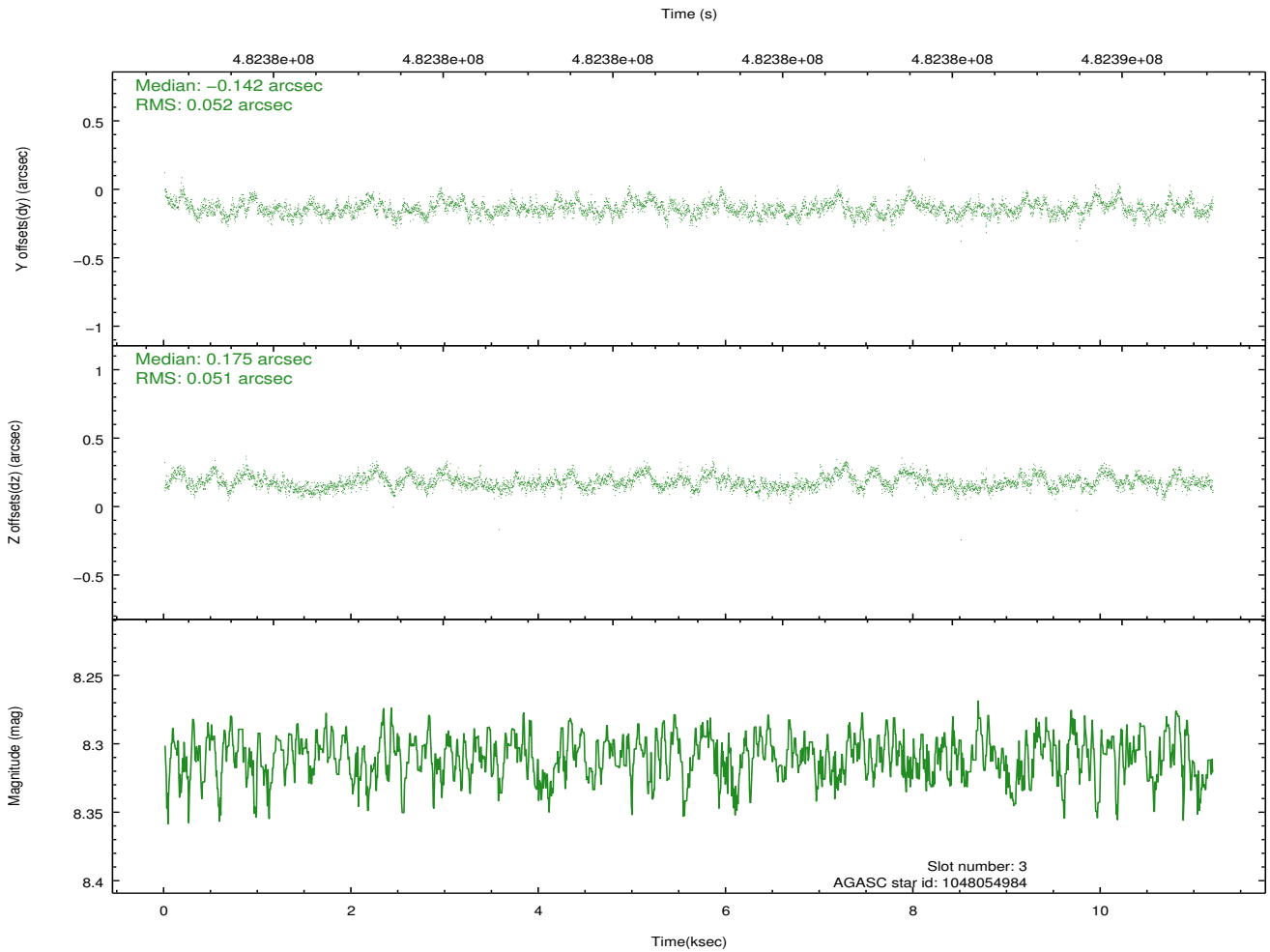
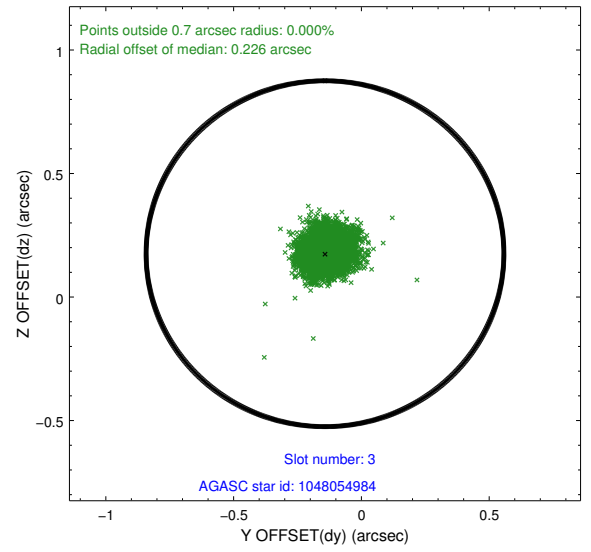
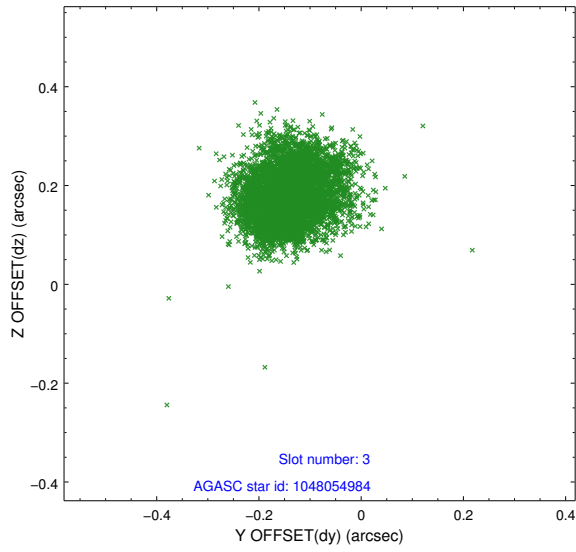
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.06	2730	0.112	-0.056	0.009	0.020	0.000000	0.000000	919.89	-1001.61
