

# V&V Reference Report

## L2 ASCDS Version : 10.2.4

Observation 16103 - L2 Version 1  
Chandra X-Ray Center

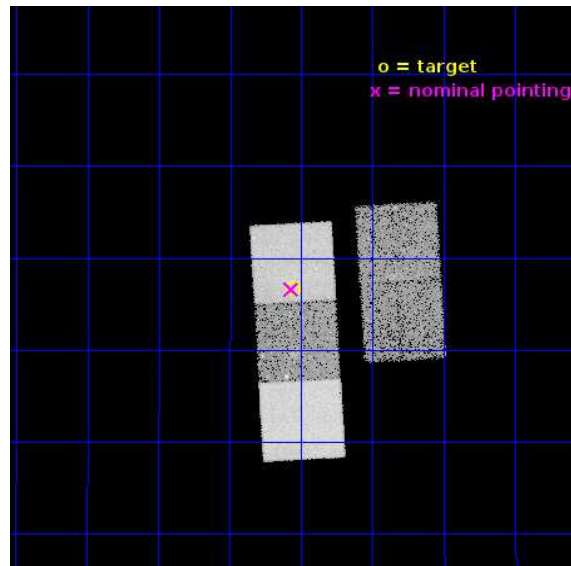
L2 Processing Date : Sep 9 2014

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# 1 Front

seq_num	702991	Sequence number
obs_id	16103	Observation id
title	Studying AGN evolution with ionization echoes	Proposal title
observer	Dr. Mischa Schirmer	Principal investigator
object	J145533.6+044643	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	223.89	Observer's specified target RA [deg]
dec_targ	4.778611	Observer's specified target Dec [deg]
ra_nom	223.89249022057	Nominal RA [deg]
dec_nom	4.7767365708505	Nominal Dec [deg]
roll_nom	266.74411485401	Nominal Roll [deg]
revision	1	Processing version of data
ontime	19867.900152802	Sum of GTIs [s]
livetime	19608.311410771	Livetime [s]
ontime2	19864.759192407	Sum of GTIs [s]
ontime3	19864.759162545	Sum of GTIs [s]
ontime5	19867.900152802	Sum of GTIs [s]
ontime6	19864.759212315	Sum of GTIs [s]
ontime7	19867.900152802	Sum of GTIs [s]
l2events	153398	Number of level 2 events

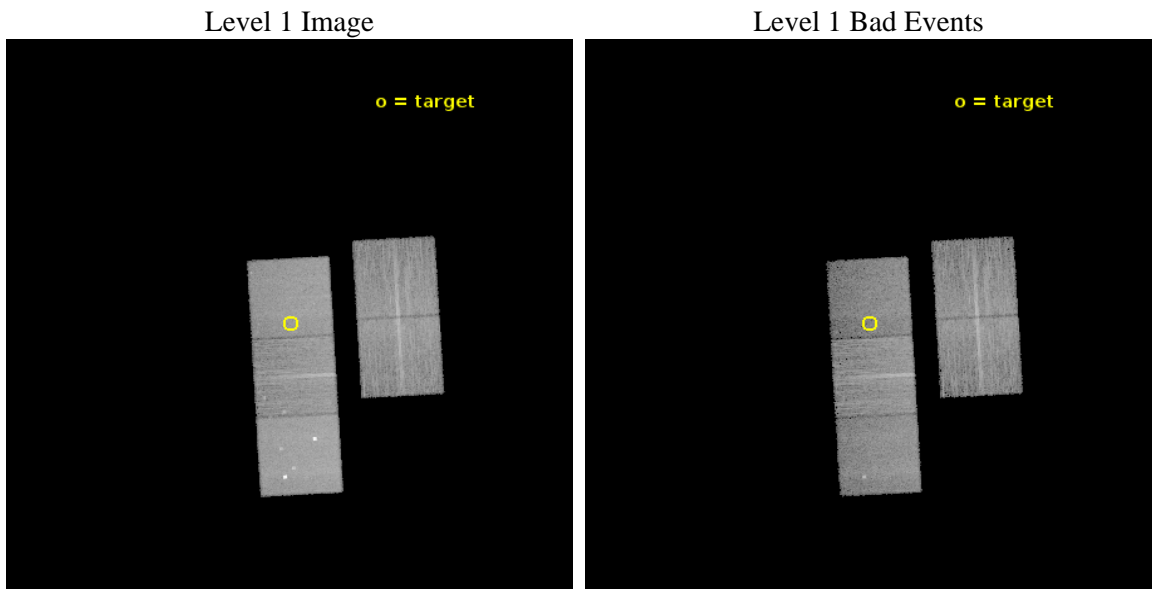




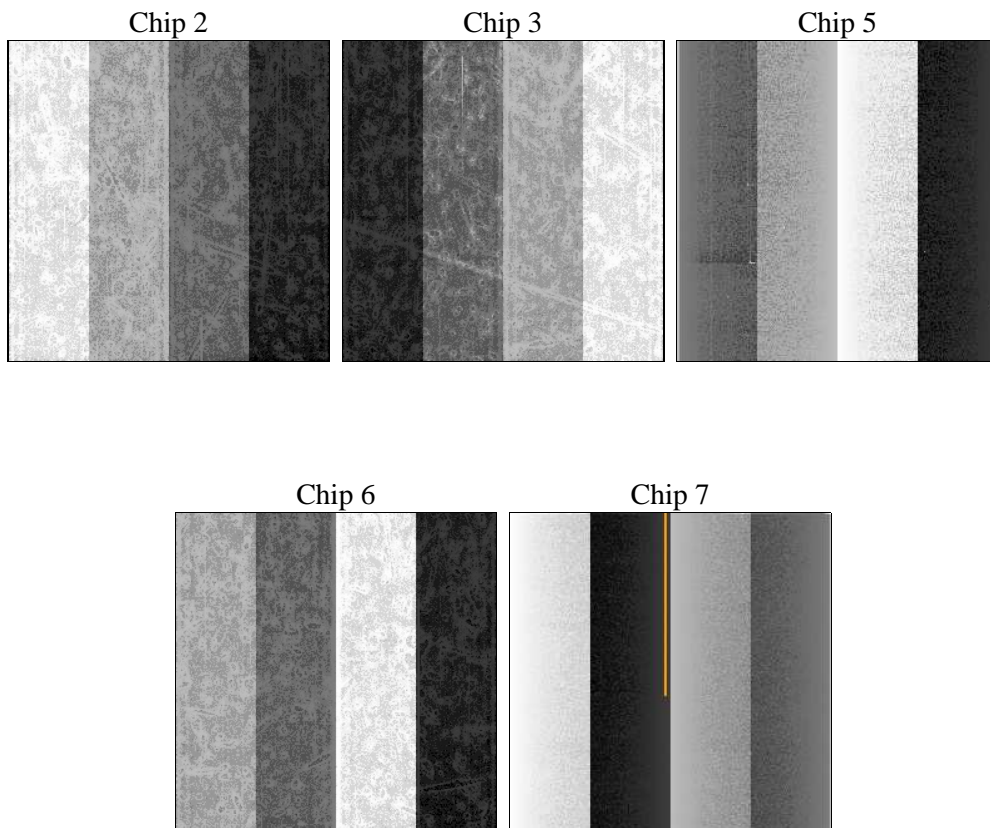
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	19800.000000	[s] Scheduled observation exposure time
ascdsver	10.2.4	Processing system revision	ontime	19867.900152802	Sum of GTIs [s]
caldsver	4.6.3	&#160	ontime2	19864.759192407	Sum of GTIs [s]
date	2014-09-09T18:06:59	Date and time of file creation	ontime3	19864.759162545	Sum of GTIs [s]
revision	1	Processing version of data	ontime5	19867.900152802	Sum of GTIs [s]
			ontime6	19864.759212315	Sum of GTIs [s]
			ontime7	19867.900152802	Sum of GTIs [s]
			l1events	550028	Number of level 1 events

