

# V&V Reference Report

## L2 ASCDS Version : 8.1.2

Observation 162 - L2 Version 4  
Chandra X-Ray Center

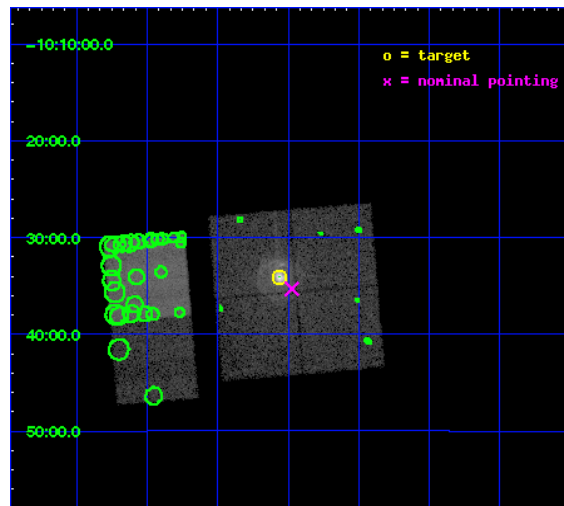
L2 Processing Date : Dec 17 2009

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# 1 Front

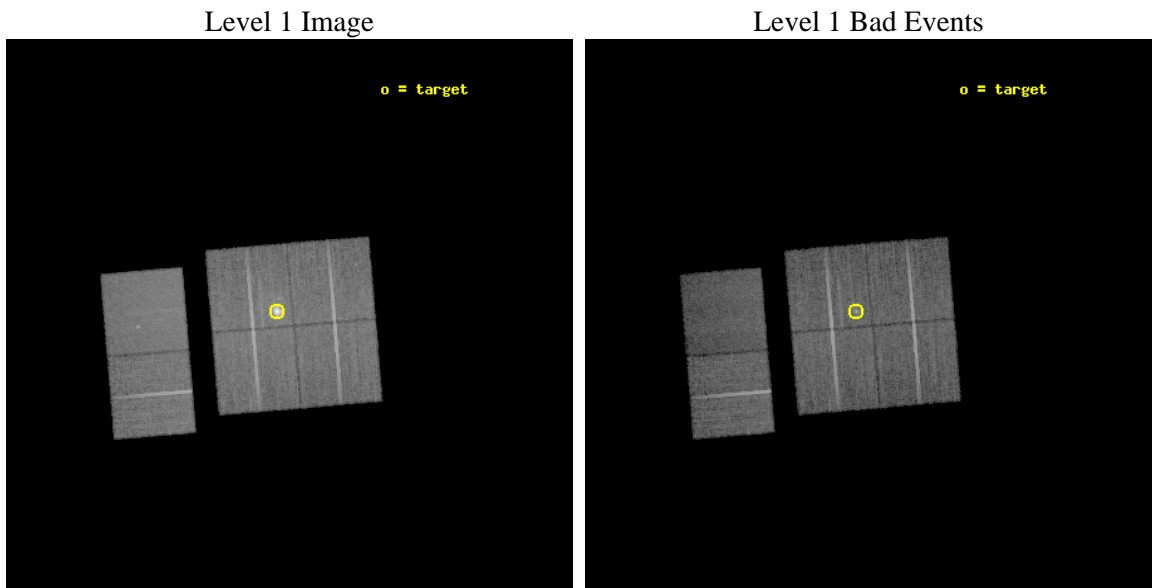
seq_num	590030	Sequence number
obs_id	162	Observation id
title	ACIS CHIP RESPONSE TO A CONTINUUM SOURCE	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	G21.5-0.9 [Chip I3, T=100, Offsets=-1,1,0 Std Can]	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	278.389583	Observer's specified target RA
dec_targ	-10.568528	Observer's specified target Dec
ra_nom	278.36843239681	Nominal RA
dec_nom	-10.588617537557	Nominal Dec
roll_nom	265.1809399575	Nominal Roll
revision	4	Processing version of data
ontime	13235.200012326	Sum of GTIs [s]
livetime	13067.607940489	Livetime [s]
ontime0	13235.200012326	Sum of GTIs [s]
ontime1	13235.200012326	Sum of GTIs [s]
ontime2	13235.200012326	Sum of GTIs [s]
ontime3	13235.200012326	Sum of GTIs [s]
ontime6	13235.200012326	Sum of GTIs [s]
ontime7	13235.200012326	Sum of GTIs [s]
l2events	153543	Number of level 2 events



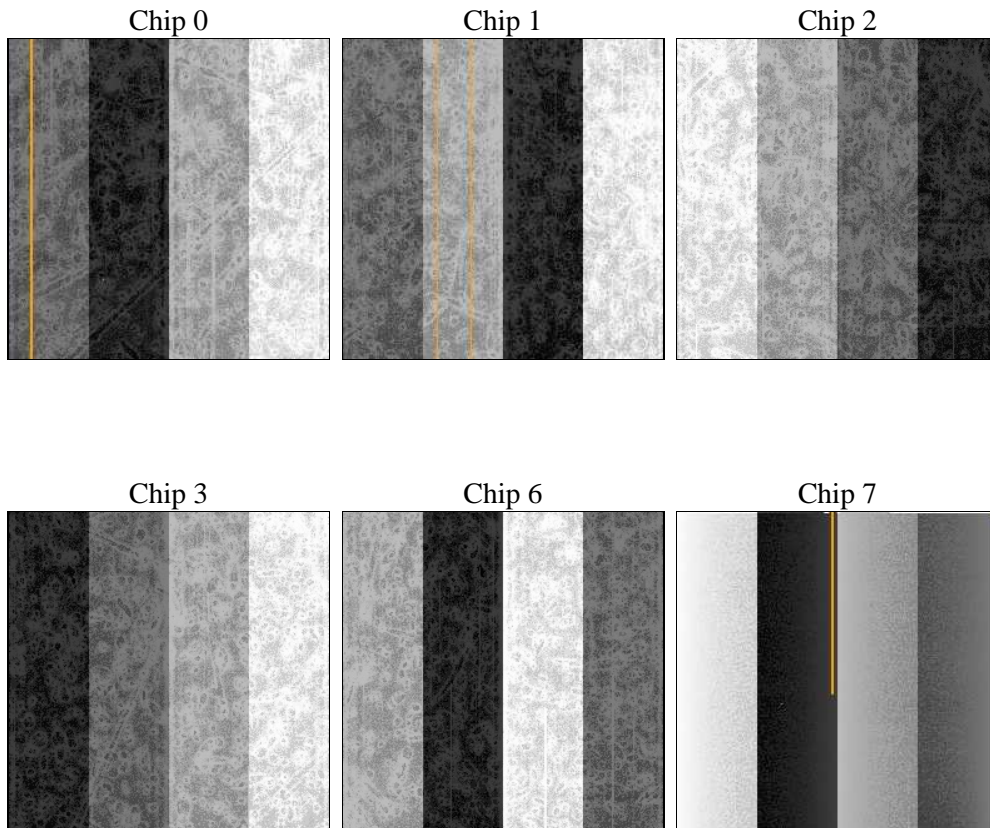
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14200.000000	Scheduled observation exposure time
ascdsver	8.1.2	ASCDS version number	ontime	13235.200012326	Sum of GTIs [s]
caldbver	4.1.4	&#160	ontime0	13235.200012326	Sum of GTIs [s]
date	2009-12-17T10:43:23	Date and time of file creation	ontime1	13235.200012326	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	13235.200012326	Sum of GTIs [s]
			ontime3	13235.200012326	Sum of GTIs [s]
			ontime6	13235.200012326	Sum of GTIs [s]
			ontime7	13235.200012326	Sum of GTIs [s]
			l1events	837364	Number of level 1 events

