

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 13132 - L2 Version 2  
Chandra X-Ray Center

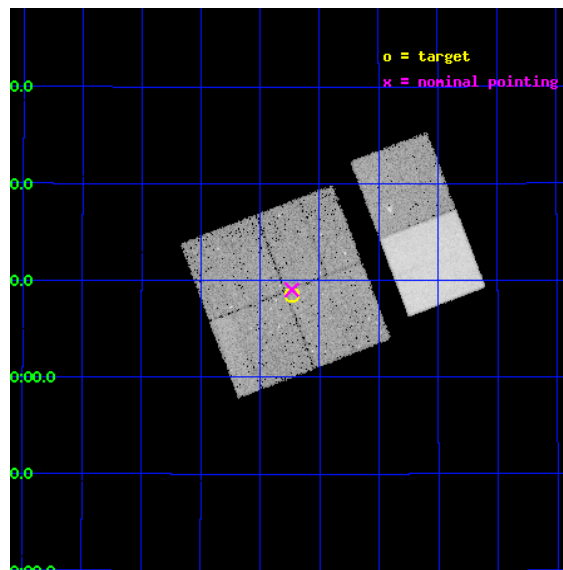
L2 Processing Date : Feb 2 2012

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# 1 Front

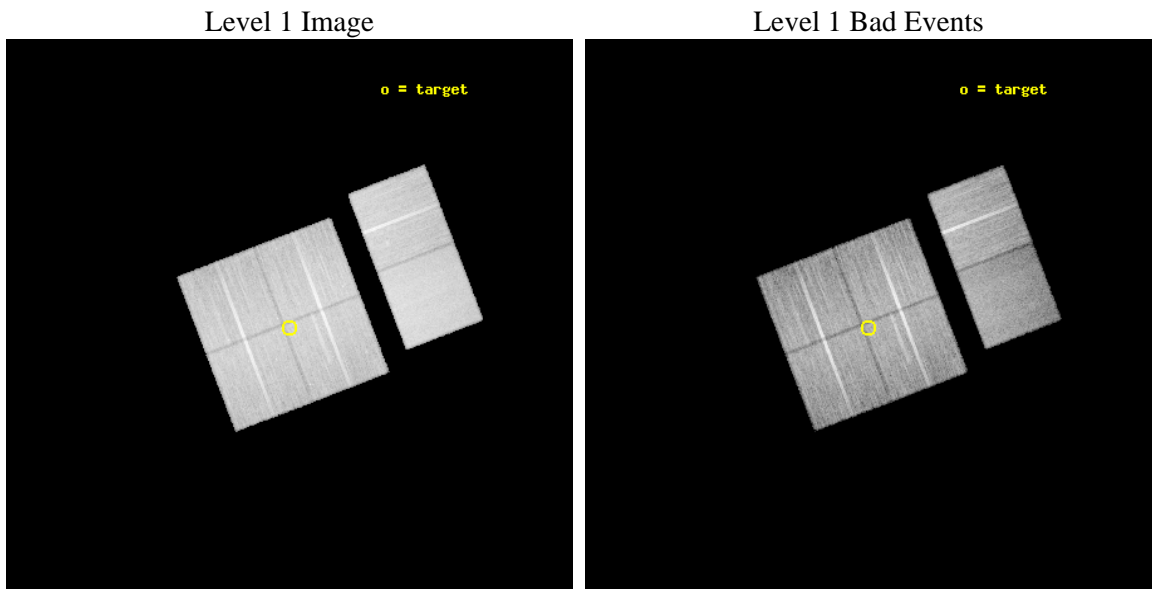
seq_num	702508	Sequence number
obs_id	13132	Observation id
title	Detailed X-ray spectra of IR-selected AGN in the Bootes field	Prop
observer	Dr Stephen Murray	Principal investigator
object	XBootes IRAGN Field 1	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	218.8075	Observer's specified target RA [deg]
dec_targ	34.142528	Observer's specified target Dec [deg]
ra_nom	218.80812047778	Nominal RA [deg]
dec_nom	34.150600312559	Nominal Dec [deg]
roll_nom	69.028023444714	Nominal Roll [deg]
revision	2	Processing version of data
ontime	28044.758865237	Sum of GTIs [s]
livetime	27689.639241959	Livetime [s]
ontime0	28041.517994463	Sum of GTIs [s]
ontime1	28047.999895573	Sum of GTIs [s]
ontime2	28041.518004477	Sum of GTIs [s]
ontime3	28044.758865237	Sum of GTIs [s]
ontime6	28044.758984804	Sum of GTIs [s]
ontime7	28047.999895573	Sum of GTIs [s]
l2events	199345	Number of level 2 events



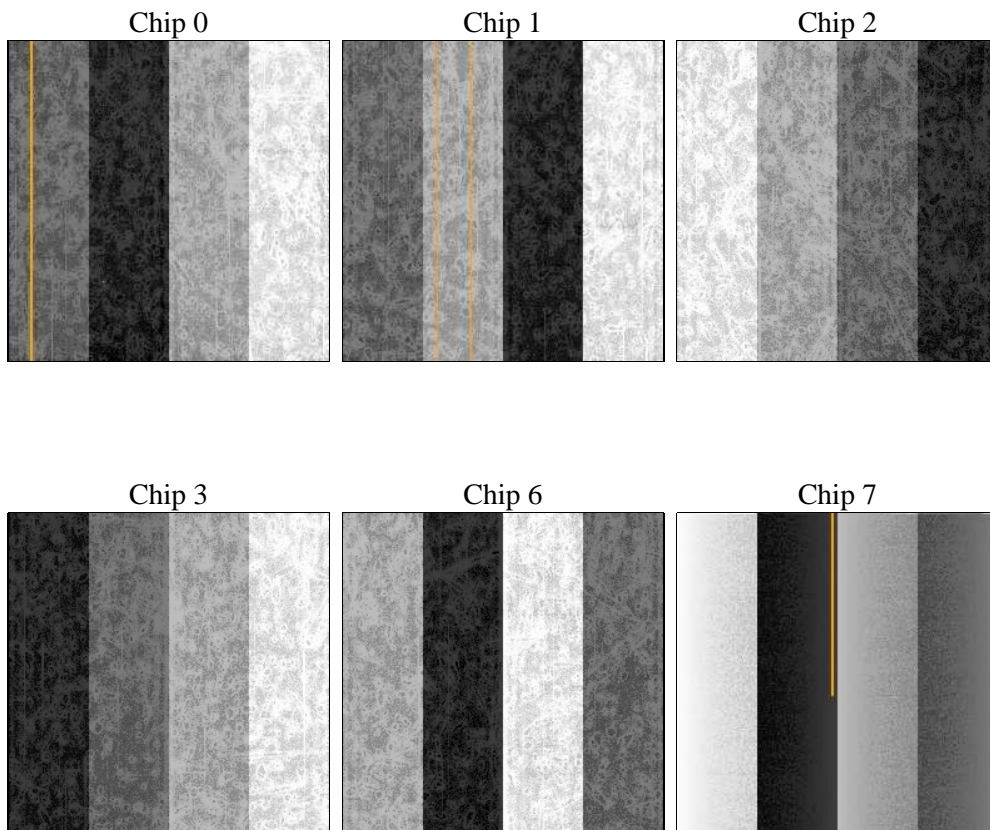
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	28000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	28044.758865237	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime0	28041.517994463	Sum of GTIs [s]
date	2012-02-02T07:27:23	Date and time of file creation	ontime1	28047.999895573	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	28041.518004477	Sum of GTIs [s]
			ontime3	28044.758865237	Sum of GTIs [s]
			ontime6	28044.758984804	Sum of GTIs [s]
			ontime7	28047.999895573	Sum of GTIs [s]
			l1events	1210243	Number of level 1 events

