

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8092 - L2 Version 3  
Chandra X-Ray Center

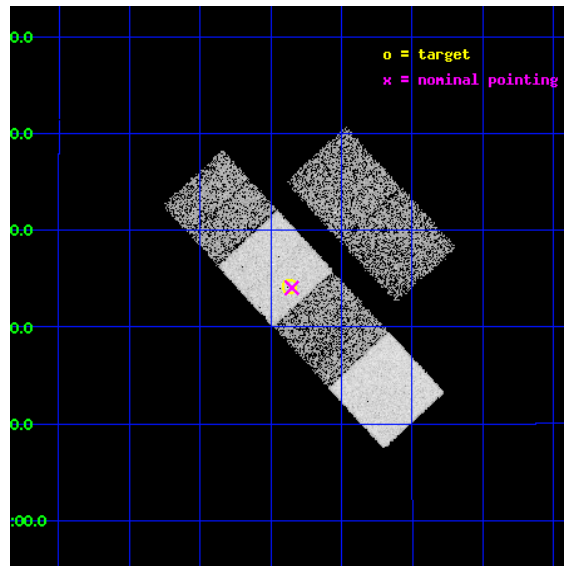
L2 Processing Date : Apr 23 2012

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# 1 Front

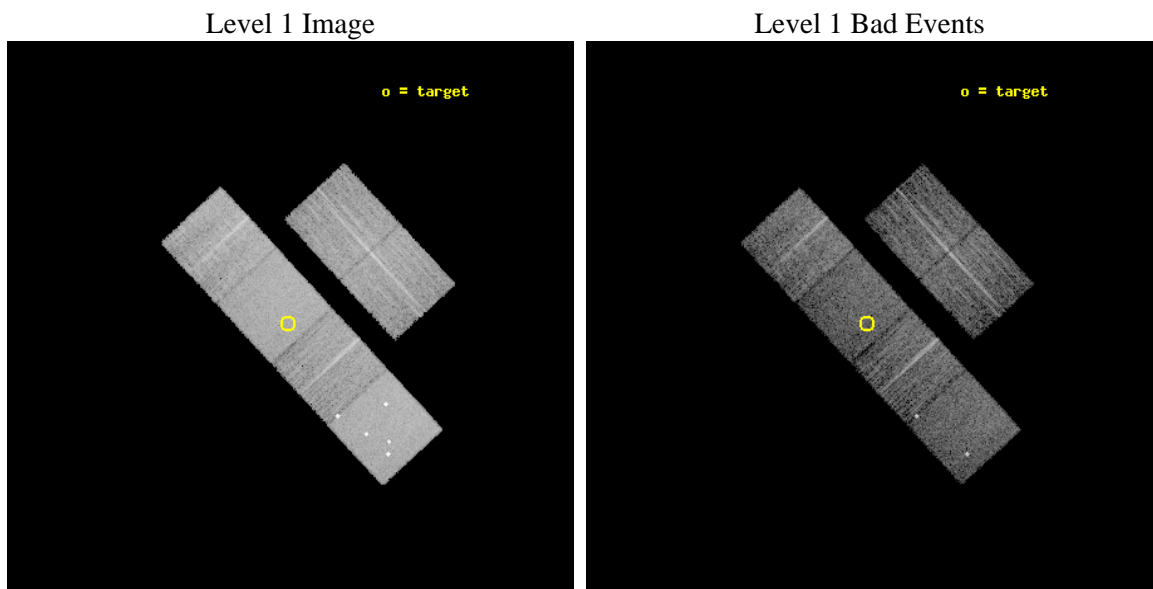
seq_num	900633	Sequence number
obs_id	8092	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	1895	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	190.466667	Observer's specified target RA [deg]
dec_targ	9.402861	Observer's specified target Dec [deg]
ra_nom	190.46259506895	Nominal RA [deg]
dec_nom	9.4008919354946	Nominal Dec [deg]
roll_nom	227.23889310304	Nominal Roll [deg]
revision	3	Processing version of data
ontime	5155.199980855	Sum of GTIs [s]
livetime	5089.9217346086	Livetime [s]
ontime2	5155.199980855	Sum of GTIs [s]
ontime3	5155.199980855	Sum of GTIs [s]
ontime5	5155.199980855	Sum of GTIs [s]
ontime6	5155.199980855	Sum of GTIs [s]
ontime7	5155.199980855	Sum of GTIs [s]
ontime8	5151.9589805603	Sum of GTIs [s]
l2events	79448	Number of level 2 events



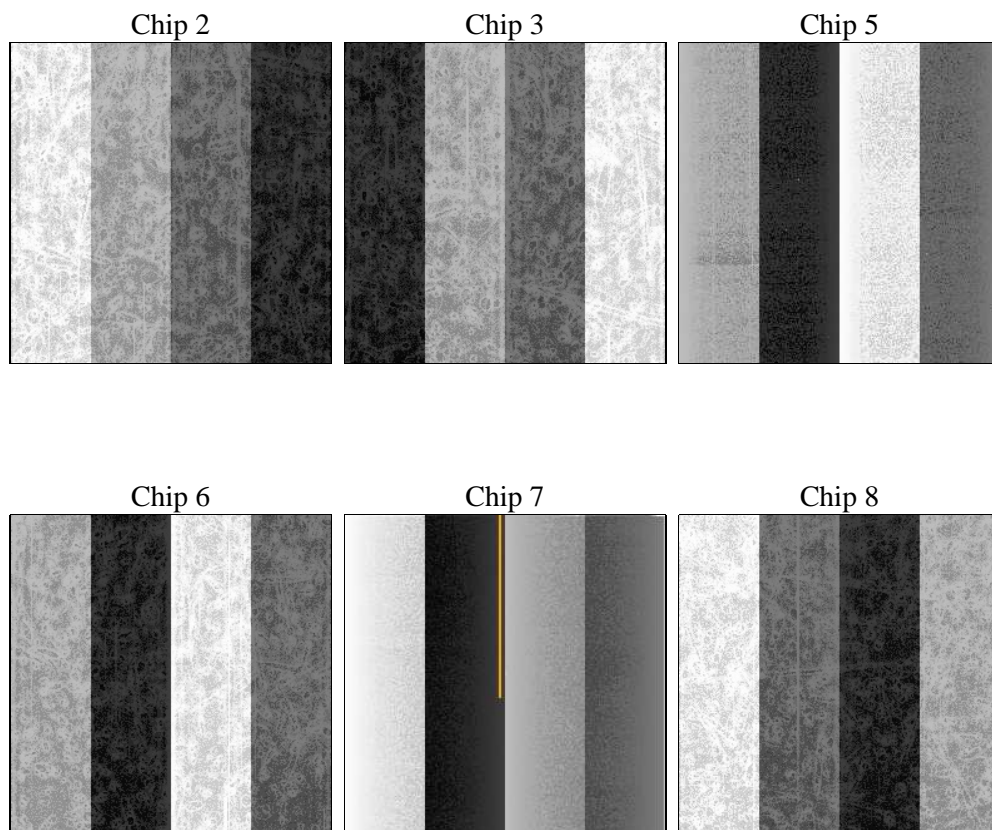
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5400.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	5155.199980855	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime2	5155.199980855	Sum of GTIs [s]
date	2012-04-23T21:30:56	Date and time of file creation	ontime3	5155.199980855	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	5155.199980855	Sum of GTIs [s]
			ontime6	5155.199980855	Sum of GTIs [s]
			ontime7	5155.199980855	Sum of GTIs [s]
			ontime8	5151.9589805603	Sum of GTIs [s]
			l1events	359845	Number of level 1 events

