

# V&V Reference Report

## L2 ASCDS Version : 10.2.4

Observation 16236 - L2 Version 1  
Chandra X-Ray Center

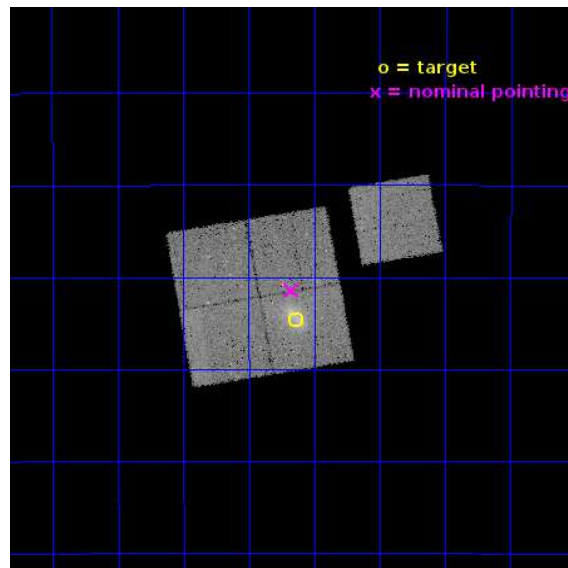
L2 Processing Date : Sep 1 2014

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# 1 Front

seq_num	801418	Sequence number
obs_id	16236	Observation id
title	Clusters, Galaxies, and AGN in HST Frontier Fields	Proposal title
observer	Dr. Christine Jones	Principal investigator
object	MACSJ0416.1-2403	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	64.035833	Observer's specified target RA [deg]
dec_targ	-24.077944	Observer's specified target Dec [deg]
ra_nom	64.043531573351	Nominal RA [deg]
dec_nom	-24.02386374802	Nominal Dec [deg]
roll_nom	80.211827202036	Nominal Roll [deg]
revision	1	Processing version of data
ontime	40379.897958517	Sum of GTIs [s]
livetime	39852.304864441	Livetime [s]
ontime0	40382.915798903	Sum of GTIs [s]
ontime1	40382.956838906	Sum of GTIs [s]
ontime2	40379.8569085	Sum of GTIs [s]
ontime3	40379.897958517	Sum of GTIs [s]
ontime6	40382.874758899	Sum of GTIs [s]
l2events	113436	Number of level 2 events

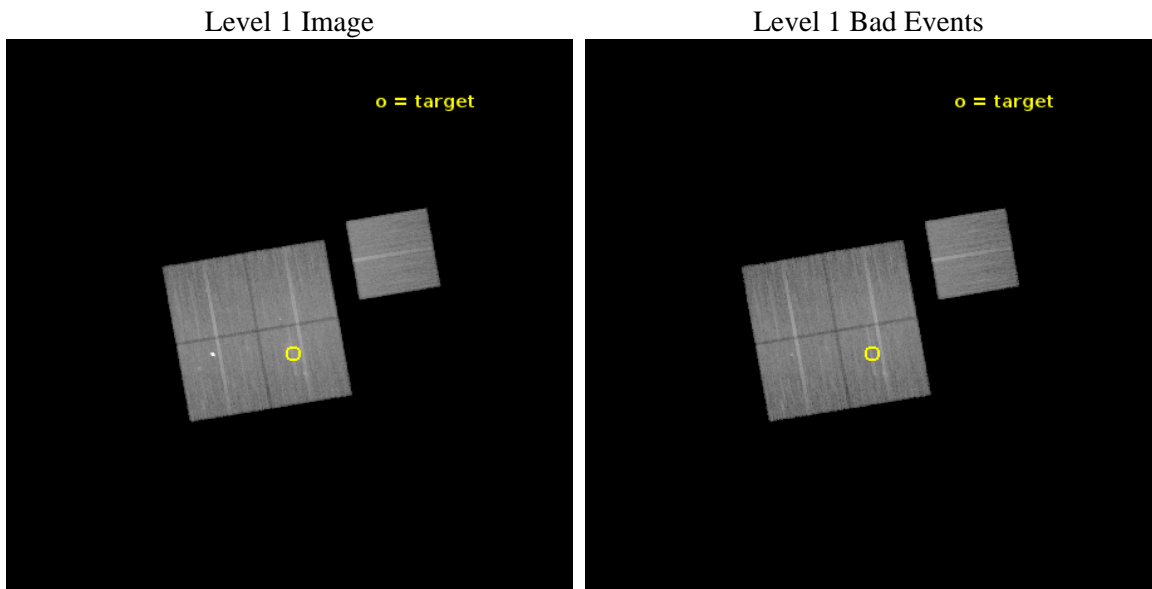




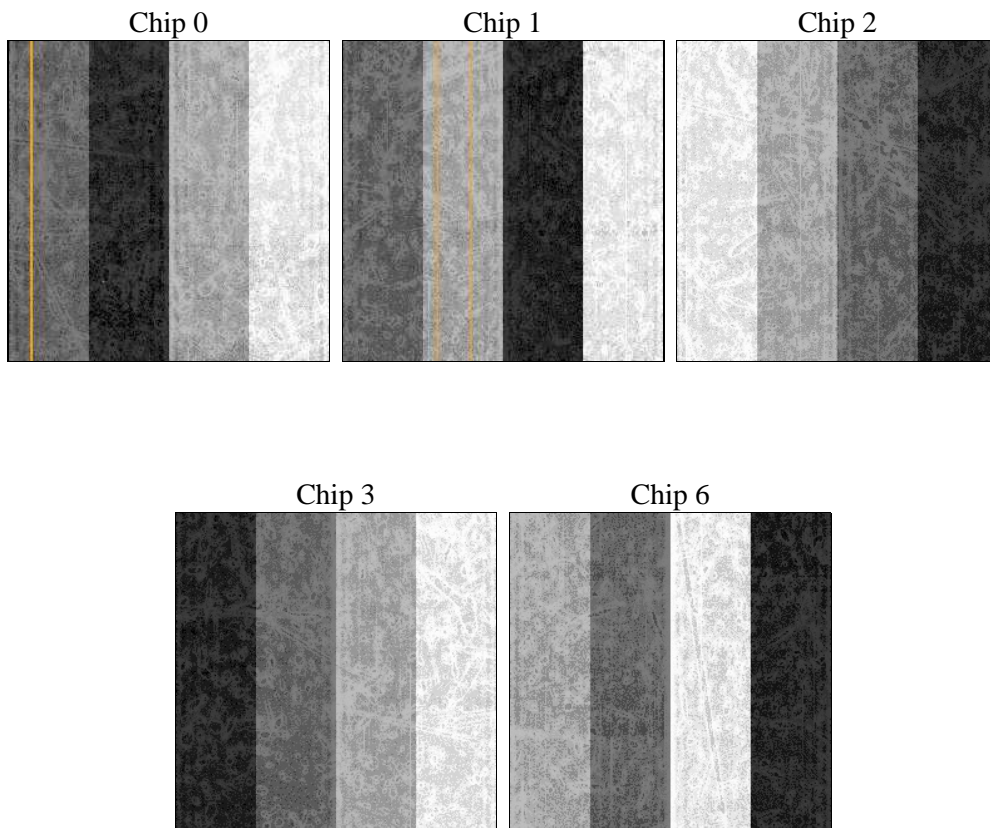
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	40298.995000	[s] Scheduled observation exposure time
ascdsver	10.2.4	Processing system revision	ontime	40379.897958517	Sum of GTIs [s]
caldbver	4.6.2	&#160	ontime0	40382.915798903	Sum of GTIs [s]
date	2014-09-01T18:16:33	Date and time of file creation	ontime1	40382.956838906	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	40379.8569085	Sum of GTIs [s]
			ontime3	40379.897958517	Sum of GTIs [s]
			ontime6	40382.874758899	Sum of GTIs [s]
			l1events	1037762	Number of level 1 events

