

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 6020 - L2 Version 4  
Chandra X-Ray Center

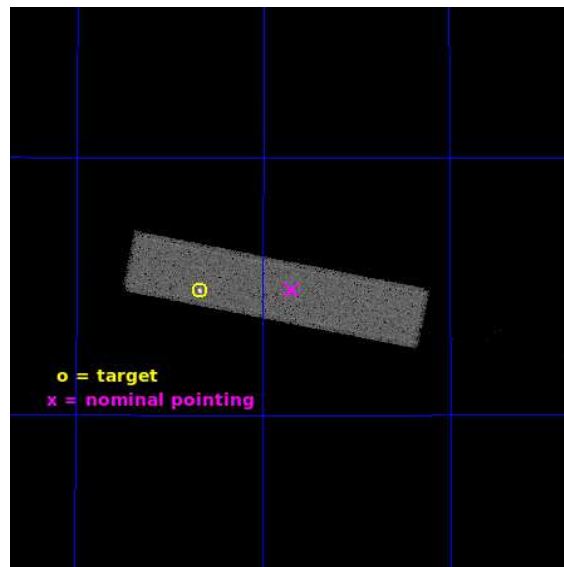
L2 Processing Date : Oct 10 2020

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# 1 Front

seq_num	290512	Sequence number
obs_id	6020	Observation id
title	AO6B 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	331.92235551414	Nominal RA [deg]
dec_nom	45.743998676088	Nominal Dec [deg]
roll_nom	191.56314220076	Nominal Roll [deg]
revision	4	Processing version of data
ontime	1159.5313032866	[s]
livetime	1151.3110657785	Ontime multiplied by DTCOR
l2events	57017	Number of level 2 events

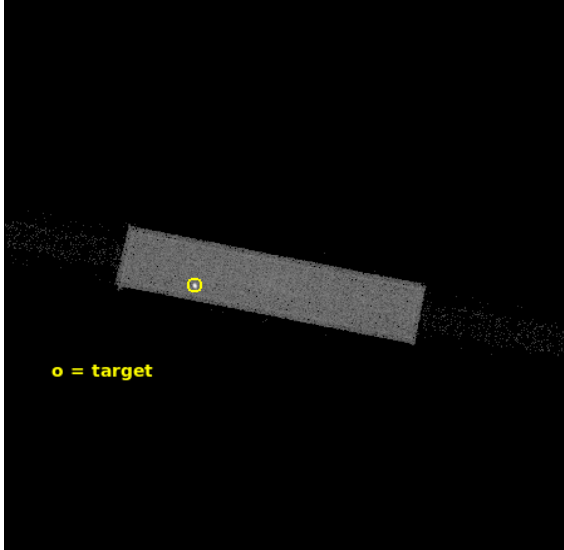


## 2 OBI

### 2.1 OBI

#### 2.1.1 Images

Level 1 Image



Level 1 Bad Events



### 2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	1000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	1159.5313032866	[s]
caldbver	4.9.2	&#160	l1events	88661	Number of level 1 events
date	2020-10-10T08:02:41	Date and time of file creation			
revision	4	Processing version of data			

### 2.1.3 Events

#### Level 1 Events

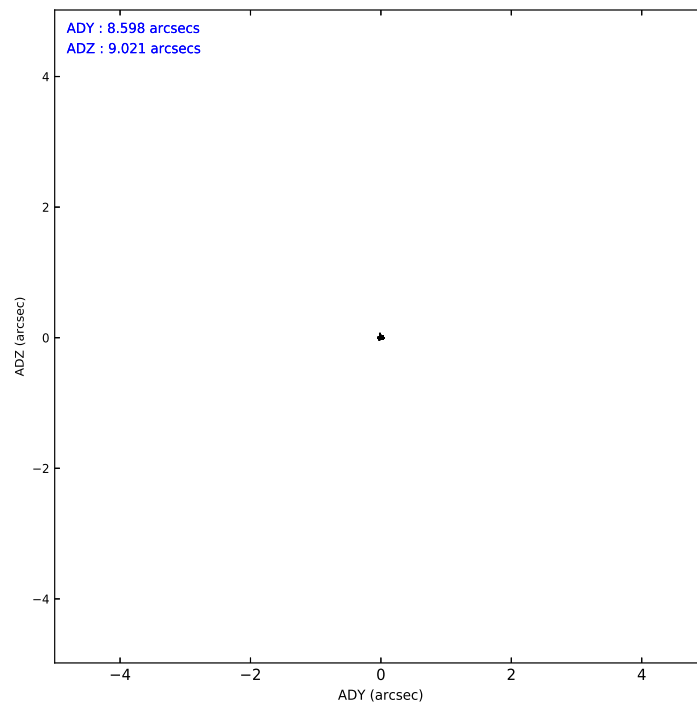
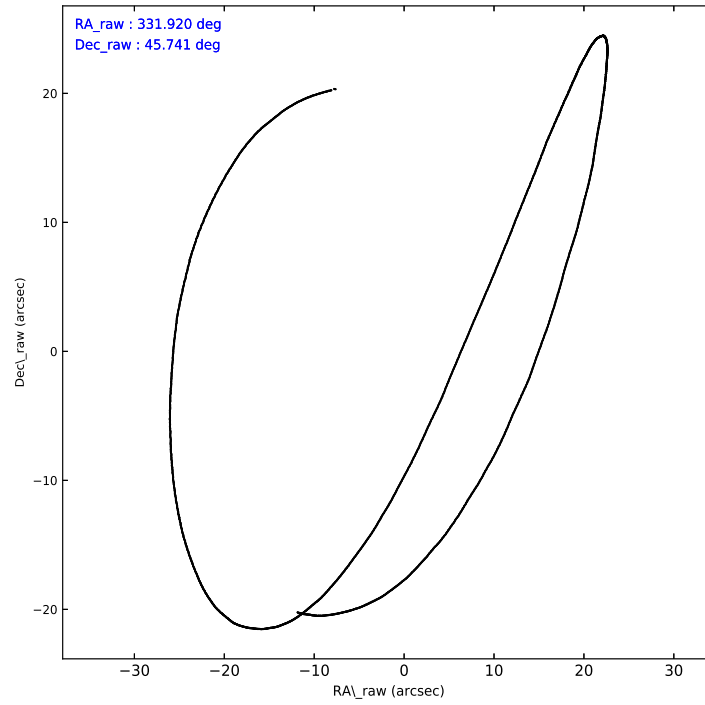
	<b>segment 1</b>	<b>segment 2</b>	<b>segment 3</b>
level 1 events	894	86930	837
rejected events	894	16518	829
rejected %	100%	19%	99%