### 2.1.4 Events

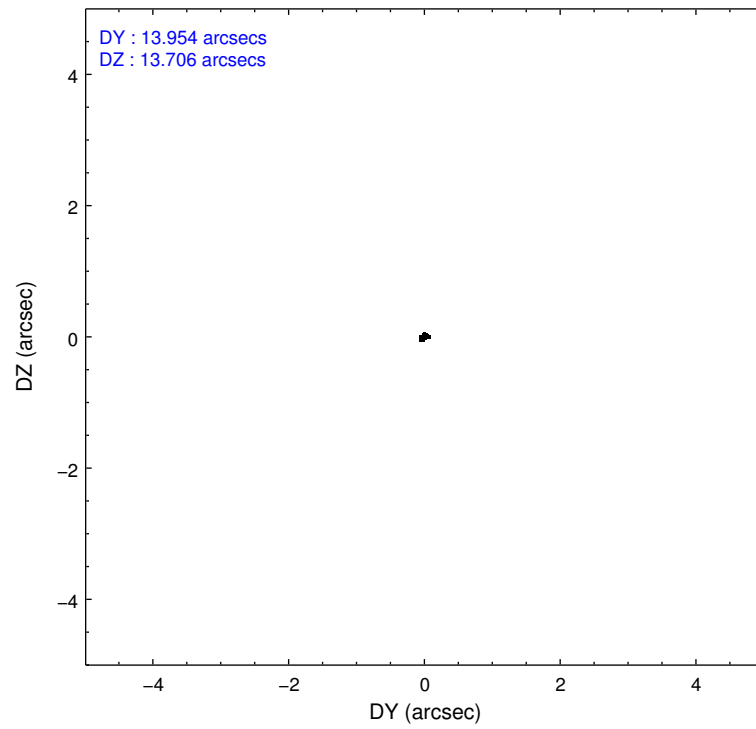
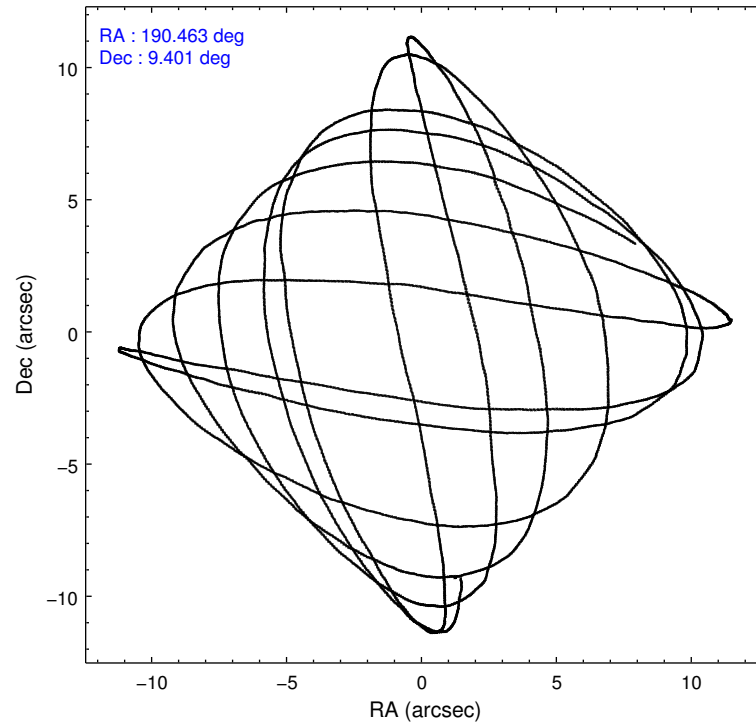
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	49515	48451	79743	49596	66888	65652	grade 0 events	2392	2493	6190	2222	2508	4235
rejected events	43925	42811	41373	43929	39080	52367		4%	5%	7%	4%	3%	6%
rejected %	88%	88%	51%	88%	58%	79%	grade 1 events	35	34	294	24	67	40
								0%	0%	0%	0%	0%	0%
							grade 2 events	1193	1092	10868	1222	5682	2959
								2%	2%	13%	2%	8%	4%
							grade 3 events	556	560	1412	541	2342	1305
								1%	1%	1%	1%	3%	1%
							grade 4 events	524	518	1302	514	2454	1222
								1%	1%	1%	1%	3%	1%
							grade 5 events	1867	2230	5744	2261	6355	3001
								3%	4%	7%	4%	9%	4%
							grade 6 events	929	986	18645	1177	14860	3574
								1%	2%	23%	2%	22%	5%
							grade 7 events	42019	40538	35288	41635	32620	49316
								84%	83%	44%	83%	48%	75%