### 2.1.4 Events

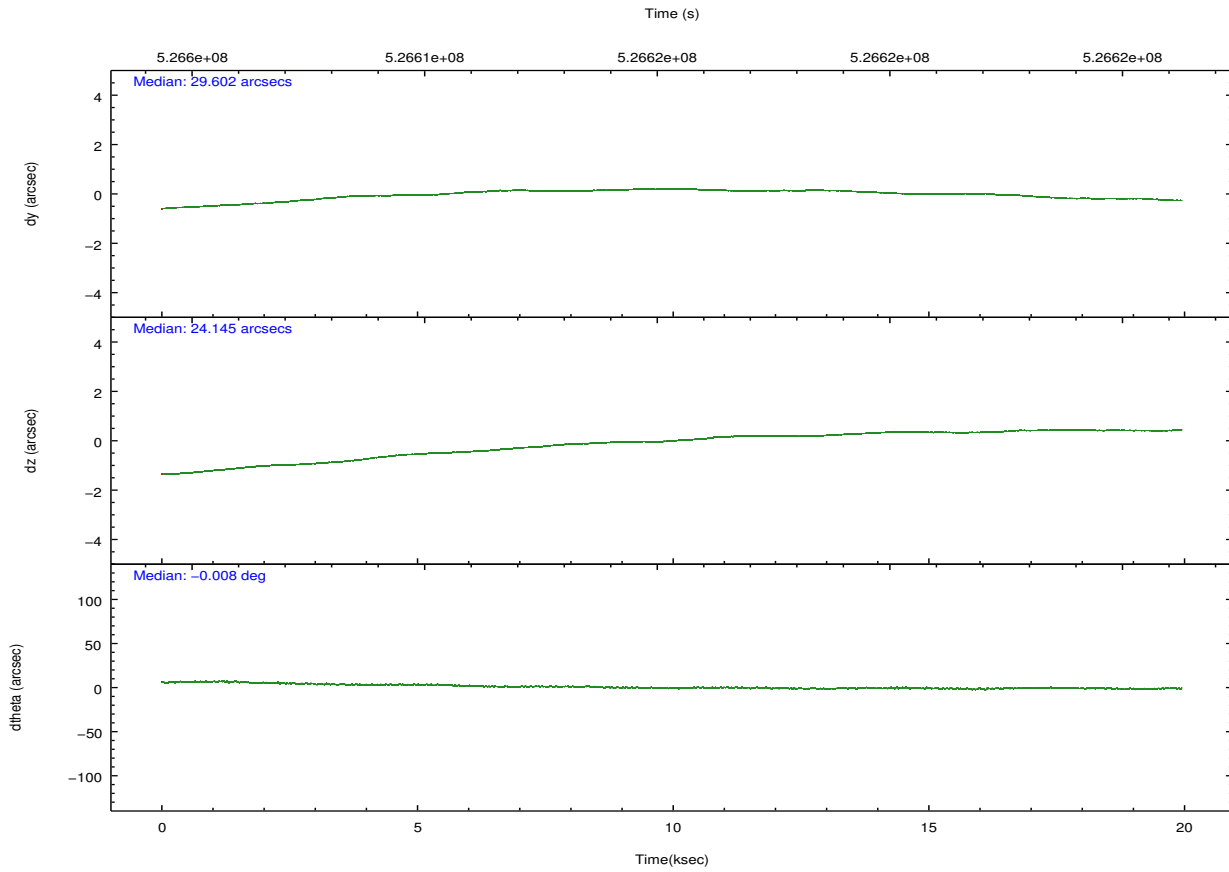
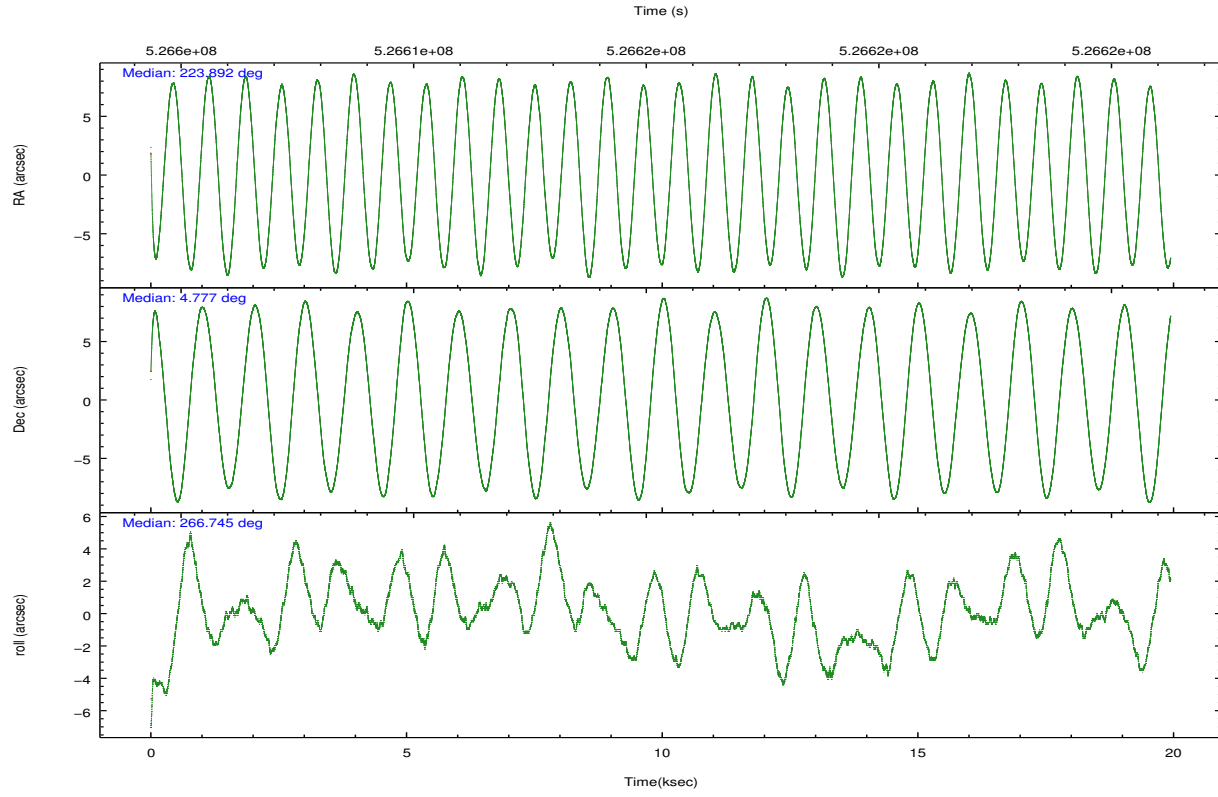
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	95801	91304	152172	100386	110365
rejected events	83341	80077	69582	86412	56688
rejected %	86%	87%	45%	86%	51%

