

# V&V Reference Report

## L2 ASCDS Version : 10.9.2

Observation 20659 - L2 Version 2  
Chandra X-Ray Center

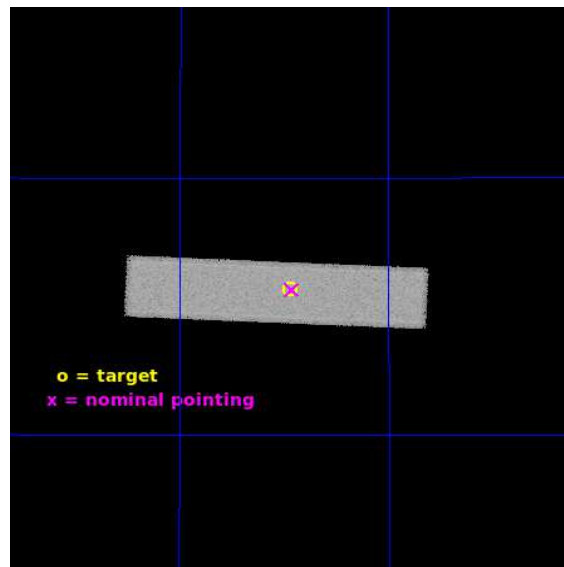
L2 Processing Date : Oct 26 2020

## 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

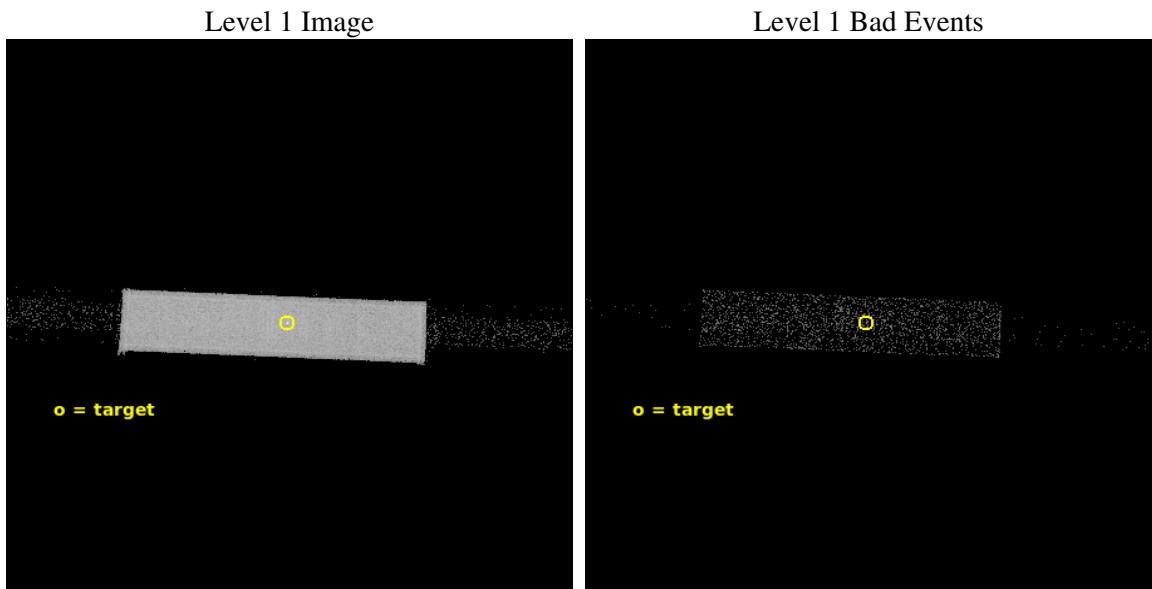
seq_num	291370	Sequence number
obs_id	20659	Observation id
title	AO-19 Measurements of the optical/UV Transmission of the HRC Filters.	Proposal title
observer	CXC Calibration	Principal investigator
object	Vega	Source name
ra_targ	279.235833	Observer's specified target RA [deg]
dec_targ	38.78475	Observer's specified target Dec [deg]
ra_nom	279.23118782733	Nominal RA [deg]
dec_nom	38.783256224925	Nominal Dec [deg]
roll_nom	182.4374039899	Nominal Roll [deg]
revision	2	Processing version of data
ontime	2178.3813791275	[s]
livetime	2160.6529362	Ontime multiplied by DTCOR
l2events	132094	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	2000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	2178.3813791275	[s]
caldsver	4.9.3	&#160	l1events	201583	Number of level 1 events
date	2020-10-26T16:19:27	Date and time of file creation			
revision	2	Processing version of data			

### 2.1.3 Events

Level 1 Events

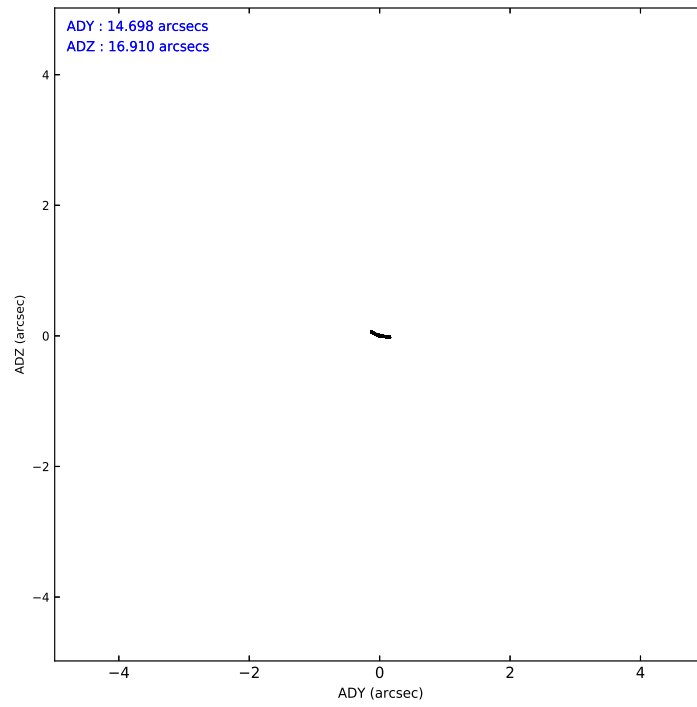
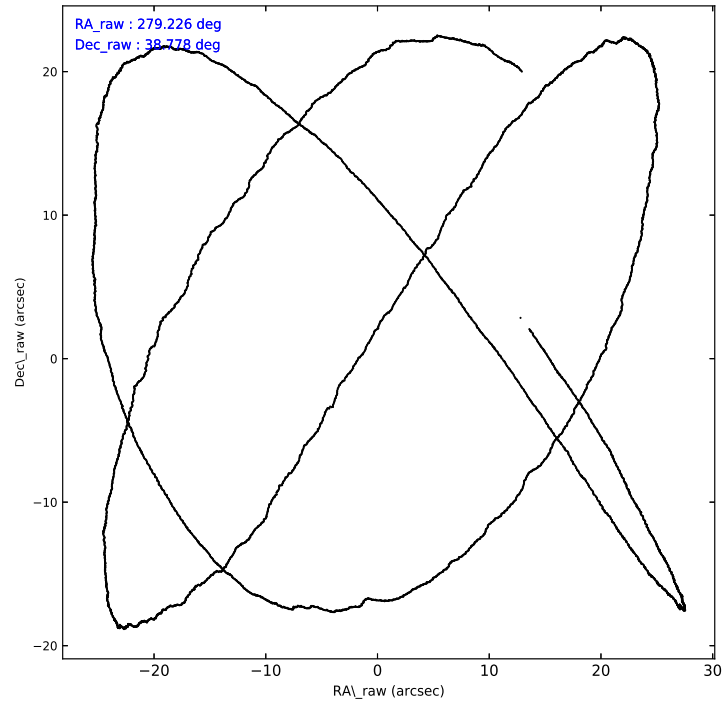
	segment 1	segment 2	segment 3
level 1 events	949	199697	937
rejected events	949	43738	937
rejected %	100%	21%	100%

