

# V&V Reference Report

## L2 ASCDS Version : 10.2.4

Observation 16106 - L2 Version 1  
Chandra X-Ray Center

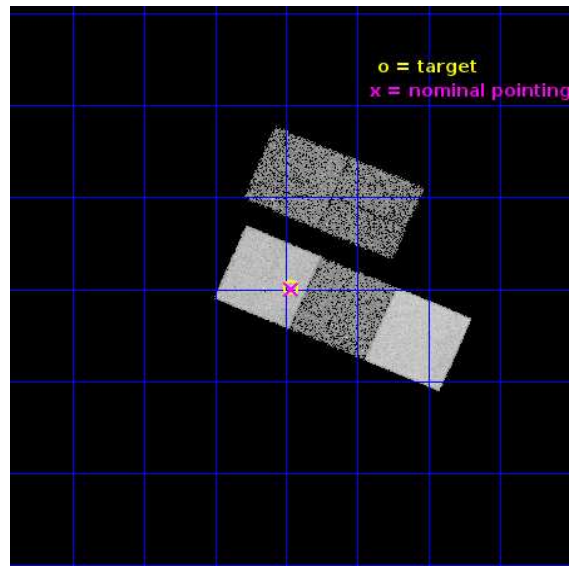
L2 Processing Date : Aug 8 2014

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# 1 Front

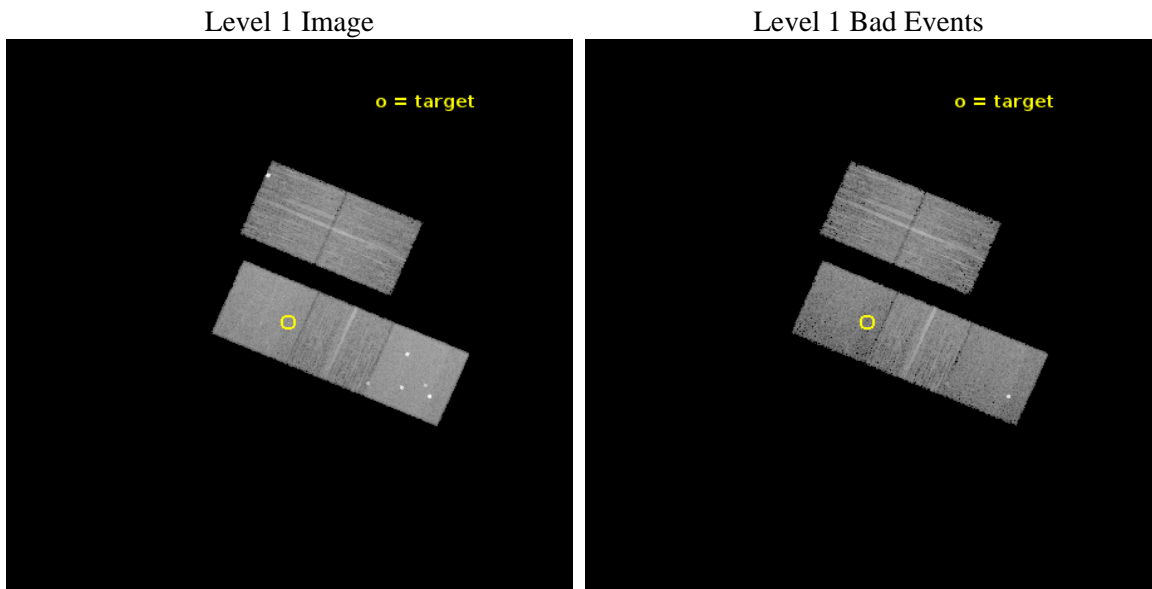
seq_num	702994	Sequence number
obs_id	16106	Observation id
title	Studying AGN evolution with ionization echoes	Proposal title
observer	Dr. Mischa Schirmer	Principal investigator
object	J205058.0+055012	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	312.741667	Observer's specified target RA [deg]
dec_targ	5.836667	Observer's specified target Dec [deg]
ra_nom	312.74111761197	Nominal RA [deg]
dec_nom	5.8335979218543	Nominal Dec [deg]
roll_nom	203.15666853517	Nominal Roll [deg]
revision	1	Processing version of data
ontime	16069.212491274	Sum of GTIs [s]
livetime	15859.256400093	Livetime [s]
ontime2	16069.048331261	Sum of GTIs [s]
ontime3	16069.089371264	Sum of GTIs [s]
ontime5	16069.171451271	Sum of GTIs [s]
ontime6	16069.130411267	Sum of GTIs [s]
ontime7	16069.212491274	Sum of GTIs [s]
l2events	113012	Number of level 2 events



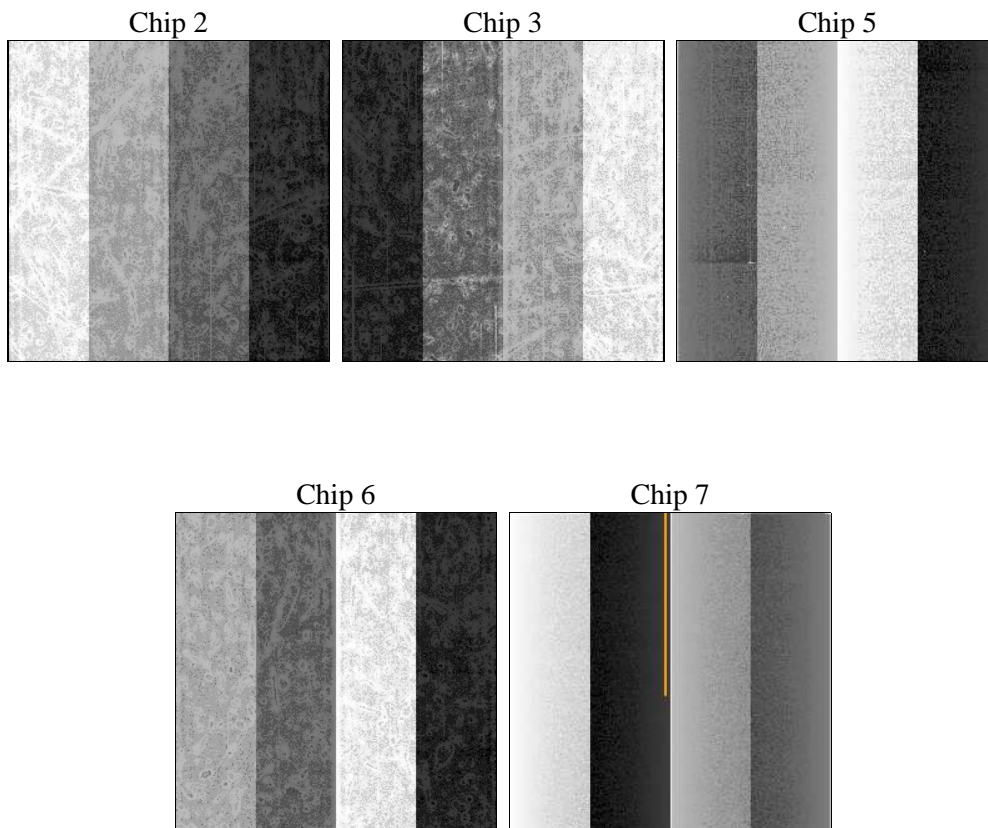
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	16000.000000	[s] Scheduled observation exposure time
ascdsver	10.2.4	Processing system revision	ontime	16069.212491274	Sum of GTIs [s]
caldsver	4.6.2	&#160	ontime2	16069.048331261	Sum of GTIs [s]
date	2014-08-08T18:33:49	Date and time of file creation	ontime3	16069.089371264	Sum of GTIs [s]
revision	1	Processing version of data	ontime5	16069.171451271	Sum of GTIs [s]
			ontime6	16069.130411267	Sum of GTIs [s]
			ontime7	16069.212491274	Sum of GTIs [s]
			l1events	420725	Number of level 1 events

