

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 20702 - L2 Version 2  
Chandra X-Ray Center

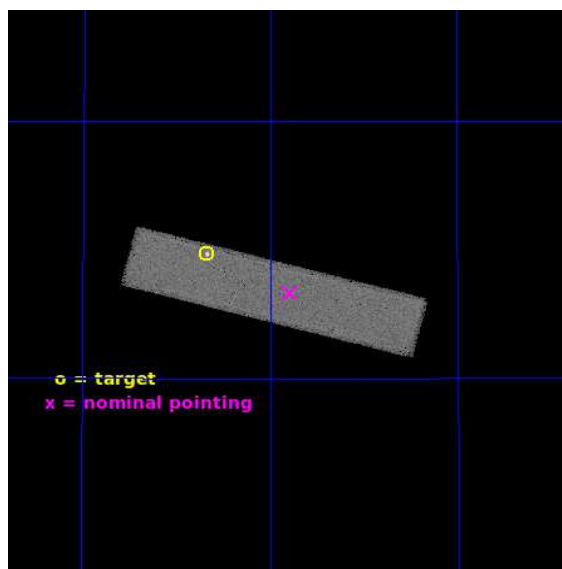
L2 Processing Date : Oct 27 2020

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Parameters . . . . .	4
2.1.3	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>A</b>	<b>Summary</b>	<b>17</b>
A.1	Status . . . . .	17
A.2	Comments . . . . .	17

# 1 Front

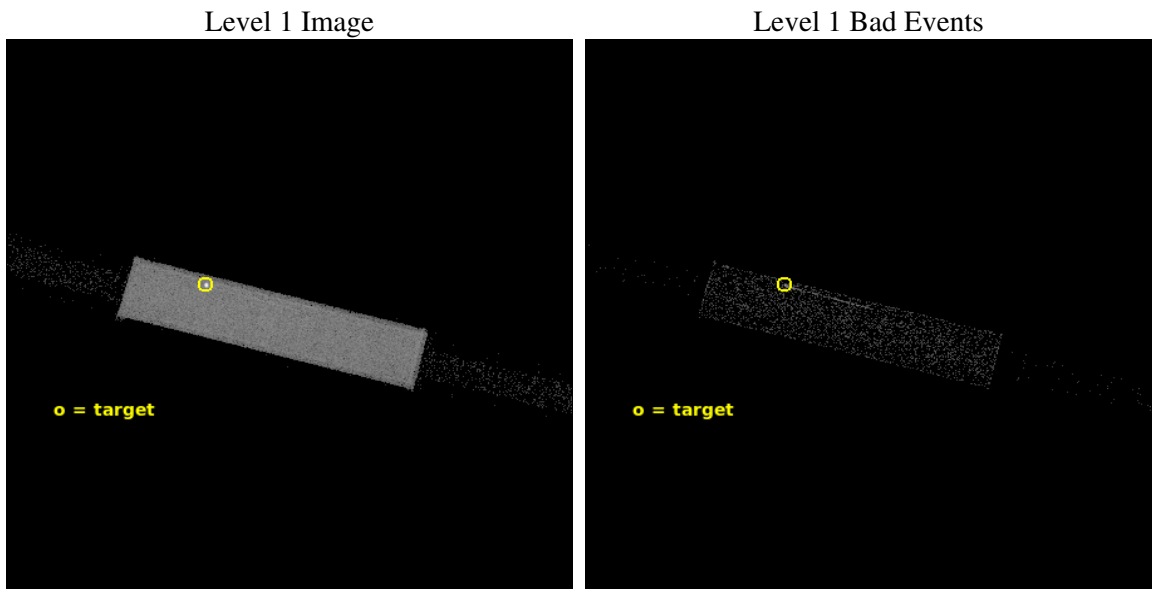
seq_num	291413	Sequence number
obs_id	20702	Observation id
title	AO-19 Calibration Observations to Monitor the Spatial Variations in the HRC-S Gain	Proposal title
observer	CXC Calibration	Principal investigator
object	ArLac	Source name
ra_targ	332.17	Observer's specified target RA [deg]
dec_targ	45.742306	Observer's specified target Dec [deg]
ra_nom	331.94726709842	Nominal RA [deg]
dec_nom	45.667029425557	Nominal Dec [deg]
roll_nom	194.5468912468	Nominal Roll [deg]
revision	2	Processing version of data
ontime	1177.9813201427	[s]
livetime	1166.9187218034	Ontime multiplied by DTCOR
l2events	86532	Number of level 2 events



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	1000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	1177.9813201427	[s]
caldbver	4.9.3	&#160	l1events	129536	Number of level 1 events
date	2020-10-27T17:03:33	Date and time of file creation			
revision	2	Processing version of data			

### 2.1.3 Events

Level 1 Events

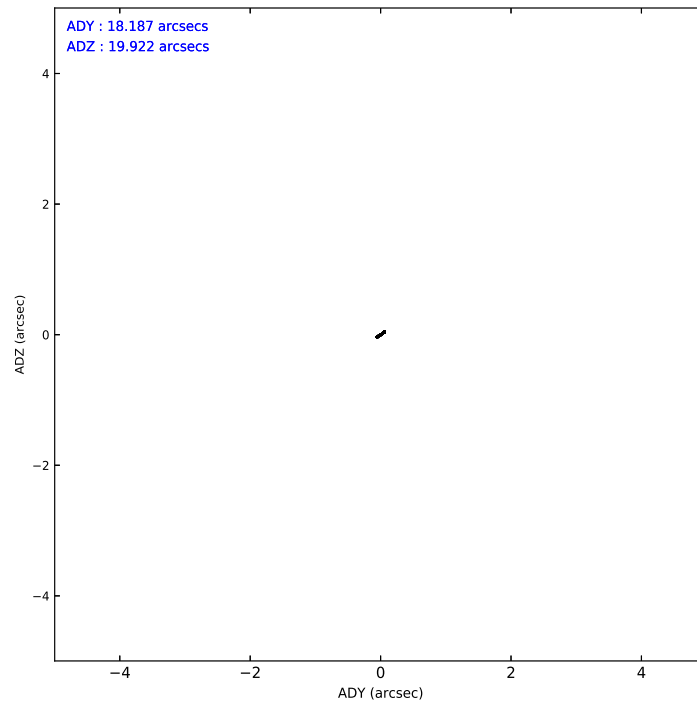
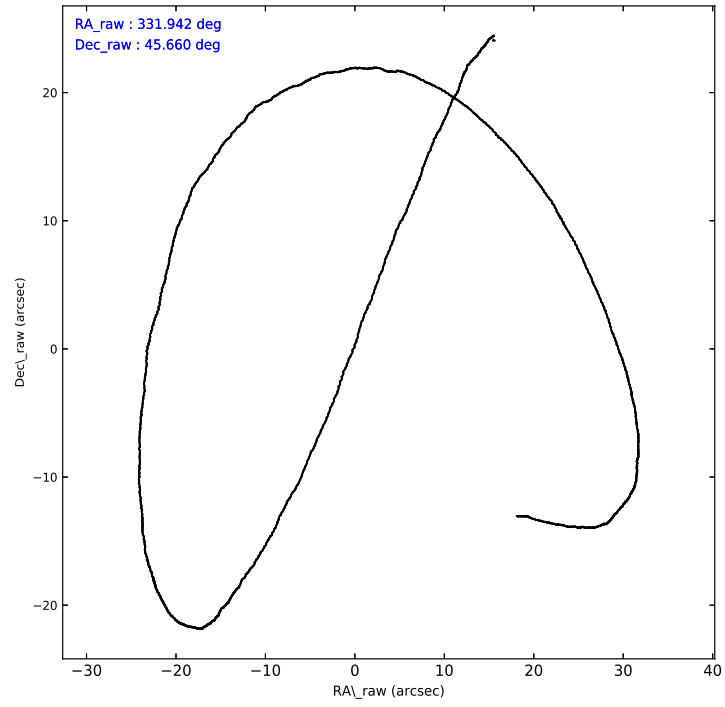
	segment 1	segment 2	segment 3
level 1 events	1178	127278	1080
rejected events	1178	27891	1080
rejected %	100%	21%	100%

