

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 13225 - L2 Version 2  
Chandra X-Ray Center

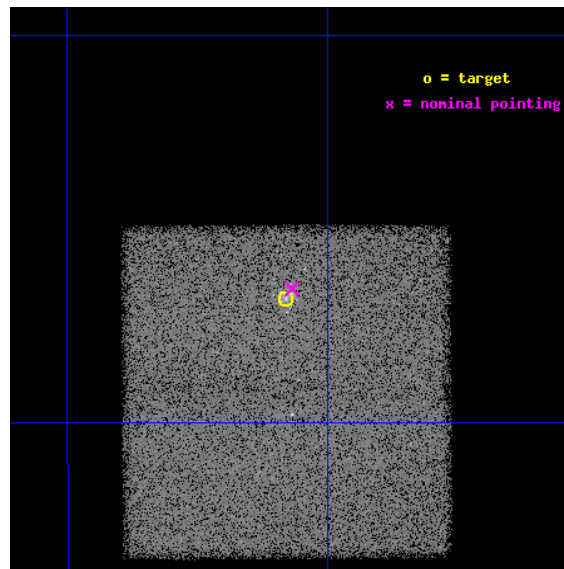
L2 Processing Date : Feb 4 2012

## 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

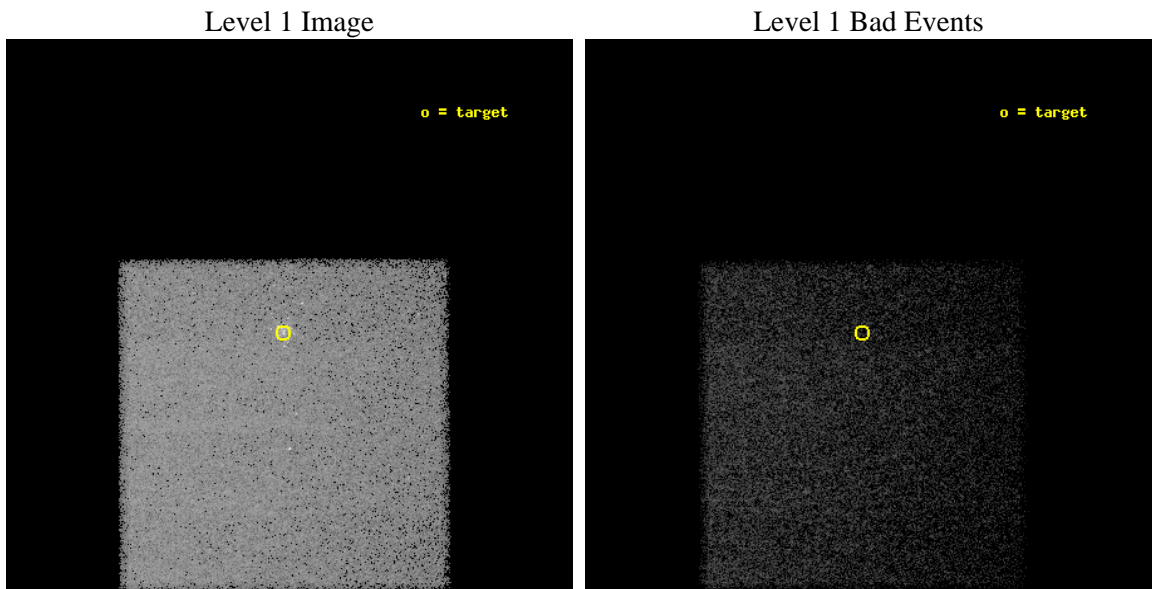
seq_num	401293	Sequence number
obs_id	13225	Observation id
title	Observing the crust cooling in the 11 Hz accreting pulsar in the globular cluster Terzan 5	Proposal title
observer	Dr. Rudy Wijnands	Principal investigator
object	CXOGClb J174804.8-244648	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	267.02	Observer's specified target RA [deg]
dec_targ	-24.78	Observer's specified target Dec [deg]
ra_nom	267.01722797413	Nominal RA [deg]
dec_nom	-24.77585443864	Nominal Dec [deg]
roll_nom	89.697347237899	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30078.0	Sum of GTIs [s]
liveltime	29672.085865362	Livetime [s]
ontime7	30078.0	Sum of GTIs [s]
l2events	126175	Number of level 2 events



## 2 OBI

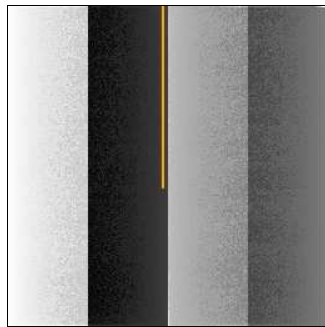
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	30078.0	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime7	30078.0	Sum of GTIs [s]
date	2012-02-04T06:56:39	Date and time of file creation	l1events	275329	Number of level 1 events
revision	2	Processing version of data			

### 2.1.4 Events

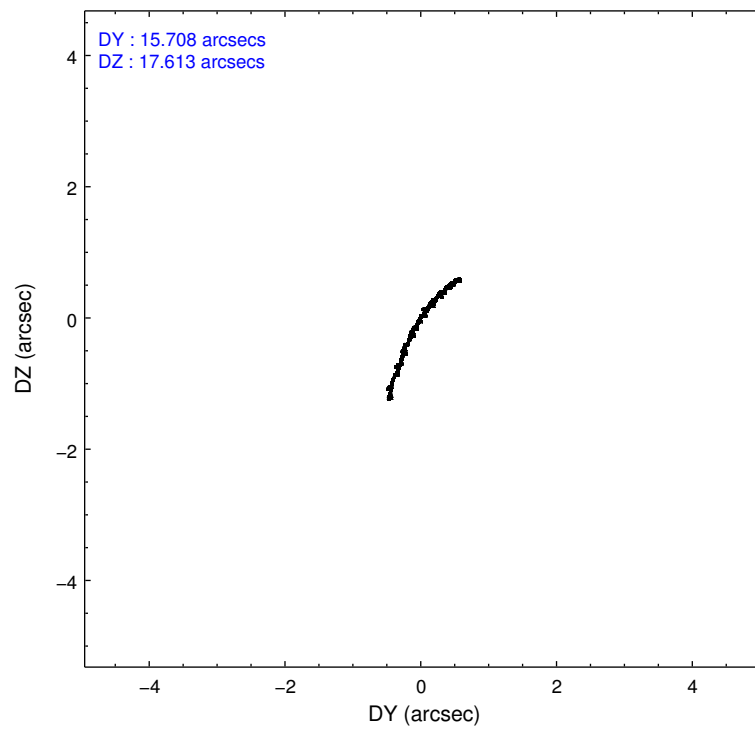
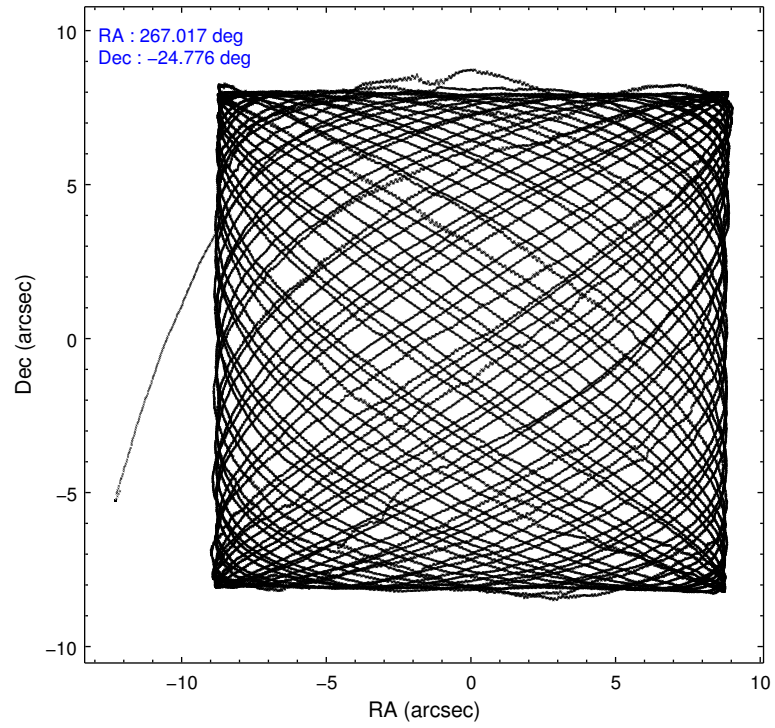
	<b>ccd 7</b>
level 1 events	275329
rejected events	145791
rejected %	52%

