

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8050 - L2 Version 2  
Chandra X-Ray Center

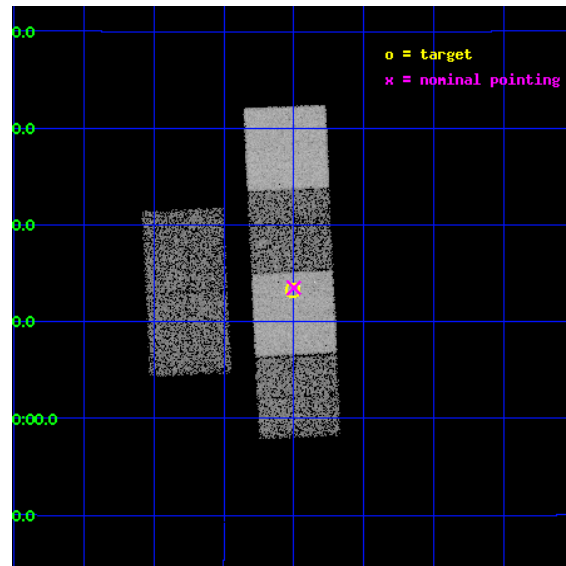
L2 Processing Date : May 9 2012

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# 1 Front

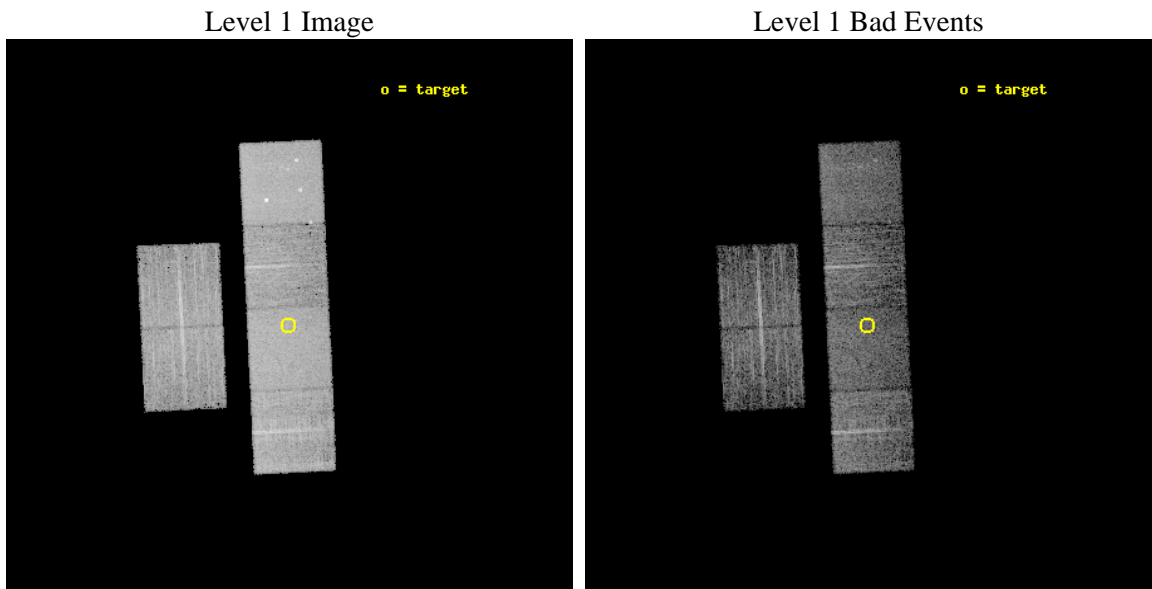
seq_num	900591	Sequence number
obs_id	8050	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	1619	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	188.8775	Observer's specified target RA [deg]
dec_targ	12.220944	Observer's specified target Dec [deg]
ra_nom	188.87500851451	Nominal RA [deg]
dec_nom	12.225074151377	Nominal Dec [deg]
roll_nom	87.285044866026	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5158.3999808431	Sum of GTIs [s]
livetime	5093.0812142701	Livetime [s]
ontime2	5158.3999808431	Sum of GTIs [s]
ontime3	5158.3999808431	Sum of GTIs [s]
ontime5	5158.3999808431	Sum of GTIs [s]
ontime6	5155.1589806676	Sum of GTIs [s]
ontime7	5158.3999808431	Sum of GTIs [s]
ontime8	5155.1590104699	Sum of GTIs [s]
l2events	85084	Number of level 2 events



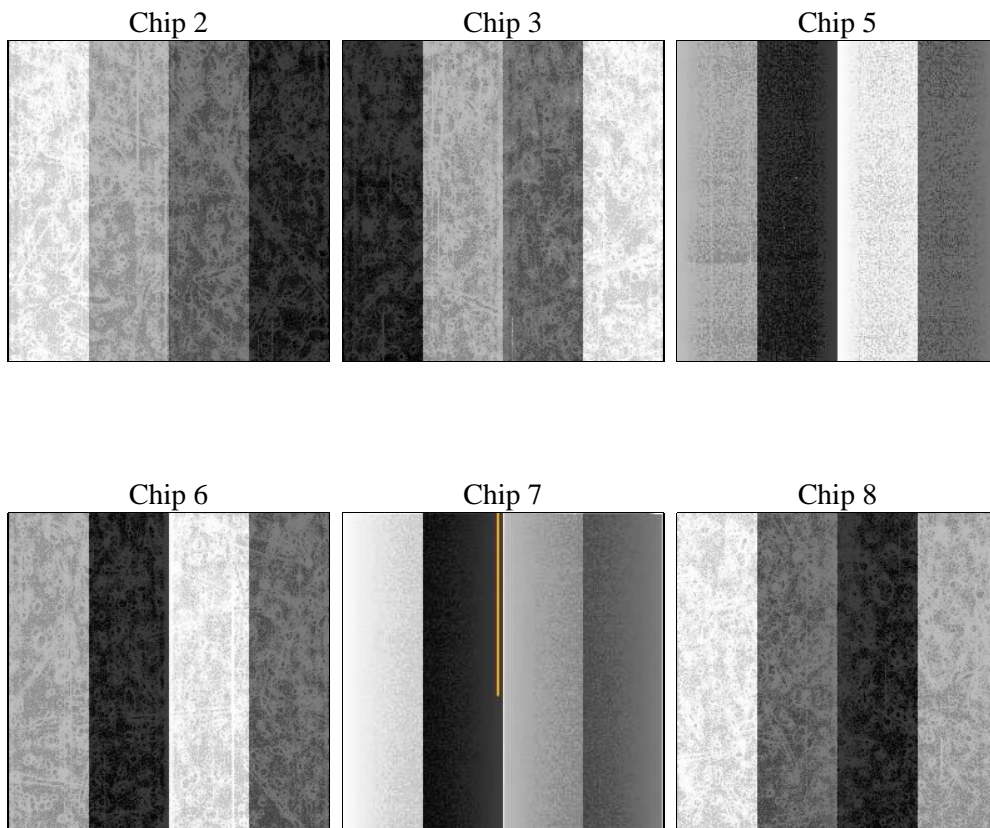
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	5400.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	5158.3999808431	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime2	5158.3999808431	Sum of GTIs [s]
date	2012-05-09T19:10:56	Date and time of file creation	ontime3	5158.3999808431	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	5158.3999808431	Sum of GTIs [s]
			ontime6	5155.1589806676	Sum of GTIs [s]
			ontime7	5158.3999808431	Sum of GTIs [s]
			ontime8	5155.1590104699	Sum of GTIs [s]
			l1events	359076	Number of level 1 events

