

# V&V Reference Report

## L2 ASCDS Version : 10.5.2

Observation 19541 - L2 Version 1  
Chandra X-Ray Center

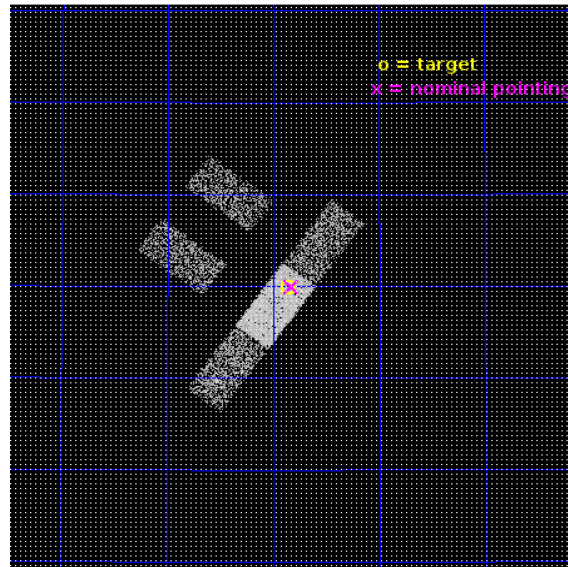
L2 Processing Date : Jan 12 2017

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# 1 Front

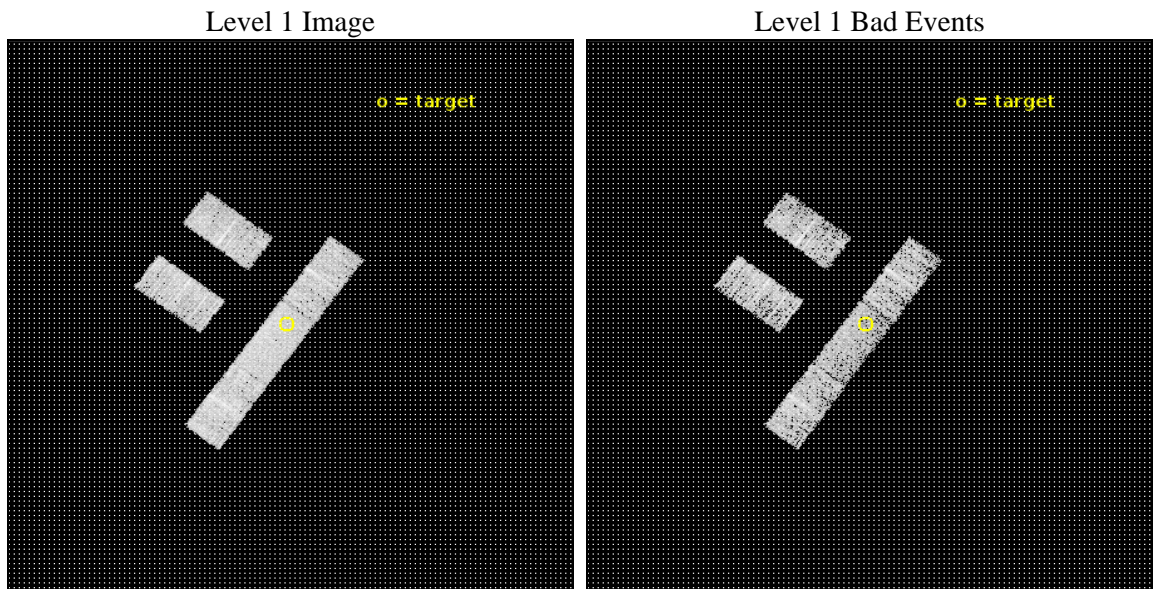
seq_num	703389	Sequence number
obs_id	19541	Observation id
title	Investigating X-ray Bias in Low-L, Low-z Quasars	Proposal title
observer	Gordon Richards	Principal investigator
object	SDSSJ091451.42+421957.0	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	138.714167	Observer's specified target RA [deg]
dec_targ	42.332472	Observer's specified target Dec [deg]
ra_nom	138.70748035416	Nominal RA [deg]
dec_nom	42.332542274609	Nominal Dec [deg]
roll_nom	126.29430725546	Nominal Roll [deg]
revision	1	Processing version of data
ontime	3589.9240012169	Sum of GTIs [s]
livetime	3505.3018897146	Livetime [s]
ontime2	3589.7598412037	Sum of GTIs [s]
ontime3	3589.8419212103	Sum of GTIs [s]
ontime6	3589.8829612732	Sum of GTIs [s]
ontime7	3589.9240012169	Sum of GTIs [s]
ontime8	3589.8008812666	Sum of GTIs [s]
l2events	12616	Number of level 2 events



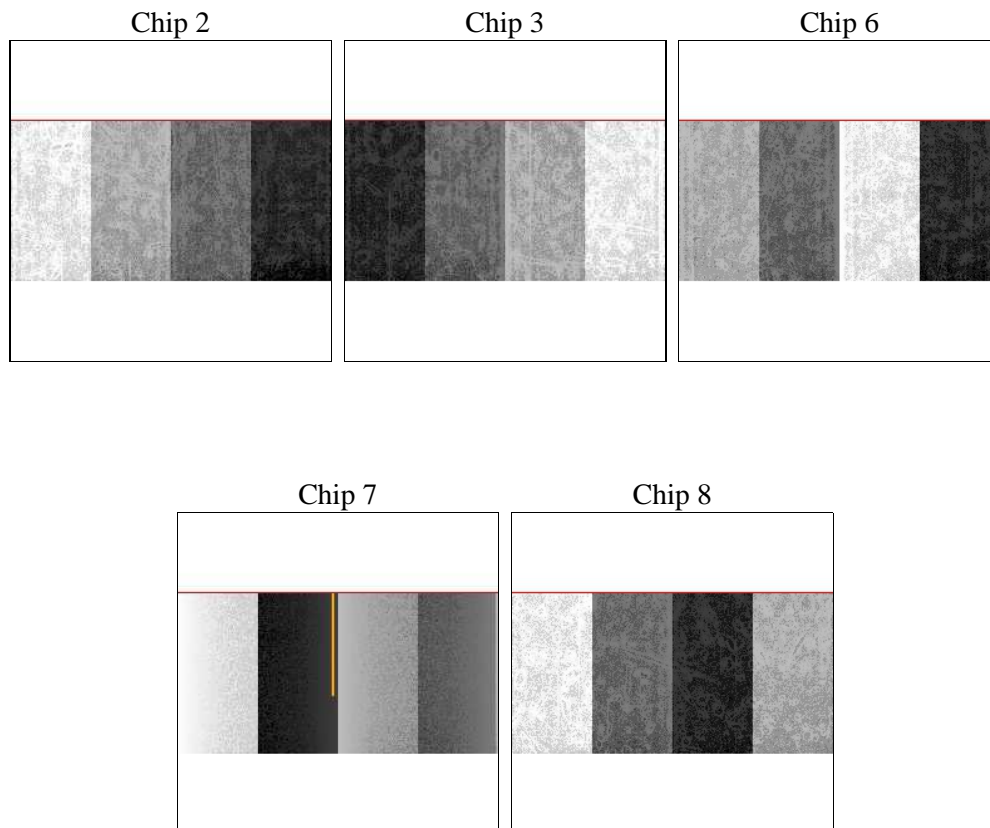
## 2 OBI

### 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	3589.9240012169	Sum of GTIs [s]
caldsver	4.7.3	&#160	ontime2	3589.7598412037	Sum of GTIs [s]
date	2017-01-12T12:13:55	Date and time of file creation	ontime3	3589.8419212103	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	3589.8829612732	Sum of GTIs [s]
			ontime7	3589.9240012169	Sum of GTIs [s]
			ontime8	3589.8008812666	Sum of GTIs [s]
			l1events	78678	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	13662	15245	14256	17361	18154
rejected events	12286	13885	12641	9815	13661
rejected %	89%	91%	88%	56%	75%

