

# V&V Reference Report

## L2 ASCDS Version : 10.5.2

Observation 19783 - L2 Version 1  
Chandra X-Ray Center

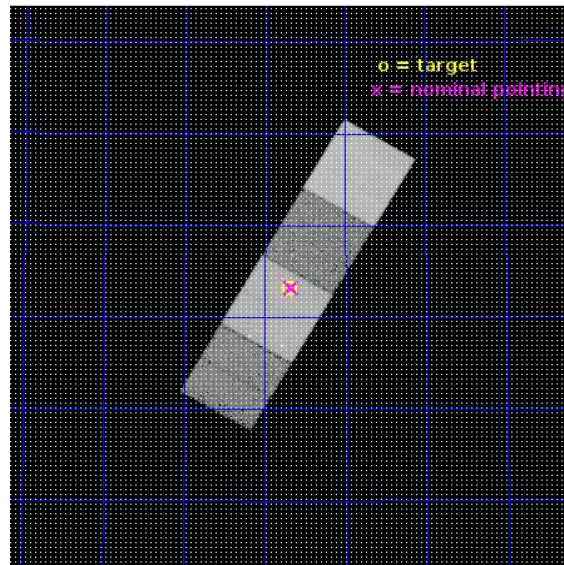
L2 Processing Date : Feb 19 2017

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# 1 Front

seq_num	703242	Sequence number
obs_id	19783	Observation id
title	Elliptical Galaxy in the Making: The Black Hole Activity, Galaxy-Scale Outflow, and Metal-Rich Halo of Mrk 273	Proposal title
observer	Prof. Sylvain Veilleux	Principal investigator
object	Mrk 273	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	206.175417	Observer's specified target RA [deg]
dec_targ	55.886861	Observer's specified target Dec [deg]
ra_nom	206.16809242539	Nominal RA [deg]
dec_nom	55.887293368629	Nominal Dec [deg]
roll_nom	120.16267762935	Nominal Roll [deg]
revision	1	Processing version of data
ontime	32245.958004355	Sum of GTIs [s]
livetime	31824.6408239	Livetime [s]
ontime5	32245.916964412	Sum of GTIs [s]
ontime6	32245.875924349	Sum of GTIs [s]
ontime7	32245.958004355	Sum of GTIs [s]
ontime8	32245.834884405	Sum of GTIs [s]
l2events	333946	Number of level 2 events

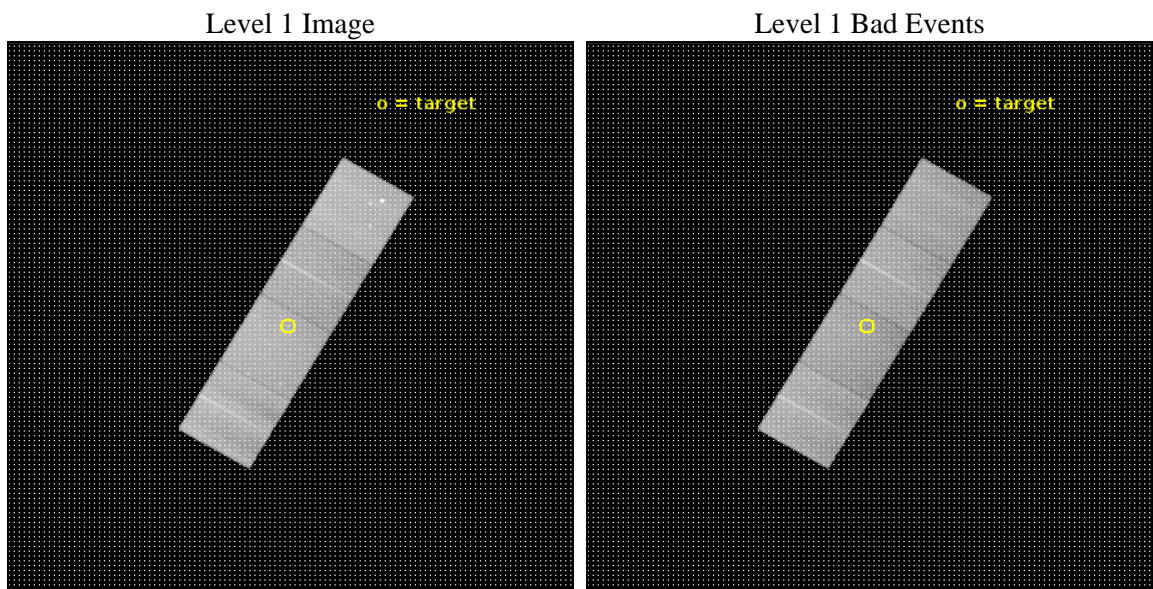




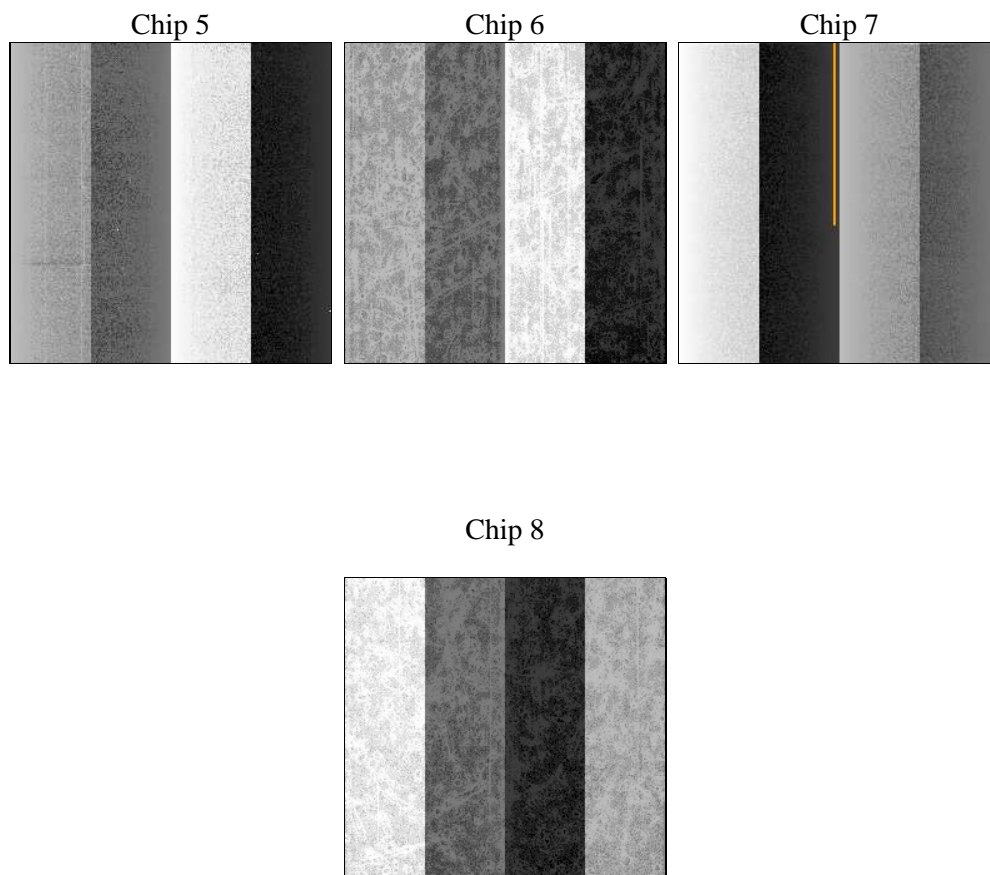
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	3	Obi number	sched_exp_time	32184.976000	[s] Scheduled observation exposure time
ascdsver	10.5.2	Processing system revision	ontime	32245.958004355	Sum of GTIs [s]
caldsver	4.7.3	&#160	ontime5	32245.916964412	Sum of GTIs [s]
date	2017-02-19T15:54:33	Date and time of file creation	ontime6	32245.875924349	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	32245.958004355	Sum of GTIs [s]
			ontime8	32245.834884405	Sum of GTIs [s]
			l1events	1204594	Number of level 1 events

