

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12854 - L2 Version 2  
Chandra X-Ray Center

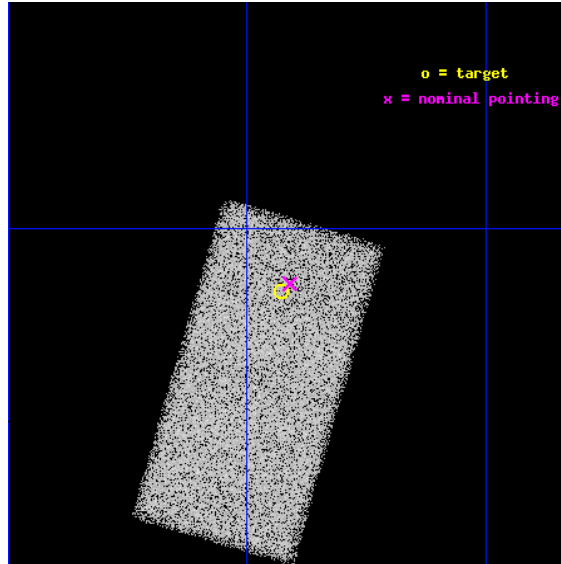
L2 Processing Date : Feb 1 2012

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# 1 Front

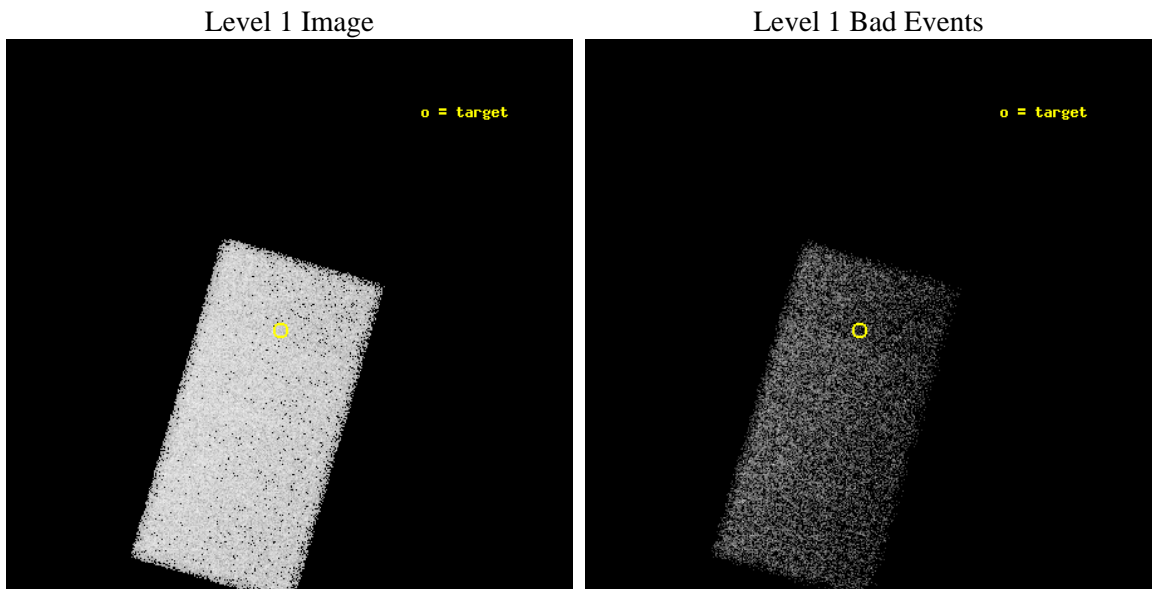
seq_num	702487	Sequence number
obs_id	12854	Observation id
title	Extreme Velocity Quasar Outflows and the Role of X-Ray Shielding	P
observer	Fred Hamann	Principal investigator
object	J084255.61+331822.58	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	130.731667	Observer's specified target RA [deg]
dec_targ	33.306278	Observer's specified target Dec [deg]
ra_nom	130.72735835747	Nominal RA [deg]
dec_nom	33.309529699124	Nominal Dec [deg]
roll_nom	106.2625205817	Nominal Roll [deg]
revision	2	Processing version of data
ontime	31047.911861956	Sum of GTIs [s]
livetime	30221.063562876	Livetime [s]
ontime7	31047.911861956	Sum of GTIs [s]
l2events	63210	Number of level 2 events



## 2 OBI

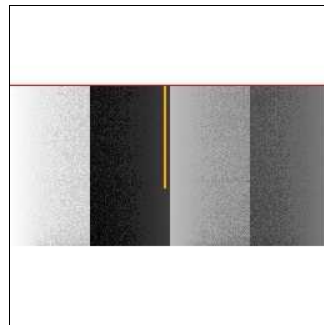
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	31000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	31047.911861956	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime7	31047.911861956	Sum of GTIs [s]
date	2012-02-01T08:29:34	Date and time of file creation	l1events	138486	Number of level 1 events
revision	2	Processing version of data			

### 2.1.4 Events

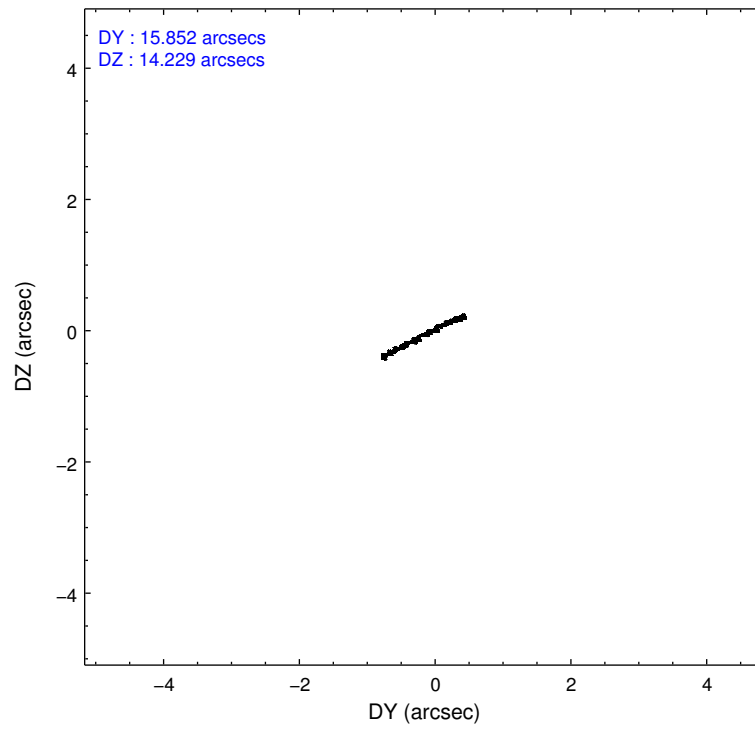
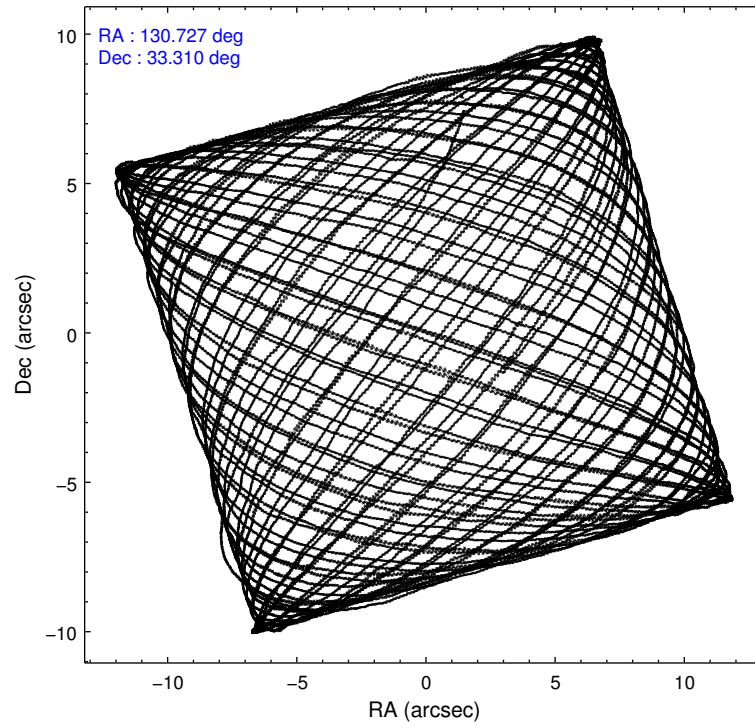
	<b>ccd 7</b>
level 1 events	138486
rejected events	73425
rejected %	<b>53%</b>

