

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5163 - L2 Version 4  
Chandra X-Ray Center

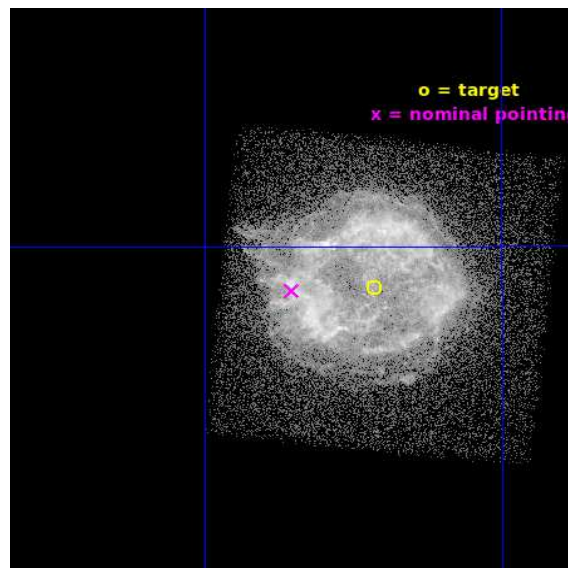
L2 Processing Date : Sep 24 2020

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# 1 Front

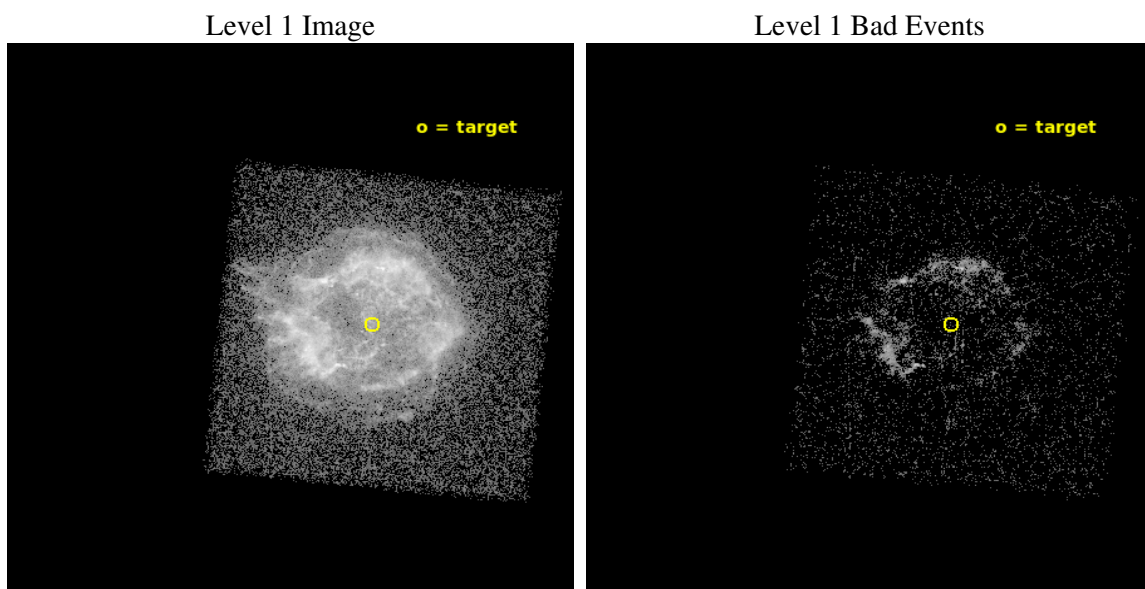
seq_num	590361	Sequence number
obs_id	5163	Observation id
title	AO5A Observations of the Standard Candles Cas A and G21.5-09	Propo
observer	CXC Calibration	Principal investigator
object	Cas A	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	350.8575	Observer's specified target RA [deg]
dec_targ	58.814833	Observer's specified target Dec [deg]
ra_nom	350.92653371016	Nominal RA [deg]
dec_nom	58.813305390558	Nominal Dec [deg]
roll_nom	5.9932448183094	Nominal Roll [deg]
revision	4	Processing version of data
ontime	1101.9492535293	Sum of GTIs [s]
livetime	1087.9957085669	Livetime [s]
ontime4	1918.9028063118	Sum of GTIs [s]
ontime5	1944.8715584874	Sum of GTIs [s]
ontime6	1944.707398504	Sum of GTIs [s]
ontime7	1101.9492535293	Sum of GTIs [s]
ontime8	1944.7894784808	Sum of GTIs [s]
ontime9	1944.7484384775	Sum of GTIs [s]
l2events	333249	Number of level 2 events



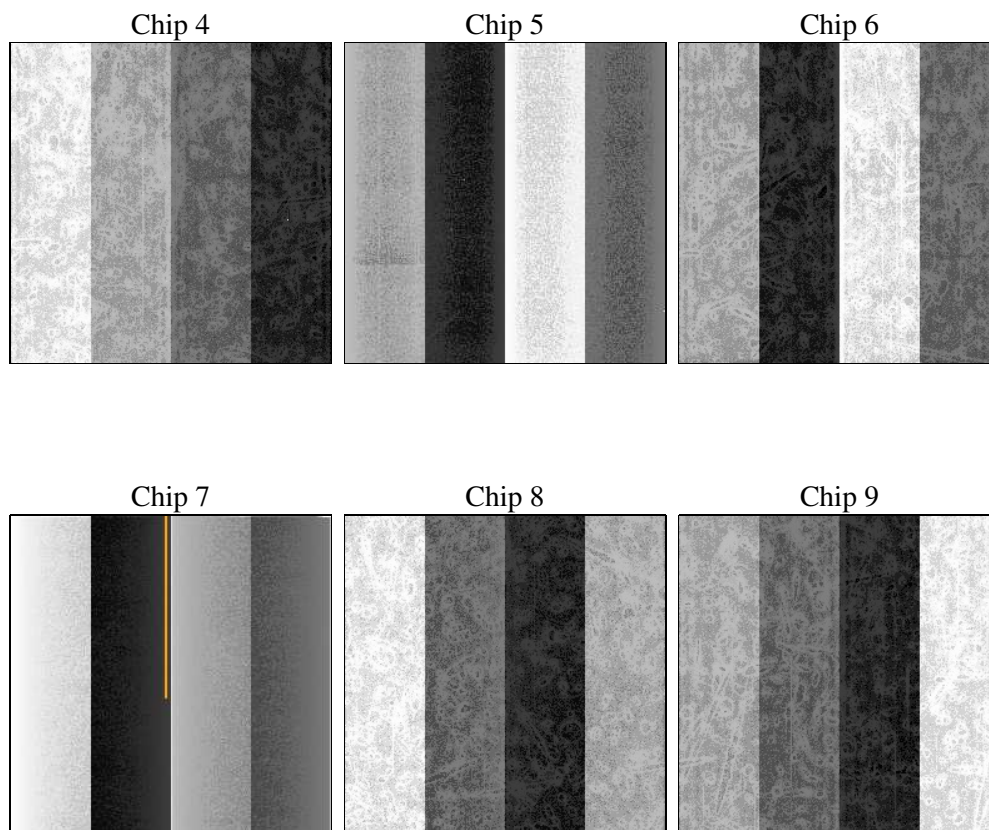
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	2000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	1101.9492535293	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime4	1918.9028063118	Sum of GTIs [s]
date	2020-09-24T11:39:59	Date and time of file creation	ontime5	1944.8715584874	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	1944.707398504	Sum of GTIs [s]
			ontime7	1101.9492535293	Sum of GTIs [s]
			ontime8	1944.7894784808	Sum of GTIs [s]
			ontime9	1944.7484384775	Sum of GTIs [s]
			l1events	375949	Number of level 1 events

