

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 13094 - L2 Version 2  
Chandra X-Ray Center

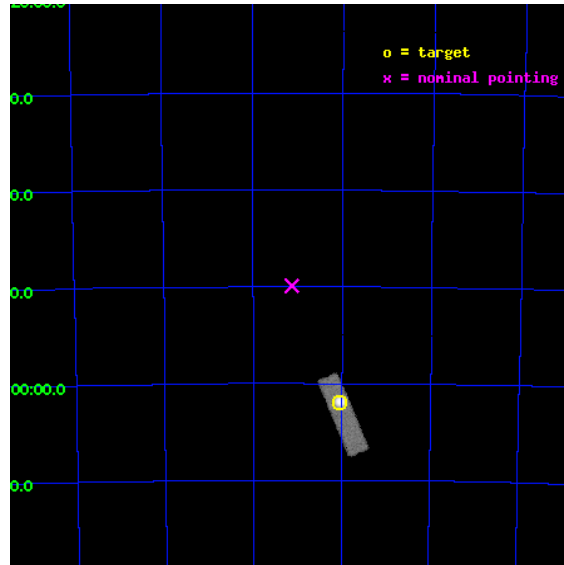
L2 Processing Date : Feb 3 2012

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# 1 Front

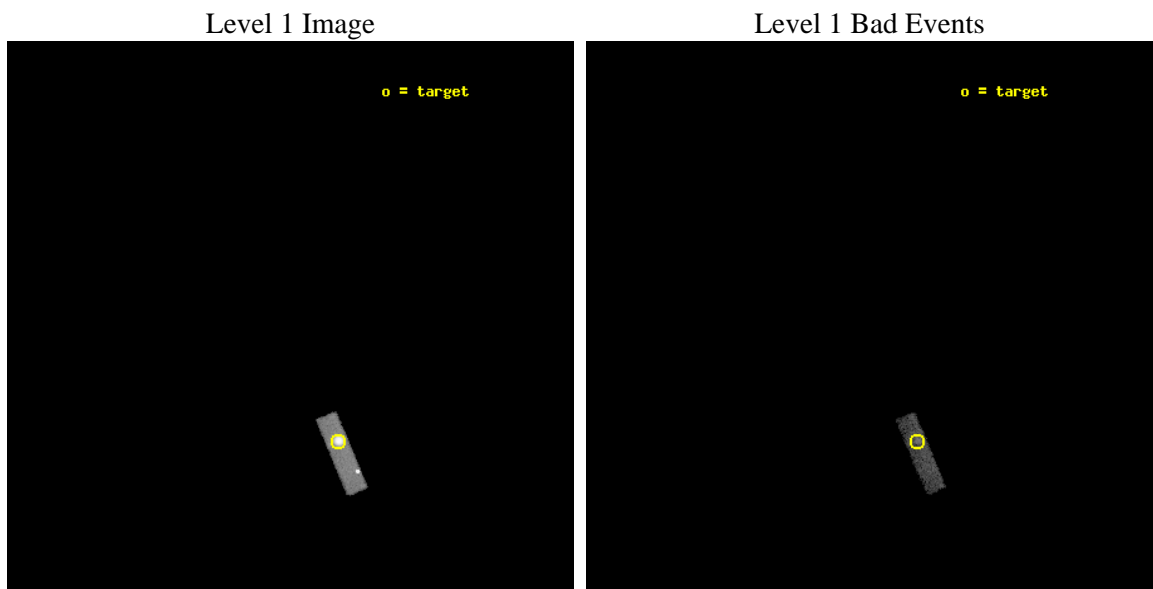
seq_num	590507	Sequence number
obs_id	13094	Observation id
title	AO-12 Calibration Observations of E0102-72	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	E0102-72 S1,-120,13.29,0,0	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	16.01	Observer's specified target RA [deg]
dec_targ	-72.032028	Observer's specified target Dec [deg]
ra_nom	16.282556133712	Nominal RA [deg]
dec_nom	-71.831835764476	Nominal Dec [deg]
roll_nom	246.96966531206	Nominal Roll [deg]
revision	2	Processing version of data
ontime	8028.0001196861	Sum of GTIs [s]
livetime	7636.2599825798	Livetime [s]
ontime5	8028.0001196861	Sum of GTIs [s]
l2events	42374	Number of level 2 events



## 2 OBI

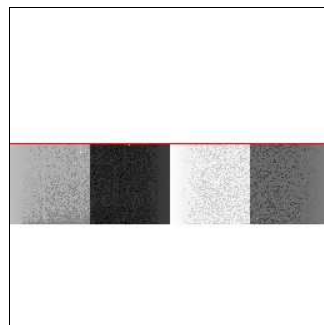
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 5



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	8000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	8028.0001196861	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime5	8028.0001196861	Sum of GTIs [s]
date	2012-02-03T14:17:22	Date and time of file creation	l1events	62743	Number of level 1 events
revision	2	Processing version of data			

### 2.1.4 Events

	<b>ccd 5</b>
level 1 events	62743
rejected events	9187
rejected %	14%

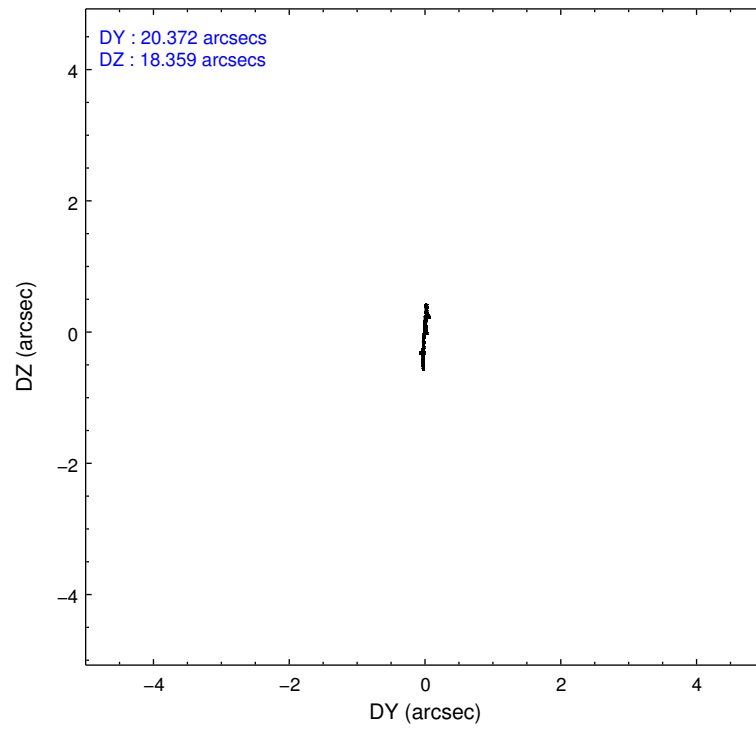
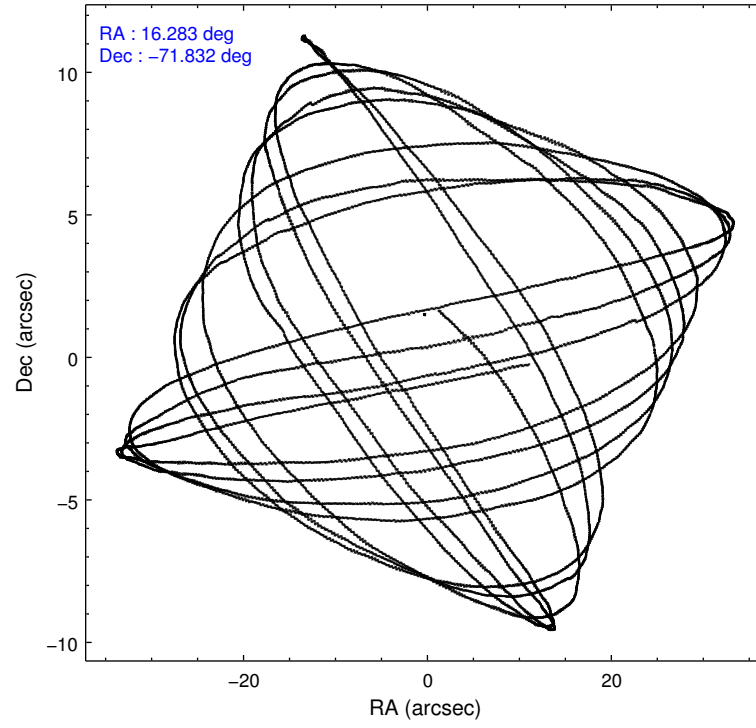
	<b>ccd 5</b>
grade 0 events	24024
	38%
grade 1 events	98
	0%
grade 2 events	14667
	23%
grade 3 events	3860
	6%
grade 4 events	3861
	6%
grade 5 events	2056
	3%
grade 6 events	7157
	11%
grade 7 events	7020
	11%

