

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5122 - L2 Version 4  
Chandra X-Ray Center

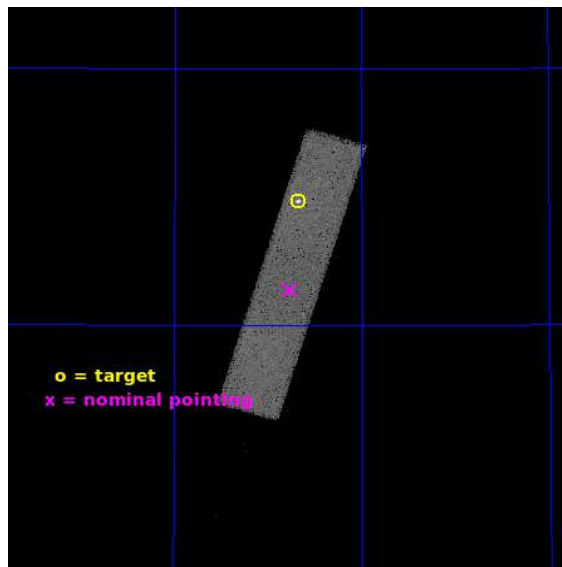
L2 Processing Date : Oct 5 2020

## 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

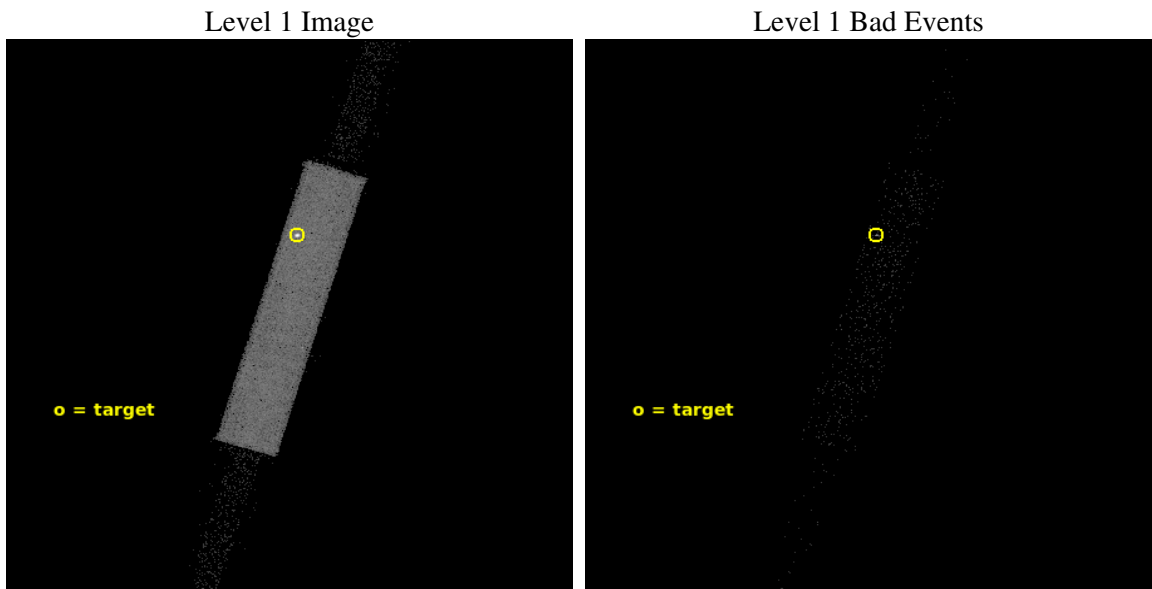
seq_num	290395	Sequence number
obs_id	5122	Observation id
title	AO5B Calibration Observations to Monitor the Spatial Variations in the HRC-S Gain	Proposal title
observer	CXC Calibration	Principal investigator
object	ArLac	Source name
ra_targ	332.17	Observer's specified target RA [deg]
dec_targ	45.742306	Observer's specified target Dec [deg]
ra_nom	332.19110467616	Nominal RA [deg]
dec_nom	45.569961399813	Nominal Dec [deg]
roll_nom	287.15239118742	Nominal Roll [deg]
revision	4	Processing version of data
ontime	1059.081297636	[s]
livetime	1050.3071700804	Ontime multiplied by DTCOR
l2events	61263	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	1059.081297636	[s]
caldsver	4.9.2	&#160	l1events	90040	Number of level 1 events
date	2020-10-05T08:31:32	Date and time of file creation			
revision	4	Processing version of data			

### 2.1.3 Events

Level 1 Events

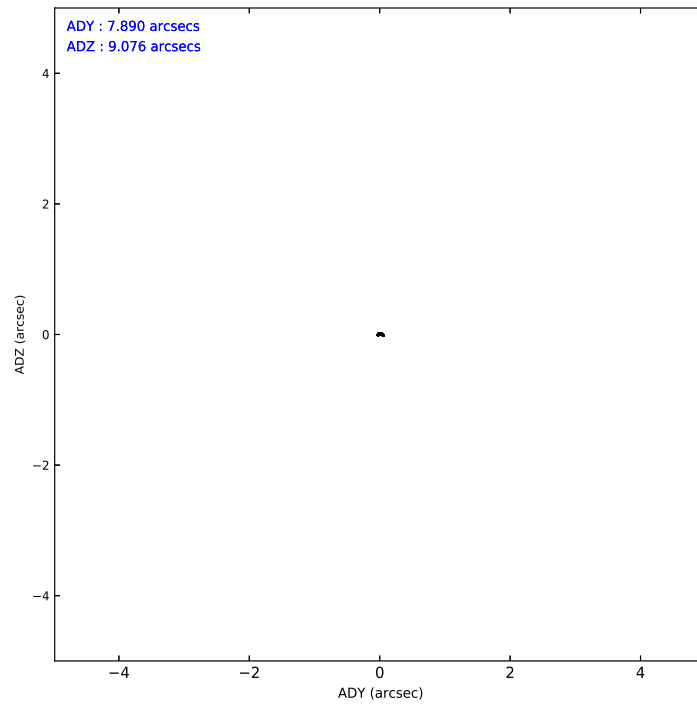
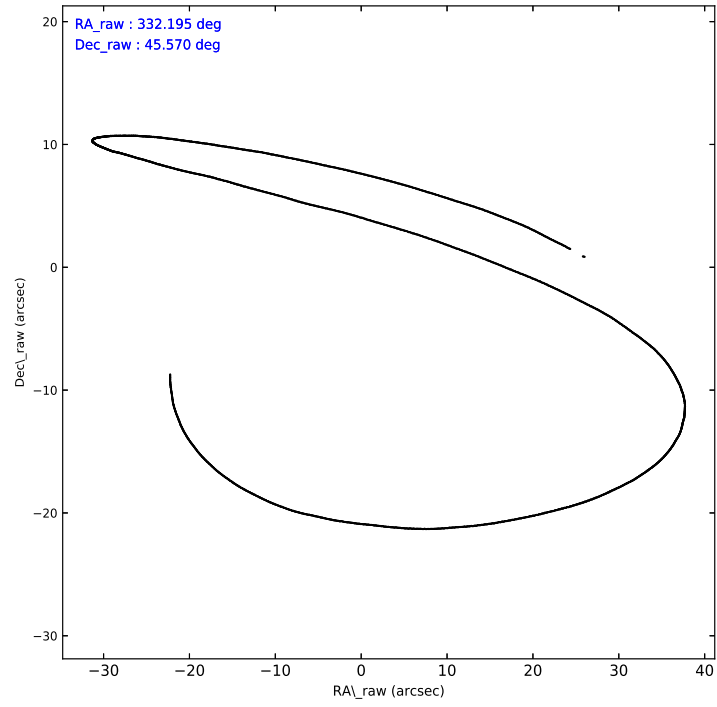
	segment 1	segment 2	segment 3
level 1 events	1005	88103	932
rejected events	1005	14678	927
rejected %	100%	16%	99%

