

# V&V Reference Report

## L2 ASCDS Version : 10.5.2

Observation 19544 - L2 Version 1  
Chandra X-Ray Center

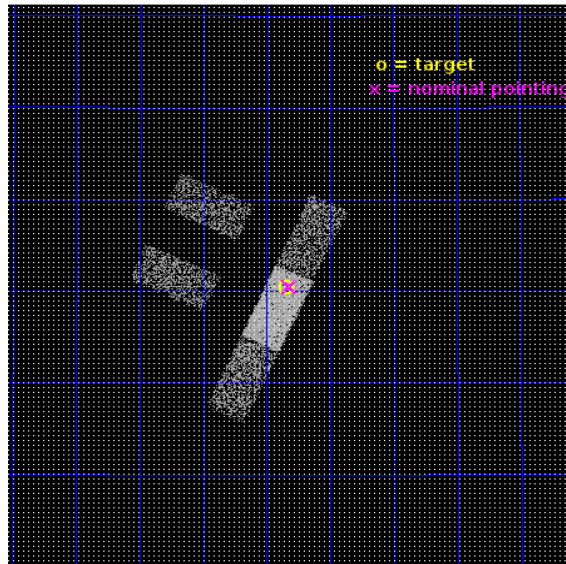
L2 Processing Date : Feb 1 2017

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# 1 Front

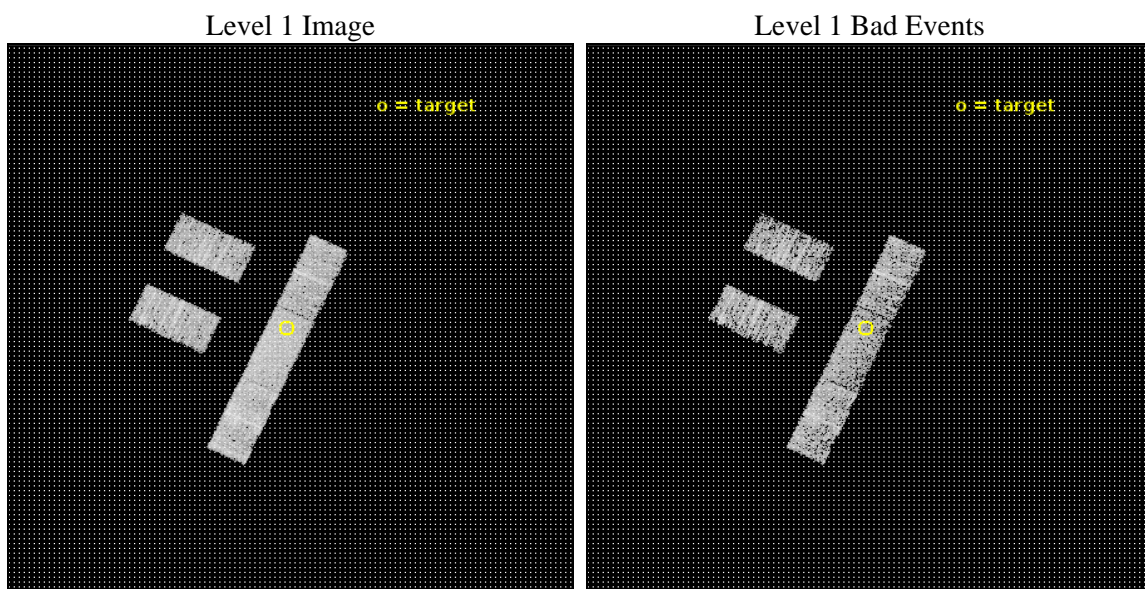
seq_num	703392	Sequence number
obs_id	19544	Observation id
title	Investigating X-ray Bias in Low-L, Low-z Quasars	Proposal title
observer	Gordon Richards	Principal investigator
object	SDSSJ103320.65+274024.2	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	158.33625	Observer's specified target RA [deg]
dec_targ	27.673417	Observer's specified target Dec [deg]
ra_nom	158.33042752408	Nominal RA [deg]
dec_nom	27.674785353025	Nominal Dec [deg]
roll_nom	115.15940377753	Nominal Roll [deg]
revision	1	Processing version of data
ontime	3590.400100708	Sum of GTIs [s]
livetime	3505.7667665324	Livetime [s]
ontime2	3590.400100708	Sum of GTIs [s]
ontime3	3590.400100708	Sum of GTIs [s]
ontime6	3590.400100708	Sum of GTIs [s]
ontime7	3590.400100708	Sum of GTIs [s]
ontime8	3590.400100708	Sum of GTIs [s]
l2events	12803	Number of level 2 events



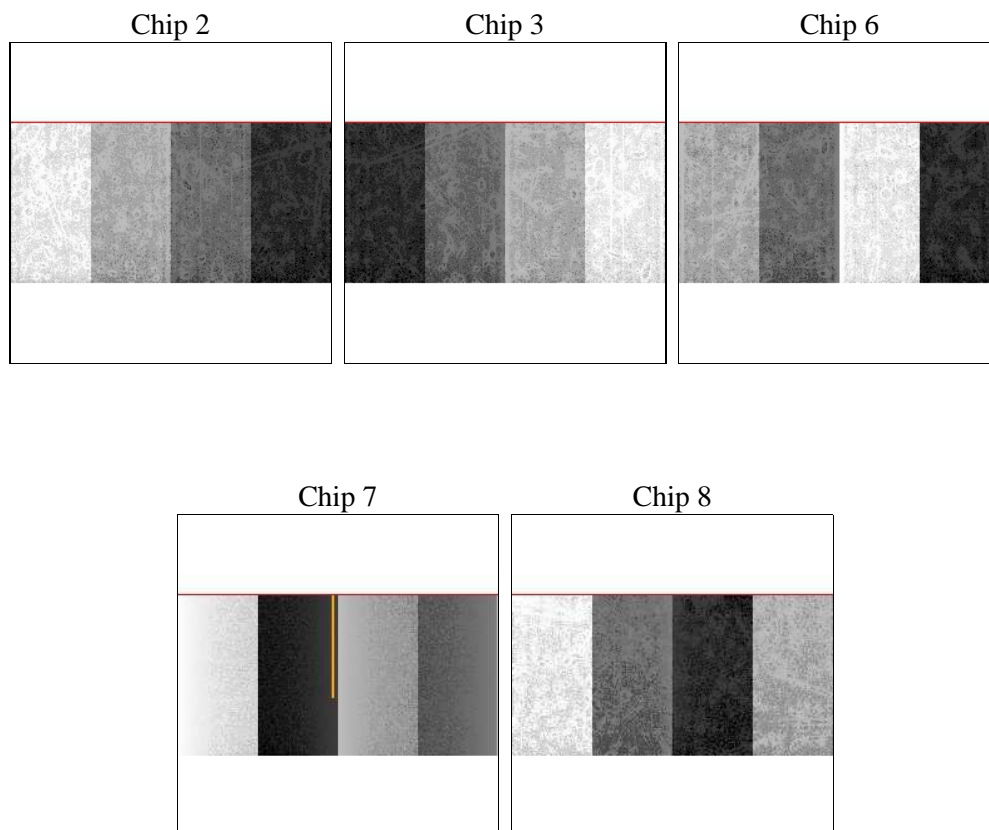
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	3500.000000	[s] Scheduled observation exposure time
ascdsver	10.5.2	Processing system revision	ontime	3590.400100708	Sum of GTIs [s]
caldsver	4.7.3	&#160	ontime2	3590.400100708	Sum of GTIs [s]
date	2017-02-02T01:13:06	Date and time of file creation	ontime3	3590.400100708	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	3590.400100708	Sum of GTIs [s]
			ontime7	3590.400100708	Sum of GTIs [s]
			ontime8	3590.400100708	Sum of GTIs [s]
			l1events	76008	Number of level 1 events