### 2.1.4 Events

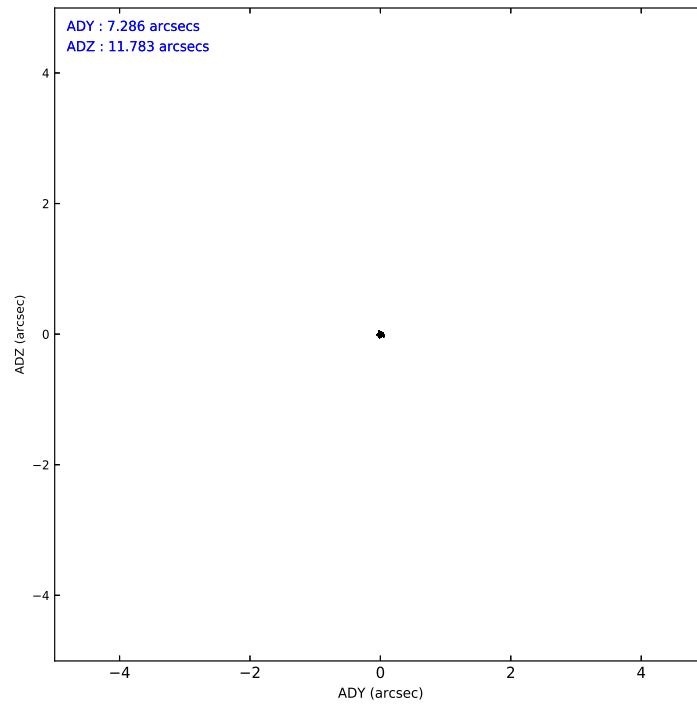
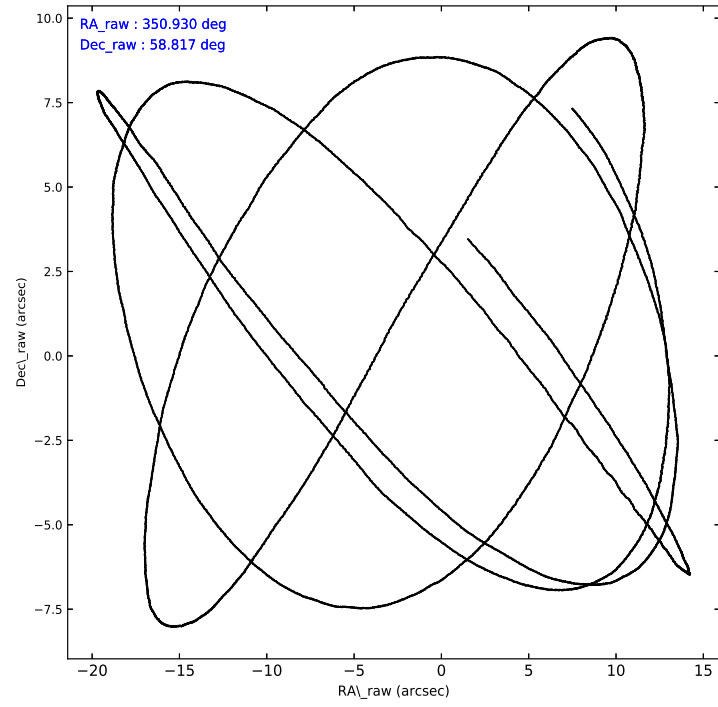
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	0	0	0	375949	0	0
rejected events	0	0	0	39031	0	0
rejected %	0%	0%	0%	10%	0%	0%

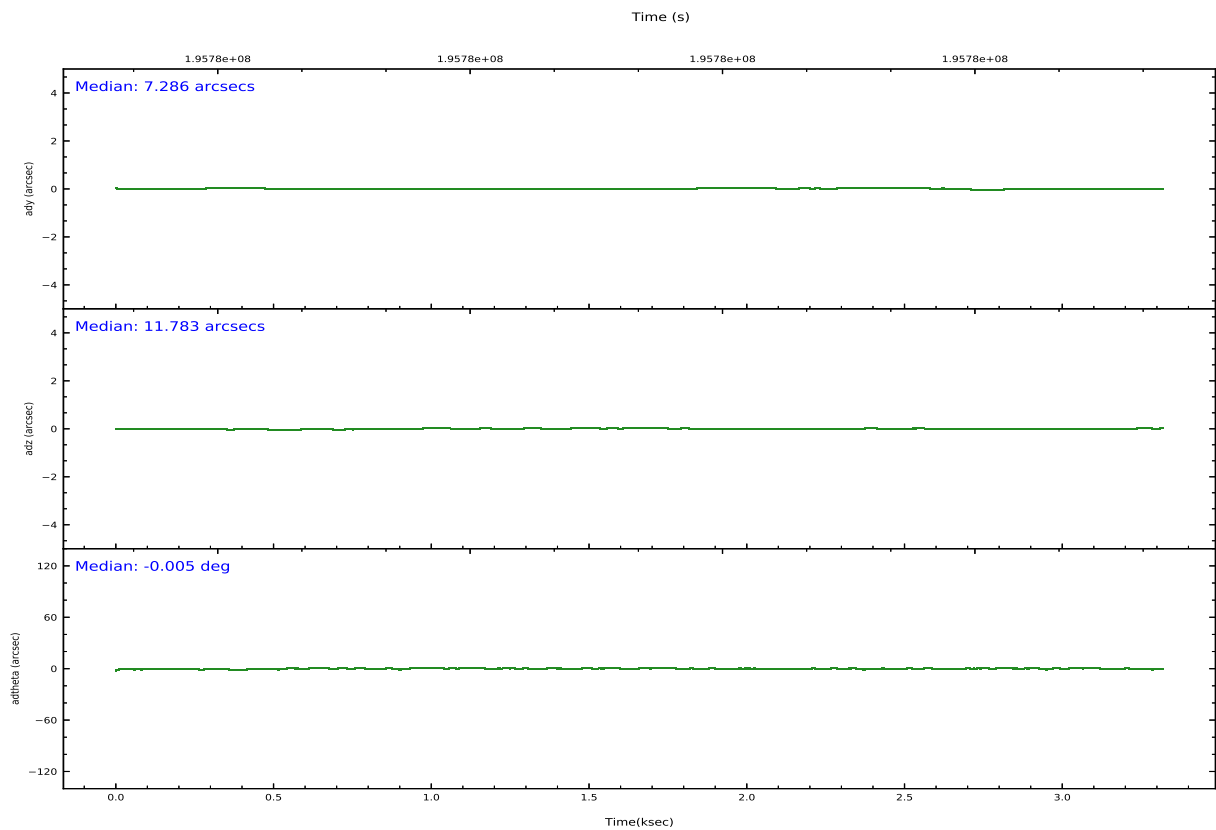
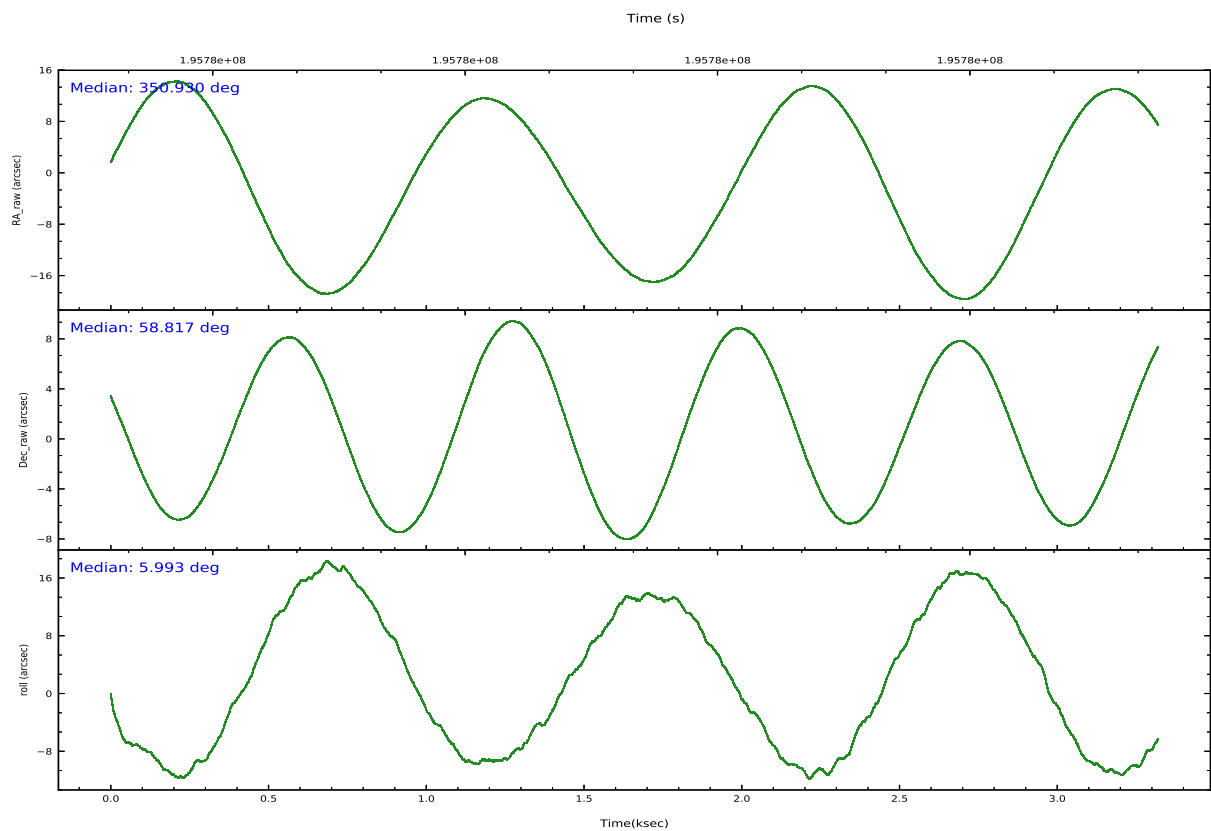
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	0	0	0	84323	0	0
	0%	0%	0%	22%	0%	0%
grade 1 events	0	0	0	1674	0	0
	0%	0%	0%	0%	0%	0%
grade 2 events	0	0	0	90929	0	0
	0%	0%	0%	24%	0%	0%
grade 3 events	0	0	0	39861	0	0
	0%	0%	0%	10%	0%	0%
grade 4 events	0	0	0	39027	0	0
	0%	0%	0%	10%	0%	0%
grade 5 events	0	0	0	7095	0	0
	0%	0%	0%	1%	0%	0%
grade 6 events	0	0	0	83745	0	0
	0%	0%	0%	22%	0%	0%
grade 7 events	0	0	0	29295	0	0
	0%	0%	0%	7%	0%	0%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-235678	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	350.887499	350.92653371016	CCD I2 on	Y	N
[deg] Pointing Dec	58.800694	58.813305390558	CCD I3 on	Y	N
[deg] Pointing Roll	5.870187	5.9932448183094	CCD S0 on	N	Y
[s] Window start time (MET)	194486464.184000	194486464.184000	CCD S1 on	Y	Y
[s] Window stop time (MET)	197078464.184000	197078464.184000	CCD S2 on	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S3 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S4 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S5 on	N	Y
[mm] SIM translation stage offset	0	0.01005778216563158	Number of optional ACIS chips dropped	0	0
[s] Observation start time (MET)	195777796.184000	195776266.64339	On-chip summing requested	N	N
Observation start date	2004-03-15T22:42:12	2004-03-15T22:17:46	Subarray requested	NONE	NONE
[s] Observation end time (MET)	195779796.184000	195779987.90605	Alternating exposures requested	N	N
Observation end date	2004-03-15T23:15:32	2004-03-15T23:19:47	[s] Primary exposure time	0.000000	3.2
Read mode	TIMED	TIMED			