1	FID		ACIS-I-5	7.05	2730	-0.306	0.088	0.008	0.017	0.000000	0.000000	-1828.47	895.62
2	FID		ACIS-I-6	7.07	2730	0.103	0.038	0.010	0.018	0.000000	0.000000	384.82	1540.69
3	GUIDE	used	1048054984	8.31	5458	-0.142	0.175	0.077	0.124	334.713504	-38.433722	1189.33	-1053.14
4	GUIDE	used	1048057312	8.22	5460	0.180	-0.357	0.073	0.121	334.676760	-39.553432	-2003.29	1409.56
5	GUIDE	used	1048059464	9.14	5455	-0.344	-0.495	0.116	0.184	333.896772	-39.014075	842.95	2029.30
6	GUIDE	used	1048062584	7.69	5459	0.238	0.061	0.082	0.142	335.023591	-38.765128	-288.21	-1049.07
7	GUIDE	used	1048054920	8.24	5458	0.062	0.609	0.069	0.111	335.767620	-38.906295	-1941.38	-2420.77

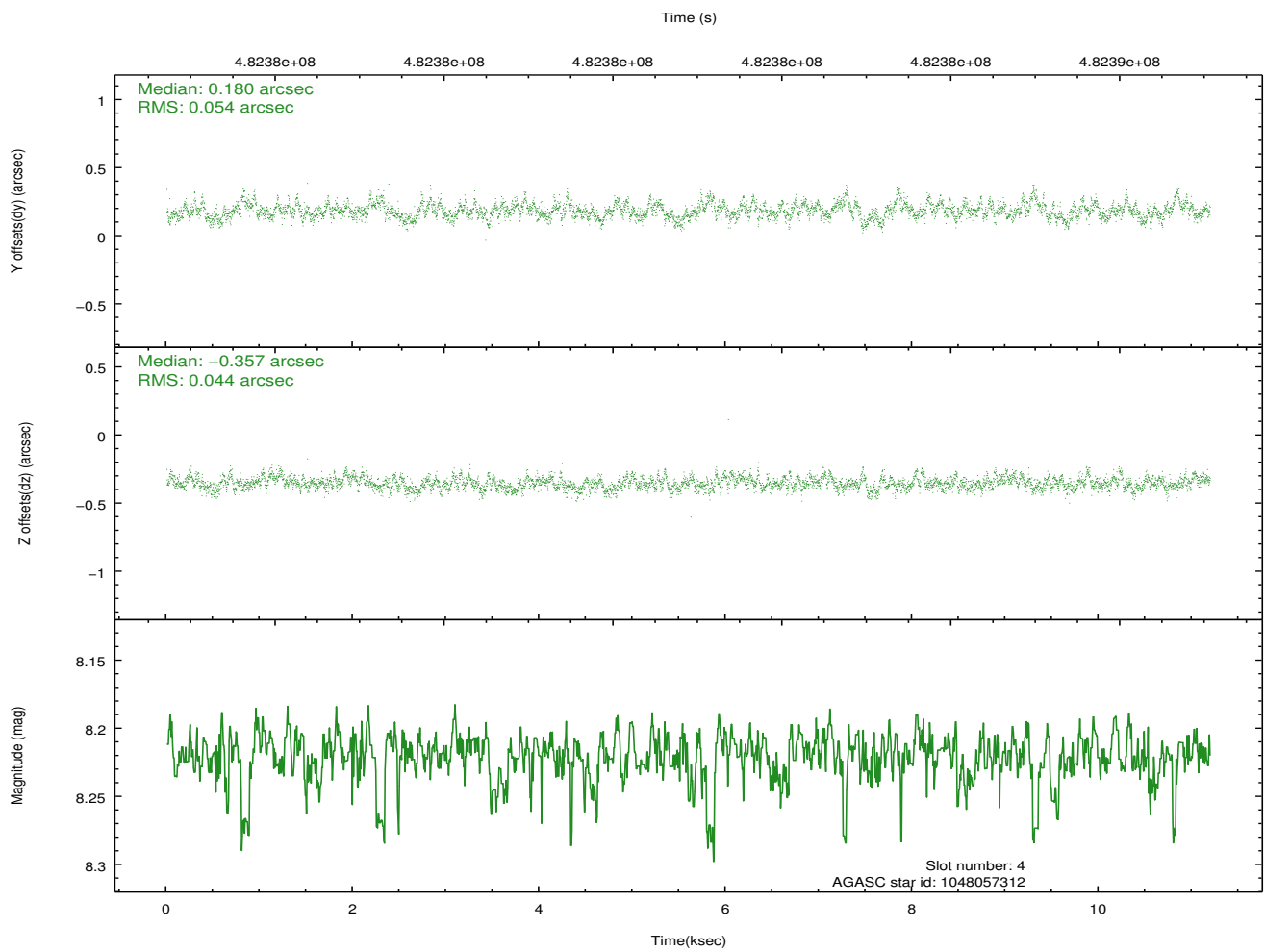
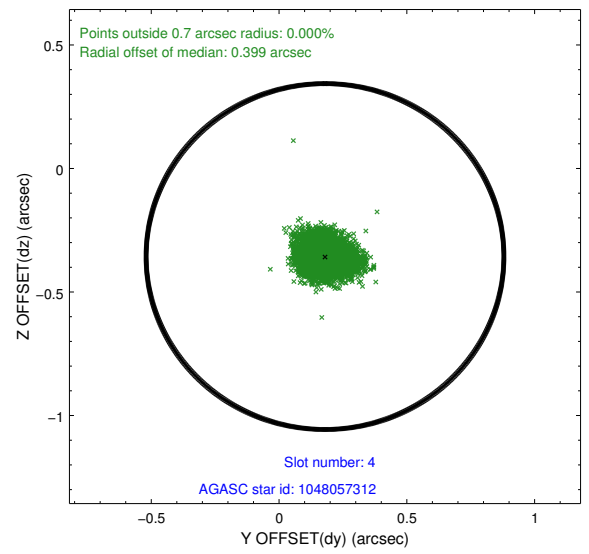
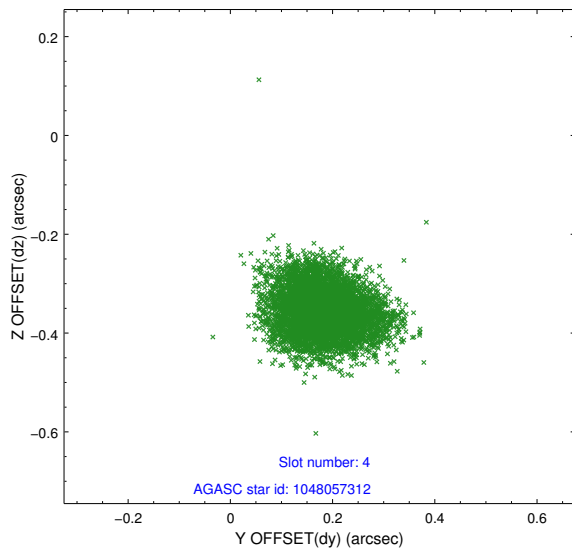