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	4820	4173	11831	5498	5502
	5%	4%	7%	5%	4%
grade 1 events	52	56	793	60	211
	0%	0%	0%	0%	0%
grade 2 events	3136	2511	27208	3145	12033
	3%	2%	17%	3%	10%
grade 3 events	1055	1129	2919	1264	4686
	1%	1%	1%	1%	4%
grade 4 events	1210	1138	2841	1228	4727
	1%	1%	1%	1%	4%
grade 5 events	3182	3904	10531	4089	11090
	3%	4%	6%	4%	10%
grade 6 events	2240	2280	37800	2840	26747
	2%	2%	24%	2%	24%
grade 7 events	80106	76113	58249	82262	45369
	83%	83%	38%	81%	41%

## 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	223.879785	223.8924902205707	CCD I2 on	O3	Y
[deg] Pointing Dec	4.801085	4.776736570850521	CCD I3 on	O2	Y
[deg] Pointing Roll	266.588555	266.7441148540117	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)	526605488.184000	526604131.2788	CCD S5 on	N	N
Observation start date	2014-09-08T23:17:01	2014-09-08T22:55:31	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	526625288.184000	526626016.56751	On-chip summing requested	N	N
Observation end date	2014-09-09T04:47:01	2014-09-09T05:00:16	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect

