

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 1657 - L2 Version 3  
Chandra X-Ray Center

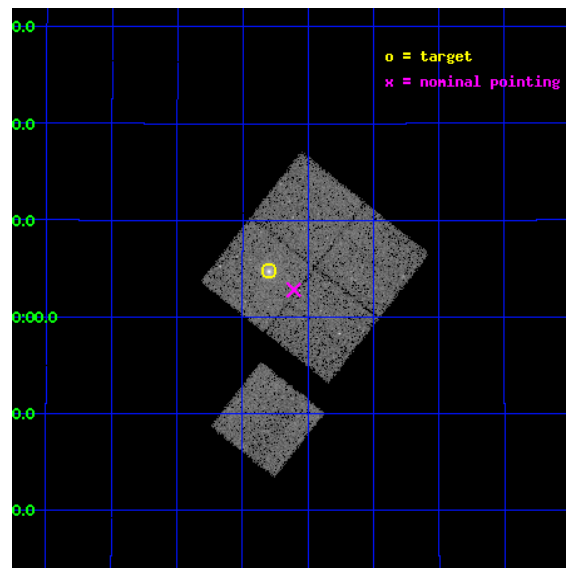
L2 Processing Date : Sep 17 2012

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# 1 Front

seq_num	800125	Sequence number
obs_id	1657	Observation id
title	DETERMINATION OF H0 AND Q0, 2000 PART 2	Proposal title
observer	DR. LEON VANSPEYBROECK	Principal investigator
object	MACS J1423.8+2404	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	215.95	Observer's specified target RA [deg]
dec_targ	24.079	Observer's specified target Dec [deg]
ra_nom	215.901832073	Nominal RA [deg]
dec_nom	24.046995203838	Nominal Dec [deg]
roll_nom	218.18716841678	Nominal Roll [deg]
revision	3	Processing version of data
ontime	18770.459003672	Sum of GTIs [s]
livetime	18525.209138178	Livetime [s]
ontime0	18770.459003657	Sum of GTIs [s]
ontime1	18773.599963903	Sum of GTIs [s]
ontime2	18770.45897375	Sum of GTIs [s]
ontime3	18770.459003672	Sum of GTIs [s]
ontime6	18770.458993658	Sum of GTIs [s]
l2events	65076	Number of level 2 events

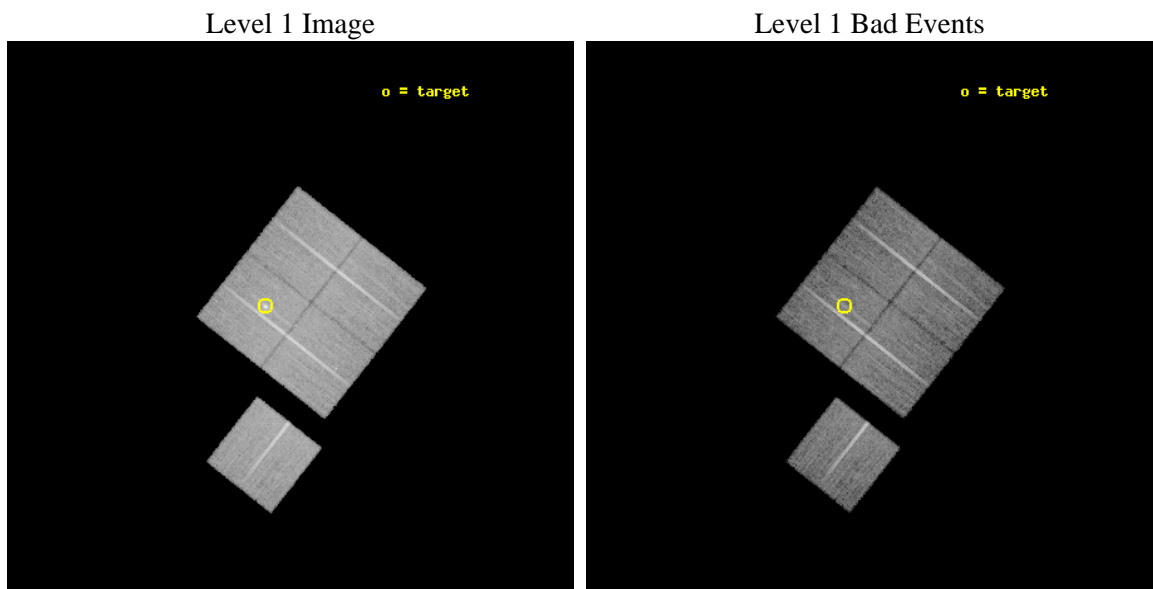




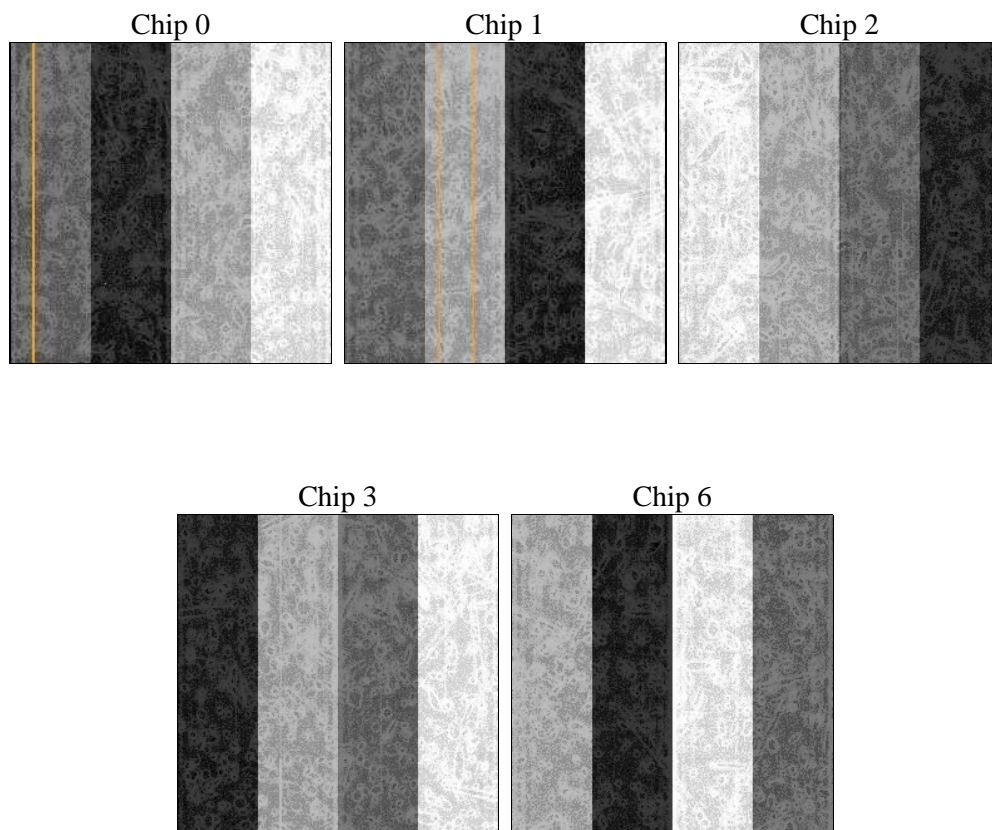
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	19000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	18770.459003672	Sum of GTIs [s]
caldsver	4.5.1.1	&#160	ontime0	18770.459003657	Sum of GTIs [s]
date	2012-09-17T01:45:24	Date and time of file creation	ontime1	18773.599963903	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	18770.45897375	Sum of GTIs [s]
			ontime3	18770.459003672	Sum of GTIs [s]
			ontime6	18770.458993658	Sum of GTIs [s]
			l1events	605412	Number of level 1 events

