

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5901 - L2 Version 4  
Chandra X-Ray Center

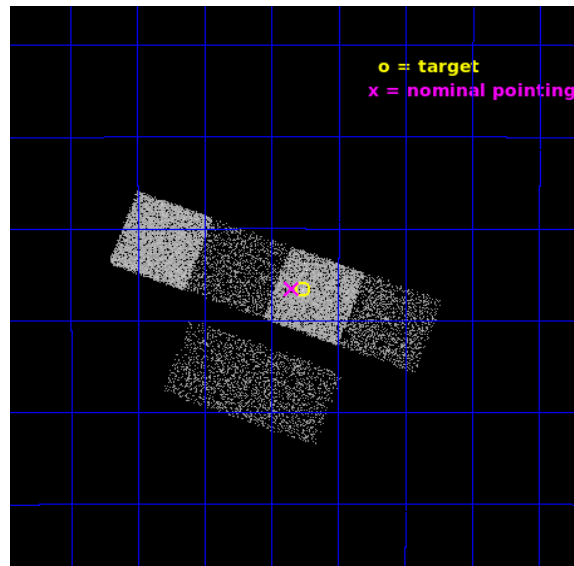
L2 Processing Date : Oct 6 2020

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# 1 Front

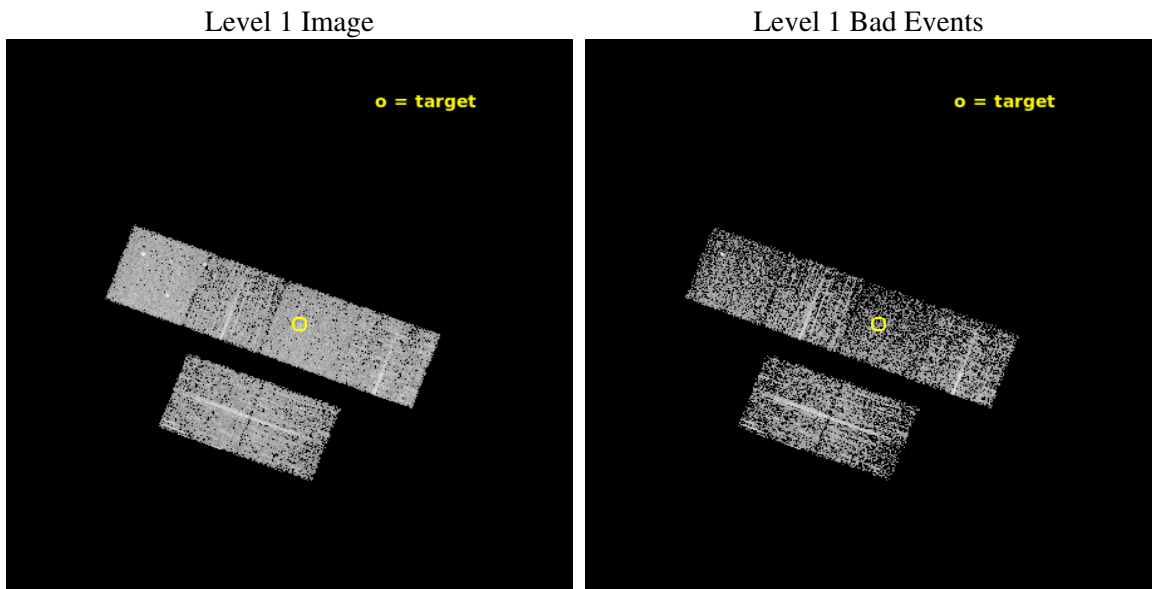
seq_num	600420	Sequence number
obs_id	5901	Observation id
title	Snapshot Observations of X-ray Bright Early-Type Galaxies	Proposal
observer	Dr. Stephen Murray	Principal investigator
object	NGC2986	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	146.066667	Observer's specified target RA [deg]
dec_targ	-21.278056	Observer's specified target Dec [deg]
ra_nom	146.08679687772	Nominal RA [deg]
dec_nom	-21.276010953323	Nominal Dec [deg]
roll_nom	20.43155967763	Nominal Roll [deg]
revision	4	Processing version of data
ontime	2473.2043051124	Sum of GTIs [s]
livetime	2441.8871030162	Livetime [s]
ontime2	2473.2453451157	Sum of GTIs [s]
ontime3	2473.0811851025	Sum of GTIs [s]
ontime5	2473.1632651091	Sum of GTIs [s]
ontime6	2473.1222251058	Sum of GTIs [s]
ontime7	2473.2043051124	Sum of GTIs [s]
ontime8	2473.040145129	Sum of GTIs [s]
l2events	22832	Number of level 2 events



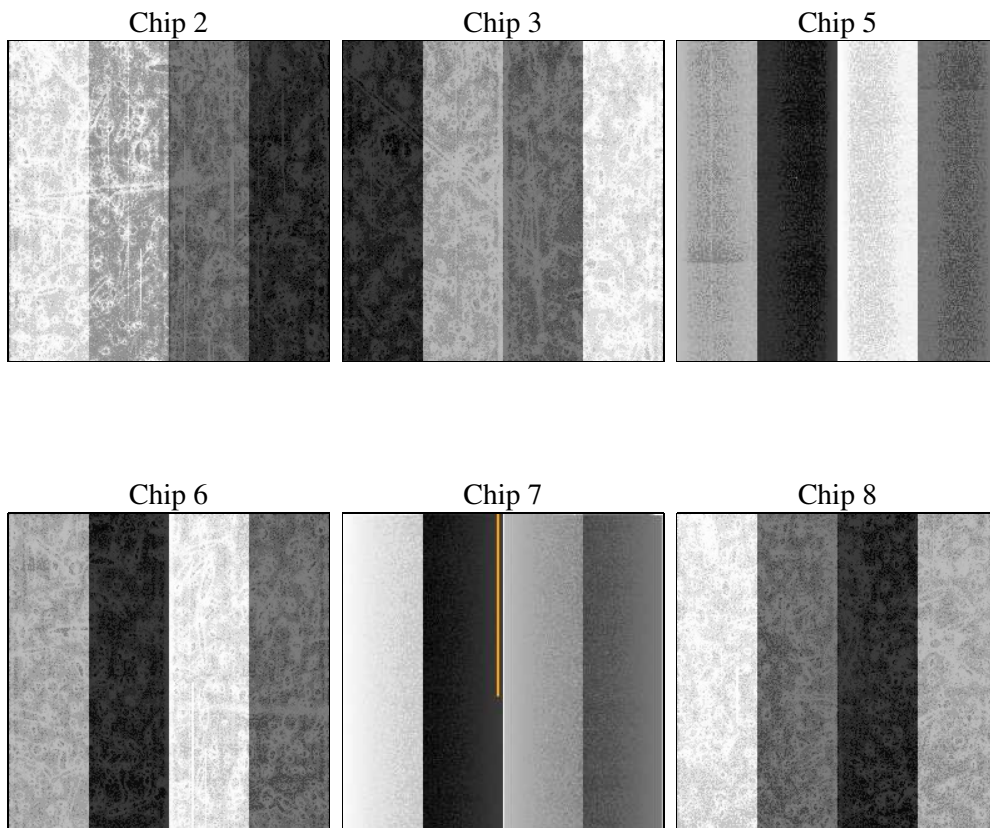
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	2500.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	2473.2043051124	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime2	2473.2453451157	Sum of GTIs [s]
date	2020-10-06T09:42:40	Date and time of file creation	ontime3	2473.0811851025	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	2473.1632651091	Sum of GTIs [s]
			ontime6	2473.1222251058	Sum of GTIs [s]
			ontime7	2473.2043051124	Sum of GTIs [s]
			ontime8	2473.040145129	Sum of GTIs [s]
			l1events	101325	Number of level 1 events

