

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 13195 - L2 Version 2  
Chandra X-Ray Center

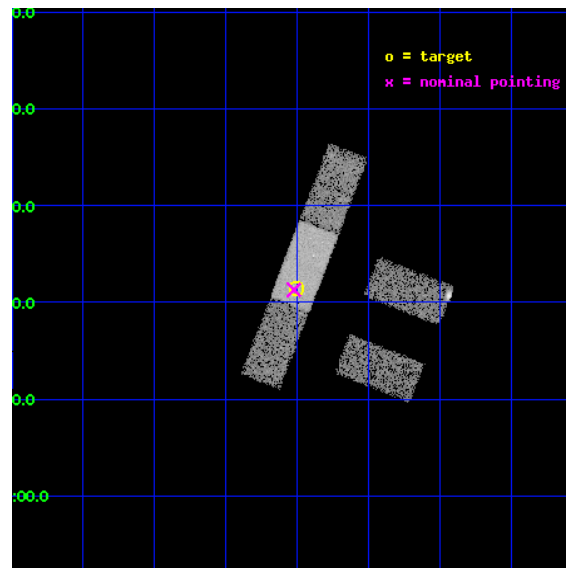
L2 Processing Date : Jul 7 2012

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# 1 Front

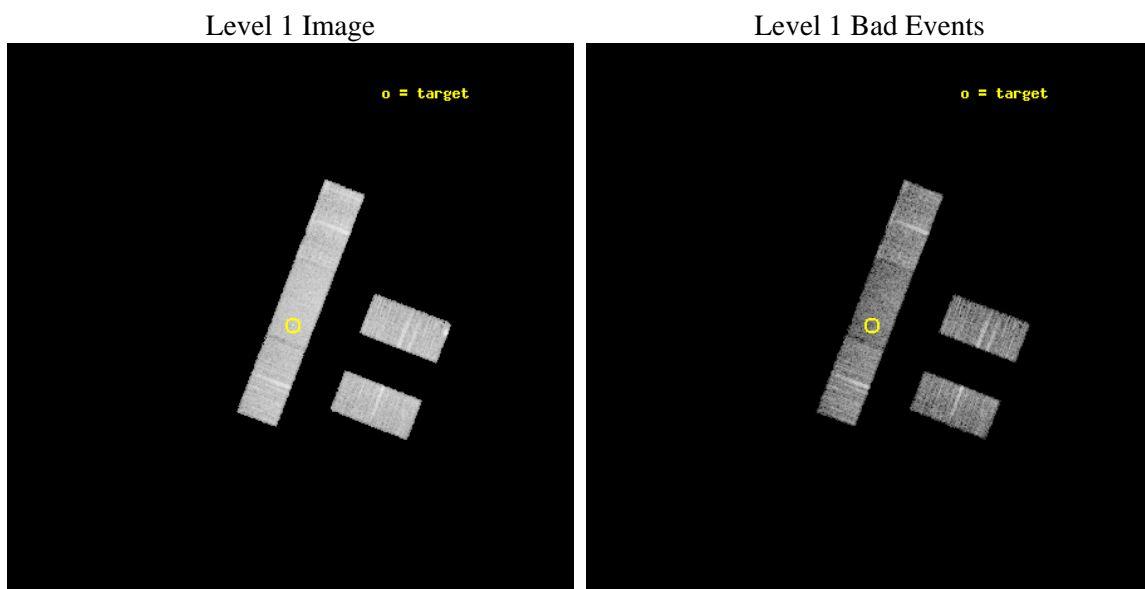
seq_num	702125	Sequence number
obs_id	13195	Observation id
title	The Size of Quasar Non-Thermal/X-ray Emission Regions	Proposal tit
observer	Prof. Christopher Kochanek	Principal investigator
object	Q2237+0305	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	340.12625	Observer's specified target RA [deg]
dec_targ	3.358	Observer's specified target Dec [deg]
ra_nom	340.13015069076	Nominal RA [deg]
dec_nom	3.3550524207692	Nominal Dec [deg]
roll_nom	291.15640848779	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10067.181920171	Sum of GTIs [s]
livetime	9829.8771218871	Livetime [s]
ontime2	10067.017760158	Sum of GTIs [s]
ontime3	10067.099840164	Sum of GTIs [s]
ontime6	10067.140880167	Sum of GTIs [s]
ontime7	10067.181920171	Sum of GTIs [s]
ontime8	10067.058800161	Sum of GTIs [s]
l2events	38762	Number of level 2 events



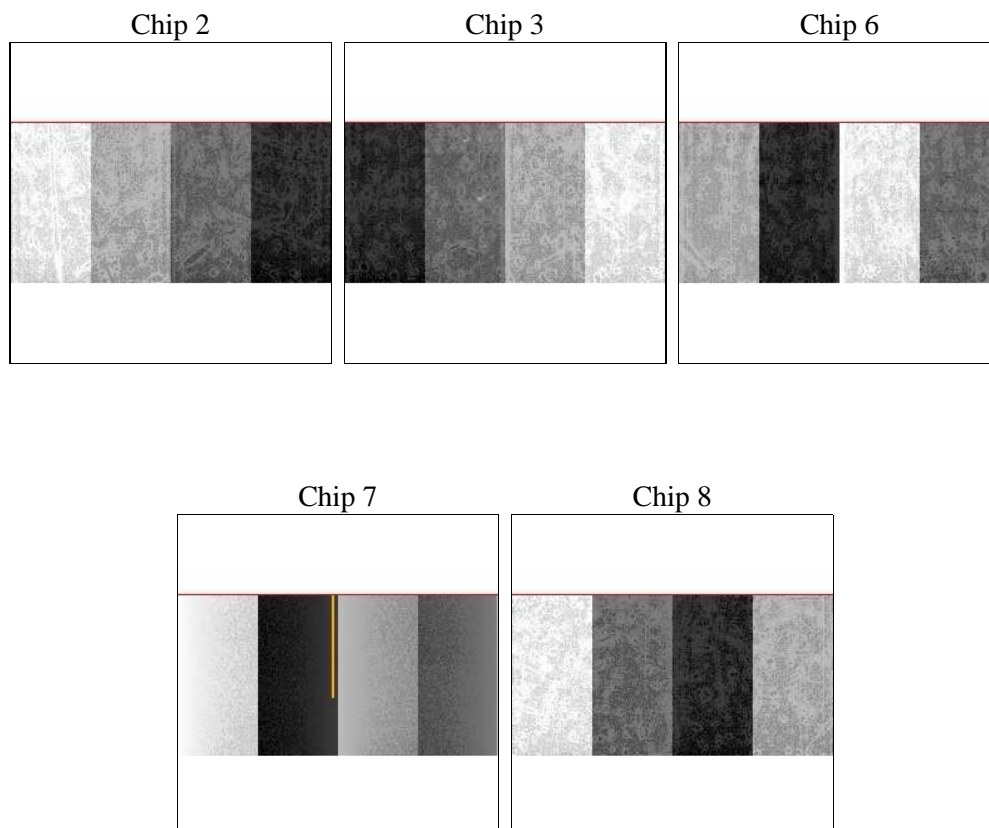
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10001.217000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	10067.181920171	Sum of GTIs [s]
caldsver	4.5.0	&#160	ontime2	10067.017760158	Sum of GTIs [s]
date	2012-07-07T04:40:45	Date and time of file creation	ontime3	10067.099840164	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	10067.140880167	Sum of GTIs [s]
			ontime7	10067.181920171	Sum of GTIs [s]
			ontime8	10067.058800161	Sum of GTIs [s]
			l1events	216164	Number of level 1 events

