

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 13411 - L2 Version 2  
Chandra X-Ray Center

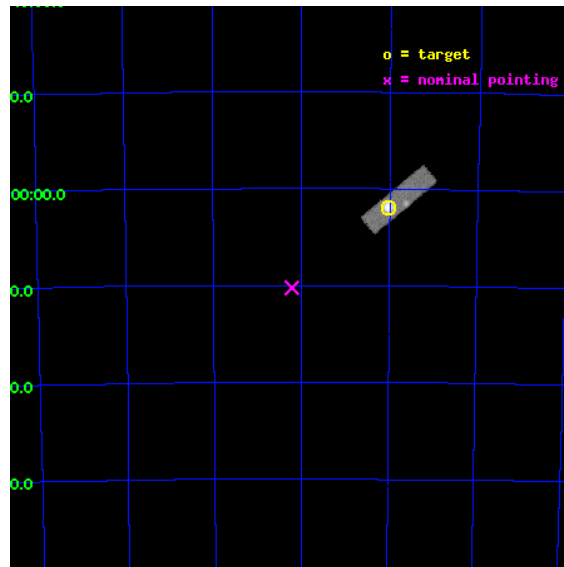
L2 Processing Date : Feb 10 2012

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# 1 Front

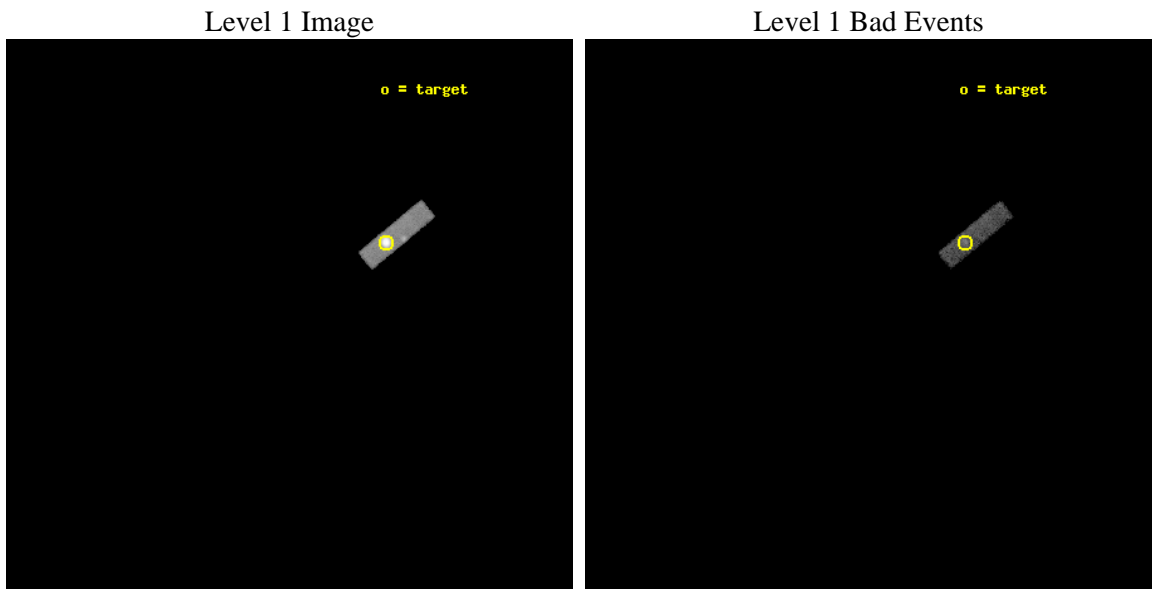
seq_num	890056	Sequence number
obs_id	13411	Observation id
title	Mapping the Spatial Distribution of the ACIS Contaminant	Proposal
observer	Dr. CXC Calibration	Principal investigator
object	E0102-72	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	16.01	Observer's specified target RA [deg]
dec_targ	-72.032028	Observer's specified target Dec [deg]
ra_nom	16.553938062951	Nominal RA [deg]
dec_nom	-72.171035823295	Nominal Dec [deg]
roll_nom	140.25817329937	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10027.912201881	Sum of GTIs [s]
livetime	9538.5828991548	Livetime [s]
ontime5	10027.912201881	Sum of GTIs [s]
l2events	45321	Number of level 2 events



## 2 OBI

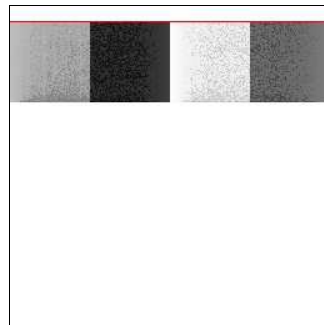
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 5



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	10027.912201881	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime5	10027.912201881	Sum of GTIs [s]
date	2012-02-11T00:14:18	Date and time of file creation	l1events	59015	Number of level 1 events
revision	2	Processing version of data			

### 2.1.4 Events

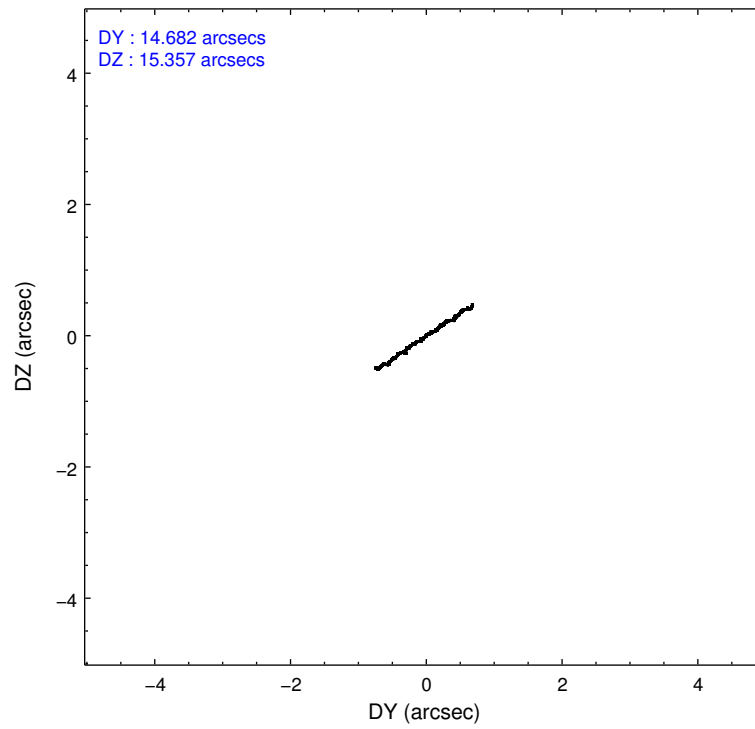
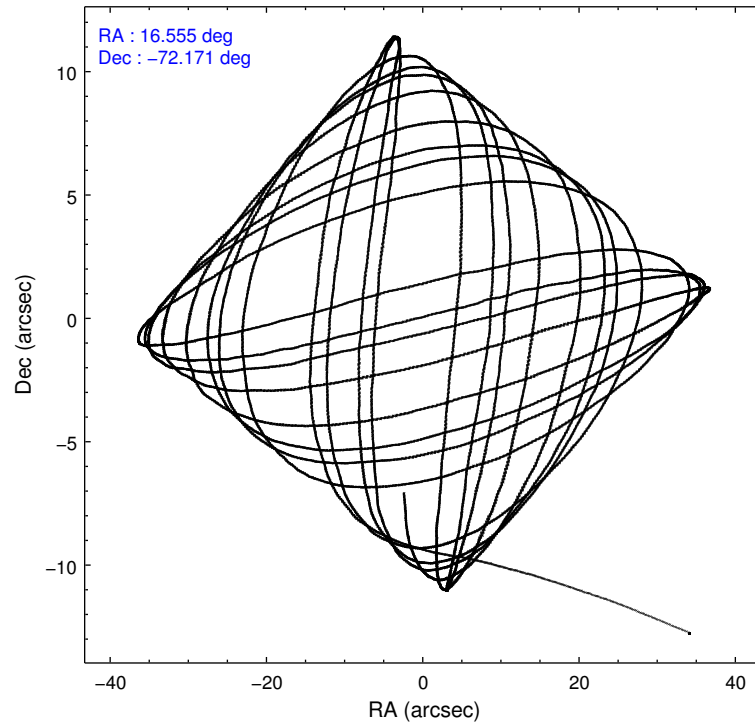
	<b>ccd 5</b>
level 1 events	59015
rejected events	11422
rejected %	19%

