

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 1779 - L2 Version 5  
Chandra X-Ray Center

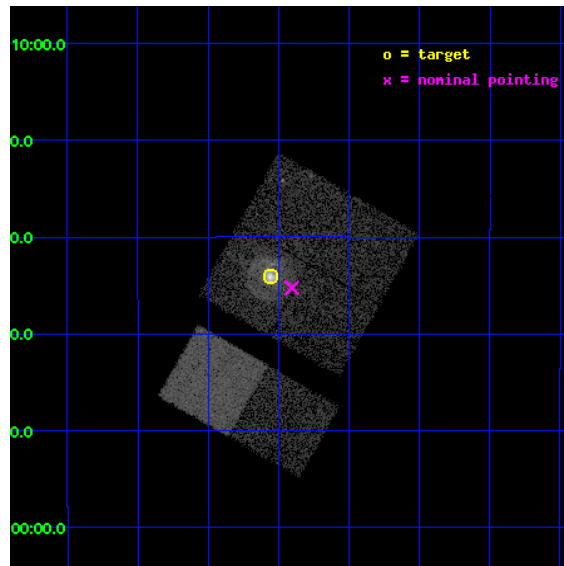
L2 Processing Date : Aug 30 2012

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# 1 Front

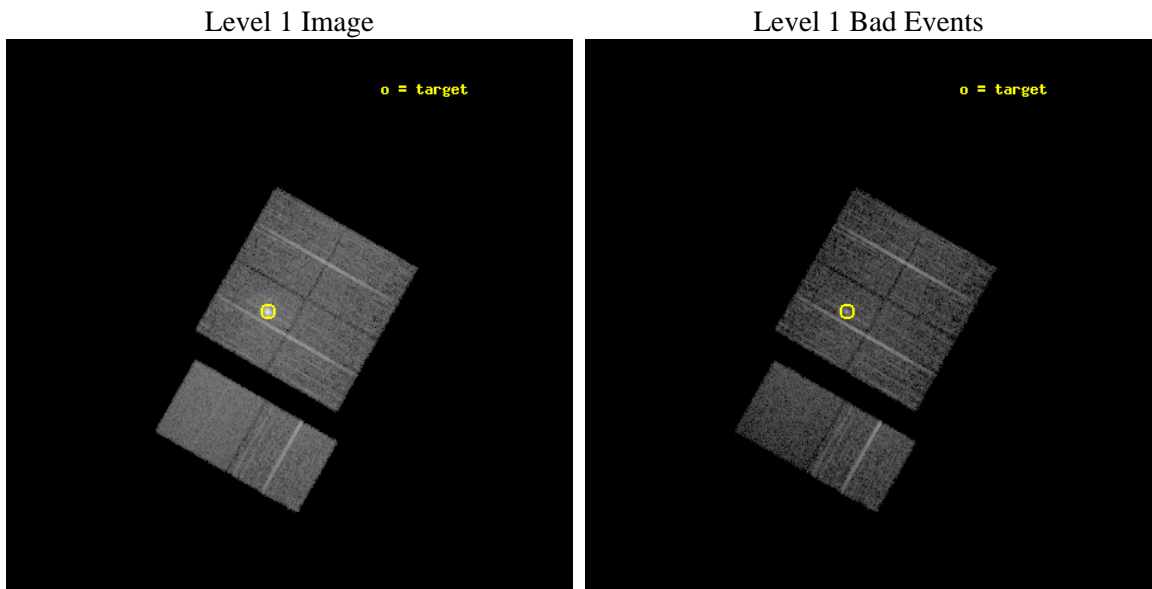
seq_num	590205	Sequence number
obs_id	1779	Observation id
title	HRC RESPONSE TO CONTINUUM SOURCE.	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	G21.5-0.9 [Chip I3, T=110, Offsets=-2,0,2]	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	278.389583	Observer's specified target RA [deg]
dec_targ	-10.568528	Observer's specified target Dec [deg]
ra_nom	278.35140547657	Nominal RA [deg]
dec_nom	-10.587560319824	Nominal Dec [deg]
roll_nom	209.6965087231	Nominal Roll [deg]
revision	5	Processing version of data
ontime	7318.4000068009	Sum of GTIs [s]
livetime	7225.7300193033	Livetime [s]
ontime0	7318.4000068009	Sum of GTIs [s]
ontime1	7318.4000068009	Sum of GTIs [s]
ontime2	7318.4000068009	Sum of GTIs [s]
ontime3	7318.4000068009	Sum of GTIs [s]
ontime6	7318.4000068009	Sum of GTIs [s]
ontime7	7318.4000068009	Sum of GTIs [s]
l2events	64738	Number of level 2 events



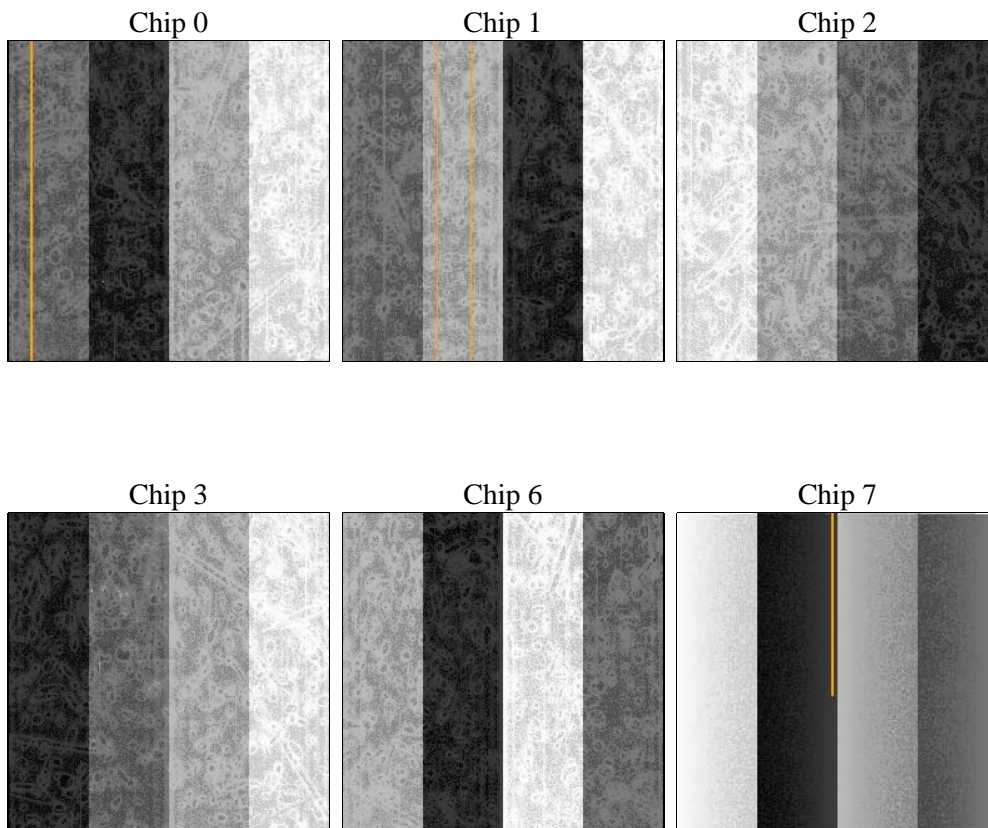
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	7560.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	7318.4000068009	Sum of GTIs [s]
caldbver	4.5.1.1	&#160	ontime0	7318.4000068009	Sum of GTIs [s]
date	2012-08-30T03:57:34	Date and time of file creation	ontime1	7318.4000068009	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	7318.4000068009	Sum of GTIs [s]
			ontime3	7318.4000068009	Sum of GTIs [s]
			ontime6	7318.4000068009	Sum of GTIs [s]
			ontime7	7318.4000068009	Sum of GTIs [s]
			l1events	329789	Number of level 1 events

