

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12934 - L2 Version 2  
Chandra X-Ray Center

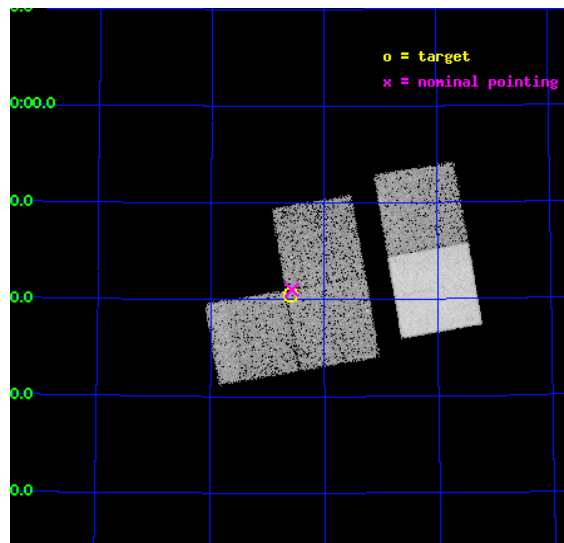
L2 Processing Date : Feb 5 2012

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# 1 Front

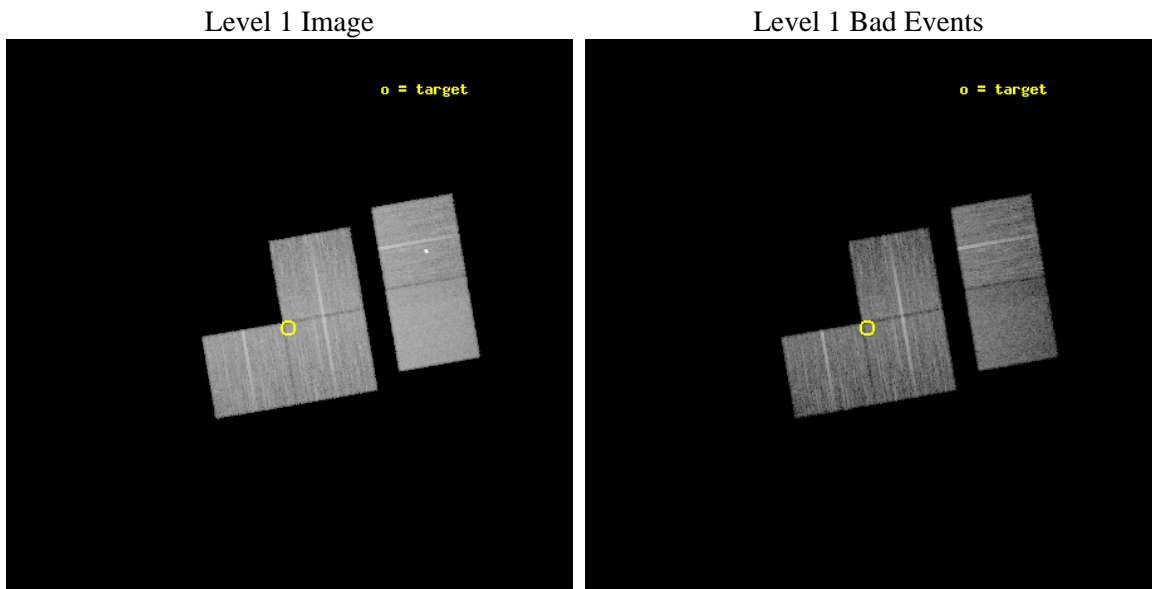
seq_num	900966	Sequence number
obs_id	12934	Observation id
title	Filling the 15 micron Gap: Search for Compton-thick Accretion with Chandra and AKARI in the NEP Deep Field	Proposal title
observer	Dr. Mirko Krumpe	Principal investigator
object	AKARI-NEP-Deep Field	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	269.14583	Observer's specified target RA [deg]
dec_targ	66.675833	Observer's specified target Dec [deg]
ra_nom	269.14314126179	Nominal RA [deg]
dec_nom	66.68388705974	Nominal Dec [deg]
roll_nom	80.111182662815	Nominal Roll [deg]
revision	2	Processing version of data
ontime	15052.799943984	Sum of GTIs [s]
livetime	14862.192327385	Livetime [s]
ontime0	15052.799943984	Sum of GTIs [s]
ontime1	15052.799943984	Sum of GTIs [s]
ontime2	15049.55894357	Sum of GTIs [s]
ontime3	15052.799943984	Sum of GTIs [s]
ontime6	15052.799943984	Sum of GTIs [s]
ontime7	15052.799943984	Sum of GTIs [s]
l2events	96955	Number of level 2 events



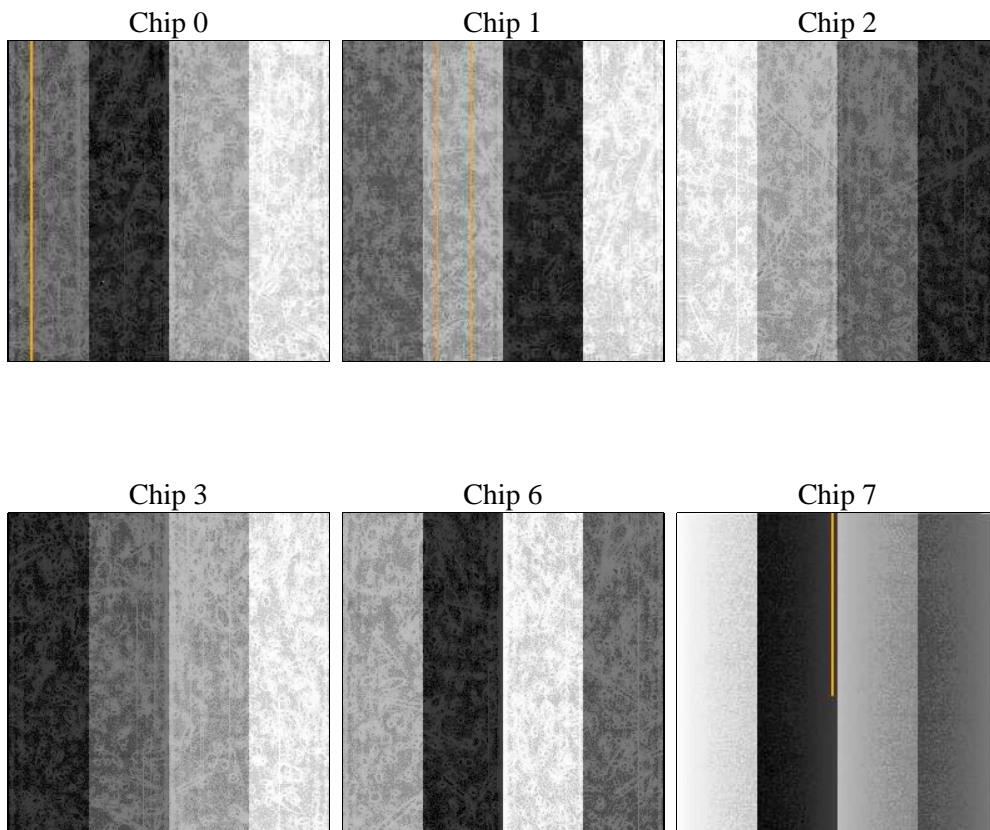
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	15052.799943984	Sum of GTIs [s]
caldsver	4.4.7	&#160	ontime0	15052.799943984	Sum of GTIs [s]
date	2012-02-05T14:42:58	Date and time of file creation	ontime1	15052.799943984	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	15049.55894357	Sum of GTIs [s]
			ontime3	15052.799943984	Sum of GTIs [s]
			ontime6	15052.799943984	Sum of GTIs [s]
			ontime7	15052.799943984	Sum of GTIs [s]
			l1events	548001	Number of level 1 events

