

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 13212 - L2 Version 2  
Chandra X-Ray Center

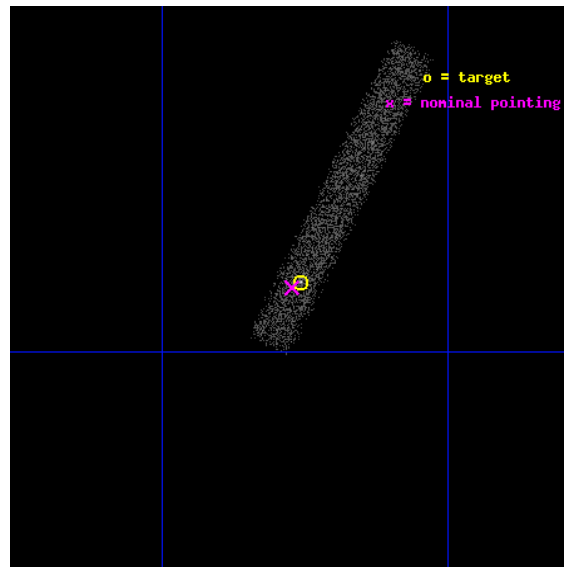
L2 Processing Date : Feb 2 2012

## 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

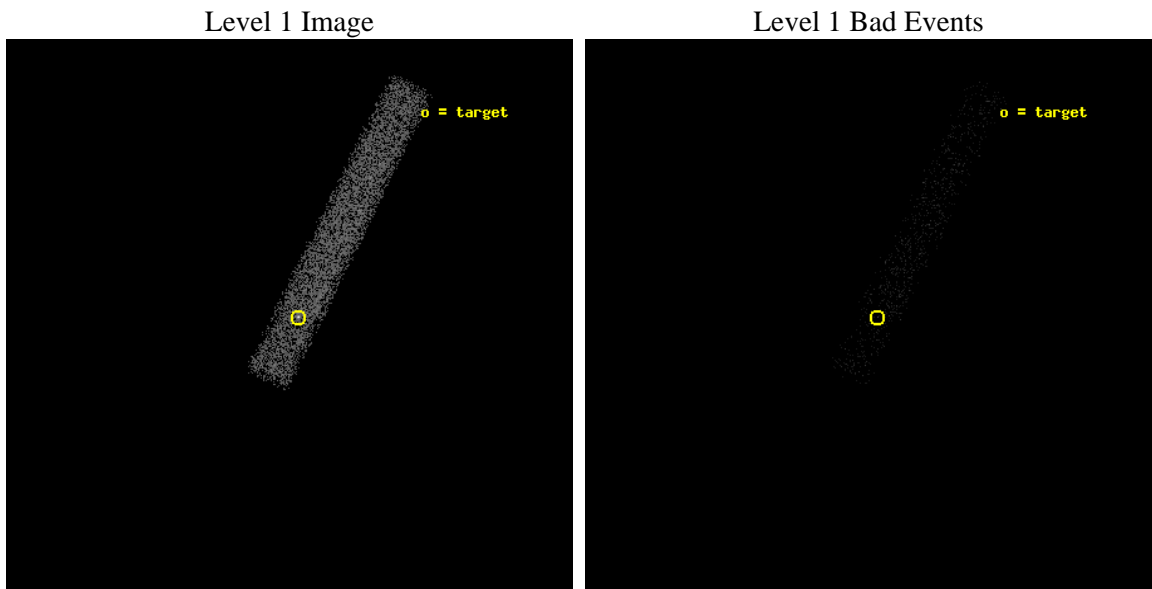
seq_num	600982	Sequence number
obs_id	13212	Observation id
title	An Unusual Outburst from the Nucleus of the Quiescent Galaxy NGC 1589	Proposal title
observer	Prof. Alexei Filippenko	Principal investigator
object	NGC1589-OT	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	67.689167	Observer's specified target RA [deg]
dec_targ	0.863611	Observer's specified target Dec [deg]
ra_nom	67.693259203234	Nominal RA [deg]
dec_nom	0.86104234434041	Nominal Dec [deg]
roll_nom	296.33648292452	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10186.400151849	Sum of GTIs [s]
livetime	9689.3371557584	Livetime [s]
ontime7	10186.400151849	Sum of GTIs [s]
l2events	5894	Number of level 2 events



## 2 OBI

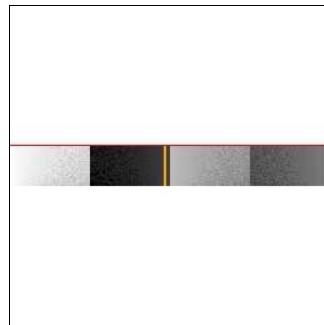
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	10186.400151849	Sum of GTIs [s]
caldbver	4.4.7	&#160	ontime7	10186.400151849	Sum of GTIs [s]
date	2012-02-02T03:52:19	Date and time of file creation	l1events	10645	Number of level 1 events
revision	2	Processing version of data			

### 2.1.4 Events

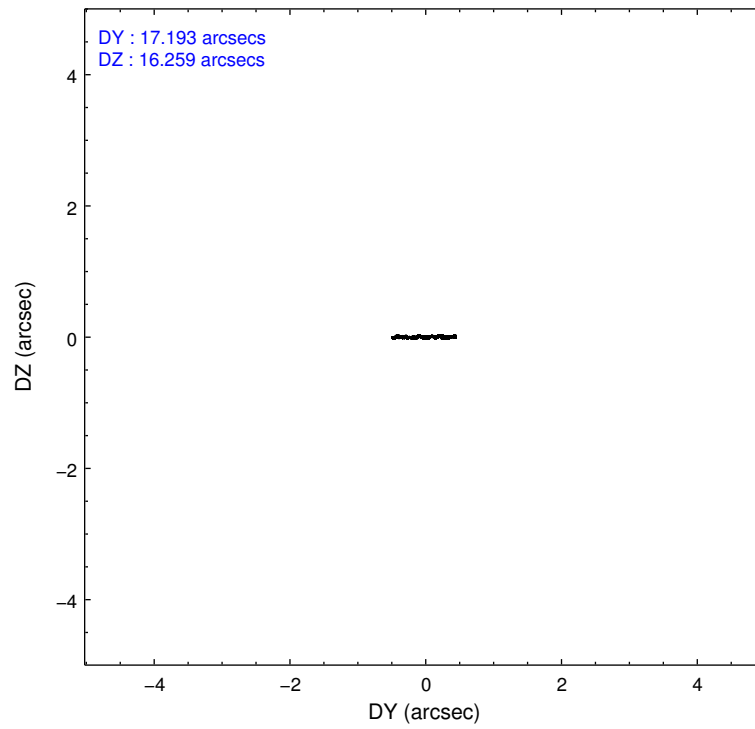
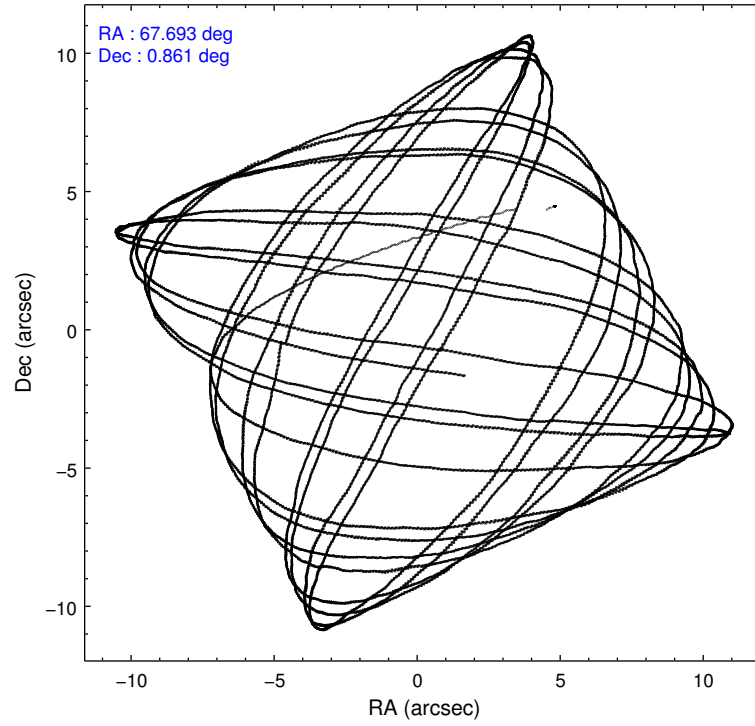
	<b>ccd 7</b>
level 1 events	10645
rejected events	4572
rejected %	42%

