

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5106 - L2 Version 4  
Chandra X-Ray Center

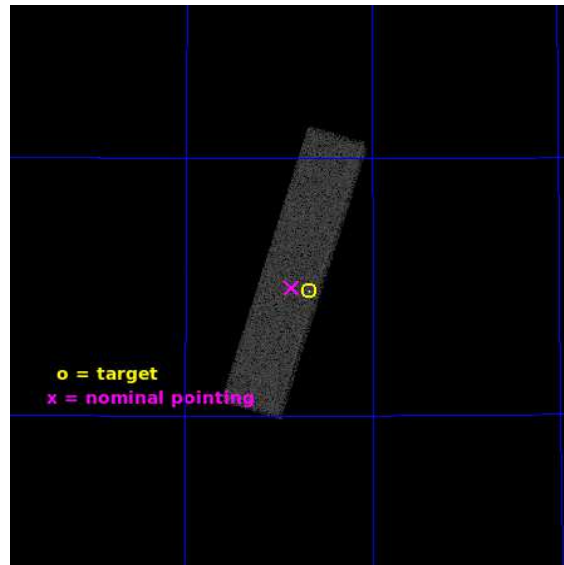
L2 Processing Date : Oct 5 2020

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# 1 Front

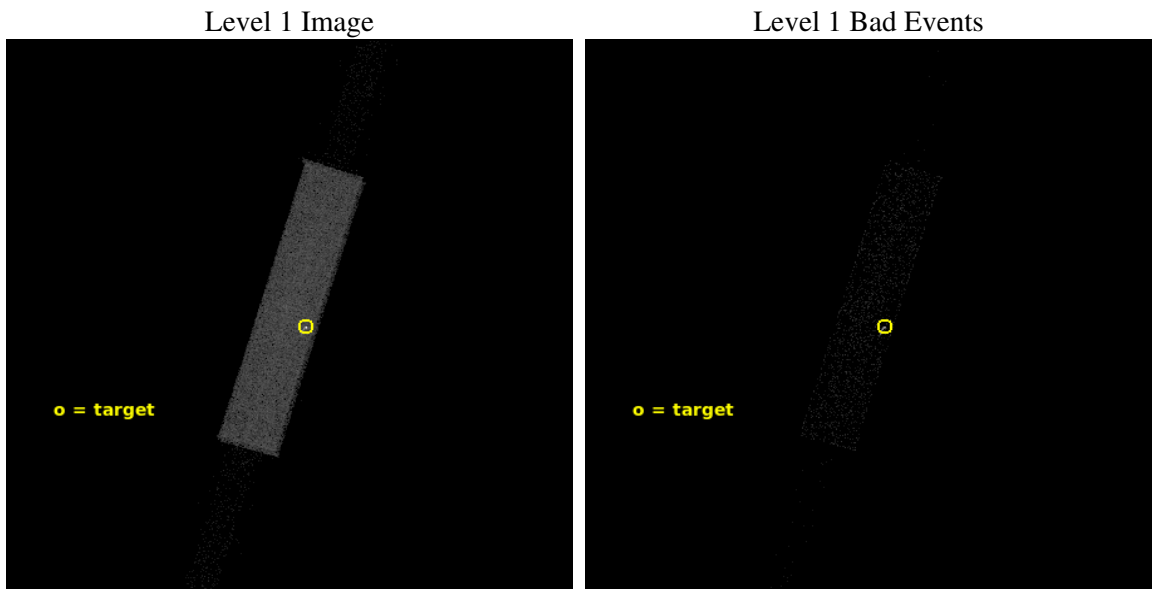
seq_num	290379	Sequence number
obs_id	5106	Observation id
title	AO5B Calibration Observations to Monitor the Spatial Variations in the HRC-S Gain	Proposal title
observer	CXC Calibration	Principal investigator
object	ArLac	Source name
ra_targ	332.17	Observer's specified target RA [deg]
dec_targ	45.742306	Observer's specified target Dec [deg]
ra_nom	332.21508082775	Nominal RA [deg]
dec_nom	45.749113517698	Nominal Dec [deg]
roll_nom	286.86990893749	Nominal Roll [deg]
revision	4	Processing version of data
ontime	1052.931297332	[s]
livetime	1045.8287053849	Ontime multiplied by DTCOR
l2events	48937	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	1052.931297332	[s]
caldsver	4.9.2	&#160	l1events	82011	Number of level 1 events
date	2020-10-05T07:58:45	Date and time of file creation			
revision	4	Processing version of data			

### 2.1.3 Events

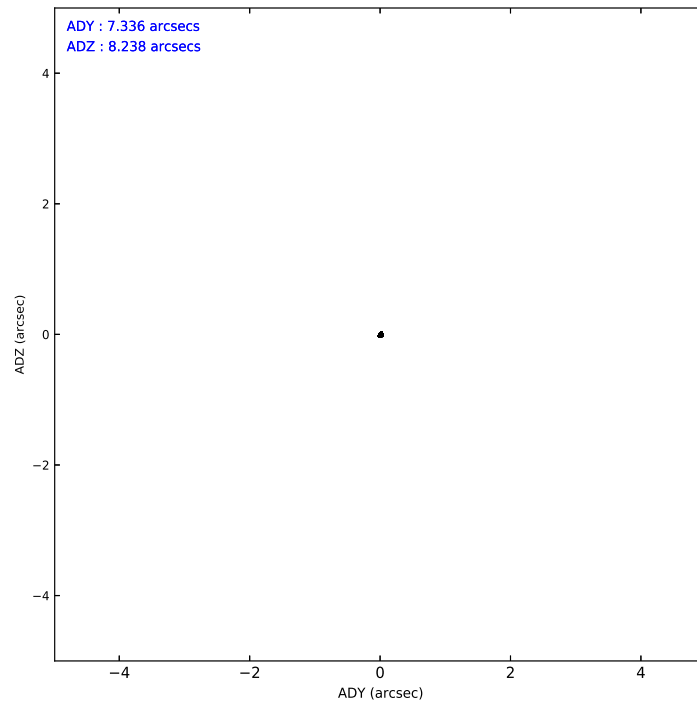
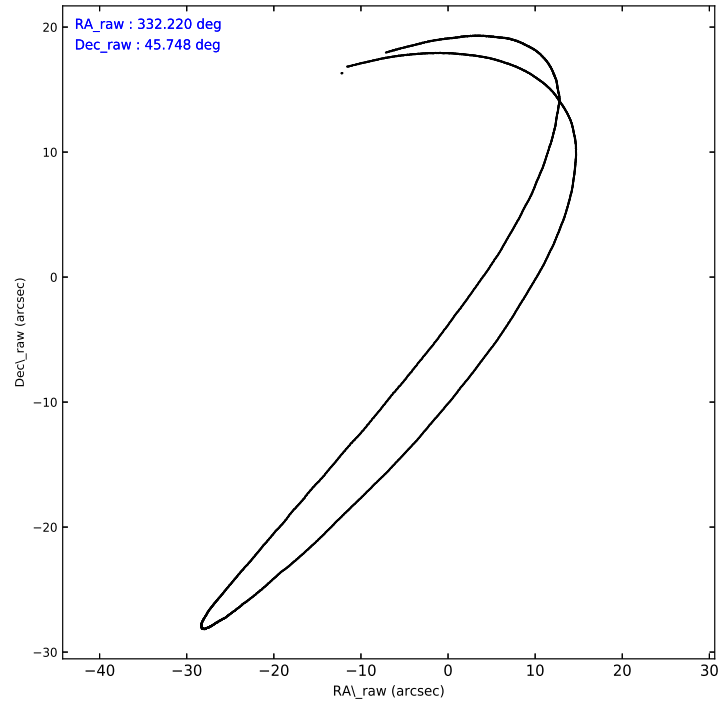
Level 1 Events

