

# V&V Reference Report

## L2 ASCDS Version : 8.3.2.1

Observation 49 - L2 Version 5

Chandra X-Ray Center

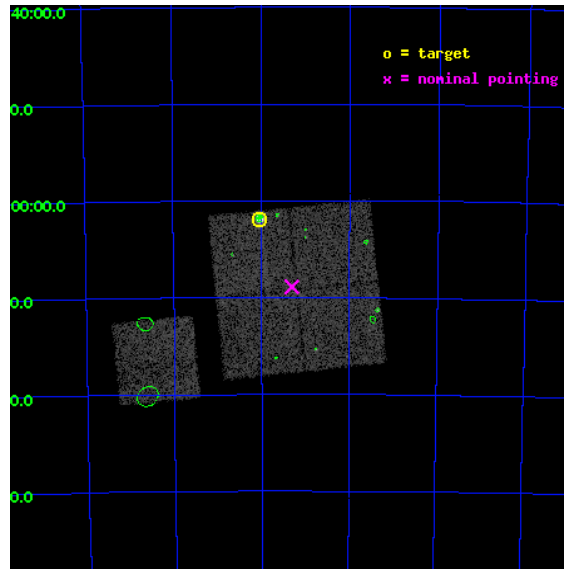
L2 Processing Date : Sep 24 2010

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# 1 Front

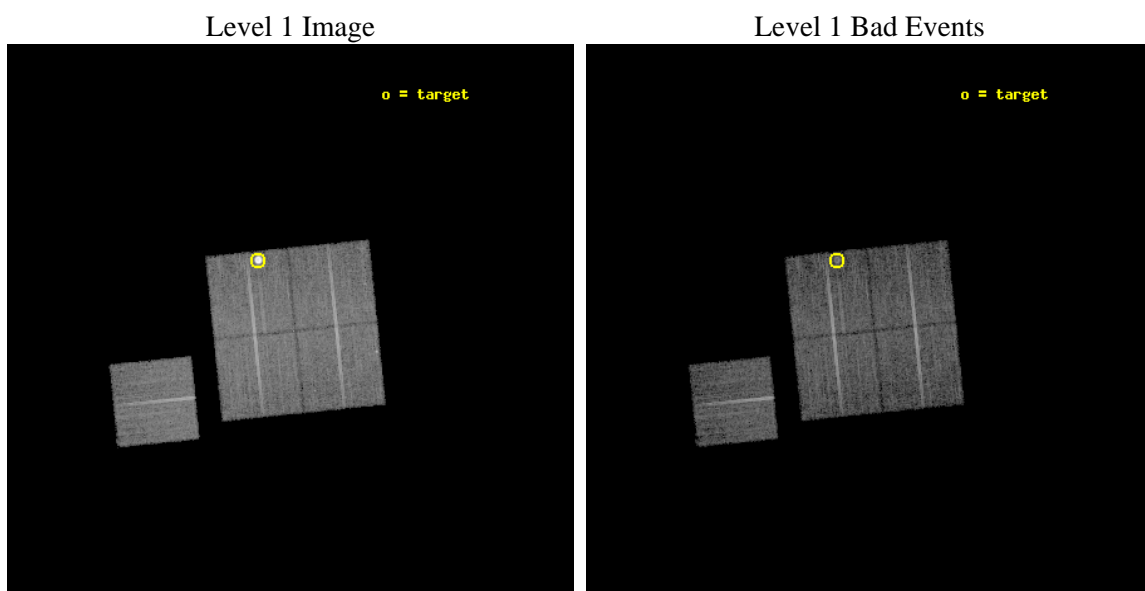
seq_num	590109	Sequence number
obs_id	49	Observation id
title	ACIS CHIP RESPONSE TO LINES WITH E=0.6-1.5 KEV	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	E0102-72.3 [Chip I1, T=110, Offsets=-7,-2,0]	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	16.01	Observer's specified target RA
dec_targ	-72.032028	Observer's specified target Dec
ra_nom	15.827821319178	Nominal RA
dec_nom	-72.148241999039	Nominal Dec
roll_nom	264.16760805726	Nominal Roll
revision	5	Processing version of data
ontime	9269.6971068829	Sum of GTIs [s]
livetime	9152.3186205741	Livetime [s]
ontime0	9269.8612668812	Sum of GTIs [s]
ontime1	9269.8202268779	Sum of GTIs [s]
ontime2	9269.7791868821	Sum of GTIs [s]
ontime3	9269.6971068829	Sum of GTIs [s]
ontime6	9269.7381468788	Sum of GTIs [s]
l2events	69534	Number of level 2 events



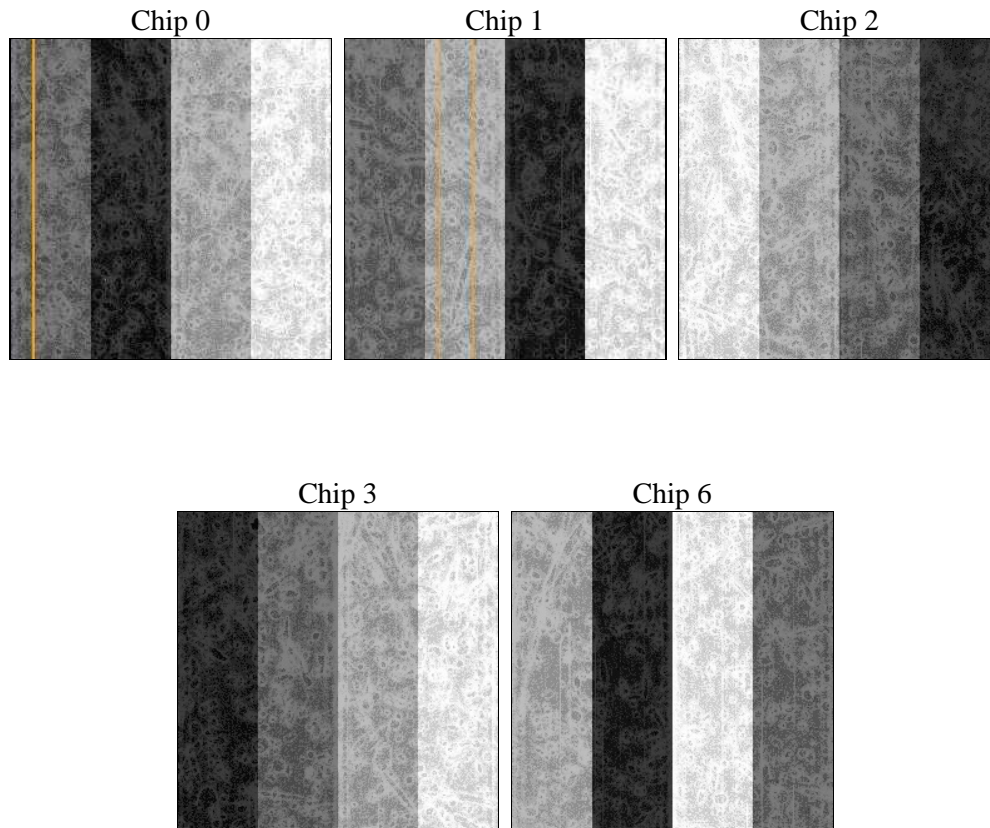
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	9500.000000	Scheduled observation exposure time
ascdsver	8.3.2.1	ASCDS version number	ontime	9269.6971068829	Sum of GTIs [s]
caldsver	4.3.1	&#160	ontime0	9269.8612668812	Sum of GTIs [s]
date	2010-09-24T19:52:57	Date and time of file creation	ontime1	9269.8202268779	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	9269.7791868821	Sum of GTIs [s]
			ontime3	9269.6971068829	Sum of GTIs [s]
			ontime6	9269.7381468788	Sum of GTIs [s]
			l1events	423354	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	75227	74706	80715	113175	79531
rejected events	66653	66327	73108	72151	71902
rejected %	88%	88%	90%	63%	90%

