

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5110 - L2 Version 4  
Chandra X-Ray Center

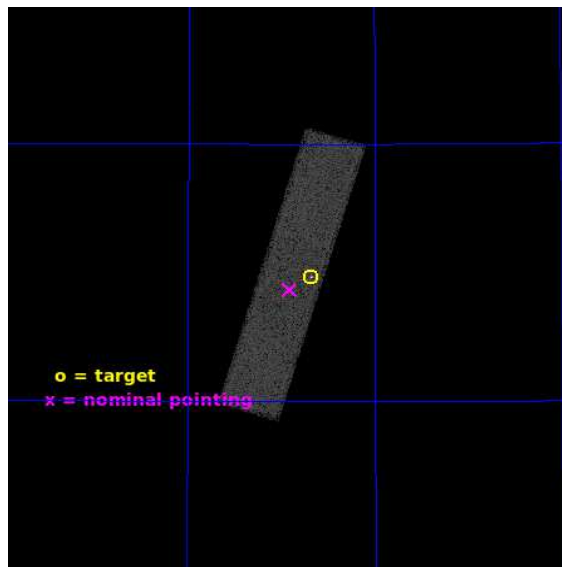
L2 Processing Date : Oct 5 2020

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# 1 Front

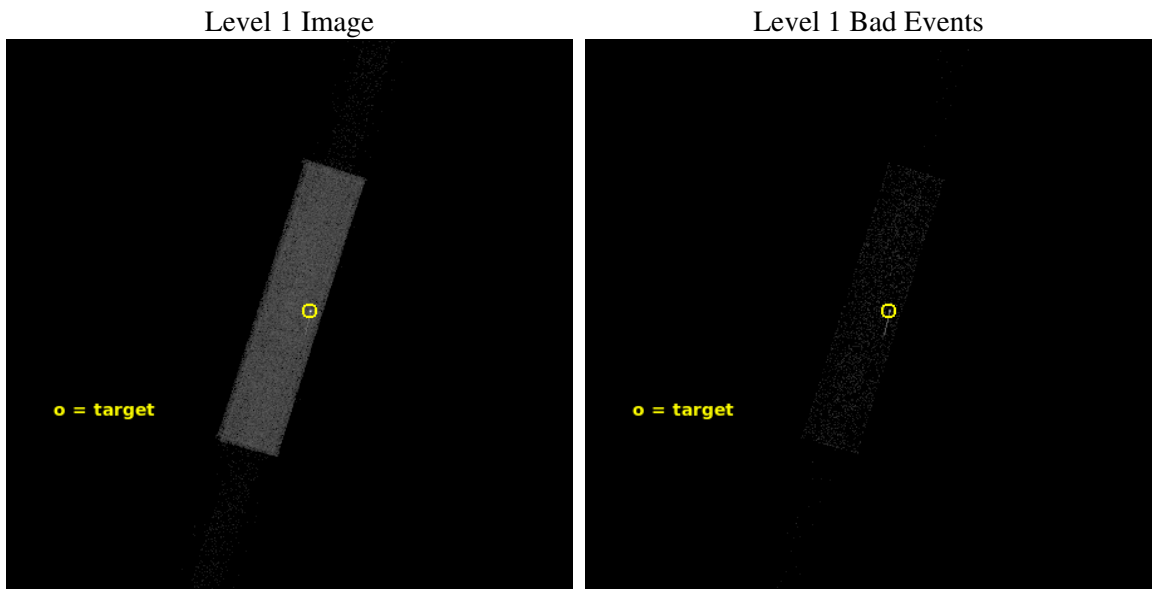
seq_num	290383	Sequence number
obs_id	5110	Observation id
title	AO5B Calibration Observations to Monitor the Spatial Variations in the HRC-S Gain	Proposal title
observer	CXC Calibration	Principal investigator
object	ArLac	Source name
ra_targ	332.17	Observer's specified target RA [deg]
dec_targ	45.742306	Observer's specified target Dec [deg]
ra_nom	332.22642441258	Nominal RA [deg]
dec_nom	45.716763299012	Nominal Dec [deg]
roll_nom	286.92543598678	Nominal Roll [deg]
revision	4	Processing version of data
ontime	1054.9812974334	[s]
livetime	1047.1568505665	Ontime multiplied by DTCOR
l2events	54997	Number of level 2 events



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

obi_num	1	Obi number	sched_exp_time	900.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	1054.9812974334	[s]
caldbver	4.9.2	&#160	l1events	90486	Number of level 1 events
date	2020-10-05T08:02:46	Date and time of file creation			
revision	4	Processing version of data			

### 2.1.3 Events

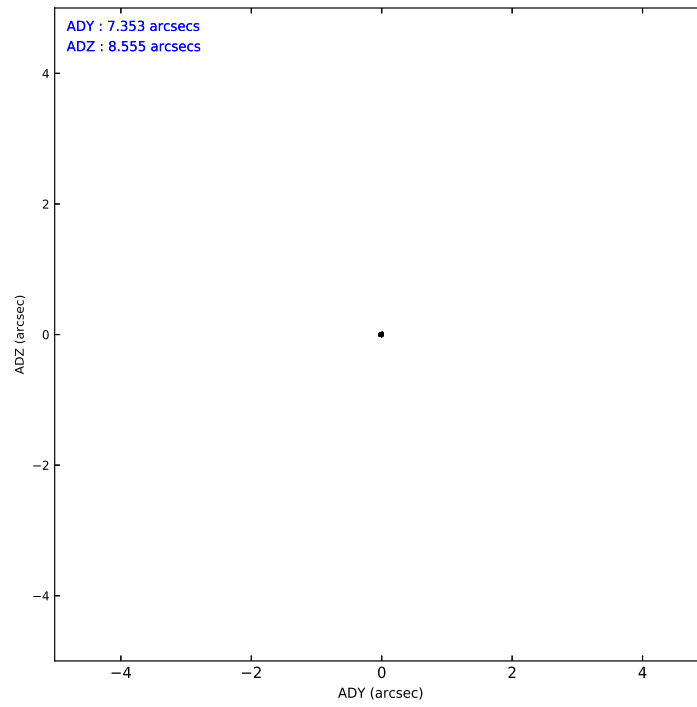
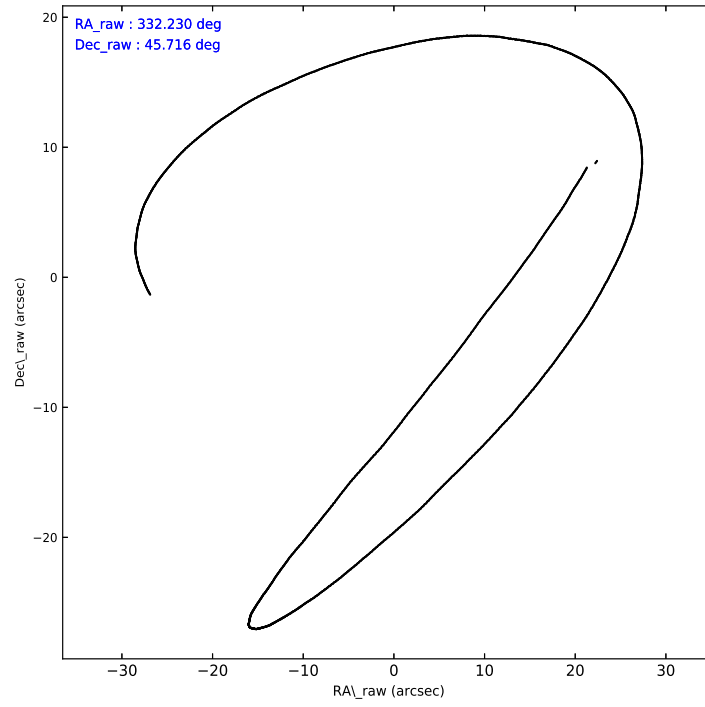
Level 1 Events

