

# V&V Reference Report

## L2 ASCDS Version : 10.4

Observation 17026 - L2 Version 2  
Chandra X-Ray Center

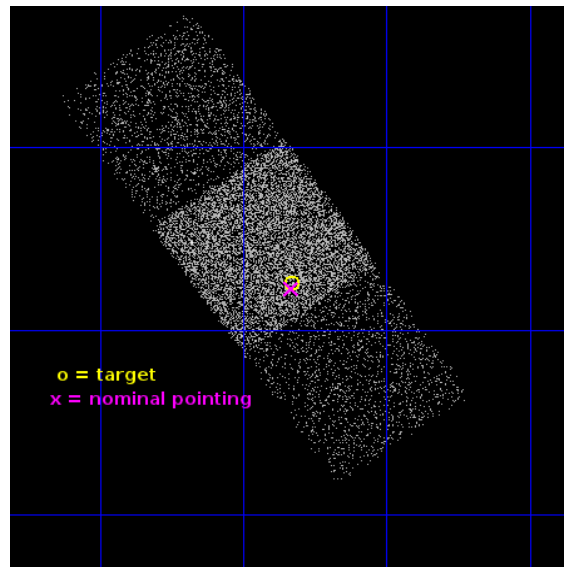
L2 Processing Date : Jun 16 2015

## 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

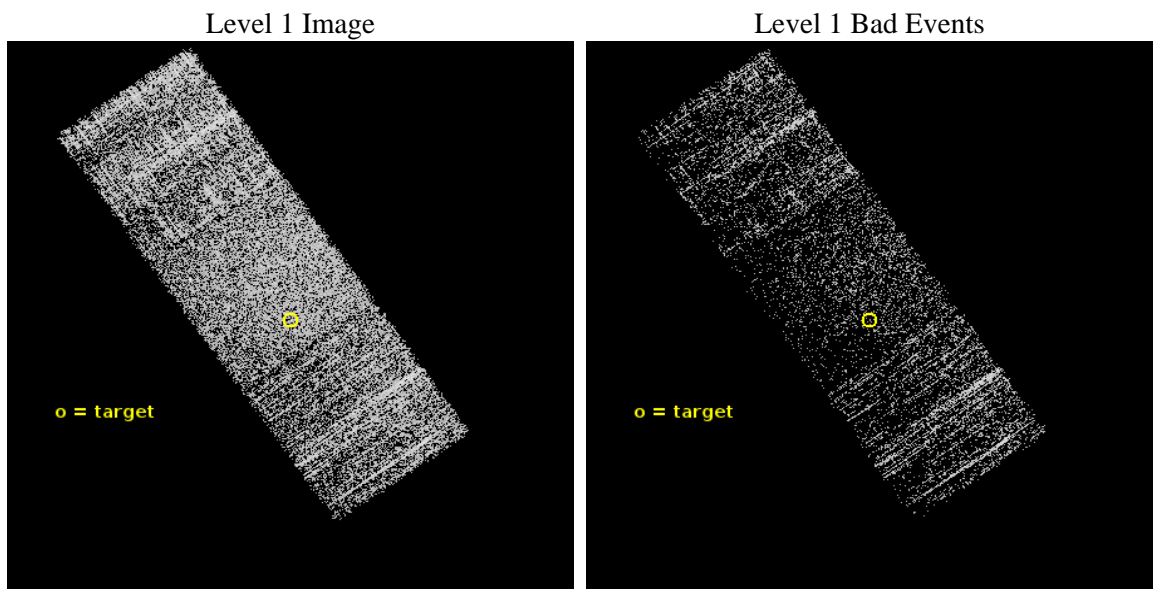
seq_num	703030	Sequence number
obs_id	17026	Observation id
title	Shielding Gas Variations in Transforming Broad Absorption Line Quasars	Proposal title
observer	Prof. William Brandt	Principal investigator
object	SDSS J1521+0102	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	230.4575	Observer's specified target RA [deg]
dec_targ	1.043444	Observer's specified target Dec [deg]
ra_nom	230.45786977716	Nominal RA [deg]
dec_nom	1.0380850100377	Nominal Dec [deg]
roll_nom	235.15642813984	Nominal Roll [deg]
revision	2	Processing version of data
ontime	3775.8000291586	Sum of GTIs [s]
livetime	3726.4664220741	Livetime [s]
ontime6	3775.8000291586	Sum of GTIs [s]
ontime7	3775.8000291586	Sum of GTIs [s]
ontime8	3775.8000291586	Sum of GTIs [s]
l2events	13993	Number of level 2 events



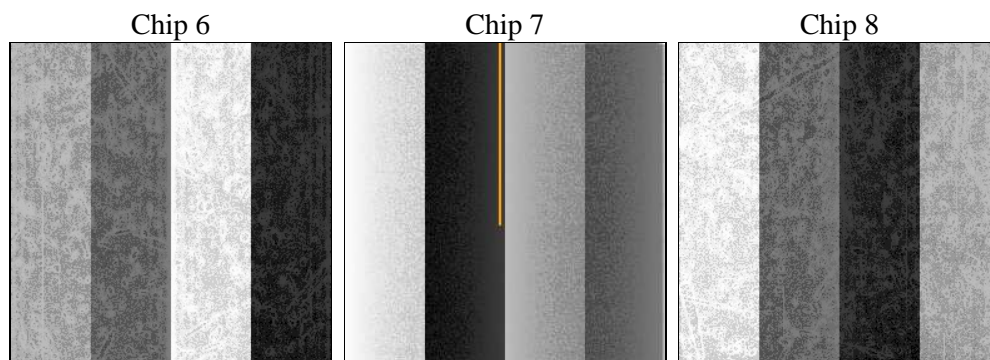
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	3700.000000	[s] Scheduled observation exposure time
ascdsver	10.4	Processing system revision	ontime	3775.8000291586	Sum of GTIs [s]
caldbver	4.6.7	&#160	ontime6	3775.8000291586	Sum of GTIs [s]
date	2015-06-16T17:21:12	Date and time of file creation	ontime7	3775.8000291586	Sum of GTIs [s]
revision	2	Processing version of data	ontime8	3775.8000291586	Sum of GTIs [s]
			l1events	63820	Number of level 1 events

### 2.1.4 Events

	ccd 6	ccd 7	ccd 8
level 1 events	18679	21691	23450
rejected events	16542	11394	16453
rejected %	88%	52%	70%

	ccd 6	ccd 7	ccd 8
grade 0 events	762	992	2015
	4%	4%	8%
grade 1 events	10	22	17
	0%	0%	0%
grade 2 events	480	2237	1598
	2%	10%	6%
grade 3 events	208	905	811
	1%	4%	3%
grade 4 events	204	917	796
	1%	4%	3%
grade 5 events	842	2318	1248
	4%	10%	5%
grade 6 events	487	5262	1785
	2%	24%	7%
grade 7 events	15686	9038	15180
	83%	41%	64%

