

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8043 - L2 Version 2  
Chandra X-Ray Center

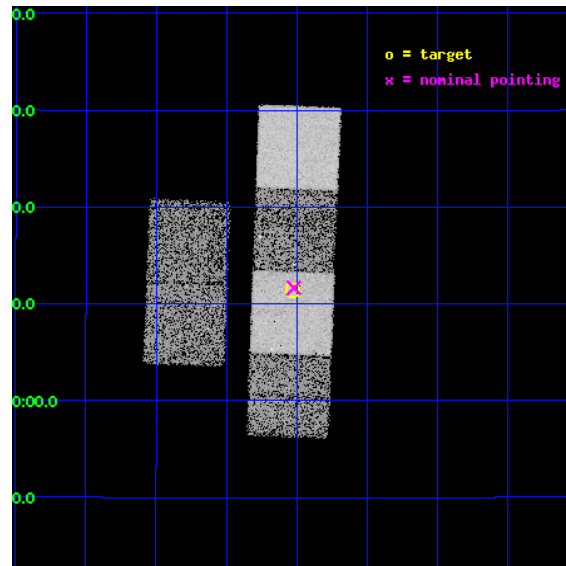
L2 Processing Date : May 10 2012

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# 1 Front

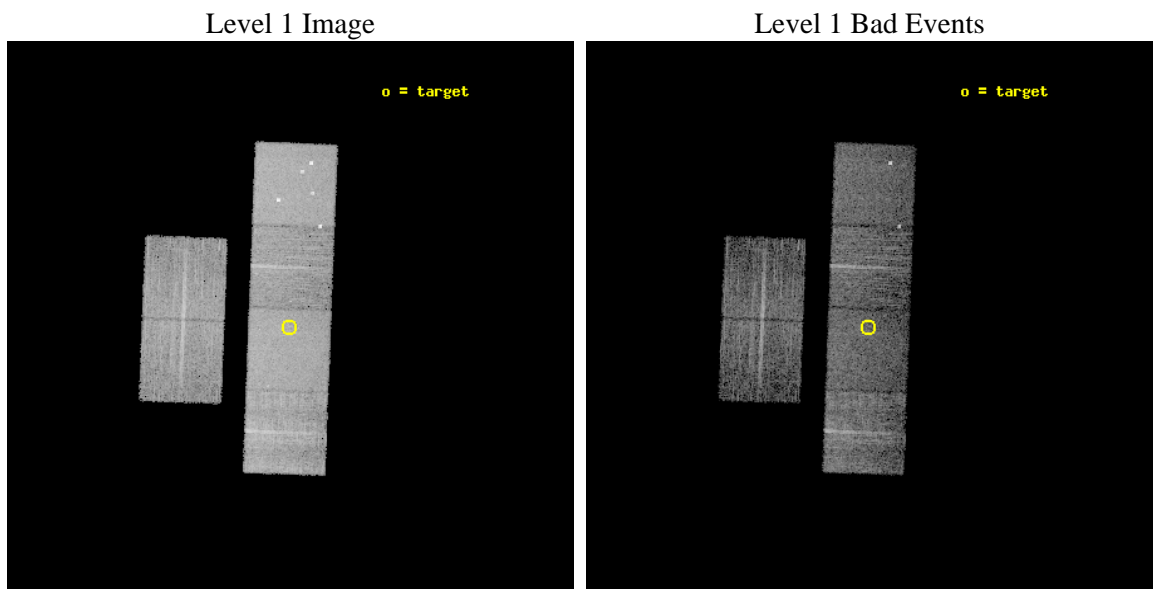
seq_num	900584	Sequence number
obs_id	8043	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	2000	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	191.132917	Observer's specified target RA [deg]
dec_targ	11.190306	Observer's specified target Dec [deg]
ra_nom	191.13015145119	Nominal RA [deg]
dec_nom	11.194212853837	Nominal Dec [deg]
roll_nom	92.164041705048	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5155.1368247867	Sum of GTIs [s]
livetime	5089.8593782605	Livetime [s]
ontime2	5155.17786479	Sum of GTIs [s]
ontime3	5155.0137047768	Sum of GTIs [s]
ontime5	5155.0957847834	Sum of GTIs [s]
ontime6	5155.0547447801	Sum of GTIs [s]
ontime7	5155.1368247867	Sum of GTIs [s]
ontime8	5151.7316148877	Sum of GTIs [s]
l2events	84816	Number of level 2 events



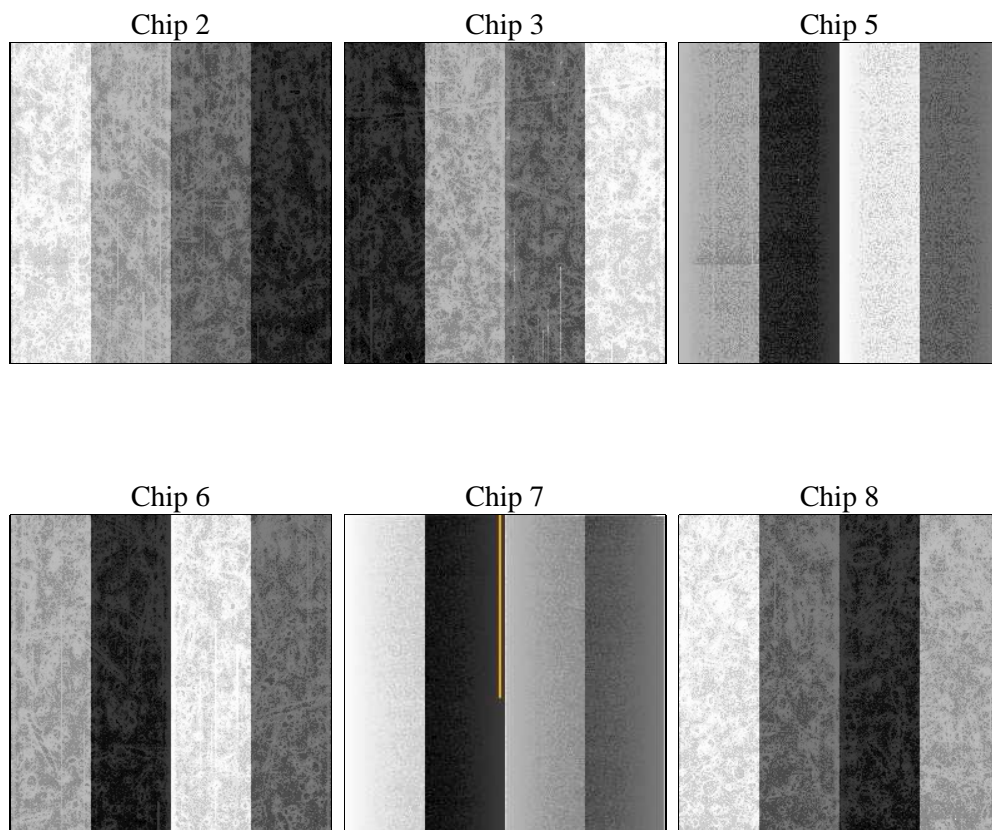
## 2 OBI

### 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	5155.1368247867	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime2	5155.17786479	Sum of GTIs [s]
date	2012-05-10T10:54:36	Date and time of file creation	ontime3	5155.0137047768	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	5155.0957847834	Sum of GTIs [s]
			ontime6	5155.0547447801	Sum of GTIs [s]
			ontime7	5155.1368247867	Sum of GTIs [s]
			ontime8	5151.7316148877	Sum of GTIs [s]
			l1events	367818	Number of level 1 events

