

# V&V Reference Report

## L2 ASCDS Version : 8.1.1

Observation 555 - L2 Version 4

Chandra X-Ray Center

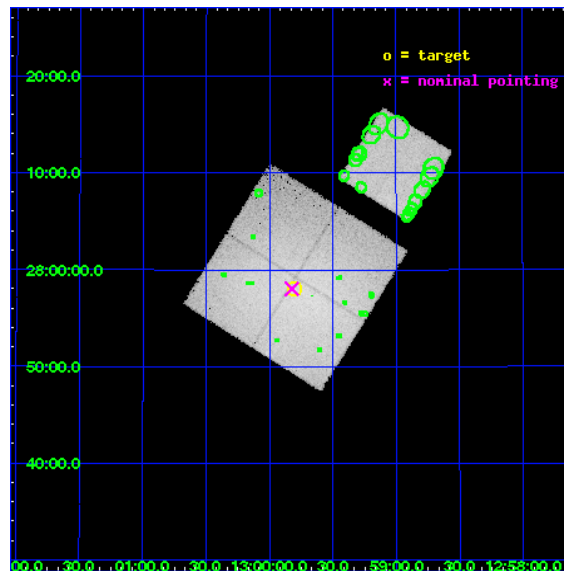
L2 Processing Date : Nov 21 2009

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# 1 Front

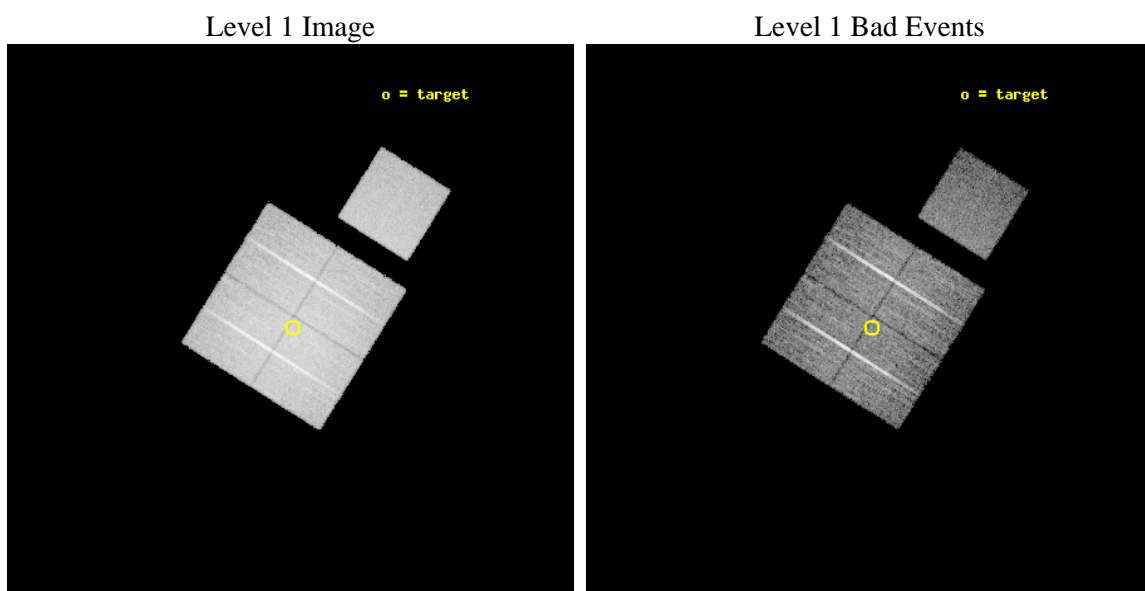
seq_num	890000	Sequence number
obs_id	555	Observation id
title	CALIBRATION OBSERVATION OF AN EXTENDED HARD SOURCE: THE COMA CLUSTER	&#160
observer	Dr. CXC Calibration	Principal investigator
object	COMA CLUSTER	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	194.95	Observer's specified target RA
dec_targ	27.966667	Observer's specified target Dec
ra_nom	194.95597652055	Nominal RA
dec_nom	27.967481883345	Nominal Dec
roll_nom	32.065113089818	Nominal Roll
revision	4	Processing version of data
ontime	8774.4000081718	Sum of GTIs [s]
livetime	8663.2932719589	Livetime [s]
ontime0	8774.4000081718	Sum of GTIs [s]
ontime1	8774.4000081718	Sum of GTIs [s]
ontime2	8774.4000081718	Sum of GTIs [s]
ontime3	8774.4000081718	Sum of GTIs [s]
ontime7	8774.4000081718	Sum of GTIs [s]
l2events	239471	Number of level 2 events



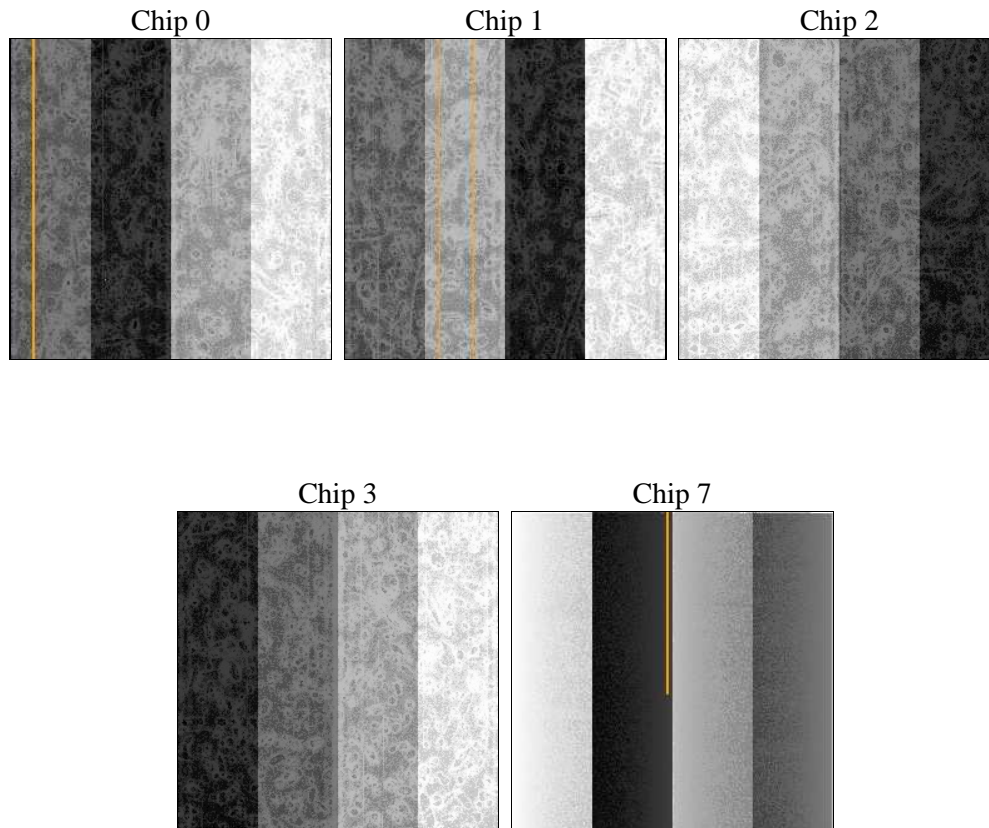
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	9000.000000	Scheduled observation exposure time
ascdsver	8.1.1	ASCDS version number	ontime	8774.4000081718	Sum of GTIs [s]
caldsver	4.1.4	&#160	ontime0	8774.4000081718	Sum of GTIs [s]
date	2009-11-21T09:54:30	Date and time of file creation	ontime1	8774.4000081718	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	8774.4000081718	Sum of GTIs [s]
			ontime3	8774.4000081718	Sum of GTIs [s]
			ontime7	8774.4000081718	Sum of GTIs [s]
			l1events	584513	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	123908	137706	106413	119868	96618
rejected events	70605	69440	74185	72725	52170
rejected %	56%	50%	69%	60%	53%

