

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8049 - L2 Version 2  
Chandra X-Ray Center

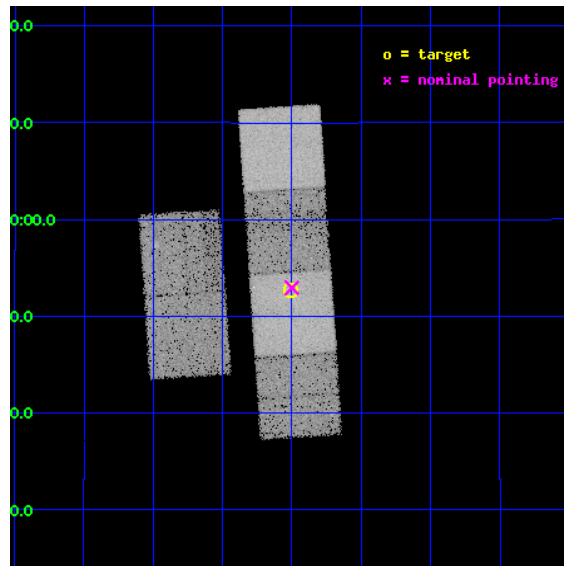
L2 Processing Date : May 9 2012

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# 1 Front

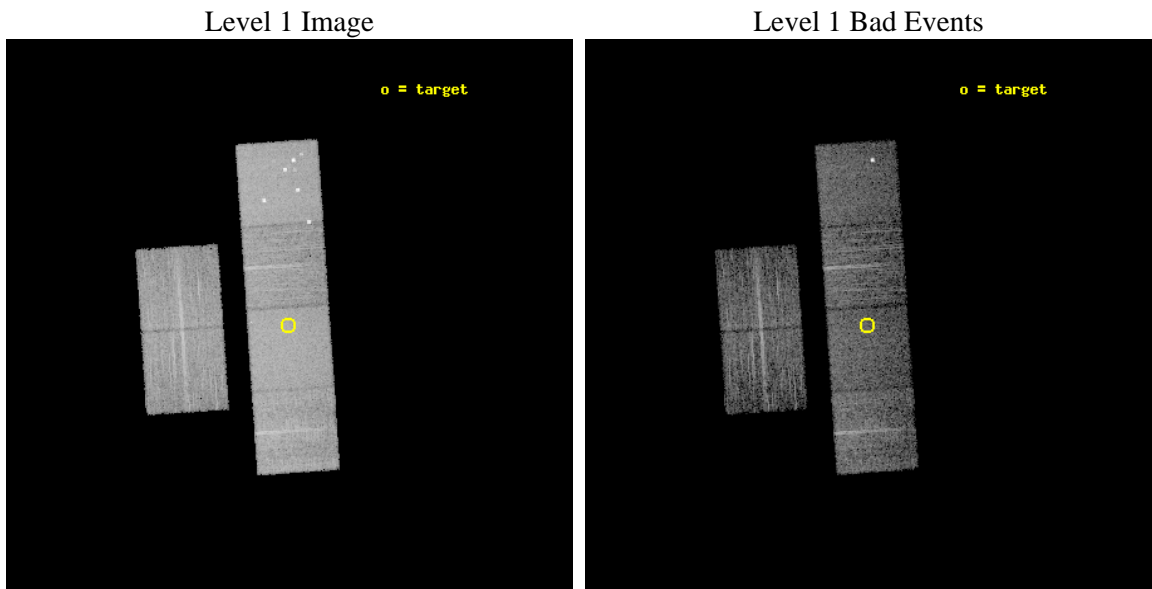
seq_num	900590	Sequence number
obs_id	8049	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	355	Source name
dtycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	184.8775	Observer's specified target RA [deg]
dec_targ	14.878167	Observer's specified target Dec [deg]
ra_nom	184.8750470176	Nominal RA [deg]
dec_nom	14.882378895552	Nominal Dec [deg]
roll_nom	86.094796364931	Nominal Roll [deg]
revision	2	Processing version of data
ontime	4801.7804147005	Sum of GTIs [s]
livetime	4740.9773798045	Livetime [s]
ontime2	4801.8214547038	Sum of GTIs [s]
ontime3	4801.6572946906	Sum of GTIs [s]
ontime5	4801.7393746972	Sum of GTIs [s]
ontime6	4801.6983346939	Sum of GTIs [s]
ontime7	4801.7804147005	Sum of GTIs [s]
ontime8	4798.3752148151	Sum of GTIs [s]
l2events	128198	Number of level 2 events



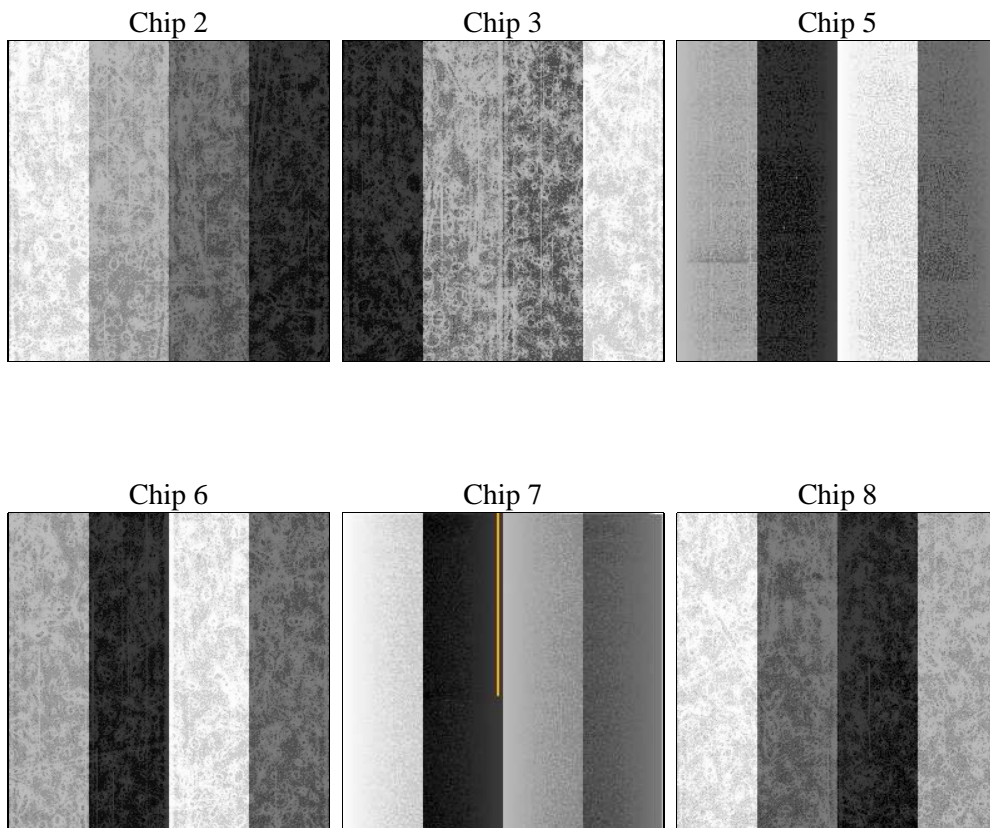
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5042.584000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	4801.7804147005	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime2	4801.8214547038	Sum of GTIs [s]
date	2012-05-09T18:07:09	Date and time of file creation	ontime3	4801.6572946906	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	4801.7393746972	Sum of GTIs [s]
			ontime6	4801.6983346939	Sum of GTIs [s]
			ontime7	4801.7804147005	Sum of GTIs [s]
			ontime8	4798.3752148151	Sum of GTIs [s]
			l1events	403098	Number of level 1 events