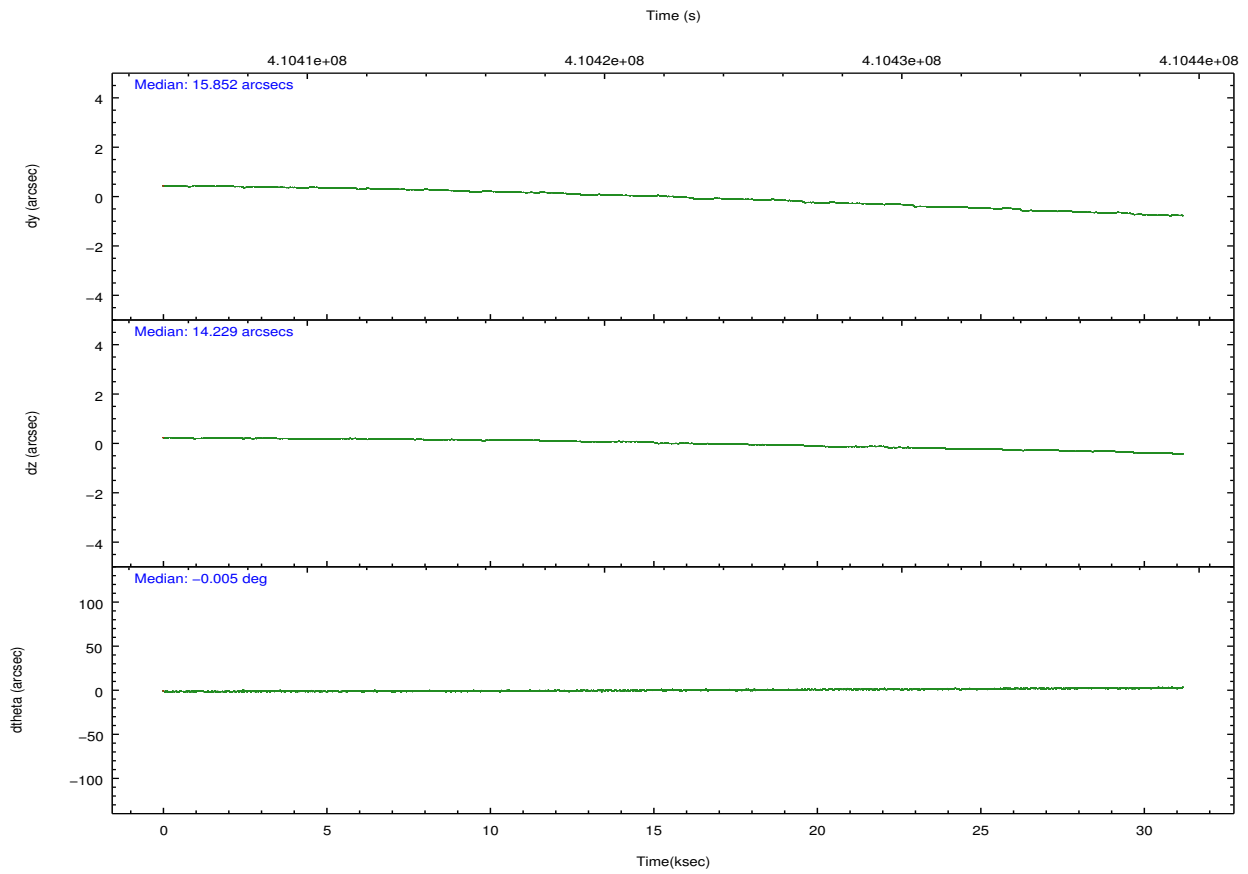
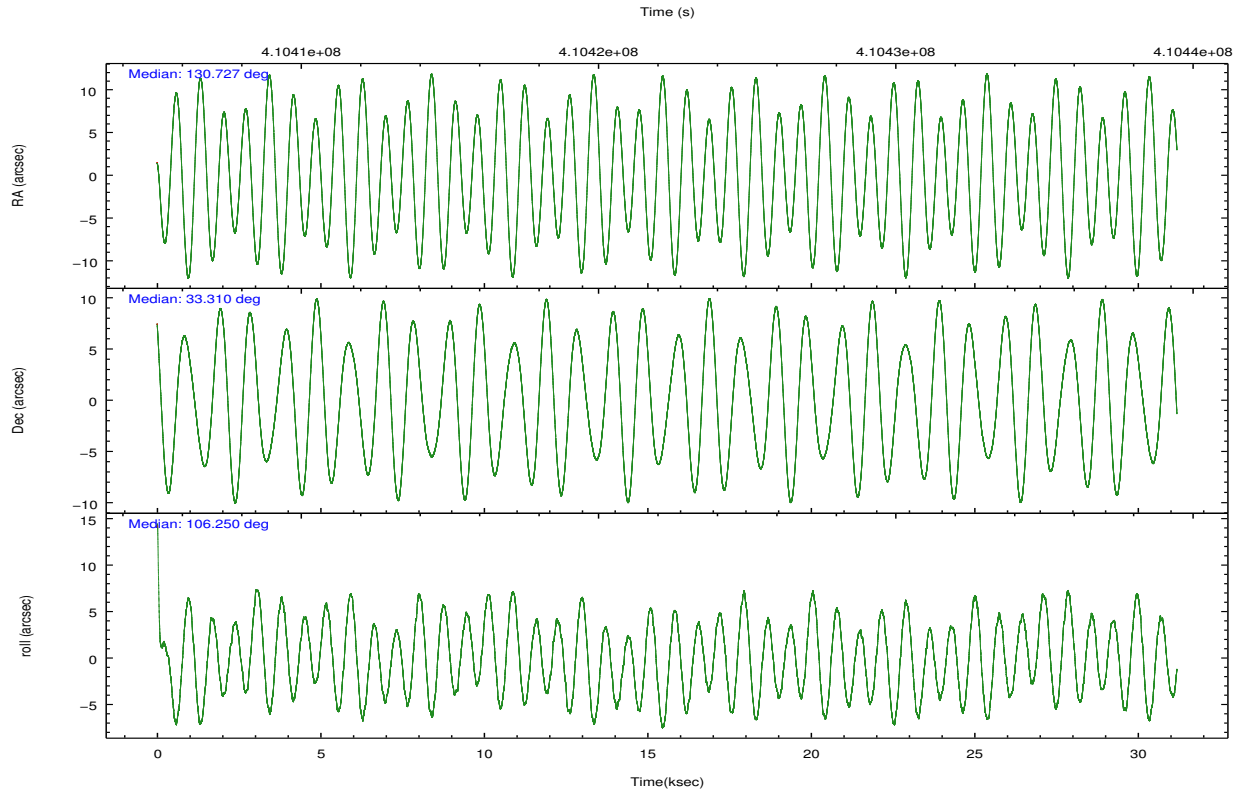
	<b>ccd 7</b>
grade 0 events	6218
	4%
grade 1 events	187
	0%
grade 2 events	13317
	9%
grade 3 events	6530
	4%
grade 4 events	6500
	4%
grade 5 events	14537
	10%
grade 6 events	32503
	23%
grade 7 events	58694
	42%

## 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	130.751300	130.7273583574705	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	33.290889	33.309529699124	Subarray start row	257	257
[deg] Pointing Roll	106.092743	106.2625205817049	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	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	410406901.184000	410406309.55683			
Observation start date	2011-01-03T01:53:55	2011-01-03T01:45:09			
[s] Observation end time (MET)	410437901.184000	410438688.796			
Observation end date	2011-01-03T10:30:35	2011-01-03T10:44:48			
Read mode	TIMED	TIMED			

