

# V&V Reference Report

## L2 ASCDS Version : 10.7.1

Observation 19643 - L2 Version 1  
Chandra X-Ray Center

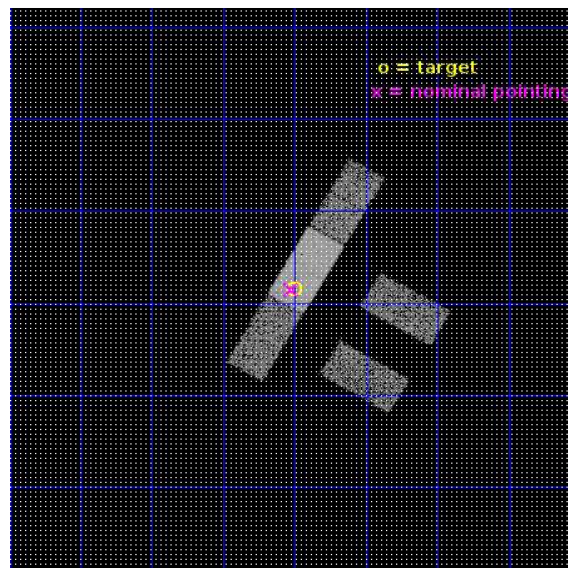
L2 Processing Date : Jan 7 2019

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# 1 Front

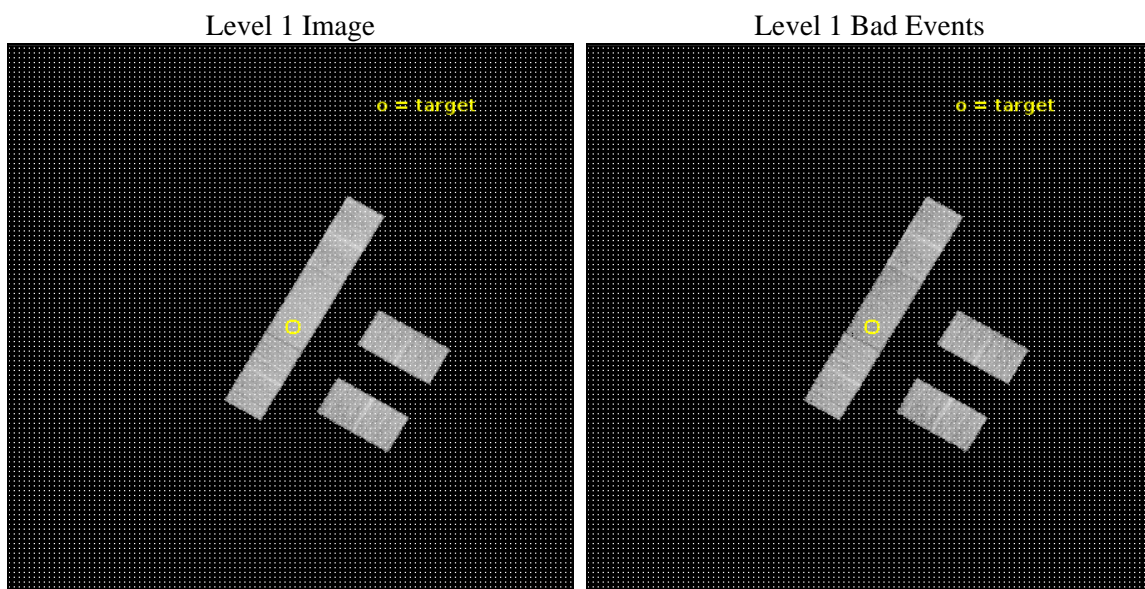
seq_num	703440	Sequence number
obs_id	19643	Observation id
title	MEASURING THE INNERMOST STABLE ORBIT USING MICROLENSING OF THE FE K LINE	Proposal title
observer	George Chartas	Principal investigator
object	Q2237+0305	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	340.12625	Observer's specified target RA [deg]
dec_targ	3.358	Observer's specified target Dec [deg]
ra_nom	340.13098747361	Nominal RA [deg]
dec_nom	3.3576761885542	Nominal Dec [deg]
roll_nom	300.15639322374	Nominal Roll [deg]
revision	1	Processing version of data
ontime	10058.900282145	Sum of GTIs [s]
livetime	9821.7906996081	Livetime [s]
ontime2	10057.15923214	Sum of GTIs [s]
ontime3	10058.900282145	Sum of GTIs [s]
ontime6	10058.900282145	Sum of GTIs [s]
ontime7	10058.900282145	Sum of GTIs [s]
ontime8	10058.900282145	Sum of GTIs [s]
l2events	37304	Number of level 2 events



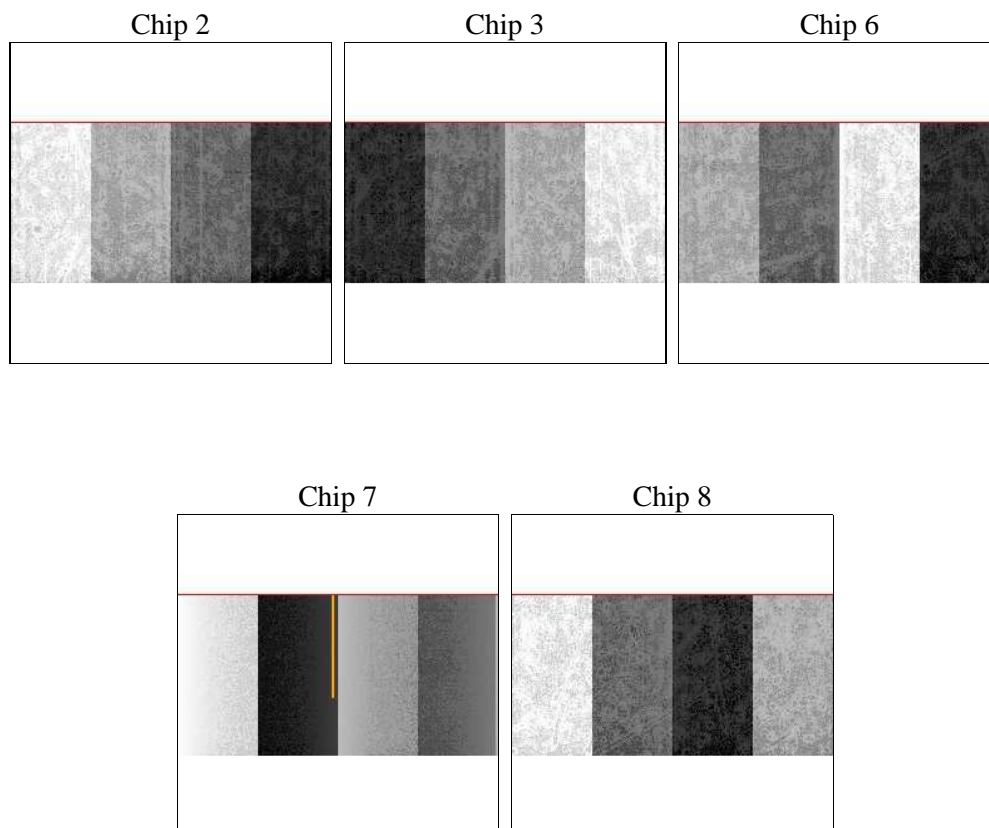
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	10058.900282145	Sum of GTIs [s]
caldsver	4.8.2	&#160	ontime2	10057.15923214	Sum of GTIs [s]
date	2019-01-07T14:30:22	Date and time of file creation	ontime3	10058.900282145	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	10058.900282145	Sum of GTIs [s]
			ontime7	10058.900282145	Sum of GTIs [s]
			ontime8	10058.900282145	Sum of GTIs [s]
			l1events	229714	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	39605	41607	44910	51242	52350
rejected events	35413	37411	40299	28733	39833
rejected %	89%	89%	89%	56%	76%