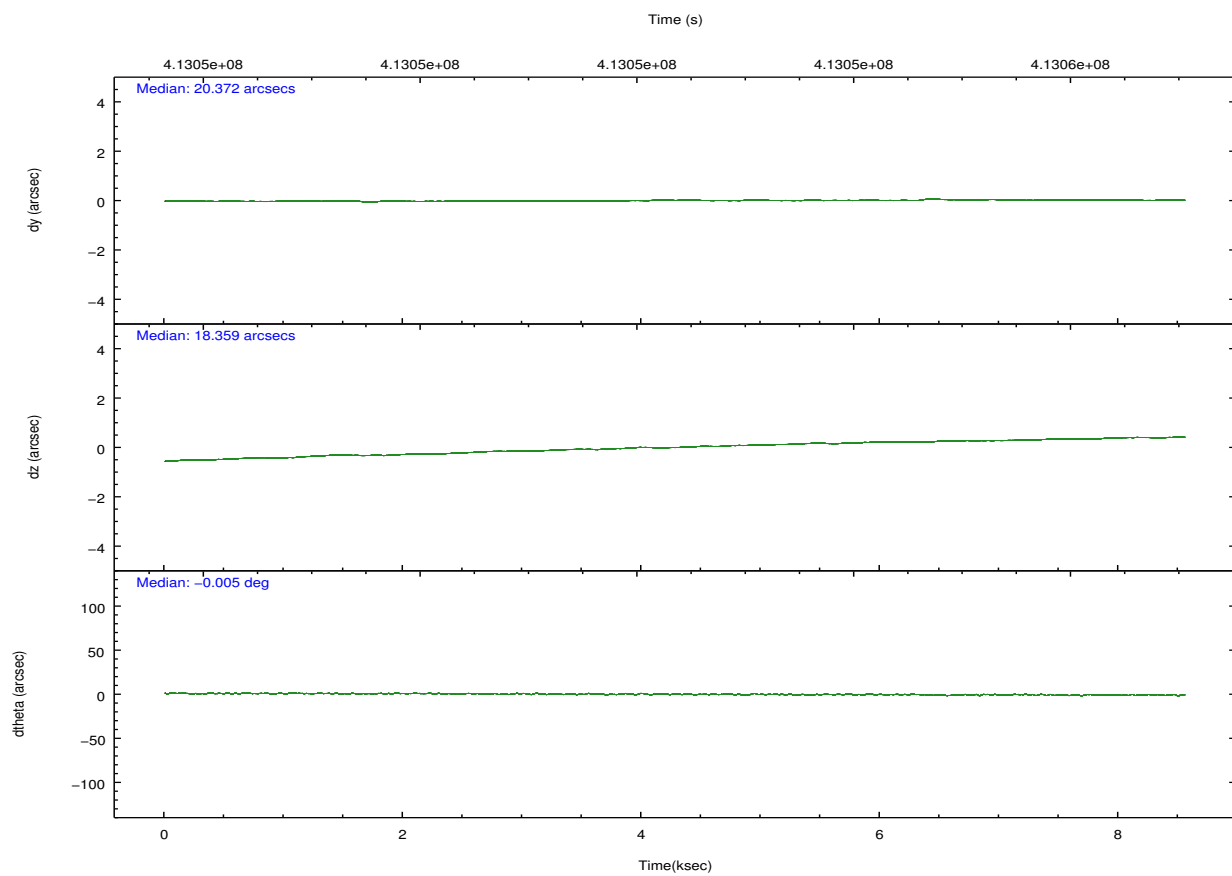
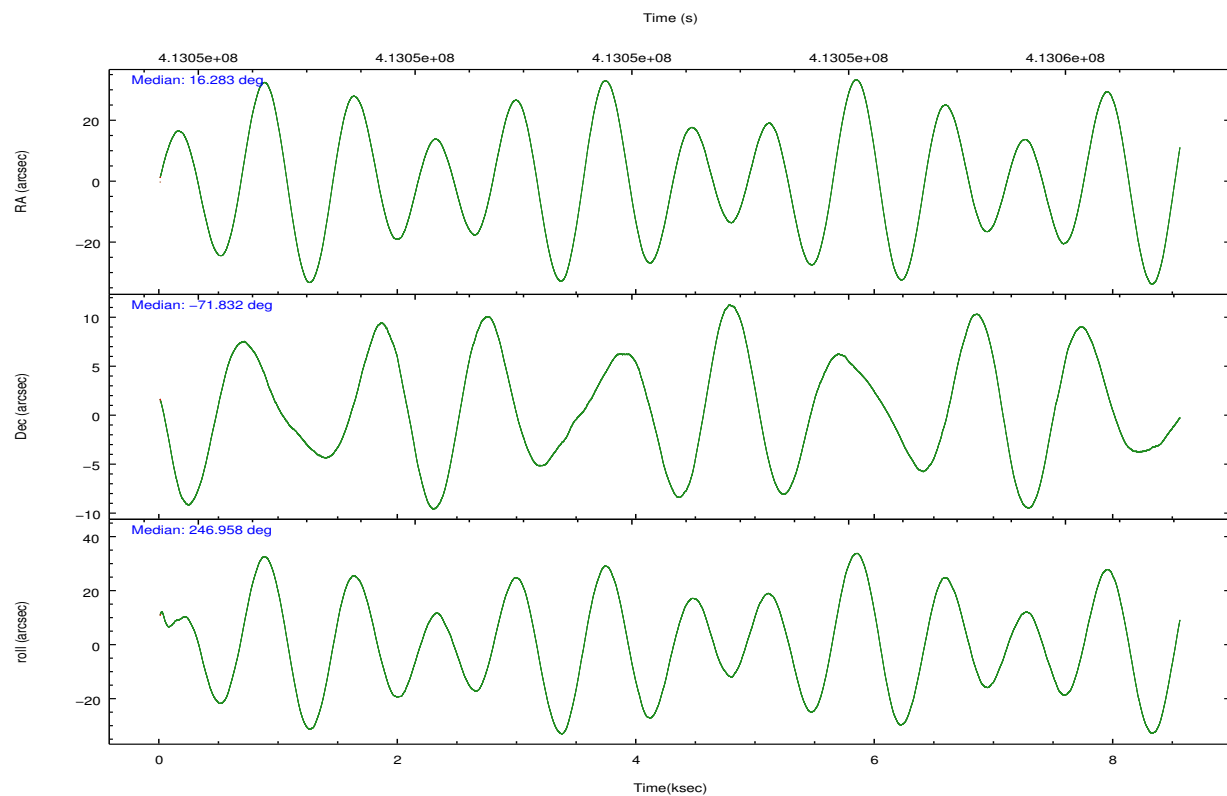