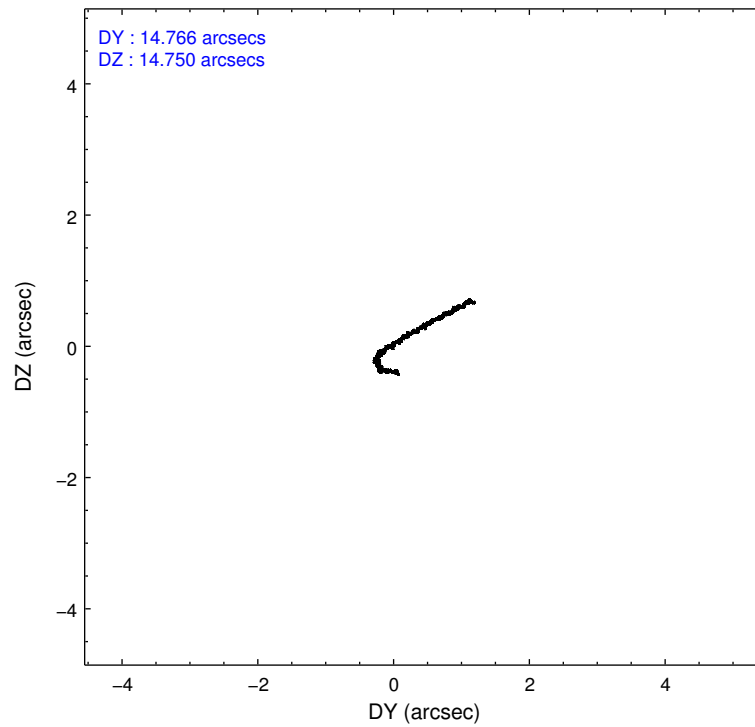
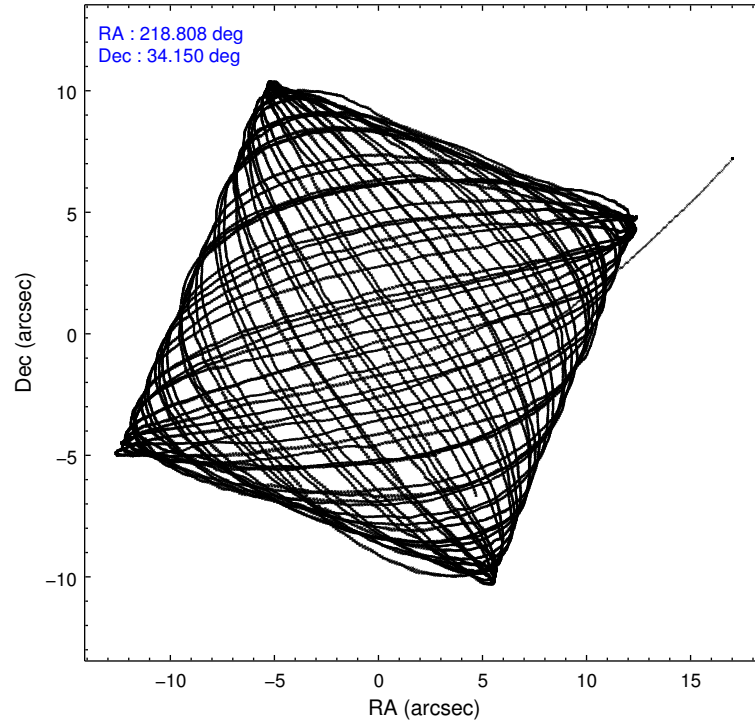
### 2.1.4 Events

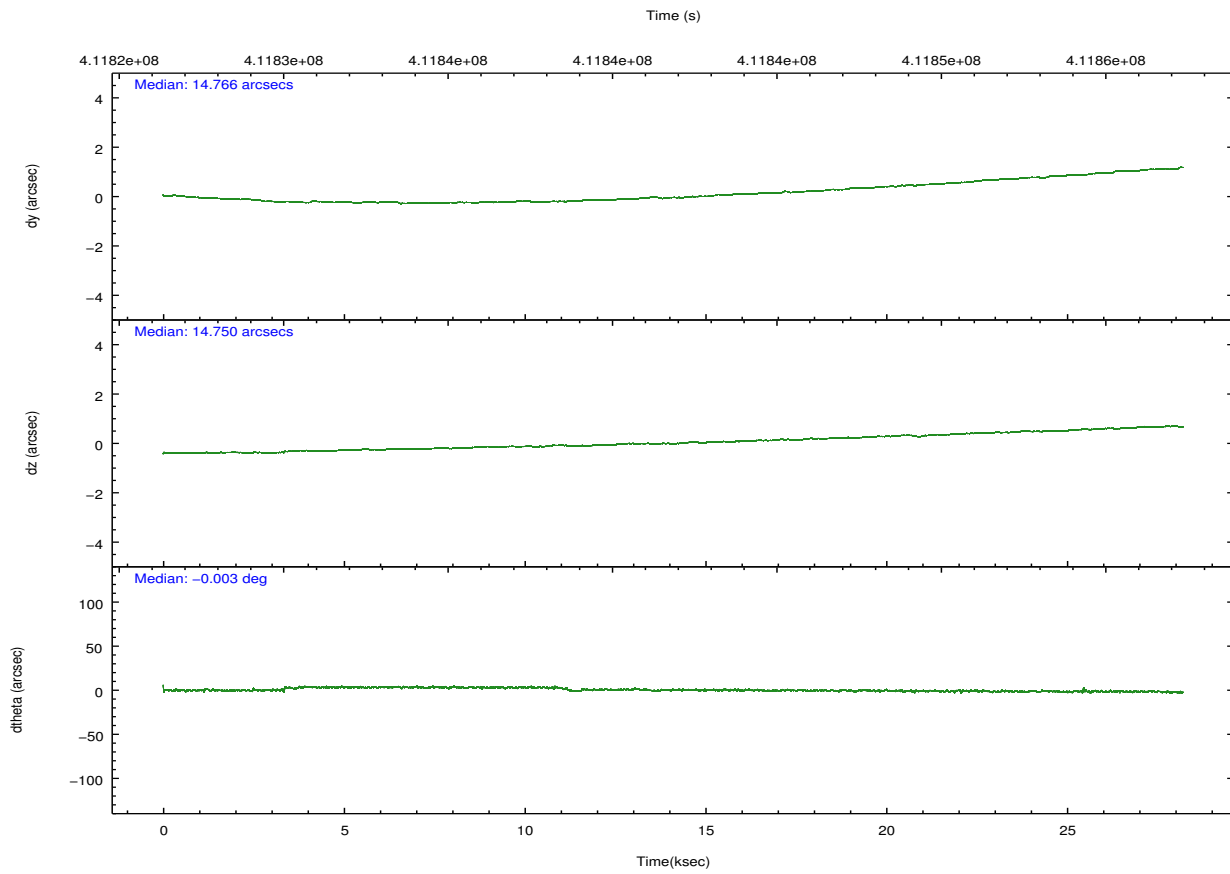
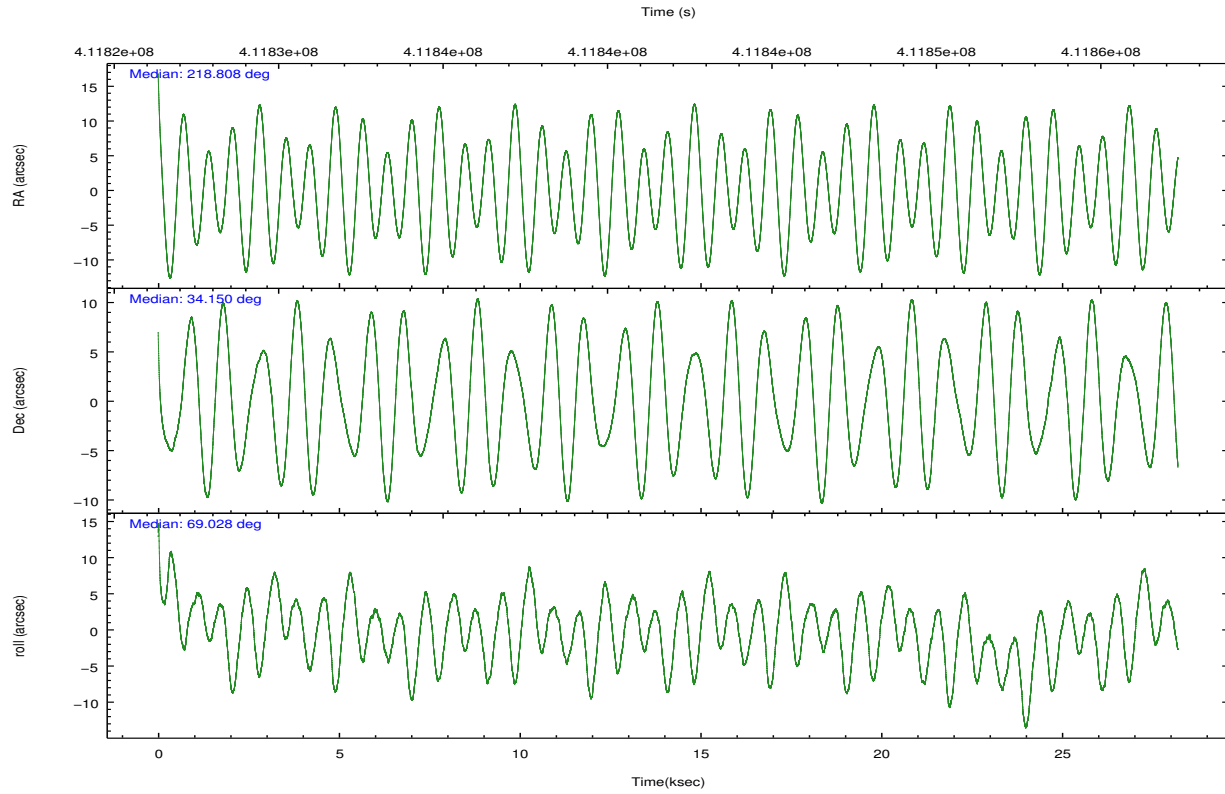
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	180118	181422	202187	192033	209645	244838	grade 0 events	7585	8452	7560	7452	8040	10064
rejected events	158105	157454	181034	171373	186673	135278		4%	4%	3%	3%	3%	4%
rejected %	87%	86%	89%	89%	89%	55%	grade 1 events	104	106	119	109	109	289
								0%	0%	0%	0%	0%	0%
							grade 2 events	5448	5769	5171	4592	5298	22170
								3%	3%	2%	2%	2%	9%
							grade 3 events	2338	2449	2152	2181	2336	9548
								1%	1%	1%	1%	1%	3%
							grade 4 events	2249	2330	2265	2218	2356	9739
								1%	1%	1%	1%	1%	3%
							grade 5 events	8301	8606	7882	9186	9611	25679
								4%	4%	3%	4%	4%	10%
							grade 6 events	4401	4973	4009	4222	4947	58065
								2%	2%	1%	2%	2%	23%
							grade 7 events	149692	148737	173029	162073	176948	109284
								83%	81%	85%	84%	84%	44%

