

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8083 - L2 Version 2  
Chandra X-Ray Center

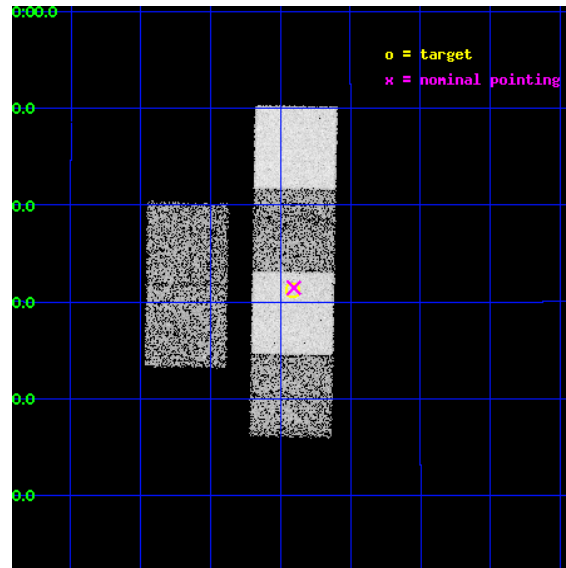
L2 Processing Date : May 10 2012

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# 1 Front

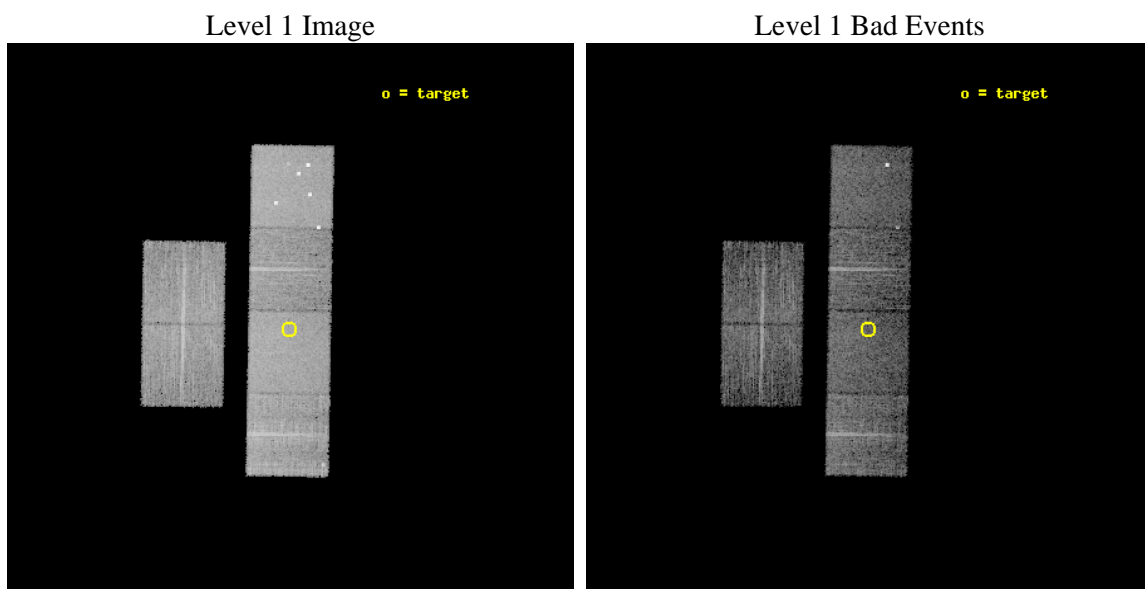
seq_num	900624	Sequence number
obs_id	8083	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	1695	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	189.22875	Observer's specified target RA [deg]
dec_targ	12.520139	Observer's specified target Dec [deg]
ra_nom	189.22600881917	Nominal RA [deg]
dec_nom	12.524338314345	Nominal Dec [deg]
roll_nom	90.976932581843	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5158.3999808431	Sum of GTIs [s]
livetime	5093.0812142701	Livetime [s]
ontime2	5155.1589604616	Sum of GTIs [s]
ontime3	5158.3999808431	Sum of GTIs [s]
ontime5	5158.3999808431	Sum of GTIs [s]
ontime6	5158.3999808431	Sum of GTIs [s]
ontime7	5158.3999808431	Sum of GTIs [s]
ontime8	5151.9179599285	Sum of GTIs [s]
l2events	83463	Number of level 2 events



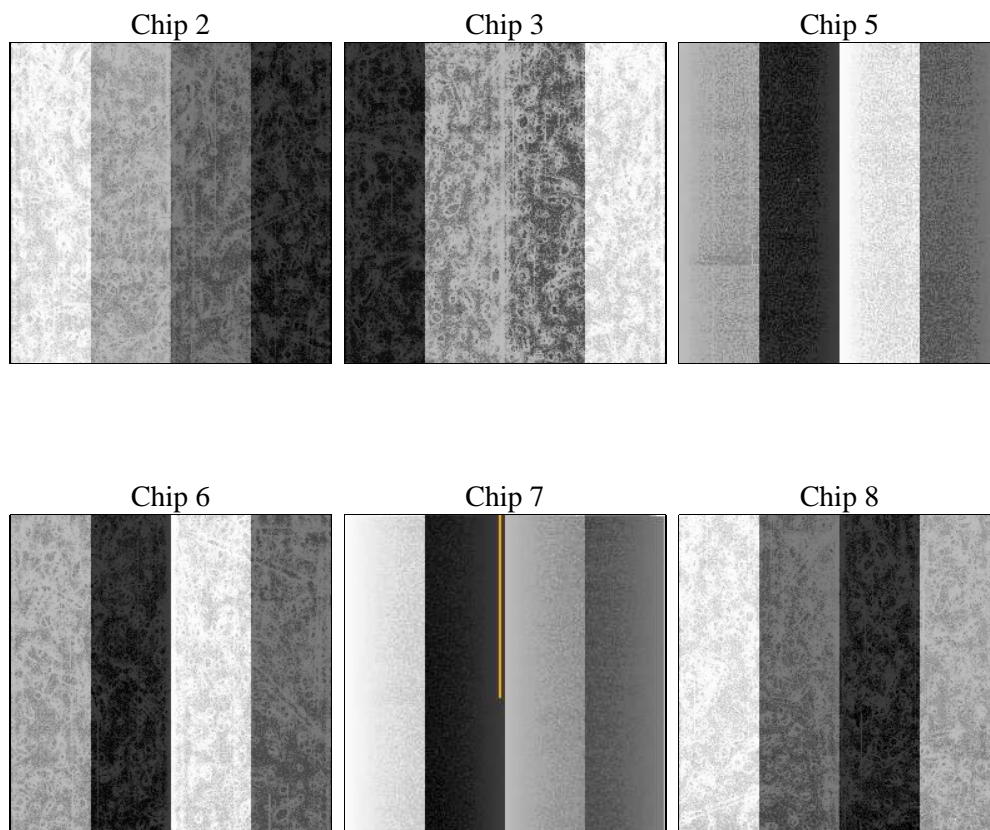
## 2 OBI

### 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	5155.1589604616	Sum of GTIs [s]
date	2012-05-10T08:29:40	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	5158.3999808431	Sum of GTIs [s]
			ontime7	5158.3999808431	Sum of GTIs [s]
			ontime8	5151.9179599285	Sum of GTIs [s]
			l1events	375148	Number of level 1 events