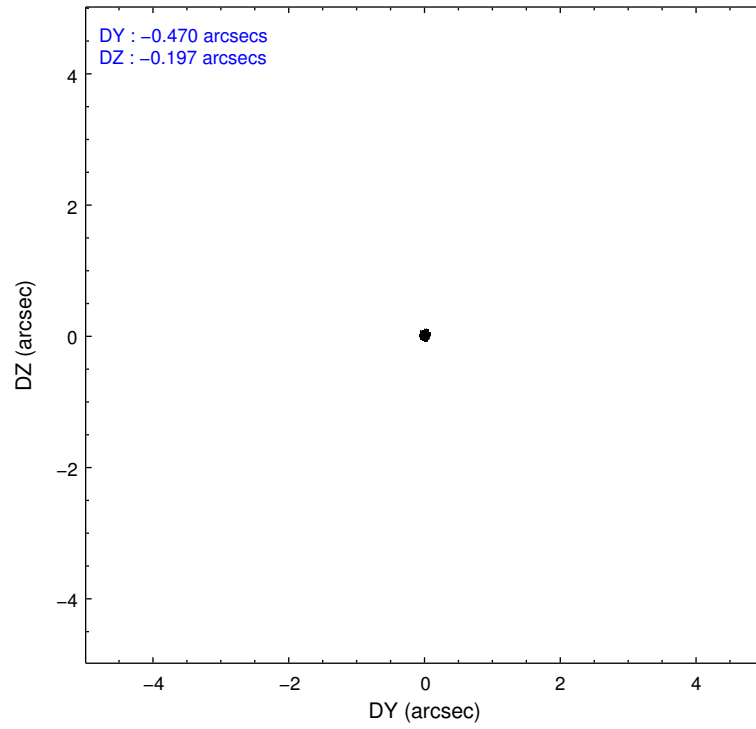
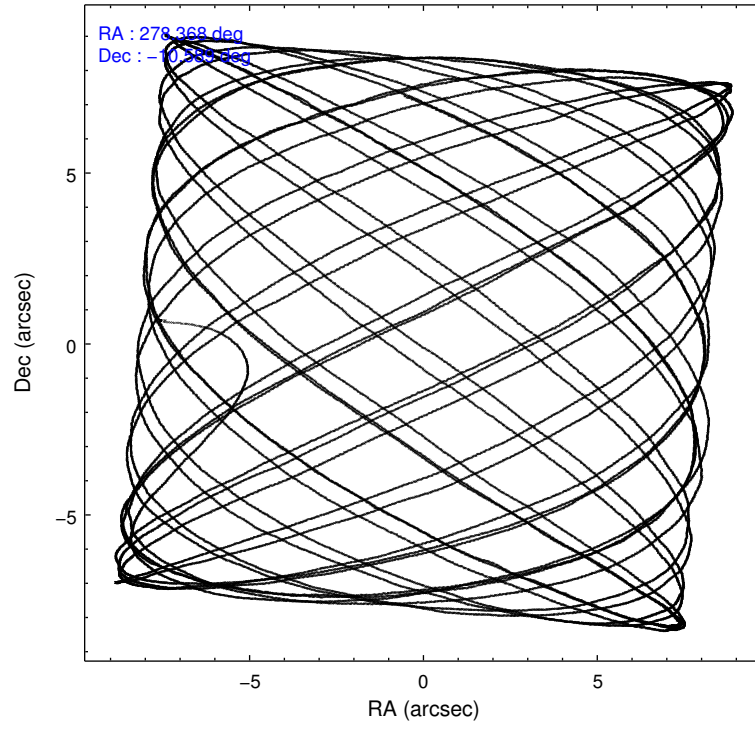
### 2.1.4 Events

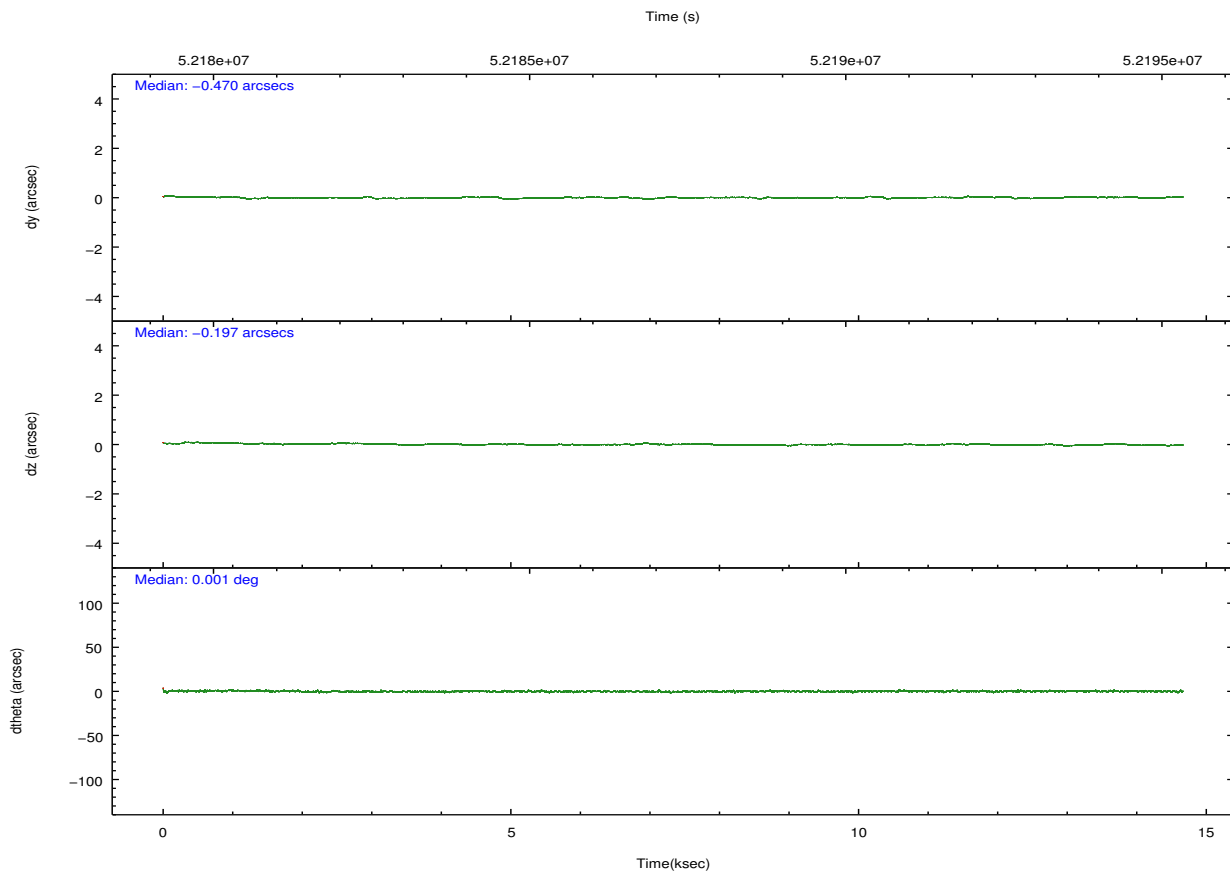
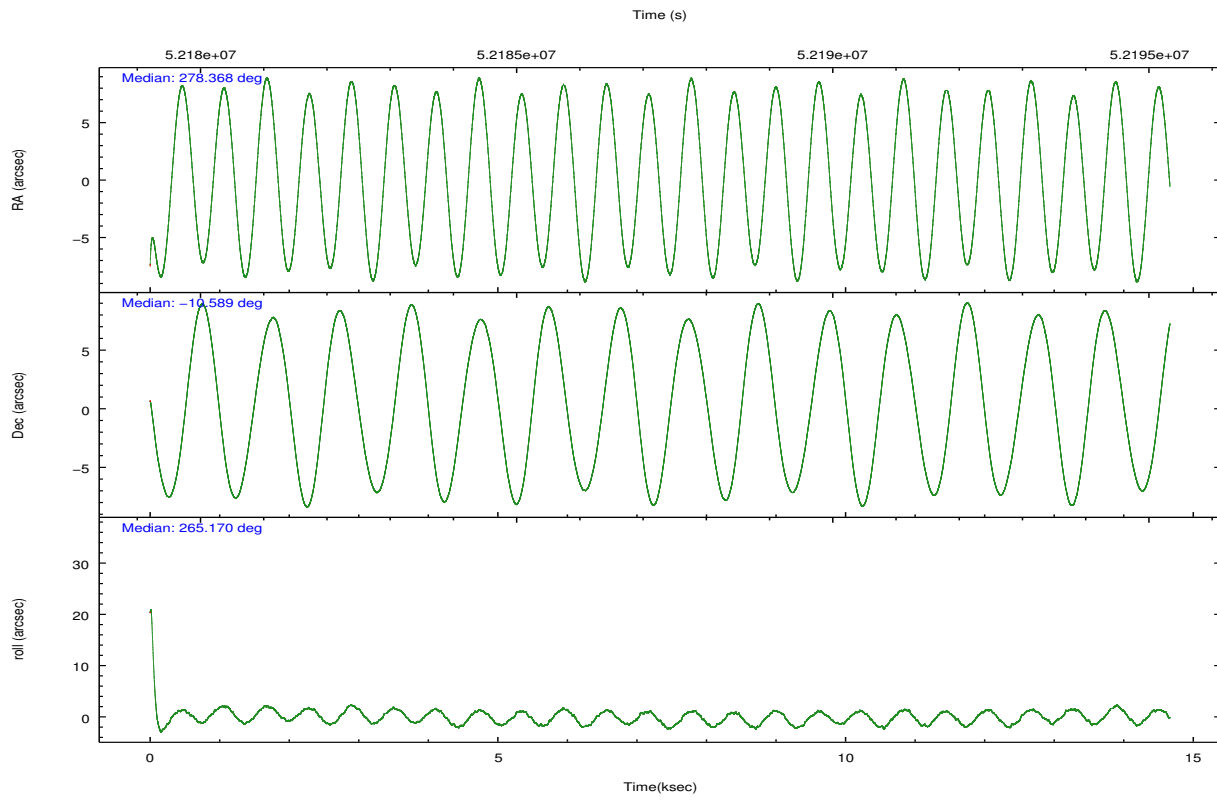
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	128199	129743	138091	172555	131583	137193	grade 0 events	5224	5920	5073	31168	3674	4086
rejected events	114401	114477	124966	120681	119069	81416		4%	4%	3%	18%	2%	2%
rejected %	89%	88%	90%	69%	90%	59%	grade 1 events	44	43	38	274	36	89
								0%	0%	0%	0%	0%	0%
							grade 2 events	3509	3779	3417	10508	3836	8840
								2%	2%	2%	6%	2%	6%
							grade 3 events	1257	1368	1128	2636	1050	5403
								0%	1%	0%	1%	0%	3%
							grade 4 events	1169	1385	1052	2657	985	4640
								0%	1%	0%	1%	0%	3%
							grade 5 events	3233	3414	2802	3344	2913	9148
								2%	2%	2%	1%	2%	6%
							grade 6 events	2645	2822	2460	4913	2971	32821
								2%	2%	1%	2%	2%	23%
							grade 7 events	111118	111012	122121	117055	116118	72166
								86%	85%	88%	67%	88%	52%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-012367	ACIS-012367	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	278.357053	278.3684323968091	Subarray requested	NONE	NONE
Pointing Dec	-10.563043	-10.58861753755687	Alternating exposures requested	N	N
Pointing Roll	264.970140	265.1809399574959	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	52180400.184000	52178823.849665			
Observation start date	1999-08-27T22:32:16	1999-08-27T22:07:03			
Observation end time	52194600.184000	52196458.462799			
Observation end date	1999-08-28T02:28:56	1999-08-28T03:00:58			
Read mode	TIMED	TIMED			

