

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5056 - L2 Version 4  
Chandra X-Ray Center

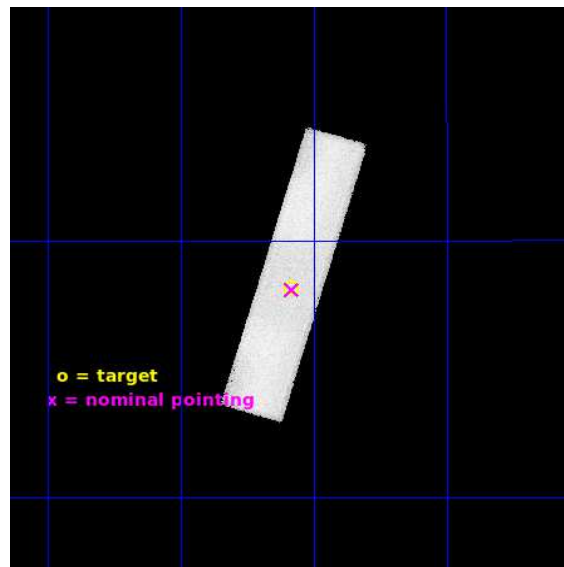
L2 Processing Date : Sep 22 2020

## 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

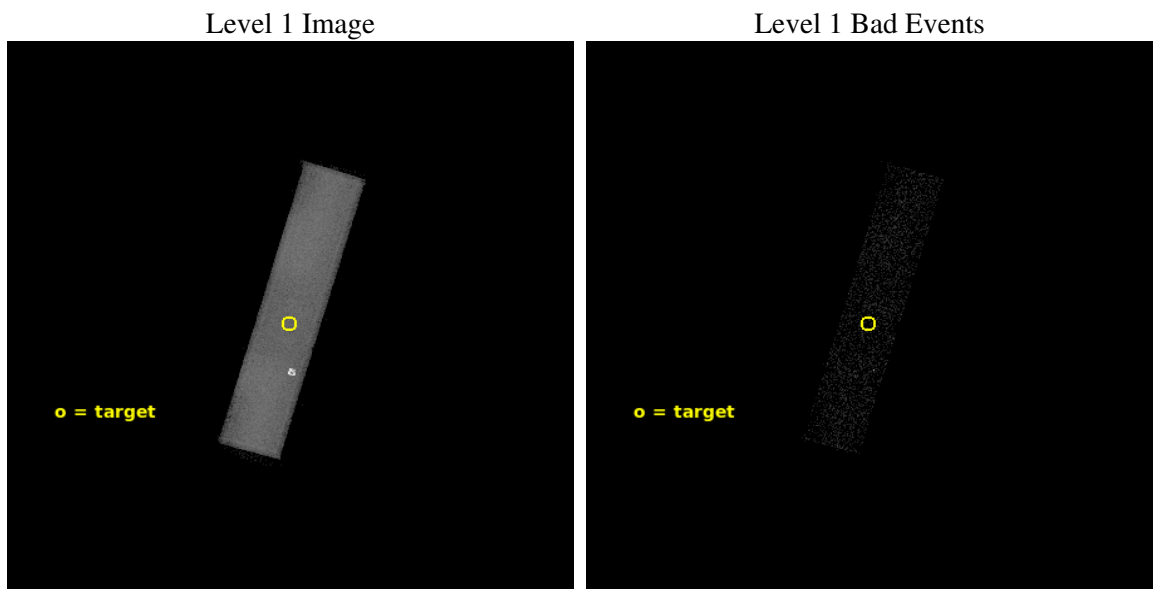
seq_num	290329	Sequence number
obs_id	5056	Observation id
title	AO5 Measurements of the optical/UV Transmission of the HRC and ACIS Filters.	Proposal title
observer	CXC Calibration	Principal investigator
object	Betelgeuse	Source name
ra_targ	88.792917	Observer's specified target RA [deg]
dec_targ	7.407056	Observer's specified target Dec [deg]
ra_nom	88.790801598539	Nominal RA [deg]
dec_nom	7.4042405107865	Nominal Dec [deg]
roll_nom	286.46504861295	Nominal Roll [deg]
revision	4	Processing version of data
ontime	1945.7063350379	[s]
livetime	1881.8309242878	Ontime multiplied by DTCOR
l2events	176405	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	2102.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	1945.7063350379	[s]
caldbver	4.9.2	&#160	l1events	240904	Number of level 1 events
date	2020-09-23T01:24:45	Date and time of file creation			
revision	4	Processing version of data			

### 2.1.3 Events

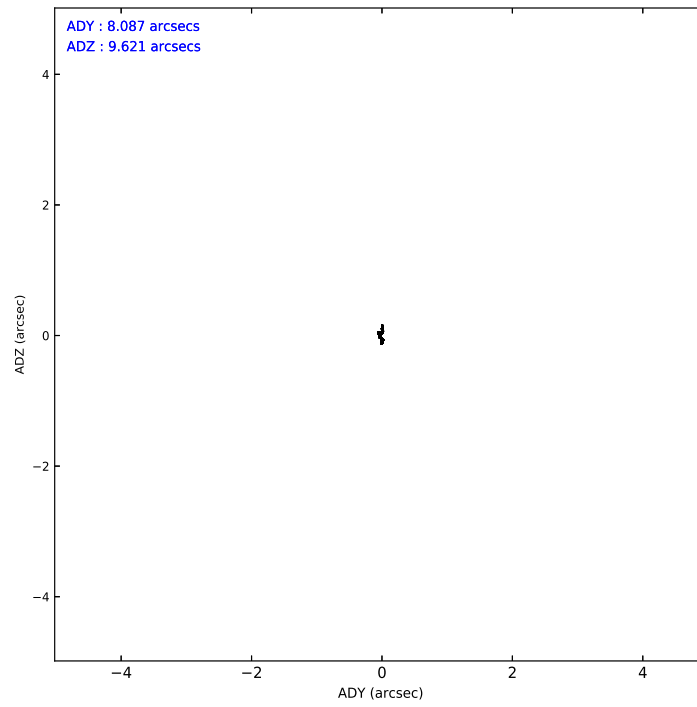
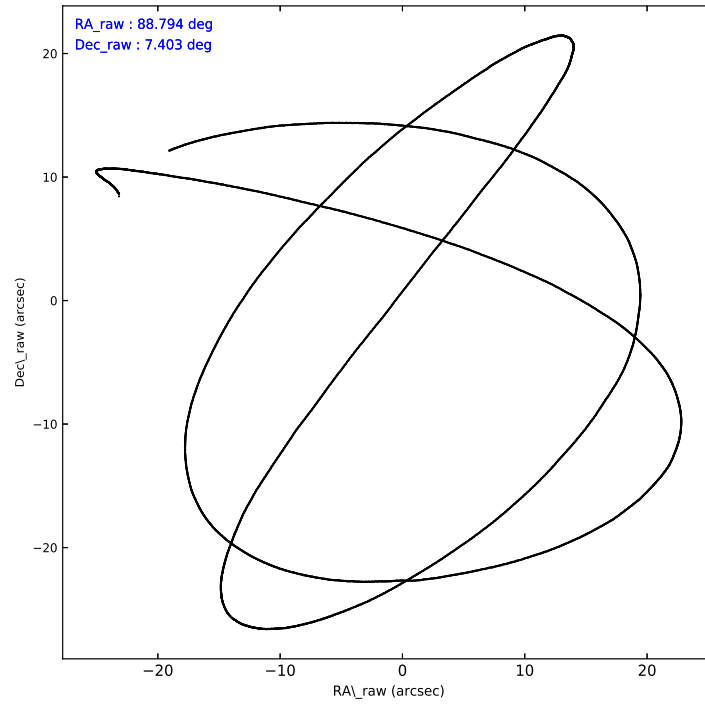
Level 1 Events

