

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6298 - L2 Version 5
Chandra X-Ray Center

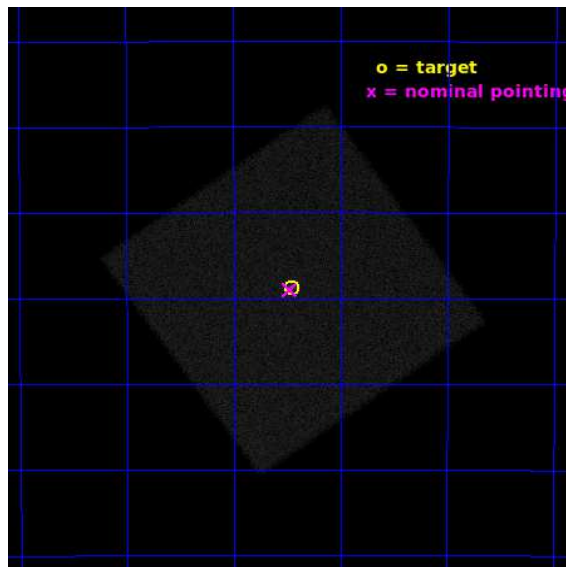
L2 Processing Date : Oct 8 2020

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1 Front

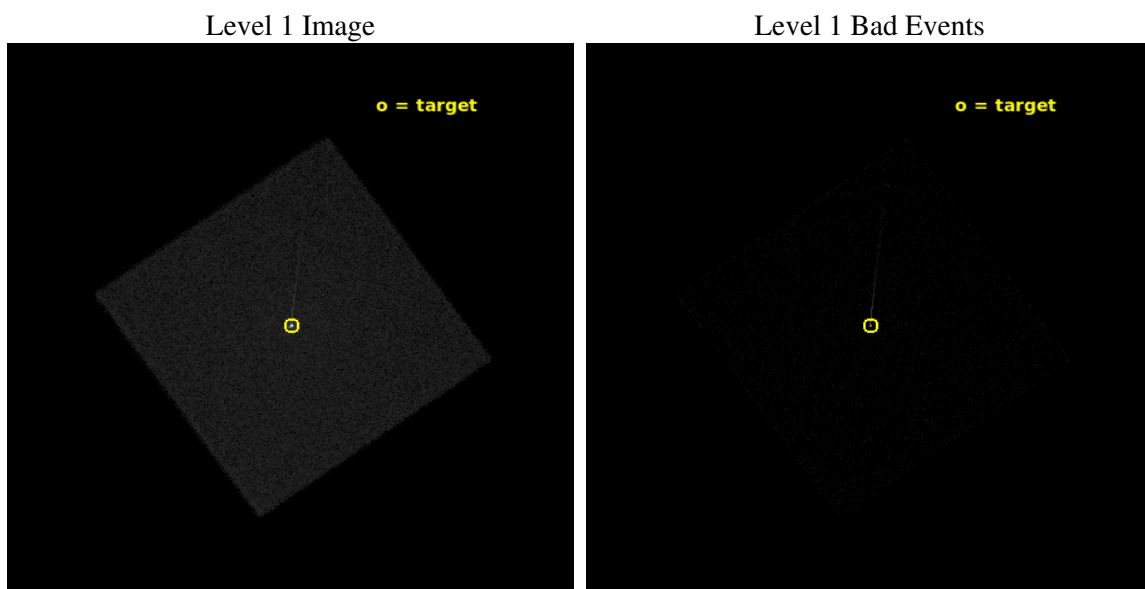
seq_num	400470	Sequence number
obs_id	6298	Observation id
title	Search for X-Ray Jets from a Millisecond Pulsar	Proposal title
observer	Deepto Chakrabarty	Principal investigator
object	SAX J1808.4-3658	Source name
ra_targ	272.114583	Observer's specified target RA [deg]
dec_targ	-36.978972	Observer's specified target Dec [deg]
ra_nom	272.11834342725	Nominal RA [deg]
dec_nom	-36.983372744164	Nominal Dec [deg]
roll_nom	9.7101593724662	Nominal Roll [deg]
revision	5	Processing version of data
ontime	4767.5314677358	[s]
livetime	4729.2628598348	Ontime multiplied by DTCOR
l2events	243268	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	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	4767.5314677358	[s]
caldbver	4.9.2	 	l1events	386631	Number of level 1 events
date	2020-10-09T00:41:26	Date and time of file creation			
revision	5	Processing version of data			

2.1.3 Events

Level 1 Events

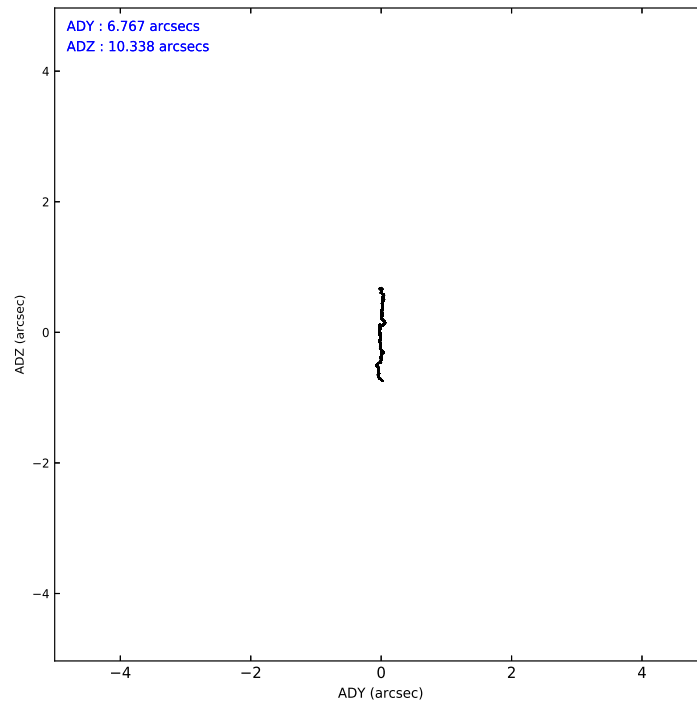
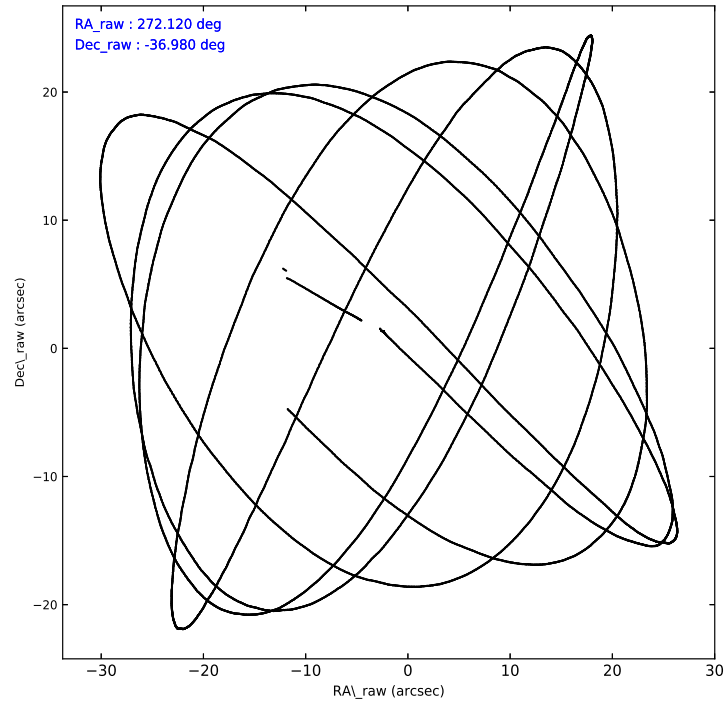
	segment 0
level 1 events	386631
rejected events	51446
rejected %	13%