## 2.3 Aspect



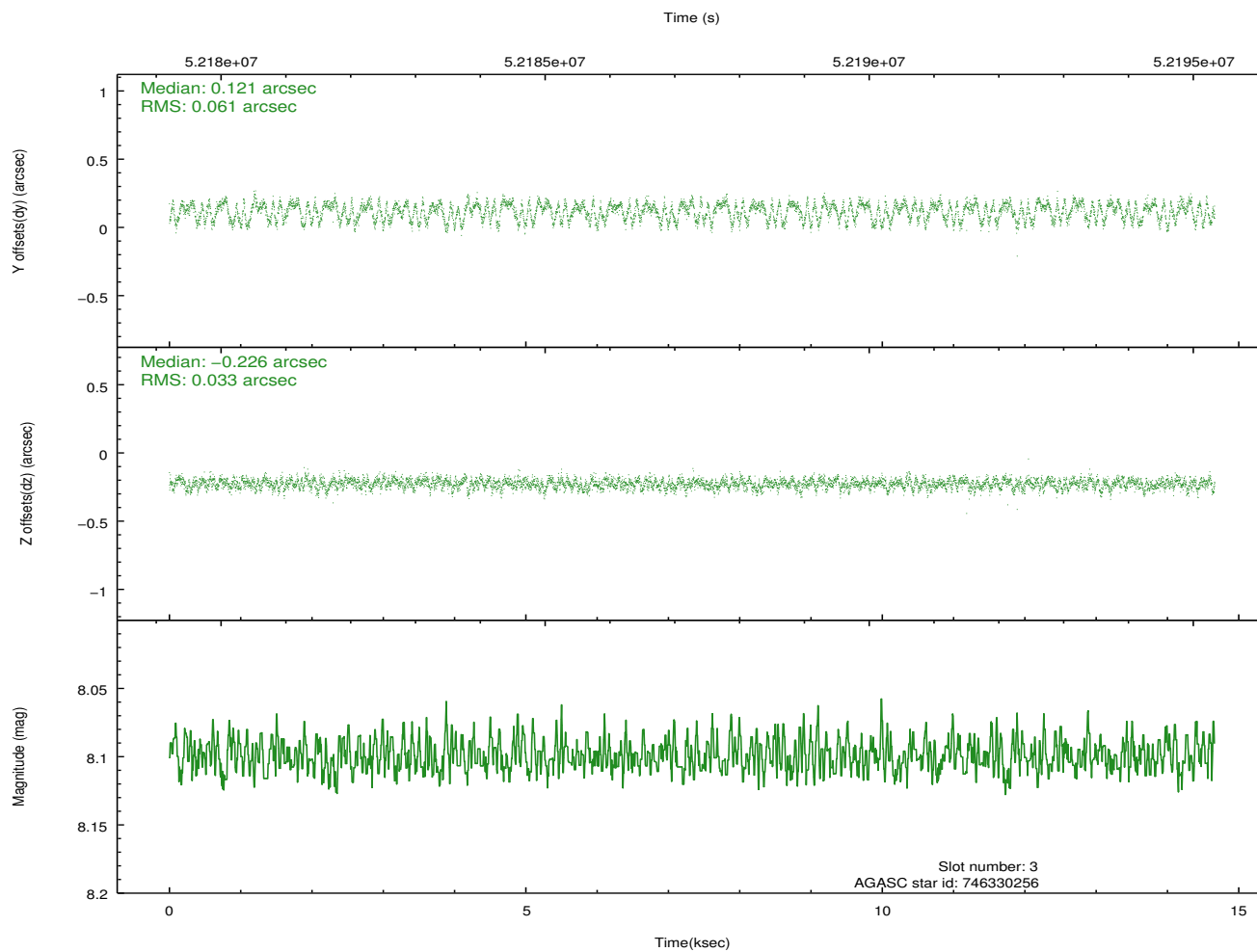
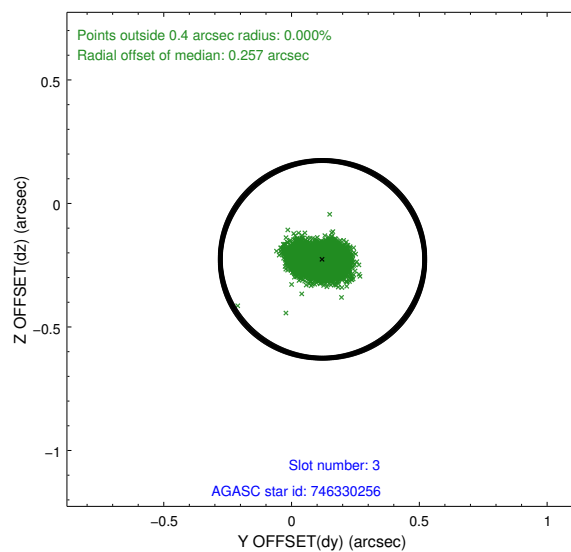
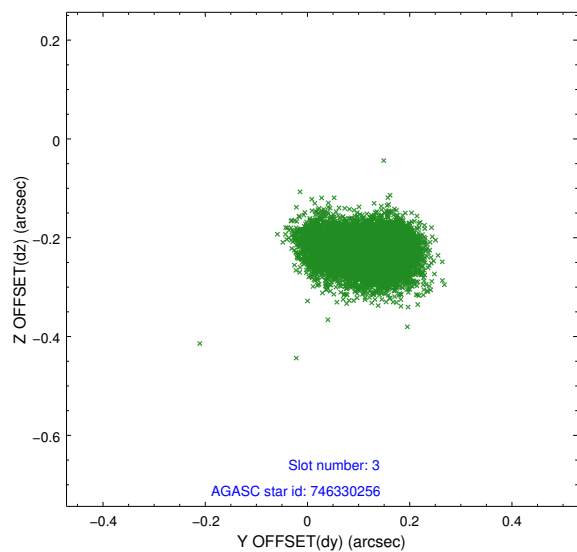