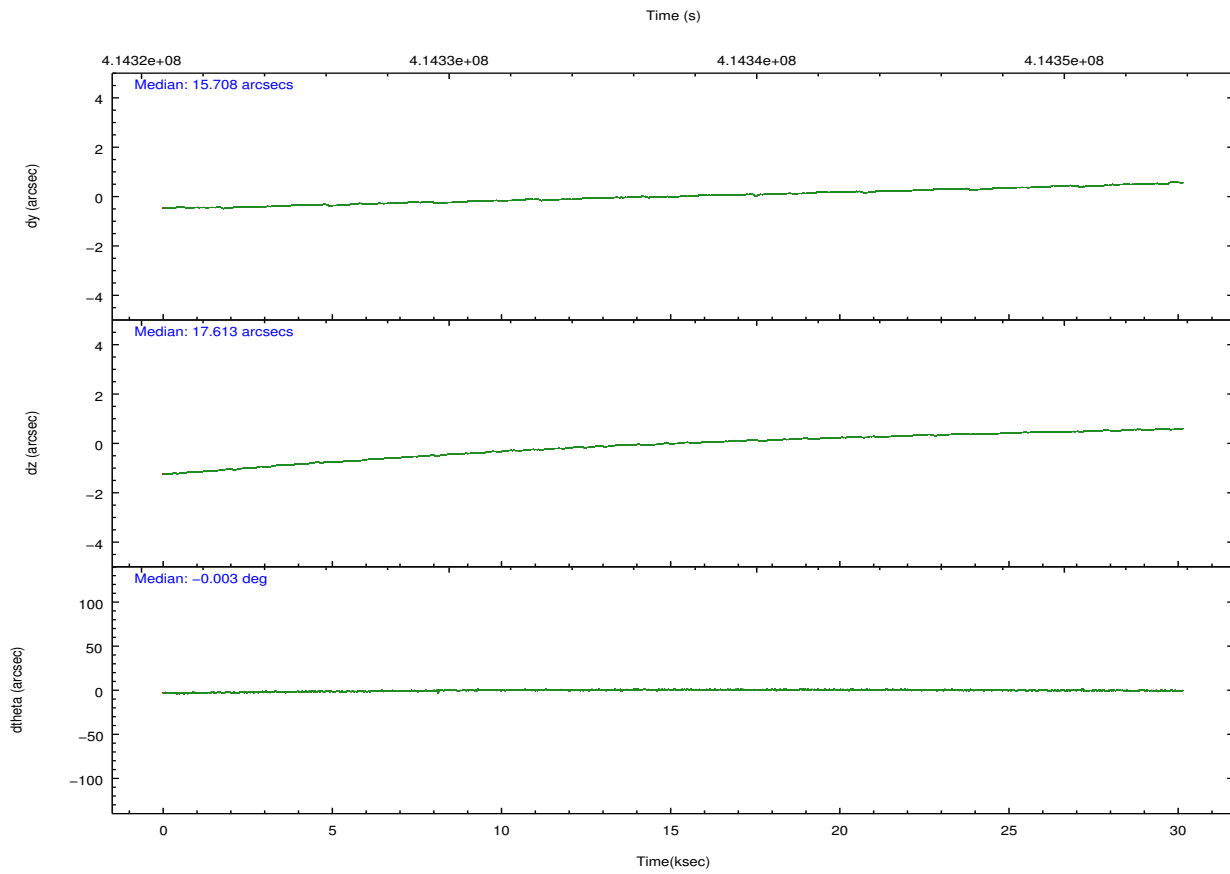
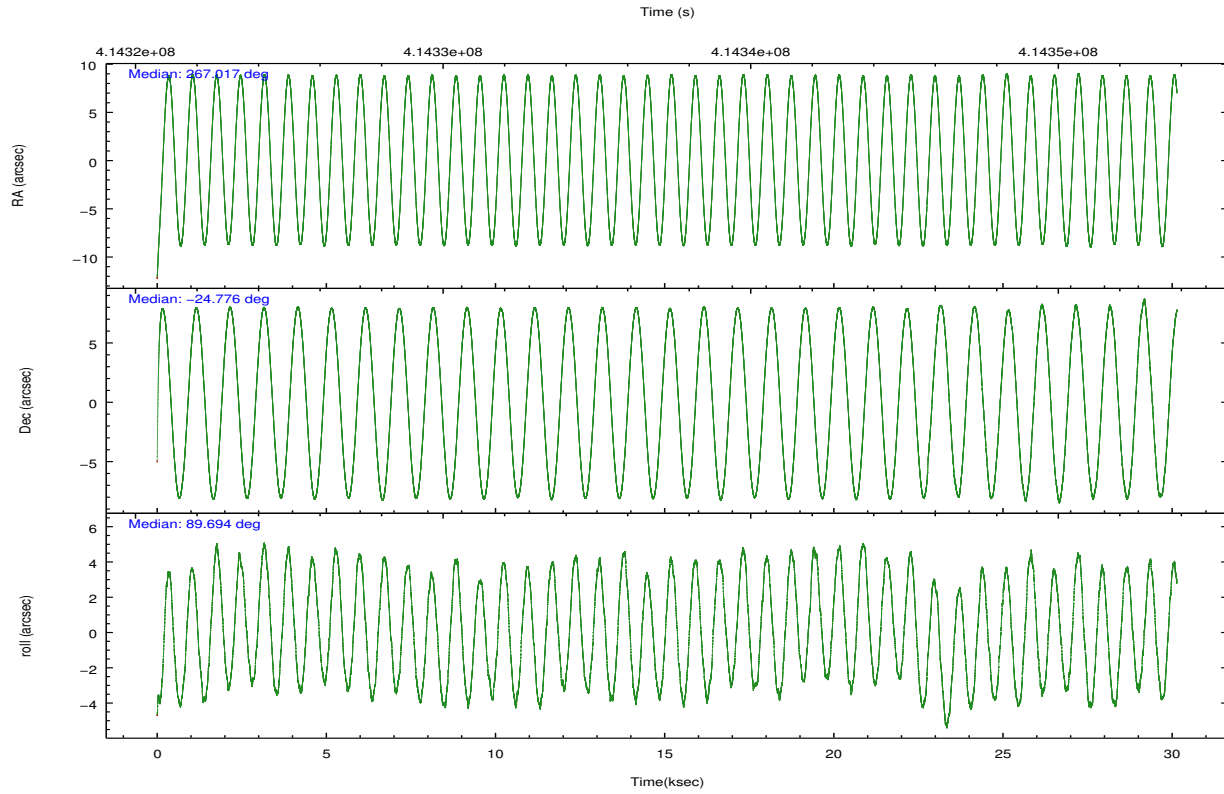
	<b>ccd 7</b>
grade 0 events	13027
	4%
grade 1 events	333
	0%
grade 2 events	26829
	9%
grade 3 events	11502
	4%
grade 4 events	11590
	4%
grade 5 events	28117
	10%
grade 6 events	66619
	24%
grade 7 events	117312
	42%

## 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	267.032491	267.0172279741316	Subarray requested	NONE	NONE
[deg] Pointing Dec	-24.799419	-24.77585443863958	Alternating exposures requested	N	N
[deg] Pointing Roll	89.547120	89.69734723789887	[s] Primary exposure time	0.000000	3
[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)	414322349.184000	414320800.64678			
Observation start date	2011-02-17T09:31:23	2011-02-17T09:06:40			
[s] Observation end time (MET)	414352349.184000	414352690.44843			
Observation end date	2011-02-17T17:51:23	2011-02-17T17:58:10			
Read mode	TIMED	TIMED			

