

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12855 - L2 Version 2  
Chandra X-Ray Center

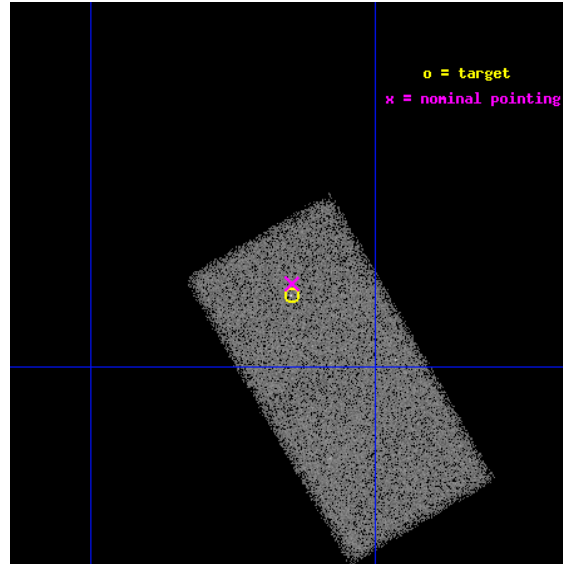
L2 Processing Date : Feb 1 2012

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# 1 Front

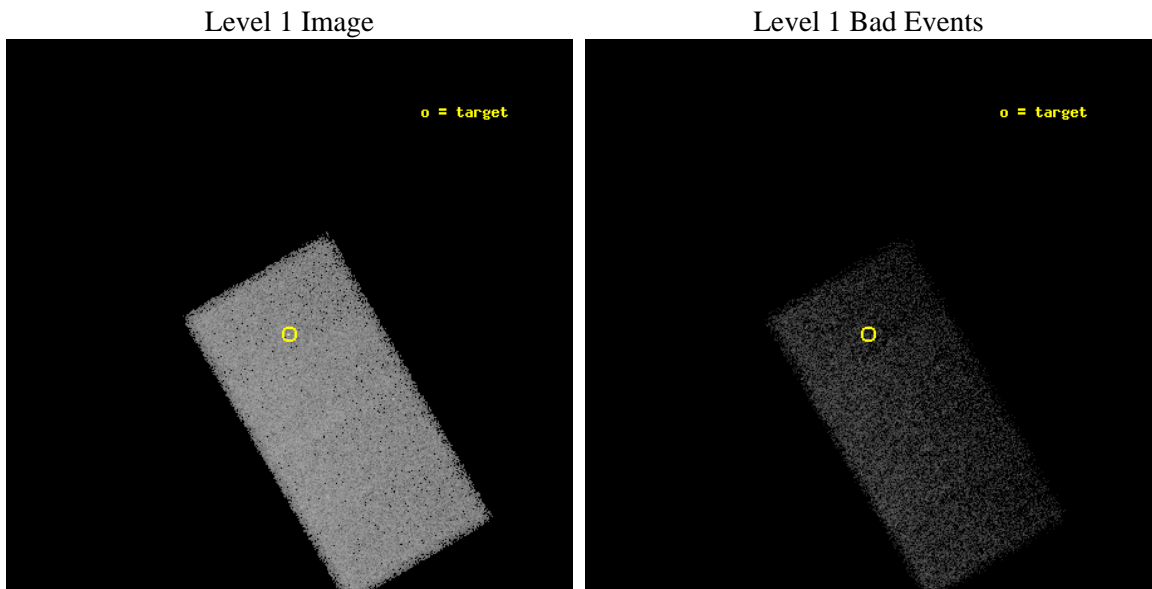
seq_num	702488	Sequence number
obs_id	12855	Observation id
title	Extreme Velocity Quasar Outflows and the Role of X-Ray Shielding	P
observer	Fred Hamann	Principal investigator
object	J090508.85+074151.24	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	136.286667	Observer's specified target RA [deg]
dec_targ	7.697556	Observer's specified target Dec [deg]
ra_nom	136.286545016	Nominal RA [deg]
dec_nom	7.7023964331803	Nominal Dec [deg]
roll_nom	59.772026773299	Nominal Roll [deg]
revision	2	Processing version of data
ontime	35048.320427835	Sum of GTIs [s]
livetime	34114.935784764	Livetime [s]
ontime7	35048.320427835	Sum of GTIs [s]
l2events	72394	Number of level 2 events



## 2 OBI

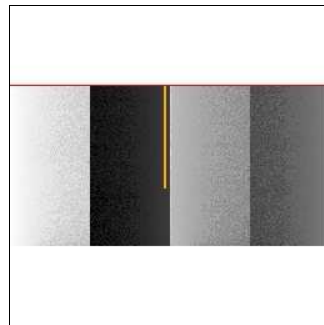
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	35000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	35048.320427835	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime7	35048.320427835	Sum of GTIs [s]
date	2012-02-01T08:50:15	Date and time of file creation	l1events	157936	Number of level 1 events
revision	2	Processing version of data			

### 2.1.4 Events

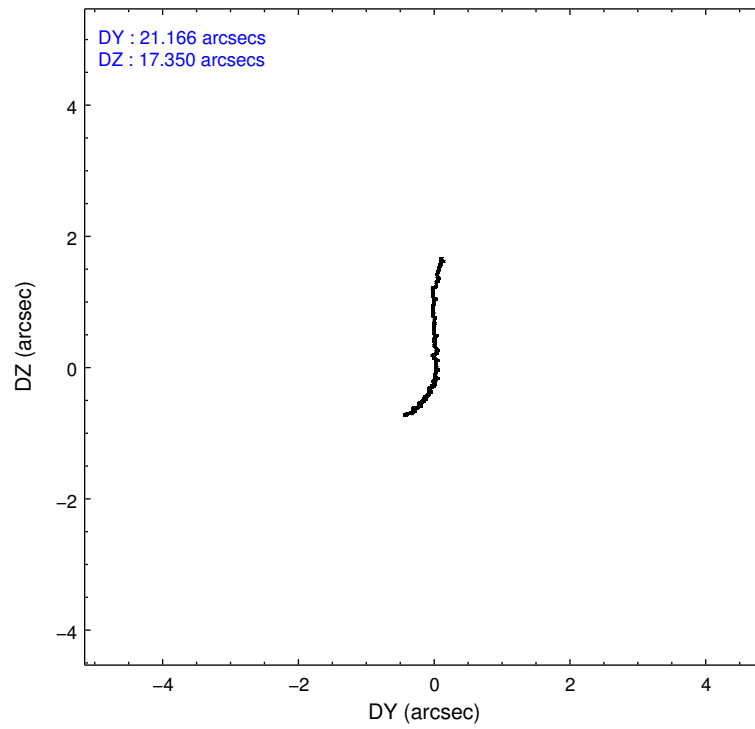
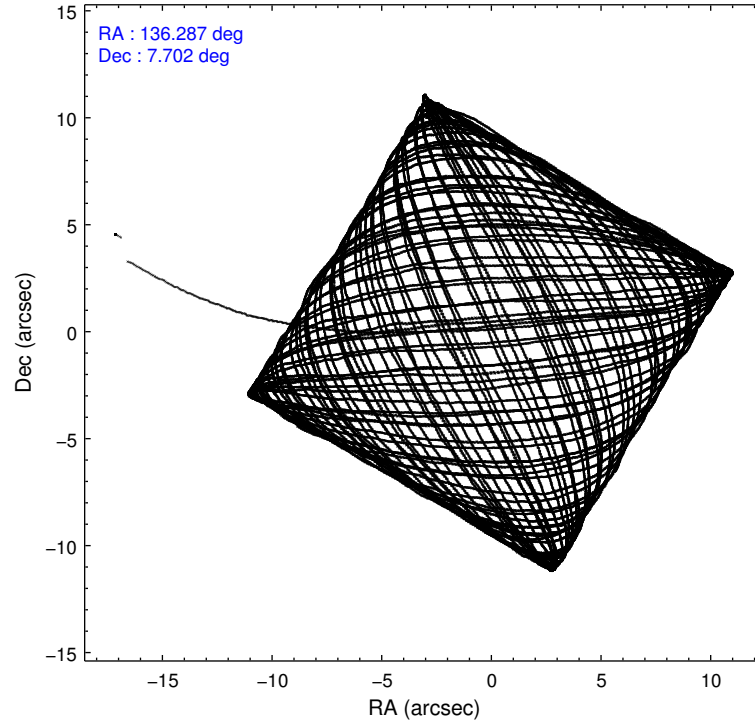
	<b>ccd 7</b>
level 1 events	157936
rejected events	83426
rejected %	52%