### 2.1.4 Events

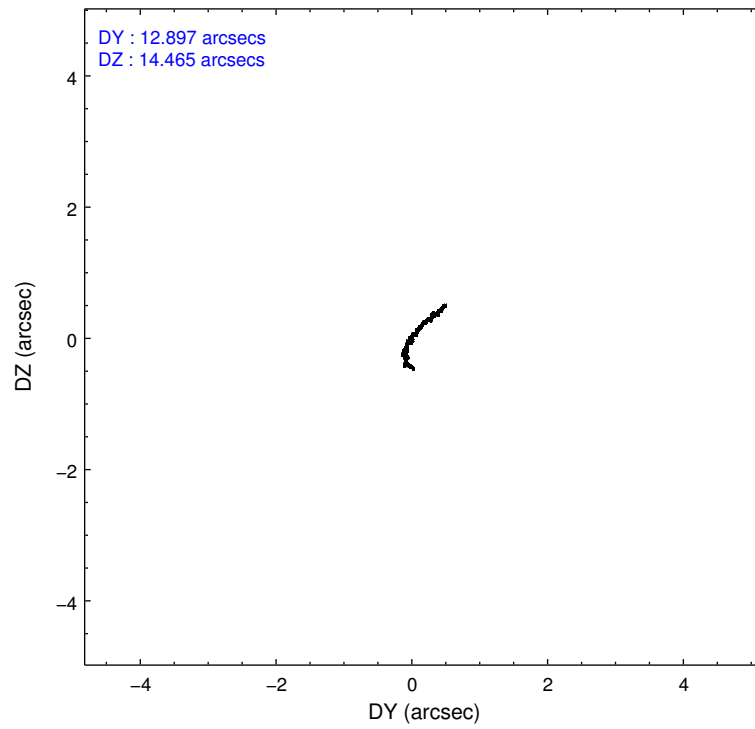
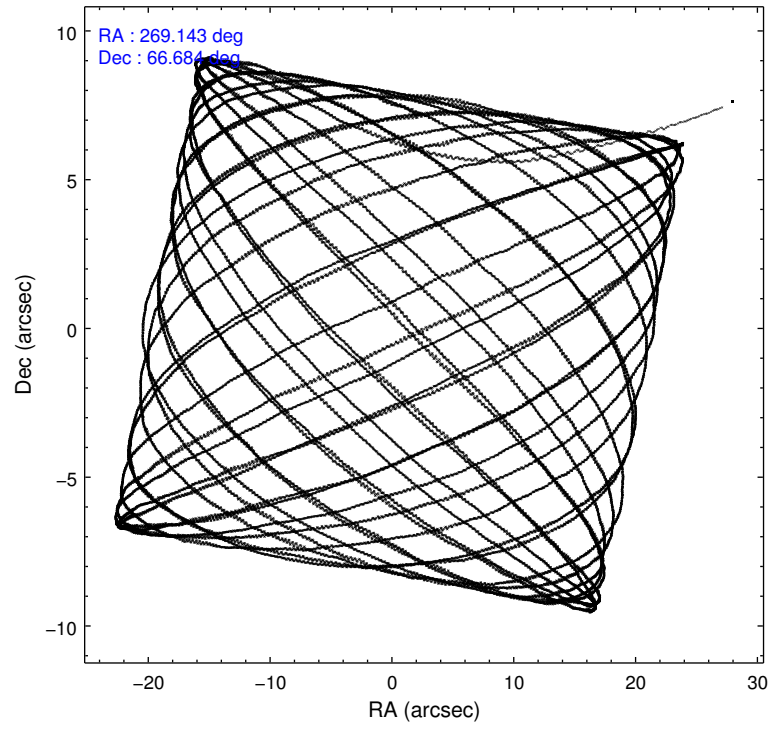
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	0	98116	102562	102512	114722	130089
rejected events	0	85178	91193	91339	98135	71932
rejected %	0%	86%	88%	89%	85%	55%

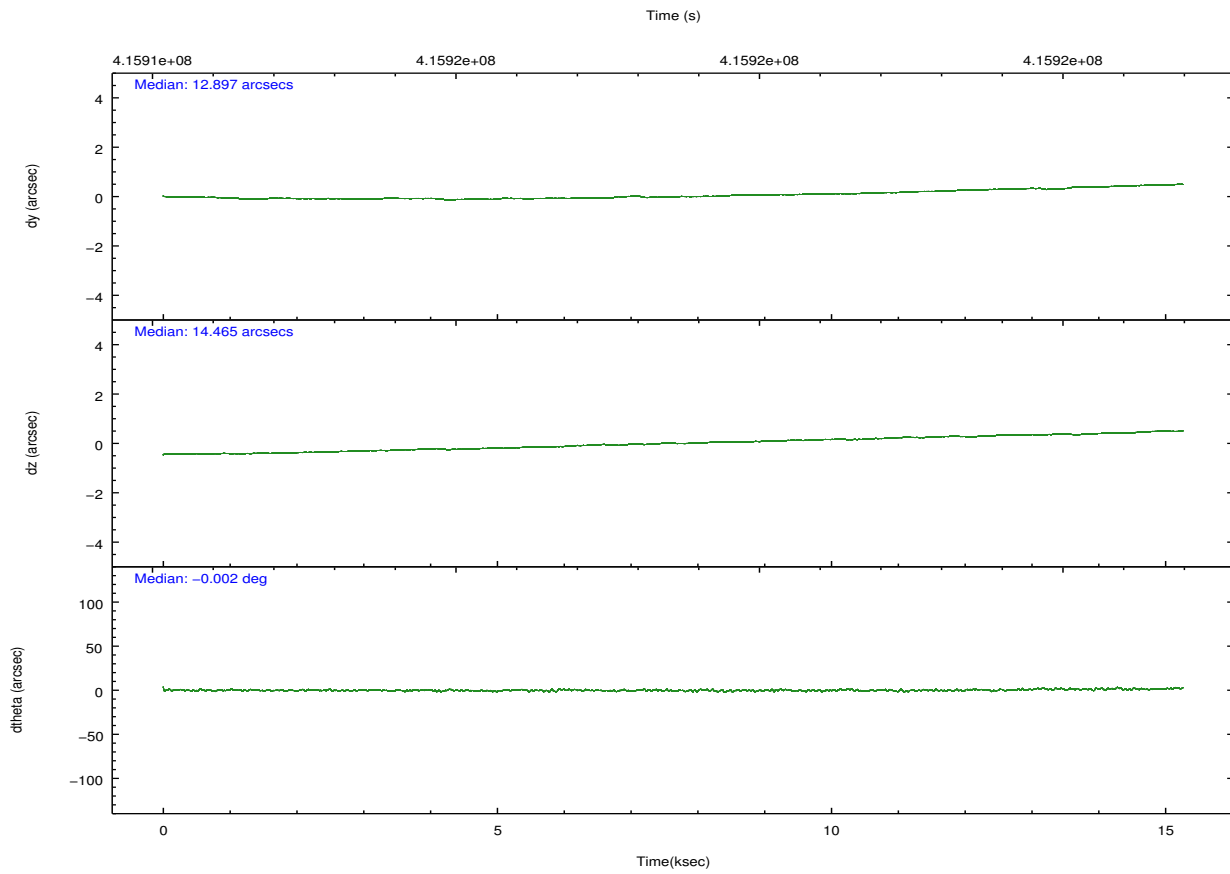
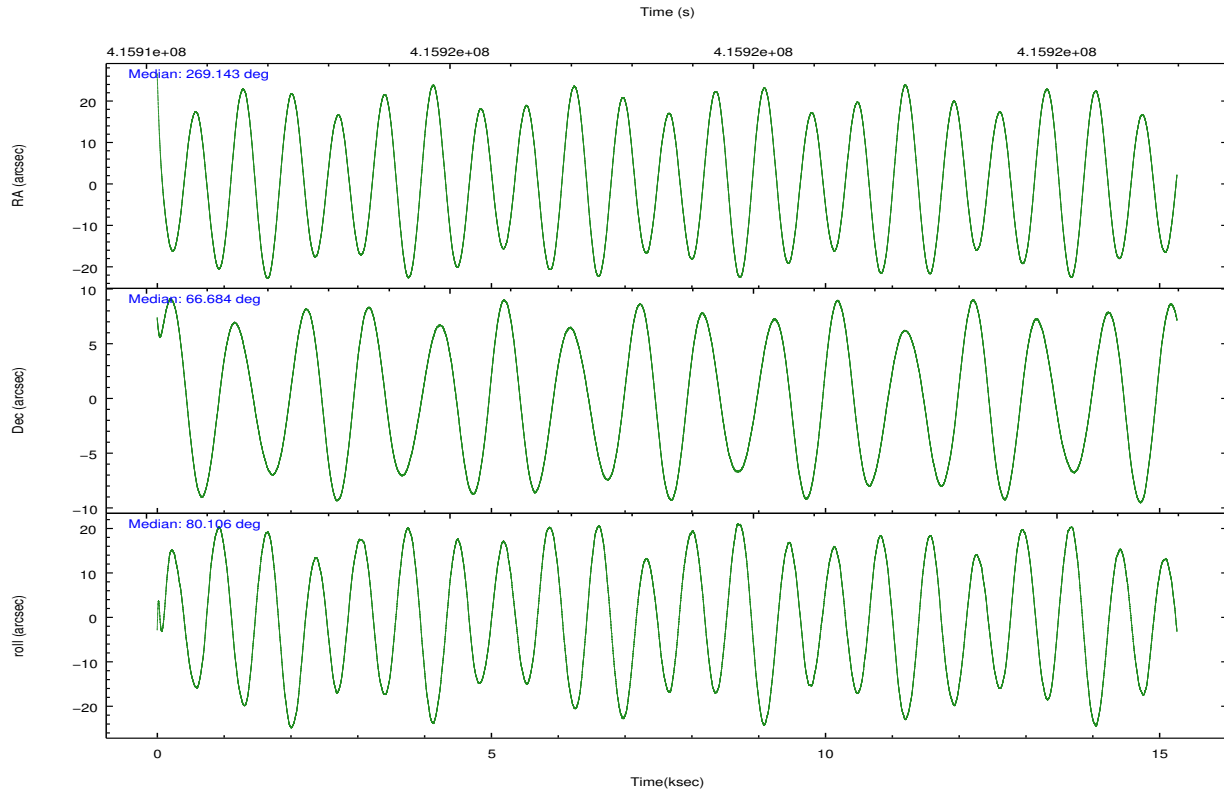
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	0	4538	4104	3975	4176	5212
	0%	4%	4%	3%	3%	4%
grade 1 events	0	57	70	68	73	165
	0%	0%	0%	0%	0%	0%
grade 2 events	0	3130	2701	2548	7239	12083
	0%	3%	2%	2%	6%	9%
grade 3 events	0	1251	1175	1204	1274	5159
	0%	1%	1%	1%	1%	3%
grade 4 events	0	1300	1152	1182	1198	5134
	0%	1%	1%	1%	1%	3%
grade 5 events	0	4457	4041	4940	4983	13641
	0%	4%	3%	4%	4%	10%
grade 6 events	0	2722	2239	2265	2704	30579
	0%	2%	2%	2%	2%	23%
grade 7 events	0	80661	87080	86330	93075	58116
	0%	82%	84%	84%	81%	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	269.167332	269.1431412617879	CCD I2 on	Y	Y
[deg] Pointing Dec	66.658067	66.68388705973973	CCD I3 on	Y	Y
[deg] Pointing Roll	79.880263	80.11118266281535	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)	415911203.184000	415910143.69156	CCD S5 on	N	N
Observation start date	2011-03-07T18:52:17	2011-03-07T18:35:43	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	415926203.184000	415926998.27994	On-chip summing requested	N	N
Observation end date	2011-03-07T23:02:17	2011-03-07T23:16:38	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