## 2.3 Aspect





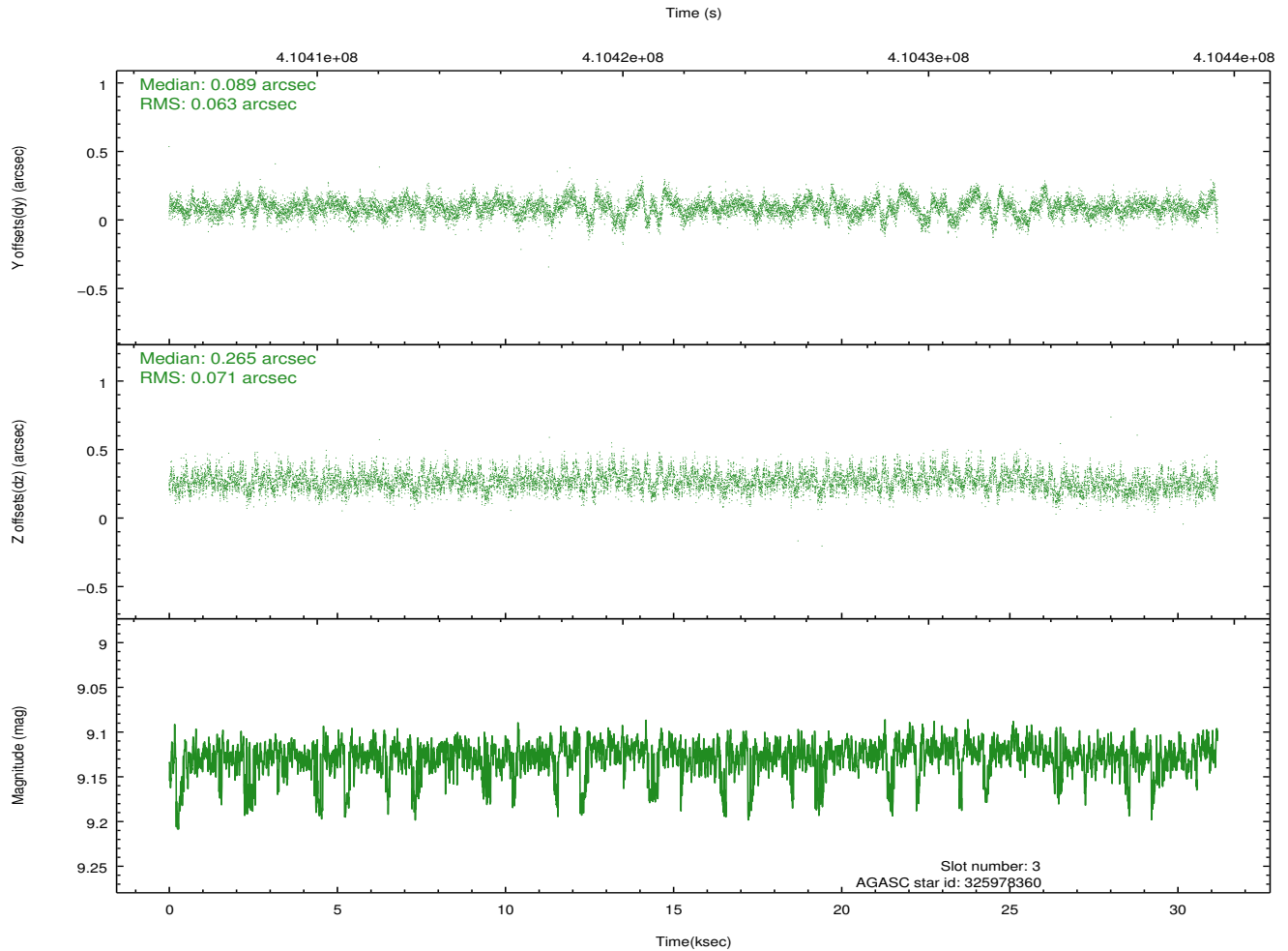
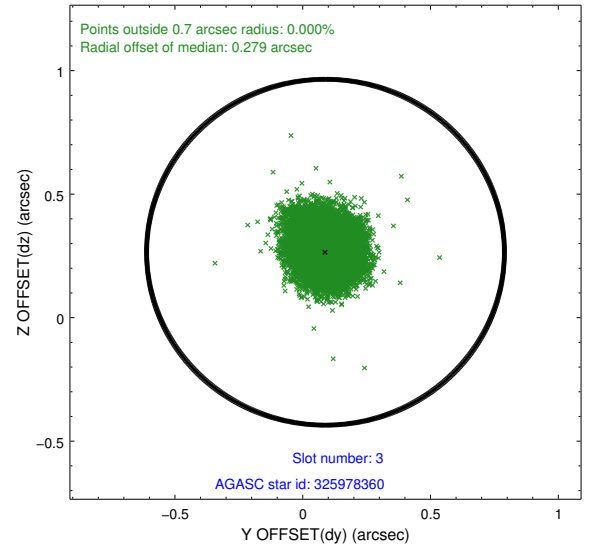
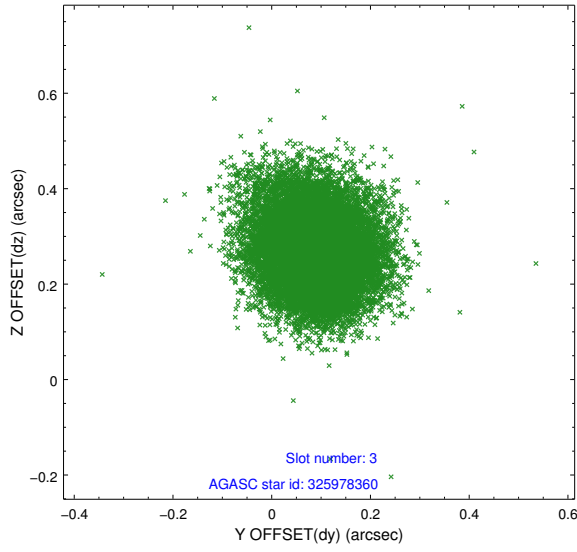
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.03	7608	0.033	-0.006	0.010	0.017	0.000000	0.000000	927.29	-1731.15
1	FID	ACIS-S-4	7.05	7608	0.147	-0.007	0.009	0.023	0.000000	0.000000	2144.84	172.94
2	FID	ACIS-S-5	7.07	7608	-0.206	0.026	0.009	0.029	0.000000	0.000000	-1821.74	166.63
3	GUIDE	325978360	9.13	15199	0.089	0.265	0.101	0.166	131.433074	33.437594	-53.39	-2115.34
4	GUIDE	325988408	6.59	15215	-0.075	-0.163	0.077	0.116	130.140266	33.277246	467.24	1779.21
5	GUIDE	325988840	8.23	15205	0.008	-0.074	0.075	0.118	130.525100	33.369039	459.02	575.33
6	GUIDE	325991200	7.27	15214	-0.041	0.310	0.060	0.094	131.376652	33.239726	-692.99	-1759.57
7	GUIDE	325991976	7.19	15214	0.019	-0.346	0.055	0.087	130.084629	33.009870	-408.42	2211.89

