

# V&V Reference Report

## L2 ASCDS Version : 10.2.1

Observation 14827 - L2 Version 2  
Chandra X-Ray Center

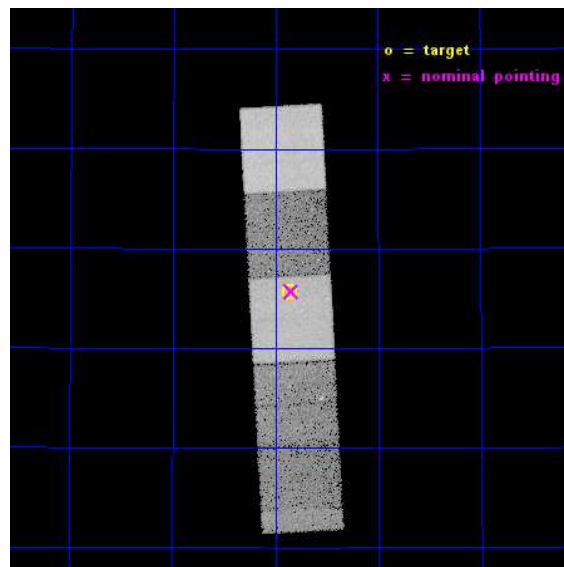
L2 Processing Date : Dec 10 2014

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# 1 Front

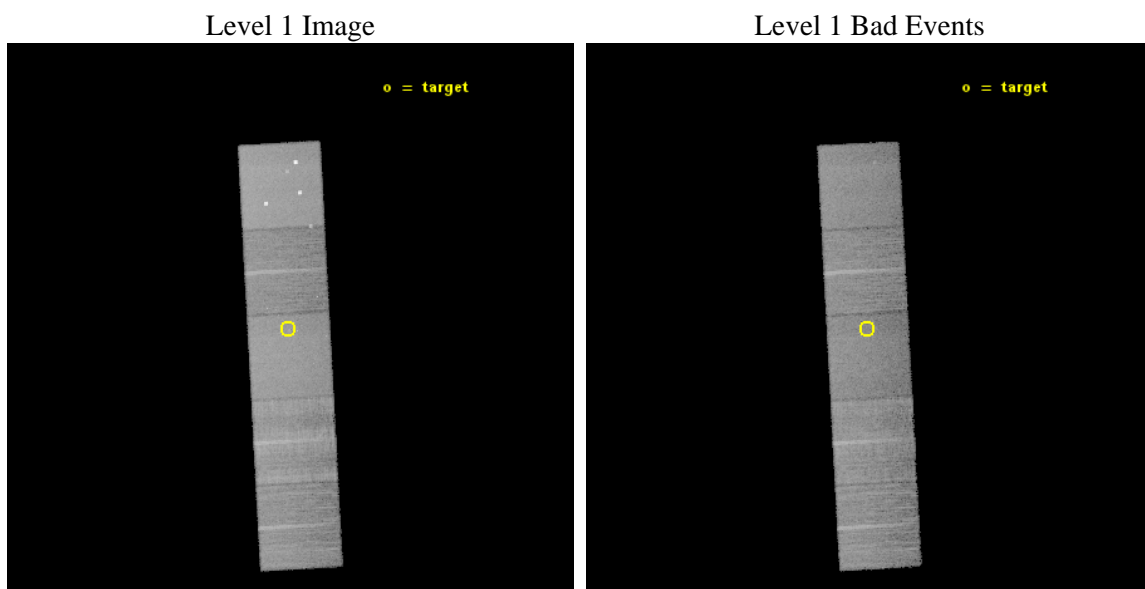
seq_num	501953	Sequence number
obs_id	14827	Observation id
title	Searching for X-ray counterparts of radio-quiet Fermi pulsars	Prop
observer	Dr Martino Marelli	Principal investigator
object	PSR J2030+4415	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	307.714583	Observer's specified target RA [deg]
dec_targ	44.260194	Observer's specified target Dec [deg]
ra_nom	307.71117684356	Nominal RA [deg]
dec_nom	44.261950351158	Nominal Dec [deg]
roll_nom	86.813356920101	Nominal Roll [deg]
revision	2	Processing version of data
ontime	25065.795435607	Sum of GTIs [s]
livetime	24738.292365071	Livetime [s]
ontime5	25065.754395604	Sum of GTIs [s]
ontime6	25065.713355601	Sum of GTIs [s]
ontime7	25065.795435607	Sum of GTIs [s]
ontime8	25065.672315598	Sum of GTIs [s]
ontime9	25062.490305245	Sum of GTIs [s]
l2events	203624	Number of level 2 events



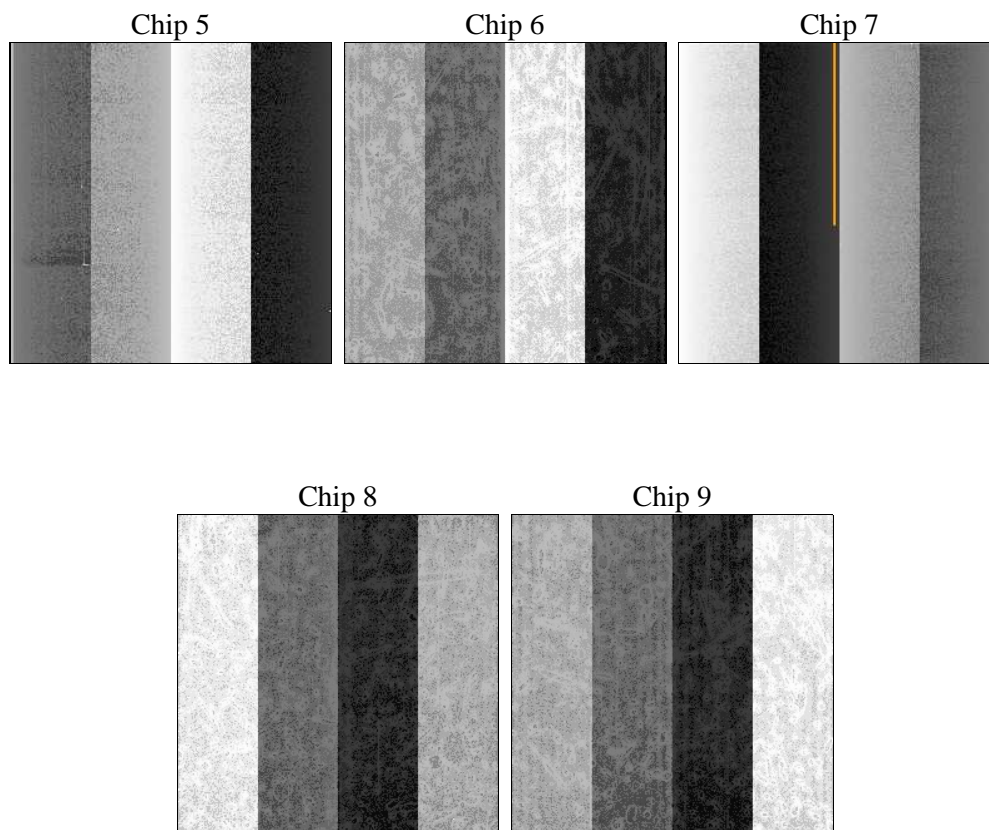
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	25000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	25065.795435607	Sum of GTIs [s]
caldsver	4.6.4	&#160	ontime5	25065.754395604	Sum of GTIs [s]
date	2014-12-11T02:37:56	Date and time of file creation	ontime6	25065.713355601	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	25065.795435607	Sum of GTIs [s]
			ontime8	25065.672315598	Sum of GTIs [s]
			ontime9	25062.490305245	Sum of GTIs [s]
			l1events	780016	Number of level 1 events