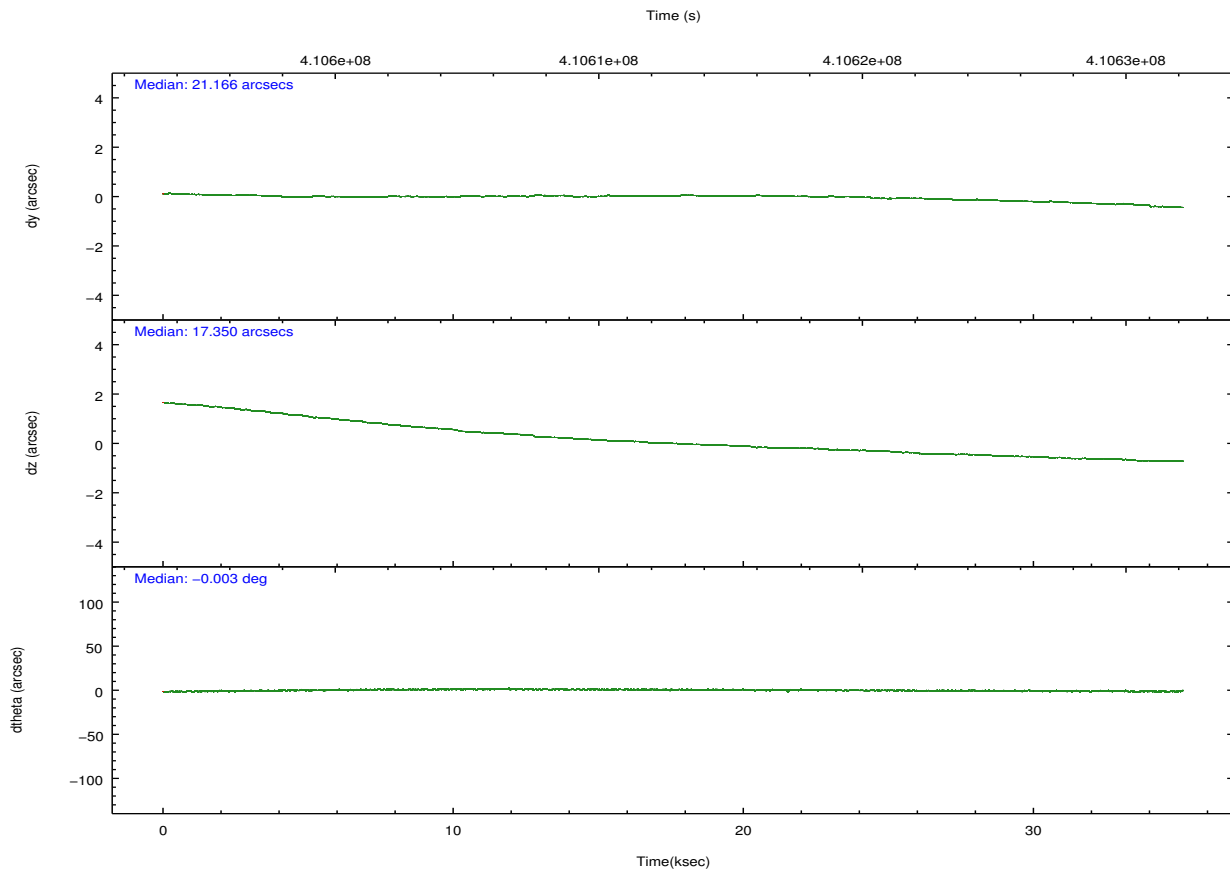
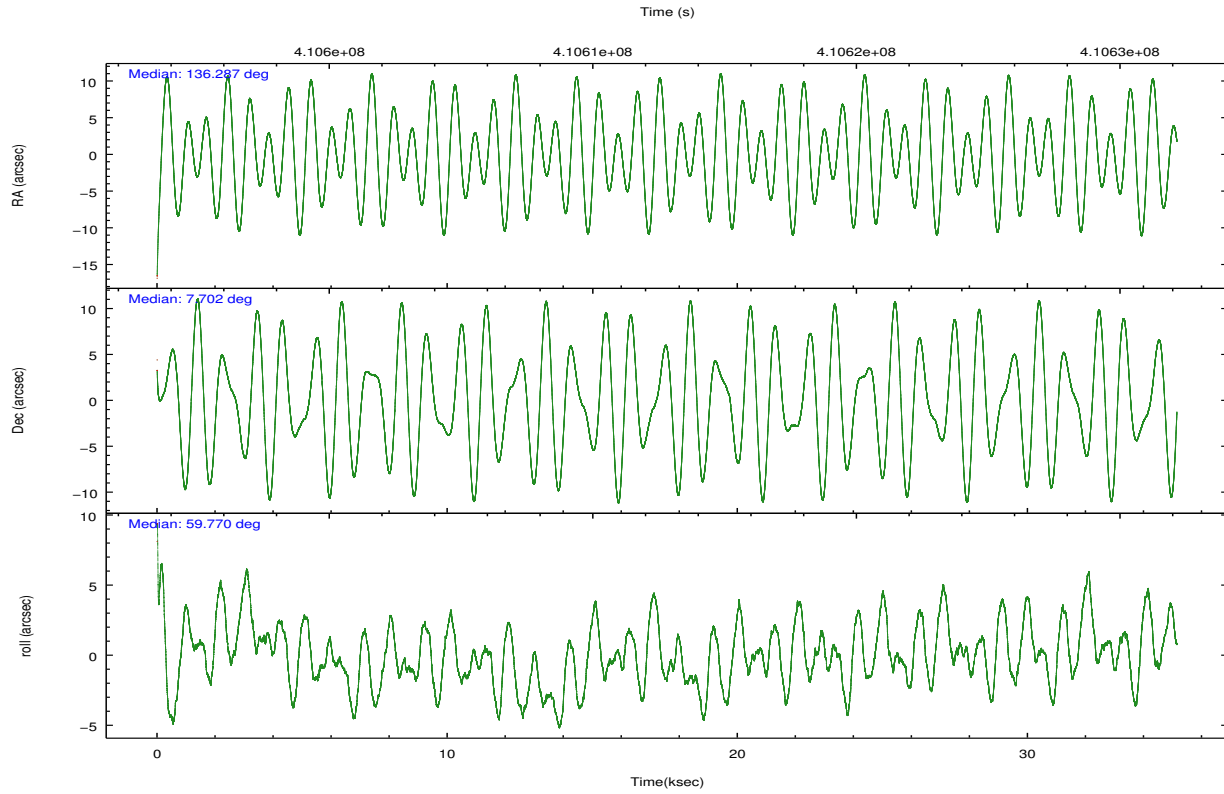
	<b>ccd 7</b>
grade 0 events	7217
	4%
grade 1 events	213
	0%
grade 2 events	15359
	9%
grade 3 events	7540
	4%
grade 4 events	7588
	4%
grade 5 events	16769
	10%
grade 6 events	36811
	23%
grade 7 events	66439
	42%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-7	ACIS-7	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	136.286806	136.2865450159986	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	7.675066	7.702396433180321	Subarray start row	257	257
[deg] Pointing Roll	59.615364	59.77202677329862	Subarray row count	512	512
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	1.5
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	410595385.184000	410594166.44153			
Observation start date	2011-01-05T06:15:19	2011-01-05T05:56:06			
[s] Observation end time (MET)	410630385.184000	410631911.55598			
Observation end date	2011-01-05T15:58:39	2011-01-05T16:25:11			
Read mode	TIMED	TIMED			

