

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8097 - L2 Version 2  
Chandra X-Ray Center

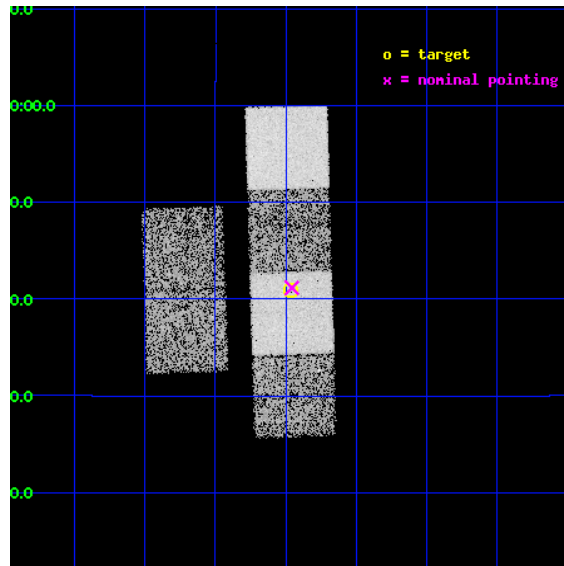
L2 Processing Date : May 10 2012

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# 1 Front

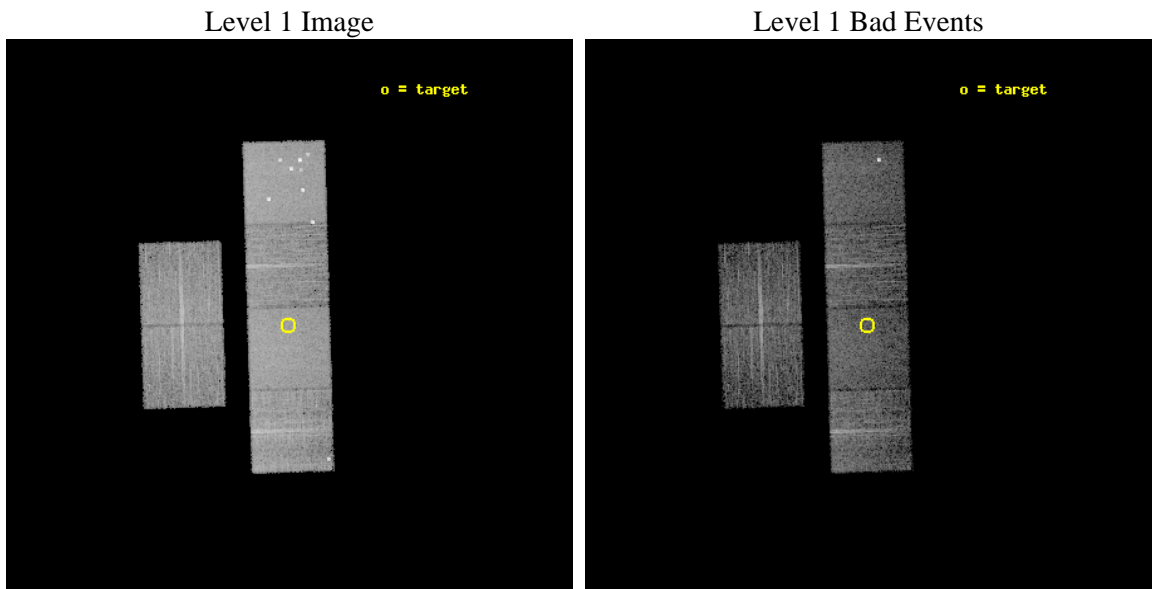
seq_num	900638	Sequence number
obs_id	8097	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	1948	Source name
dtycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	190.741667	Observer's specified target RA [deg]
dec_targ	10.681806	Observer's specified target Dec [deg]
ra_nom	190.739193407	Nominal RA [deg]
dec_nom	10.686057644173	Nominal Dec [deg]
roll_nom	88.34099937539	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5157.1956039071	Sum of GTIs [s]
livetime	5091.8920878801	Livetime [s]
ontime2	5157.2366537452	Sum of GTIs [s]
ontime3	5157.0724838972	Sum of GTIs [s]
ontime5	5157.1545737386	Sum of GTIs [s]
ontime6	5157.1135239005	Sum of GTIs [s]
ontime7	5157.1956039071	Sum of GTIs [s]
ontime8	5150.5493737459	Sum of GTIs [s]
l2events	82563	Number of level 2 events



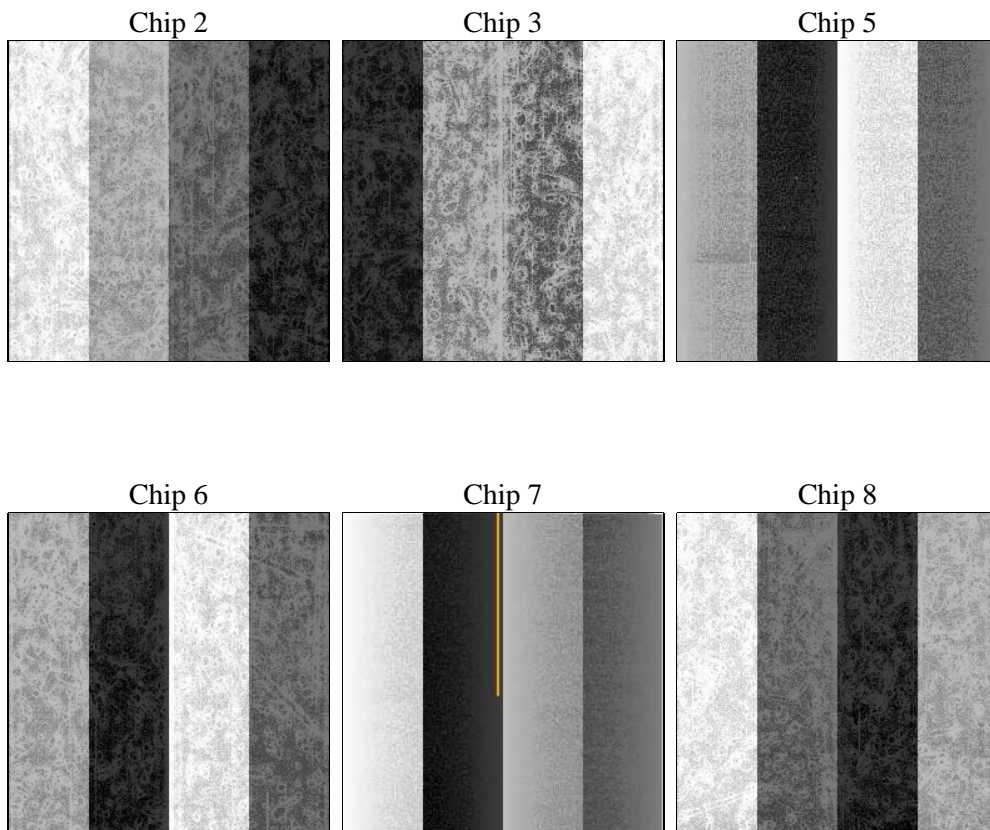
## 2 OBI

### 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	5157.1956039071	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime2	5157.2366537452	Sum of GTIs [s]
date	2012-05-10T08:33:06	Date and time of file creation	ontime3	5157.0724838972	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	5157.1545737386	Sum of GTIs [s]
			ontime6	5157.1135239005	Sum of GTIs [s]
			ontime7	5157.1956039071	Sum of GTIs [s]
			ontime8	5150.5493737459	Sum of GTIs [s]
			l1events	372536	Number of level 1 events

