

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 5516 - L2 Version 3  
Chandra X-Ray Center

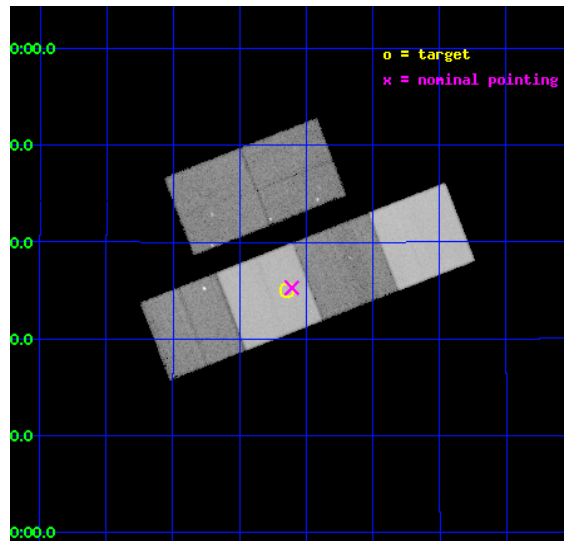
L2 Processing Date : Dec 25 2012

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# 1 Front

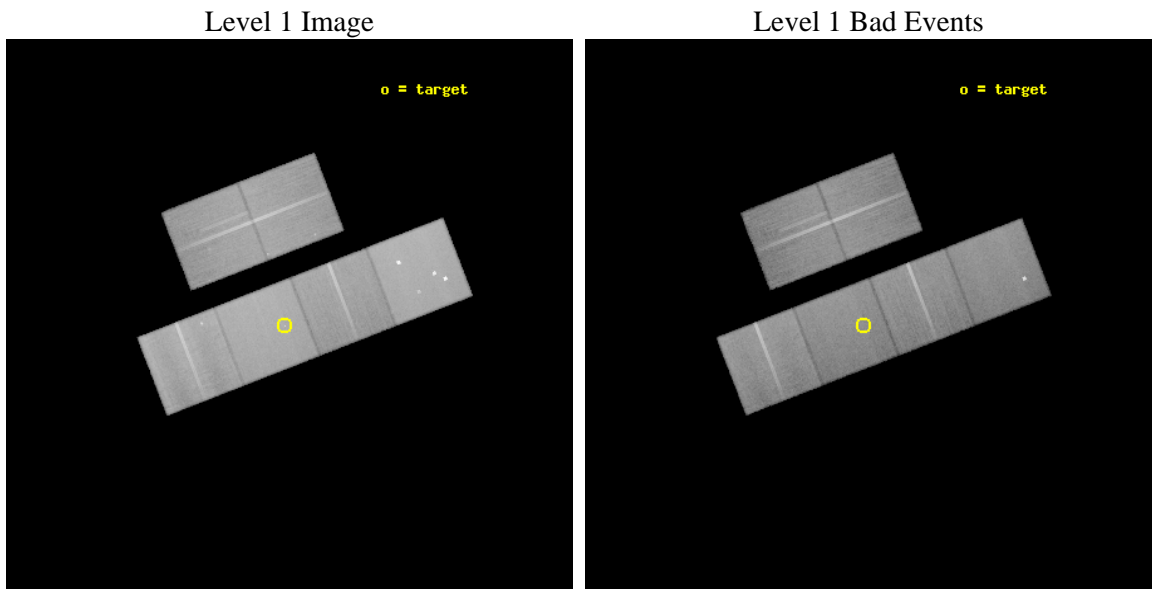
seq_num	500510	Sequence number
obs_id	5516	Observation id
title	Spatial extent and spectrum of the X-ray DC component of millisecond pulsar PSR B1937+21	Proposal title
observer	Prof Mariano Mendez	Principal investigator
object	PSR B1937+21	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	294.910833	Observer's specified target RA [deg]
dec_targ	21.583083	Observer's specified target Dec [deg]
ra_nom	294.90193806278	Nominal RA [deg]
dec_nom	21.588103753003	Nominal Dec [deg]
roll_nom	158.78813166252	Nominal Roll [deg]
revision	3	Processing version of data
ontime	50137.599813223	Sum of GTIs [s]
livetime	49502.72733515	Livetime [s]
ontime2	50131.117852598	Sum of GTIs [s]
ontime3	50137.599813223	Sum of GTIs [s]
ontime5	50137.599813223	Sum of GTIs [s]
ontime6	50137.599813223	Sum of GTIs [s]
ontime7	50137.599813223	Sum of GTIs [s]
ontime8	50137.599813223	Sum of GTIs [s]
l2events	631904	Number of level 2 events



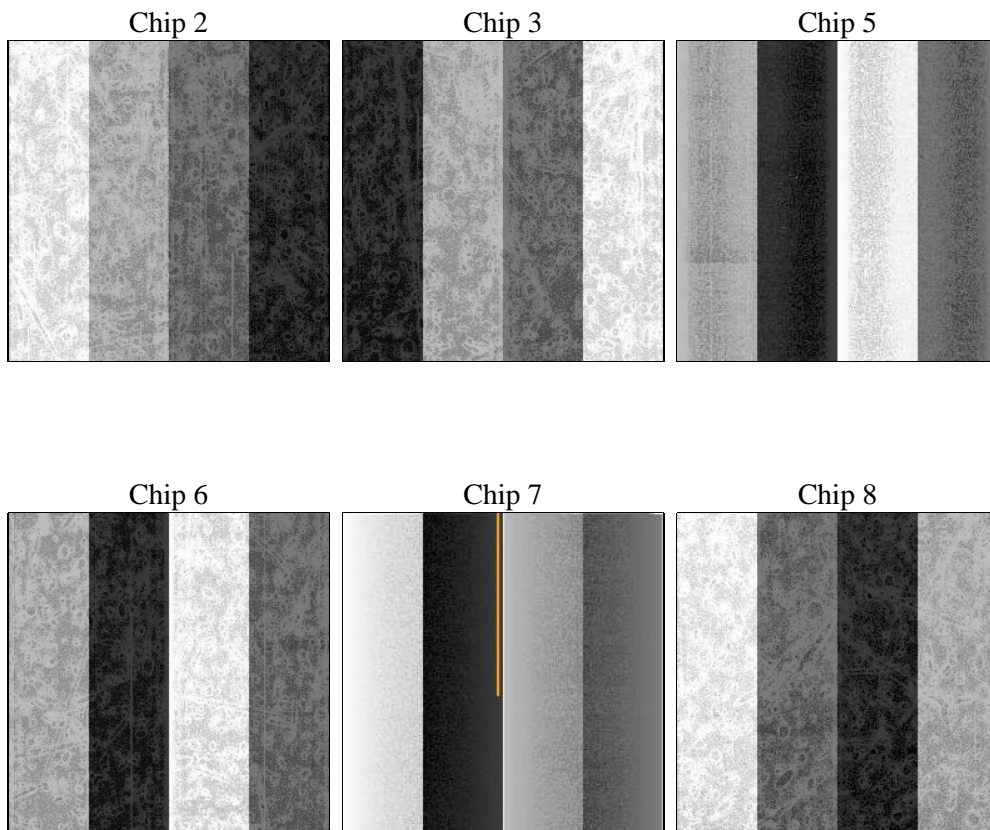
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	50000.000000	[s] Scheduled observation exposure time
ascdsver	8.5.1.1	Processing system revision	ontime	50137.599813223	Sum of GTIs [s]
caldbver	4.5.5	&#160	ontime2	50131.117852598	Sum of GTIs [s]
date	2012-12-25T09:10:37	Date and time of file creation	ontime3	50137.599813223	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	50137.599813223	Sum of GTIs [s]
			ontime6	50137.599813223	Sum of GTIs [s]
			ontime7	50137.599813223	Sum of GTIs [s]
			ontime8	50137.599813223	Sum of GTIs [s]
			l1events	2827834	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	403360	383785	613330	397663	534303	495393	grade 0 events	20858	19747	38103	18248	18626	34708
rejected events	356176	338979	328600	350994	315539	388098		5%	5%	6%	4%	3%	7%
rejected %	88%	88%	53%	88%	59%	78%	grade 1 events	235	269	774	213	515	355
								0%	0%	0%	0%	0%	0%
							grade 2 events	9876	8651	85879	10074	43651	23519
								2%	2%	14%	2%	8%	4%
							grade 3 events	4342	4372	9818	4478	19149	11403
								1%	1%	1%	1%	3%	2%
							grade 4 events	4494	4377	9356	4474	19299	10766
								1%	1%	1%	1%	3%	2%
							grade 5 events	15841	17593	43476	18864	50534	24106
								3%	4%	7%	4%	9%	4%
							grade 6 events	7834	7851	142877	9598	119019	27342
								1%	2%	23%	2%	22%	5%
							grade 7 events	339880	320925	283047	331714	263510	363194
								84%	83%	46%	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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	294.930823	294.9019380627774	Subarray requested	NONE	NONE
[deg] Pointing Dec	21.592635	21.58810375300336	Alternating exposures requested	N	N
[deg] Pointing Roll	158.620875	158.7881316625215	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	236386812.184000	236385654.80135			
Observation start date	2005-06-28T22:59:08	2005-06-28T22:40:54			
[s] Observation end time (MET)	236436812.184000	236437442.92871			
Observation end date	2005-06-29T12:52:28	2005-06-29T13:04:02			
Read mode	TIMED	TIMED			