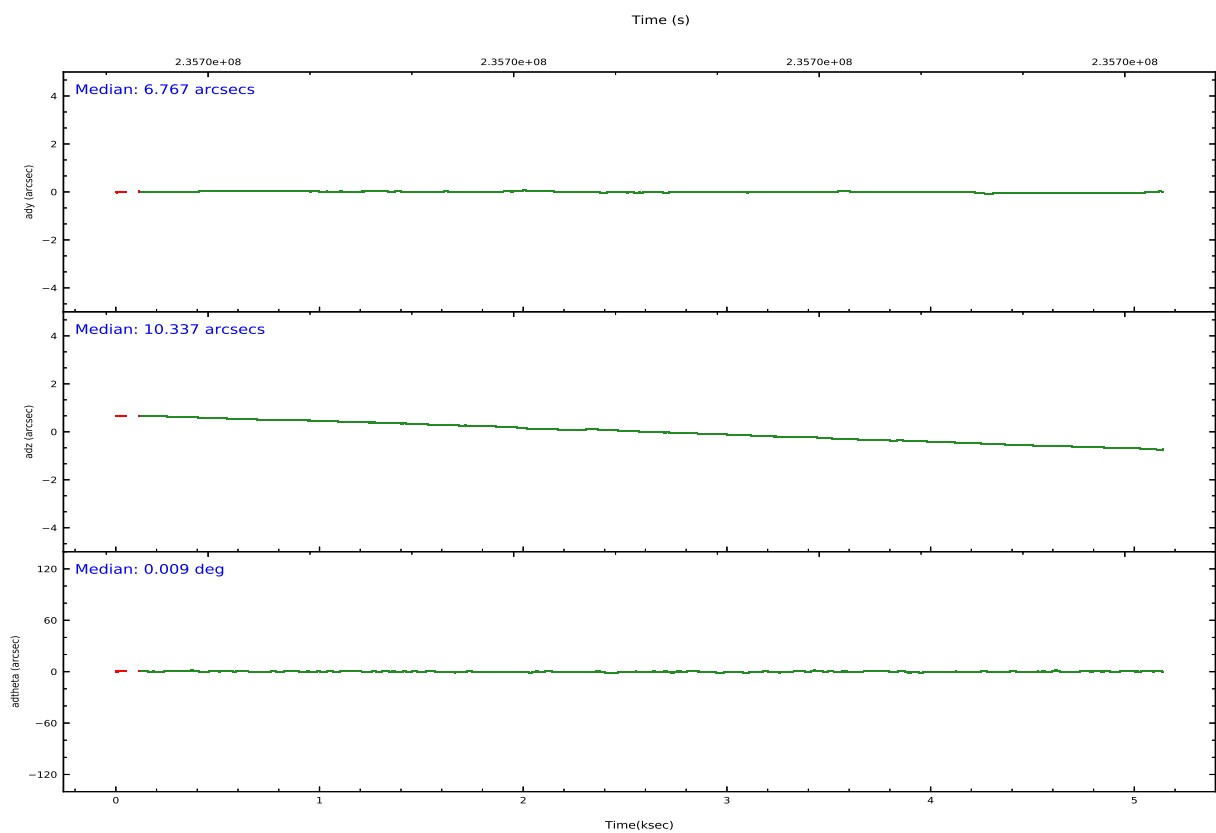
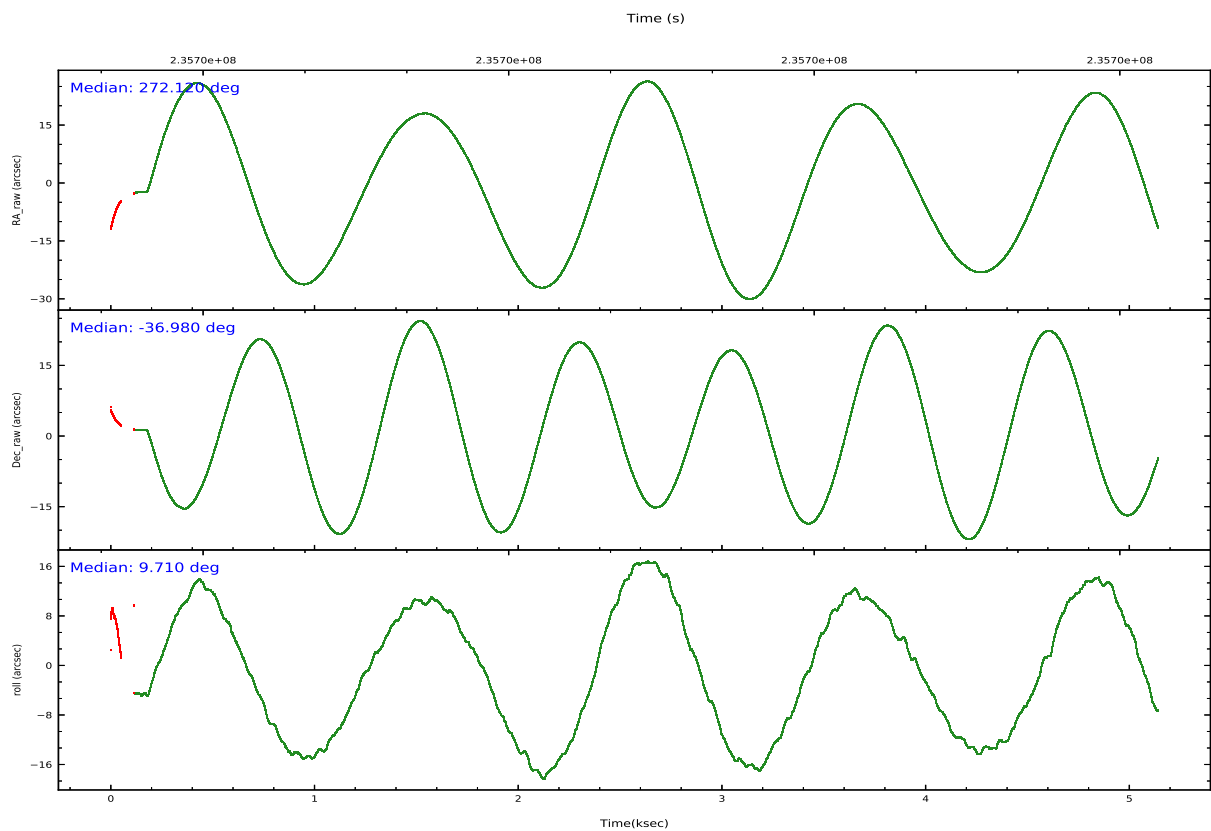
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-I	HRC-I
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
[deg] Pointing RA	272.094078	272.11834342725
[deg] Pointing Dec	-36.997696	-36.983372744164
[deg] Pointing Roll	9.802186	9.710159372466199
[mm] SIM focus pos	-1.040293	-1.038866356238299
[mm] SIM defocus	0	0.001426264420575141
[mm] SIM translation stage pos	126.985494	126.9829799899862
[mm] SIM translation stage offset	0	0.002508901615314585
[s] Observation start time (MET)	235697188.184000	235695882.04483
Observation start date	2005-06-20T23:25:24	2005-06-20T23:04:42
[s] Observation end time (MET)	235702188.184000	235703017.07016
Observation end date	2005-06-21T00:48:44	2005-06-21T01:03:37