### 2.1.4 Events

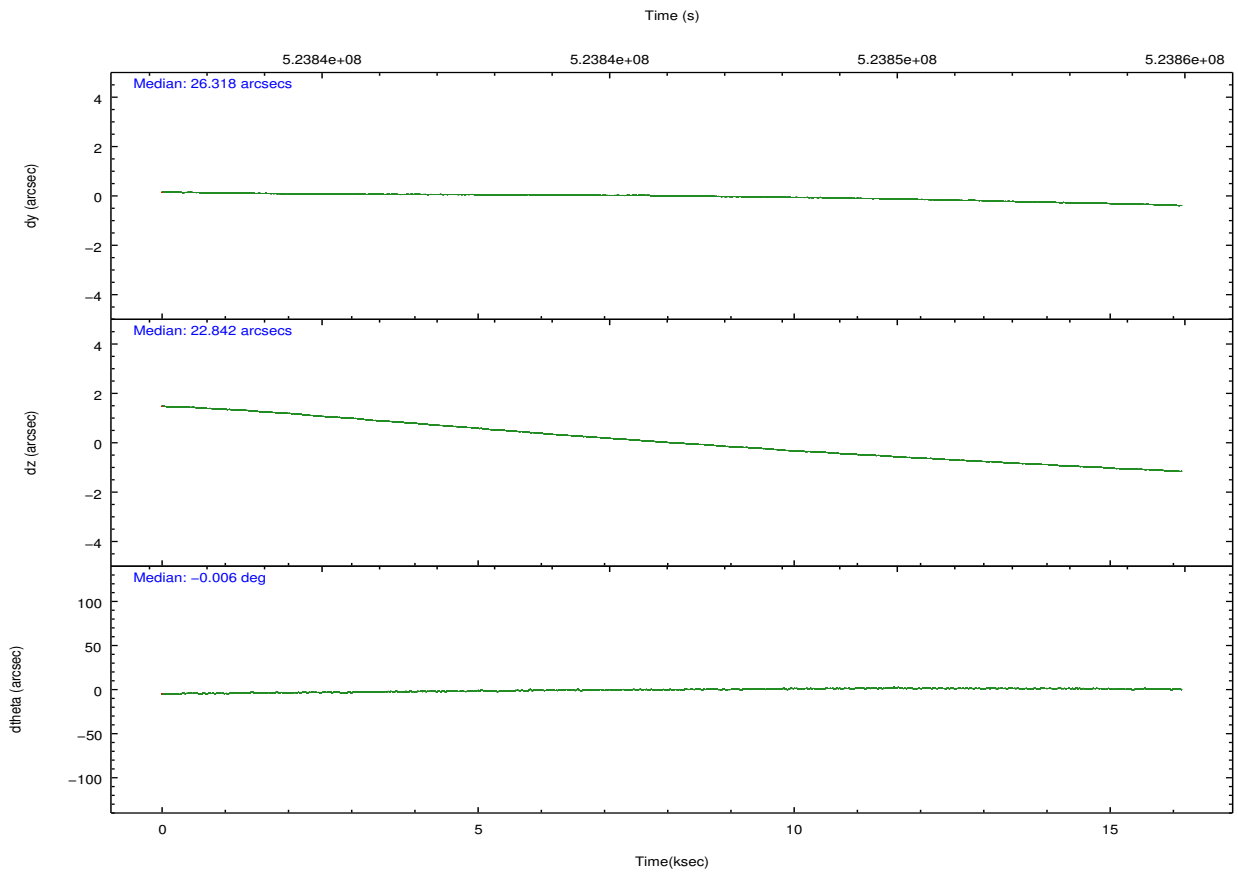
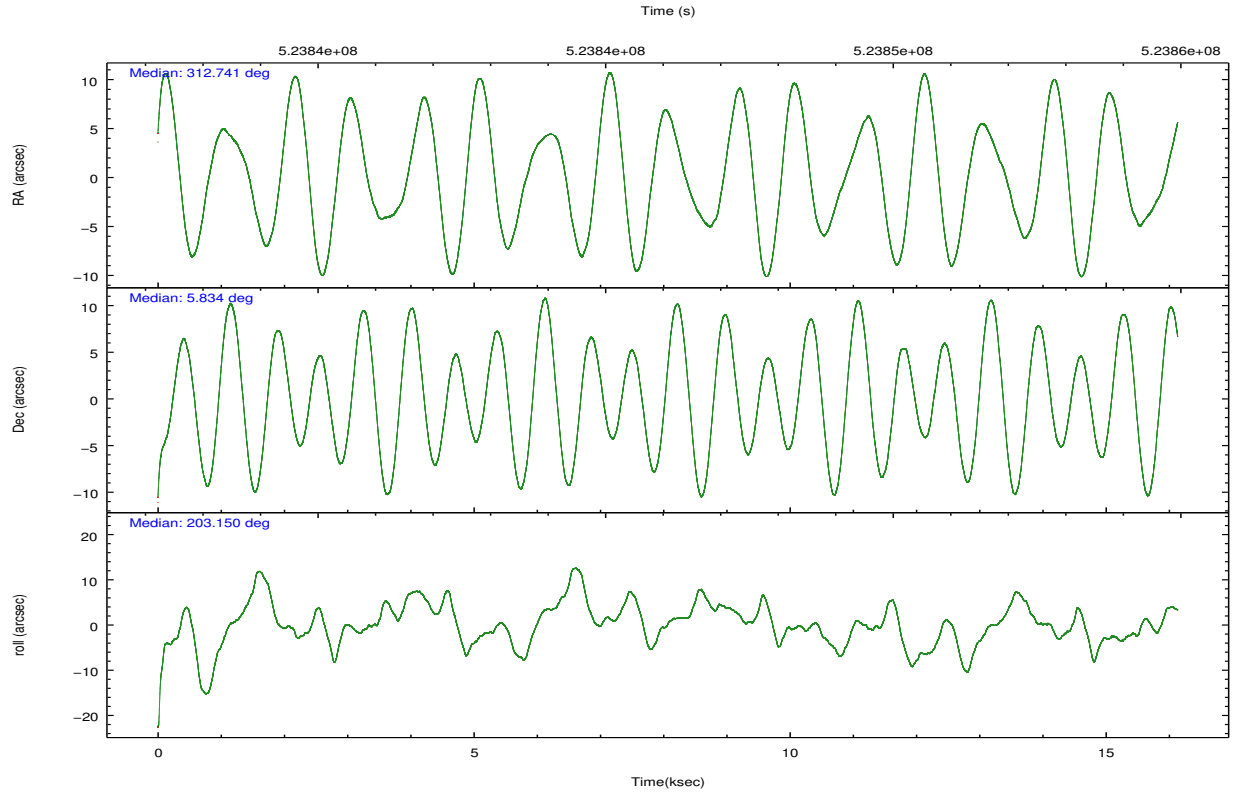
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	69610	71605	122242	71602	85666
rejected events	61525	58875	56754	63010	45588
rejected %	88%	82%	46%	88%	53%

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	2986	7676	12462	2945	3787
	4%	10%	10%	4%	4%
grade 1 events	62	53	340	35	121
	0%	0%	0%	0%	0%
grade 2 events	2023	1778	19536	1983	8574
	2%	2%	15%	2%	10%
grade 3 events	794	860	1965	855	3496
	1%	1%	1%	1%	4%
grade 4 events	807	851	1956	902	3587
	1%	1%	1%	1%	4%
grade 5 events	2641	3279	8606	3384	8922
	3%	4%	7%	4%	10%
grade 6 events	1476	1567	29588	1908	20647
	2%	2%	24%	2%	24%
grade 7 events	58821	55541	47789	59590	36532
	84%	77%	39%	83%	42%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23567	ACIS-23567	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	312.757350	312.741117611967	CCD I2 on	O3	Y
[deg] Pointing Dec	5.855783	5.833597921854271	CCD I3 on	O2	Y
[deg] Pointing Roll	202.998402	203.1566685351743	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	O4	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	N	N
[s] Observation start time (MET)	523838146.184000	523836895.57527	CCD S5 on	N	N
Observation start date	2014-08-07T22:34:39	2014-08-07T22:14:55	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	523854146.184000	523855102.13878	On-chip summing requested	N	N
Observation end date	2014-08-08T03:01:19	2014-08-08T03:18:22	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect

