

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6149 - L2 Version 4
Chandra X-Ray Center

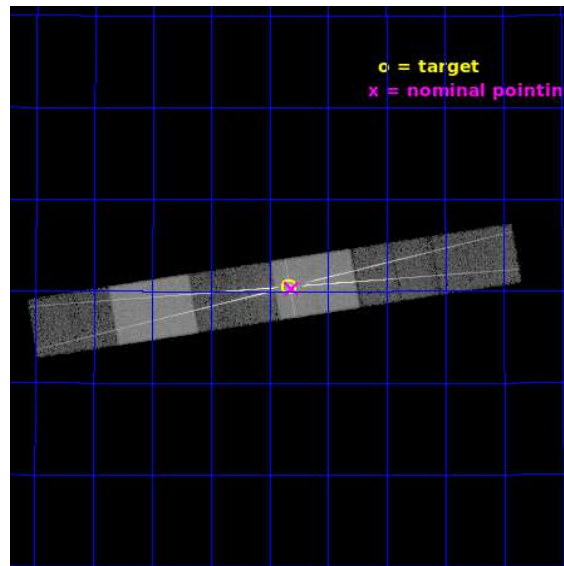
L2 Processing Date : Oct 5 2020

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1 Front

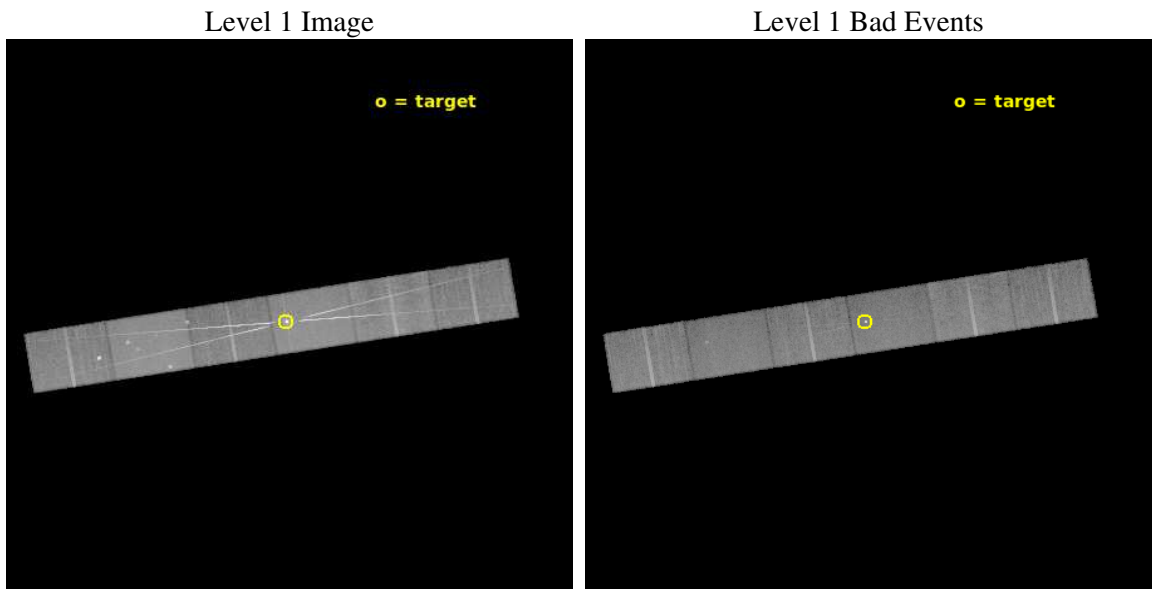
seq_num	400367	Sequence number
obs_id	6149	Observation id
title	Using the Intensity Dips in Hercules X-1 to Probe the Inner Accretion Disk	Proposal title
observer	Dr. Mario Jimenez-Garate	Principal investigator
object	Her X-1	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	254.4575	Observer's specified target RA [deg]
dec_targ	35.342389	Observer's specified target Dec [deg]
ra_nom	254.45219723412	Nominal RA [deg]
dec_nom	35.337976854476	Nominal Dec [deg]
roll_nom	350.70752192274	Nominal Roll [deg]
revision	4	Processing version of data
ontime	22140.0	Sum of GTIs [s]
livetime	21782.419796619	Livetime [s]
ontime4	22140.0	Sum of GTIs [s]
ontime5	22140.0	Sum of GTIs [s]
ontime6	22140.0	Sum of GTIs [s]
ontime7	22140.0	Sum of GTIs [s]
ontime8	22140.0	Sum of GTIs [s]
ontime9	22140.0	Sum of GTIs [s]
l2events	353351	Number of level 2 events



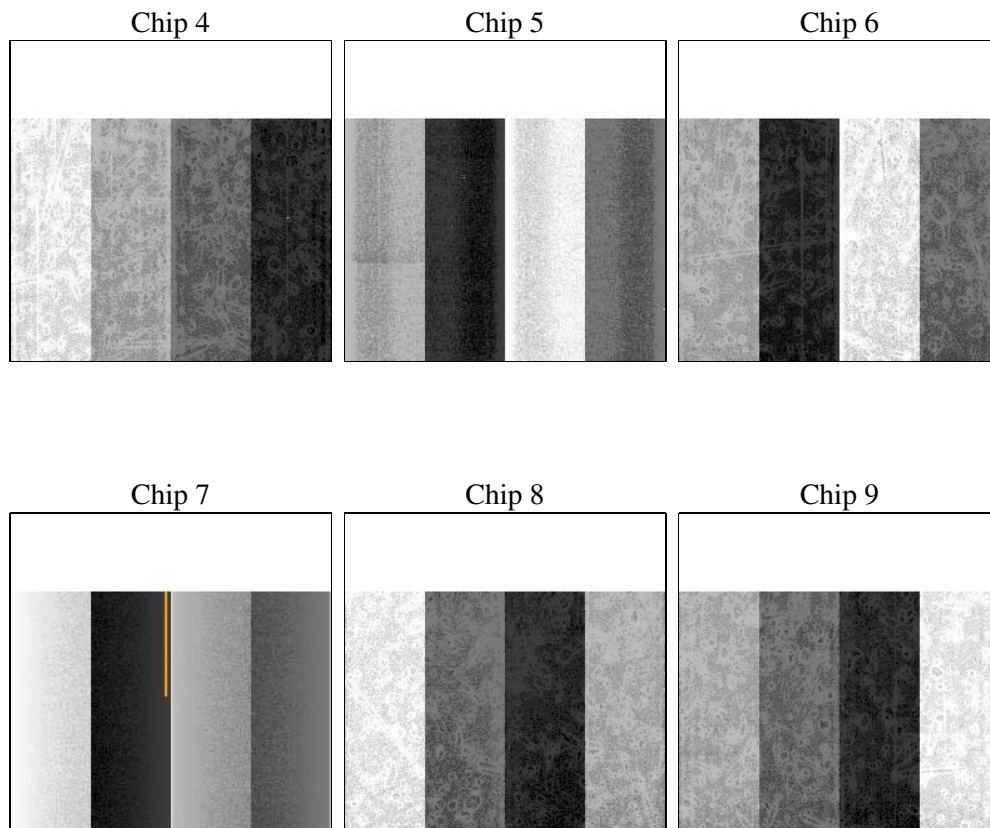
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	22000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	22140.0	Sum of GTIs [s]
caldbver	4.9.2	 	ontime4	22140.0	Sum of GTIs [s]
date	2020-10-05T08:57:37	Date and time of file creation	ontime5	22140.0	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	22140.0	Sum of GTIs [s]
			ontime7	22140.0	Sum of GTIs [s]
			ontime8	22140.0	Sum of GTIs [s]
			ontime9	22140.0	Sum of GTIs [s]
			l1events	1137808	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
				14061.37	

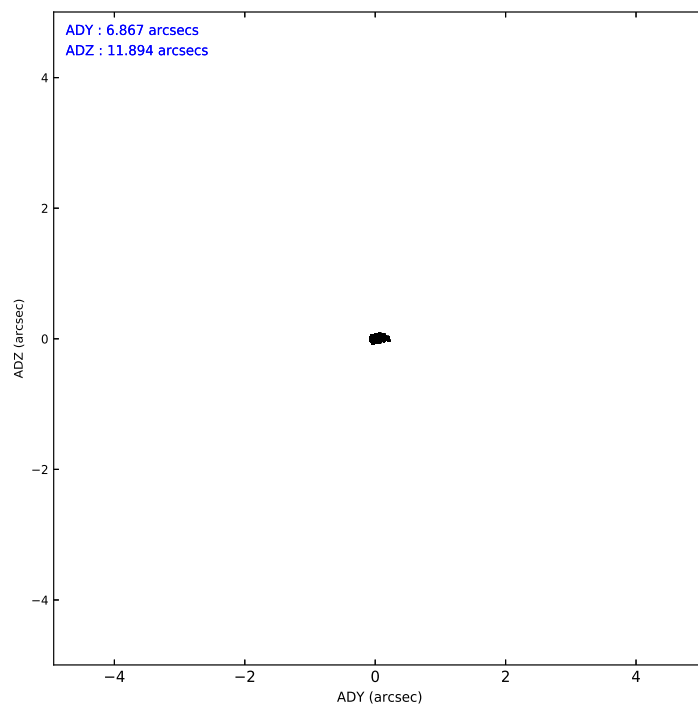
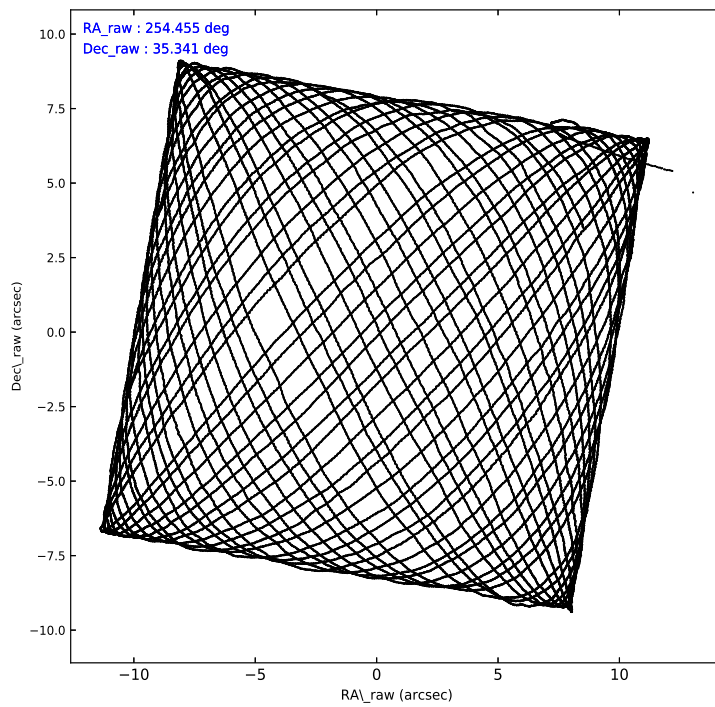
2.1.4 Events