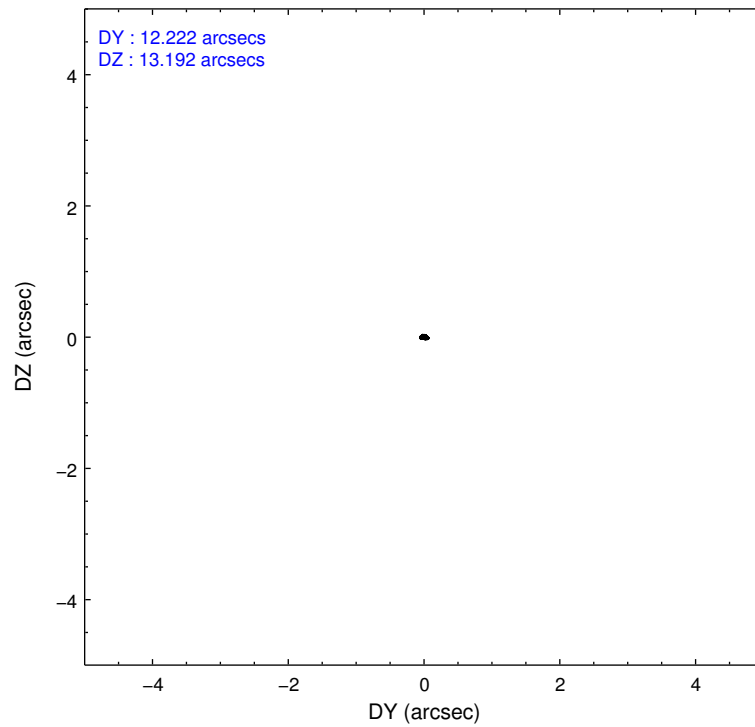
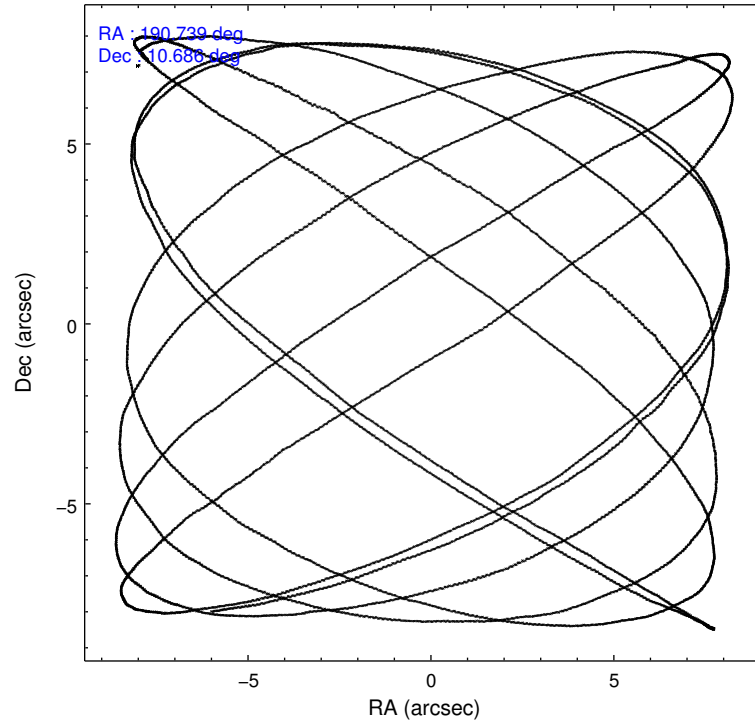
### 2.1.4 Events

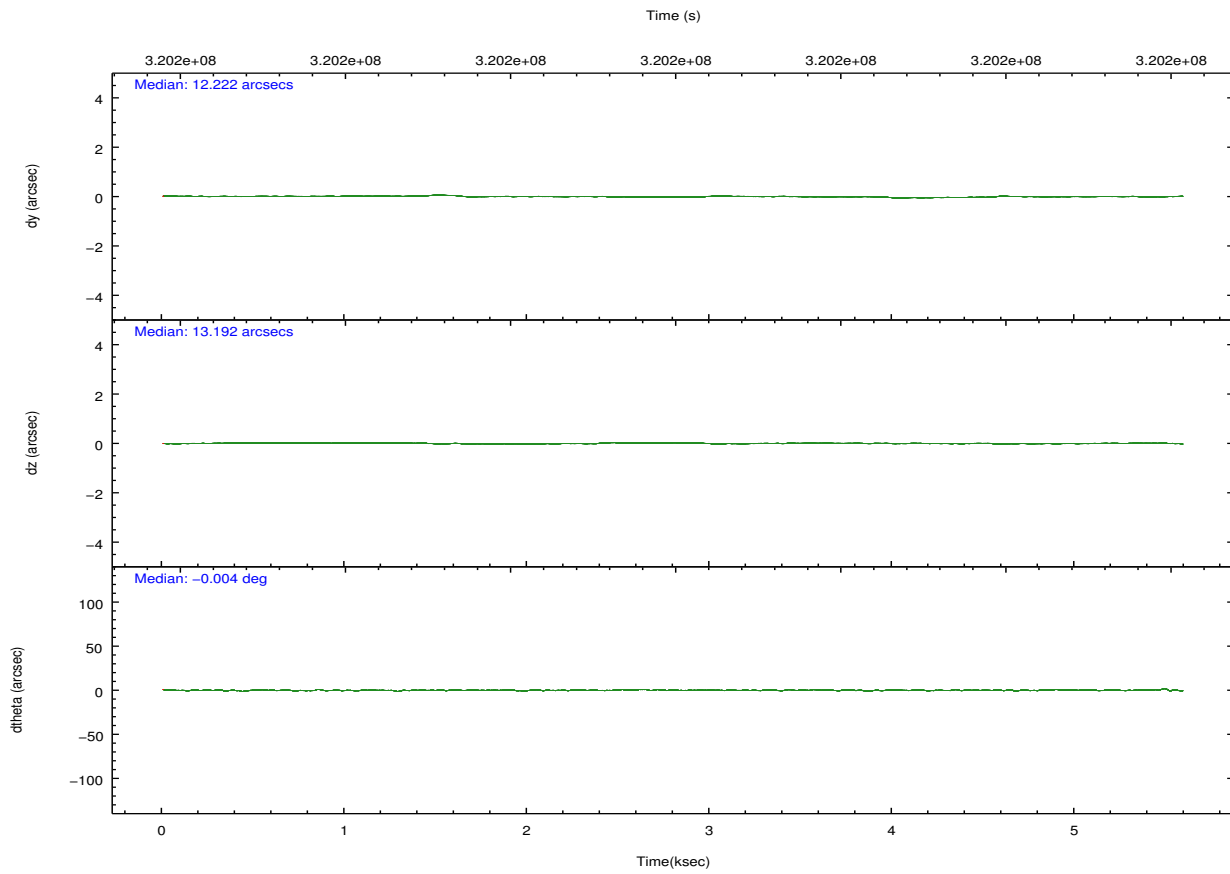
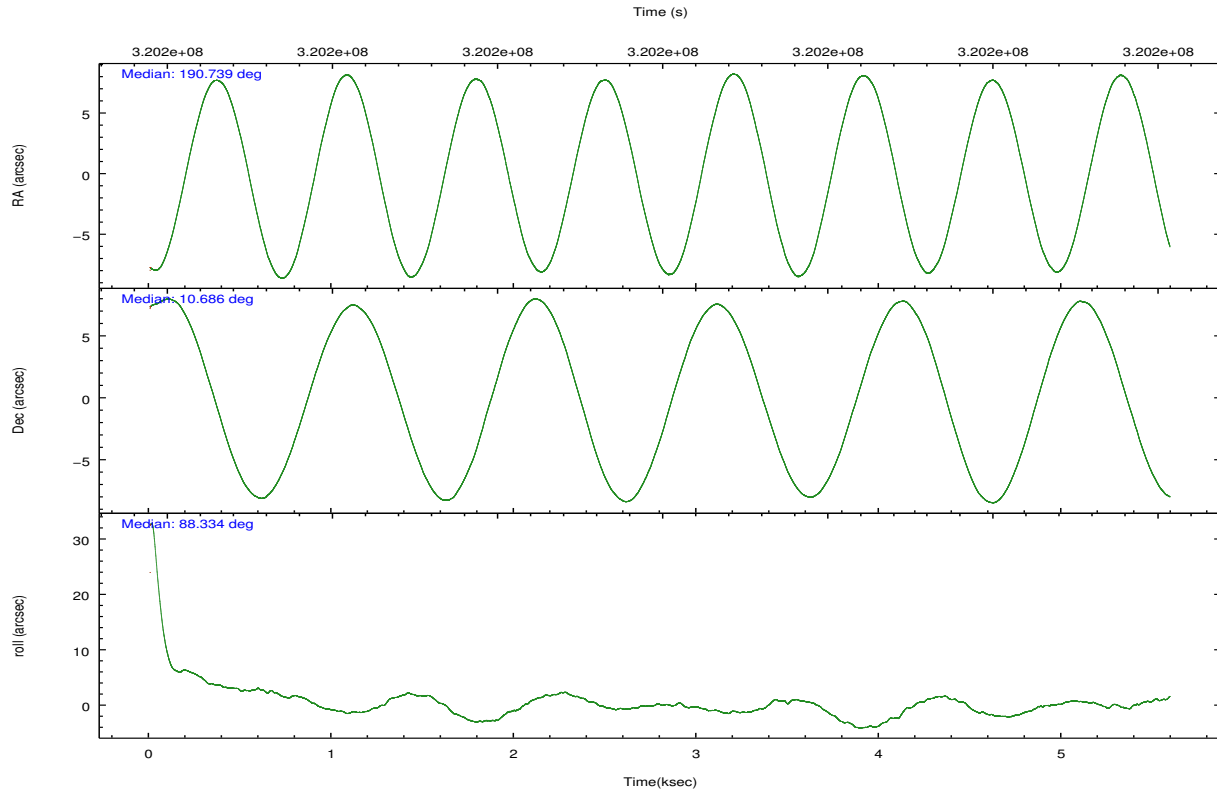
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	51935	48482	86150	51346	69246	65377	grade 0 events	2422	2561	7529	2358	2537	5231
rejected events	46155	42516	43751	45302	40582	50763		4%	5%	8%	4%	3%	8%
rejected %	88%	87%	50%	88%	58%	77%	grade 1 events	38	32	120	19	80	60
								0%	0%	0%	0%	0%	0%
							grade 2 events	1300	1196	11773	1346	5907	3053
								2%	2%	13%	2%	8%	4%
							grade 3 events	546	544	1378	548	2436	1381
								1%	1%	1%	1%	3%	2%
							grade 4 events	533	614	1217	521	2336	1337
								1%	1%	1%	1%	3%	2%
							grade 5 events	1963	2414	5355	2311	6310	3039
								3%	4%	6%	4%	9%	4%
							grade 6 events	987	1064	20542	1282	15482	3627
								1%	2%	23%	2%	22%	5%
							grade 7 events	44146	40057	38236	42961	34158	47649
								85%	82%	44%	83%	49%	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	190.752737	190.7391934069979	CCD I2 on	O1	Y
[deg] Pointing Dec	10.662113	10.68605764417288	CCD I3 on	O2	Y
[deg] Pointing Roll	88.181799	88.34099937539006	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)	320197383.184000	320196921.90406	CCD S5 on	N	N
Observation start date	2008-02-23T23:41:58	2008-02-23T23:35:21	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	320202783.184000	320203000.66686	On-chip summing requested	N	N
Observation end date	2008-02-24T01:11:58	2008-02-24T01:16:40	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