### 2.1.4 Events

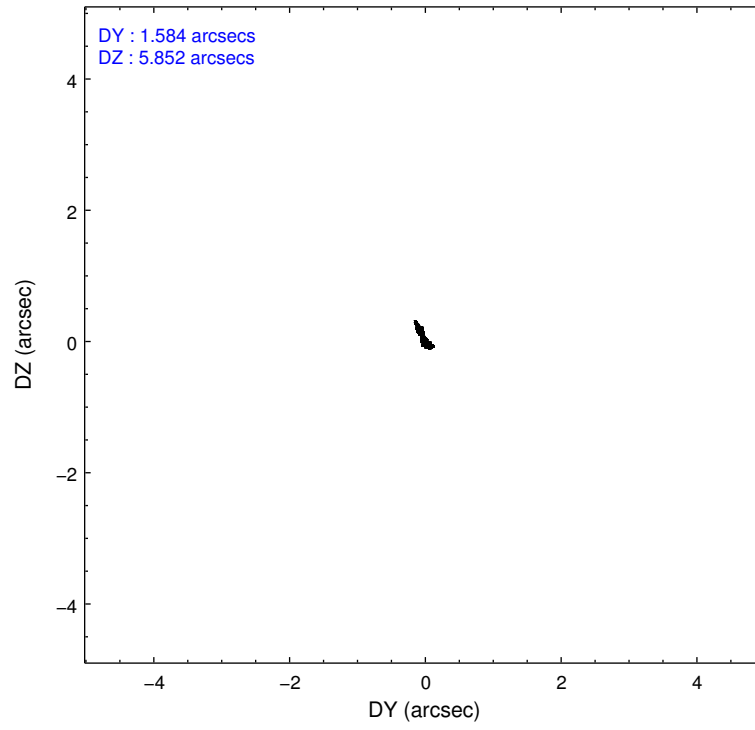
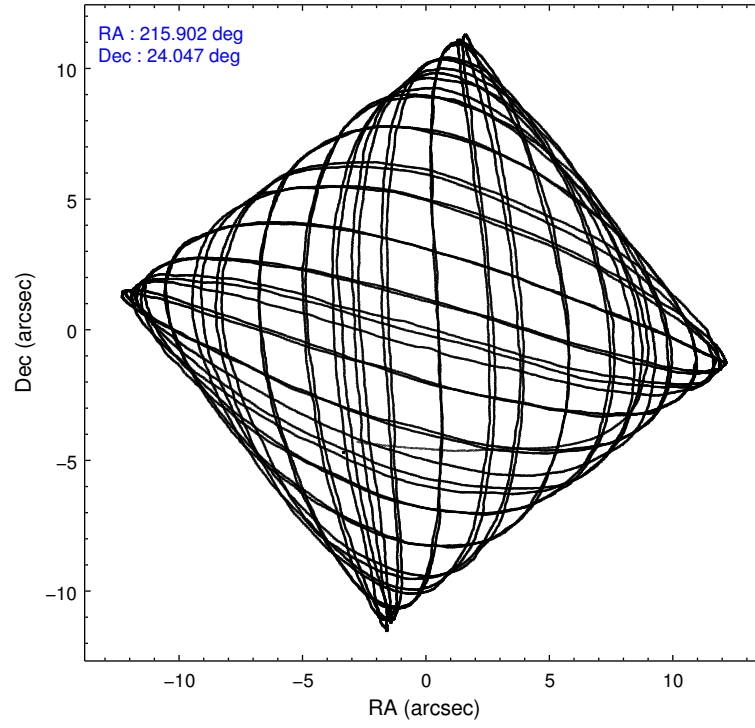
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	114331	115249	126897	126551	122384
rejected events	100077	100039	112566	108227	108563
rejected %	87%	86%	88%	85%	88%