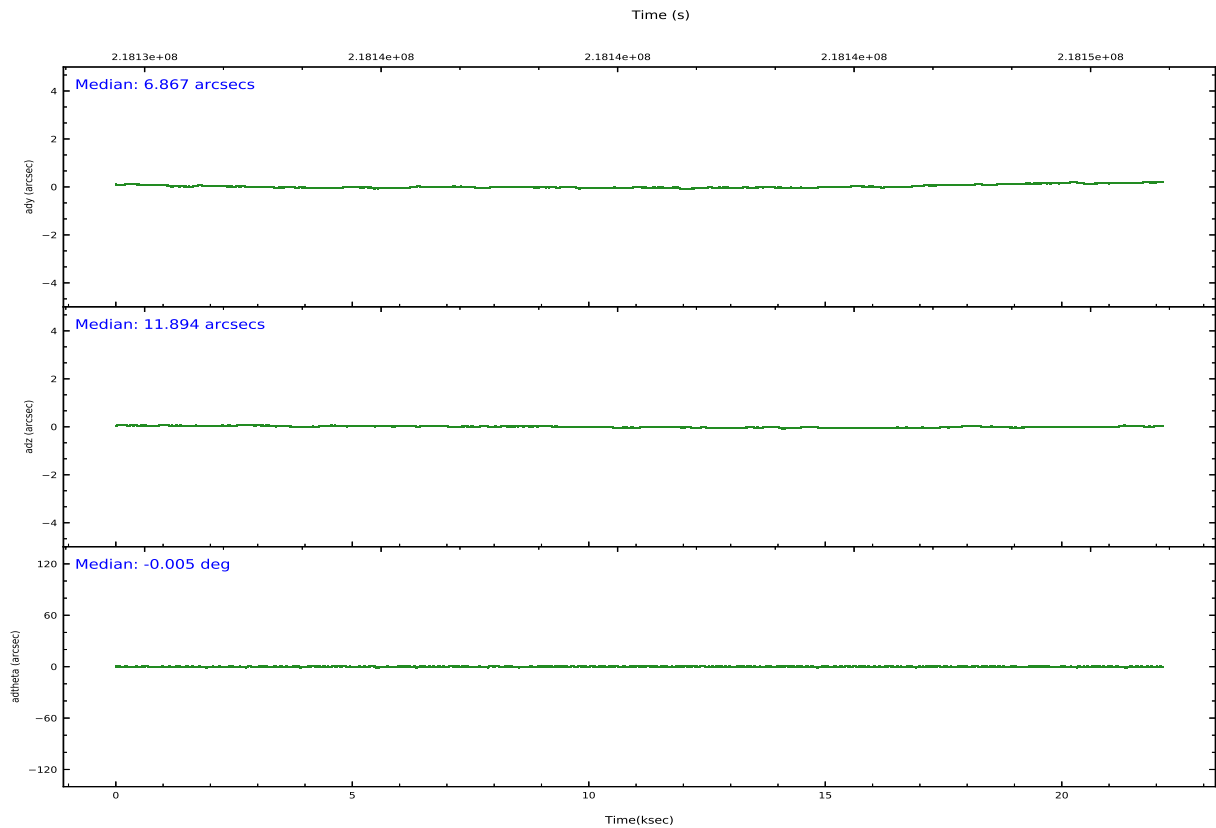
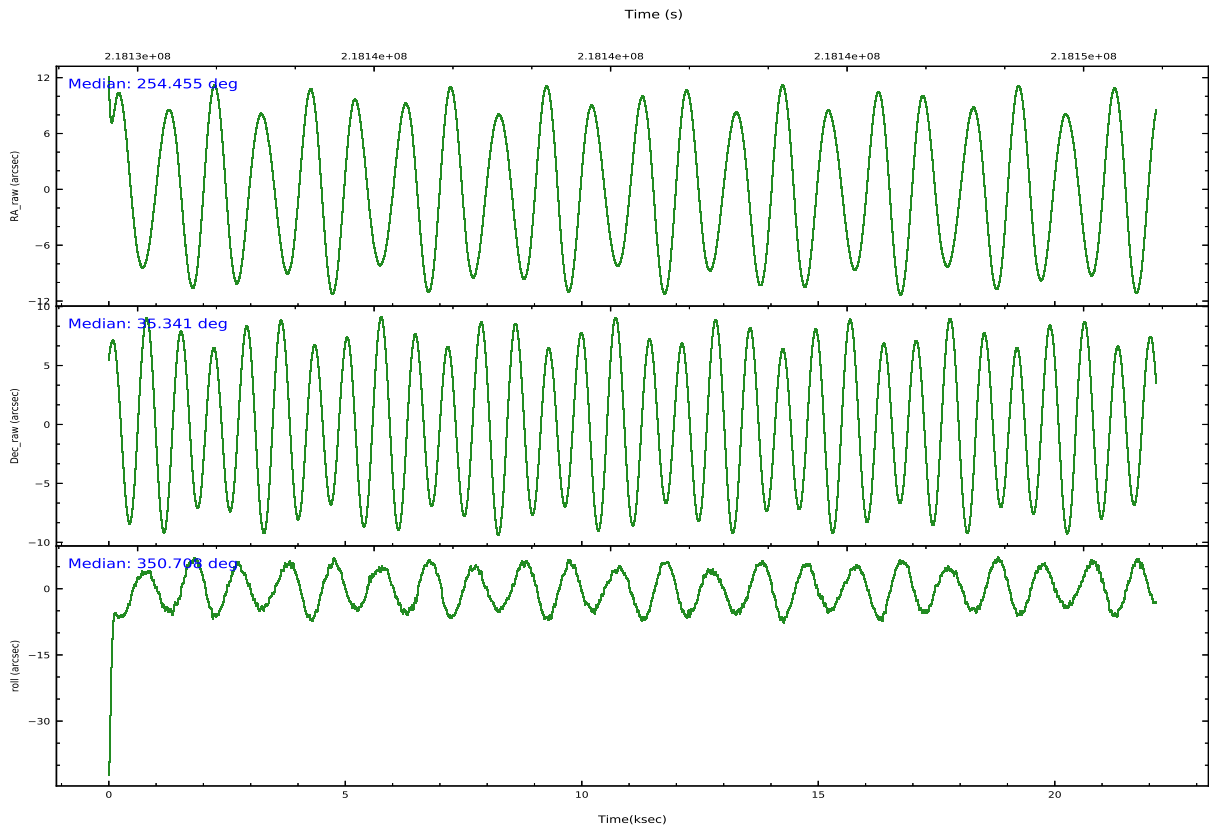
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	160798	215837	186345	248107	190274	136447	grade 0 events	17065	17182	42265	21400	25573	9910
rejected events	134333	112205	120775	111745	137060	116429		10%	7%	22%	8%	13%	7%
rejected %	83%	51%	64%	45%	72%	85%	grade 1 events	148	636	314	488	184	75
								0%	0%	0%	0%	0%	0%
							grade 2 events	3829	29633	9887	30331	9916	3639
								2%	13%	5%	12%	5%	2%
							grade 3 events	1911	5545	3861	13384	4429	1879
								1%	2%	2%	5%	2%	1%
							grade 4 events	1783	5373	3860	13594	4239	1834
								1%	2%	2%	5%	2%	1%
							grade 5 events	5741	15397	6344	18568	8207	6445
								3%	7%	3%	7%	4%	4%
							grade 6 events	2785	49280	6631	60555	10286	3308
								1%	22%	3%	24%	5%	2%
							grade 7 events	127536	92791	113183	89787	127440	109357
								79%	42%	60%	36%	66%	80%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	254.424260	254.45219723412	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	35.331013	35.337976854476	Subarray start row	1	1
[deg] Pointing Roll	350.565668	350.70752192274	Subarray row count	774	774
[s] Window start time (MET)	218125864.184000	218125864.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	218152864.184000	218152864.184000	[s] Primary exposure time	0.000000	2.5
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-187.132523	-187.1254020033014			
[mm] SIM translation stage offset	-3	-3.007120579706367			
Phase constraints	Y	Y			
[d] Phase period	1.700167	1.700167			
[d] Phase epoch (MJD)	51310.760000	51310.760000			
Phase start	0.750000	0.750000			
Phase end	0.900000	0.900000			
Phase start error	0.020000	0.020000			
Phase end error	0.010000	0.010000			
[s] Observation start time (MET)	218129534.184000	218128061.84861			
Observation start date	2004-11-29T15:31:10	2004-11-29T15:07:41			
[s] Observation end time (MET)	218151534.184000	218152489.64971			

2.3 Aspect



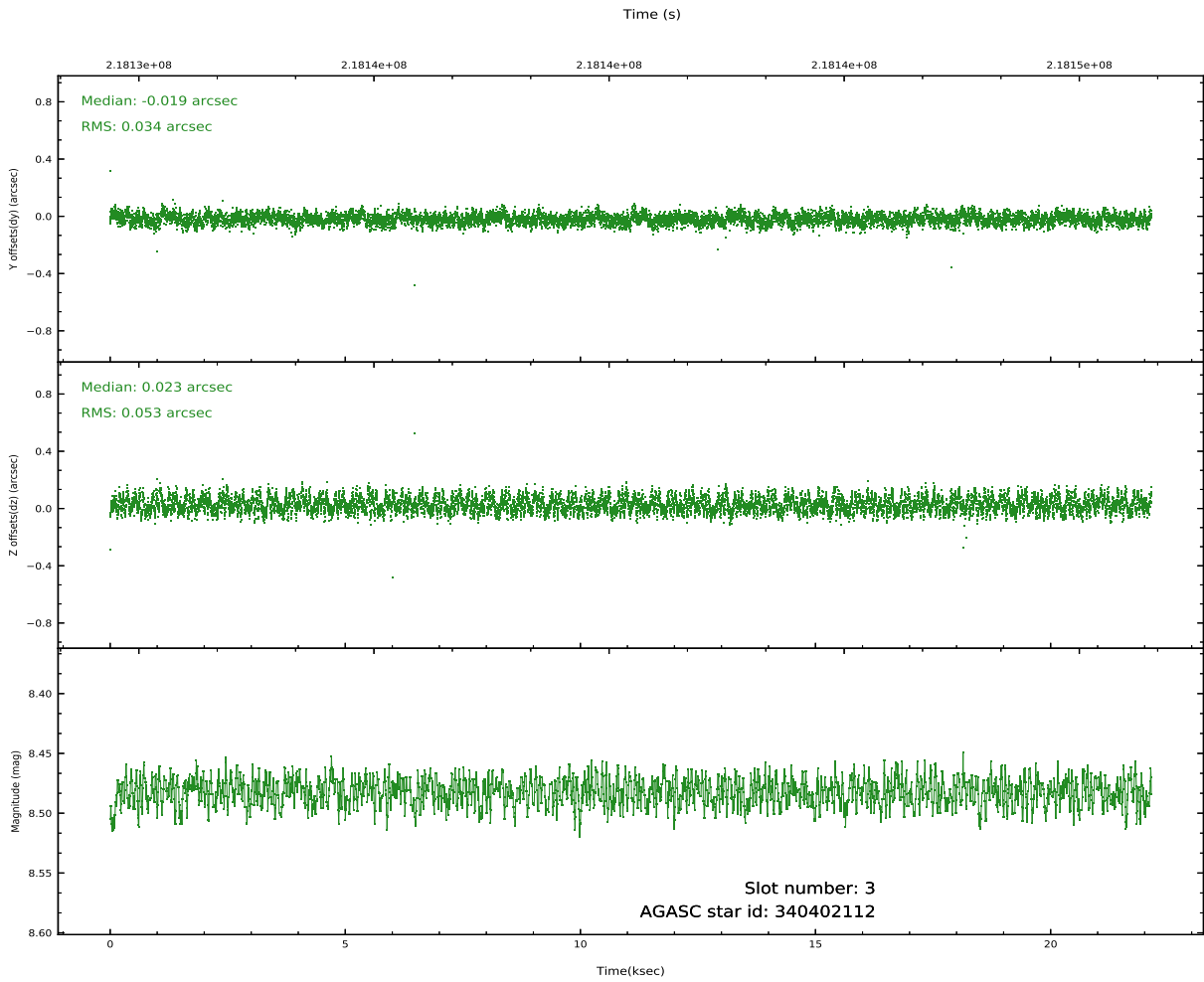
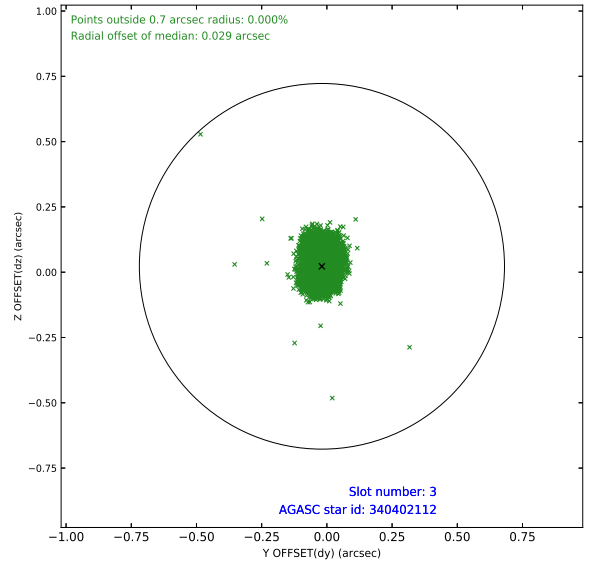
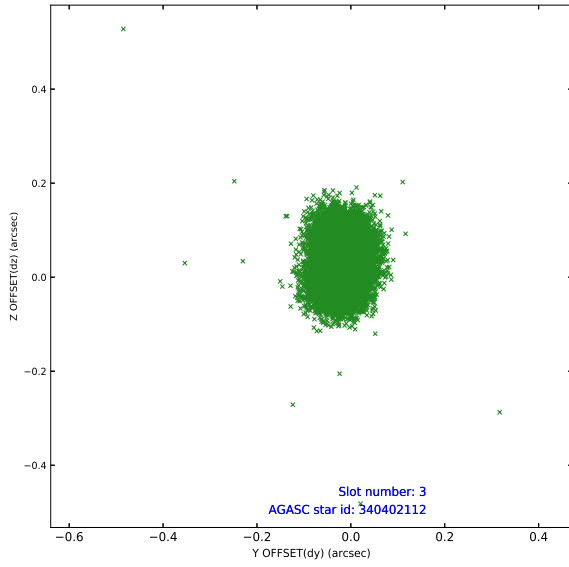


