

# V&V Reference Report

## L2 ASCDS Version : 8.1.2

Observation 165 - L2 Version 2

Chandra X-Ray Center

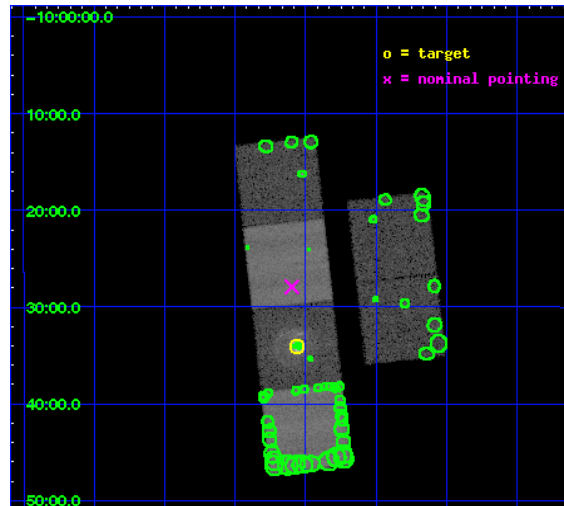
L2 Processing Date : Dec 16 2009

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# 1 Front

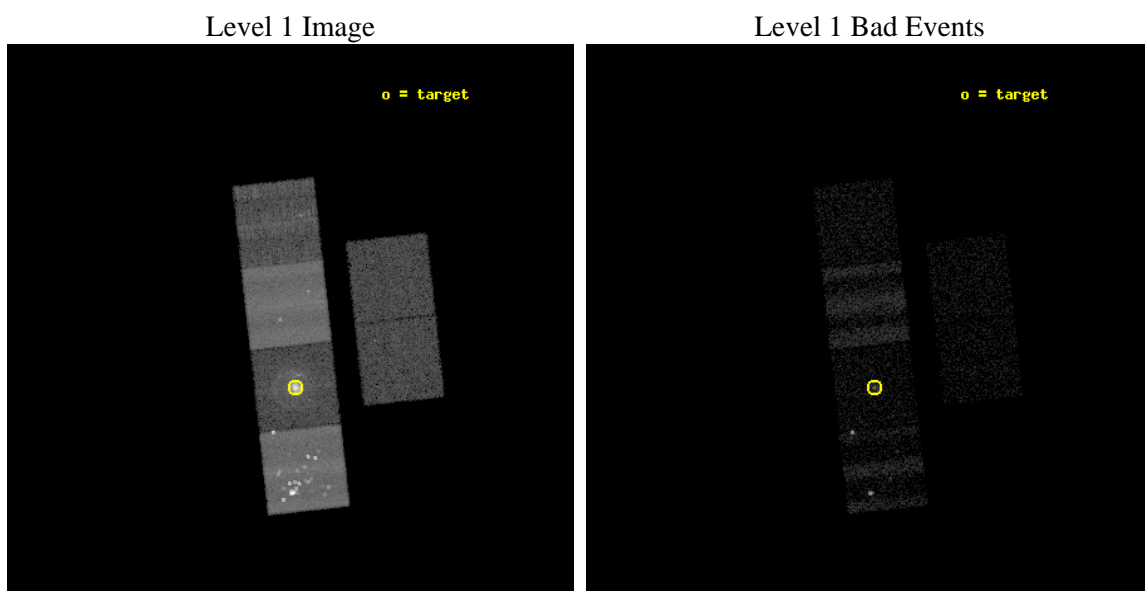
seq_num	590033	Sequence number
obs_id	165	Observation id
title	ACIS CHIP RESPONSE TO A CONTINUUM SOURCE	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	G21.5-0.9 [Chip S2, T=100, Offsets=6,0,0]	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	278.389583	Observer's specified target RA
dec_targ	-10.568528	Observer's specified target Dec
ra_nom	278.39927779827	Nominal RA
dec_nom	-10.465469267291	Nominal Dec
roll_nom	263.65416805864	Nominal Roll
revision	2	Processing version of data
ontime	9758.7314669192	Sum of GTIs [s]
livetime	9635.1605330824	Livetime [s]
ontime2	9758.8545869216	Sum of GTIs [s]
ontime3	9758.8135469183	Sum of GTIs [s]
ontime5	9758.8956269175	Sum of GTIs [s]
ontime6	9758.7314669192	Sum of GTIs [s]
ontime7	9758.9366669208	Sum of GTIs [s]
ontime8	9758.7725069225	Sum of GTIs [s]
l2events	215270	Number of level 2 events



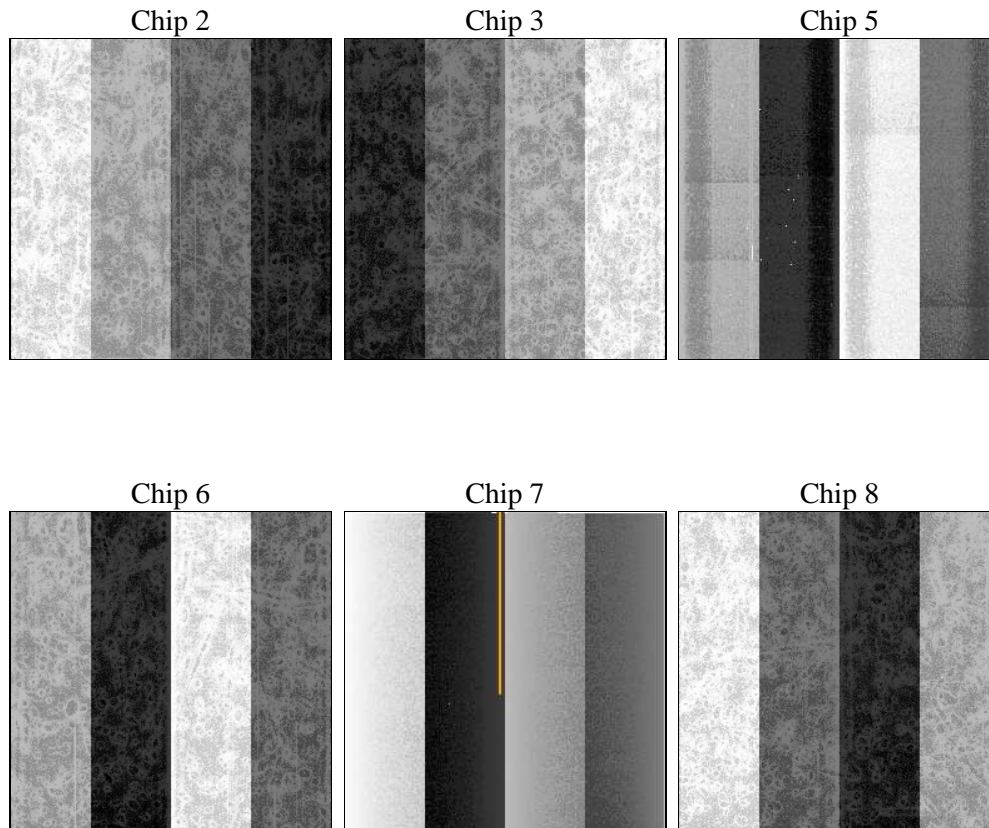
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	Scheduled observation exposure time
ascdsver	8.1.2	ASCDS version number	ontime	9758.7314669192	Sum of GTIs [s]
caldbver	4.1.4	&#160	ontime2	9758.8545869216	Sum of GTIs [s]
date	2009-12-16T08:34:02	Date and time of file creation	ontime3	9758.8135469183	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	9758.8956269175	Sum of GTIs [s]
			ontime6	9758.7314669192	Sum of GTIs [s]
			ontime7	9758.9366669208	Sum of GTIs [s]
			ontime8	9758.7725069225	Sum of GTIs [s]
			l1events	314083	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	20185	20262	116212	50748	76360	30316
rejected events	4923	5376	9172	5873	11831	6276
rejected %	24%	26%	7%	11%	15%	20%