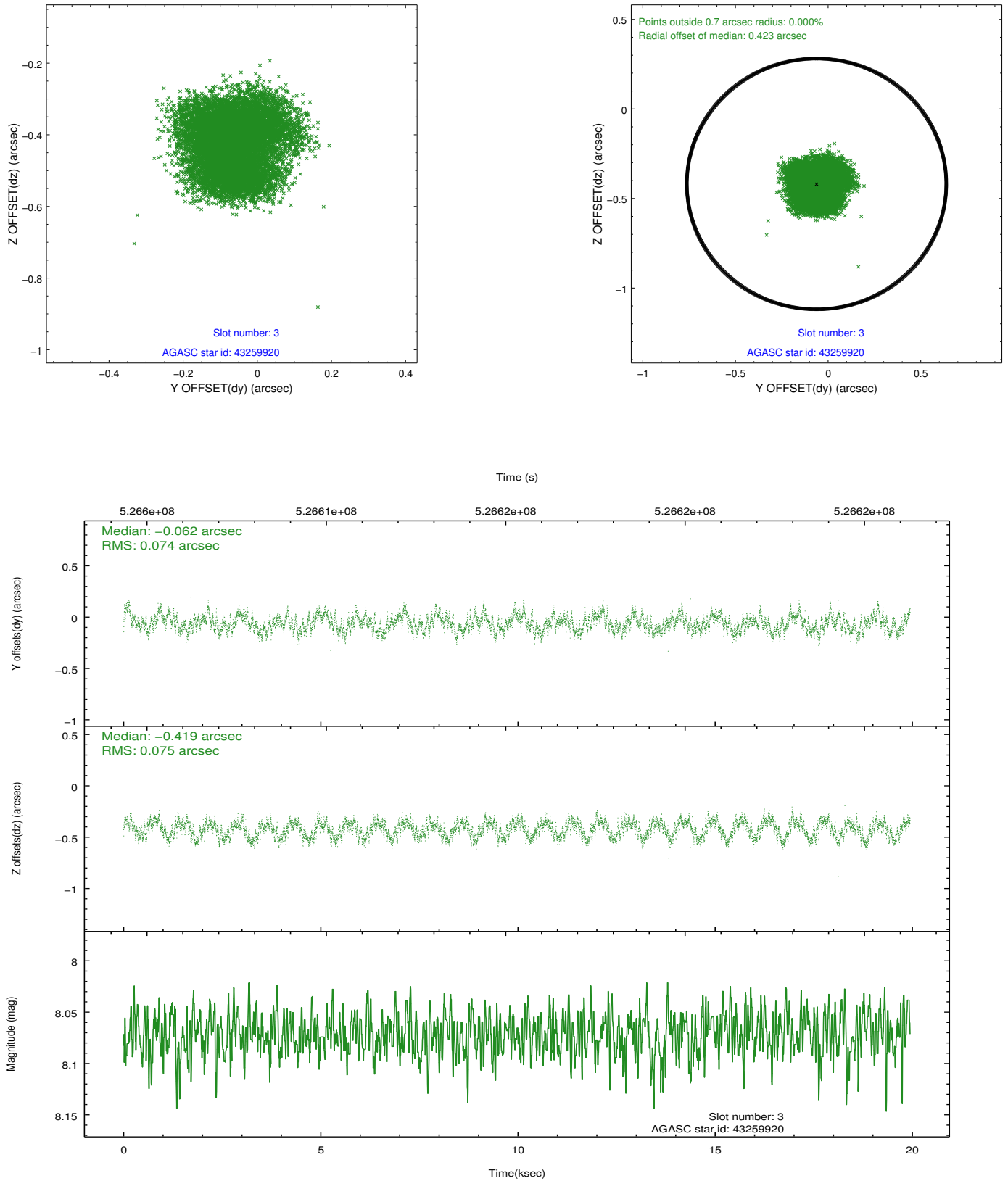


### Slot Statistics

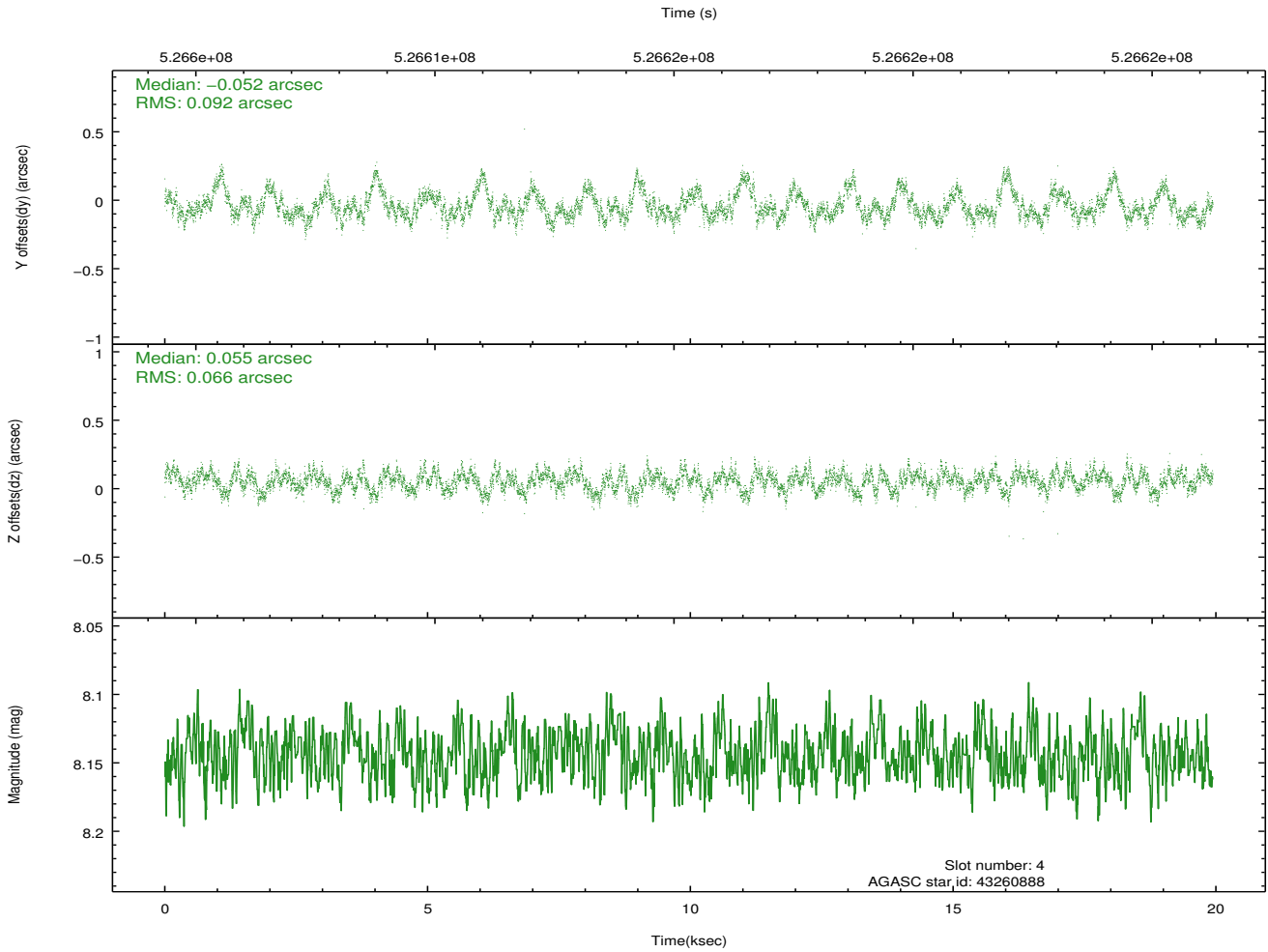
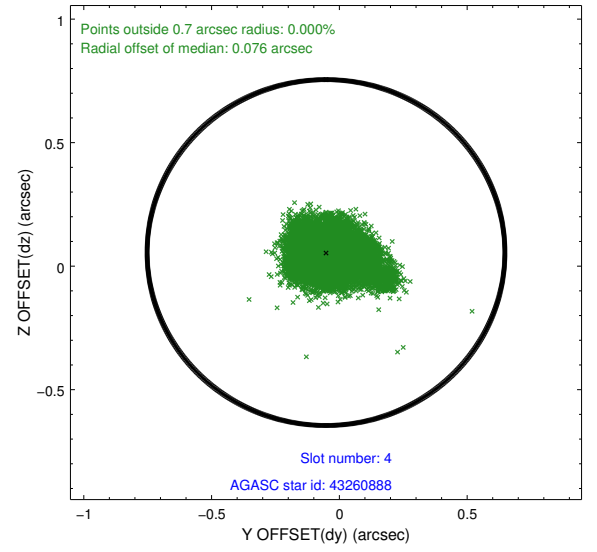
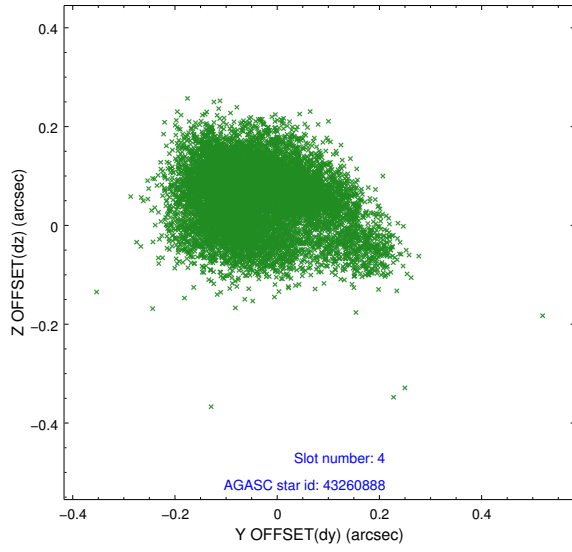
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.03	4865	-0.039	0.032	0.016	0.050	0.000000	0.000000	913.14	-1741.13
1	FID	ACIS-S-4	7.03	4865	0.321	-0.000	0.014	0.020	0.000000	0.000000	2130.93	162.84
2	FID	ACIS-S-5	7.07	4864	-0.312	-0.020	0.012	0.043	0.000000	0.000000	-1835.85	156.48
3	GUIDE	43259920	8.07	9726	-0.062	-0.419	0.116	0.168	224.232946	4.150565	2262.06	1404.99
4	GUIDE	43260888	8.14	9728	-0.052	0.055	0.117	0.205	224.099569	4.228662	2010.67	910.38
5	GUIDE	43266632	8.91	9722	0.348	0.221	0.297	0.428	223.389865	4.484567	1241.98	-1687.10
6	GUIDE	43656536	8.32	9729	-0.007	0.073	0.120	0.187	224.176193	5.398904	-2211.34	932.38
7	GUIDE	43649080	7.01	9728	-0.183	0.060	0.075	0.131	224.268493	5.430783	-2346.32	1256.12

