

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8074 - L2 Version 2  
Chandra X-Ray Center

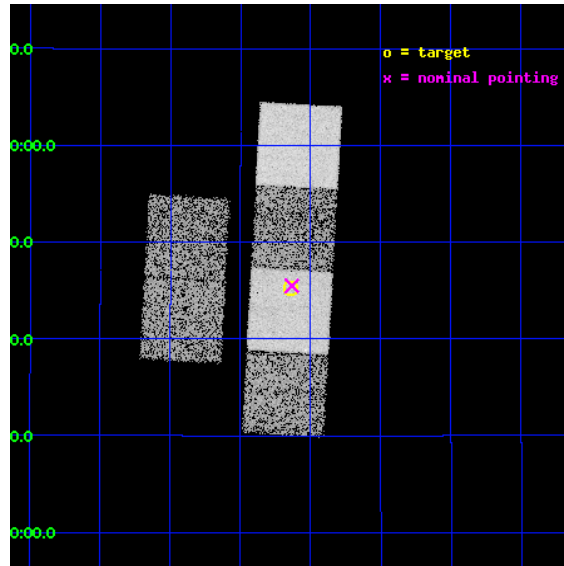
L2 Processing Date : May 10 2012

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# 1 Front

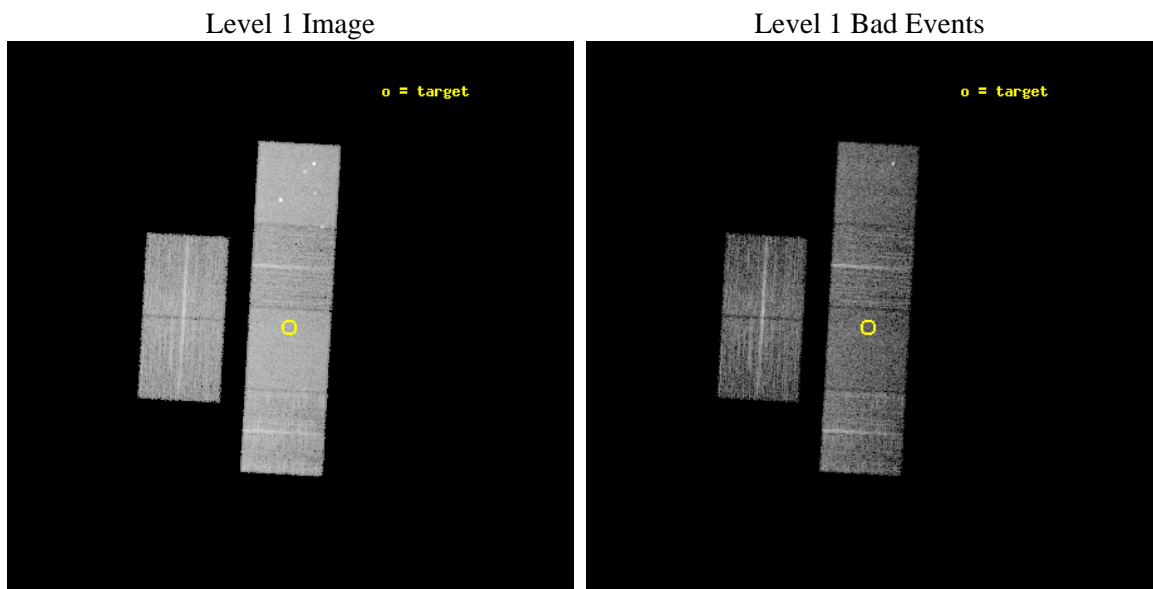
seq_num	900615	Sequence number
obs_id	8074	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	1910	Source name
dtycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	190.53625	Observer's specified target RA [deg]
dec_targ	11.754139	Observer's specified target Dec [deg]
ra_nom	190.53343387509	Nominal RA [deg]
dec_nom	11.758060494128	Nominal Dec [deg]
roll_nom	93.188332091024	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5353.3704704046	Sum of GTIs [s]
livetime	5285.5828700957	Livetime [s]
ontime2	5353.4115104079	Sum of GTIs [s]
ontime3	5353.2473503947	Sum of GTIs [s]
ontime5	5353.3294304013	Sum of GTIs [s]
ontime6	5353.288390398	Sum of GTIs [s]
ontime7	5353.3704704046	Sum of GTIs [s]
ontime8	5353.2063103914	Sum of GTIs [s]
l2events	87546	Number of level 2 events



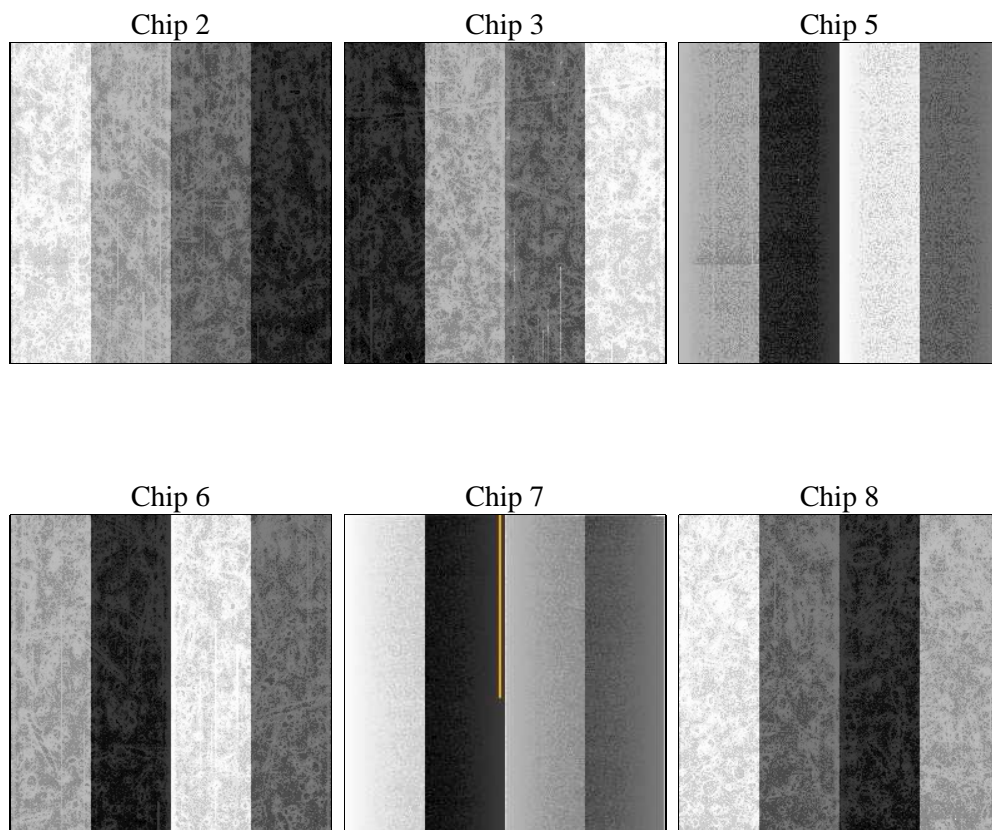
## 2 OBI

### 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	5353.3704704046	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime2	5353.4115104079	Sum of GTIs [s]
date	2012-05-10T10:50:44	Date and time of file creation	ontime3	5353.2473503947	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	5353.3294304013	Sum of GTIs [s]
			ontime6	5353.288390398	Sum of GTIs [s]
			ontime7	5353.3704704046	Sum of GTIs [s]
			ontime8	5353.2063103914	Sum of GTIs [s]
			l1events	378525	Number of level 1 events

