

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 12729 - L2 Version 2  
Chandra X-Ray Center

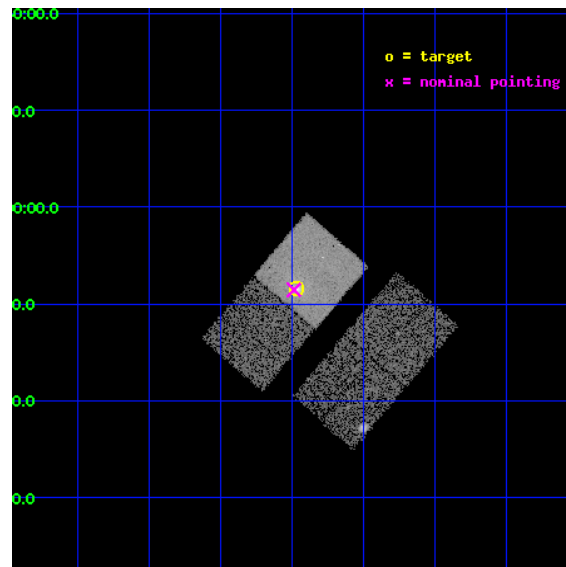
L2 Processing Date : Feb 4 2012

## 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

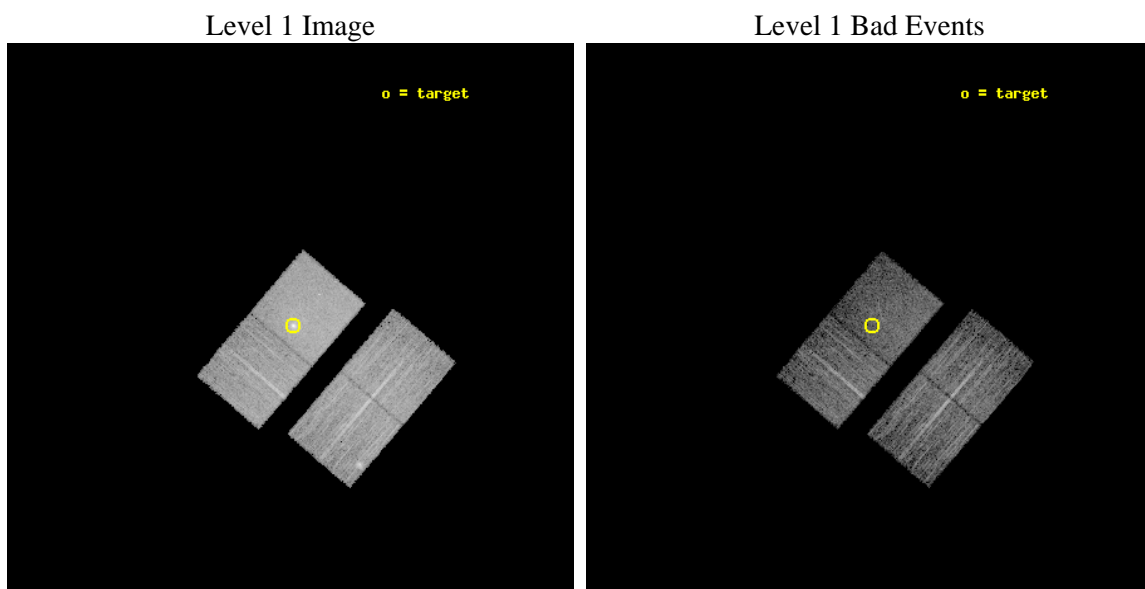
seq_num	702365	Sequence number
obs_id	12729	Observation id
title	Completing the Chandra 3C Snapshot Survey: Extragalactic Radio Sources with $z < 0.3$	Proposal title
observer	Dr. Daniel Harris	Principal investigator
object	3C 196.1	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	123.867083	Observer's specified target RA [deg]
dec_targ	-3.141111	Observer's specified target Dec [deg]
ra_nom	123.87167407077	Nominal RA [deg]
dec_nom	-3.1425734385482	Nominal Dec [deg]
roll_nom	310.49230135845	Nominal Roll [deg]
revision	2	Processing version of data
ontime	8052.6527776122	Sum of GTIs [s]
livetime	7947.438940796	Livetime [s]
ontime2	8052.5296576023	Sum of GTIs [s]
ontime3	8049.4296672344	Sum of GTIs [s]
ontime6	8052.6117376089	Sum of GTIs [s]
ontime7	8052.6527776122	Sum of GTIs [s]
l2events	53373	Number of level 2 events



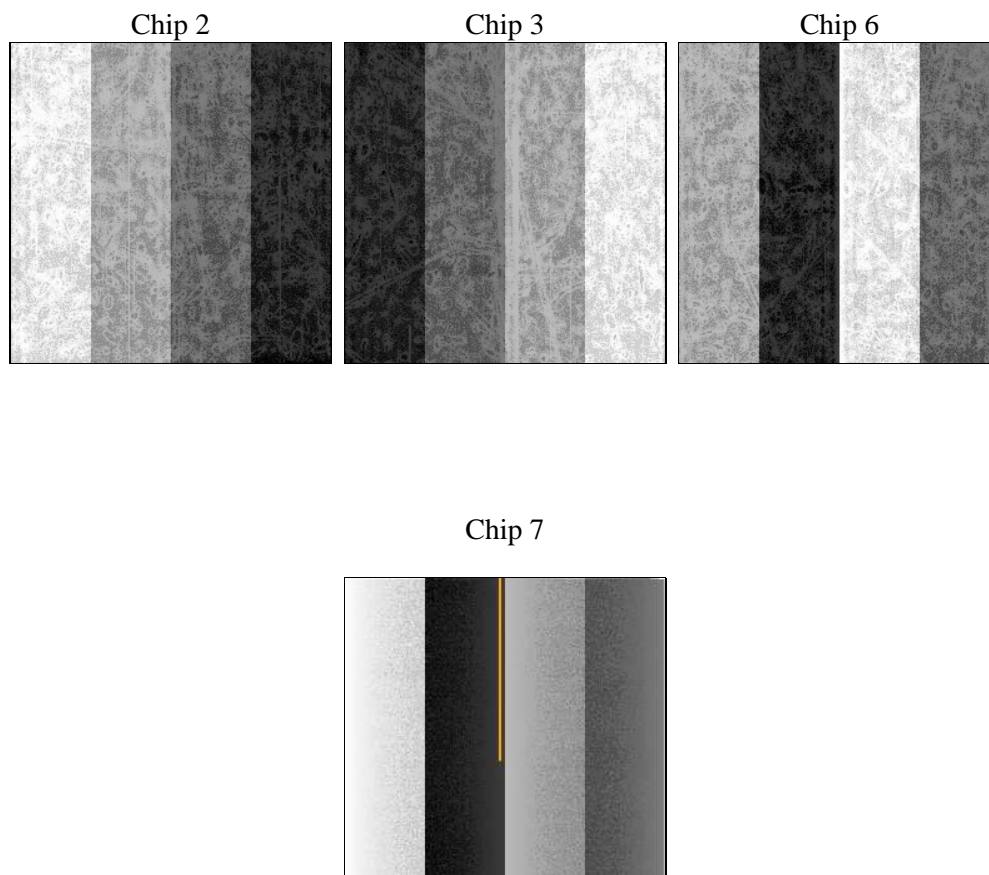
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 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	8052.6527776122	Sum of GTIs [s]
caldsver	4.4.7	&#160	ontime2	8052.5296576023	Sum of GTIs [s]
date	2012-02-04T05:58:46	Date and time of file creation	ontime3	8049.4296672344	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	8052.6117376089	Sum of GTIs [s]
			ontime7	8052.6527776122	Sum of GTIs [s]
			l1events	249728	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	59222	56523	57137	76846
rejected events	51998	50582	50425	39893
rejected %	87%	89%	88%	51%