### 2.1.4 Events

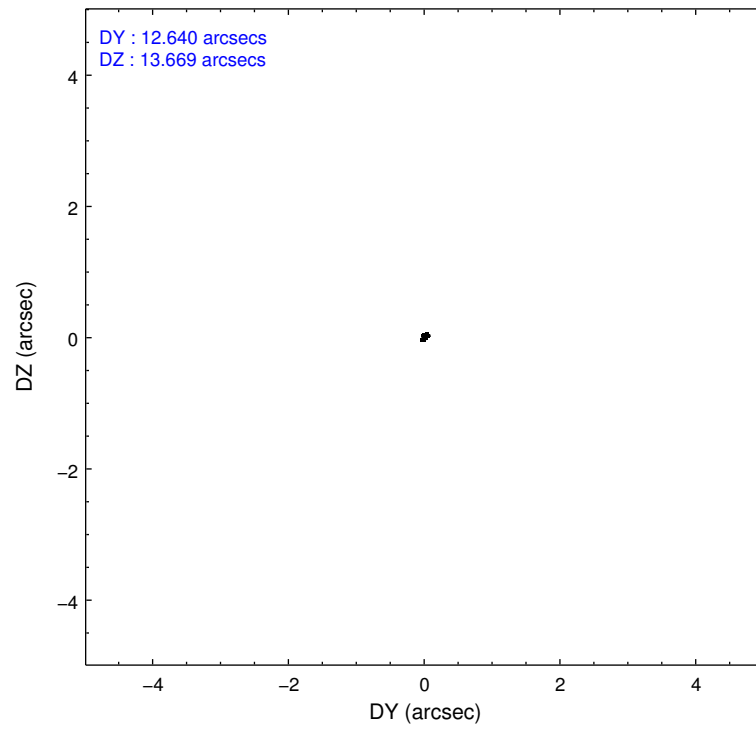
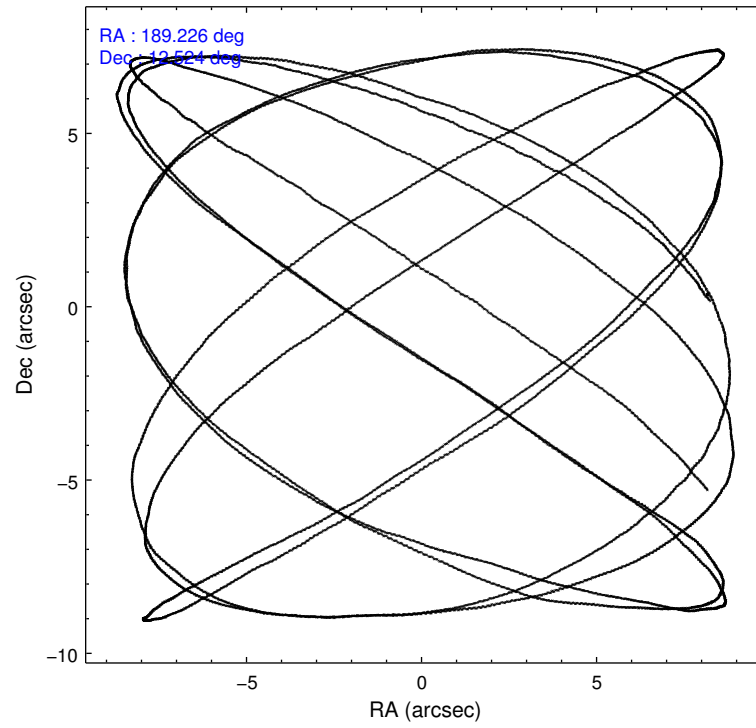
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	52899	49069	84974	50141	70164	67901	grade 0 events	2443	2697	6771	2534	2375	4954
rejected events	47042	43153	43932	43870	41179	52801		4%	5%	7%	5%	3%	7%
rejected %	88%	87%	51%	87%	58%	77%	grade 1 events	37	27	100	31	71	58
								0%	0%	0%	0%	0%	0%
							grade 2 events	1295	1134	11336	1343	6075	3349
								2%	2%	13%	2%	8%	4%
							grade 3 events	566	567	1315	535	2546	1407
								1%	1%	1%	1%	3%	2%
							grade 4 events	551	523	1229	558	2430	1394
								1%	1%	1%	1%	3%	2%
							grade 5 events	2033	2379	5707	2362	6620	3127
								3%	4%	6%	4%	9%	4%
							grade 6 events	1009	996	20413	1303	15576	3998
								1%	2%	24%	2%	22%	5%
							grade 7 events	44965	40746	38103	41475	34471	49614
								85%	83%	44%	82%	49%	73%

