

# V&V Reference Report

## L2 ASCDS Version : 10.2.4

Observation 16171 - L2 Version 1  
Chandra X-Ray Center

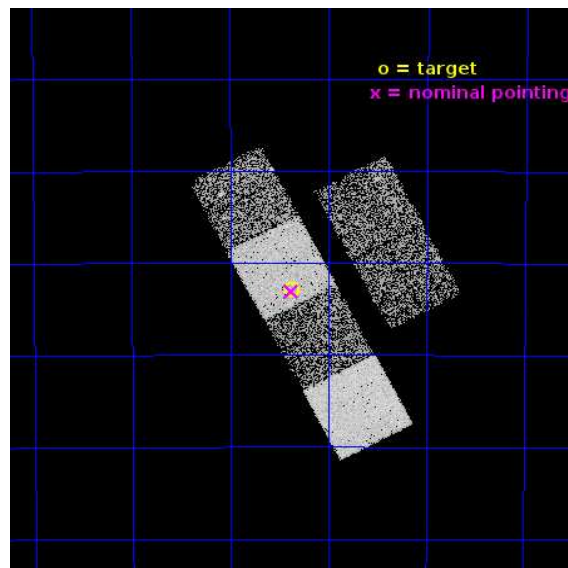
L2 Processing Date : Oct 20 2014

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# 1 Front

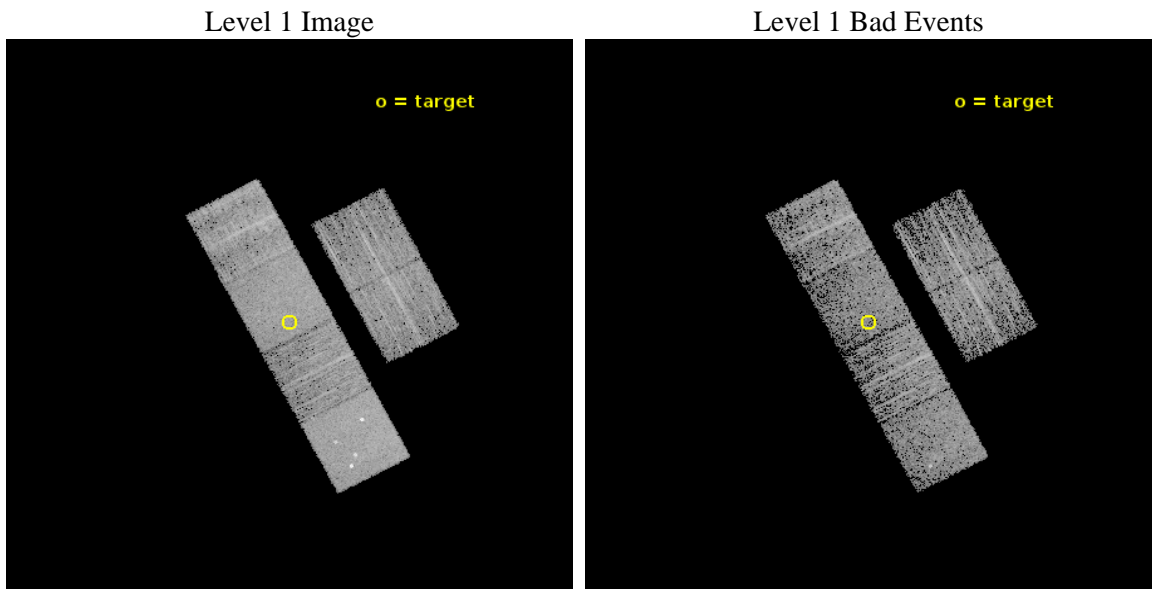
seq_num	901111	Sequence number
obs_id	16171	Observation id
title	Localizing NuSTAR-Discovered Sources in the Galactic Plane	Proposa
observer	Dr. John Tomsick	Principal investigator
object	NuSTAR J164222-4642.9	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	250.5925	Observer's specified target RA [deg]
dec_targ	-46.715278	Observer's specified target Dec [deg]
ra_nom	250.59464531266	Nominal RA [deg]
dec_nom	-46.718129827	Nominal Dec [deg]
roll_nom	242.19824606095	Nominal Roll [deg]
revision	1	Processing version of data
ontime	4959.9999815822	Sum of GTIs [s]
livetime	4897.1934752619	Livetime [s]
ontime2	4959.9999815822	Sum of GTIs [s]
ontime3	4959.9999815822	Sum of GTIs [s]
ontime5	4959.9999815822	Sum of GTIs [s]
ontime6	4959.9999815822	Sum of GTIs [s]
ontime7	4959.9999815822	Sum of GTIs [s]
ontime8	4959.9999815822	Sum of GTIs [s]
l2events	48316	Number of level 2 events



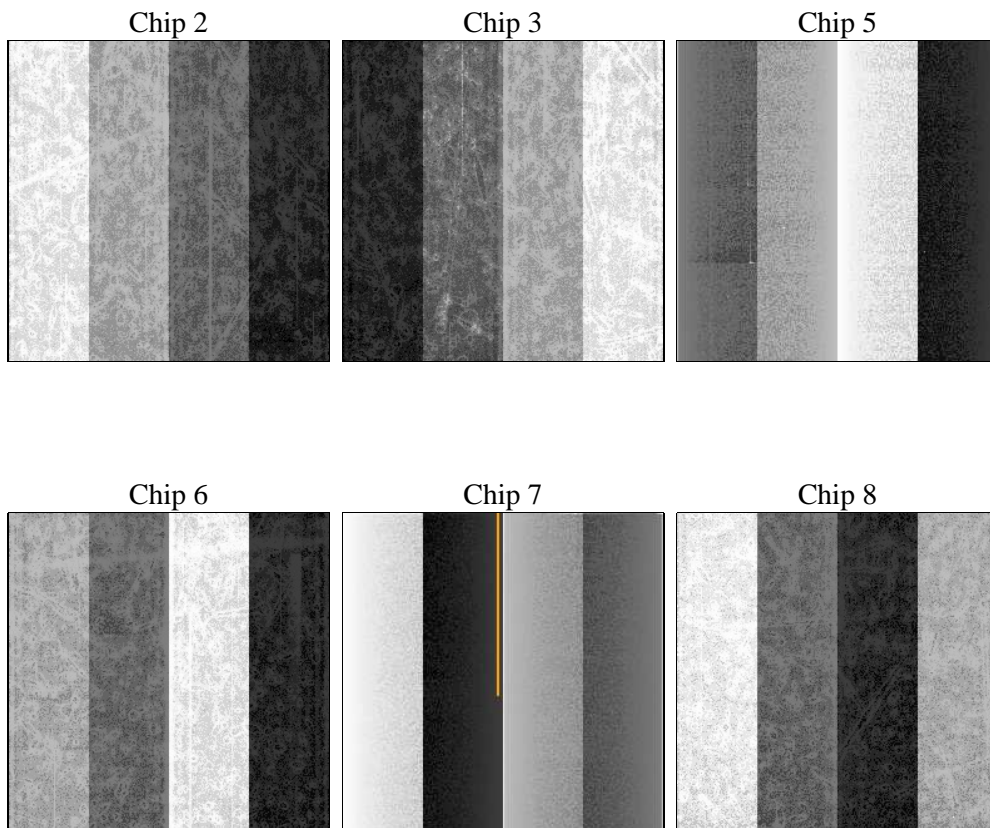
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.2.4	Processing system revision	ontime	4959.9999815822	Sum of GTIs [s]
caldbver	4.6.3	&#160	ontime2	4959.9999815822	Sum of GTIs [s]
date	2014-10-20T15:34:10	Date and time of file creation	ontime3	4959.9999815822	Sum of GTIs [s]
revision	1	Processing version of data	ontime5	4959.9999815822	Sum of GTIs [s]
			ontime6	4959.9999815822	Sum of GTIs [s]
			ontime7	4959.9999815822	Sum of GTIs [s]
			ontime8	4959.9999815822	Sum of GTIs [s]
			l1events	199700	Number of level 1 events