## 2.3 Aspect





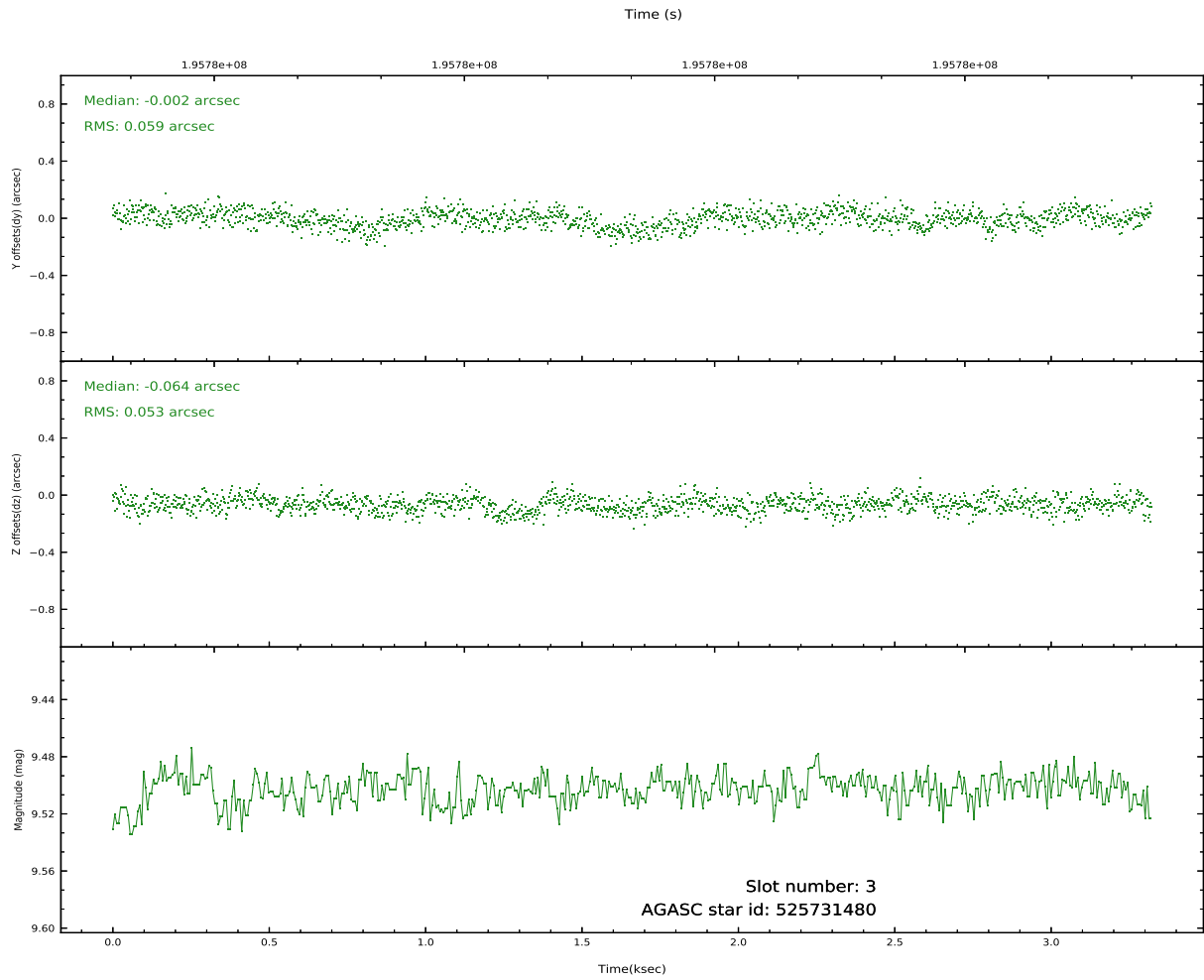
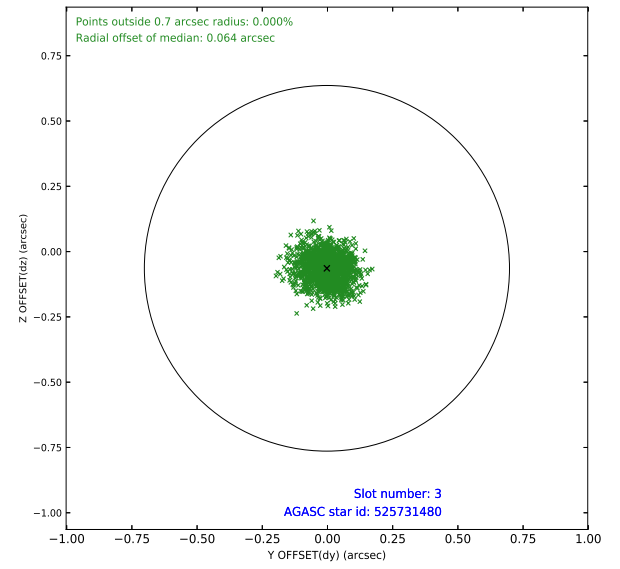
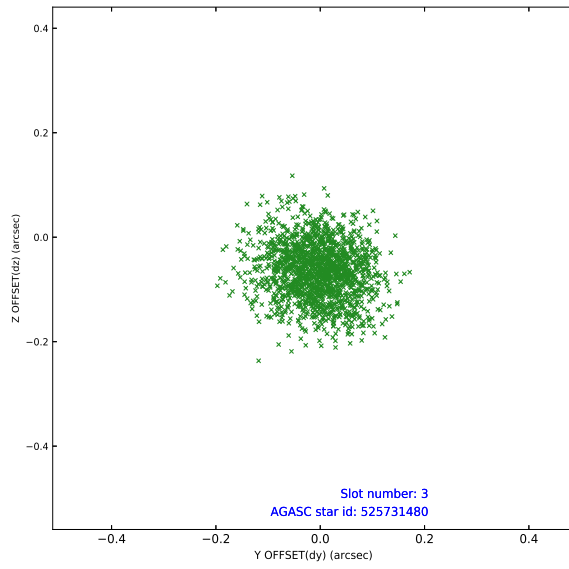
Slot Statistics

