

# V&V Reference Report

## L2 ASCDS Version : 10.8.3

Observation 23107 - L2 Version 1  
Chandra X-Ray Center

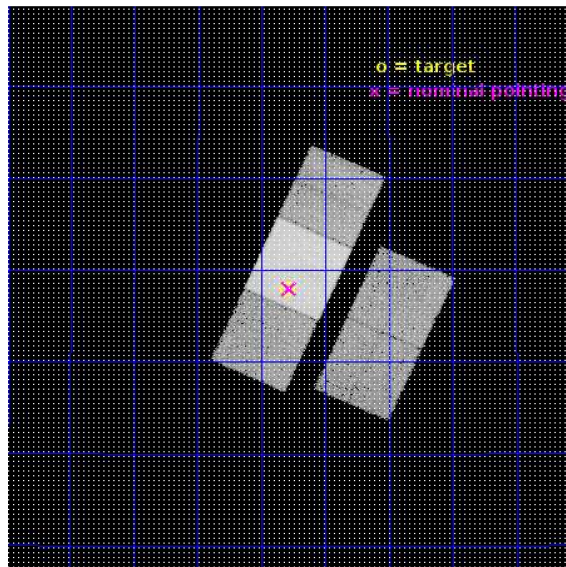
L2 Processing Date : Mar 26 2020

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# 1 Front

seq_num	704032	Sequence number
obs_id	23107	Observation id
title	X-ray jet at very high redshift	Proposal title
observer	alberto moretti	Principal investigator
object	PSO J047.4479+27.2993	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	47.447917	Observer's specified target RA [deg]
dec_targ	27.29925	Observer's specified target Dec [deg]
ra_nom	47.4448005642	Nominal RA [deg]
dec_nom	27.3000094786	Nominal Dec [deg]
roll_nom	294.213792495	Nominal Roll [deg]
revision	1	Processing version of data
ontime	27053.700208187	Sum of GTIs [s]
livetime	26700.223698323	Livetime [s]
ontime2	27053.700208187	Sum of GTIs [s]
ontime3	27053.700208187	Sum of GTIs [s]
ontime6	27053.700208187	Sum of GTIs [s]
ontime7	27053.700208187	Sum of GTIs [s]
ontime8	27044.27737689	Sum of GTIs [s]
l2events	206694	Number of level 2 events

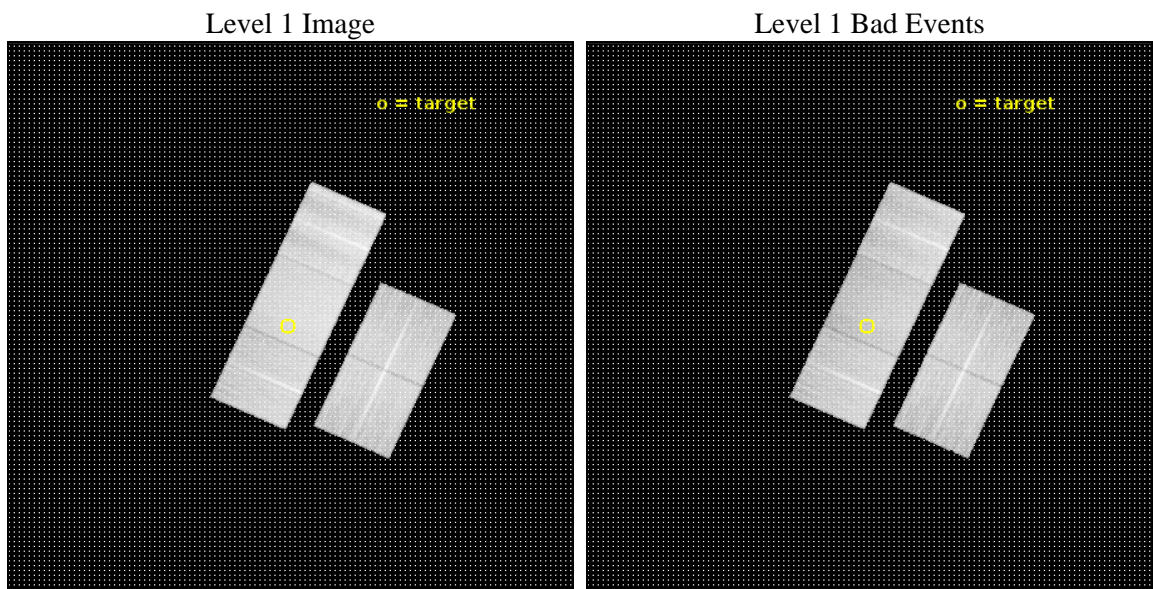




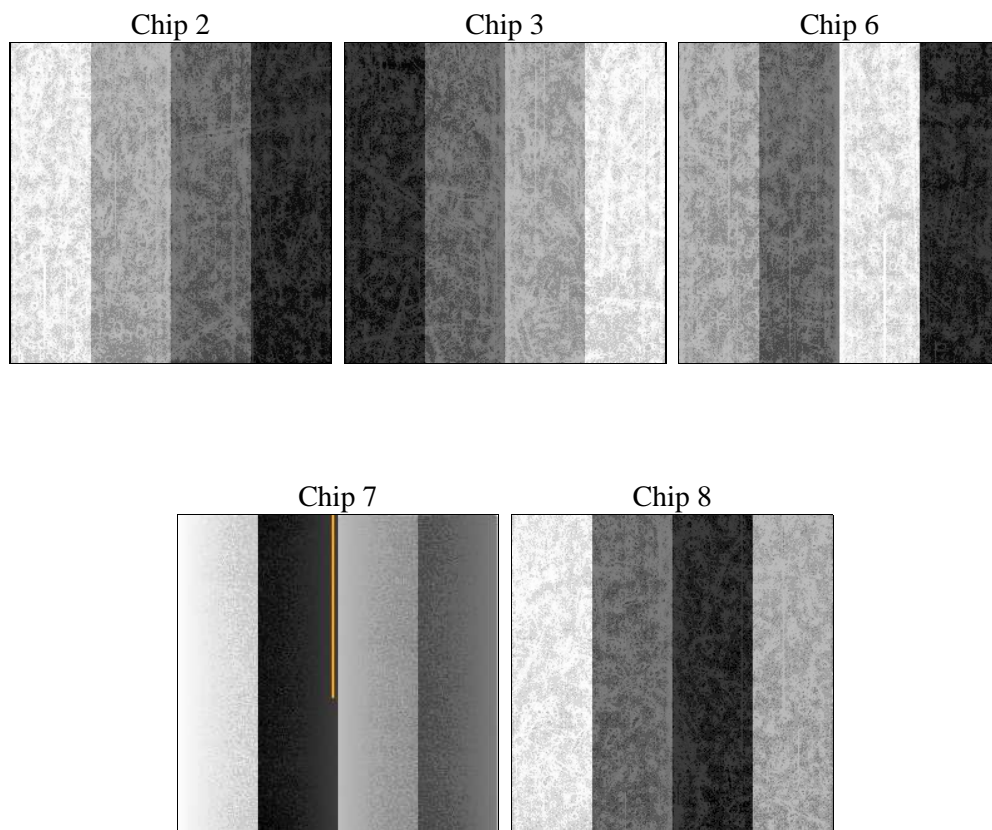
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	27000.000000	[s] Scheduled observation exposure time
ascdsver	10.8.3	Processing system revision	ontime	27053.700208187	Sum of GTIs [s]
caldsver	4.9.1	&#160	ontime2	27053.700208187	Sum of GTIs [s]
date	2020-03-26T06:56:01	Date and time of file creation	ontime3	27053.700208187	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	27053.700208187	Sum of GTIs [s]
			ontime7	27053.700208187	Sum of GTIs [s]
			ontime8	27044.27737689	Sum of GTIs [s]
			l1events	1187863	Number of level 1 events