### 2.1.4 Events

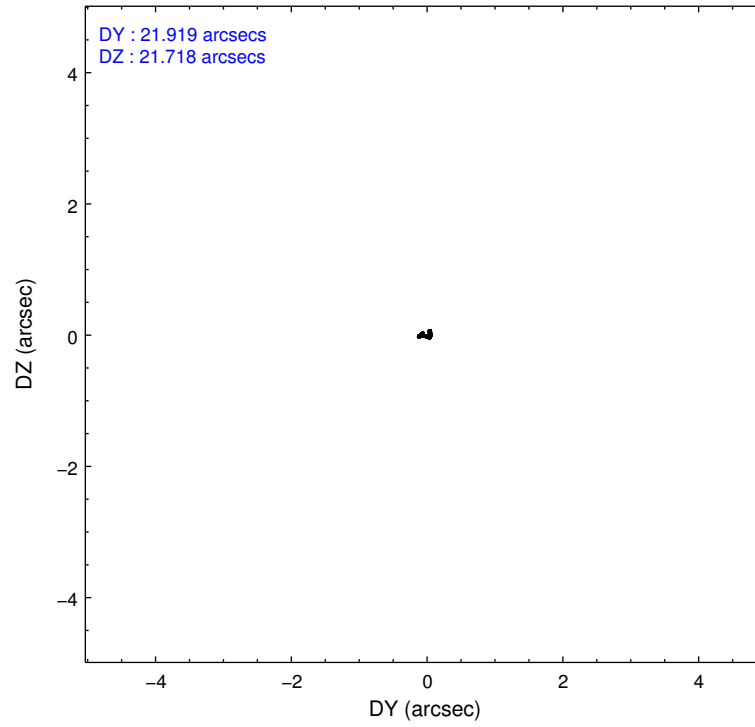
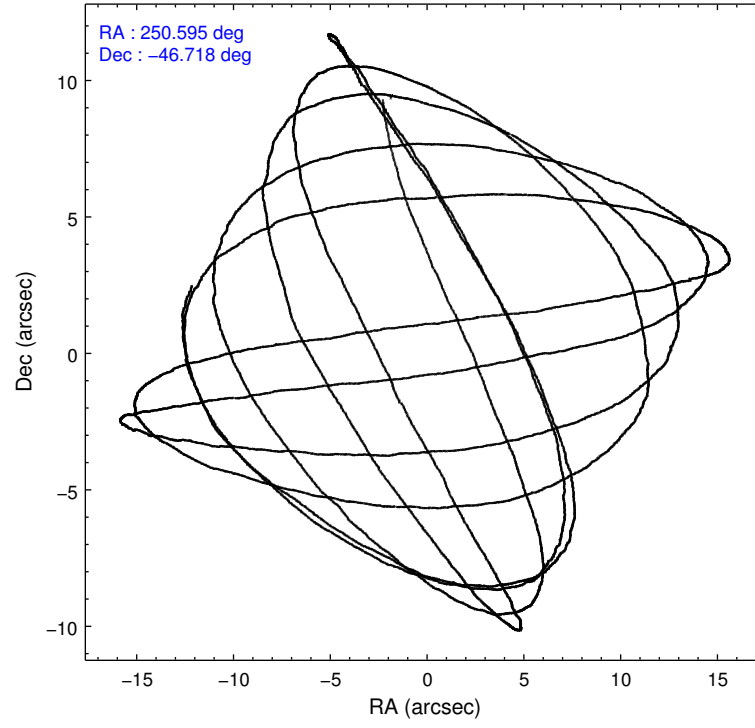
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	27893	25985	45904	27787	36028	36103	grade 0 events	1227	1292	3320	1274	1470	3180
rejected events	24651	22732	22560	24376	19782	25842		4%	4%	7%	4%	4%	8%
rejected %	88%	87%	49%	87%	54%	71%	grade 1 events	23	14	76	19	40	21
								0%	0%	0%	0%	0%	0%
							grade 2 events	800	689	6954	741	3320	2513
								2%	2%	15%	2%	9%	6%
							grade 3 events	327	332	797	325	1373	1037
								1%	1%	1%	1%	3%	2%
							grade 4 events	321	325	690	317	1364	945
								1%	1%	1%	1%	3%	2%
							grade 5 events	1230	1307	3219	1334	3720	2055
								4%	5%	7%	4%	10%	5%
							grade 6 events	567	616	11598	756	8722	2617
								2%	2%	25%	2%	24%	7%
							grade 7 events	23398	21410	19250	23021	16019	23735
								83%	82%	41%	82%	44%	65%

