

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 10109 - L2 Version 2  
Chandra X-Ray Center

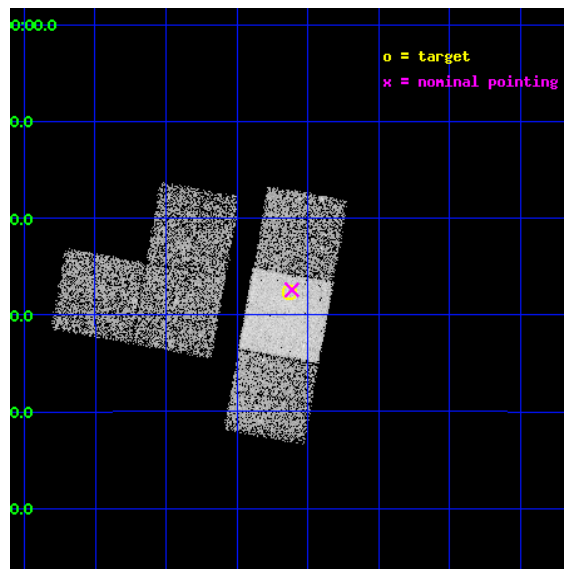
L2 Processing Date : Jun 3 2012

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# 1 Front

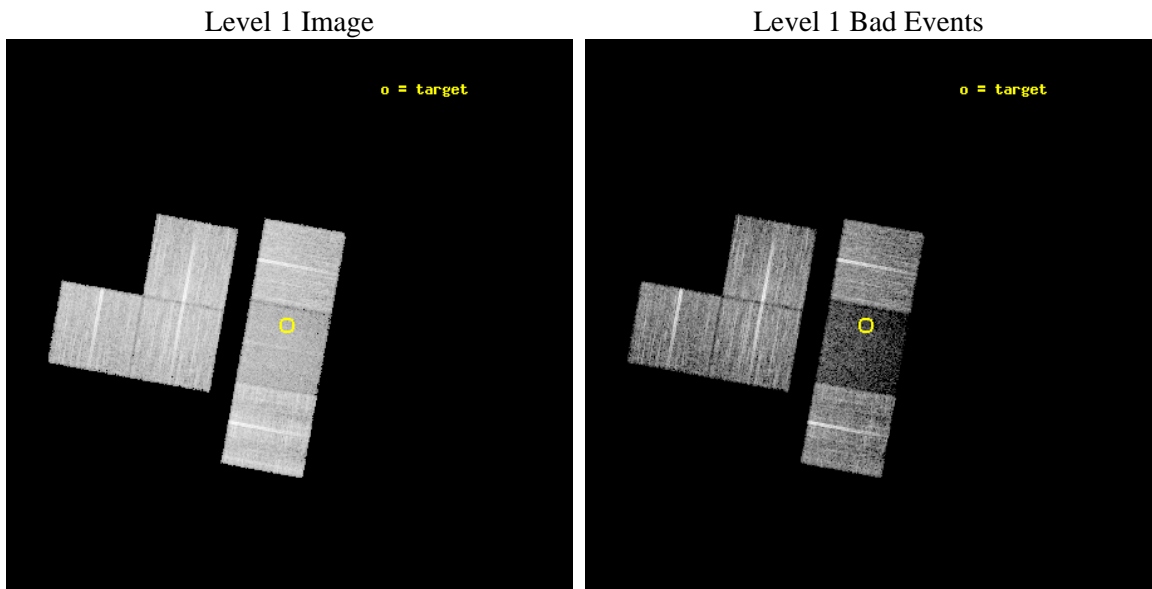
seq_num	501037	Sequence number
obs_id	10109	Observation id
title	Are all black widows alike?	Proposal title
observer	Dr. Vyacheslav Zavlin	Principal investigator
object	PSR J2051-0827	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	312.78125	Observer's specified target RA [deg]
dec_targ	-8.460556	Observer's specified target Dec [deg]
ra_nom	312.77797244128	Nominal RA [deg]
dec_nom	-8.4569904068087	Nominal Dec [deg]
roll_nom	100.26522110956	Nominal Roll [deg]
revision	2	Processing version of data
ontime	9142.3999660015	Sum of GTIs [s]
livetime	9026.6333927396	Livetime [s]
ontime1	9139.1589758396	Sum of GTIs [s]
ontime2	9139.1589758396	Sum of GTIs [s]
ontime3	9139.1590953469	Sum of GTIs [s]
ontime6	9142.3999660015	Sum of GTIs [s]
ontime7	9142.3999660015	Sum of GTIs [s]
ontime8	9142.3999660015	Sum of GTIs [s]
l2events	47056	Number of level 2 events



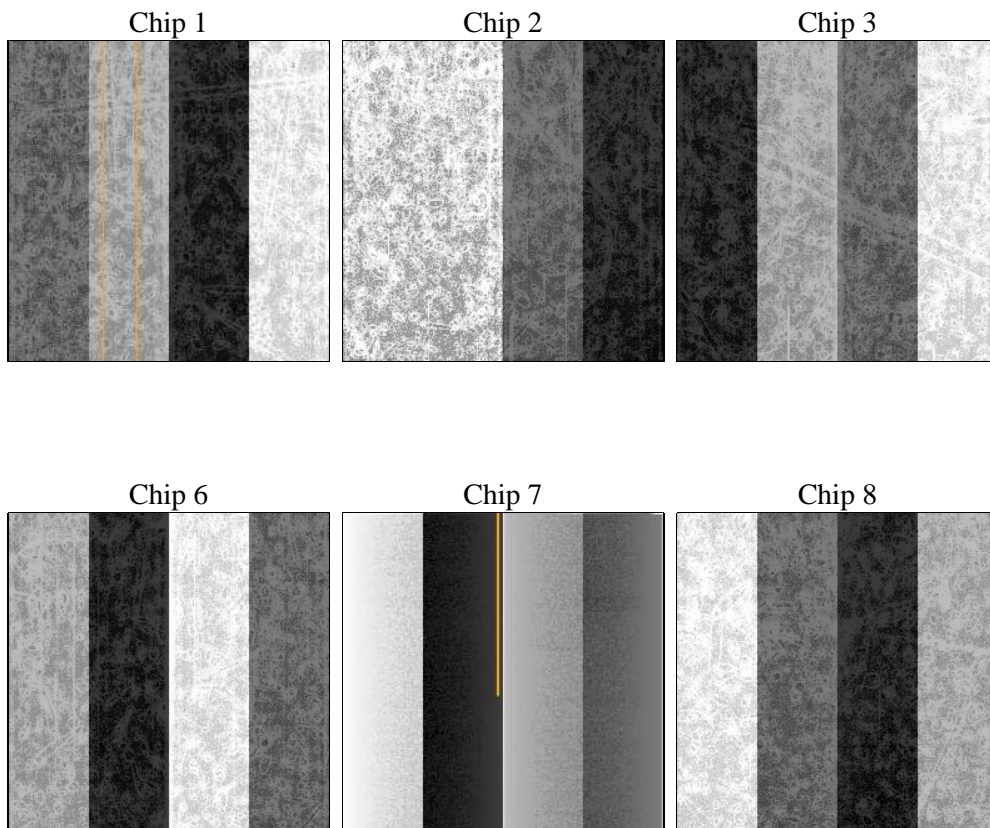
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	8998.971000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	9142.3999660015	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime1	9139.1589758396	Sum of GTIs [s]
date	2012-06-03T06:34:57	Date and time of file creation	ontime2	9139.1589758396	Sum of GTIs [s]
revision	2	Processing version of data	ontime3	9139.1590953469	Sum of GTIs [s]
			ontime6	9142.3999660015	Sum of GTIs [s]
			ontime7	9142.3999660015	Sum of GTIs [s]
			ontime8	9142.3999660015	Sum of GTIs [s]
			l1events	395161	Number of level 1 events