### 2.1.4 Events

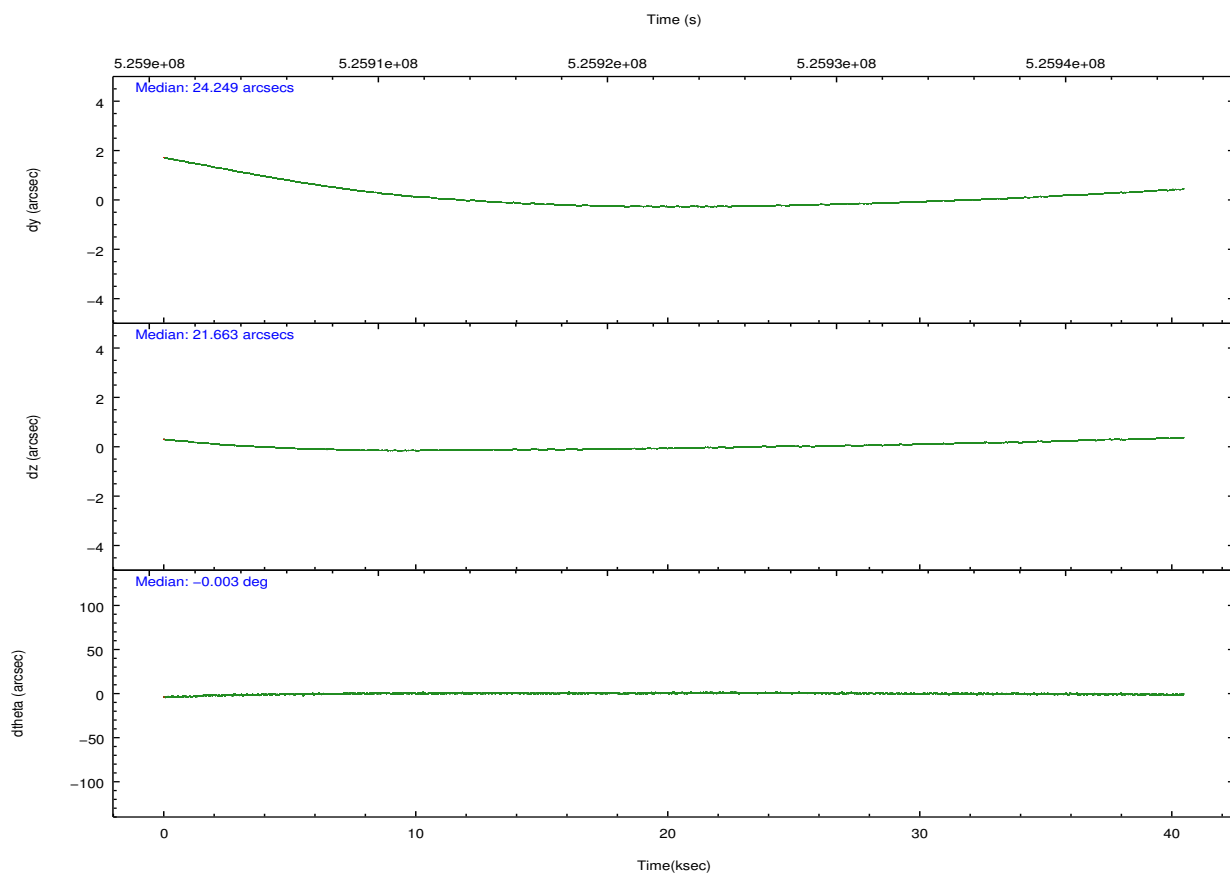
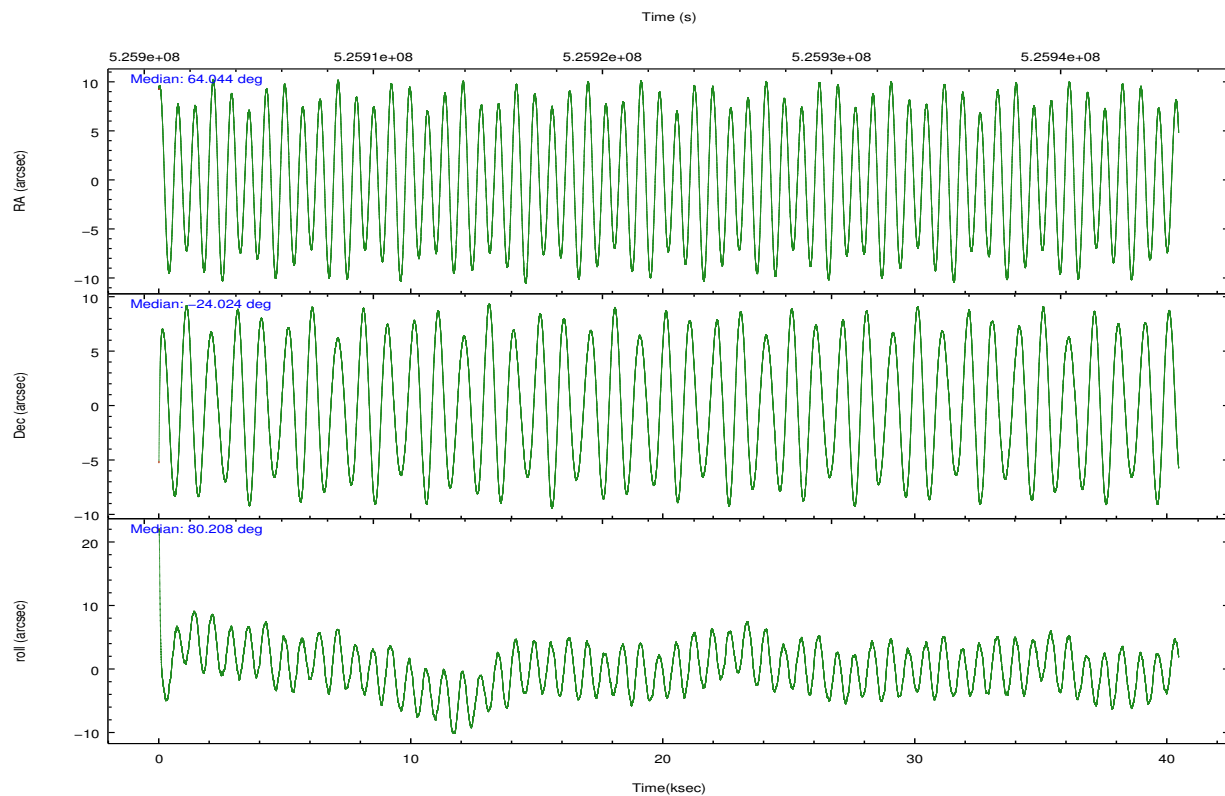
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	190437	218988	208805	213286	206246
rejected events	165571	166697	184309	181127	181632
rejected %	86%	76%	88%	84%	88%