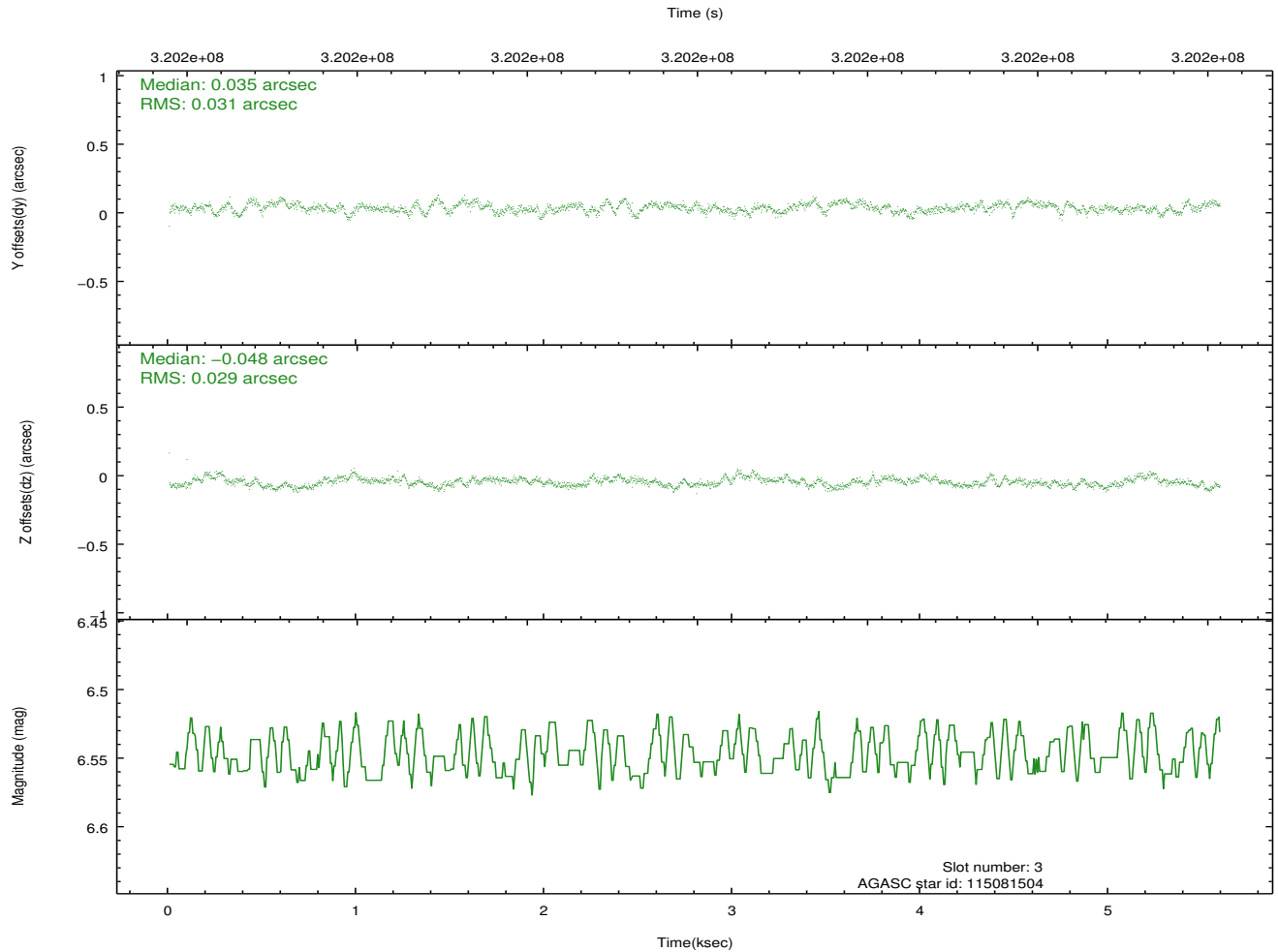
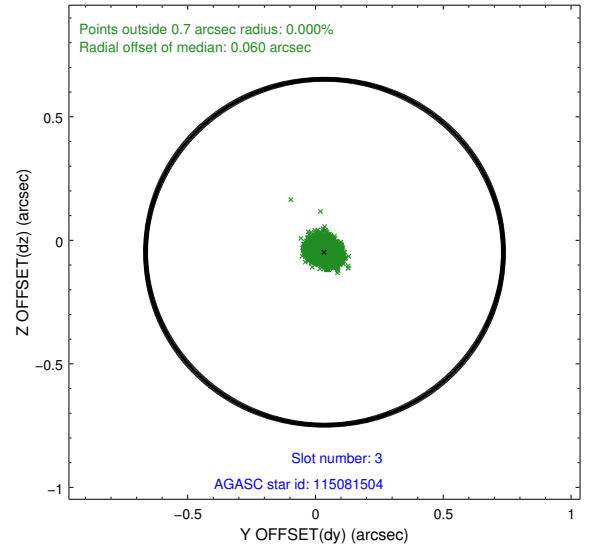
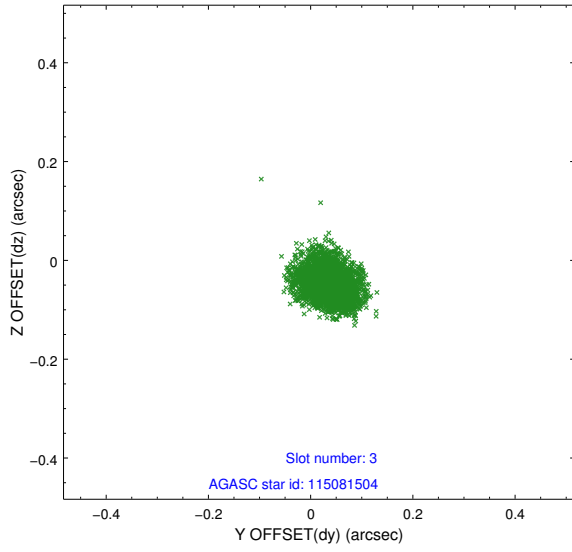