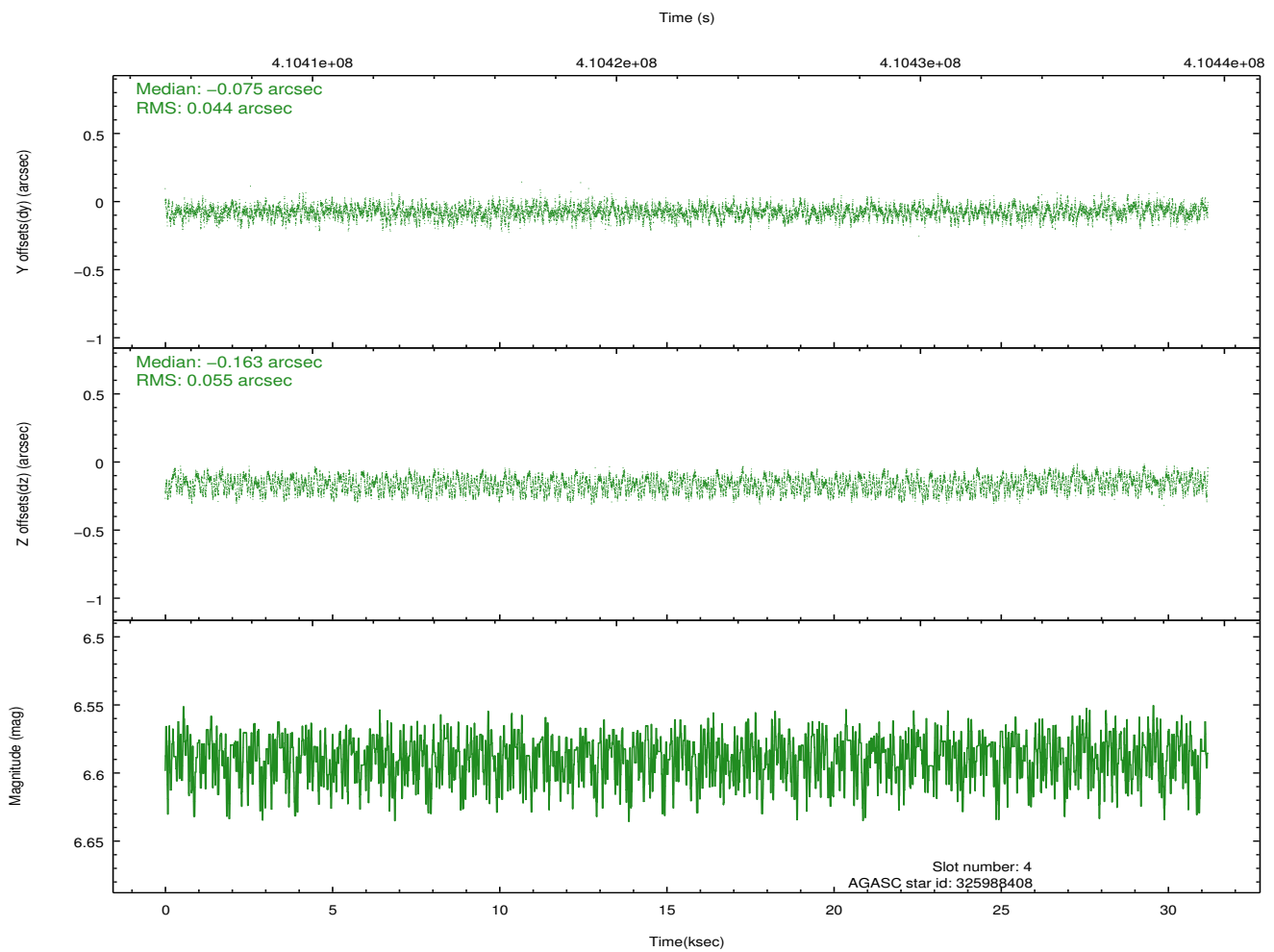
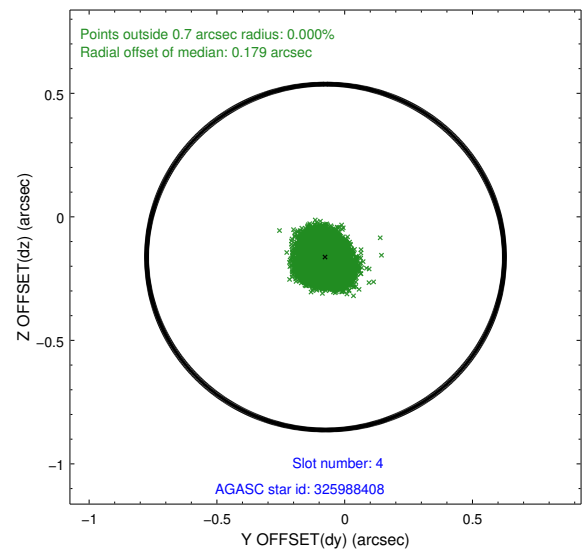
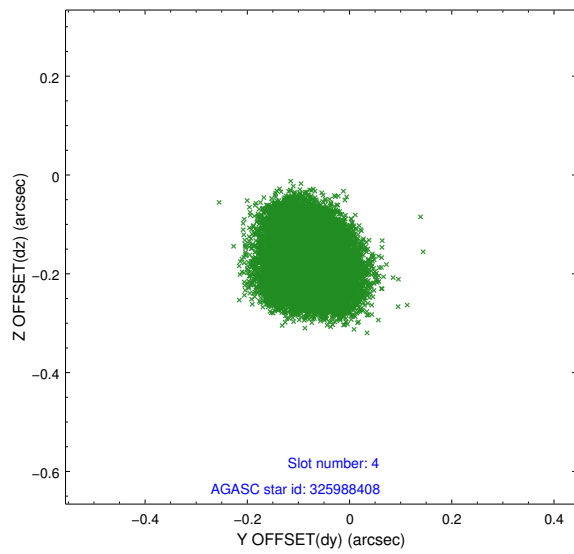
∞