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

2.3 Aspect



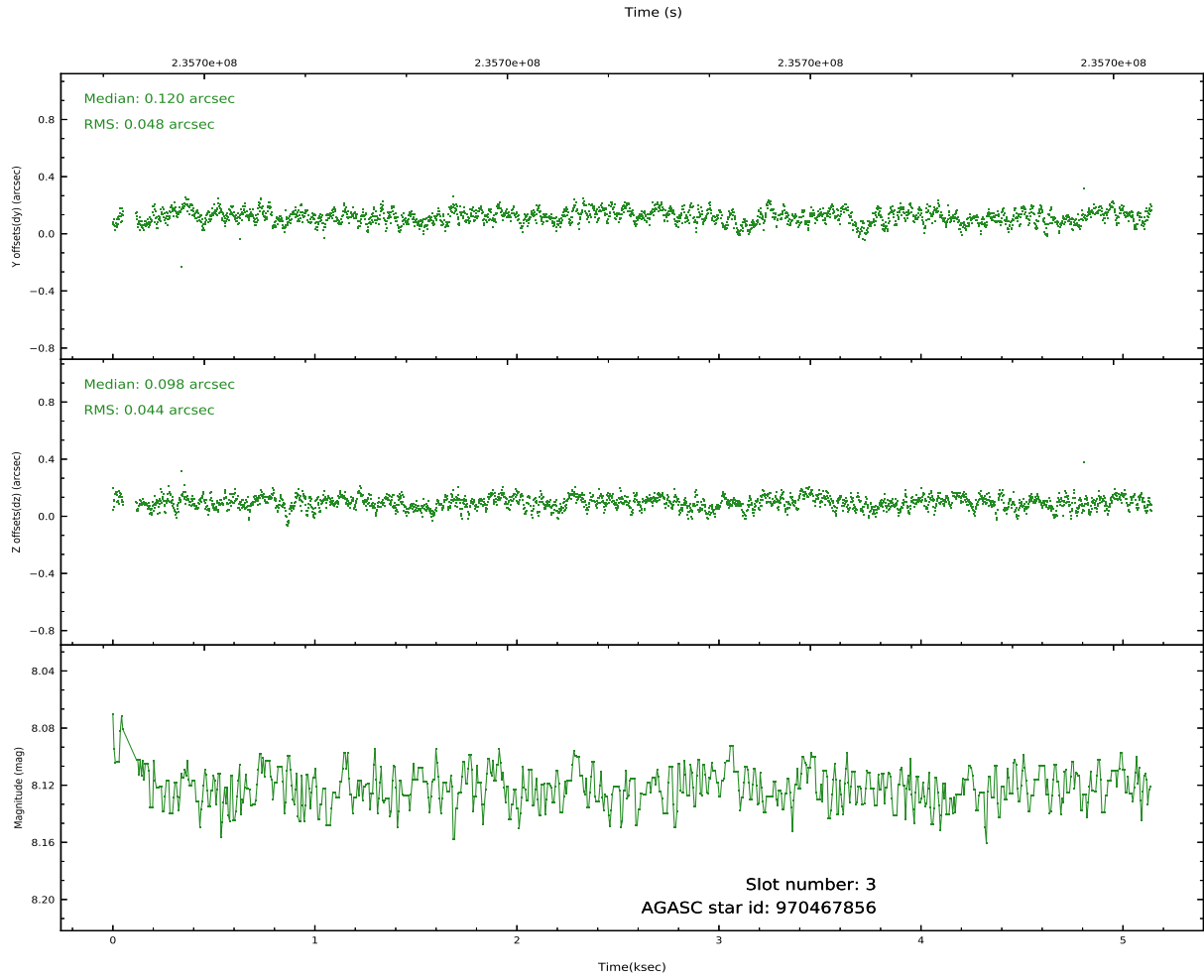
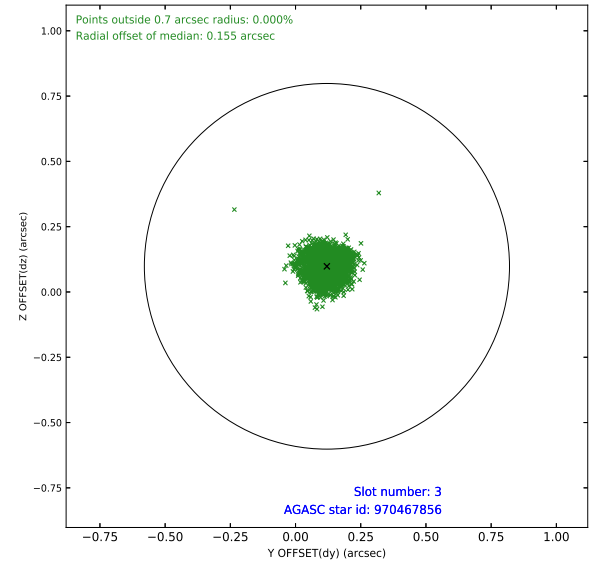
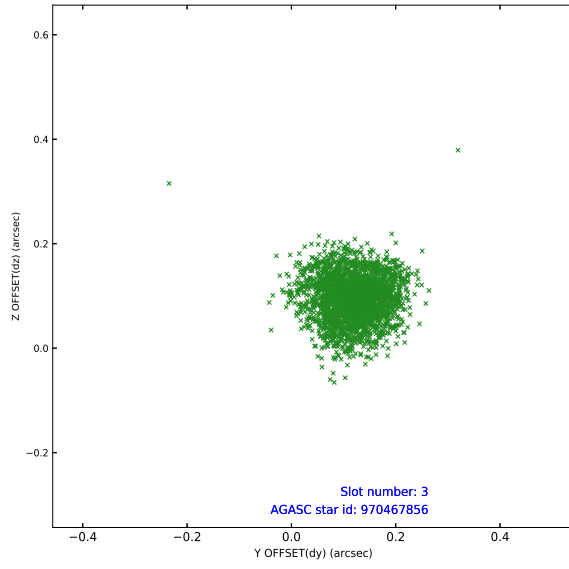