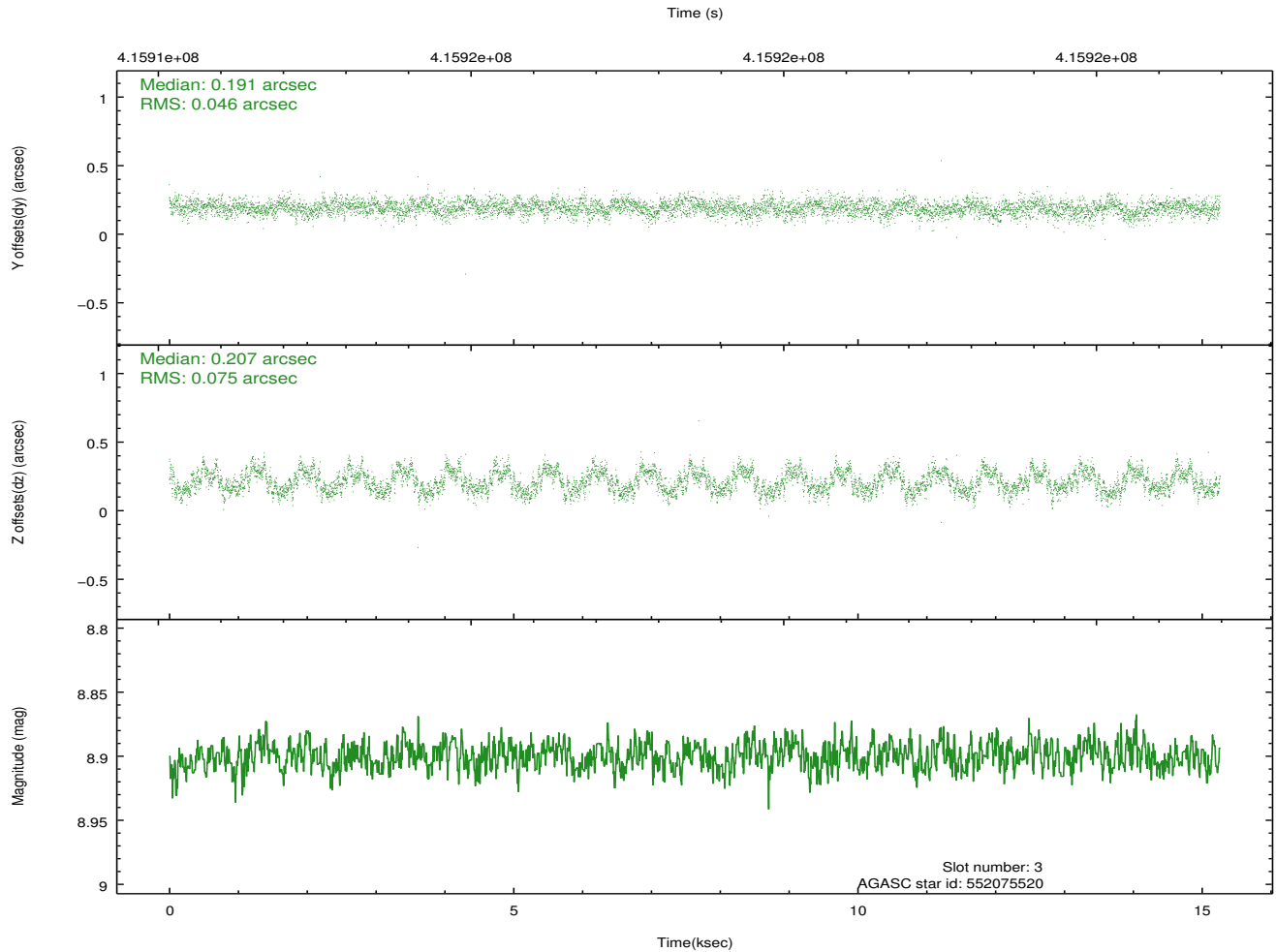
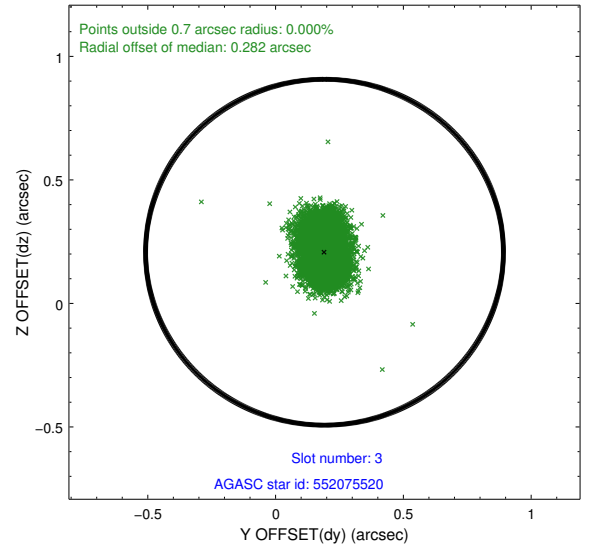
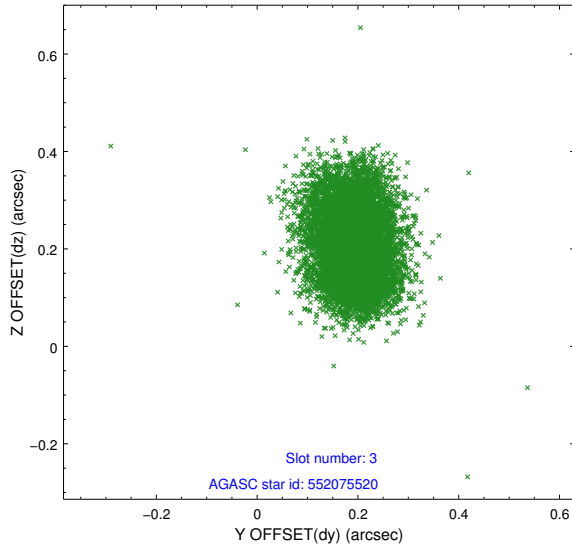