## 2.4 Star Slots

### 2.4.1 Slot 3

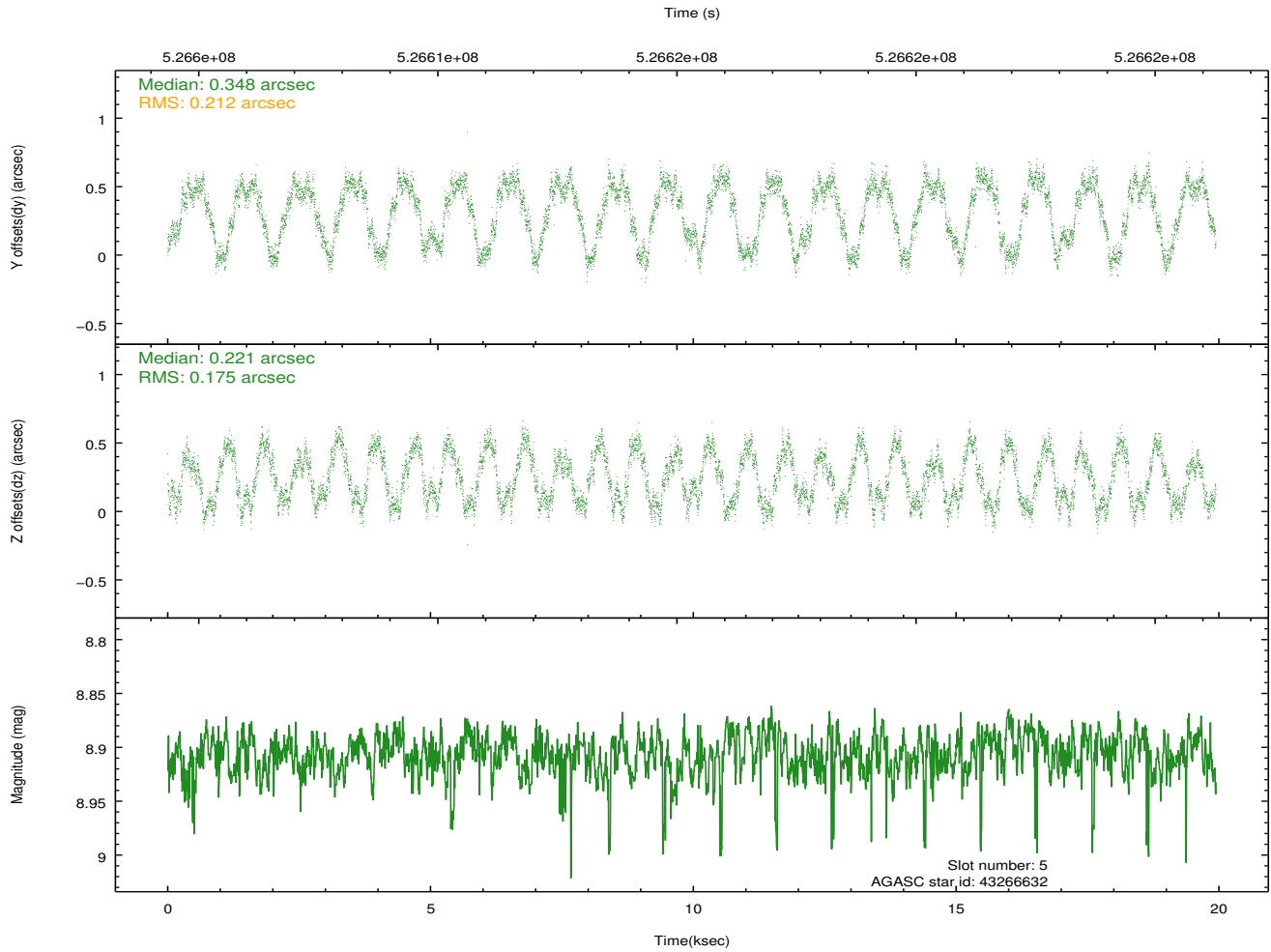
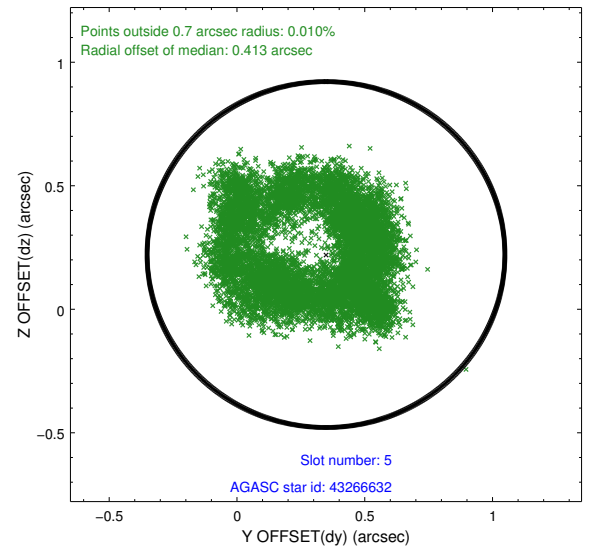
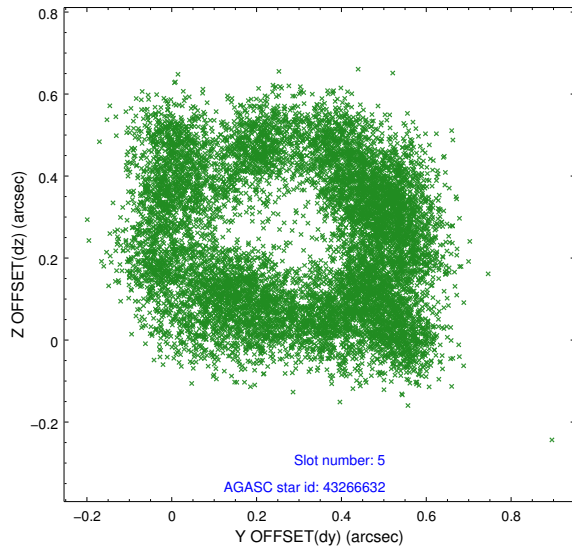


## 2.4.2 Slot 4

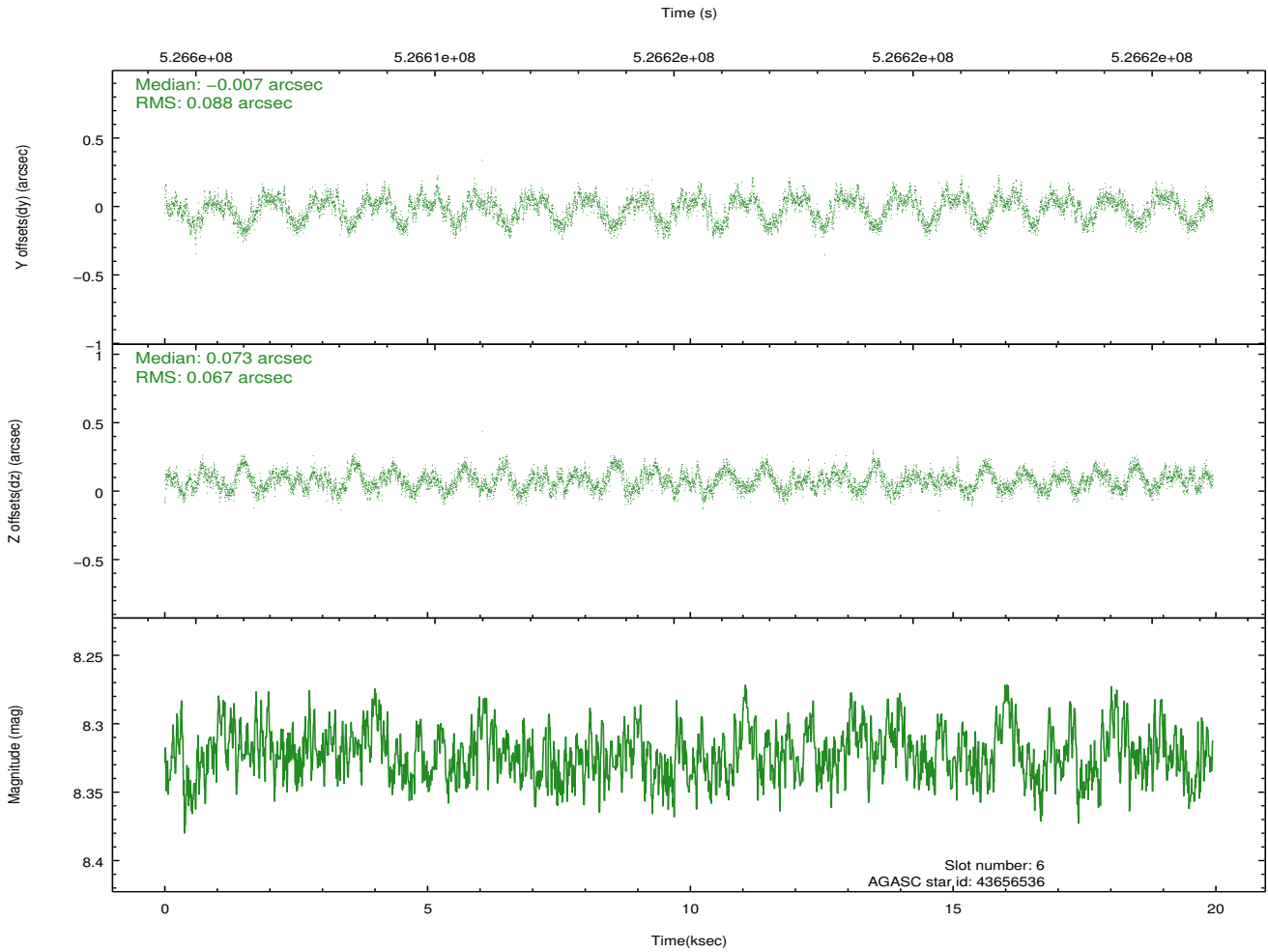
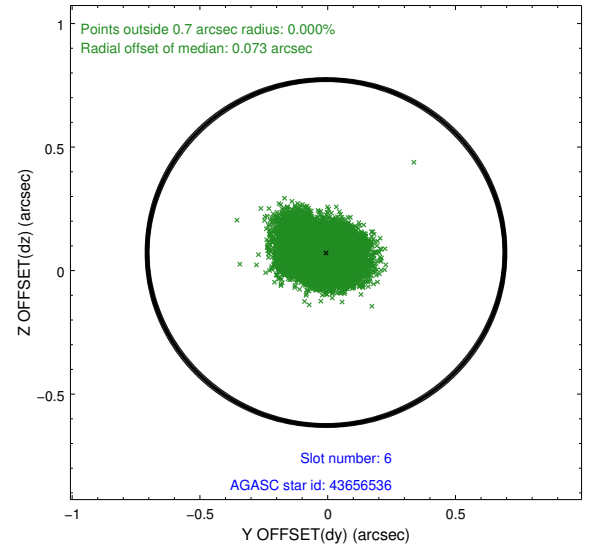
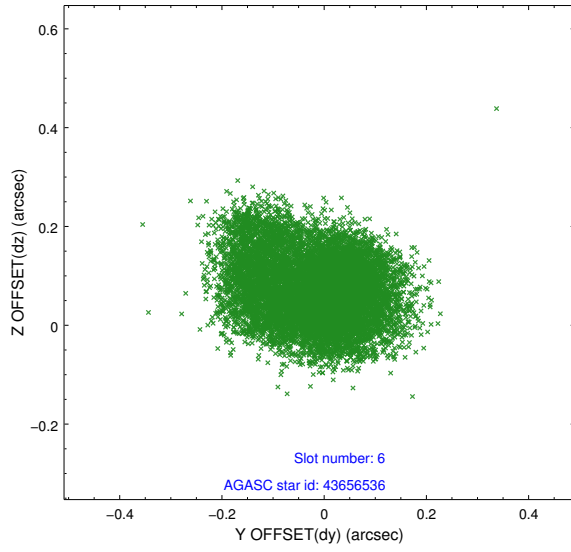