## 2.2 Compared Parameters

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	16.270837	16.28255613371239	Subarray requested	CUSTOM	1/4
[deg] Pointing Dec	-71.804694	-71.83183576447553	Subarray start row	335	335
[deg] Pointing Roll	246.801887	246.9696653120582	Subarray row count	256	256
[s] Window start time (MET)	407548866.184000	407548866.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	420508866.184000	420508866.184000	[s] Primary exposure time	0.000000	0.8
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	413048628.184000	413047884.3434			
Observation start date	2011-02-02T15:42:42	2011-02-02T15:31:24			
[s] Observation end time (MET)	413056628.184000	413057372.76889			
Observation end date	2011-02-02T17:56:02	2011-02-02T18:09:32			
Read mode	TIMED	TIMED			

## 2.3 Aspect



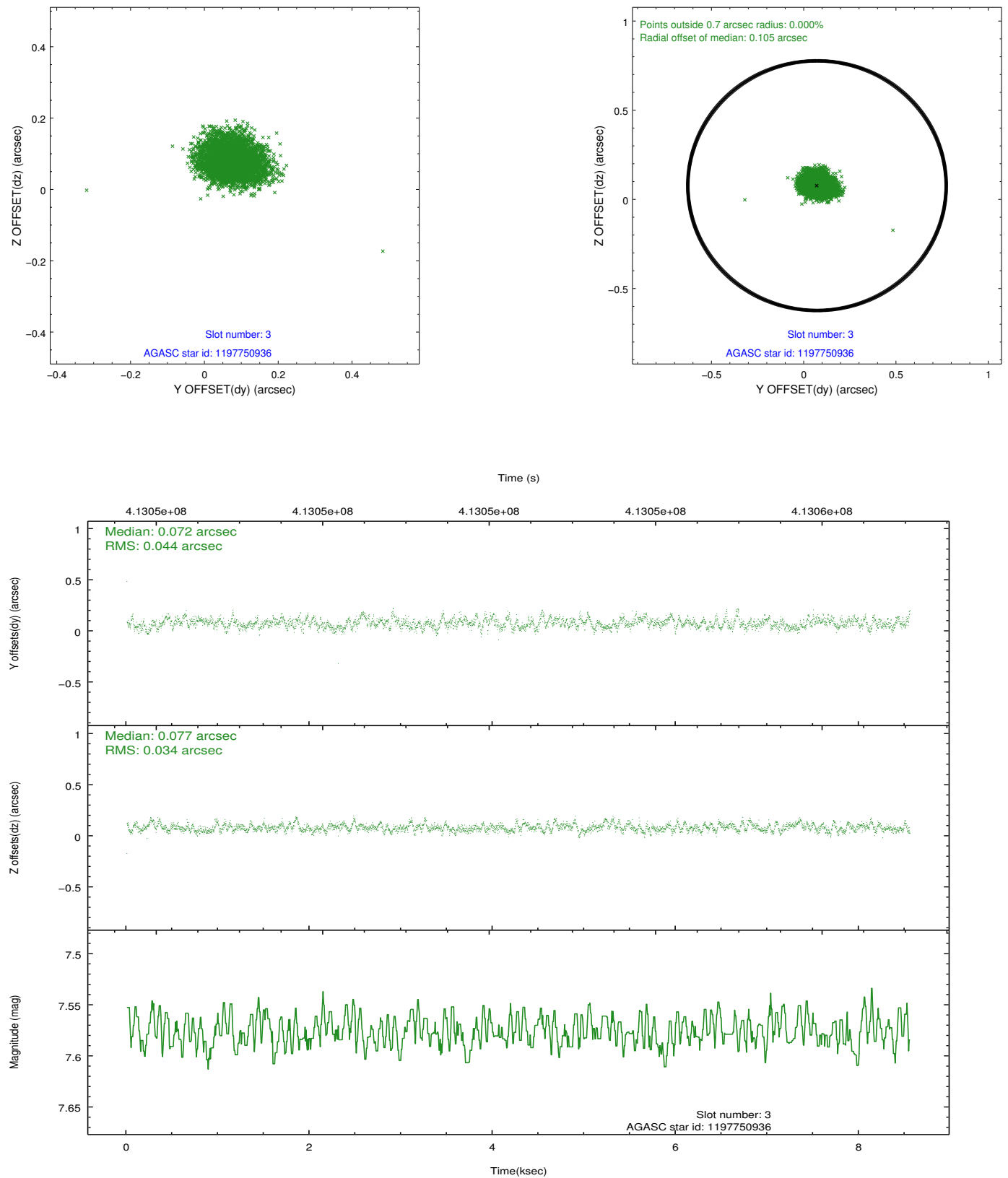