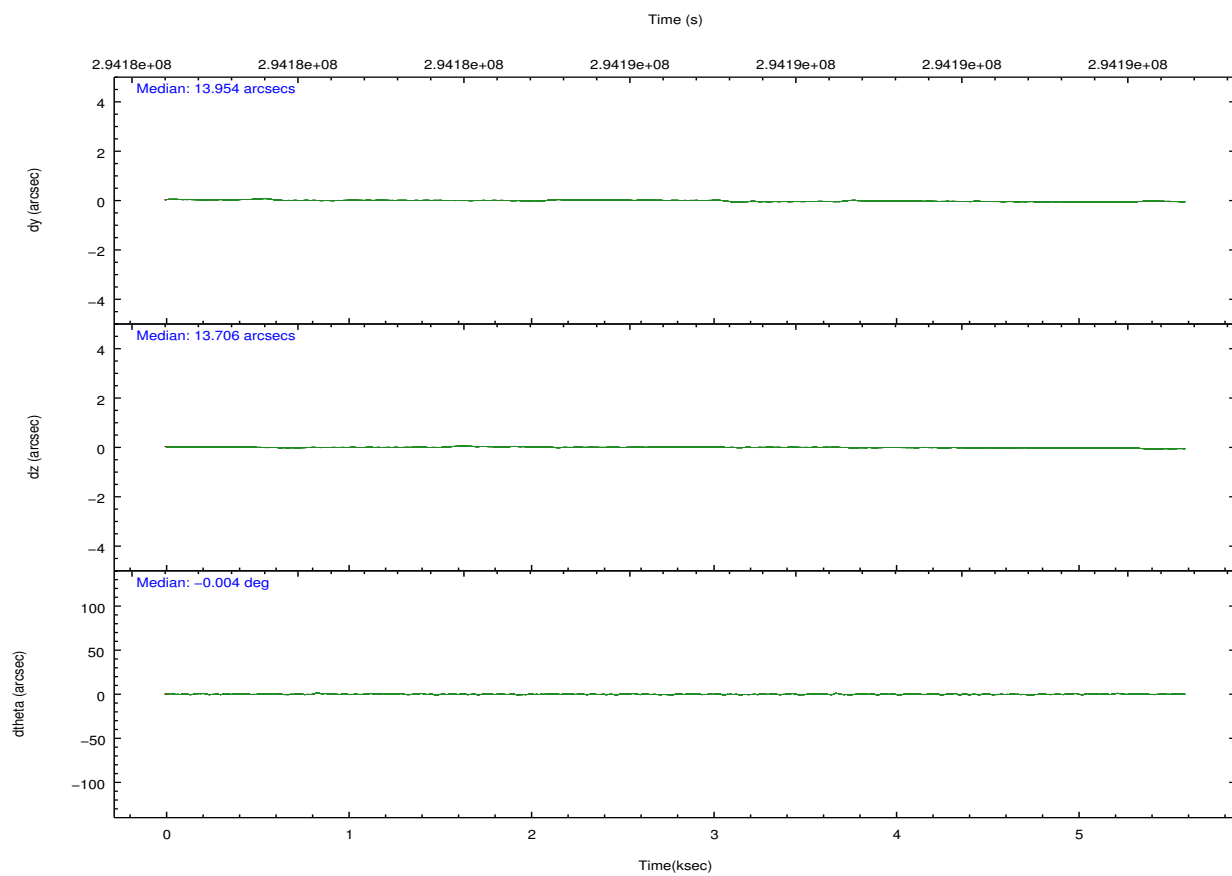
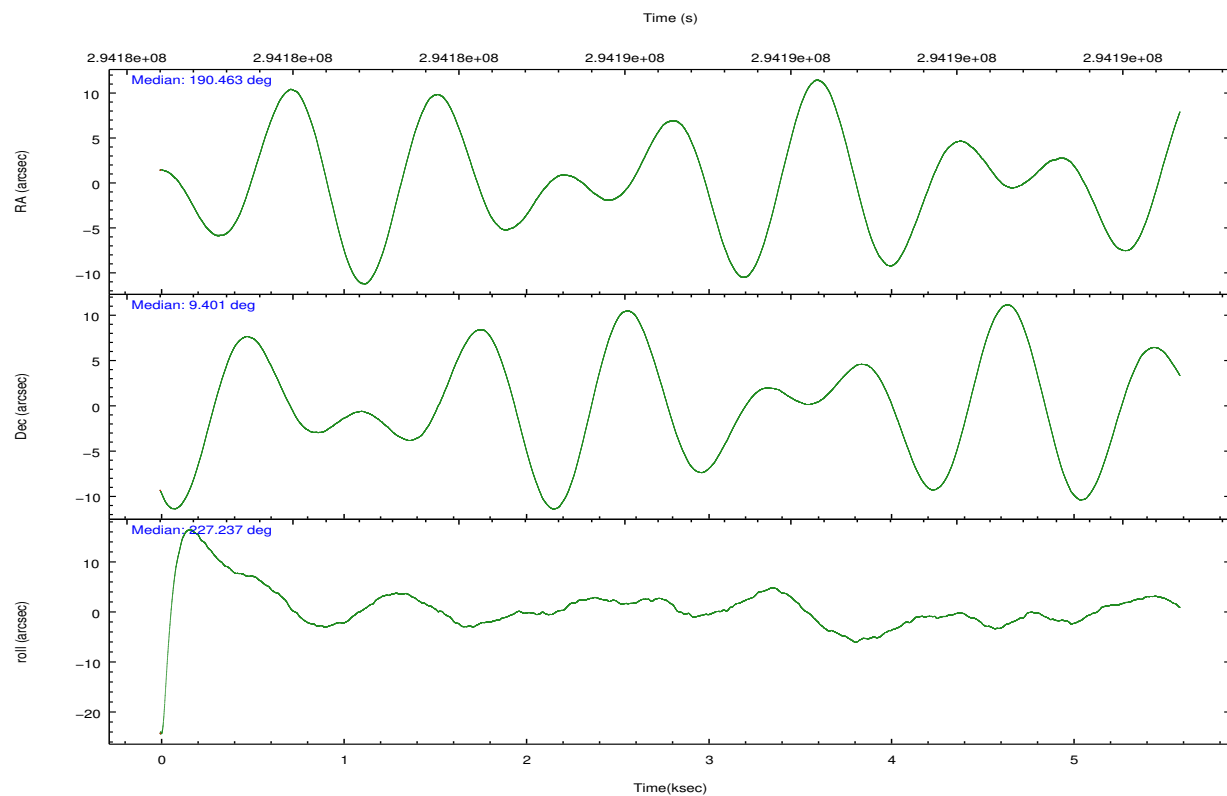


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	190.468377	190.4625950689482	Subarray requested	NONE	NONE
[deg] Pointing Dec	9.427686	9.400891935494649	Alternating exposures requested	N	N
[deg] Pointing Roll	227.081416	227.2388931030352	[s] Primary exposure time	0.000000	3.2
[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)	294183668.184000	294183273.45179			
Observation start date	2007-04-28T21:40:03	2007-04-28T21:34:33			
[s] Observation end time (MET)	294189068.184000	294189301.98958			
Observation end date	2007-04-28T23:10:03	2007-04-28T23:15:01			
Read mode	TIMED	TIMED			

