

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8082 - L2 Version 2  
Chandra X-Ray Center

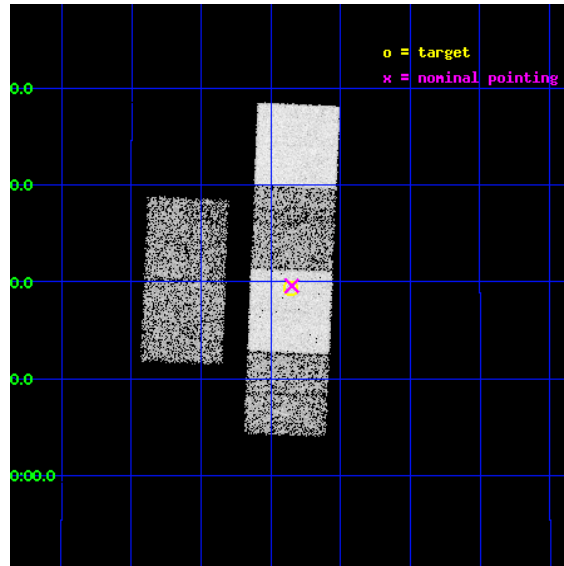
L2 Processing Date : May 10 2012

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# 1 Front

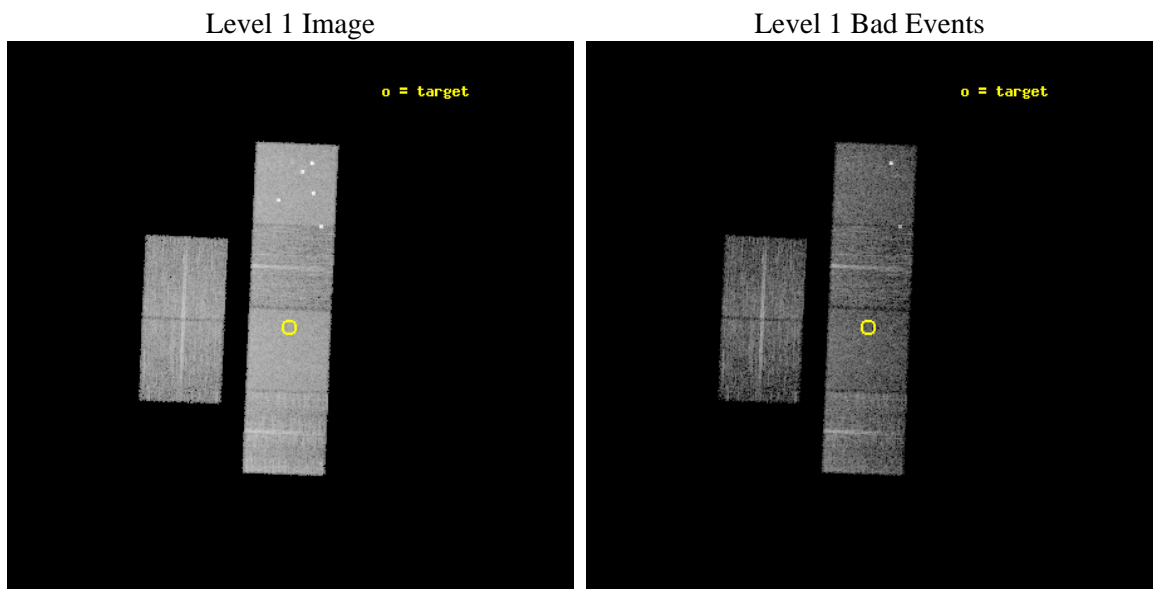
seq_num	900623	Sequence number
obs_id	8082	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	1528	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	188.465	Observer's specified target RA [deg]
dec_targ	13.322583	Observer's specified target Dec [deg]
ra_nom	188.46220491347	Nominal RA [deg]
dec_nom	13.326705471237	Nominal Dec [deg]
roll_nom	92.38310615128	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5158.3999808431	Sum of GTIs [s]
livetime	5093.0812142701	Livetime [s]
ontime2	5155.1589605212	Sum of GTIs [s]
ontime3	5158.3762792349	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	5151.8532086611	Sum of GTIs [s]
l2events	83425	Number of level 2 events



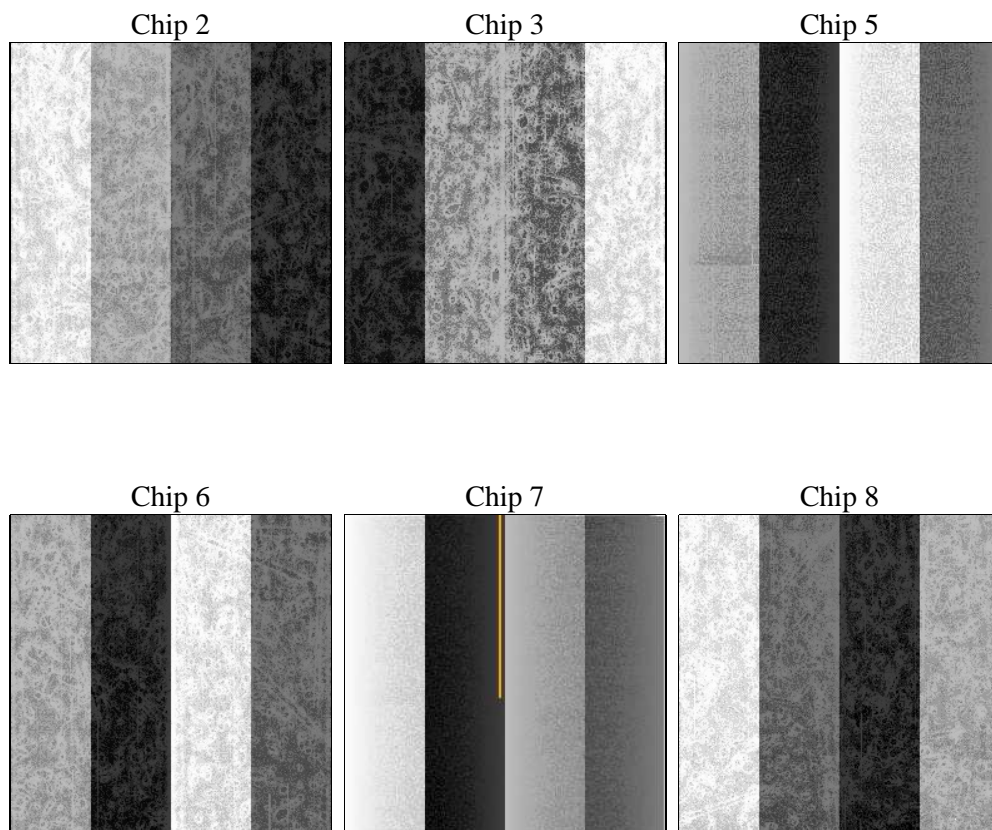
## 2 OBI

### 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]
caldbver	4.4.9	&#160	ontime2	5155.1589605212	Sum of GTIs [s]
date	2012-05-10T08:12:53	Date and time of file creation	ontime3	5158.3762792349	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	5151.8532086611	Sum of GTIs [s]
			l1events	367757	Number of level 1 events