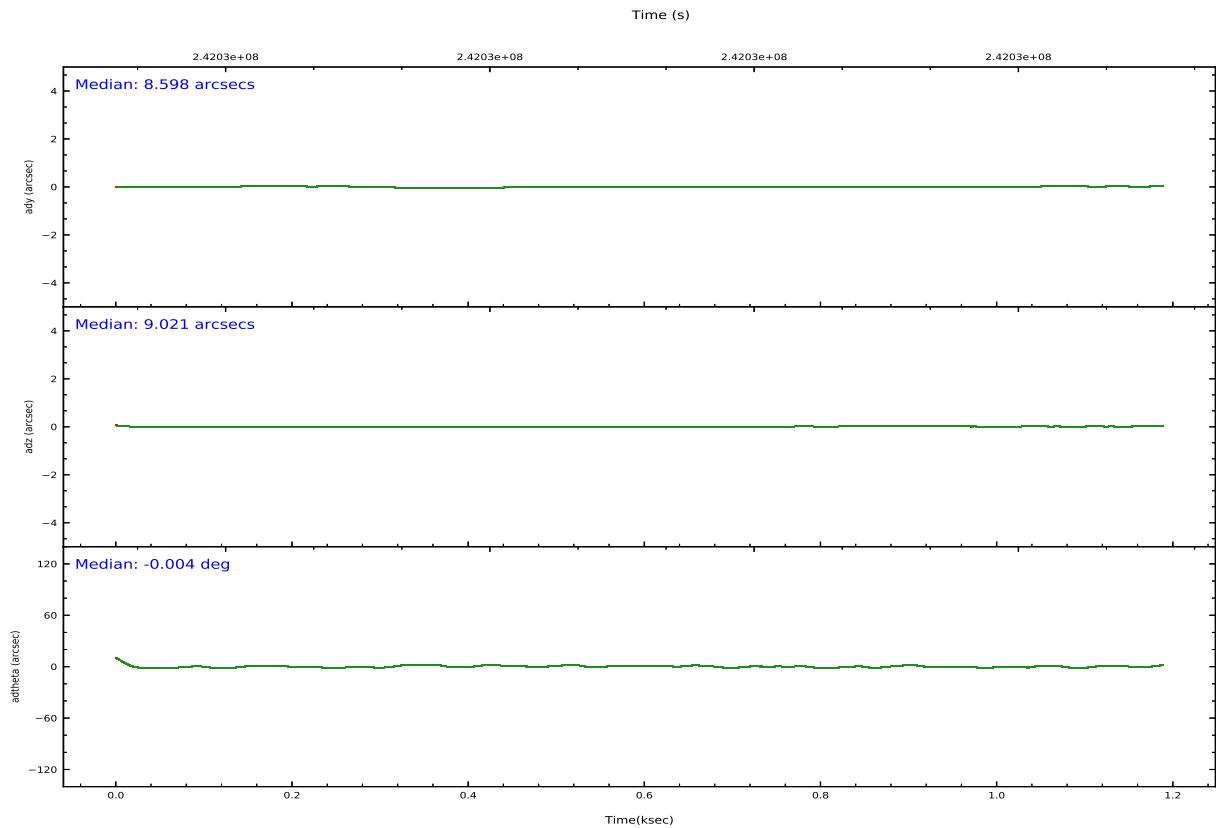
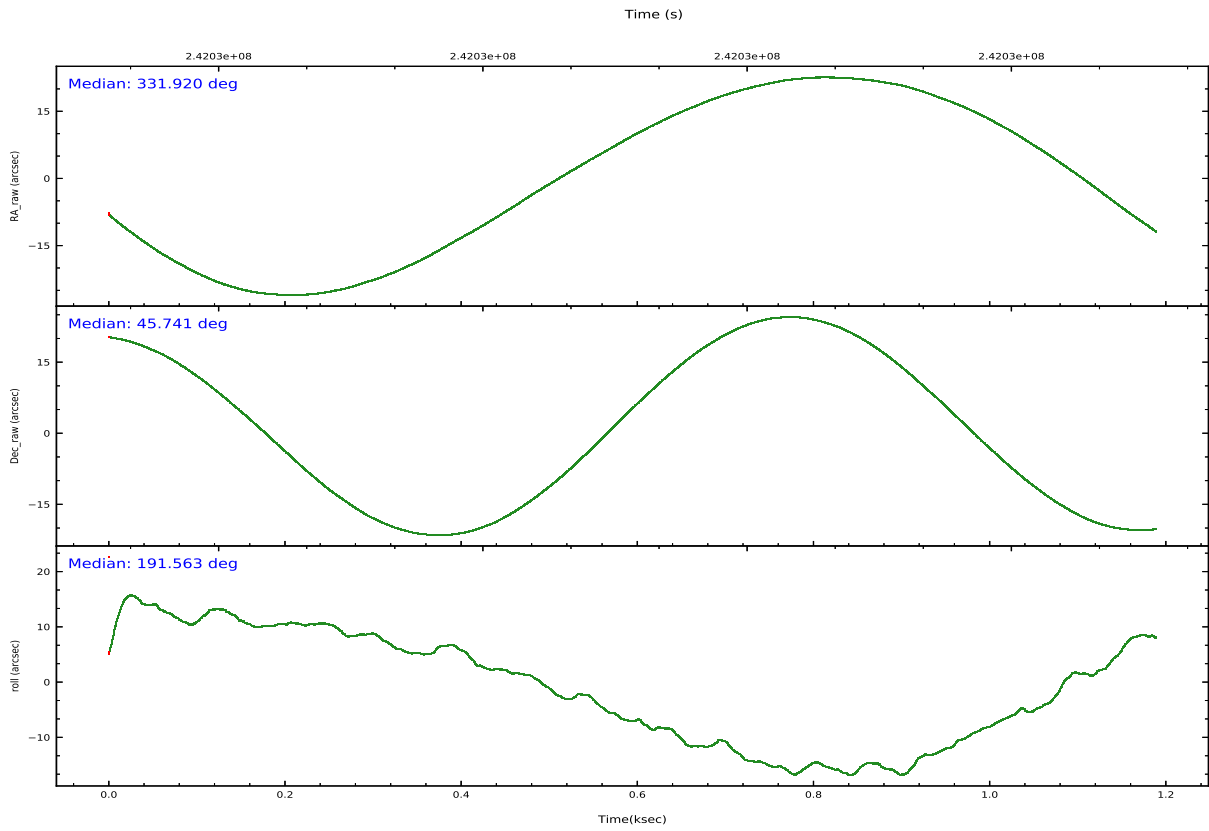
## 2.2 Compared Parameters

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	331.949136	331.92235551414
[deg] Pointing Dec	45.761223	45.743998676088
[deg] Pointing Roll	191.477998	191.56314220076
[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)	242028464.184000	242028088.38482
Observation start date	2005-09-02T06:06:40	2005-09-02T06:01:28
[s] Observation end time (MET)	242029464.184000	242030412.05993
Observation end date	2005-09-02T06:23:20	2005-09-02T06:40:12

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

## 2.3 Aspect





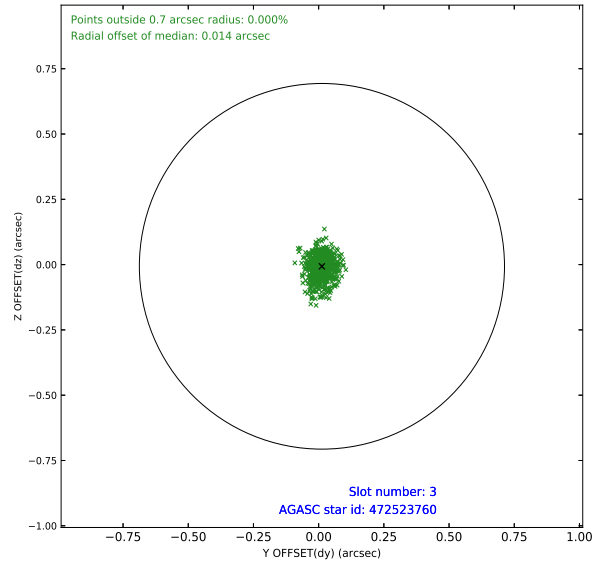
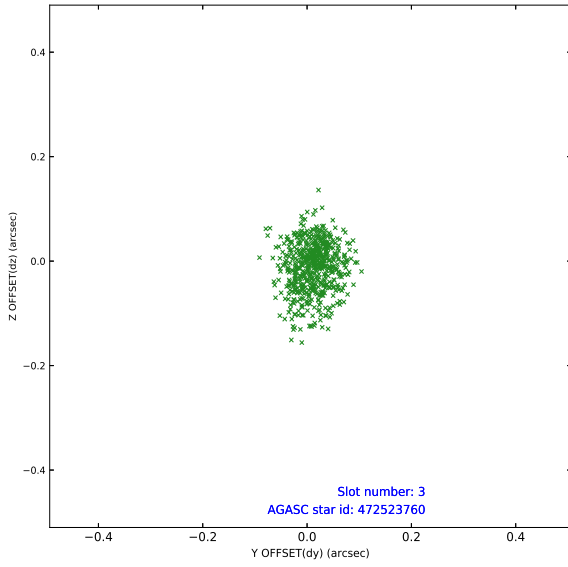
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		HRC-S-1	7.03	291	1.000	0.079	-0.210	0.007	0.012	0.000000	0.000000	-1162.83	-457
1	FID		HRC-S-3	7.05	291	1.000	0.050	-0.008	0.009	0.013	0.000000	0.000000	-1169.60	570
2	FID		HRC-S-4	7.01	291	1.000	0.257	-0.078	0.005	0.010	0.000000	0.000000	1231.57	576
3	GUIDE	used	472523760	8.24	581	1.000	0.013	-0.007	0.060	0.101	331.645363	45.403260	1008.16	1108
4	GUIDE	used	472527720	6.99	581	1.000	-0.066	-0.083	0.071	0.115	331.460205	45.112509	1682.31	2039
5	GUIDE	used	472533912	9.16	578	1.000	0.146	-0.051	0.113	0.193	331.791136	46.368695	-47.75	-2218
6	GUIDE	used	472535576	7.86	581	1.000	-0.157	0.118	0.055	0.094	331.438373	46.291802	863.93	-2133
7	GUIDE	used	472655152	9.44	579	1.000	0.061	0.039	0.105	0.161	332.504239	45.862991	-1436.44	-91