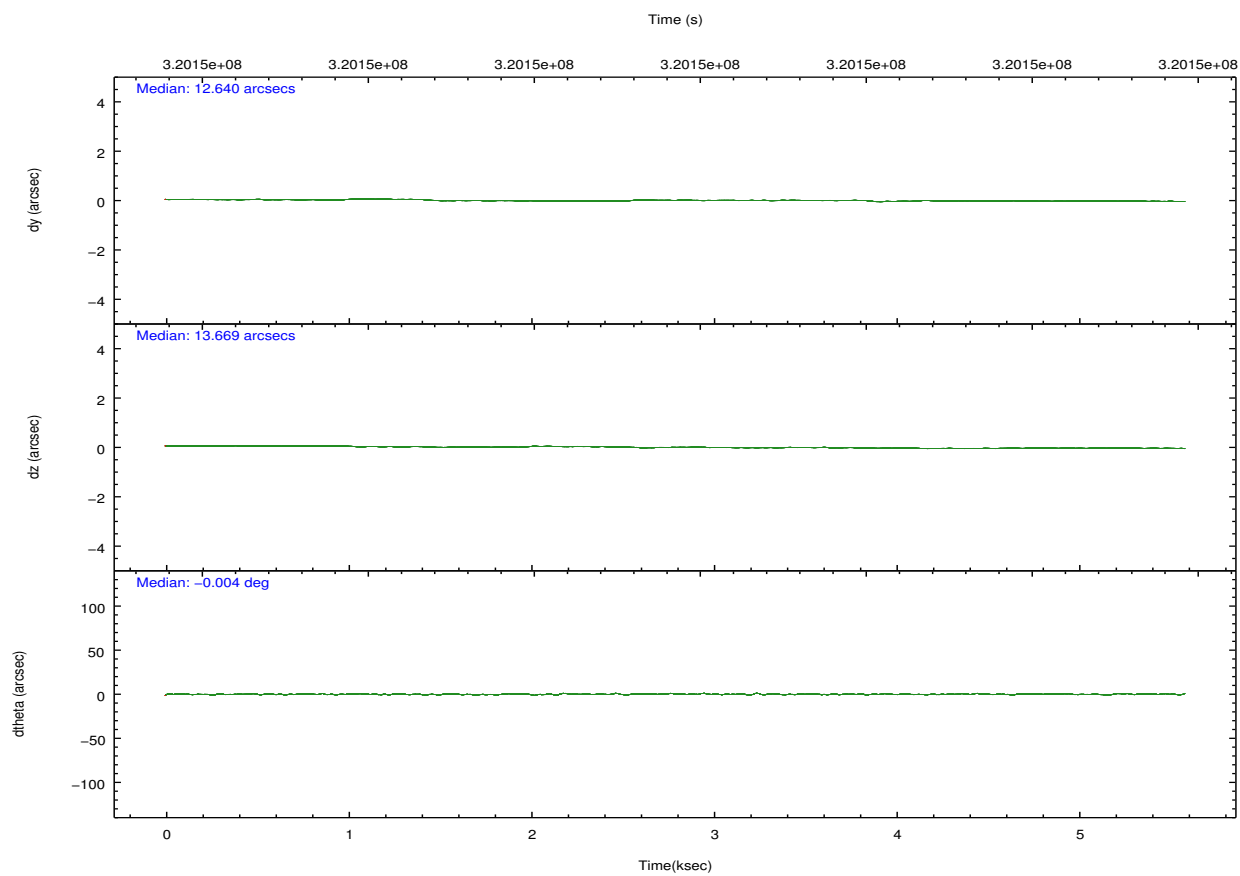
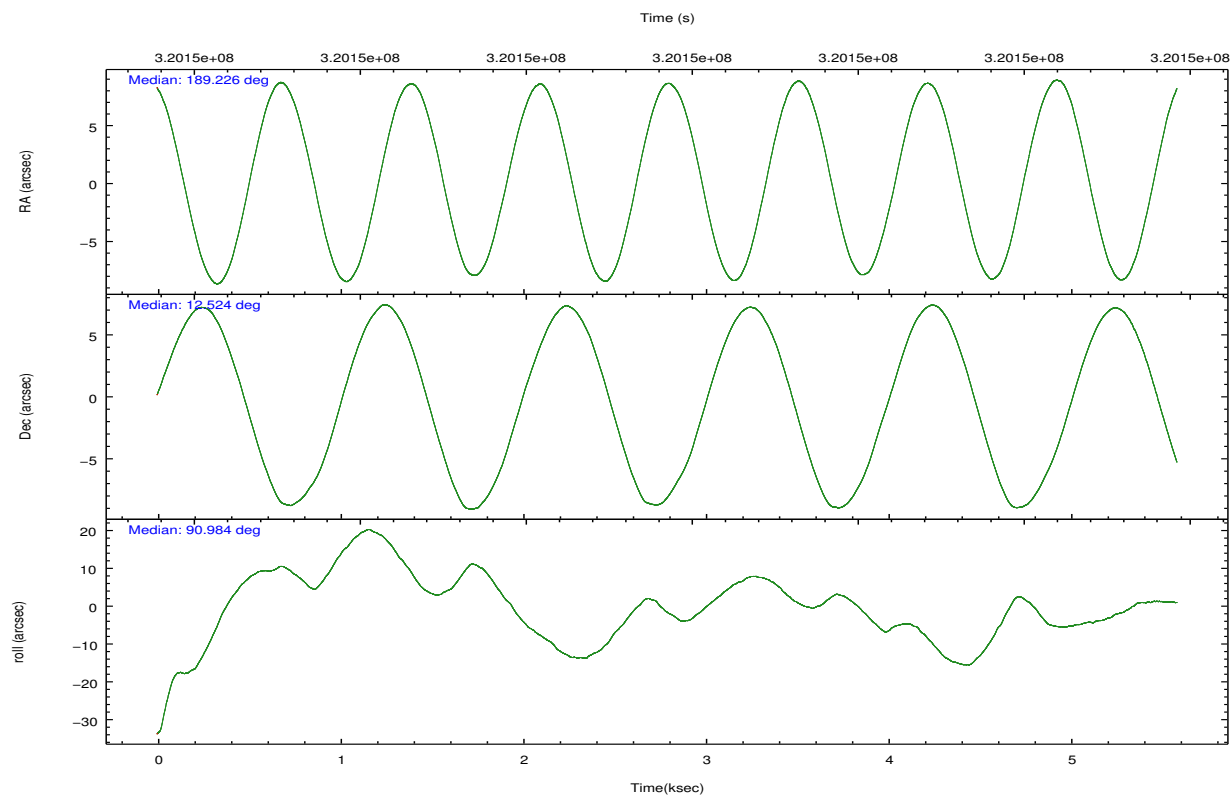


## 2.2 Compared Parameters

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	189.240812	189.2260088191702	CCD I2 on	O1	Y
[deg] Pointing Dec	12.500965	12.52433831434501	CCD I3 on	O2	Y
[deg] Pointing Roll	90.817108	90.97693258184327	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)	320148239.184000	320147834.65168	CCD S5 on	N	N
Observation start date	2008-02-23T10:02:54	2008-02-23T09:57:14	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	320153639.184000	320153888.30197	On-chip summing requested	N	N
Observation end date	2008-02-23T11:32:54	2008-02-23T11:38:08	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