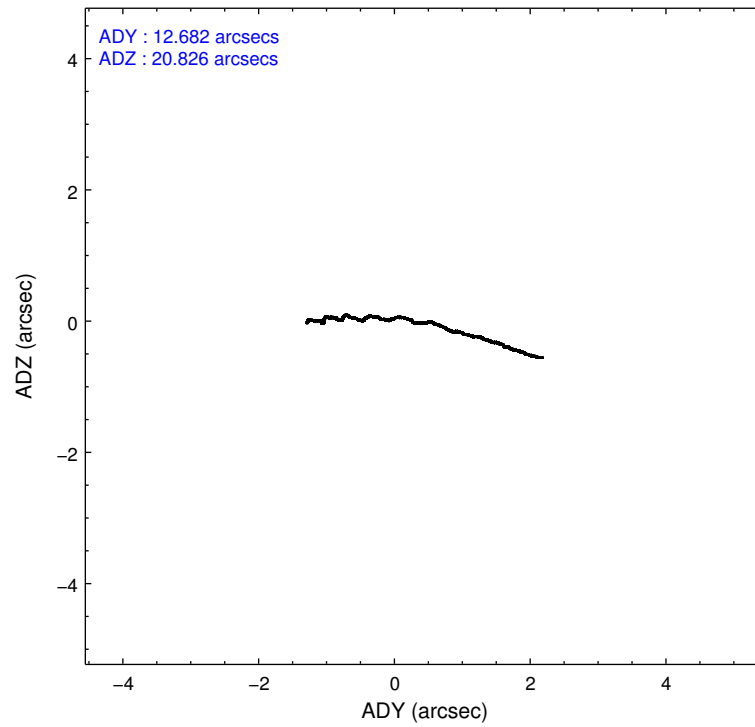
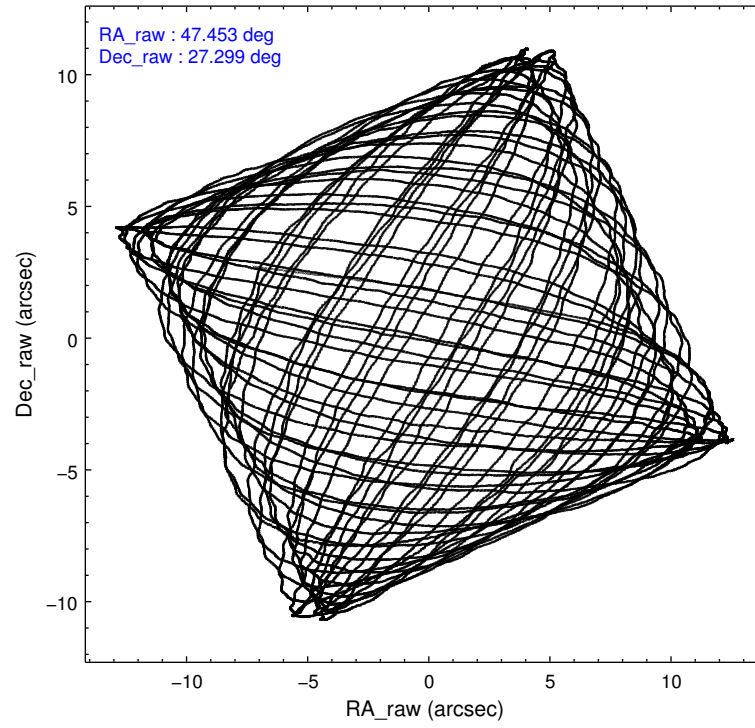
### 2.1.4 Events