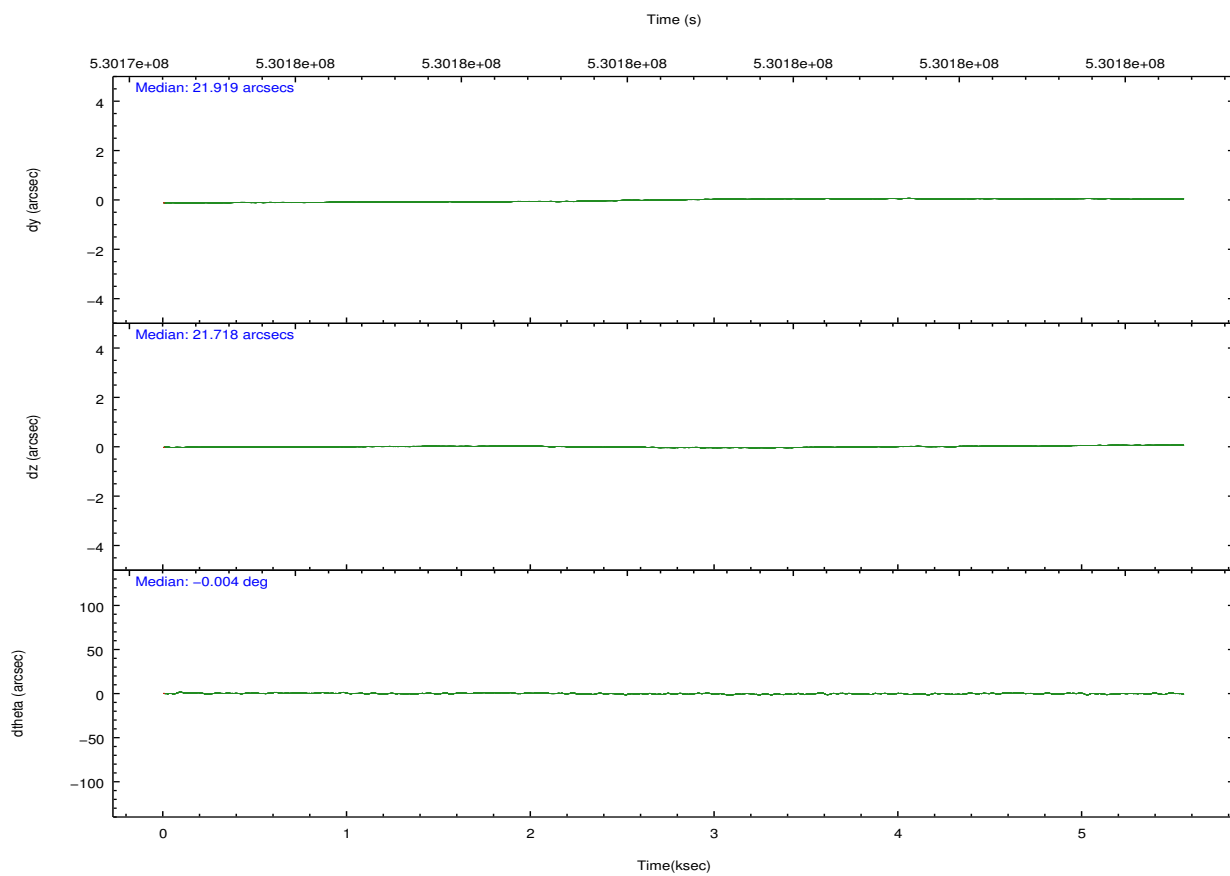
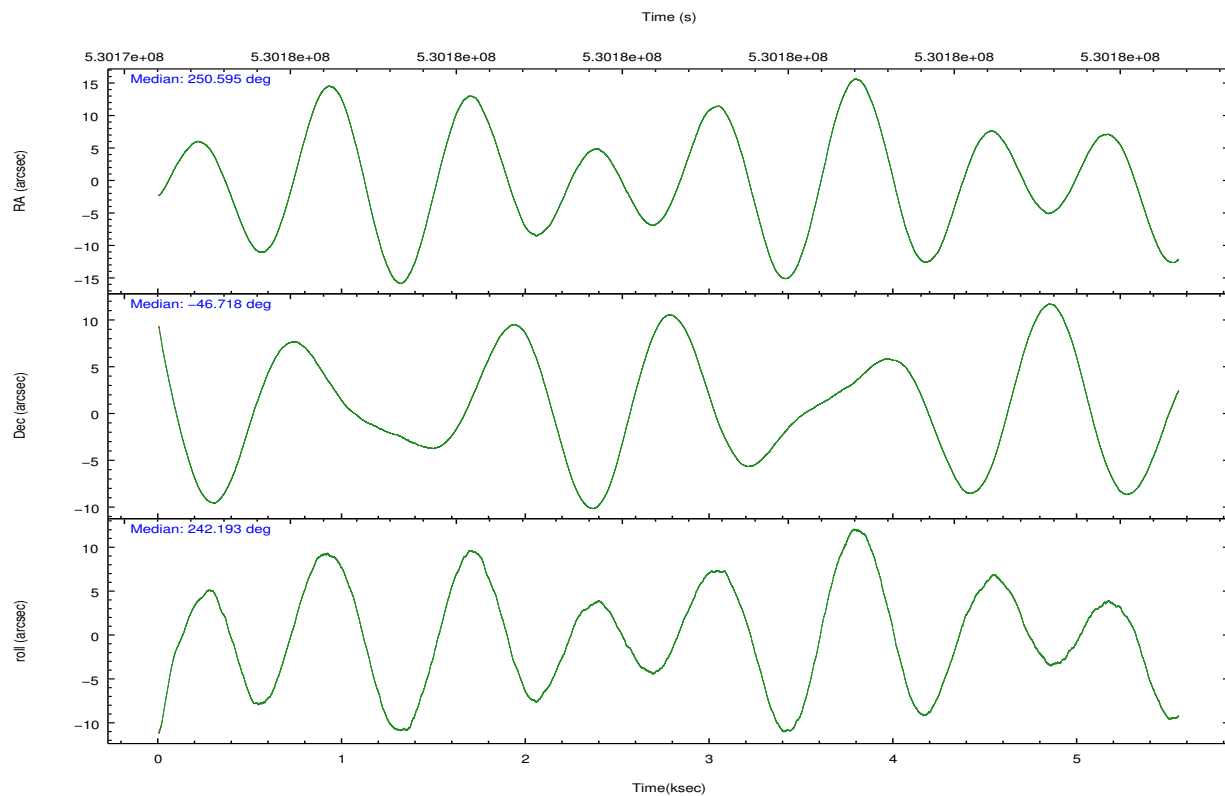


## 2.2 Compared Parameters

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	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	250.592611	250.5946453126638	CCD I2 on	O2	Y
[deg] Pointing Dec	-46.690601	-46.71812982700032	CCD I3 on	Y	Y
[deg] Pointing Roll	242.040145	242.1982460609505	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	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	Y	Y
[s] Observation start time (MET)	530175052.184000	530173910.25207	CCD S5 on	N	N
Observation start date	2014-10-20T06:49:45	2014-10-20T06:31:50	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	530180052.184000	530180548.15244	On-chip summing requested	N	N
Observation end date	2014-10-20T08:13:05	2014-10-20T08:22:28	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