### 2.1.4 Events

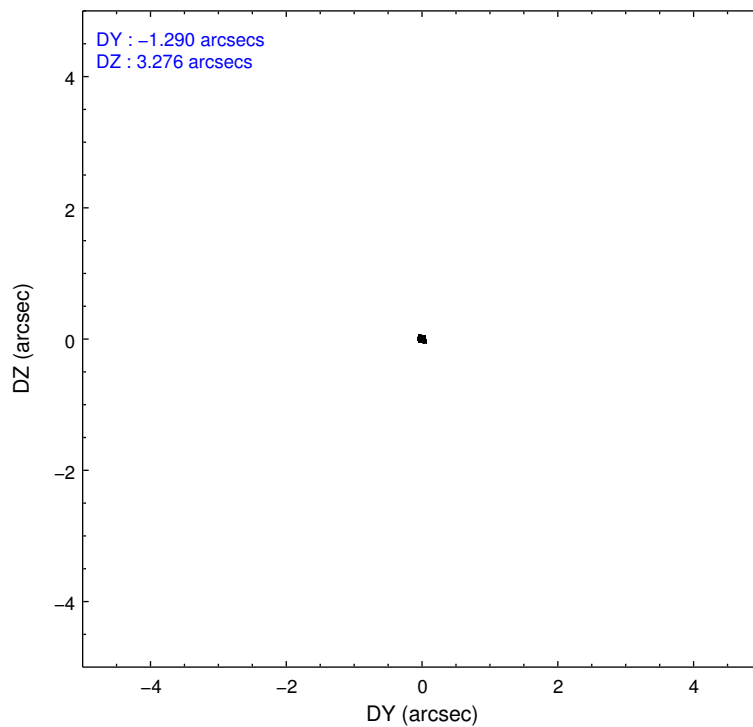
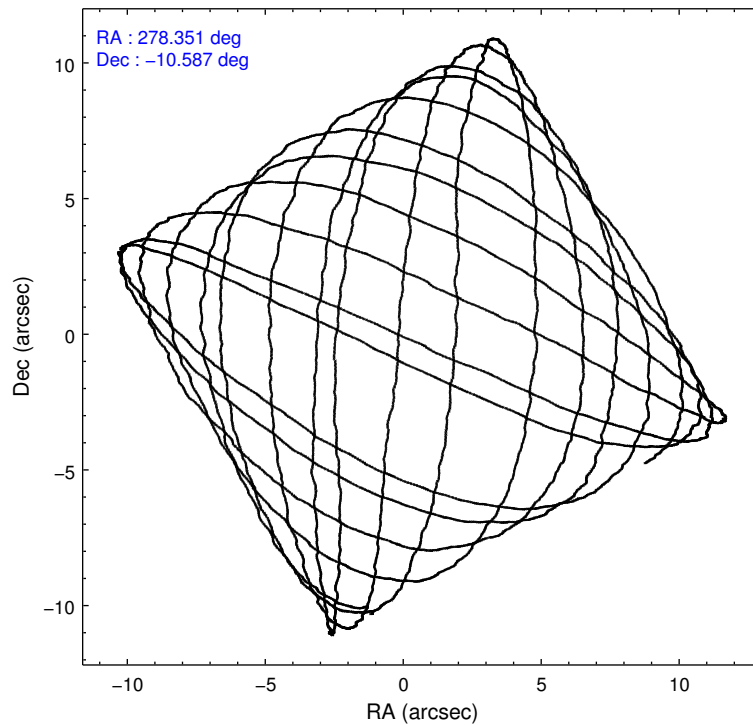
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	47478	46966	51634	73410	53517	56784
rejected events	41987	40794	46467	46606	48177	35251
rejected %	88%	86%	89%	63%	90%	62%

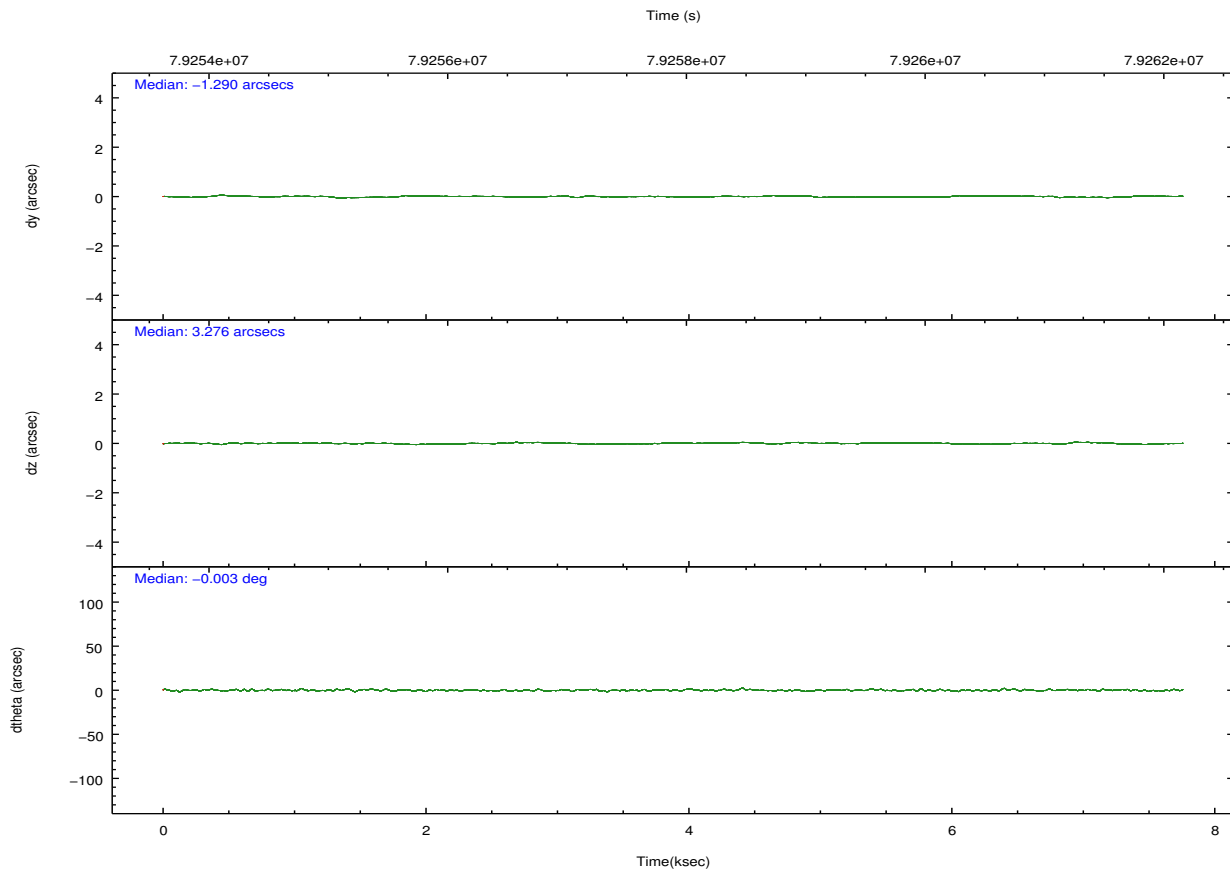
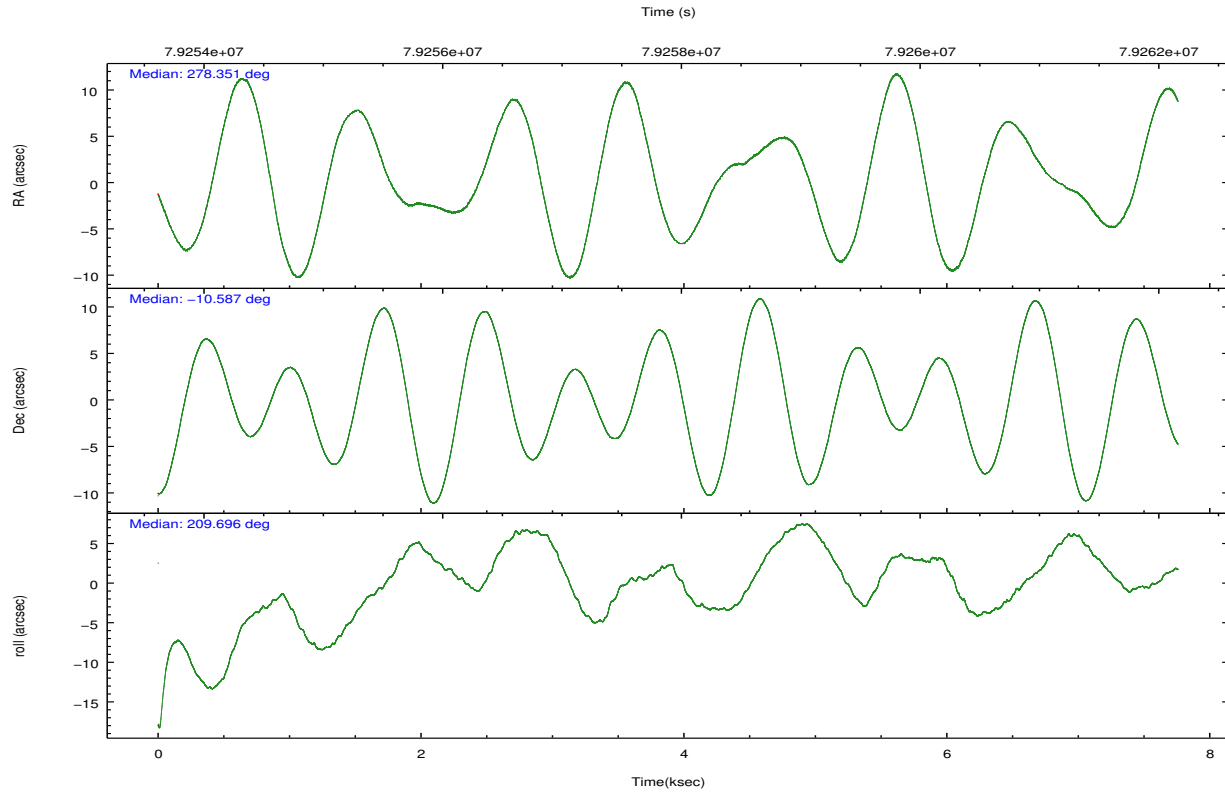
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	1394	1772	1231	8482	1055	1238
	2%	3%	2%	11%	1%	2%
grade 1 events	10	9	11	65	14	29
	0%	0%	0%	0%	0%	0%
grade 2 events	2132	2097	2020	13940	2099	4611
	4%	4%	3%	18%	3%	8%
grade 3 events	352	447	327	682	337	1250
	0%	0%	0%	0%	0%	2%
grade 4 events	364	438	332	639	358	1178
	0%	0%	0%	0%	0%	2%
grade 5 events	992	1074	968	1270	1180	3392
	2%	2%	1%	1%	2%	5%
grade 6 events	1250	1423	1258	3083	1498	13273
	2%	3%	2%	4%	2%	23%
grade 7 events	40984	39706	45487	45249	46976	31813
	86%	84%	88%	61%	87%	56%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
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
[deg] Pointing RA	278.365655	278.351405476571	Subarray requested	NONE	NONE
[deg] Pointing Dec	-10.563830	-10.58756031982445	Alternating exposures requested	N	N
[deg] Pointing Roll	209.490441	209.696508723096	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-226.272463	-226.2682626179875			
[mm] SIM translation stage offset	-7.32	-7.32419038494217			
[s] Observation start time (MET)	79254206.184000	79253829.86909799			
Observation start date	2000-07-06T07:02:22	2000-07-06T06:57:09			
[s] Observation end time (MET)	79261766.184000	79262433.71941499			
Observation end date	2000-07-06T09:08:22	2000-07-06T09:20:33			
Read mode	TIMED	TIMED			