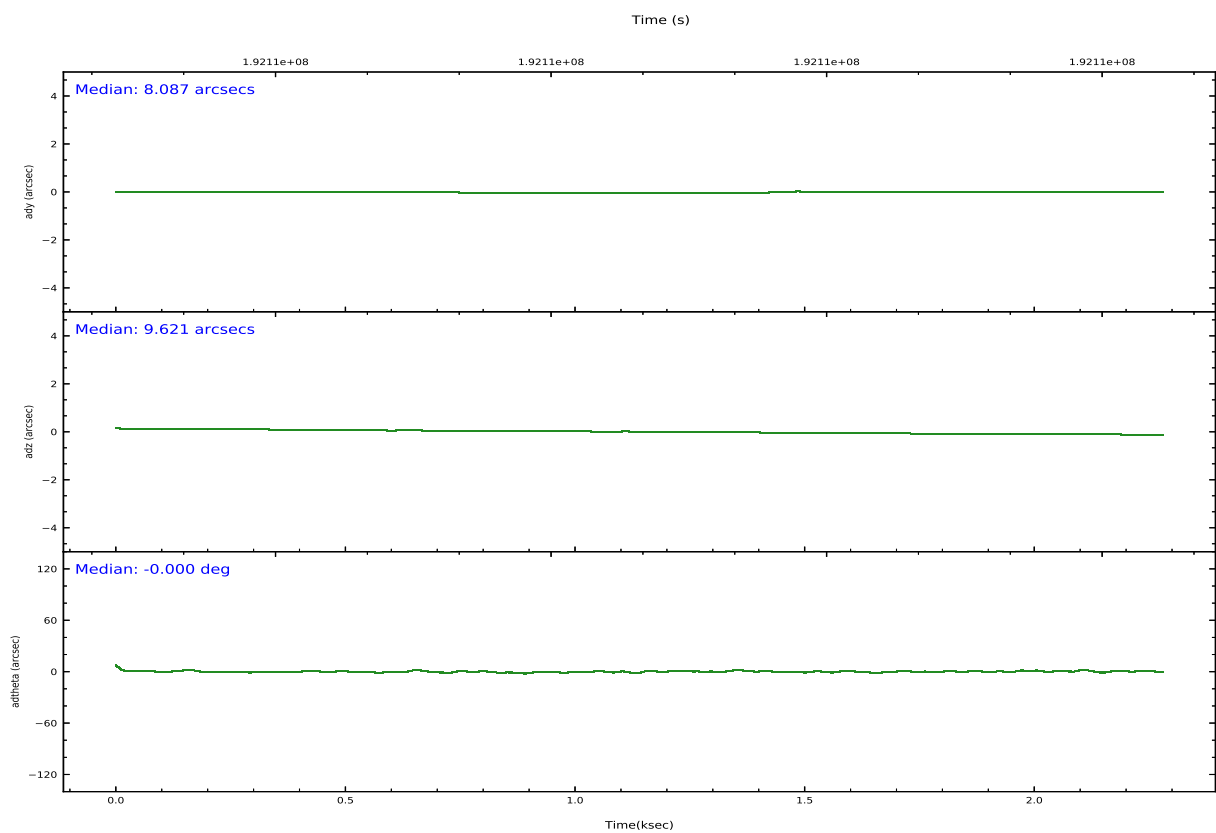
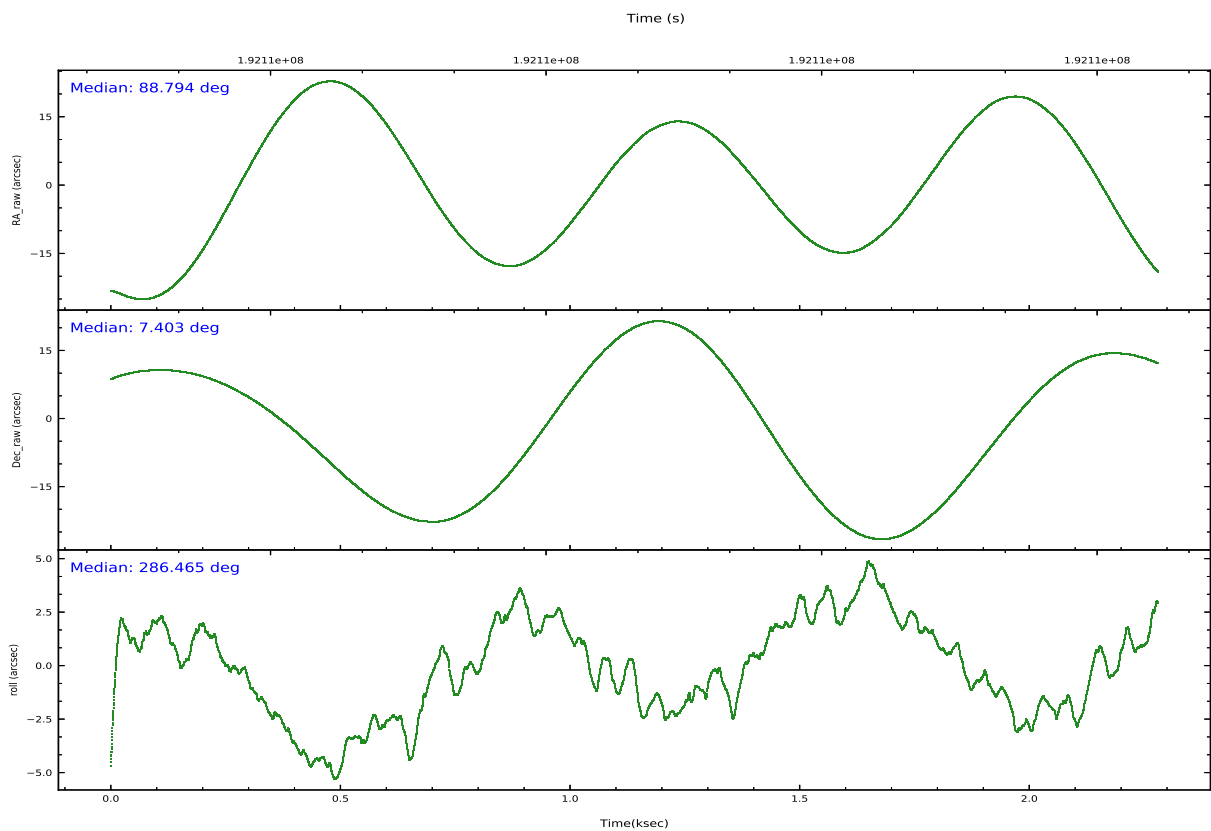
	segment 1	segment 2	segment 3
level 1 events	0	240904	0
rejected events	0	14275	0
rejected %	0%	5%	0%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	HRC	HRC	Obspar version number	8	8
Detector	HRC-S	HRC-S	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	OBSERVING	OBSERVING			
Observation mode	POINTING	POINTING			
[deg] Pointing RA	88.772253	88.79080159853901			
[deg] Pointing Dec	7.421172	7.4042405107865			
[deg] Pointing Roll	286.402971	286.46504861295			
[s] Window start time (MET)	191980864.184000	191980864.184000			
[s] Window stop time (MET)	197078464.184000	197078464.184000			
[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)	192105831.184000	192105457.04516			
Observation start date	2004-02-02T10:42:47	2004-02-02T10:37:37			
[s] Observation end time (MET)	192107933.184000	192108066.69527			
Observation end date	2004-02-02T11:17:49	2004-02-02T11:21:06			