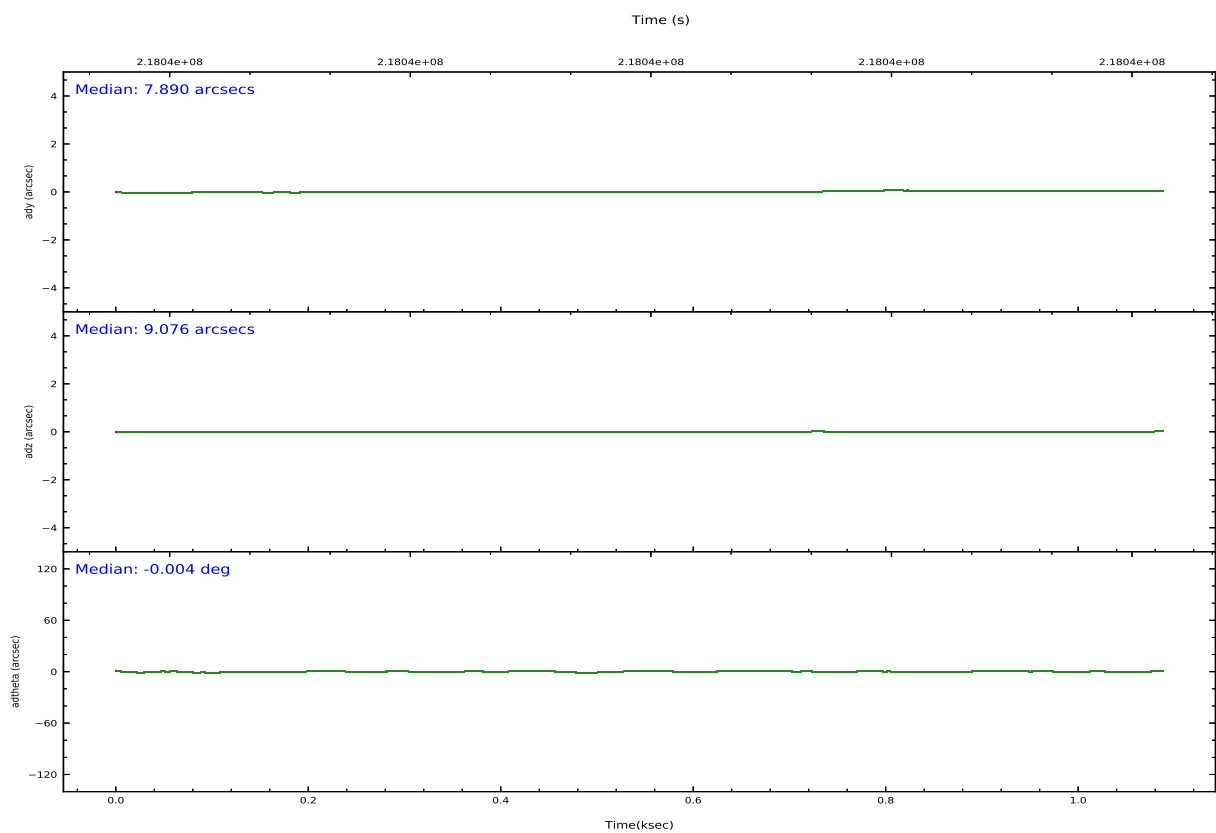
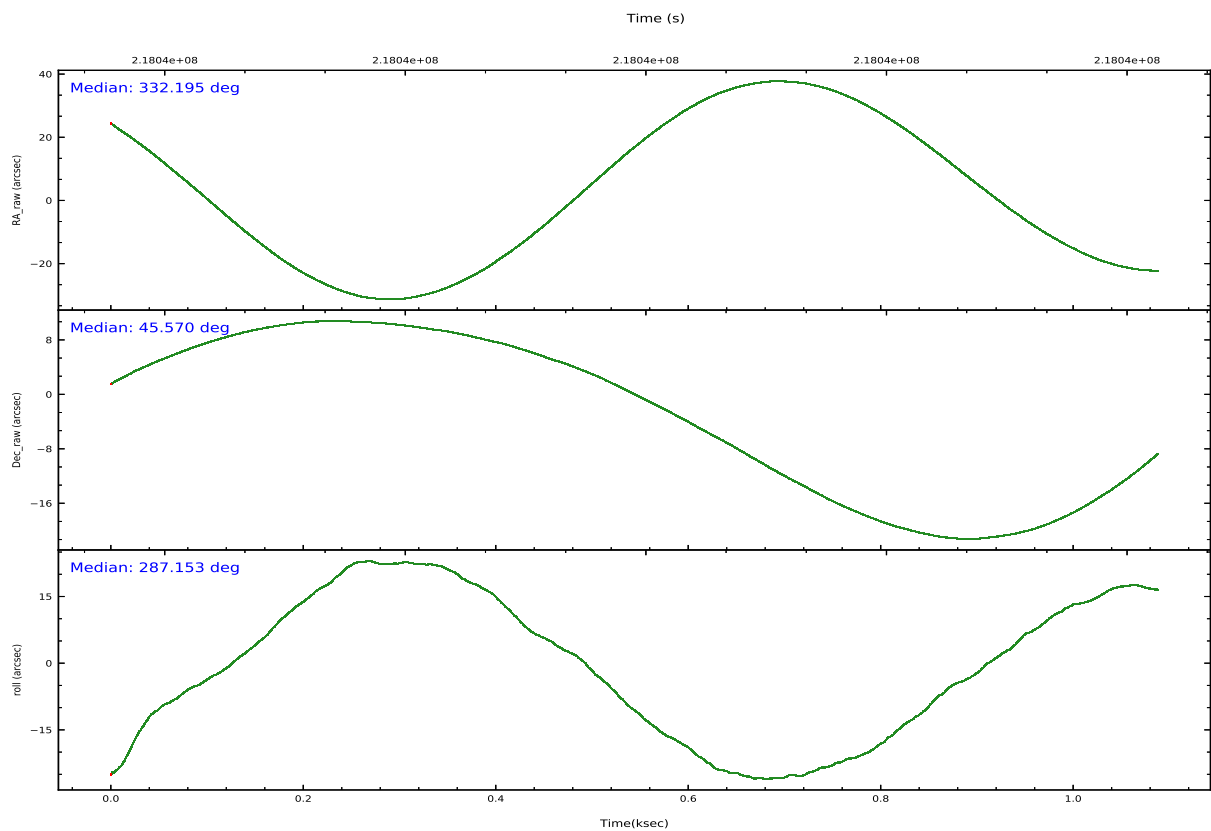
## 2.2 Compared Parameters

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	332.165003	332.19110467616
[deg] Pointing Dec	45.587077	45.569961399813
[deg] Pointing Roll	287.108950	287.15239118742
[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)	218036883.184000	218036506.7945
Observation start date	2004-11-28T13:46:59	2004-11-28T13:41:46
[s] Observation end time (MET)	218037783.184000	218038401.50708
Observation end date	2004-11-28T14:01:59	2004-11-28T14:13:21