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	8650	9596	9063	15052	8264
	4%	4%	4%	7%	4%
grade 1 events	98	103	108	163	105
	0%	0%	0%	0%	0%
grade 2 events	6251	31355	6048	6318	5582
	3%	14%	2%	2%	2%
grade 3 events	2548	2614	2326	2724	2443
	1%	1%	1%	1%	1%
grade 4 events	2349	2623	2473	2734	2470
	1%	1%	1%	1%	1%
grade 5 events	10026	10335	9172	11153	10703
	5%	4%	4%	5%	5%
grade 6 events	5068	6108	4587	5336	5856
	2%	2%	2%	2%	2%
grade 7 events	155447	156254	175028	169806	170823
	81%	71%	83%	79%	82%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	64.054072	64.04353157335089	CCD I2 on	Y	Y
[deg] Pointing Dec	-24.049741	-24.02386374801975	CCD I3 on	Y	Y
[deg] Pointing Roll	80.007435	80.21182720203622	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-225.842463	-225.8433433320239	CCD S3 on	N	N
[mm] SIM translation stage offset	-7.75	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	525902828.184000	525901526.02724	CCD S5 on	N	N
Observation start date	2014-08-31T20:06:01	2014-08-31T19:45:26	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	525943127.184000	525943363.45456	On-chip summing requested	N	N
Observation end date	2014-09-01T07:17:40	2014-09-01T07:22:43	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect

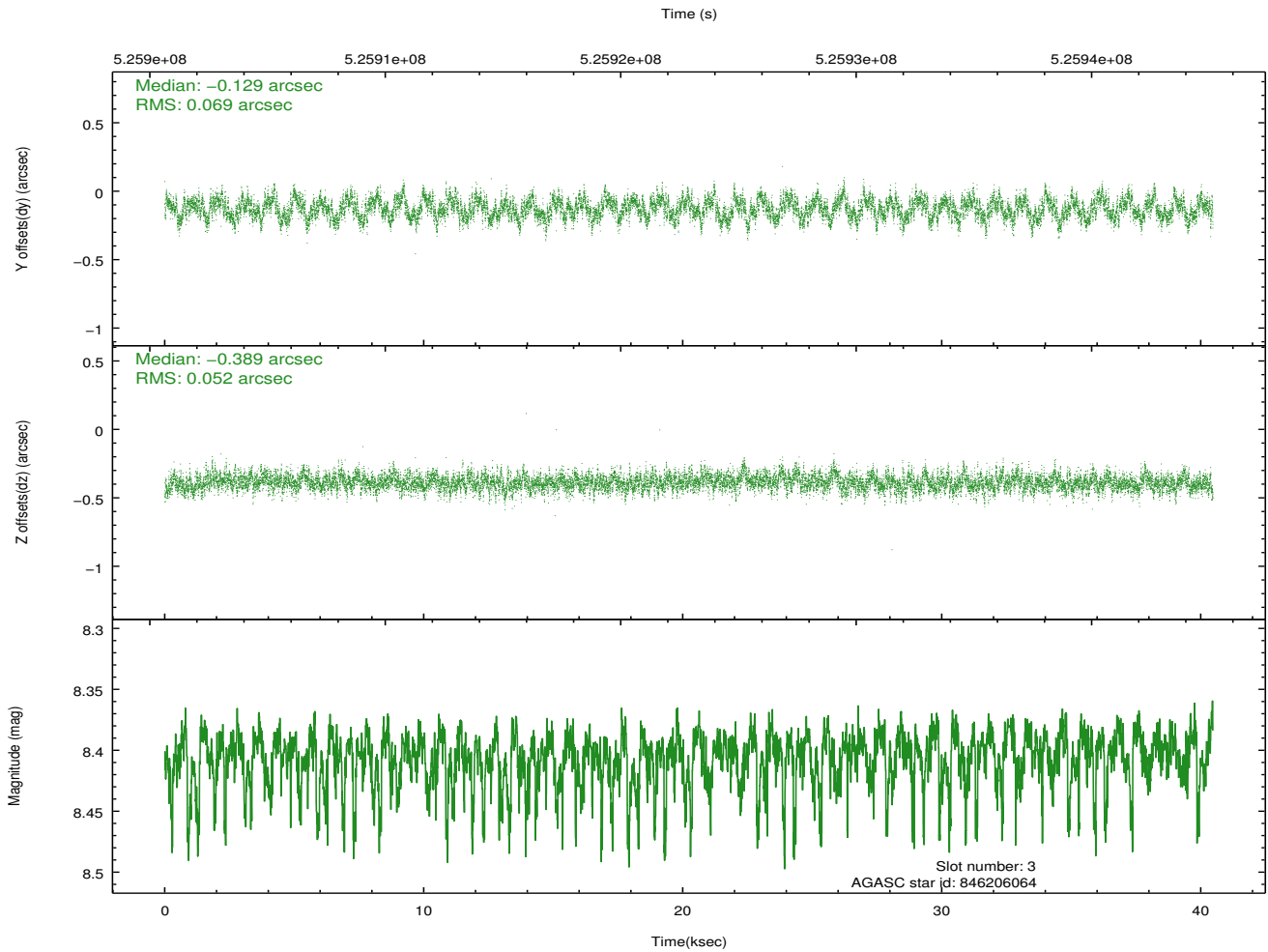
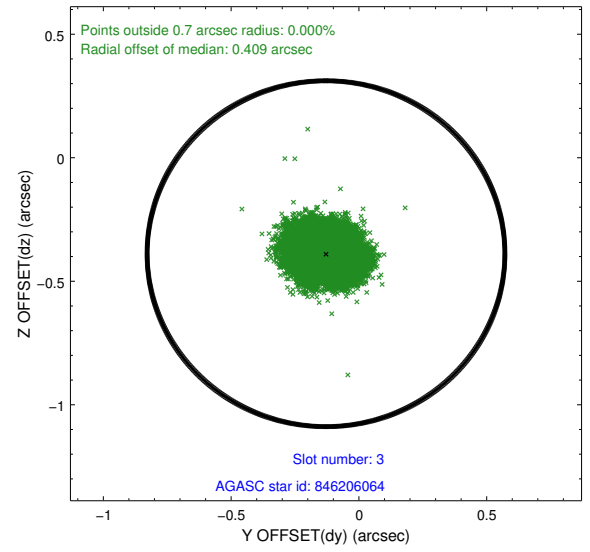
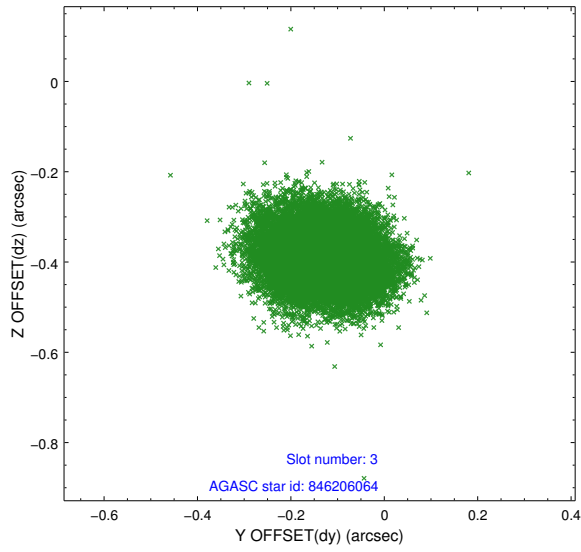