### 2.1.4 Events

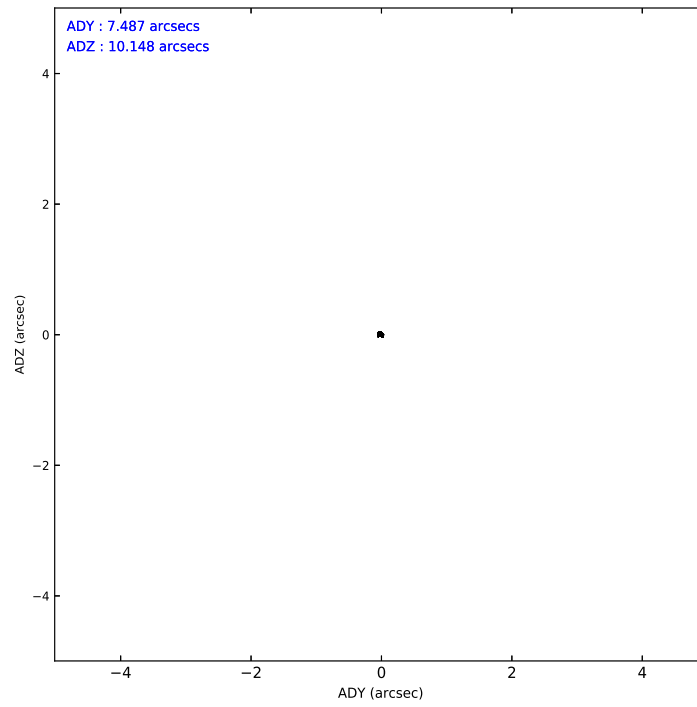
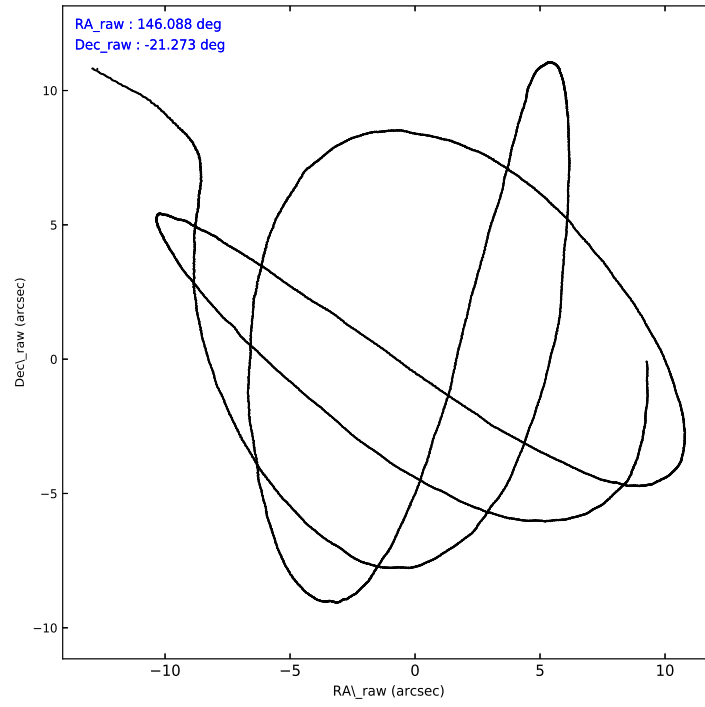
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	15661	14370	20603	15200	17034	18457
rejected events	14125	12934	10526	13534	8748	13994
rejected %	90%	90%	51%	89%	51%	75%

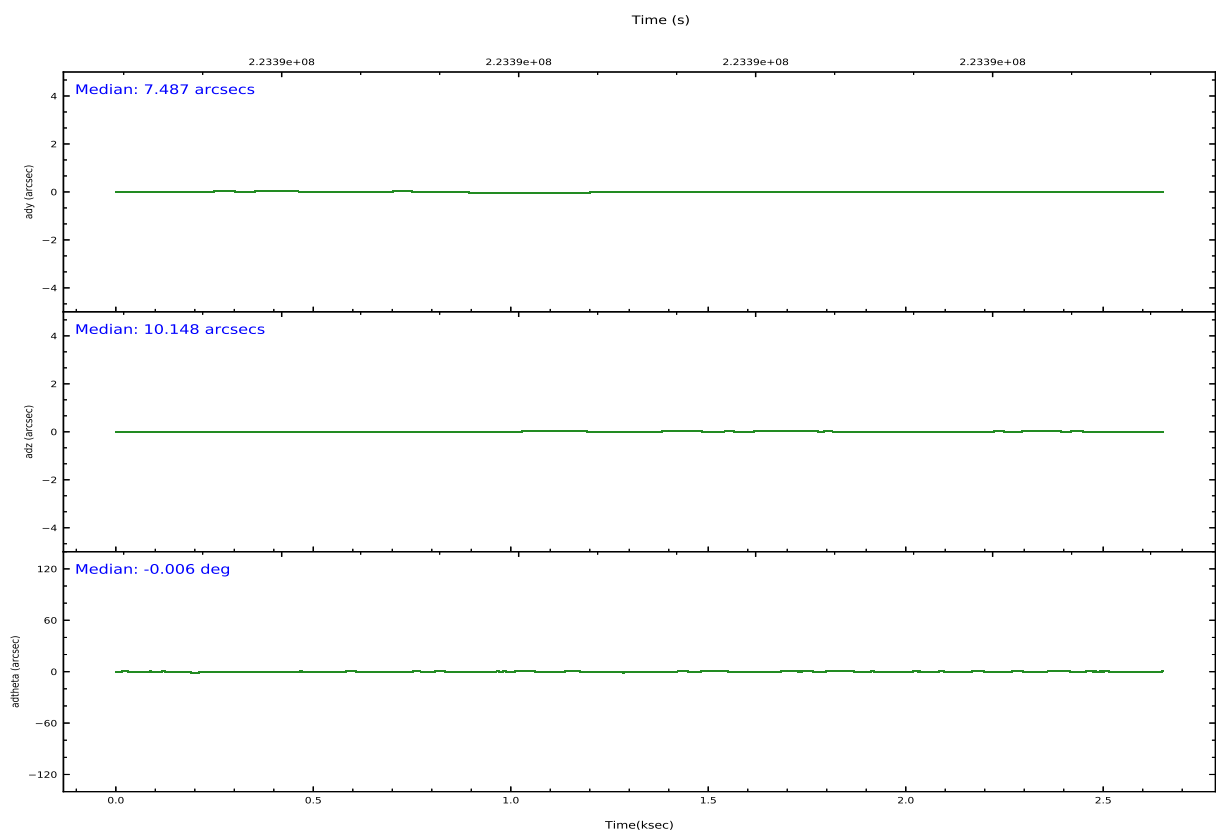
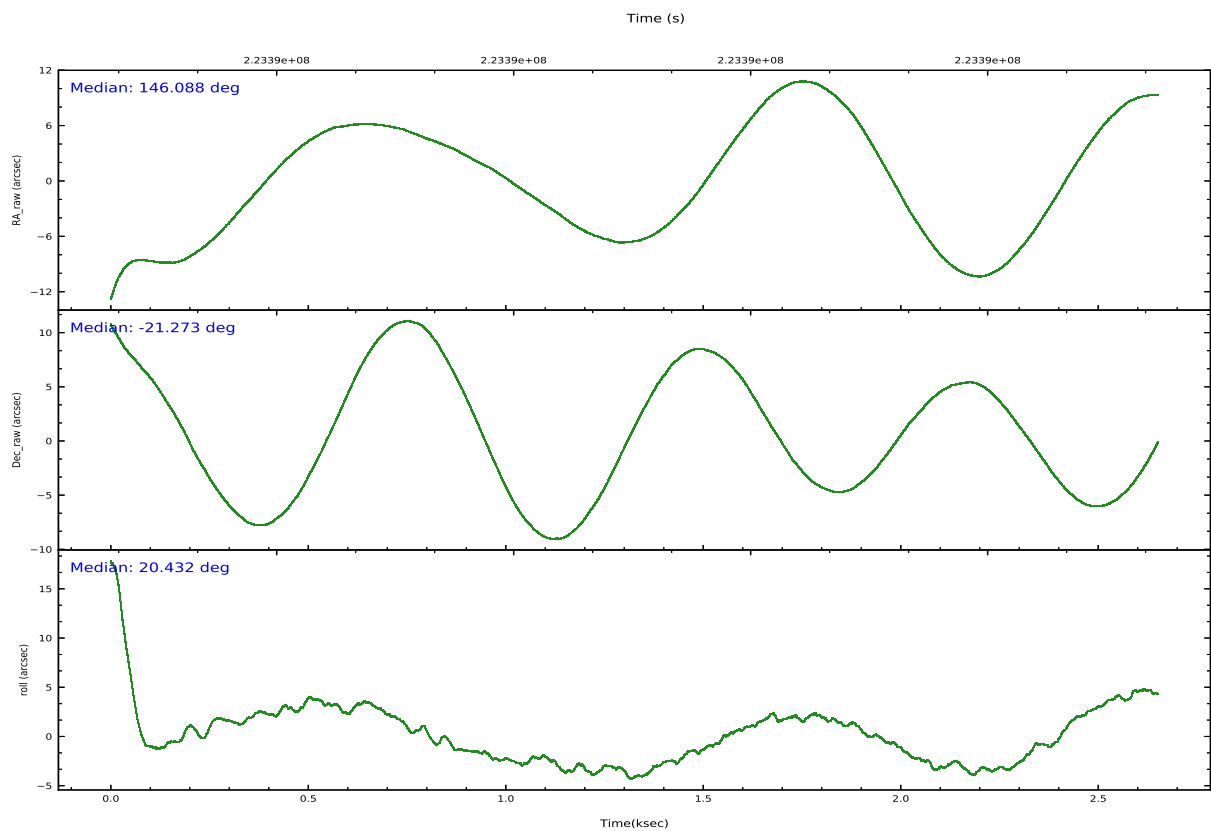
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	554	545	1055	624	958	1386
	3%	3%	5%	4%	5%	7%
grade 1 events	7	8	22	8	13	16
	0%	0%	0%	0%	0%	0%
grade 2 events	358	268	2933	341	1714	968
	2%	1%	14%	2%	10%	5%
grade 3 events	155	162	496	181	800	507
	0%	1%	2%	1%	4%	2%
grade 4 events	170	165	411	189	805	476
	1%	1%	1%	1%	4%	2%
grade 5 events	535	582	1819	614	1794	878
	3%	4%	8%	4%	10%	4%
grade 6 events	304	299	5211	336	4025	1131
	1%	2%	25%	2%	23%	6%
grade 7 events	13578	12341	8656	12907	6925	13095
	86%	85%	42%	84%	40%	70%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-235678	ACIS-235678	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	146.069811	146.08679687772	Subarray requested	NONE	NONE
[deg] Pointing Dec	-21.293676	-21.276010953323	Alternating exposures requested	N	N
[deg] Pointing Roll	20.270608	20.43155967763	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	223391531.184000	223390554.56073			
Observation start date	2005-01-29T13:11:07	2005-01-29T12:55:54			
[s] Observation end time (MET)	223394031.184000	223394461.8609			
Observation end date	2005-01-29T13:52:47	2005-01-29T14:01:01			
Read mode	TIMED	TIMED			