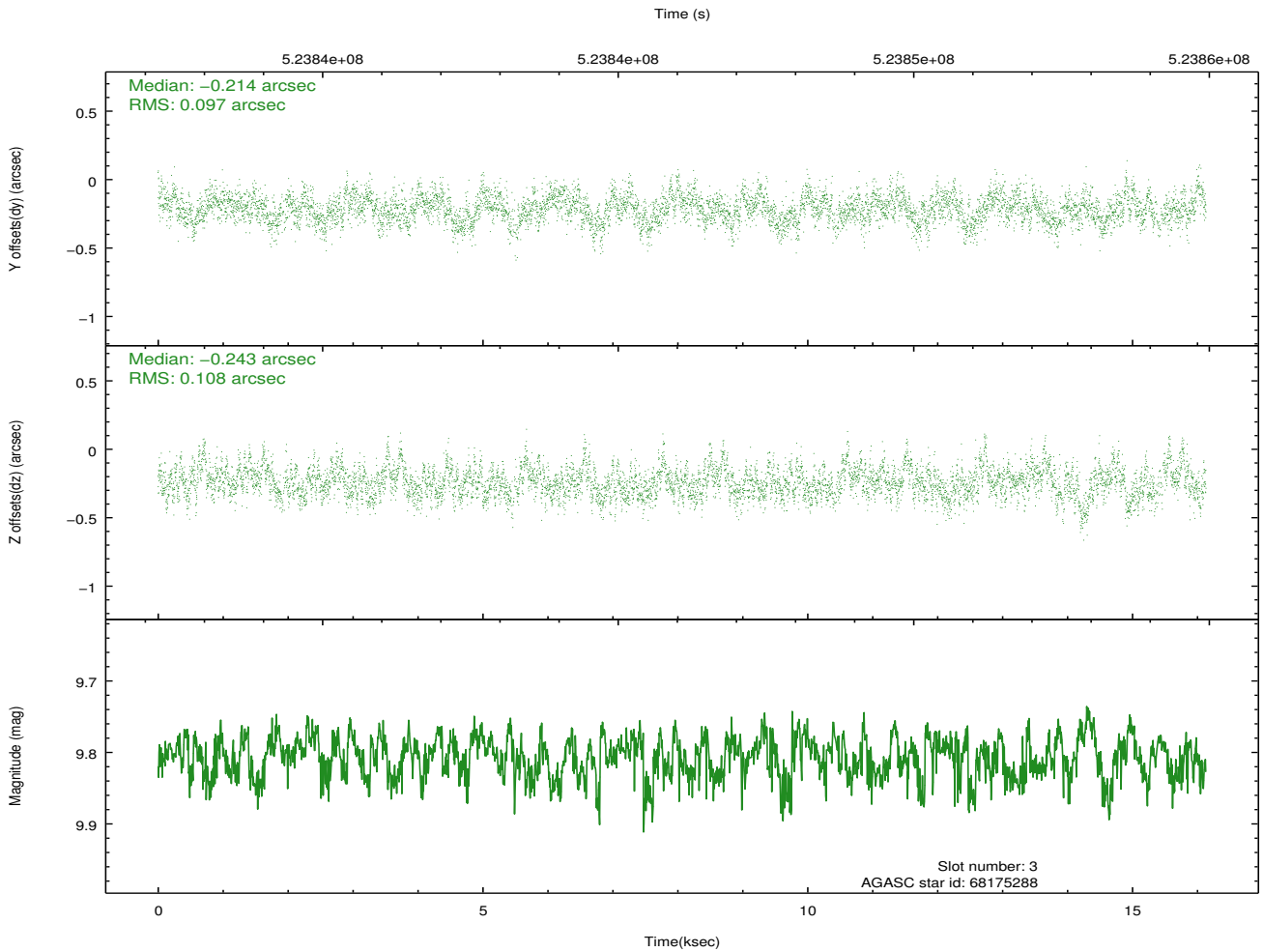
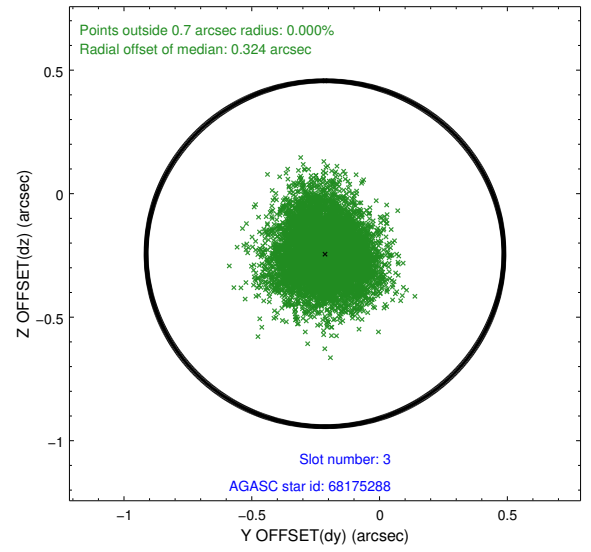
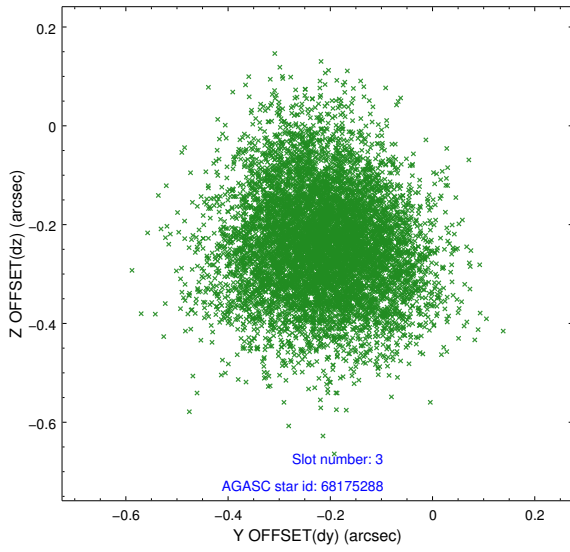