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

## 2.3 Aspect



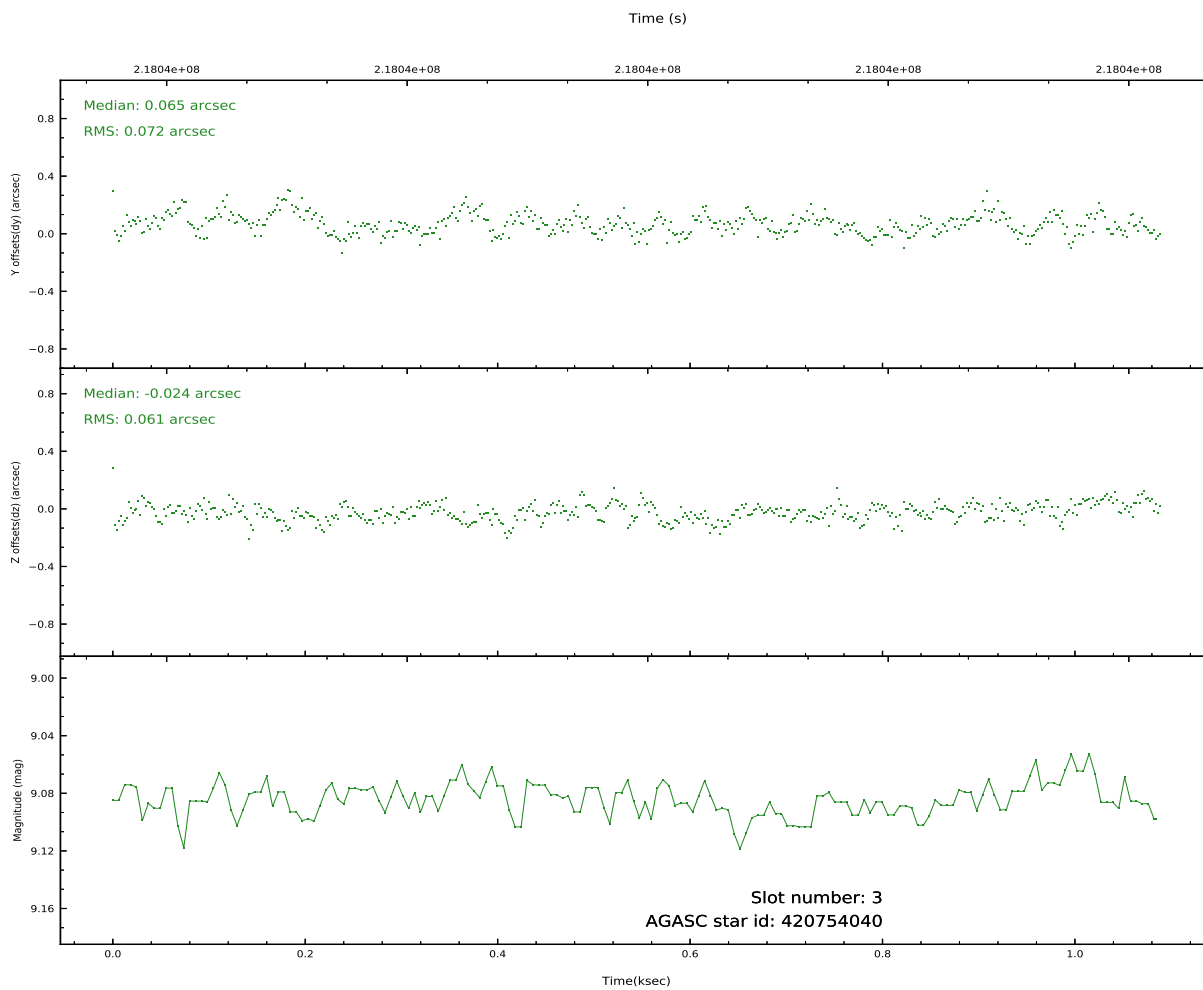
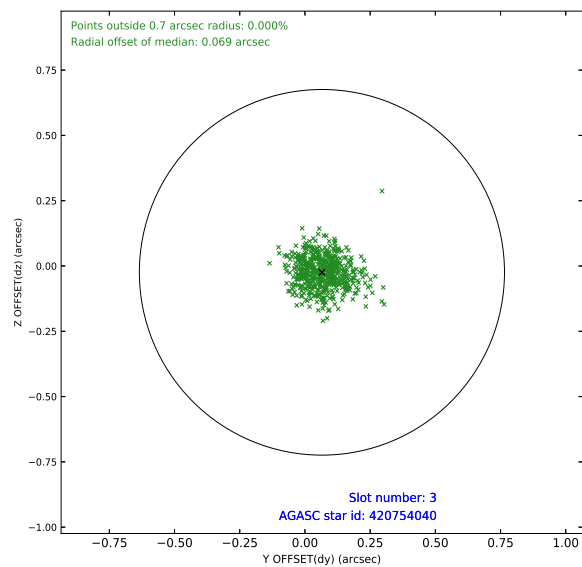
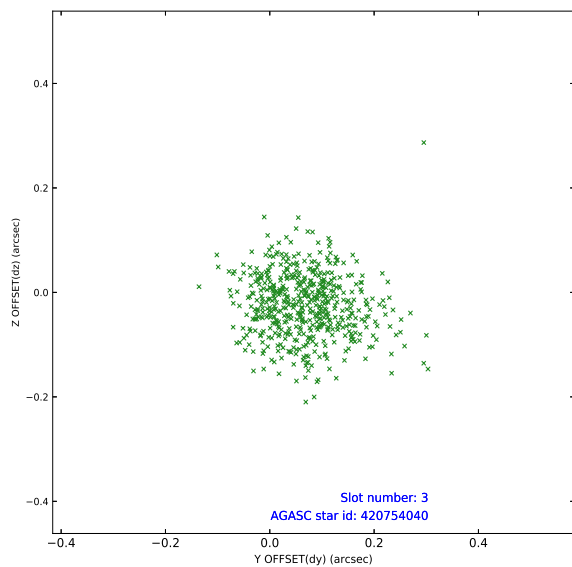