## 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	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	218.813470	218.8081204777768	CCD I2 on	Y	Y
[deg] Pointing Dec	34.123453	34.15060031255852	CCD I3 on	Y	Y
[deg] Pointing Roll	68.816328	69.02802344471395	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O2	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	411827935.184000	411826893.51774	CCD S5 on	N	N
Observation start date	2011-01-19T12:37:49	2011-01-19T12:21:33	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	411855935.184000	411856615.44427	On-chip summing requested	N	N
Observation end date	2011-01-19T20:24:29	2011-01-19T20:36:55	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



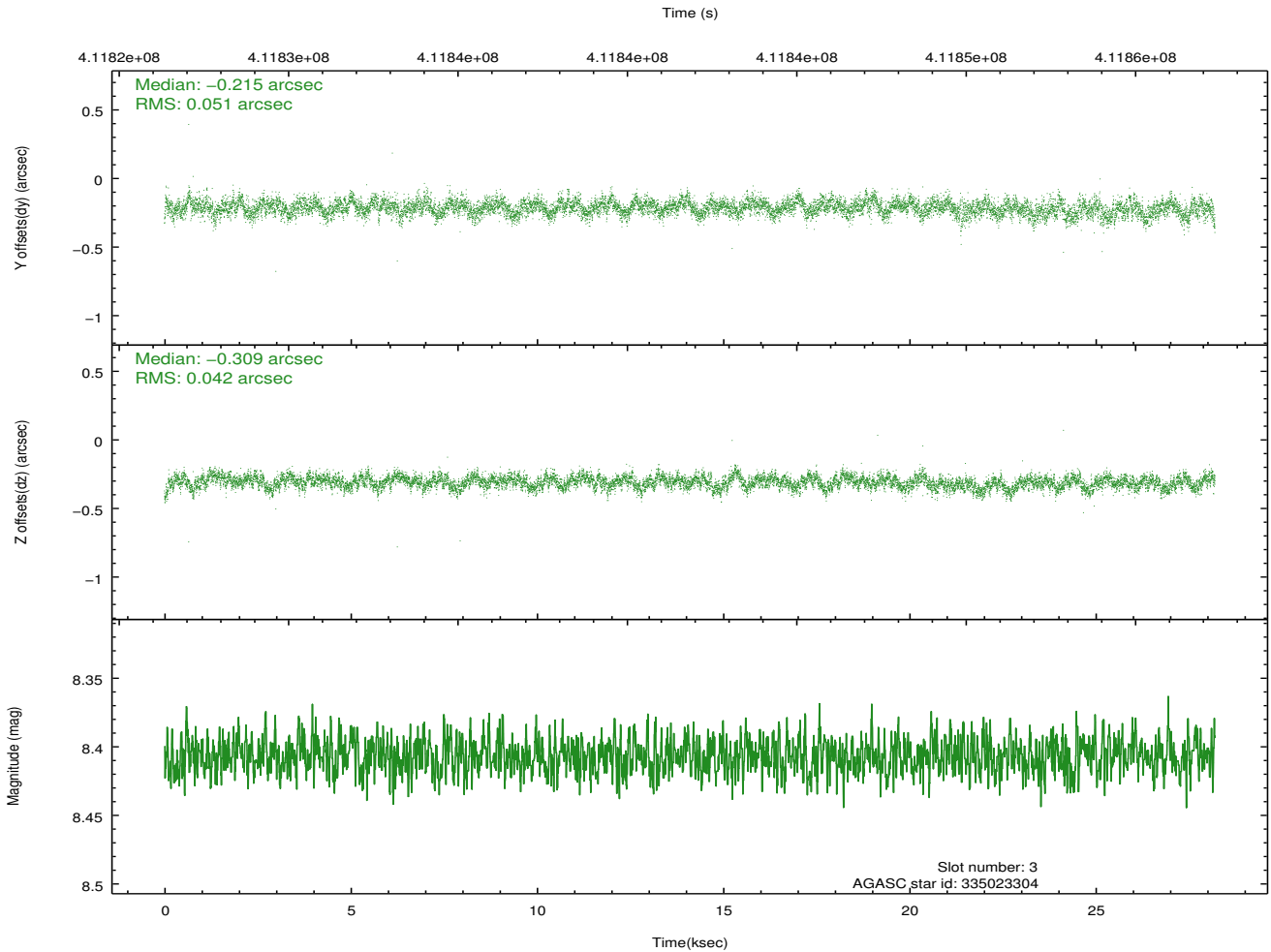
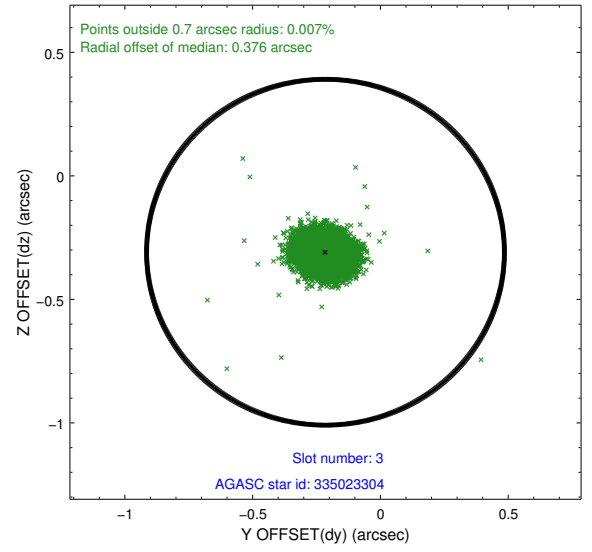
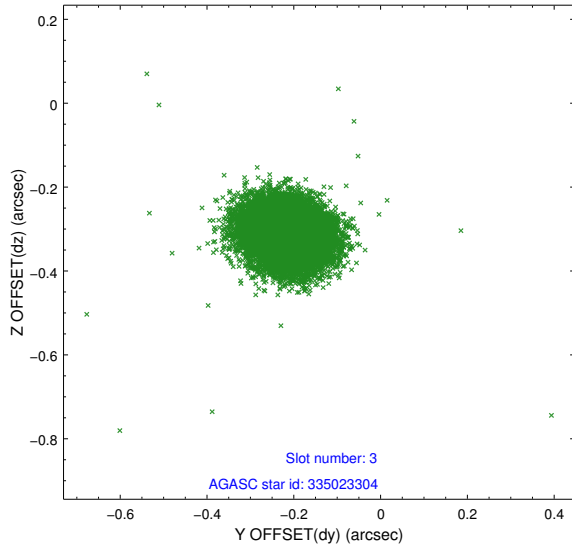


