

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8088 - L2 Version 2  
Chandra X-Ray Center

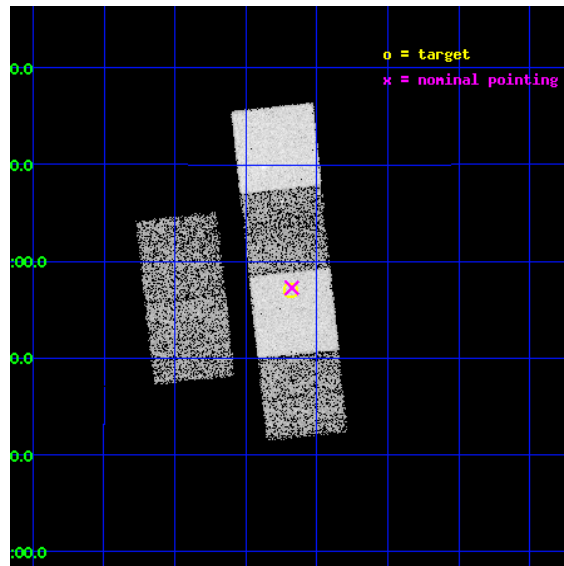
L2 Processing Date : May 10 2012

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# 1 Front

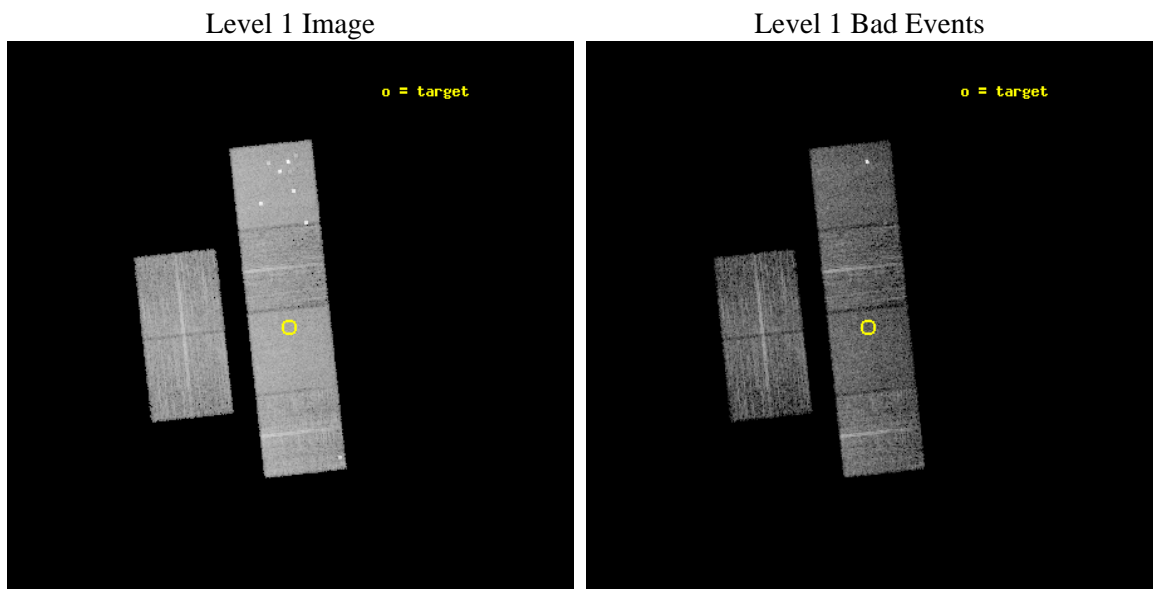
seq_num	900629	Sequence number
obs_id	8088	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	571	Source name
dtycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	185.67125	Observer's specified target RA [deg]
dec_targ	7.950306	Observer's specified target Dec [deg]
ra_nom	185.66912099617	Nominal RA [deg]
dec_nom	7.9545613662986	Nominal Dec [deg]
roll_nom	83.829762065114	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5157.4263144732	Sum of GTIs [s]
livetime	5092.11987705	Livetime [s]
ontime2	5157.4673544168	Sum of GTIs [s]
ontime3	5157.3031944633	Sum of GTIs [s]
ontime5	5157.3852744102	Sum of GTIs [s]
ontime6	5157.3442344666	Sum of GTIs [s]
ontime7	5157.4263144732	Sum of GTIs [s]
ontime8	5154.0211045742	Sum of GTIs [s]
l2events	82636	Number of level 2 events



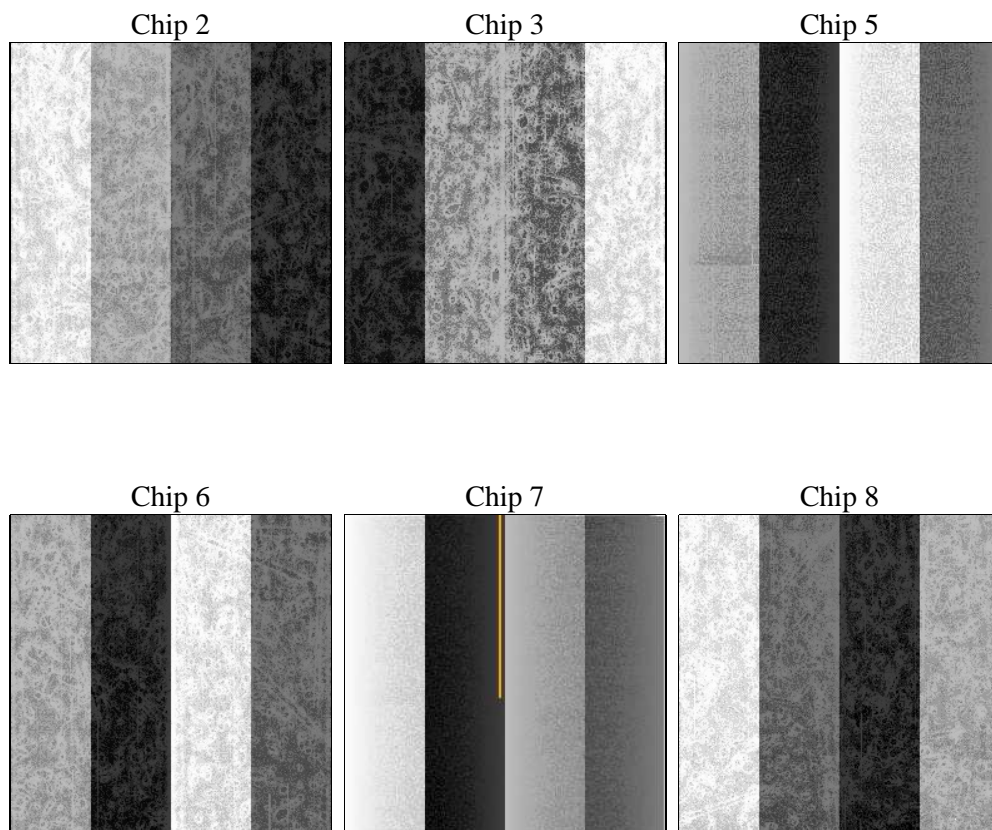
## 2 OBI

### 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	5157.4263144732	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime2	5157.4673544168	Sum of GTIs [s]
date	2012-05-10T08:27:52	Date and time of file creation	ontime3	5157.3031944633	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	5157.3852744102	Sum of GTIs [s]
			ontime6	5157.3442344666	Sum of GTIs [s]
			ontime7	5157.4263144732	Sum of GTIs [s]
			ontime8	5154.0211045742	Sum of GTIs [s]
			l1events	375080	Number of level 1 events