Slot Statistics

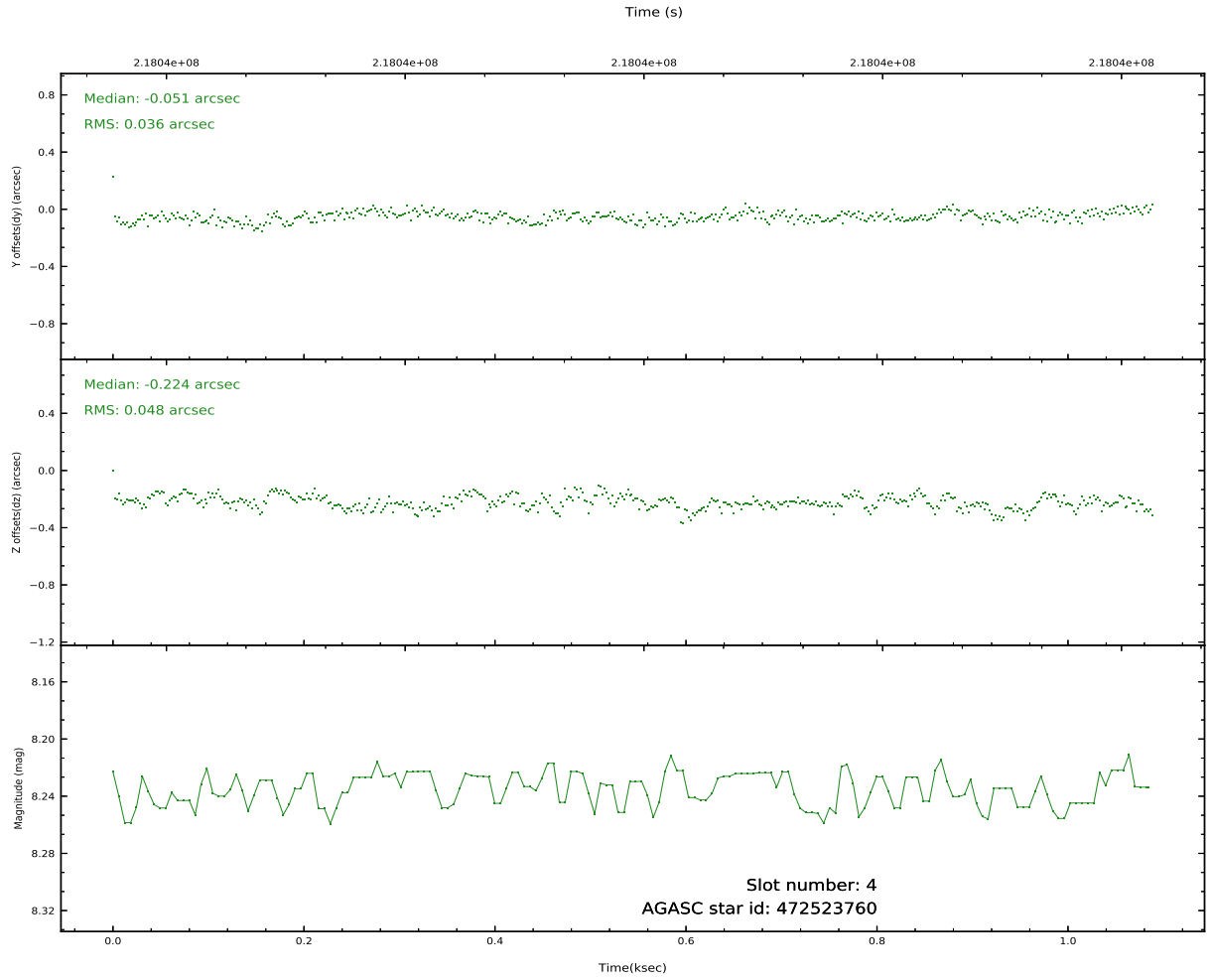
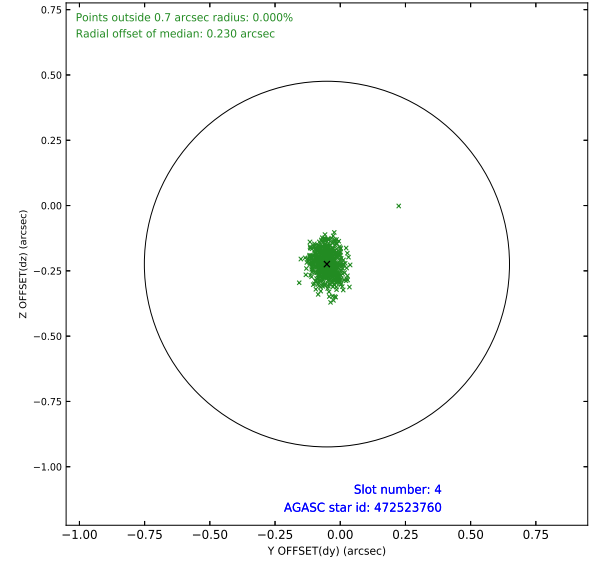
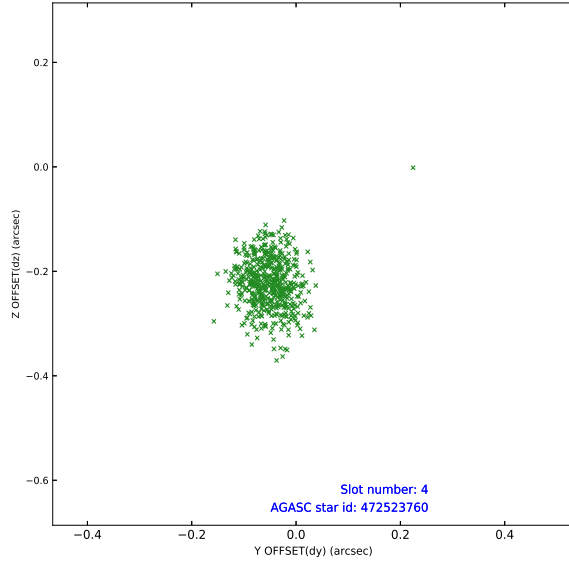
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		HRC-S-1	7.02	266	1.000	0.124	-0.173	0.007	0.011	0.000000	0.000000	-1162.07	-457
1	FID		HRC-S-2	7.03	266	1.000	0.182	-0.120	0.005	0.009	0.000000	0.000000	1233.30	-452
2	FID		HRC-S-3	7.04	266	1.000	0.085	-0.009	0.007	0.012	0.000000	0.000000	-1160.21	570
3	GUIDE	used	420754040	9.08	532	1.000	0.065	-0.024	0.099	0.157	331.917939	44.882543	2238.36	-1345
4	GUIDE	used	472523760	8.23	532	1.000	-0.051	-0.224	0.063	0.099	331.645363	45.403260	246.70	-1449
5	GUIDE	used	472654568	9.44	532	1.000	0.073	0.049	0.108	0.193	332.194449	45.063576	1824.29	-483
6	GUIDE	used	472655152	9.43	532	1.000	-0.013	0.154	0.096	0.161	332.504239	45.862991	-697.13	1106
7	GUIDE	used	472659832	9.47	530	1.000	-0.080	0.059	0.104	0.165	332.780399	46.098139	-1313.32	2015

## 2.4 Star Slots

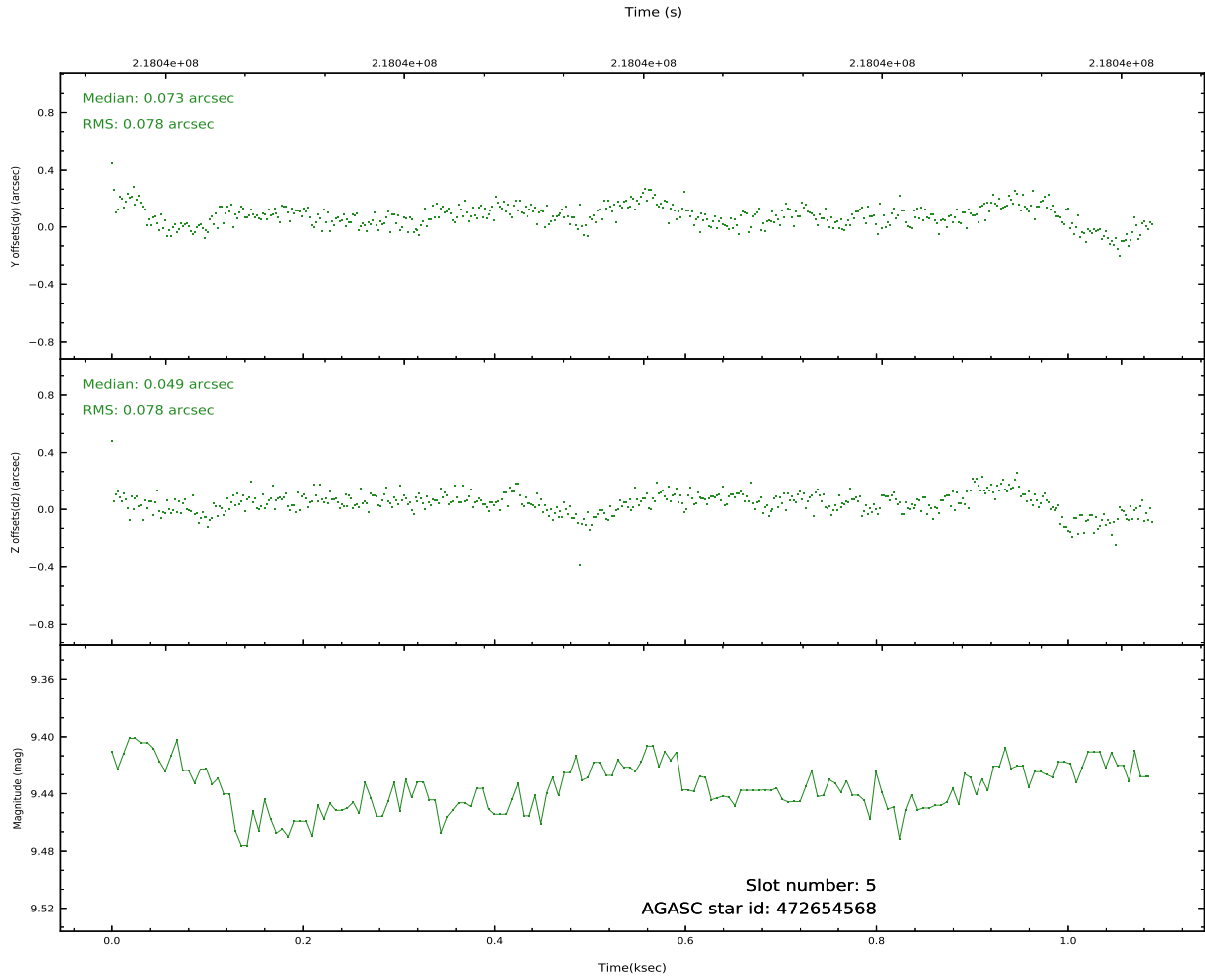
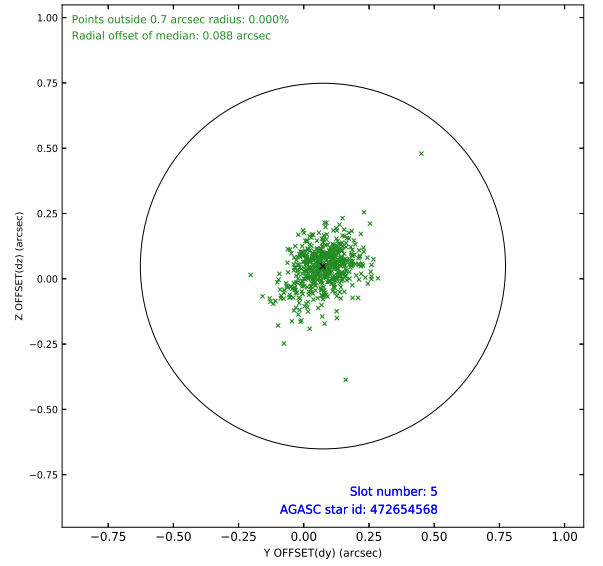
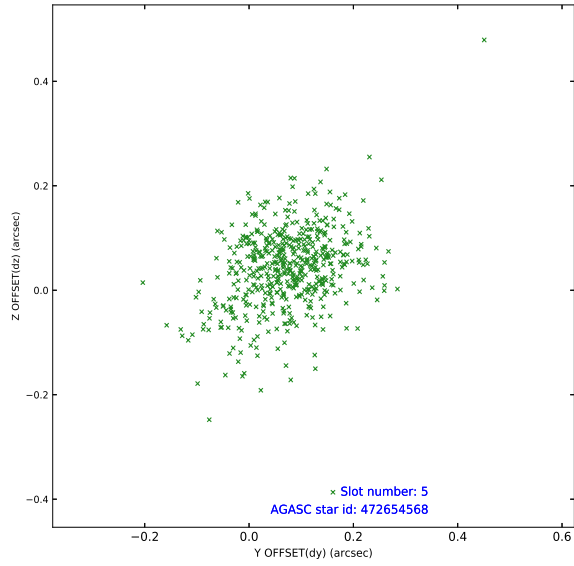
### 2.4.1 Slot 3