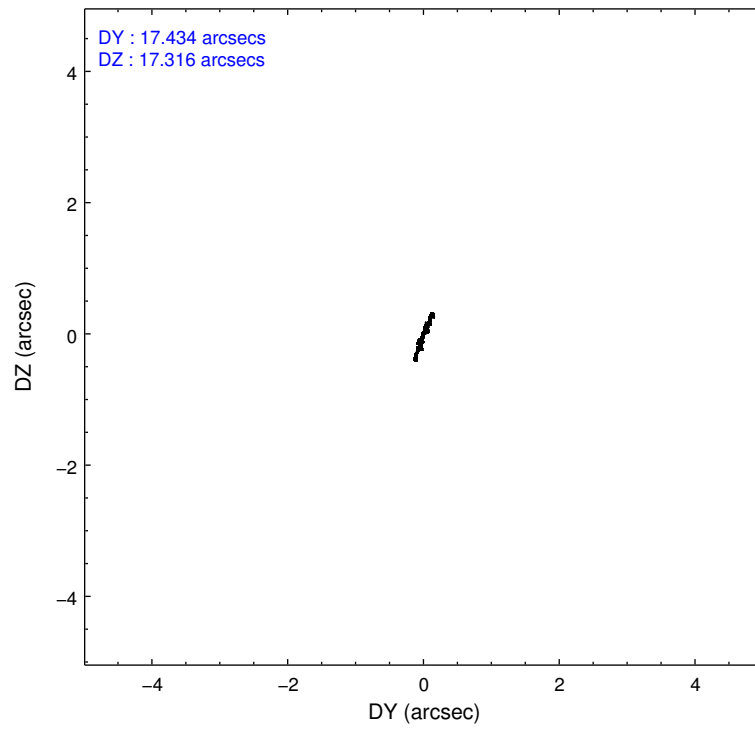
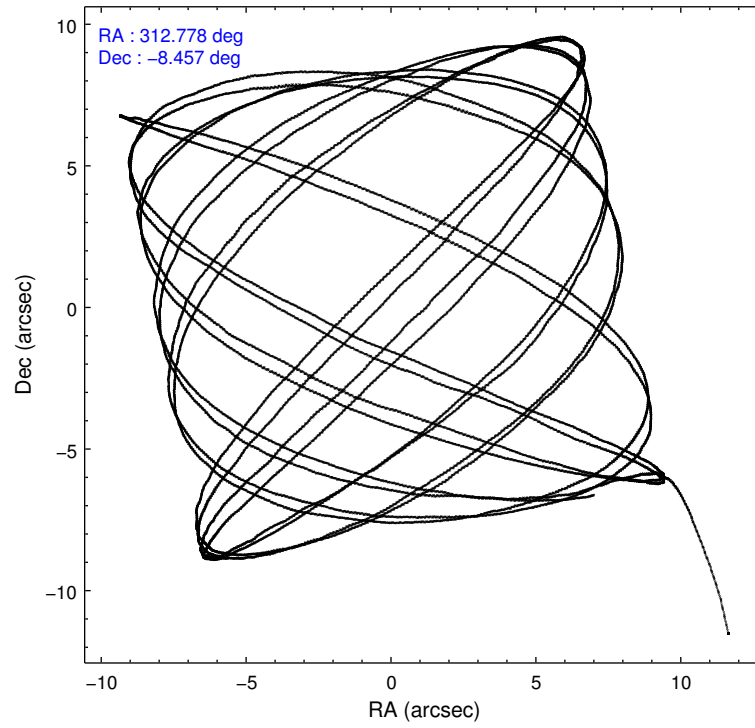
### 2.1.4 Events

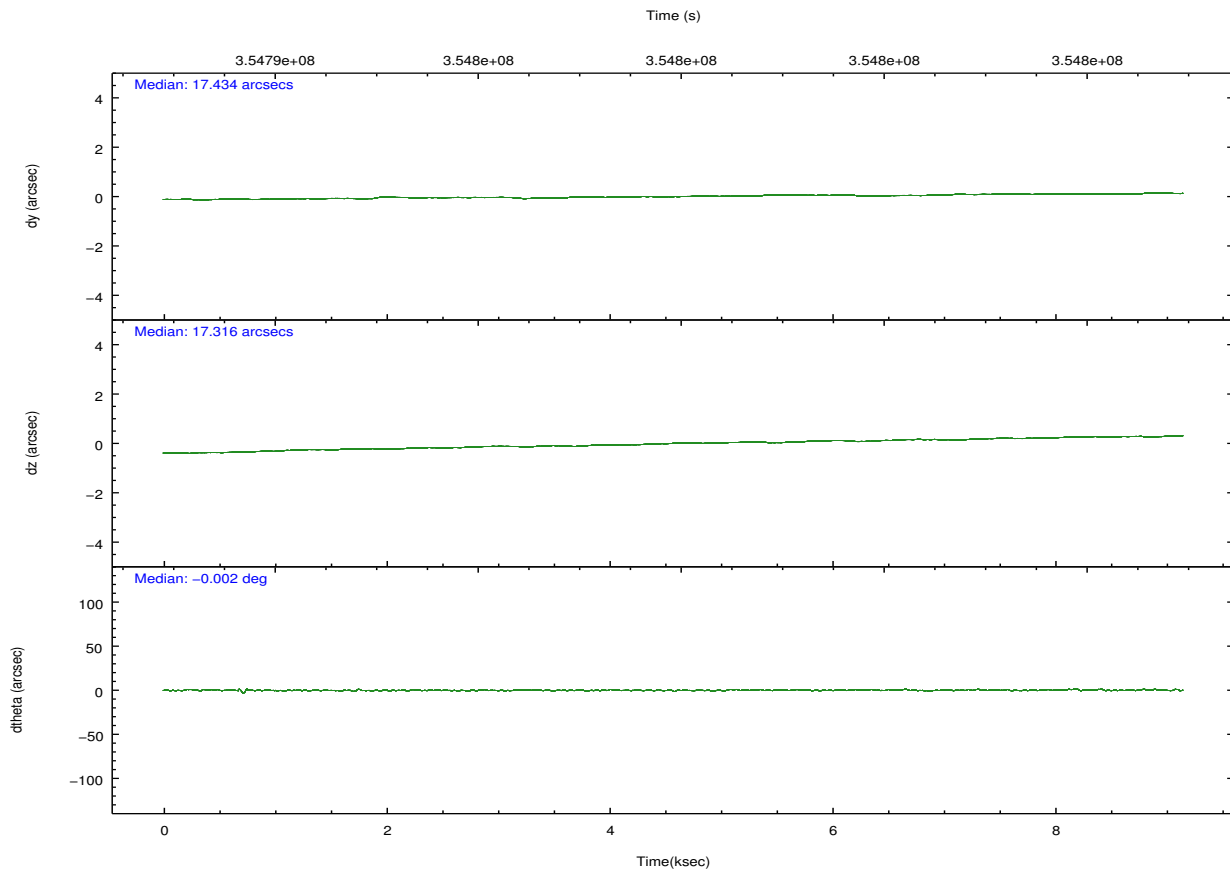
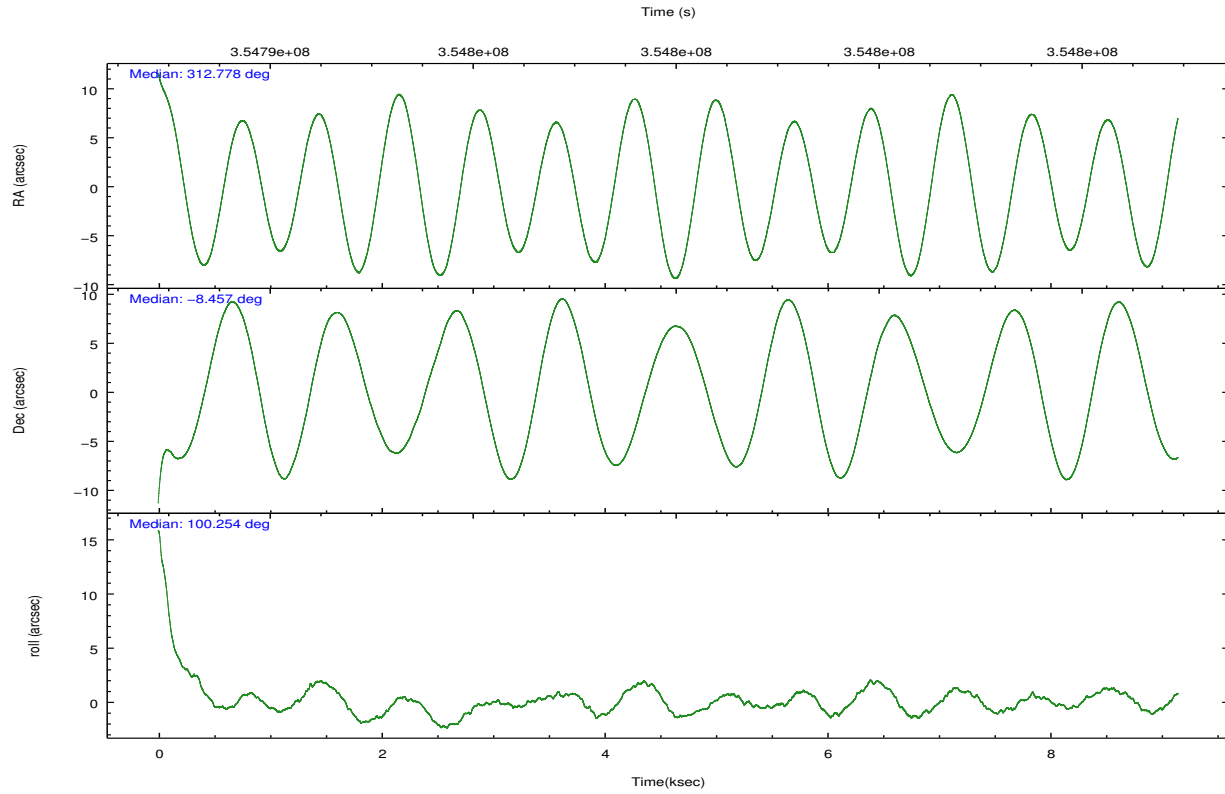
	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8		ccd 1	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	62121	73211	68806	68368	40790	81865	grade 0 events	2372	2488	2278	2571	3182	6250
rejected events	55926	67349	63257	62190	17613	60279		3%	3%	3%	3%	7%	7%
rejected %	90%	91%	91%	90%	43%	73%	grade 1 events	22	37	39	28	105	69
								0%	0%	0%	0%	0%	0%
							grade 2 events	1469	1480	1247	1428	5833	5133
								2%	2%	1%	2%	14%	6%
							grade 3 events	739	610	629	635	2400	2552
								1%	0%	0%	0%	5%	3%
							grade 4 events	704	609	641	642	2357	2287
								1%	0%	0%	0%	5%	2%
							grade 5 events	1370	1152	1403	1367	4082	2459
								2%	1%	2%	1%	10%	3%
							grade 6 events	1086	842	917	1060	10015	6121
								1%	1%	1%	1%	24%	7%
							grade 7 events	54359	65993	61652	60637	12816	56994
								87%	90%	89%	88%	31%	69%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-123678	ACIS-123678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	O1	Y
[deg] Pointing RA	312.796127	312.7779724412805	CCD I2 on	Y	Y
[deg] Pointing Dec	-8.477577	-8.456990406808695	CCD I3 on	Y	Y
[deg] Pointing Roll	100.111266	100.265221109559	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[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	O2	Y
[s] Observation start time (MET)	354793484.184000	354792299.02639	CCD S5 on	N	N
Observation start date	2009-03-30T09:43:38	2009-03-30T09:24:59	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	354802483.184000	354802710.9769	On-chip summing requested	N	N
Observation end date	2009-03-30T12:13:37	2009-03-30T12:18:30	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