Slot Statistics

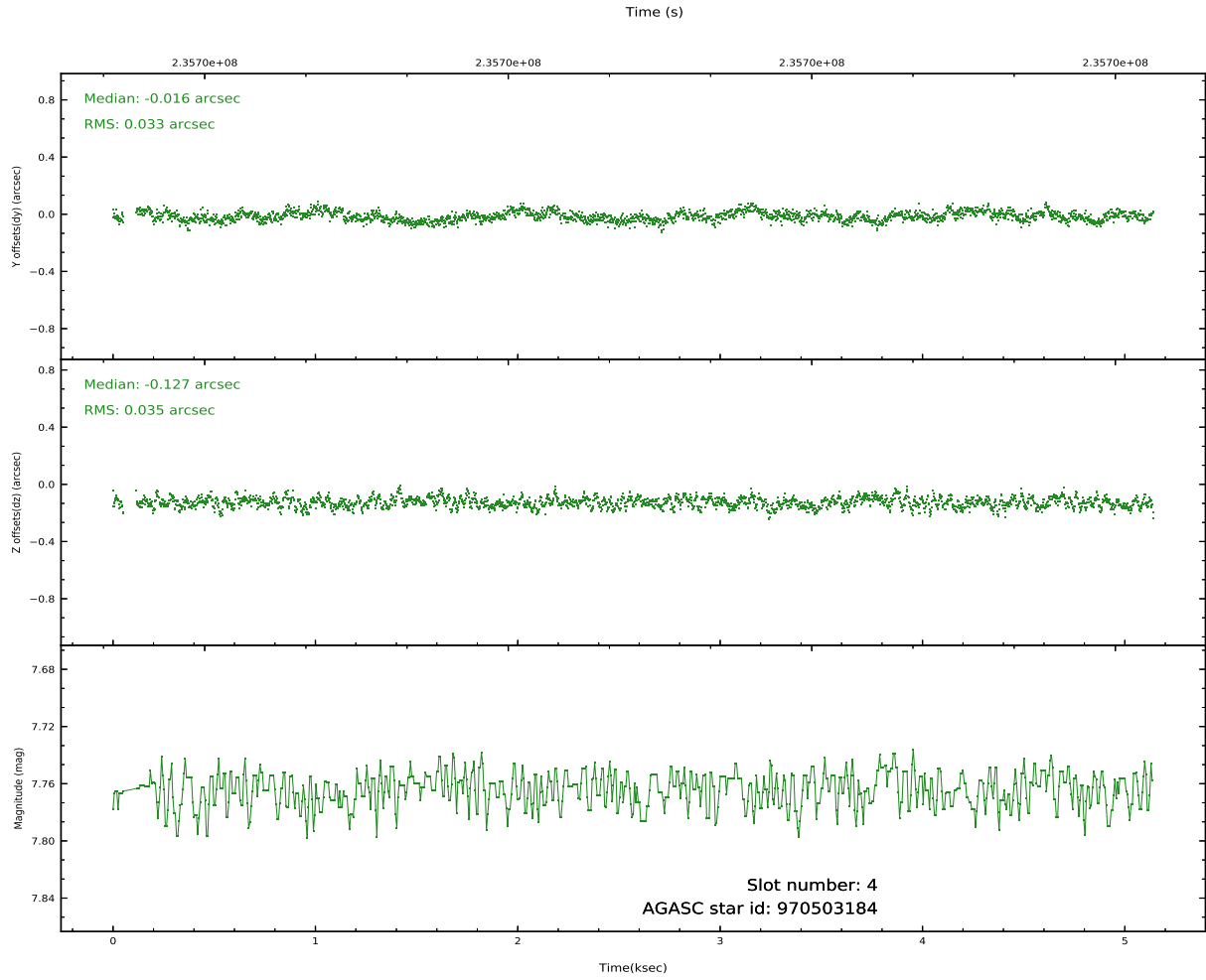
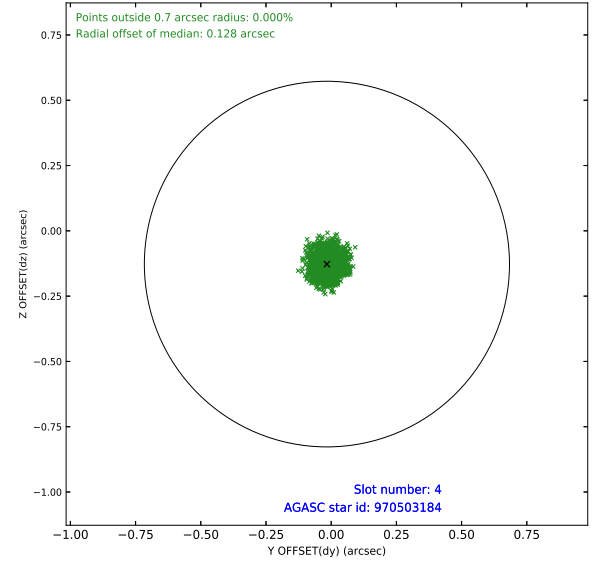
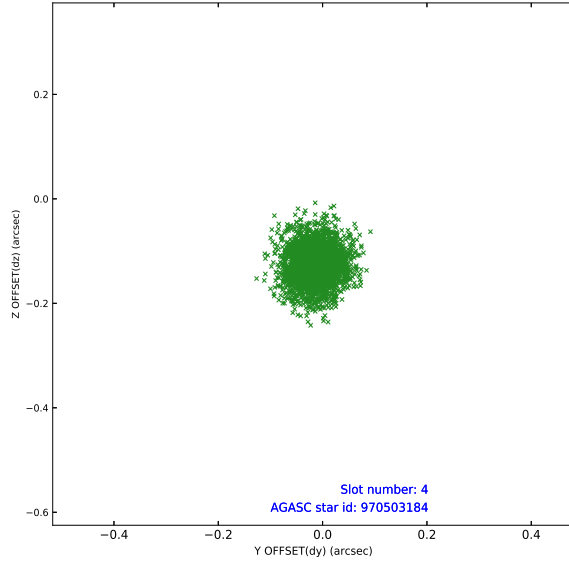
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		HRC-I-1	7.00	1240	1.000	-0.029	-0.050	0.015	0.023	0.000000	0.000000	-762.38	-1298
1	FID		HRC-I-3	7.09	1240	1.000	-0.049	-0.077	0.013	0.022	0.000000	0.000000	-1191.48	1005
2	FID		HRC-I-4	7.04	1240	1.000	0.192	0.036	0.008	0.014	0.000000	0.000000	1279.69	1004
3	GUIDE	used	970467856	8.12	2479	1.000	0.120	0.098	0.070	0.108	272.620241	-37.224567	1345.53	-1064
4	GUIDE	used	970503184	7.76	2479	1.000	-0.016	-0.127	0.051	0.083	272.399123	-36.777047	1001.22	632
5	GUIDE	used	970342184	6.70	2479	1.000	-0.080	0.012	0.050	0.078	271.387118	-37.471840	-2283.11	-1344
6	GUIDE	used	970375136	7.93	2478	1.000	-0.024	0.017	0.062	0.099	271.398909	-36.754910	-1830.41	1195
7	MONITOR	unused		0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0