## 2.3 Aspect





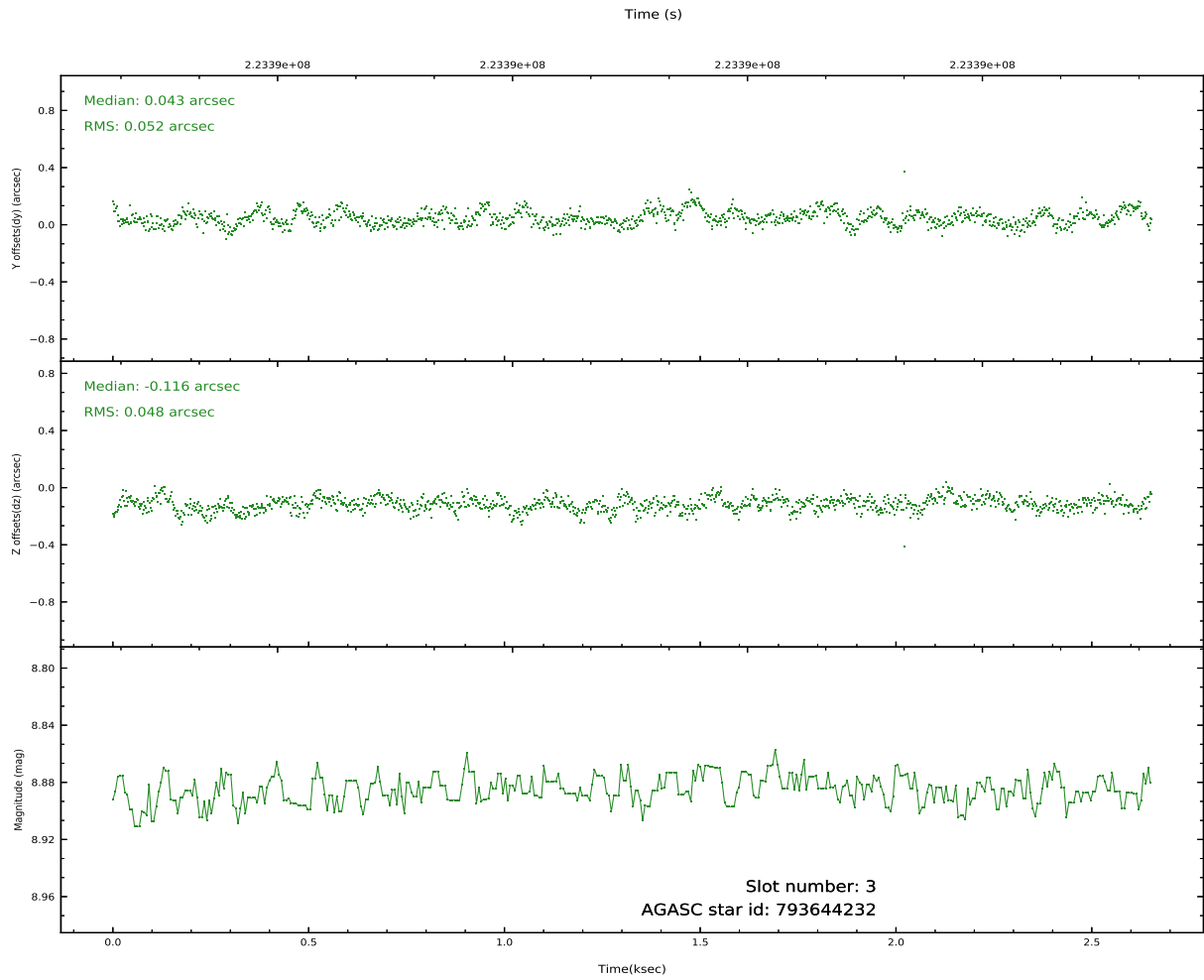
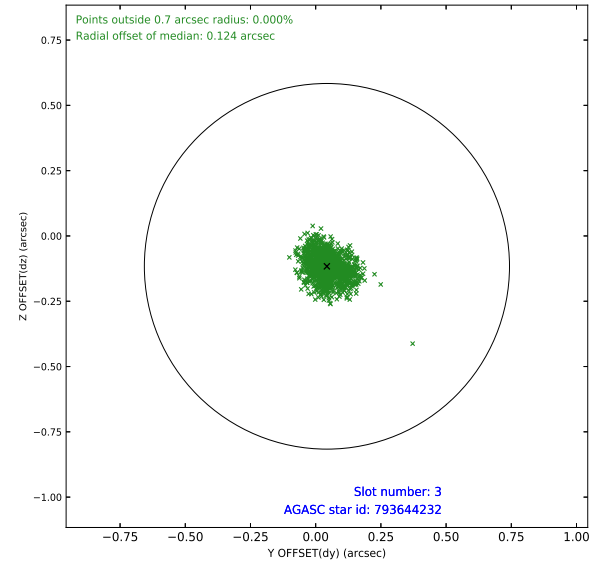
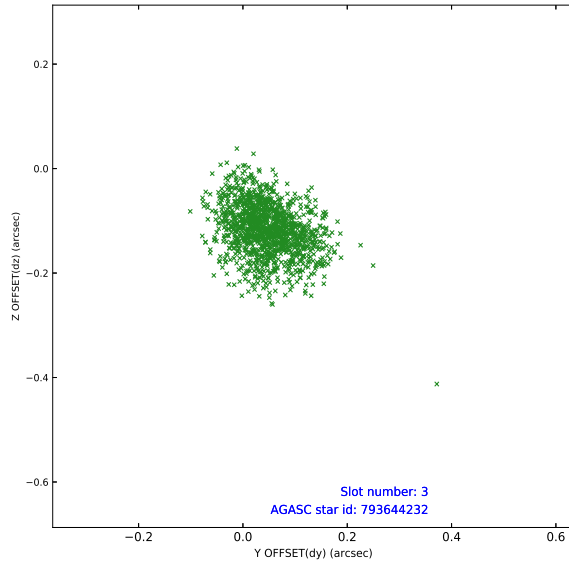
Slot Statistics

pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.10	647	1.000	-0.078	-0.059	0.008	0.012	0.000000	0.000000	-760.26	-1731
1	FID		ACIS-S-4	7.20	647	1.000	0.158	0.053	0.006	0.011	0.000000	0.000000	2152.08	174
2	FID		ACIS-S-5	7.23	648	1.000	-0.111	0.014	0.006	0.012	0.000000	0.000000	-1810.09	170
3	GUIDE	used	793644232	8.89	1295	1.000	0.043	-0.116	0.075	0.122	145.501411	-20.919397	-1326.71	1922
4	GUIDE	used	793778576	8.30	1294	1.000	-0.043	0.128	0.067	0.111	146.164515	-21.957858	-531.61	-2351
5	GUIDE	used	793779344	8.32	1295	1.000	-0.084	-0.057	0.056	0.092	146.313111	-20.672070	1543.49	1813
6	GUIDE	used	793779416	8.24	1295	1.000	-0.036	0.094	0.070	0.111	146.782685	-21.700697	1729.59	-2203
7	GUIDE	used	793653224	8.80	1294	1.000	0.115	-0.044	0.071	0.118	145.937146	-21.155491	-243.16	619