### 2.1.4 Events

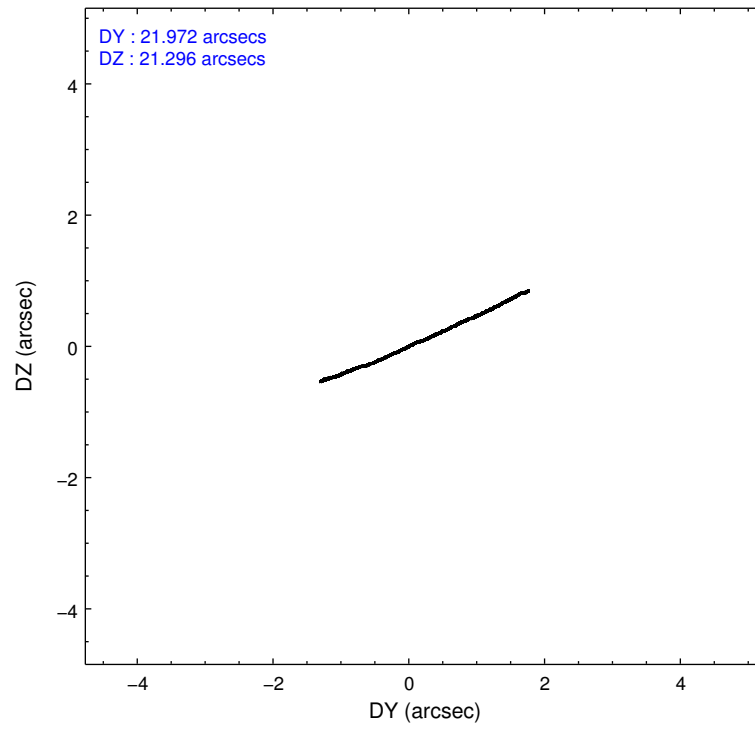
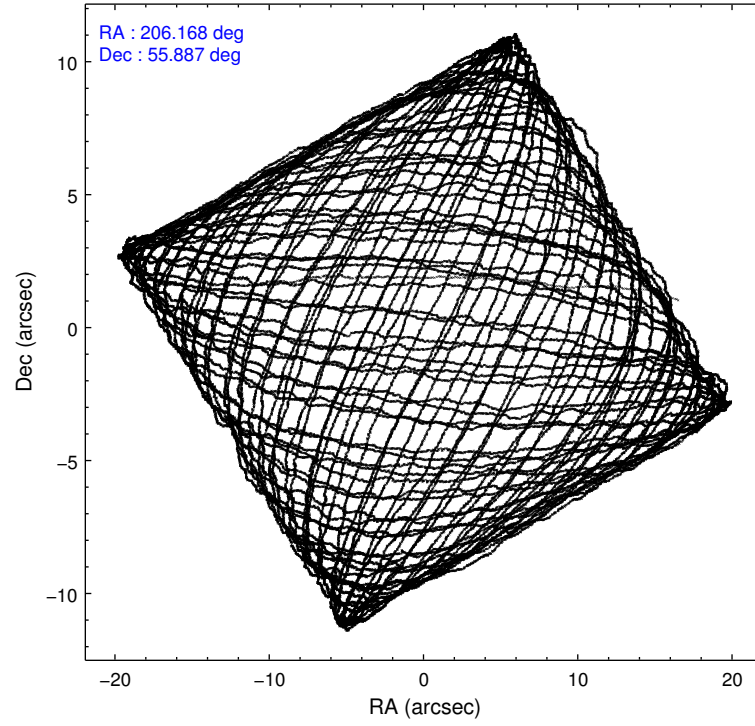
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	364988	241355	295474	302777
rejected events	188334	215682	167819	226530
rejected %	51%	89%	56%	74%

