

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 13981 - L2 Version 2  
Chandra X-Ray Center

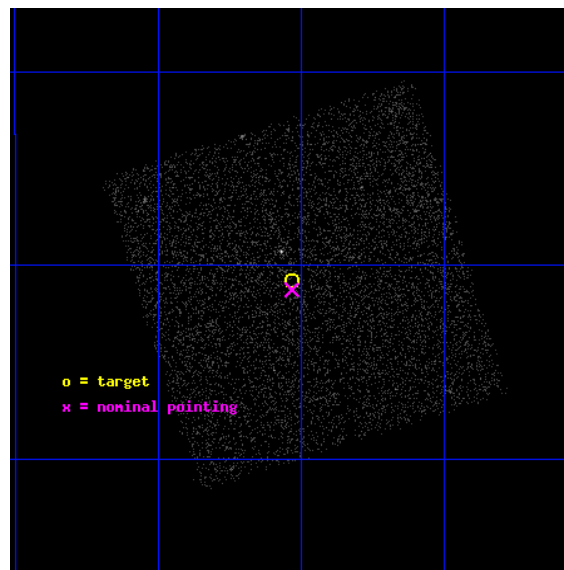
L2 Processing Date : Aug 14 2012

## 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 6 . . . . .	11
2.4.4	Slot 7 . . . . .	12
2.5	FID Slots . . . . .	13
2.5.1	Slot 0 . . . . .	13
2.5.2	Slot 1 . . . . .	14
2.5.3	Slot 2 . . . . .	15
<b>A</b>	<b>Summary</b>	<b>16</b>
A.1	Status . . . . .	16
A.2	Comments . . . . .	16

# 1 Front

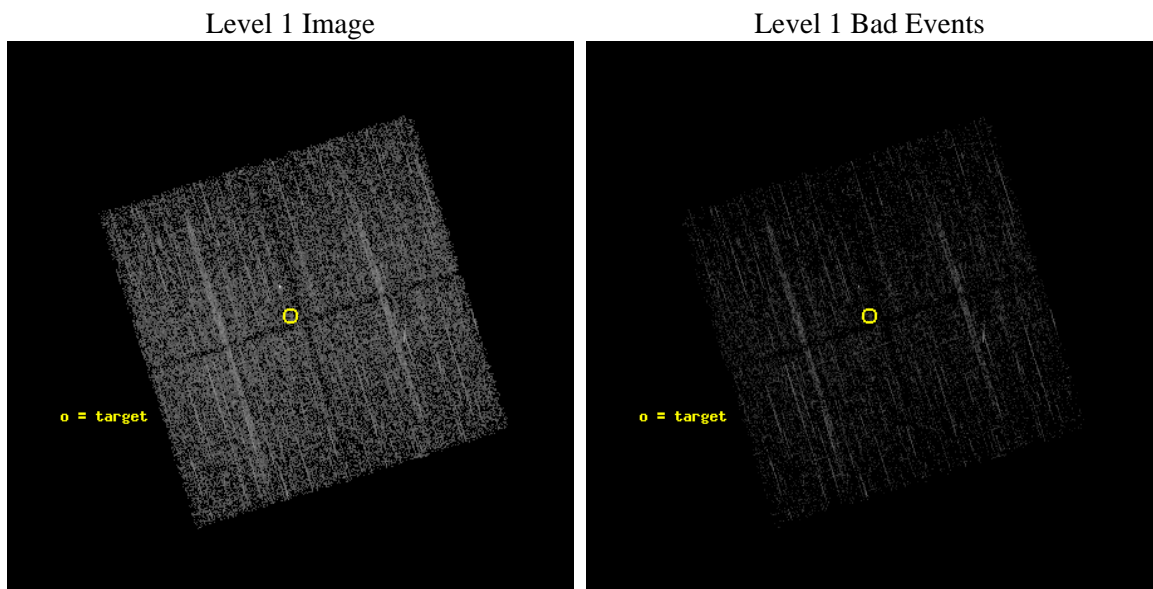
seq_num	702702	Sequence number
obs_id	13981	Observation id
title	Chandra observations of the faintest hard X-ray sources in the SIX survey	Proposal title
observer	Dr Eugenio Bottacini	Principal investigator
object	six-8	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	202.133333	Observer's specified target RA [deg]
dec_targ	-1.512889	Observer's specified target Dec [deg]
ra_nom	202.1333674248	Nominal RA [deg]
dec_nom	-1.5210703415983	Nominal Dec [deg]
roll_nom	252.50830538537	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5090.2000391483	Sum of GTIs [s]
livetime	5023.6928282861	Livetime [s]
ontime0	5090.2000391483	Sum of GTIs [s]
ontime1	5090.2000391483	Sum of GTIs [s]
ontime2	5090.2000391483	Sum of GTIs [s]
ontime3	5090.2000391483	Sum of GTIs [s]
l2events	11270	Number of level 2 events



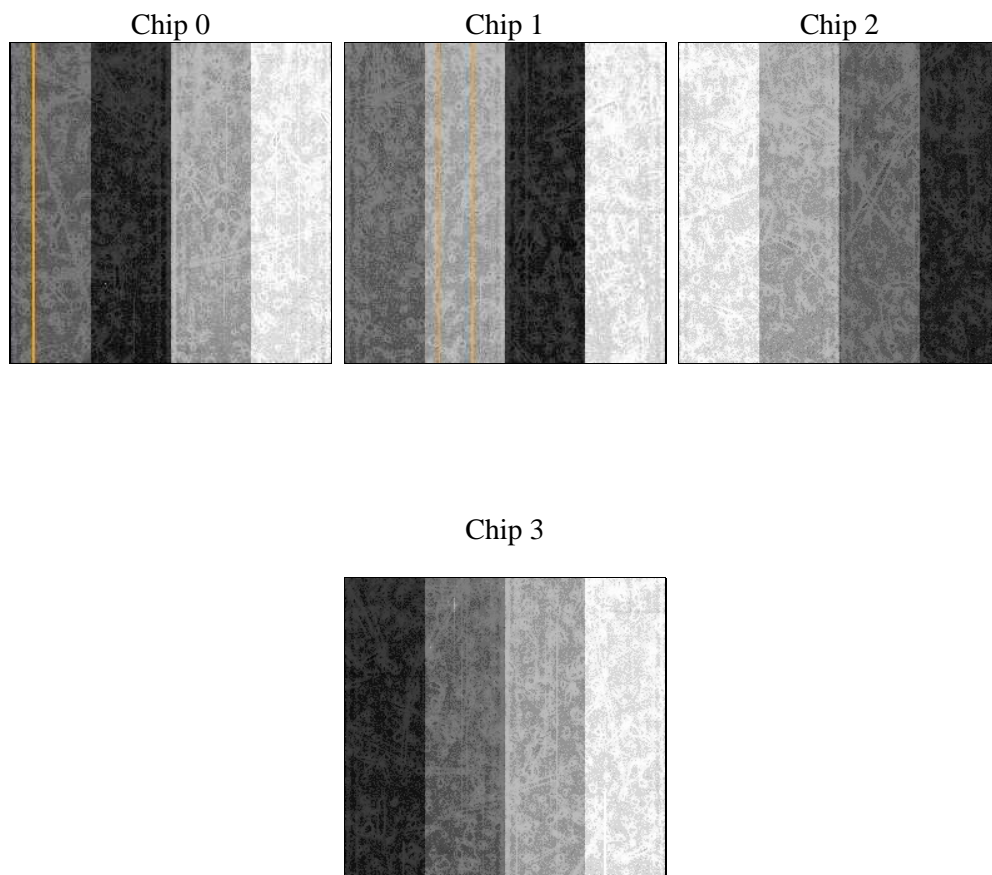
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	5090.2000391483	Sum of GTIs [s]
caldsver	4.5.1.1	&#160	ontime0	5090.2000391483	Sum of GTIs [s]
date	2012-08-14T17:55:04	Date and time of file creation	ontime1	5090.2000391483	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	5090.2000391483	Sum of GTIs [s]
			ontime3	5090.2000391483	Sum of GTIs [s]
			l1events	100101	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	23508	23222	26801	26570
rejected events	20452	19856	23778	22650
rejected %	87%	85%	88%	85%