### Slot Statistics

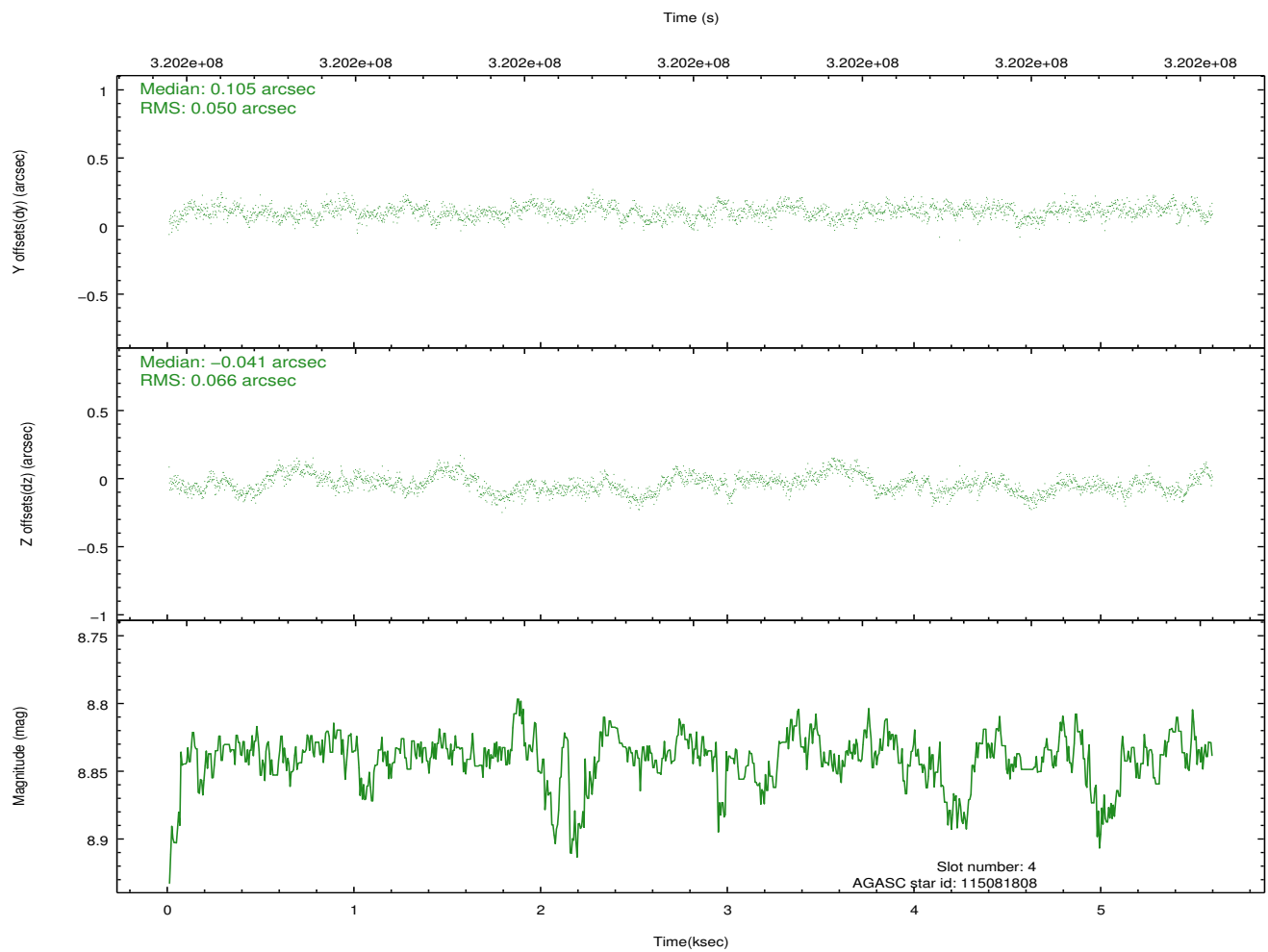
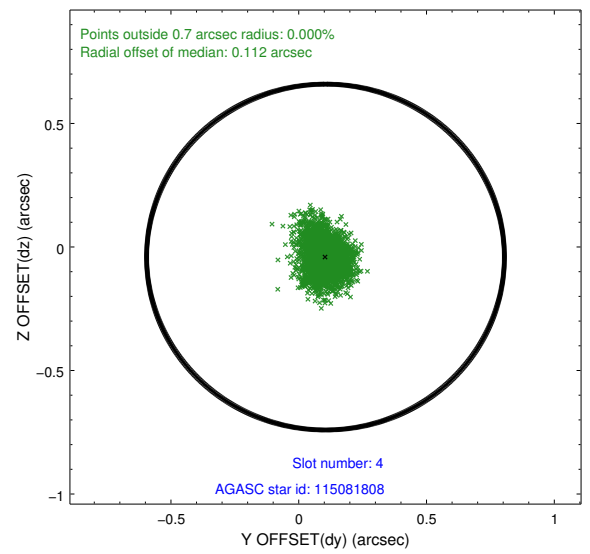
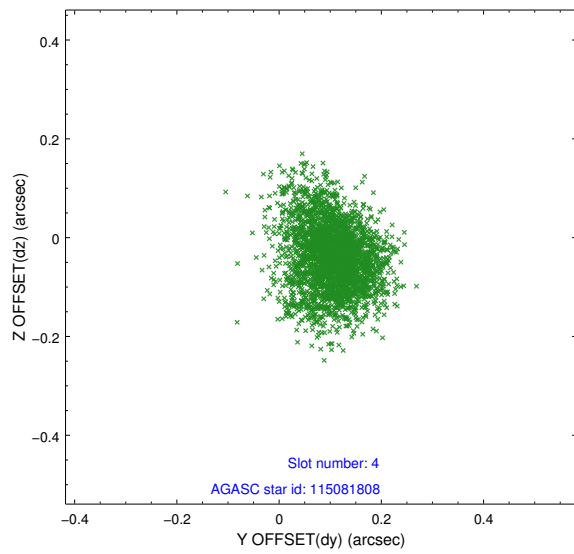
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1364	-0.023	-0.050	0.007	0.011	0.000000	0.000000	-765.14	-1734.57
1	FID	ACIS-S-4	7.20	1364	0.119	0.025	0.006	0.011	0.000000	0.000000	2147.79	172.87
2	FID	ACIS-S-5	7.24	1364	-0.126	0.034	0.007	0.011	0.000000	0.000000	-1816.71	167.78
3	GUIDE	115081504	6.55	2726	0.035	-0.048	0.046	0.072	190.816286	10.100683	-2013.29	-289.11
4	GUIDE	115081808	8.84	2727	0.105	-0.041	0.087	0.143	191.005561	10.921316	960.80	-863.05
5	GUIDE	115082648	9.33	2727	0.108	0.026	0.117	0.193	191.382029	10.575431	-238.73	-2235.02
6	GUIDE	115087784	8.87	2726	-0.167	-0.442	0.094	0.143	190.162527	10.931081	903.19	2115.68
7	GUIDE	115090024	6.57	2726	-0.083	0.503	0.070	0.125	190.393304	10.426268	-888.15	1246.55

