

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 3654 - L2 Version 3  
Chandra X-Ray Center

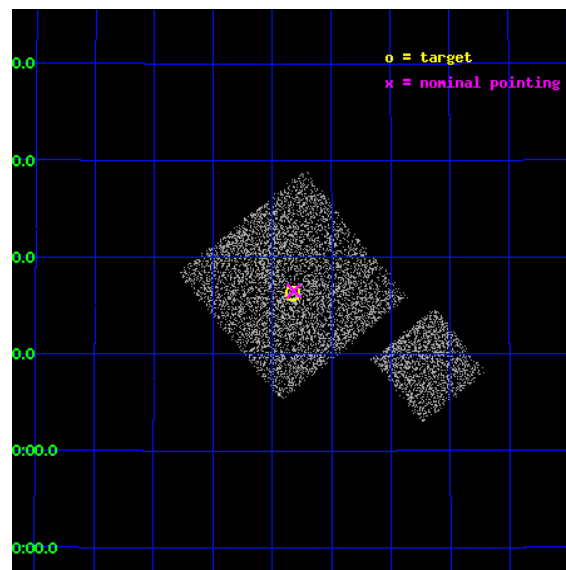
L2 Processing Date : Oct 24 2012

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# 1 Front

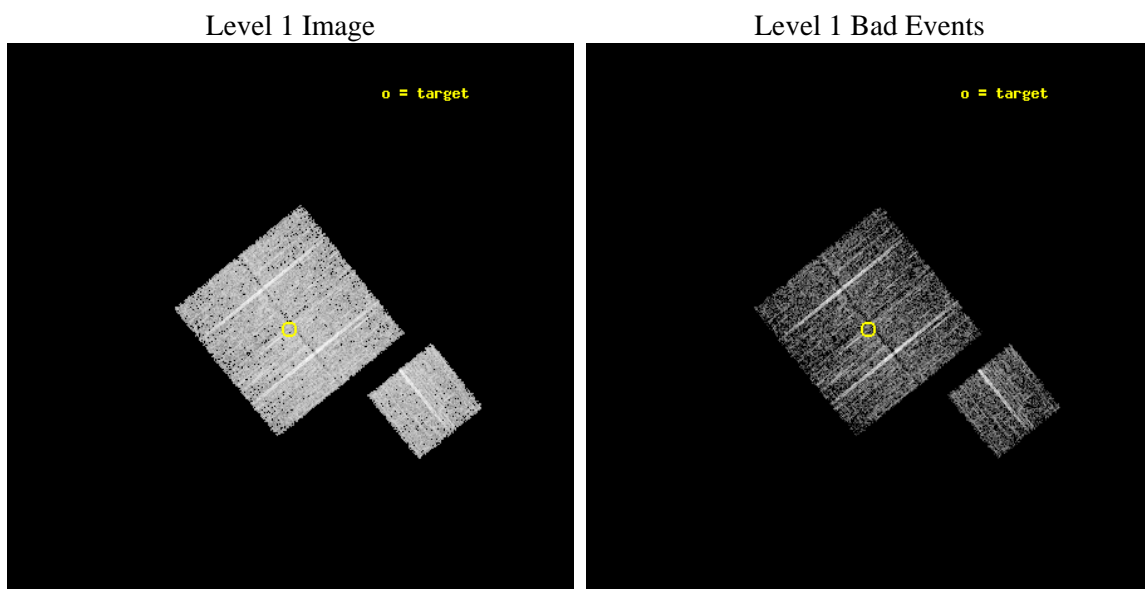
seq_num	900254	Sequence number
obs_id	3654	Observation id
title	CHANDRA LARGE SCALE SURVEY OF THE NOAO BOOTES DEEP FIELD	Proposal
observer	Dr. Stephen Murray	Principal investigator
object	NOAO FIELD F65	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	216.957163	Observer's specified target RA [deg]
dec_targ	34.271694	Observer's specified target Dec [deg]
ra_nom	216.95457702262	Nominal RA [deg]
dec_nom	34.275763194313	Nominal Dec [deg]
roll_nom	141.01016077872	Nominal Roll [deg]
revision	3	Processing version of data
ontime	4671.2606402338	Sum of GTIs [s]
livetime	4610.227181037	Livetime [s]
ontime0	4554.9201846421	Sum of GTIs [s]
ontime1	4674.3196001649	Sum of GTIs [s]
ontime2	4674.3606600761	Sum of GTIs [s]
ontime3	4671.2606402338	Sum of GTIs [s]
ontime6	4671.0965697467	Sum of GTIs [s]
l2events	9152	Number of level 2 events



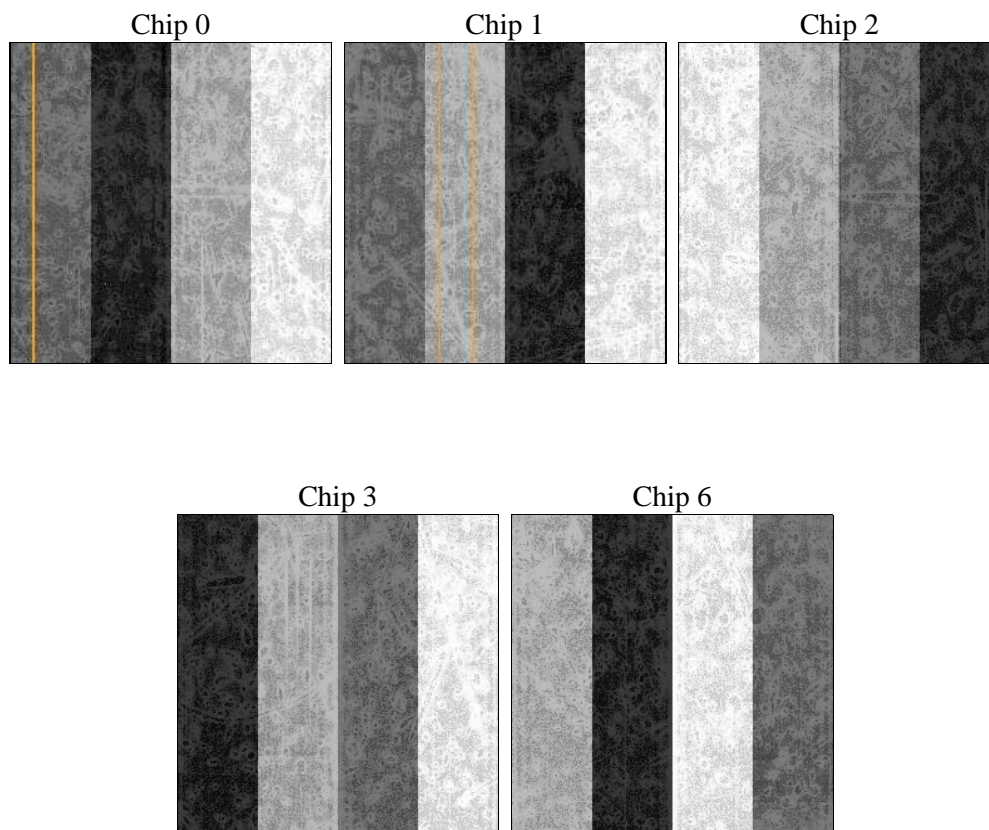
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	4900.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	4671.2606402338	Sum of GTIs [s]
caldsver	4.5.2	&#160	ontime0	4554.9201846421	Sum of GTIs [s]
date	2012-10-24T23:54:03	Date and time of file creation	ontime1	4674.3196001649	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	4674.3606600761	Sum of GTIs [s]
			ontime3	4671.2606402338	Sum of GTIs [s]
			ontime6	4671.0965697467	Sum of GTIs [s]
			l1events	114710	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	21907	21130	23920	25162	22591
rejected events	19716	18761	21688	23035	20337
rejected %	89%	88%	90%	91%	90%