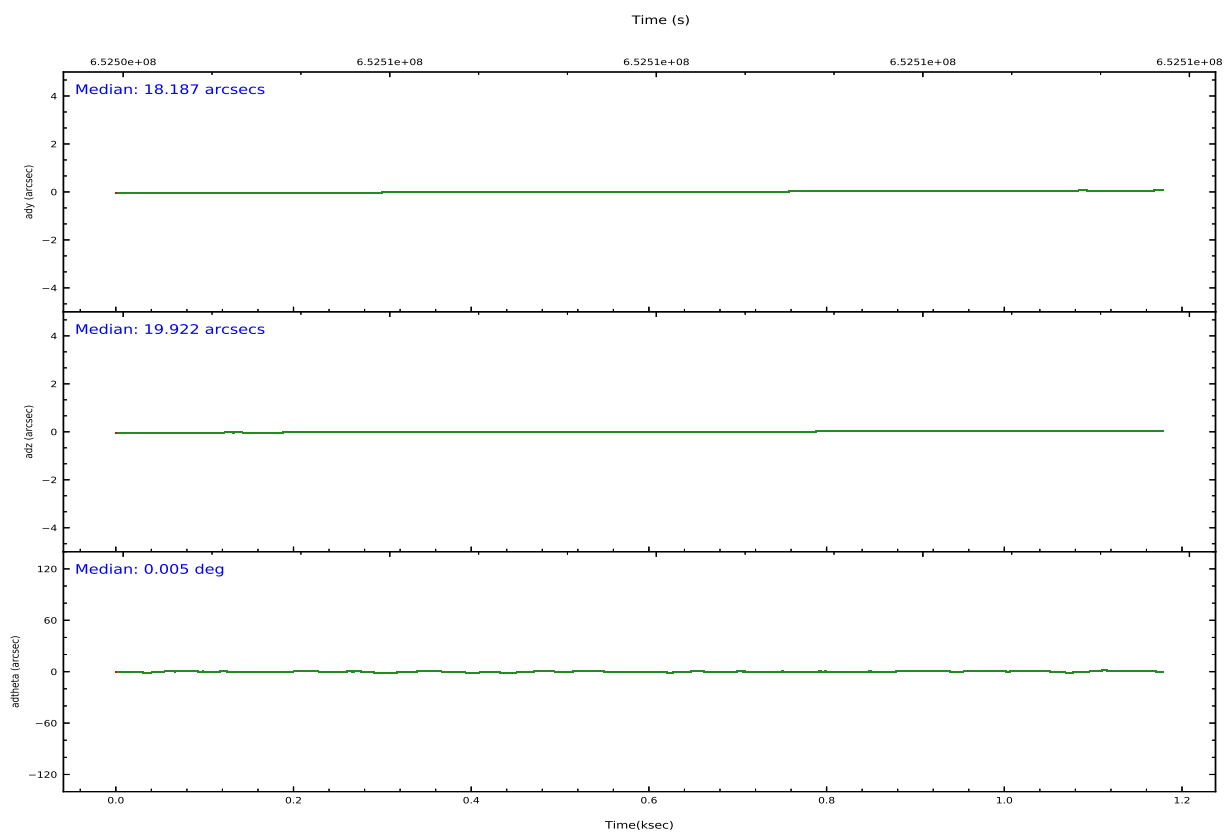
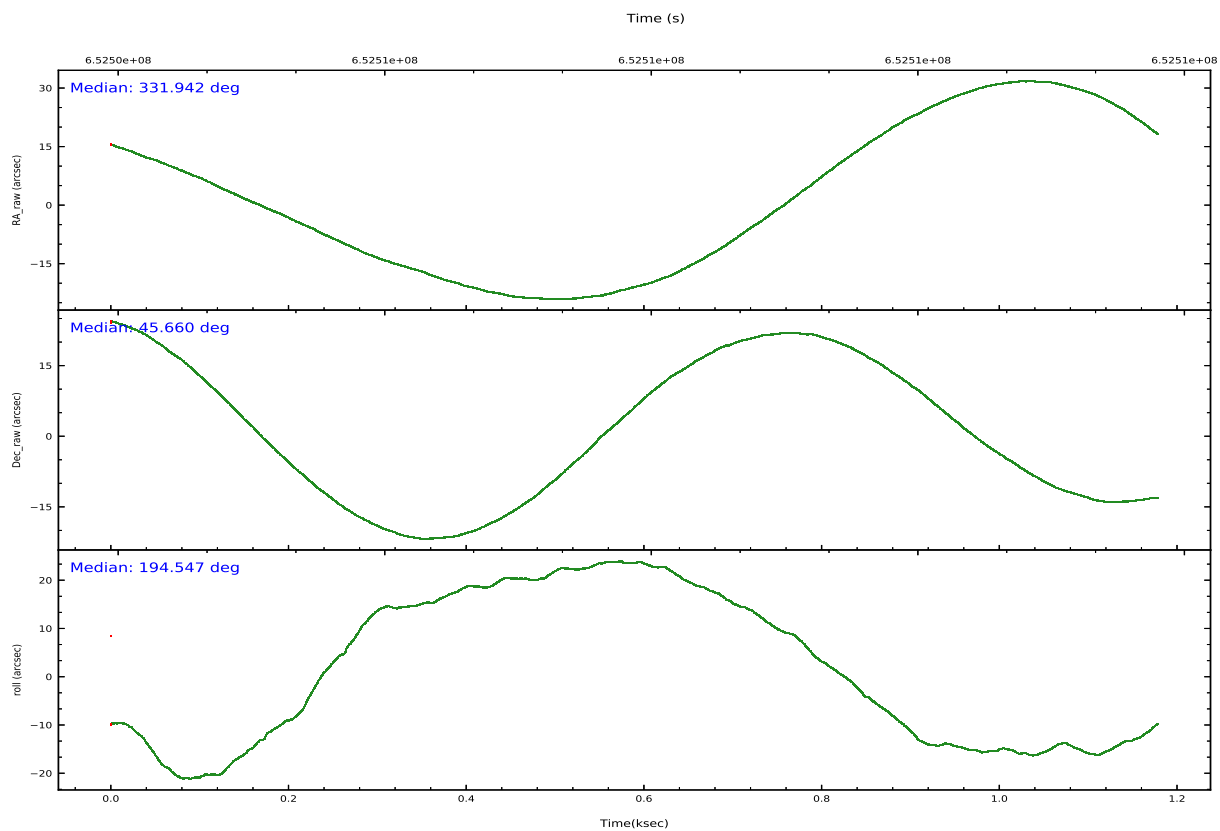
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-S	HRC-S
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
[deg] Pointing RA	331.969525	331.94726709842
[deg] Pointing Dec	45.681746	45.667029425557
[deg] Pointing Roll	194.469184	194.5468912468
[mm] SIM focus pos	-1.533336	-1.526339935833849
[mm] SIM defocus	7.710433287538843e-07	0.006996703570447904
[mm] SIM translation stage pos	250.455976	250.466033080201
[mm] SIM translation stage offset	0	-0.01005468664627074
[s] Observation start time (MET)	652505071.184000	652504695.51368
Observation start date	2018-09-05T03:23:22	2018-09-05T03:18:15
[s] Observation end time (MET)	652506071.184000	652506205.33877
Observation end date	2018-09-05T03:40:02	2018-09-05T03:43:25

Parameter	Planned	Actual
Obspar version number	8	8
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