### 2.1.4 Events

	<b>ccd 2</b>	<b>ccd 3</b>	<b>ccd 6</b>	<b>ccd 7</b>	<b>ccd 8</b>
level 1 events	12928	13966	13120	17459	18535
rejected events	11426	12585	11531	9752	13531
rejected %	88%	90%	87%	55%	73%

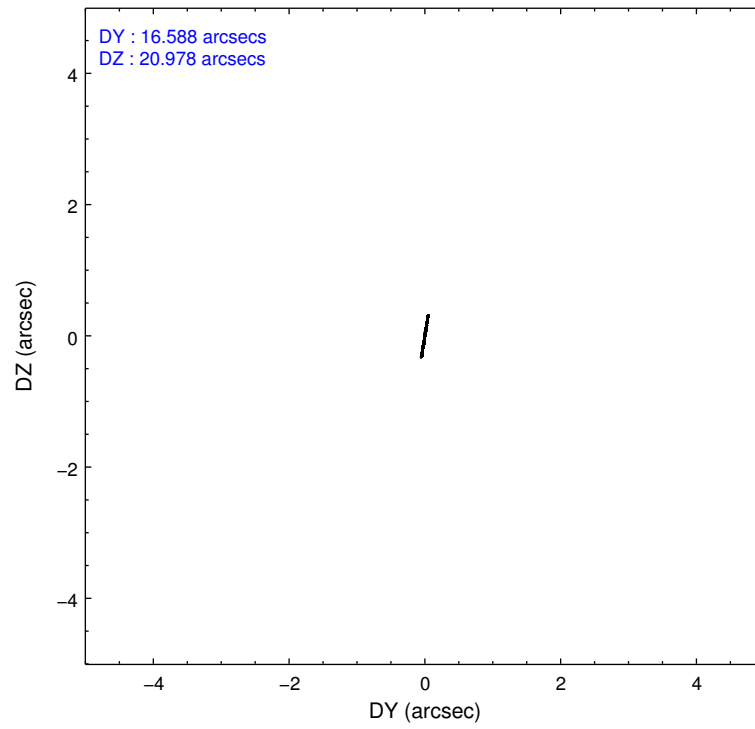
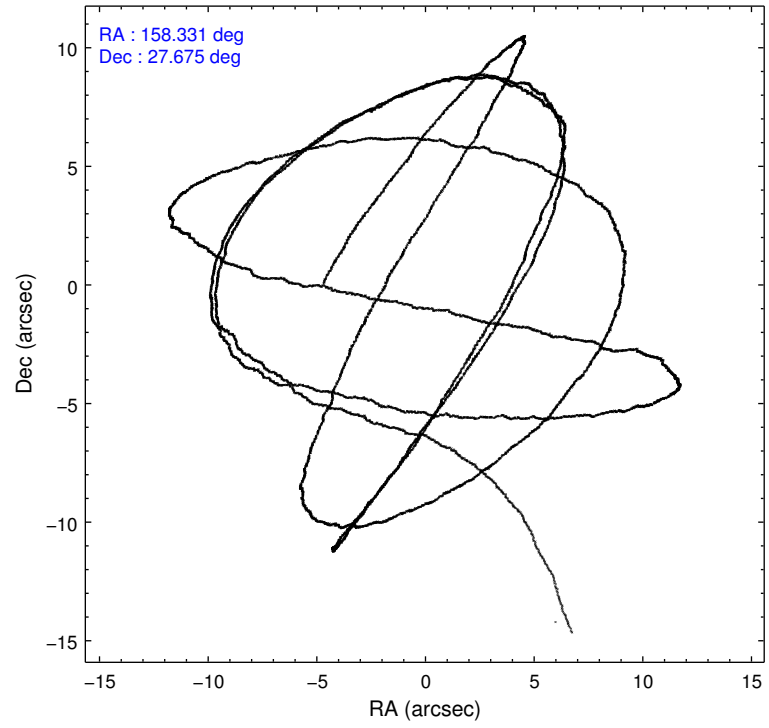
	<b>ccd 2</b>	<b>ccd 3</b>	<b>ccd 6</b>	<b>ccd 7</b>	<b>ccd 8</b>
grade 0 events	518	454	477	732	1524
	4%	3%	3%	4%	8%
grade 1 events	7	8	2	27	10
	0%	0%	0%	0%	0%
grade 2 events	354	307	360	1680	1042
	2%	2%	2%	9%	5%
grade 3 events	182	180	186	775	598
	1%	1%	1%	4%	3%
grade 4 events	173	169	191	704	554
	1%	1%	1%	4%	2%
grade 5 events	478	647	691	1813	924
	3%	4%	5%	10%	4%
grade 6 events	275	271	377	3822	1287
	2%	1%	2%	21%	6%
grade 7 events	10941	11930	10836	7906	12596
	84%	85%	82%	45%	67%

