

# V&V Reference Report

## L2 ASCDS Version : 8.1.2

Observation 1231 - L2 Version 3

Chandra X-Ray Center

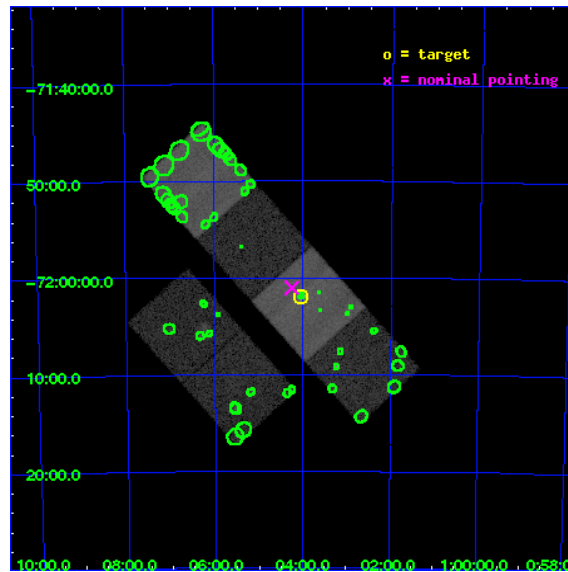
L2 Processing Date : Dec 17 2009

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# 1 Front

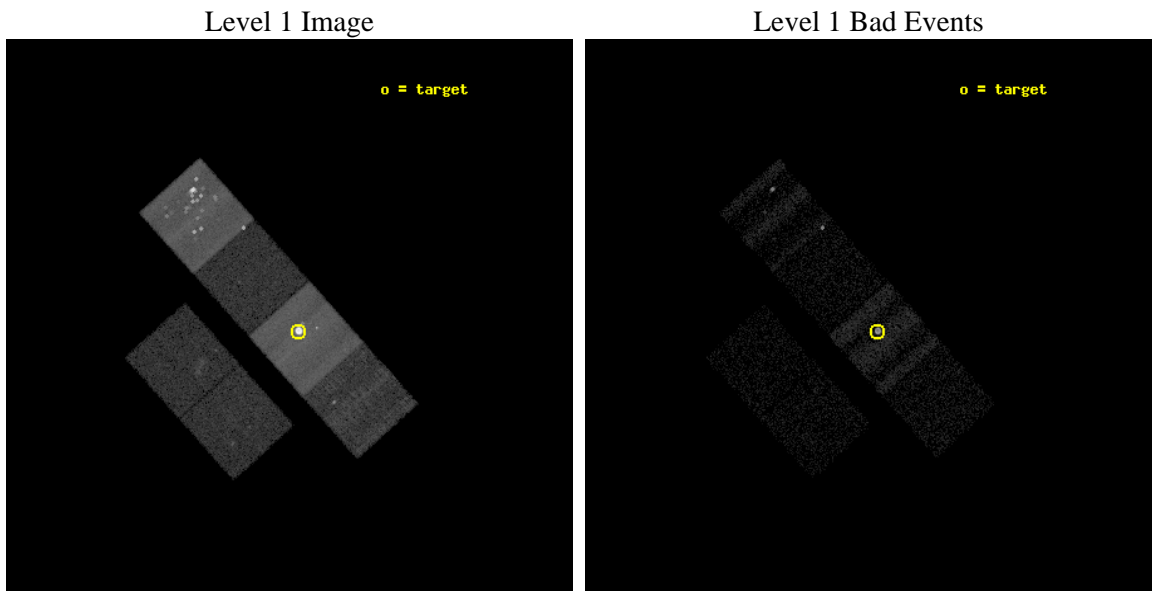
seq_num	580181	Sequence number
obs_id	1231	Observation id
title	ACIS CHIP RESPONSE TO LINES WITH E=0.6-1.5 KEV	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	E0102-72.3 [Chip S3, T=100, Offsets=-1,0,0 Std Ca]	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	16.01	Observer's specified target RA
dec_targ	-72.032028	Observer's specified target Dec
ra_nom	16.062075283103	Nominal RA
dec_nom	-72.017537749854	Nominal Dec
roll_nom	48.058942776939	Nominal Roll
revision	3	Processing version of data
ontime	9760.0000090897	Sum of GTIs [s]
livetime	9636.4130122082	Livetime [s]
ontime2	9760.0000090897	Sum of GTIs [s]
ontime3	9753.5181385055	Sum of GTIs [s]
ontime5	9760.0000090897	Sum of GTIs [s]
ontime6	9760.0000090897	Sum of GTIs [s]
ontime7	9760.0000090897	Sum of GTIs [s]
ontime8	9760.0000090897	Sum of GTIs [s]
l2events	308853	Number of level 2 events



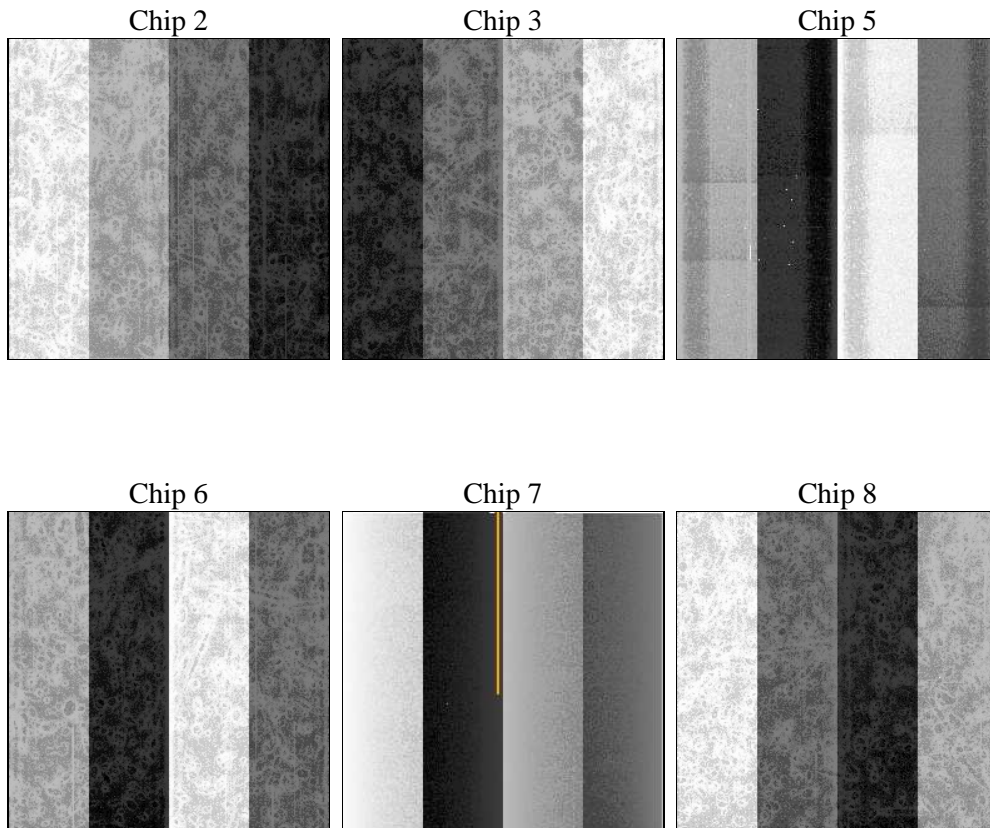
## 2 OBI

### 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	9760.0000090897	Sum of GTIs [s]
caldbver	4.1.4	&#160	ontime2	9760.0000090897	Sum of GTIs [s]
date	2009-12-17T06:19:19	Date and time of file creation	ontime3	9753.5181385055	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	9760.0000090897	Sum of GTIs [s]
			ontime6	9760.0000090897	Sum of GTIs [s]
			ontime7	9760.0000090897	Sum of GTIs [s]
			ontime8	9760.0000090897	Sum of GTIs [s]
			l1events	409175	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	20451	21124	124940	22145	188904	31611
rejected events	4959	5395	8989	5629	14621	6240
rejected %	24%	25%	7%	25%	7%	19%