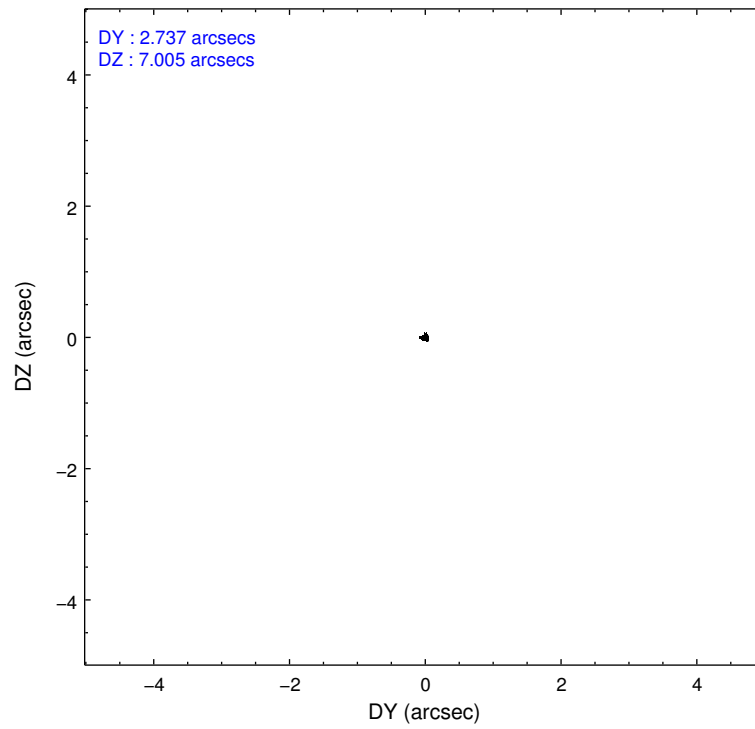
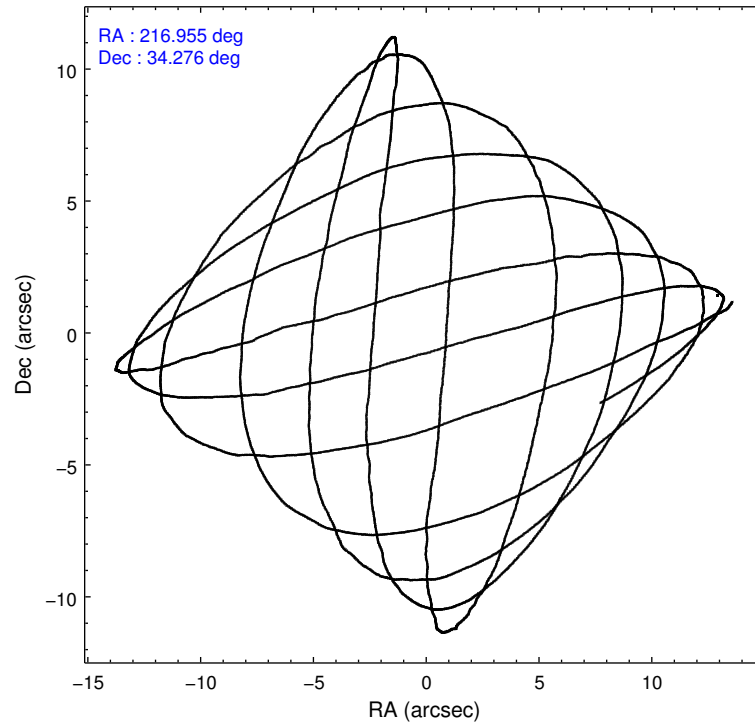
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	787	832	852	777	839
	3%	3%	3%	3%	3%
grade 1 events	10	20	14	15	8
	0%	0%	0%	0%	0%
grade 2 events	512	484	498	460	442
	2%	2%	2%	1%	1%
grade 3 events	253	308	243	248	259
	1%	1%	1%	0%	1%
grade 4 events	268	266	276	236	270
	1%	1%	1%	0%	1%
grade 5 events	700	780	621	783	736
	3%	3%	2%	3%	3%
grade 6 events	434	485	365	410	456
	1%	2%	1%	1%	2%
grade 7 events	18943	17955	21051	22233	19581
	86%	84%	88%	88%	86%