### 2.1.4 Events

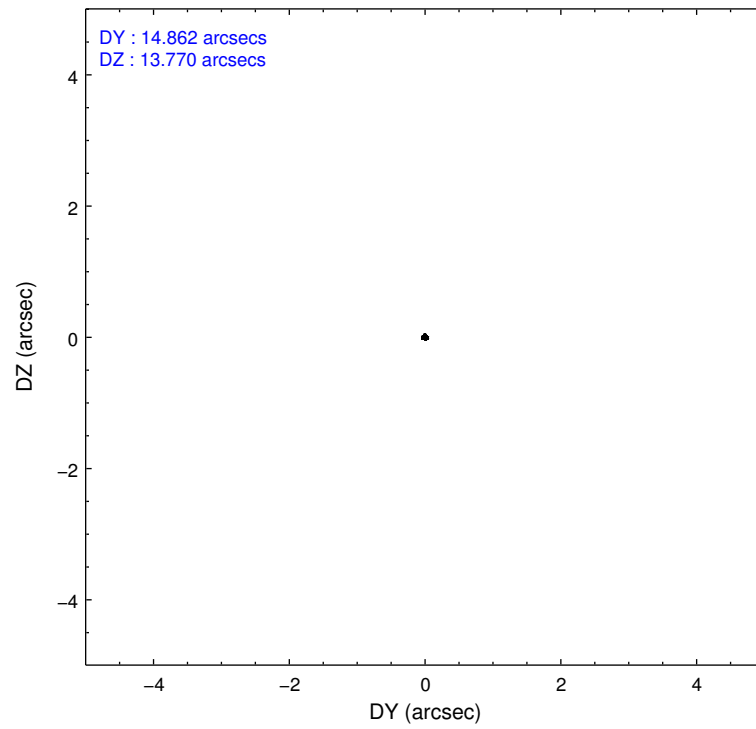
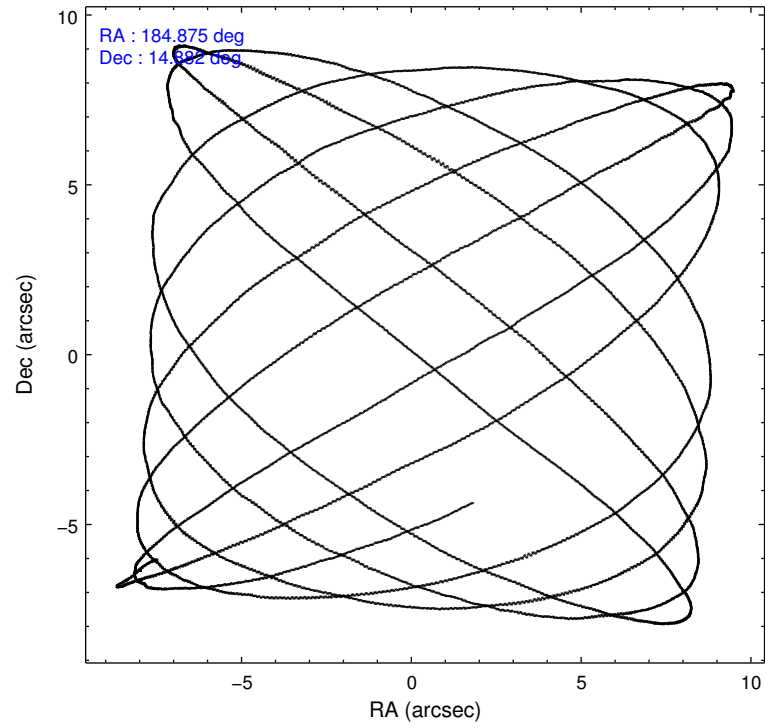
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	55906	55378	87561	56640	76119	71494	grade 0 events	7645	8070	7743	7468	3696	9975
rejected events	42687	41442	40580	42396	38460	49251		13%	14%	8%	13%	4%	13%
rejected %	76%	74%	46%	74%	50%	68%	grade 1 events	76	65	109	47	70	102
								0%	0%	0%	0%	0%	0%
							grade 2 events	2207	2264	13195	2852	7461	4329
								3%	4%	15%	5%	9%	6%
							grade 3 events	847	901	1411	860	2887	1743
								1%	1%	1%	1%	3%	2%
							grade 4 events	782	864	1396	833	2733	1726
								1%	1%	1%	1%	3%	2%
							grade 5 events	1773	2106	4829	2126	5903	2820
								3%	3%	5%	3%	7%	3%
							grade 6 events	1746	1852	23271	2248	20910	4484
								3%	3%	26%	3%	27%	6%
							grade 7 events	40830	39256	35607	40206	32459	46315
								73%	70%	40%	70%	42%	64%