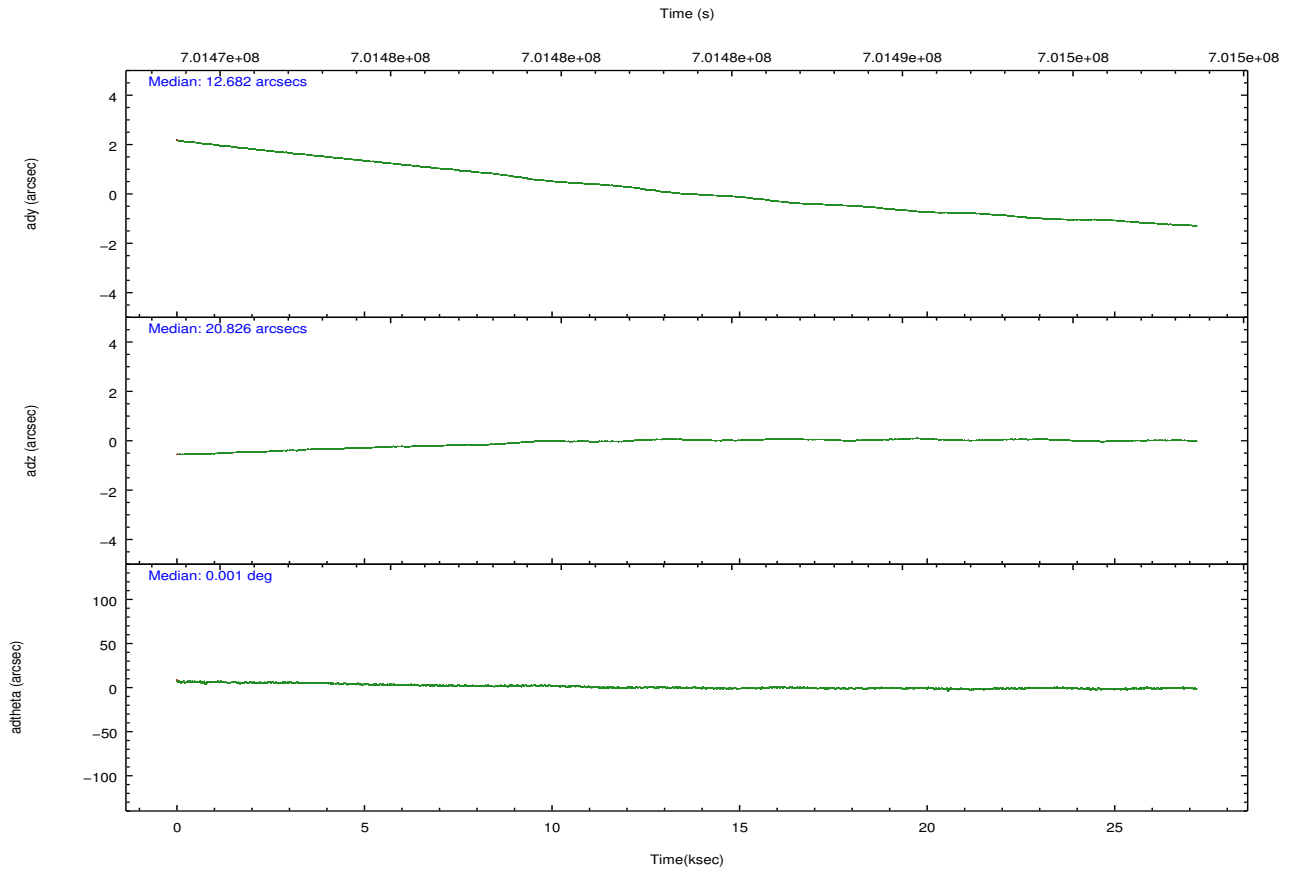
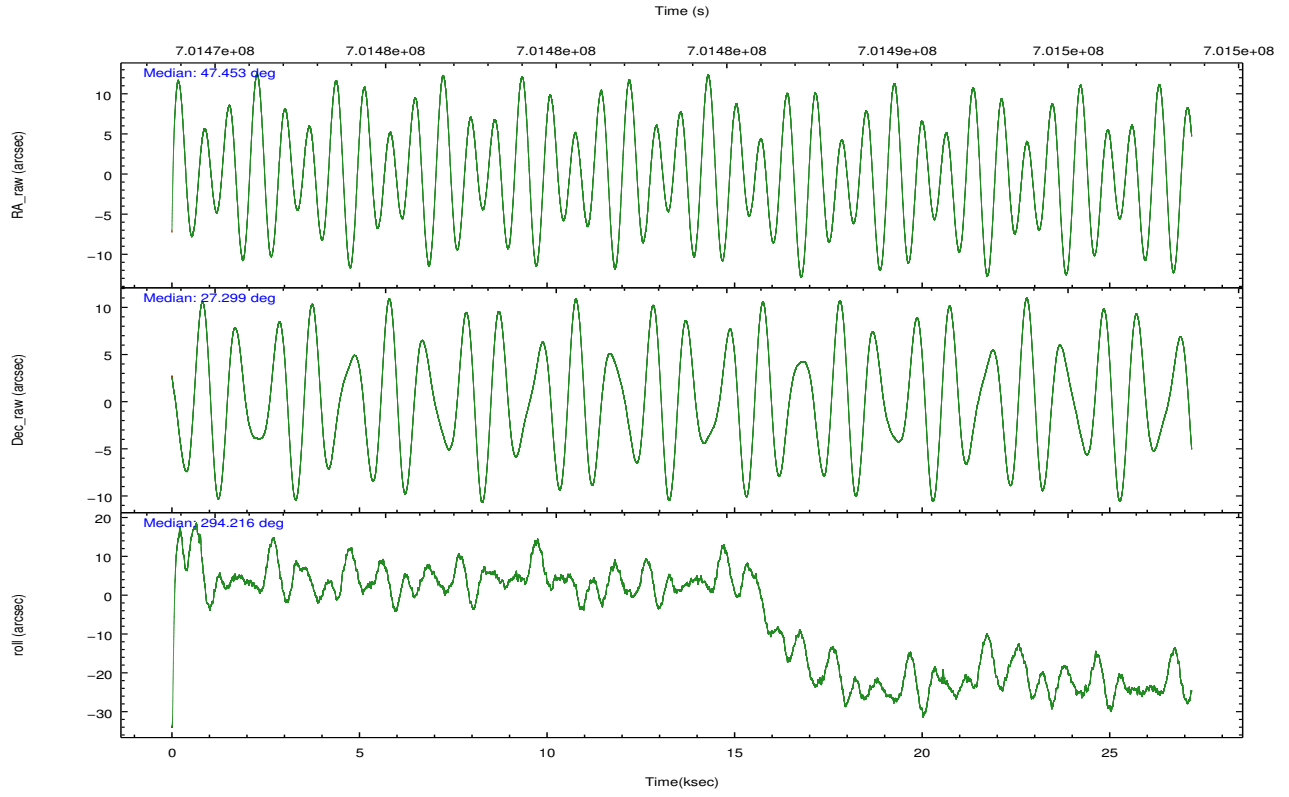
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	208343	201512	216595	275781	285632	grade 0 events	8737	9017	8820	10161	24756
rejected events	184422	177756	190862	155376	203142		4%	4%	4%	3%	8%
rejected %	88%	88%	88%	56%	71%	grade 1 events	110	126	118	414	212
							0%	0%	0%	0%	0%
						grade 2 events	5918	5160	6061	26131	20021
							2%	2%	2%	9%	7%
						grade 3 events	2280	2368	2426	9283	8345
							1%	1%	1%	3%	2%
						grade 4 events	2437	2367	2407	9149	7929
							1%	1%	1%	3%	2%
						grade 5 events	8416	10062	10195	27015	15397
							4%	4%	4%	9%	5%
						grade 6 events	4551	4851	6022	65711	21454
							2%	2%	2%	23%	7%
						grade 7 events	175894	167561	180546	127917	187518
							84%	83%	83%	46%	65%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
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	47.427067	47.4448005642	CCD I2 on	O3	Y
[deg] Pointing Dec	27.314895	27.3000094786	CCD I3 on	O4	Y
[deg] Pointing Roll	294.061158	294.213792495	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O5	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	O2	Y
[s] Observation start time (MET)	701470291.184000	701469321.63169	CCD S5 on	N	N
Observation start date	2020-03-24T20:50:22	2020-03-24T20:35:21	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	701497291.184000	701498213.30844	On-chip summing requested	N	N
Observation end date	2020-03-25T04:20:22	2020-03-25T04:36:53	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



