

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5085 - L2 Version 4  
Chandra X-Ray Center

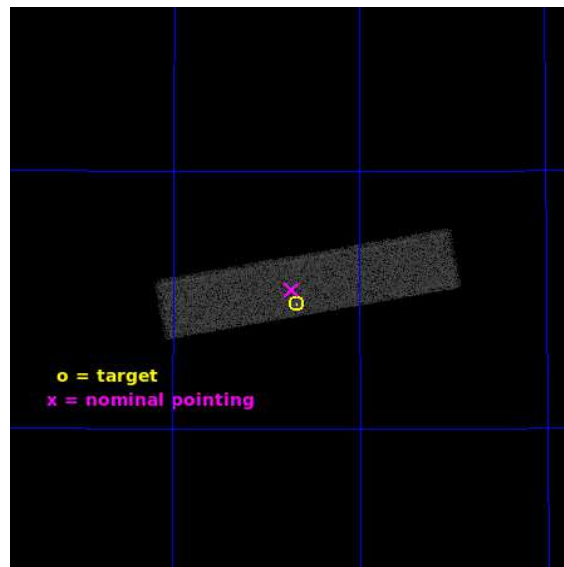
L2 Processing Date : Sep 23 2020

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# 1 Front

seq_num	290358	Sequence number
obs_id	5085	Observation id
title	AO5A 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	332.18136157145	Nominal RA [deg]
dec_nom	45.770314974002	Nominal Dec [deg]
roll_nom	349.4652440427	Nominal Roll [deg]
revision	4	Processing version of data
ontime	1087.7812975943	[s]
livetime	1082.1568661466	Ontime multiplied by DTCOR
l2events	38710	Number of level 2 events

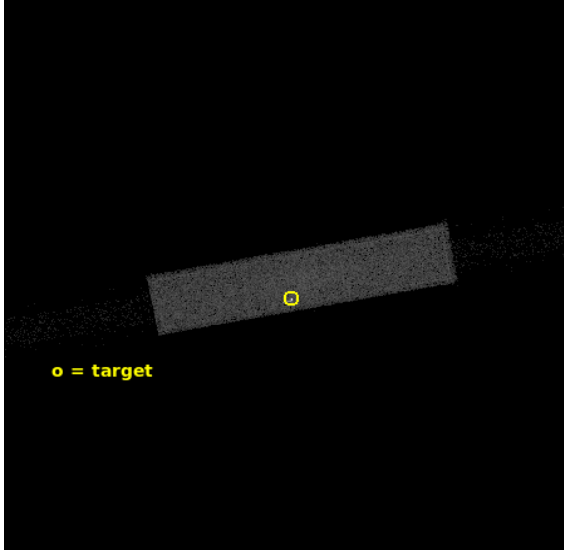


## 2 OBI

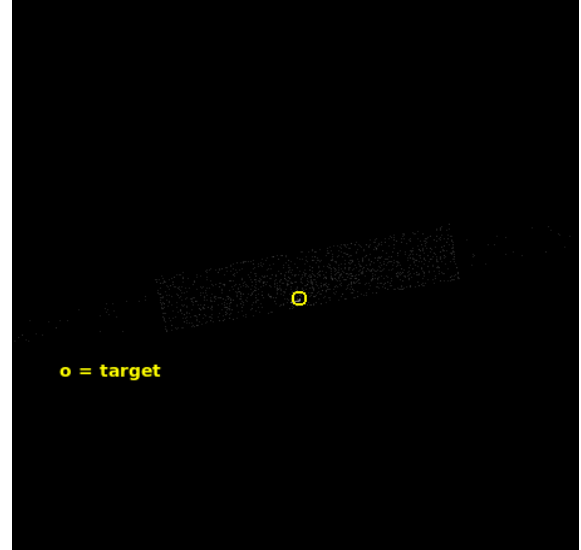
### 2.1 OBI

#### 2.1.1 Images

Level 1 Image



Level 1 Bad Events



### 2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	946.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	1087.7812975943	[s]
caldsver	4.9.2	&#160	l1events	66323	Number of level 1 events
date	2020-09-23T04:22:12	Date and time of file creation			
revision	4	Processing version of data			

### 2.1.3 Events

Level 1 Events

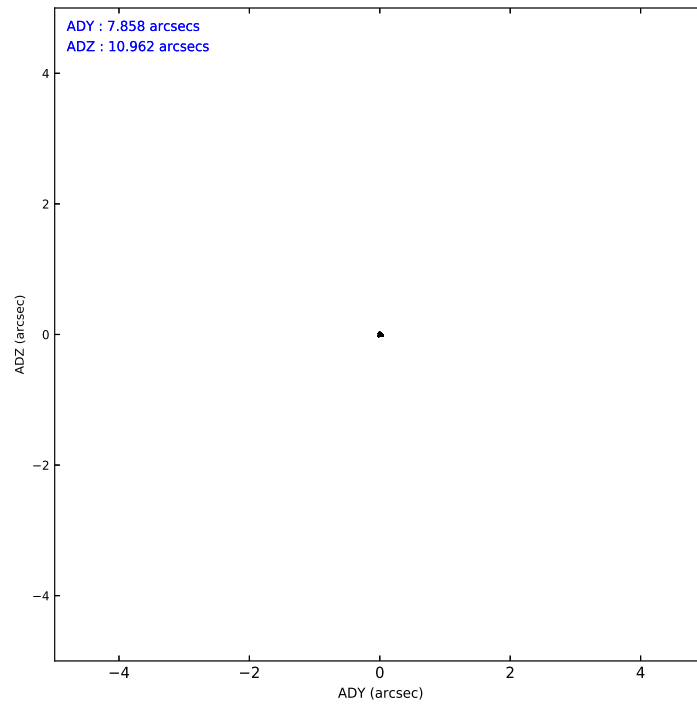
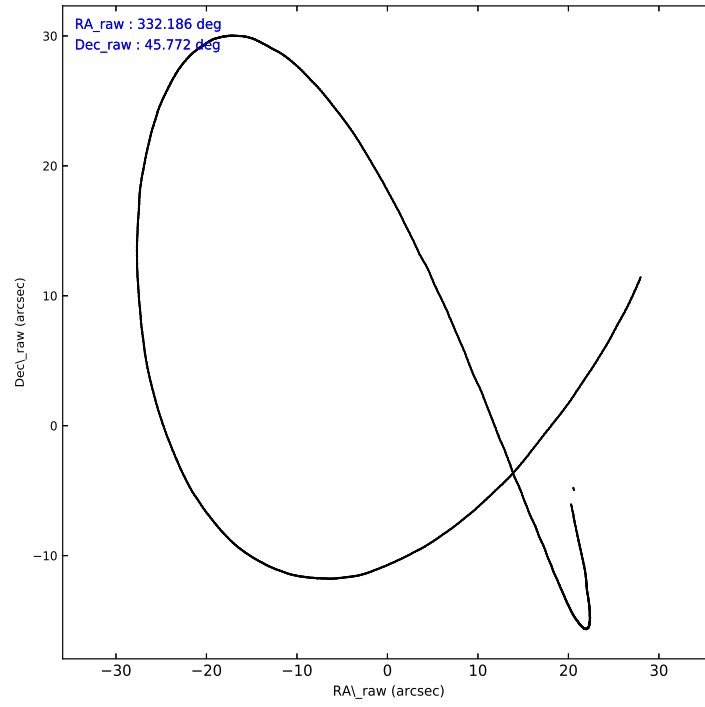
	<b>segment 1</b>	<b>segment 2</b>	<b>segment 3</b>
level 1 events	1091	64110	1122
rejected events	1091	15283	1122
rejected %	100%	23%	100%

