

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 13093 - L2 Version 2  
Chandra X-Ray Center

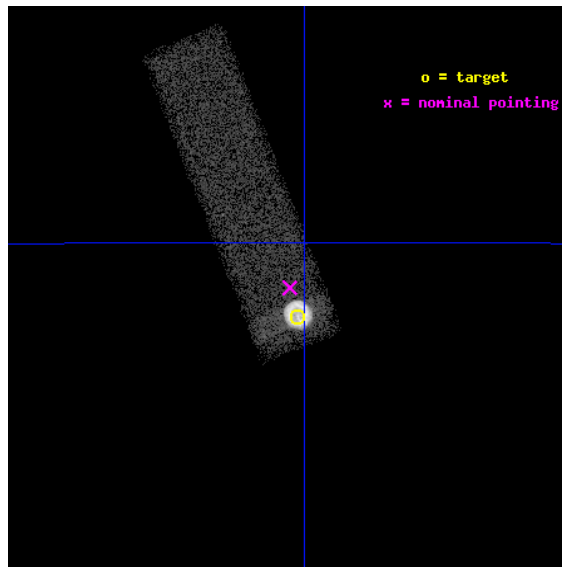
L2 Processing Date : Feb 3 2012

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>A</b>	<b>Summary</b>	<b>17</b>
A.1	Status . . . . .	17
A.2	Comments . . . . .	17

# 1 Front

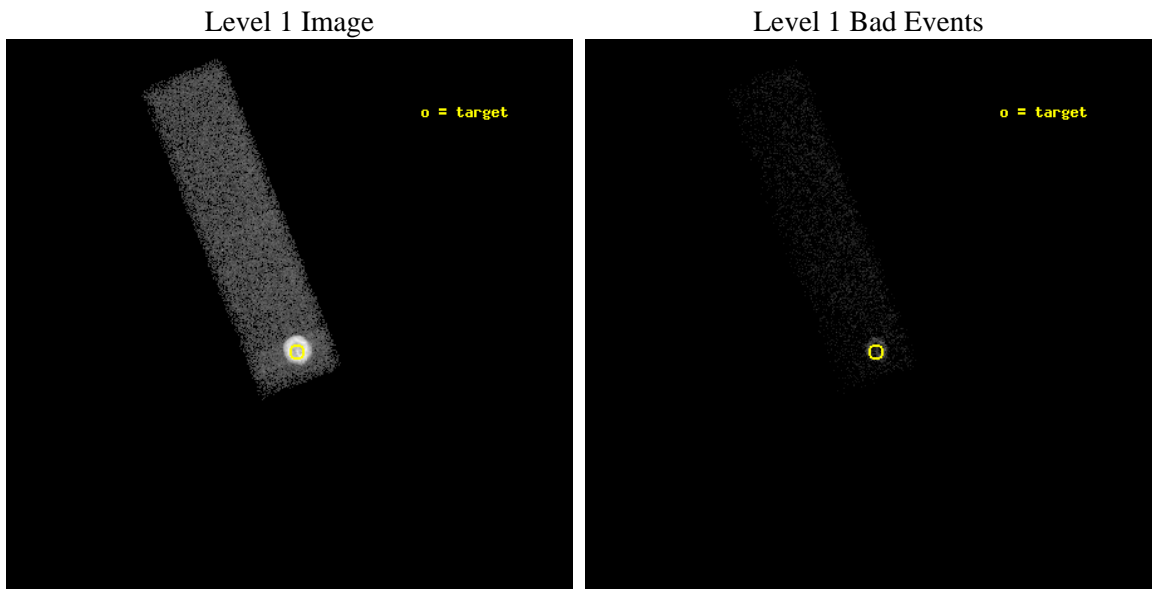
seq_num	590506	Sequence number
obs_id	13093	Observation id
title	AO-12 Calibration Observations of E0102-72	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	E0102-72 S3,-120,1,0,0	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	16.01	Observer's specified target RA [deg]
dec_targ	-72.032028	Observer's specified target Dec [deg]
ra_nom	16.020140835619	Nominal RA [deg]
dec_nom	-72.019776141655	Nominal Dec [deg]
roll_nom	248.38343308441	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20025.600298464	Sum of GTIs [s]
livetime	19048.416530452	Livetime [s]
ontime7	20025.600298464	Sum of GTIs [s]
l2events	130192	Number of level 2 events



## 2 OBI

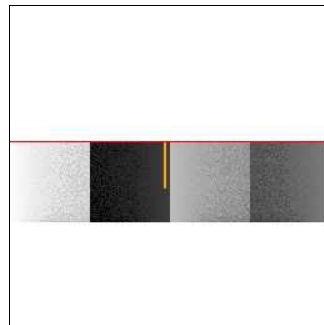
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	20025.600298464	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime7	20025.600298464	Sum of GTIs [s]
date	2012-02-03T14:44:41	Date and time of file creation	l1events	149046	Number of level 1 events
revision	2	Processing version of data			

### 2.1.4 Events

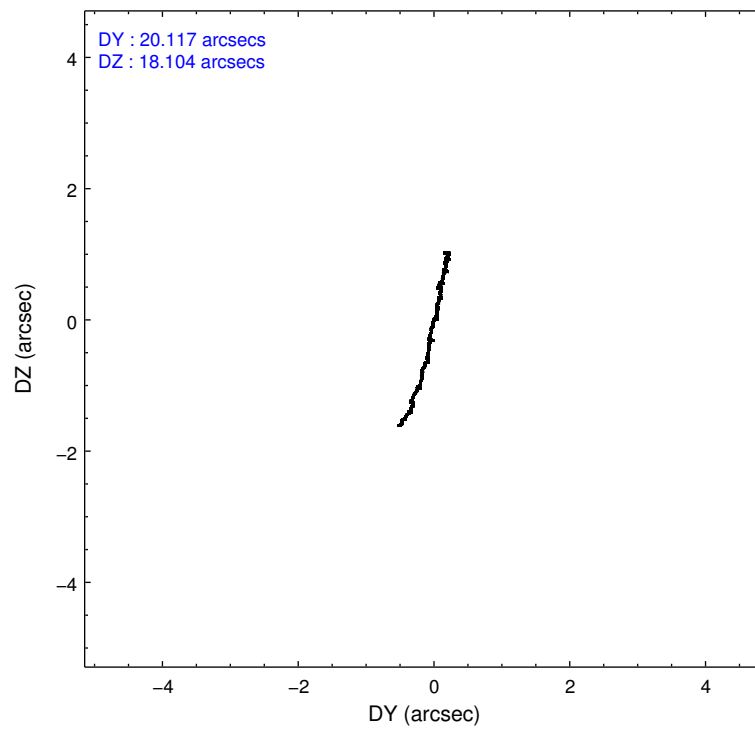
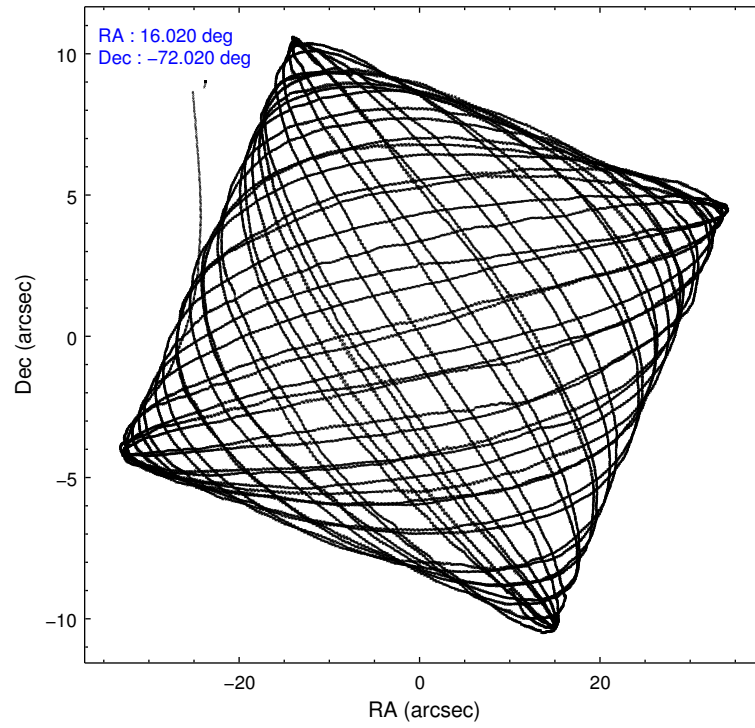
	<b>ccd 7</b>
level 1 events	149046
rejected events	18121
rejected %	12%