## 2.3 Aspect



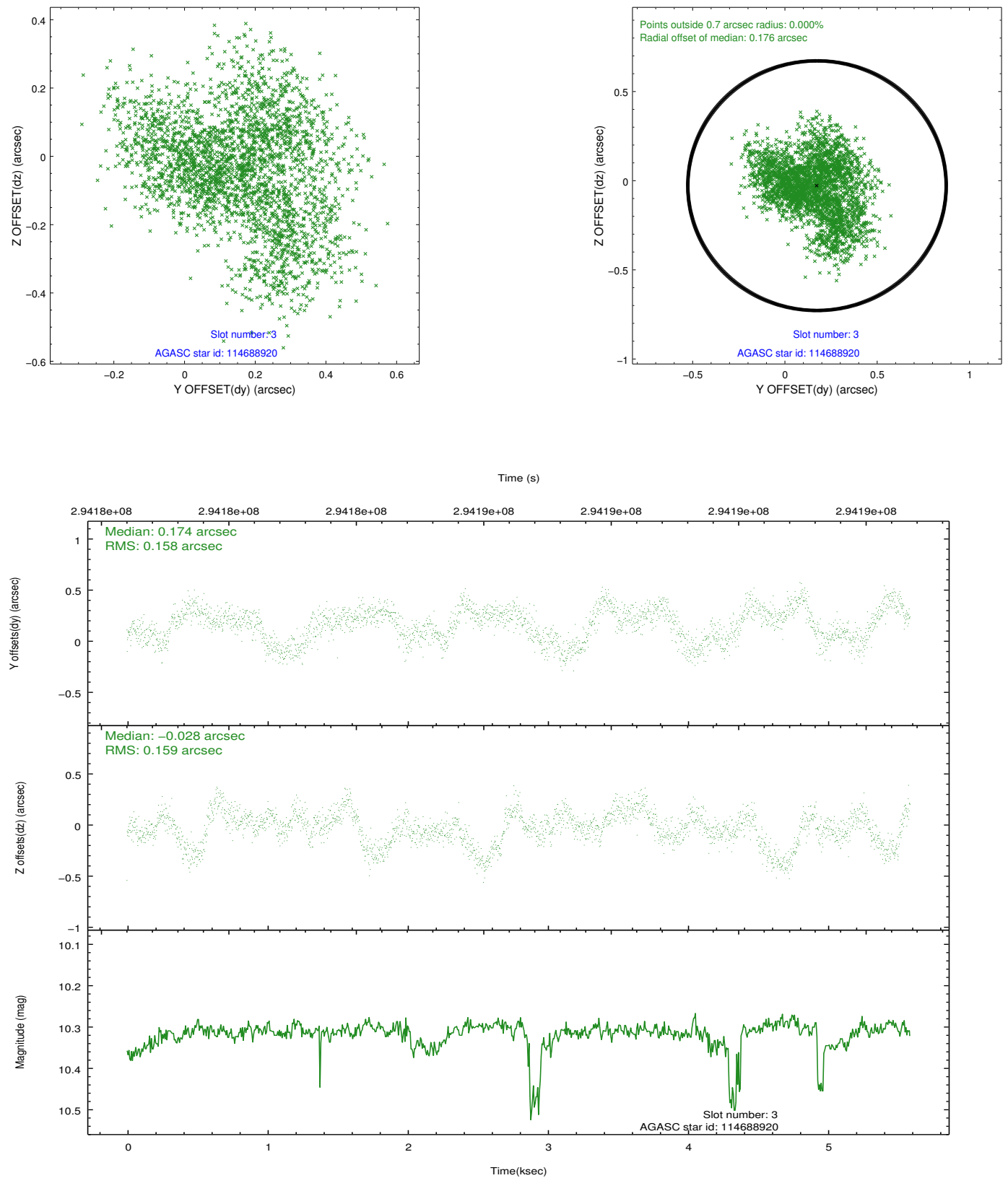


### Slot Statistics

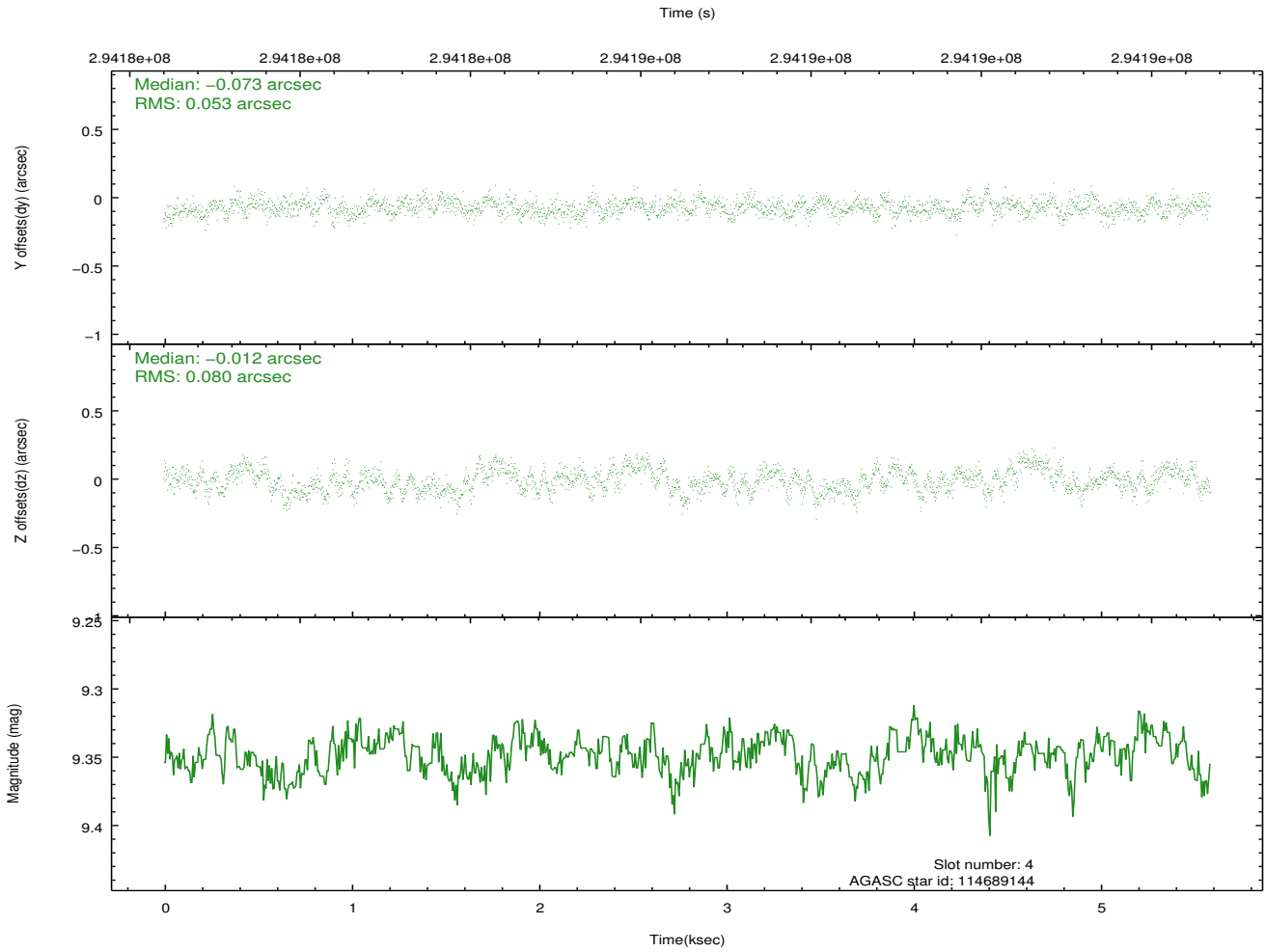
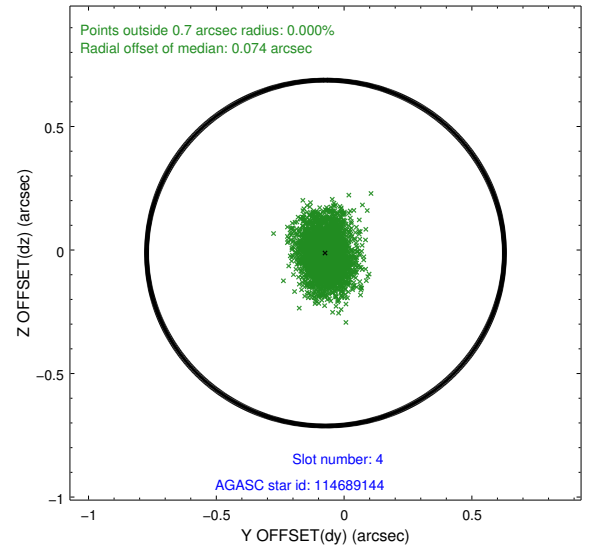
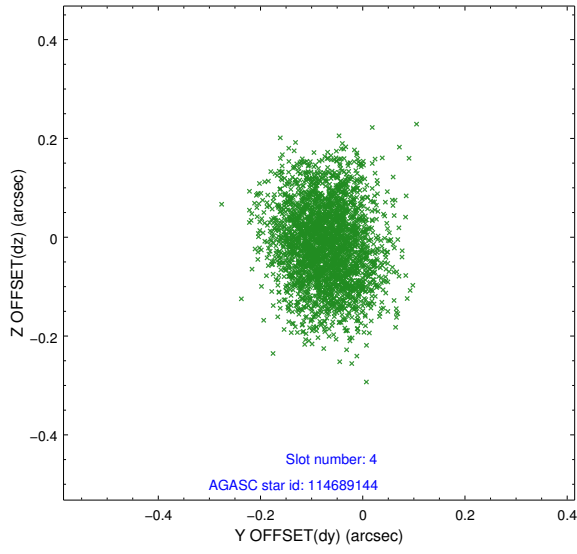
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1364	-0.052	-0.063	0.006	0.011	0.000000	0.000000	-766.95	-1735.06
1	FID	ACIS-S-4	7.19	1363	0.193	0.042	0.006	0.011	0.000000	0.000000	2146.09	172.41
2	FID	ACIS-S-5	7.23	1364	-0.172	0.030	0.007	0.012	0.000000	0.000000	-1818.53	167.31
3	GUIDE	114688920	10.31	2719	0.174	-0.028	0.247	0.378	191.054858	9.670680	-2058.90	926.63
4	GUIDE	114689144	9.35	2724	-0.073	-0.012	0.102	0.168	190.701401	8.793437	1107.33	2161.85
5	GUIDE	114690280	10.13	2721	-0.031	0.092	0.145	0.226	190.625397	9.900527	-1625.46	-750.48
6	GUIDE	114692672	9.78	2721	0.026	0.062	0.133	0.204	190.090346	9.130472	1697.77	-256.03
7	GUIDE	114692864	8.63	2723	-0.085	-0.109	0.114	0.168	190.502418	9.003046	1037.67	1129.61