### 2.1.4 Events

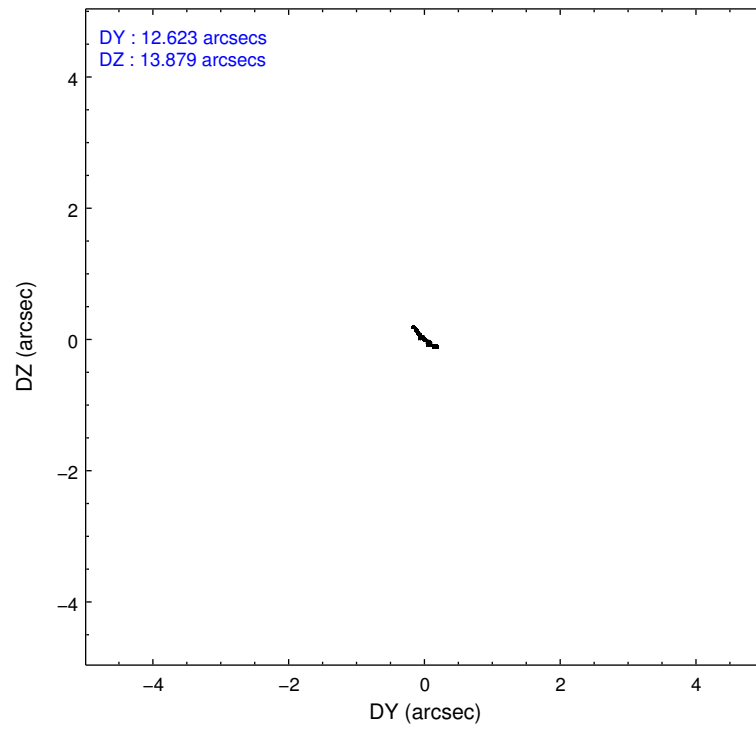
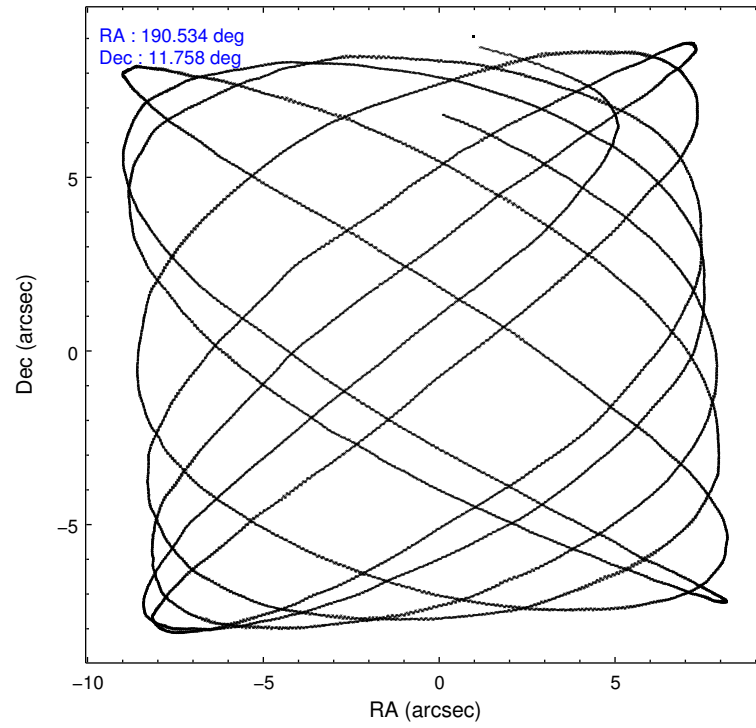
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	52293	51405	82635	53481	72087	66624	grade 0 events	2666	2764	4650	2442	2673	4918
rejected events	46128	45038	43826	47251	41624	51483		5%	5%	5%	4%	3%	7%
rejected %	88%	87%	53%	88%	57%	77%	grade 1 events	35	43	199	31	80	51
								0%	0%	0%	0%	0%	0%
							grade 2 events	1258	1237	11797	1393	6284	3258
								2%	2%	14%	2%	8%	4%
							grade 3 events	592	595	1402	567	2719	1713
								1%	1%	1%	1%	3%	2%
							grade 4 events	566	639	1328	552	2576	1527
								1%	1%	1%	1%	3%	2%
							grade 5 events	2165	2376	5825	2486	6688	3270
								4%	4%	7%	4%	9%	4%
							grade 6 events	1087	1133	19657	1278	16230	3729
								2%	2%	23%	2%	22%	5%
							grade 7 events	43924	42618	37777	44732	34837	48158
								83%	82%	45%	83%	48%	72%