Slot Statistics

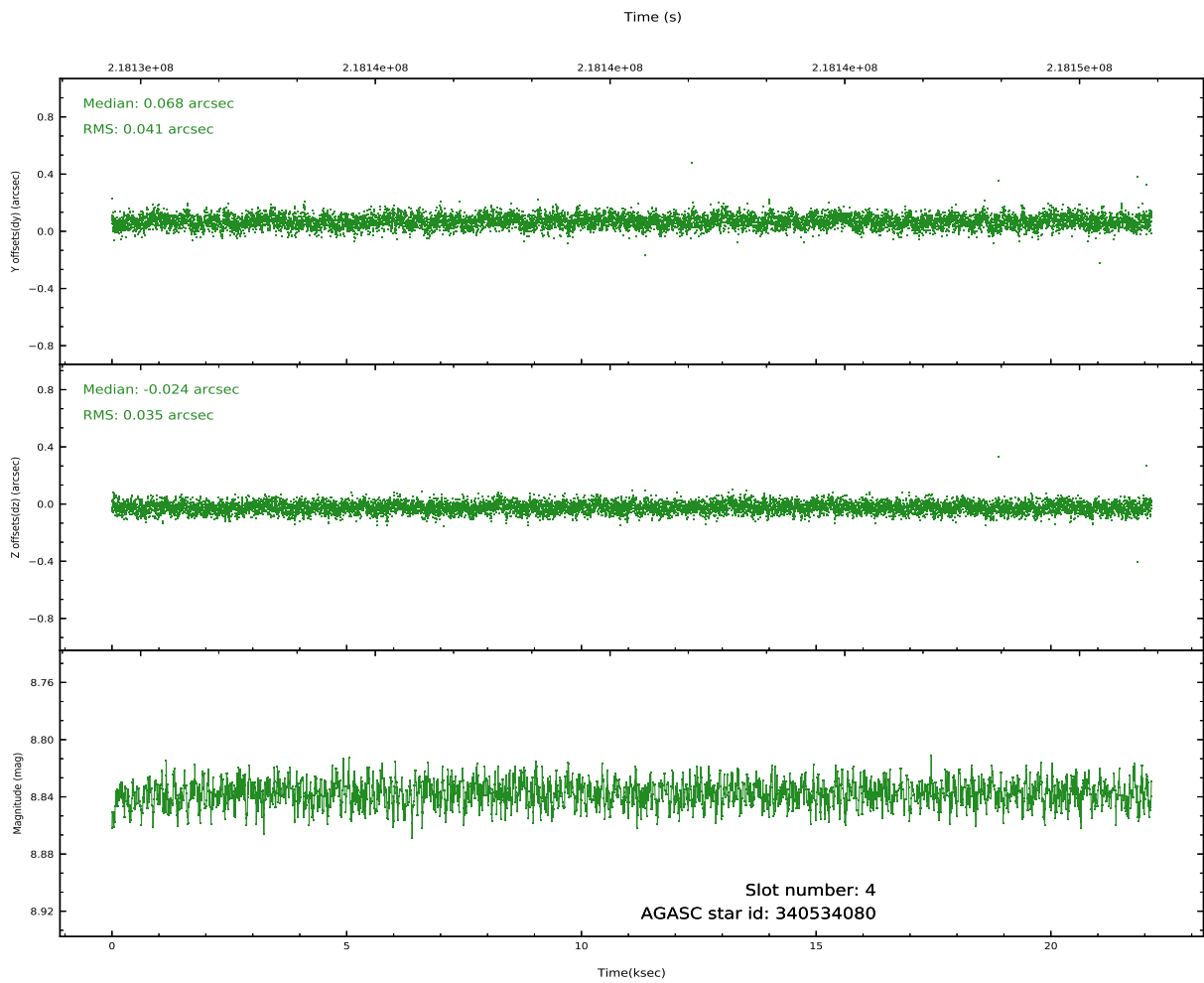
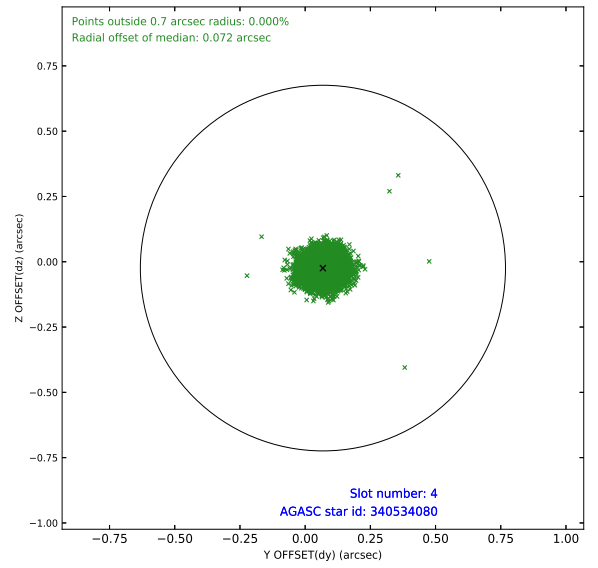
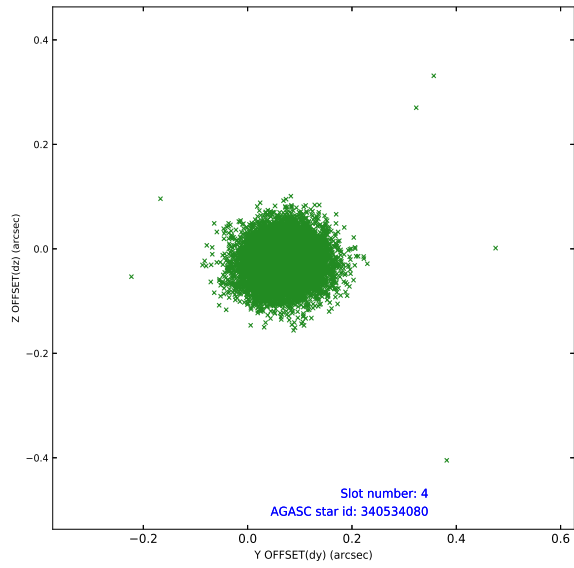
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.09	5401	1.000	-0.095	-0.118	0.007	0.011	0.000000	0.000000	-759.49	-1795
1	FID		ACIS-S-4	7.18	5401	1.000	0.158	0.078	0.006	0.011	0.000000	0.000000	2153.93	113
2	FID		ACIS-S-5	7.23	5402	1.000	-0.093	0.049	0.007	0.011	0.000000	0.000000	-1812.17	106
3	GUIDE	used	340402112	8.48	10799	1.000	-0.019	0.023	0.067	0.106	253.640936	34.860529	-2006.21	-2041
4	GUIDE	used	340534080	8.84	10800	1.000	0.068	-0.024	0.057	0.093	255.228954	35.471551	2243.02	895
5	GUIDE	used	340536192	7.73	10797	1.000	0.022	0.058	0.050	0.081	254.294567	35.286536	-349.24	-220
6	GUIDE	used	340401120	8.17	10800	1.000	0.027	-0.047	0.057	0.092	253.574895	35.128140	-2348.56	-1120
7	GUIDE	used	340534896	8.59	10795	1.000	-0.096	-0.011	0.059	0.094	255.288450	35.541682	2371.02	1174