### 2.1.4 Events

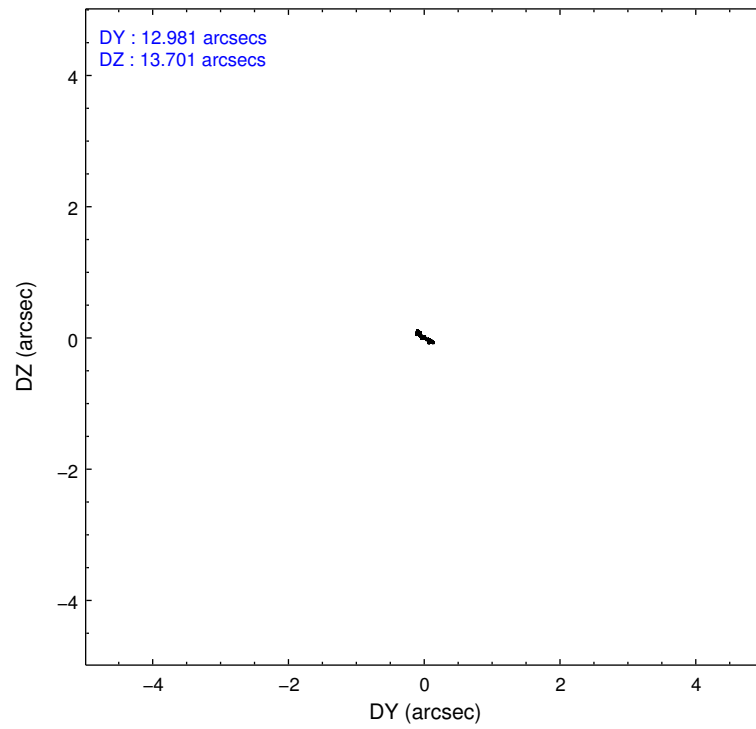
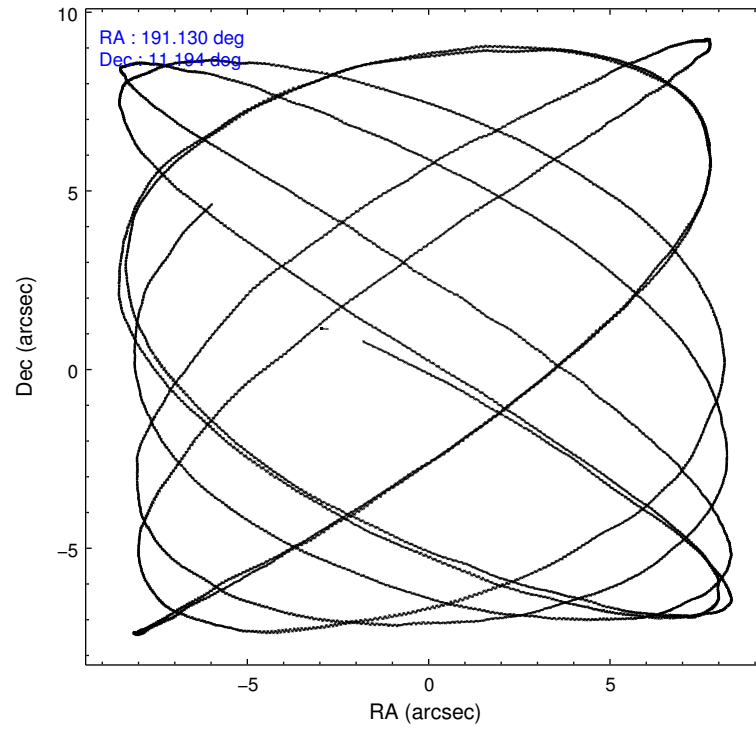
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	49156	46995	82278	51366	69917	68106	grade 0 events	2460	2731	5215	2597	2562	4693
rejected events	43310	40918	43592	44975	40400	53604		5%	5%	6%	5%	3%	6%
rejected %	88%	87%	52%	87%	57%	78%	grade 1 events	34	46	317	29	82	50
								0%	0%	0%	0%	0%	0%
							grade 2 events	1285	1162	11572	1367	6041	3251
								2%	2%	14%	2%	8%	4%
							grade 3 events	532	561	1333	576	2525	1535
								1%	1%	1%	1%	3%	2%
							grade 4 events	555	579	1270	558	2465	1391
								1%	1%	1%	1%	3%	2%
							grade 5 events	1989	2238	5930	2331	6437	3188
								4%	4%	7%	4%	9%	4%
							grade 6 events	1016	1048	19314	1297	15940	3637
								2%	2%	23%	2%	22%	5%
							grade 7 events	41285	38630	37327	42611	33865	50361
								83%	82%	45%	82%	48%	73%