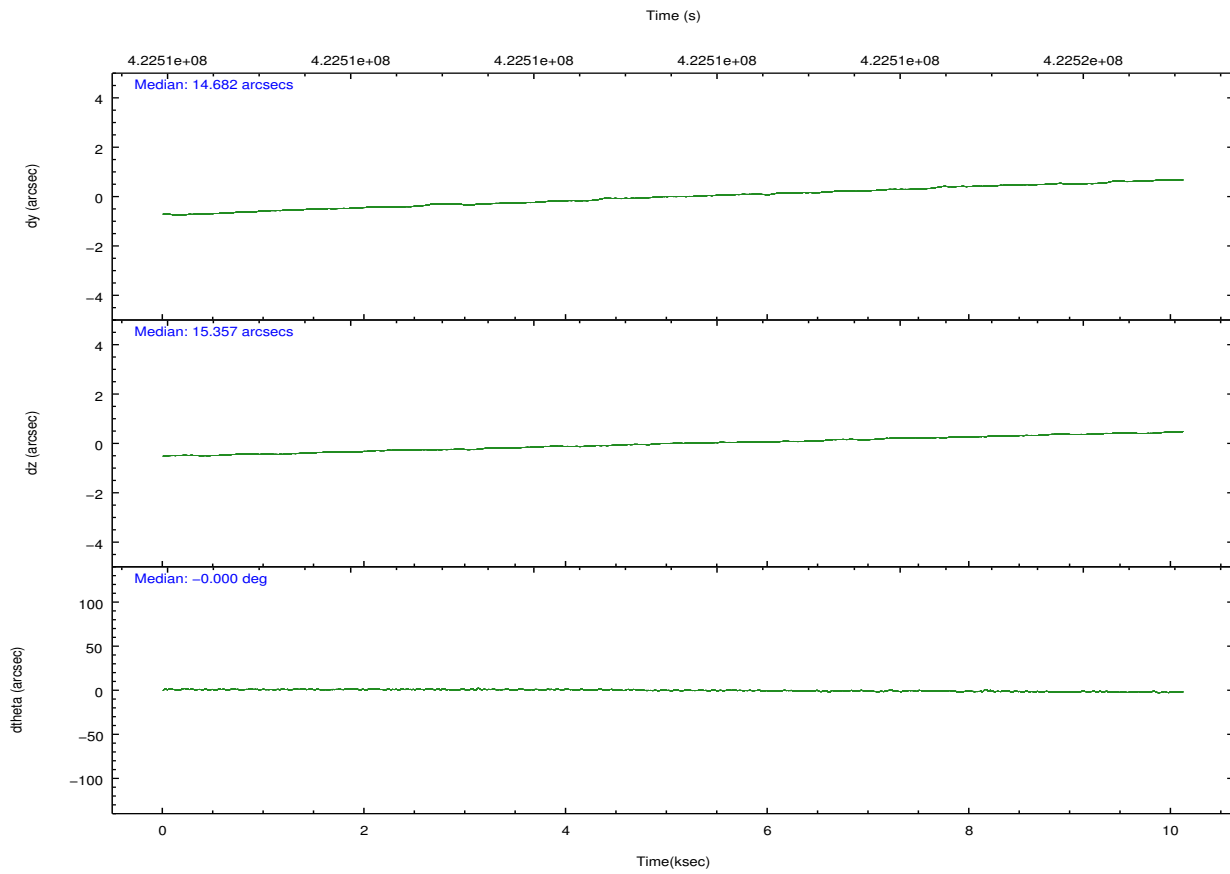
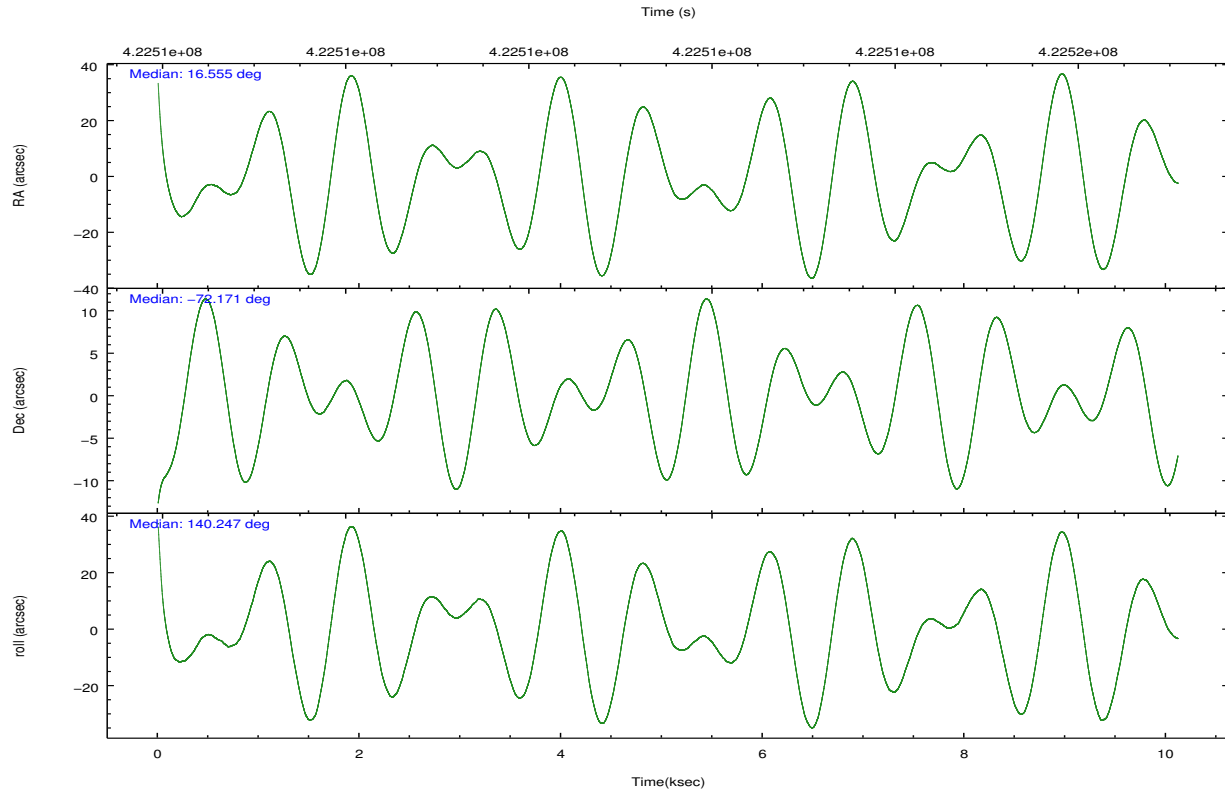
	<b>ccd 5</b>
grade 0 events	18666
	31%
grade 1 events	115
	0%
grade 2 events	13220
	22%
grade 3 events	3789
	6%
grade 4 events	3687
	6%
grade 5 events	2482
	4%
grade 6 events	8238
	13%
grade 7 events	8818
	14%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5	ACIS-5	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	16.642195	16.55393806295064	Subarray requested	CUSTOM	1/4
[deg] Pointing Dec	-72.175224	-72.17103582329524	Subarray start row	720	720
[deg] Pointing Roll	140.185563	140.2581732993732	Subarray row count	256	256
[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	0.8
[mm] SIM translation stage pos	-198.932523	-198.9301123441257			
[mm] SIM translation stage offset	8.800000000000001	8.797589761117848			
[s] Observation start time (MET)	422506588.184000	422504895.63367			
Observation start date	2011-05-23T02:55:22	2011-05-23T02:28:15			
[s] Observation end time (MET)	422516588.184000	422517276.60931			
Observation end date	2011-05-23T05:42:02	2011-05-23T05:54:36			
Read mode	TIMED	TIMED			