2.4 Star Slots

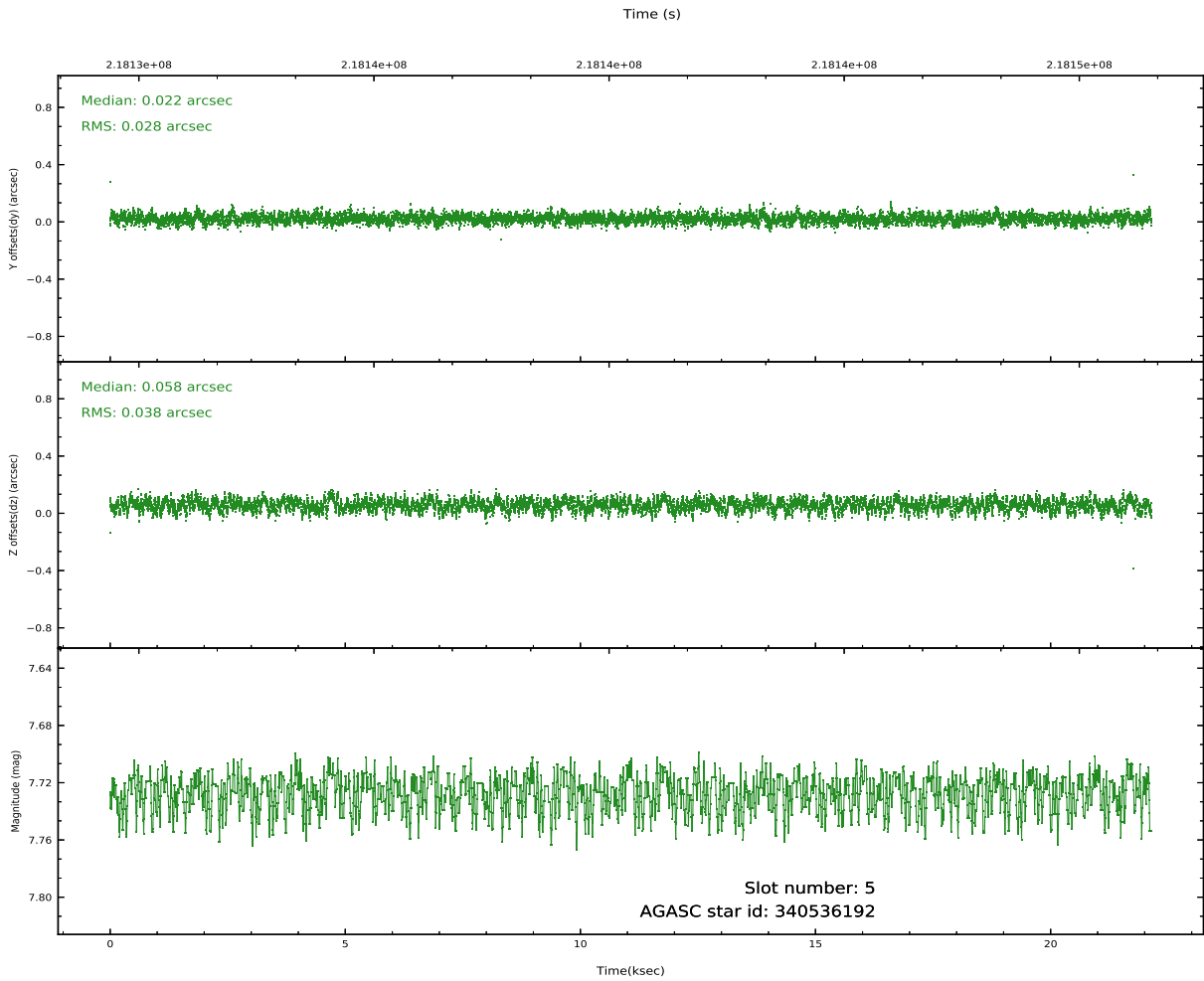
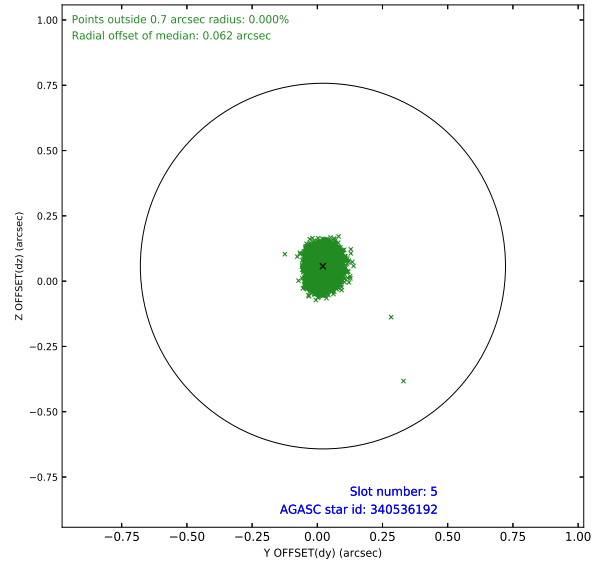
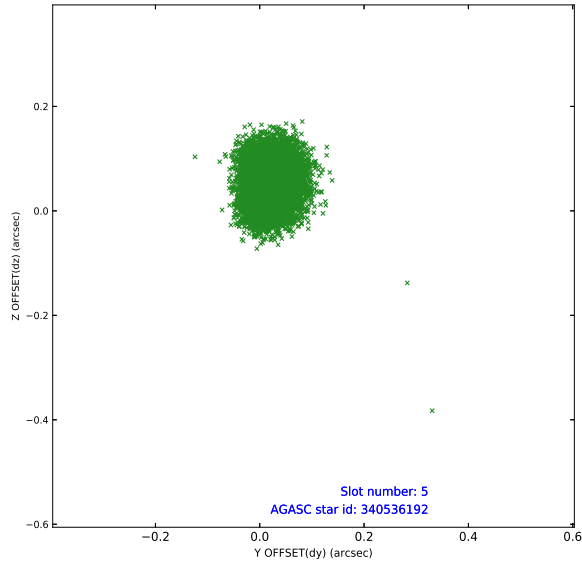
2.4.1 Slot 3



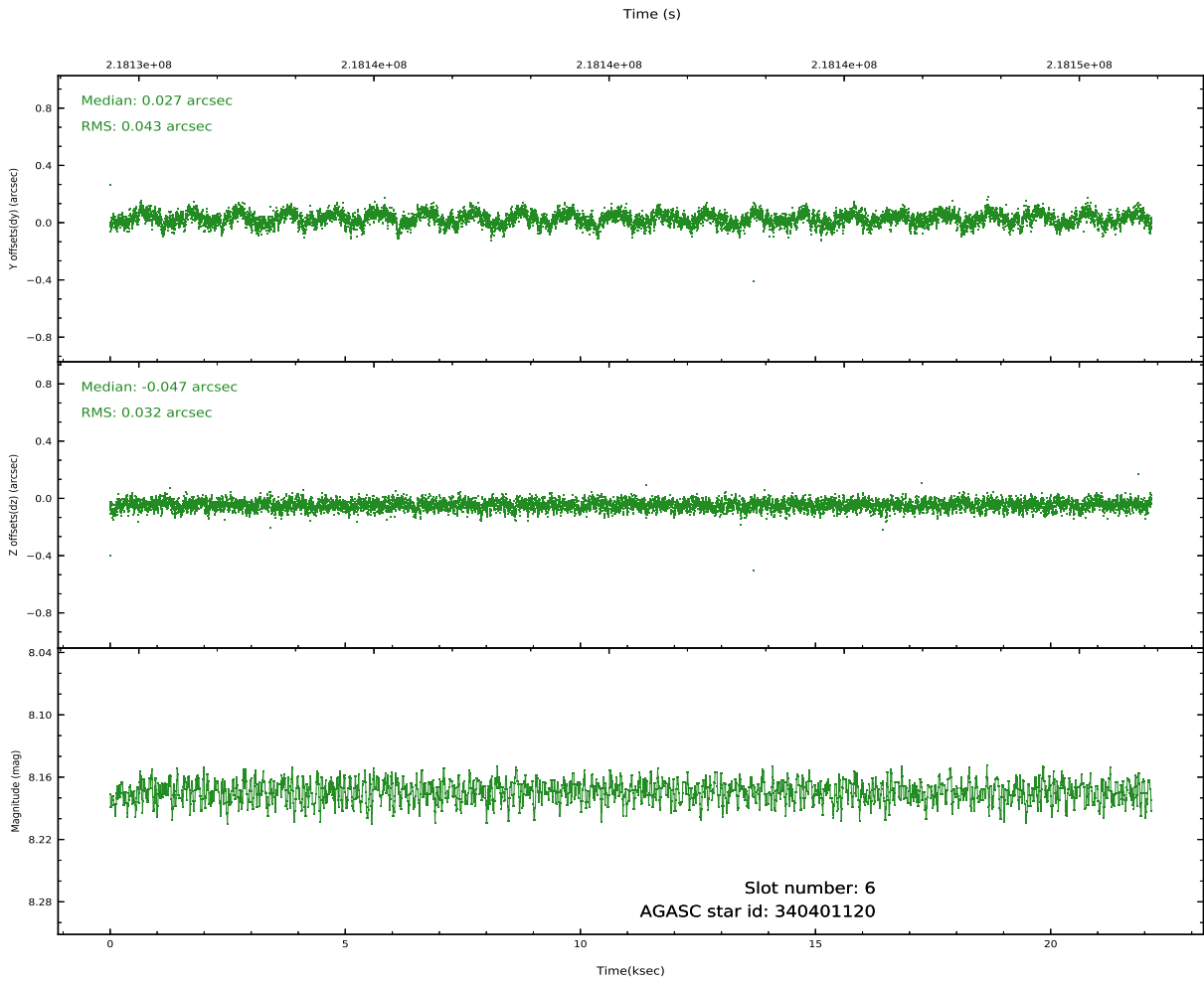
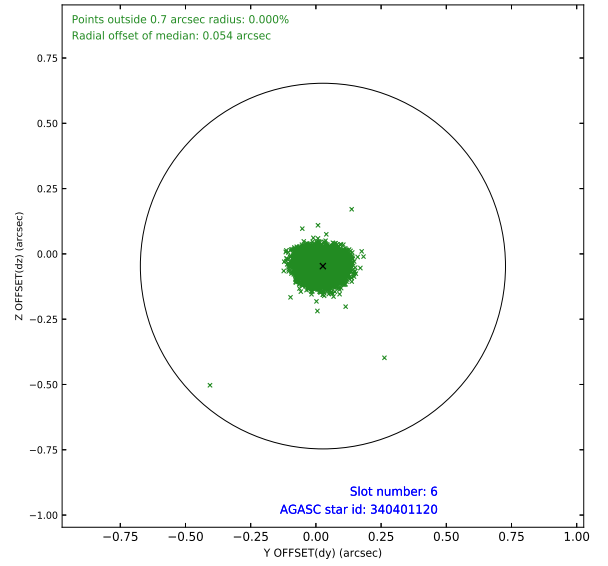
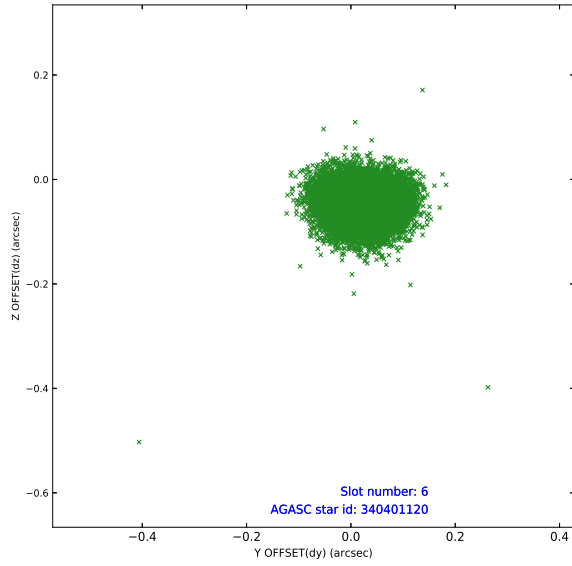
2.4.2 Slot 4