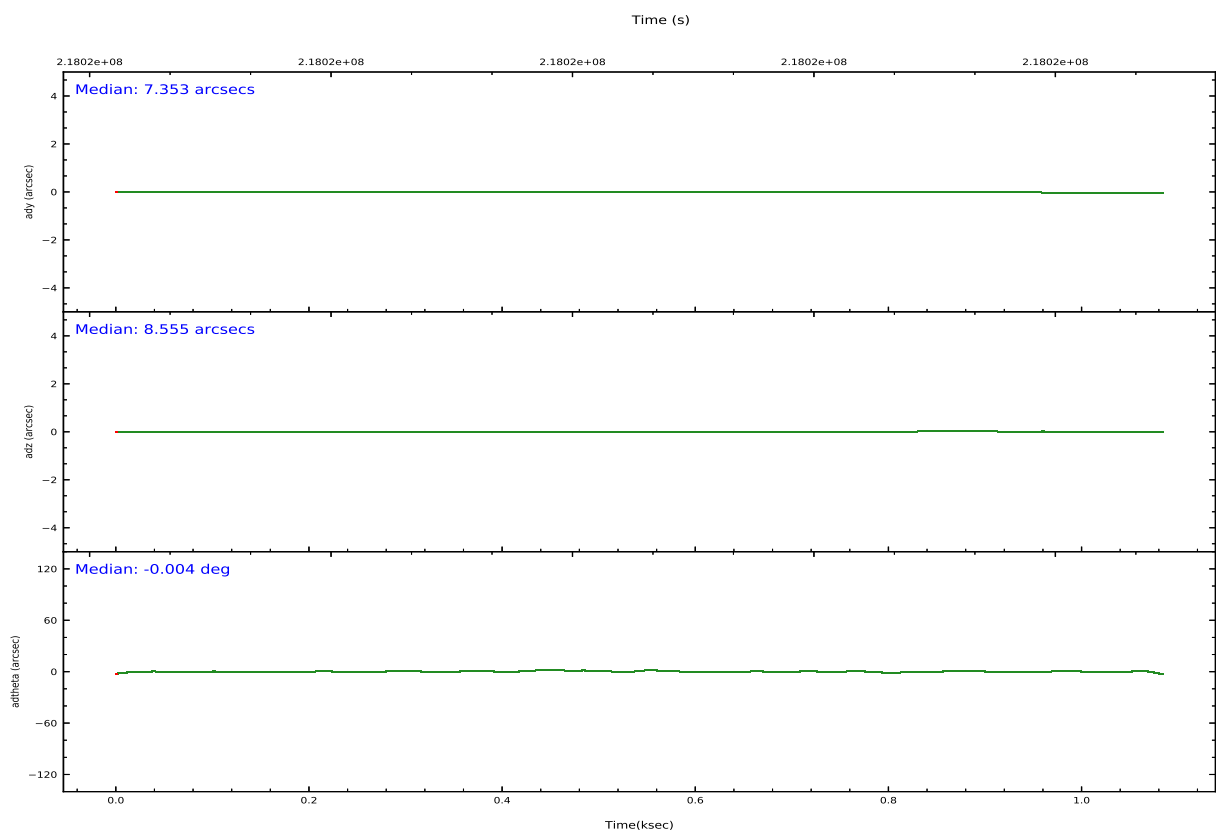
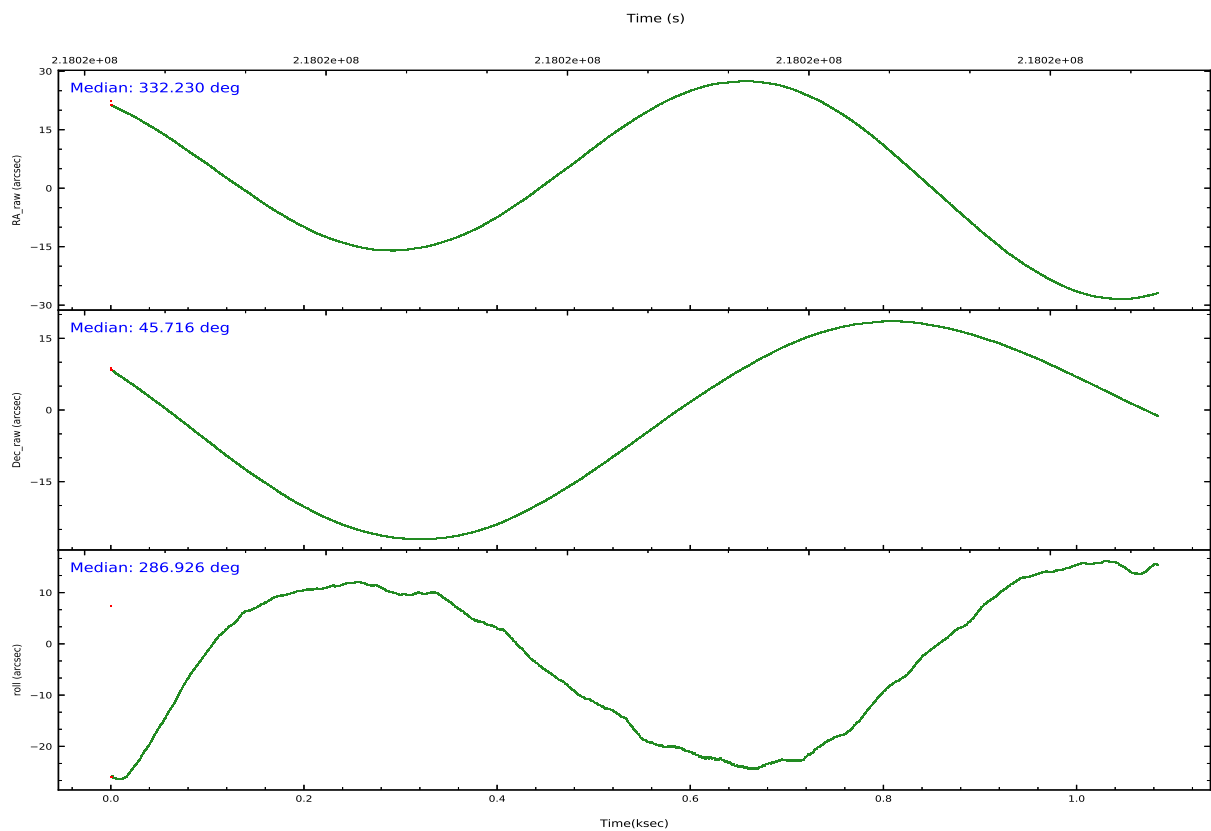
	segment 1	segment 2	segment 3
level 1 events	808	88886	792
rejected events	808	21825	792
rejected %	100%	24%	100%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	HRC	HRC	Obspar version number	8	8
Detector	HRC-S	HRC-S	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	OBSERVING	OBSERVING			
Observation mode	POINTING	POINTING			
[deg] Pointing RA	332.200053	332.22642441258			
[deg] Pointing Dec	45.734039	45.716763299012			
[deg] Pointing Roll	286.882038	286.92543598678			
[mm] SIM focus pos	-1.429586	-1.428180813131781			
[mm] SIM defocus	0.1037507710433287	0.1051558262725154			
[mm] SIM translation stage pos	250.455976	250.466033080201			
[mm] SIM translation stage offset	0	-0.01005468664627074			
[s] Observation start time (MET)	218019963.184000	218019587.11874			
Observation start date	2004-11-28T09:04:59	2004-11-28T08:59:47			
[s] Observation end time (MET)	218020863.184000	218020996.4938			
Observation end date	2004-11-28T09:19:59	2004-11-28T09:23:16			