### Slot Statistics

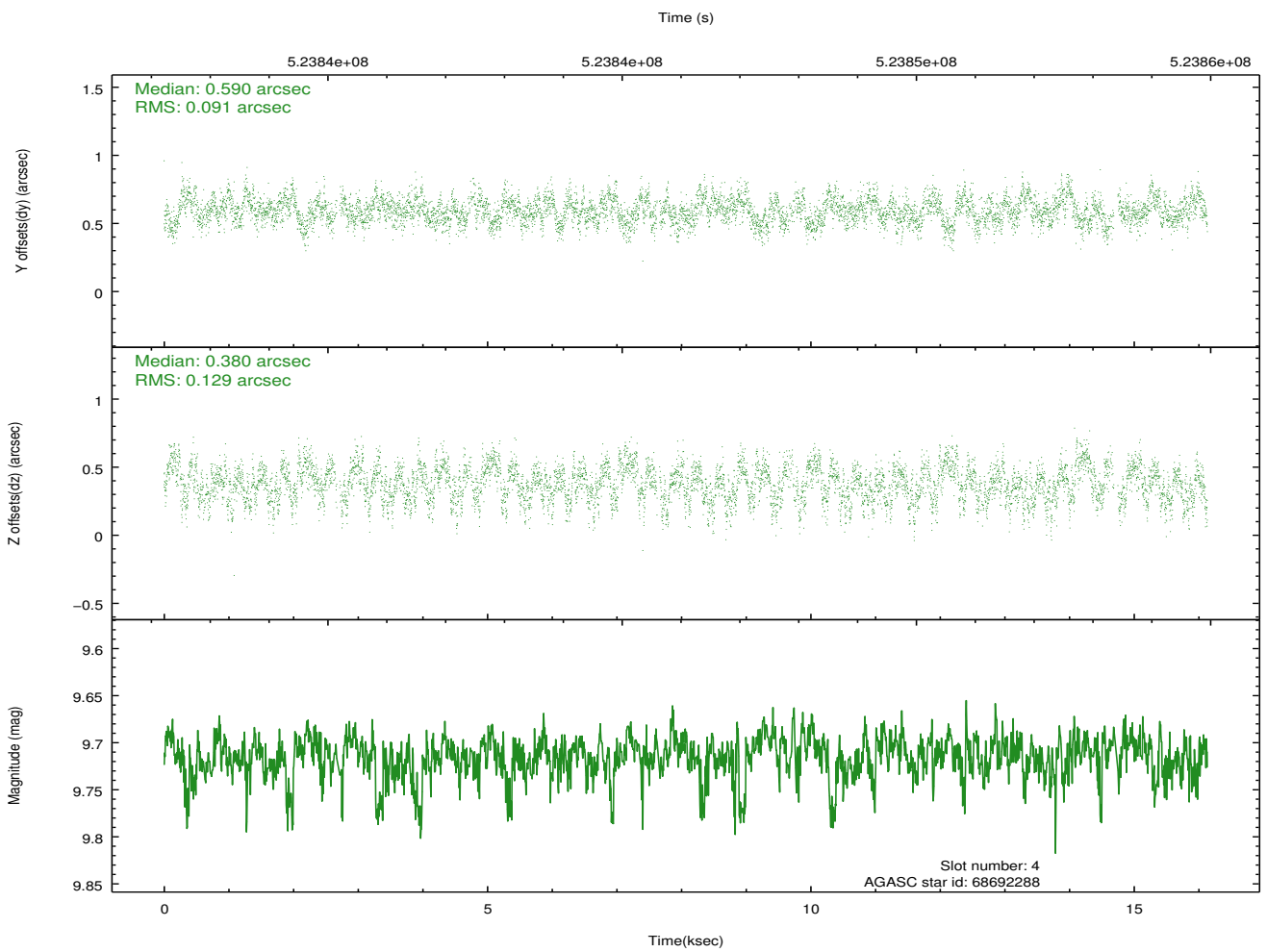
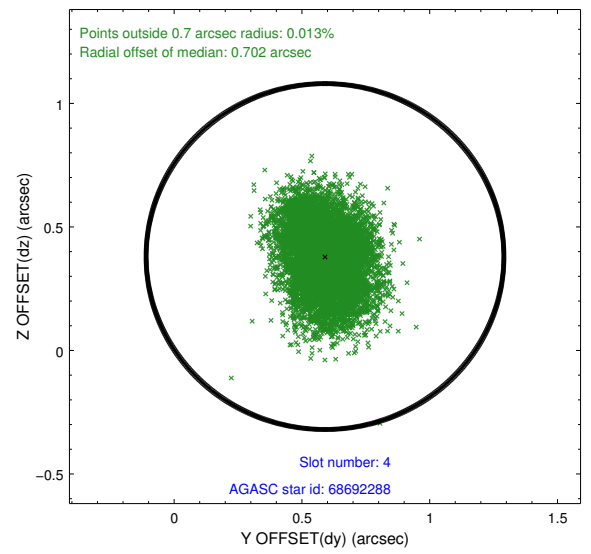
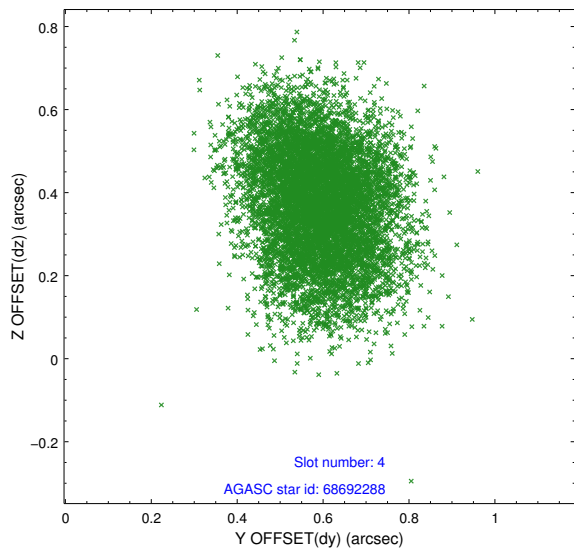
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.04	3936	0.002	0.018	0.032	0.054	0.000000	0.000000	916.50	-1740.07
1	FID	ACIS-S-4	7.04	3935	0.240	-0.005	0.018	0.034	0.000000	0.000000	2134.27	163.81
2	FID	ACIS-S-5	7.07	3935	-0.268	0.005	0.017	0.022	0.000000	0.000000	-1832.32	157.67
3	GUIDE	68175288	9.81	7753	-0.214	-0.243	0.154	0.251	312.444663	5.322270	1782.43	1329.98
4	GUIDE	68692288	9.71	7639	0.590	0.380	0.168	0.272	312.820536	6.320849	-860.48	-1452.32
5	GUIDE	68694656	9.63	7827	-0.145	0.202	0.163	0.261	312.219466	6.246833	1222.11	-2048.48
6	GUIDE	68697888	9.31	7864	-0.029	-0.166	0.140	0.216	312.349633	5.633590	1657.63	165.12
7	GUIDE	68157528	8.86	7804	-0.199	-0.165	0.101	0.169	312.513843	5.531523	1260.02	734.11