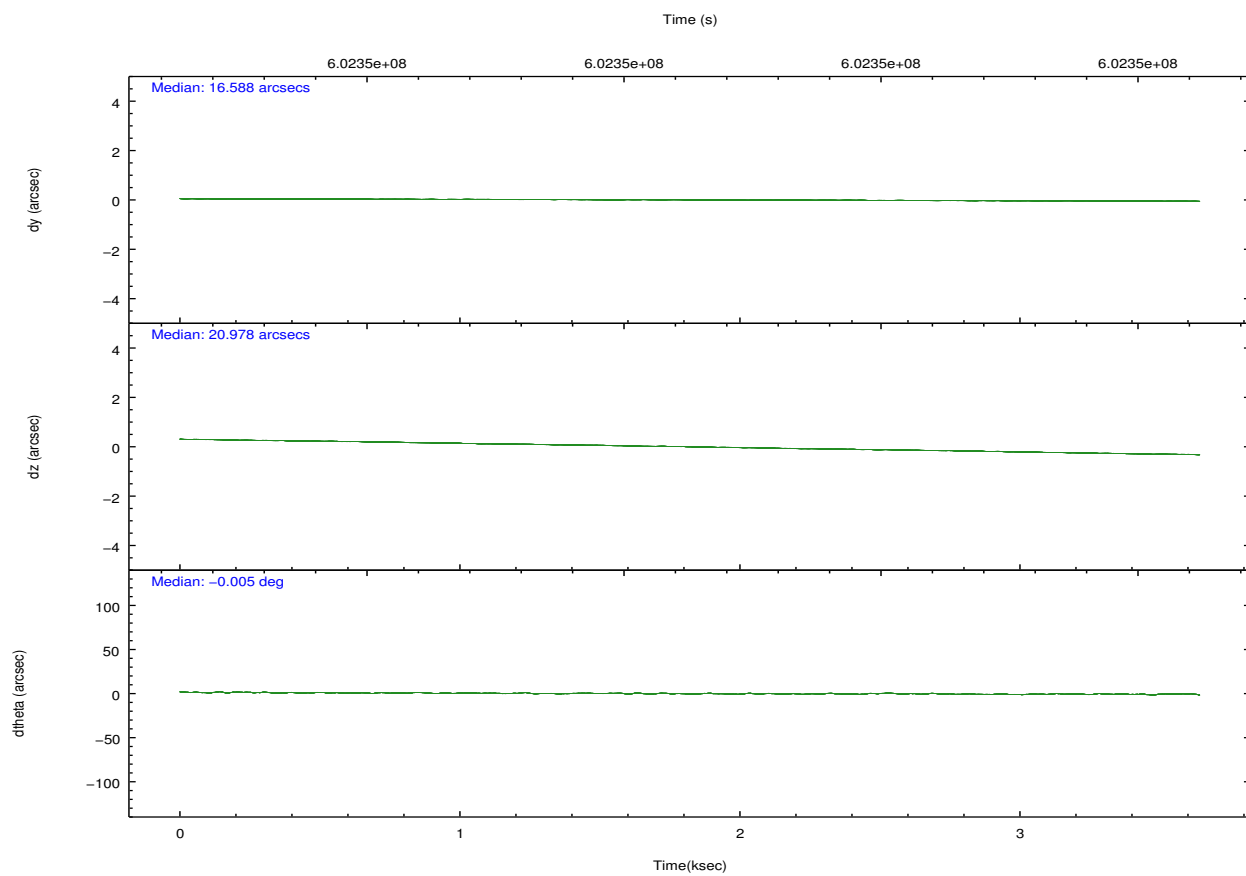
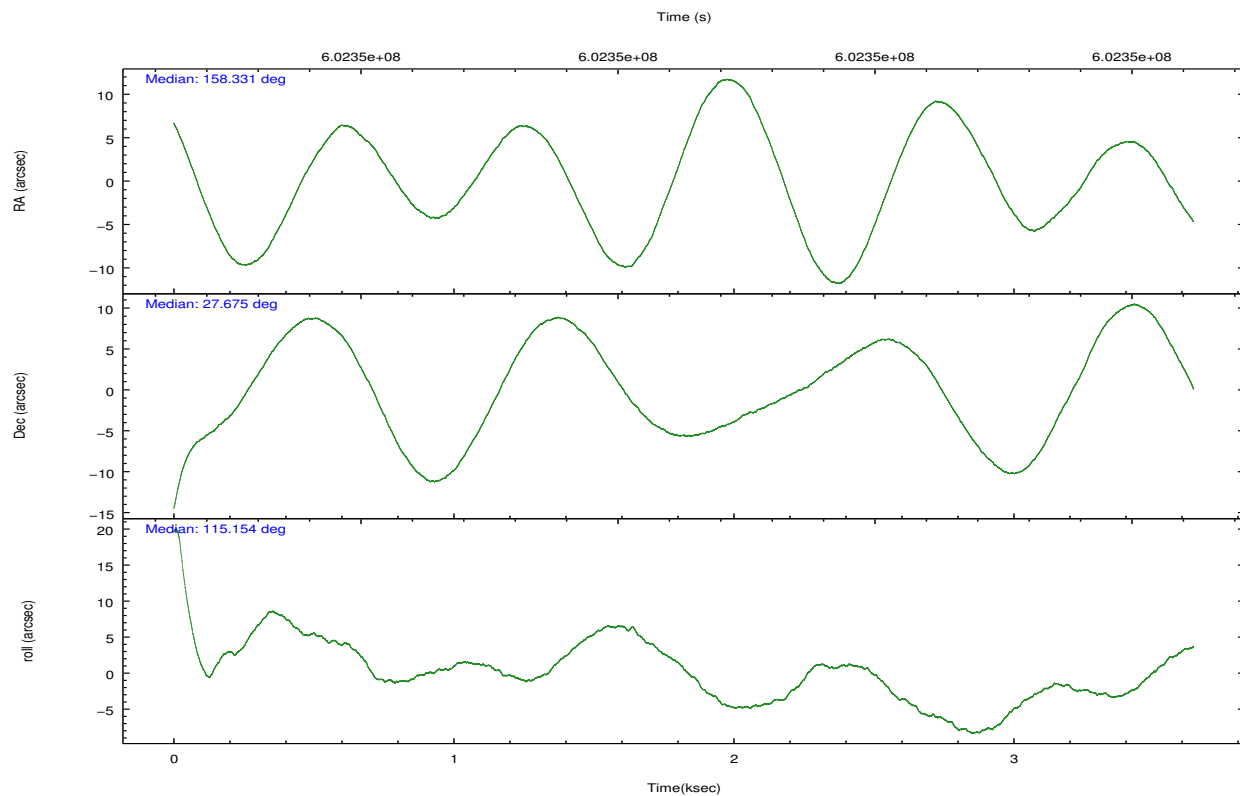


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23678	ACIS-23678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	158.356205	158.3304275240767	CCD I2 on	O1	Y
[deg] Pointing Dec	27.659328	27.67478535302491	CCD I3 on	Y	Y
[deg] Pointing Roll	114.990738	115.1594037775302	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	Y	Y
[s] Observation start time (MET)	602350576.184000	602349256.75913	CCD S5 on	N	N
Observation start date	2017-02-01T15:35:07	2017-02-01T15:14:16	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	602354076.184000	602354469.39693	On-chip summing requested	N	N
Observation end date	2017-02-01T16:33:27	2017-02-01T16:41:09	Subarray requested	CUSTOM	1/2
Read mode	TIMED	TIMED	Subarray start row	257	257
			Subarray row count	512	512
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.7

## 2.3 Aspect



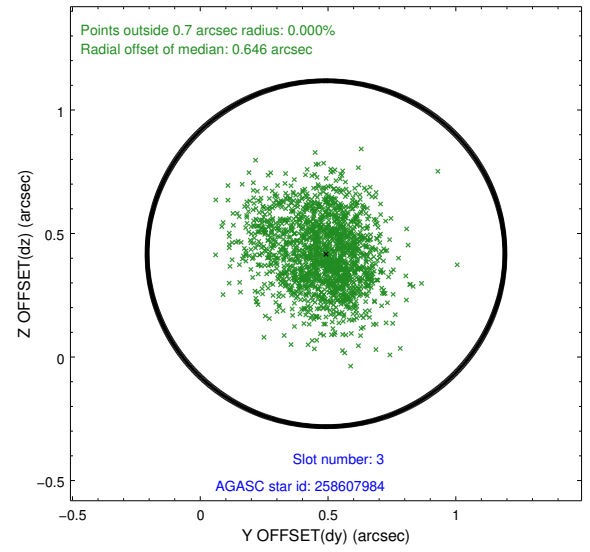
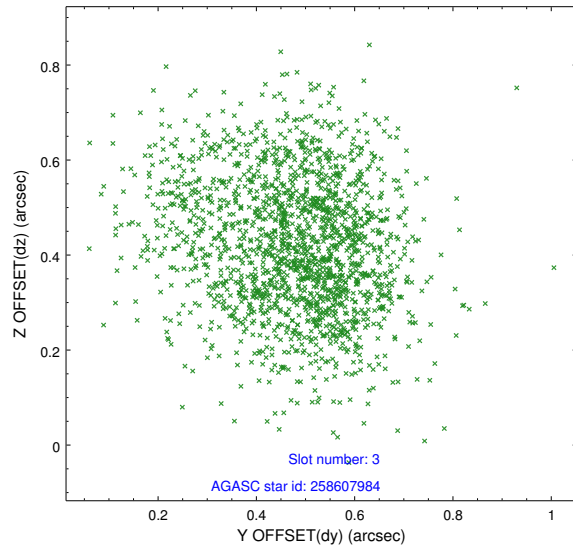