∞

## 2.4 Star Slots

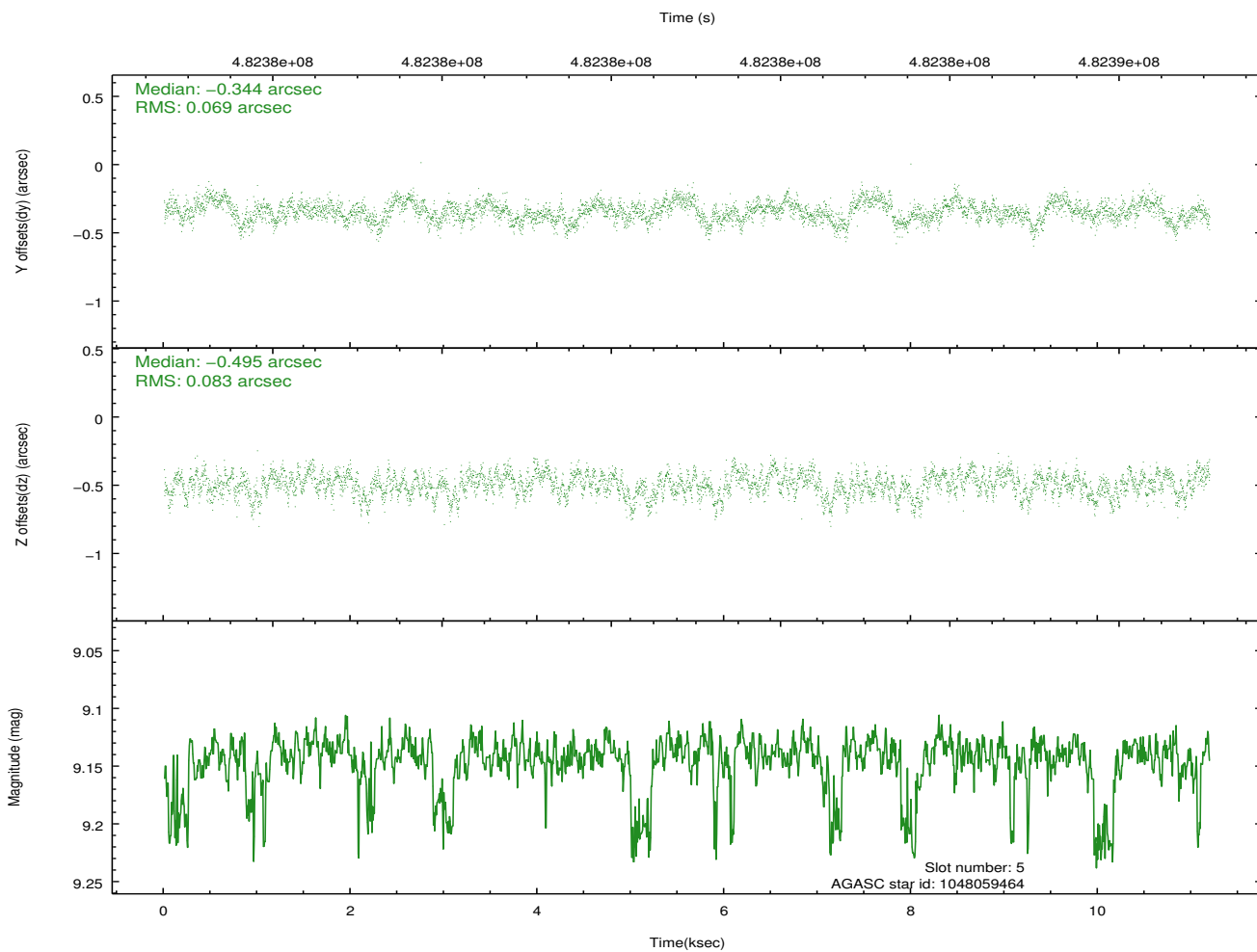
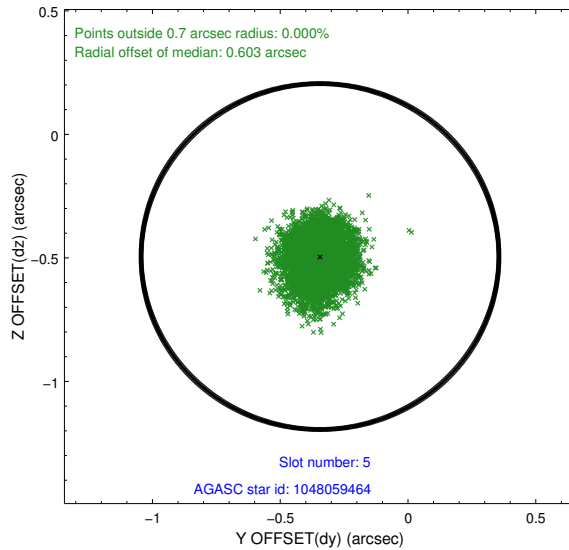
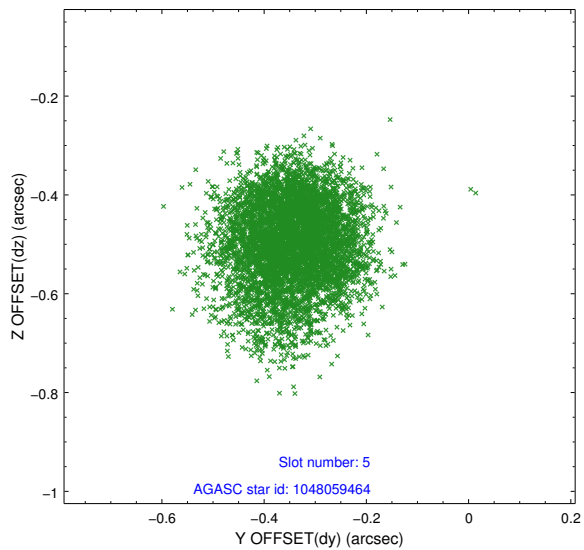
### 2.4.1 Slot 3



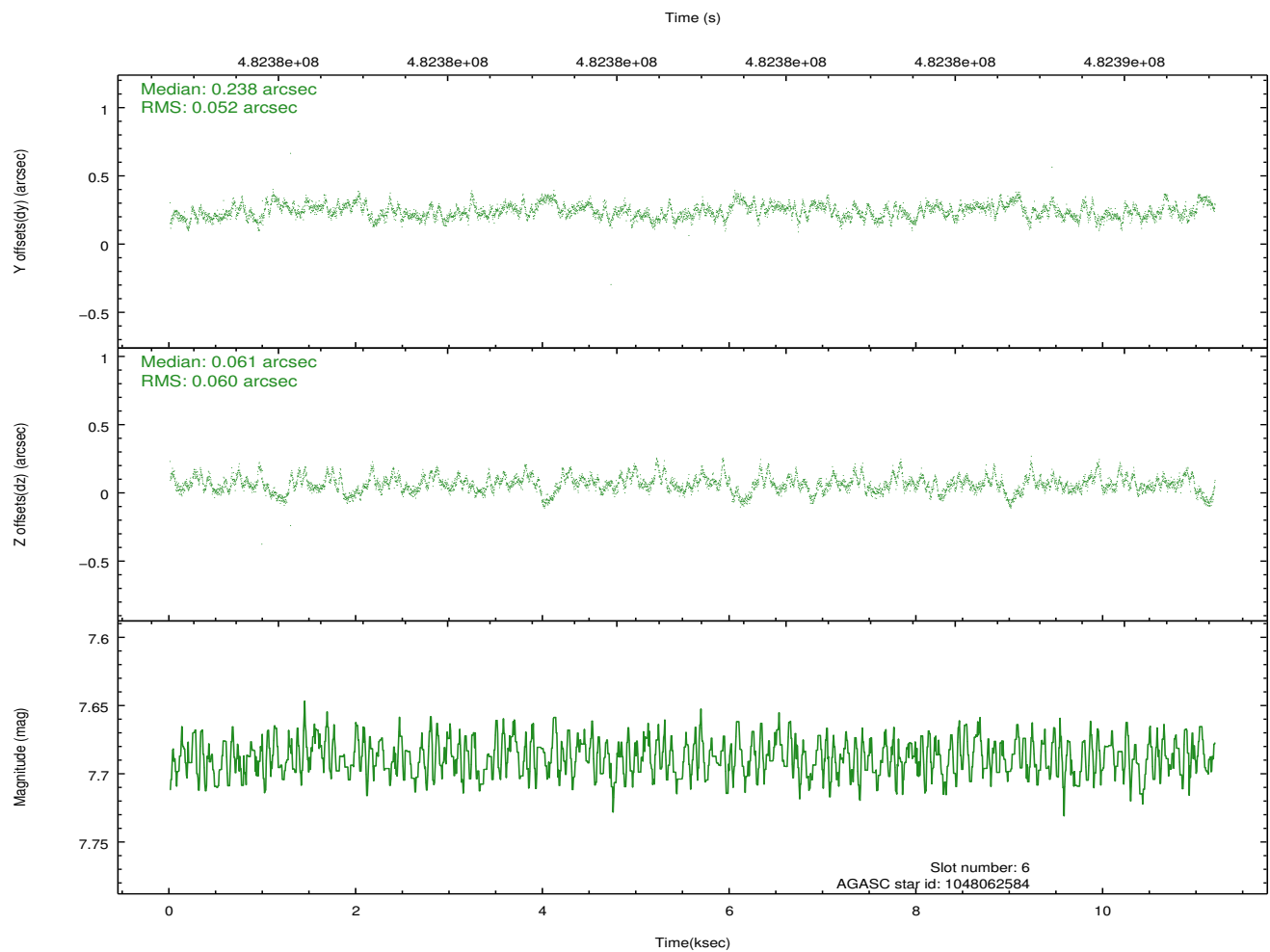
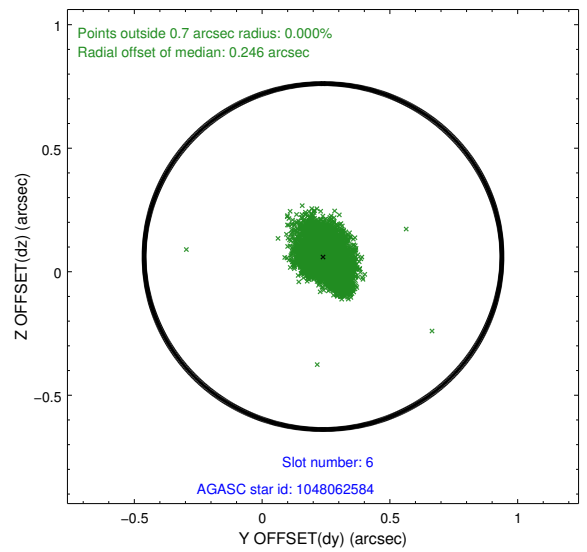