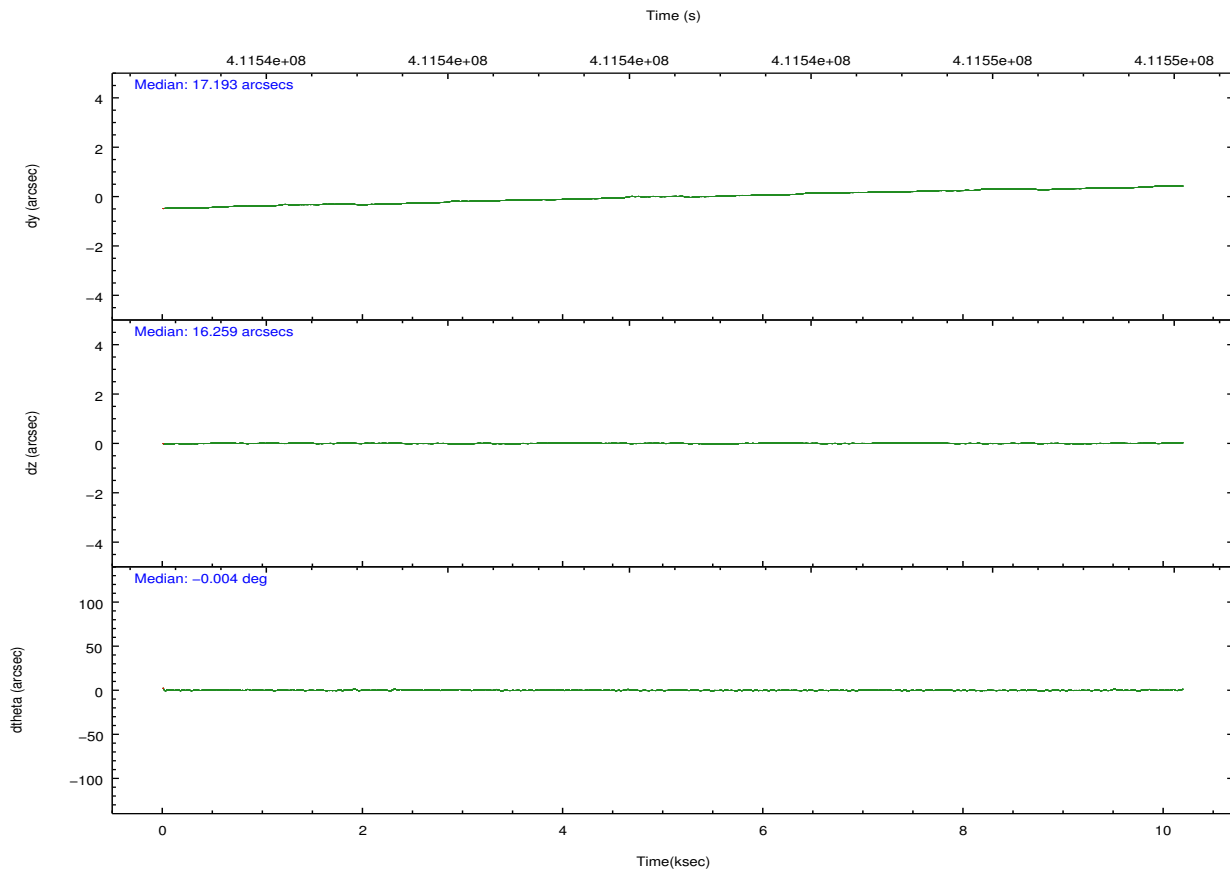
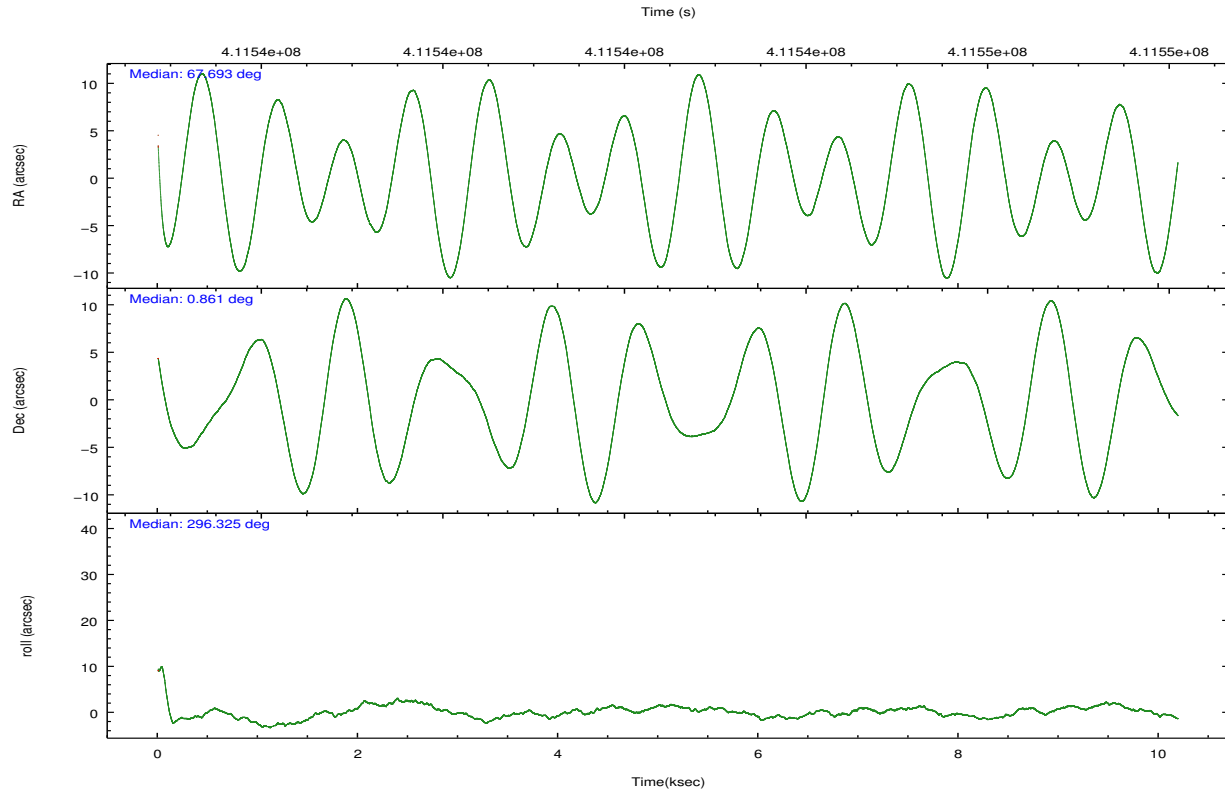
	<b>ccd 7</b>
grade 0 events	753
	7%
grade 1 events	21
	0%
grade 2 events	1250
	11%
grade 3 events	702
	6%
grade 4 events	714
	6%
grade 5 events	1083
	10%
grade 6 events	2669
	25%
grade 7 events	3453
	32%