### Slot Statistics

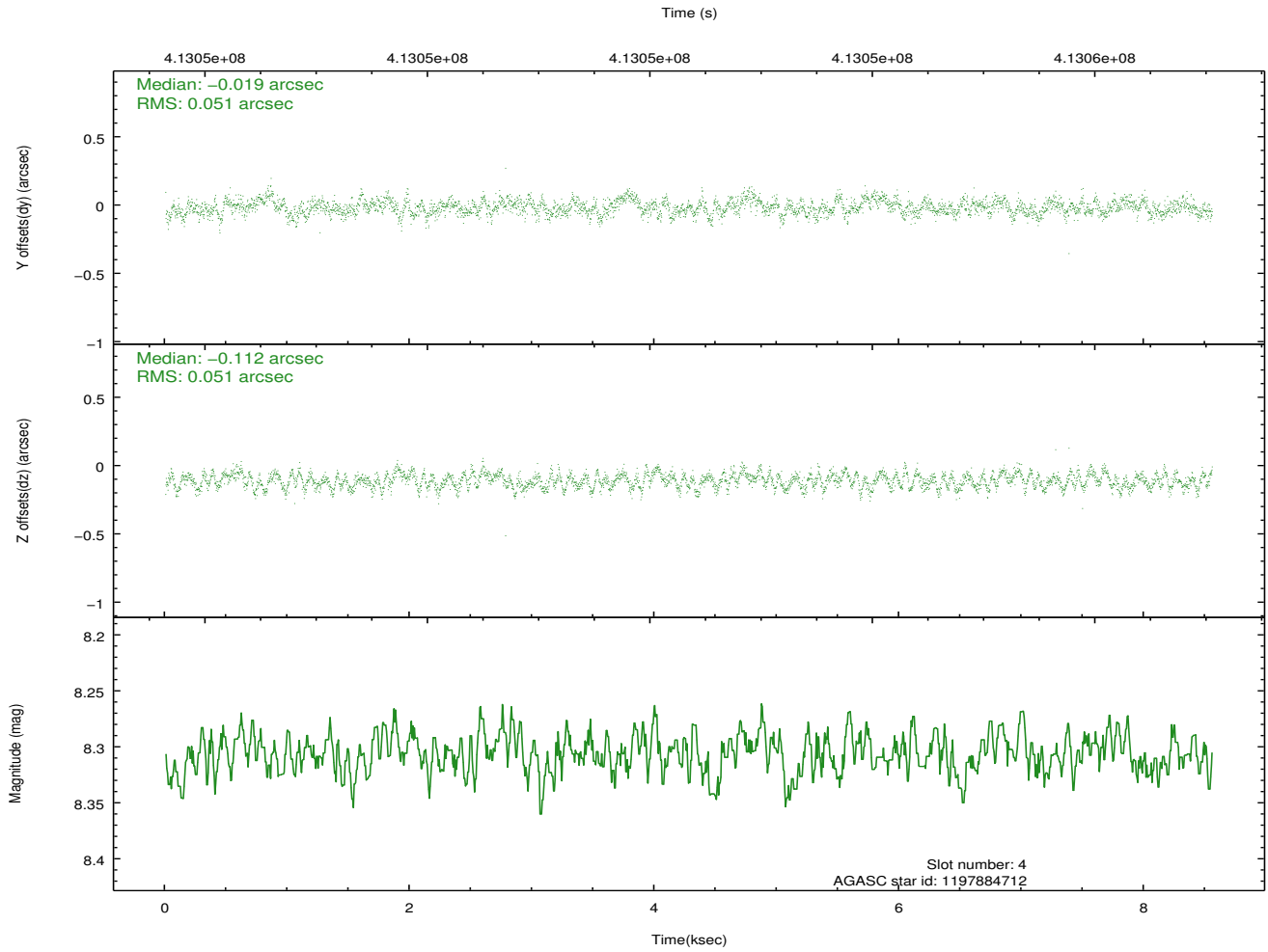
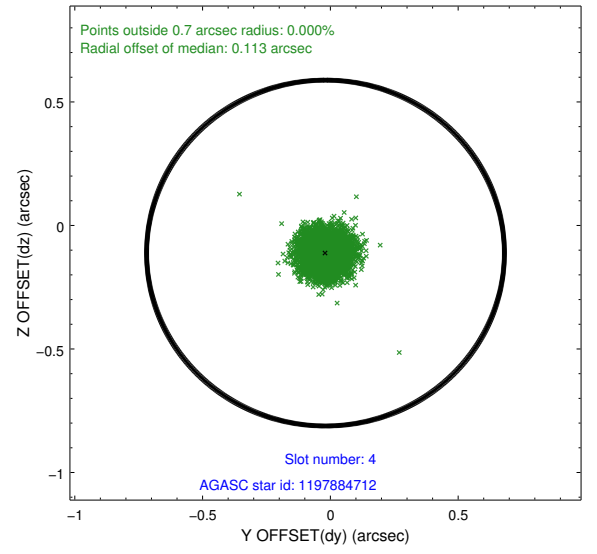
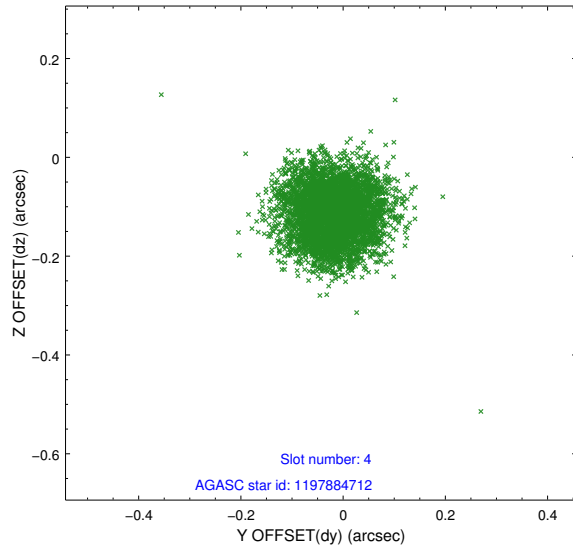
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.01	2087	0.067	-0.008	0.012	0.025	0.000000	0.000000	922.61	-1735.41
1	FID	ACIS-S-5	7.05	2087	-0.123	0.053	0.007	0.011	0.000000	0.000000	-1826.21	161.56
2	FID	ACIS-S-6	7.16	2087	0.034	-0.032	0.010	0.020	0.000000	0.000000	387.44	806.15
3	GUIDE	1197750936	7.58	4173	0.072	0.077	0.058	0.096	15.387940	-71.549550	-440.43	-1283.31
4	GUIDE	1197884712	8.31	4172	-0.019	-0.112	0.077	0.122	16.087398	-72.252690	1561.91	450.26
5	GUIDE	1197885328	7.25	4172	0.095	0.202	0.079	0.122	16.283090	-71.733943	-239.89	-86.64
6	GUIDE	1198283128	7.76	4173	-0.115	-0.040	0.075	0.125	17.272580	-72.642428	2356.02	2180.77
7	GUIDE	1197885104	9.34	4165	-0.034	-0.131	0.125	0.204	17.845067	-72.189368	611.96	2147.83