## 2.3 Aspect



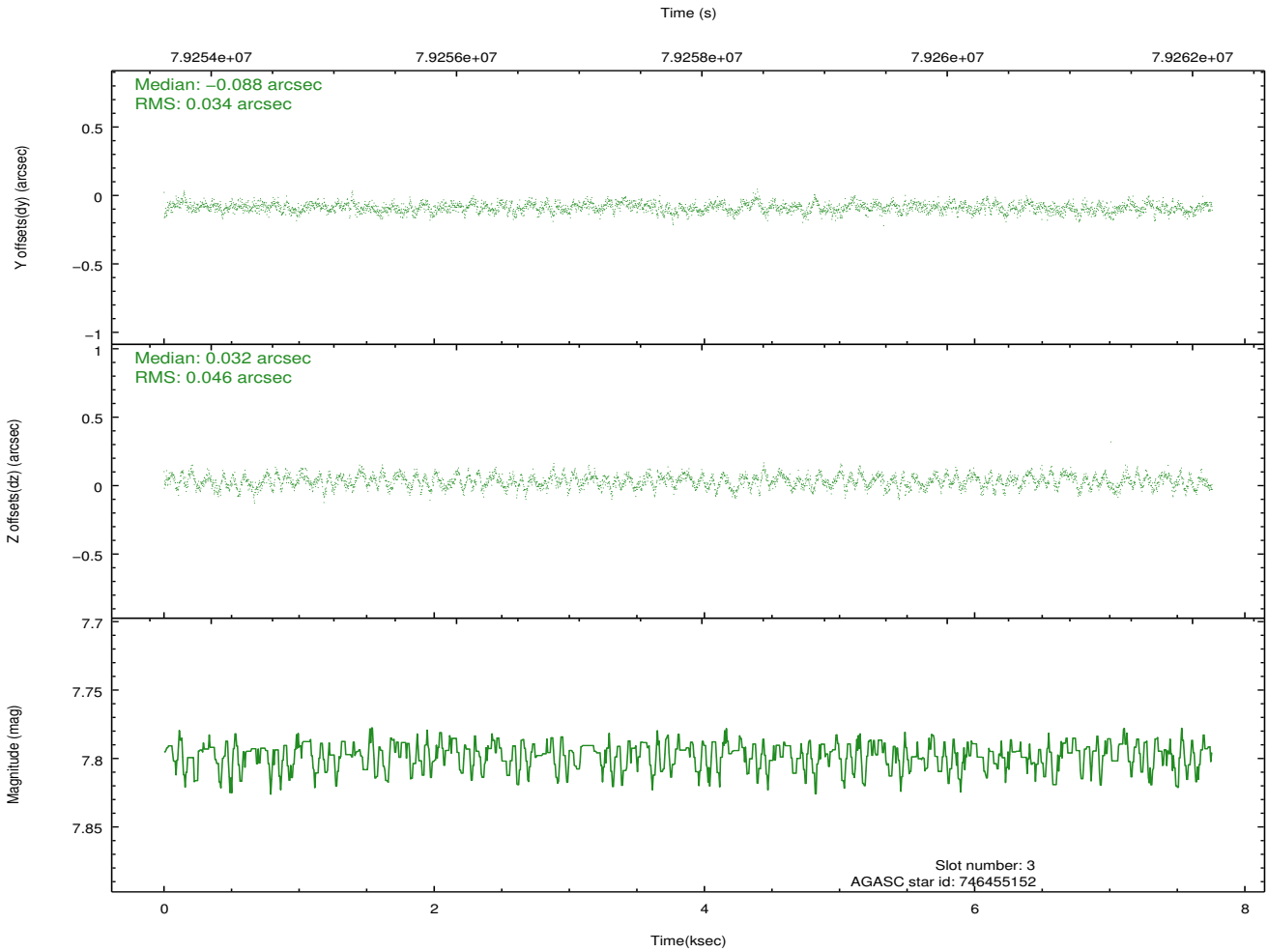
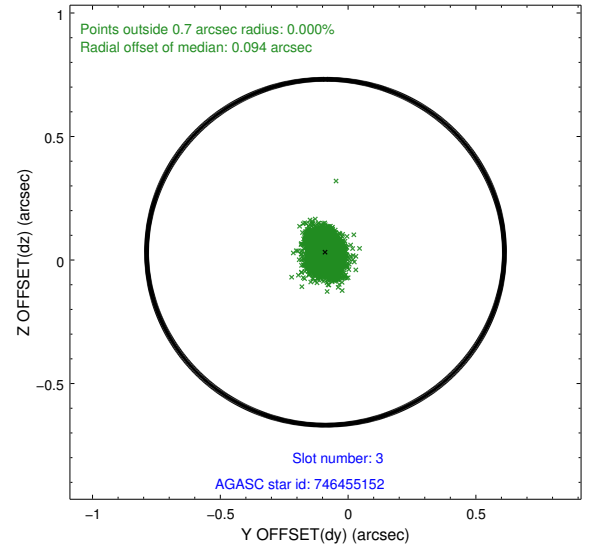
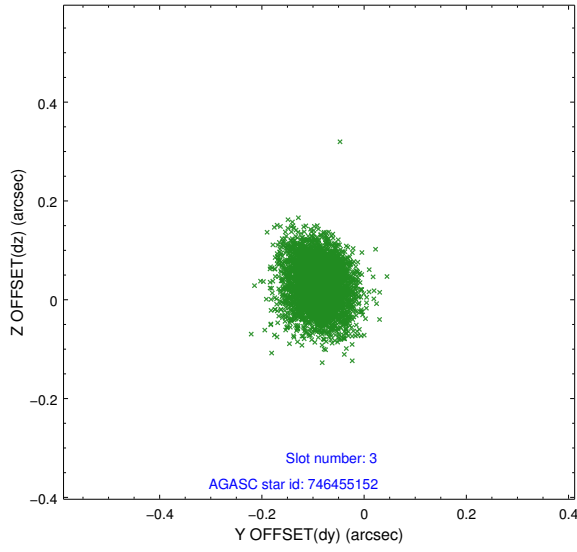