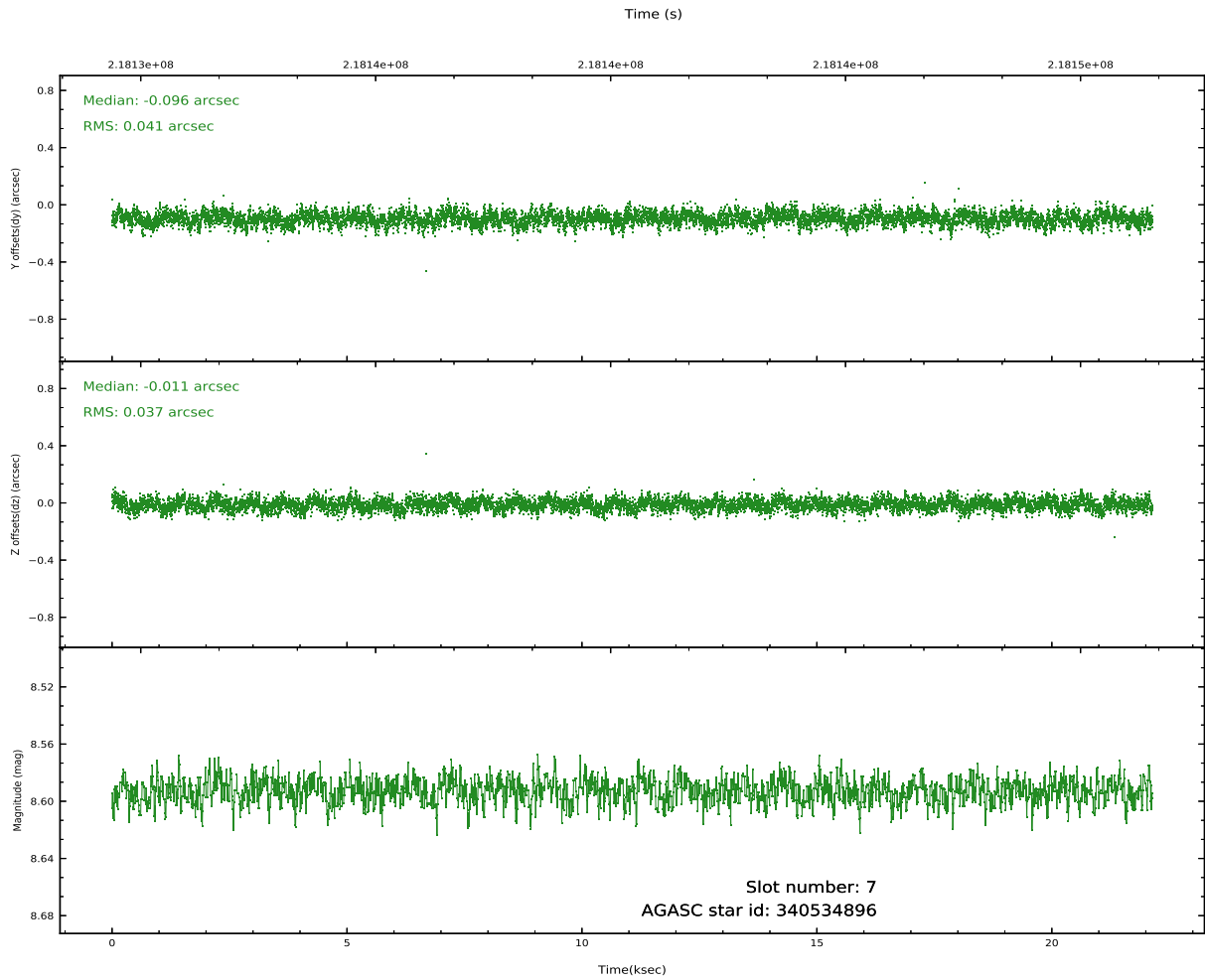
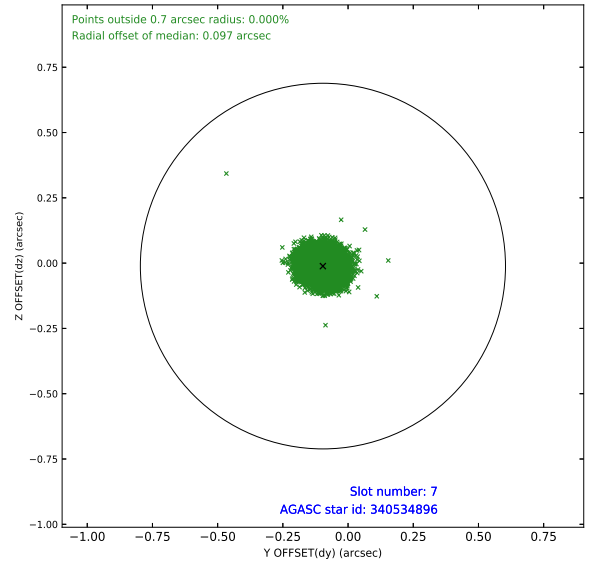
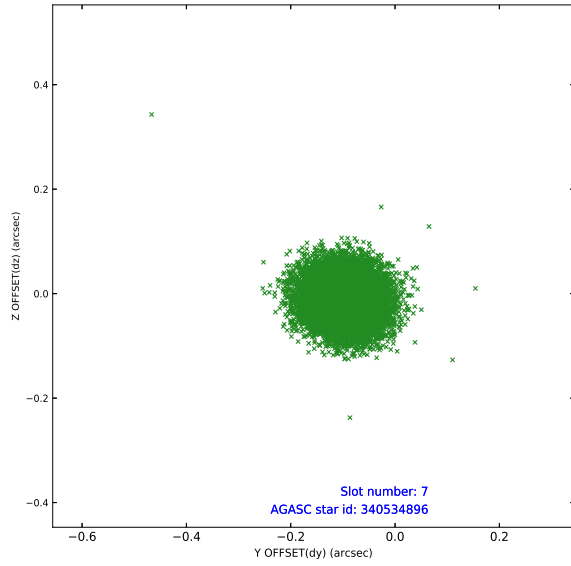
2.4.3 Slot 5



2.4.4 Slot 6

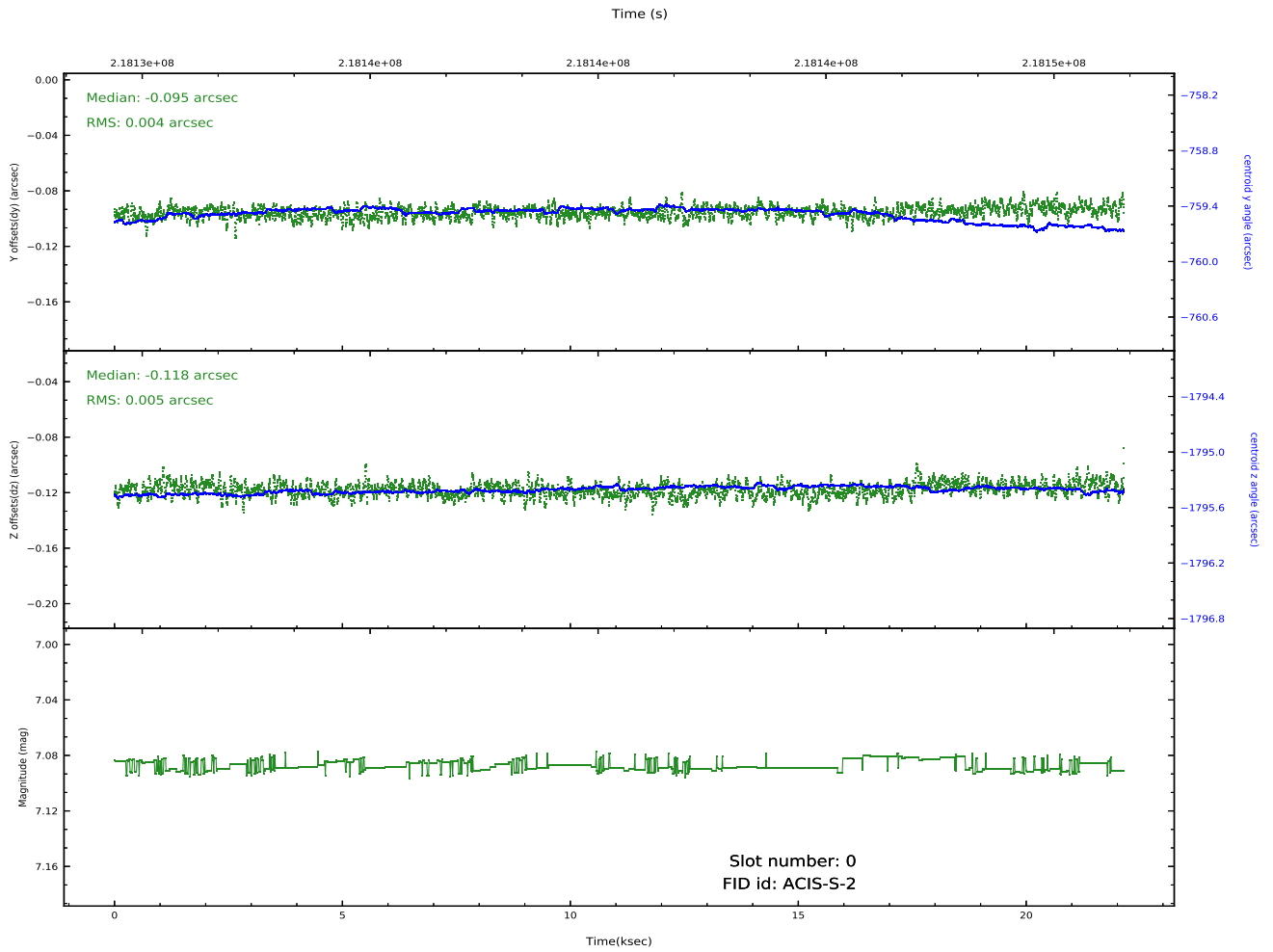
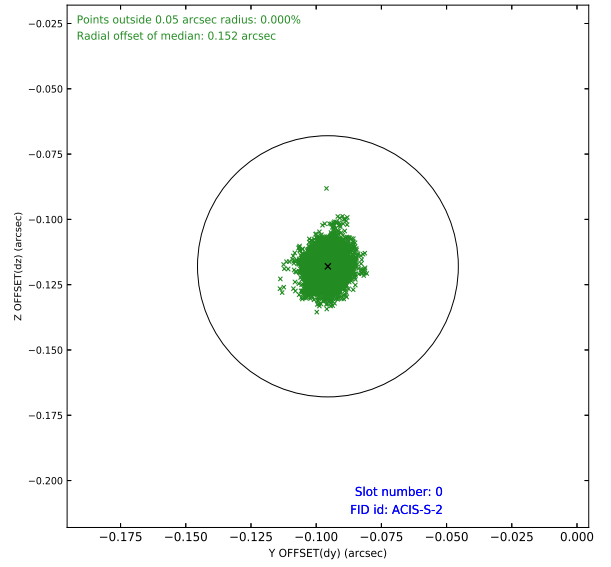
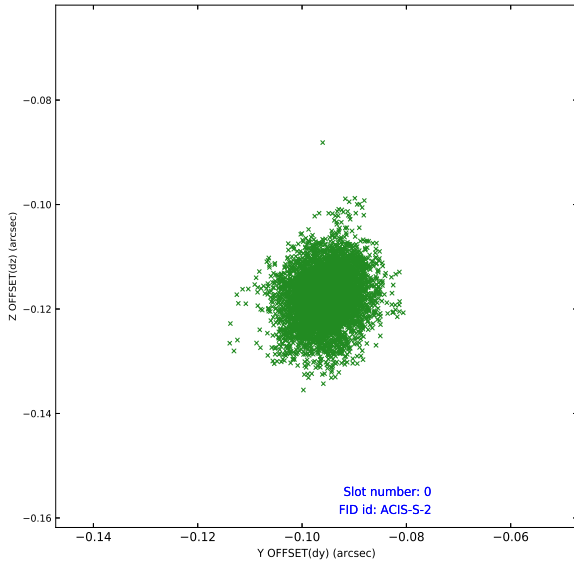