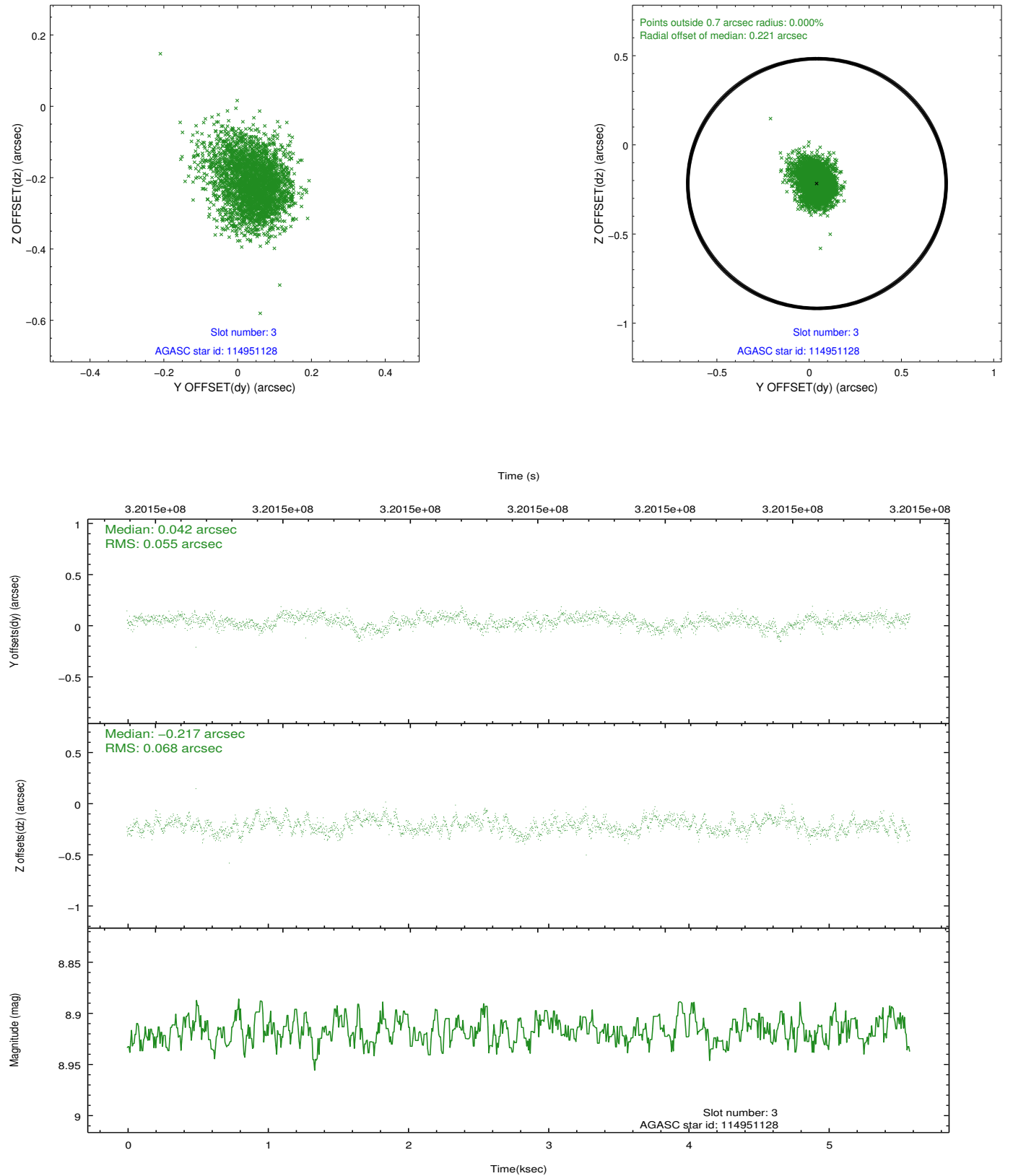


### Slot Statistics

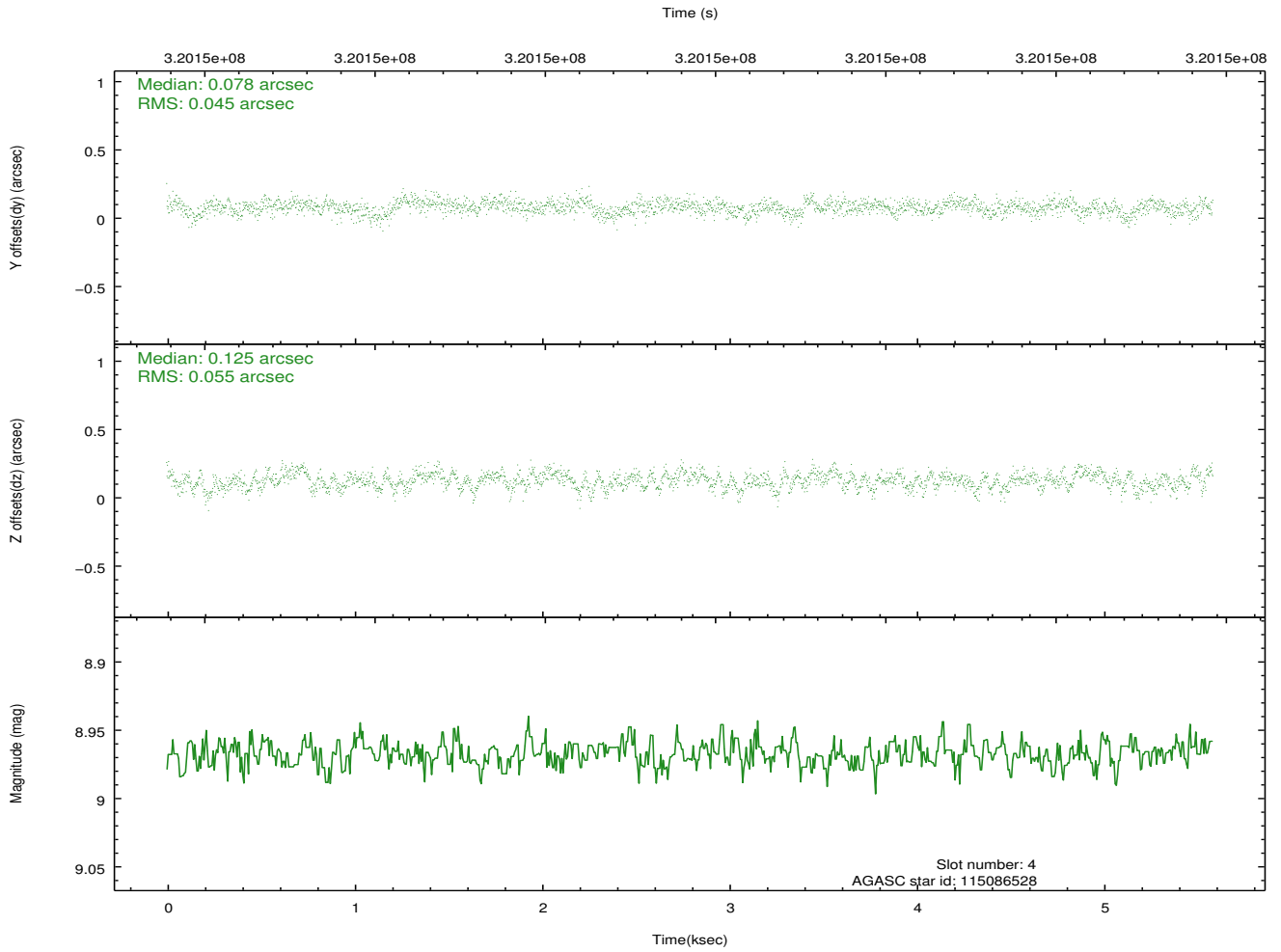
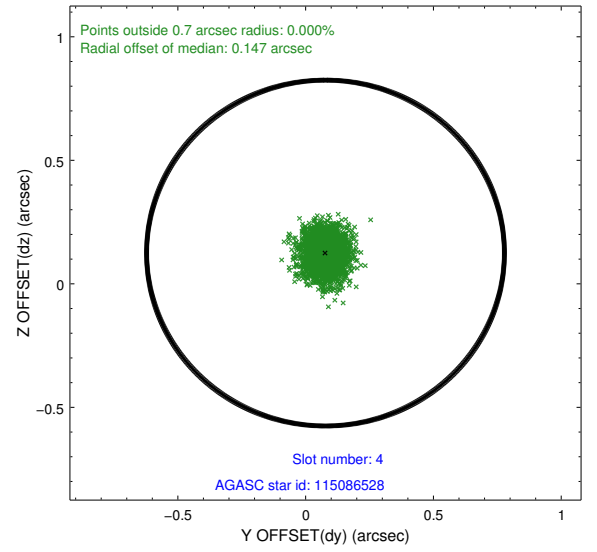
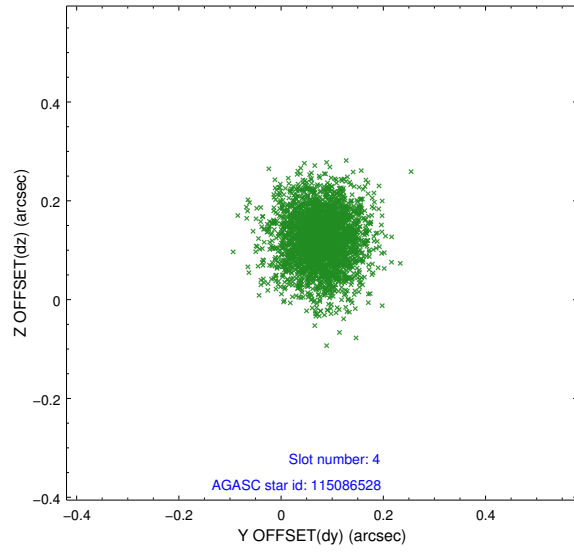
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1363	-0.031	-0.057	0.006	0.011	0.000000	0.000000	-765.58	-1735.08
1	FID	ACIS-S-4	7.19	1362	0.143	0.030	0.006	0.011	0.000000	0.000000	2147.38	172.39
2	FID	ACIS-S-5	7.23	1363	-0.143	0.035	0.006	0.011	0.000000	0.000000	-1817.16	167.28
3	GUIDE	114951128	8.92	2724	0.042	-0.217	0.092	0.150	188.719863	12.459246	-122.63	1832.76
4	GUIDE	115086528	8.97	2722	0.078	0.125	0.075	0.125	189.286111	12.182164	-1149.91	-142.22
5	GUIDE	115349088	9.28	2683	-0.106	-0.142	0.141	0.218	188.777694	12.938966	1600.88	1602.20
6	GUIDE	115481912	8.59	2724	0.052	0.144	0.125	0.172	189.408526	12.669552	599.20	-597.07
7	GUIDE	115482272	8.16	2724	-0.071	0.096	0.062	0.098	189.342268	12.983616	1732.49	-380.88