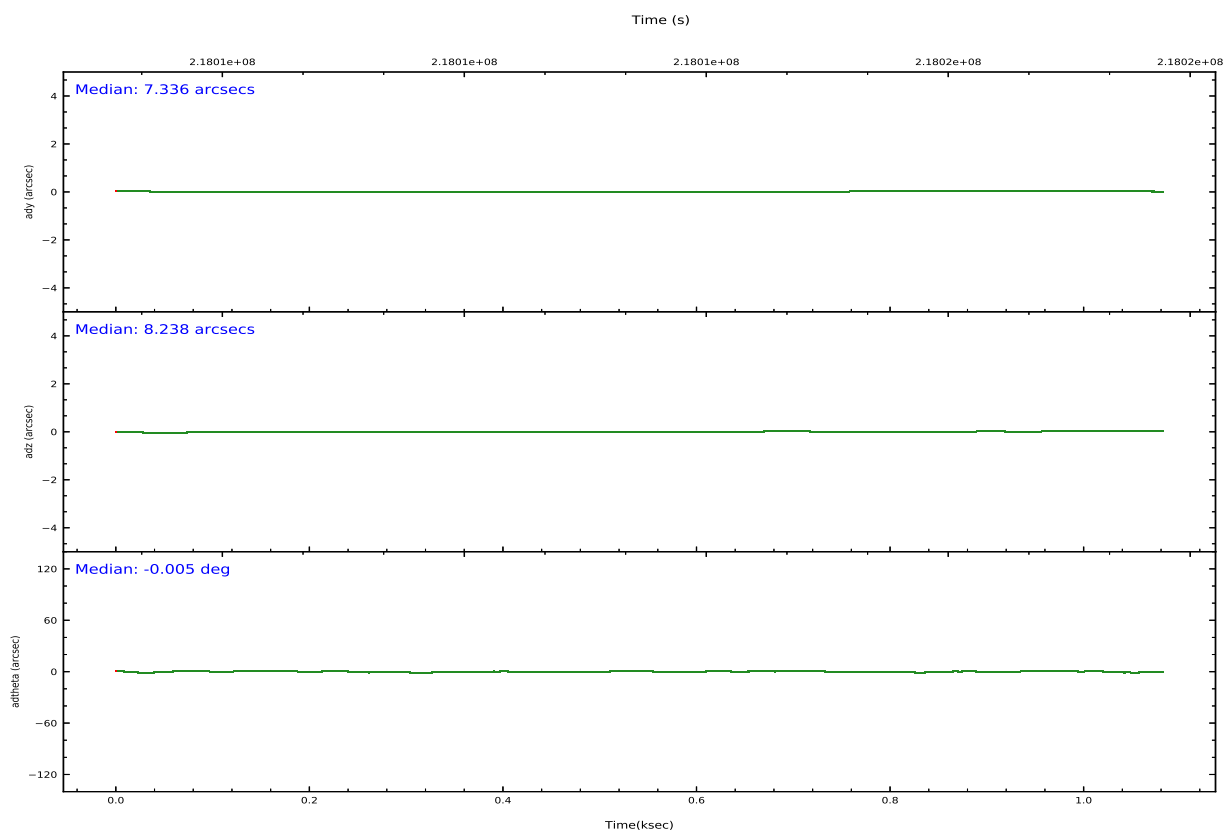
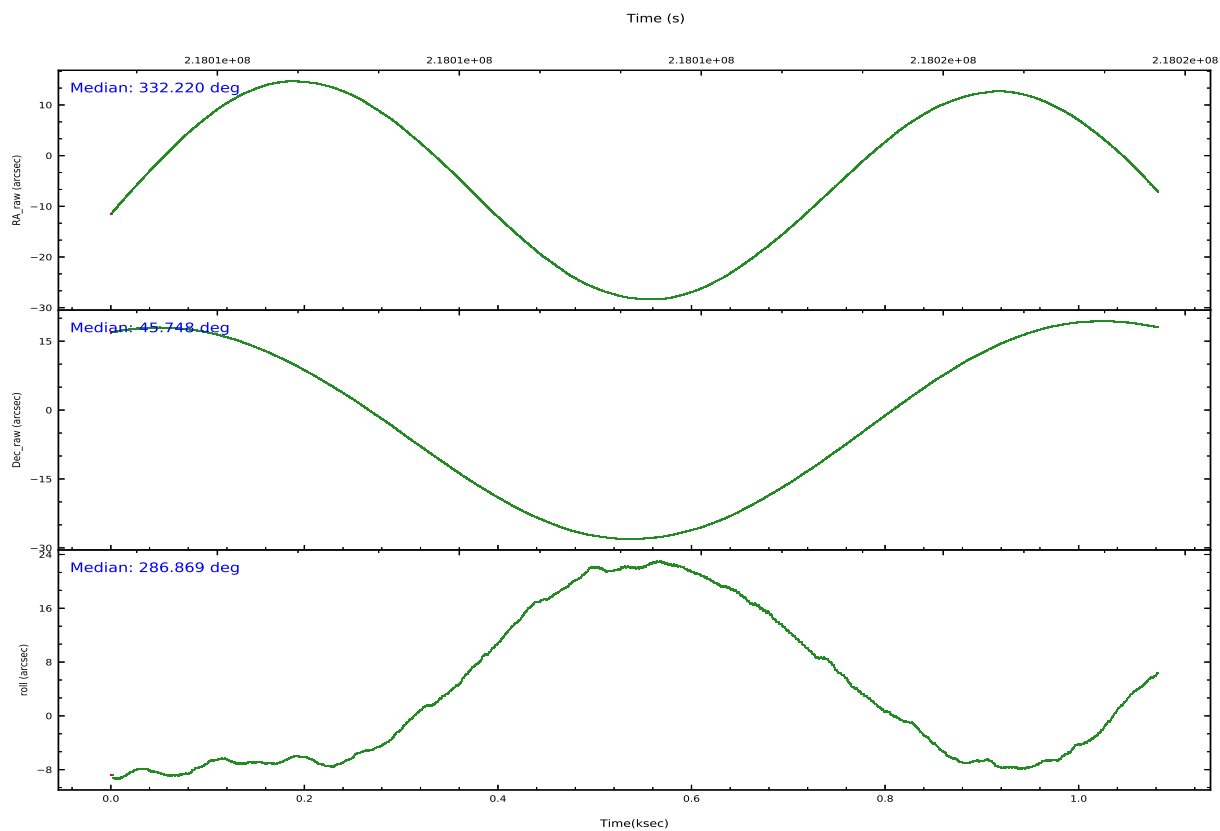
	segment 1	segment 2	segment 3
level 1 events	760	80498	753
rejected events	760	19575	753
rejected %	100%	24%	100%

## 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	332.186208	332.21508082775			
[deg] Pointing Dec	45.765926	45.749113517698			
[deg] Pointing Roll	286.825971	286.86990893749			
[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)	218014323.184000	218013946.54348			
Observation start date	2004-11-28T07:30:59	2004-11-28T07:25:46			
[s] Observation end time (MET)	218015223.184000	218015356.94355			
Observation end date	2004-11-28T07:45:59	2004-11-28T07:49:16			