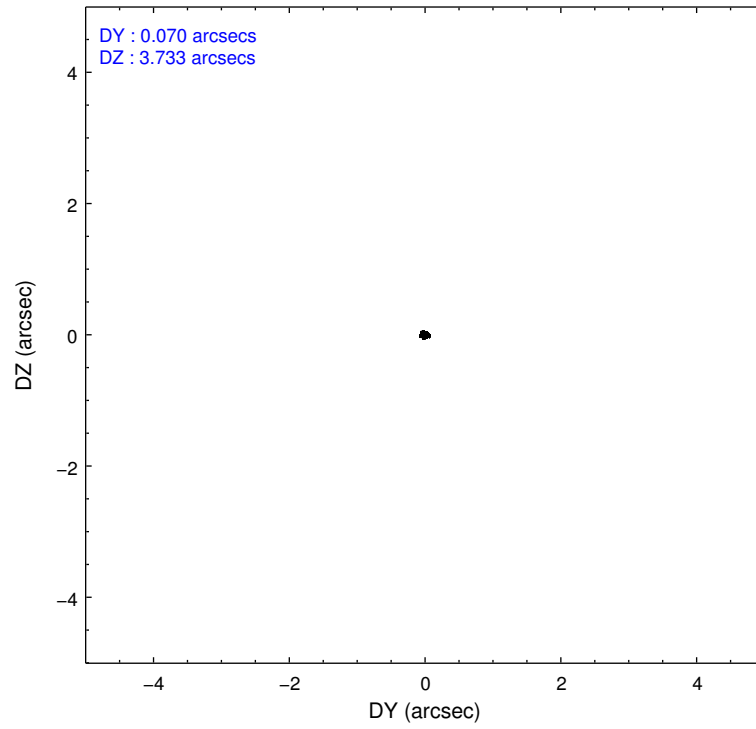
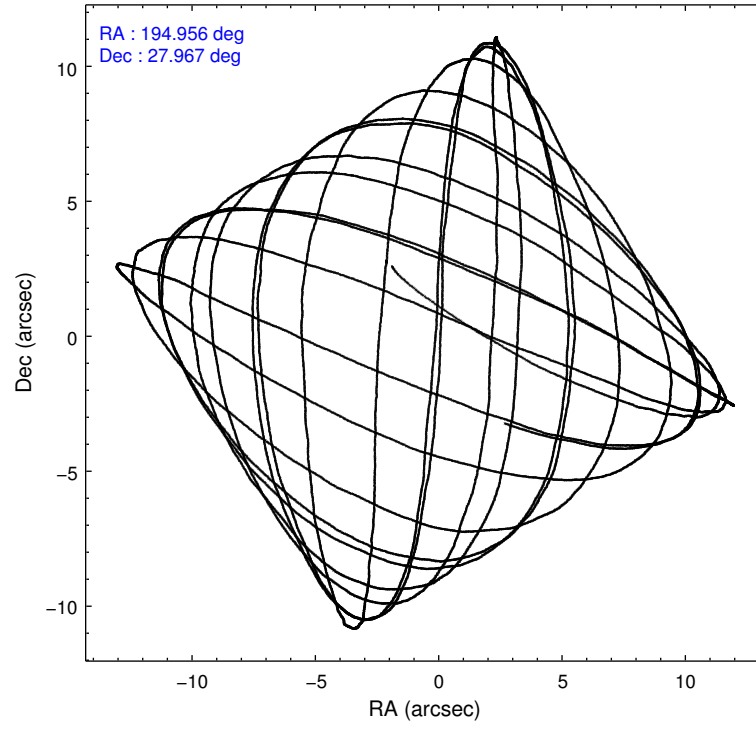
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	32663	43747	17445	28162	5843
	26%	31%	16%	23%	6%
grade 1 events	100	127	47	87	33
	0%	0%	0%	0%	0%
grade 2 events	14021	16516	10312	13281	10247
	11%	11%	9%	11%	10%
grade 3 events	1678	1992	998	1317	3225
	1%	1%	0%	1%	3%
grade 4 events	1530	1968	1007	1291	2927
	1%	1%	0%	1%	3%
grade 5 events	1780	1874	1498	1672	5132
	1%	1%	1%	1%	5%
grade 6 events	3456	4097	2491	3129	22248
	2%	2%	2%	2%	23%
grade 7 events	68680	67385	72615	70929	46963
	55%	48%	68%	59%	48%

