

# V&V Reference Report

## L2 ASCDS Version : 10.6

Observation 20468 - L2 Version 2  
Chandra X-Ray Center

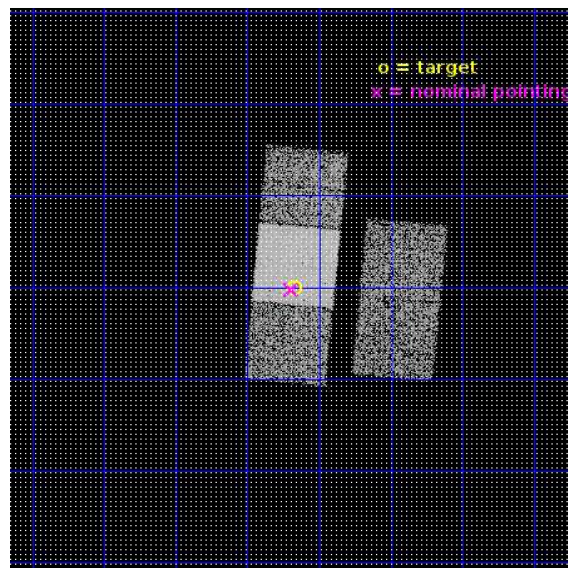
L2 Processing Date : Oct 3 2017

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# 1 Front

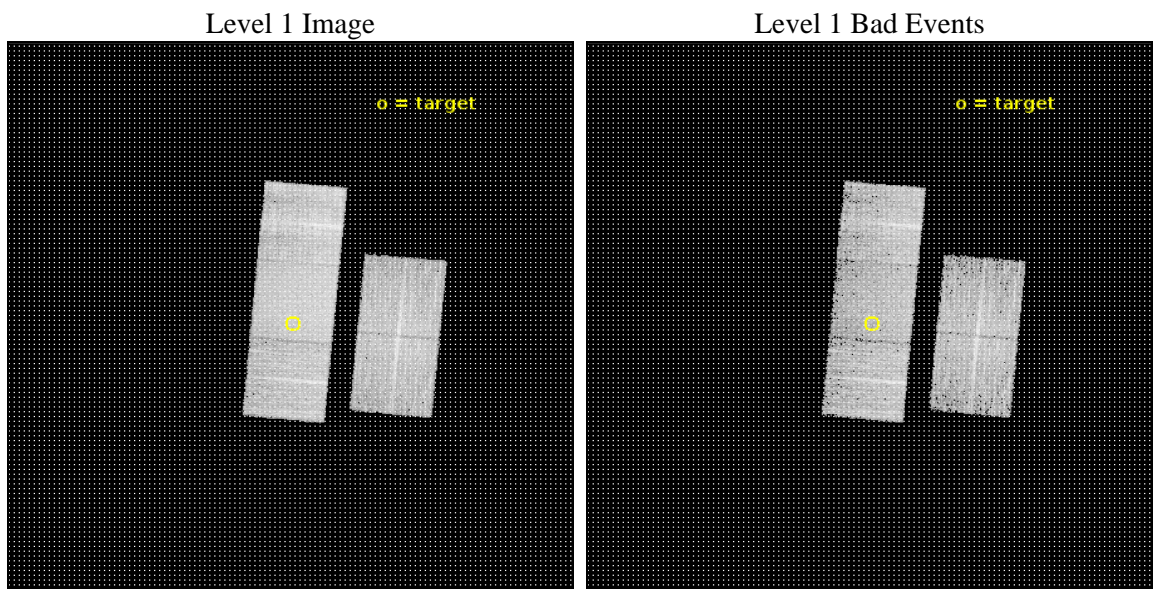
seq_num	703571	Sequence number
obs_id	20468	Observation id
title	Understanding AGN Accretion State Transitions with a Statistical Sample of Changing-Look Quasars	Proposal title
observer	John Ruan	Principal investigator
object	SDSS J225240.37+010958.7	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	343.168333	Observer's specified target RA [deg]
dec_targ	1.166333	Observer's specified target Dec [deg]
ra_nom	343.17320430199	Nominal RA [deg]
dec_nom	1.1626177364107	Nominal Dec [deg]
roll_nom	275.30252287895	Nominal Roll [deg]
revision	2	Processing version of data
ontime	8056.9000620842	Sum of GTIs [s]
livetime	7951.6307313695	Livetime [s]
ontime2	8056.9000620842	Sum of GTIs [s]
ontime3	8056.9000620842	Sum of GTIs [s]
ontime6	8056.9000620842	Sum of GTIs [s]
ontime7	8056.9000620842	Sum of GTIs [s]
ontime8	8056.9000620842	Sum of GTIs [s]
l2events	48796	Number of level 2 events



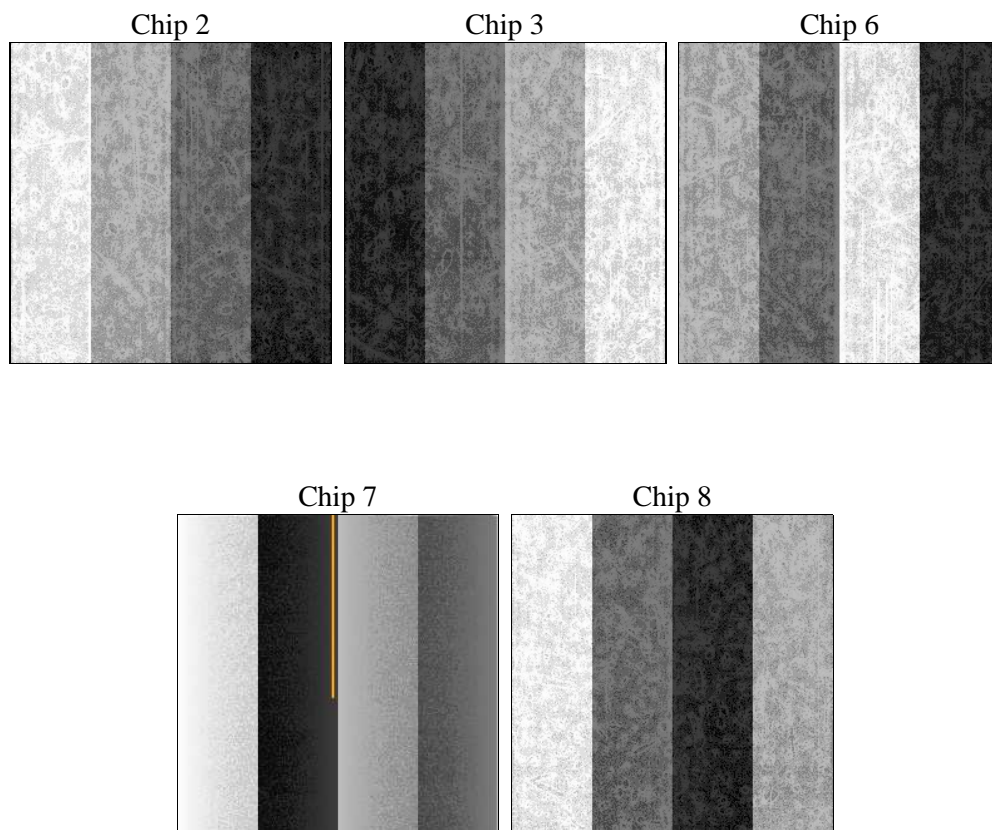
## 2 OBI

### 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	10.6	Processing system revision	ontime	8056.9000620842	Sum of GTIs [s]
caldsver	4.7.6	&#160	ontime2	8056.9000620842	Sum of GTIs [s]
date	2017-10-04T01:38:27	Date and time of file creation	ontime3	8056.9000620842	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	8056.9000620842	Sum of GTIs [s]
			ontime7	8056.9000620842	Sum of GTIs [s]
			ontime8	8056.9000620842	Sum of GTIs [s]
			l1events	289426	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	49427	49129	54512	68794	67564
rejected events	44017	43872	48624	39588	50453
rejected %	89%	89%	89%	57%	74%