## 2.3 Aspect





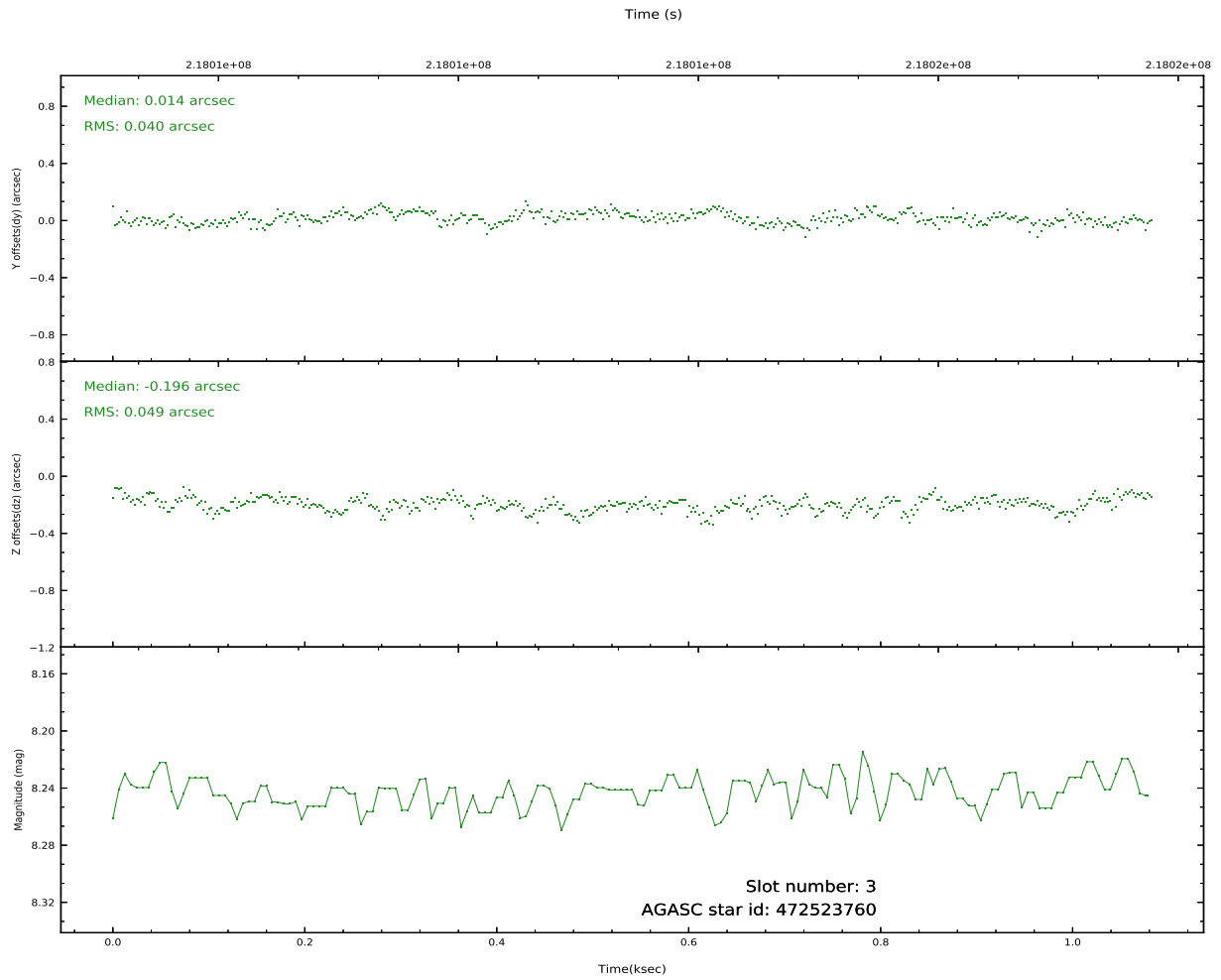
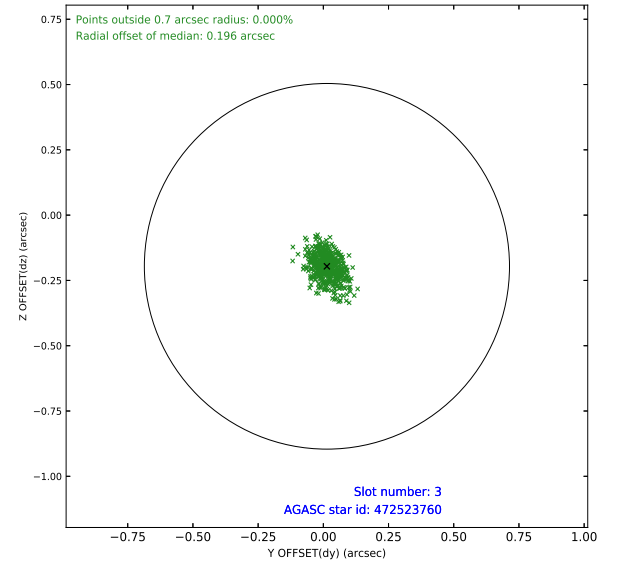
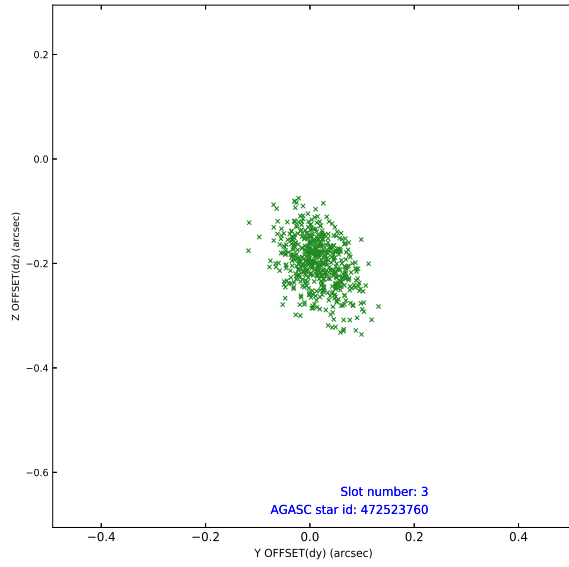
Slot Statistics

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	0.105	-0.131	0.006	0.009	0.000000	0.000000	-1161.52	-456
1	FID		HRC-S-2	7.04	265	1.000	0.198	-0.119	0.004	0.008	0.000000	0.000000	1233.87	-451
2	FID		HRC-S-3	7.05	265	1.000	0.086	-0.052	0.006	0.010	0.000000	0.000000	-1159.62	571
3	GUIDE	used	472523760	8.24	529	1.000	0.014	-0.196	0.065	0.116	331.645363	45.403260	850.03	-1689
4	GUIDE	used	472655152	9.43	529	1.000	0.048	0.046	0.091	0.158	332.504239	45.862991	-103.28	857
5	GUIDE	used	472659832	9.45	529	1.000	-0.060	0.041	0.101	0.158	332.780399	46.098139	-720.81	1764
6	GUIDE	used	472533912	9.15	529	1.000	-0.132	0.038	0.073	0.135	331.791136	46.368695	-2364.68	-311
7	GUIDE	used	472654568	9.45	527	1.000	0.123	0.062	0.122	0.201	332.194449	45.063576	2422.35	-716