## 2.4 Star Slots

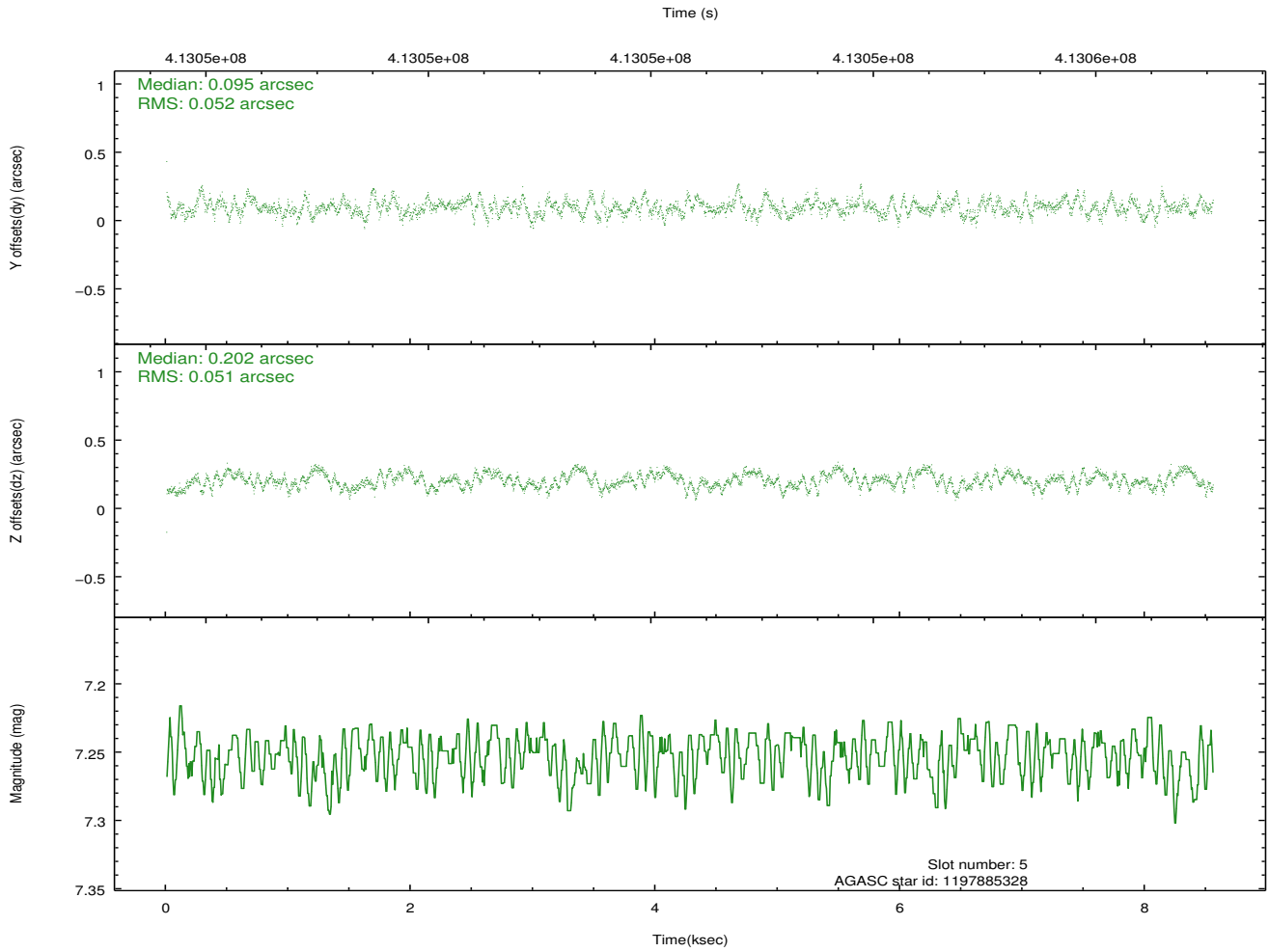
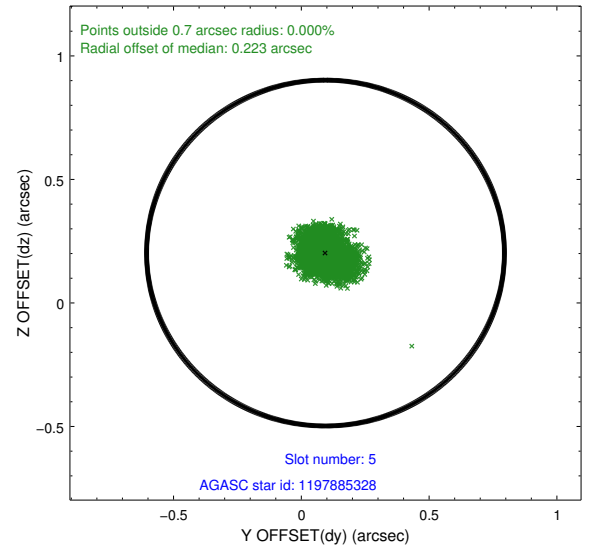
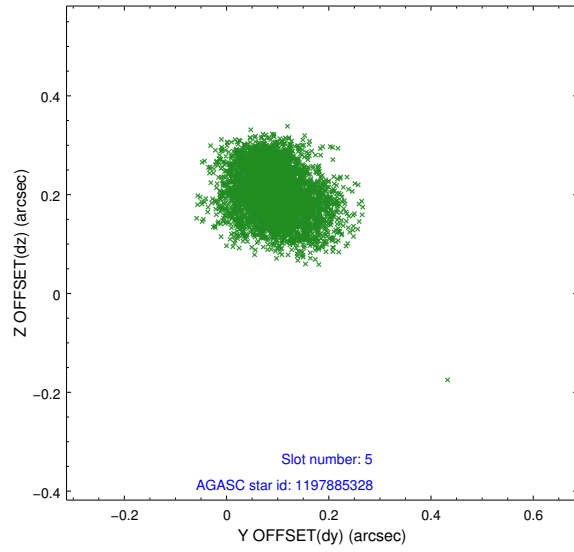
### 2.4.1 Slot 3