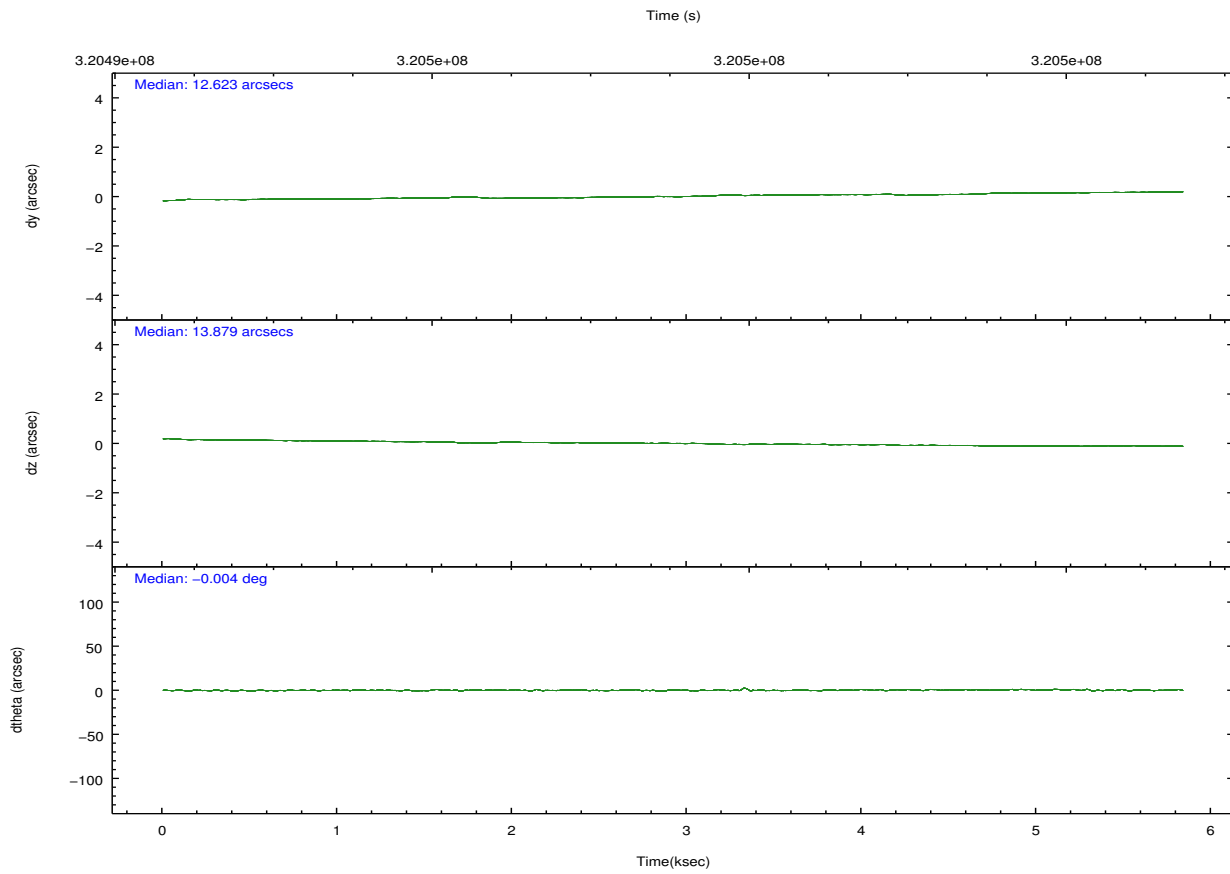
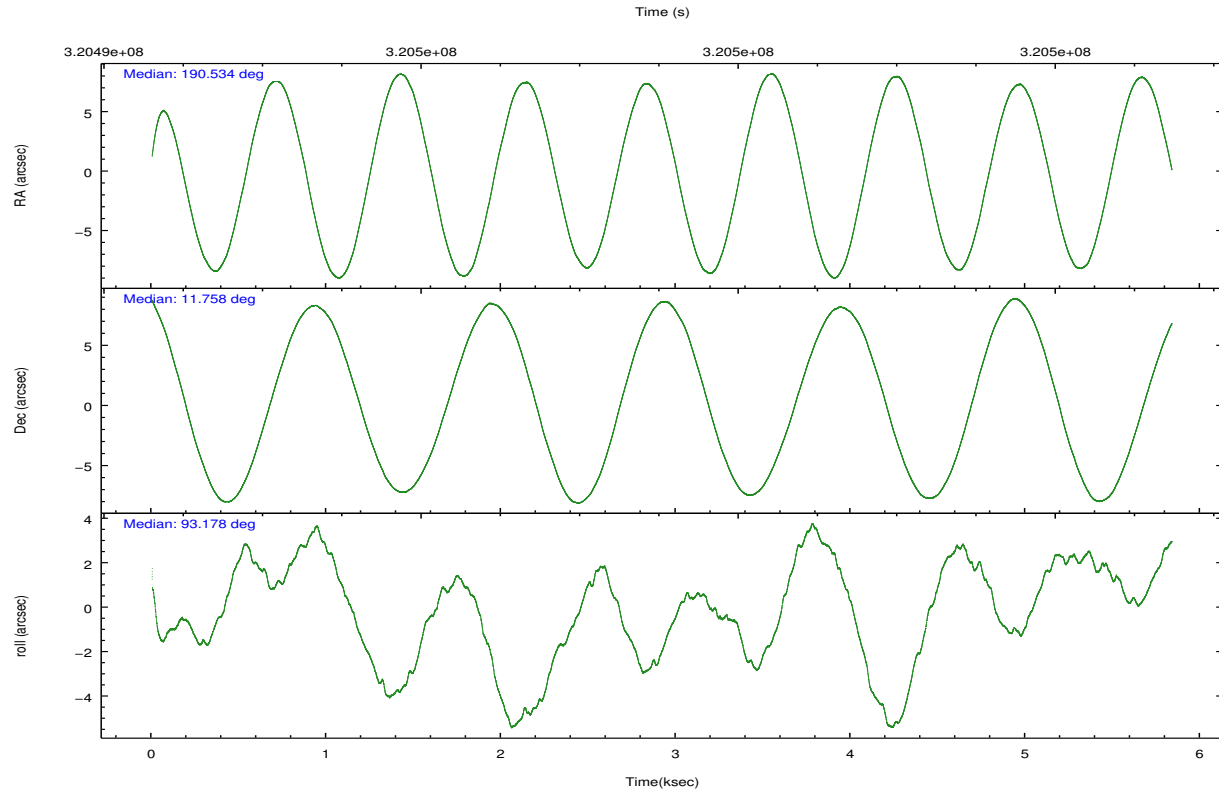


## 2.2 Compared Parameters

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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	190.549016	190.5334338750925	CCD I2 on	O1	Y
[deg] Pointing Dec	11.735441	11.75806049412781	CCD I3 on	O2	Y
[deg] Pointing Roll	93.028529	93.18833209102432	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O3	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	O4	Y
[s] Observation start time (MET)	320495036.184000	320493950.51848	CCD S5 on	N	N
Observation start date	2008-02-27T10:22:51	2008-02-27T10:05:50	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	320500436.184000	320500583.2938	On-chip summing requested	N	N
Observation end date	2008-02-27T11:52:51	2008-02-27T11:56:23	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