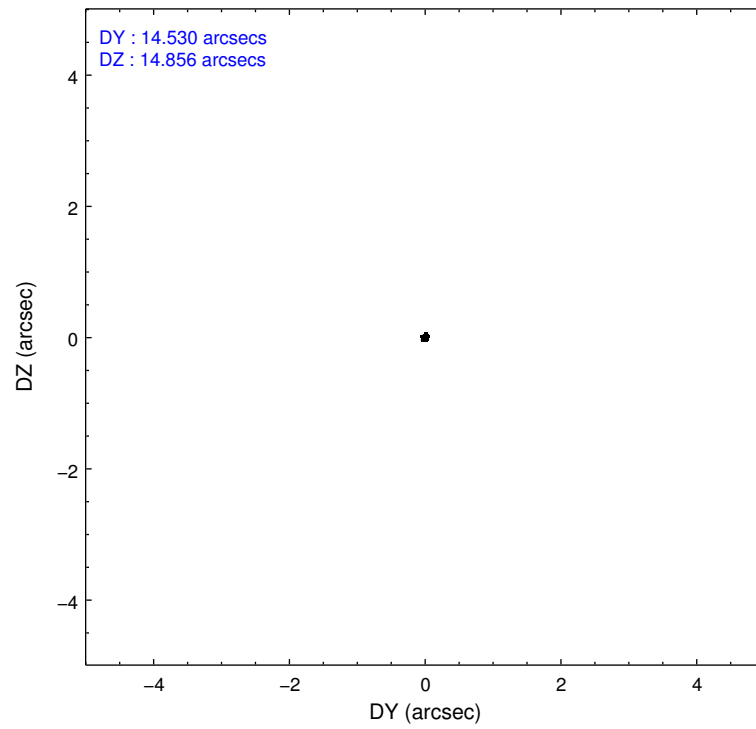
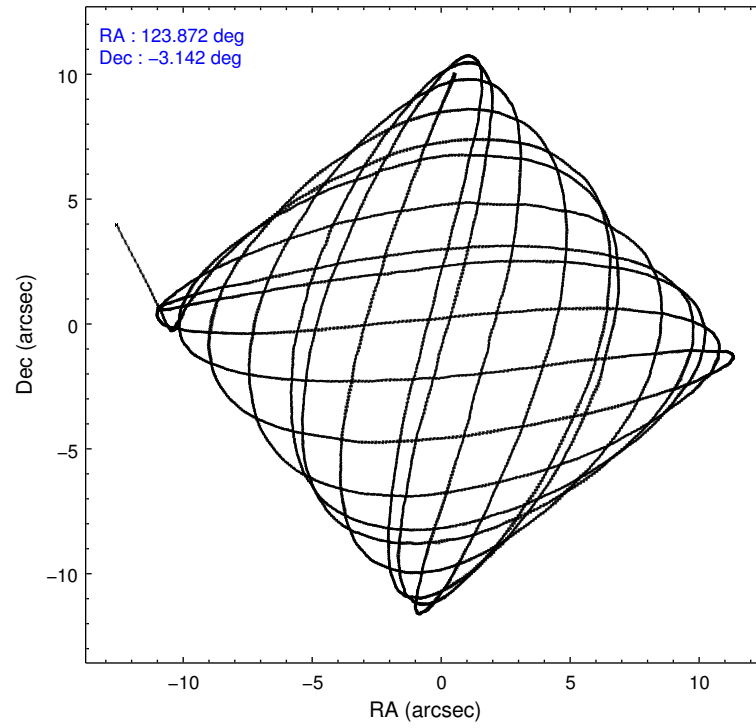
	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	3144	2062	2411	4357
	5%	3%	4%	5%
grade 1 events	44	40	30	93
	0%	0%	0%	0%
grade 2 events	1522	1314	1471	7802
	2%	2%	2%	10%
grade 3 events	671	661	740	3363
	1%	1%	1%	4%
grade 4 events	689	669	690	3364
	1%	1%	1%	4%
grade 5 events	2218	2710	2700	7365
	3%	4%	4%	9%
grade 6 events	1203	1238	1402	18085
	2%	2%	2%	23%
grade 7 events	49731	47829	47693	32417
	83%	84%	83%	42%