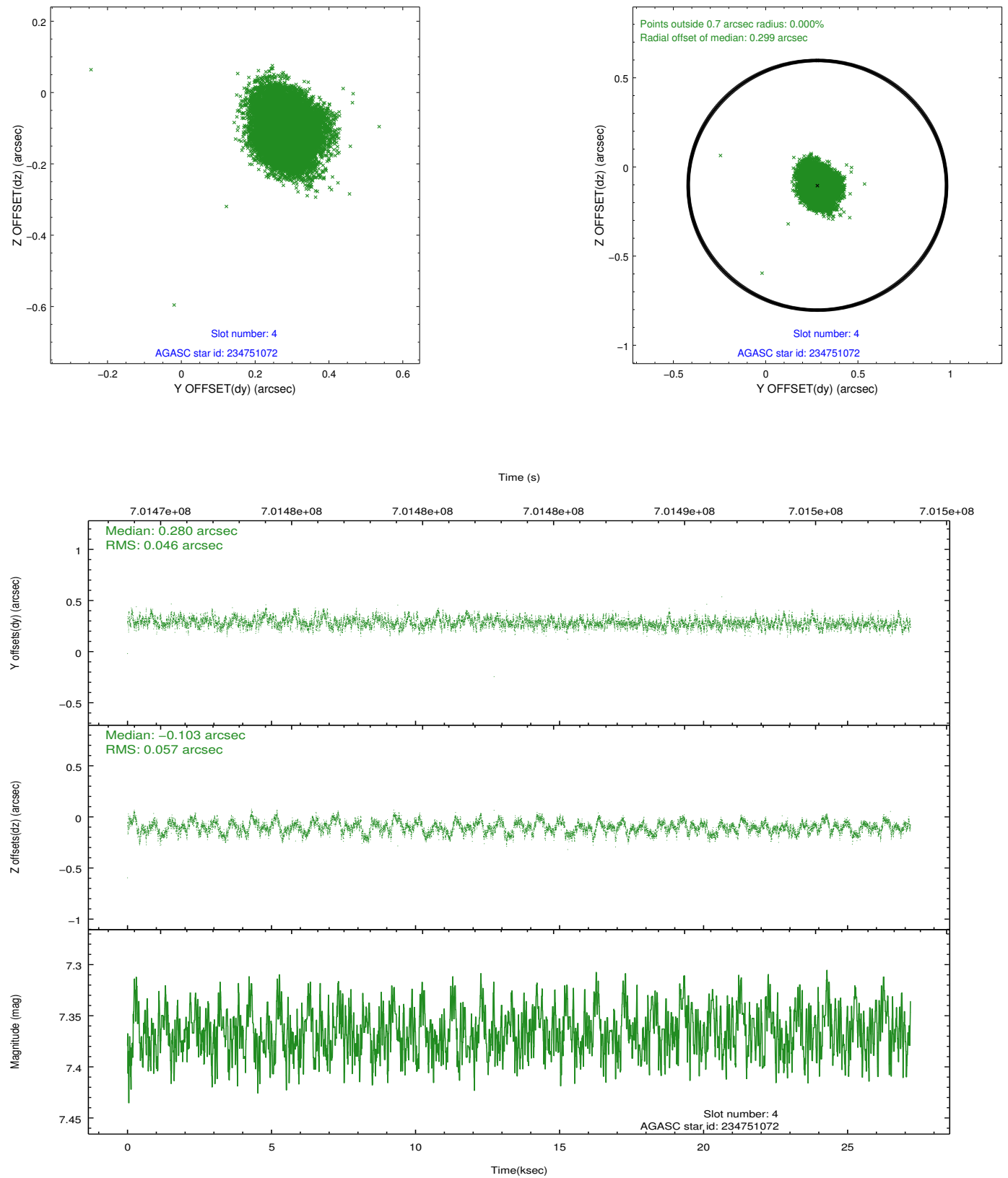


Slot Statistics

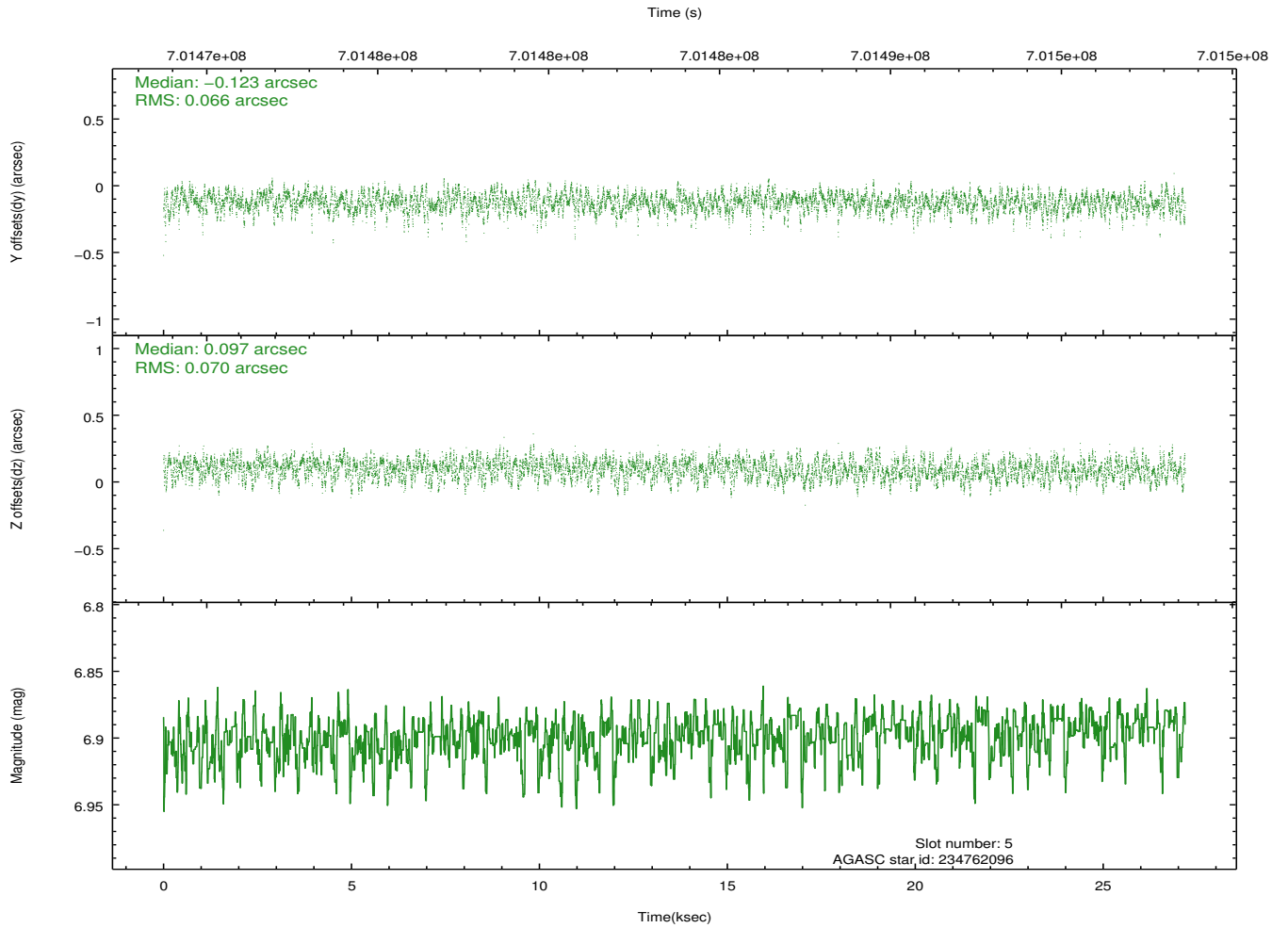
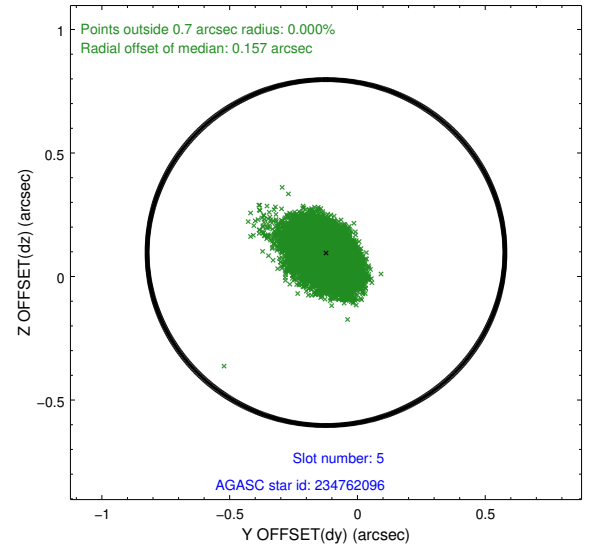
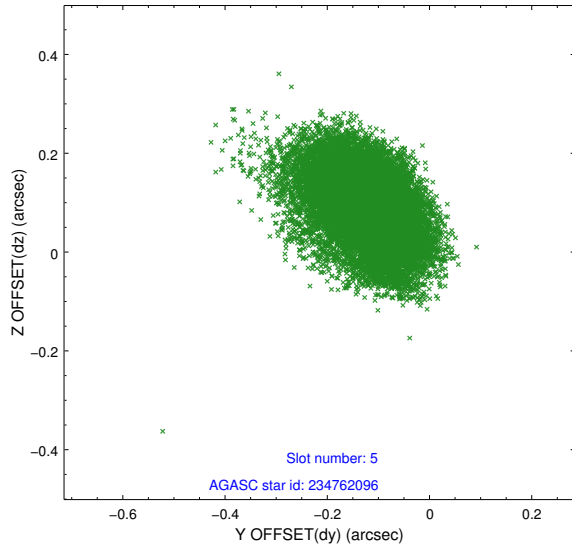
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.04	6630	1.000	0.366	-0.203	0.045	0.066	0.000000	0.000000	930.39	-1738
1	FID		ACIS-S-5	7.06	6631	1.000	-0.320	0.288	0.073	0.096	0.000000	0.000000	-1818.98	160
2	FID		ACIS-S-6	7.21	6631	1.000	-0.068	-0.067	0.032	0.043	0.000000	0.000000	395.74	803
3	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
4	GUIDE	used	234751072	7.37	13259	1.000	0.280	-0.103	0.079	0.121	47.877608	26.845930	2129.21	633
5	GUIDE	used	234762096	6.90	13261	1.000	-0.123	0.097	0.102	0.165	47.536833	27.819765	-1516.39	1060
6	GUIDE	used	234762104	6.33	13258	1.000	0.027	0.055	0.095	0.150	48.059357	27.256968	1010.97	1764
7	GUIDE	used	234751592	8.86	13245	1.000	-0.182	-0.042	0.110	0.175	48.116346	27.494266	302.20	2275