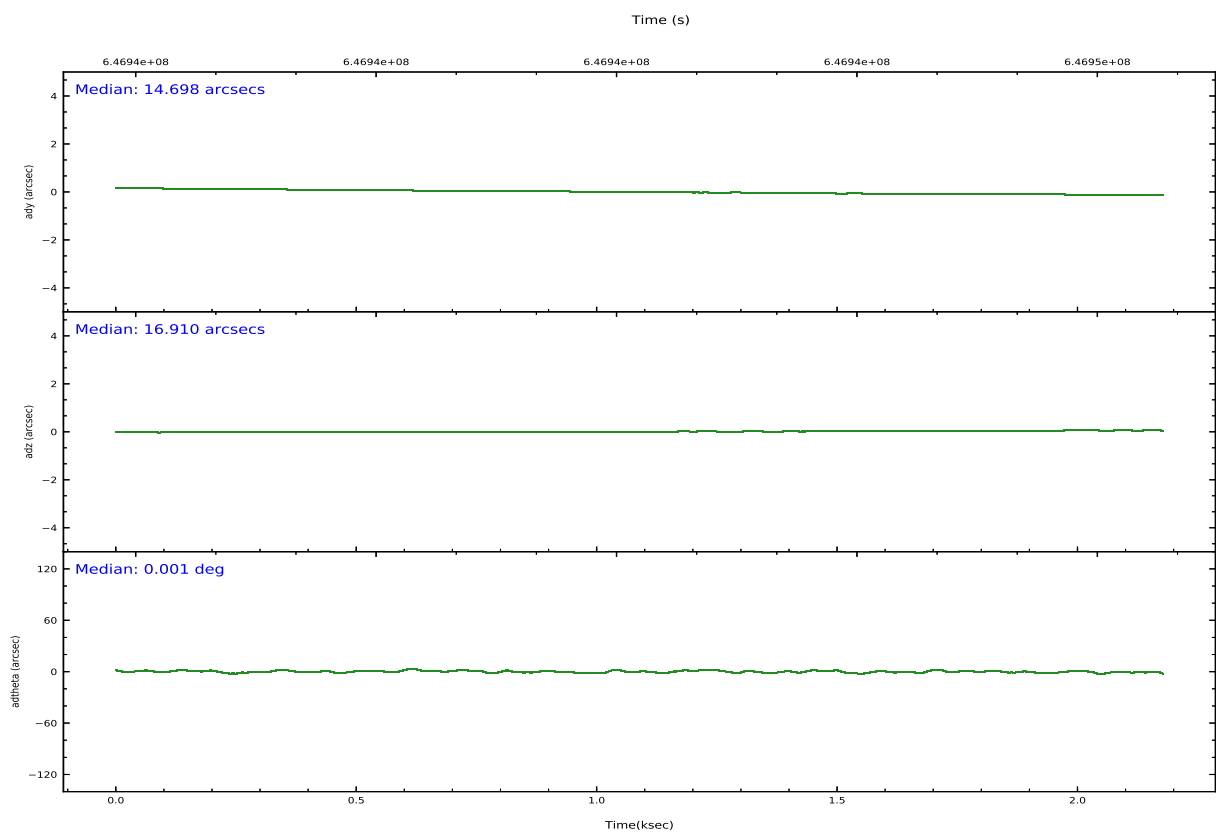
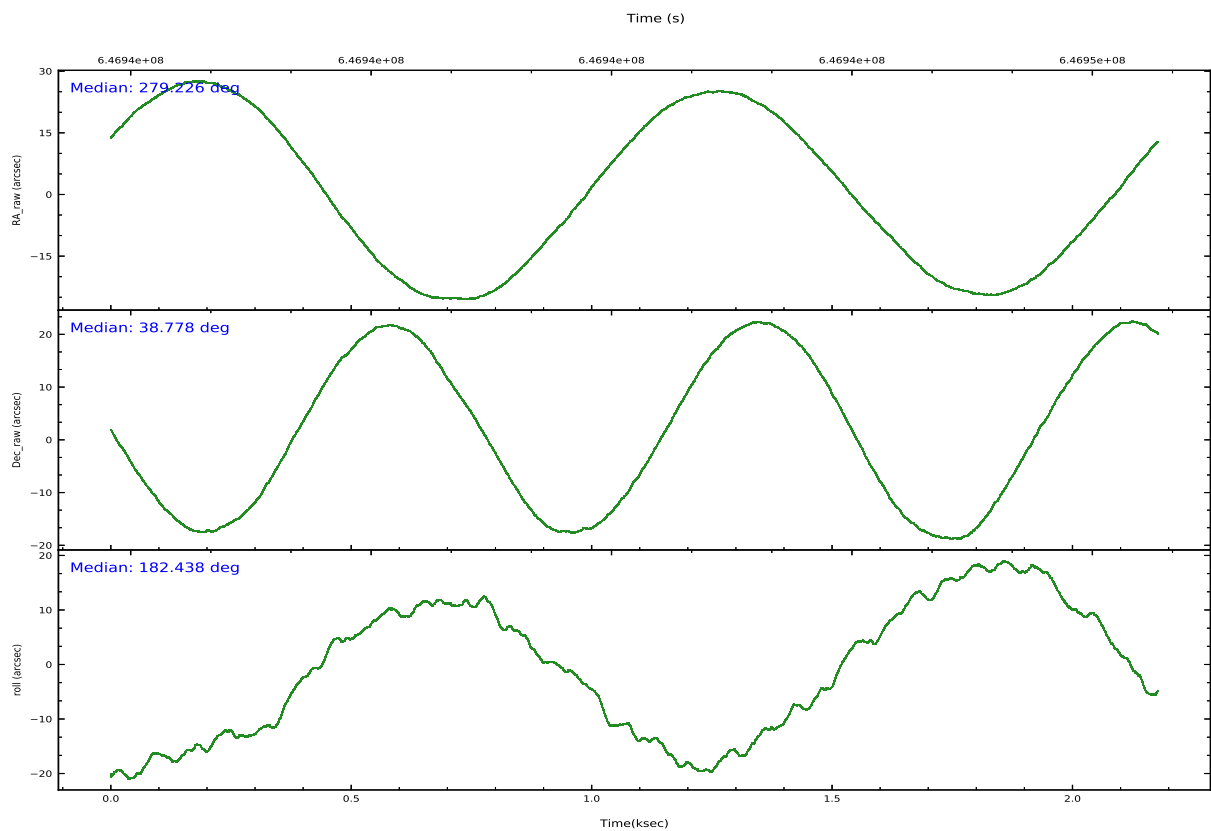
## 2.2 Compared Parameters

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	279.256226	279.23118782733
[deg] Pointing Dec	38.795057	38.783256224925
[deg] Pointing Roll	182.355157	182.4374039899
[s] Window start time (MET)	644198469.184000	644198469.184000
[s] Window stop time (MET)	649382469.184000	649382469.184000
[mm] SIM focus pos	-1.533336	-1.526339935833849
[mm] SIM defocus	7.710433287538843e-07	0.006996703570447904
[mm] SIM translation stage pos	250.455976	250.4635187648994
[mm] SIM translation stage offset	0	-0.007540371344731511
[s] Observation start time (MET)	646943637.184000	646942971.89634
Observation start date	2018-07-02T18:32:48	2018-07-02T18:22:51
[s] Observation end time (MET)	646945637.184000	646945770.659
Observation end date	2018-07-02T19:06:08	2018-07-02T19:09:30