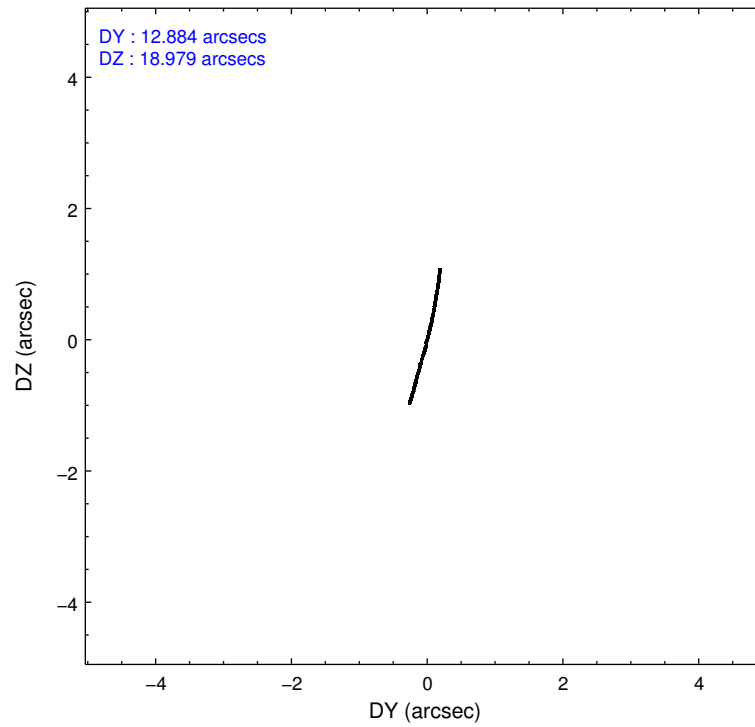
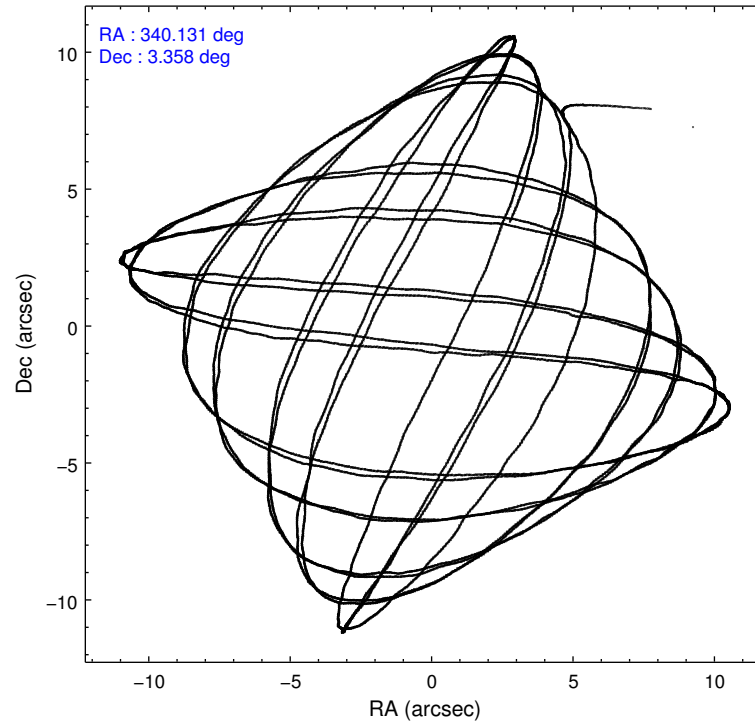
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	1364	1336	1279	2115	3464
	3%	3%	2%	4%	6%
grade 1 events	13	20	20	83	27
	0%	0%	0%	0%	0%
grade 2 events	913	878	1167	4587	3027
	2%	2%	2%	8%	5%
grade 3 events	518	522	485	2135	1333
	1%	1%	1%	4%	2%
grade 4 events	519	502	484	2015	1268
	1%	1%	1%	3%	2%
grade 5 events	1406	1724	1580	5173	2670
	3%	4%	3%	10%	5%
grade 6 events	878	959	1196	11659	3426
	2%	2%	2%	22%	6%
grade 7 events	33994	35666	38699	23475	37135
	85%	85%	86%	45%	70%

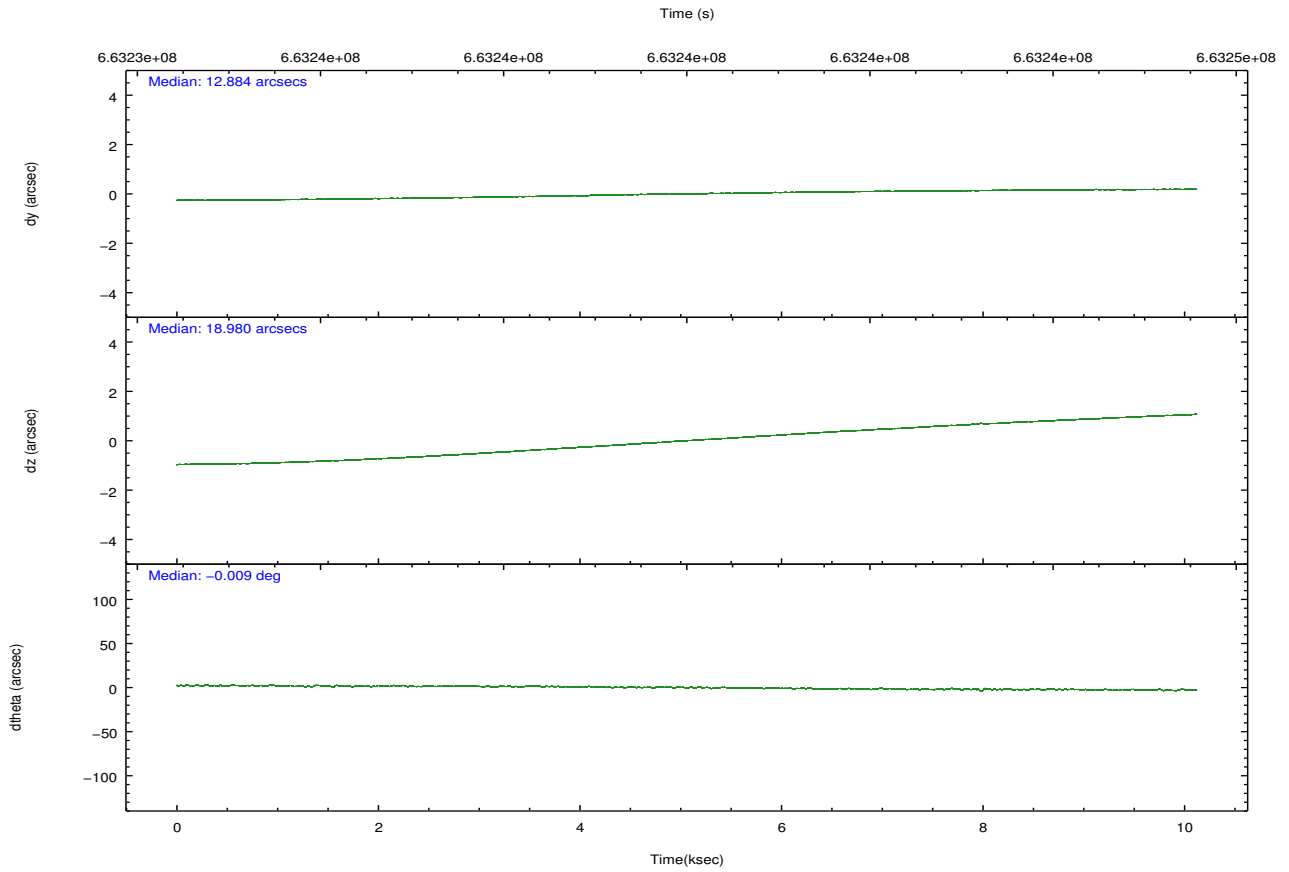
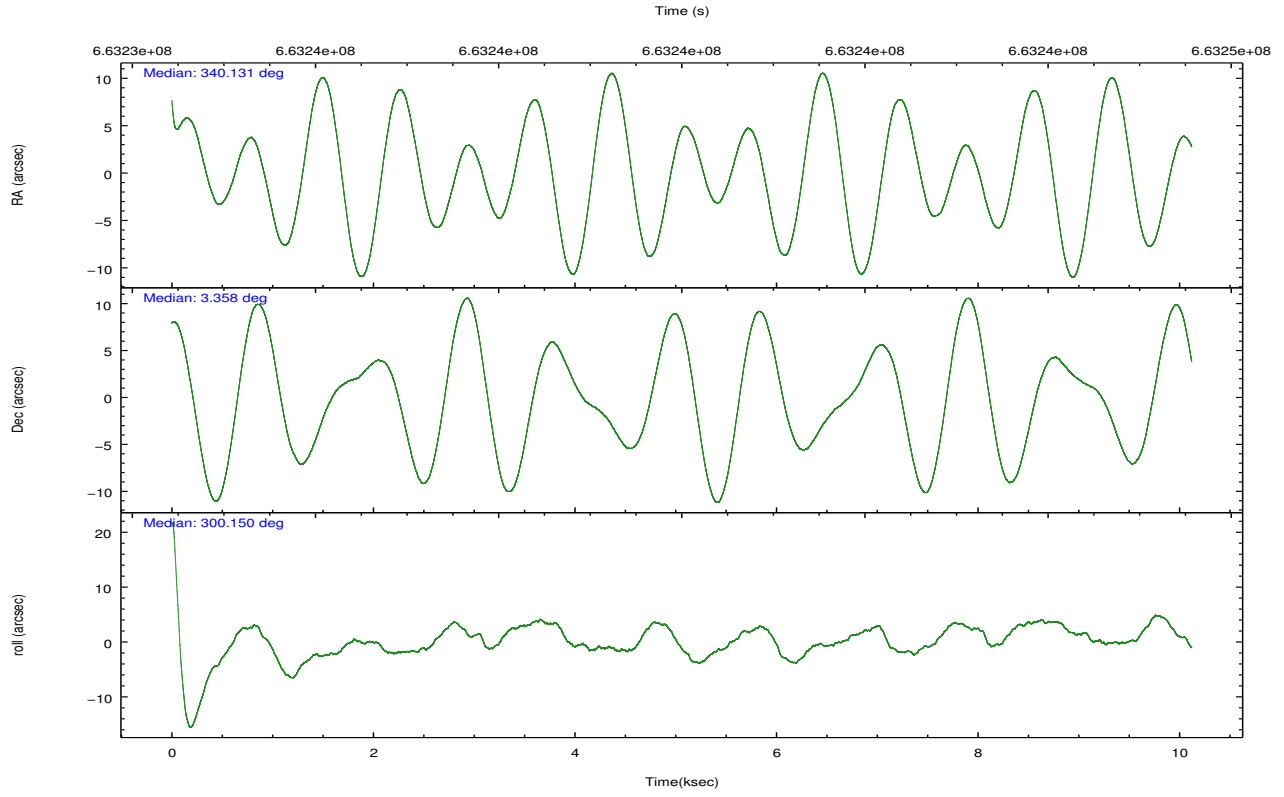
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-23678	ACIS-23678
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	340.106934	340.1309874736106
[deg] Pointing Dec	3.370983	3.357676188554234
[deg] Pointing Roll	300.001138	300.1563932237434
[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)	663235066.184000	663233920.11974
Observation start date	2019-01-07T07:56:37	2019-01-07T07:38:40
[s] Observation end time (MET)	663245066.184000	663245892.6329499
Observation end date	2019-01-07T10:43:17	2019-01-07T10:58:12
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	O2	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O4	Y
CCD S3 on	Y	Y
CCD S4 on	O3	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