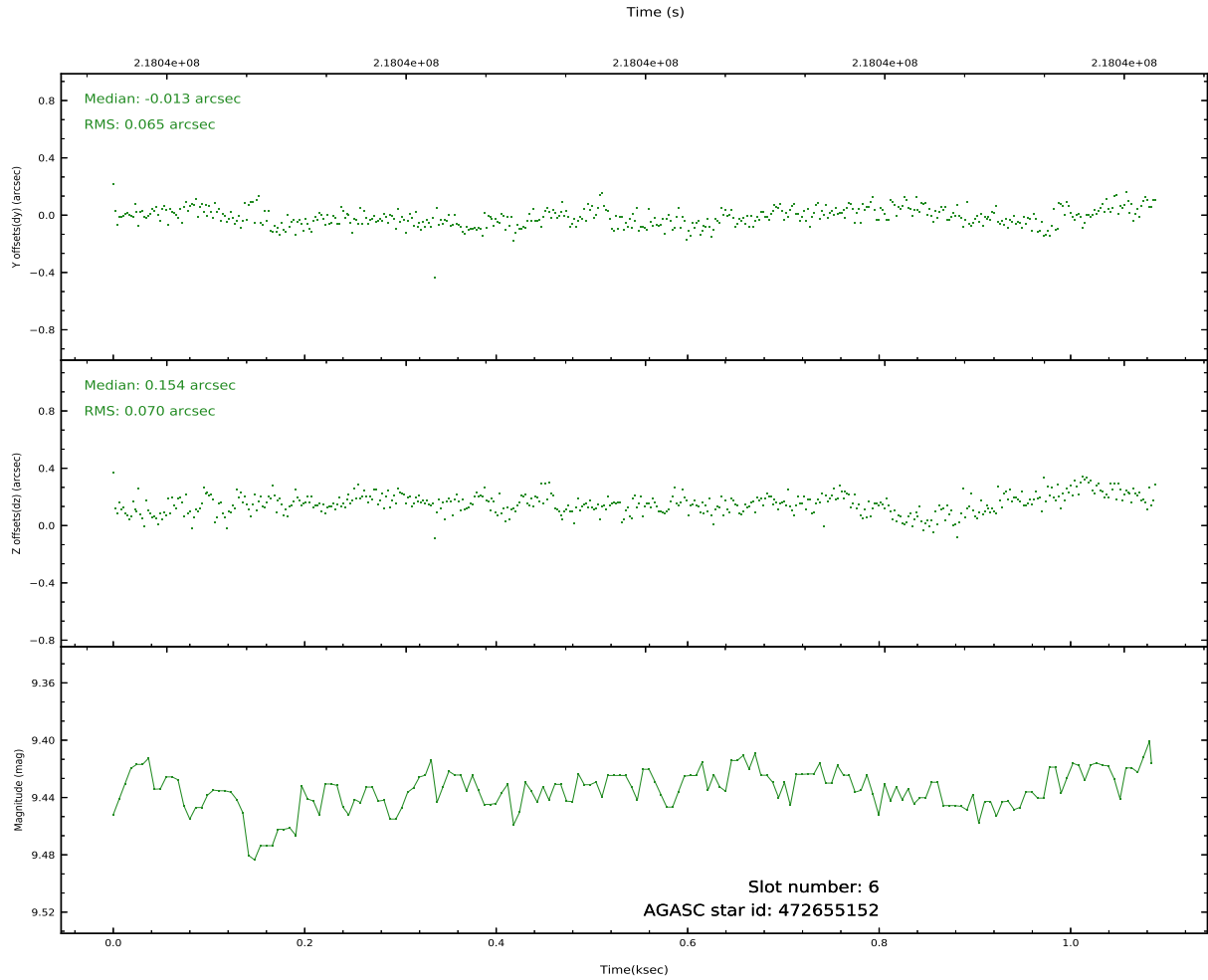
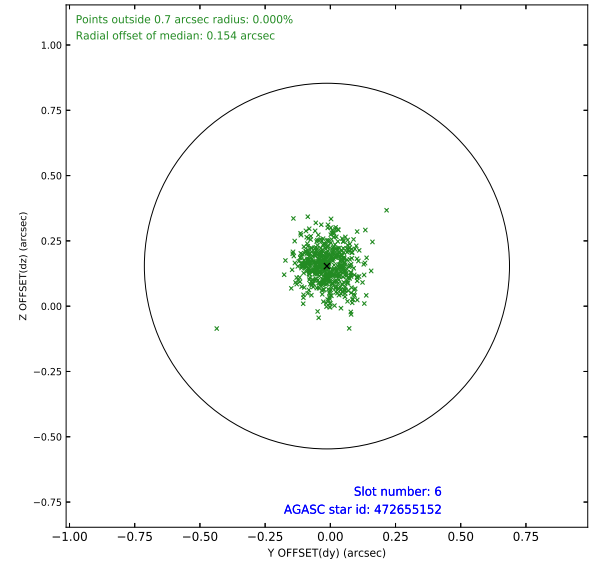
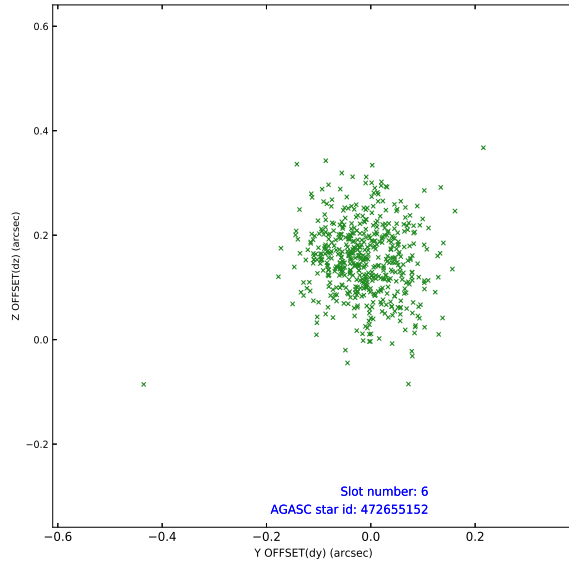
## 2.4.2 Slot 4