### 2.1.4 Events

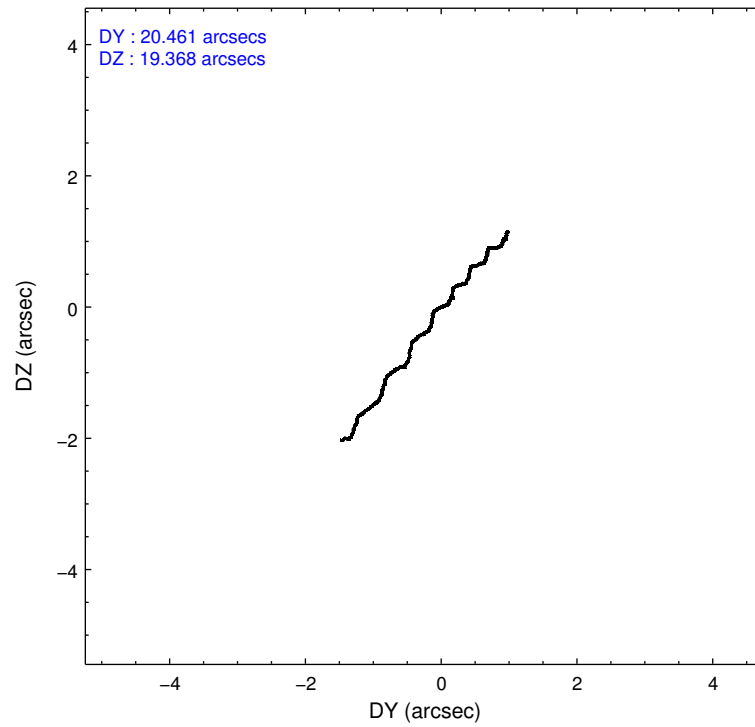
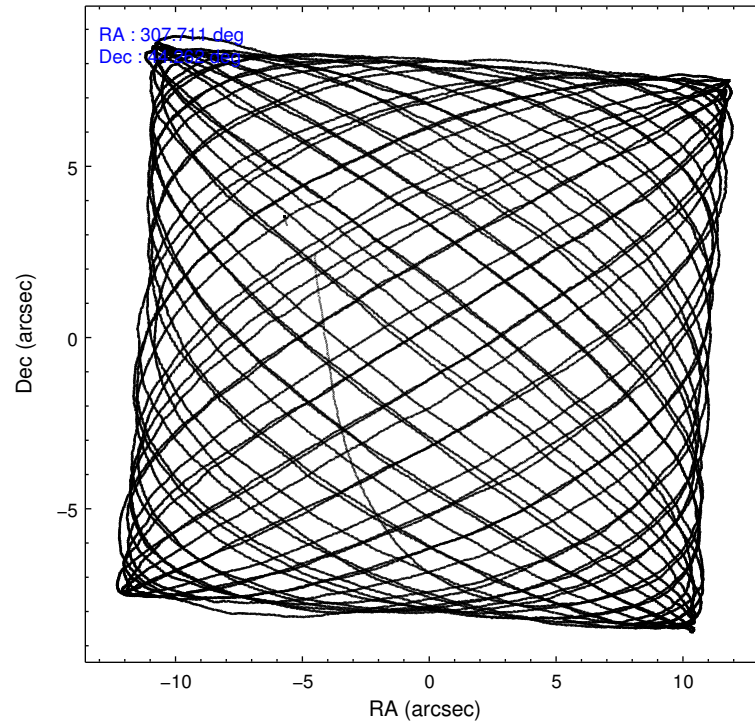
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	212060	120382	163916	162285	121373
rejected events	103115	105057	92309	117899	105806
rejected %	48%	87%	56%	72%	87%

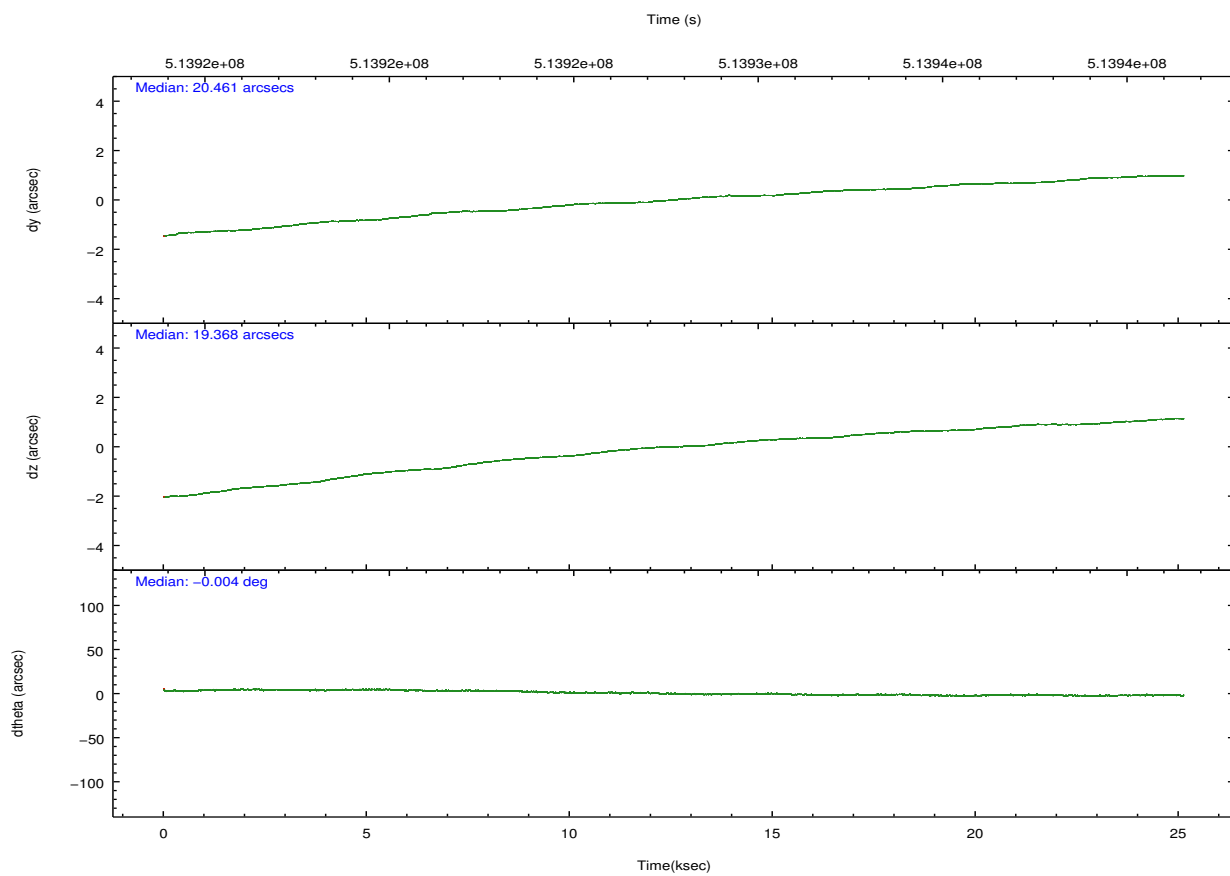
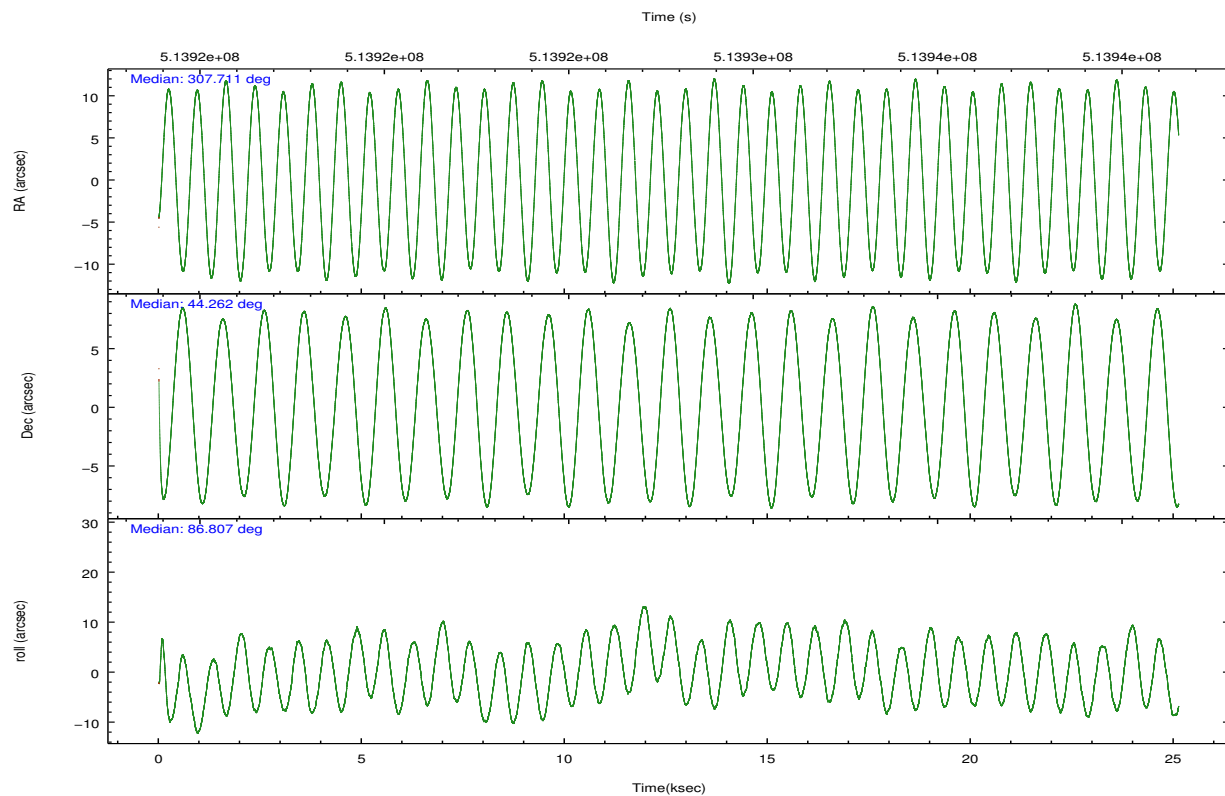
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	17908	5365	6383	13414	5559
	8%	4%	3%	8%	4%
grade 1 events	408	68	192	119	58
	0%	0%	0%	0%	0%
grade 2 events	32975	3493	14809	10180	3457
	15%	2%	9%	6%	2%
grade 3 events	3461	1497	6036	4722	1594
	1%	1%	3%	2%	1%
grade 4 events	3449	1566	5972	4388	1517
	1%	1%	3%	2%	1%
grade 5 events	14898	6390	16720	9263	7070
	7%	5%	10%	5%	5%
grade 6 events	51176	3411	38430	11692	3450
	24%	2%	23%	7%	2%
grade 7 events	87785	98592	75374	108507	98668
	41%	81%	45%	66%	81%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-56789	ACIS-56789	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	307.728829	307.7111768435595	CCD I2 on	N	N
[deg] Pointing Dec	44.237727	44.26195035115828	CCD I3 on	N	N
[deg] Pointing Roll	86.644419	86.813356920101	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	513915273.184000	513913680.91406	CCD S5 on	O2	Y
Observation start date	2014-04-15T02:13:26	2014-04-15T01:48:00	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	513940273.184000	513941151.42808	On-chip summing requested	N	N
Observation end date	2014-04-15T09:10:06	2014-04-15T09:25:51	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