2.4 Star Slots

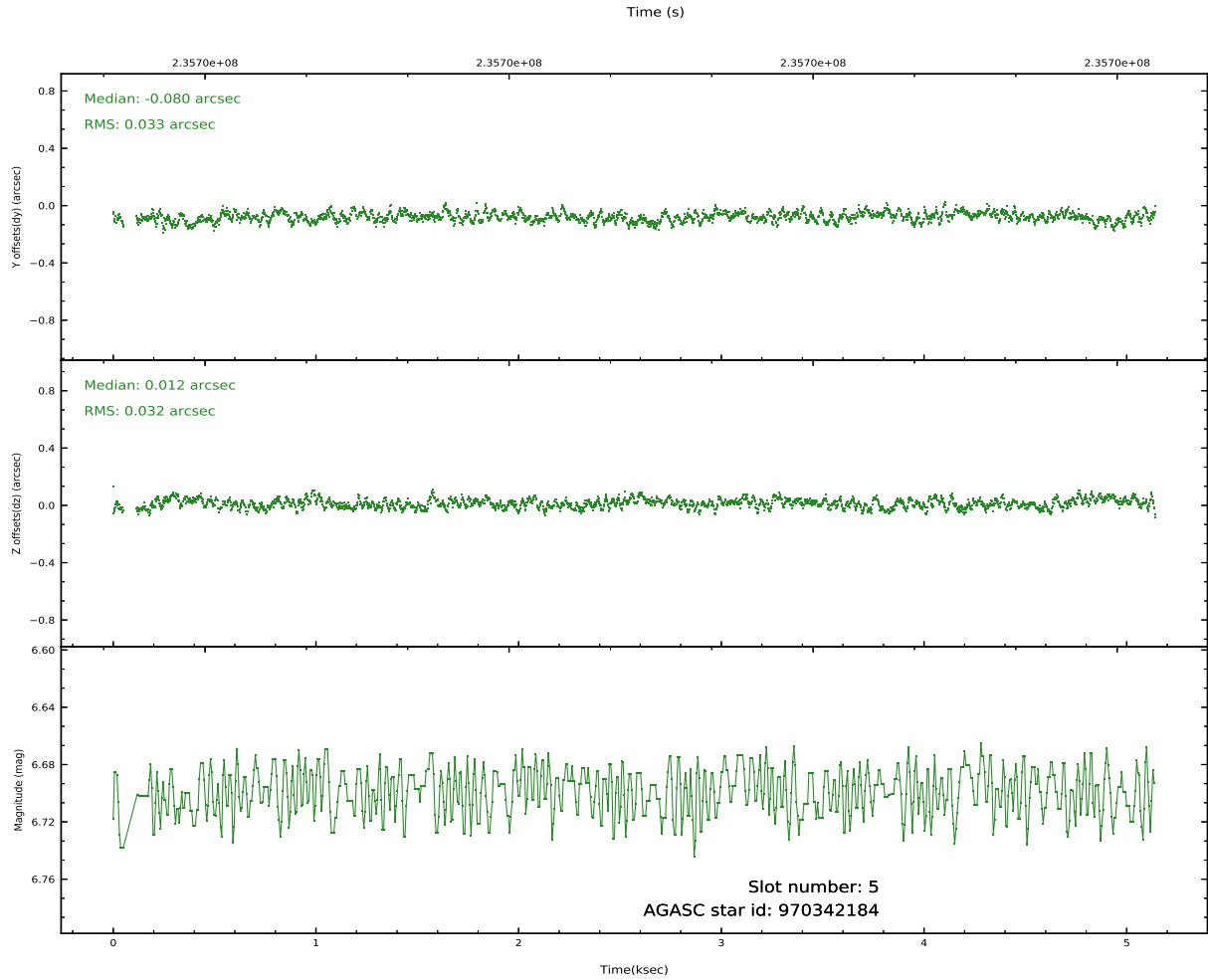
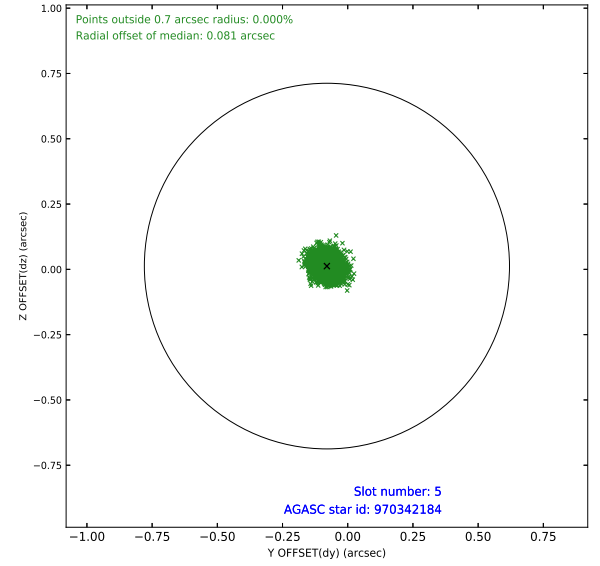
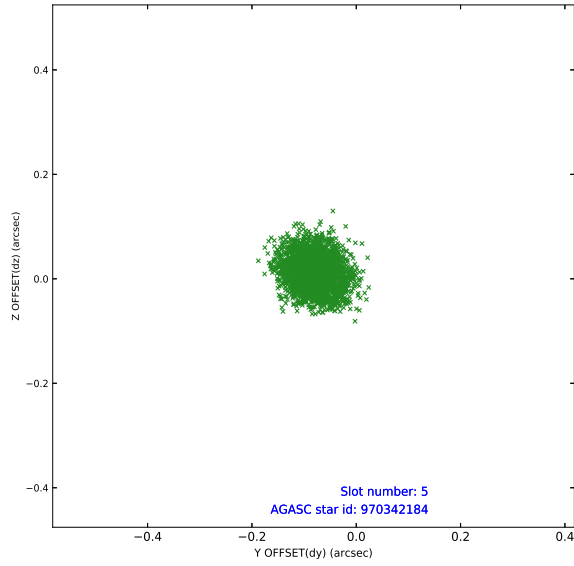
2.4.1 Slot 3



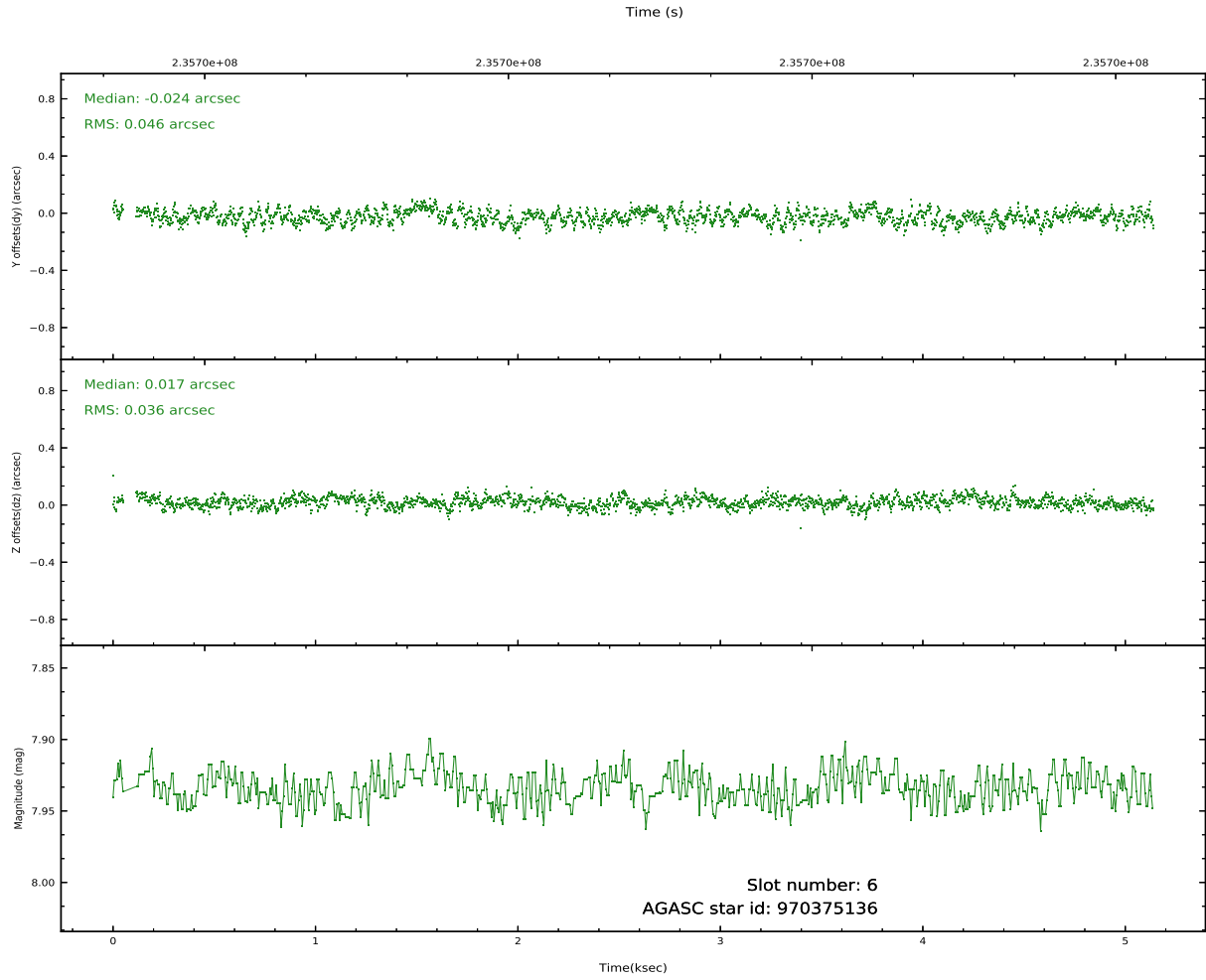
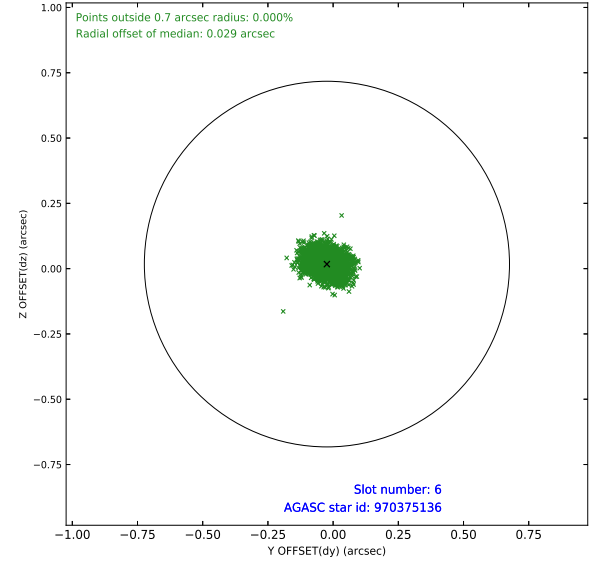
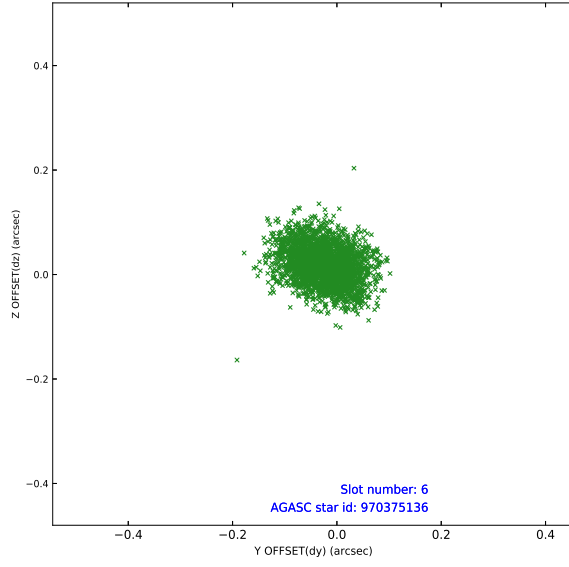
2.4.2 Slot 4