## 2.4 Star Slots

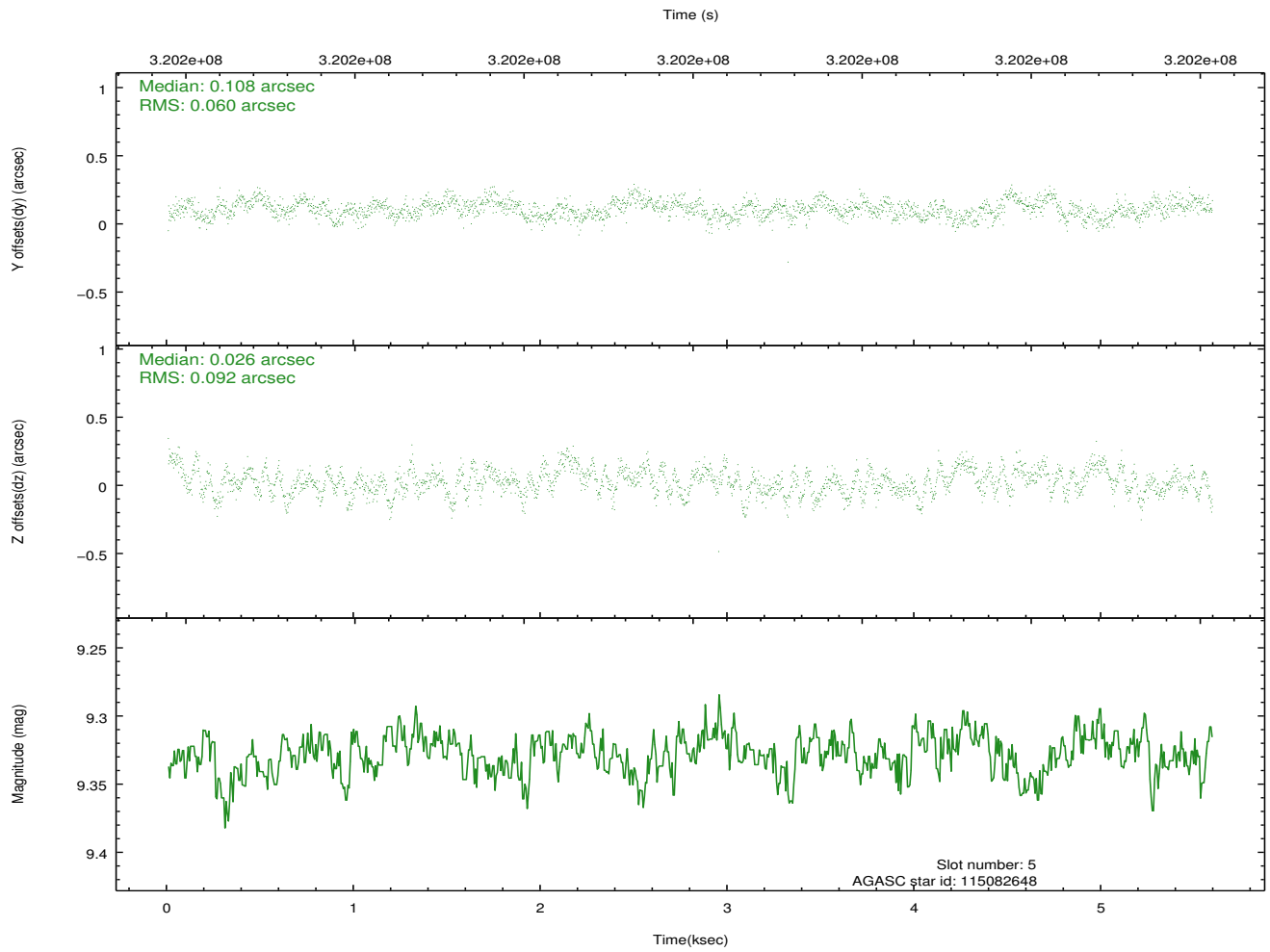
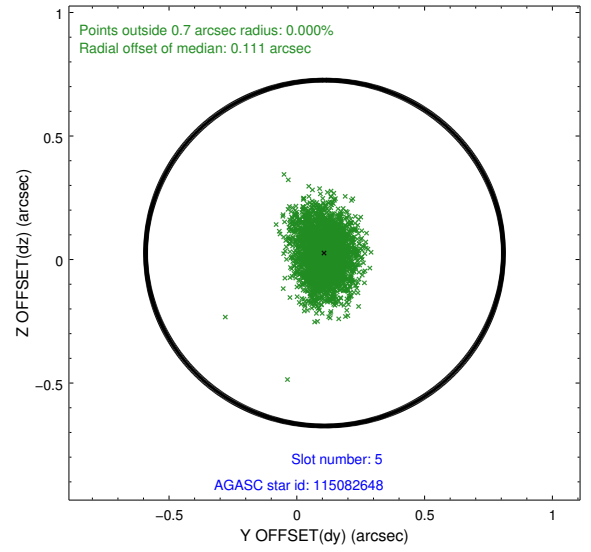
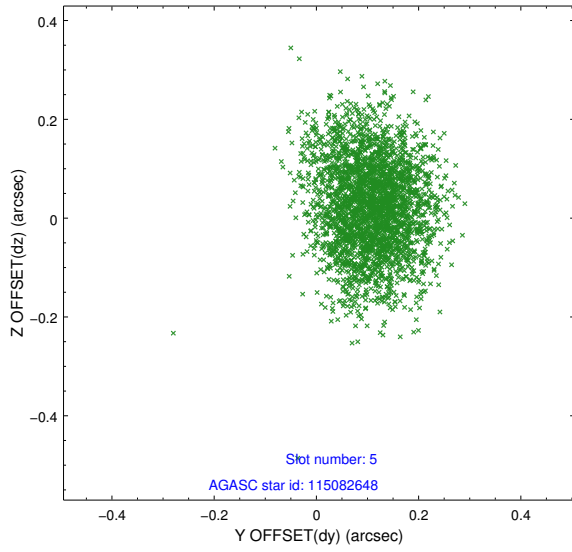
### 2.4.1 Slot 3



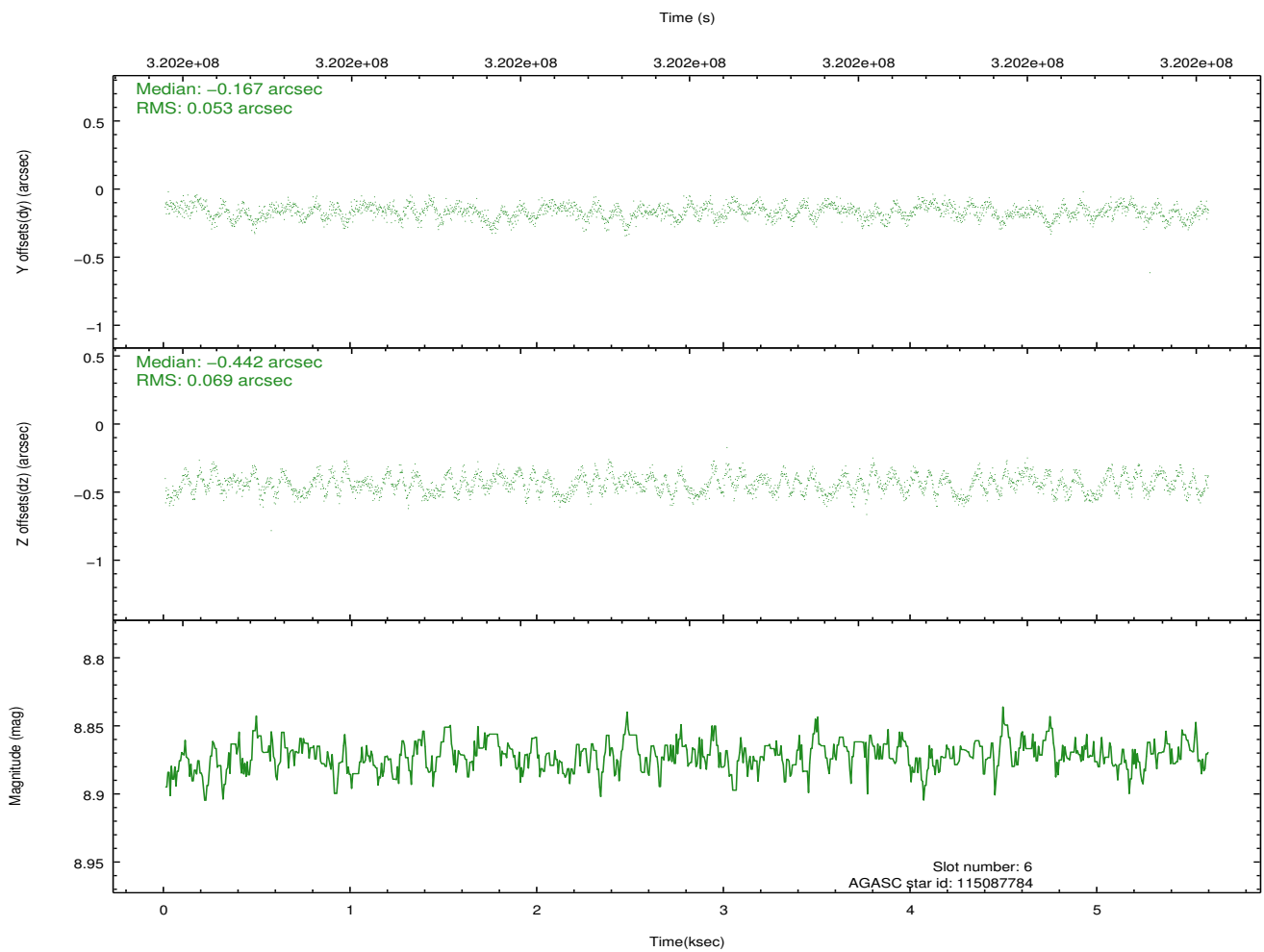
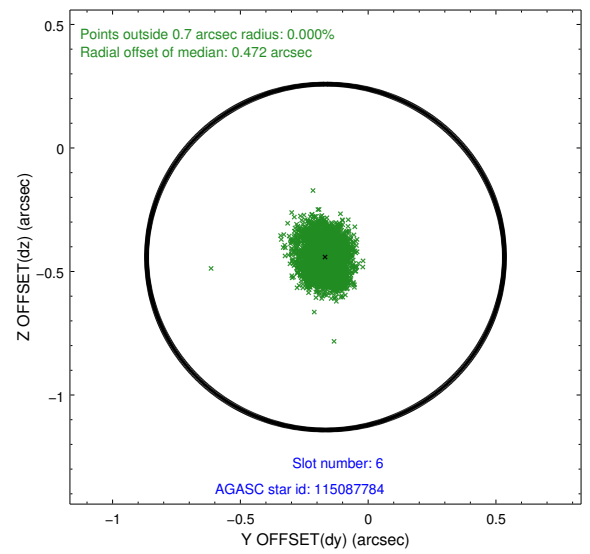
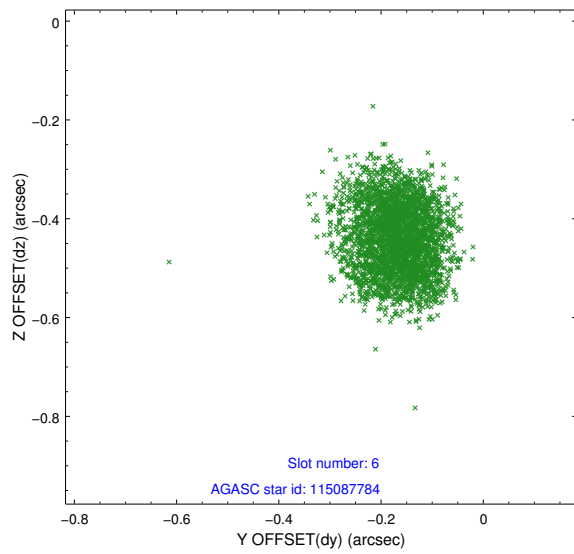
## 2.4.2 Slot 4