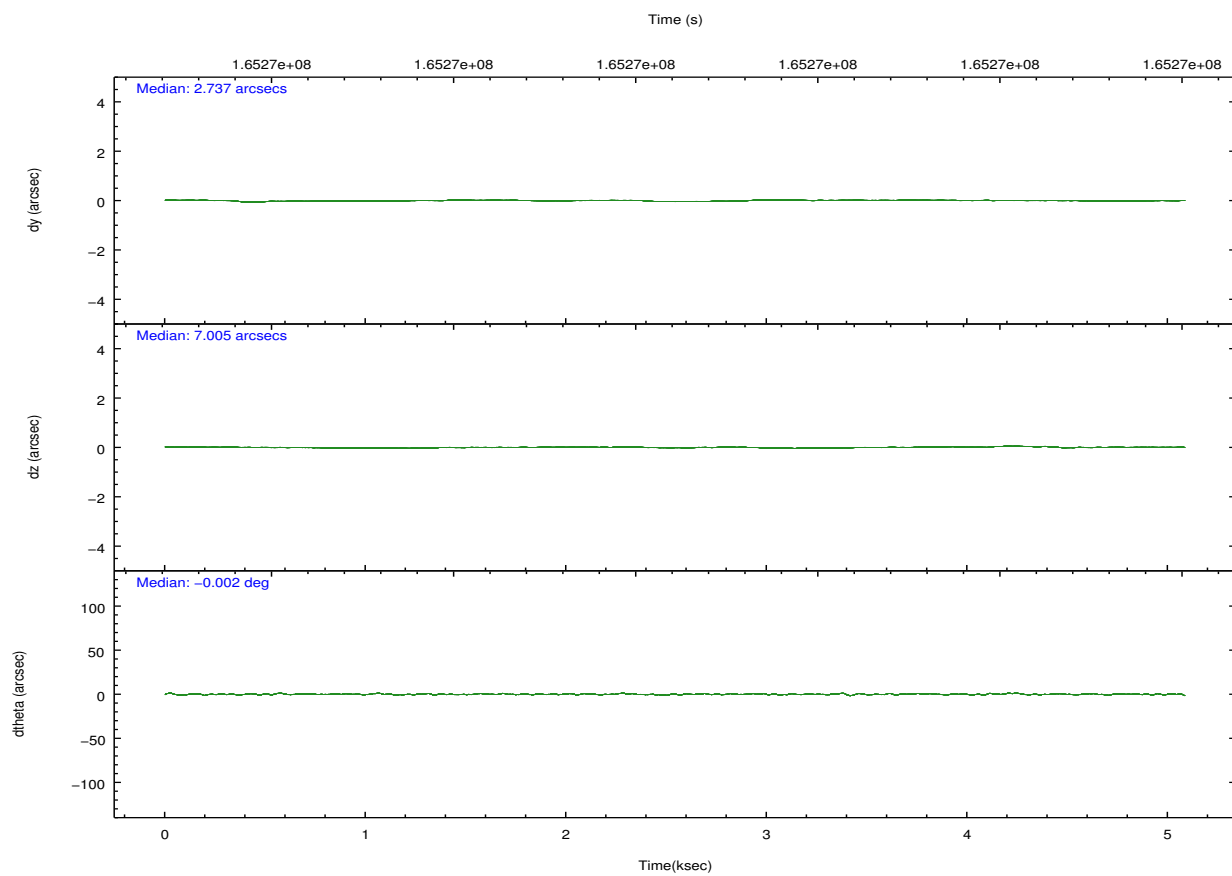
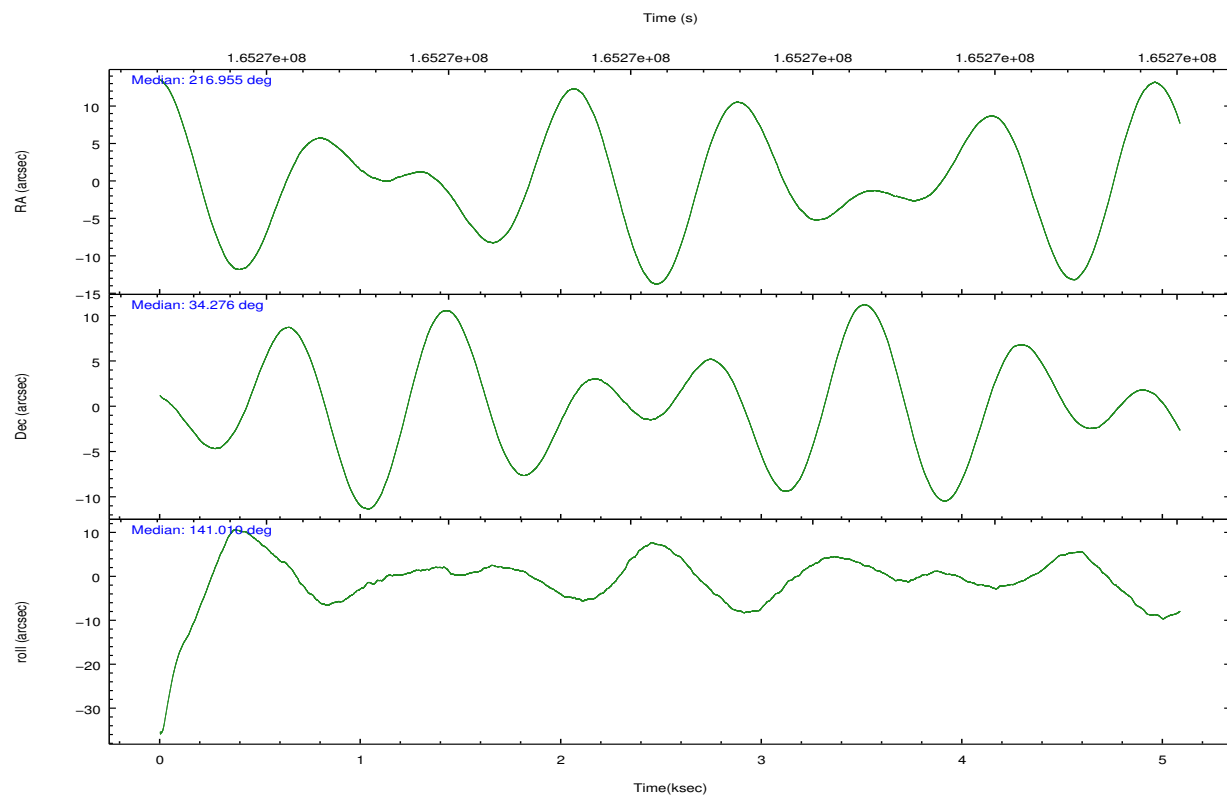


## 2.2 Compared Parameters

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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	216.987271	216.9545770226188	Subarray requested	NONE	NONE
[deg] Pointing Dec	34.271613	34.27576319431278	Alternating exposures requested	N	N
[deg] Pointing Roll	140.783049	141.0101607787201	[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)	165268860.184000	165268484.61979			
Observation start date	2003-03-28T19:59:56	2003-03-28T19:54:44			
[s] Observation end time (MET)	165273760.184000	165273894.57002			
Observation end date	2003-03-28T21:21:36	2003-03-28T21:24:54			
Read mode	TIMED	TIMED			