## 2.3 Aspect



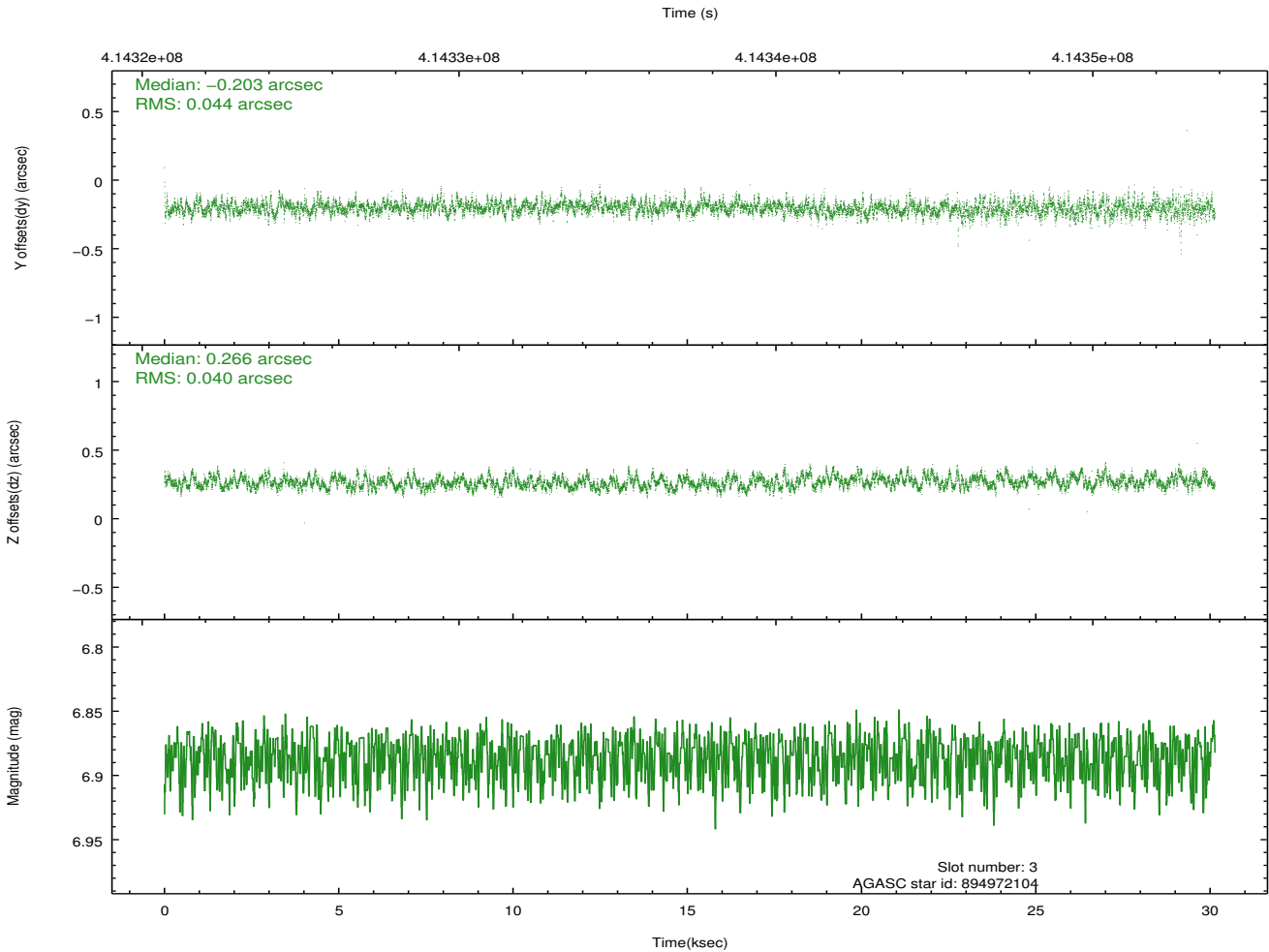
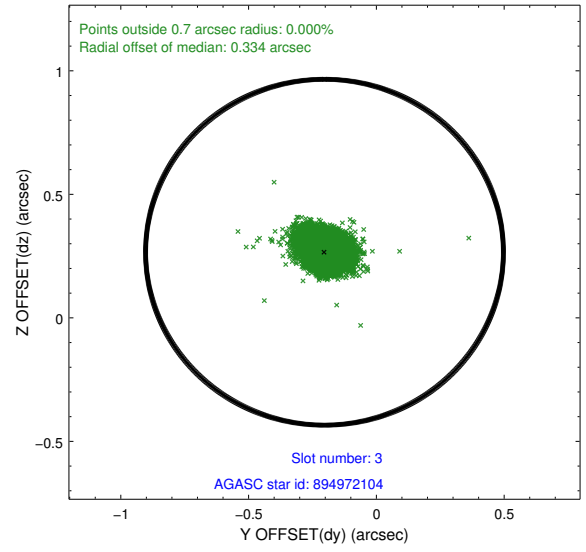
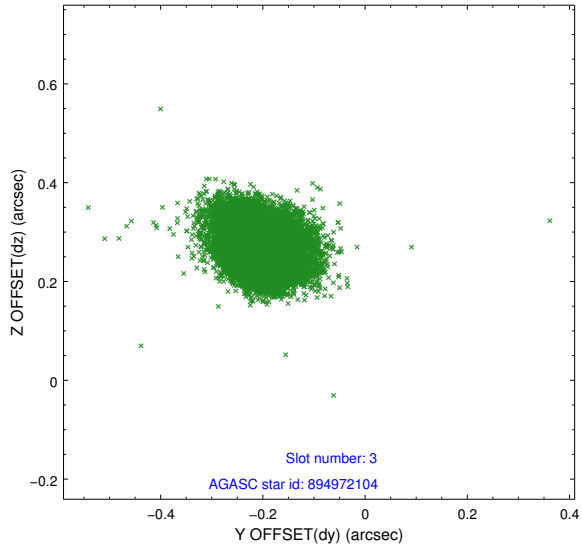