### Slot Statistics

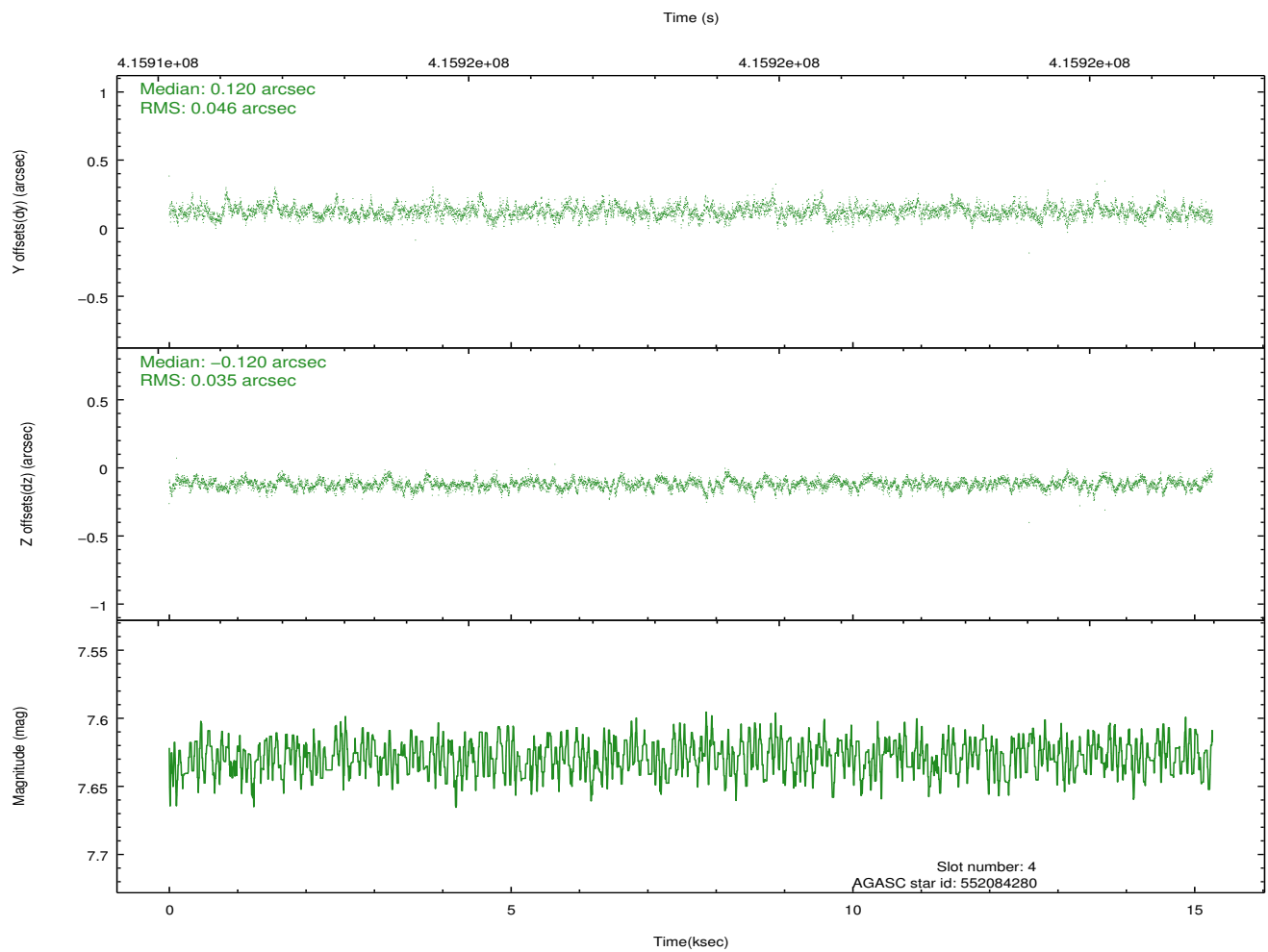
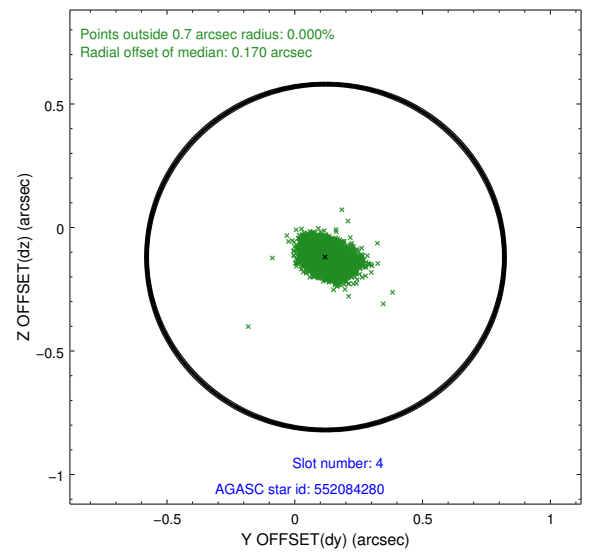
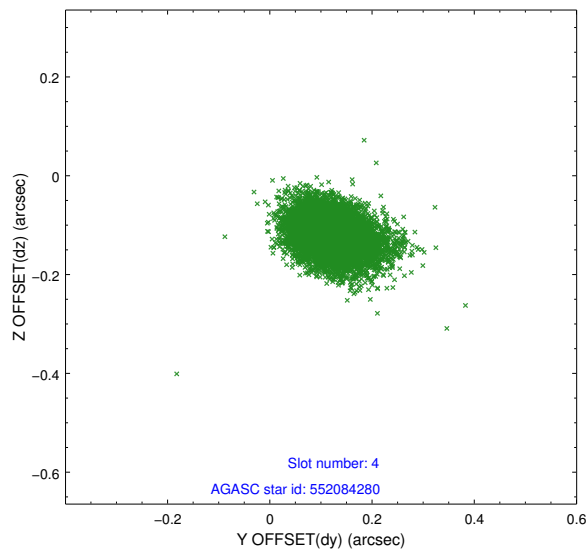
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.12	3723	0.003	0.056	0.013	0.026	0.000000	0.000000	926.55	-837.99
1	FID	ACIS-I-2	7.02	3723	-0.111	-0.070	0.011	0.019	0.000000	0.000000	-767.49	-844.71
2	FID	ACIS-I-6	7.11	3723	0.018	0.081	0.014	0.021	0.000000	0.000000	392.05	1703.70
3	GUIDE	552075520	8.90	7438	0.191	0.207	0.094	0.148	269.430358	66.310622	-1163.60	-594.15
4	GUIDE	552084280	7.63	7444	0.120	-0.120	0.059	0.100	268.233478	66.419076	-1073.58	1174.25
5	GUIDE	552216648	9.76	7396	0.112	0.028	0.128	0.212	270.130141	67.075369	1726.07	-1062.79
6	GUIDE	552082392	9.74	7430	-0.261	-0.225	0.155	0.260	267.761612	66.950878	711.36	2139.20
7	GUIDE	552209520	9.82	7433	-0.159	0.121	0.188	0.315	270.790044	66.469989	-226.87	-2408.91