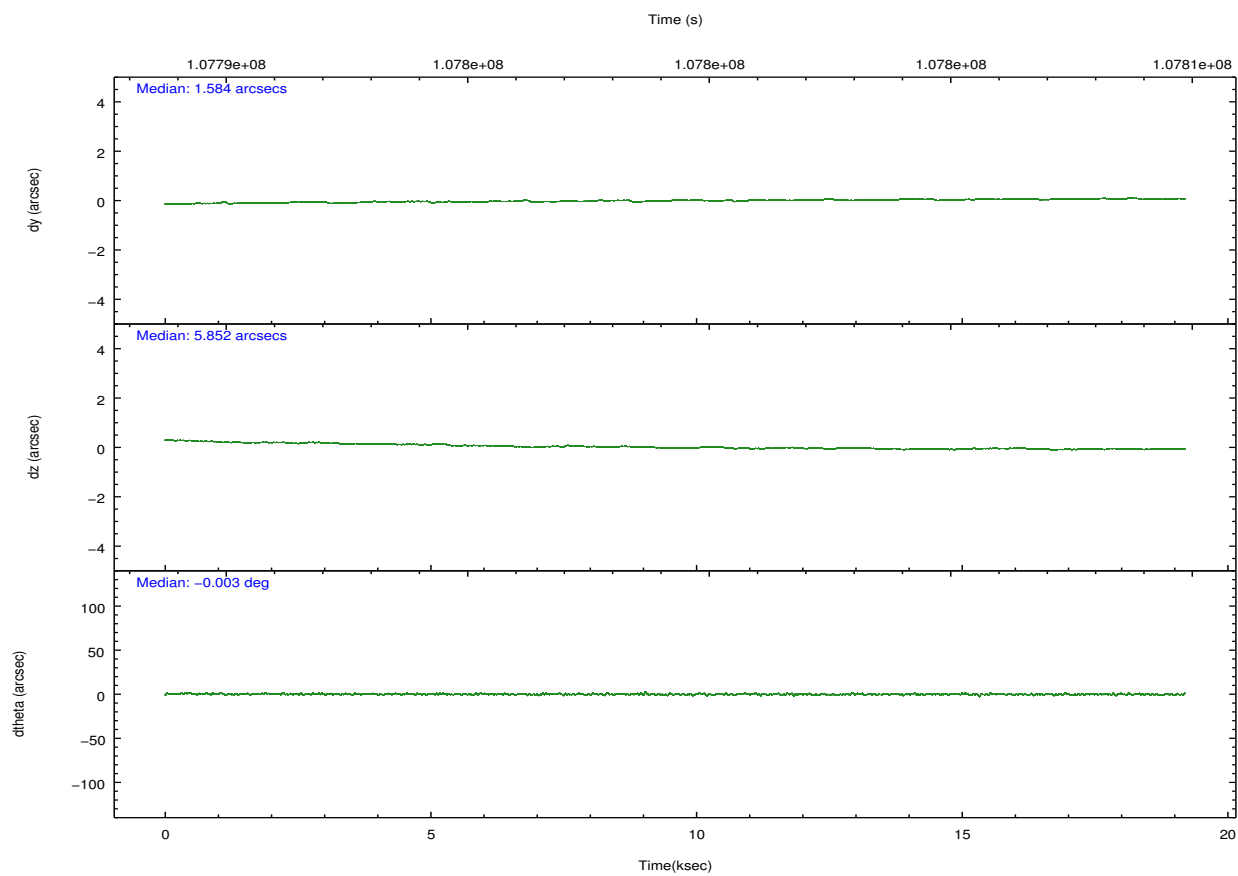
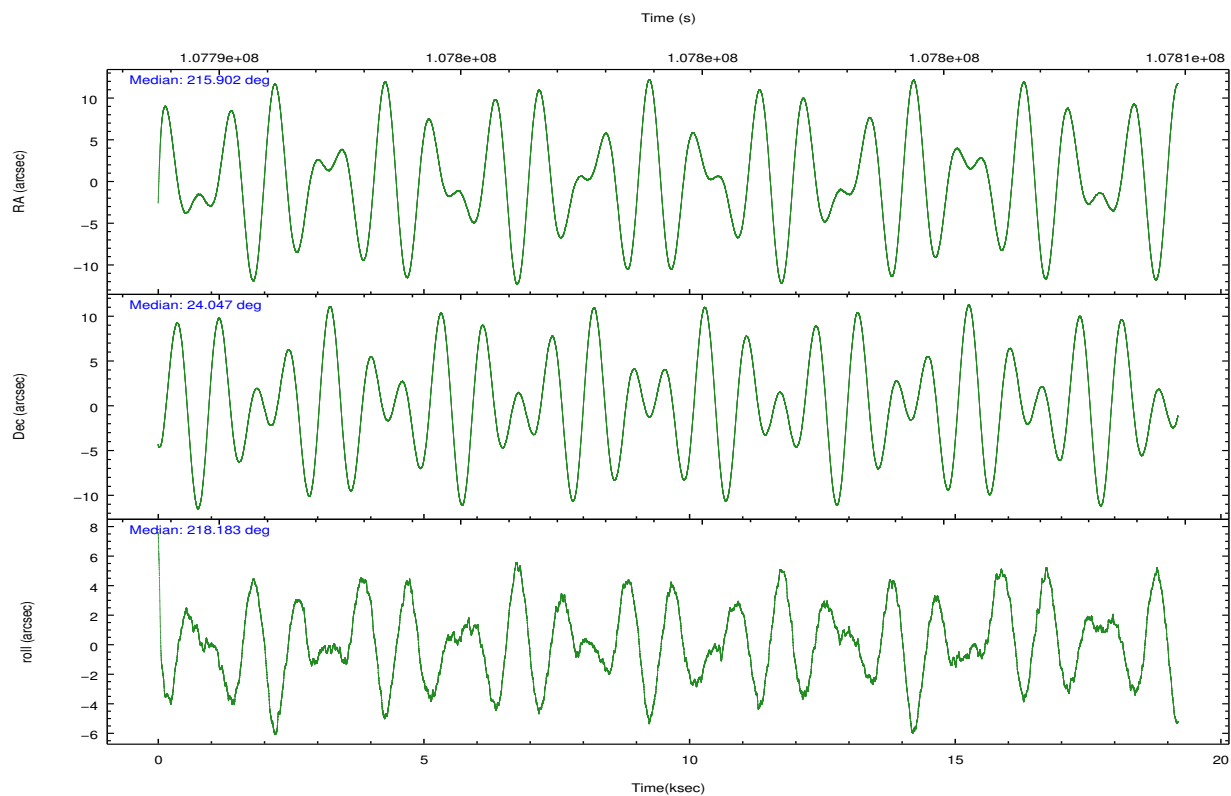
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	6108	6146	6279	9481	5672
	5%	5%	4%	7%	4%
grade 1 events	69	56	65	75	52
	0%	0%	0%	0%	0%
grade 2 events	2977	3053	3104	3229	2776
	2%	2%	2%	2%	2%
grade 3 events	1405	1561	1292	1484	1389
	1%	1%	1%	1%	1%
grade 4 events	1331	1577	1270	1506	1333
	1%	1%	1%	1%	1%
grade 5 events	4416	4693	4129	4801	5027
	3%	4%	3%	3%	4%
grade 6 events	2440	2879	2389	2626	2654
	2%	2%	1%	2%	2%
grade 7 events	95585	95284	108369	103349	103481
	83%	82%	85%	81%	84%

## 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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	215.912962	215.9018320729962	Subarray requested	NONE	NONE
[deg] Pointing Dec	24.072485	24.04699520383816	Alternating exposures requested	N	N
[deg] Pointing Roll	217.973943	218.1871684167833	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-225.840463	-225.848371962627			
[mm] SIM translation stage offset	-7.752	-7.744081040302689			
[s] Observation start time (MET)	107789887.184000	107789060.66999			
Observation start date	2001-06-01T13:37:03	2001-06-01T13:24:20			
[s] Observation end time (MET)	107808887.184000	107809247.53328			
Observation end date	2001-06-01T18:53:43	2001-06-01T19:00:47			
Read mode	TIMED	TIMED			