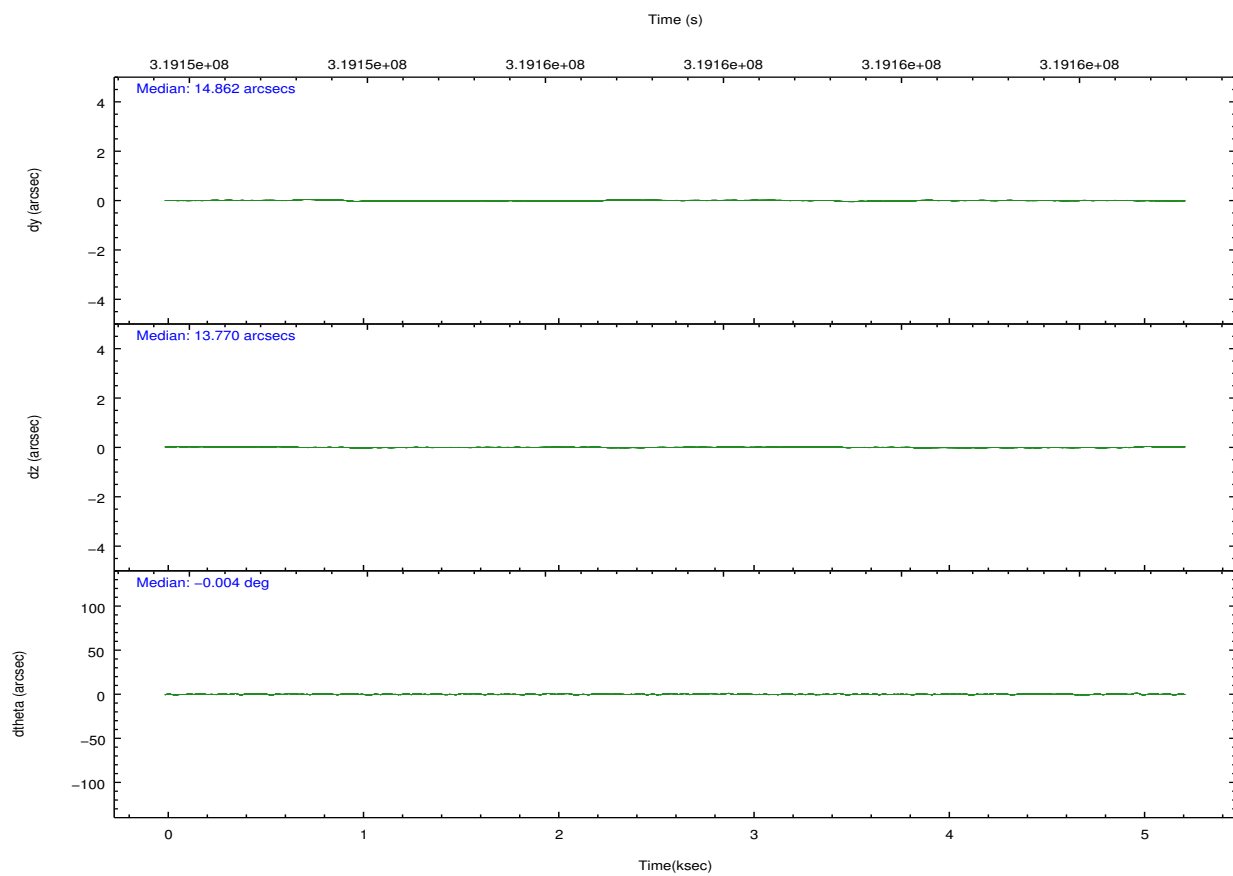
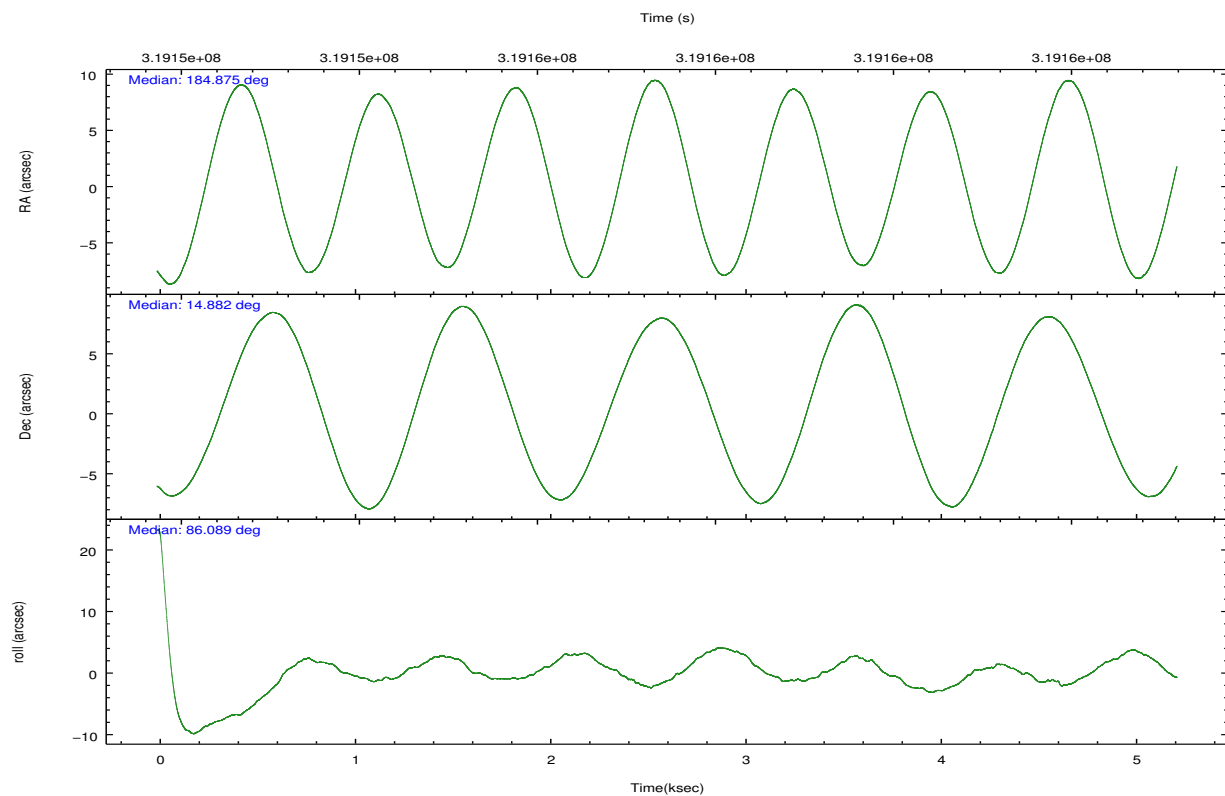


## 2.2 Compared Parameters

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	184.887953	184.875047017598	CCD I2 on	O1	Y
[deg] Pointing Dec	14.858068	14.88237889555242	CCD I3 on	O2	Y
[deg] Pointing Roll	85.934842	86.09479636493052	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)	319153284.184000	319152831.74088	CCD S5 on	N	N
Observation start date	2008-02-11T21:40:19	2008-02-11T21:33:51	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	319158326.184000	319158552.77866	On-chip summing requested	N	N
Observation end date	2008-02-11T23:04:21	2008-02-11T23:09:12	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