### 2.1.4 Events

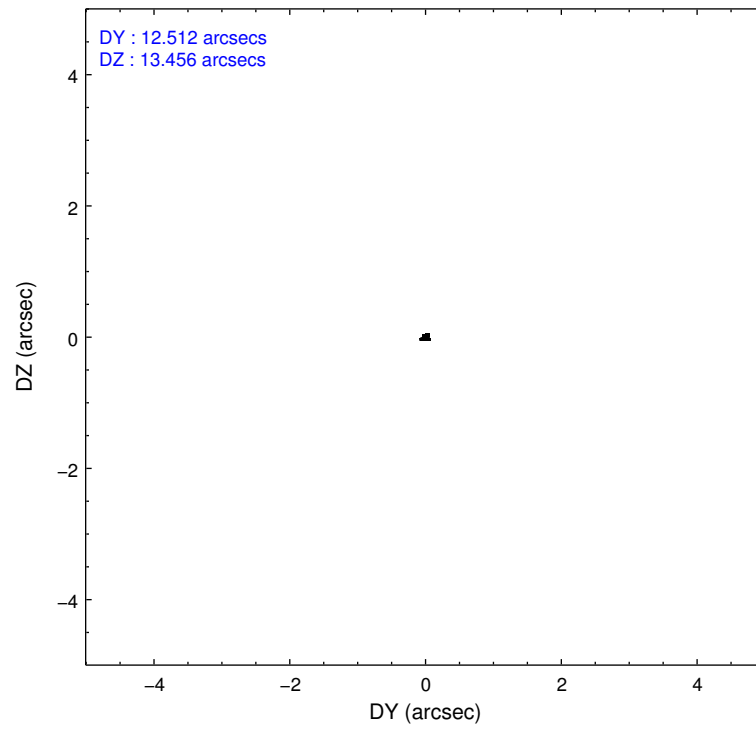
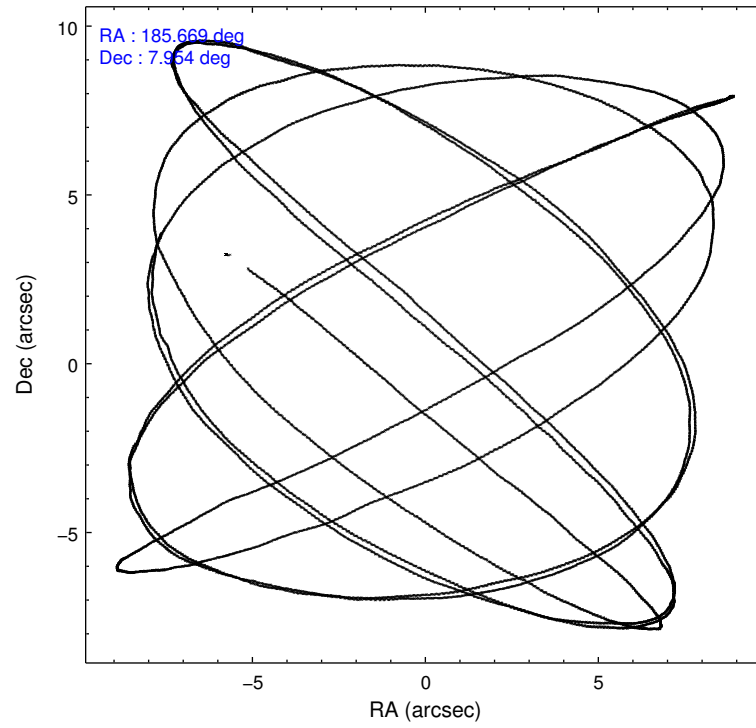
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	51251	50140	84772	51481	69688	67748	grade 0 events	2493	2576	7043	2283	2386	5115
rejected events	45514	44219	43214	45500	41020	53202		4%	5%	8%	4%	3%	7%
rejected %	88%	88%	50%	88%	58%	78%	grade 1 events	29	25	102	27	94	73
								0%	0%	0%	0%	0%	0%
							grade 2 events	1206	1174	11518	1262	5773	3008
								2%	2%	13%	2%	8%	4%
							grade 3 events	560	591	1296	598	2368	1433
								1%	1%	1%	1%	3%	2%
							grade 4 events	499	579	1168	576	2385	1431
								0%	1%	1%	1%	3%	2%
							grade 5 events	2002	2217	5406	2318	6542	3089
								3%	4%	6%	4%	9%	4%
							grade 6 events	988	1011	20586	1268	15790	3589
								1%	2%	24%	2%	22%	5%
							grade 7 events	43474	41967	37653	43149	34350	50010
								84%	83%	44%	83%	49%	73%

