

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6187 - L2 Version 3
Chandra X-Ray Center

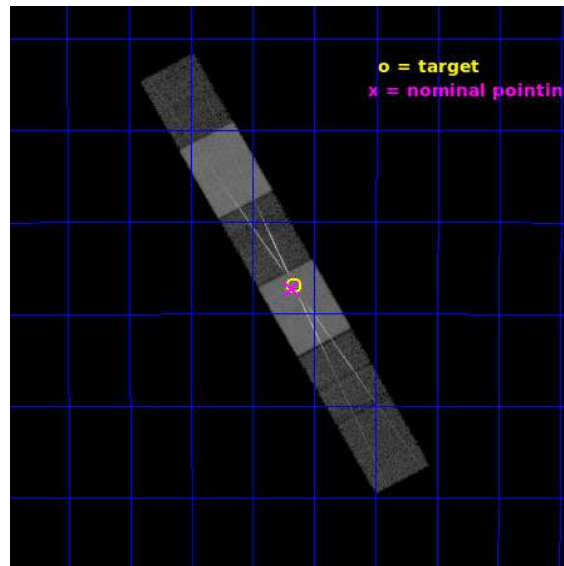
L2 Processing Date : Oct 12 2020

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1 Front

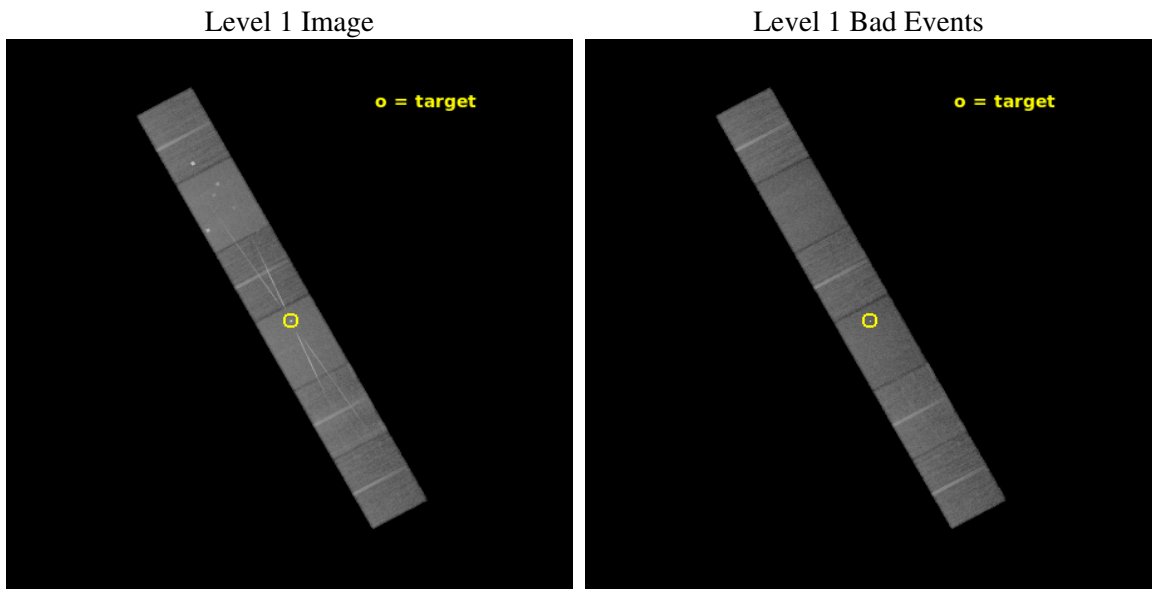
seq_num	701171	Sequence number
obs_id	6187	Observation id
title	Revealing the Relativistic Iron line in the Seyfert 1.9 Galaxy, MCG-5-23-16	Proposal title
observer	James Reeves	Principal investigator
object	MCG -5-23-16	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	146.9175	Observer's specified target RA [deg]
dec_targ	-30.948889	Observer's specified target Dec [deg]
ra_nom	146.92036997775	Nominal RA [deg]
dec_nom	-30.954440867825	Nominal Dec [deg]
roll_nom	61.206005847467	Nominal Roll [deg]
revision	3	Processing version of data
ontime	30079.493141472	Sum of GTIs [s]
livetime	29593.683237446	Livetime [s]
ontime4	30082.075171679	Sum of GTIs [s]
ontime5	30079.452121377	Sum of GTIs [s]
ontime6	30081.952051669	Sum of GTIs [s]
ontime7	30079.493141472	Sum of GTIs [s]
ontime8	30081.911011666	Sum of GTIs [s]
ontime9	30076.787941545	Sum of GTIs [s]
l2events	358219	Number of level 2 events