## 2.4 Star Slots

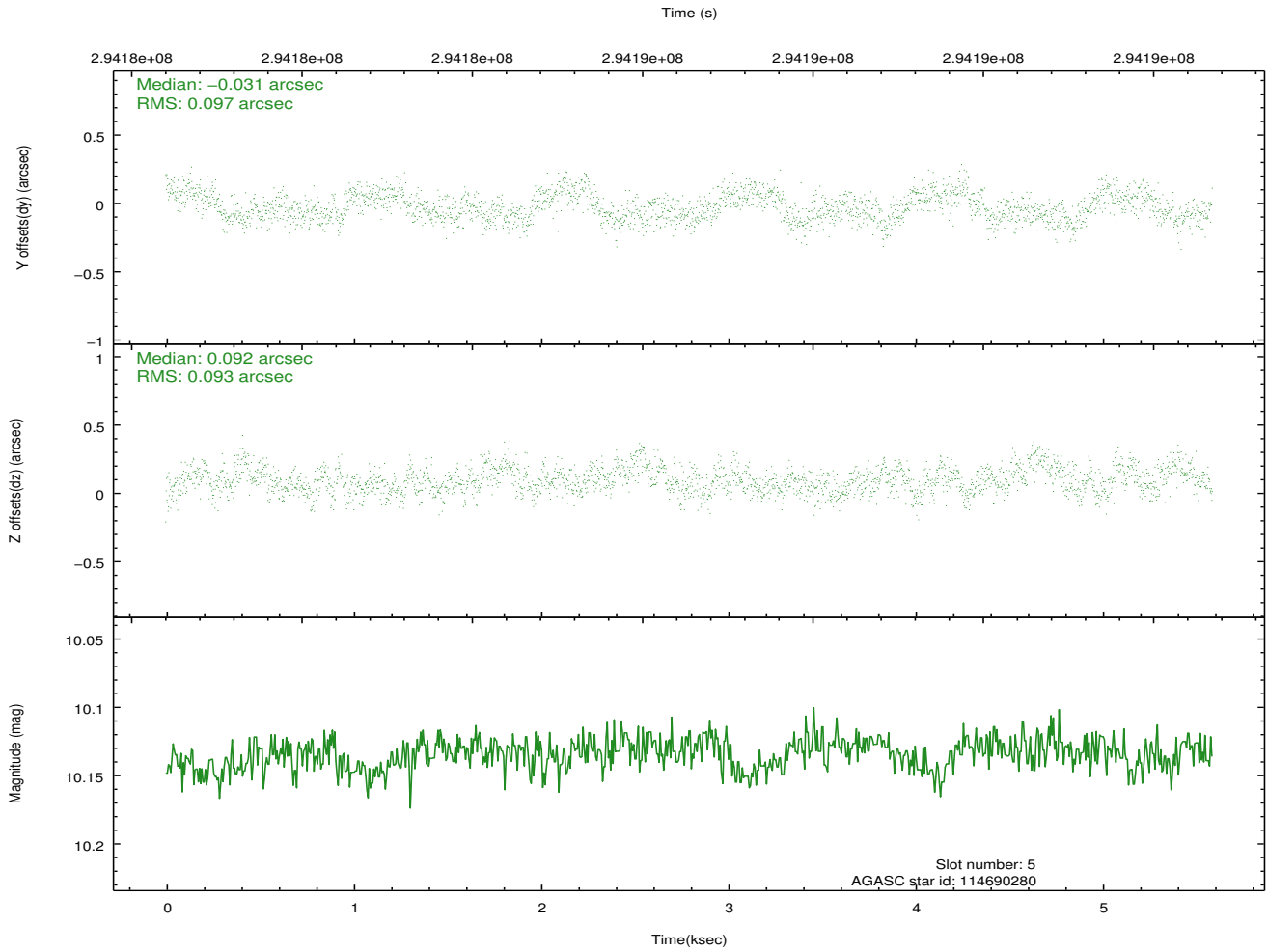
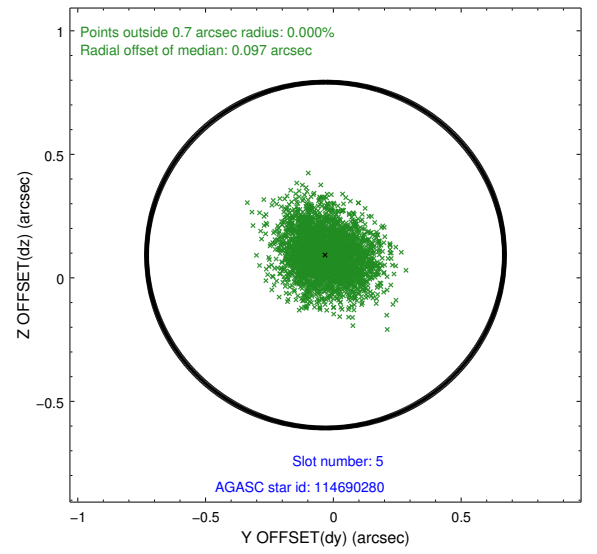
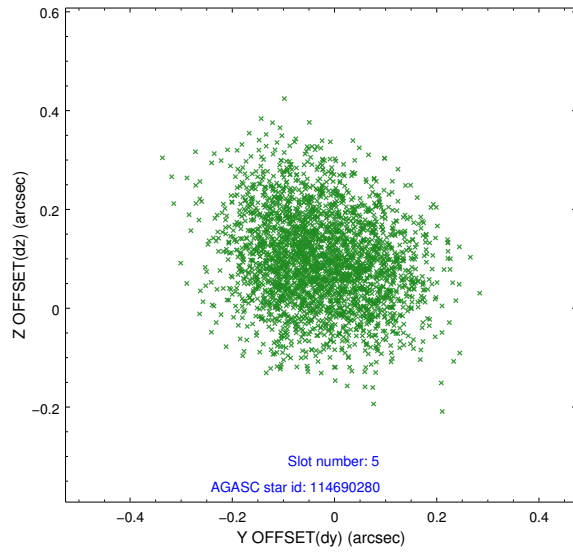
### 2.4.1 Slot 3