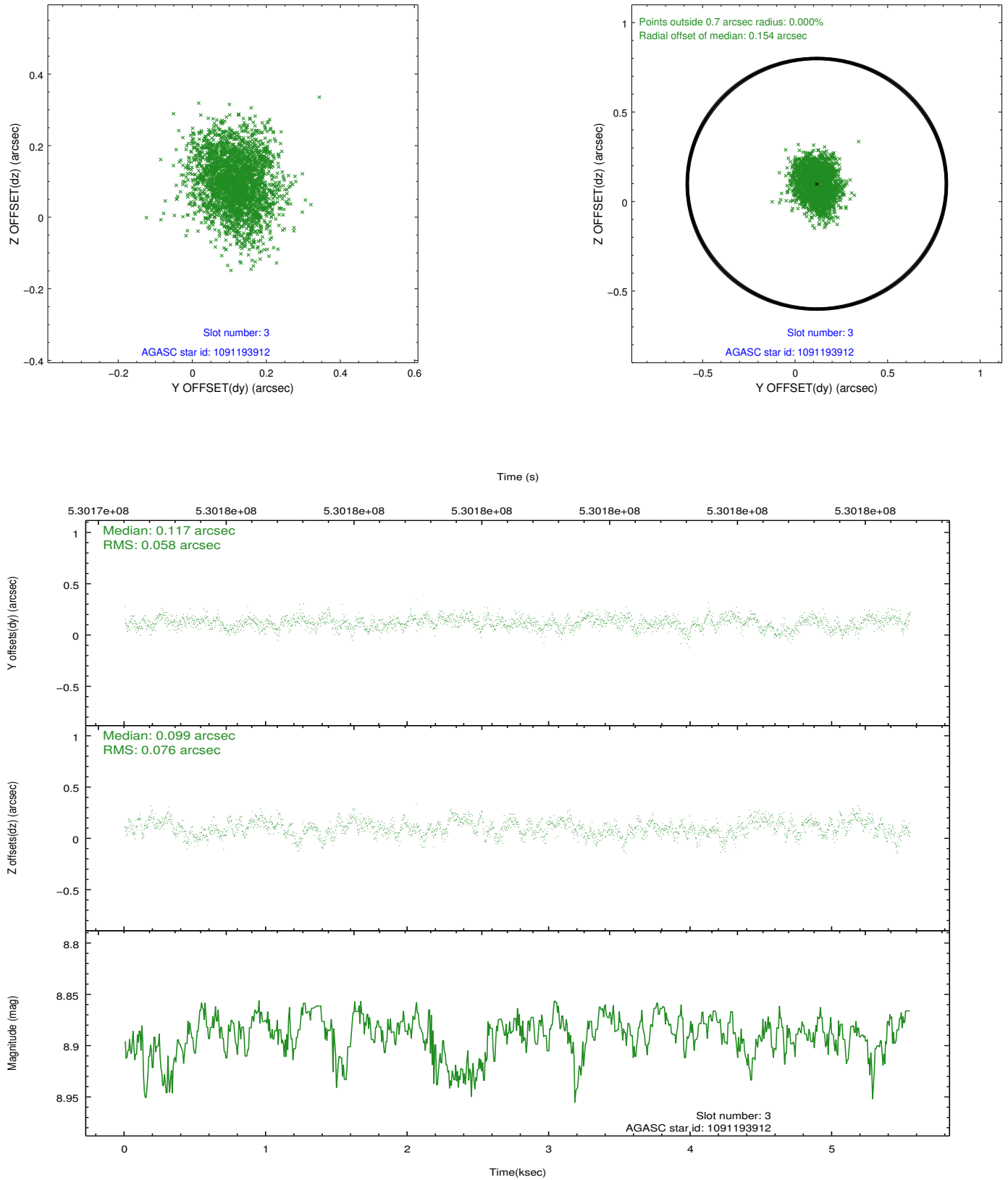


### Slot Statistics

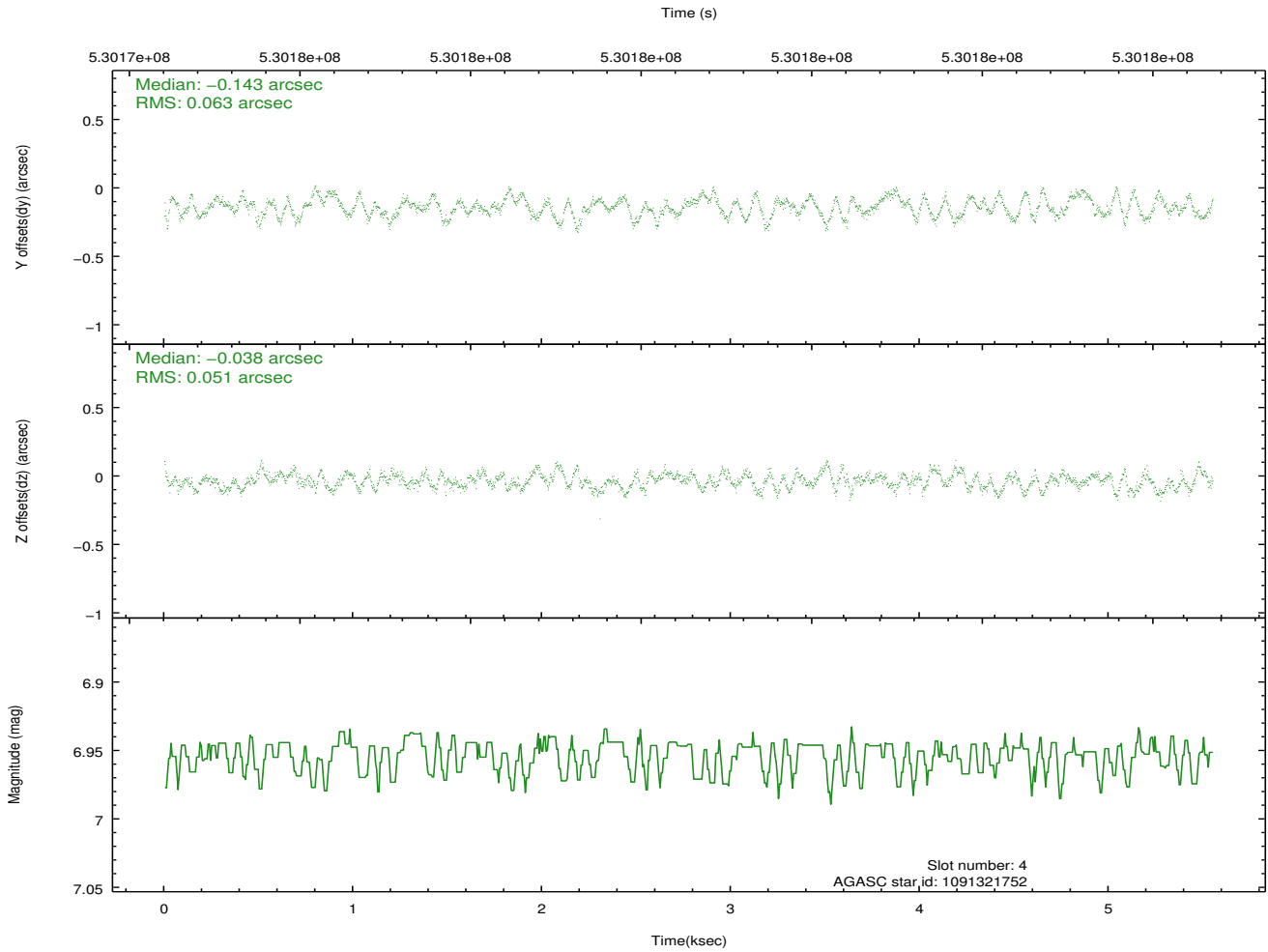
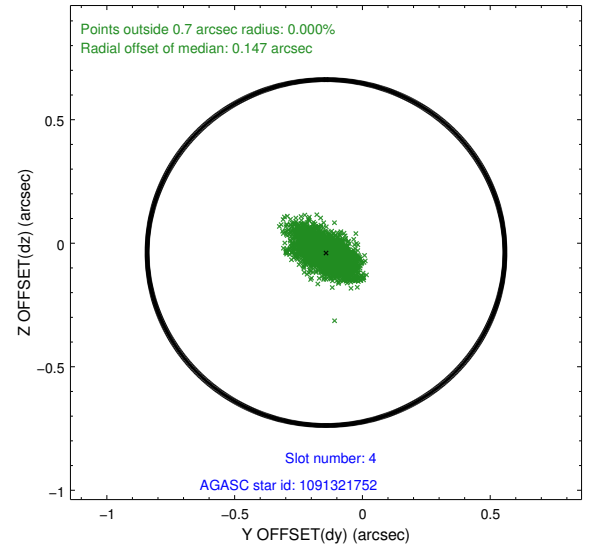
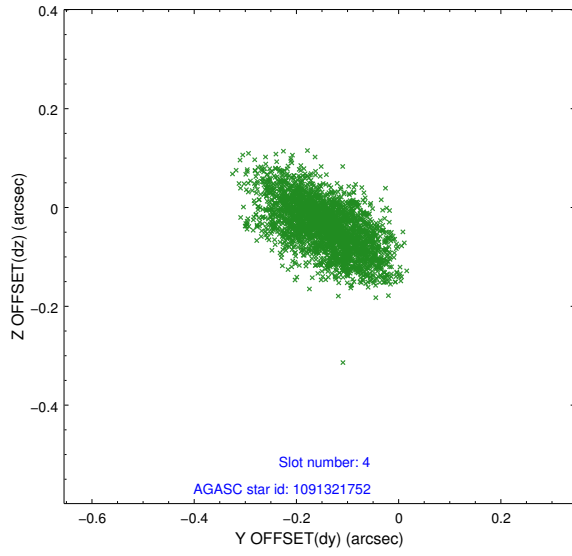
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.01	1354	0.121	-0.032	0.007	0.013	0.000000	0.000000	921.05	-1738.91
1	FID	ACIS-S-2	6.94	1354	-0.128	-0.002	0.007	0.010	0.000000	0.000000	-774.51	-1744.51
2	FID	ACIS-S-6	7.15	1353	-0.014	0.039	0.006	0.010	0.000000	0.000000	386.14	801.38
3	GUIDE	1091193912	8.89	2706	0.117	0.099	0.102	0.165	250.208472	-45.834358	-2268.89	-2295.27
4	GUIDE	1091321752	6.95	2708	-0.143	-0.038	0.086	0.142	251.516776	-46.486101	-1713.83	1683.57
5	GUIDE	1091334688	6.14	2708	0.015	0.204	0.074	0.110	250.764858	-46.070295	-2174.57	-666.04
6	GUIDE	1091343368	6.92	2708	-0.195	-0.117	0.082	0.139	251.526552	-46.531998	-1577.65	1781.55
7	GUIDE	1091842752	7.50	2707	0.187	-0.158	0.093	0.147	250.934866	-47.105704	927.60	1442.97

