

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 6028 - L2 Version 4  
Chandra X-Ray Center

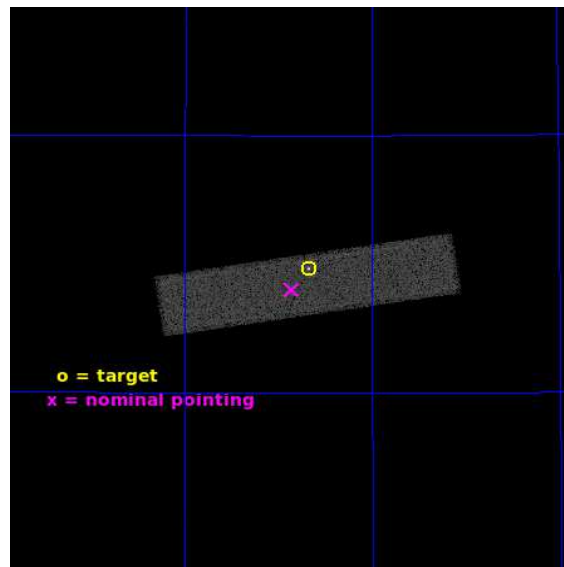
L2 Processing Date : Oct 6 2020

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# 1 Front

seq_num	290520	Sequence number
obs_id	6028	Observation id
title	AO6A 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	332.21382786368	Nominal RA [deg]
dec_nom	45.700445035754	Nominal Dec [deg]
roll_nom	351.21115206924	Nominal Roll [deg]
revision	4	Processing version of data
ontime	1161.5813025534	[s]
livetime	1154.6432356726	Ontime multiplied by DTCOR
l2events	47518	Number of level 2 events

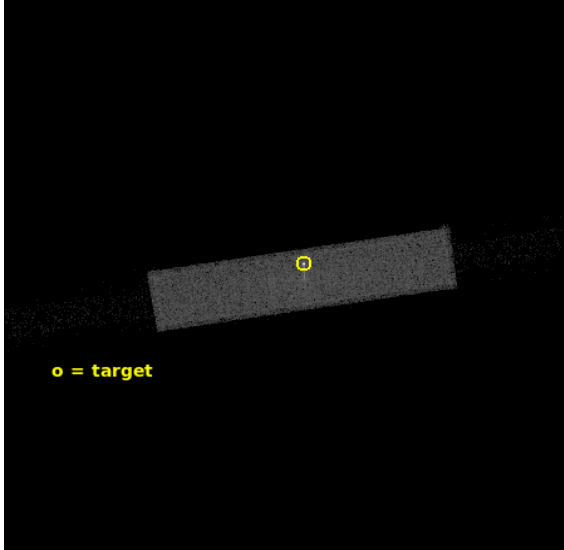


## 2 OBI

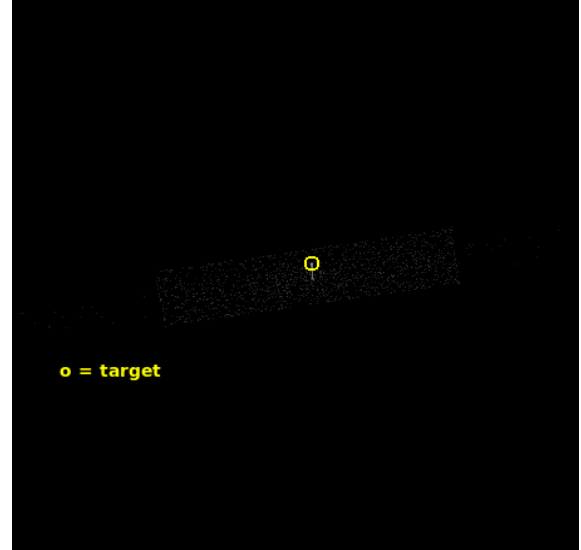
### 2.1 OBI

#### 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	1161.5813025534	[s]
caldsver	4.9.2	&#160	l1events	78099	Number of level 1 events
date	2020-10-06T16:06:40	Date and time of file creation			
revision	4	Processing version of data			

### 2.1.3 Events

Level 1 Events

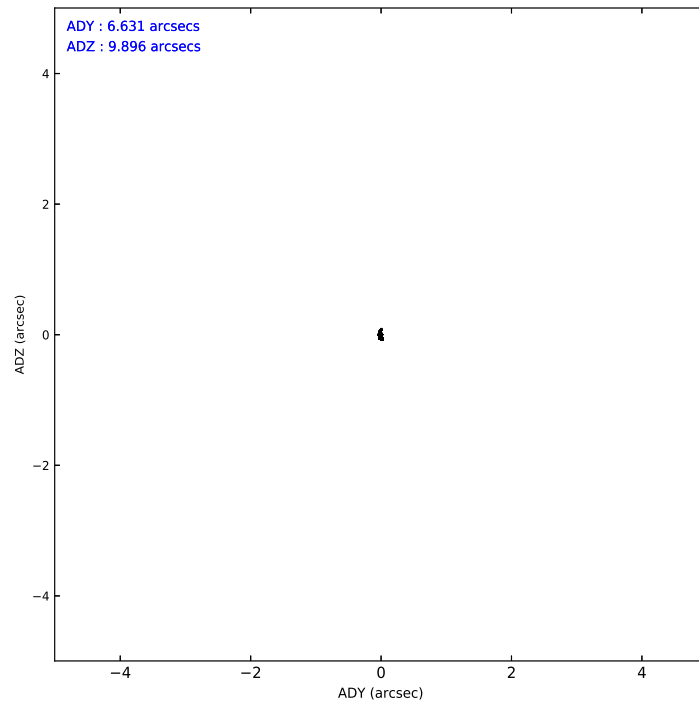
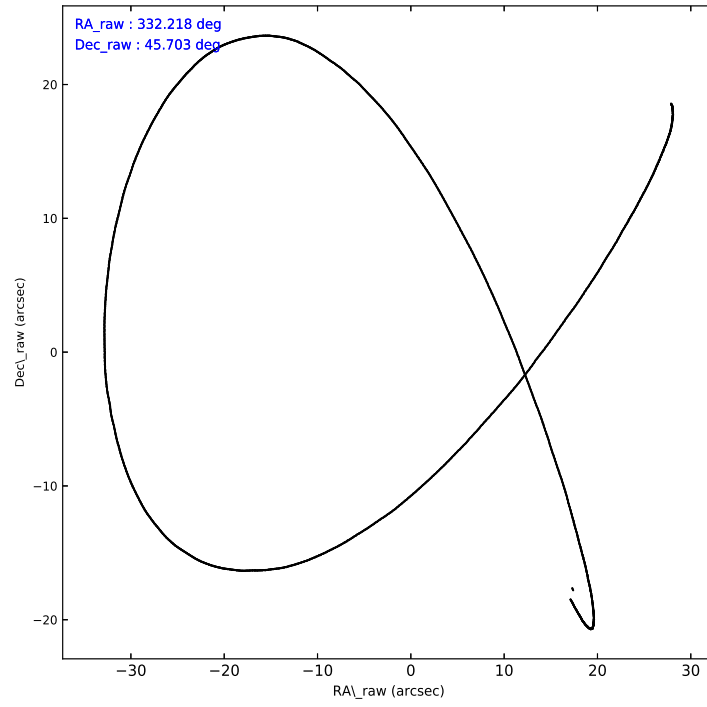
	<b>segment 1</b>	<b>segment 2</b>	<b>segment 3</b>
level 1 events	690	76681	728
rejected events	690	17022	725
rejected %	100%	22%	99%