### Slot Statistics

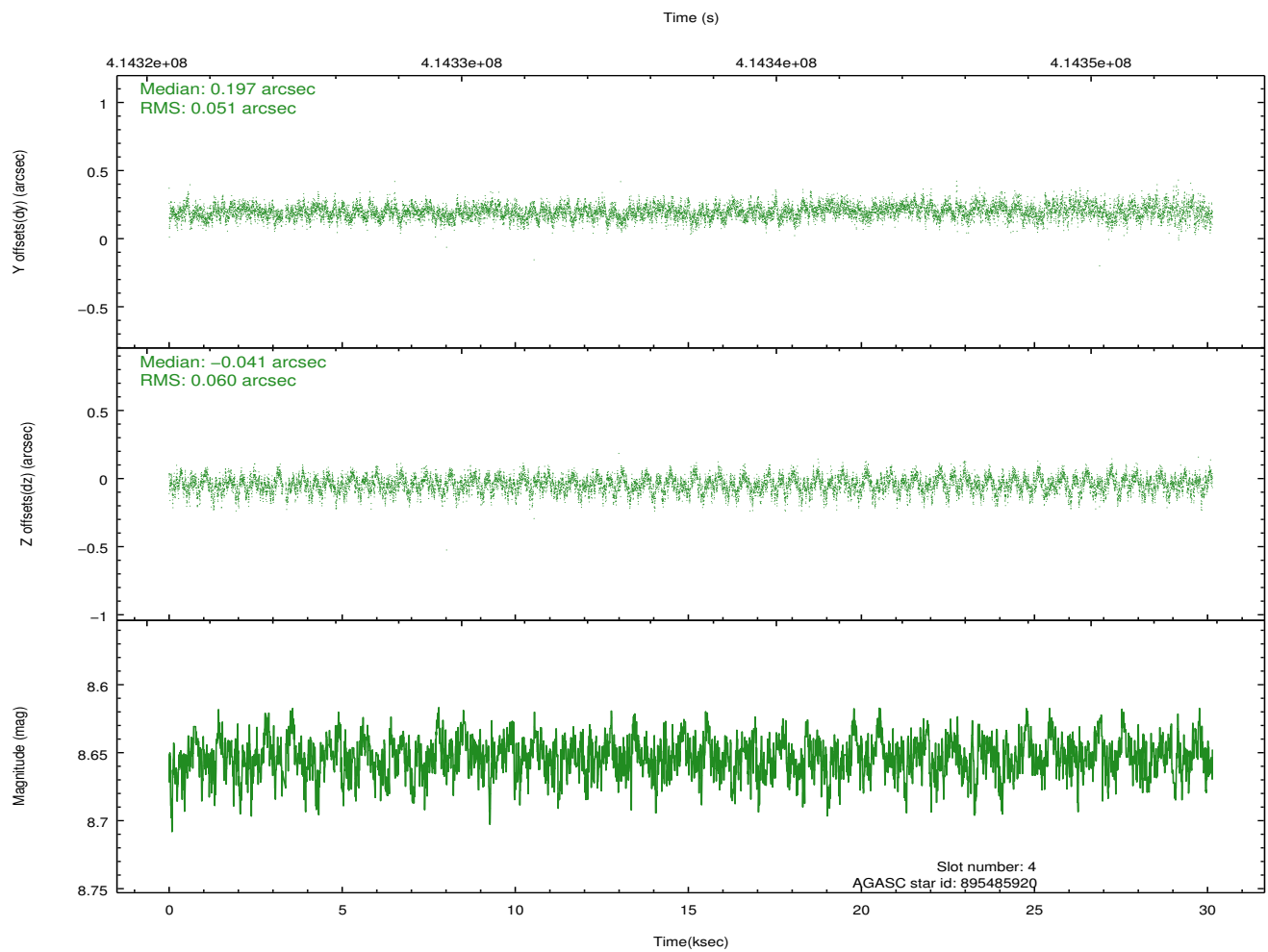
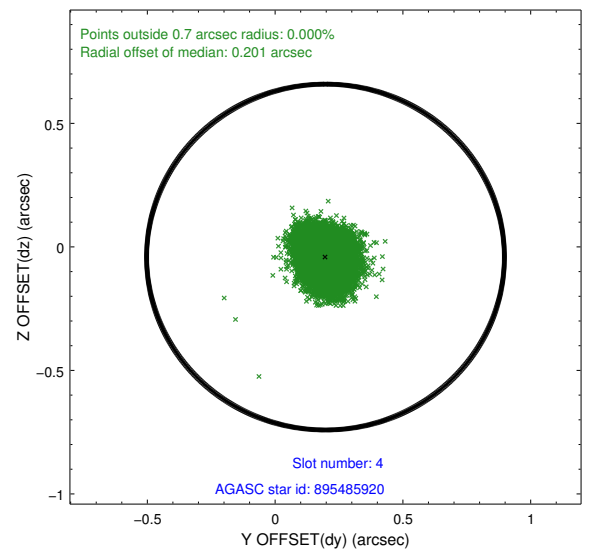
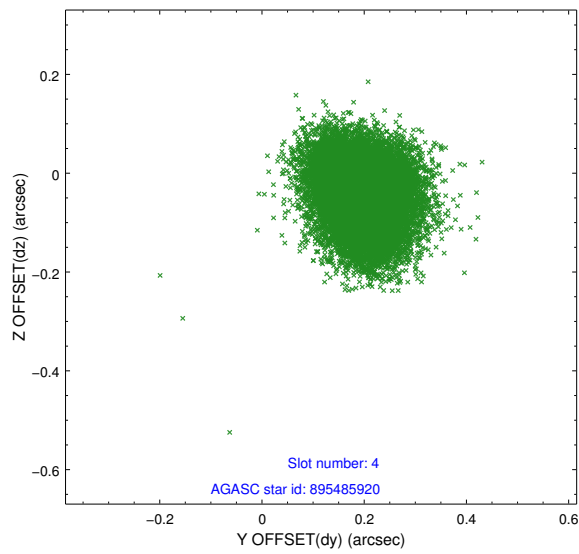
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.88	7352	-0.072	-0.040	0.011	0.023	0.000000	0.000000	-768.82	-1738.96
1	FID	ACIS-S-4	6.97	7351	0.170	0.045	0.014	0.022	0.000000	0.000000	2144.71	169.46
2	FID	ACIS-S-5	6.99	7352	-0.129	0.004	0.014	0.022	0.000000	0.000000	-1821.58	163.26
3	GUIDE	894972104	6.89	14703	-0.203	0.266	0.062	0.103	267.489380	-24.207054	2141.40	-1482.19
4	GUIDE	895485920	8.65	14651	0.197	-0.041	0.084	0.135	266.932426	-25.188840	-1404.17	314.87
5	GUIDE	895488888	8.54	14682	0.009	0.075	0.065	0.106	266.751949	-24.913497	-418.92	912.96
6	GUIDE	895489704	8.79	14696	0.303	-0.163	0.084	0.137	266.328076	-25.361339	-2047.59	2275.27
7	GUIDE	894973544	8.06	14697	-0.305	-0.133	0.062	0.102	266.605572	-24.141151	2355.78	1421.77