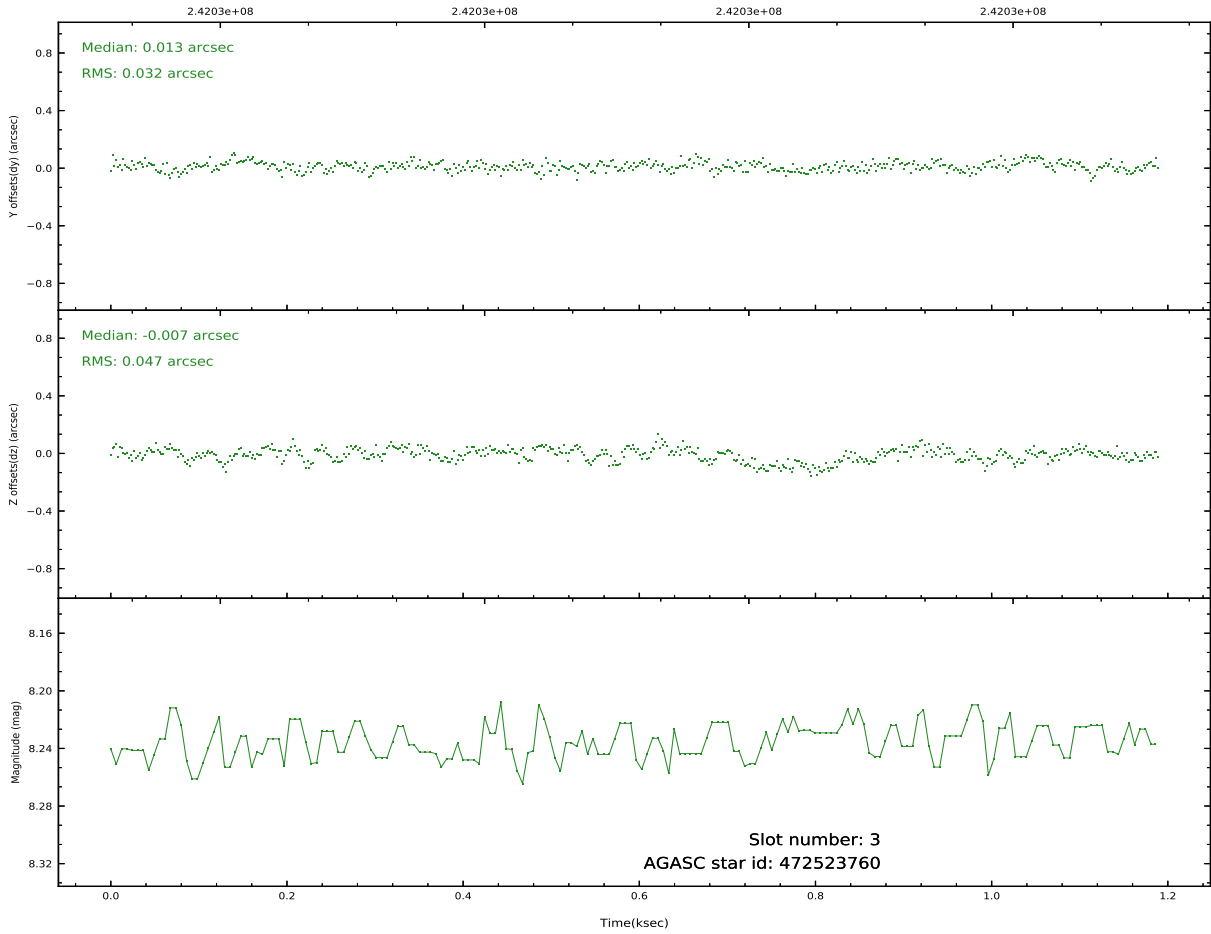
∞

## 2.4 Star Slots

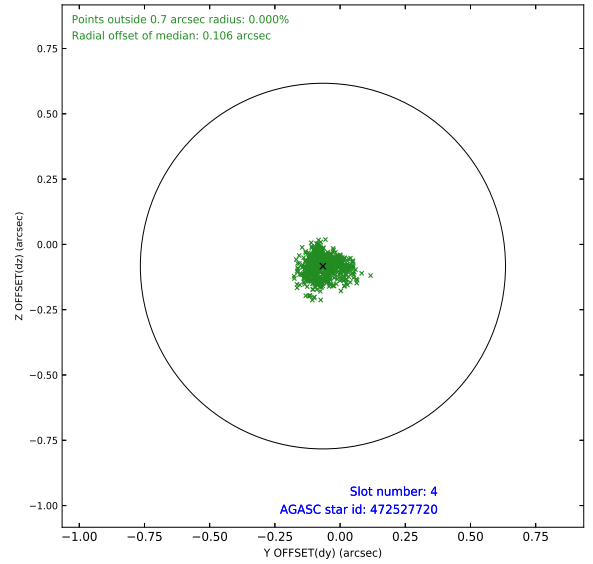
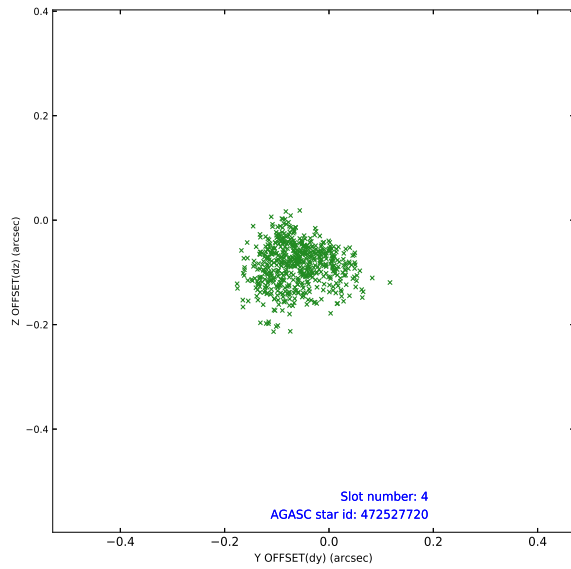
### 2.4.1 Slot 3