## 2.3 Aspect





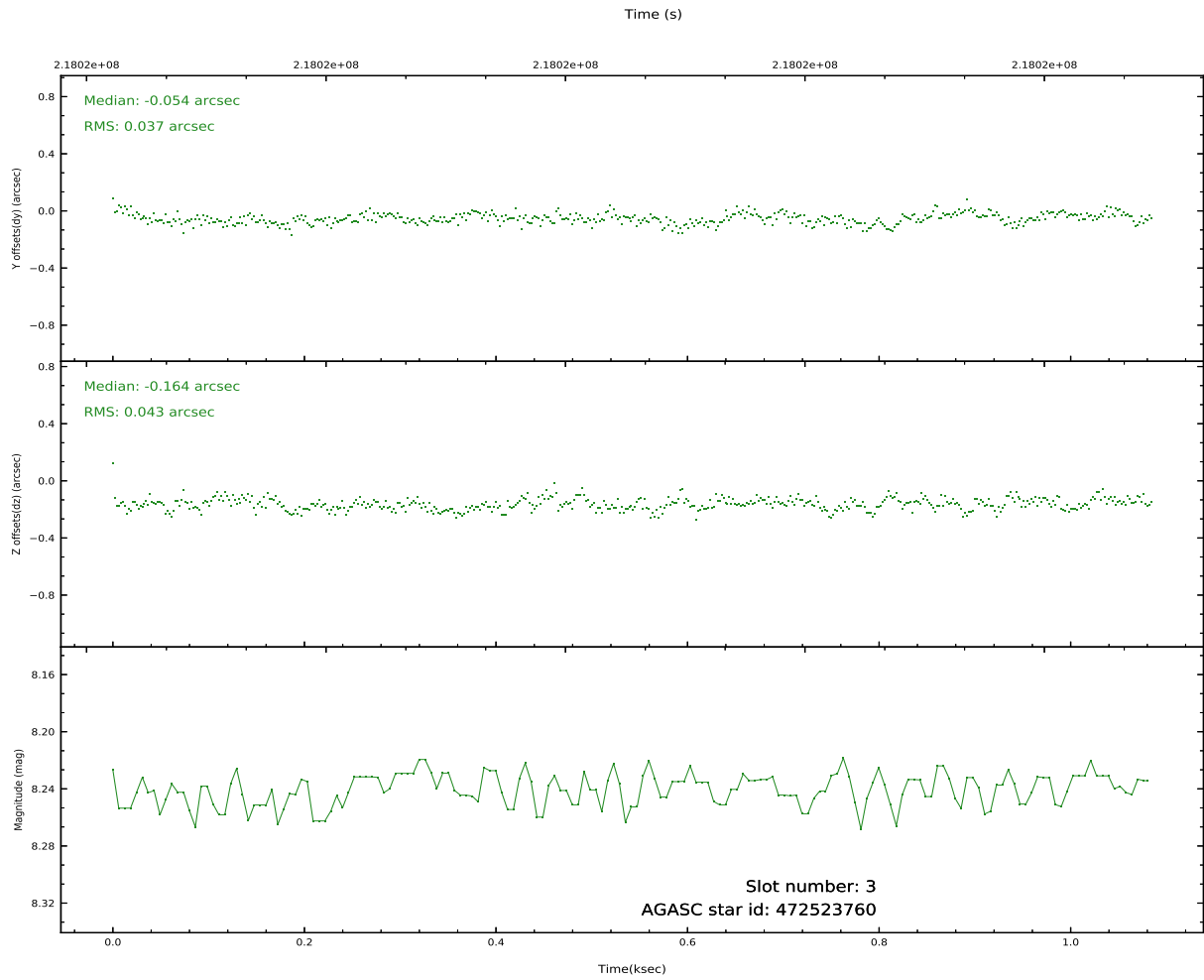
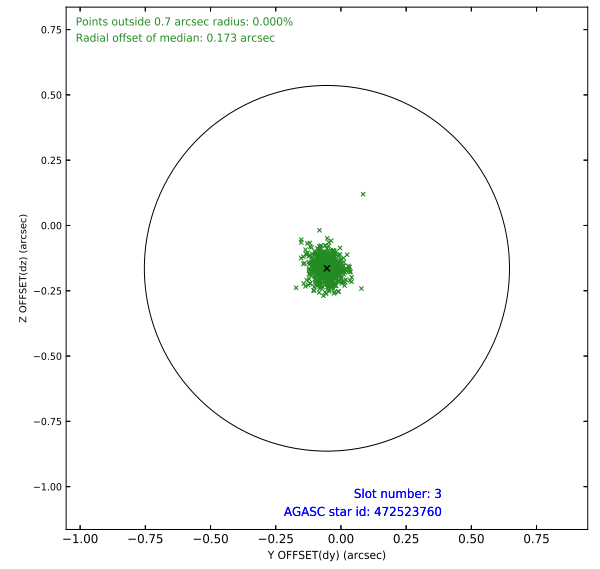
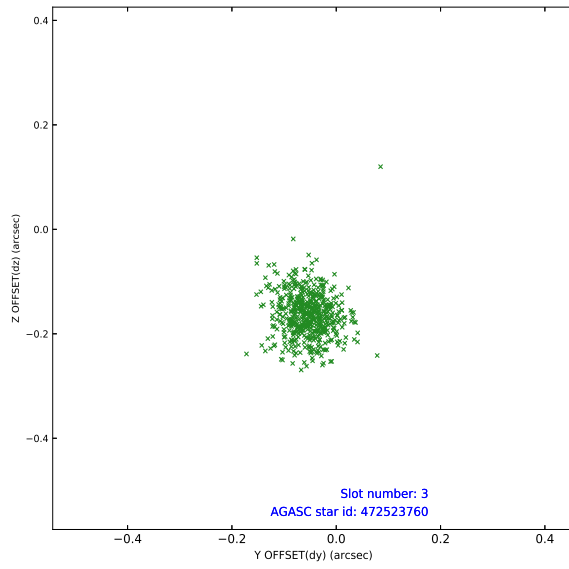
Slot Statistics

pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		HRC-S-1	7.04	265	1.000	0.108	-0.150	0.006	0.011	0.000000	0.000000	-1161.52	-457
1	FID		HRC-S-2	7.04	265	1.000	0.200	-0.121	0.005	0.010	0.000000	0.000000	1233.87	-451
2	FID		HRC-S-3	7.04	265	1.000	0.082	-0.031	0.006	0.010	0.000000	0.000000	-1159.63	570
3	GUIDE	used	472523760	8.24	530	1.000	-0.054	-0.164	0.060	0.099	331.645363	45.403260	728.28	-1684
4	GUIDE	used	472654568	9.44	530	1.000	0.061	0.071	0.115	0.187	332.194449	45.063576	2307.56	-715
5	GUIDE	used	472655152	9.44	530	1.000	0.003	0.112	0.100	0.163	332.504239	45.862991	-219.41	865
6	GUIDE	used	472659832	9.46	530	1.000	-0.078	0.103	0.112	0.174	332.780399	46.098139	-838.87	1772
7	GUIDE	used	472527720	7.02	529	1.000	0.052	-0.120	0.101	0.175	331.460205	45.112509	1586.20	-2440