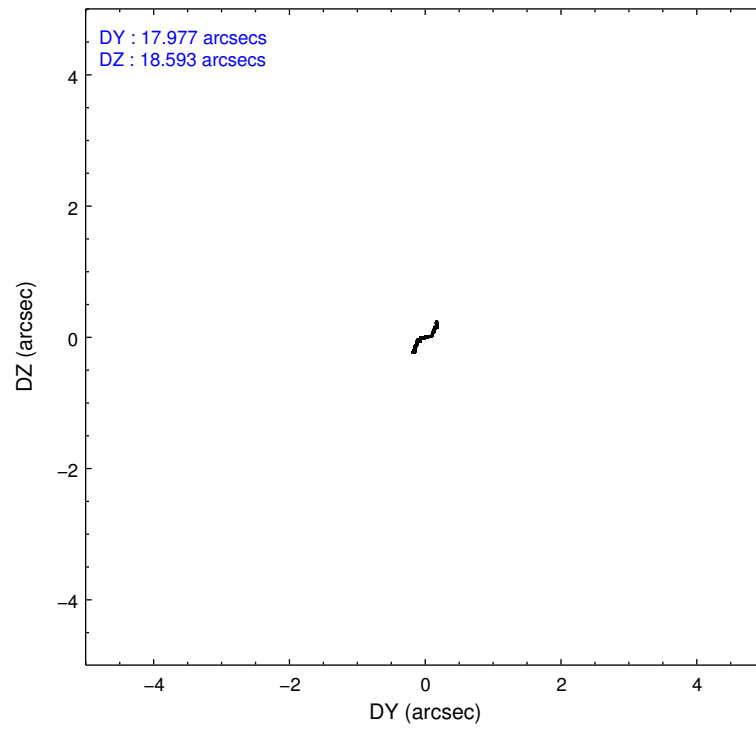
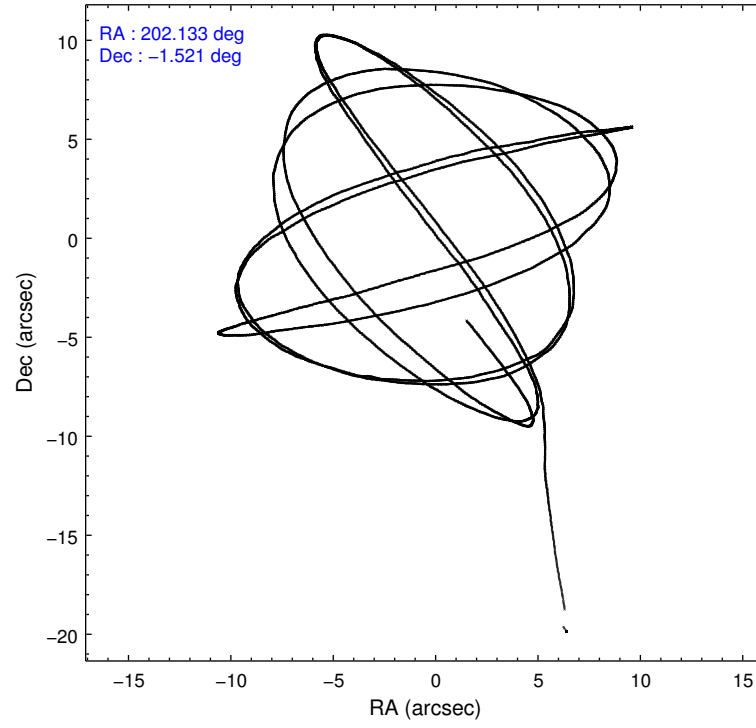
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	1043	1176	1054	1727
	4%	5%	3%	6%
grade 1 events	5	18	14	71
	0%	0%	0%	0%
grade 2 events	746	800	817	859
	3%	3%	3%	3%
grade 3 events	336	340	278	350
	1%	1%	1%	1%
grade 4 events	304	333	327	368
	1%	1%	1%	1%
grade 5 events	1191	1195	1119	1341
	5%	5%	4%	5%
grade 6 events	628	717	548	616
	2%	3%	2%	2%
grade 7 events	19255	18643	22644	21238
	81%	80%	84%	79%