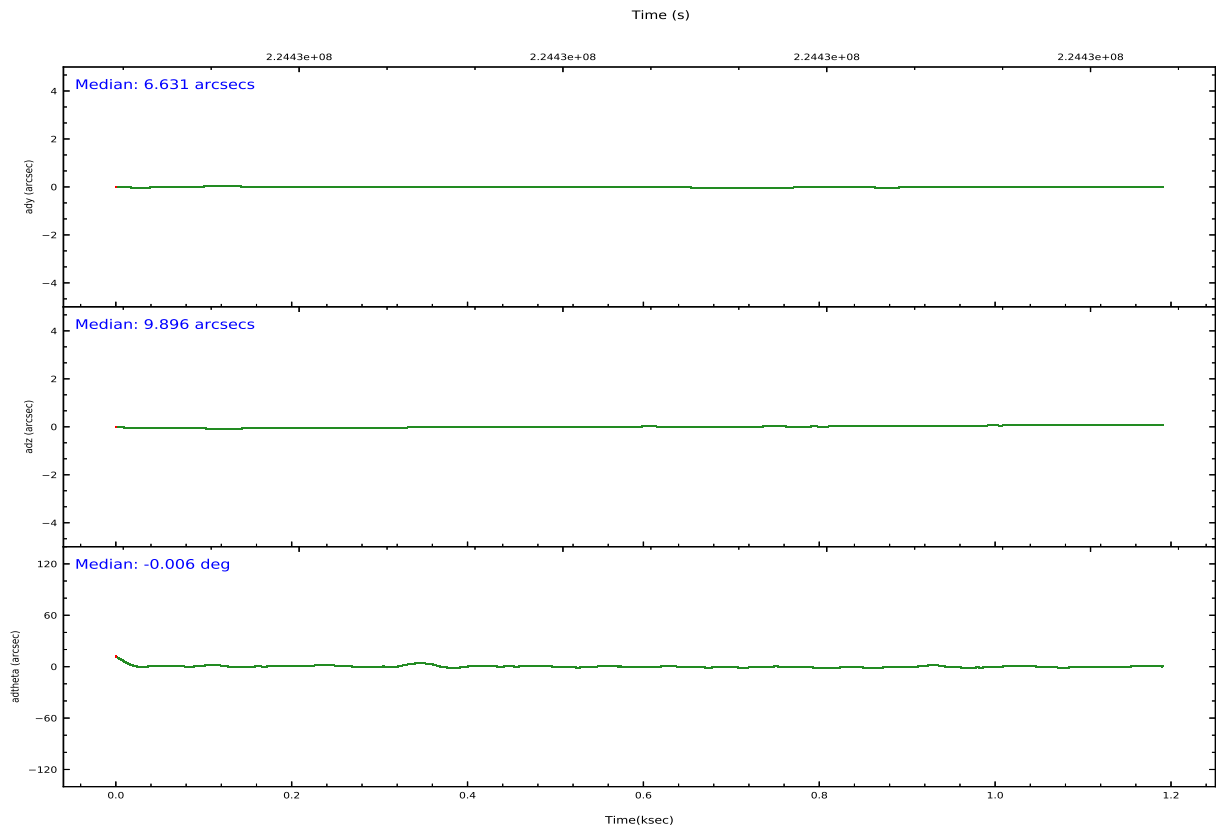
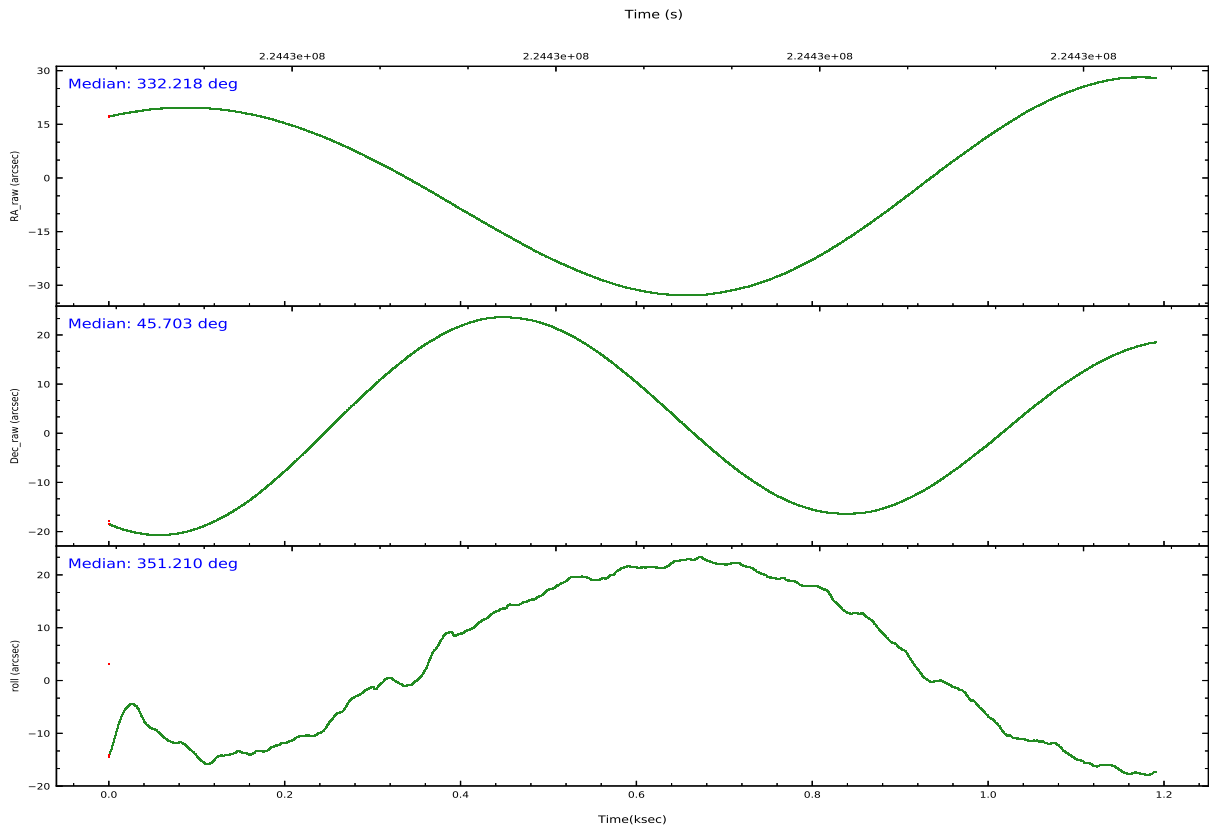
## 2.2 Compared Parameters

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	332.179047	332.21382786368
[deg] Pointing Dec	45.691731	45.700445035754
[deg] Pointing Roll	351.172610	351.21115206924
[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)	224432783.184000	224432406.63285
Observation start date	2005-02-10T14:25:19	2005-02-10T14:20:06
[s] Observation end time (MET)	224433783.184000	224433916.45792
Observation end date	2005-02-10T14:41:59	2005-02-10T14:45:16