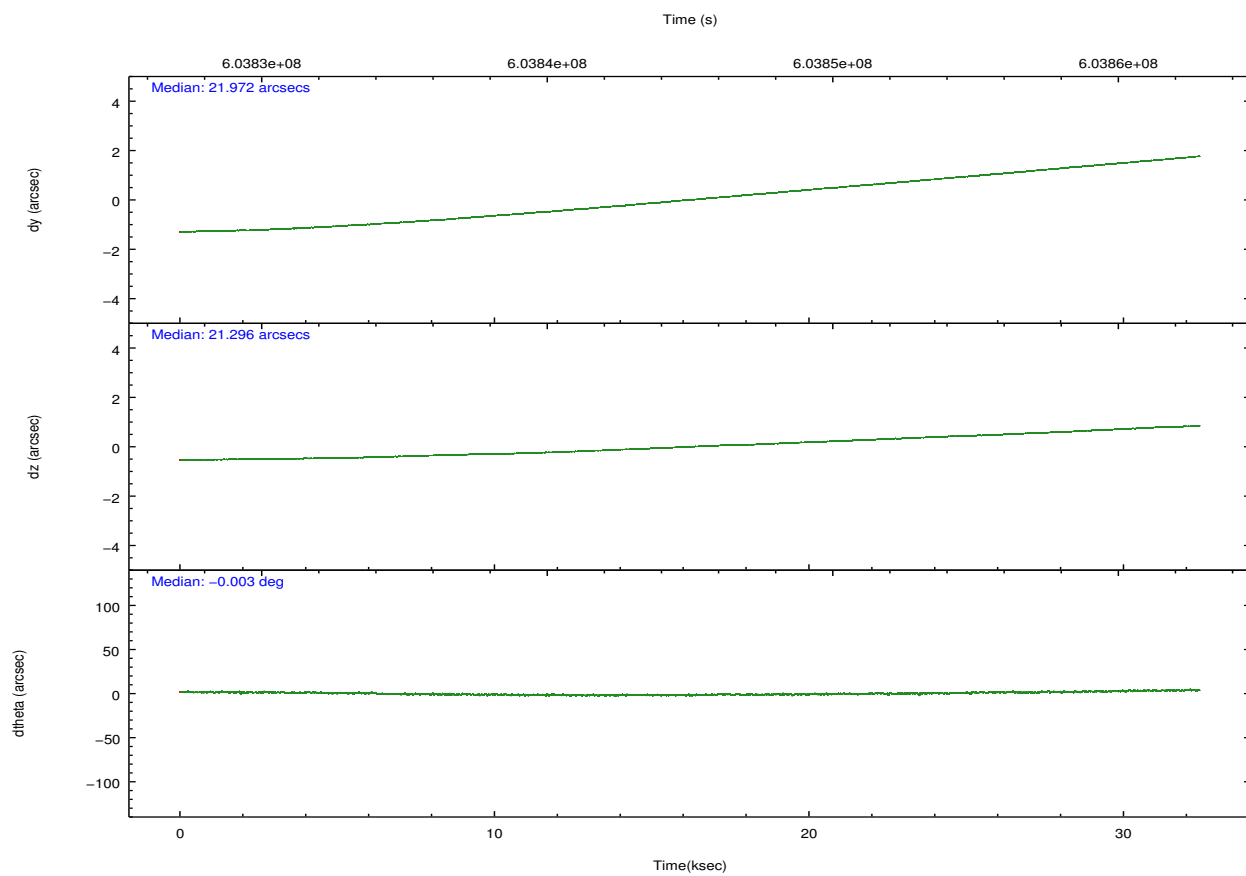
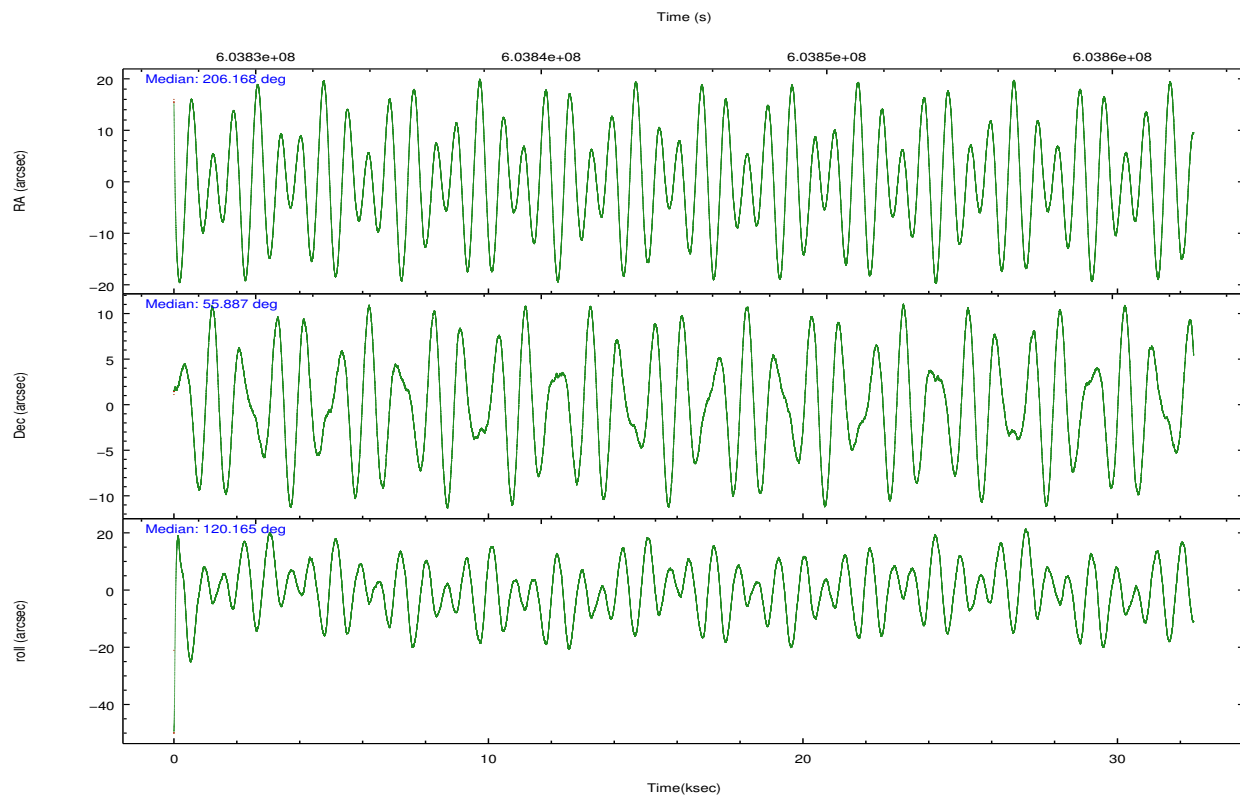
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	15146	8020	10724	20605
	4%	3%	3%	6%
grade 1 events	947	88	363	226
	0%	0%	0%	0%
grade 2 events	54610	6460	27475	18962
	14%	2%	9%	6%
grade 3 events	5351	2392	9395	7936
	1%	0%	3%	2%
grade 4 events	5112	2395	9126	7324
	1%	0%	3%	2%
grade 5 events	23403	9930	27278	15808
	6%	4%	9%	5%
grade 6 events	96453	6409	70948	21422
	26%	2%	24%	7%
grade 7 events	163966	205661	140165	210494
	44%	85%	47%	69%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	206.210878	206.1680924253874	Subarray requested	NONE	NONE
[deg] Pointing Dec	55.873933	55.88729336862893	Alternating exposures requested	N	N
[deg] Pointing Roll	119.970646	120.1626776293522	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	603829024.184000	603828104.29482			
Observation start date	2017-02-18T18:15:55	2017-02-18T18:01:44			
[s] Observation end time (MET)	603861209.184000	603861429.09675			
Observation end date	2017-02-19T03:12:20	2017-02-19T03:17:09			
Read mode	TIMED	TIMED			

