

# V&V Reference Report

## L2 ASCDS Version : 10.2.1

Observation 15634 - L2 Version 2  
Chandra X-Ray Center

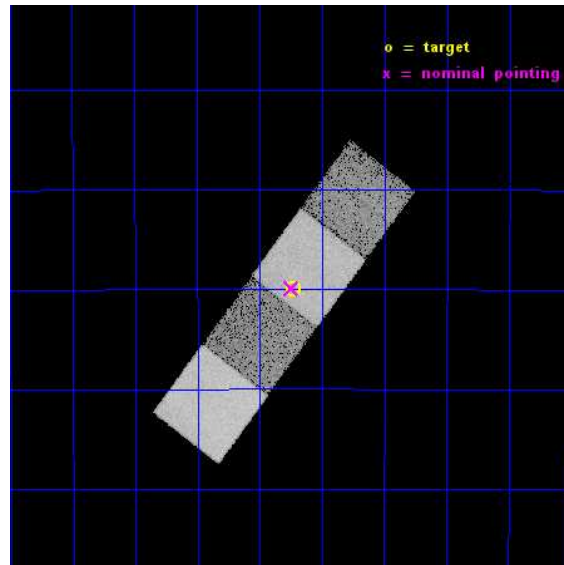
L2 Processing Date : Dec 11 2014

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# 1 Front

seq_num	502035	Sequence number
obs_id	15634	Observation id
title	A Study of Massive Star Evolution and Mass Loss With Multi-Wavelength Observations of Type II <sub>n</sub> Supernovae	Proposal title
observer	Dr. Ori Fox	Principal investigator
object	SN 2011fh	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	194.058	Observer's specified target RA [deg]
dec_targ	-29.4986	Observer's specified target Dec [deg]
ra_nom	194.0614810568	Nominal RA [deg]
dec_nom	-29.498341625298	Nominal Dec [deg]
roll_nom	306.93429877678	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20065.24482739	Sum of GTIs [s]
livetime	19803.077631902	Livetime [s]
ontime5	20065.203787386	Sum of GTIs [s]
ontime6	20065.162747383	Sum of GTIs [s]
ontime7	20065.24482739	Sum of GTIs [s]
ontime8	20065.12170738	Sum of GTIs [s]
l2events	144383	Number of level 2 events

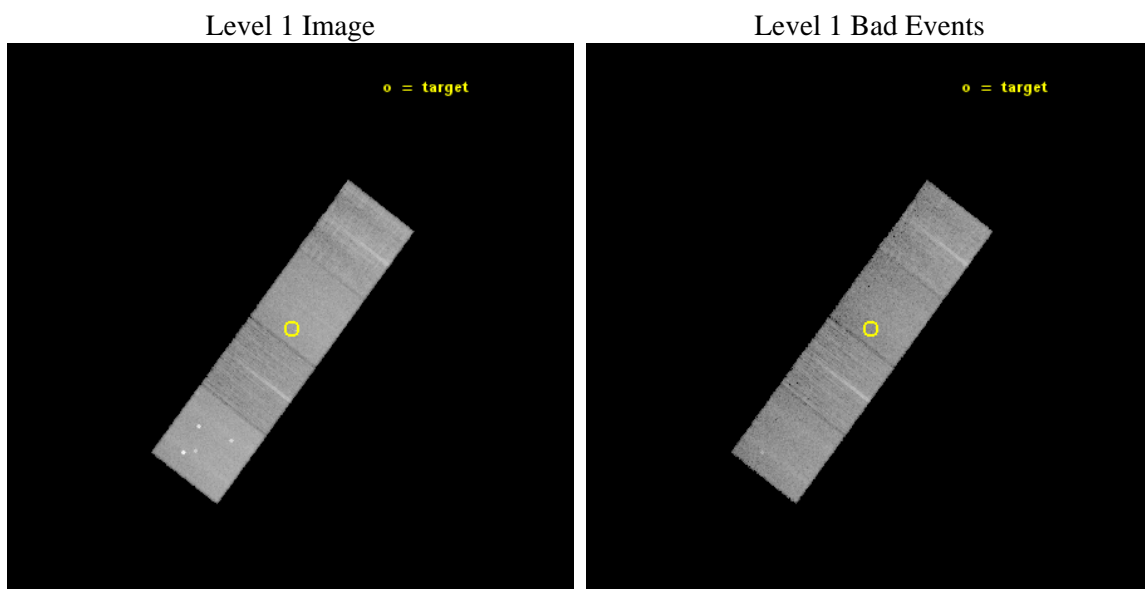




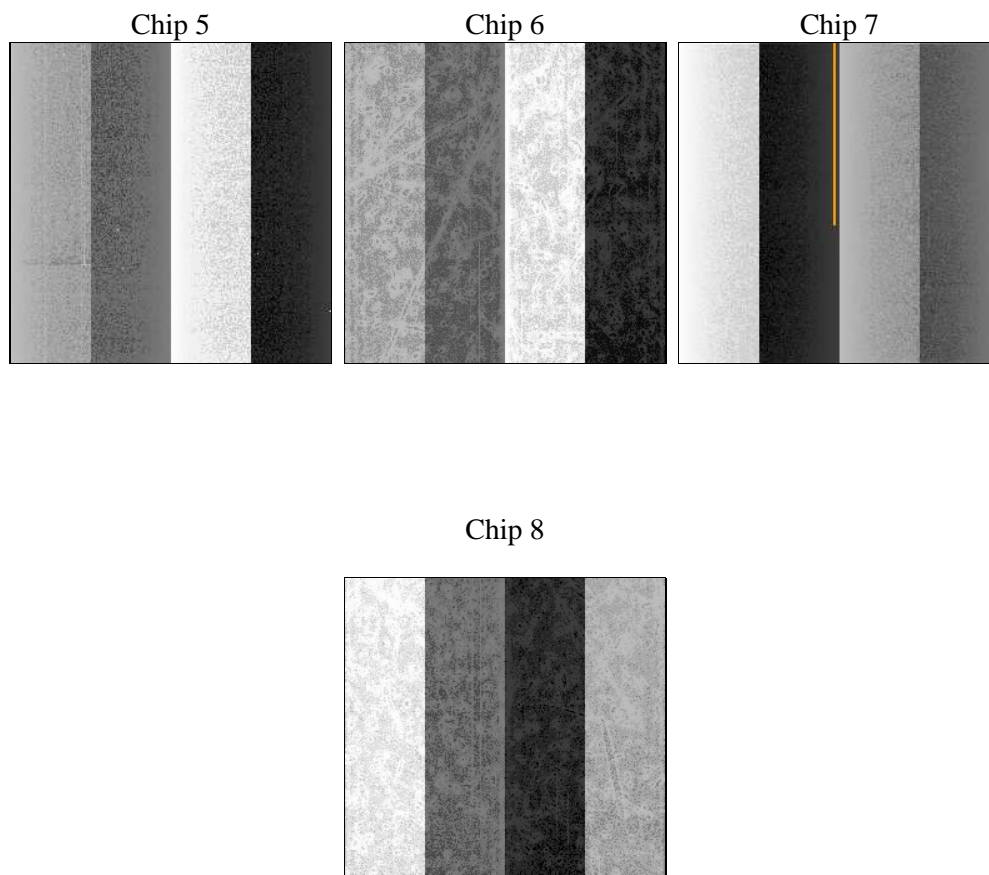
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	20065.24482739	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime5	20065.203787386	Sum of GTIs [s]
date	2014-12-11T09:24:45	Date and time of file creation	ontime6	20065.162747383	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	20065.24482739	Sum of GTIs [s]
			ontime8	20065.12170738	Sum of GTIs [s]
			l1events	509783	Number of level 1 events