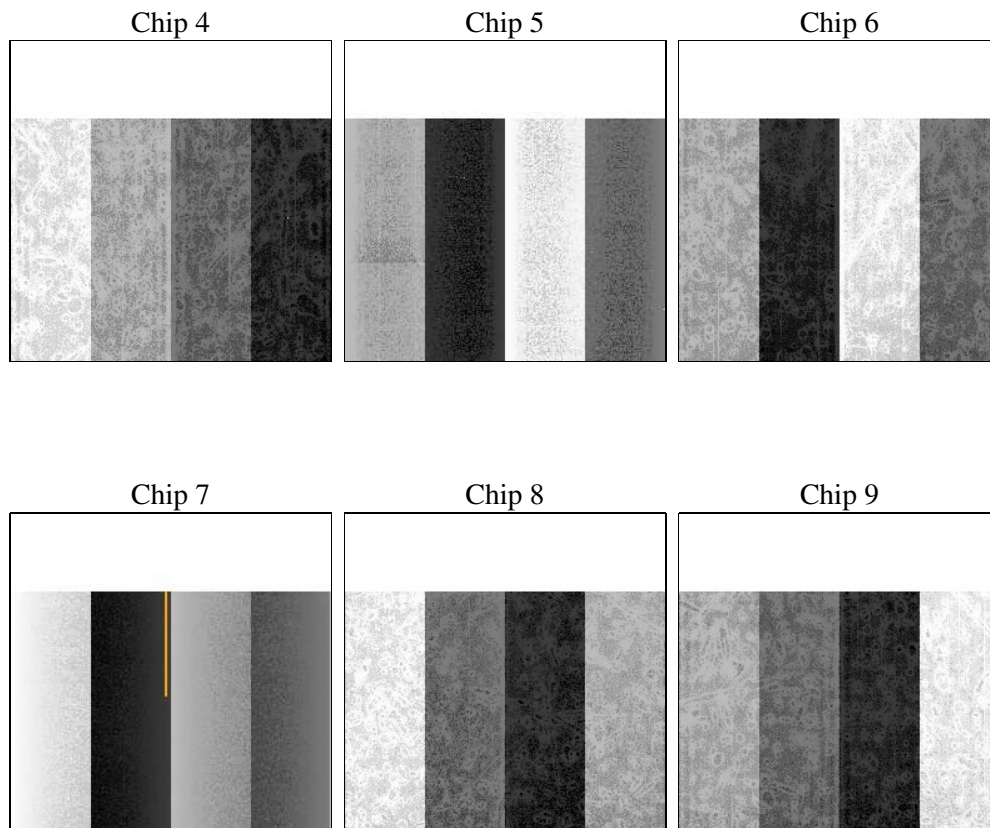
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	30079.493141472	Sum of GTIs [s]
caldbver	4.9.2	 	ontime4	30082.075171679	Sum of GTIs [s]
date	2020-10-12T02:45:56	Date and time of file creation	ontime5	30079.452121377	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	30081.952051669	Sum of GTIs [s]
			ontime7	30079.493141472	Sum of GTIs [s]
			ontime8	30081.911011666	Sum of GTIs [s]
			ontime9	30076.787941545	Sum of GTIs [s]
			l1events	1418450	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			z0_pos	(4115.08 4127.27)	grade 0 sky pixel position