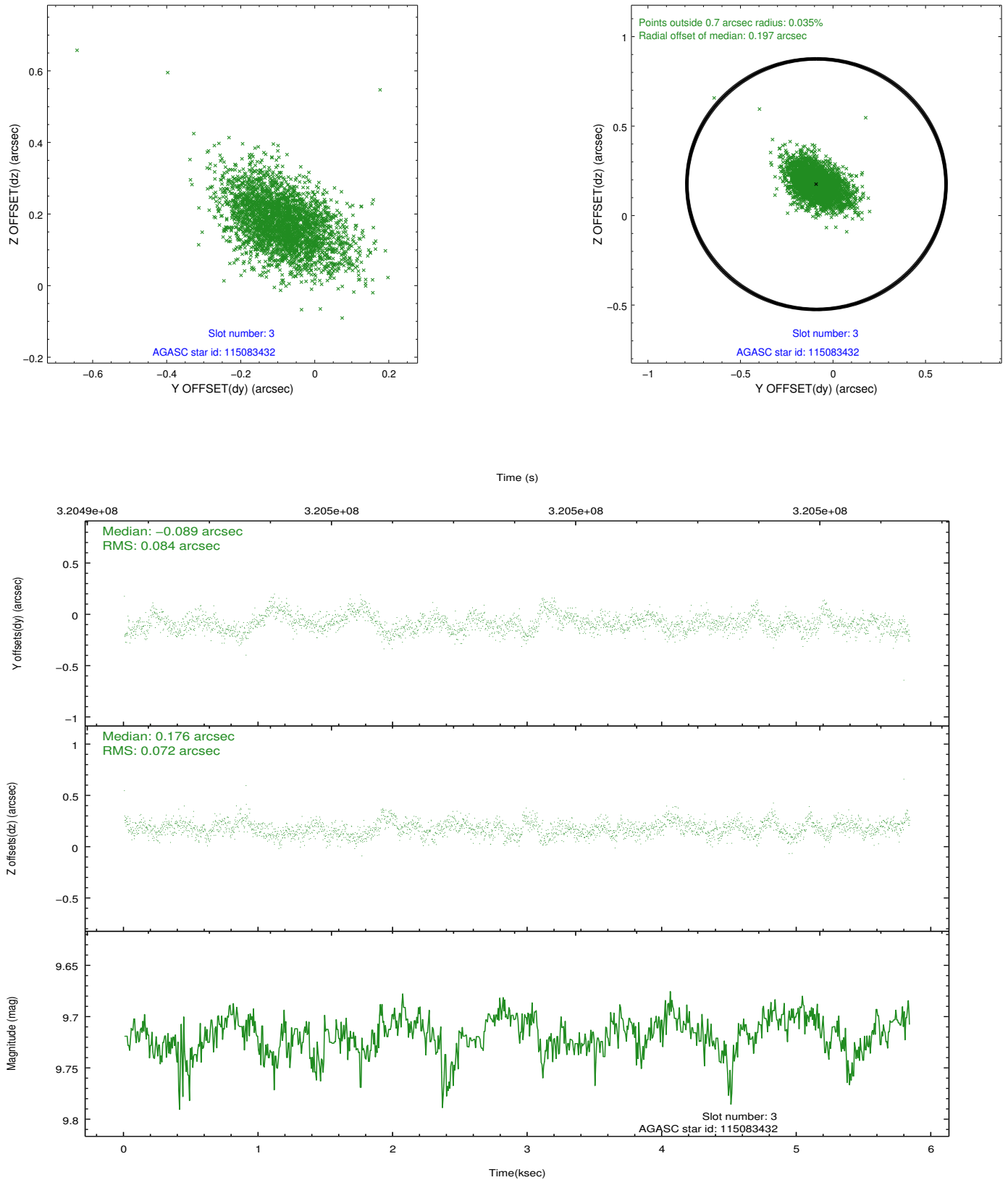


### Slot Statistics

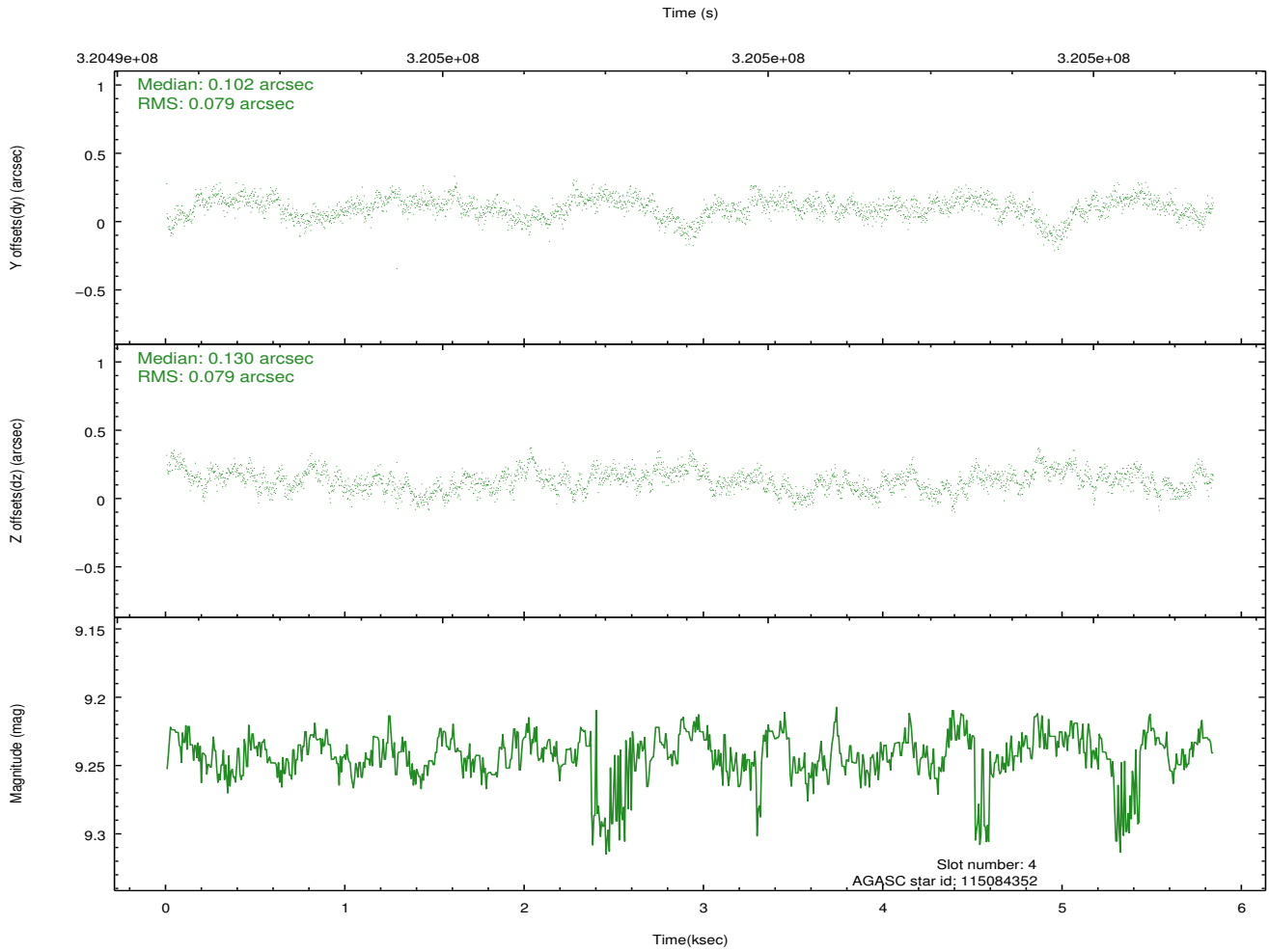
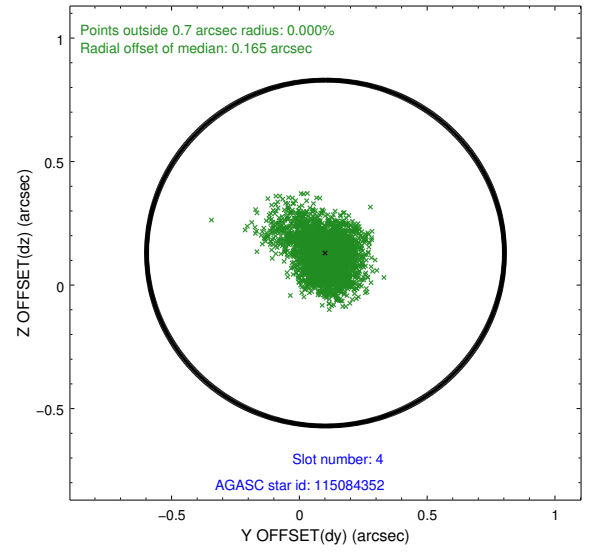
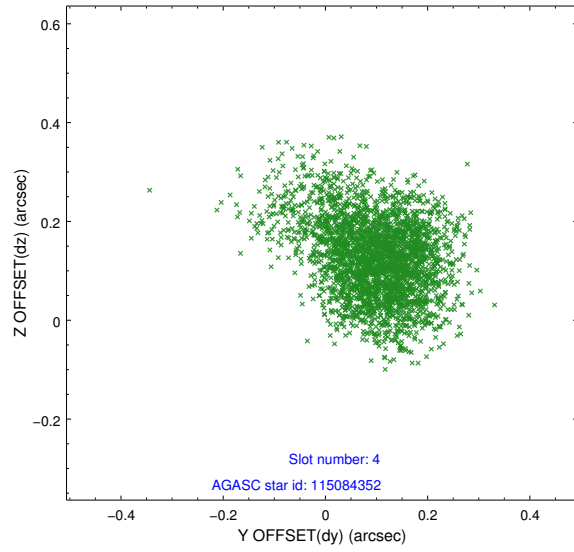
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1423	-0.030	-0.047	0.007	0.012	0.000000	0.000000	-765.56	-1735.23
1	FID	ACIS-S-4	7.19	1423	0.126	0.027	0.006	0.011	0.000000	0.000000	2147.39	172.28
2	FID	ACIS-S-5	7.23	1422	-0.128	0.029	0.008	0.013	0.000000	0.000000	-1817.20	167.10
3	GUIDE	115083432	9.72	2839	-0.089	0.176	0.114	0.198	190.888504	12.192141	1580.14	-1279.40
4	GUIDE	115084352	9.24	2841	0.102	0.130	0.116	0.198	190.760225	11.783180	132.90	-752.31
5	GUIDE	115085728	10.03	2843	-0.010	-0.049	0.142	0.230	190.191864	12.341254	2245.20	1139.13
6	GUIDE	115089400	9.84	2844	0.037	-0.142	0.139	0.227	190.425194	11.760272	113.20	430.52
7	GUIDE	115089520	9.65	2846	-0.041	-0.111	0.127	0.198	189.892491	12.217562	1858.30	2215.48