### 2.1.4 Events

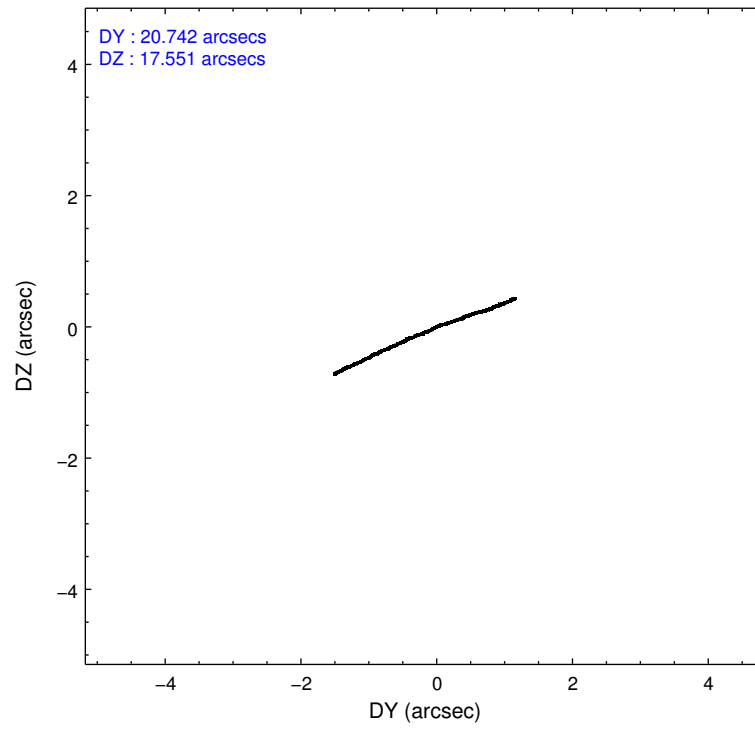
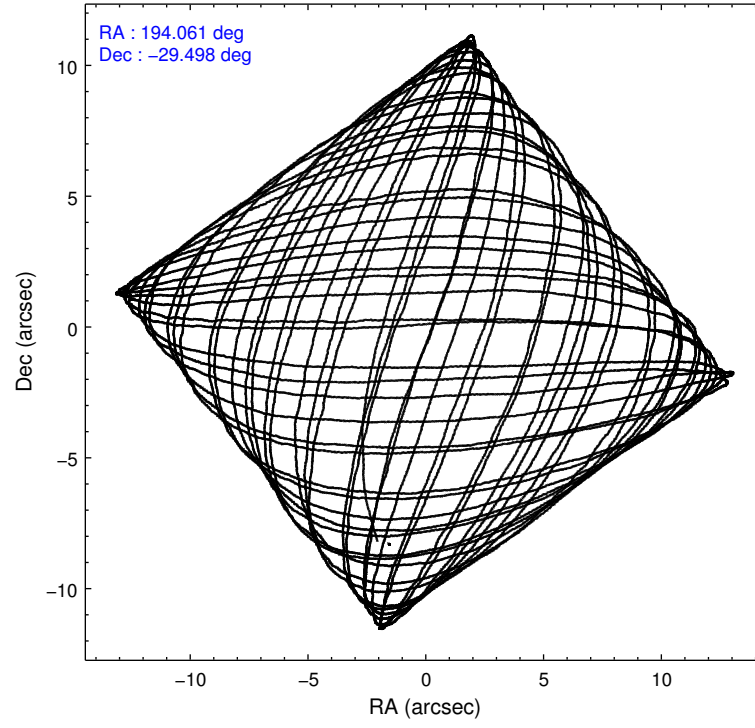
	<b>ccd 5</b>	<b>ccd 6</b>	<b>ccd 7</b>	<b>ccd 8</b>
level 1 events	161464	94542	128868	124909
rejected events	82044	82917	74292	92890
rejected %	50%	87%	57%	74%

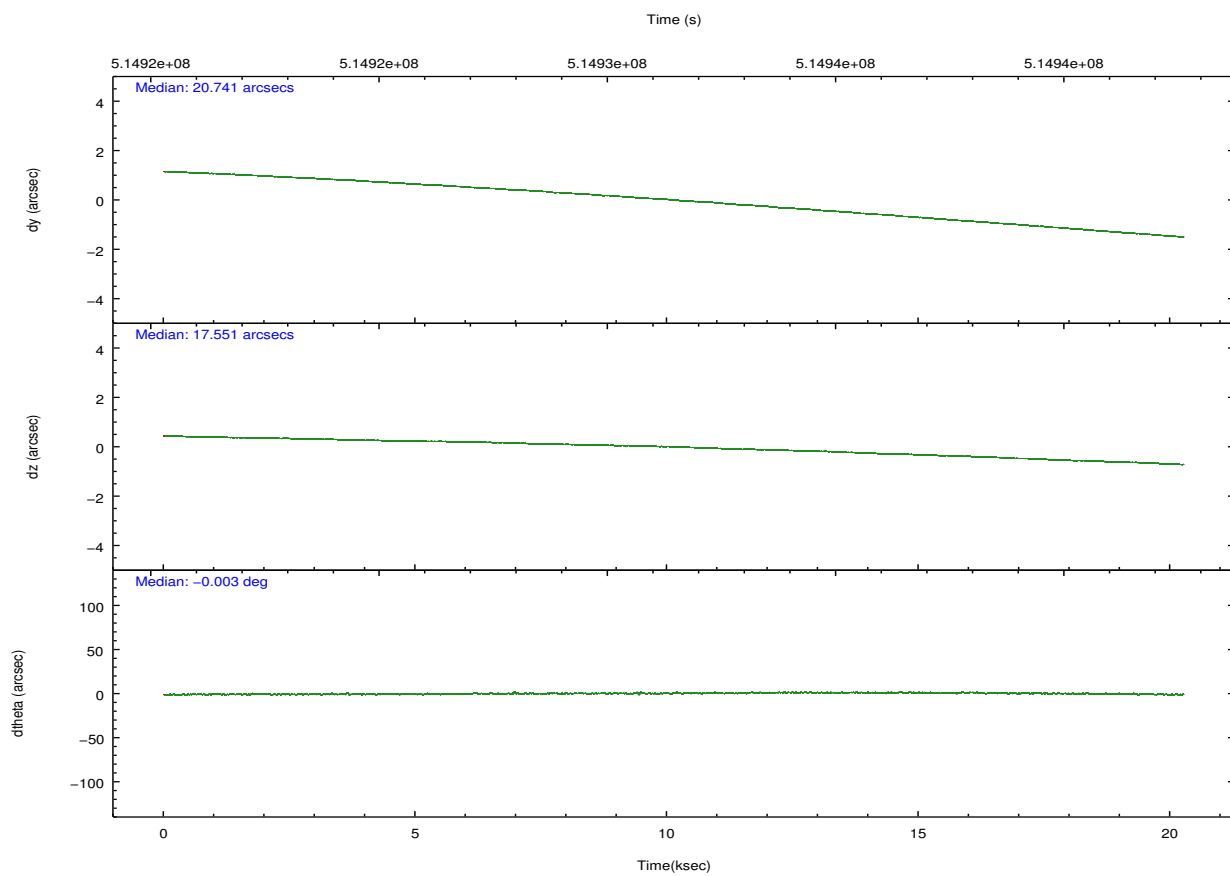
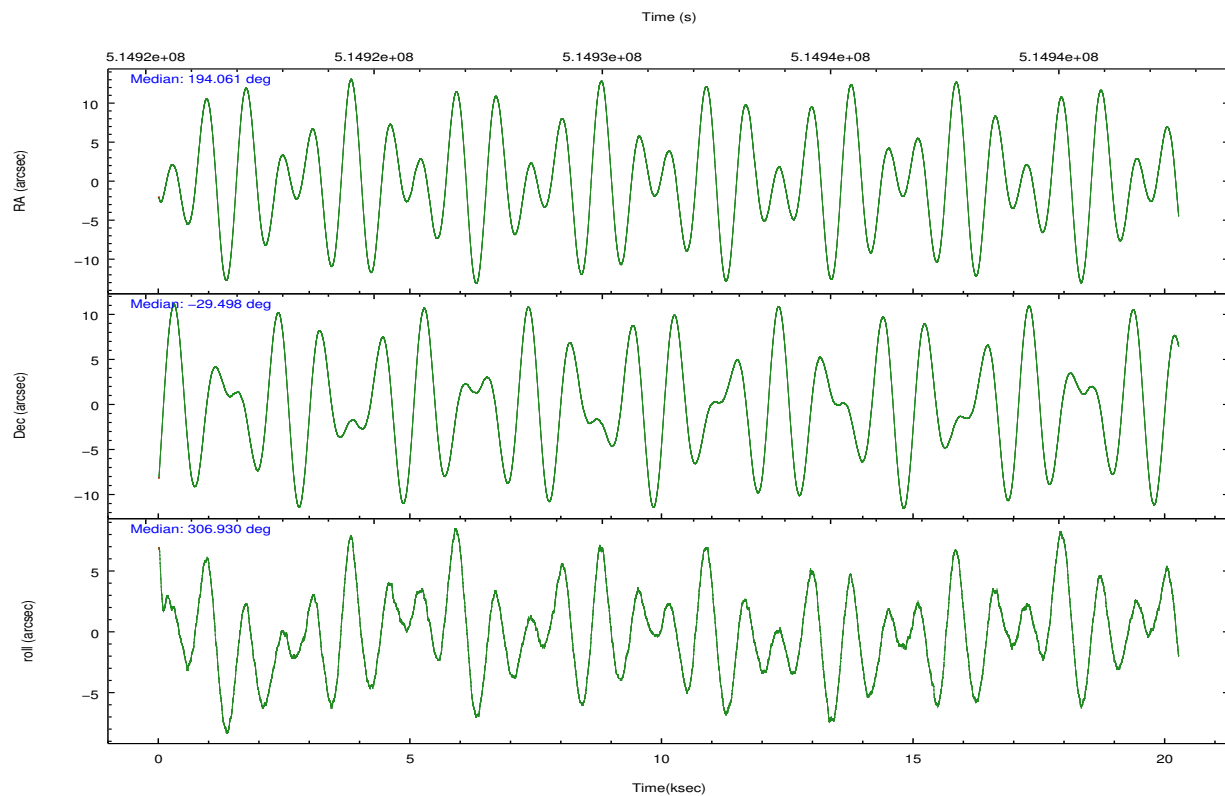
	<b>ccd 5</b>	<b>ccd 6</b>	<b>ccd 7</b>	<b>ccd 8</b>
grade 0 events	10699	3896	4459	9233
	6%	4%	3%	7%
grade 1 events	523	46	158	76
	0%	0%	0%	0%
grade 2 events	23671	2601	11186	7499
	14%	2%	8%	6%
grade 3 events	2124	1159	4349	3402
	1%	1%	3%	2%
grade 4 events	2049	1091	4114	3255
	1%	1%	3%	2%
grade 5 events	10249	4732	12591	7094
	6%	5%	9%	5%
grade 6 events	40894	2879	30484	8649
	25%	3%	23%	6%
grade 7 events	71255	78138	61527	85701
	44%	82%	47%	68%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	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	194.032402	194.0614810568032	Subarray requested	NONE	NONE
[deg] Pointing Dec	-29.487989	-29.49834162529753	Alternating exposures requested	N	N
[deg] Pointing Roll	306.763347	306.9342987767767	[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)	514921591.184000	514920672.2321			
Observation start date	2014-04-26T17:45:24	2014-04-26T17:31:12			
[s] Observation end time (MET)	514941591.184000	514942008.63327			
Observation end date	2014-04-26T23:18:44	2014-04-26T23:26:48			
Read mode	TIMED	TIMED			