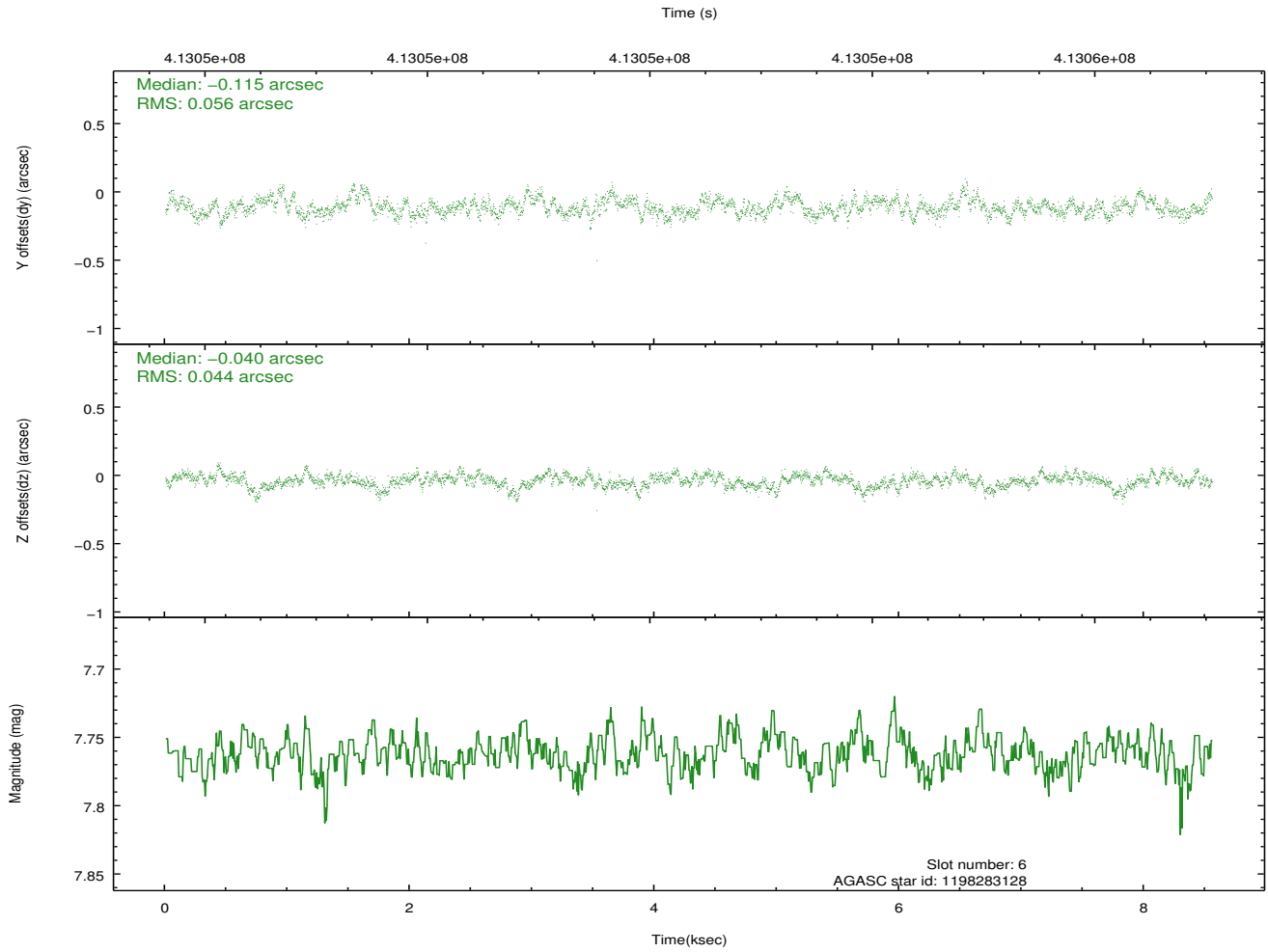
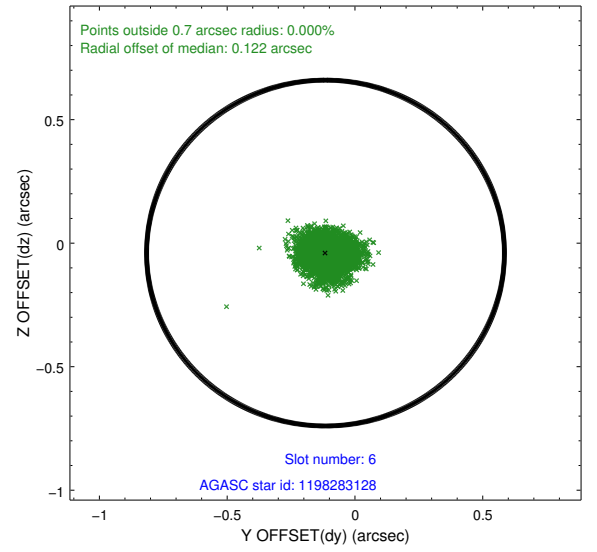
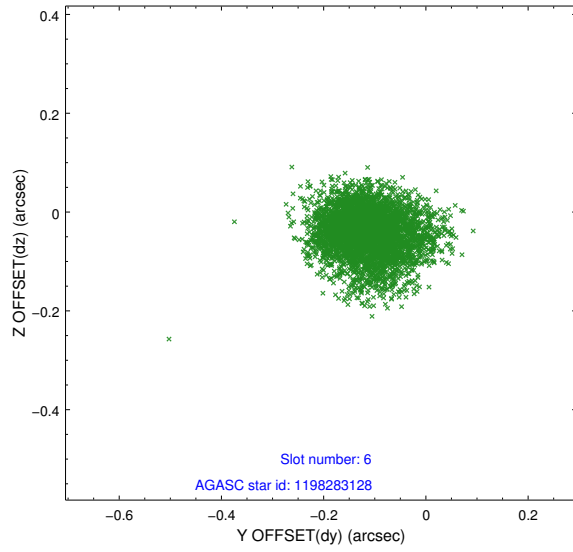