## 2.3 Aspect





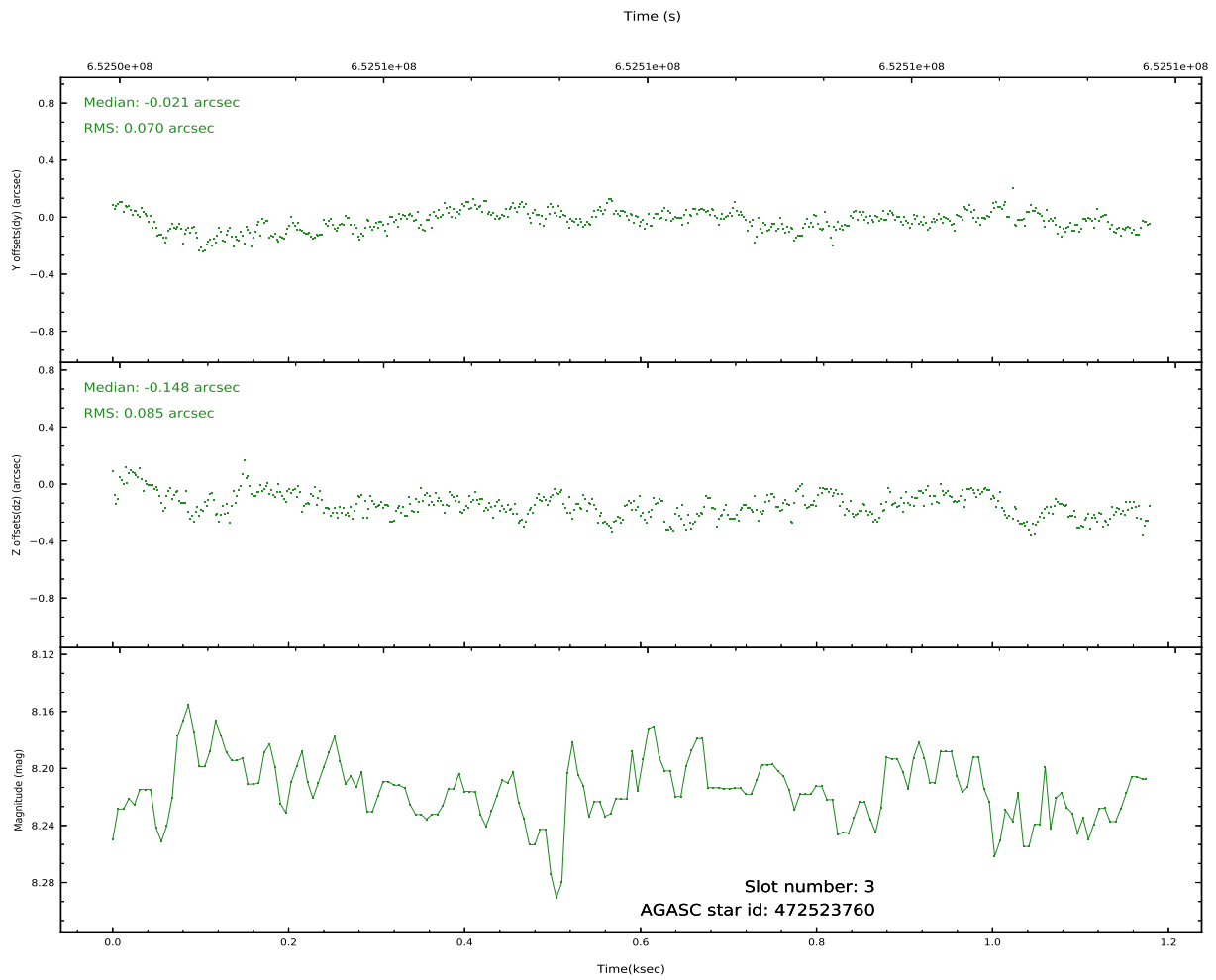
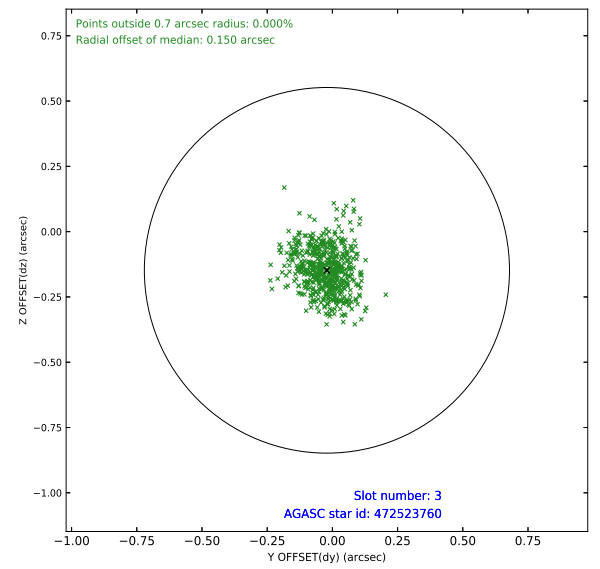
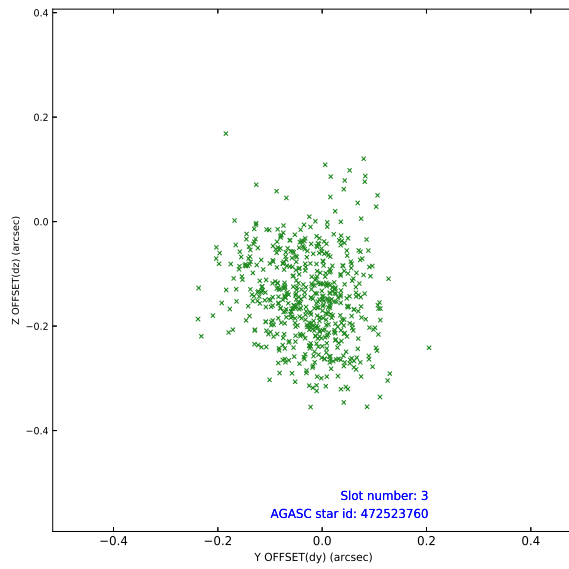
Slot Statistics

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	7.05	288	1.000	0.104	-0.265	0.007	0.011	0.000000	0.000000	-1172.70	-468
1	FID		HRC-S-2	7.02	288	1.000	0.271	-0.150	0.005	0.011	0.000000	0.000000	1223.05	-463
2	FID		HRC-S-3	7.03	288	1.000	0.014	0.112	0.007	0.012	0.000000	0.000000	-1171.12	559
3	GUIDE	used	472523760	8.22	575	1.000	-0.021	-0.148	0.118	0.198	331.645363	45.403260	1044.81	763
4	GUIDE	used	472527720	6.98	576	1.000	-0.227	-0.160	0.122	0.196	331.460205	45.112509	1766.45	1656
5	GUIDE	used	472655152	9.36	575	1.000	0.084	0.021	0.241	0.387	332.504239	45.862991	-1457.79	-299
6	GUIDE	used	472651904	6.17	576	1.000	-0.074	0.068	0.144	0.231	332.170077	45.742257	-543.09	-88
7	GUIDE	used	472663080	9.31	575	1.000	0.258	0.211	0.206	0.320	332.652741	46.473840	-2353.84	-2346