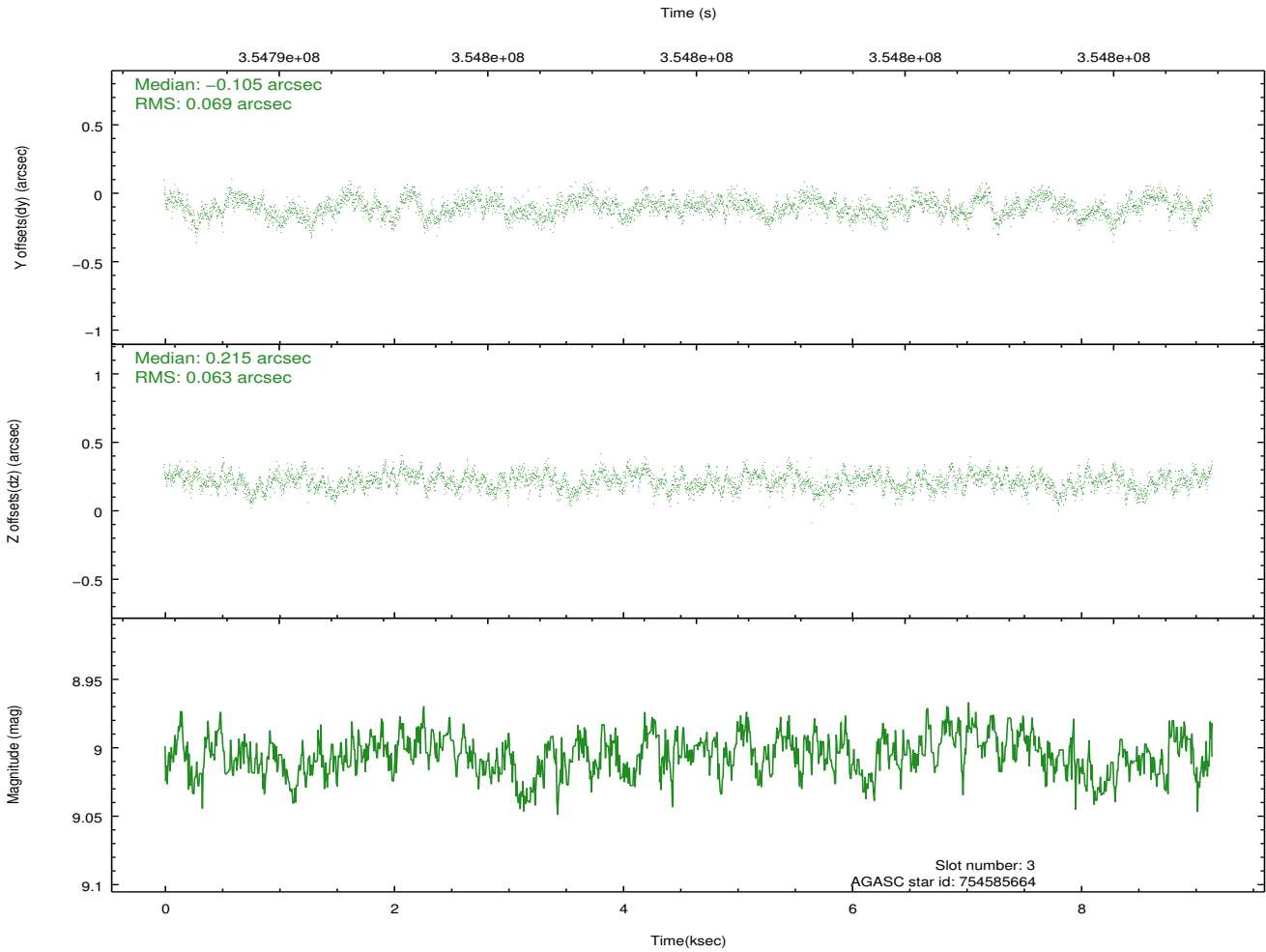
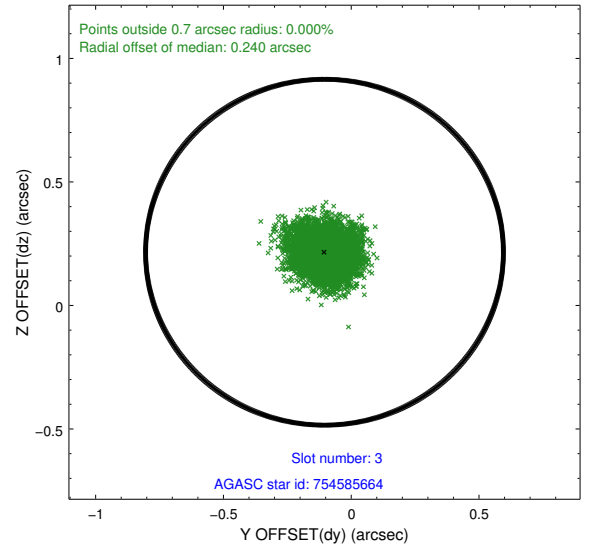
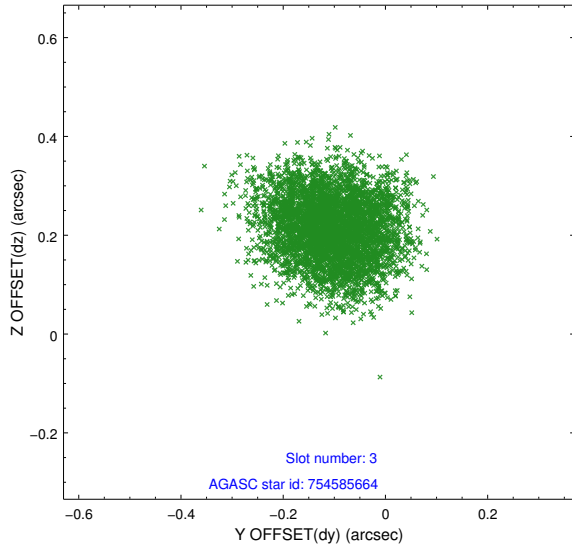