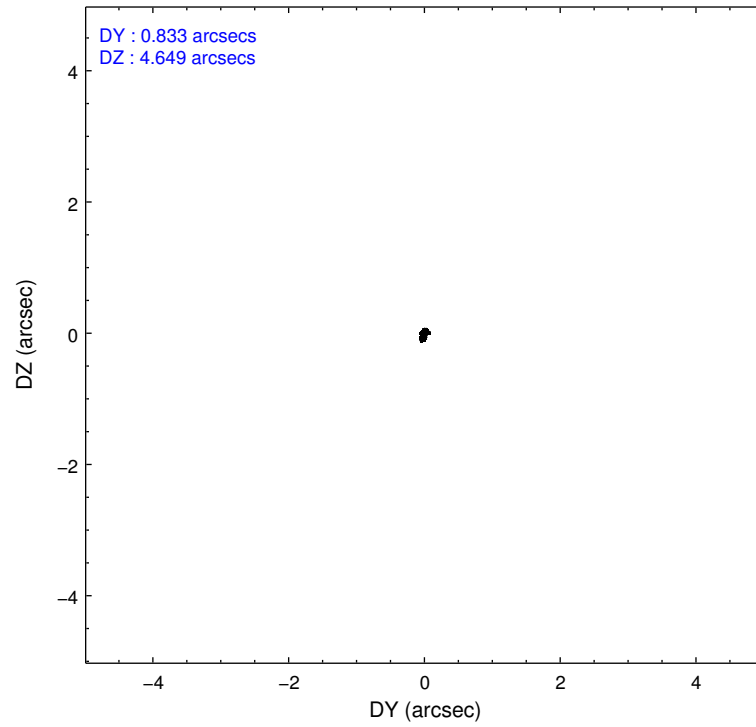
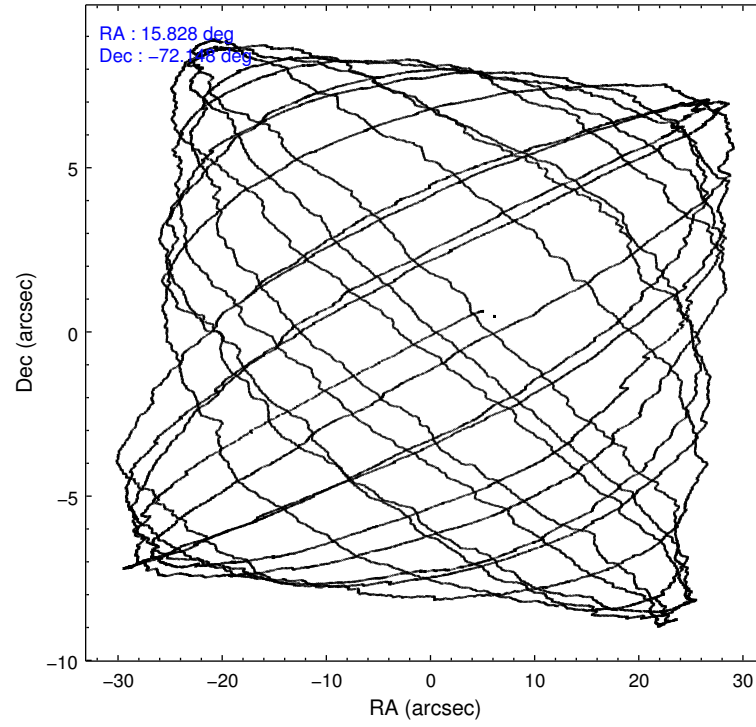
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2336	2070	1968	31188	1555
	3%	2%	2%	27%	1%
grade 1 events	20	16	16	254	11
	0%	0%	0%	0%	0%
grade 2 events	3189	2945	2865	5555	2945
	4%	3%	3%	4%	3%
grade 3 events	594	670	496	1123	490
	0%	0%	0%	0%	0%
grade 4 events	593	667	469	1100	462
	0%	0%	0%	0%	0%
grade 5 events	1652	1687	1366	1641	1603
	2%	2%	1%	1%	2%
grade 6 events	1873	2032	1814	2083	2183
	2%	2%	2%	1%	2%
grade 7 events	64970	64619	71721	70231	70282
	86%	86%	88%	62%	88%

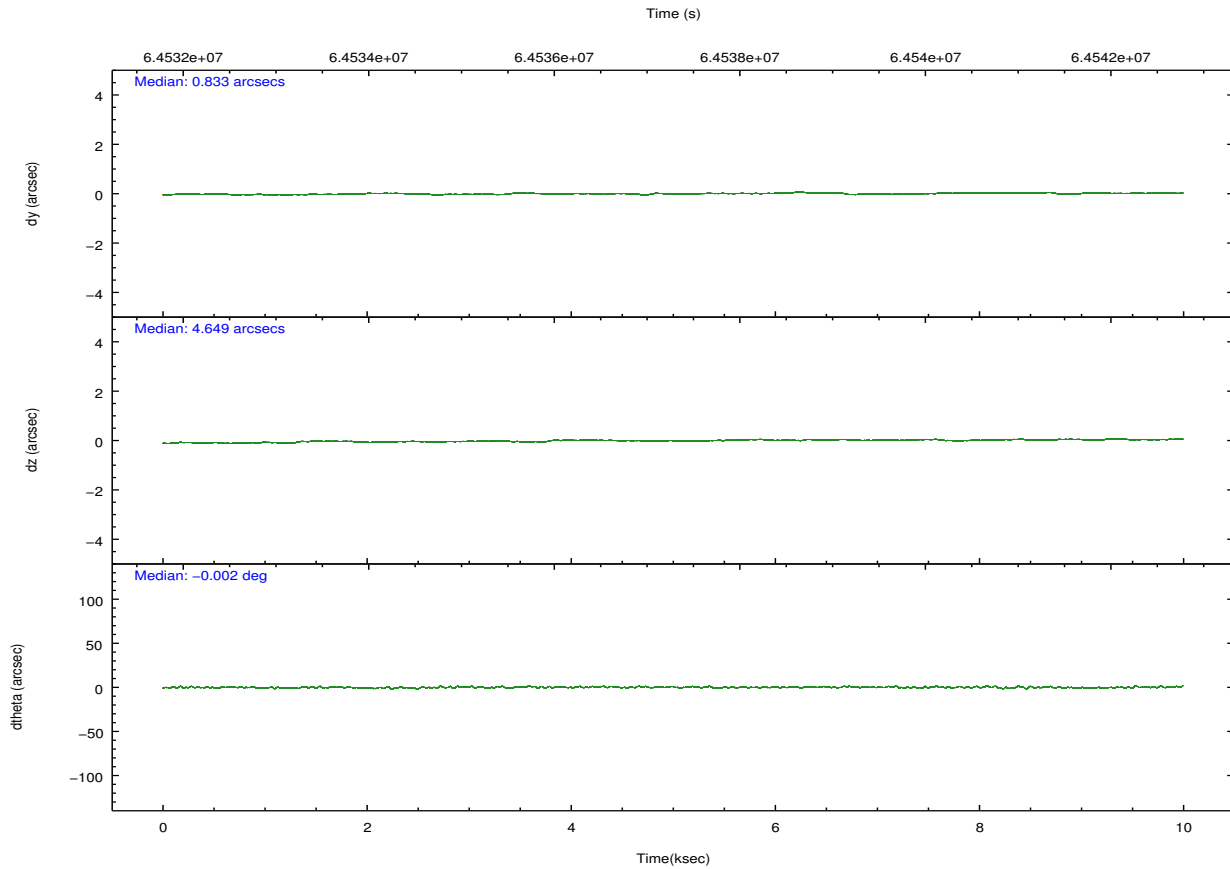
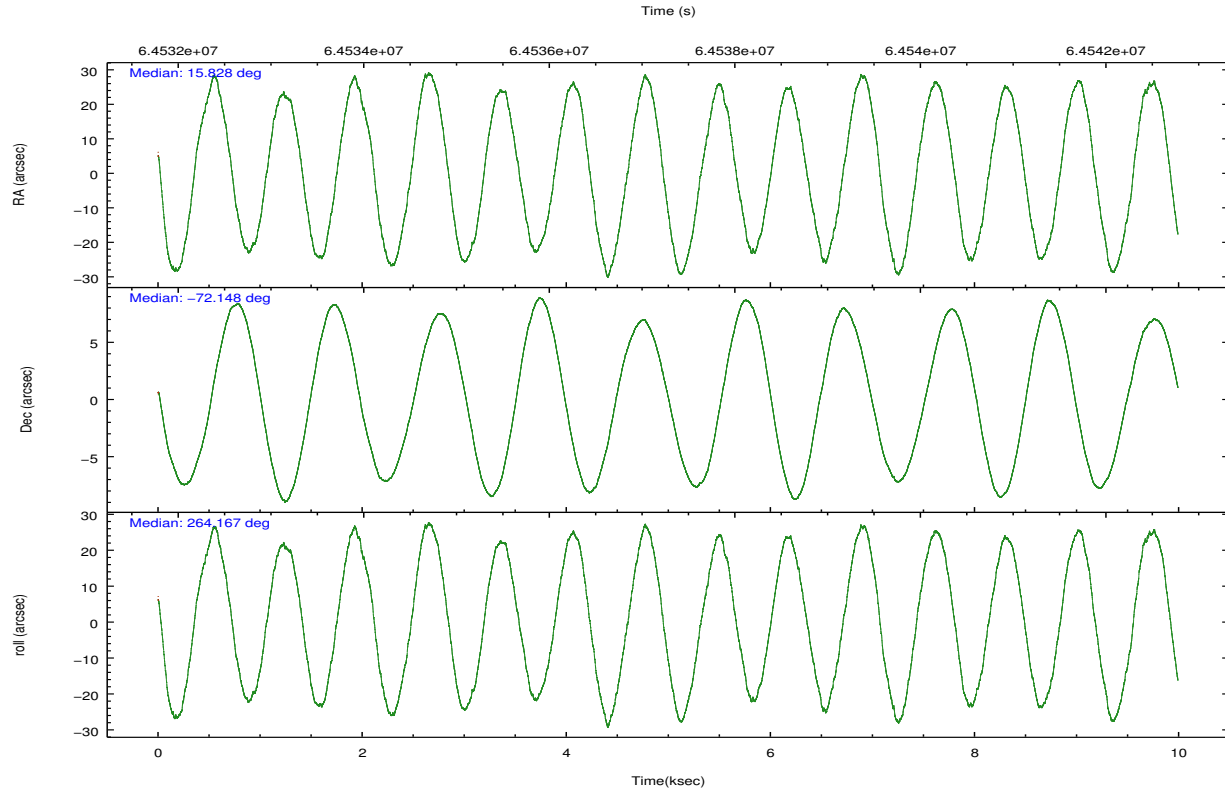