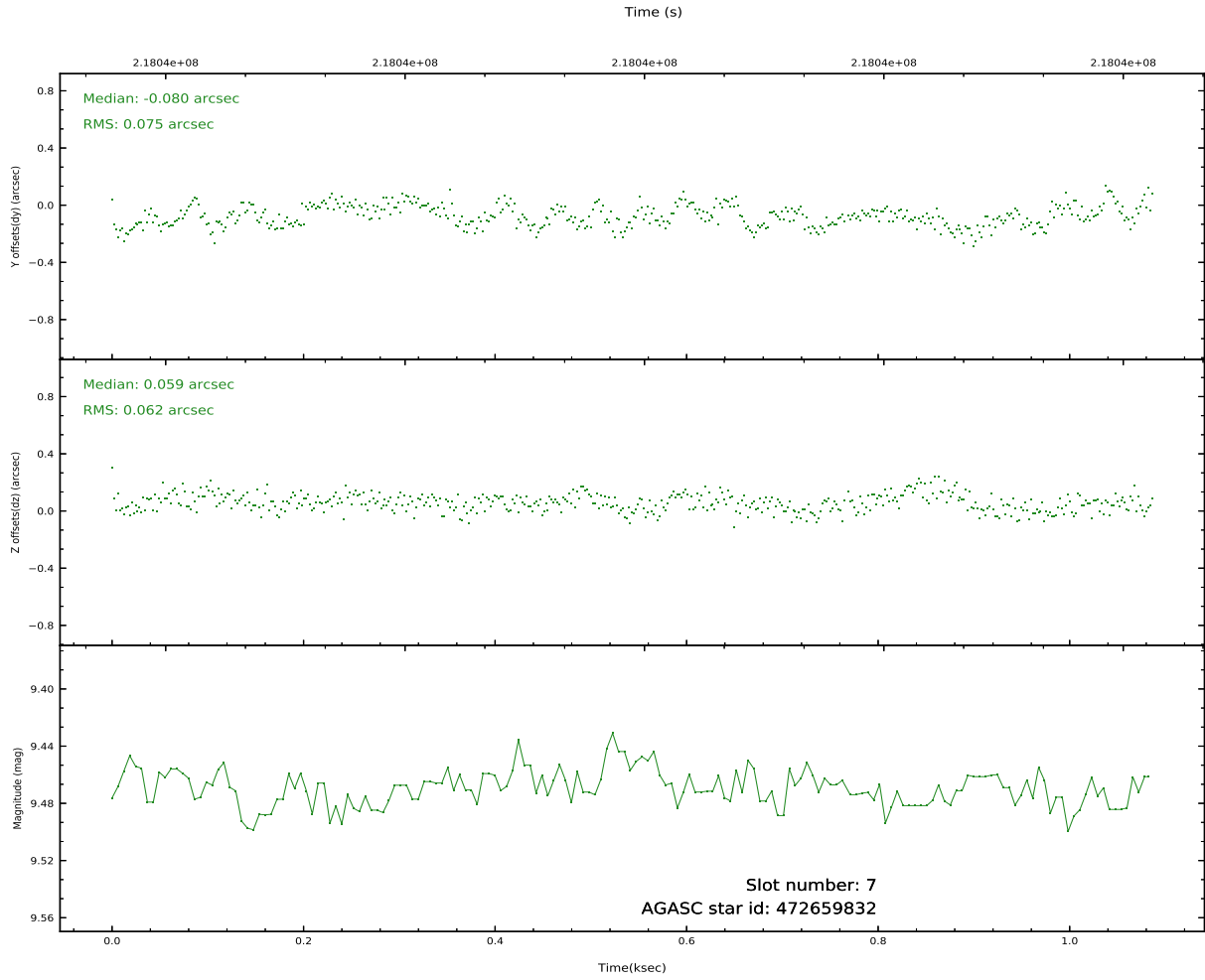
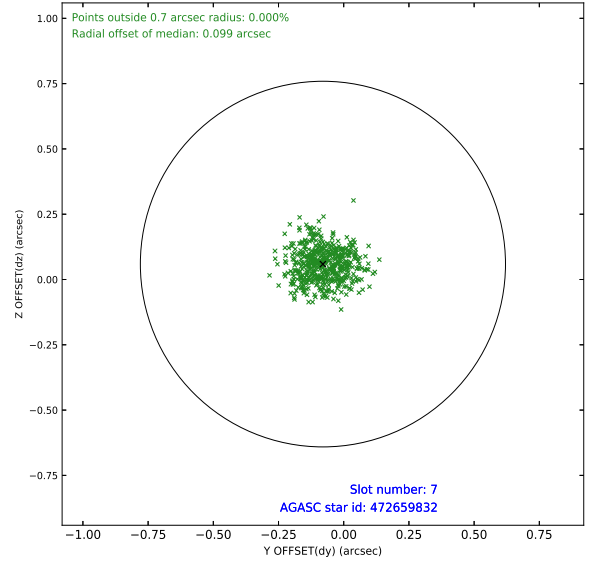
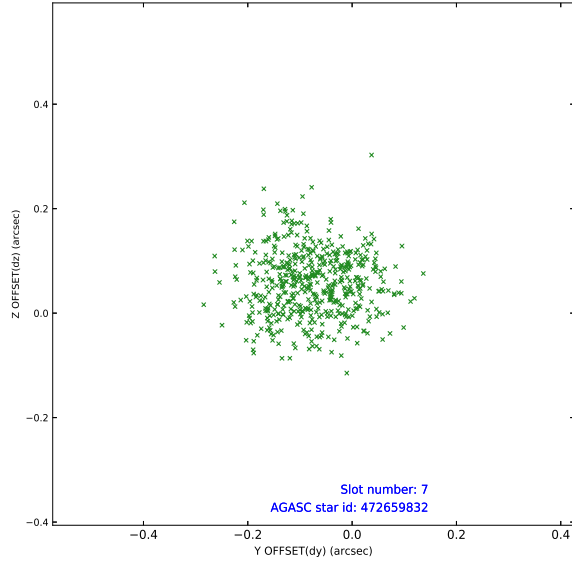
### 2.4.3 Slot 5