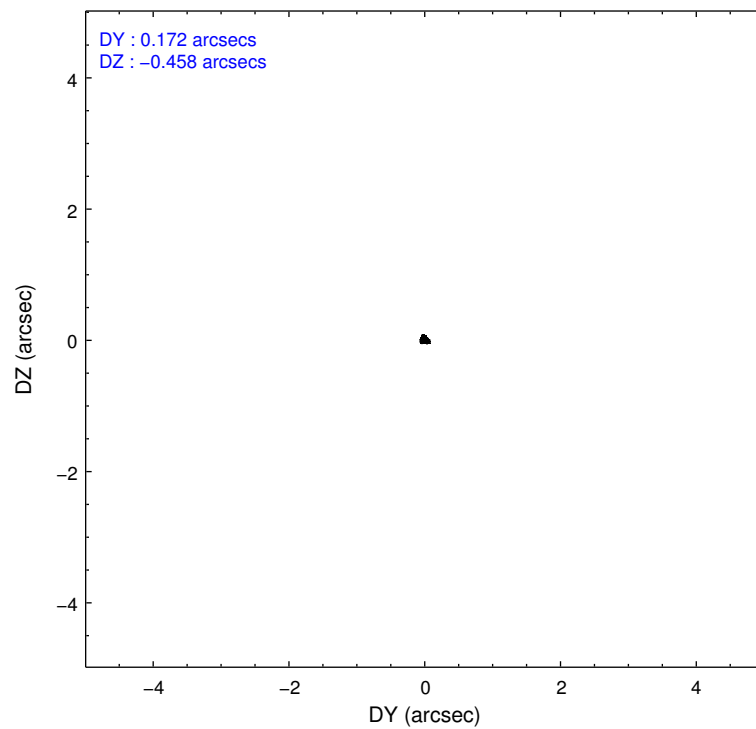
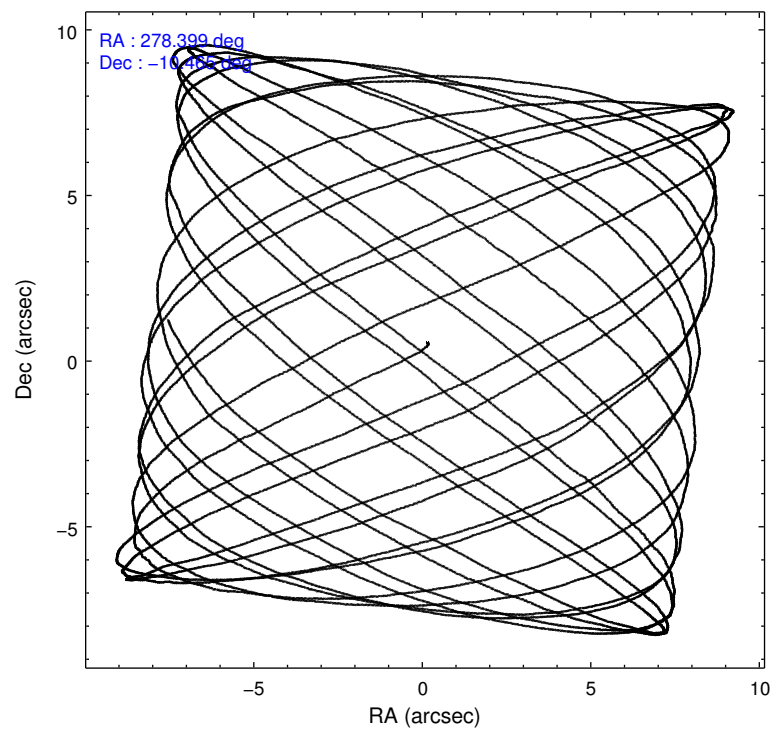
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	3953	3972	31909	24000	3372	5924
	19%	19%	27%	47%	4%	19%
grade 1 events	36	28	910	176	68	61
	0%	0%	0%	0%	0%	0%
grade 2 events	3464	3245	18305	7997	7956	6238
	17%	16%	15%	15%	10%	20%
grade 3 events	1315	1203	4354	2449	4702	1990
	6%	5%	3%	4%	6%	6%
grade 4 events	1183	1239	3806	2298	3966	1807
	5%	6%	3%	4%	5%	5%
grade 5 events	4877	5334	8155	5670	11725	6192
	24%	26%	7%	11%	15%	20%
grade 6 events	5357	5241	48743	8155	44571	8104
	26%	25%	41%	16%	58%	26%
grade 7 events	0	0	30	3	0	0
	0%	0%	0%	0%	0%	0%