## 2.3 Aspect



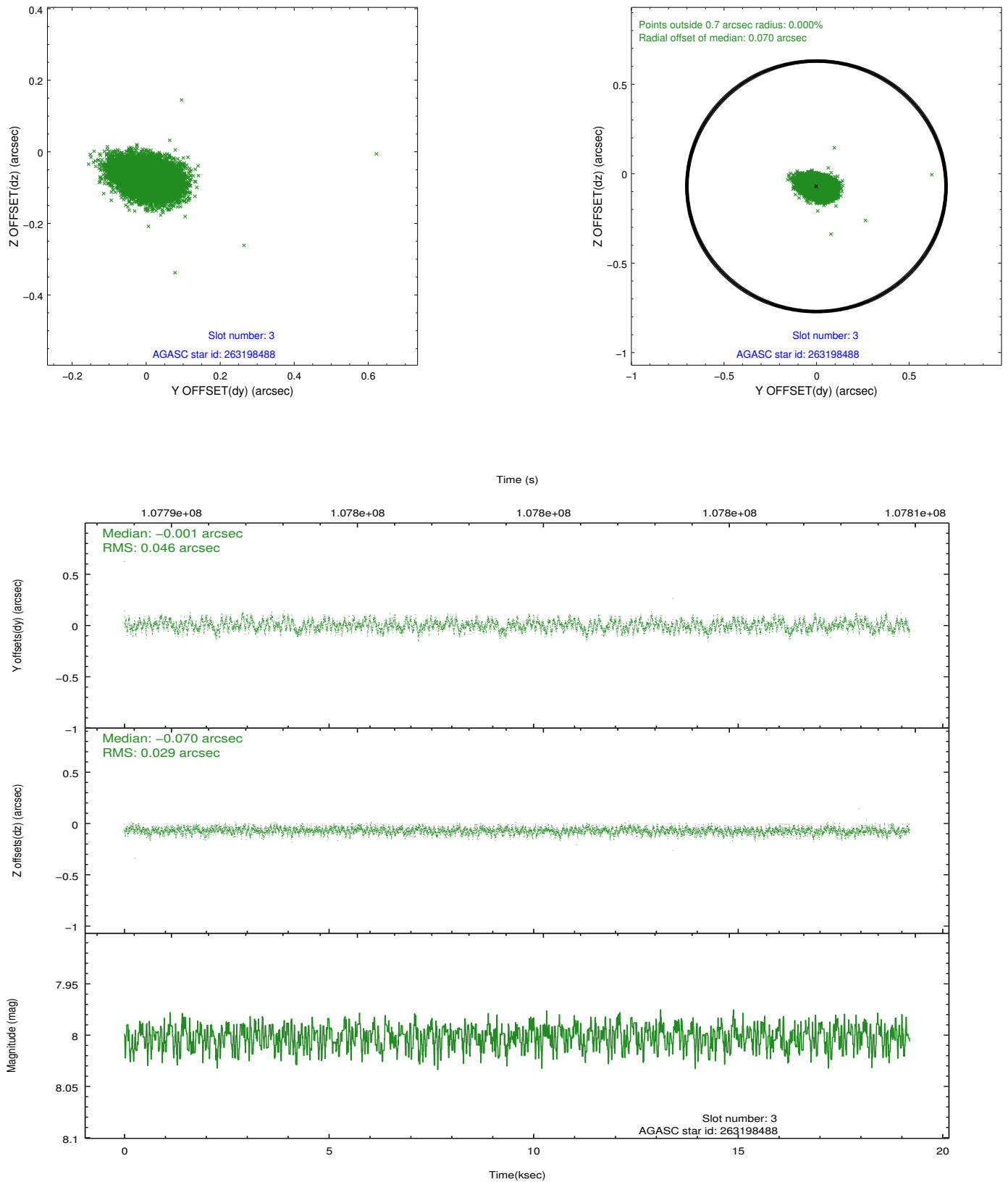


### Slot Statistics

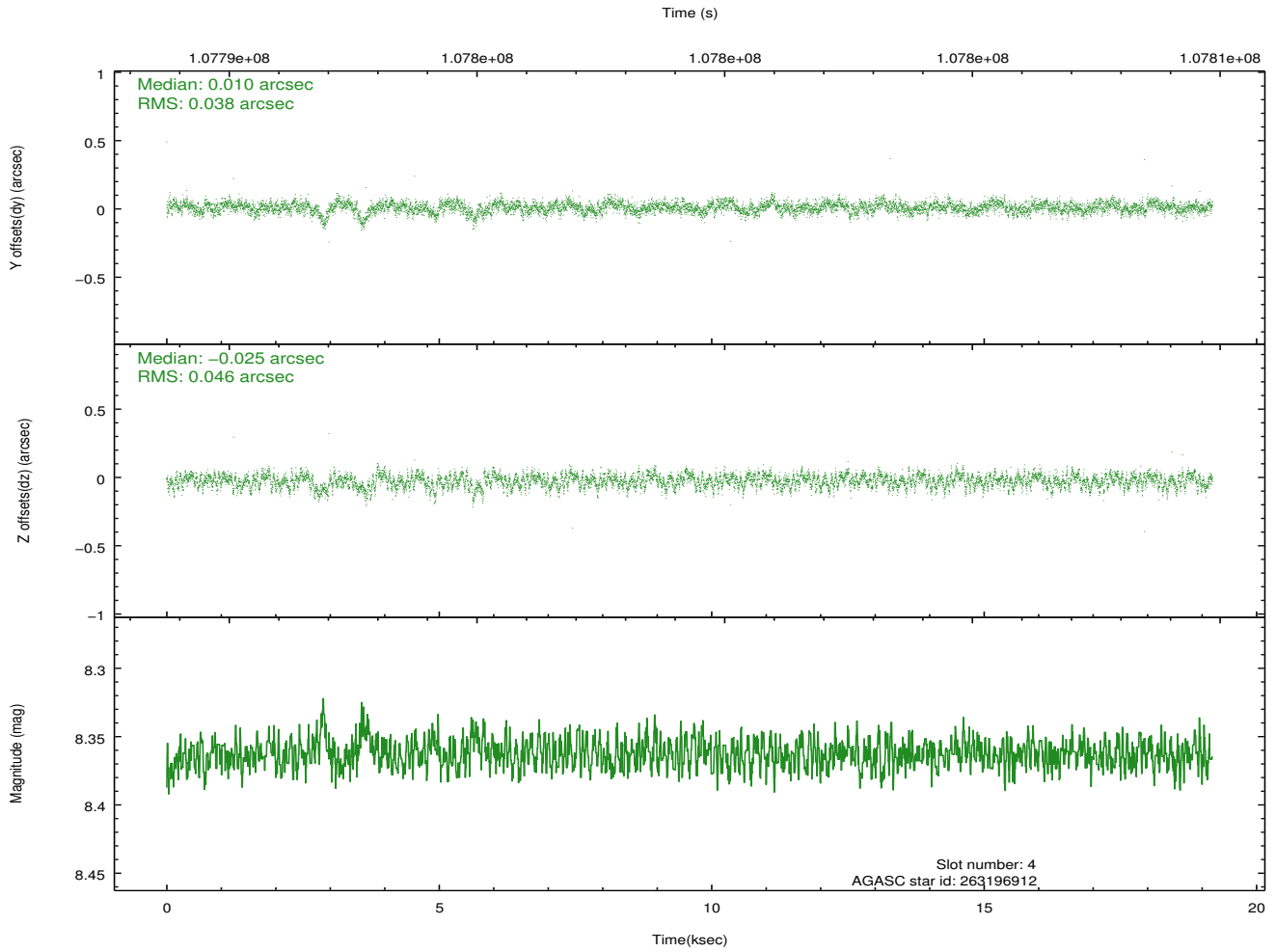
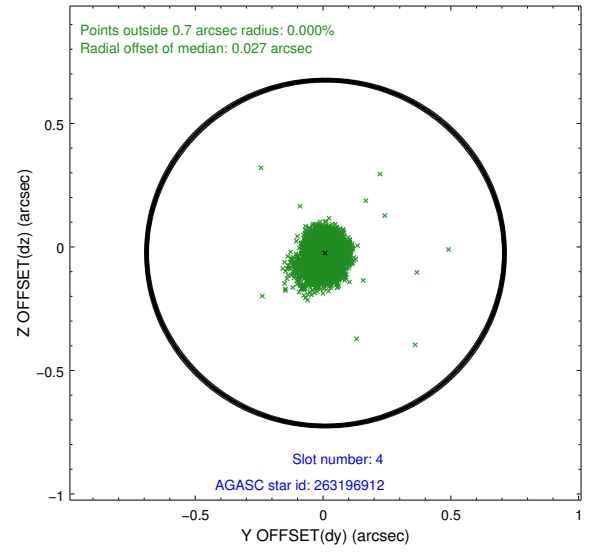
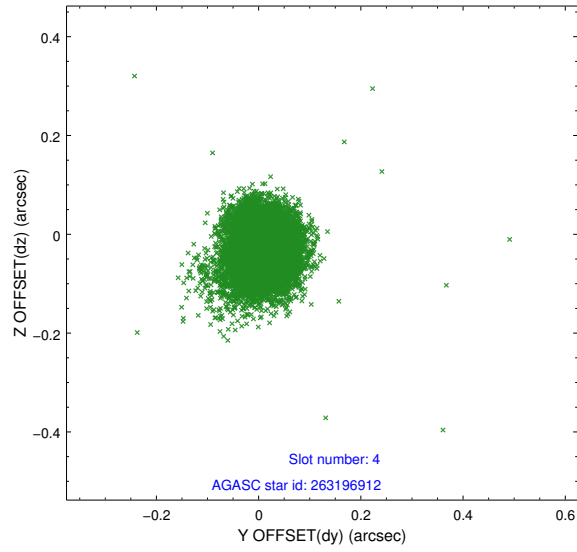
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.17	4682	-0.048	-0.058	0.008	0.014	0.000000	0.000000	-756.50	-993.62
1	FID	ACIS-I-4	7.15	4682	-0.023	0.050	0.006	0.011	0.000000	0.000000	2157.44	912.50
2	FID	ACIS-I-5	7.22	4682	-0.030	0.076	0.009	0.014	0.000000	0.000000	-1809.66	909.58
3	GUIDE	263198488	8.00	9363	-0.001	-0.070	0.058	0.094	215.302096	24.133252	1445.76	-1410.59
4	GUIDE	263196912	8.36	9360	0.010	-0.025	0.061	0.102	215.746107	24.106688	357.27	-434.75
5	GUIDE	263198456	8.73	9363	0.047	-0.106	0.056	0.091	215.550984	23.637397	1904.78	499.05
6	GUIDE	263194568	8.86	9358	-0.172	-0.076	0.063	0.100	216.120487	24.742057	-2017.40	-1483.17
7	GUIDE	263200584	9.68	9355	0.118	0.280	0.104	0.167	215.715152	23.220906	2402.59	2014.09