### 2.1.4 Events

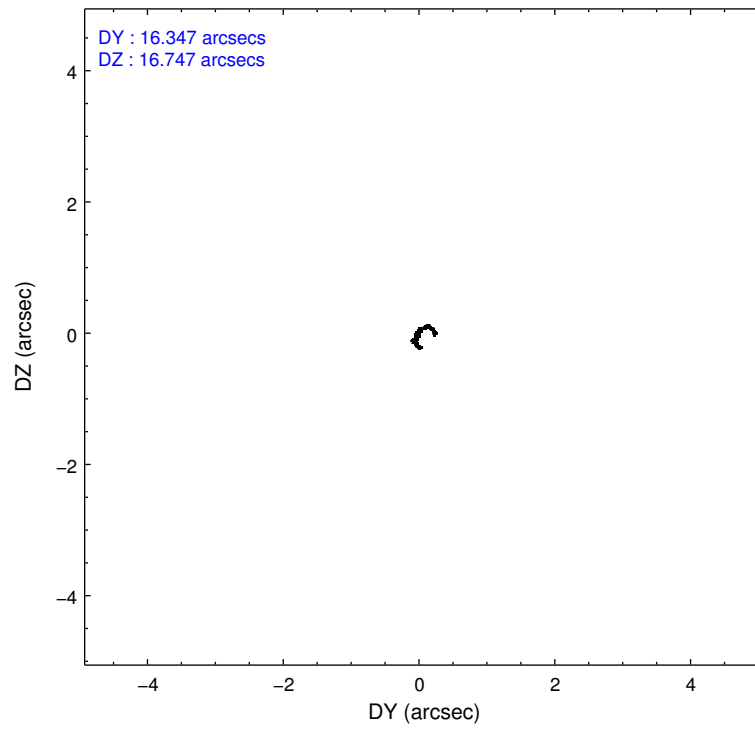
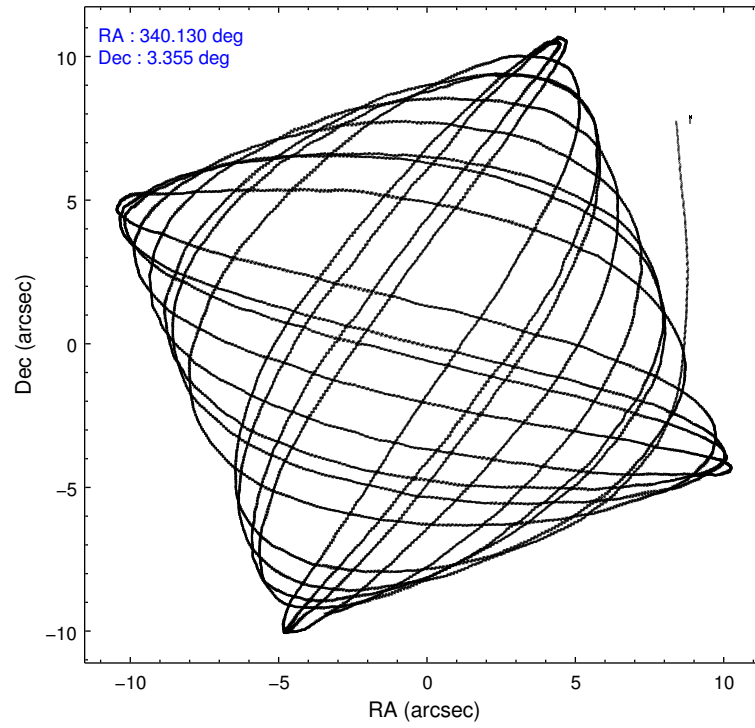
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	36453	39209	41505	47448	51549
rejected events	32163	34088	36593	25186	38306
rejected %	88%	86%	88%	53%	74%