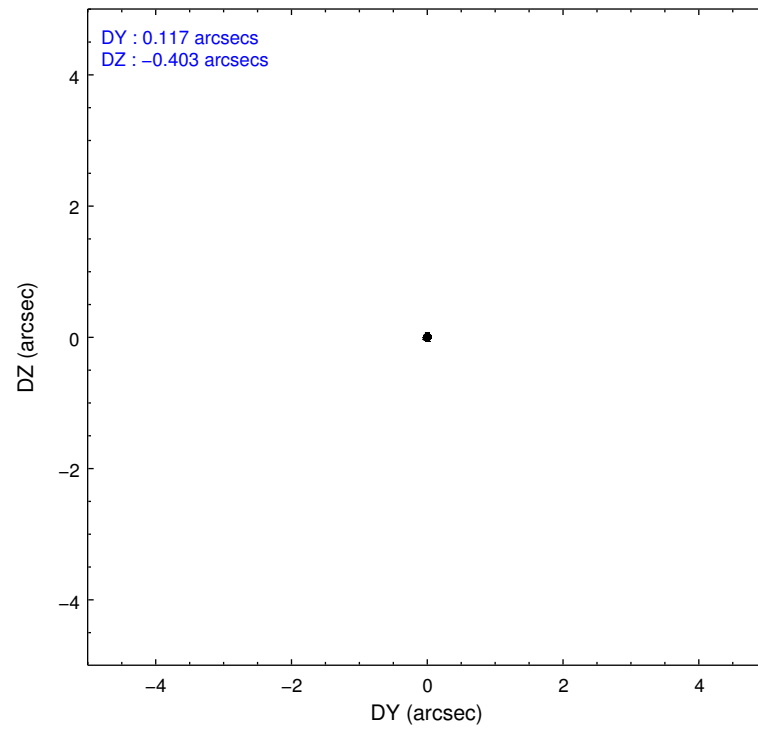
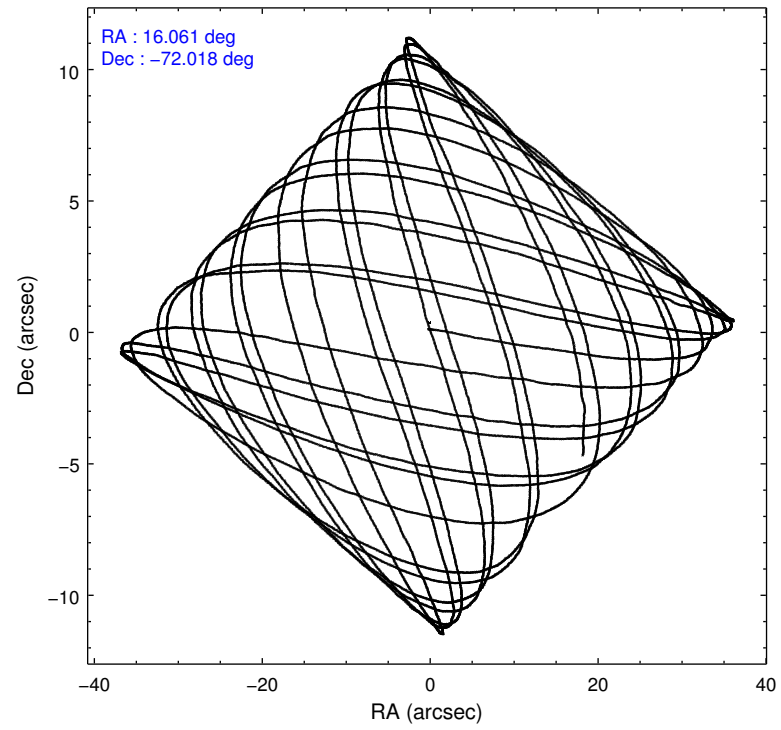
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	4302	4529	33587	4064	38247	7169
	21%	21%	26%	18%	20%	22%
grade 1 events	32	35	940	30	980	70
	0%	0%	0%	0%	0%	0%
grade 2 events	3438	3456	19261	3969	34010	6111
	16%	16%	15%	17%	18%	19%
grade 3 events	1262	1251	5278	1191	19498	2138
	6%	5%	4%	5%	10%	6%
grade 4 events	1130	1223	4674	1075	17009	1945
	5%	5%	3%	4%	9%	6%
grade 5 events	4921	5358	8020	5595	13584	6167
	24%	25%	6%	25%	7%	19%
grade 6 events	5366	5272	53180	6221	65576	8011
	26%	24%	42%	28%	34%	25%
grade 7 events	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%