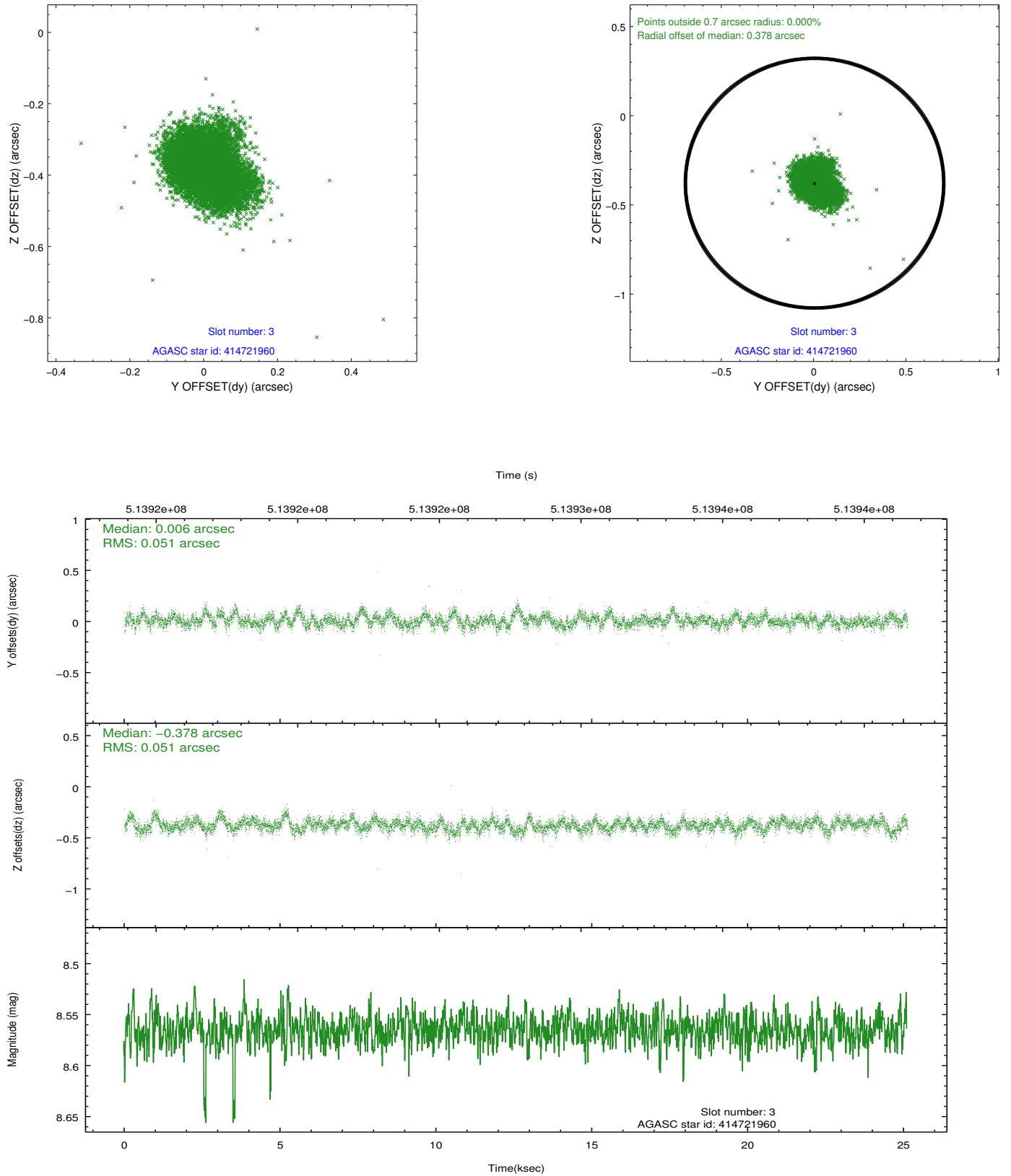


### Slot Statistics

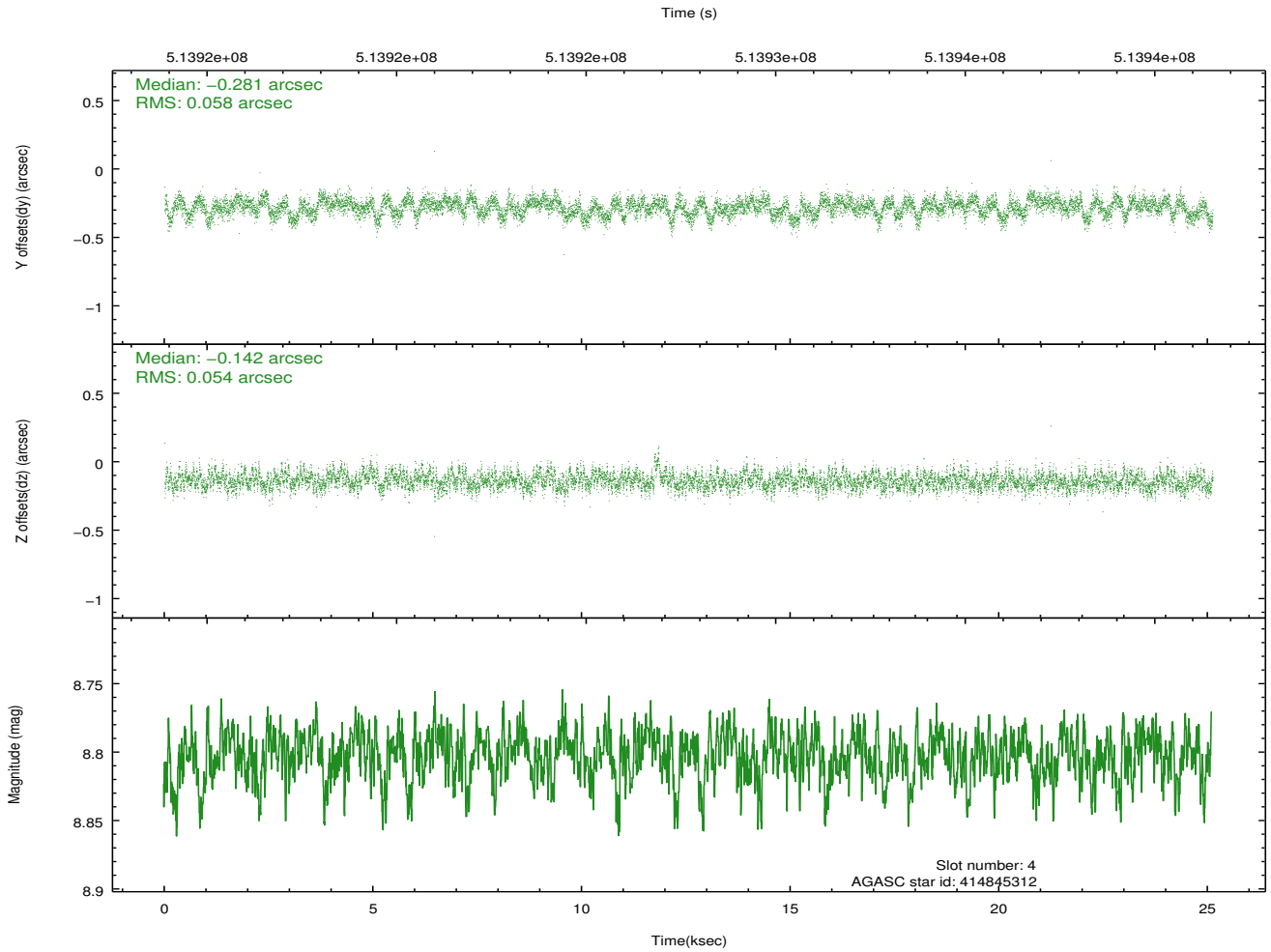
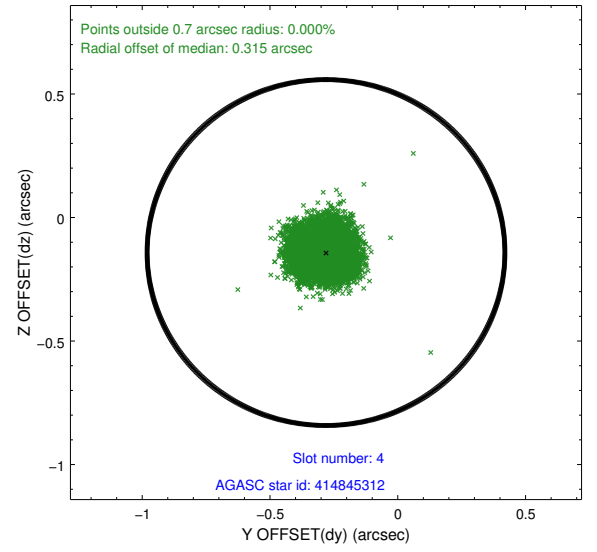
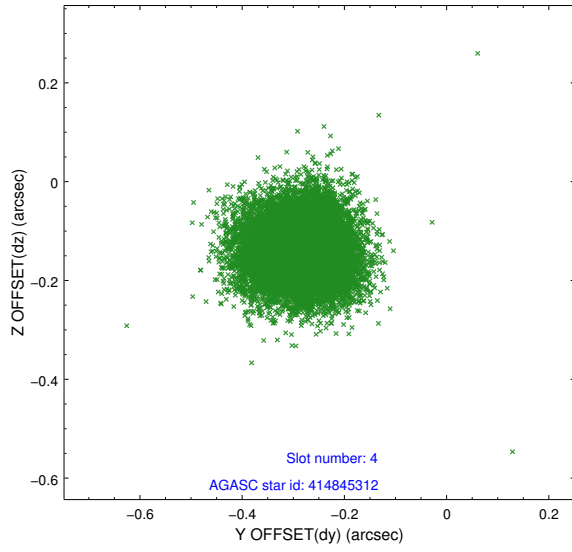
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.96	6128	-0.129	-0.026	0.028	0.038	0.000000	0.000000	-773.64	-1740.66
1	FID		ACIS-S-4	7.04	6128	0.252	0.069	0.013	0.019	0.000000	0.000000	2139.97	167.79
2	FID		ACIS-S-5	7.07	6128	-0.151	-0.037	0.034	0.054	0.000000	0.000000	-1826.36	161.51
3	GUIDE	used	414721960	8.56	12253	0.006	-0.378	0.075	0.128	306.992291	43.980466	-1027.58	1850.77
4	GUIDE	used	414845312	8.80	12250	-0.281	-0.142	0.085	0.136	307.518552	44.680946	1561.96	631.25
5	GUIDE	used	414848000	9.00	12247	0.110	0.329	0.087	0.140	308.087433	43.779659	-1588.93	-1026.46
6	GUIDE	used	414851152	9.16	12179	0.131	0.430	0.114	0.185	308.526474	44.239012	135.44	-2052.09
7	GUIDE	used	414719816	8.69	12249	0.030	-0.236	0.109	0.174	306.965041	44.477406	755.84	2009.56