## 2.4 Star Slots

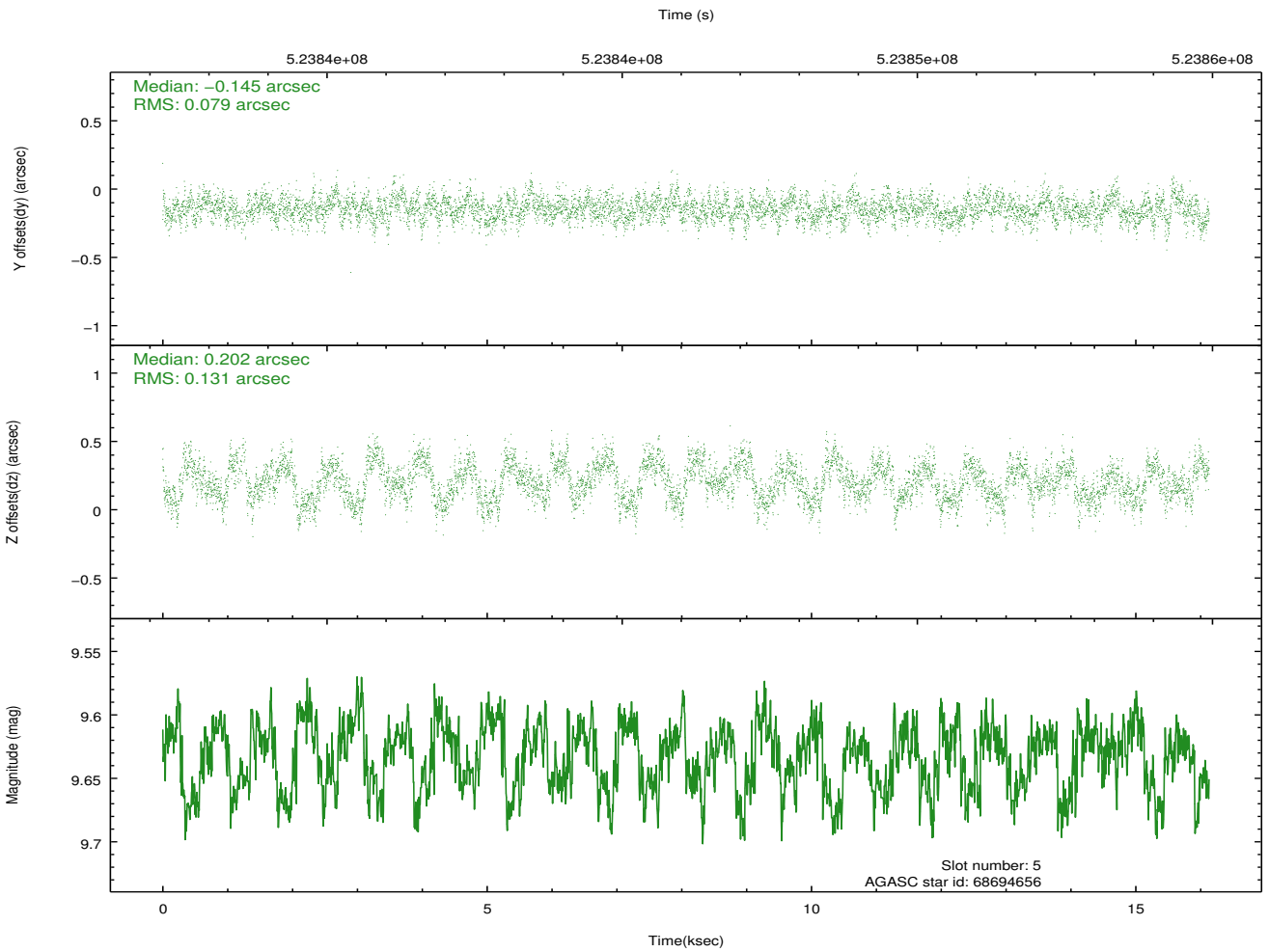
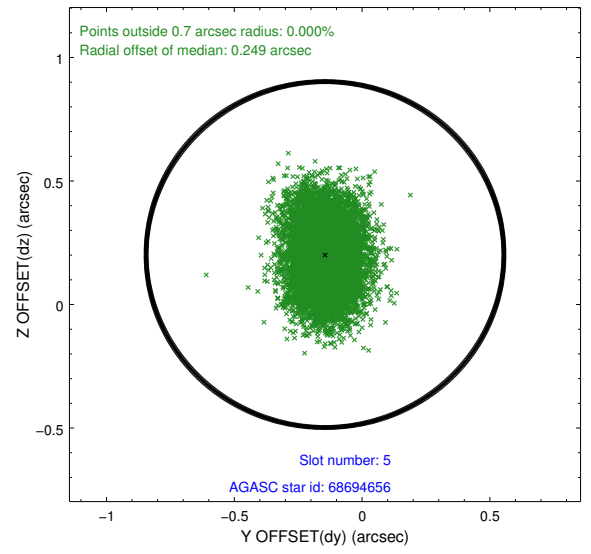
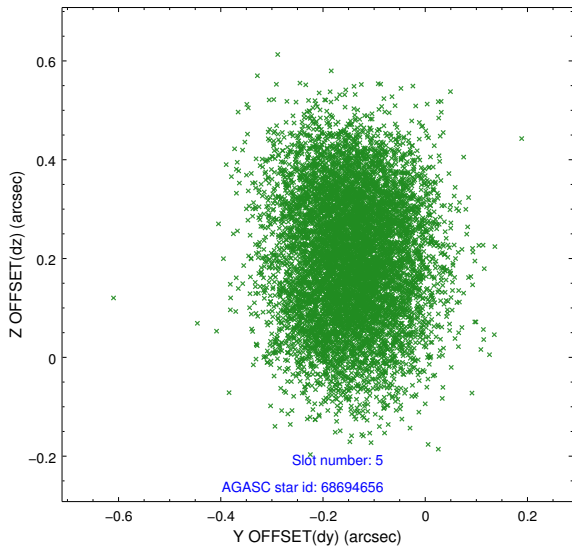
### 2.4.1 Slot 3



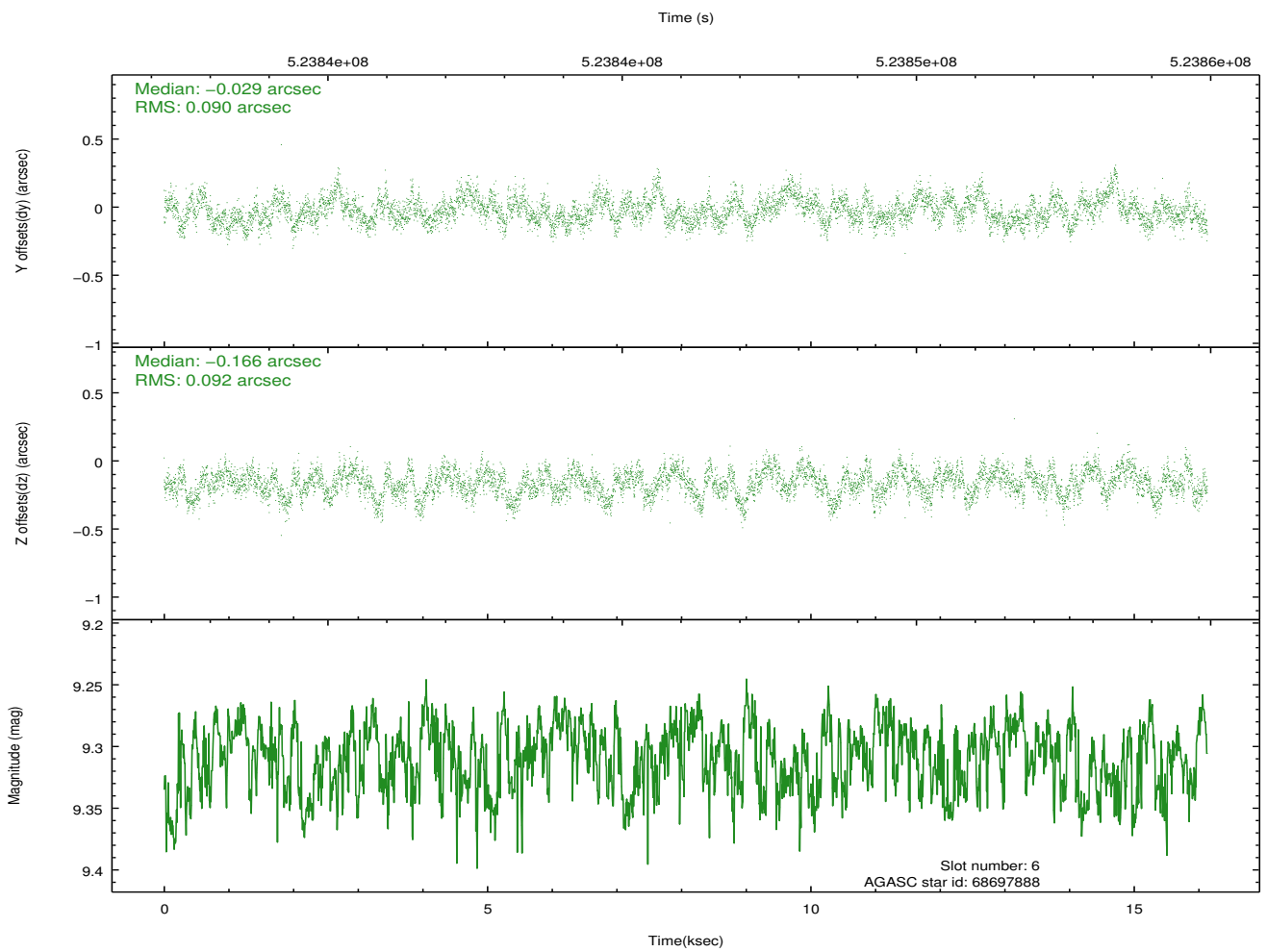
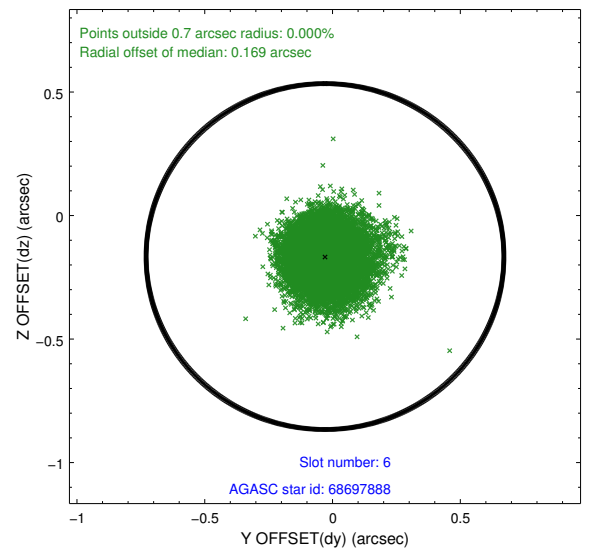
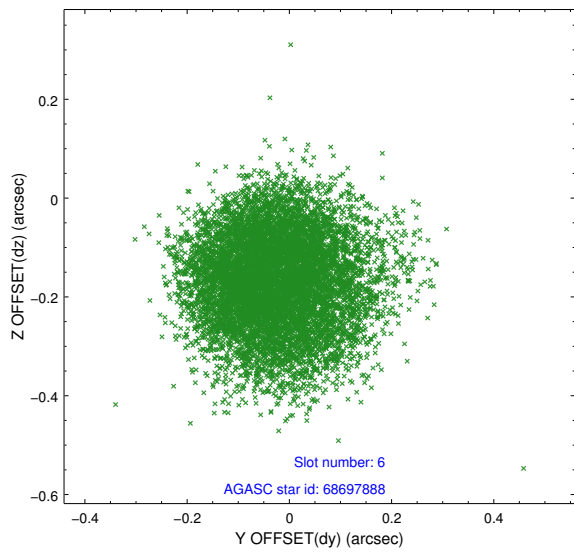
## 2.4.2 Slot 4