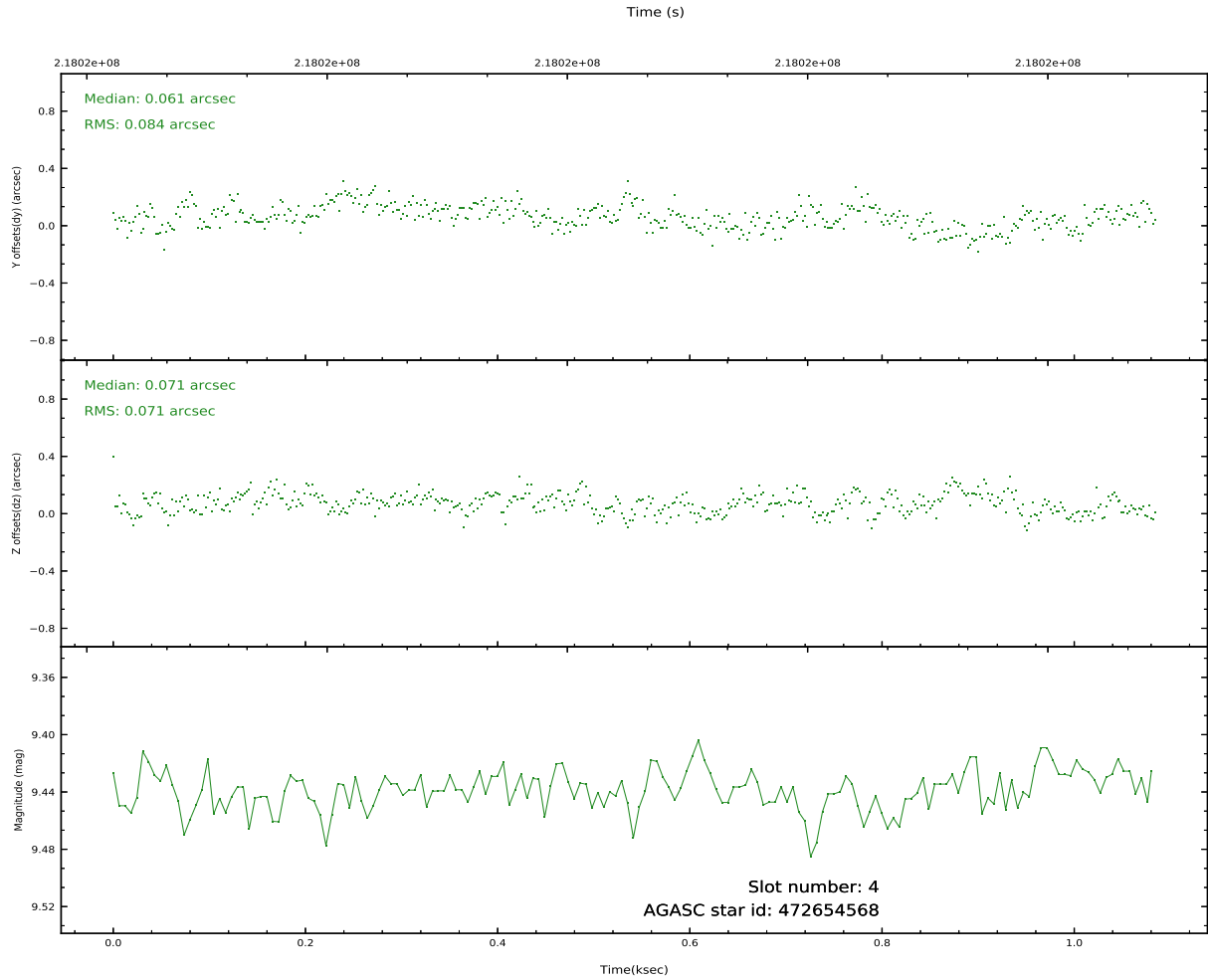
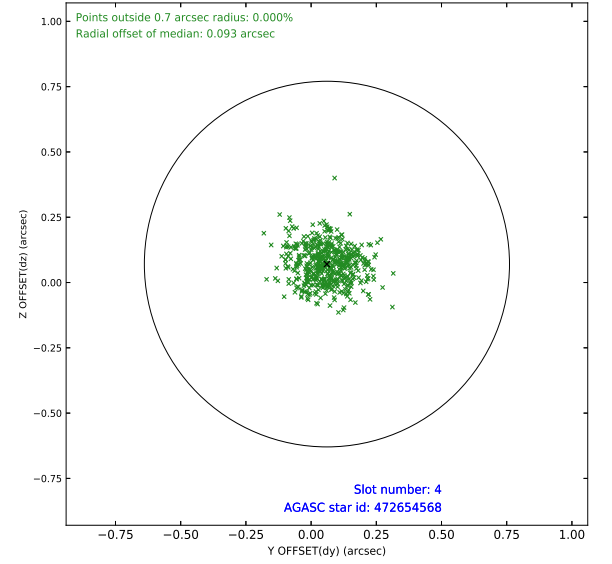
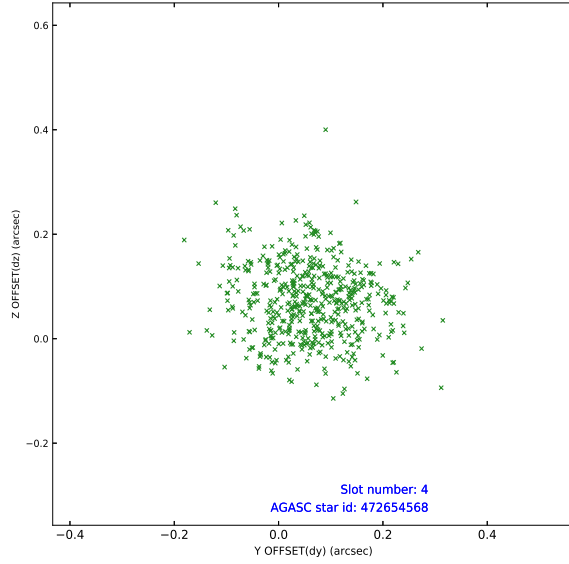


## 2.4 Star Slots

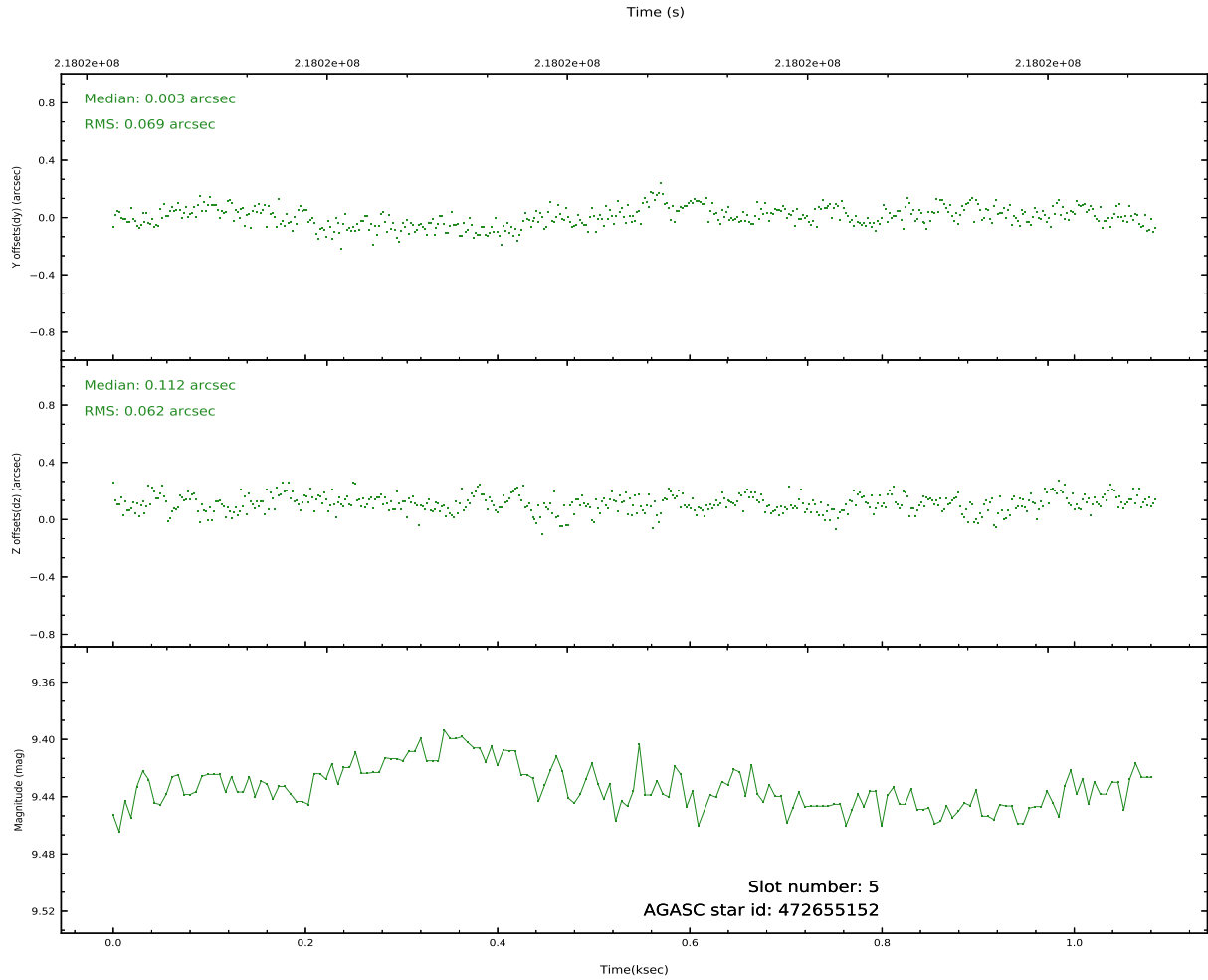
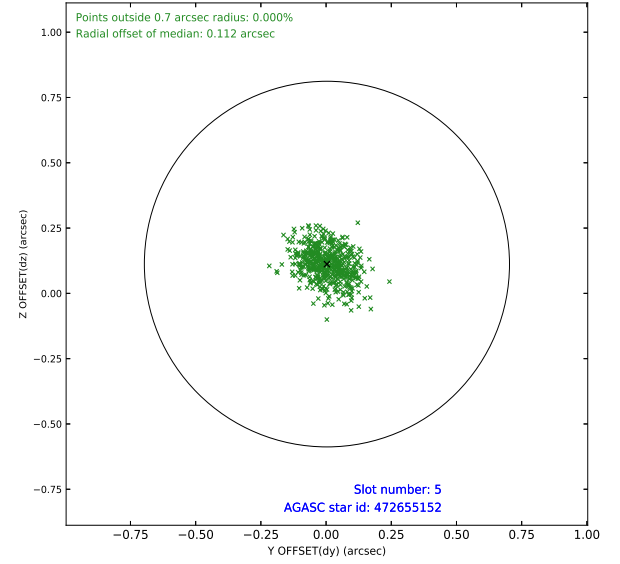
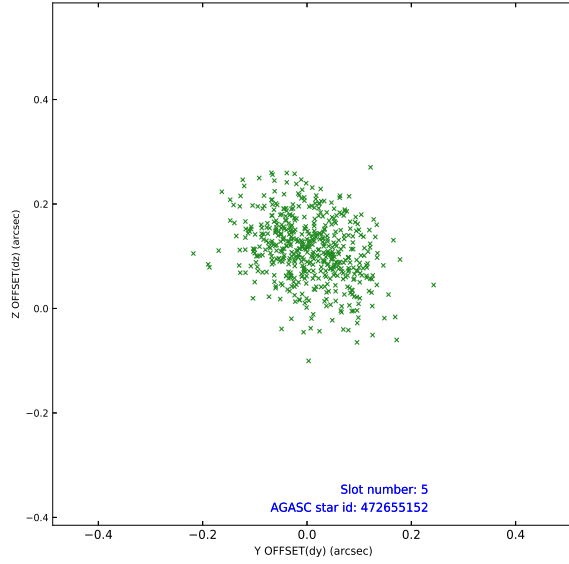
### 2.4.1 Slot 3