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

## 2.3 Aspect





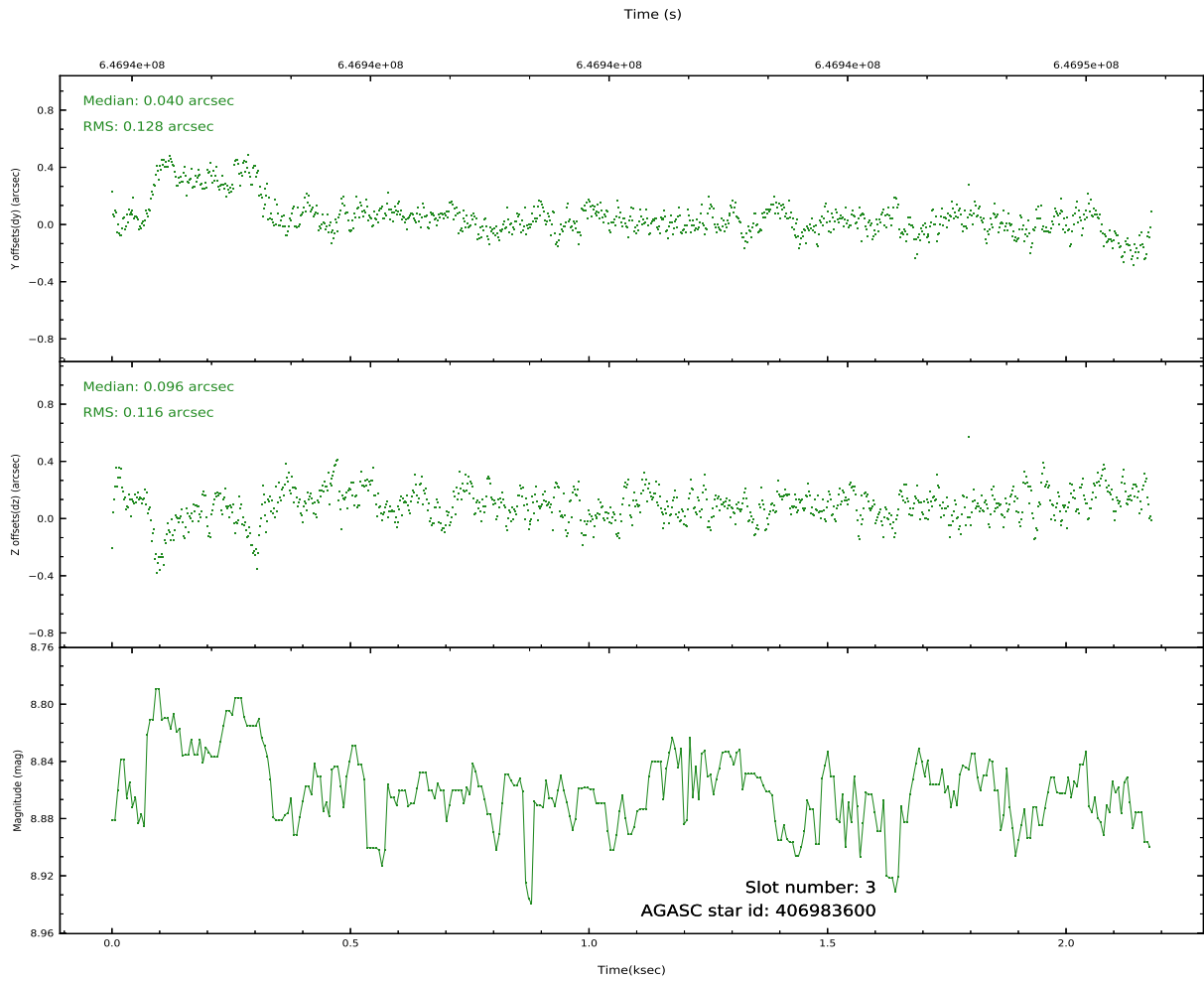
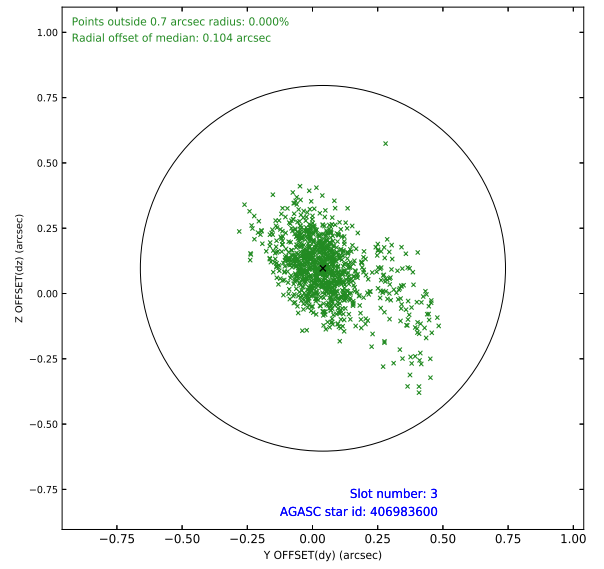
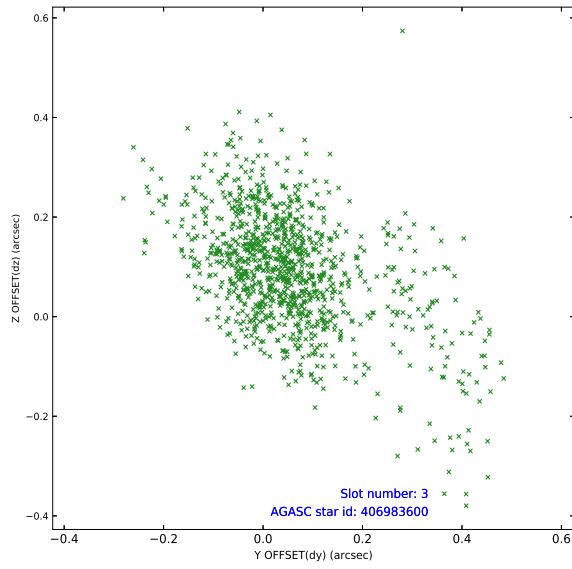
Slot Statistics

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	7.07	532	1.000	0.087	-0.202	0.007	0.012	0.000000	0.000000	-1169.11	-465
1	FID		HRC-S-3	7.03	532	1.000	0.069	-0.013	0.008	0.014	0.000000	0.000000	-1173.97	563
2	FID		HRC-S-4	7.01	532	1.000	0.231	-0.082	0.007	0.012	0.000000	0.000000	1227.14	567
3	GUIDE	used	406983600	8.86	1064	1.000	0.040	0.096	0.155	0.351	279.940957	39.020708	-1948.37	-739
4	GUIDE	used	406985120	7.42	1064	1.000	0.081	0.025	0.154	0.272	278.839732	38.894839	1149.85	-410
5	GUIDE	used	406987272	6.90	1064	1.000	-0.392	-0.303	0.134	0.231	278.536588	38.437504	2081.59	1192
6	GUIDE	used	407513096	8.09	1059	1.000	0.094	0.167	0.126	0.216	279.928965	39.436841	-1961.71	-2237
7	GUIDE	used	407521232	8.60	1063	1.000	0.171	0.025	0.164	0.262	279.628883	39.431715	-1130.87	-2252