### 2.1.4 Events

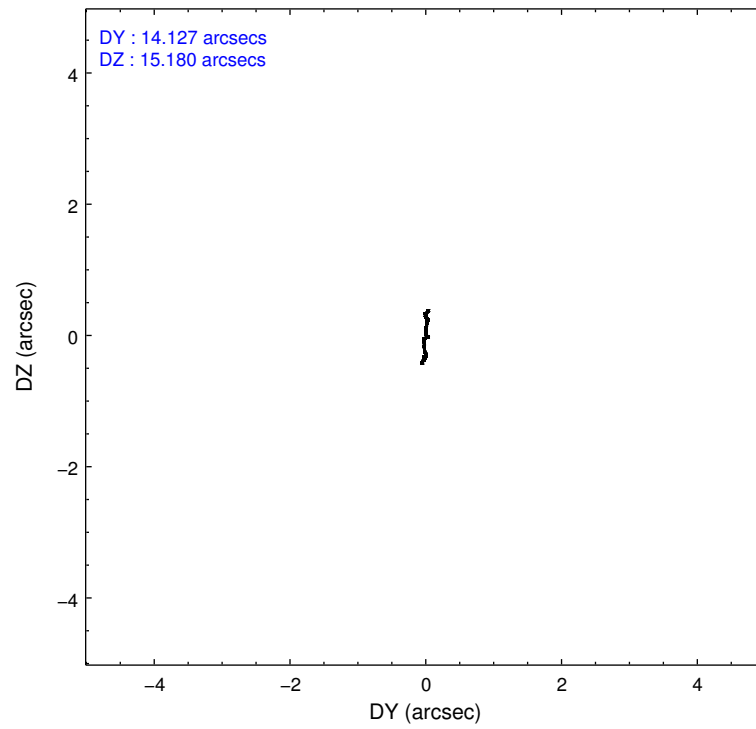
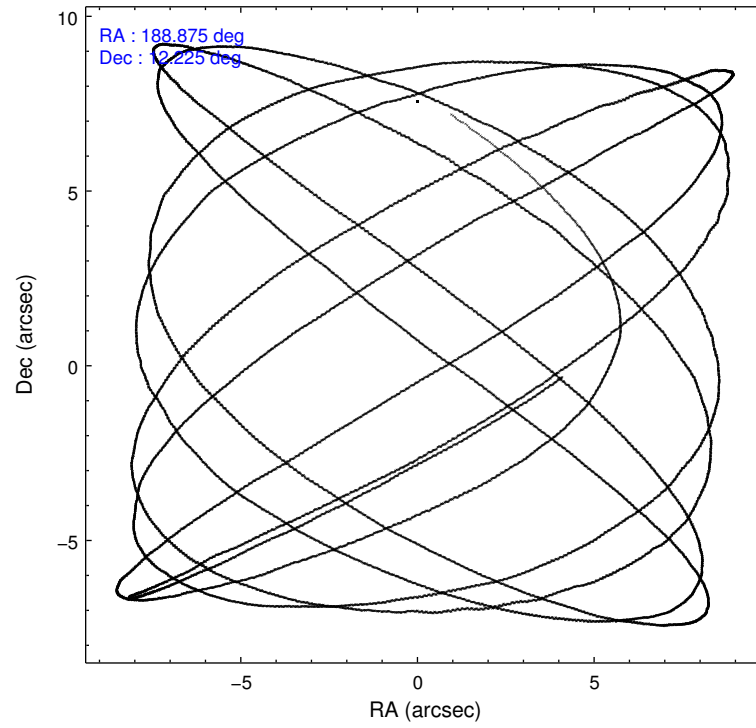
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	49219	47950	78661	48683	69302	65261	grade 0 events	2781	2628	4545	2688	2725	4826
rejected events	43163	41894	41602	42187	39889	50537		5%	5%	5%	5%	3%	7%
rejected %	87%	87%	52%	86%	57%	77%	grade 1 events	34	41	168	33	63	65
								0%	0%	0%	0%	0%	0%
							grade 2 events	1236	1251	10980	1398	6125	3188
								2%	2%	13%	2%	8%	4%
							grade 3 events	531	557	1340	582	2554	1636
								1%	1%	1%	1%	3%	2%
							grade 4 events	502	588	1356	567	2550	1419
								1%	1%	1%	1%	3%	2%
							grade 5 events	2028	2276	5551	2402	6500	3075
								4%	4%	7%	4%	9%	4%
							grade 6 events	1009	1037	18864	1266	15476	3665
								2%	2%	23%	2%	22%	5%
							grade 7 events	41098	39572	35857	39747	33309	47387
								83%	82%	45%	81%	48%	72%