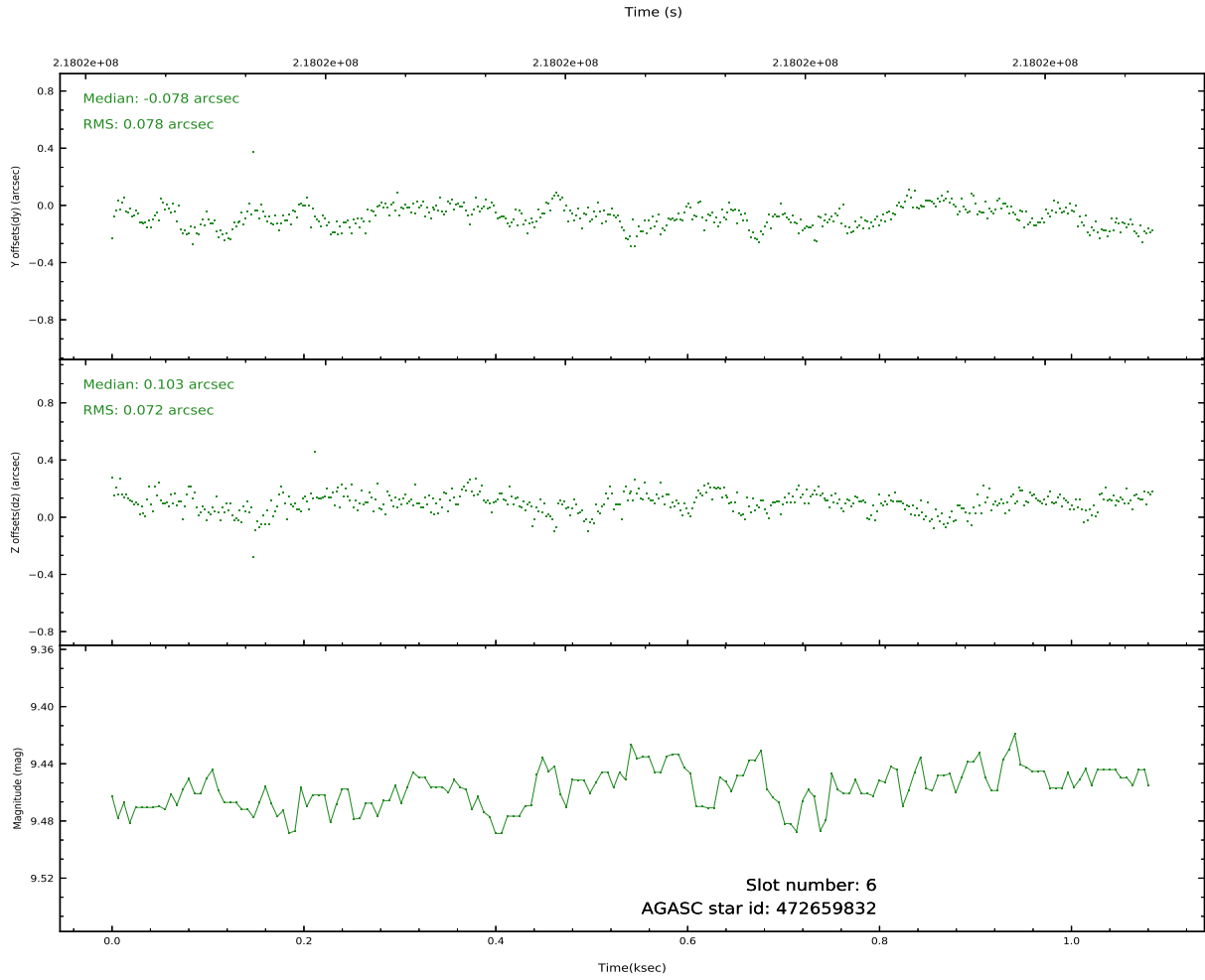
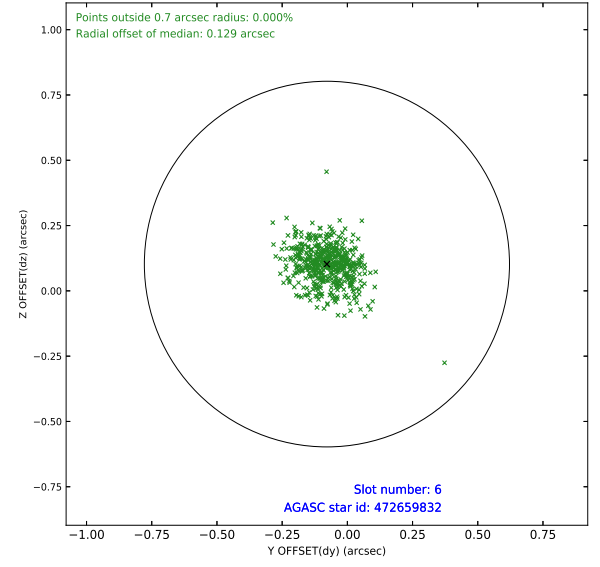
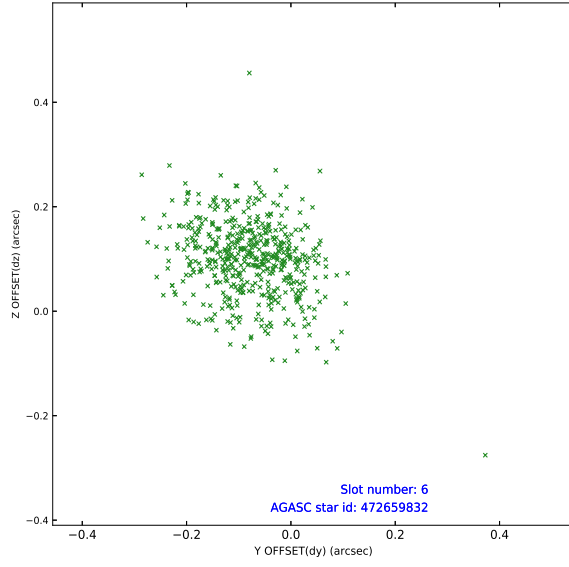
## 2.4.2 Slot 4