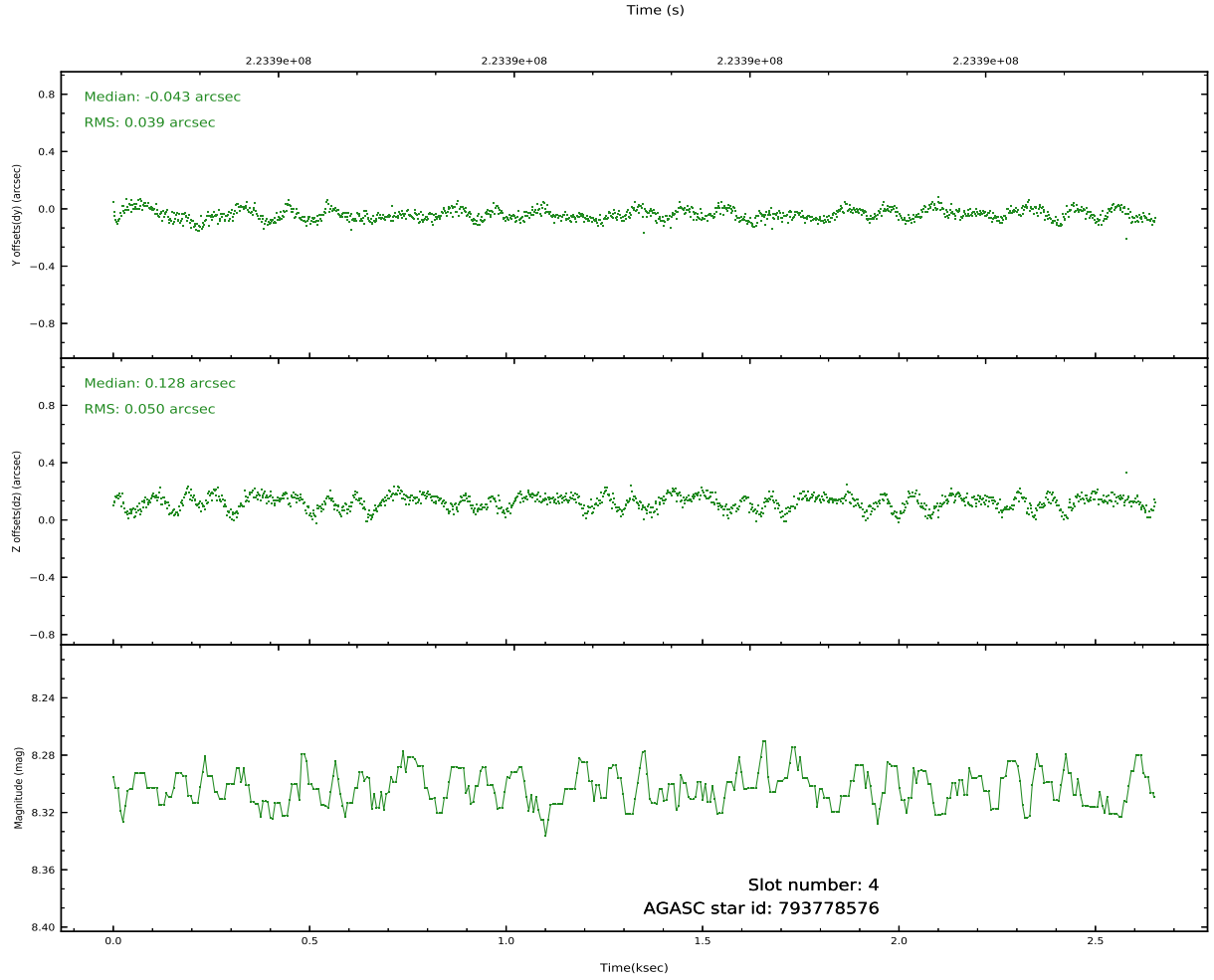
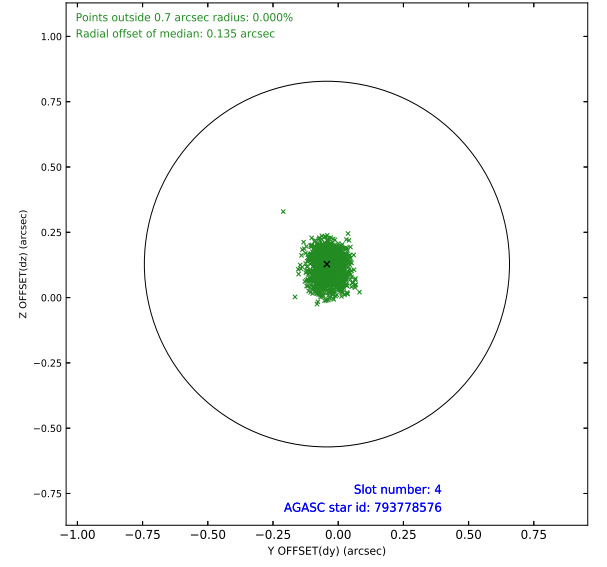
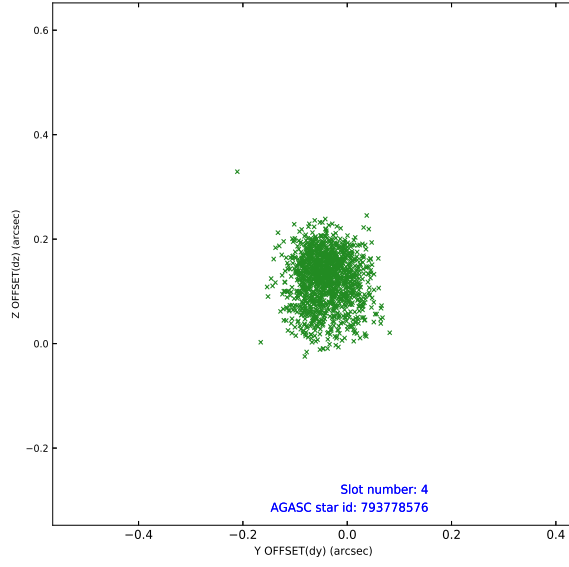