## 2.4 Star Slots

### 2.4.1 Slot 3

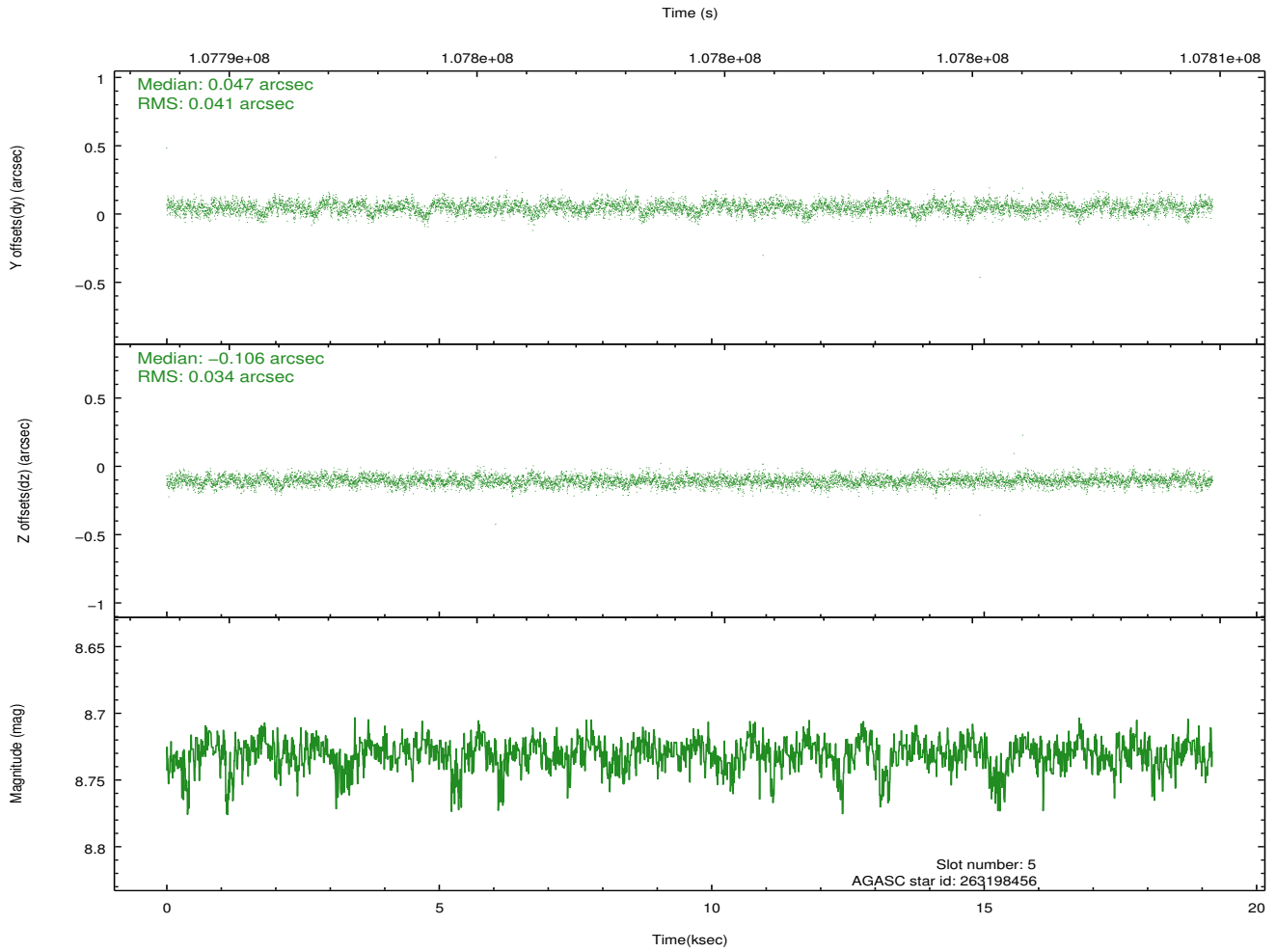
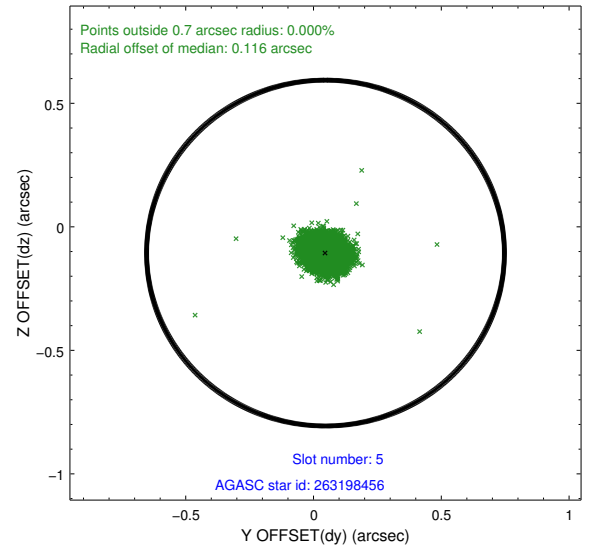
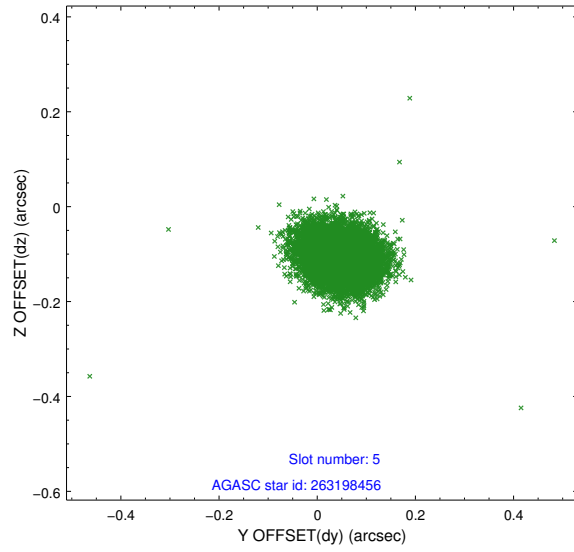