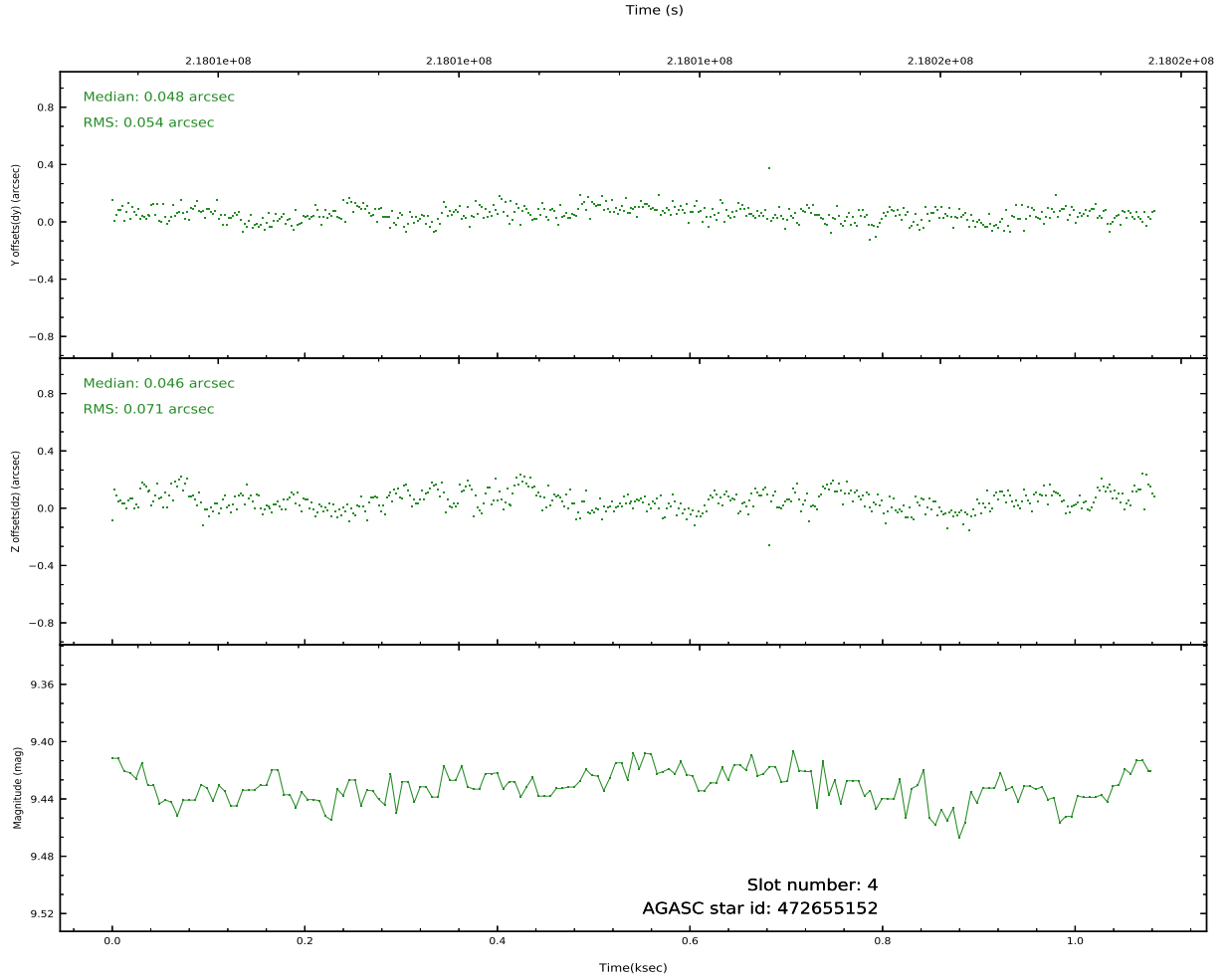
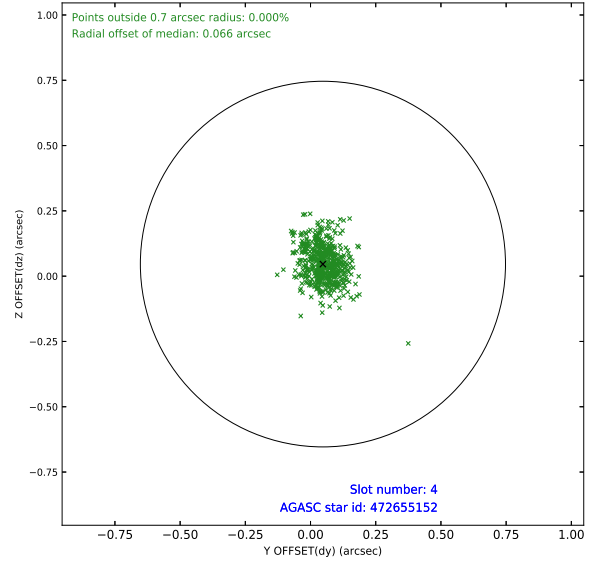
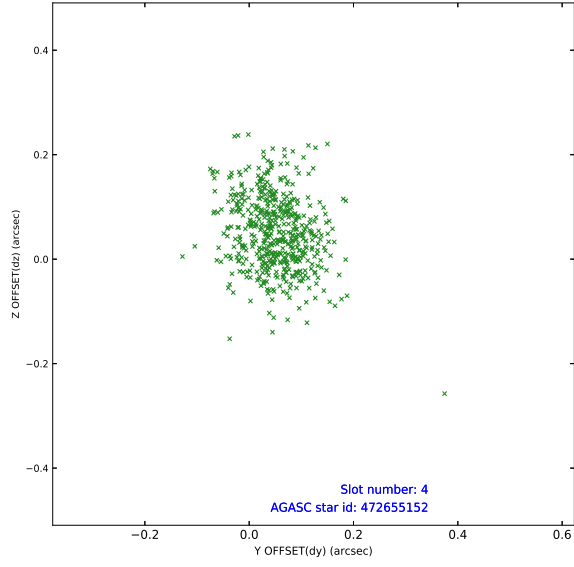


## 2.4 Star Slots

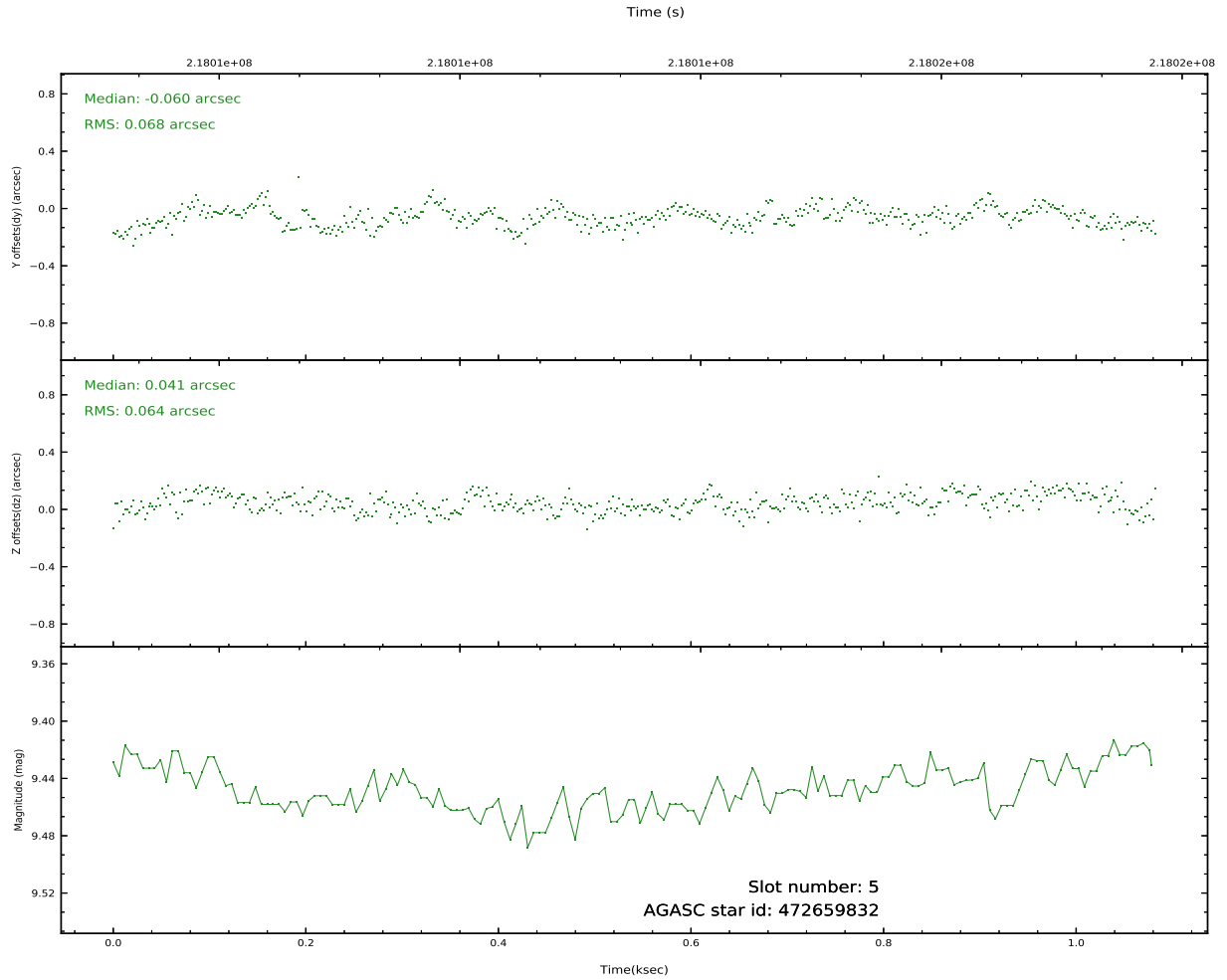
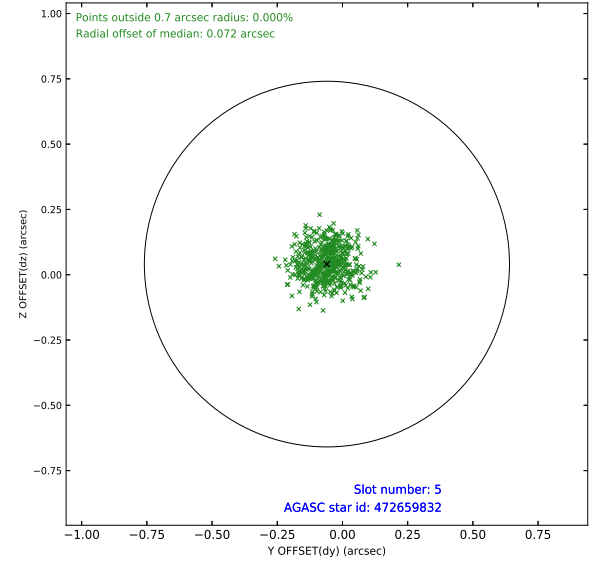
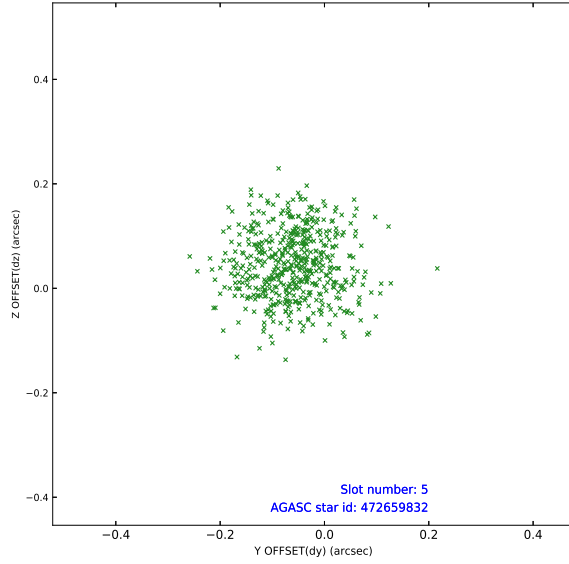
### 2.4.1 Slot 3