## 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	67.670317	67.69325920323389	Subarray requested	CUSTOM	1/8
[deg] Pointing Dec	0.875886	0.8610423443404106	Subarray start row	449	449
[deg] Pointing Roll	296.180190	296.3364829245228	Subarray row count	128	128
[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	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	411537573.184000	411536601.71524			
Observation start date	2011-01-16T03:58:27	2011-01-16T03:43:21			
[s] Observation end time (MET)	411547573.184000	411548228.29084			
Observation end date	2011-01-16T06:45:07	2011-01-16T06:57:08			
Read mode	TIMED	TIMED			

## 2.3 Aspect



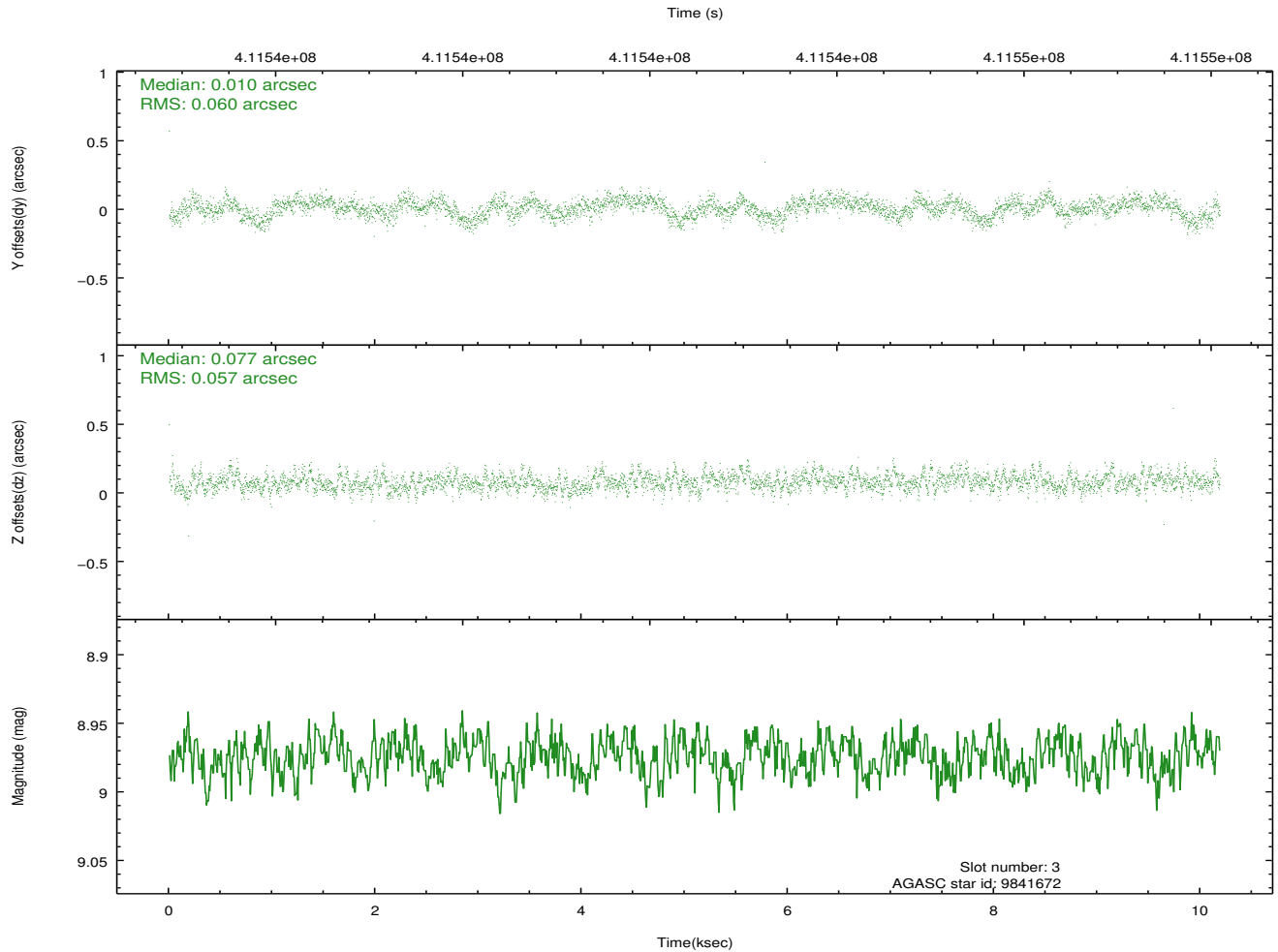
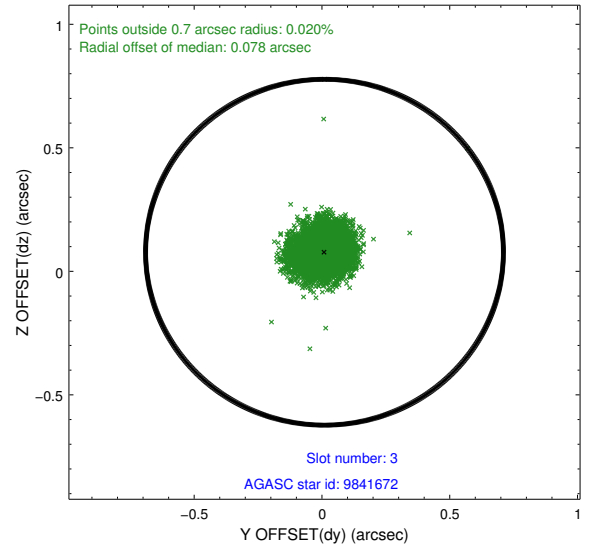
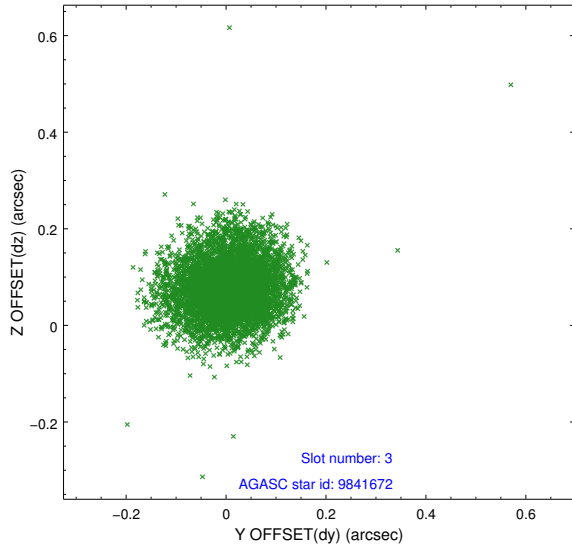