	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	480	472	466	664	1283
	3%	3%	3%	3%	7%
grade 1 events	5	9	8	26	15
	0%	0%	0%	0%	0%
grade 2 events	274	264	375	1521	1130
	2%	1%	2%	8%	6%
grade 3 events	199	201	203	632	463
	1%	1%	1%	3%	2%
grade 4 events	156	159	173	659	453
	1%	1%	1%	3%	2%
grade 5 events	453	621	594	1702	949
	3%	4%	4%	9%	5%
grade 6 events	268	264	398	4077	1166
	1%	1%	2%	23%	6%
grade 7 events	11827	13255	12039	8080	12695
	86%	86%	84%	46%	69%

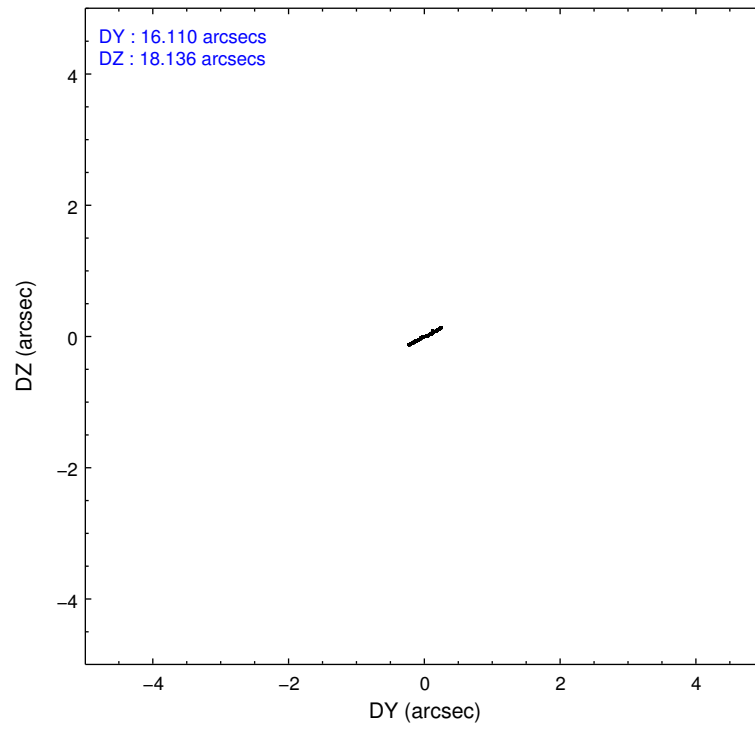
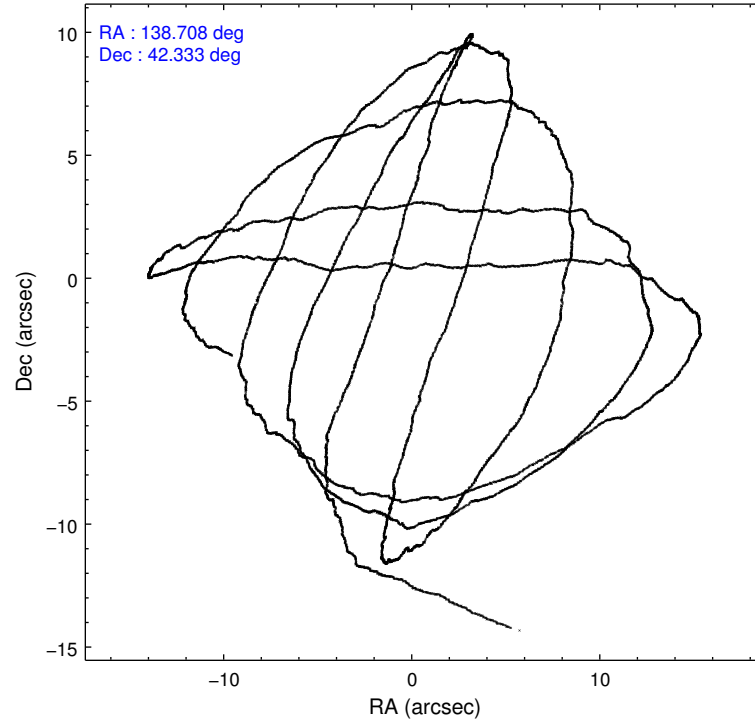