## 2.4.2 Slot 4



### 2.4.3 Slot 5

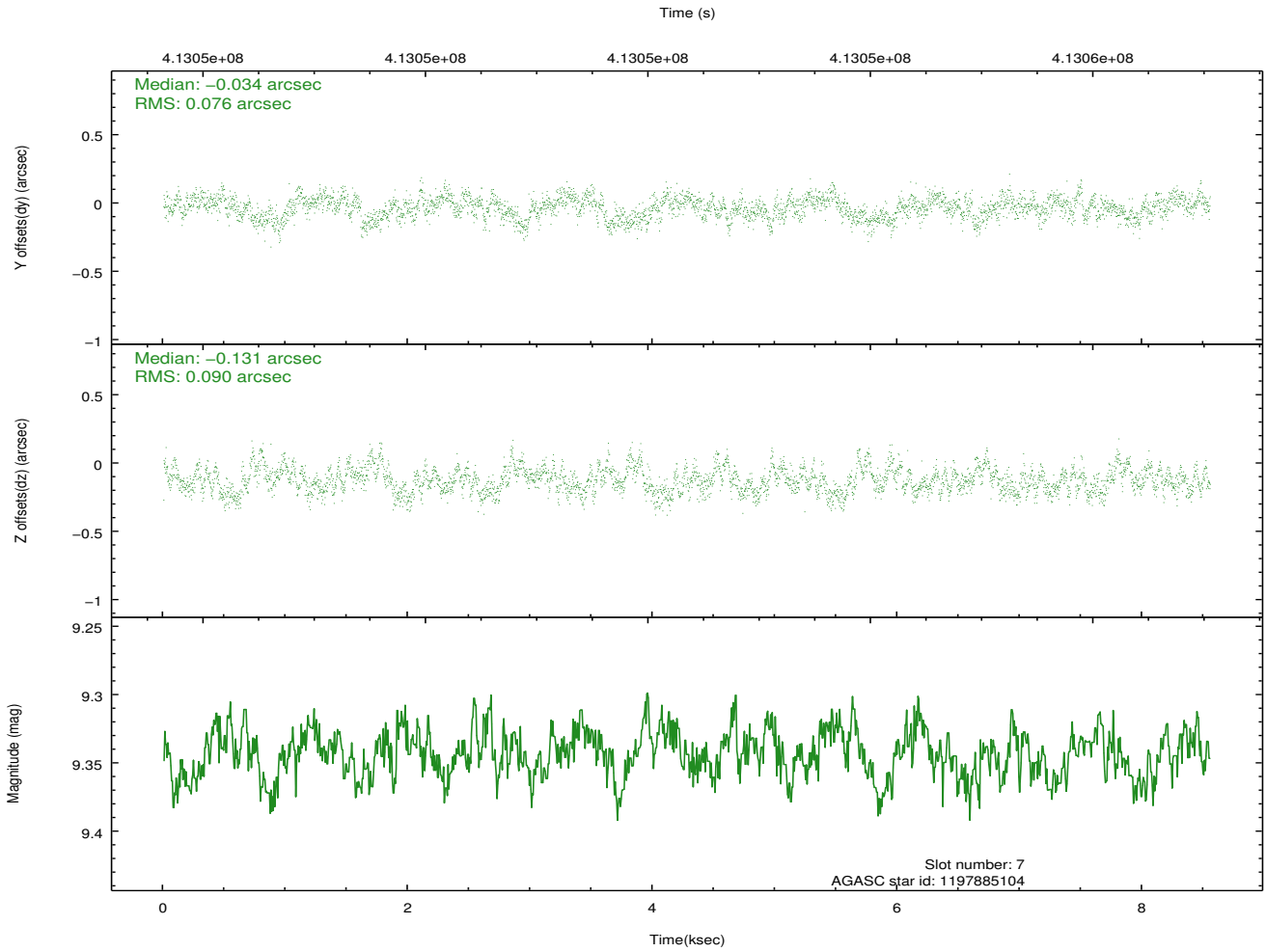
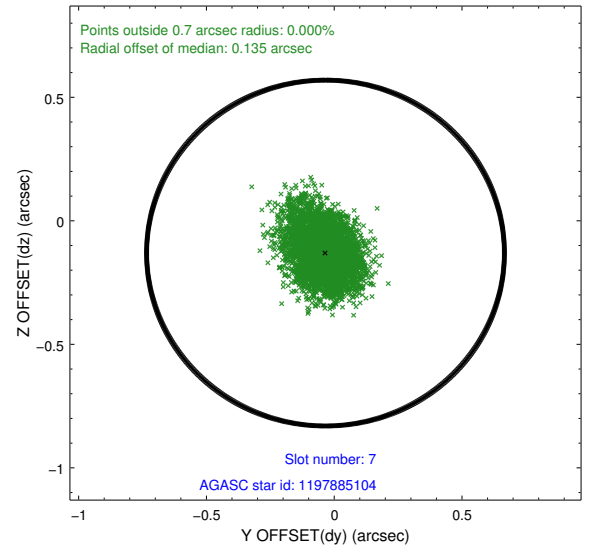
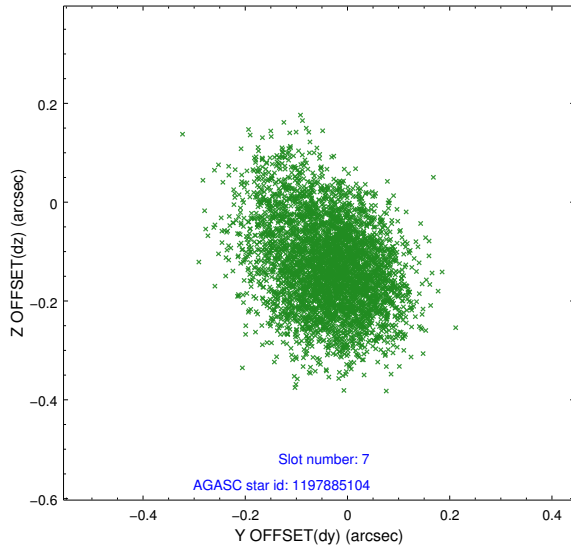