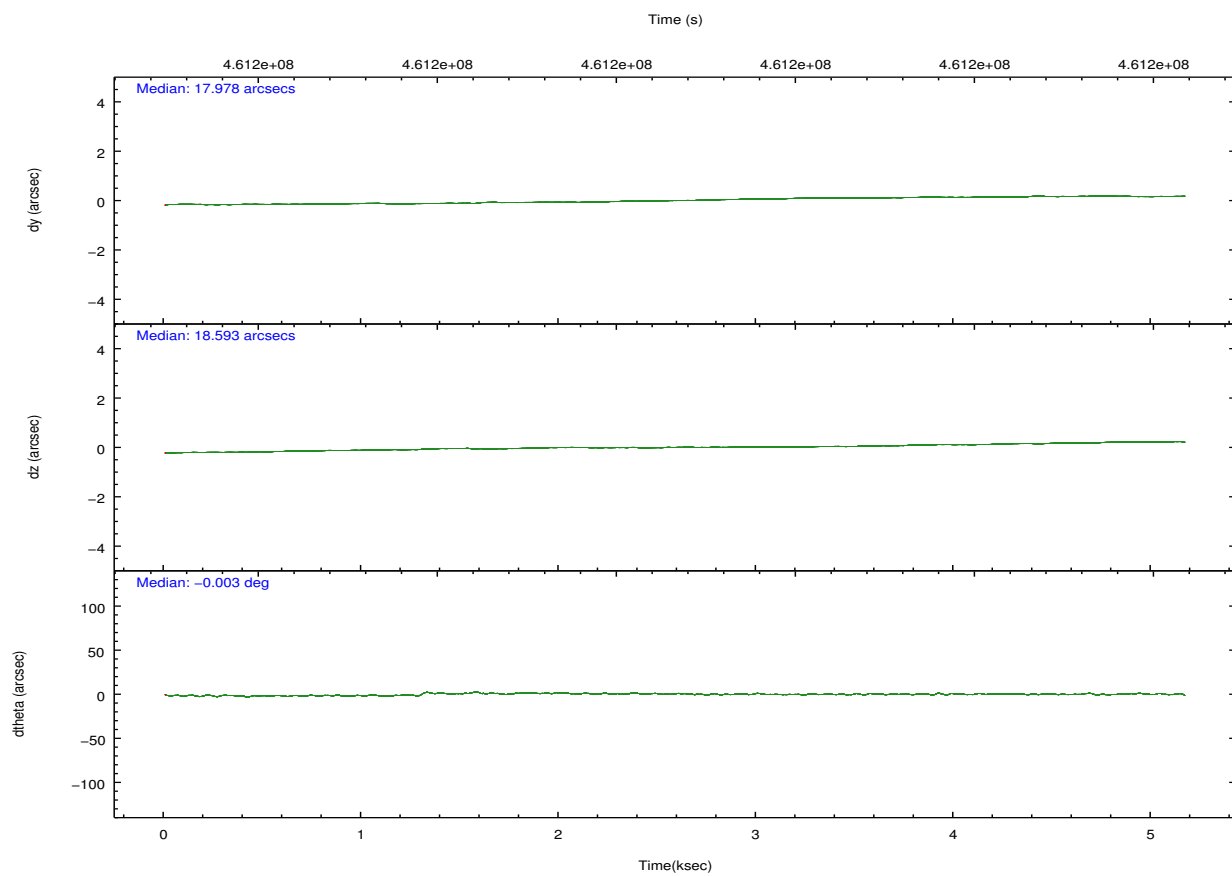
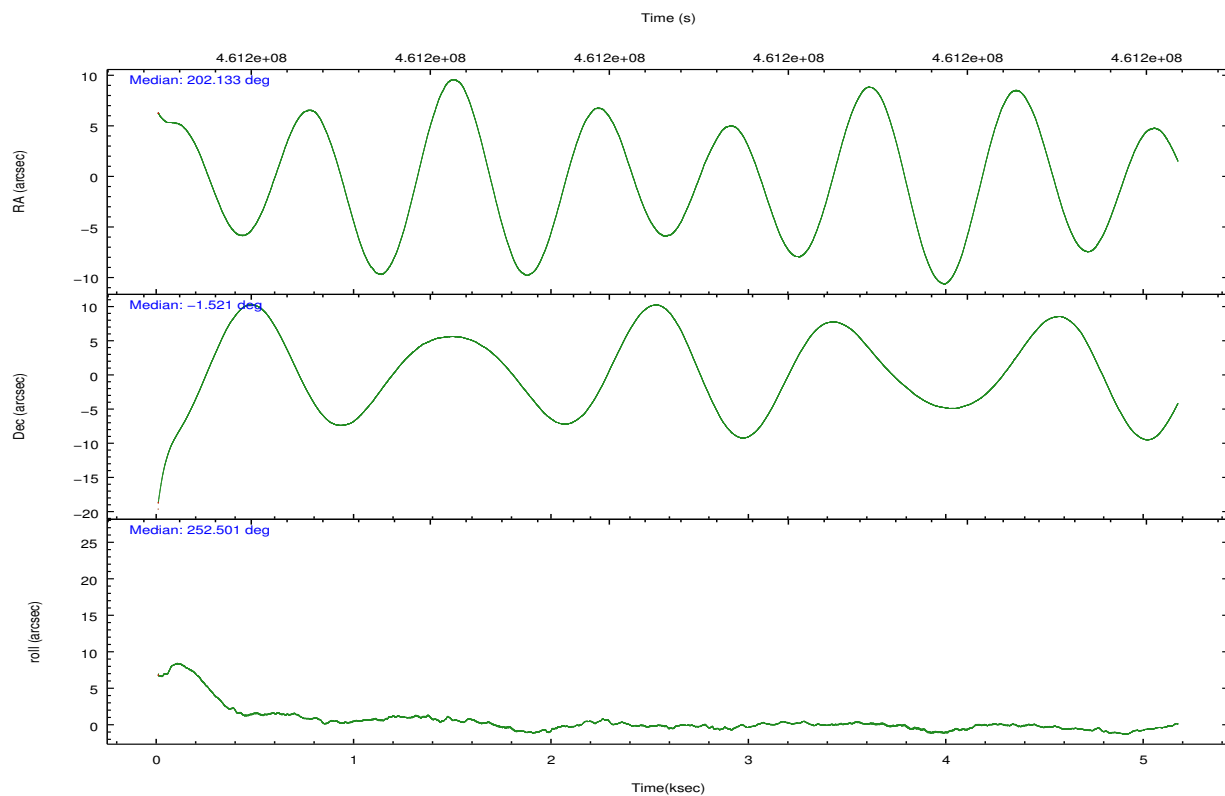


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	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	202.127240	202.1333674247979	Subarray requested	NONE	NONE
[deg] Pointing Dec	-1.494149	-1.521070341598273	Alternating exposures requested	N	N
[deg] Pointing Roll	252.299472	252.5083053853677	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-233.592463	-233.5899487761303			
[mm] SIM translation stage offset	0	-0.002504226799430853			
[s] Observation start time (MET)	461196913.184000	461195620.26175			
Observation start date	2012-08-12T22:14:06	2012-08-12T21:53:40			
[s] Observation end time (MET)	461201913.184000	461202744.01213			
Observation end date	2012-08-12T23:37:26	2012-08-12T23:52:24			
Read mode	TIMED	TIMED			