### 2.1.4 Events

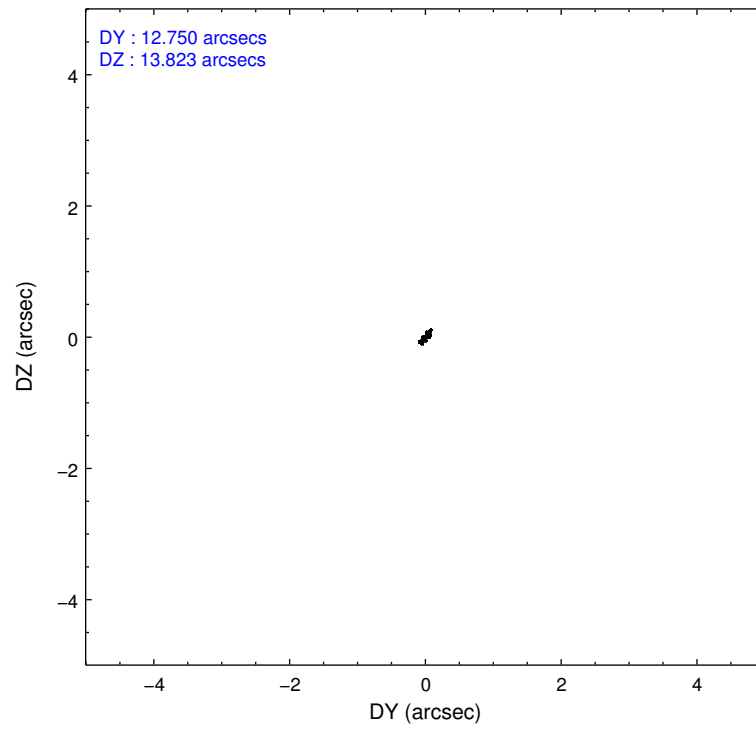
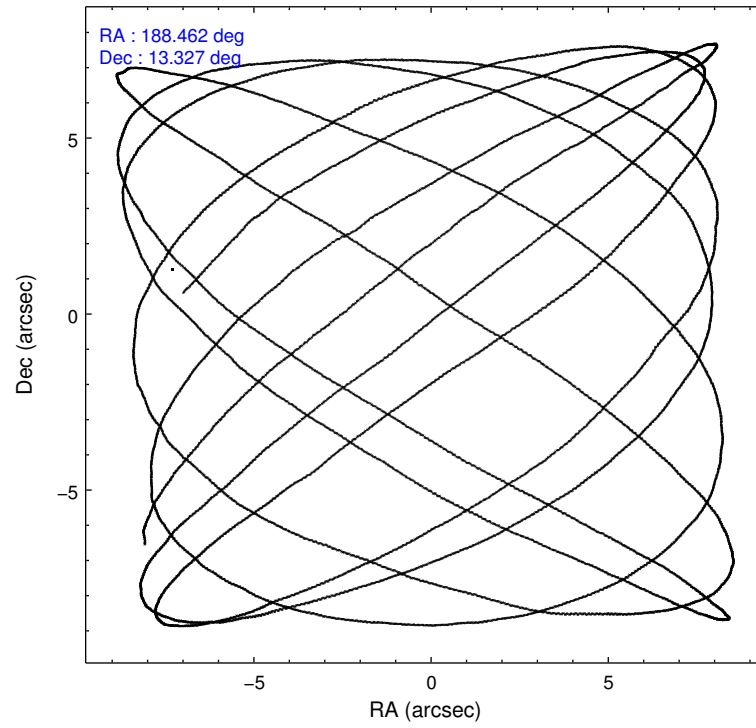
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	51304	46946	83514	50650	69323	66020	grade 0 events	2654	2771	6647	2556	2574	4870
rejected events	45316	40893	43407	44391	40545	51286		5%	5%	7%	5%	3%	7%
rejected %	88%	87%	51%	87%	58%	77%	grade 1 events	30	41	132	29	73	52
								0%	0%	0%	0%	0%	0%
							grade 2 events	1280	1220	11224	1343	5953	3245
								2%	2%	13%	2%	8%	4%
							grade 3 events	512	538	1471	566	2507	1446
								0%	1%	1%	1%	3%	2%
							grade 4 events	530	512	1325	566	2472	1379
								1%	1%	1%	1%	3%	2%
							grade 5 events	2021	2316	5883	2391	6545	3034
								3%	4%	7%	4%	9%	4%
							grade 6 events	1016	1015	19460	1235	15289	3817
								1%	2%	23%	2%	22%	5%
							grade 7 events	43261	38533	37372	41964	33910	48177
								84%	82%	44%	82%	48%	72%