2.4.5 Slot 7

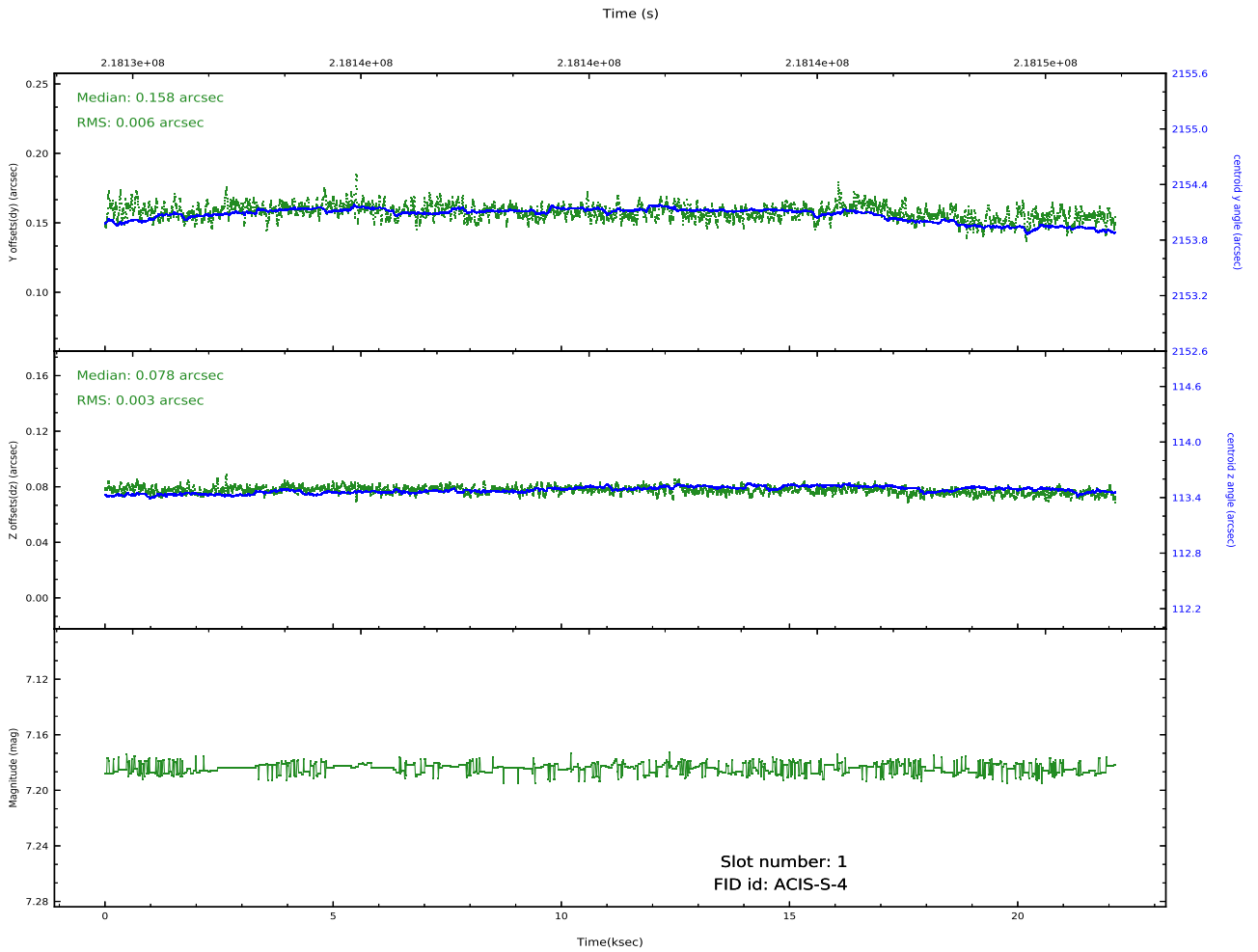
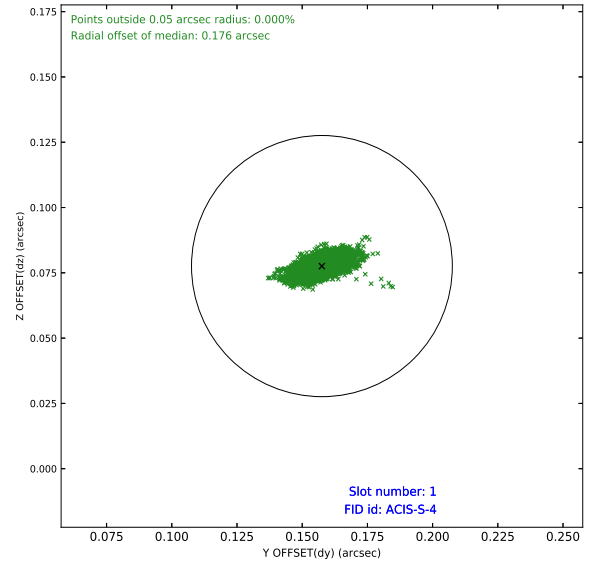
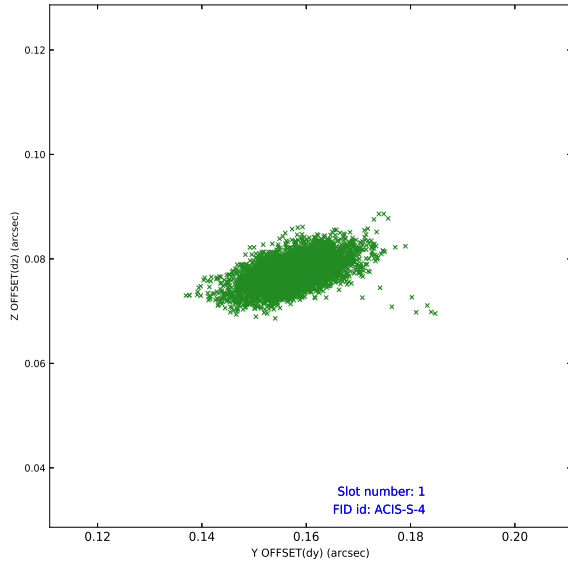


2.5 FID Slots

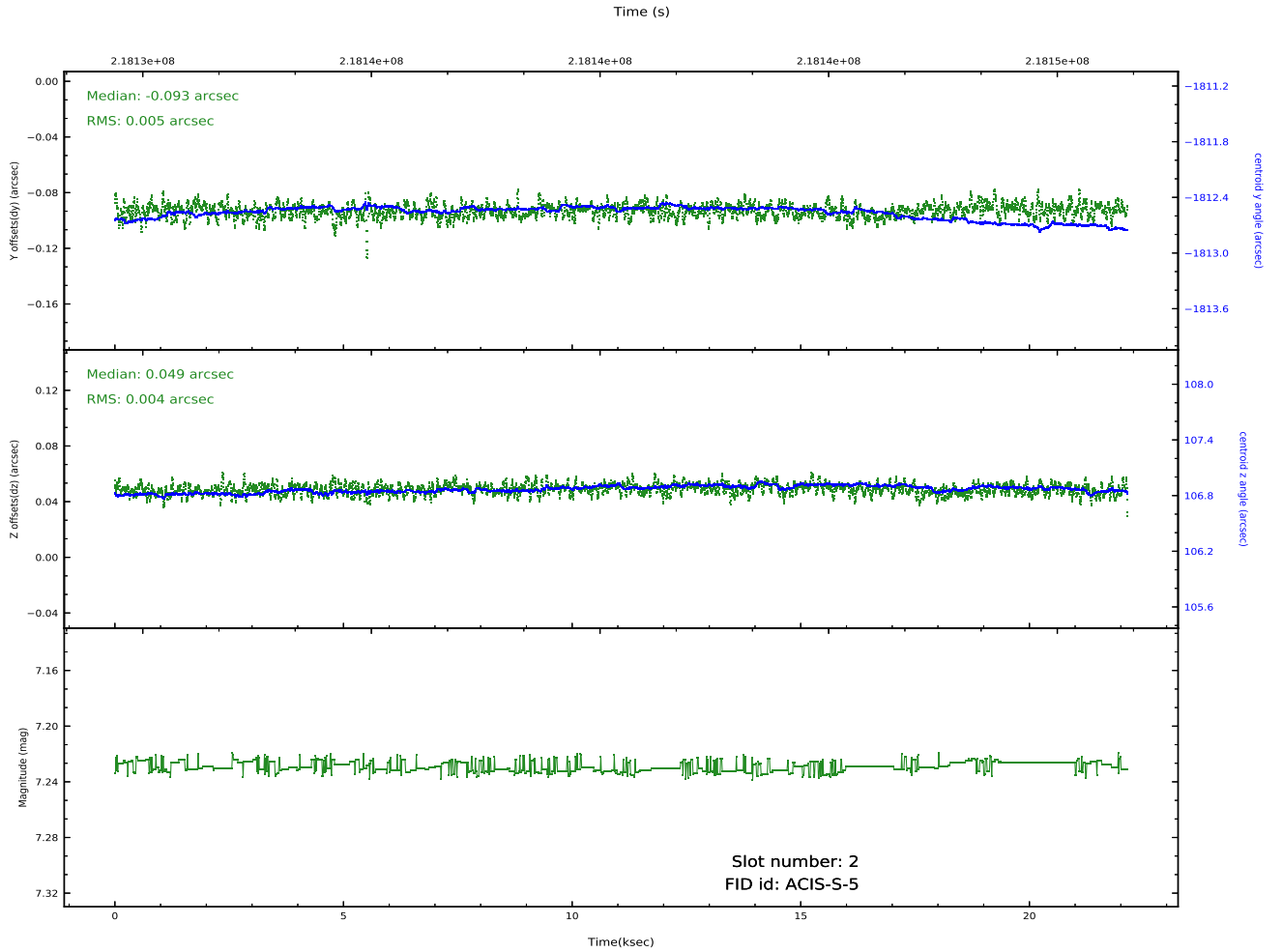
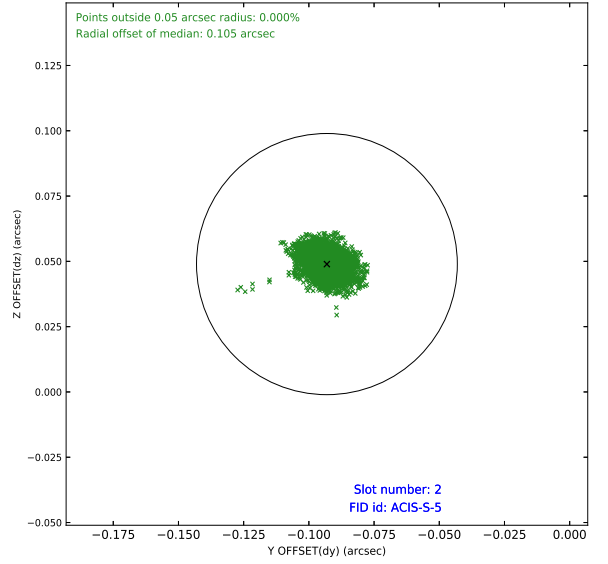
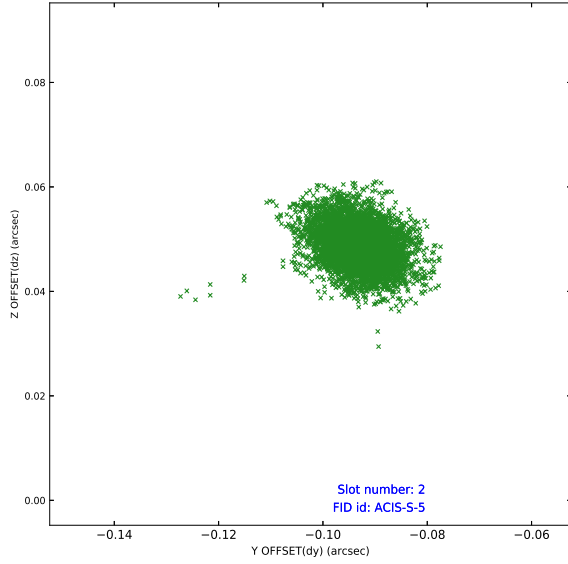
2.5.1 Slot 0