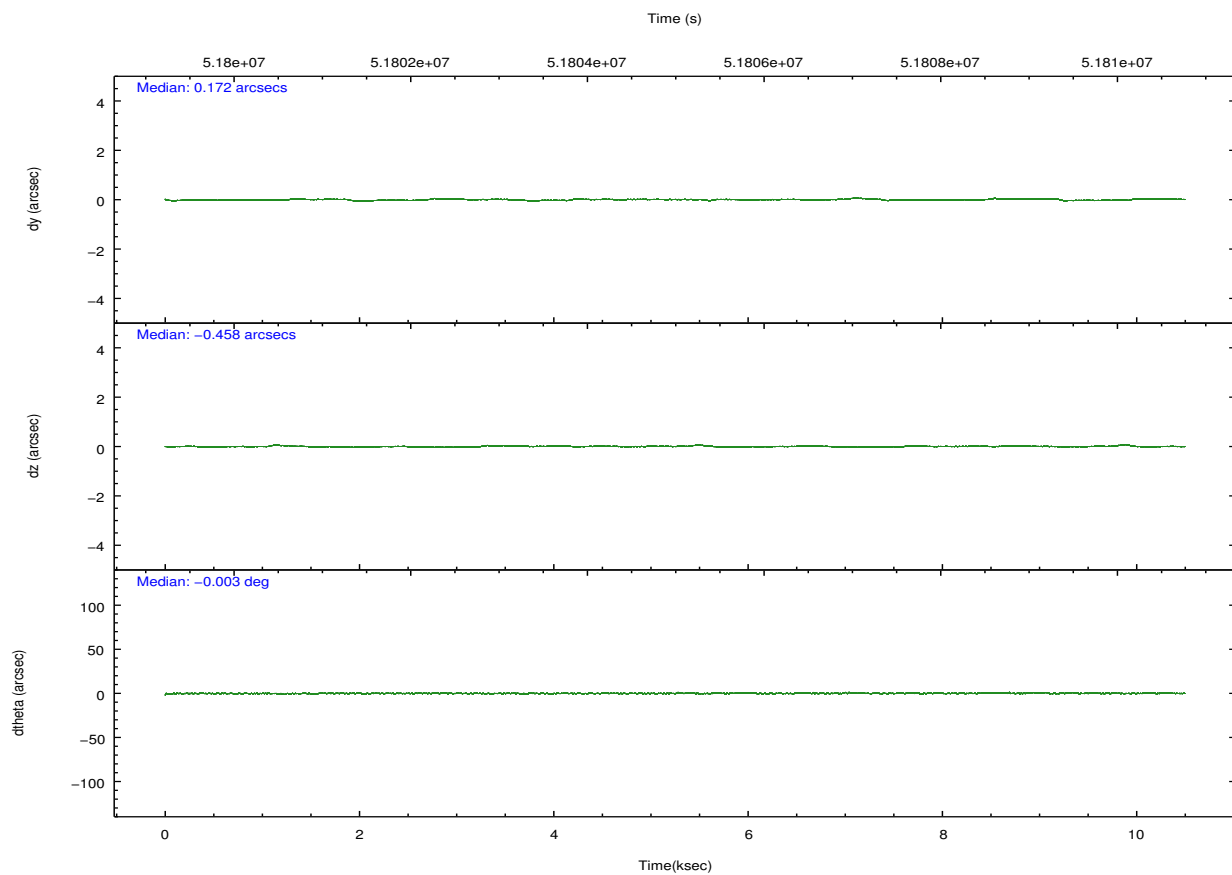
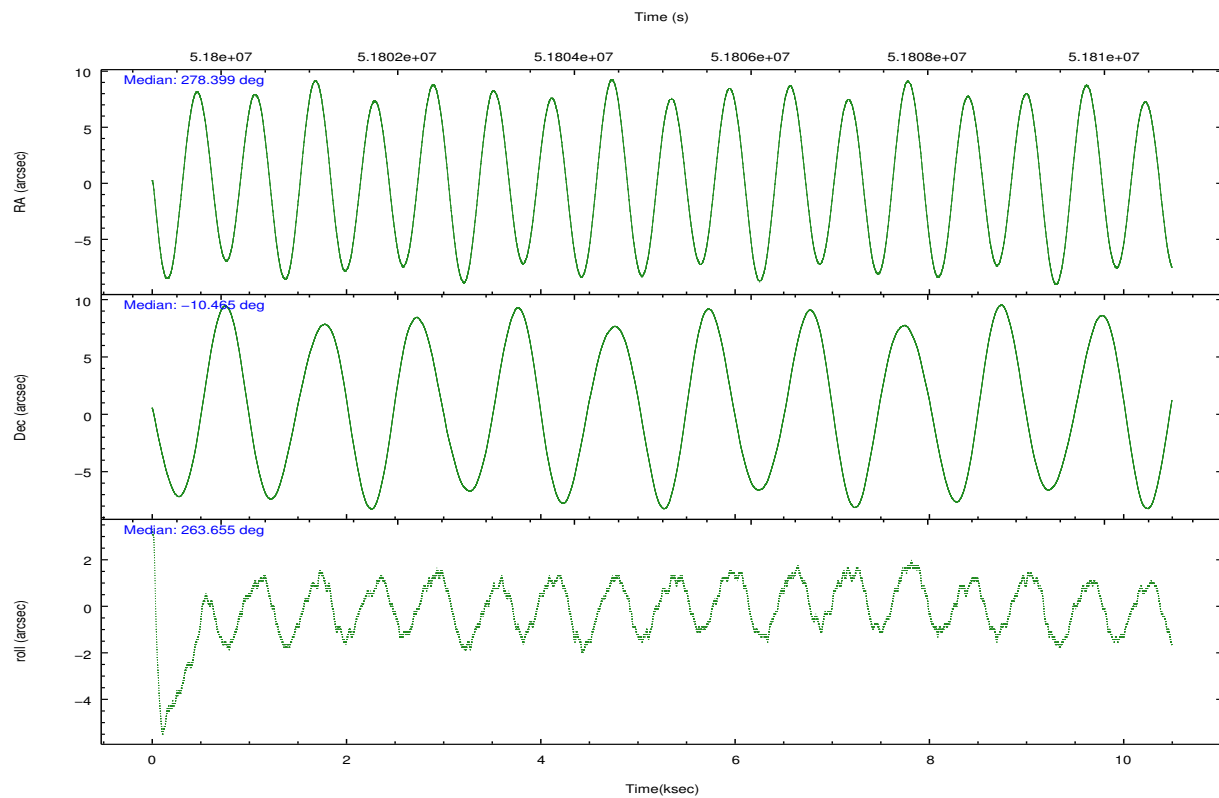


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-235678	ACIS-235678	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	278.388466	278.3992777982656	Subarray requested	NONE	NONE
Pointing Dec	-10.439911	-10.46546926729111	Alternating exposures requested	N	N
Pointing Roll	263.495578	263.6541680586355	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.684267	-0.865731118321573			
SIM defocus (mm)	0	-0.1814636570216768			
SIM translation stage pos (mm)	-190.132523	-190.1199515274594			
SIM translation stage offset (mm)	0	-0.012571055548392			
Observation start time	51800241.184000	51799568.711023			
Observation start date	1999-08-23T12:56:17	1999-08-23T12:46:08			
Observation end time	51810241.184000	51811242.948943			
Observation end date	1999-08-23T15:42:57	1999-08-23T16:00:42			
Read mode	TIMED	TIMED			