## 2.3 Aspect



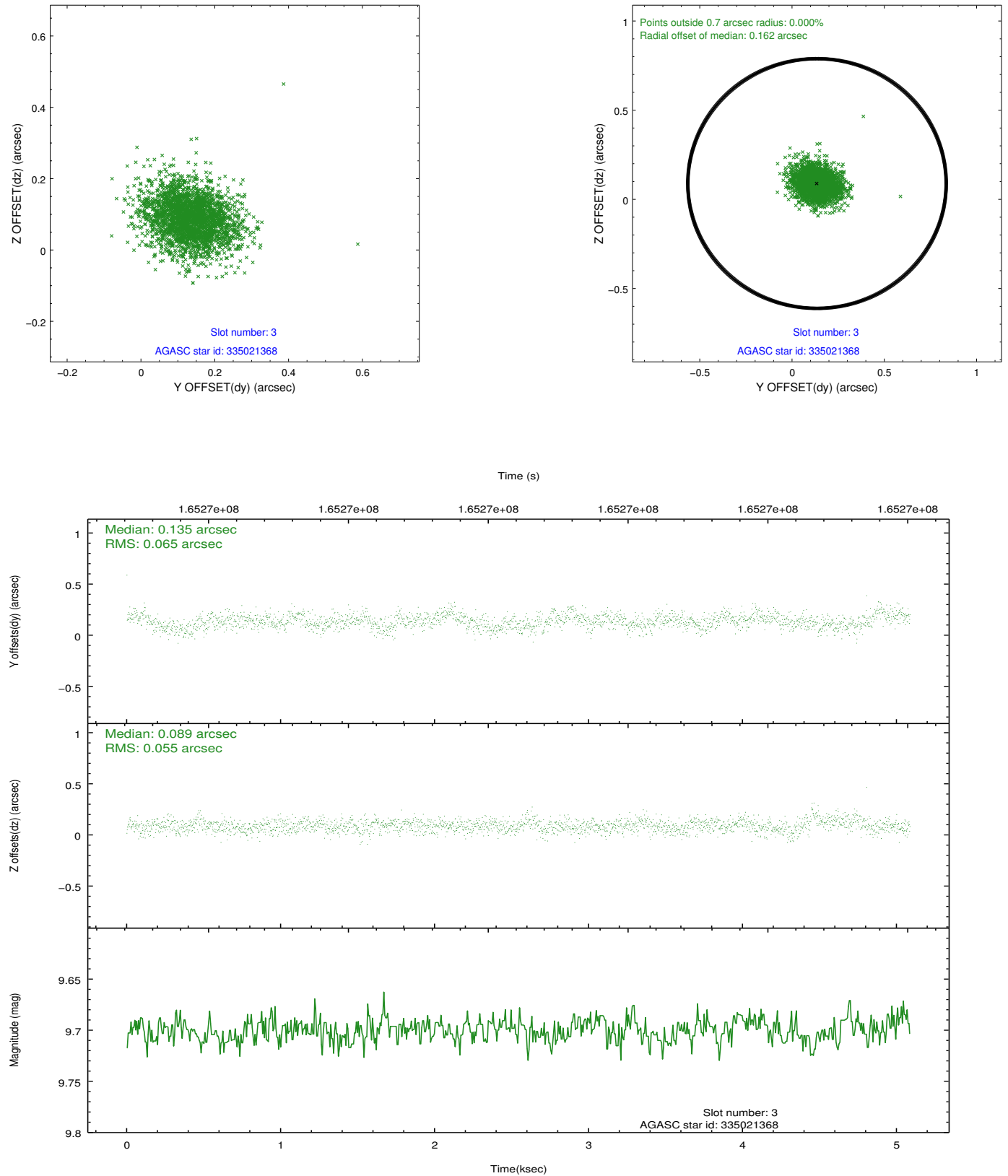


### Slot Statistics

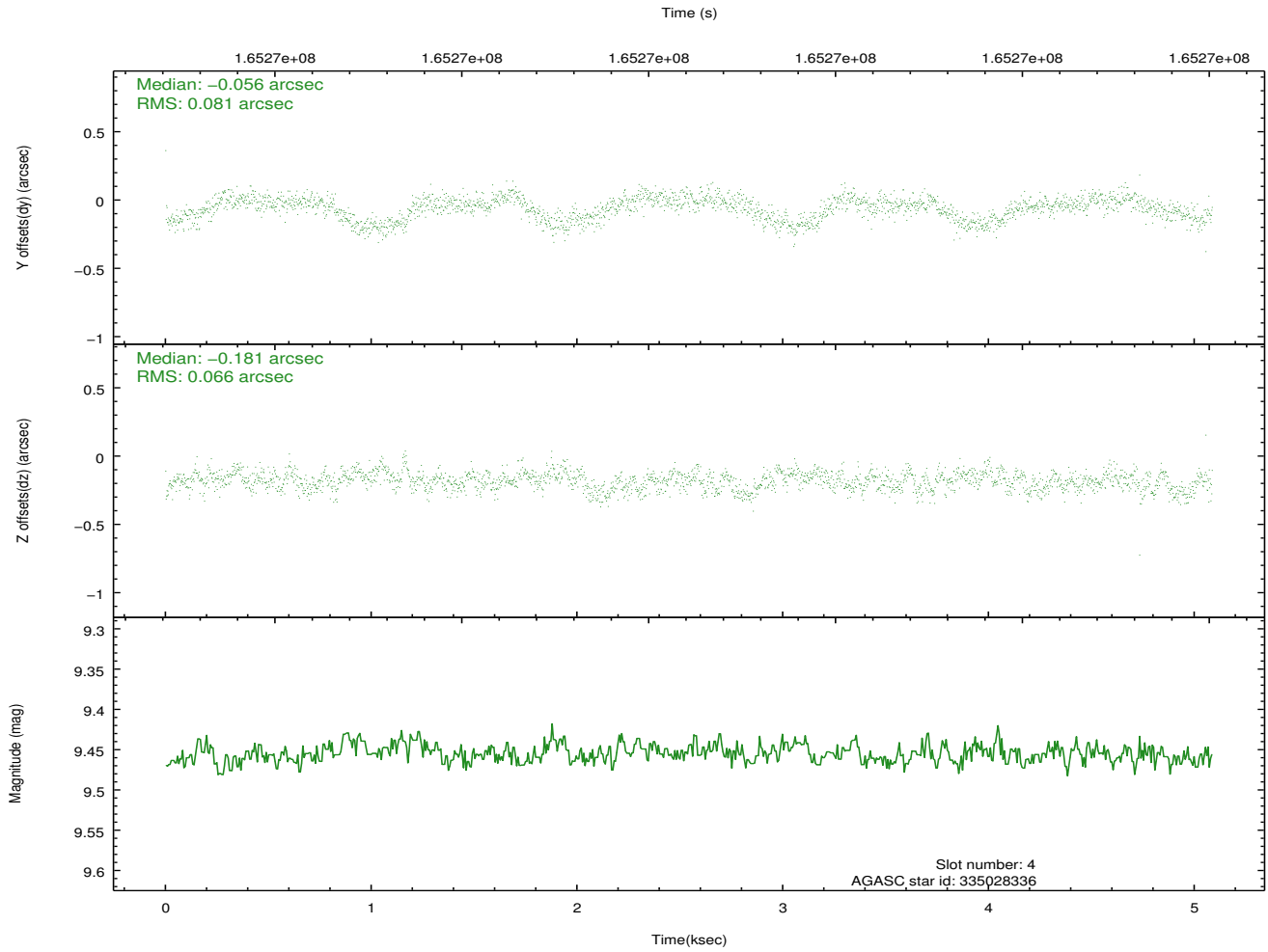
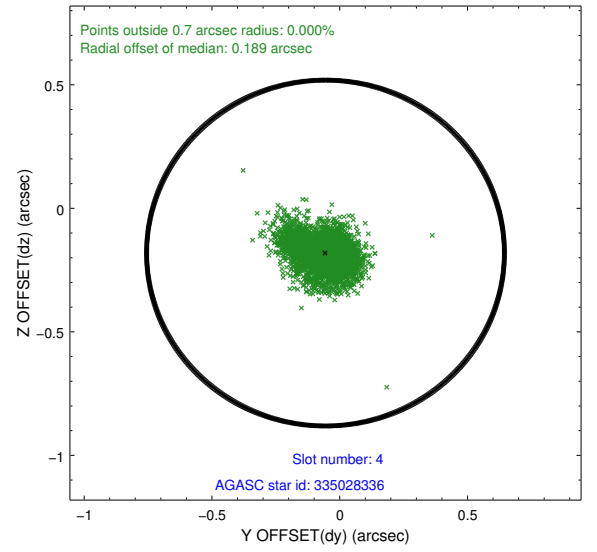
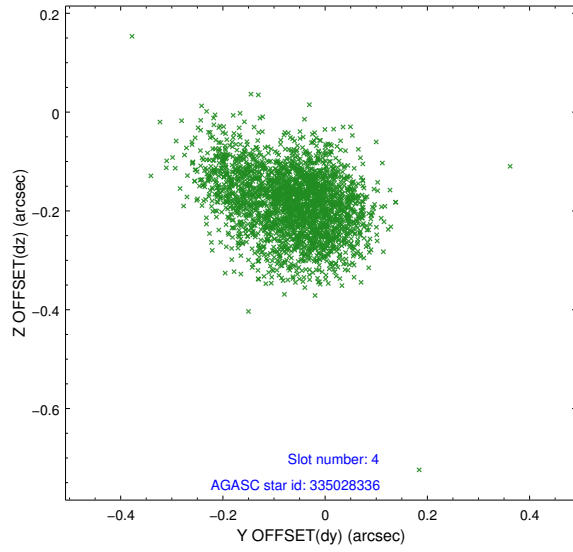
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.25	1241	-0.047	-0.050	0.008	0.012	0.000000	0.000000	937.02	-830.45
1	FID	ACIS-I-4	7.18	1241	0.072	0.081	0.007	0.011	0.000000	0.000000	2157.86	1068.89
2	FID	ACIS-I-5	7.23	1240	-0.124	0.040	0.007	0.012	0.000000	0.000000	-1809.51	1068.08
3	GUIDE	335021368	9.70	2480	0.135	0.089	0.088	0.150	217.529643	33.934817	-2018.35	-87.75
4	GUIDE	335028336	9.46	2481	-0.056	-0.181	0.111	0.178	217.189840	34.665629	432.11	-1478.49
5	GUIDE	335028696	9.19	2478	0.098	-0.027	0.070	0.111	217.260519	33.844112	-1604.61	674.70
6	GUIDE	335030384	8.83	2482	-0.065	-0.040	0.072	0.113	216.806407	34.722197	1440.29	-918.14
7	GUIDE	335021128	9.39	2480	-0.100	0.160	0.087	0.144	216.159551	34.422539	2255.16	1125.59