### Slot Statistics

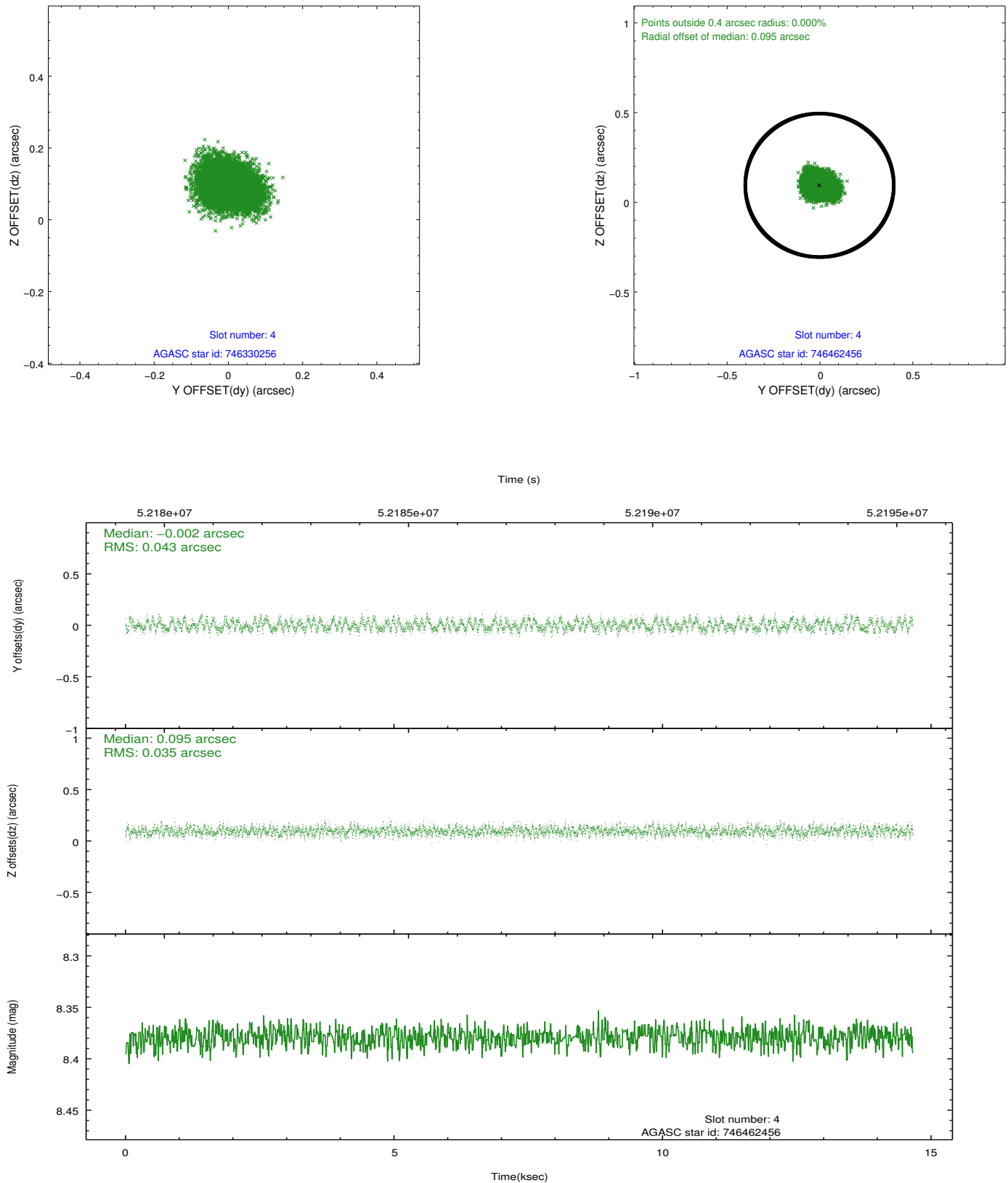
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.21	7153	-0.032	0.057	0.009	0.016	0.000000	0.000000	-753.89	-829.27
1	FID	ACIS-I-4	7.24	7153	0.141	0.012	0.006	0.012	0.000000	0.000000	2160.41	1076.66
2	FID	ACIS-I-5	7.23	7154	-0.210	-0.000	0.008	0.014	0.000000	0.000000	-1807.69	1074.80
3	GUIDE	746330256	8.10	7152	0.121	-0.226	0.075	0.117	277.634401	-10.863955	1306.65	-2449.24
4	GUIDE	746462456	8.38	7153	-0.002	0.095	0.060	0.093	278.652171	-10.530173	-209.09	1030.51
5	GUIDE	746460272	8.93	7151	-0.057	0.094	0.074	0.117	278.847488	-10.152127	-1625.13	1602.26
6	BAD	746460328	9.80	43	-0.185	0.019	0.117	0.226	278.603974	-9.898096	-2491.10	701.79
7	GUIDE	746461728	9.79	7143	-0.060	0.037	0.105	0.170	278.986921	-10.530755	-309.91	2211.46