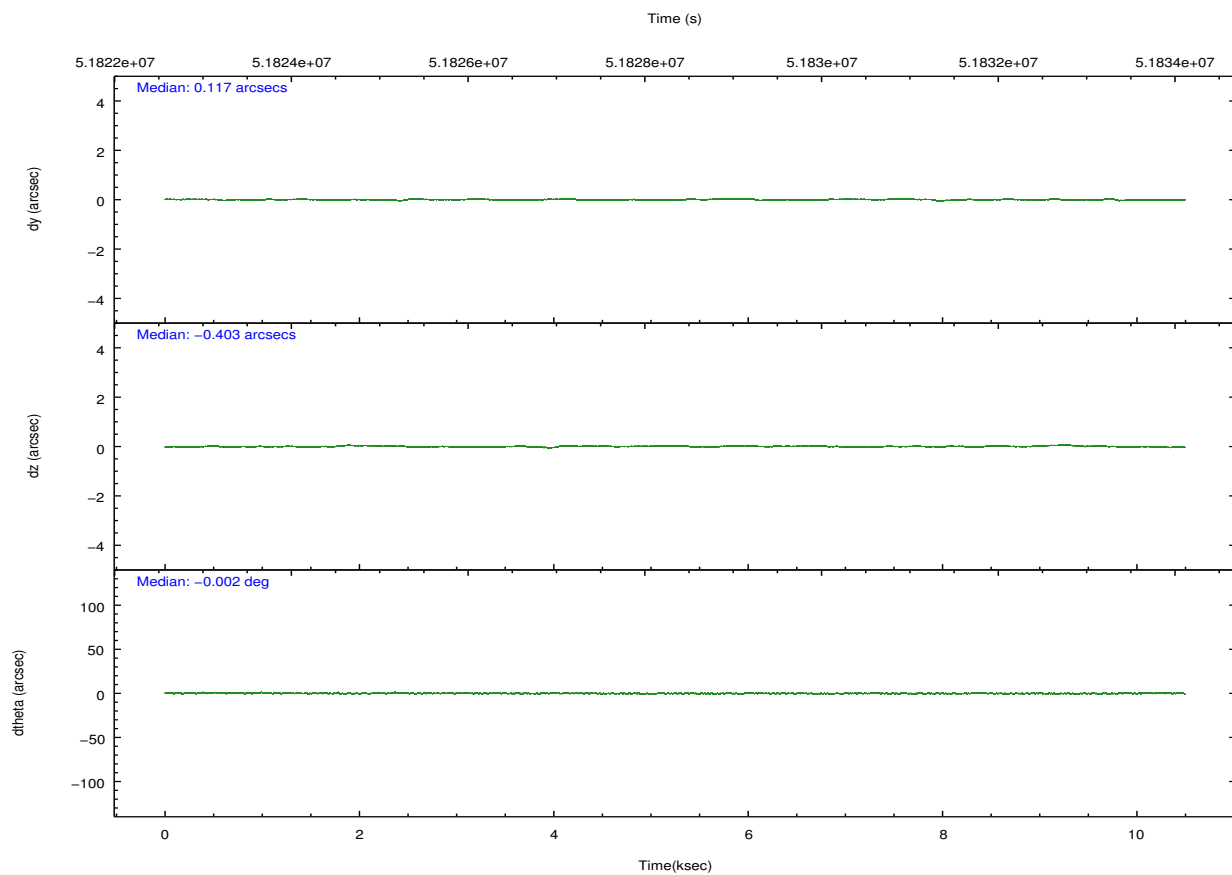
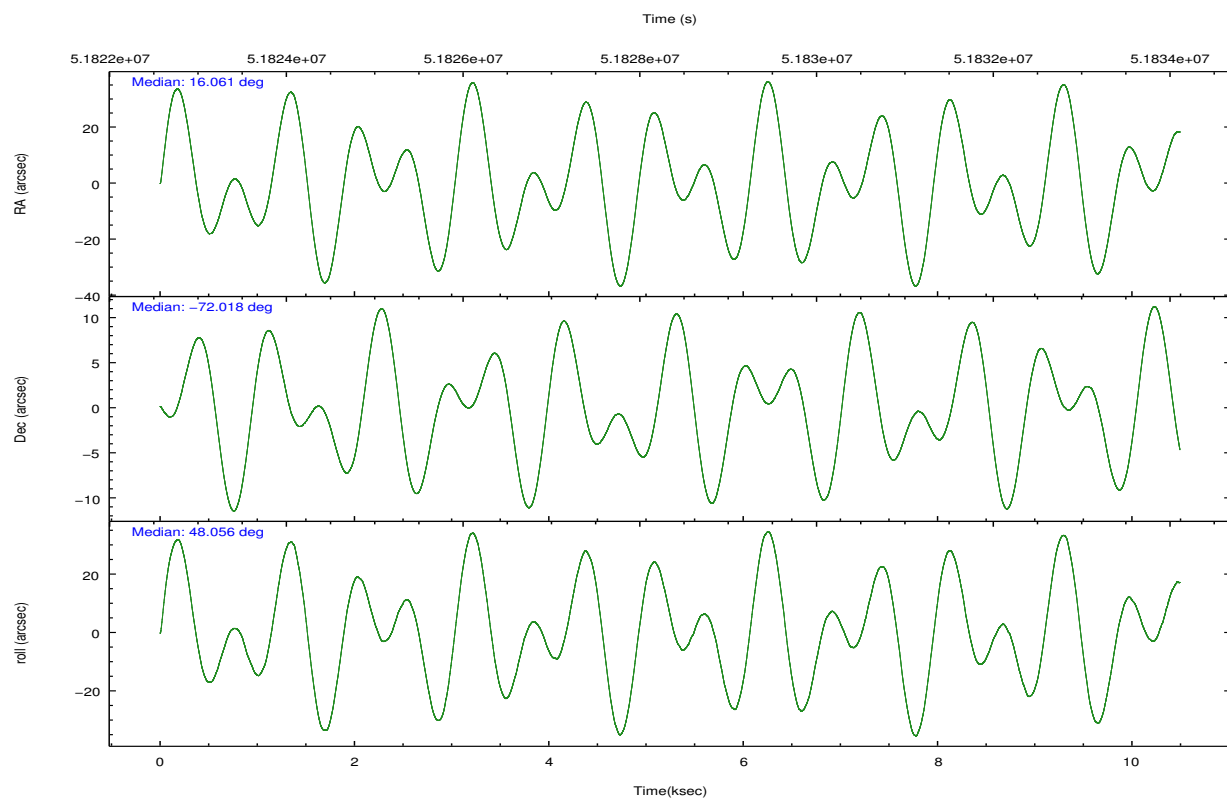


## 2.2 Compared Parameters

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	16.041868	16.06207528310338	Subarray requested	NONE	NONE
Pointing Dec	-72.044535	-72.01753774985414	Alternating exposures requested	N	N
Pointing Roll	47.883086	48.05894277693894	Primary exposure time	0.000000	3.2
Window start time	49852864.184000	49852864.184000			
Window stop time	55036864.184000	55036864.184000			
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	51823591.184000	51822917.186863			
Observation start date	1999-08-23T19:25:27	1999-08-23T19:15:17			
Observation end time	51833591.184000	51834039.974763			
Observation end date	1999-08-23T22:12:07	1999-08-23T22:20:39			
Read mode	TIMED	TIMED			