## 2.3 Aspect



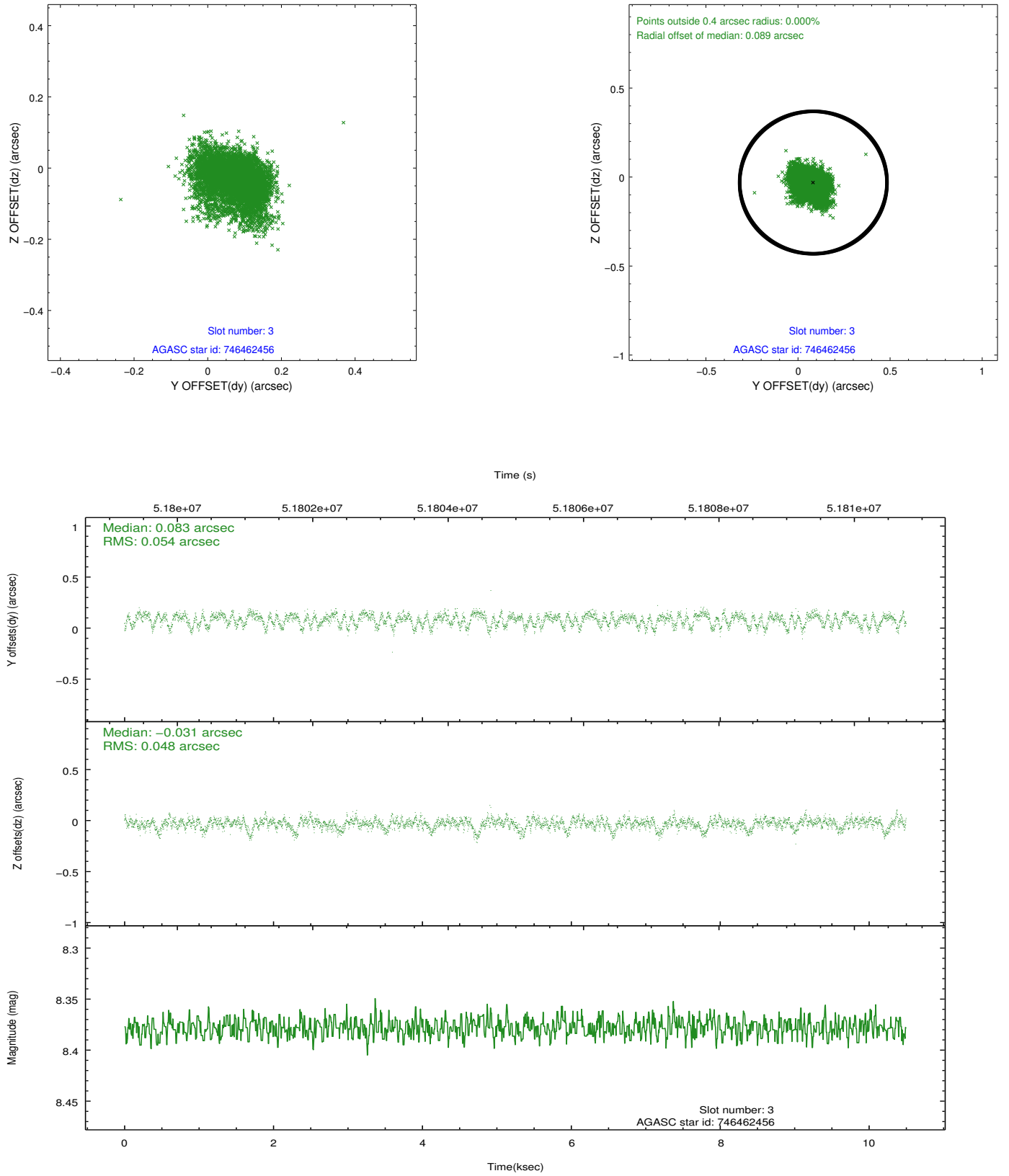


Slot Statistics

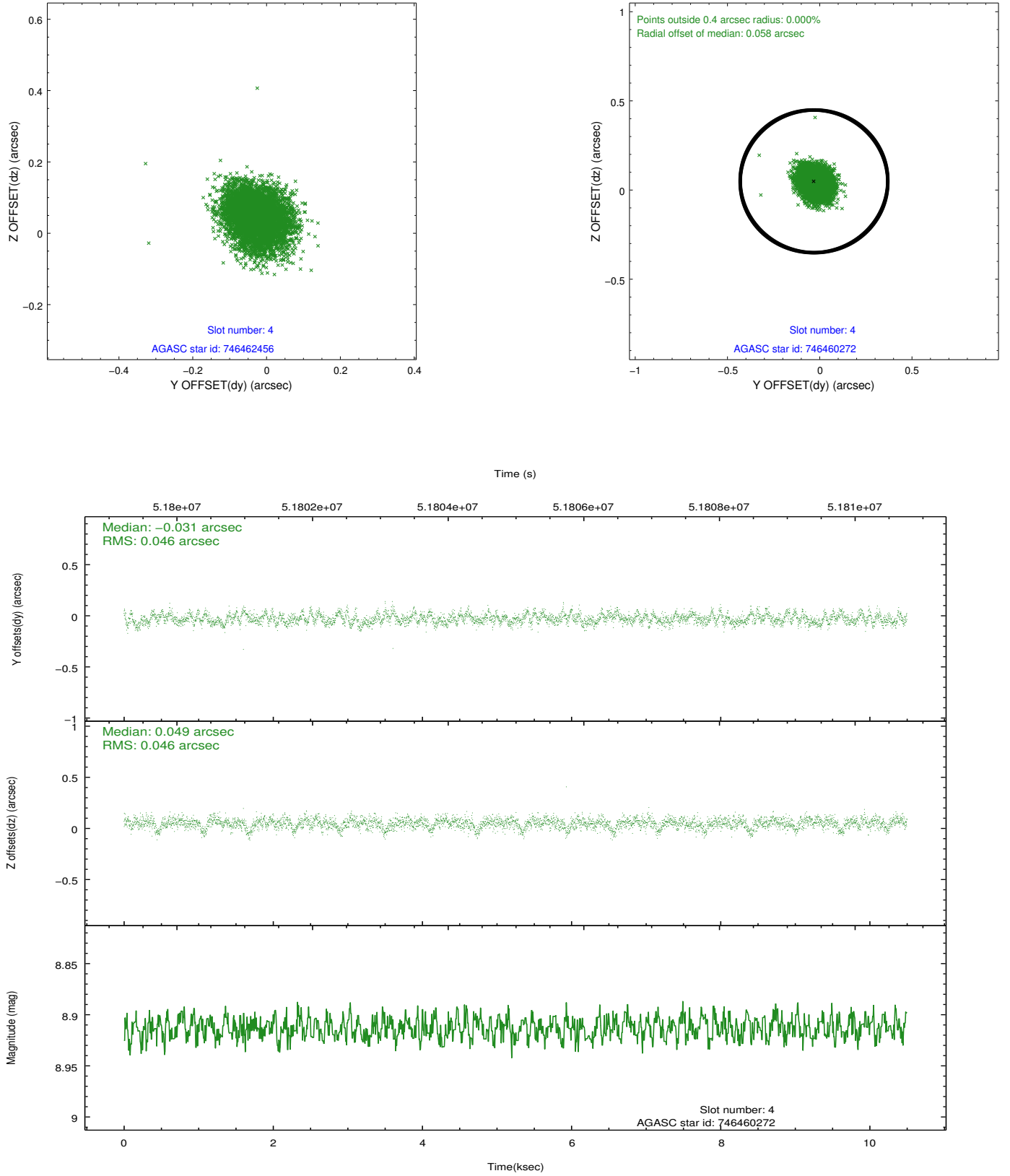
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.12	5122	-0.026	-0.024	0.009	0.016	0.000000	0.000000	-752.79	-1720.89
1	FID	ACIS-S-4	7.22	5122	0.125	0.019	0.012	0.022	0.000000	0.000000	2160.56	187.35
2	FID	ACIS-S-5	7.25	5122	-0.130	0.014	0.009	0.016	0.000000	0.000000	-1805.45	181.31
3	GUIDE	746462456	8.38	5121	0.083	-0.031	0.076	0.127	278.652171	-10.530173	217.74	964.62
4	GUIDE	746460272	8.91	5122	-0.031	0.049	0.069	0.112	278.847488	-10.152127	-1212.25	1499.66
5	GUIDE	746460328	9.81	5119	-0.061	-0.046	0.091	0.148	278.603974	-9.898096	-2024.44	539.22
6	GUIDE	746461728	9.79	5115	0.013	0.018	0.113	0.223	278.986921	-10.530755	86.83	2142.40
7	UNUSED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00