## 2.4 Star Slots

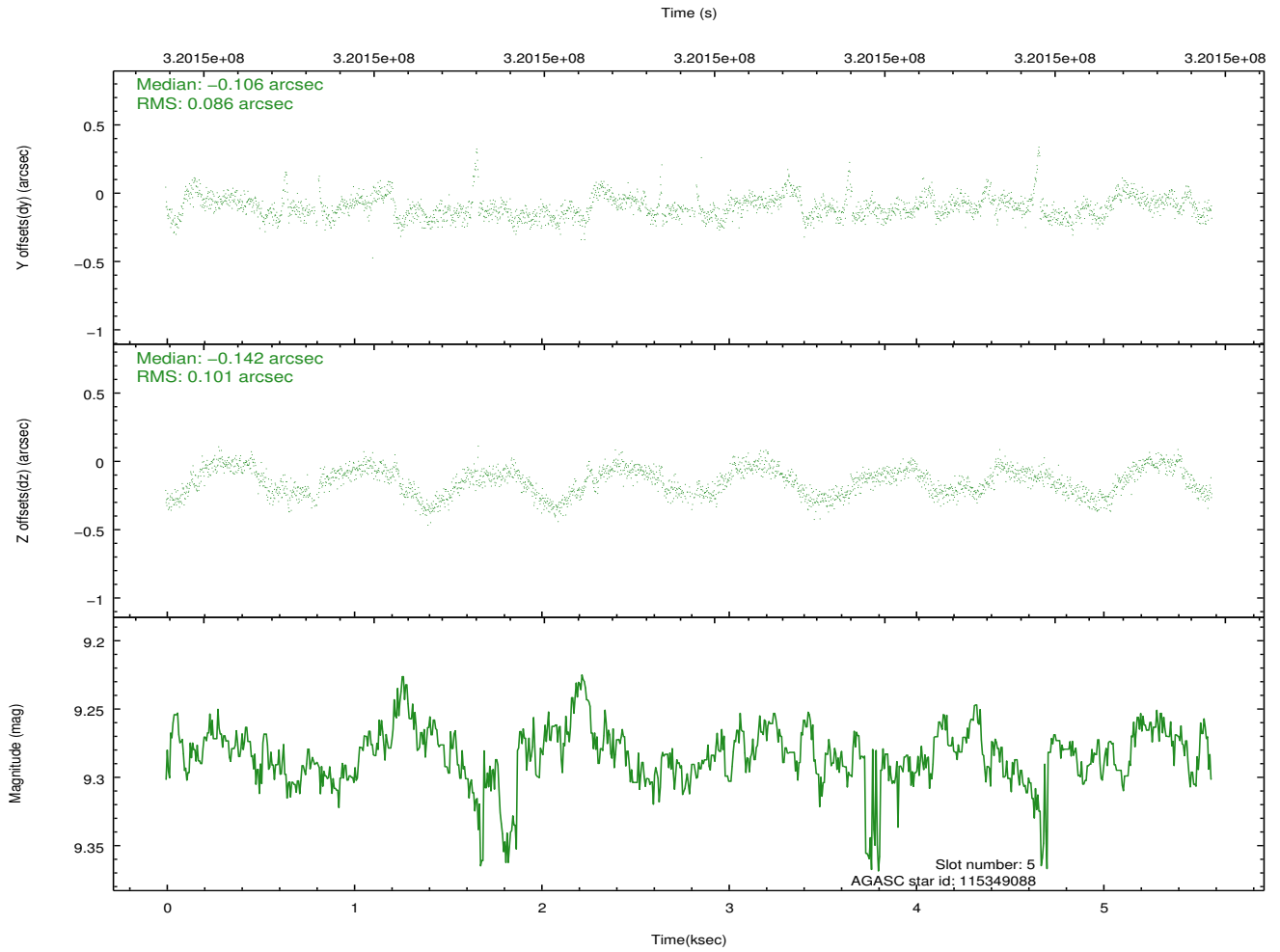
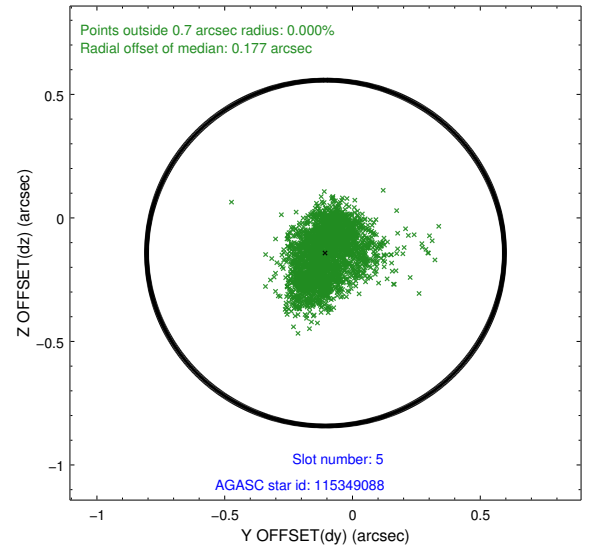
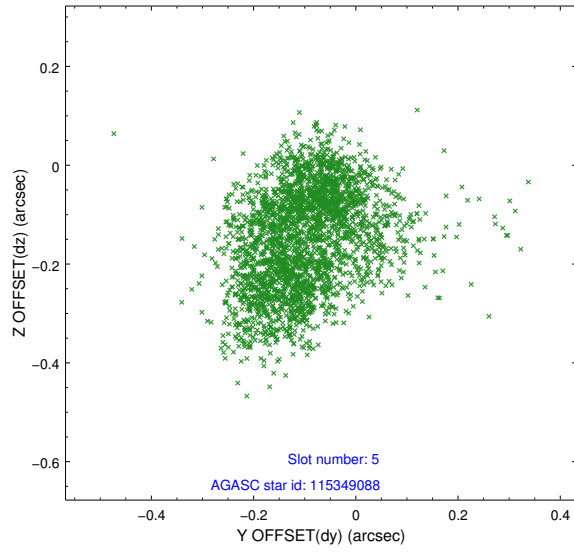
### 2.4.1 Slot 3