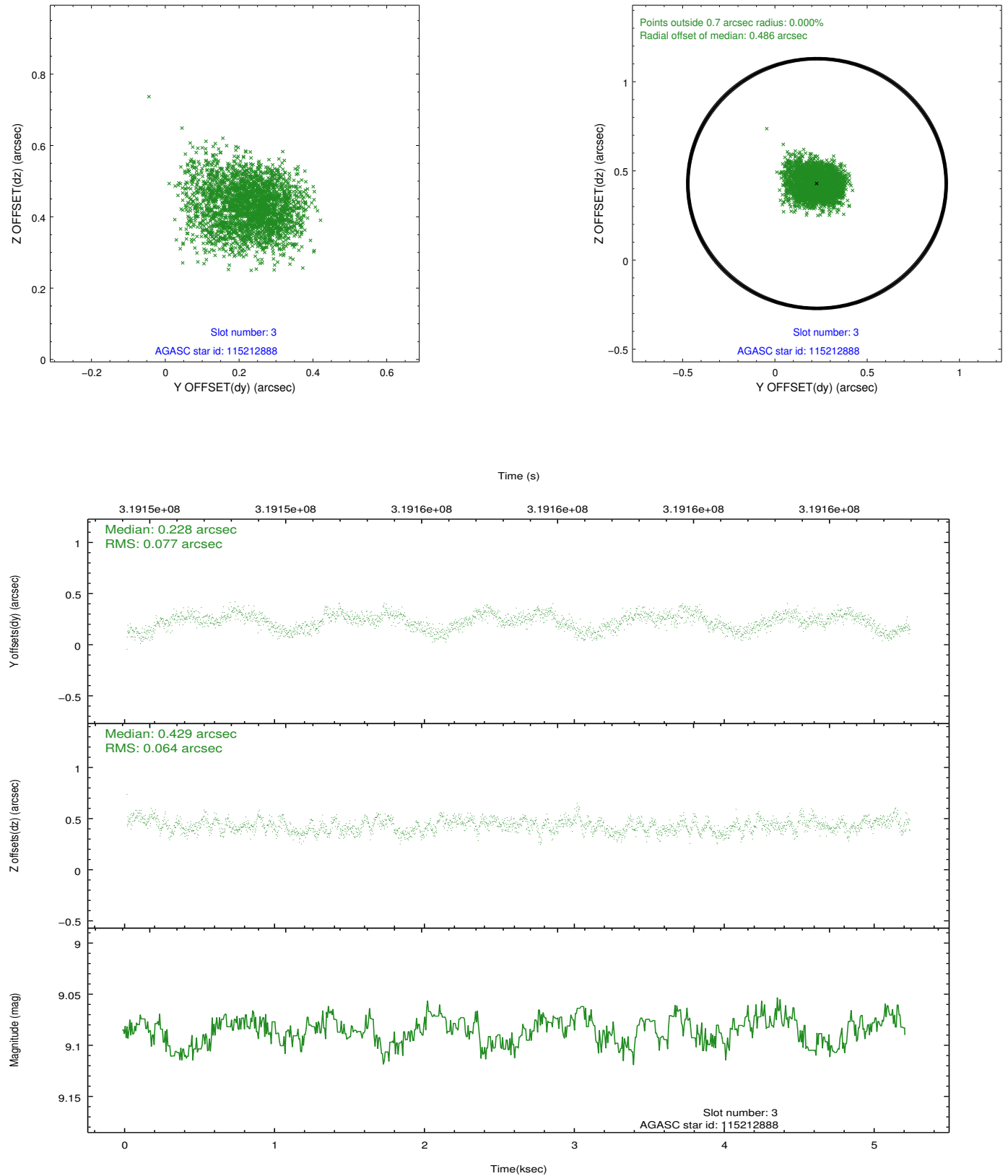


### Slot Statistics

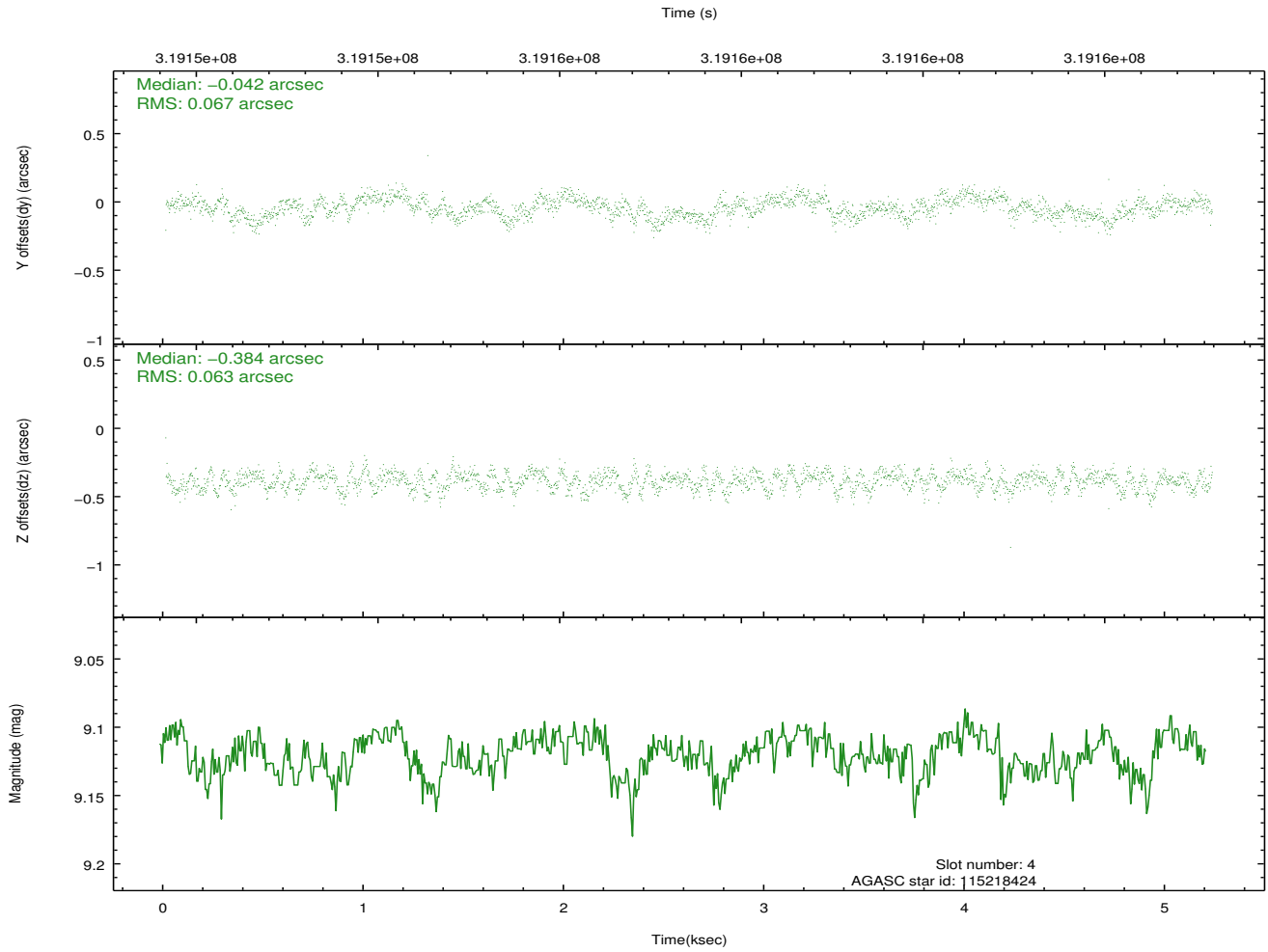
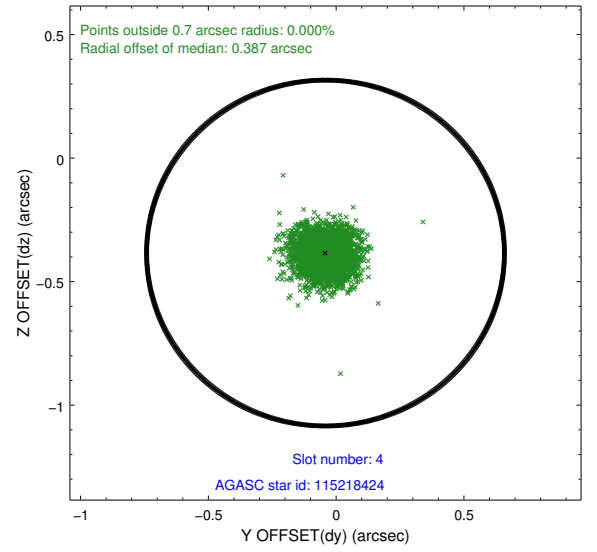
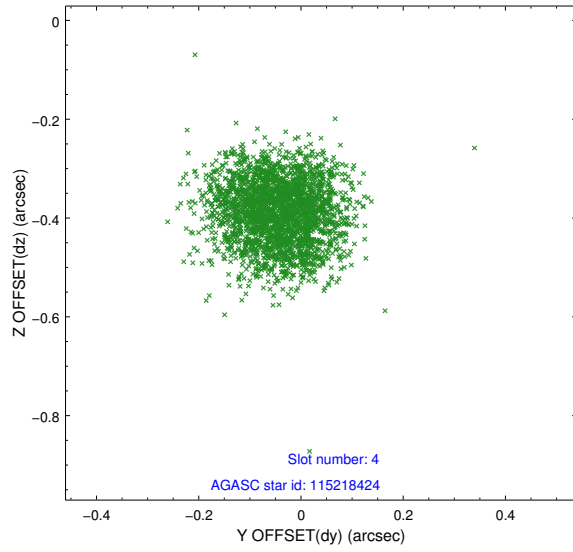
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1274	-0.075	-0.060	0.007	0.011	0.000000	0.000000	-767.91	-1735.12
1	FID	ACIS-S-4	7.19	1274	0.183	0.052	0.005	0.009	0.000000	0.000000	2145.10	172.25
2	FID	ACIS-S-5	7.23	1274	-0.140	0.017	0.006	0.011	0.000000	0.000000	-1819.32	167.24
3	GUIDE	115212888	9.09	2545	0.228	0.429	0.108	0.170	184.962096	14.383434	-1685.24	-378.94
4	GUIDE	115218424	9.12	2546	-0.042	-0.384	0.099	0.151	184.237137	14.820527	-292.87	2249.40
5	GUIDE	115218912	8.28	2548	0.057	-0.117	0.064	0.104	184.400783	14.442830	-1609.80	1589.53
6	GUIDE	189403680	8.82	2546	-0.064	0.156	0.072	0.120	185.171503	15.144043	1097.17	-909.34
7	GUIDE	189416408	8.44	2548	-0.166	-0.081	0.066	0.105	184.461757	15.019223	475.64	1519.93