### Slot Statistics

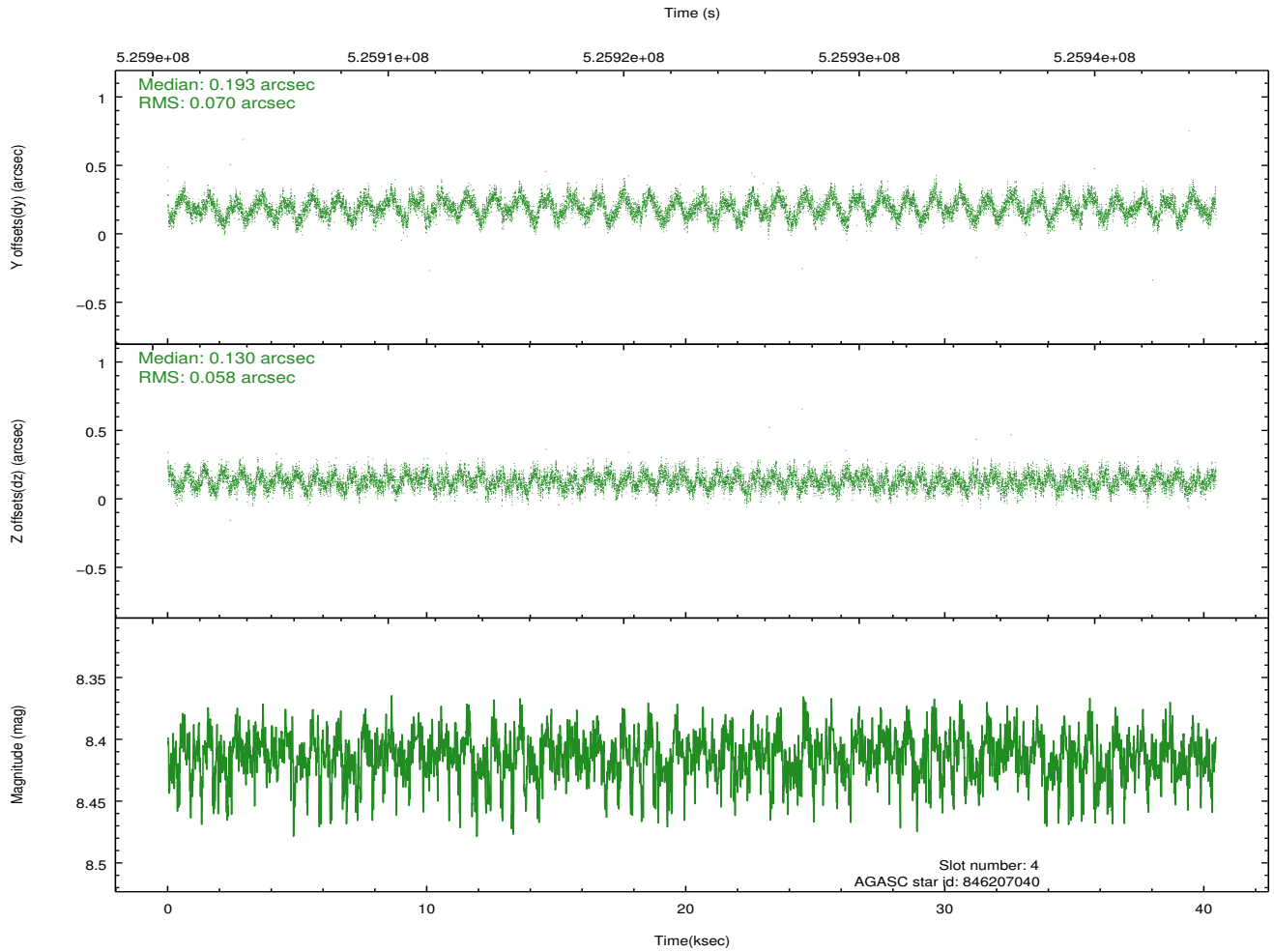
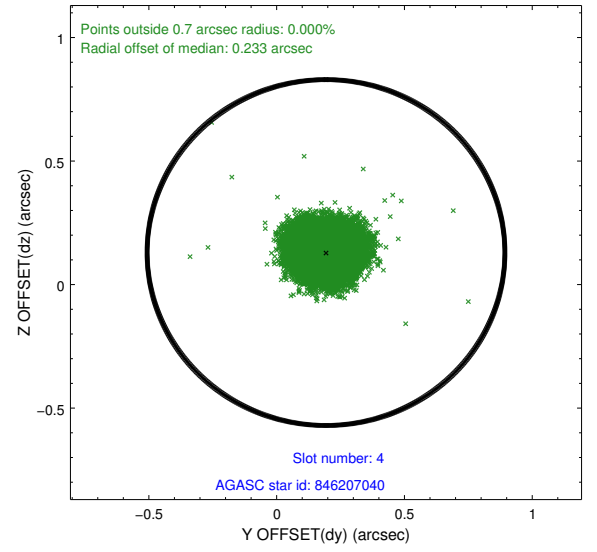
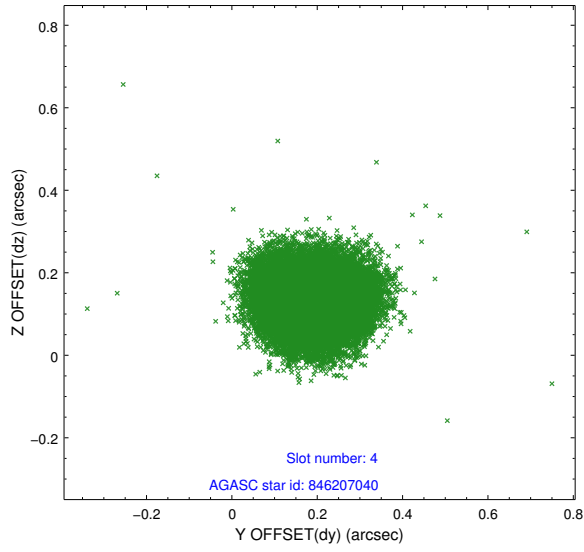
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.12	9867	0.142	-0.096	0.010	0.021	0.000000	0.000000	914.80	-1004.63
1	FID	ACIS-I-5	7.11	9869	-0.385	0.091	0.008	0.014	0.000000	0.000000	-1833.85	892.99
2	FID	ACIS-I-6	7.12	9870	0.151	0.076	0.010	0.018	0.000000	0.000000	380.30	1537.53
3	GUIDE	846206064	8.40	19735	-0.129	-0.389	0.093	0.149	63.549477	-24.205184	-841.41	1533.67
4	GUIDE	846207040	8.41	19733	0.193	0.130	0.098	0.150	63.992065	-24.505797	-1650.74	-85.21
5	GUIDE	846209096	7.98	19732	-0.407	-0.351	0.079	0.125	64.121972	-23.533882	1867.61	101.40
6	GUIDE	846354968	8.94	19717	0.283	0.421	0.108	0.184	64.667507	-24.476220	-1166.95	-2246.05
7	GUIDE	846357784	8.56	19726	0.061	0.192	0.097	0.157	64.526937	-24.060086	232.23	-1538.11