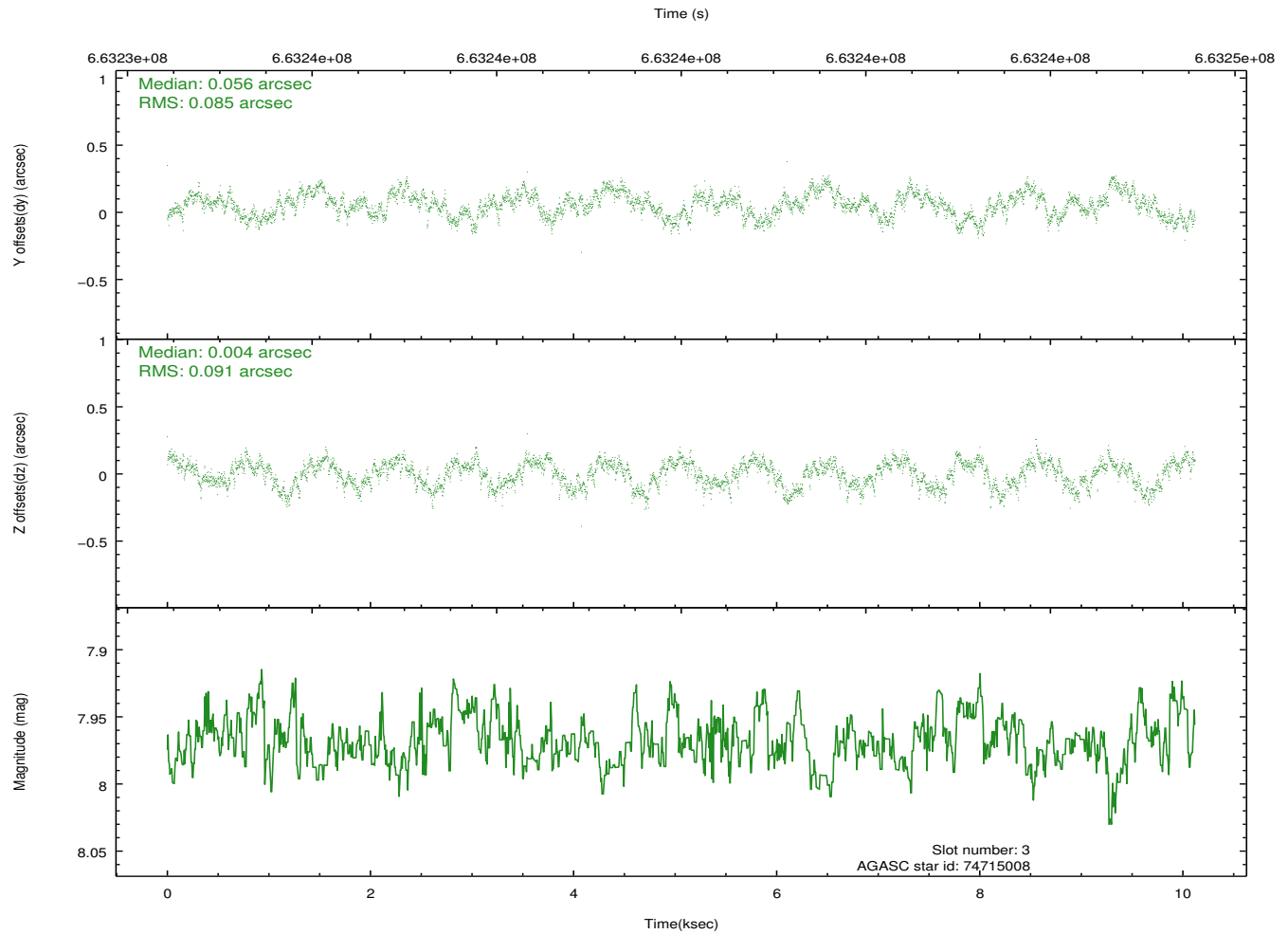
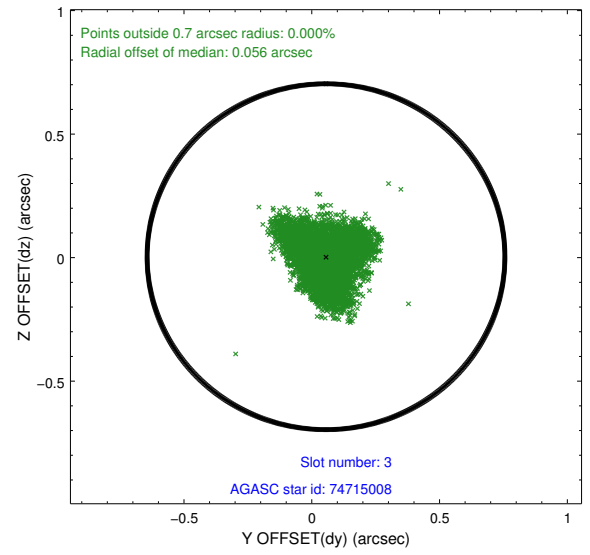
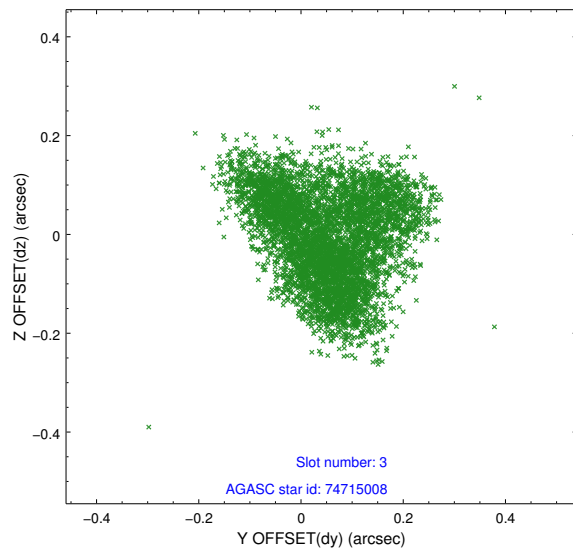