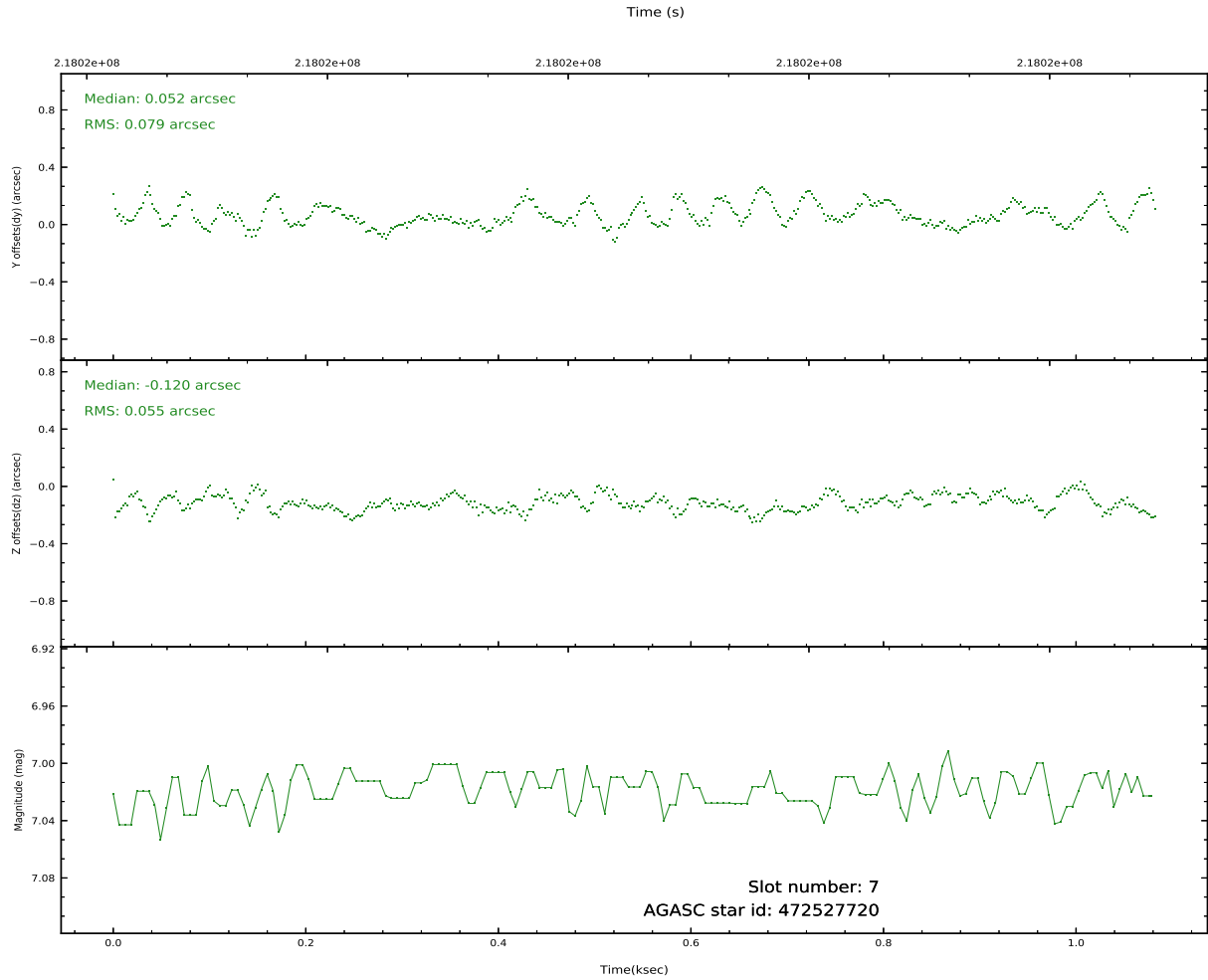
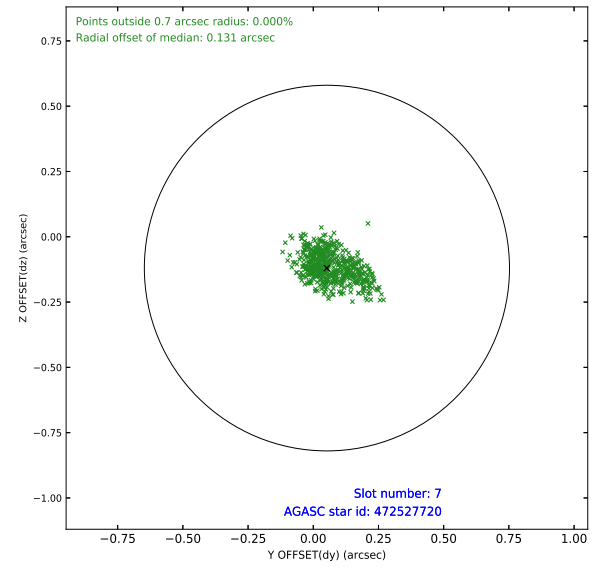
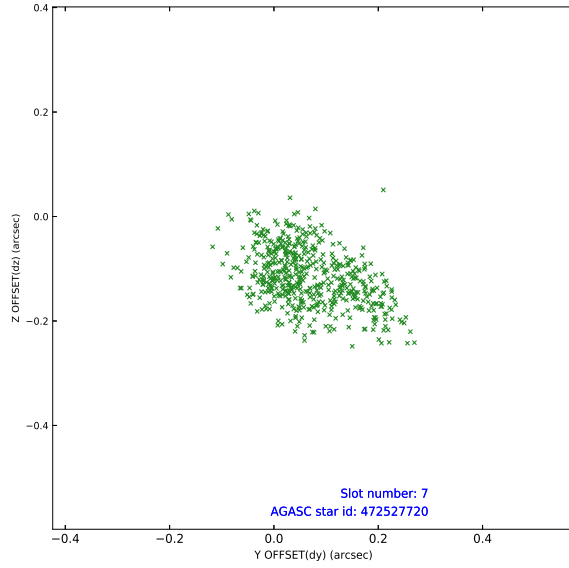
### 2.4.3 Slot 5