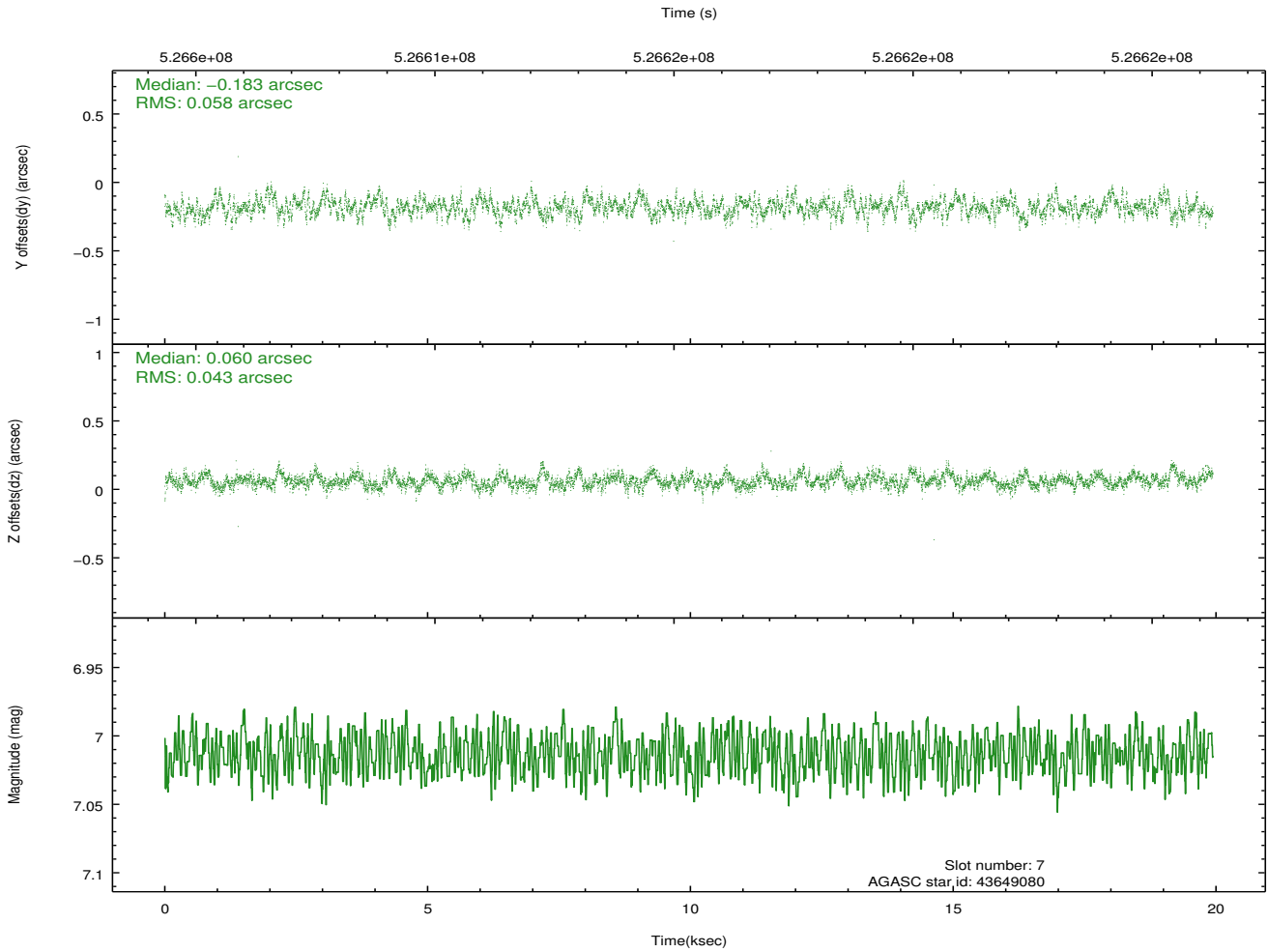
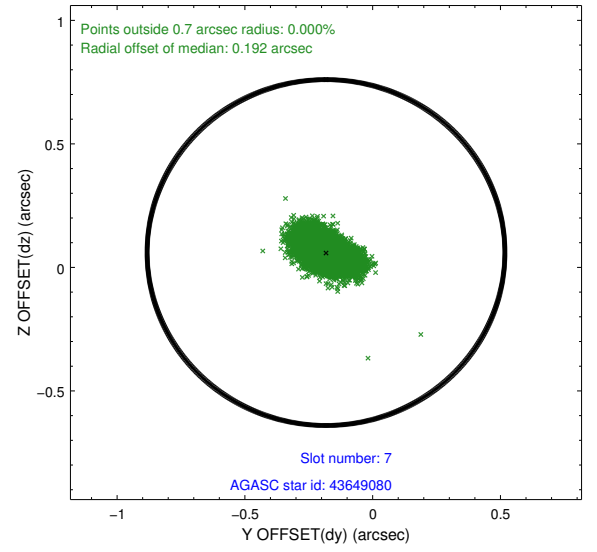
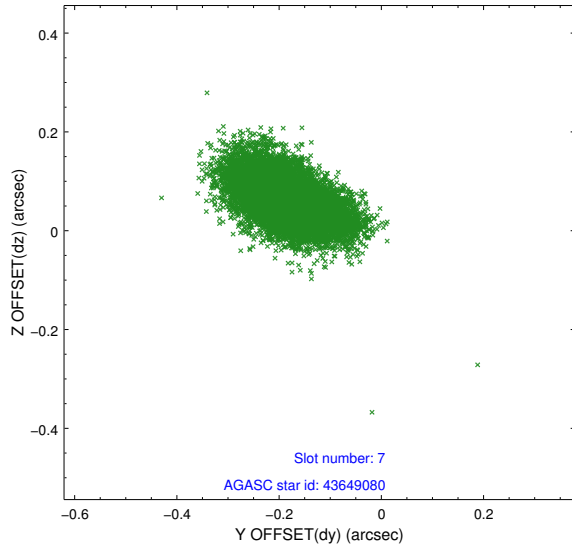
### 2.4.3 Slot 5