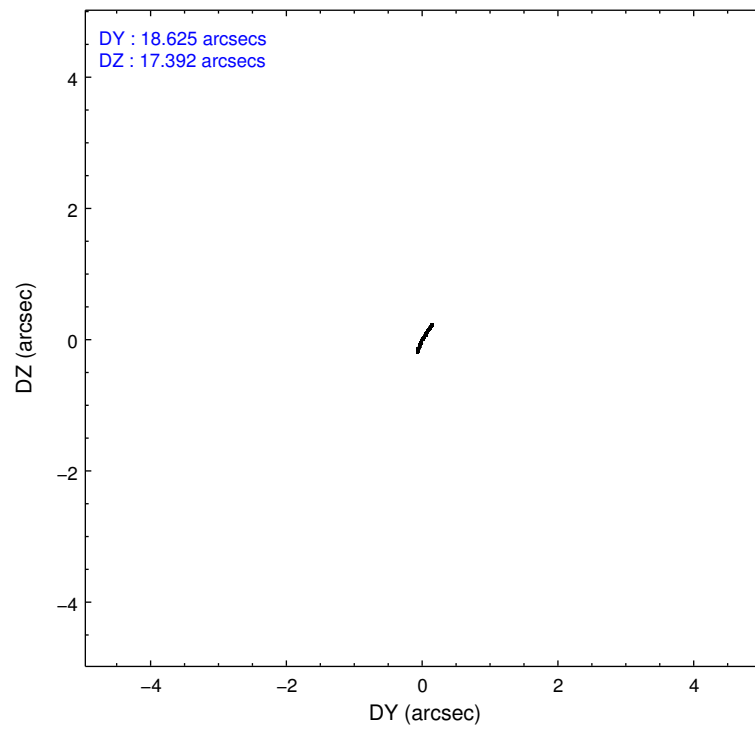
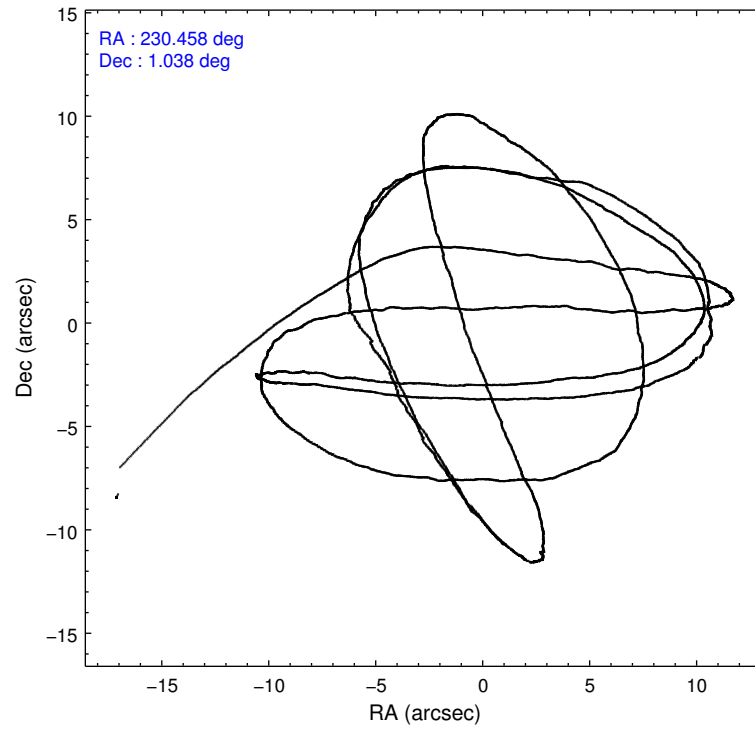