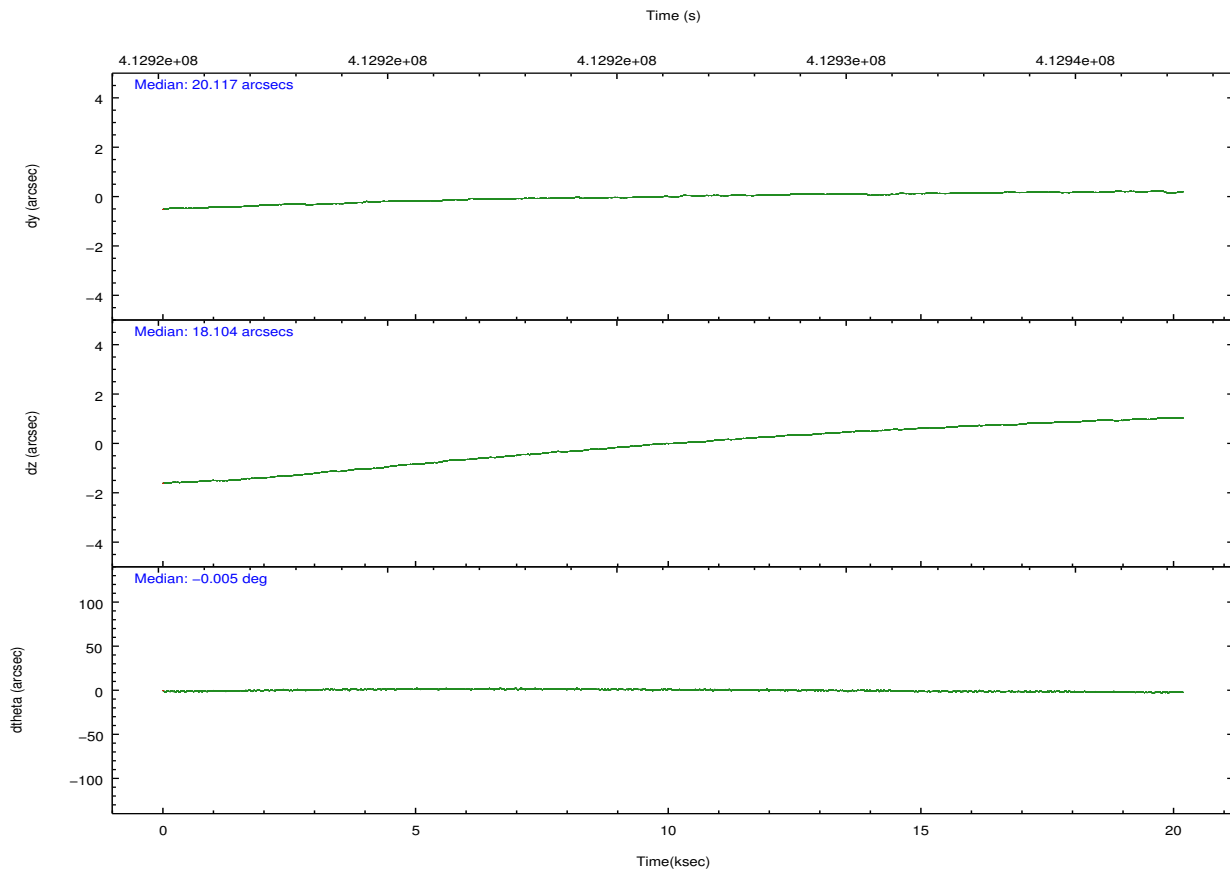
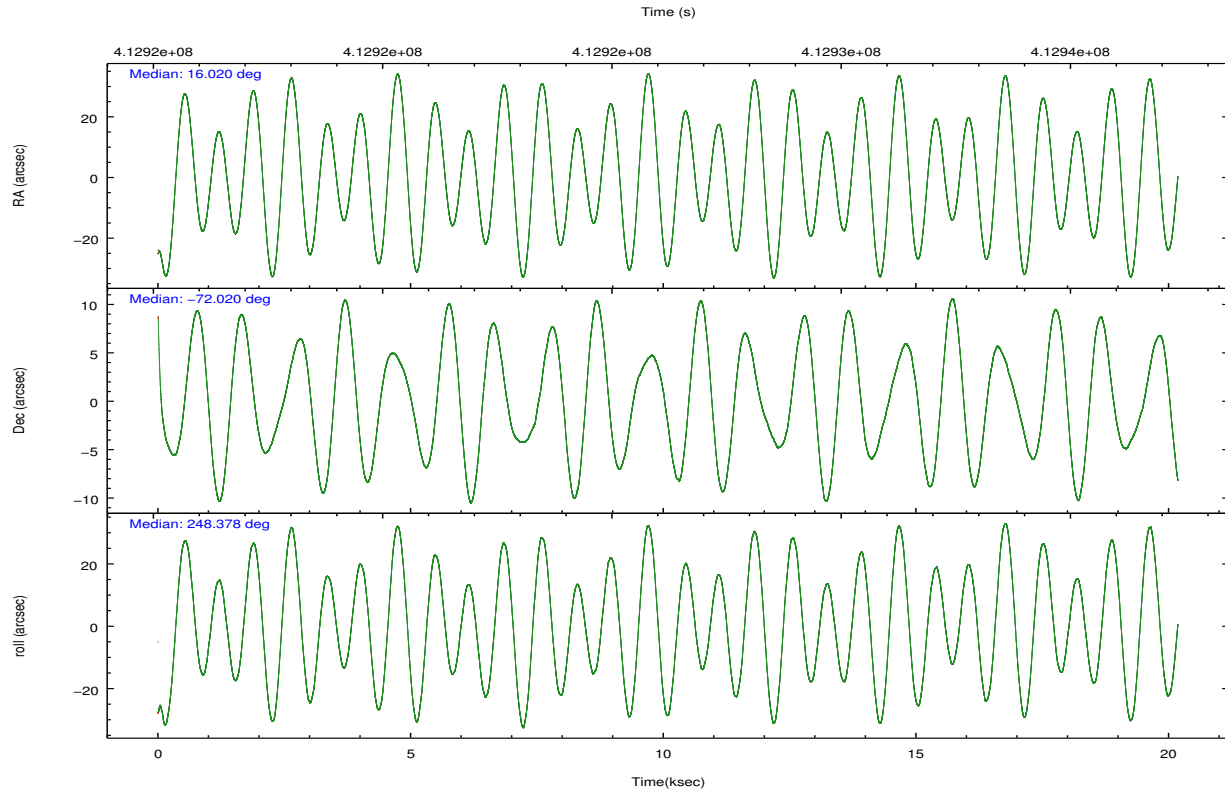
	<b>ccd 7</b>
grade 0 events	36082
	24%
grade 1 events	236
	0%
grade 2 events	35976
	24%
grade 3 events	16191
	10%
grade 4 events	15657
	10%
grade 5 events	4867
	3%
grade 6 events	27027
	18%
grade 7 events	13010
	8%

## 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	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	16.006157	16.02014083561903	Subarray requested	CUSTOM	1/4
[deg] Pointing Dec	-71.992789	-72.01977614165536	Subarray start row	335	335
[deg] Pointing Roll	248.213511	248.3834330844081	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	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	412916314.184000	412915276.49903			
Observation start date	2011-02-01T02:57:28	2011-02-01T02:41:16			
[s] Observation end time (MET)	412936314.184000	412936448.38763			
Observation end date	2011-02-01T08:30:48	2011-02-01T08:34:08			
Read mode	TIMED	TIMED			