2.5.2 Slot 1

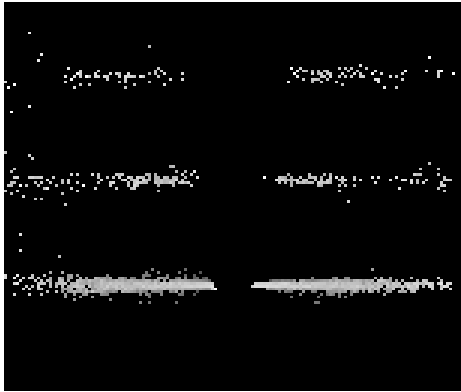


2.5.3 Slot 2

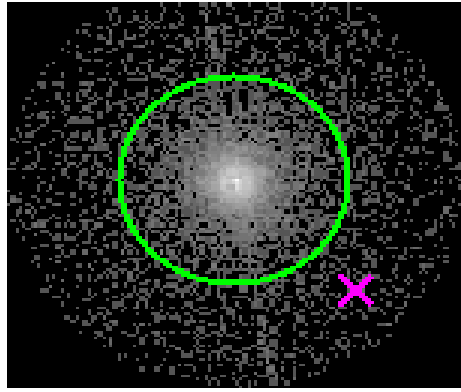


3 Gratings

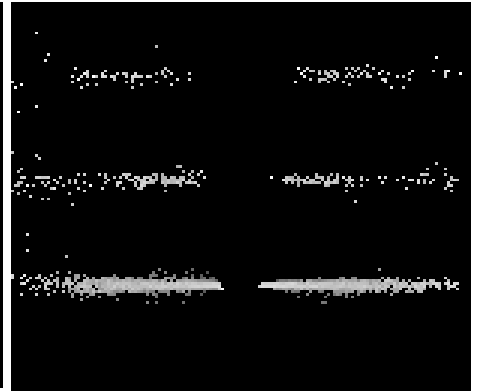
3.1 HEG Arm



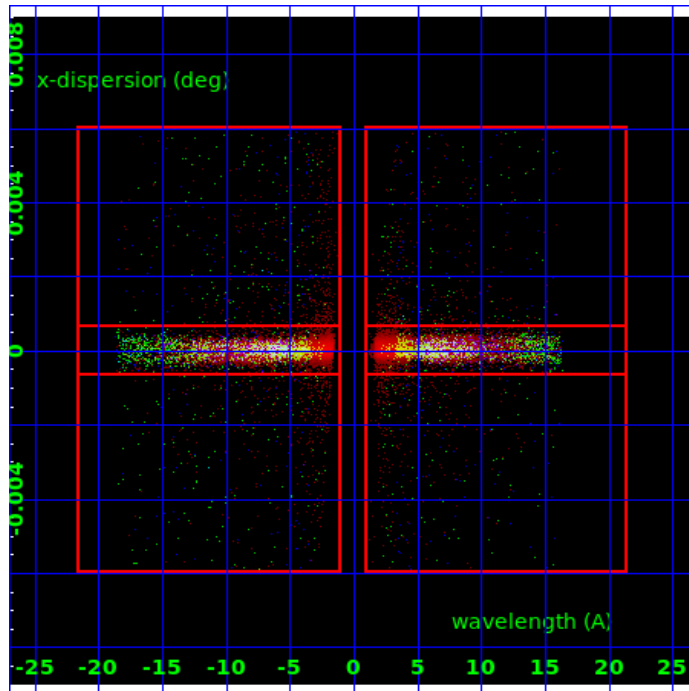
HEG Order Sort 123



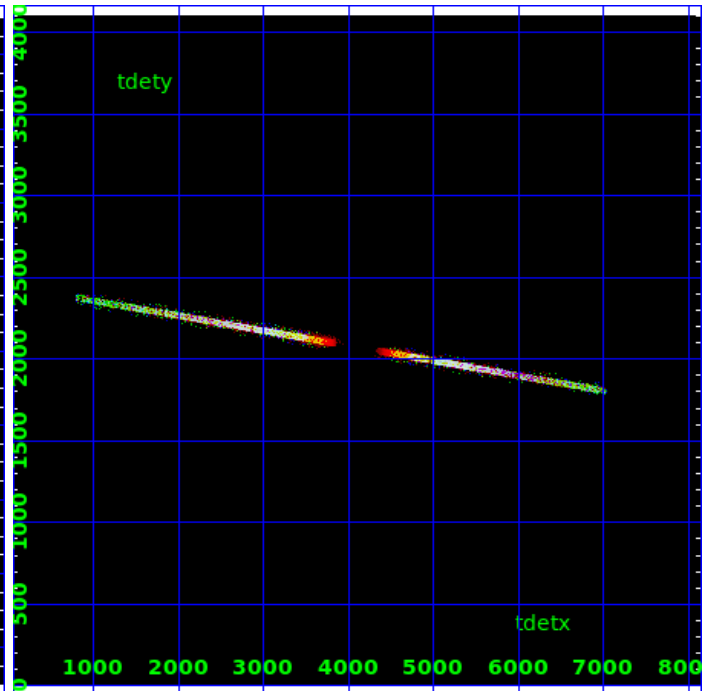
HEG Zero Order



HEG Order Sort ALL

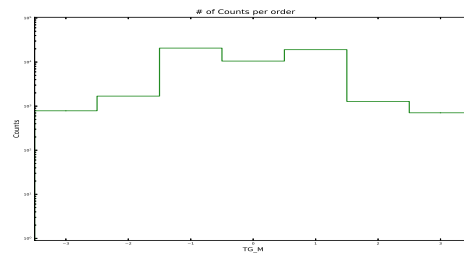


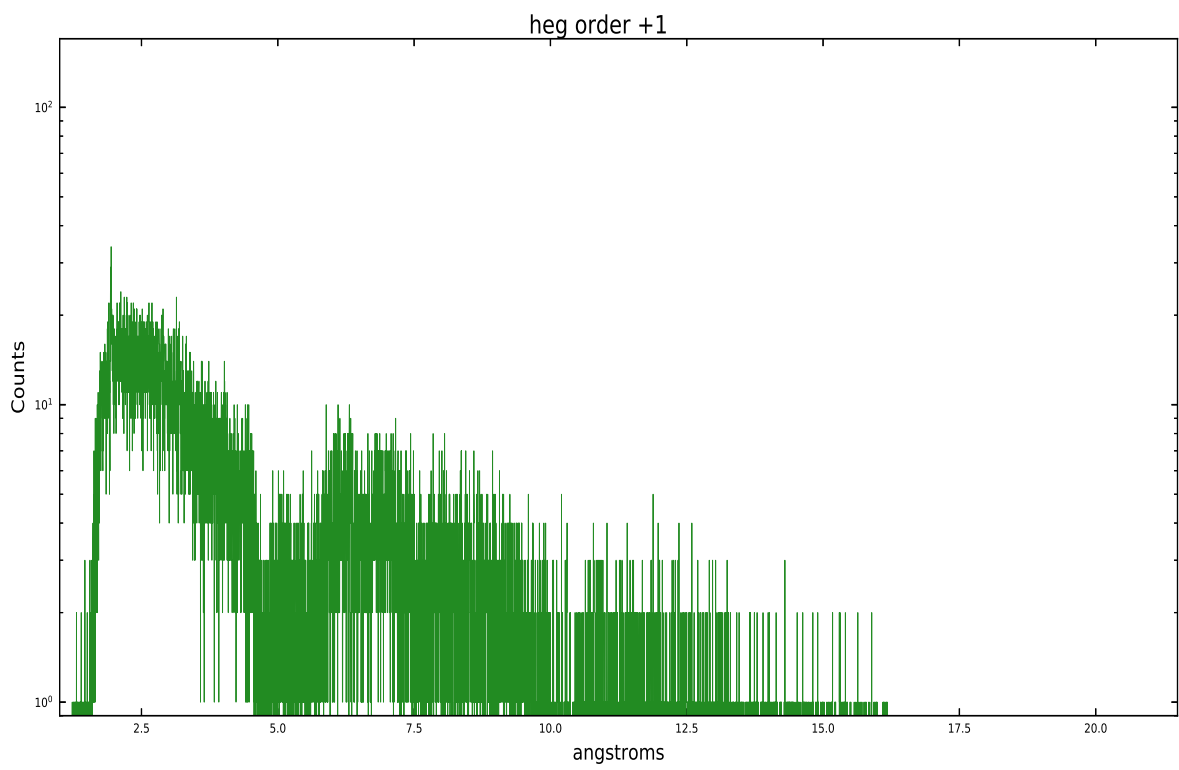
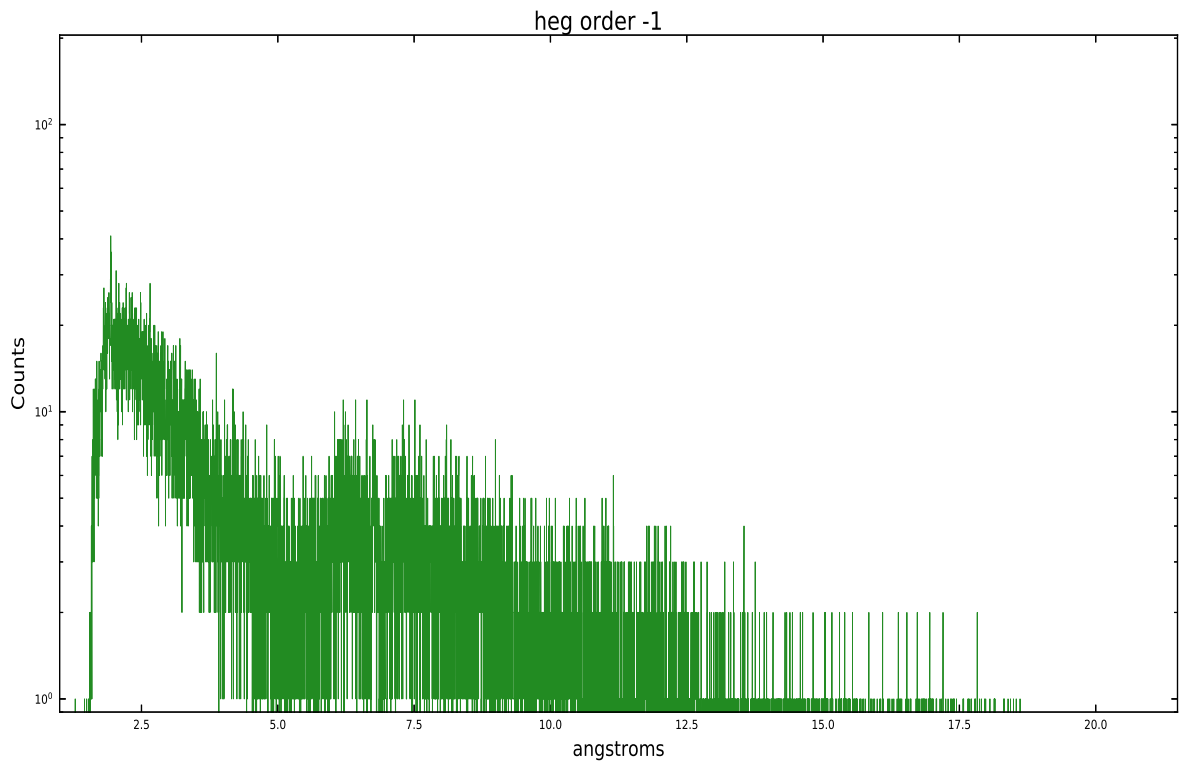
Spot Image HEG