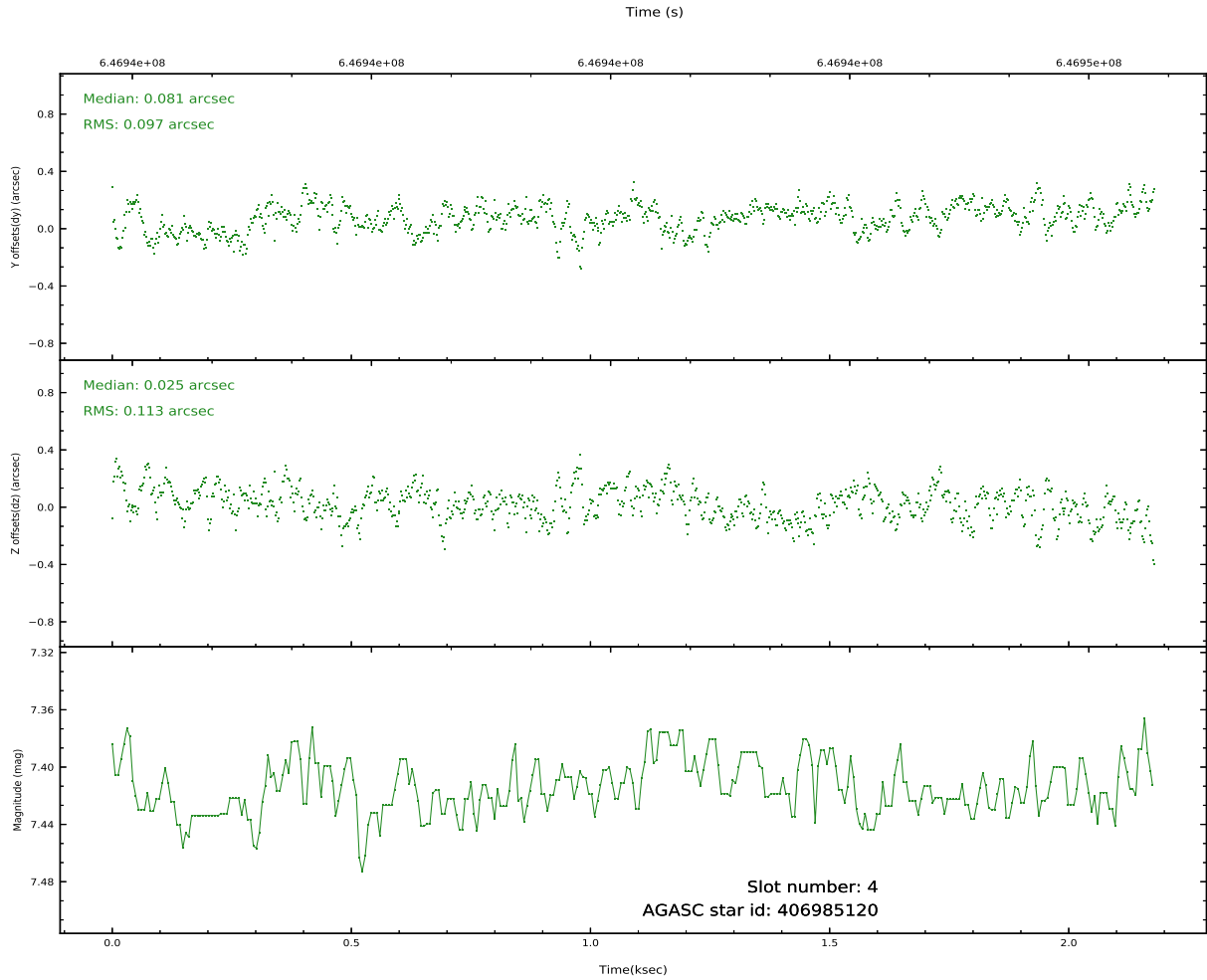
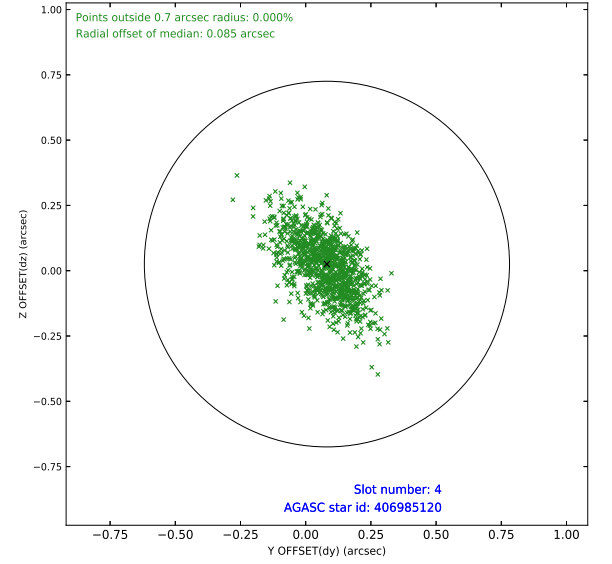
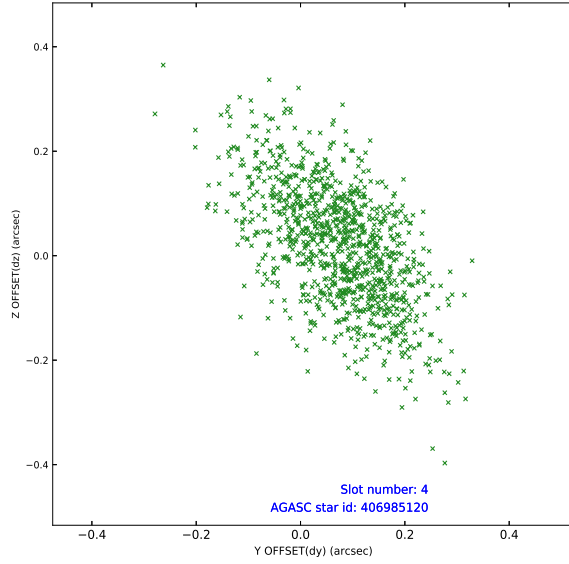