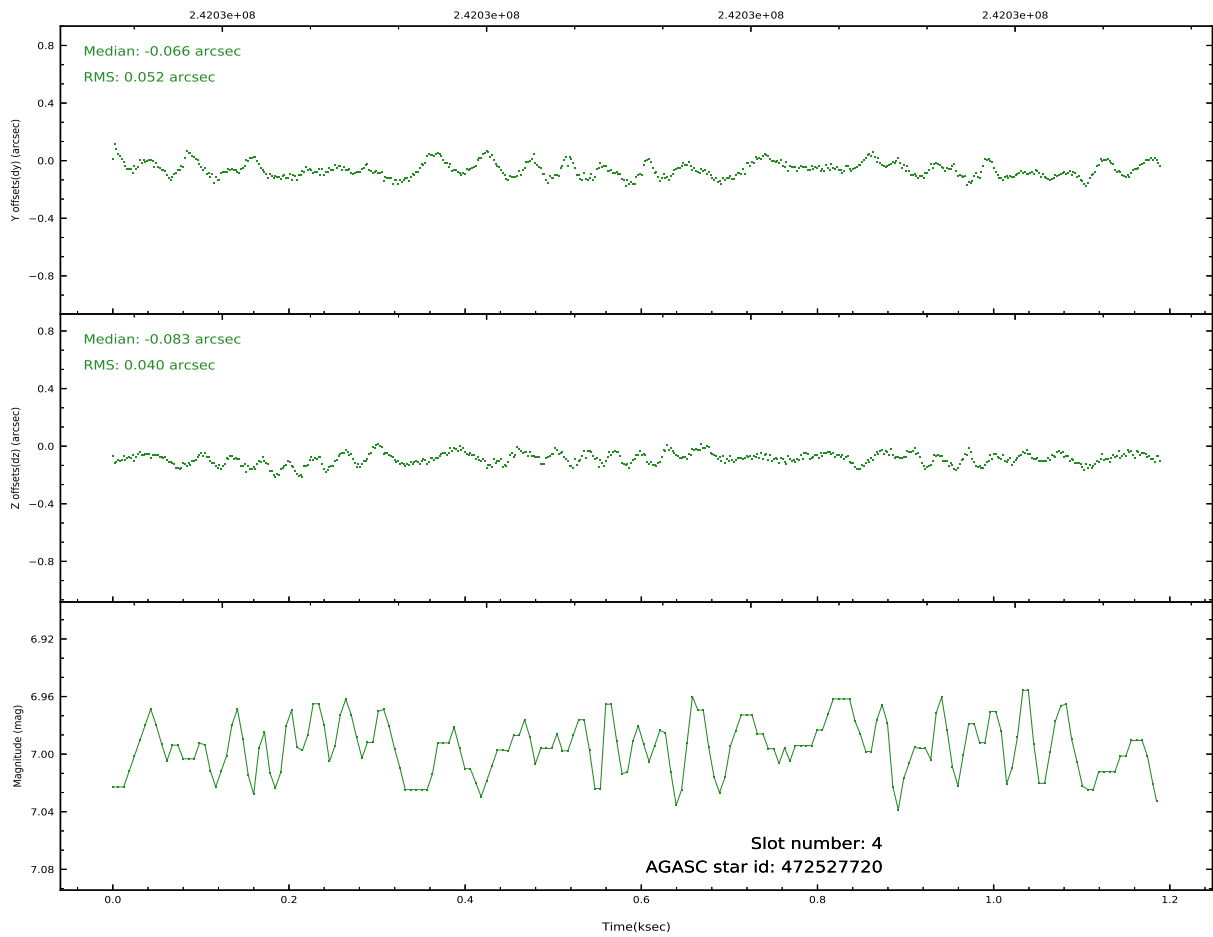
Time (s)



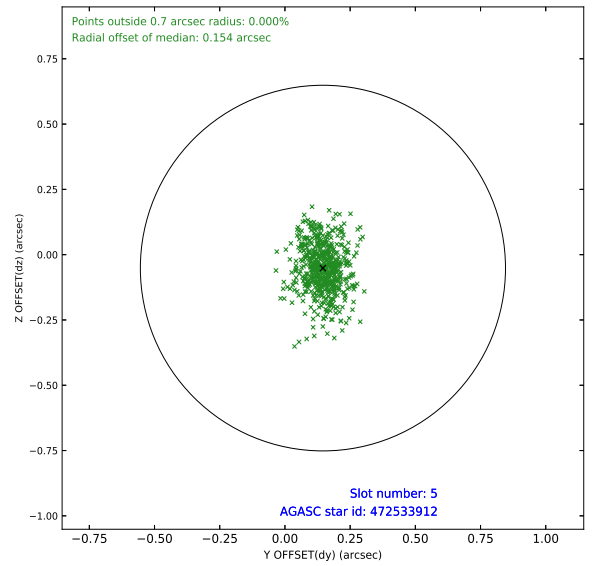
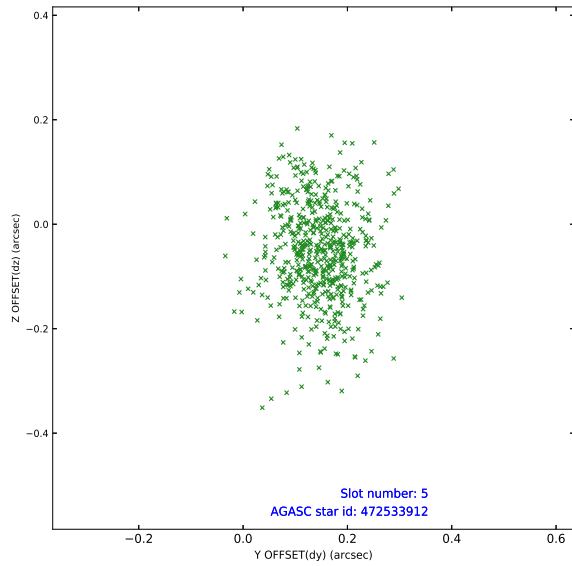
## 2.4.2 Slot 4



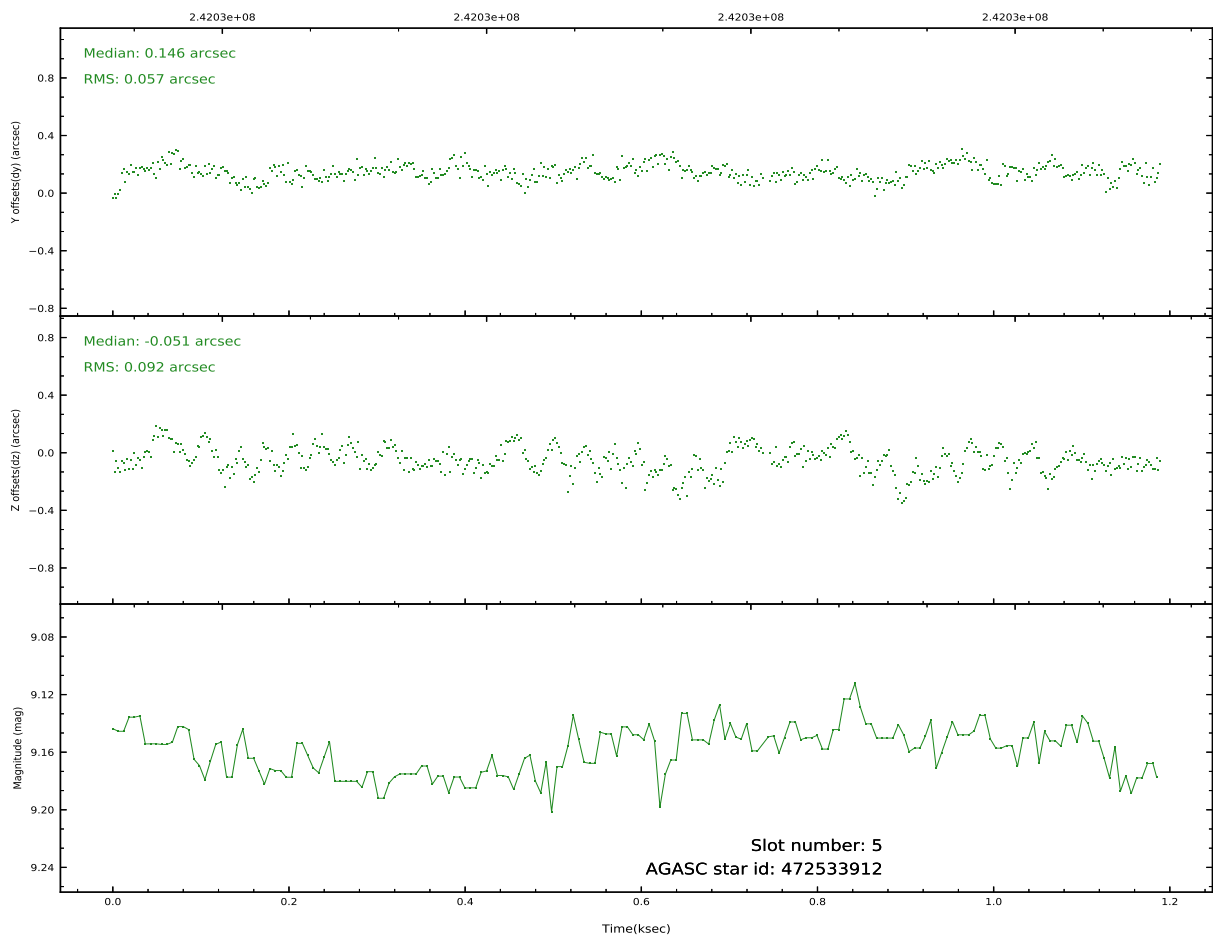
Time (s)