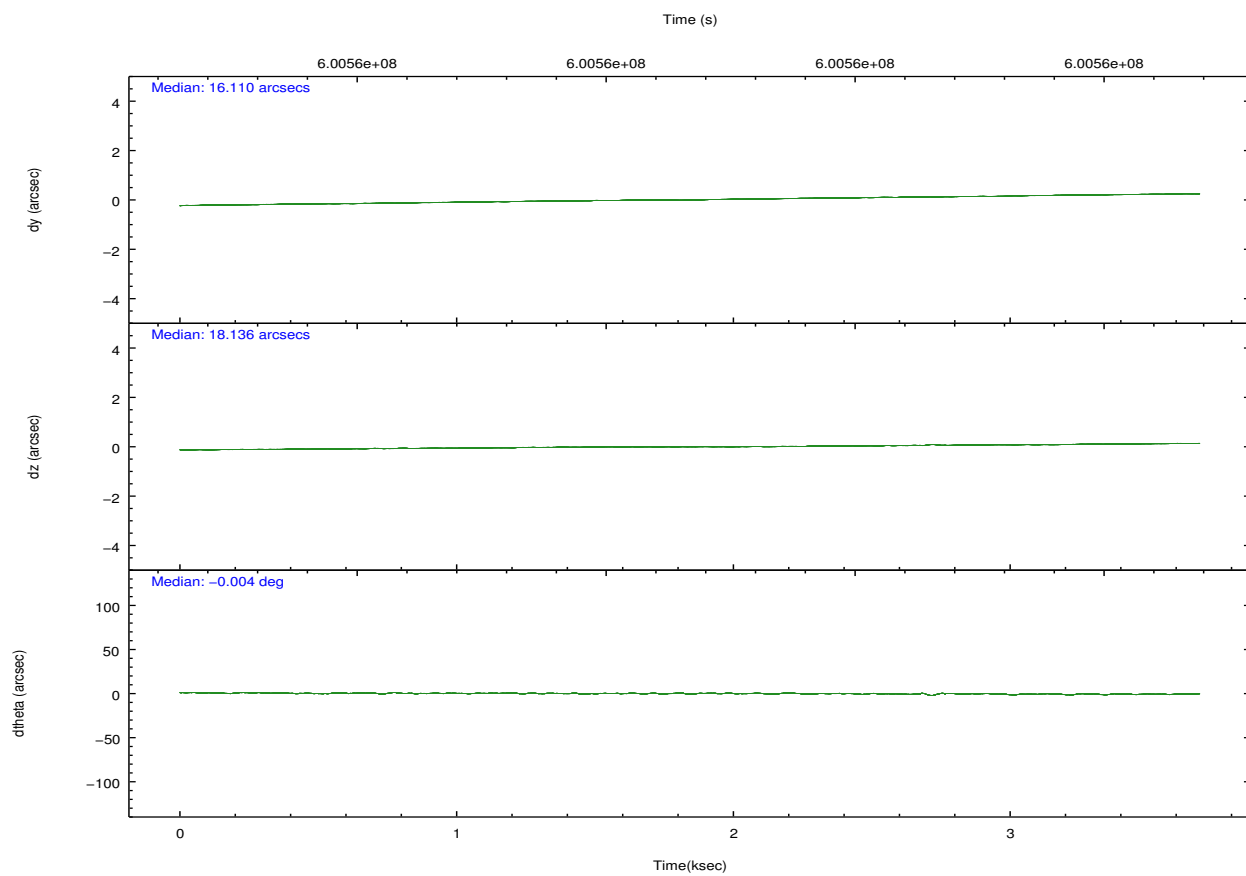
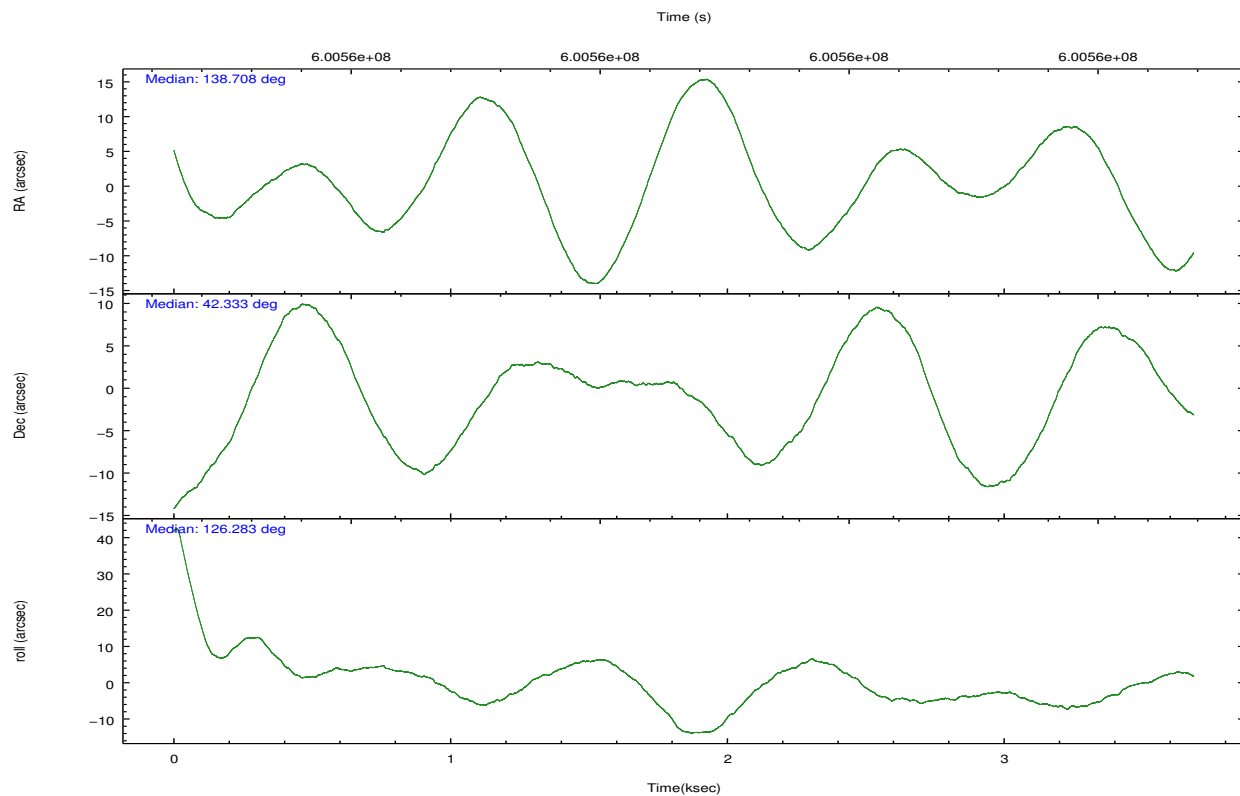
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-23678	ACIS-23678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	138.741855	138.7074803541556
[deg] Pointing Dec	42.321847	42.33254227460861
[deg] Pointing Roll	126.114367	126.2943072554631
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.145094680475
[mm] SIM translation stage offset	0	0.01257209746719923
[s] Observation start time (MET)	600556690.184000	600555903.84277
Observation start date	2017-01-11T21:17:01	2017-01-11T21:05:03
[s] Observation end time (MET)	600560190.184000	600561202.58058
Observation end date	2017-01-11T22:15:21	2017-01-11T22:33:22
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	N	N
CCD I1 on	N	N
CCD I2 on	O1	Y
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	Y	Y
CCD S3 on	Y	Y
CCD S4 on	Y	Y
CCD S5 on	N	N
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	CUSTOM	1/2
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