## 2.3 Aspect



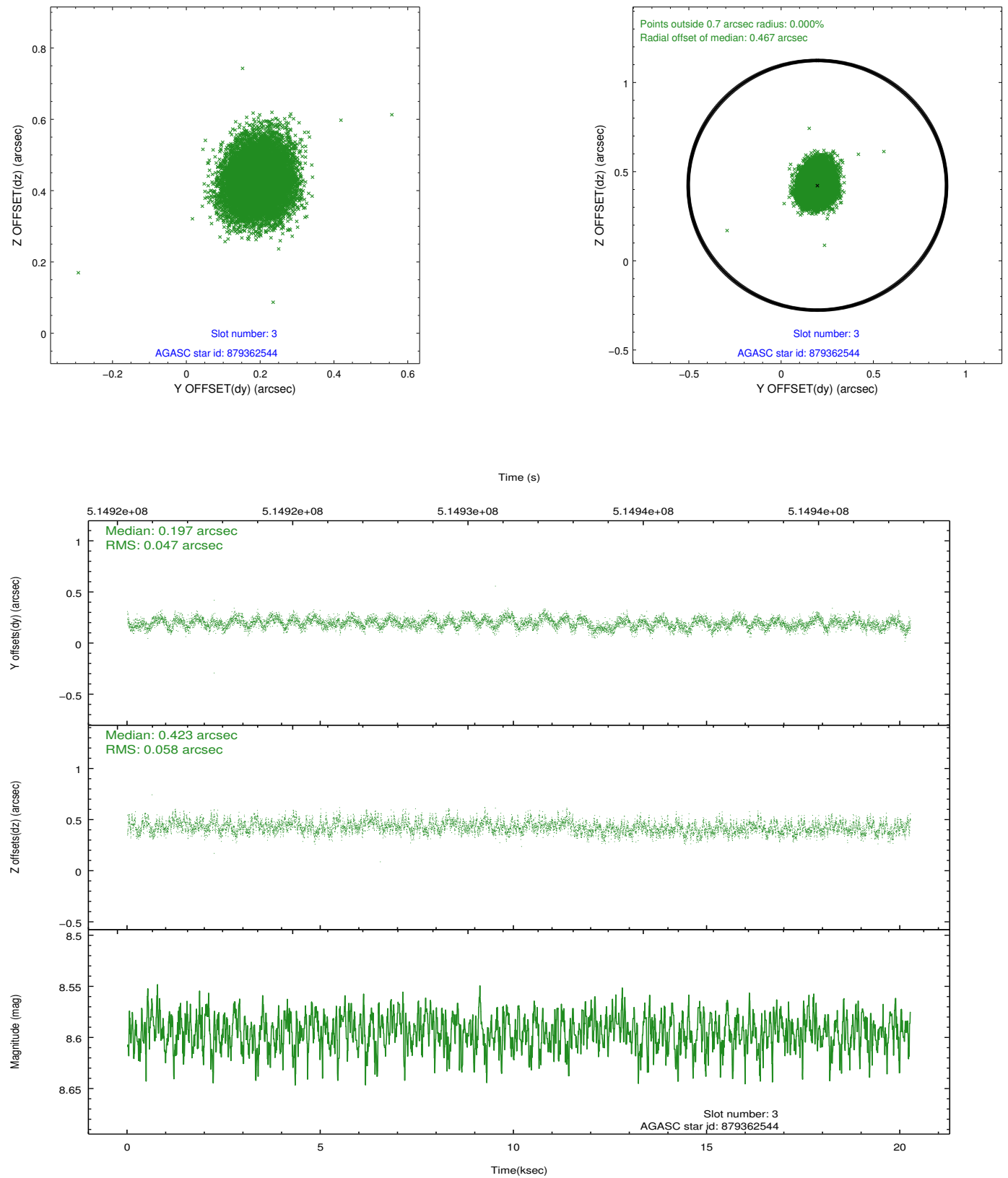


### Slot Statistics

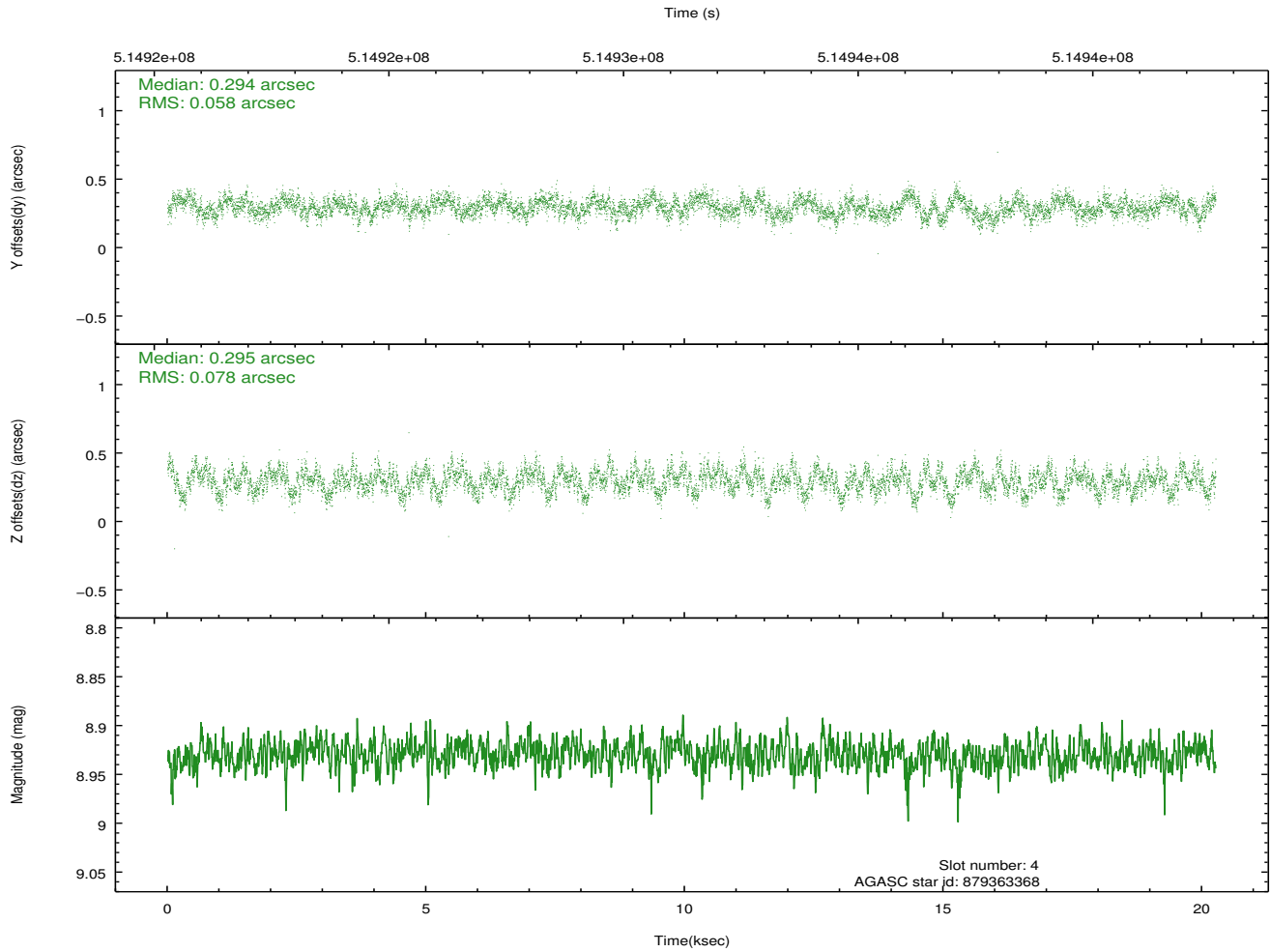
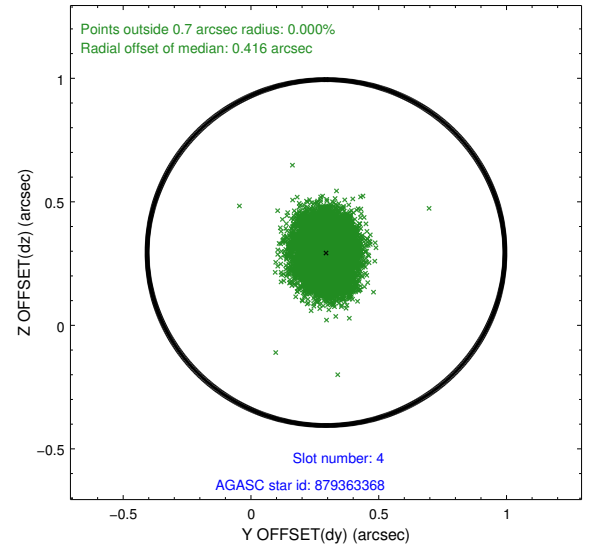
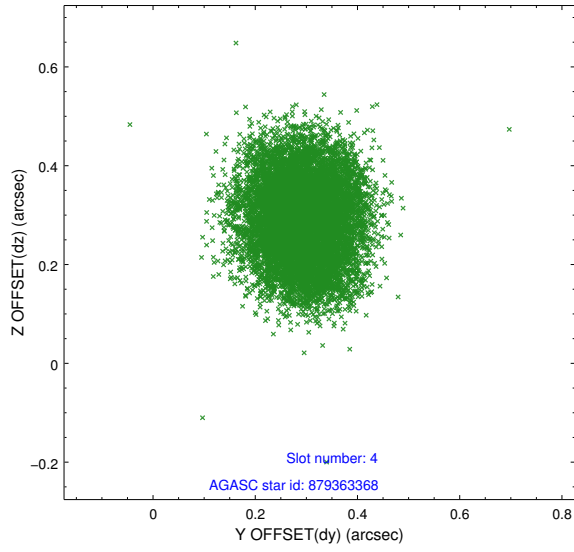
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.10	4944	-0.132	-0.078	0.018	0.028	0.000000	0.000000	-773.96	-1738.95
1	FID		ACIS-S-4	7.19	4944	0.306	0.083	0.015	0.025	0.000000	0.000000	2139.70	169.46
2	FID		ACIS-S-5	7.22	4944	-0.211	0.002	0.017	0.027	0.000000	0.000000	-1826.62	163.32
3	GUIDE	used	879362544	8.59	9885	0.197	0.423	0.079	0.126	193.151674	-29.493997	-1625.33	-2229.90
4	GUIDE	used	879363368	8.93	9882	0.294	0.295	0.105	0.166	193.355088	-29.318430	-1755.96	-1341.80
5	GUIDE	used	879495944	8.47	9884	-0.267	-0.352	0.124	0.191	194.857445	-29.476959	1522.93	2089.40
6	GUIDE	used	879500408	8.34	9882	-0.376	-0.452	0.081	0.130	194.779044	-29.537164	1547.58	1762.96
7	GUIDE	used	950142824	7.35	9885	0.159	0.086	0.079	0.142	193.885222	-30.070108	1405.68	-1621.33