## 2.3 Aspect



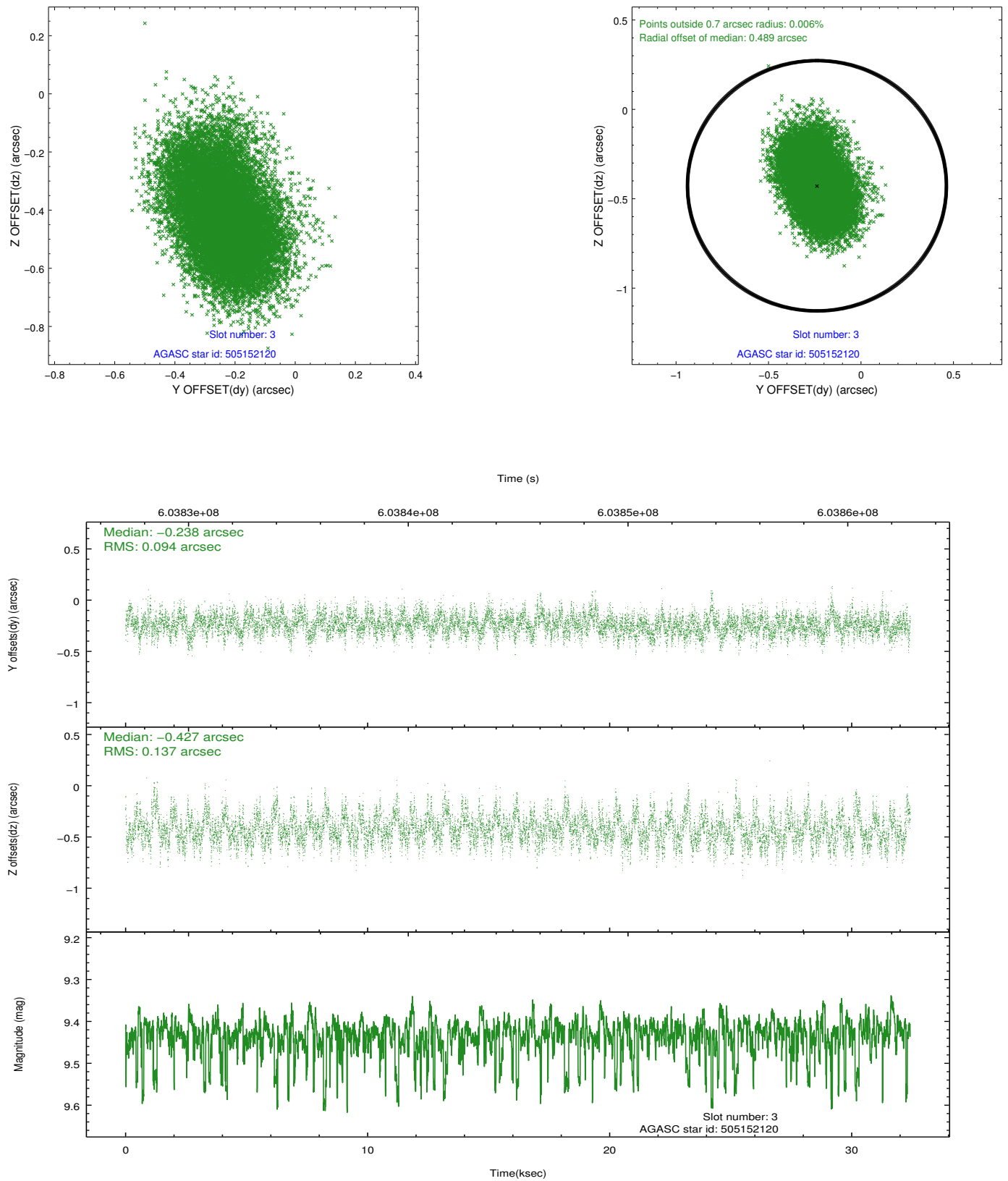


### Slot Statistics

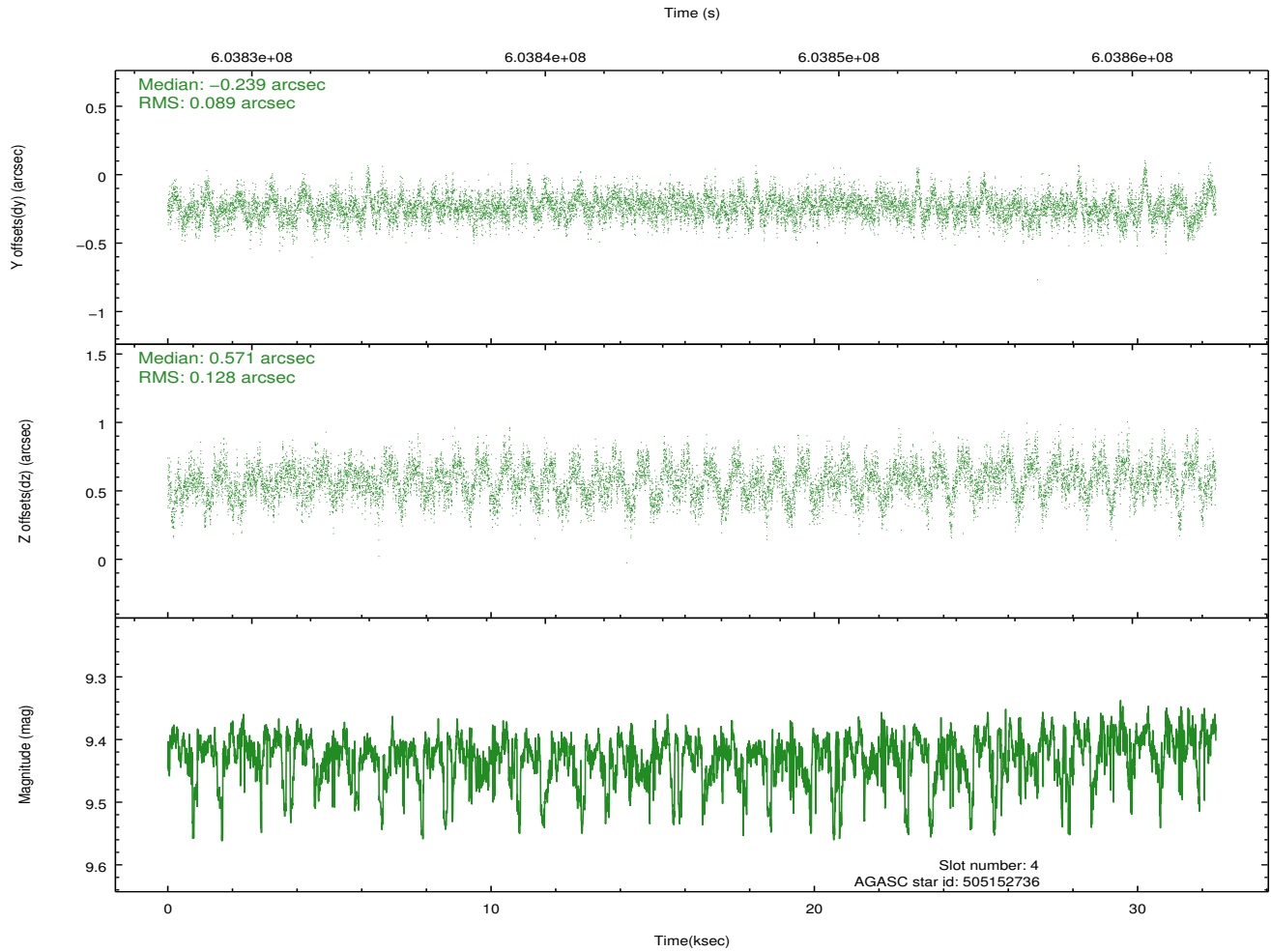
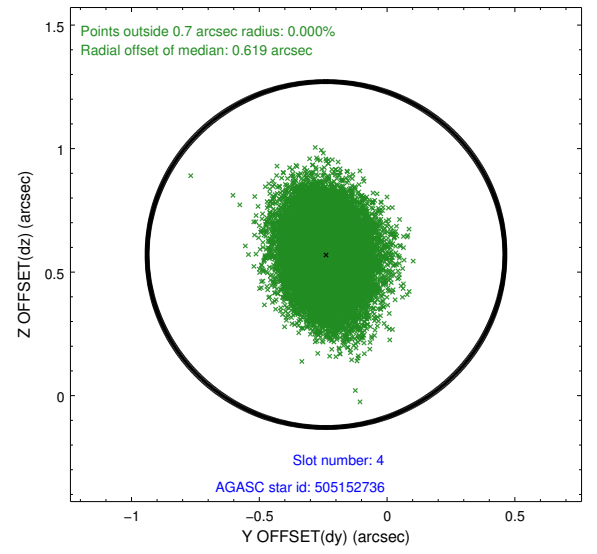
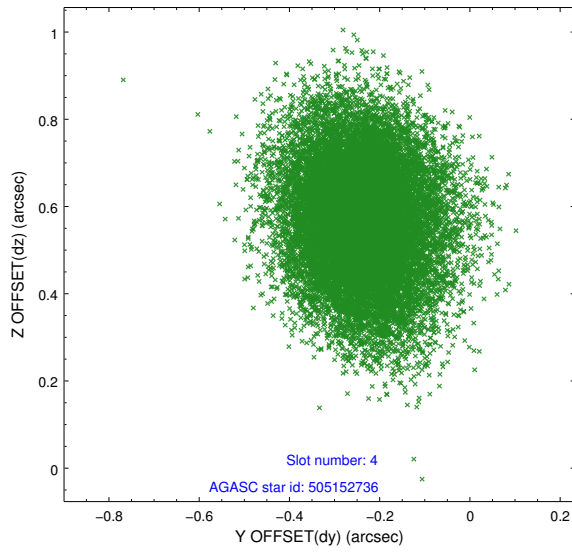
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.13	7908	-0.335	-0.239	0.015	0.033	0.000000	0.000000	-775.57	-1743.06
1	FID		ACIS-S-4	7.25	7909	0.363	0.185	0.015	0.024	0.000000	0.000000	2138.43	165.72
2	FID		ACIS-S-6	7.40	7909	-0.056	0.066	0.012	0.020	0.000000	0.000000	386.83	803.10
3	GUIDE	used	505152120	9.43	15789	-0.238	-0.427	0.175	0.294	205.411901	56.033893	1310.38	1102.90
4	GUIDE	used	505152736	9.42	15793	-0.239	0.571	0.165	0.271	206.650172	55.777454	-742.98	-597.73
5	GUIDE	used	505159640	9.31	15791	0.531	0.431	0.217	0.342	207.764799	55.675028	-2164.72	-2392.03
6	GUIDE	used	505163008	6.66	15816	0.104	-0.023	0.140	0.220	206.305054	55.879347	-84.34	-173.22
7	GUIDE	used	505163040	6.93	15814	-0.183	-0.556	0.125	0.207	206.025637	55.634983	-556.92	755.01