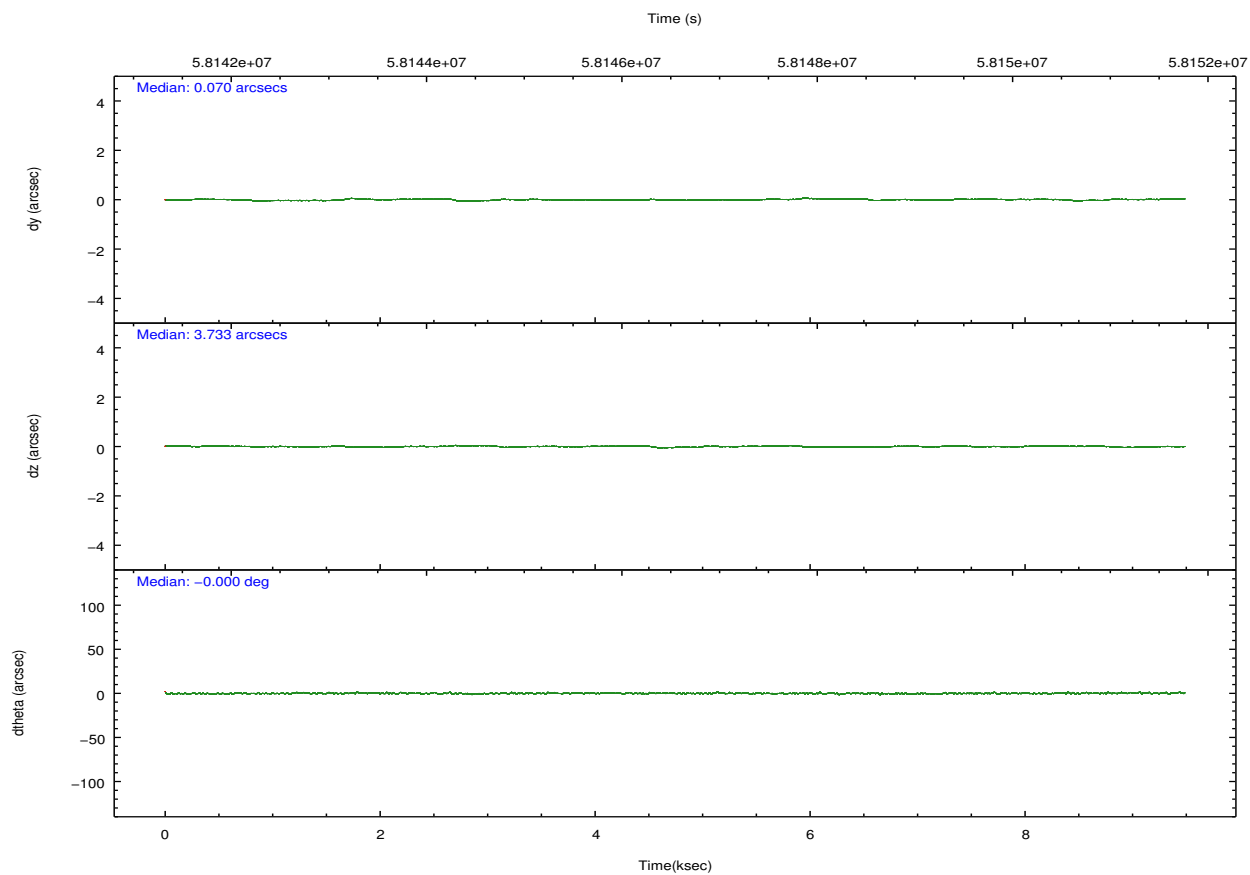
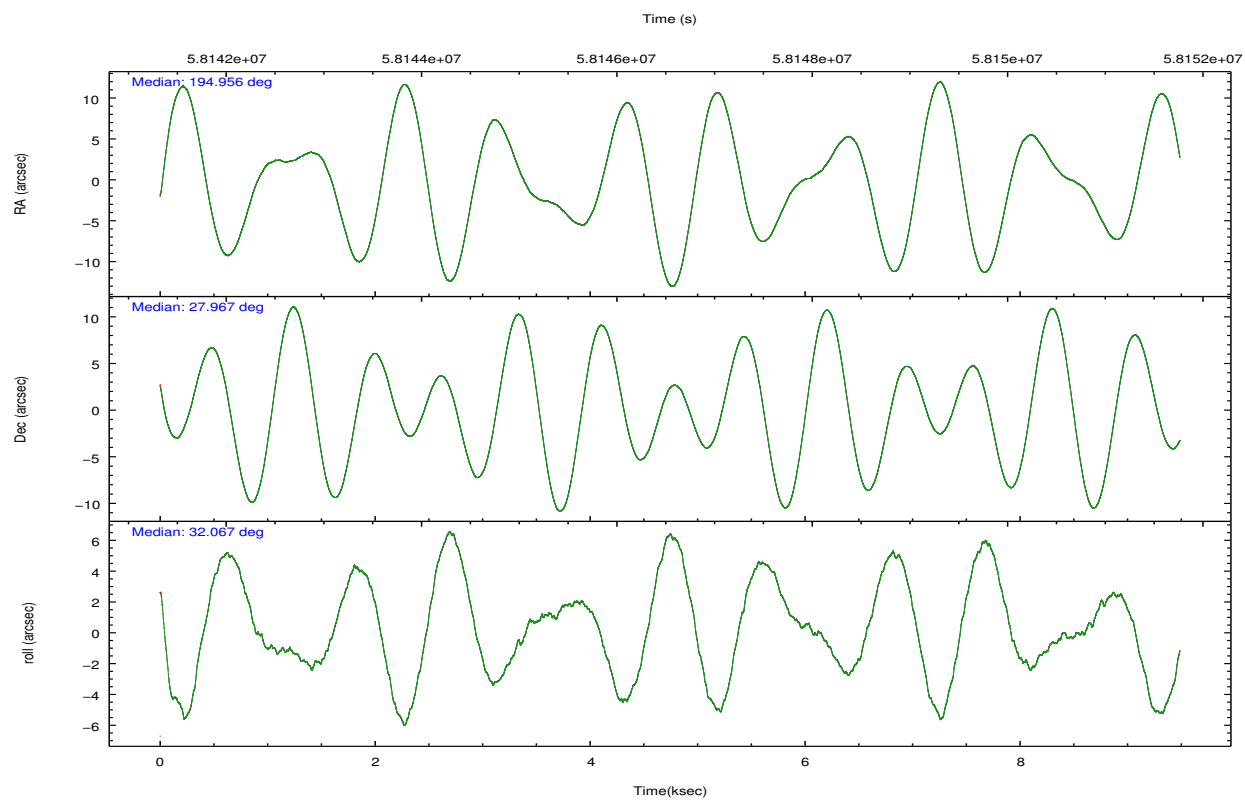


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-01237	ACIS-01237	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	194.940775	194.9559765205476	Subarray requested	NONE	NONE
Pointing Dec	27.943152	27.96748188334486	Alternating exposures requested	N	N
Pointing Roll	31.863552	32.06511308981849	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.782348	-0.7809083437167272			
SIM defocus (mm)	0	0.001439871863259334			
SIM translation stage pos (mm)	-238.592463	-238.5959505415362			
SIM translation stage offset (mm)	5	5.003497538606524			
Observation start time	58142287.184000	58141621.144547			
Observation start date	1999-11-04T22:37:03	1999-11-04T22:27:01			
Observation end time	58151287.184000	58151795.294914			
Observation end date	1999-11-05T01:07:03	1999-11-05T01:16:35			
Read mode	TIMED	TIMED			