## 2.4 Star Slots

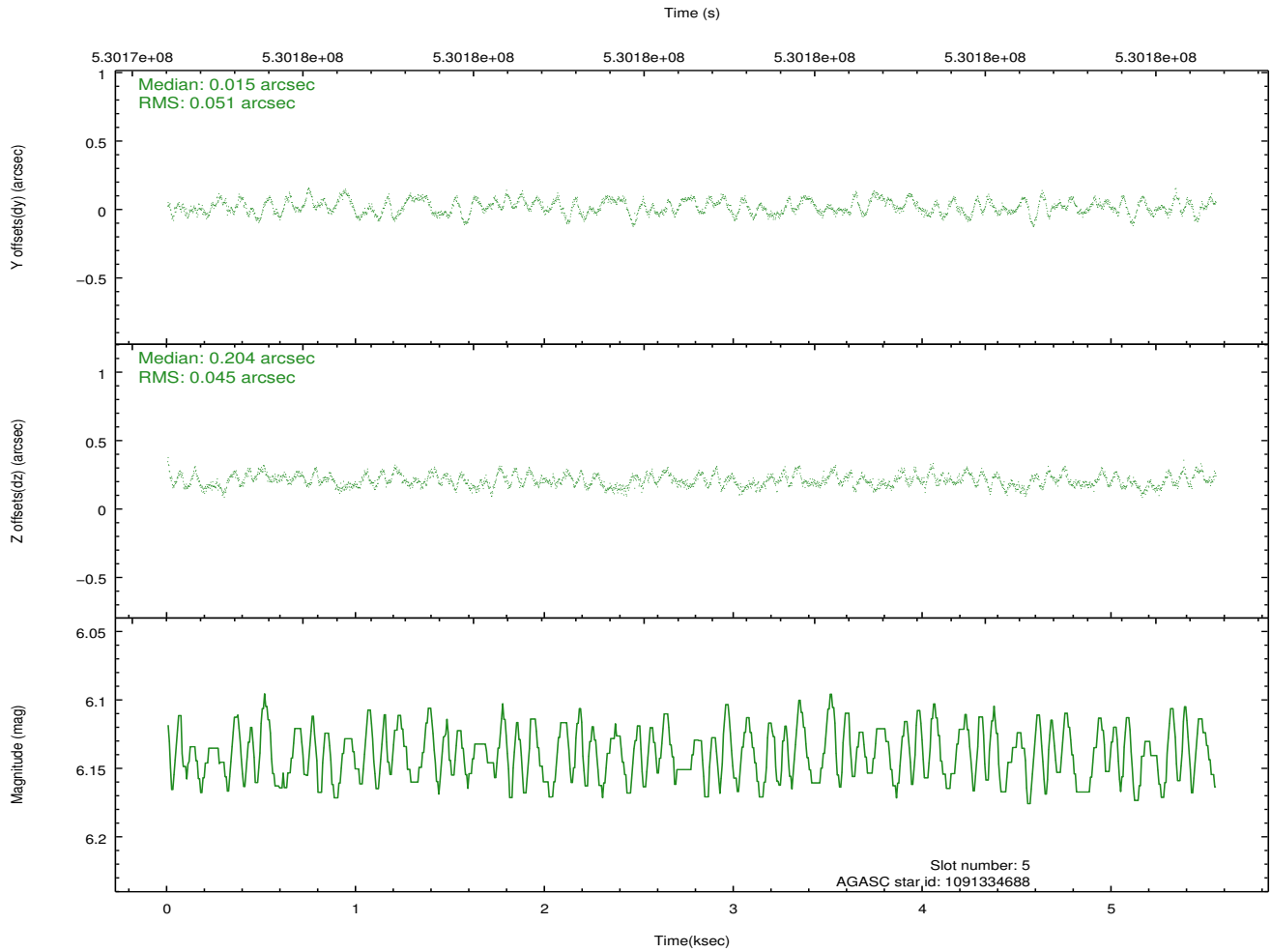
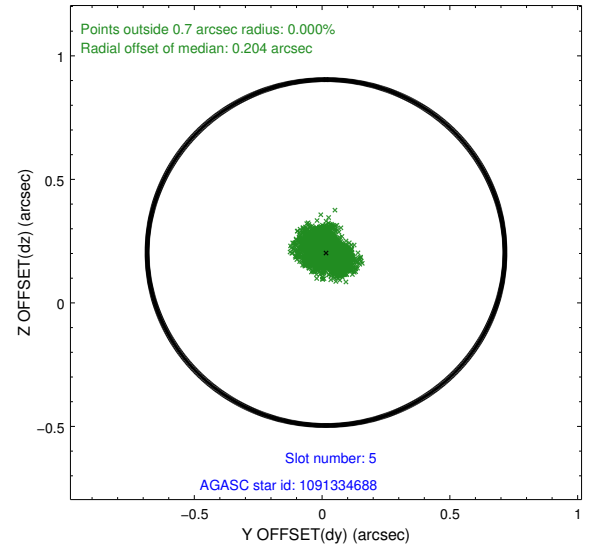
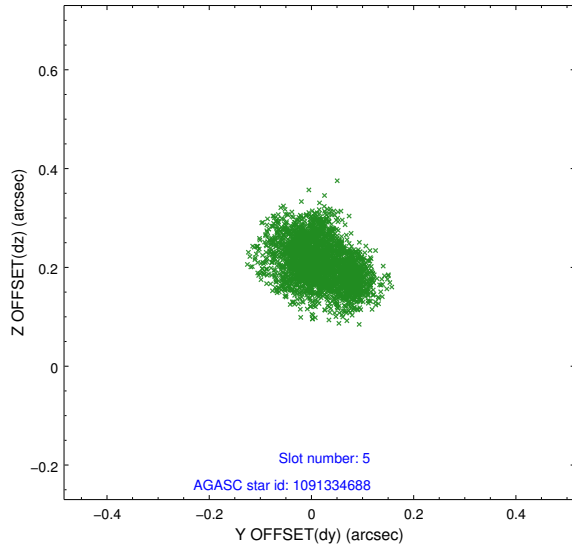
### 2.4.1 Slot 3