## 2.3 Aspect



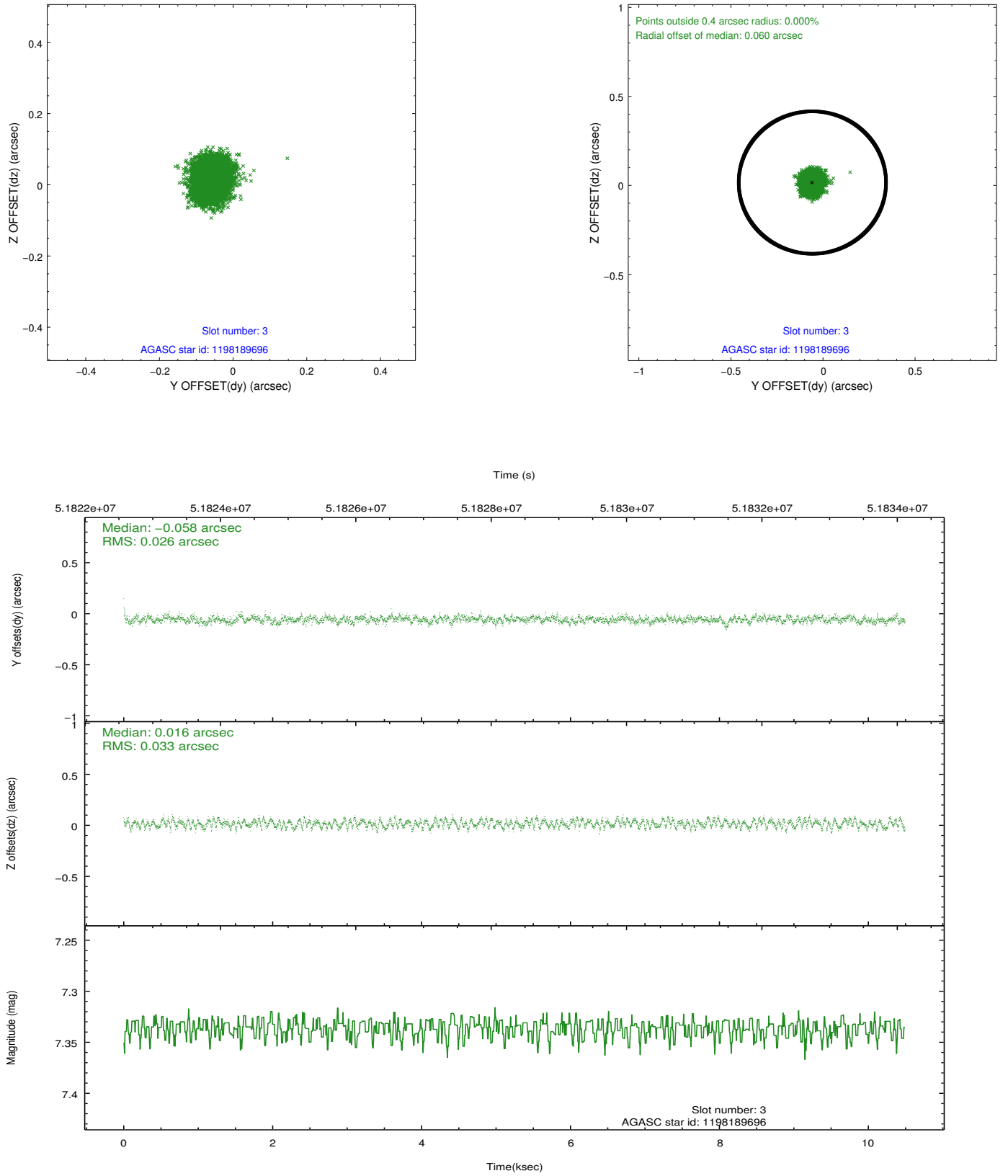


Slot Statistics

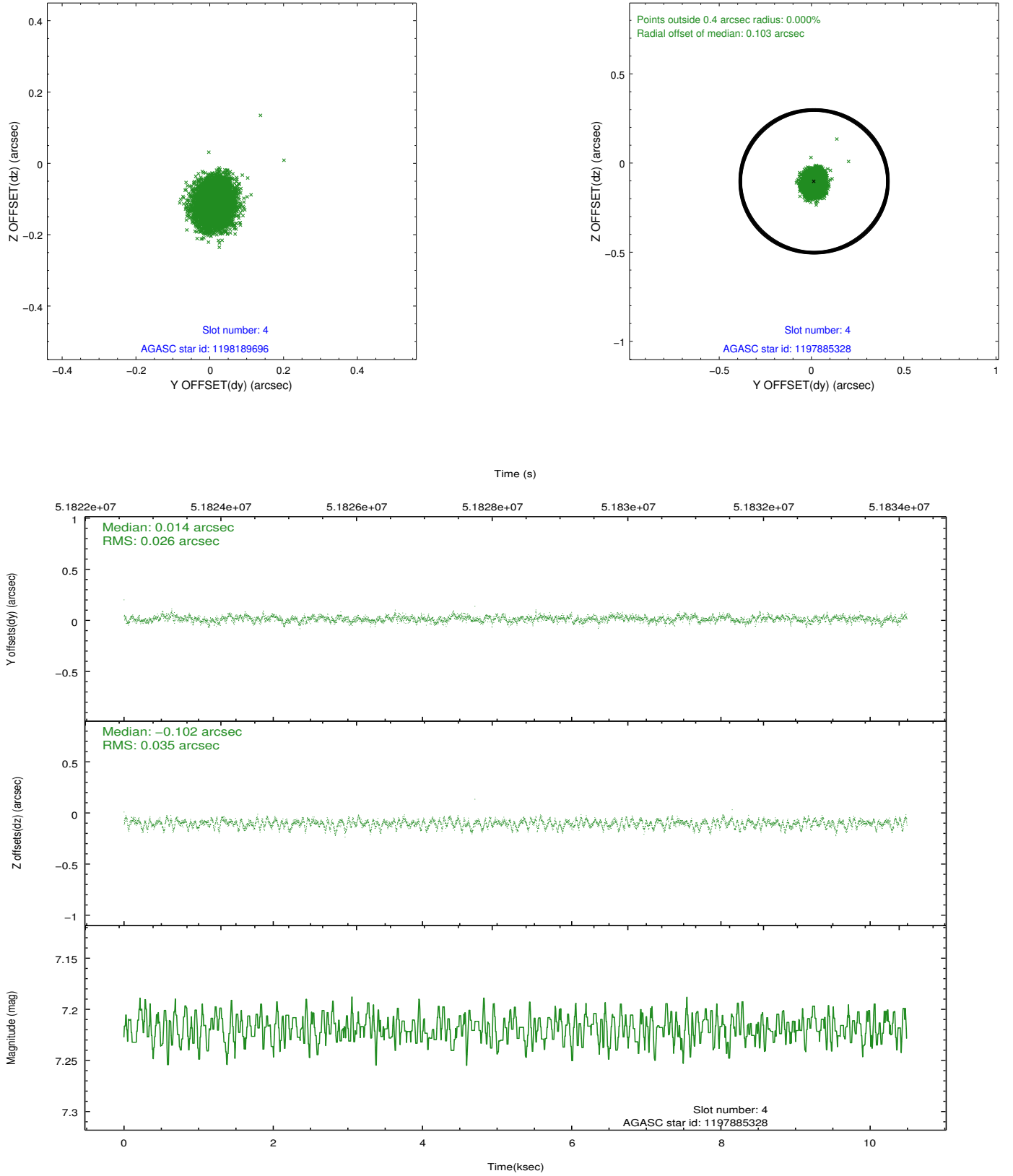
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-3	7.36	5118	-0.031	0.034	0.007	0.012	0.000000	0.000000	60.44	-1849.97
1	FID	ACIS-S-4	7.22	5120	0.138	0.002	0.007	0.012	0.000000	0.000000	2160.78	187.25
2	FID	ACIS-S-5	7.25	5120	-0.135	-0.026	0.007	0.012	0.000000	0.000000	-1805.40	181.22
3	GUIDE	1198189696	7.34	5120	-0.058	0.016	0.045	0.071	15.223750	-72.697522	-2335.20	-931.52
4	GUIDE	1197885328	7.22	5120	0.014	-0.102	0.046	0.078	16.283090	-71.733943	1011.50	546.69
5	GUIDE	1197750936	7.55	5120	-0.055	0.015	0.055	0.087	15.387940	-71.549550	819.72	1744.49
6	GUIDE	1197884536	8.50	5119	0.069	0.051	0.046	0.077	17.160729	-71.835289	1392.91	-434.28
7	GUIDE	1197749664	9.58	5112	0.033	0.030	0.080	0.129	15.809015	-72.366369	-1029.32	-589.75