## 2.4 Star Slots

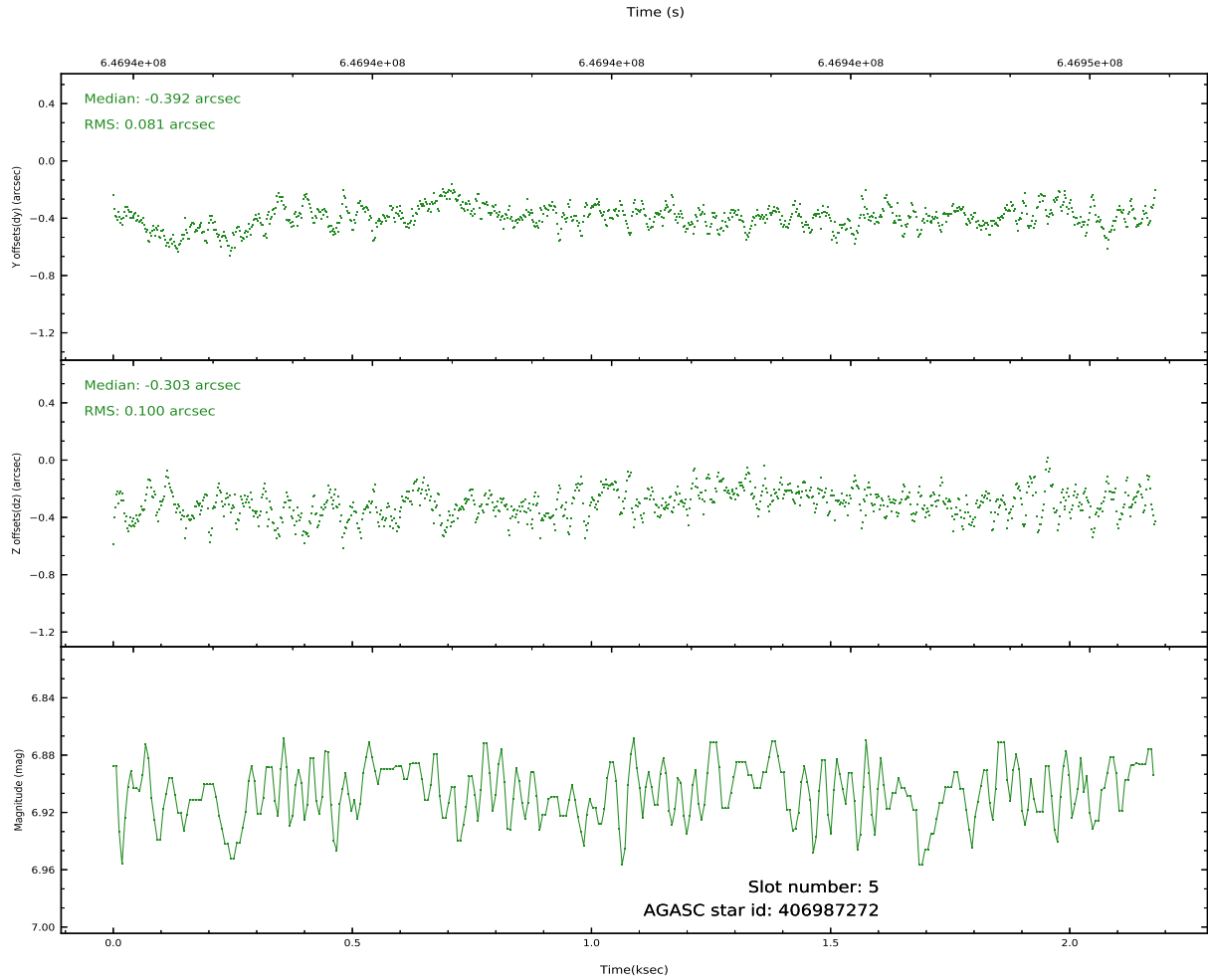
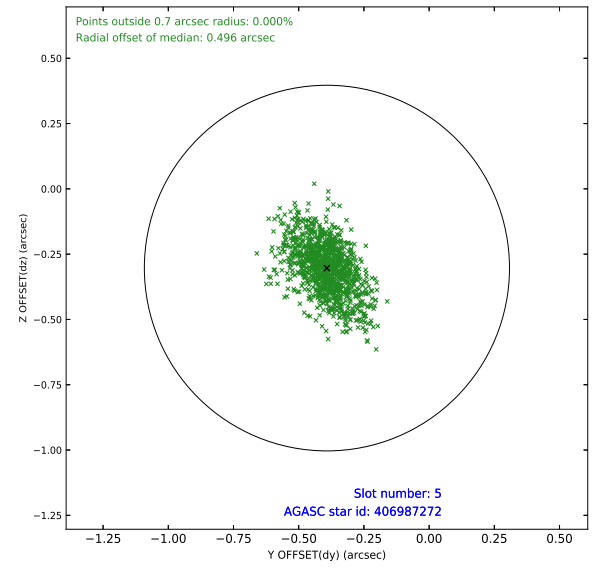
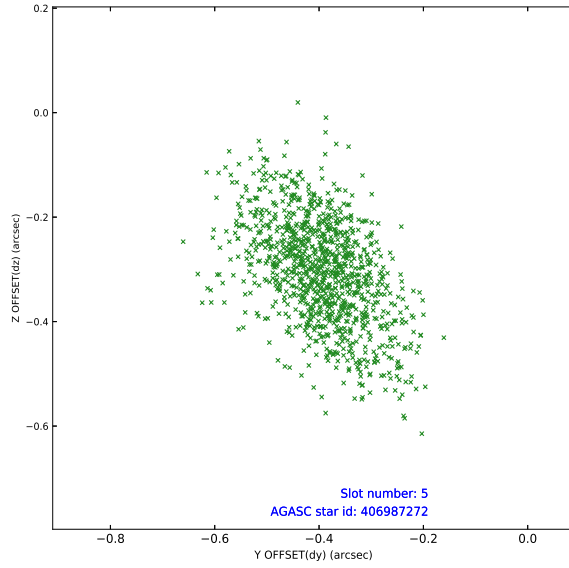
### 2.4.1 Slot 3



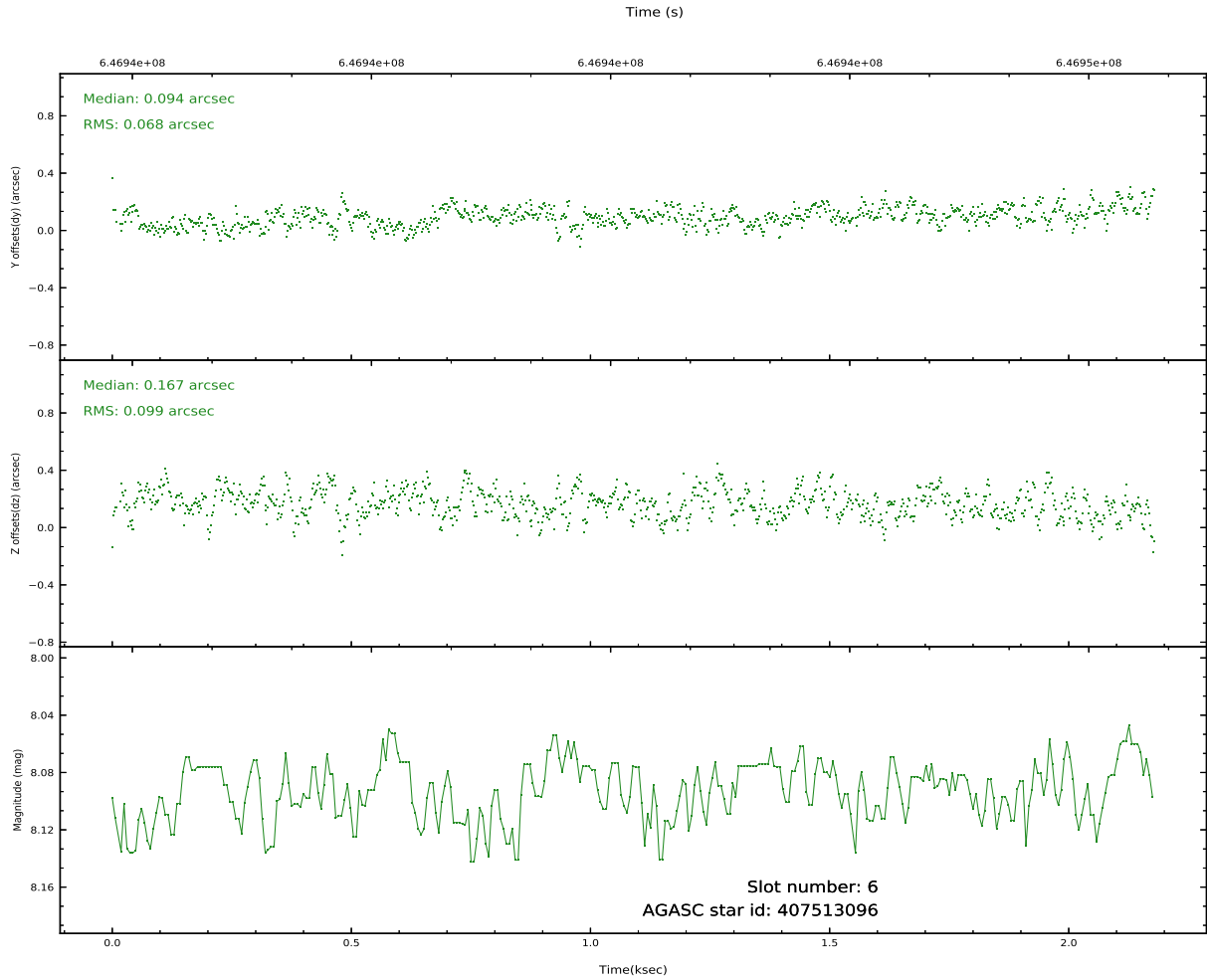
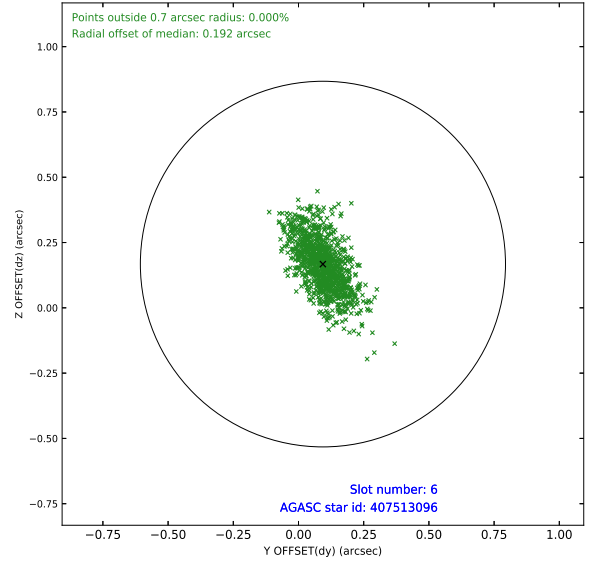
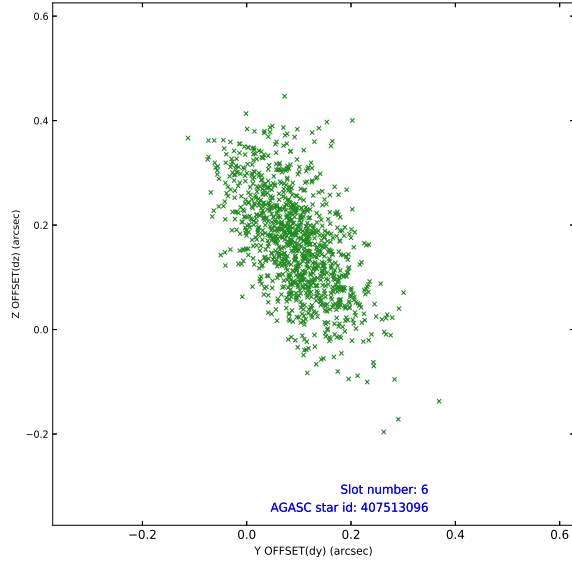
## 2.4.2 Slot 4