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	811	1.000	-0.069	-0.059	0.005	0.010	0.000000	0.000000	-760.09	-1733
1	FID		ACIS-S-4	7.20	810	1.000	0.077	0.021	0.006	0.011	0.000000	0.000000	2152.44	173
2	FID		ACIS-S-6	7.34	810	1.000	-0.036	0.045	0.007	0.011	0.000000	0.000000	404.34	813
3	GUIDE	used	525731480	9.50	1619	1.000	-0.002	-0.064	0.084	0.140	351.647209	58.687294	1372.64	-542
4	GUIDE	used	525732232	9.11	1620	1.000	0.142	0.056	0.078	0.123	351.669550	58.757012	1438.52	-297
5	GUIDE	used	525732488	8.41	1618	1.000	-0.103	-0.047	0.060	0.098	350.087090	58.516915	-1599.91	-853
6	GUIDE	used	525735976	8.91	1619	1.000	-0.104	-0.054	0.080	0.126	350.142956	58.277622	-1595.14	-1721
7	GUIDE	used	525732528	9.36	1615	1.000	0.068	0.114	0.086	0.140	351.607241	59.298932	1498.72	1655

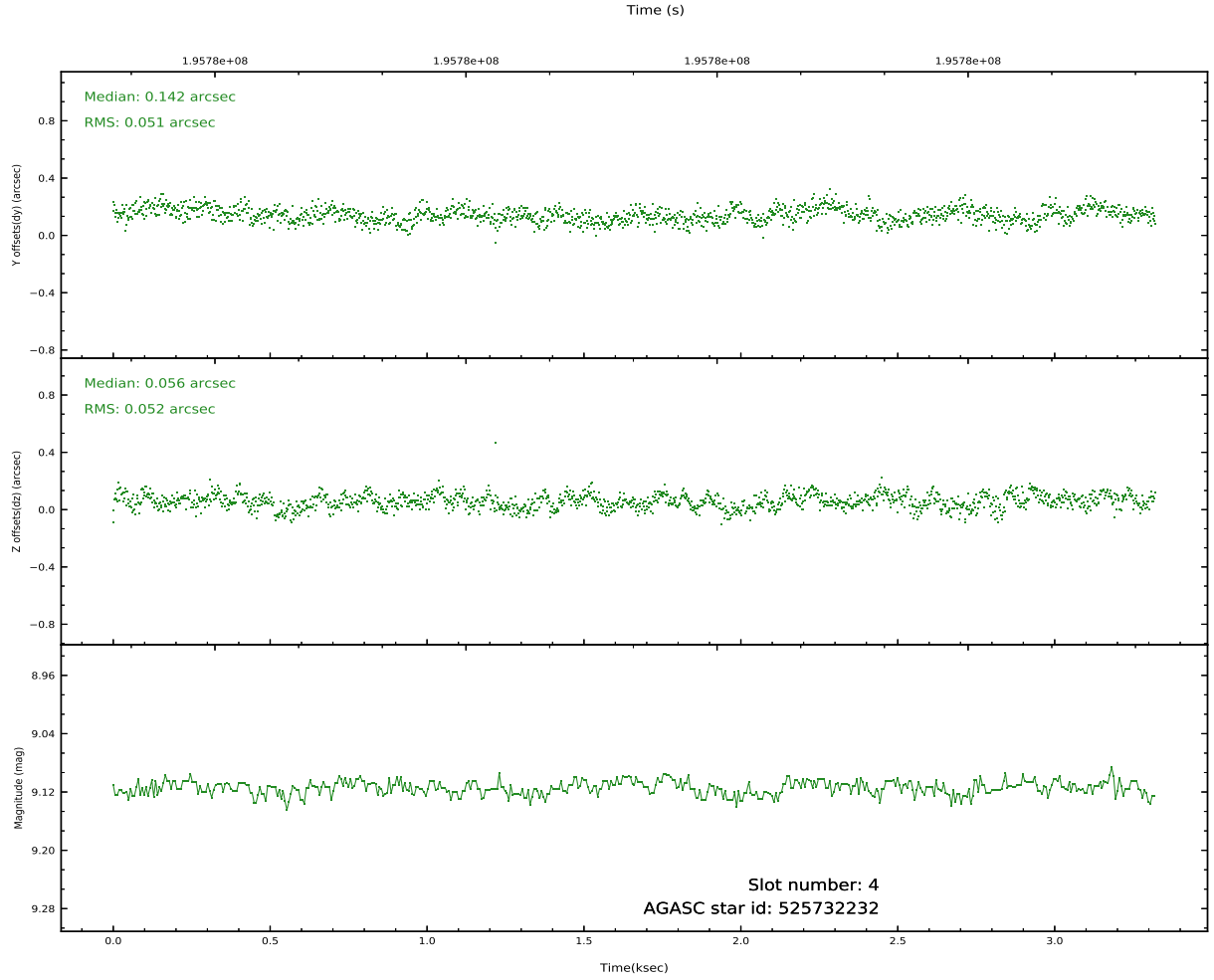
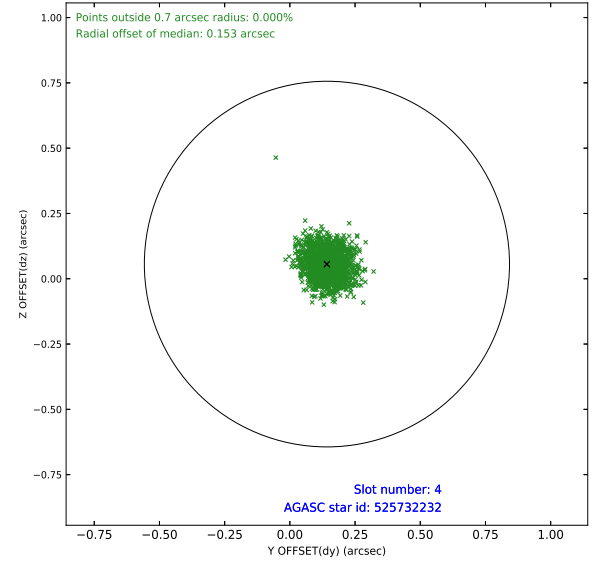
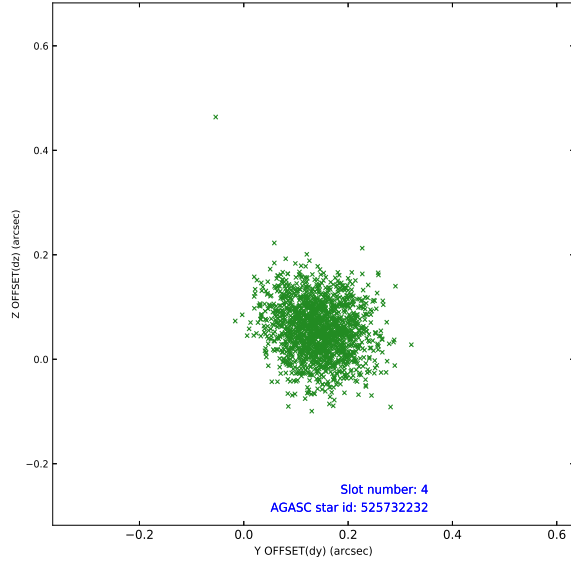