### Slot Statistics

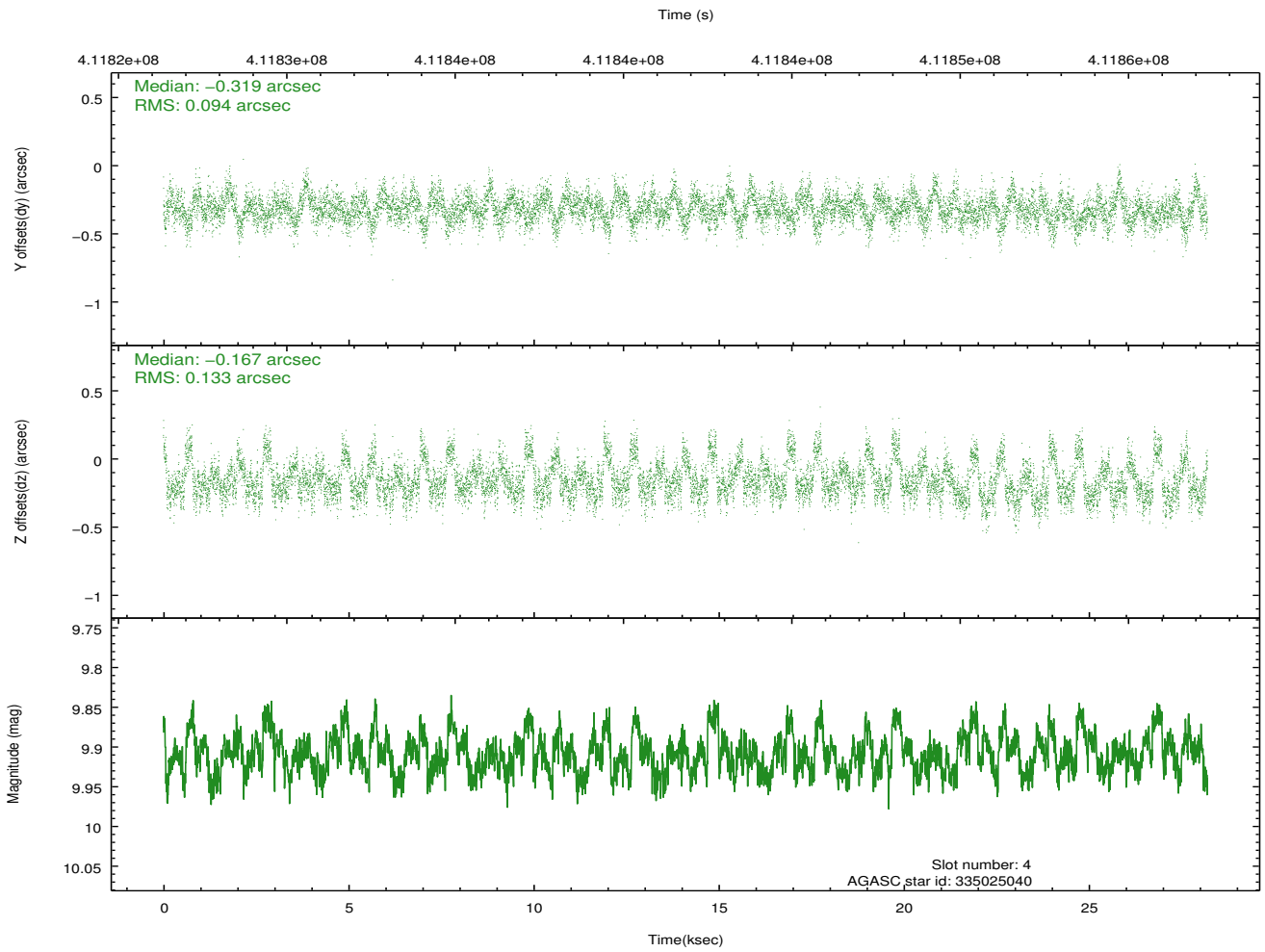
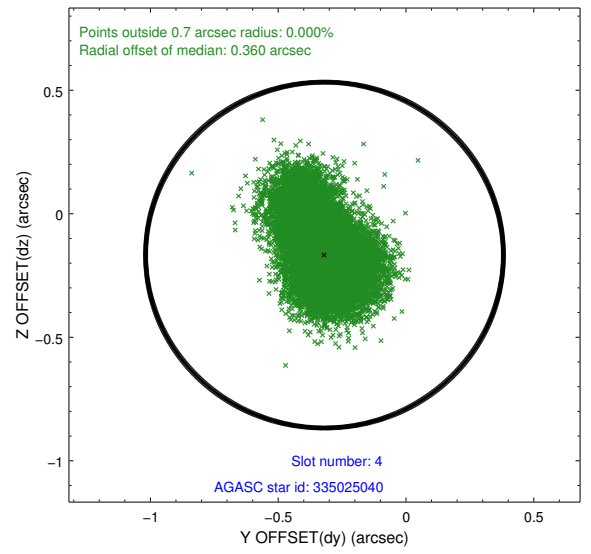
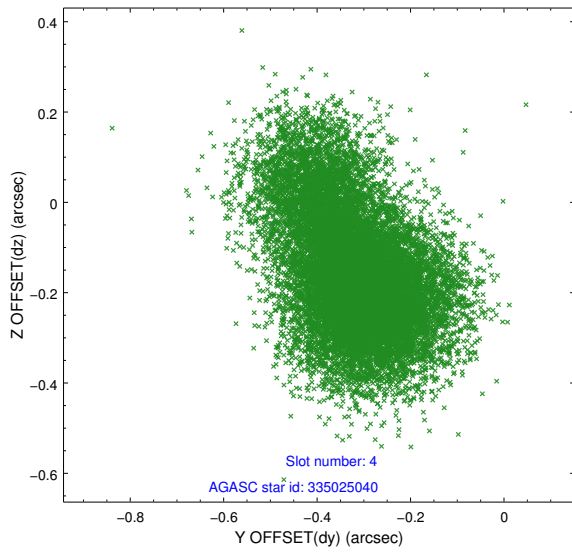
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.01	6875	-0.078	-0.065	0.014	0.022	0.000000	0.000000	-769.72	-844.84
1	FID	ACIS-I-4	7.04	6878	0.206	0.066	0.025	0.036	0.000000	0.000000	2144.56	1061.44
2	FID	ACIS-I-5	7.10	6879	-0.226	0.068	0.023	0.031	0.000000	0.000000	-1823.60	1059.36
3	GUIDE	335023304	8.41	13748	-0.215	-0.309	0.068	0.112	218.883608	34.686545	1965.43	538.94
4	GUIDE	335025040	9.91	13738	-0.319	-0.167	0.170	0.295	218.601670	34.305240	383.44	824.18
5	GUIDE	335152784	7.23	13758	0.147	0.128	0.075	0.118	219.280617	33.678221	-985.50	-1882.84
6	GUIDE	335157088	9.08	13748	0.194	0.098	0.127	0.206	219.274029	33.726909	-829.53	-1800.52
7	GUIDE	335154960	9.56	13673	0.198	0.242	0.135	0.220	219.209961	33.303073	-2320.36	-2180.44