## 2.3 Aspect



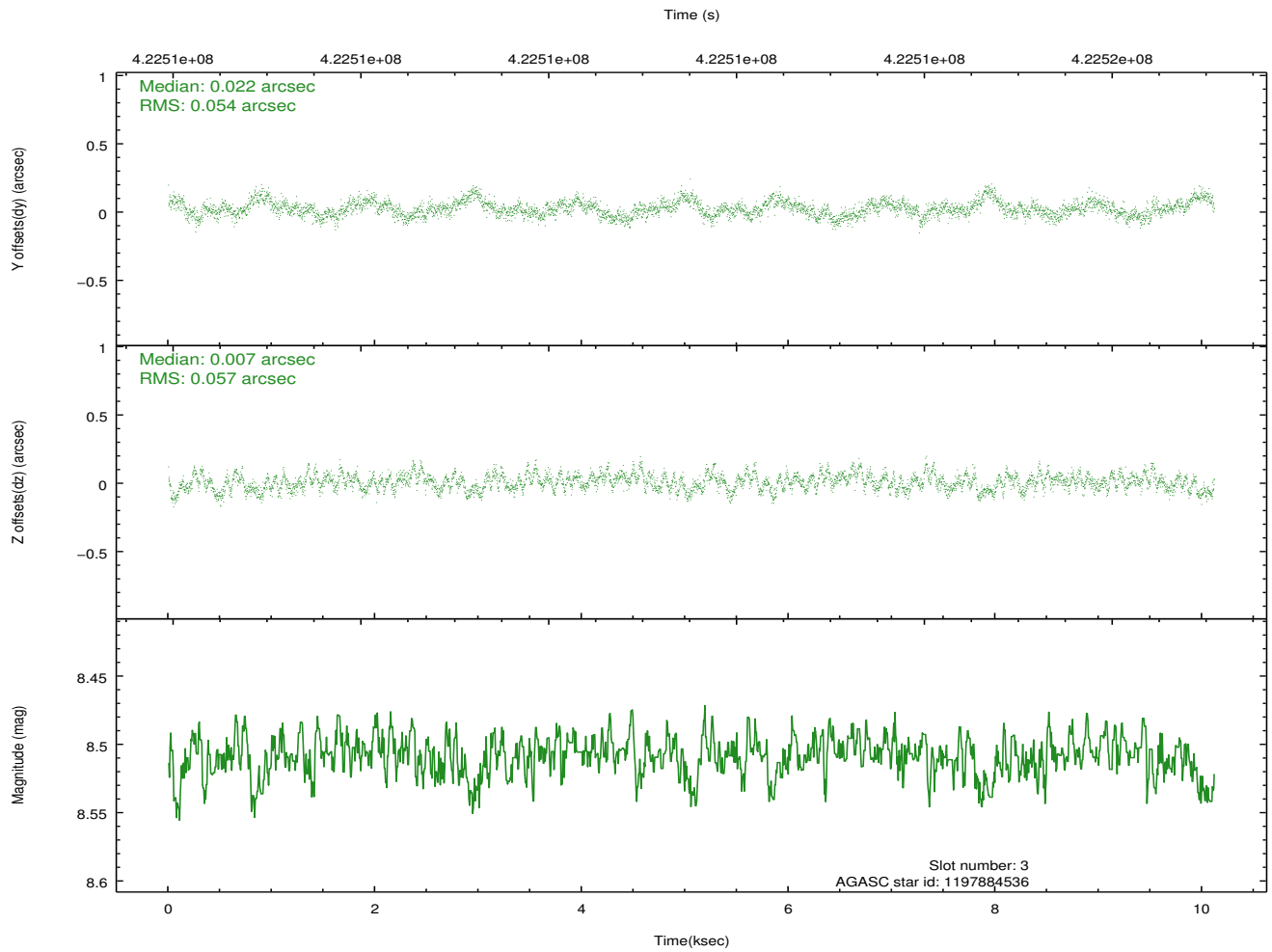
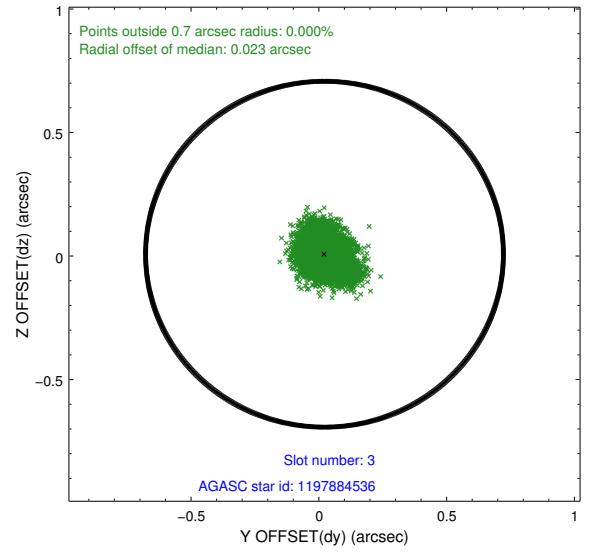
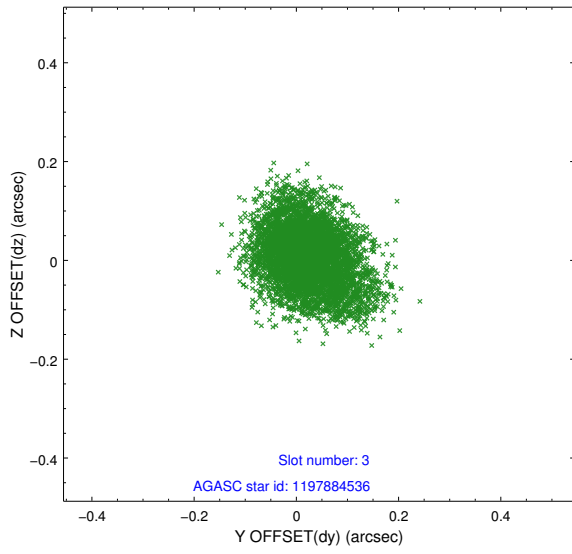