## 2.3 Aspect

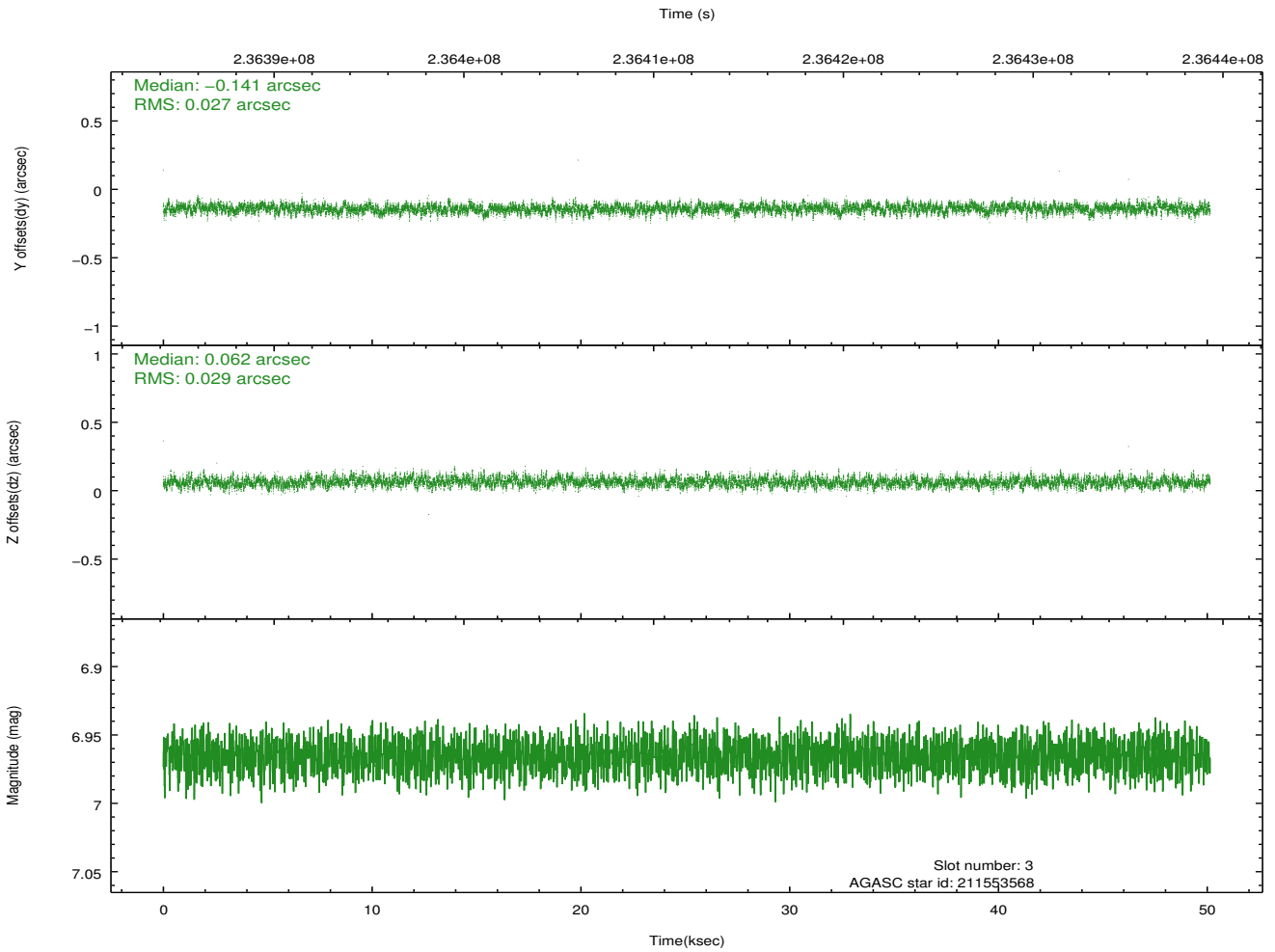
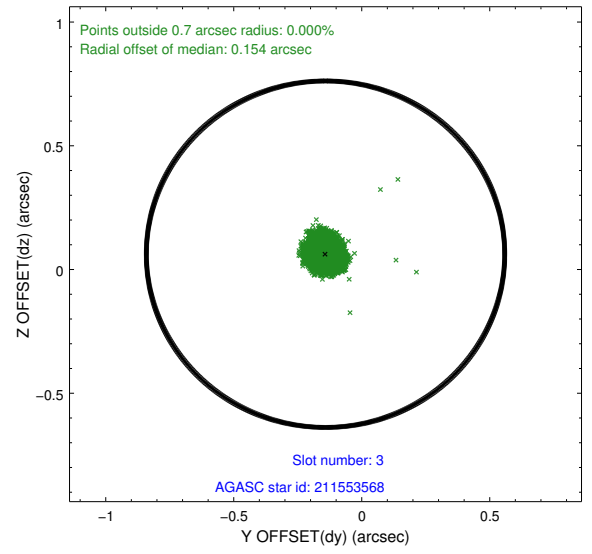
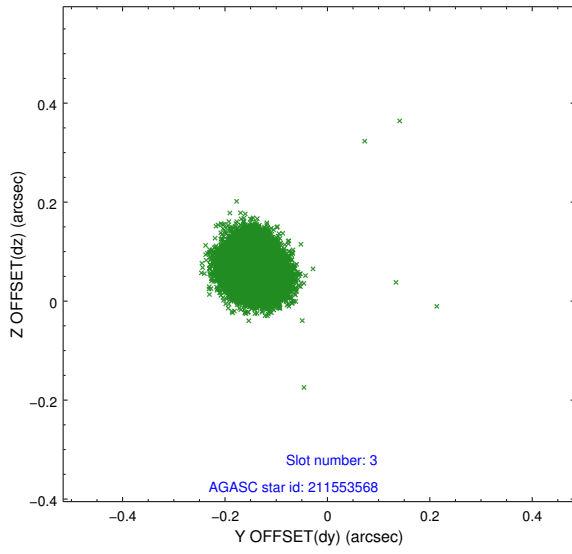