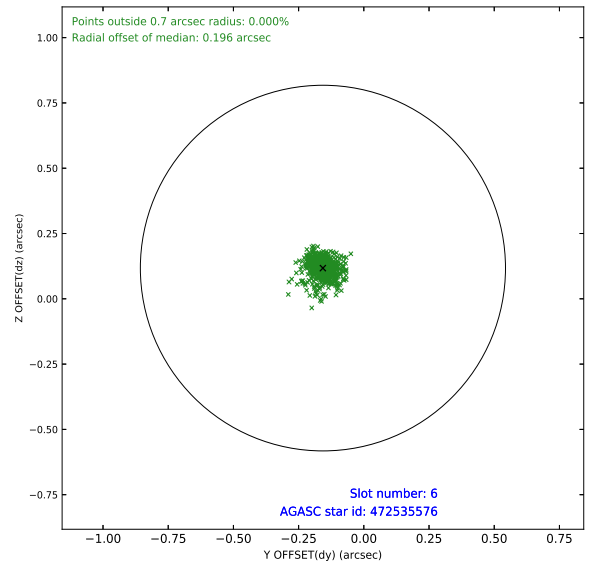
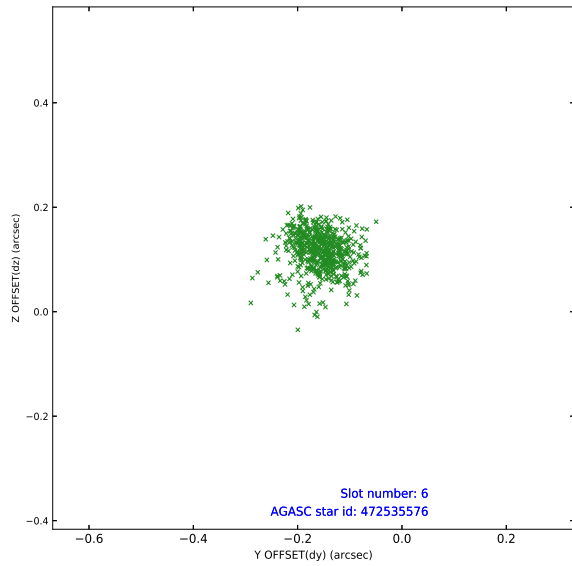
### 2.4.3 Slot 5



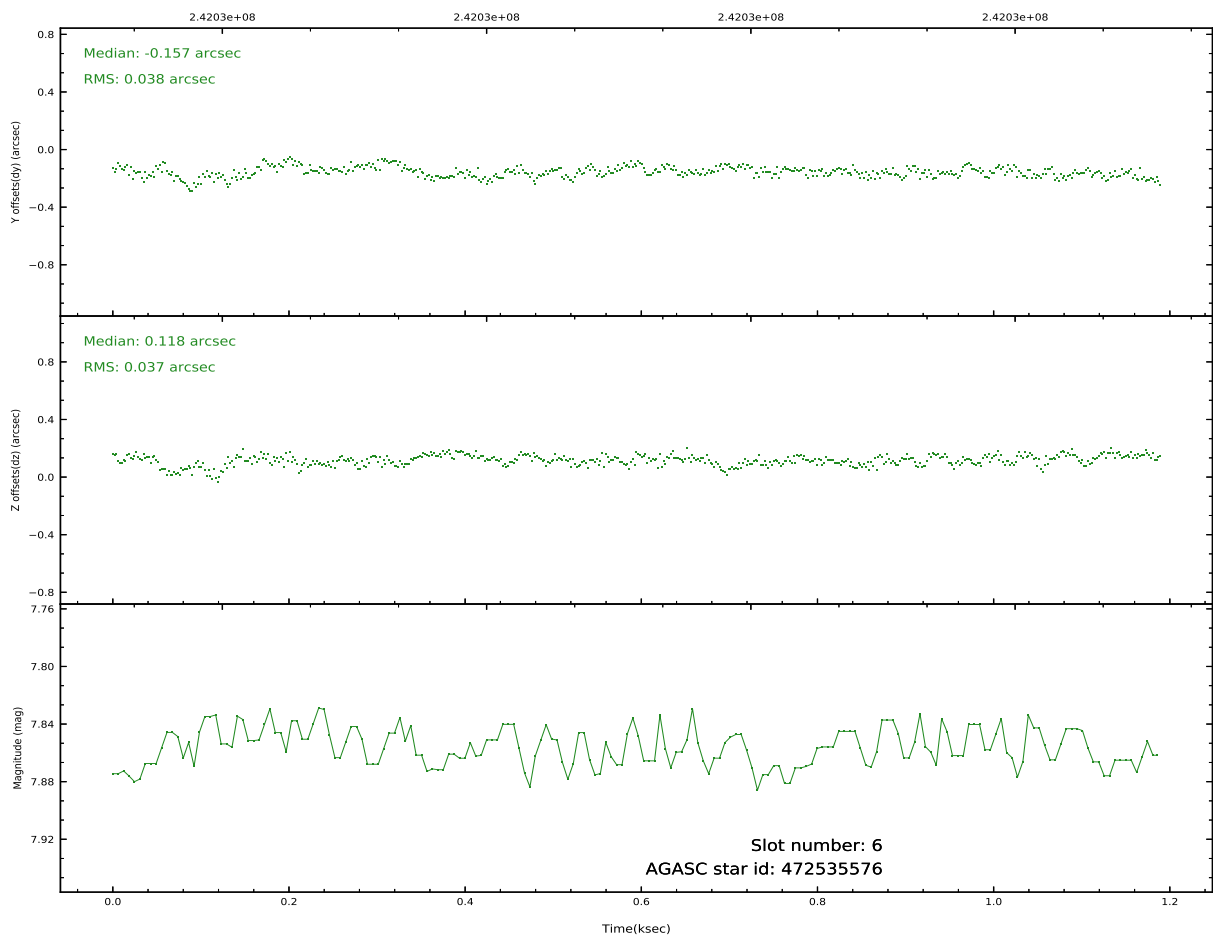
Time (s)