### Slot Statistics

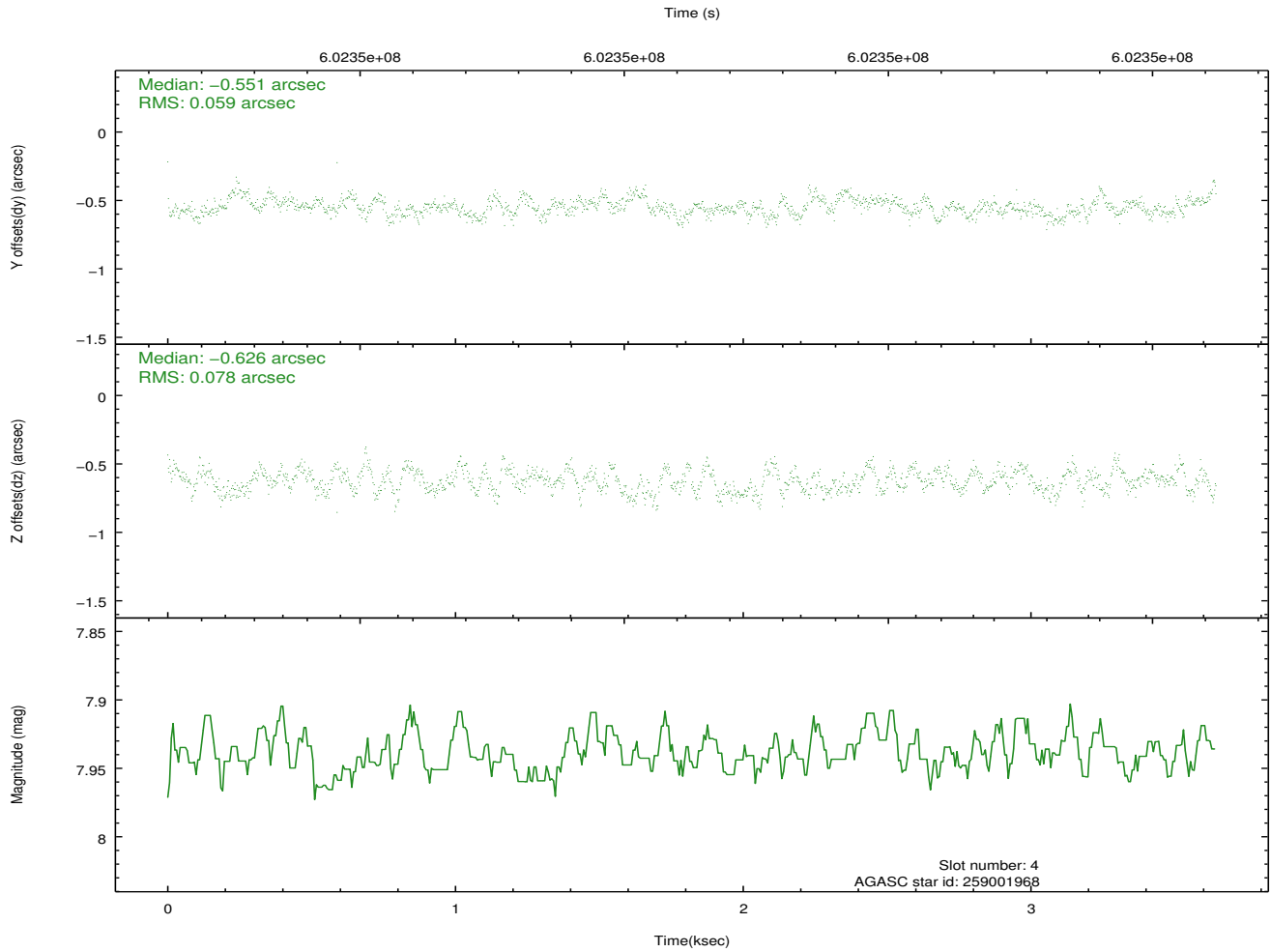
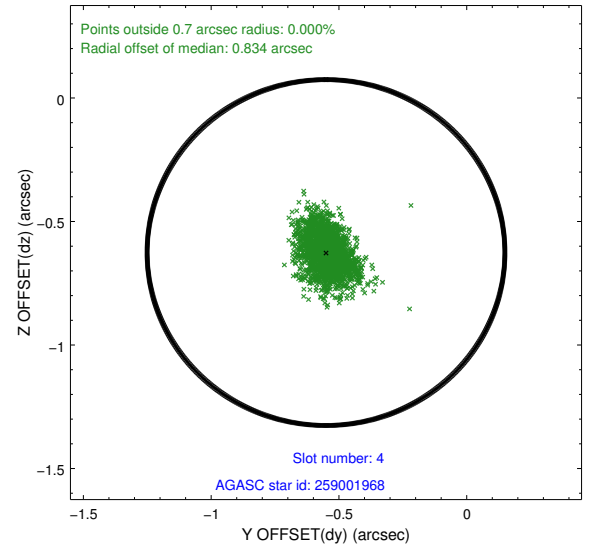
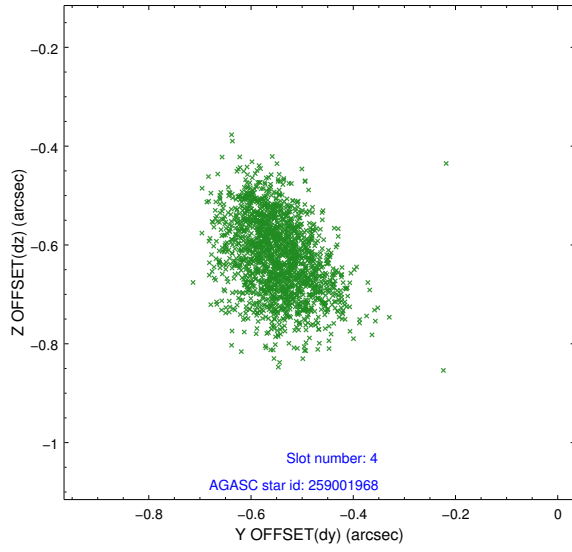
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.97	889	-0.190	-0.072	0.008	0.014	0.000000	0.000000	-769.77	-1742.59
1	FID		ACIS-S-4	7.07	889	0.400	0.111	0.006	0.013	0.000000	0.000000	2143.28	164.30
2	FID		ACIS-S-5	7.07	889	-0.241	-0.031	0.008	0.013	0.000000	0.000000	-1820.47	159.76
3	GUIDE	used	258607984	9.73	1775	0.492	0.418	0.205	0.335	159.032081	27.286425	-2124.42	-1394.91
4	GUIDE	used	259001968	7.94	1778	-0.551	-0.626	0.105	0.163	157.494047	27.825642	1709.07	2230.56
5	GUIDE	used	259002592	9.53	1778	-0.333	0.261	0.202	0.323	158.887124	28.096274	717.55	-2192.53
6	GUIDE	used	259003120	9.77	1774	0.462	-0.047	0.223	0.344	158.836079	27.731918	-406.01	-1498.90
7	GUIDE	used	259004208	6.68	1777	-0.057	0.002	0.101	0.175	158.708432	27.961574	511.92	-1477.81