## 2.4 Star Slots

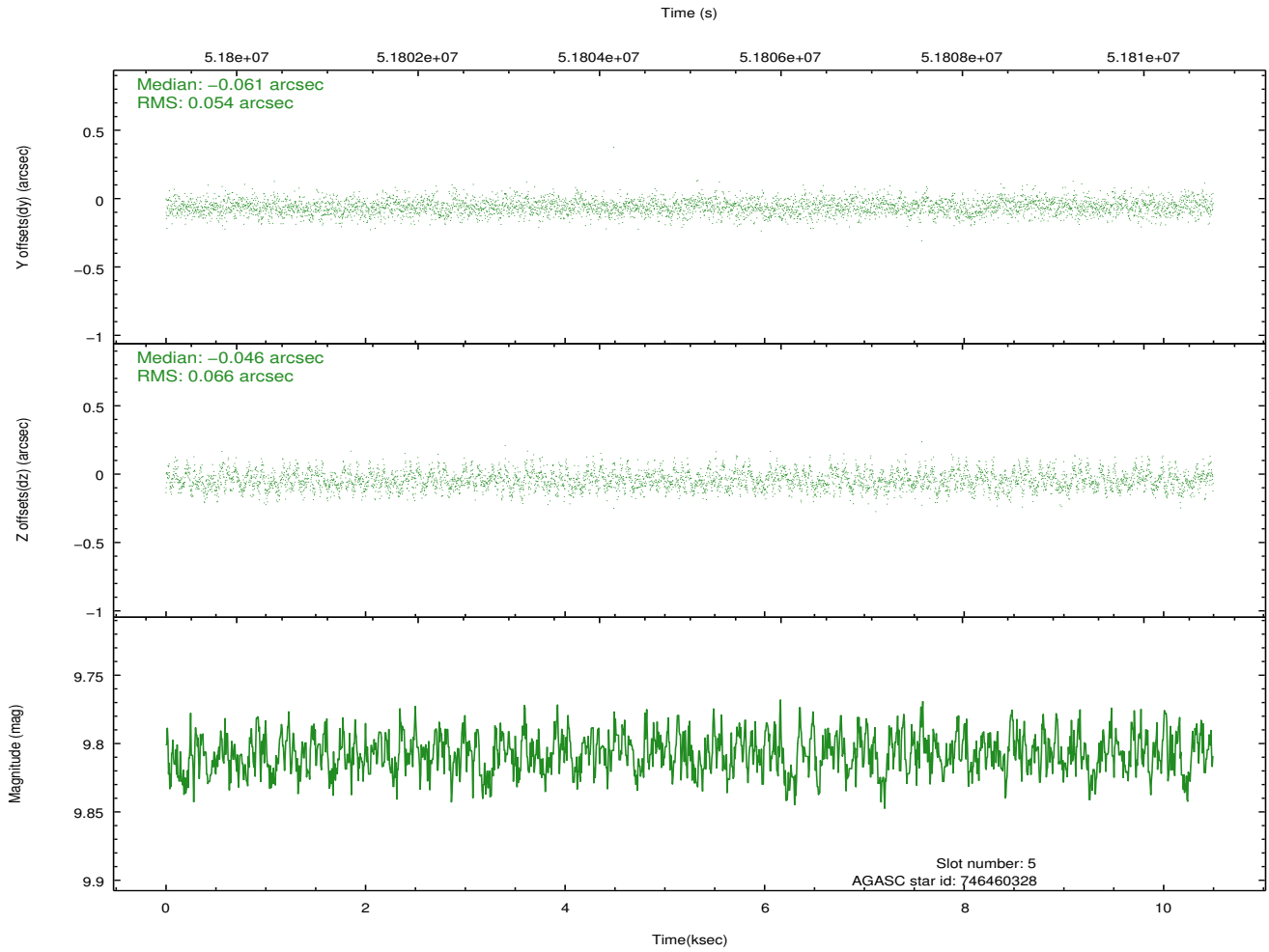
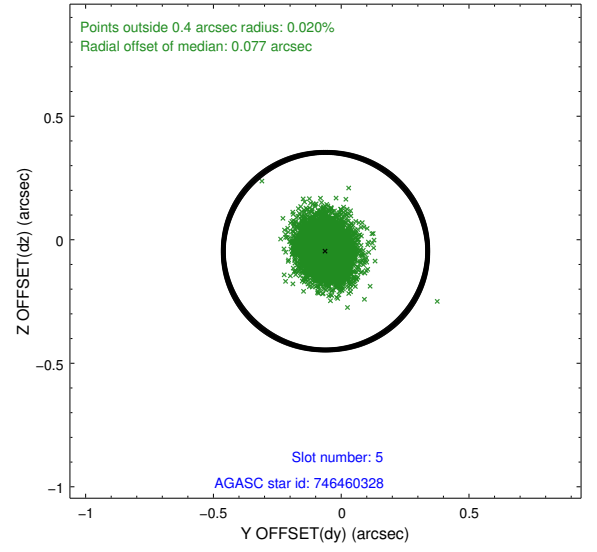
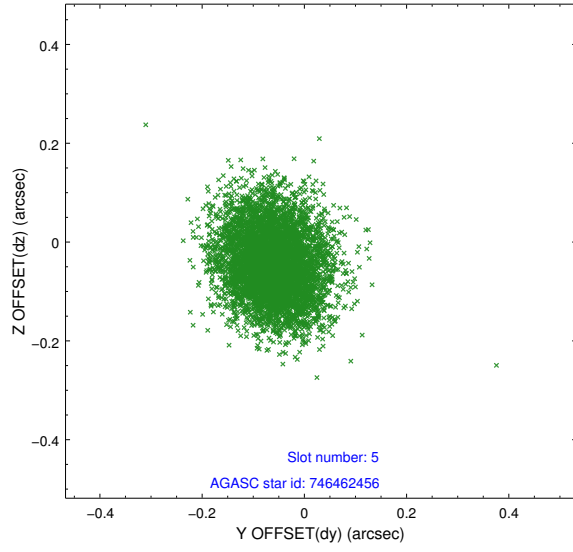
### 2.4.1 Slot 3