## 2.4 Star Slots

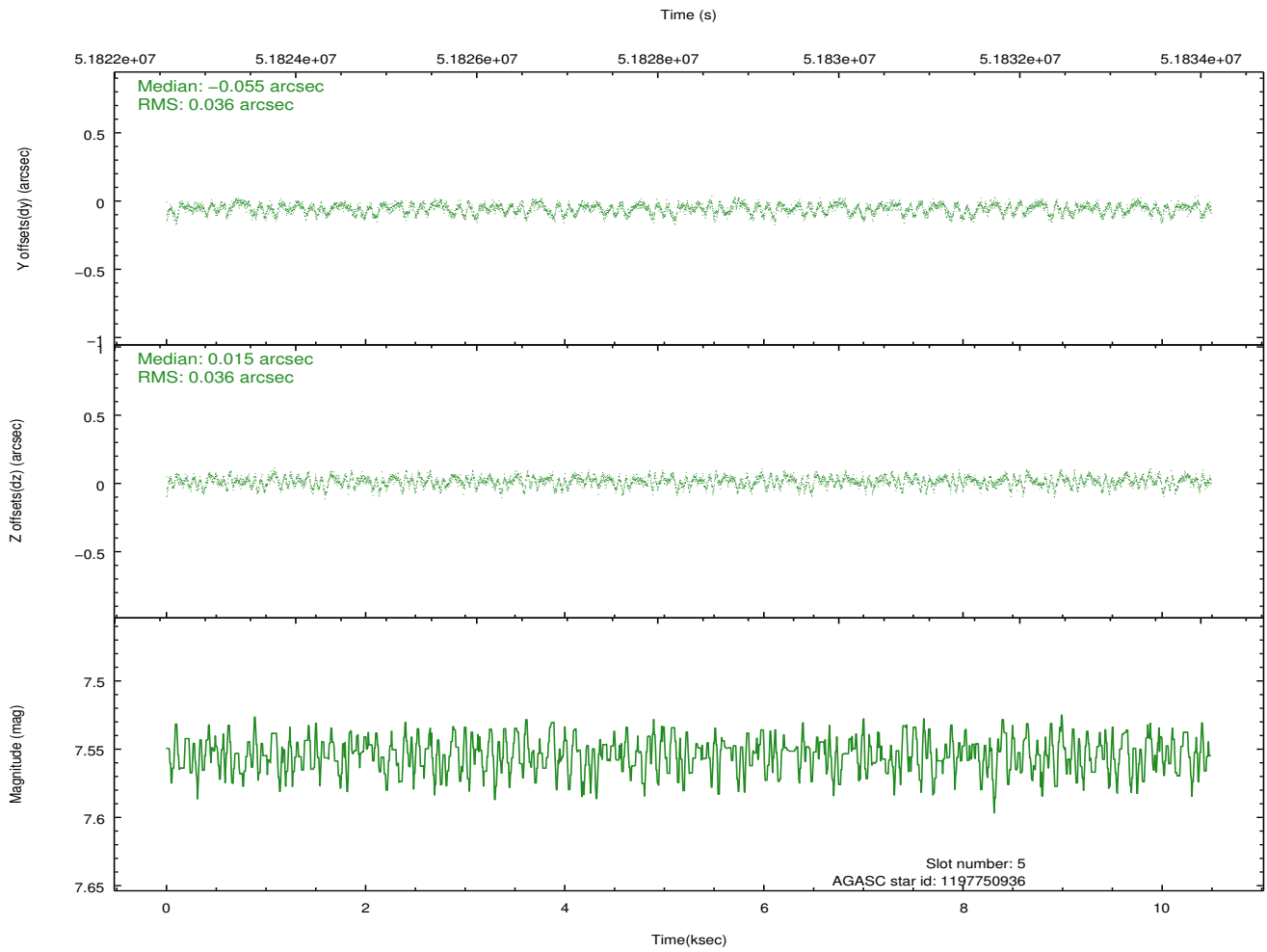
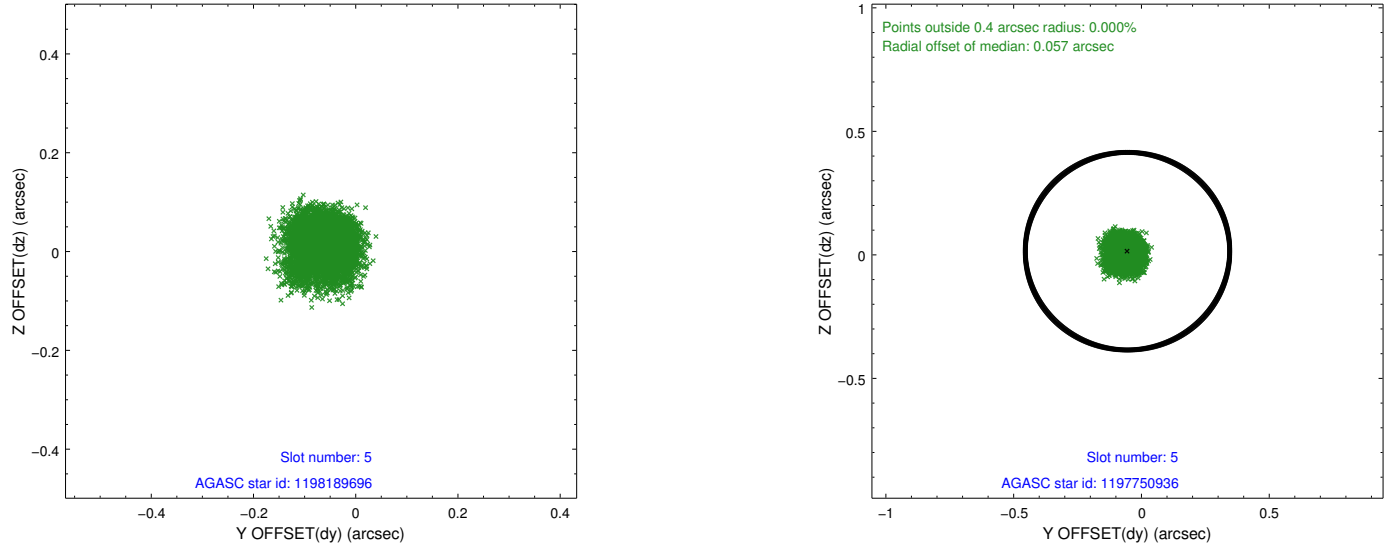
### 2.4.1 Slot 3