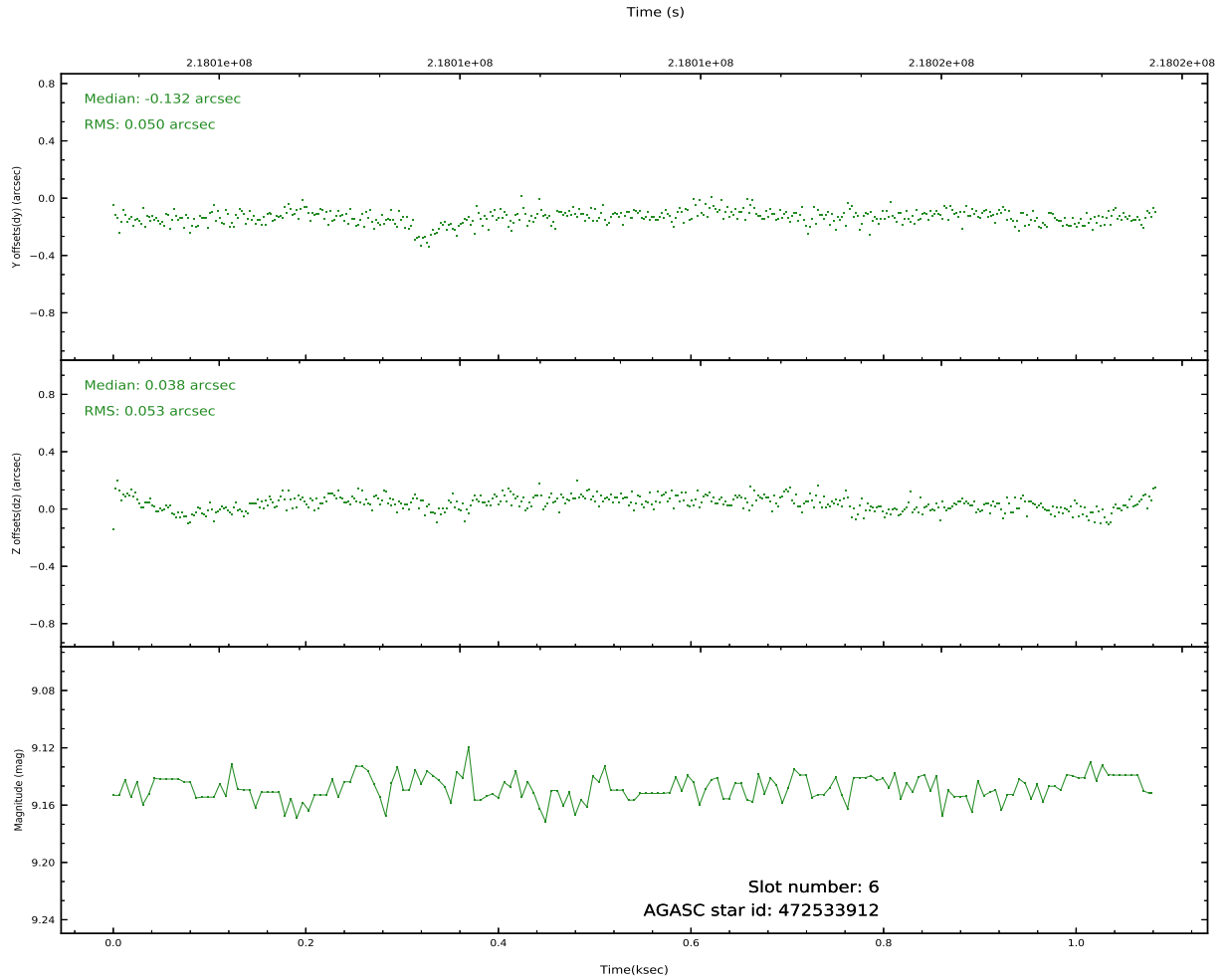
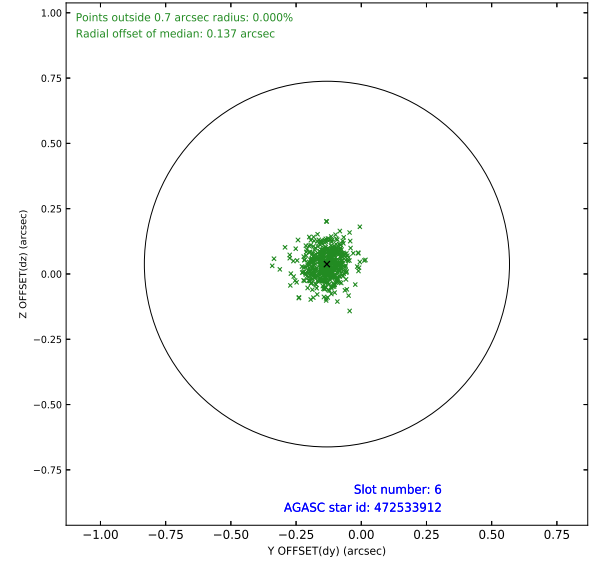
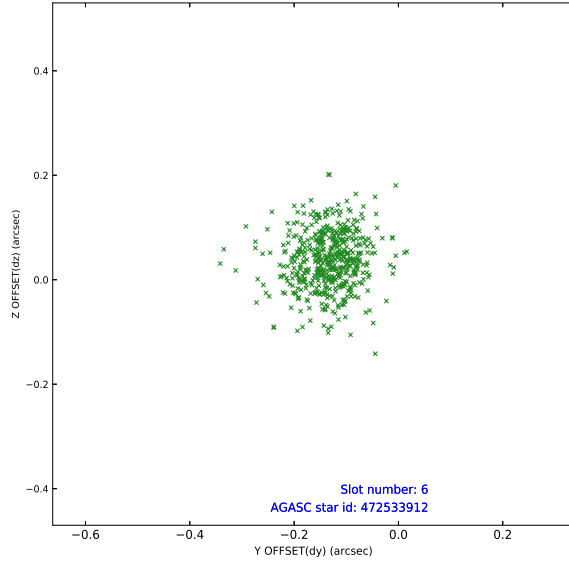
## 2.4.2 Slot 4