### Slot Statistics

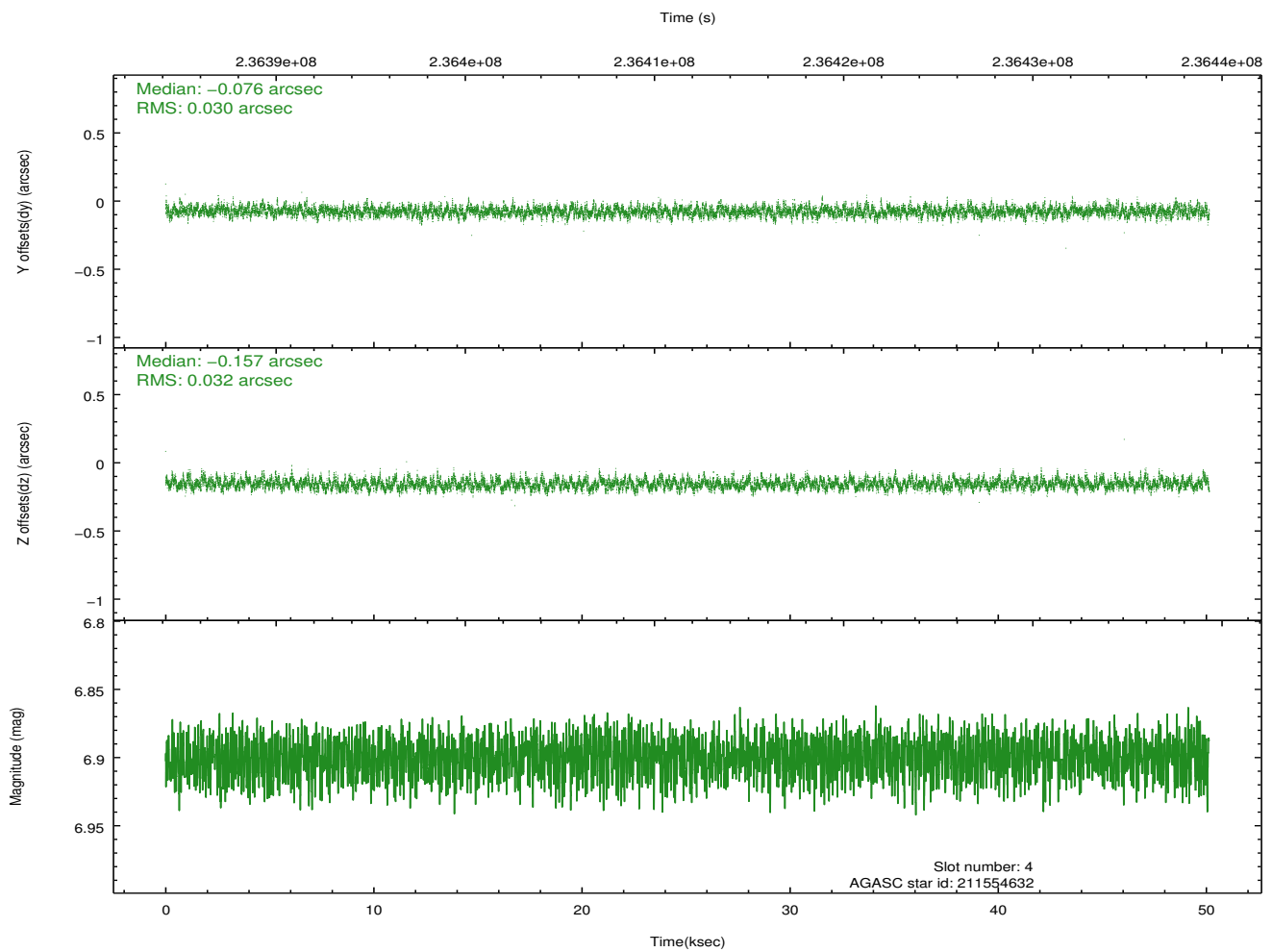
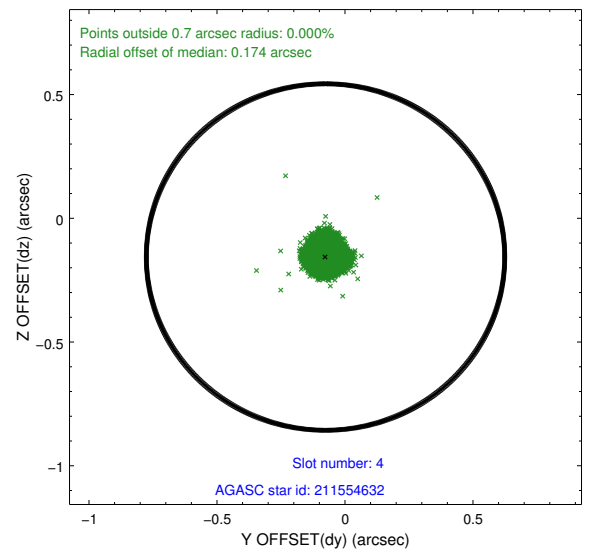
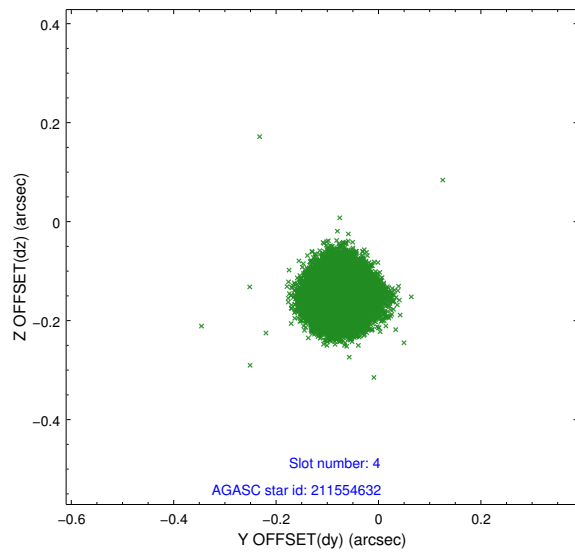
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	12230	-0.043	-0.030	0.008	0.015	0.000000	0.000000	-760.58	-1731.16
1	FID	ACIS-S-4	7.21	12231	0.113	0.029	0.010	0.021	0.000000	0.000000	2152.82	177.46
2	FID	ACIS-S-5	7.23	12231	-0.100	0.010	0.010	0.019	0.000000	0.000000	-1813.54	171.01
3	GUIDE	211553568	6.97	24463	-0.141	0.062	0.043	0.068	294.941136	22.027588	539.02	-1470.23
4	GUIDE	211554632	6.90	24461	-0.076	-0.157	0.047	0.075	294.877799	21.343444	-161.34	900.14
5	GUIDE	211554832	7.30	24460	-0.071	0.102	0.048	0.075	294.562841	21.884642	1528.65	-531.50
6	GUIDE	211558776	9.00	24444	0.180	-0.051	0.080	0.130	295.394666	21.069626	-2136.28	1182.85
7	GUIDE	211553272	8.89	24389	0.108	0.039	0.066	0.109	295.724251	21.735389	-2280.54	-1452.03