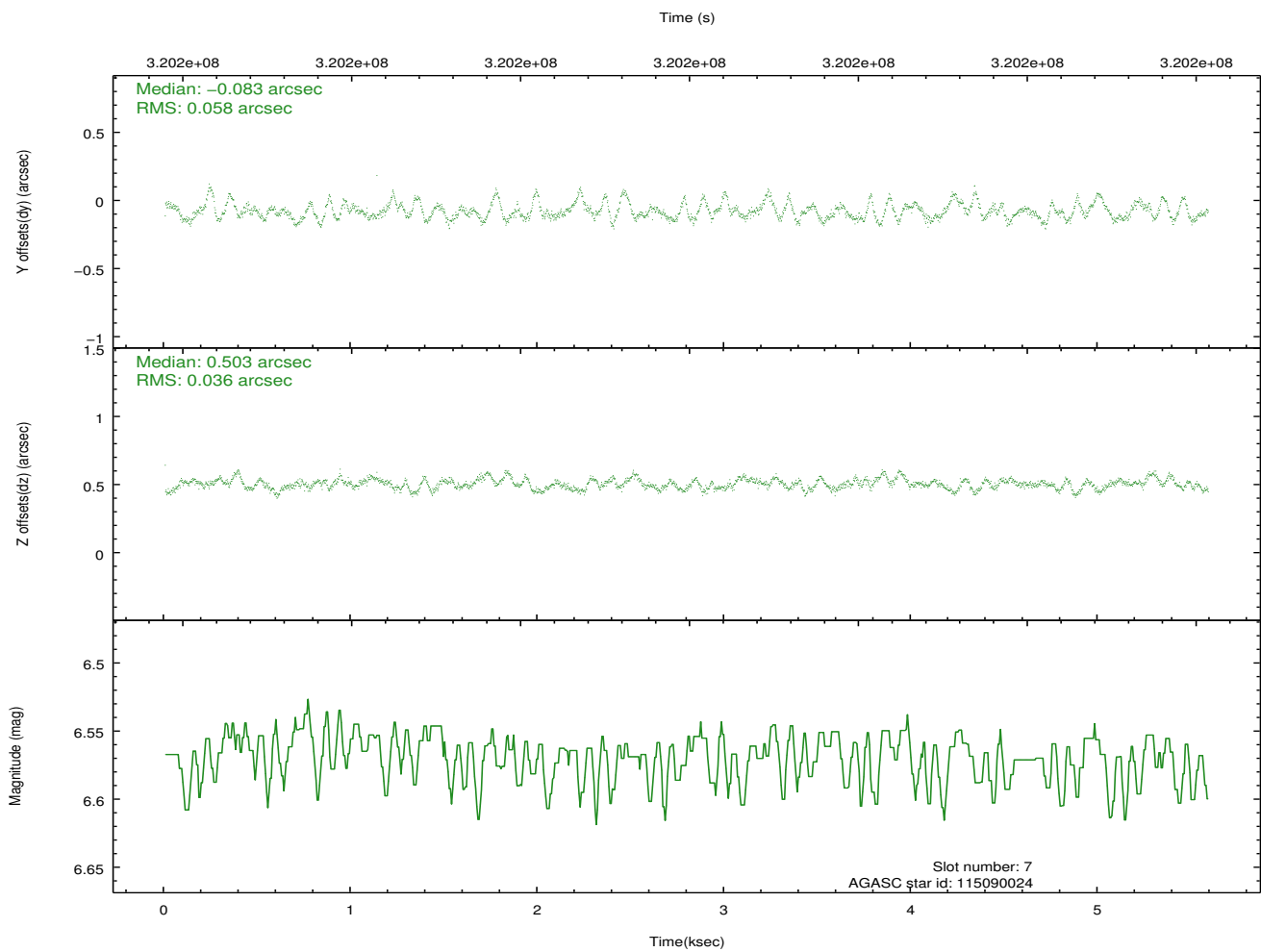
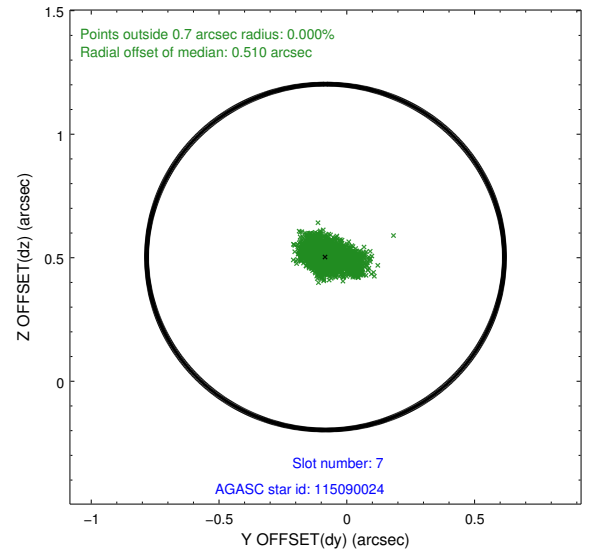
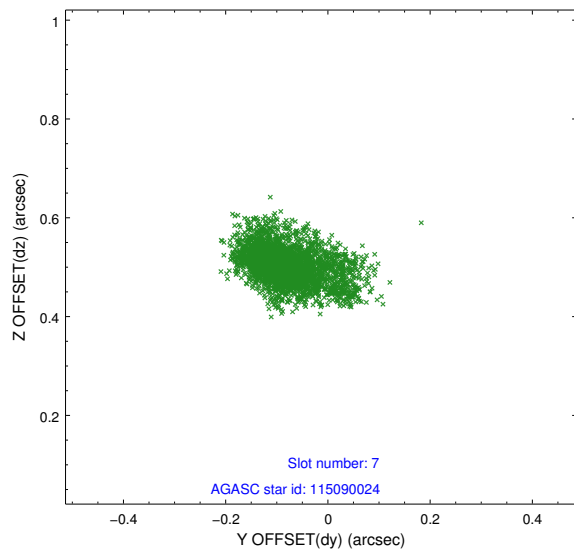
### 2.4.3 Slot 5