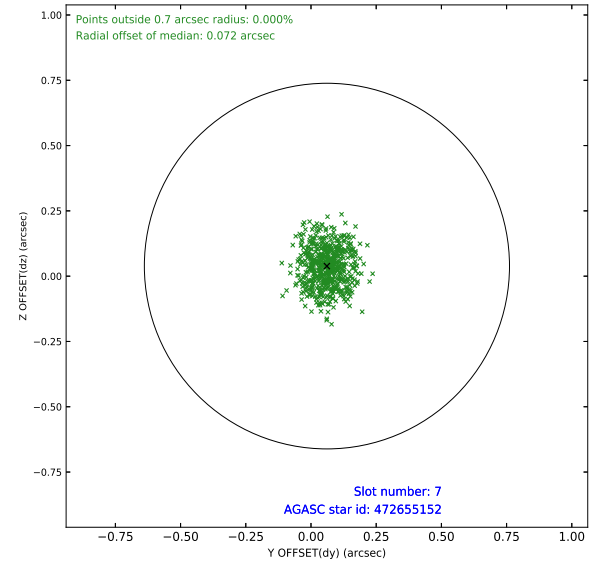
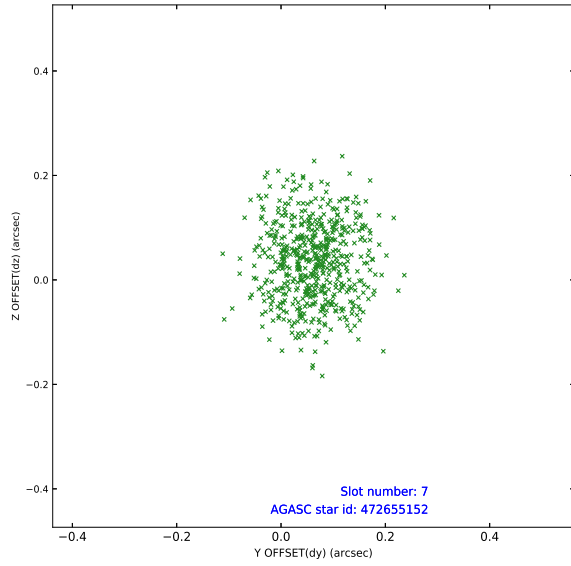
## 2.4.4 Slot 6



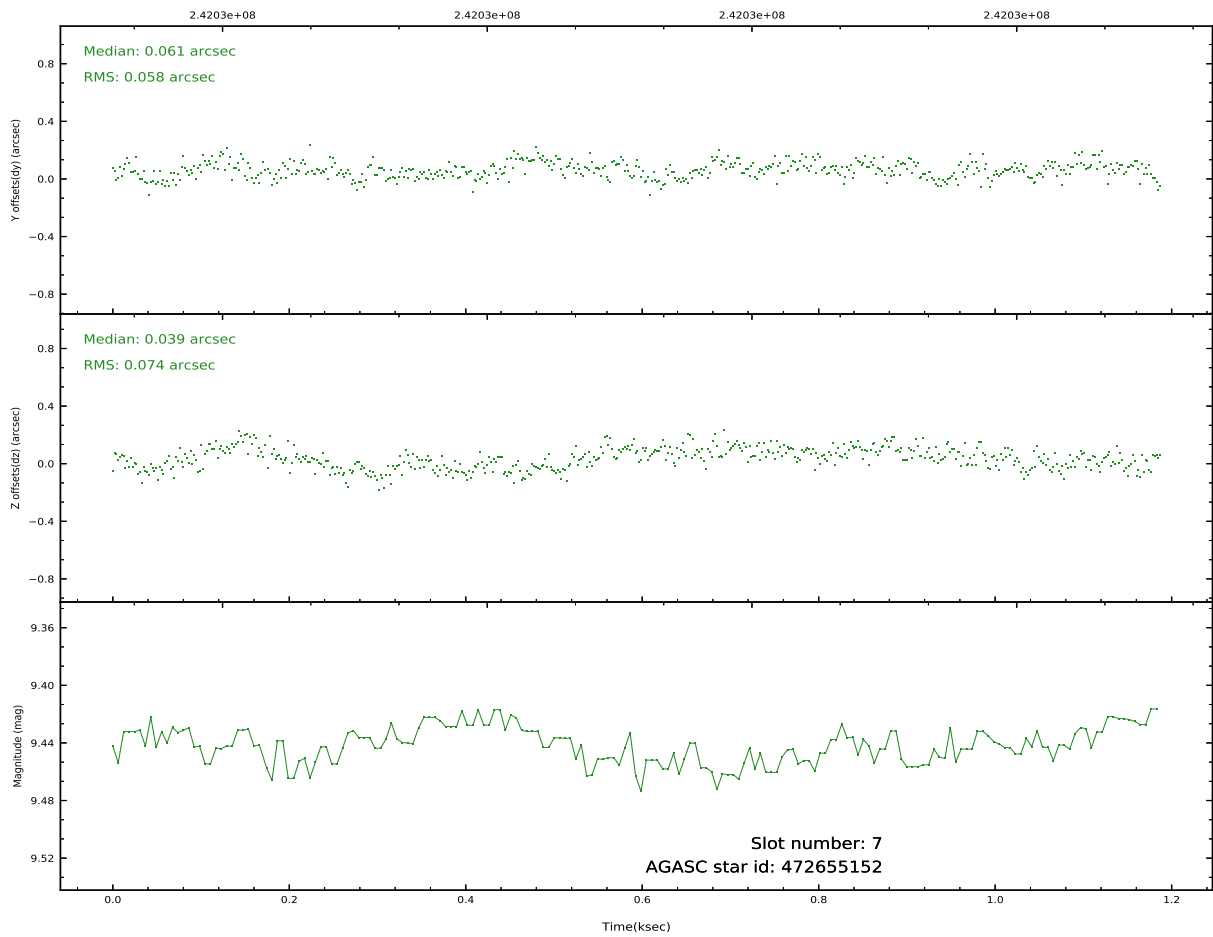
Time (s)



## 2.4.5 Slot 7

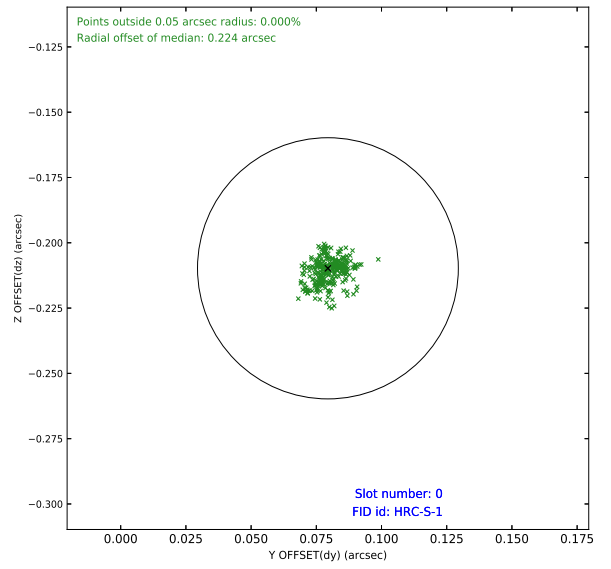
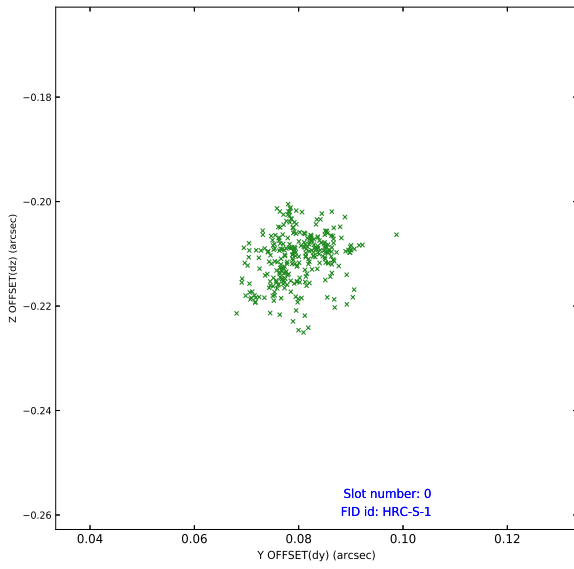


Time (s)