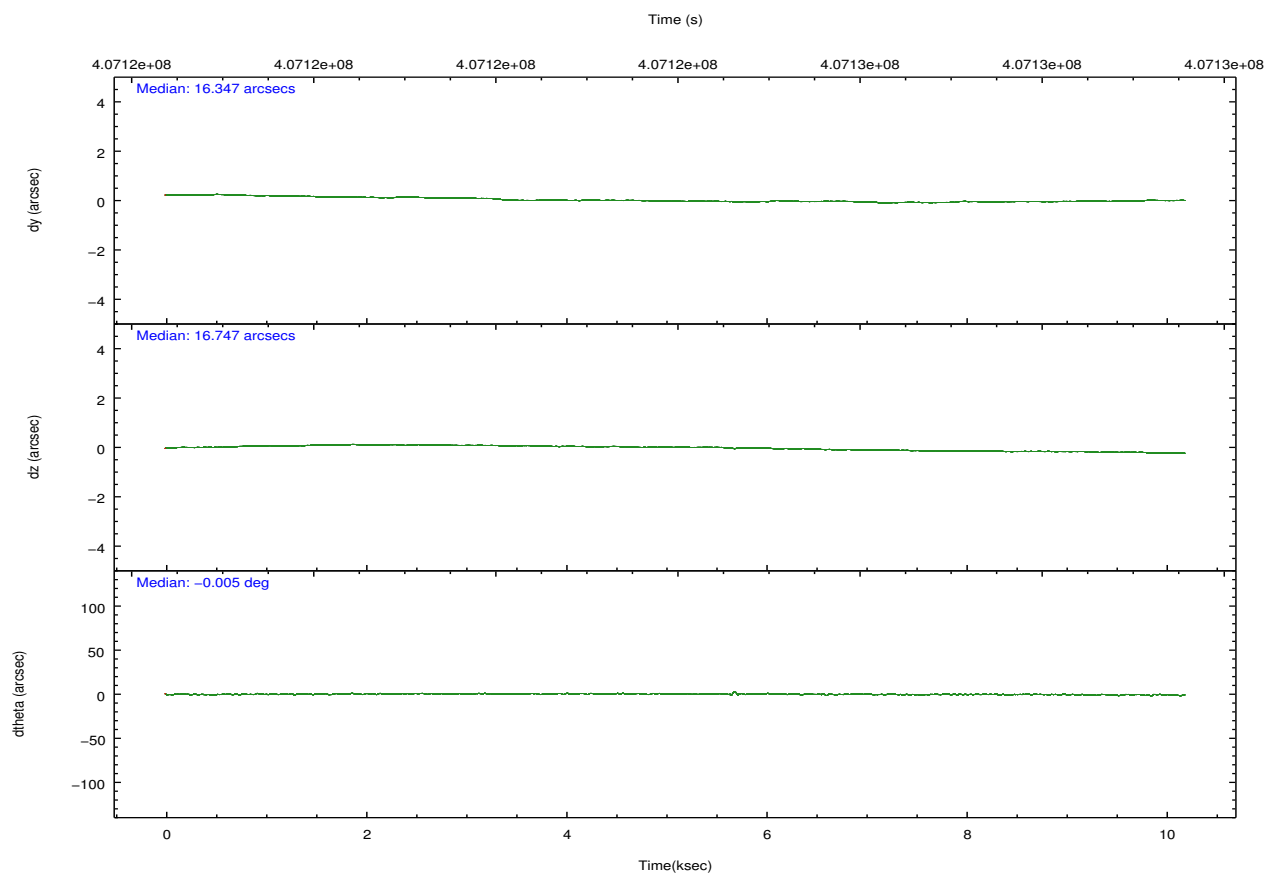
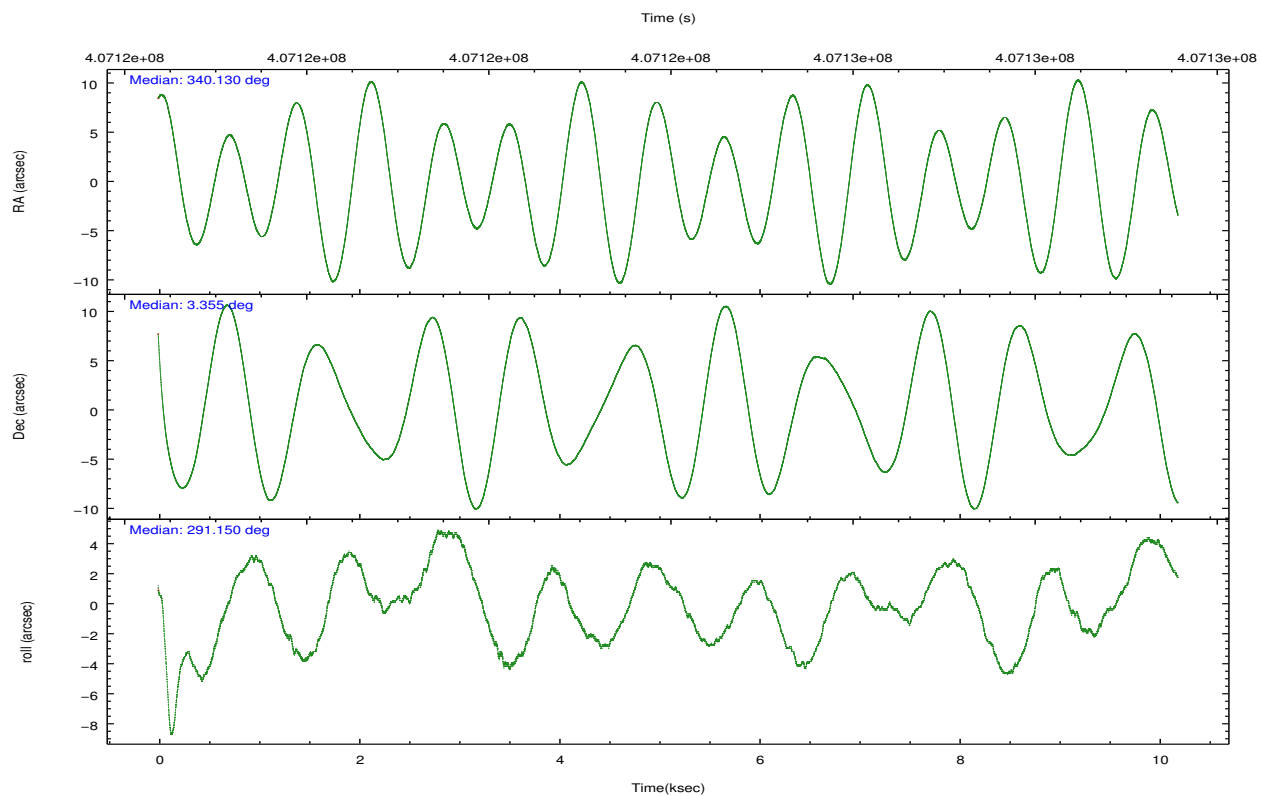
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	1542	2300	1714	2202	4139
	4%	5%	4%	4%	8%
grade 1 events	11	14	9	51	43
	0%	0%	0%	0%	0%
grade 2 events	967	914	1065	4607	3042
	2%	2%	2%	9%	5%
grade 3 events	561	560	598	2253	1224
	1%	1%	1%	4%	2%
grade 4 events	550	537	557	2196	1278
	1%	1%	1%	4%	2%
grade 5 events	1355	1707	1656	4931	2378
	3%	4%	3%	10%	4%
grade 6 events	670	811	980	11015	3575
	1%	2%	2%	23%	6%
grade 7 events	30797	32366	34926	20193	35870
	84%	82%	84%	42%	69%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23678	ACIS-23678	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	340.108553	340.1301506907554	CCD I2 on	O4	Y
[deg] Pointing Dec	3.371931	3.355052420769218	CCD I3 on	O3	Y
[deg] Pointing Roll	291.001047	291.1564084877875	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O1	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	O2	Y
[s] Observation start time (MET)	407119055.184000	407117659.92466	CCD S5 on	N	N
Observation start date	2010-11-26T00:36:29	2010-11-26T00:14:19	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	407129057.184000	407129282.40026	On-chip summing requested	N	N
Observation end date	2010-11-26T03:23:11	2010-11-26T03:28:02	Subarray requested	CUSTOM	1/2
Read mode	TIMED	TIMED	Subarray start row	257	257
			Subarray row count	512	512
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.7