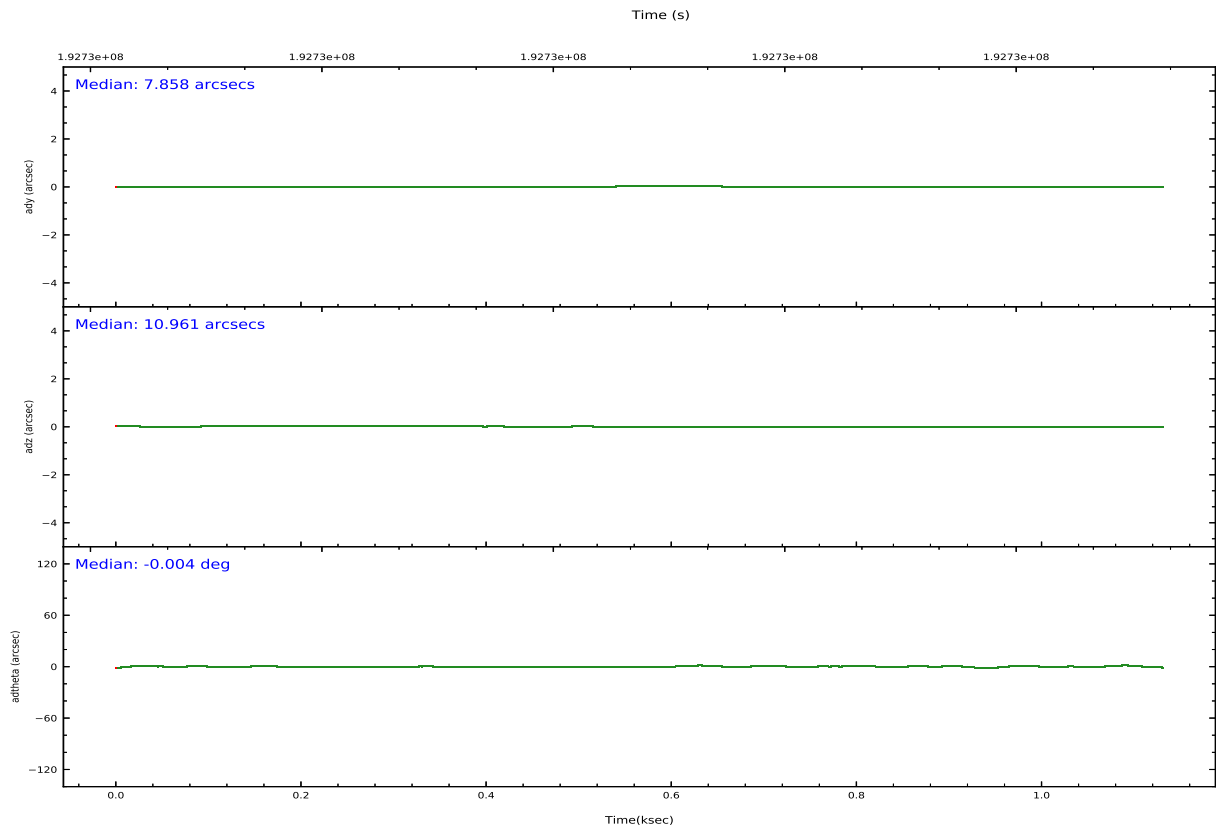
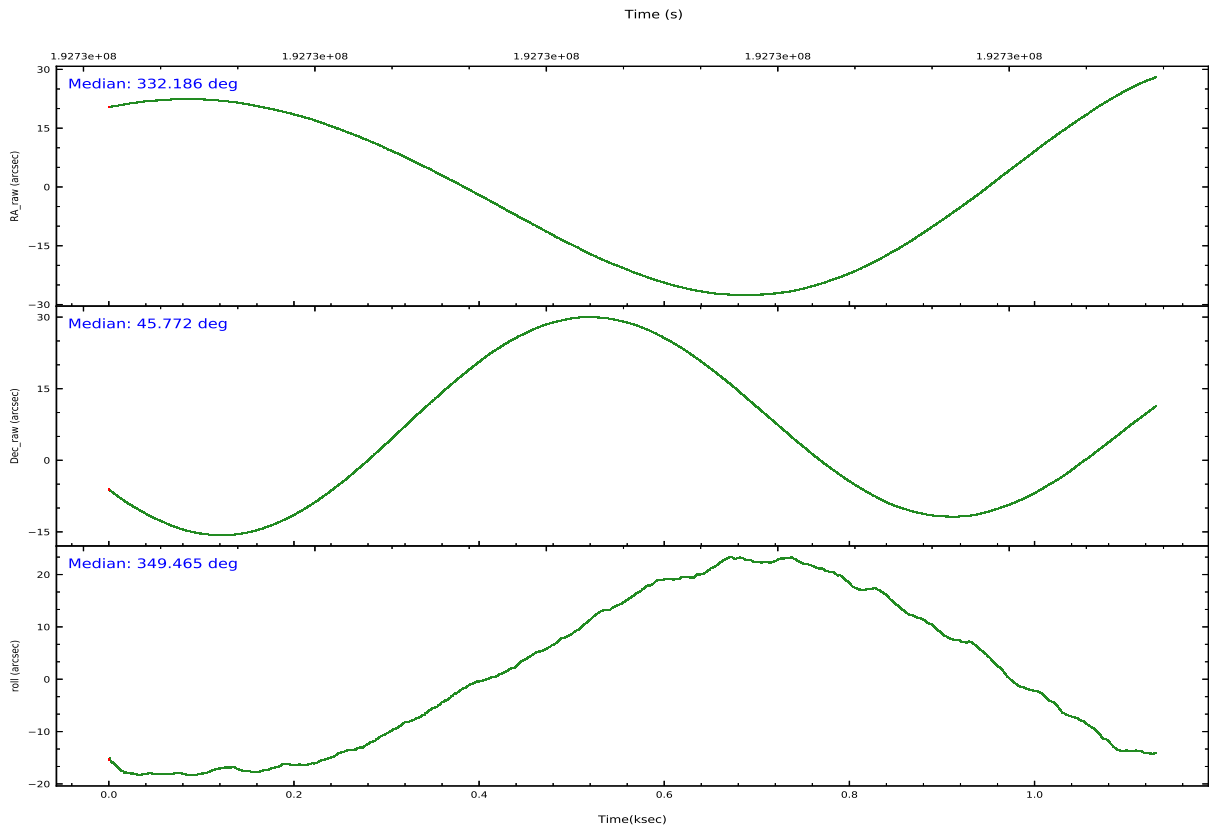
## 2.2 Compared Parameters

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	332.147408	332.18136157145
[deg] Pointing Dec	45.763215	45.770314974002
[deg] Pointing Roll	349.430275	349.4652440427
[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)	192725713.184000	192725337.09726
Observation start date	2004-02-09T14:54:09	2004-02-09T14:48:57
[s] Observation end time (MET)	192726659.184000	192726792.59732
Observation end date	2004-02-09T15:09:55	2004-02-09T15:13:12

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

## 2.3 Aspect





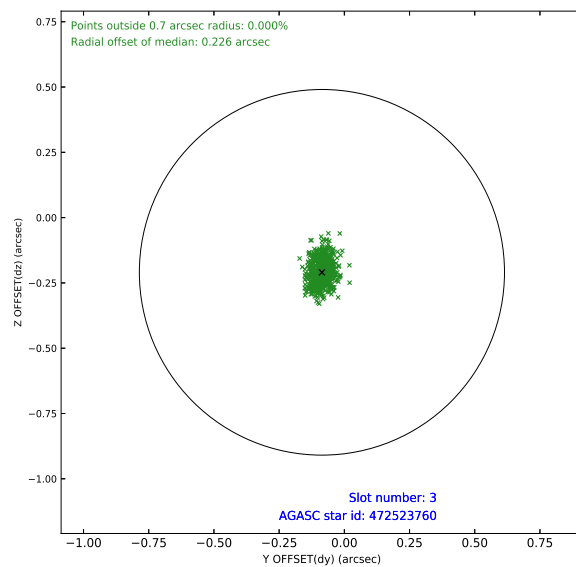
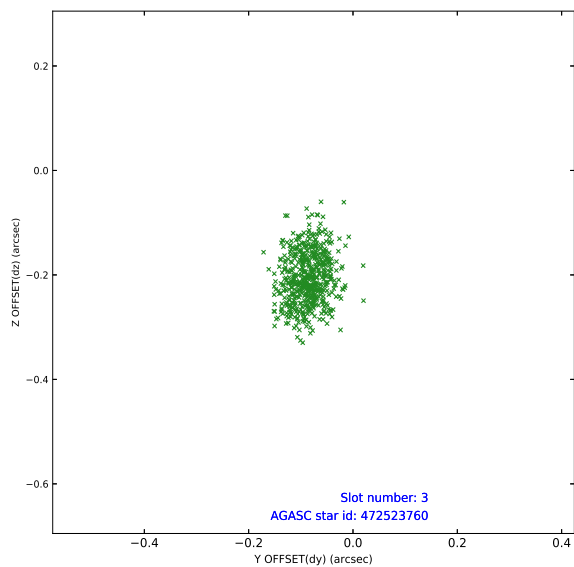
### Slot Statistics