### Slot Statistics

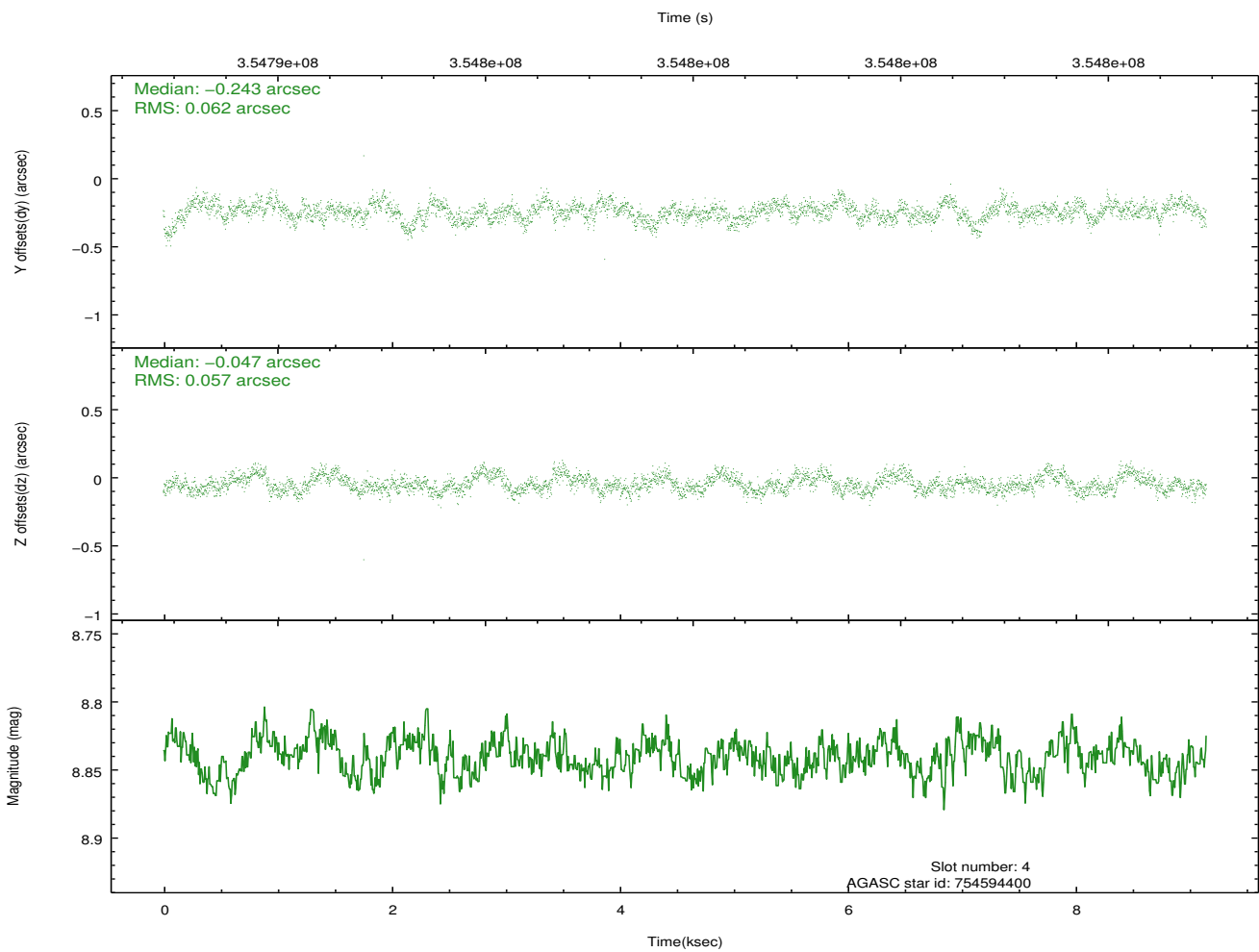
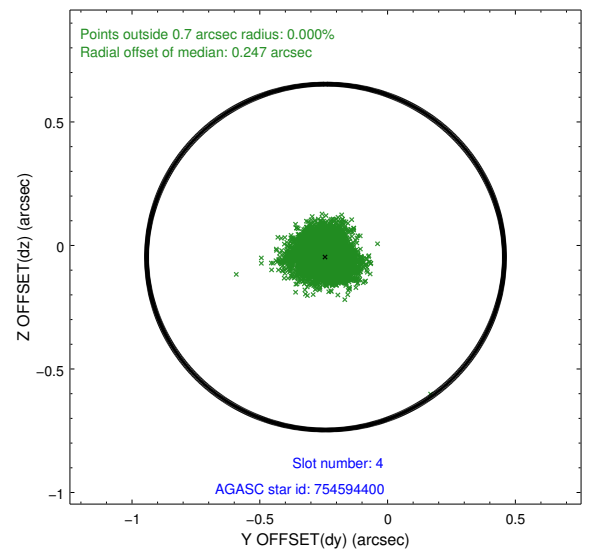
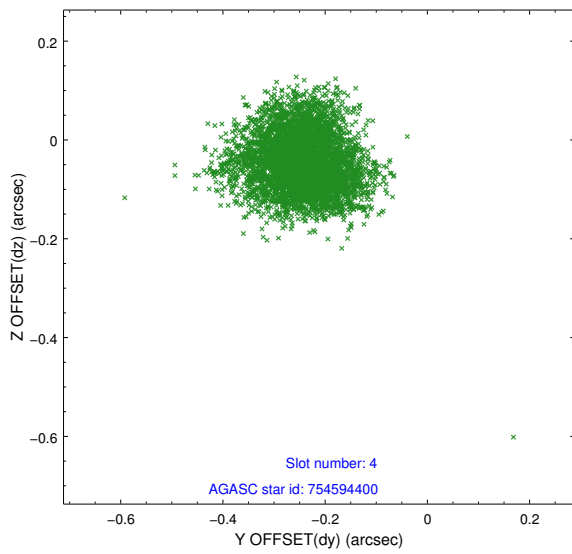
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.83	2232	-0.076	-0.044	0.007	0.012	0.000000	0.000000	-770.60	-1738.75
1	FID	ACIS-S-4	6.90	2232	0.125	0.024	0.007	0.011	0.000000	0.000000	2142.66	169.09
2	FID	ACIS-S-6	7.04	2232	-0.077	0.027	0.007	0.012	0.000000	0.000000	392.22	807.22
3	GUIDE	754585664	9.01	4462	-0.105	0.215	0.101	0.158	313.121538	-8.063030	1265.58	-1403.31
4	GUIDE	754594400	8.84	4463	-0.243	-0.047	0.090	0.142	312.179121	-7.989279	2115.12	1857.39
5	GUIDE	754594632	6.39	4465	-0.010	-0.132	0.057	0.089	312.330933	-8.794047	-831.81	1829.60
6	GUIDE	754595784	8.50	4460	0.167	0.010	0.068	0.108	312.372598	-8.652506	-356.99	1598.49
7	GUIDE	754594832	9.09	4459	0.190	-0.045	0.097	0.152	312.288462	-8.768707	-716.79	1962.60