## 2.4 Star Slots

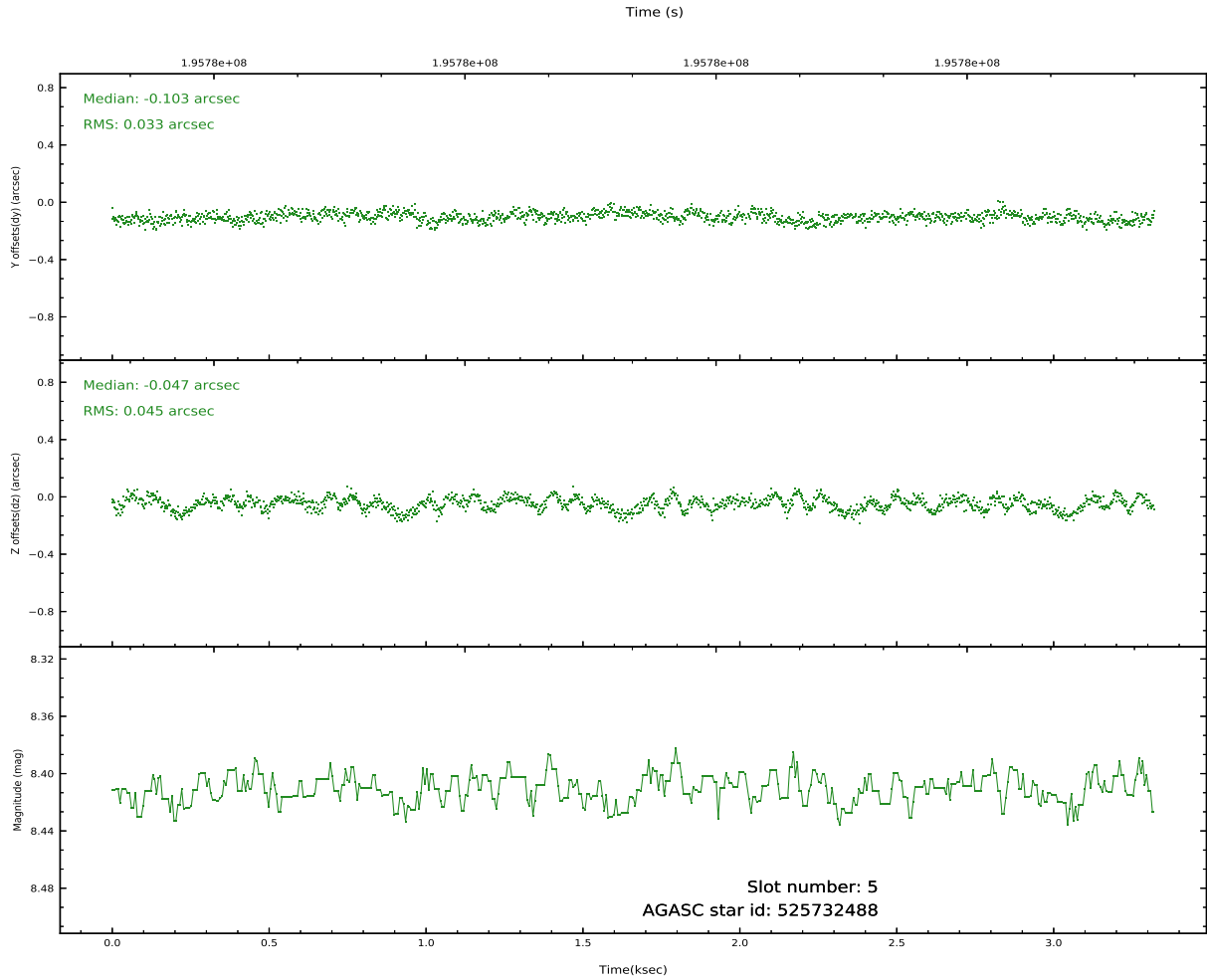
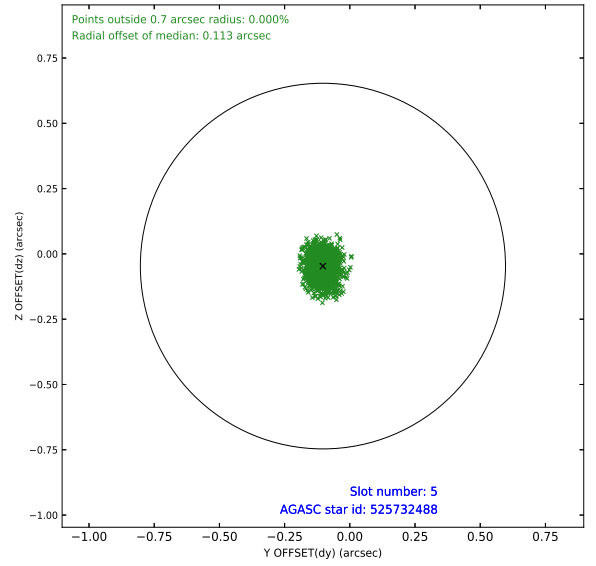
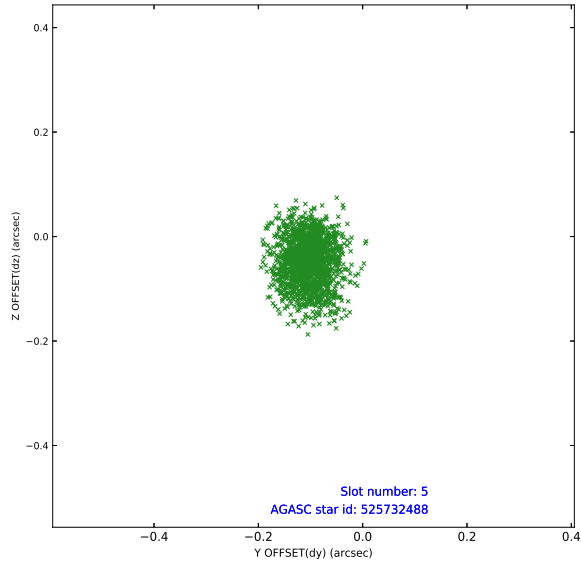
### 2.4.1 Slot 3



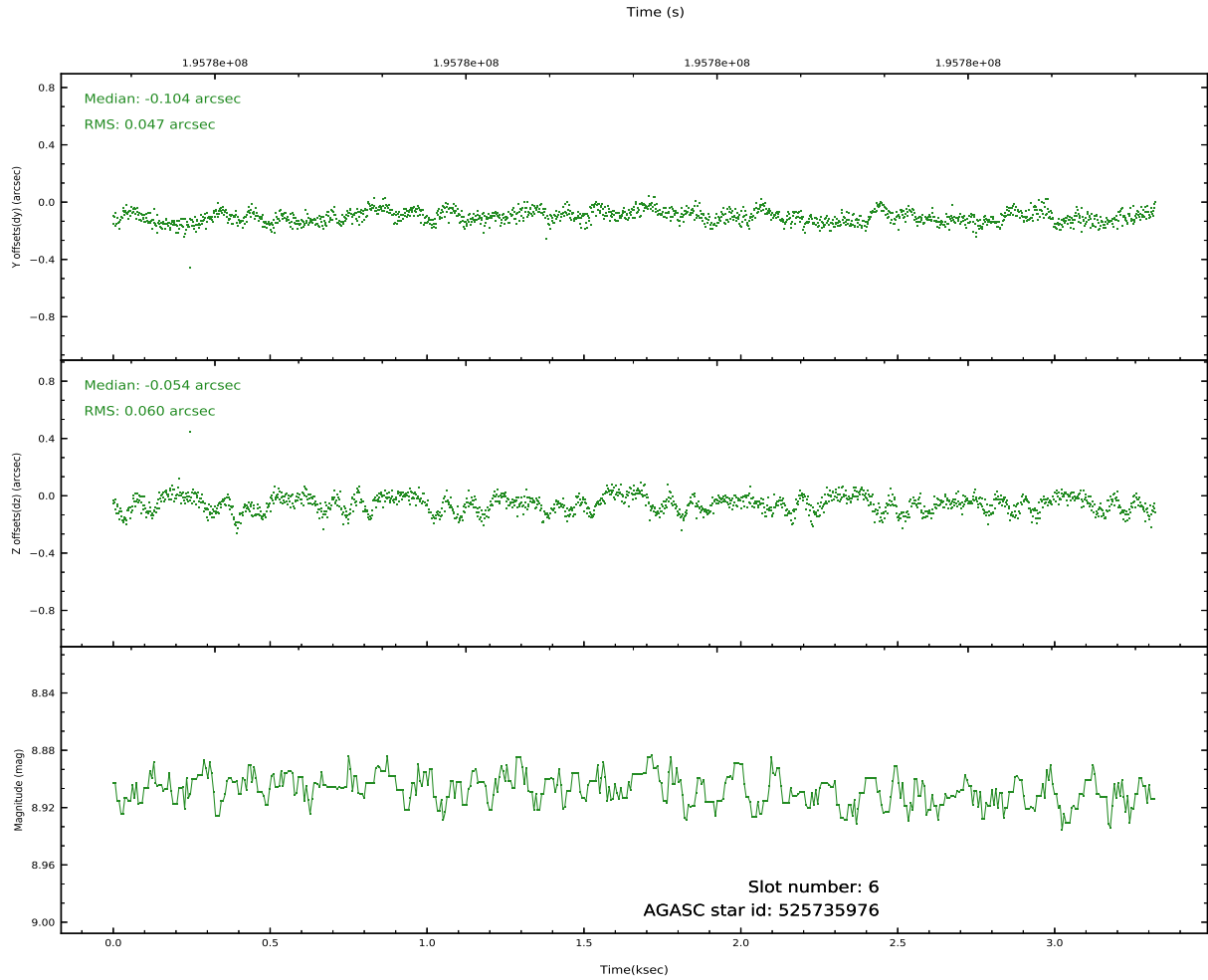
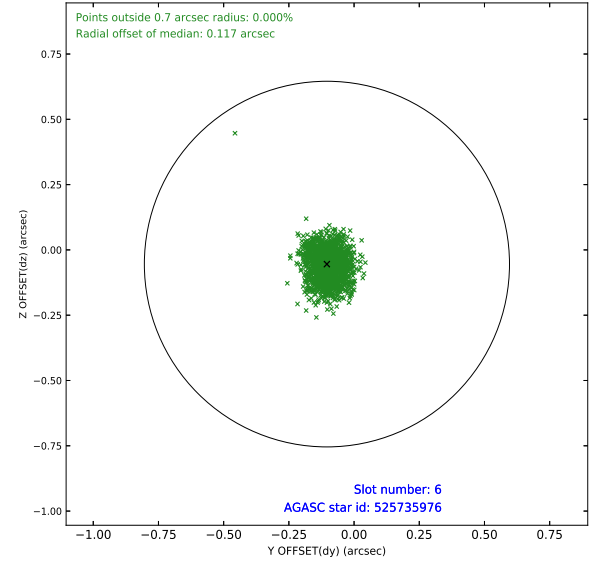
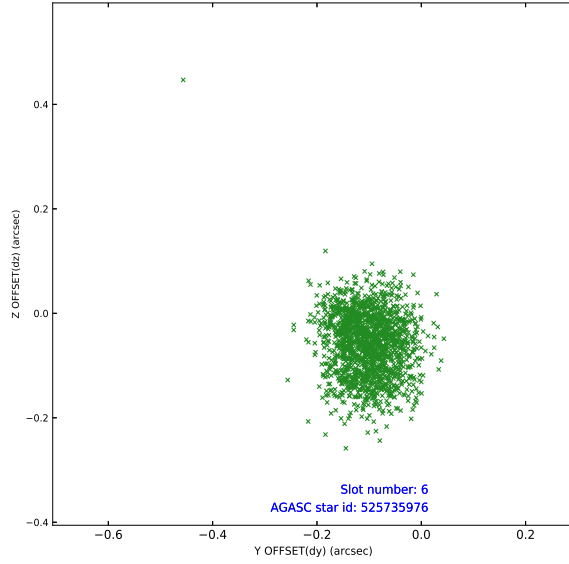
## 2.4.2 Slot 4