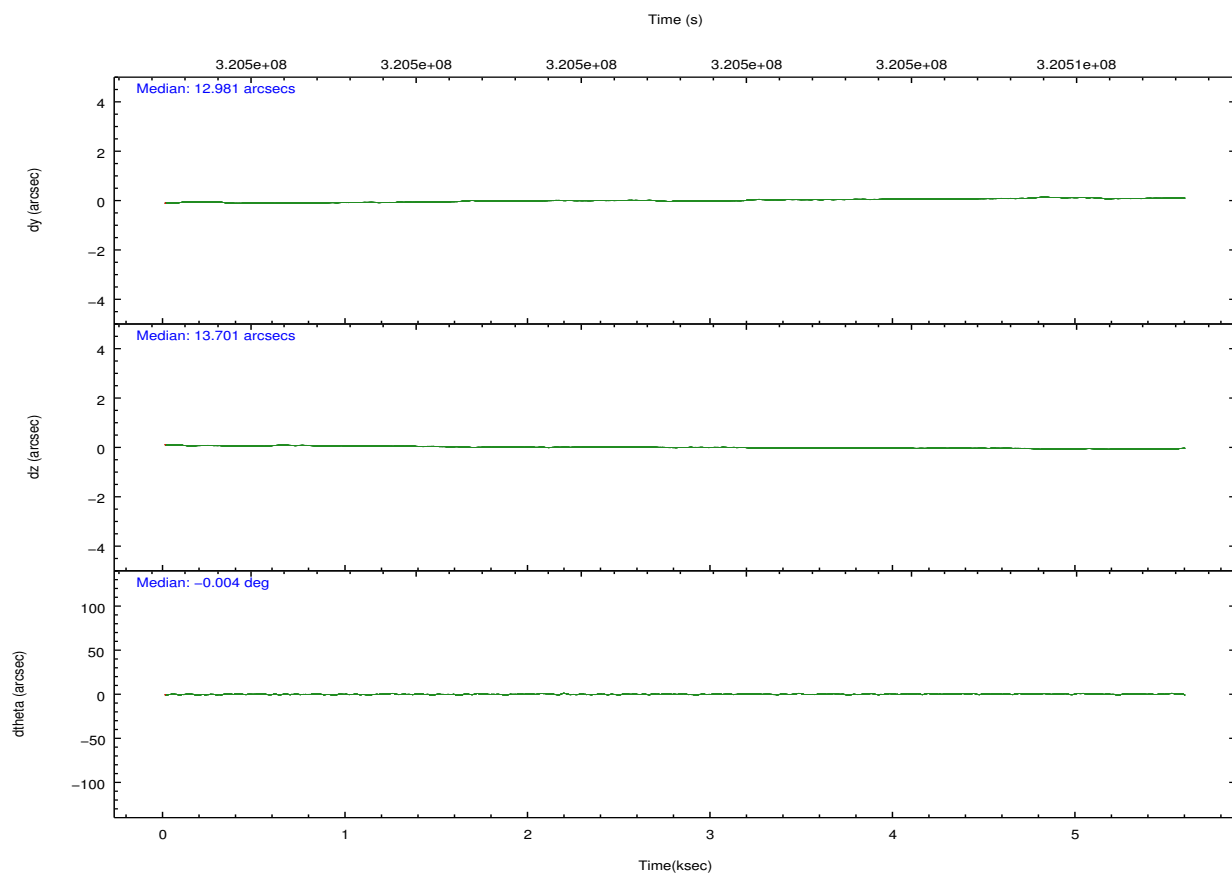
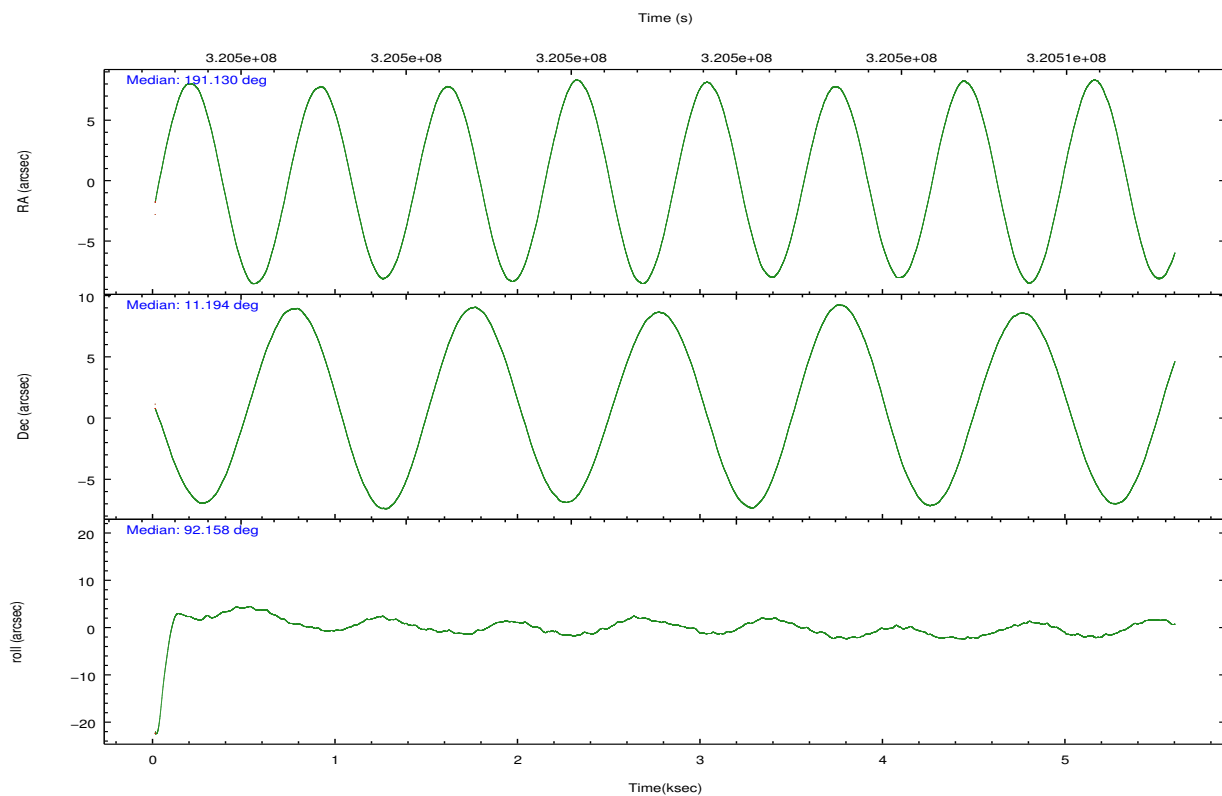


## 2.2 Compared Parameters

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	191.145324	191.1301514511892	CCD I2 on	O1	Y
[deg] Pointing Dec	11.171386	11.19421285383654	CCD I3 on	O2	Y
[deg] Pointing Roll	92.004527	92.16404170504751	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)	320500972.184000	320500583.2938	CCD S5 on	N	N
Observation start date	2008-02-27T12:01:47	2008-02-27T11:56:23	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	320506372.184000	320506968.01911	On-chip summing requested	N	N
Observation end date	2008-02-27T13:31:47	2008-02-27T13:42:48	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