## 2.4 Star Slots

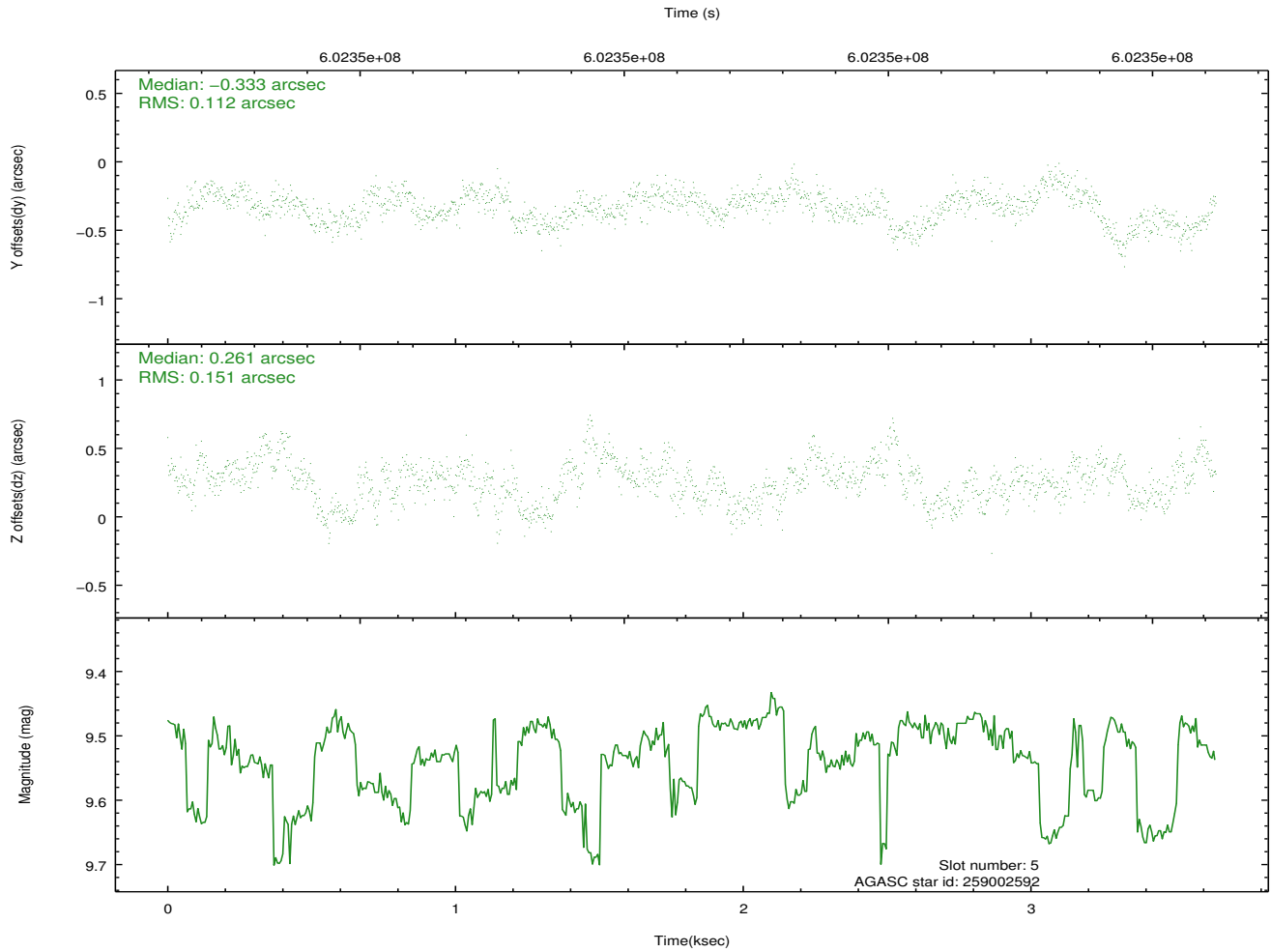
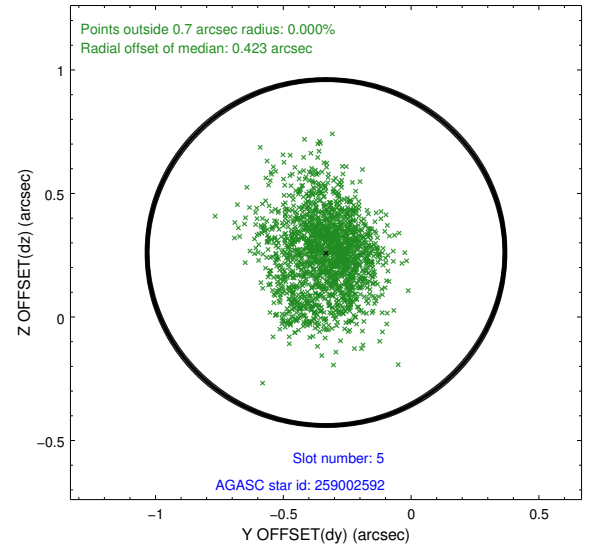
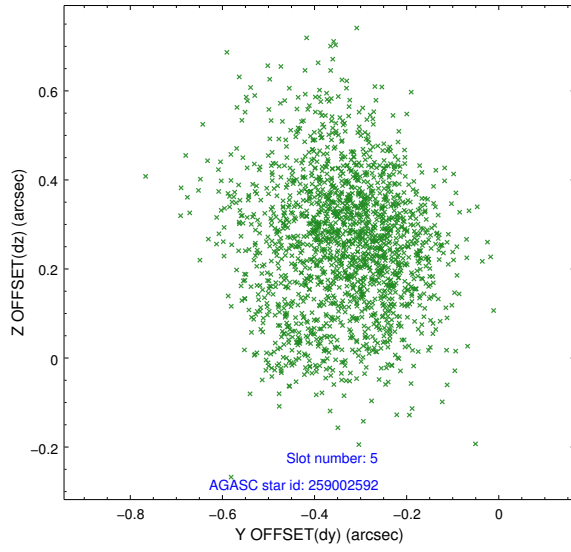
### 2.4.1 Slot 3



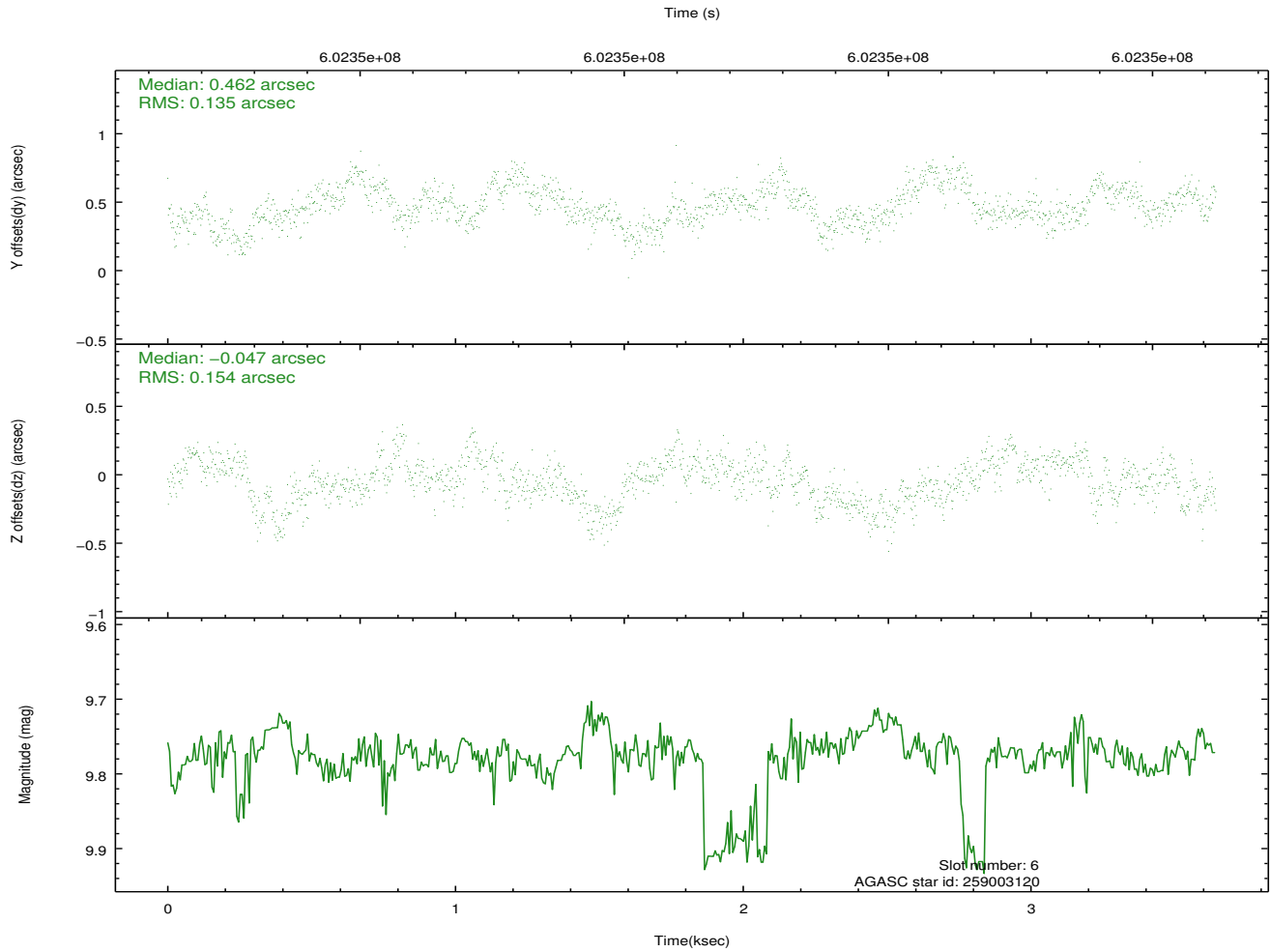
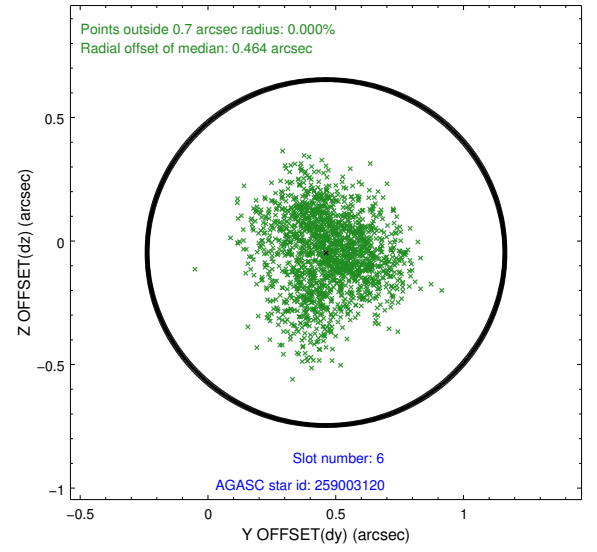
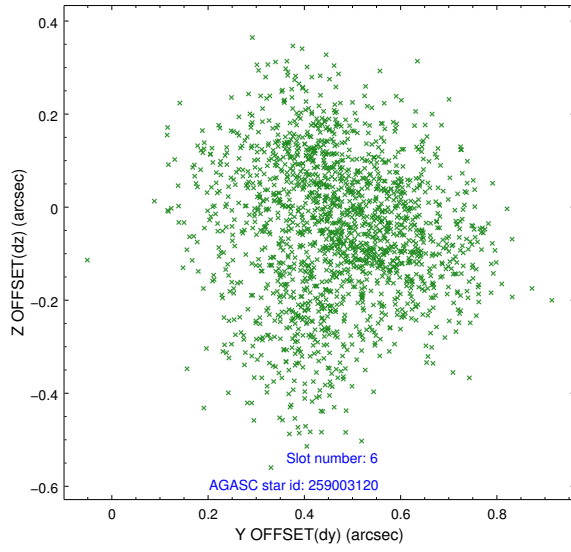
## 2.4.2 Slot 4