### Slot Statistics

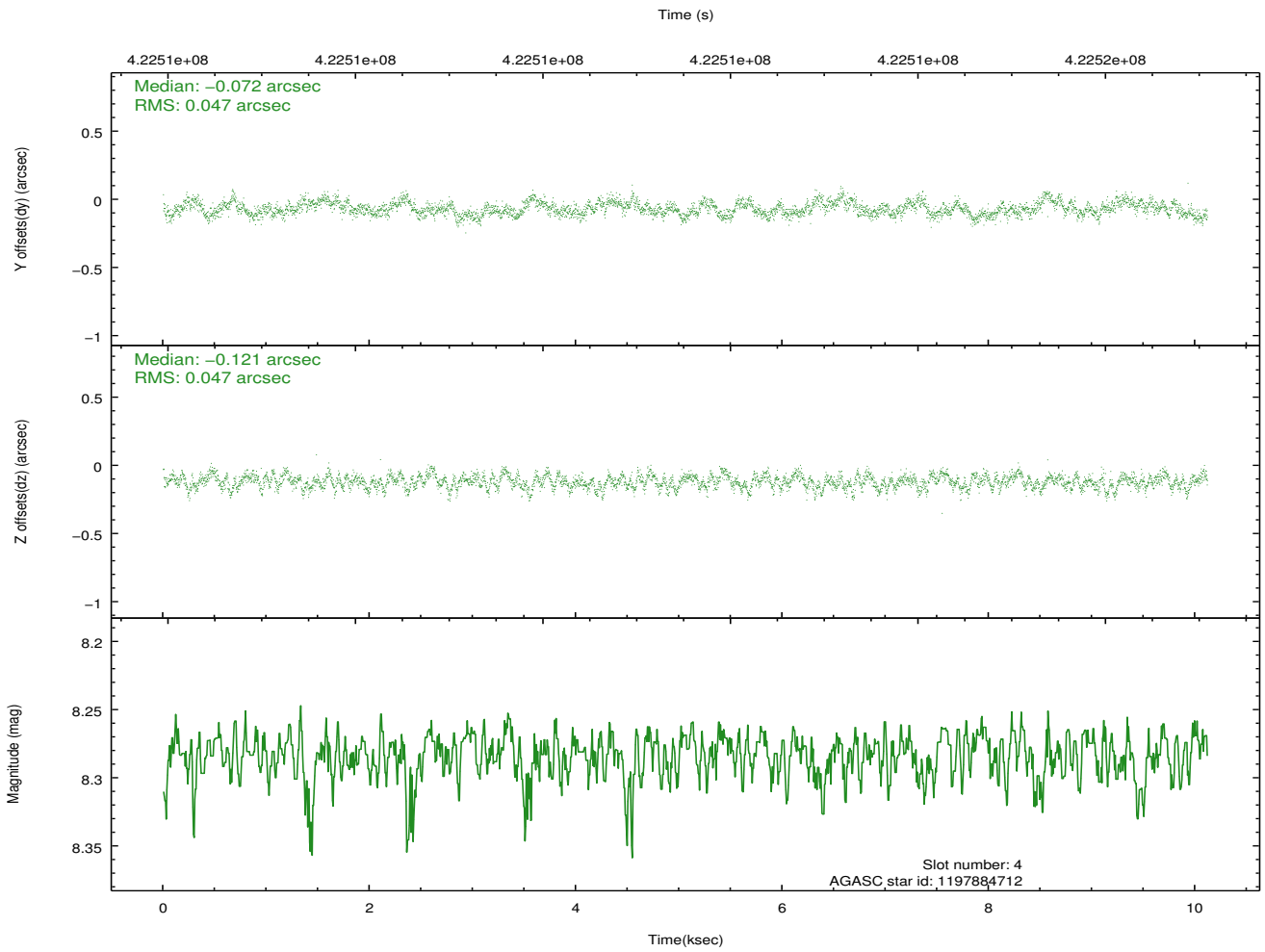
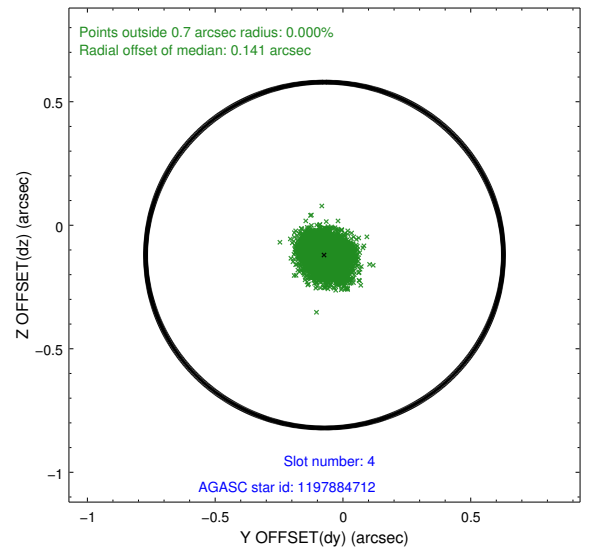
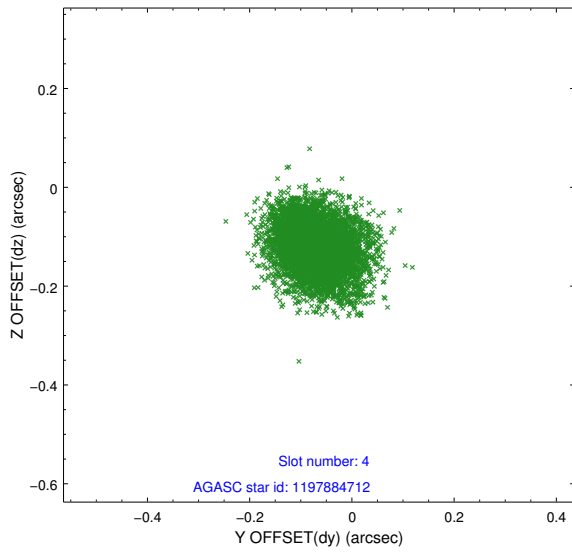
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.97	2468	0.049	0.116	0.010	0.017	0.000000	0.000000	-768.21	-1555.25
1	FID	ACIS-S-4	7.06	2468	0.097	-0.054	0.009	0.023	0.000000	0.000000	2145.00	352.42
2	FID	ACIS-S-5	7.04	2468	-0.175	-0.052	0.013	0.038	0.000000	0.000000	-1820.49	346.94
3	GUIDE	1197884536	8.51	4934	0.022	0.007	0.083	0.137	17.160729	-71.835289	335.74	-1310.37
4	GUIDE	1197884712	8.28	4935	-0.072	-0.121	0.071	0.114	16.087398	-72.252690	287.52	606.13
5	GUIDE	1197885328	7.24	4933	-0.069	0.157	0.062	0.099	16.283090	-71.733943	1327.77	-960.26
6	GUIDE	1198283128	7.74	4936	-0.056	0.020	0.055	0.087	17.272580	-72.642428	-1598.77	860.92
7	GUIDE	1198282744	9.01	4932	0.167	-0.064	0.086	0.141	17.028326	-73.013356	-2245.13	2058.66

## 2.4 Star Slots

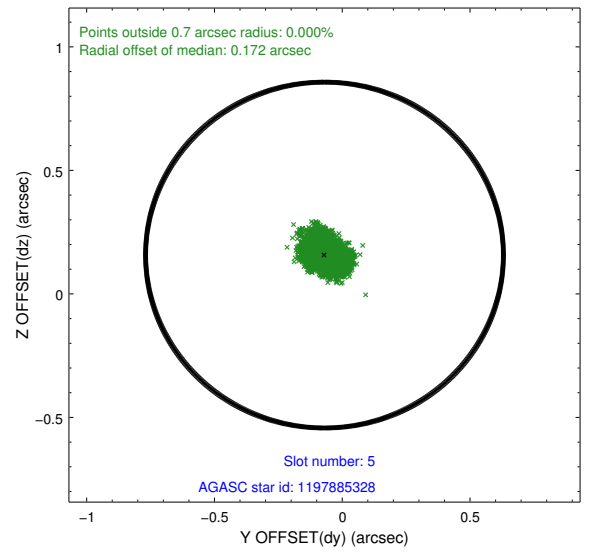
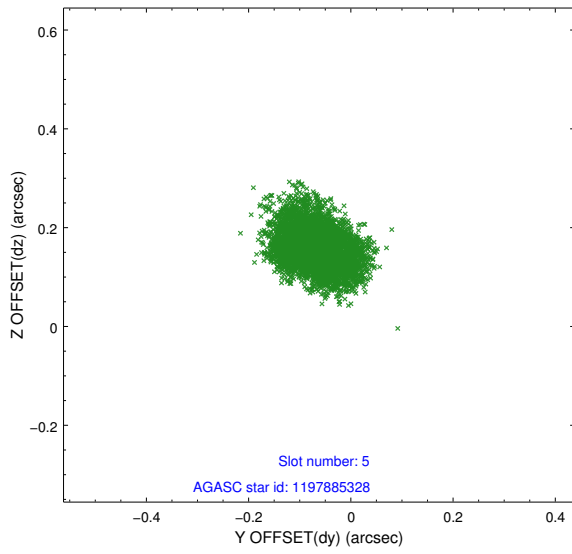
### 2.4.1 Slot 3