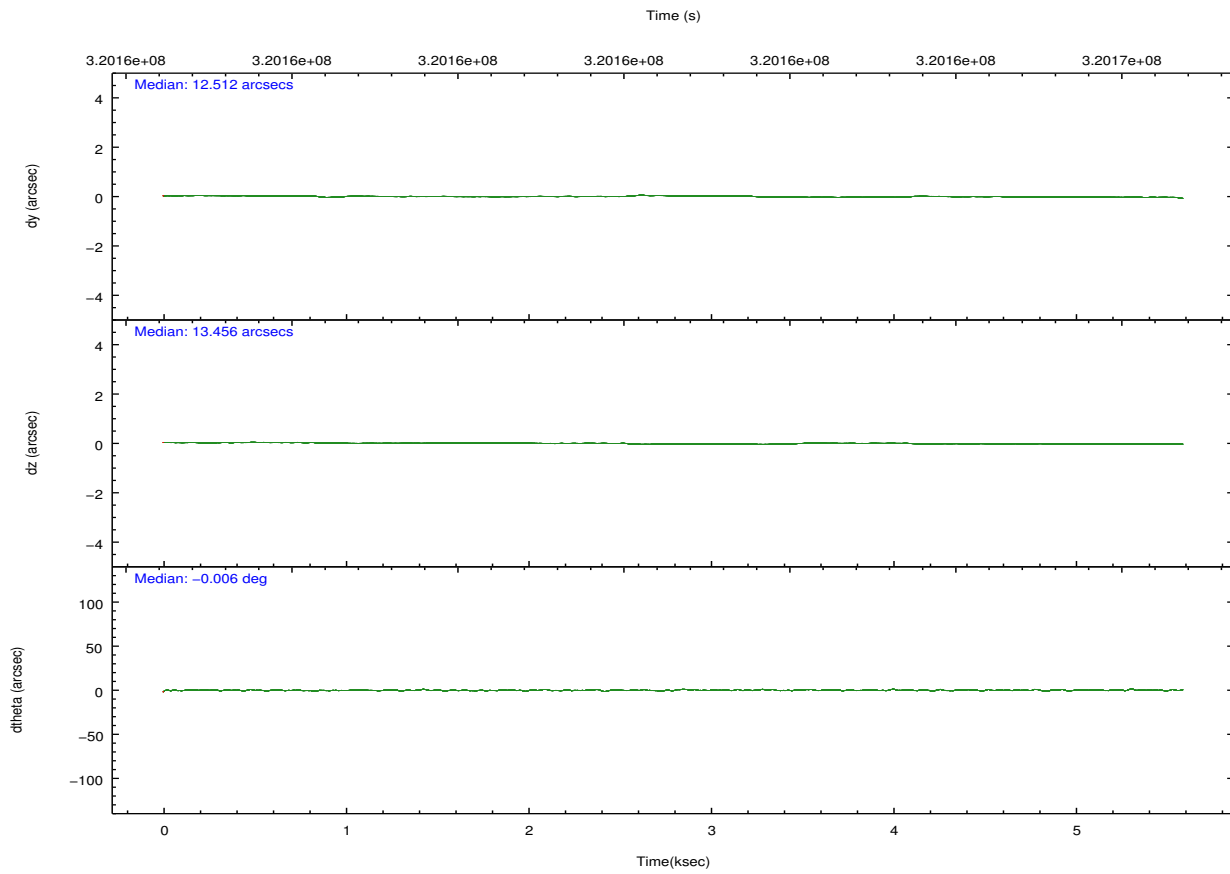
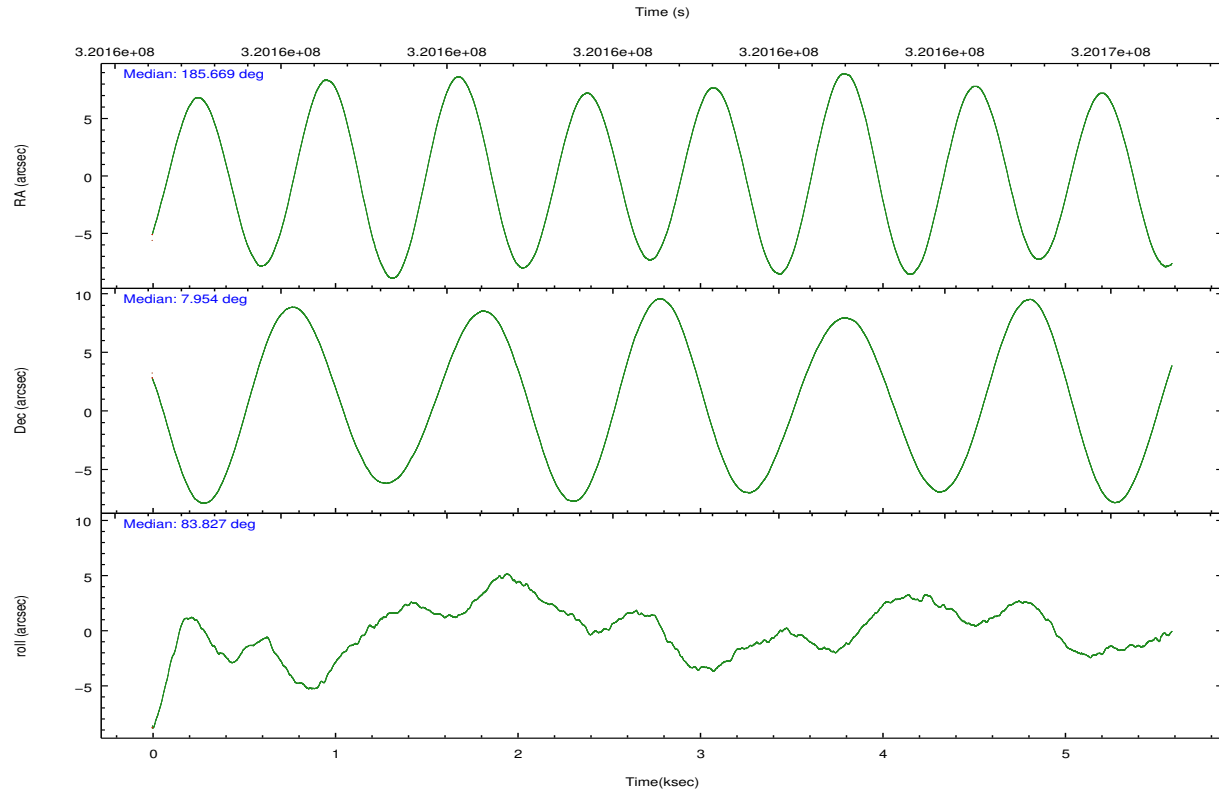


## 2.2 Compared Parameters

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	185.680641	185.6691209961733	CCD I2 on	O1	Y
[deg] Pointing Dec	7.929827	7.954561366298638	CCD I3 on	O2	Y
[deg] Pointing Roll	83.671531	83.82976206511437	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)	320160696.184000	320160116.71477	CCD S5 on	N	N
Observation start date	2008-02-23T13:30:31	2008-02-23T13:21:56	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	320166096.184000	320166324.62757	On-chip summing requested	N	N
Observation end date	2008-02-23T15:00:31	2008-02-23T15:05:24	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