## 2.4 Star Slots

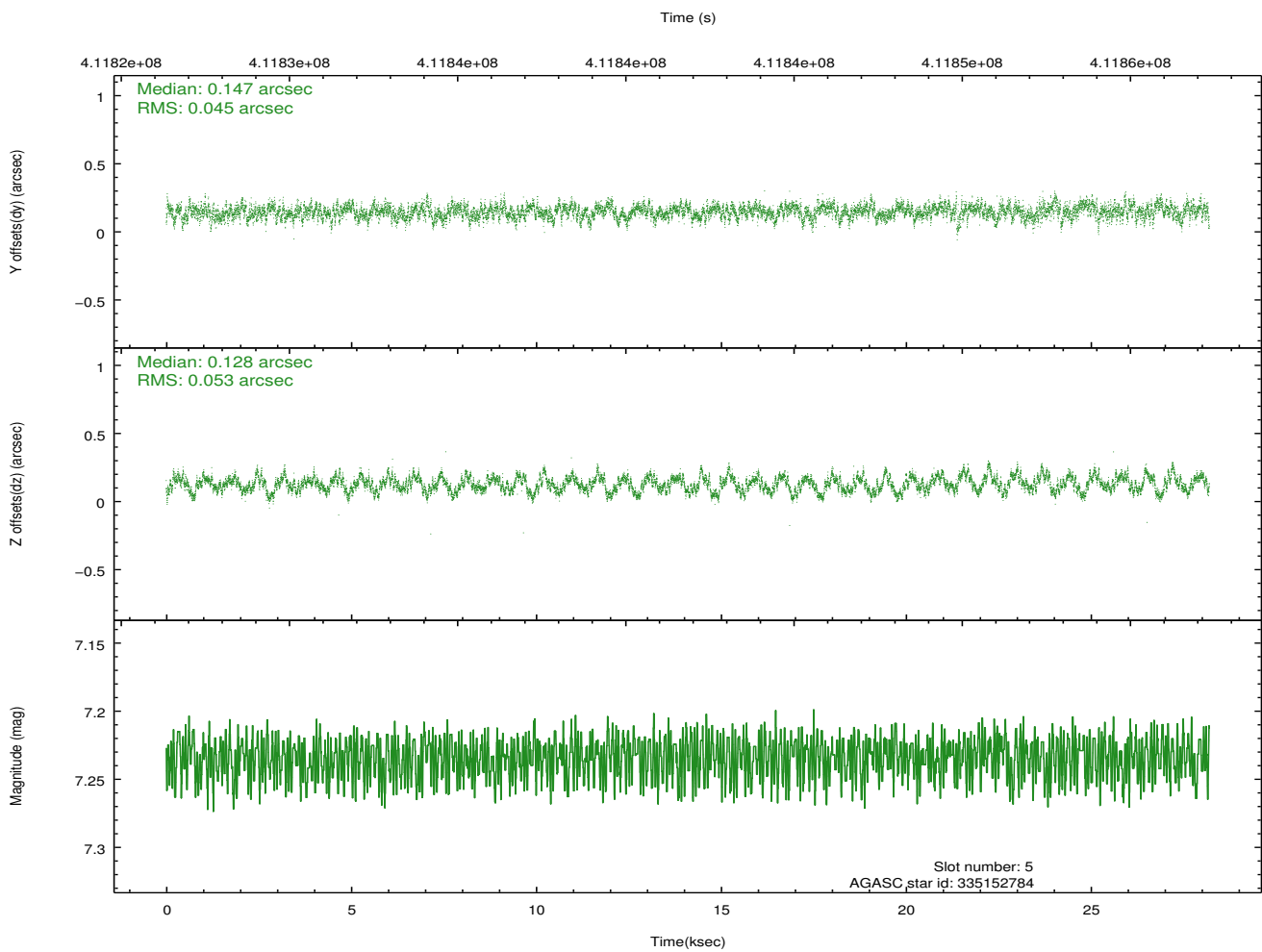
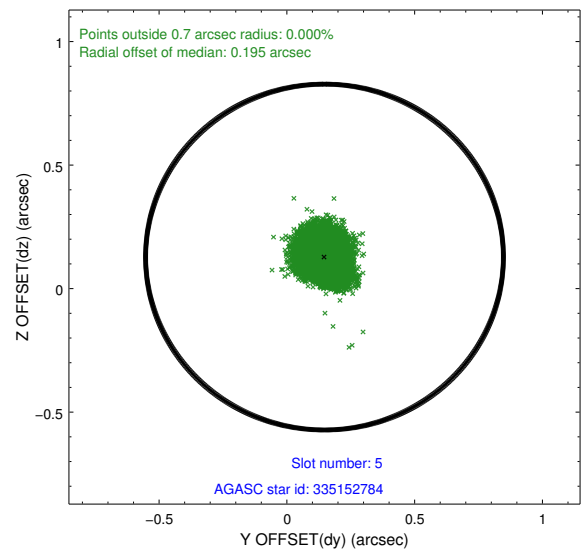
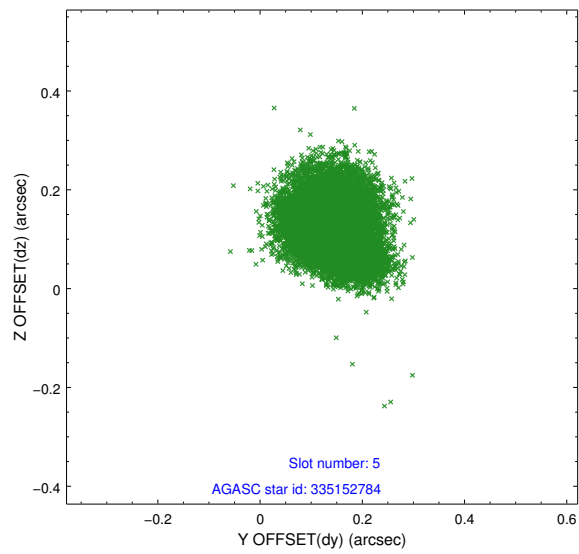
### 2.4.1 Slot 3



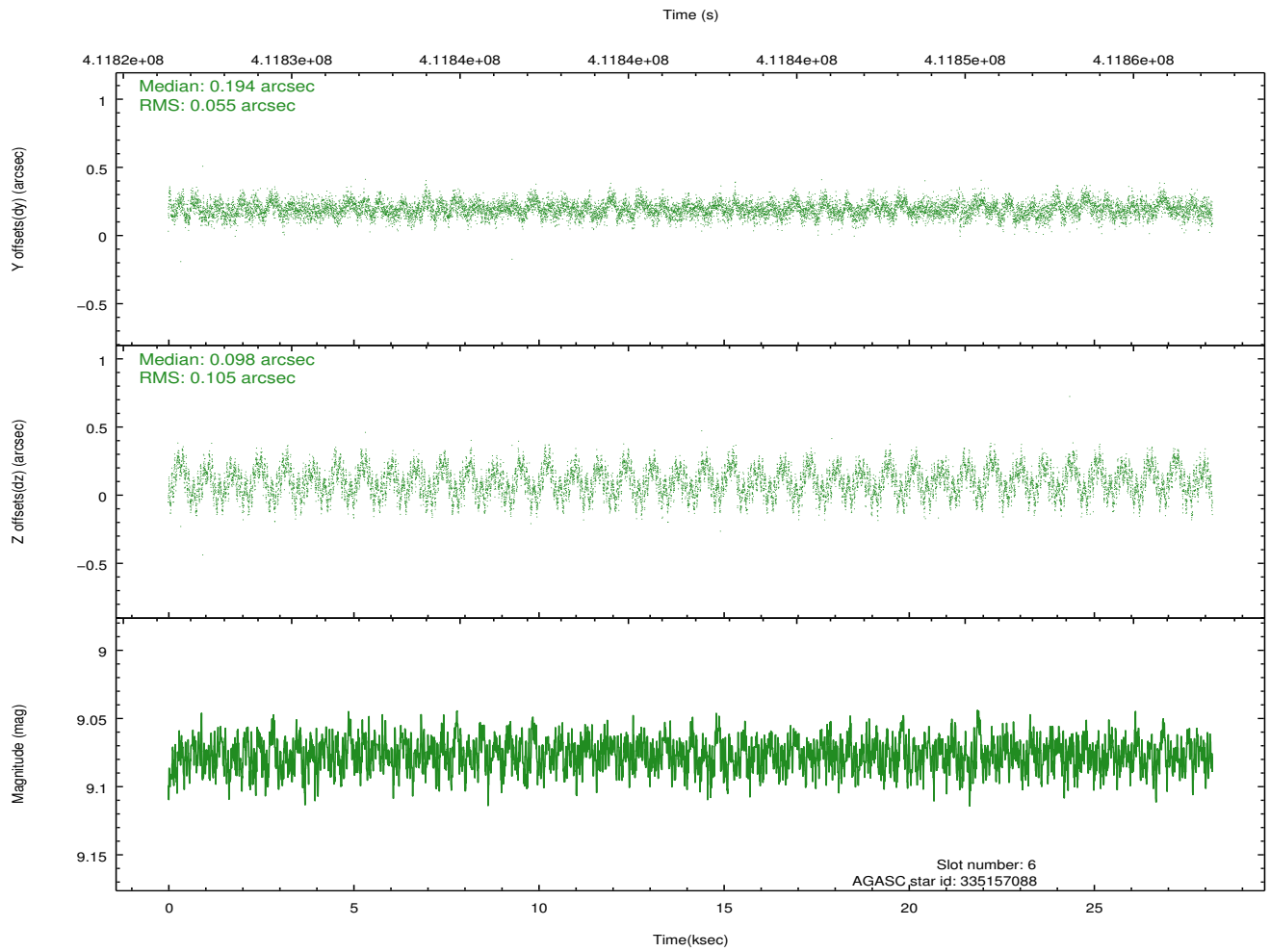
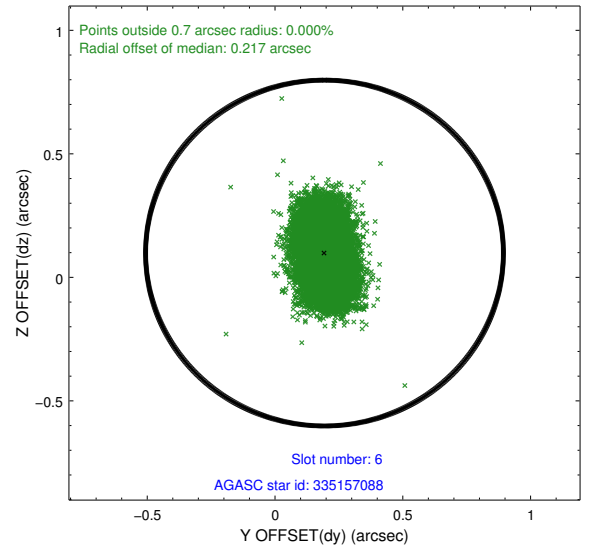
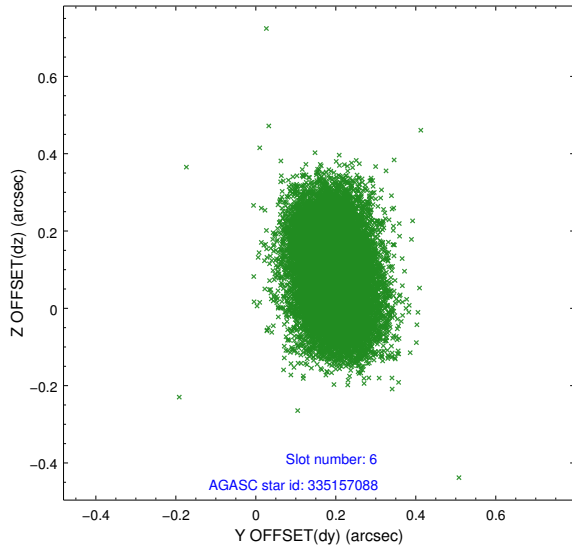
### 2.4.2 Slot 4