## 2.4.4 Slot 6

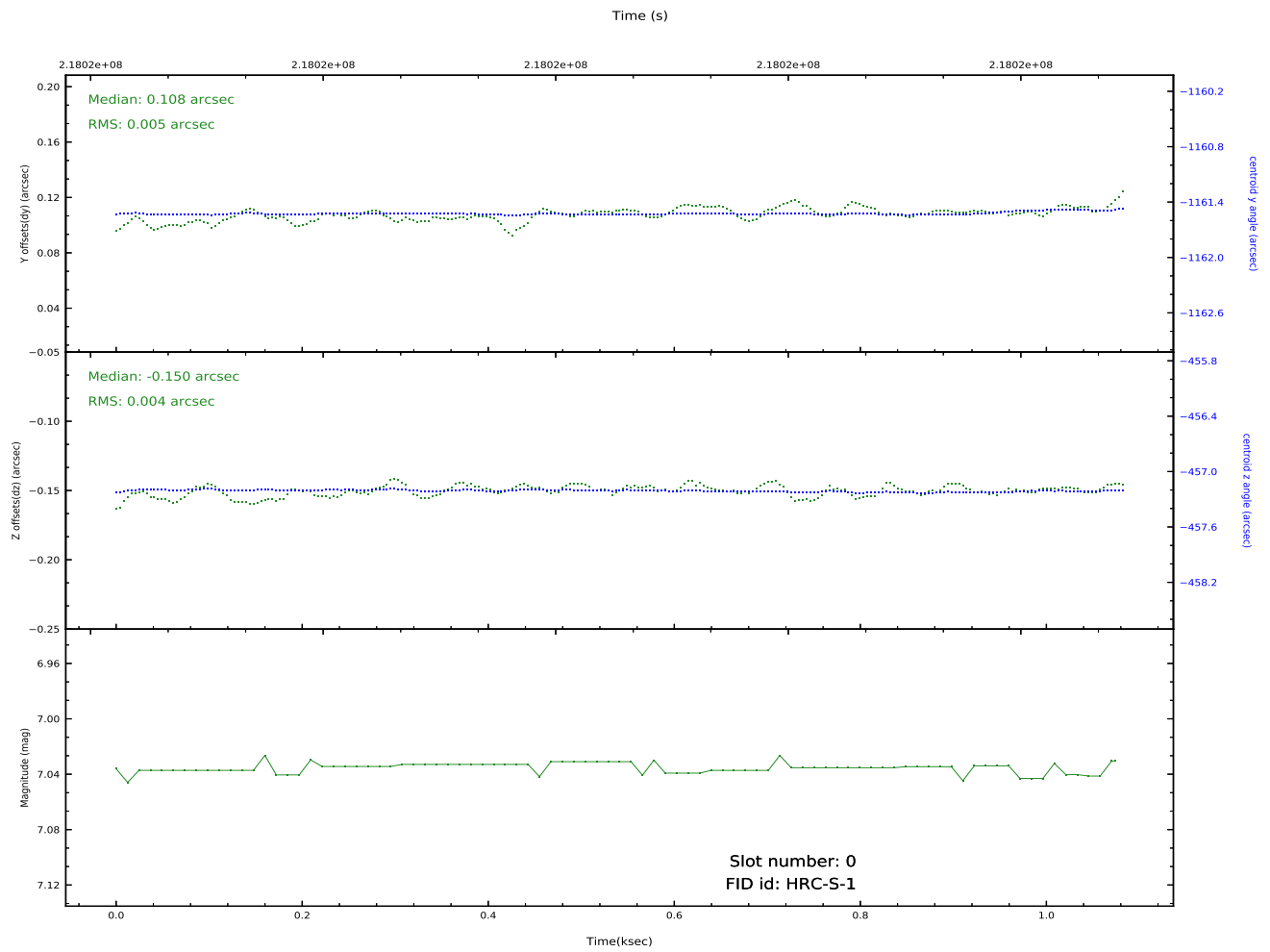
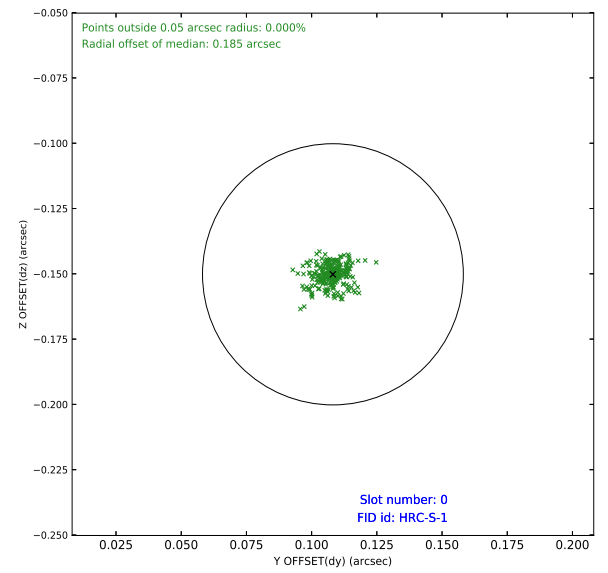
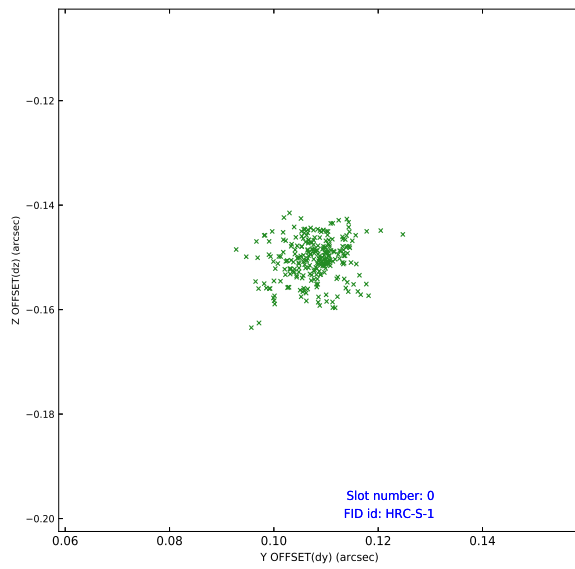


## 2.4.5 Slot 7

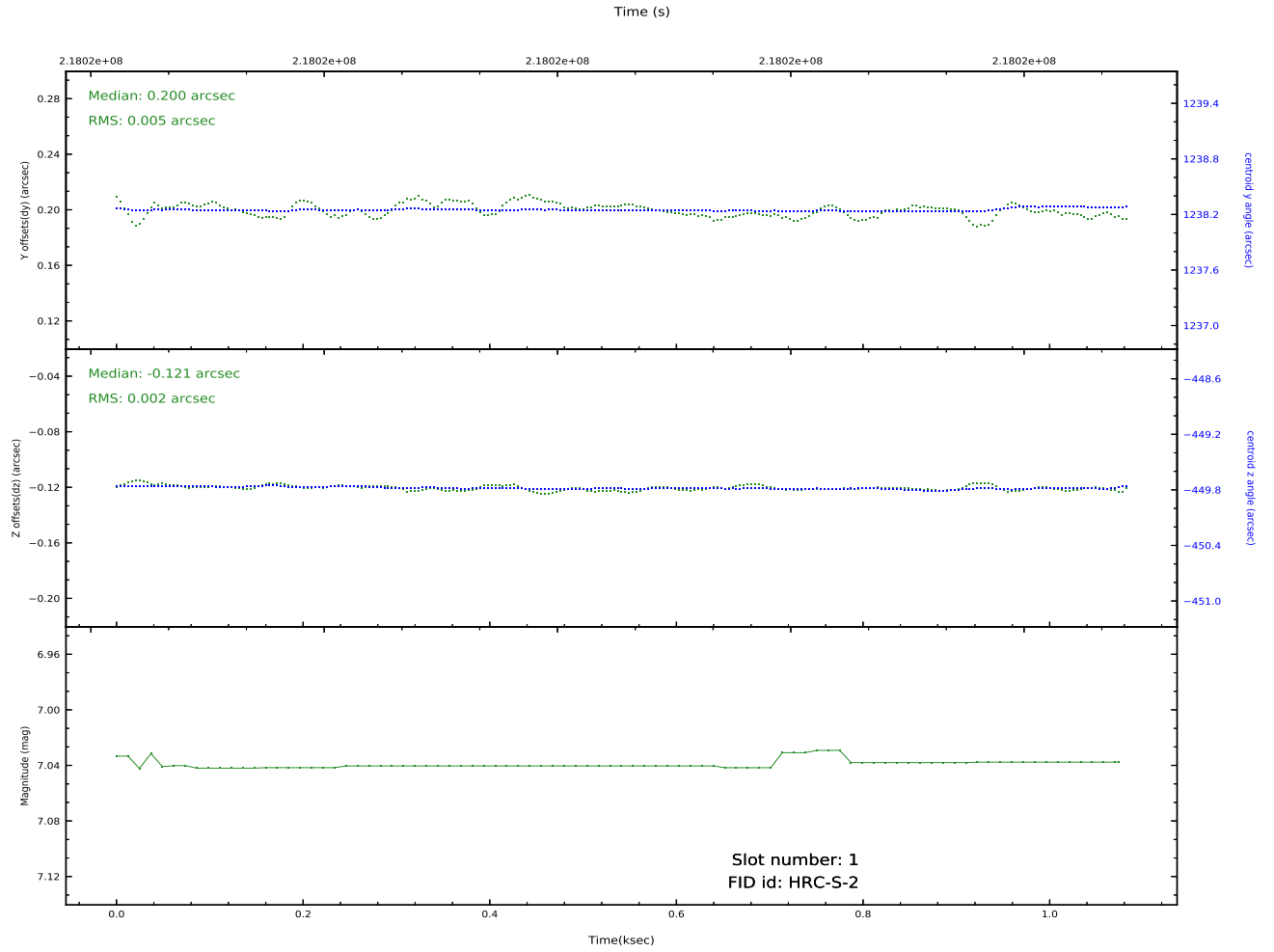
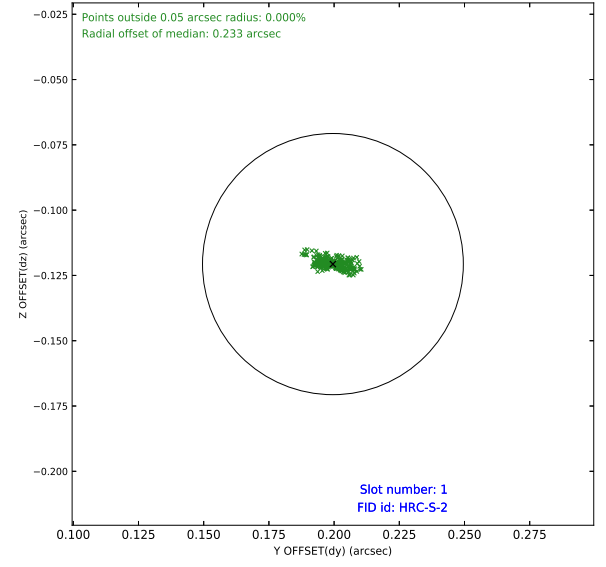
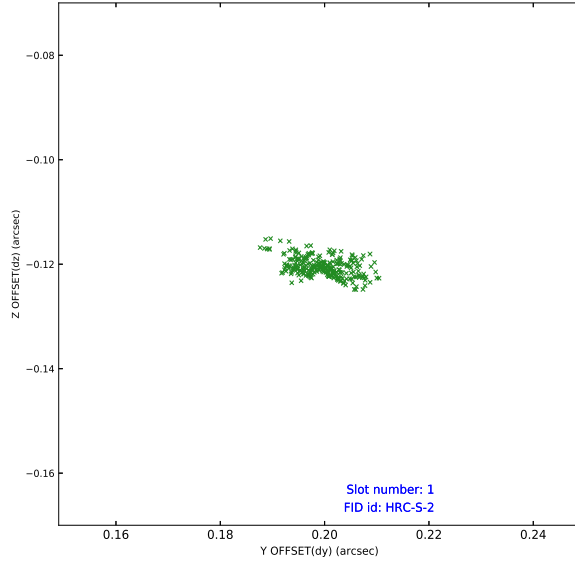