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	7.04	277	1.000	0.120	-0.180	0.007	0.012	0.000000	0.000000	-1162.03	-459
1	FID		HRC-S-2	7.03	277	1.000	0.165	-0.111	0.005	0.009	0.000000	0.000000	1233.50	-453
2	FID		HRC-S-3	7.04	277	1.000	0.104	-0.010	0.007	0.013	0.000000	0.000000	-1160.32	568
3	GUIDE	used	472523760	8.24	553	1.000	-0.086	-0.209	0.063	0.097	331.645363	45.403260	-1010.86	-1499
4	GUIDE	used	472533912	9.17	553	1.000	-0.038	0.088	0.091	0.155	331.791136	46.368695	-1272.87	1983
5	GUIDE	used	472655152	9.42	553	1.000	0.161	0.007	0.095	0.168	332.504239	45.862991	810.46	526
6	GUIDE	used	472659832	9.45	553	1.000	-0.003	0.107	0.093	0.158	332.780399	46.098139	1331.83	1486
7	GUIDE	used	472654568	9.43	552	1.000	-0.036	0.010	0.100	0.158	332.194449	45.063576	581.93	-2447

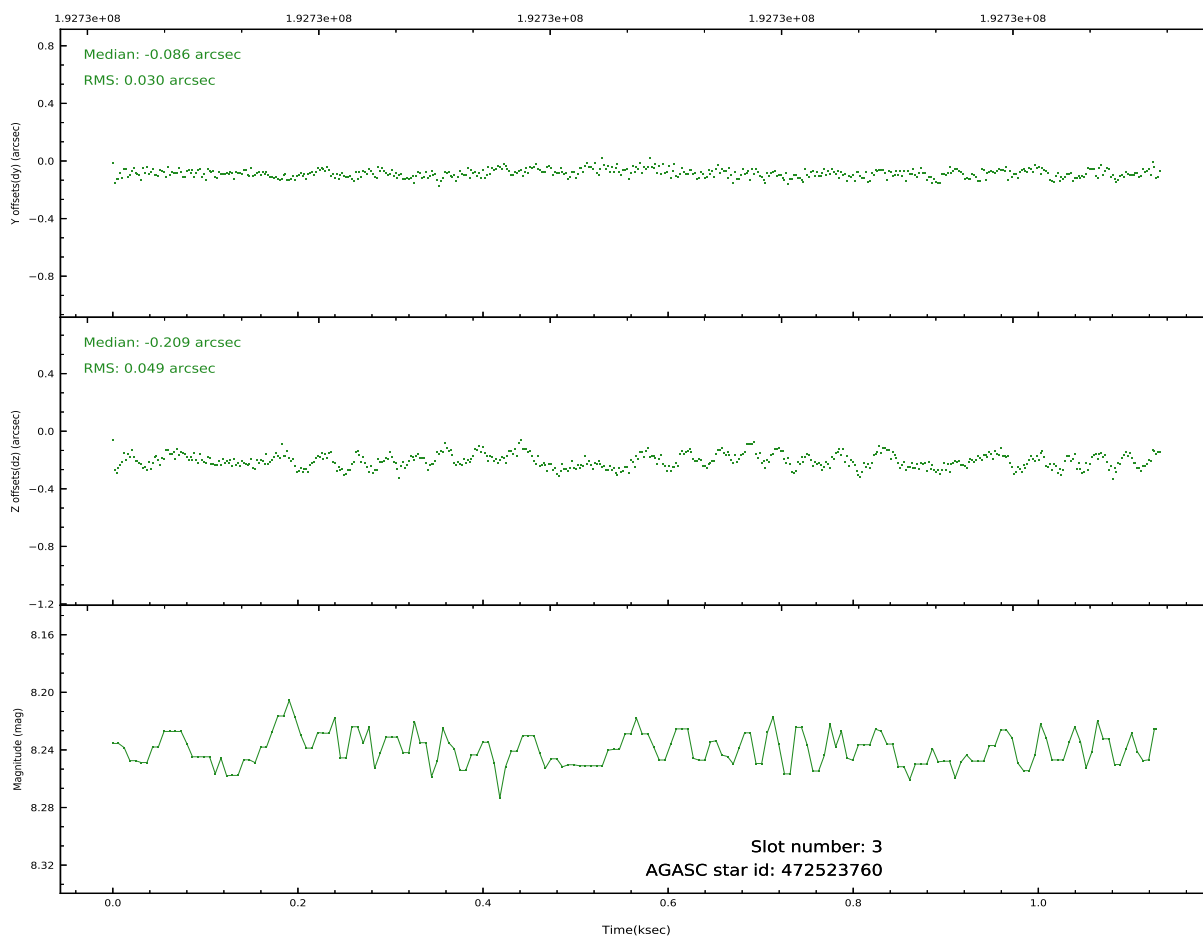
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## 2.4 Star Slots

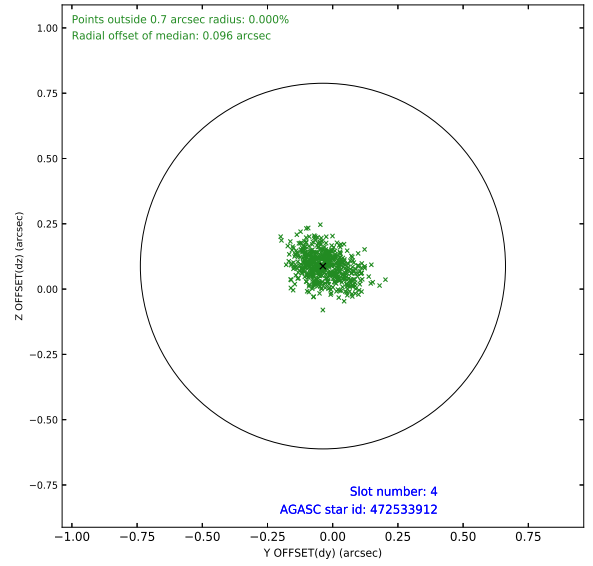
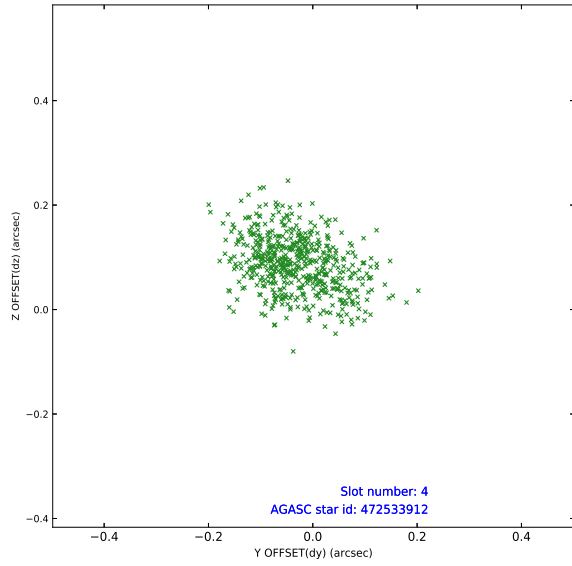
### 2.4.1 Slot 3