## 2.3 Aspect



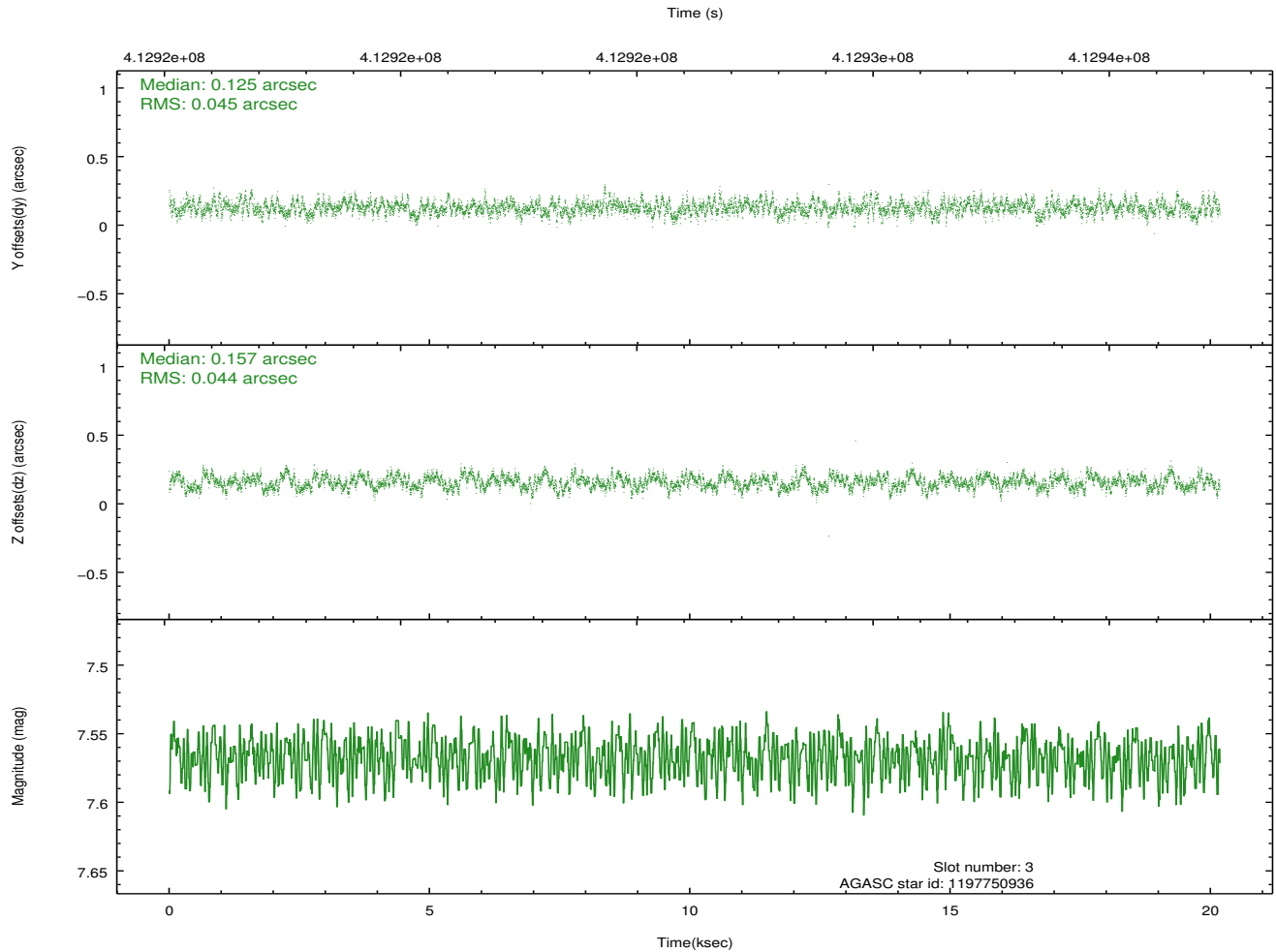
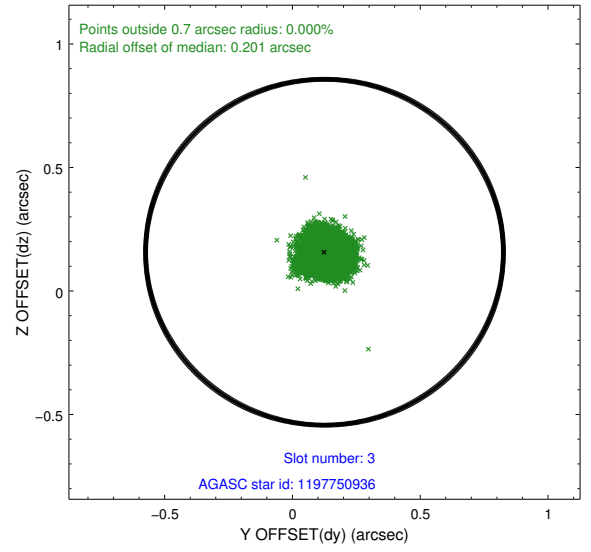
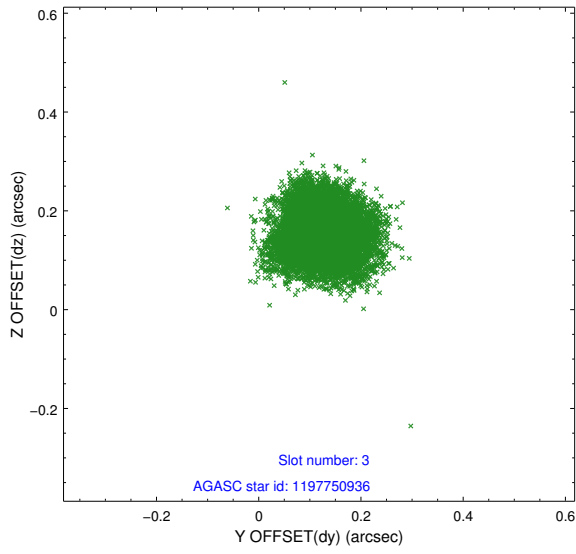


### Slot Statistics

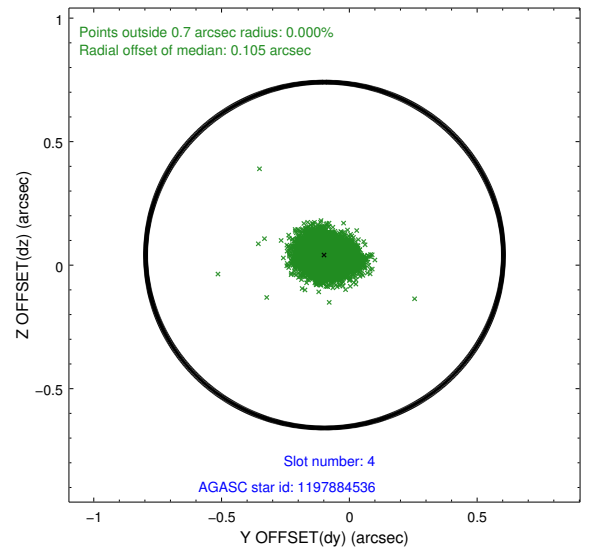
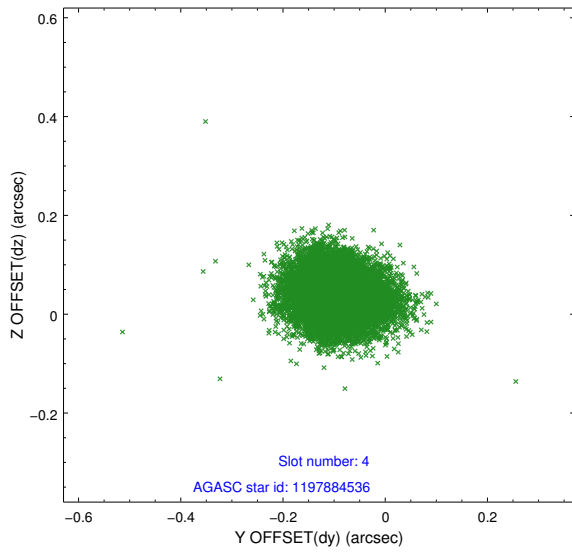
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.98	4921	0.078	-0.032	0.032	0.071	0.000000	0.000000	922.92	-1735.12
1	FID	ACIS-S-5	7.03	4921	-0.141	0.049	0.012	0.020	0.000000	0.000000	-1826.18	162.36
2	FID	ACIS-S-6	7.14	4923	0.045	-0.007	0.025	0.075	0.000000	0.000000	388.26	806.47
3	GUIDE	1197750936	7.57	9837	0.125	0.157	0.068	0.108	15.387940	-71.549550	-1216.14	-1244.28
4	GUIDE	1197884536	8.49	9844	-0.097	0.041	0.069	0.113	17.160729	-71.835289	-996.01	997.47
5	GUIDE	1197884712	8.29	9839	0.035	-0.063	0.064	0.108	16.087398	-72.252690	835.89	430.58
6	GUIDE	1198283128	7.76	9842	-0.182	-0.056	0.068	0.106	17.272580	-72.642428	1680.11	2136.74
7	GUIDE	1197885104	9.36	9834	0.117	-0.084	0.120	0.189	17.845067	-72.189368	-64.49	2154.42