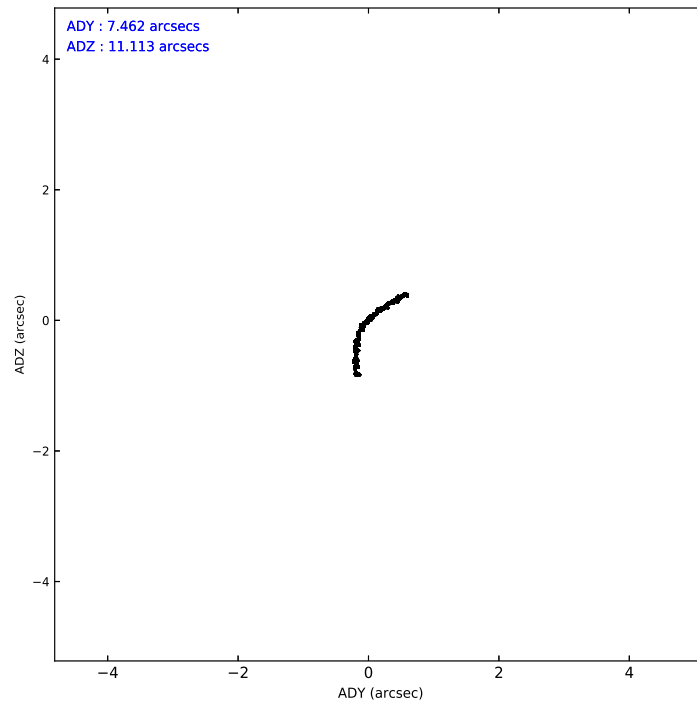
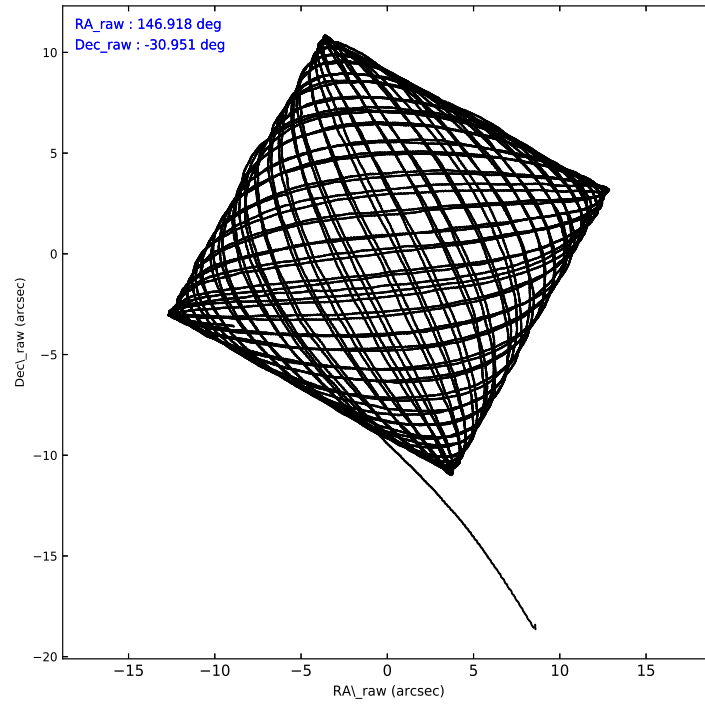
2.1.4 Events