## 2.5 FID Slots

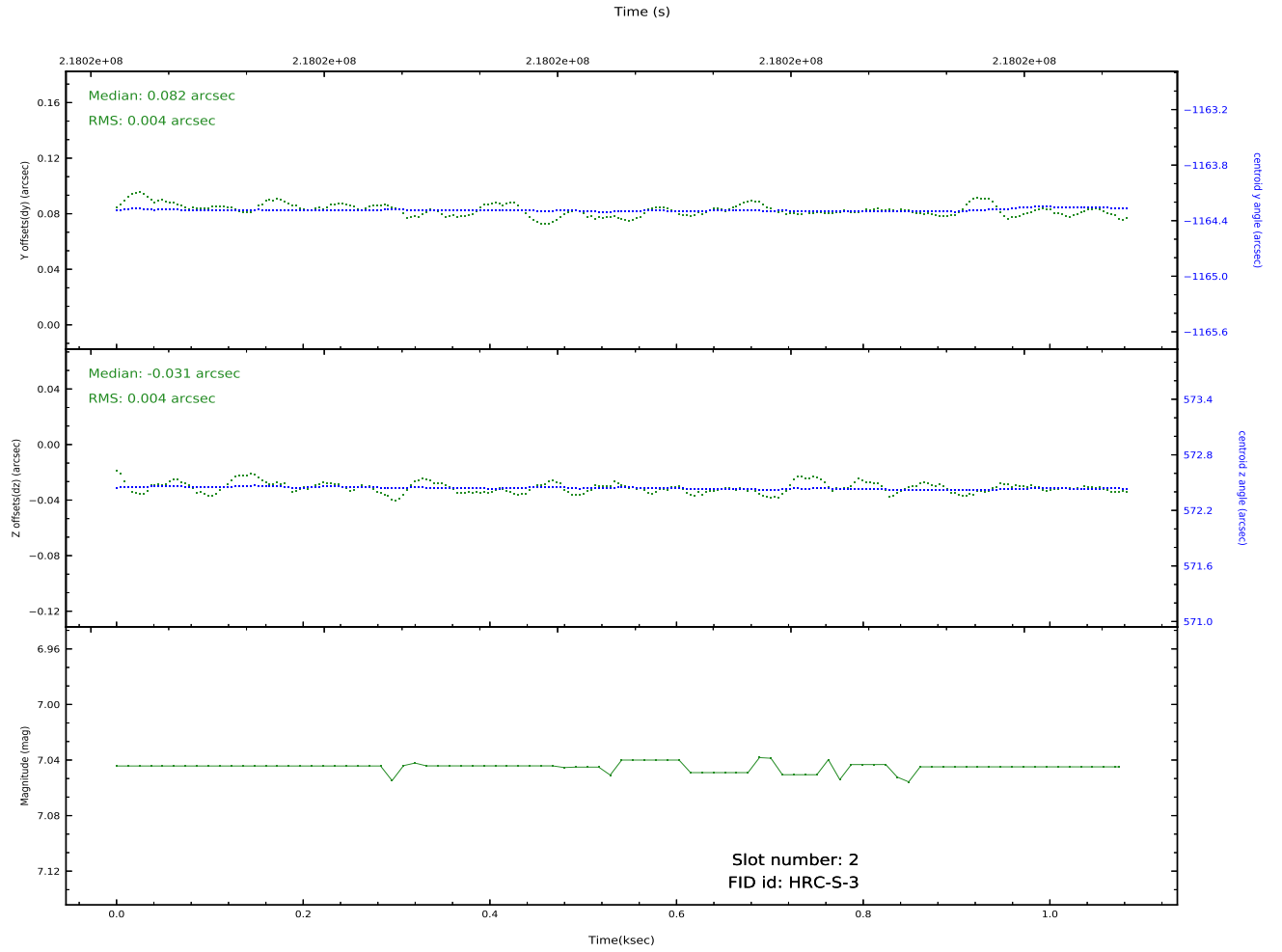
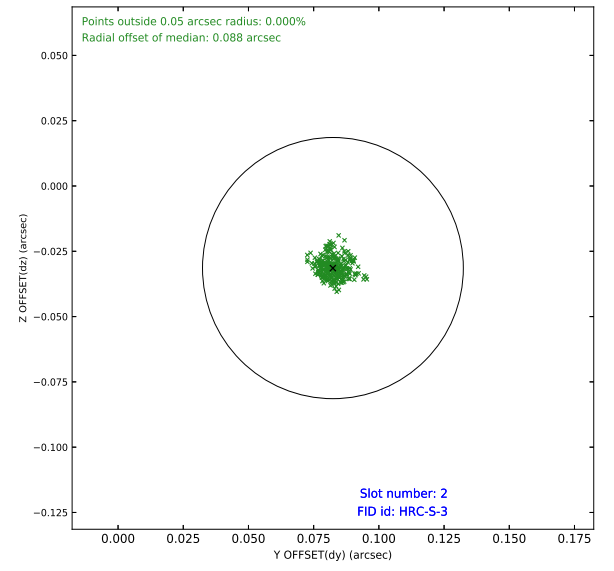
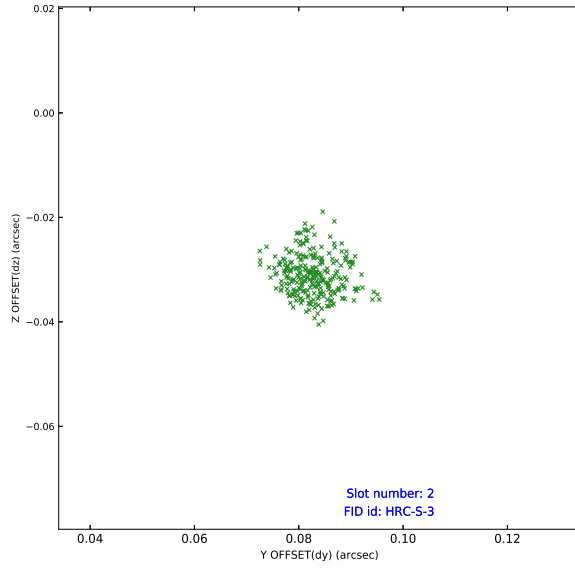
### 2.5.1 Slot 0



## 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)	2020.10.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.054981

## A.2 Comments

Due to corruption of the secondary science data during this observation, some instrument parameters have bogus values. The data in this observation have been inspected by the HRC team. PLEASE NOTE: All the event data in this observation are good. The short gaps in the GTI intervals can be eliminated (i.e., use the first START and last STOP). THE DTF values during this observation can be estimated by dropping all the low values and averaging the remaining values near 1.0.