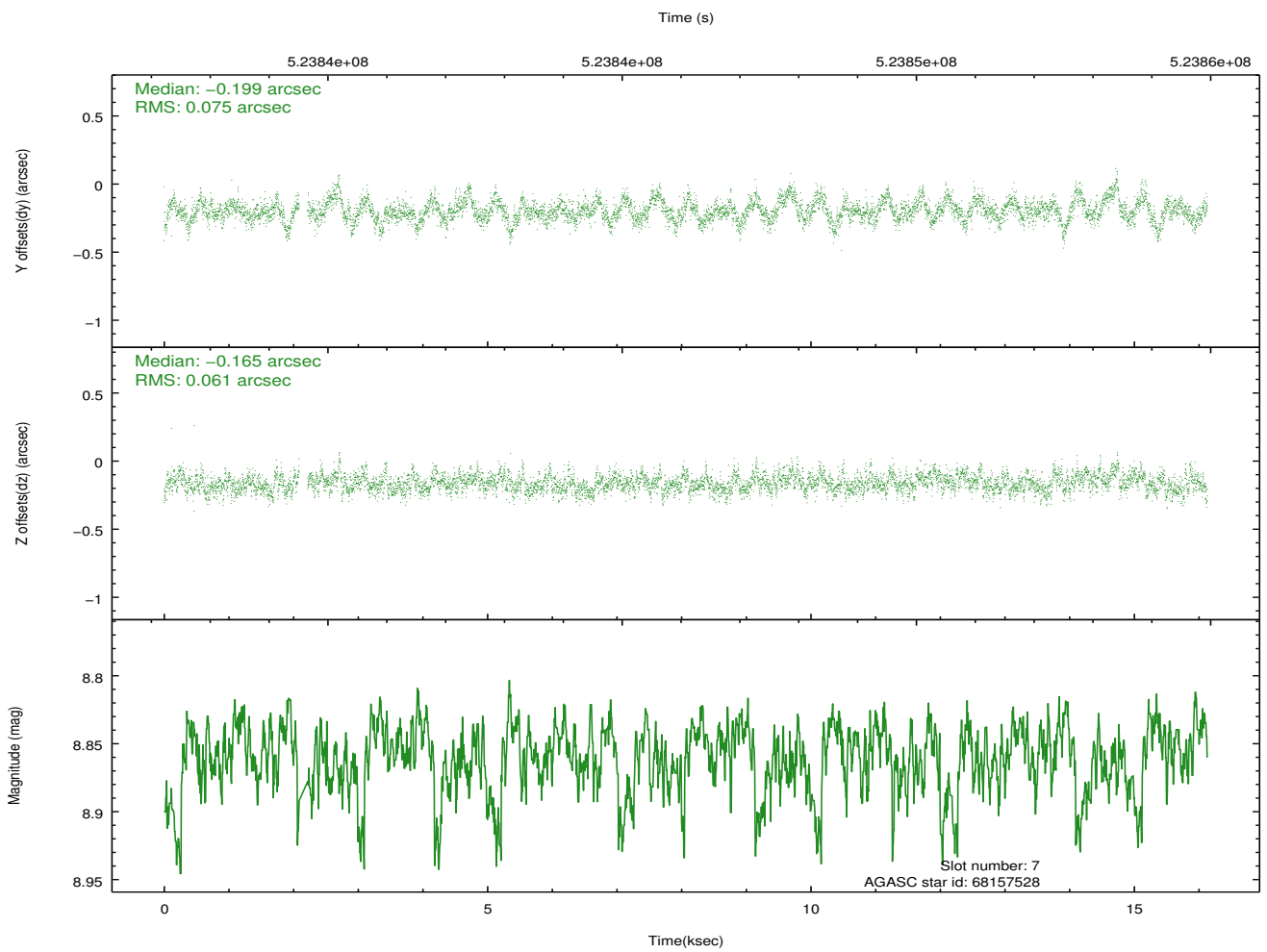
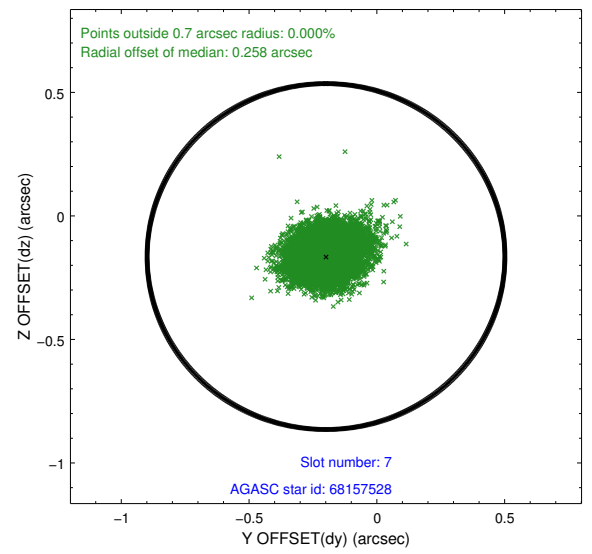
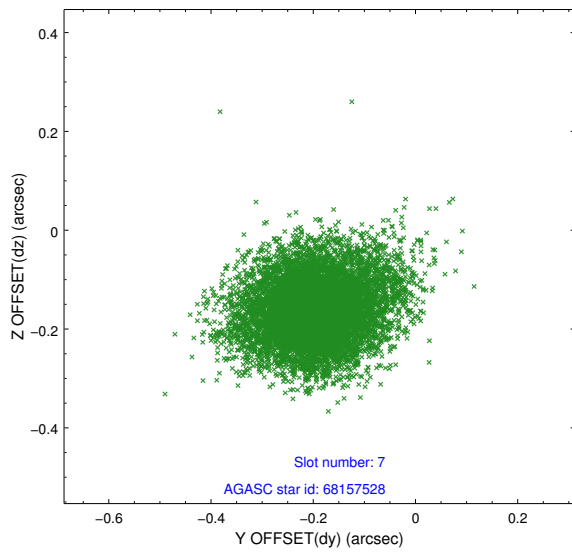
### 2.4.3 Slot 5