## 2.4 Star Slots

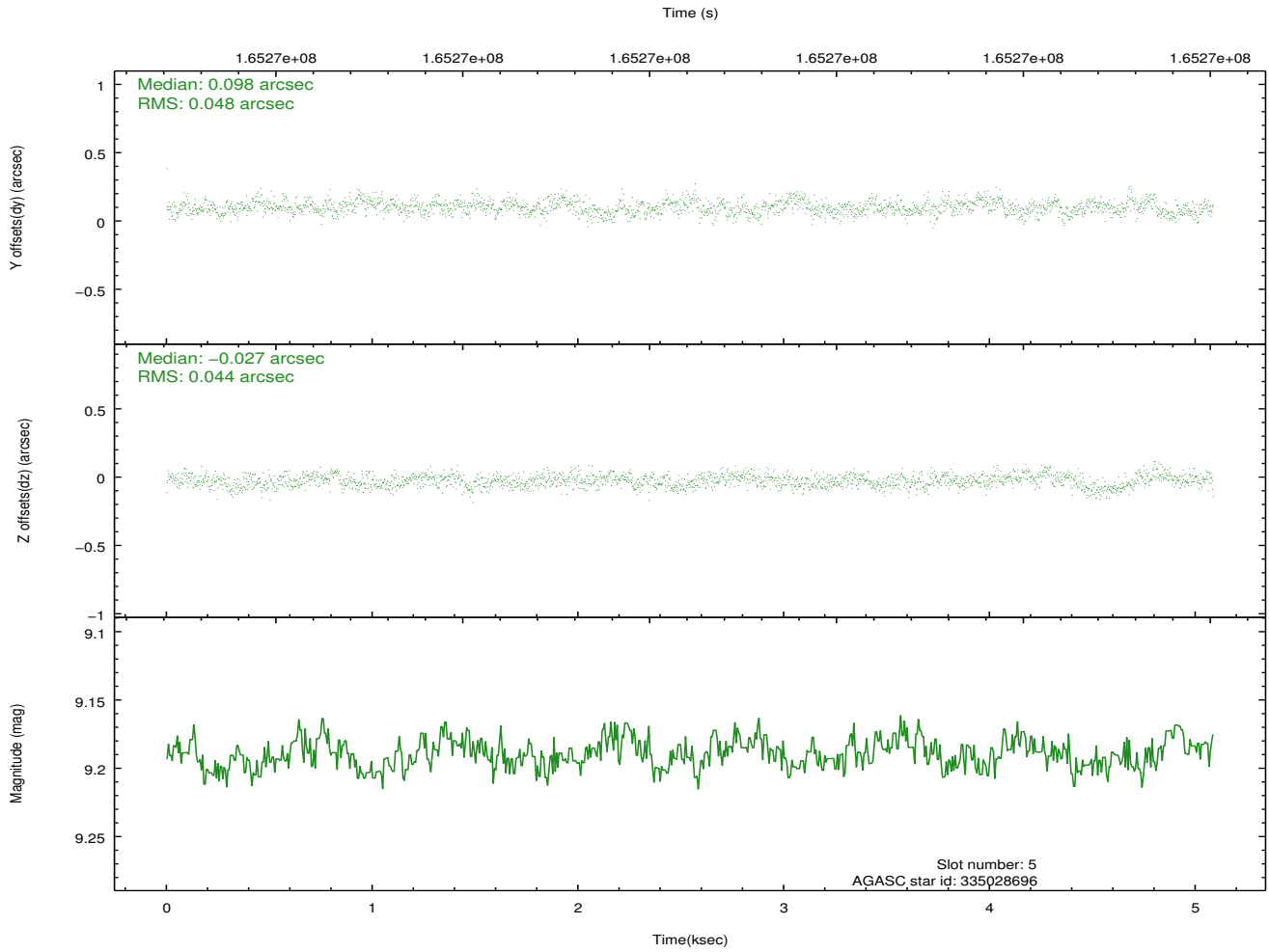
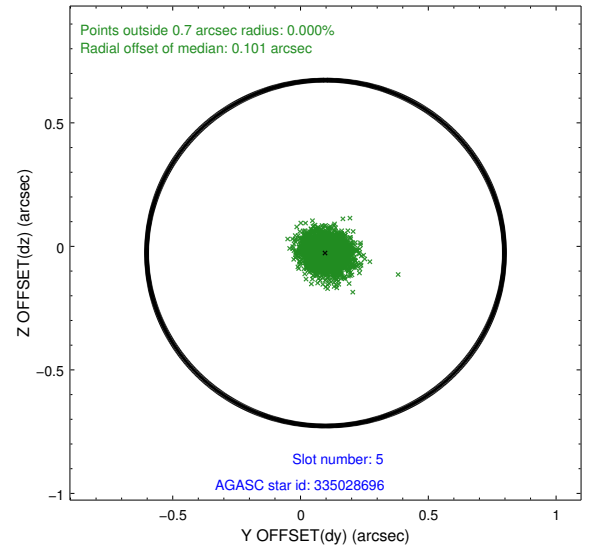
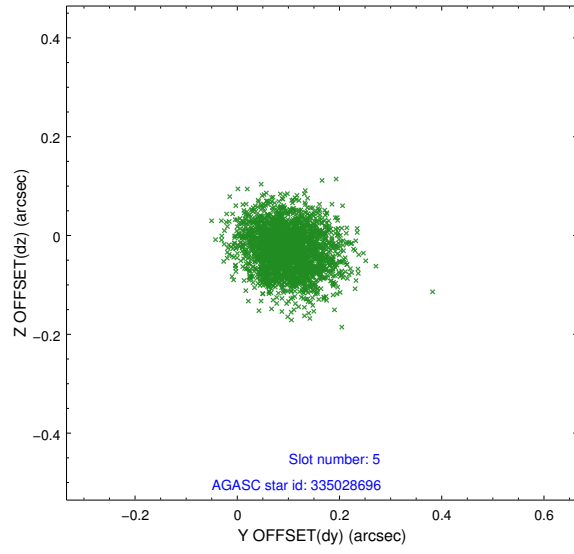
### 2.4.1 Slot 3