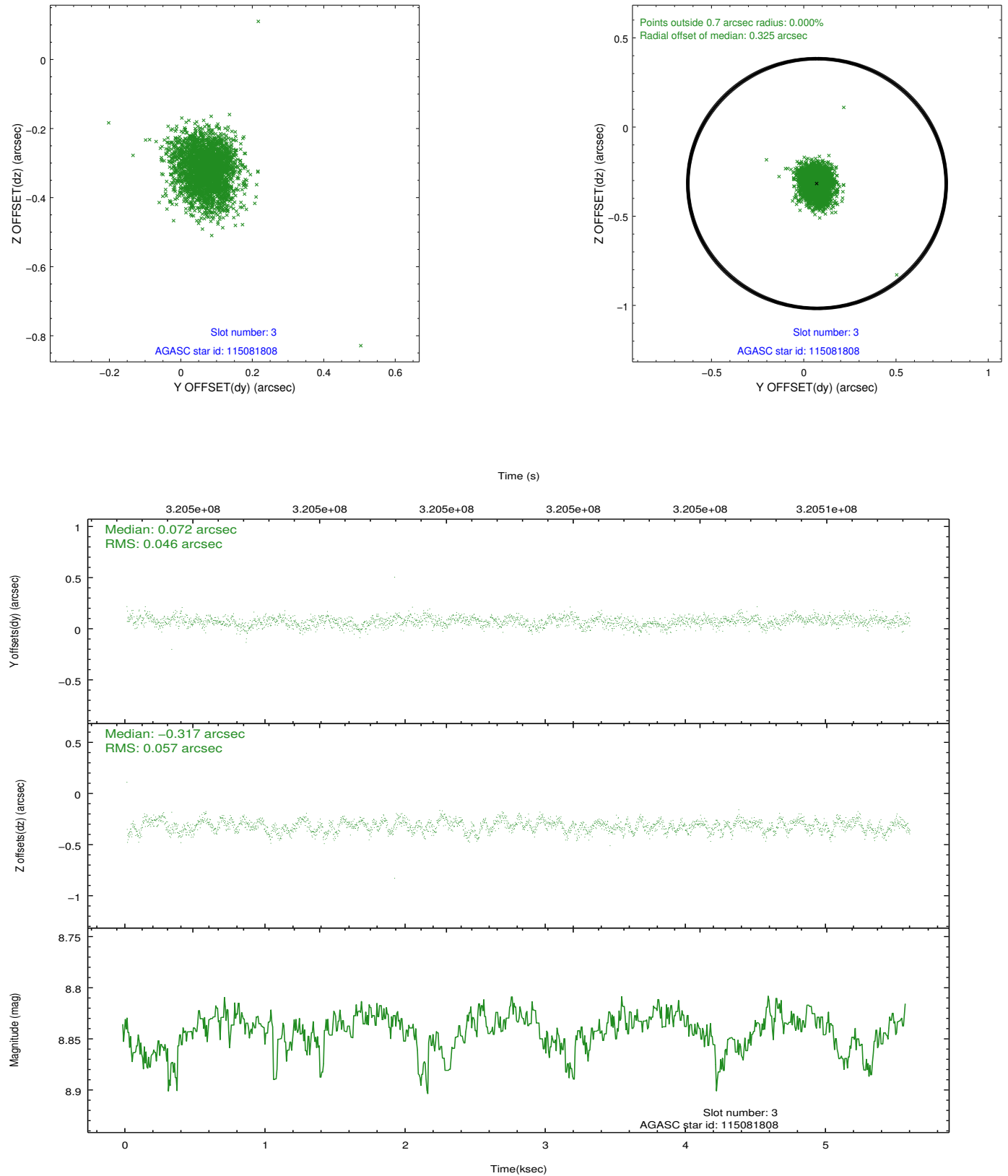


### Slot Statistics

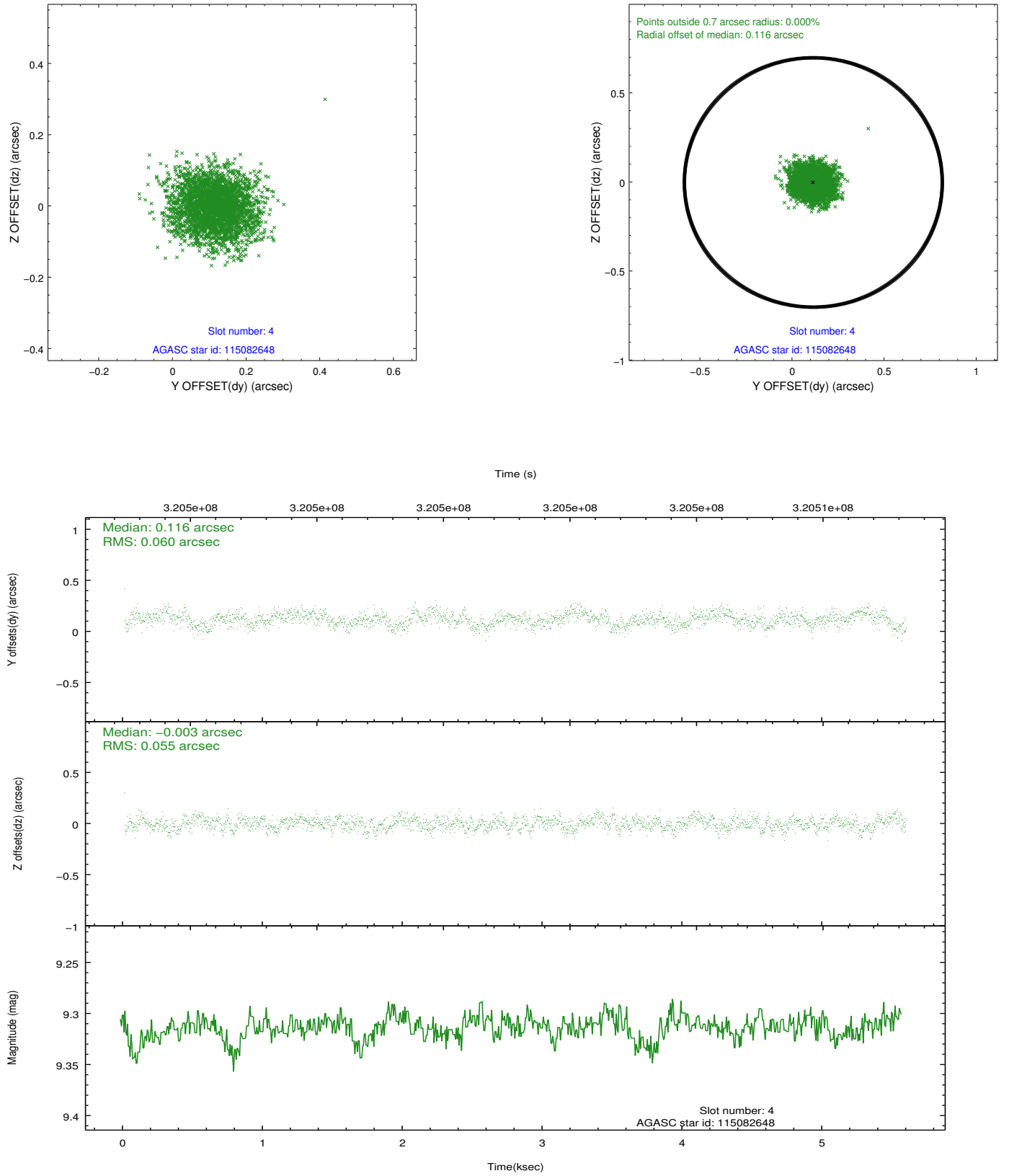
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1364	-0.028	-0.055	0.006	0.011	0.000000	0.000000	-765.93	-1735.05
1	FID	ACIS-S-4	7.19	1364	0.141	0.028	0.006	0.012	0.000000	0.000000	2147.03	172.41
2	FID	ACIS-S-5	7.23	1364	-0.144	0.035	0.007	0.012	0.000000	0.000000	-1817.51	167.30
3	GUIDE	115081808	8.84	2727	0.072	-0.317	0.076	0.125	191.005561	10.921316	-881.62	525.49
4	GUIDE	115082648	9.31	2722	0.116	-0.003	0.087	0.138	191.382029	10.575431	-2172.94	-761.13
5	GUIDE	115084352	9.25	2725	-0.067	-0.364	0.090	0.142	190.760225	11.783180	2248.22	1279.65
6	GUIDE	115999424	8.87	2726	0.016	-0.045	0.083	0.133	191.505926	10.565661	-2221.51	-1198.62
7	GUIDE	116006816	8.71	2725	-0.132	0.737	0.082	0.129	191.642439	11.378493	685.20	-1778.76