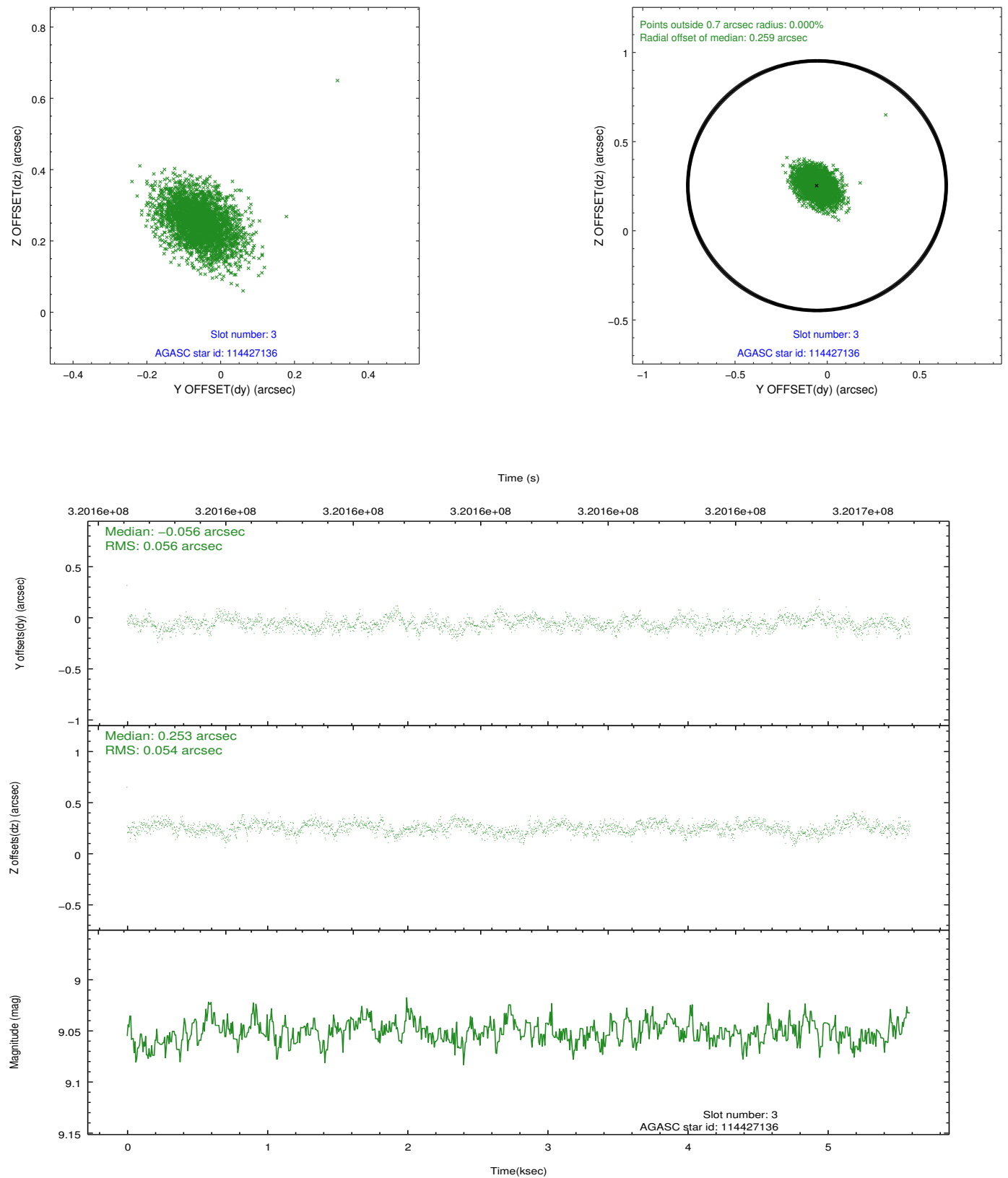


### Slot Statistics

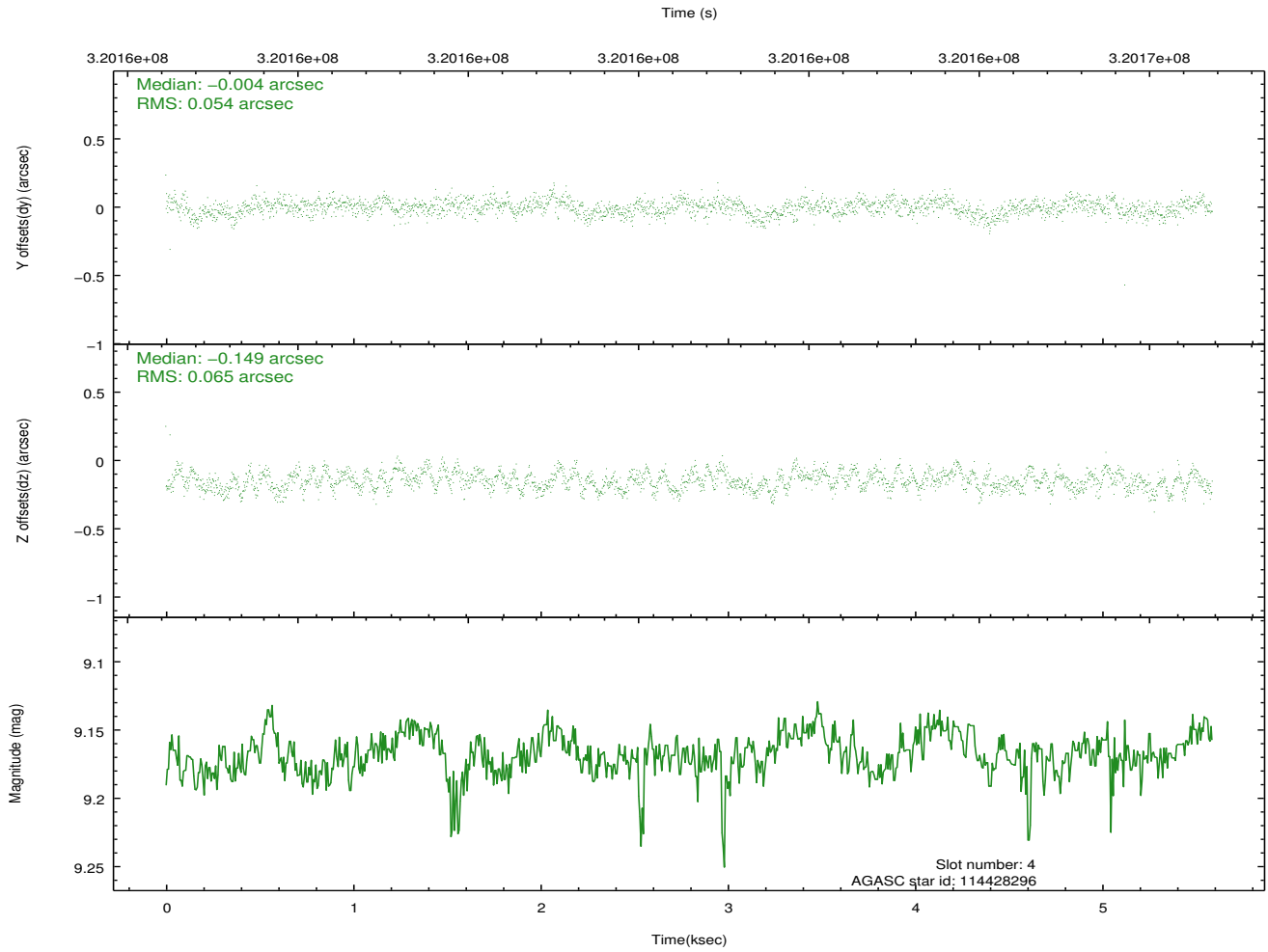
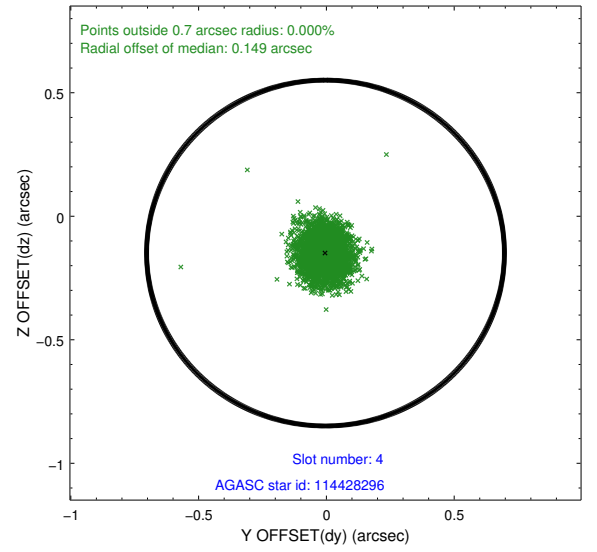
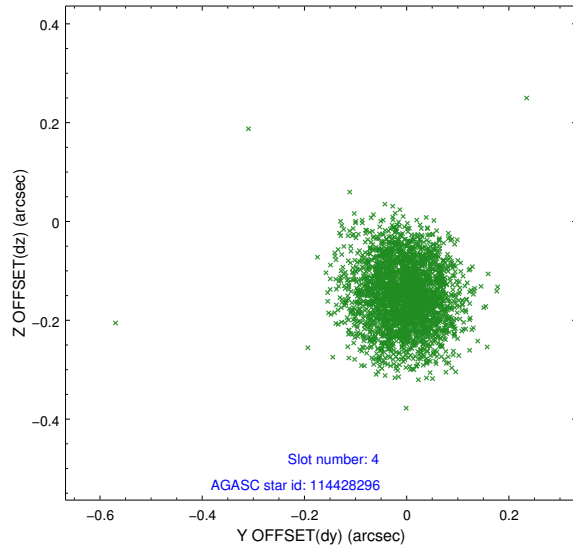
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.19	1364	0.097	-0.044	0.006	0.011	0.000000	0.000000	930.73	-1730.46
1	FID	ACIS-S-5	7.24	1364	-0.131	0.075	0.006	0.011	0.000000	0.000000	-1817.91	166.10
2	FID	ACIS-S-6	7.33	1364	0.013	-0.019	0.007	0.011	0.000000	0.000000	395.03	811.18
3	GUIDE	114427136	9.05	2722	-0.056	0.253	0.081	0.134	185.962563	8.343983	1593.55	-833.12
4	GUIDE	114428296	9.17	2723	-0.004	-0.149	0.089	0.143	185.626025	8.050776	412.68	241.52
5	GUIDE	114428472	9.34	2723	-0.091	-0.122	0.098	0.161	185.686963	8.270901	1223.68	113.10
6	GUIDE	114434008	8.75	2726	0.013	-0.013	0.064	0.103	185.534773	7.569663	-1344.85	374.80
7	GUIDE	114434192	9.76	2723	0.137	0.037	0.126	0.202	185.388204	7.710531	-898.99	949.71