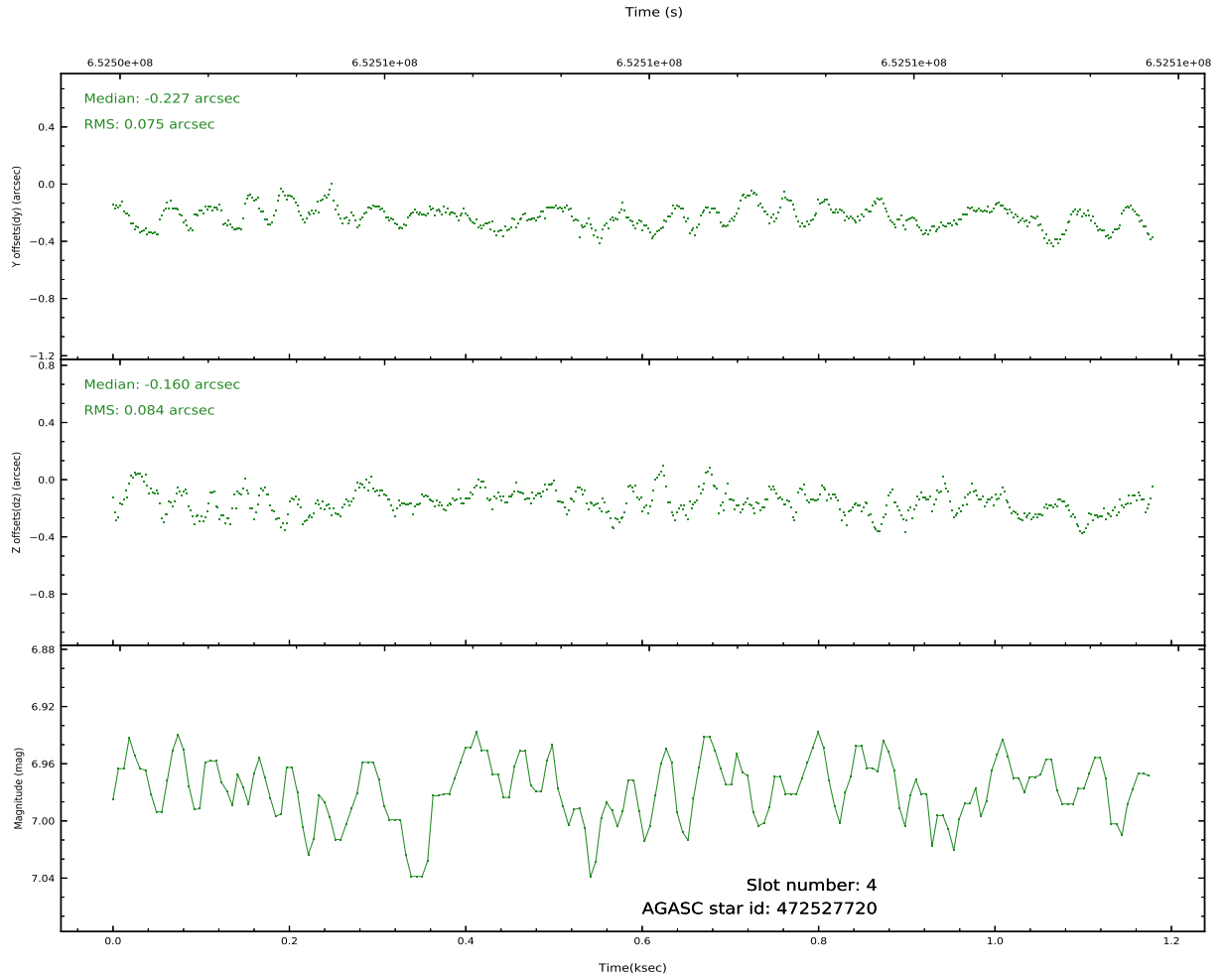
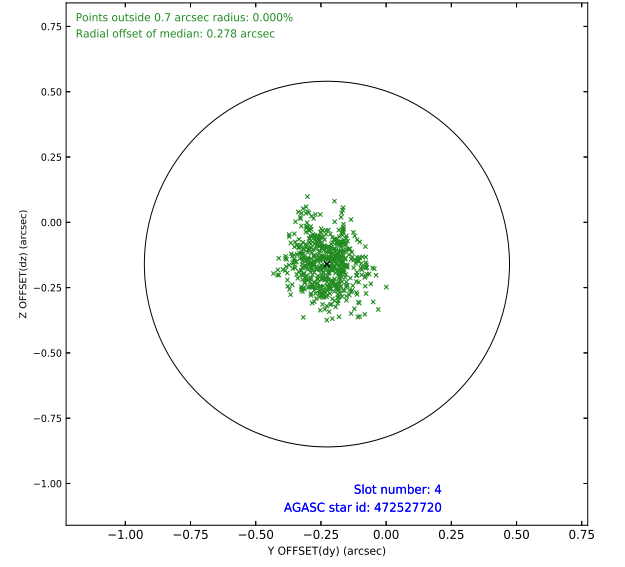
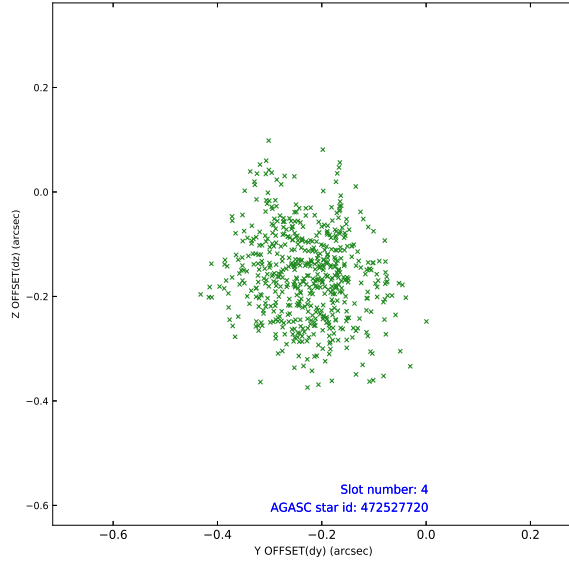


## 2.4 Star Slots

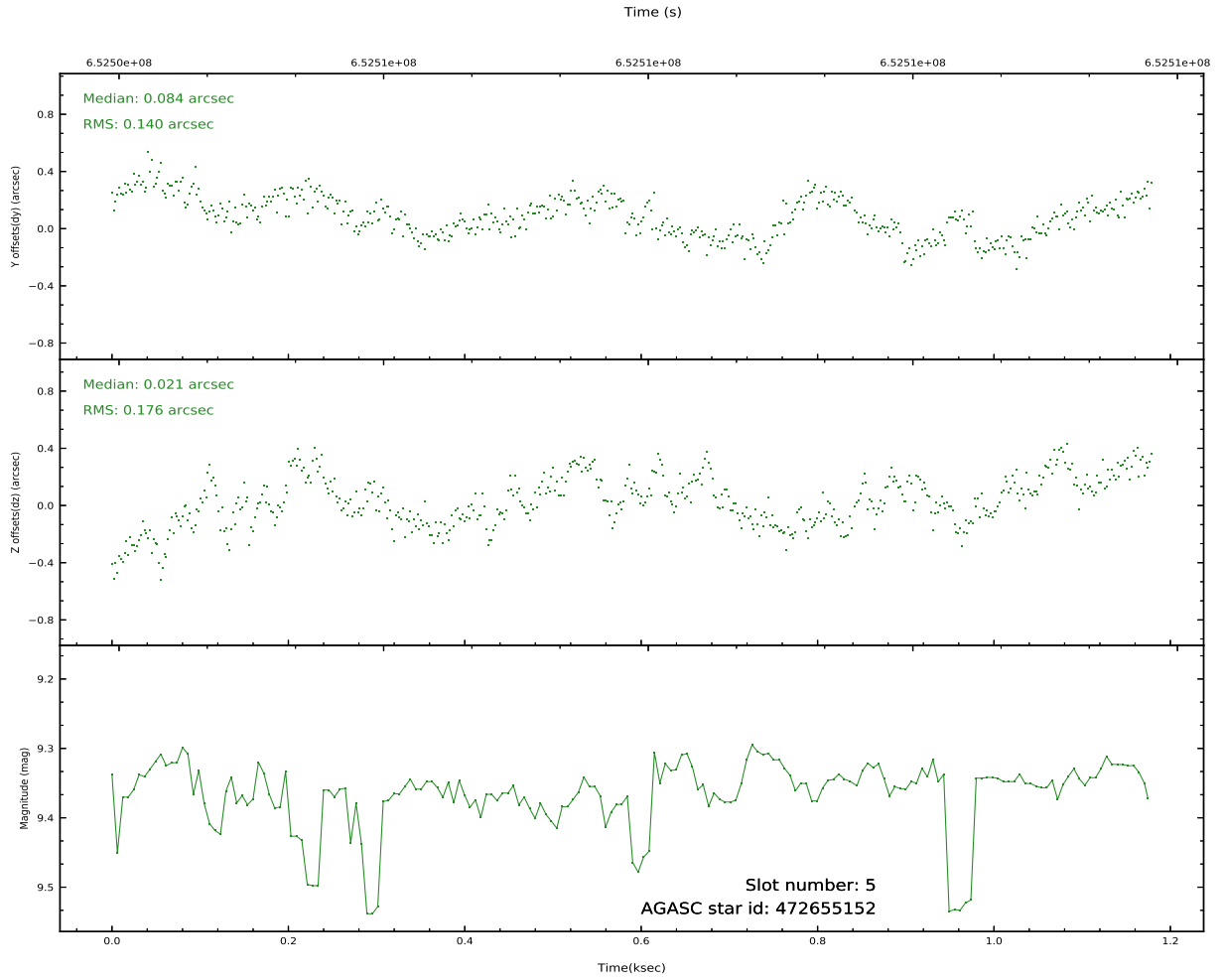
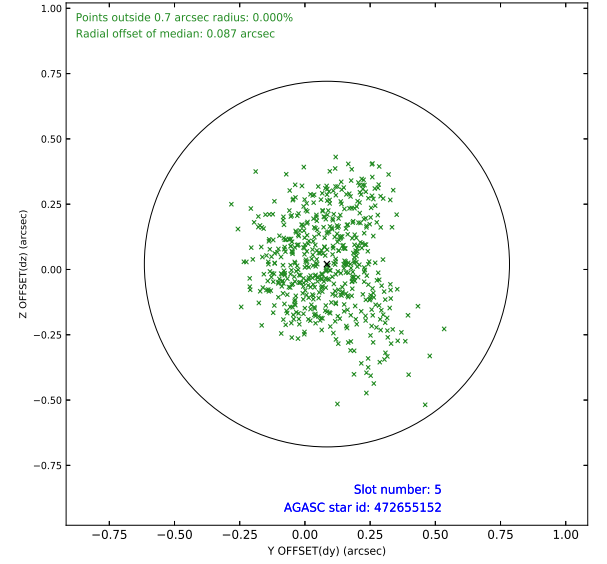
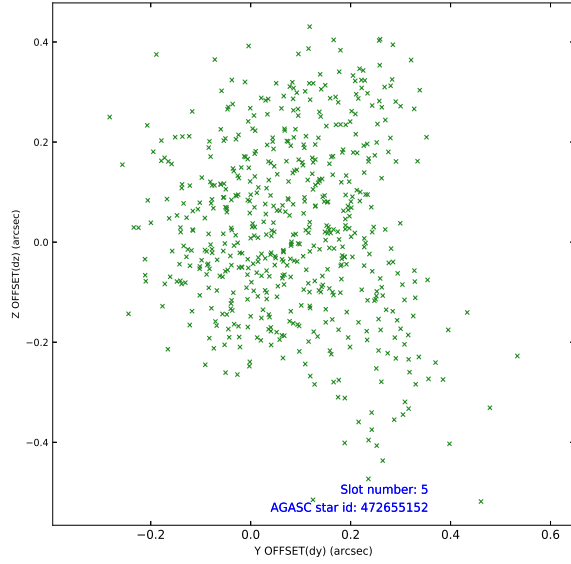
### 2.4.1 Slot 3