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

## 2.3 Aspect





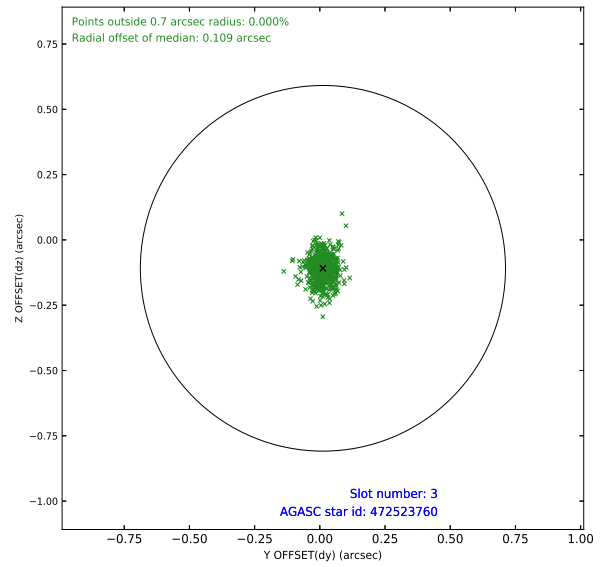
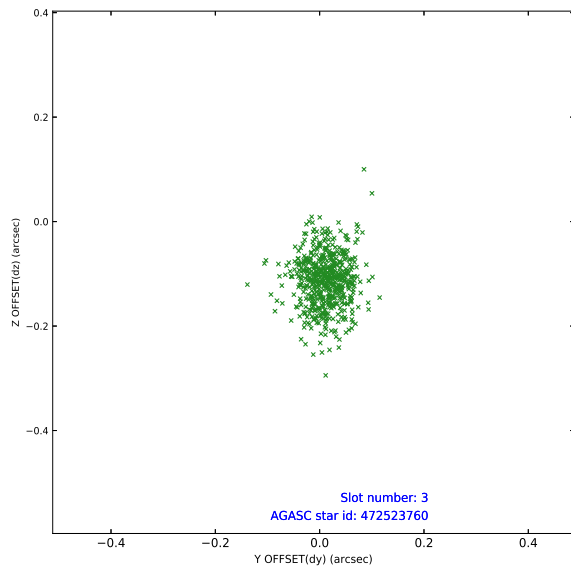
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		HRC-S-1	7.03	291	1.000	0.068	-0.225	0.007	0.012	0.000000	0.000000	-1160.80	-458
1	FID		HRC-S-3	7.04	289	1.000	0.105	0.001	0.008	0.013	0.000000	0.000000	-1167.55	569
2	FID		HRC-S-4	6.99	291	1.000	0.215	-0.073	0.004	0.009	0.000000	0.000000	1233.55	575
3	GUIDE	used	472523760	8.24	582	1.000	0.012	-0.109	0.061	0.108	331.645363	45.403260	-1175.87	-1227
4	GUIDE	used	472527720	6.98	582	1.000	-0.043	-0.125	0.059	0.090	331.460205	45.112509	-1489.37	-2333
5	GUIDE	used	472533912	9.17	582	1.000	0.110	0.115	0.122	0.179	331.791136	46.368695	-1331.02	2259
6	GUIDE	used	472535576	7.86	582	1.000	-0.028	0.044	0.055	0.090	331.438373	46.291802	-2157.77	1865
7	GUIDE	used	472665256	9.02	578	1.000	-0.055	0.082	0.090	0.144	332.808125	46.195041	1264.30	2042

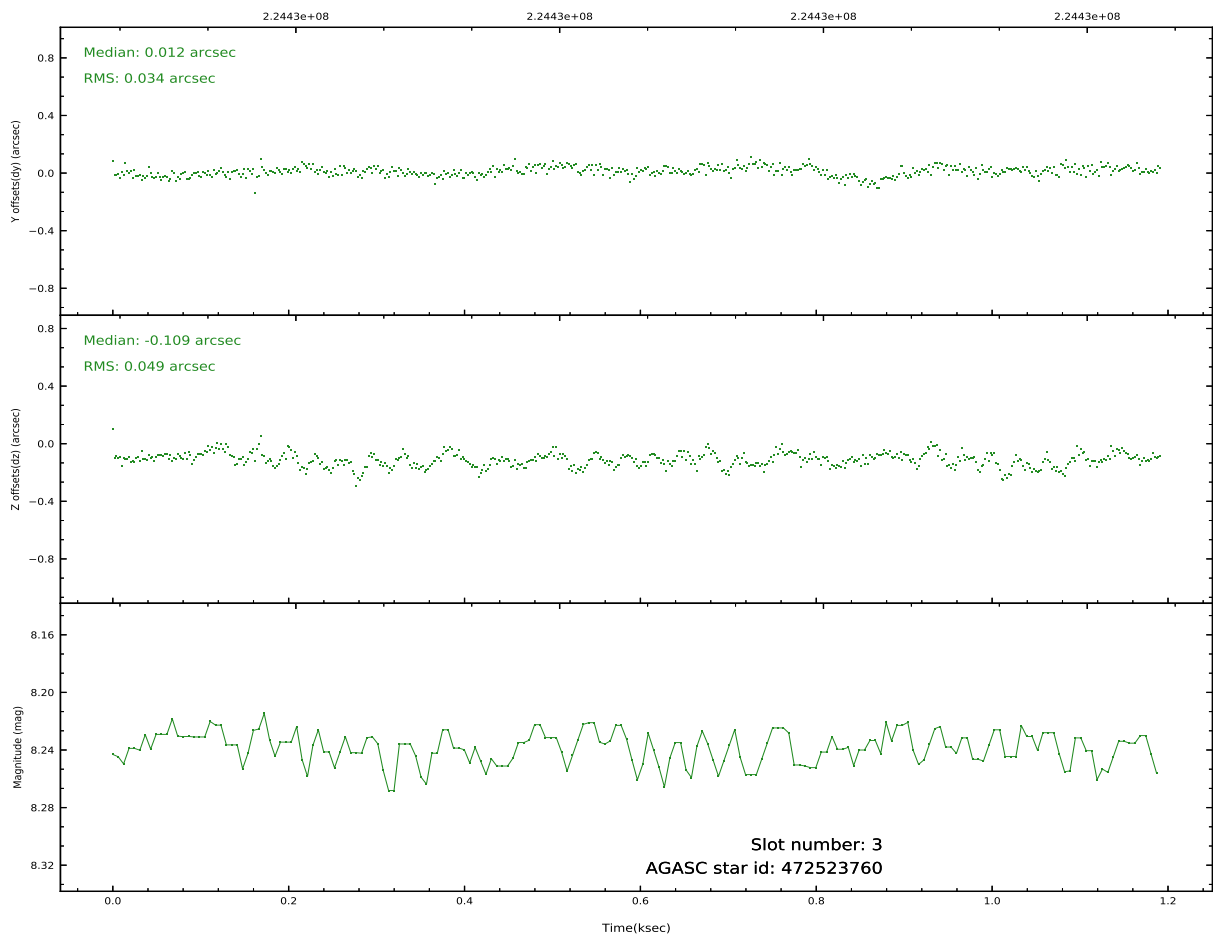
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## 2.4 Star Slots

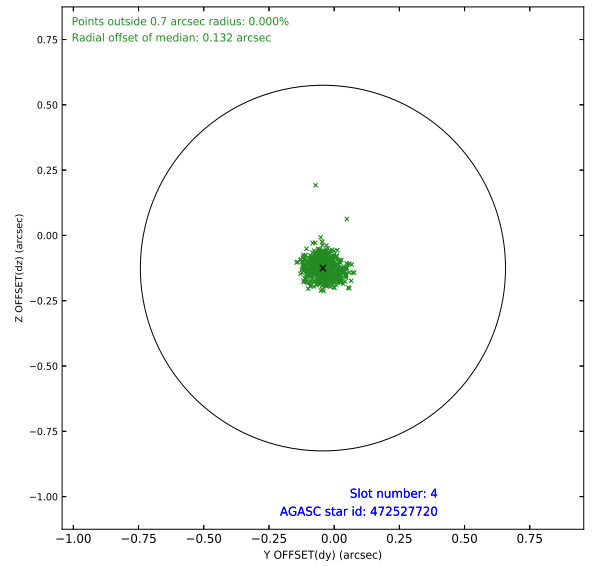
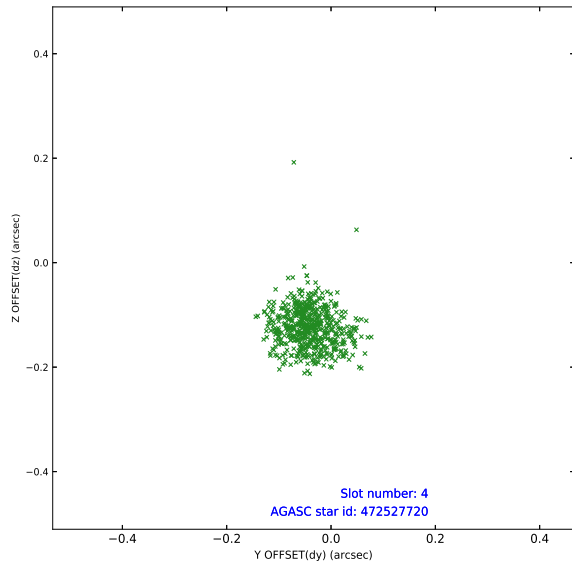
### 2.4.1 Slot 3