## 2.4.4 Slot 6

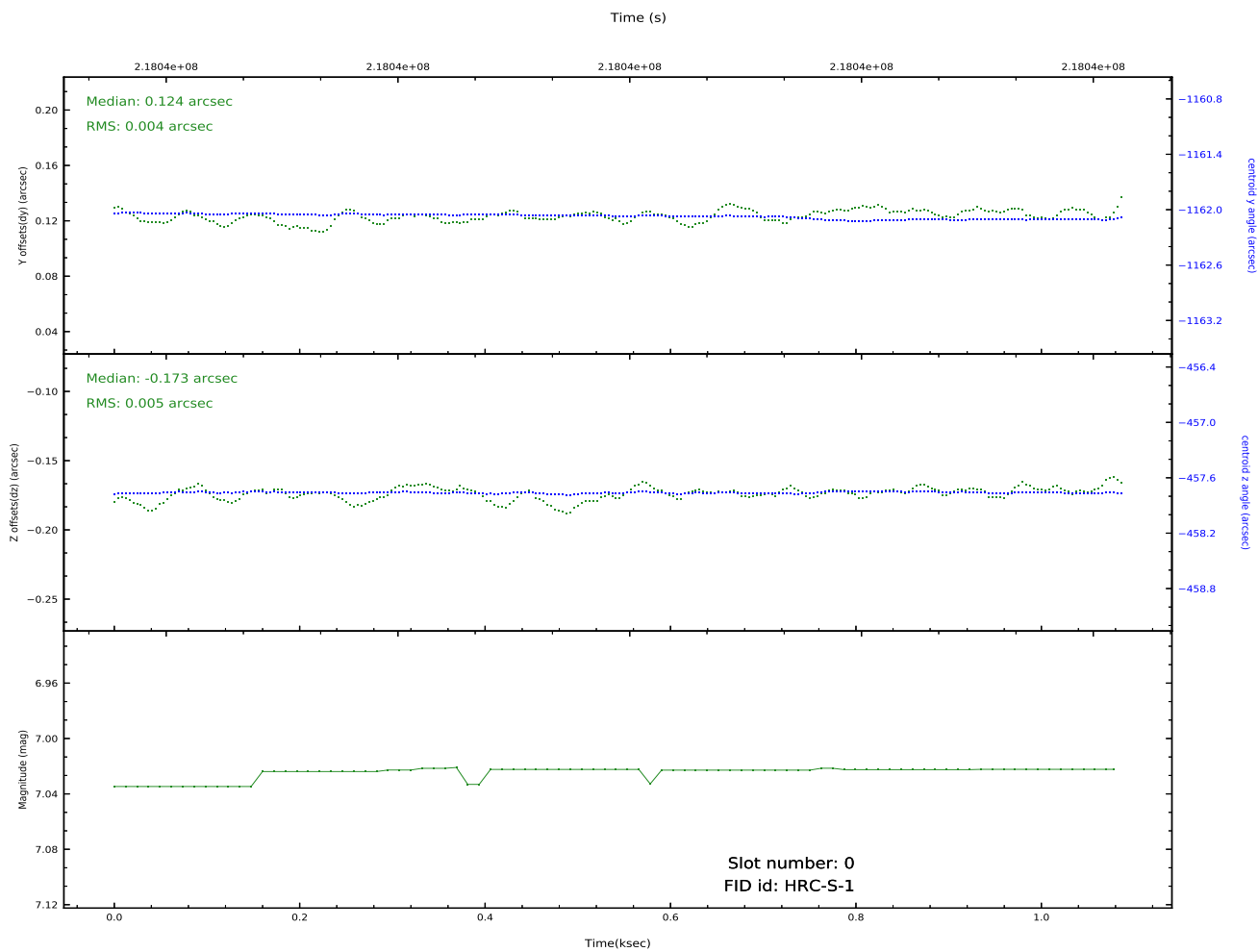
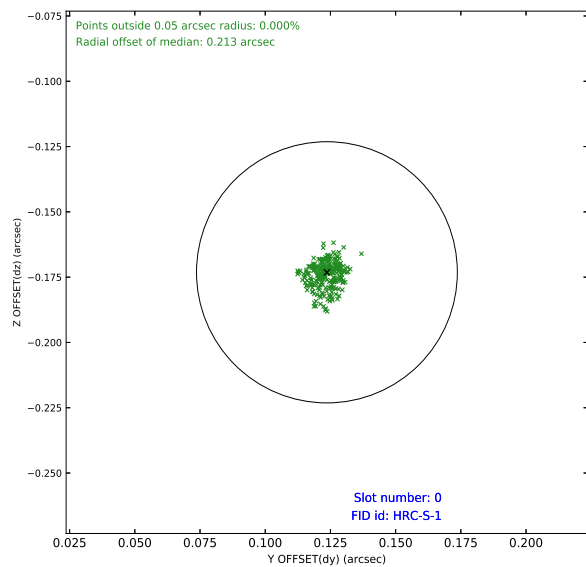
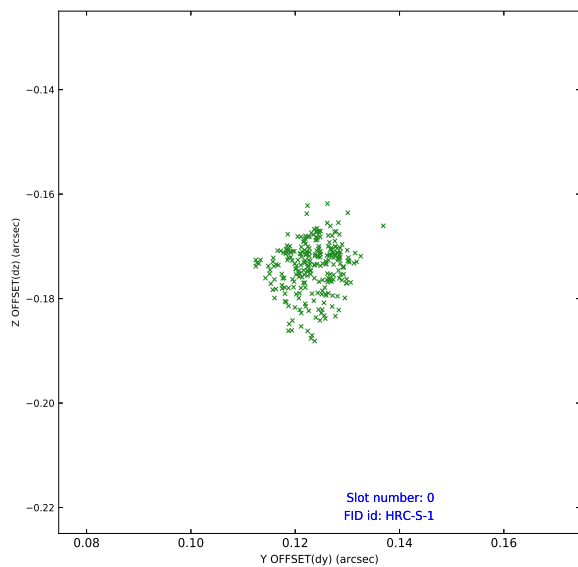


## 2.4.5 Slot 7

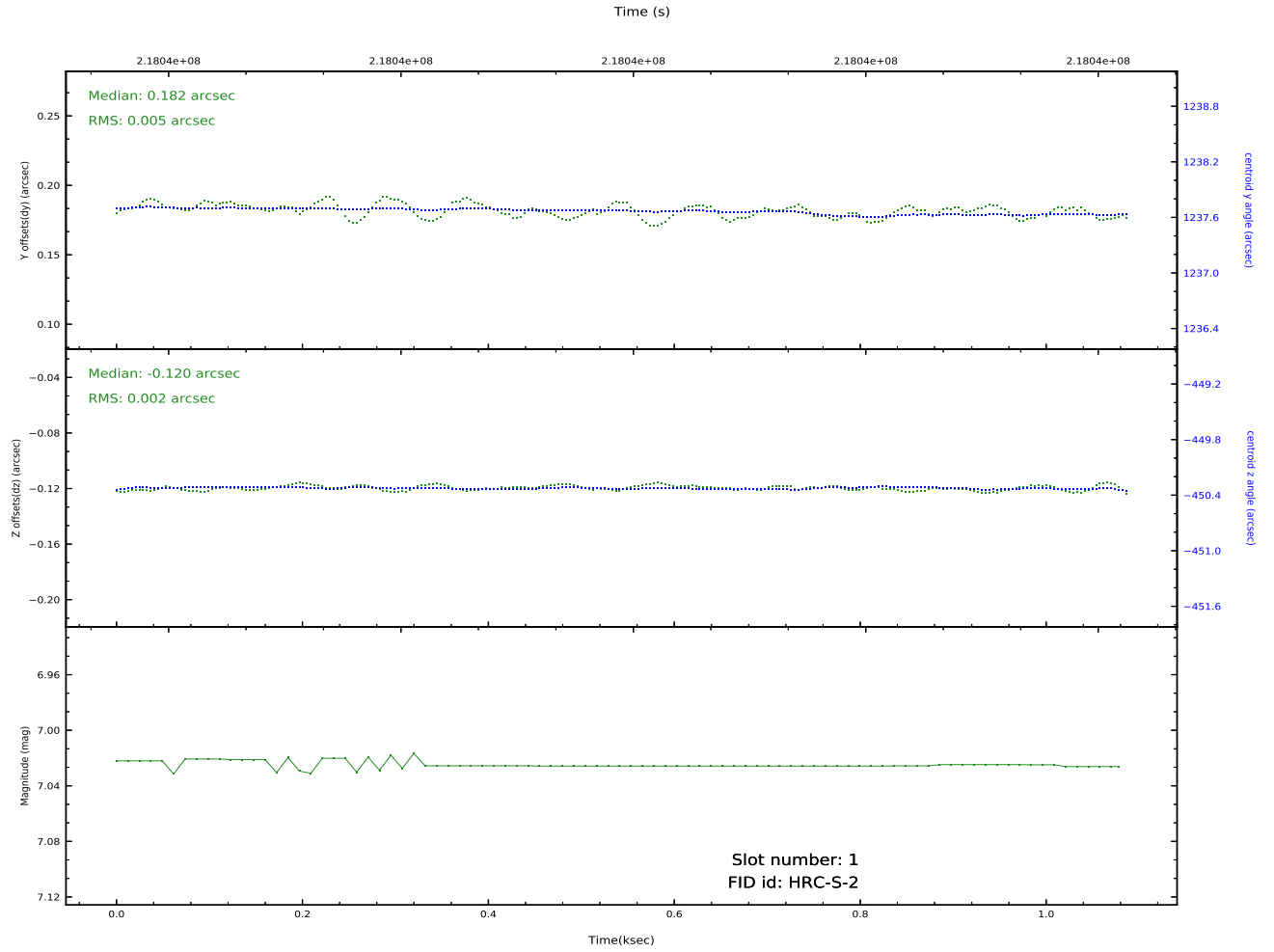
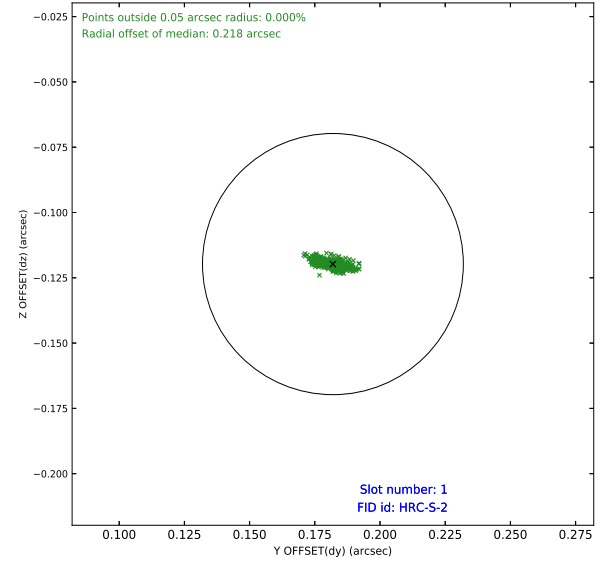
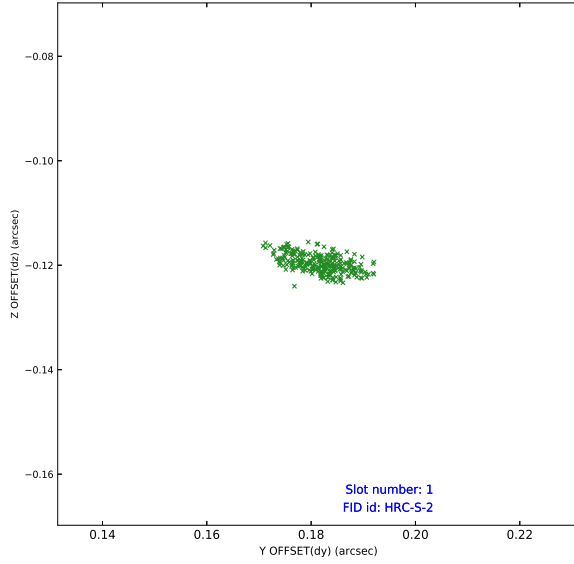