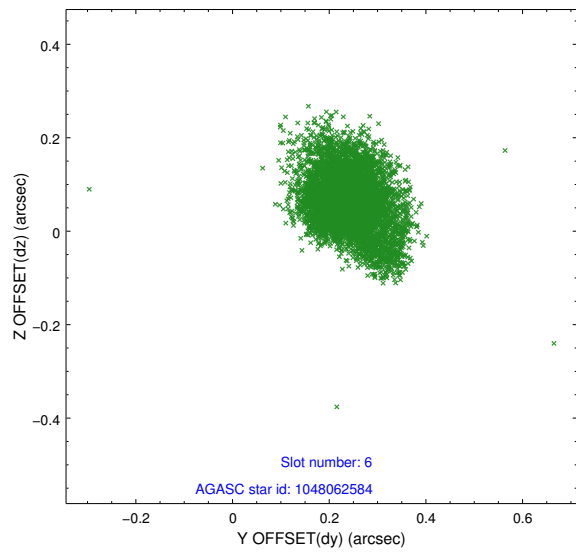
## 2.4.2 Slot 4



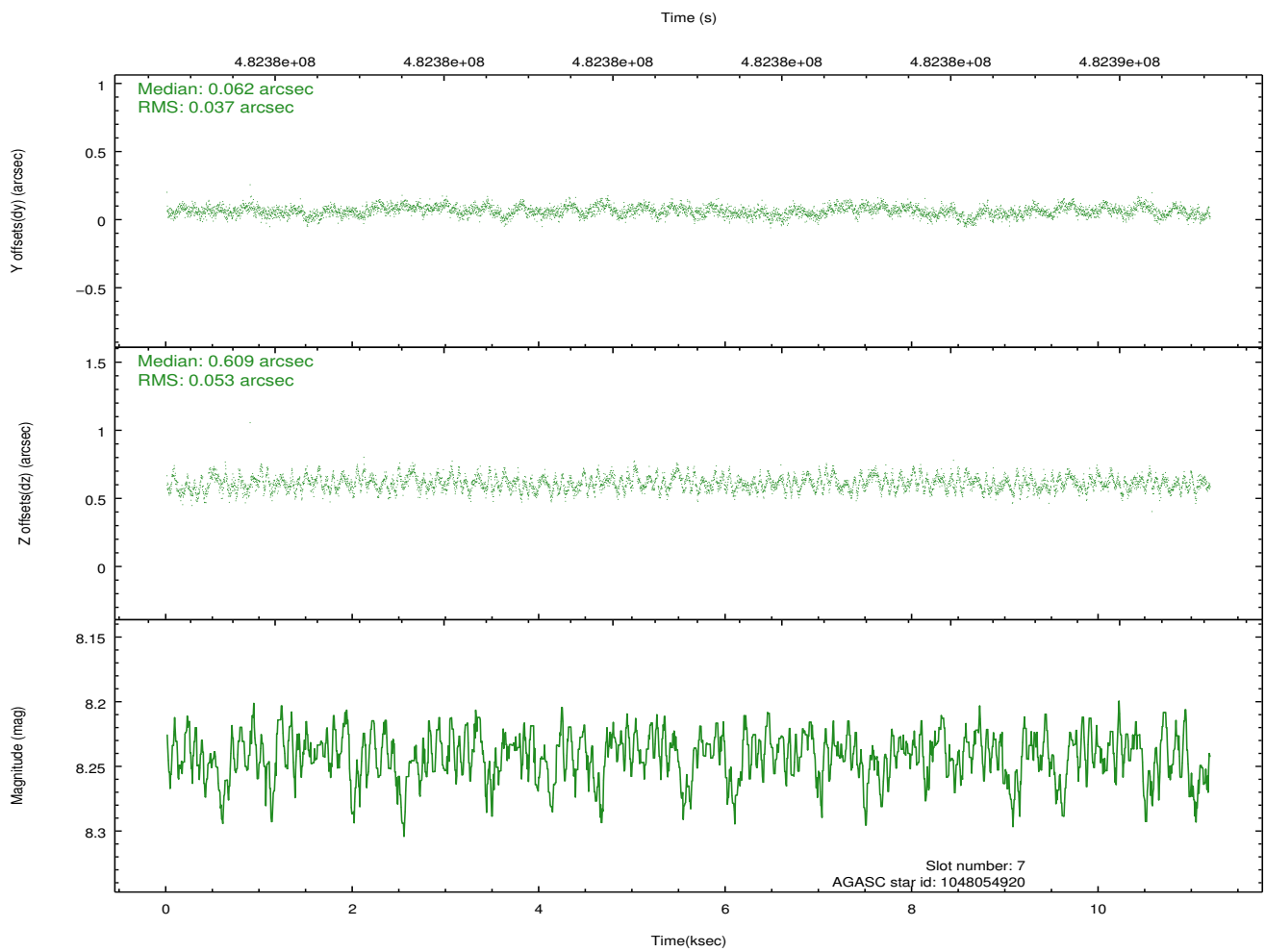
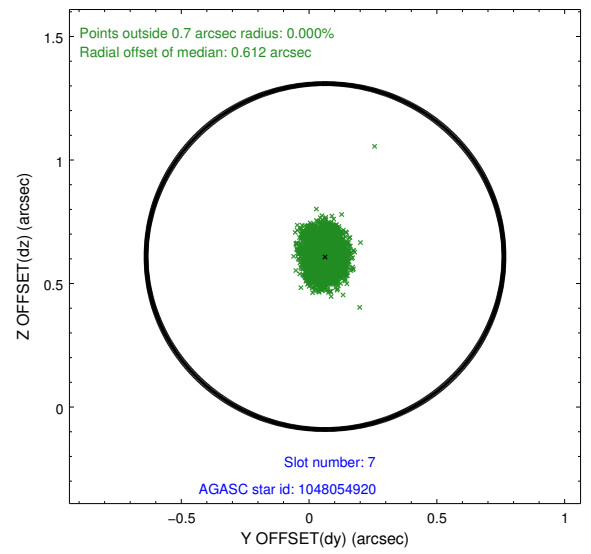
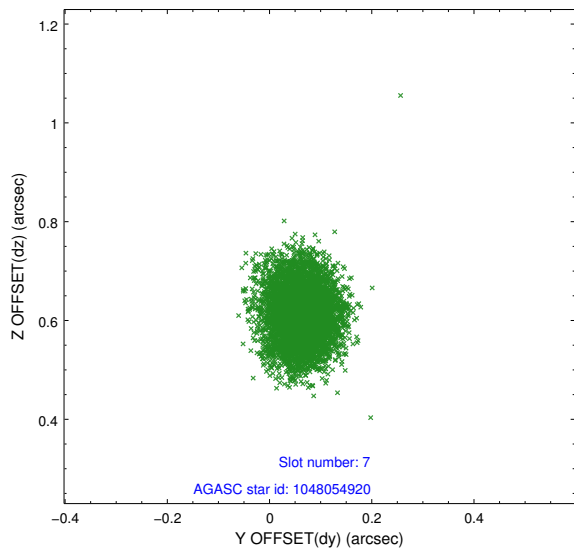
### 2.4.3 Slot 5



## 2.4.4 Slot 6

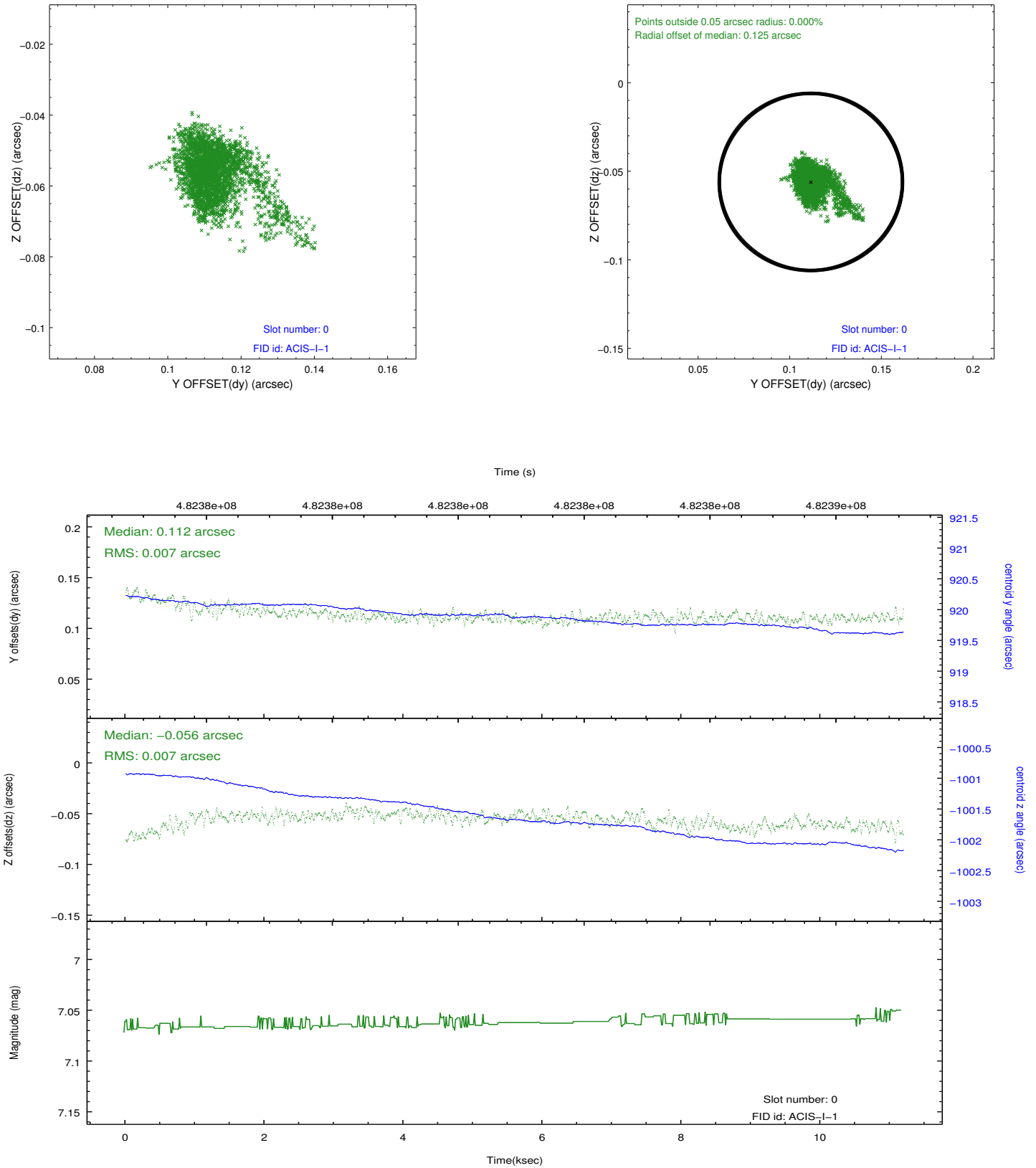