## 2.4.2 Slot 4

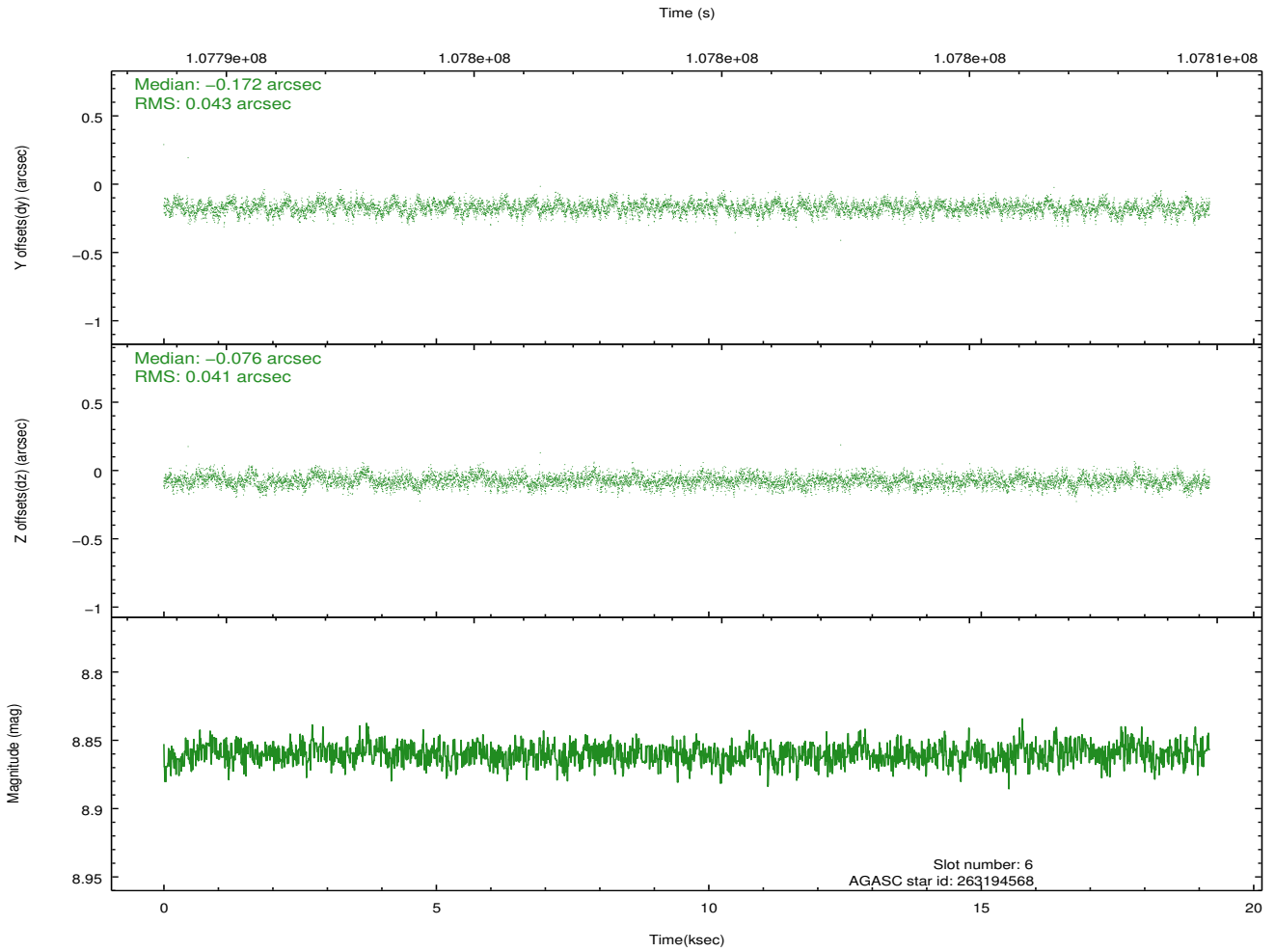
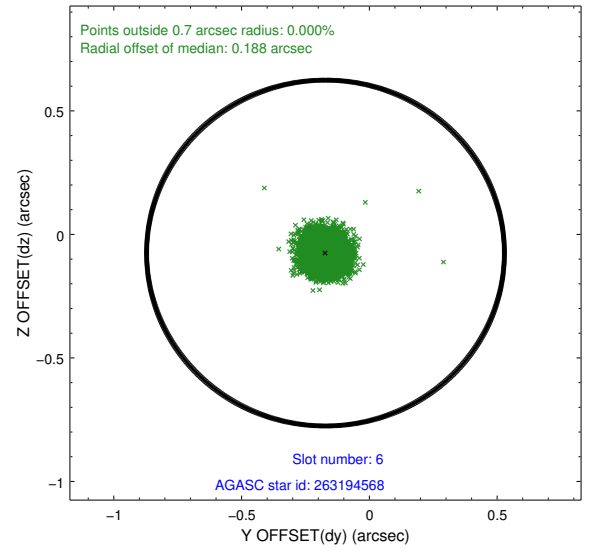
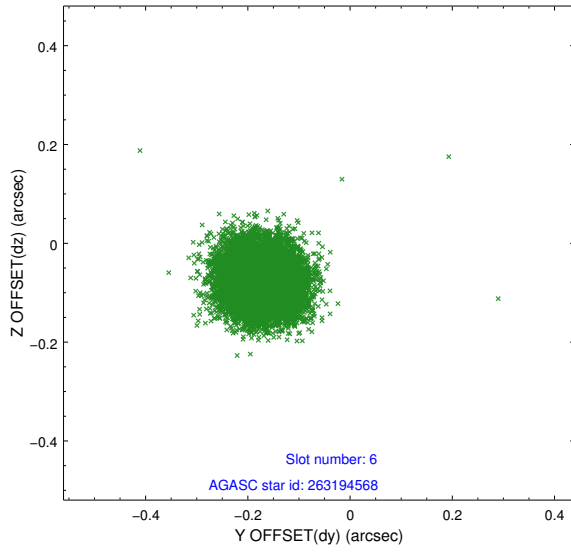