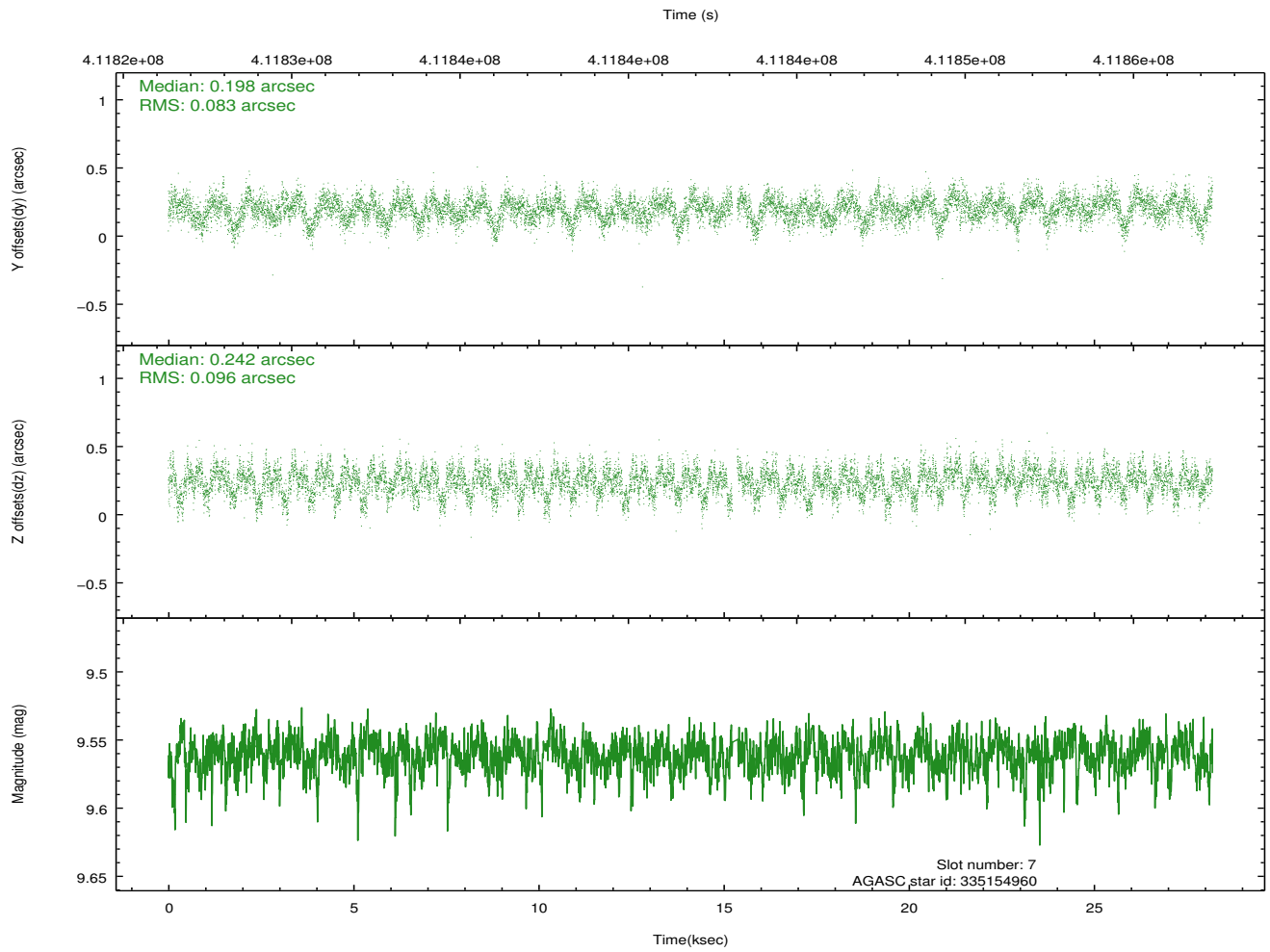
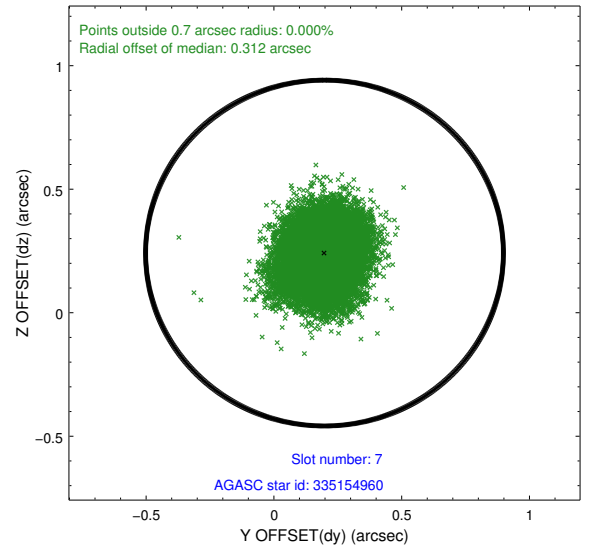
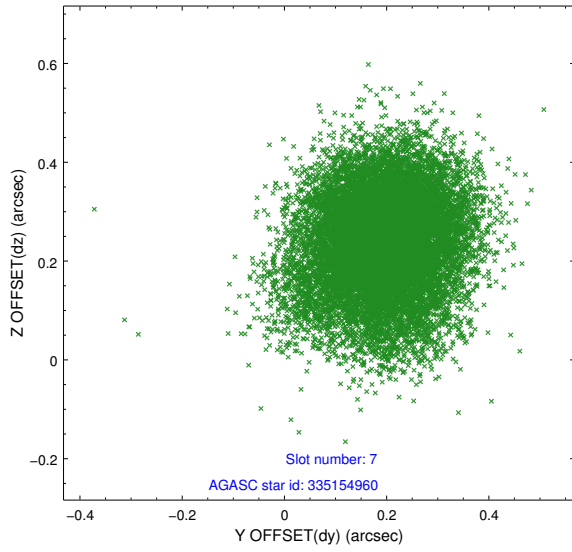
### 2.4.3 Slot 5