## 2.3 Aspect





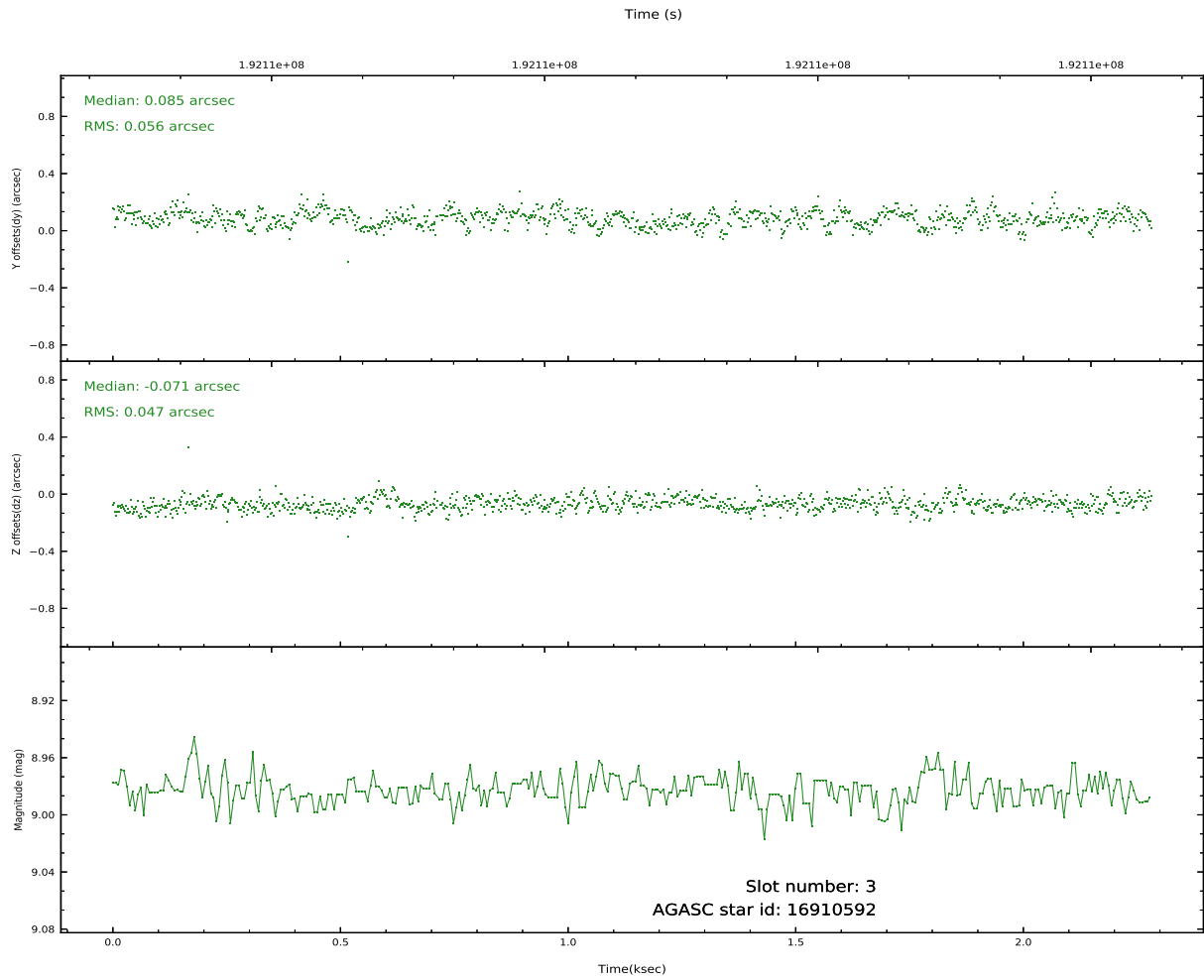
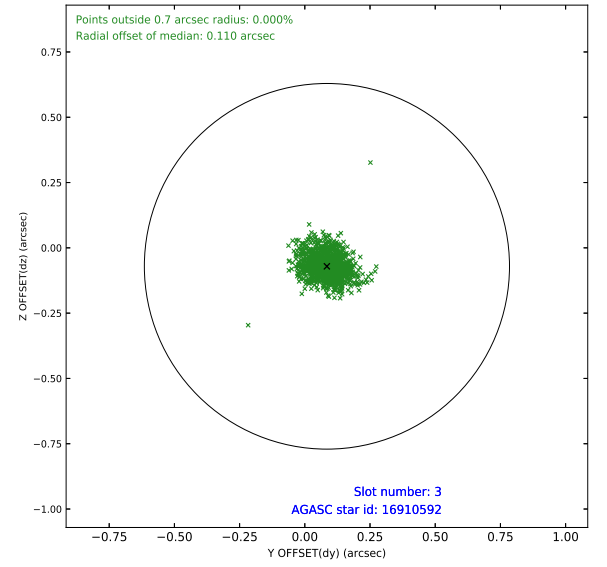
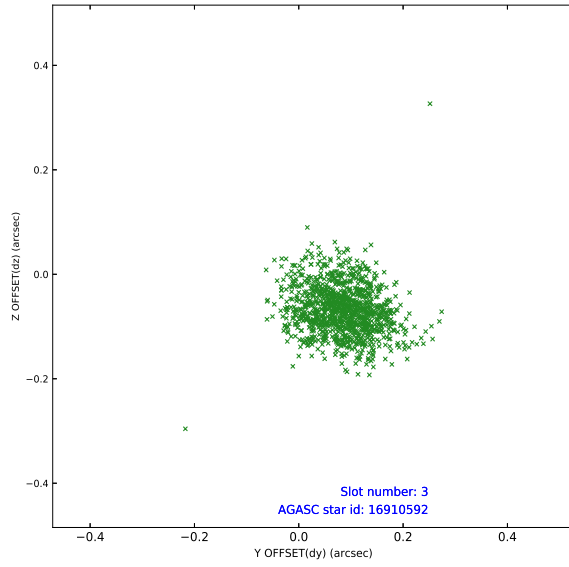
Slot Statistics

pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		HRC-S-2	7.08	557	1.000	0.154	-0.146	0.011	0.018	0.000000	0.000000	1237.42	-450
1	FID		HRC-S-3	7.09	556	1.000	0.037	-0.090	0.005	0.010	0.000000	0.000000	-1162.82	570
2	FID		HRC-S-4	7.07	557	1.000	0.214	-0.059	0.011	0.018	0.000000	0.000000	1234.03	574
3	GUIDE	used	16910592	8.98	1112	1.000	0.085	-0.071	0.076	0.124	88.532936	6.726769	2157.80	-1526
4	GUIDE	used	16913360	8.33	1114	1.000	-0.006	0.058	0.057	0.092	89.178373	7.247125	1013.22	1213
5	GUIDE	used	16918912	8.66	1114	1.000	0.165	0.108	0.058	0.100	89.257075	6.922287	2213.59	1156
6	GUIDE	used	93854800	7.57	1114	1.000	-0.122	-0.143	0.050	0.081	88.376308	7.655454	-1205.27	-1116
7	GUIDE	used	93855160	8.50	1113	1.000	-0.117	0.047	0.060	0.098	88.514904	7.713359	-1268.45	-584