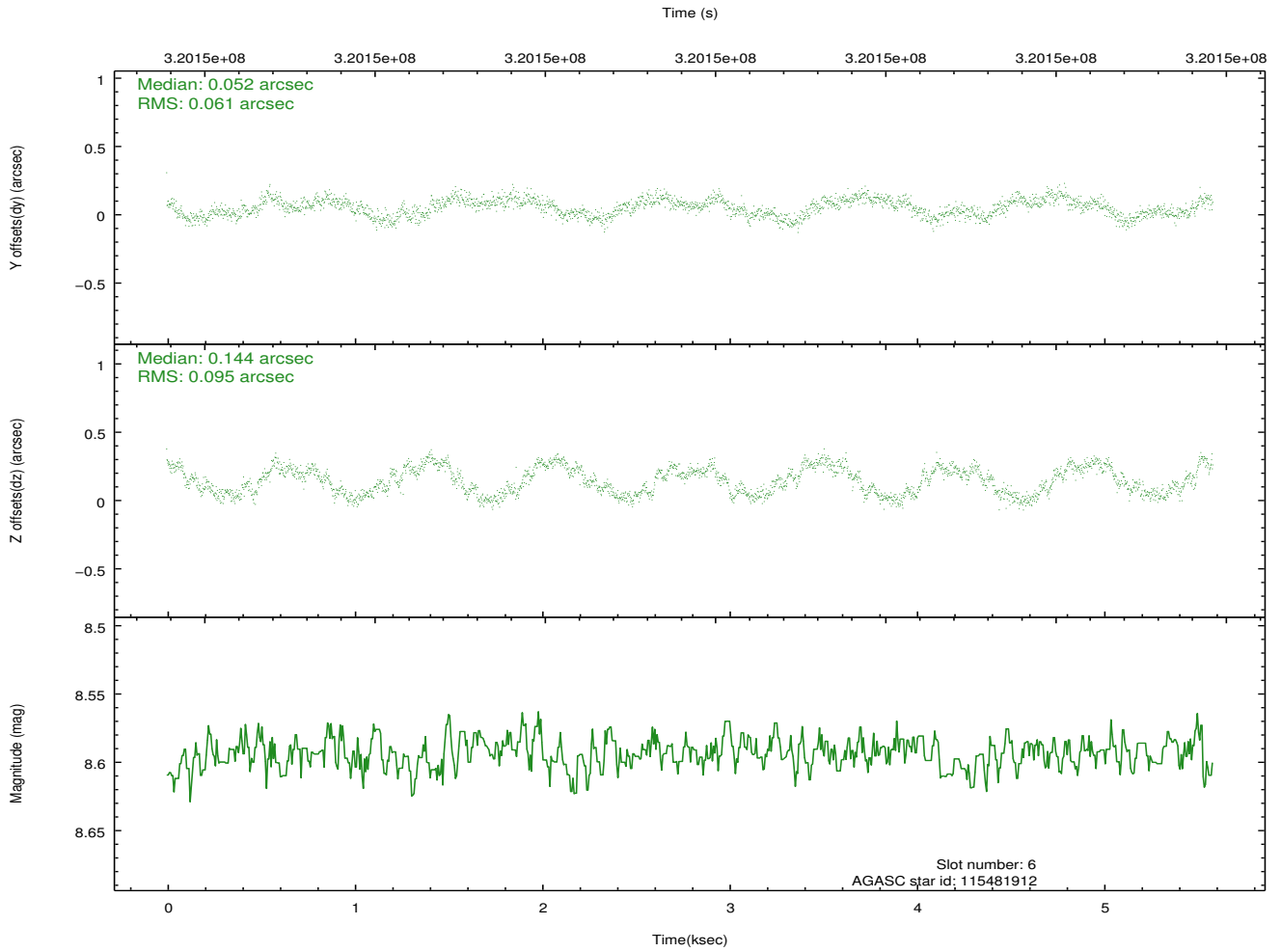
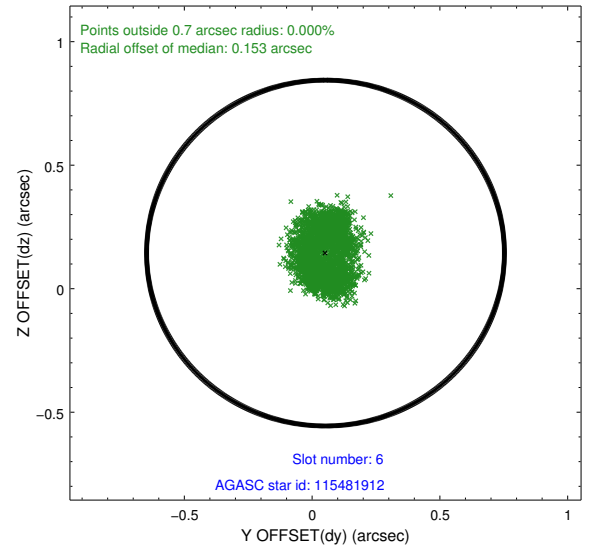
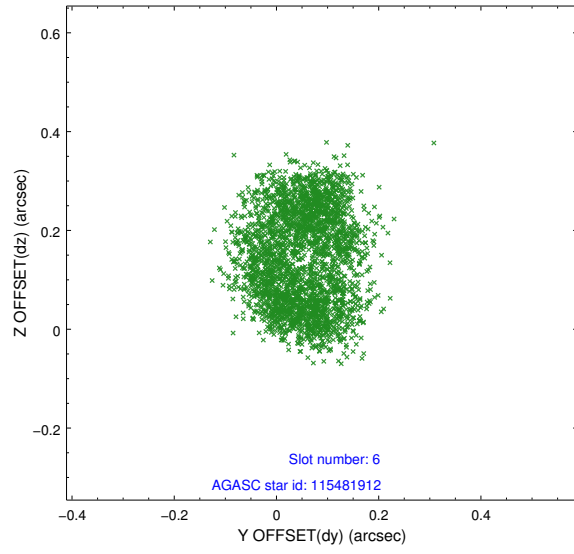
## 2.4.2 Slot 4