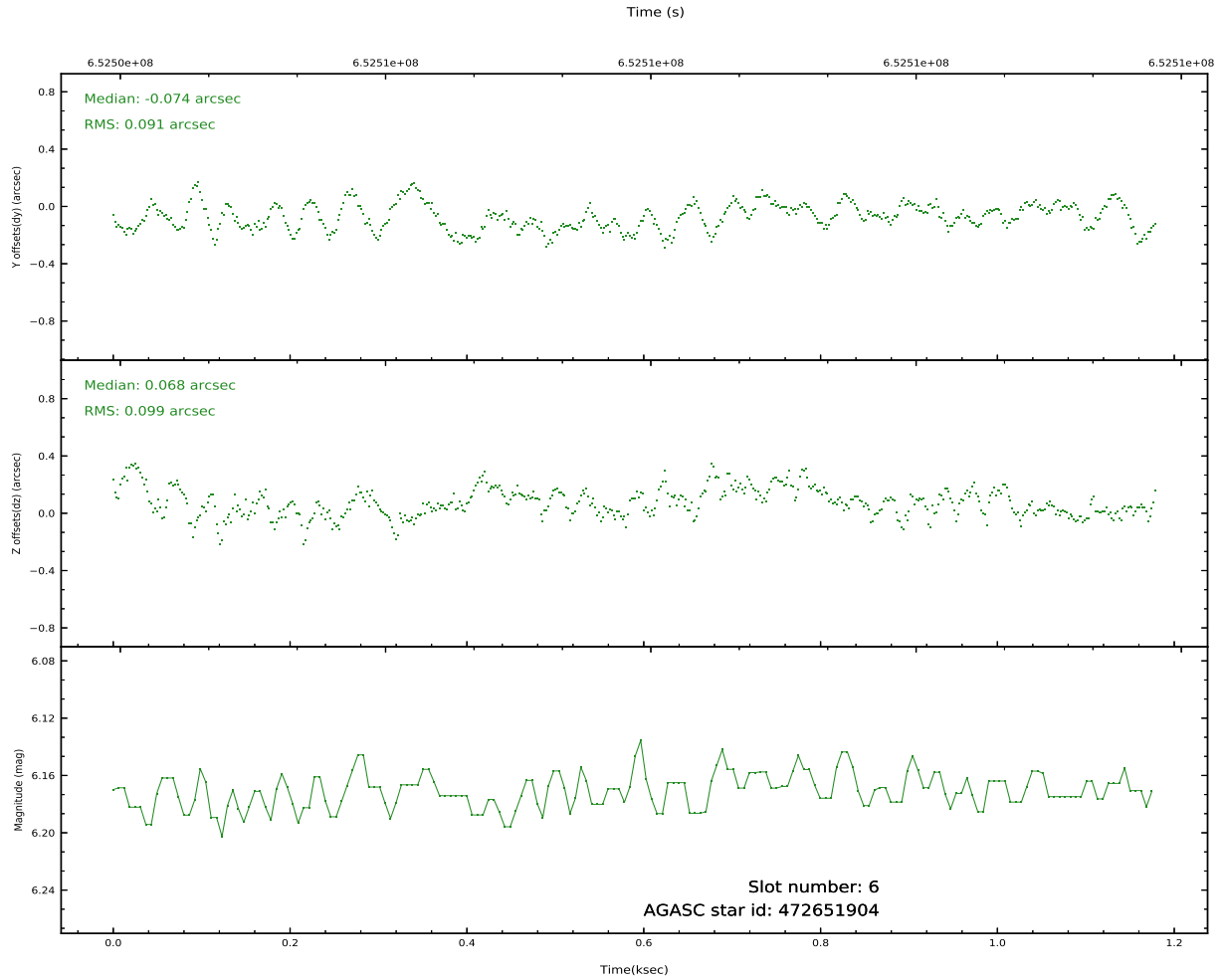
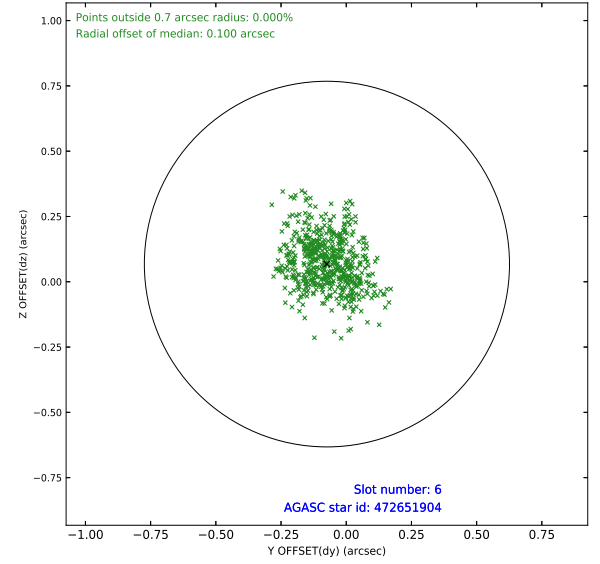
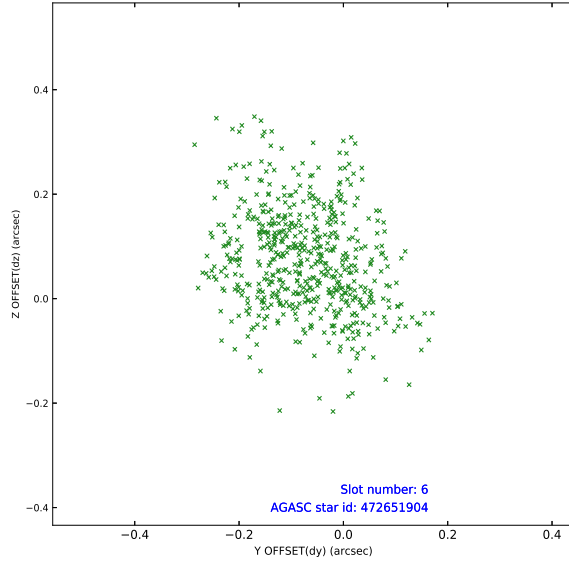
## 2.4.2 Slot 4