## 2.4.5 Slot 7

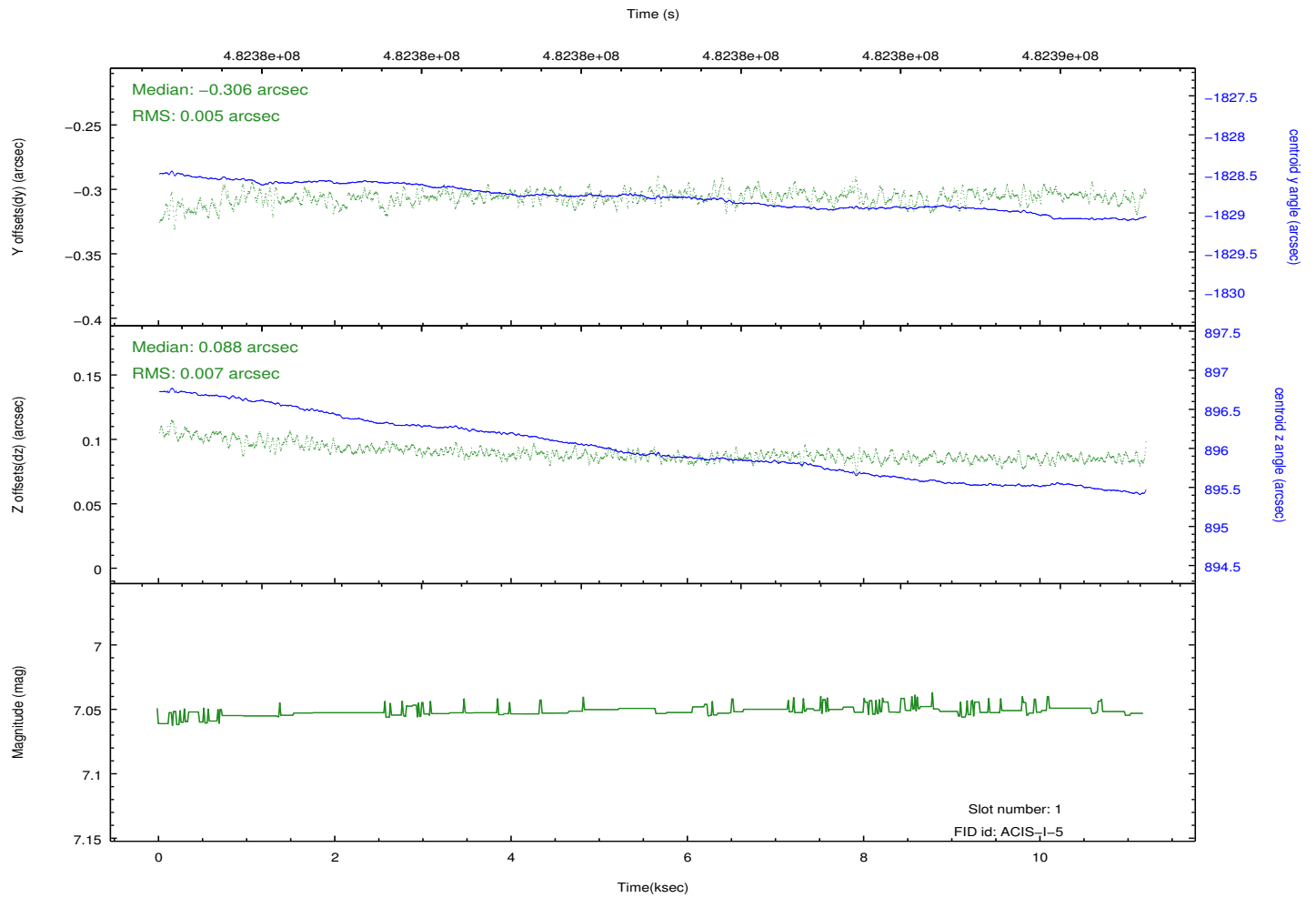
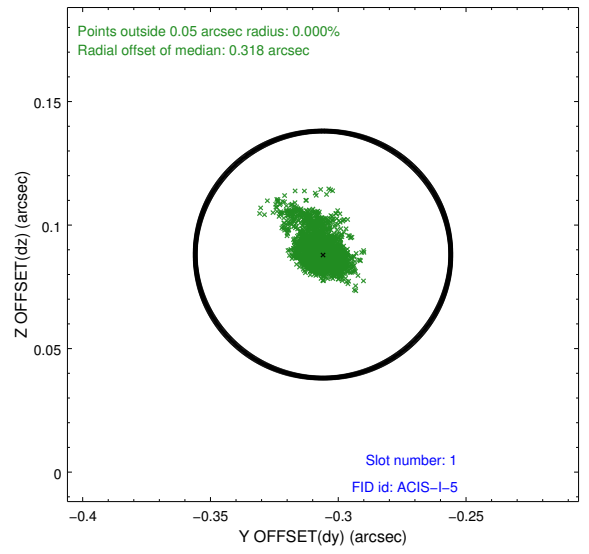
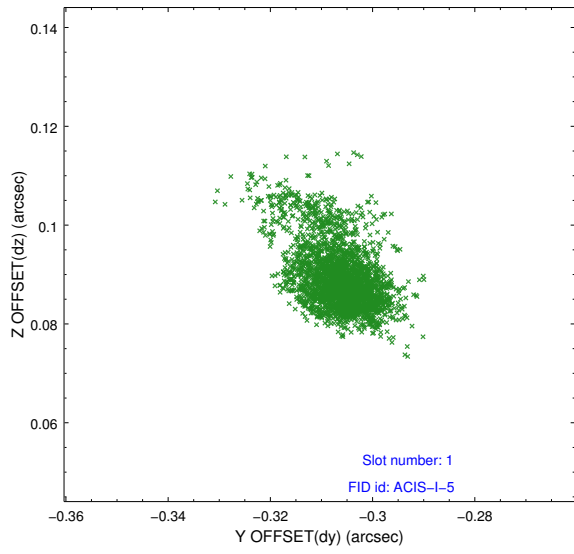


## 2.5 FID Slots

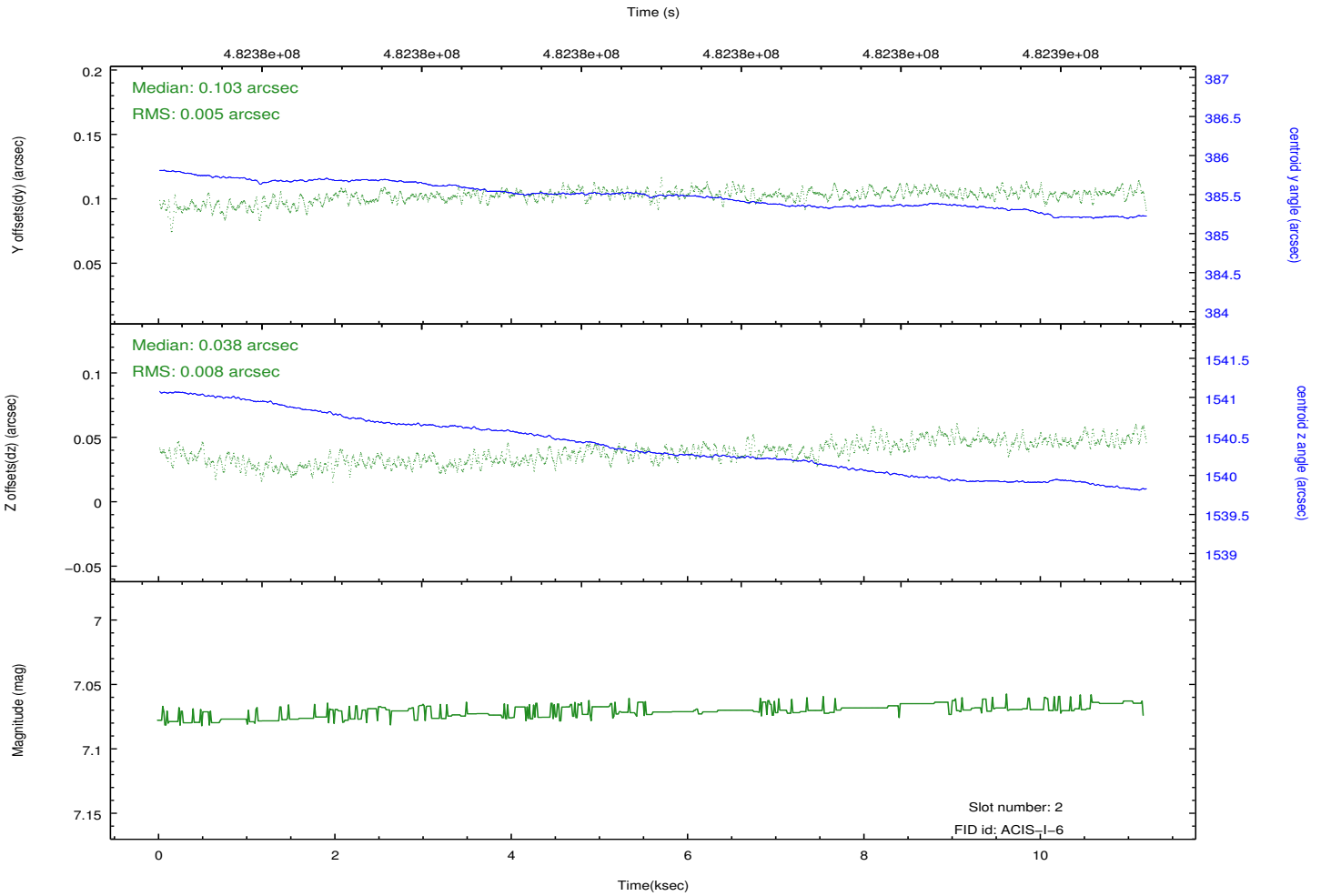
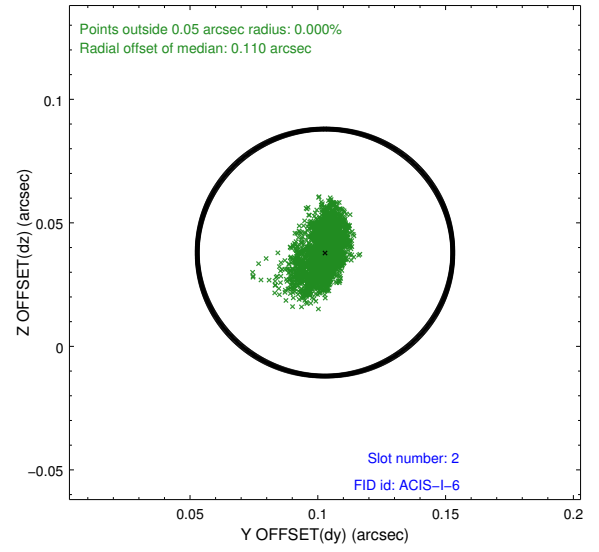
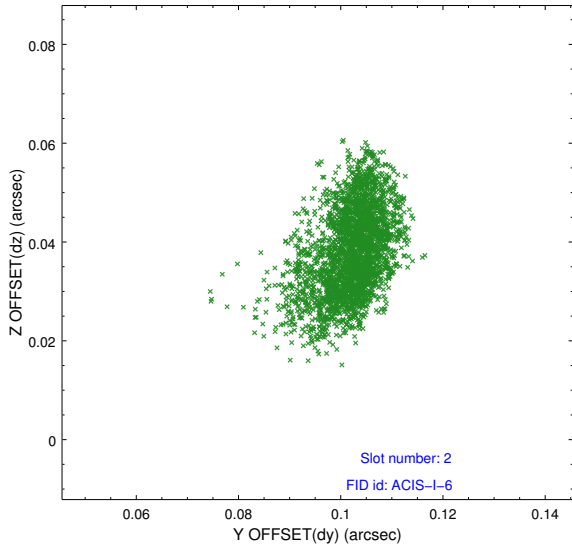
### 2.5.1 Slot 0



## 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)	2014.12.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.77250008285

## 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.