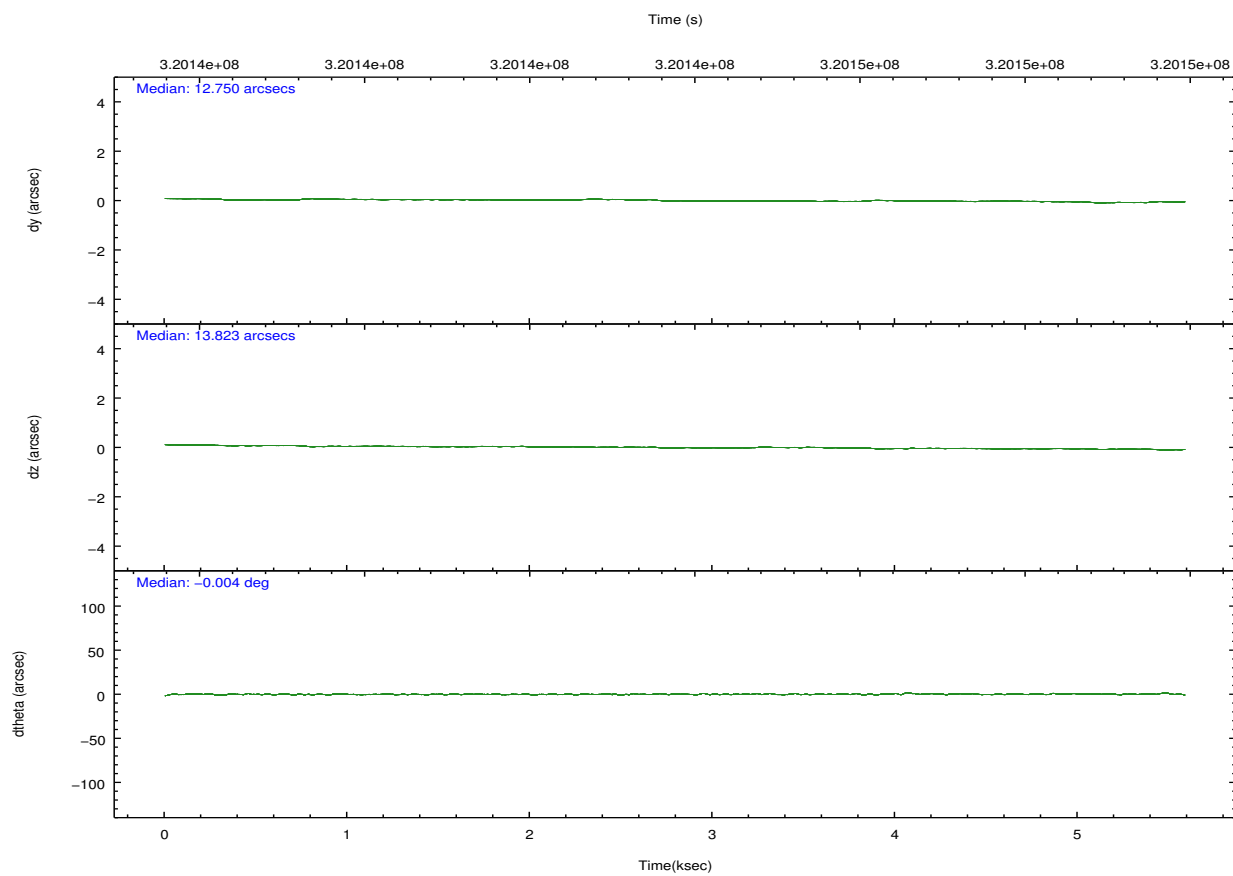
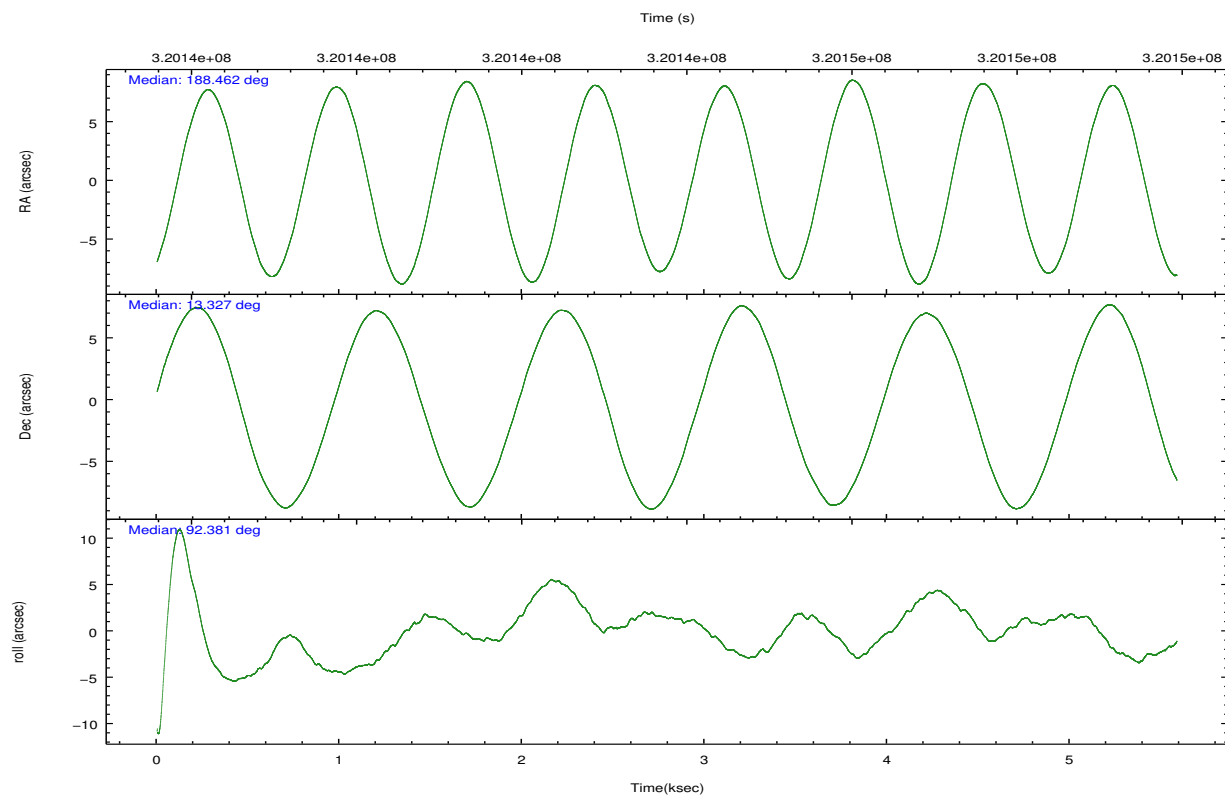


## 2.2 Compared Parameters

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	188.477584	188.4622049134664	CCD I2 on	O1	Y
[deg] Pointing Dec	13.303713	13.32670547123745	CCD I3 on	O2	Y
[deg] Pointing Roll	92.222928	92.38310615127959	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)	320142272.184000	320141805.60138	CCD S5 on	N	N
Observation start date	2008-02-23T08:23:27	2008-02-23T08:16:45	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	320147672.184000	320147834.65168	On-chip summing requested	N	N
Observation end date	2008-02-23T09:53:27	2008-02-23T09:57:14	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