## 2.3 Aspect



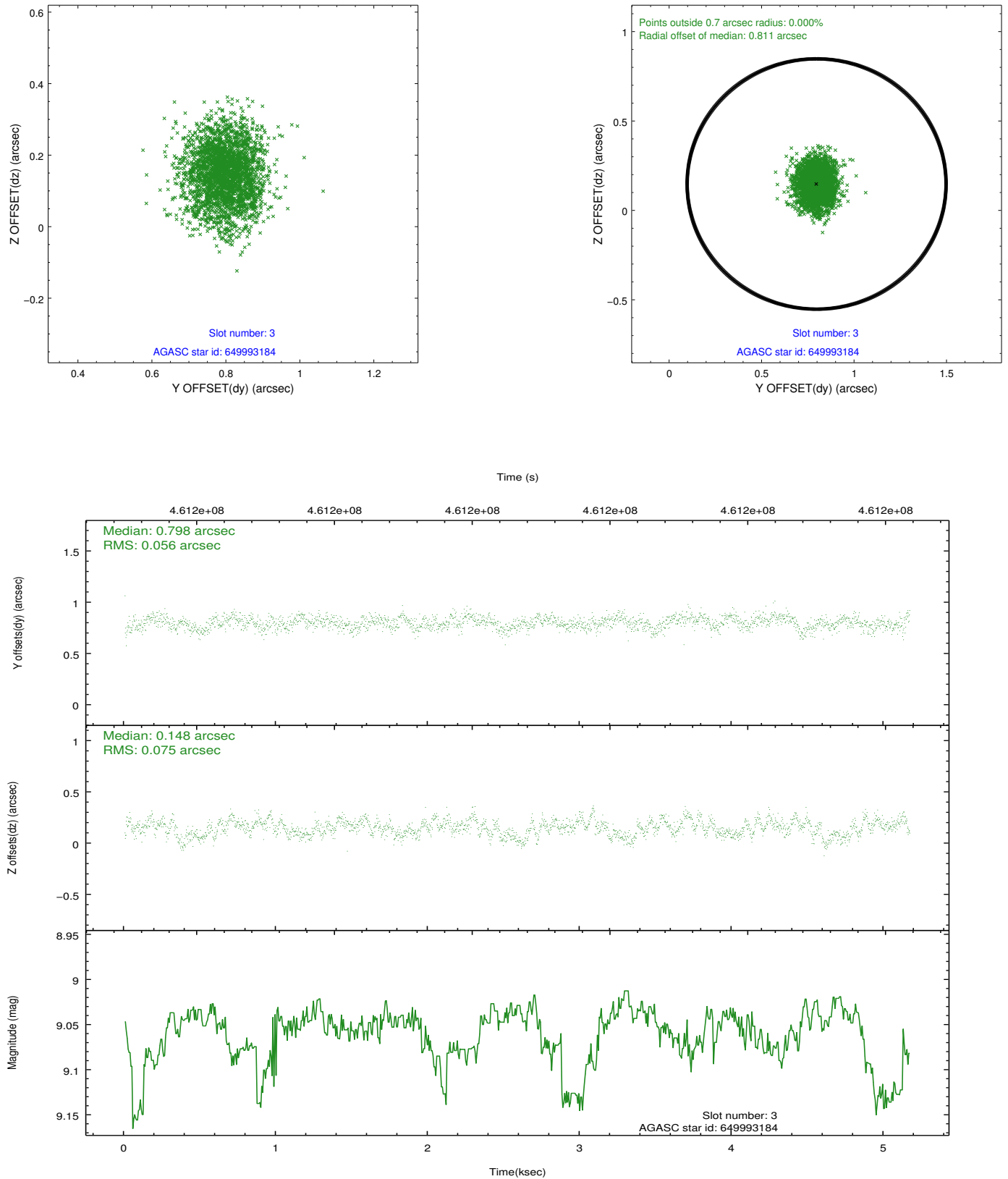


### Slot Statistics

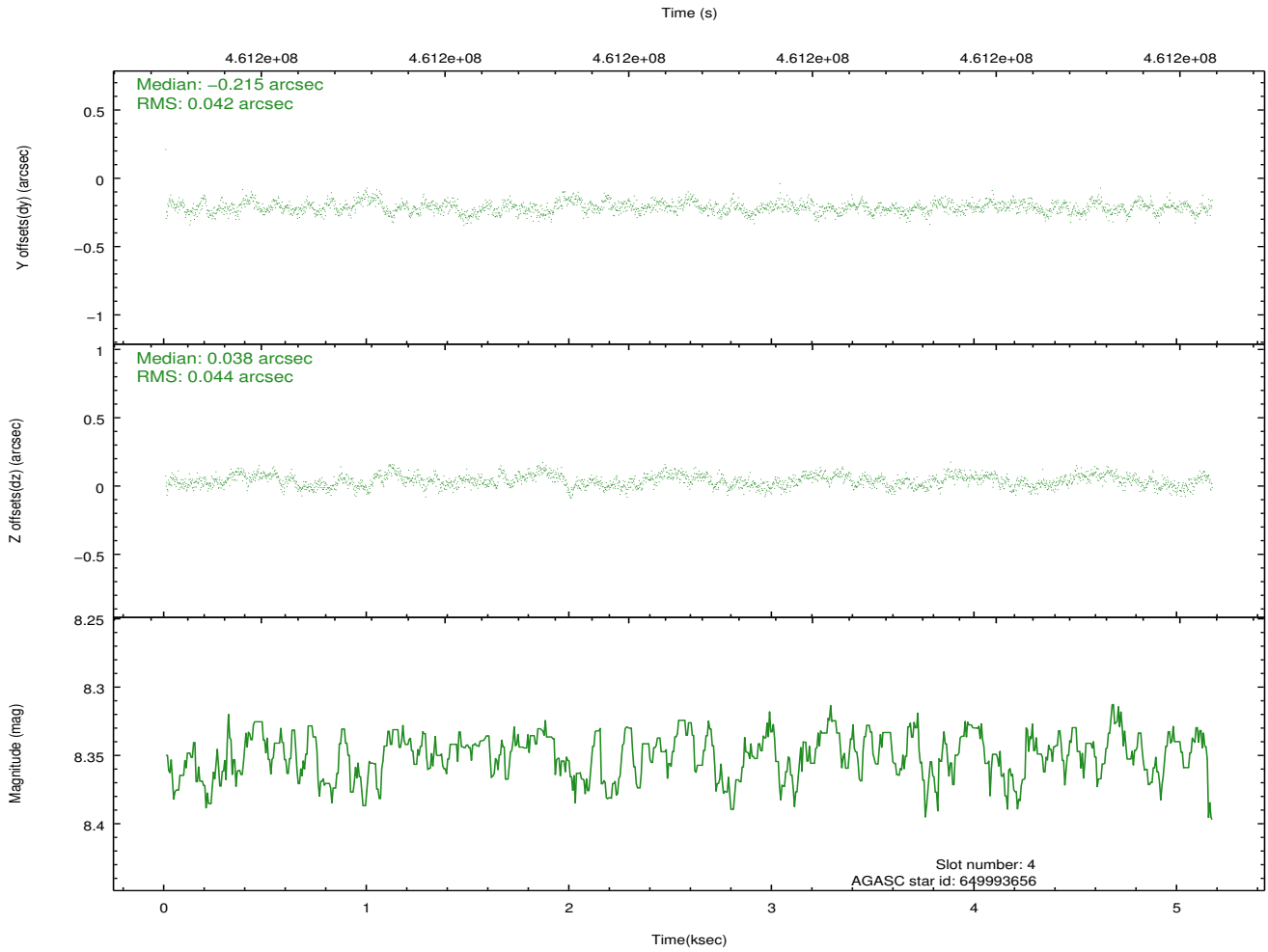
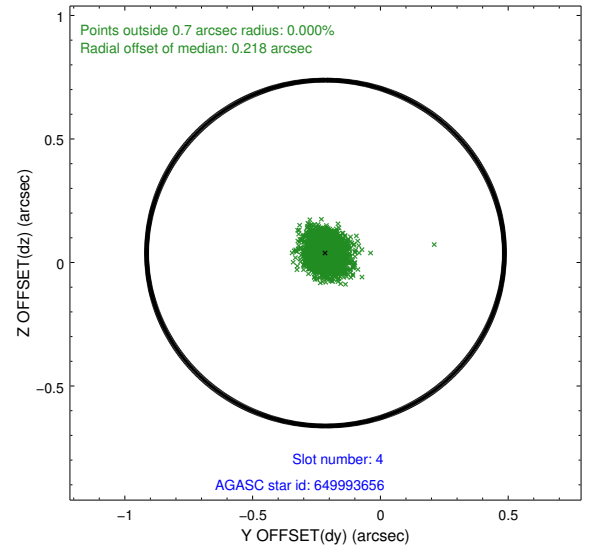
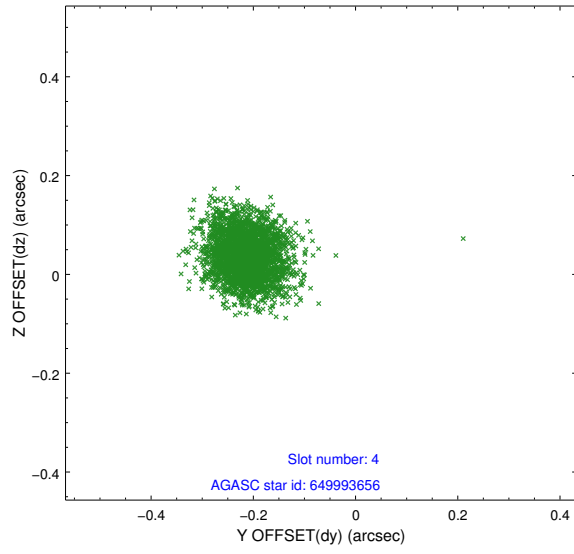
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.04	1261	-0.042	-0.000	0.011	0.037	0.000000	0.000000	921.37	-842.22
1	FID	ACIS-I-4	6.99	1261	0.253	0.044	0.011	0.030	0.000000	0.000000	2142.31	1057.08
2	FID	ACIS-I-5	7.03	1261	-0.310	0.028	0.009	0.017	0.000000	0.000000	-1825.44	1056.14
3	GUIDE	649993184	9.06	2519	0.798	0.148	0.100	0.161	202.232992	-1.271195	-879.36	118.63
4	GUIDE	649993656	8.35	2519	-0.215	0.038	0.065	0.104	202.447079	-1.396902	-683.91	990.21
5	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
6	GUIDE	649994832	6.30	2521	-0.459	-0.143	0.071	0.130	202.312148	-1.364425	-646.91	491.90
7	GUIDE	649995664	6.38	2520	-0.128	-0.043	0.085	0.128	201.547563	-1.192473	-399.54	-2318.98