## 2.4 Star Slots

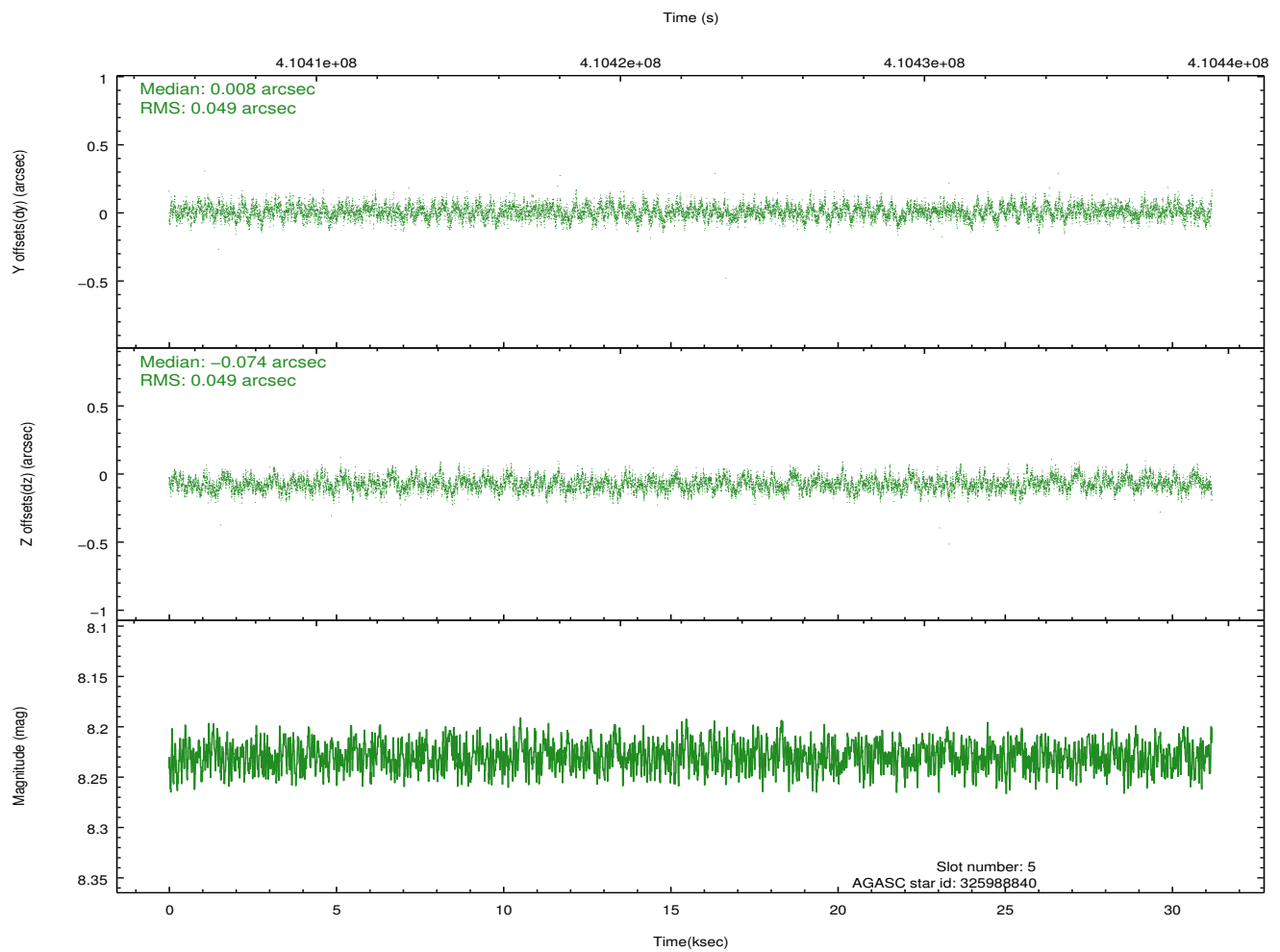
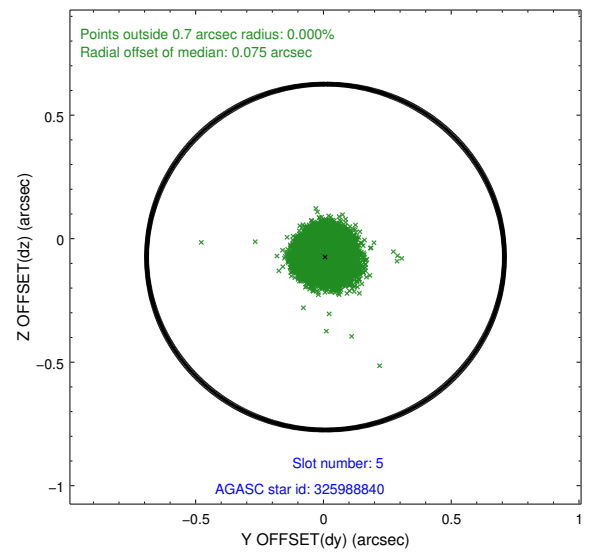
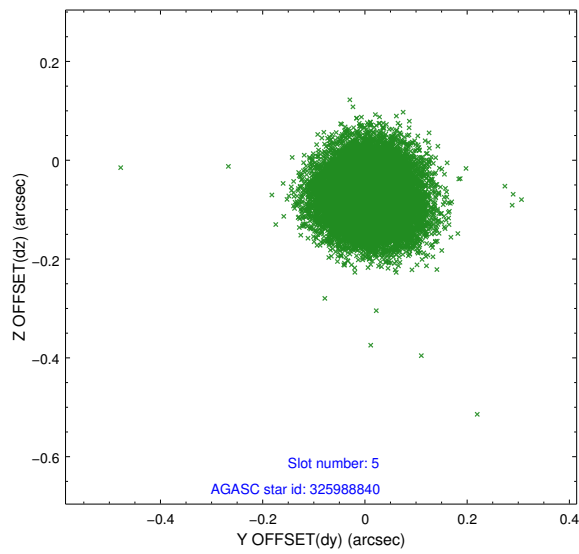
### 2.4.1 Slot 3



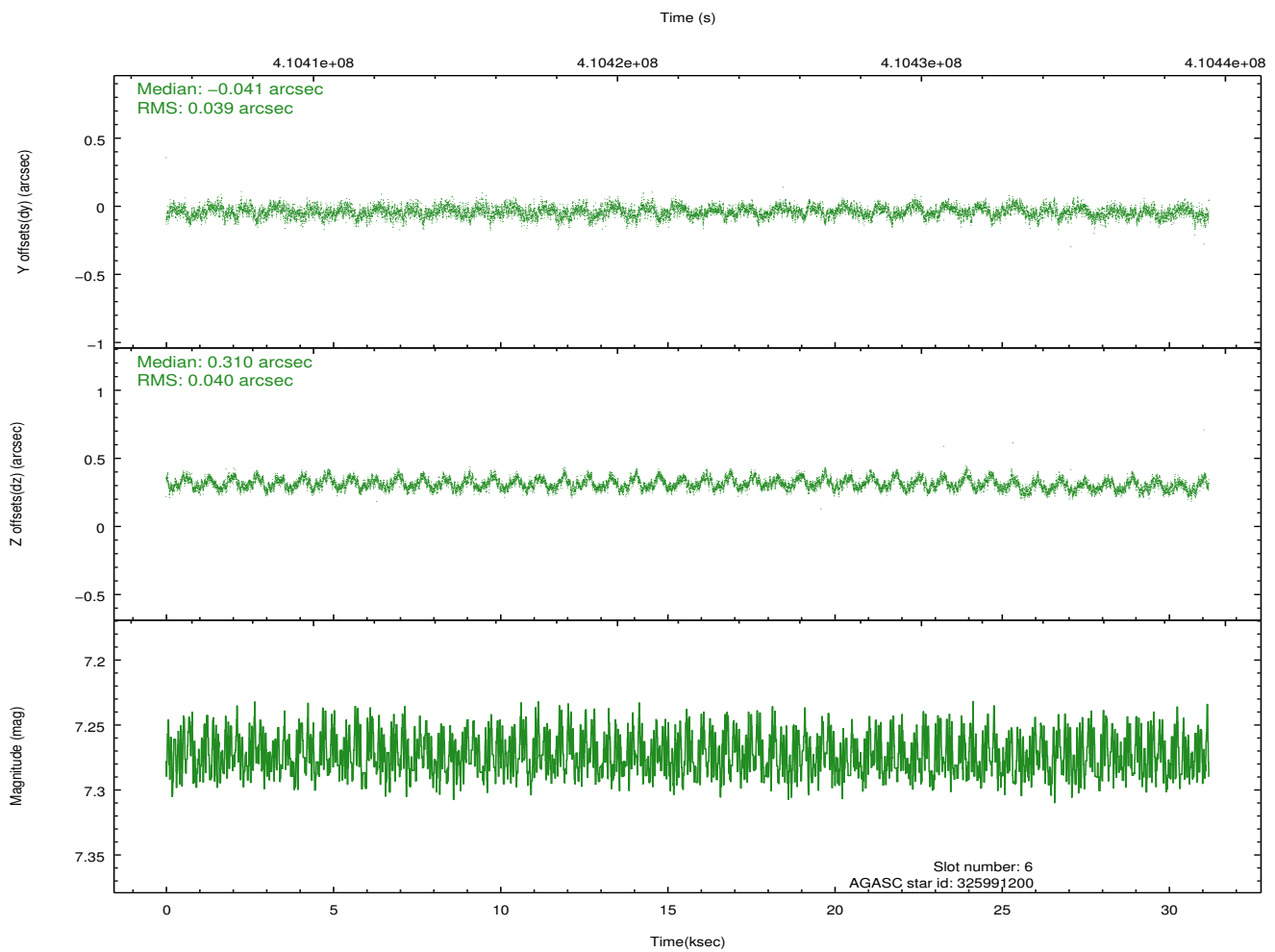
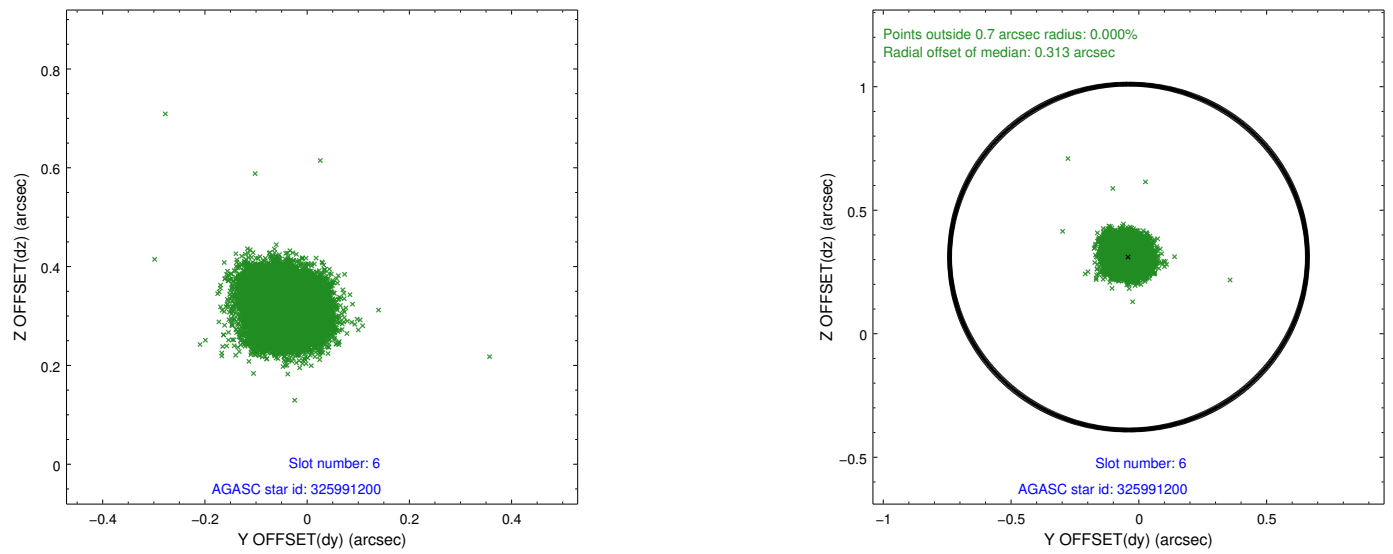
## 2.4.2 Slot 4