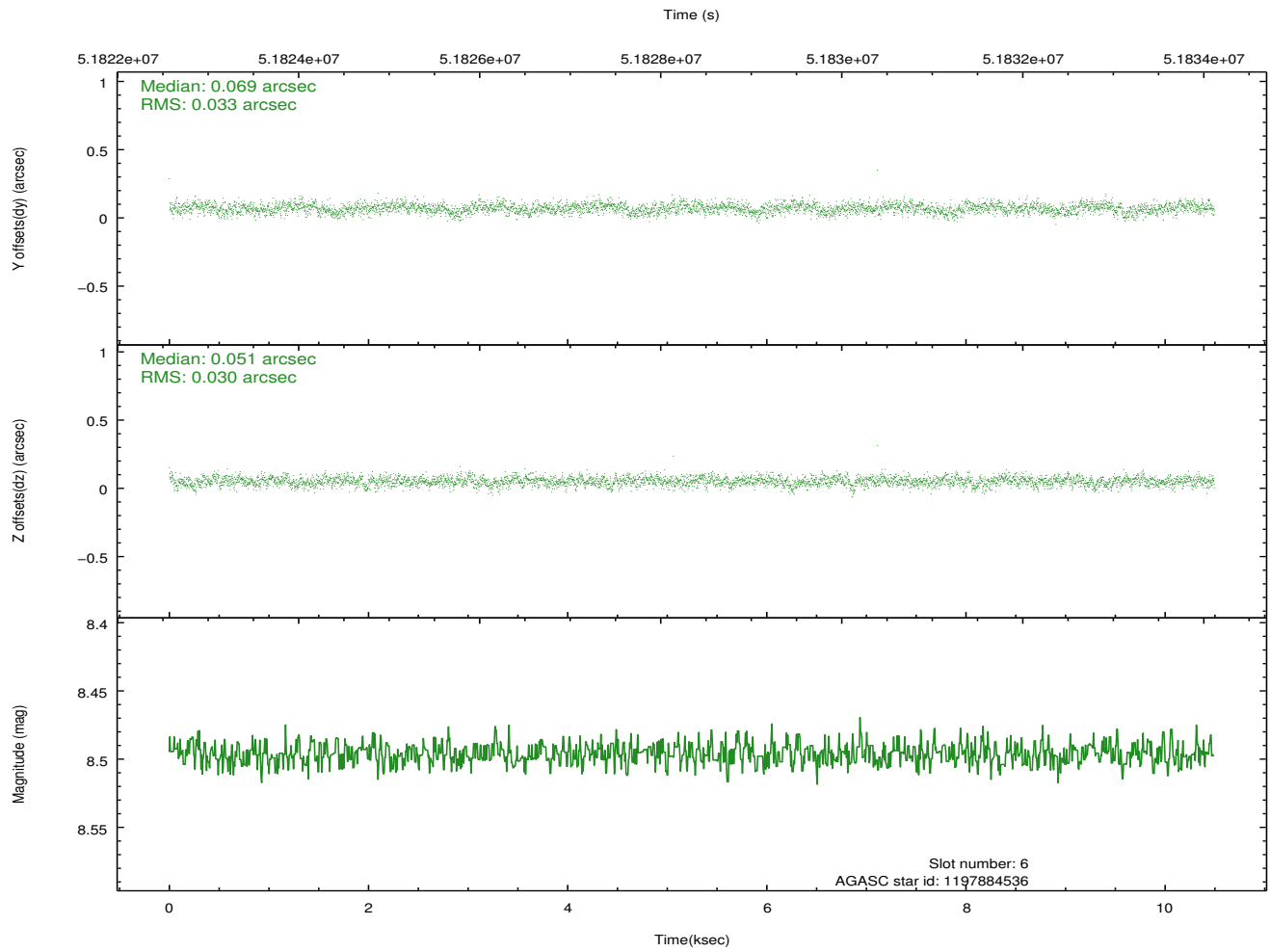
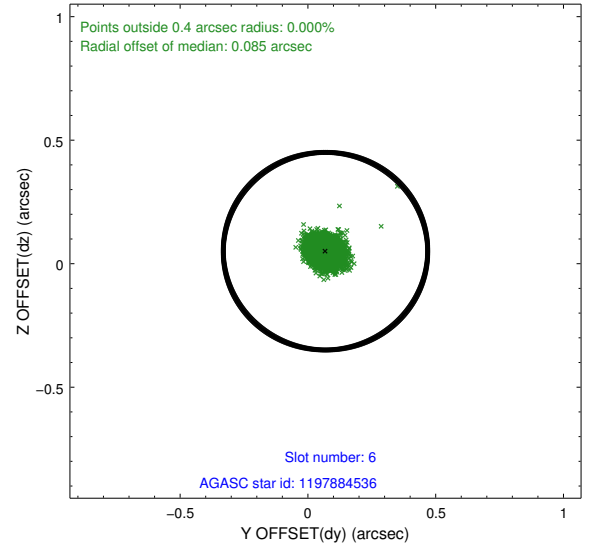
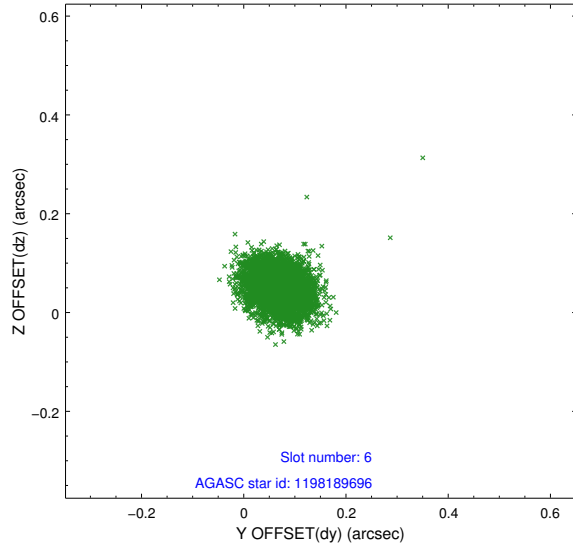
## 2.4.2 Slot 4



### 2.4.3 Slot 5

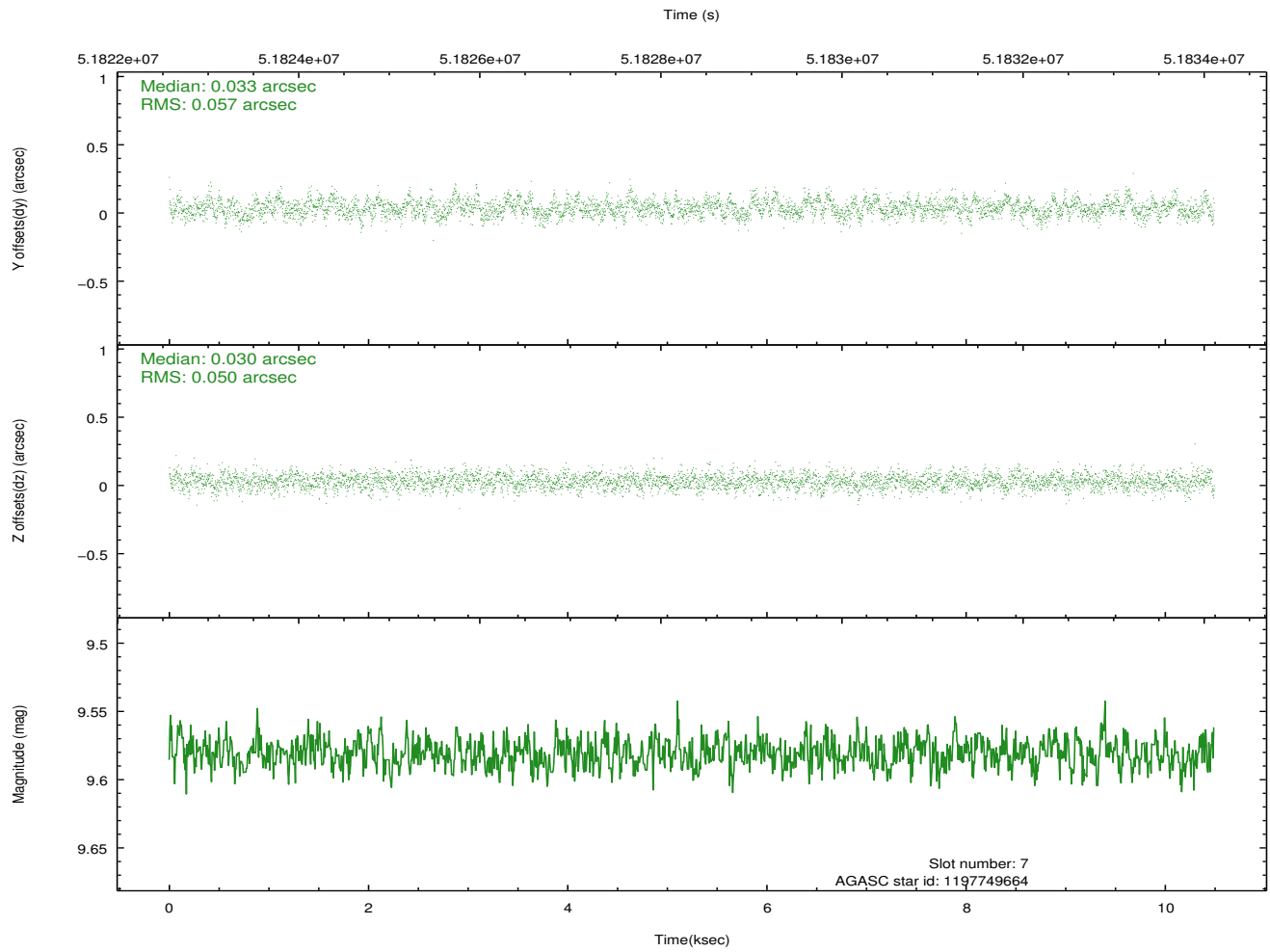
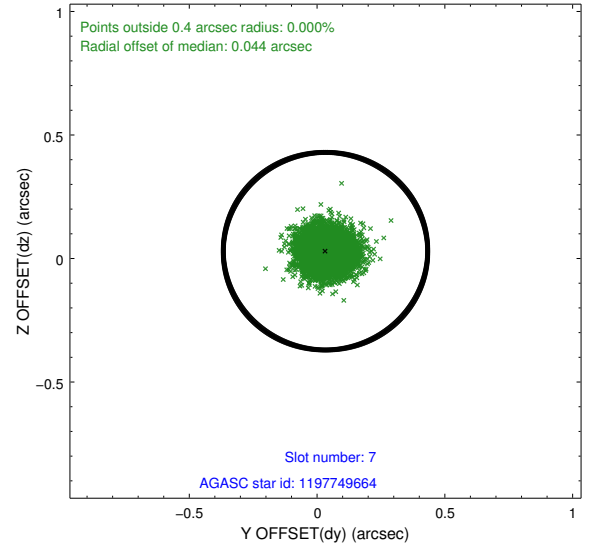
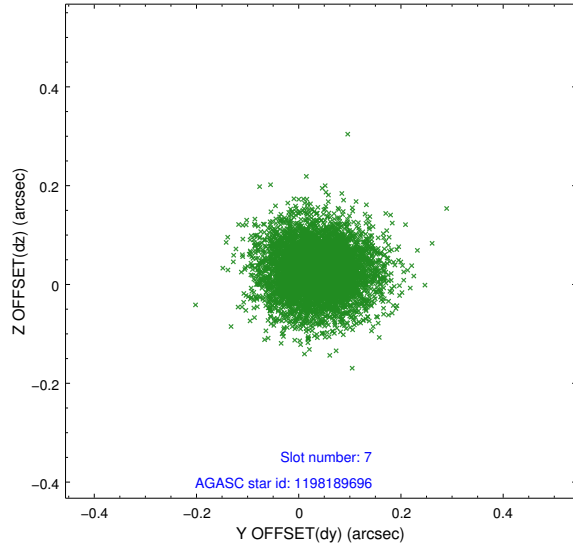