## 2.3 Aspect



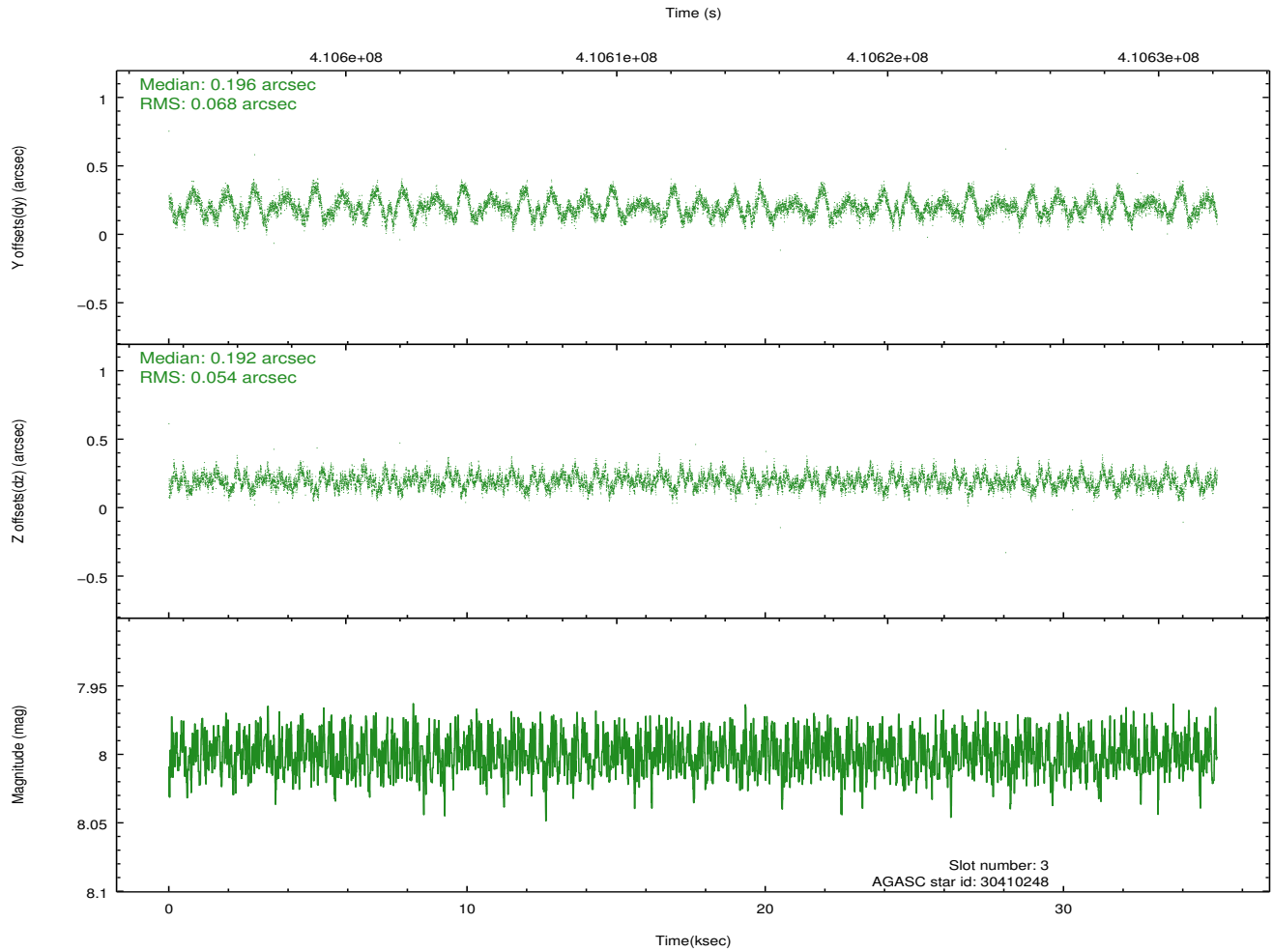
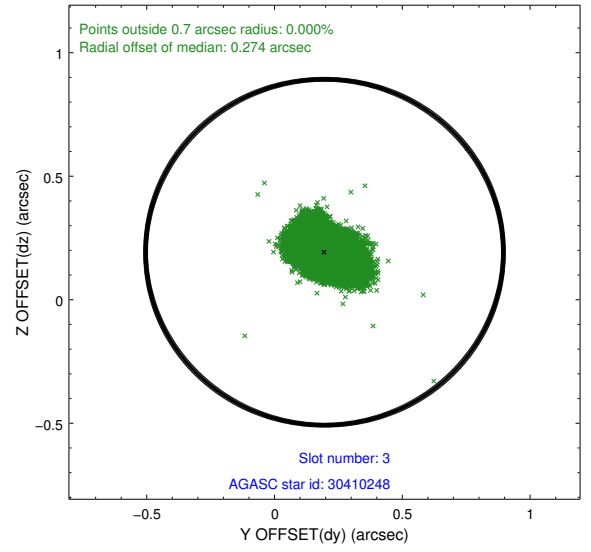
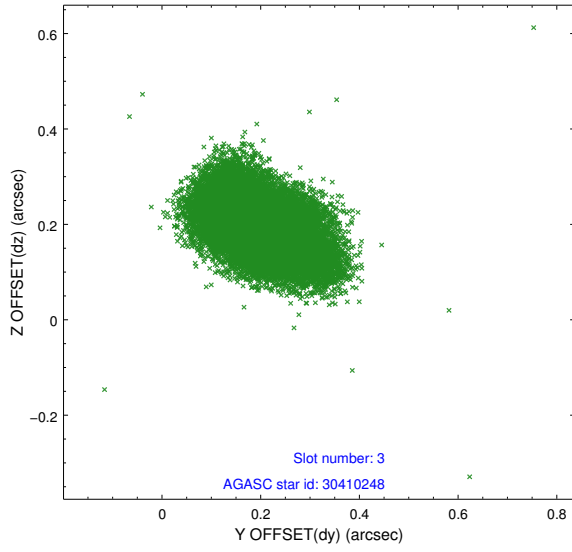