## 2.4 Star Slots

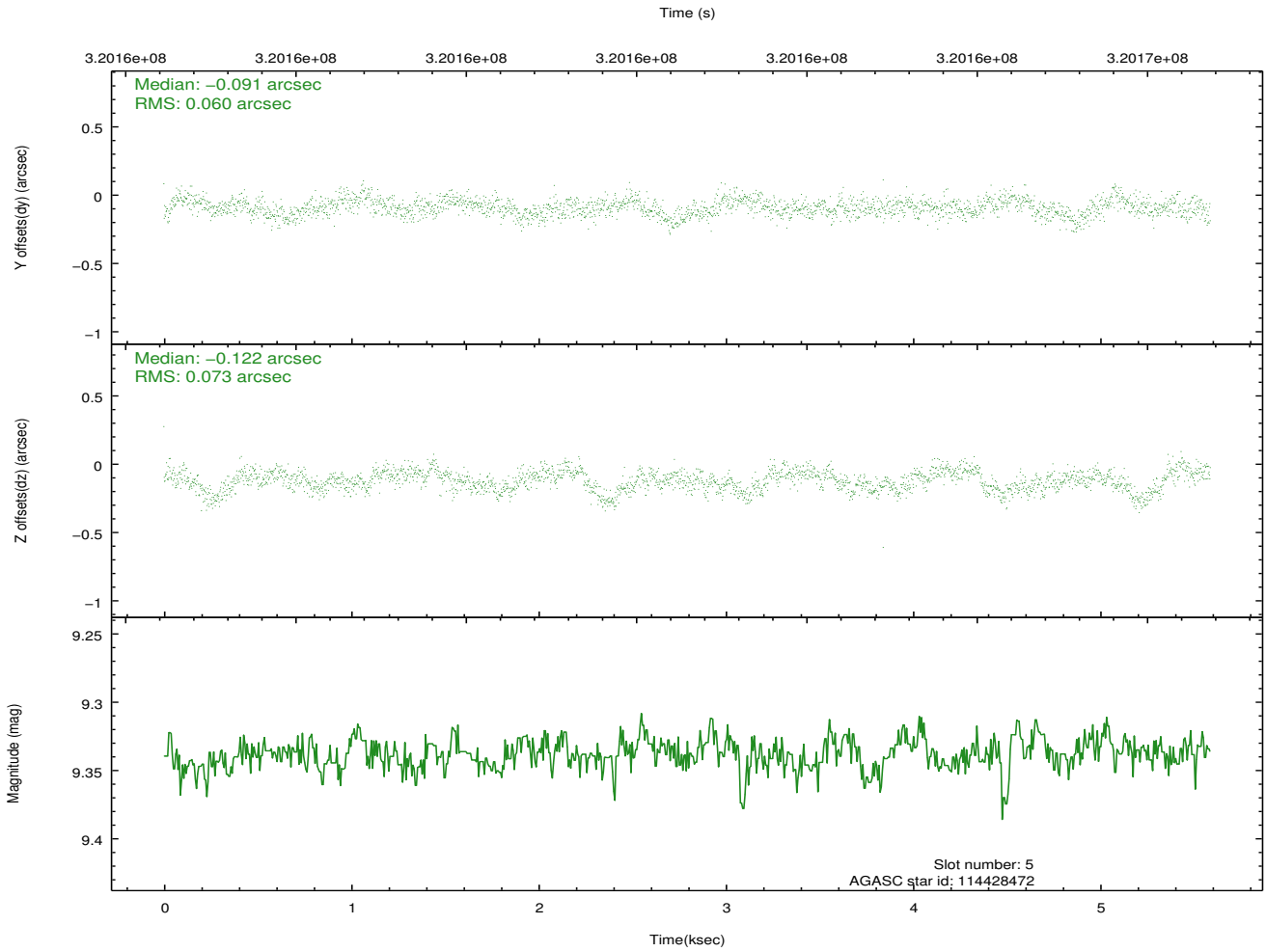
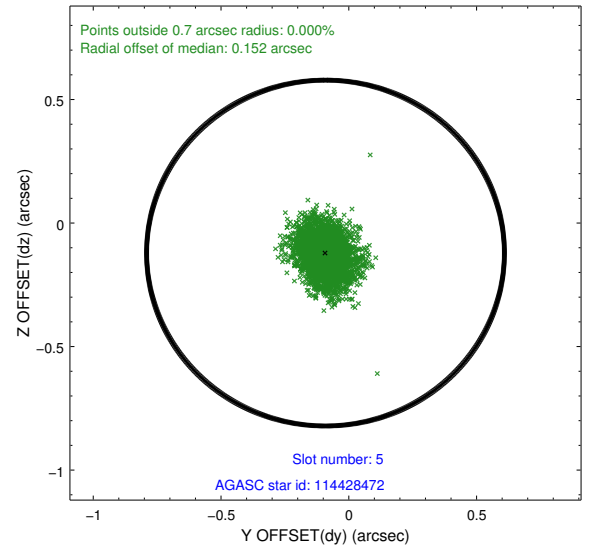
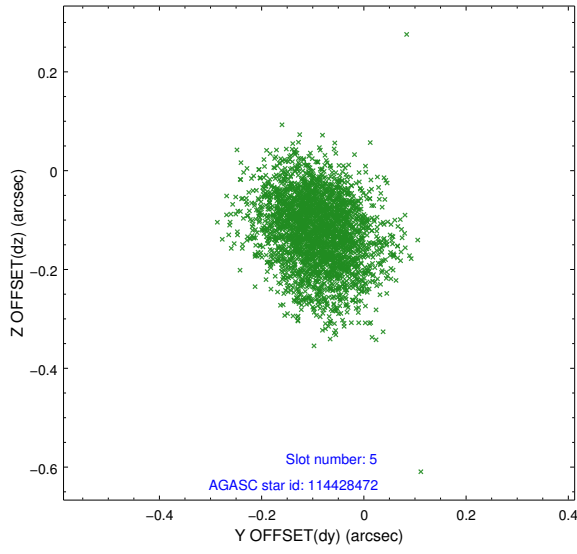
### 2.4.1 Slot 3