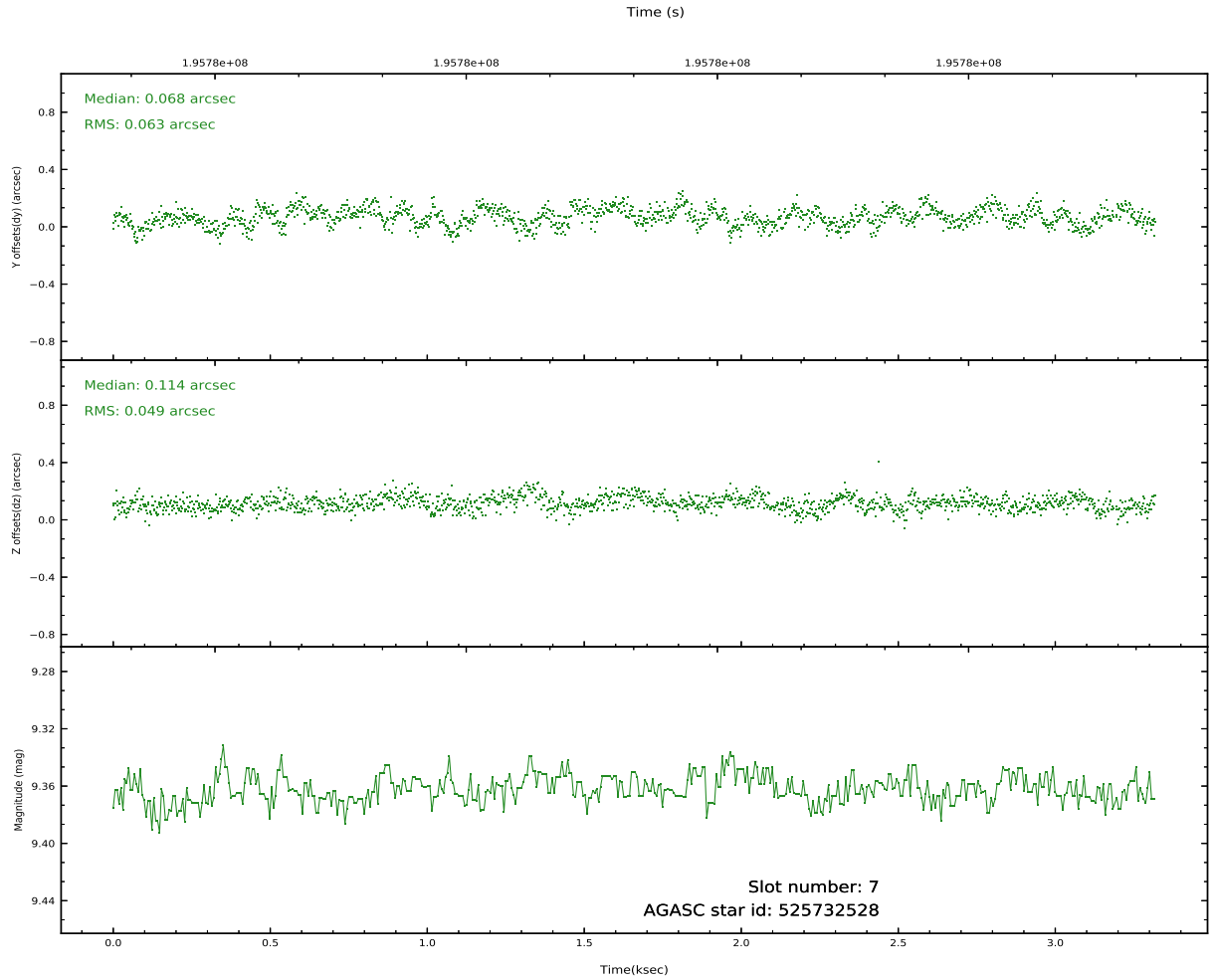
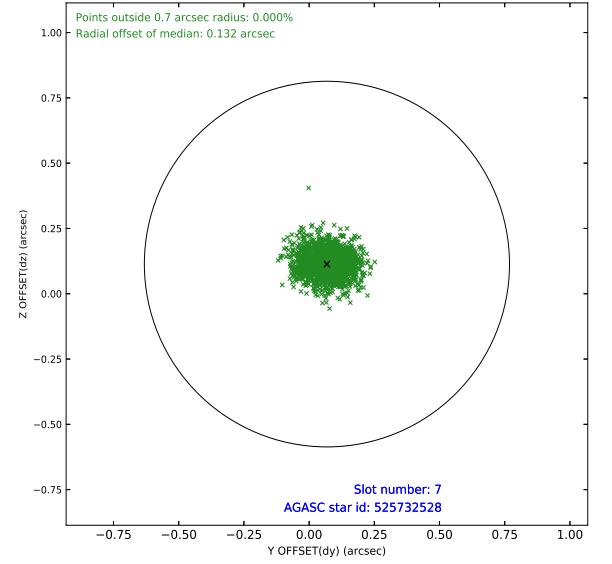
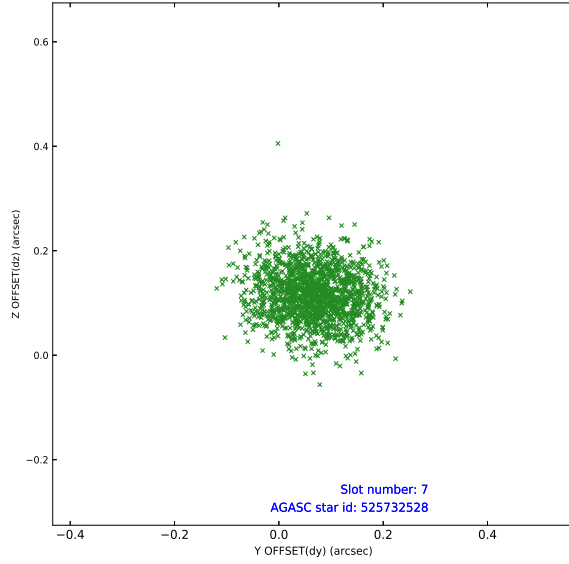
## 2.4.3 Slot 5