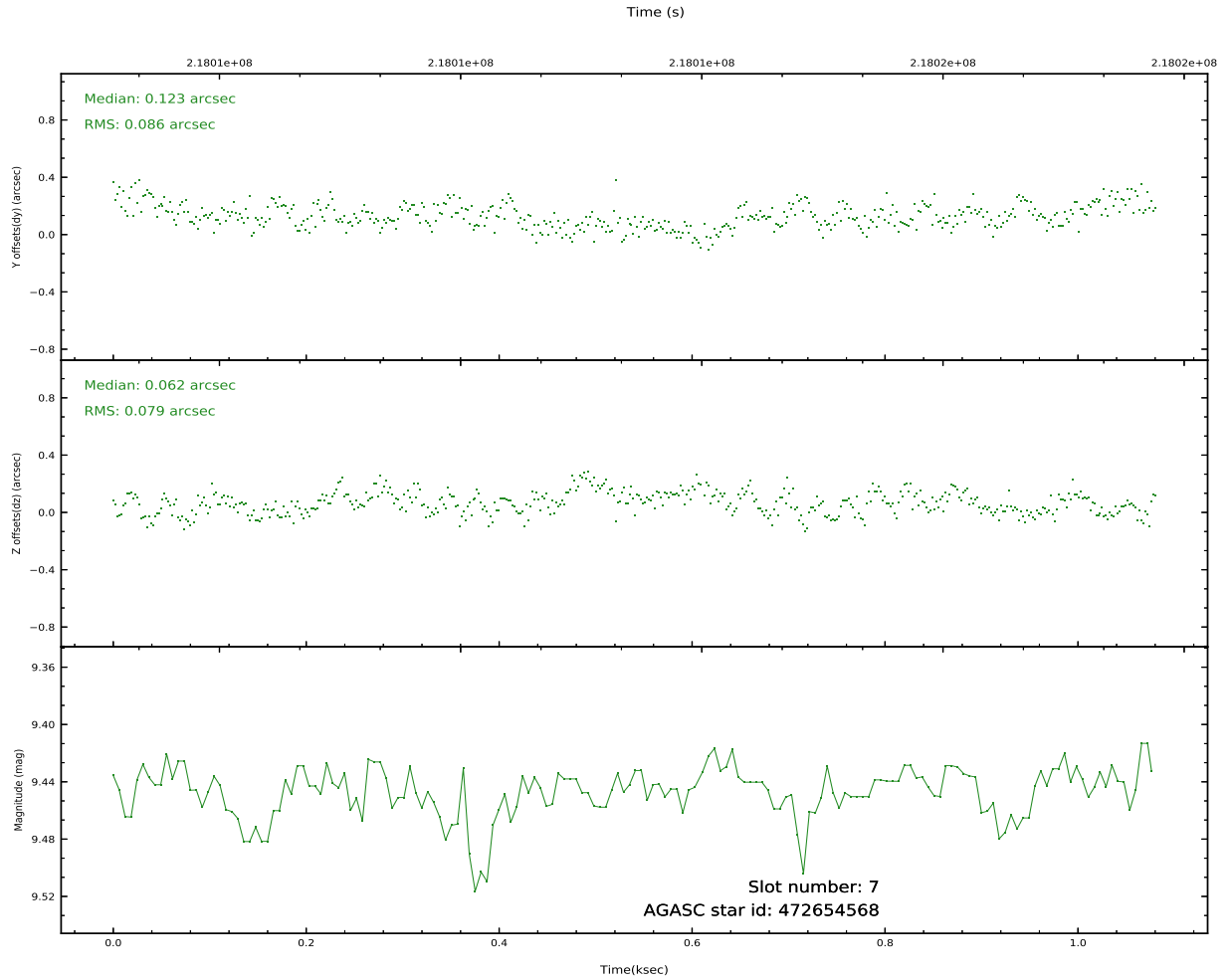
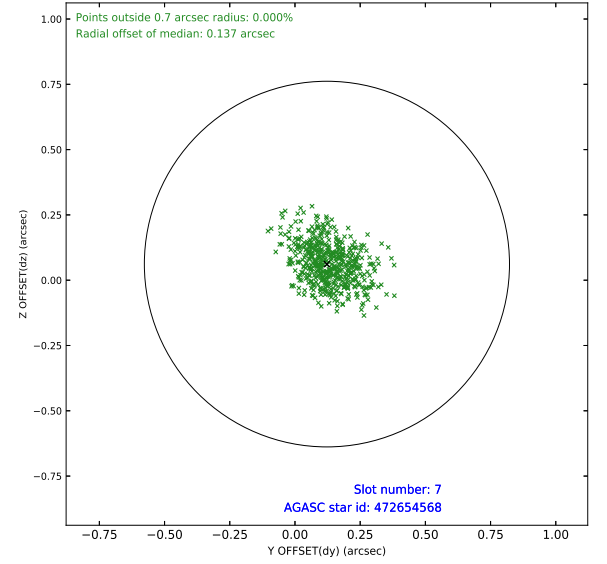
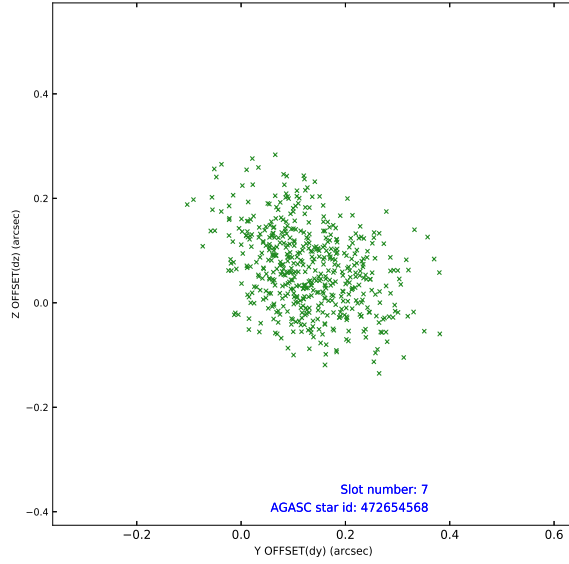
### 2.4.3 Slot 5