## 2.4 Star Slots

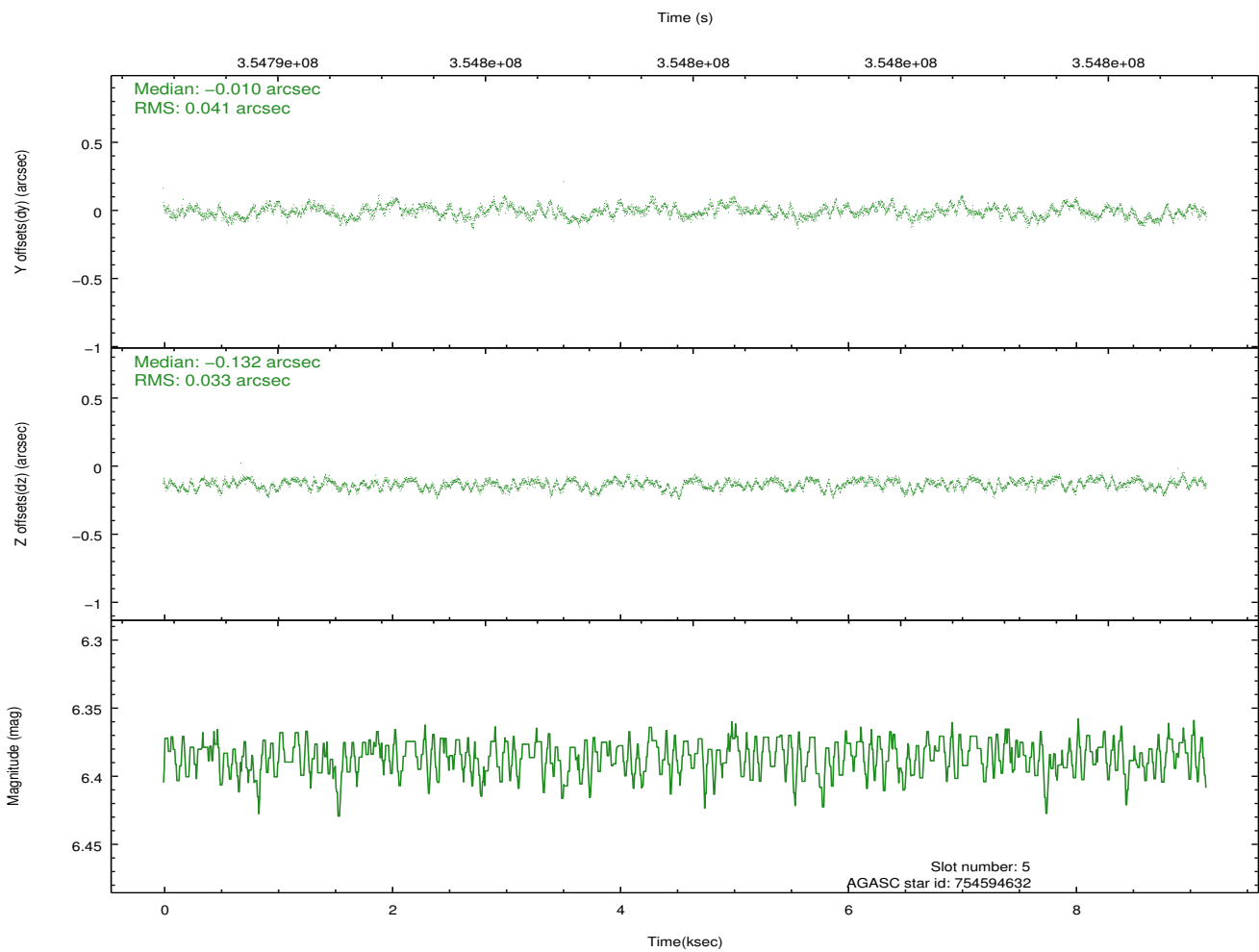
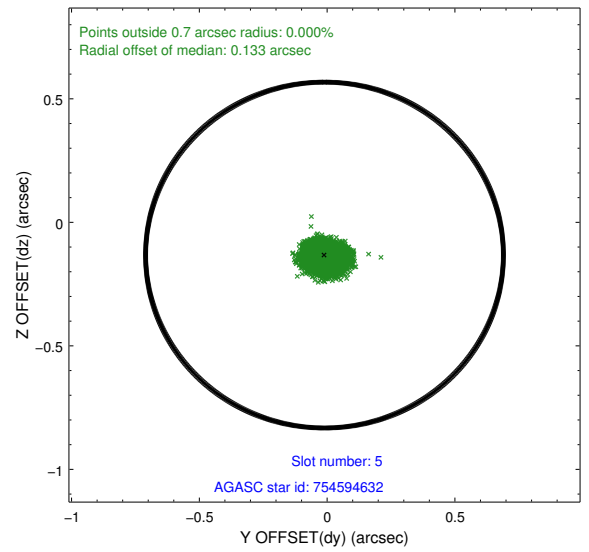
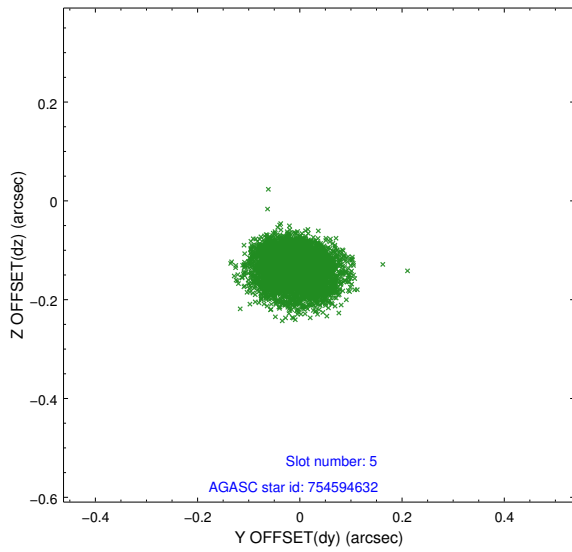
### 2.4.1 Slot 3