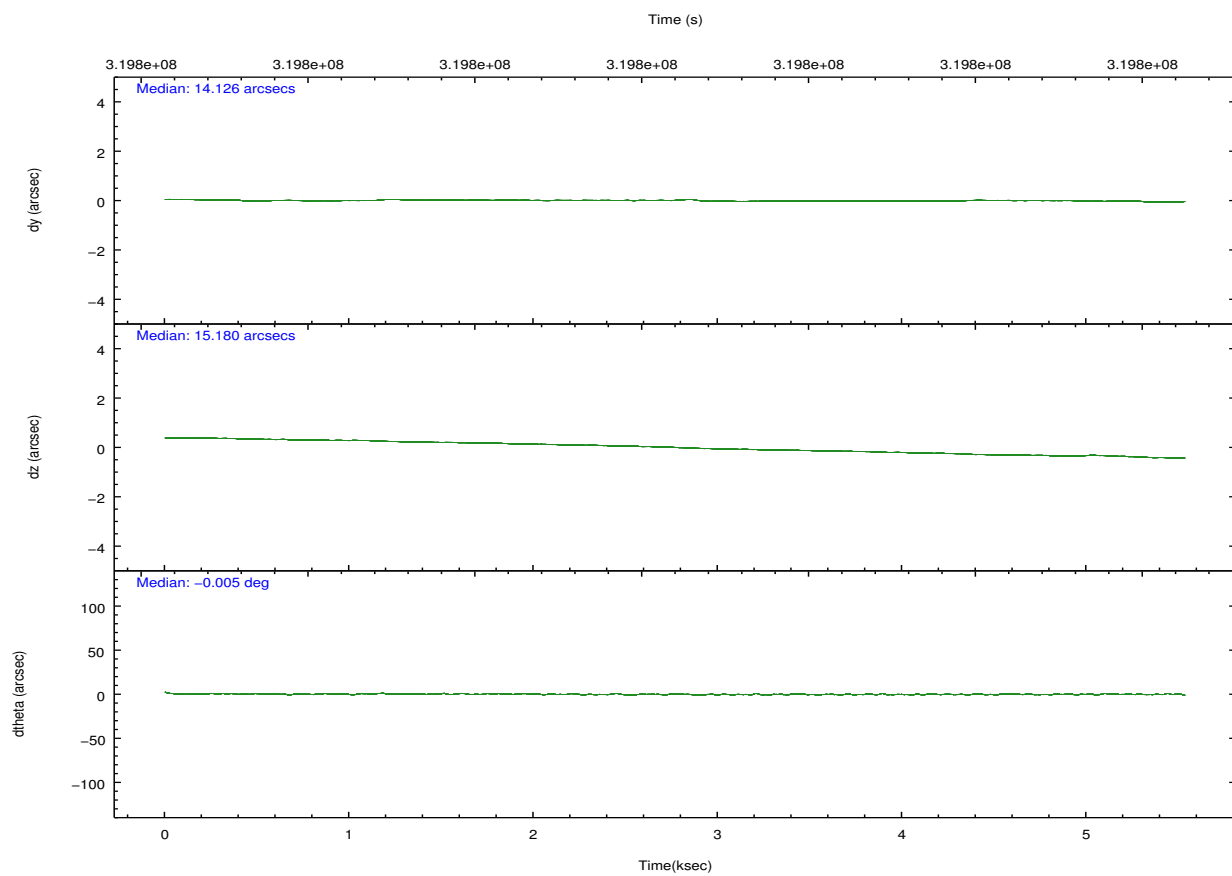
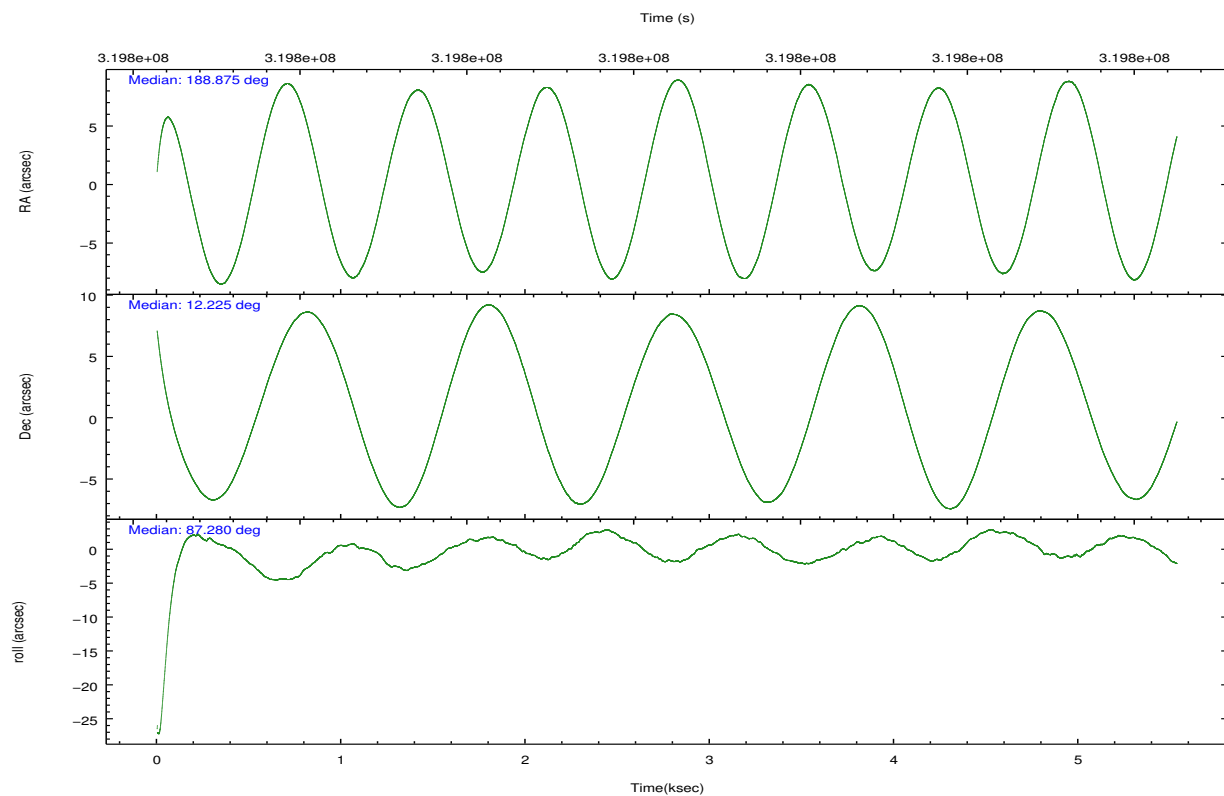


## 2.2 Compared Parameters

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	188.888259	188.8750085145141	CCD I2 on	O1	Y
[deg] Pointing Dec	12.201056	12.22507415137731	CCD I3 on	O2	Y
[deg] Pointing Roll	87.125660	87.28504486602583	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	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	O4	Y
[s] Observation start time (MET)	319798570.184000	319797388.15967	CCD S5 on	N	N
Observation start date	2008-02-19T08:55:05	2008-02-19T08:36:28	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	319803970.184000	319804184.935	On-chip summing requested	N	N
Observation end date	2008-02-19T10:25:05	2008-02-19T10:29:44	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