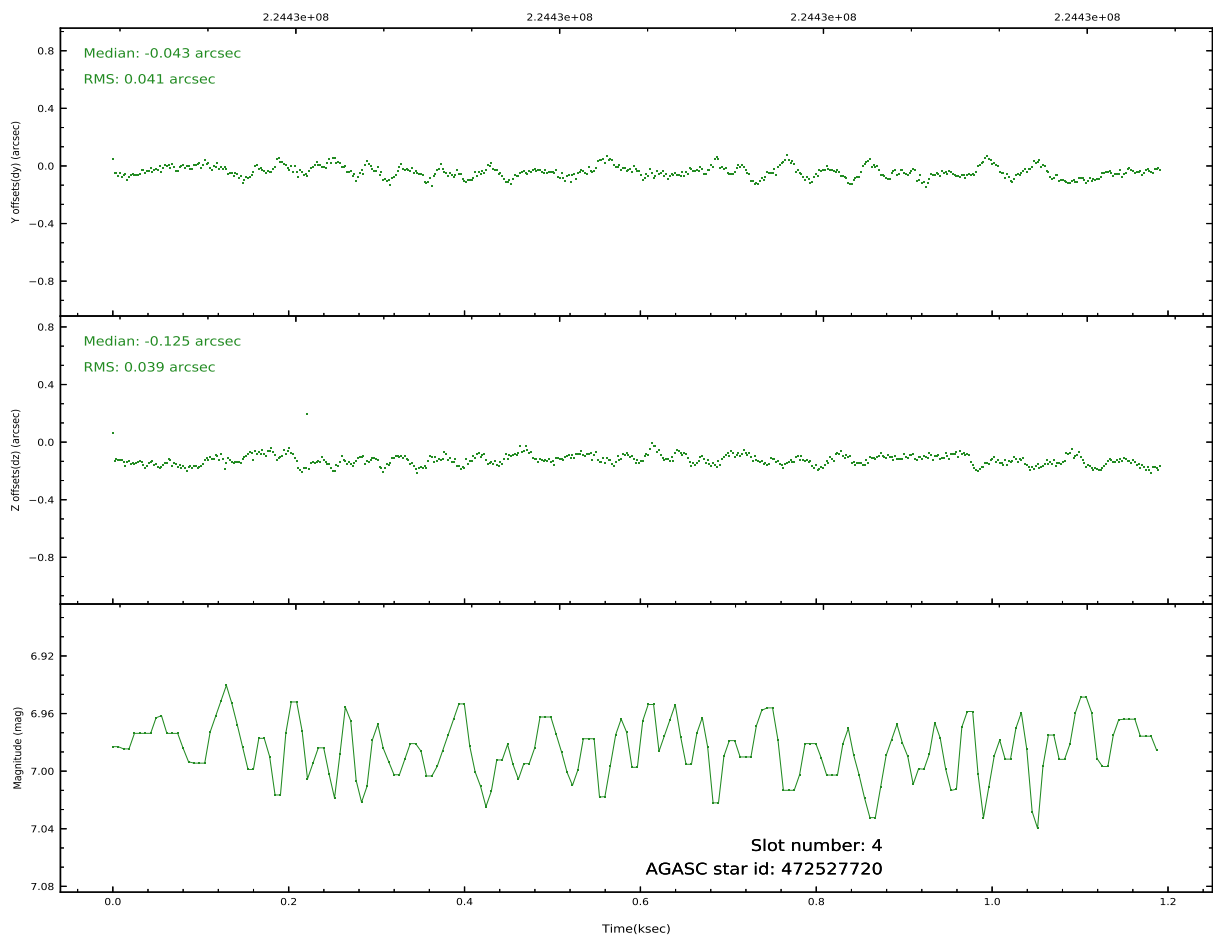
Time (s)



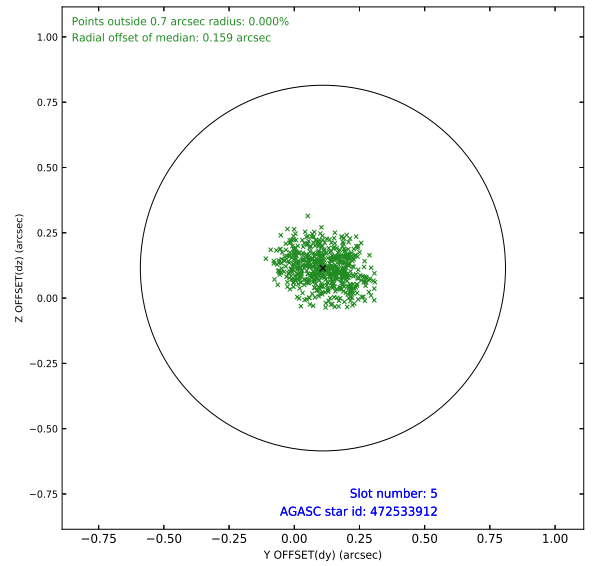
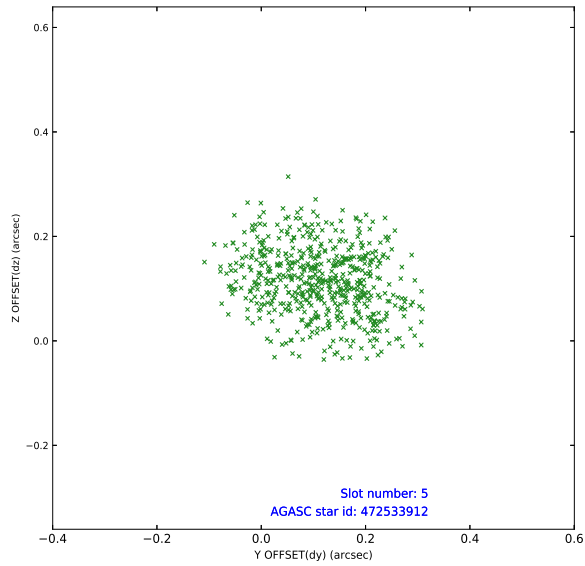
## 2.4.2 Slot 4



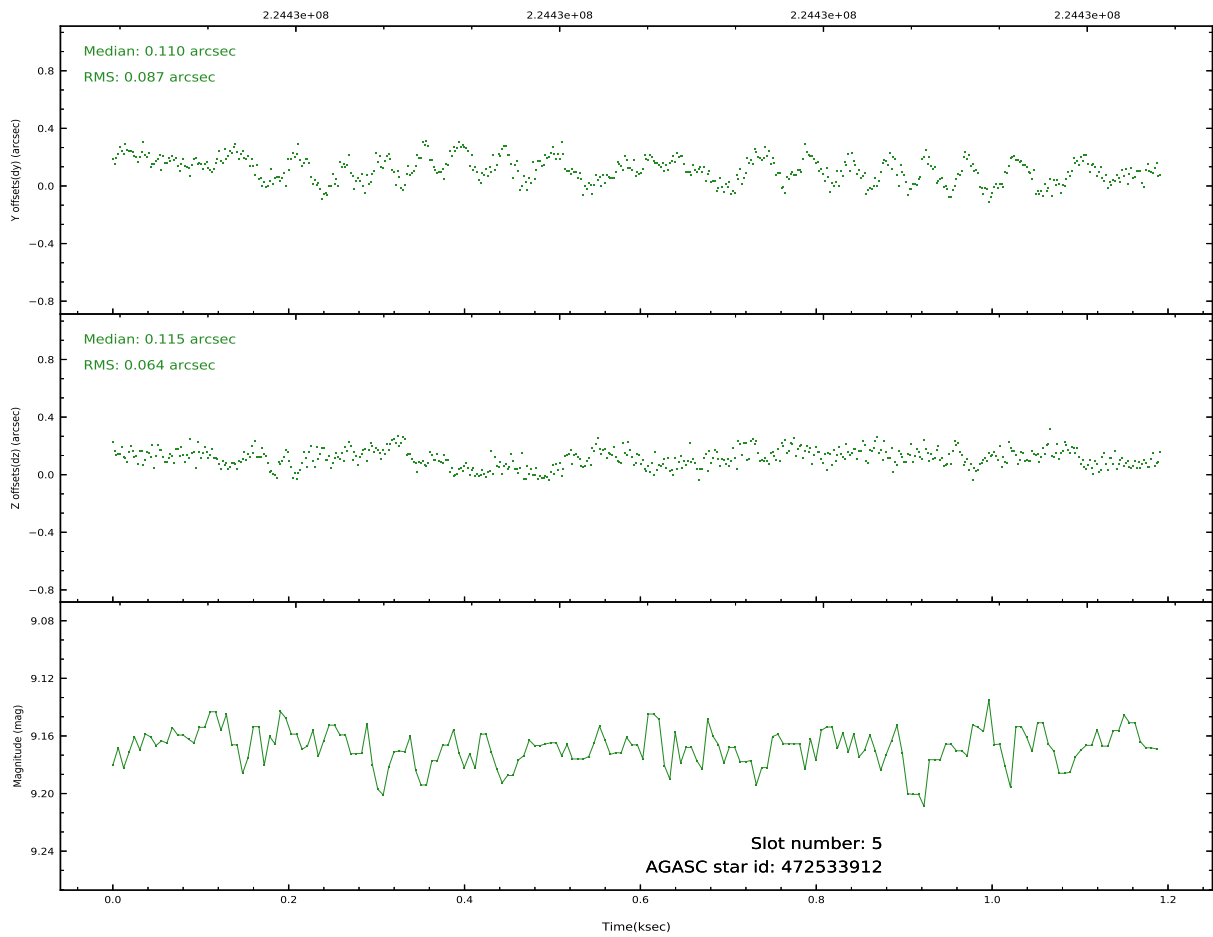
Time (s)