2.4.3 Slot 5

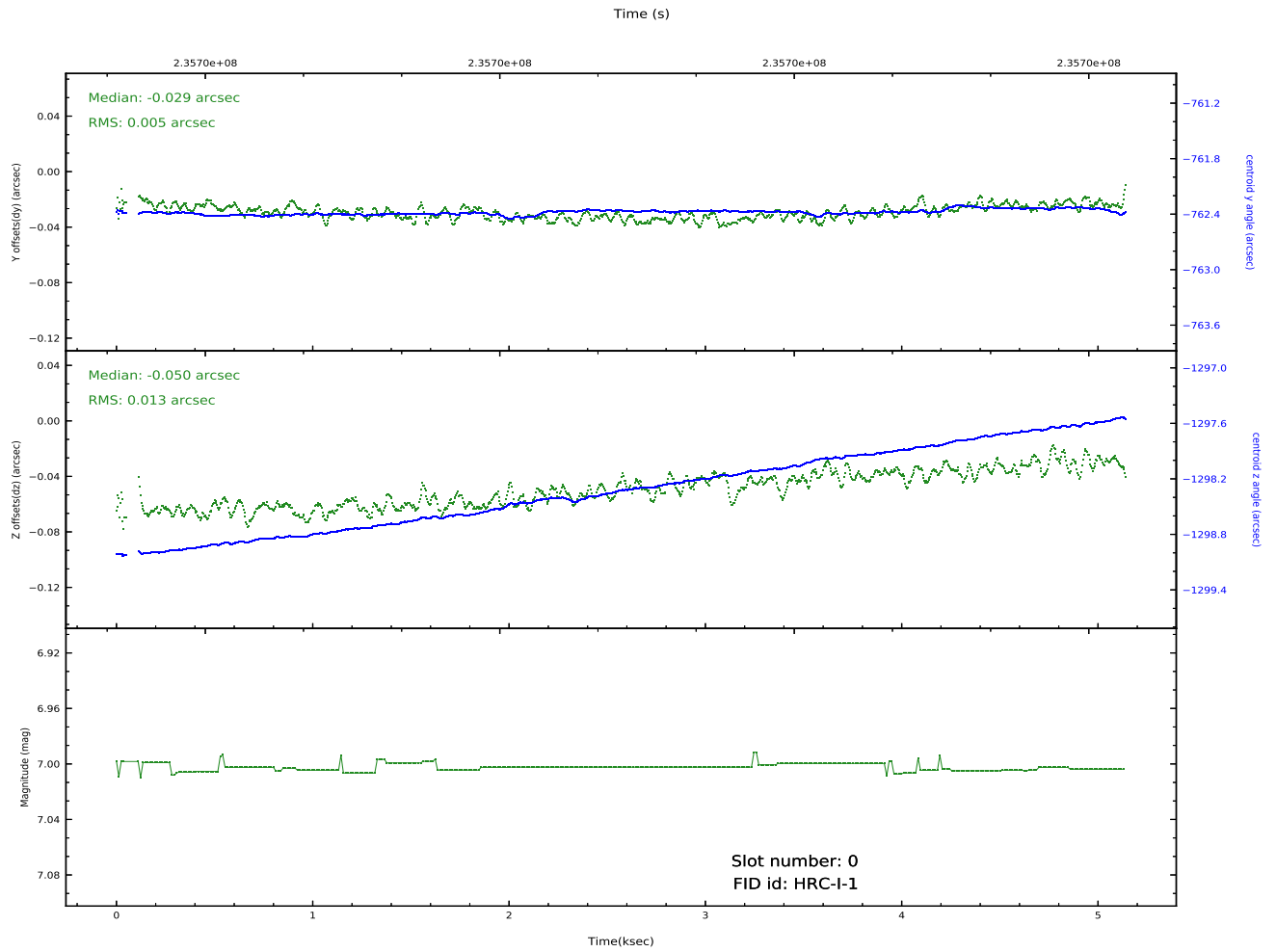
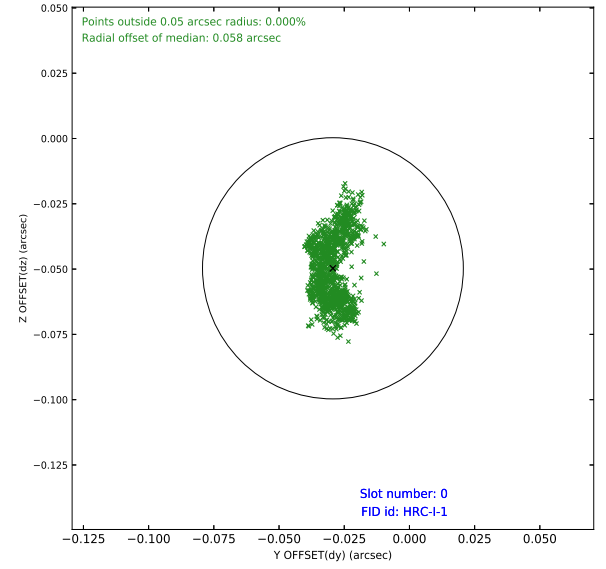
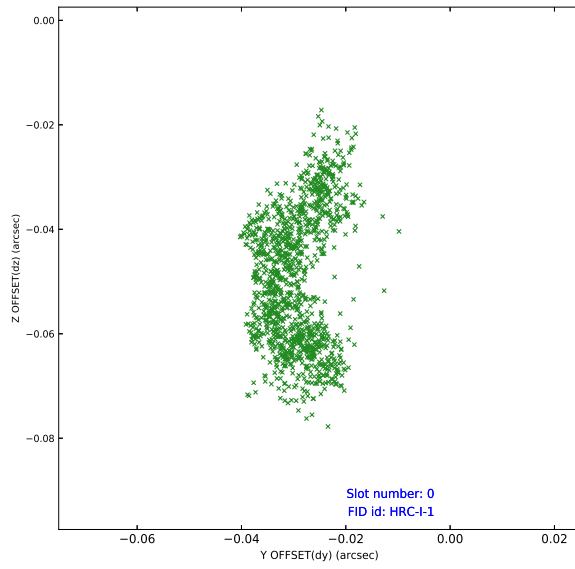