## 2.4 Star Slots

### 2.4.1 Slot 3

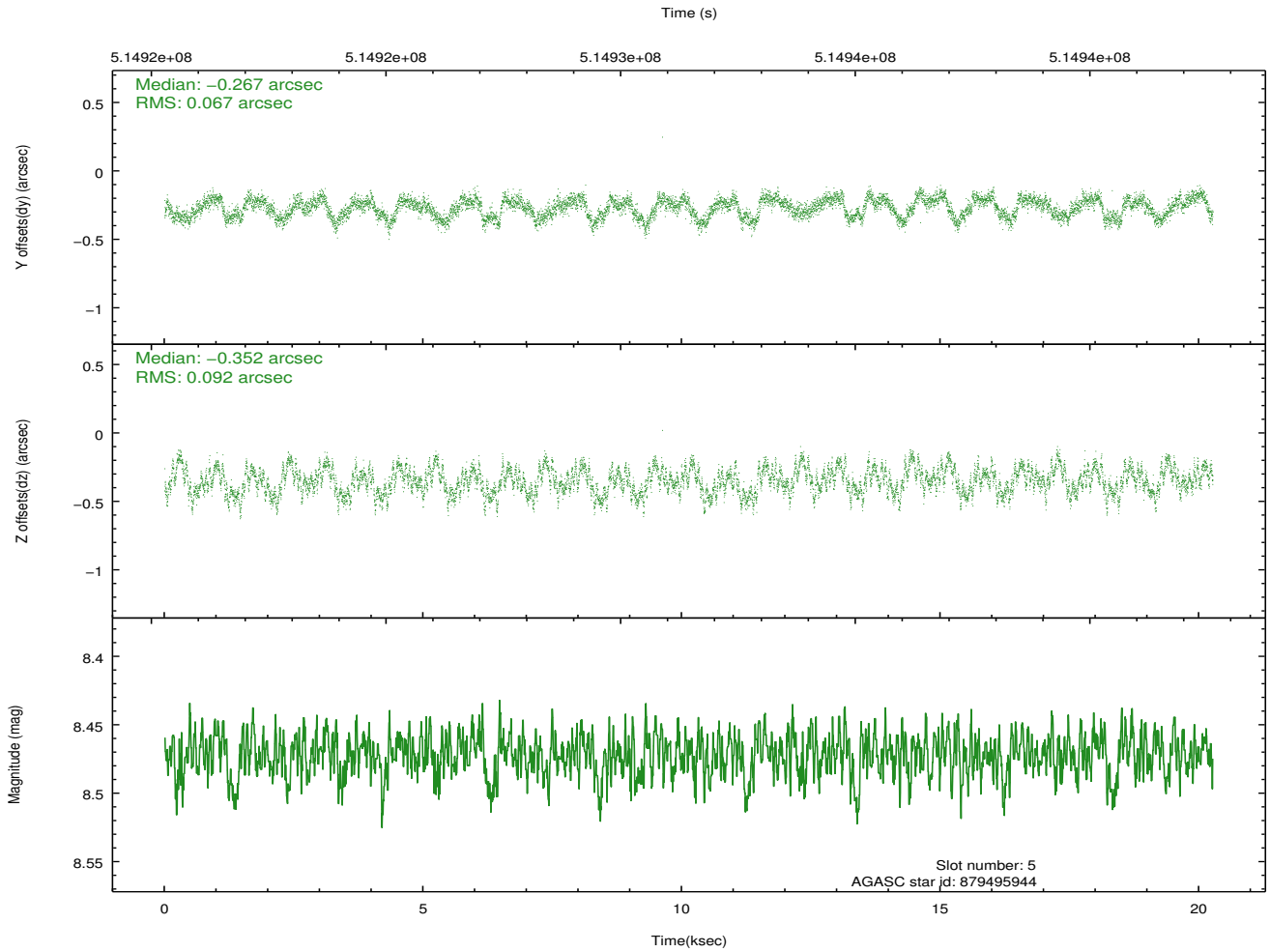
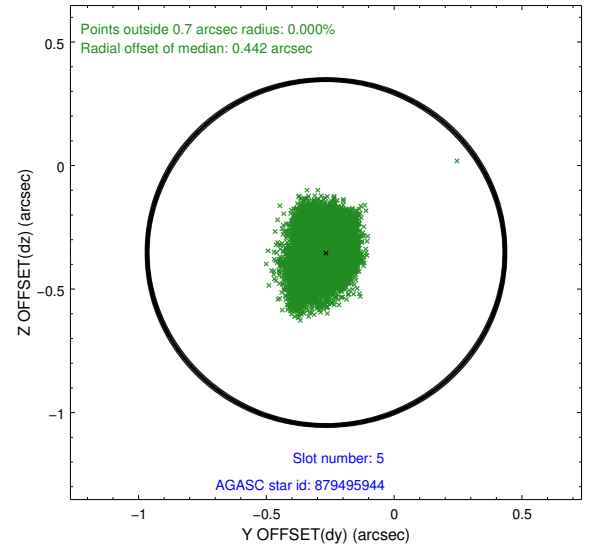
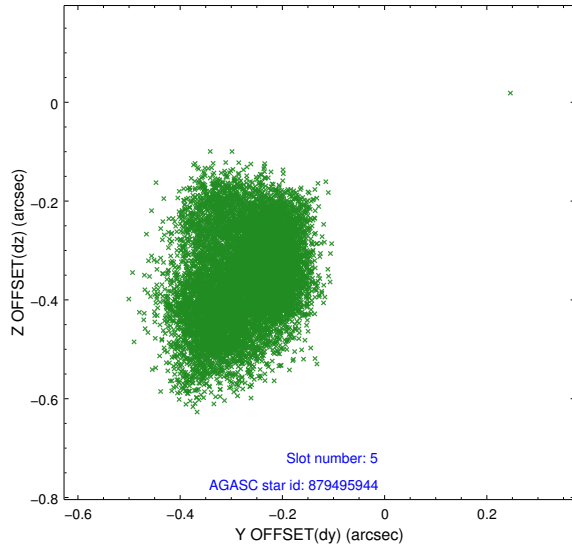