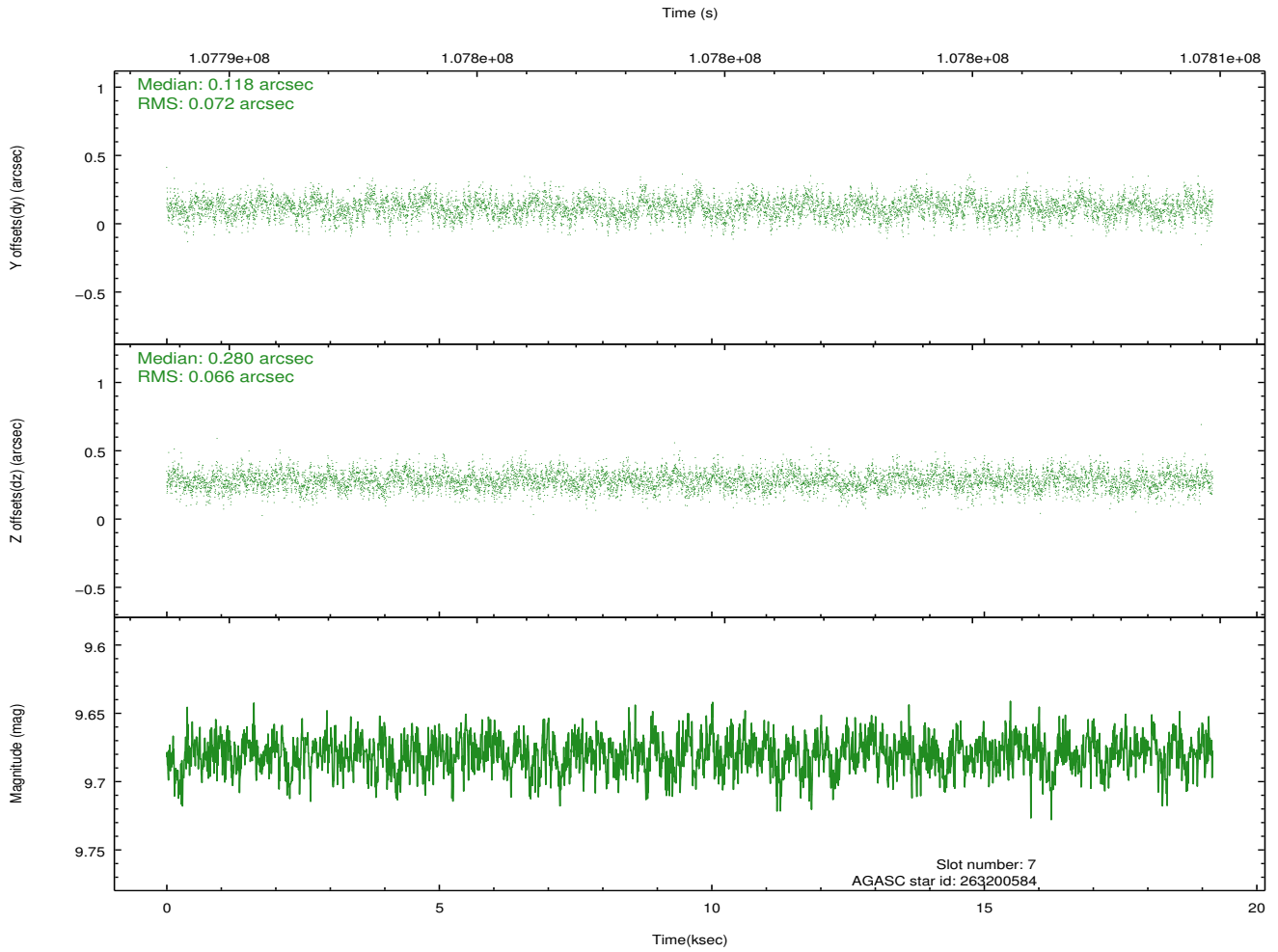
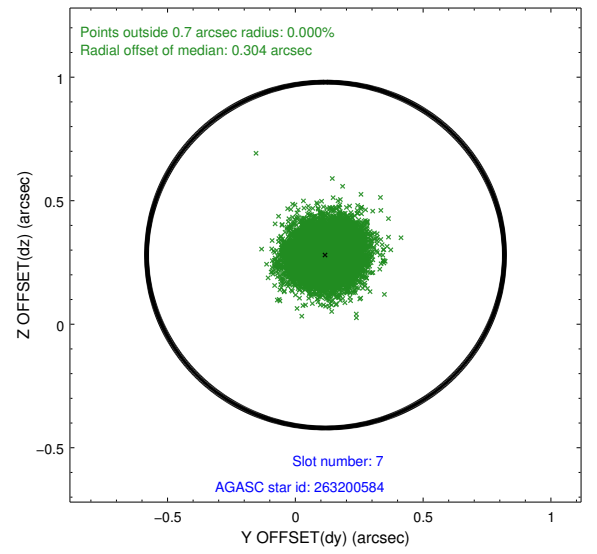
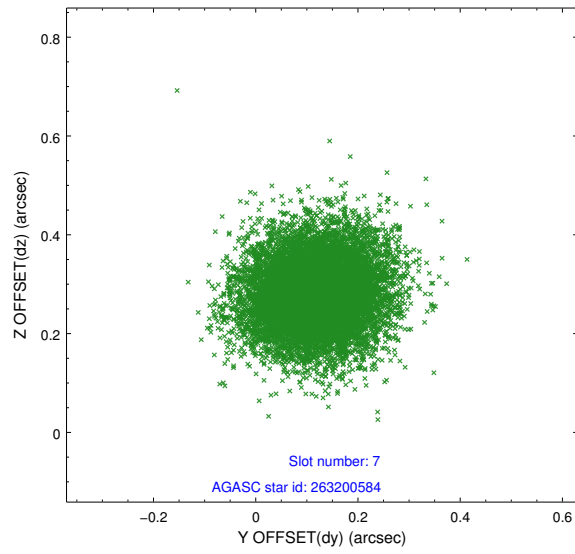
### 2.4.3 Slot 5