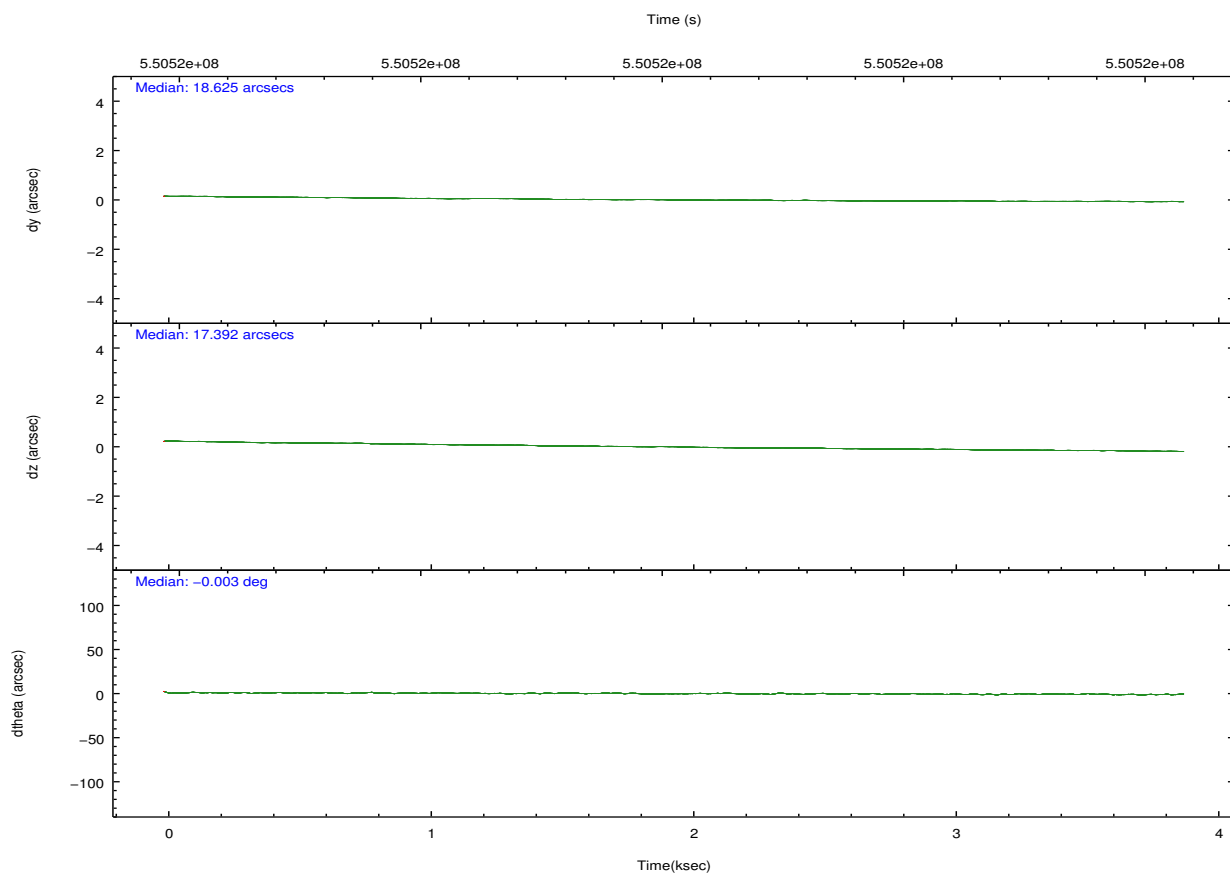
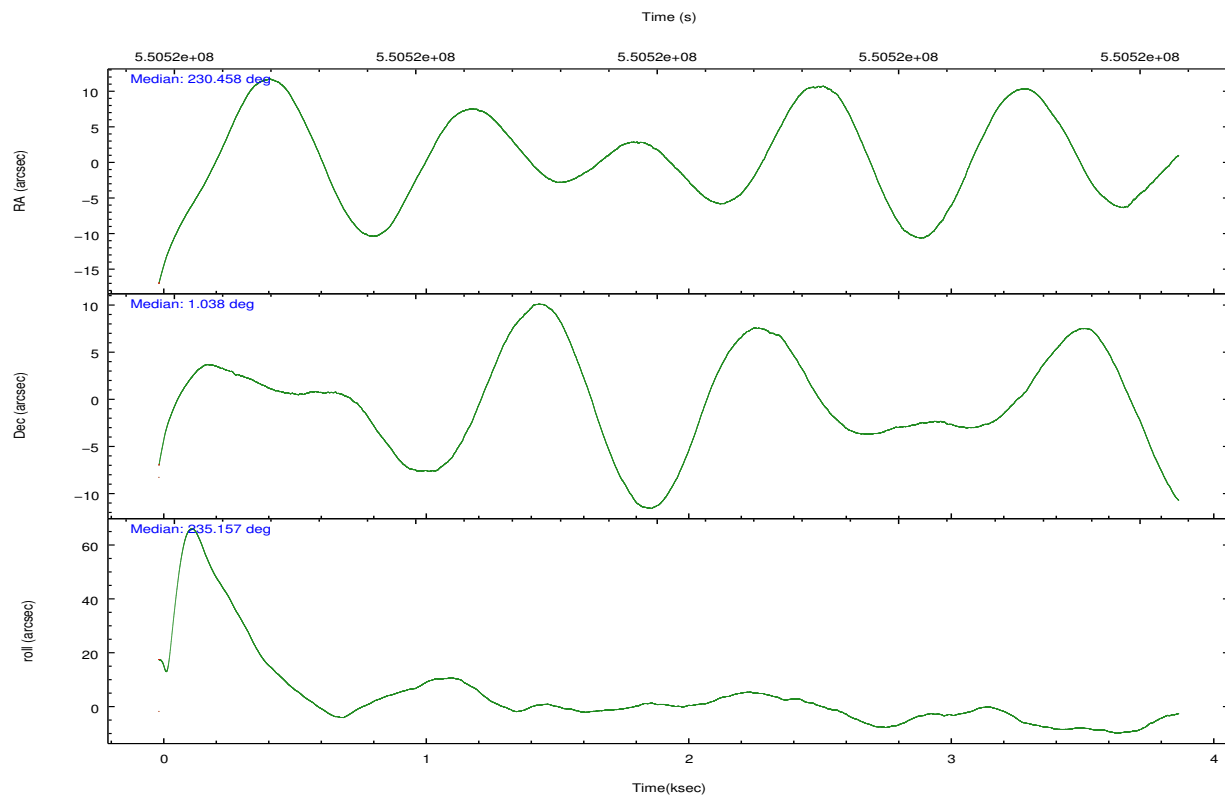
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-678	ACIS-678
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	230.459856	230.4578697771602
[deg] Pointing Dec	1.065400	1.038085010037717
[deg] Pointing Roll	234.999954	235.1564281398411
[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)	550520294.184000	550519165.60148
Observation start date	2015-06-12T18:17:07	2015-06-12T17:59:25
[s] Observation end time (MET)	550523994.184000	550525028.0893101
Observation end date	2015-06-12T19:18:47	2015-06-12T19:37:08
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