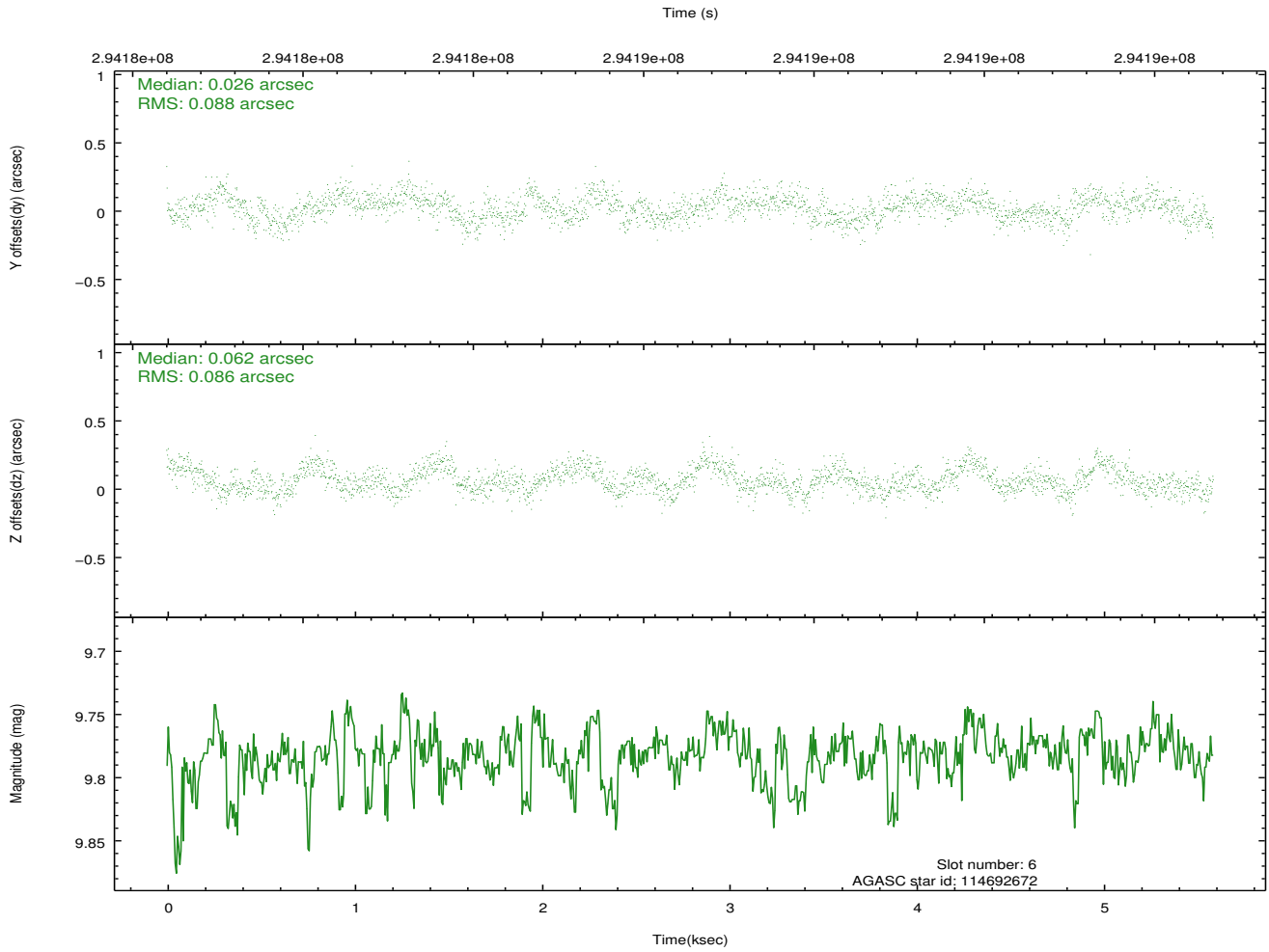
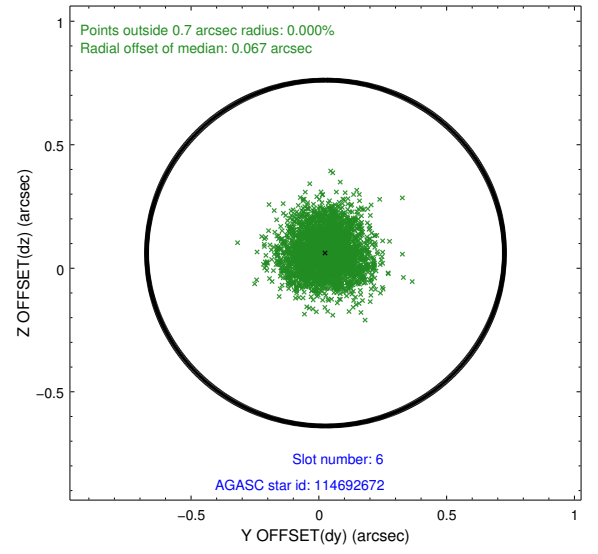
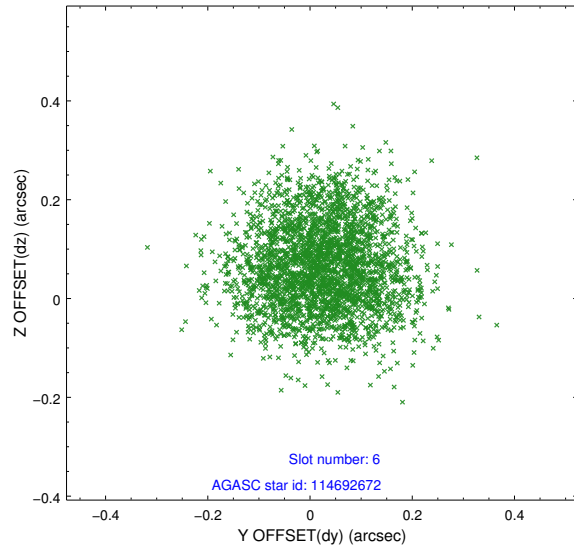
## 2.4.2 Slot 4