## 2.3 Aspect



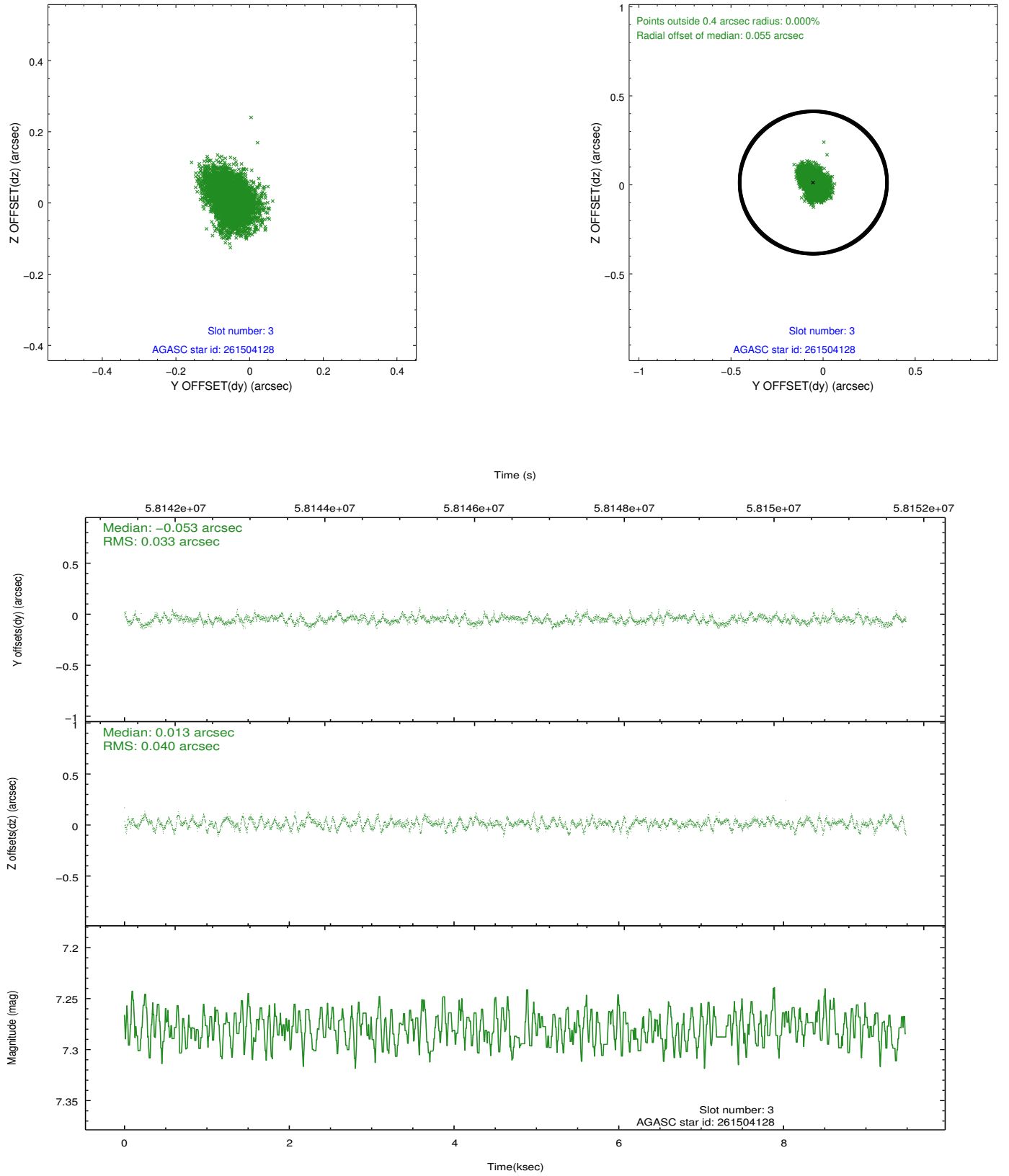


Slot Statistics

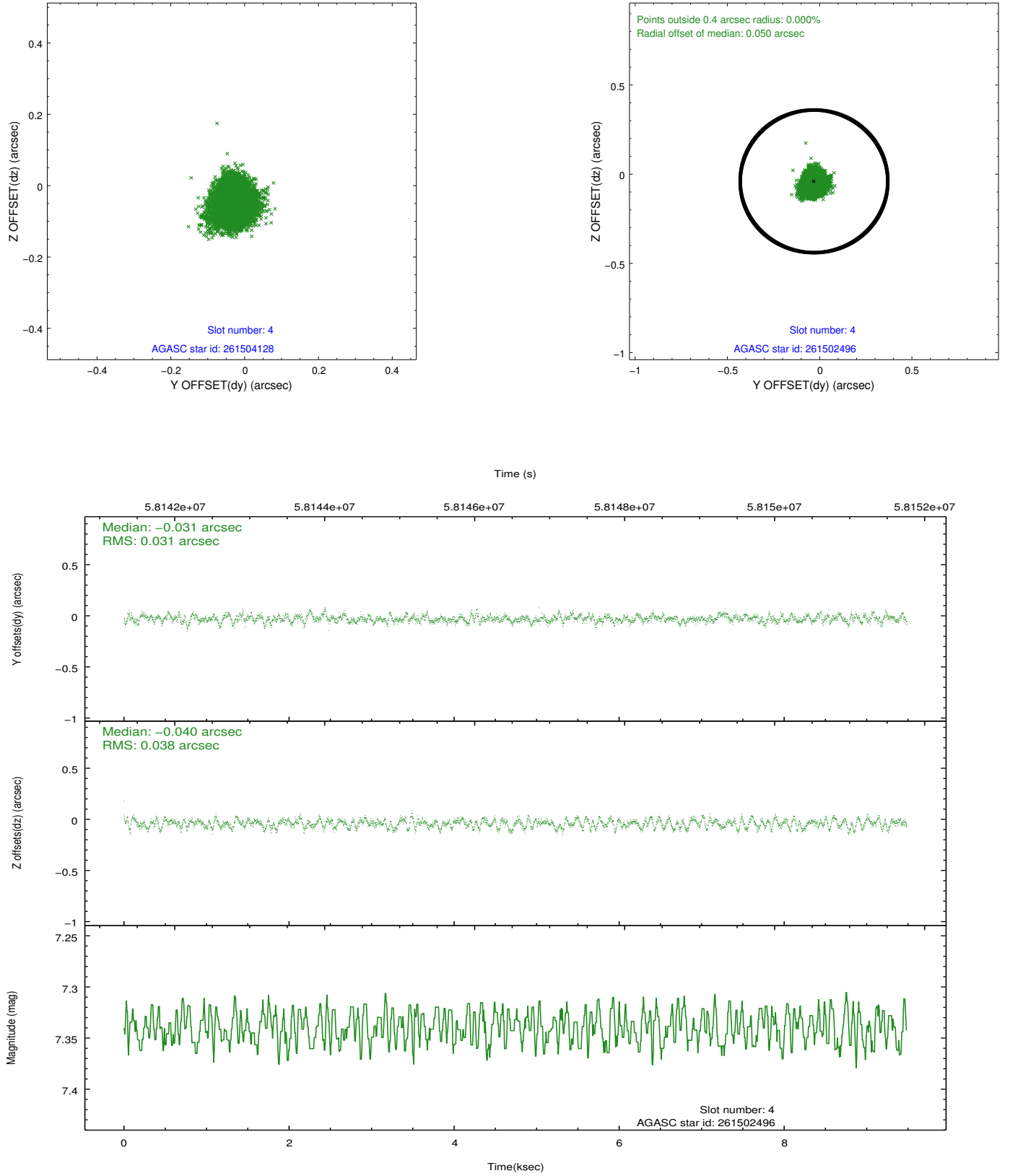
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.20	4629	0.026	-0.019	0.009	0.016	0.000000	0.000000	-754.01	-731.18
1	FID	ACIS-I-4	7.23	4629	-0.022	0.004	0.006	0.011	0.000000	0.000000	2160.00	1174.87
2	FID	ACIS-I-5	7.24	4629	-0.106	0.084	0.009	0.014	0.000000	0.000000	-1807.90	1173.81
3	GUIDE	261504128	7.28	4629	-0.053	0.013	0.055	0.093	194.640935	28.319570	-91.09	1653.85
4	GUIDE	261502496	7.34	4629	-0.031	-0.040	0.053	0.082	194.887297	28.065668	88.50	464.94
5	GUIDE	261498392	8.31	4627	-0.010	0.019	0.053	0.087	194.888587	28.238913	421.52	992.12
6	GUIDE	261492080	9.29	4628	-0.061	-0.025	0.078	0.127	194.976344	28.631585	1403.89	2046.06
7	GUIDE	261505232	9.78	4623	0.159	0.032	0.116	0.189	194.216553	27.802521	-2221.90	794.18