### Slot Statistics

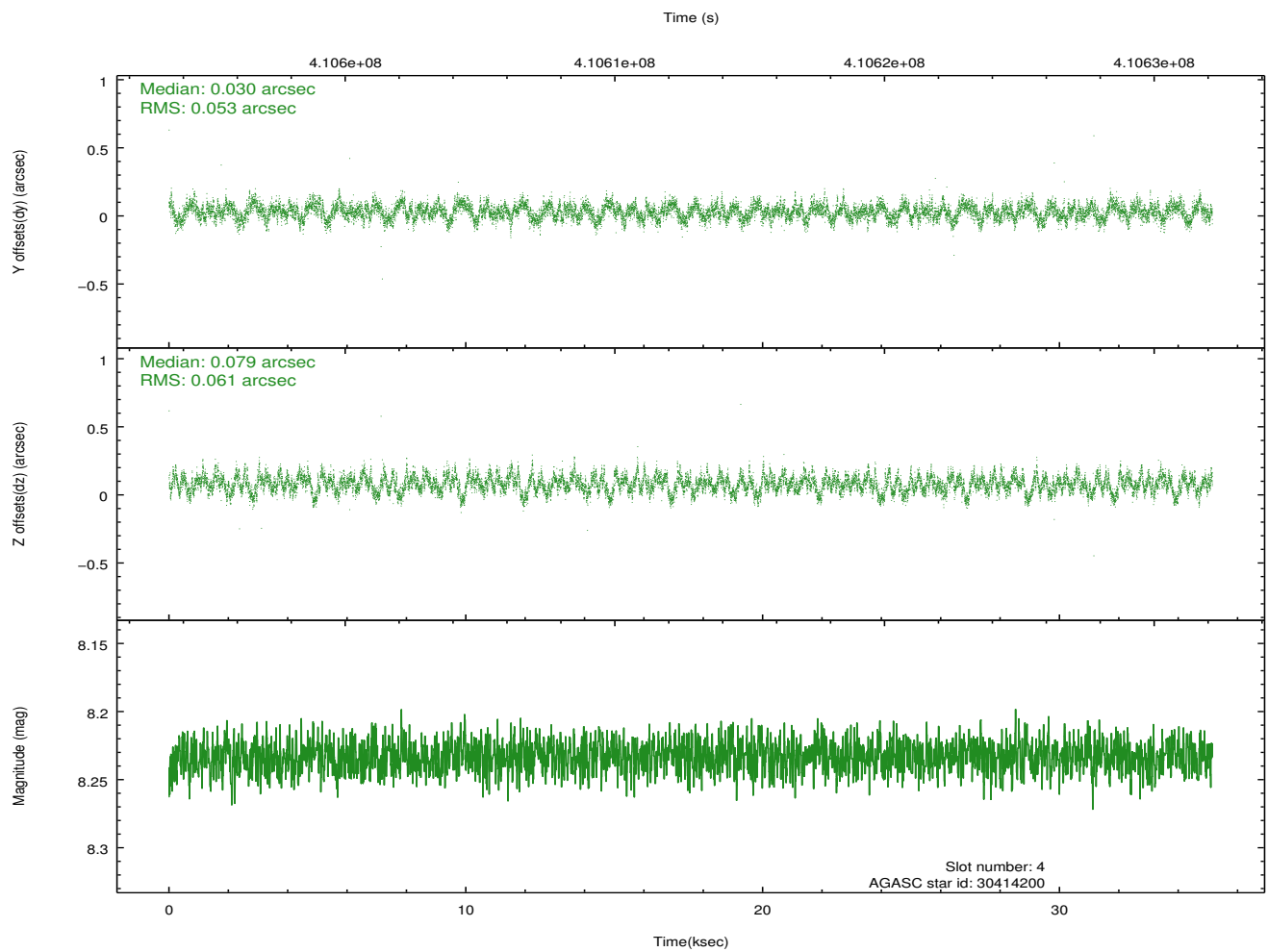
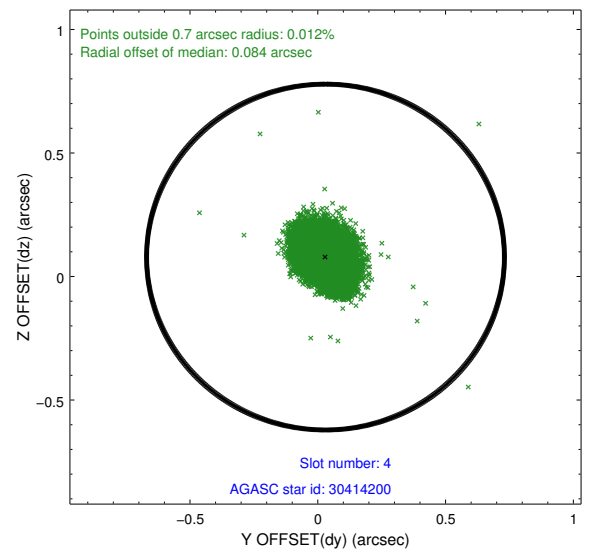
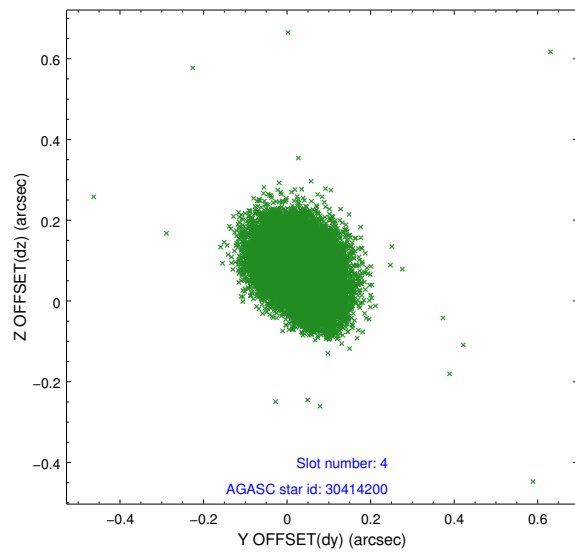
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.87	8573	-0.077	-0.029	0.015	0.023	0.000000	0.000000	-774.36	-1738.98
1	FID	ACIS-S-4	6.95	8573	0.184	0.044	0.008	0.016	0.000000	0.000000	2139.19	169.48
2	FID	ACIS-S-5	6.98	8572	-0.139	-0.006	0.013	0.024	0.000000	0.000000	-1827.18	163.21
3	GUIDE	30410248	8.00	17141	0.196	0.192	0.093	0.151	136.514690	7.190004	-1093.83	-1584.83
4	GUIDE	30414200	8.23	17138	0.030	0.079	0.085	0.139	136.906377	7.484933	529.70	-2253.32
5	GUIDE	106437808	9.70	17104	-0.082	-0.003	0.200	0.346	136.915739	7.974128	2064.82	-1388.73
6	GUIDE	106434280	9.38	17120	-0.298	-0.113	0.118	0.191	136.649876	8.224061	2360.01	-115.84
7	GUIDE	30408968	9.68	17115	0.126	-0.155	0.158	0.274	135.746315	7.234874	-2341.67	864.36

## 2.4 Star Slots

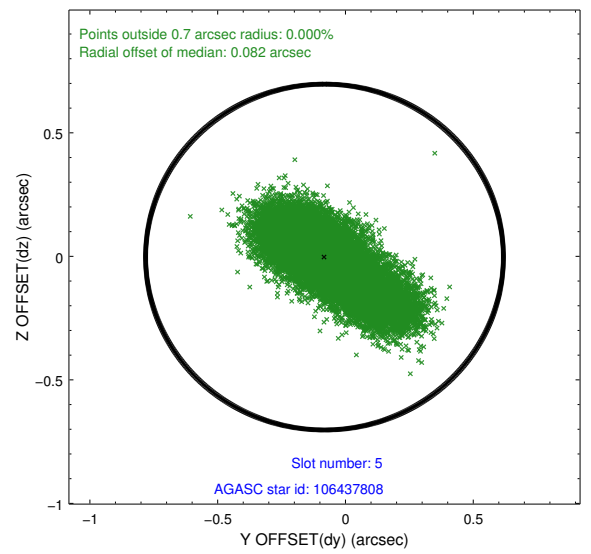
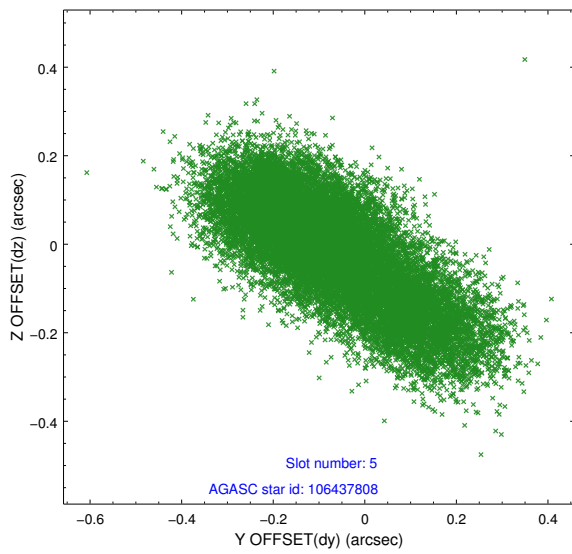
### 2.4.1 Slot 3