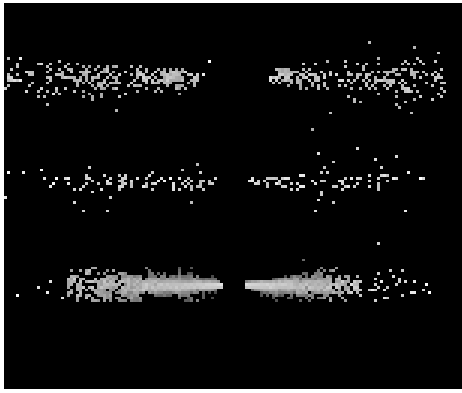
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	785	1689	20752	10528	19135	1279	707

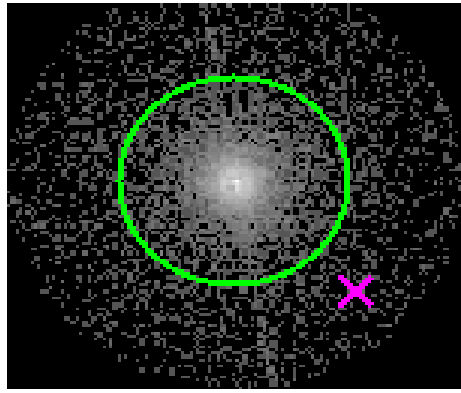




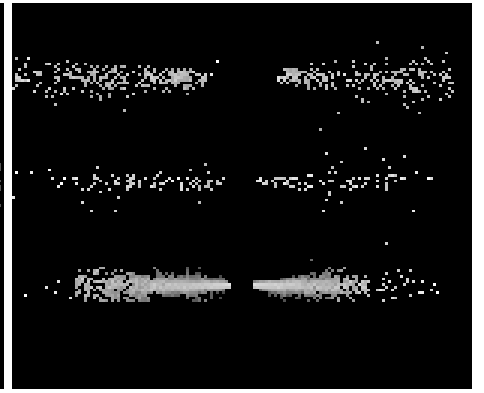
3.2 MEG Arm



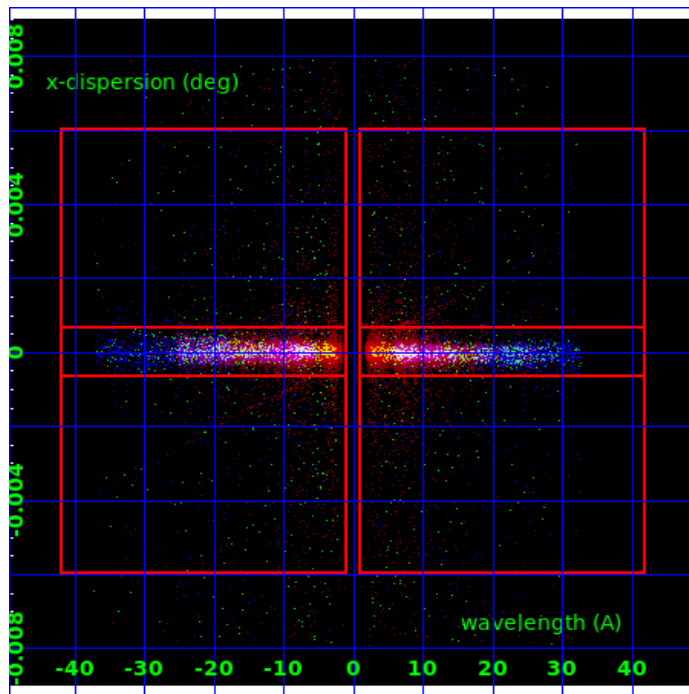
MEG Order Sort 123



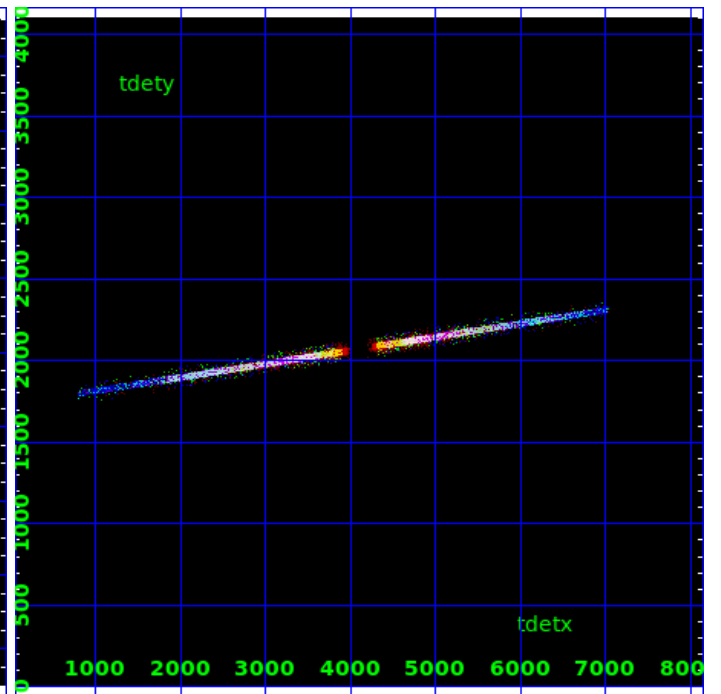
MEG Zero Order



MEG Order Sort ALL

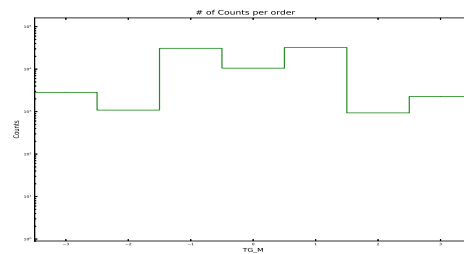


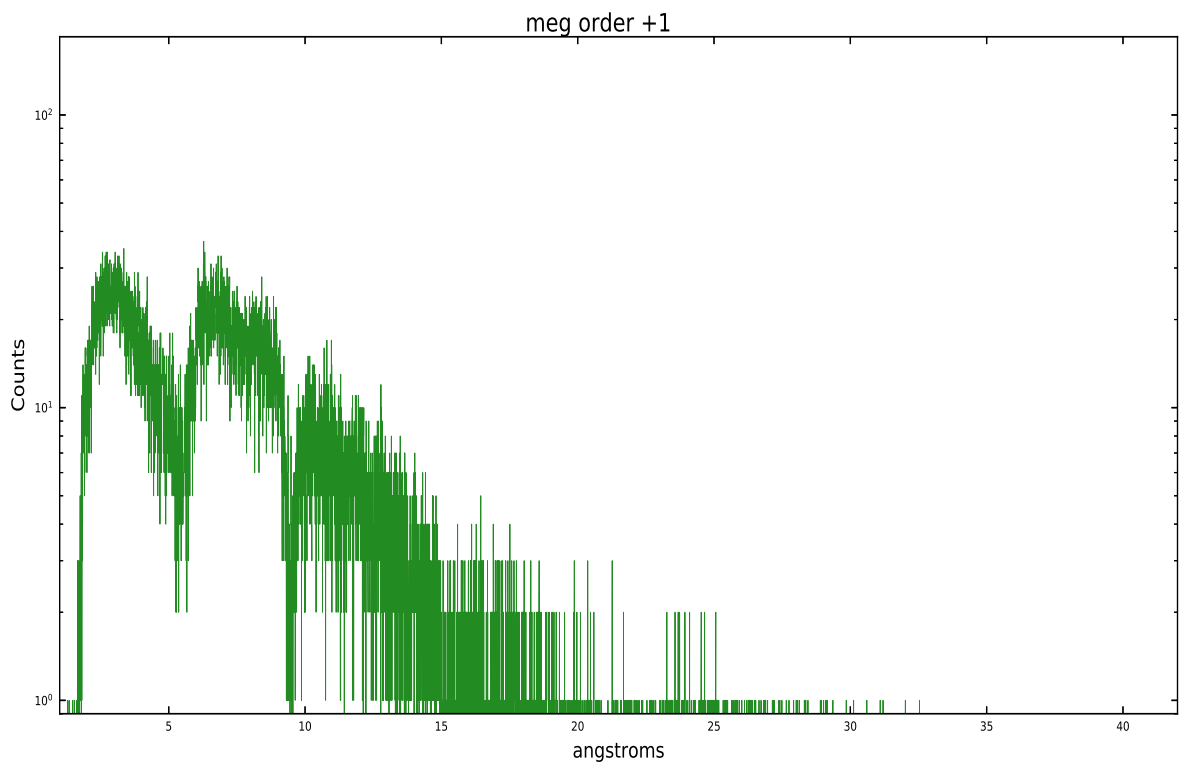
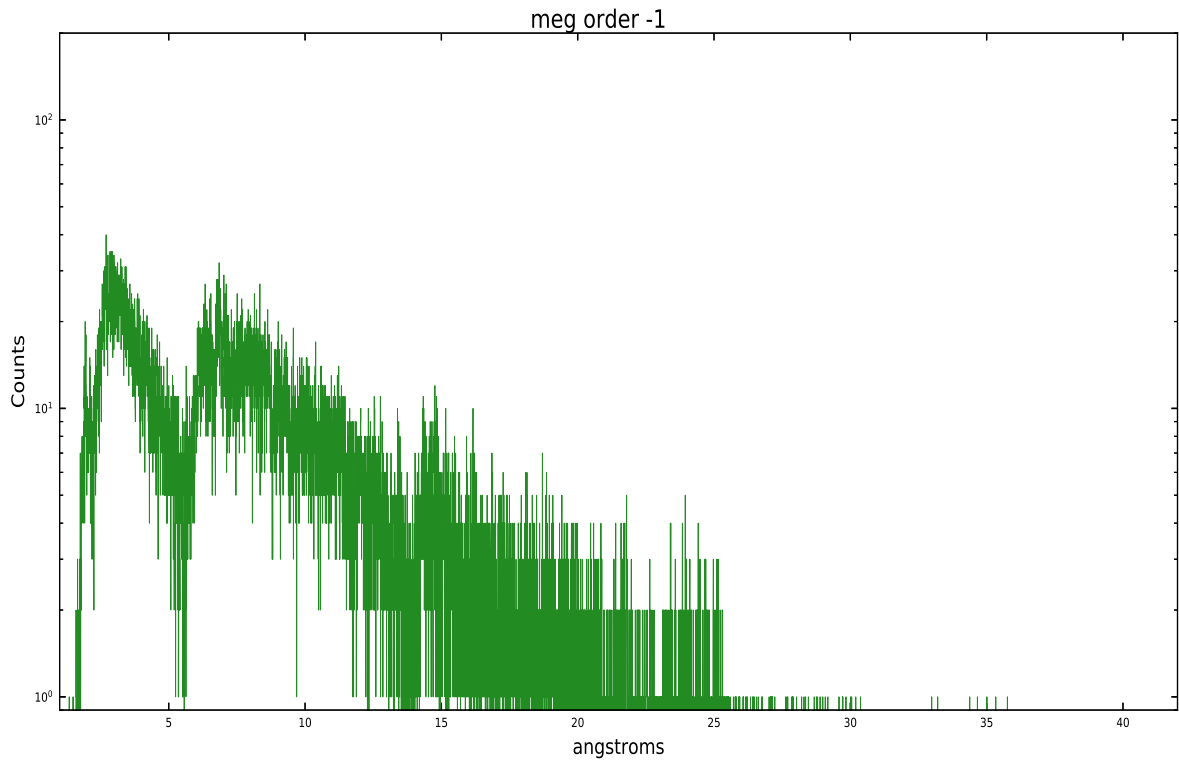
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2838	1084	30876	10528	32128	934	2280





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2020.10.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	22.14

A.2 Comments