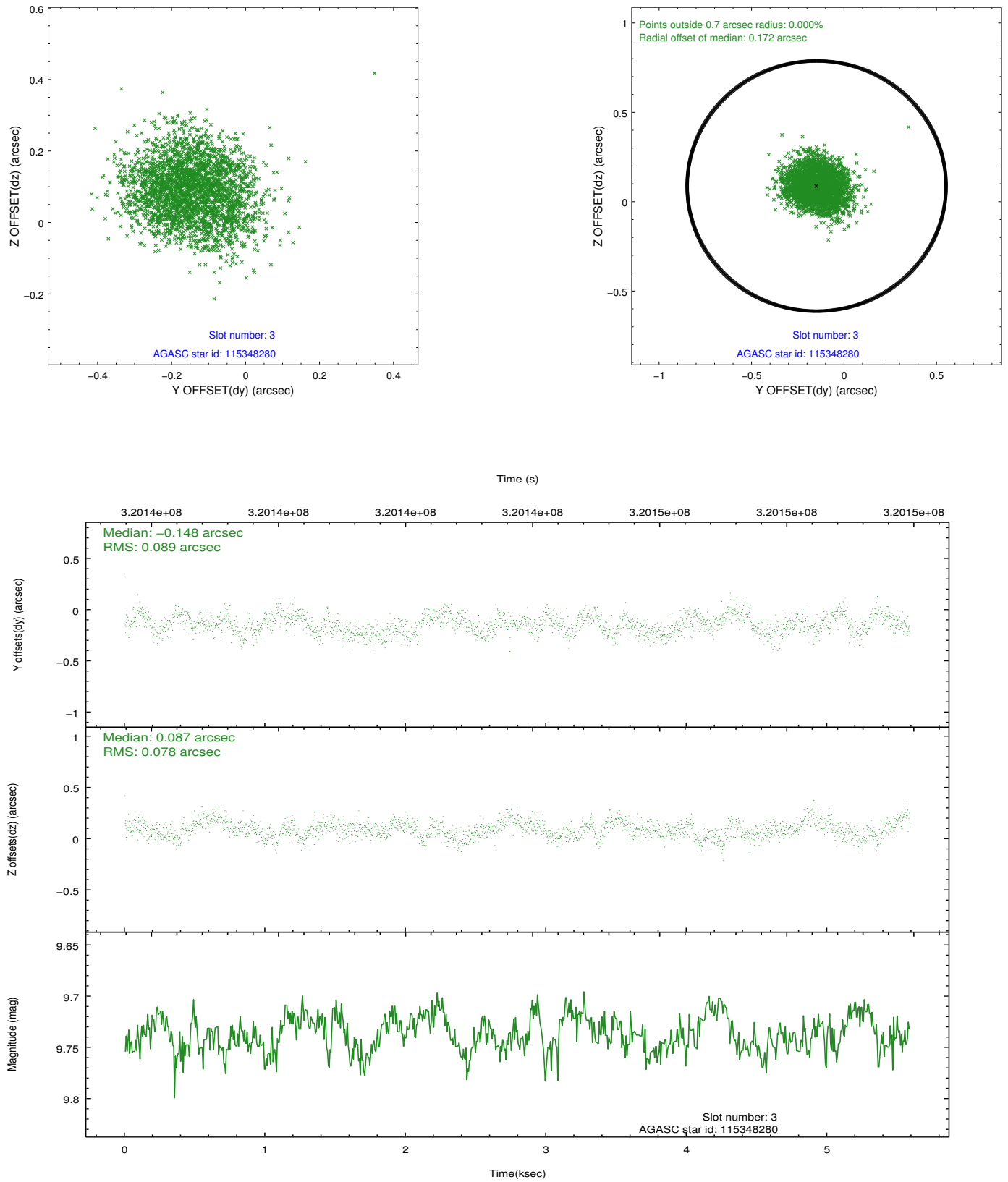


### Slot Statistics

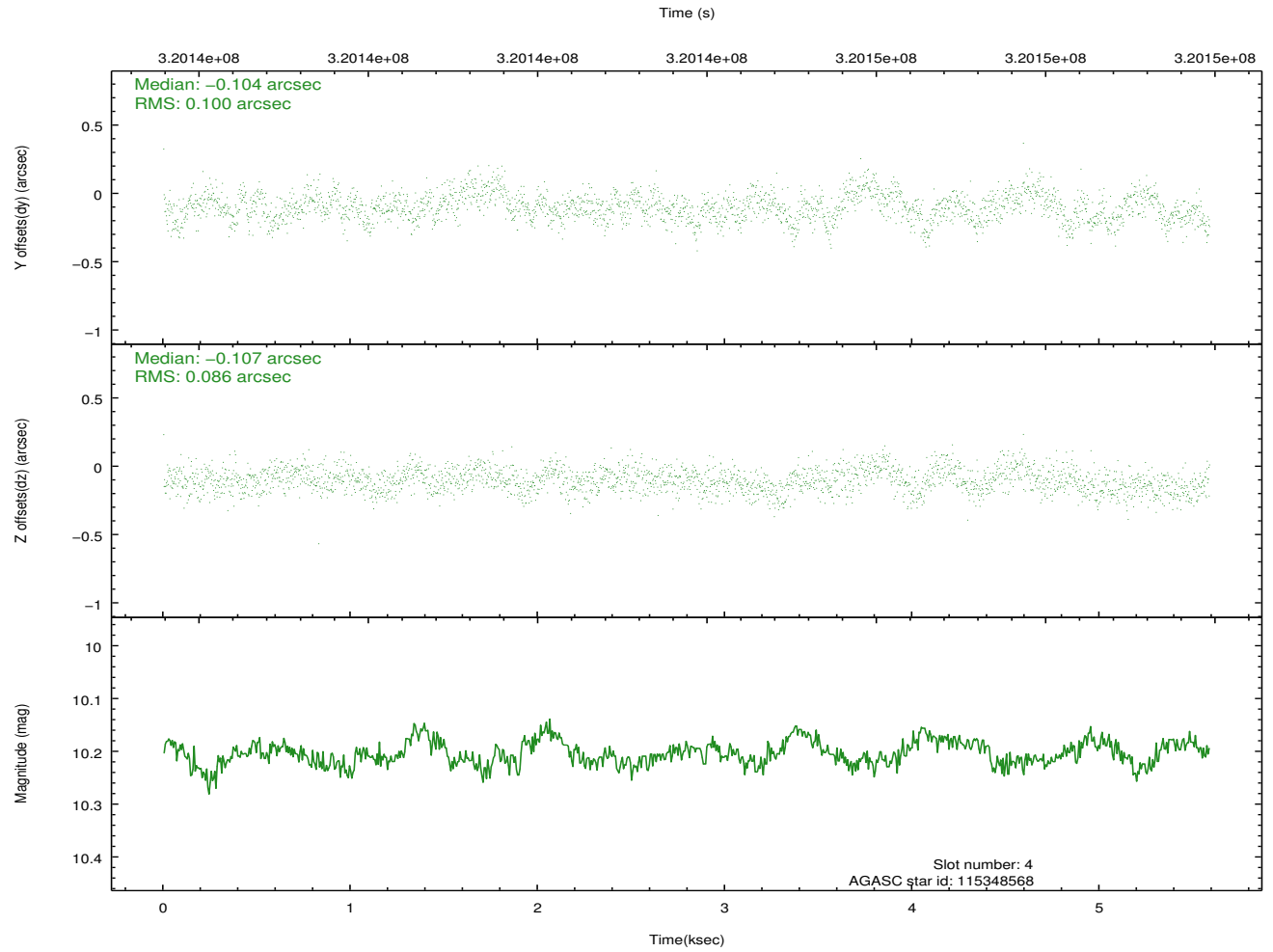
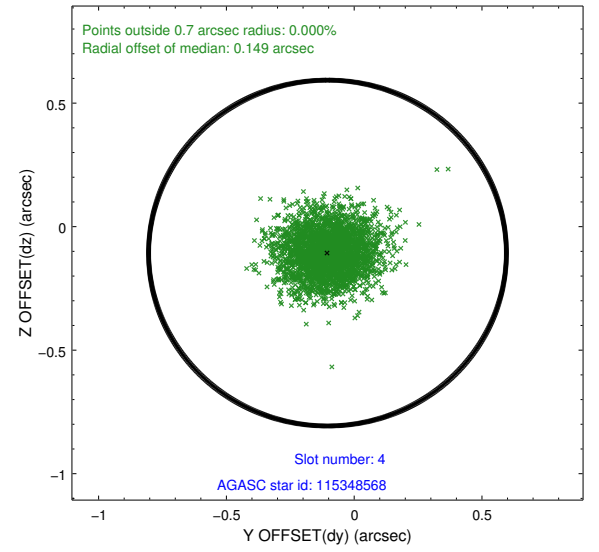
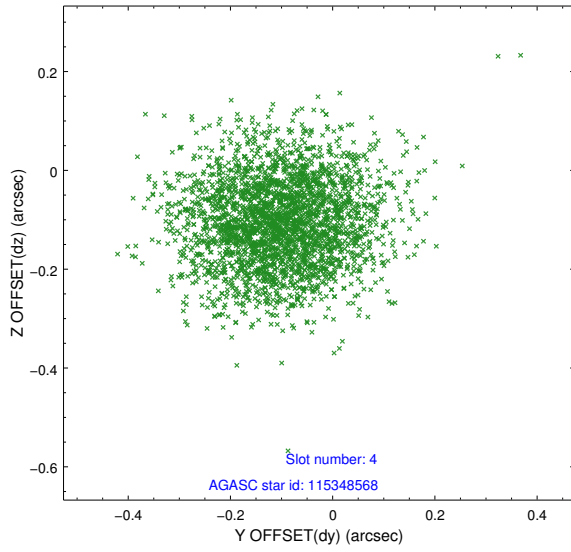
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1363	-0.035	-0.057	0.007	0.011	0.000000	0.000000	-765.69	-1735.23
1	FID	ACIS-S-4	7.19	1363	0.149	0.032	0.006	0.010	0.000000	0.000000	2147.27	172.24
2	FID	ACIS-S-5	7.23	1363	-0.145	0.033	0.007	0.011	0.000000	0.000000	-1817.27	167.12
3	GUIDE	115348280	9.74	2716	-0.148	0.087	0.128	0.200	188.509617	13.876544	2056.24	-191.62
4	GUIDE	115348568	10.21	2724	-0.104	-0.107	0.141	0.226	188.076087	13.658173	1331.40	1353.89
5	GUIDE	115349088	9.30	2710	0.167	-0.060	0.120	0.185	188.777694	12.938966	-1351.48	-1000.38
6	GUIDE	115349560	9.83	2723	-0.020	-0.166	0.160	0.241	188.086555	13.583828	1061.36	1329.97
7	GUIDE	115479416	9.93	2721	0.112	0.226	0.178	0.315	189.134928	12.759499	-2044.06	-2229.20