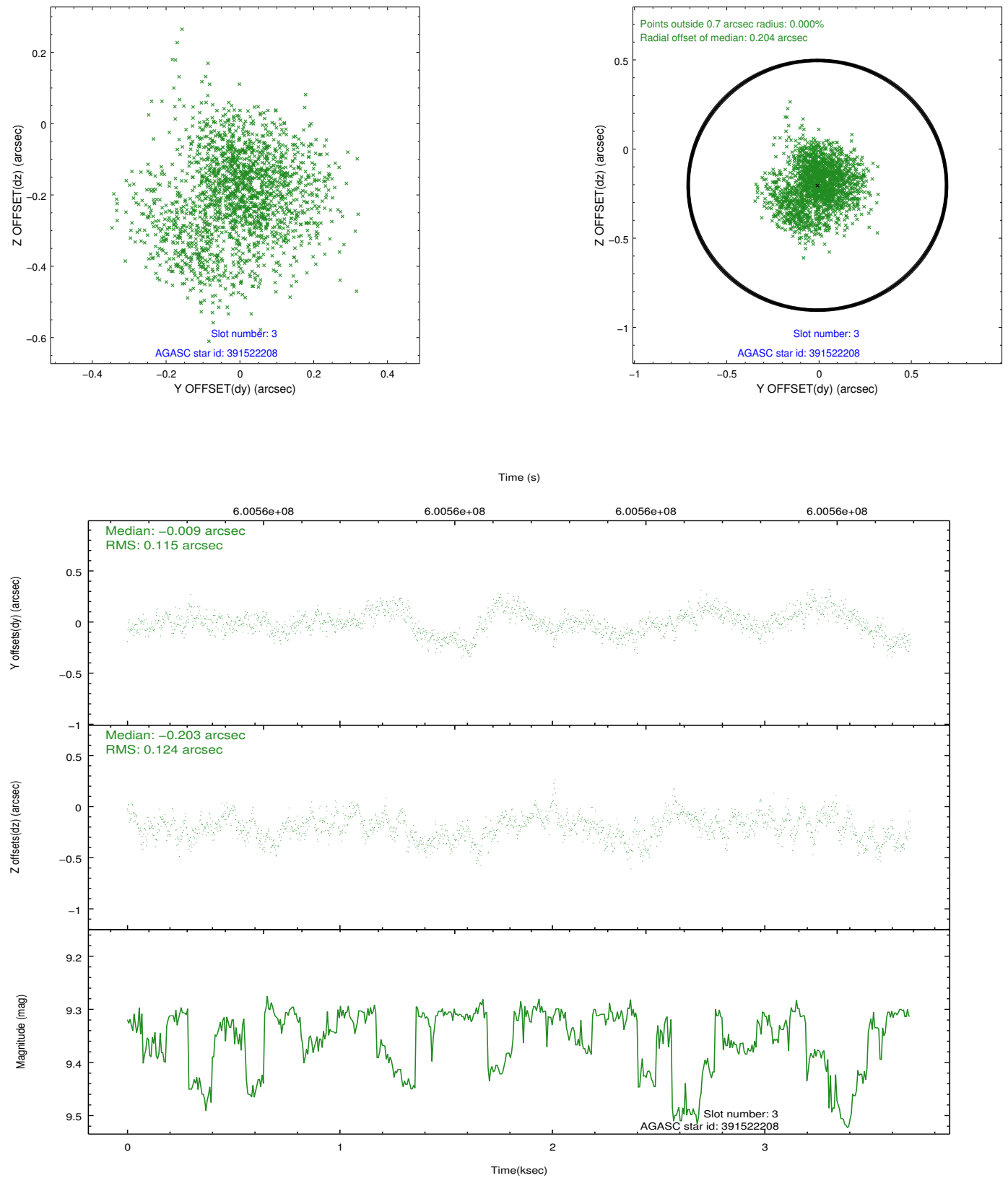


### Slot Statistics

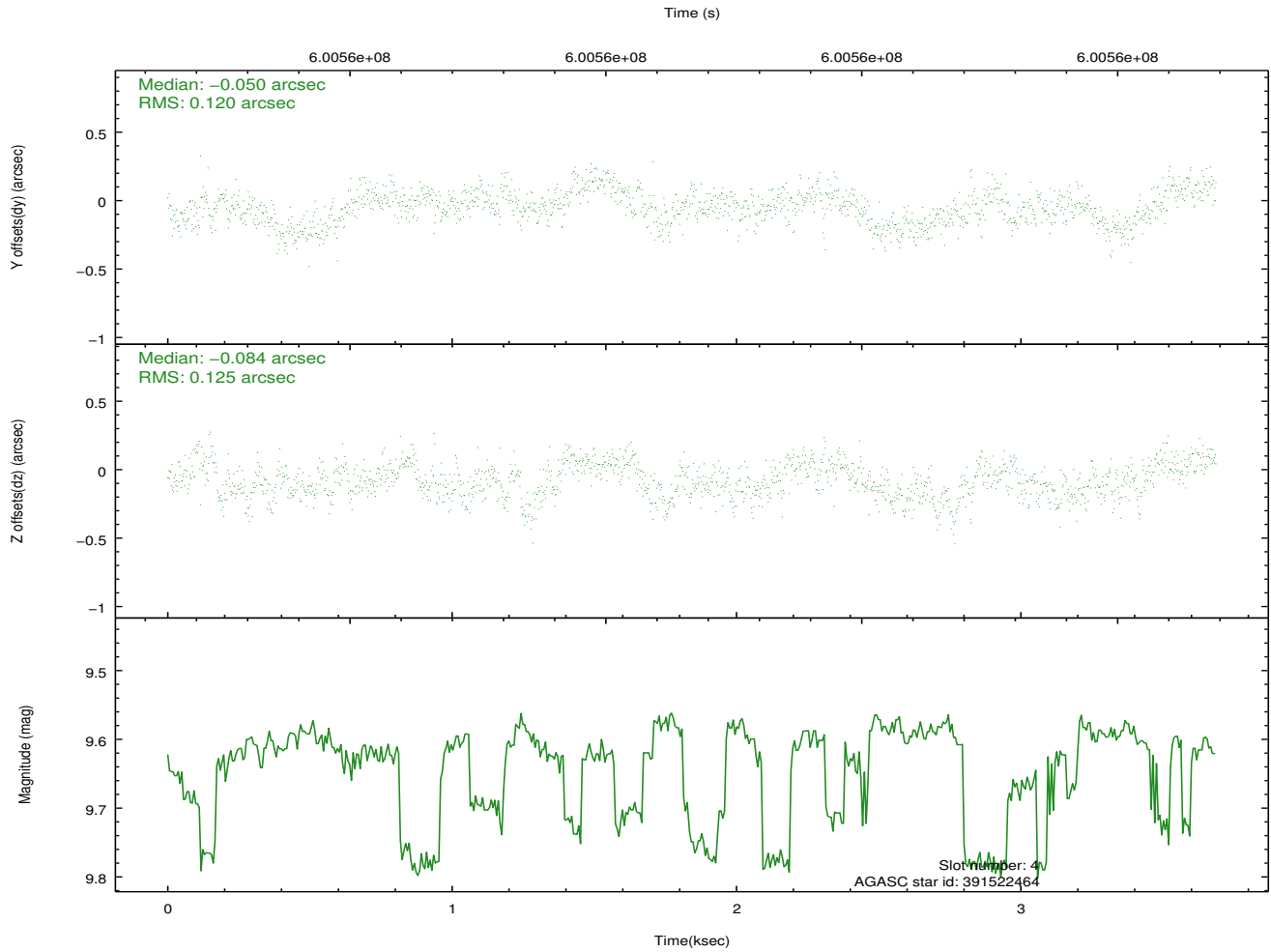
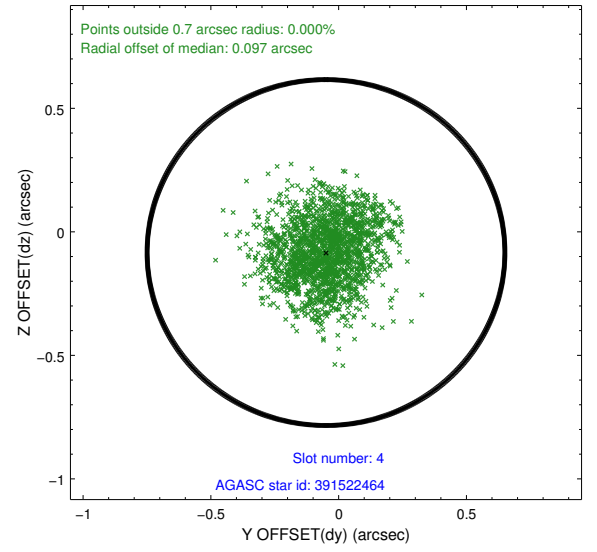
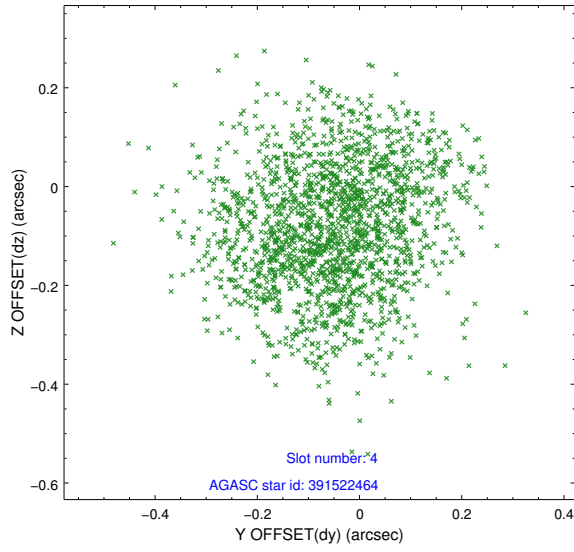
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.13	899	-0.175	-0.143	0.007	0.013	0.000000	0.000000	-769.30	-1739.64
1	FID		ACIS-S-4	7.25	899	0.466	0.123	0.005	0.010	0.000000	0.000000	2143.84	167.33
2	FID		ACIS-S-5	7.24	899	-0.322	0.030	0.007	0.015	0.000000	0.000000	-1820.10	162.86
3	GUIDE	used	391522208	9.34	1799	-0.009	-0.203	0.187	0.284	138.687550	41.907554	-1119.31	996.05
4	GUIDE	used	391522464	9.62	1798	-0.050	-0.084	0.190	0.287	138.966017	41.666181	-2262.84	903.56
5	GUIDE	used	391525768	9.21	1797	0.374	0.294	0.191	0.294	139.553312	42.045291	-2075.26	-1171.52
6	GUIDE	used	391905880	8.38	1799	-0.229	-0.068	0.115	0.197	138.774143	42.573728	680.53	-604.32
7	GUIDE	used	391908032	8.42	1798	-0.075	0.065	0.115	0.195	139.257726	42.959605	1057.57	-2453.47