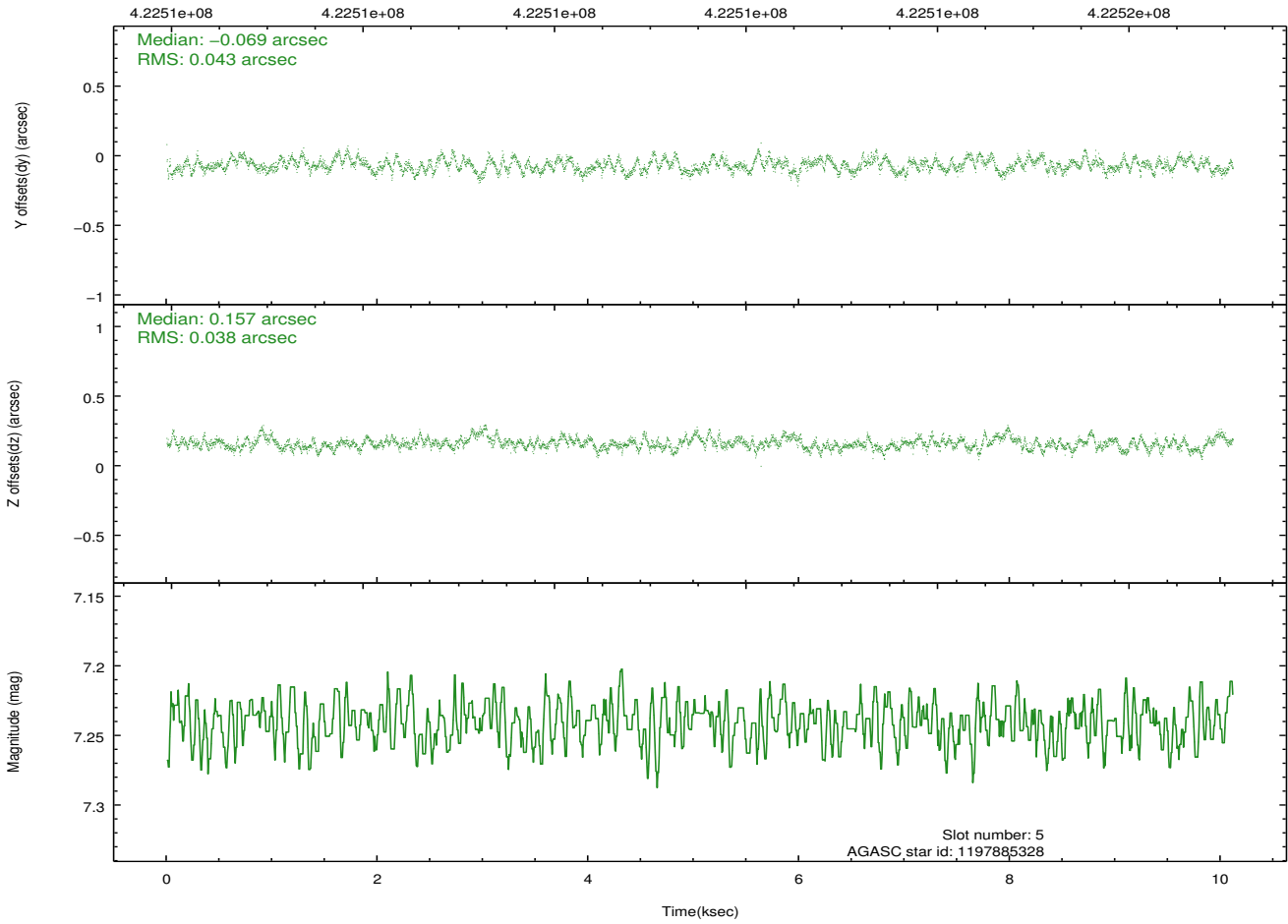
### 2.4.2 Slot 4



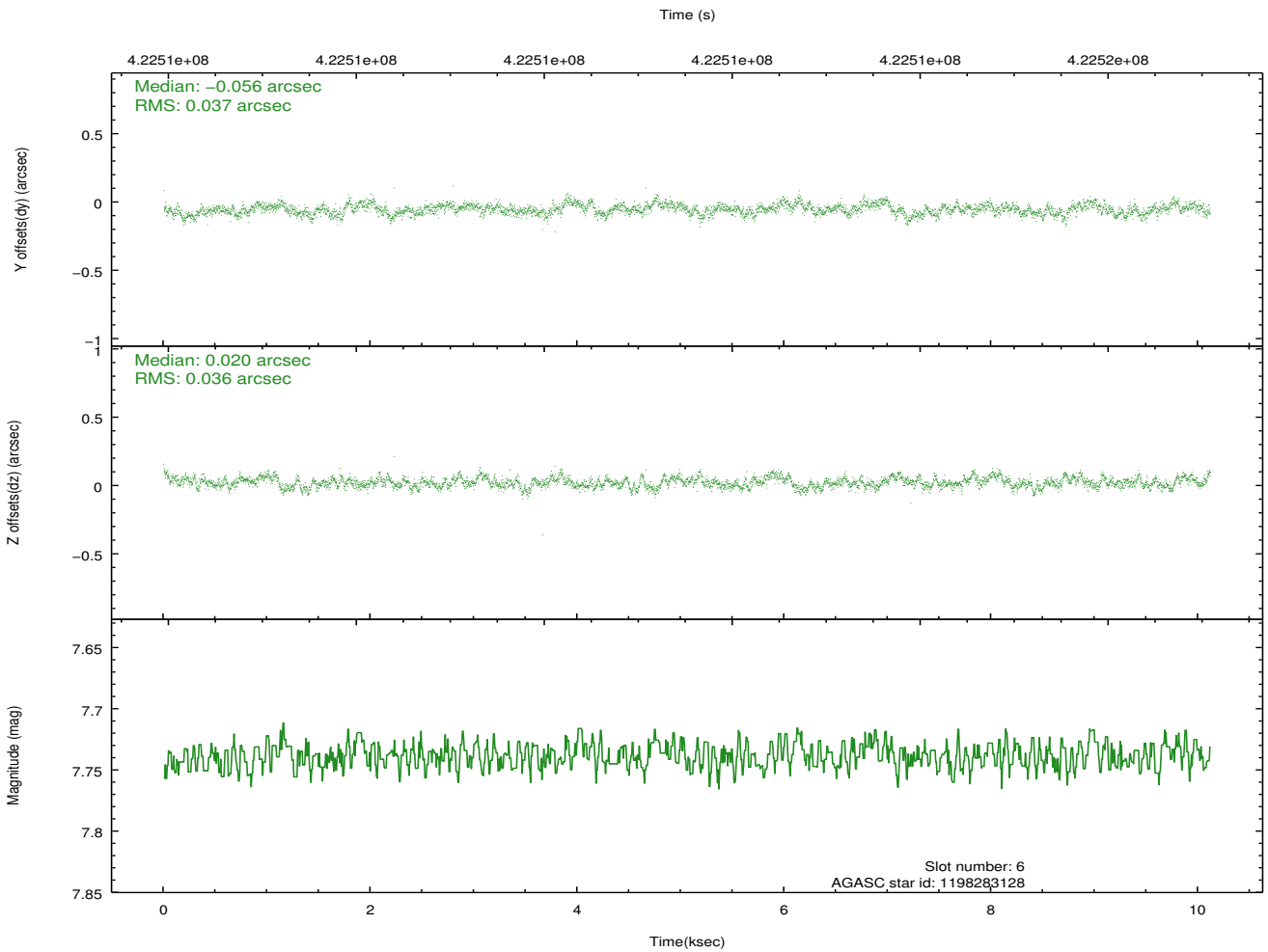
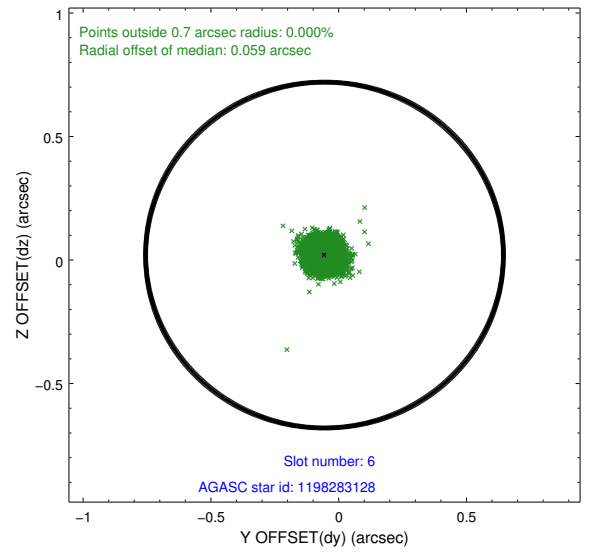
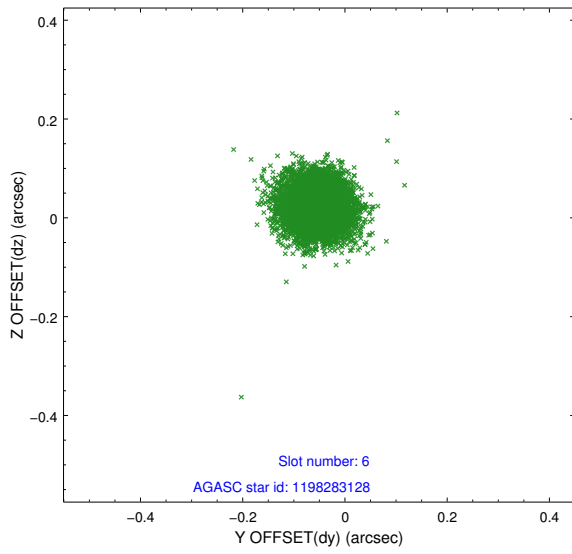
### 2.4.3 Slot 5