## 2.4.4 Slot 6

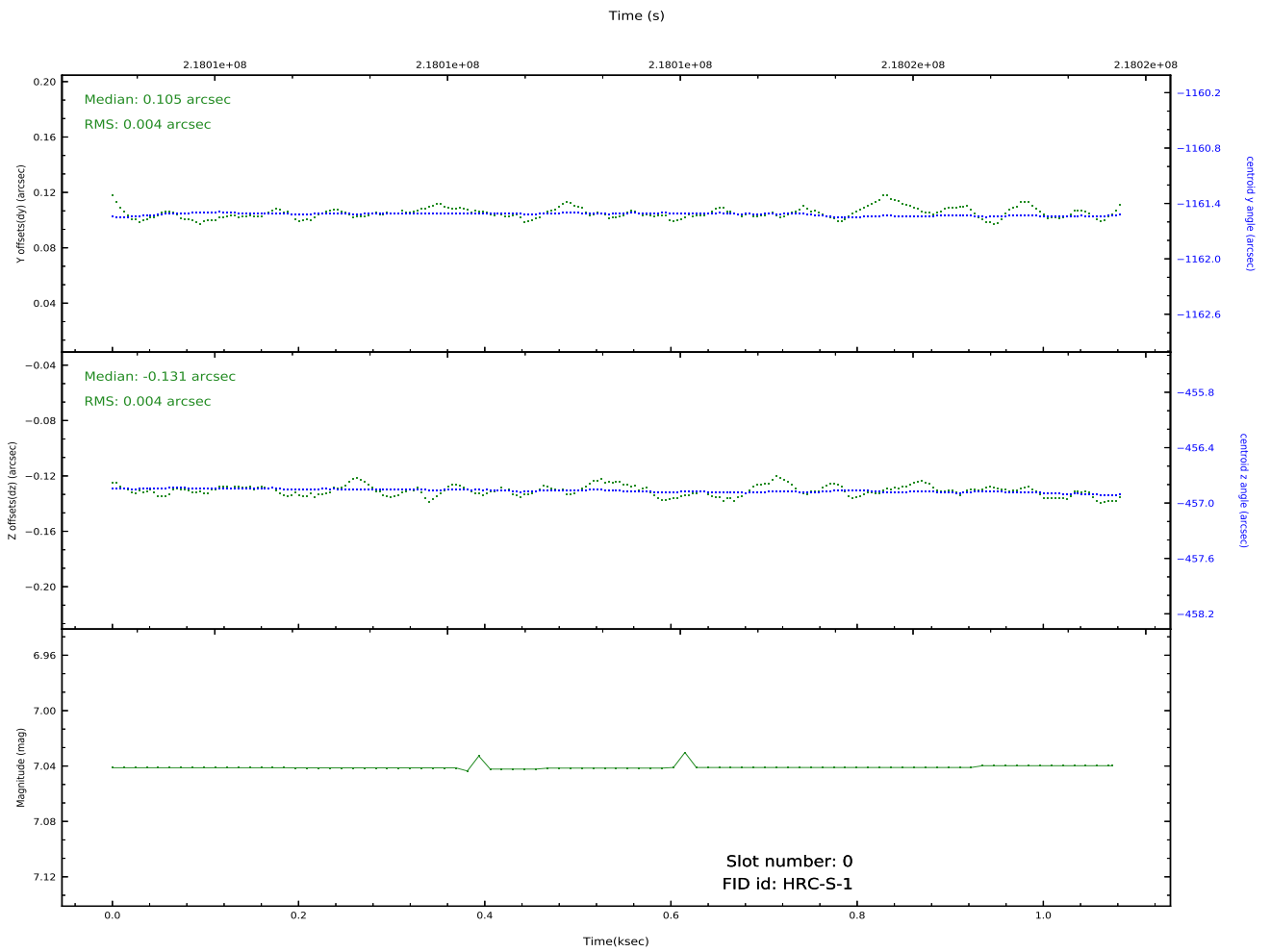
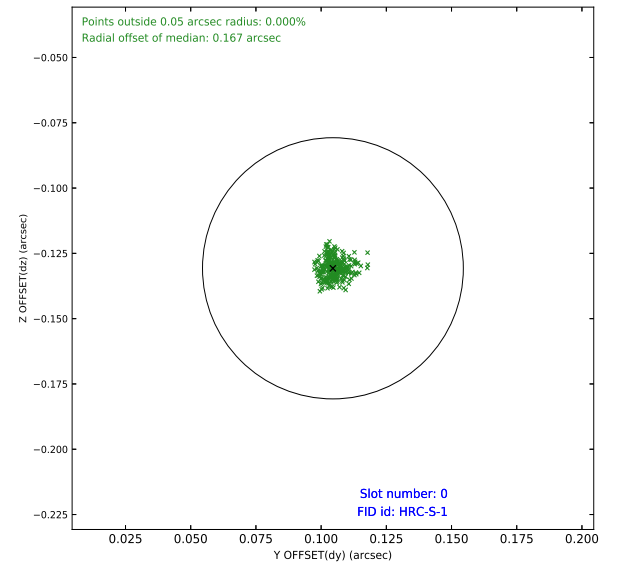
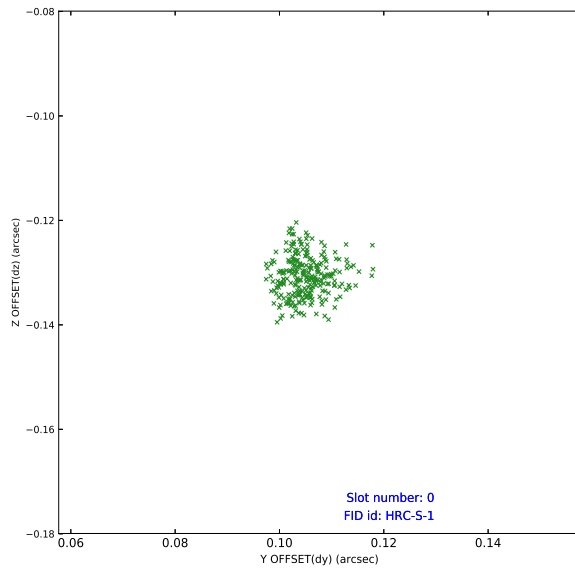


## 2.4.5 Slot 7

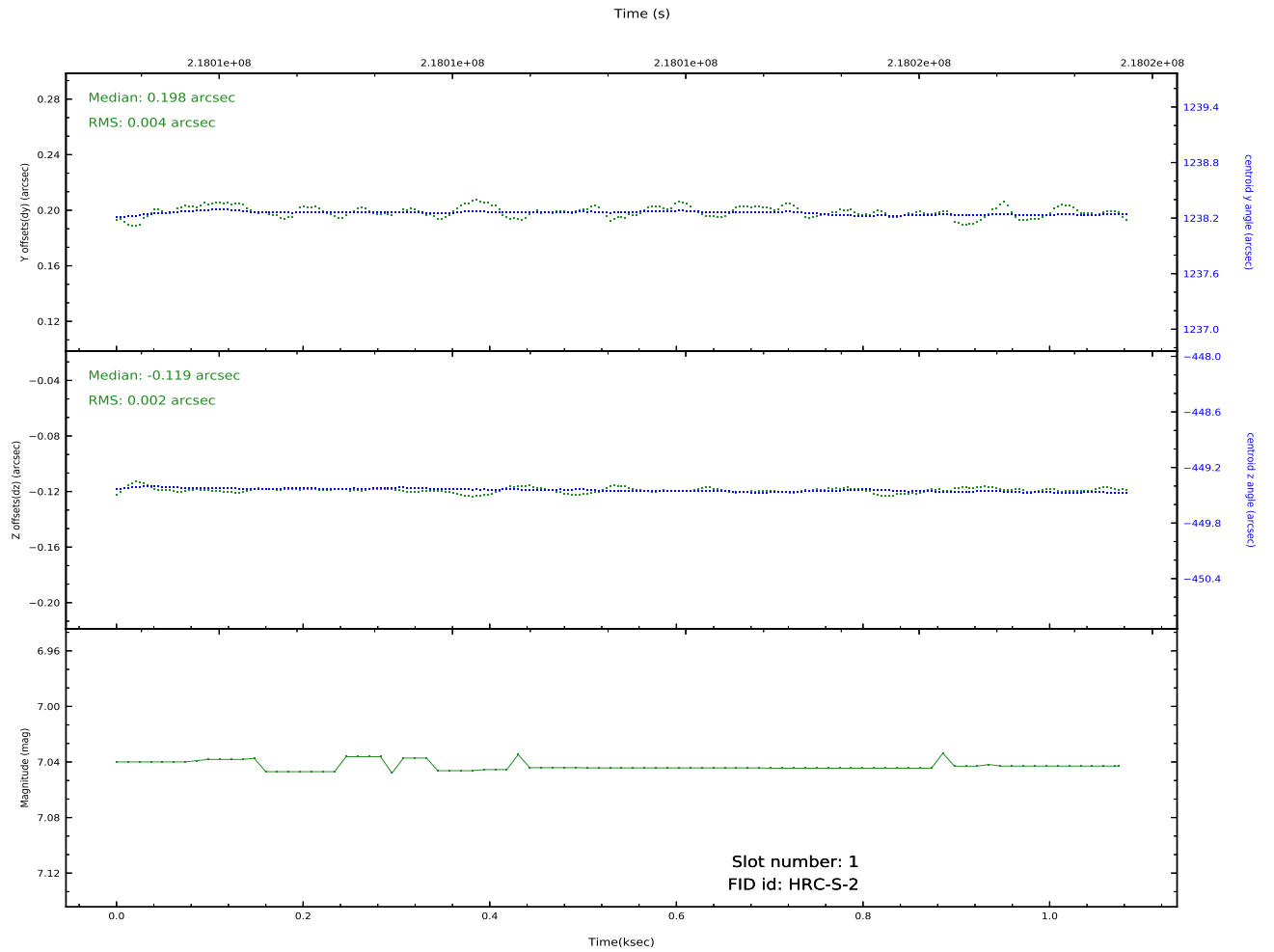
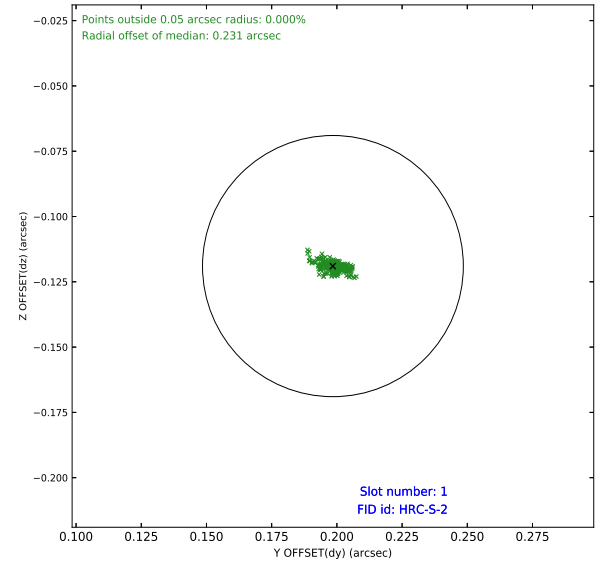
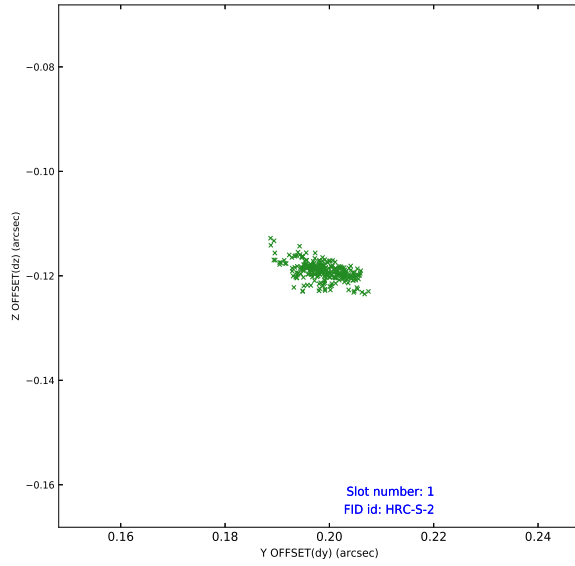