## 2.4 Star Slots

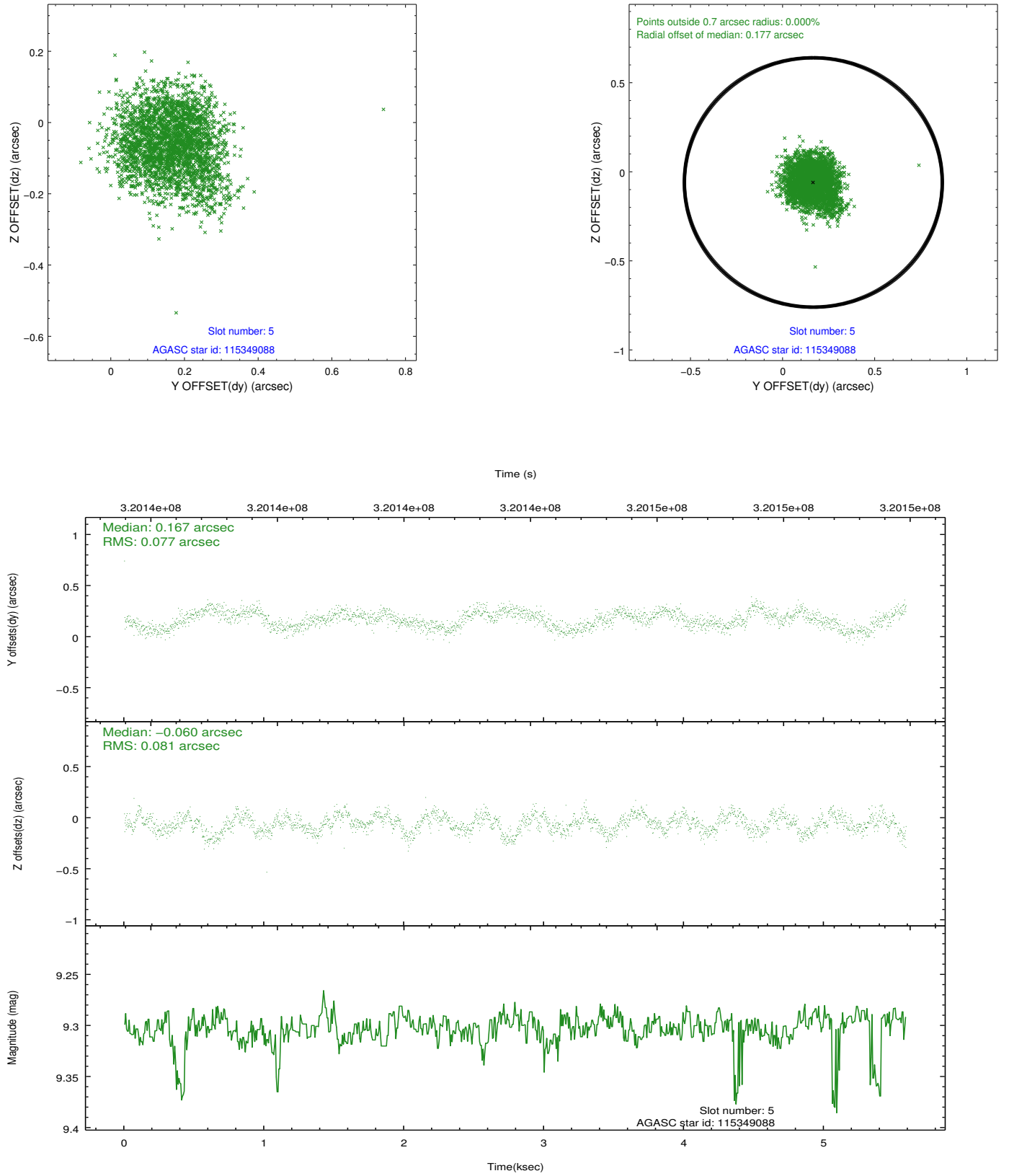
### 2.4.1 Slot 3



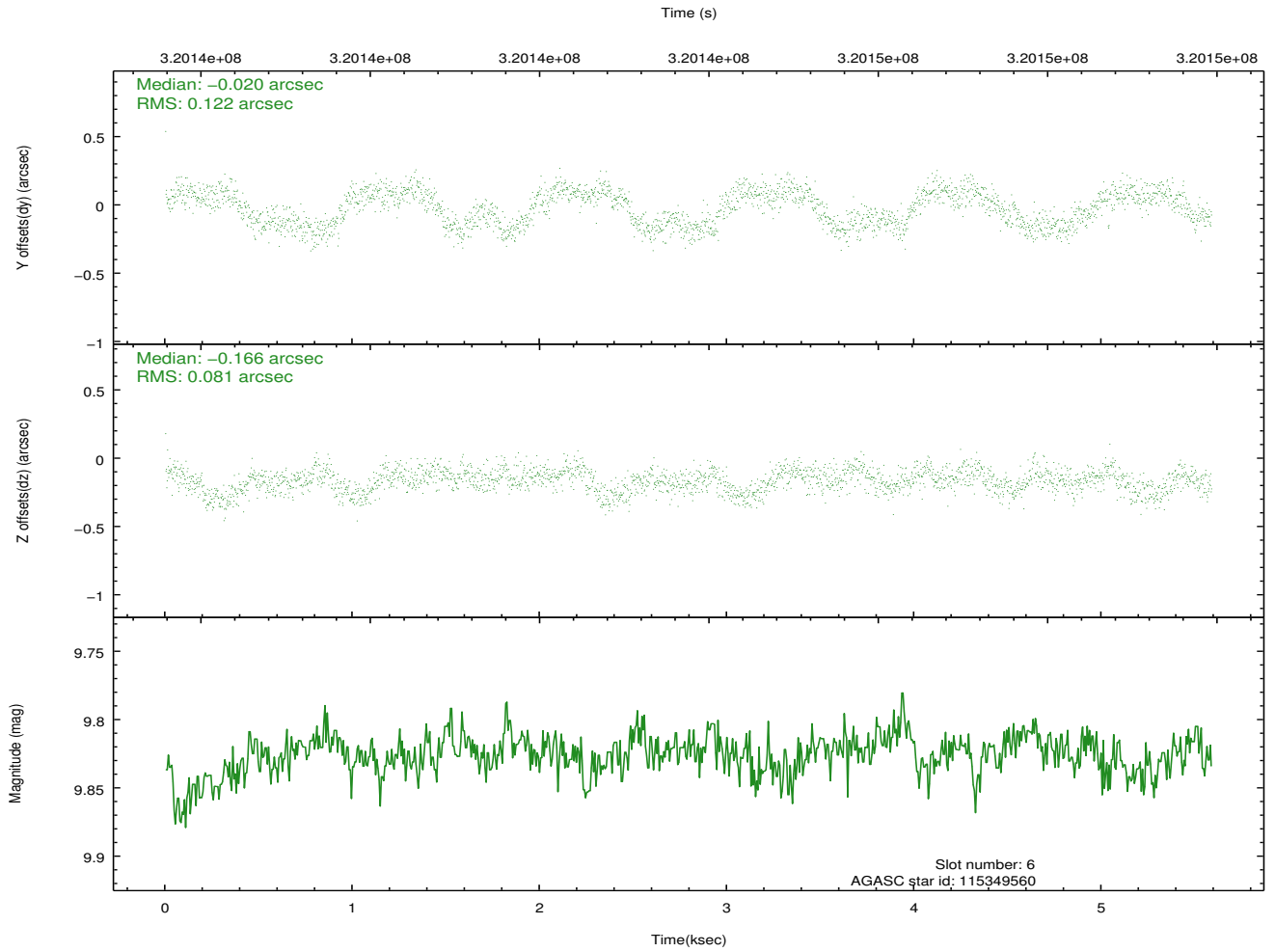
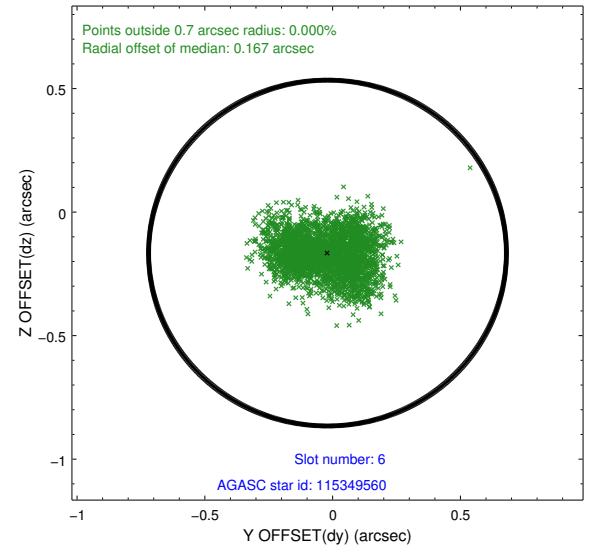
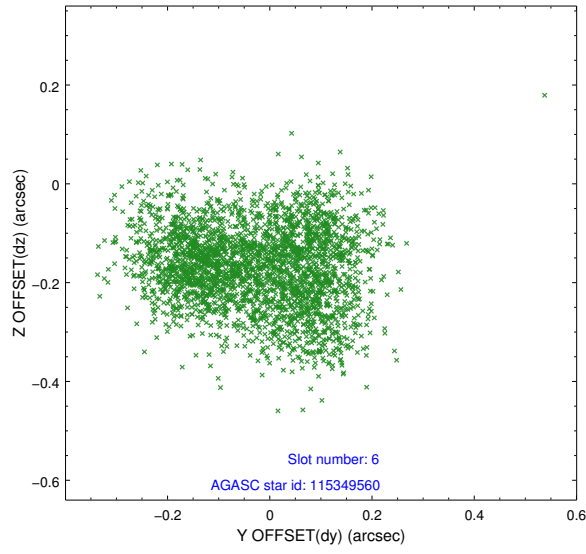
## 2.4.2 Slot 4