## 2.4.4 Slot 6

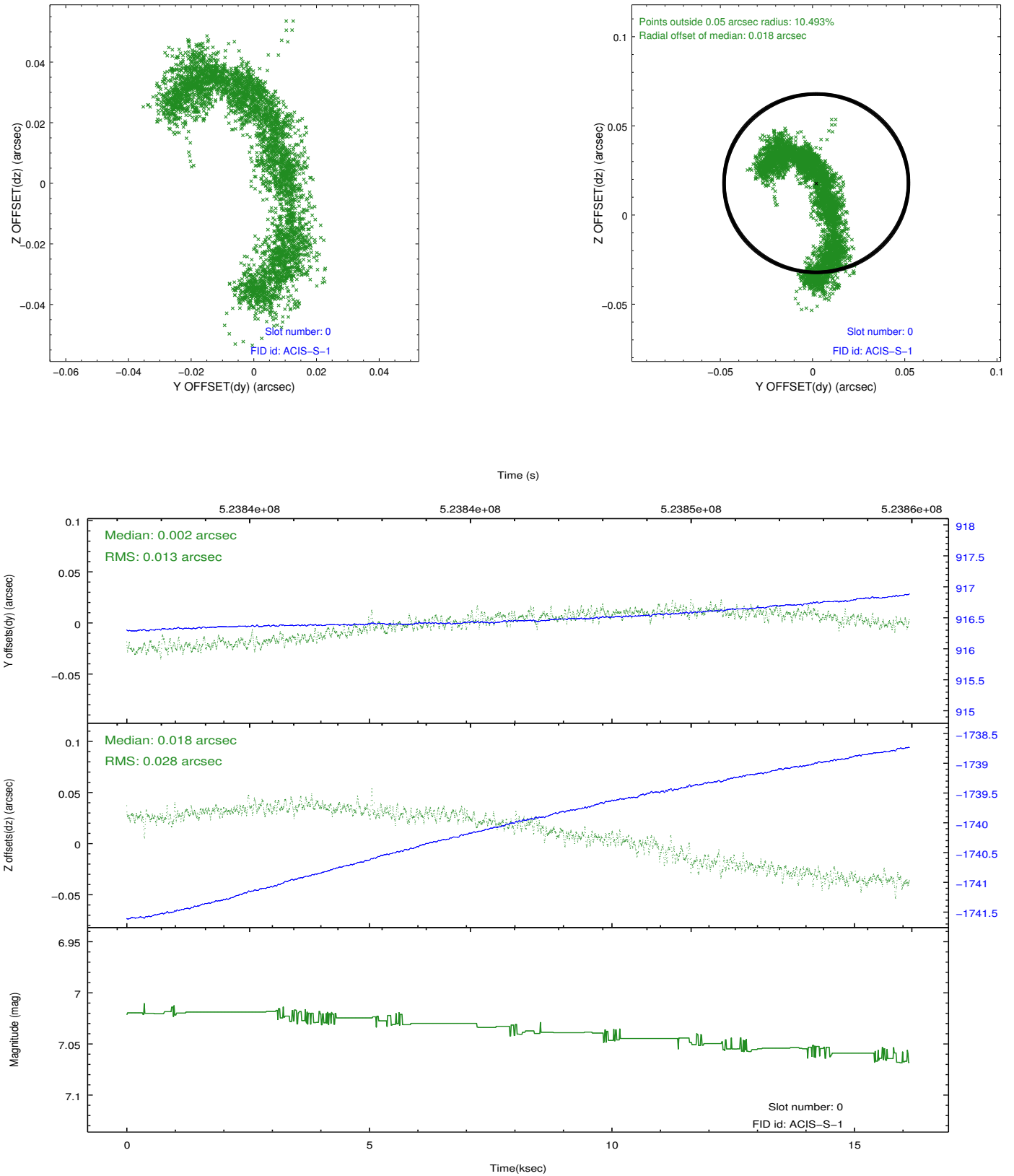


## 2.4.5 Slot 7

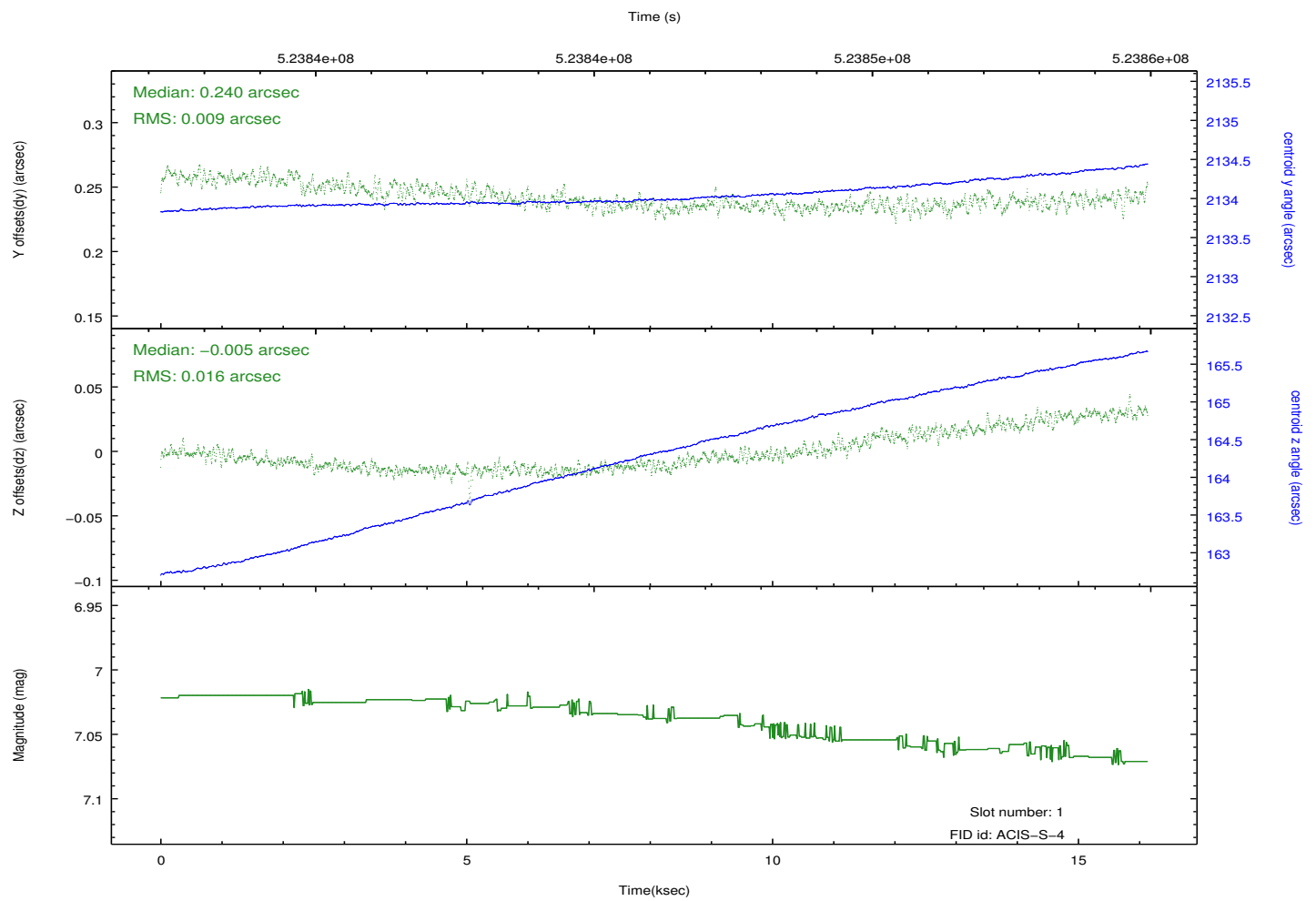
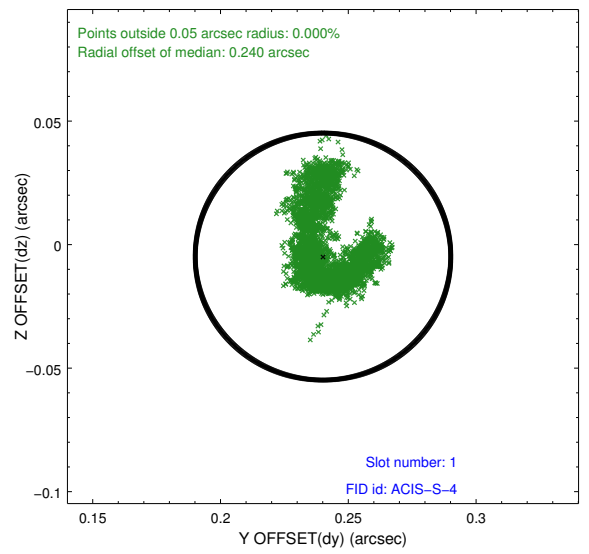
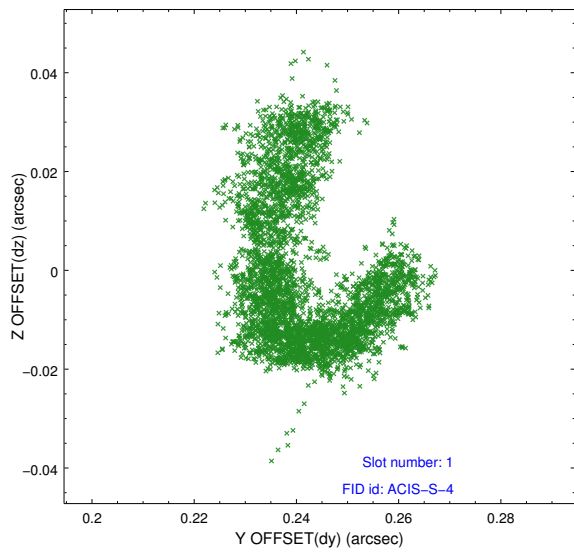