## 2.4 Star Slots

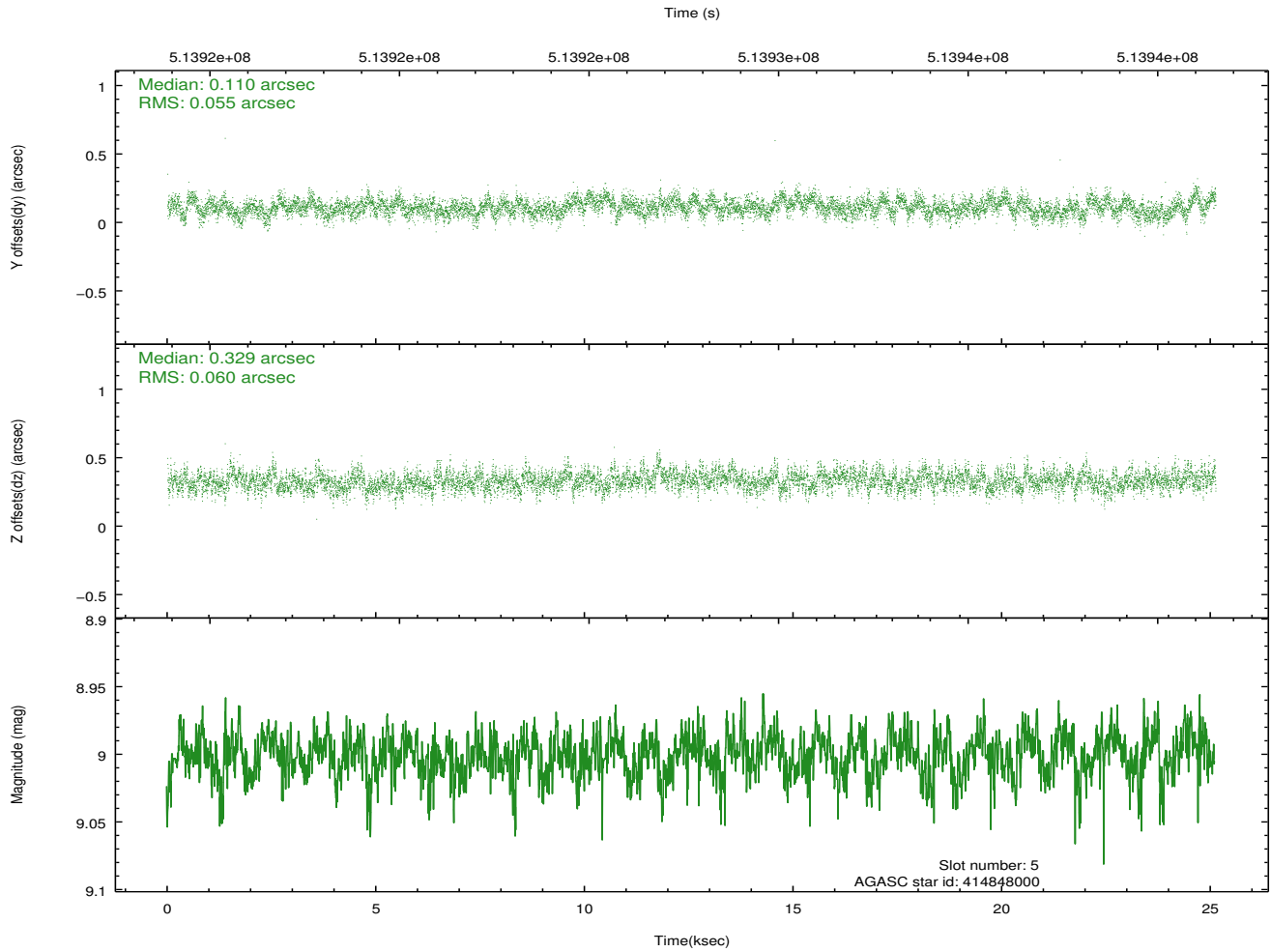
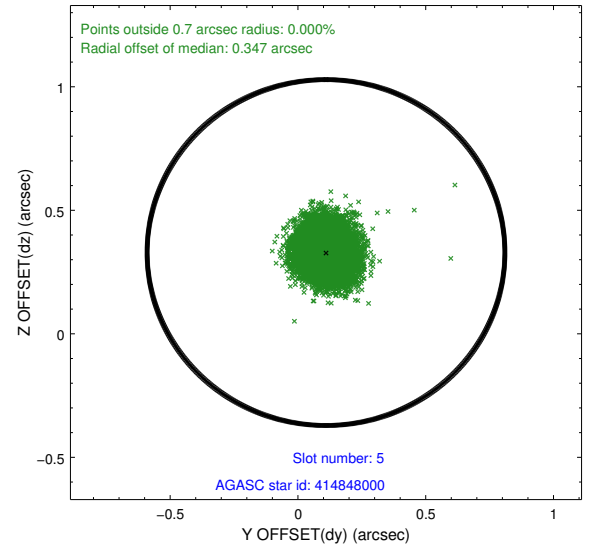
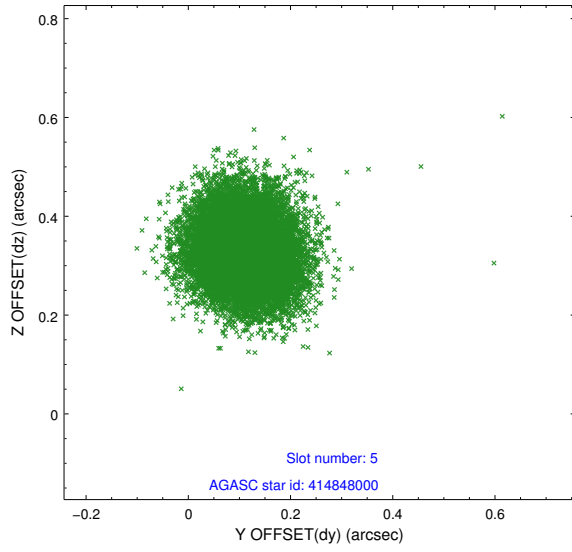
### 2.4.1 Slot 3