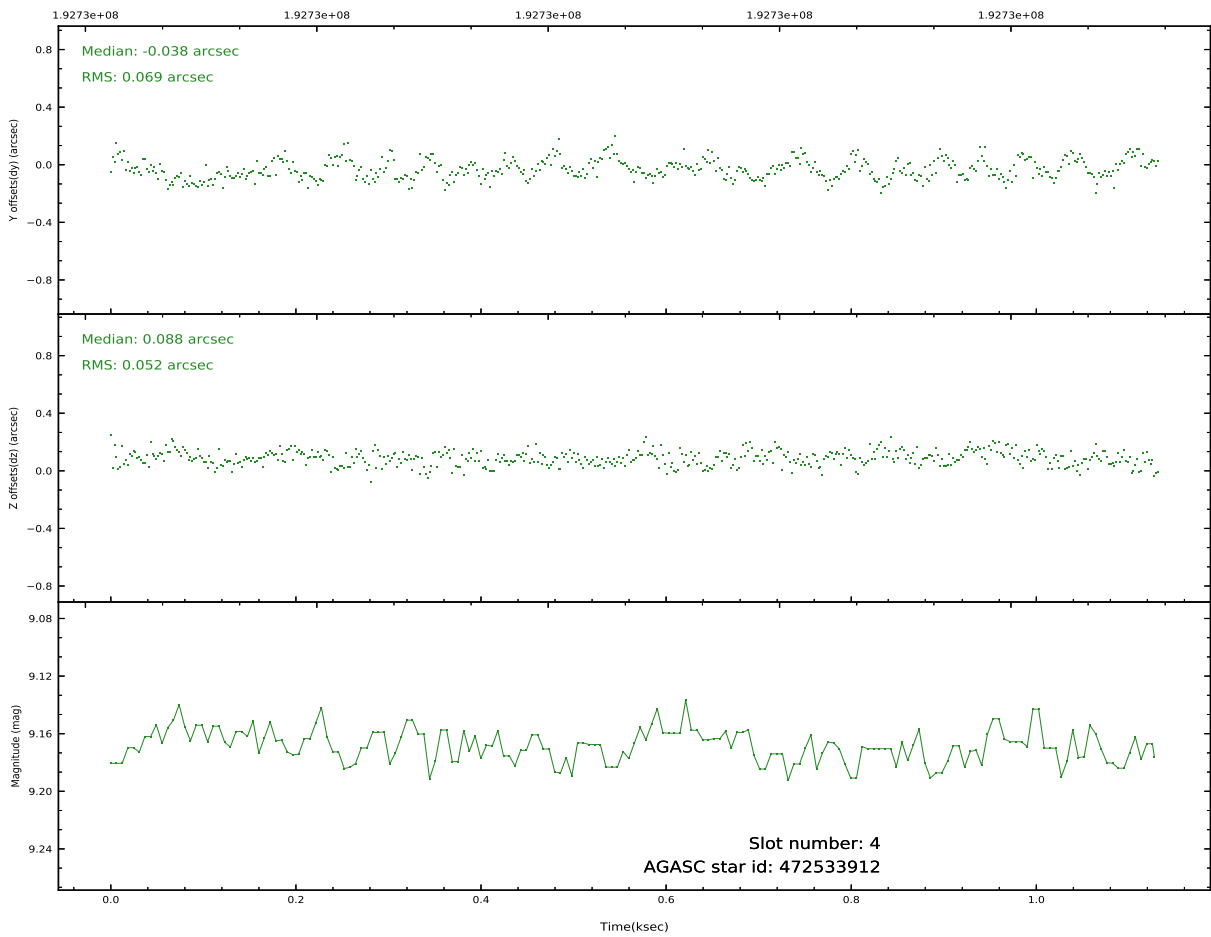
Time (s)



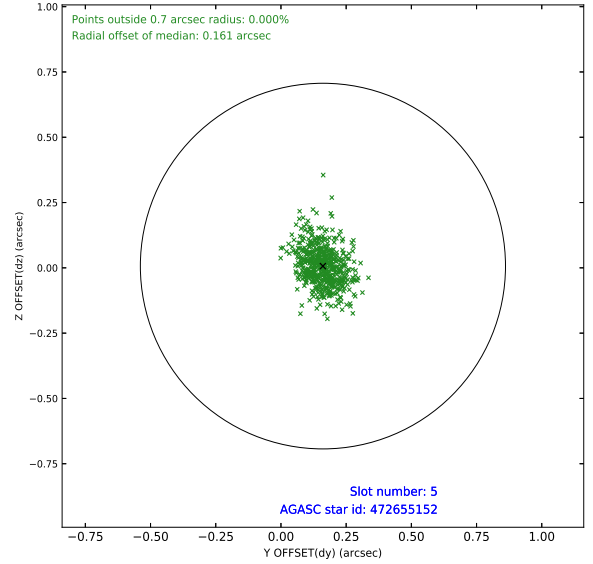
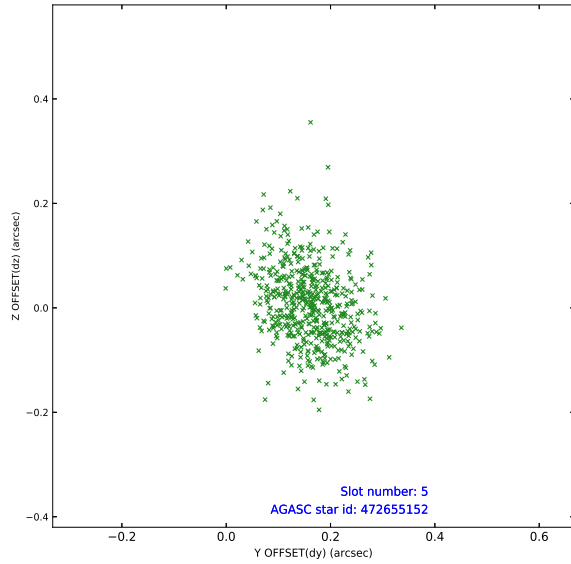
## 2.4.2 Slot 4



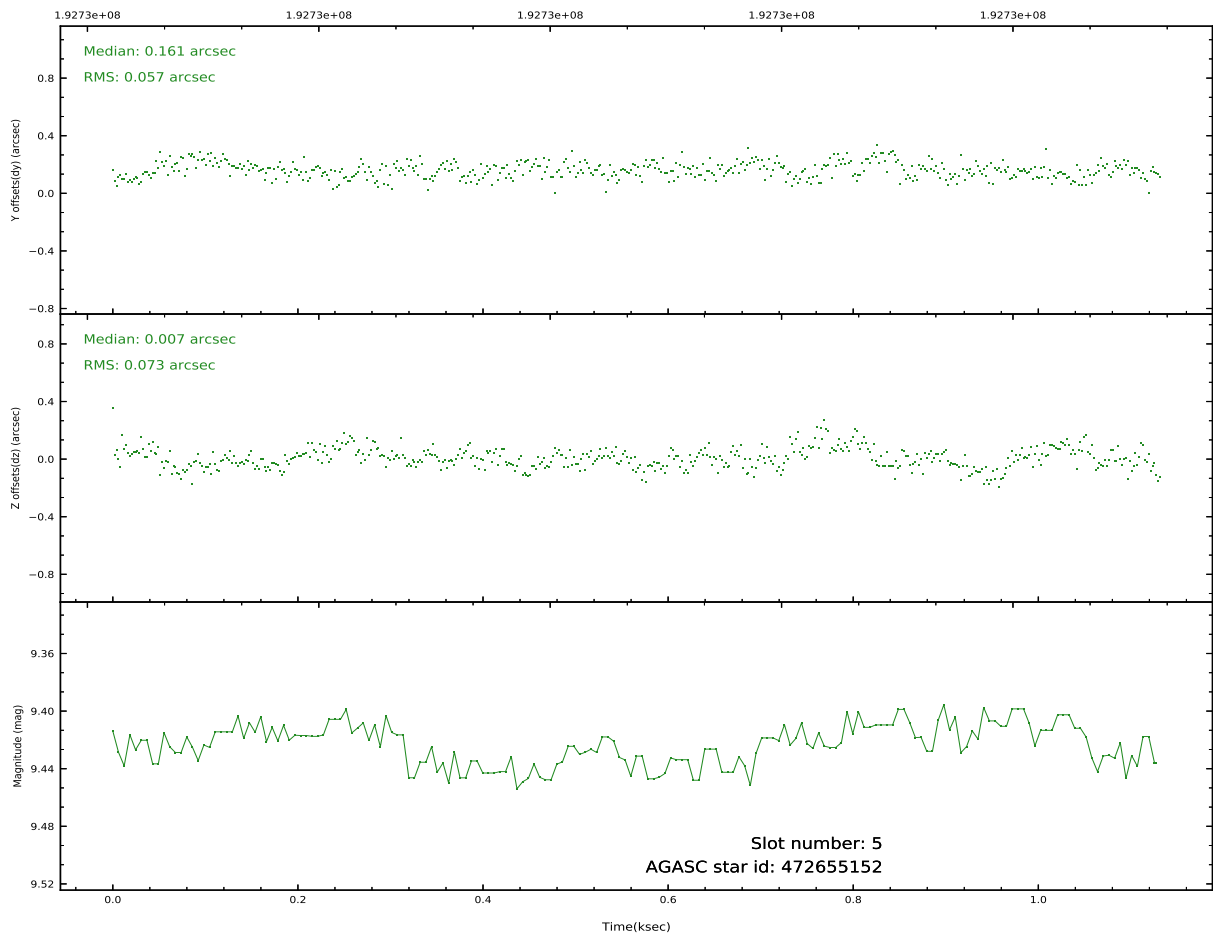
Time (s)