## 2.4.2 Slot 4

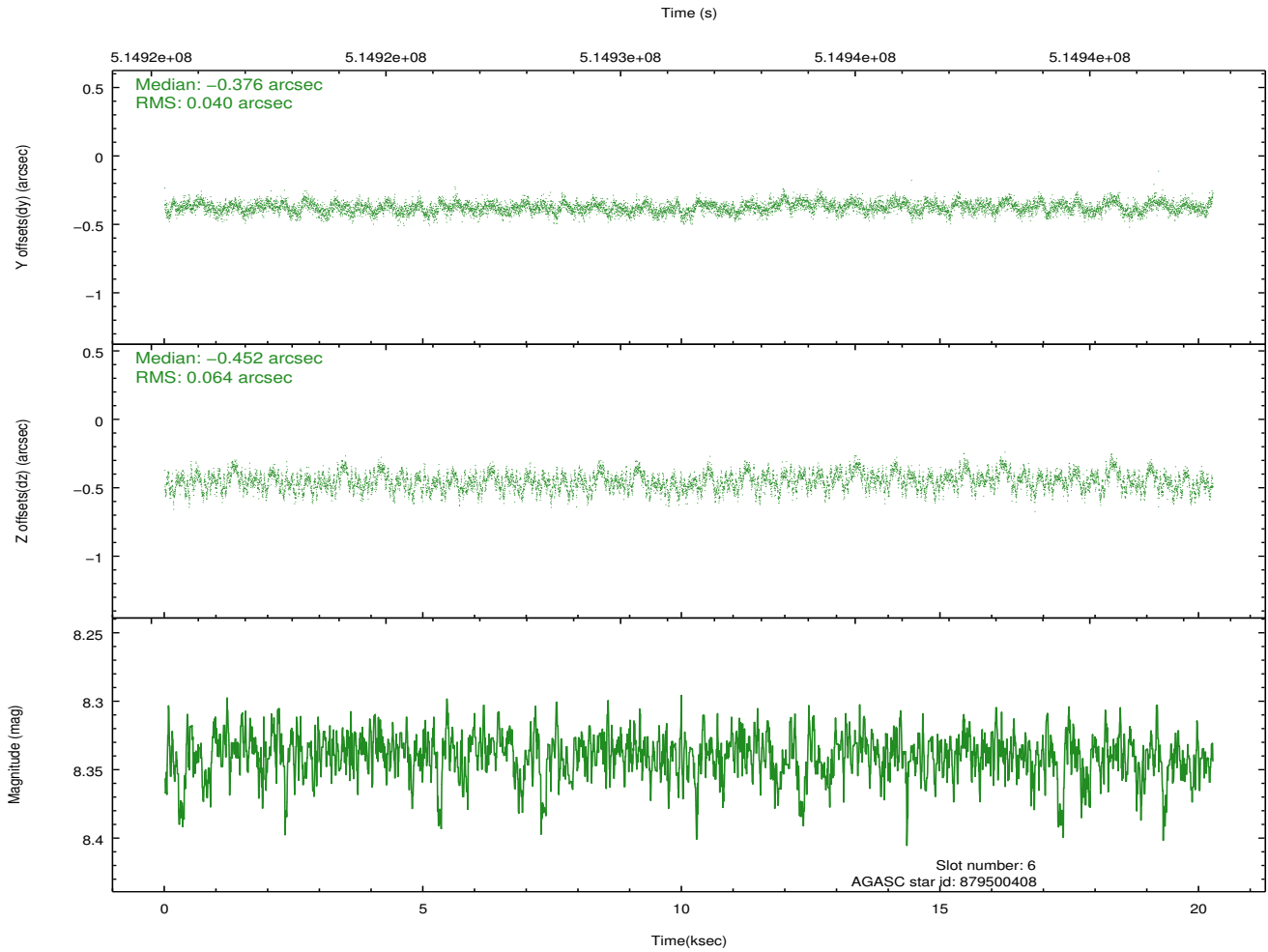
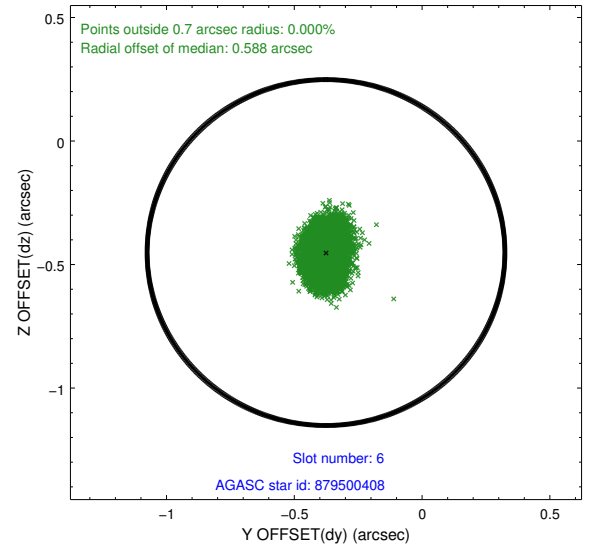
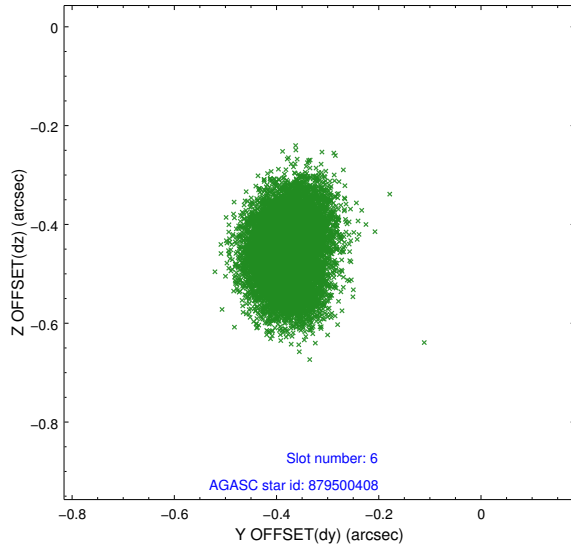