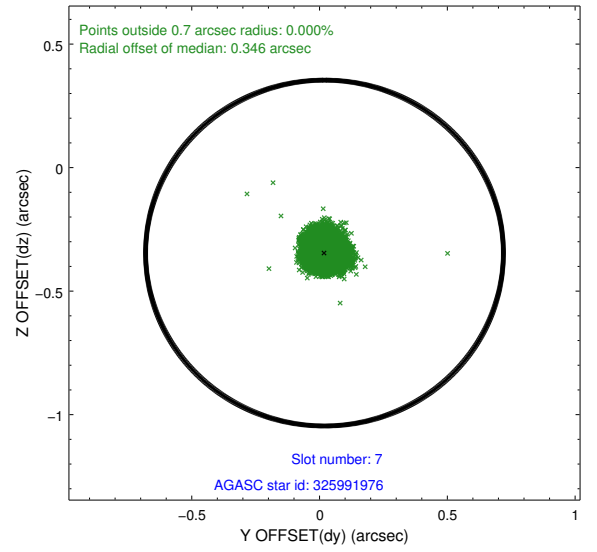
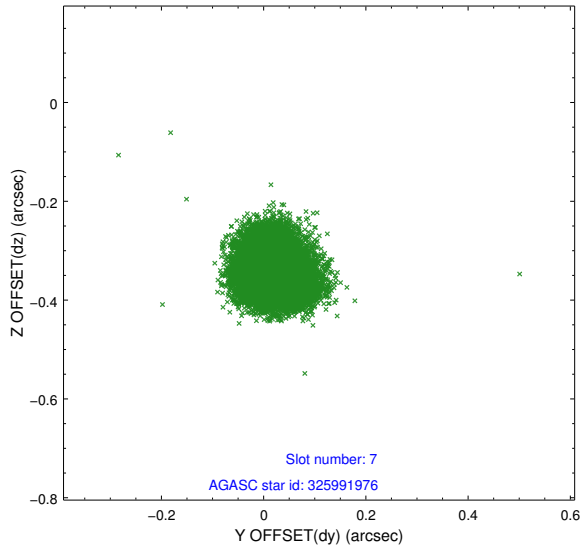
### 2.4.3 Slot 5