### Slot Statistics

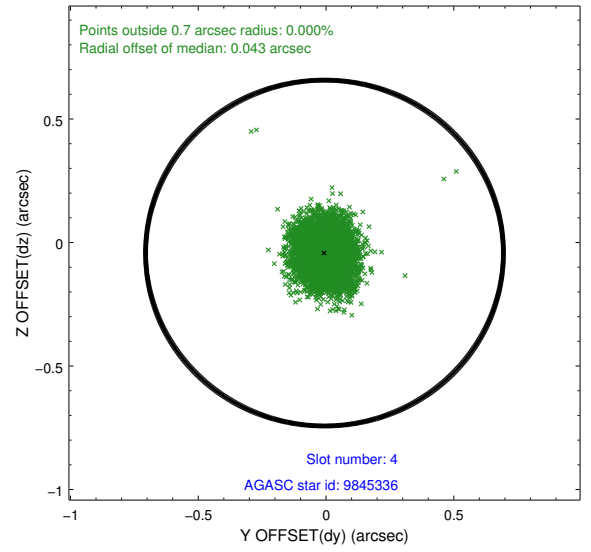
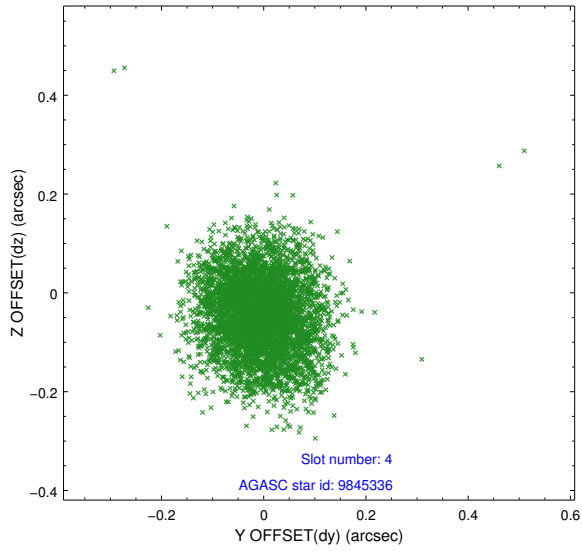
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.93	2485	-0.077	-0.011	0.008	0.013	0.000000	0.000000	-770.28	-1737.68
1	FID	ACIS-S-4	7.01	2486	0.172	0.040	0.008	0.014	0.000000	0.000000	2143.00	170.32
2	FID	ACIS-S-5	7.04	2486	-0.126	-0.021	0.009	0.018	0.000000	0.000000	-1822.51	164.51
3	GUIDE	9841672	8.97	4963	0.010	0.077	0.088	0.140	67.044190	0.886440	-1027.96	-2005.38
4	GUIDE	9845336	9.13	4963	-0.006	-0.043	0.102	0.162	67.151860	0.759033	-443.38	-1859.69
5	GUIDE	10748760	8.48	4971	-0.100	-0.072	0.074	0.118	68.071667	1.526930	-1466.63	2330.38
6	GUIDE	10754360	9.23	4967	0.113	-0.023	0.123	0.202	68.128628	1.121938	-66.74	1872.99
7	GUIDE	9842632	9.51	4958	-0.030	0.062	0.149	0.247	66.971151	0.823801	-941.26	-2339.90