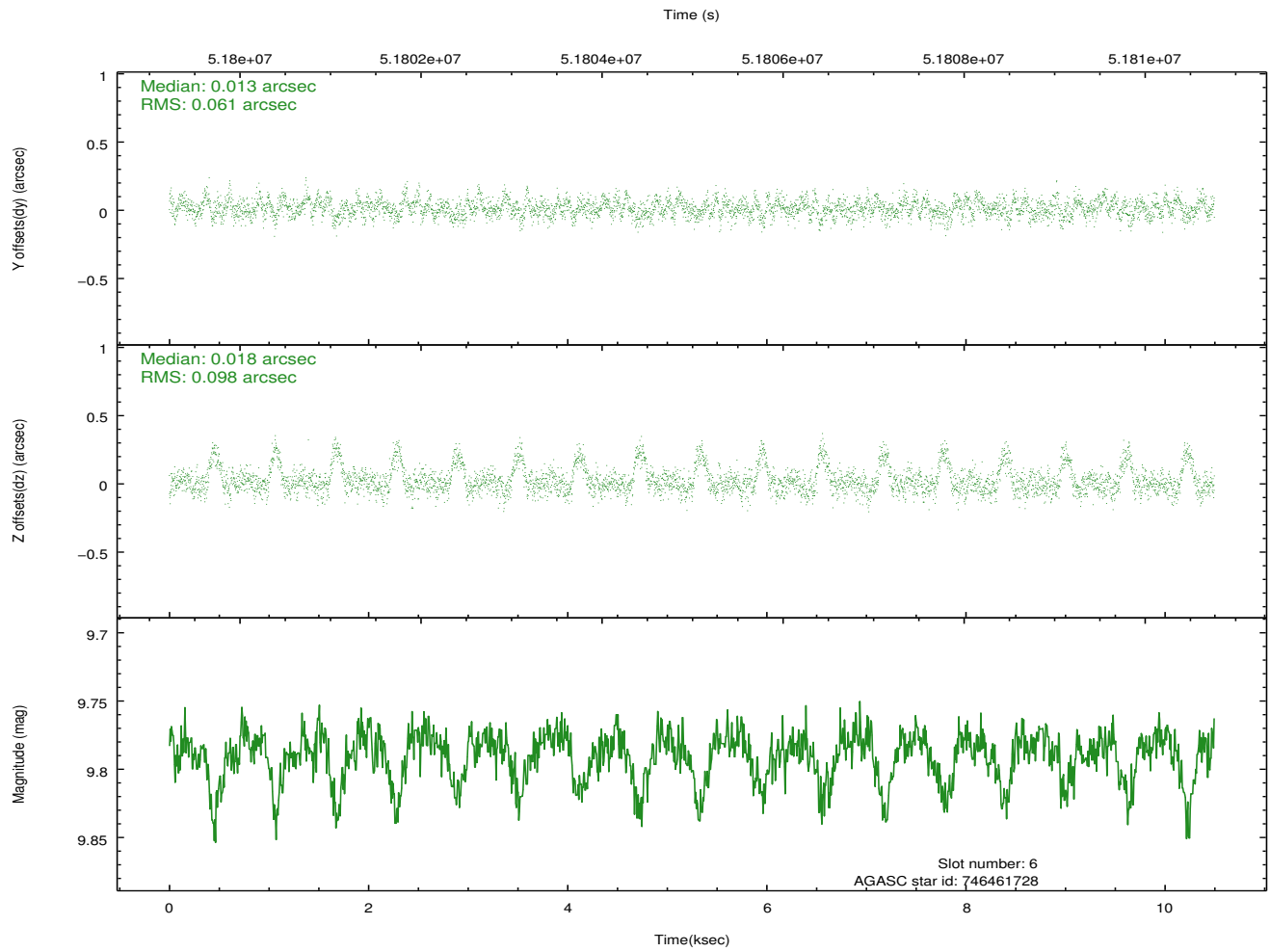
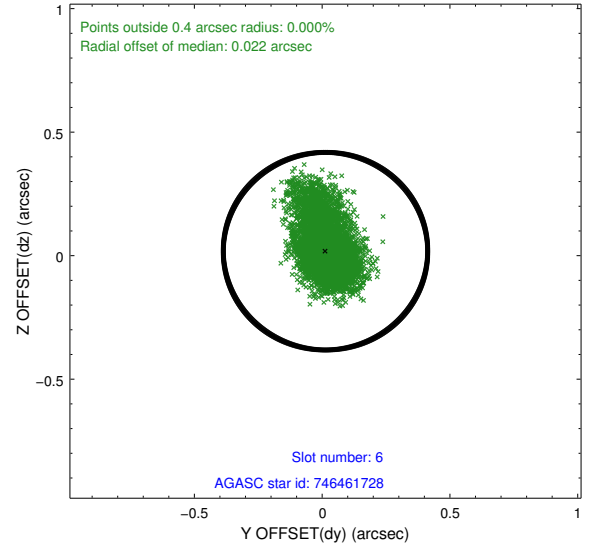
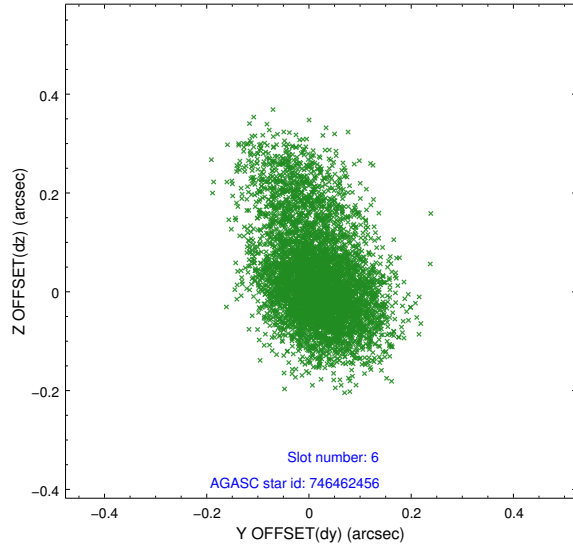
## 2.4.2 Slot 4