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-01236	ACIS-01236	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	15.791799	15.8278213191776	Subarray requested	NONE	NONE
Pointing Dec	-72.122875	-72.14824199903893	Alternating exposures requested	N	N
Pointing Roll	263.924647	264.1676080572577	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)	-233.592463	-233.5874344608287			
SIM translation stage offset (mm)	0	-0.005018542100998502			
Observation start time	64532778.184000	64532112.000887			
Observation start date	2000-01-17T21:45:14	2000-01-17T21:35:12			
Observation end time	64542278.184000	64542882.701278			
Observation end date	2000-01-18T00:23:34	2000-01-18T00:34:42			
Read mode	TIMED	TIMED			

## 2.3 Aspect



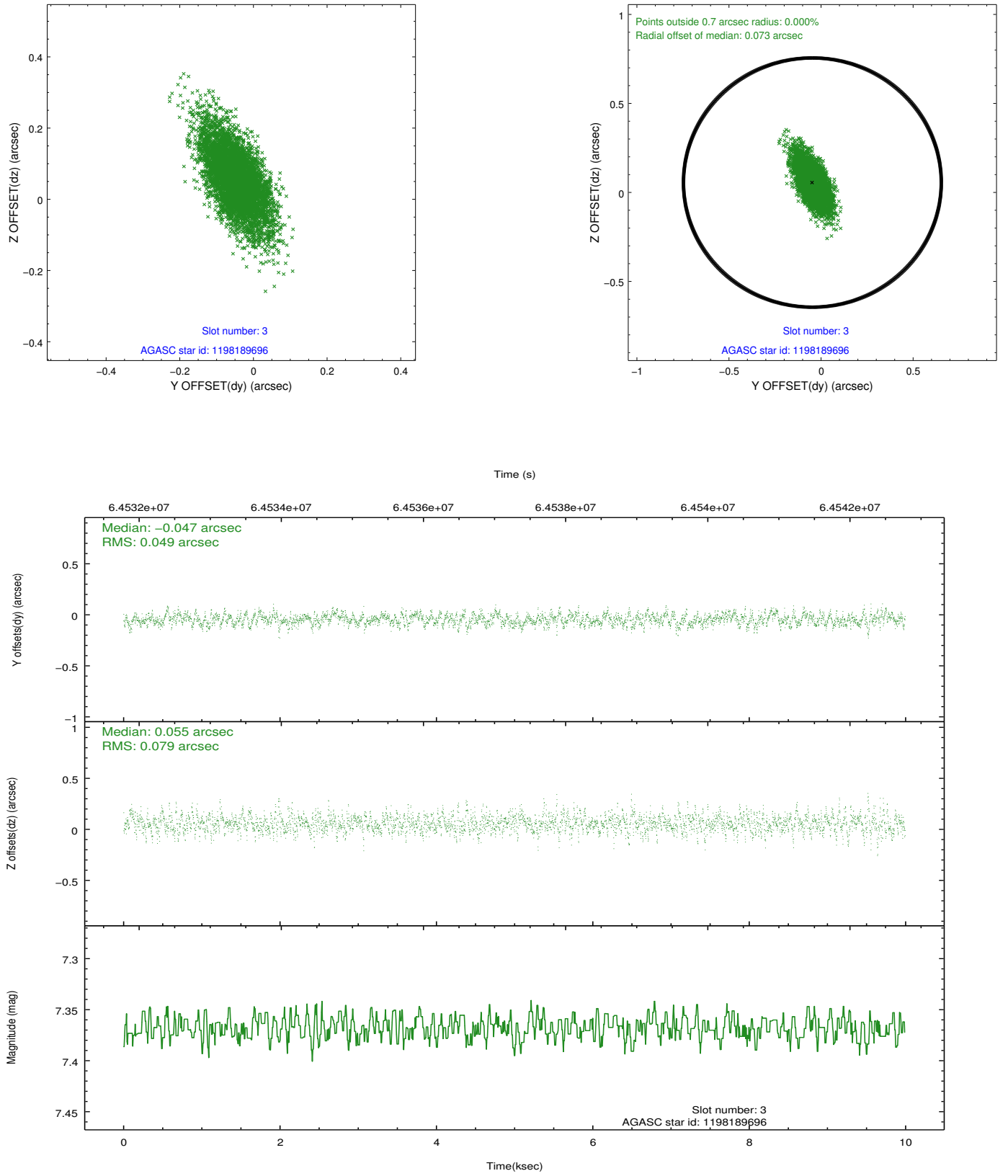


Slot Statistics

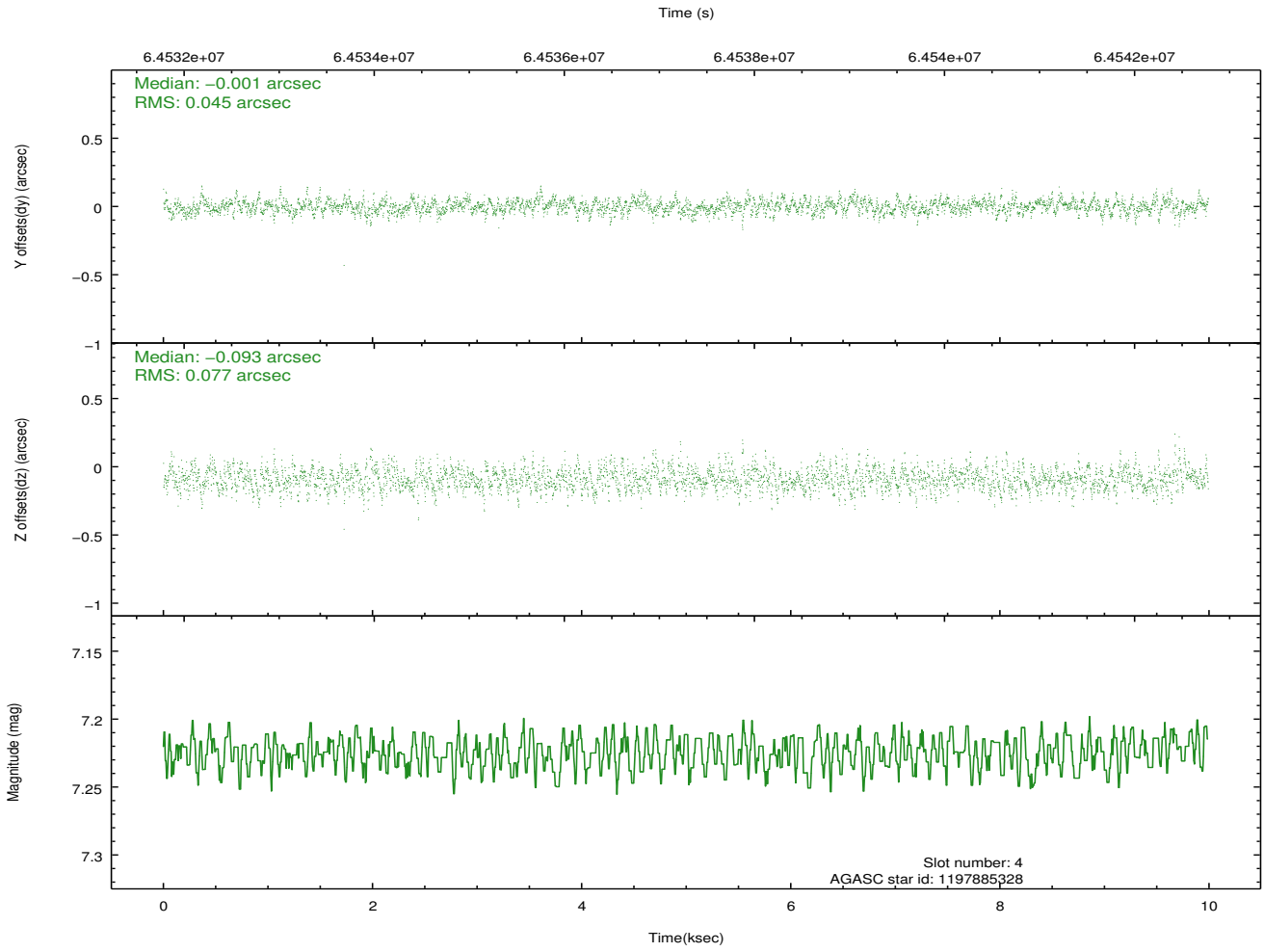
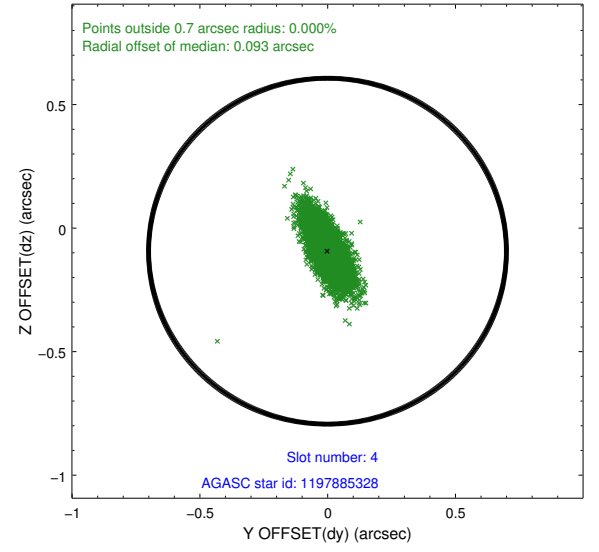
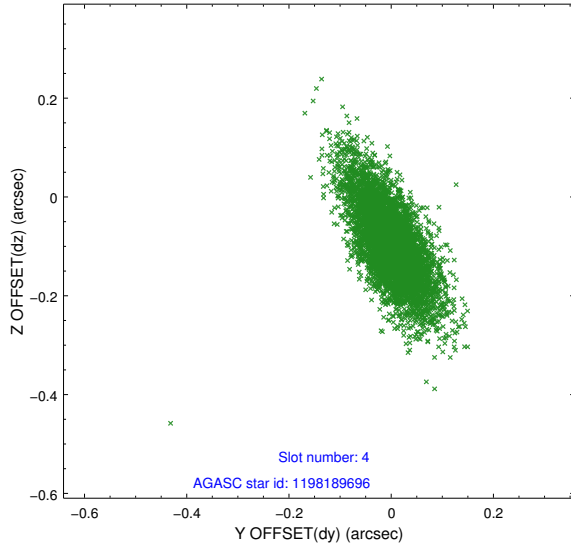
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.16	2438	-0.029	-0.021	0.008	0.015	0.000000	0.000000	-755.18	-834.35
1	FID	ACIS-I-4	7.19	2438	-0.031	0.031	0.006	0.011	0.000000	0.000000	2158.64	1071.60
2	FID	ACIS-I-5	7.23	2438	-0.041	0.059	0.009	0.014	0.000000	0.000000	-1808.33	1070.10
3	GUIDE	1198189696	7.37	4874	-0.047	0.055	0.091	0.175	15.223750	-72.697522	2124.11	-385.62
4	GUIDE	1197885328	7.22	4874	-0.001	-0.093	0.088	0.168	16.283090	-71.733943	-1448.47	402.97
5	GUIDE	1197750936	7.56	4873	-0.009	0.063	0.089	0.164	15.387940	-71.549550	-2002.64	-675.87
6	GUIDE	1198283128	7.76	4873	-0.083	-0.142	0.093	0.172	17.272580	-72.642428	1710.39	1780.96
7	GUIDE	1197750640	9.75	4867	0.140	0.111	0.118	0.206	15.758835	-72.088048	-120.49	-49.23