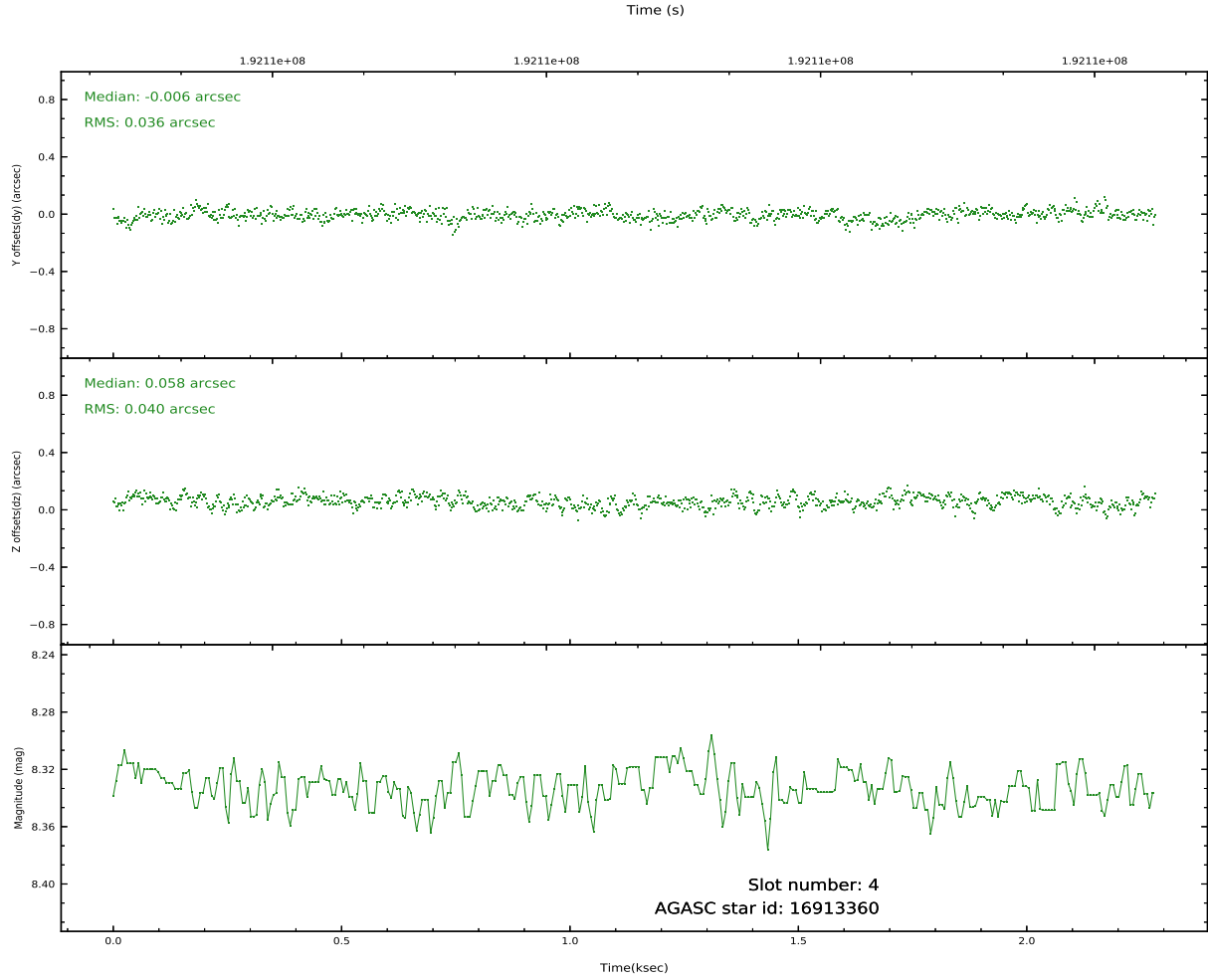
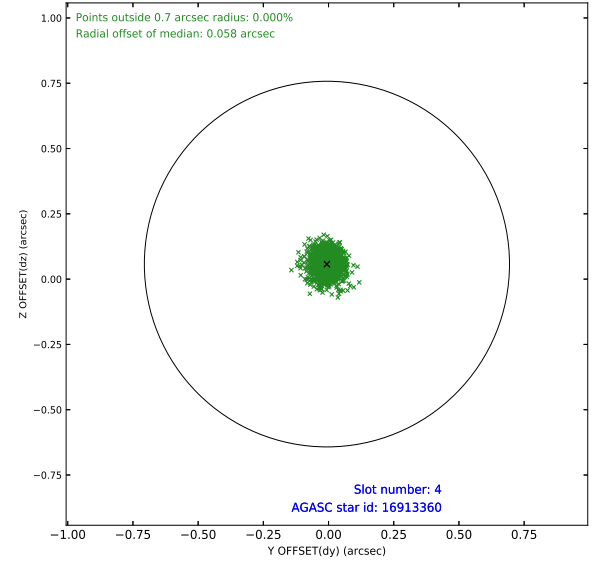
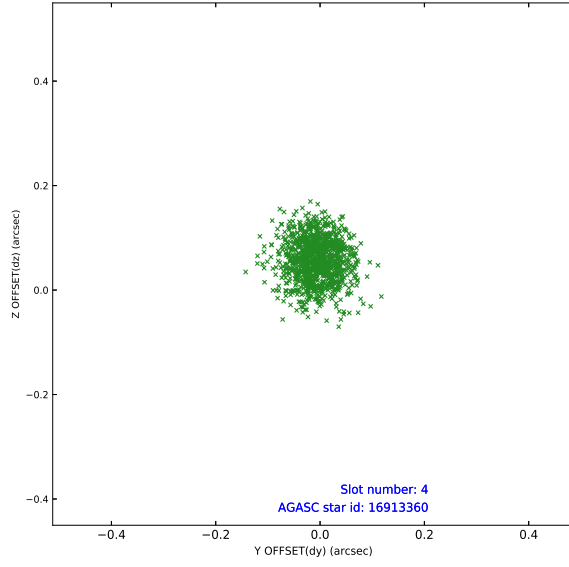


## 2.4 Star Slots

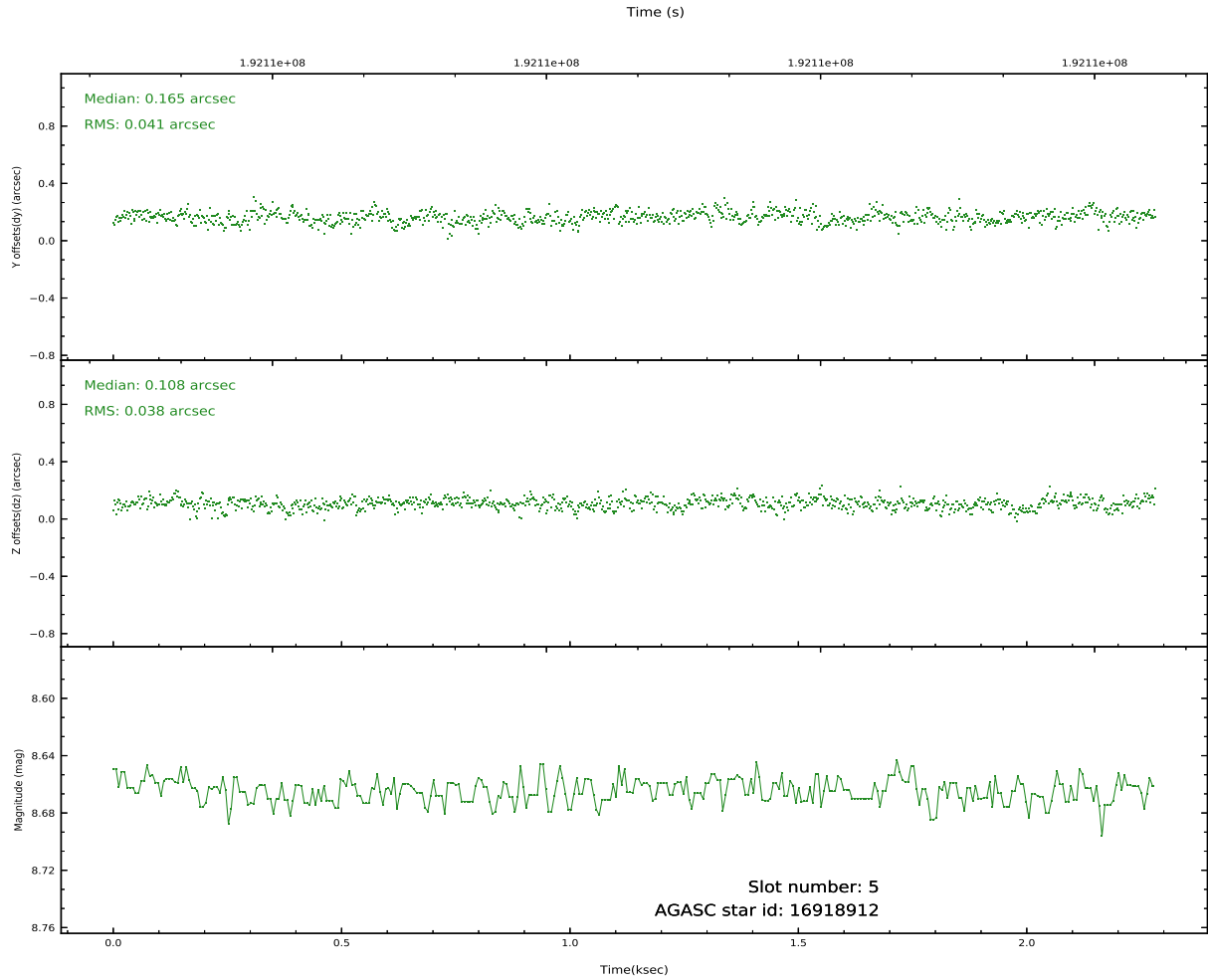
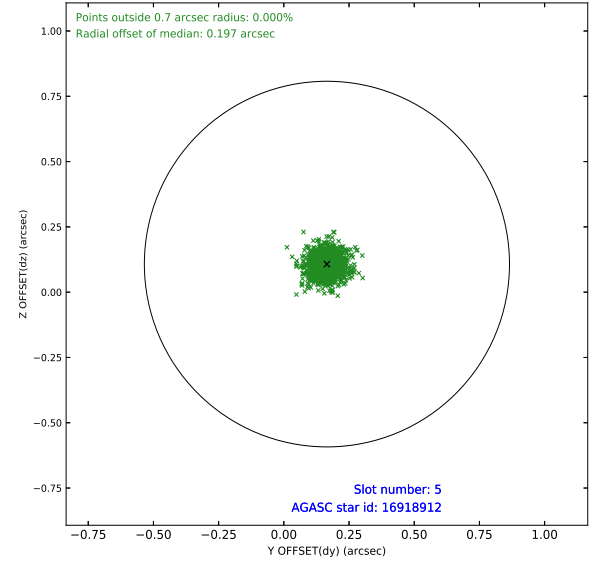
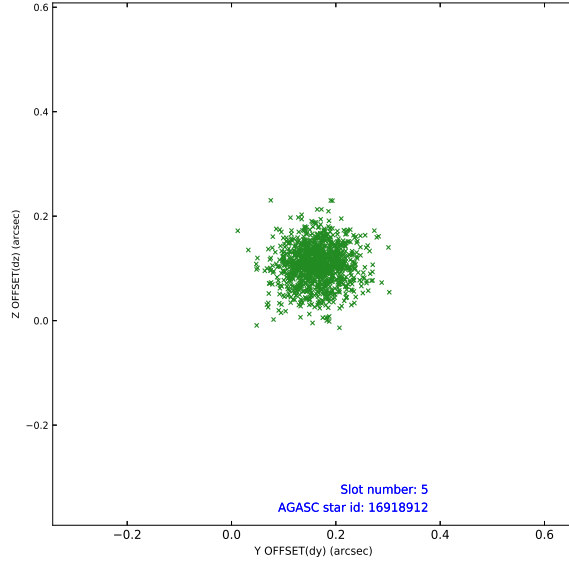
### 2.4.1 Slot 3