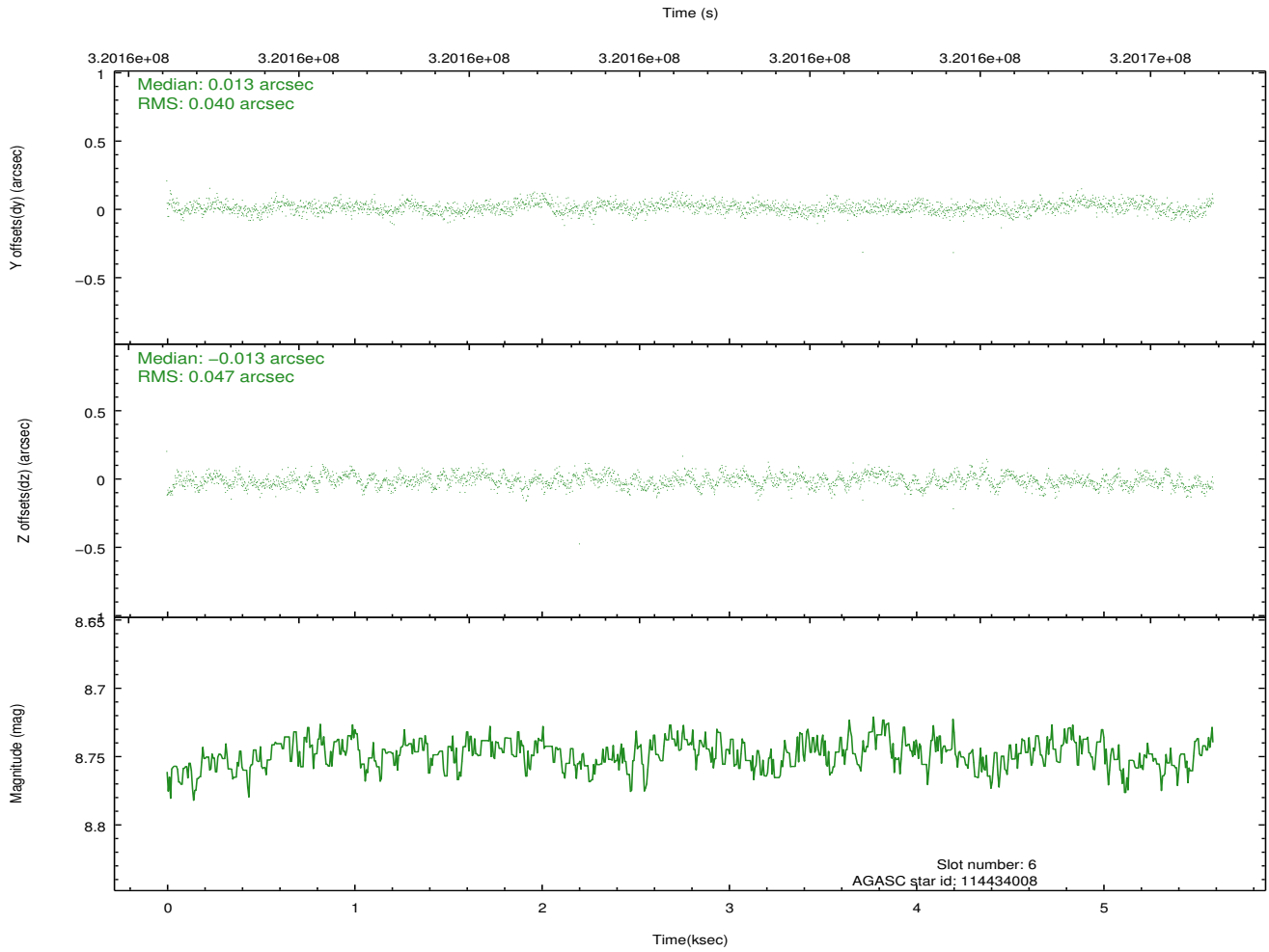
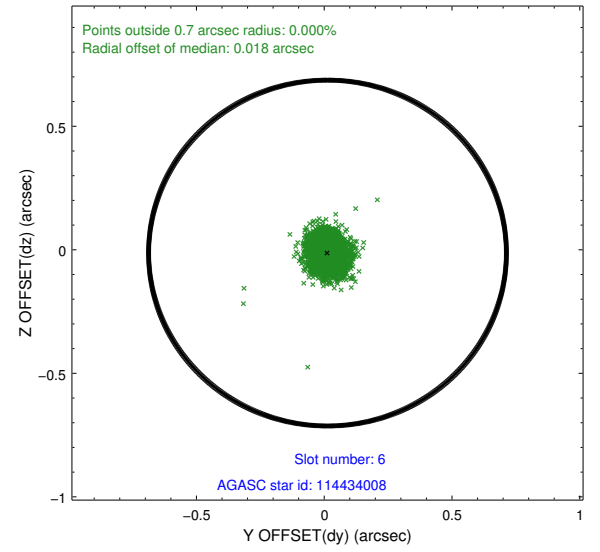
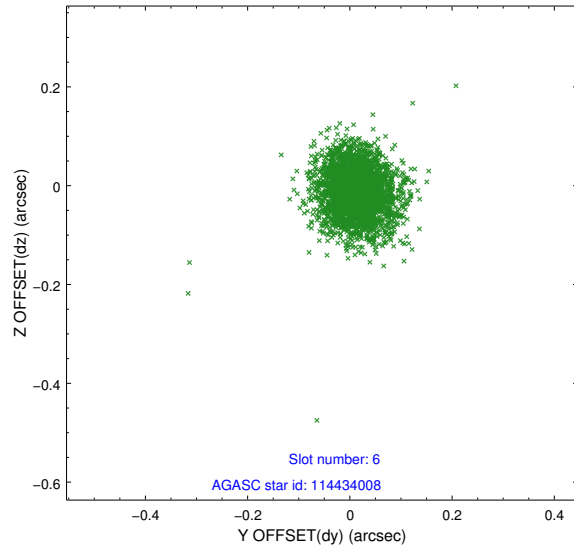
## 2.4.2 Slot 4