## 2.4 Star Slots

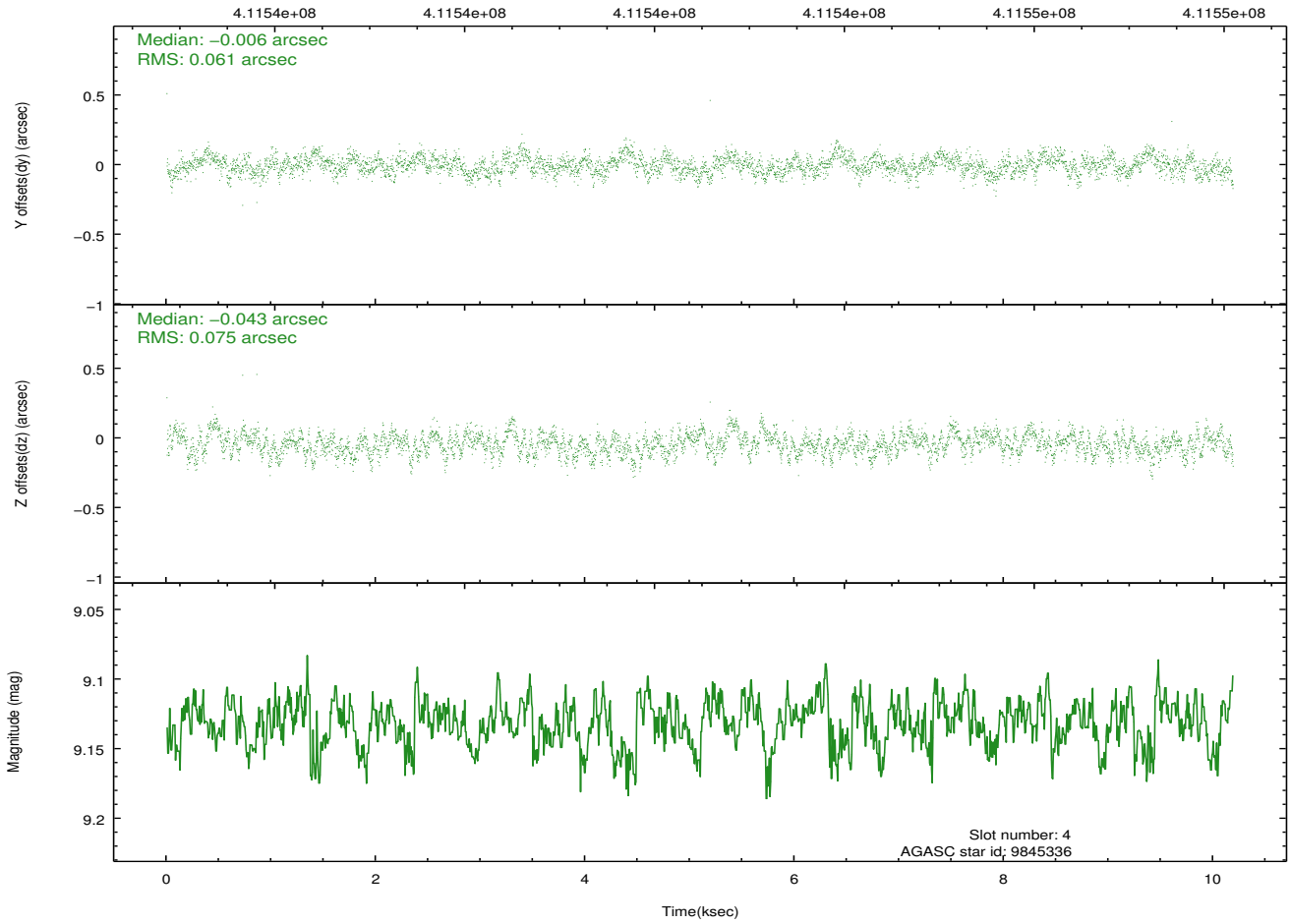
### 2.4.1 Slot 3



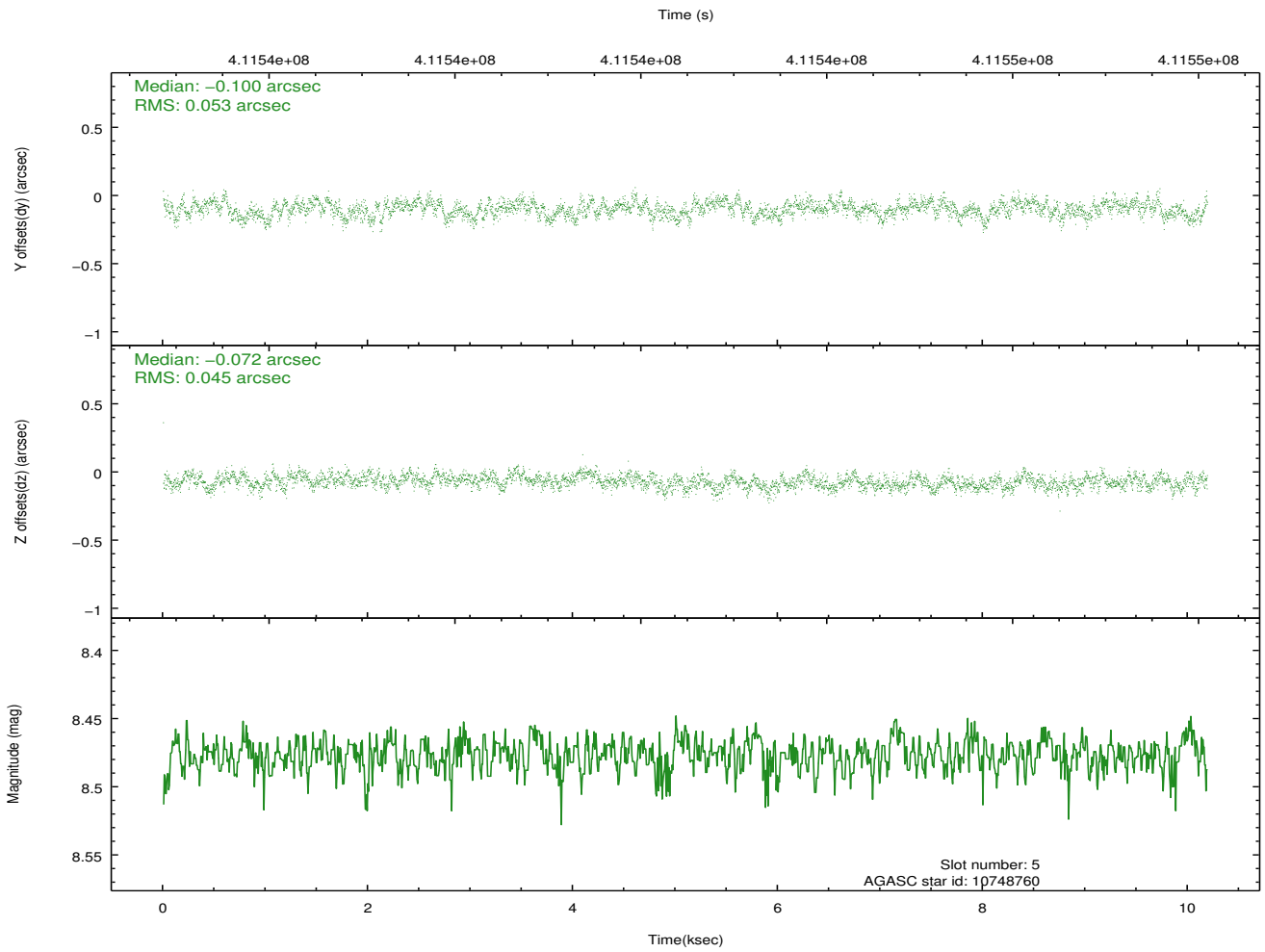
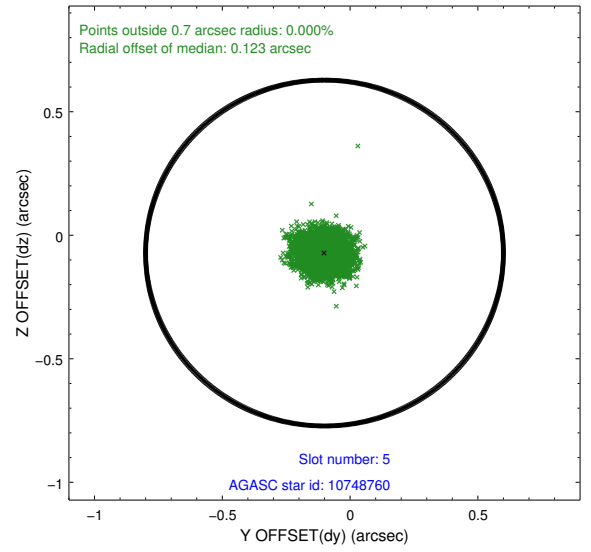
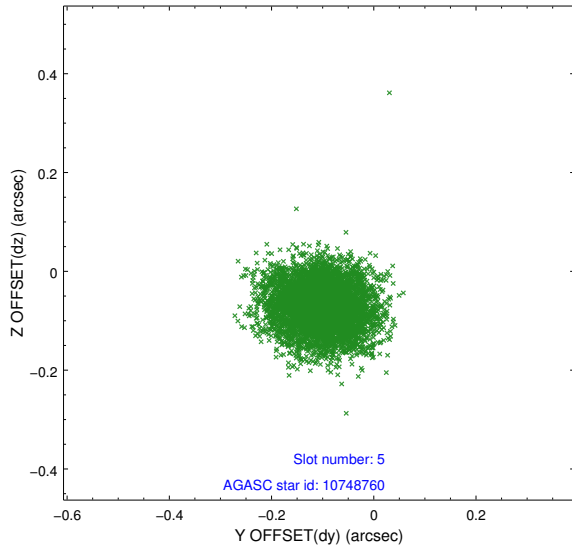
### 2.4.2 Slot 4