## 2.4 Star Slots

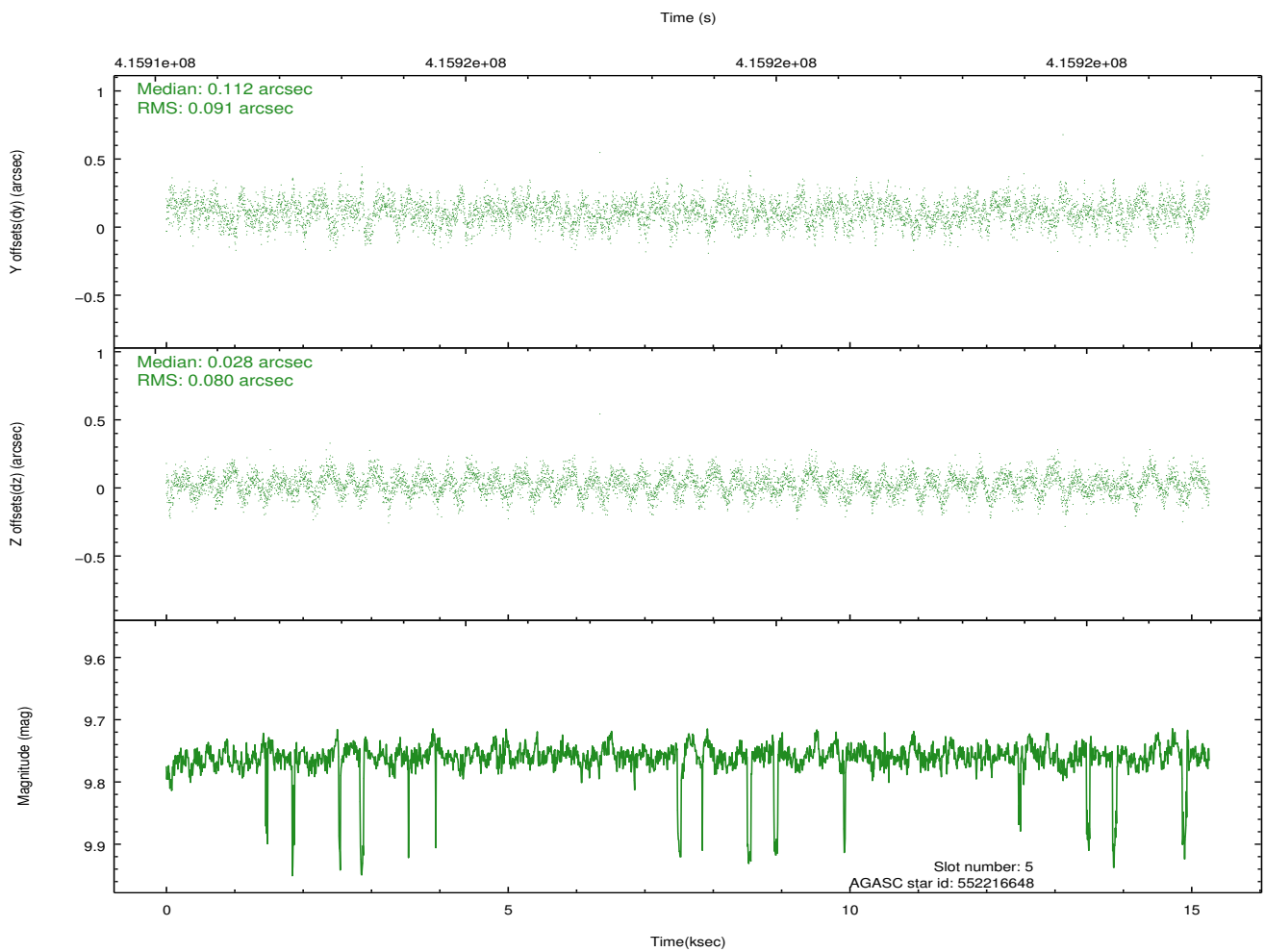
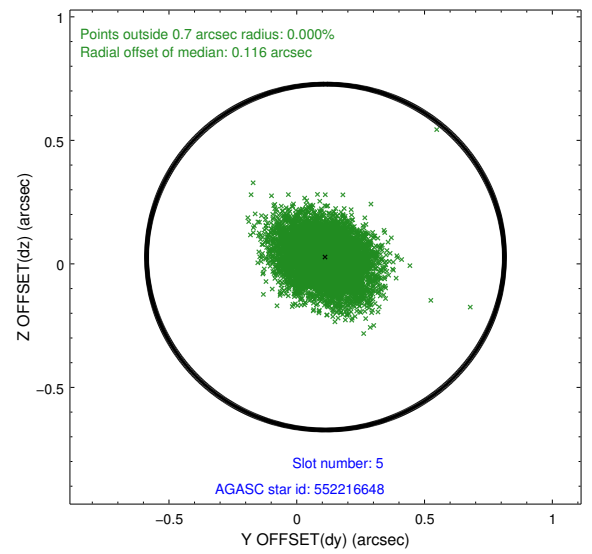
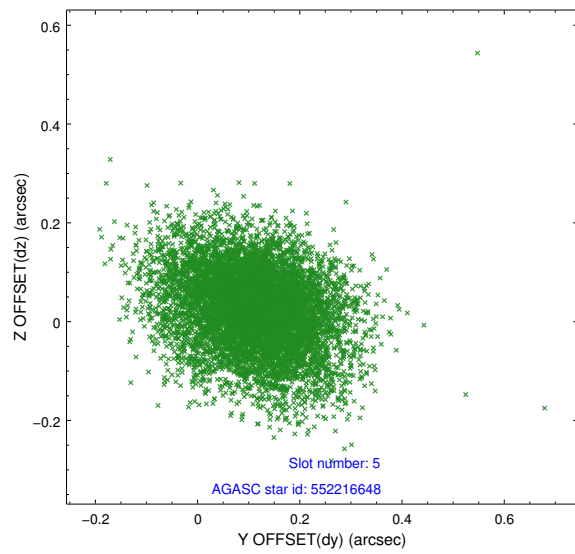
### 2.4.1 Slot 3



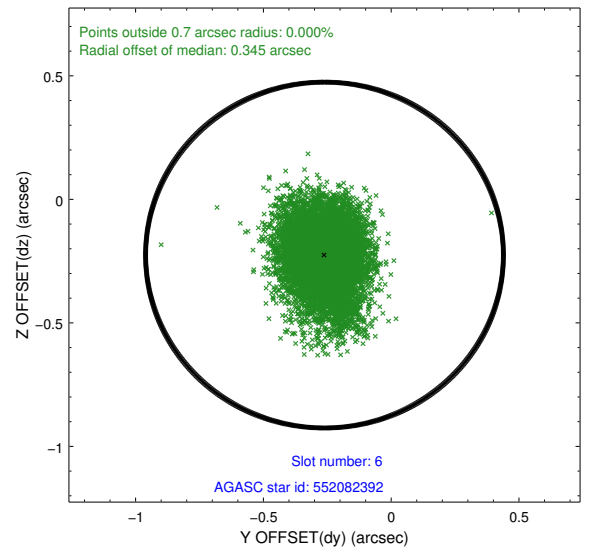
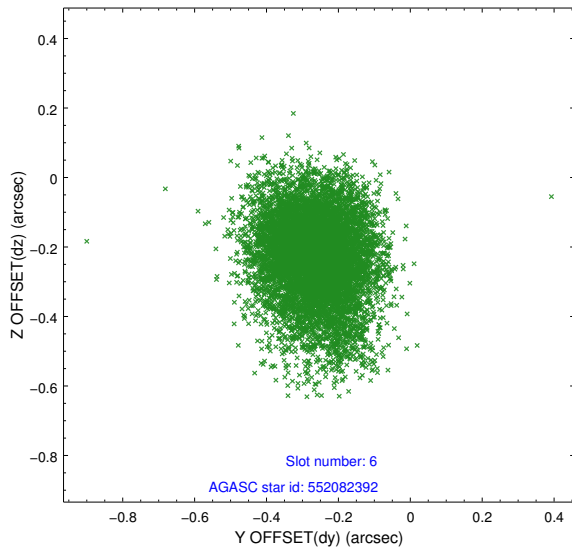
## 2.4.2 Slot 4