## 2.4 Star Slots

### 2.4.1 Slot 3

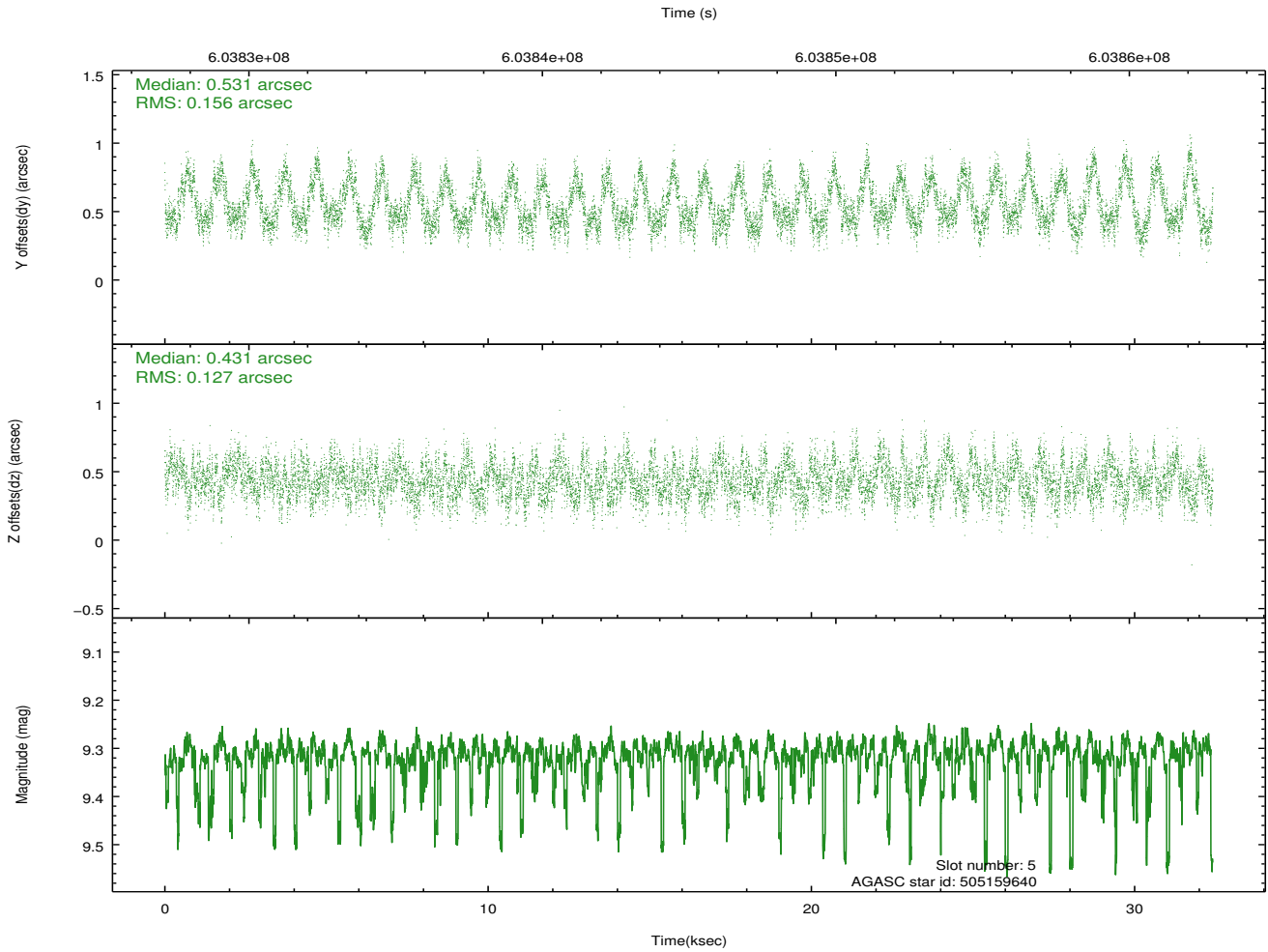
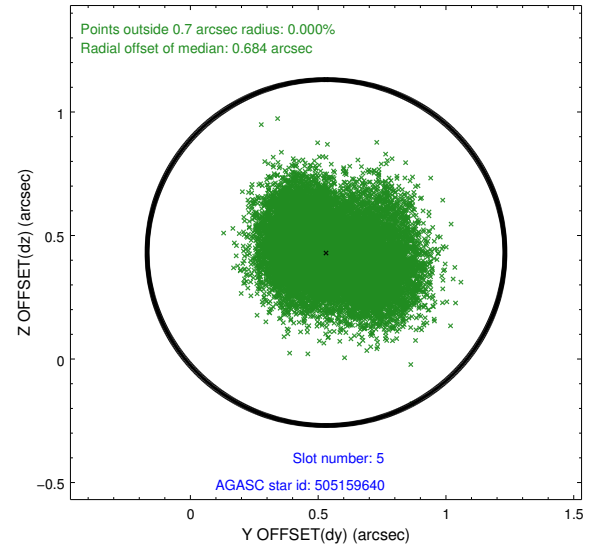
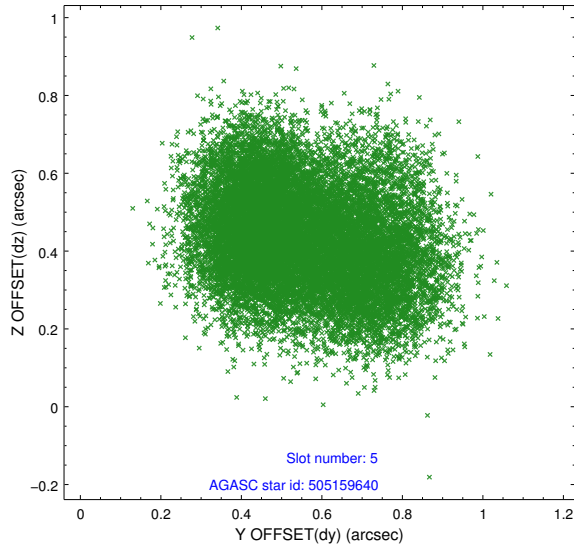