## 2.4 Star Slots

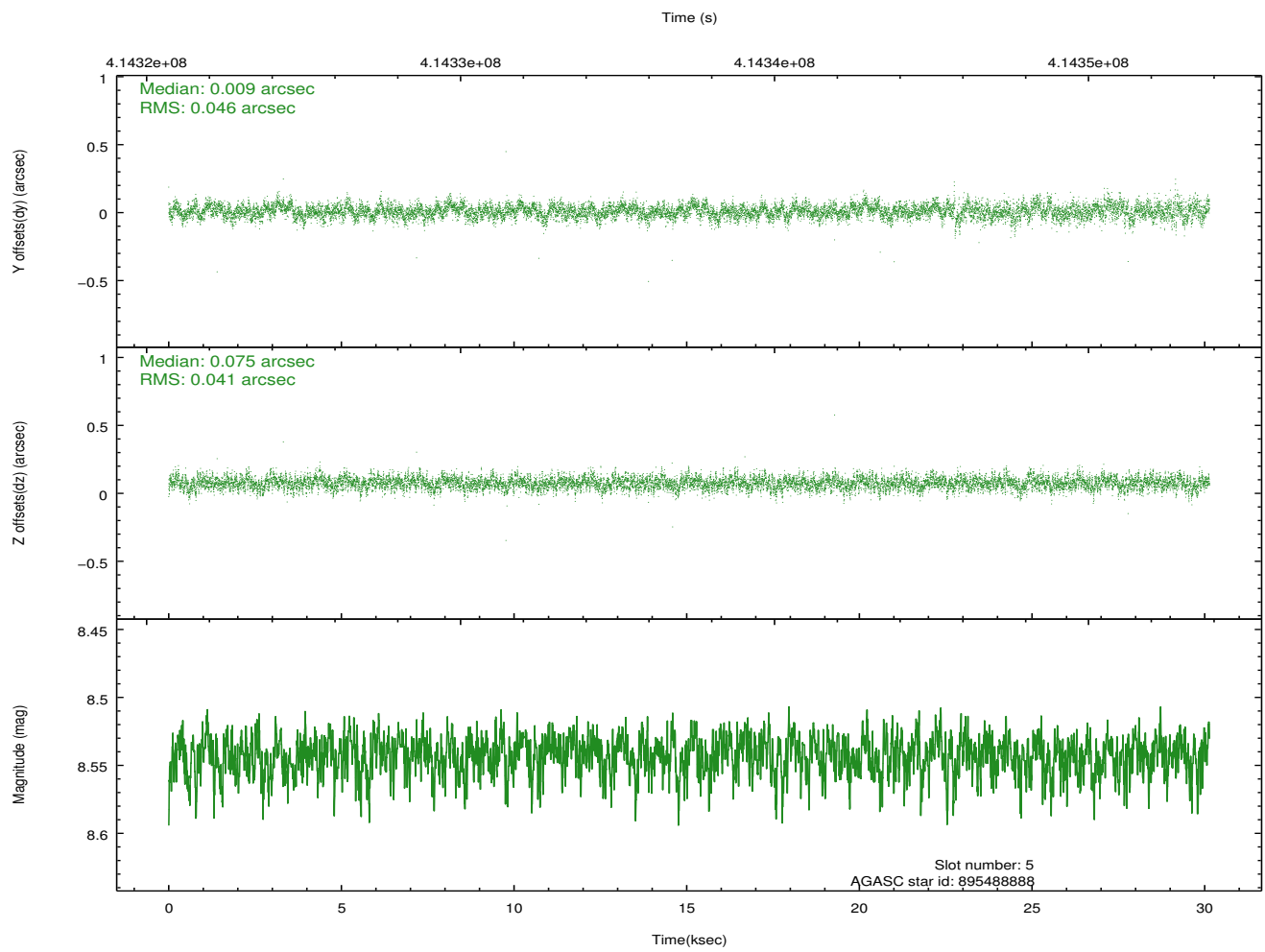
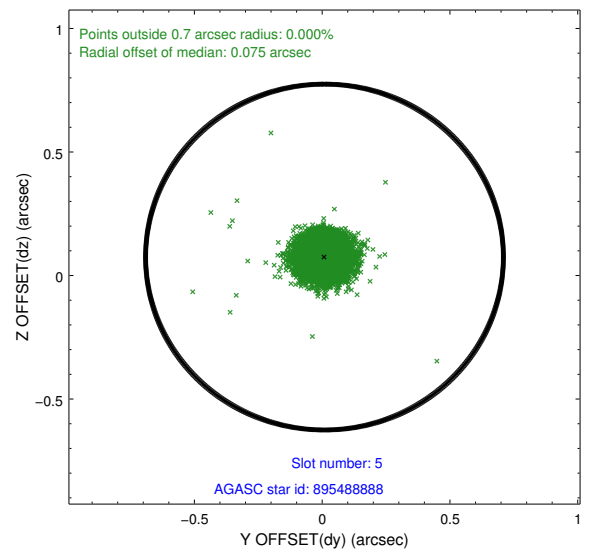
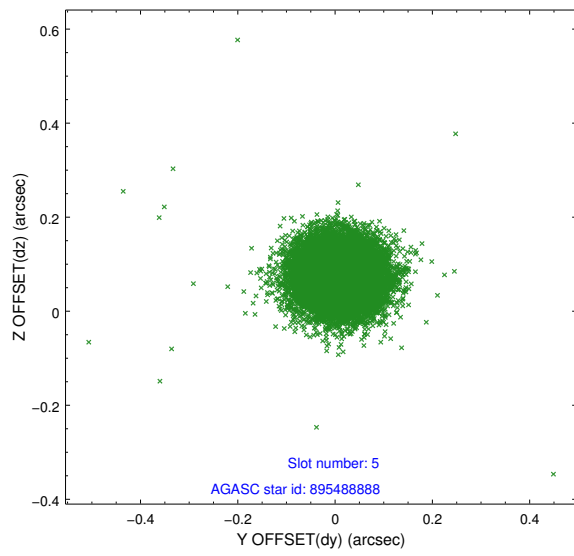
### 2.4.1 Slot 3



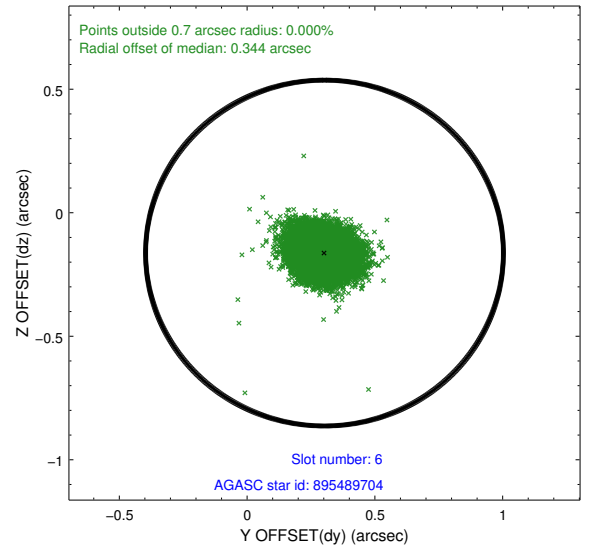
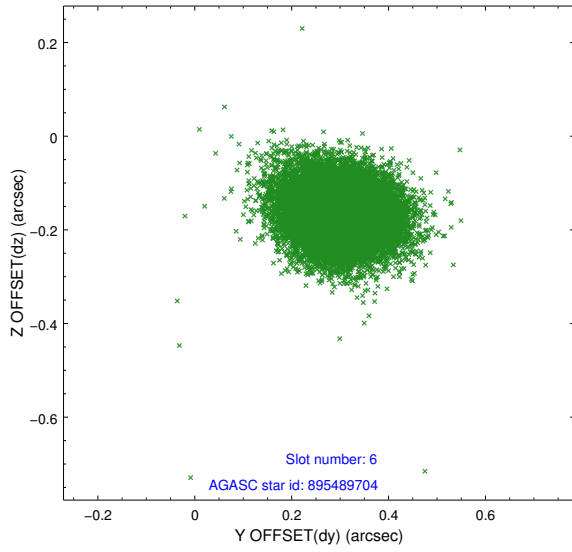
## 2.4.2 Slot 4