## 2.4.4 Slot 6

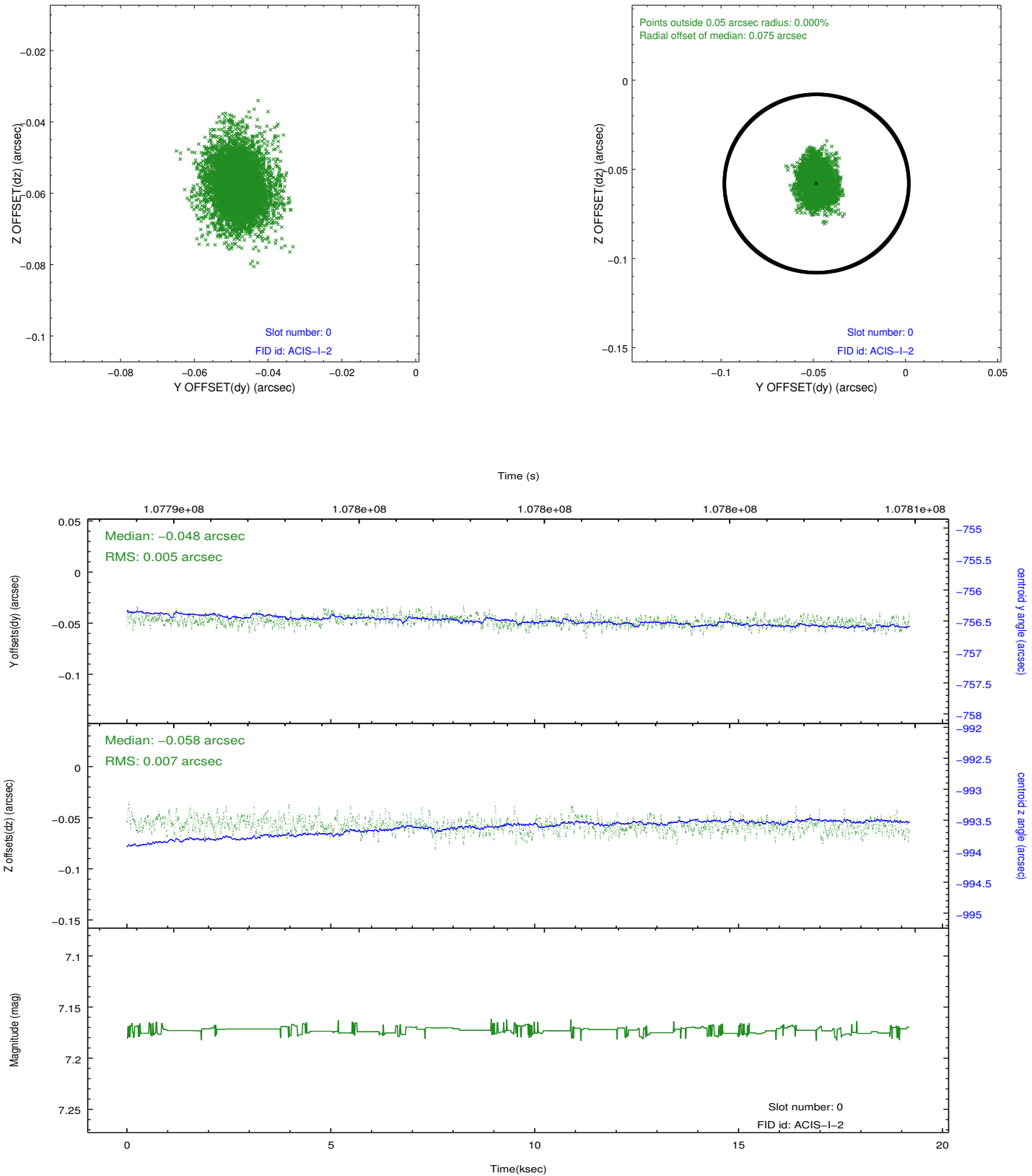


## 2.4.5 Slot 7

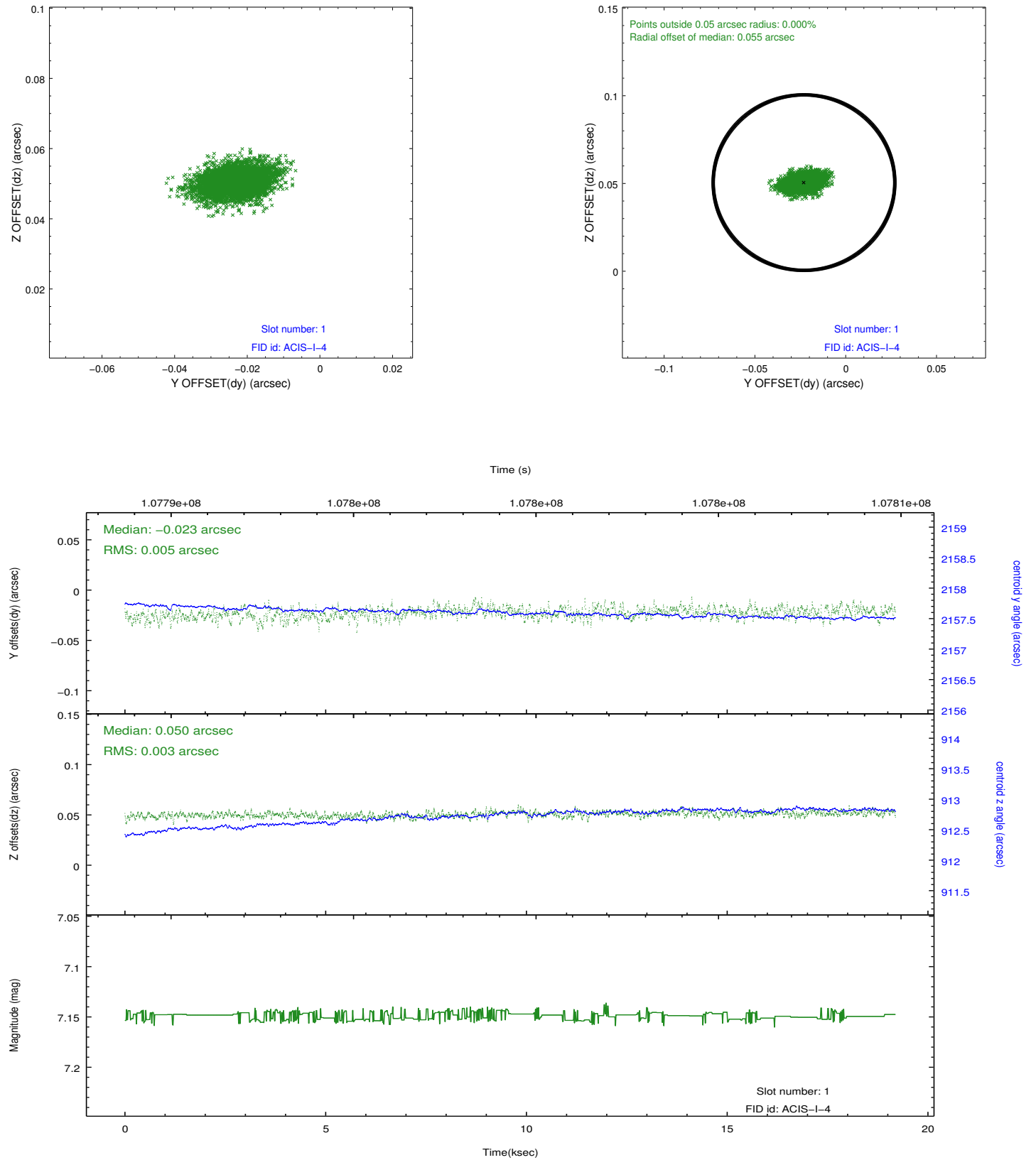


## 2.5 FID Slots

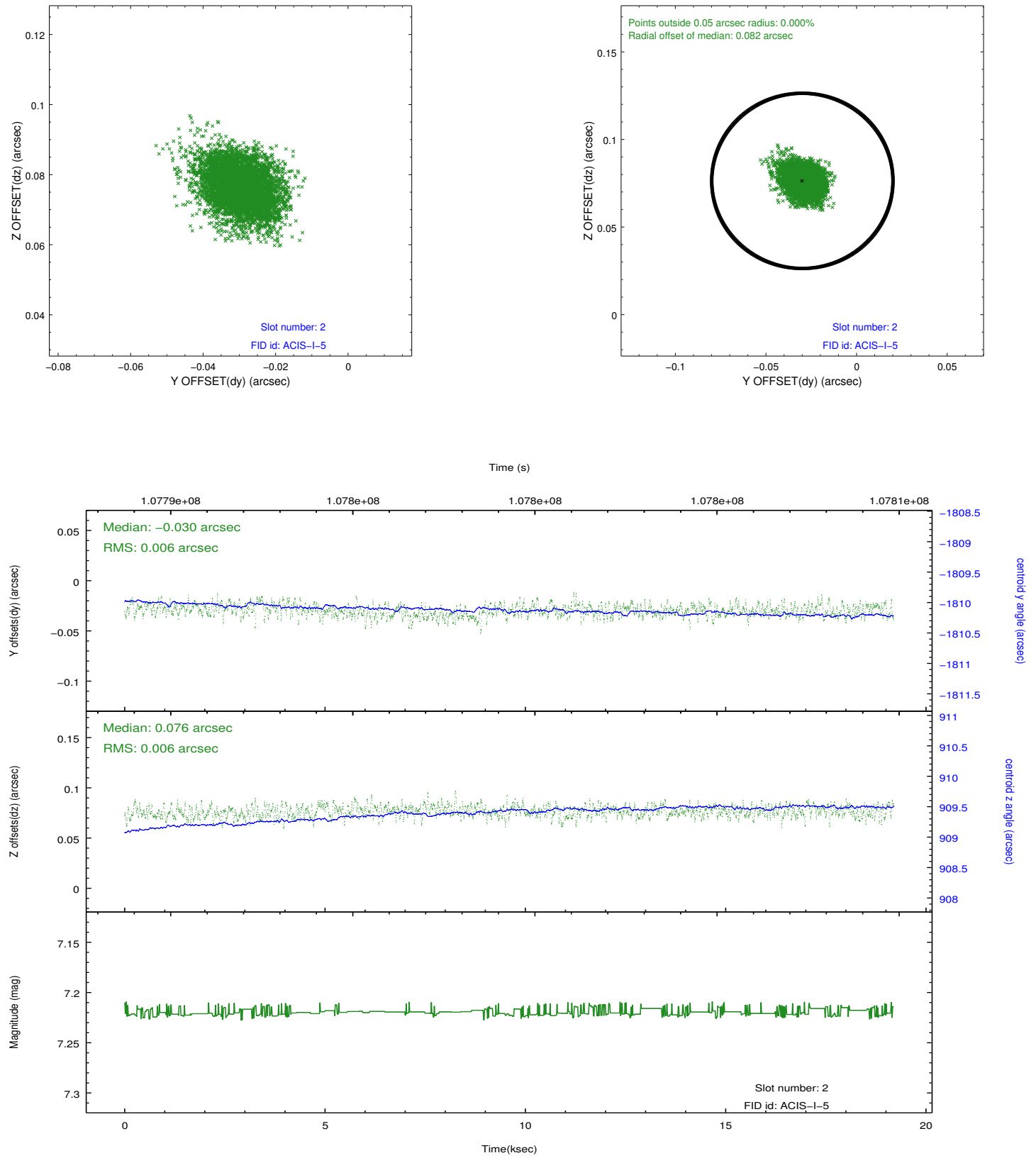
### 2.5.1 Slot 0



## 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)	2012.09.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	18.773

### **A.2 Comments**