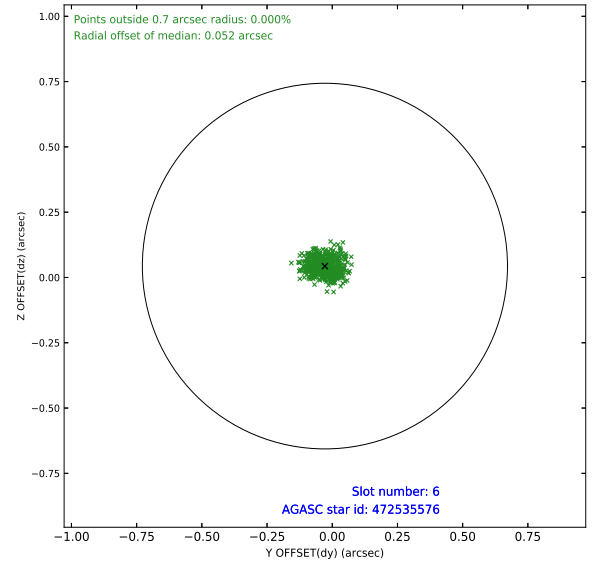
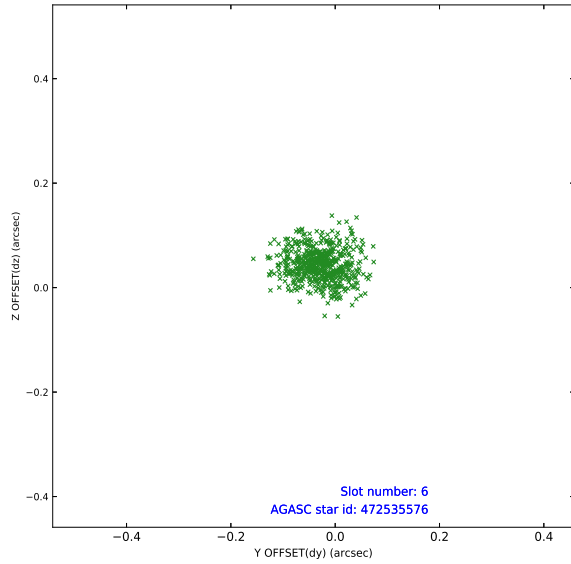
### 2.4.3 Slot 5



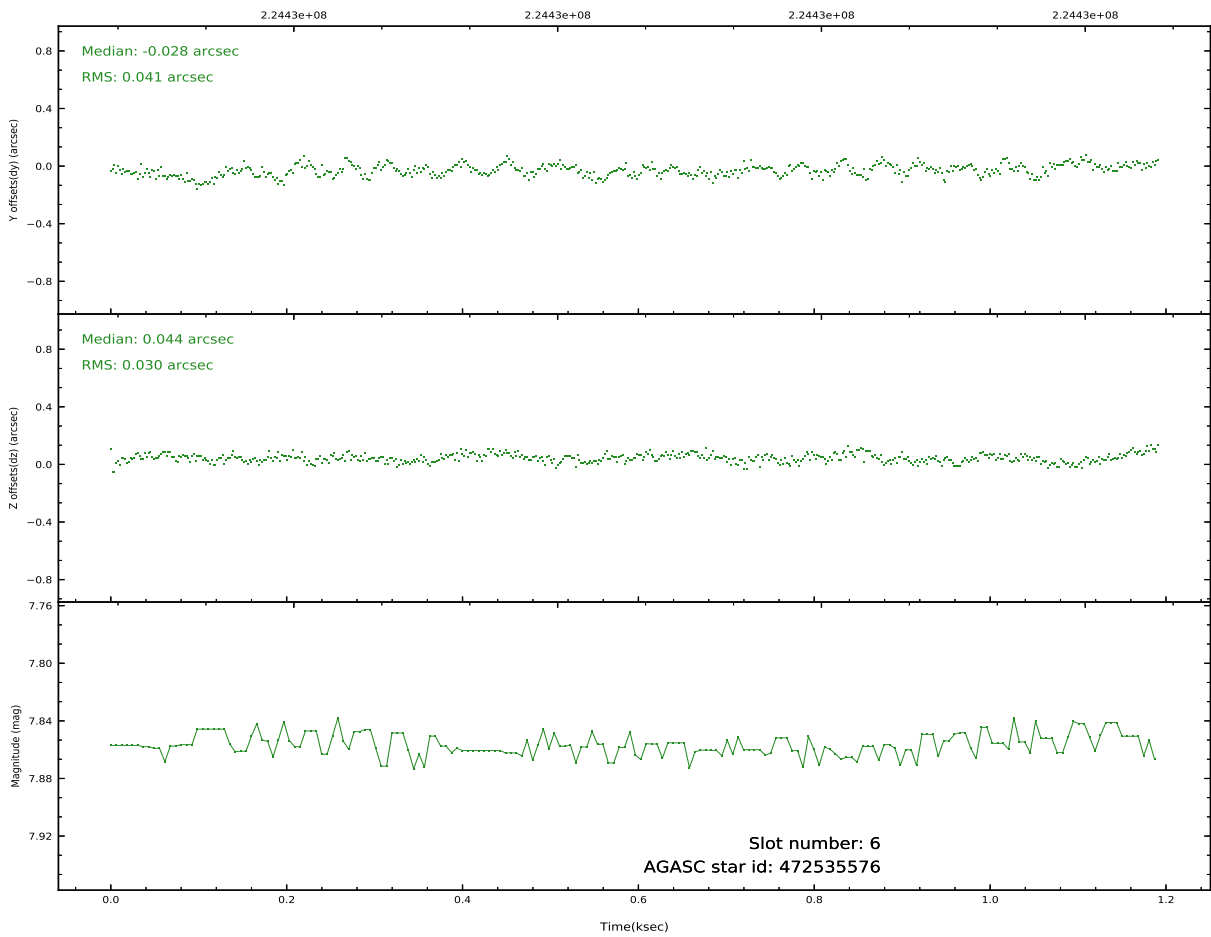
Time (s)