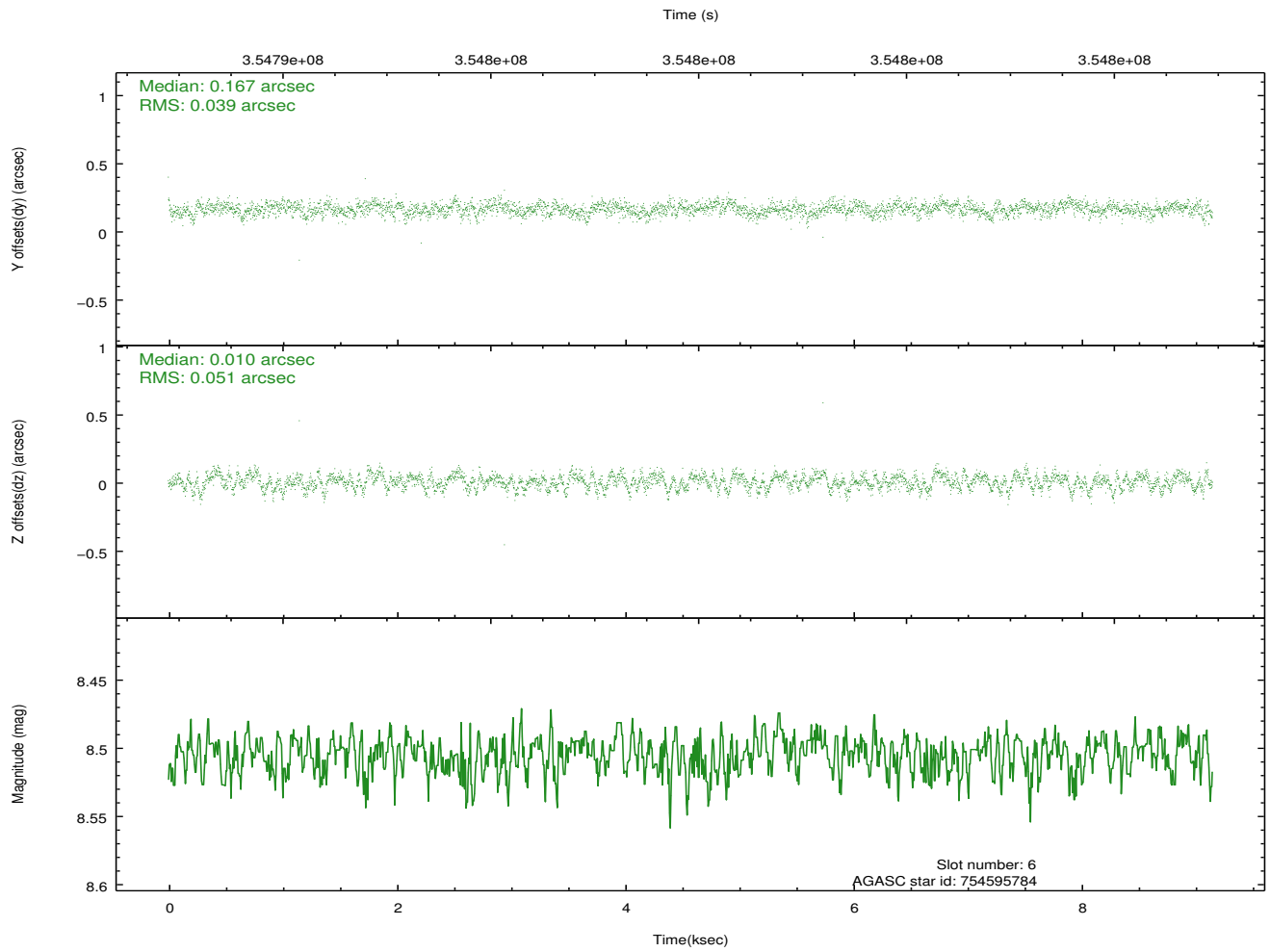
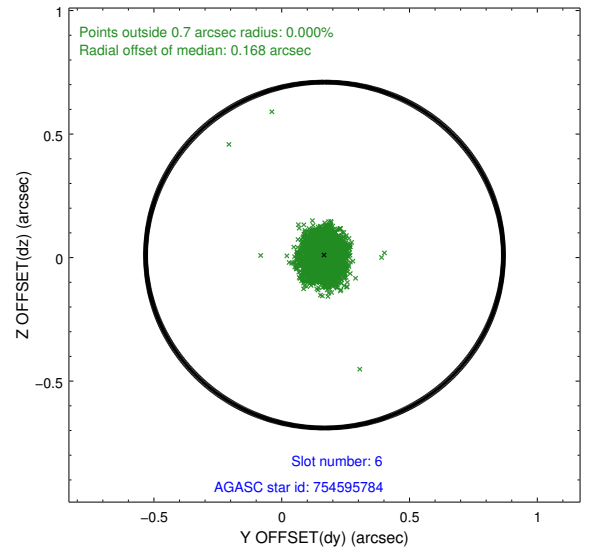
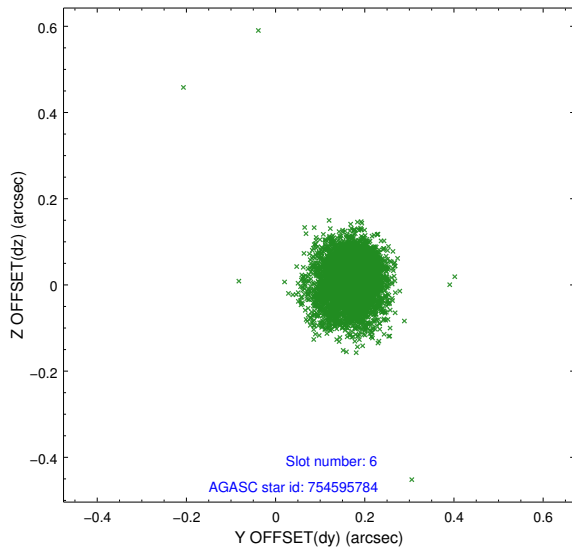
## 2.4.2 Slot 4



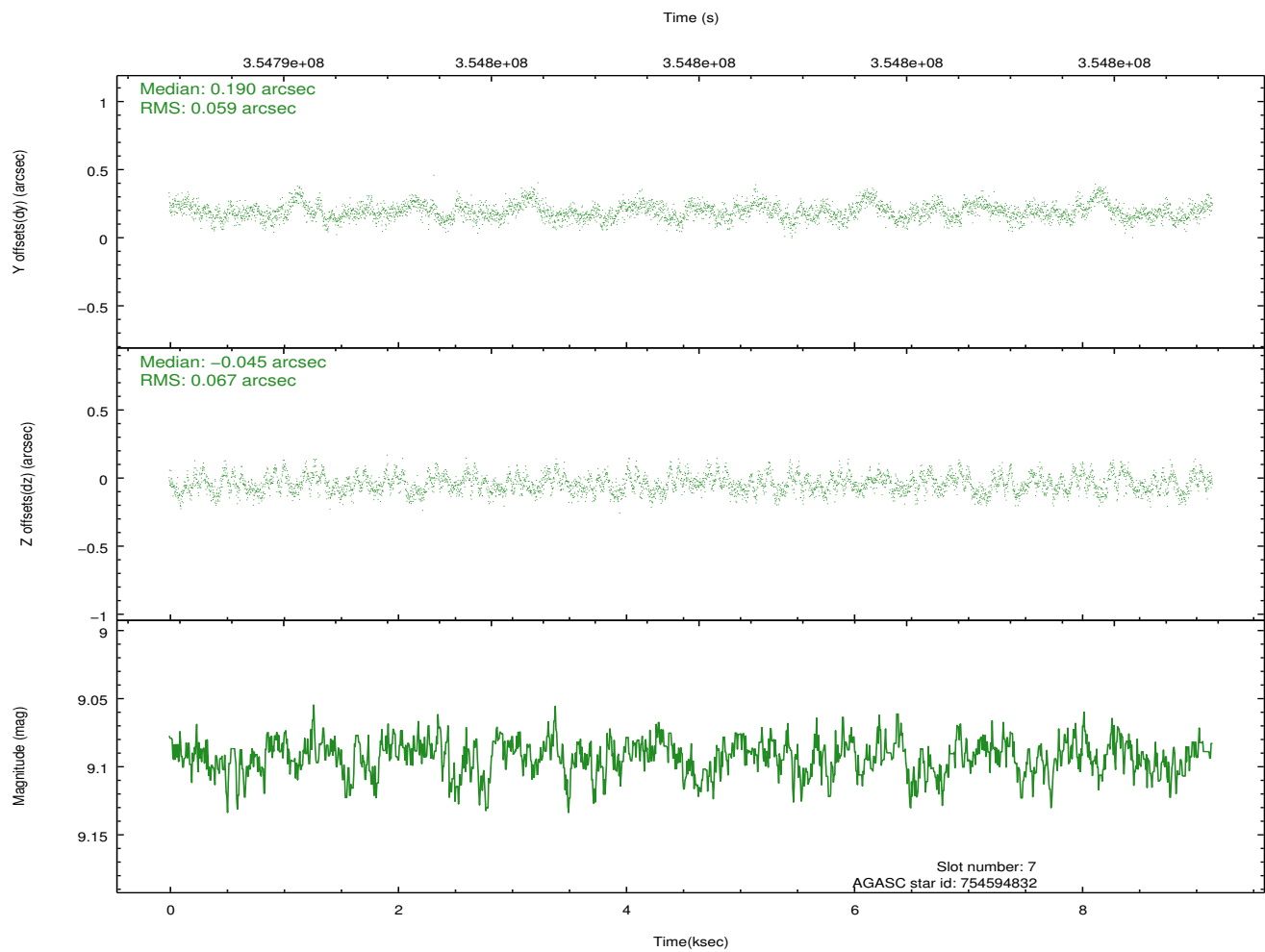
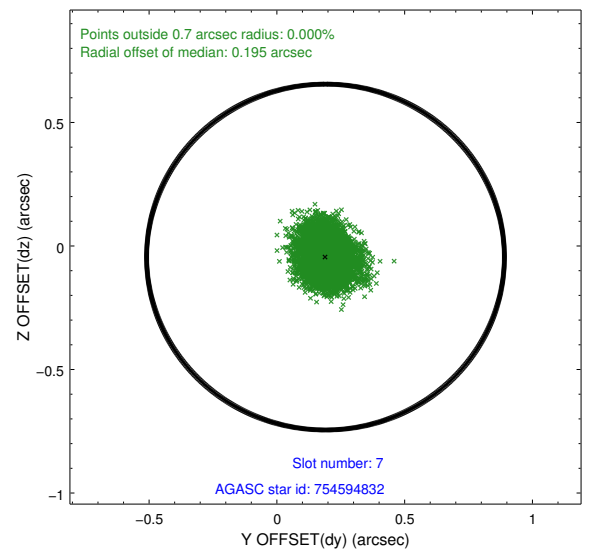
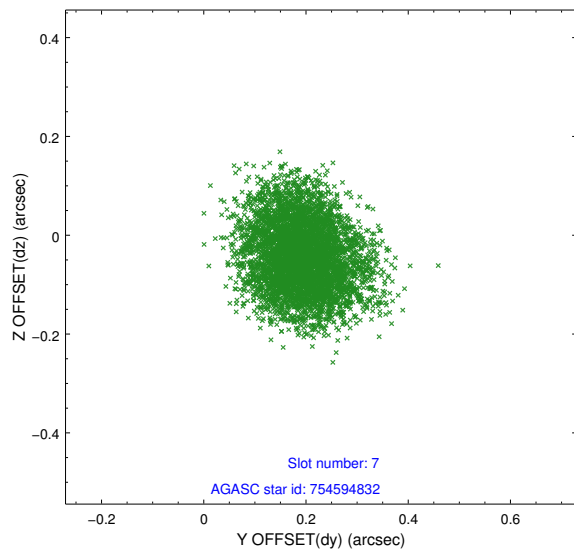
### 2.4.3 Slot 5