### 2.4.3 Slot 5

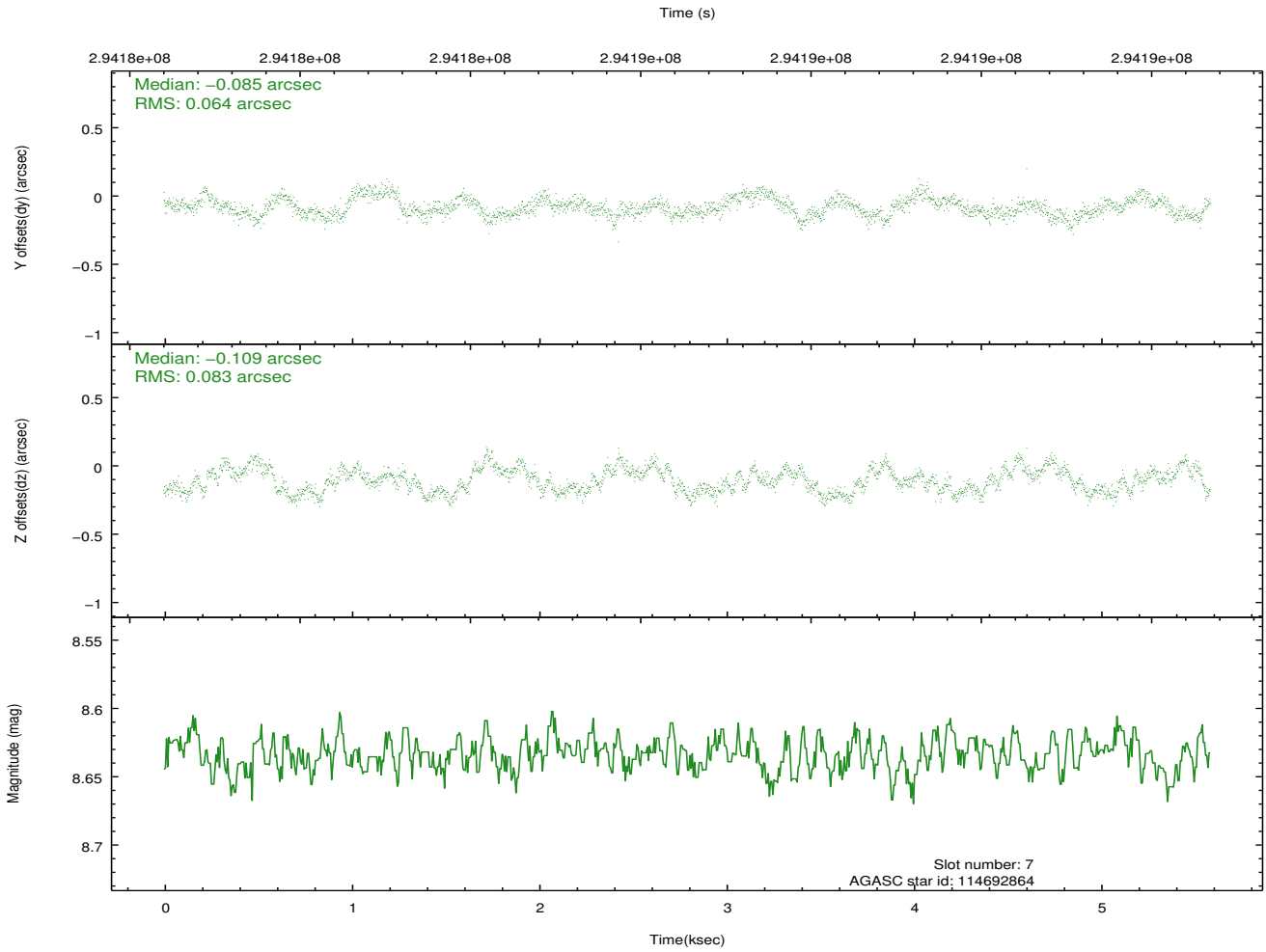
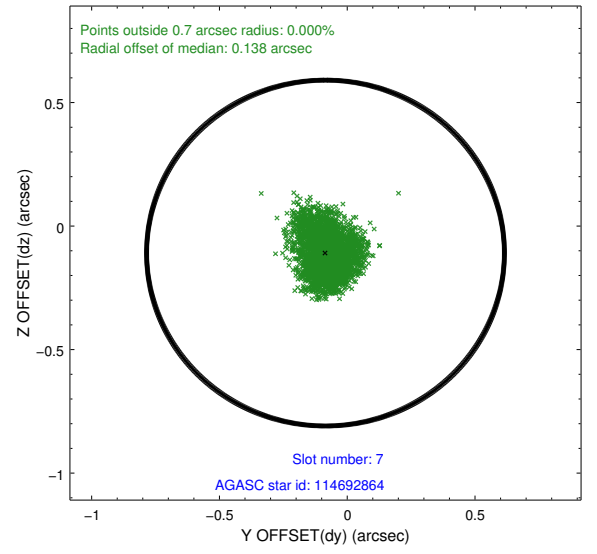
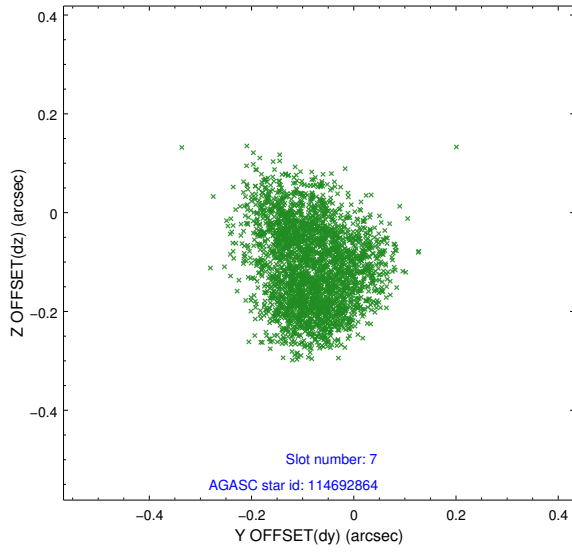