Slot Statistics

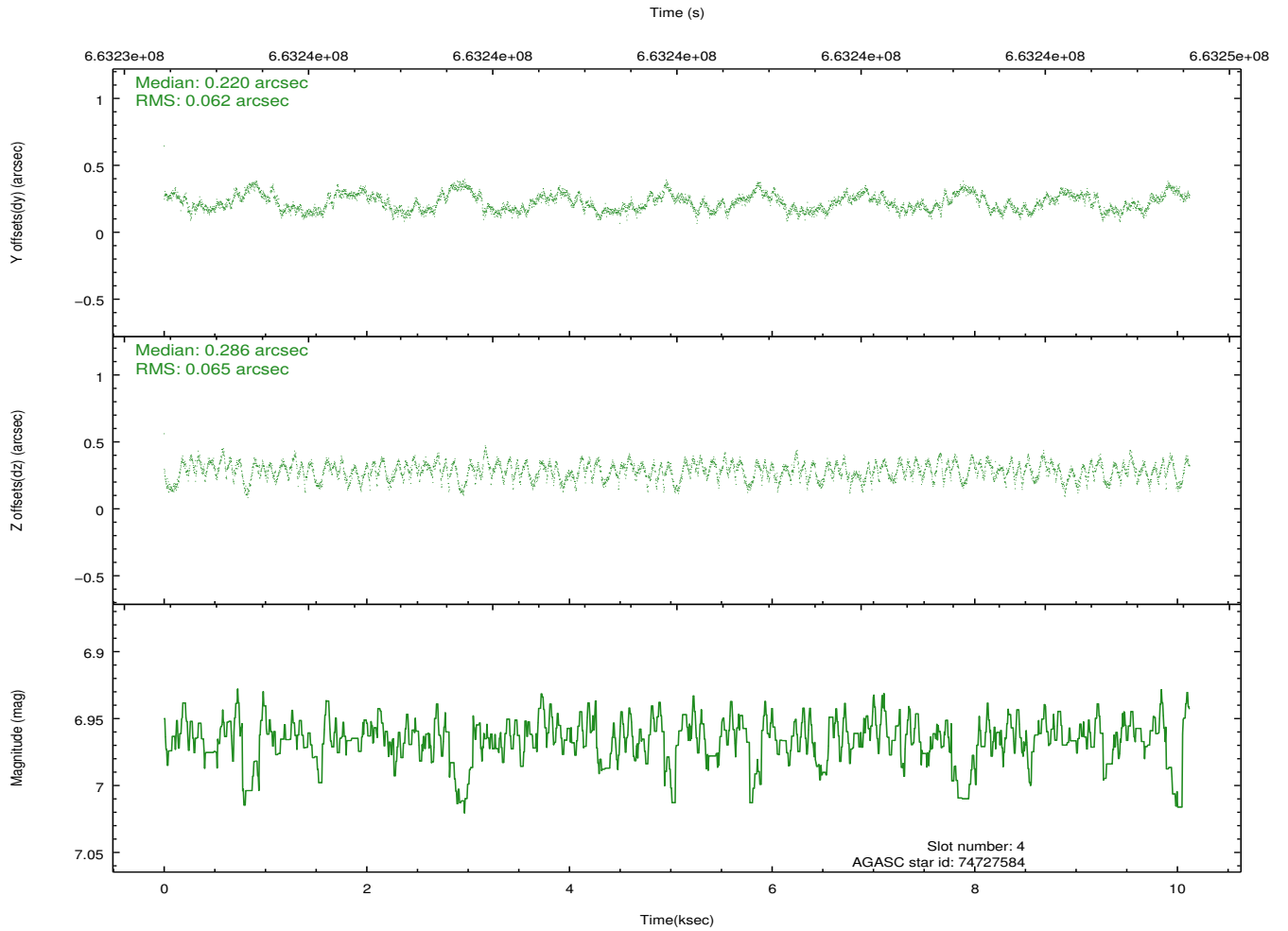
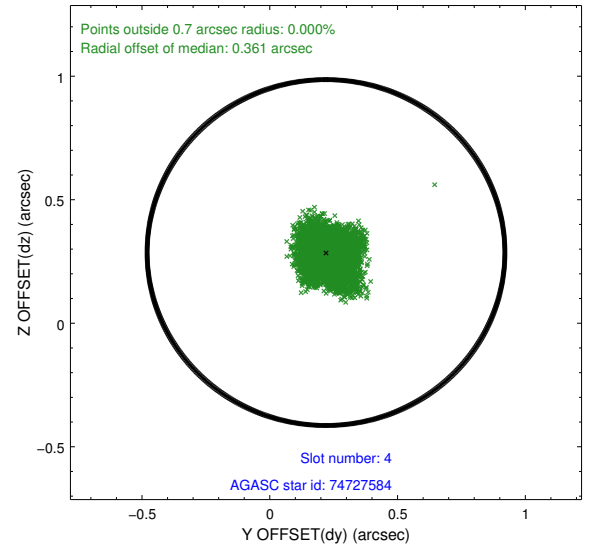
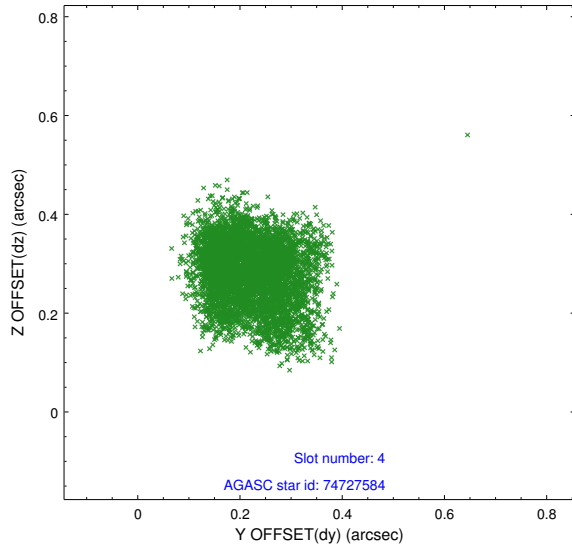
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.25	2469	1.000	0.070	-0.117	0.026	0.045	0.000000	0.000000	930.43	-1736
1	FID		ACIS-S-4	7.28	2469	1.000	0.614	0.053	0.024	0.039	0.000000	0.000000	2148.55	167
2	FID		ACIS-S-5	7.26	2468	1.000	-0.711	0.078	0.010	0.023	0.000000	0.000000	-1818.67	161
3	GUIDE	used	74715008	7.97	4934	1.000	0.056	0.004	0.137	0.201	339.956848	3.242441	131.65	-698
4	GUIDE	used	74727584	6.96	4937	1.000	0.220	0.286	0.096	0.149	339.633744	3.463732	-1138.94	-1305
5	GUIDE	used	74854992	8.26	4935	1.000	-0.009	-0.008	0.090	0.153	340.342808	3.603730	-301.72	1151
6	GUIDE	used	74855640	8.85	4924	1.000	0.010	0.123	0.133	0.221	340.341123	3.746937	-750.99	1405
7	GUIDE	used	74843656	9.23	4930	1.000	-0.284	-0.400	0.157	0.252	340.586494	3.375954	845.88	1501