### 2.4.4 Slot 6

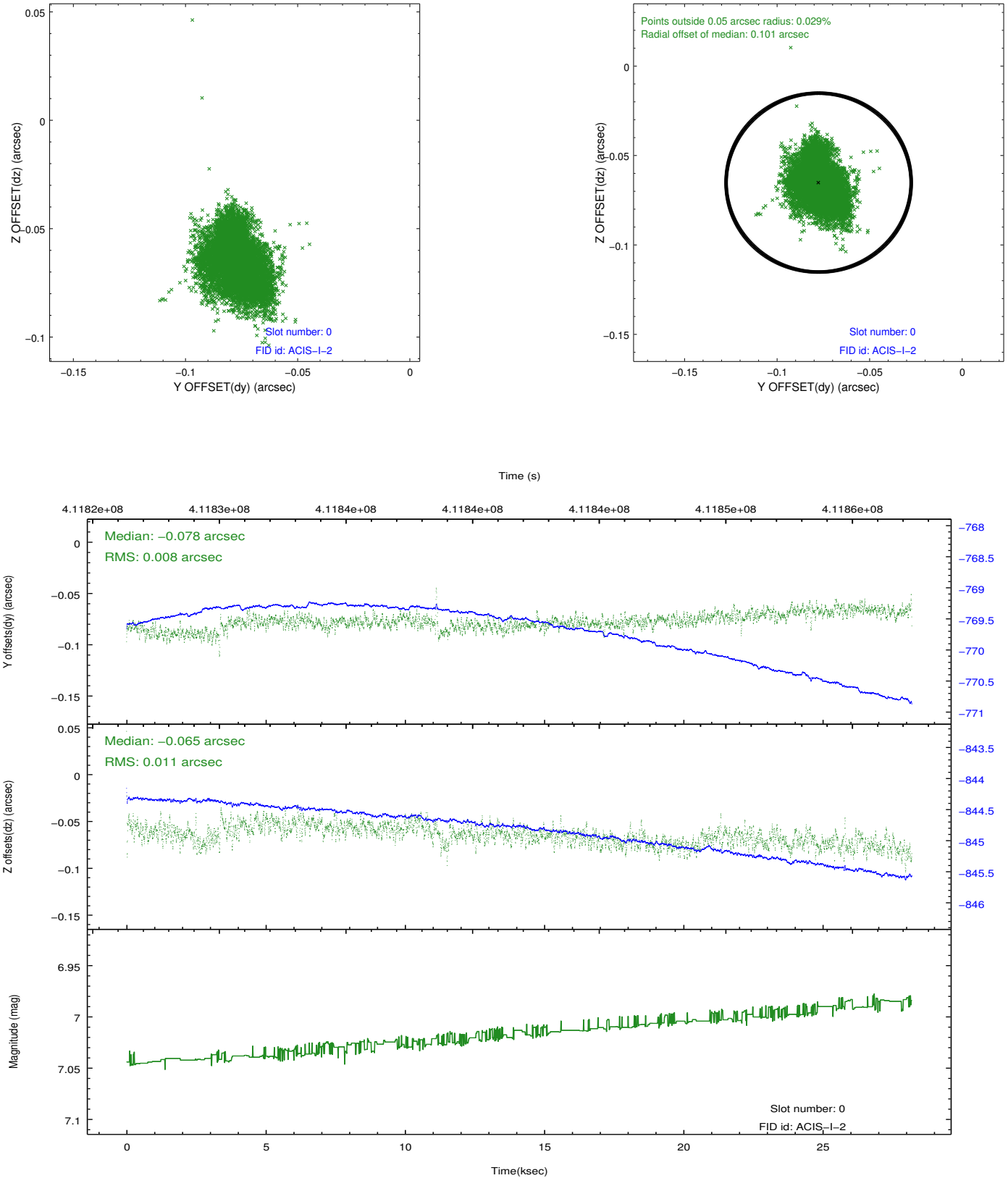


### 2.4.5 Slot 7

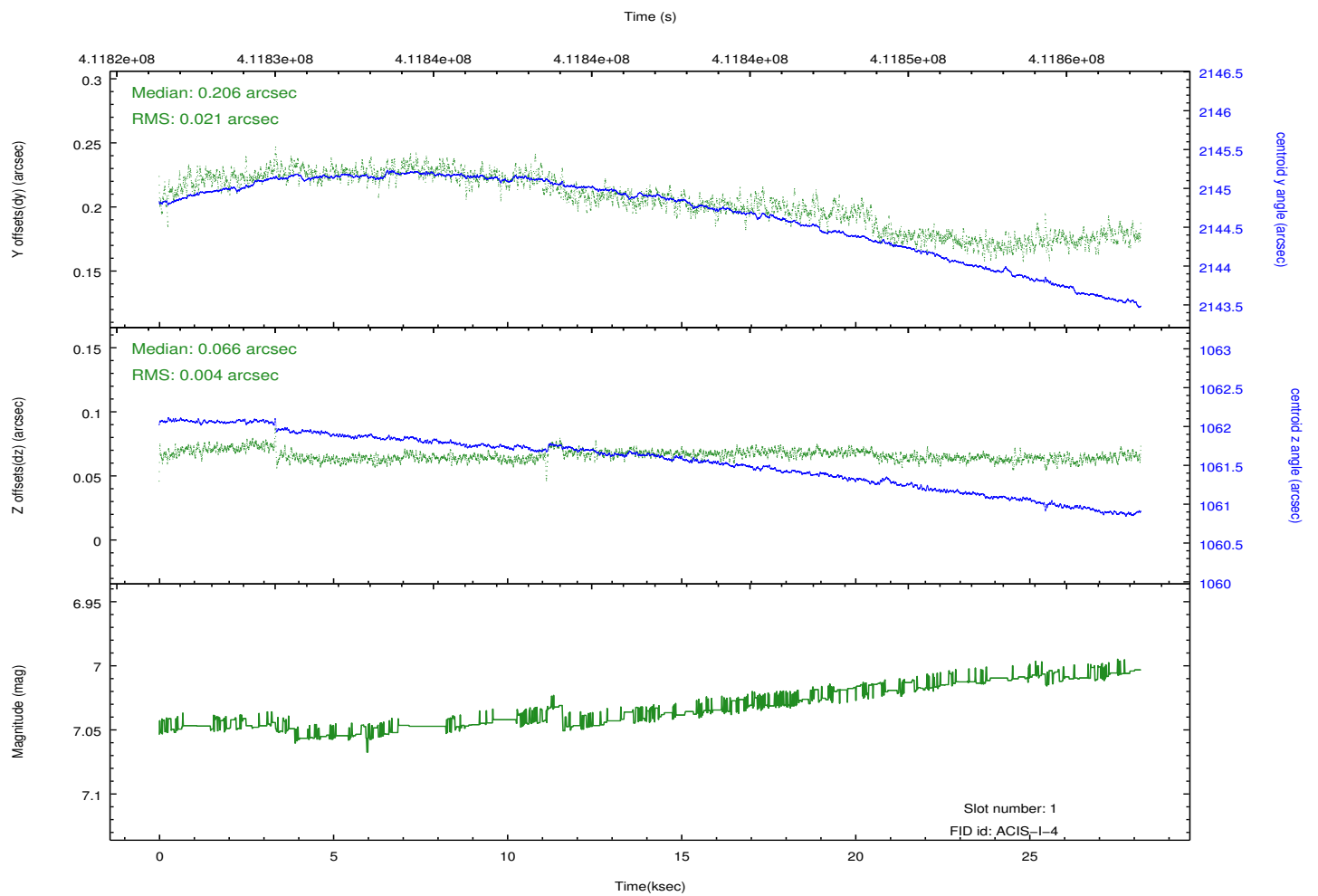
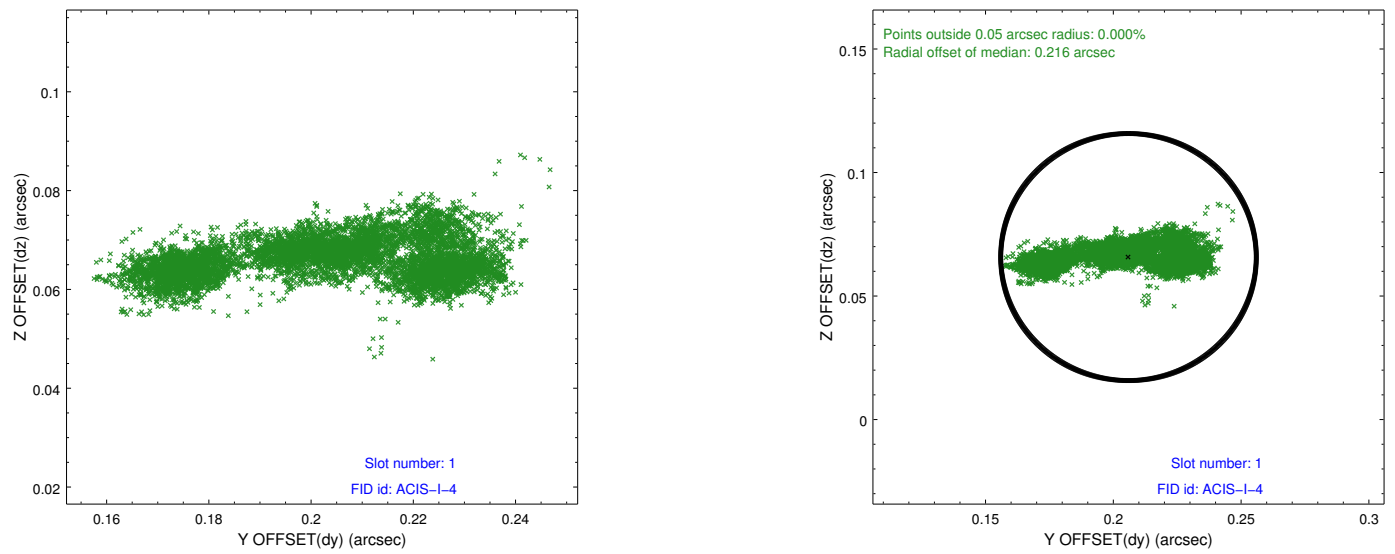