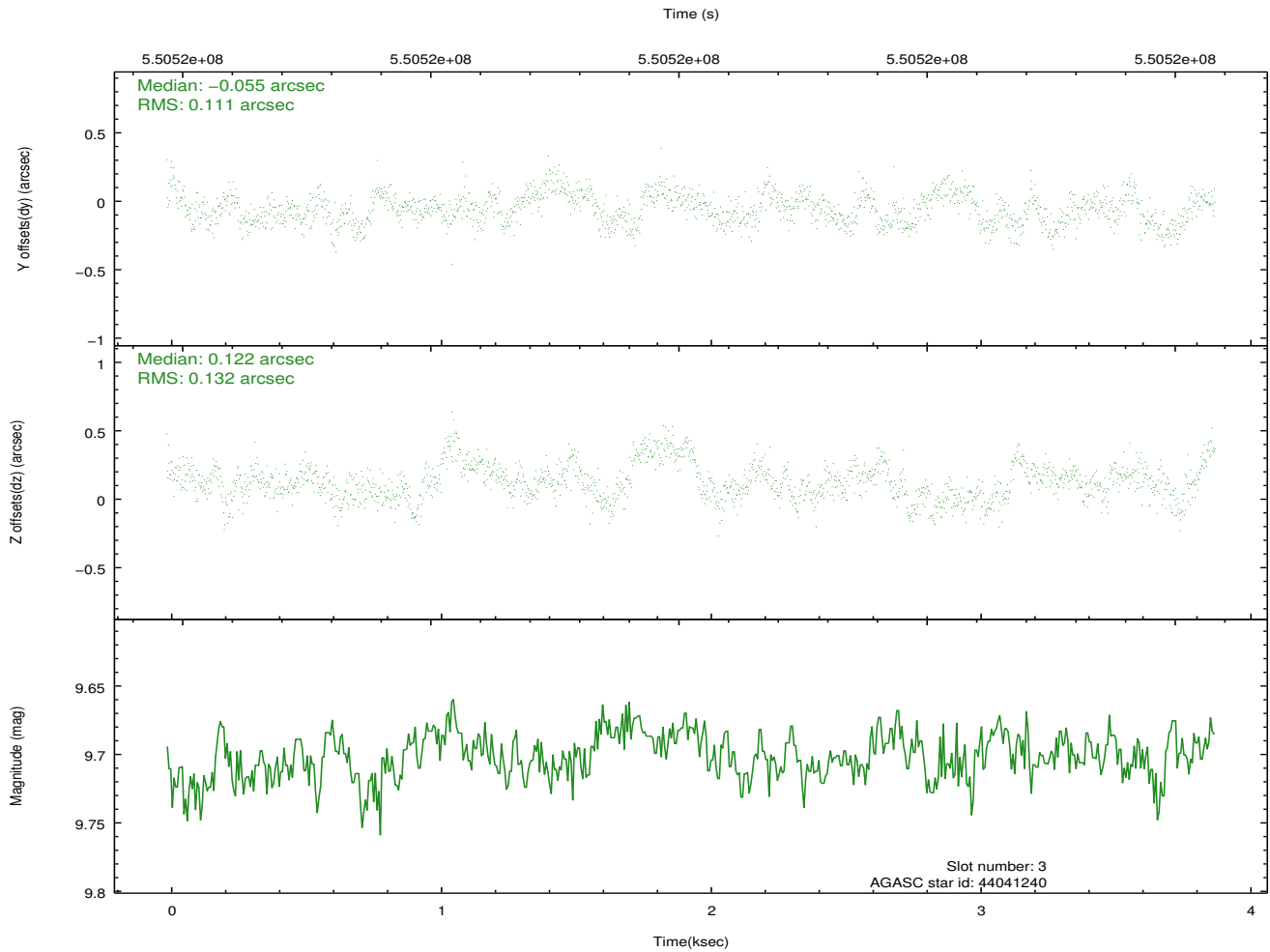
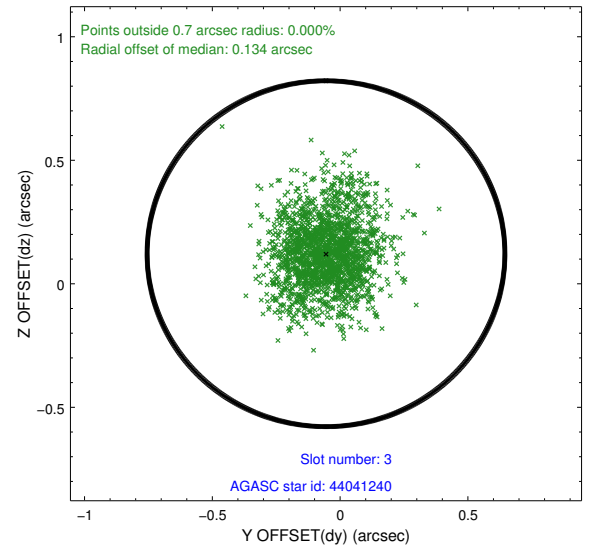
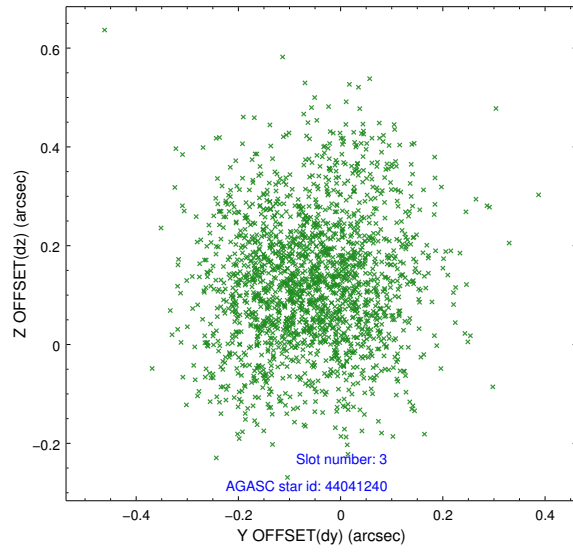


### Slot Statistics

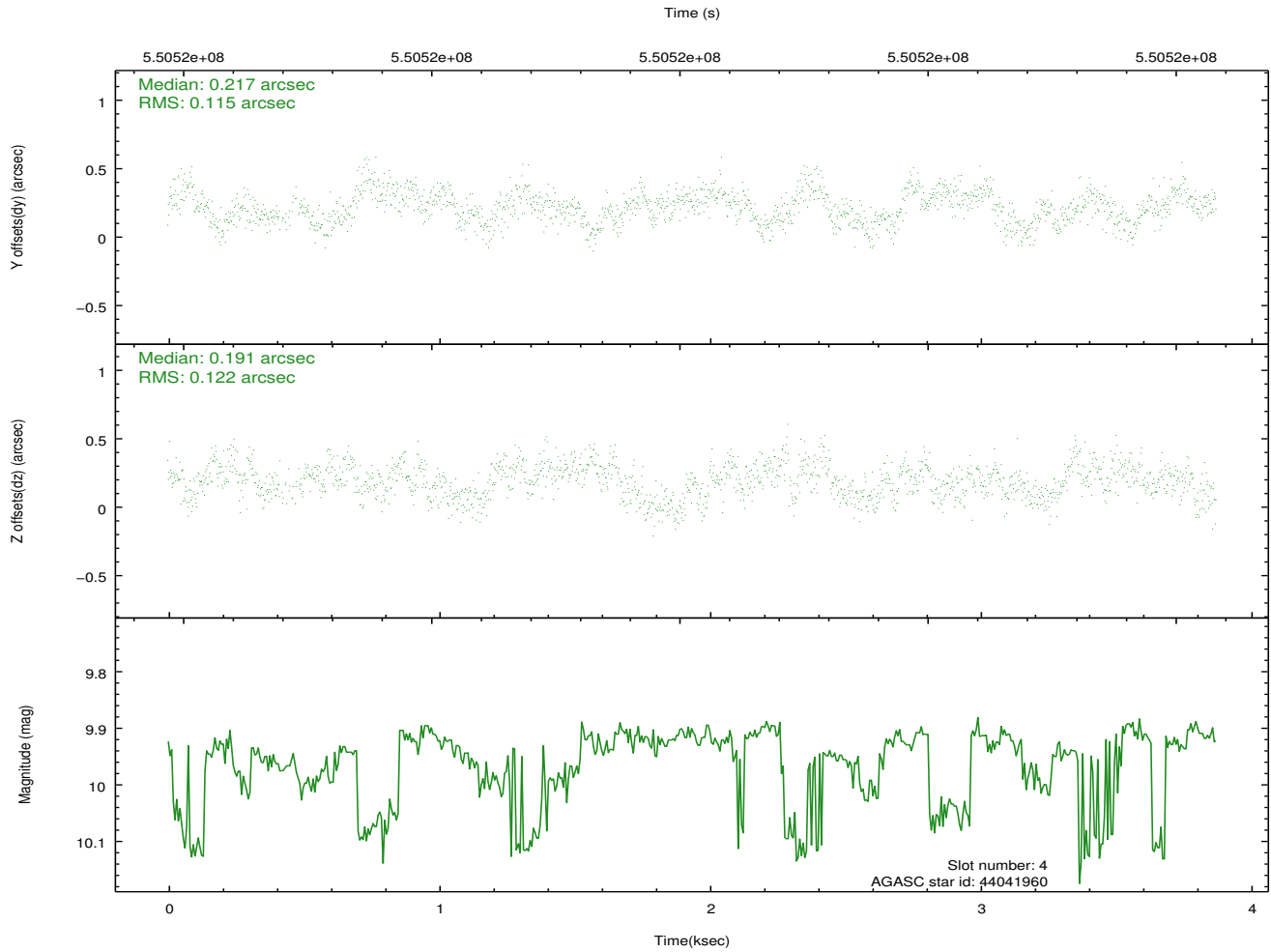
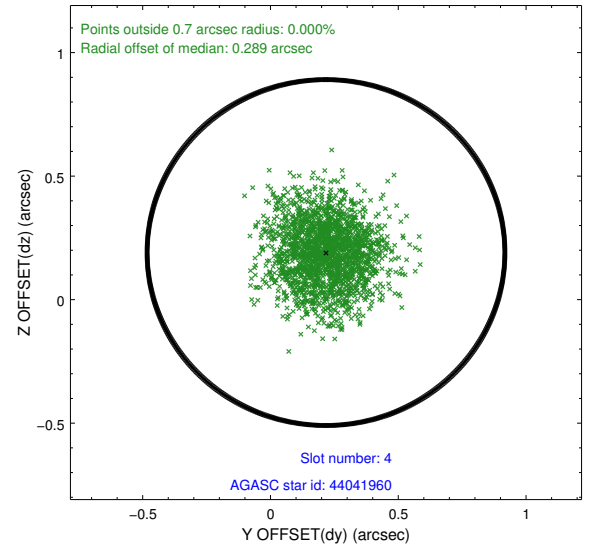
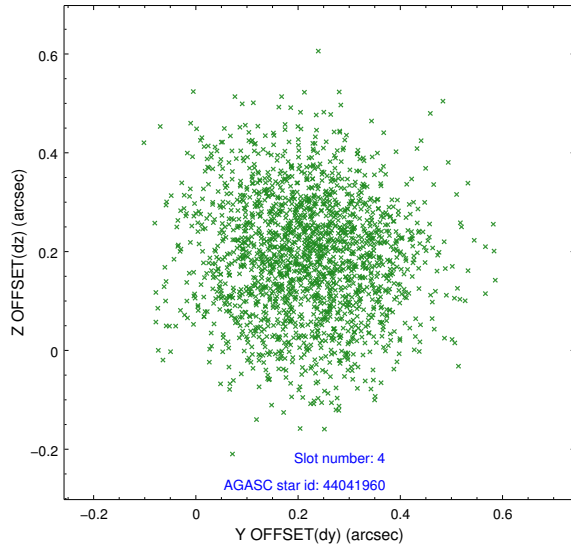
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.00	948	-0.115	-0.063	0.008	0.014	0.000000	0.000000	-771.84	-1738.89
1	FID		ACIS-S-4	7.08	948	0.345	0.073	0.006	0.009	0.000000	0.000000	2141.17	168.02
2	FID		ACIS-S-5	7.10	948	-0.261	0.000	0.007	0.012	0.000000	0.000000	-1822.75	163.50
3	GUIDE	used	44041240	9.70	1894	-0.055	0.122	0.183	0.302	230.491646	1.816130	-2278.55	-1455.98
4	GUIDE	used	44041960	9.95	1871	0.217	0.191	0.179	0.288	230.227542	1.405463	-523.61	-1387.25
5	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
6	GUIDE	used	44047768	10.08	1894	-0.142	-0.188	0.274	0.446	230.501949	0.988009	141.67	283.37
7	GUIDE	used	44175816	9.91	1892	0.006	-0.110	0.232	0.426	230.666912	1.264846	-1015.27	197.97