## 2.4 Star Slots

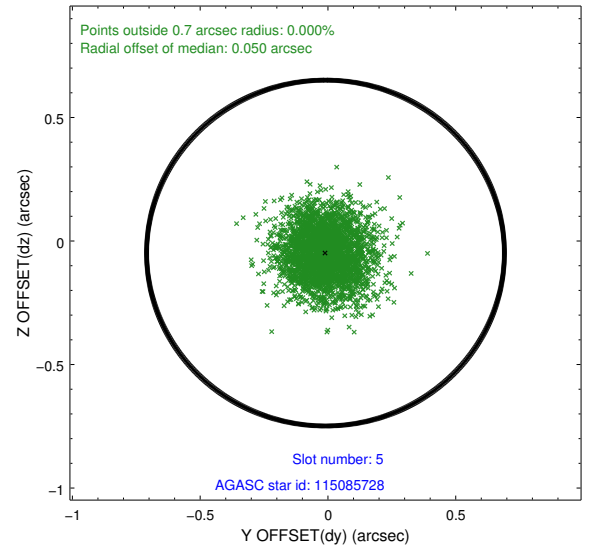
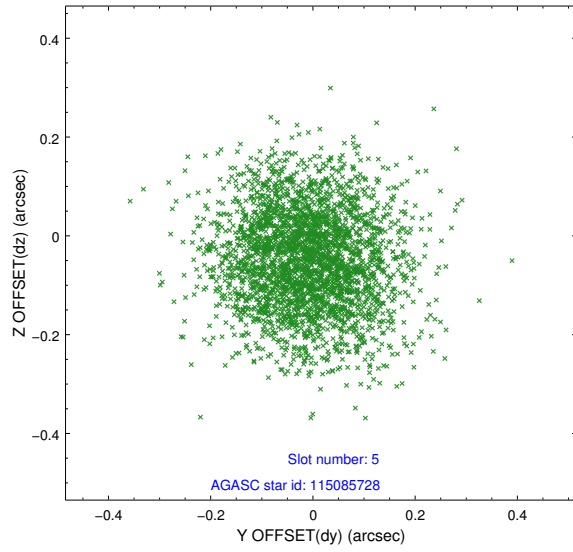
### 2.4.1 Slot 3