## 2.4 Star Slots

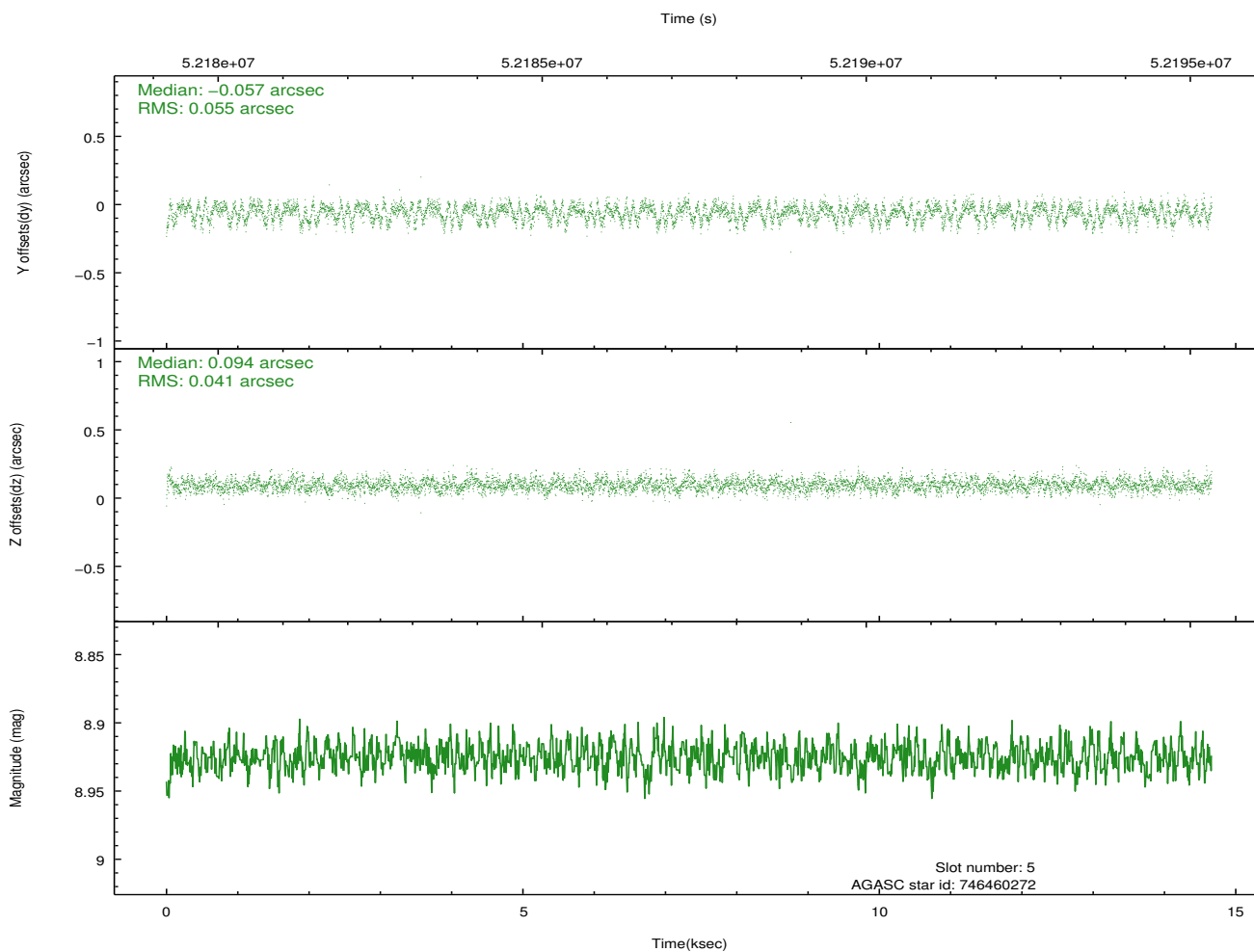
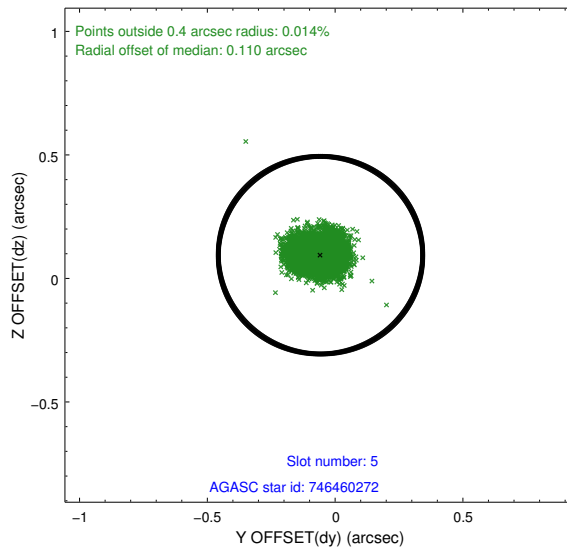
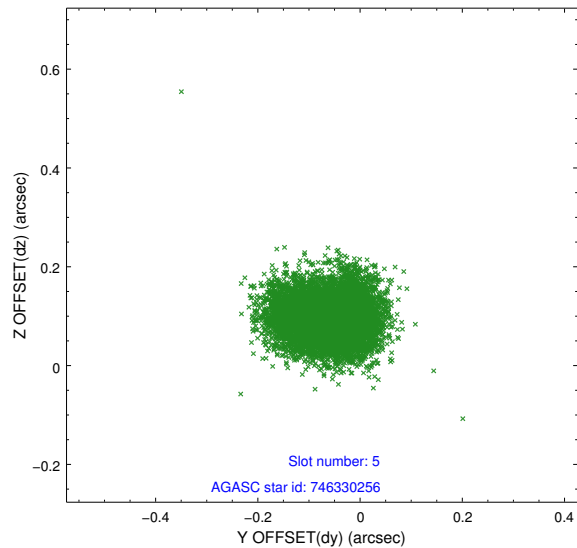
### 2.4.1 Slot 3



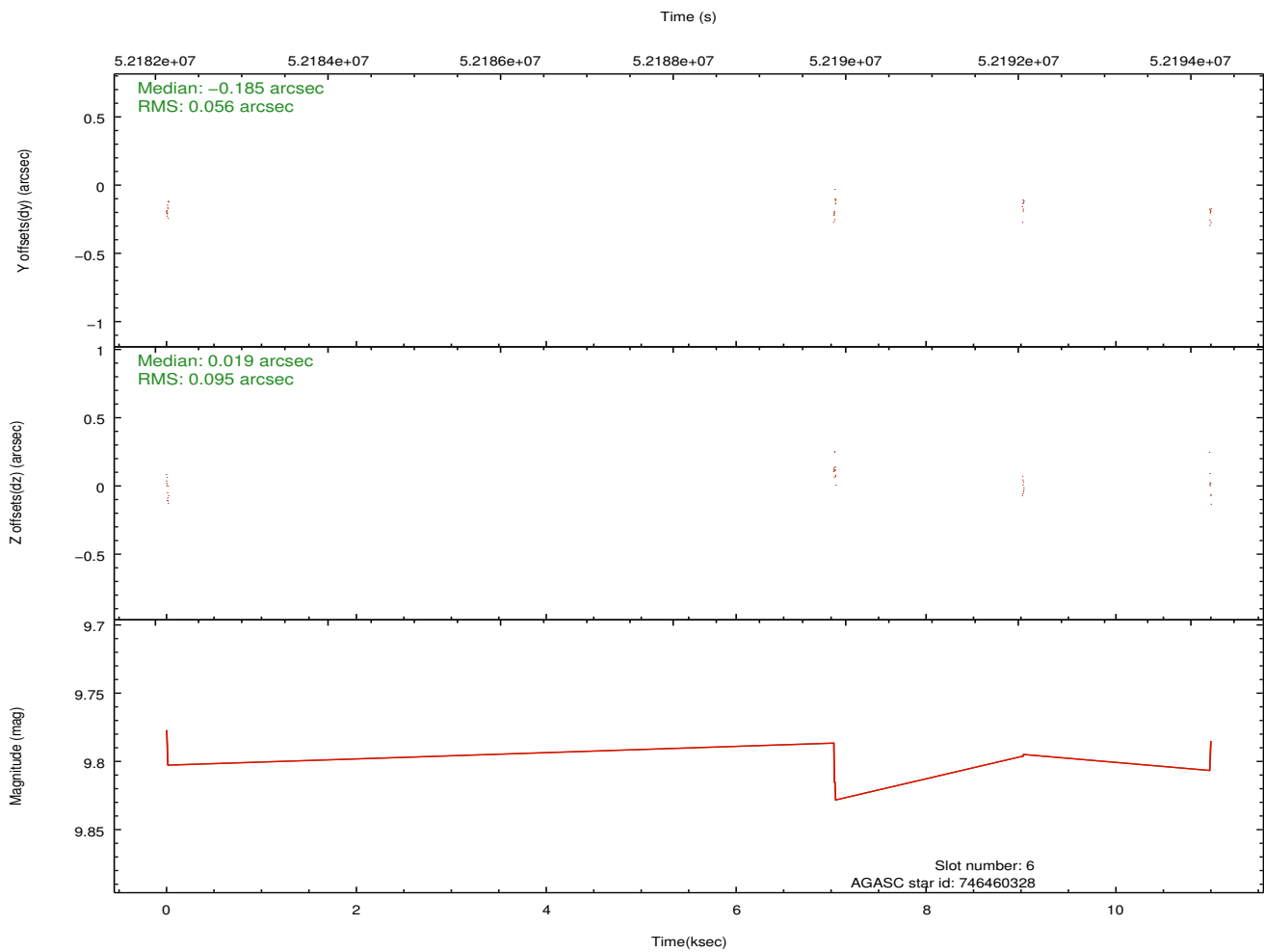
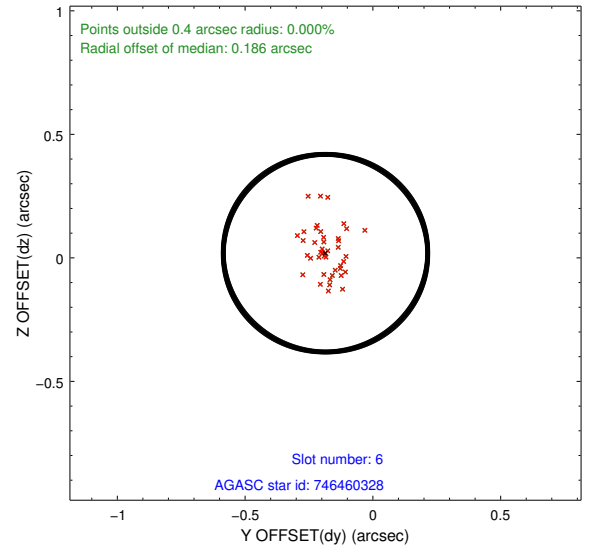
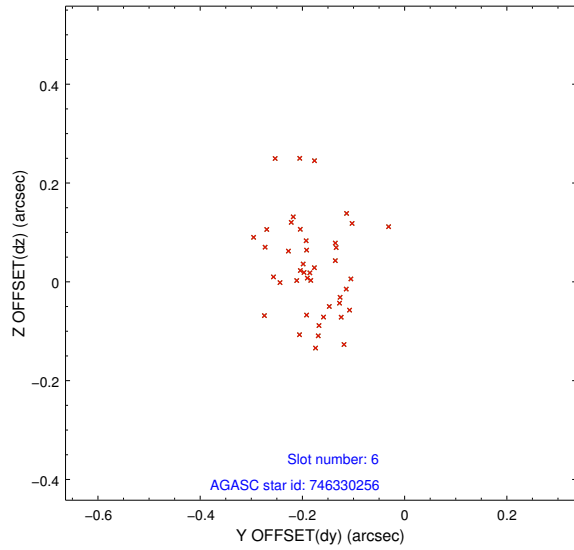
## 2.4.2 Slot 4