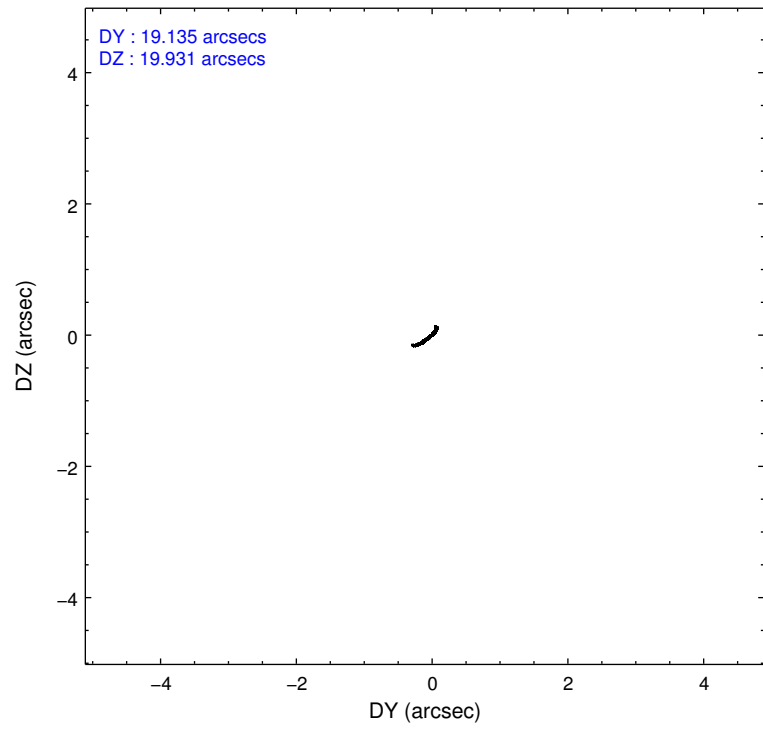
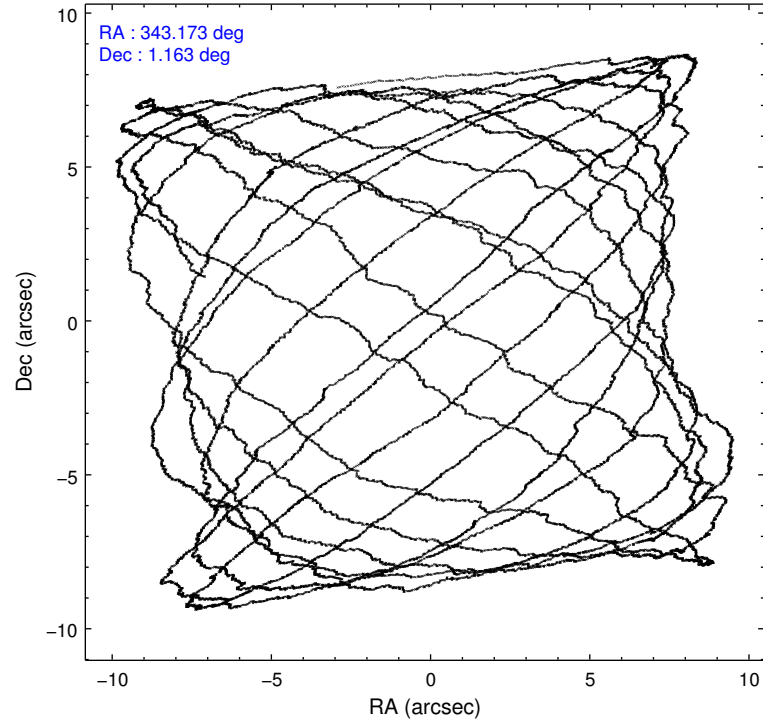
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	1906	1817	1765	2556	4425
	3%	3%	3%	3%	6%
grade 1 events	27	20	26	98	54
	0%	0%	0%	0%	0%
grade 2 events	1249	1085	1496	5906	4453
	2%	2%	2%	8%	6%
grade 3 events	577	604	518	2336	1677
	1%	1%	0%	3%	2%
grade 4 events	594	563	521	2309	1646
	1%	1%	0%	3%	2%
grade 5 events	2083	2437	2373	6660	3593
	4%	4%	4%	9%	5%
grade 6 events	1087	1194	1593	16114	4913
	2%	2%	2%	23%	7%
grade 7 events	41904	41409	46220	32815	46803
	84%	84%	84%	47%	69%