## 2.5 FID Slots

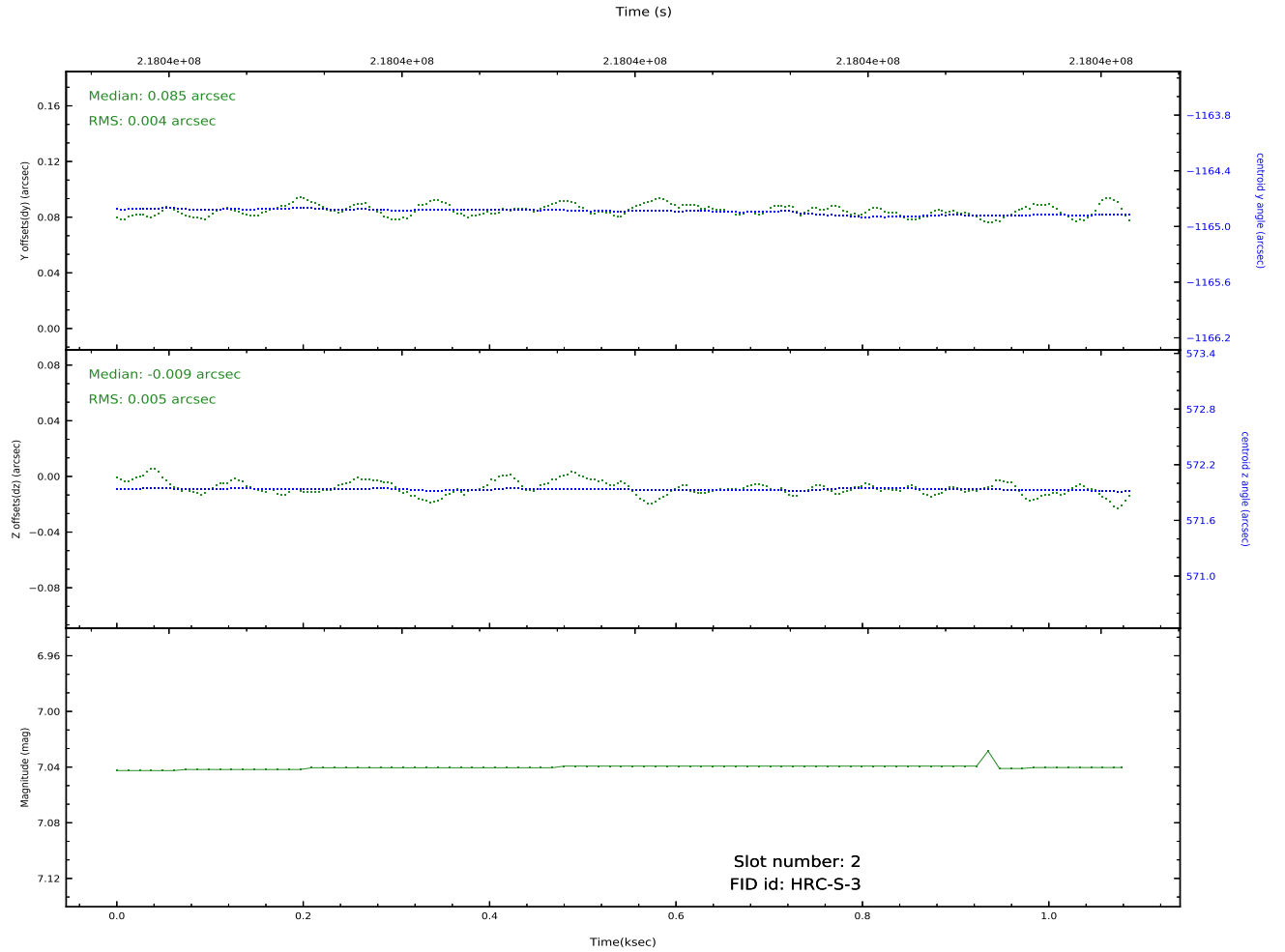
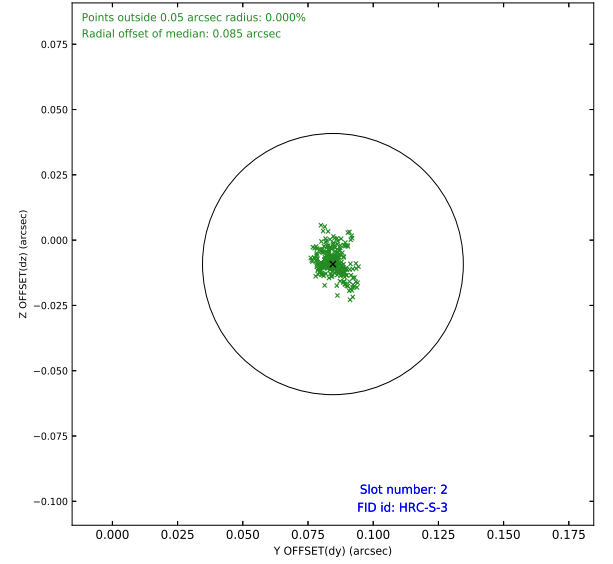
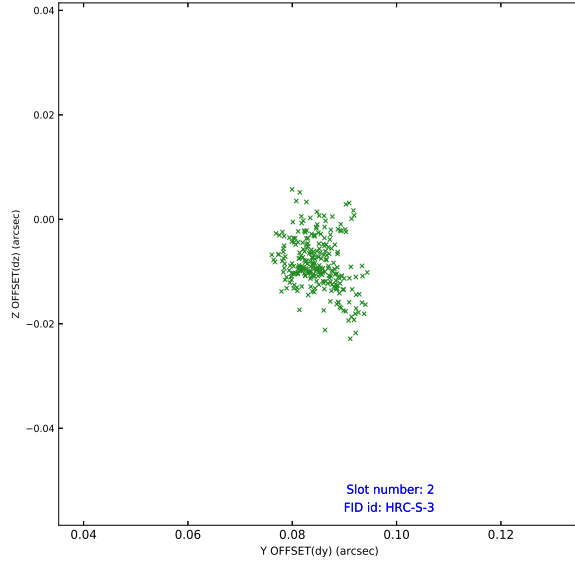
### 2.5.1 Slot 0



## 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	1.059081

## 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.