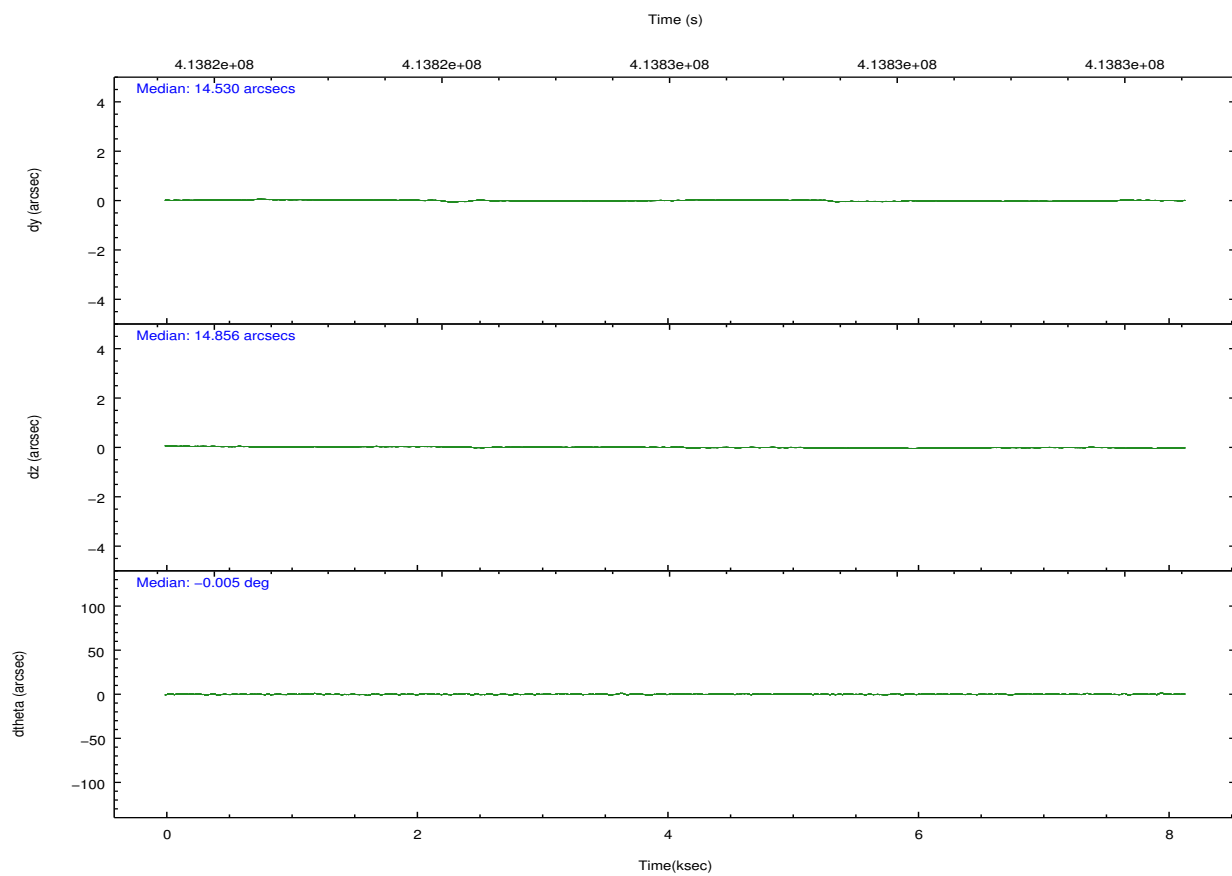
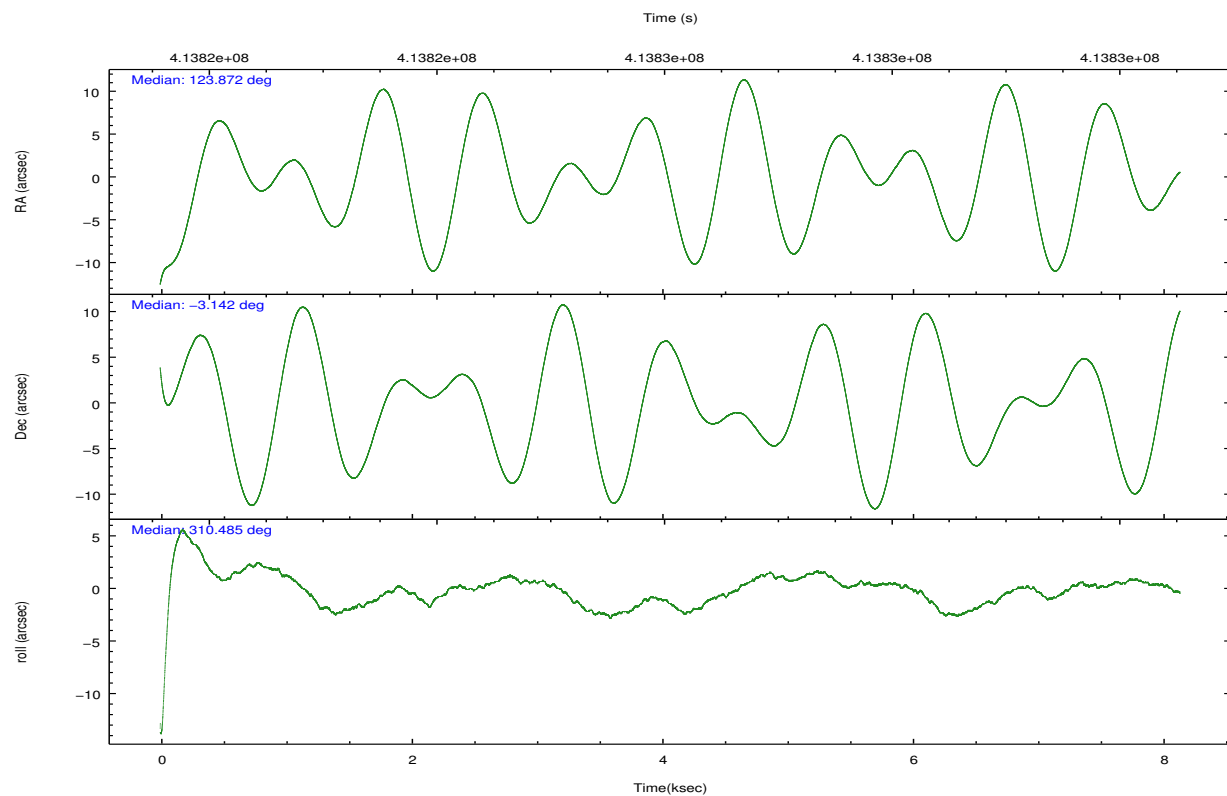


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-2367	ACIS-2367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	123.845772	123.8716740707683	CCD I2 on	O1	Y
[deg] Pointing Dec	-3.133813	-3.142573438548238	CCD I3 on	O2	Y
[deg] Pointing Roll	310.334270	310.4923013584478	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	N	N
[s] Observation start time (MET)	413822110.184000	413820765.1334	CCD S5 on	N	N
Observation start date	2011-02-11T14:34:04	2011-02-11T14:12:45	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	413830110.184000	413831078.68393	On-chip summing requested	N	N
Observation end date	2011-02-11T16:47:24	2011-02-11T17:04:38	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