## 2.5 FID Slots

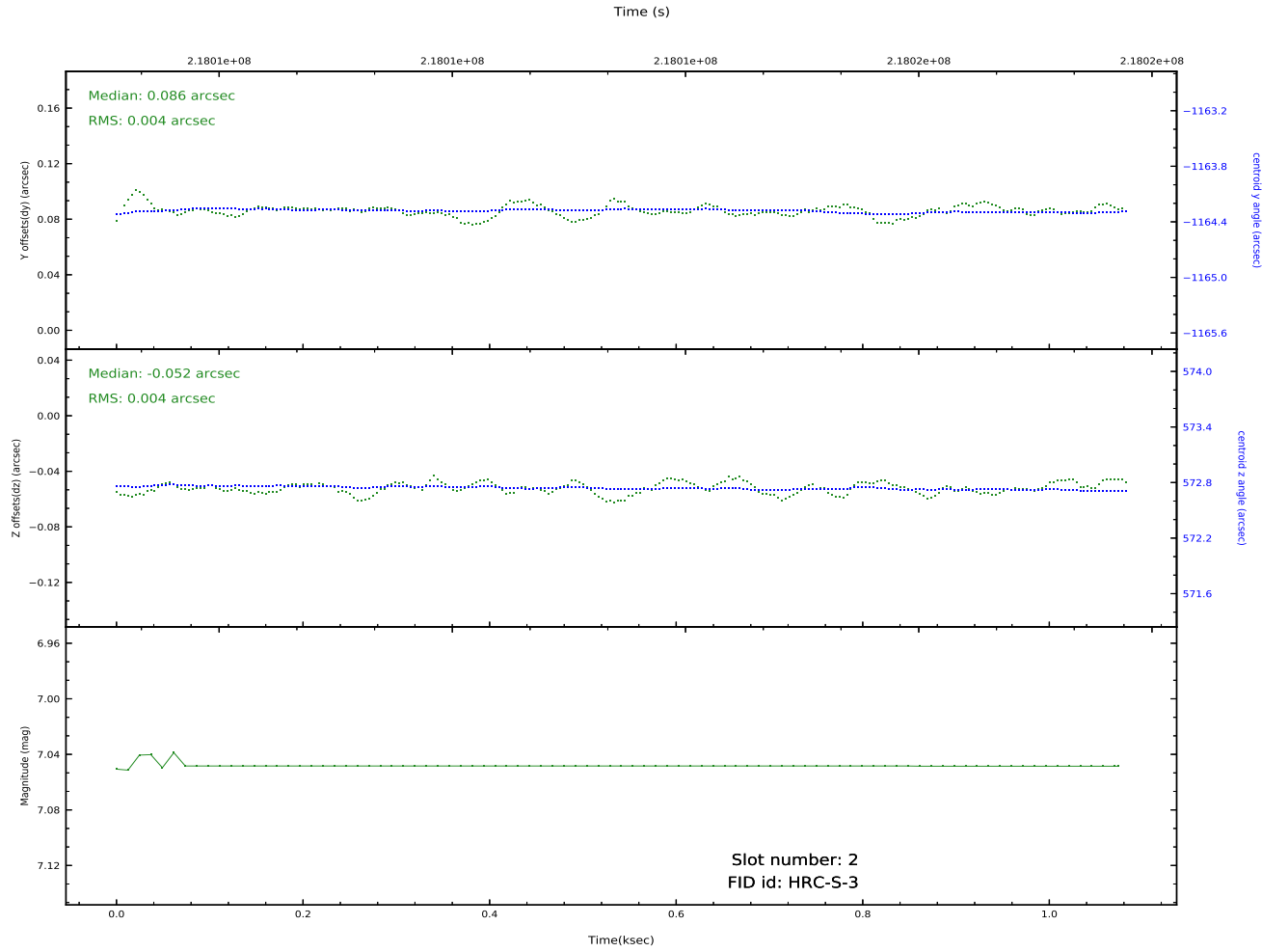
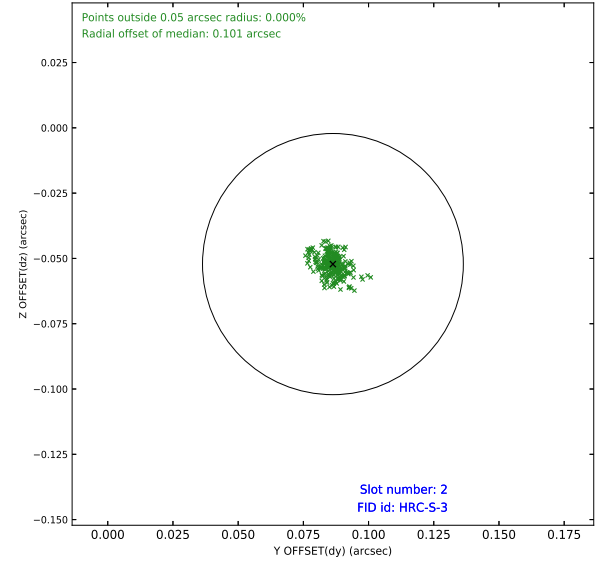
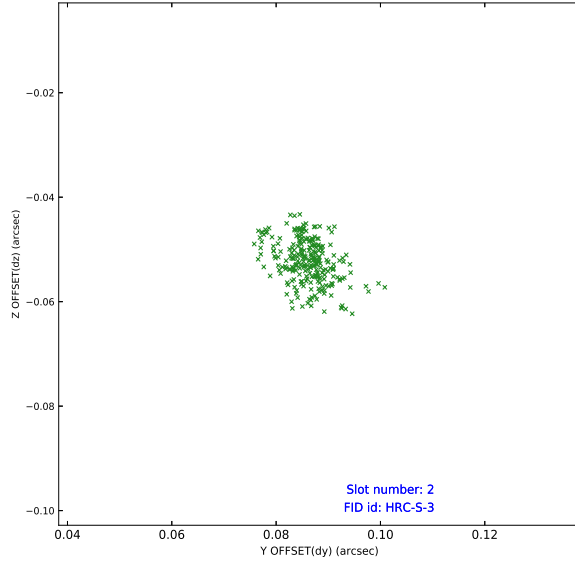
### 2.5.1 Slot 0



## 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	1.052931

## 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.