## 2.4 Star Slots

### 2.4.1 Slot 4

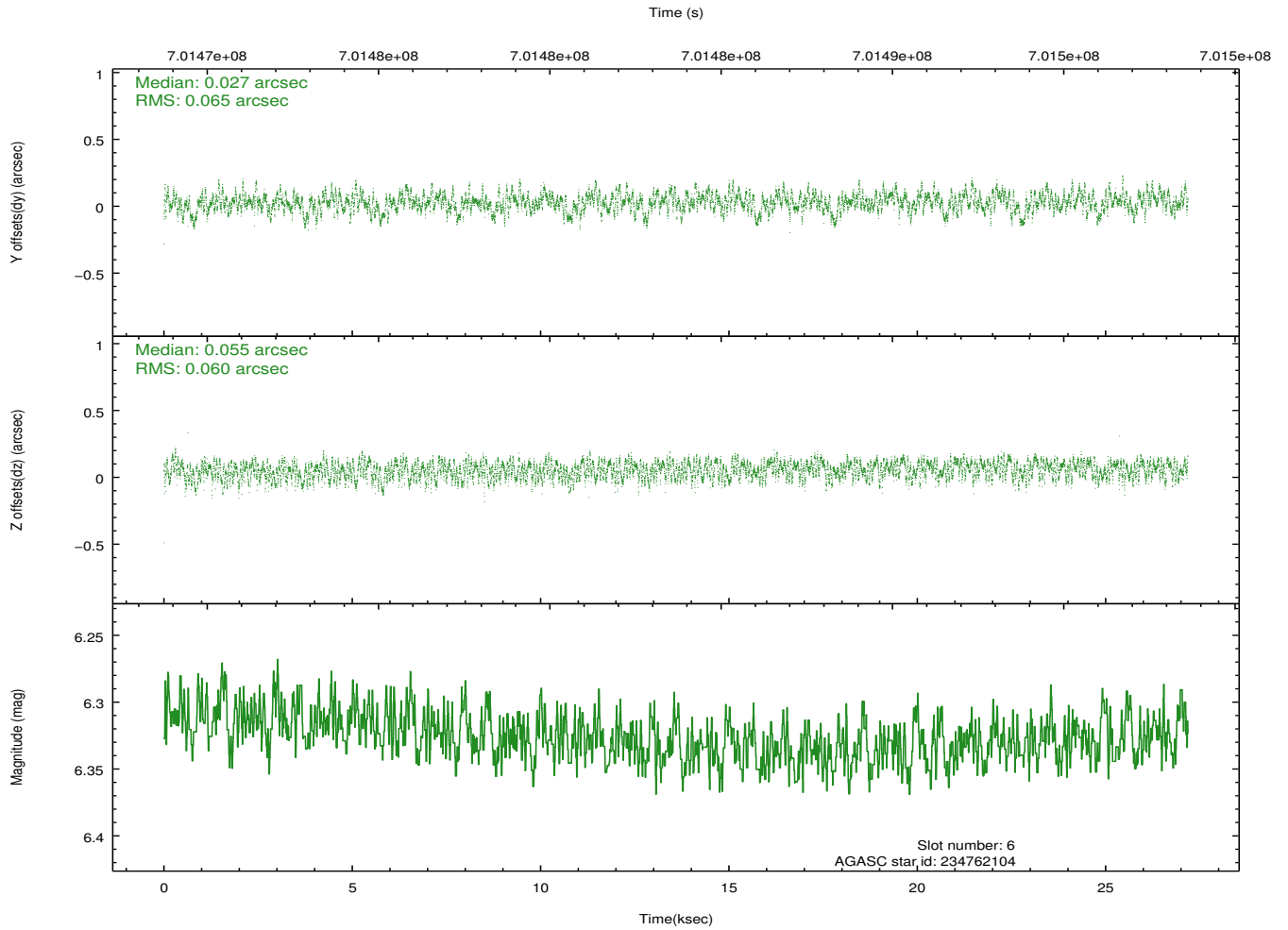
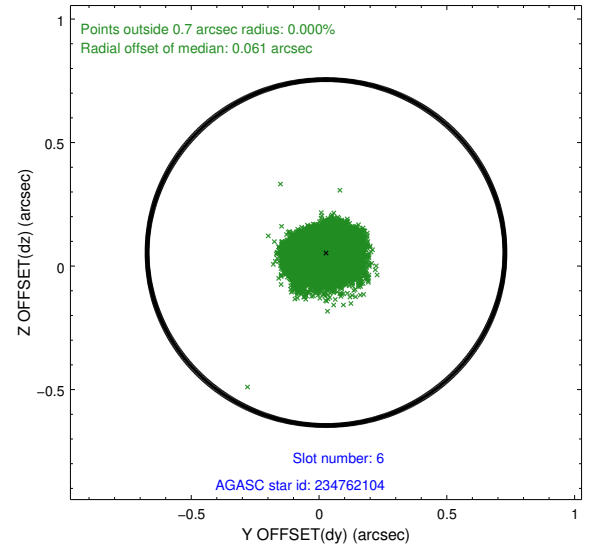
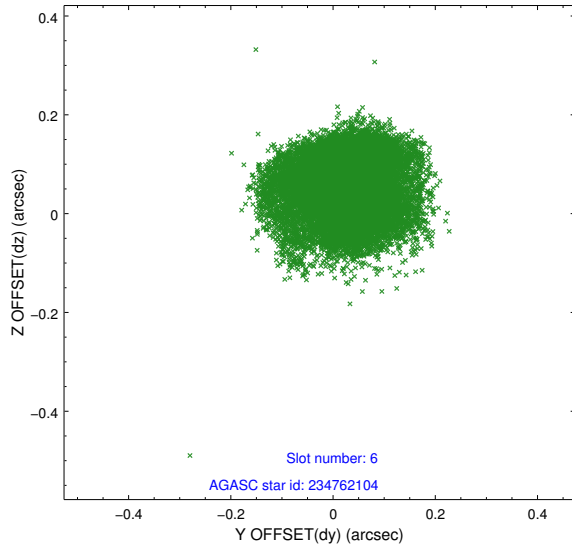