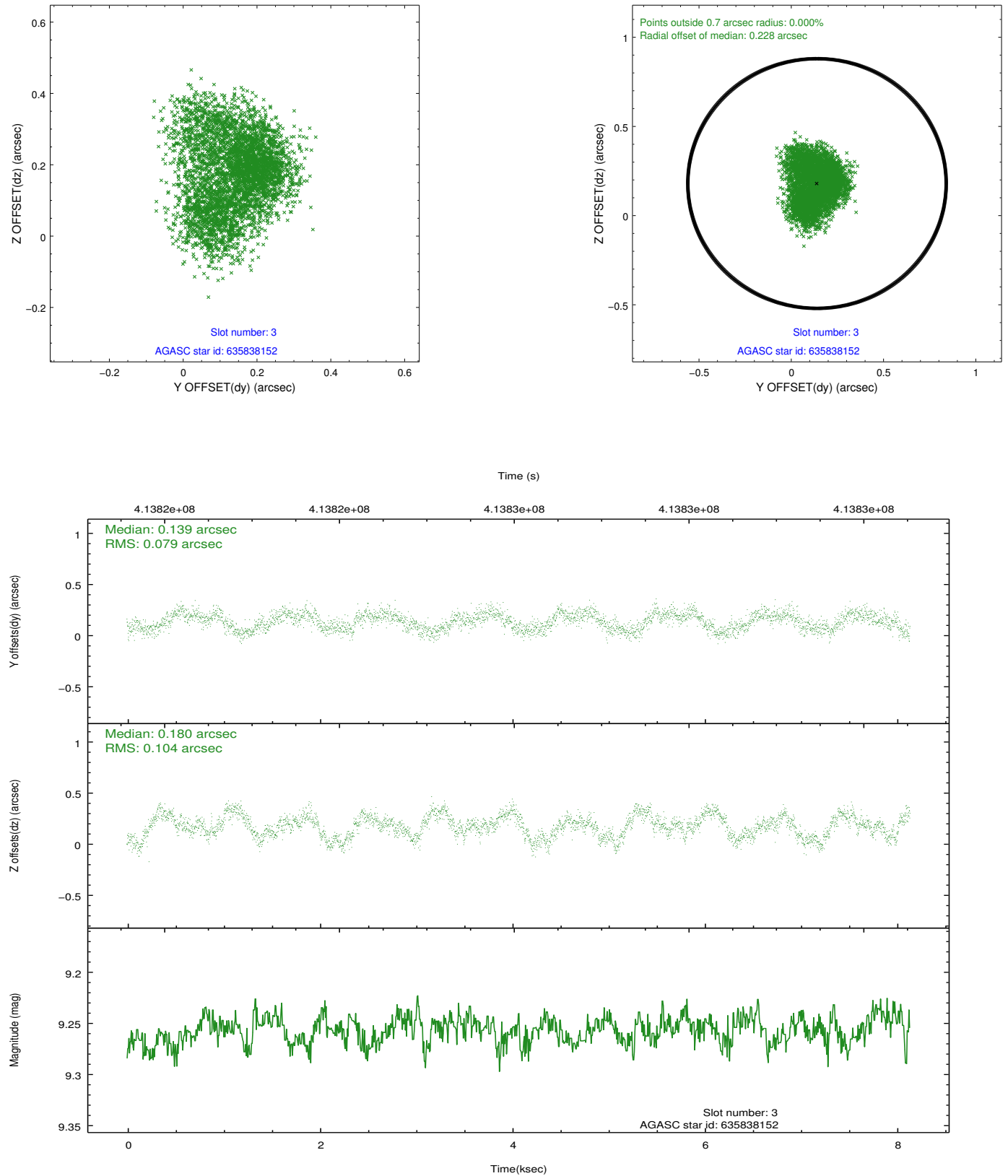


### Slot Statistics

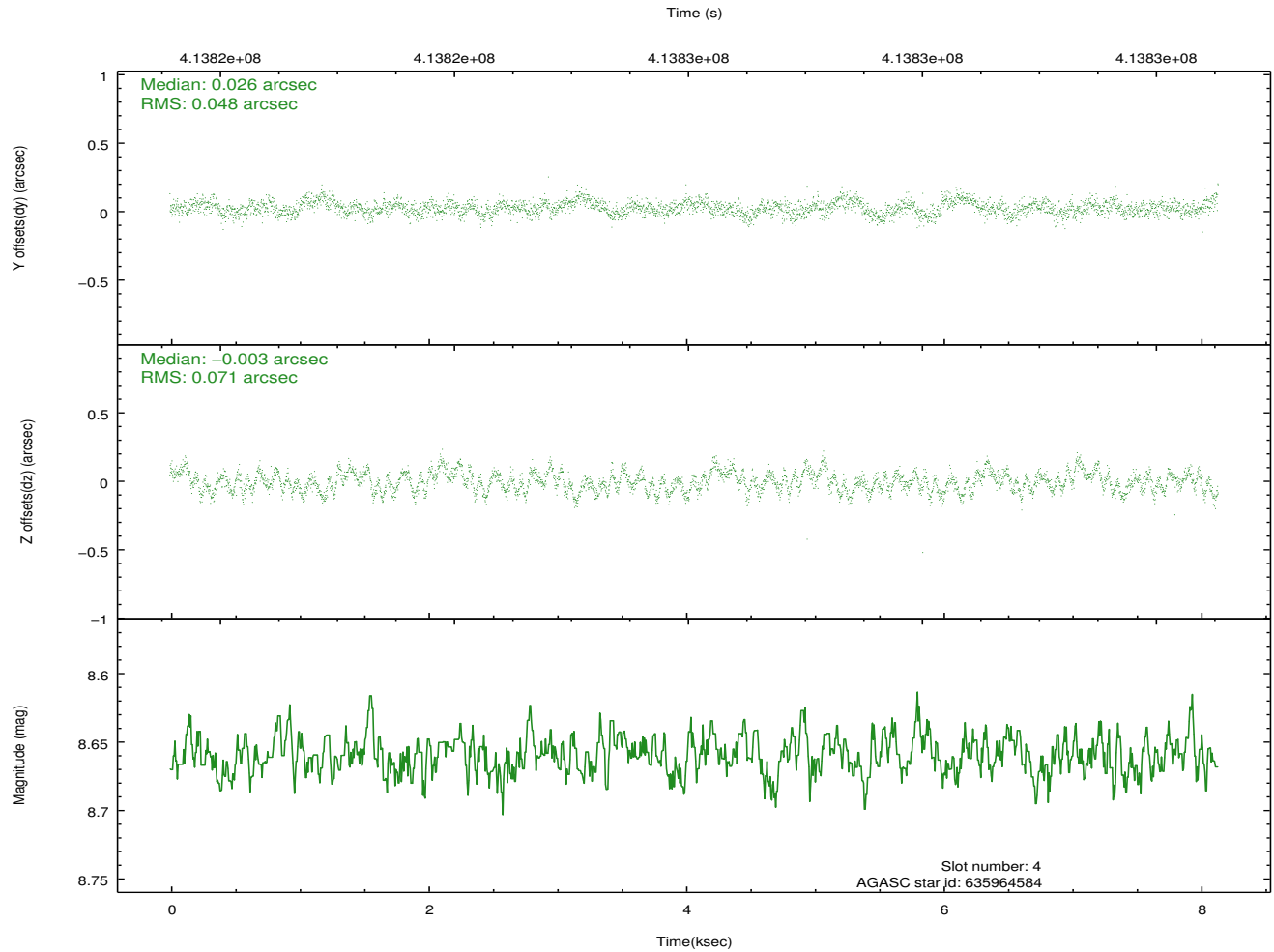
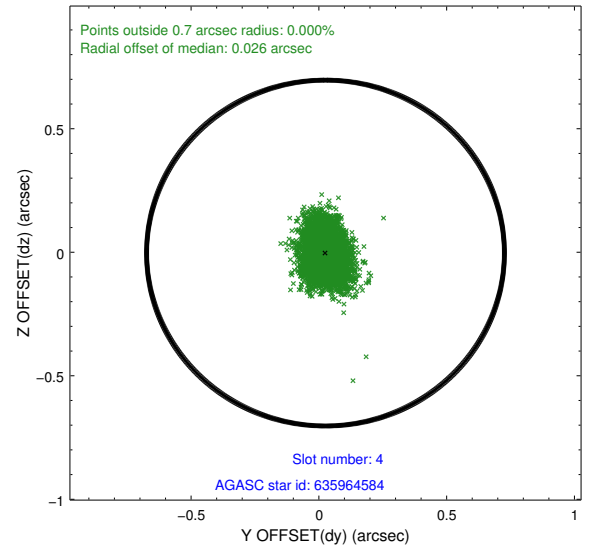
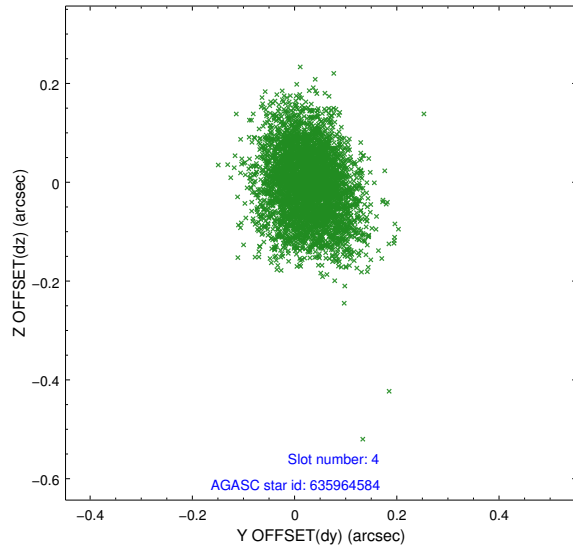
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.97	1986	-0.102	-0.055	0.006	0.011	0.000000	0.000000	-767.57	-1736.30
1	FID	ACIS-S-4	7.06	1986	0.249	0.064	0.005	0.010	0.000000	0.000000	2145.72	171.62
2	FID	ACIS-S-5	7.08	1986	-0.178	-0.000	0.006	0.011	0.000000	0.000000	-1819.63	165.97
3	GUIDE	635838152	9.26	3970	0.139	0.180	0.142	0.218	123.552514	-2.865366	-1418.47	-178.21
4	GUIDE	635964584	8.66	3969	0.026	-0.003	0.091	0.150	124.305106	-3.217216	1297.68	1063.59
5	GUIDE	635965640	7.62	3971	-0.103	-0.108	0.071	0.111	124.373368	-3.107512	1156.76	1507.47
6	GUIDE	636355600	7.31	3972	-0.001	0.084	0.071	0.112	123.599880	-3.829914	1339.72	-2294.82
7	GUIDE	635965976	8.88	3968	-0.057	-0.147	0.104	0.161	124.388287	-2.743730	192.97	2394.89