## 2.3 Aspect



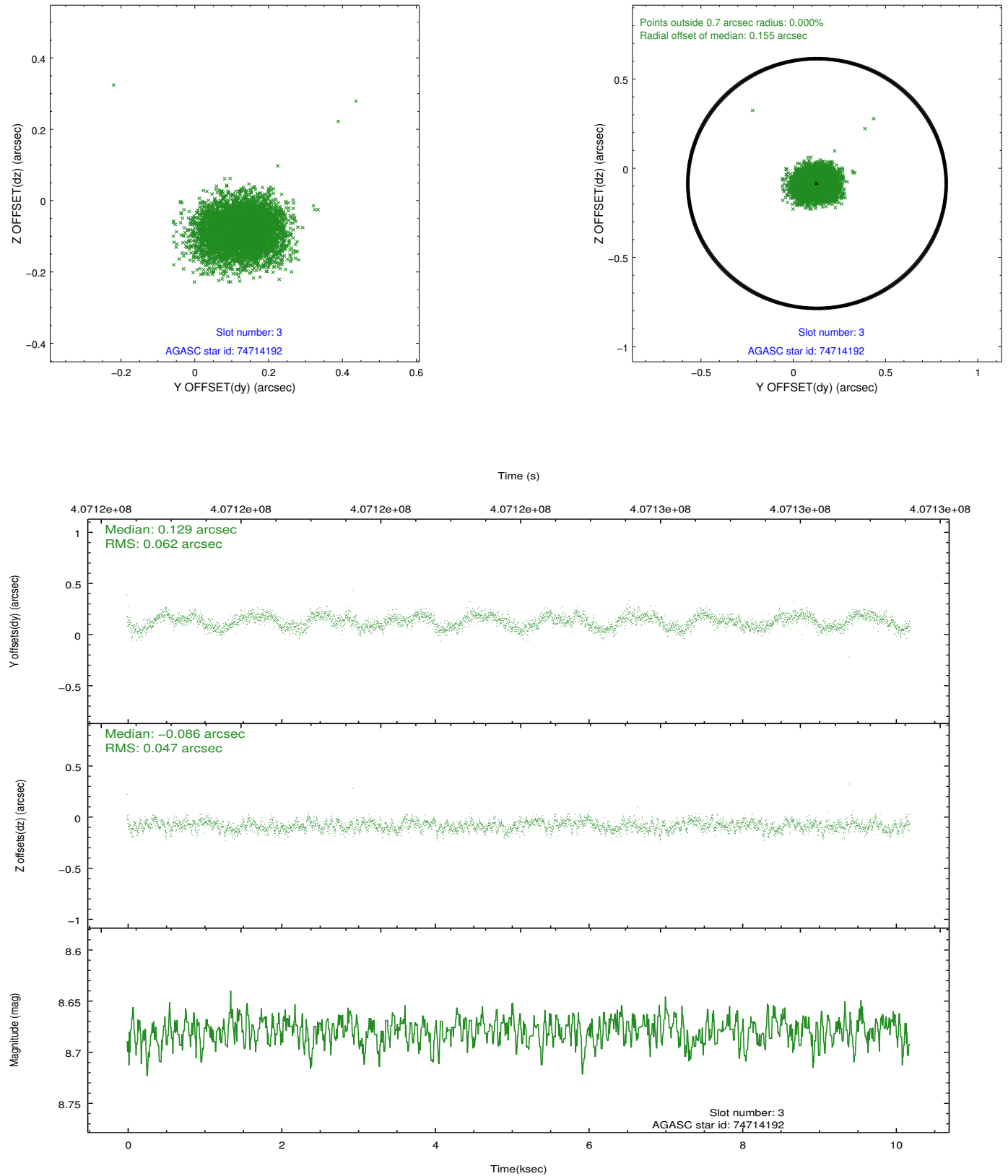


### Slot Statistics

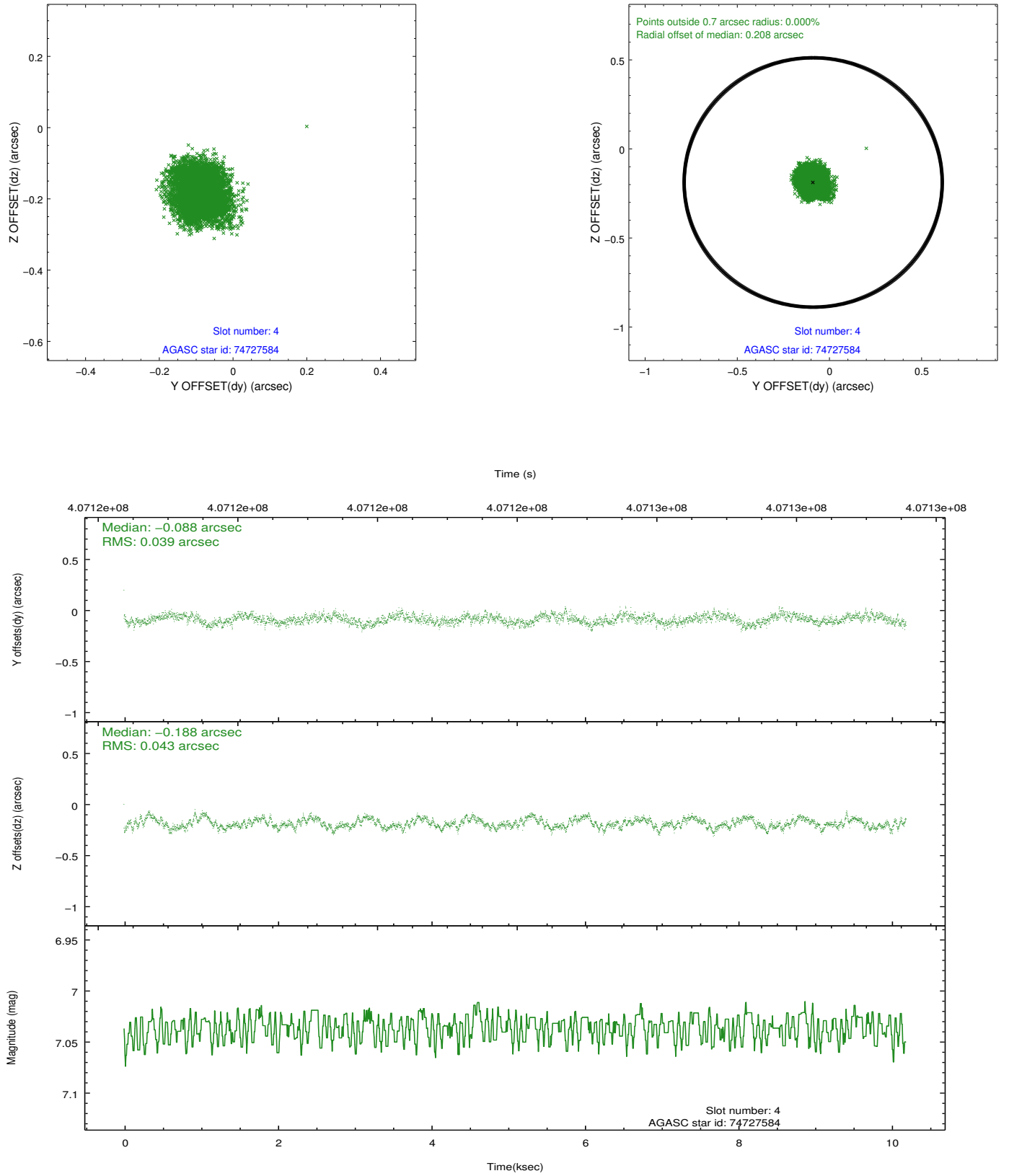
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.05	2487	0.062	-0.090	0.009	0.014	0.000000	0.000000	926.69	-1733.82
1	FID	ACIS-S-4	7.05	2487	0.118	0.037	0.007	0.012	0.000000	0.000000	2144.45	169.92
2	FID	ACIS-S-5	7.09	2487	-0.208	0.066	0.008	0.015	0.000000	0.000000	-1821.78	164.16
3	GUIDE	74714192	8.68	4971	0.129	-0.086	0.083	0.129	339.623837	3.342441	-525.11	-1664.08
4	GUIDE	74727584	7.04	4973	-0.088	-0.188	0.062	0.099	339.633744	3.463732	-920.25	-1474.64
5	GUIDE	74842128	8.53	4970	0.008	-0.036	0.086	0.132	340.118134	3.132788	816.20	-276.69
6	GUIDE	74854992	8.28	4972	-0.075	-0.048	0.079	0.126	340.342808	3.603730	-477.19	1084.63
7	GUIDE	74855640	8.83	4958	0.033	0.376	0.191	0.250	340.341123	3.746937	-961.03	1264.56