### Slot Statistics

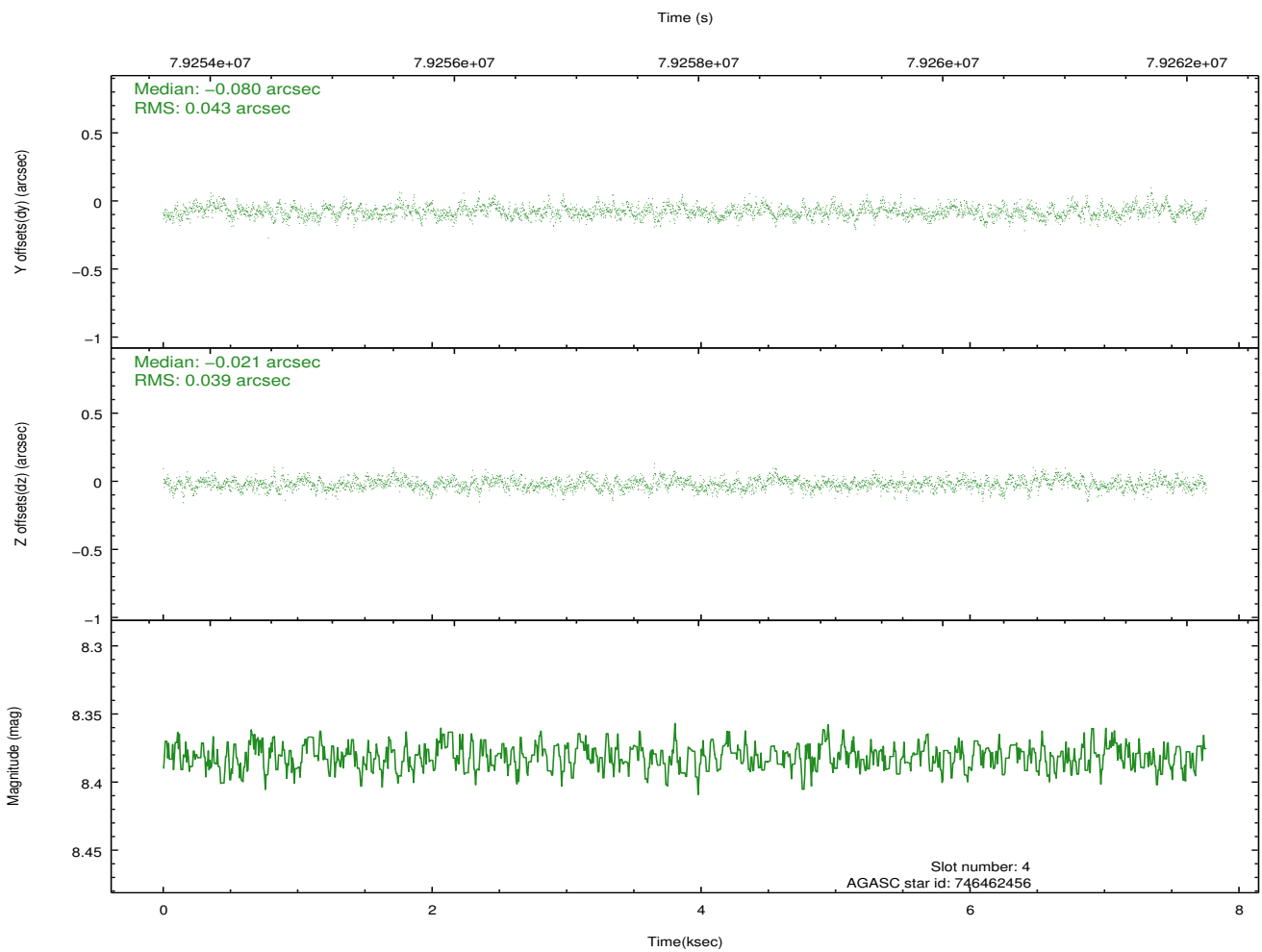
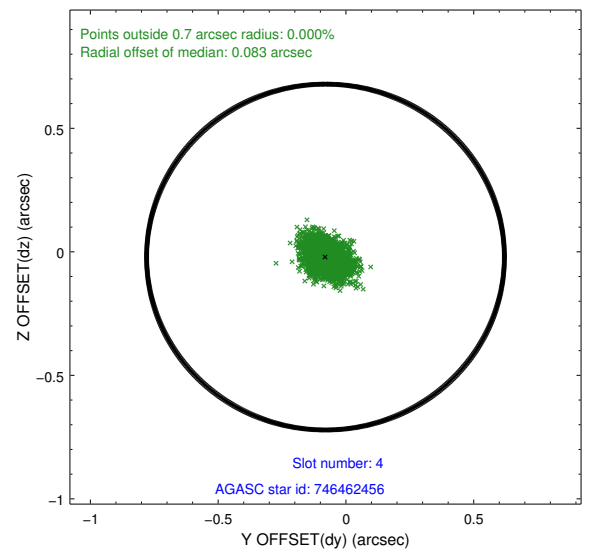
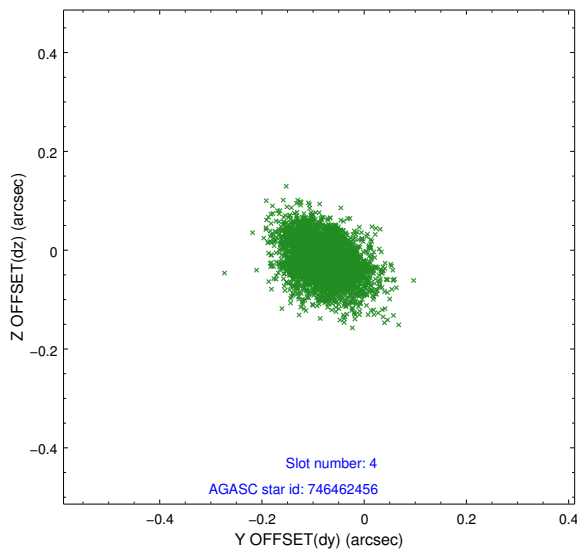
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.17	1893	-0.063	-0.061	0.009	0.015	0.000000	0.000000	-753.53	-982.39
1	FID	ACIS-I-4	7.15	1889	-0.005	0.058	0.006	0.011	0.000000	0.000000	2160.19	923.47
2	FID	ACIS-I-5	7.23	1892	-0.034	0.072	0.009	0.014	0.000000	0.000000	-1806.04	921.16
3	GUIDE	746455152	7.80	3784	-0.088	0.032	0.061	0.099	278.447893	-9.976732	-1293.78	-1695.23
4	GUIDE	746462456	8.38	3780	-0.080	-0.021	0.061	0.102	278.652171	-10.530173	-941.96	394.67
5	GUIDE	746455112	8.93	3782	0.200	-0.116	0.069	0.115	278.266531	-10.703234	552.76	265.20
6	GUIDE	746460328	9.81	3771	0.007	0.016	0.094	0.151	278.603974	-9.898096	-1914.63	-1668.81
7	GUIDE	746995400	9.48	3781	-0.034	0.091	0.098	0.159	278.078957	-11.289885	2168.01	1777.98