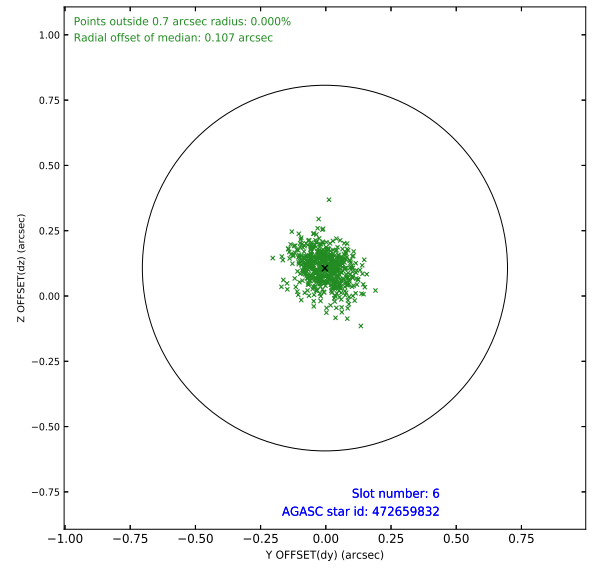
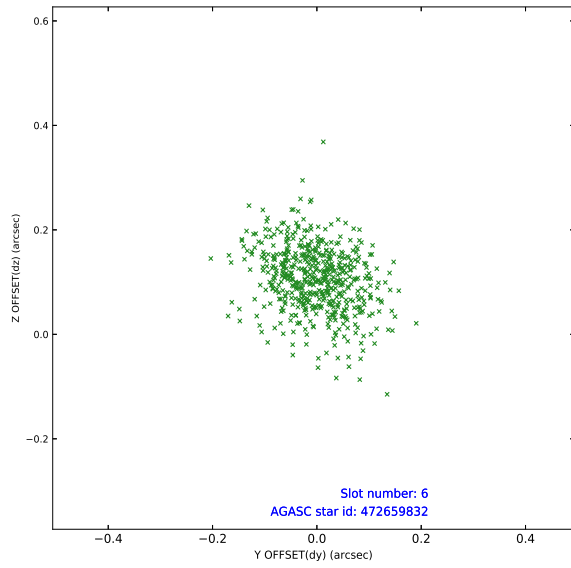
### 2.4.3 Slot 5



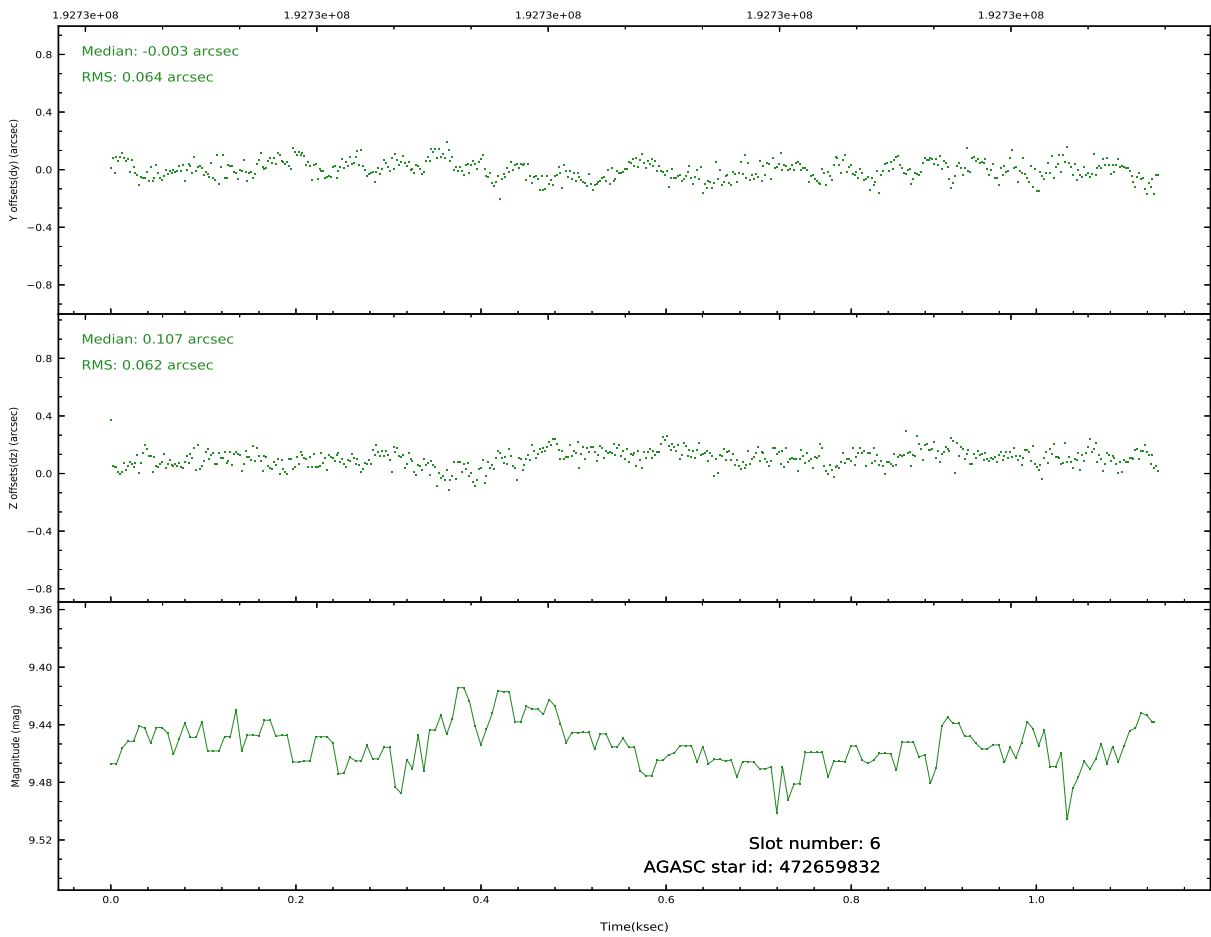
Time (s)