## 2.4.4 Slot 6



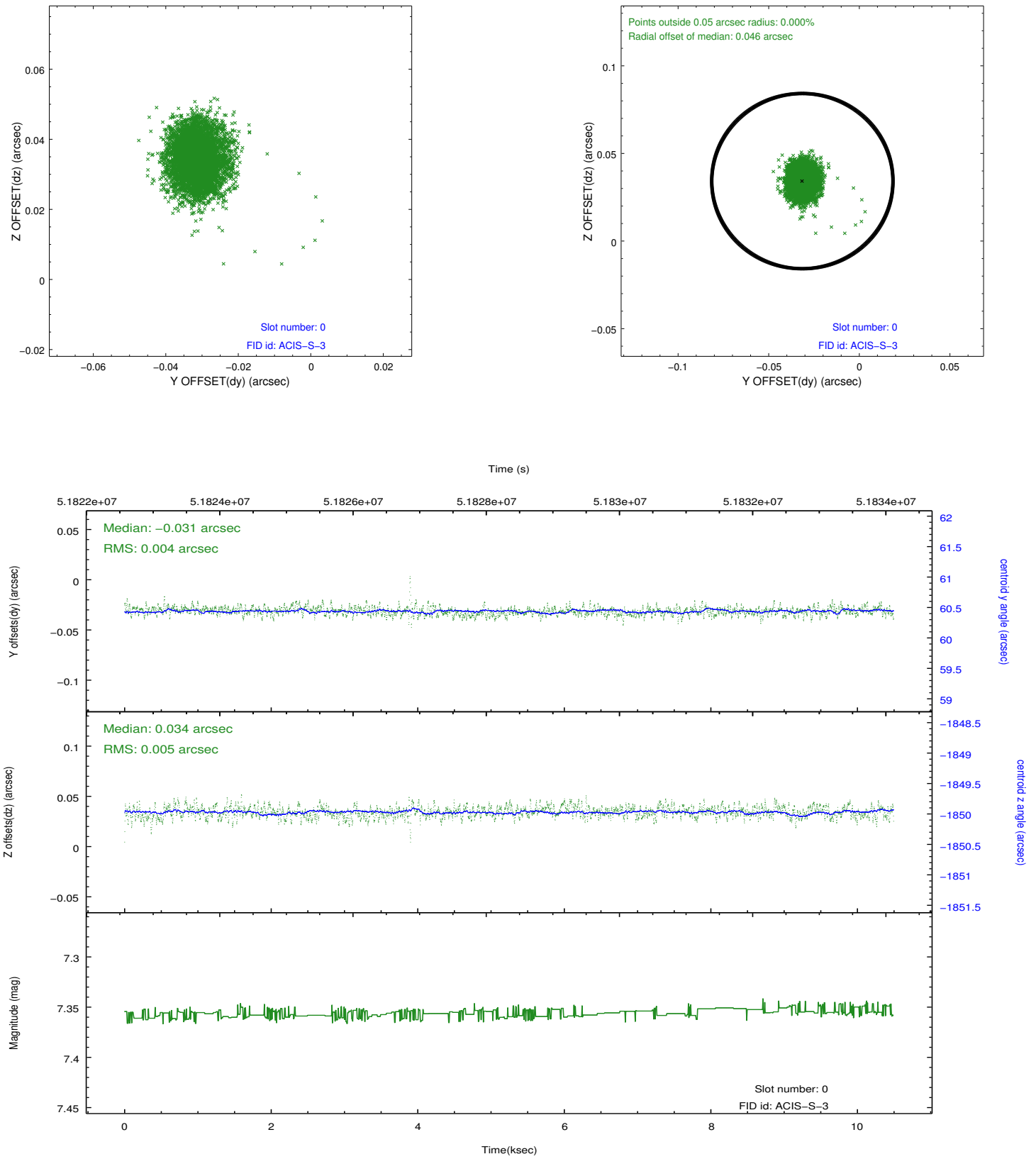


## 2.4.5 Slot 7

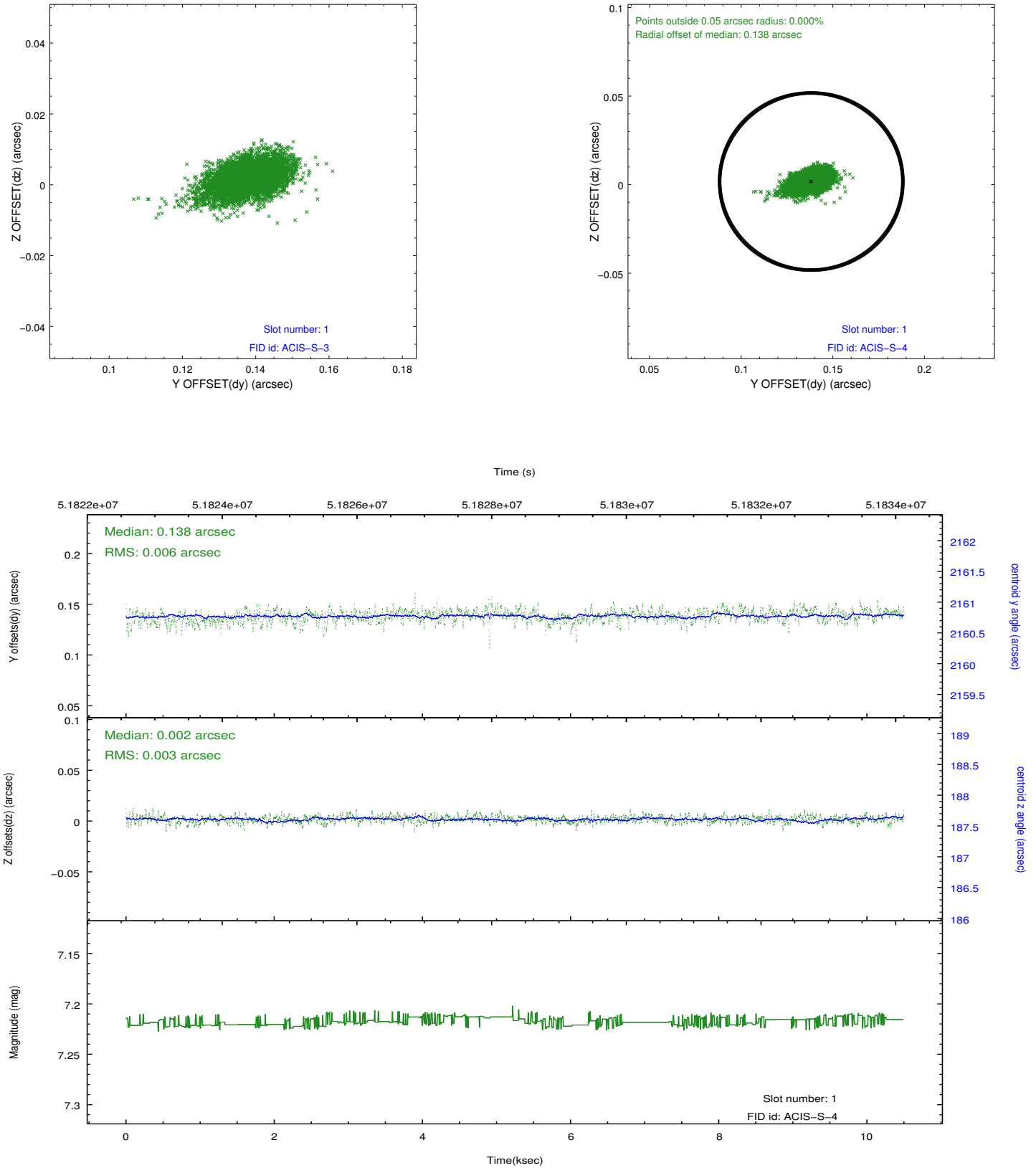


## 2.5 FID Slots

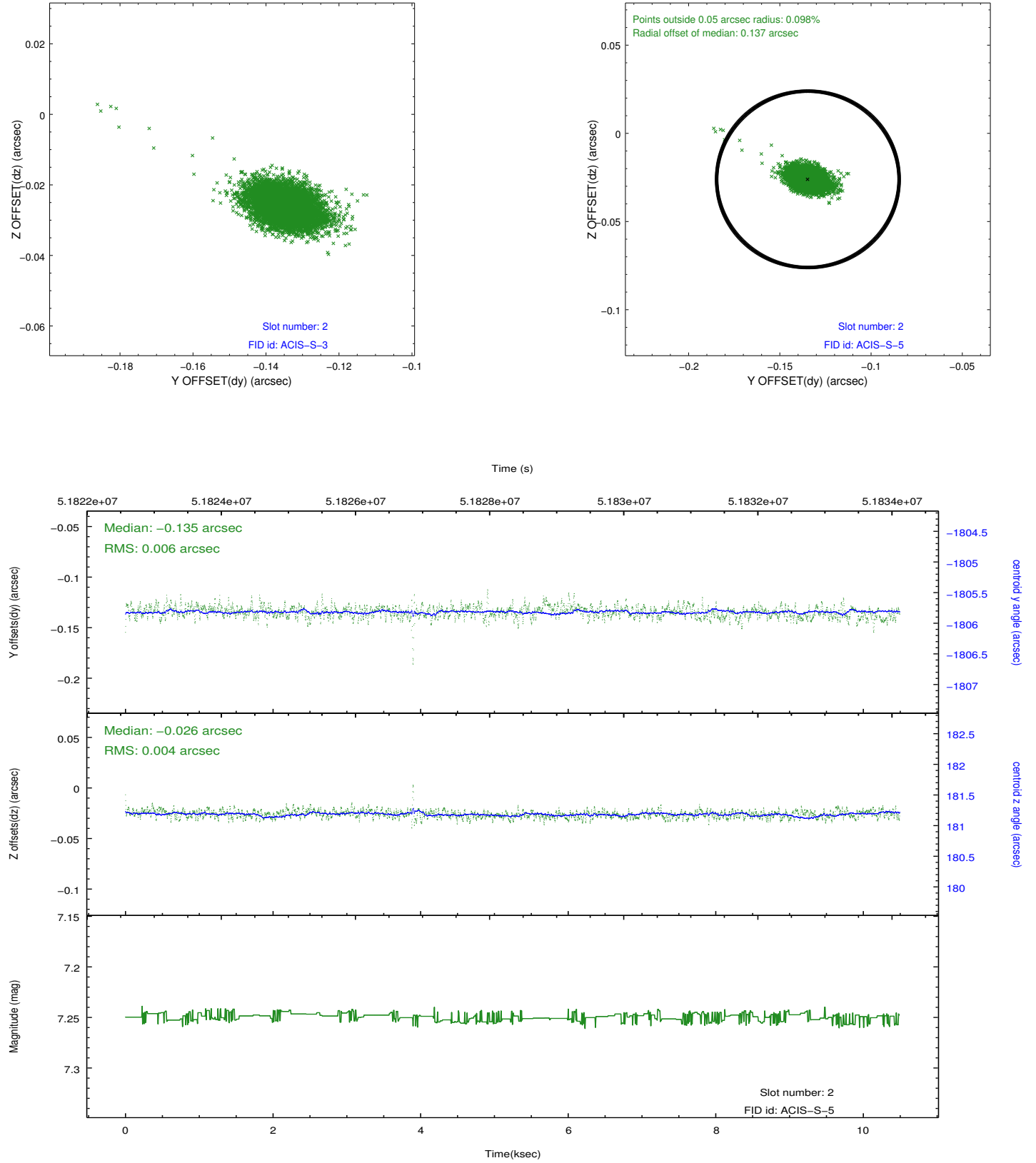
### 2.5.1 Slot 0



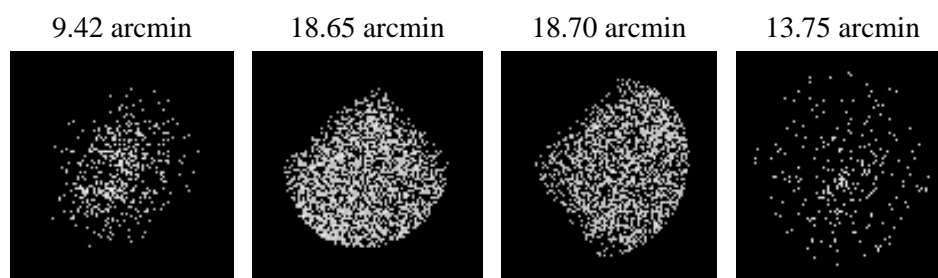
## 2.5.2 Slot 1



### 2.5.3 Slot 2



### 3 Point Sources



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2010.07.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.763

## A.2 Comments

A high radiation environment existed during this observation, resulting in several periods of enhanced count rates, primarily during the first 2.5 ksec of the observation.

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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.