## 2.4.2 Slot 5

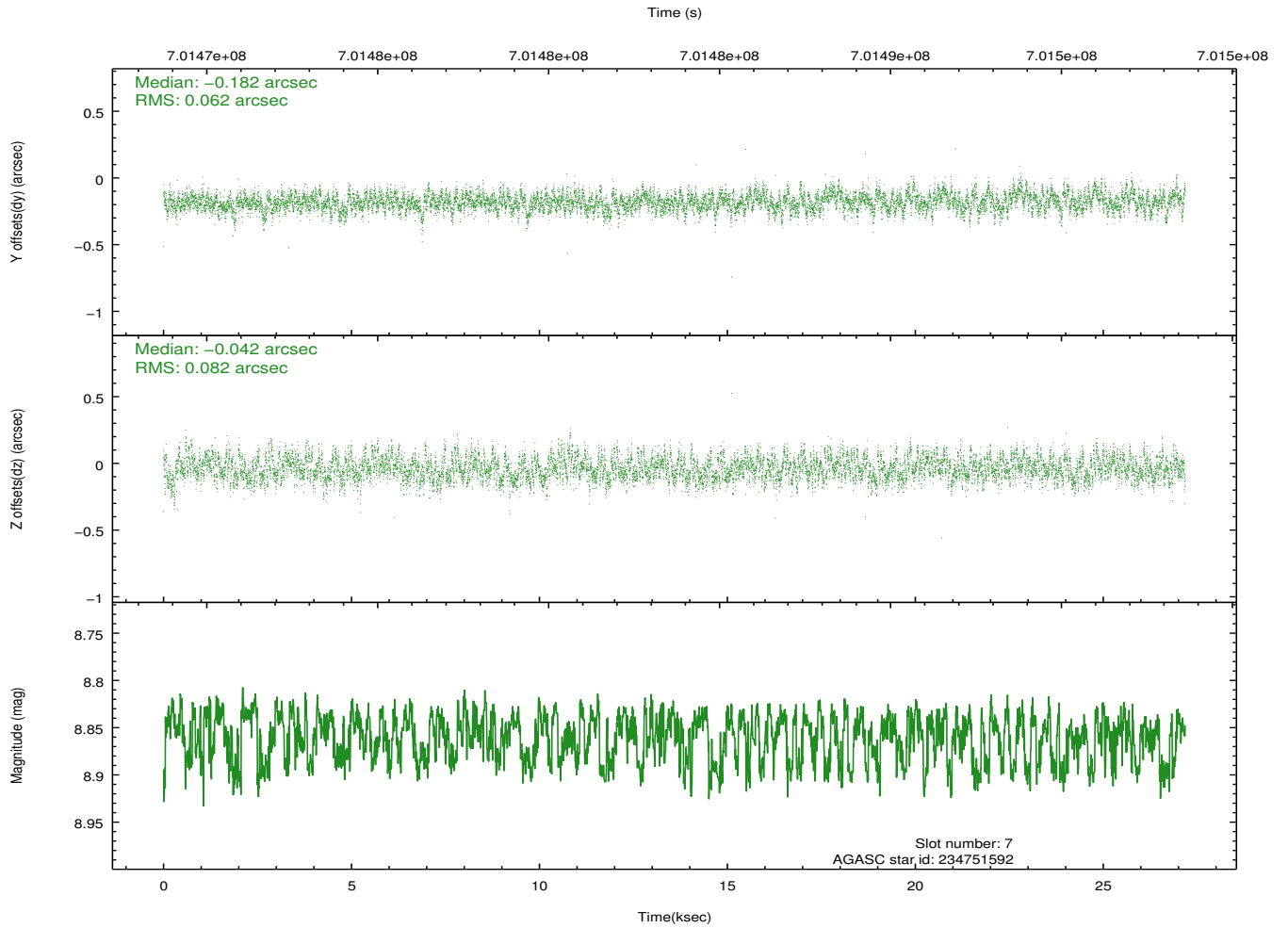
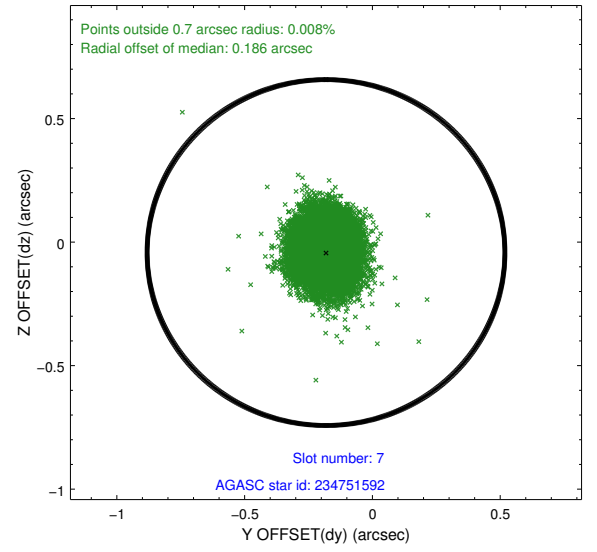
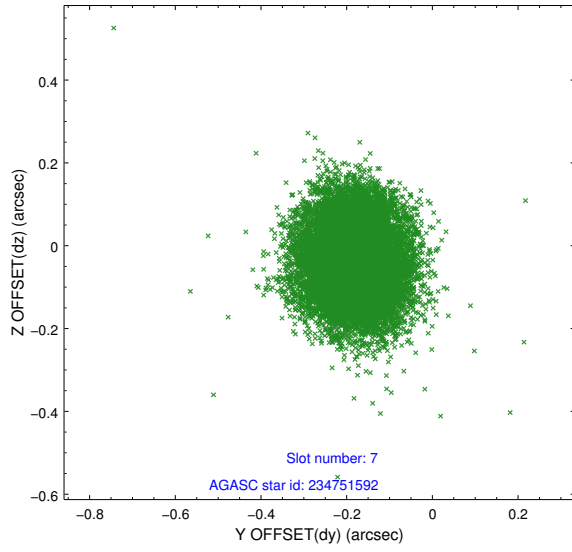