## 2.4 Star Slots

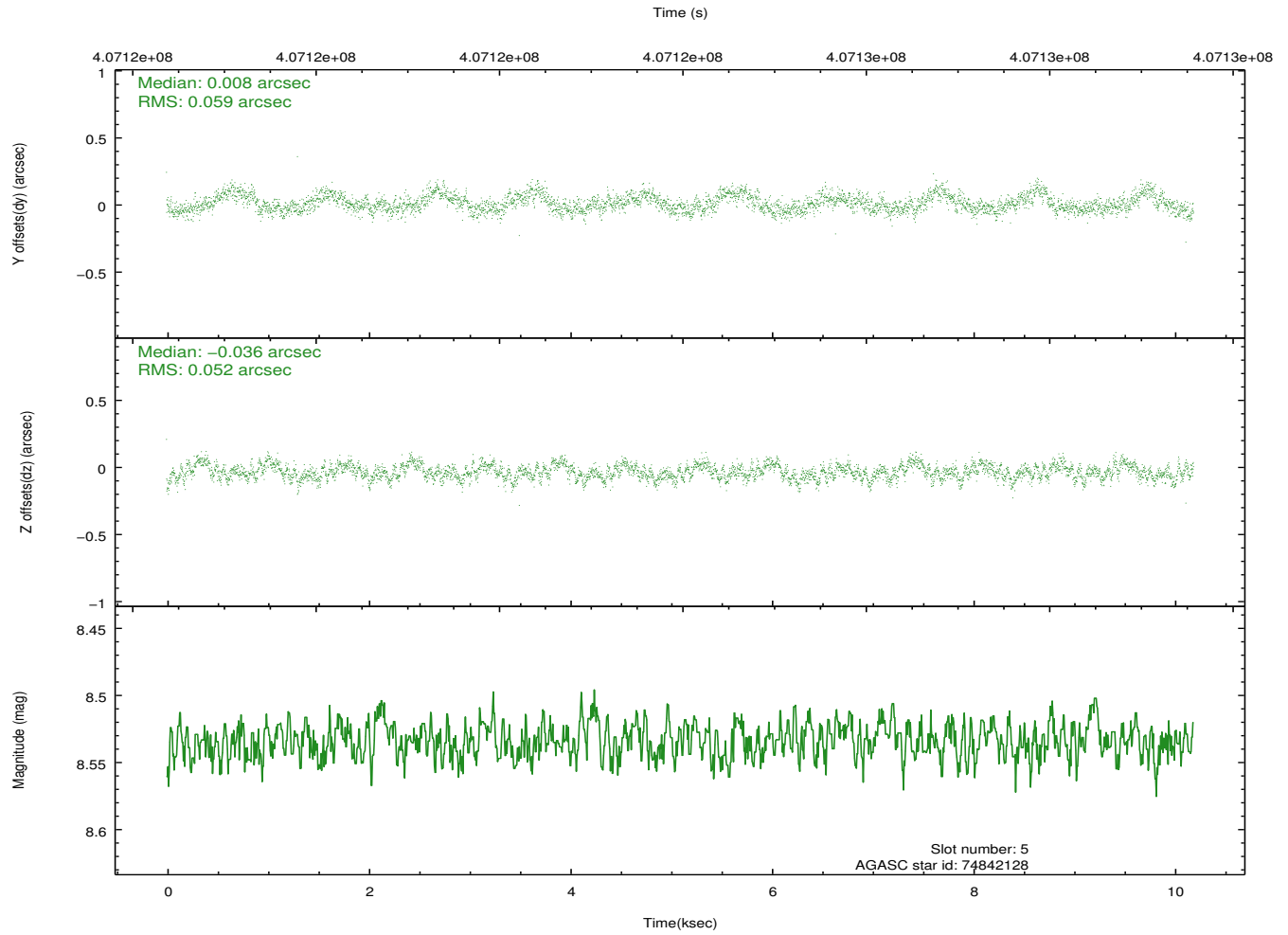
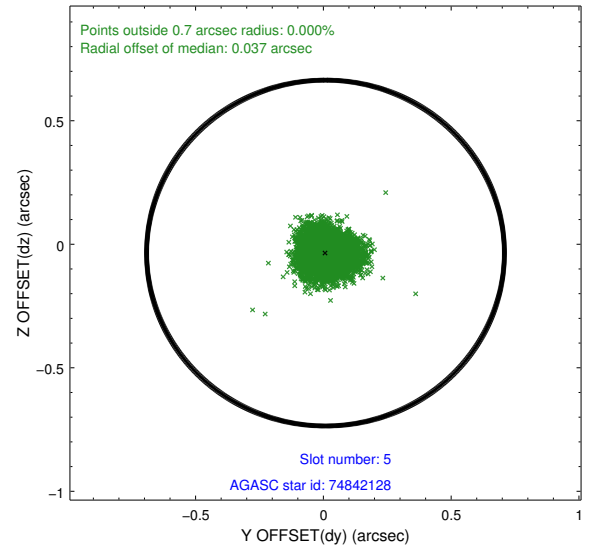
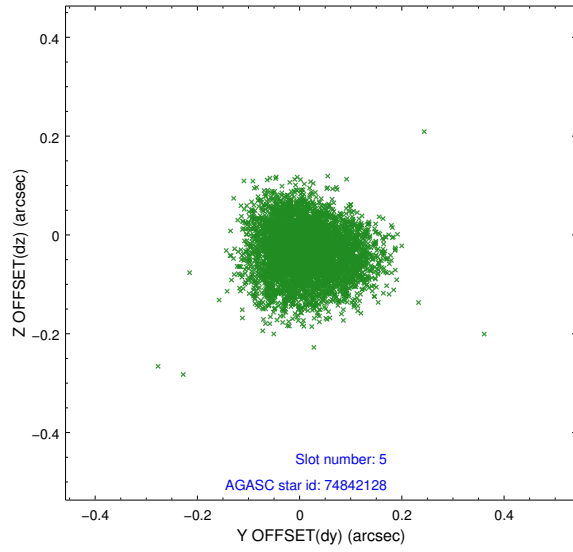
### 2.4.1 Slot 3