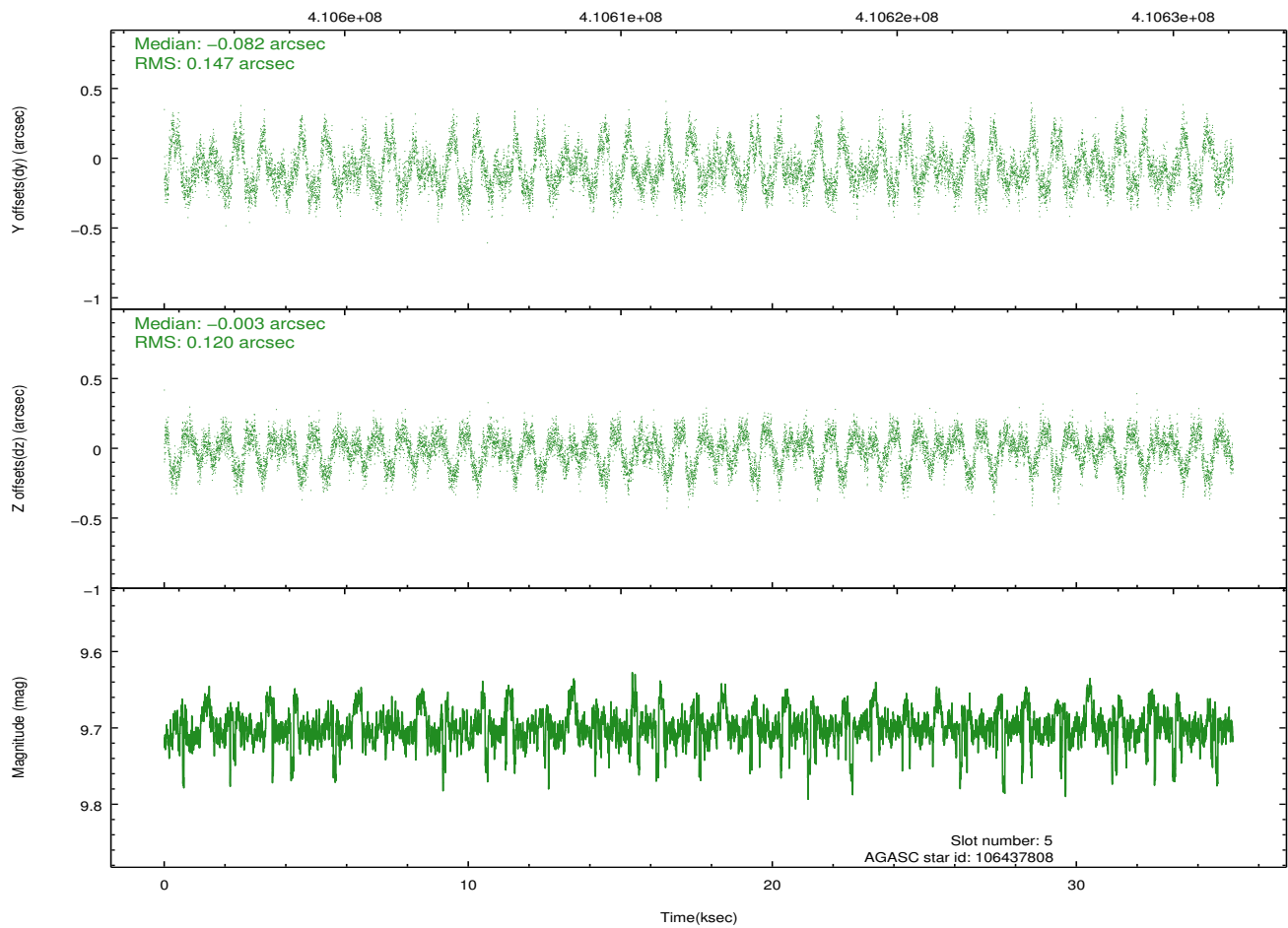
## 2.4.2 Slot 4



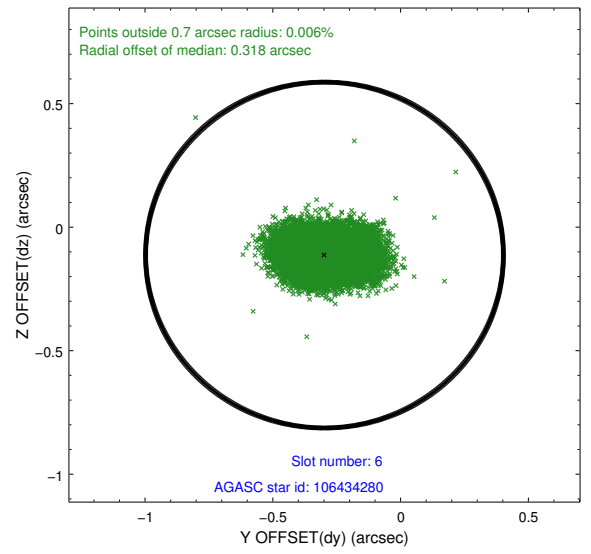
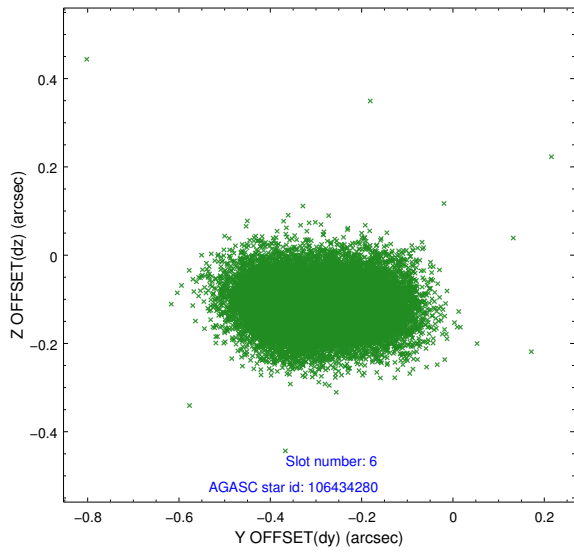
### 2.4.3 Slot 5



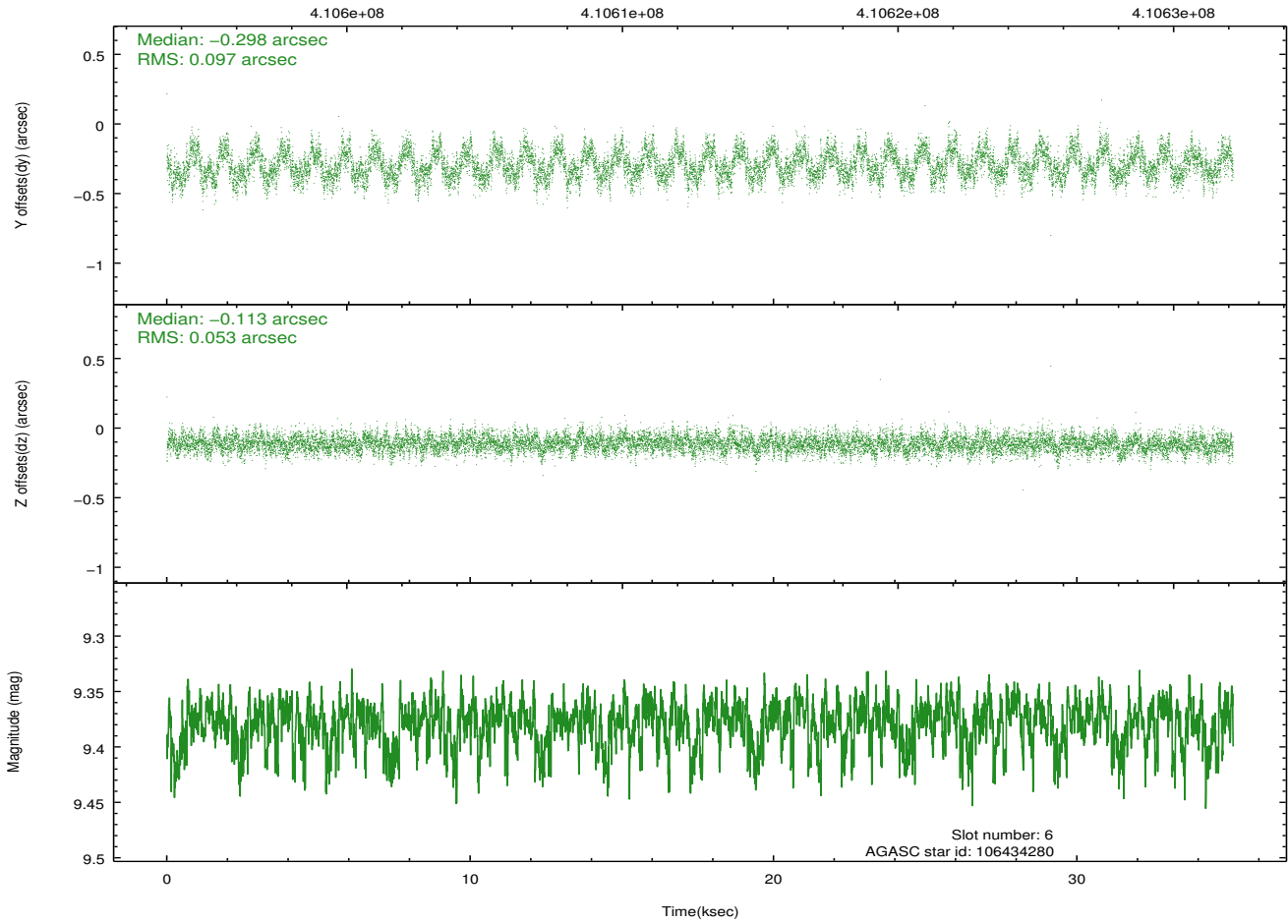
Time (s)