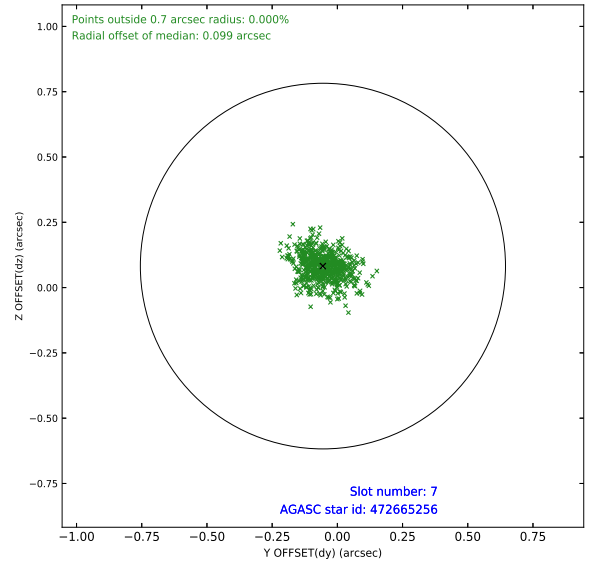
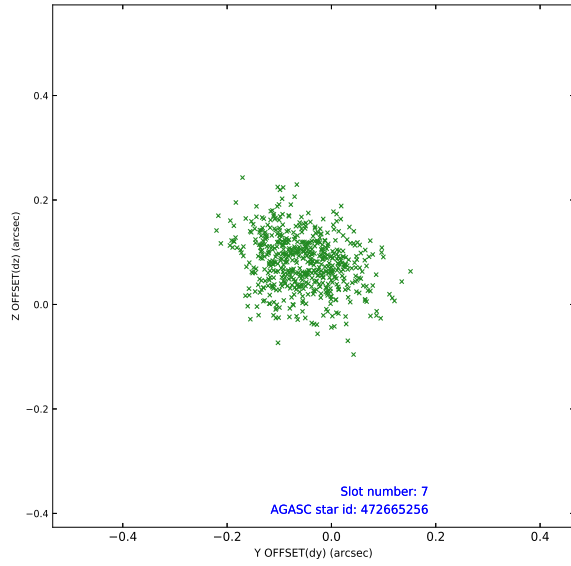
## 2.4.4 Slot 6



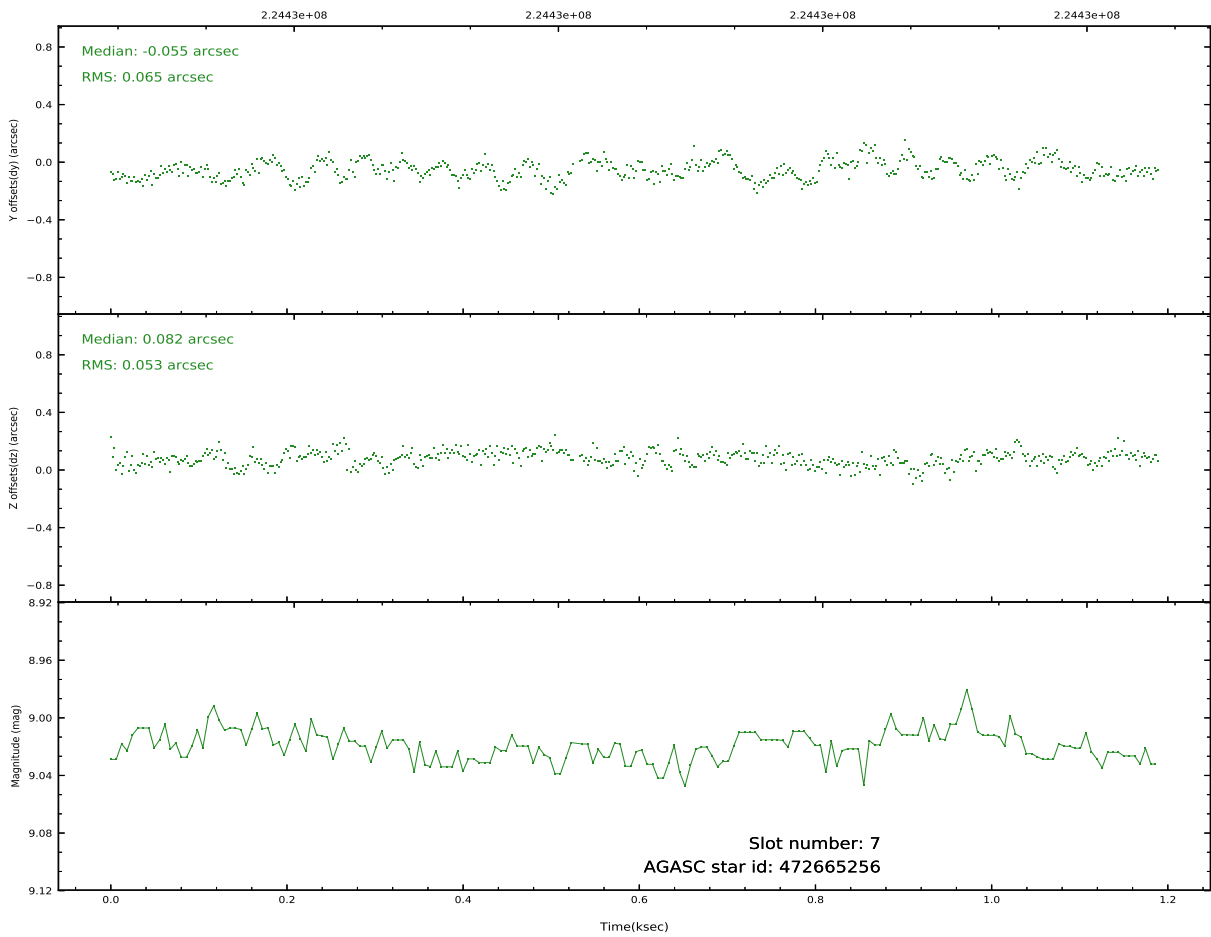
Time (s)