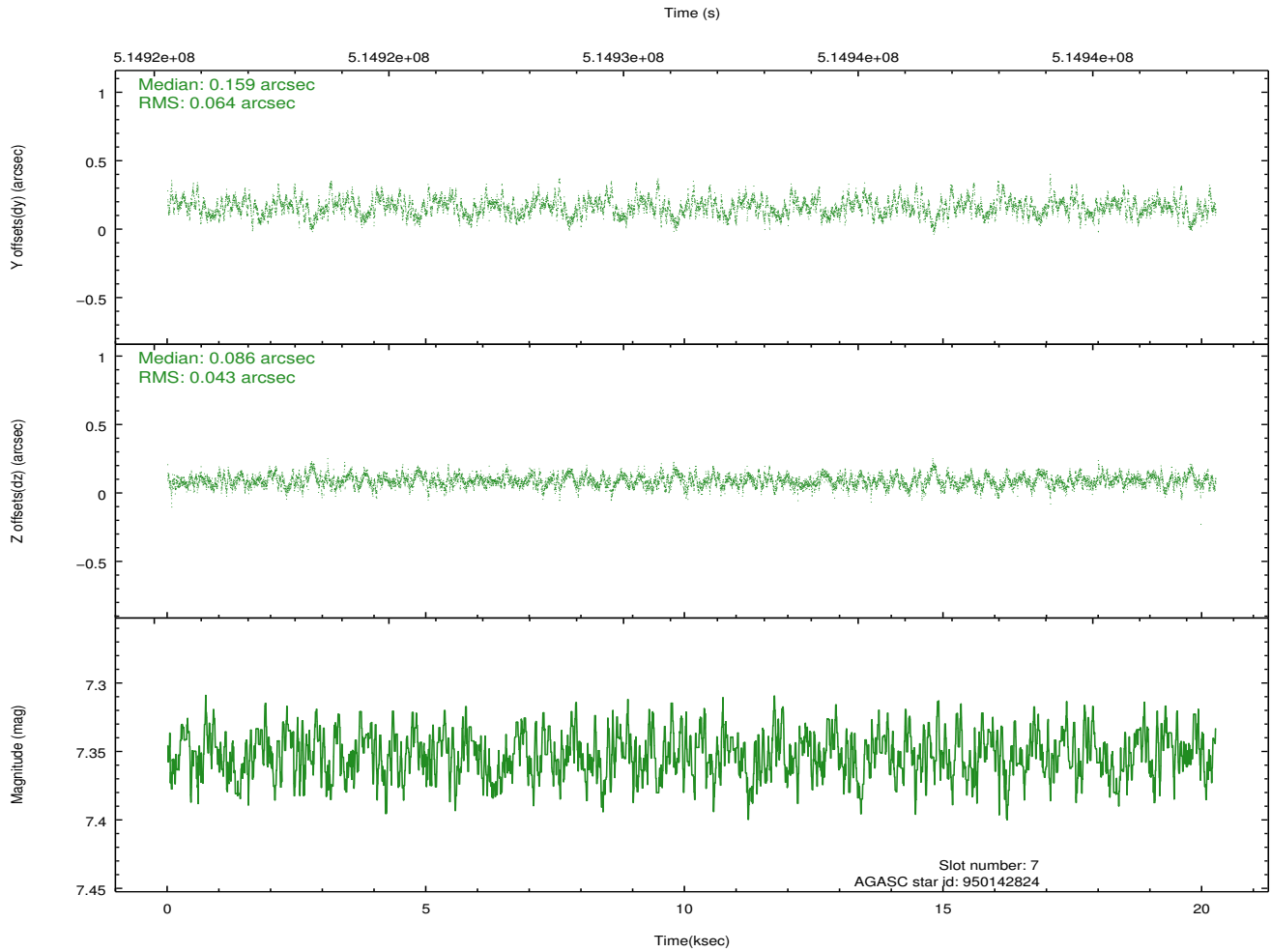
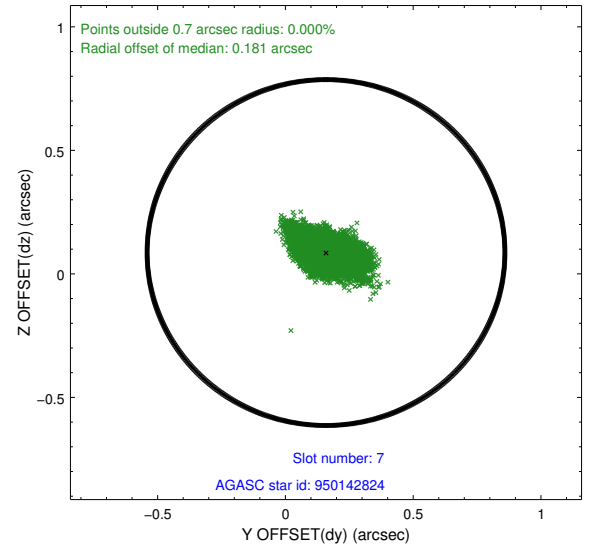
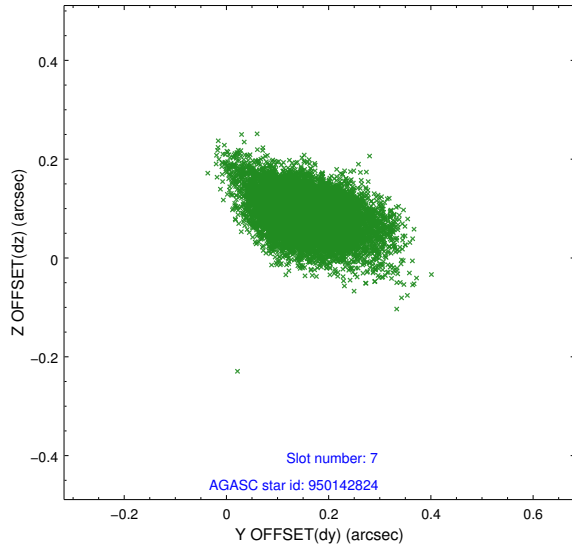
### 2.4.3 Slot 5