### 2.4.3 Slot 5

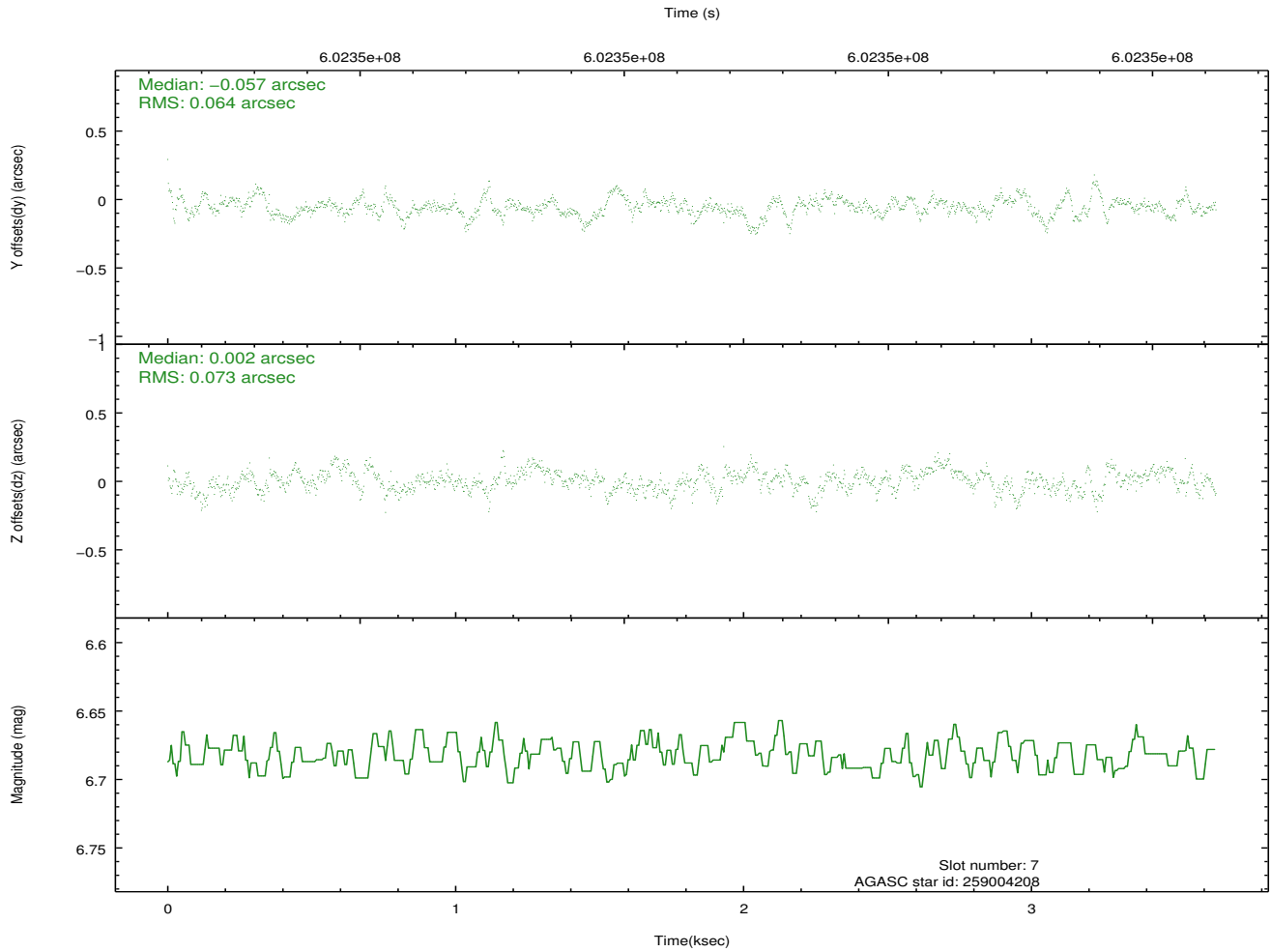
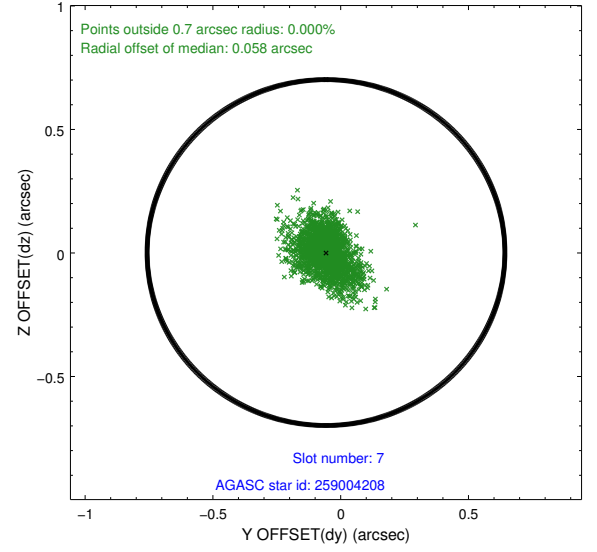
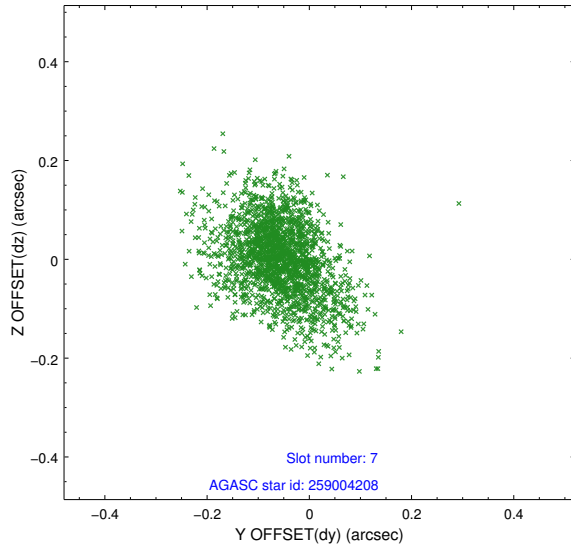