## 2.4 Star Slots

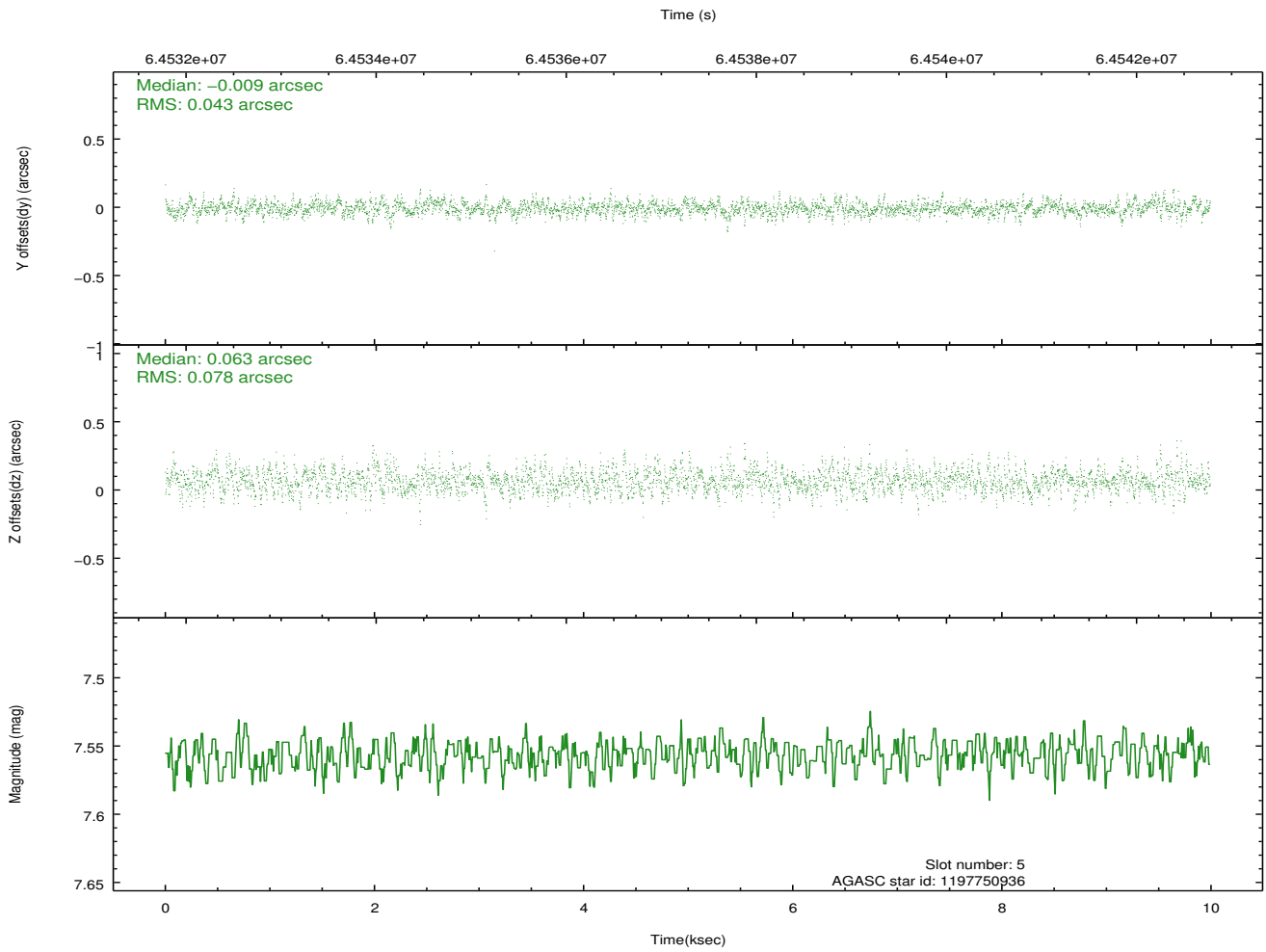
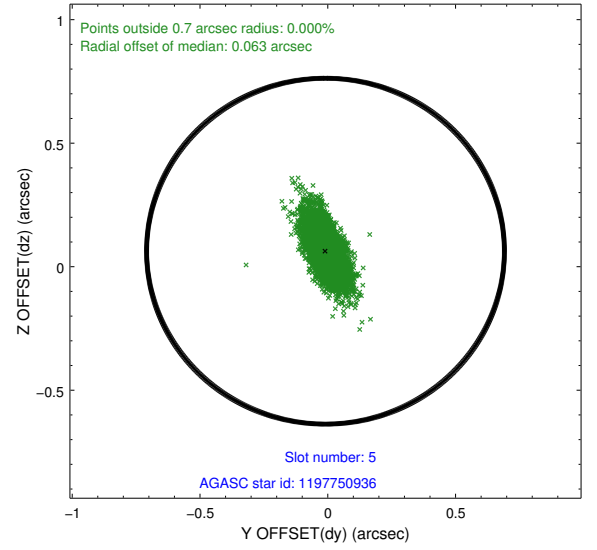
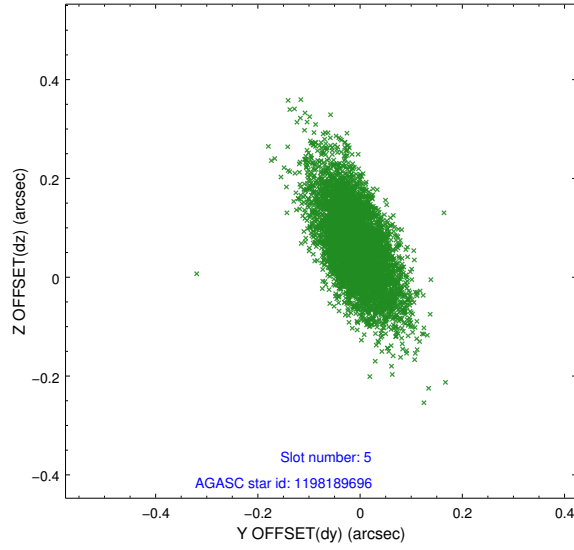
### 2.4.1 Slot 3