## 2.4 Star Slots

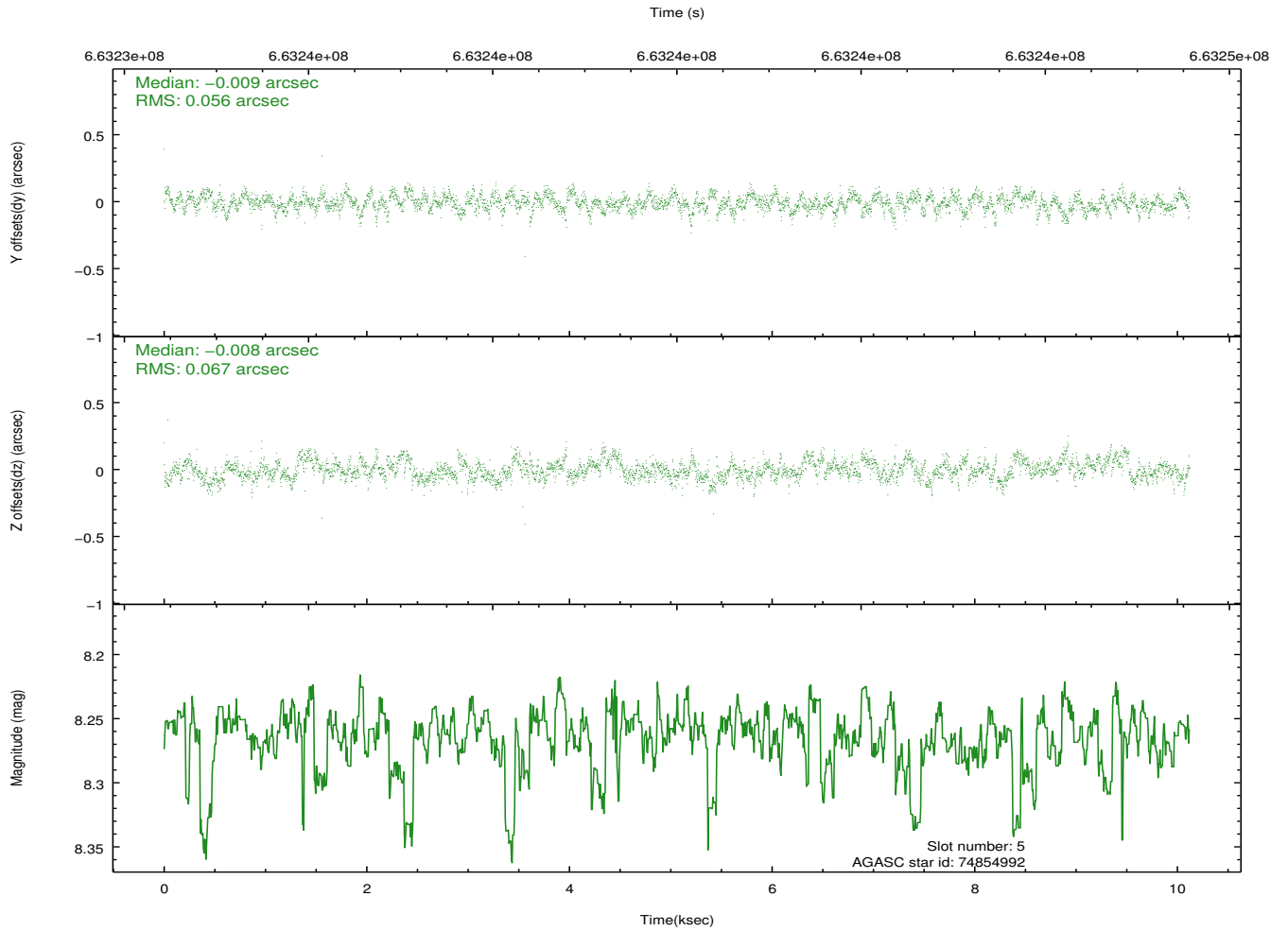
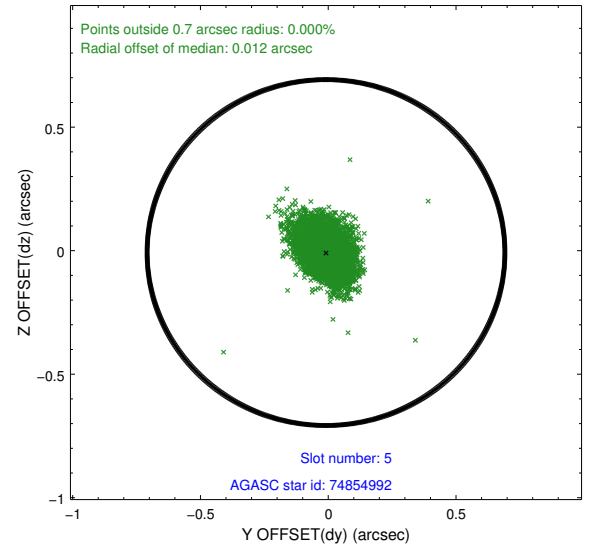
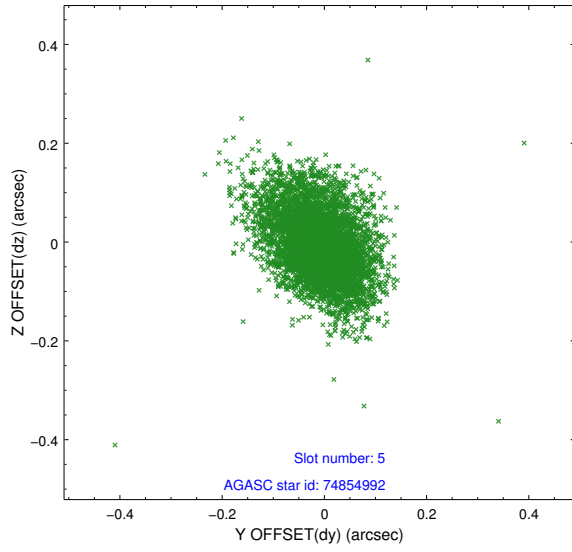
### 2.4.1 Slot 3