## 2.4.5 Slot 7

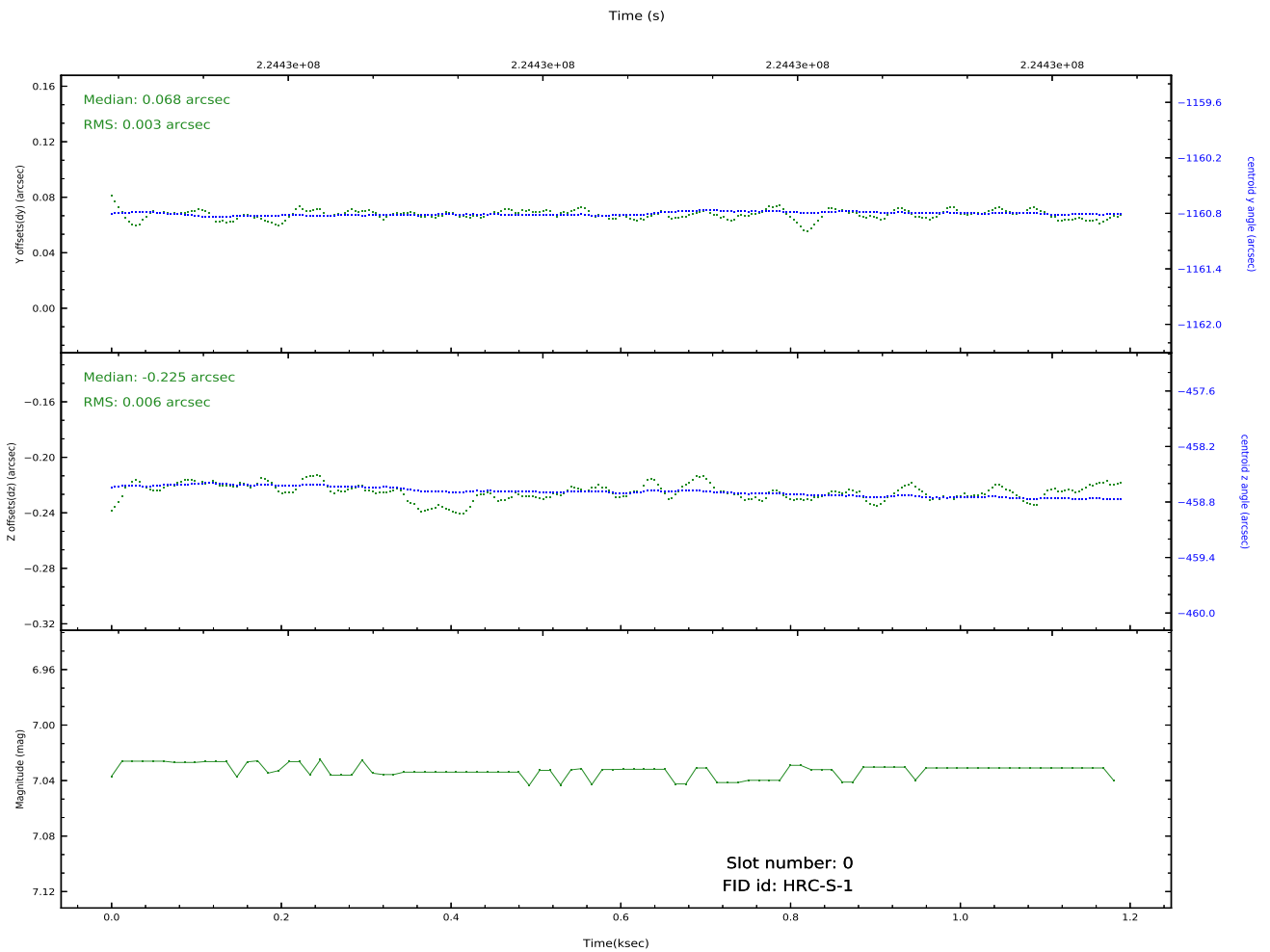
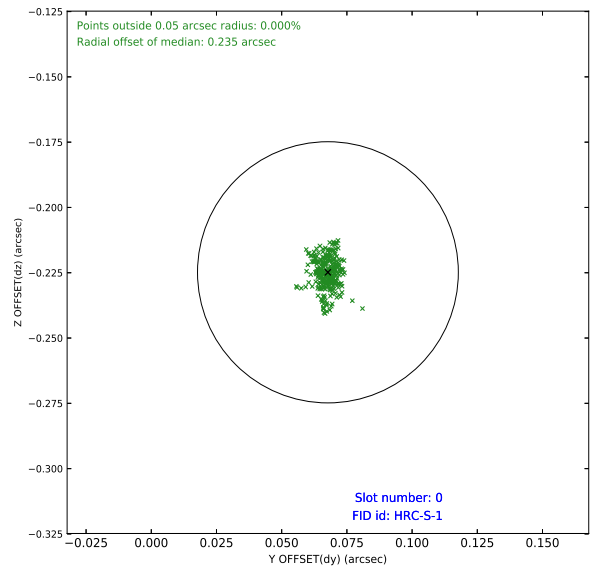
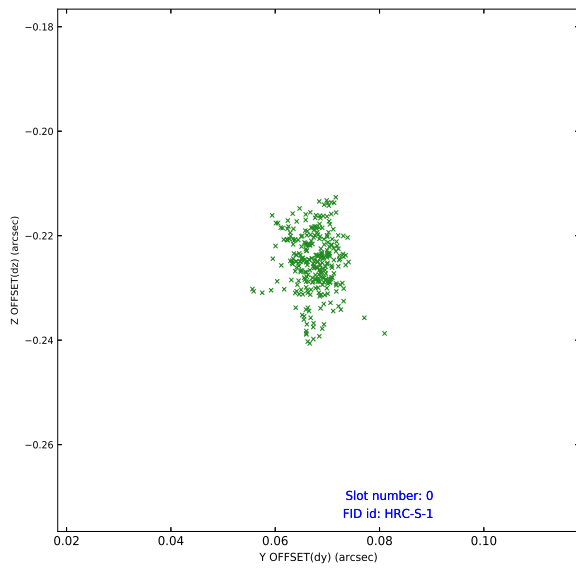


Time (s)

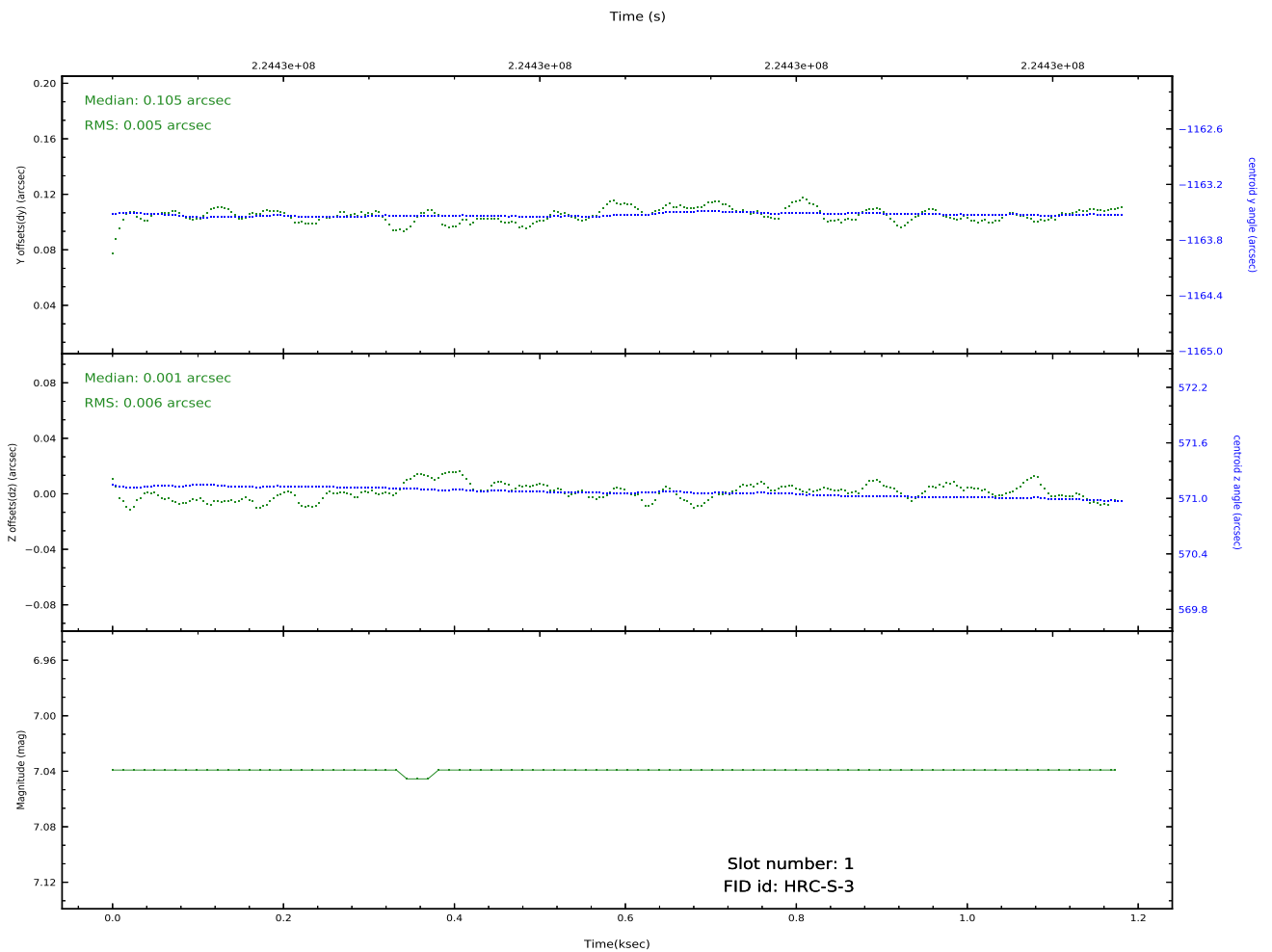
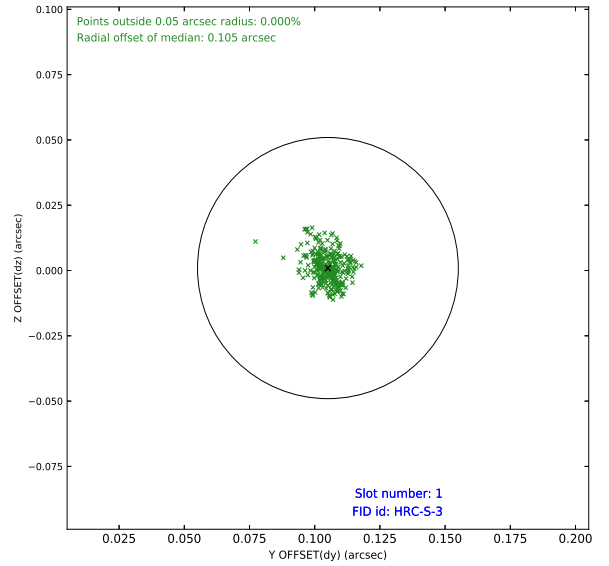
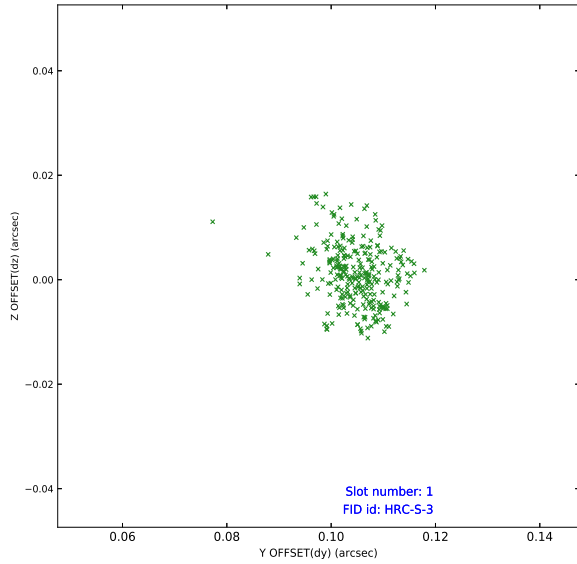