## 2.4.4 Slot 6

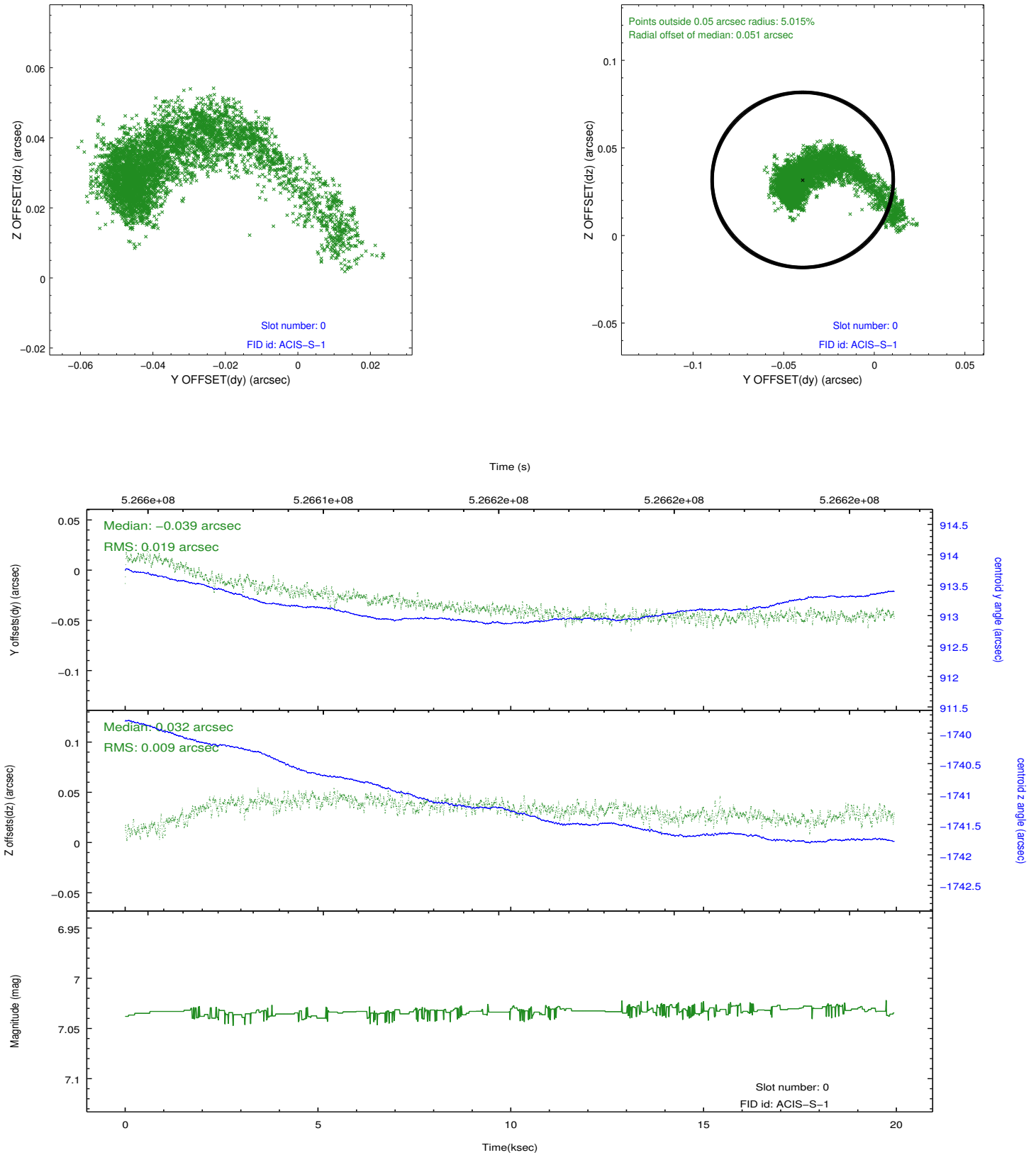


## 2.4.5 Slot 7

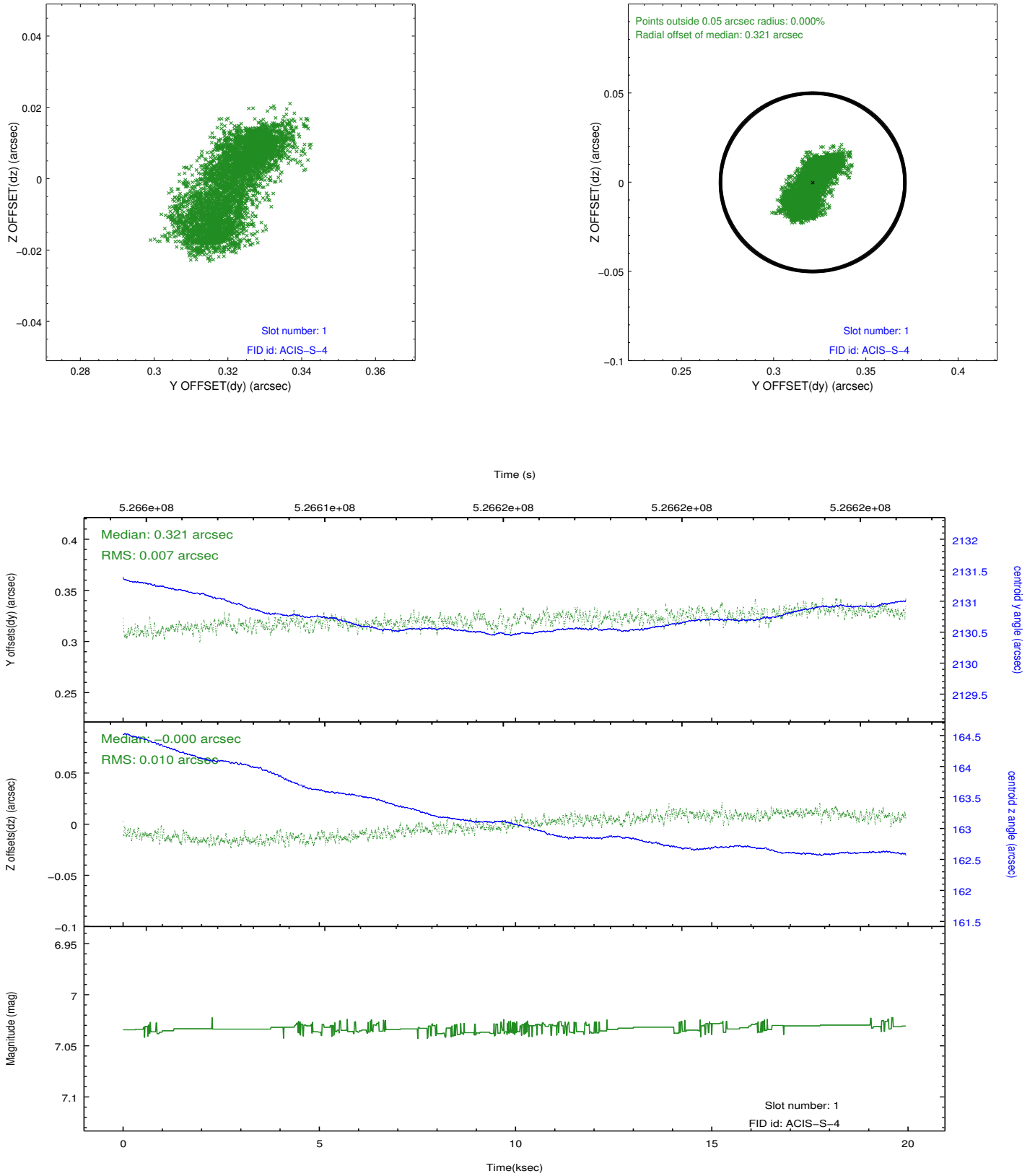


## 2.5 FID Slots

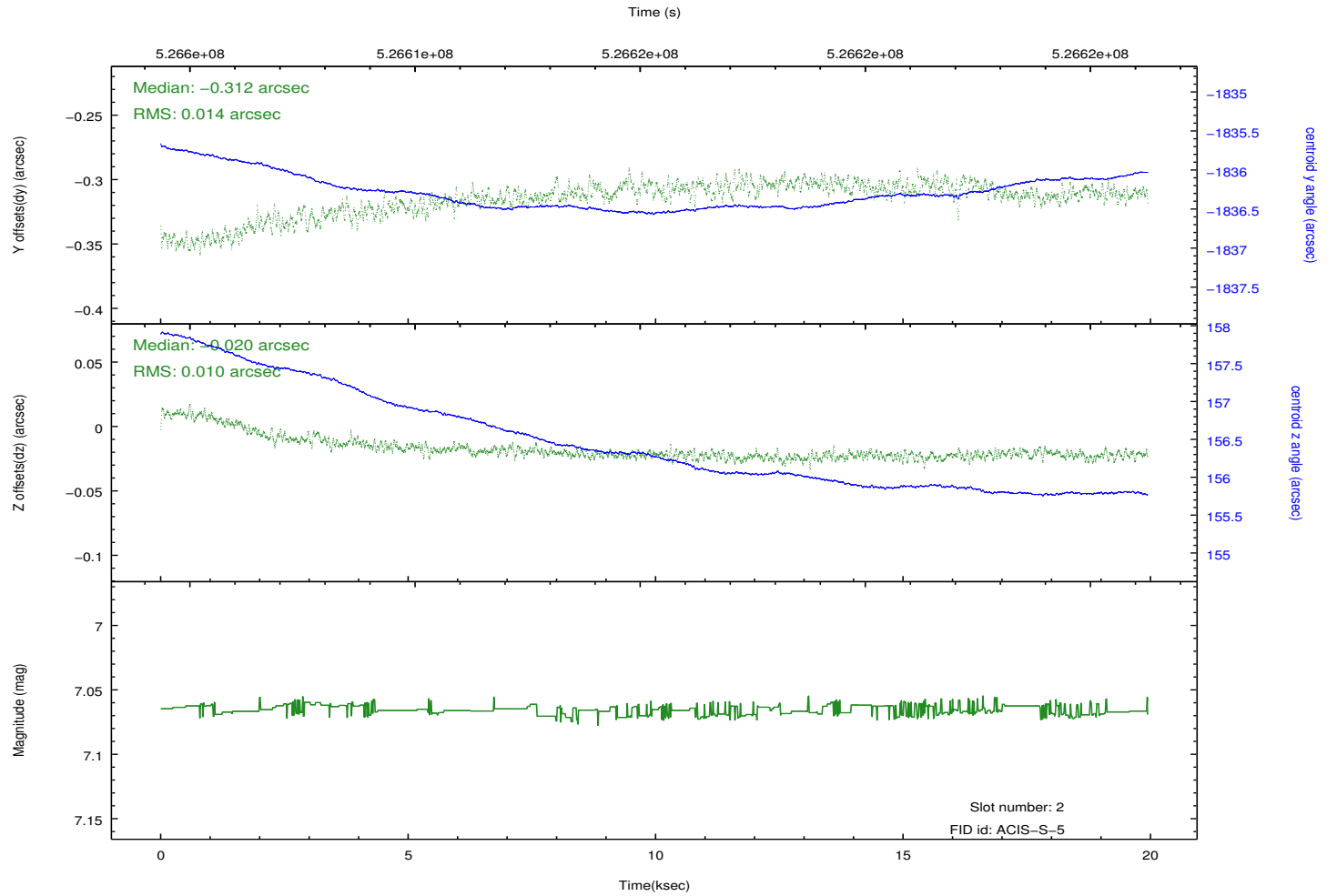