## 2.4.4 Slot 6

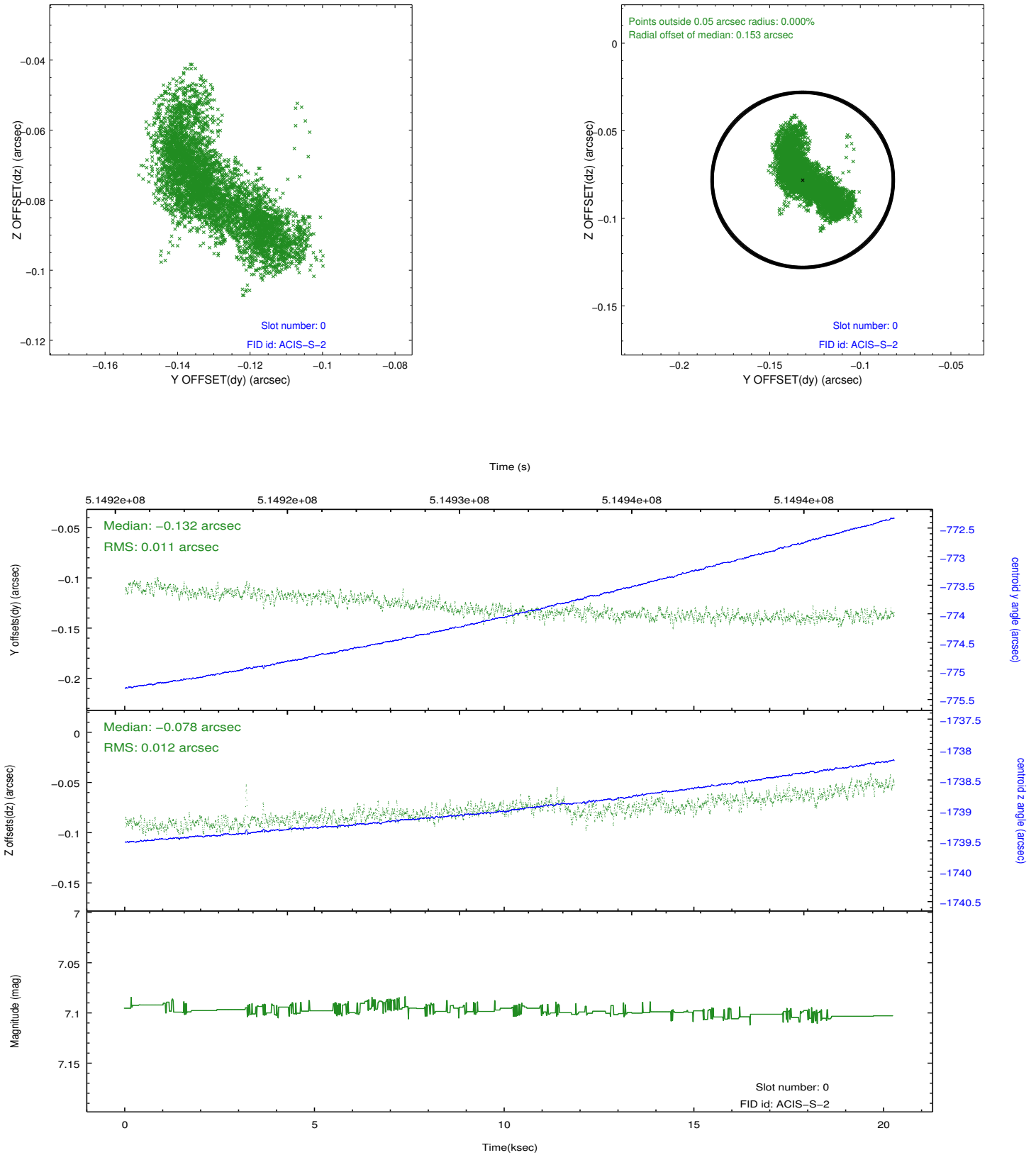


## 2.4.5 Slot 7

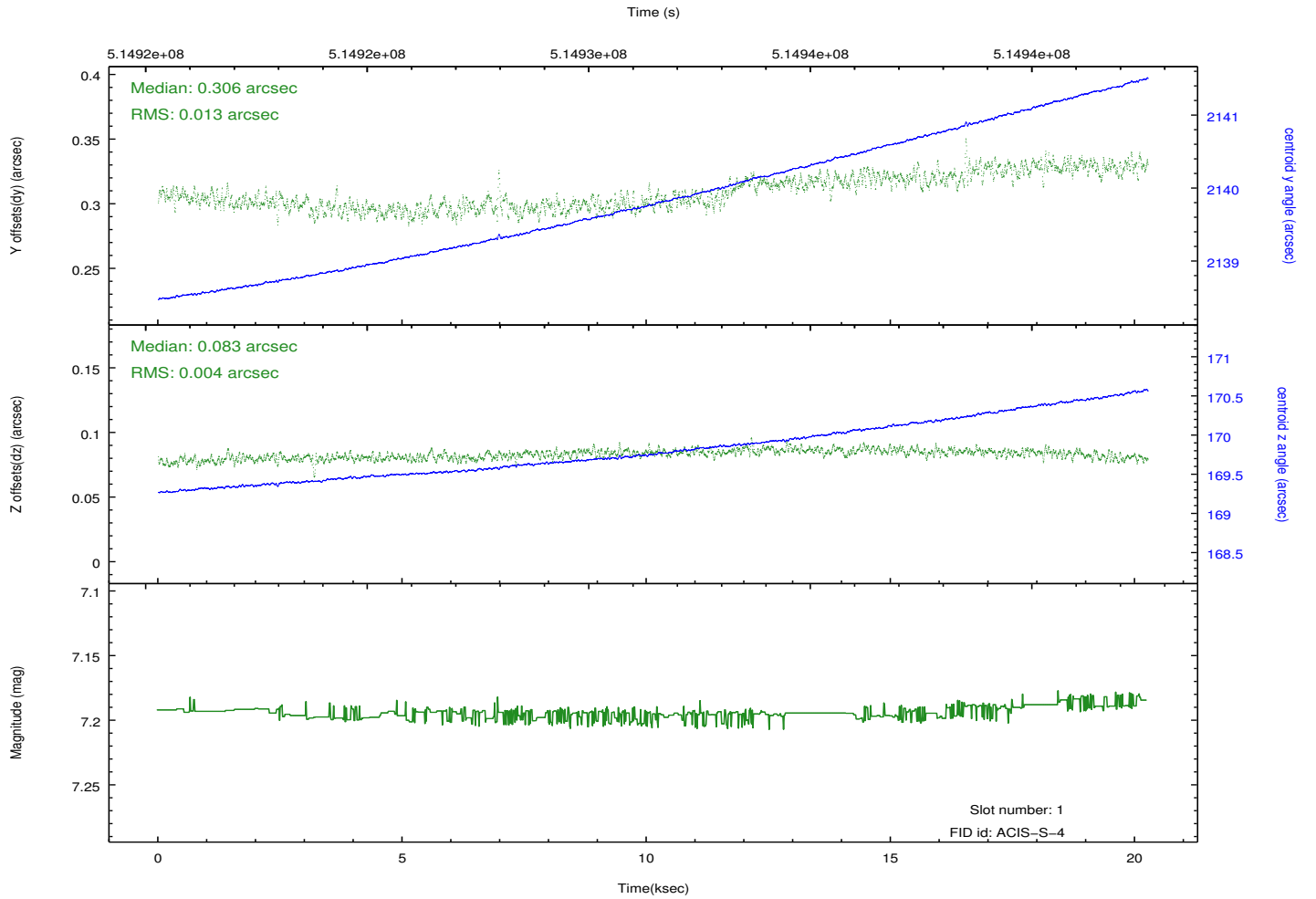
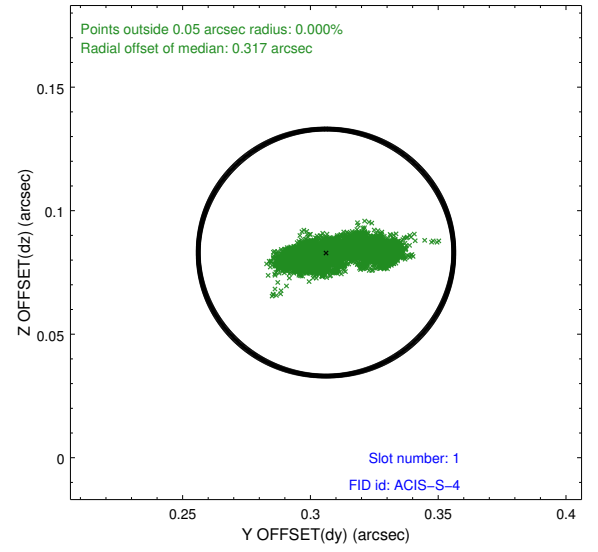
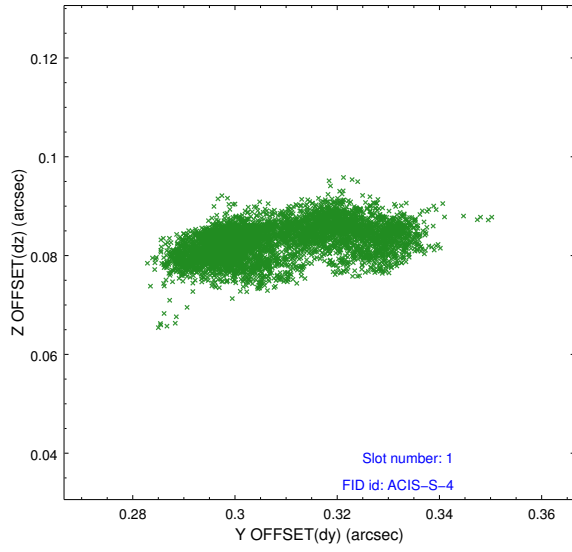


## 2.5 FID Slots

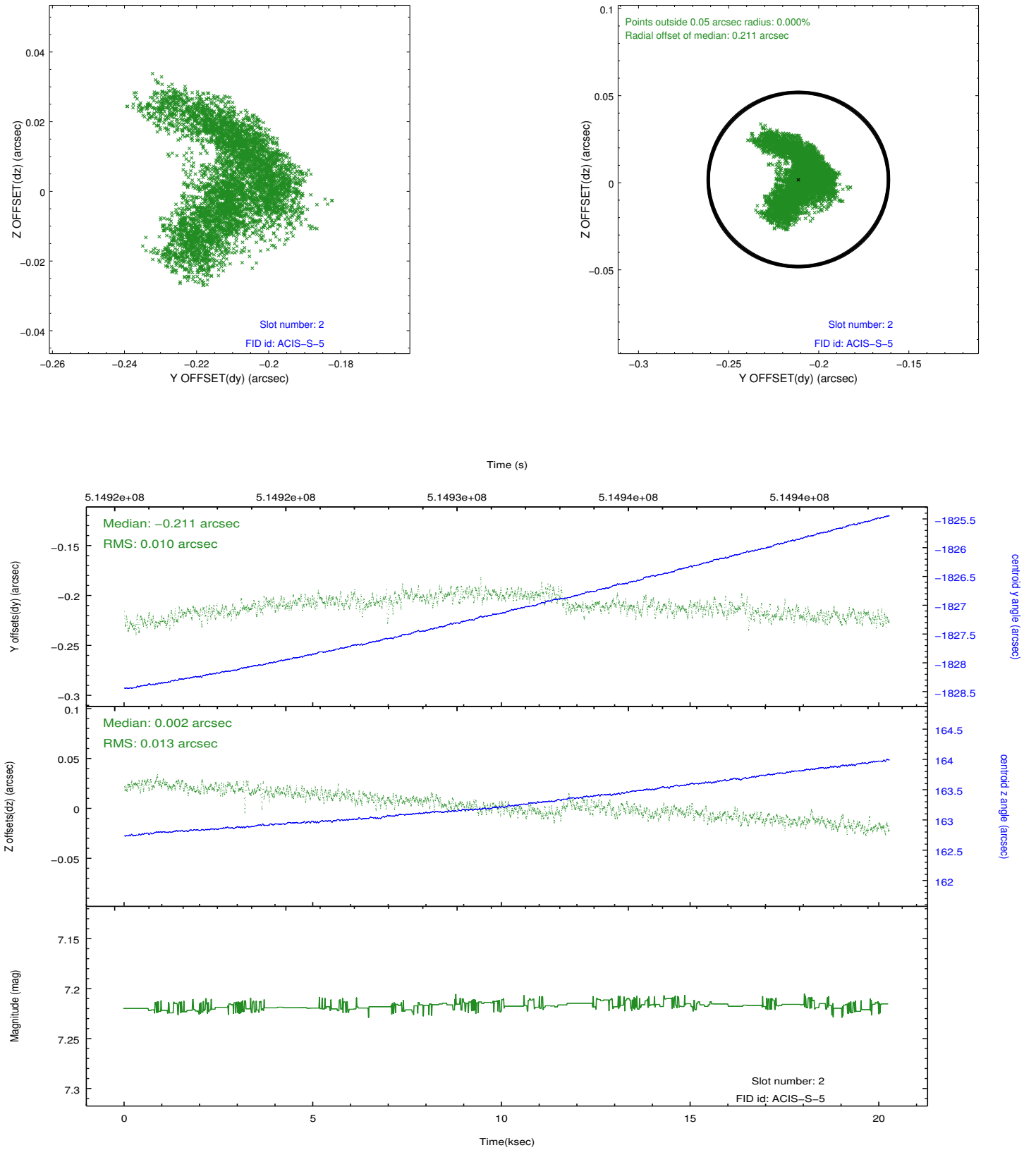
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.06524482739

## A.2 Comments

Joint proposal with Spitzer.

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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.