## 2.4 Star Slots

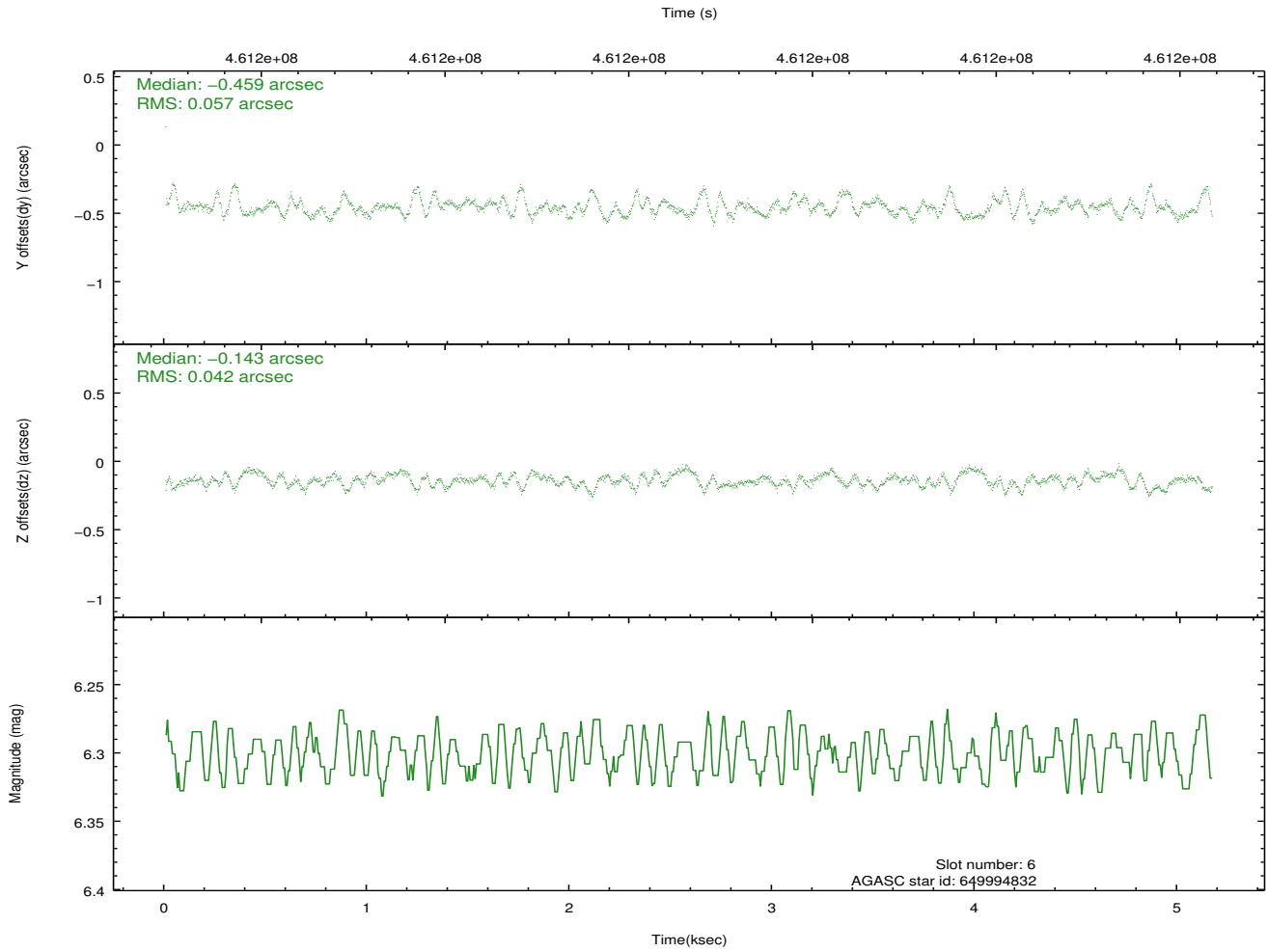
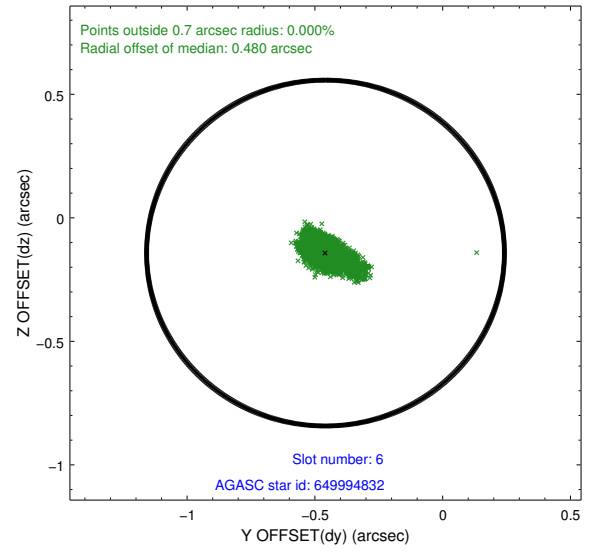
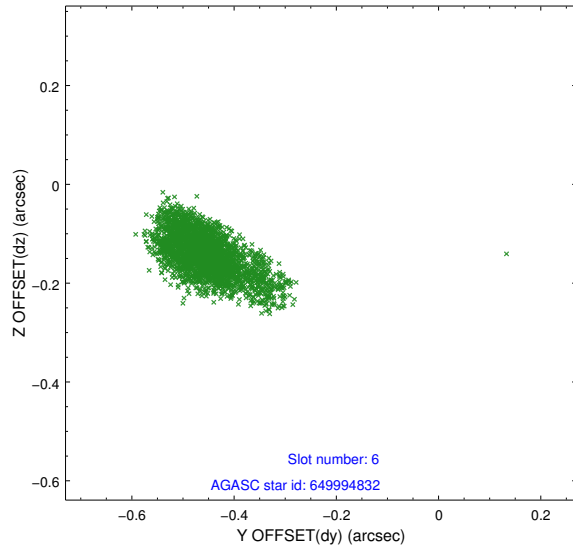
### 2.4.1 Slot 3