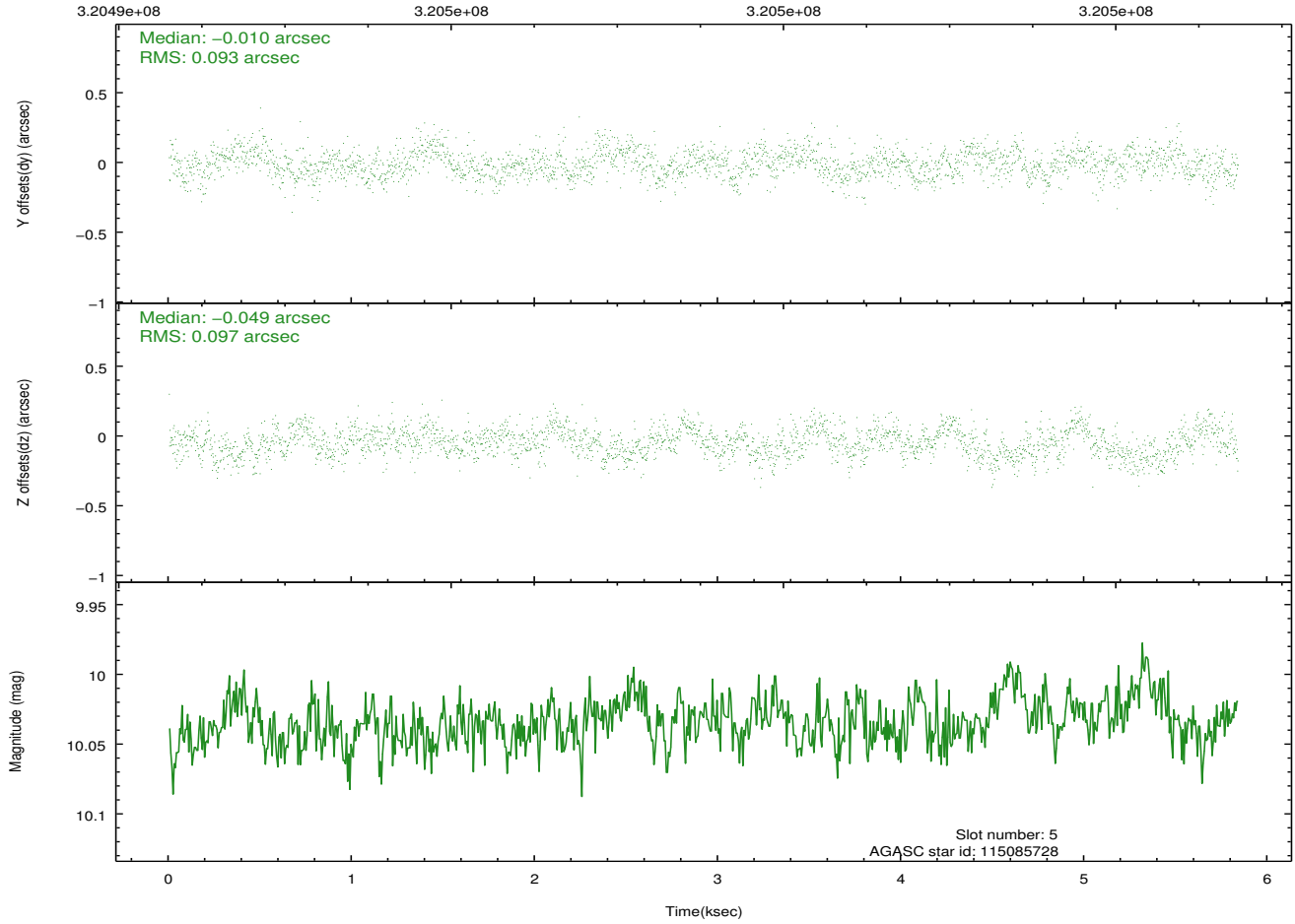
## 2.4.2 Slot 4



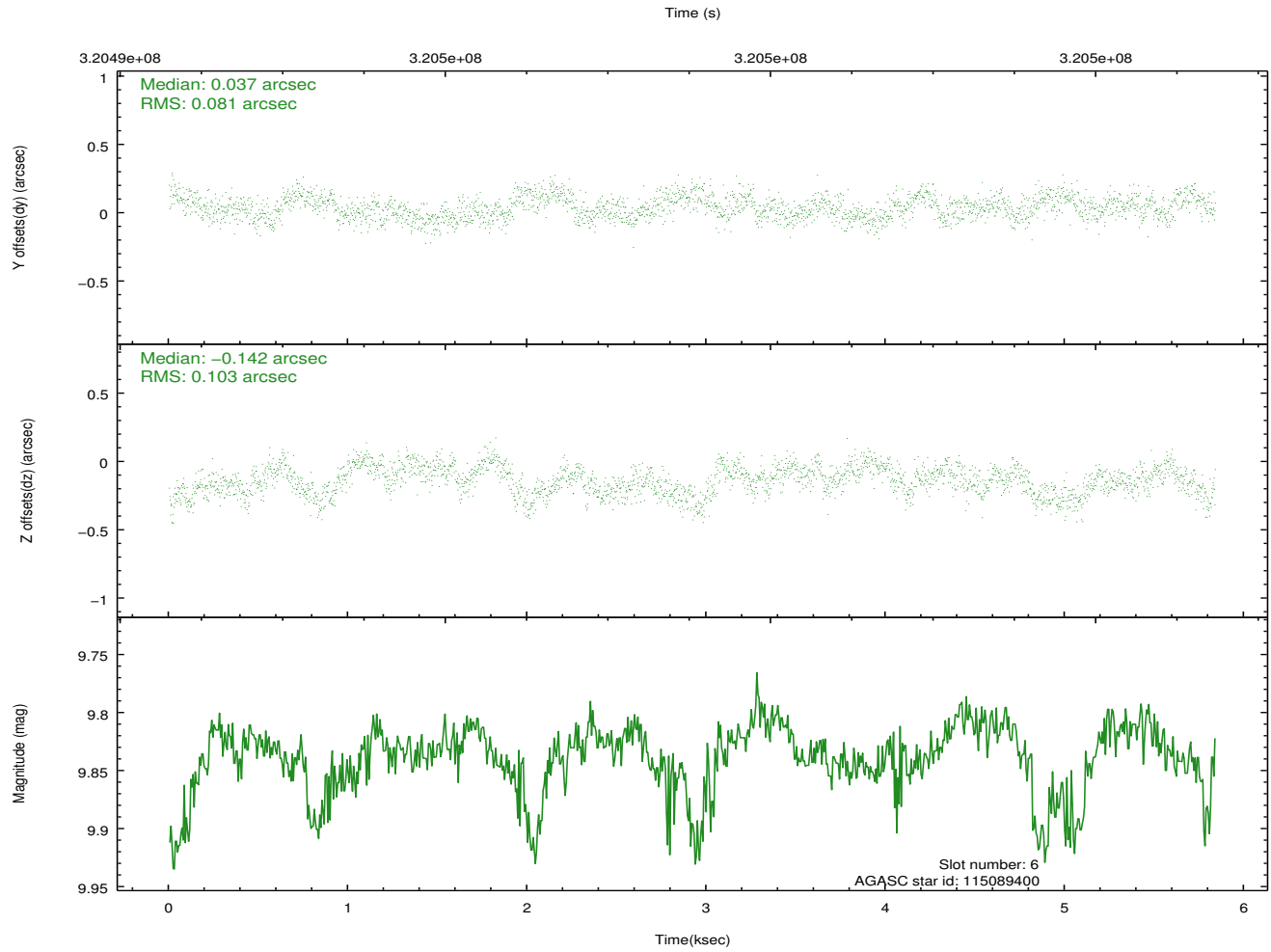
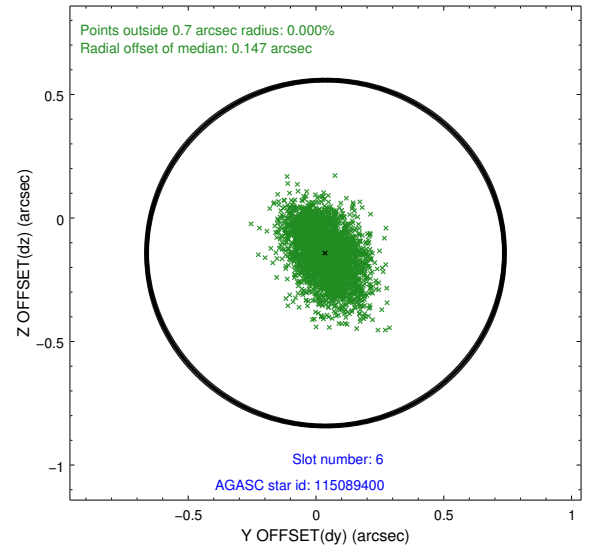
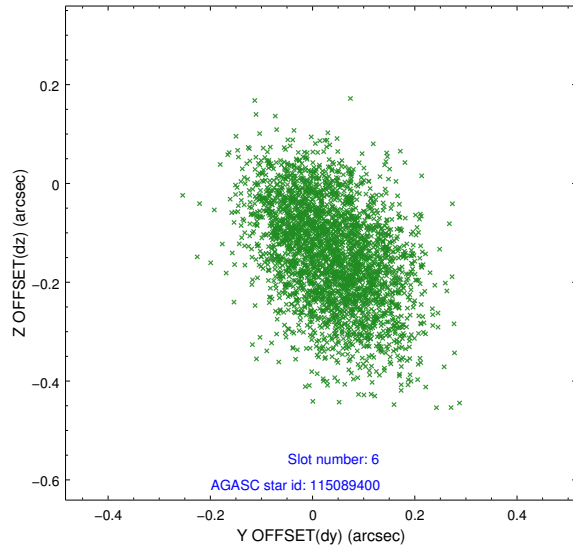
### 2.4.3 Slot 5



Time (s)