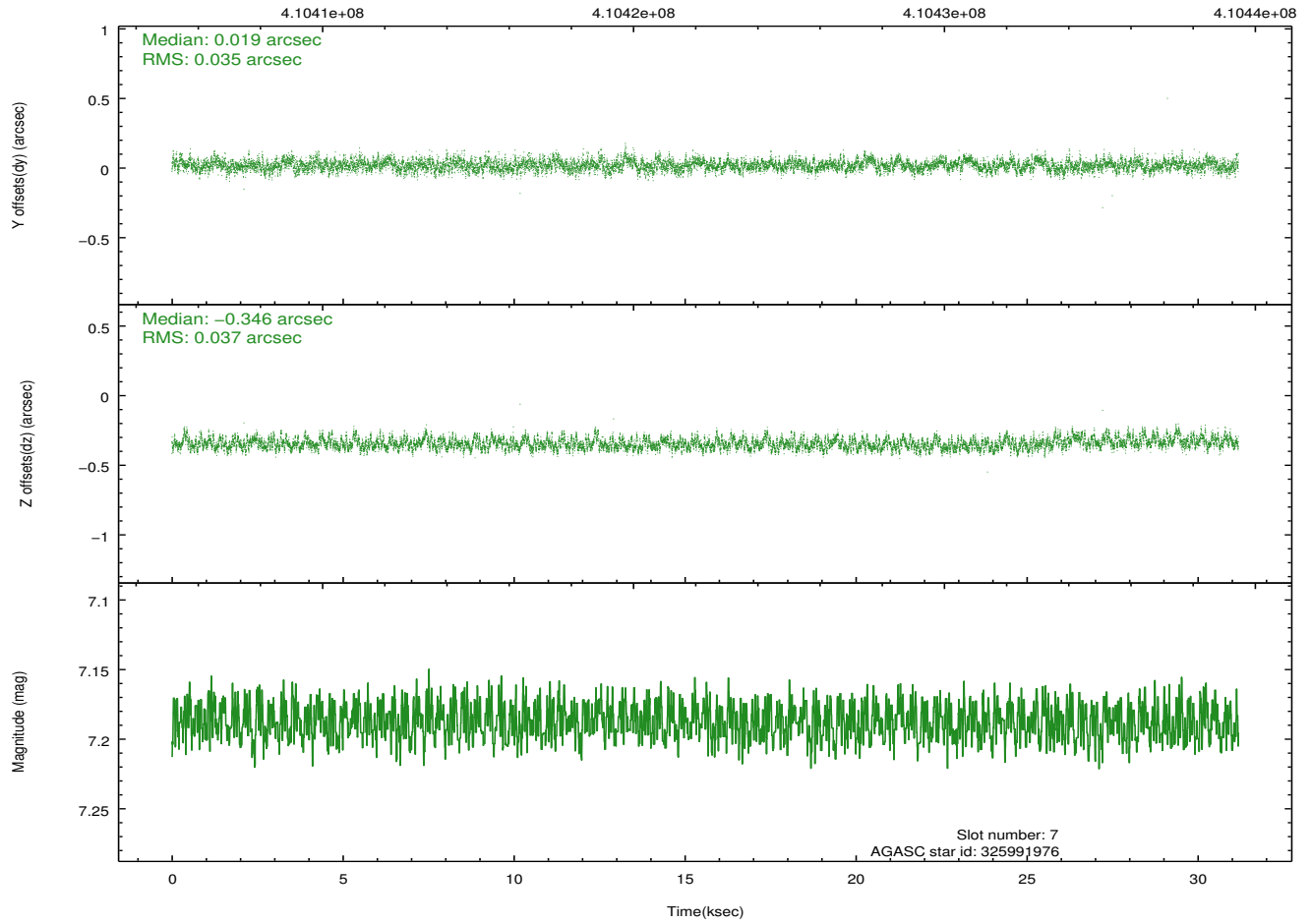
## 2.4.4 Slot 6



### 2.4.5 Slot 7

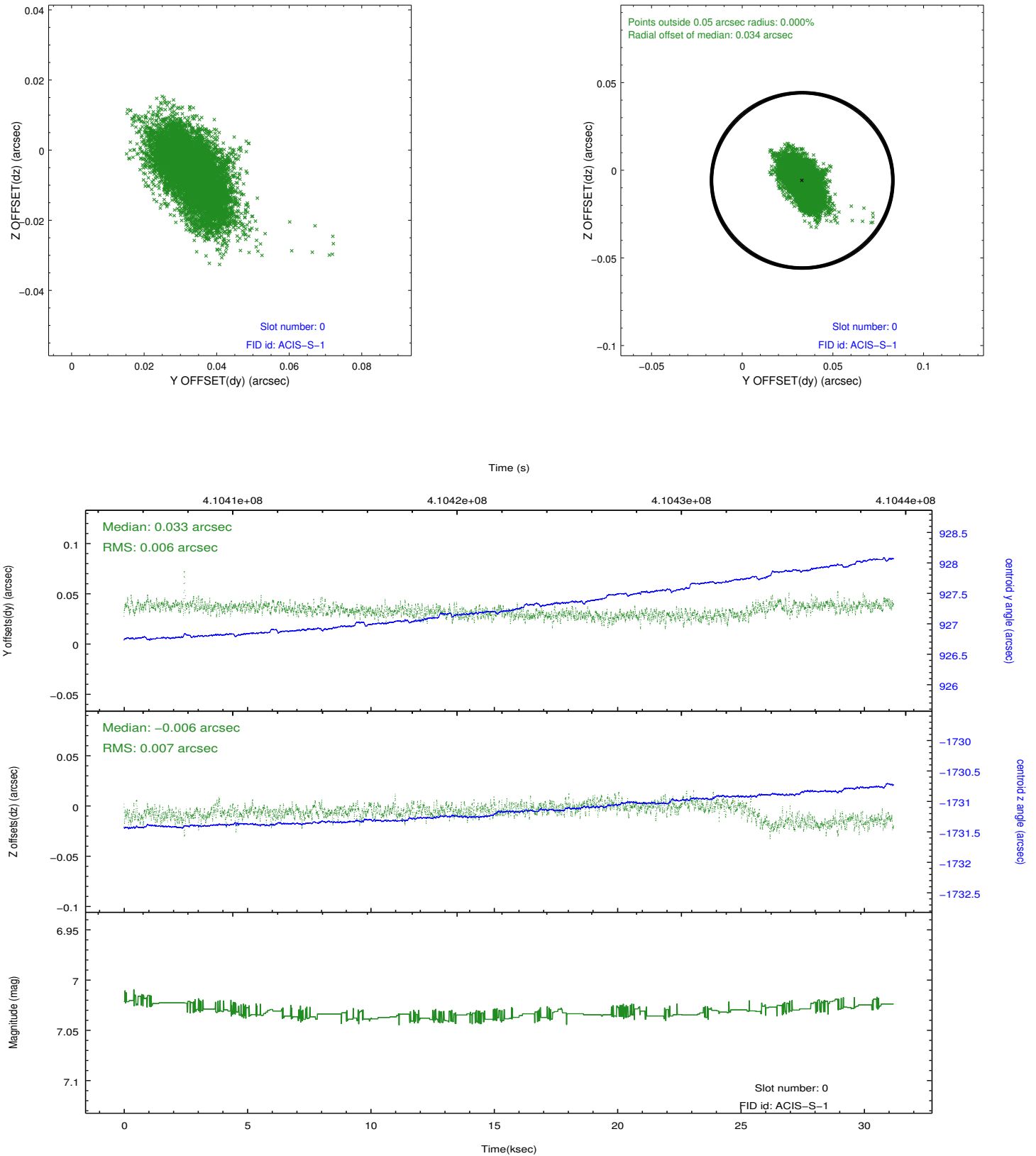


Time (s)

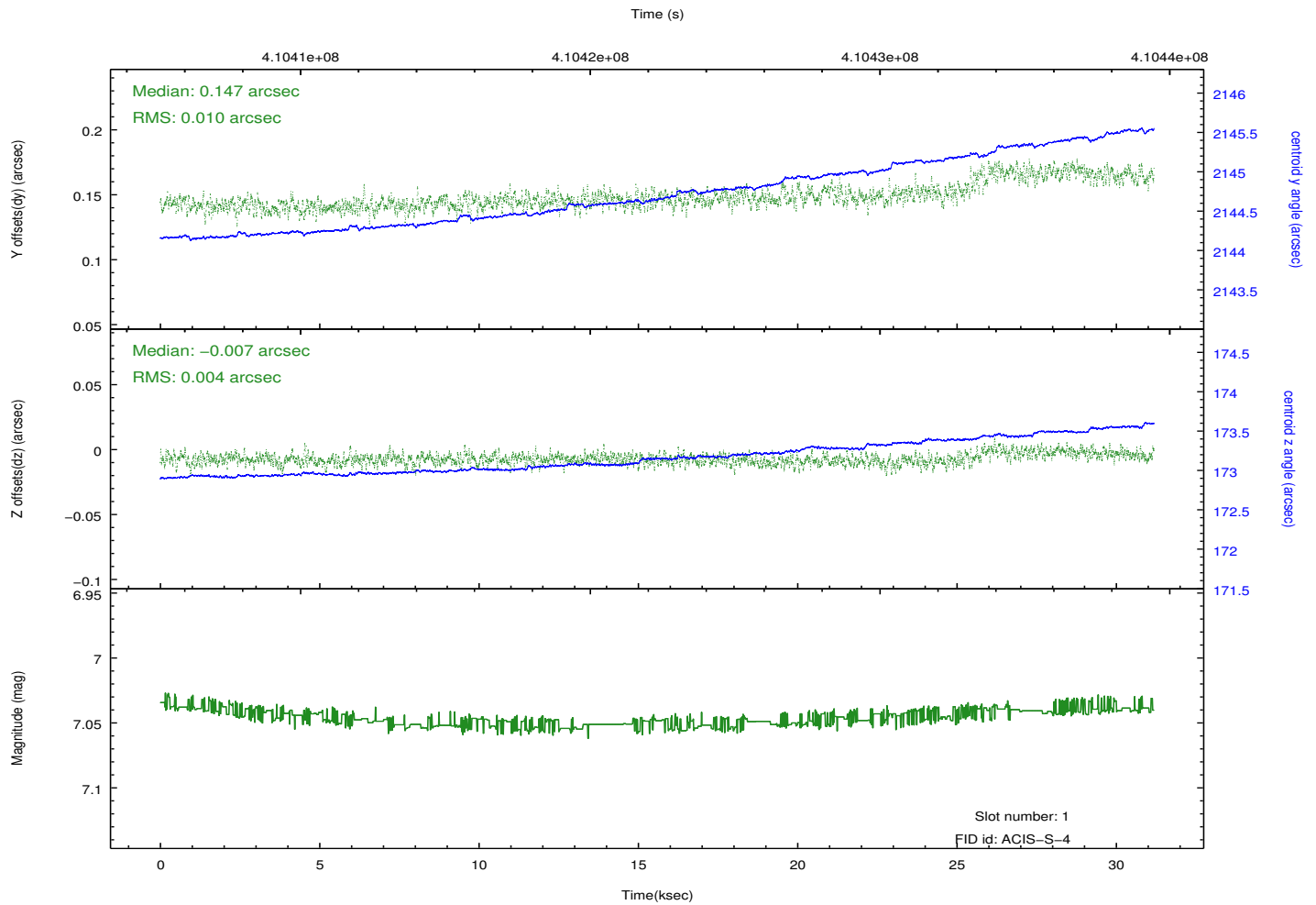
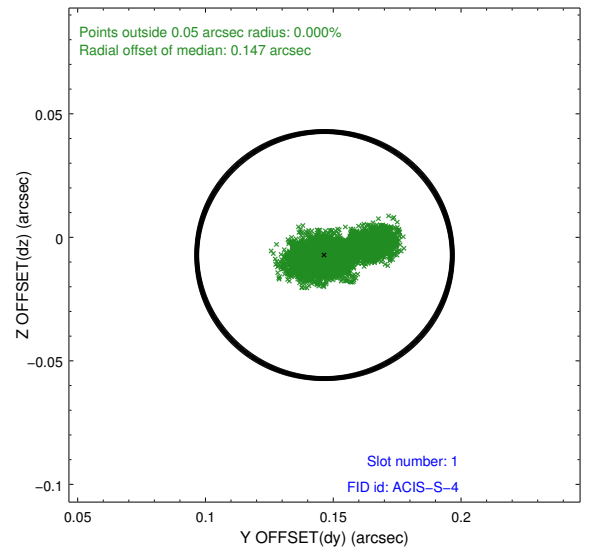
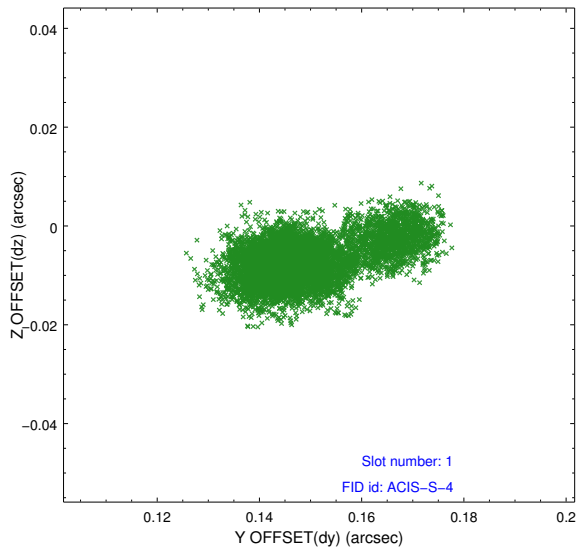