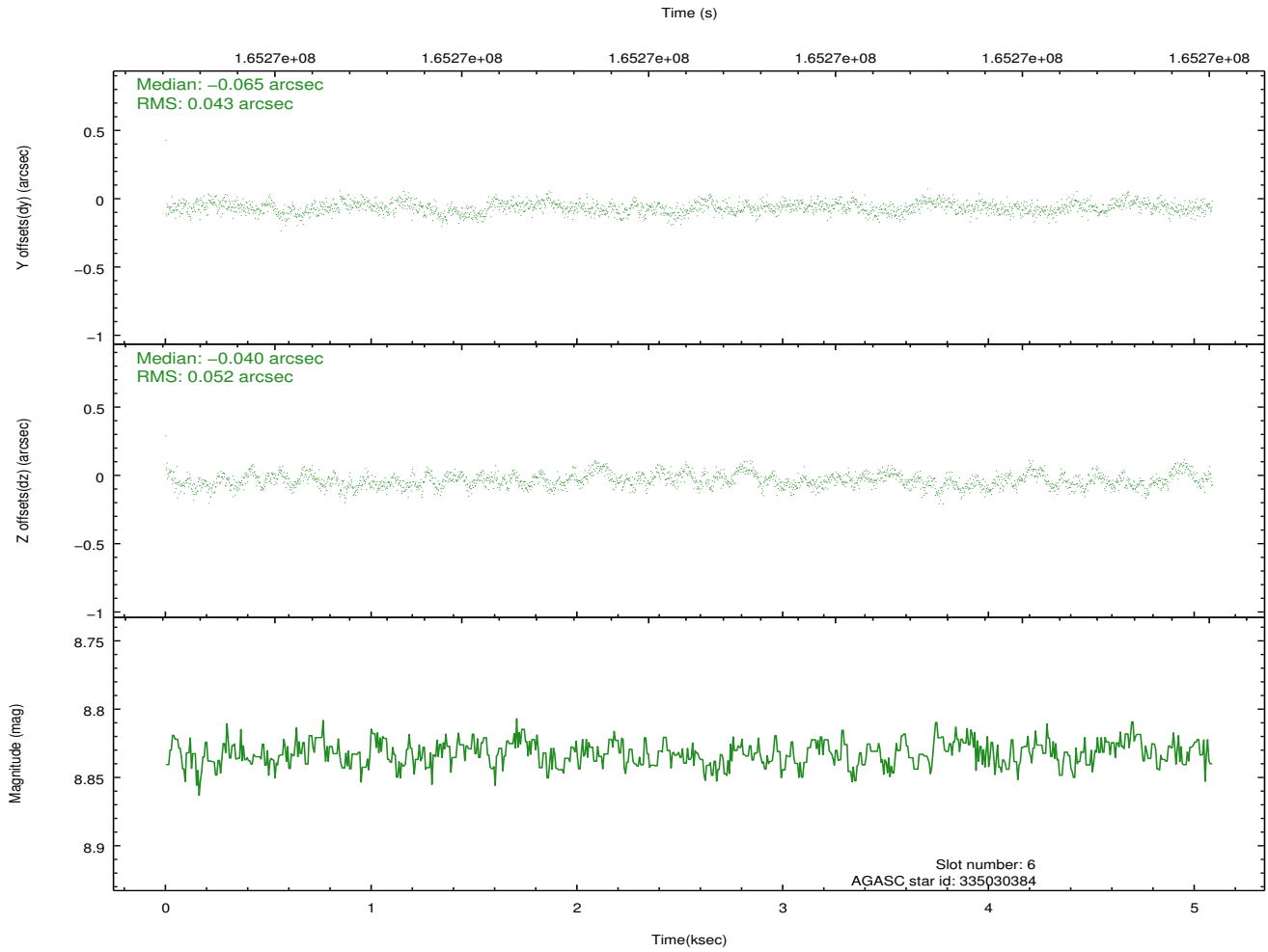
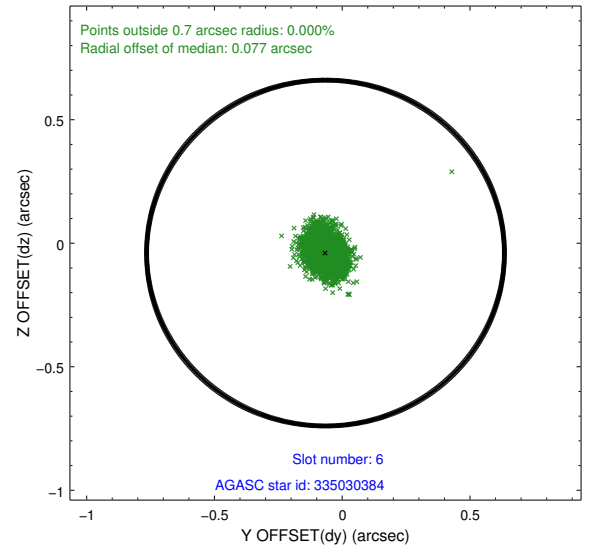
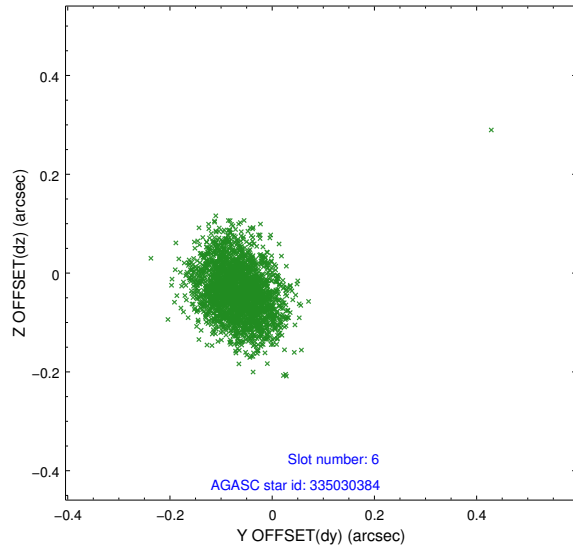
## 2.4.2 Slot 4