## 2.4.4 Slot 6

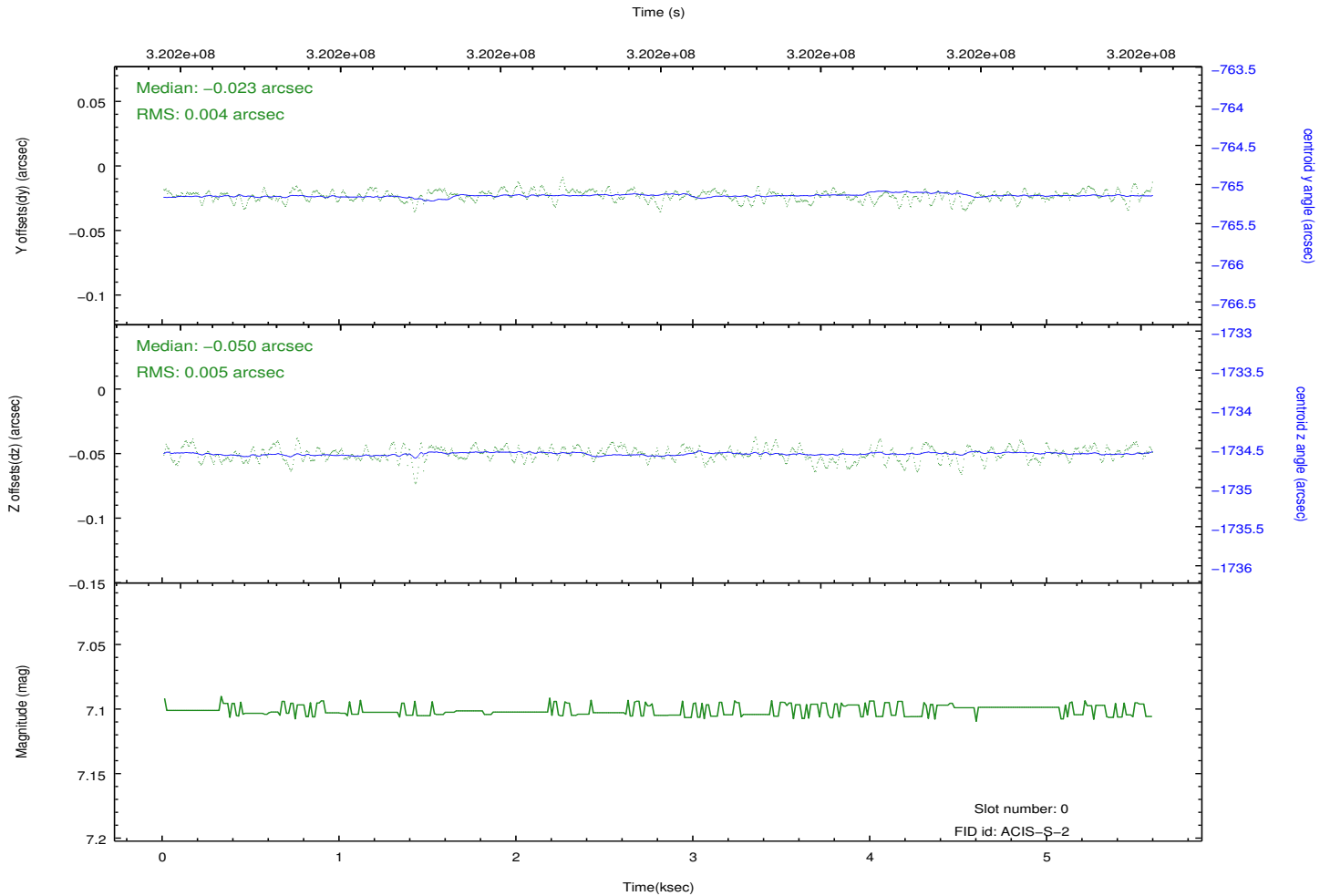
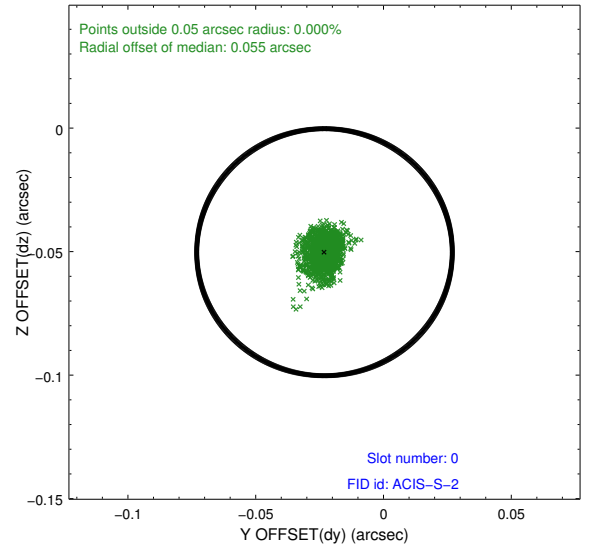
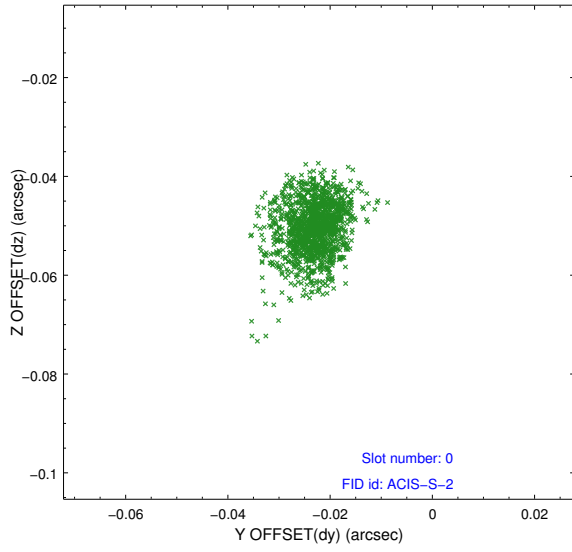


## 2.4.5 Slot 7

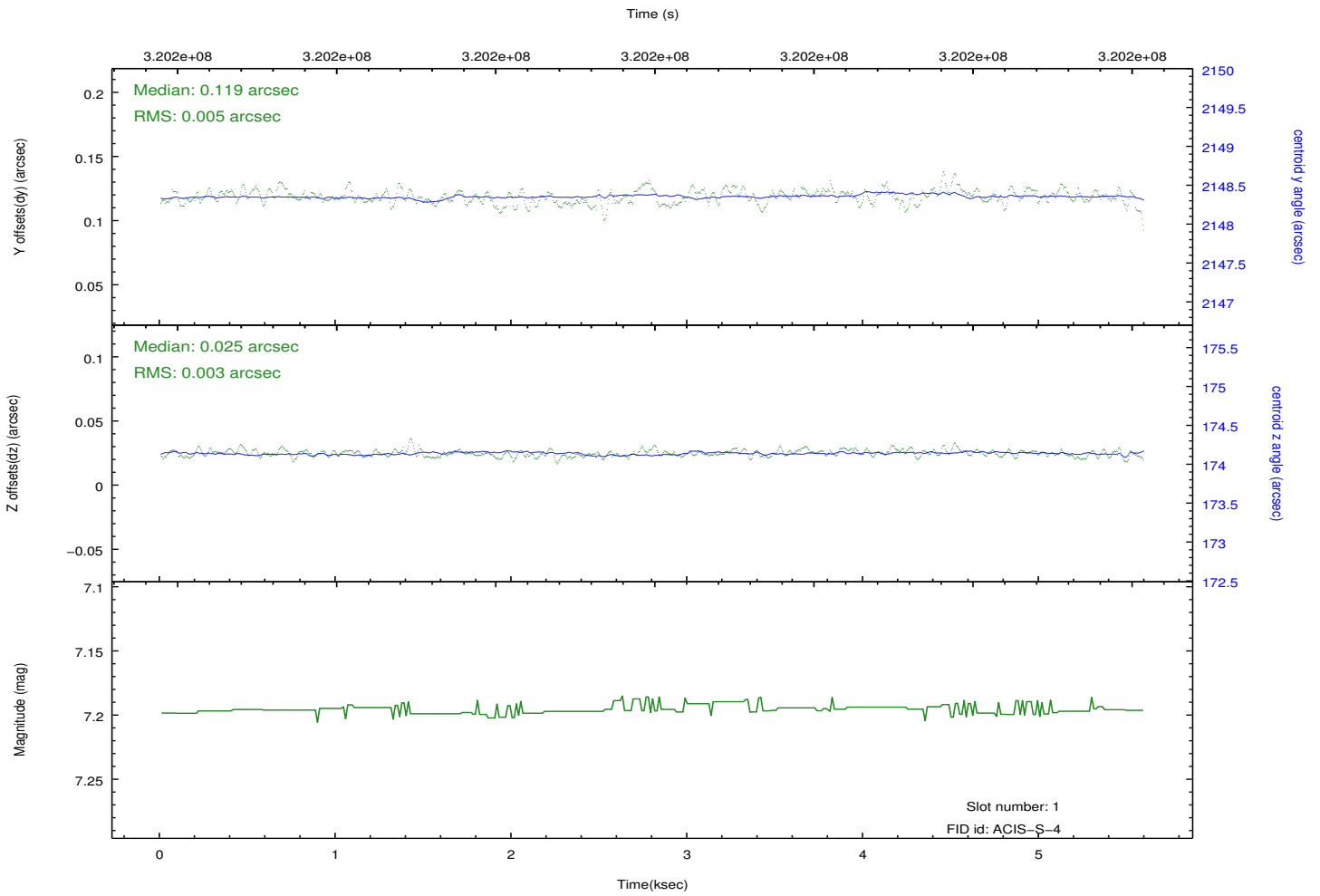
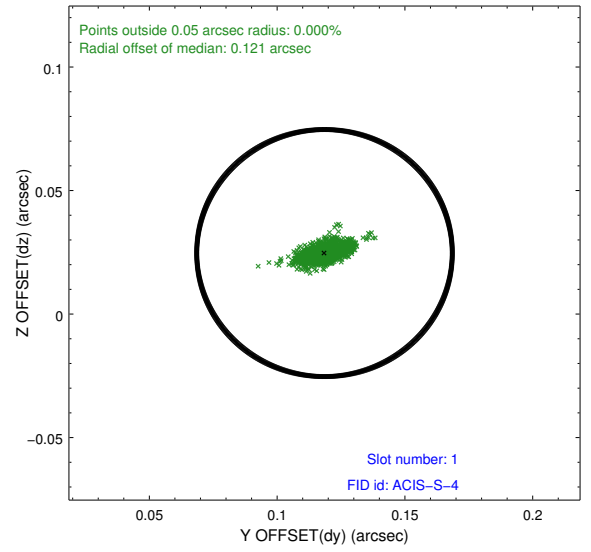
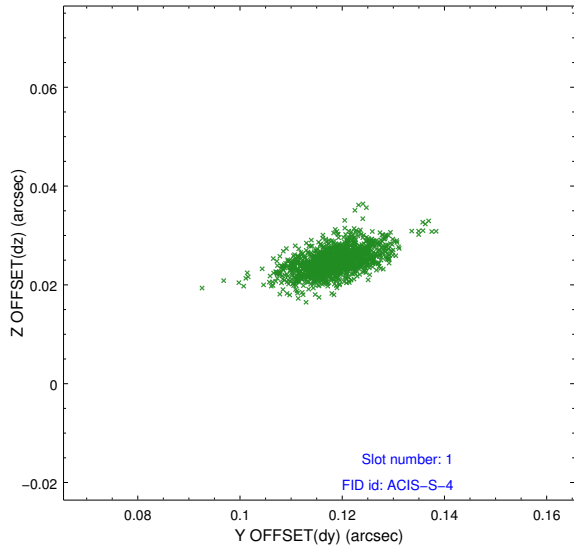