## 2.4 Star Slots

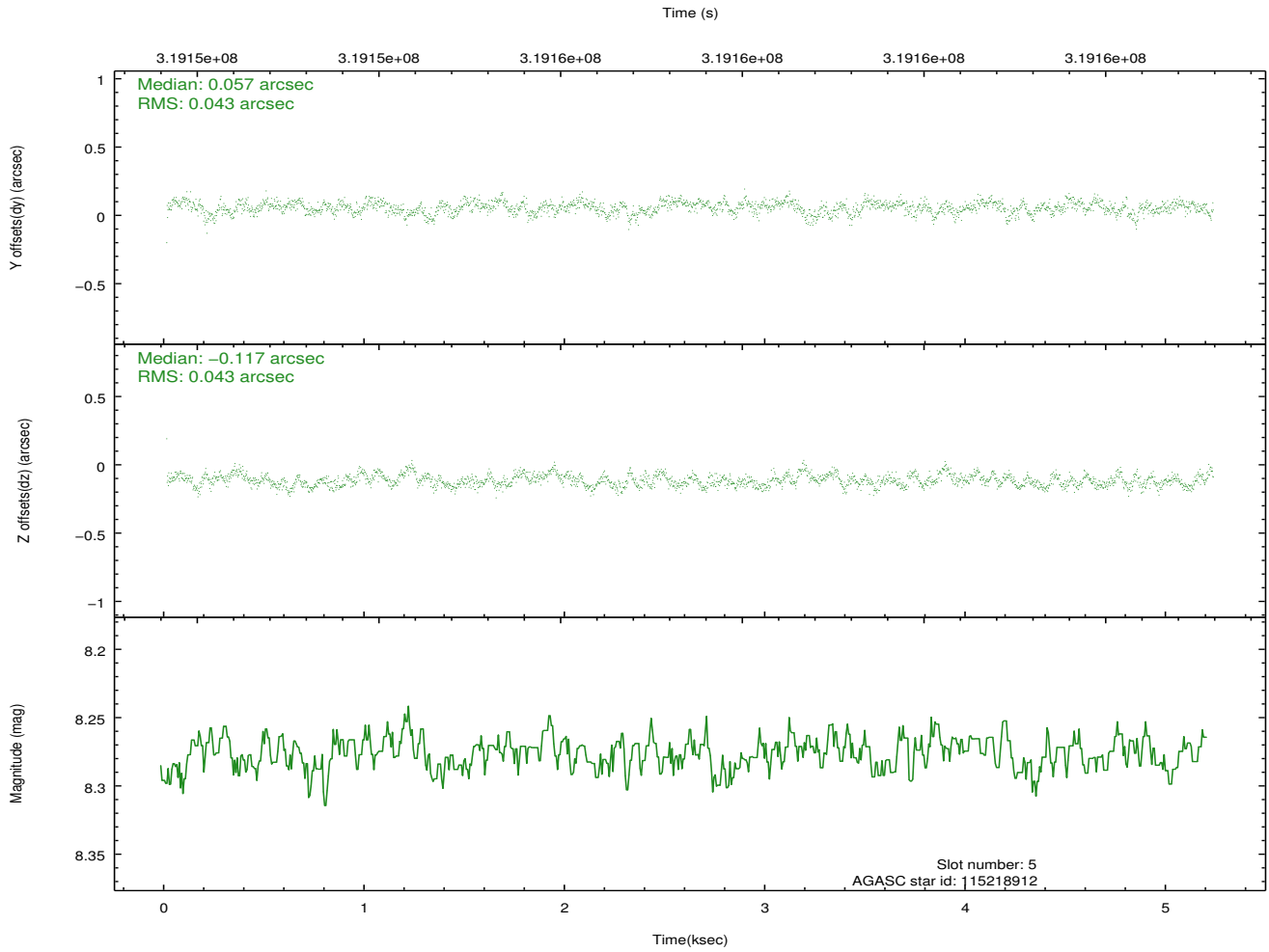
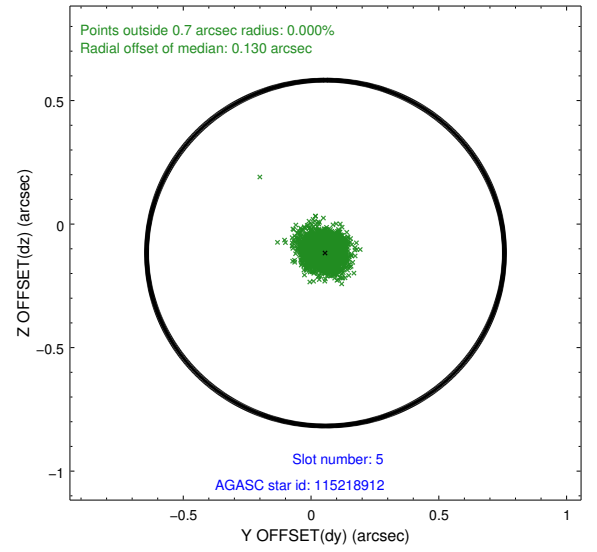
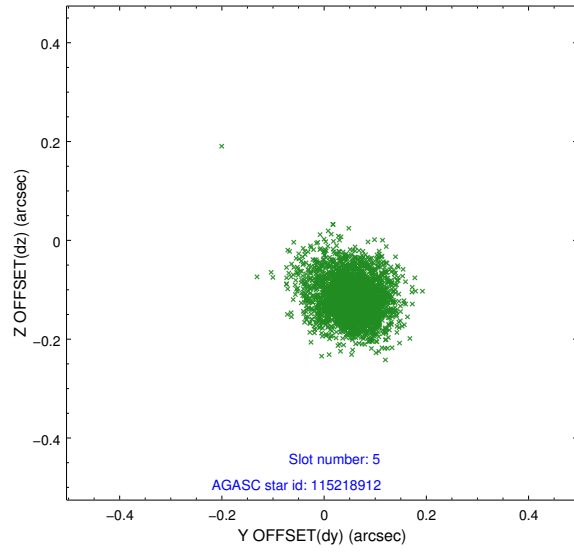
### 2.4.1 Slot 3