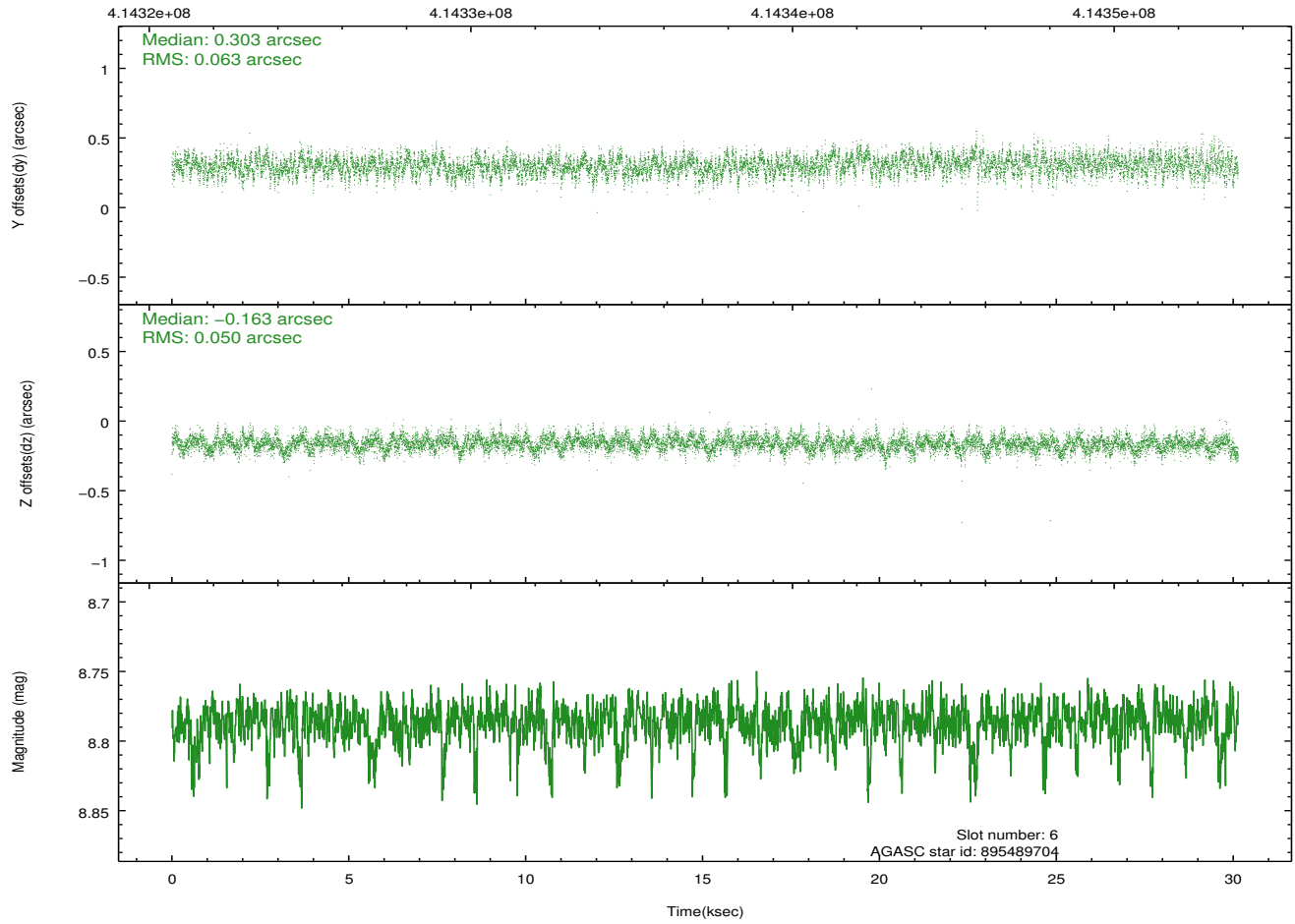
### 2.4.3 Slot 5



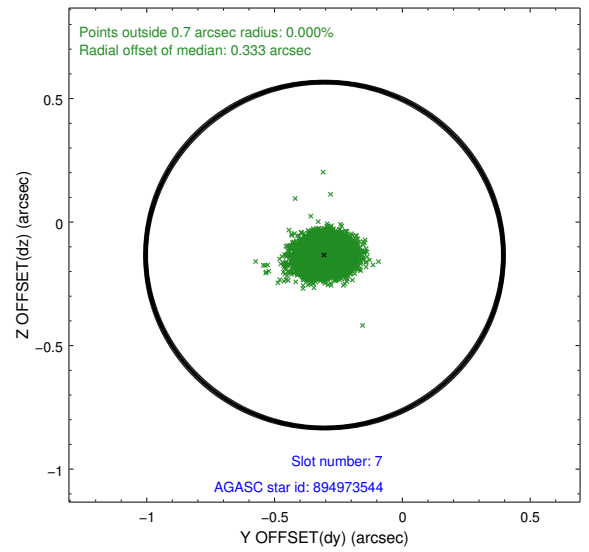
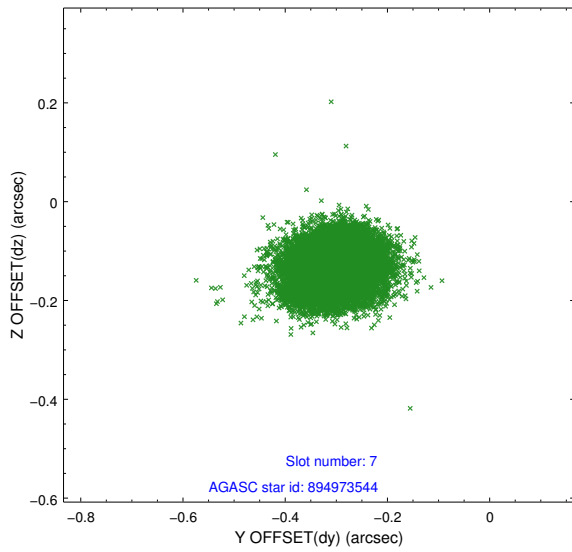
### 2.4.4 Slot 6



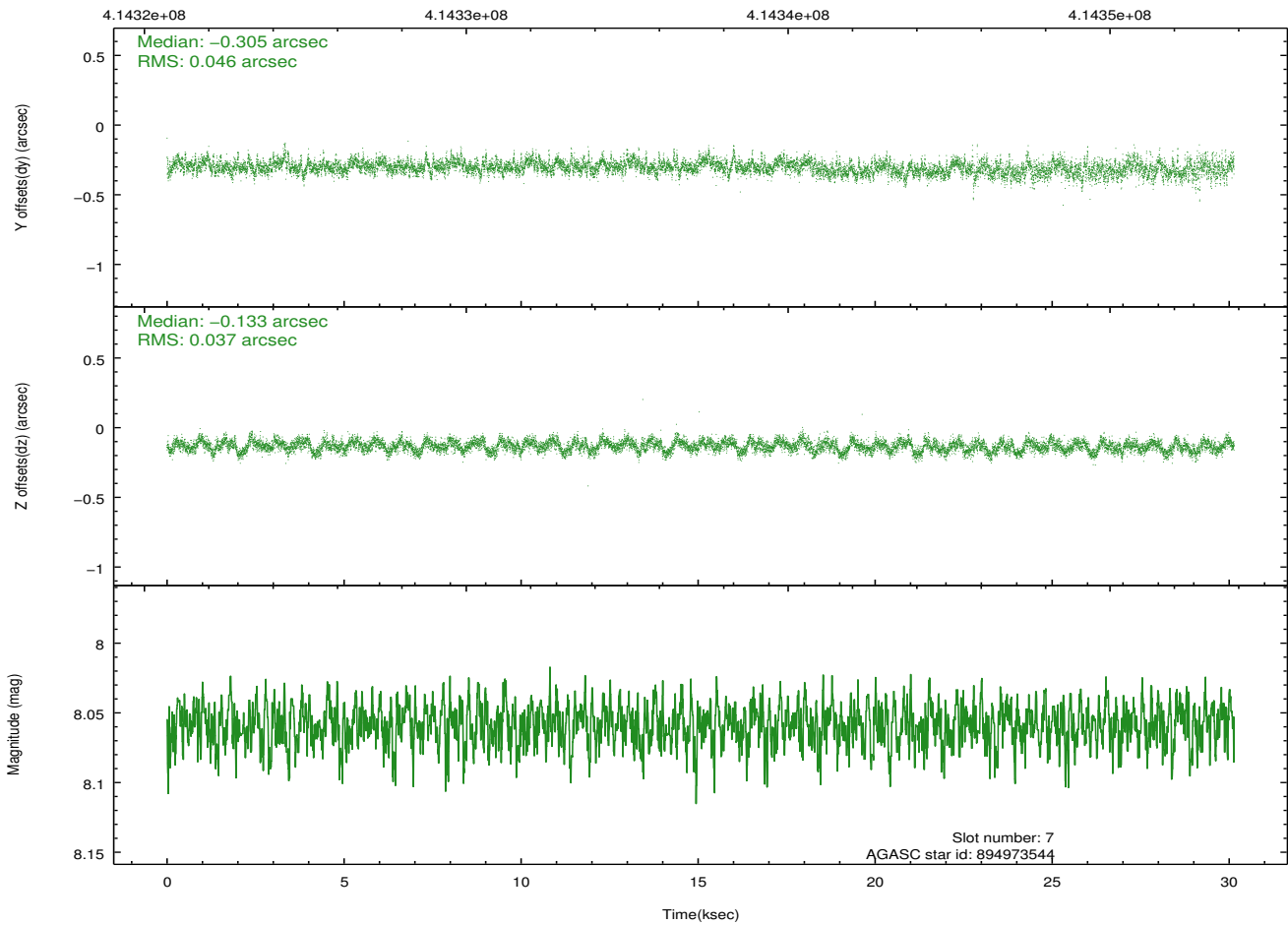
Time (s)