## 2.4.4 Slot 6

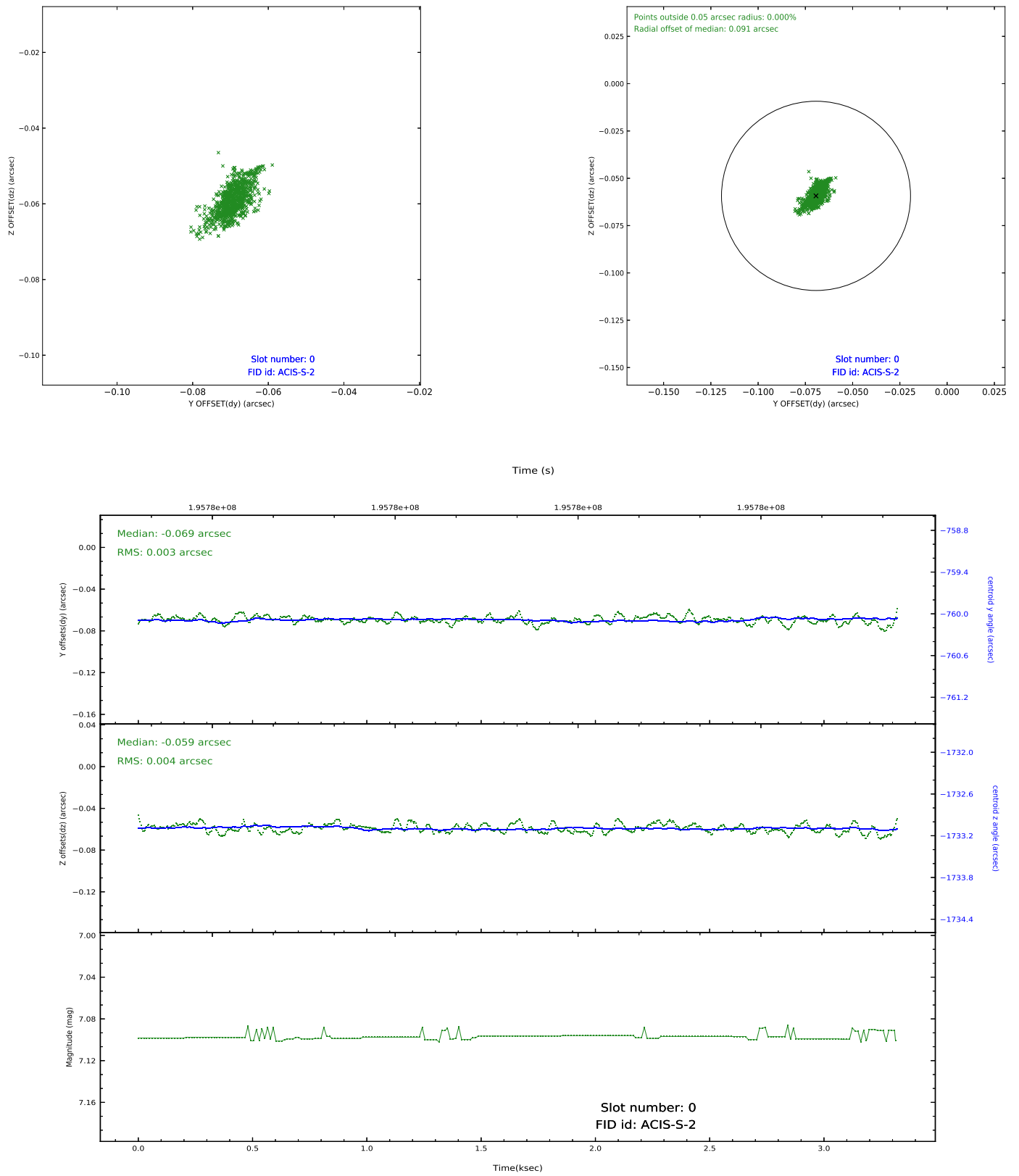


## 2.4.5 Slot 7

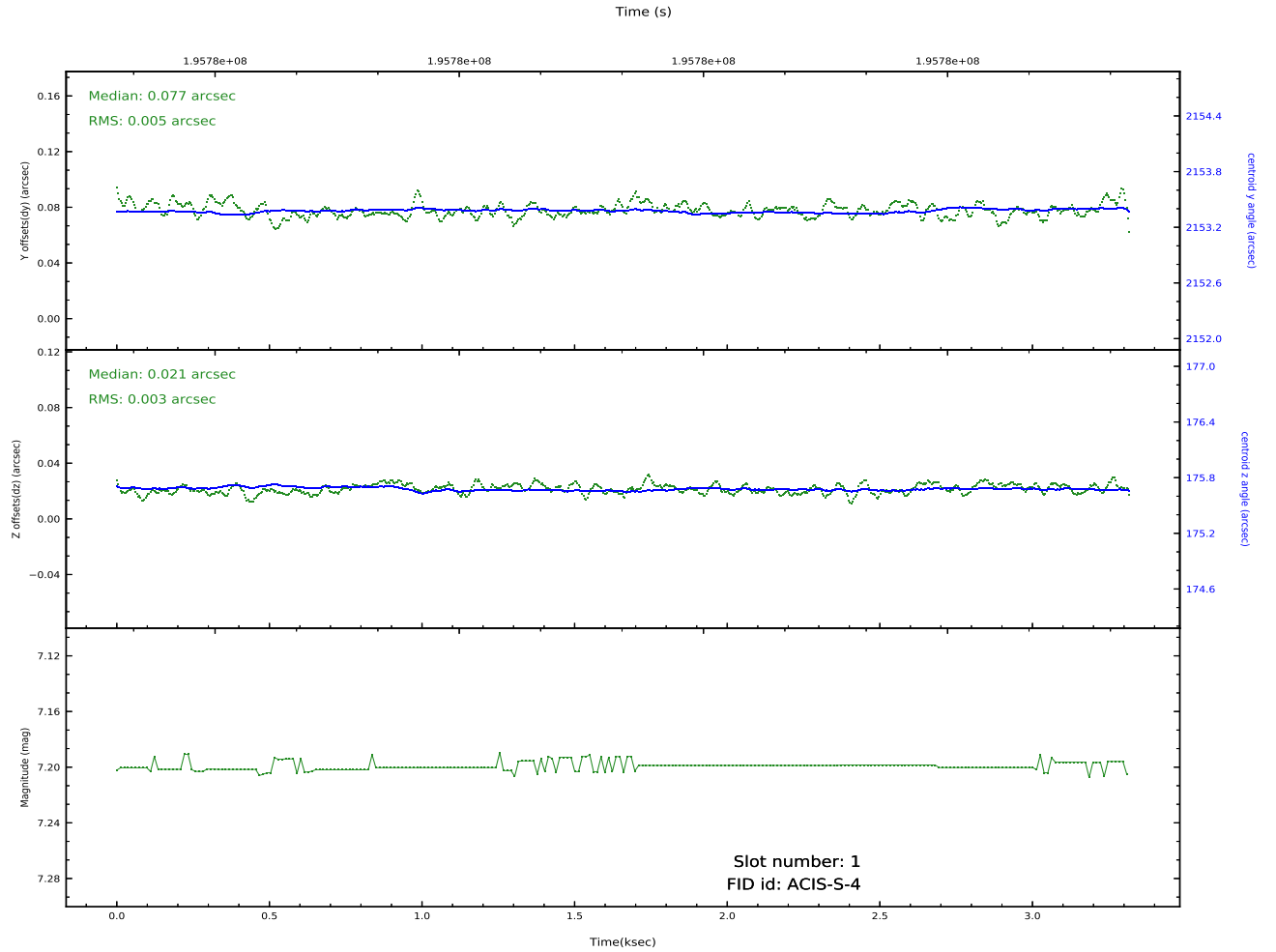
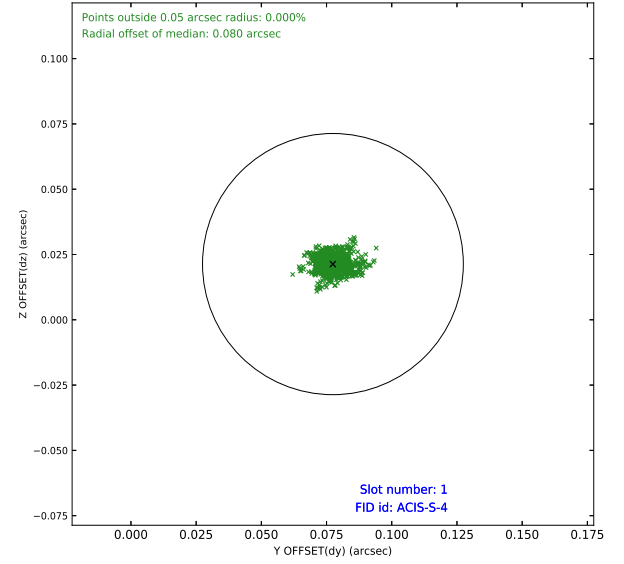
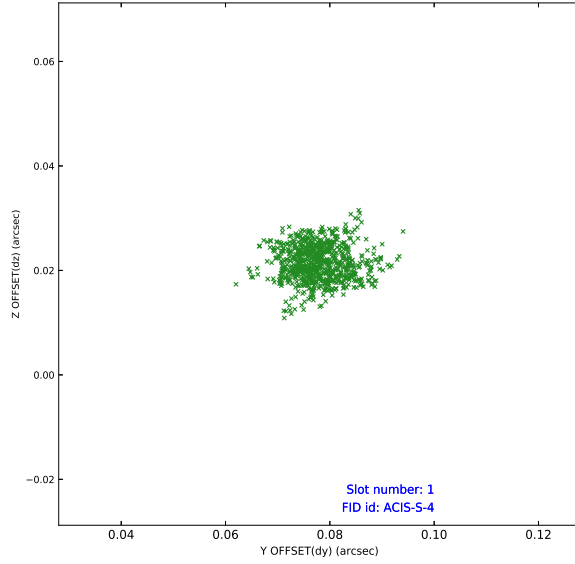