## 2.4 Star Slots

### 2.4.1 Slot 3

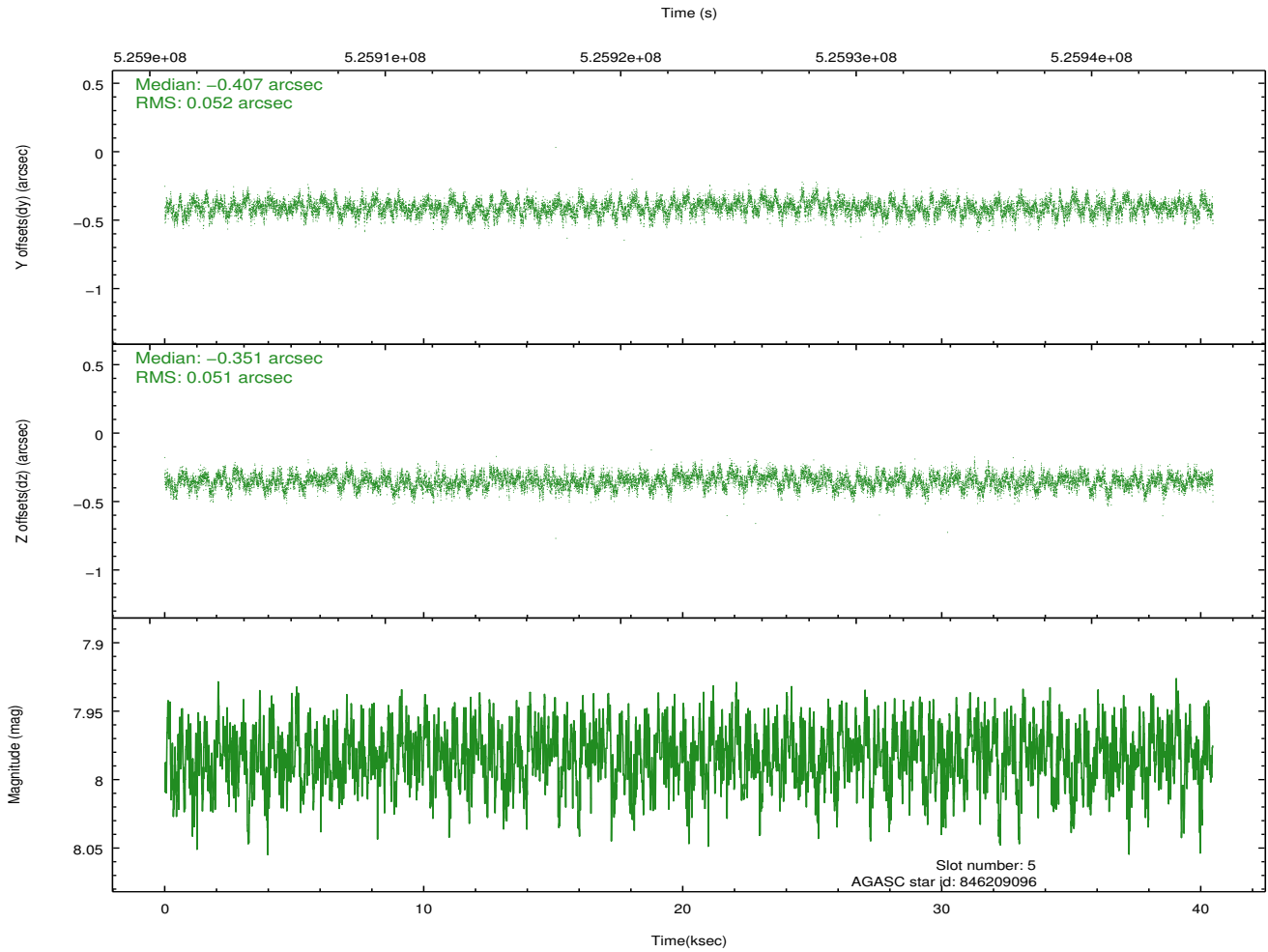
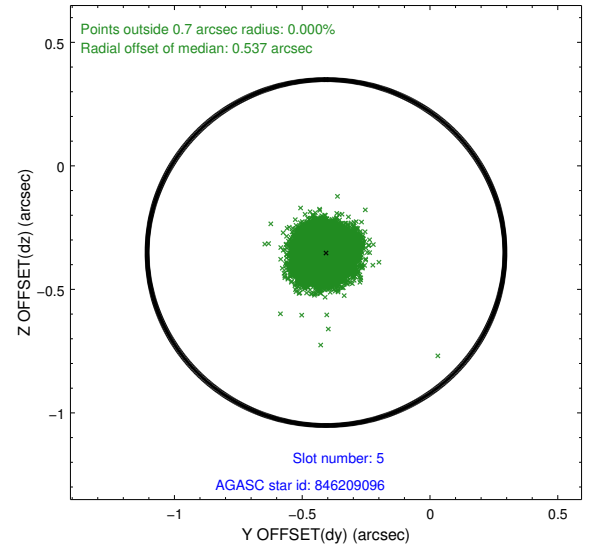
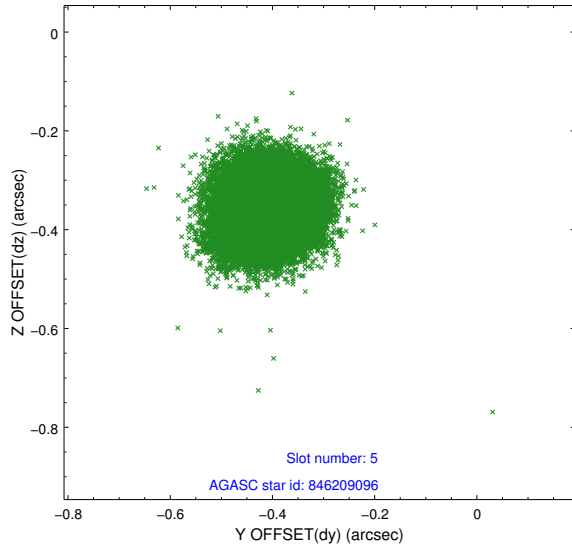