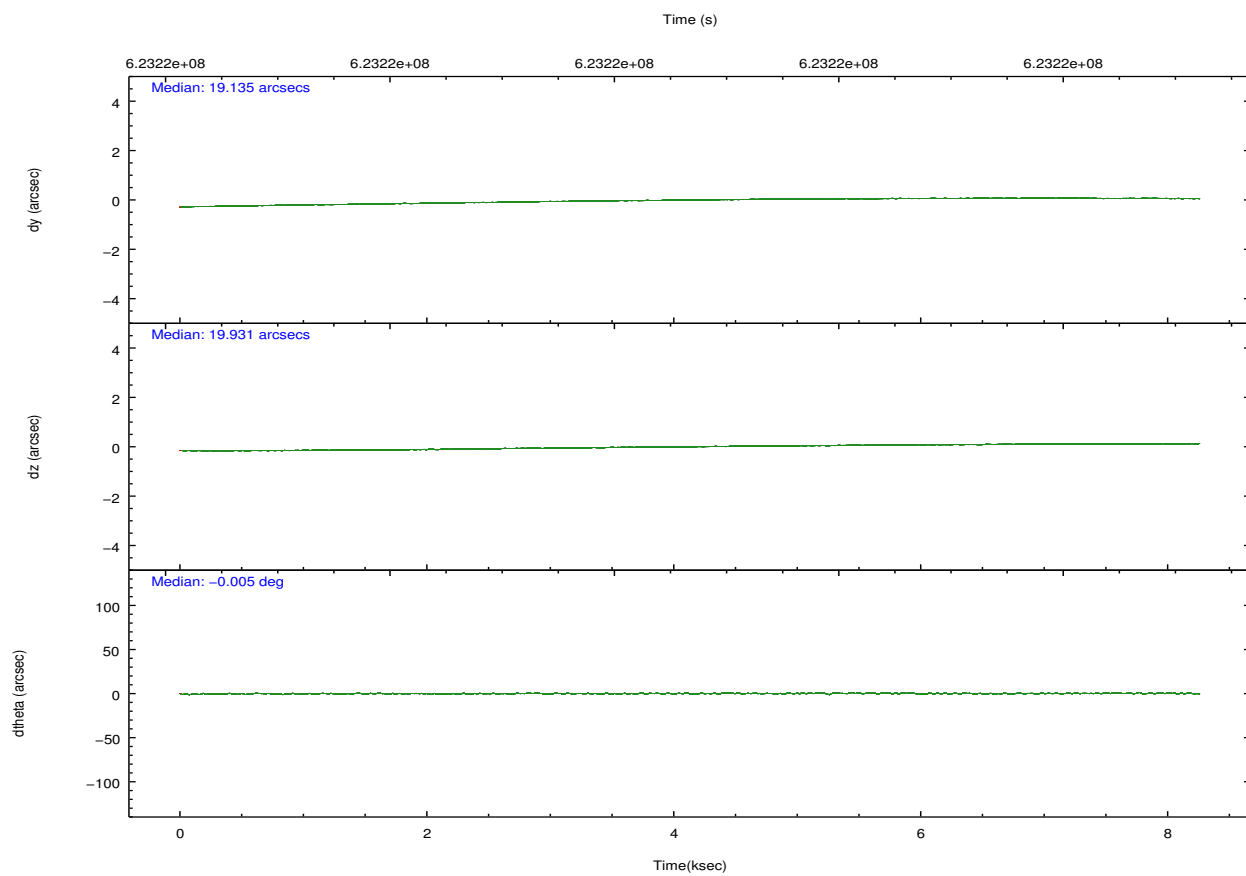
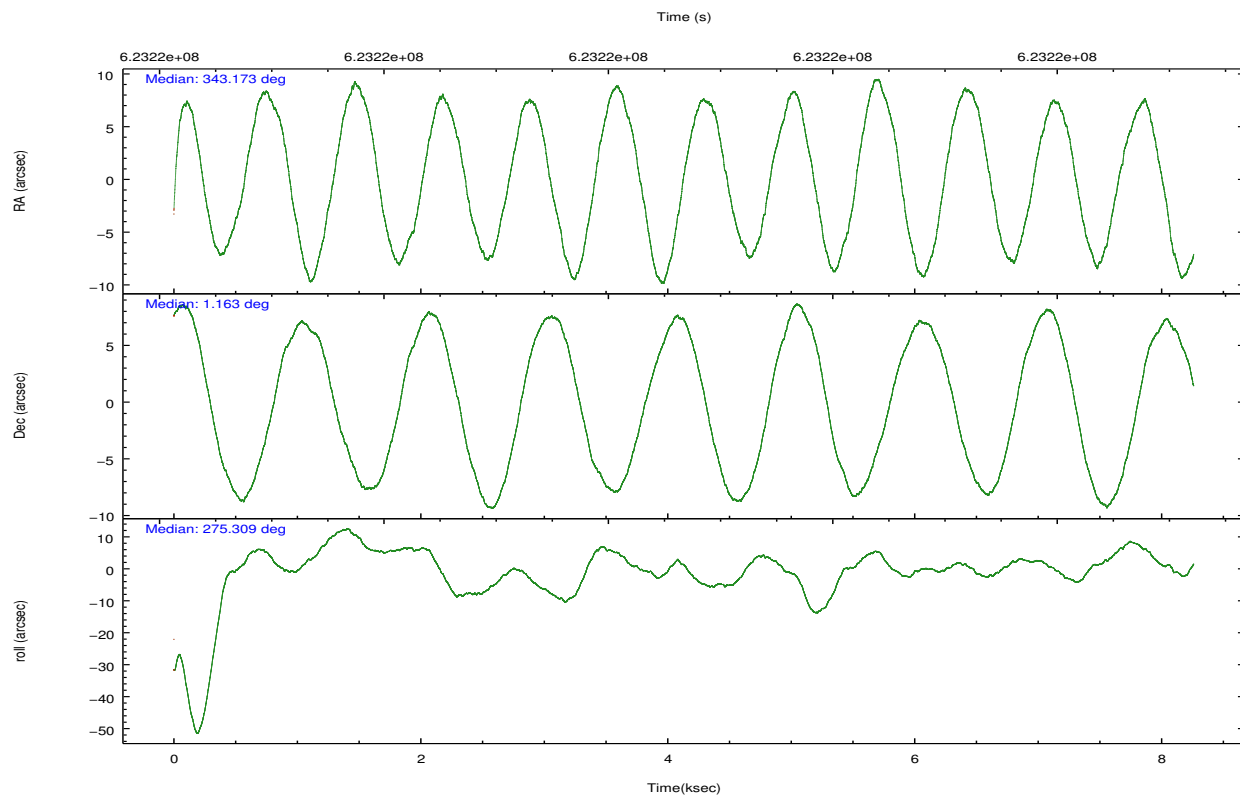


## 2.2 Compared Parameters

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	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	343.157055	343.1732043019911	CCD I2 on	O1	Y
[deg] Pointing Dec	1.184749	1.162617736410717	CCD I3 on	O2	Y
[deg] Pointing Roll	275.146202	275.3025228789548	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	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	623216825.184000	623215834.36141	CCD S5 on	N	N
Observation start date	2017-10-01T03:45:56	2017-10-01T03:30:34	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	623224825.184000	623225534.96197	On-chip summing requested	N	N
Observation end date	2017-10-01T05:59:16	2017-10-01T06:12:14	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