## 2.4 Star Slots

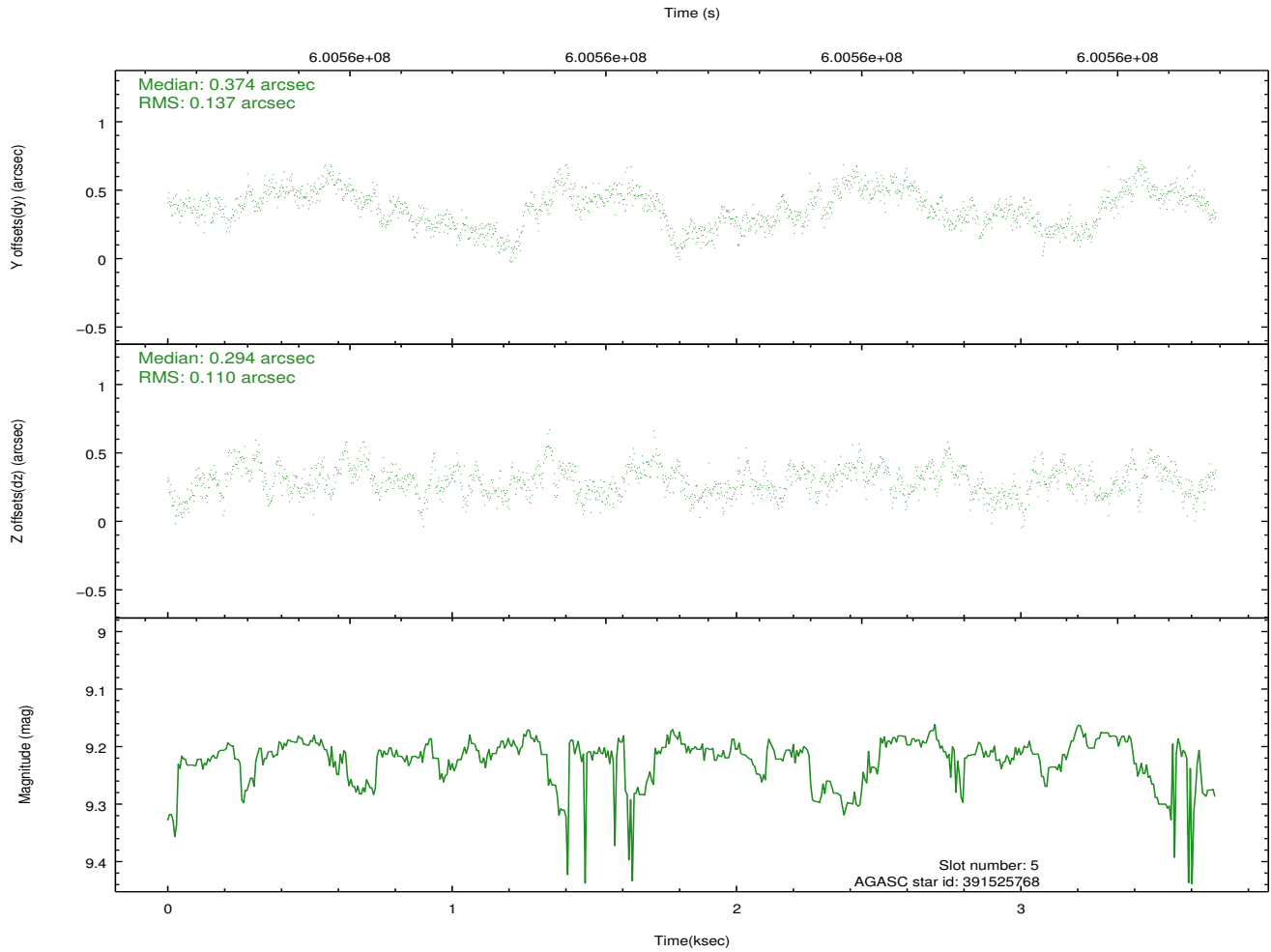
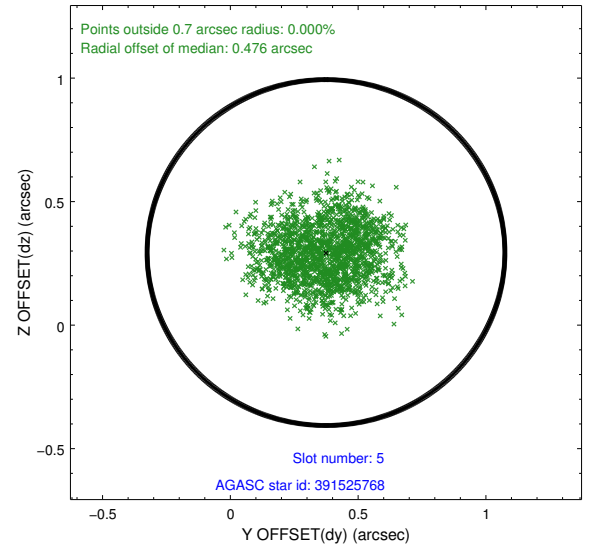
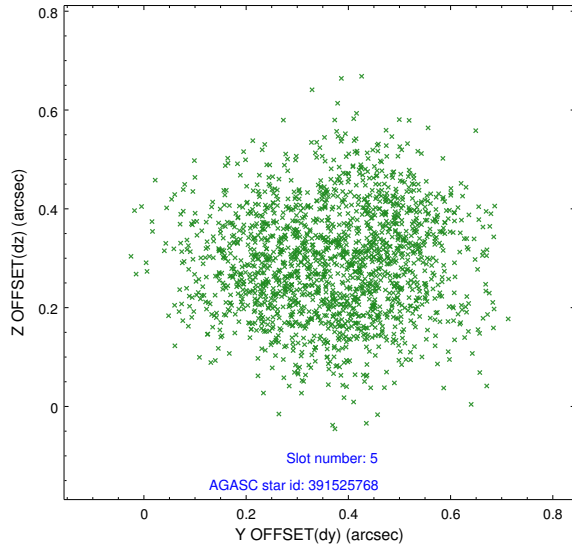
### 2.4.1 Slot 3