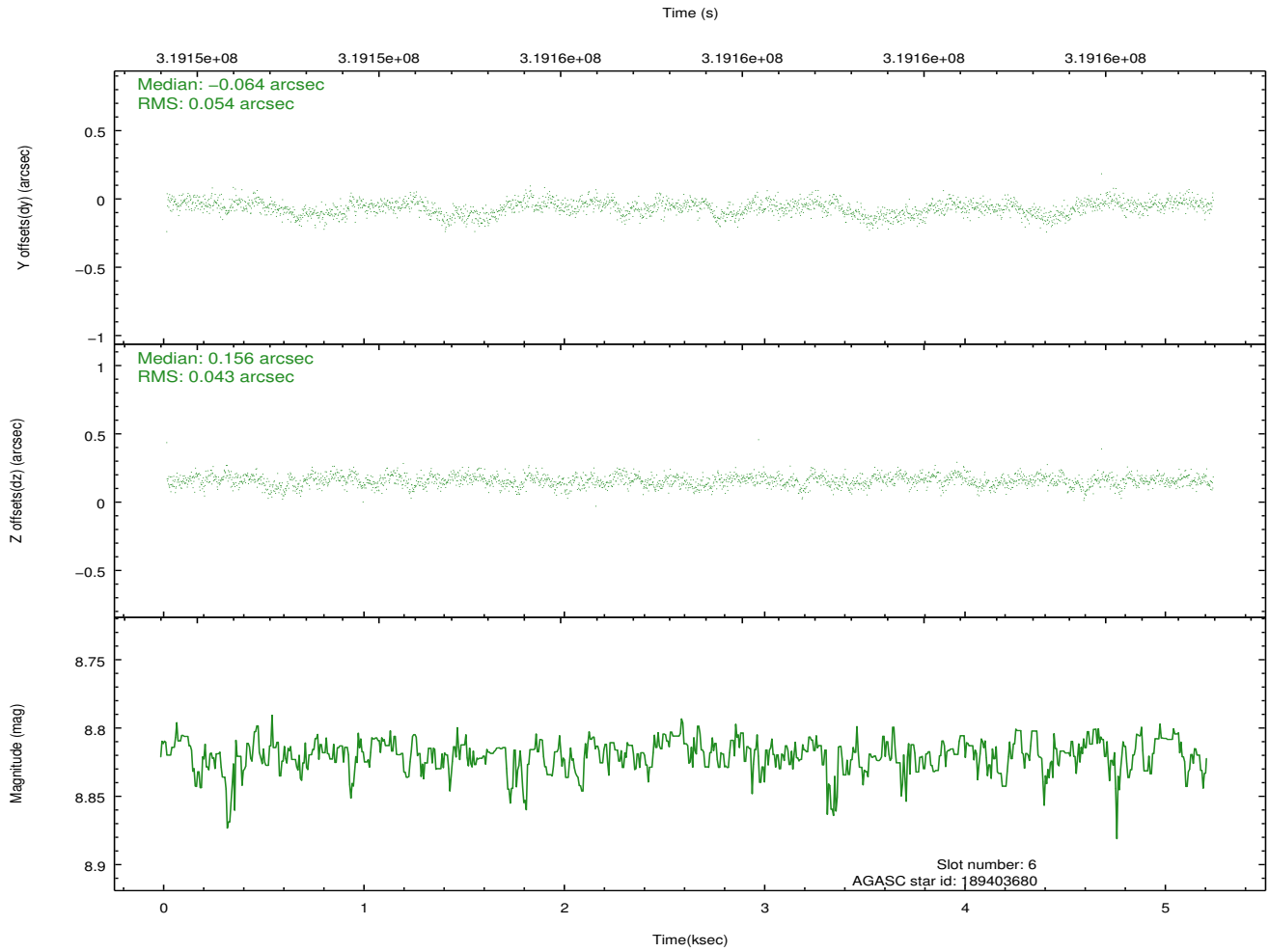
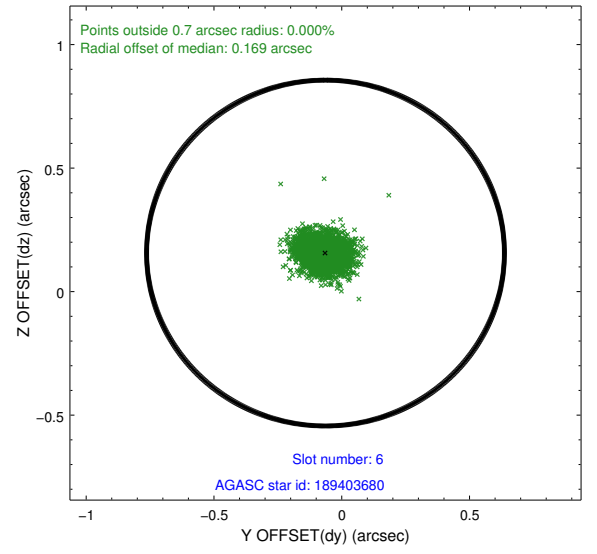
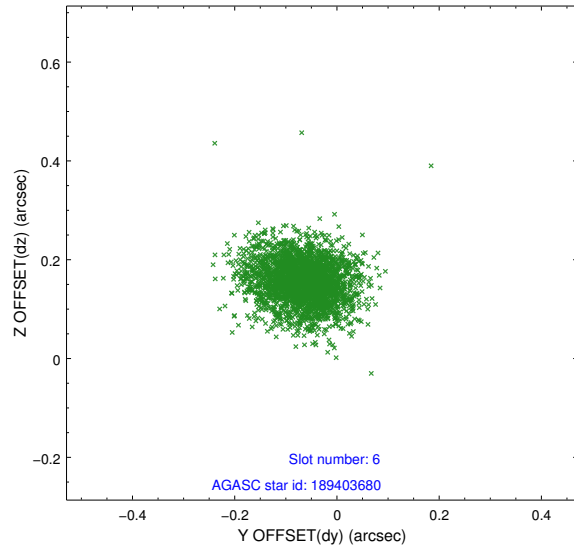
## 2.4.2 Slot 4