2.4.4 Slot 6

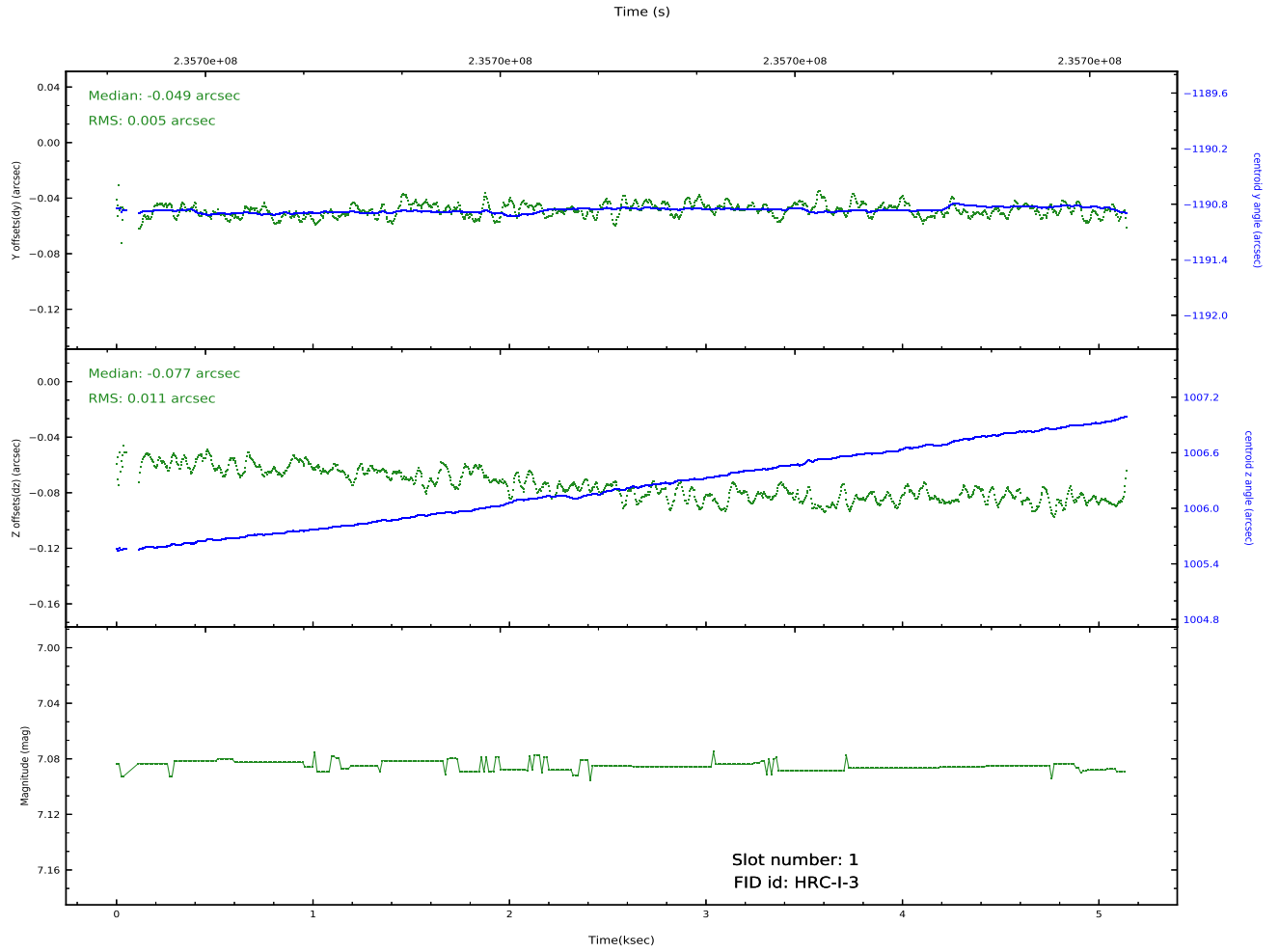
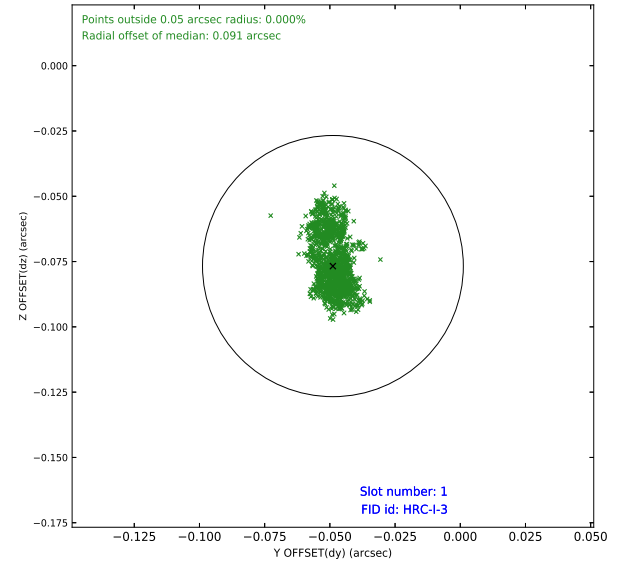
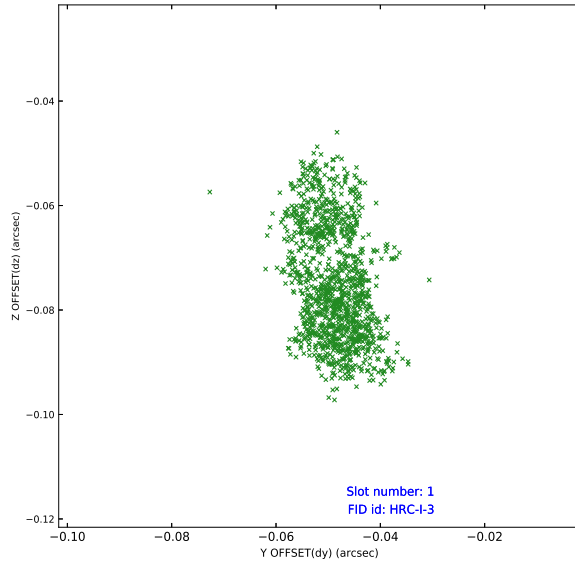