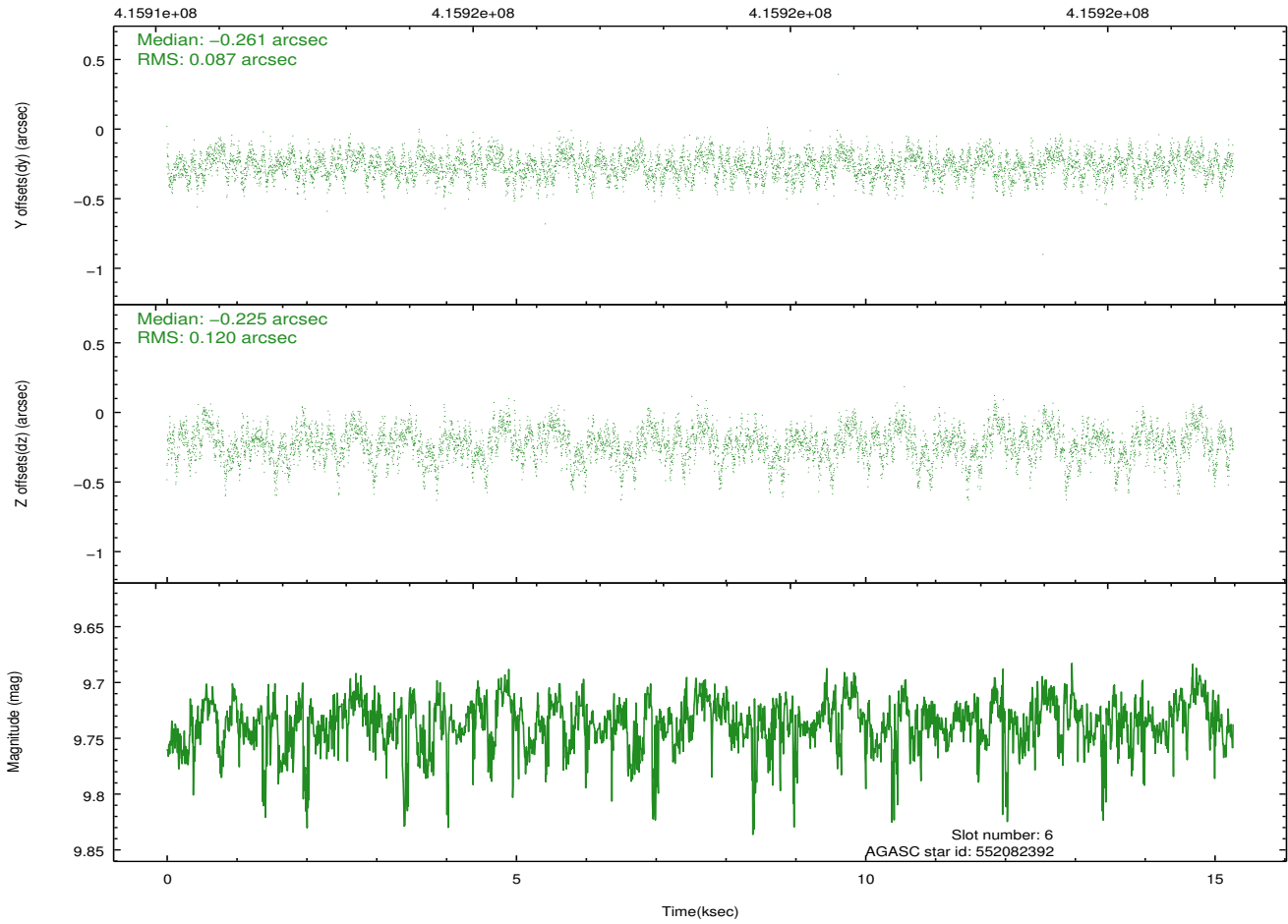
### 2.4.3 Slot 5



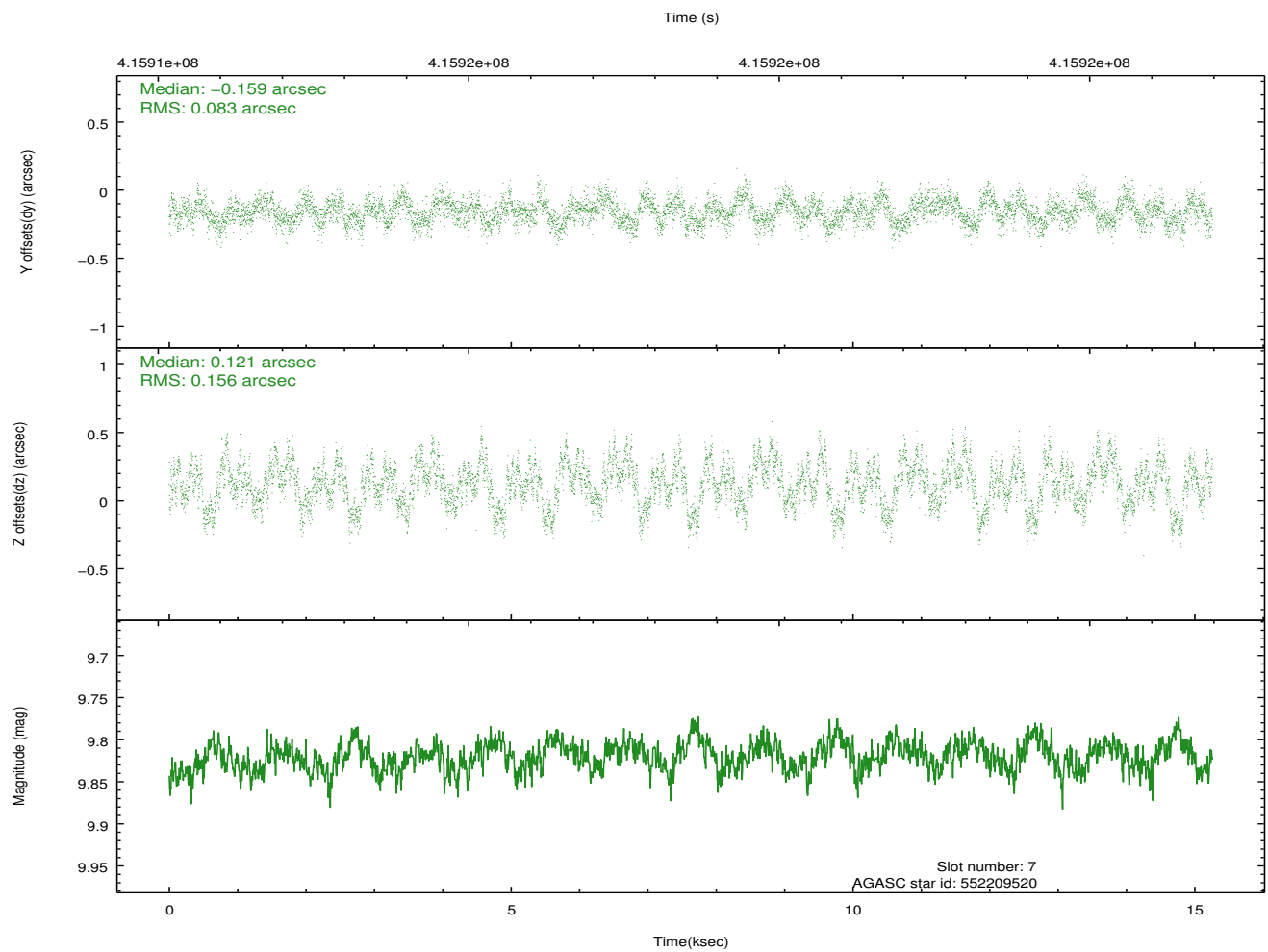
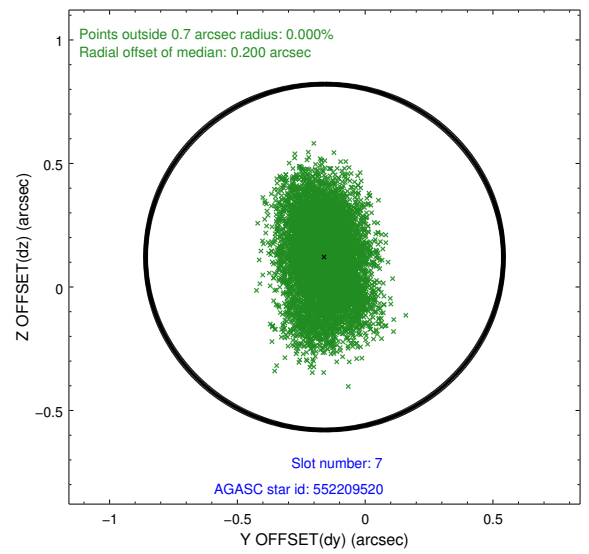
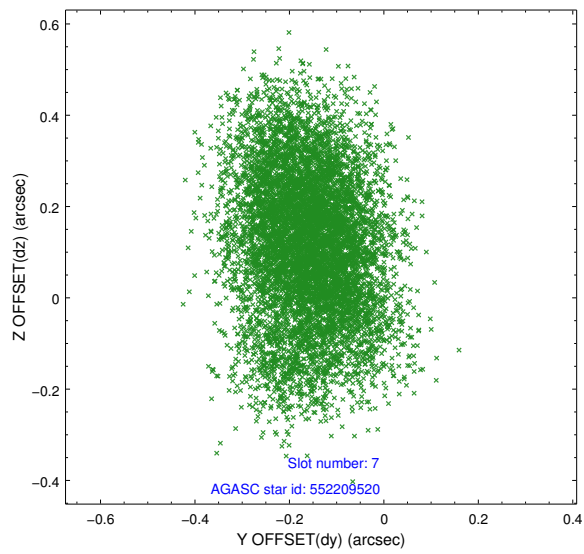
### 2.4.4 Slot 6