## 2.4 Star Slots

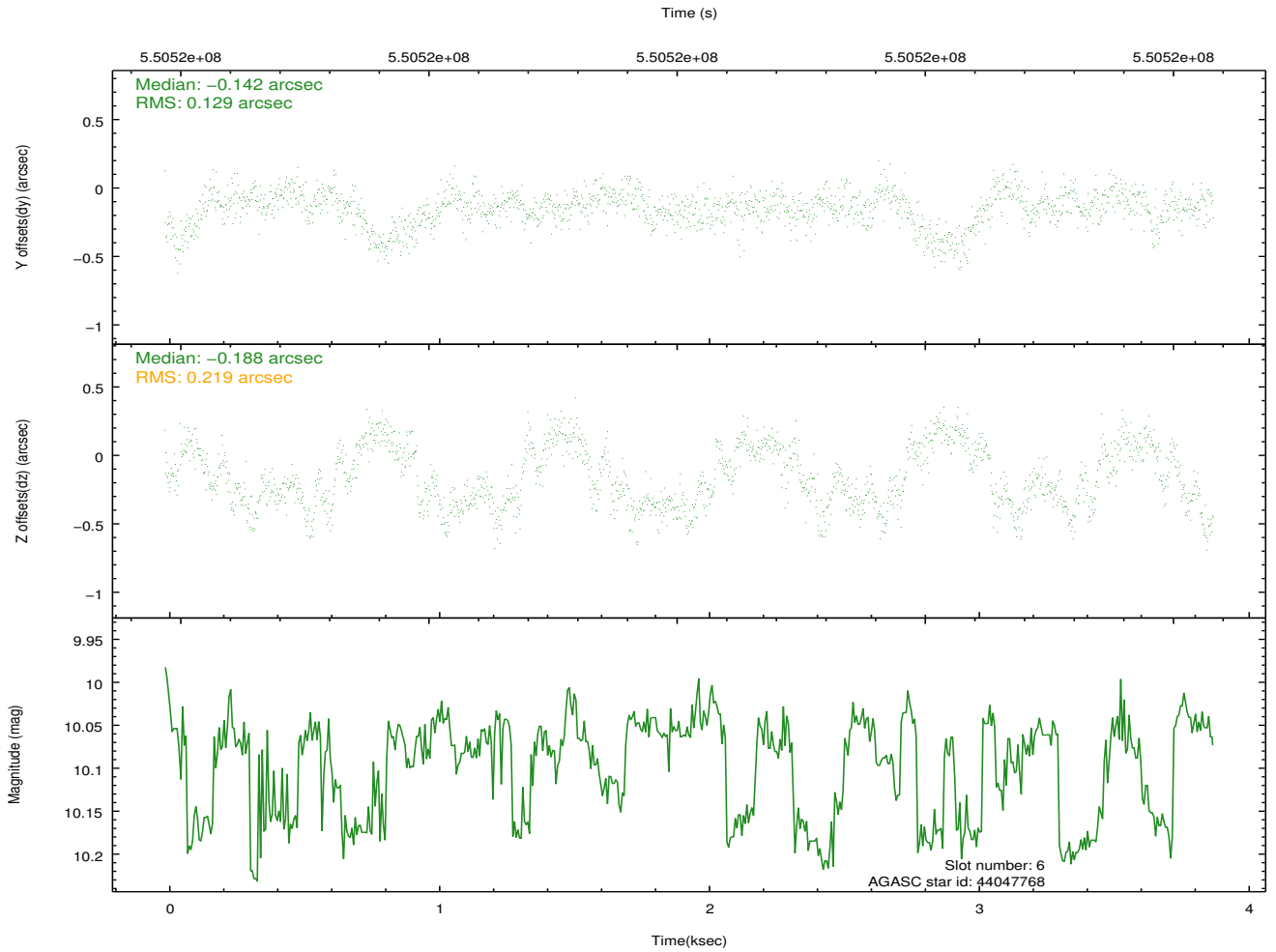
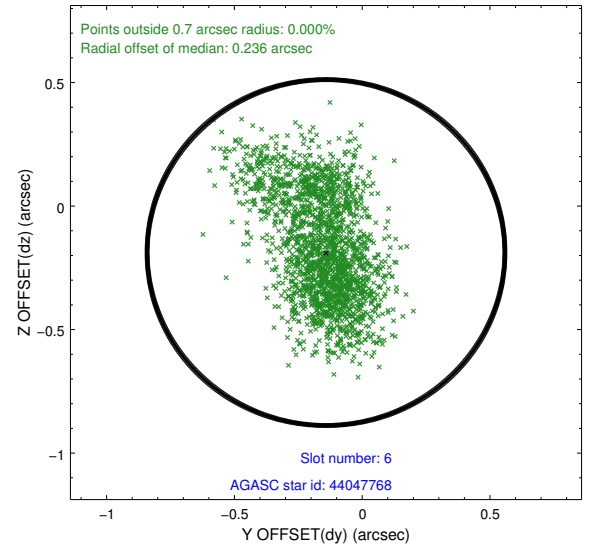
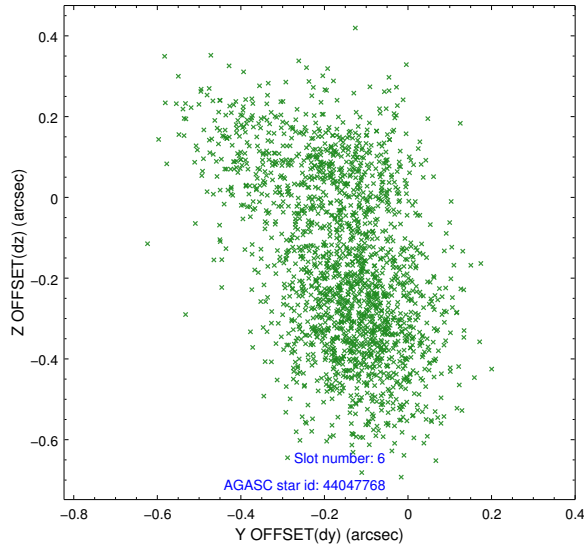
### 2.4.1 Slot 3