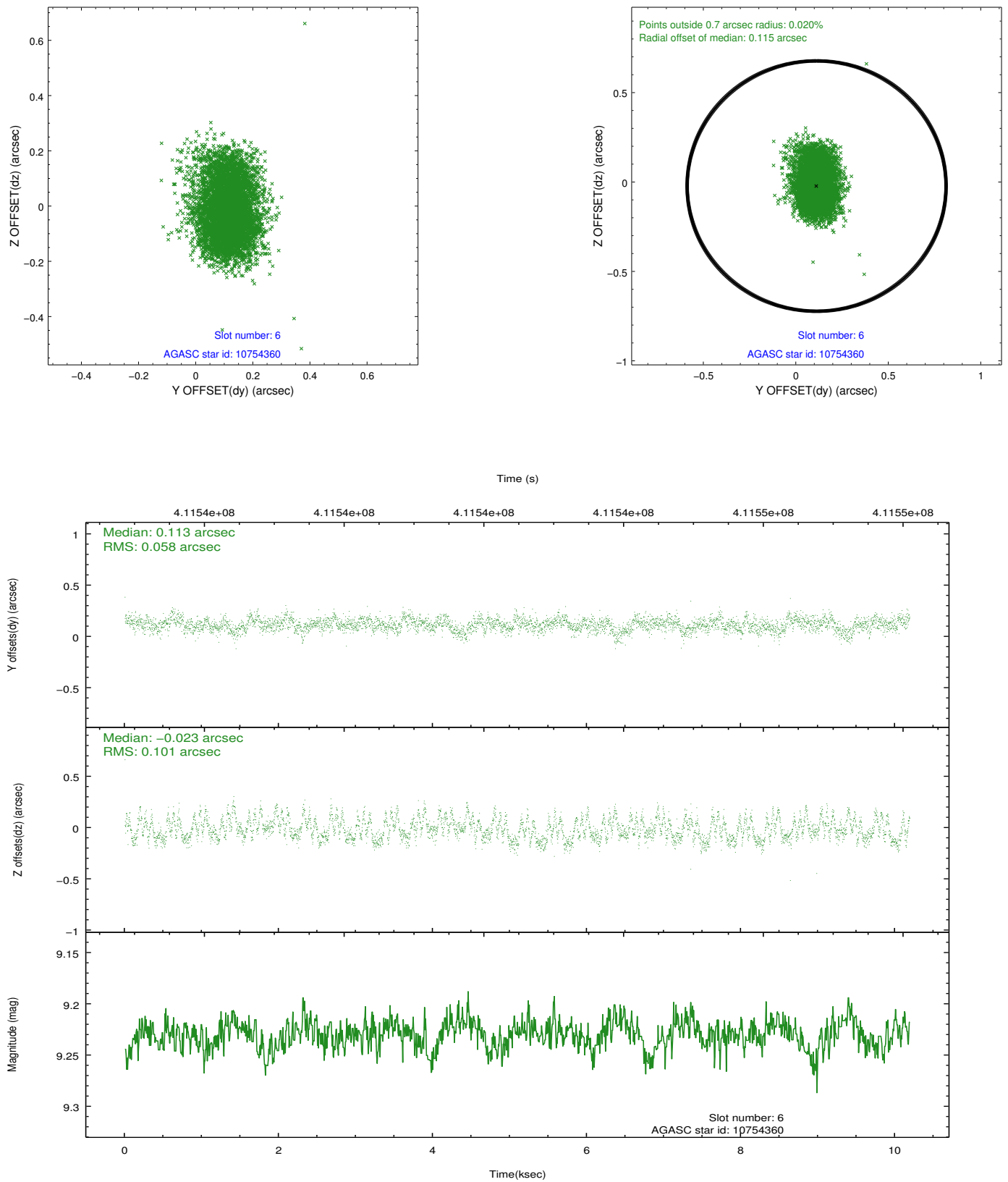
Time (s)