Time (s)

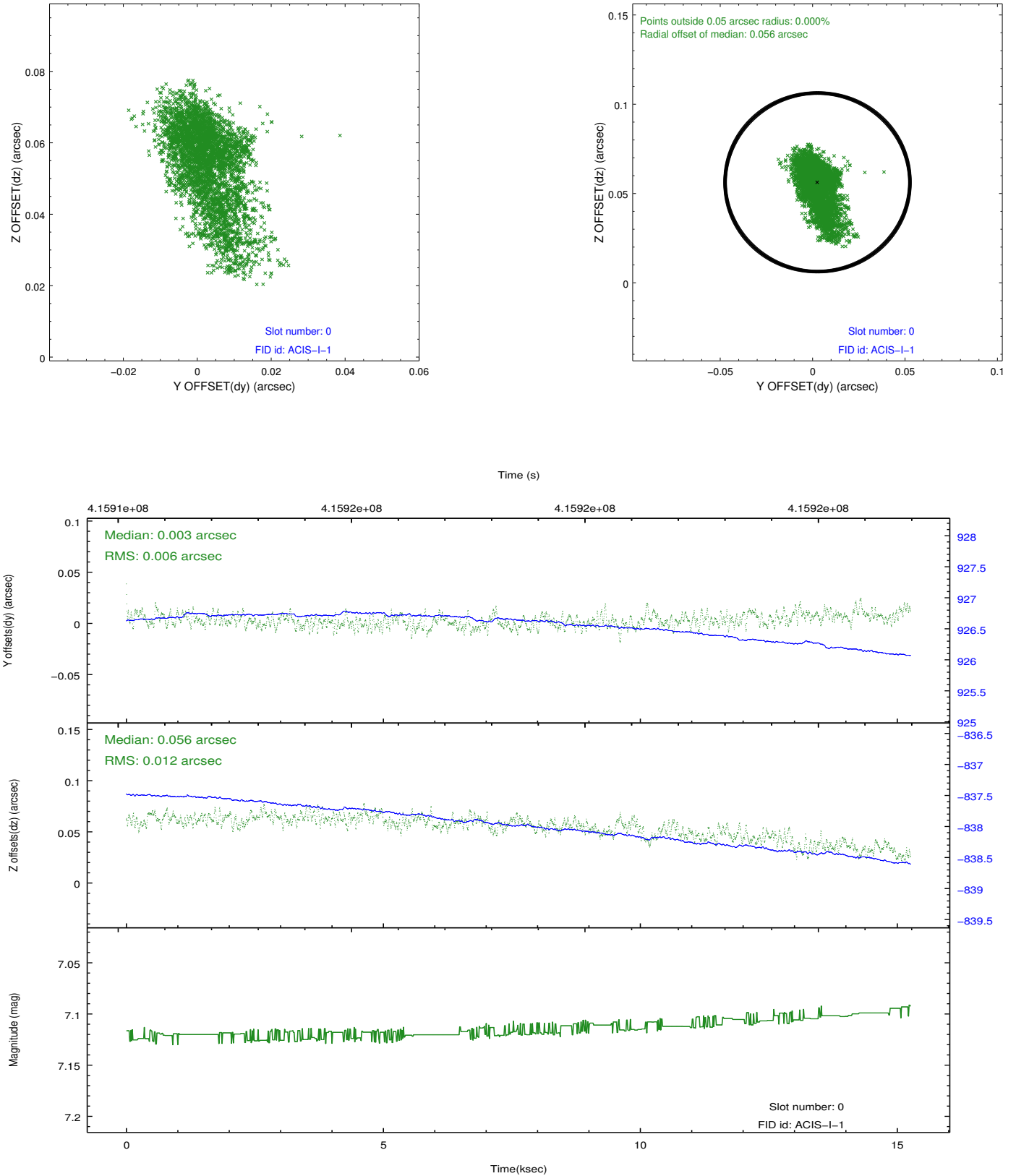


## 2.4.5 Slot 7

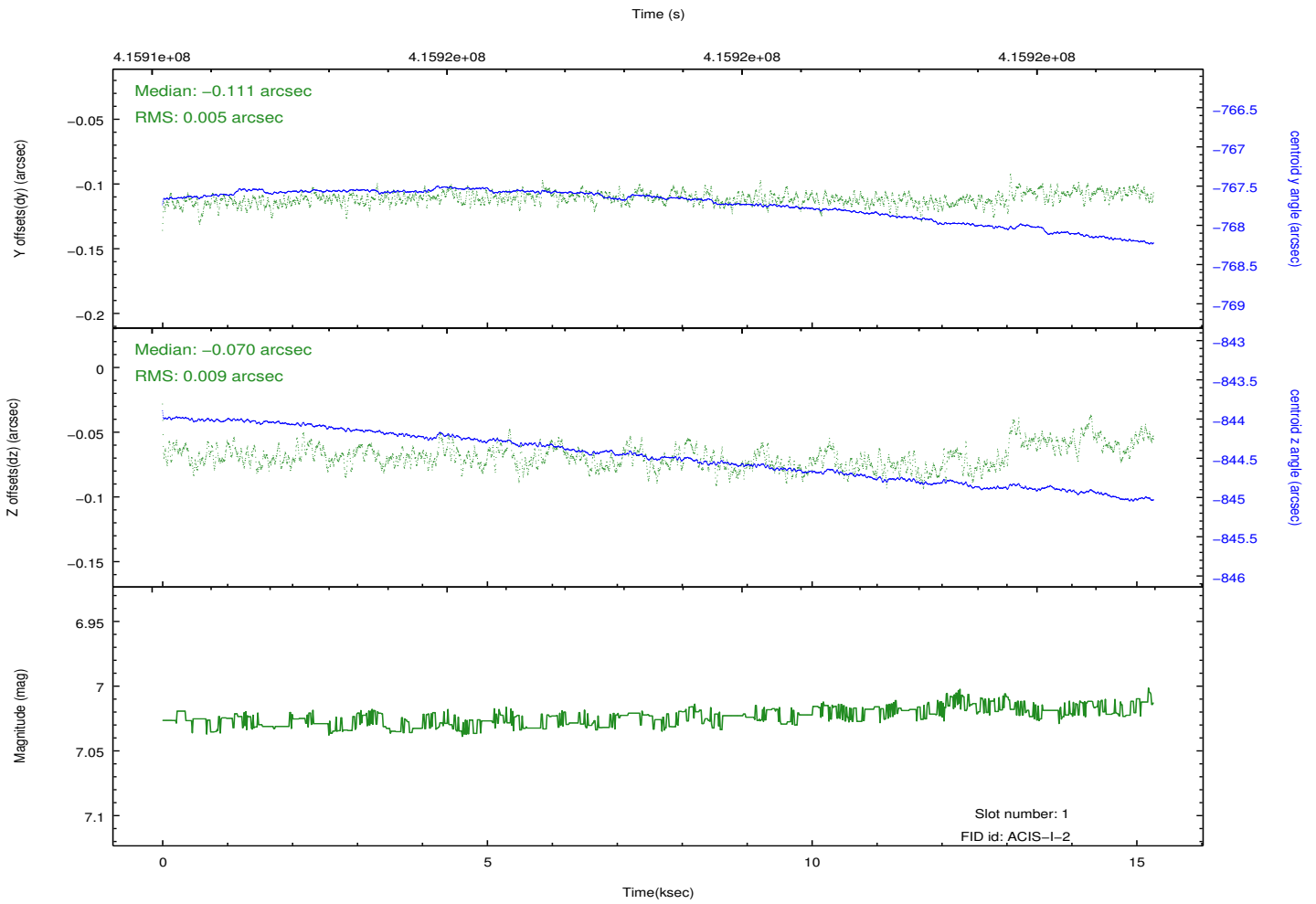
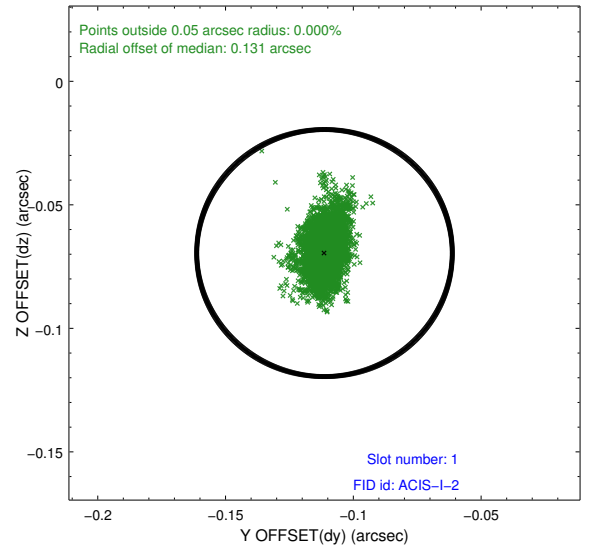
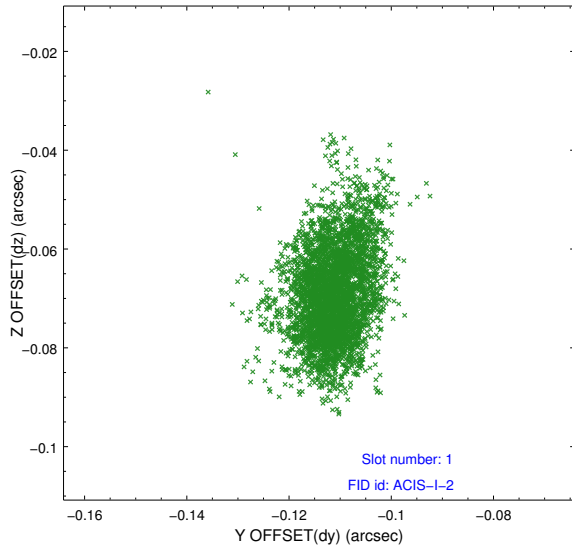