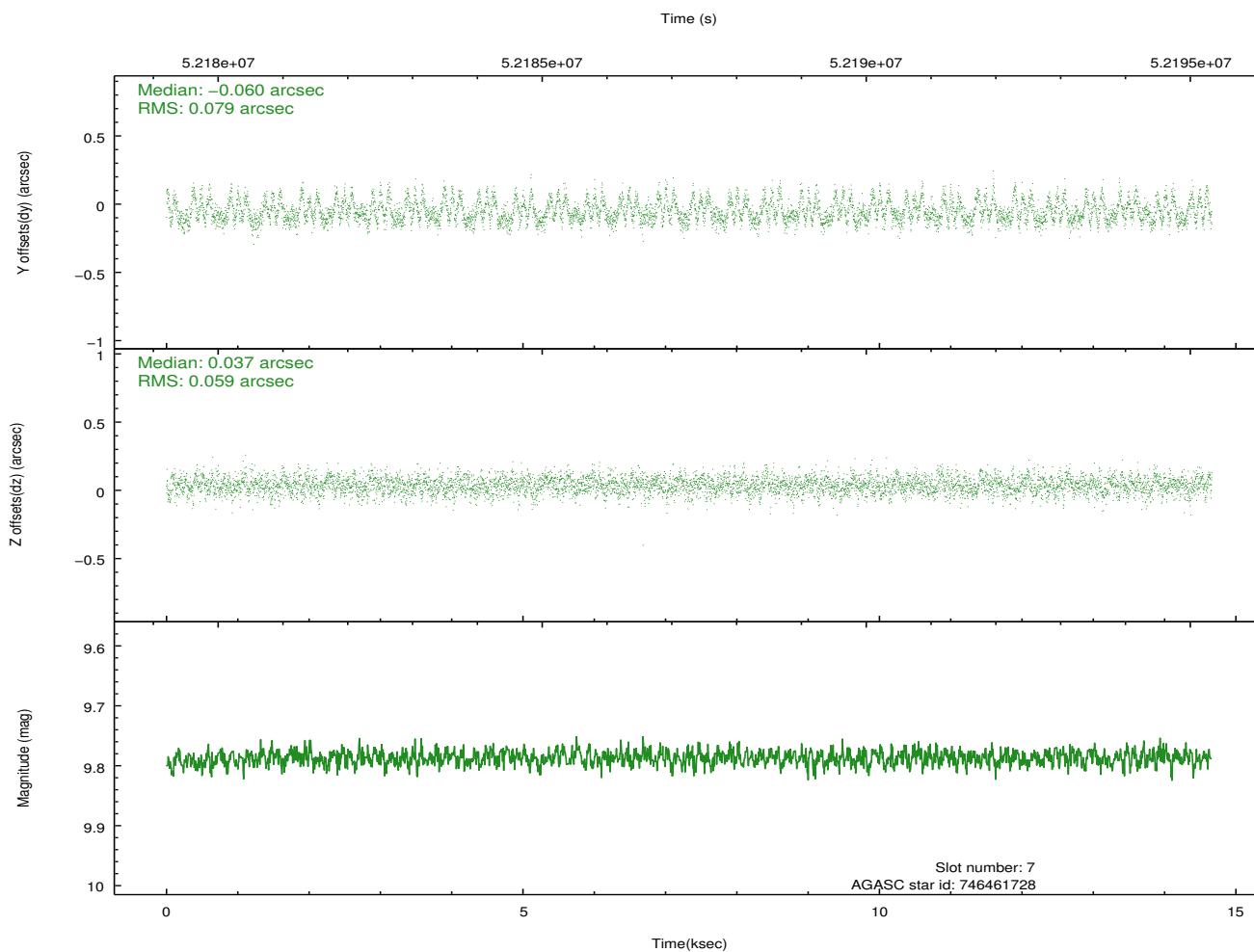
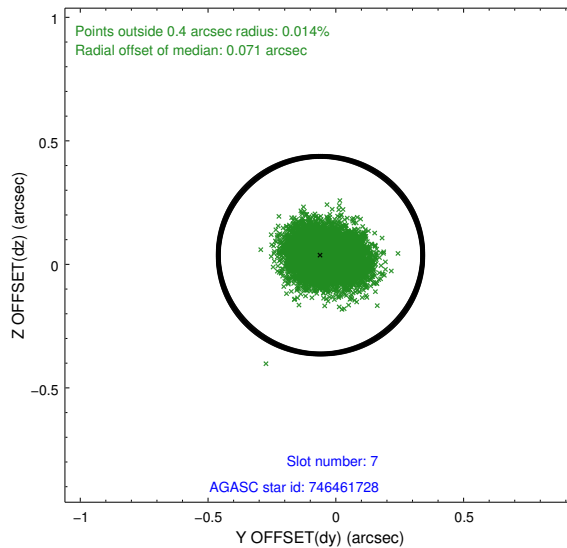
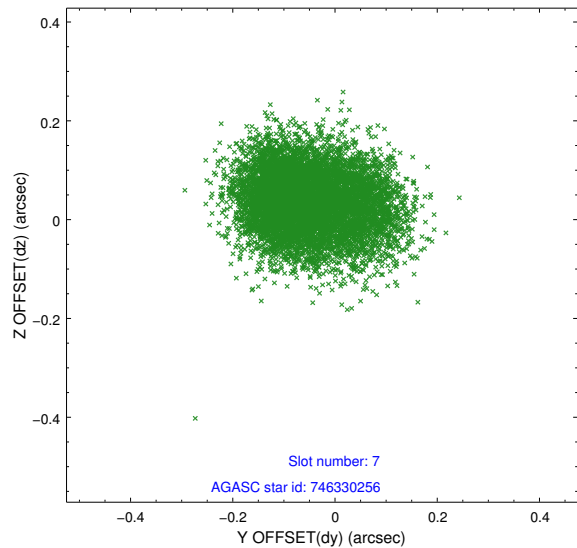
### 2.4.3 Slot 5