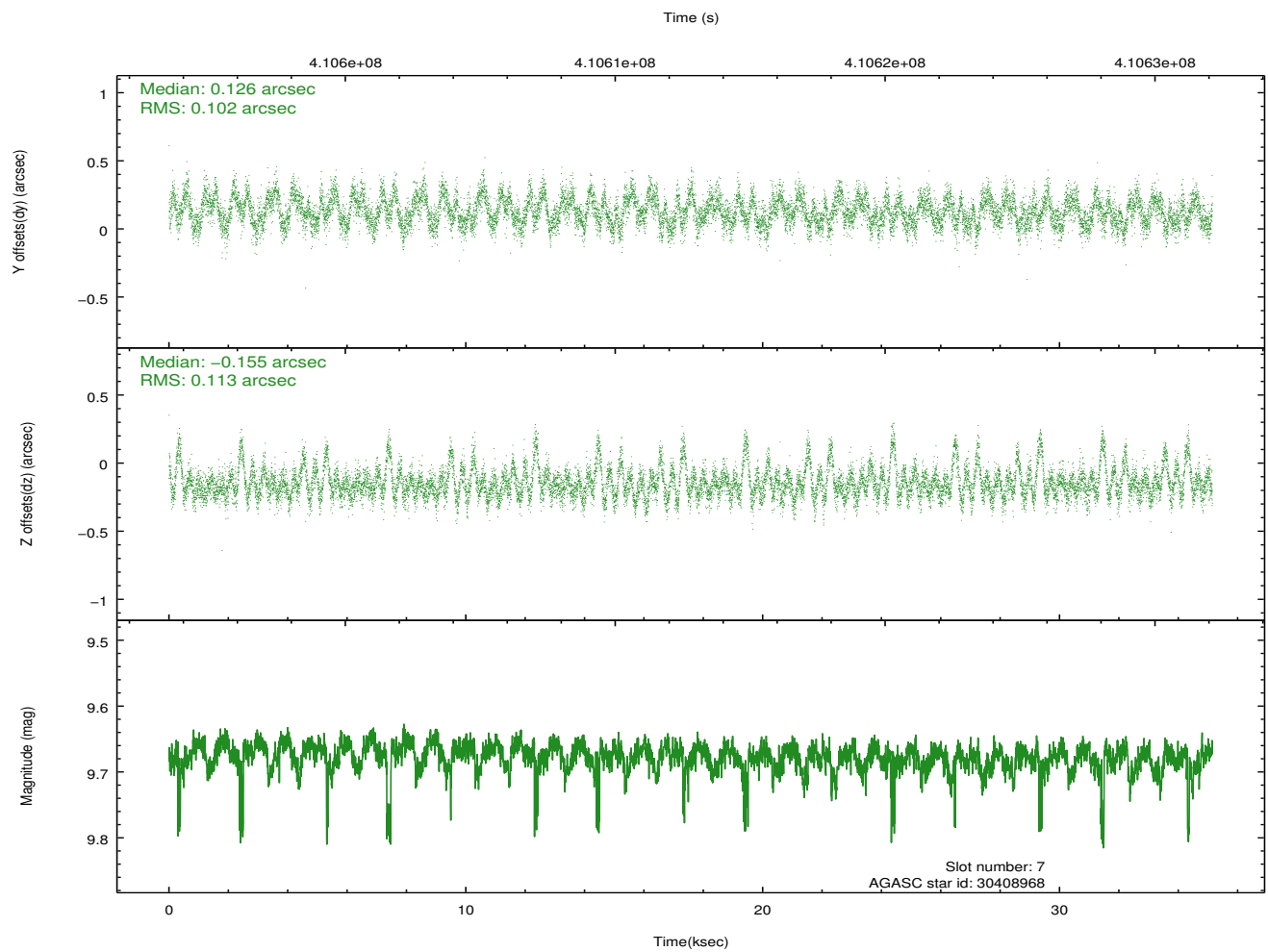
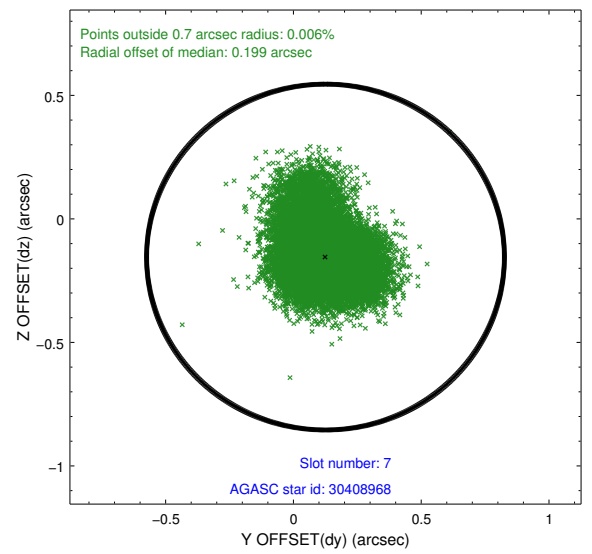
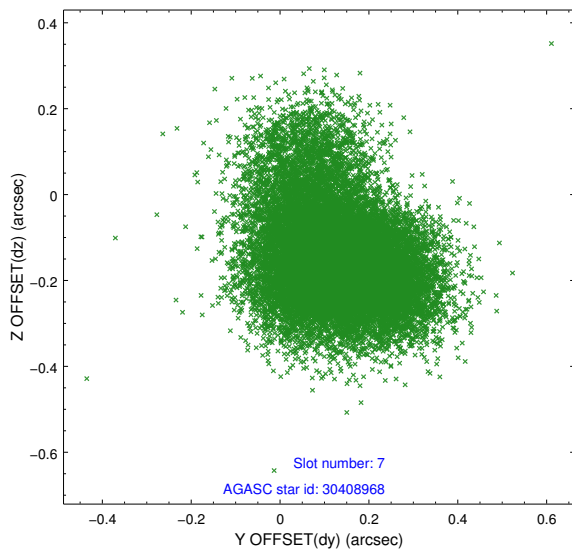
### 2.4.4 Slot 6



Time (s)