## 2.5 FID Slots

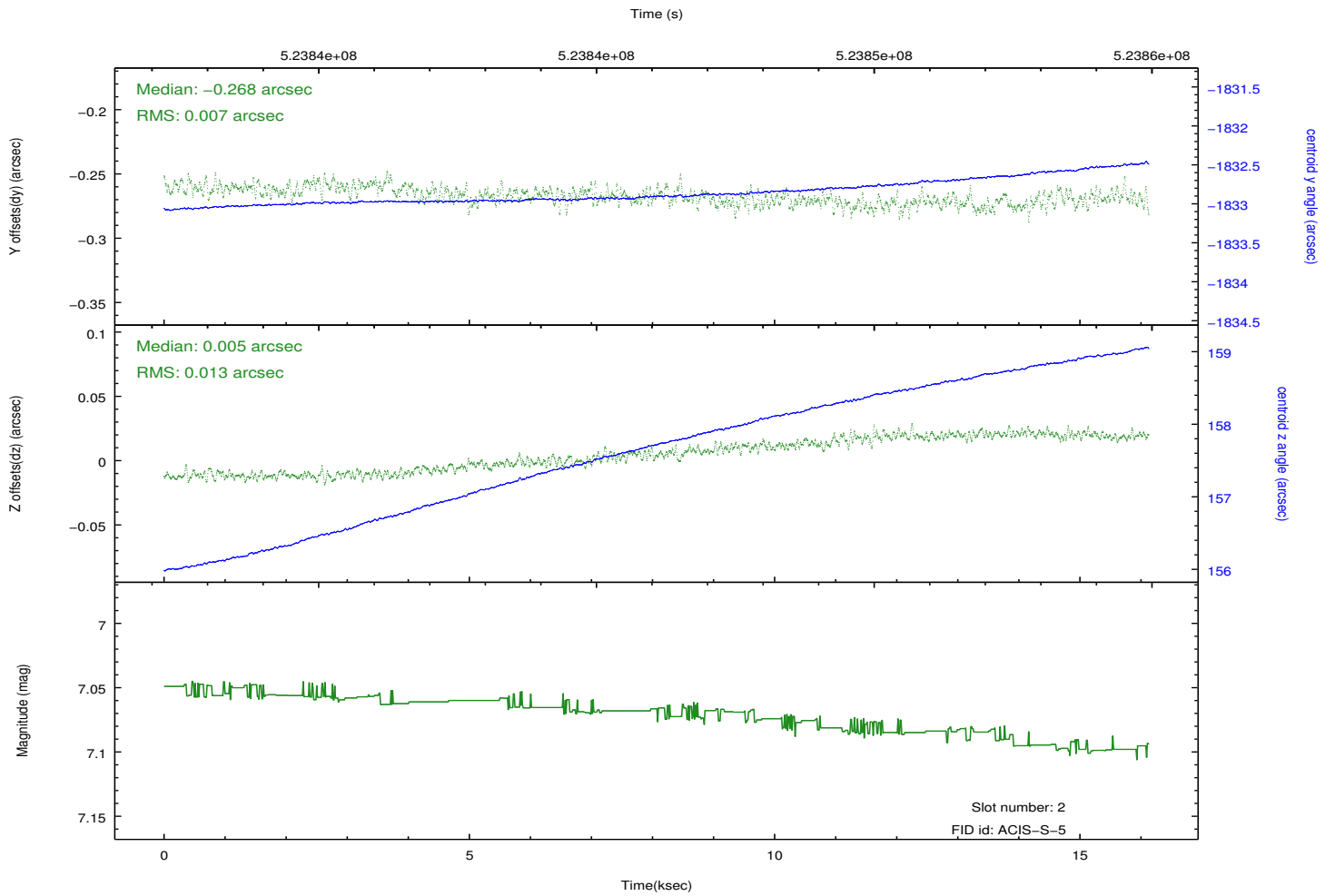
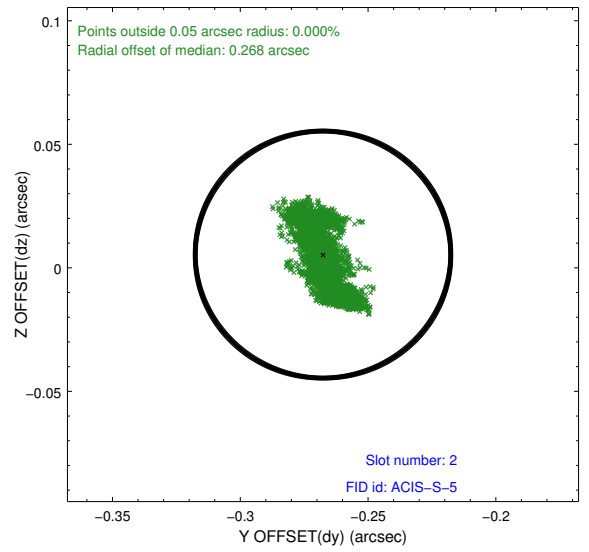
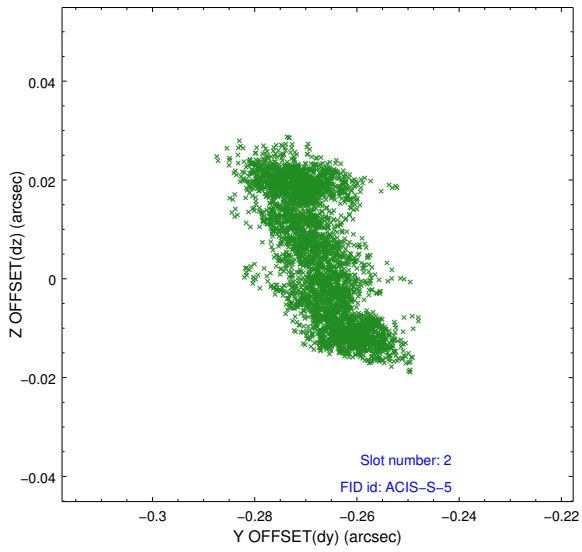
### 2.5.1 Slot 0



## 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)	2014.08.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	16.069212491274

### A.2 Comments