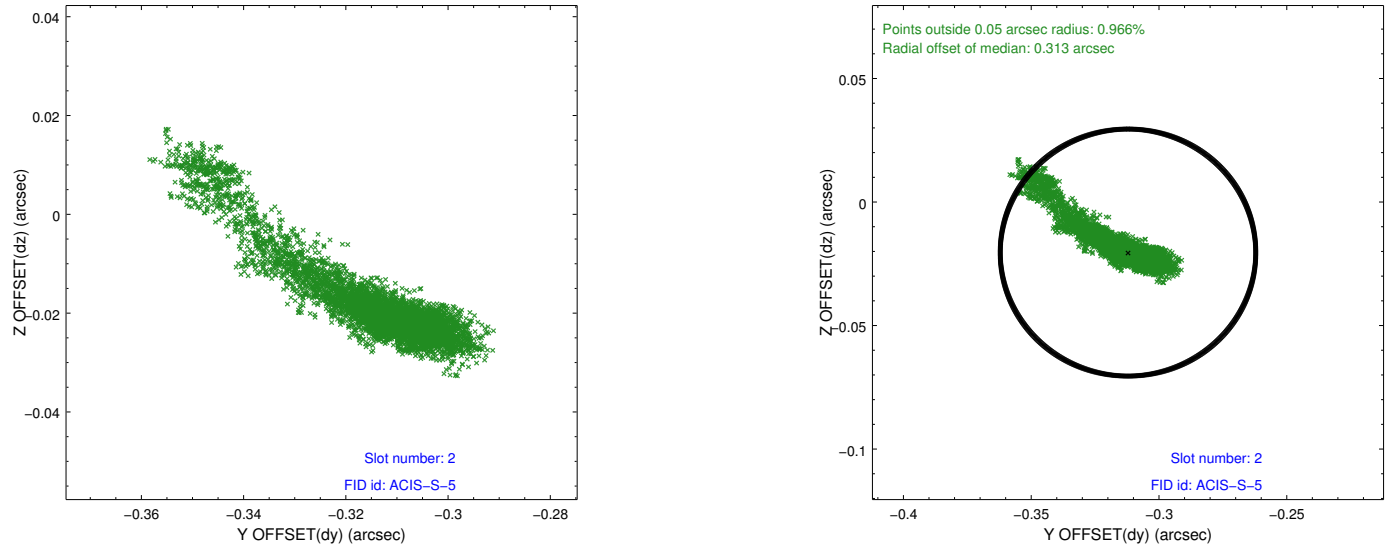
### 2.5.1 Slot 0



## 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)	2014.09.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.867900152802

### A.2 Comments