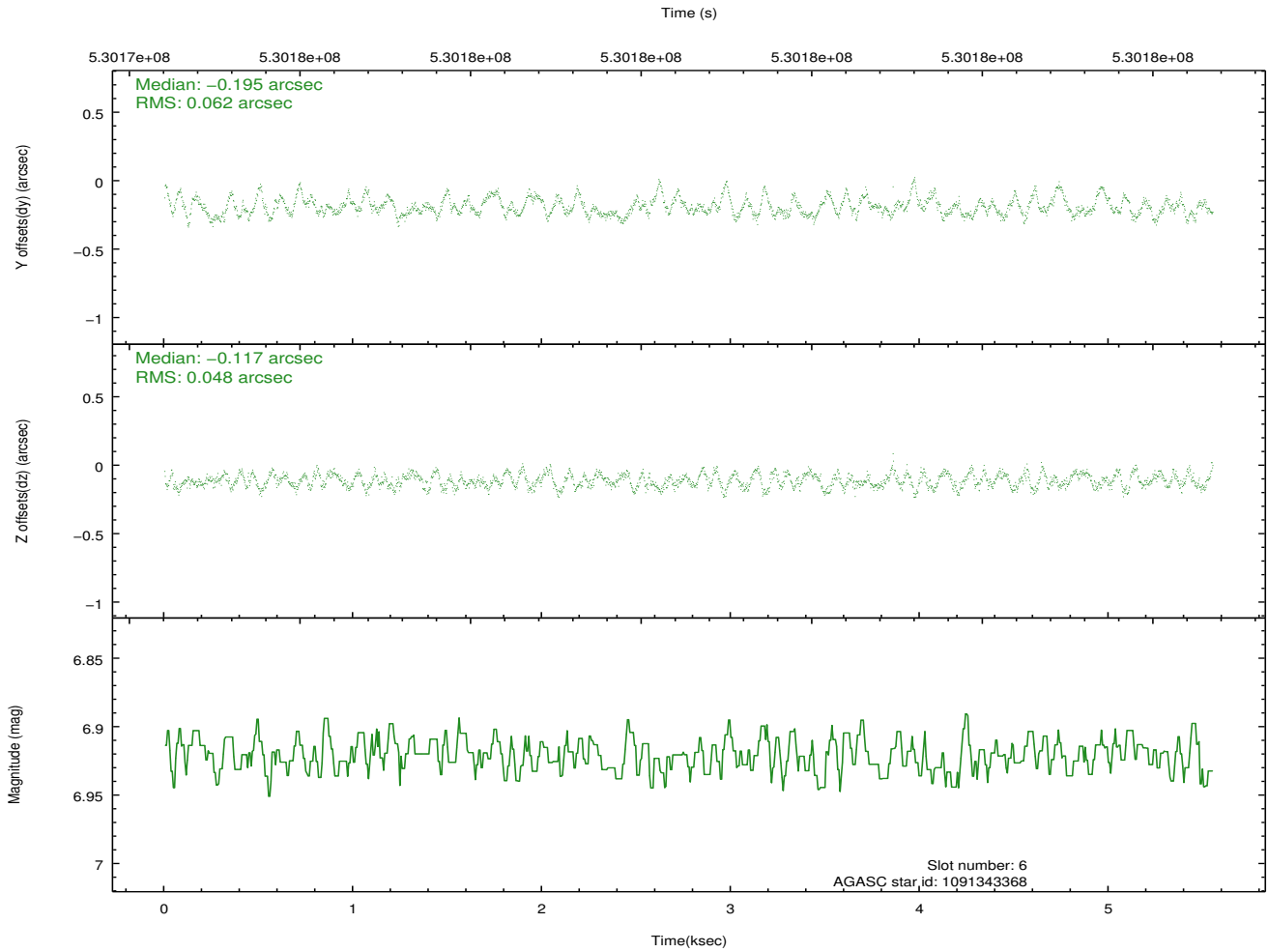
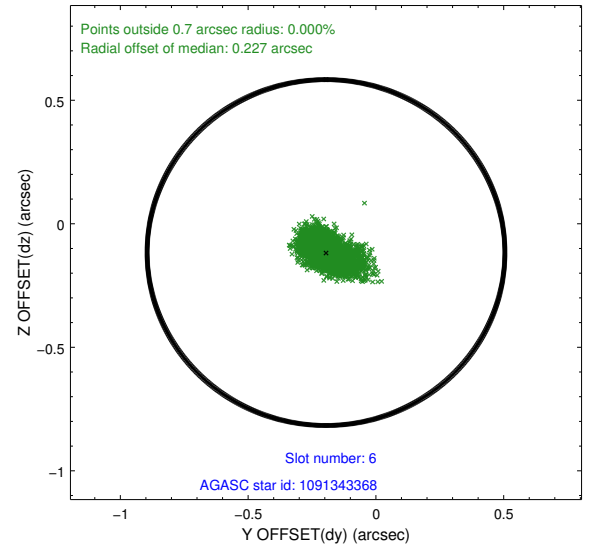
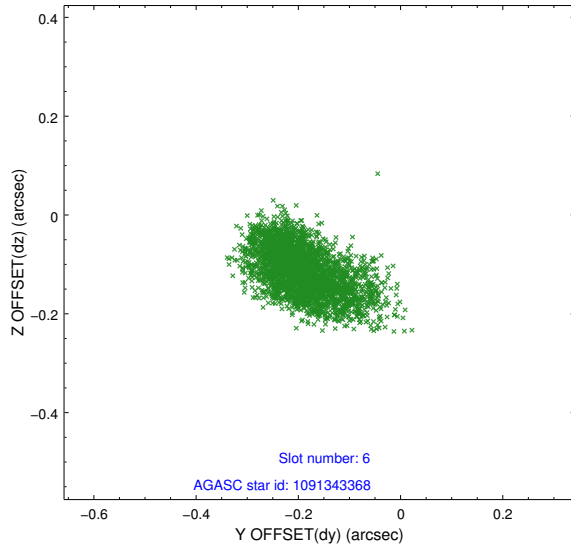
## 2.4.2 Slot 4