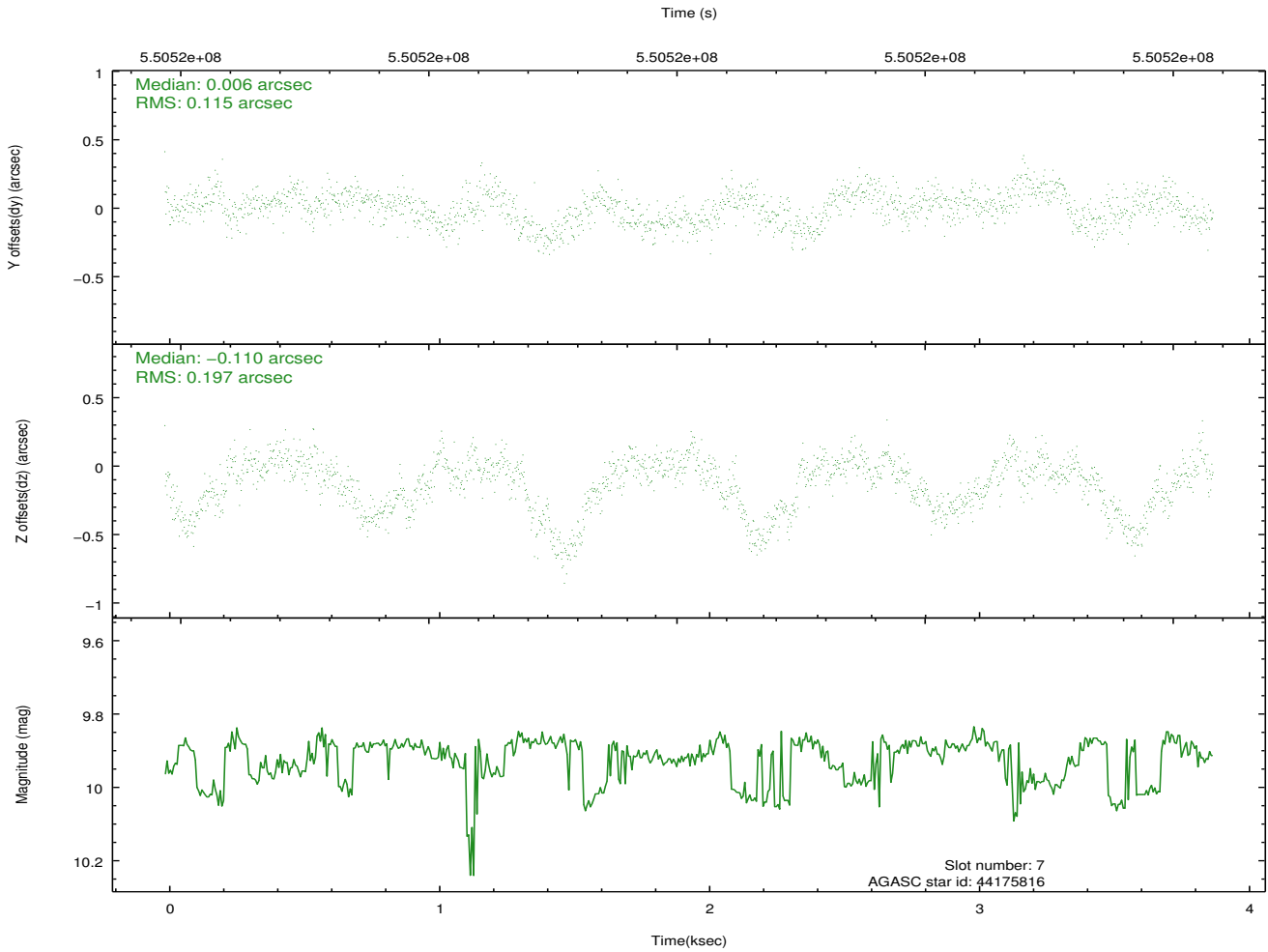
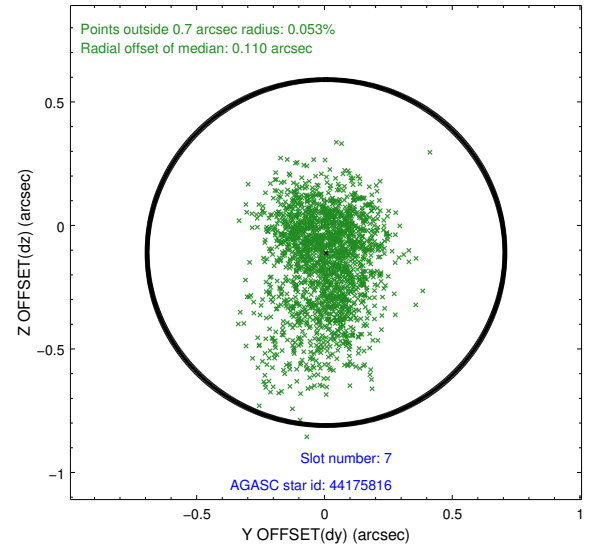
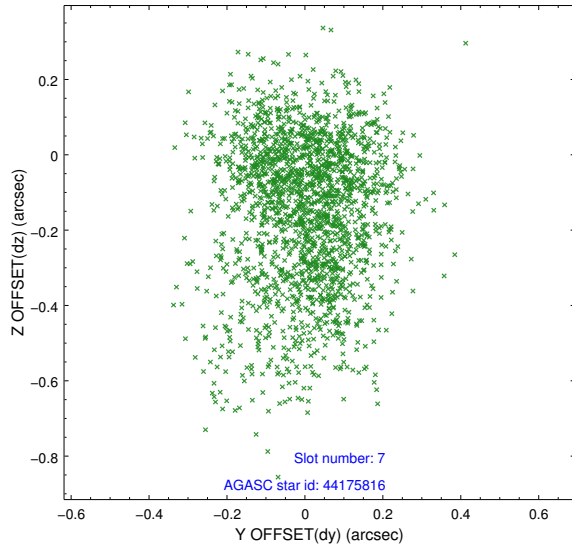
## 2.4.2 Slot 4