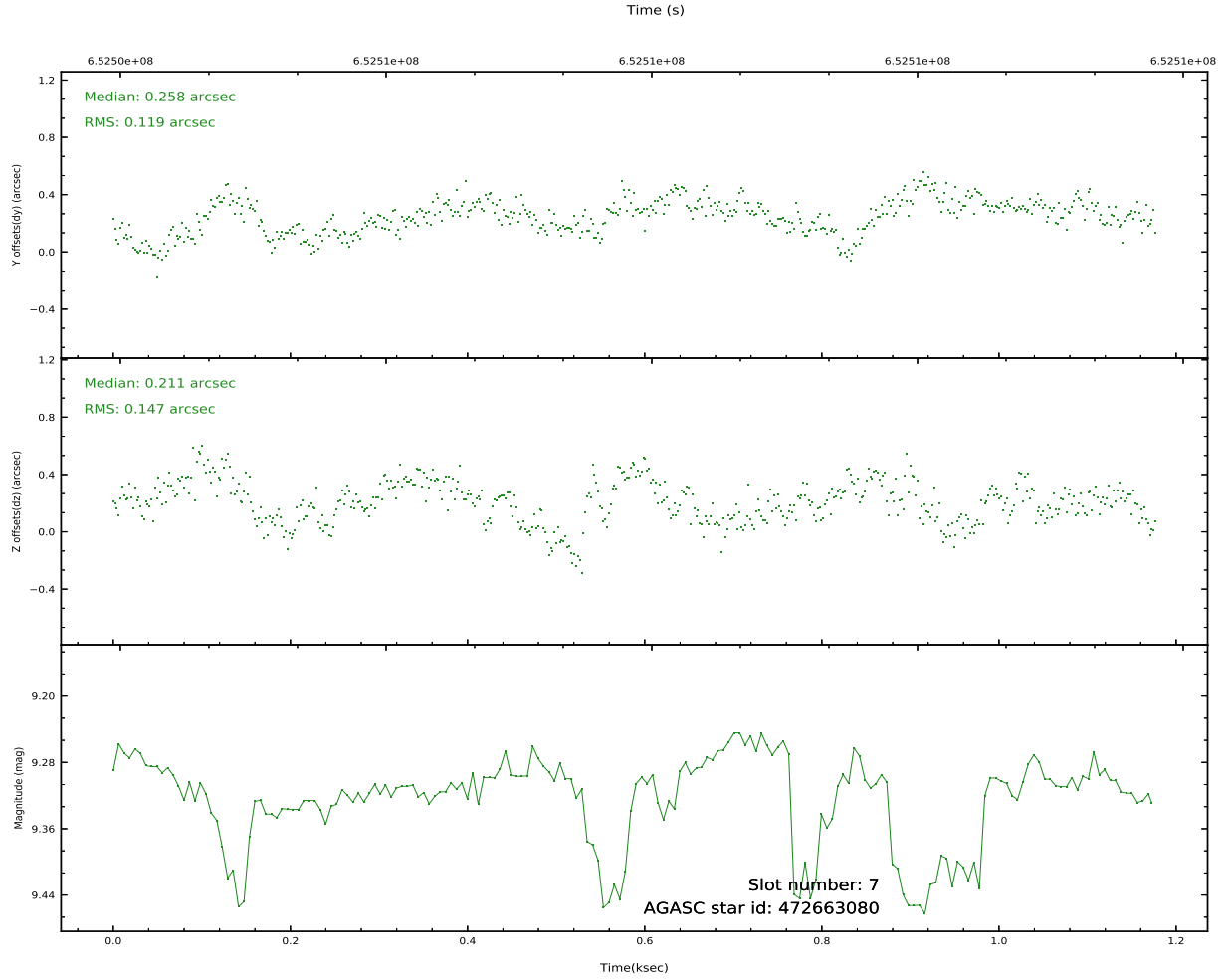
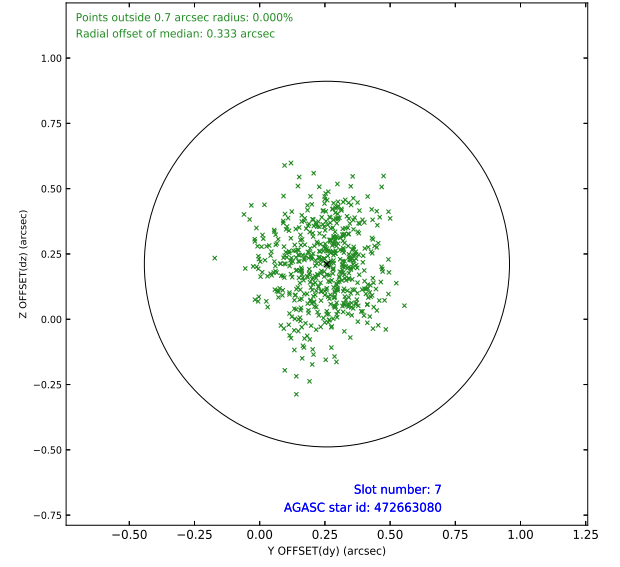
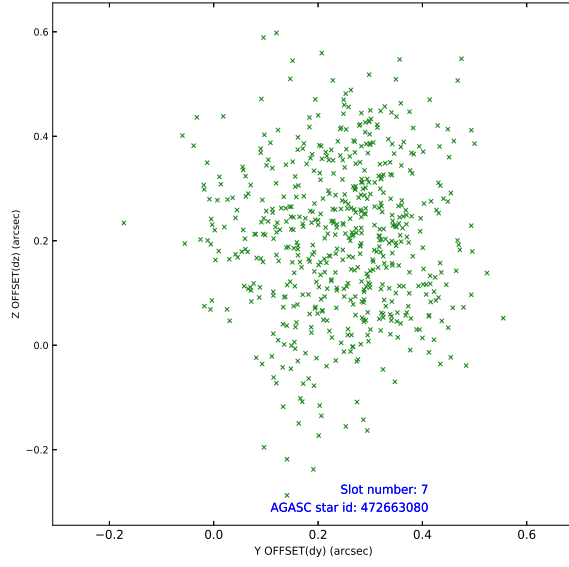
### 2.4.3 Slot 5