## 2.4.2 Slot 4

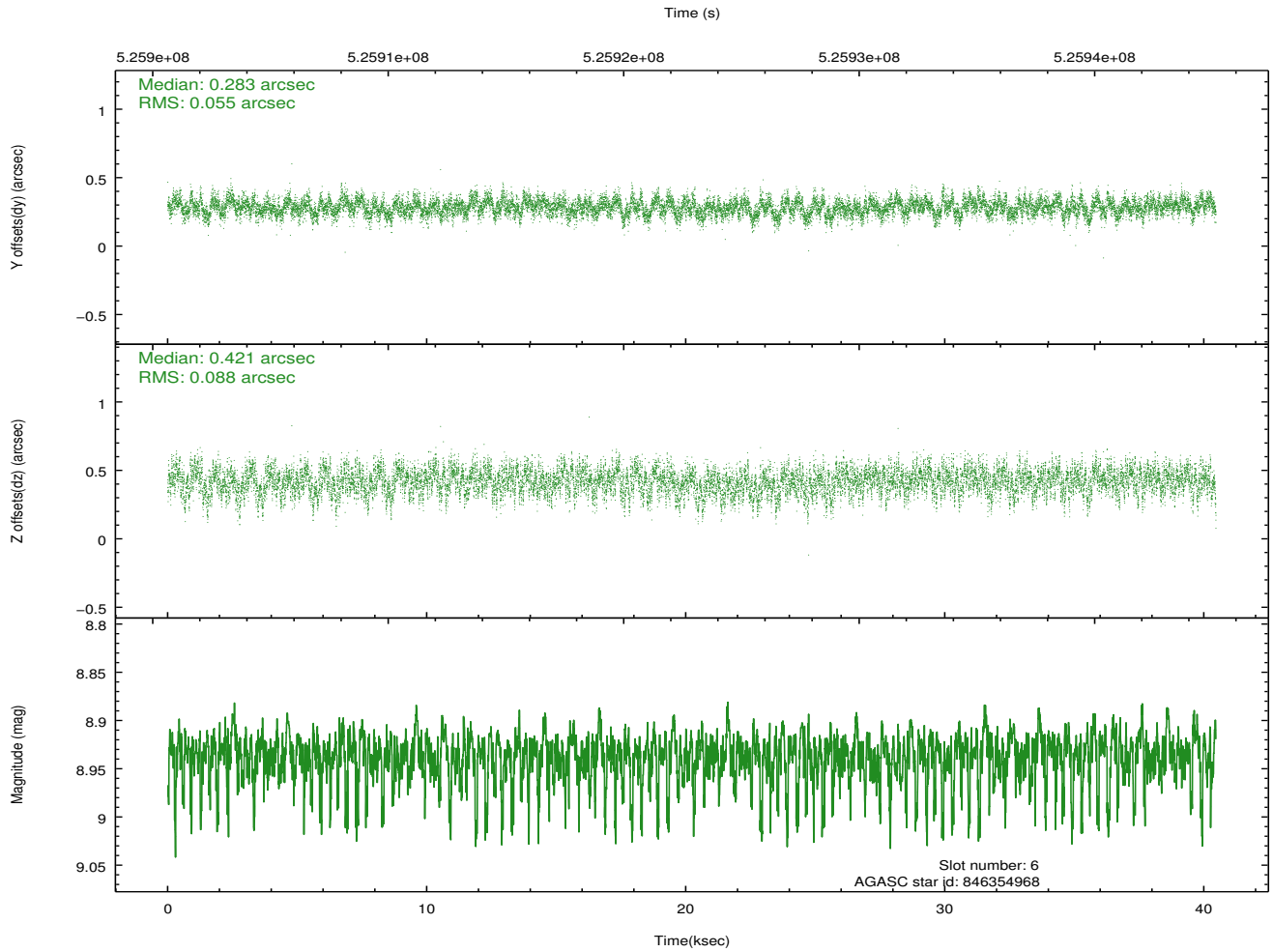
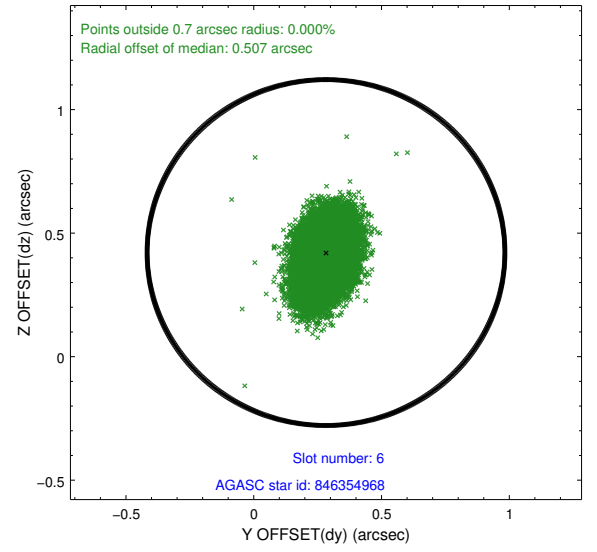
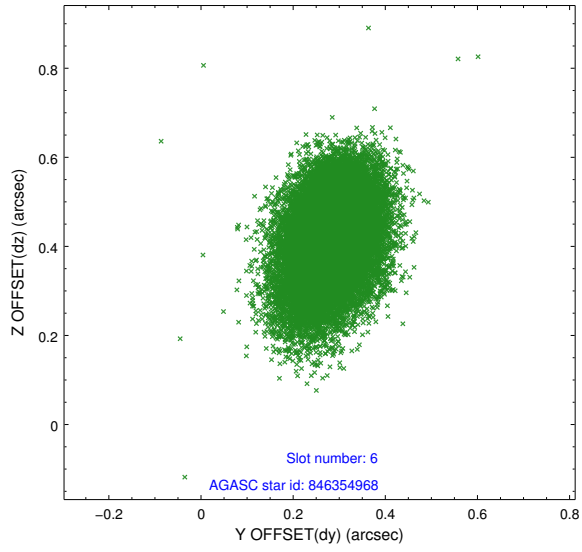




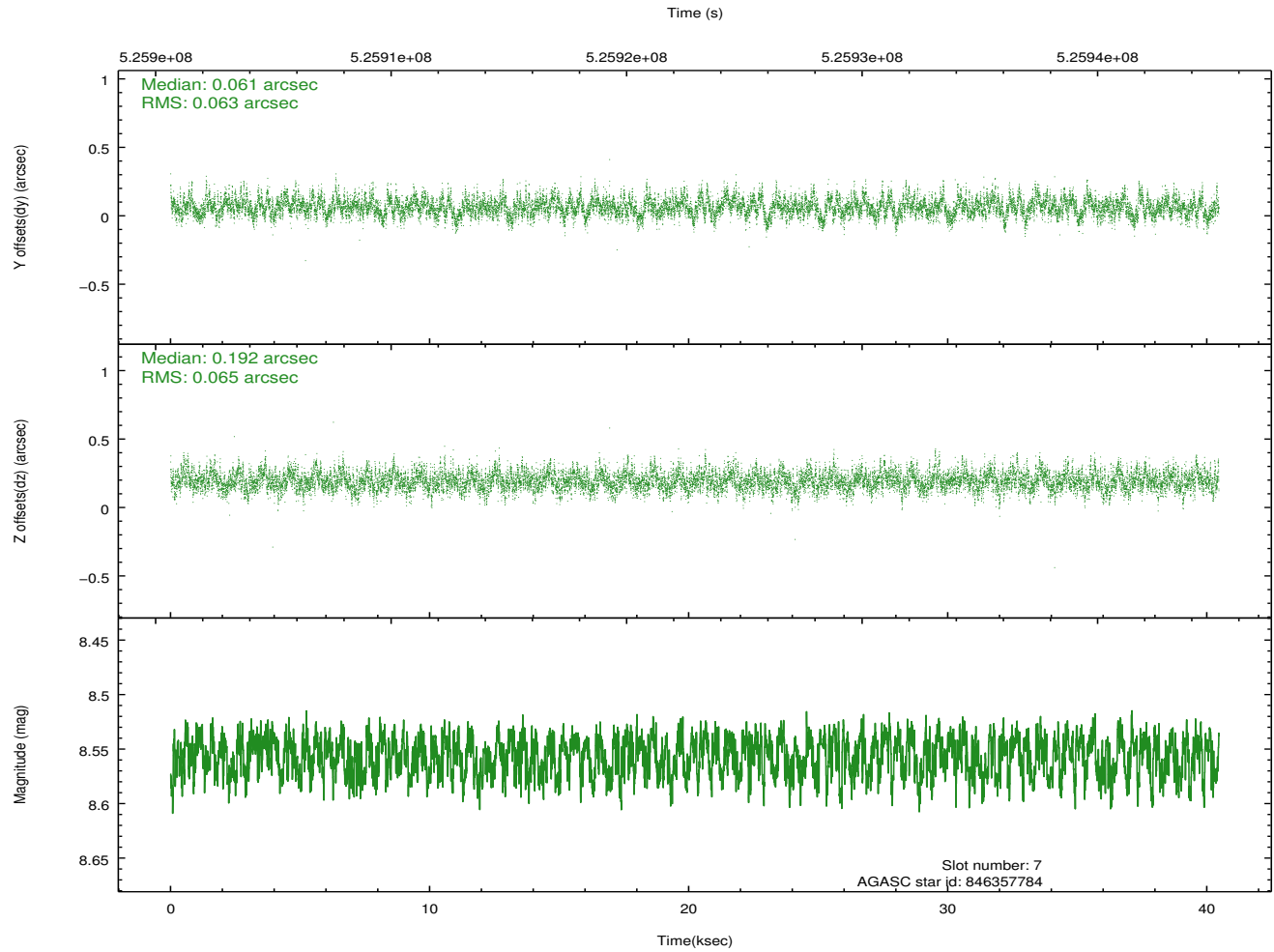
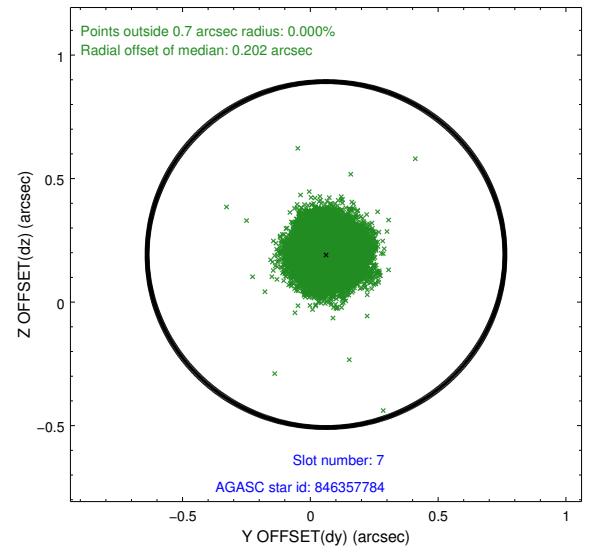
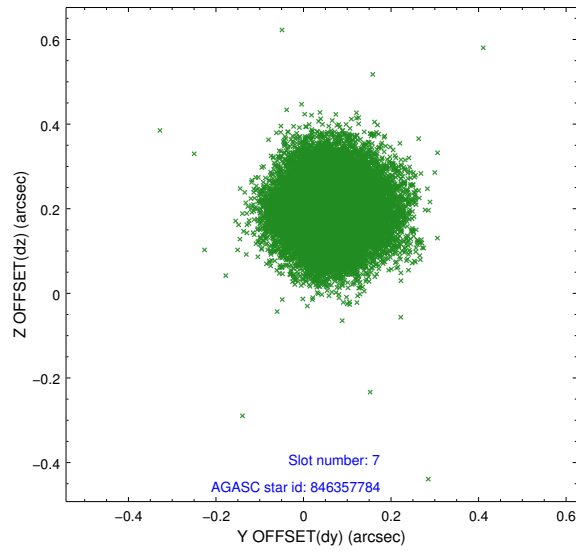
### 2.4.3 Slot 5