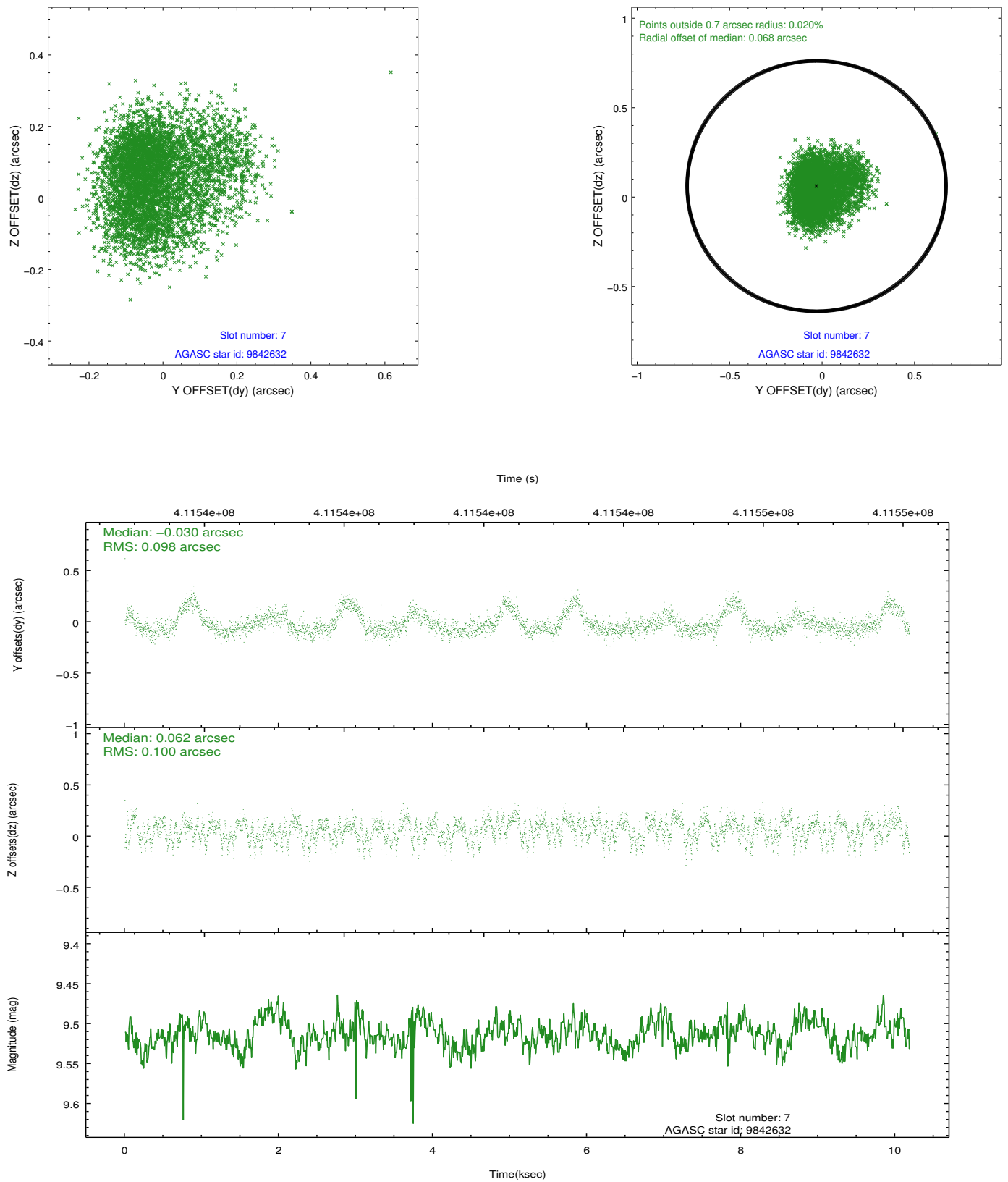
### 2.4.3 Slot 5



## 2.4.4 Slot 6

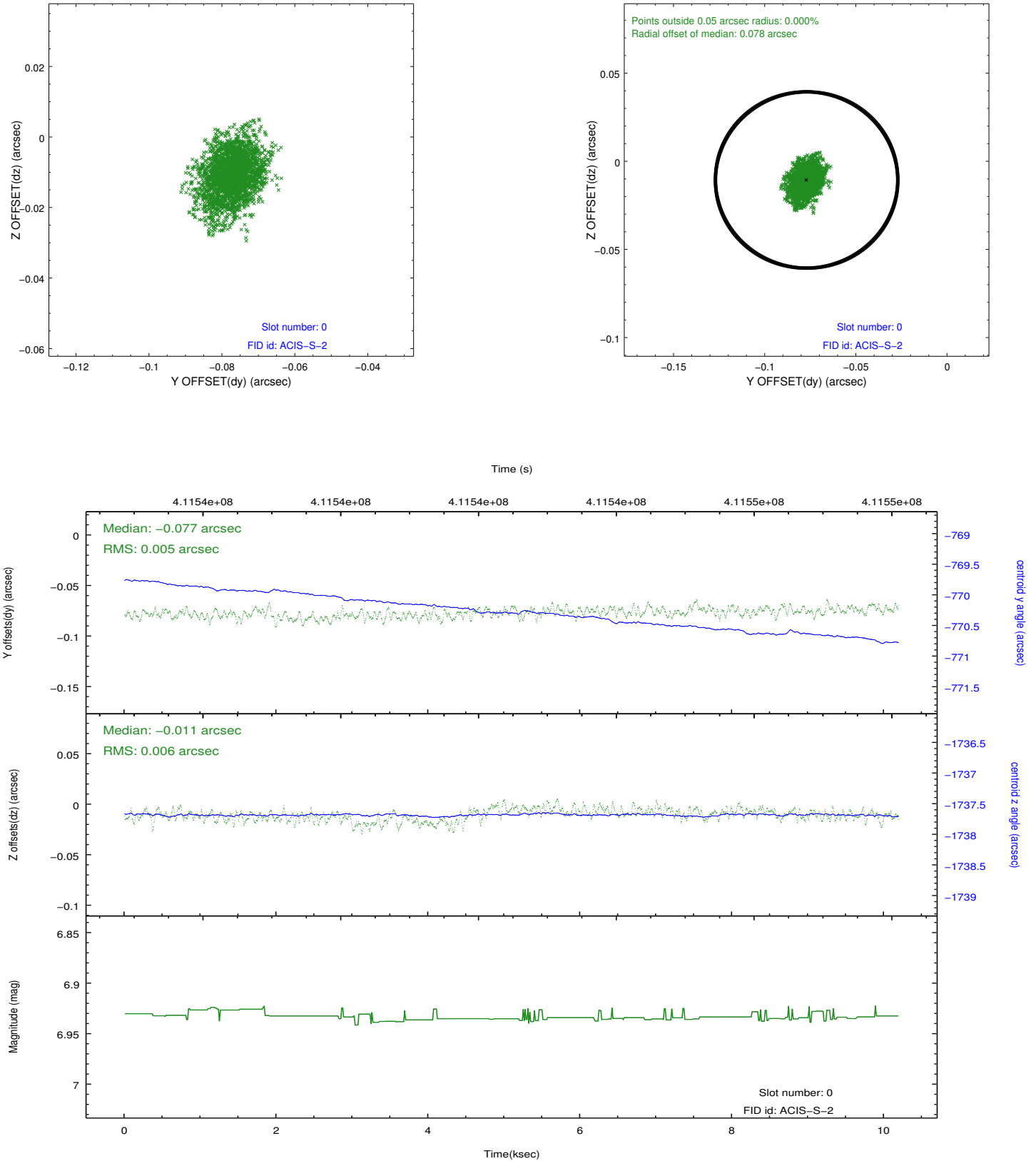


## 2.4.5 Slot 7

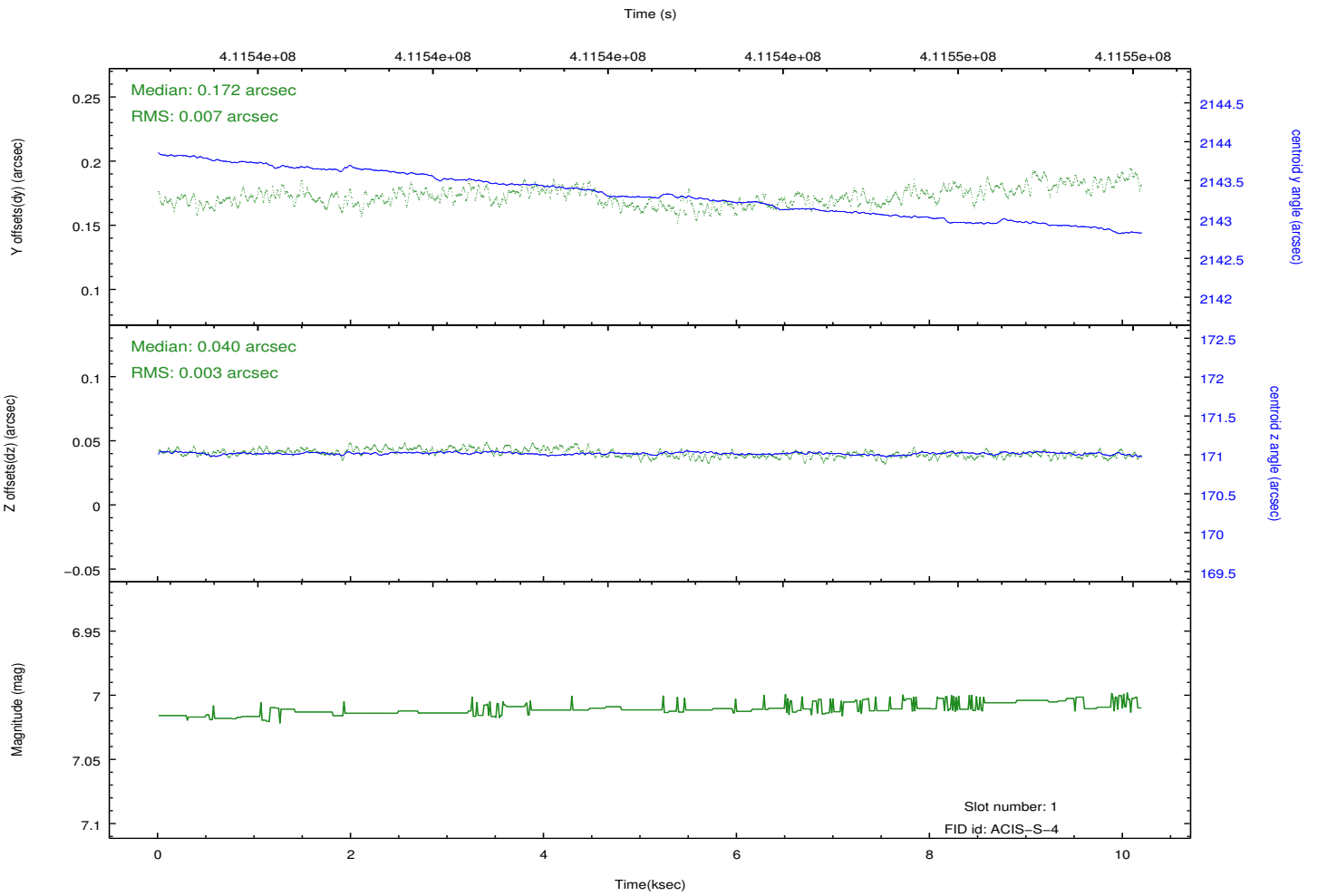
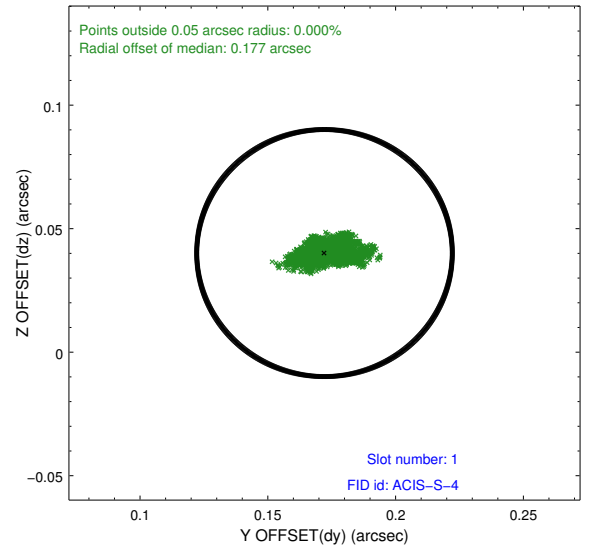
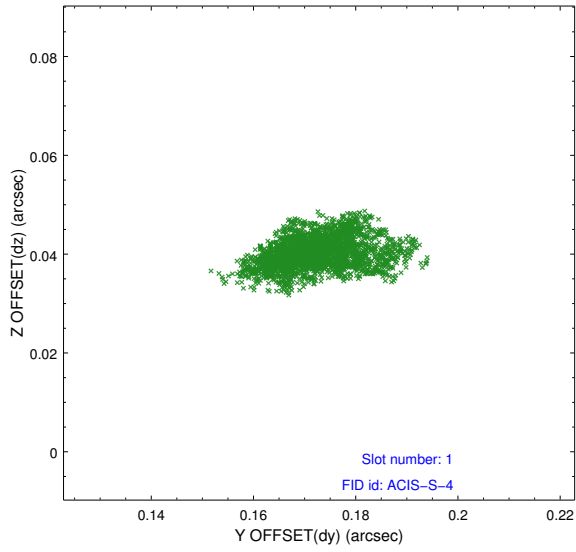