## 2.4.4 Slot 6

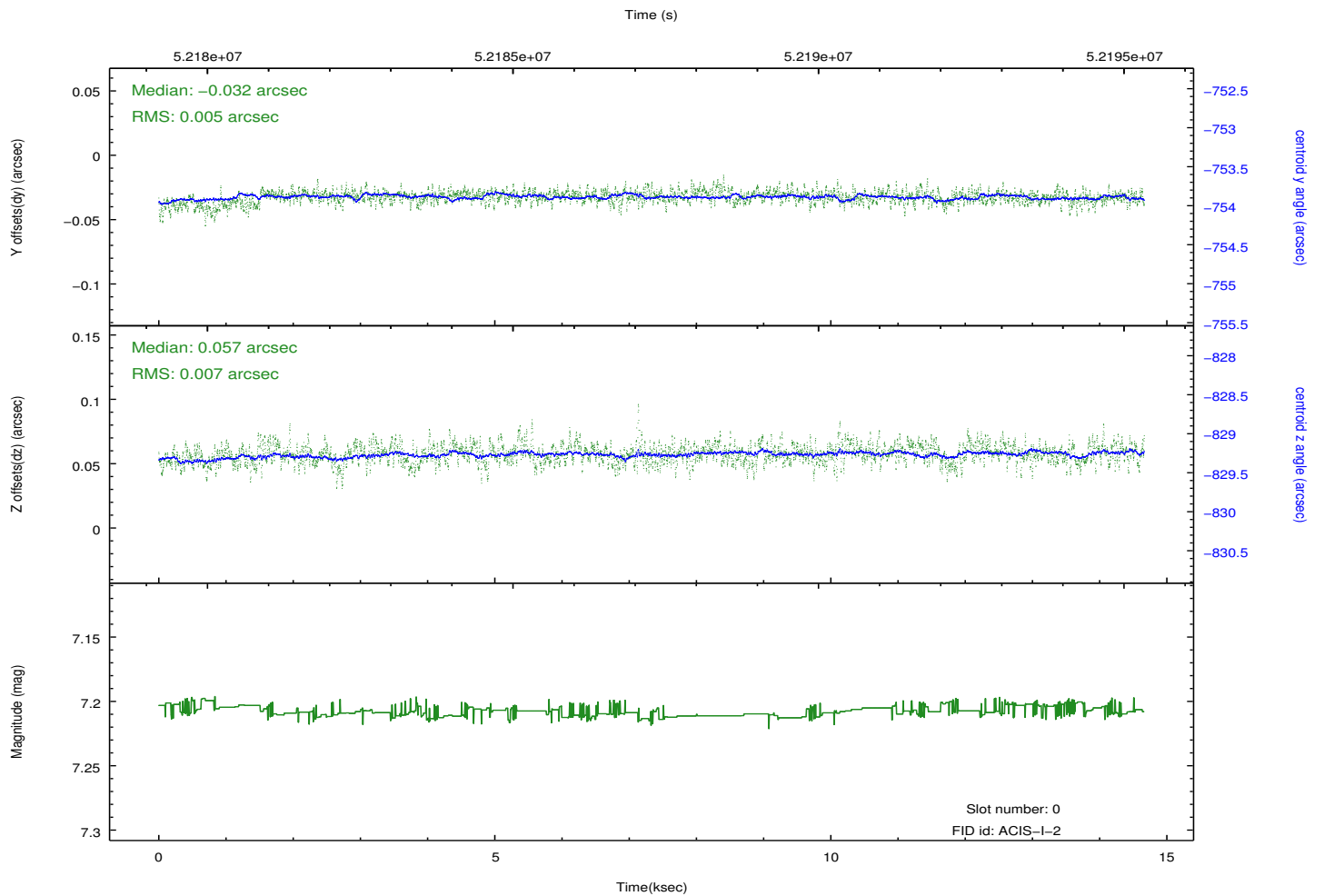
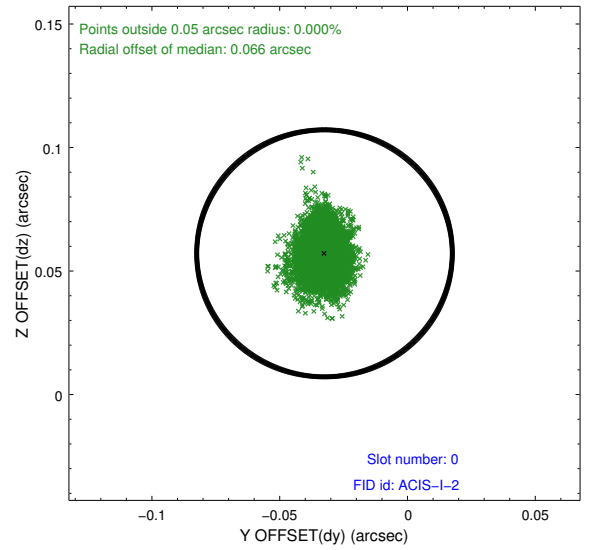
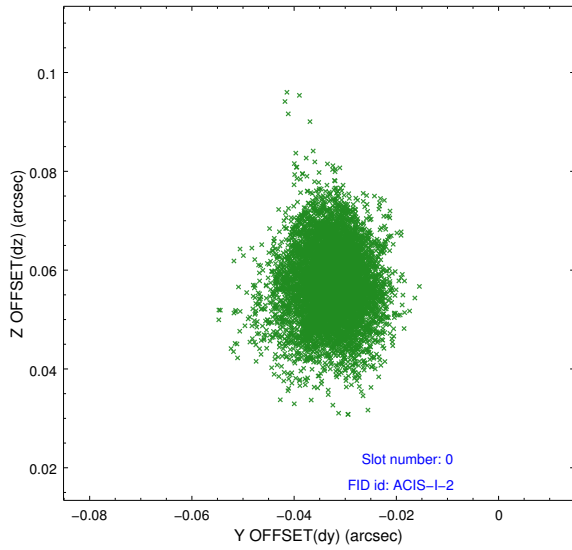