## 2.4.4 Slot 6

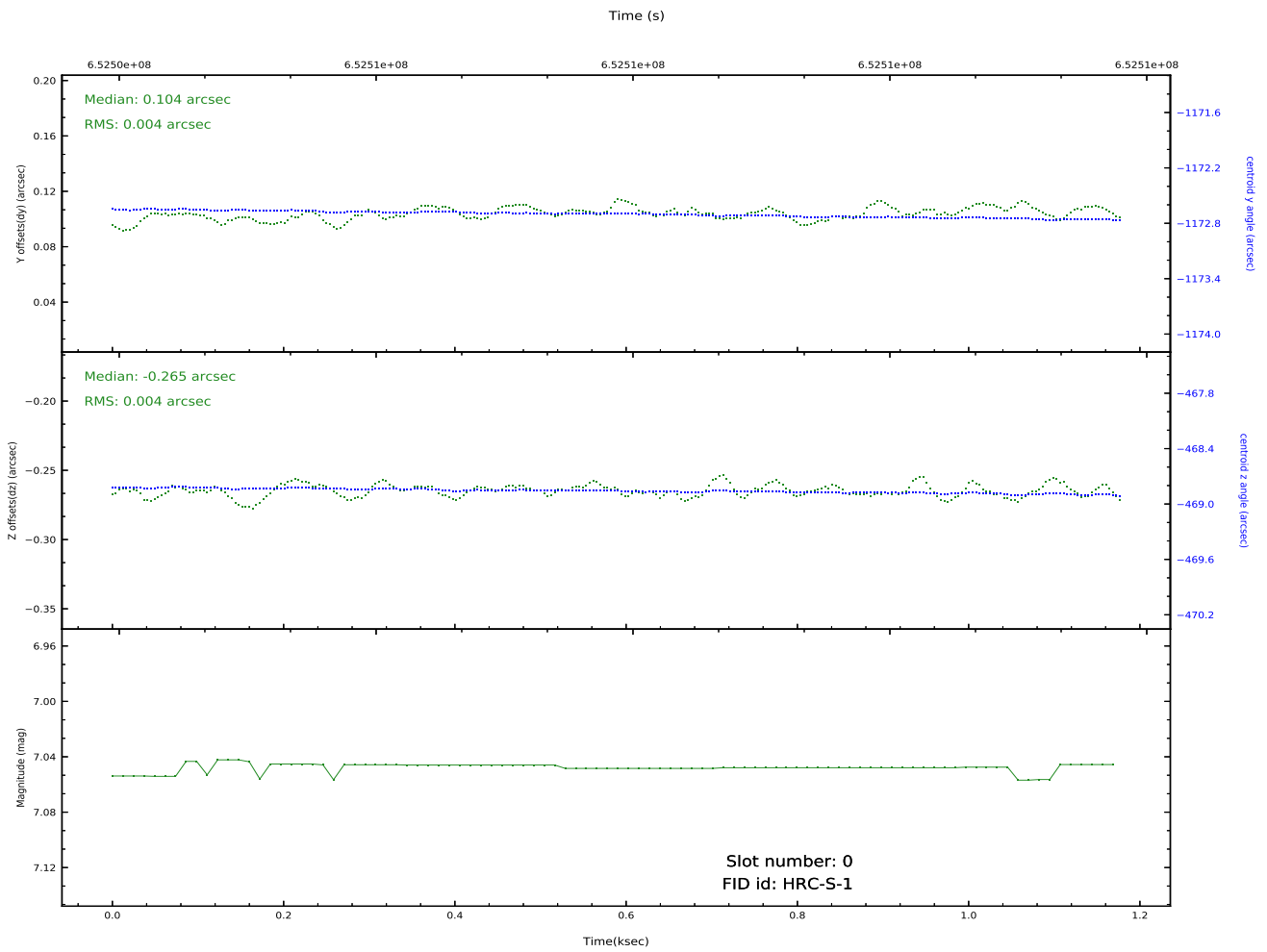
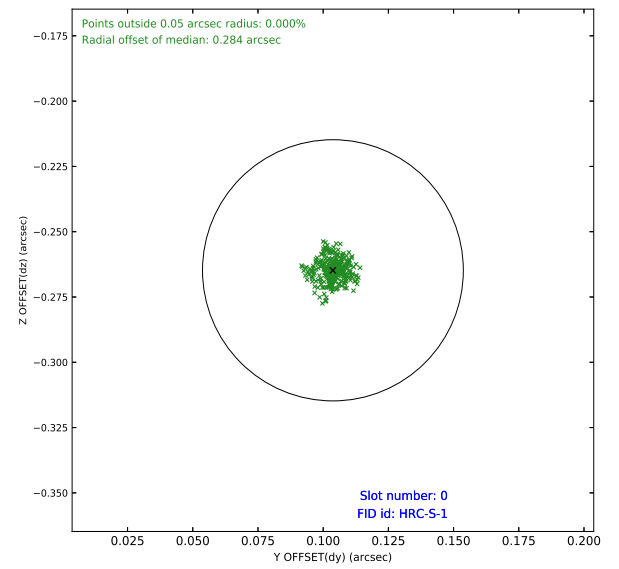
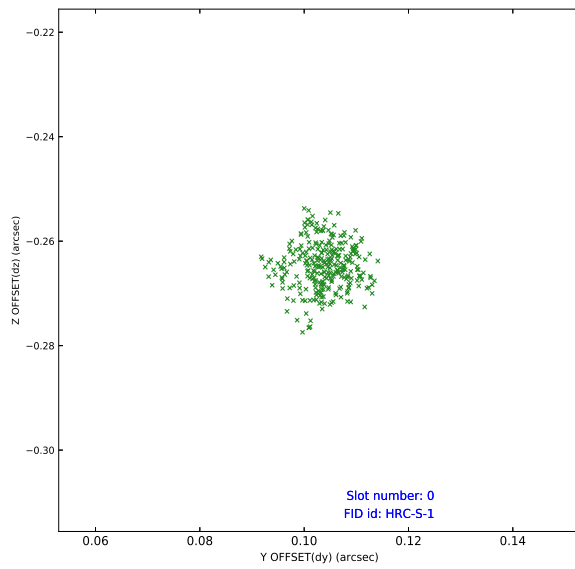


## 2.4.5 Slot 7

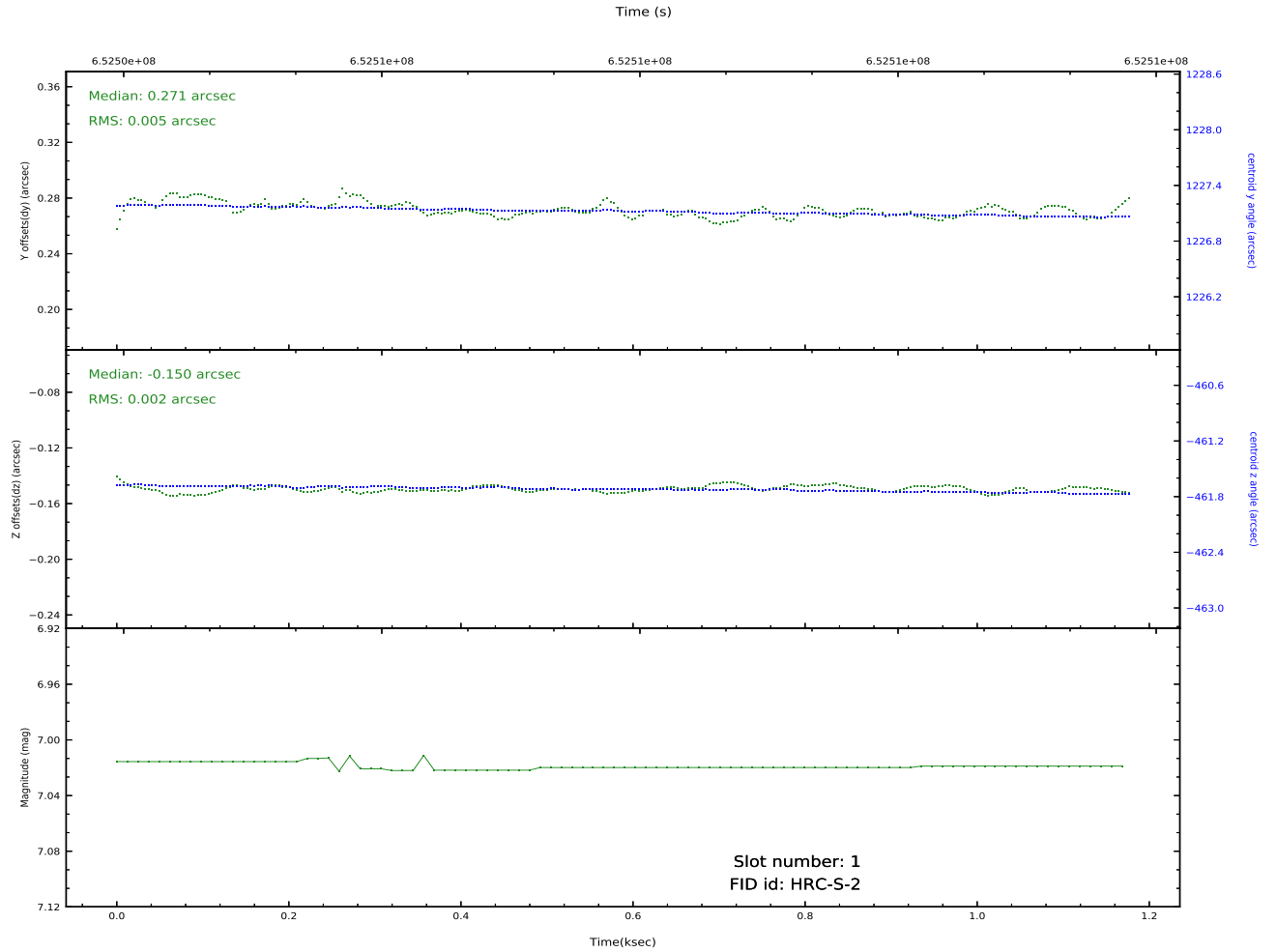
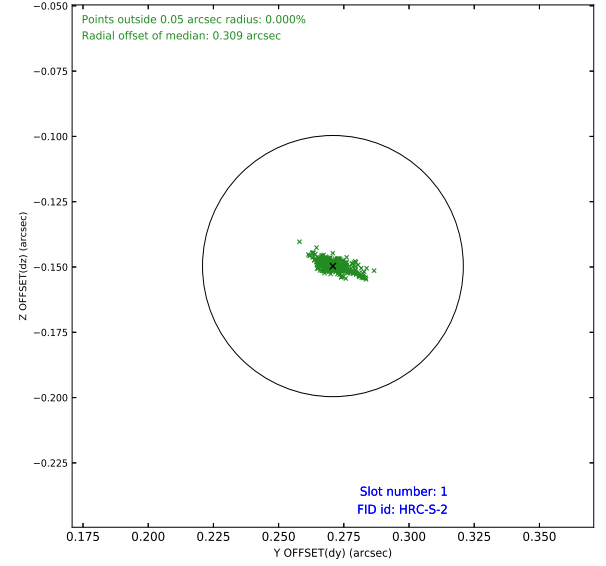
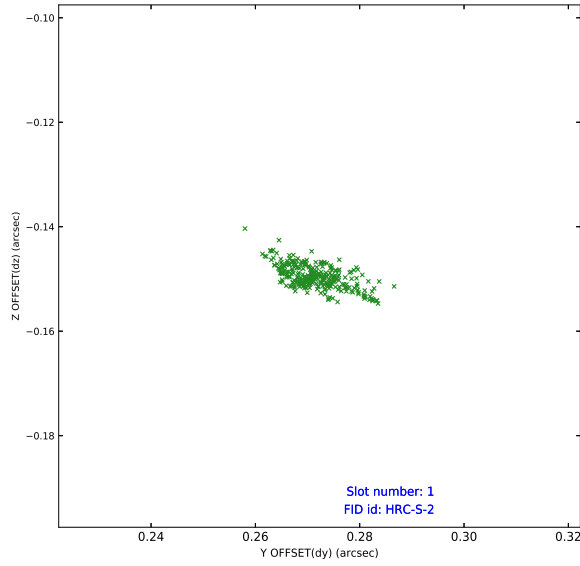