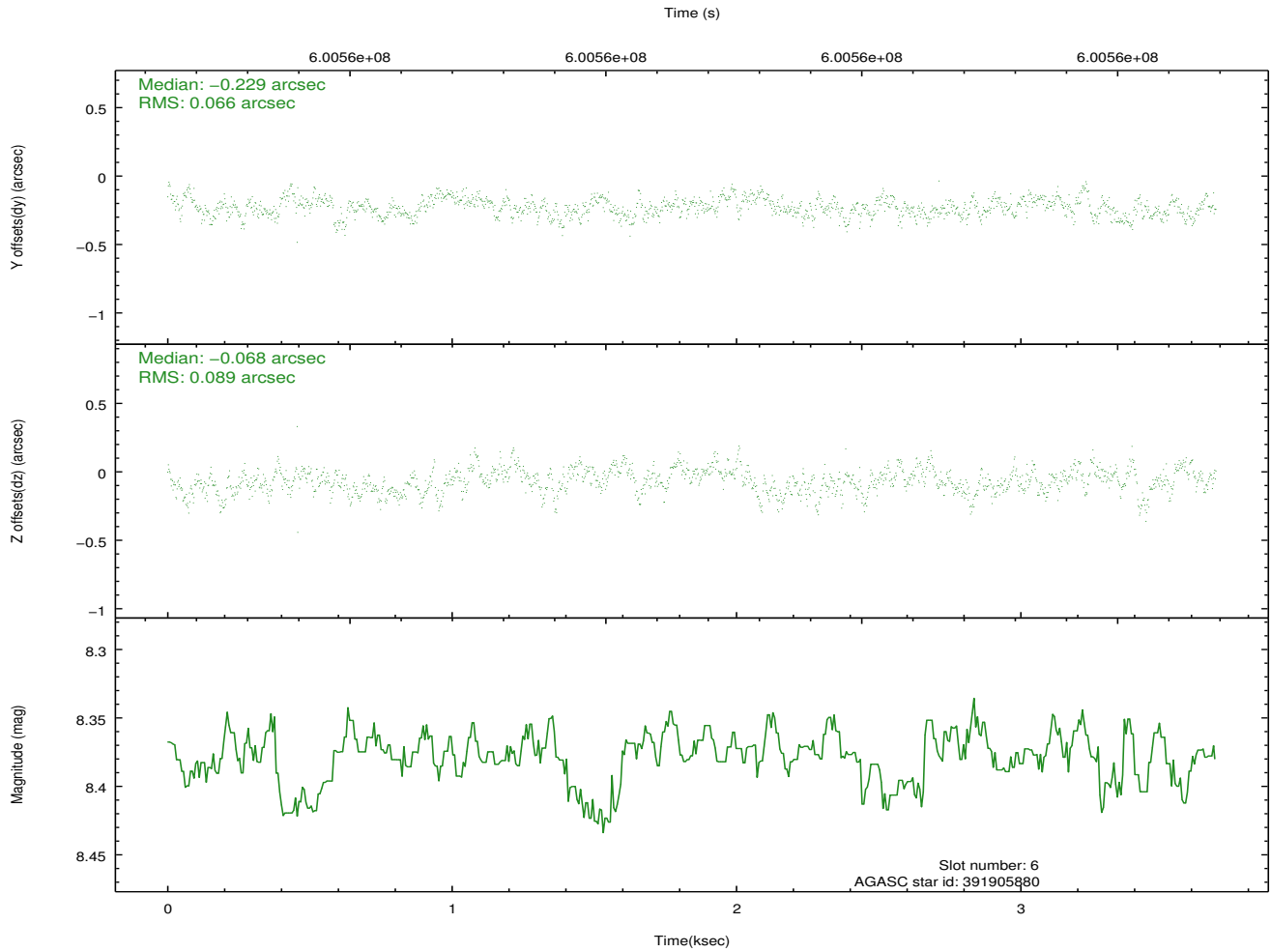
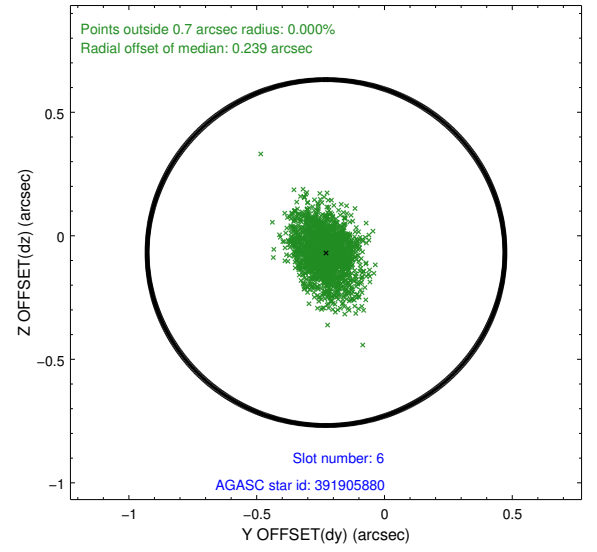
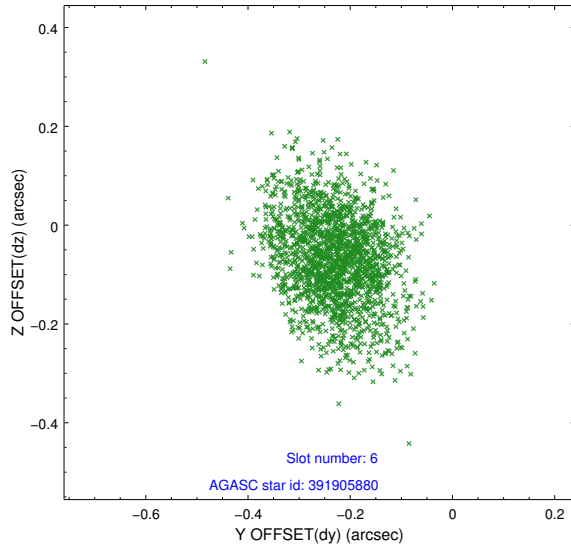
## 2.4.2 Slot 4