## 2.4 Star Slots

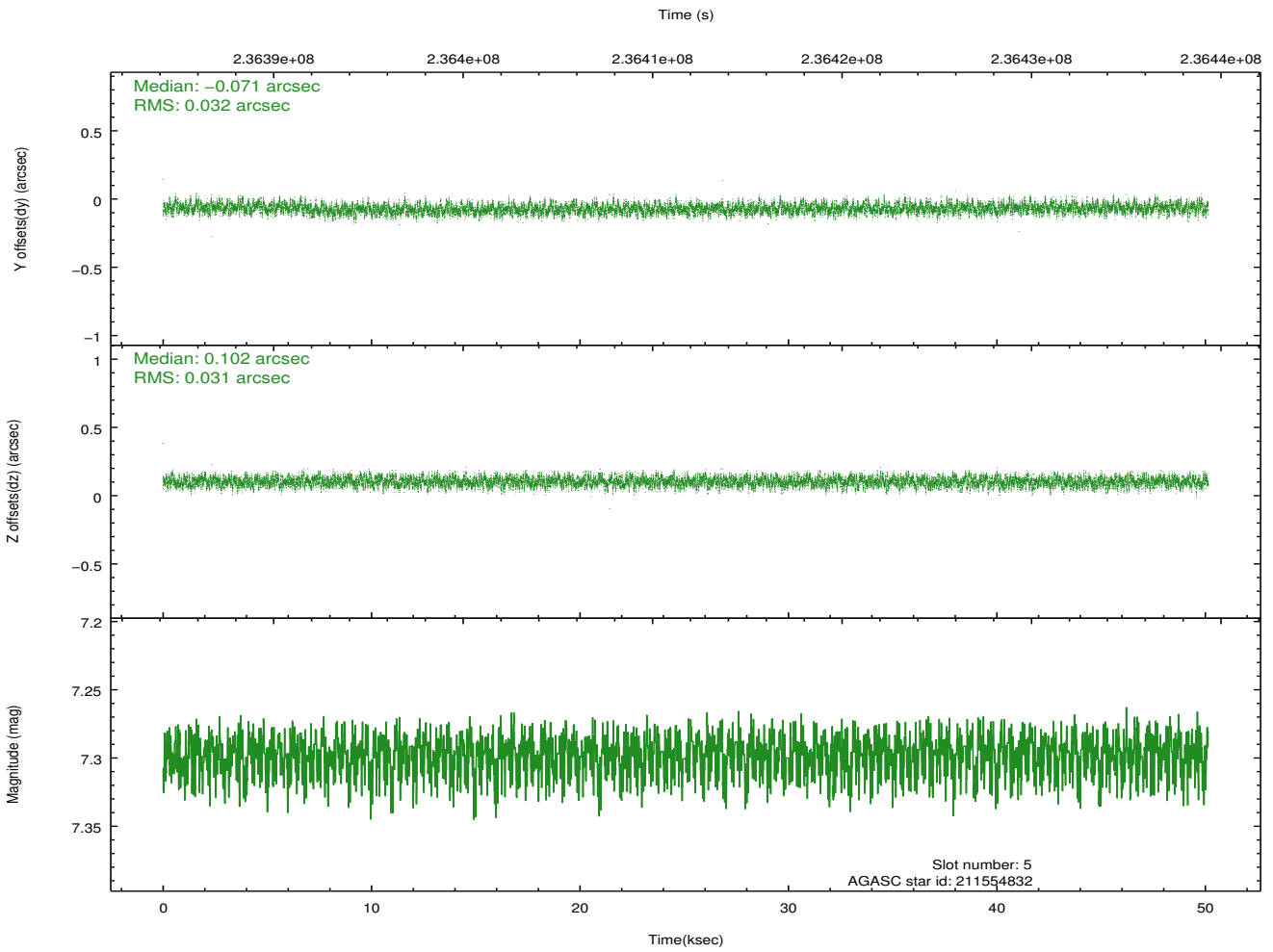
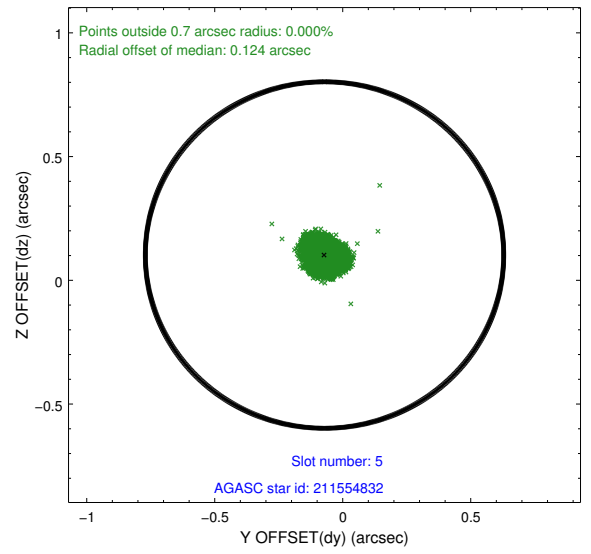
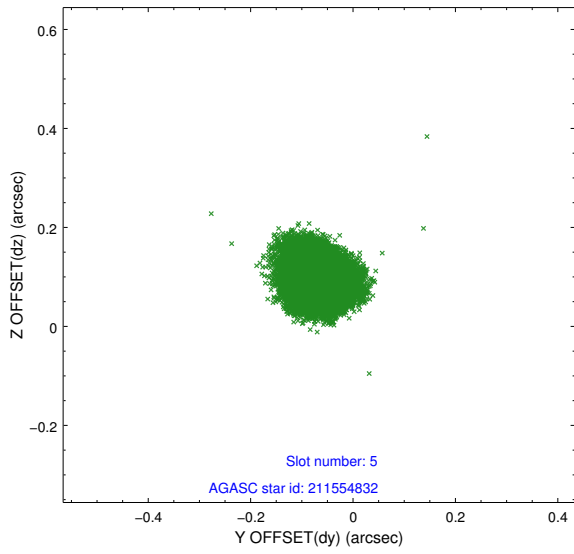
### 2.4.1 Slot 3