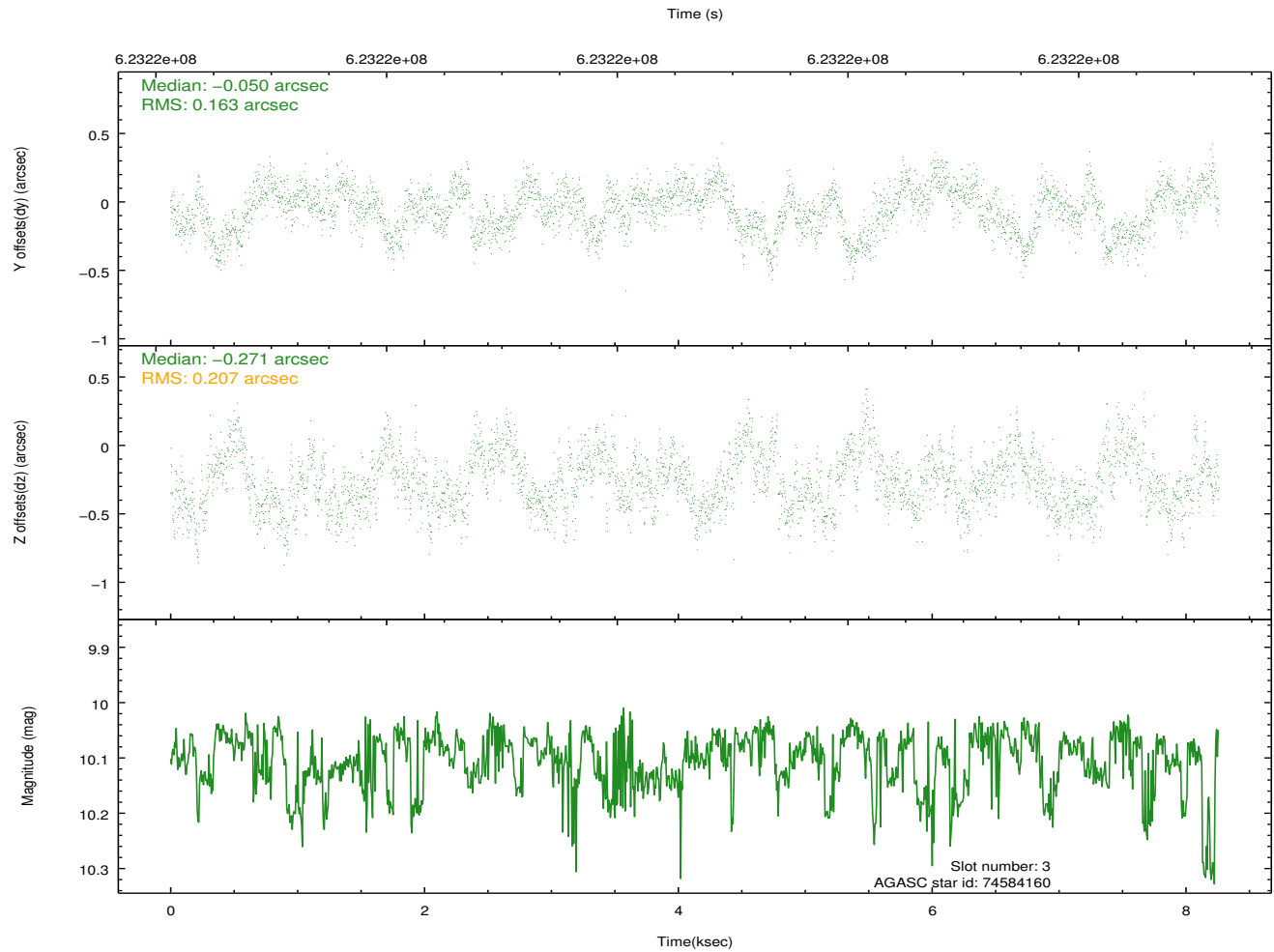
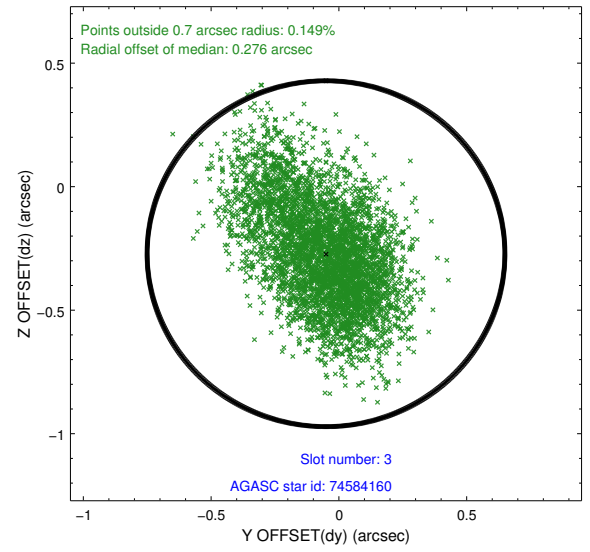
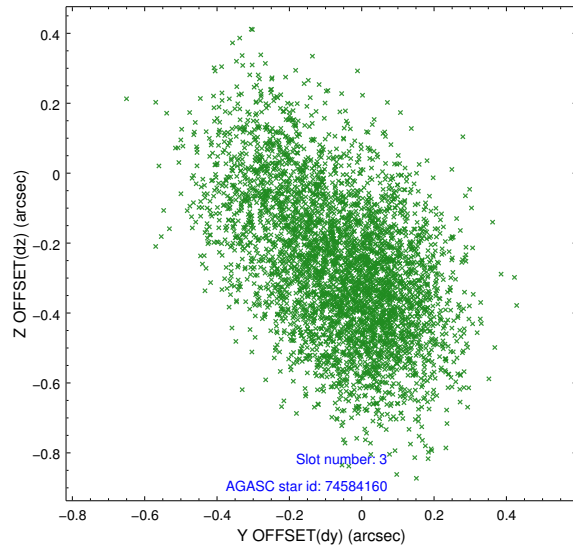


### Slot Statistics

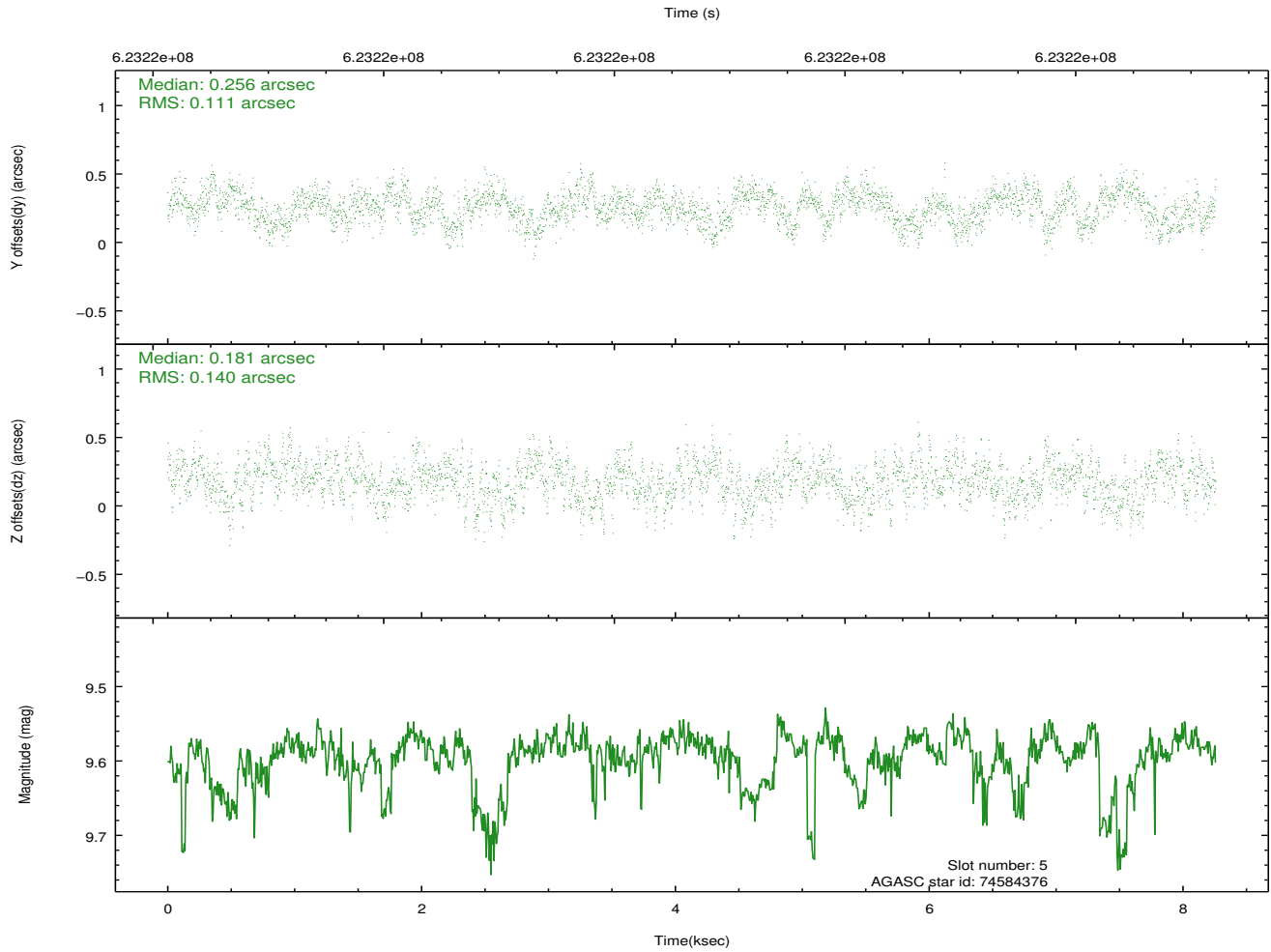
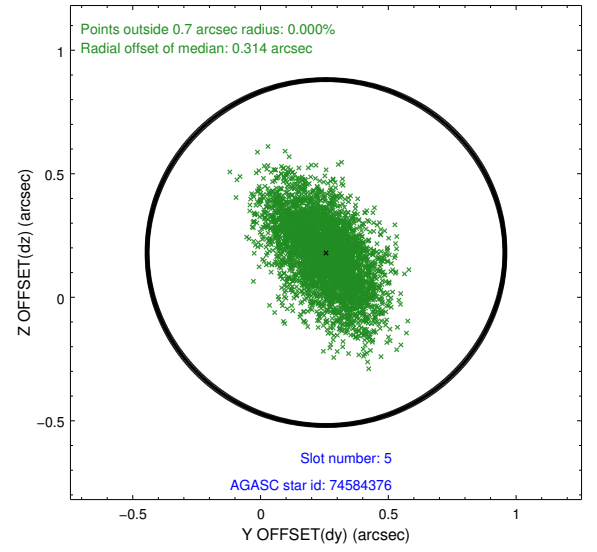
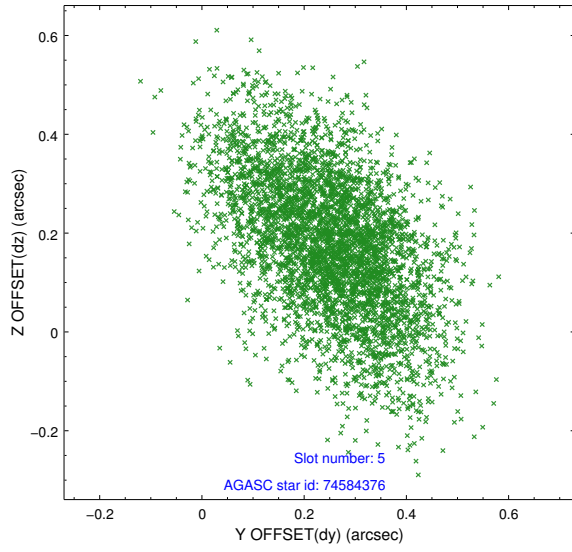
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.13	2015	-0.251	-0.134	0.010	0.019	0.000000	0.000000	-772.39	-1741.53
1	FID		ACIS-S-4	7.25	2015	0.572	0.157	0.008	0.018	0.000000	0.000000	2141.36	166.59
2	FID		ACIS-S-5	7.23	2015	-0.351	-0.014	0.007	0.012	0.000000	0.000000	-1824.51	160.79
3	GUIDE	used	74584160	10.10	4015	-0.050	-0.271	0.280	0.462	343.776818	1.264611	-85.87	2246.80
4	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
5	GUIDE	used	74584376	9.59	4019	0.256	0.181	0.187	0.319	343.296354	1.245745	-173.56	519.99
6	GUIDE	used	74584984	8.94	4025	0.291	0.441	0.146	0.251	342.922413	1.778686	-2204.94	-649.12
7	GUIDE	used	74595544	6.48	4029	-0.485	-0.350	0.157	0.257	343.747855	1.064902	619.29	2079.27