## 2.4 Star Slots

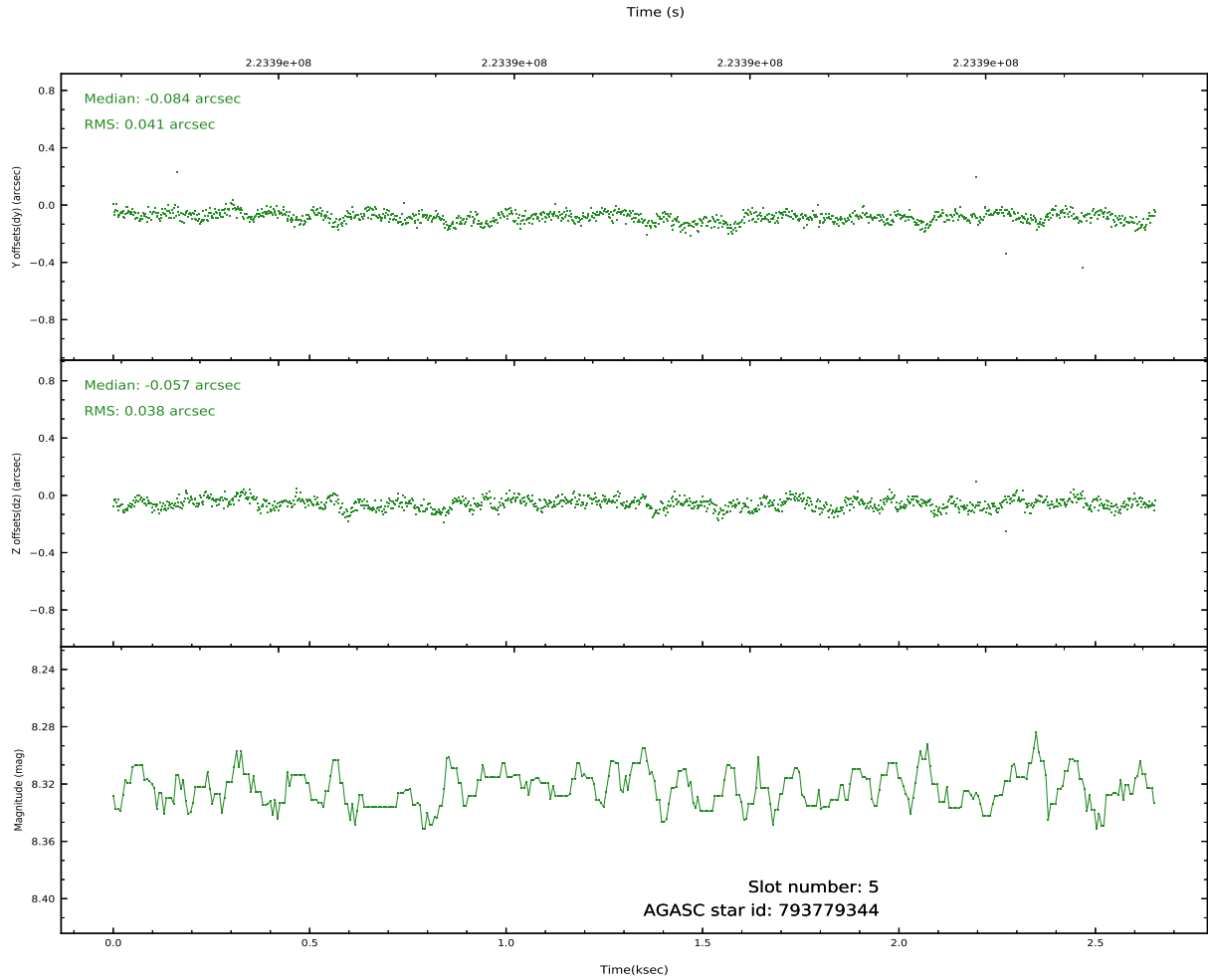
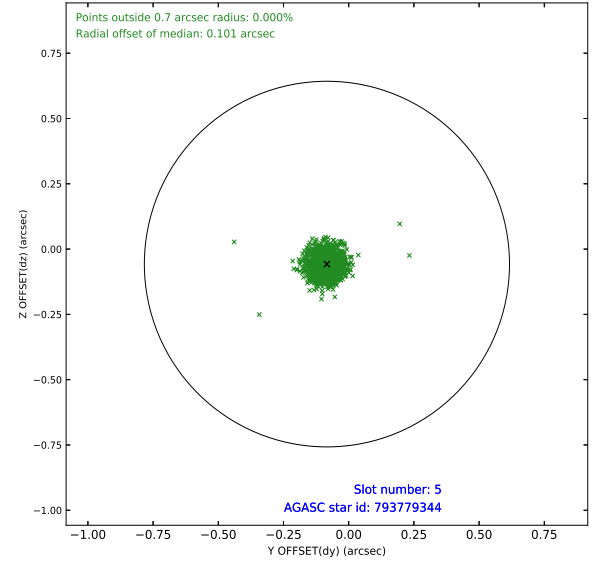
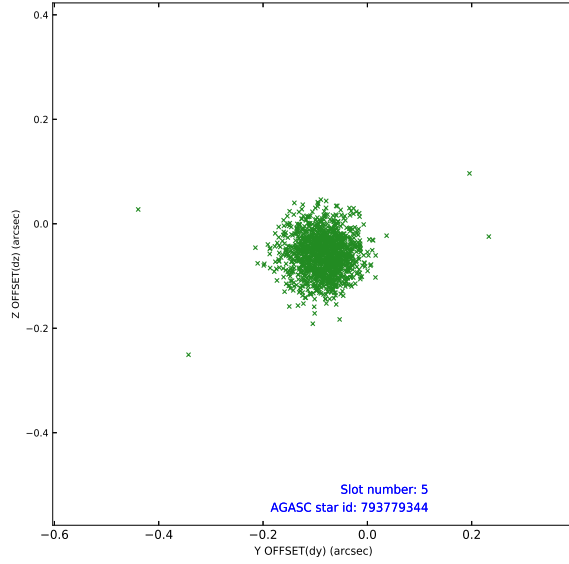
### 2.4.1 Slot 3



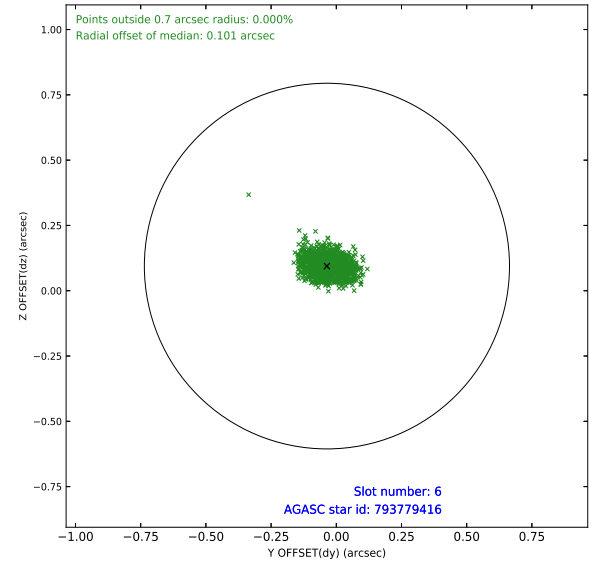
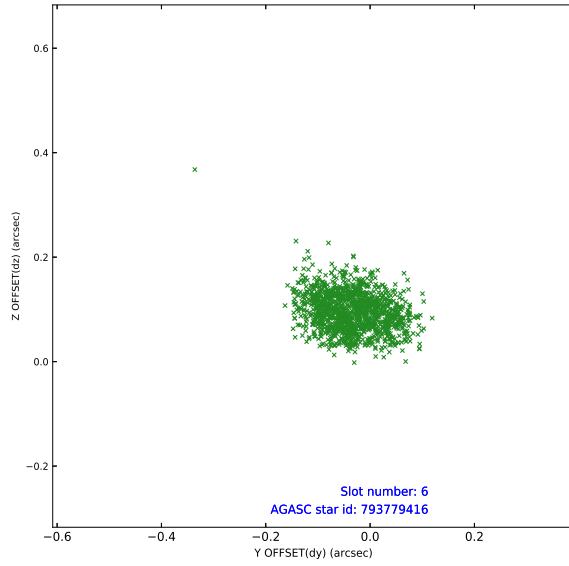
## 2.4.2 Slot 4