2.5 FID Slots

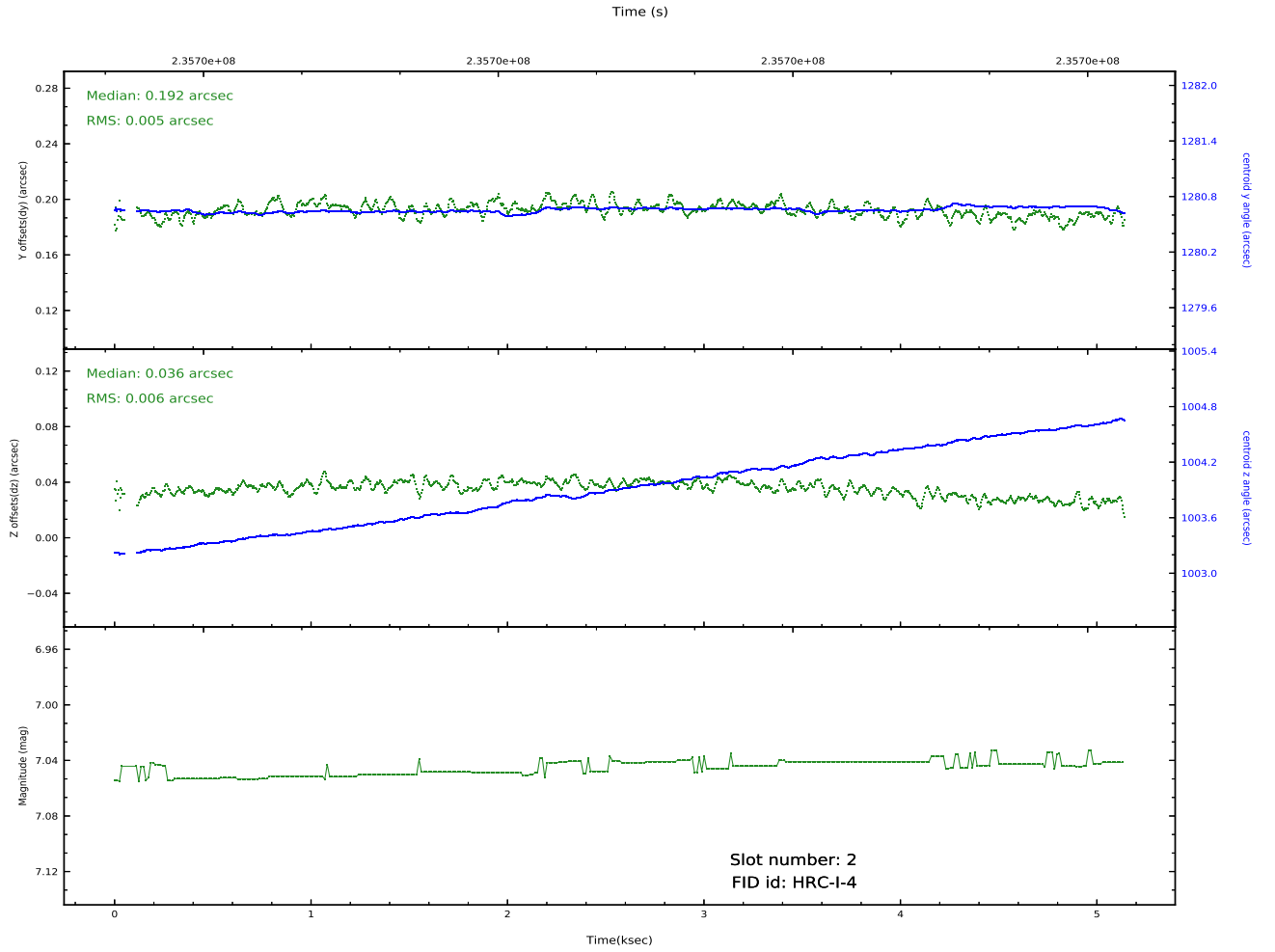
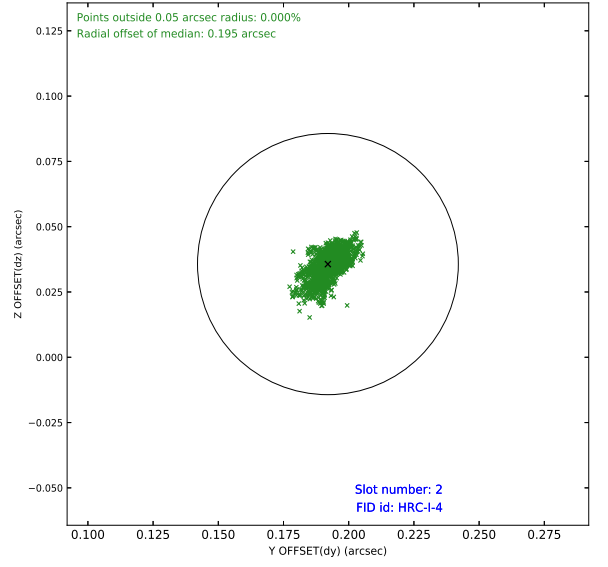
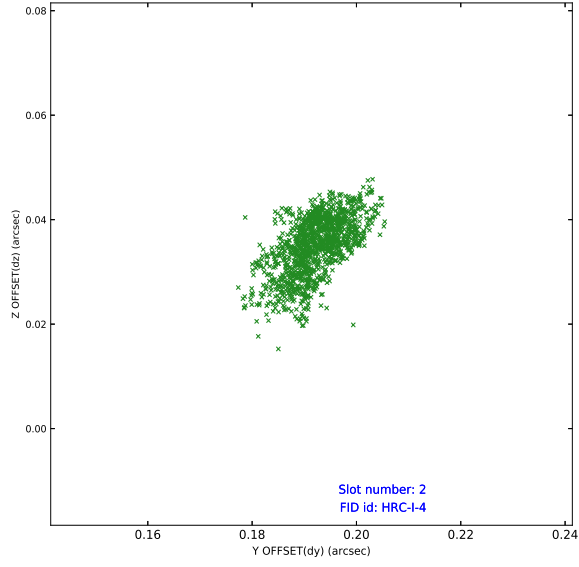
2.5.1 Slot 0



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)	2020.10.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.767531

A.2 Comments

The ACA has the capability to devote one or more of the eight image slots to "monitor" particular sky locations. This allows simultaneous optical photometry of one or more targets in the ACA field of view. These optical sources can be slightly fainter than the ACA guide star limit of $m_{ACA} = 10.2$ mag. The bright-end limit for monitor star photometry is $m_{ACA}=6.2$ mag. However, since there are a fixed number of image slots, devoting a slot to photometry instead of tracking a guide star results in a degradation of the image reconstruction and celestial location accuracy (Section 5.4). Using one monitor slot represents a 15 - 25% increase in the aspect image reconstruction RMS diameter, depending on the particular guide star configuration. Two monitor slots would increase the diameter by about 50 - 60%, but this configuration is not operationally allowed under normal circumstances. The photometric accuracy which can be achieved depends primarily on the star magnitude, integration time, CCD dark current, CCD read noise, sky background, and the CCD dark current uncertainty.