## 2.4 Star Slots

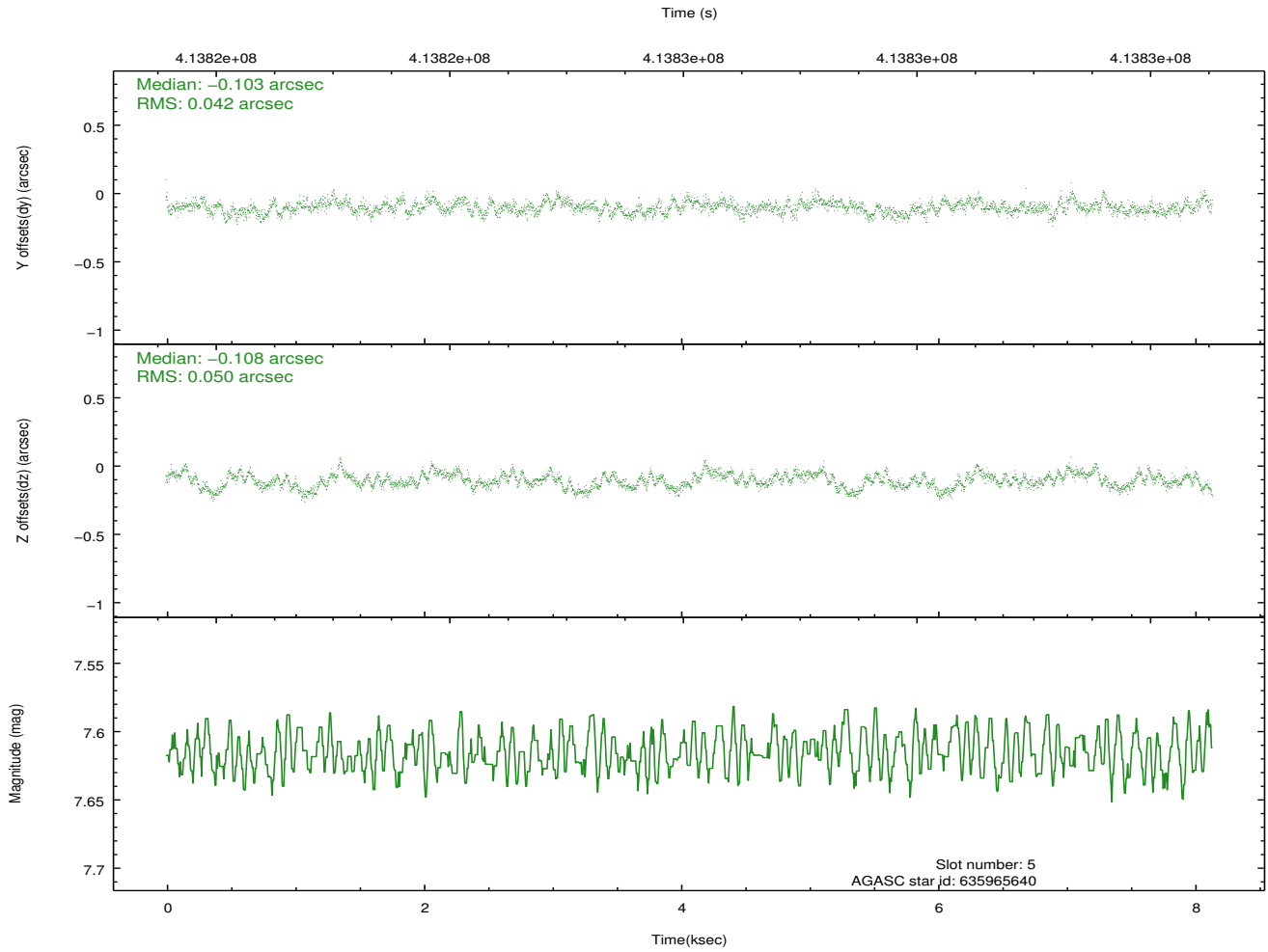
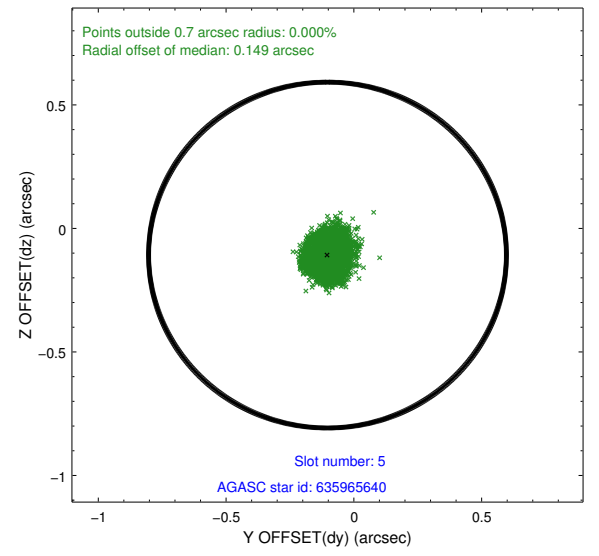
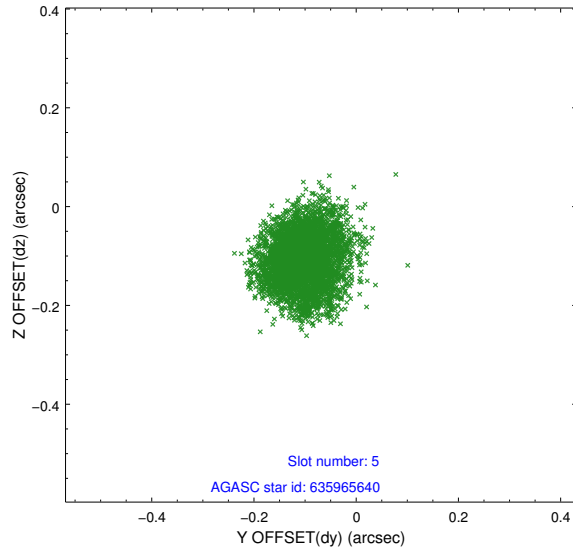
### 2.4.1 Slot 3