## 2.4.2 Slot 4

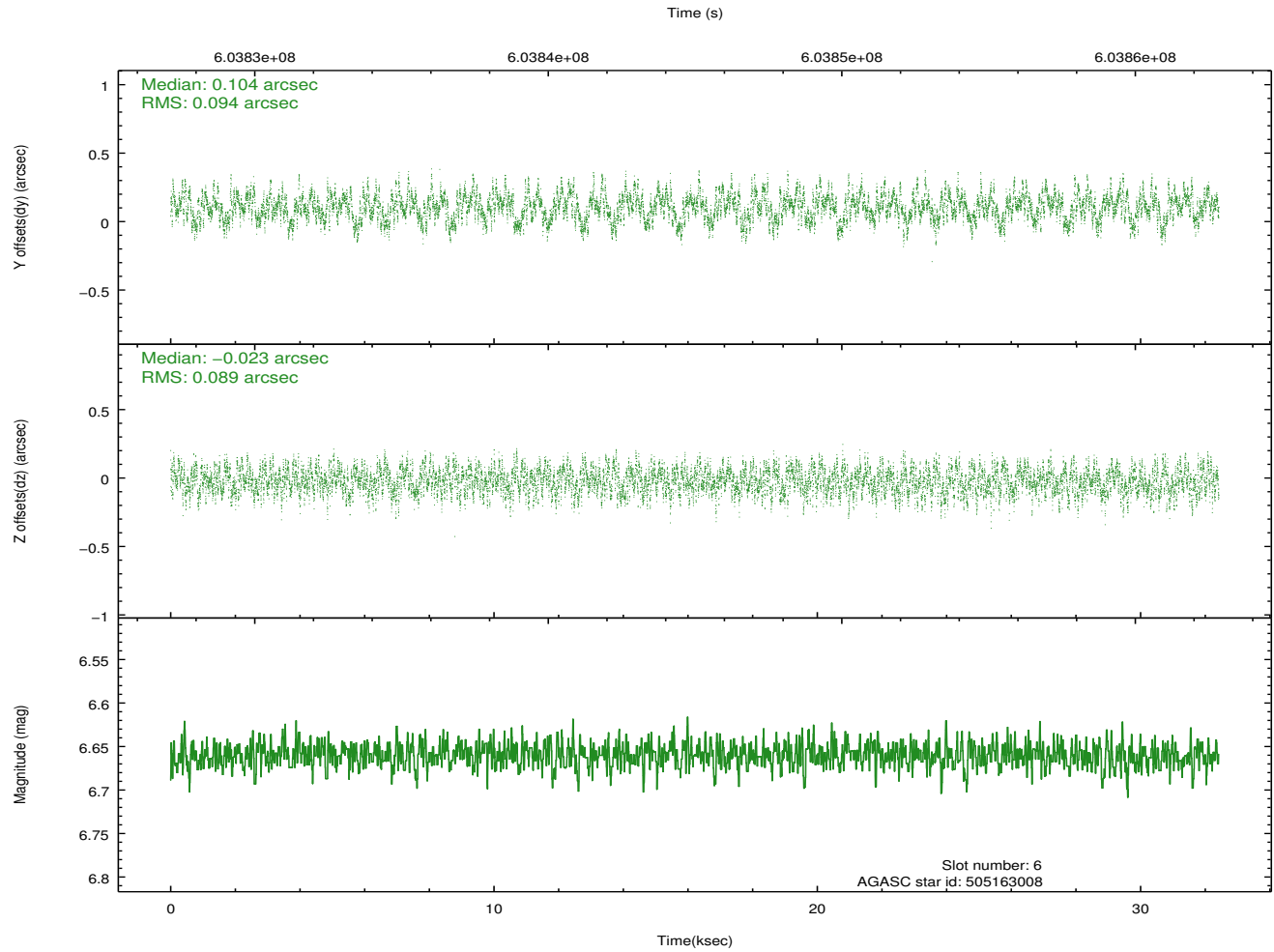
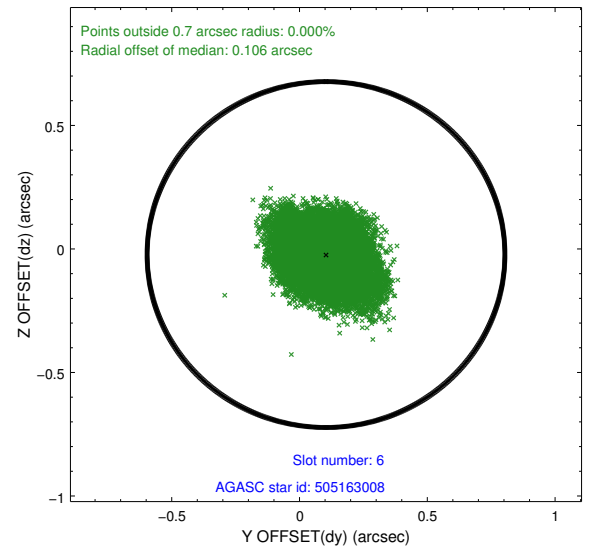
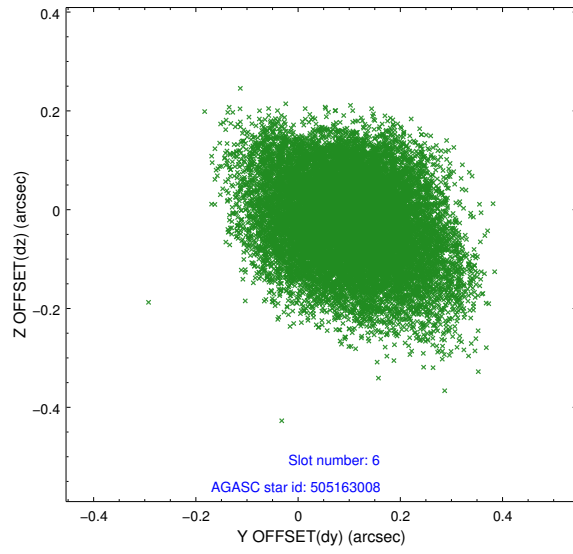




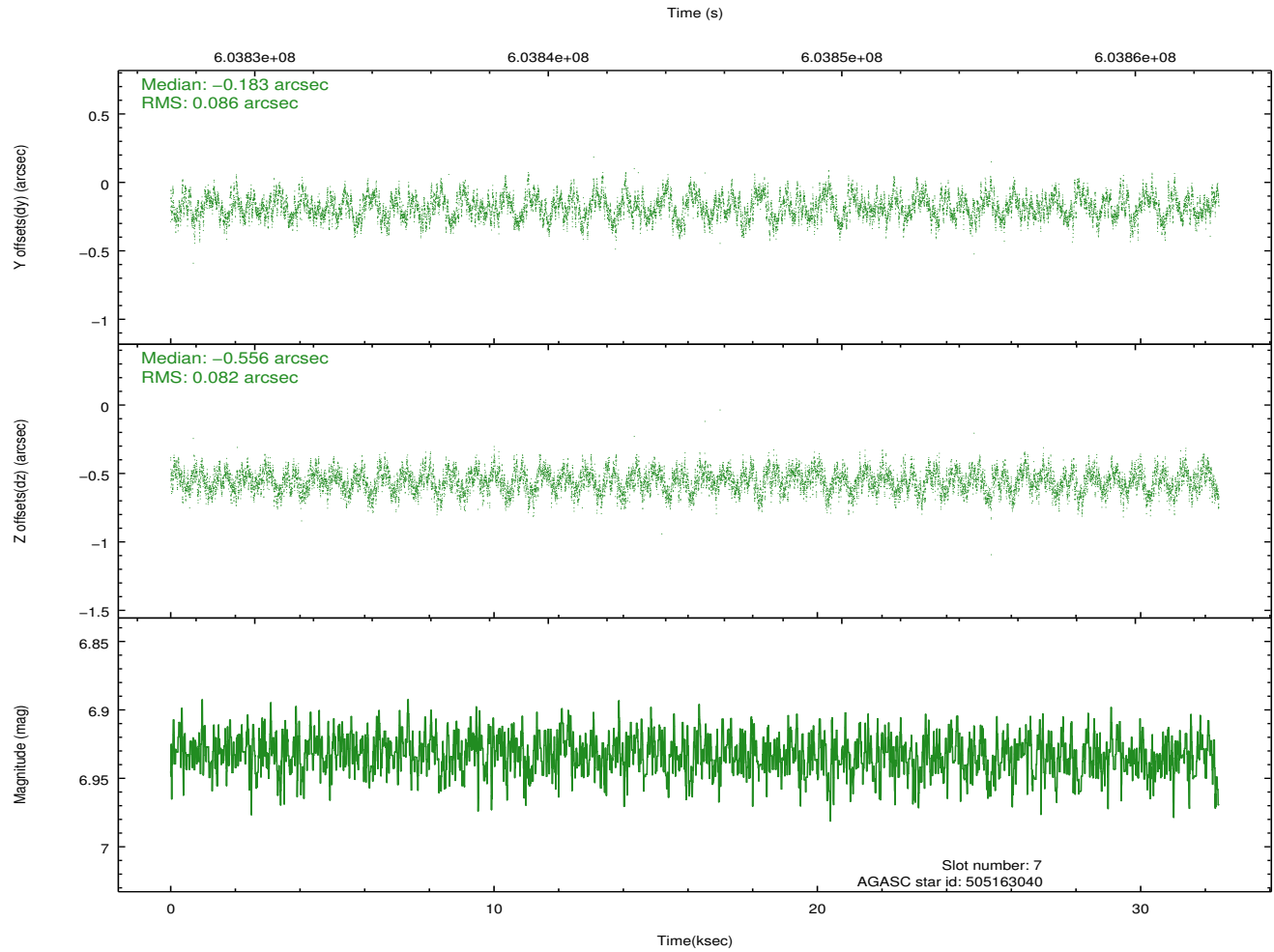
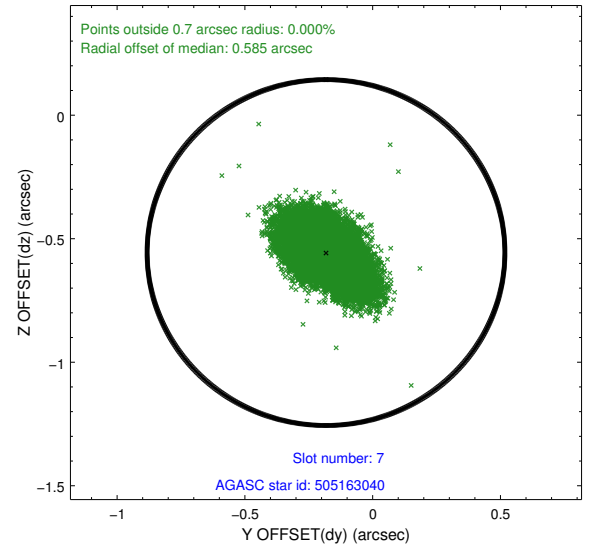
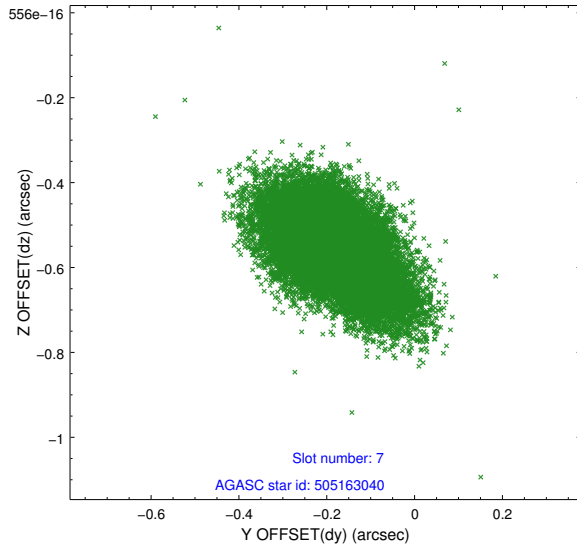
### 2.4.3 Slot 5