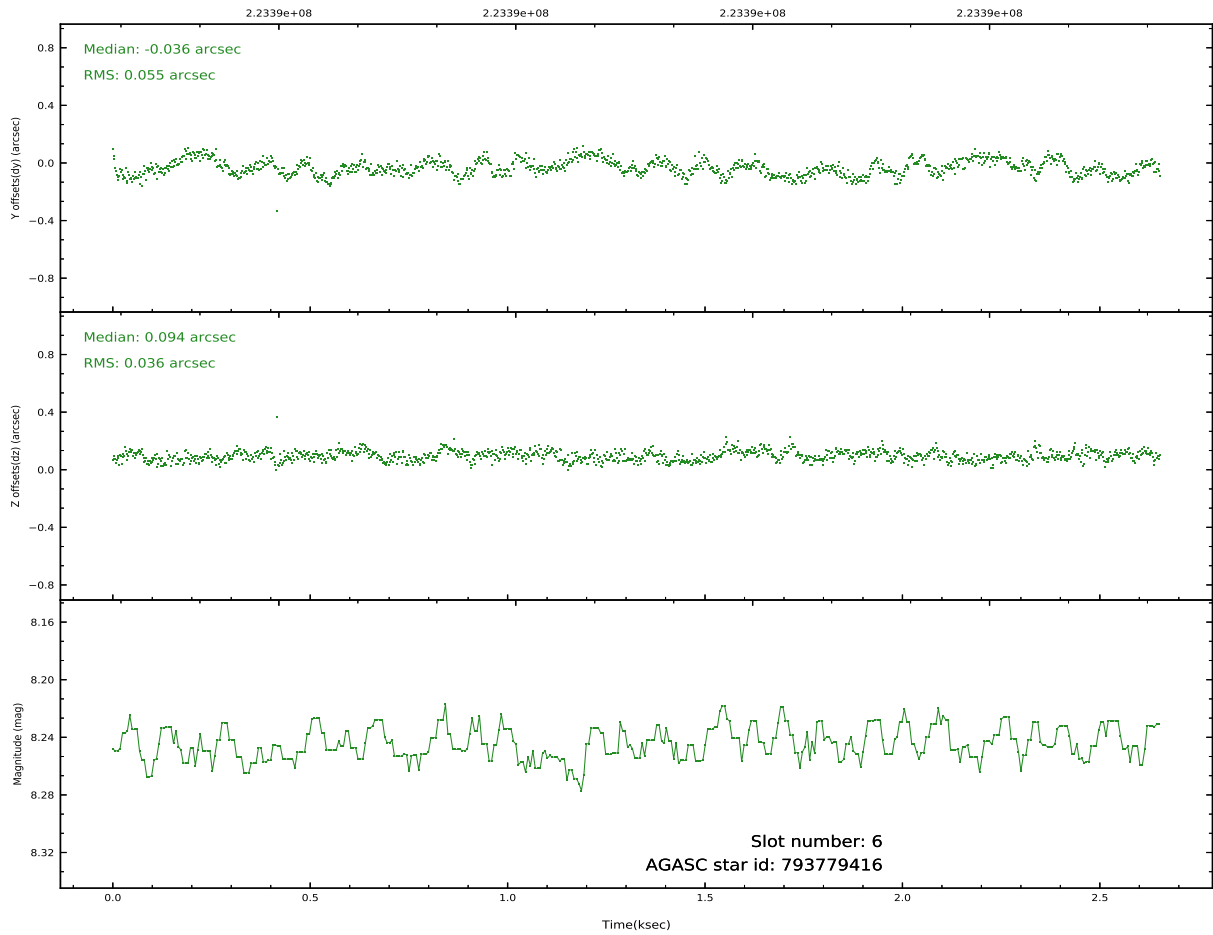
### 2.4.3 Slot 5



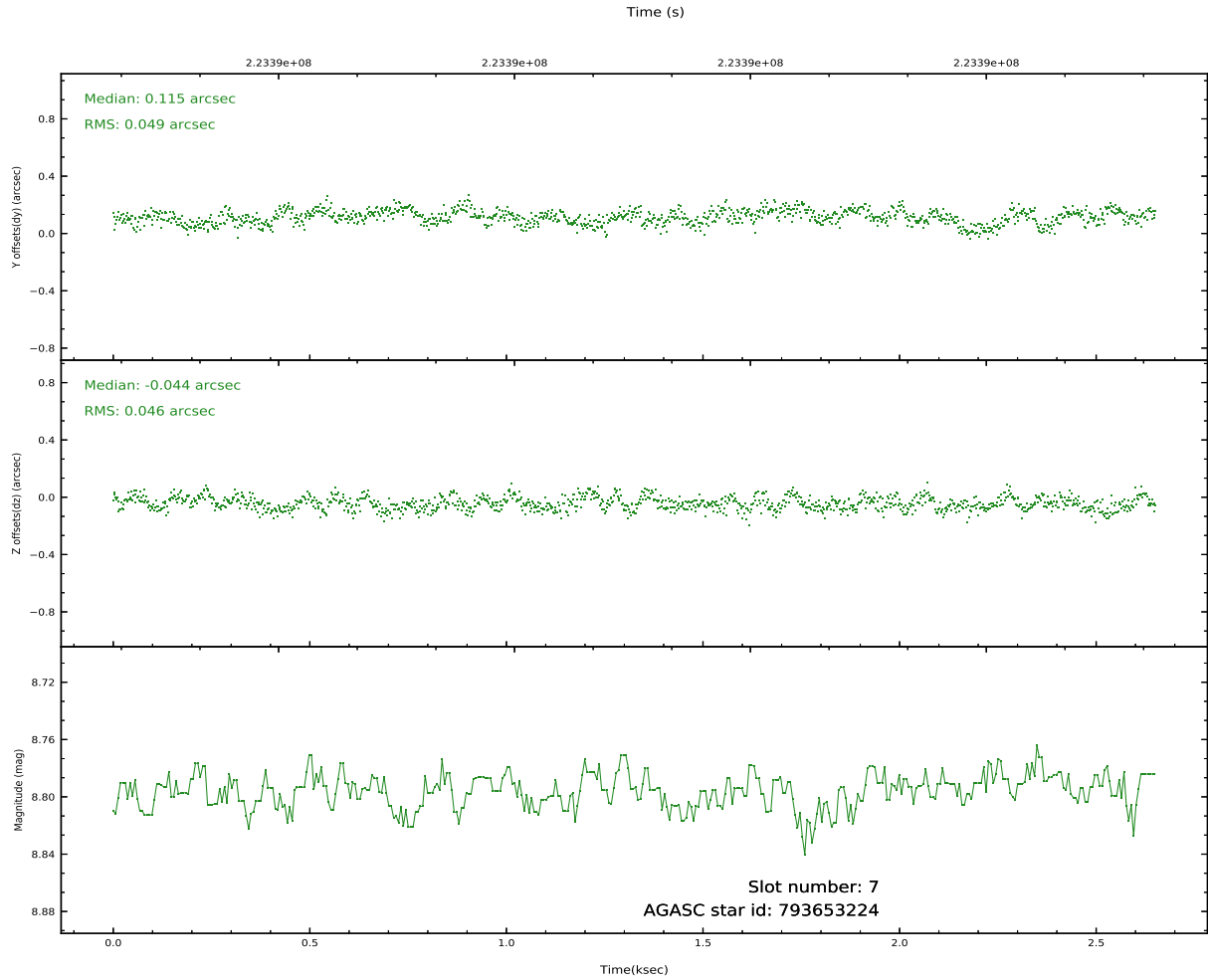
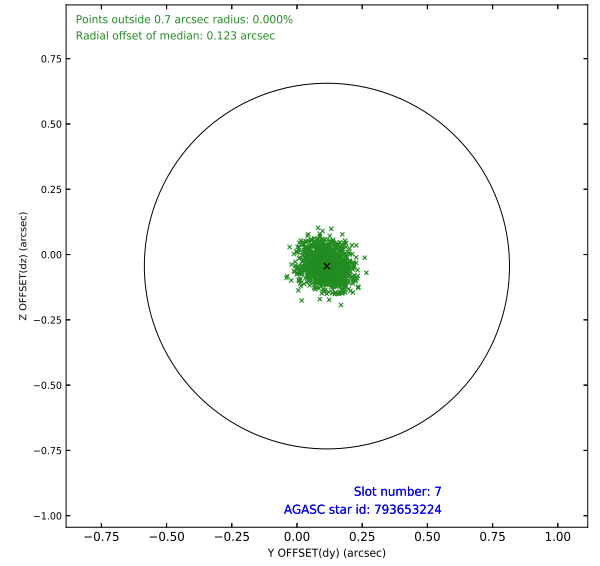
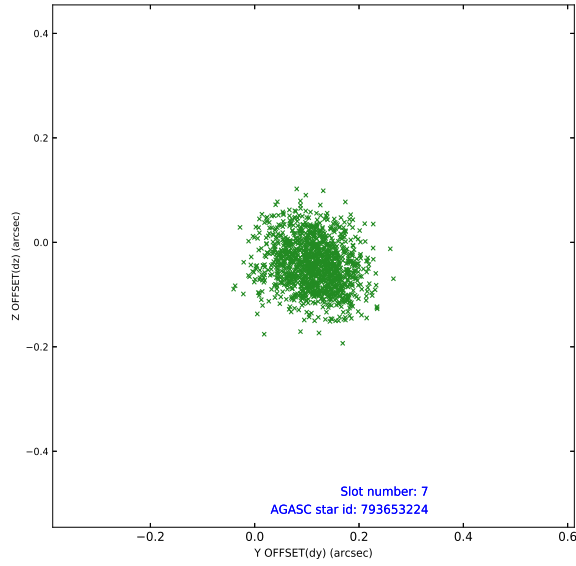
## 2.4.4 Slot 6