## 2.5 FID Slots

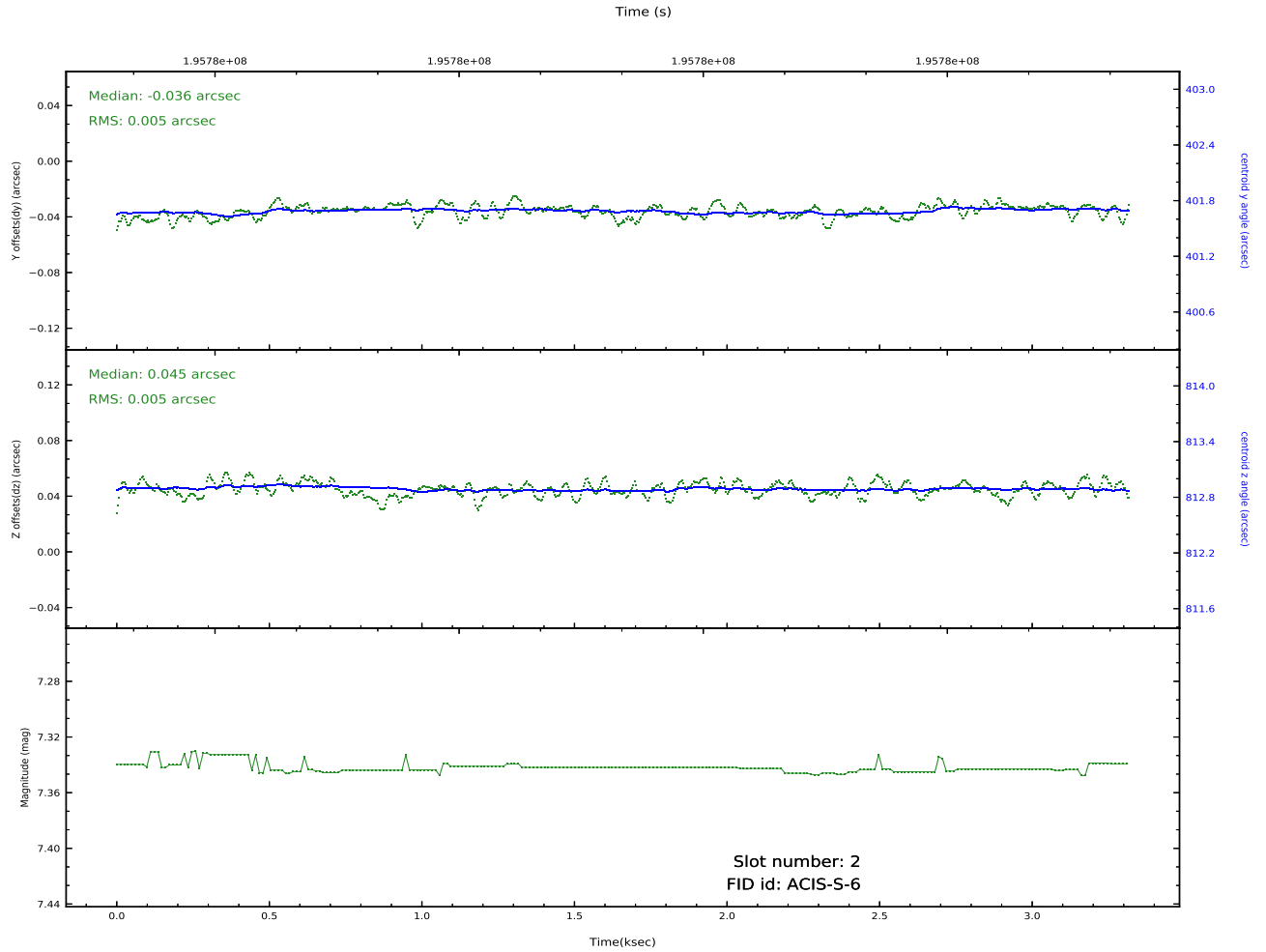
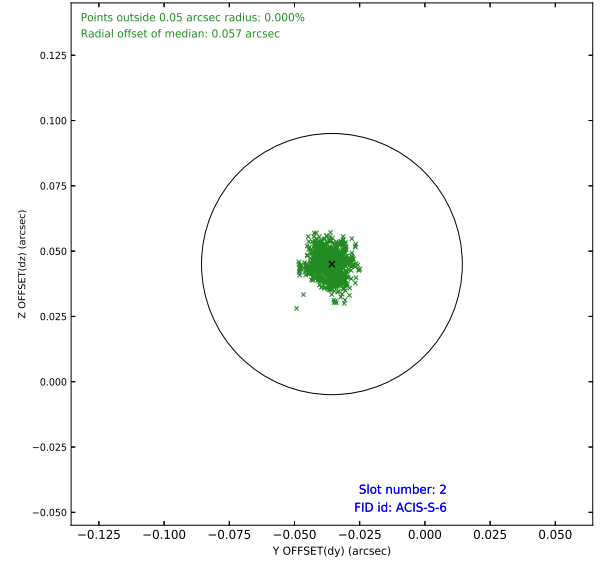
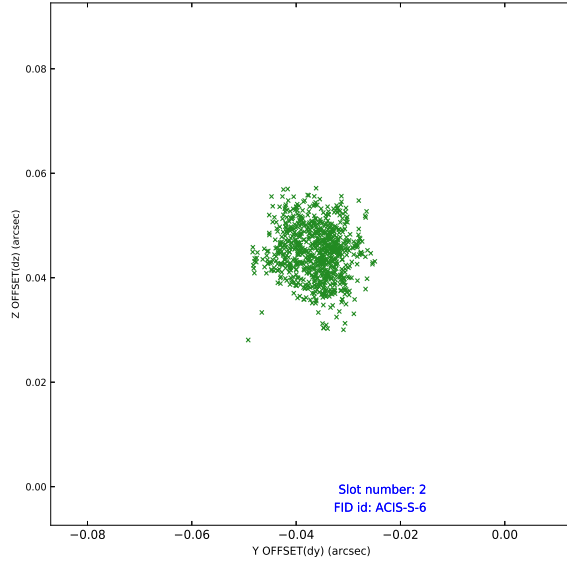
### 2.5.1 Slot 0



## 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)	2020.09.24
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.101

## A.2 Comments

Window constraint met. A spatial exclusion window was specified for this observation. Although 6 CCD chips were active, only events from chip 7 were telemetered.