## 2.5 FID Slots

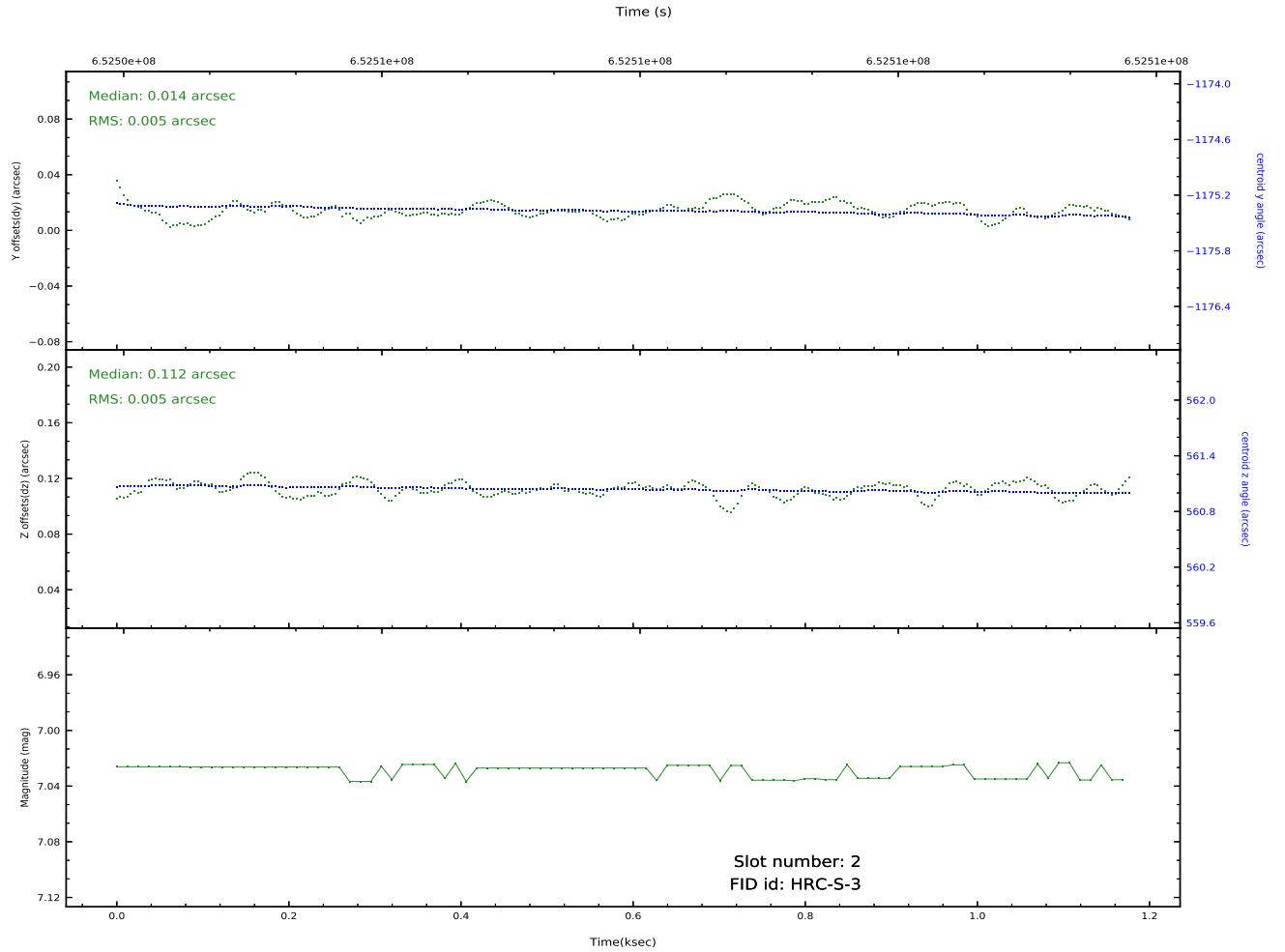
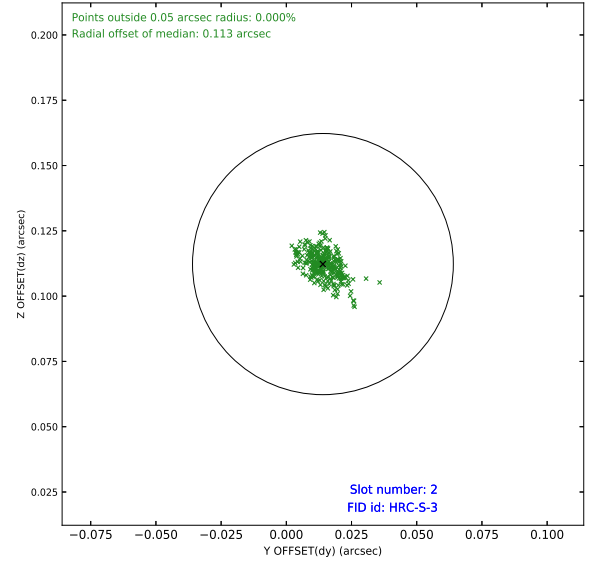
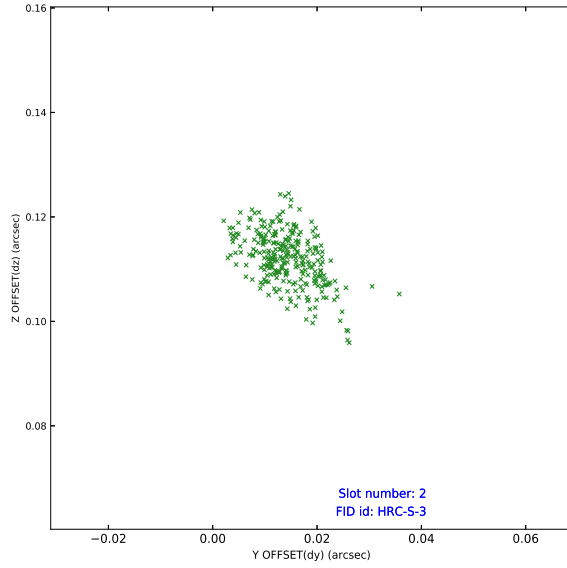
### 2.5.1 Slot 0



## 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)	2020.10.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.1779813201427

### A.2 Comments