### 2.4.3 Slot 5

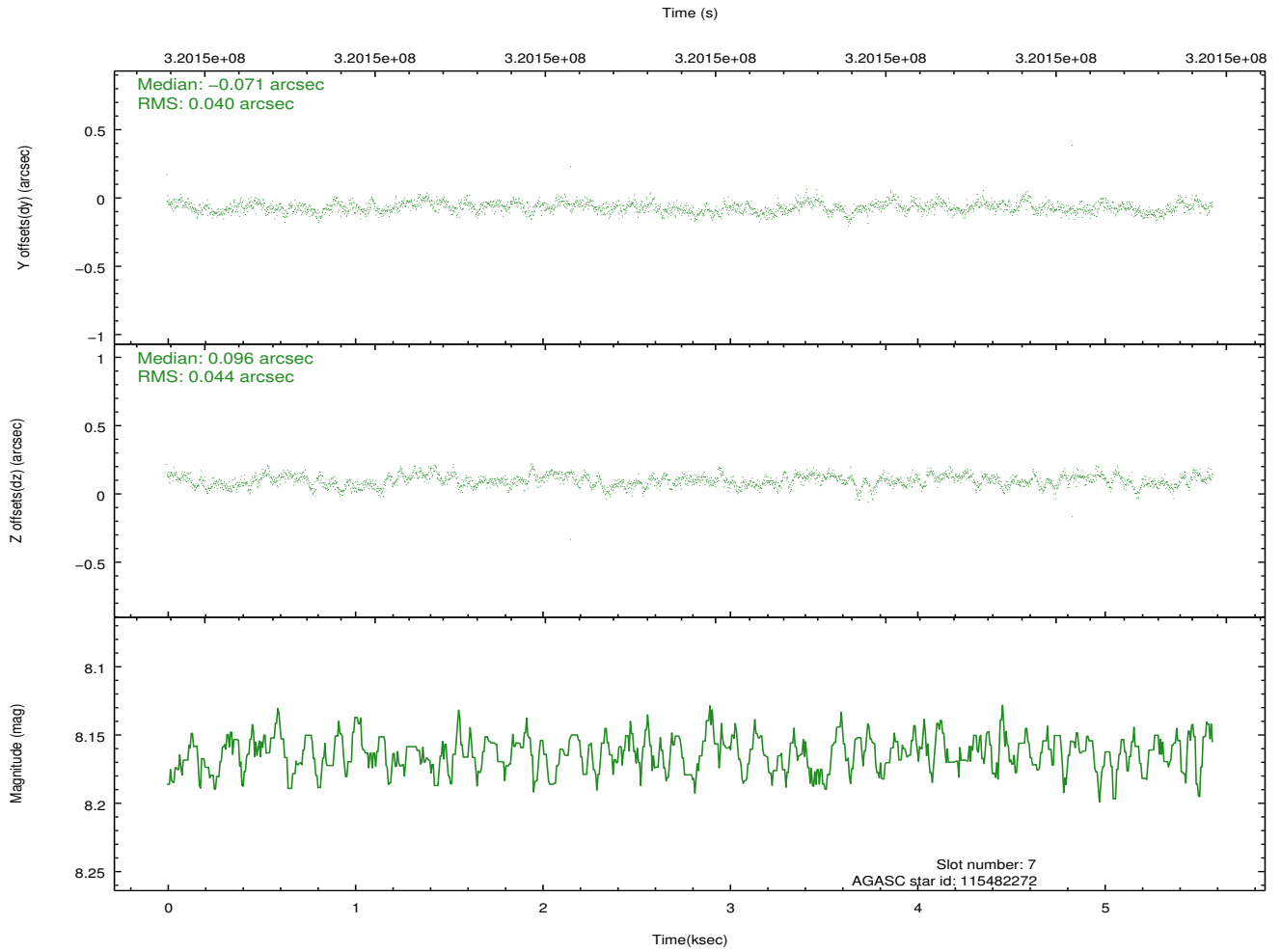
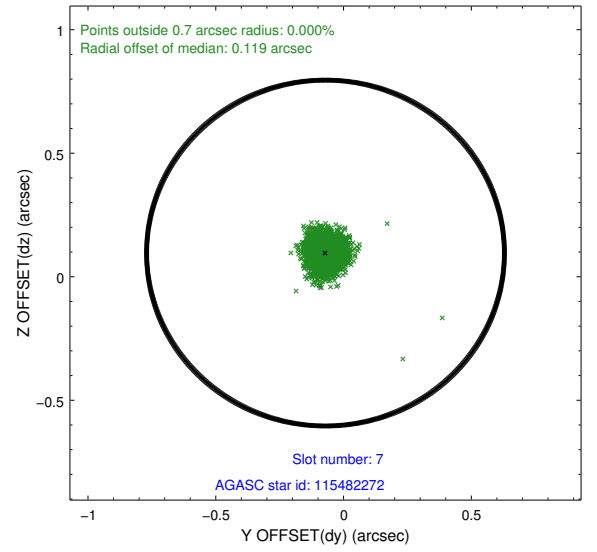
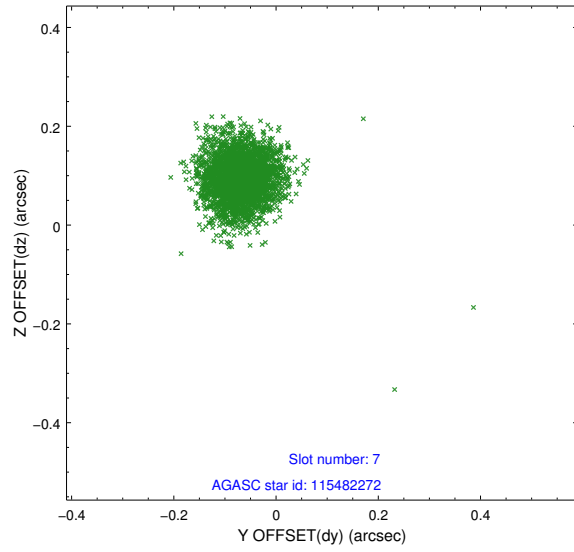