## 2.4.4 Slot 6



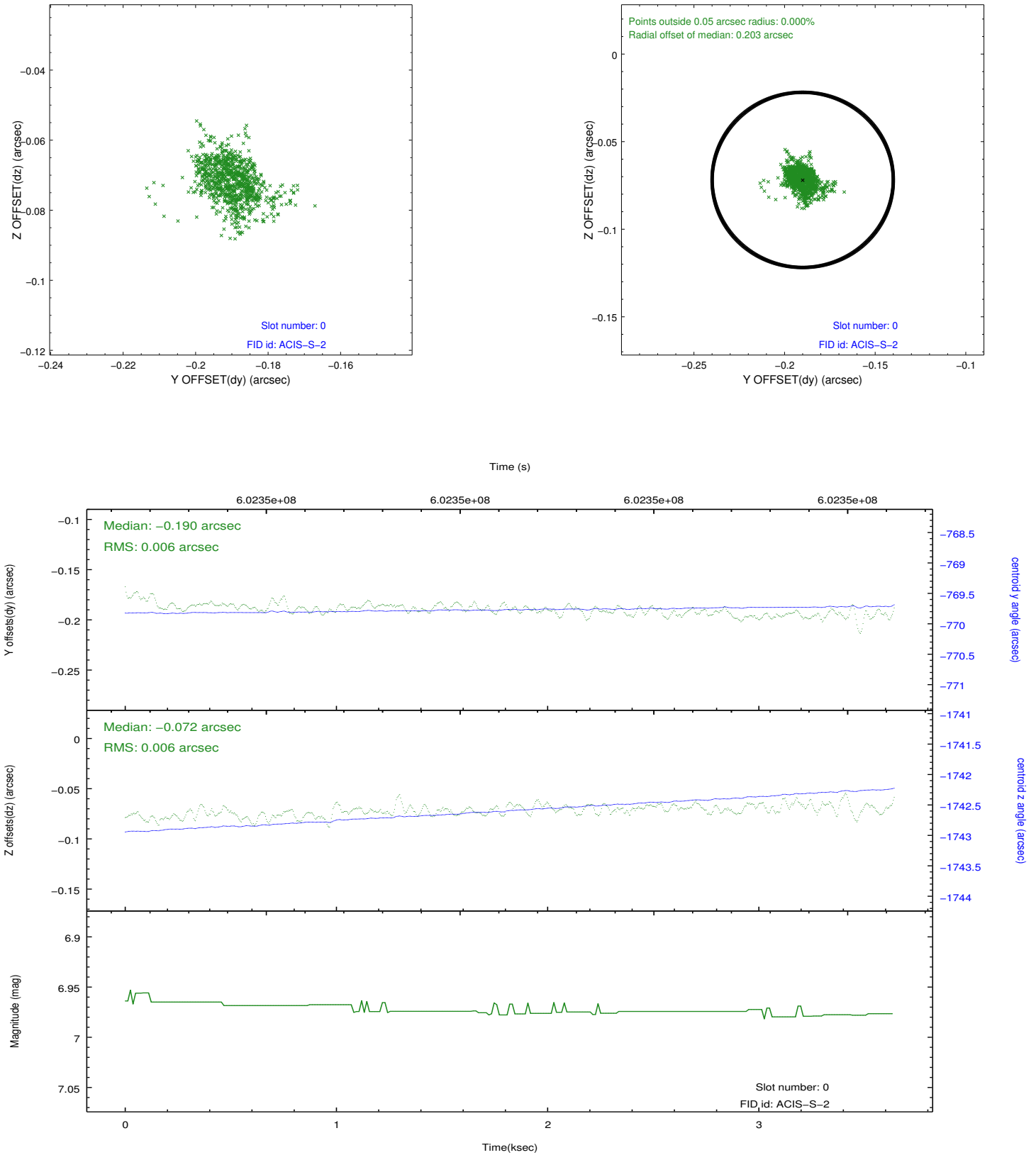


## 2.4.5 Slot 7

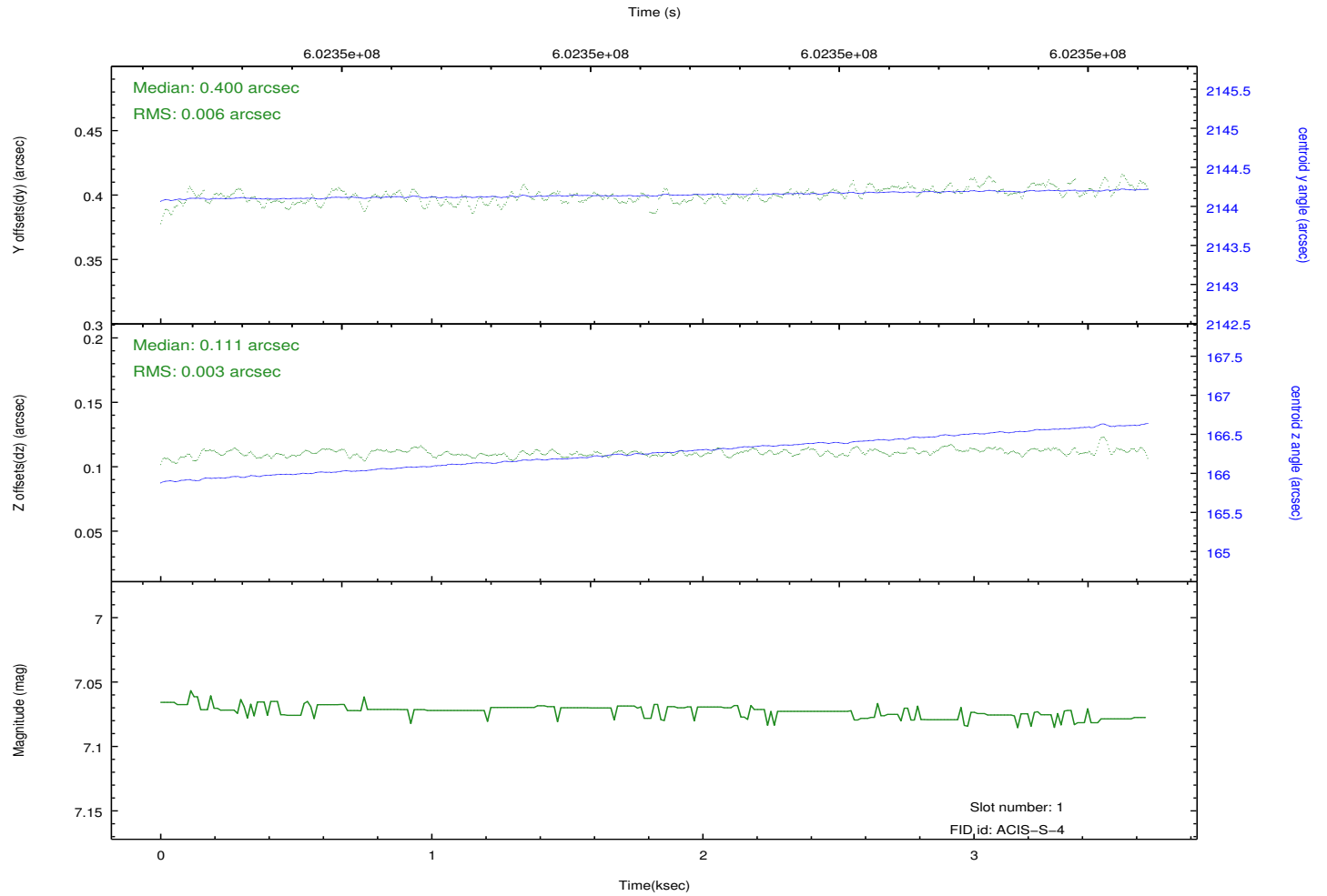
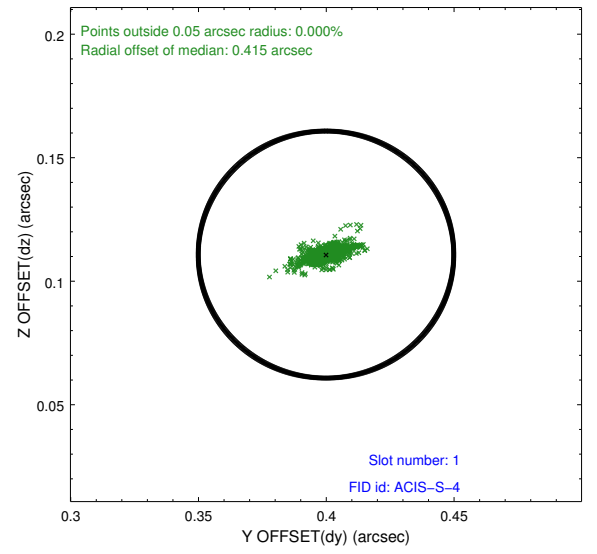
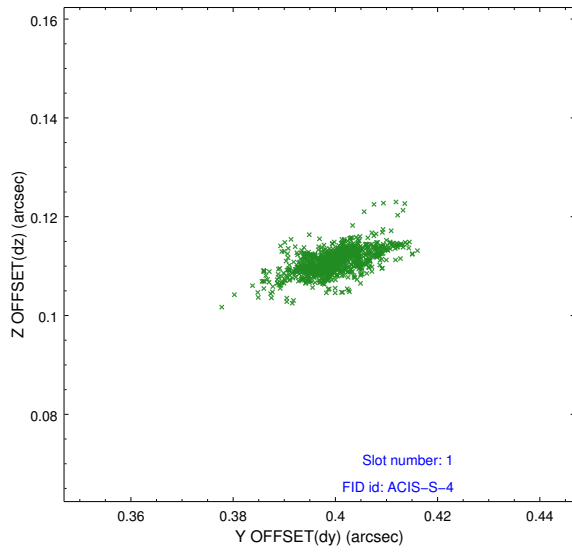