### 2.4.3 Slot 5

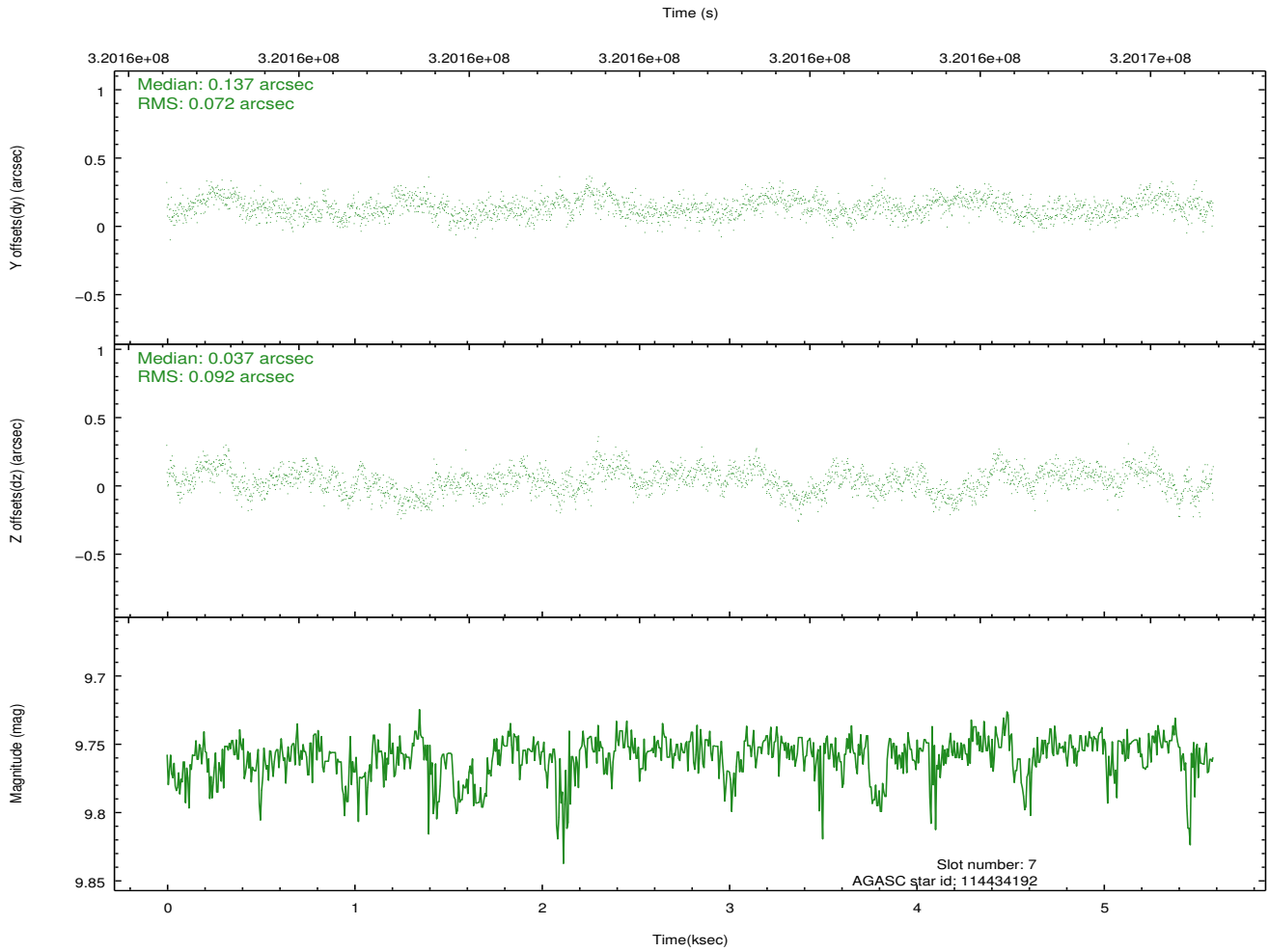
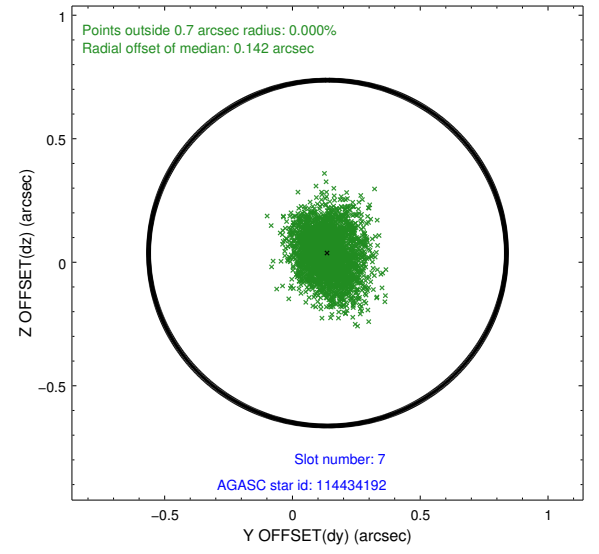
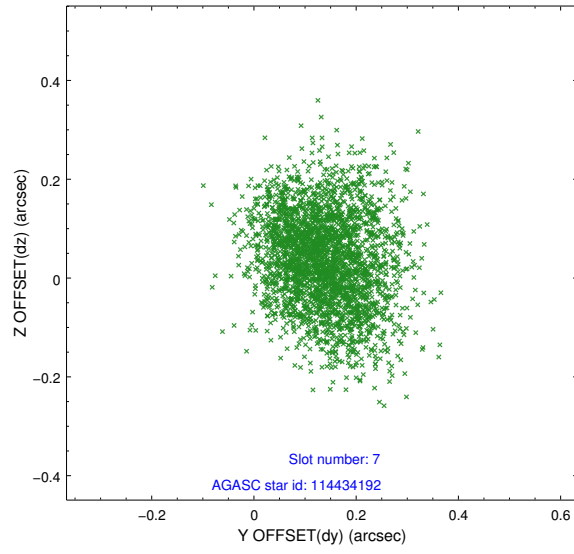