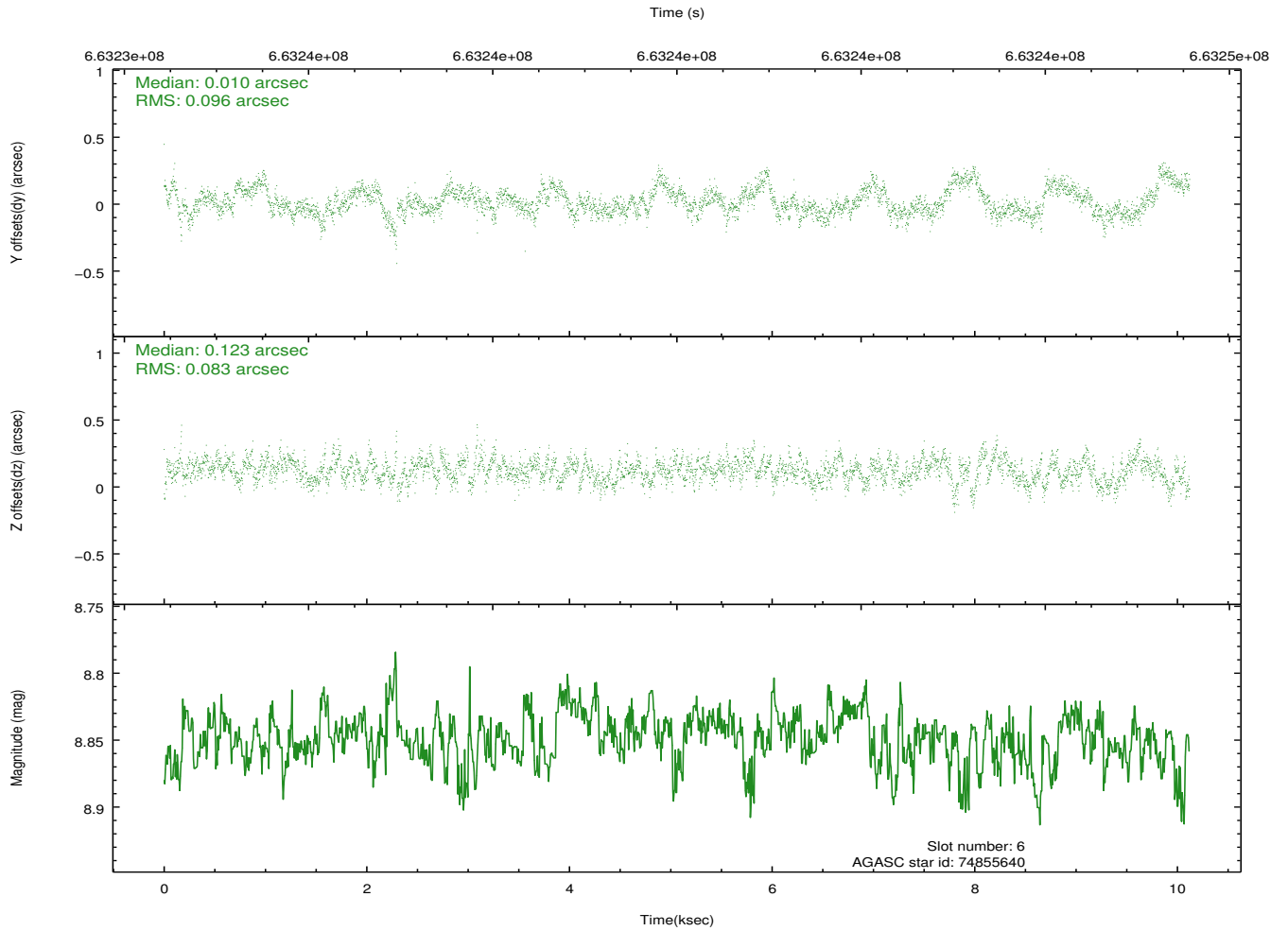
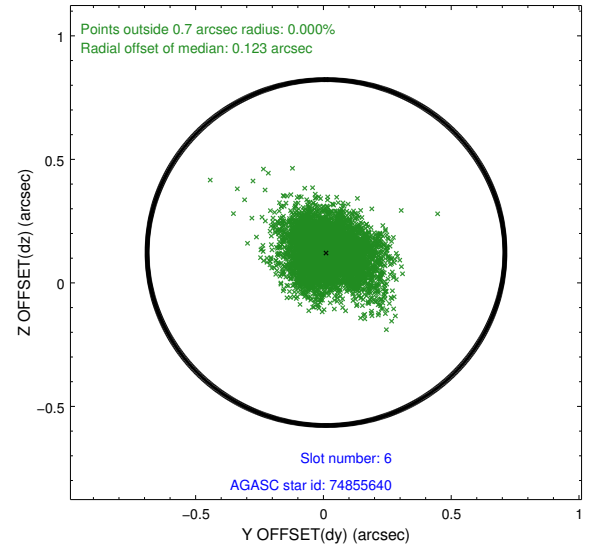
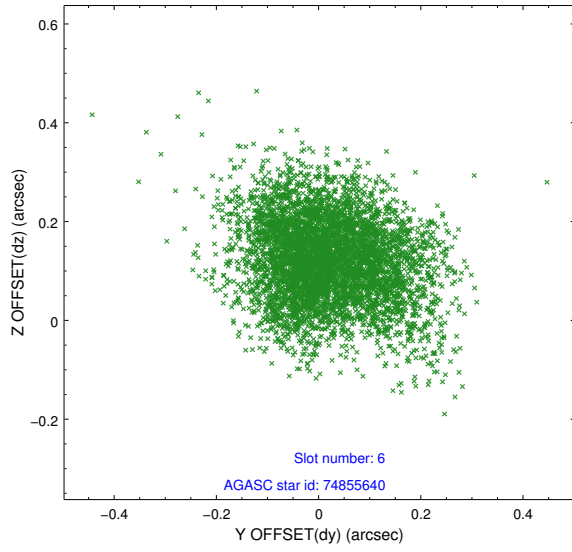
## 2.4.2 Slot 4



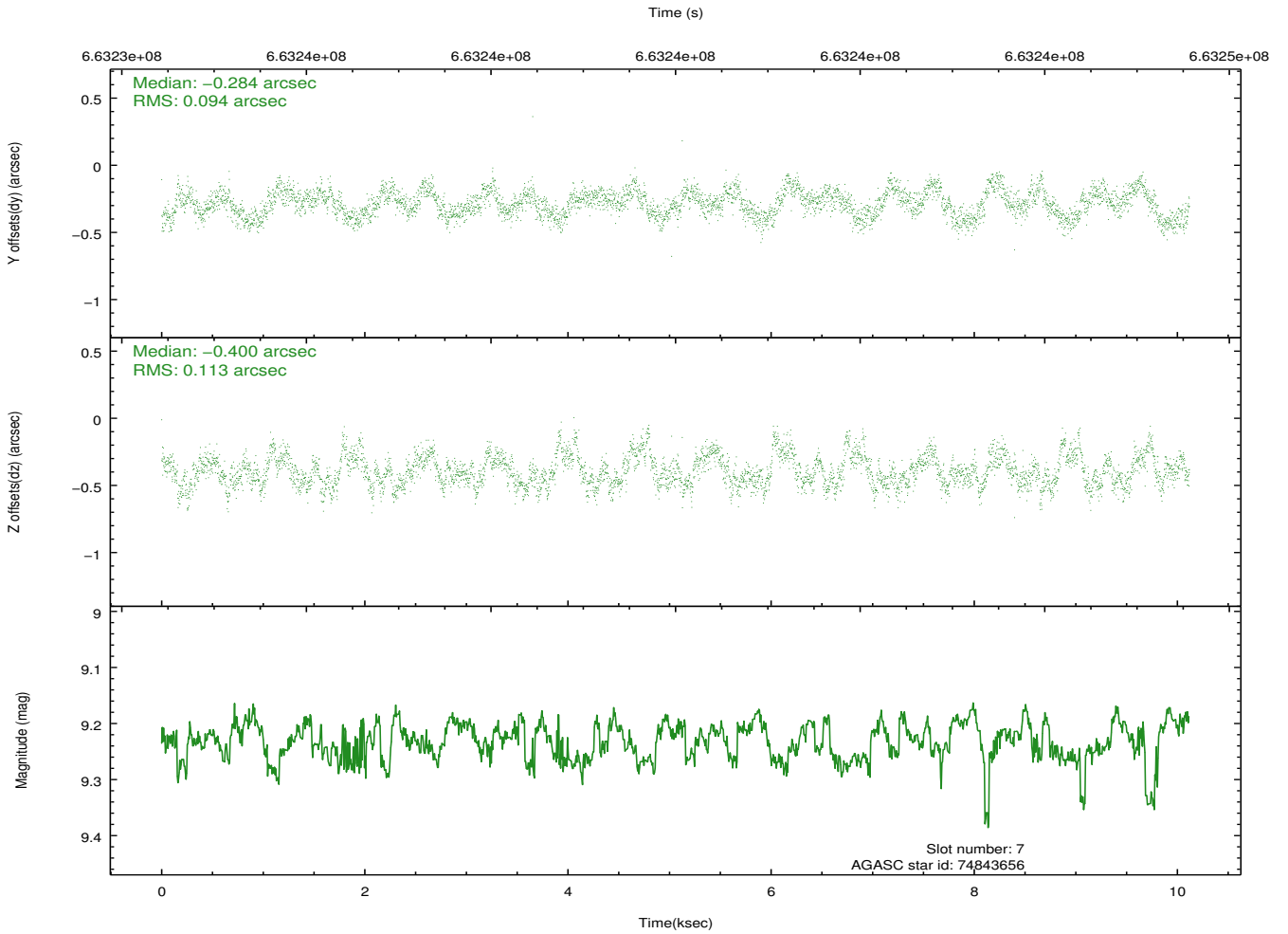
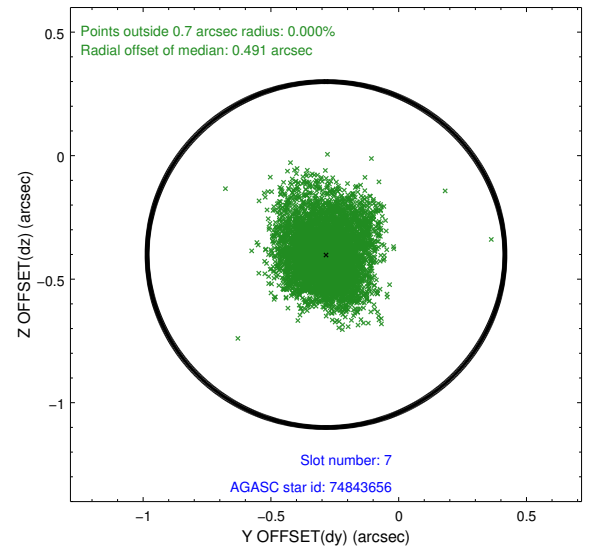
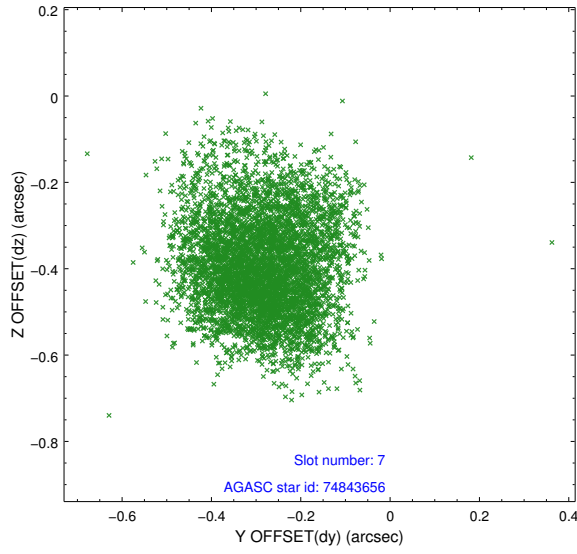
### 2.4.3 Slot 5