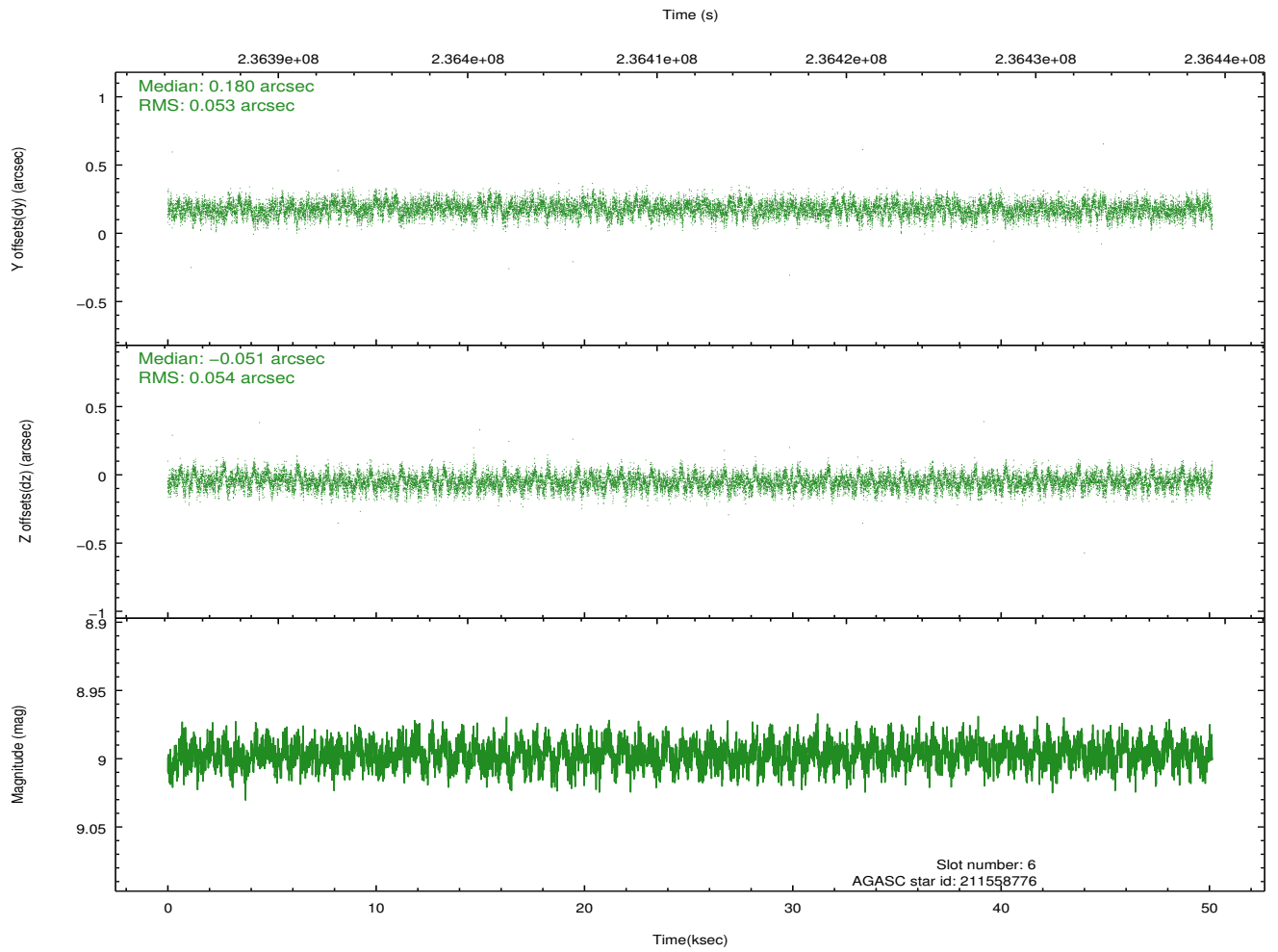
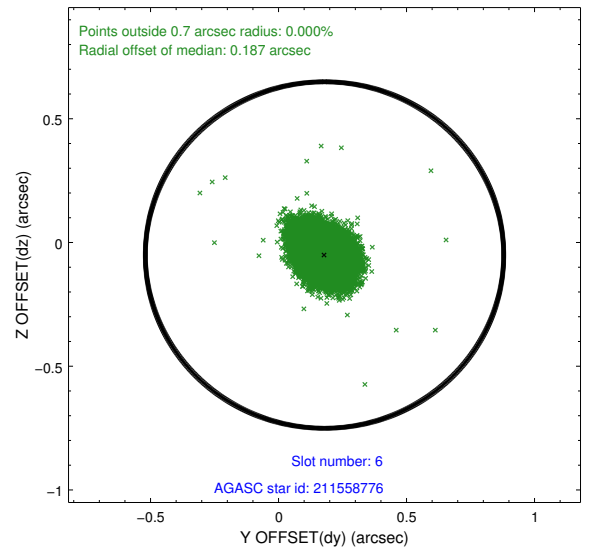
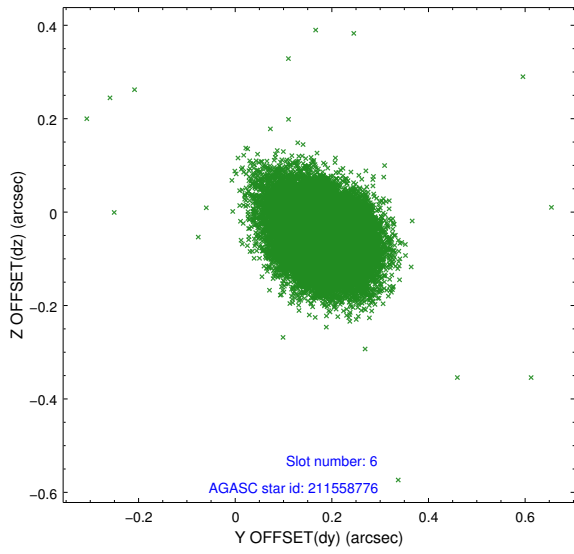
## 2.4.2 Slot 4