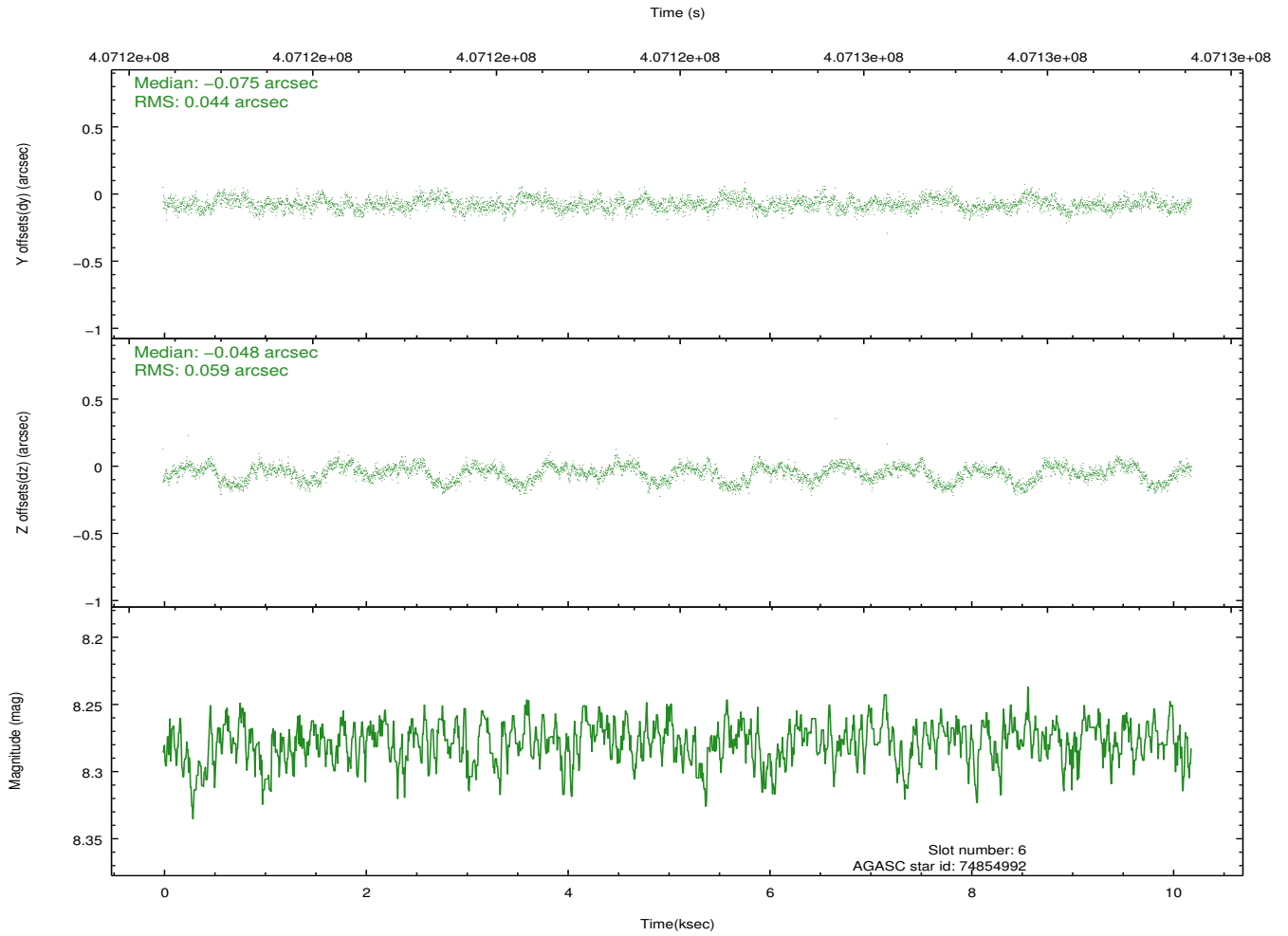
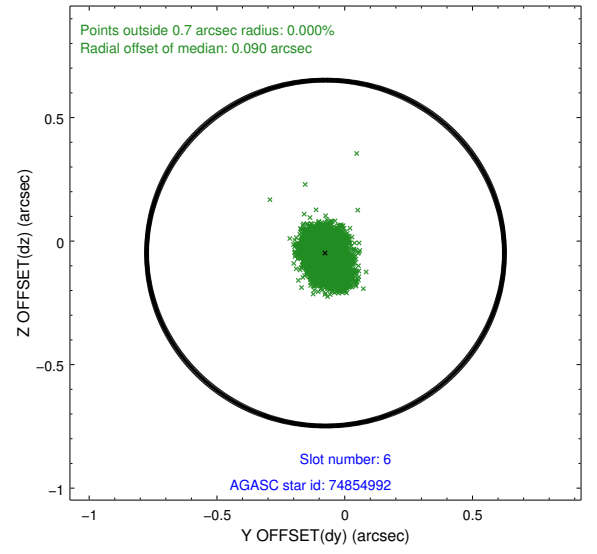
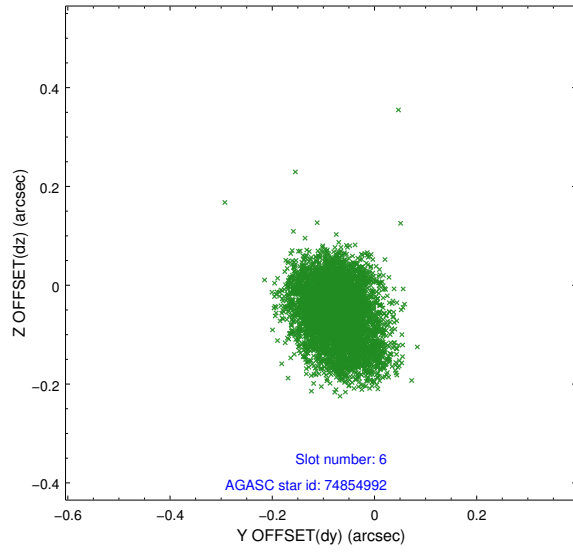