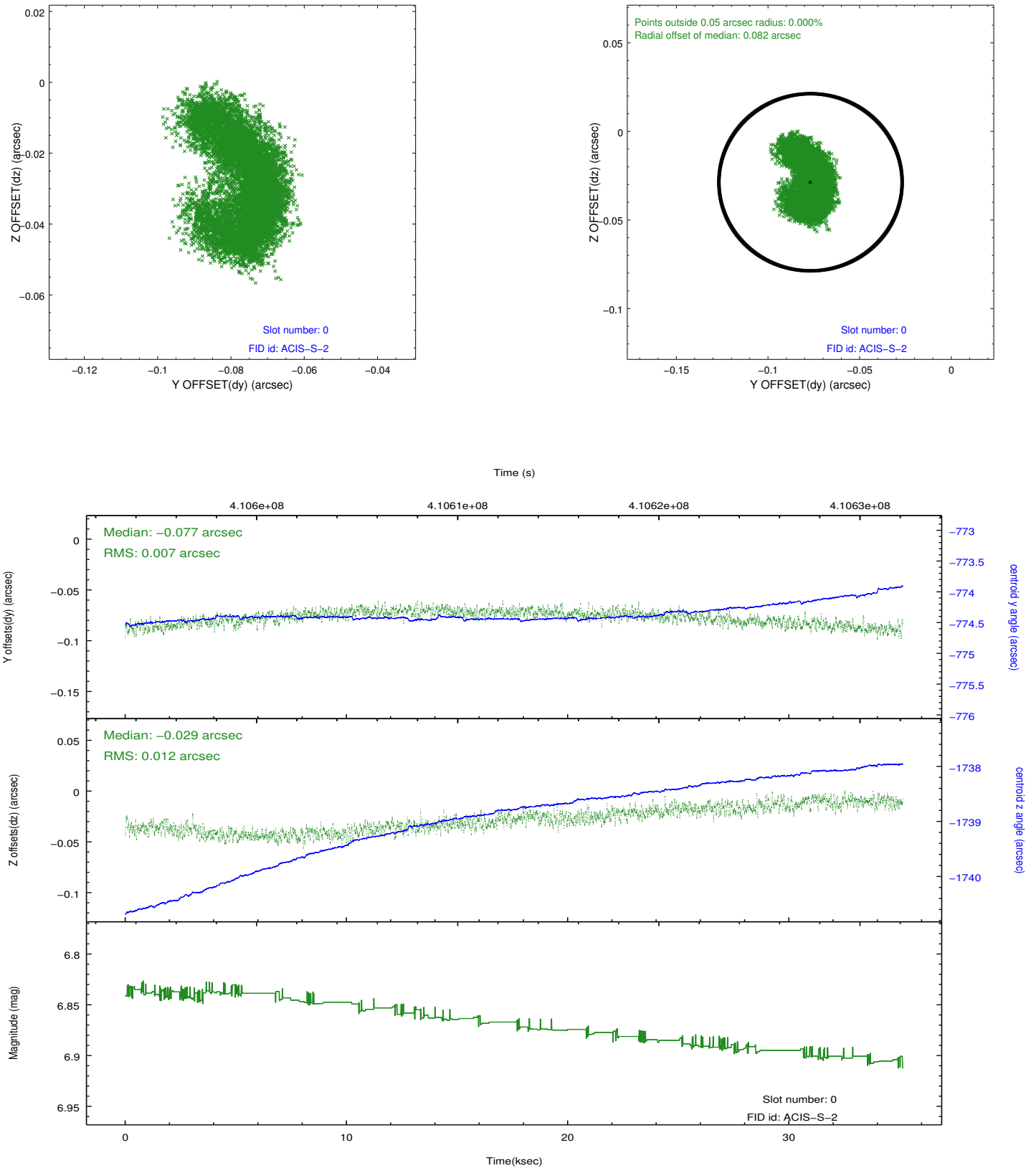


## 2.4.5 Slot 7

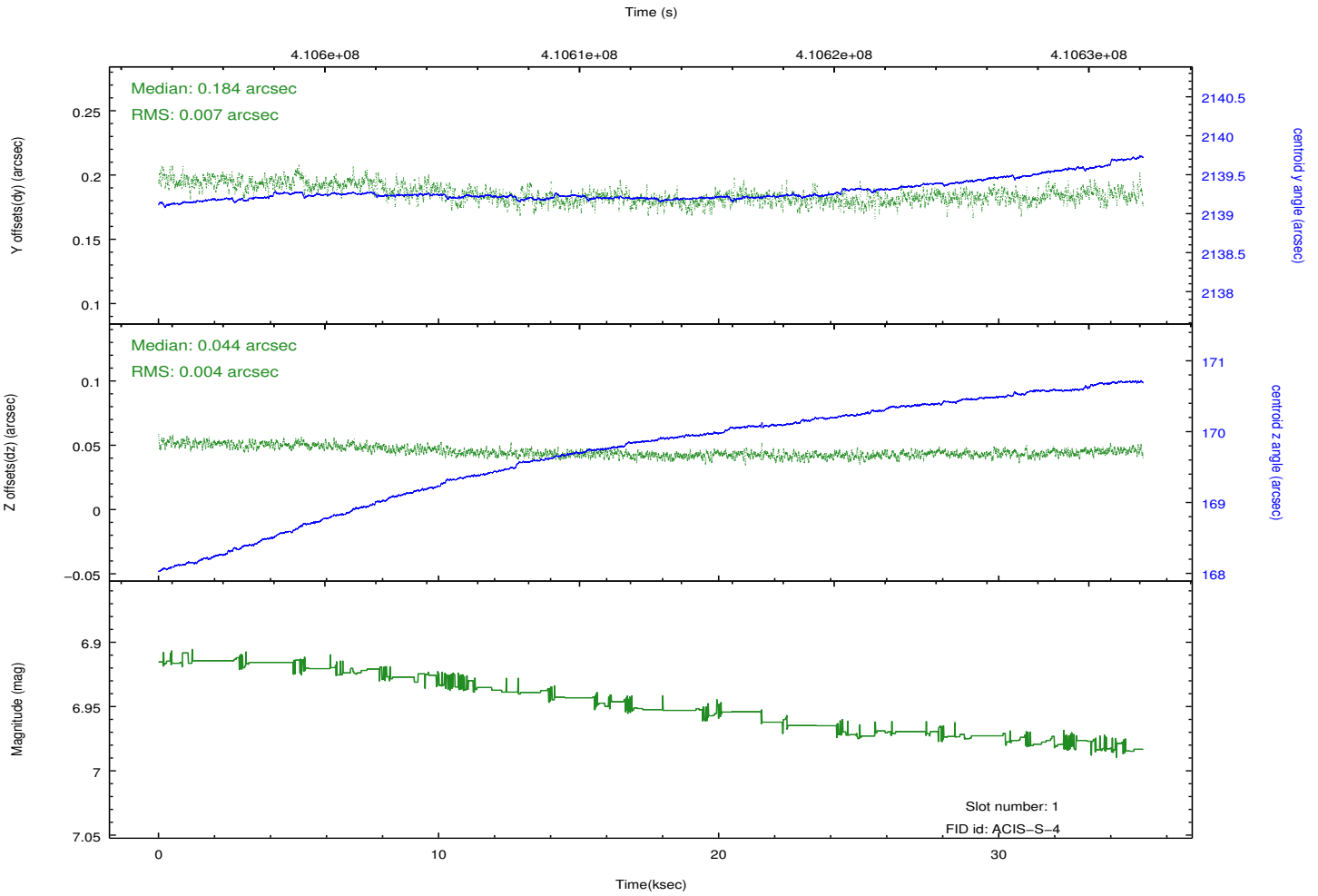
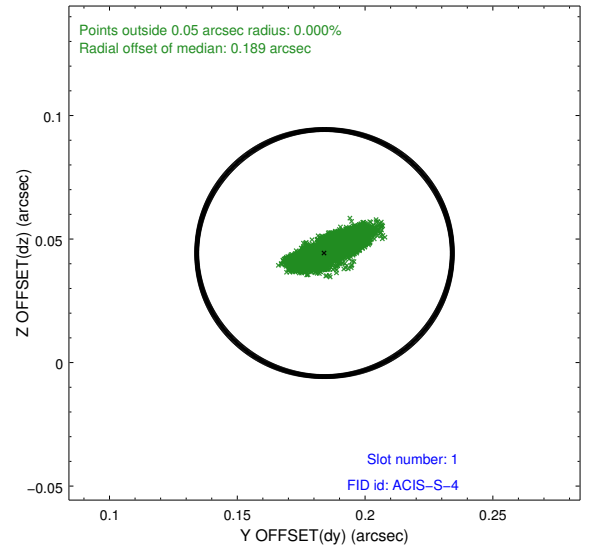
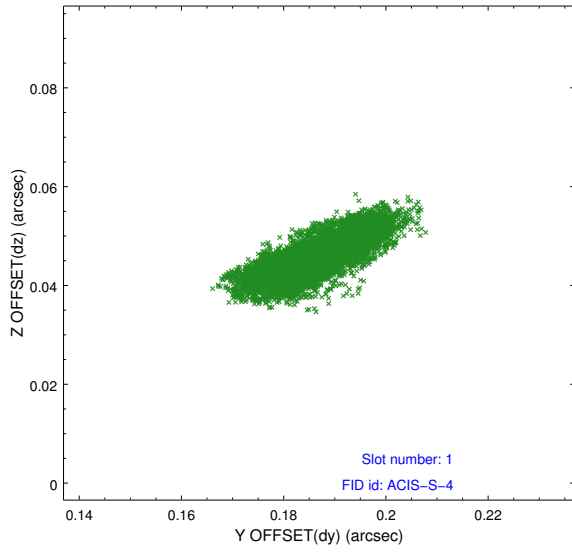