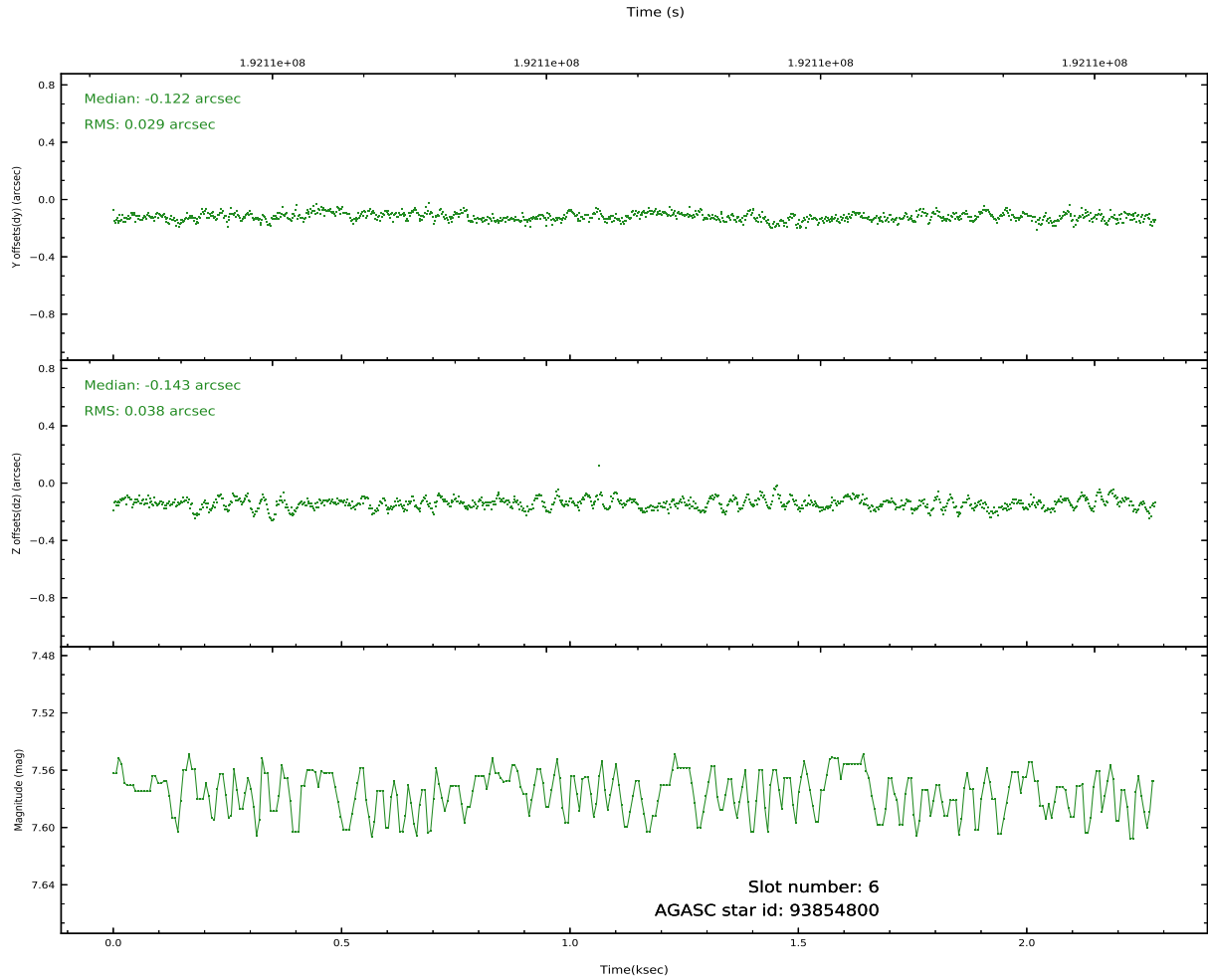
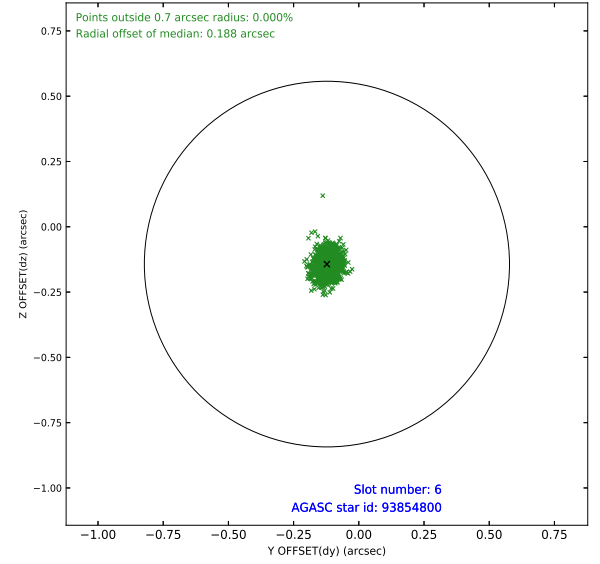
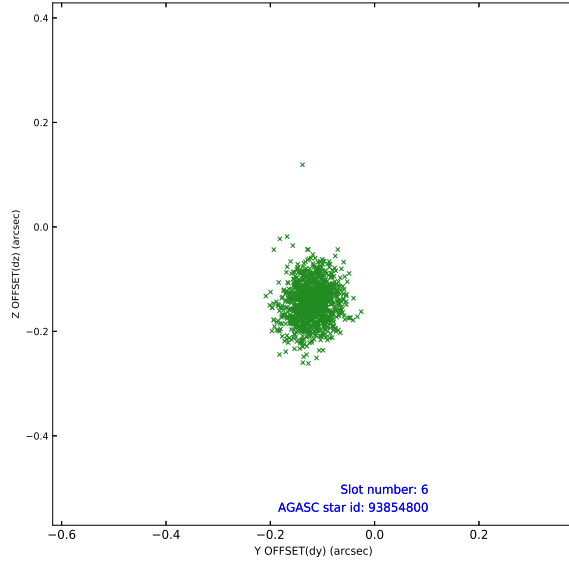
## 2.4.2 Slot 4