## 2.5 FID Slots

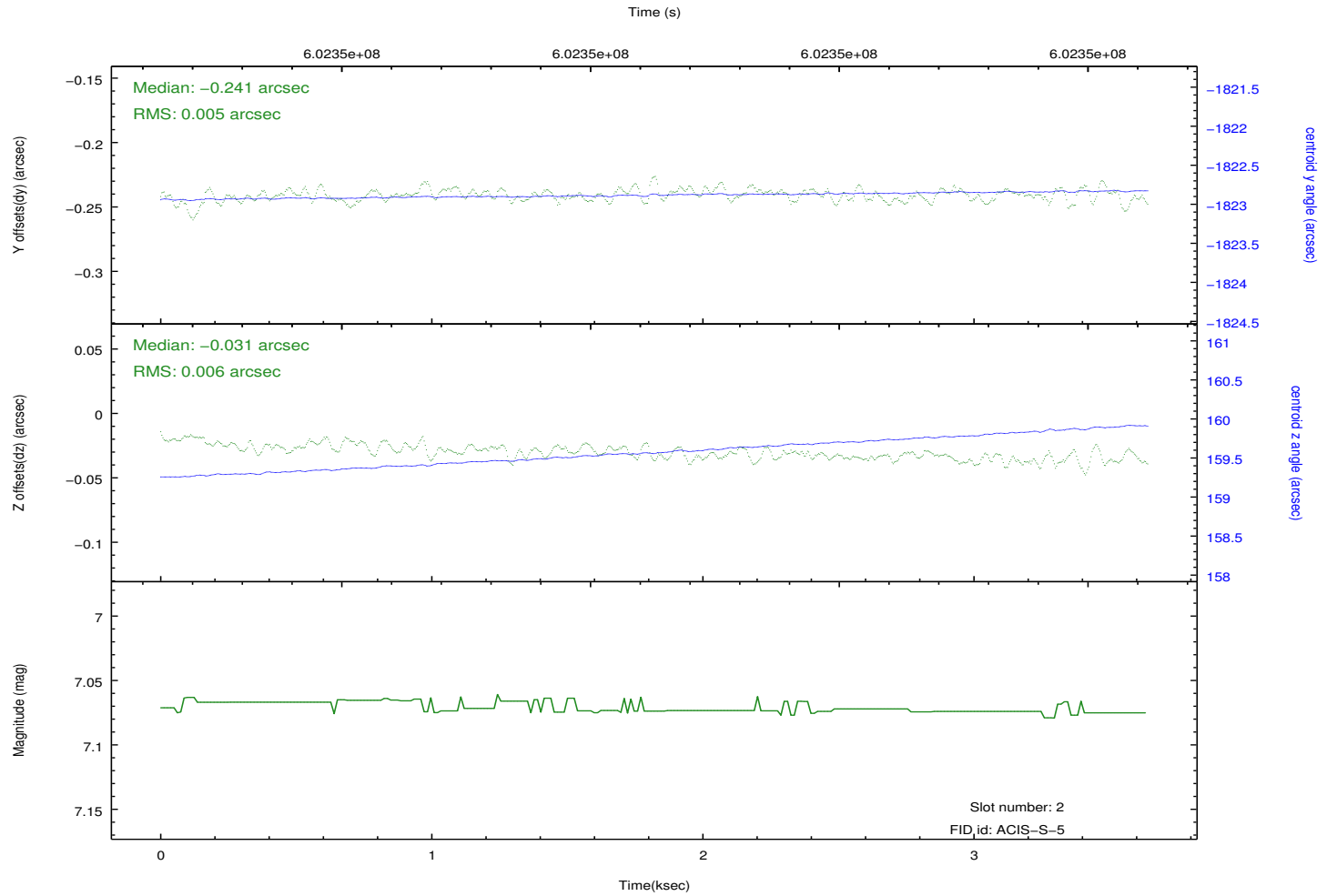
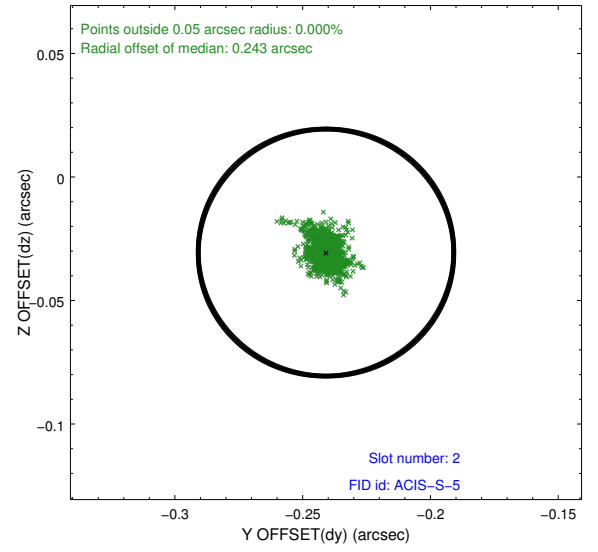
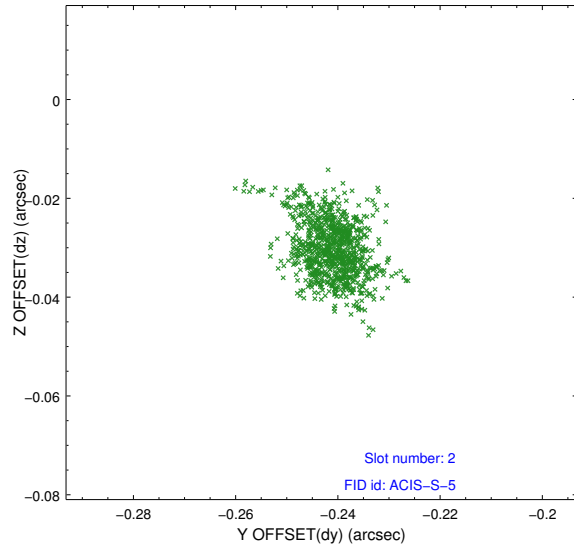
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2017.02.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.590400100708

### A.2 Comments