### 2.4.3 Slot 5

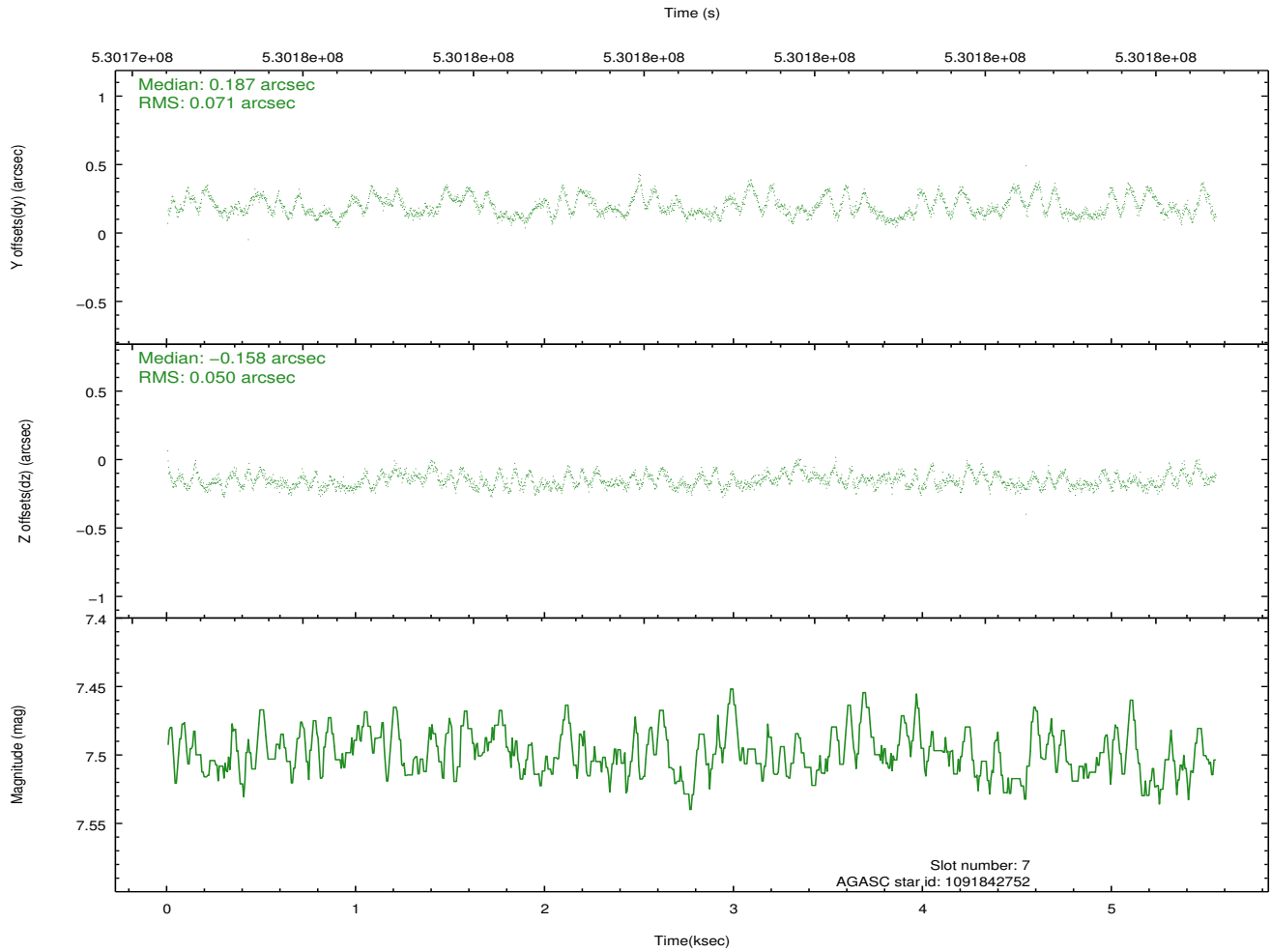
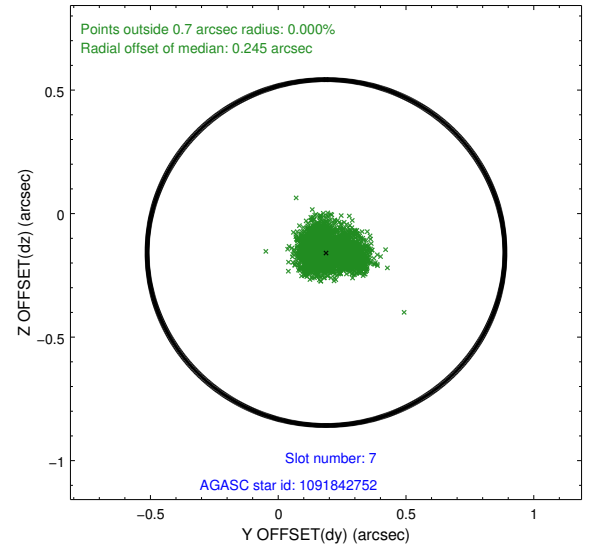
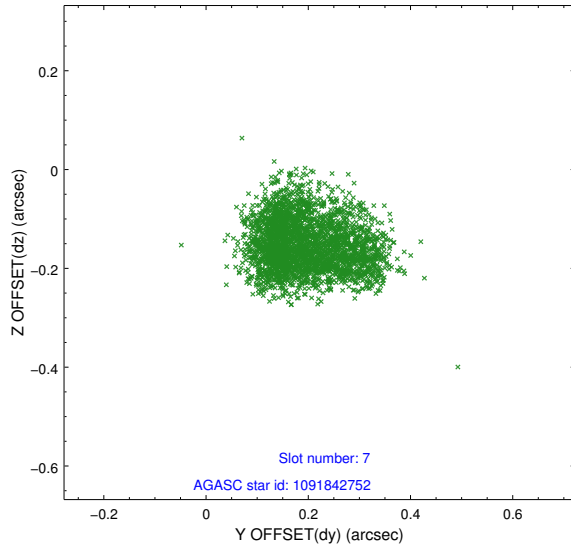