## 2.4.4 Slot 6



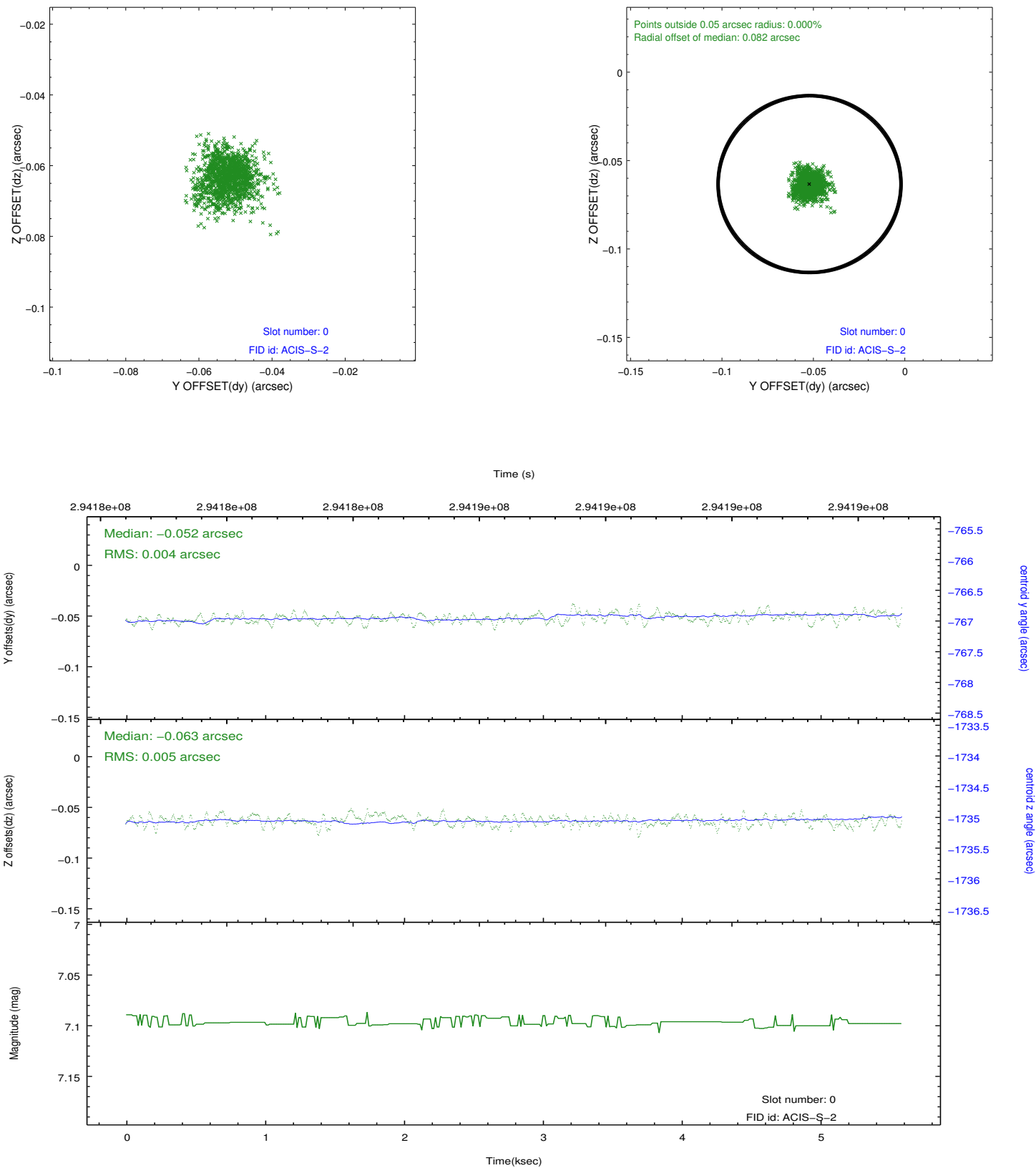


## 2.4.5 Slot 7

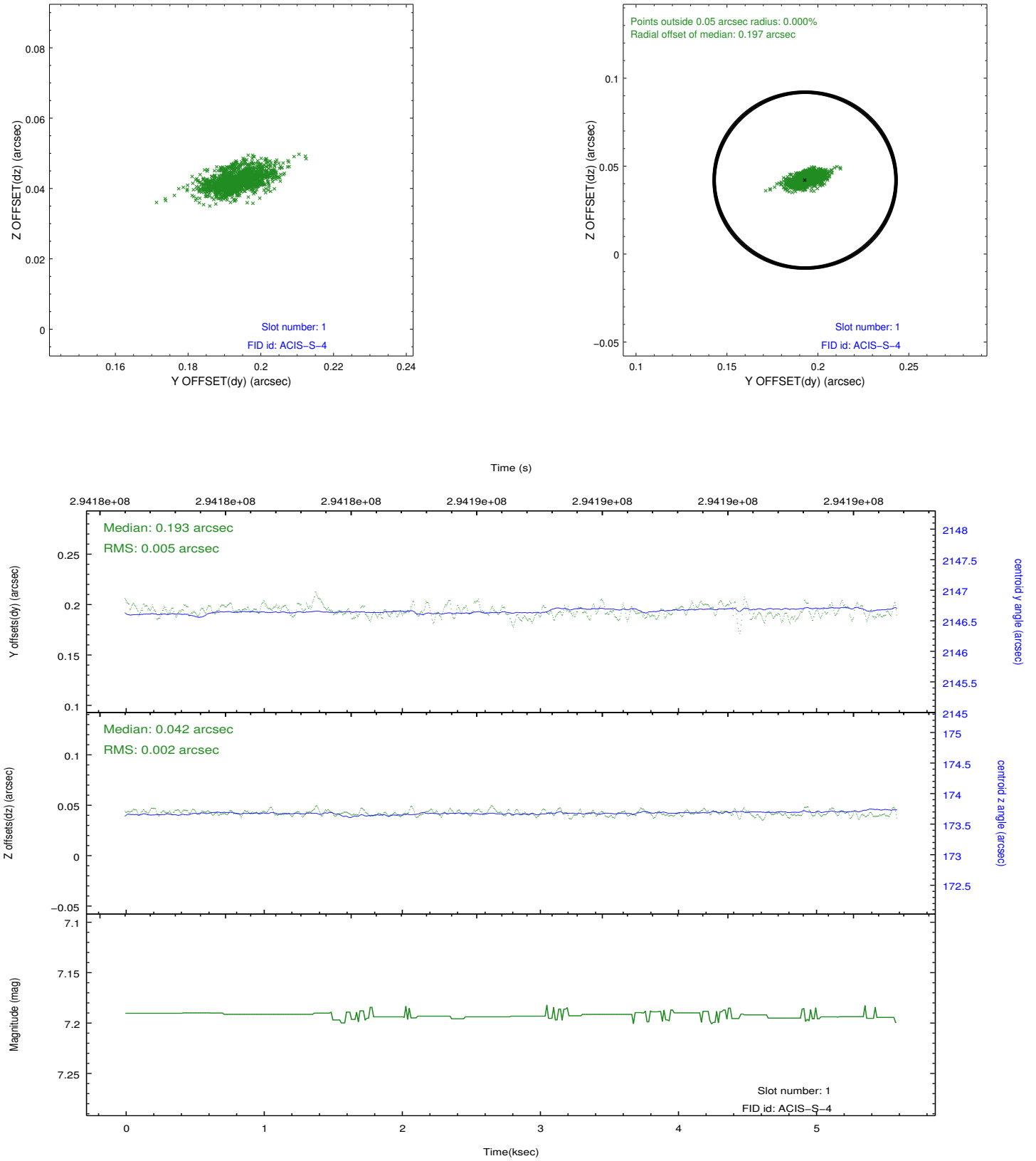


## 2.5 FID Slots

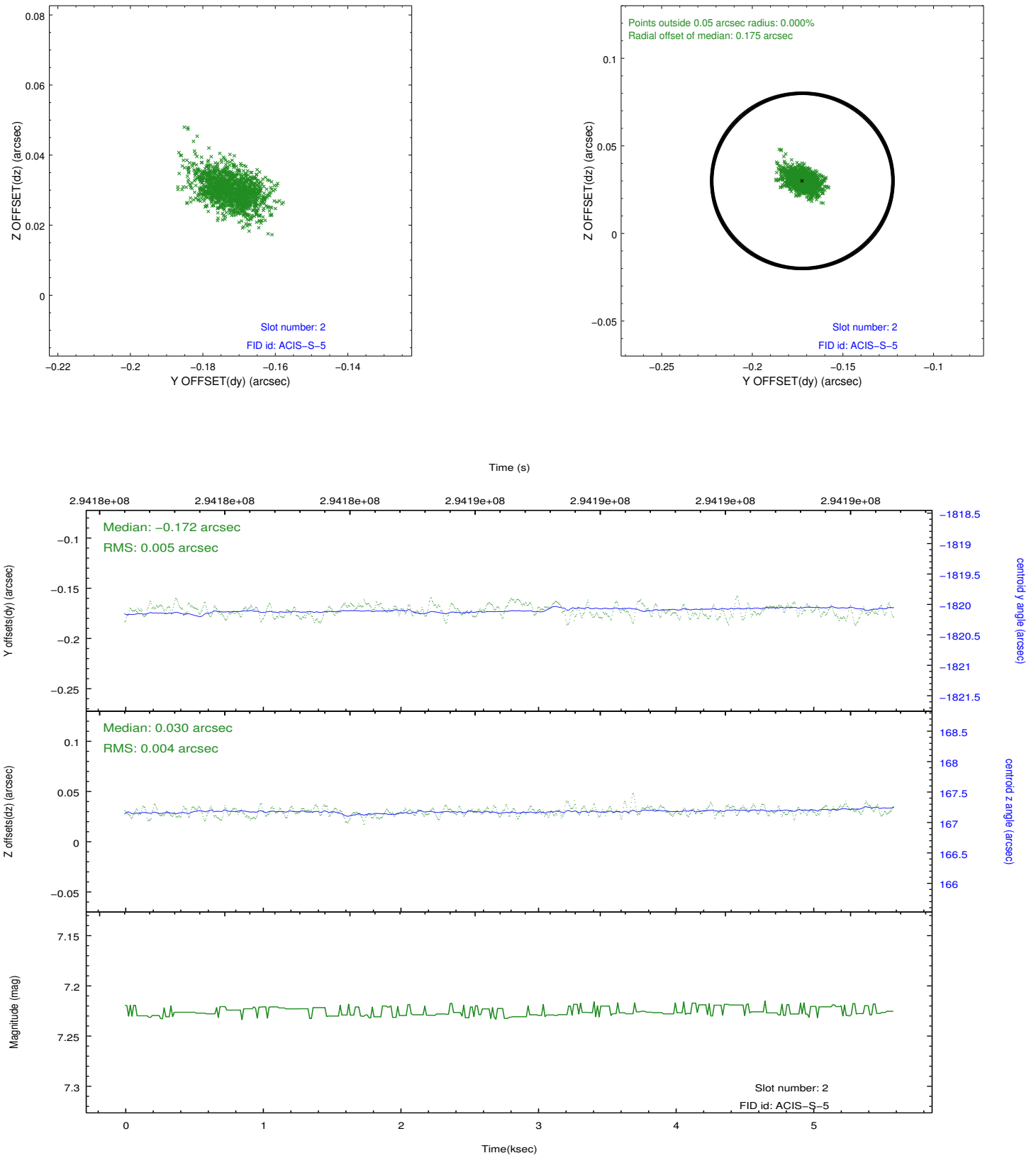
### 2.5.1 Slot 0



## 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)	2012.04.24
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.15519998

### A.2 Comments

Joint proposal with Spitzer.