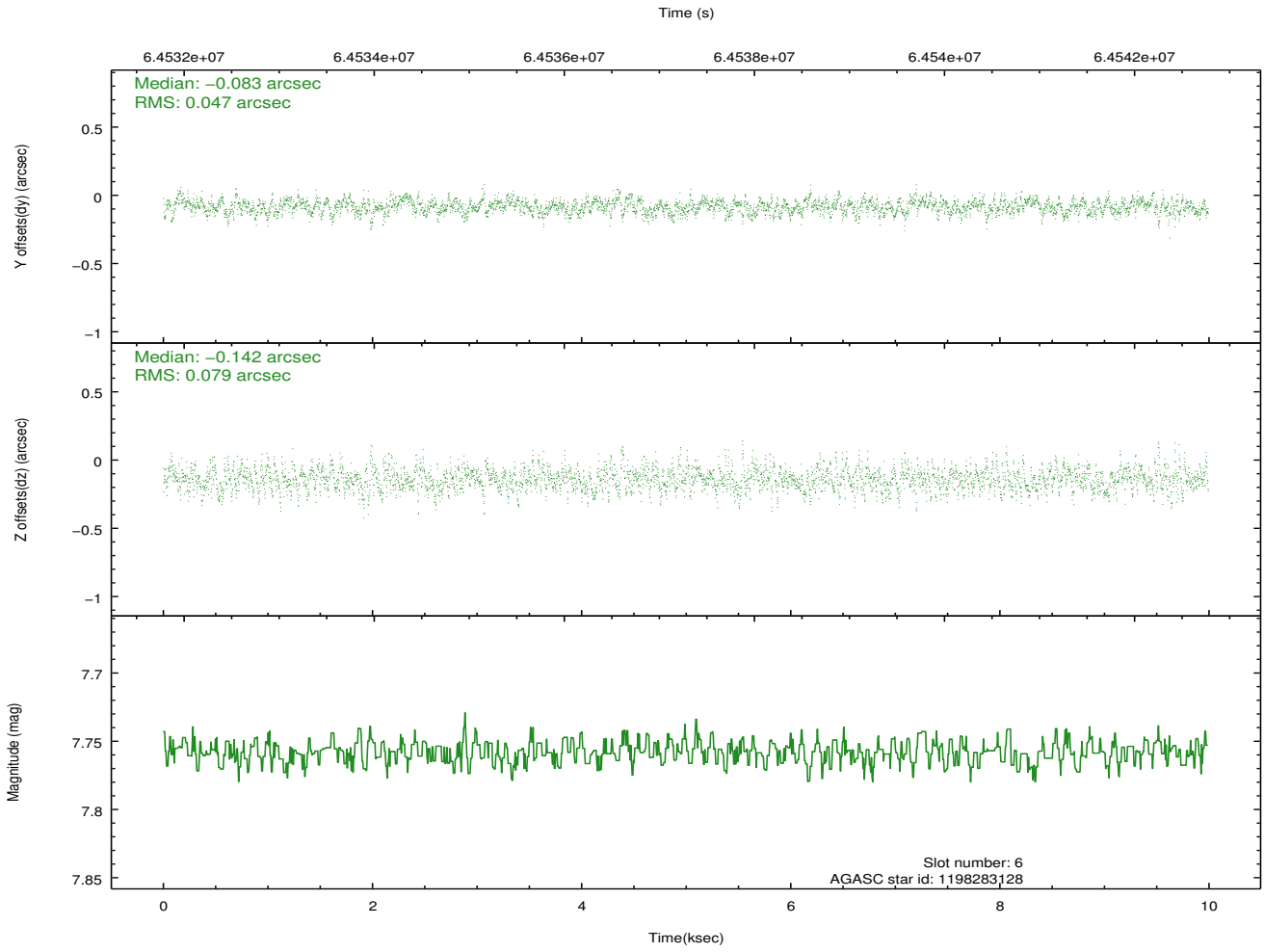
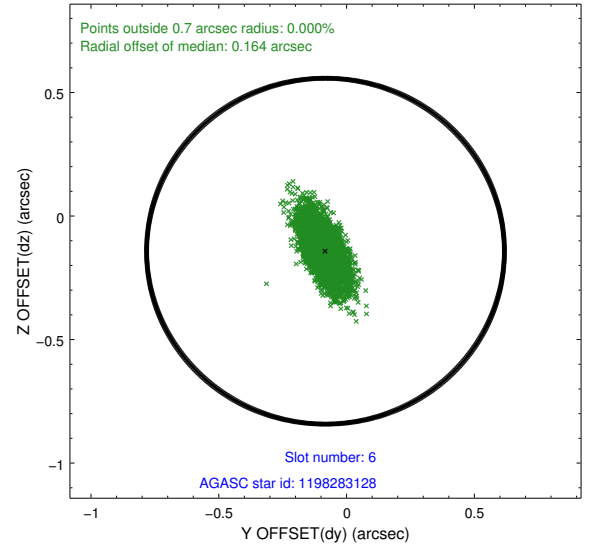
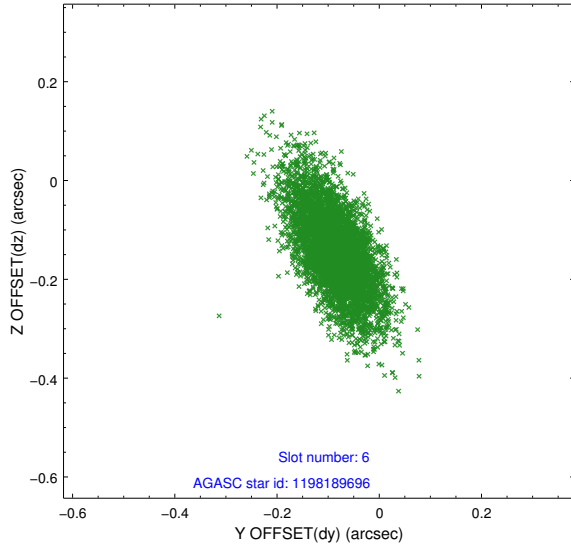