## 2.4.4 Slot 6

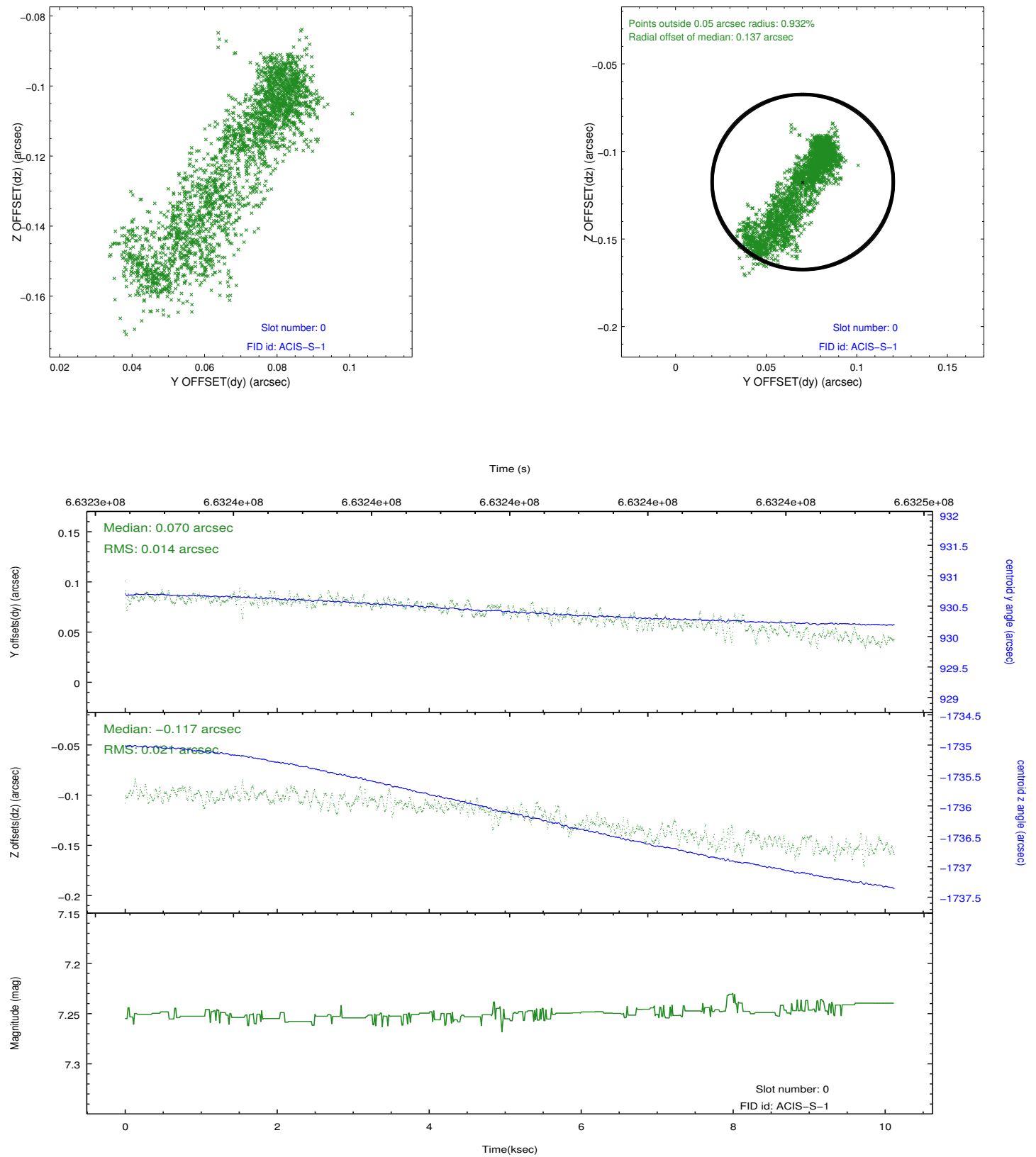


## 2.4.5 Slot 7

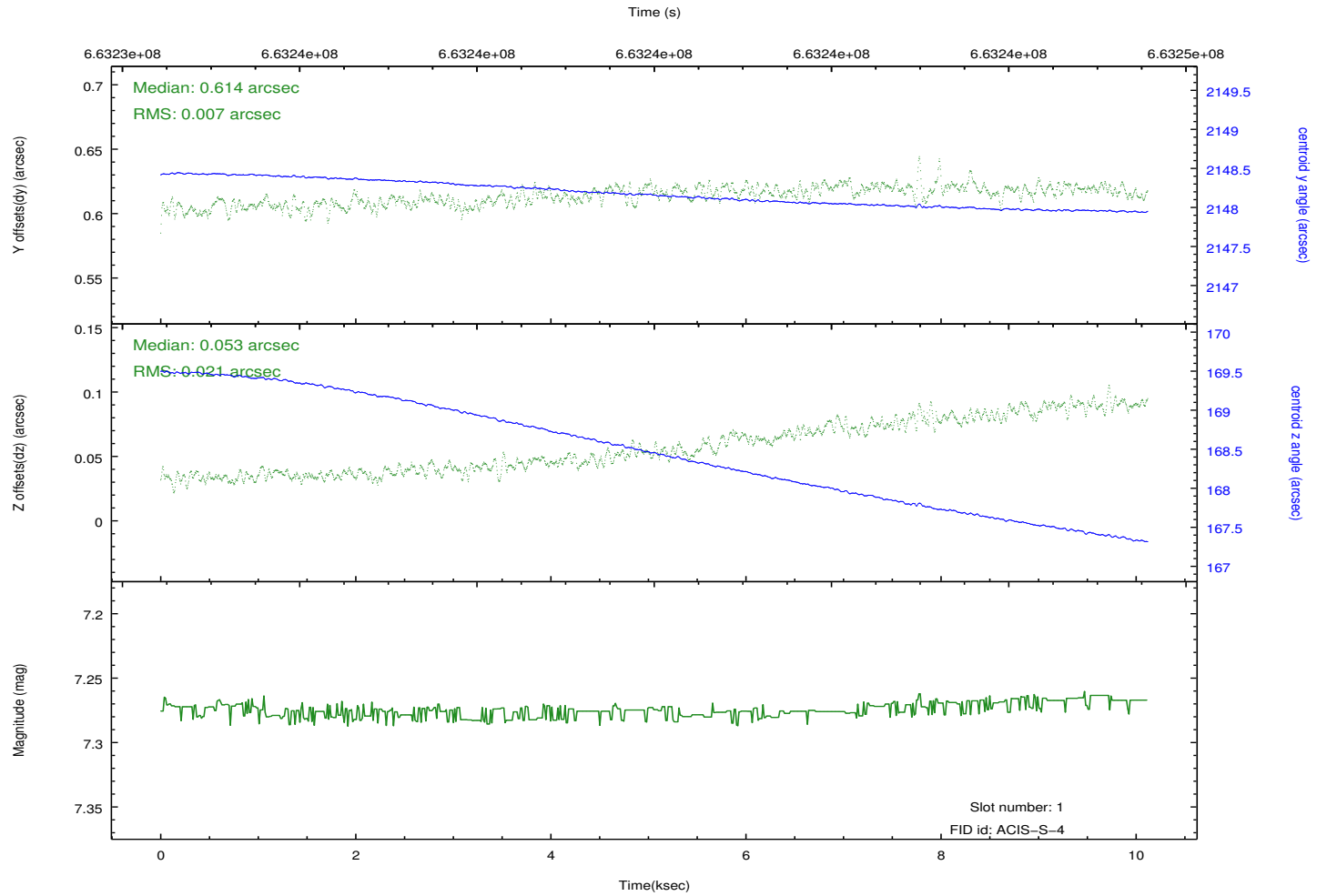
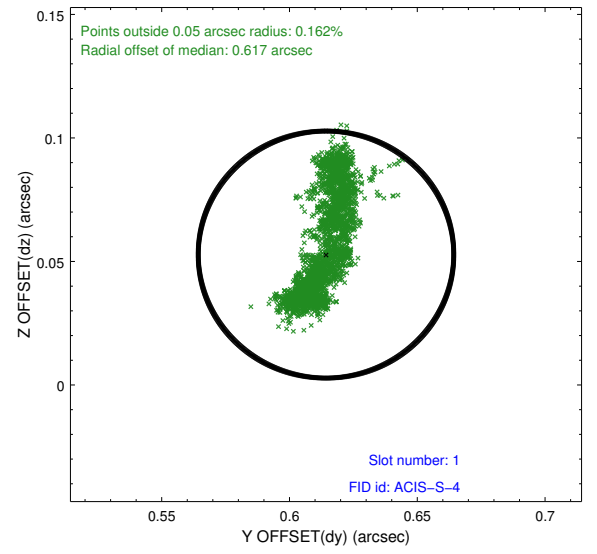
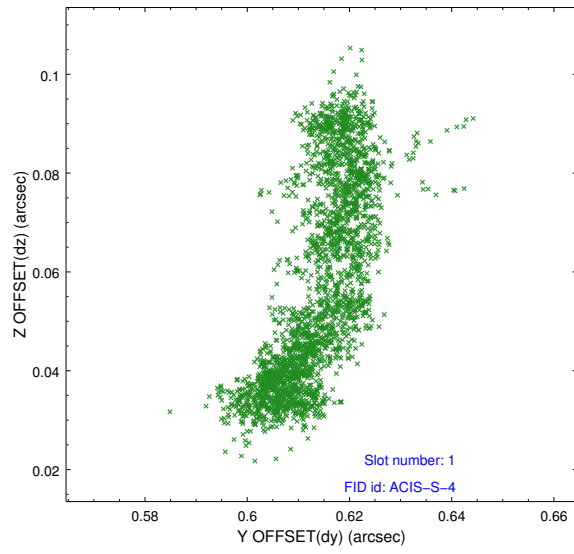