## 2.5 FID Slots

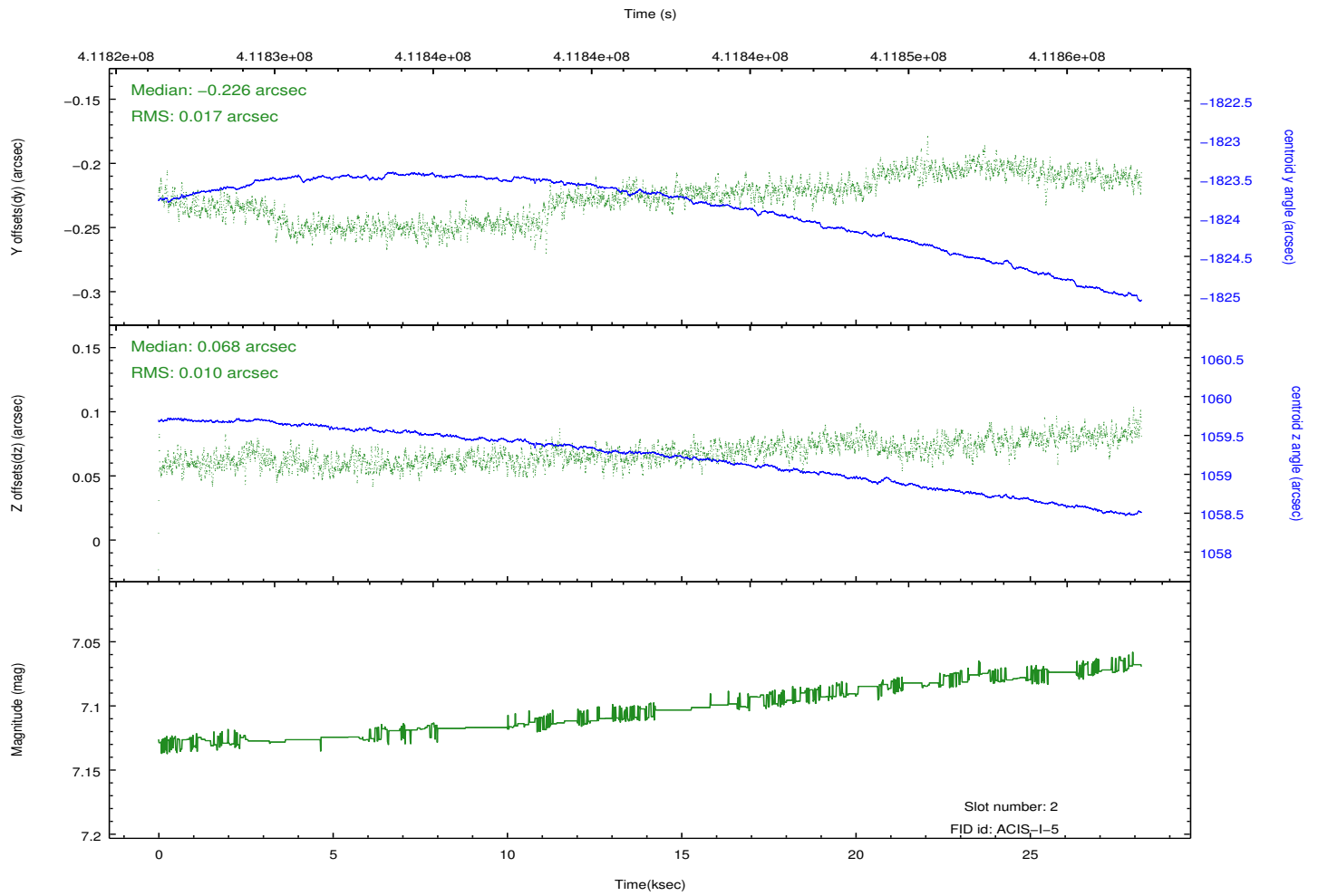
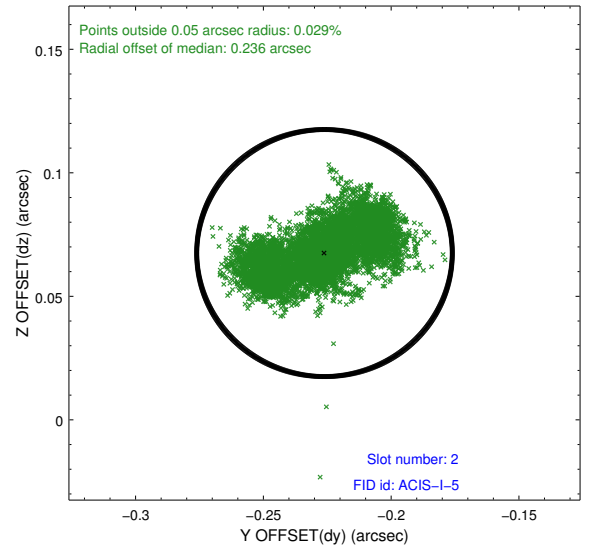
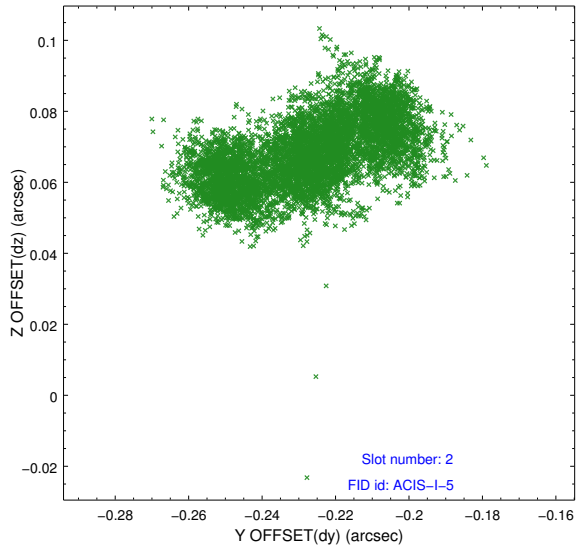
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.02.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	28.044758865297

## A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.