## 2.4 Star Slots

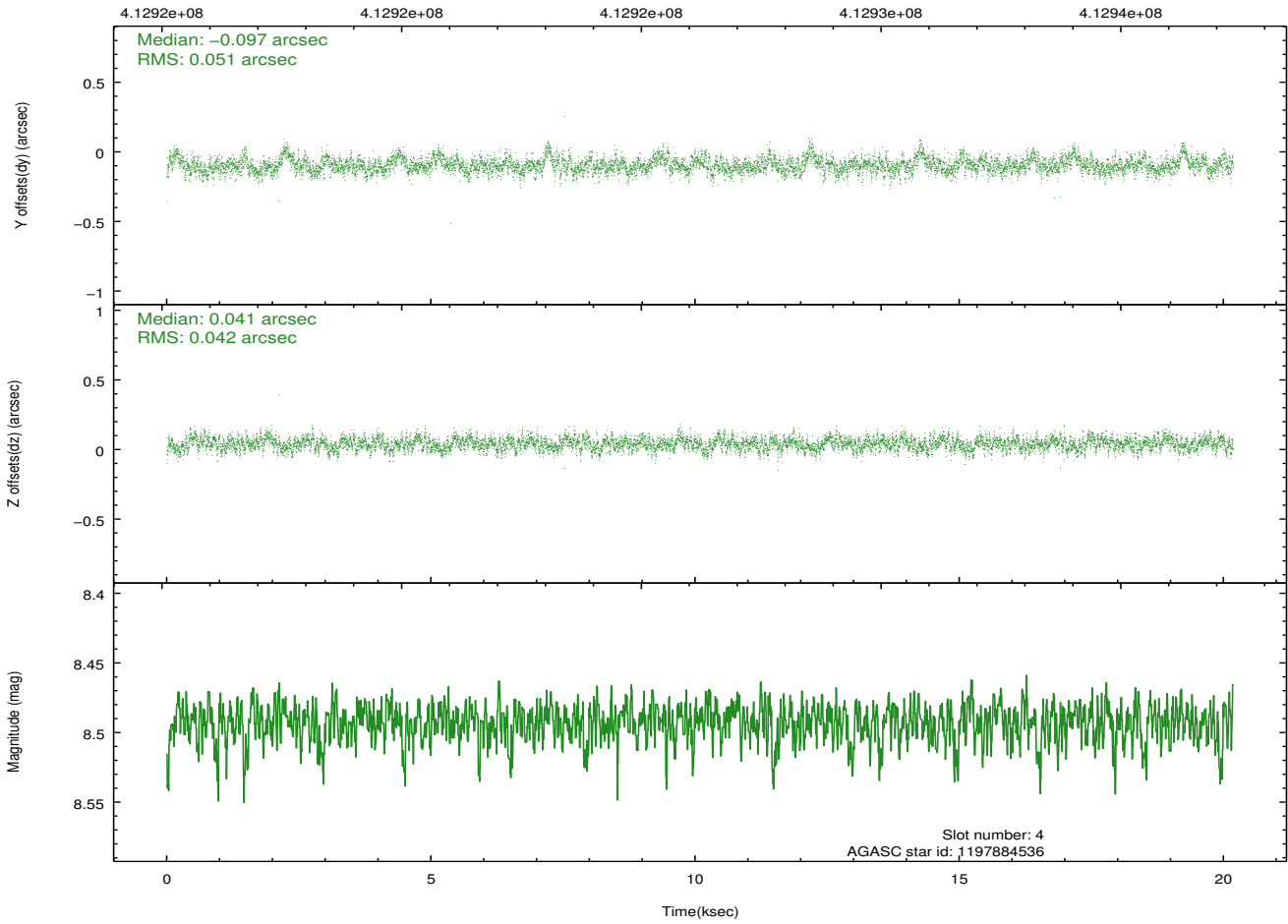
### 2.4.1 Slot 3



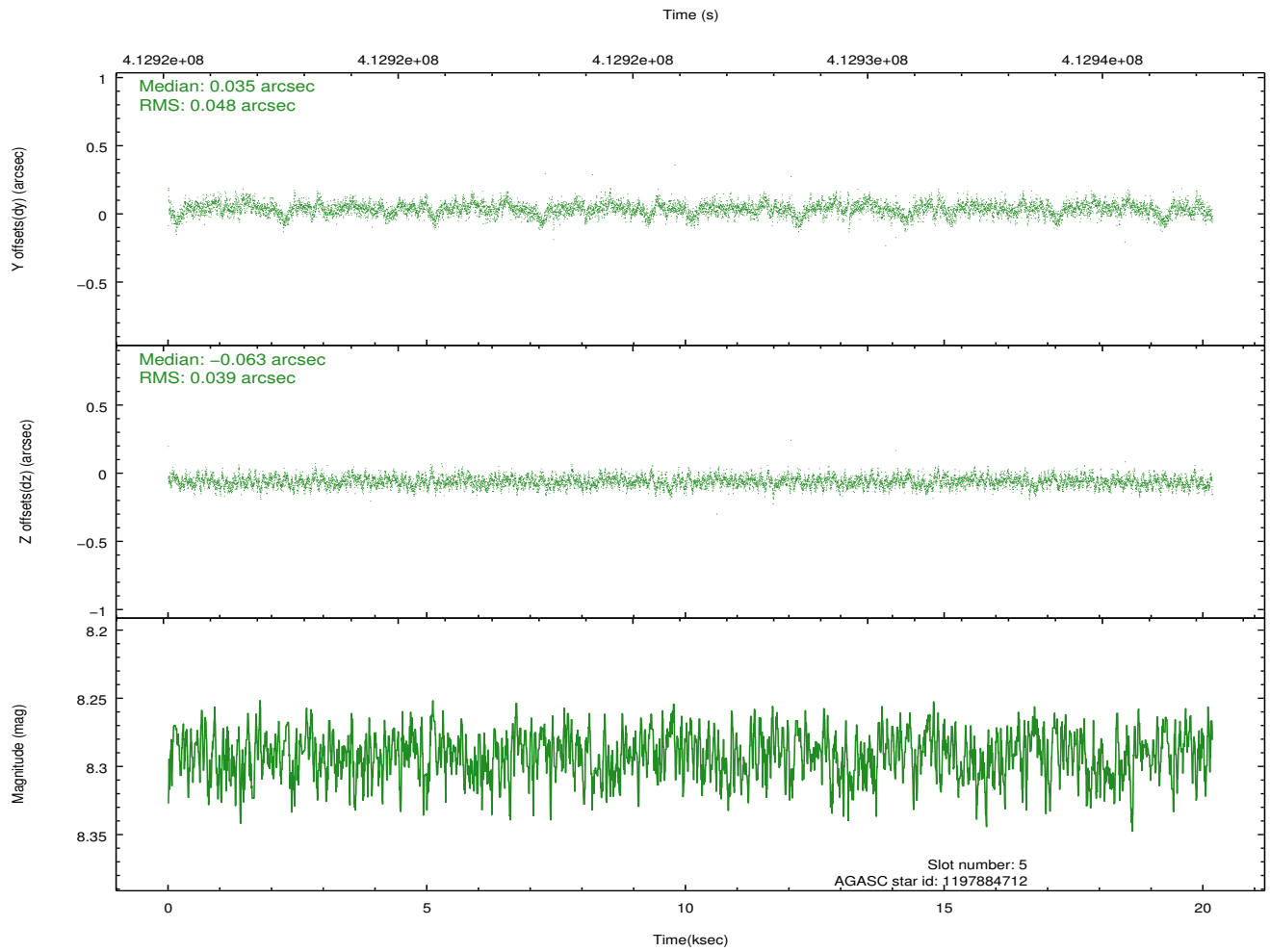
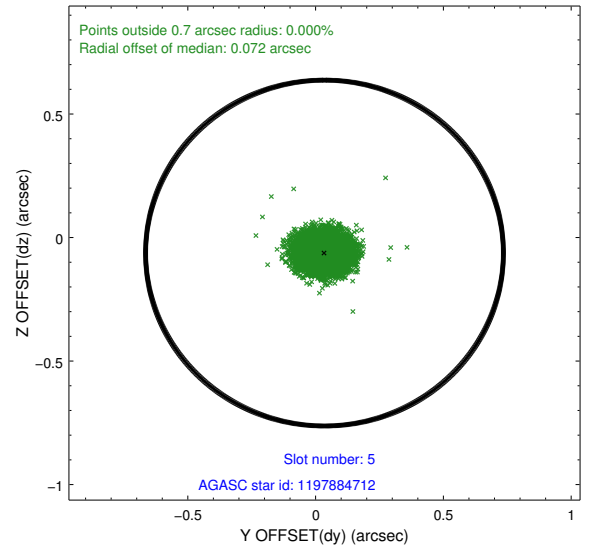
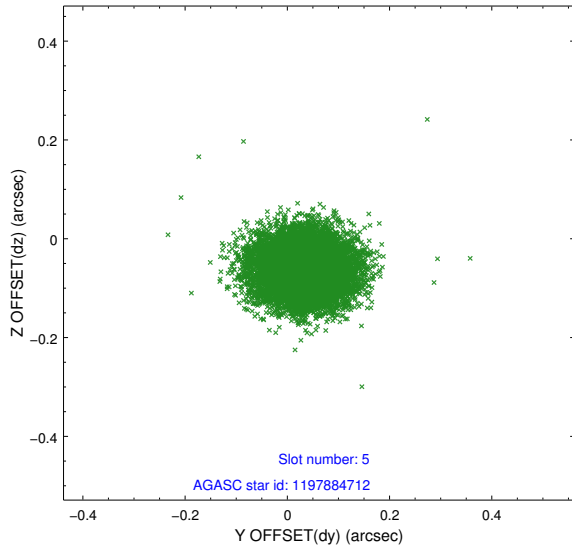
## 2.4.2 Slot 4