### 2.4.3 Slot 5

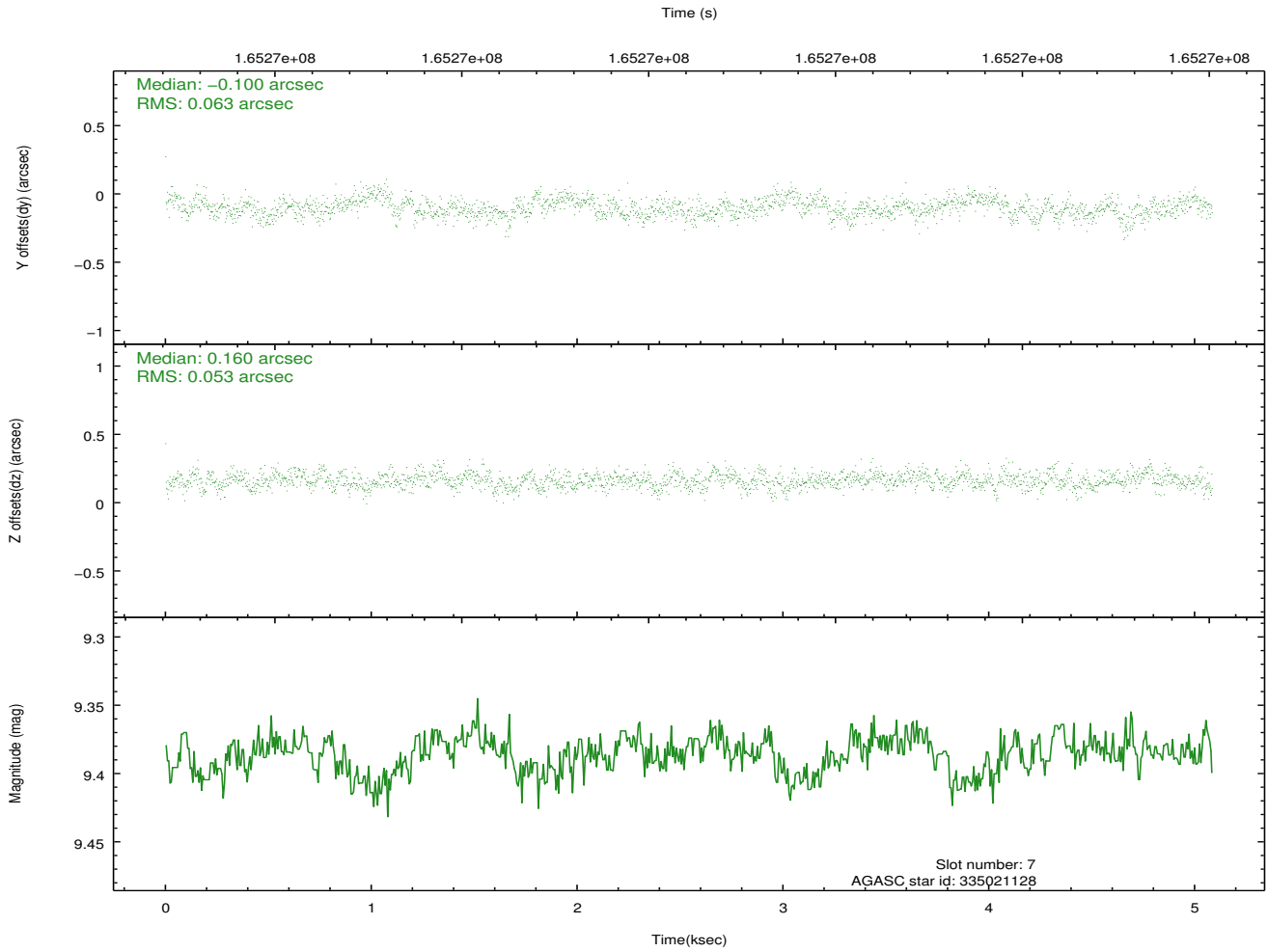
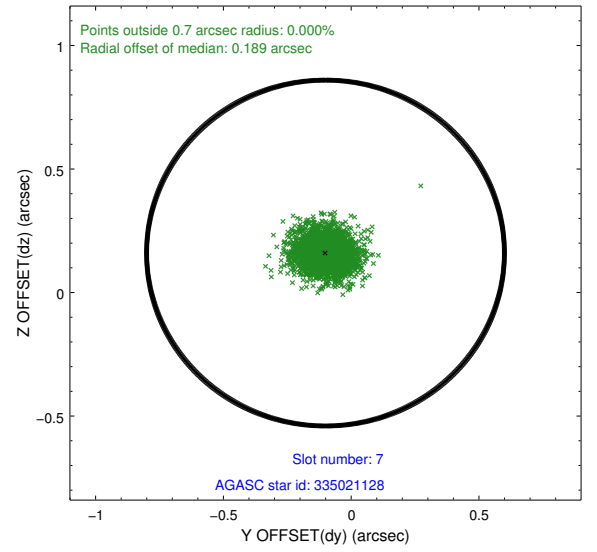
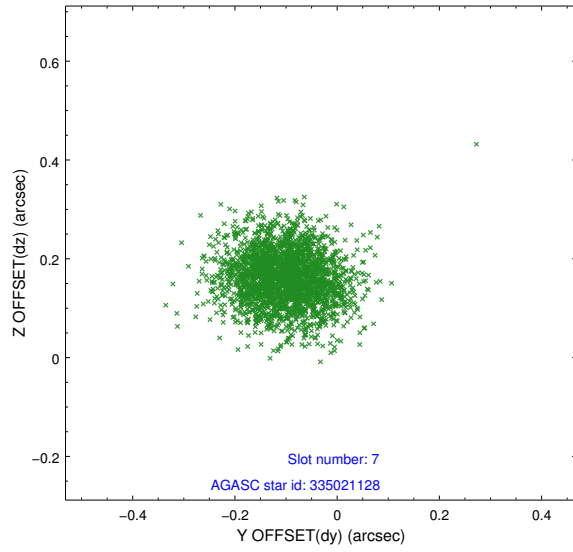