## 2.4.4 Slot 6



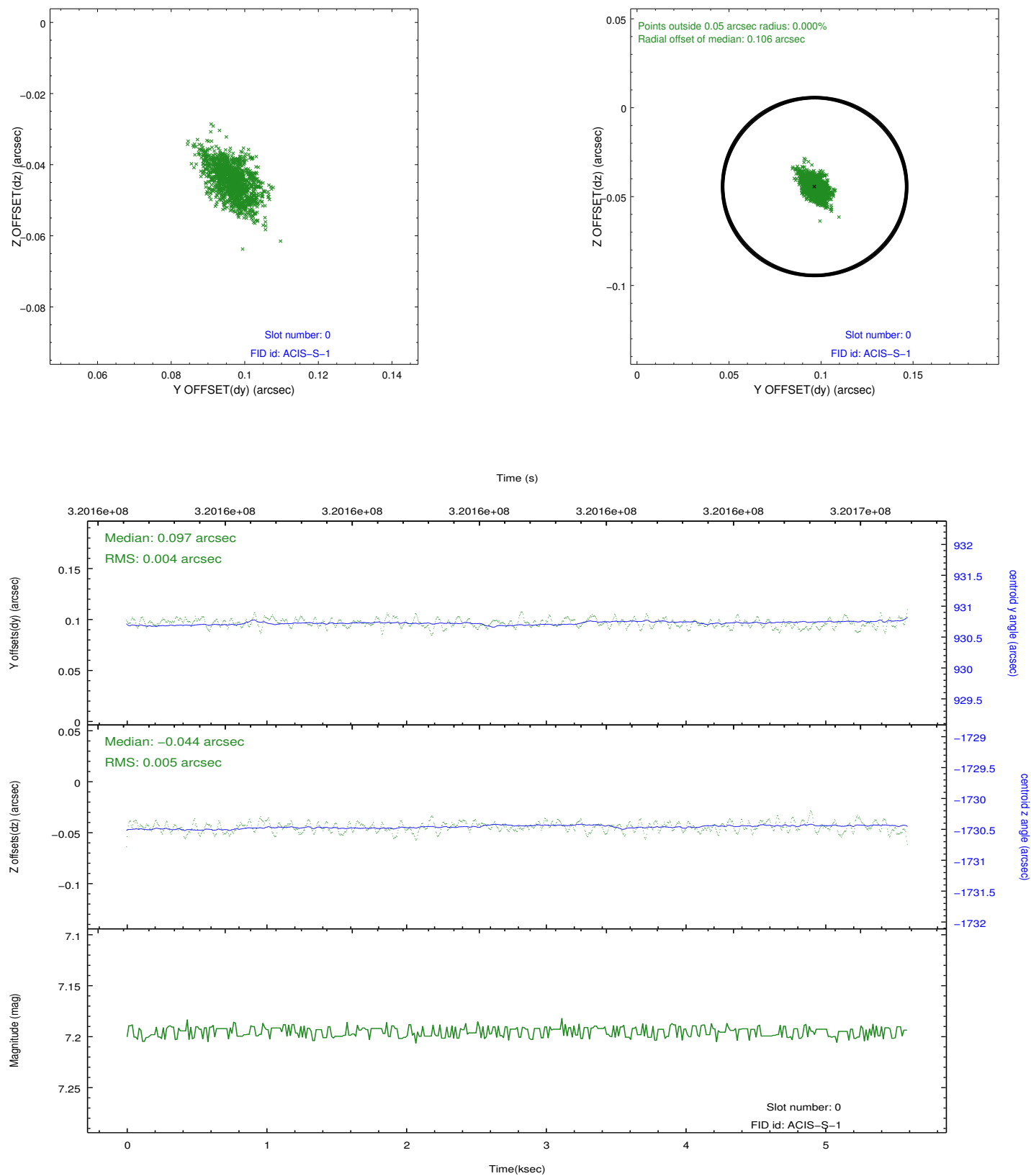


## 2.4.5 Slot 7

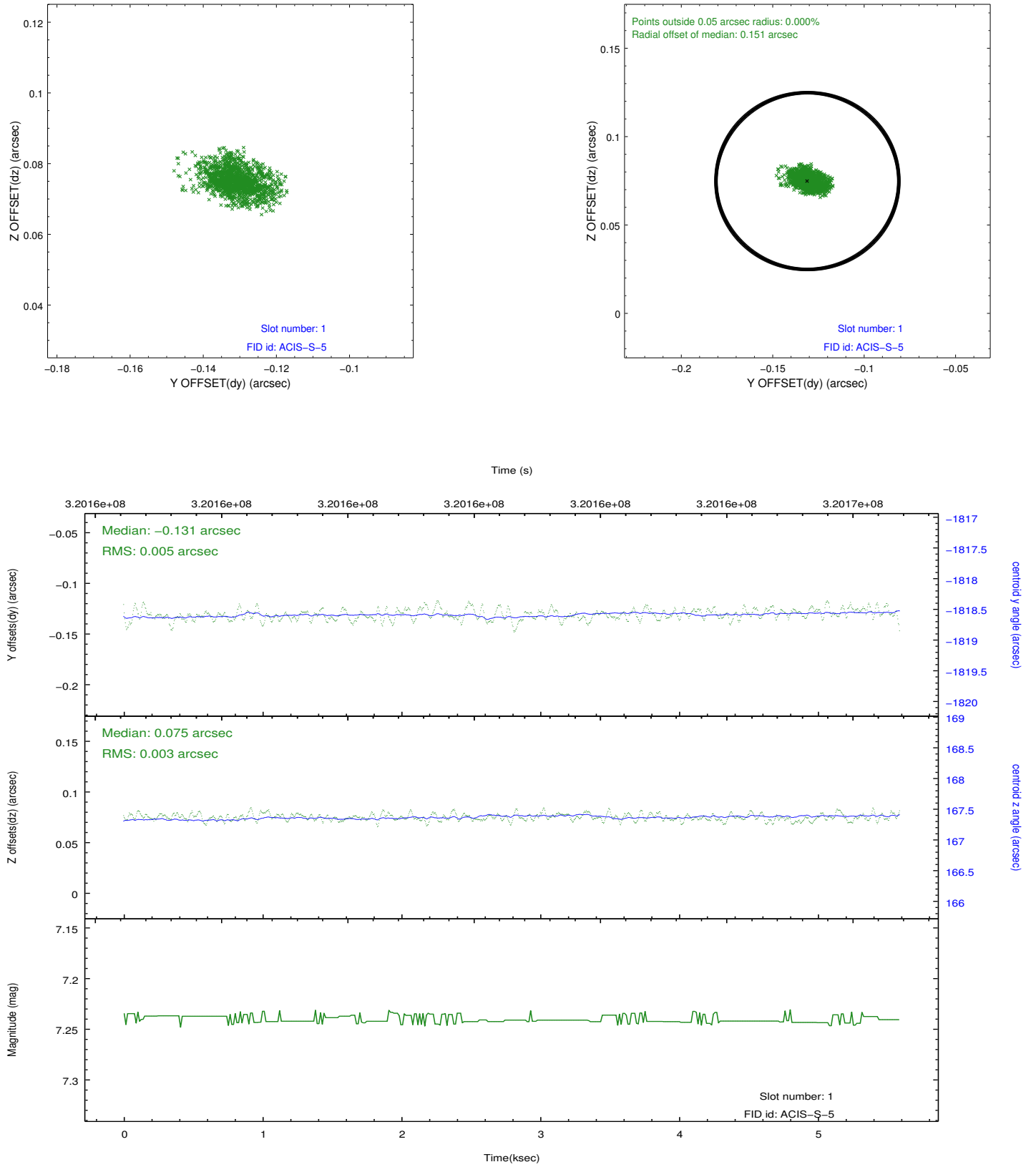


## 2.5 FID Slots

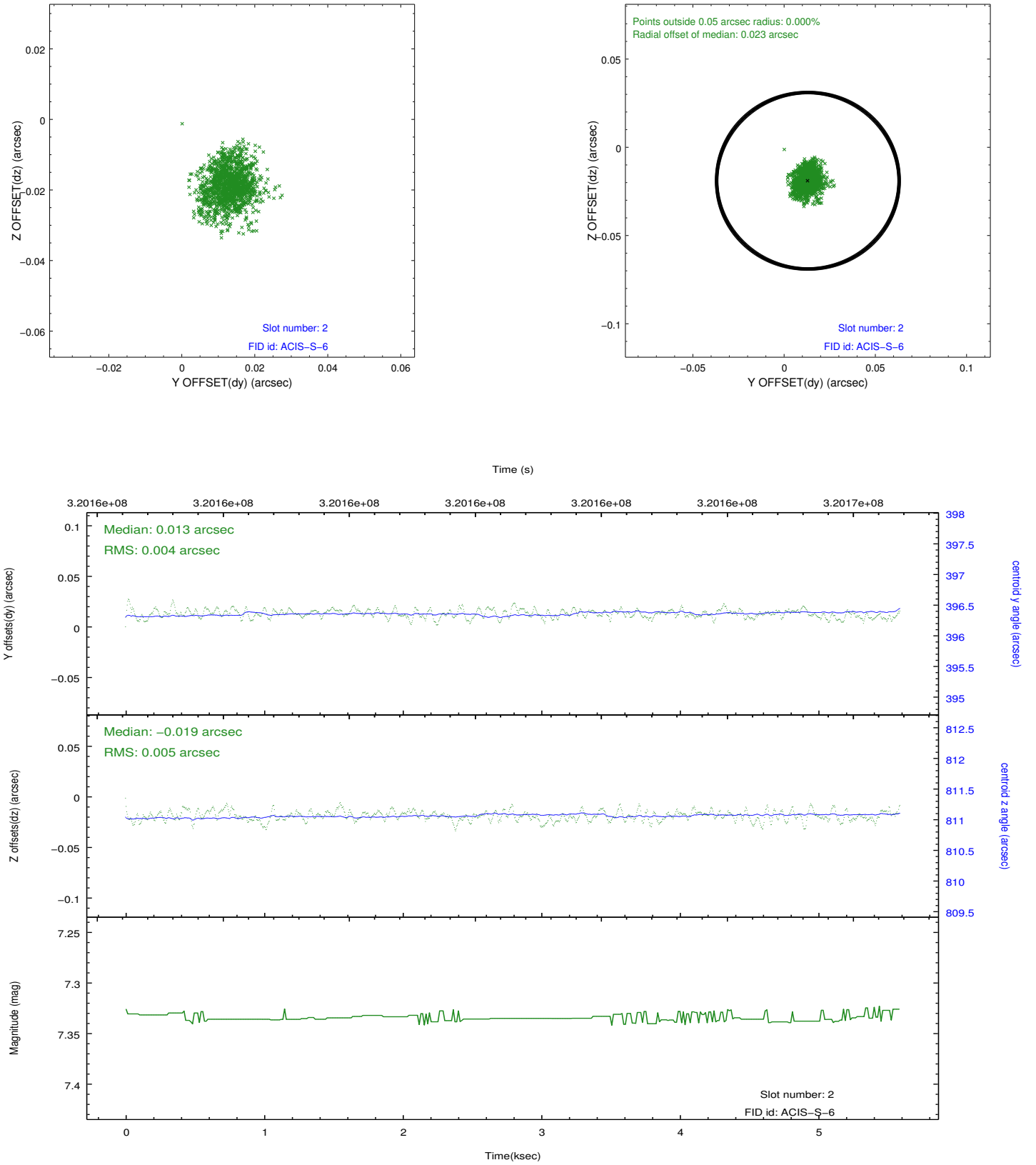
### 2.5.1 Slot 0



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

### A.2 Comments

Joint Proposal: Spitzer