## 2.4 Star Slots

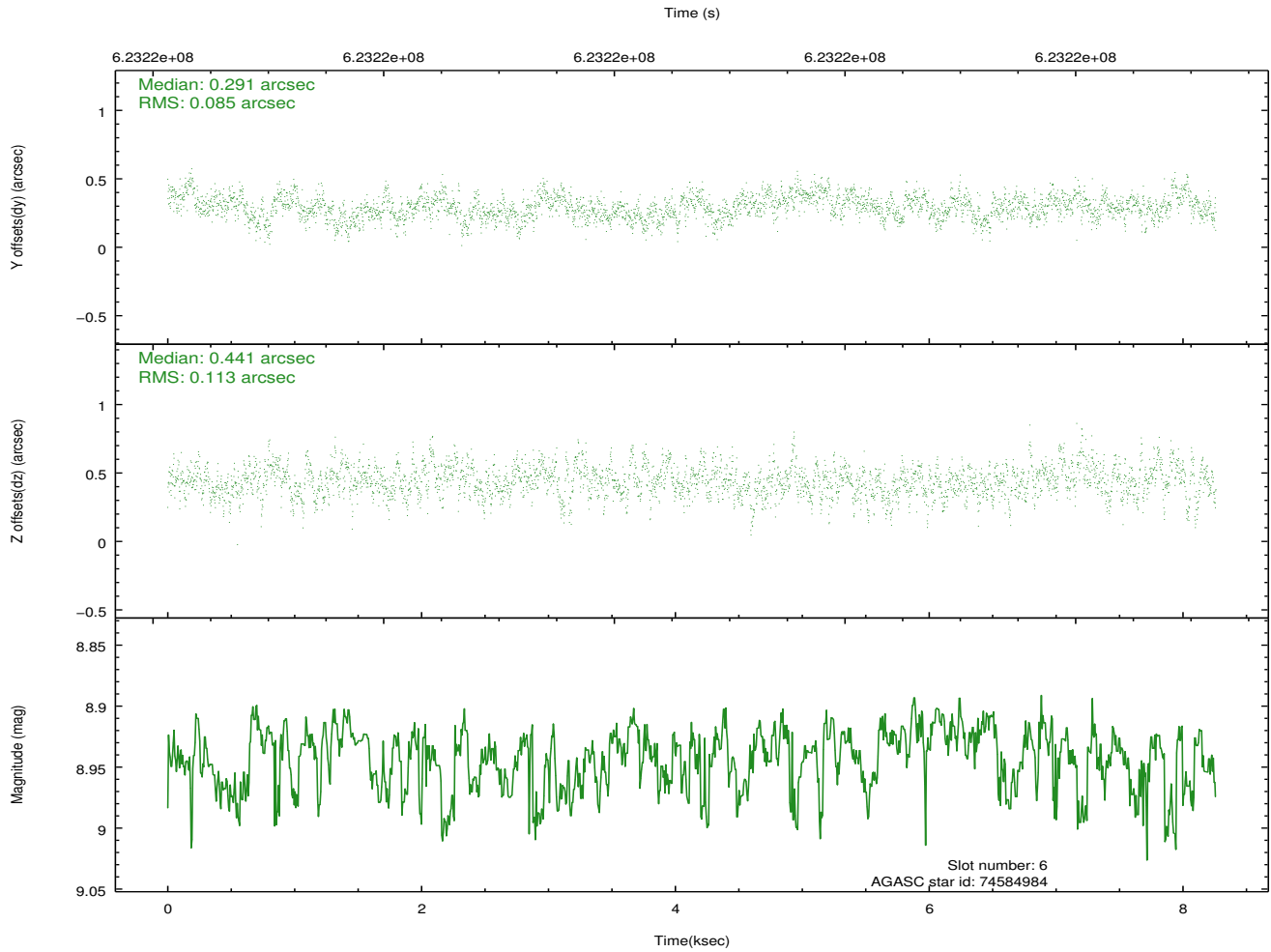
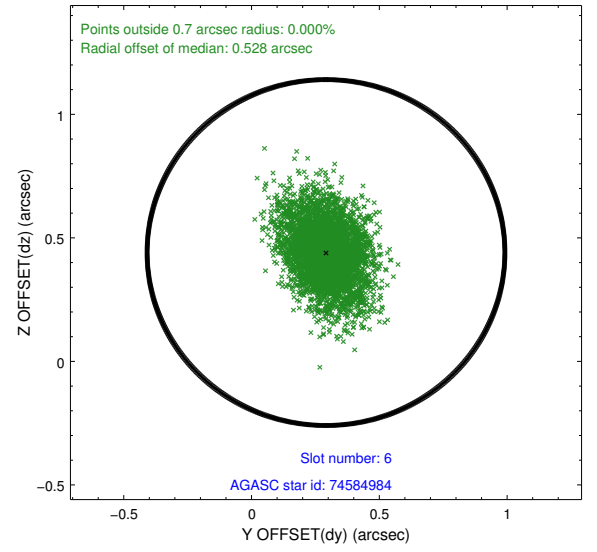
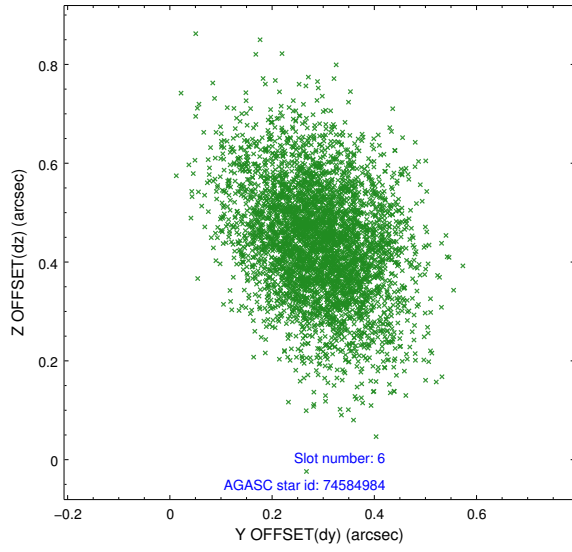
### 2.4.1 Slot 3