## 2.4.2 Slot 4



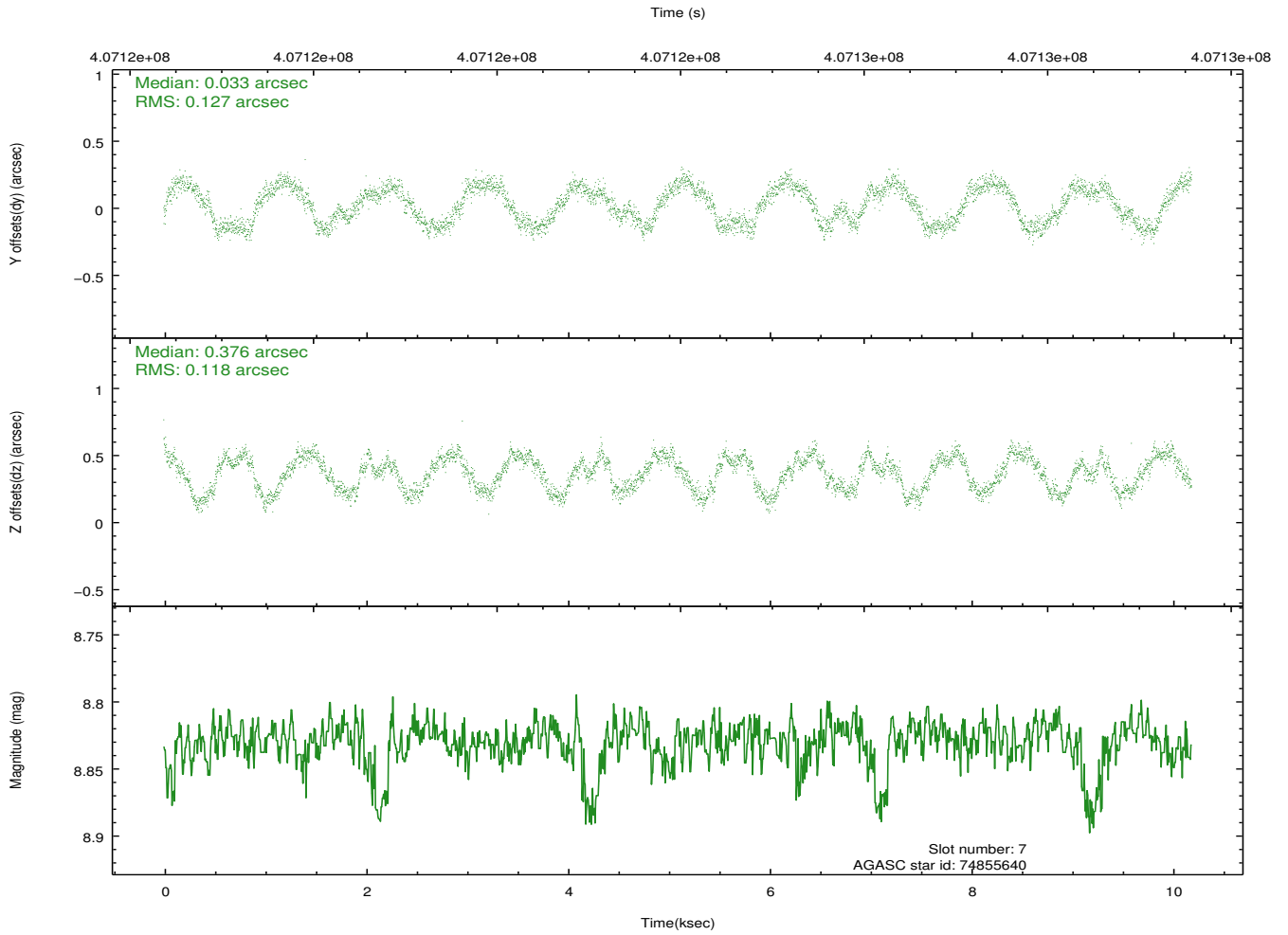
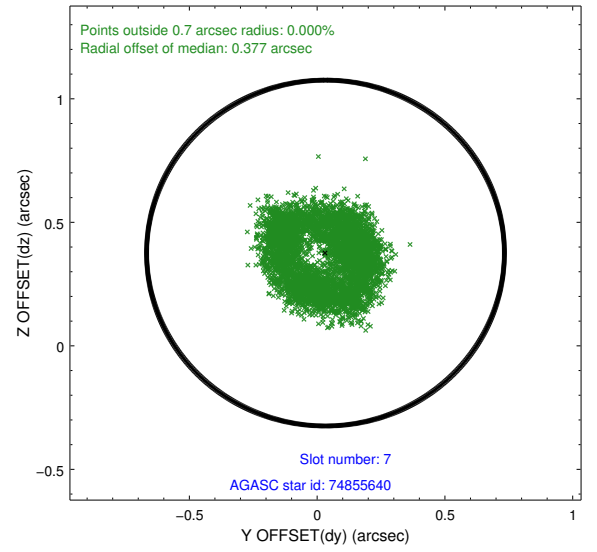
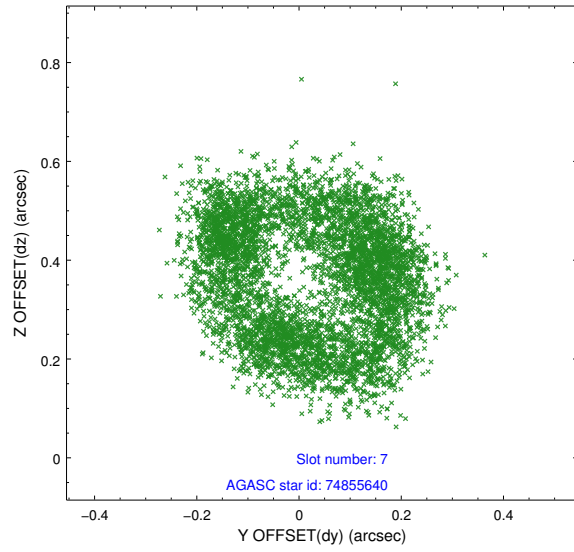
### 2.4.3 Slot 5