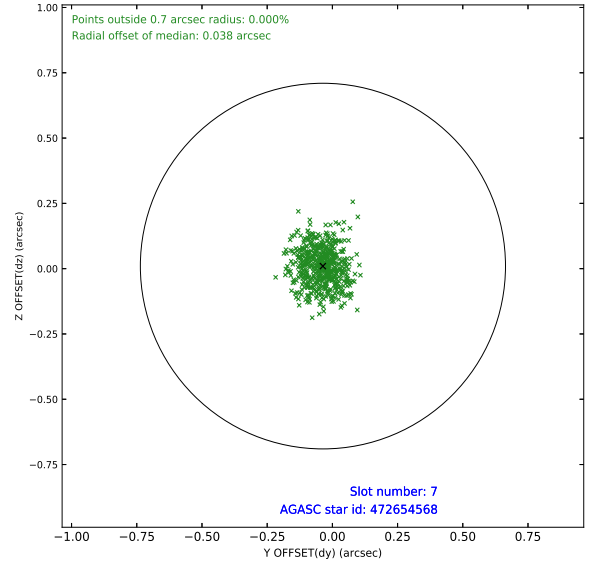
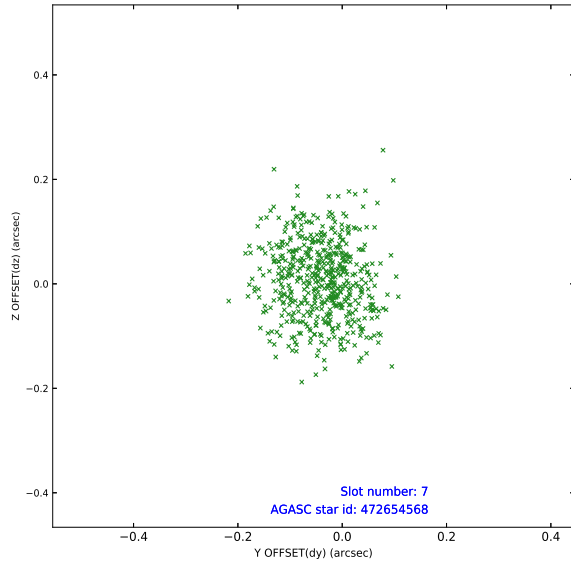
## 2.4.4 Slot 6



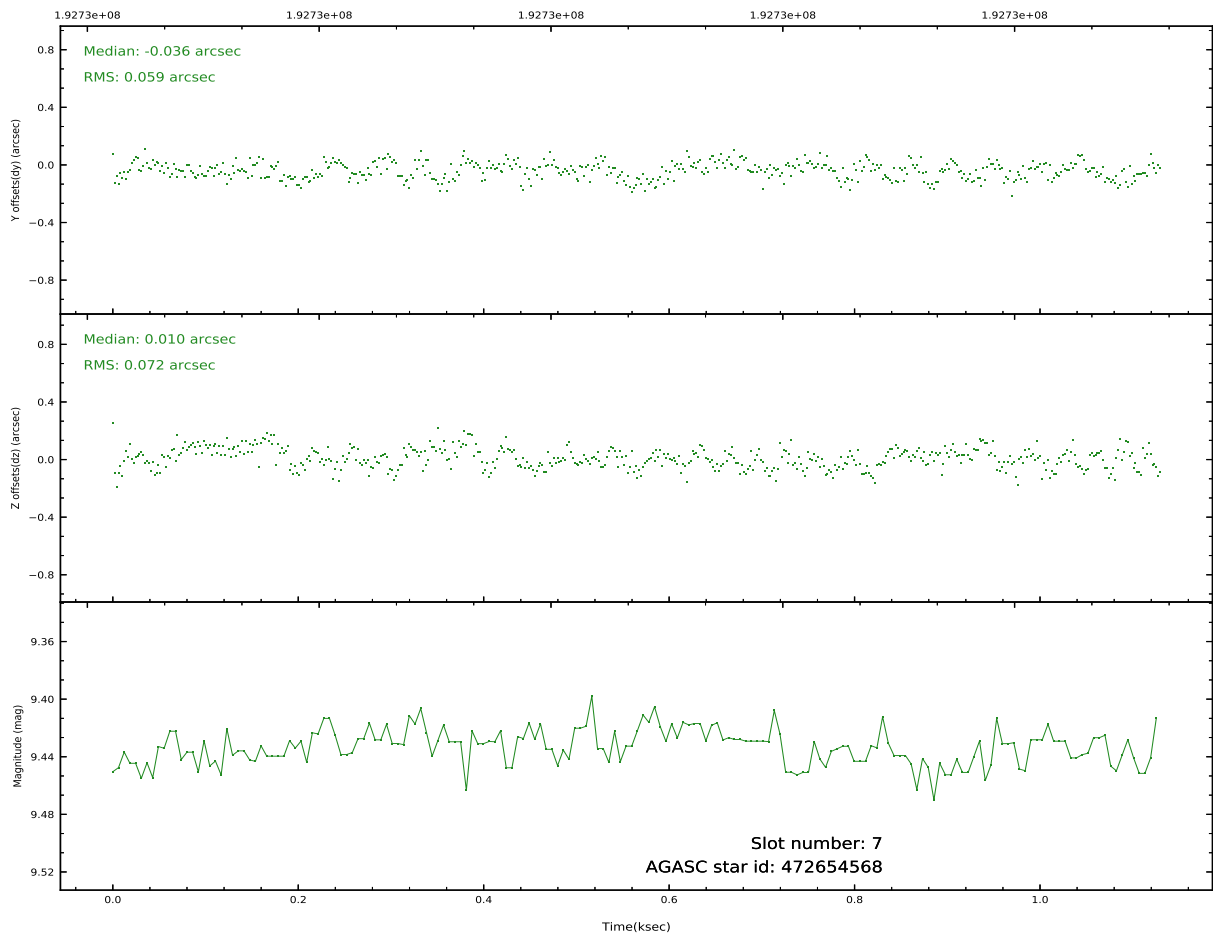
Time (s)