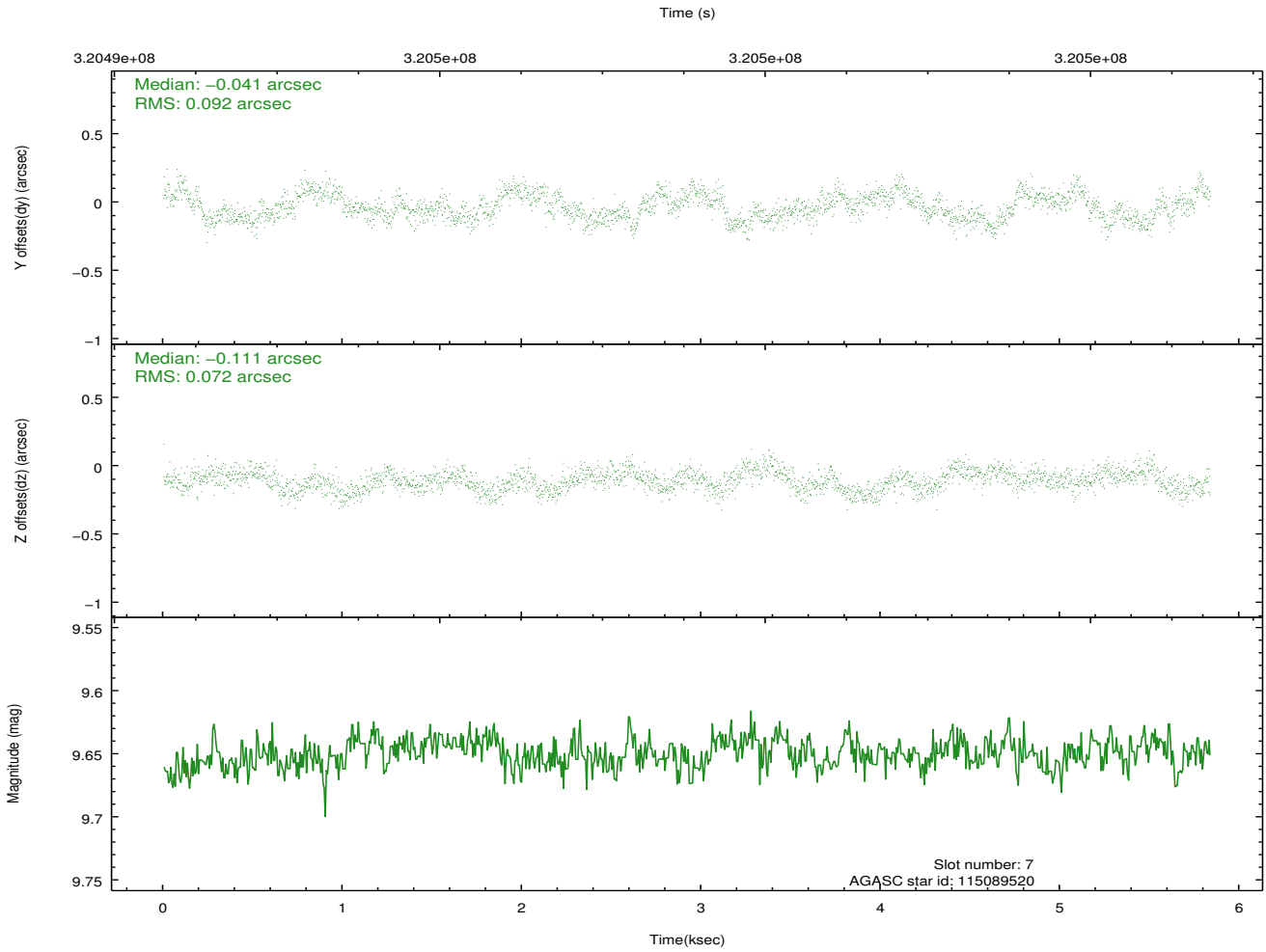
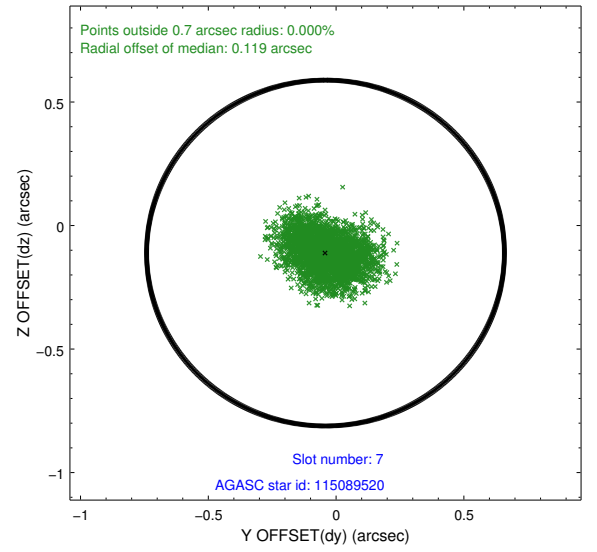
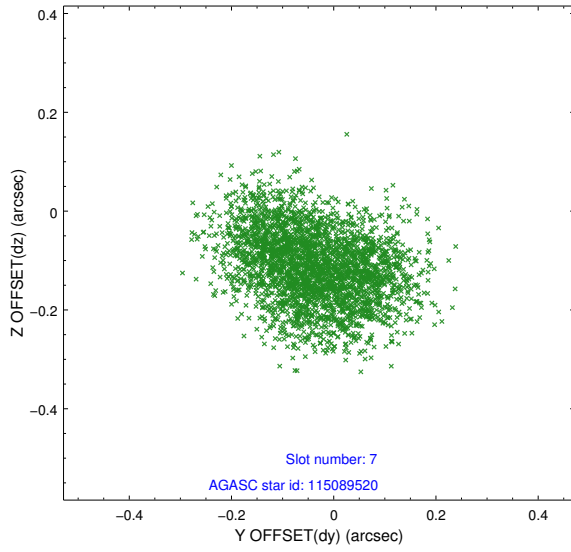