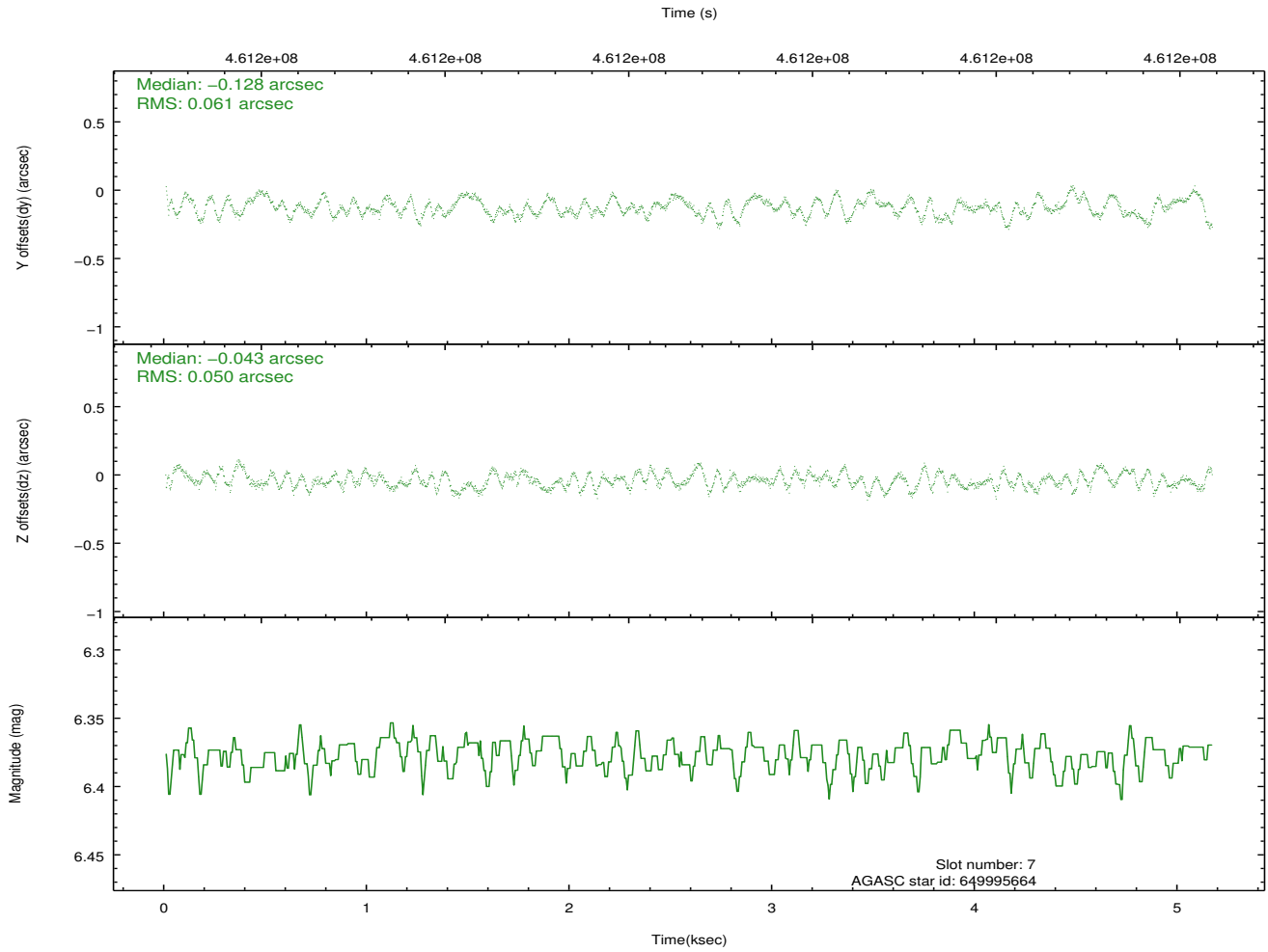
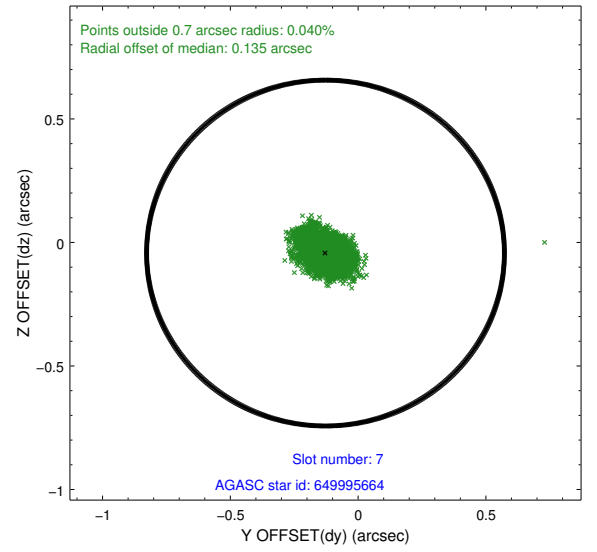
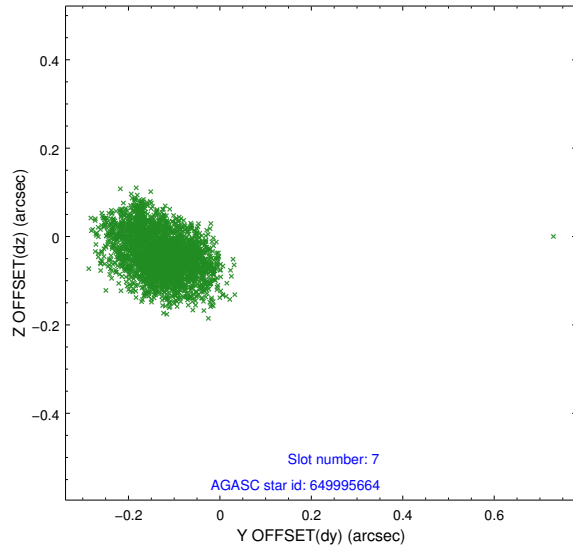
## 2.4.2 Slot 4