## 2.4.5 Slot 7

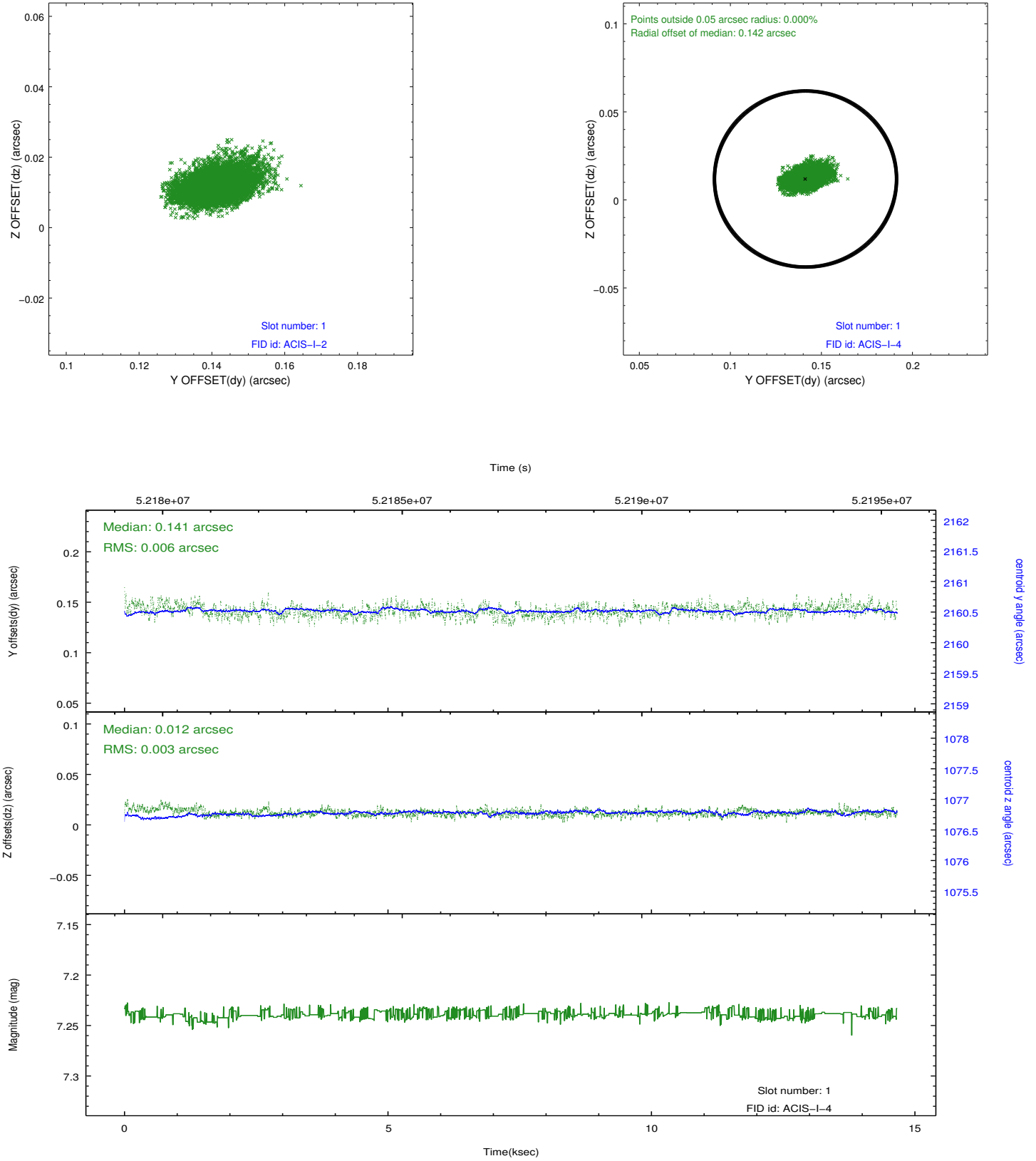


## 2.5 FID Slots

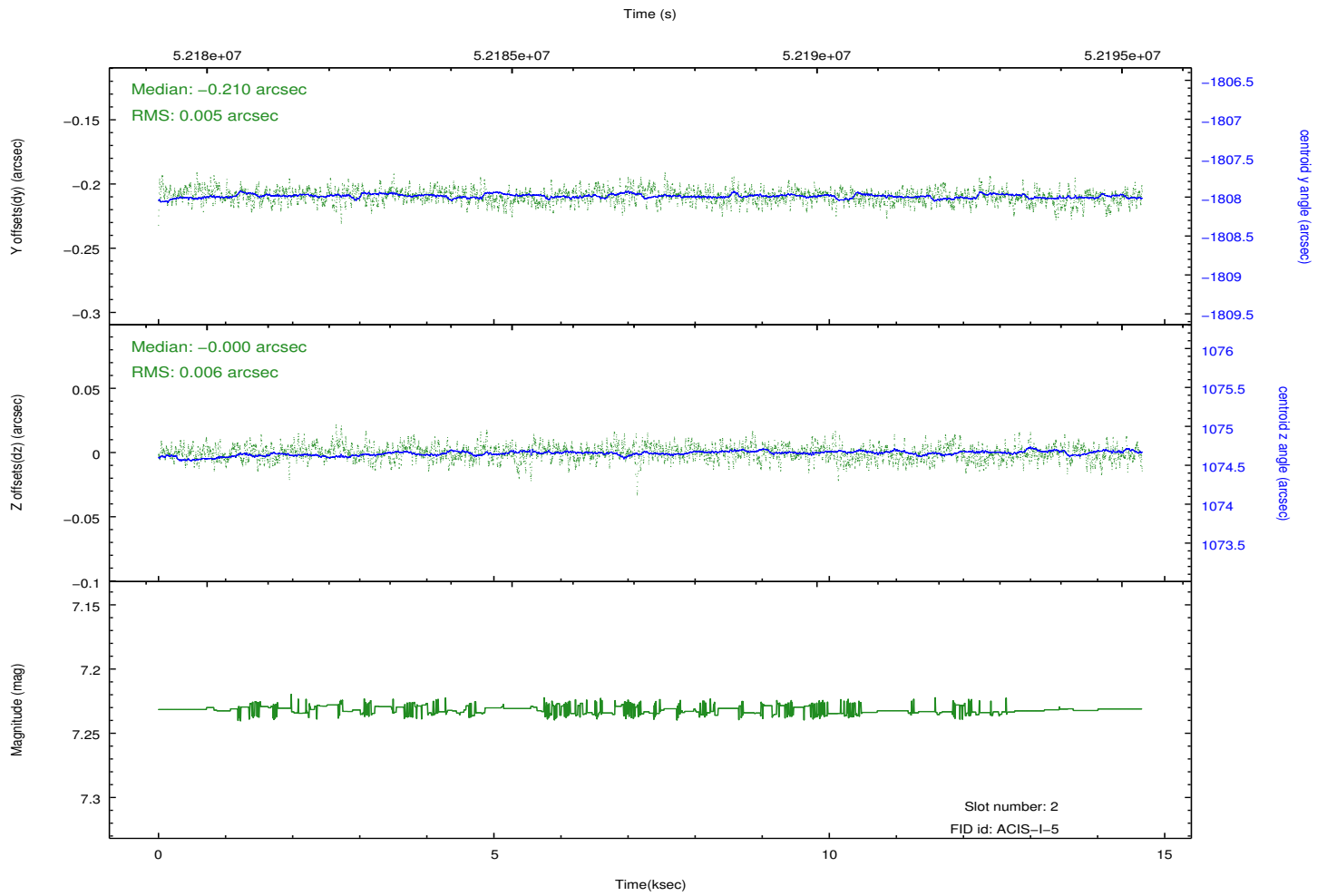
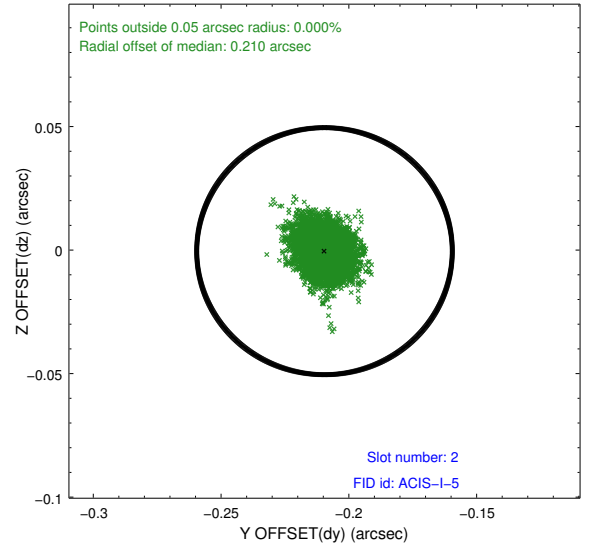
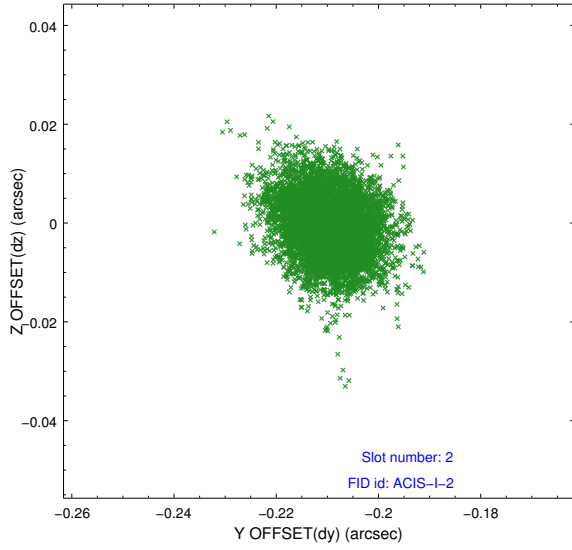
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



### 3 Point Sources

19.53 arcmin



6.49 arcmin



9.23 arcmin



19.02 arcmin



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2010.03.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	13.19

## A.2 Comments

Off-axis effective area measurement for ACIS-I3.

===

Charge time for this ObsId remains at original value of 13.19 ksec, although with the current processing the charge time would have been 13.24 ksec.

=====

The guide star in slot 6 was removed from the aspect solution due to poor data quality. The aspect solution is not expected to be degraded by removing one guide star from the solution.

===

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.