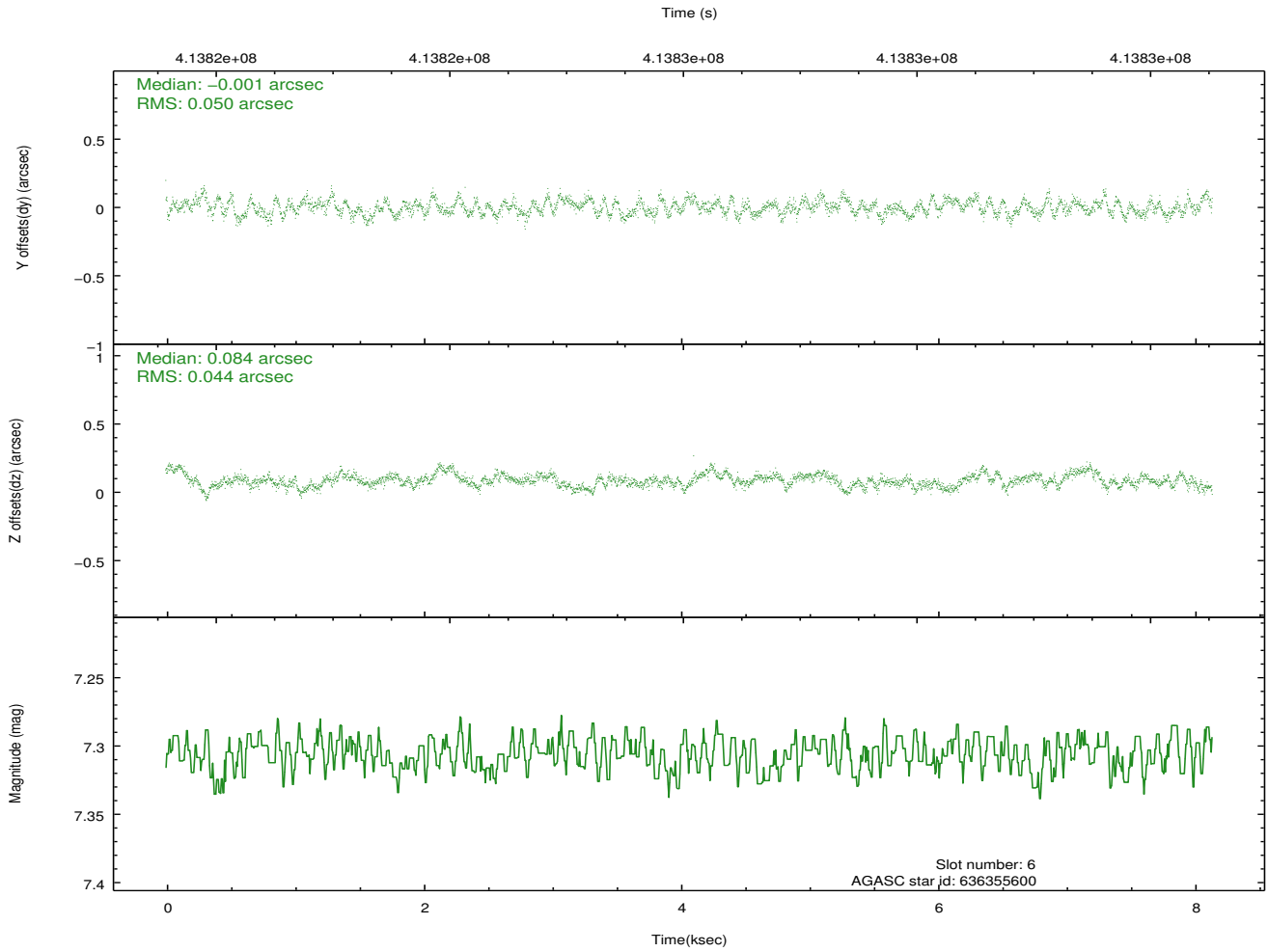
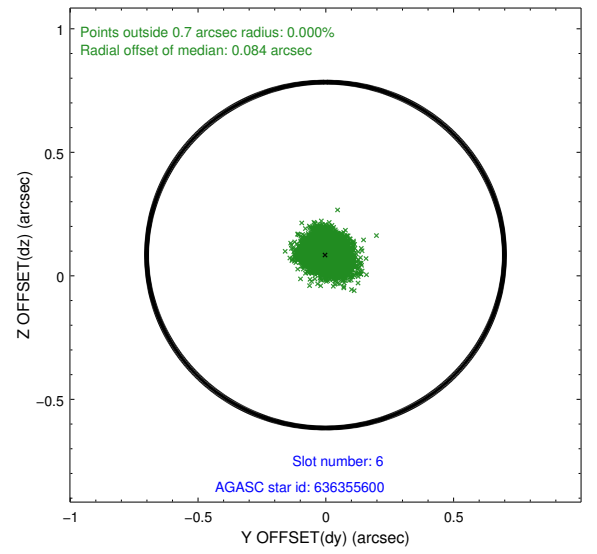
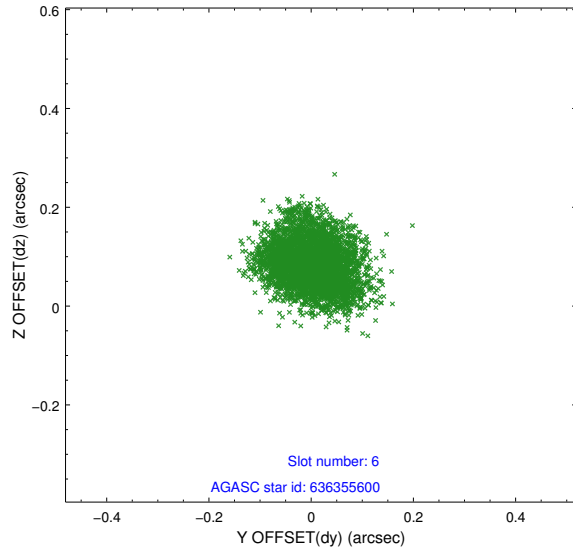
## 2.4.2 Slot 4