## 2.4 Star Slots

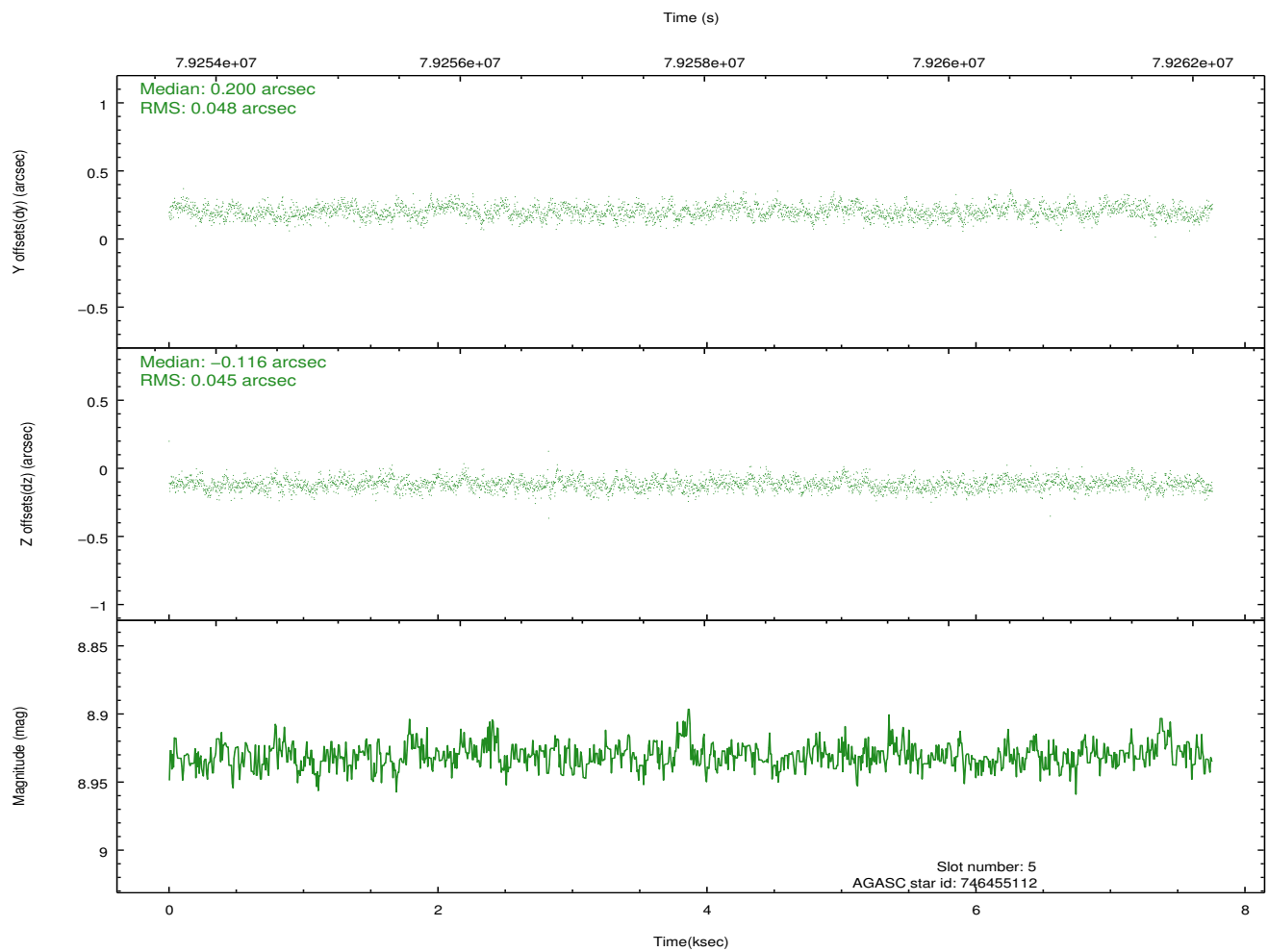
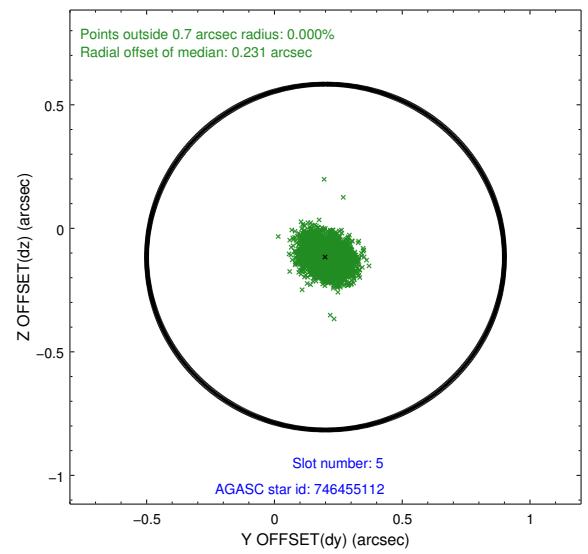
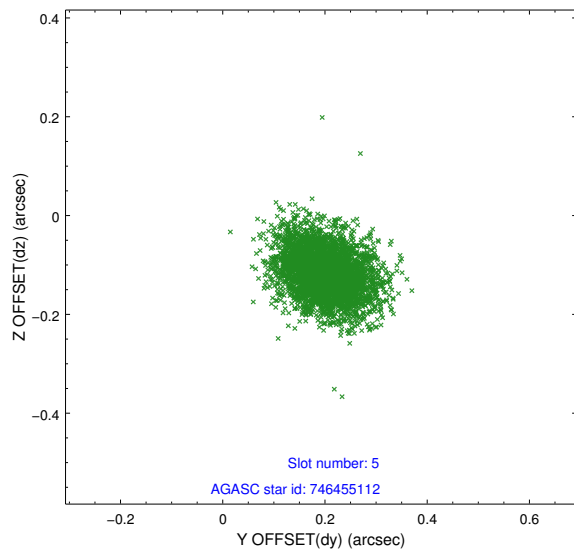
### 2.4.1 Slot 3



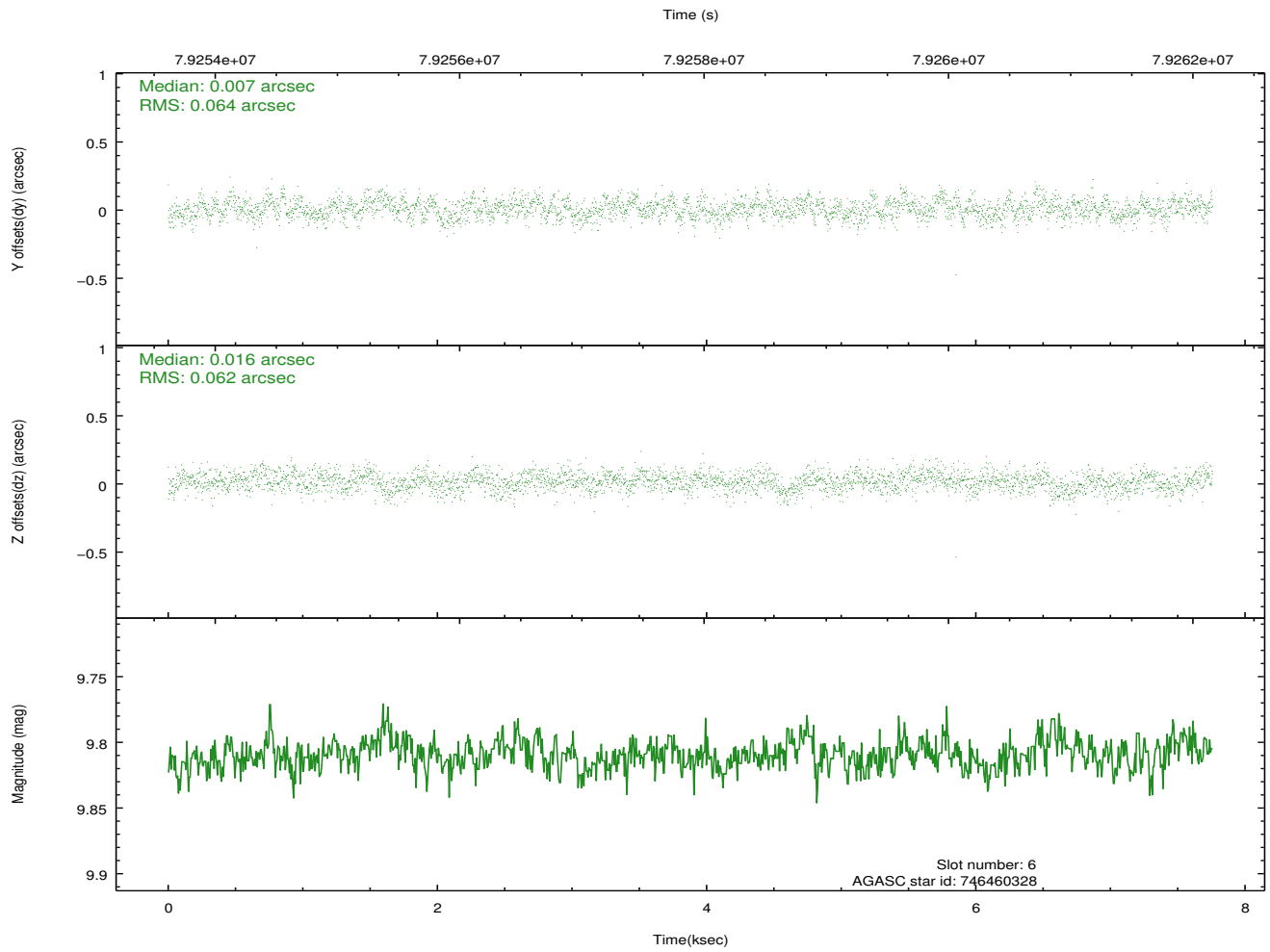
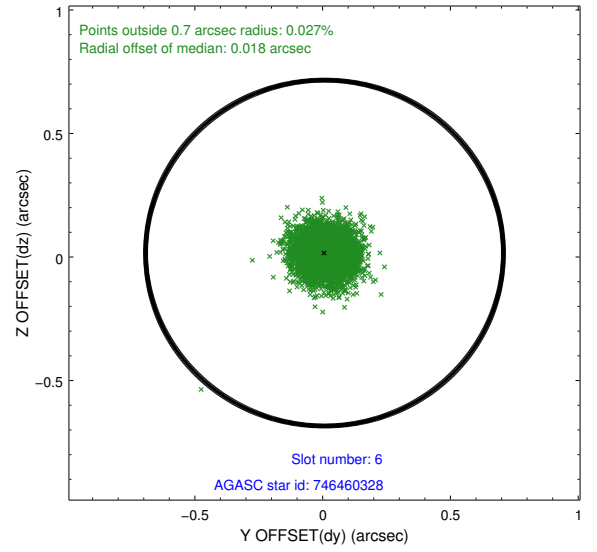
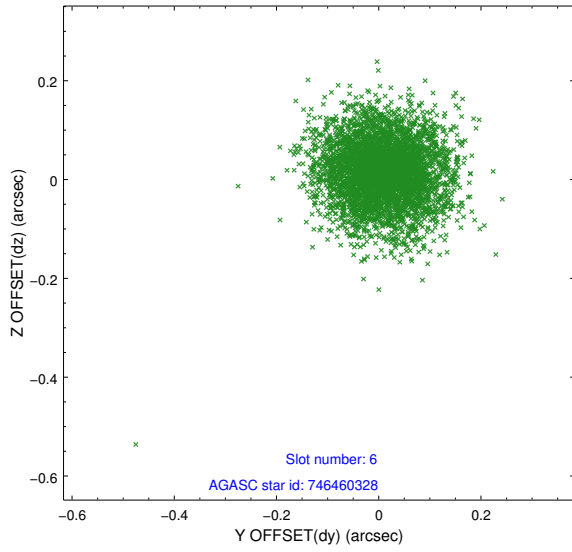
## 2.4.2 Slot 4