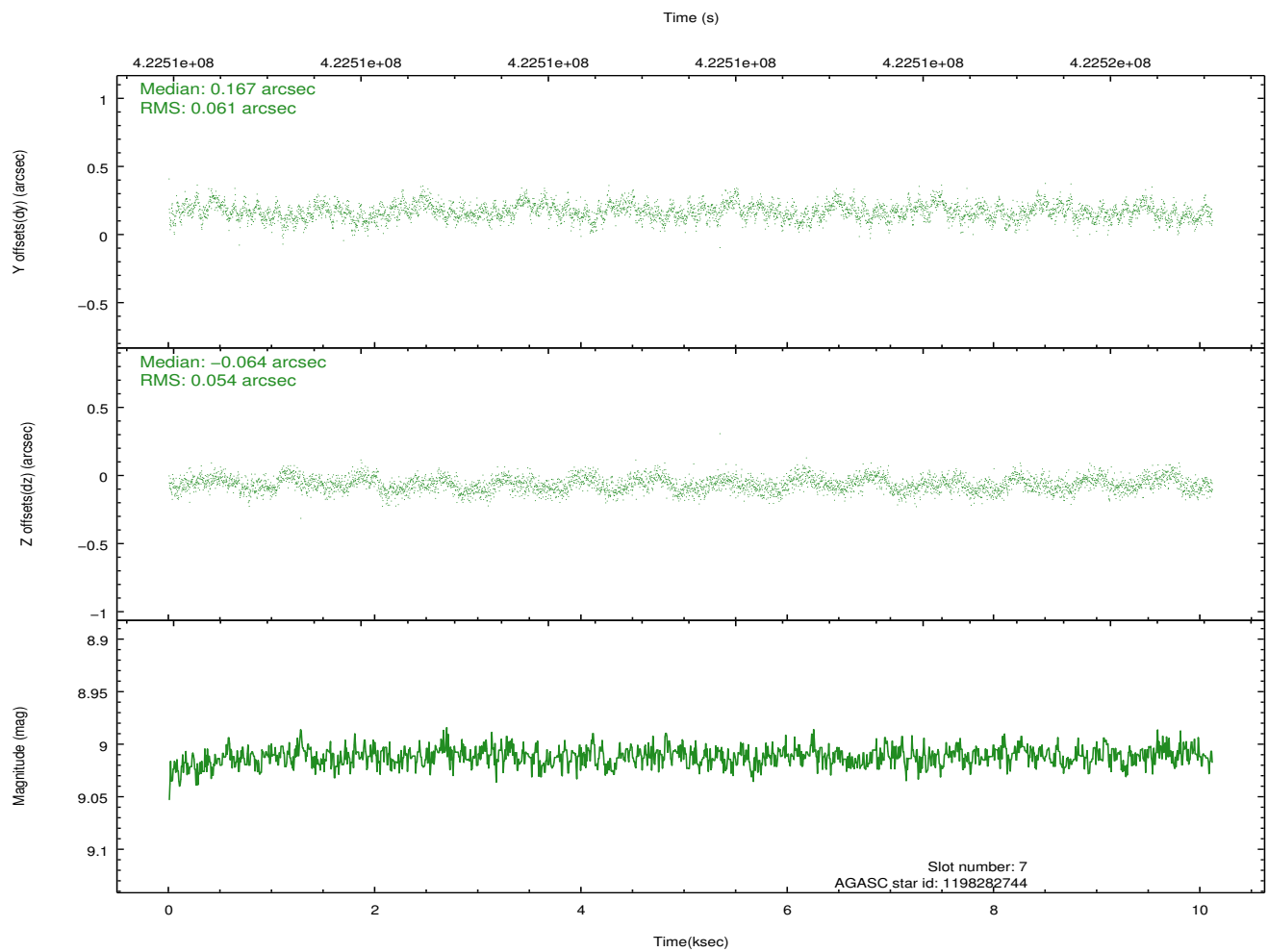
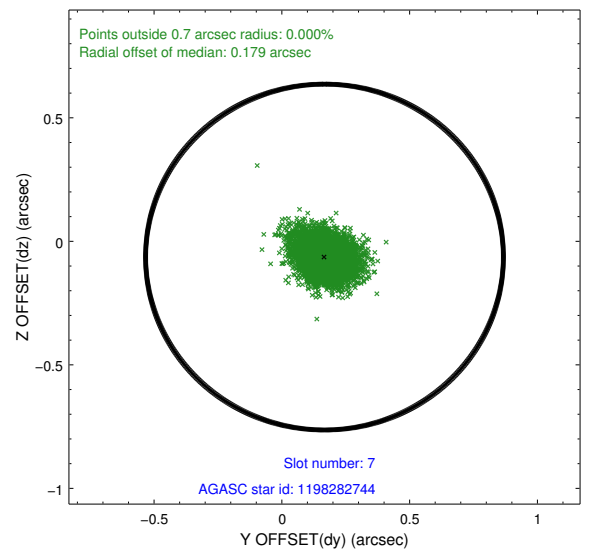
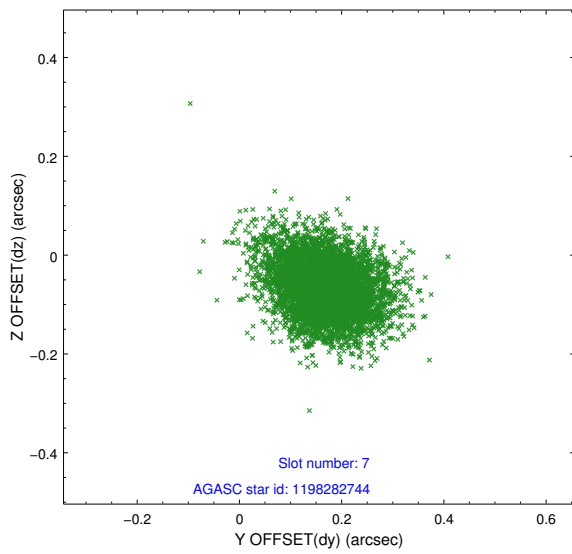
Time (s)