## 2.4.4 Slot 6

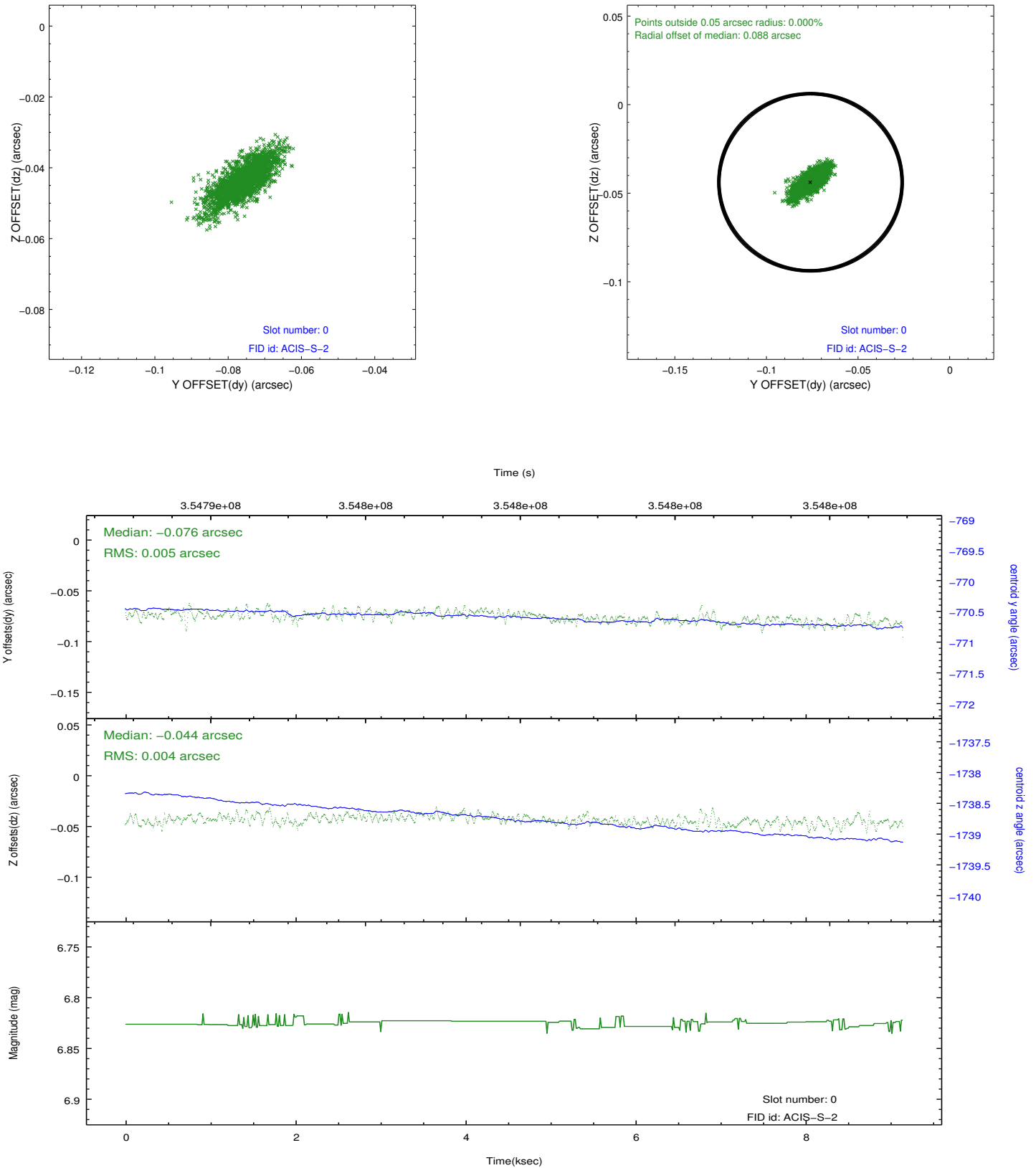


## 2.4.5 Slot 7

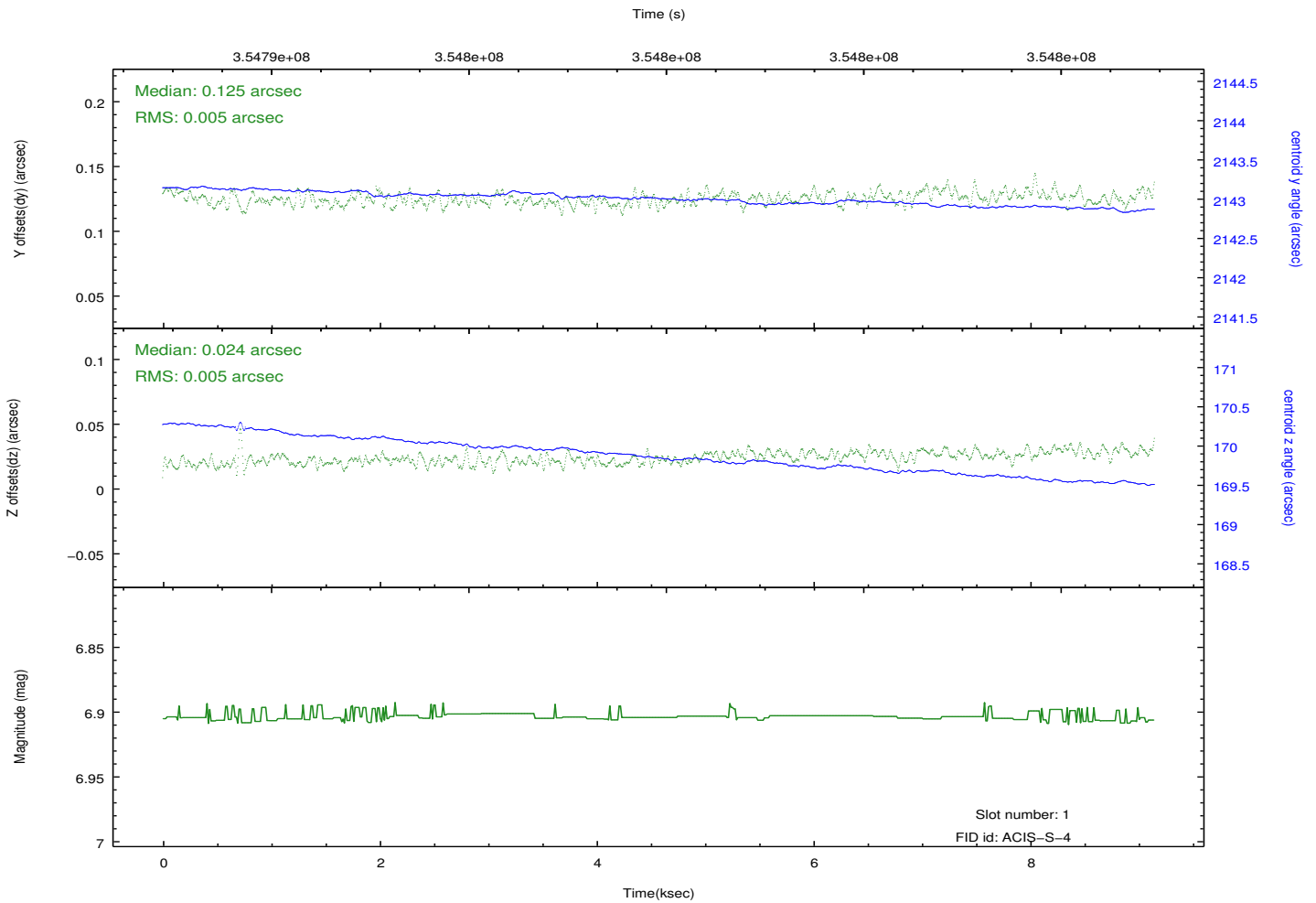
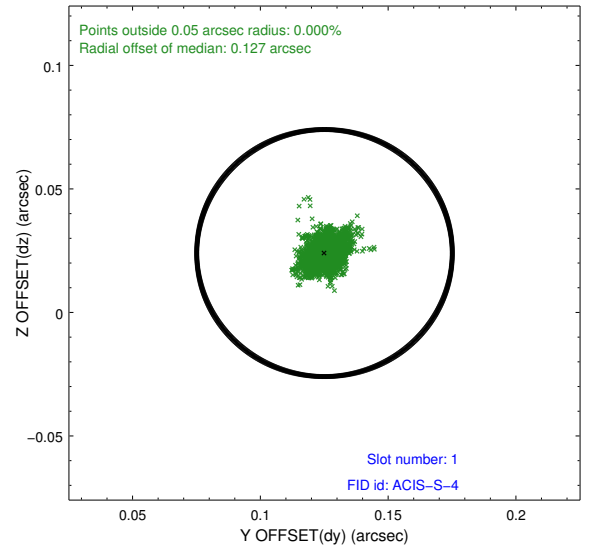
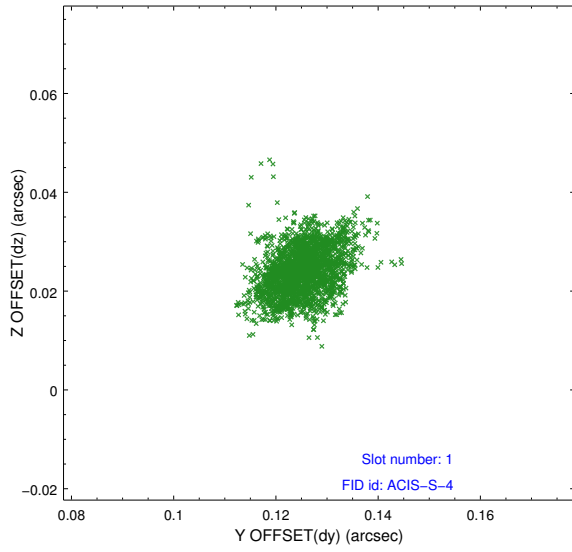