## 2.4.5 Slot 7

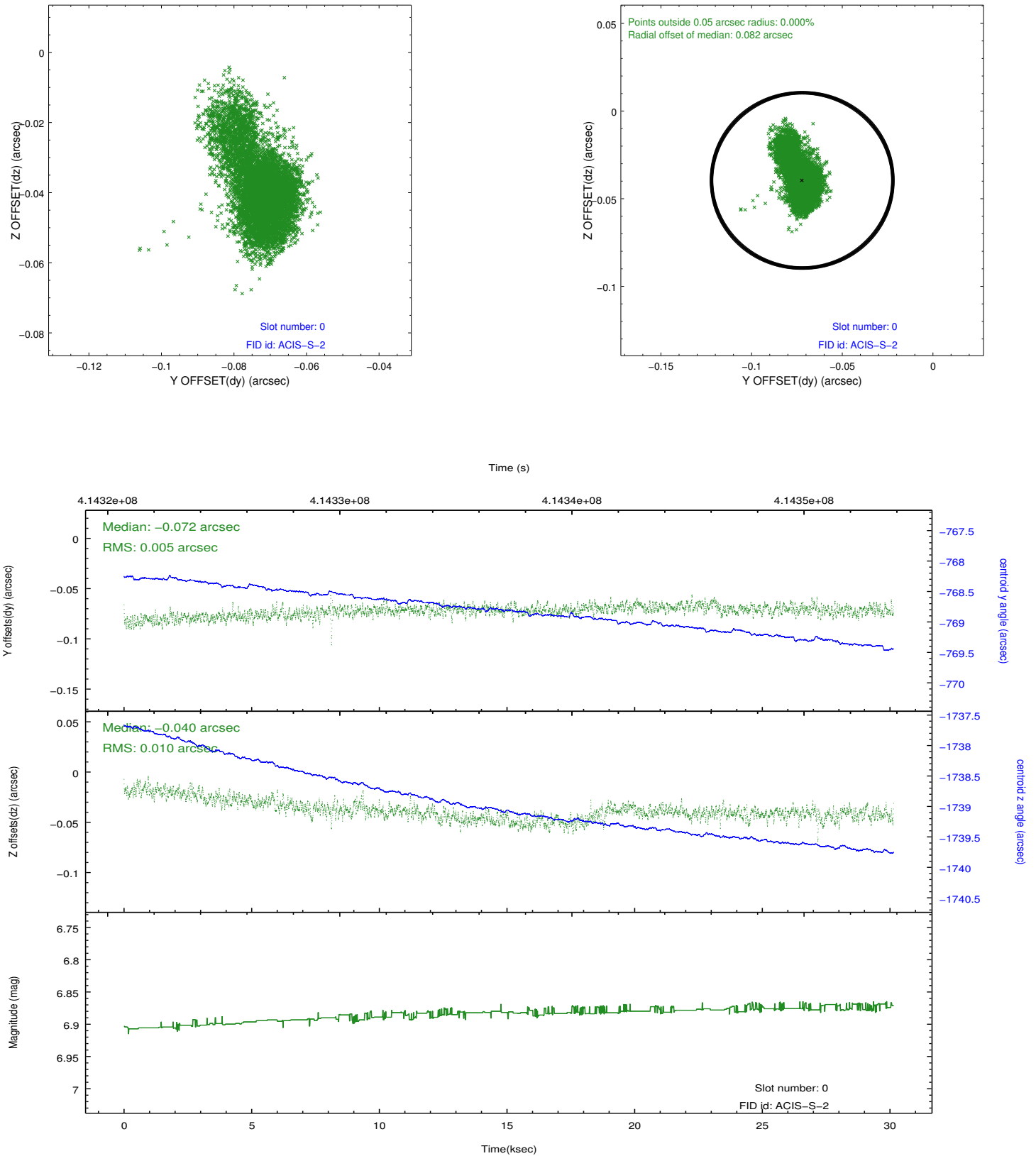


Time (s)

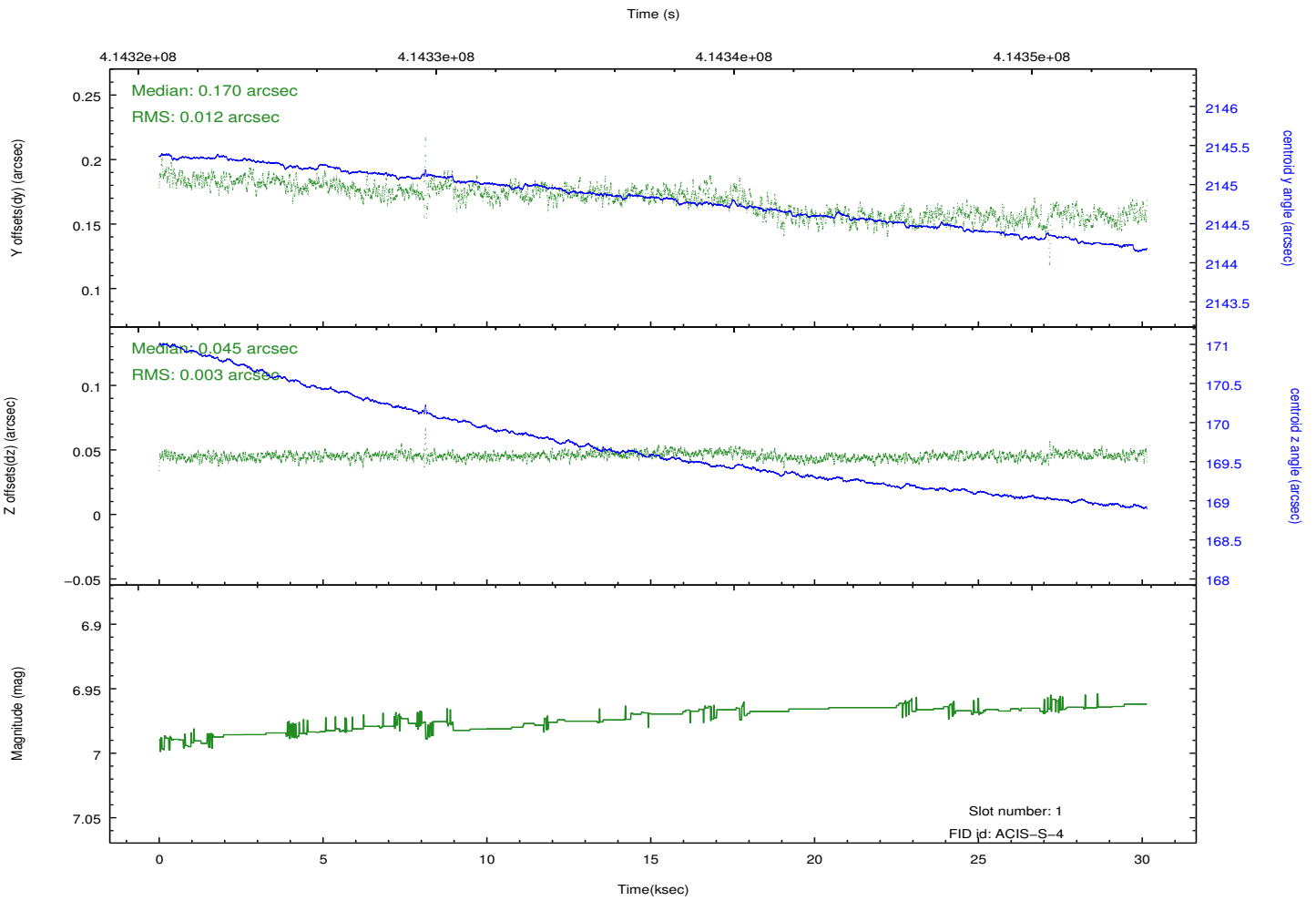
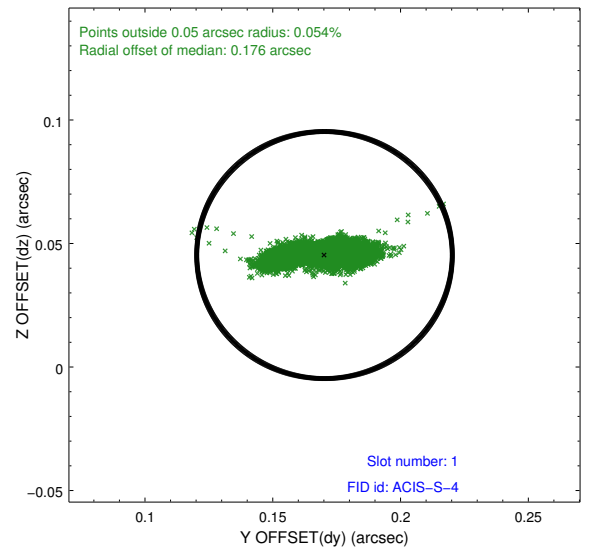
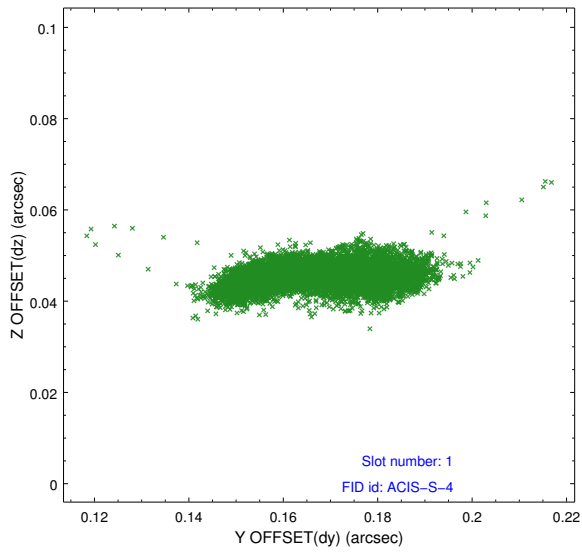