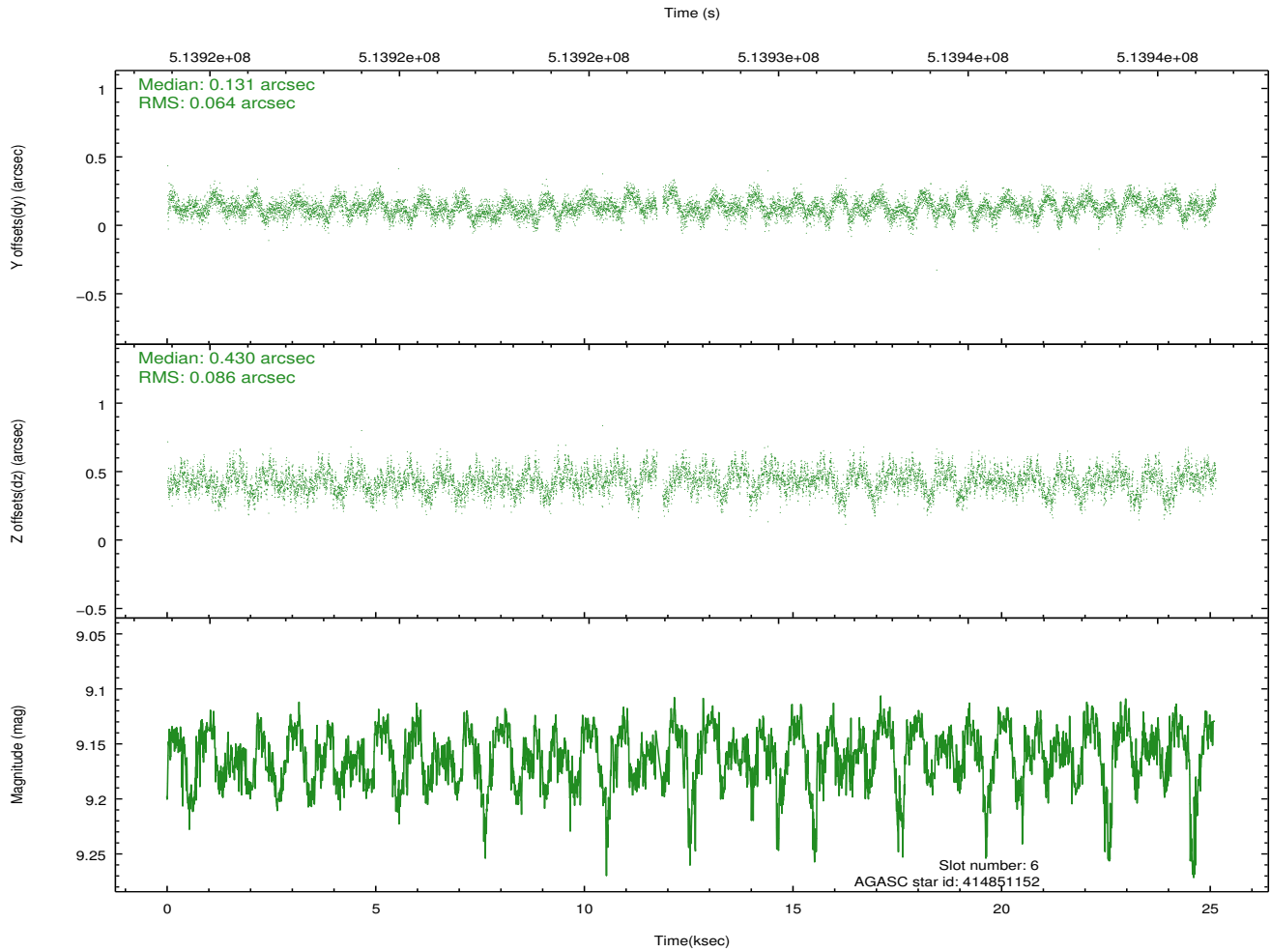
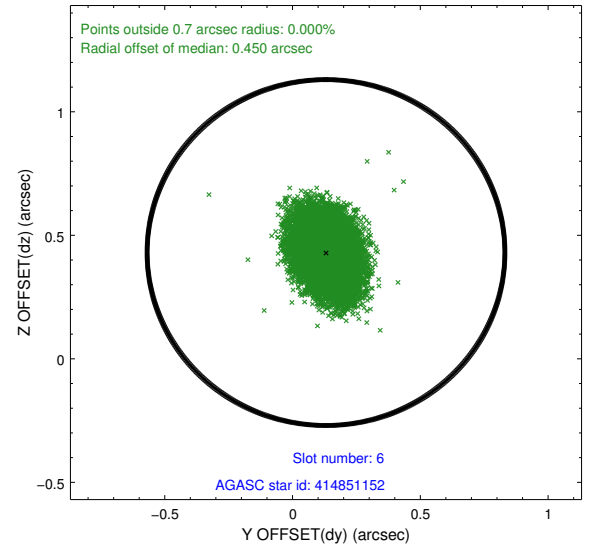
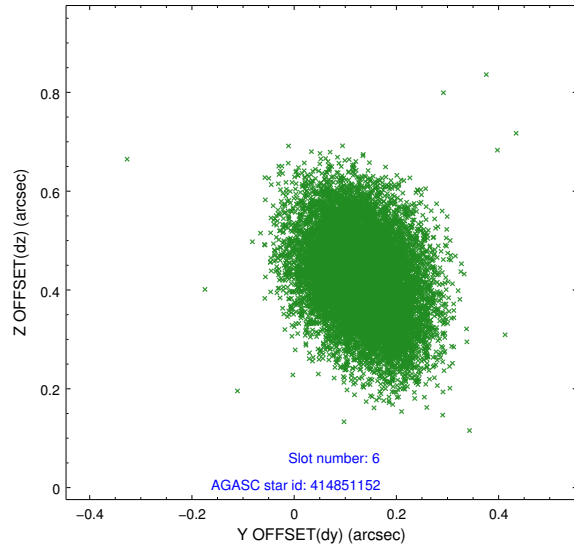