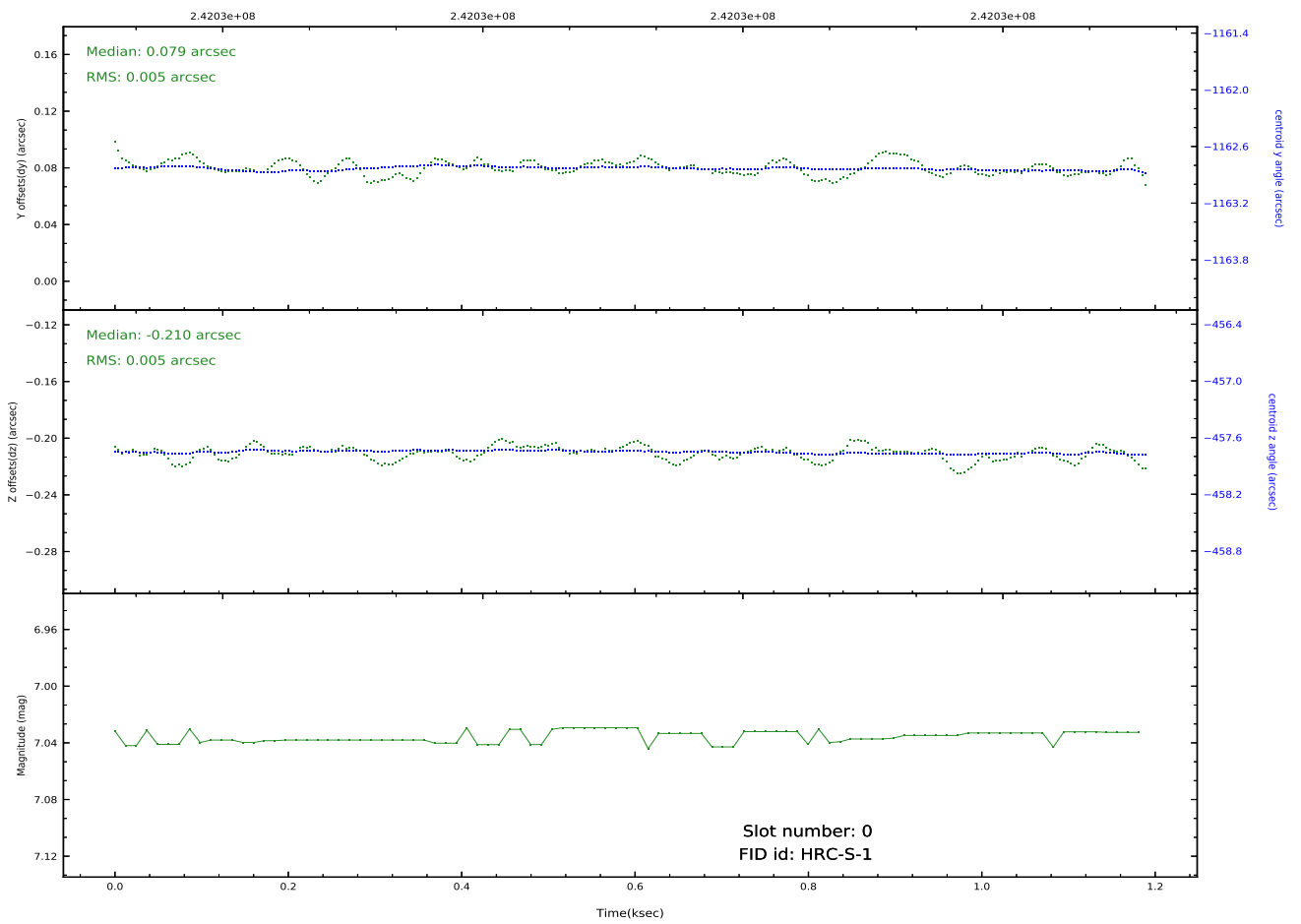


## 2.5 FID Slots

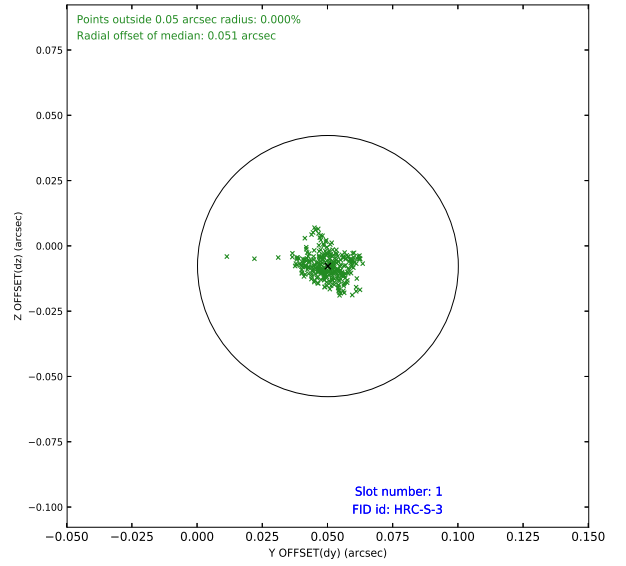
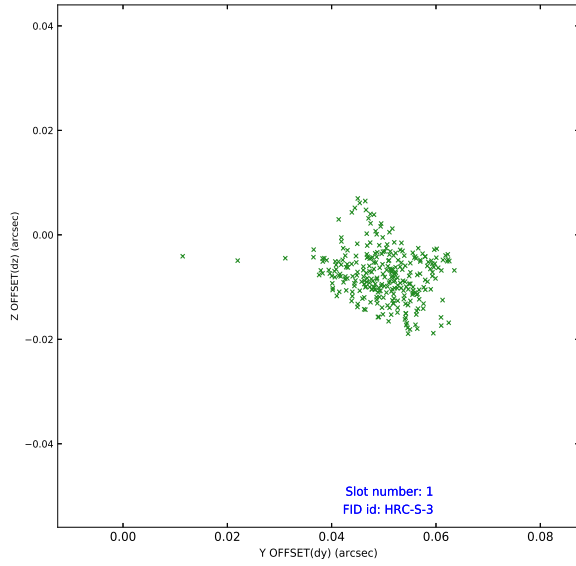
### 2.5.1 Slot 0



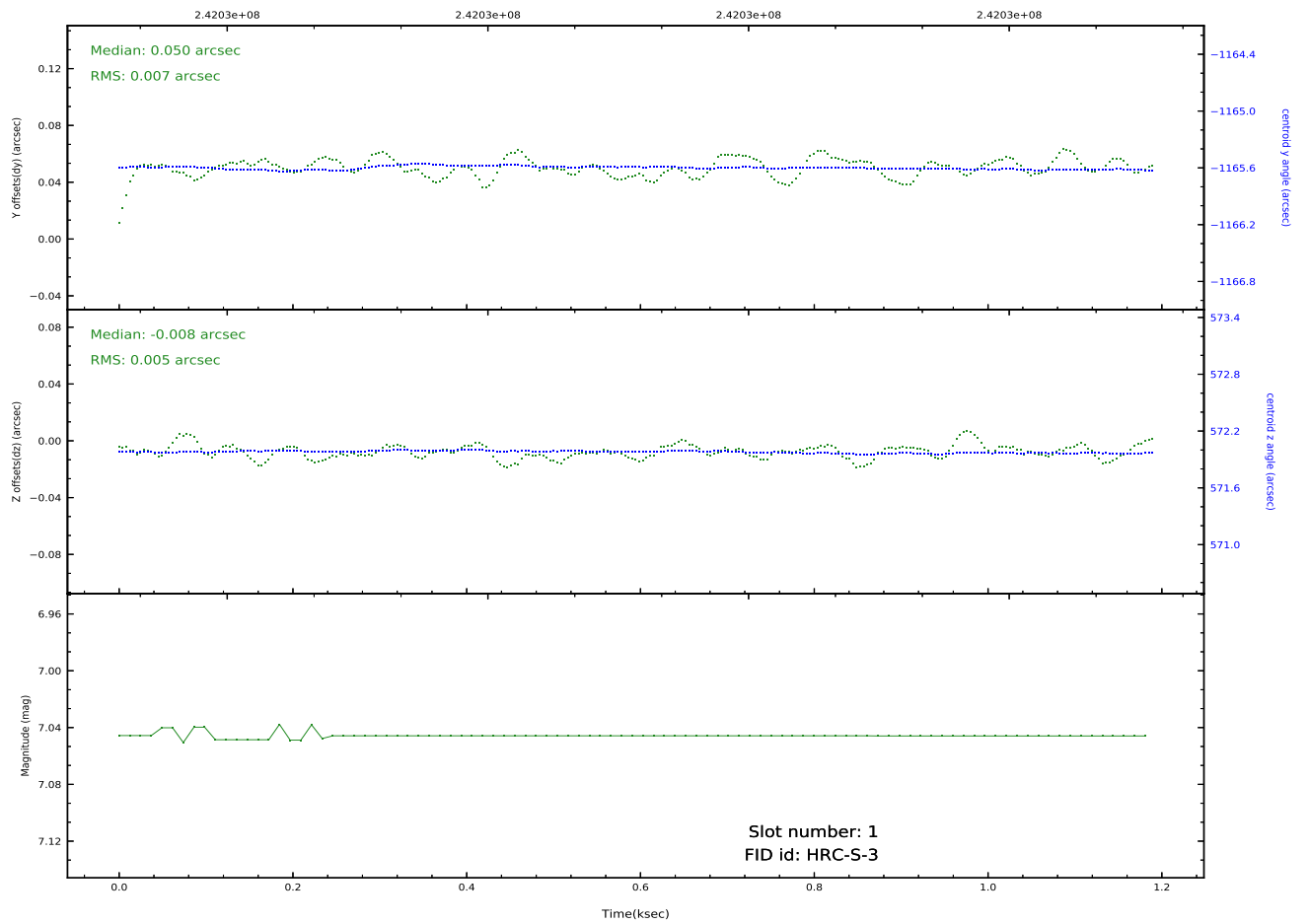
Time (s)