### 2.4.3 Slot 5

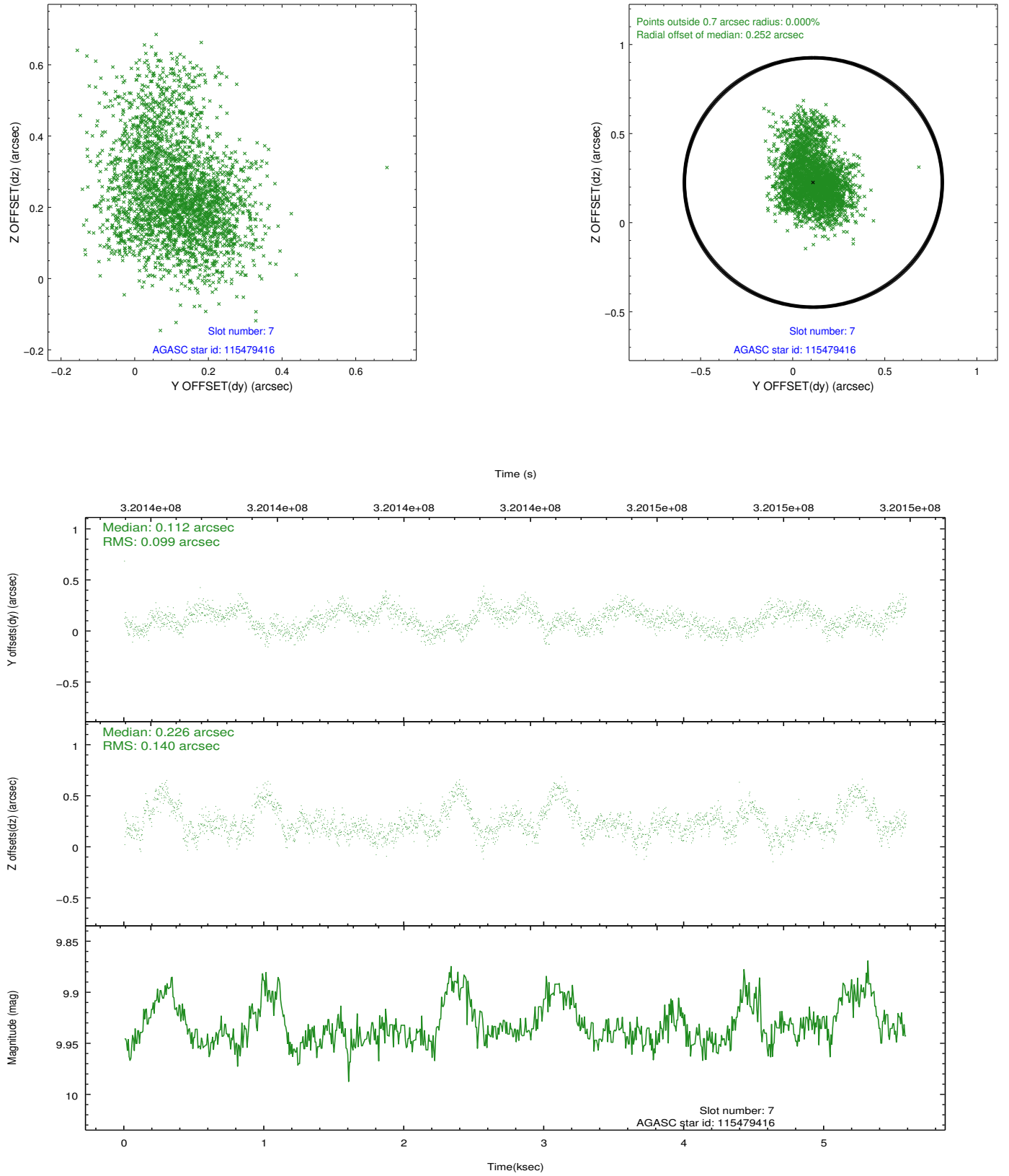


## 2.4.4 Slot 6



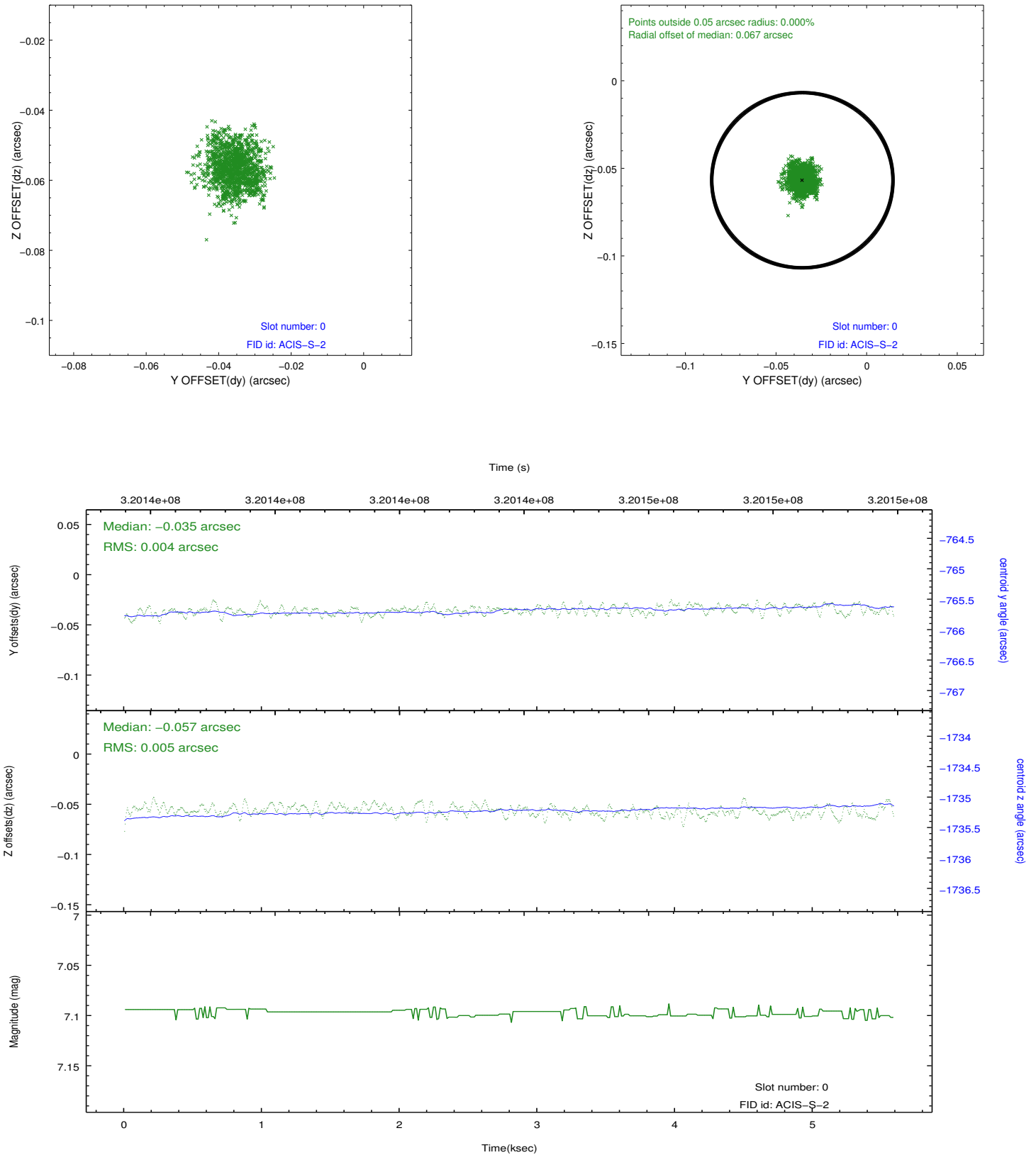


## 2.4.5 Slot 7