## 2.4 Star Slots

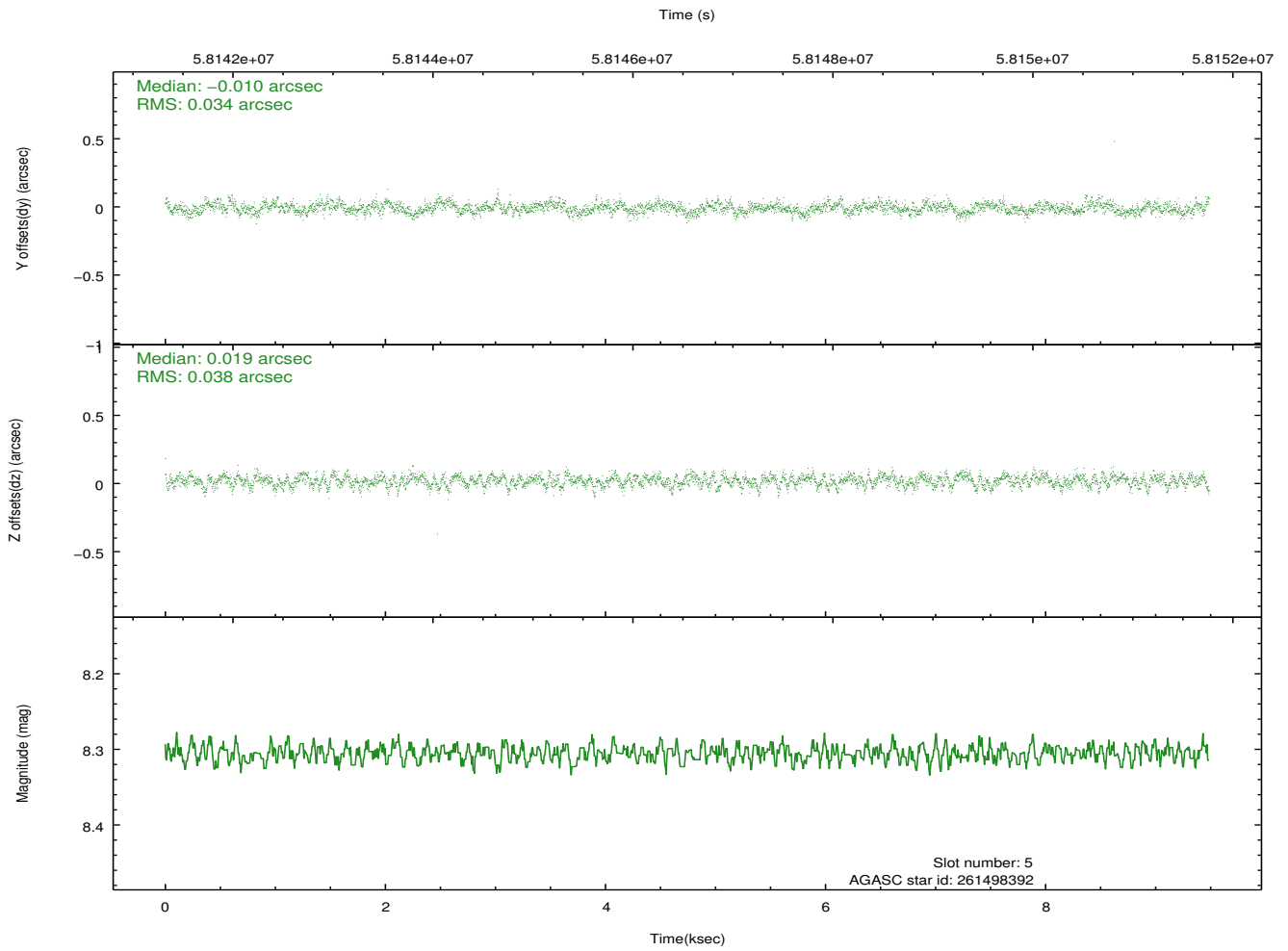
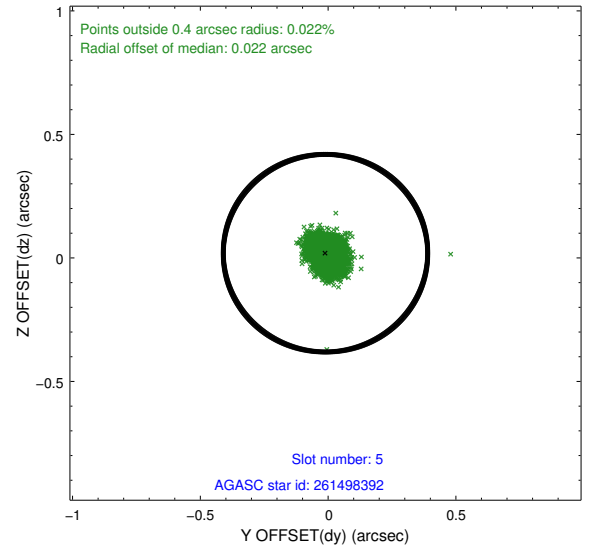
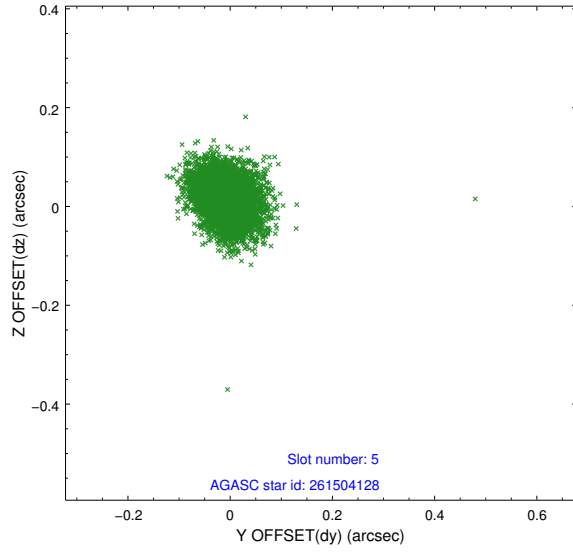
### 2.4.1 Slot 3