## 2.5 FID Slots

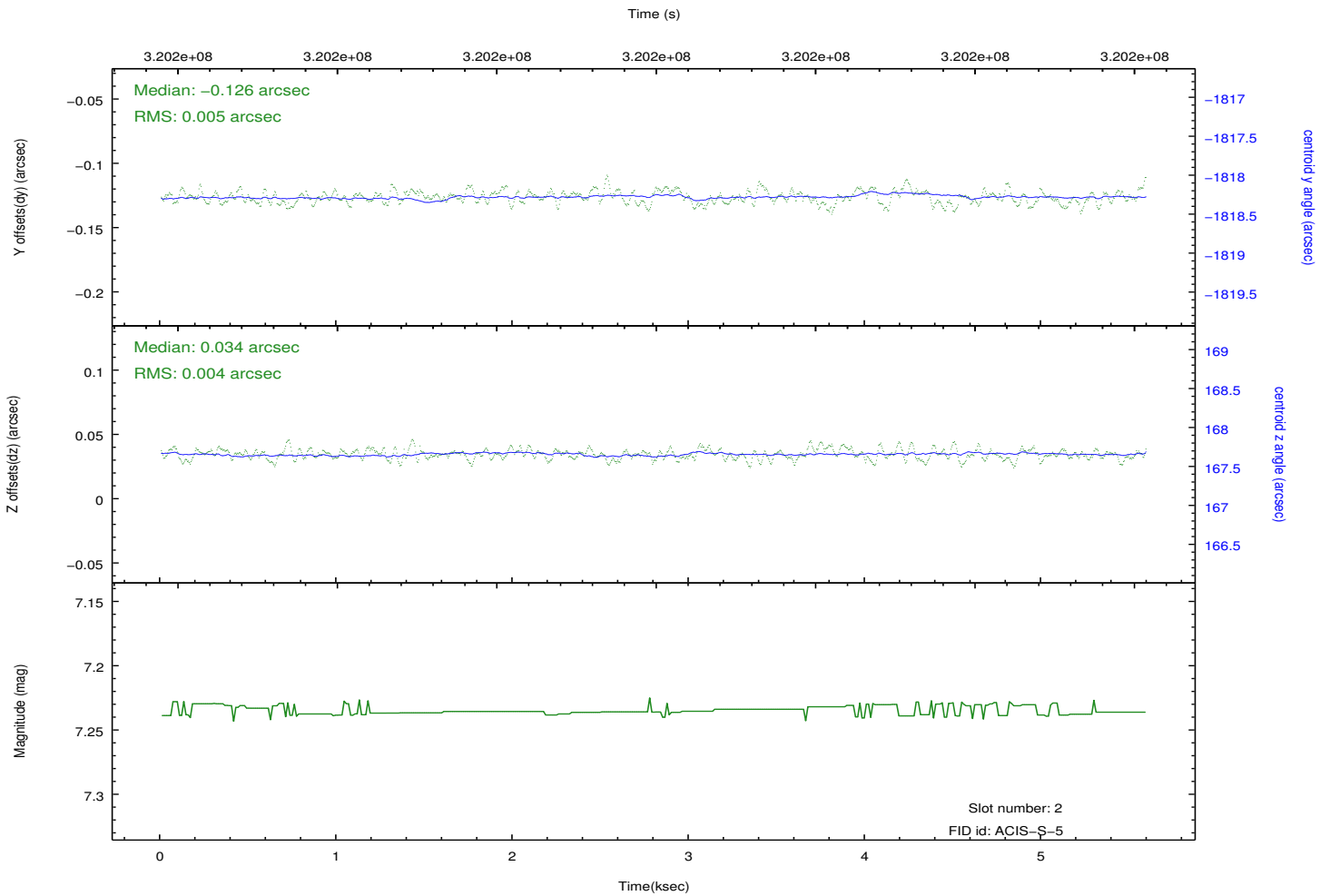
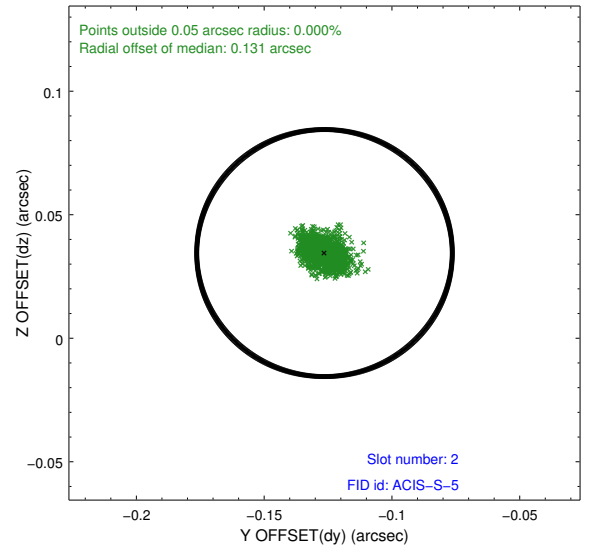
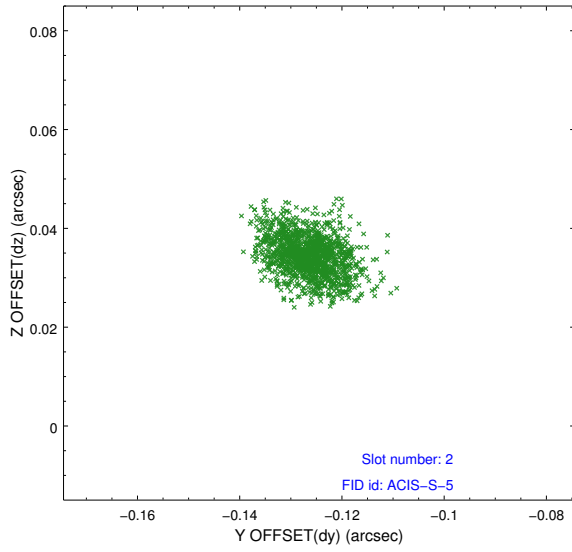
### 2.5.1 Slot 0



## 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