## 2.5 FID Slots

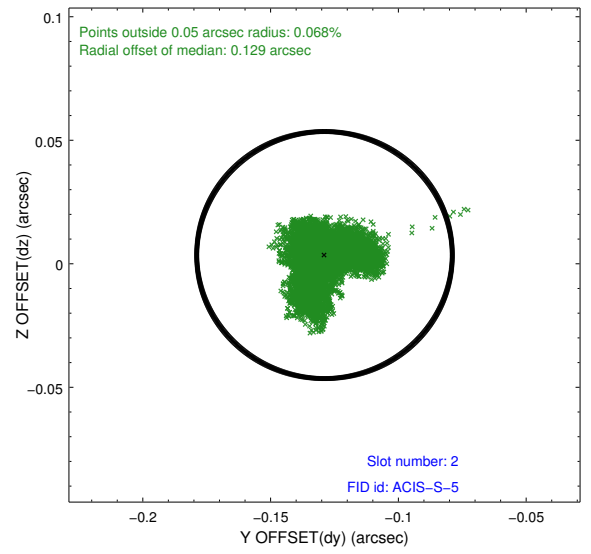
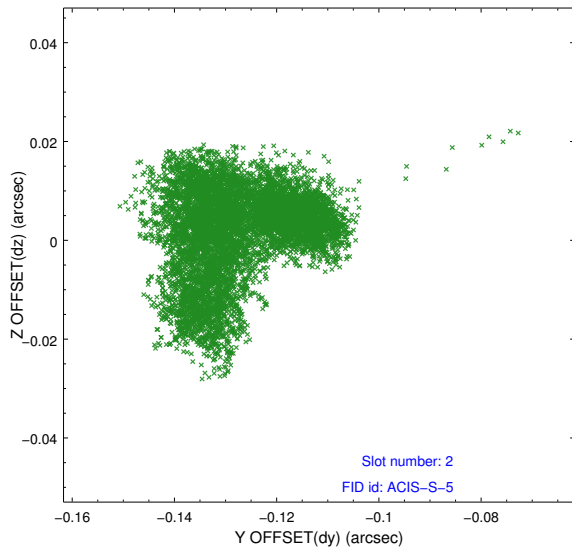
### 2.5.1 Slot 0



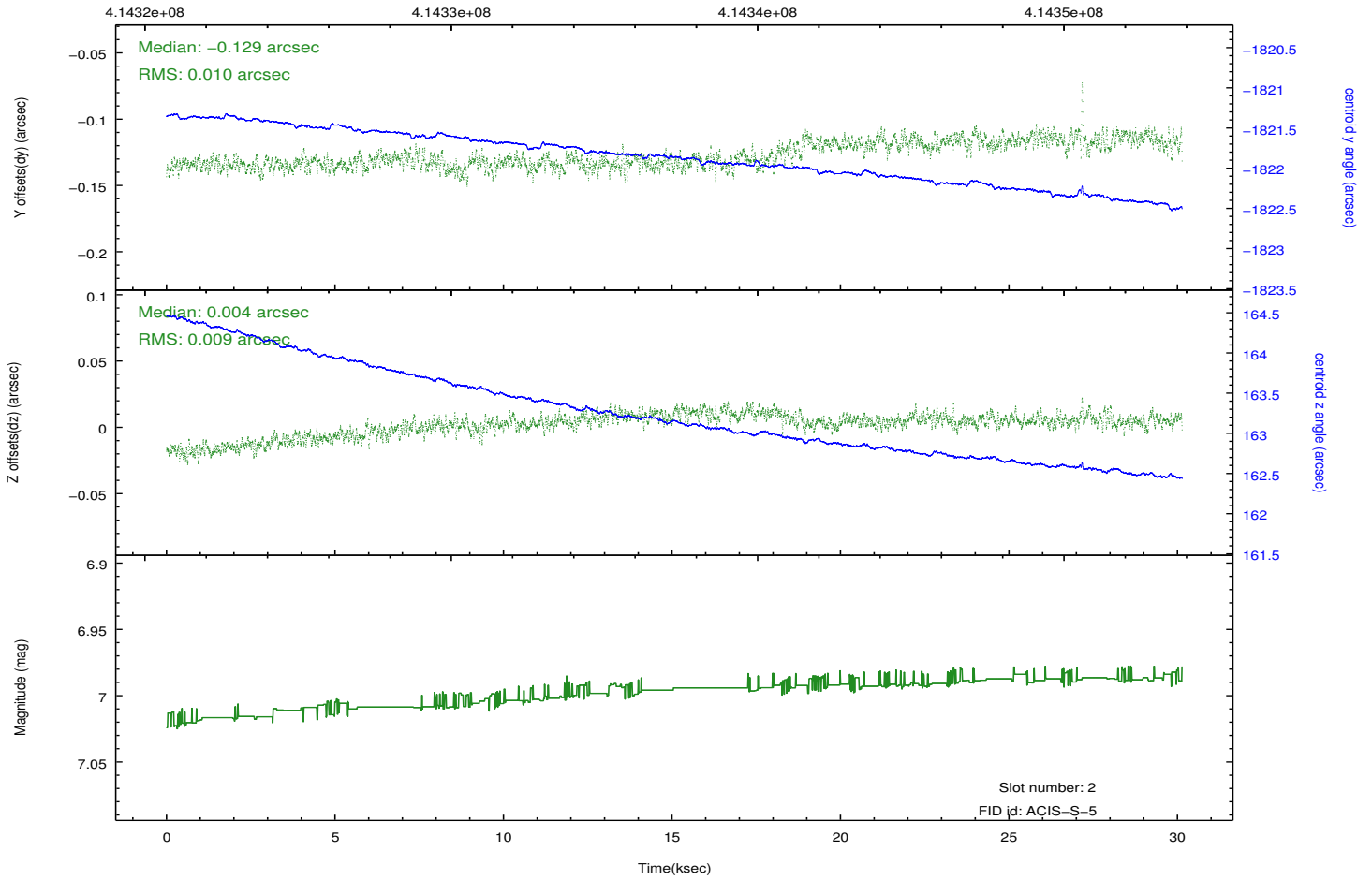
## 2.5.2 Slot 1



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.02.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.078

## 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.