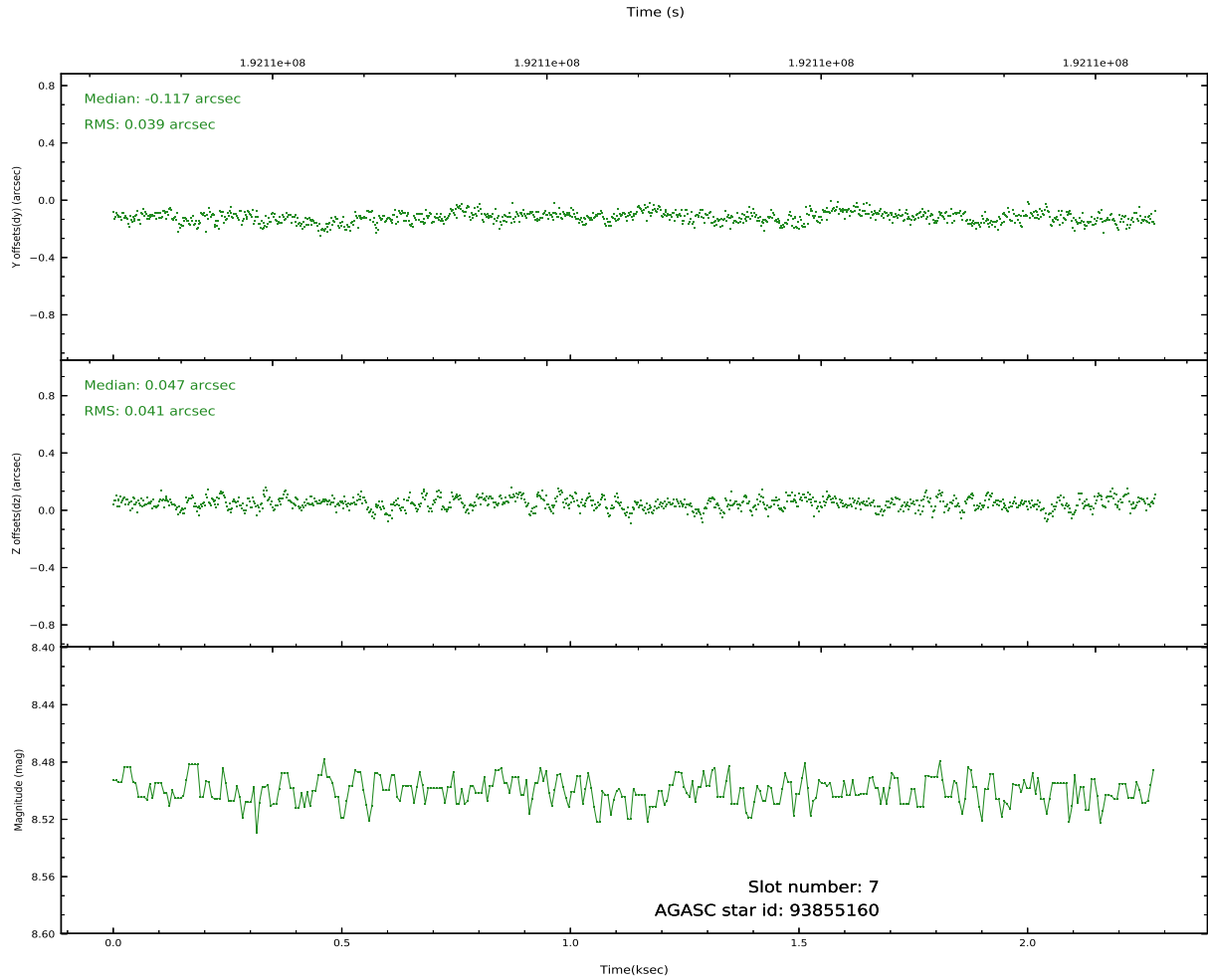
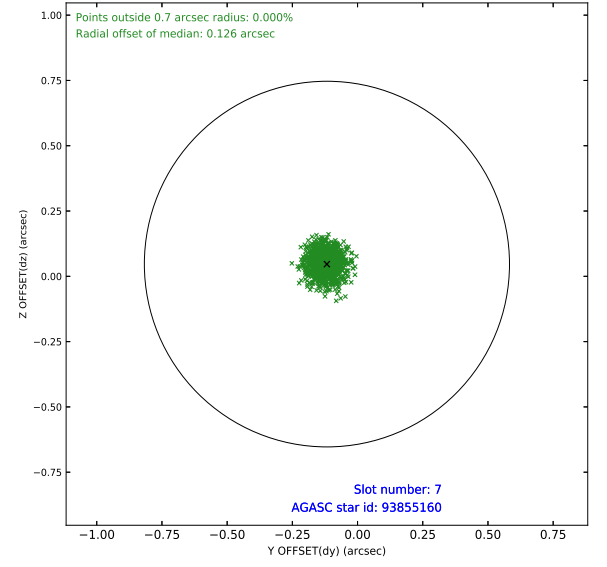
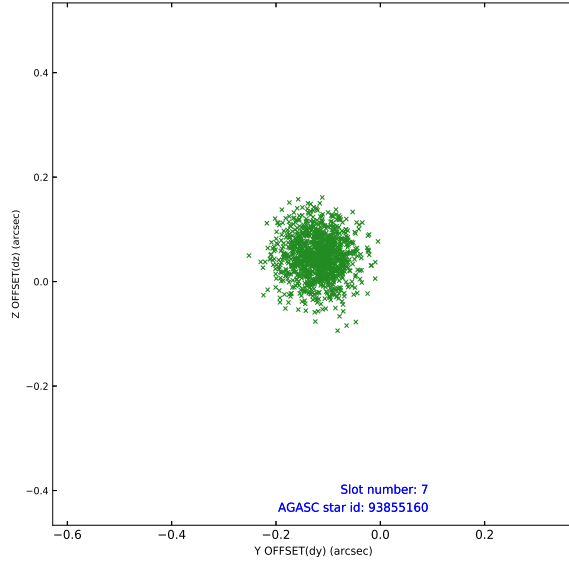
### 2.4.3 Slot 5