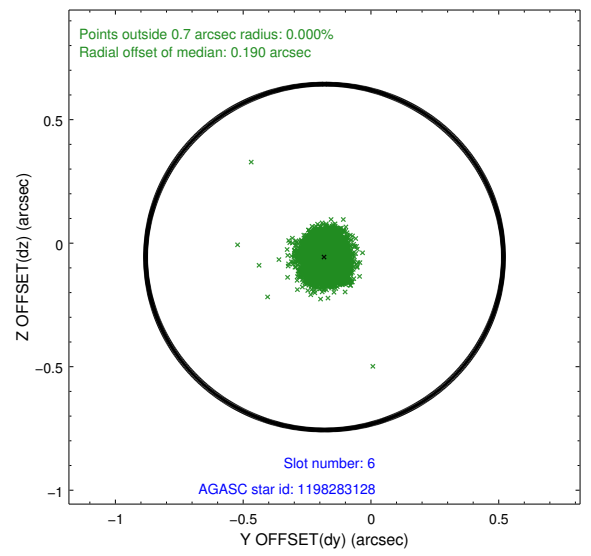
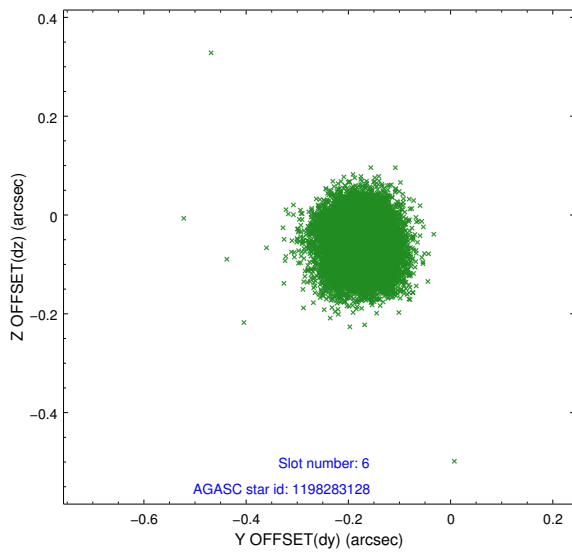
Time (s)