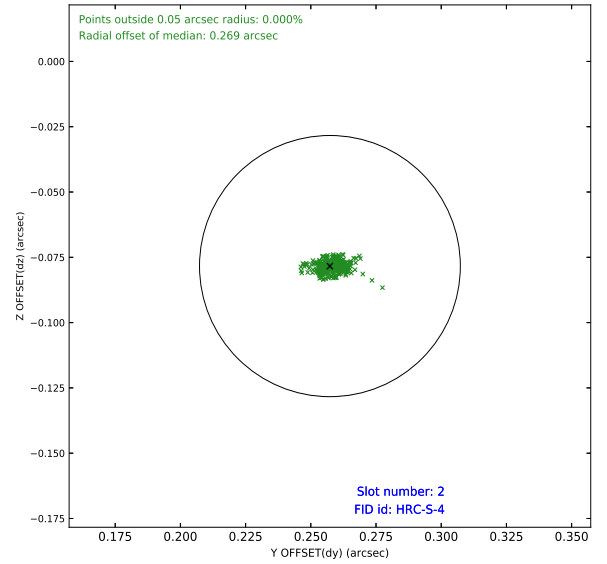
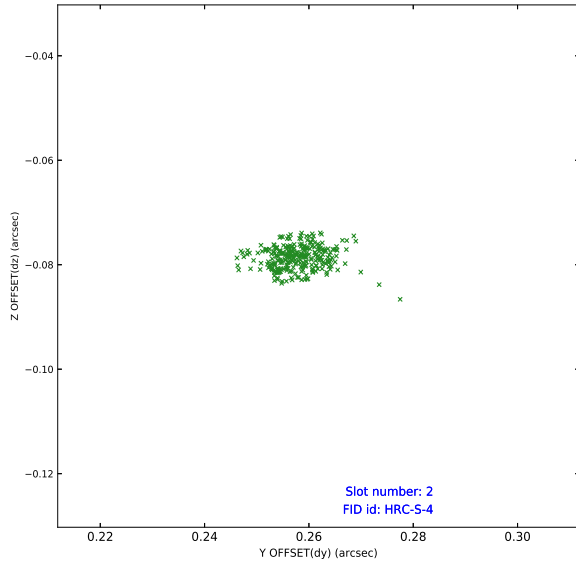
## 2.5.2 Slot 1



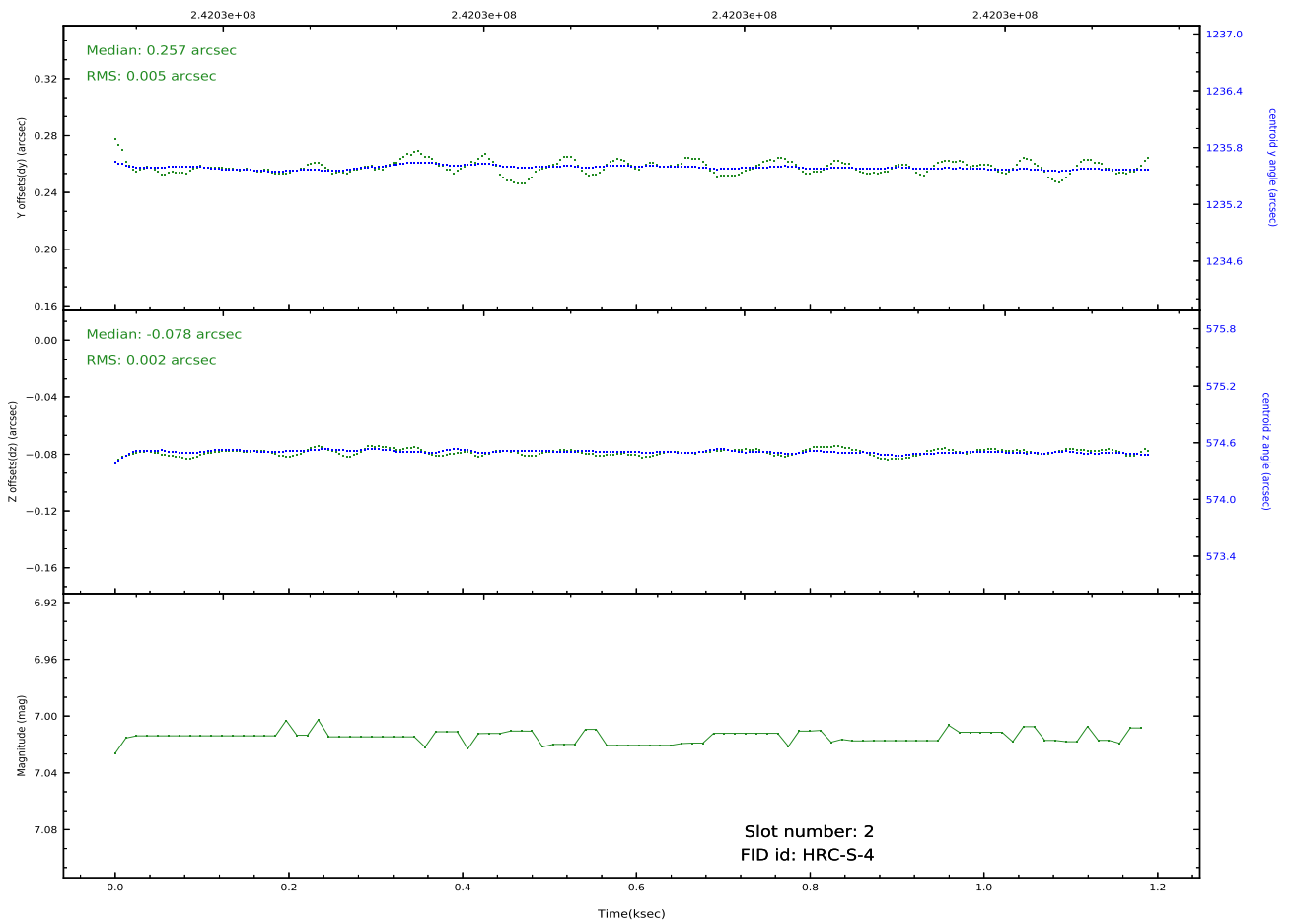
Time (s)



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.159531

## 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.