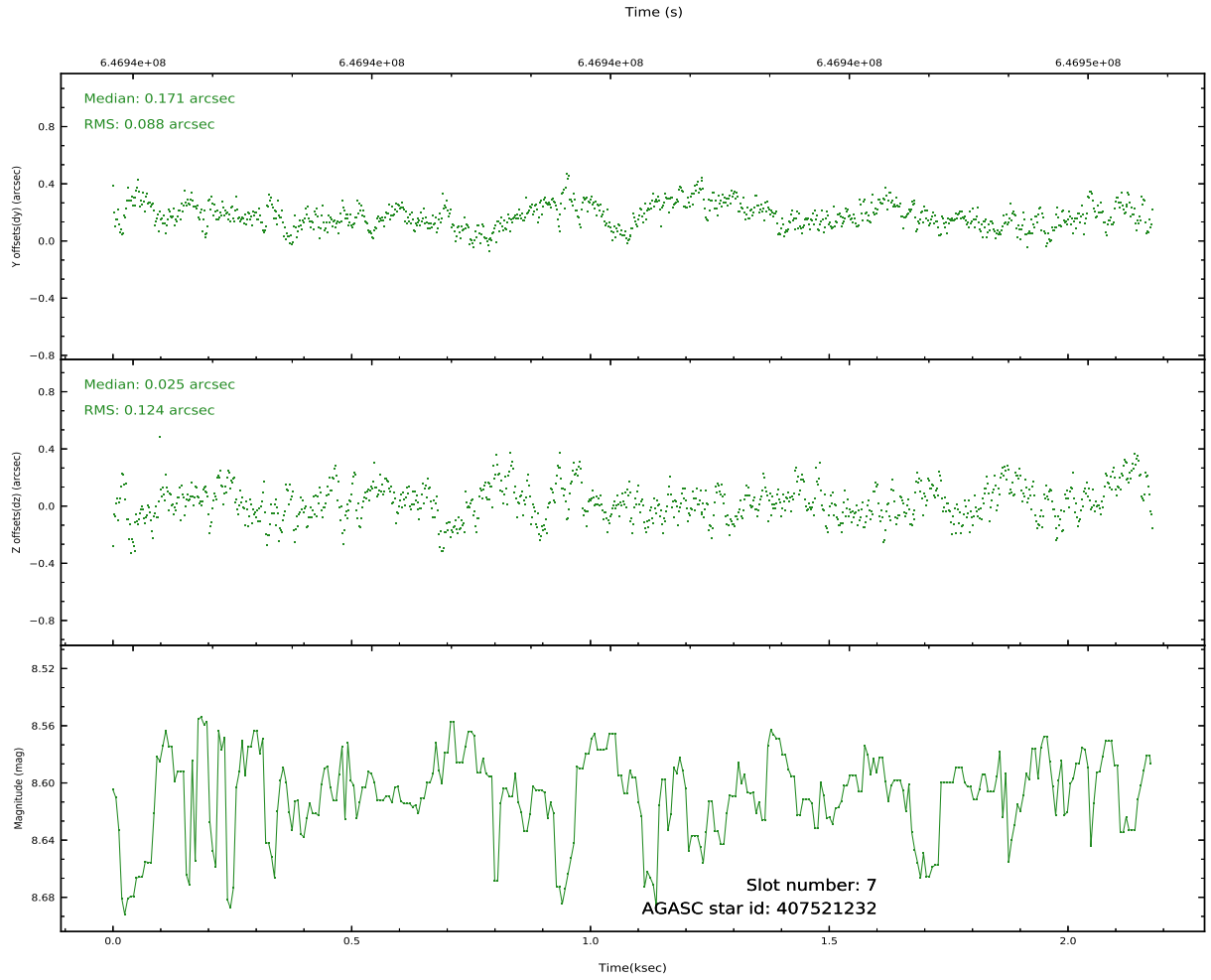
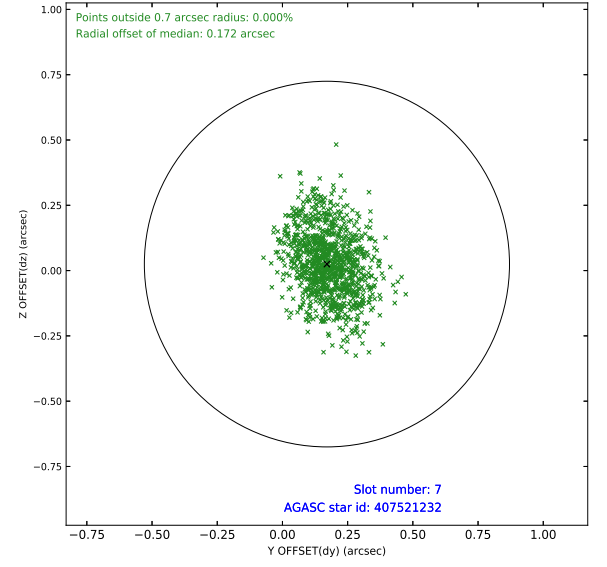
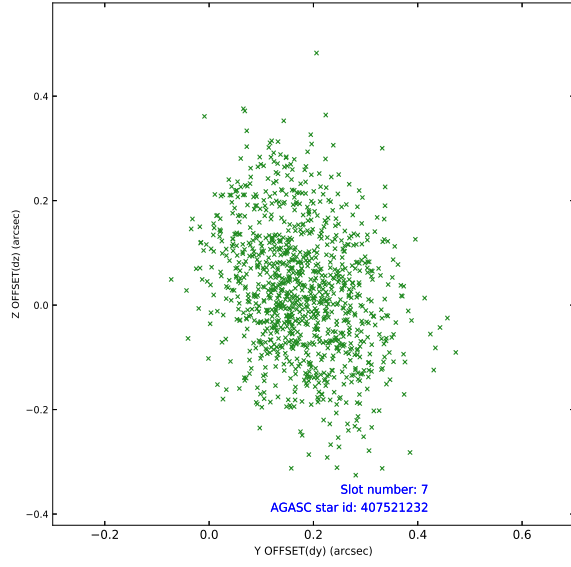
### 2.4.3 Slot 5