## 2.5 FID Slots

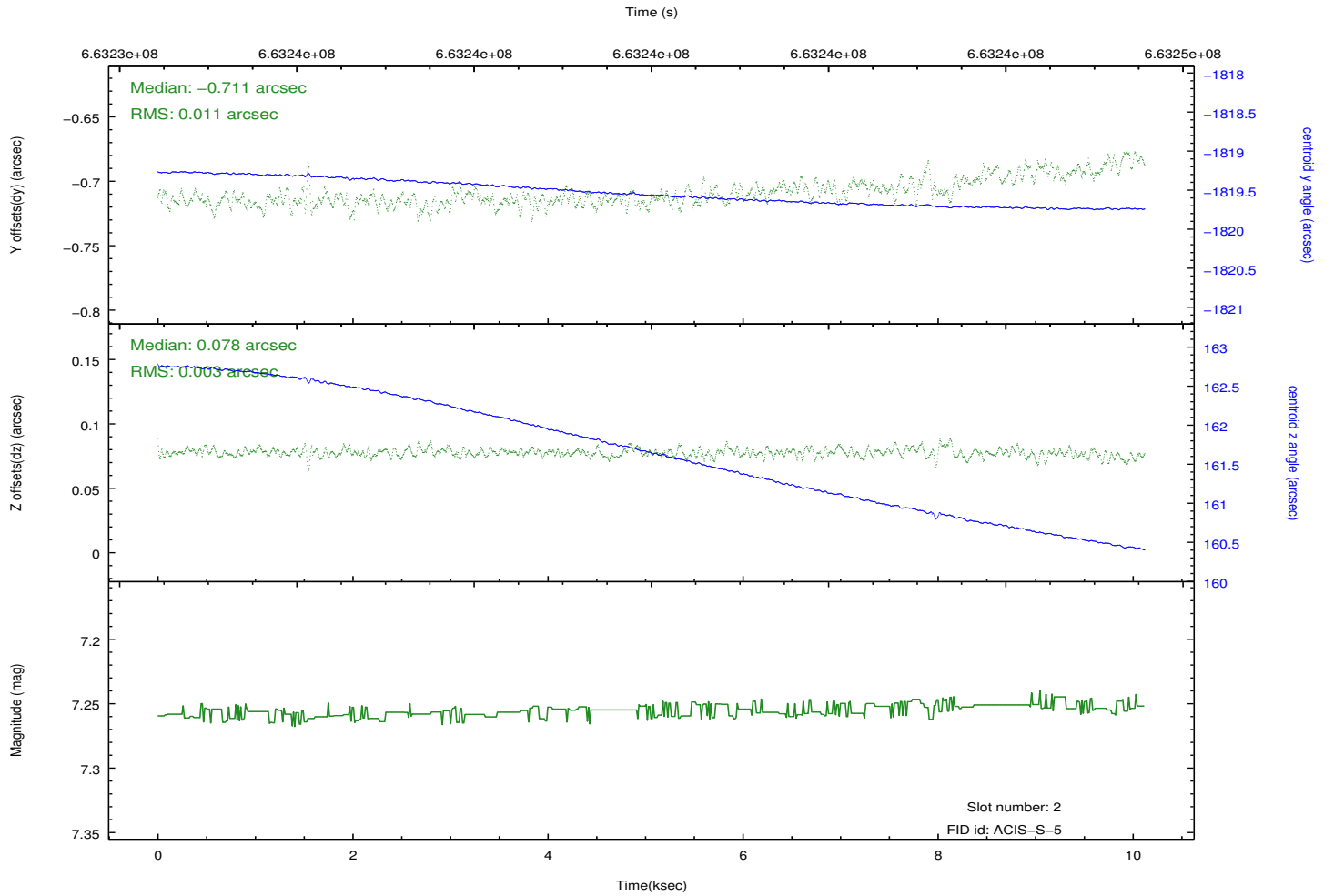
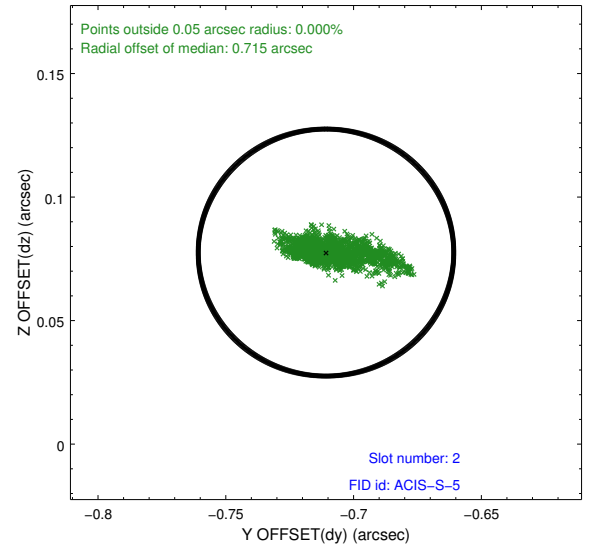
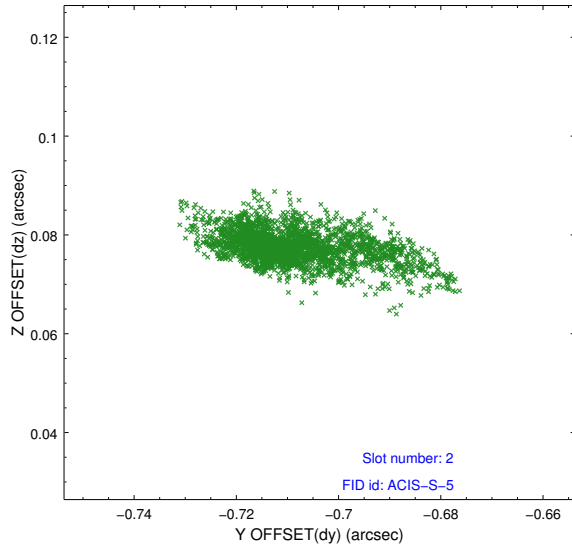
### 2.5.1 Slot 0



## 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)	2019.01.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.058900282145

### A.2 Comments