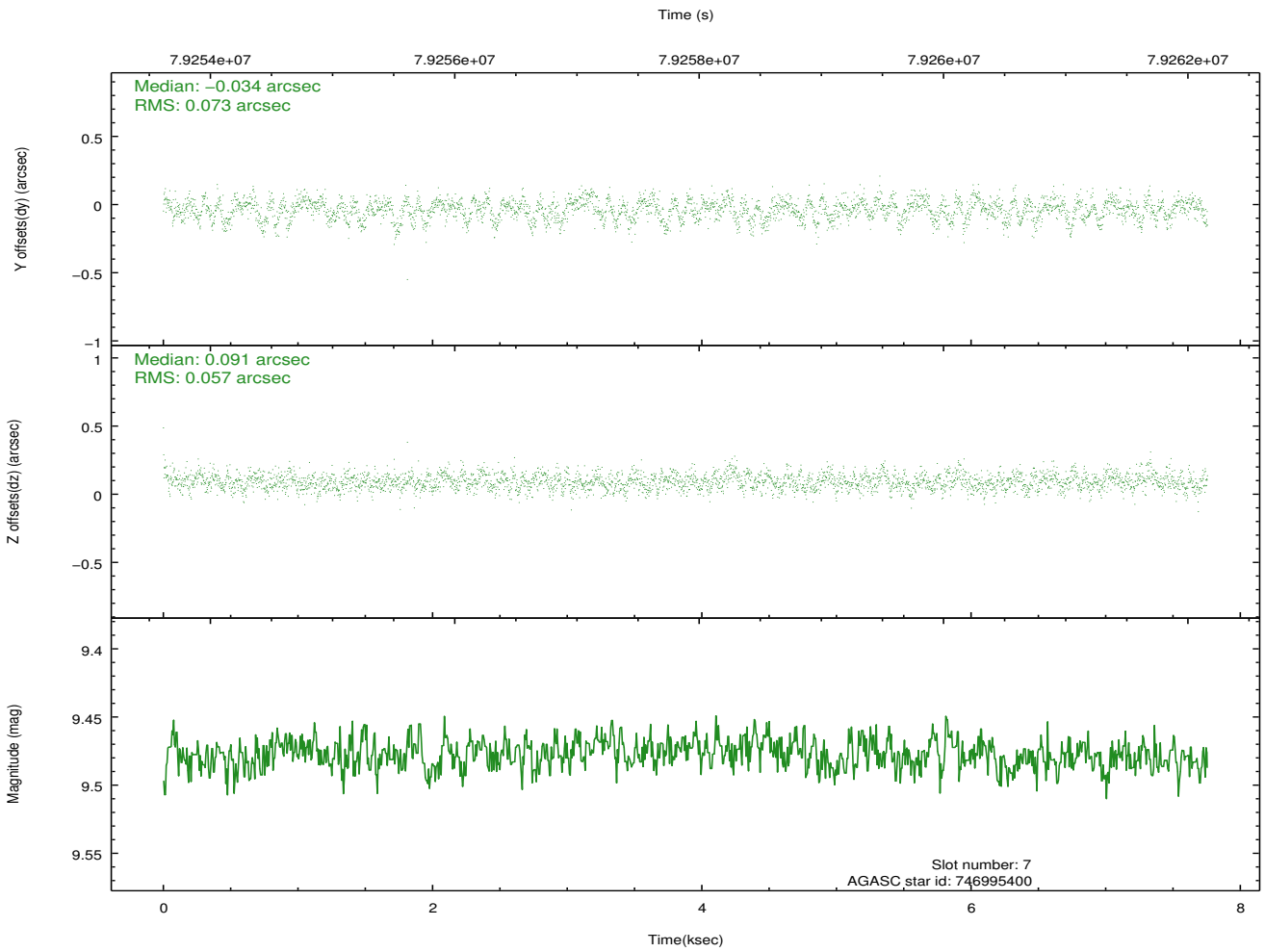
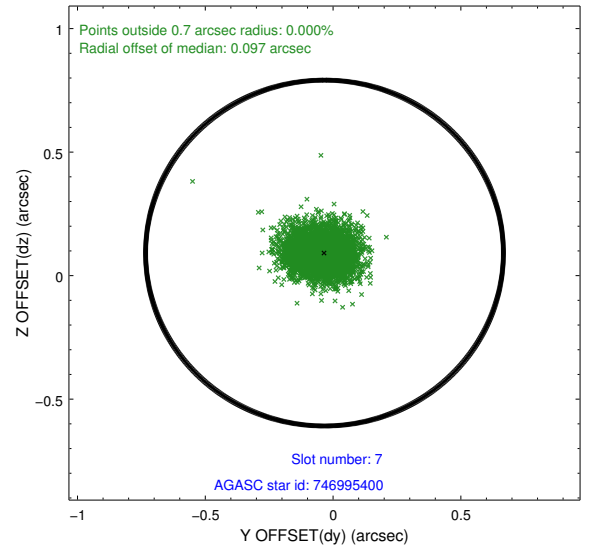
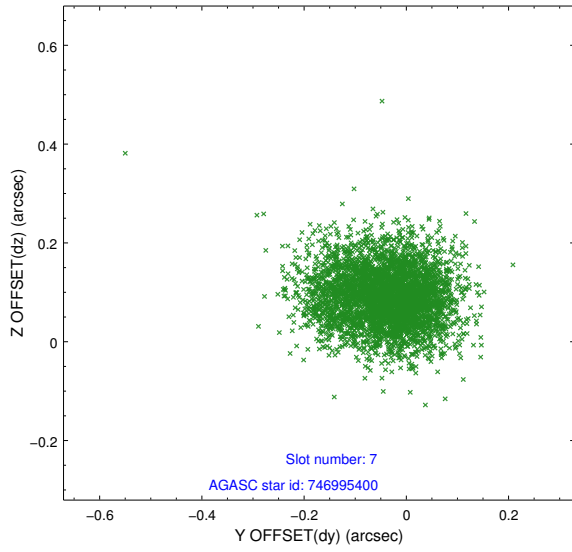
### 2.4.3 Slot 5