## 2.4.4 Slot 6

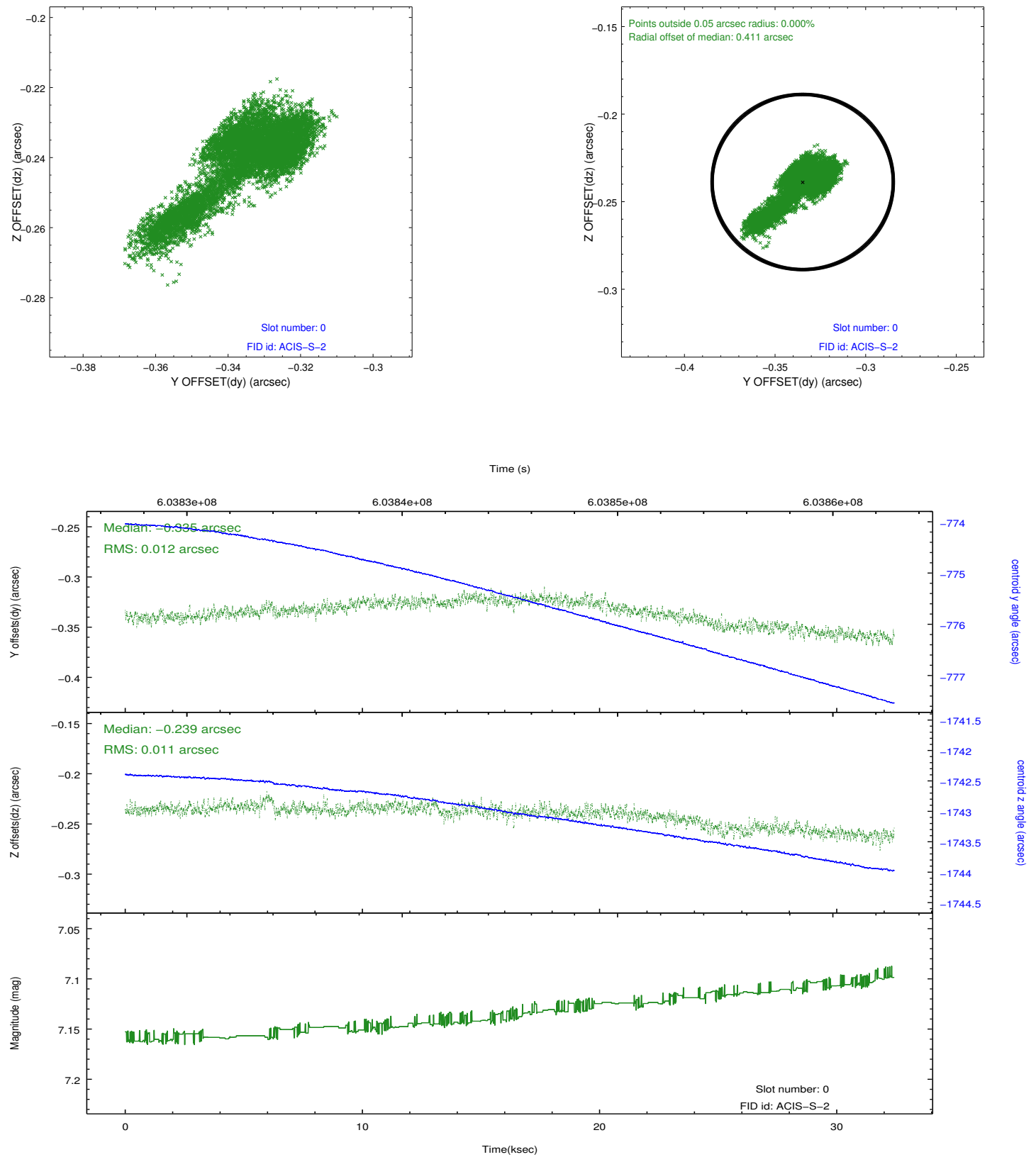


## 2.4.5 Slot 7

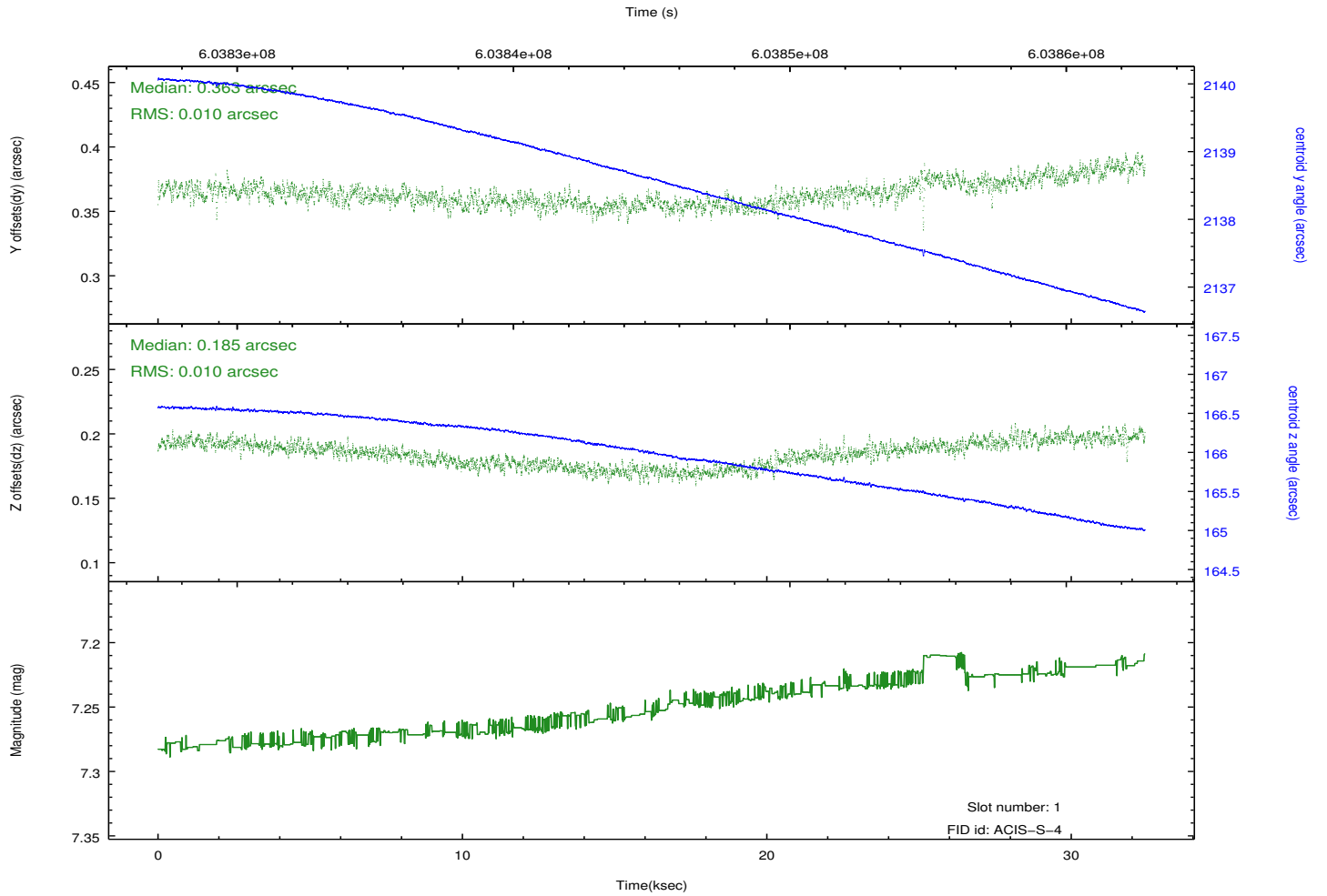
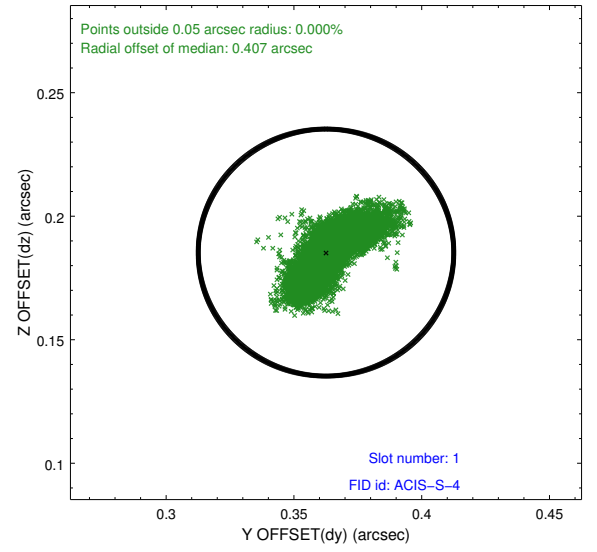
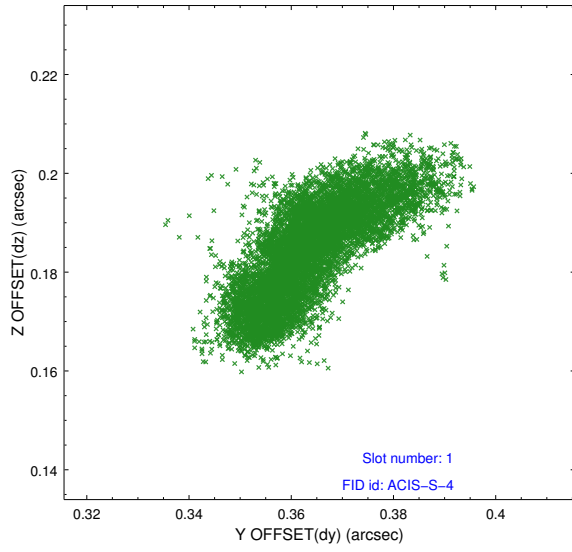