### 2.4.4 Slot 6

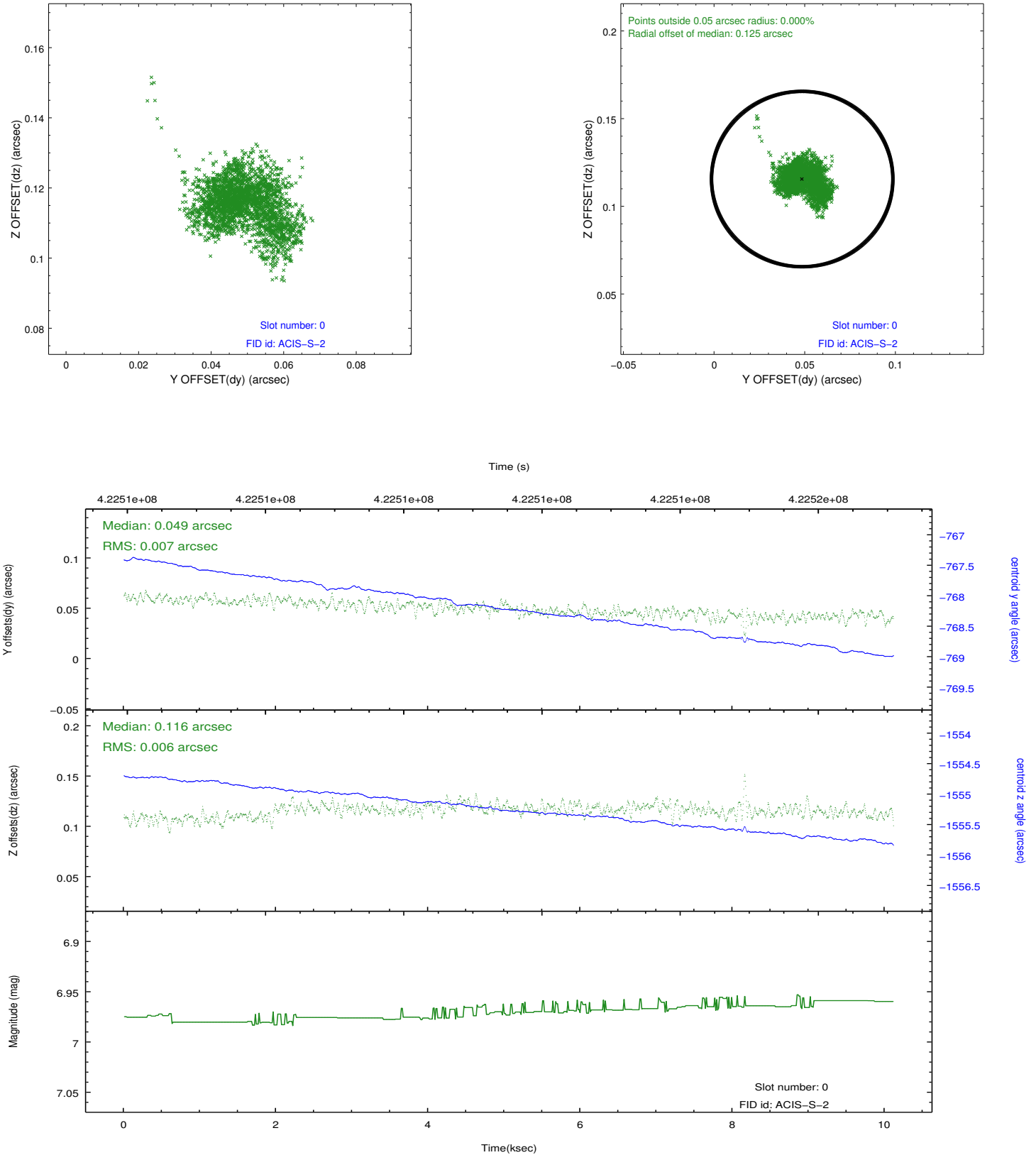


## 2.4.5 Slot 7

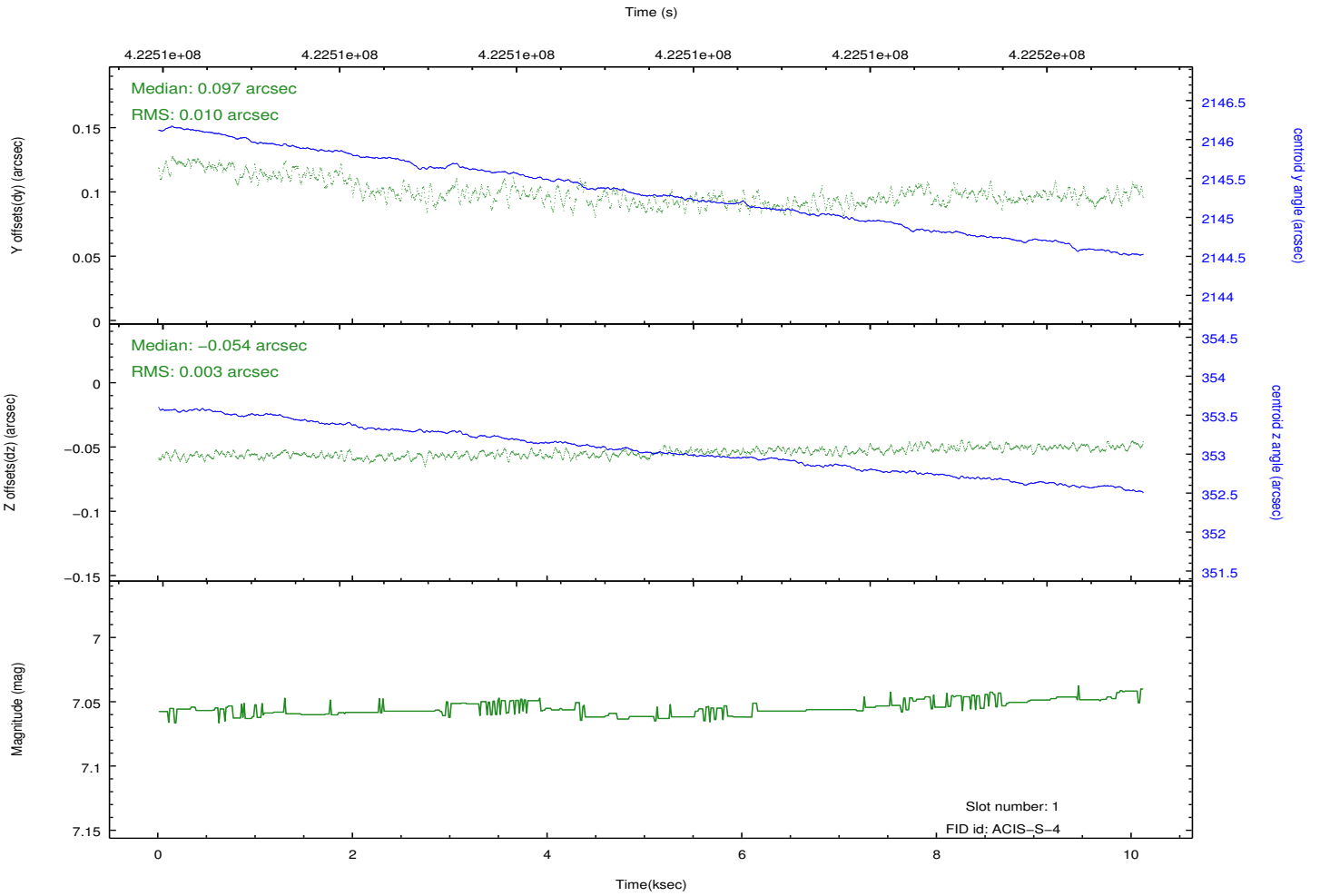
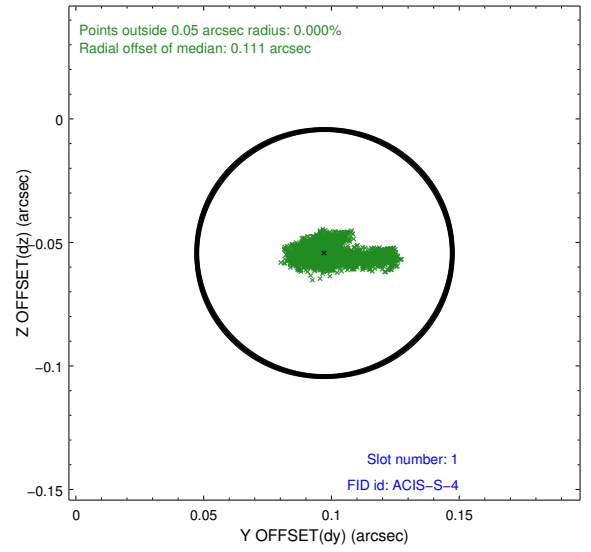
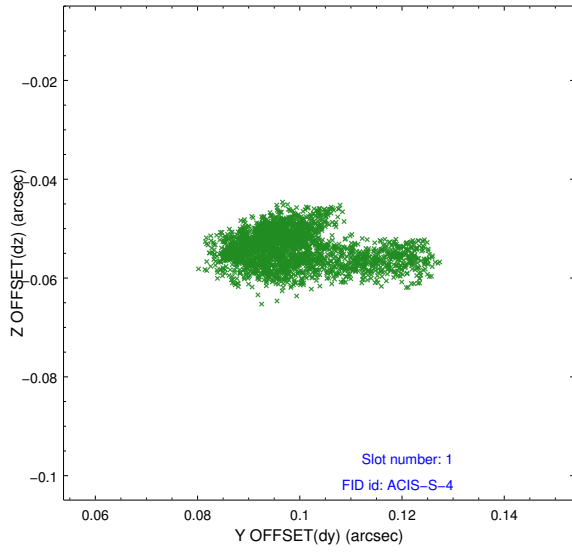