### 2.4.3 Slot 5

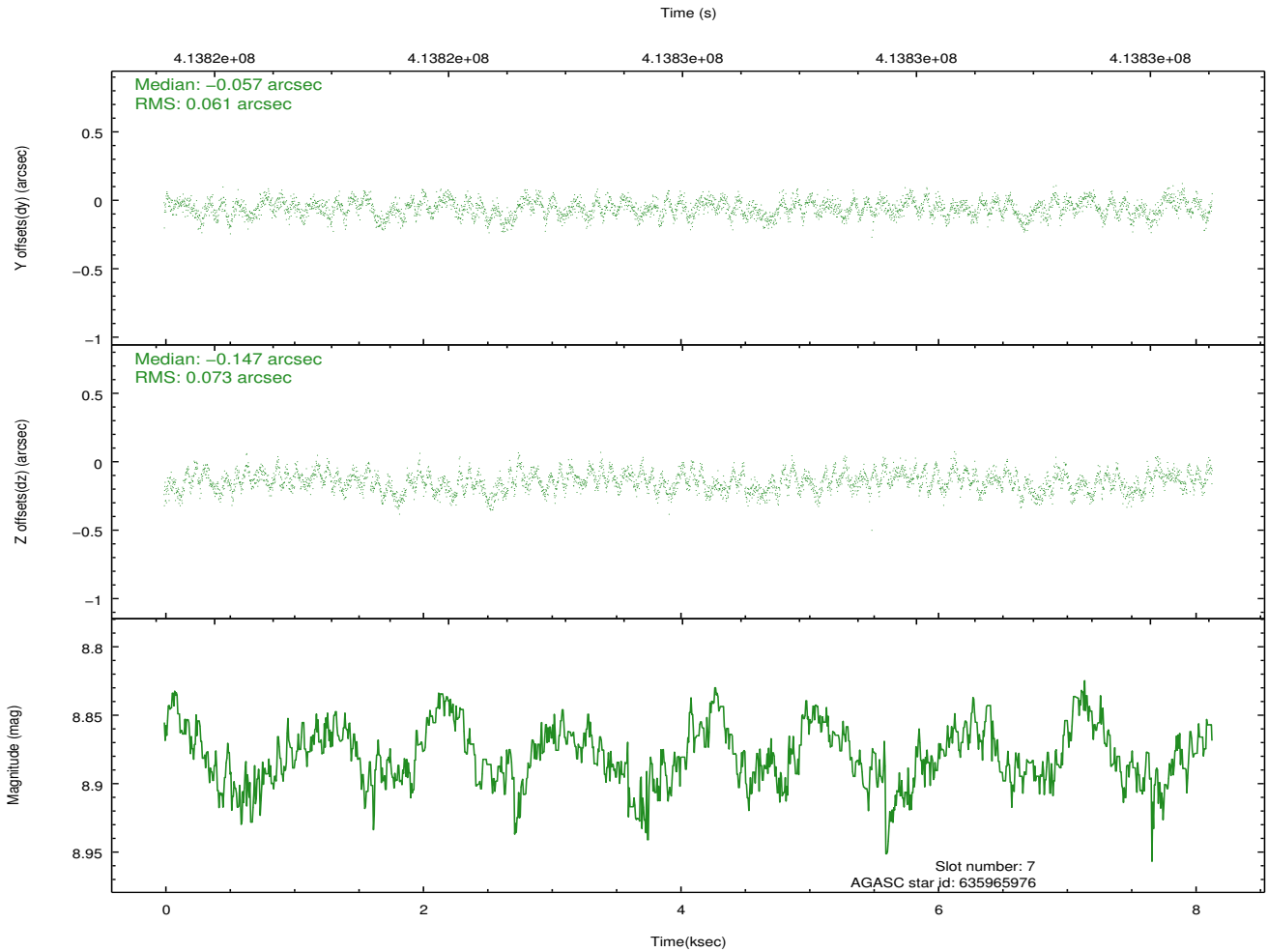
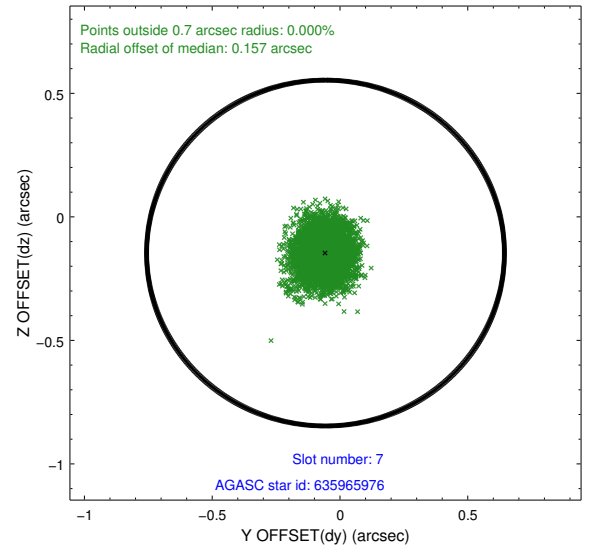
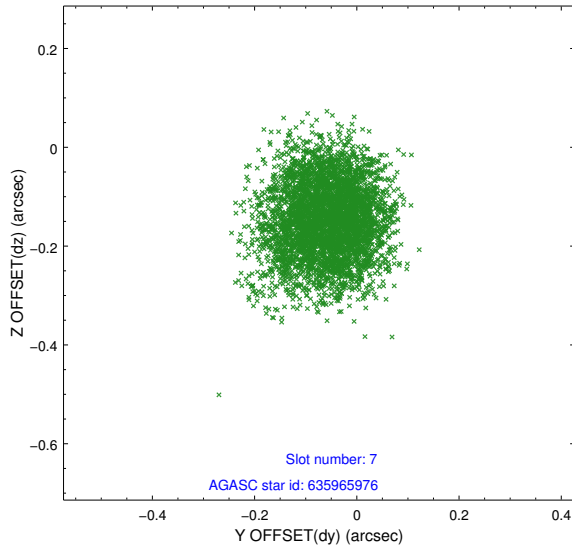