## 2.4.2 Slot 4



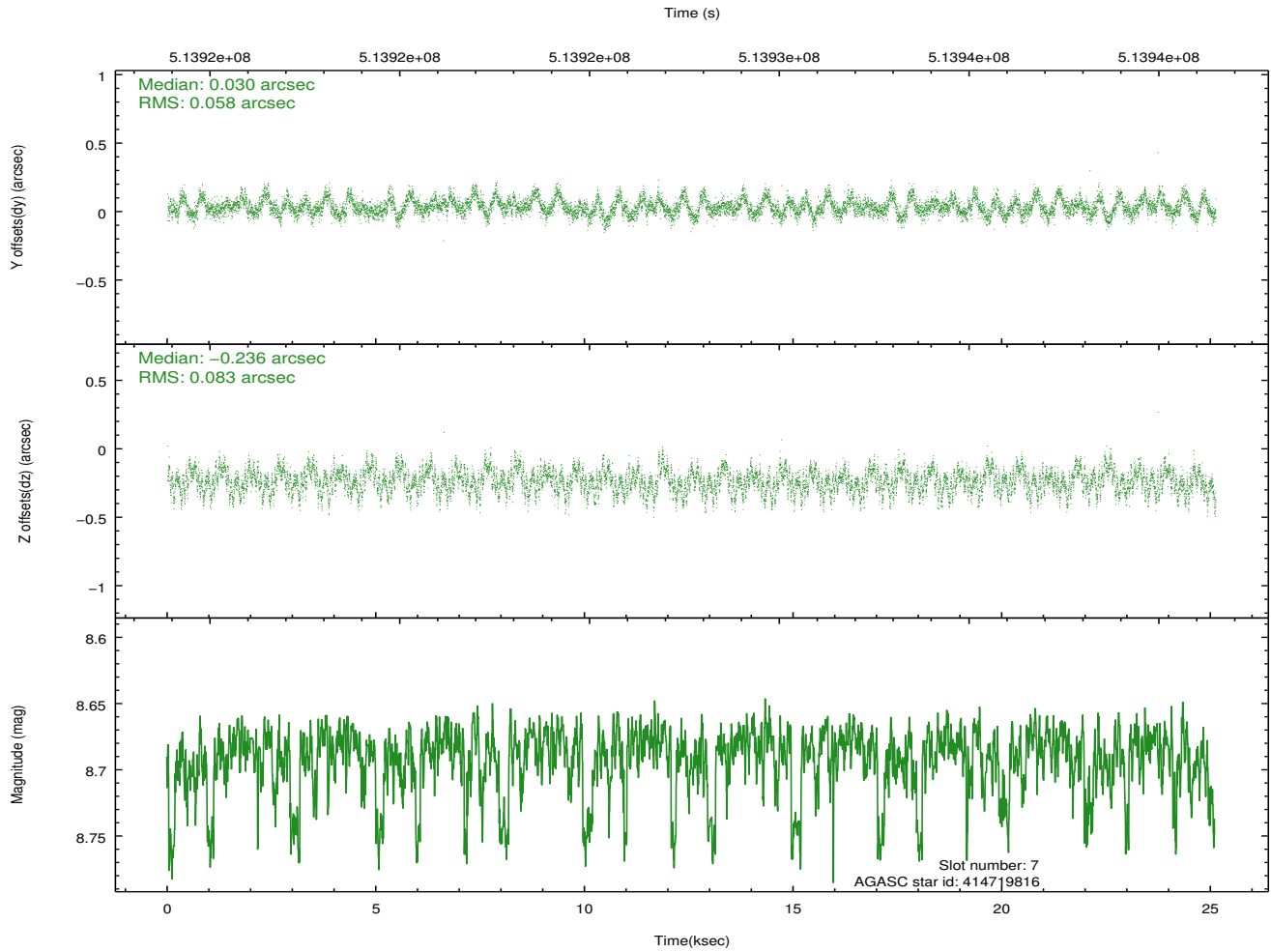
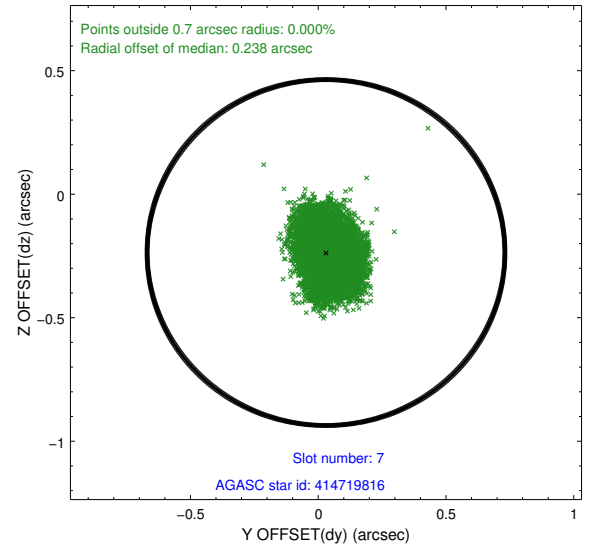
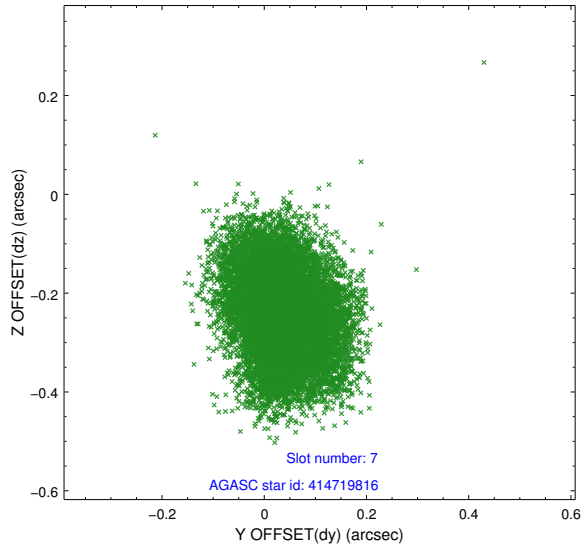
### 2.4.3 Slot 5