## 2.4.4 Slot 6



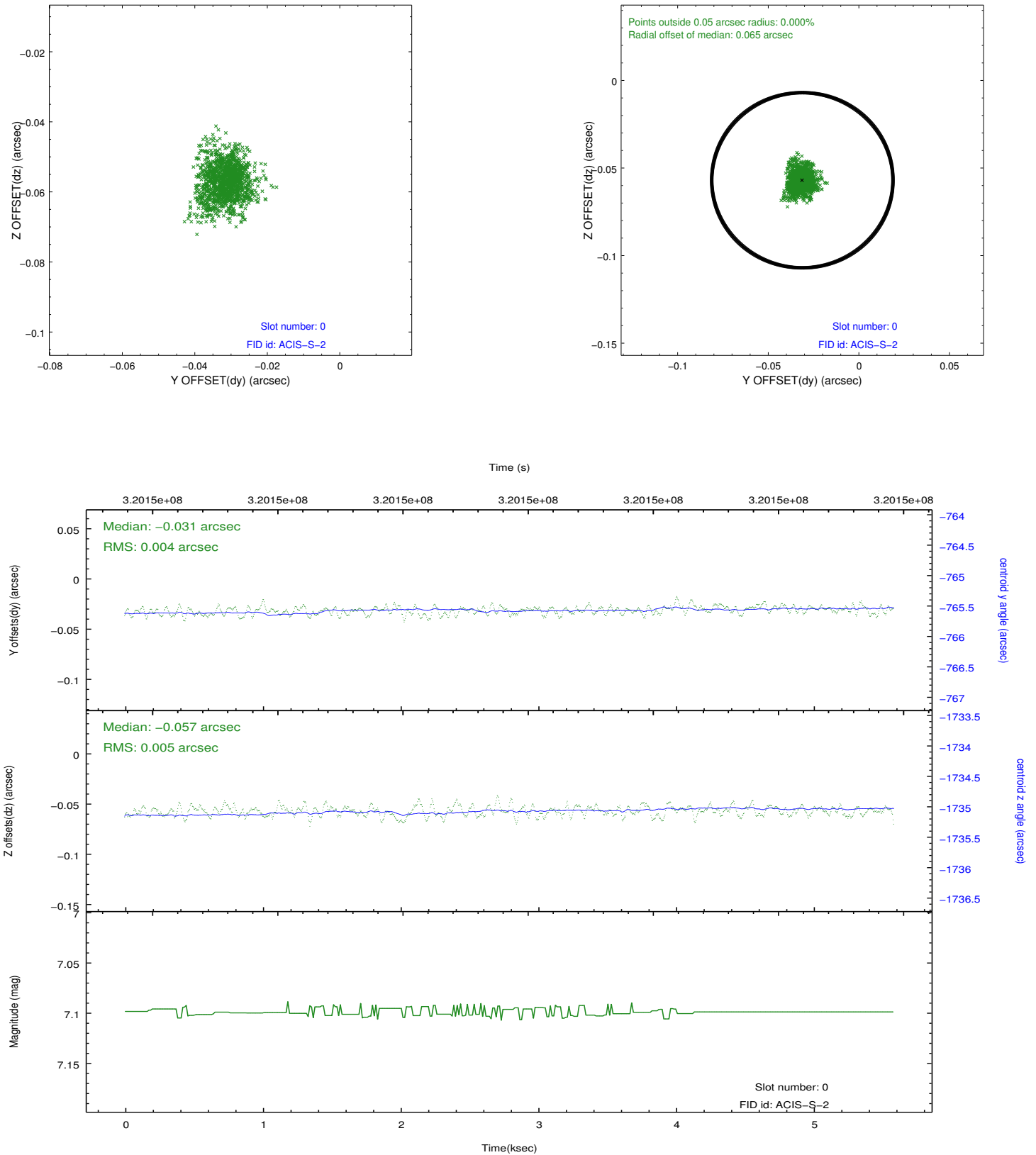


## 2.4.5 Slot 7

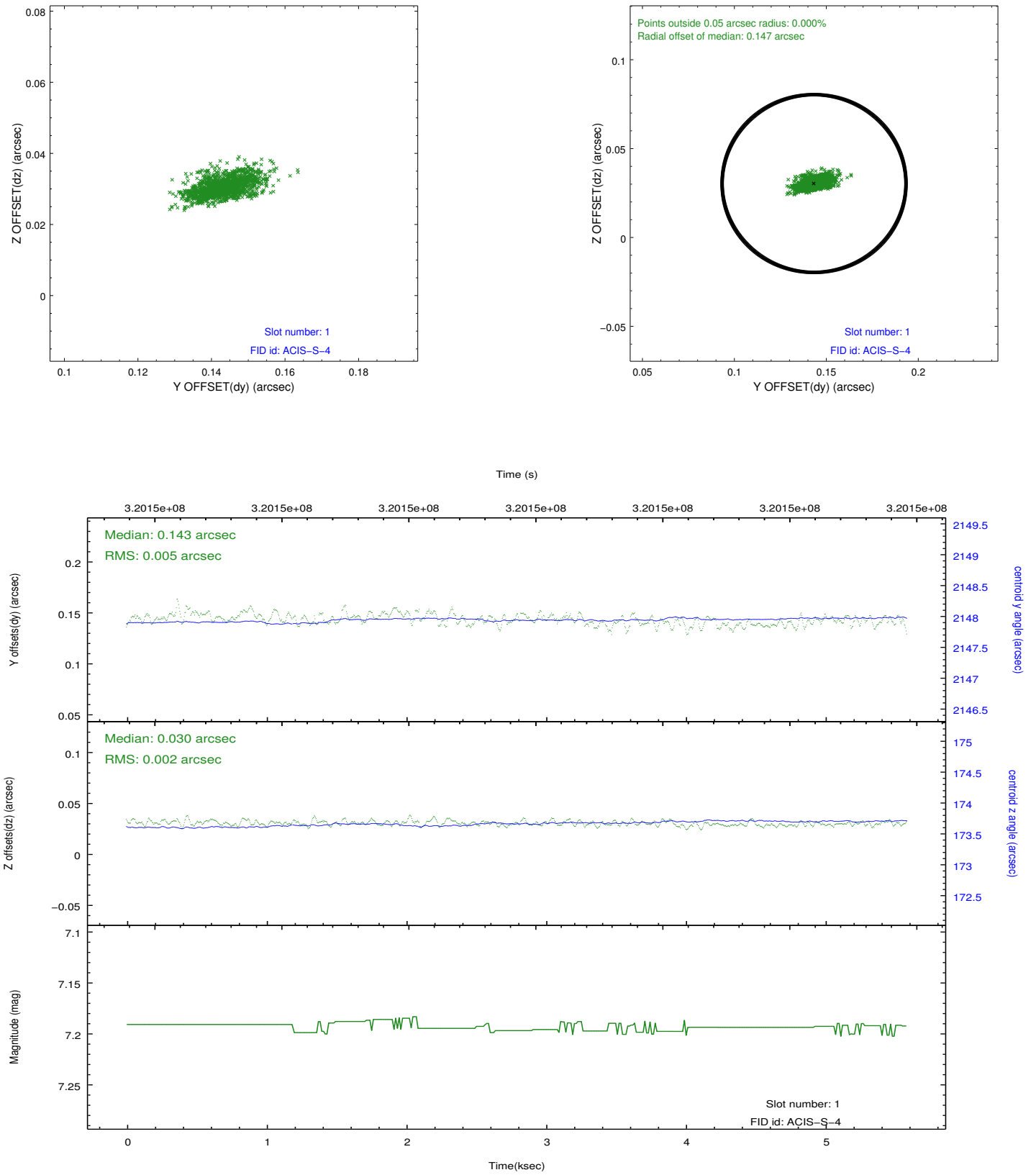


## 2.5 FID Slots

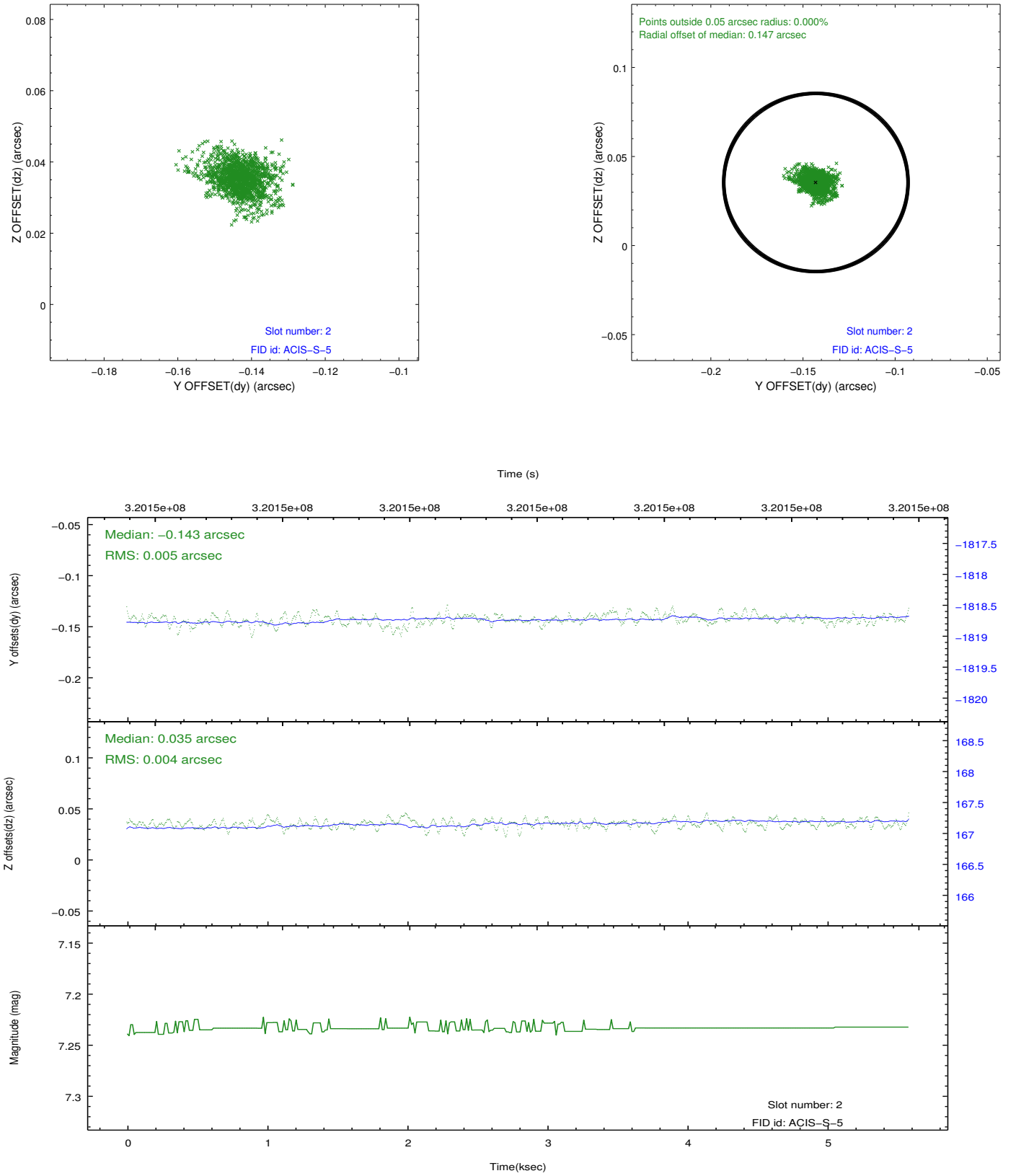
### 2.5.1 Slot 0



## 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)	2012.05.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.15839998

### A.2 Comments

Joint Proposal: Spitzer