## 2.5 FID Slots

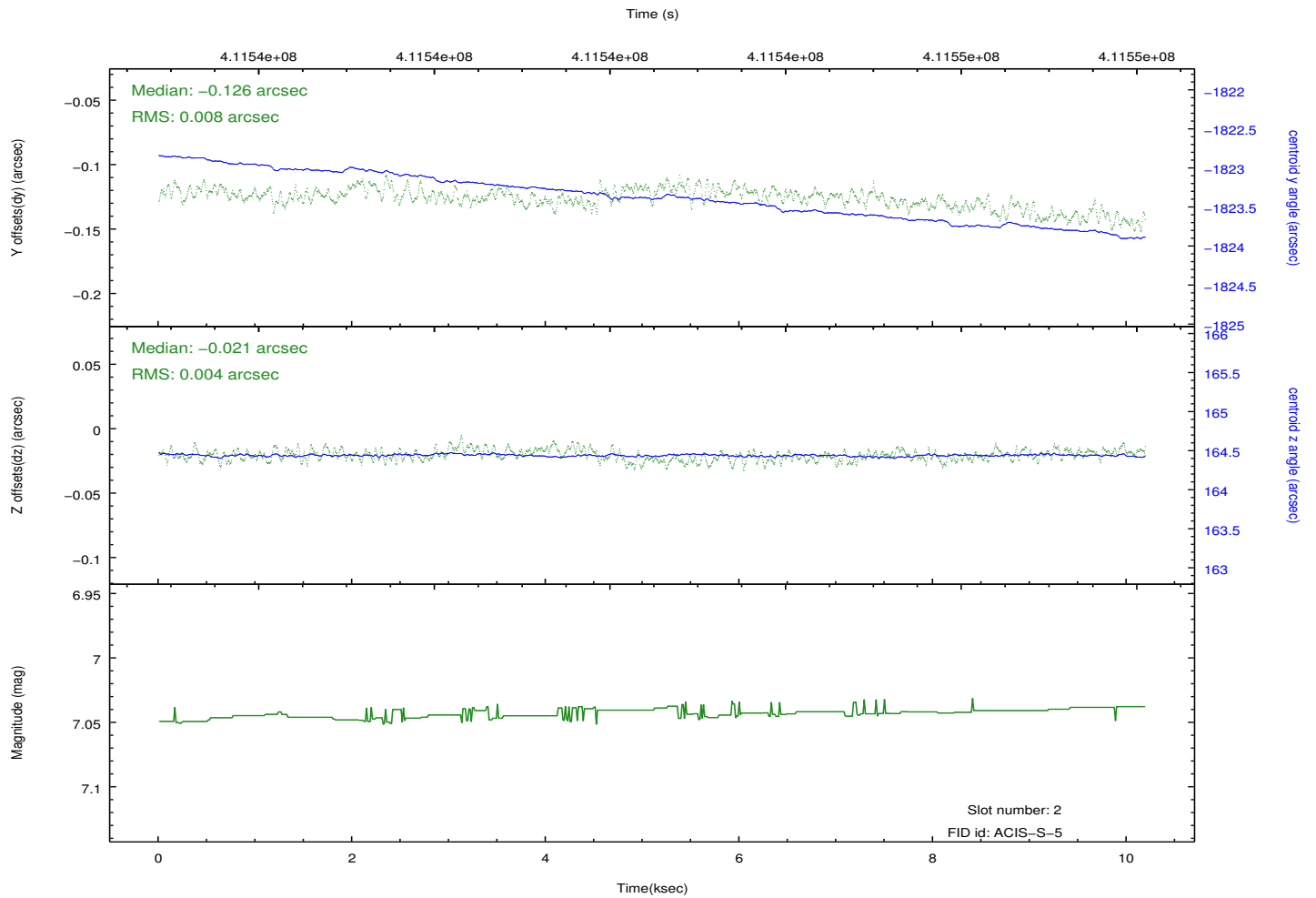
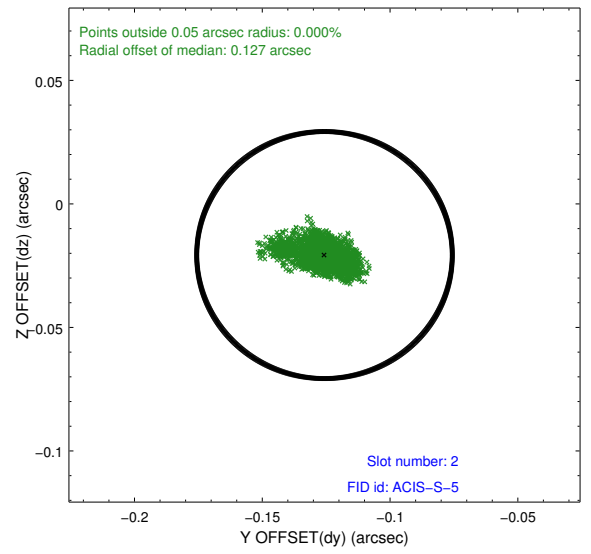
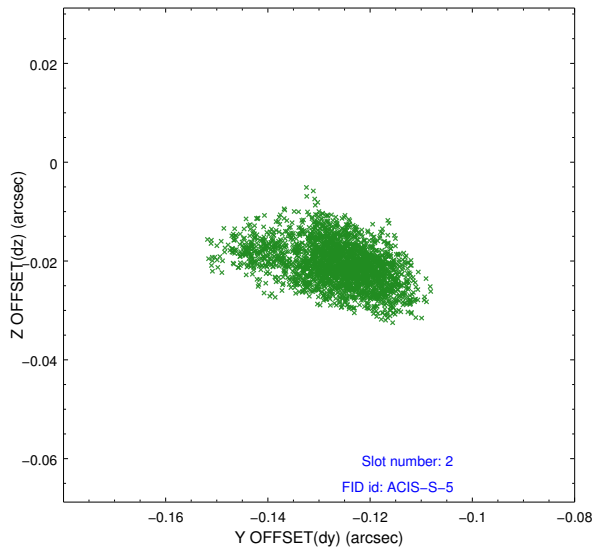
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.02.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.186400151849

## 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.