## 2.4.4 Slot 6

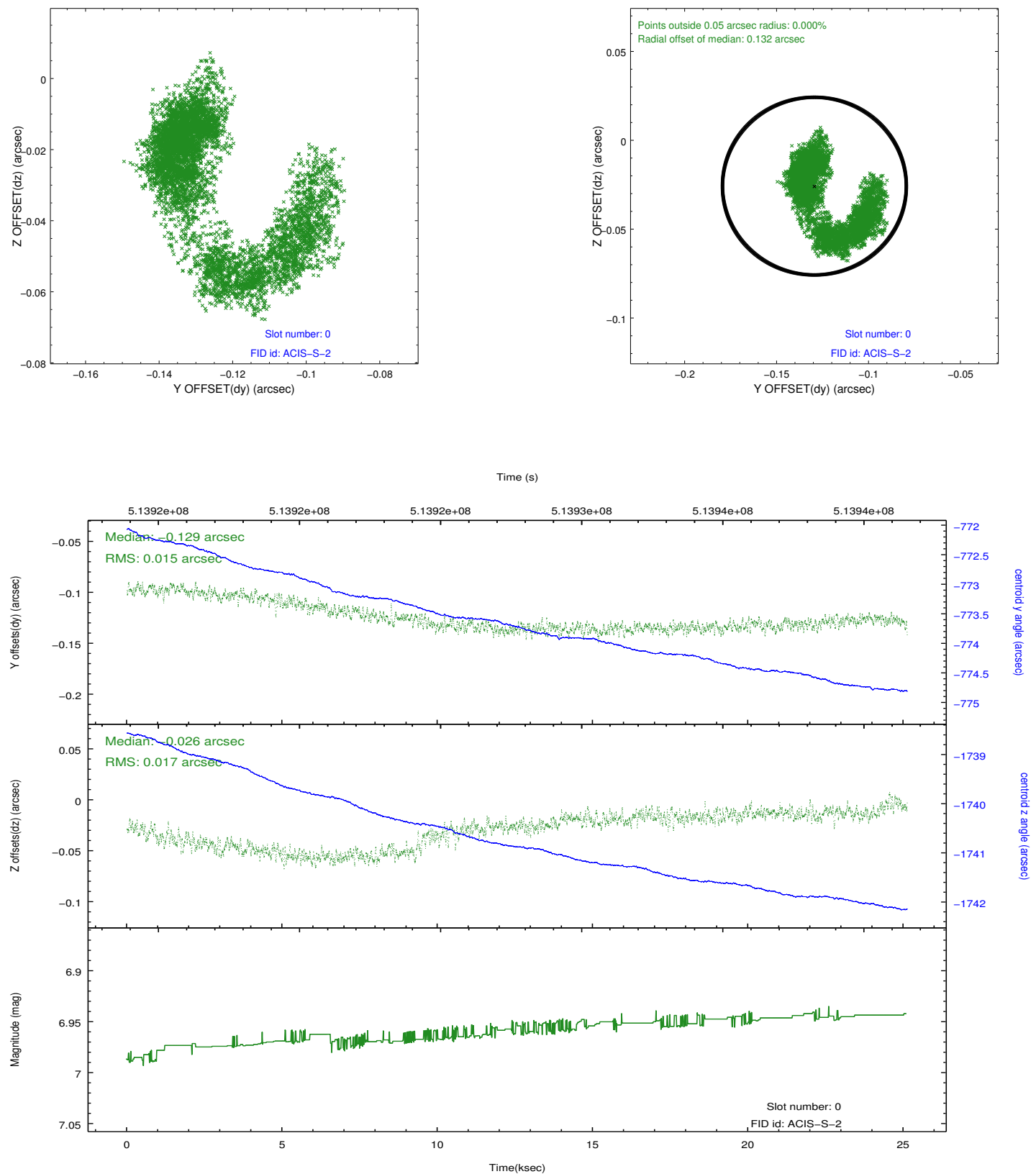


## 2.4.5 Slot 7

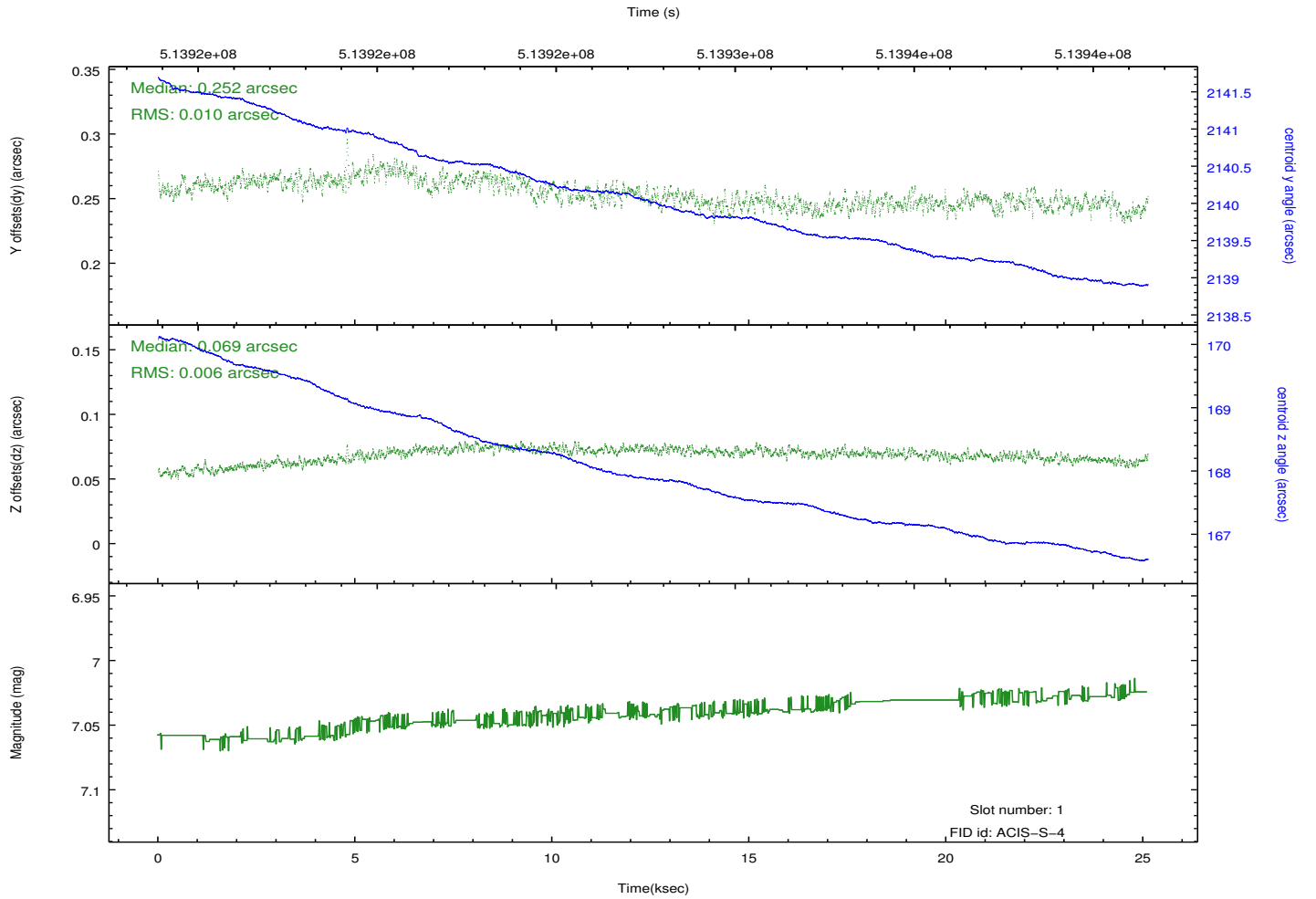
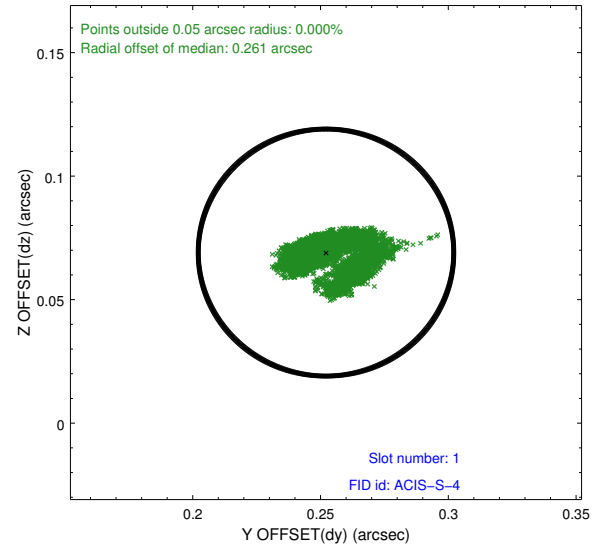
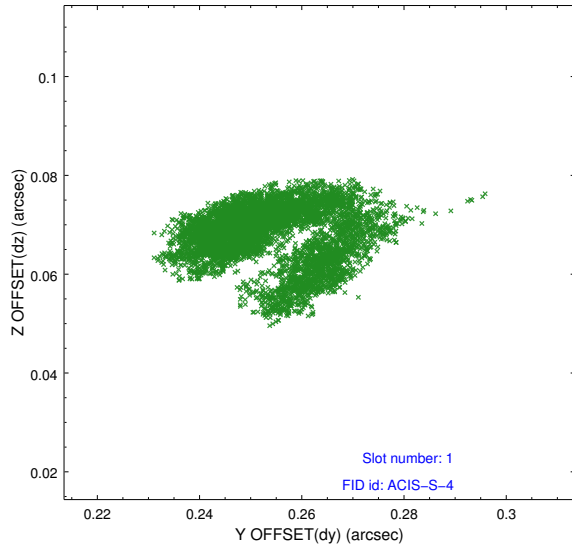