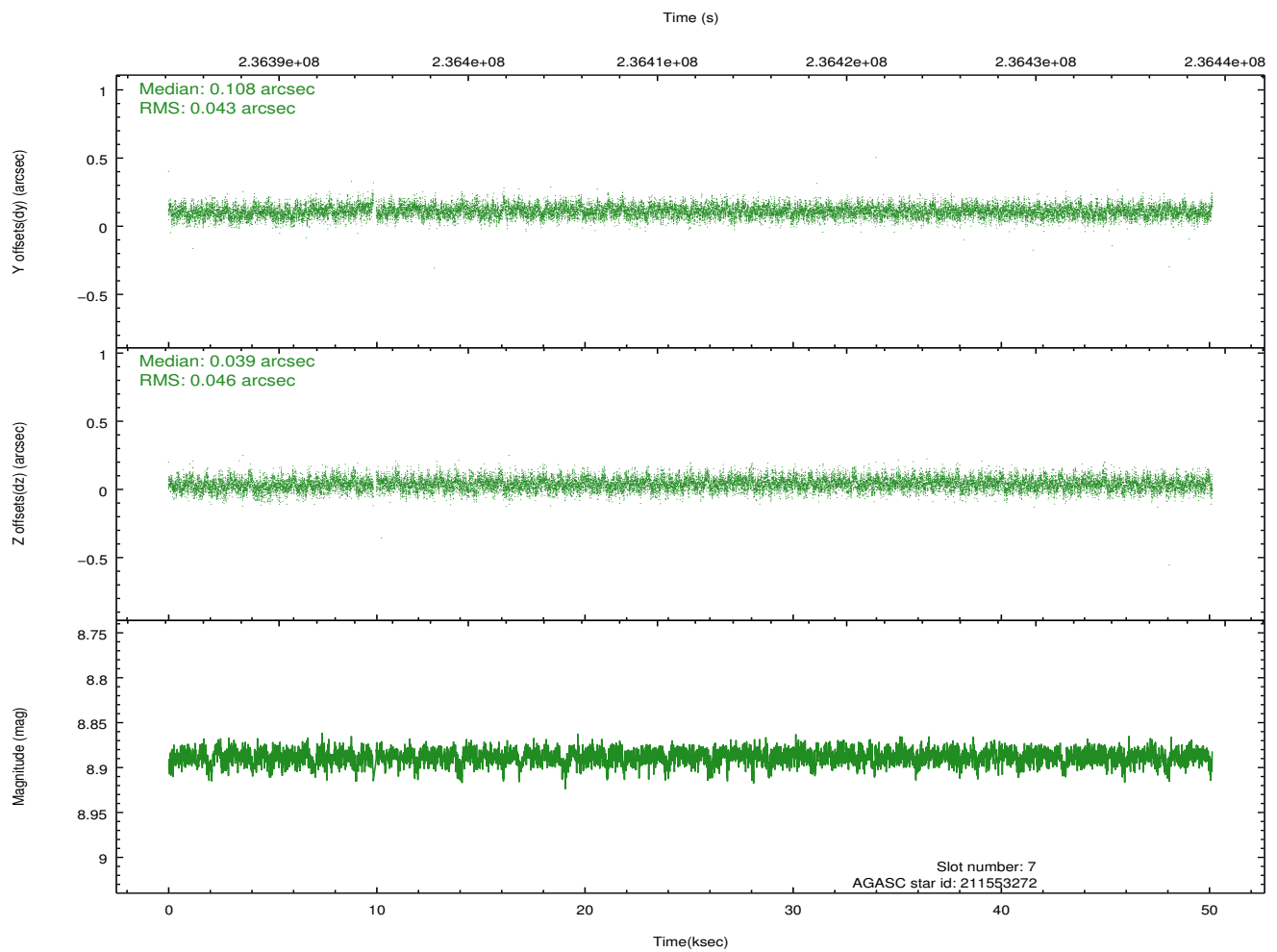
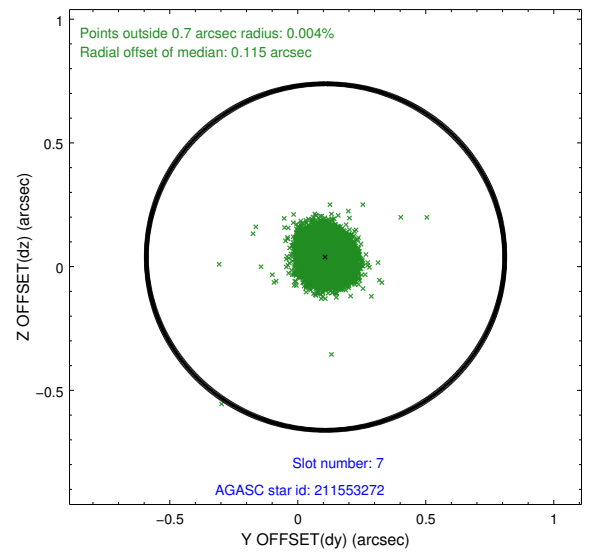
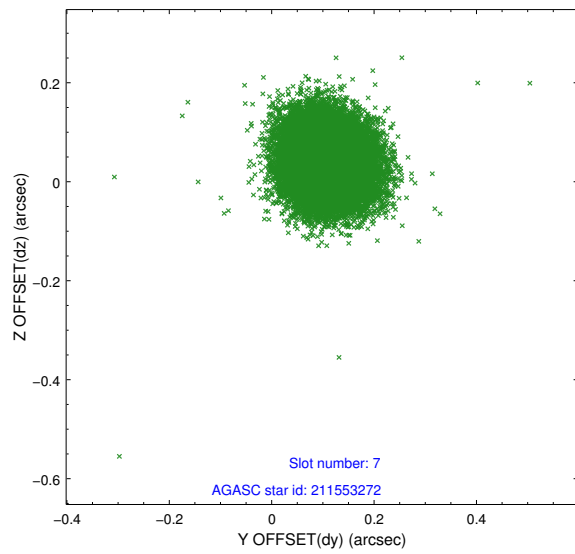
### 2.4.3 Slot 5



### 2.4.4 Slot 6

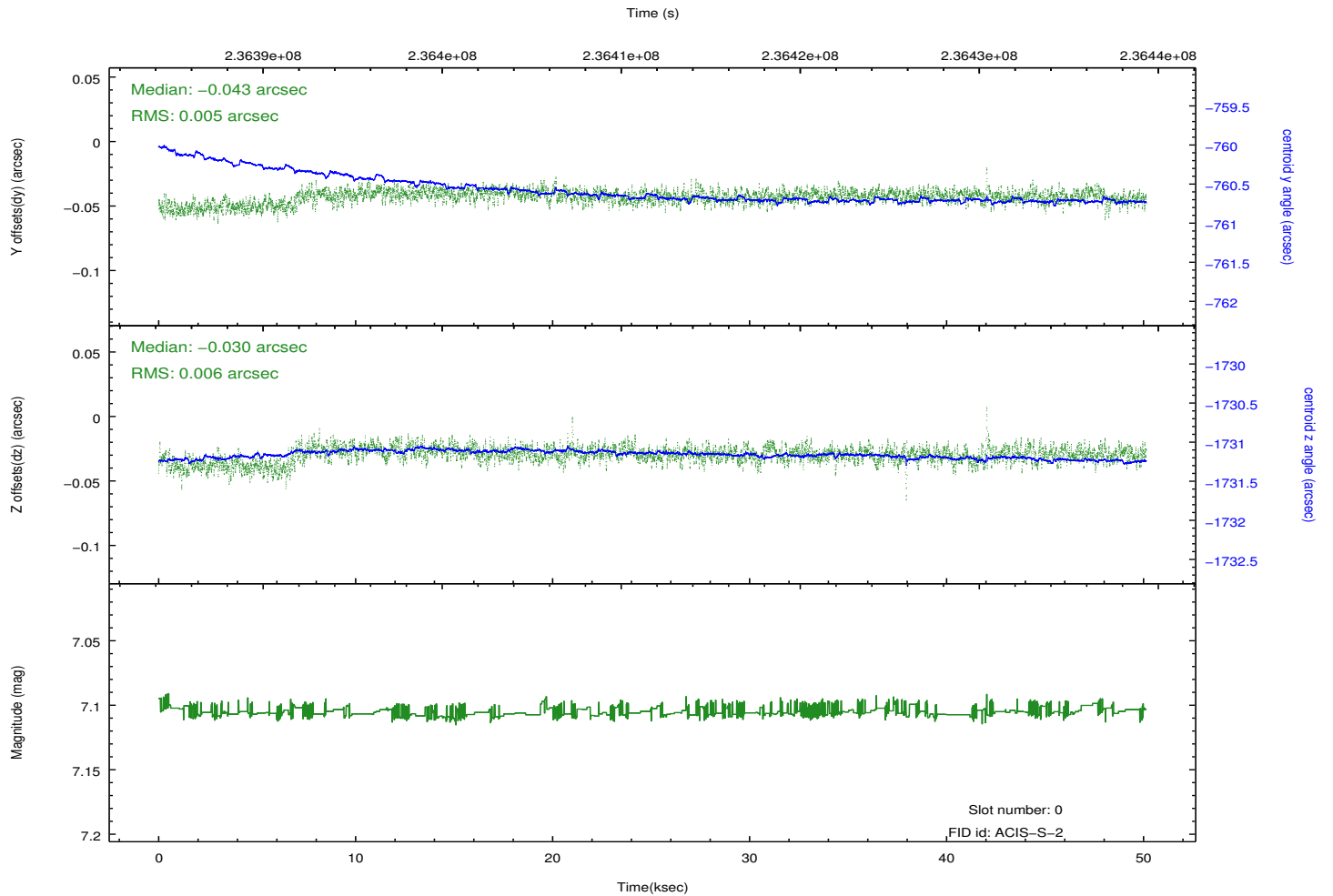
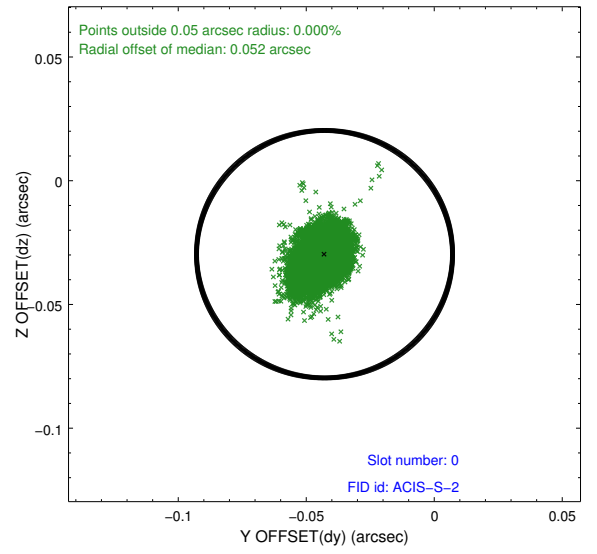
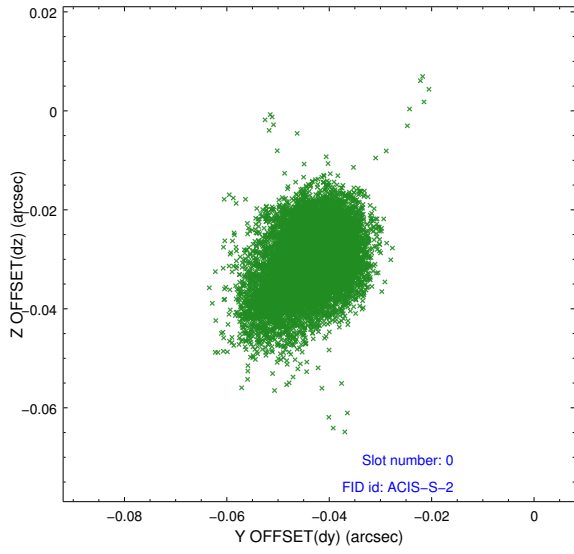