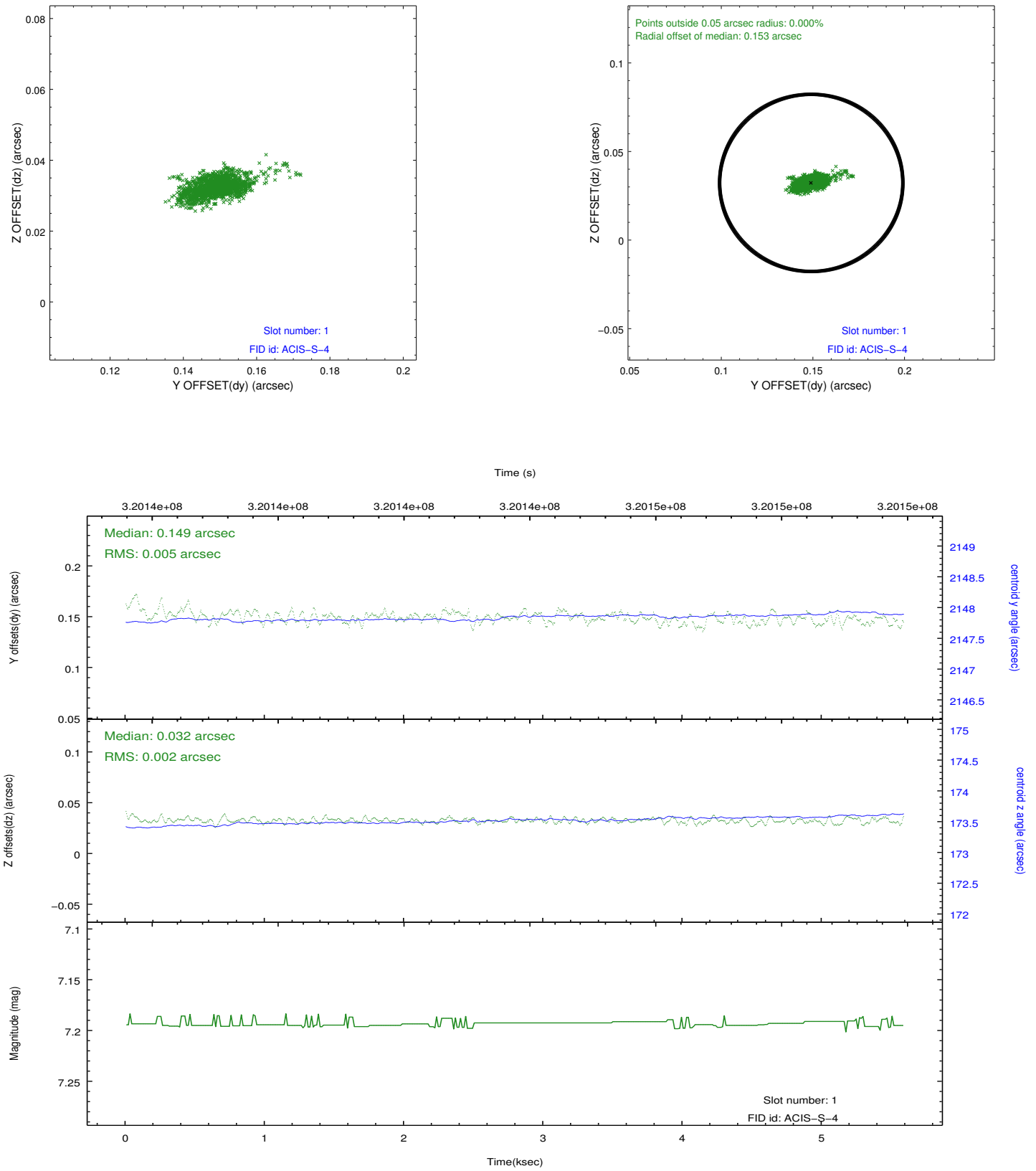


## 2.5 FID Slots

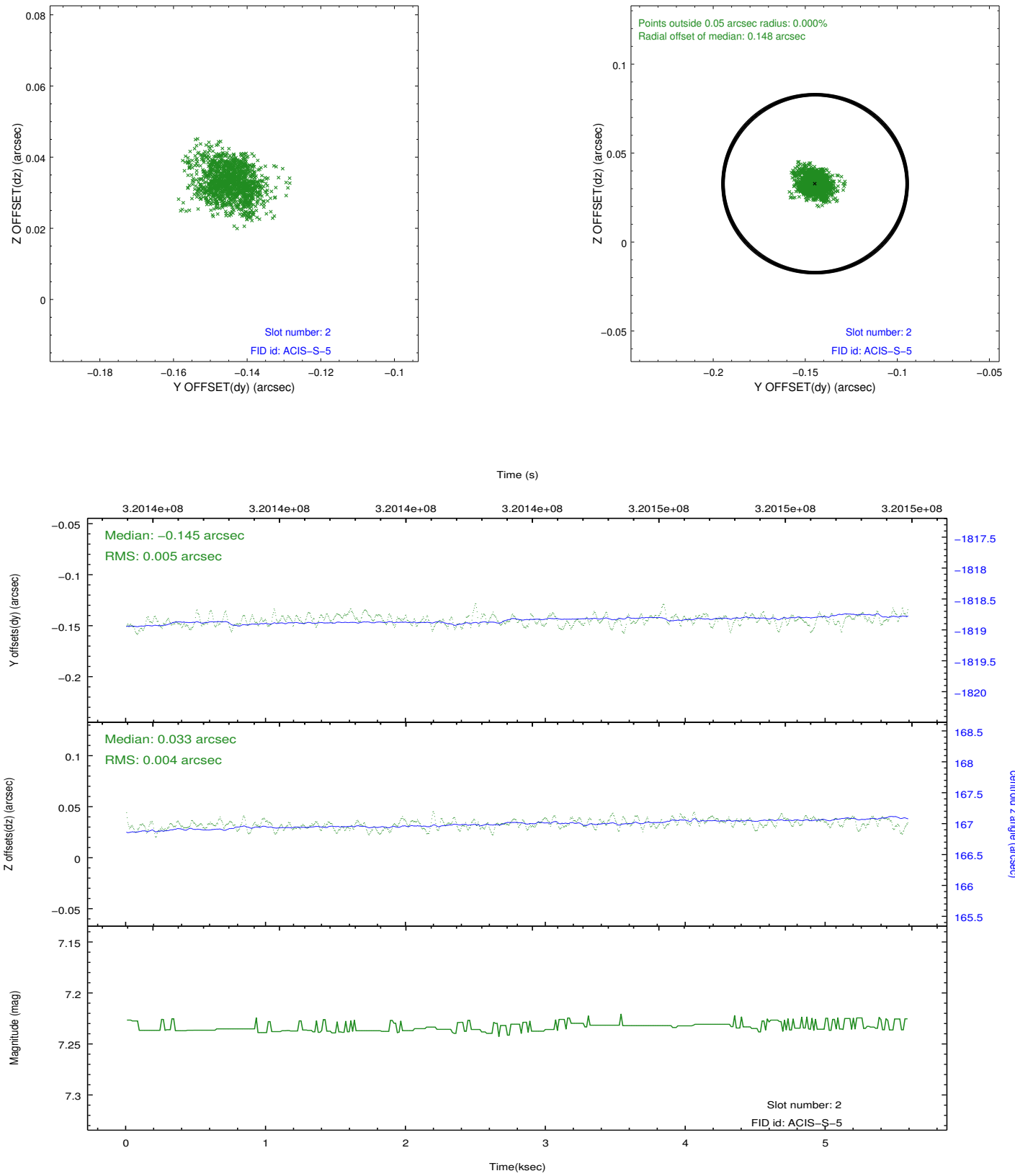
### 2.5.1 Slot 0



## 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