## 2.4.4 Slot 6

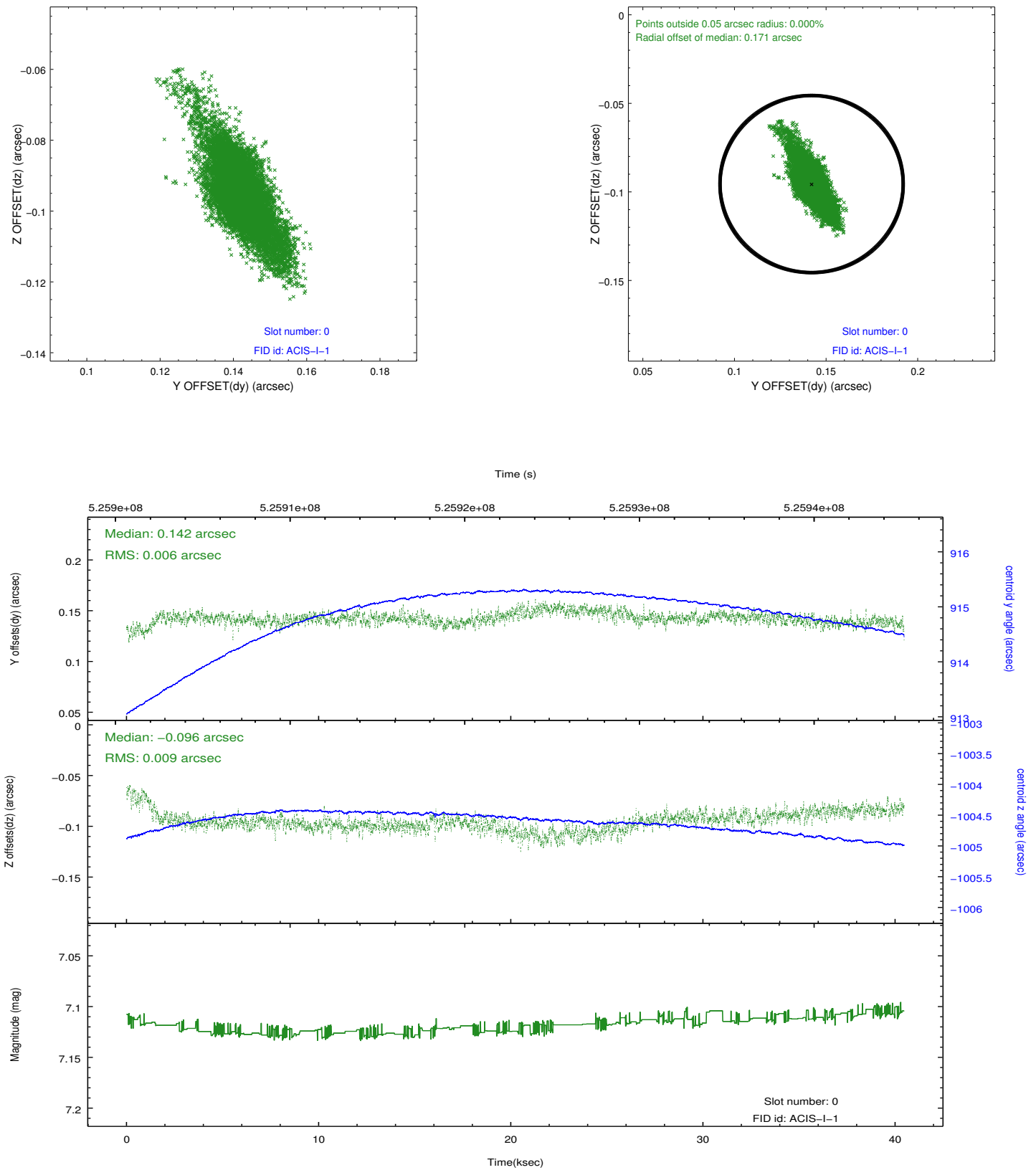


## 2.4.5 Slot 7

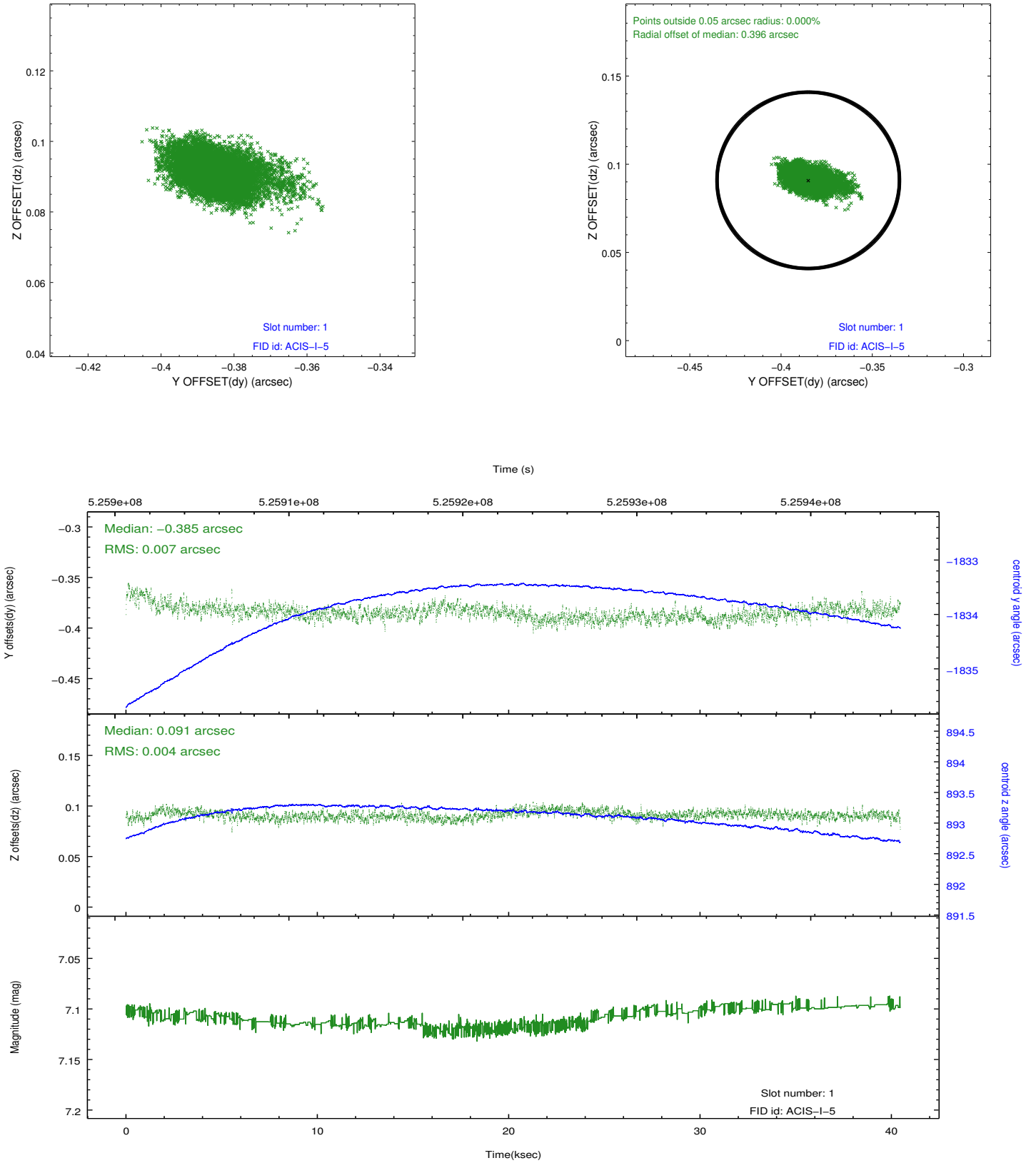


## 2.5 FID Slots

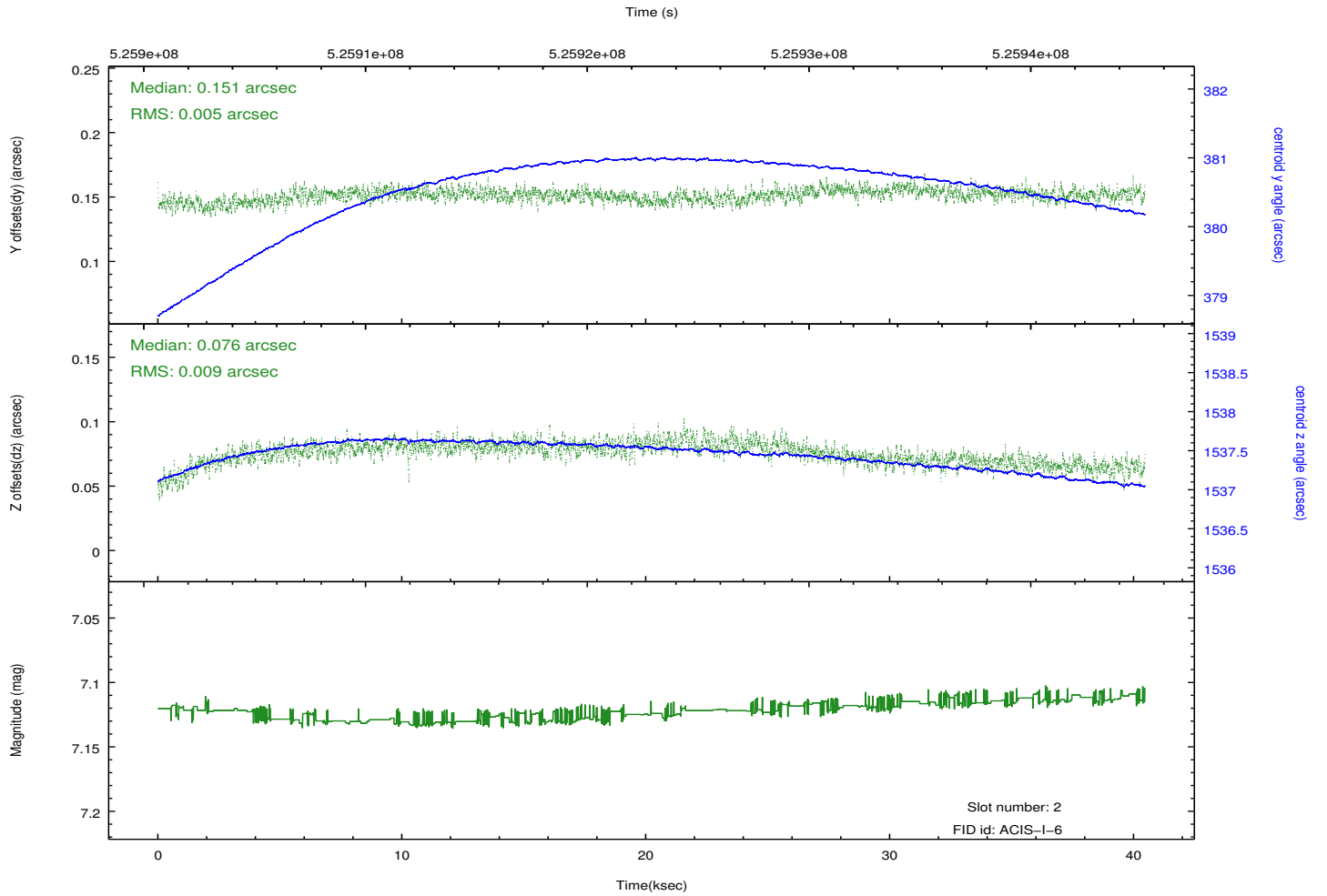
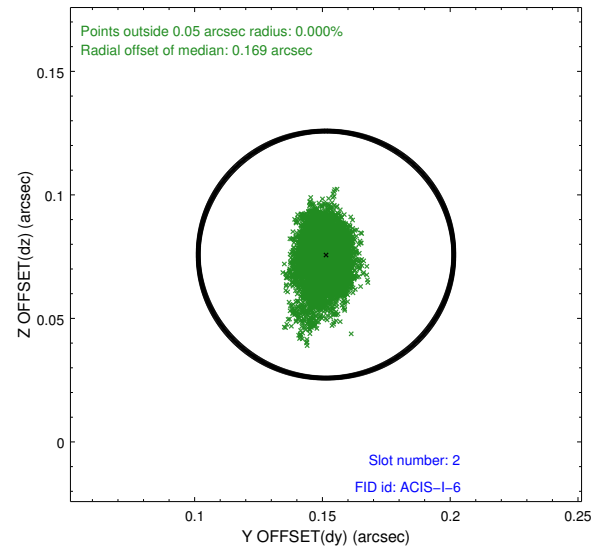
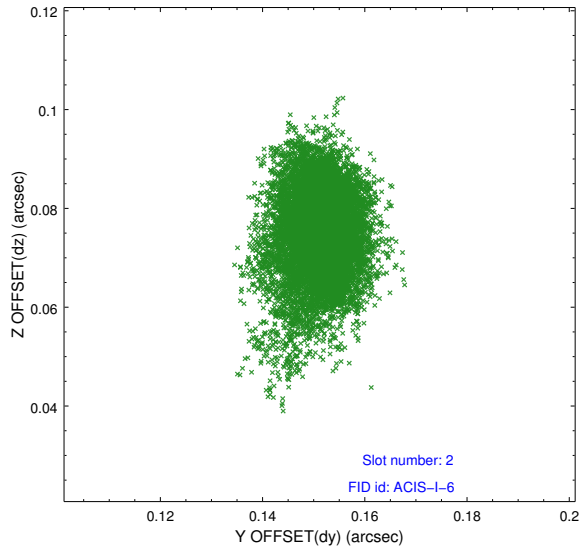
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2014.09.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	40.379897958517

### A.2 Comments