Time (s)

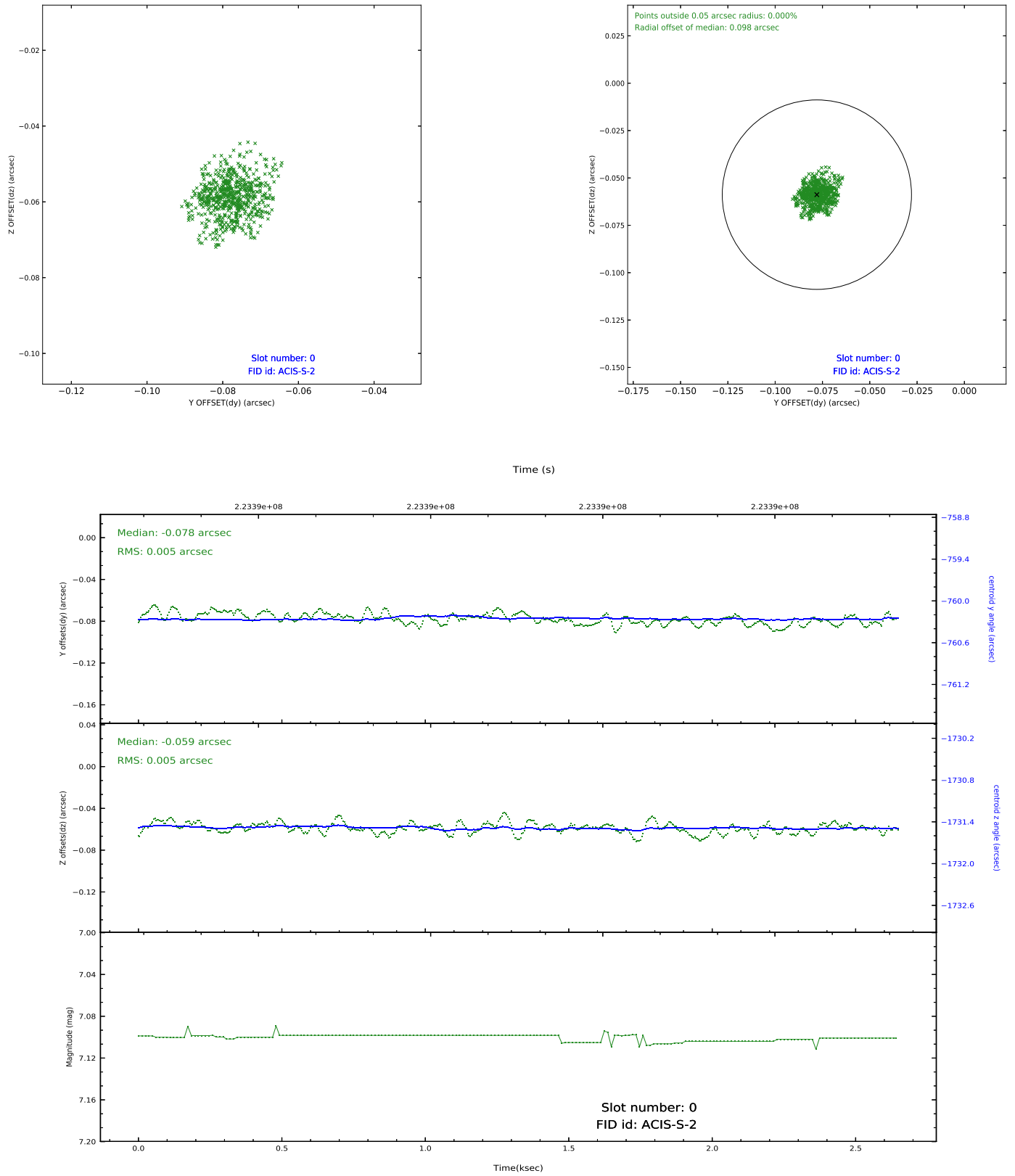


## 2.4.5 Slot 7

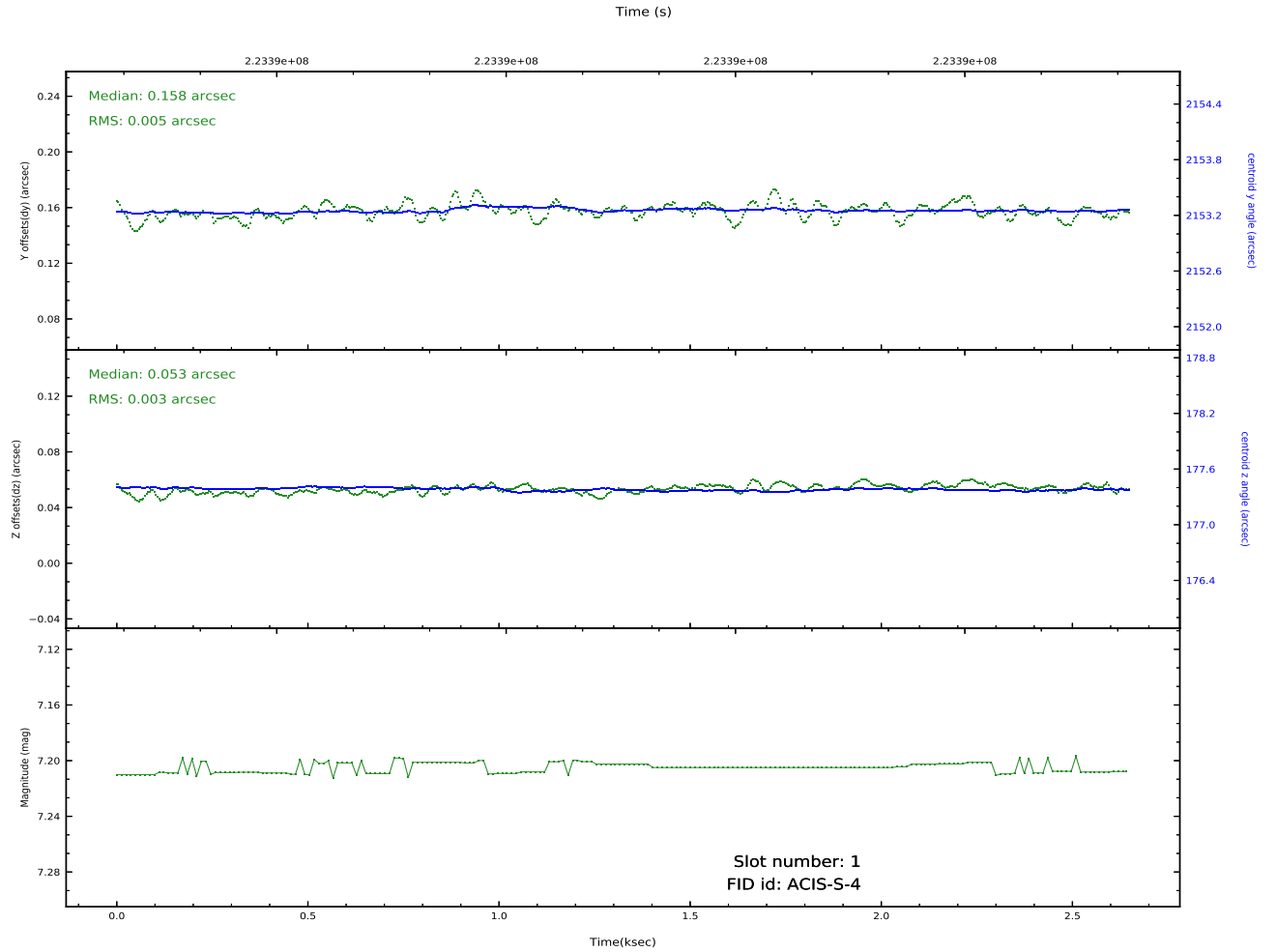
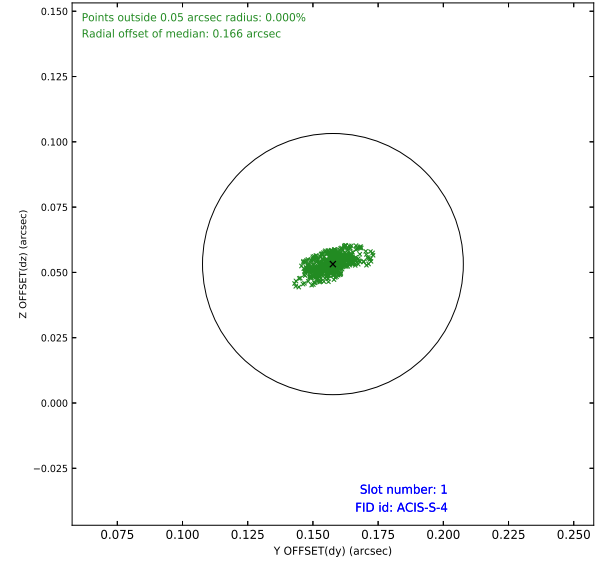
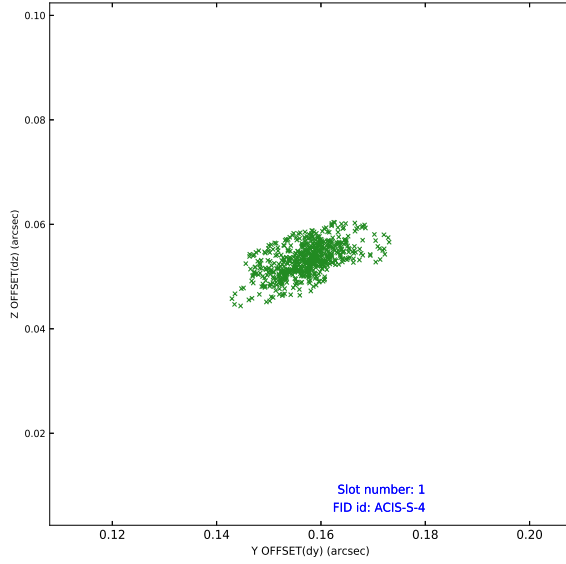