## 2.4.5 Slot 7

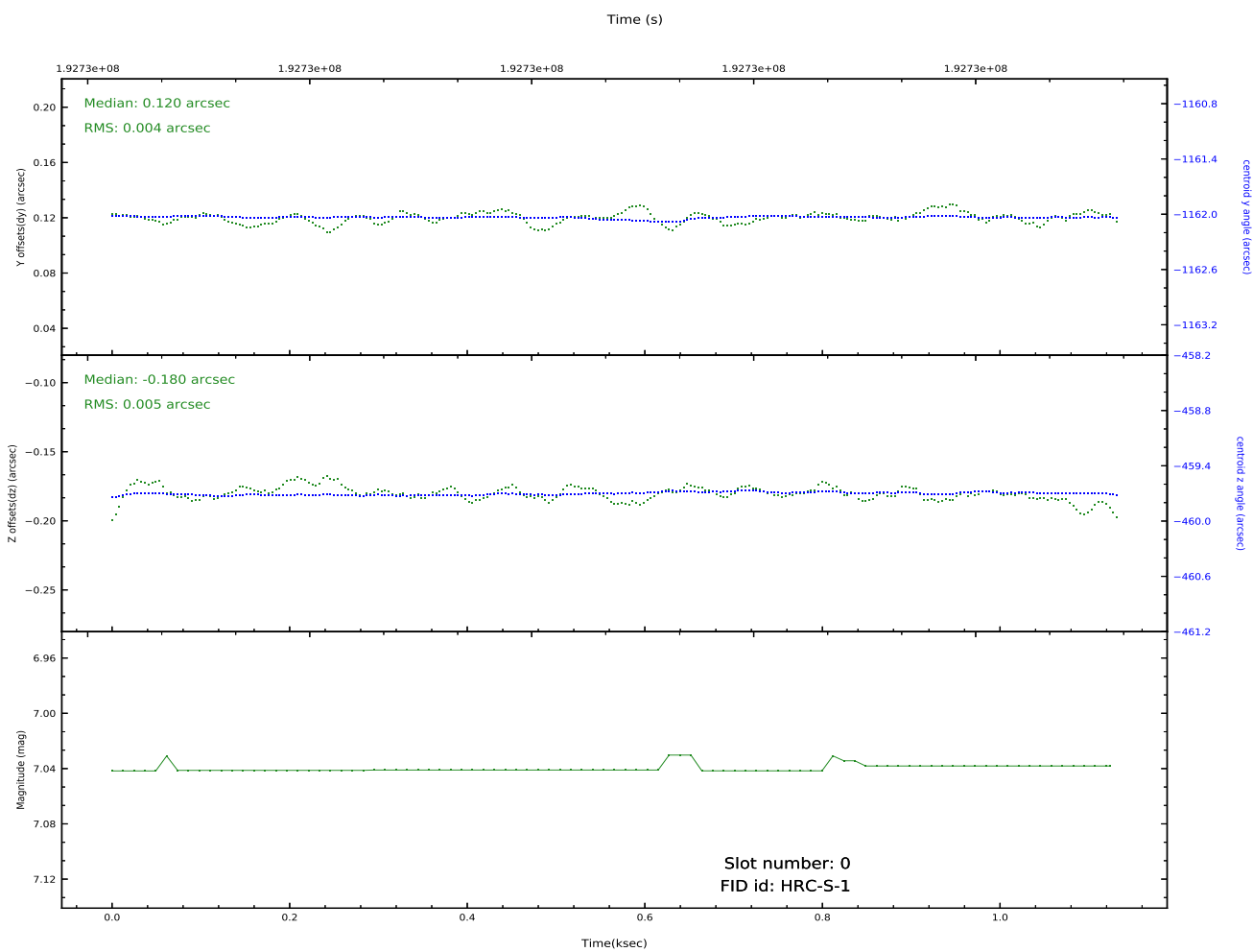
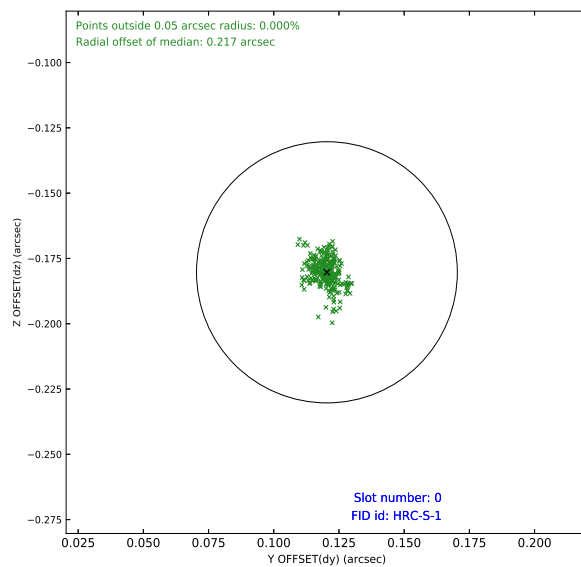
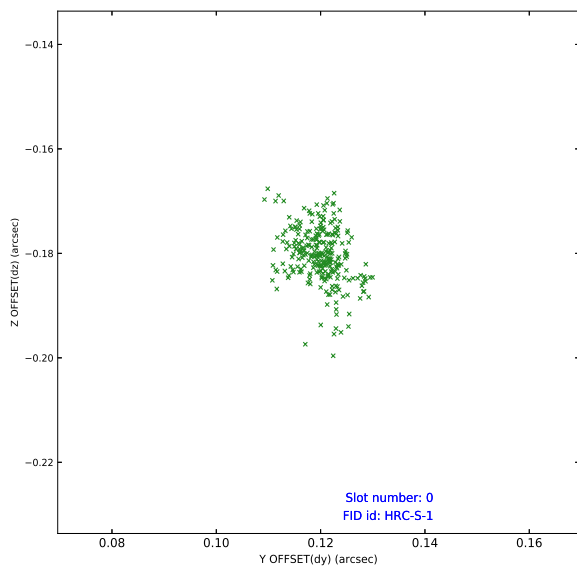


Time (s)

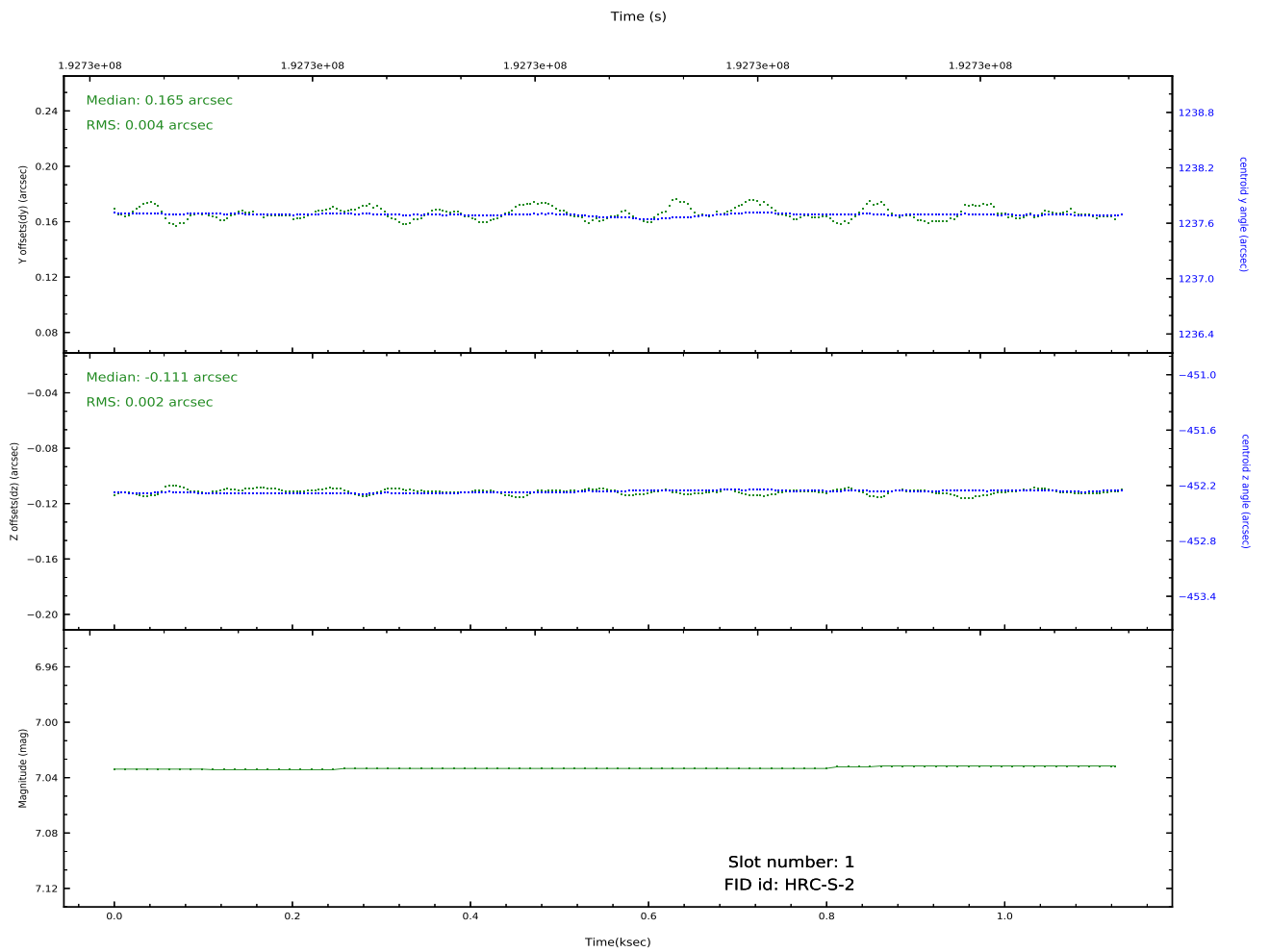
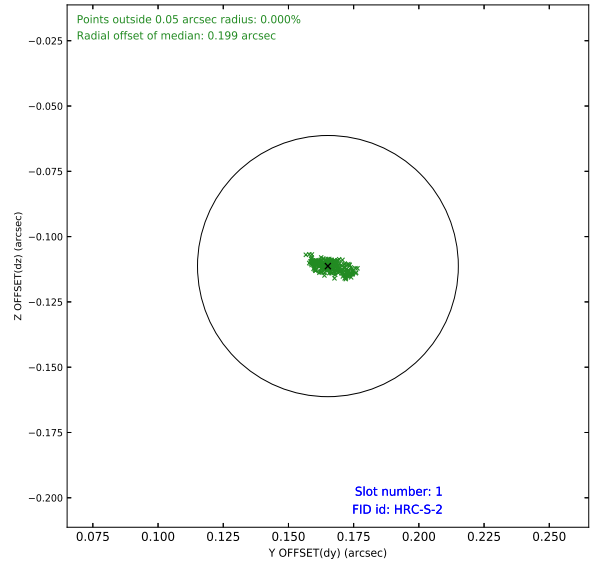
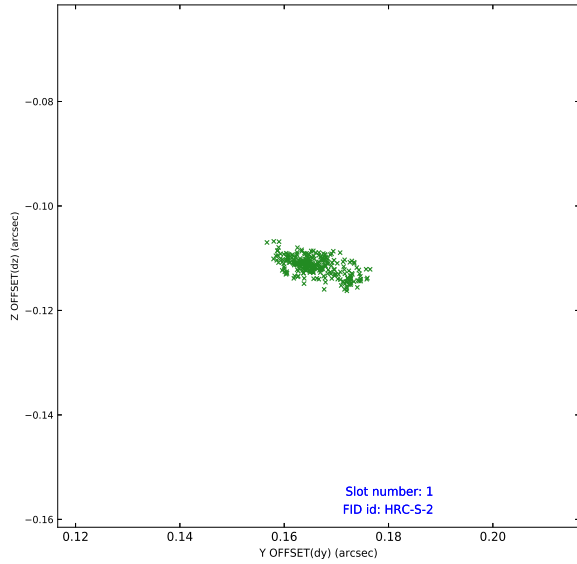