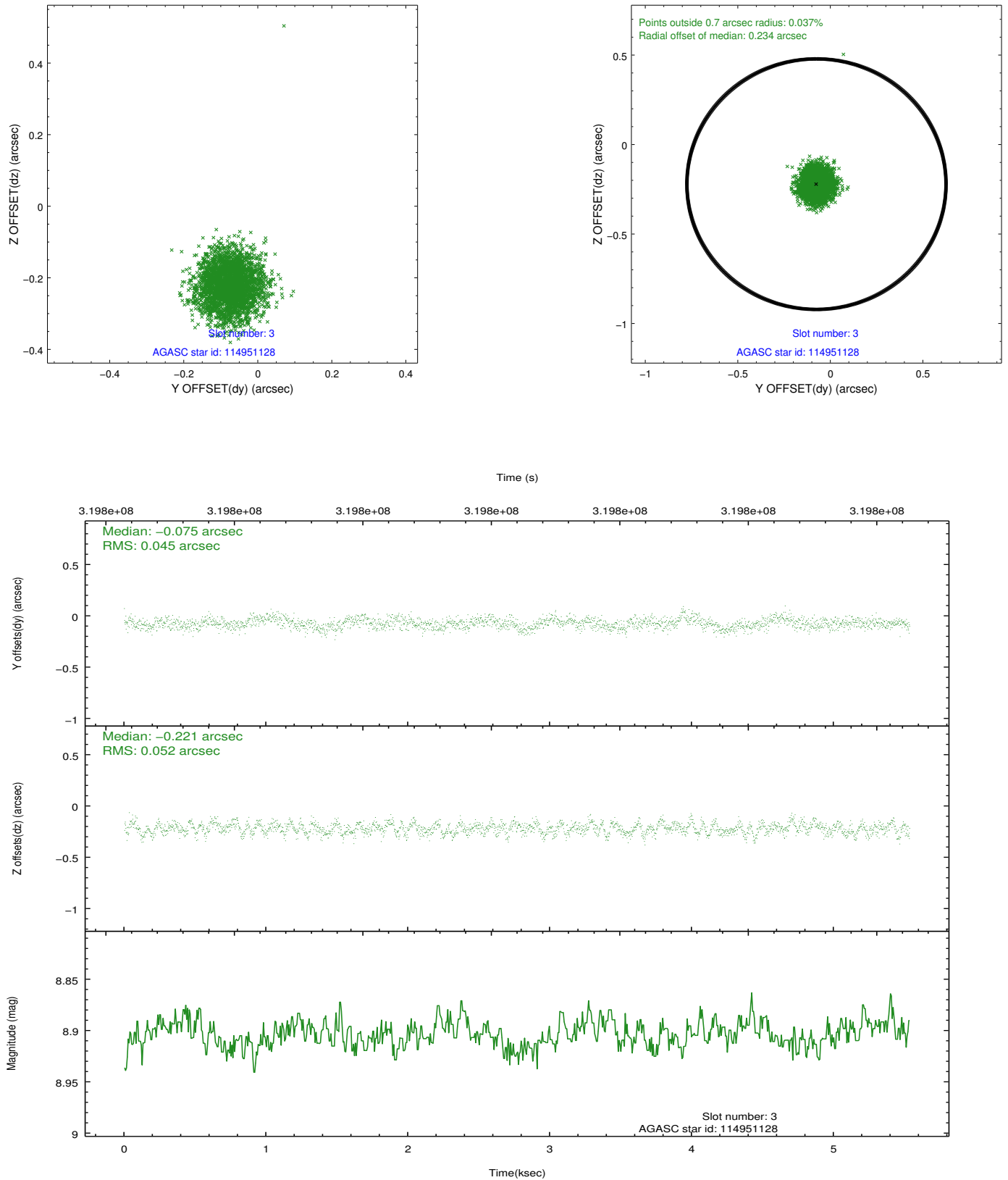


### Slot Statistics

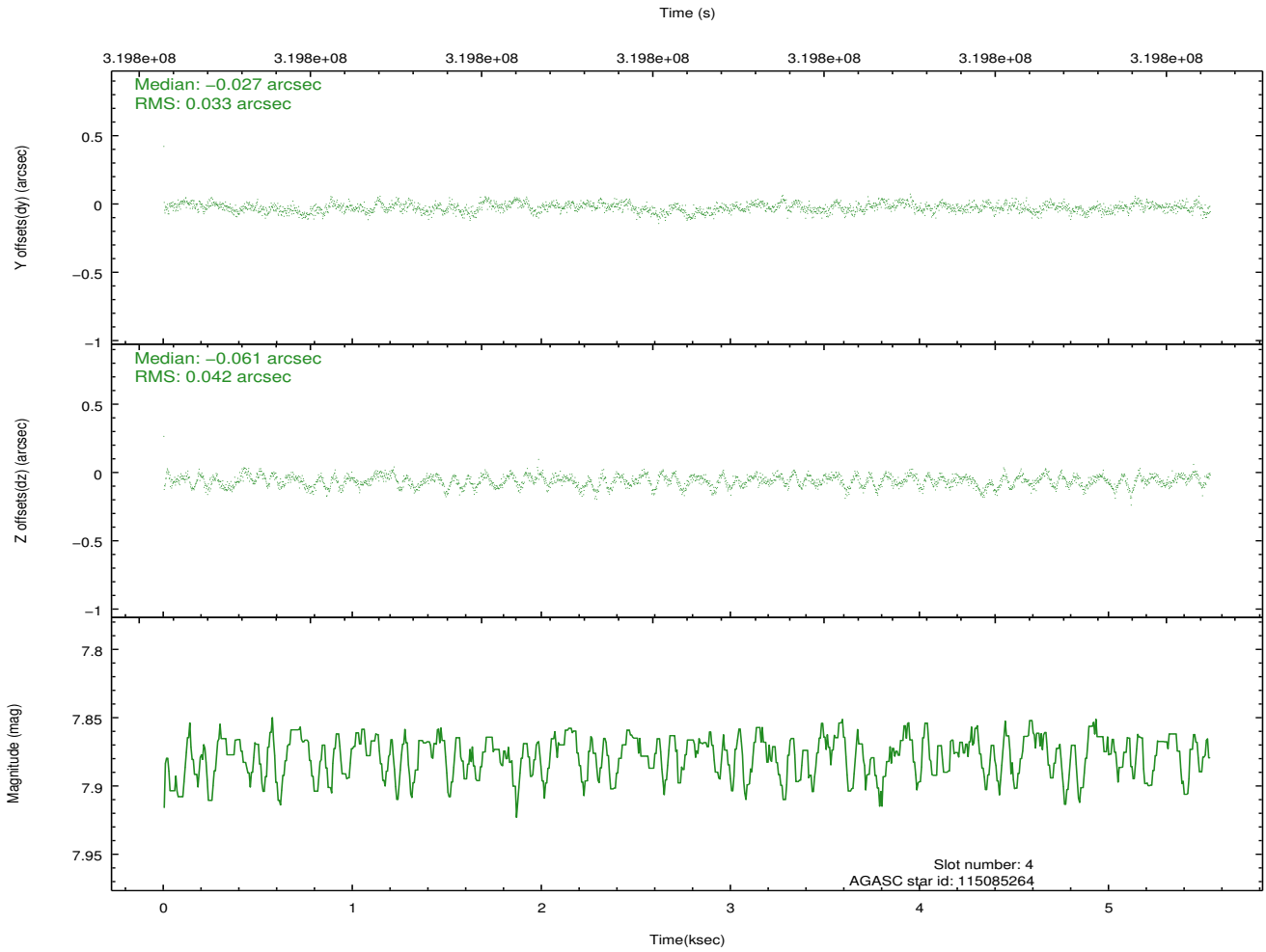
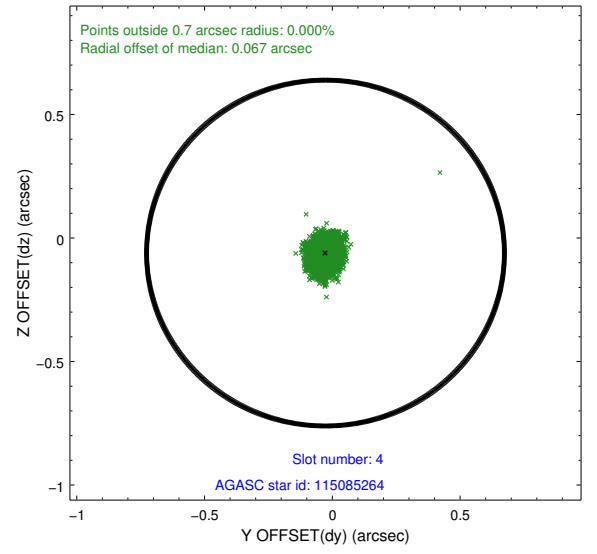
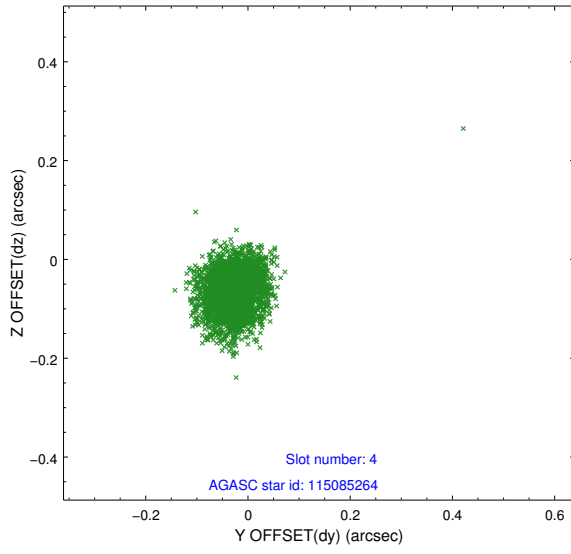
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	1350	-0.066	-0.019	0.009	0.014	0.000000	0.000000	-767.12	-1736.59
1	FID	ACIS-S-4	7.18	1350	0.174	0.037	0.006	0.011	0.000000	0.000000	2145.88	170.86
2	FID	ACIS-S-5	7.22	1350	-0.139	-0.010	0.008	0.012	0.000000	0.000000	-1818.66	165.68
3	GUIDE	114951128	8.90	2696	-0.075	-0.221	0.074	0.115	188.719863	12.459246	898.82	637.44
4	GUIDE	115085264	7.88	2700	-0.027	-0.061	0.057	0.090	189.302301	11.817775	-1302.65	-1526.31
5	GUIDE	115085768	9.97	2696	0.269	0.180	0.129	0.214	189.167689	11.938344	-894.11	-1030.90
6	GUIDE	115481912	8.60	2699	-0.278	0.180	0.064	0.105	189.408526	12.669552	1778.21	-1740.56
7	GUIDE	114953640	7.40	2699	0.113	-0.080	0.072	0.114	188.794711	11.547726	-2364.10	210.71