## 2.5 FID Slots

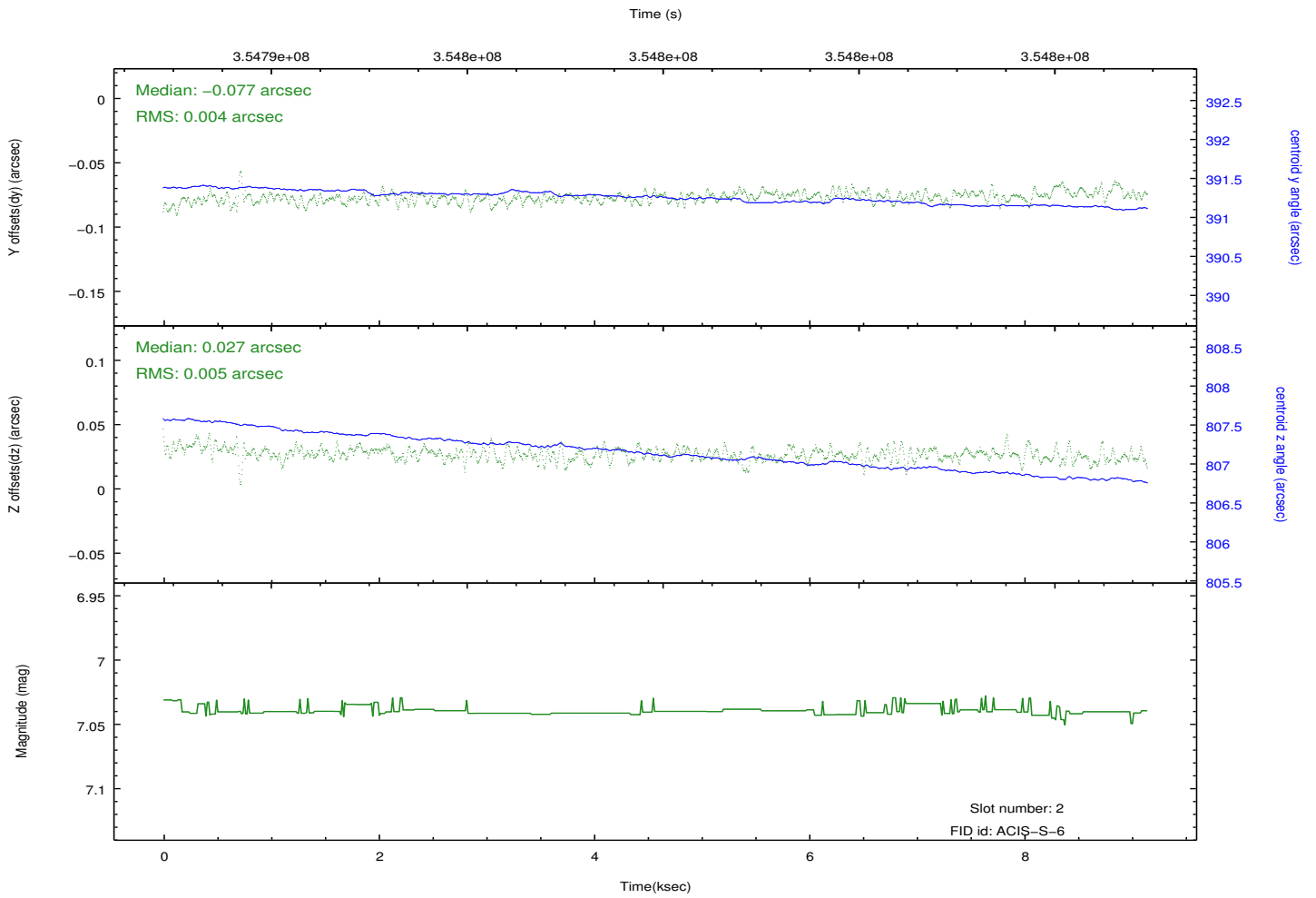
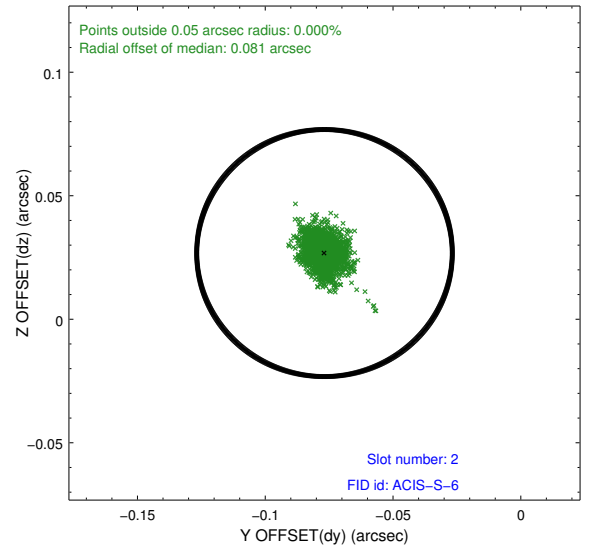
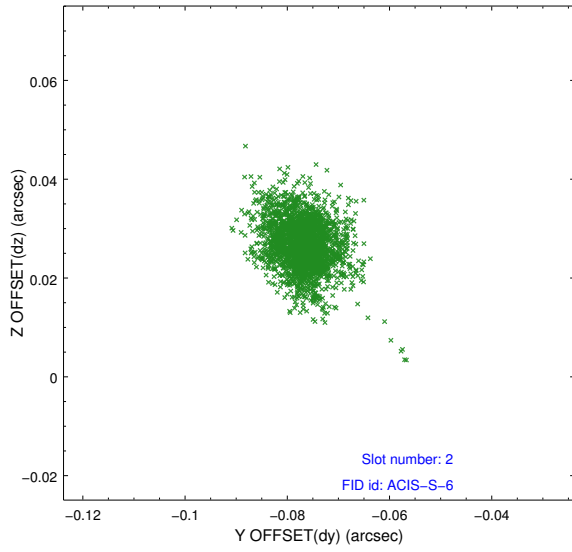
### 2.5.1 Slot 0



## 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)	2012.06.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.14239996

### A.2 Comments