## 2.4.4 Slot 6

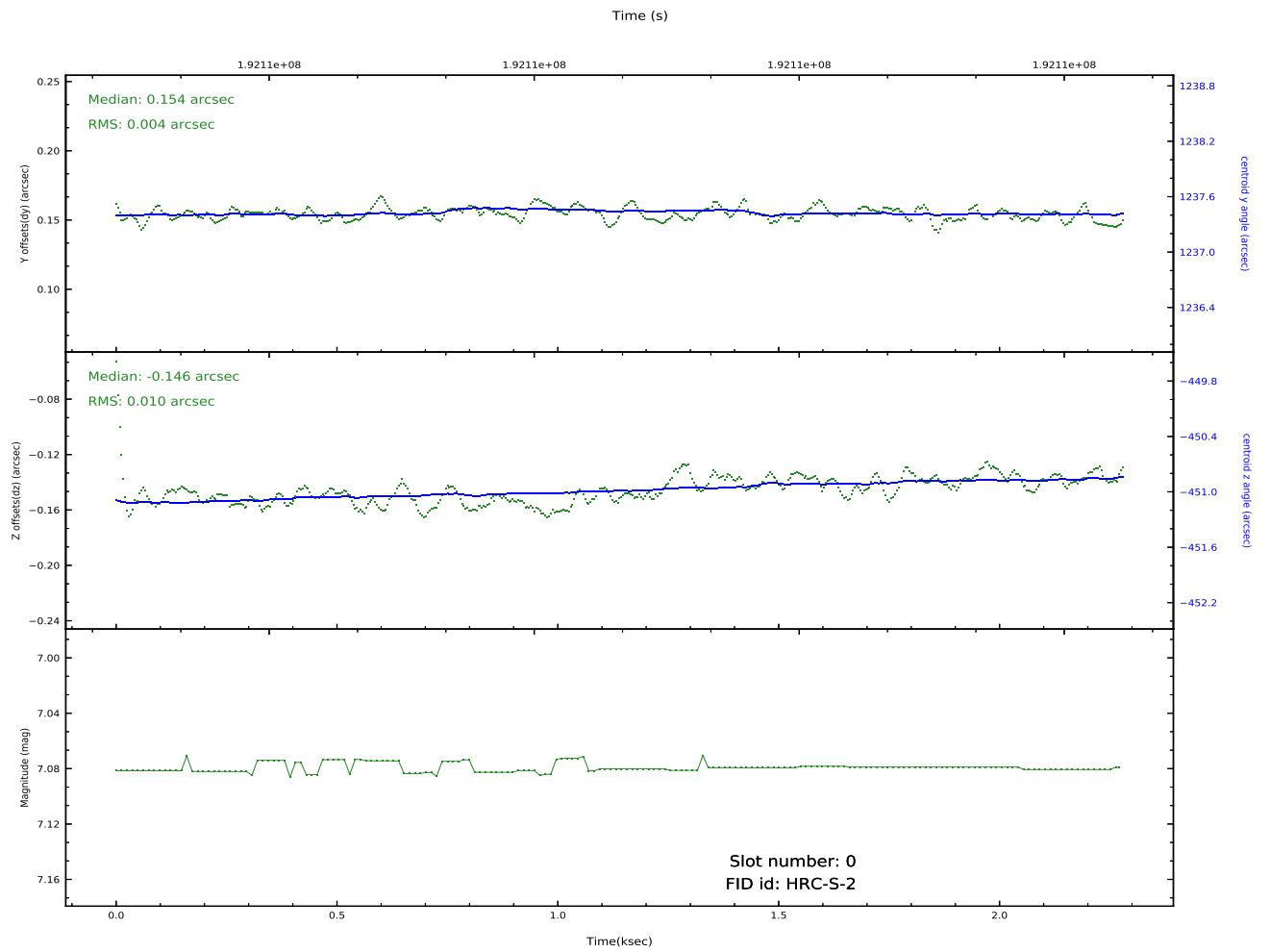
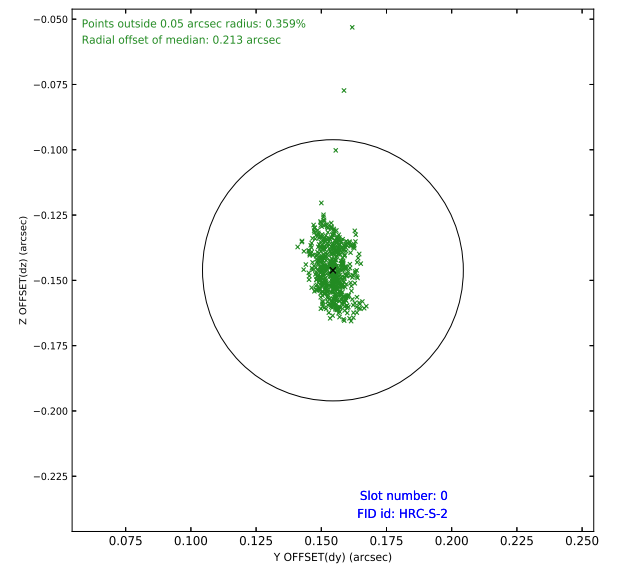
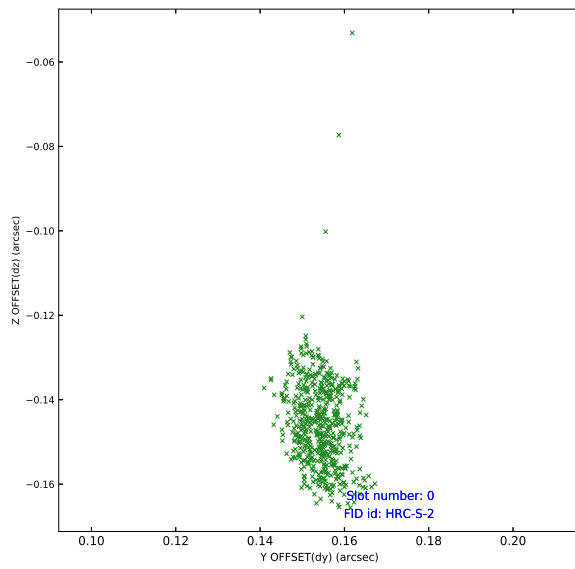


## 2.4.5 Slot 7

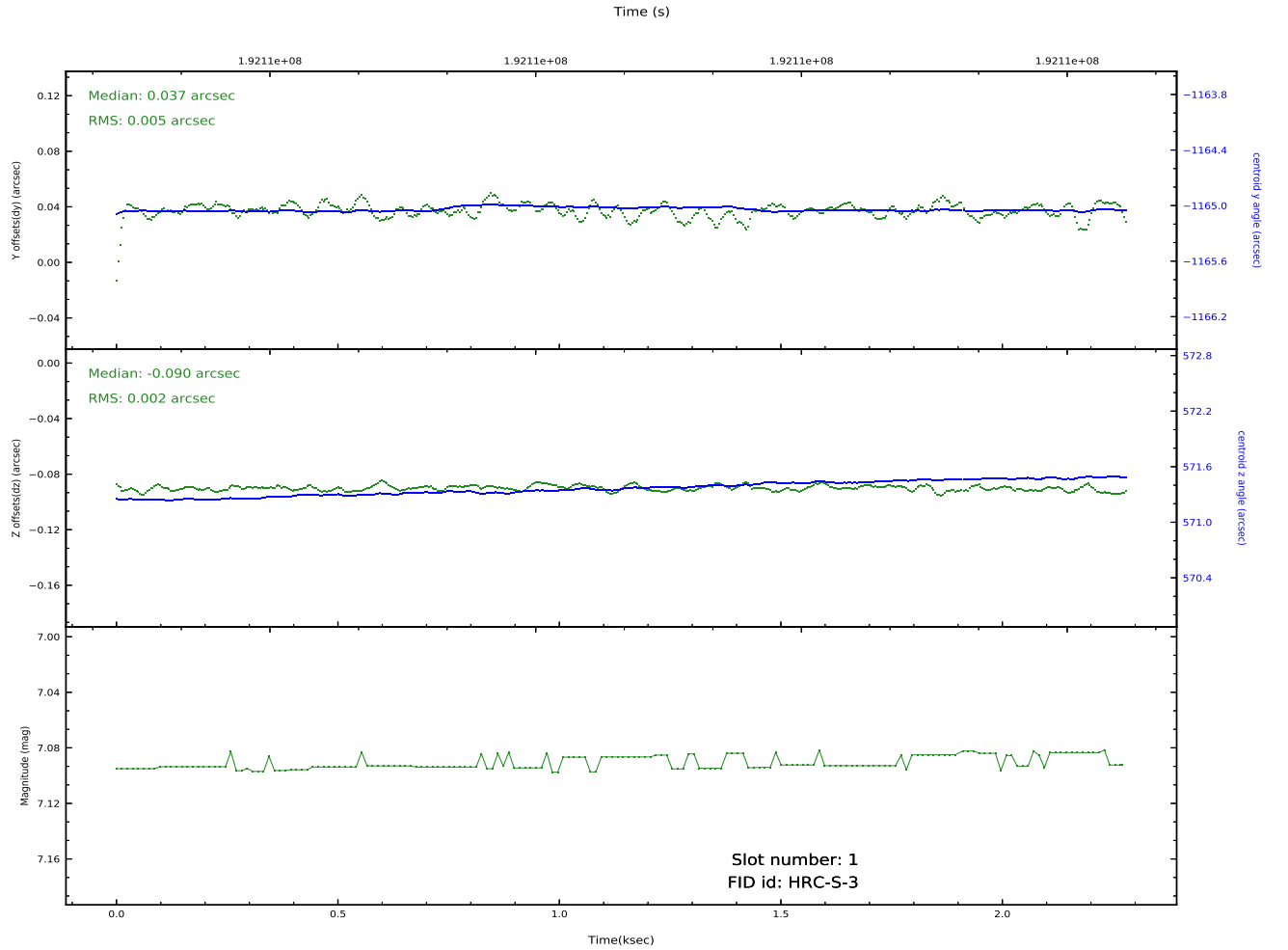
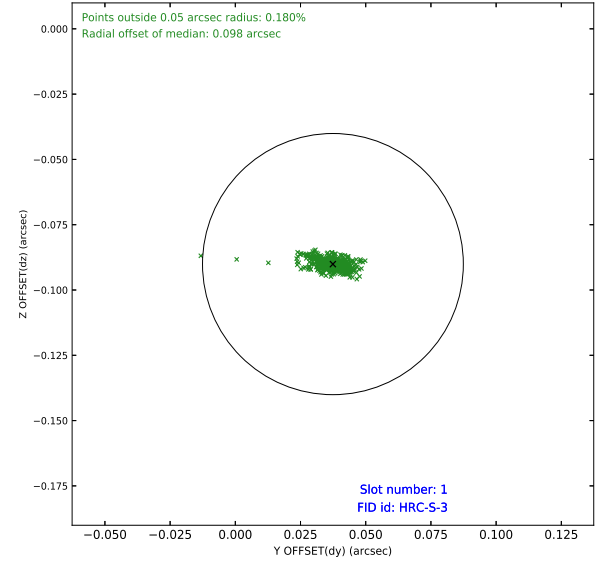
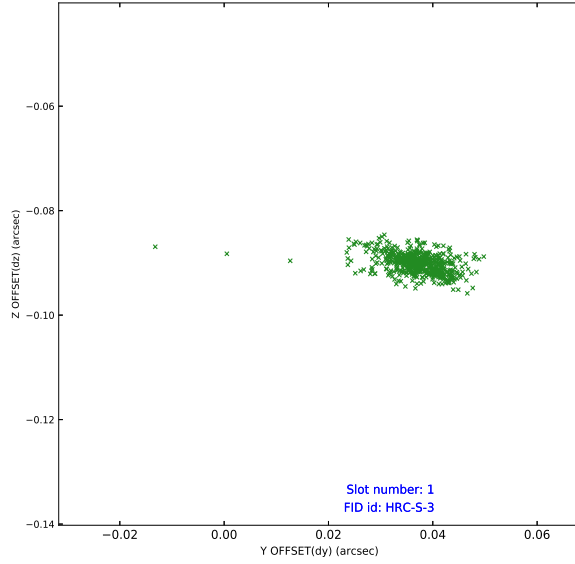