## 2.4.2 Slot 4



### 2.4.3 Slot 5

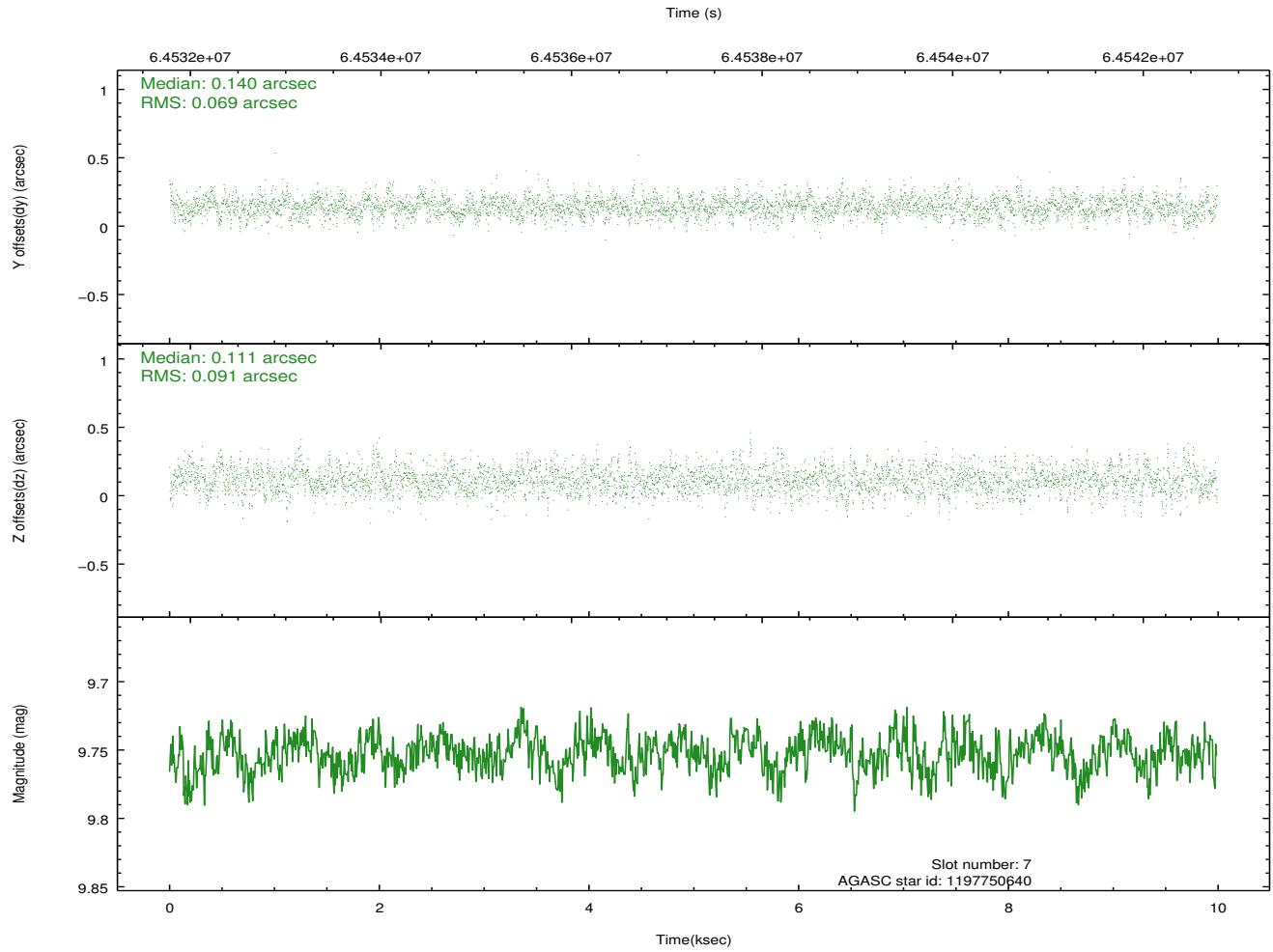
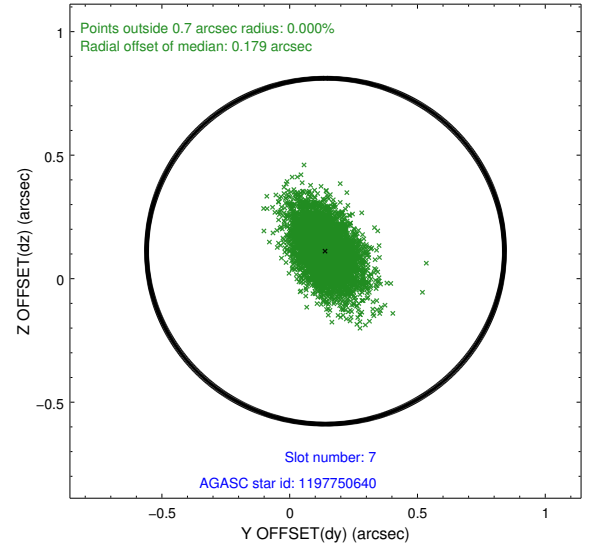
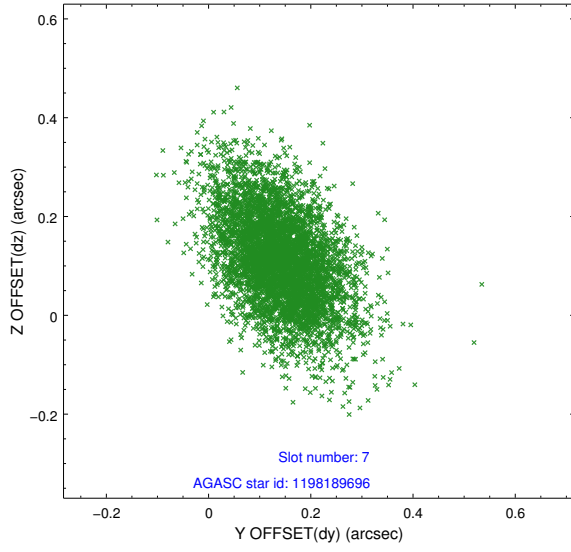