## 2.4.4 Slot 6



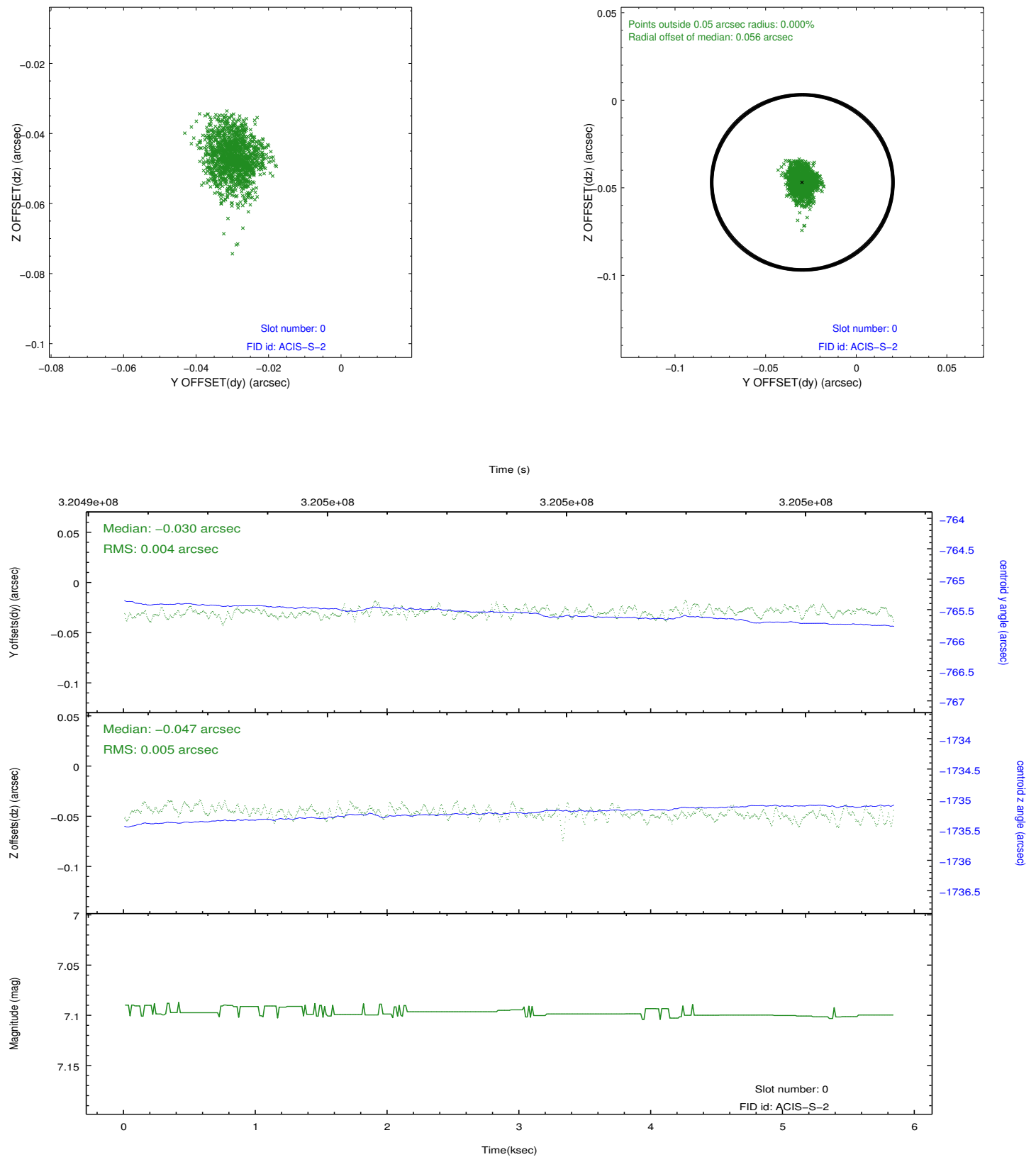


## 2.4.5 Slot 7

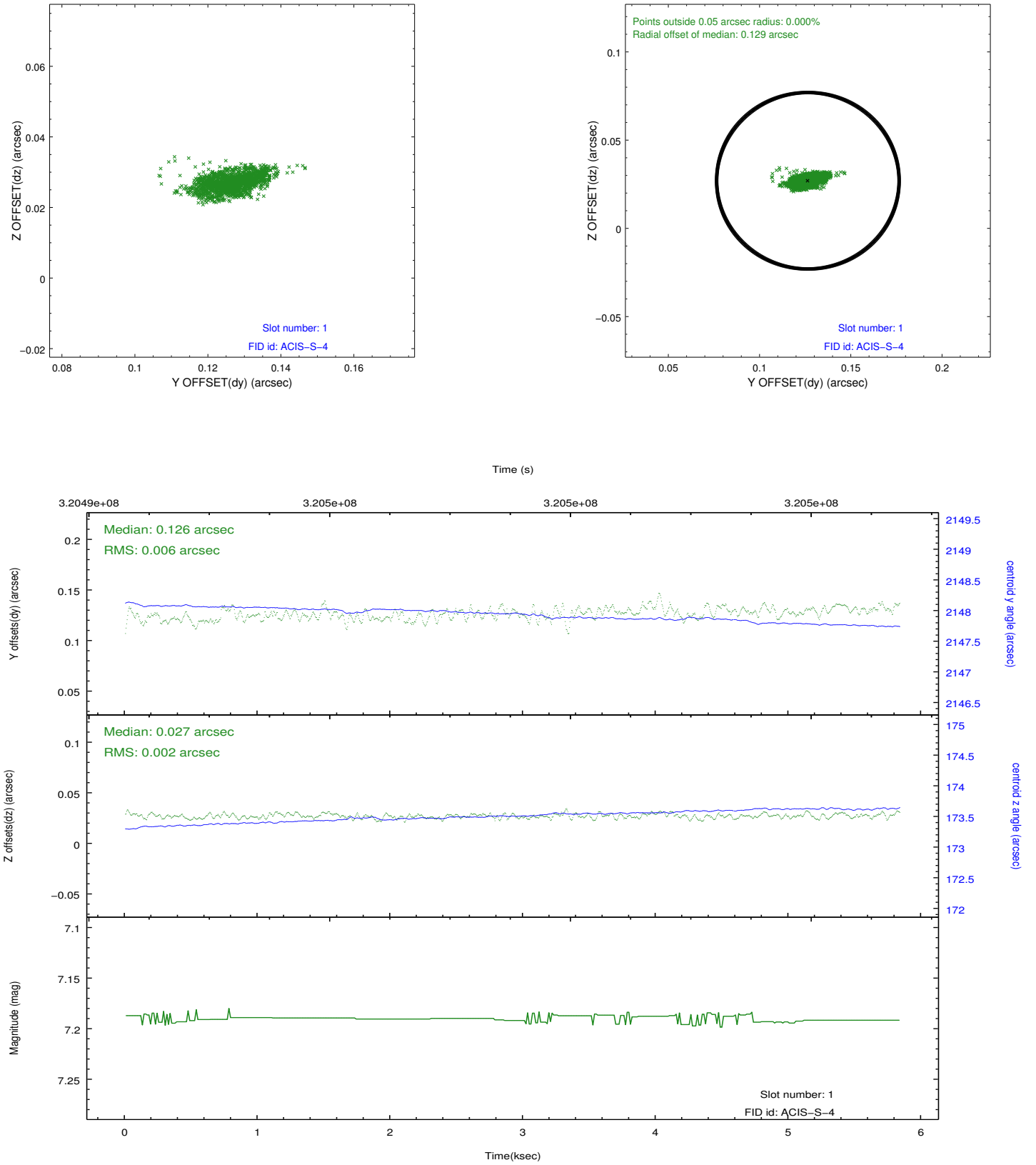


## 2.5 FID Slots

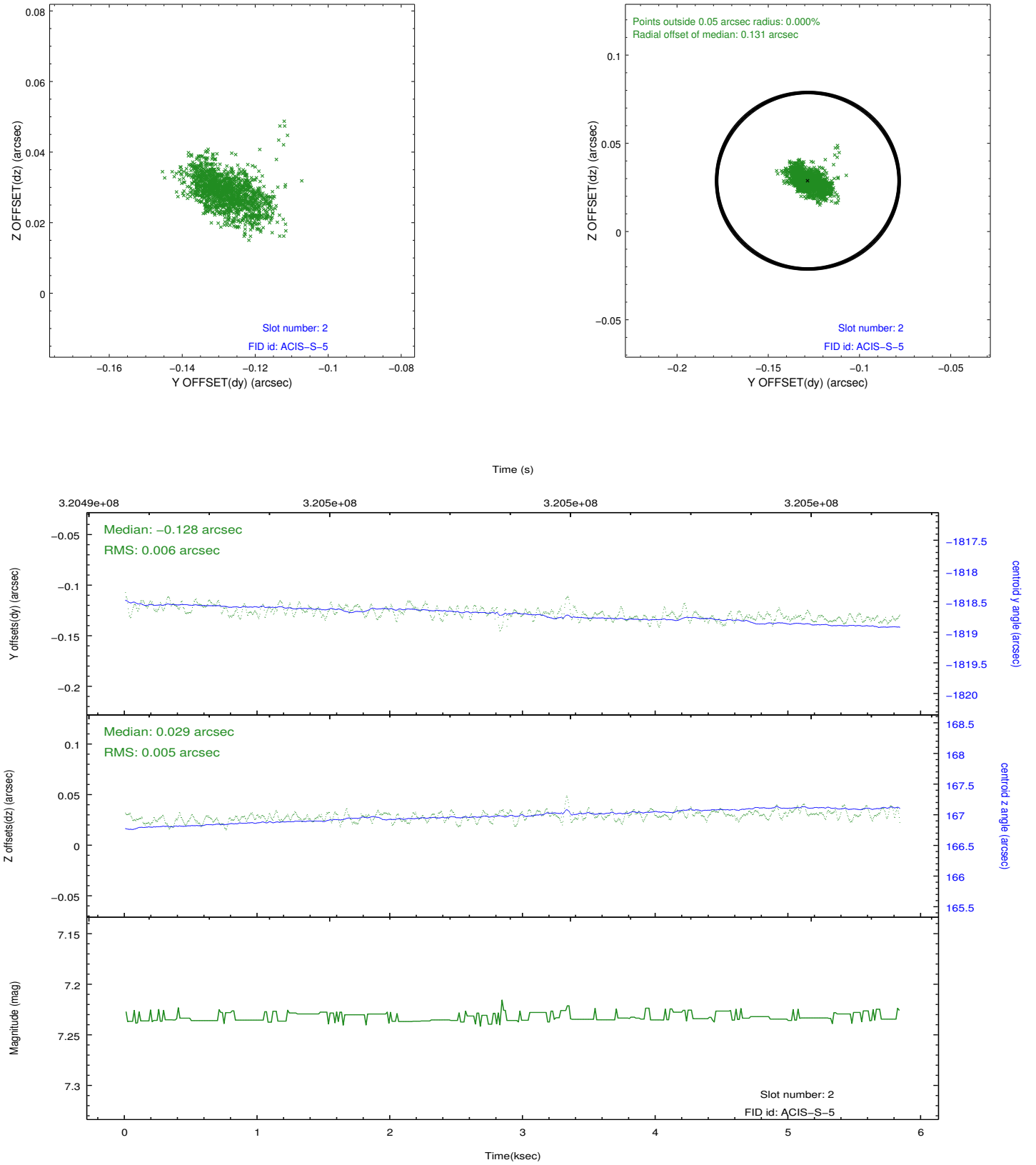
### 2.5.1 Slot 0



## 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)	2012.05.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.35359998

### A.2 Comments

Joint Proposal: Spitzer