### 2.4.3 Slot 6

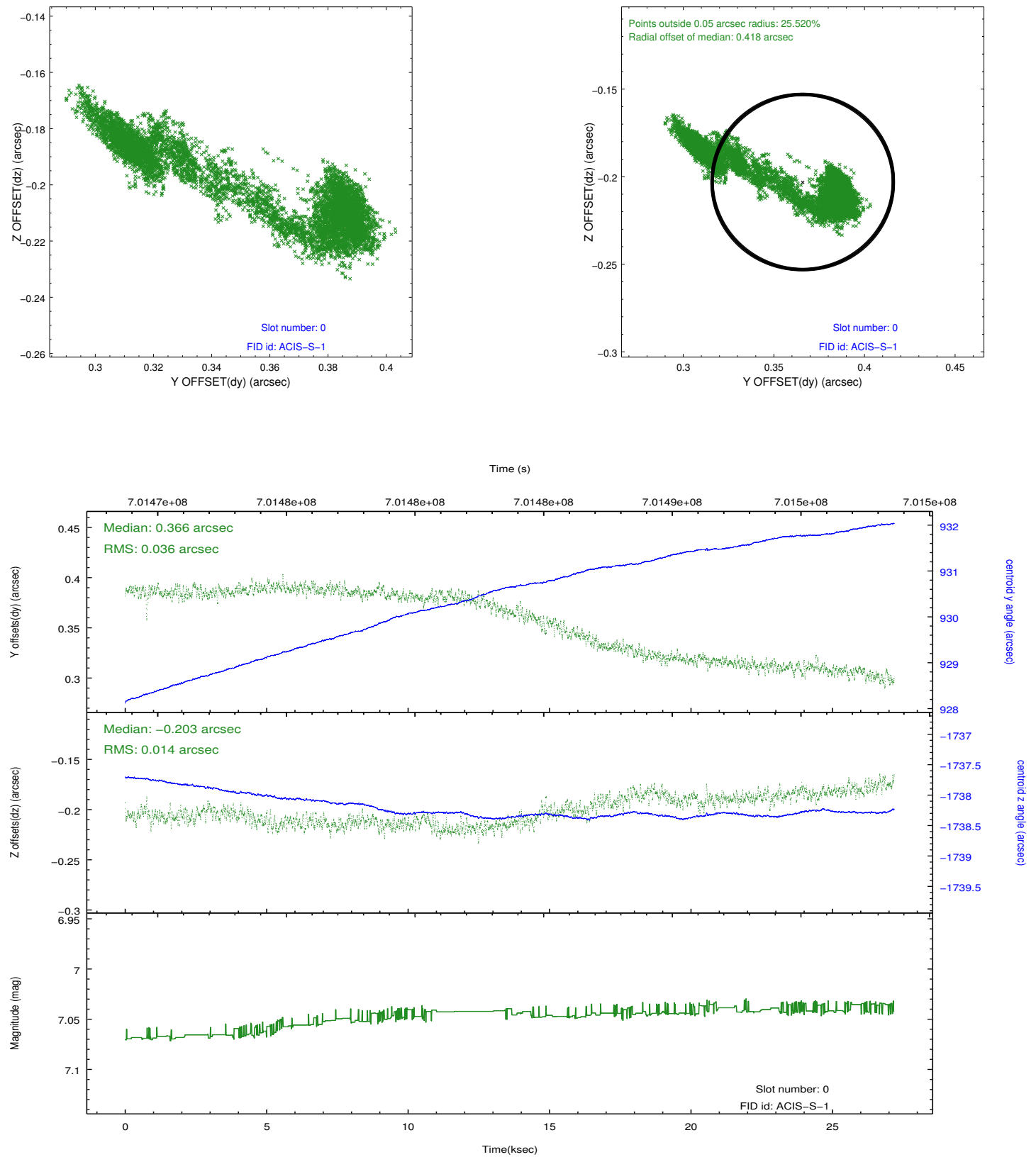


## 2.4.4 Slot 7

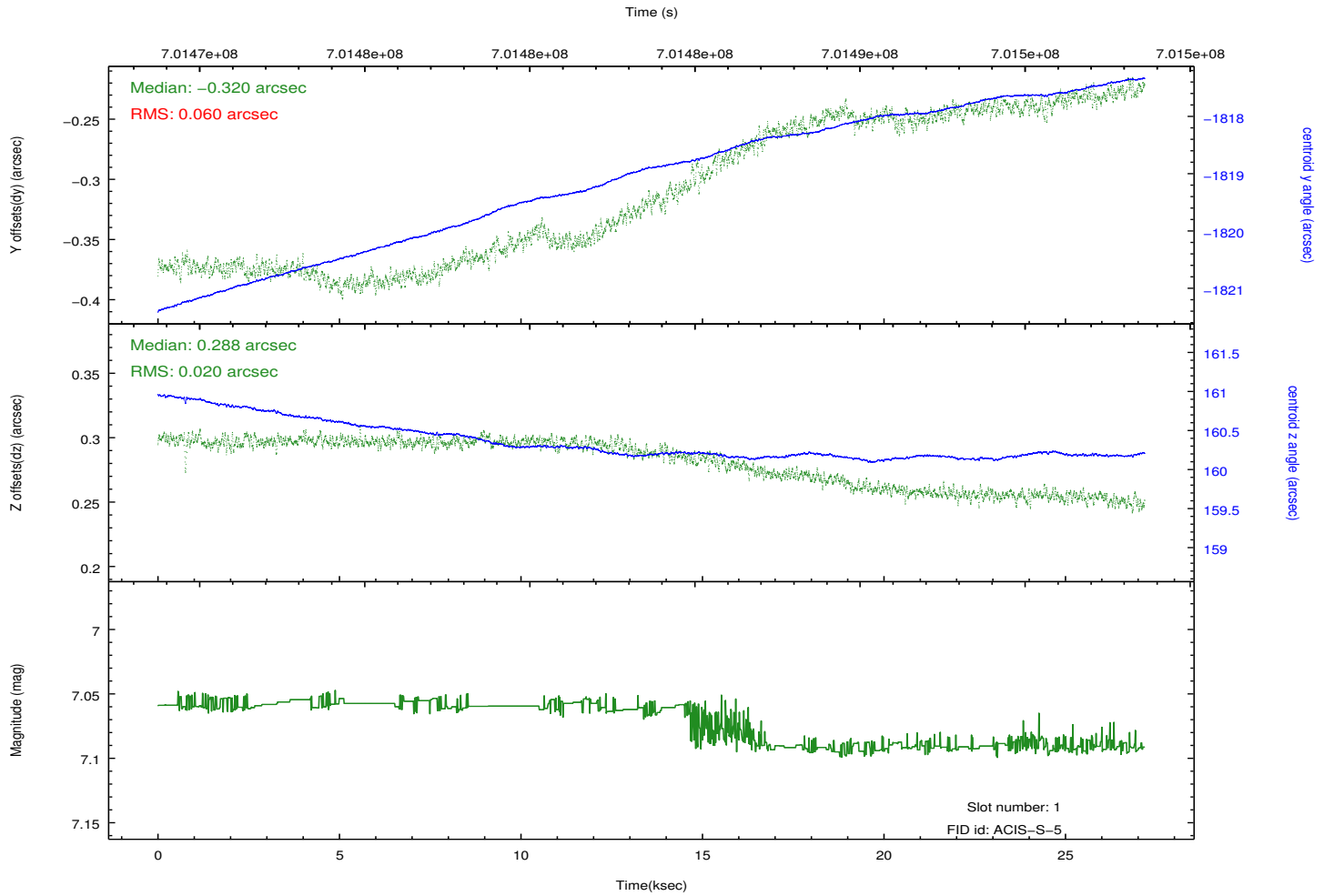
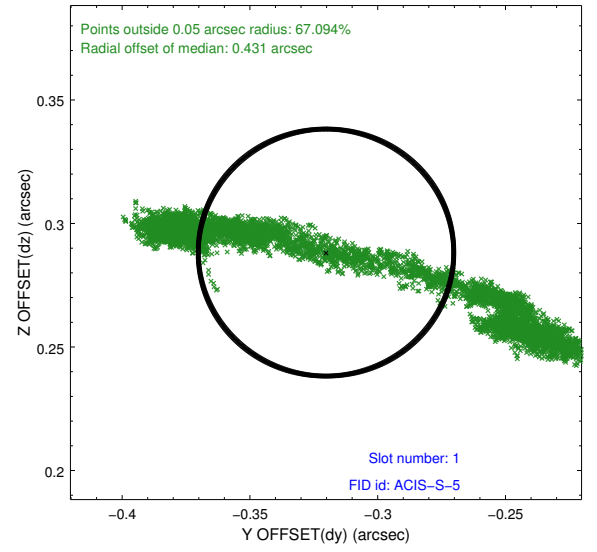
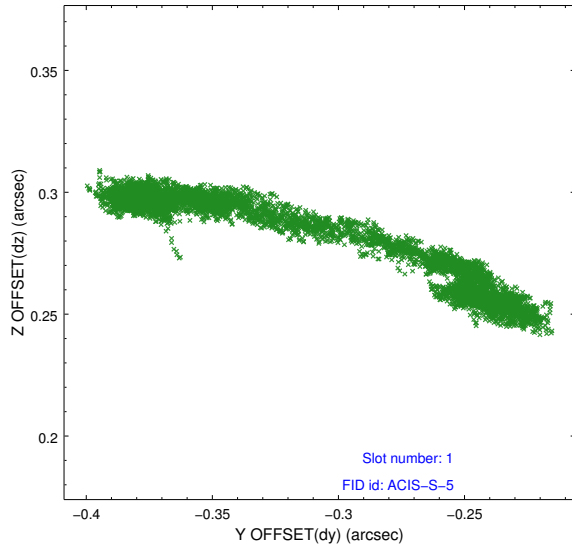


## 2.5 FID Slots

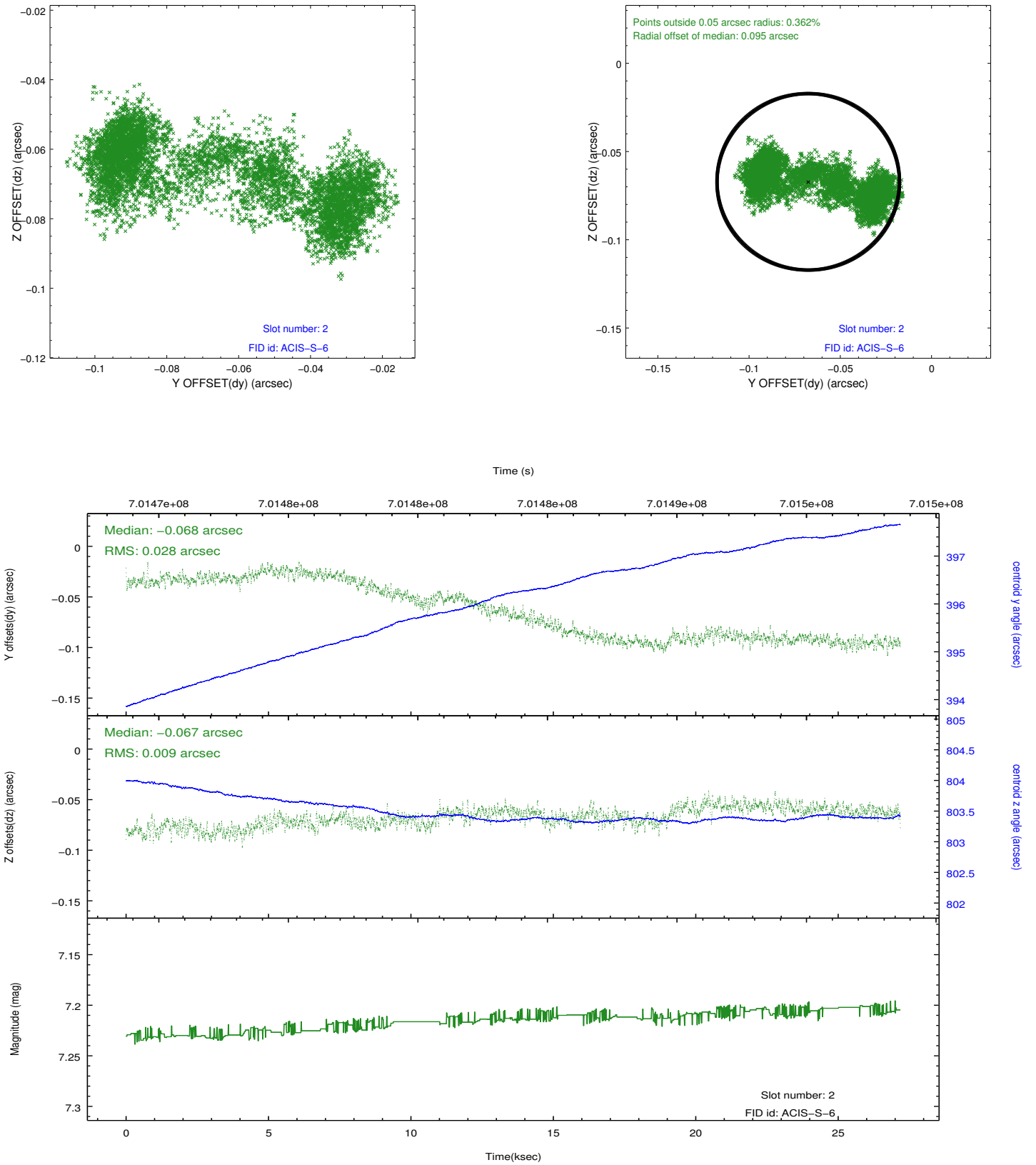
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2020.03.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	27.053700208187

### A.2 Comments

The guide star in slot 3 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.