## 2.4.4 Slot 6



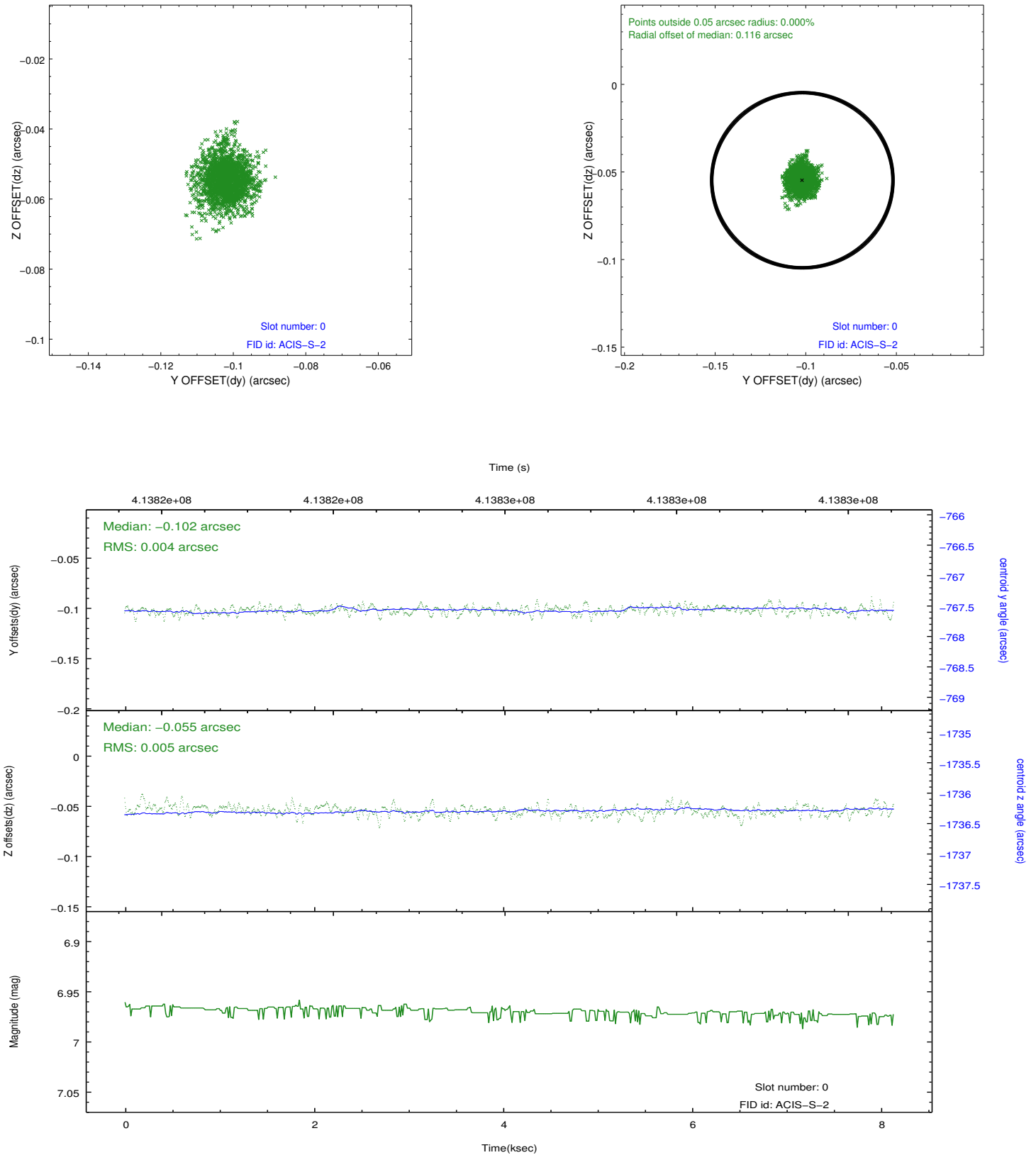


## 2.4.5 Slot 7

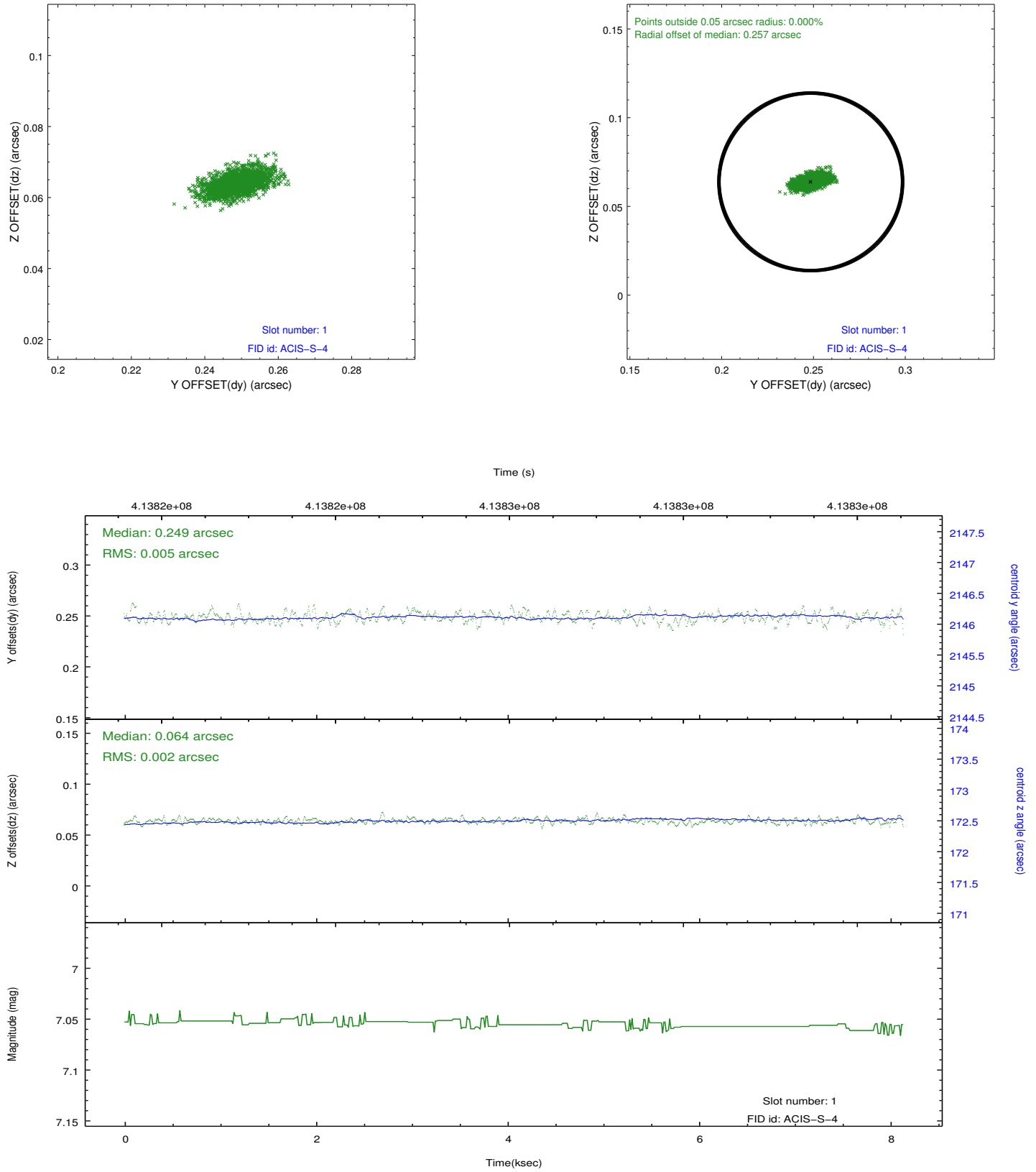


## 2.5 FID Slots

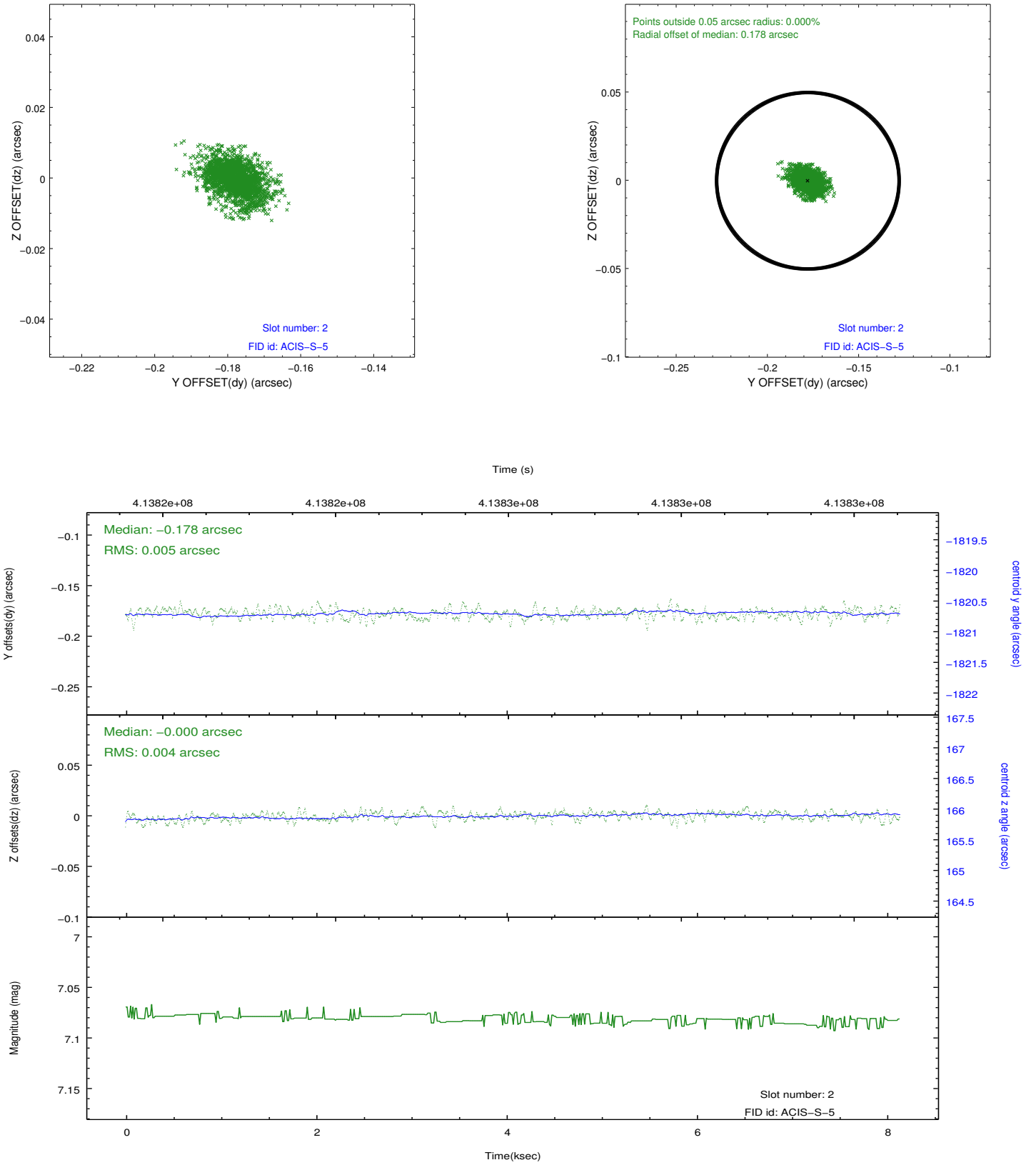
### 2.5.1 Slot 0



## 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)	2012.02.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.0526527732015

## 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.