## 2.5 FID Slots

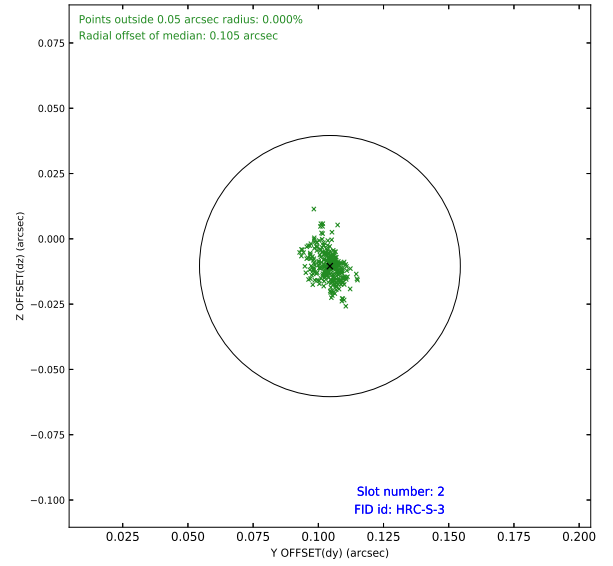
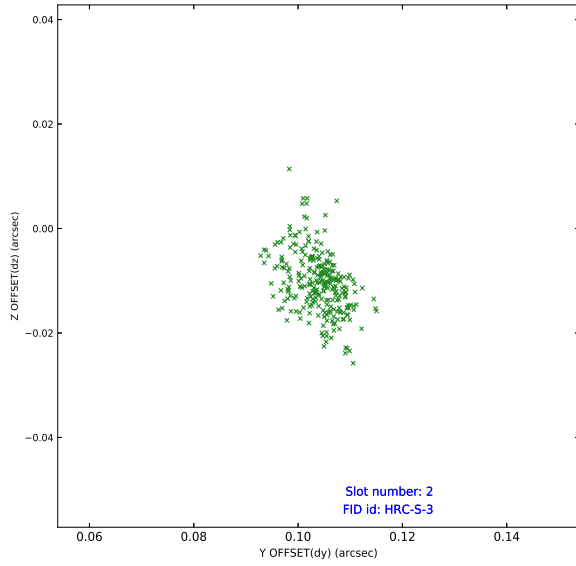
### 2.5.1 Slot 0



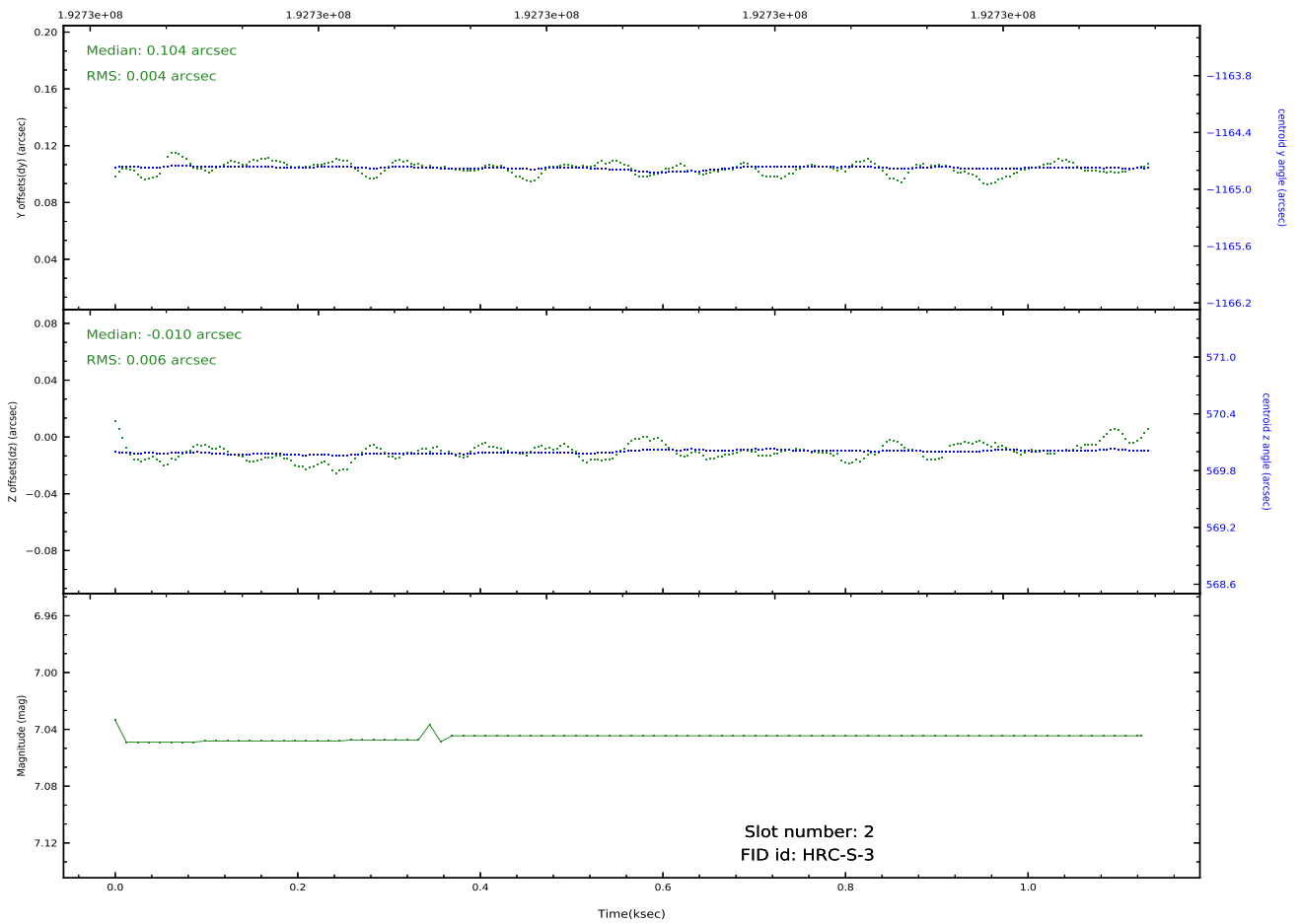
## 2.5.2 Slot 1



### 2.5.3 Slot 2



Time (s)



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2020.09.23
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.087

## 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.