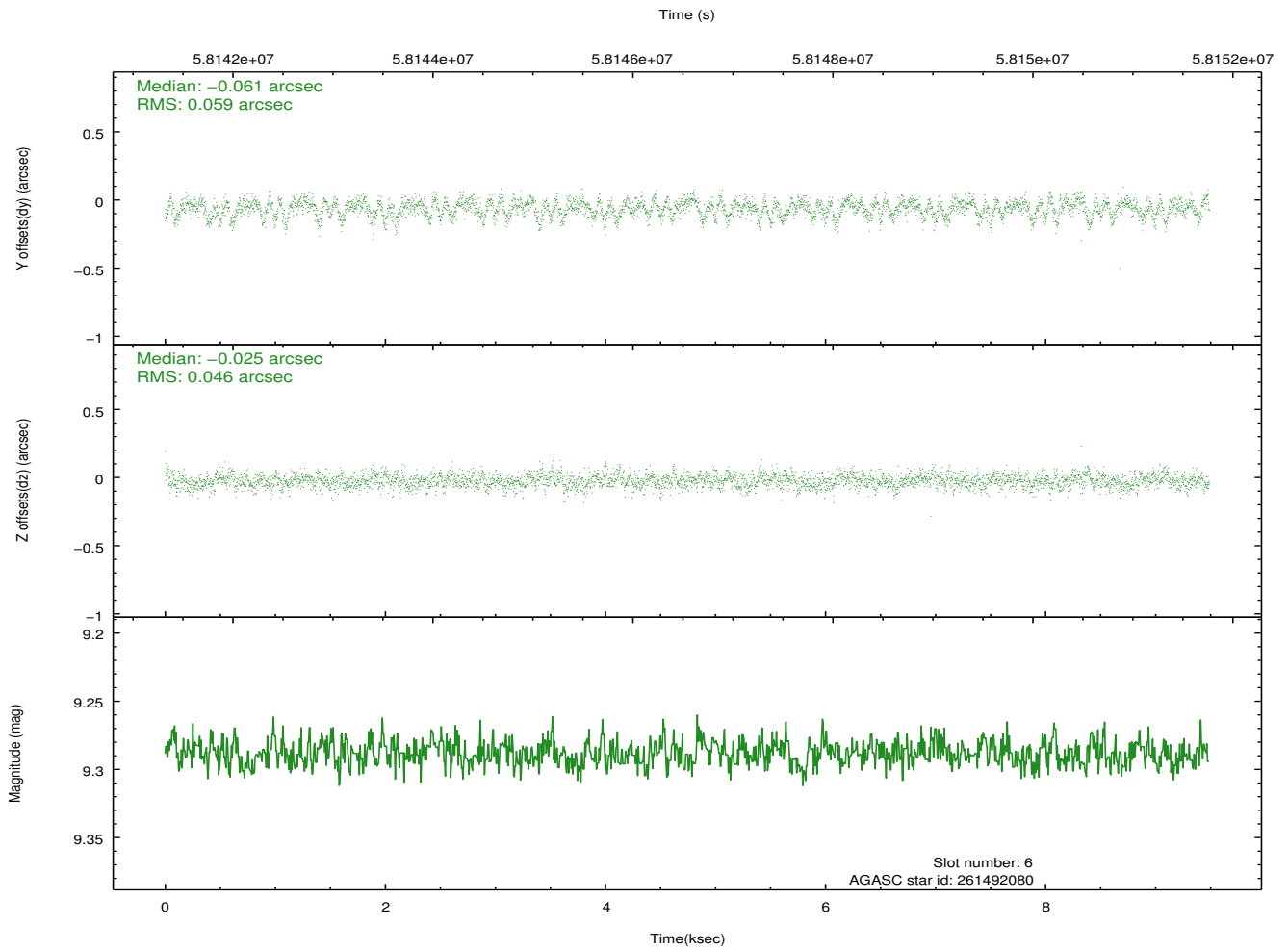
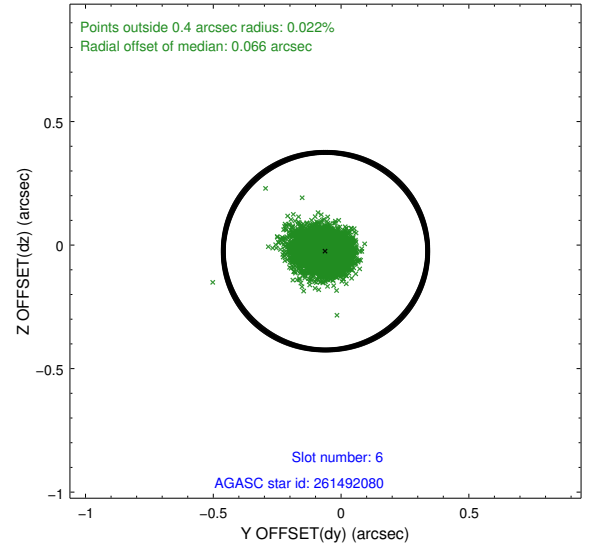
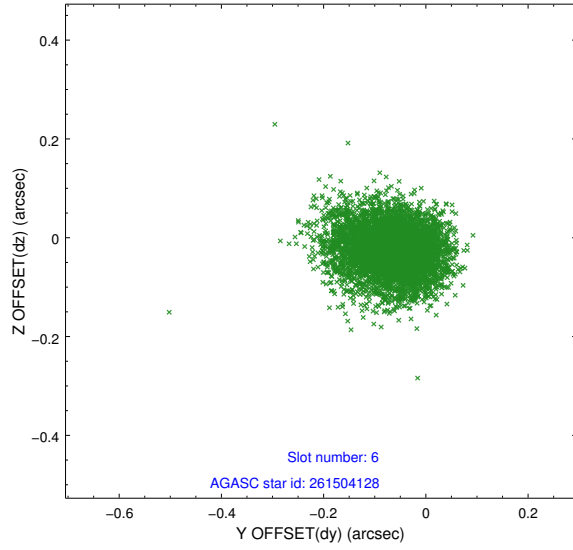
## 2.4.2 Slot 4



### 2.4.3 Slot 5

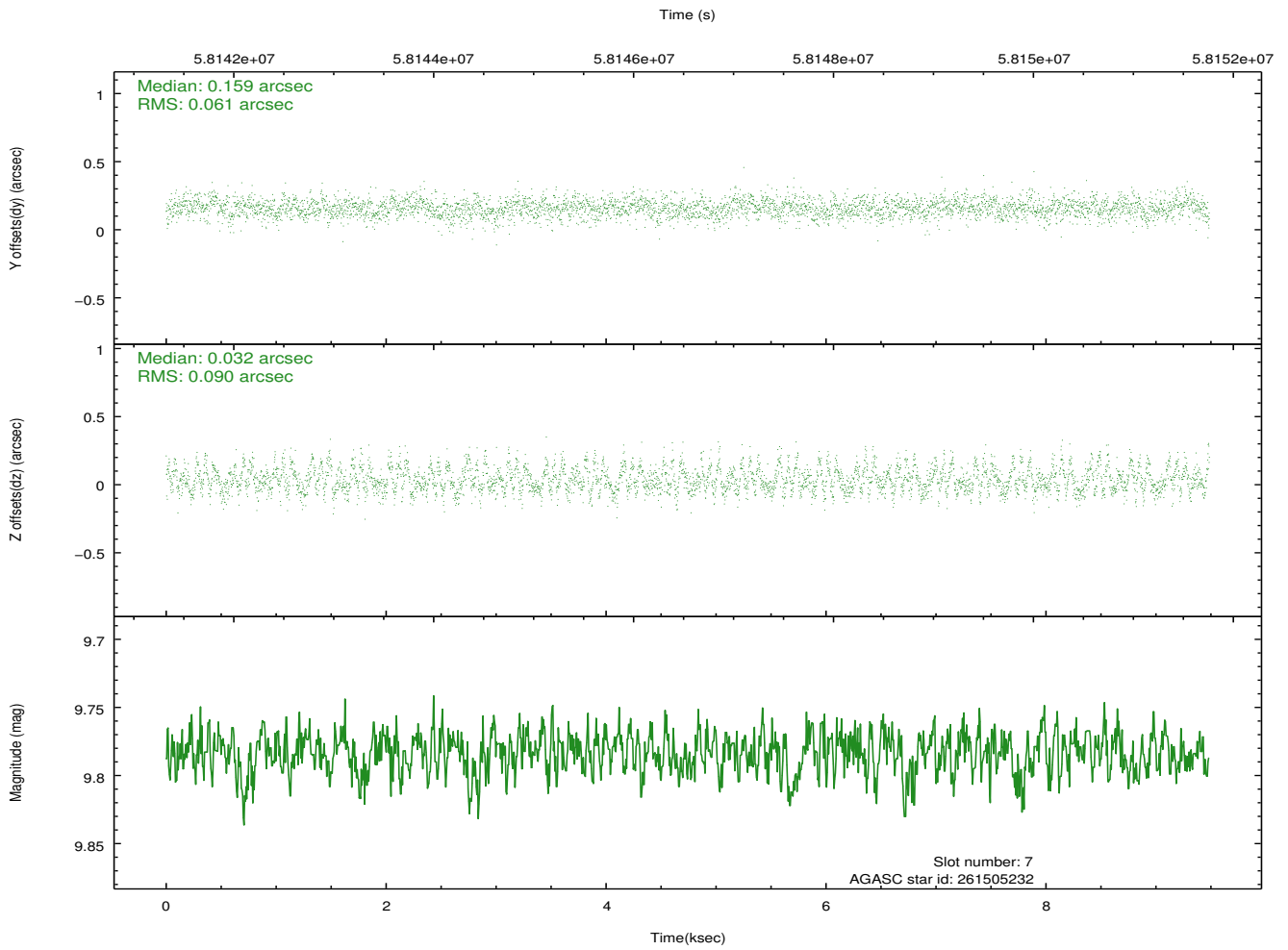
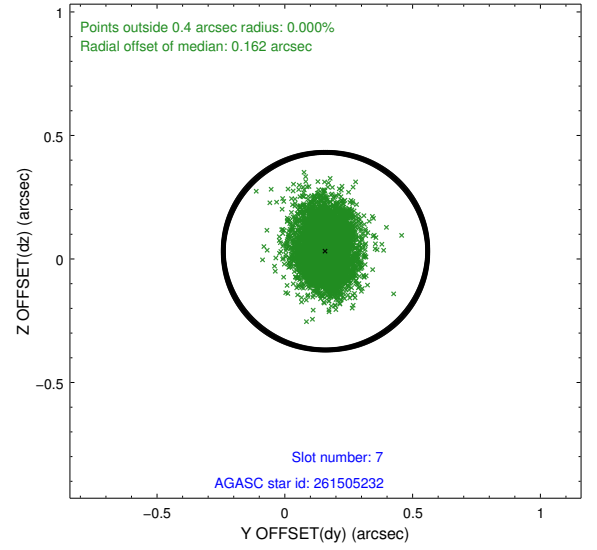
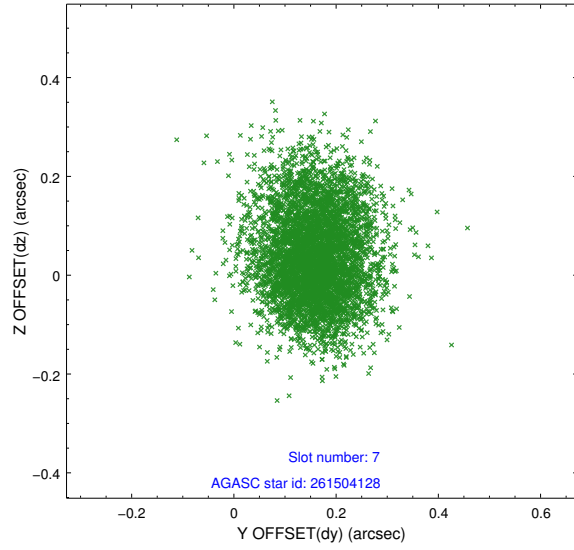