### 2.4.3 Slot 5

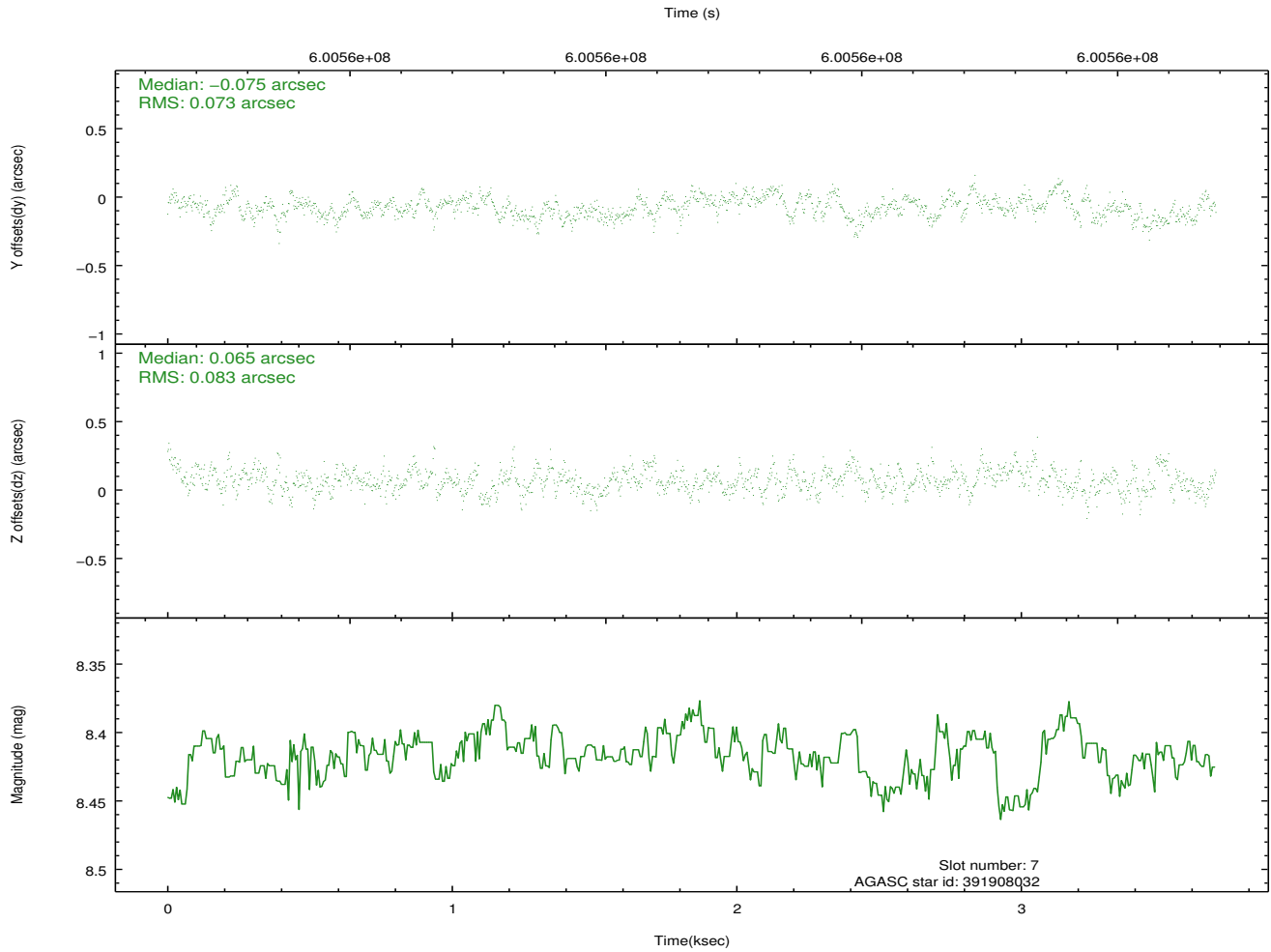
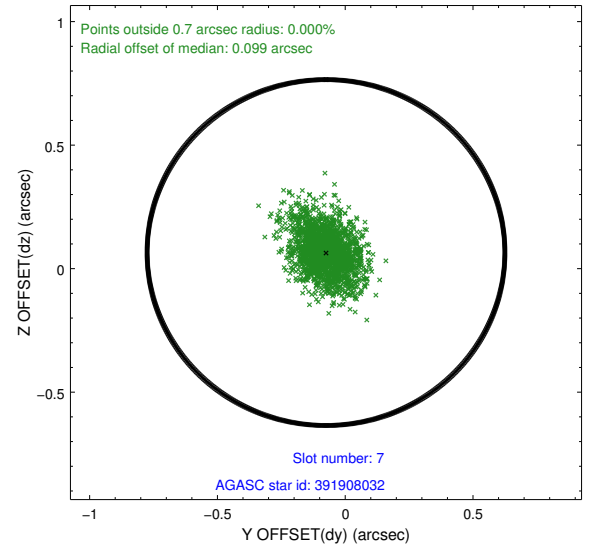
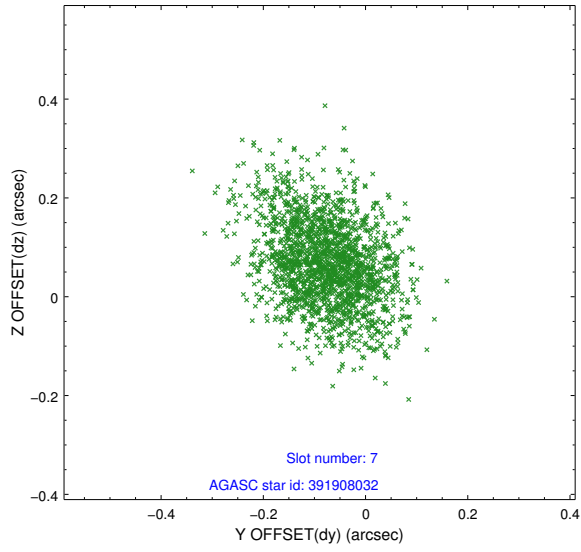