### 2.4.3 Slot 6



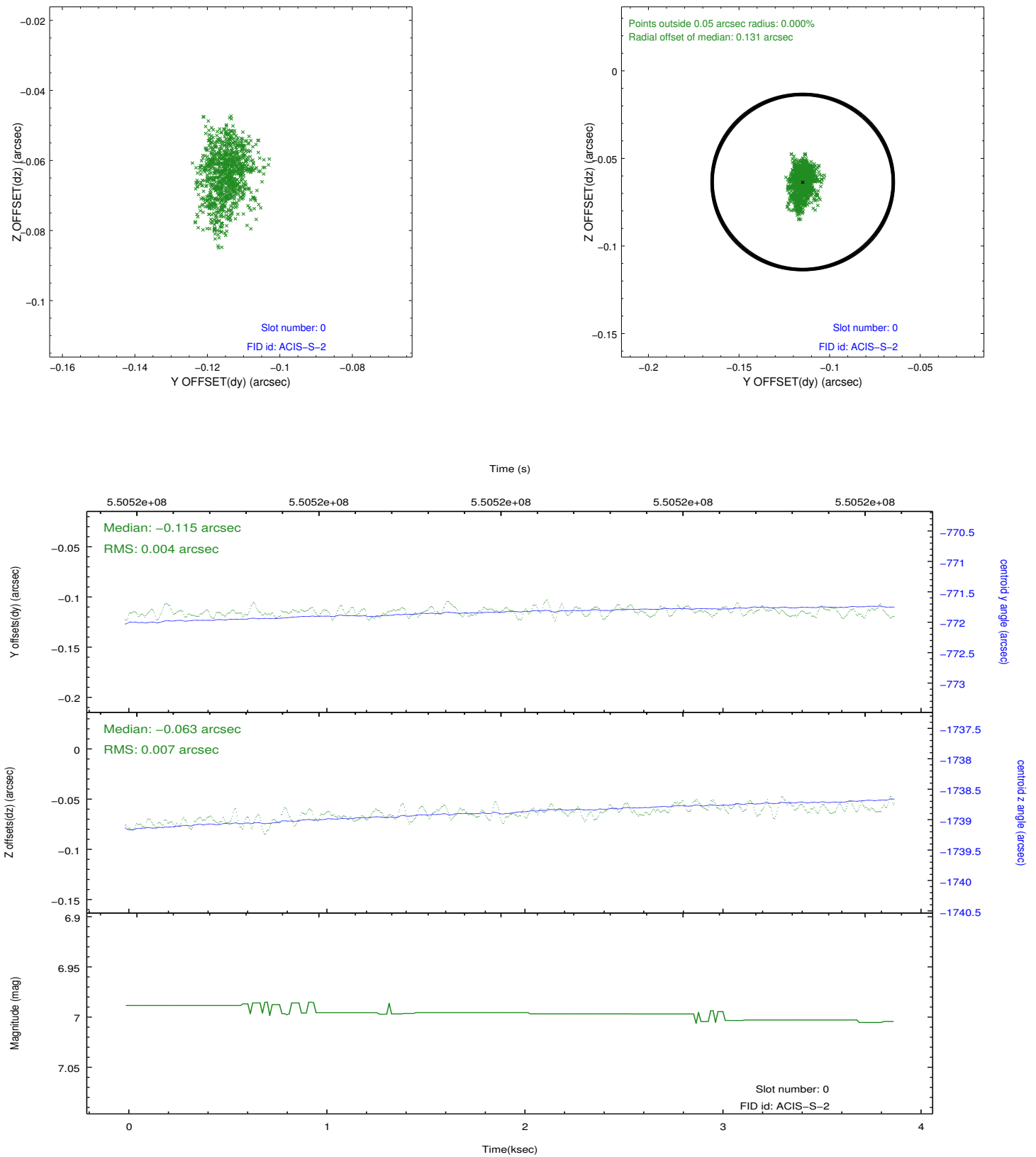
## 2.4.4 Slot 7



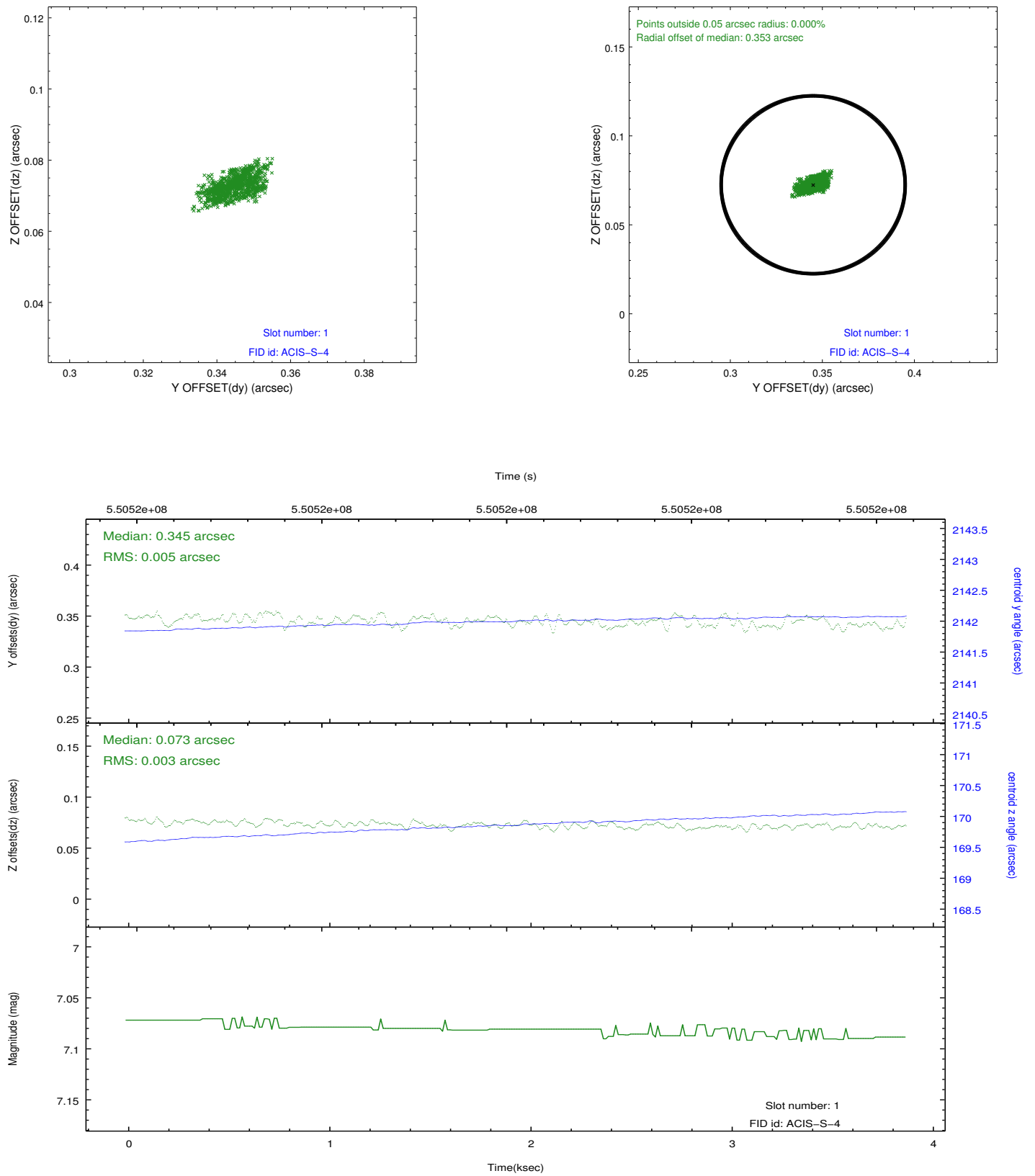


## 2.5 FID Slots

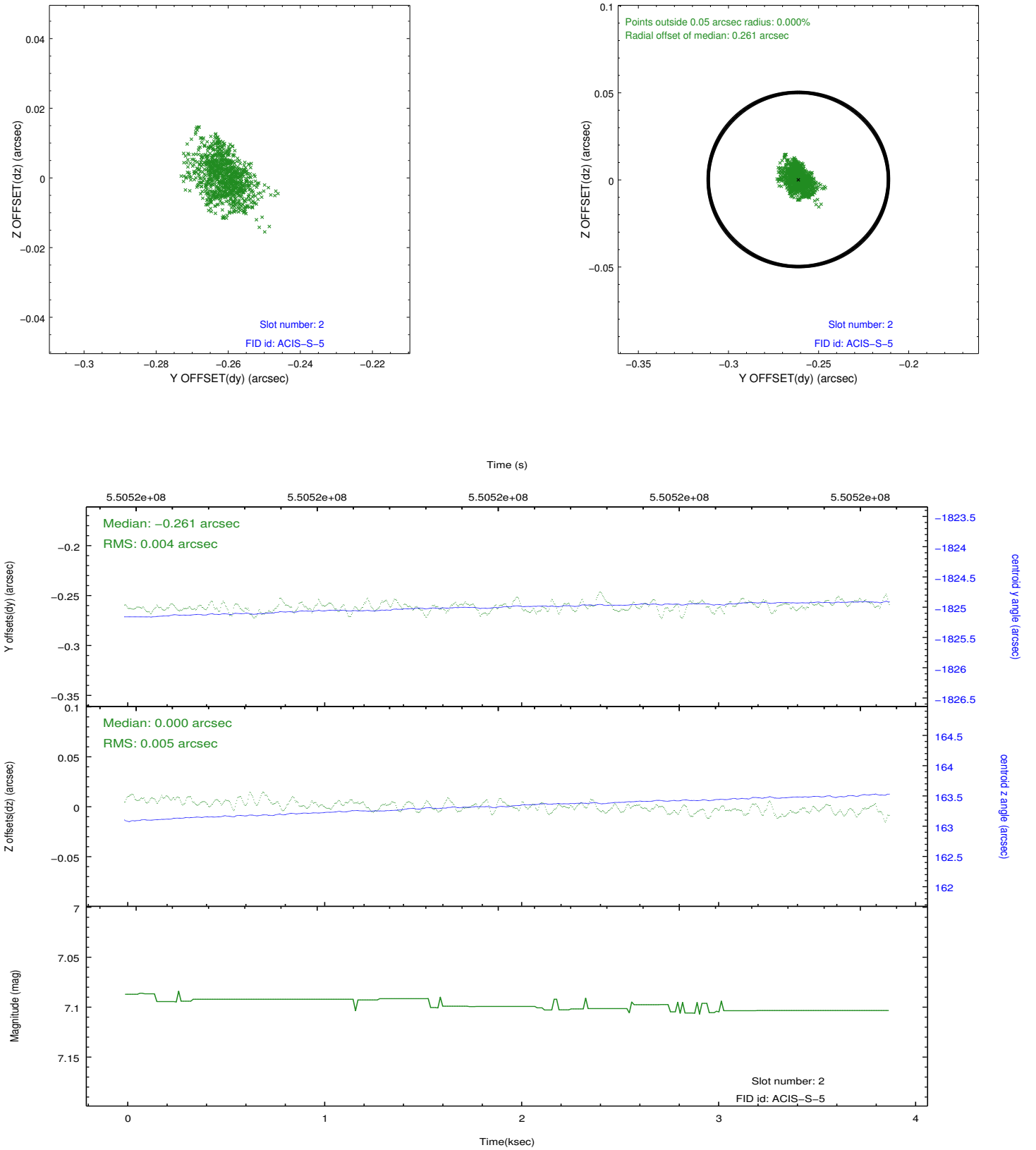
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2015.06.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.7758000291586

## A.2 Comments

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 star from the solution.