## 2.4 Star Slots

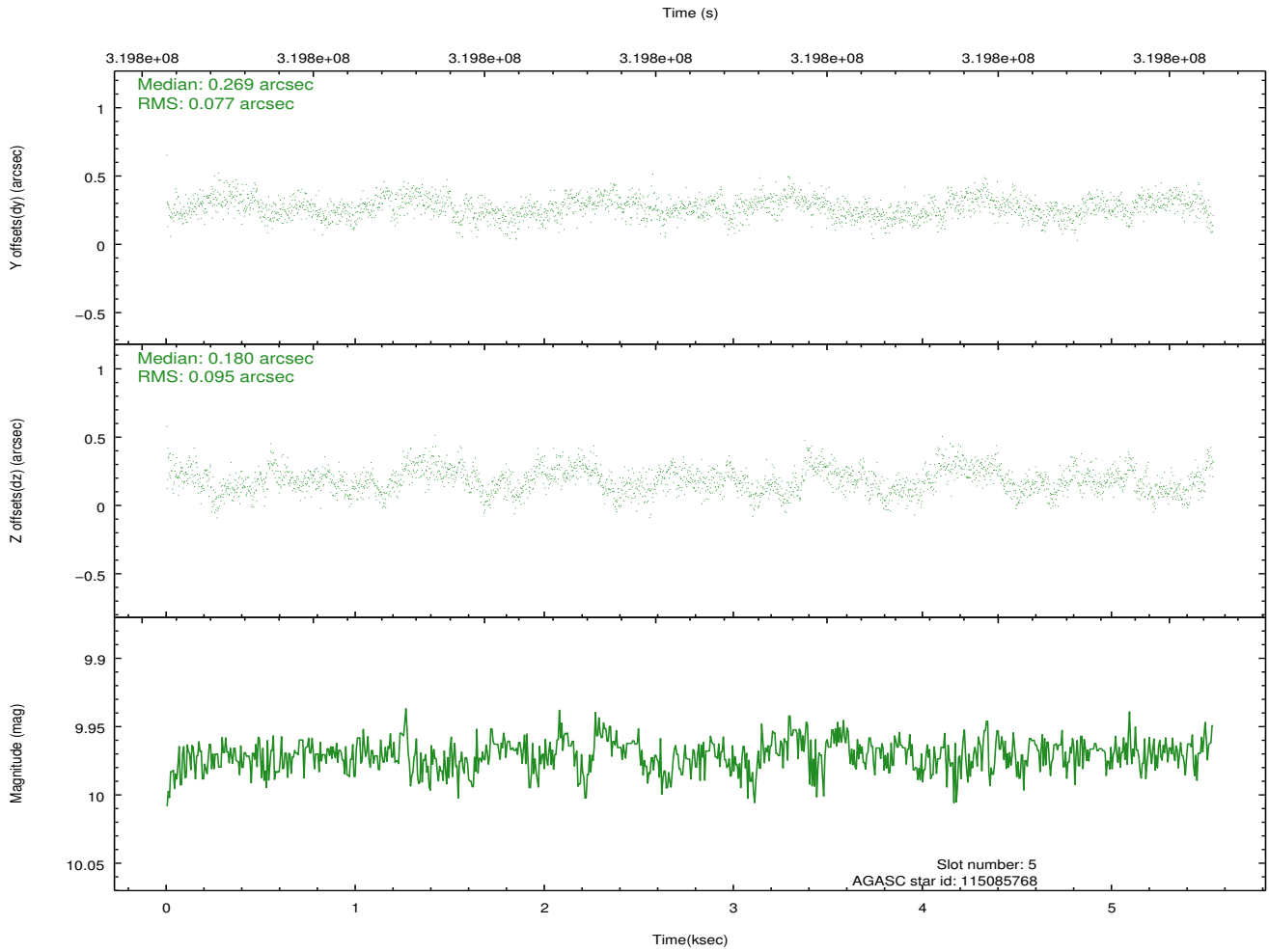
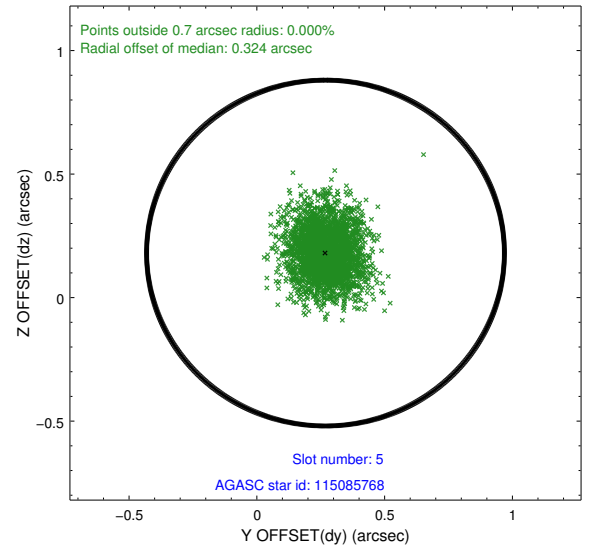
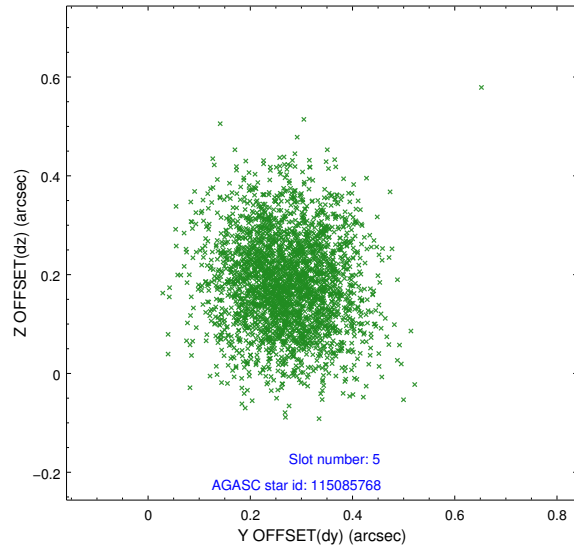
### 2.4.1 Slot 3