## 2.5 FID Slots

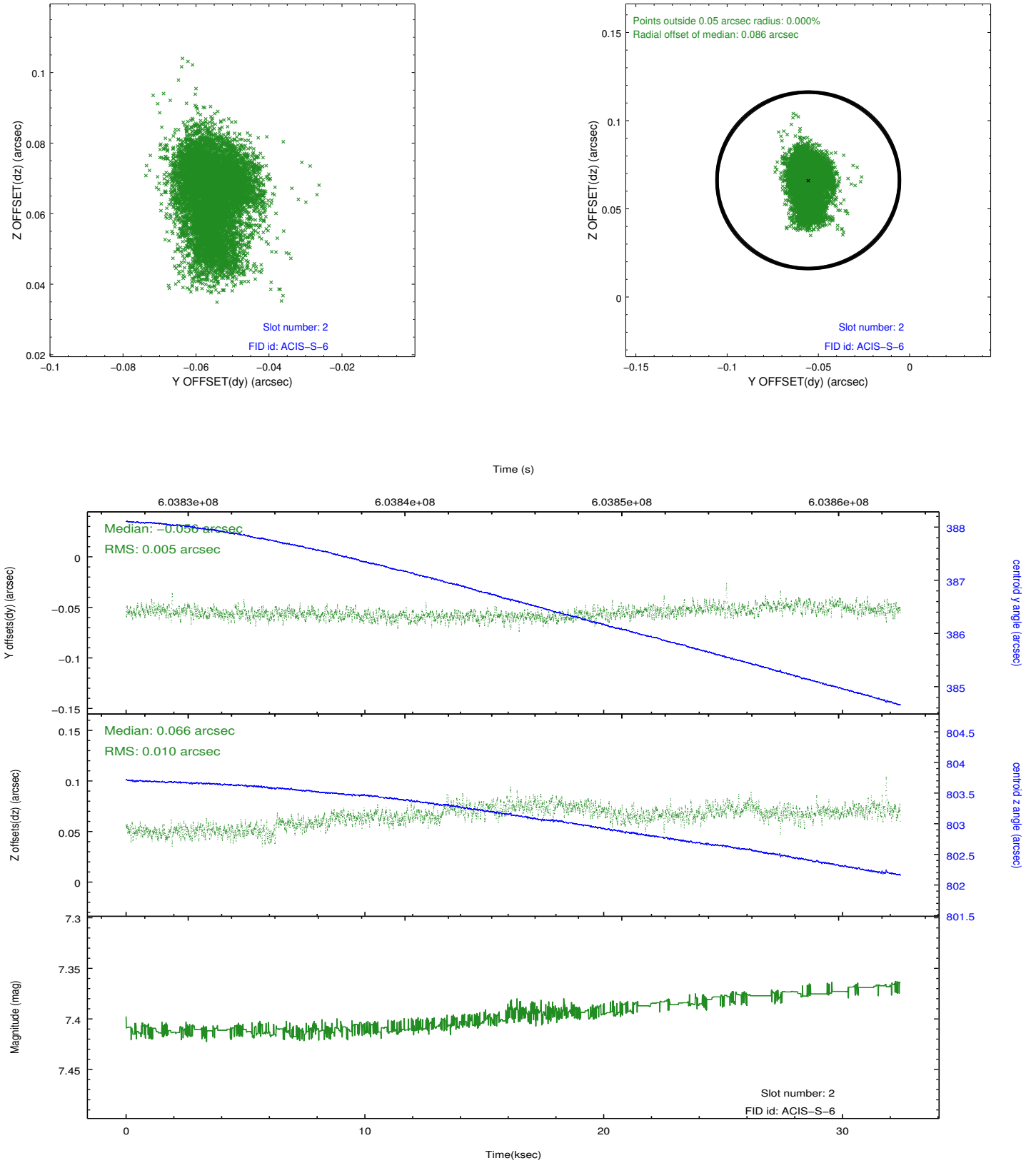
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2017.02.20
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	32.245958004355

### A.2 Comments