## 2.5 FID Slots

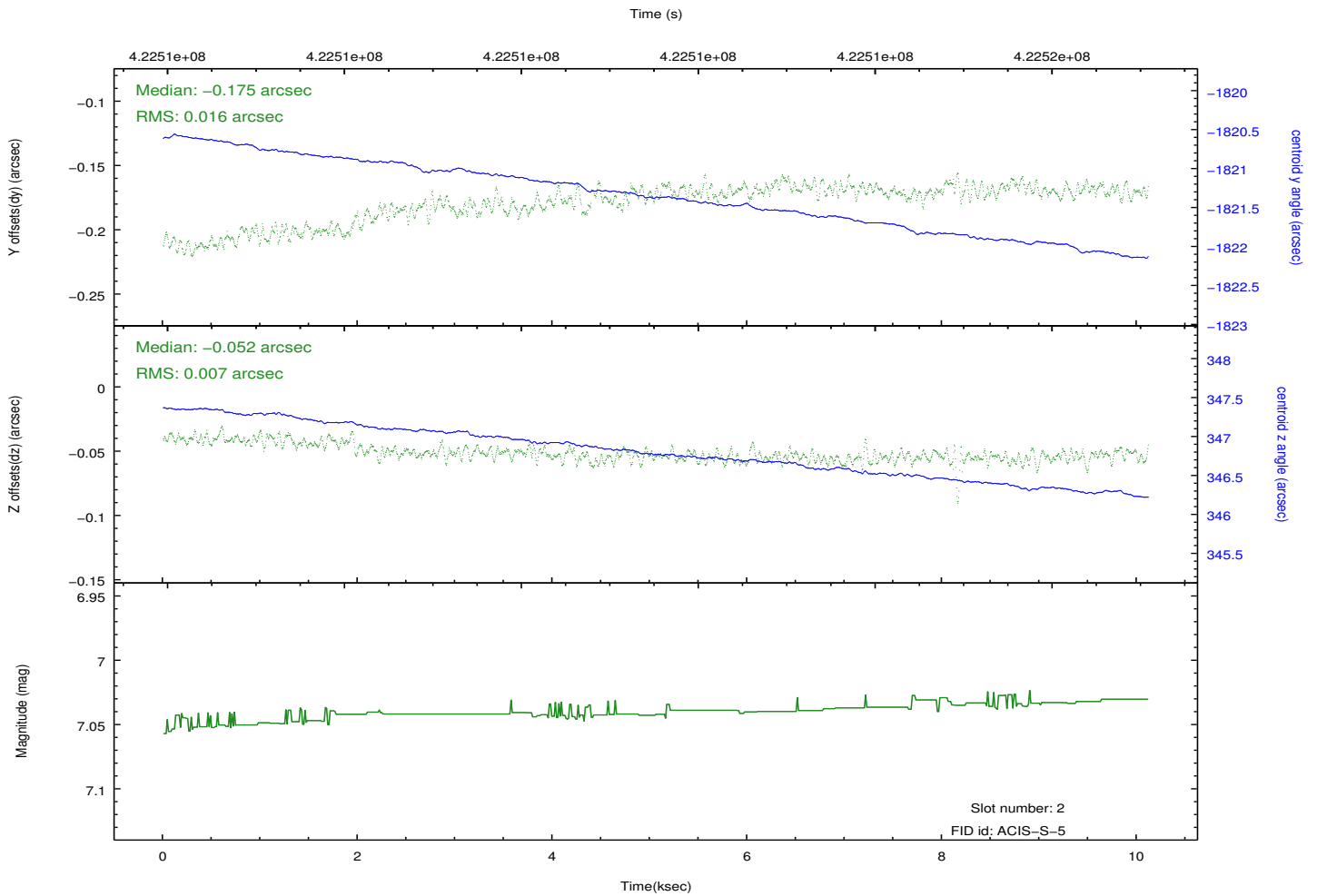
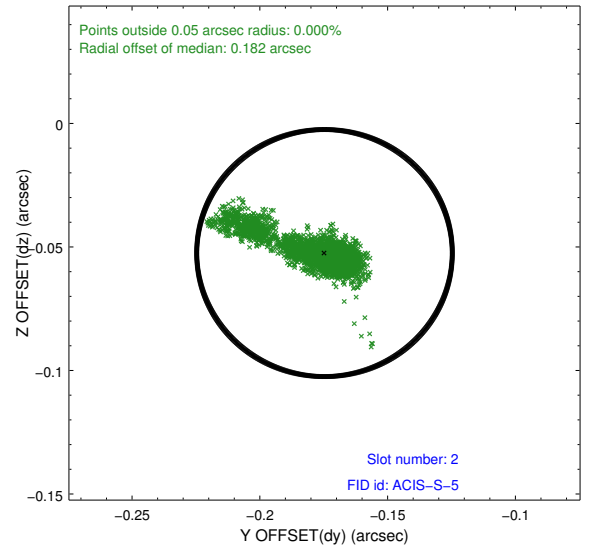
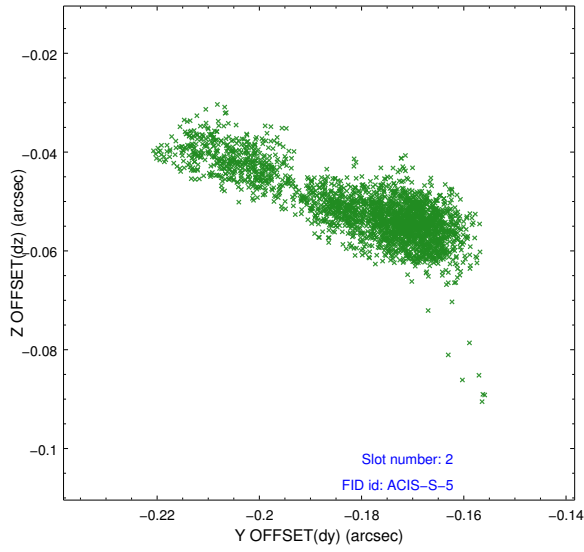
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2012.02.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.027912200689

## 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.