## 2.5 FID Slots

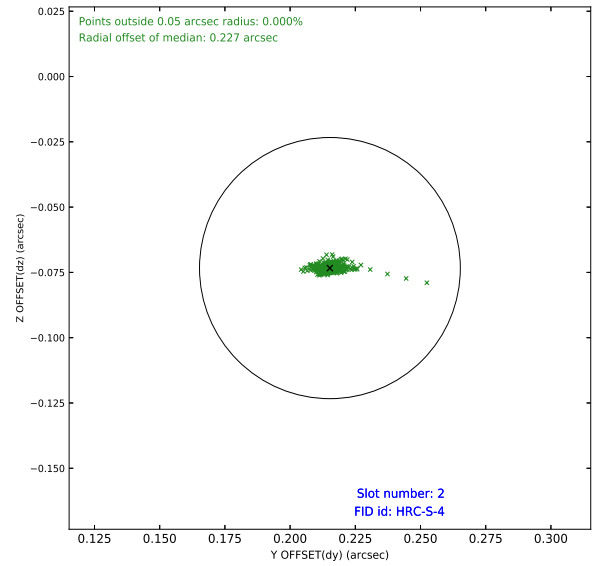
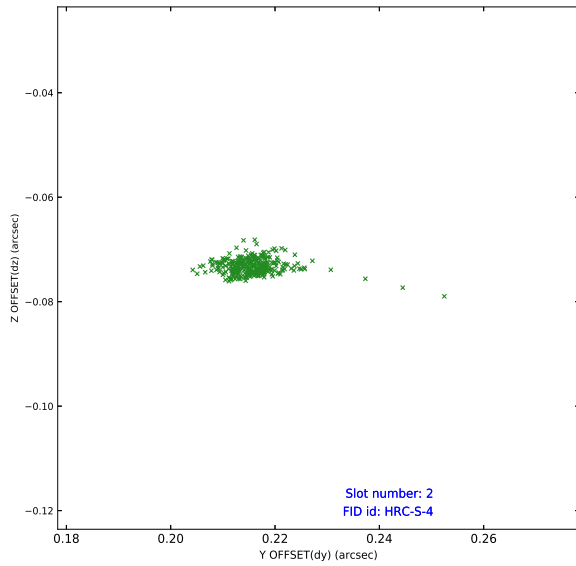
### 2.5.1 Slot 0



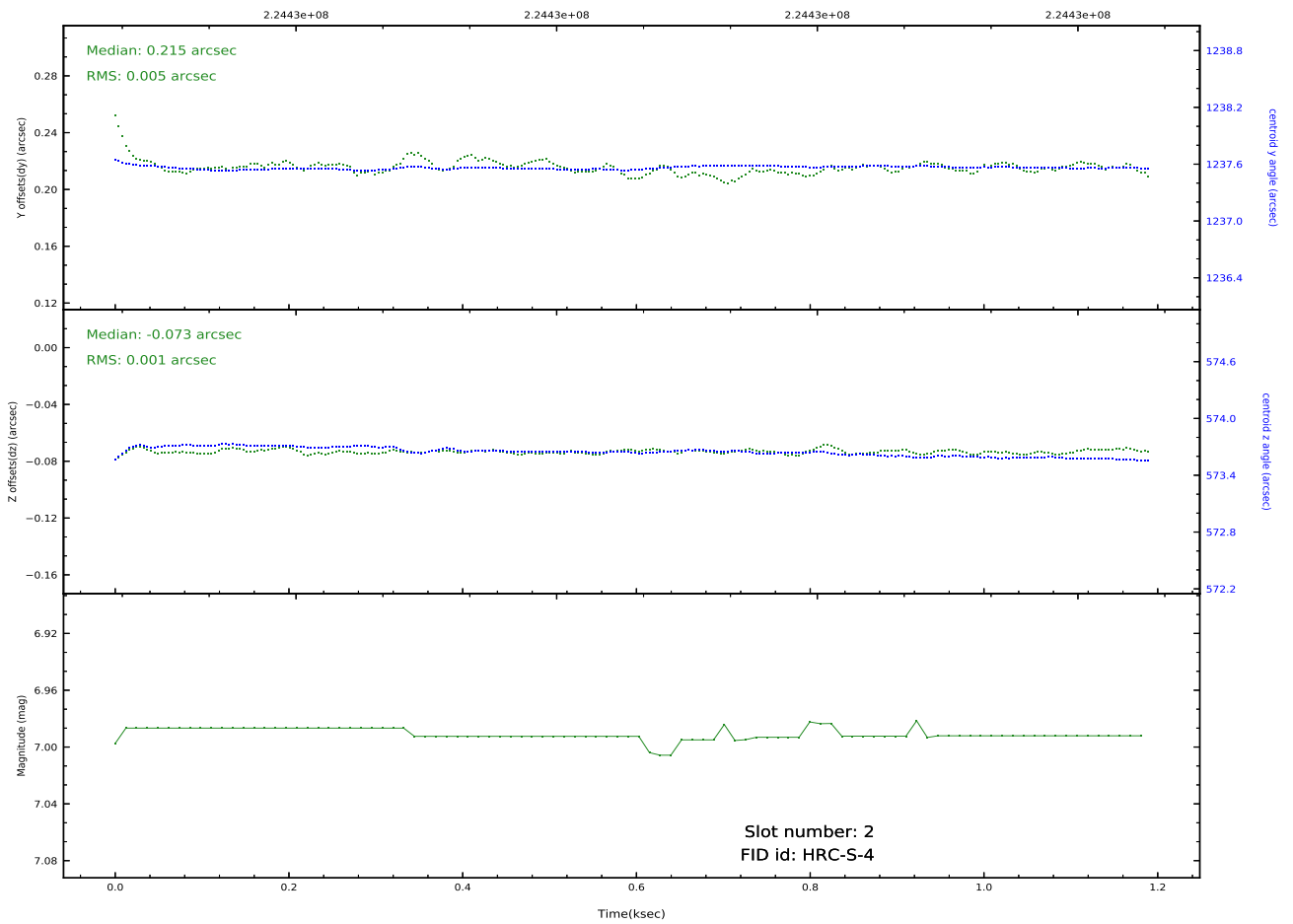
## 2.5.2 Slot 1



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2020.10.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.161581

## 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.