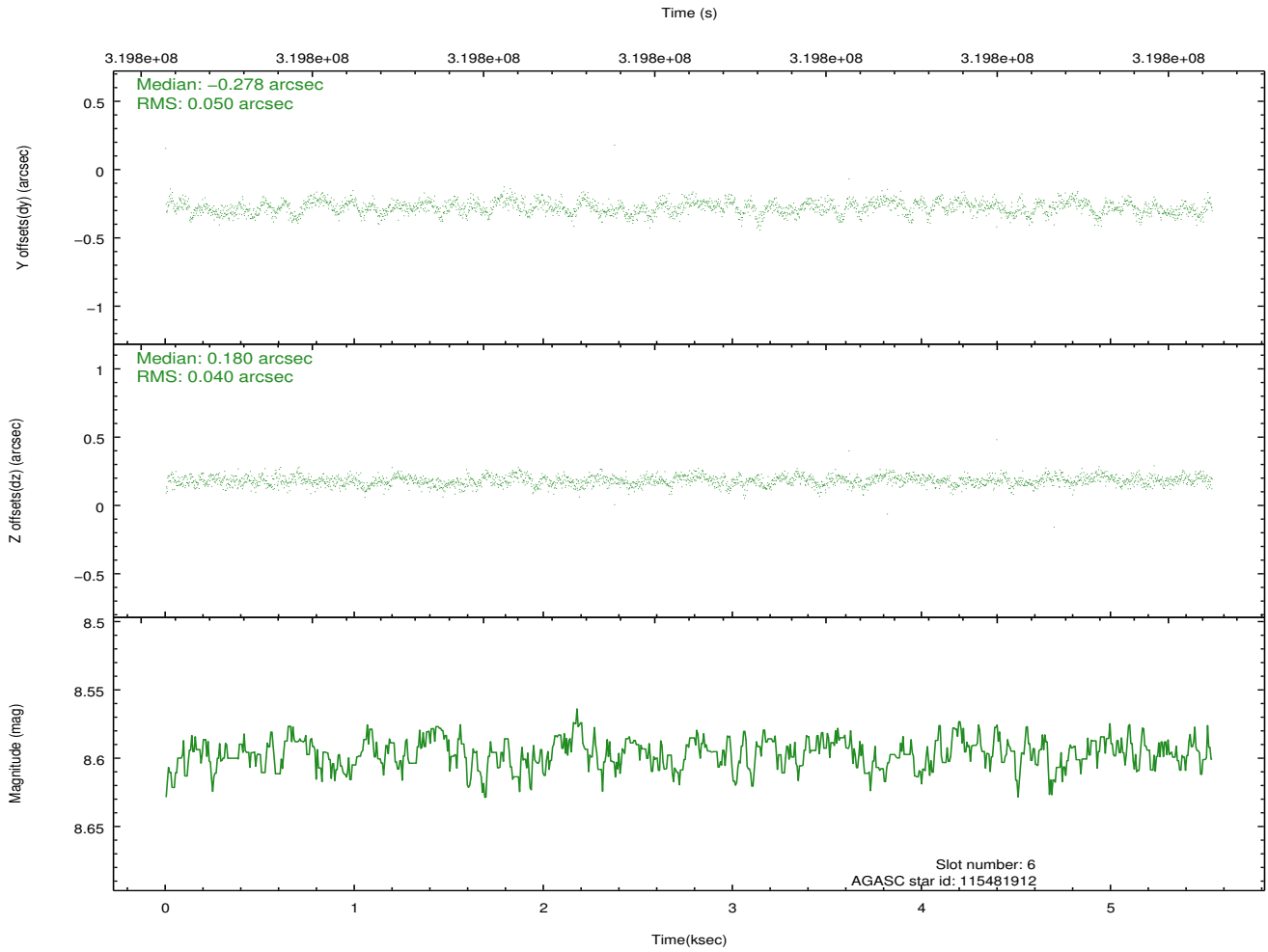
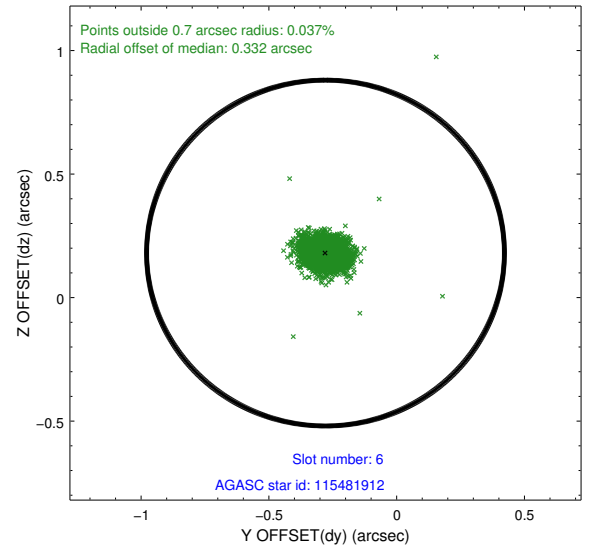
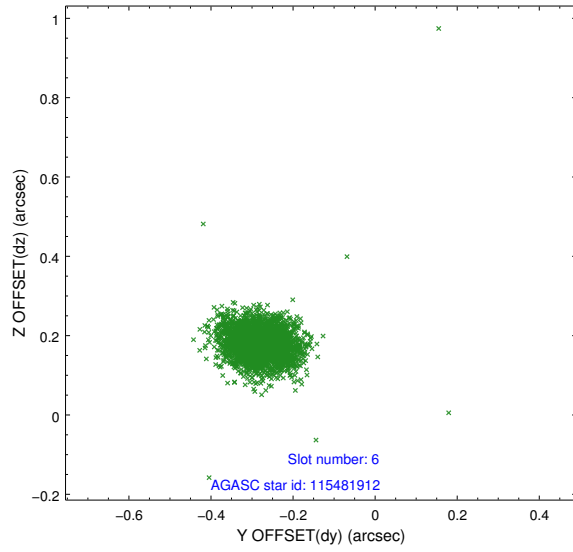
## 2.4.2 Slot 4