## 2.4 Star Slots

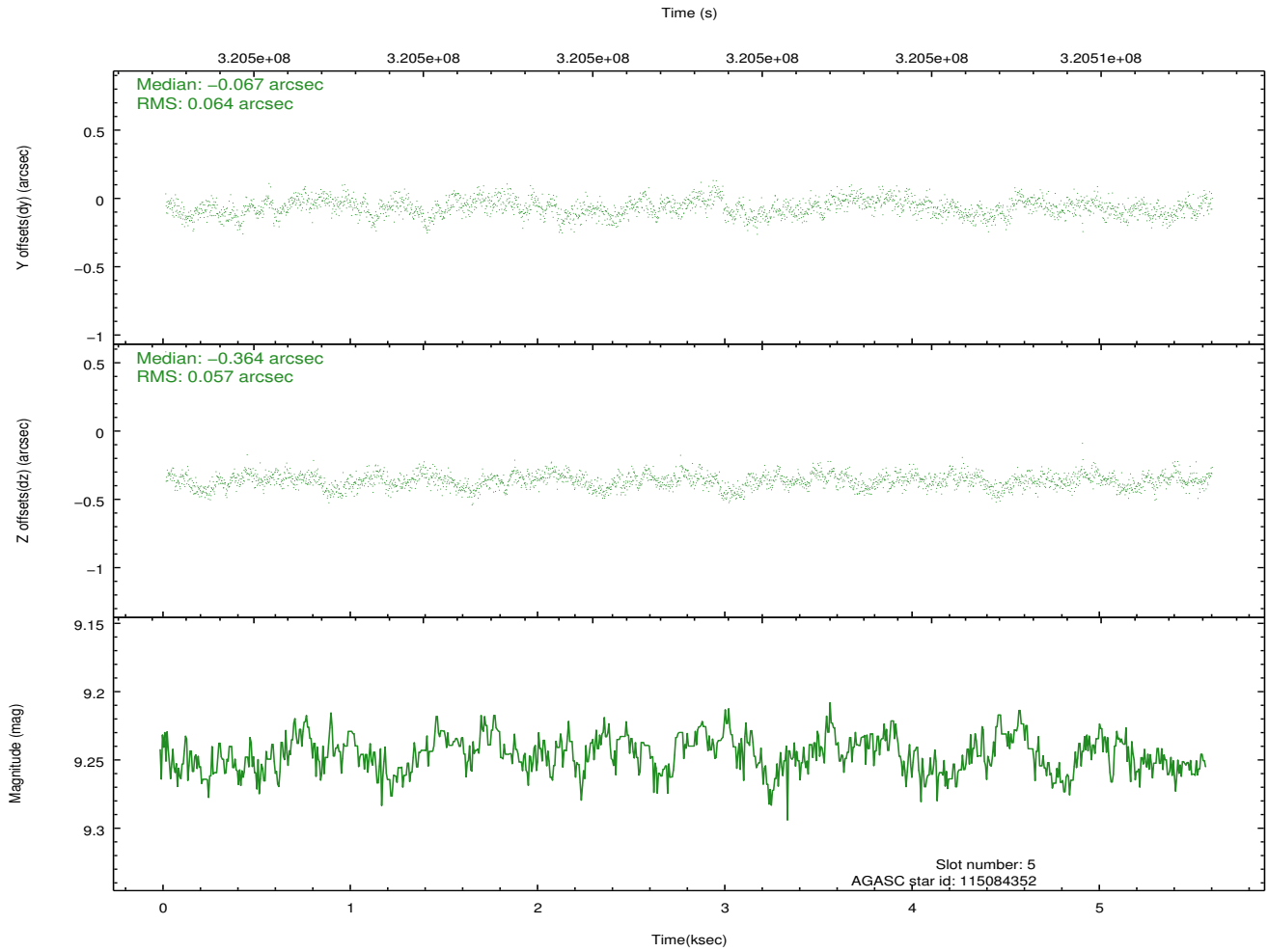
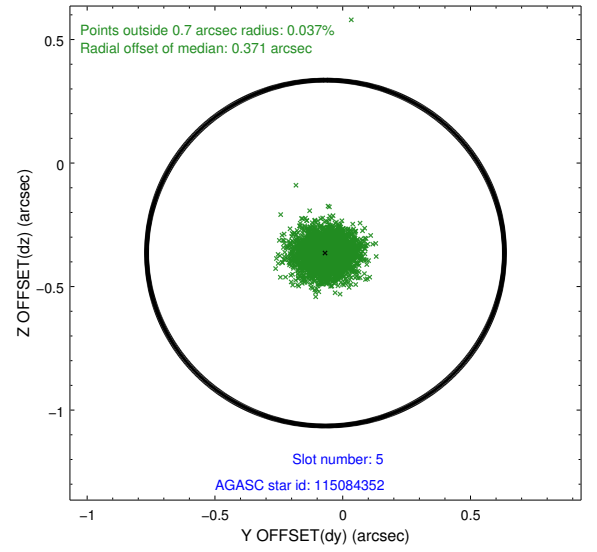
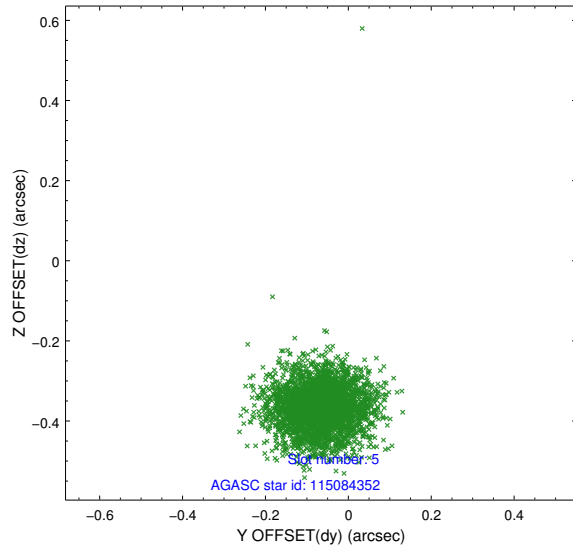
### 2.4.1 Slot 3