## 2.5 FID Slots

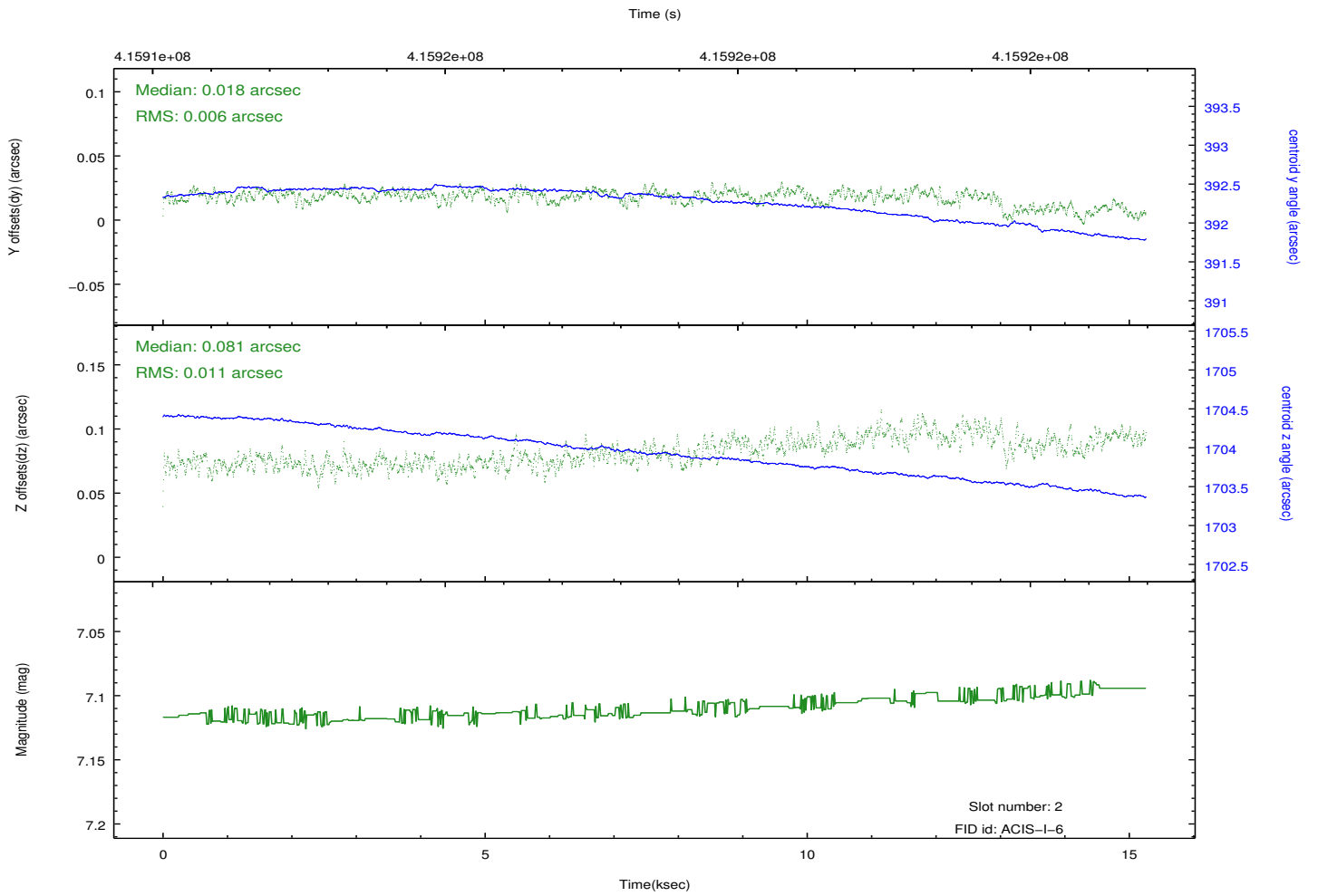
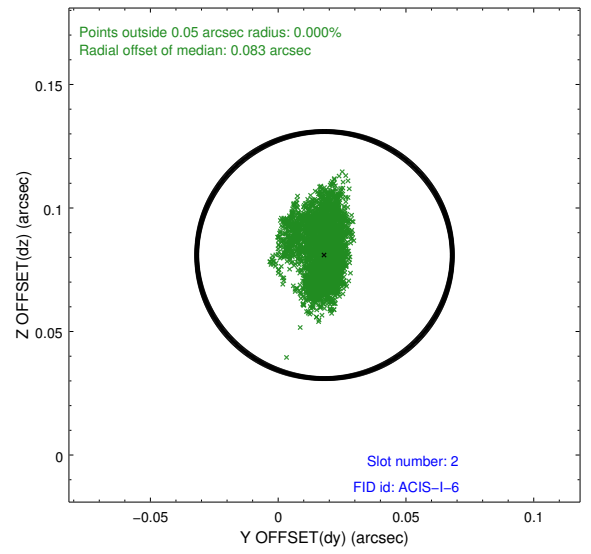
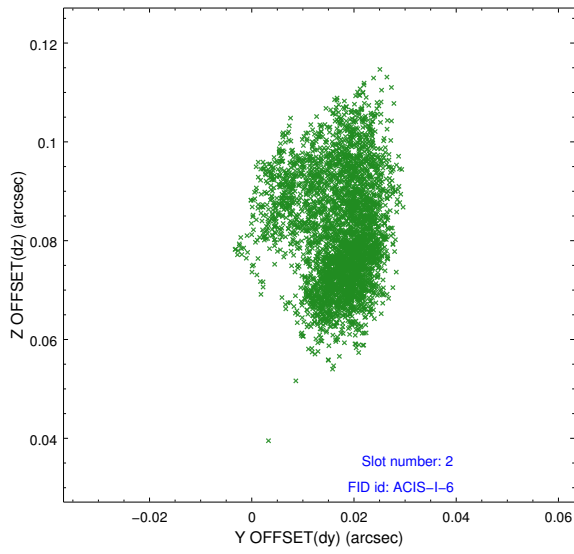
### 2.5.1 Slot 0



## 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)	2012.02.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.052

## 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.

=====

ACIS ANOMALY

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The chip I0, using FEP 5, recorded no events during the observation. The bias file for this obsid is nominal and recorded events appropriately. Therefore, only 5 chips recorded events for this observation. Subsequent tests of I0 and FEP 5 could not repeat this problem. It is considered a one-time problem.

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Roll constraint met.