### 2.4.3 Slot 5

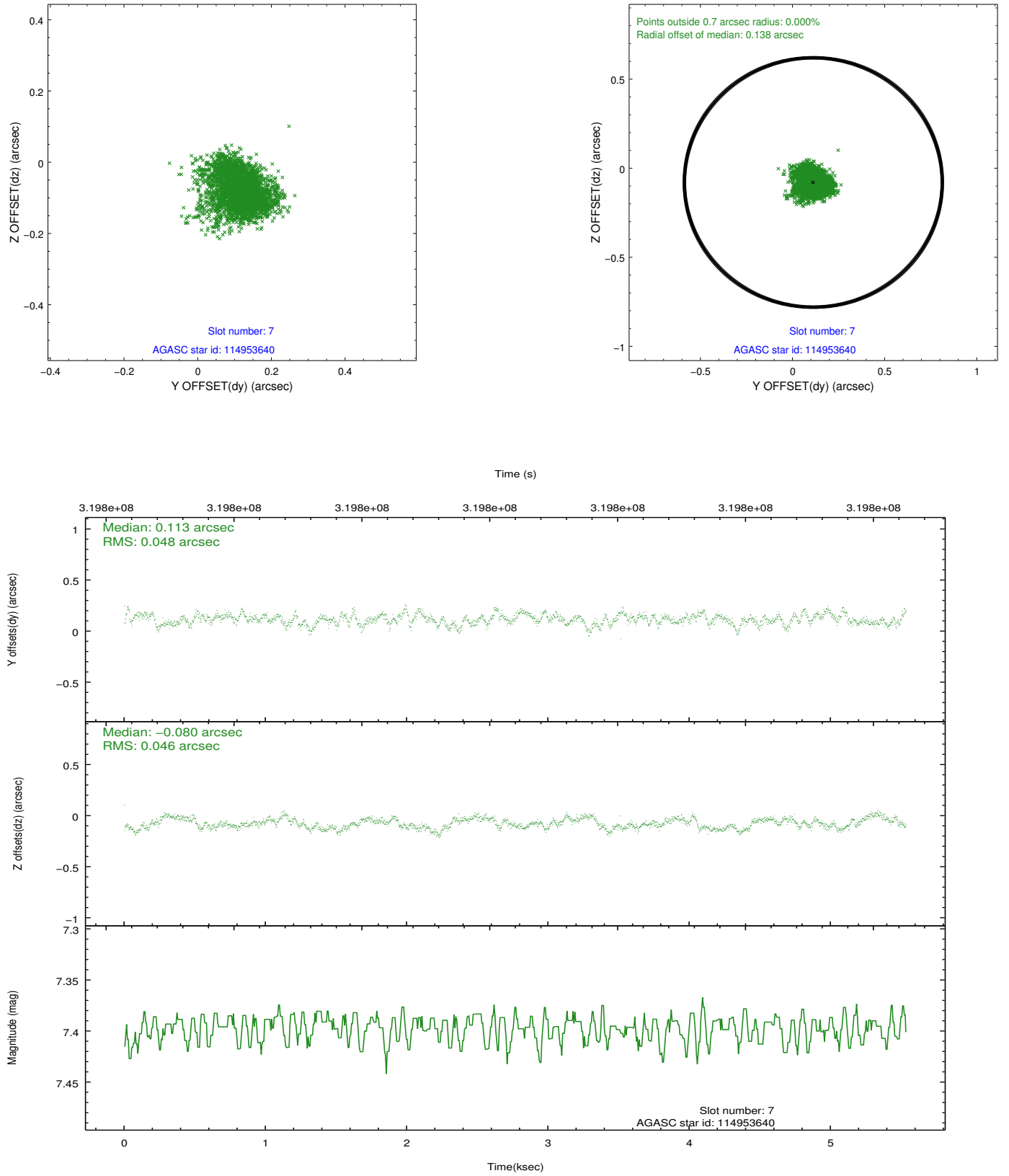


## 2.4.4 Slot 6



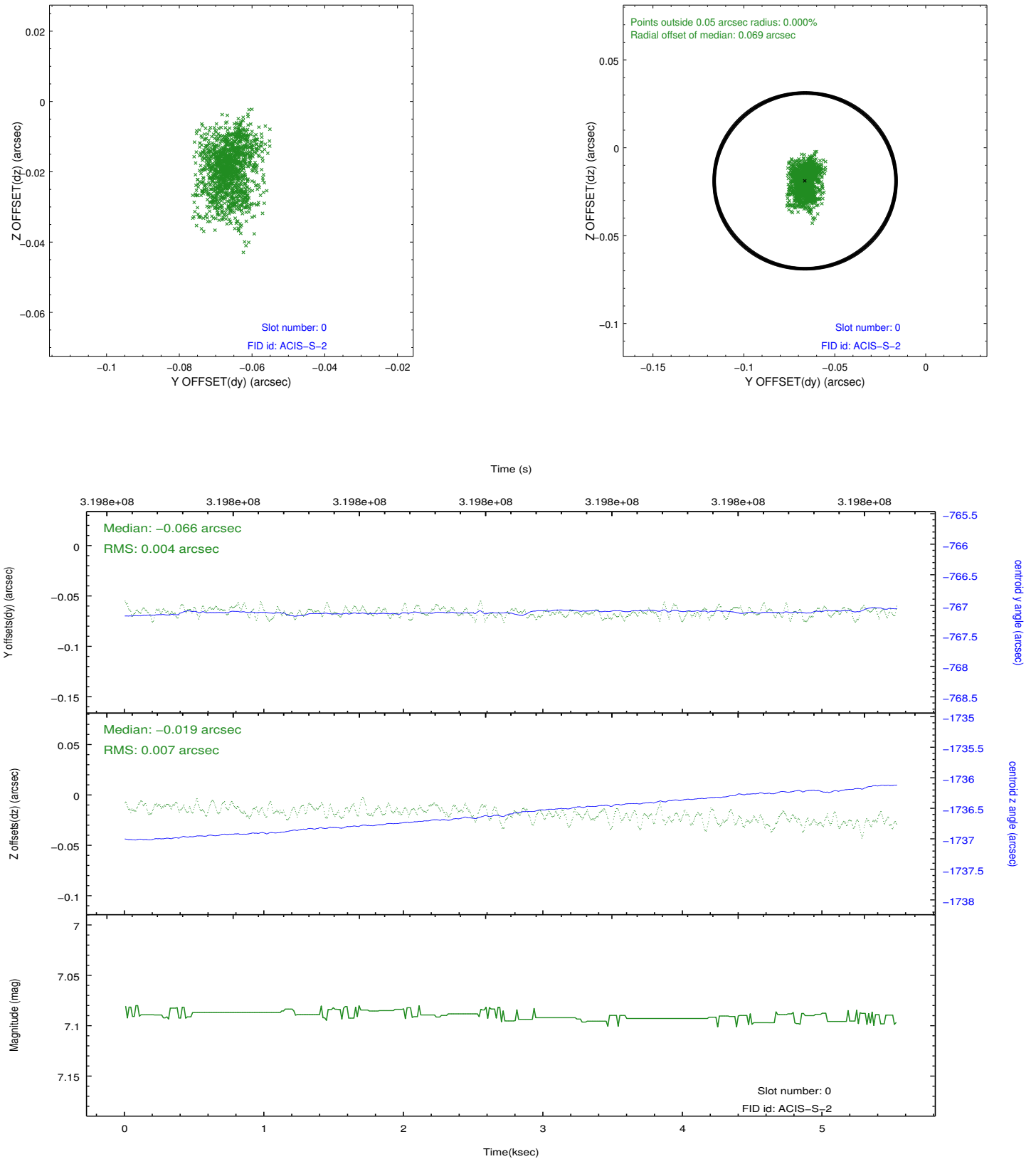


## 2.4.5 Slot 7

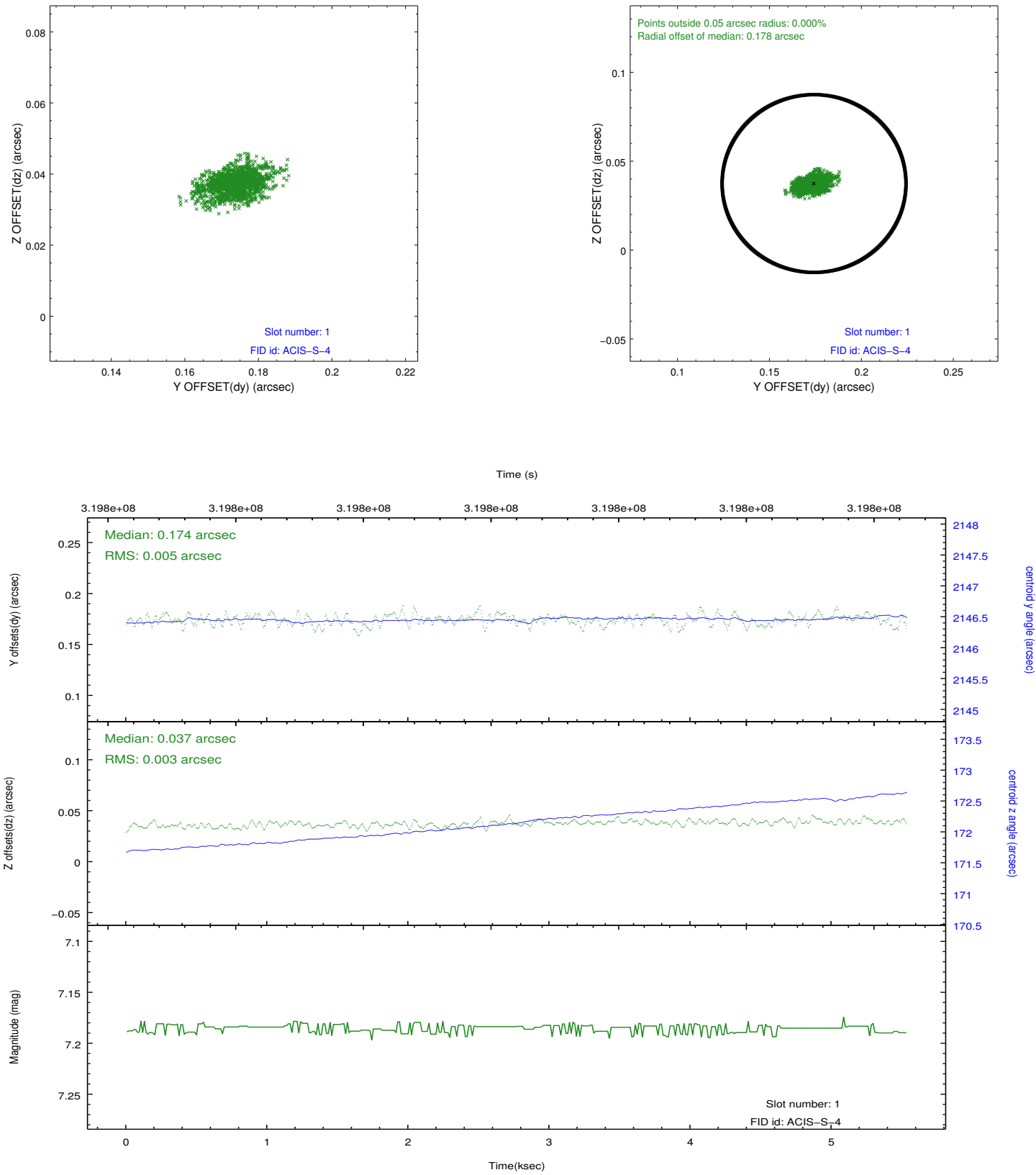


## 2.5 FID Slots

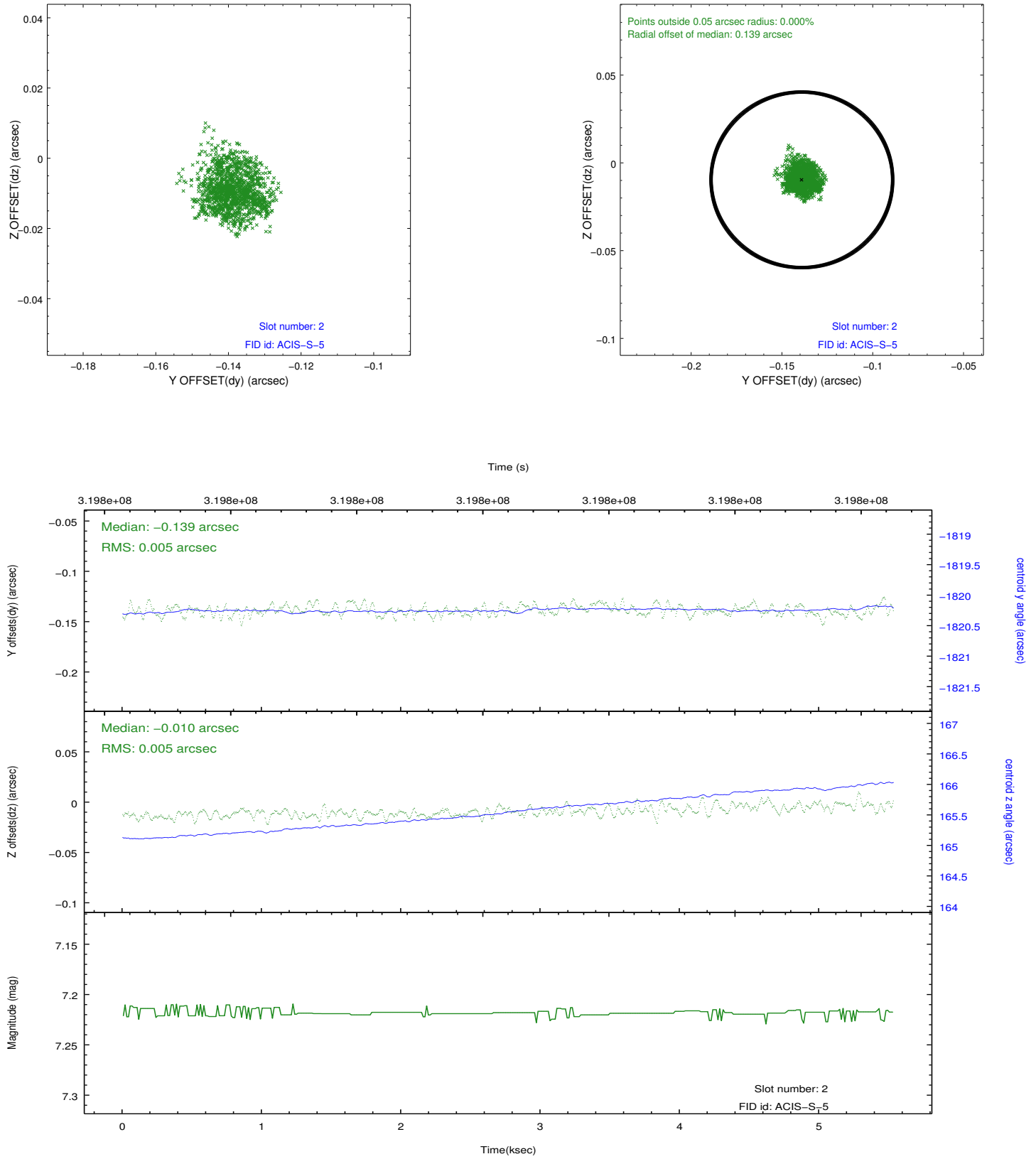
### 2.5.1 Slot 0



## 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)	2012.05.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.15839998

### A.2 Comments

Joint Proposal: Spitzer