## 2.4.4 Slot 6



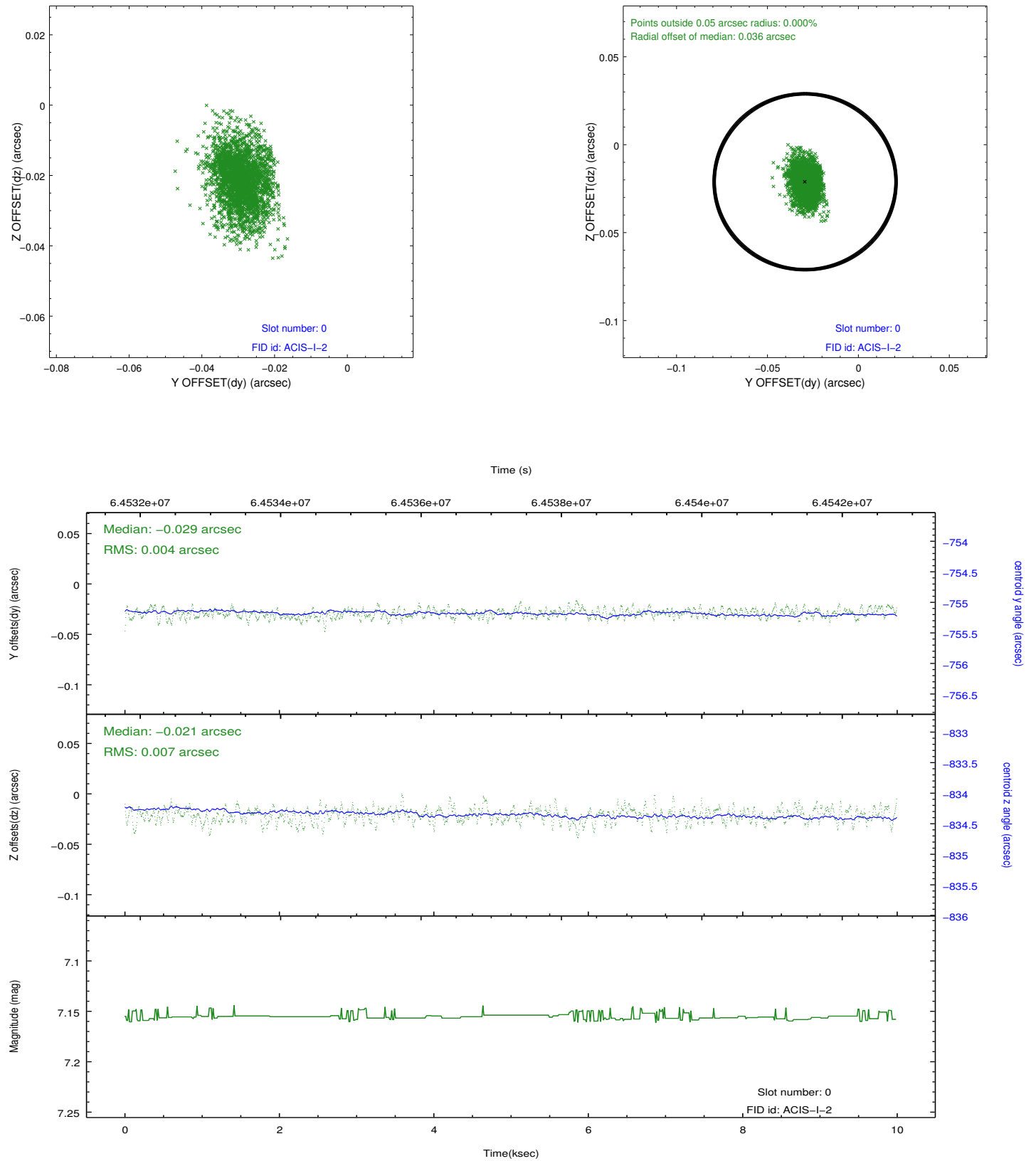


## 2.4.5 Slot 7

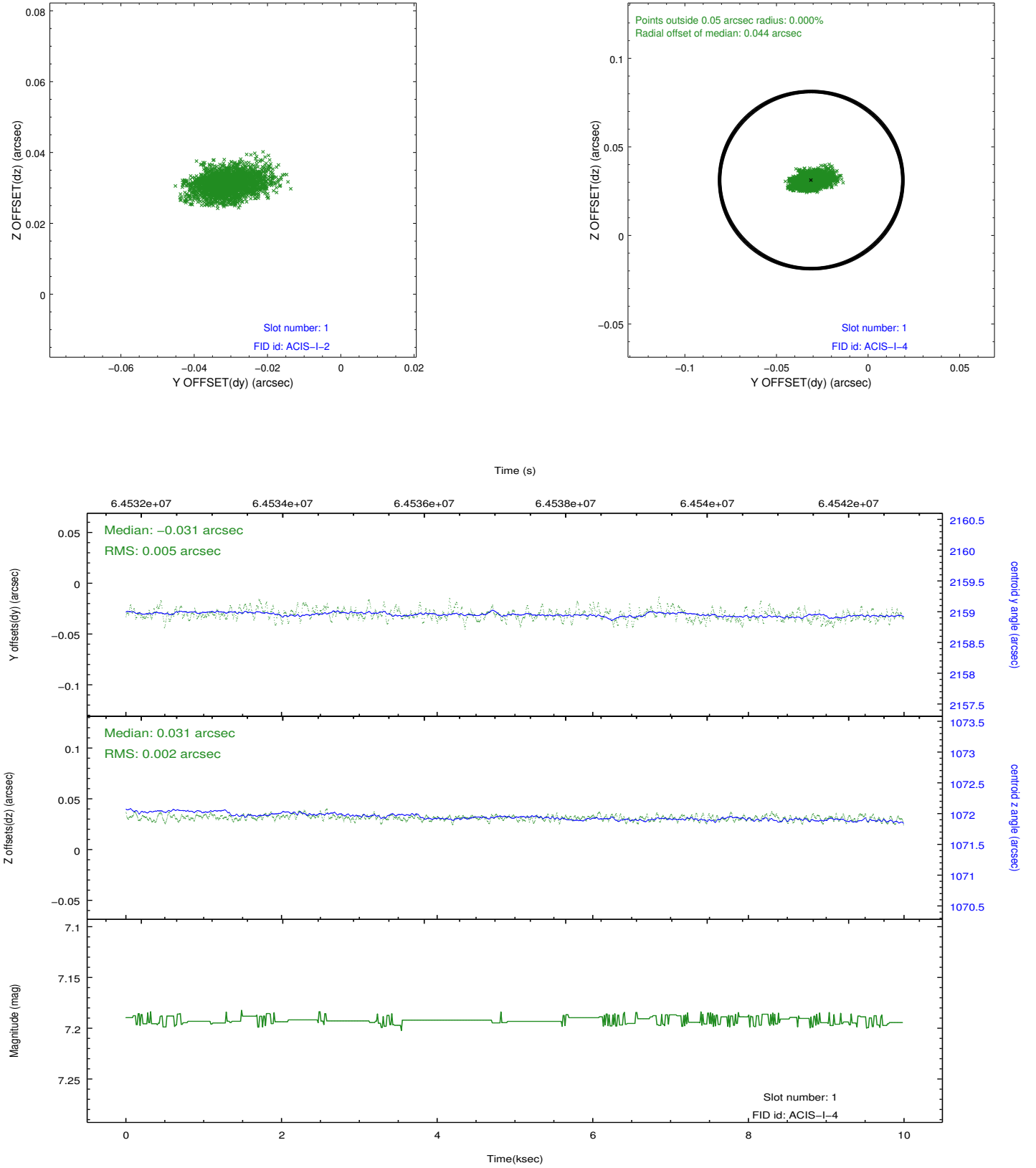


## 2.5 FID Slots

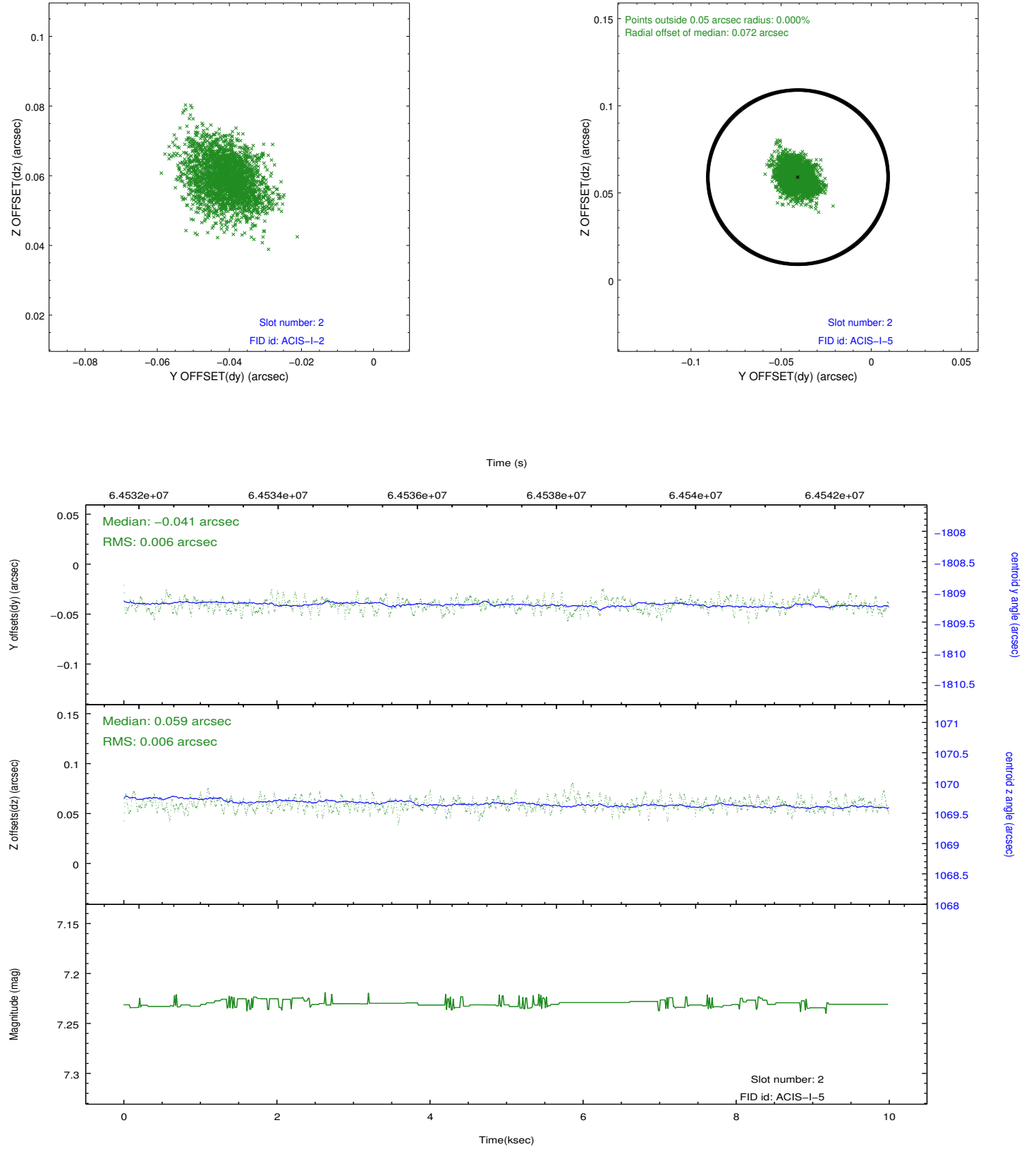
### 2.5.1 Slot 0



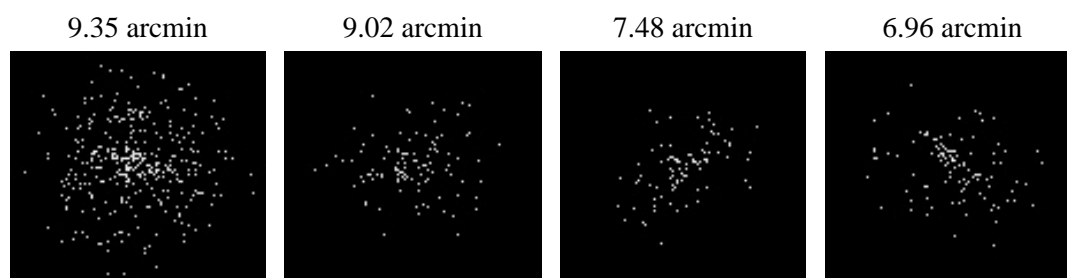
## 2.5.2 Slot 1



## 2.5.3 Slot 2



### 3 Point Sources



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2010.09.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.168

## A.2 Comments

Comments for ObsId 0

The focal plane temperature is approximately -110C 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.

=====

Charge time:

Charge time for this ObsId remains at original value of 9.168 ksec, although with the current processing the charge time would have been 9.27 ksec.

=====

A spatial region of the original bias map for CCD = 1 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 1 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:  
(15.42794,-71.99906),(15.40907,-71.99844),(15.39056,-72.05076),(15.40948,-72.05138)