## 2.4.4 Slot 6



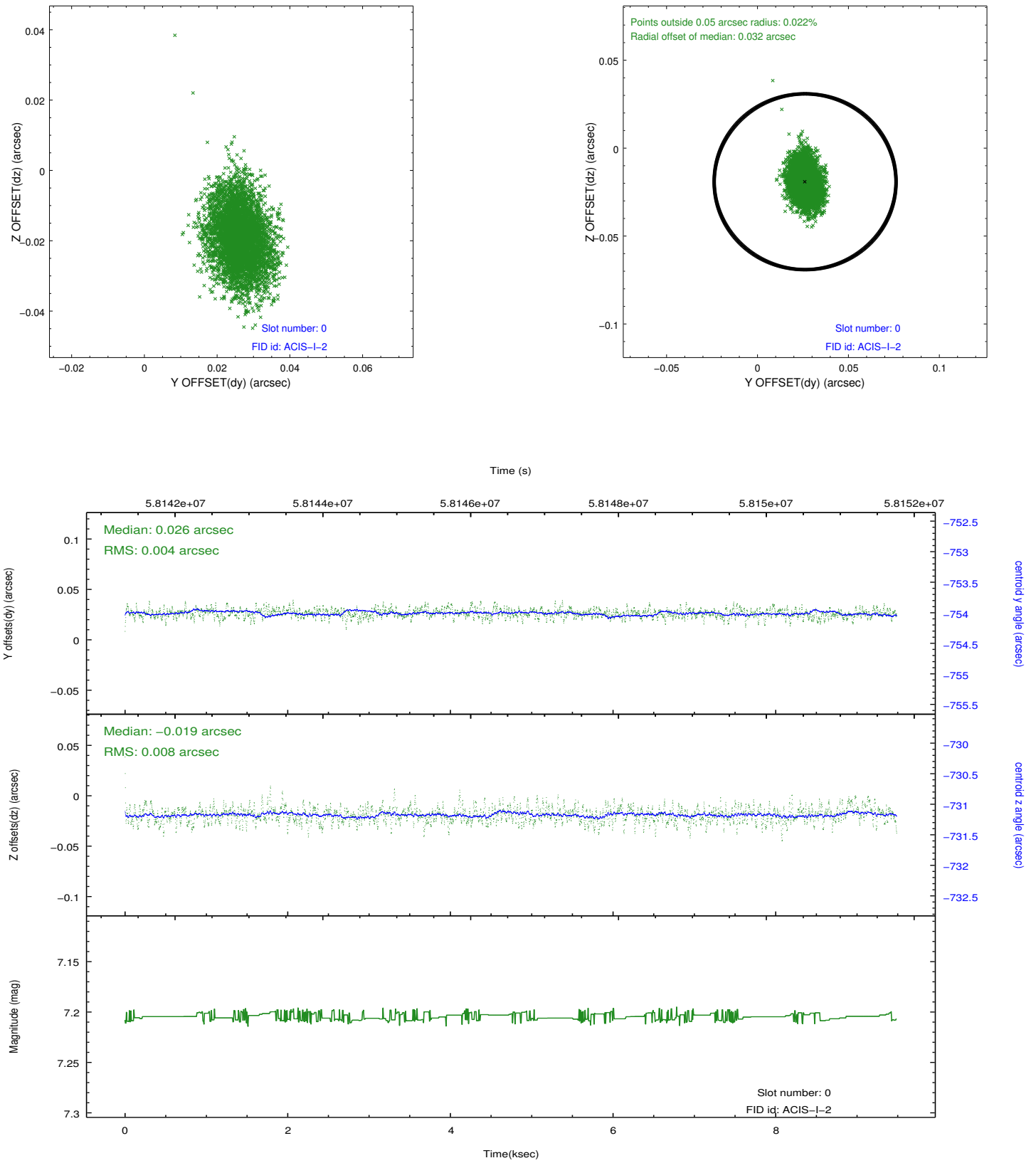


## 2.4.5 Slot 7

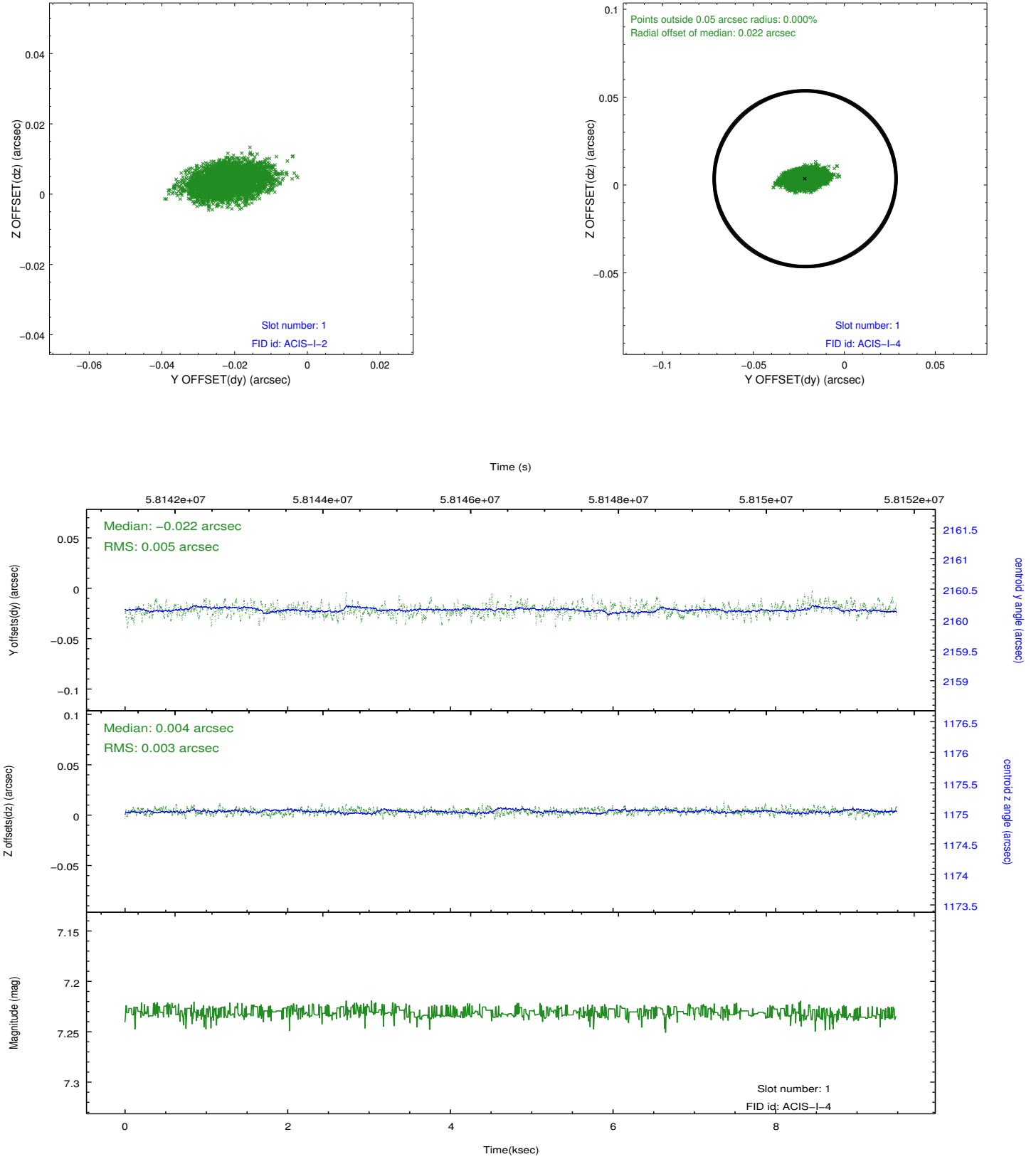


## 2.5 FID Slots

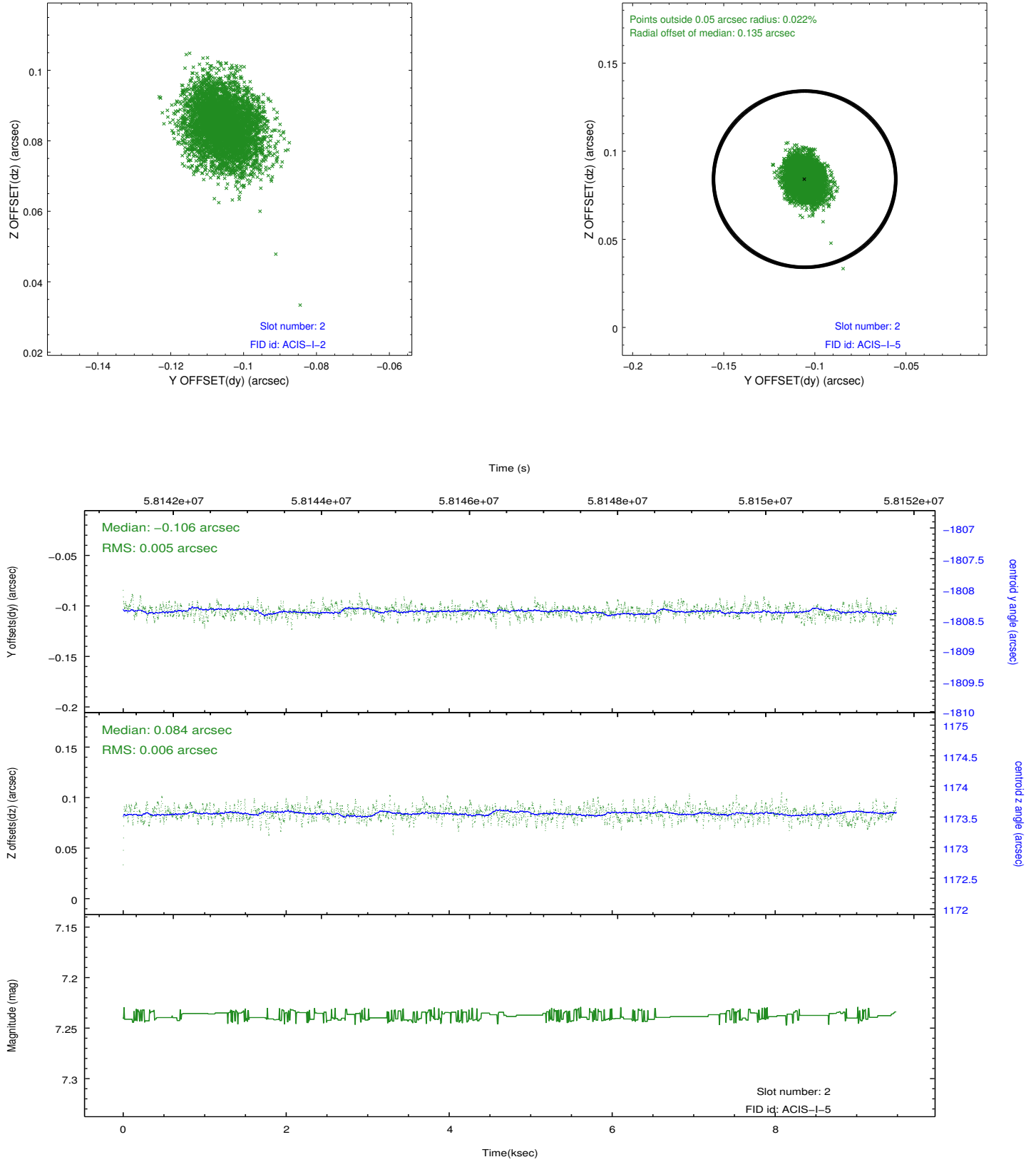
### 2.5.1 Slot 0



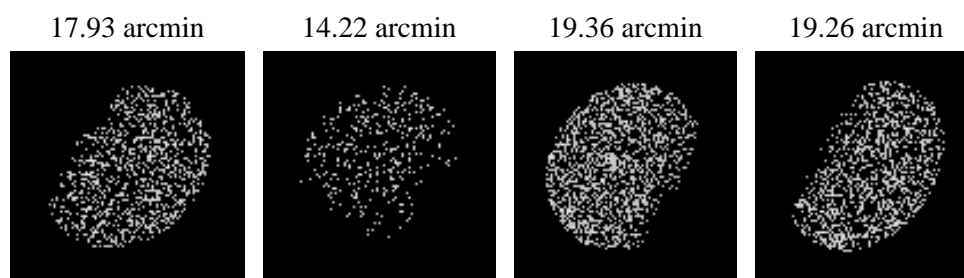
## 2.5.2 Slot 1



### 2.5.3 Slot 2



### 3 Point Sources



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2010.05.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.777

## A.2 Comments

ACIS-I calibration with hard extended source.

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The focal plane temperature is approximately -110 C during this observation. This reprocessing of the data applies no CTI correction because none is available for this temperature at present.

The ACIS CTI correction has not been calibrated at this temperature, because it was early in the mission, and ACIS had not yet been lowered to the standard -119.7 C. Both front and back illuminated chips are affected. However a T\_GAIN correction has been applied to the BI chips (ACIS-5 and ACIS-7) data included here.

The ACIS spectral response calibration is less accurate at these warmer temperatures than it is at -119.7 C. Users whose science objectives depend on the most accurate spectral response (ie: fitting line-rich spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response should not notice an effect.