## 2.4.4 Slot 6



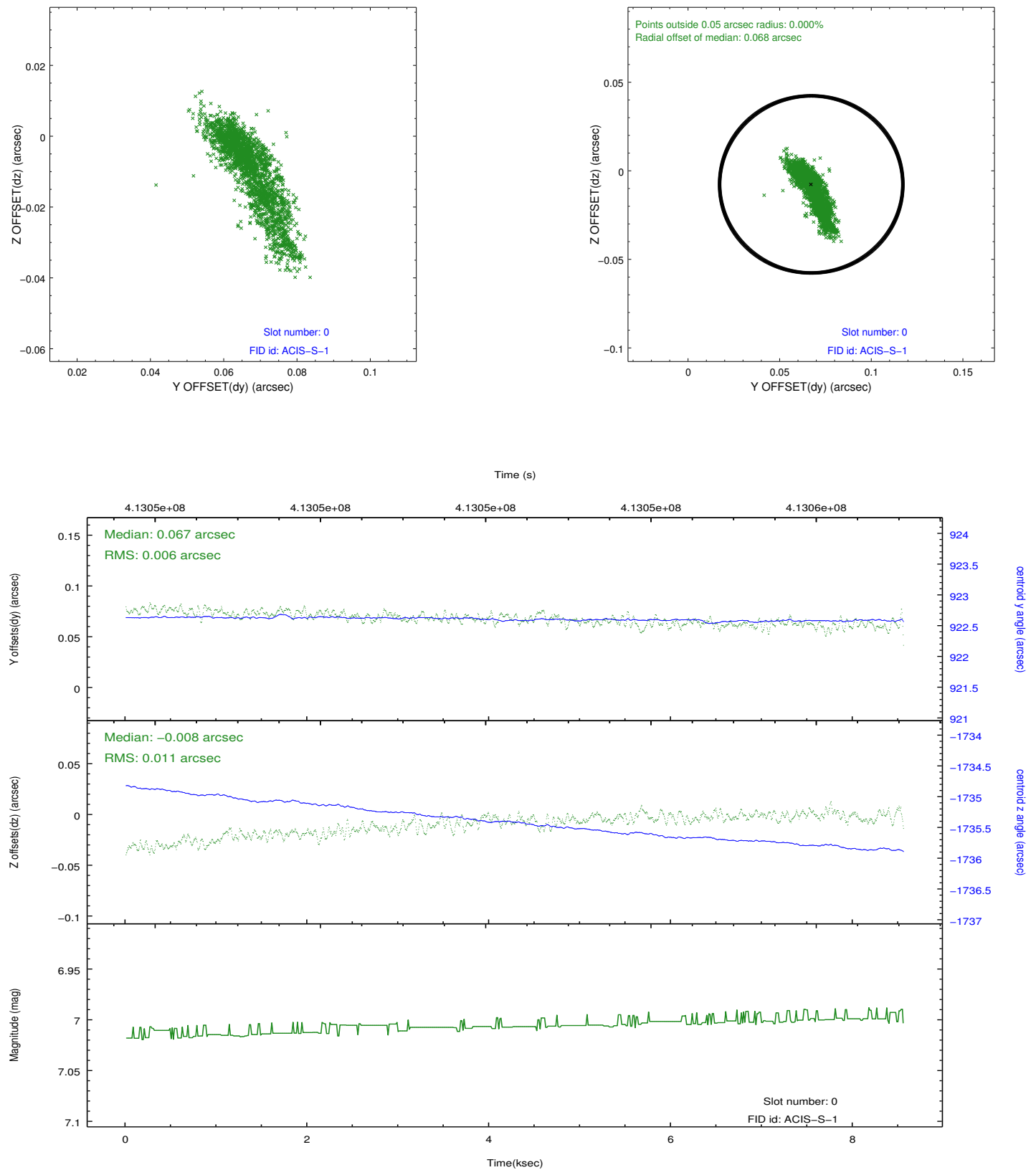


## 2.4.5 Slot 7

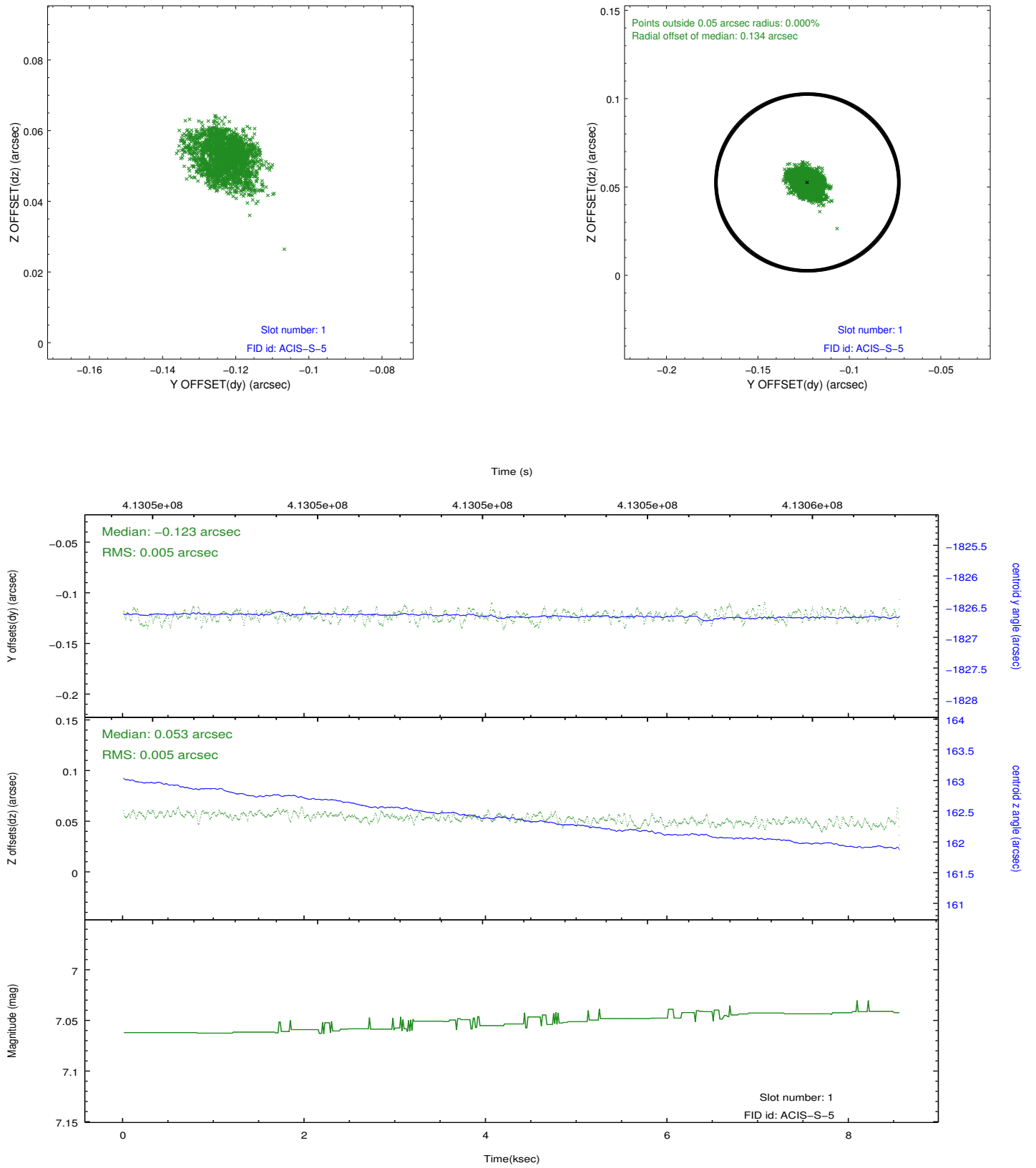


## 2.5 FID Slots

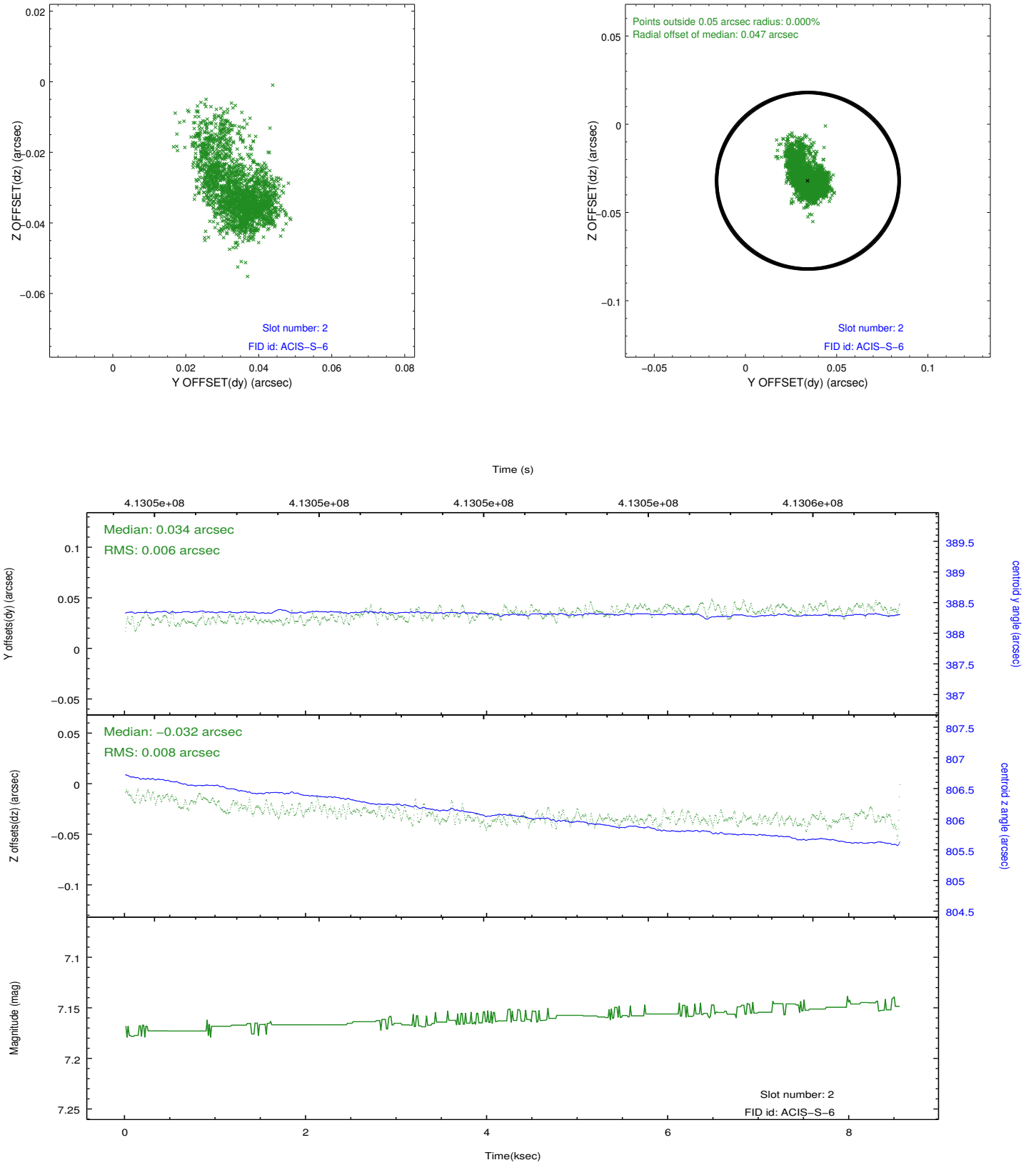
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.02.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.0280001196861

## 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.

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Window constraint met.