## 2.5 FID Slots

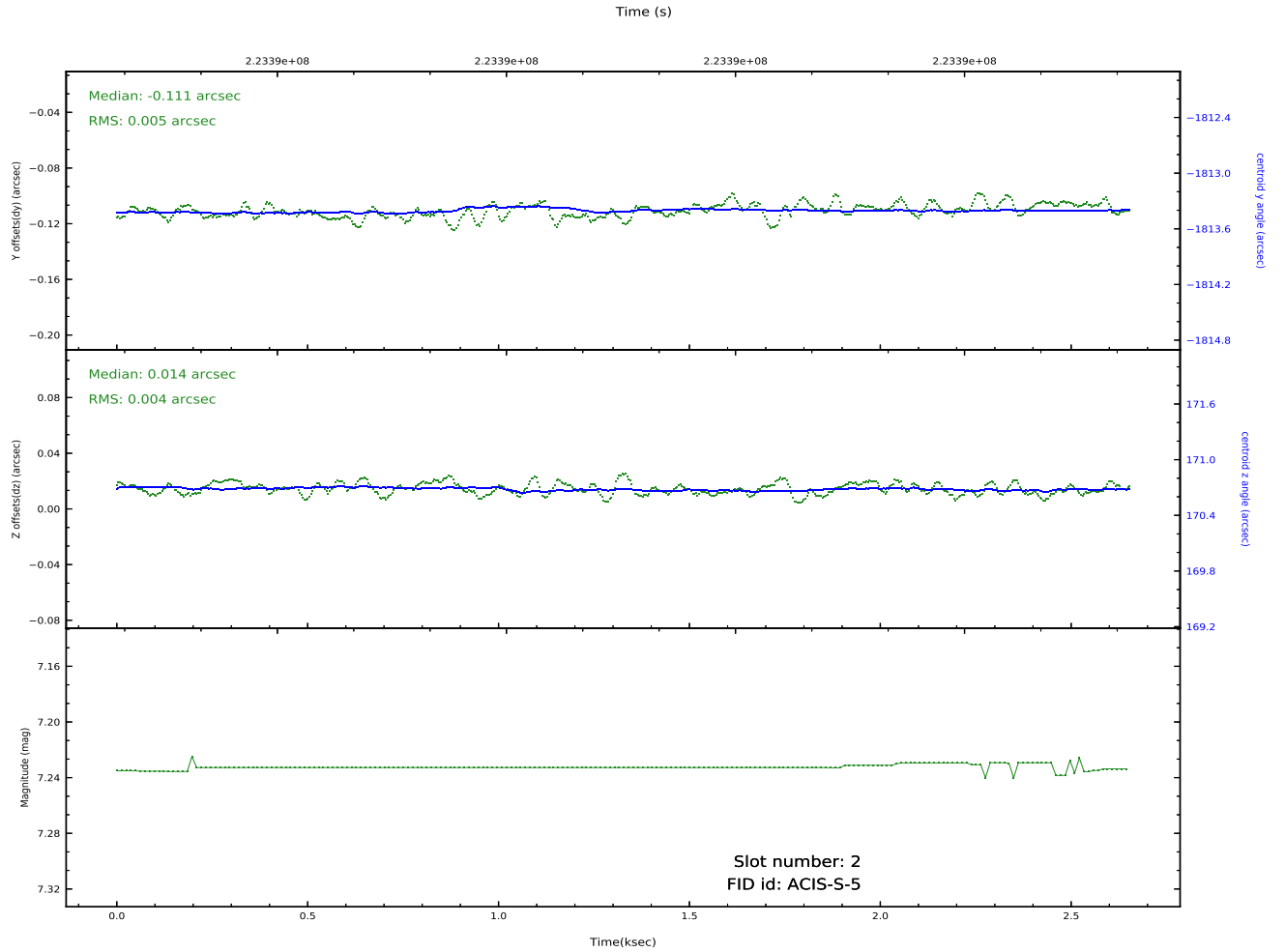
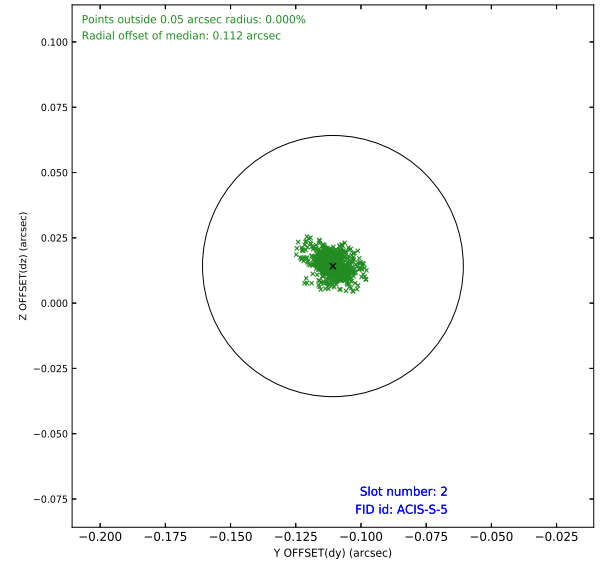
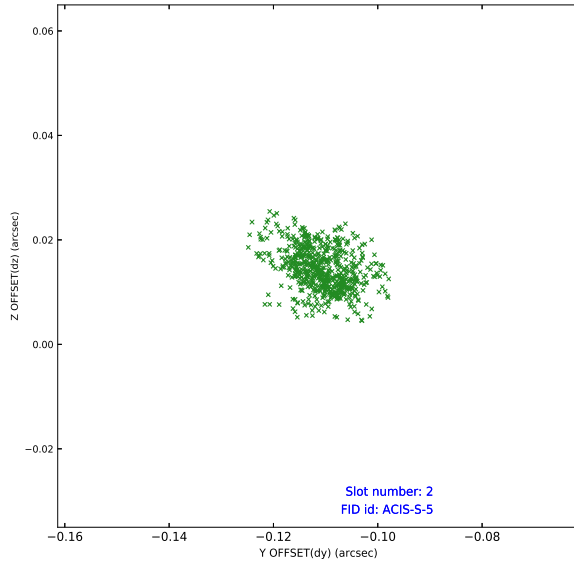
### 2.5.1 Slot 0



## 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)	2020.10.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	2.473599

### A.2 Comments