## 2.4.4 Slot 6



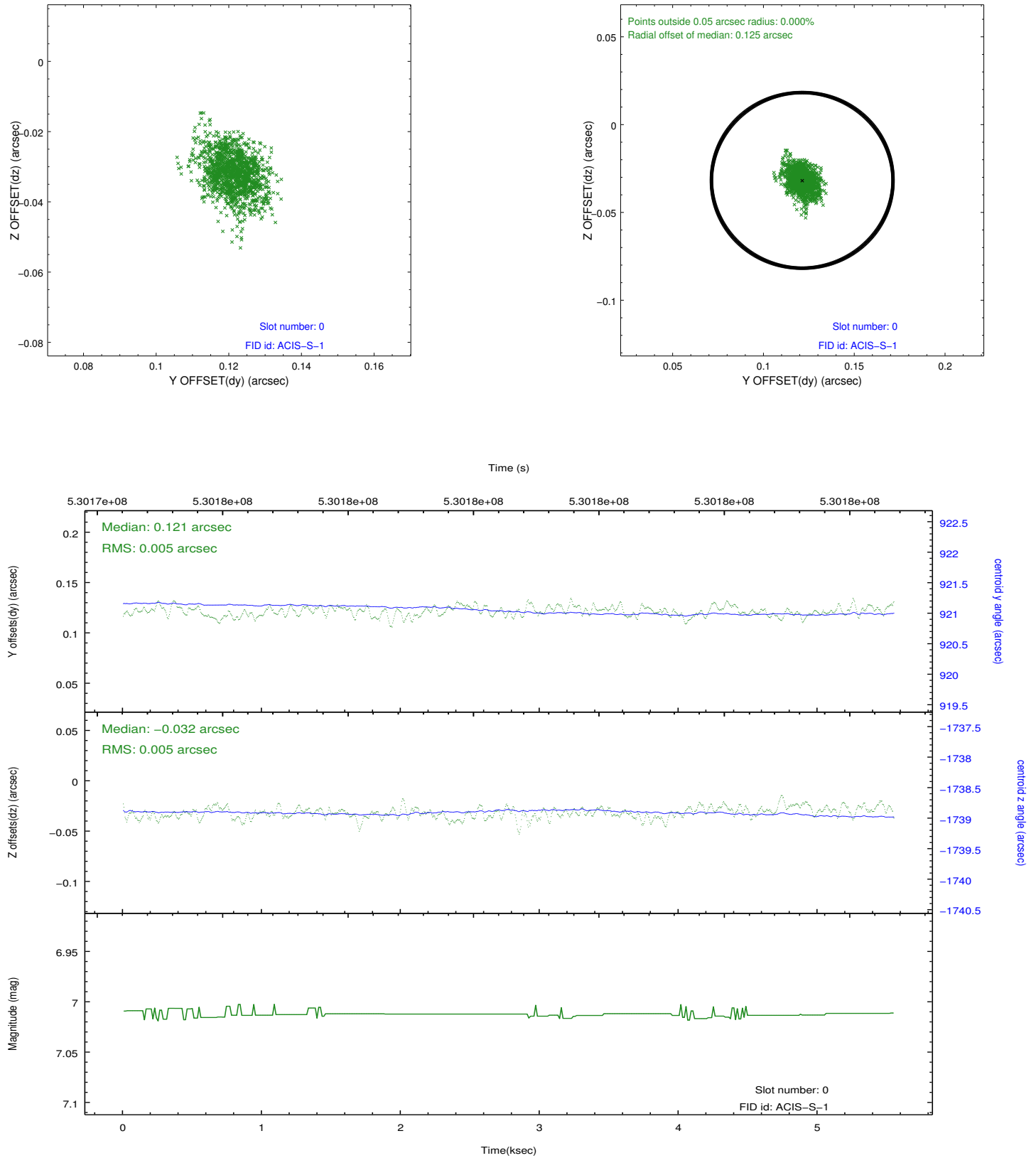


## 2.4.5 Slot 7

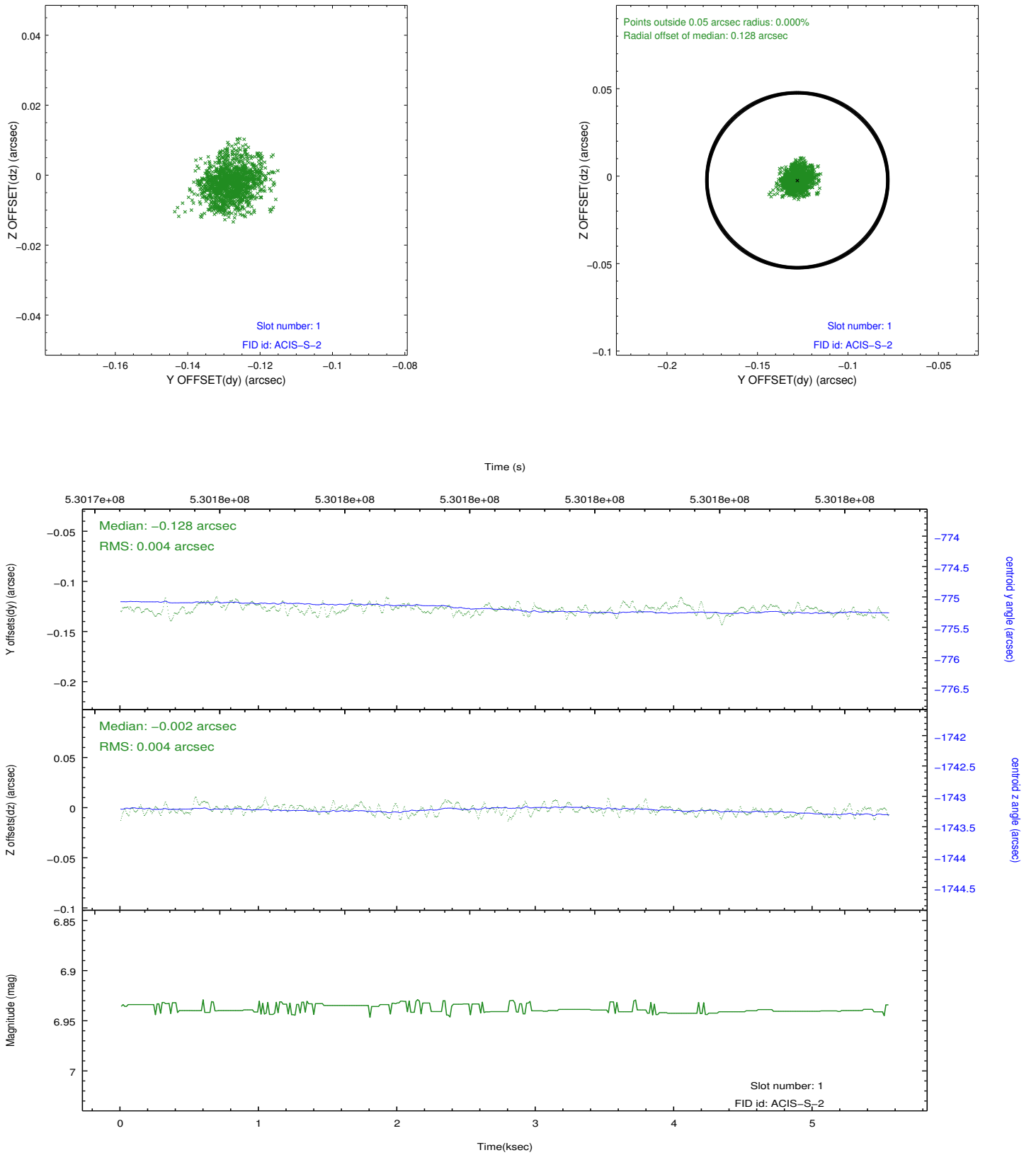


## 2.5 FID Slots

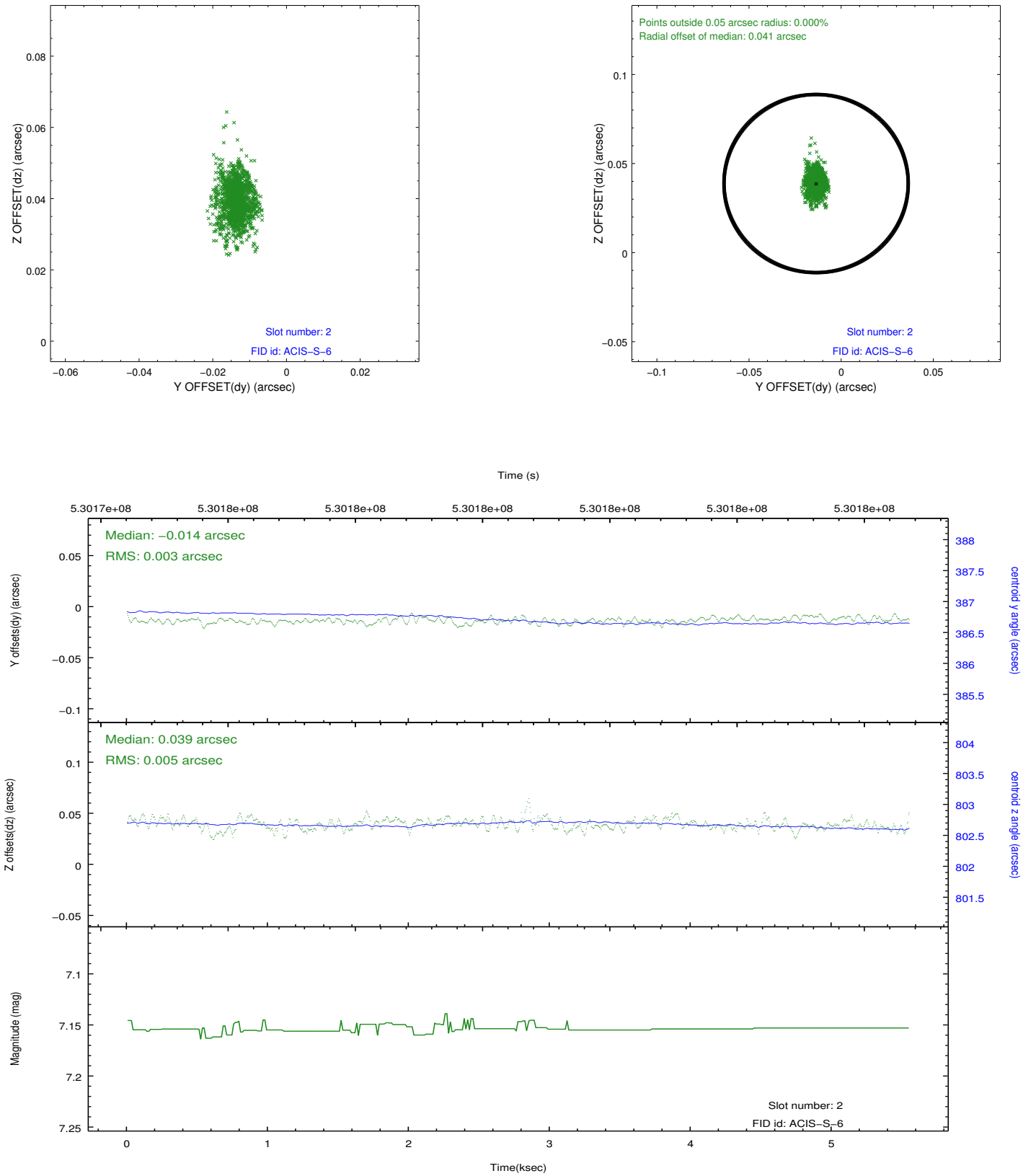
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.10.20
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.9599999815822

### A.2 Comments