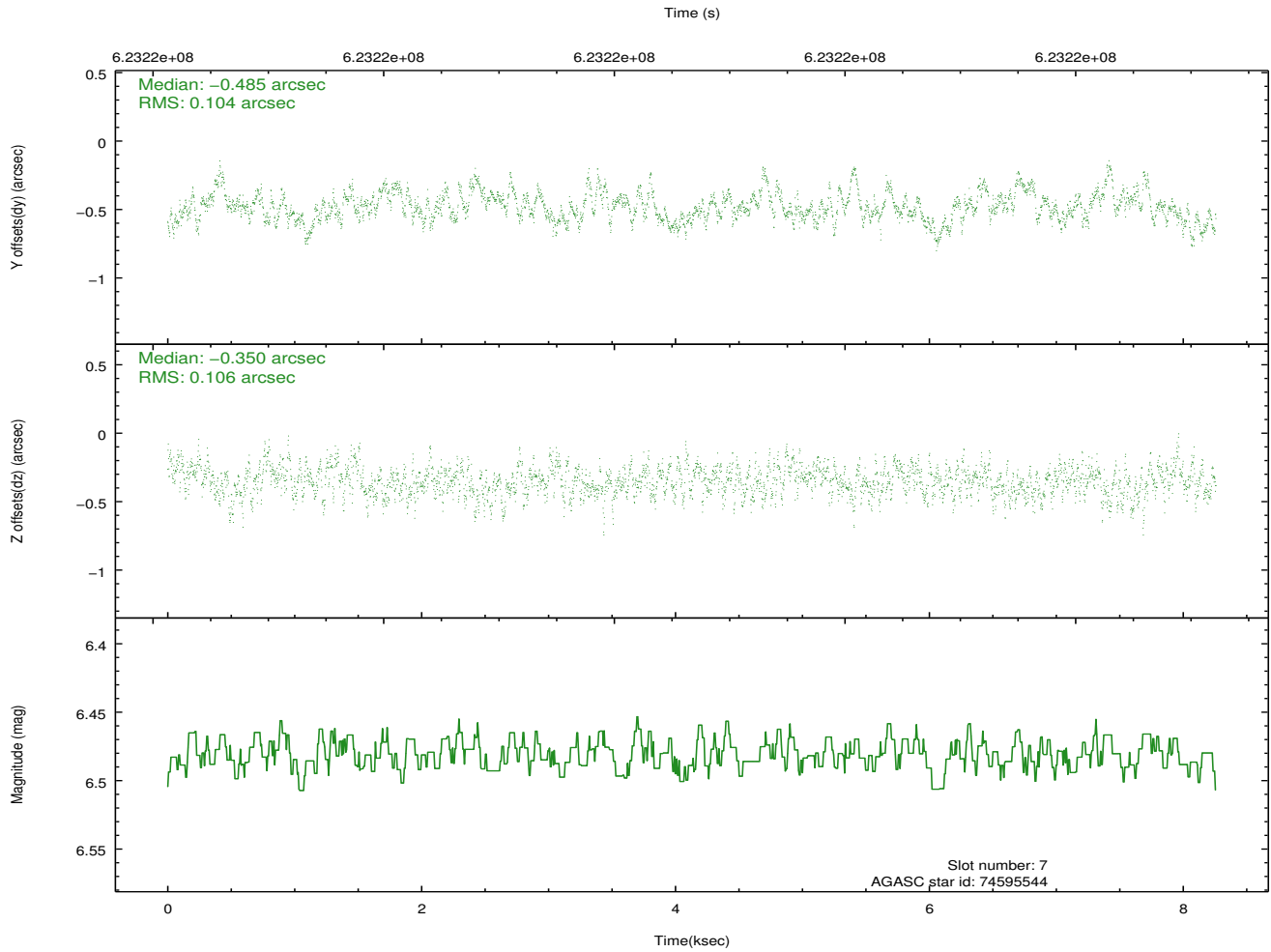
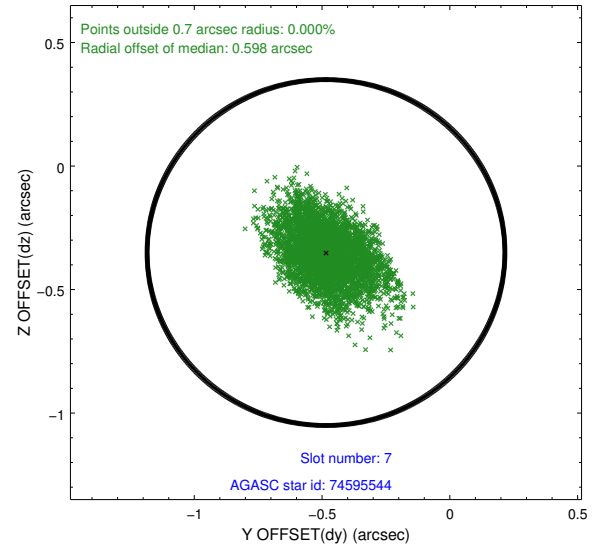
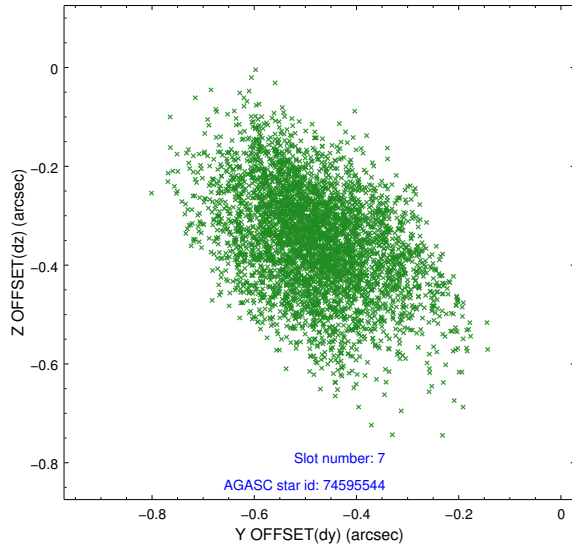
## 2.4.2 Slot 5