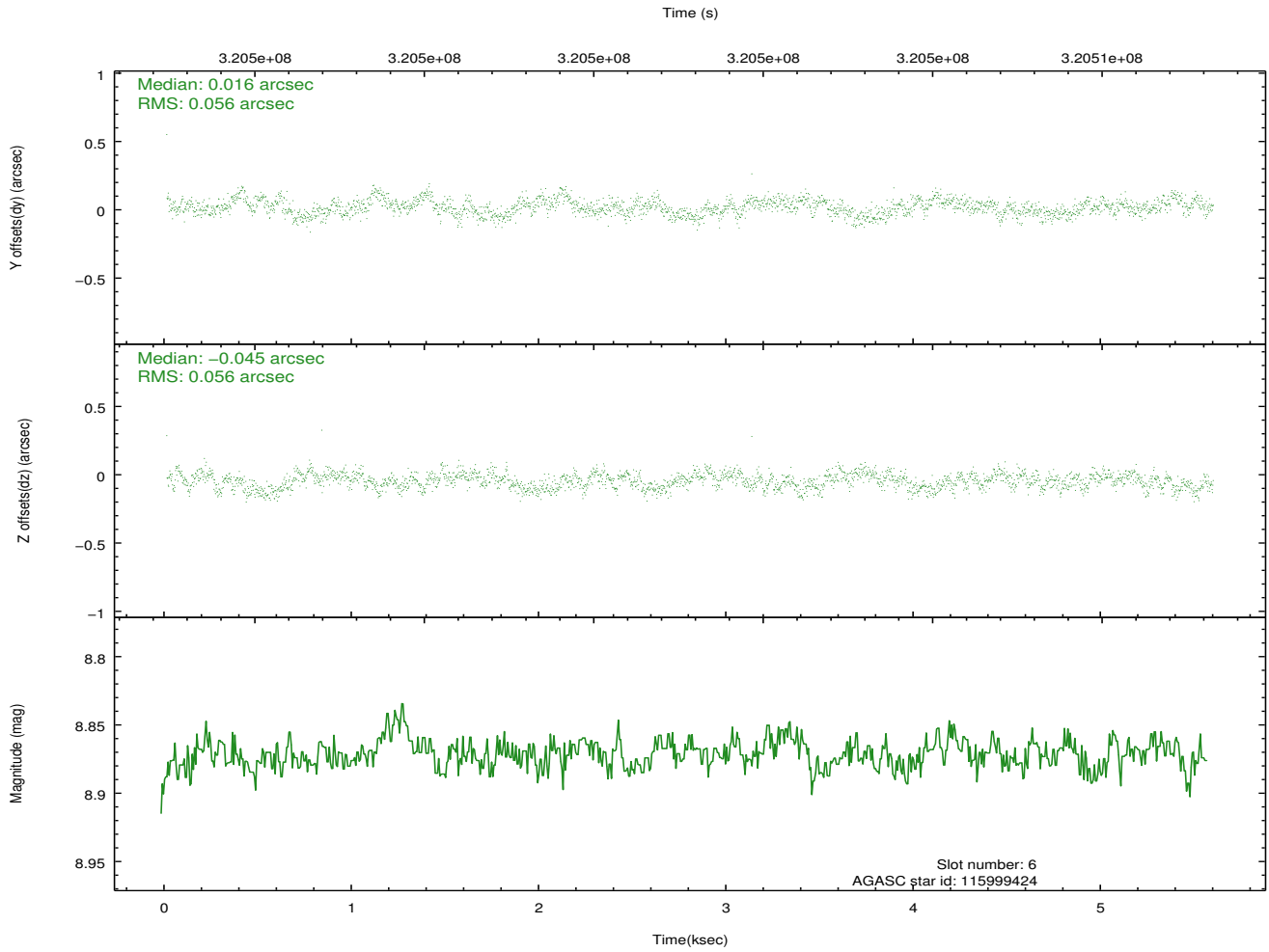
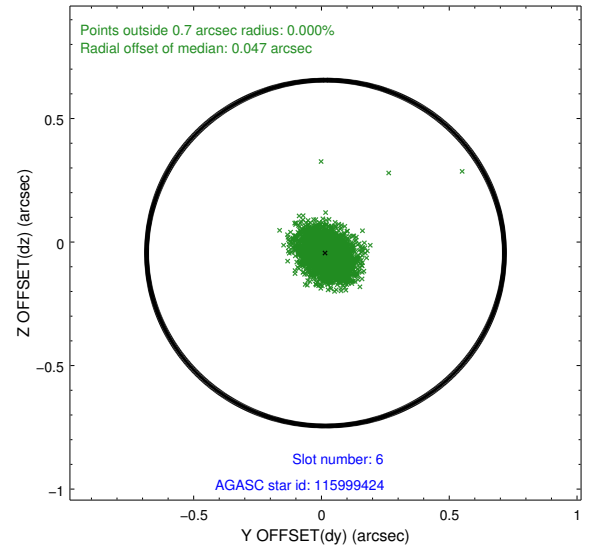
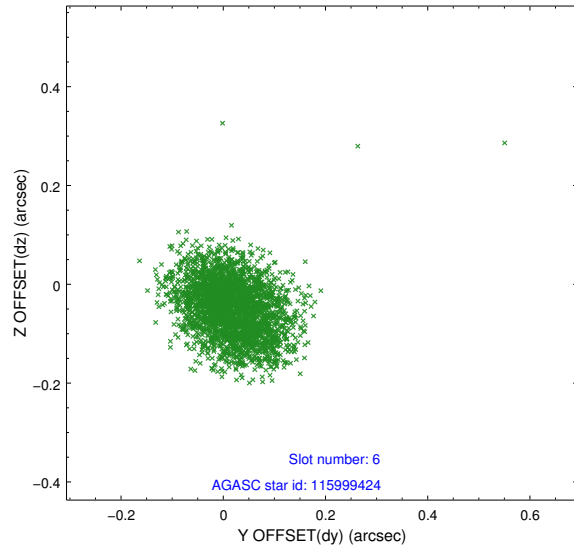