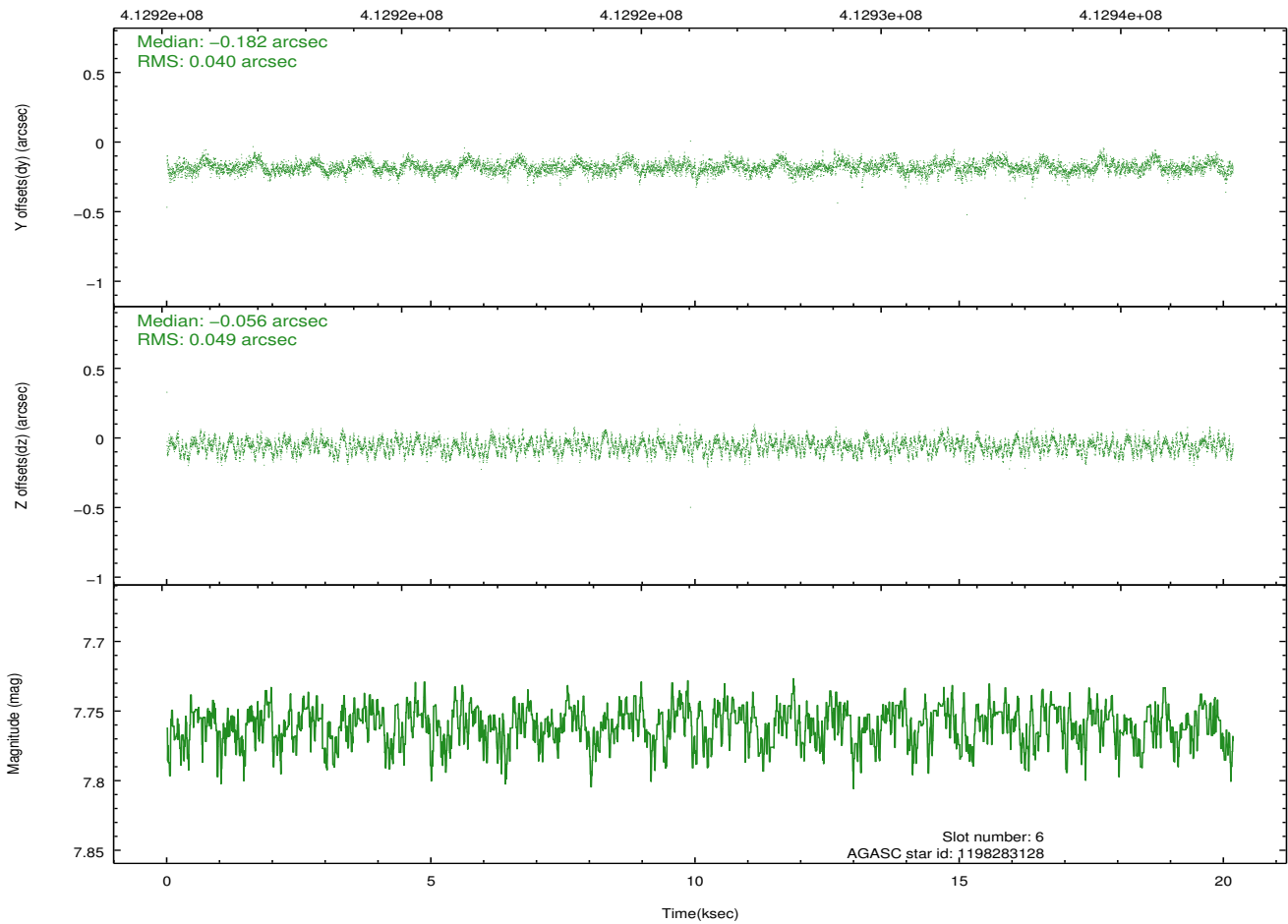
### 2.4.3 Slot 5



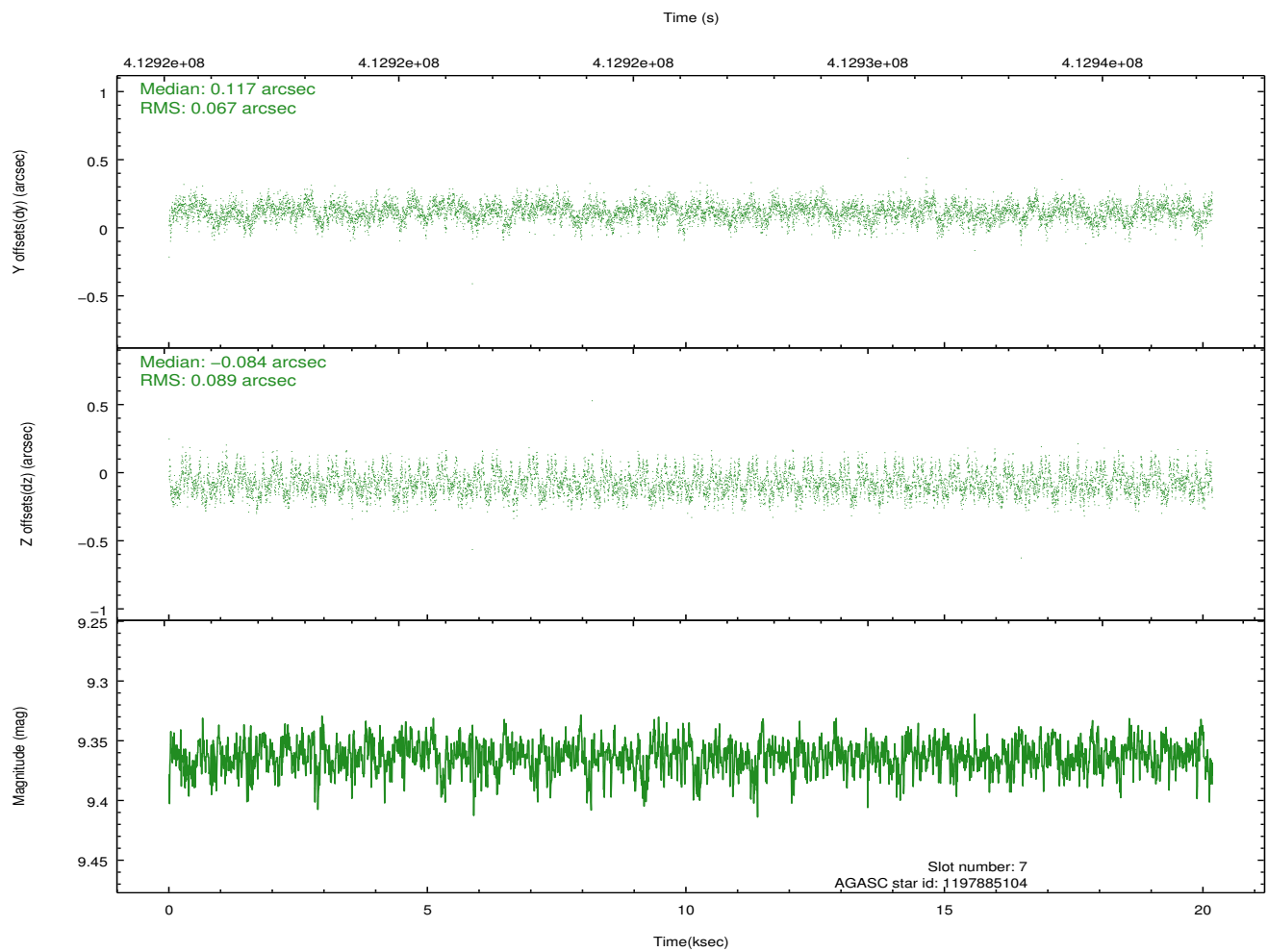
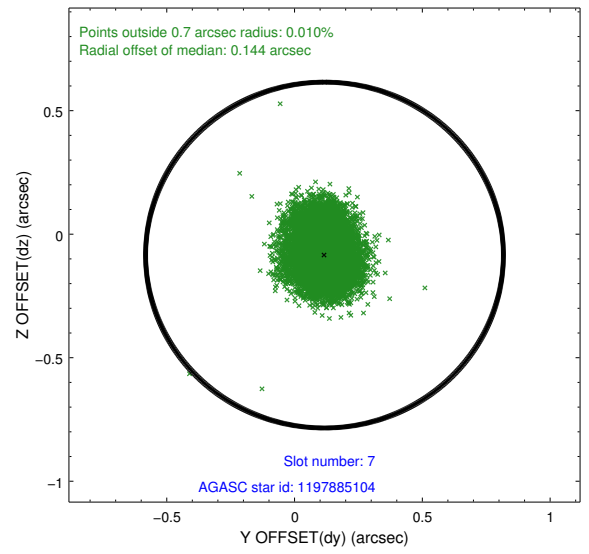
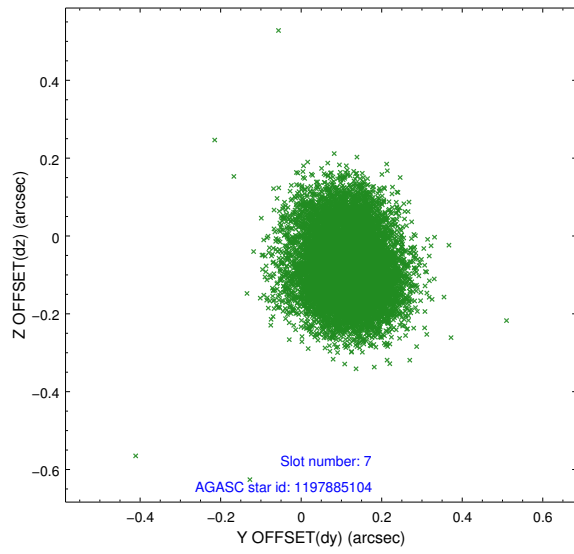
## 2.4.4 Slot 6



Time (s)