## 2.4.5 Slot 7

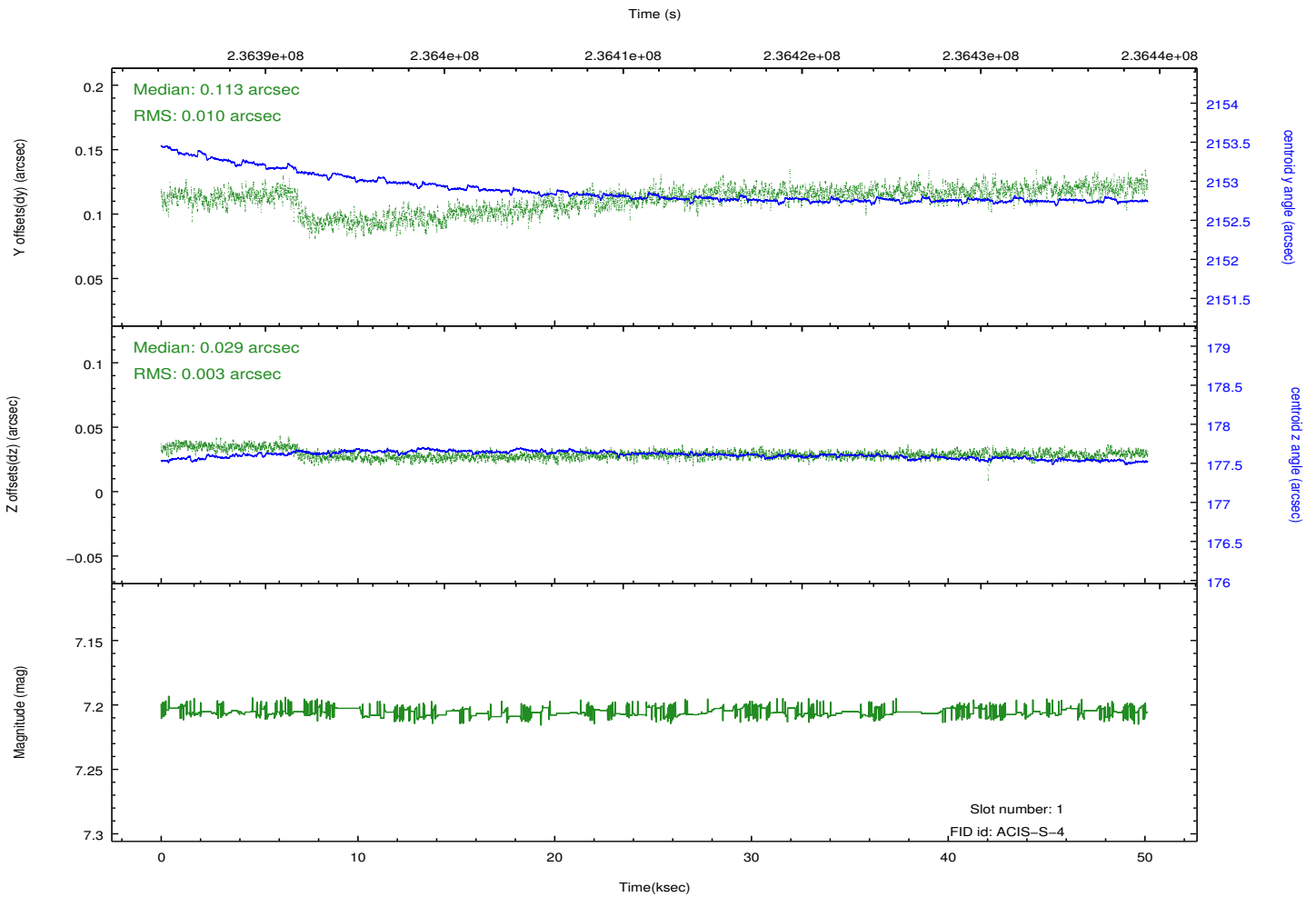
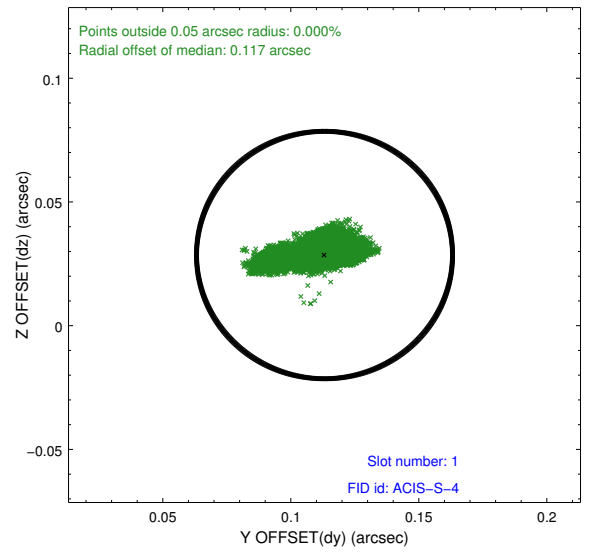
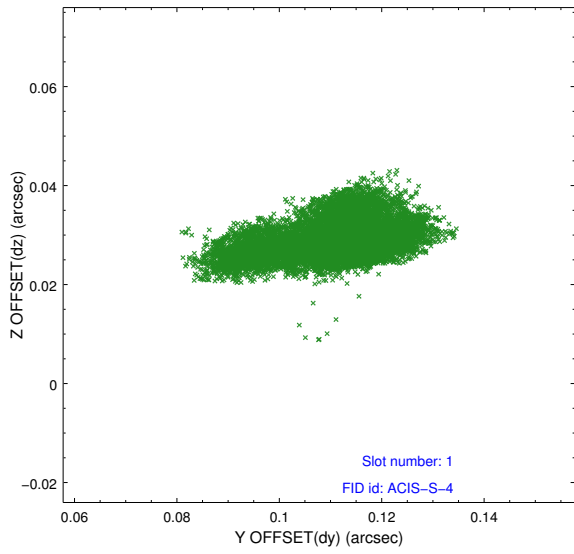