## 2.4.4 Slot 6

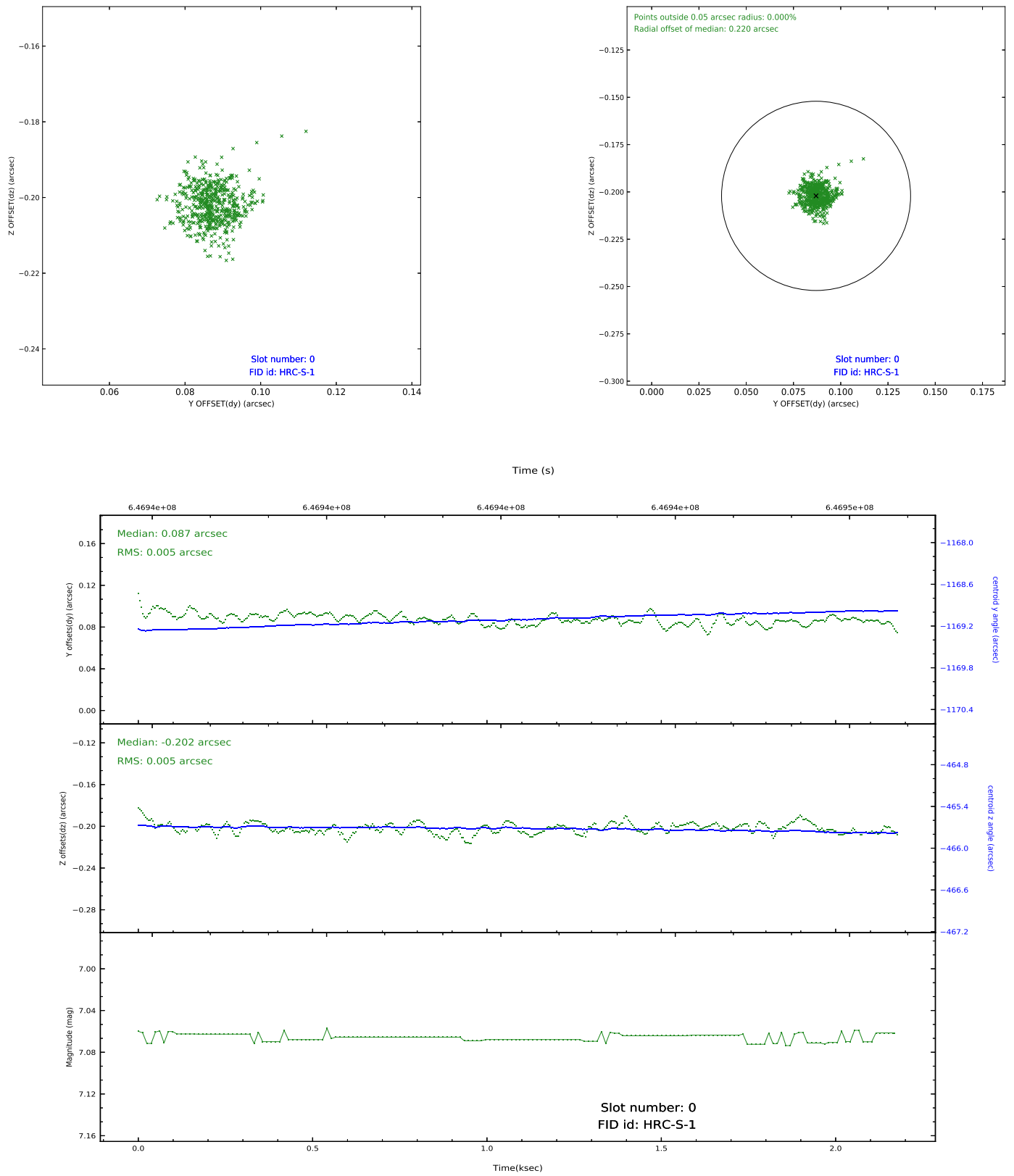


## 2.4.5 Slot 7

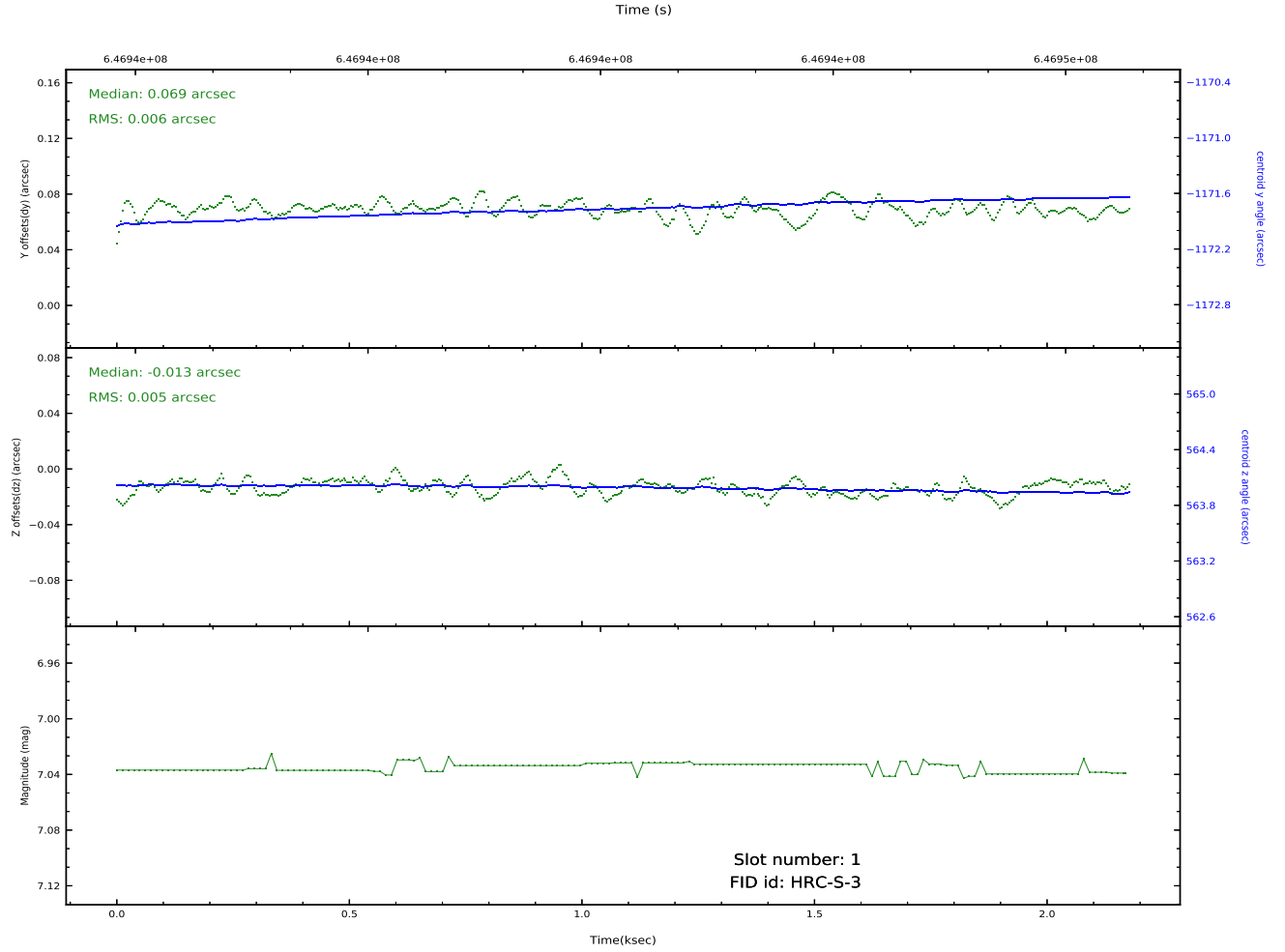
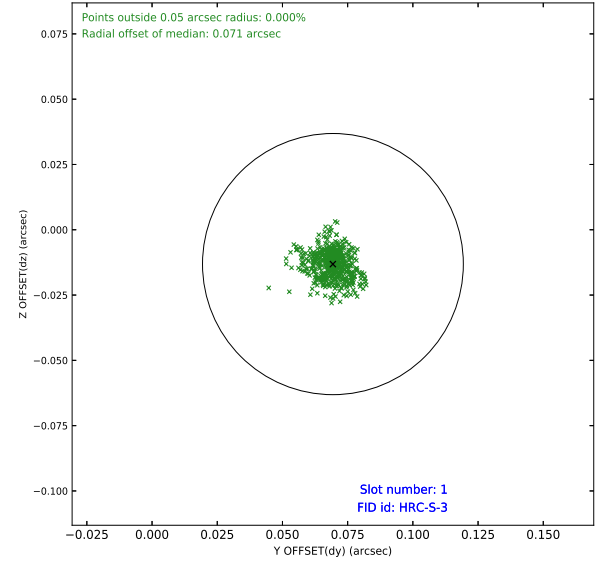
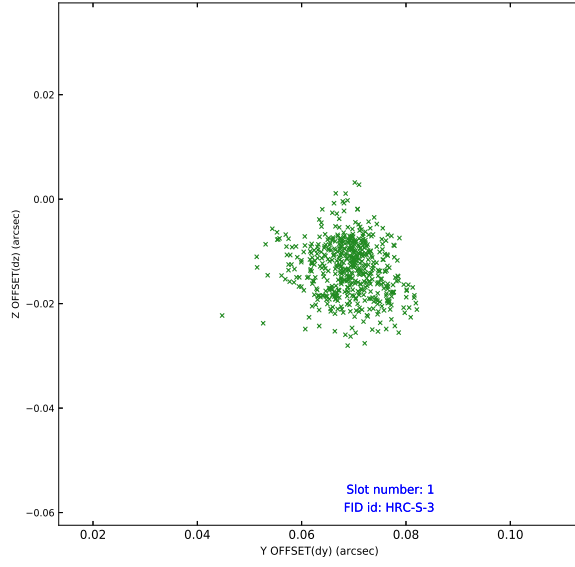