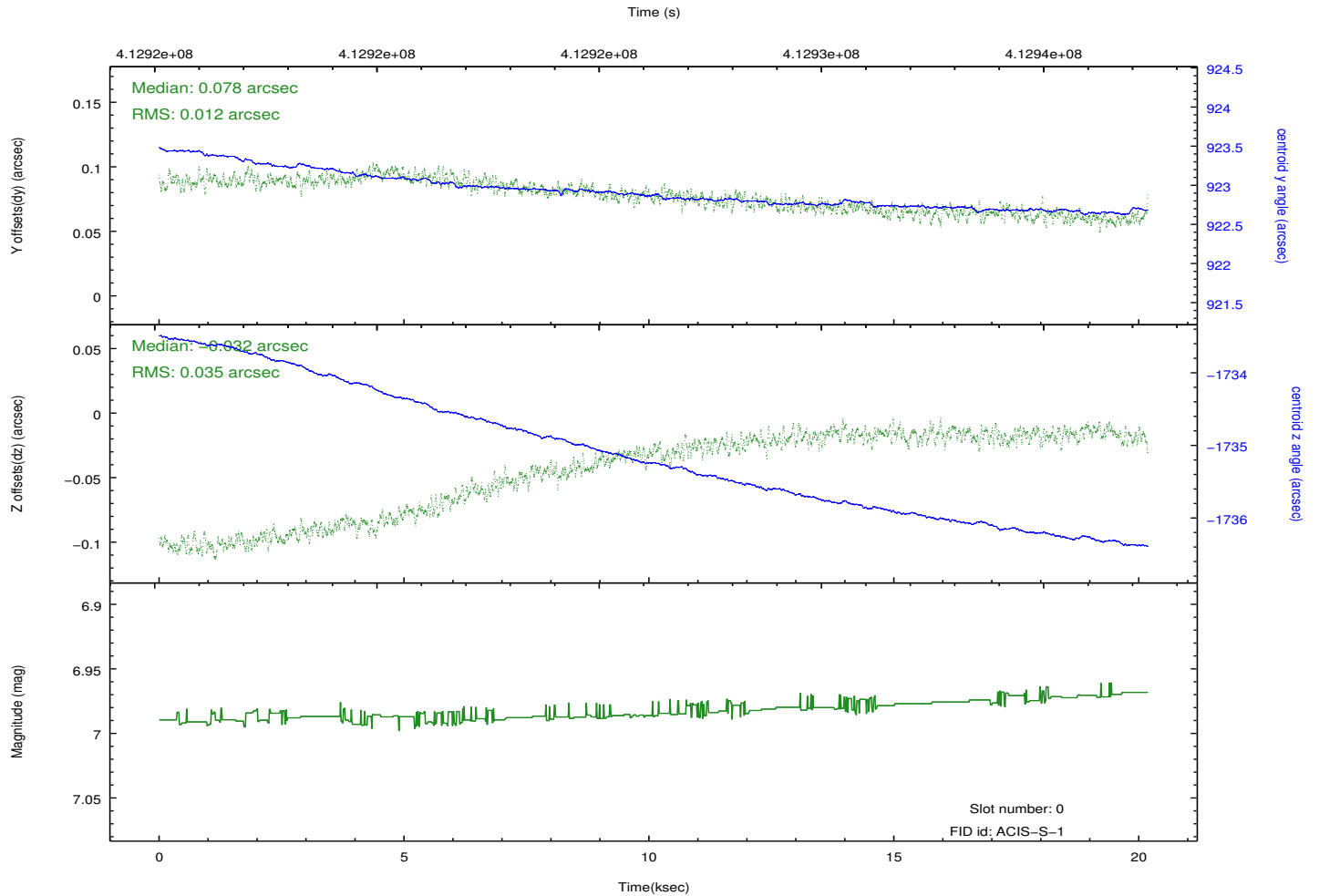
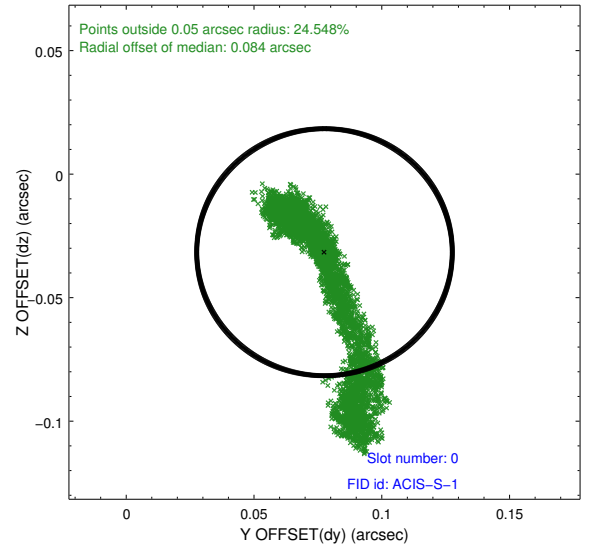
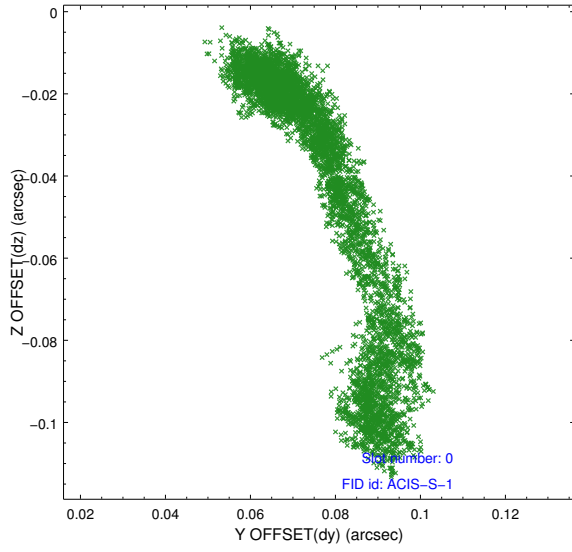


## 2.4.5 Slot 7

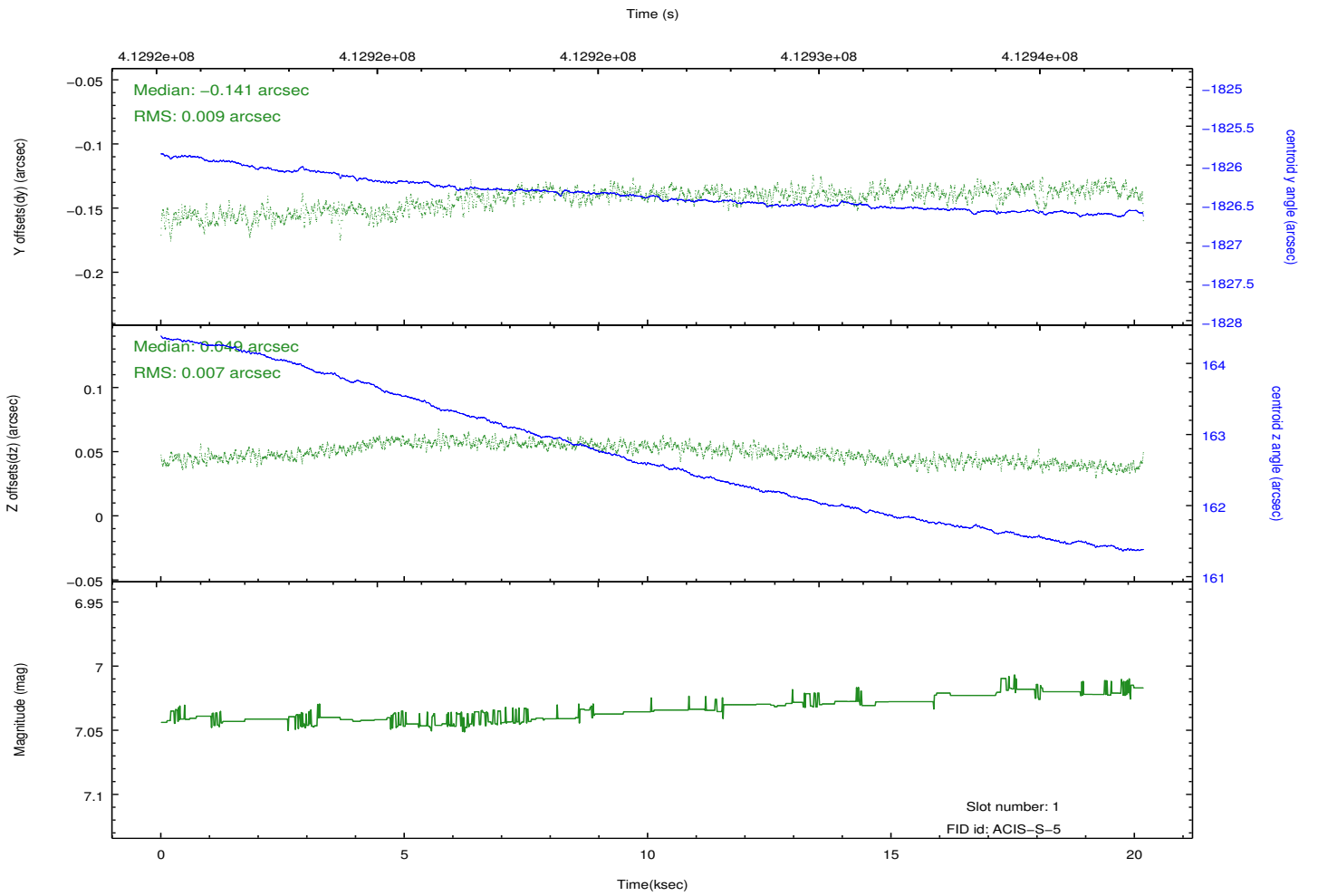
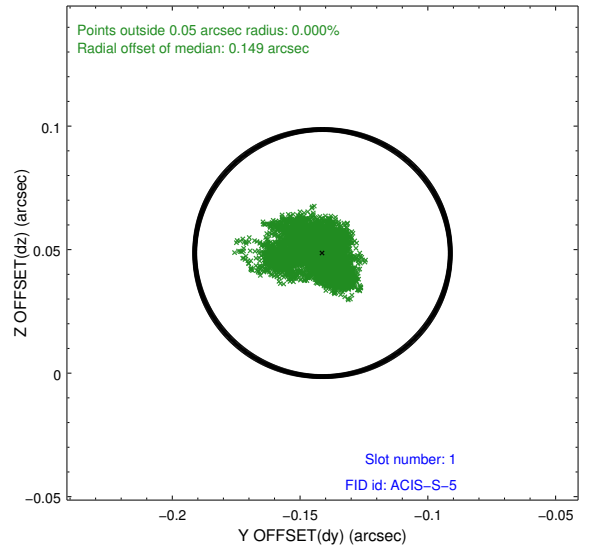
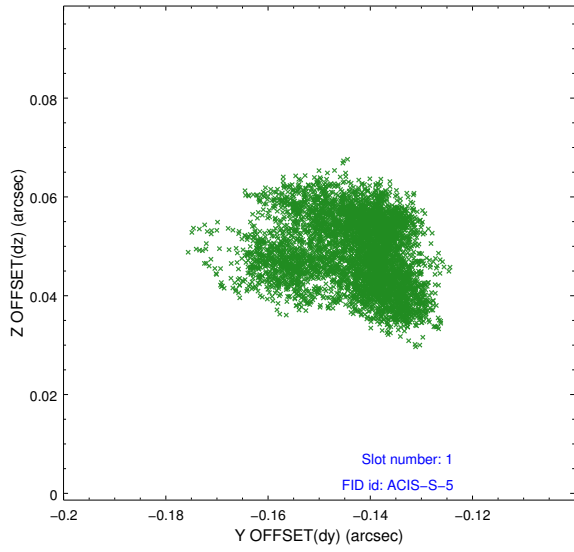