## 2.4.4 Slot 6



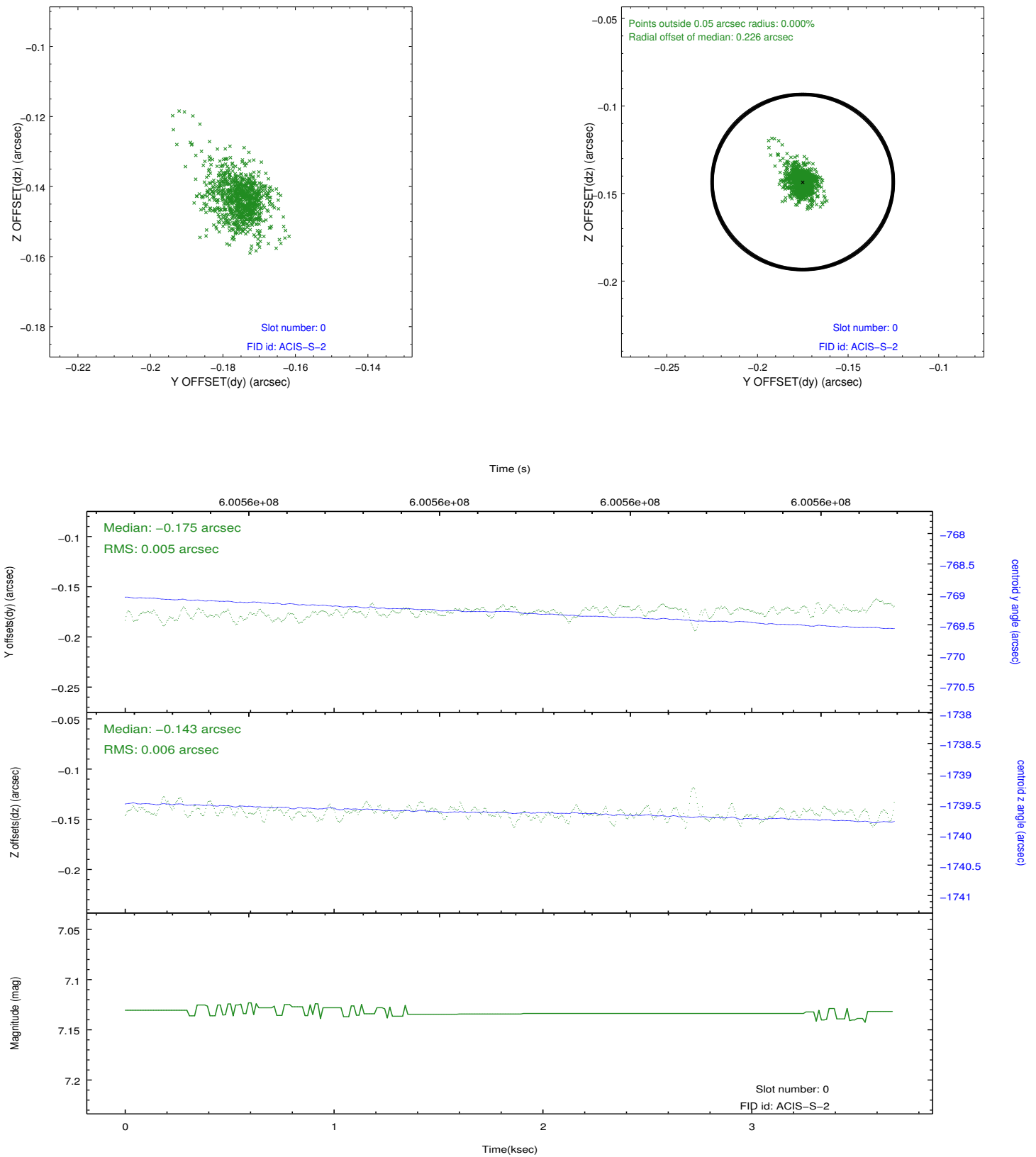


## 2.4.5 Slot 7

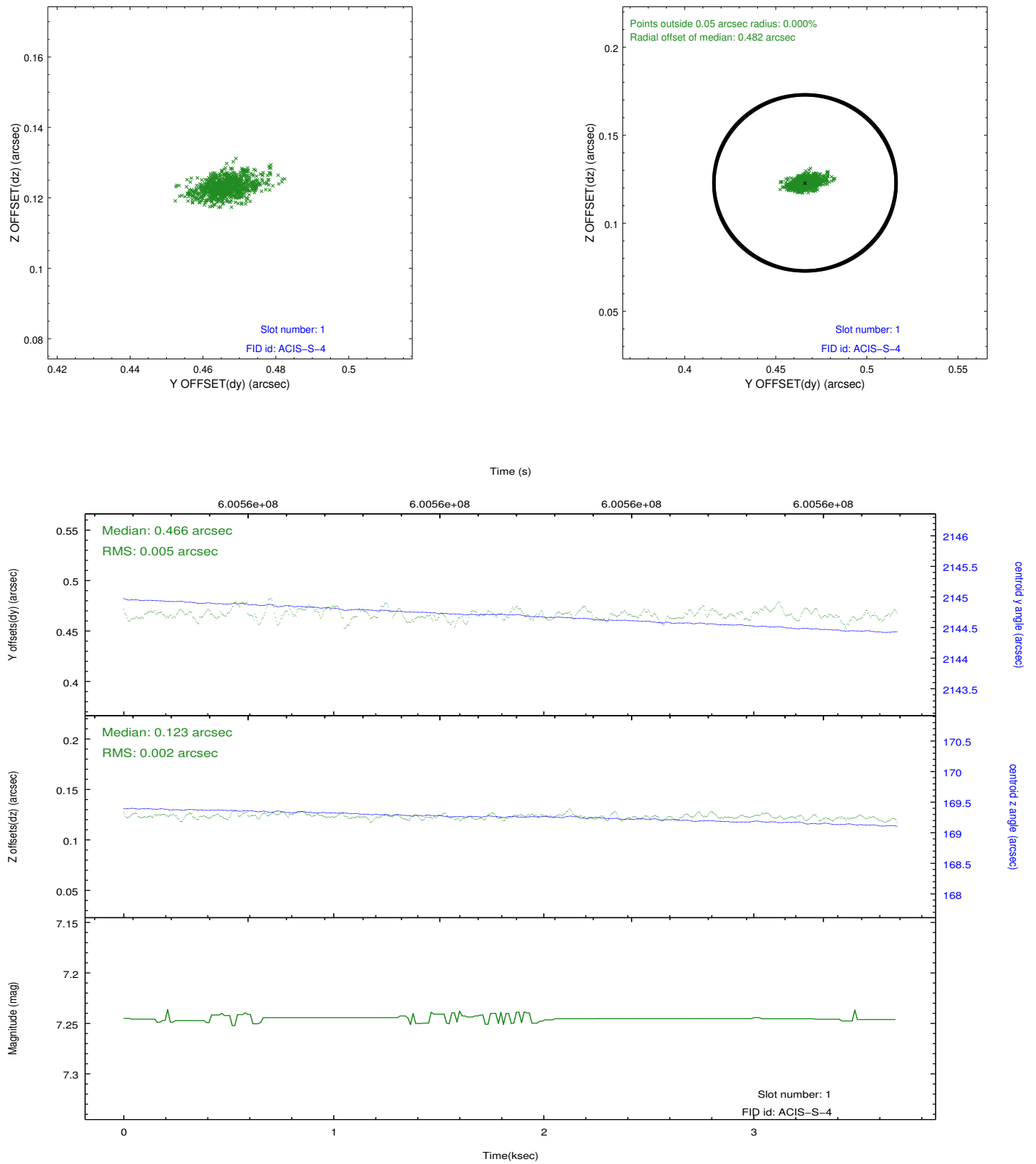


## 2.5 FID Slots

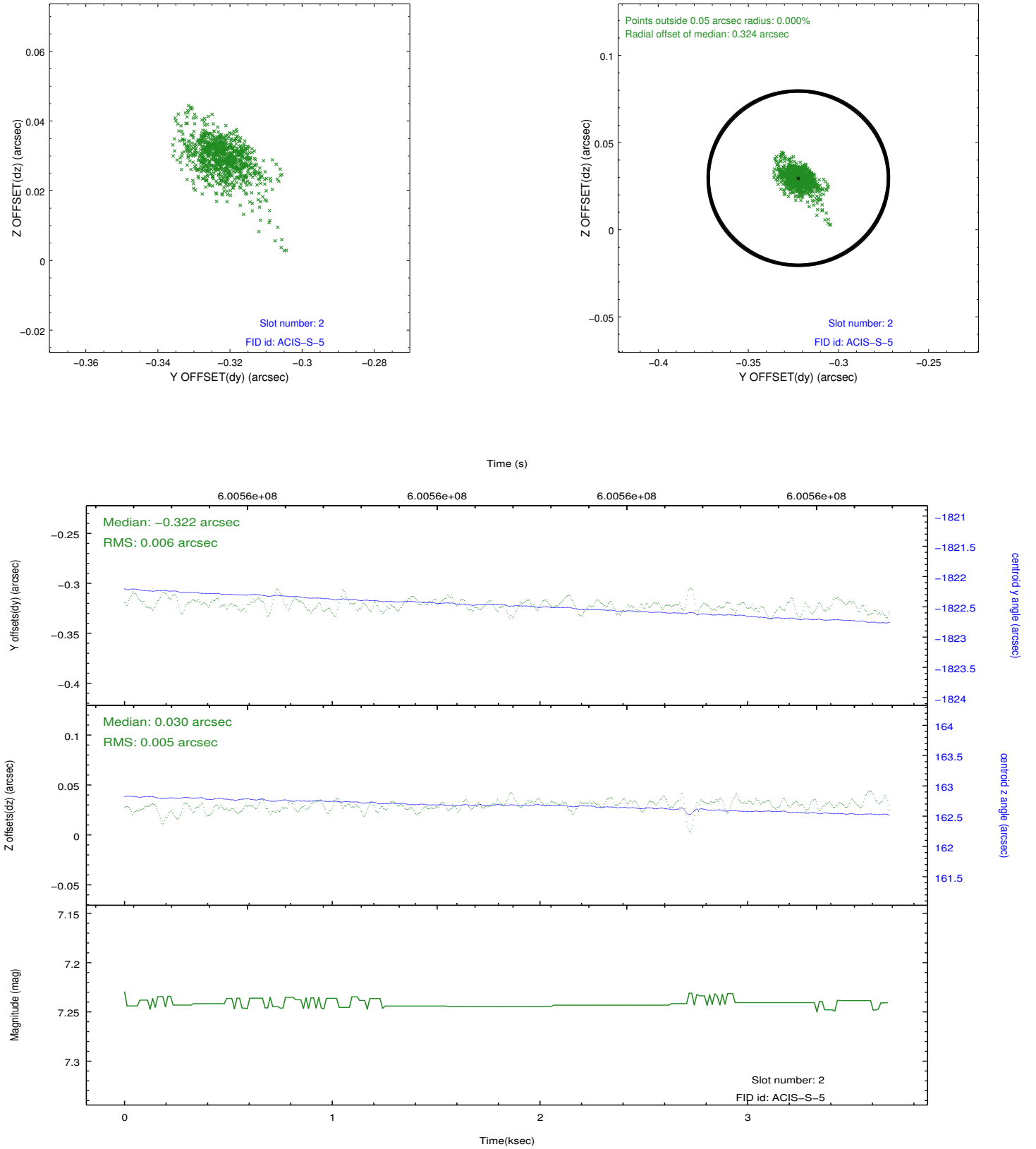
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2017.01.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.5899240012169

### A.2 Comments