### 2.4.3 Slot 5



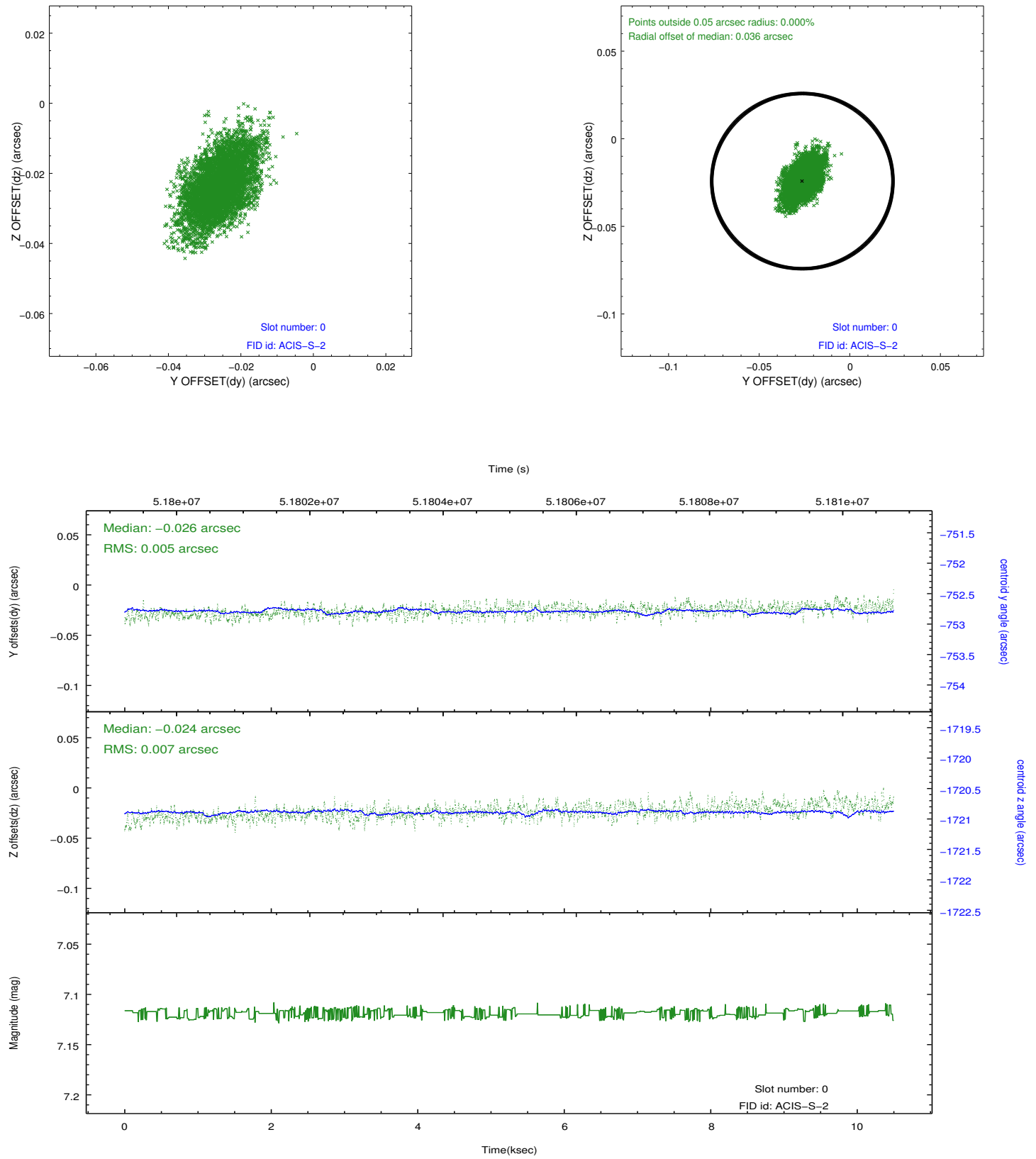
## 2.4.4 Slot 6



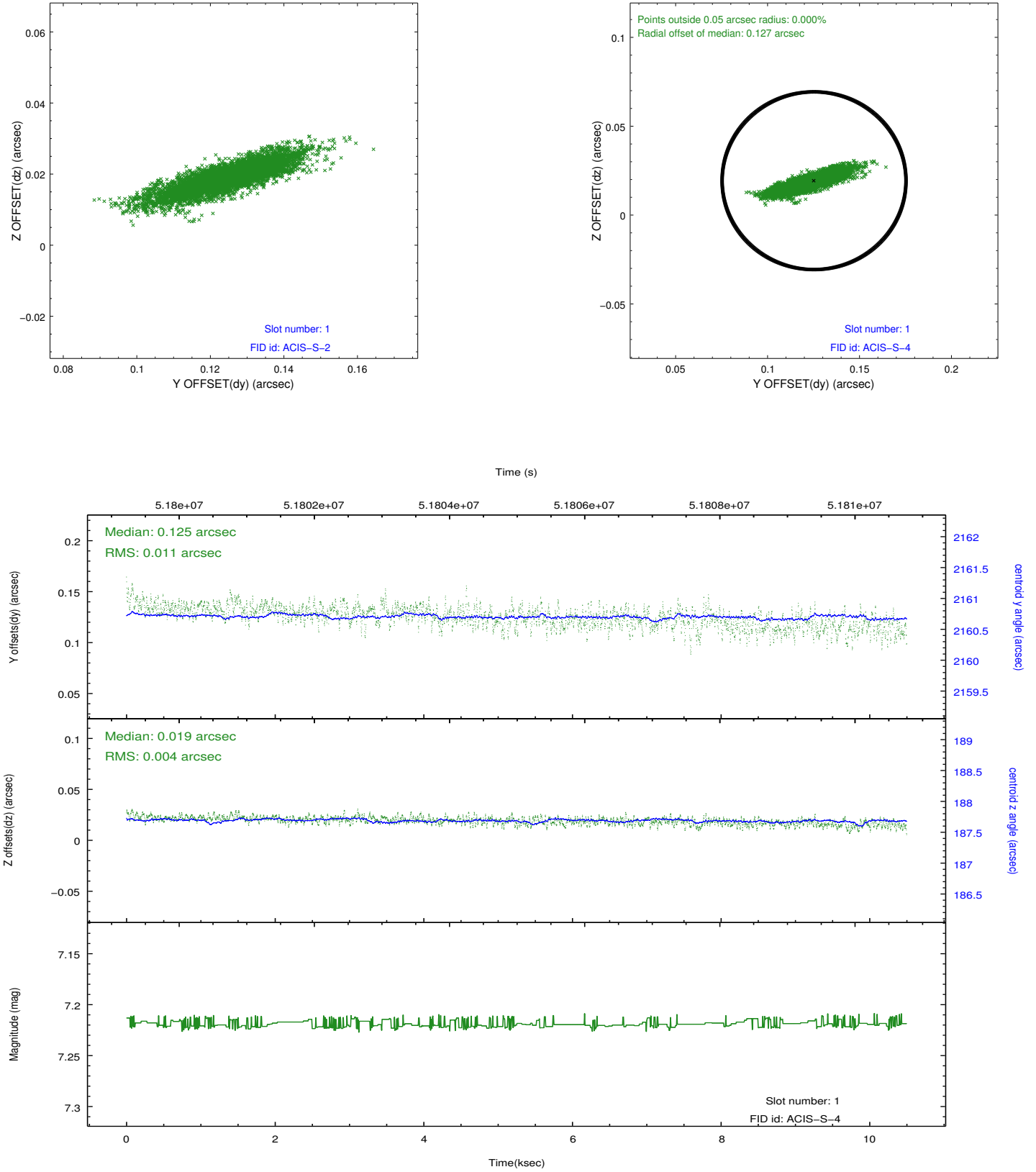


## 2.5 FID Slots

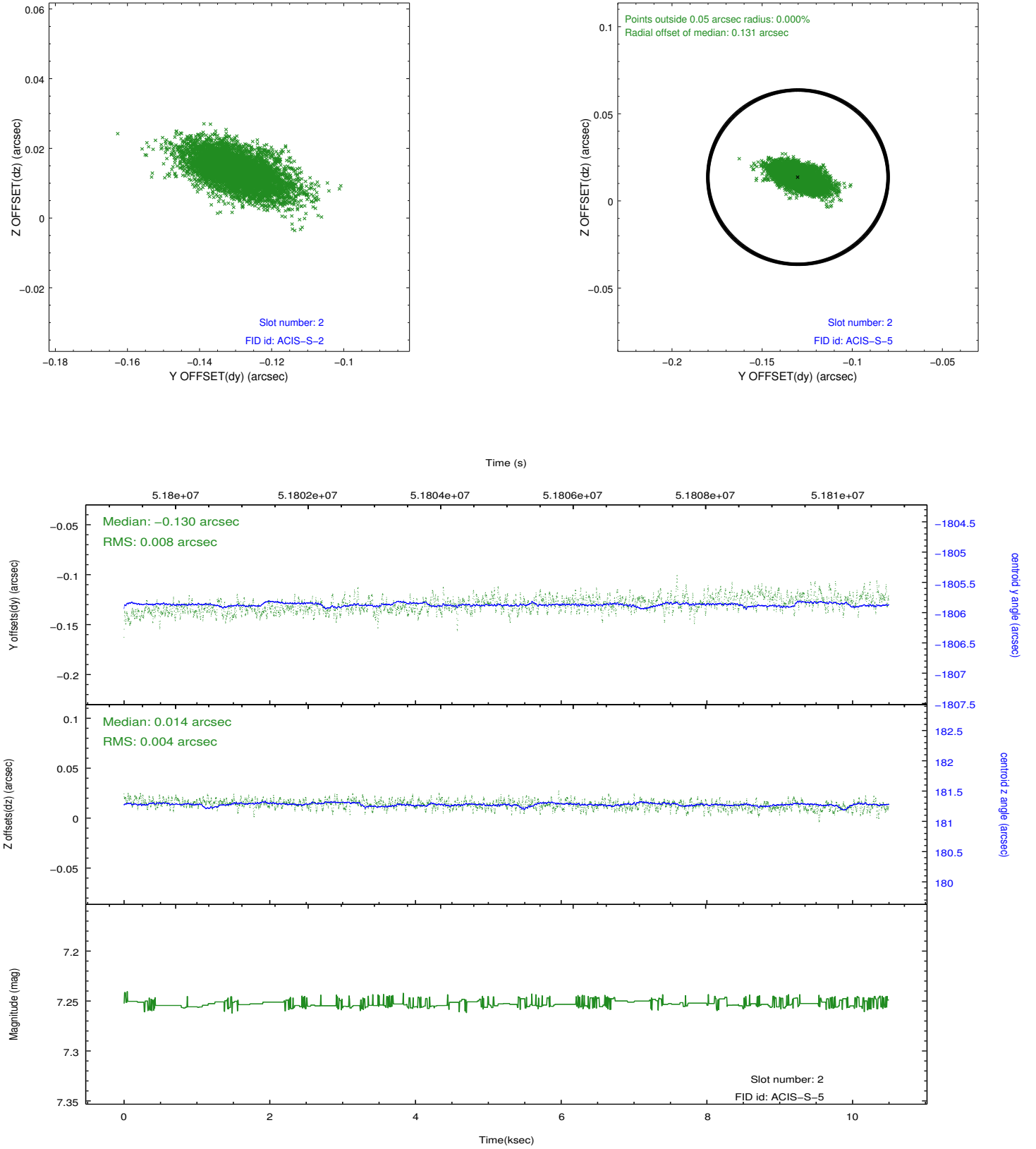
### 2.5.1 Slot 0



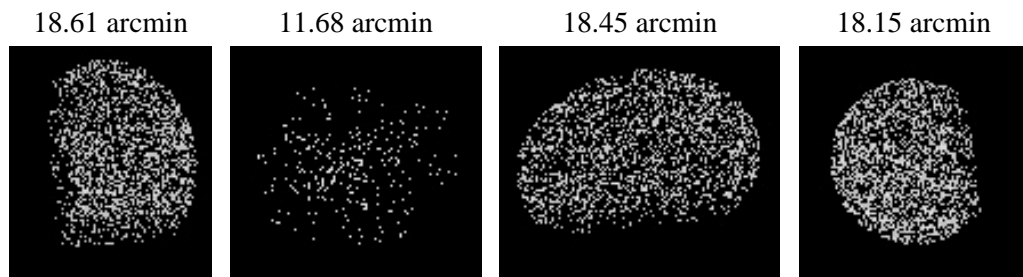
## 2.5.2 Slot 1



### 2.5.3 Slot 2



### 3 Point Sources



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2010.03.29
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.747

## A.2 Comments

Off-axis effective area measurement for chip S2.

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Slot 7 was not utilized in this observation.

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Charge time for this ObsId remains at previous value of 9.747 ksec, although with the current processing the charge time would have been 9.758 ksec.

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The focal plane temperature is approximately -100 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.