### 2.4.3 Slot 6



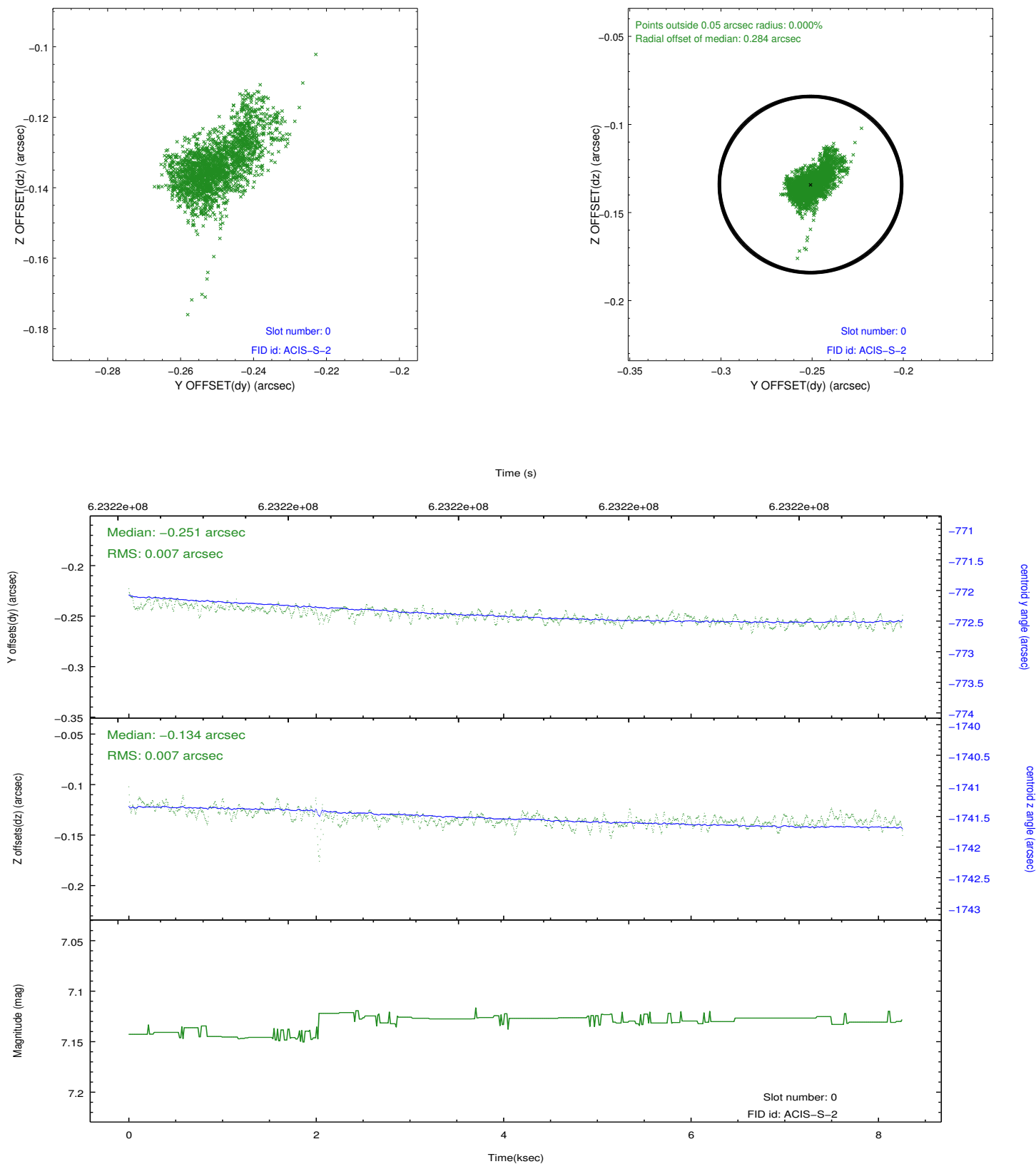
## 2.4.4 Slot 7



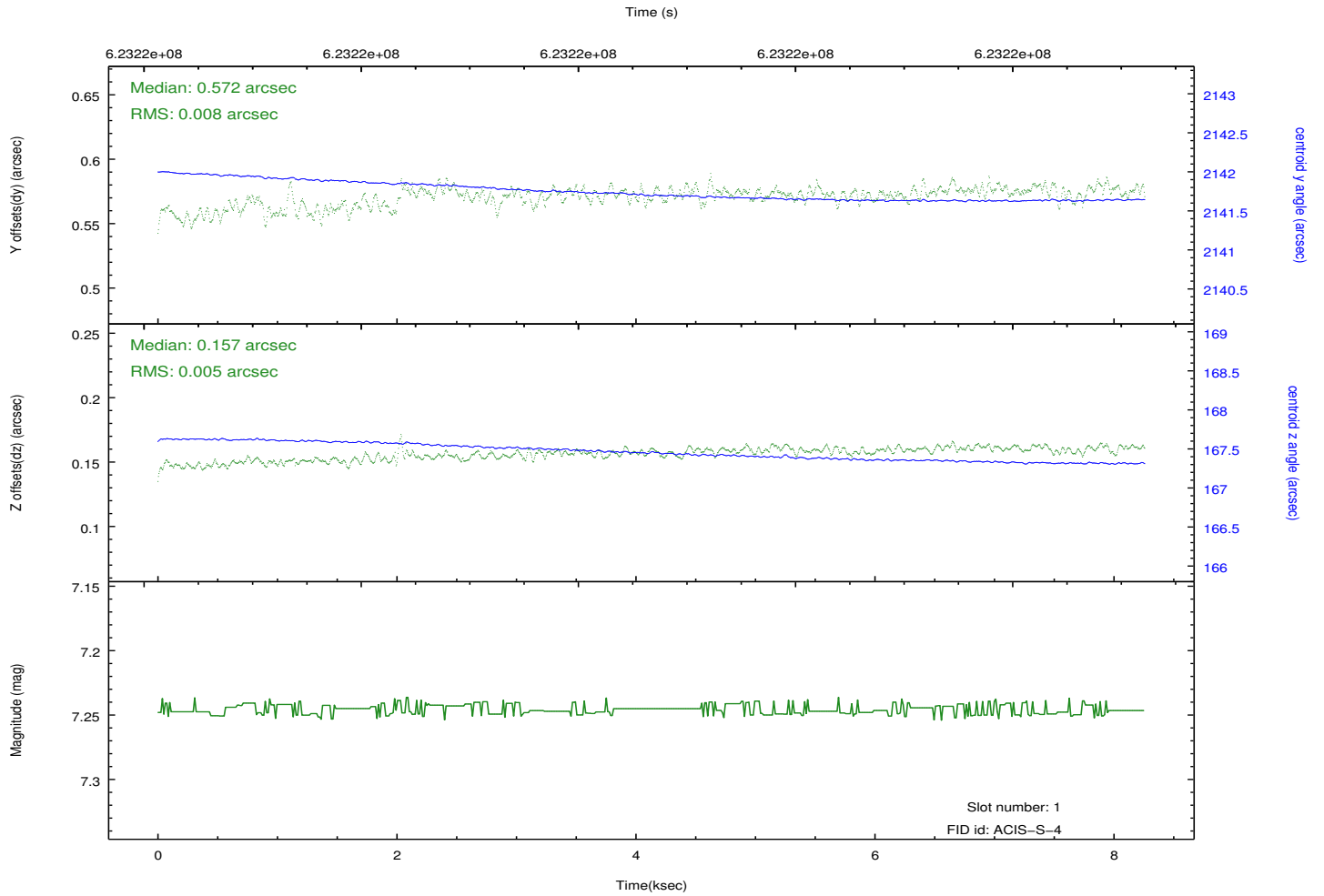
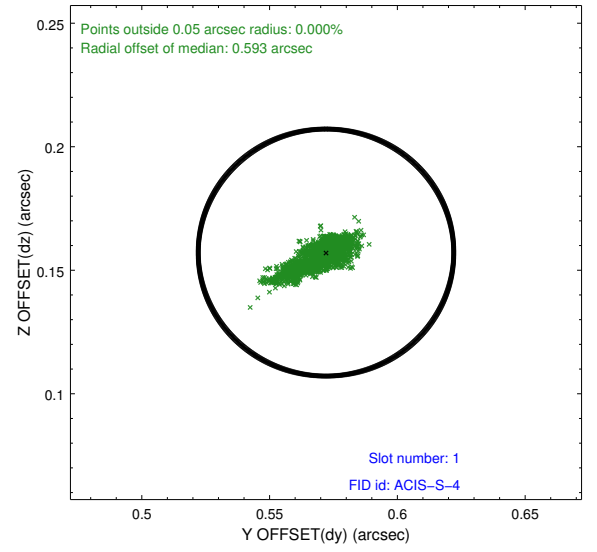
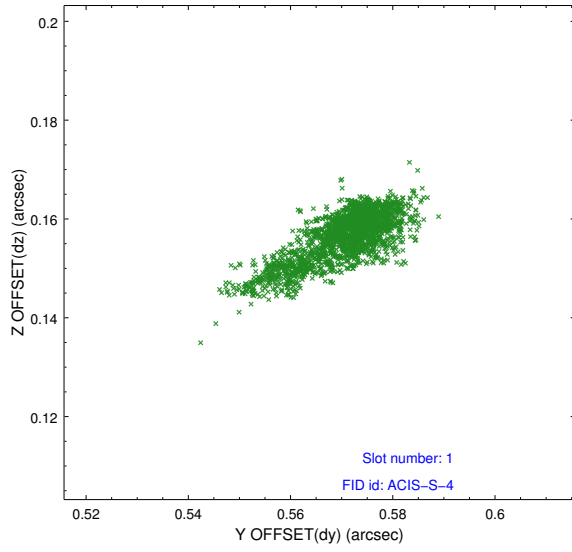


## 2.5 FID Slots

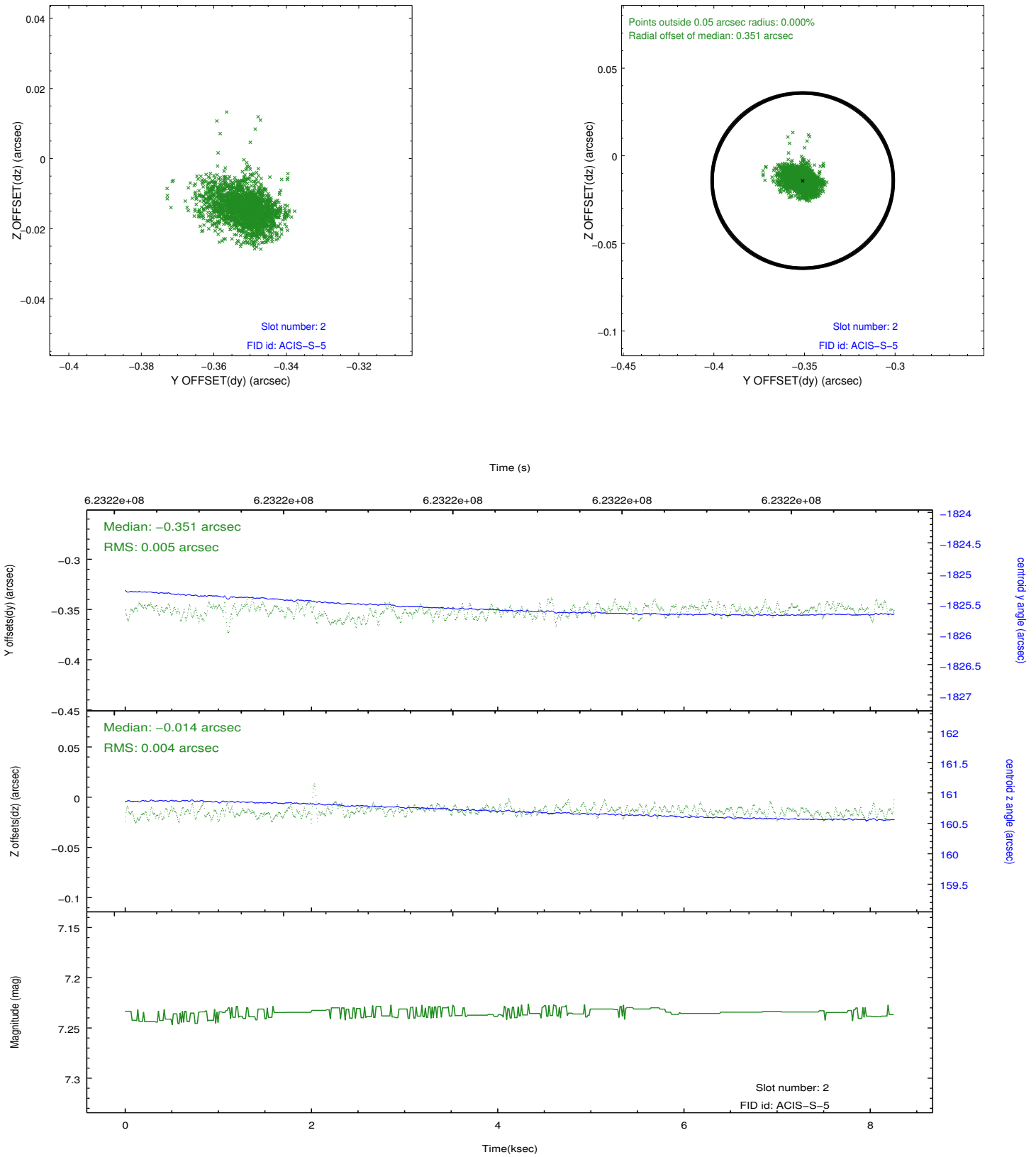
### 2.5.1 Slot 0



## 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)	2017.10.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.0569000620842

### A.2 Comments

The guide star in slot 4 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.