## 2.5 FID Slots

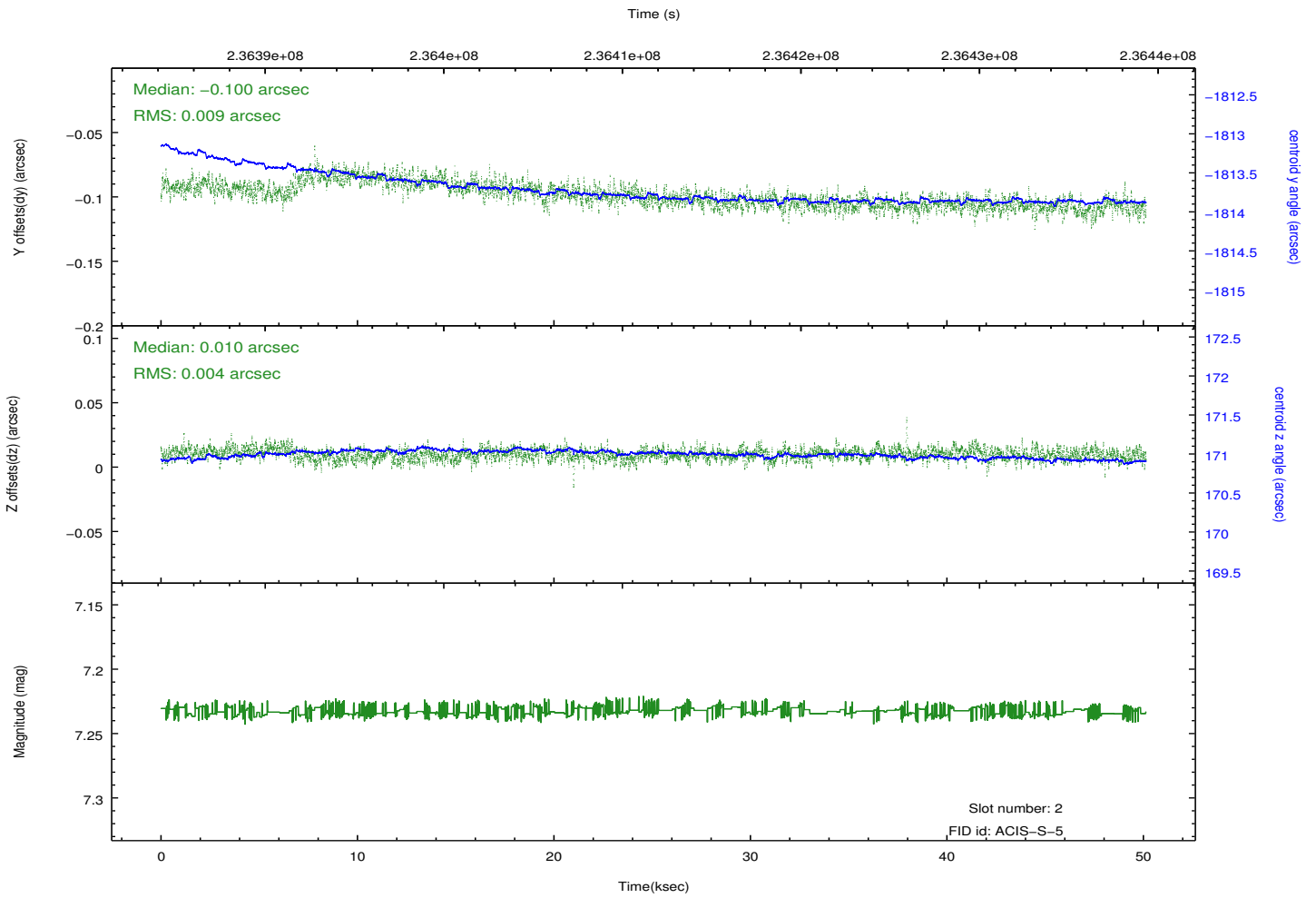
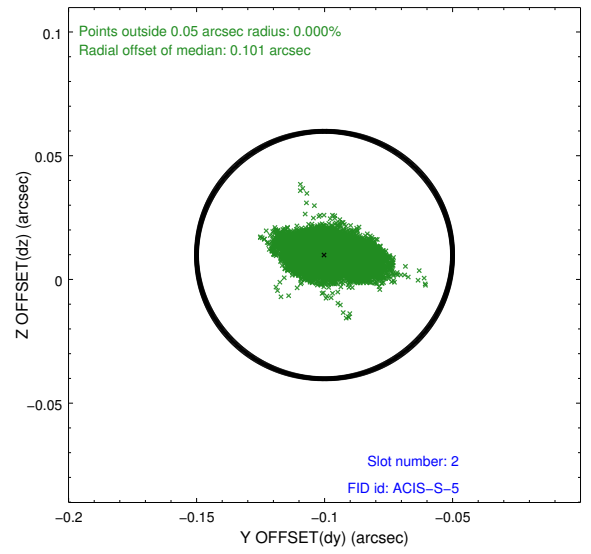
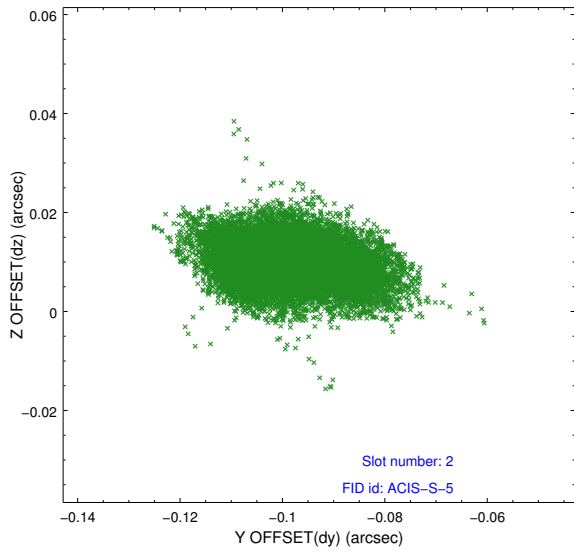
### 2.5.1 Slot 0



## 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)	2013.01.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	50.13759

### A.2 Comments