## 2.5 FID Slots

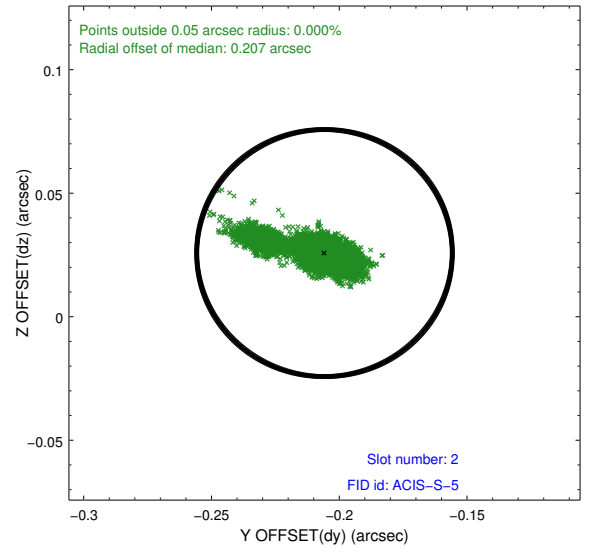
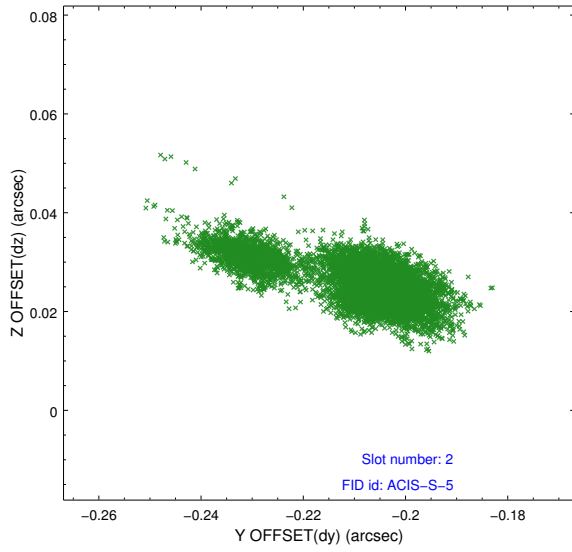
### 2.5.1 Slot 0



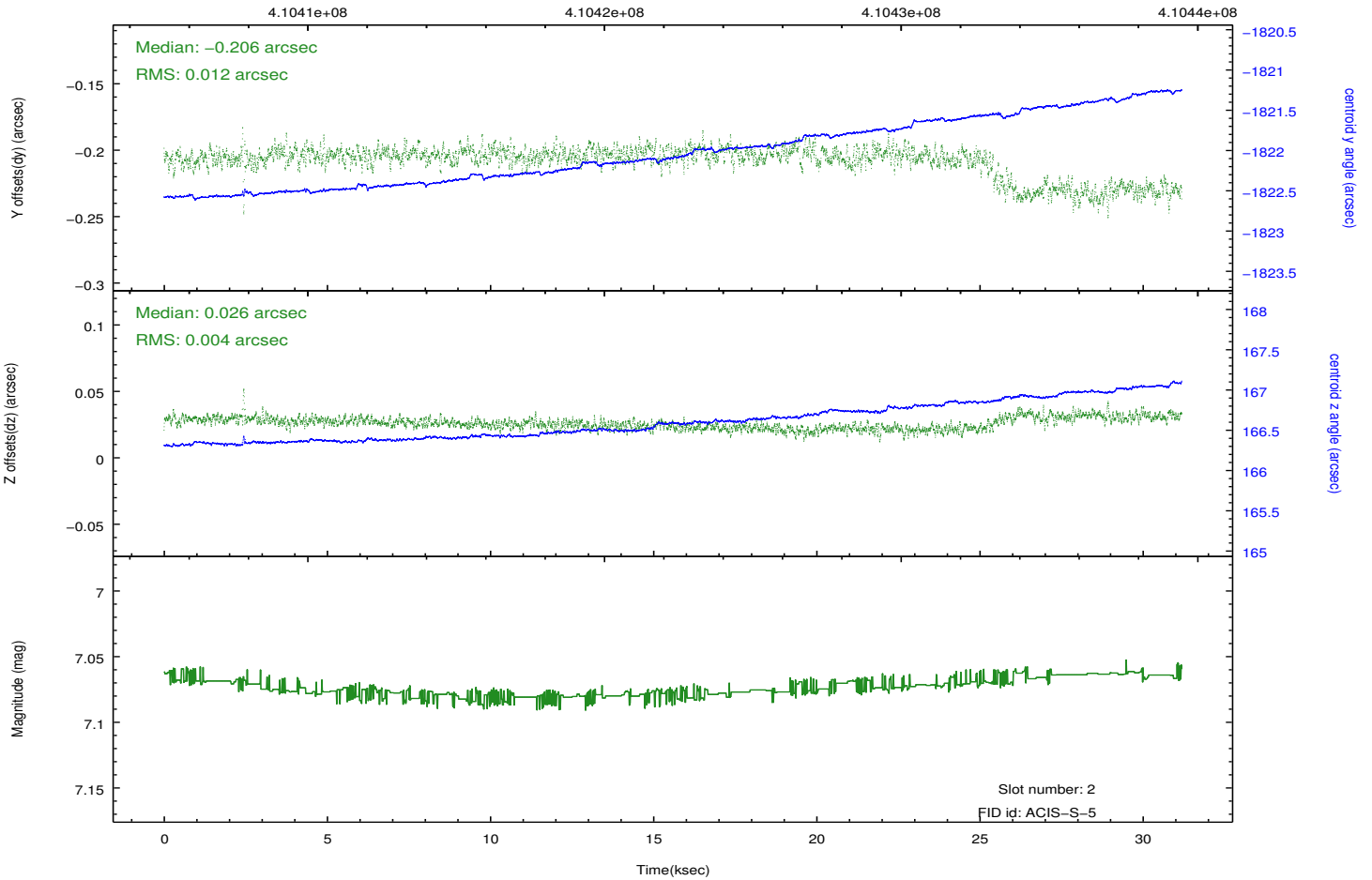
## 2.5.2 Slot 1



### 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	31.047911862433

## 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.