## 2.5 FID Slots

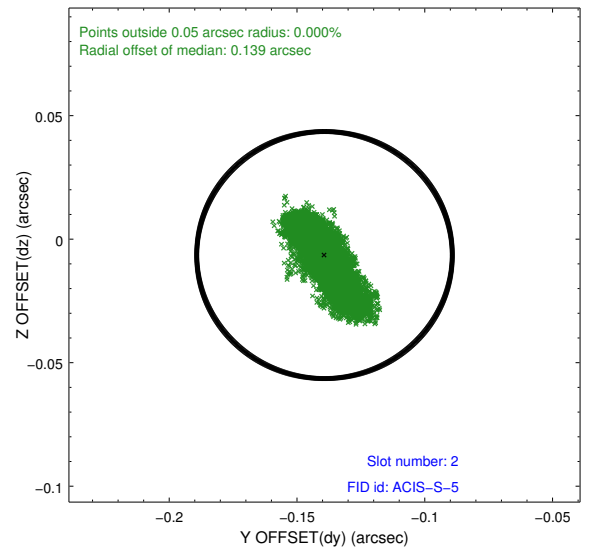
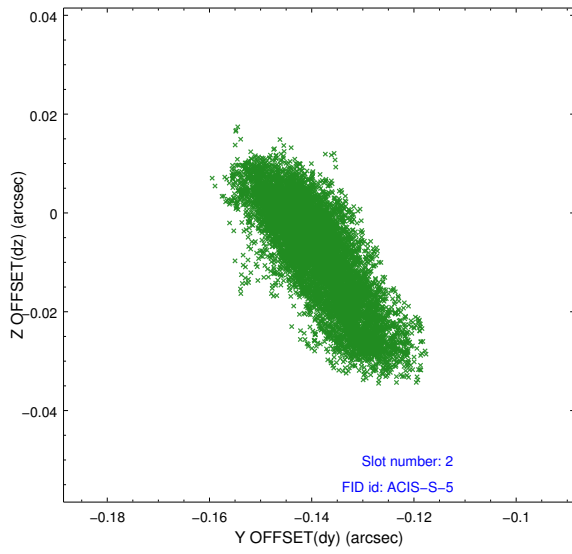
### 2.5.1 Slot 0



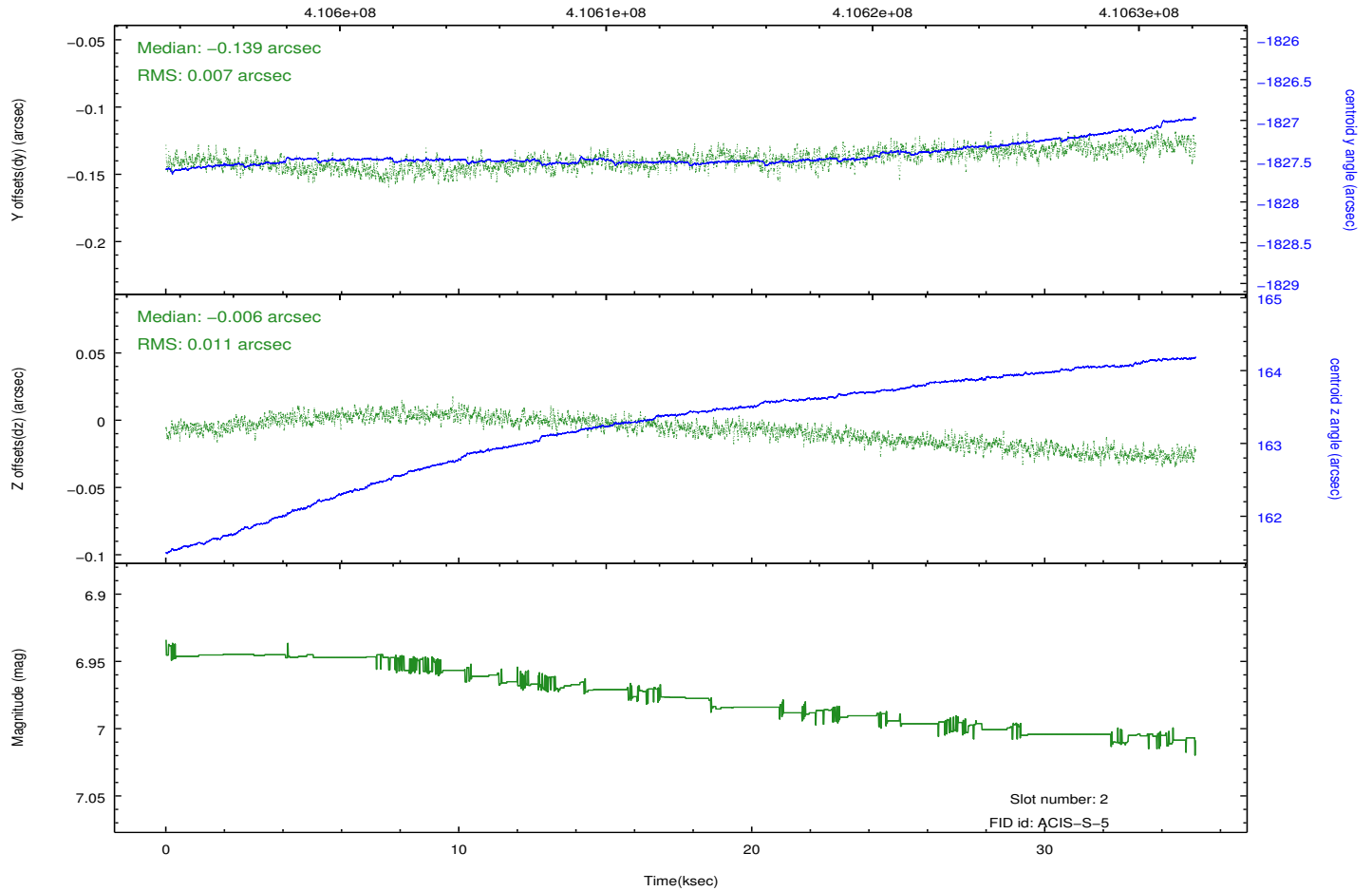
## 2.5.2 Slot 1



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.02.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	35.048320433021

## 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.