### 2.4.3 Slot 5

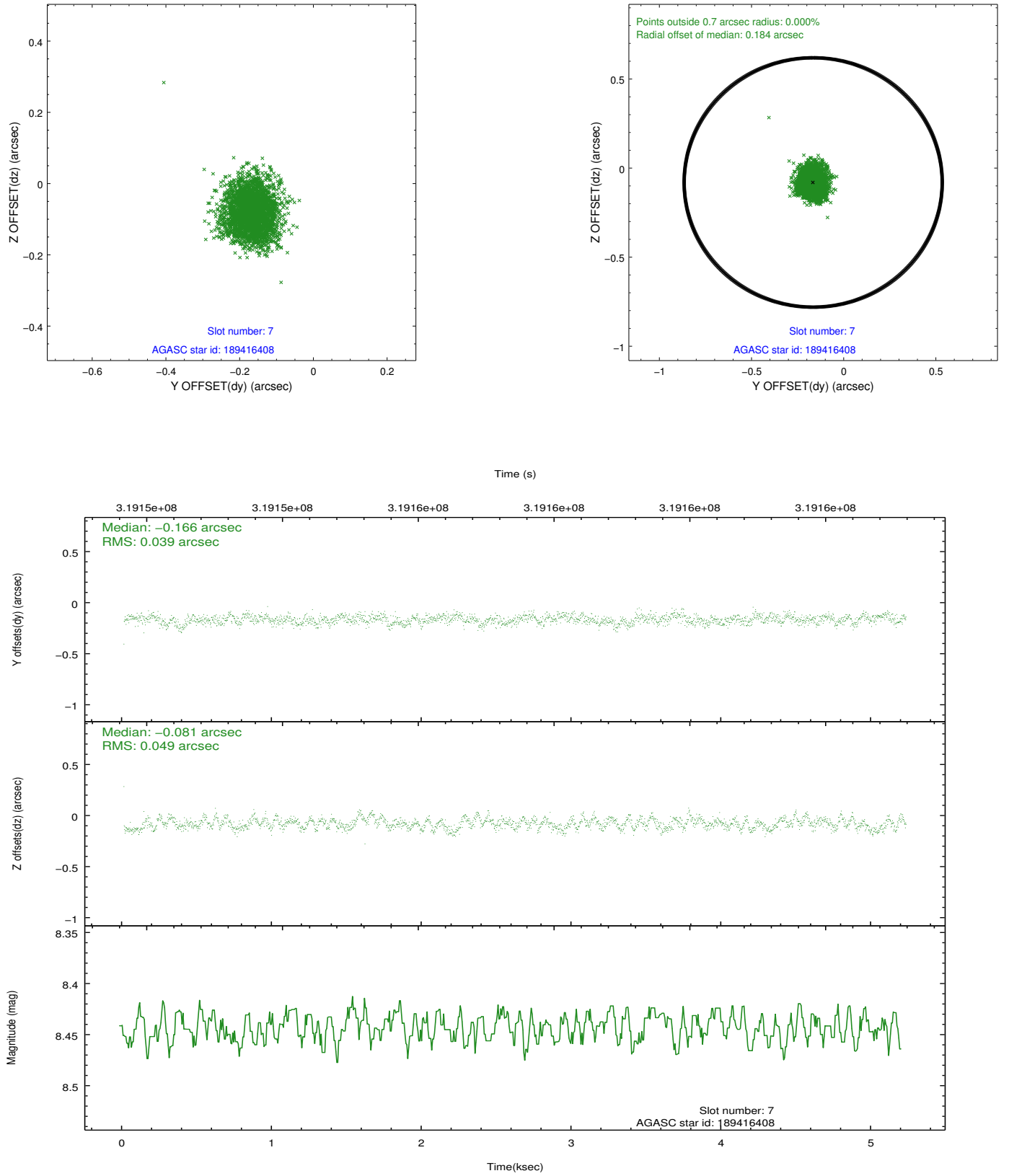


## 2.4.4 Slot 6



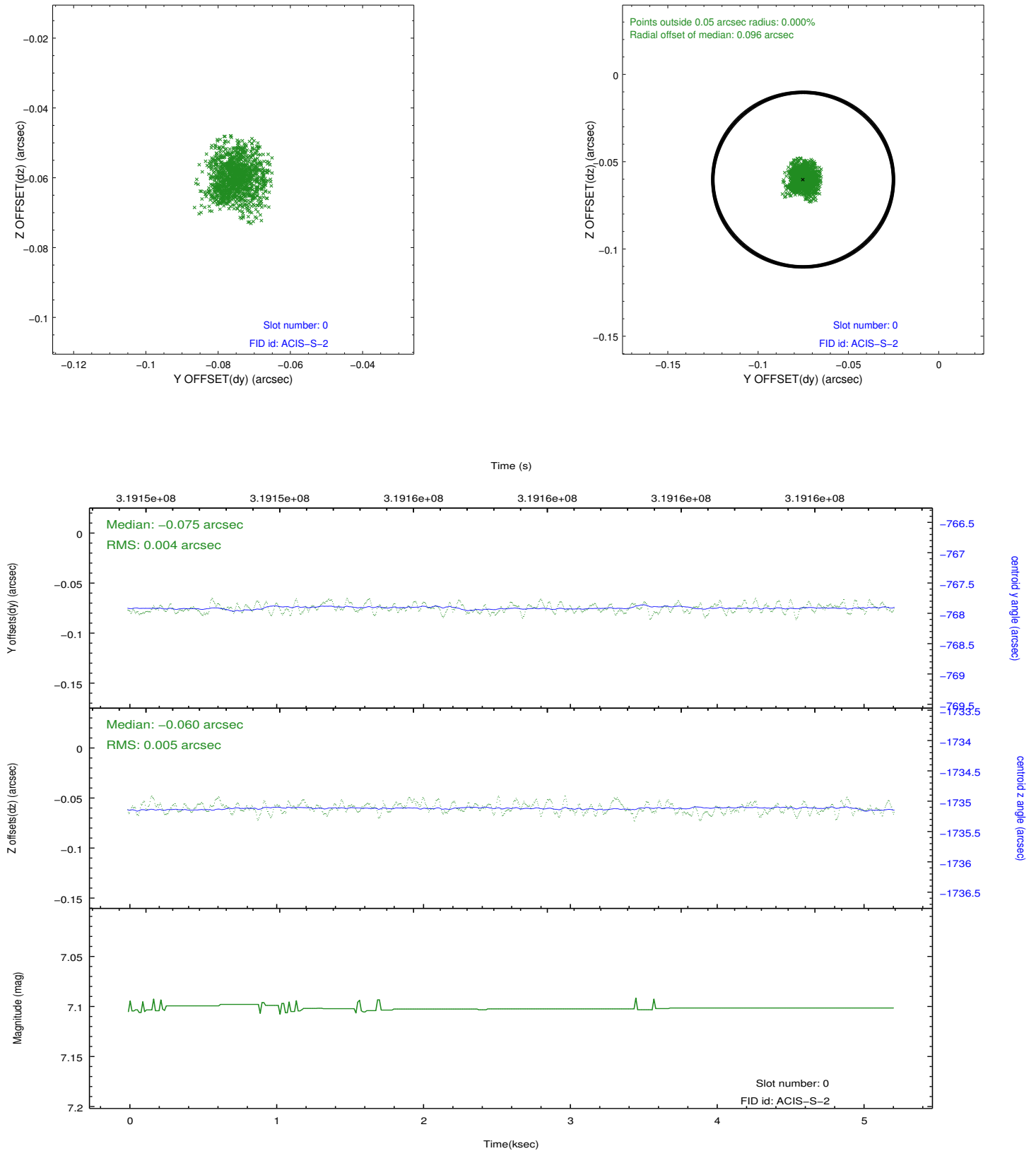


## 2.4.5 Slot 7

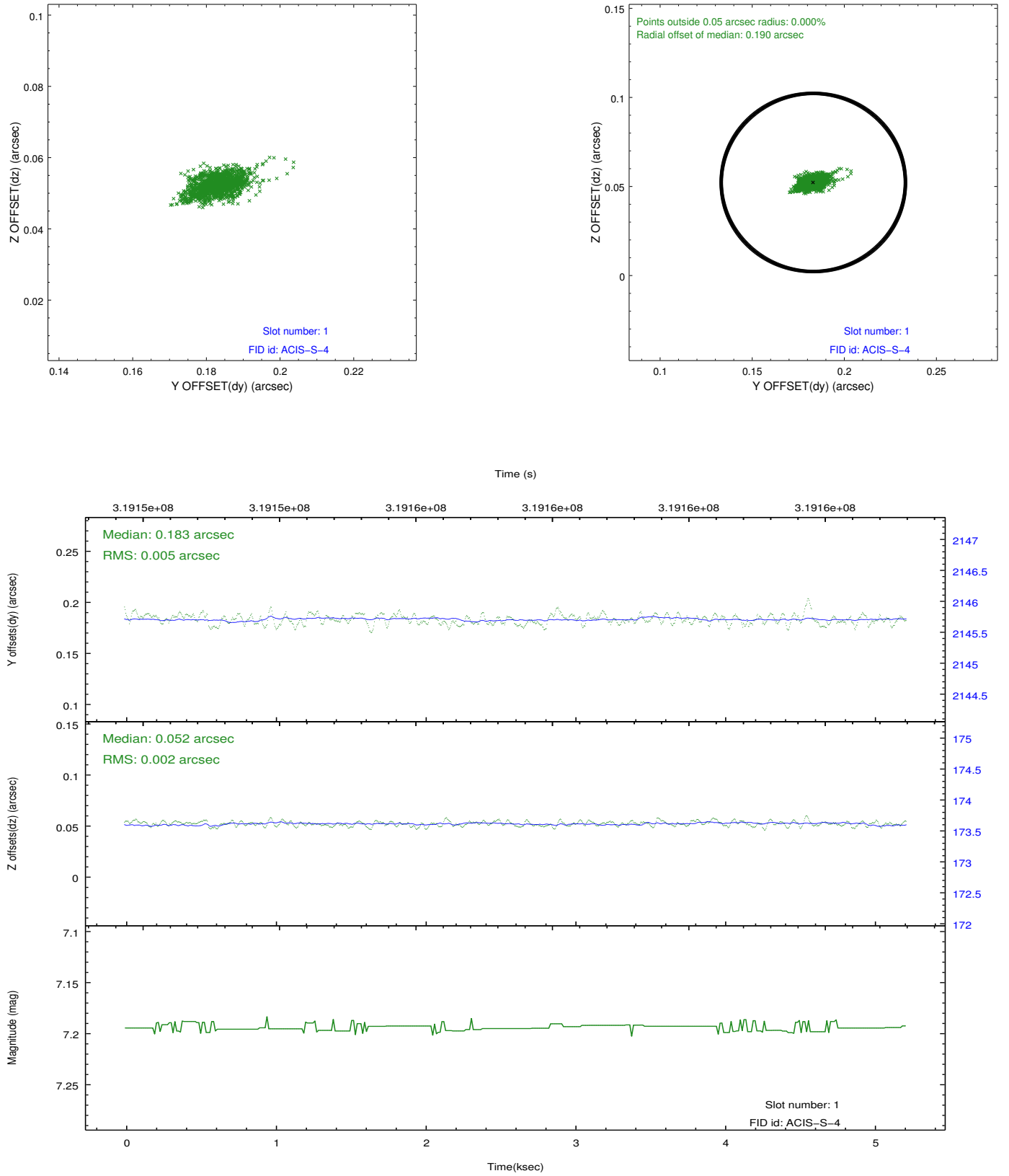


## 2.5 FID Slots

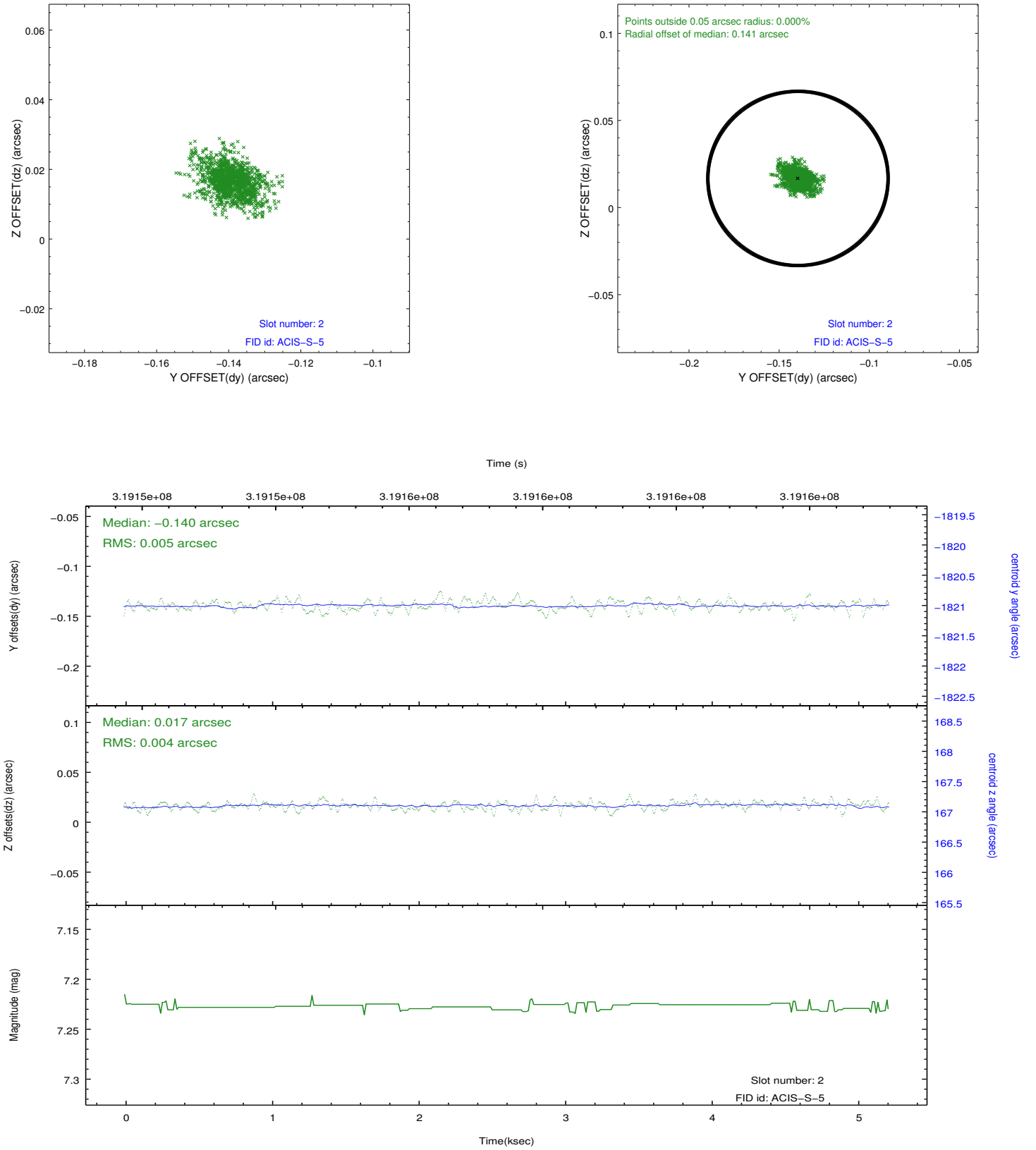
### 2.5.1 Slot 0



## 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)	2012.05.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.80319998

### A.2 Comments

Joint proposal: Spitzer. This observations is part of a raster scan.