## 2.5 FID Slots

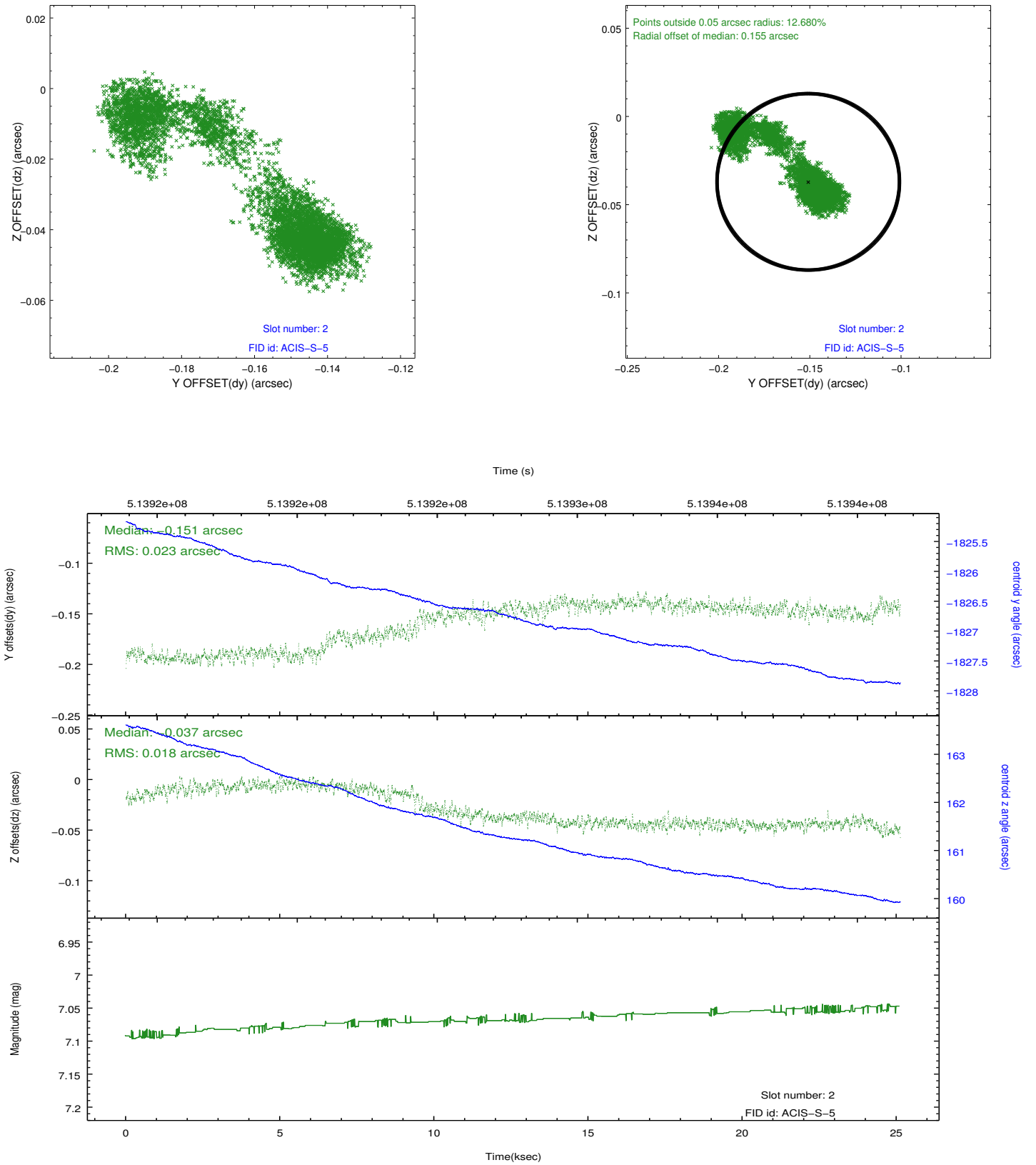
### 2.5.1 Slot 0



## 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	25.065795435607

## 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.