## 2.4.2 Slot 4



### 2.4.3 Slot 5

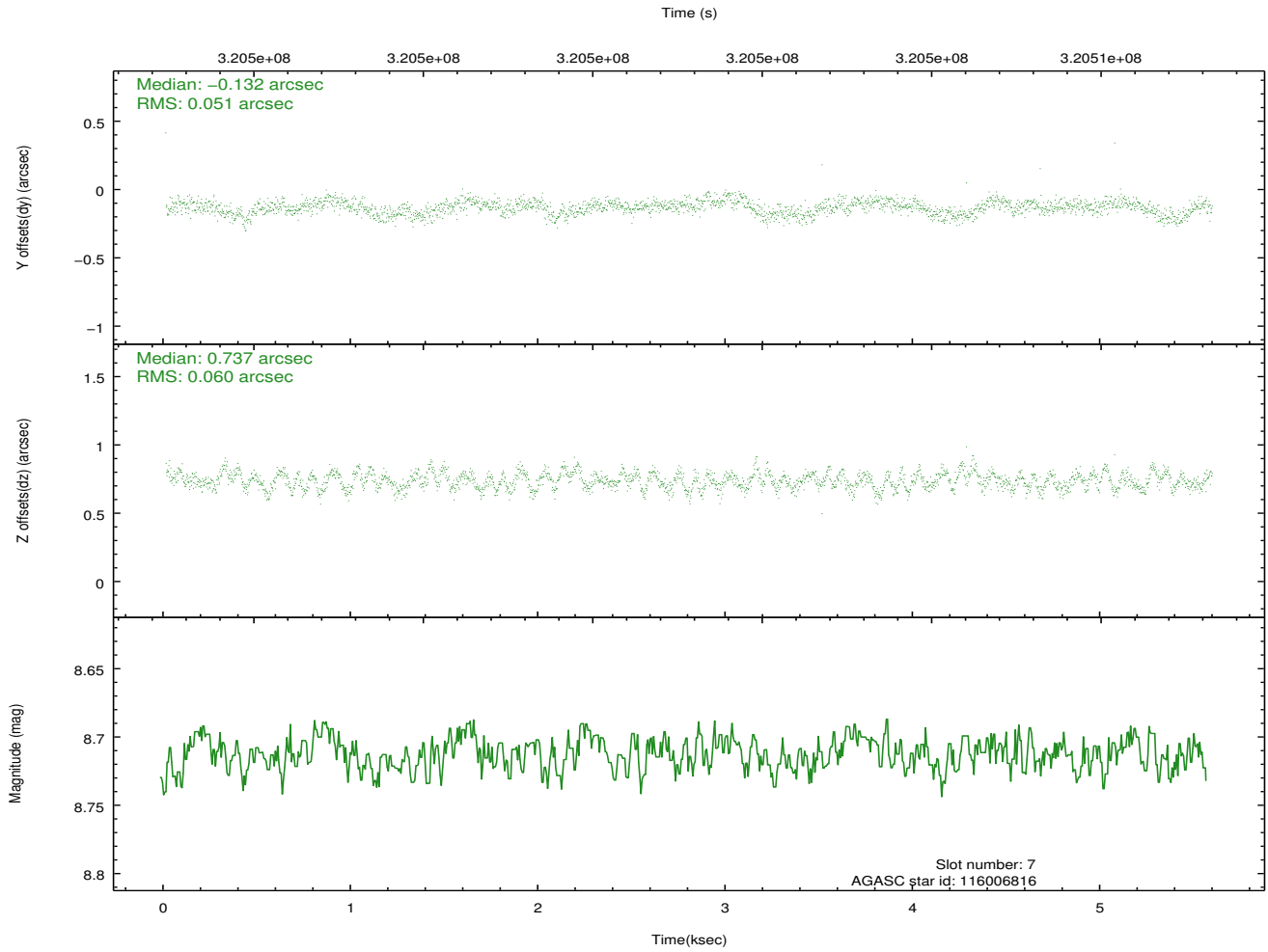
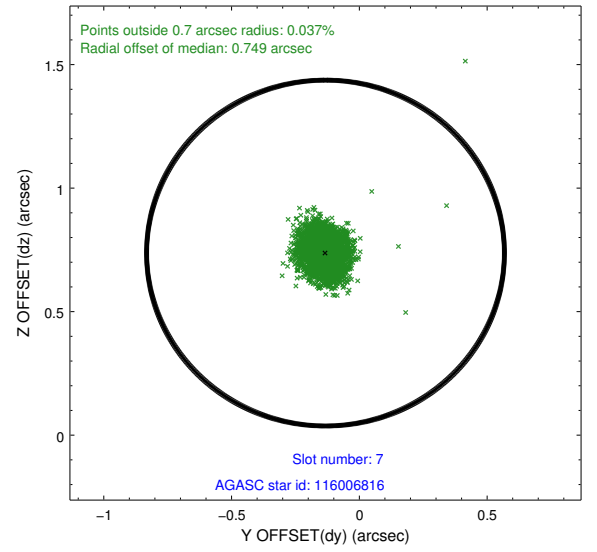
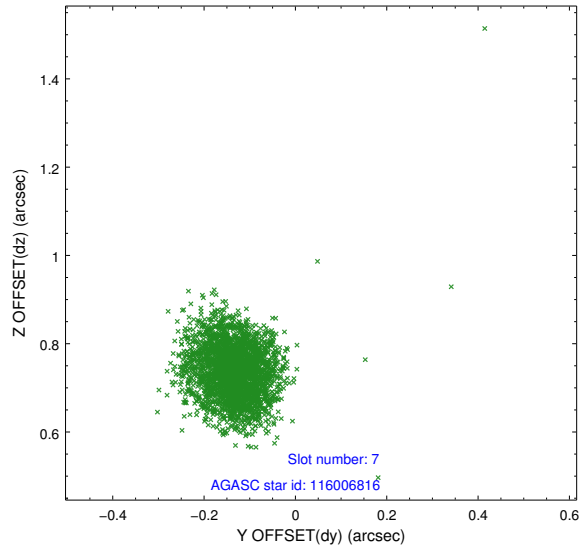