## 2.5 FID Slots

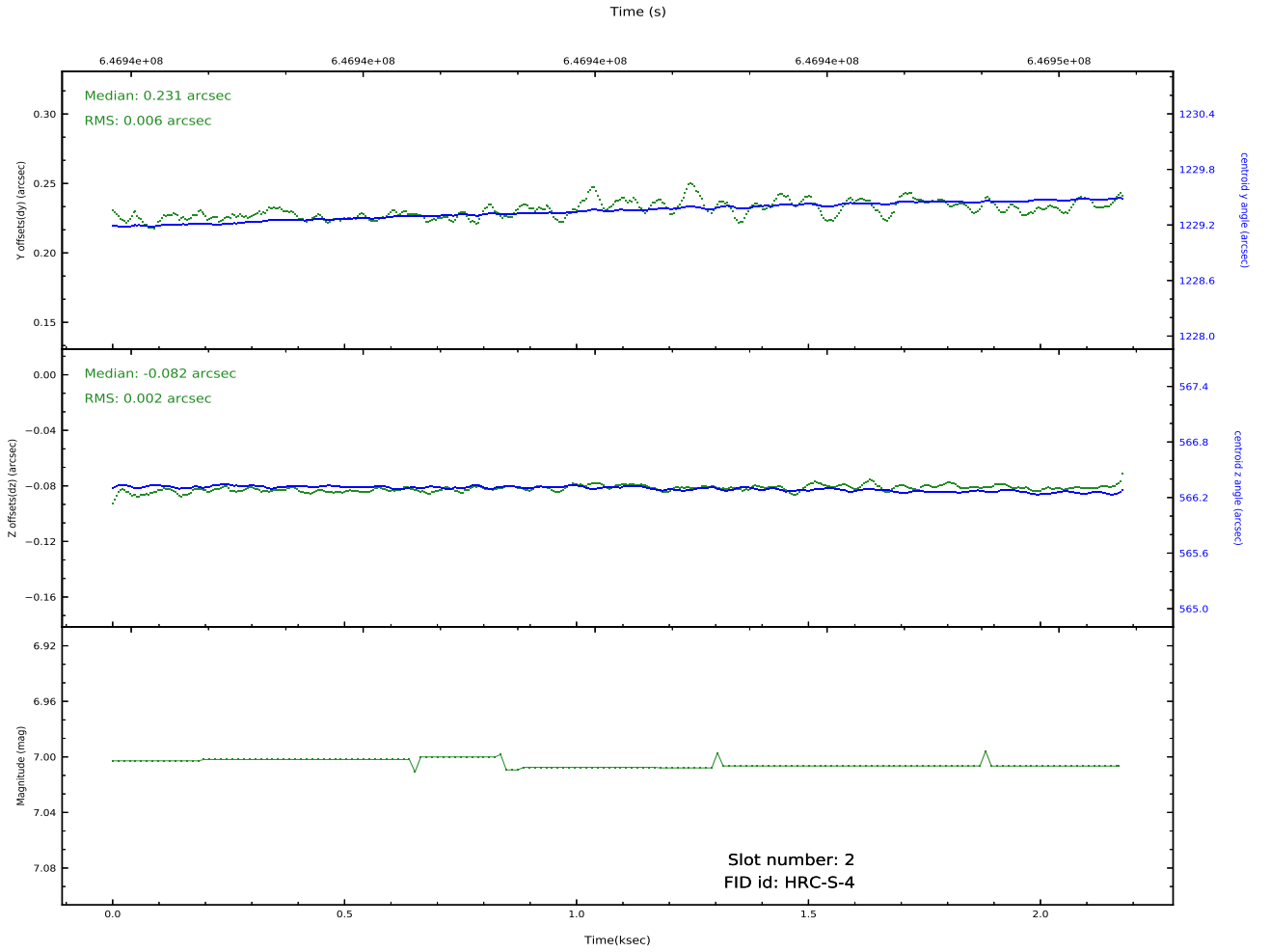
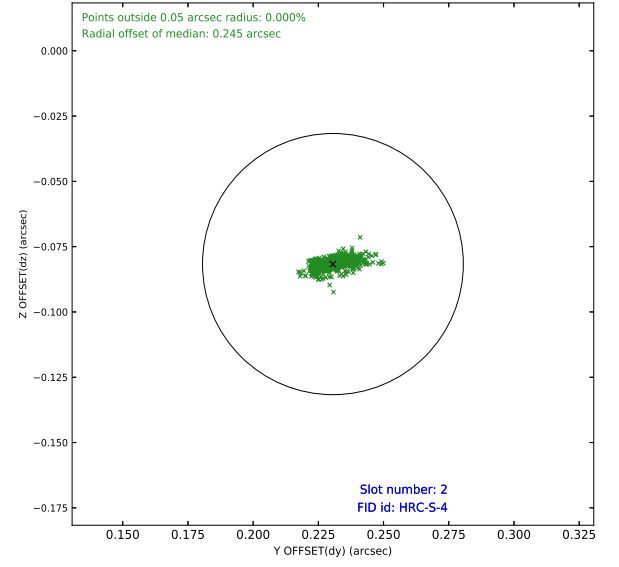
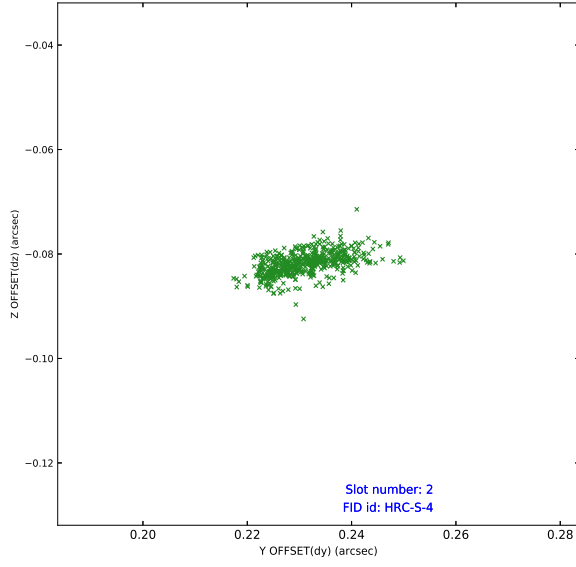
### 2.5.1 Slot 0



## 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	2.1783813791275

### A.2 Comments

Window preference met.