## 2.5 FID Slots

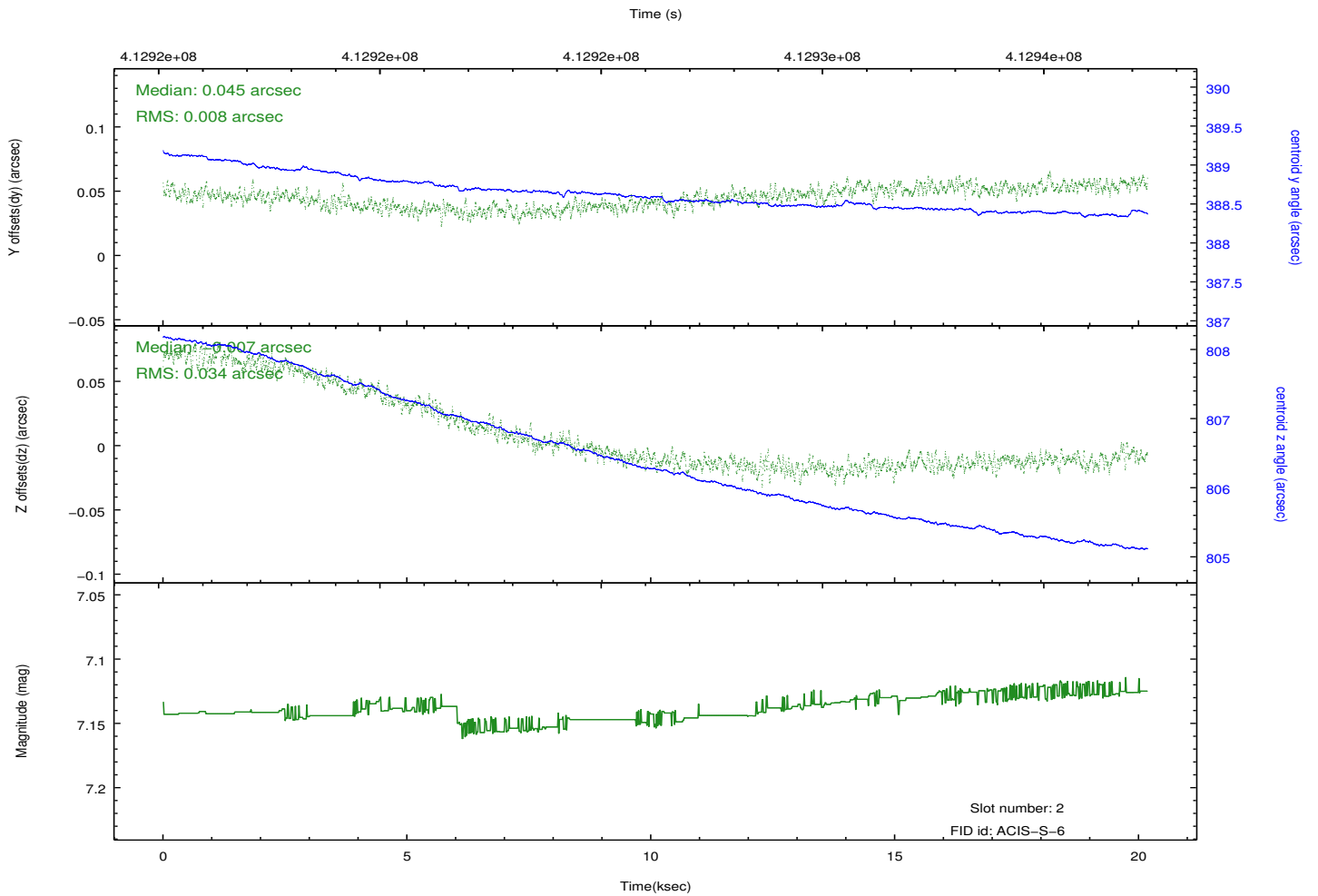
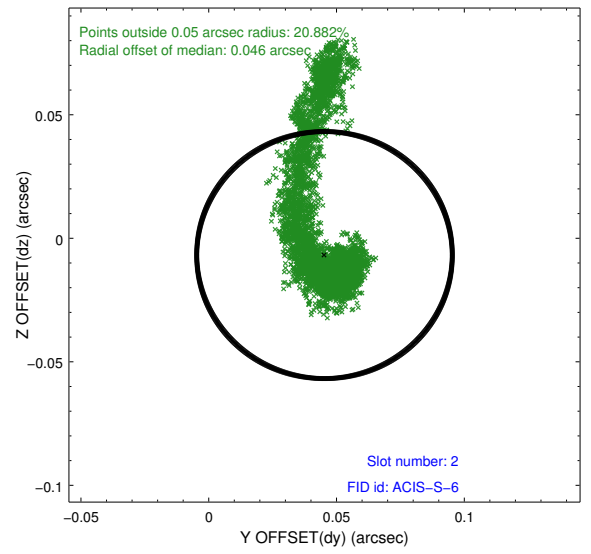
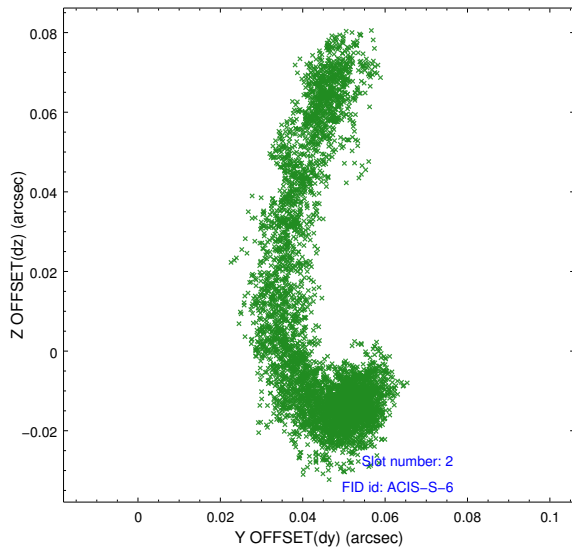
### 2.5.1 Slot 0



## 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)	2012.02.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.025600298464

## 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.