## 2.4.4 Slot 6



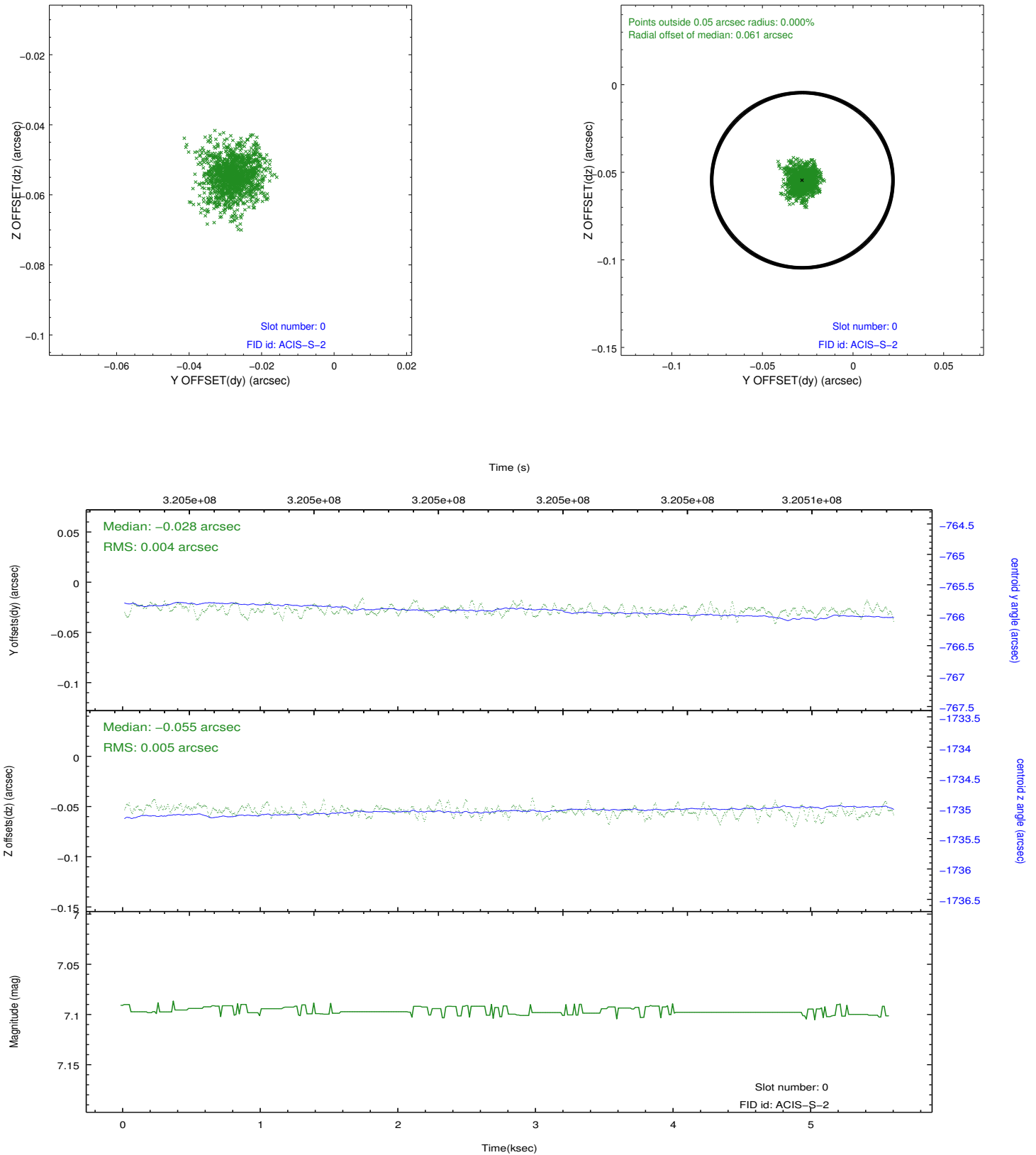


## 2.4.5 Slot 7

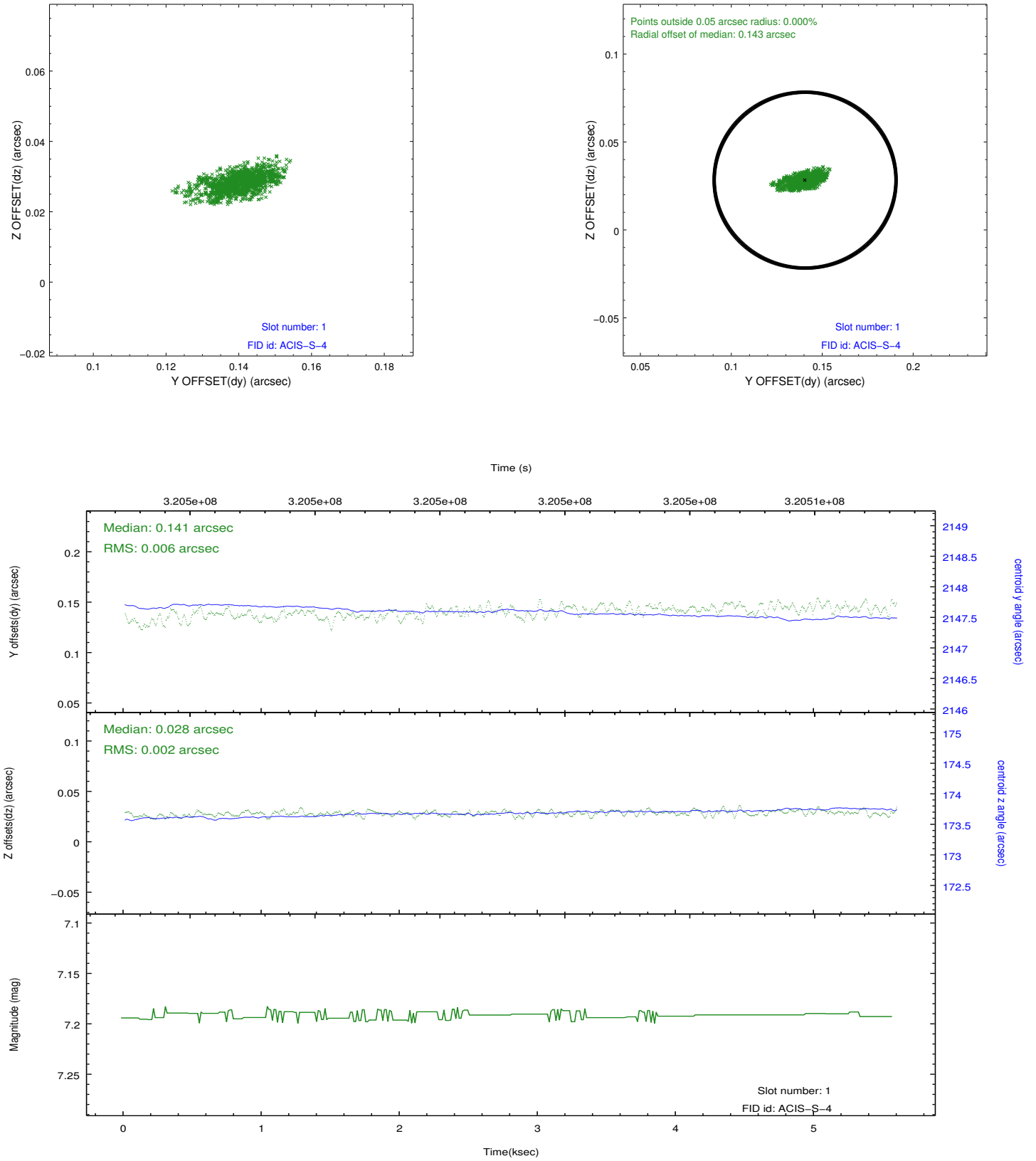


## 2.5 FID Slots

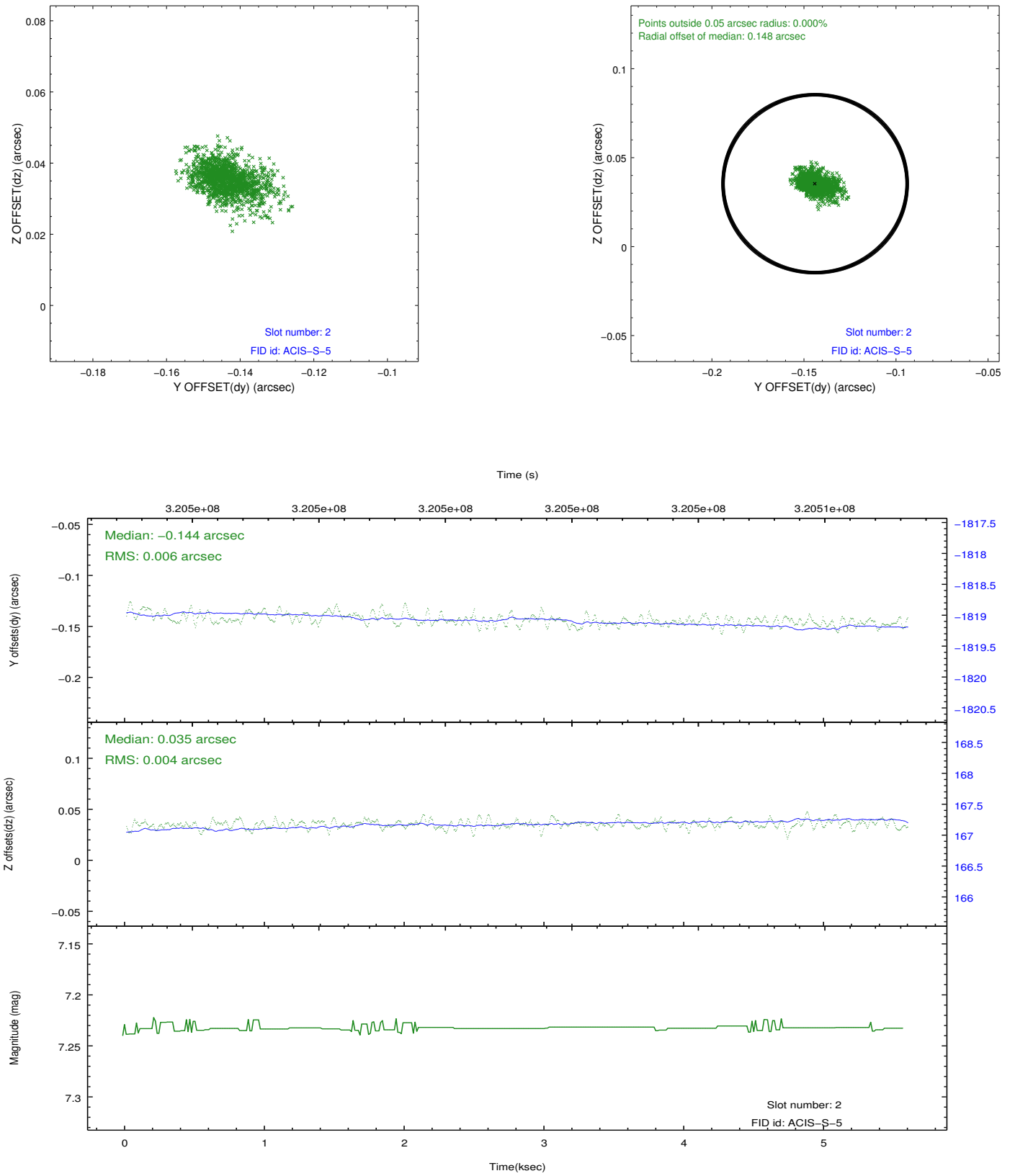
### 2.5.1 Slot 0



## 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	5.15519998

### A.2 Comments

Joint Proposal: Spitzer