## 2.4.4 Slot 6

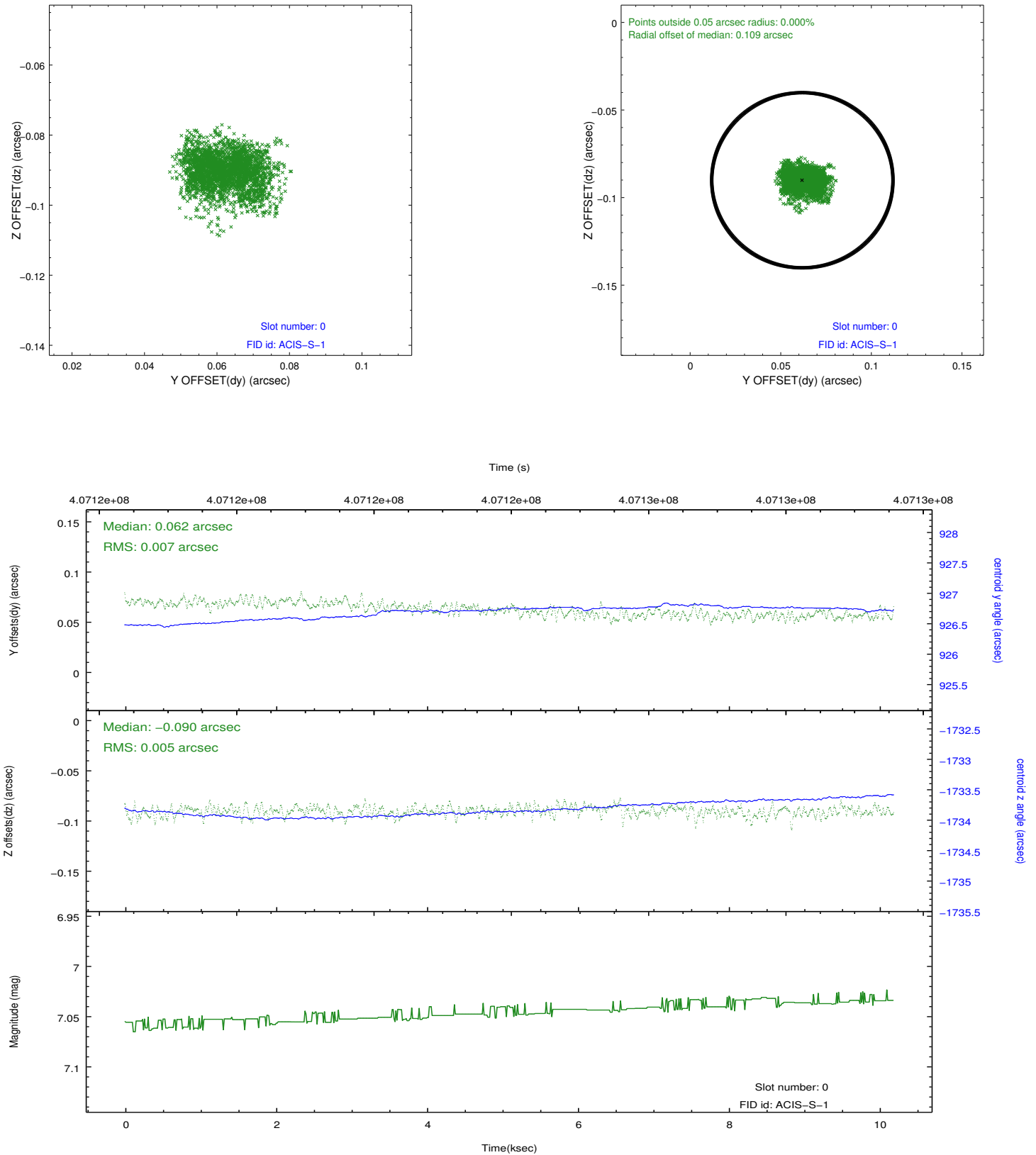


## 2.4.5 Slot 7

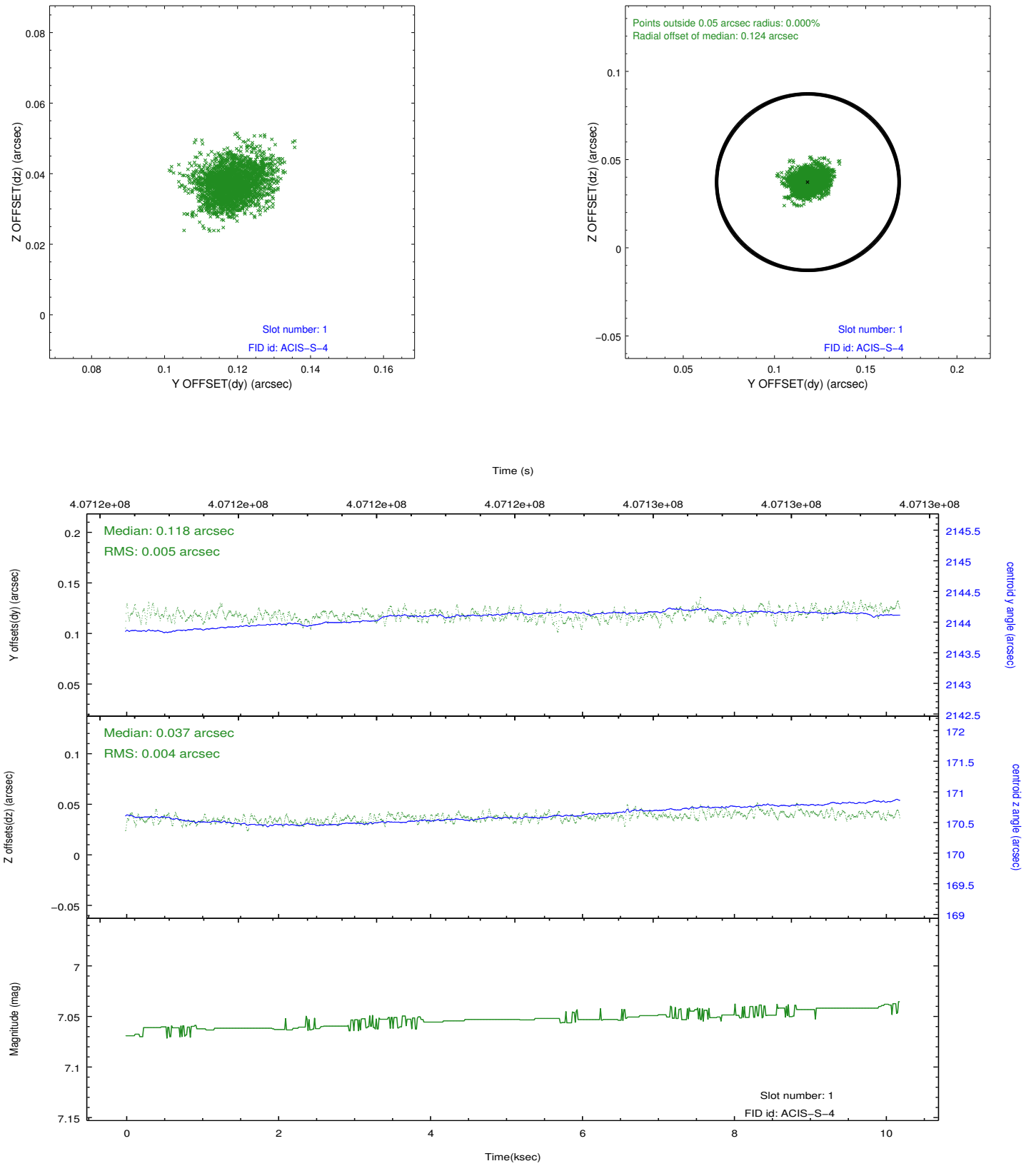


## 2.5 FID Slots

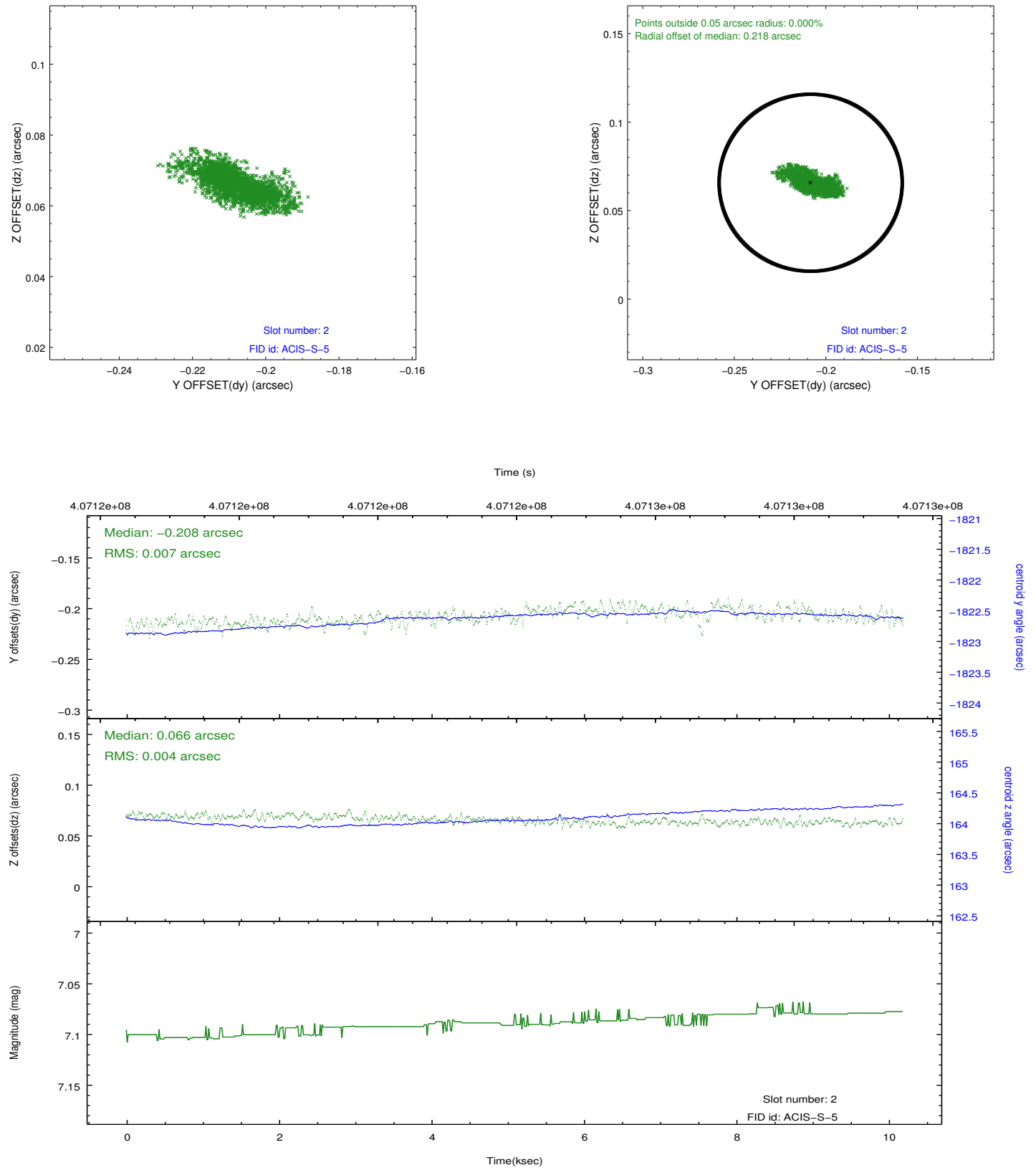
### 2.5.1 Slot 0



## 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)	2012.07.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.067181922078

### A.2 Comments