### 2.4.4 Slot 6

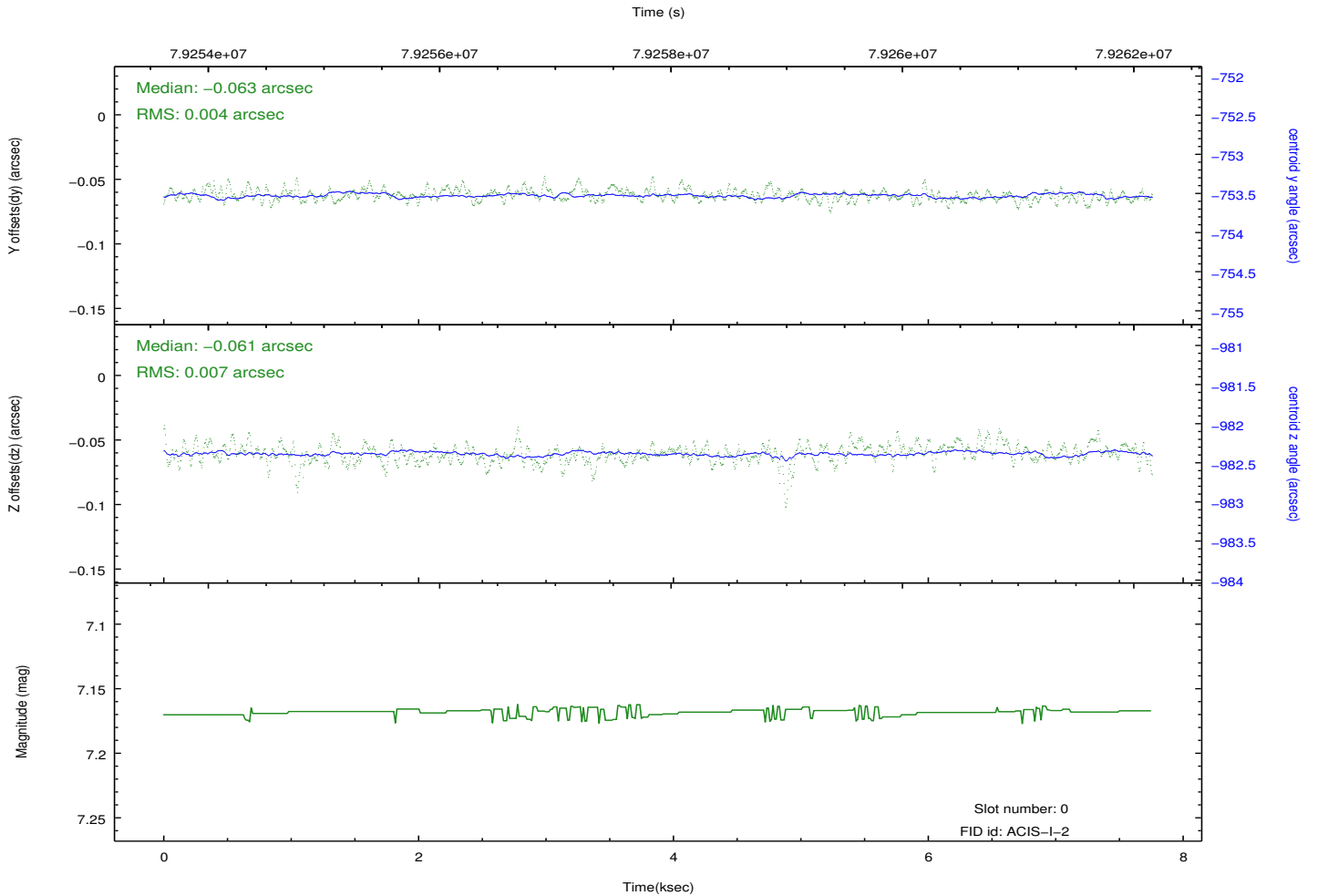
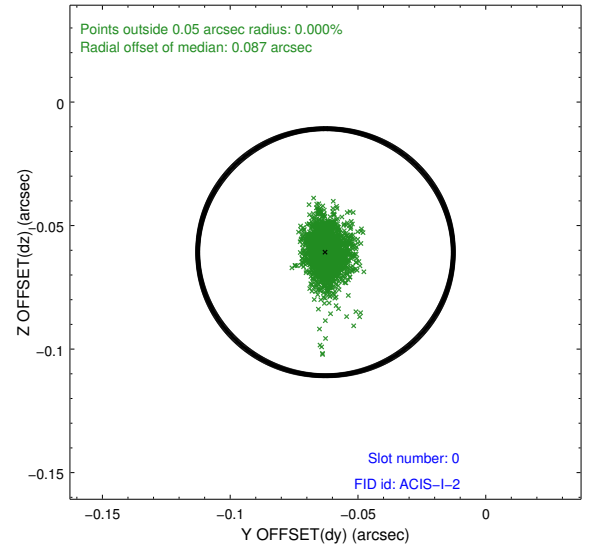
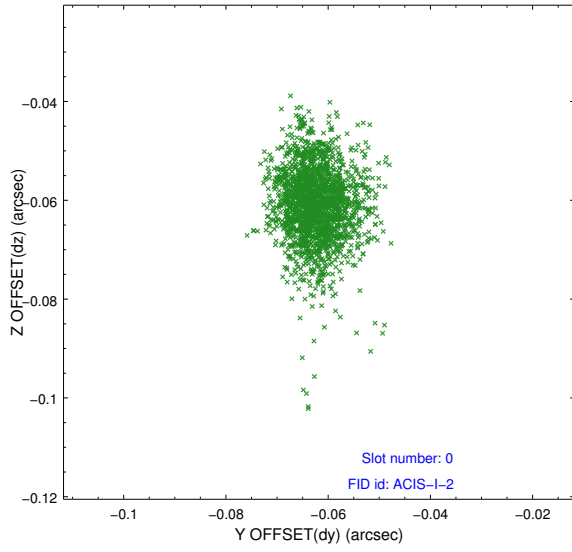


### 2.4.5 Slot 7

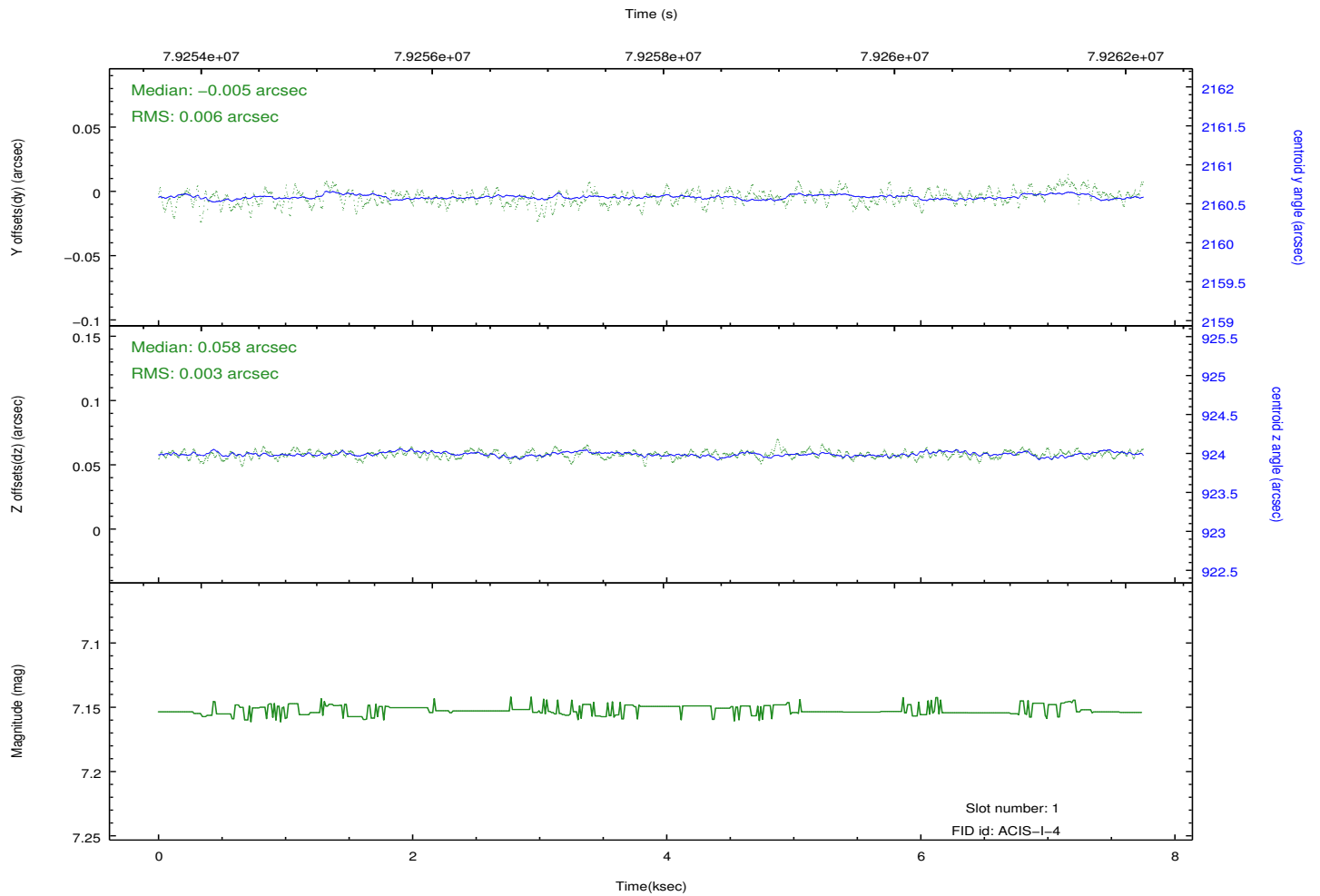
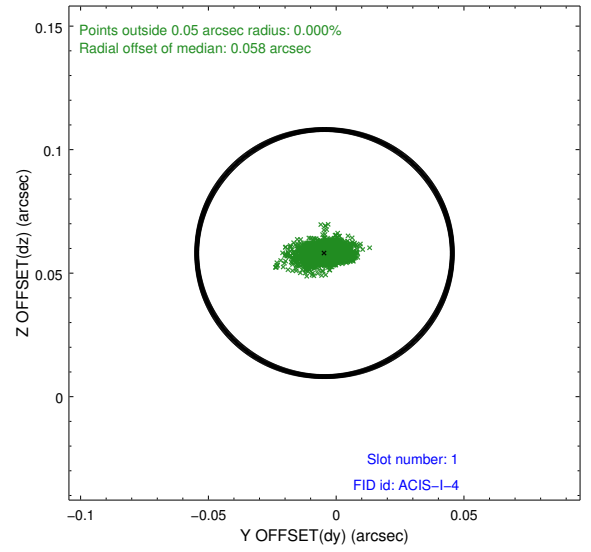
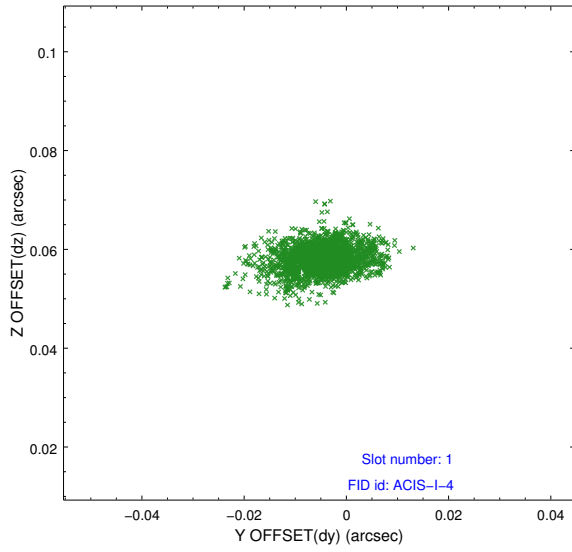