## 2.5 FID Slots

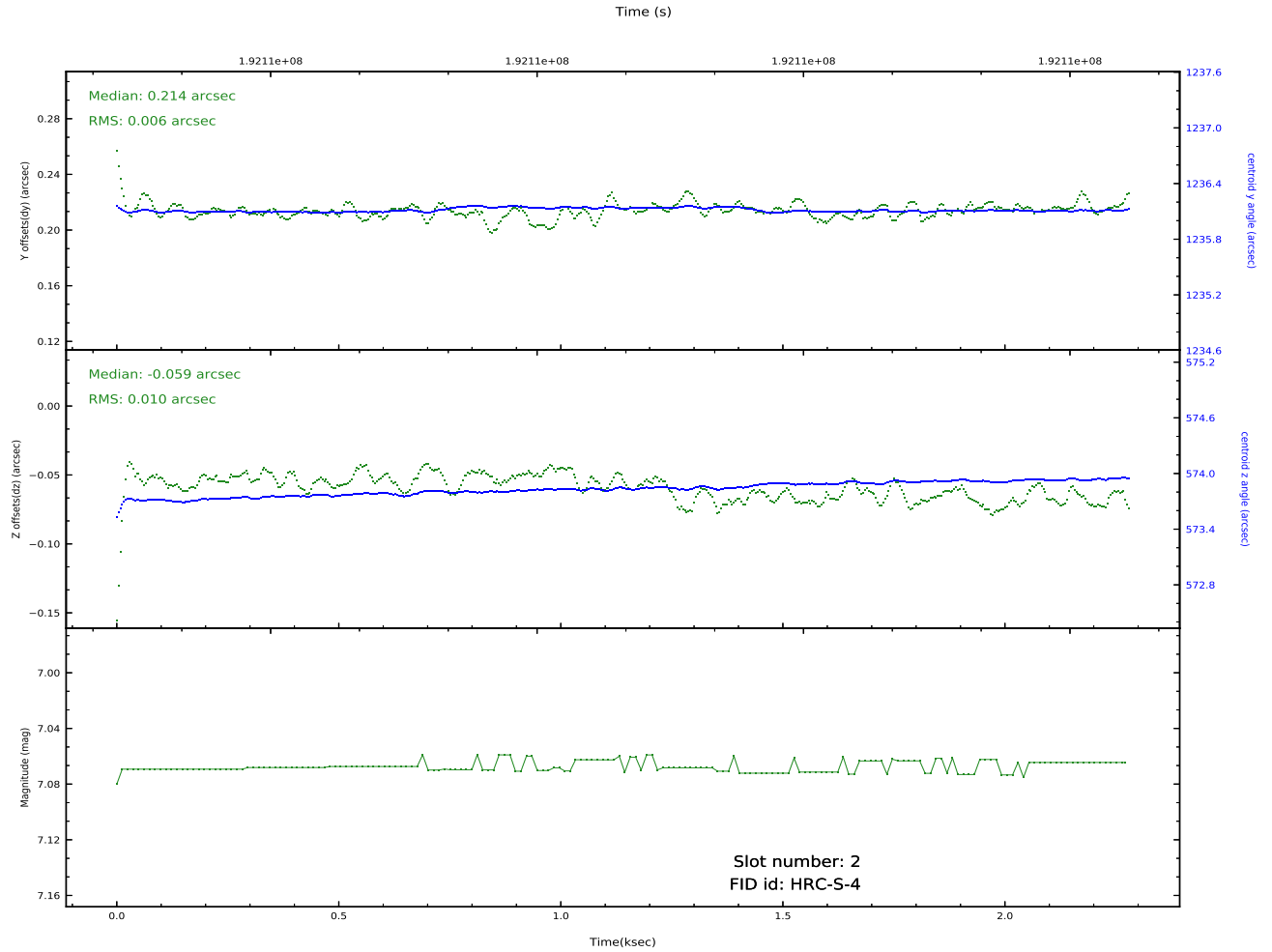
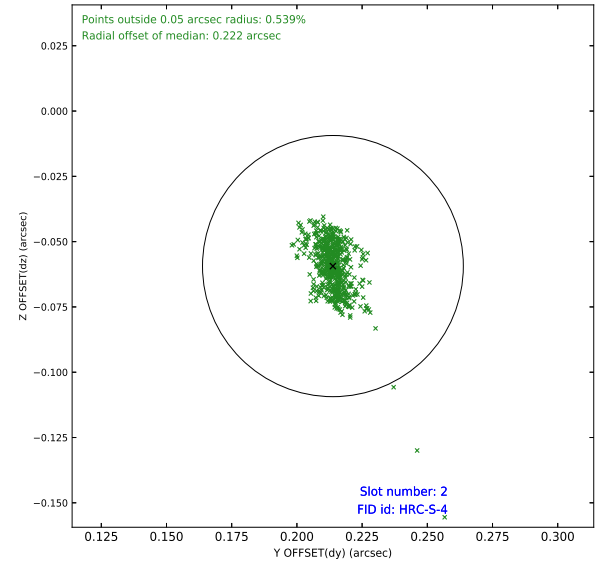
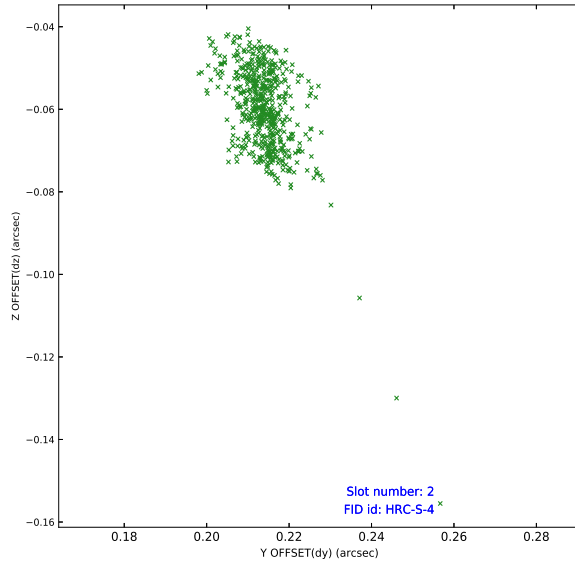
### 2.5.1 Slot 0



## 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)	2020.09.23
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	1.945

## A.2 Comments

Window constraint satisfied.

=====

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.