### 2.4.3 Slot 6



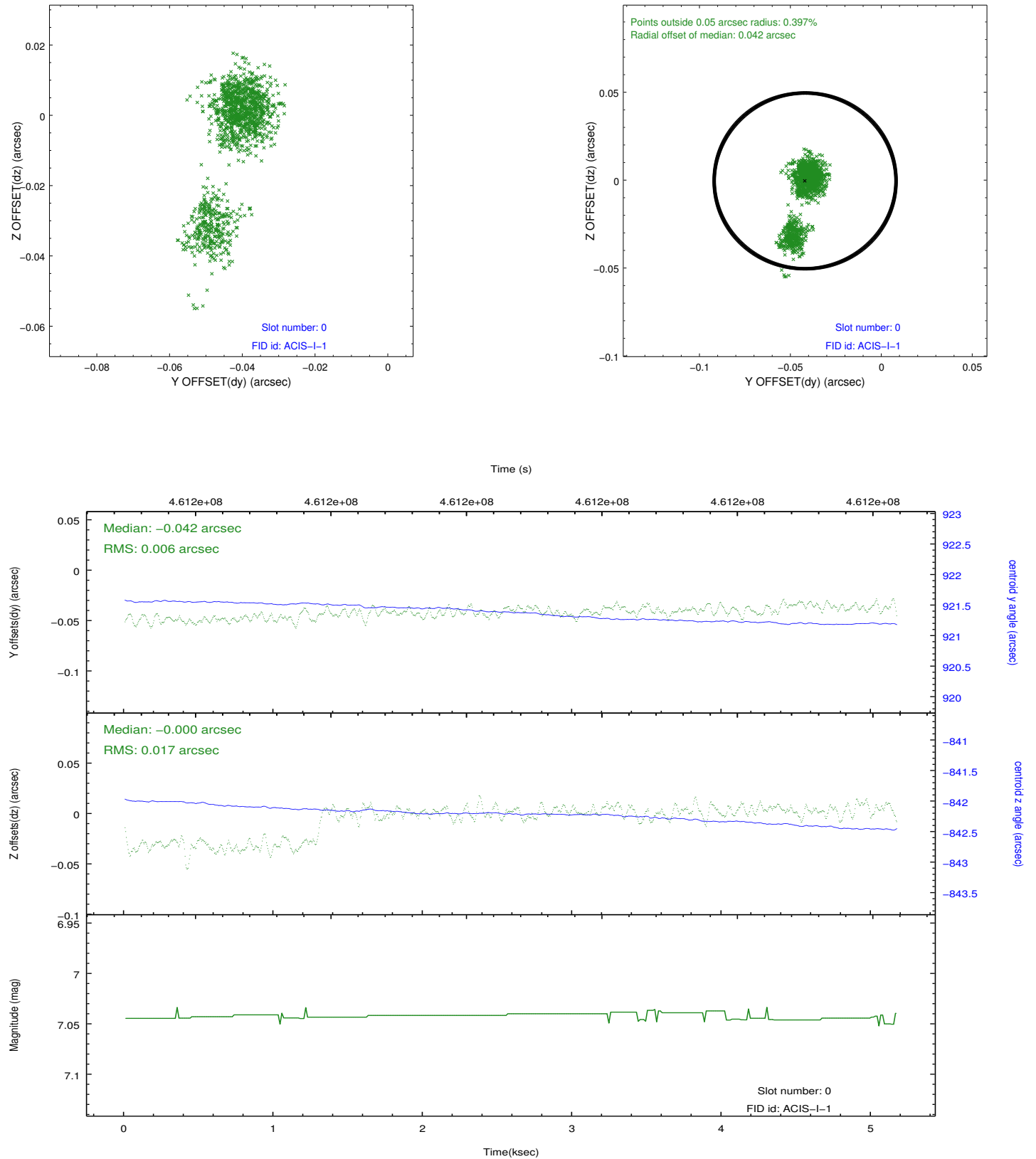
## 2.4.4 Slot 7



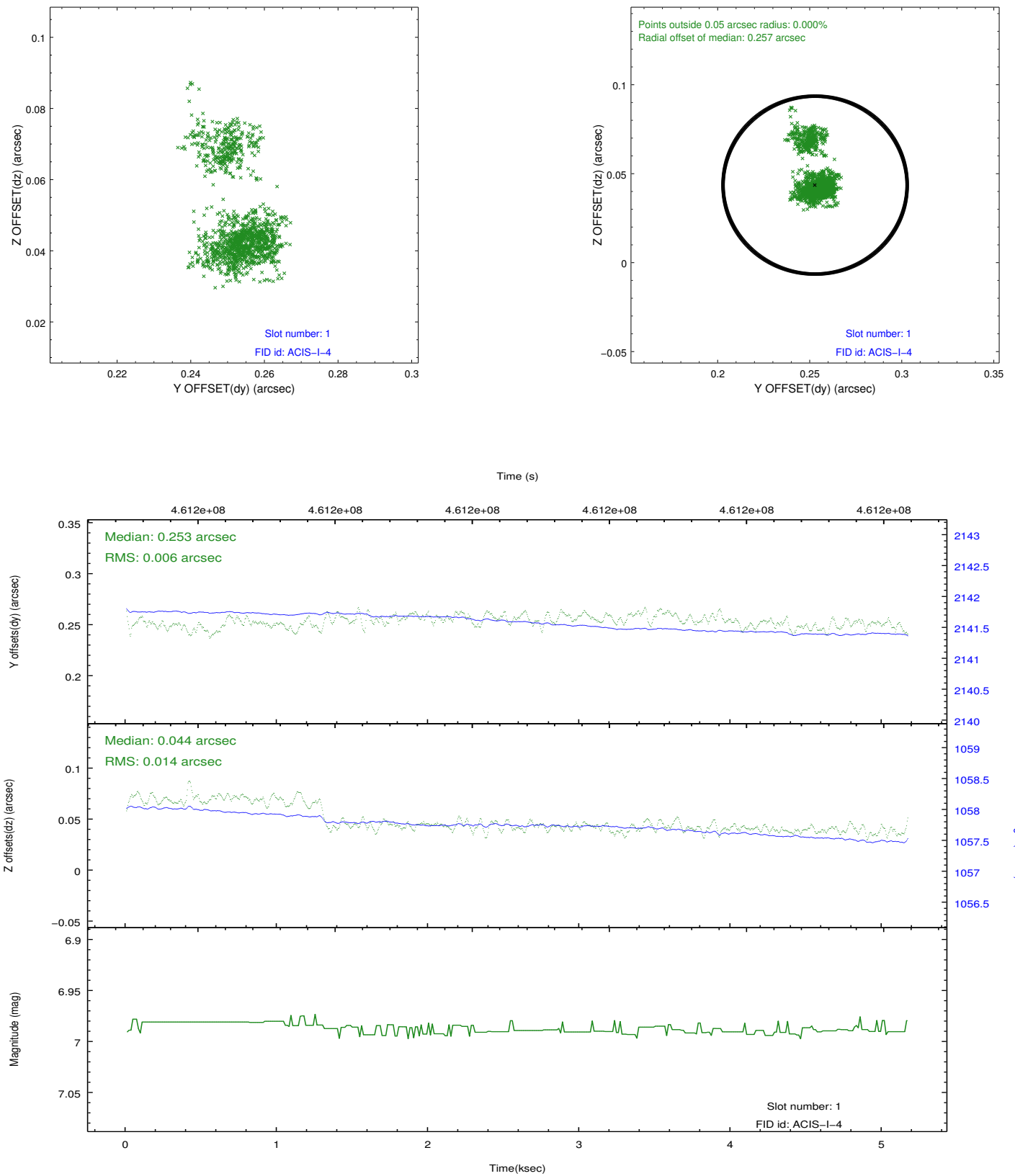


## 2.5 FID Slots

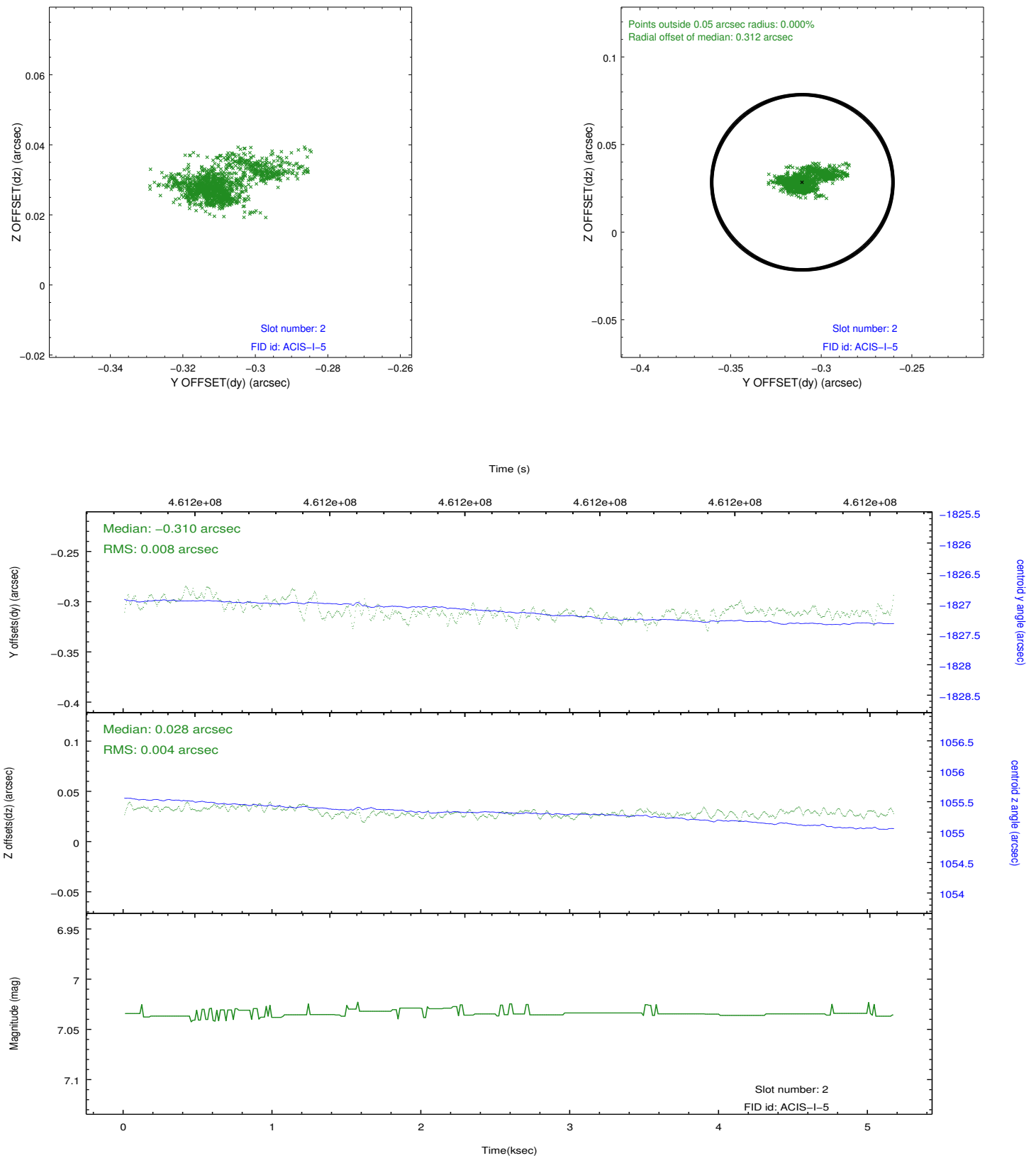
### 2.5.1 Slot 0



## 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)	2012.08.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.0902000391483

## A.2 Comments

A spatial region of the original bias map for CCD = 1 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 1 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:  
(202.03994,-1.34451),(202.03616,-1.34333),(201.99425,-1.47636),(201.99802,-1.47754)

=====

The guide star in slot 5 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this guide star from the solution.