## 2.5 FID Slots

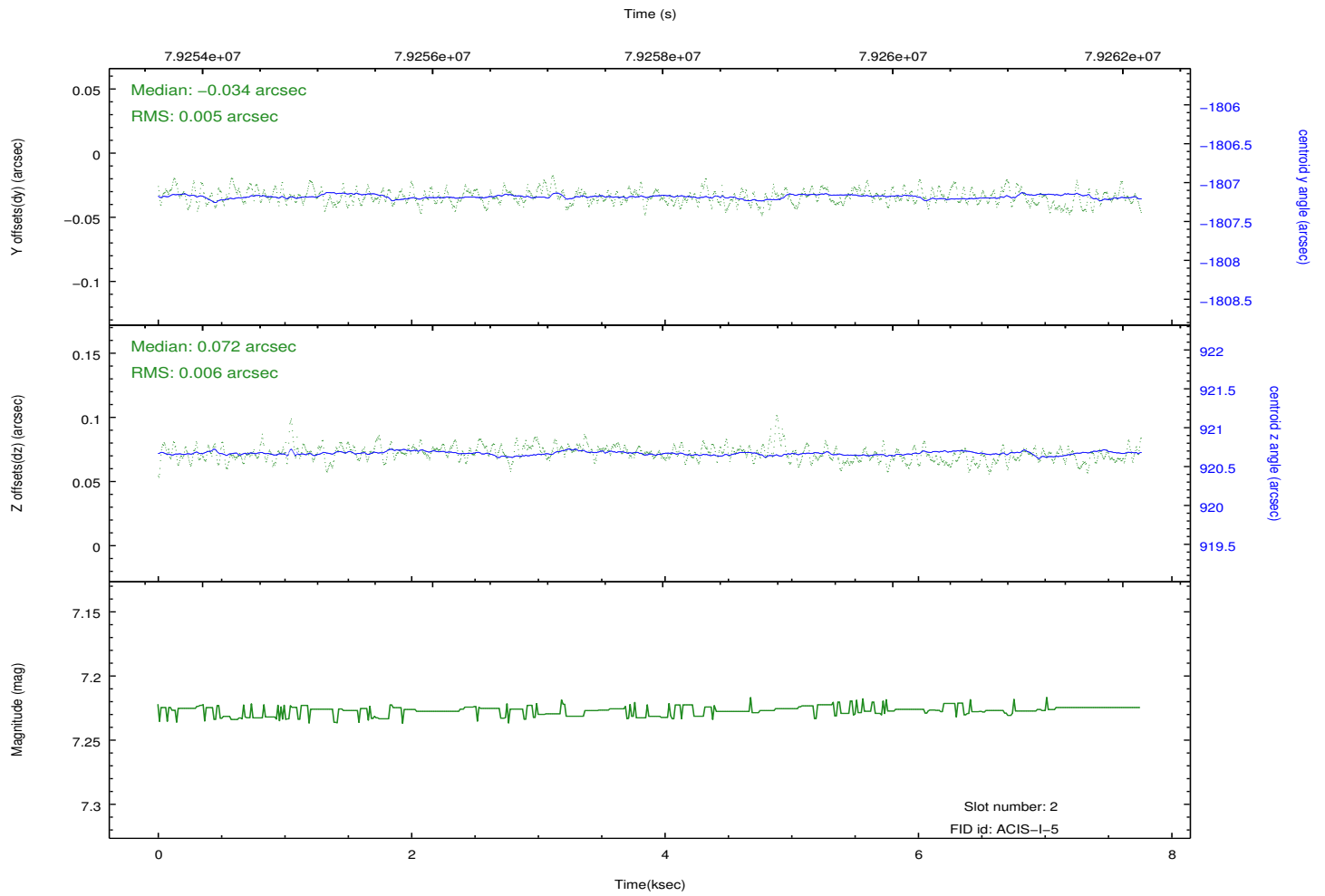
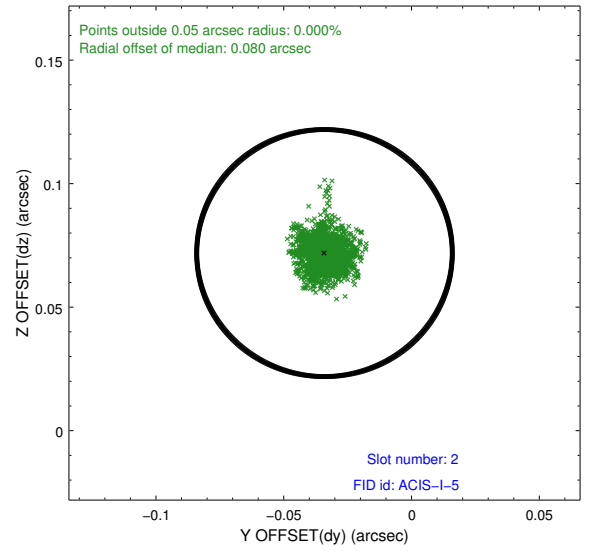
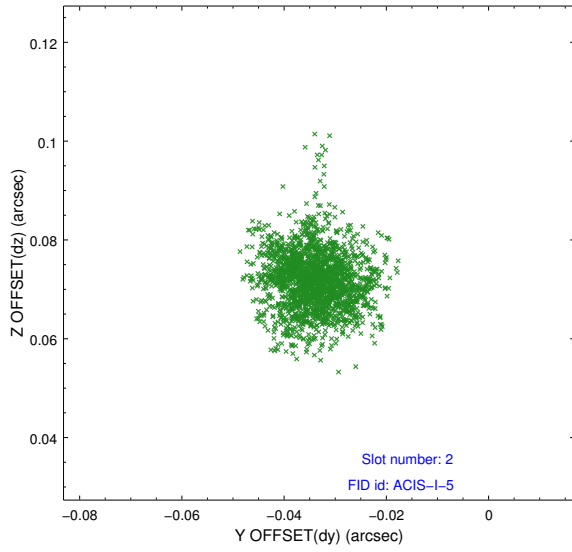
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.09.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.324

## A.2 Comments

The focal-plane temperature was set to a temperature of about  $-109.2$  C during this observation and others in the interval from September 17, 1999 to January 29, 2000. The current reprocessing of the data applies no charge-transfer inefficiency (CTI) adjustment to the data because the ACIS CTI adjustment has not been calibrated at this temperature. The CTI adjustment is calibrated for data taken from January 30, 2000 to the present, when the focal-plane temperature is set to  $-119.7$  C. However, if the observation includes one or both back-illuminated CCDs ACIS-S1 and ACIS-S3, then a time-dependent gain adjustment is applied to the data for these CCDs. The ACIS spectral response calibration is less accurate at temperatures of about  $-109.2$  C than it is at  $-119.7$  C. Users whose science objectives depend on the most accurate spectral response (i.e. fitting line-rich spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response (e.g. those interested in imaging or timing analyses) should not notice an effect.