## 2.4.4 Slot 6



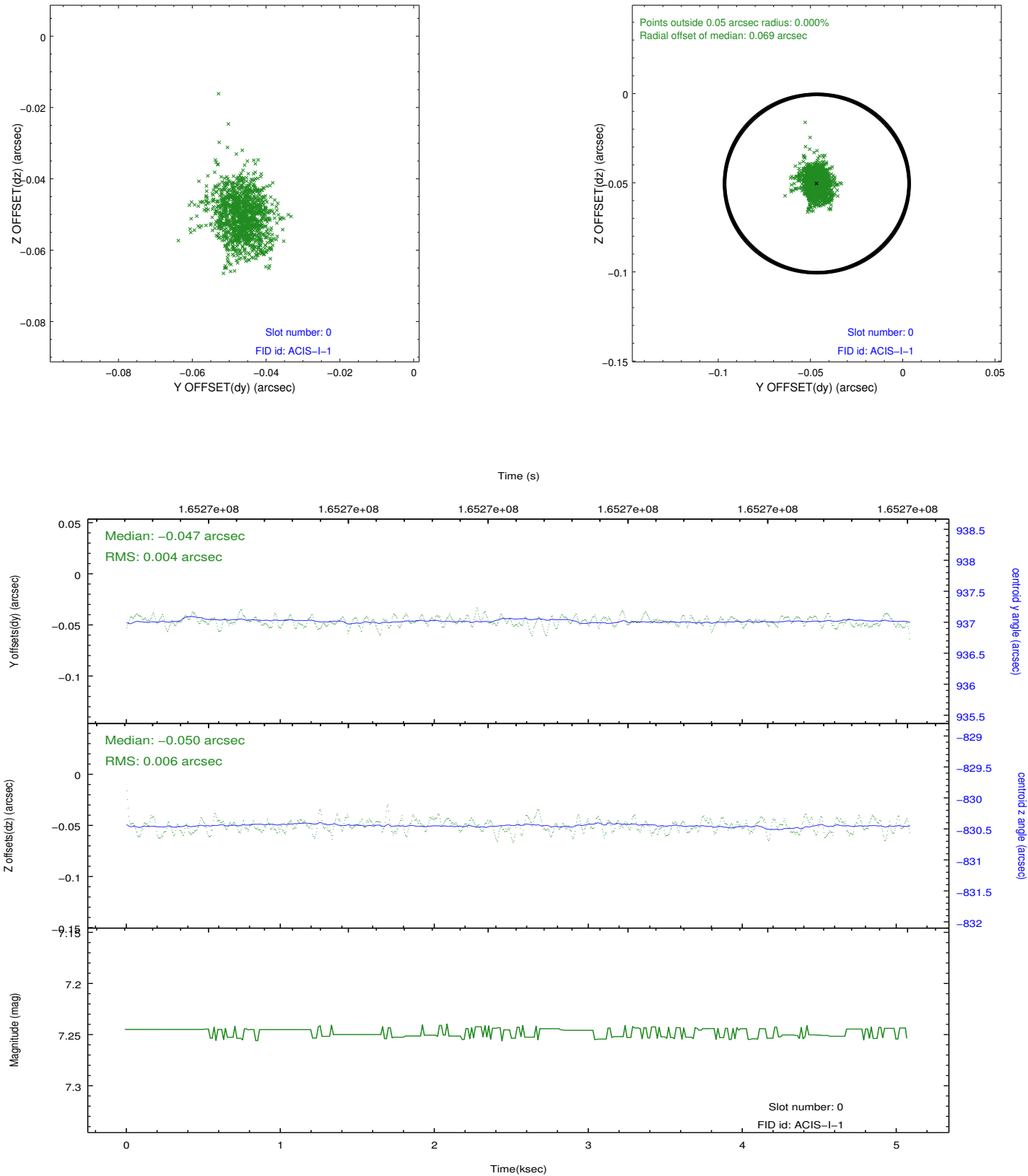


## 2.4.5 Slot 7

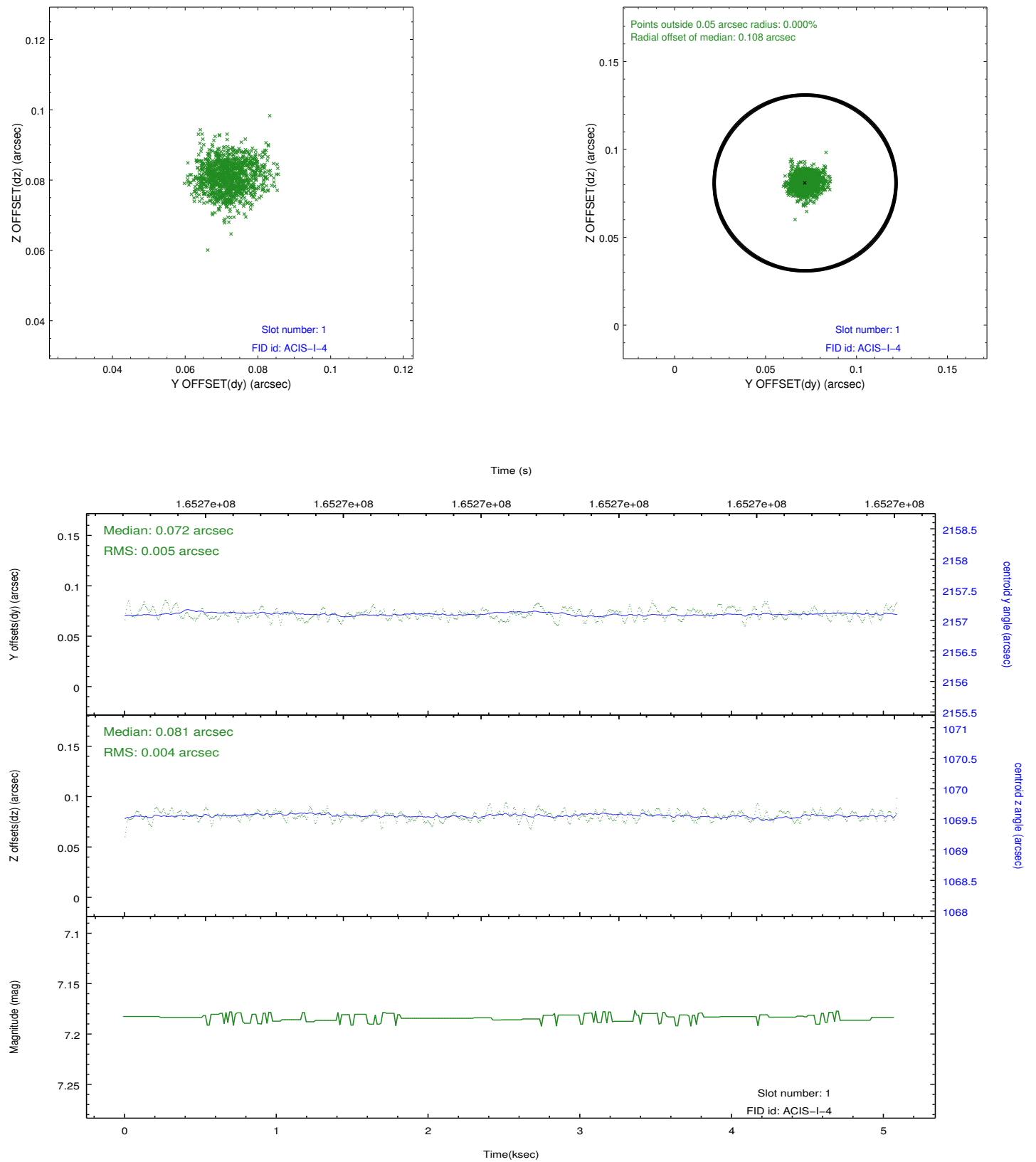


## 2.5 FID Slots

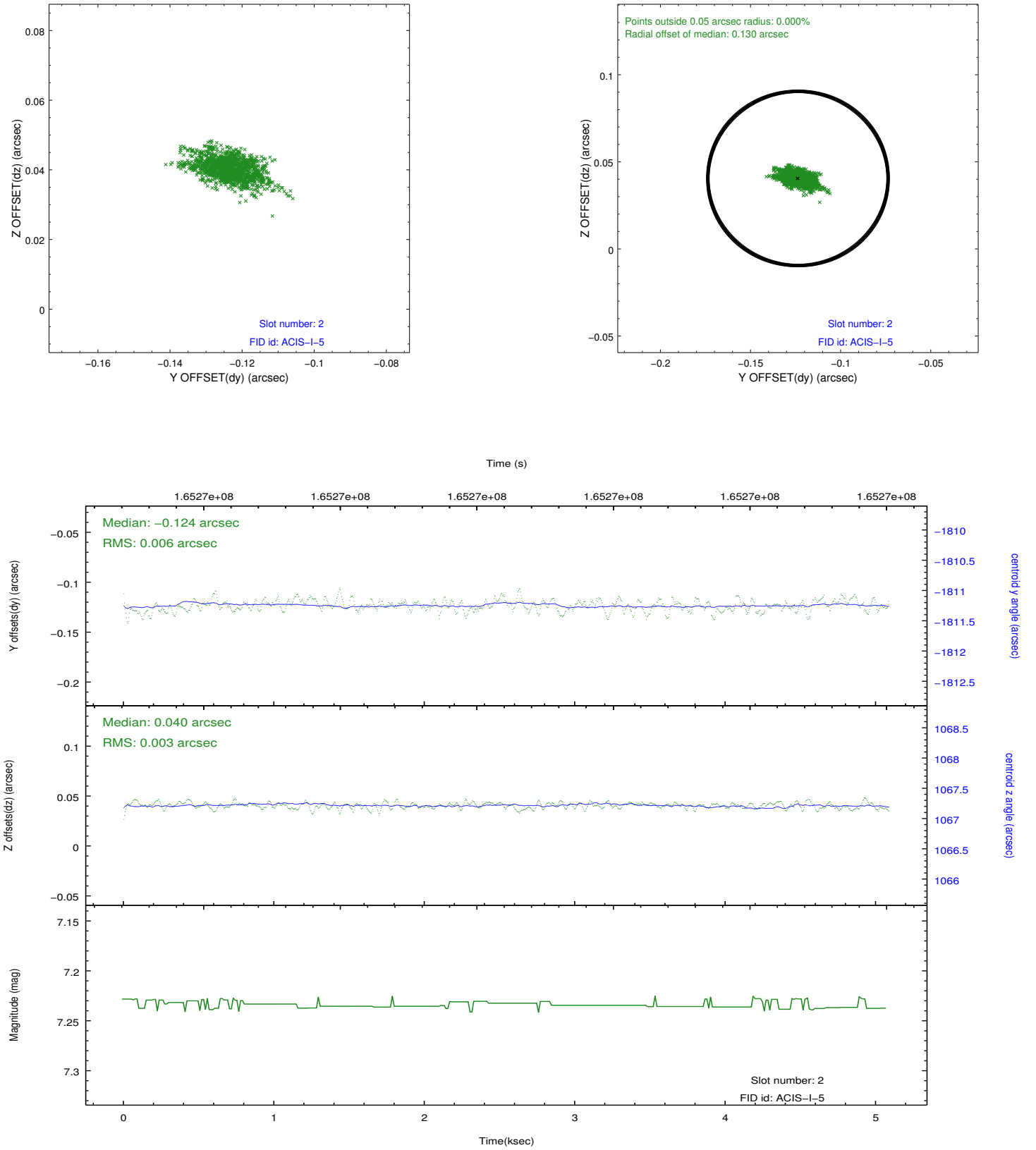
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2013.06.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.672

## A.2 Comments

A warning from the software indicates out-of-sequence exposure records. This appears to be due to a duplication of ACIS packets in the raw telemetry. The duplicate data is filtered out in Level 2 data. There is no problem with the Level 2 data. The duplicate data could be removed by special processing, removing major/minor frames 105663:72 - 105663:94 from raw telemetry.