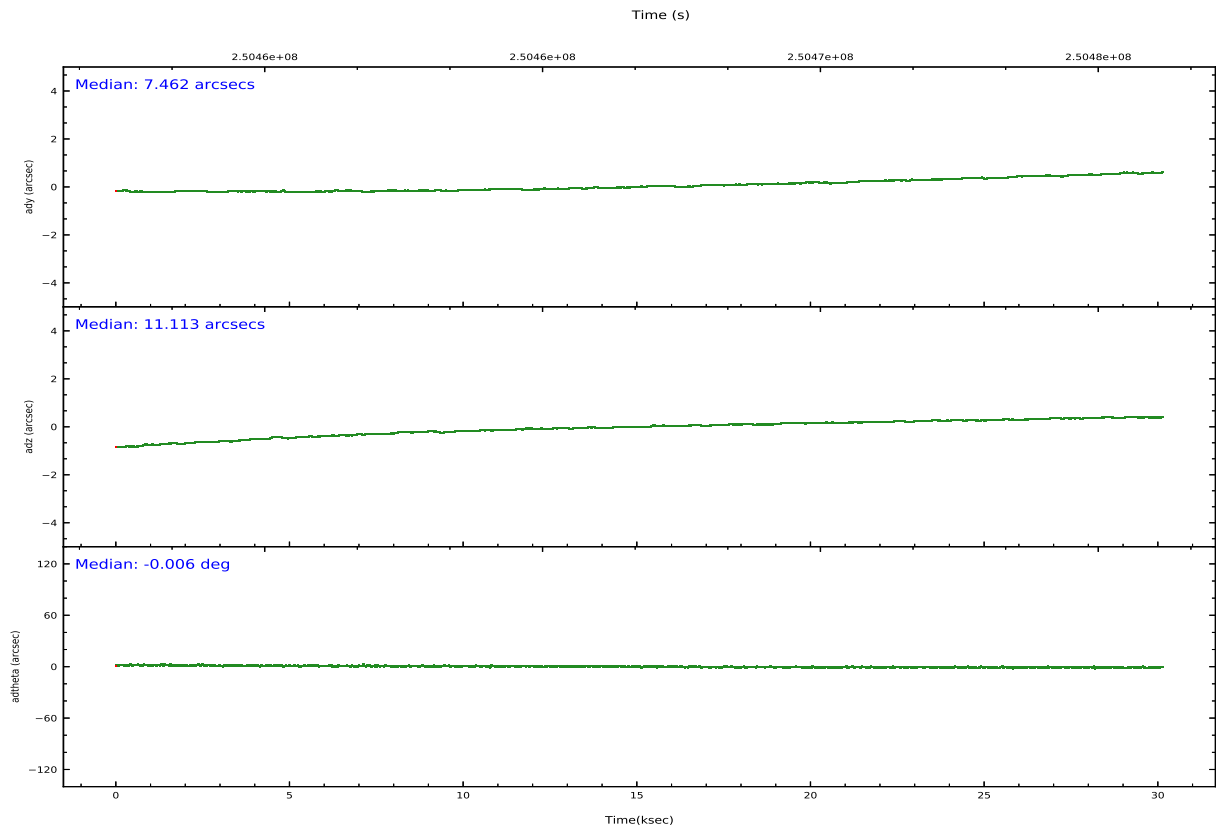
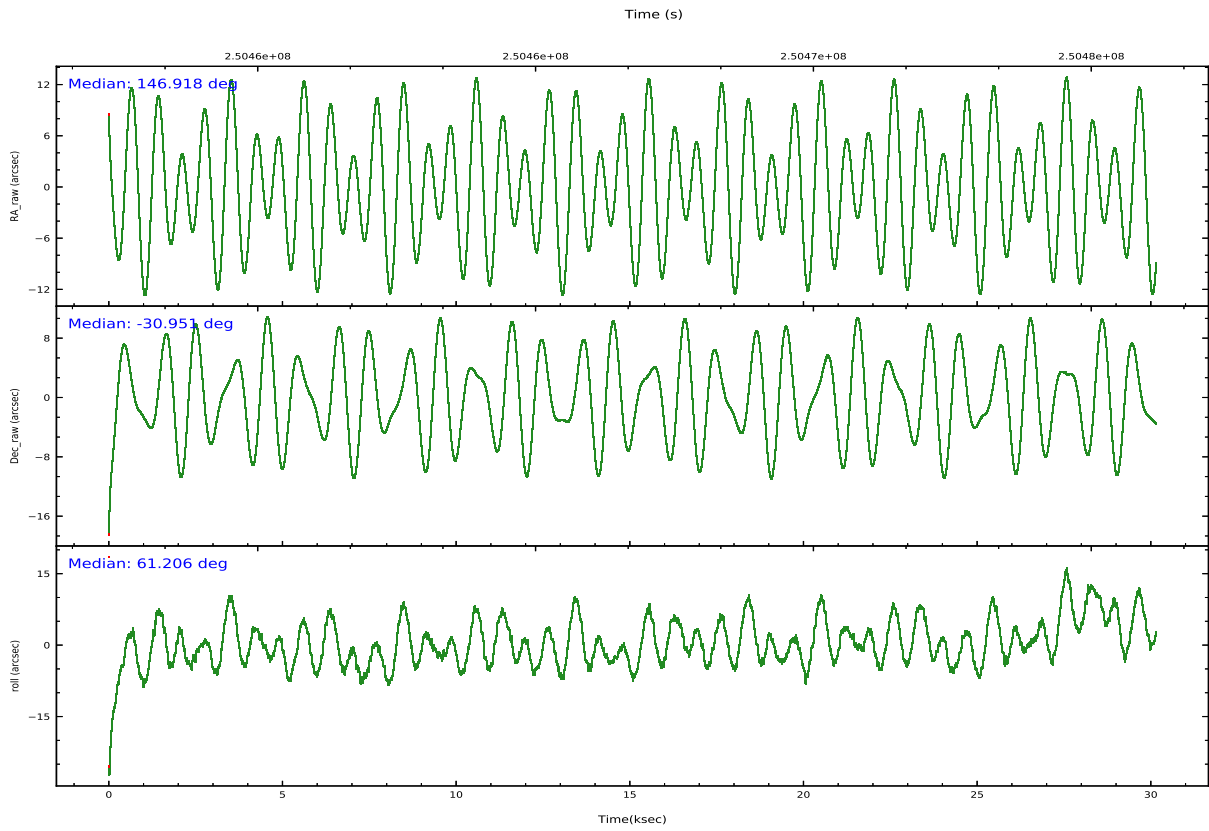
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	216911	284046	203898	286877	242331	184387	grade 0 events	18877	16934	23040	15022	20099	10243
rejected events	184206	150818	161957	151194	185321	159988		8%	5%	11%	5%	8%	5%
rejected %	84%	53%	79%	52%	76%	86%	grade 1 events	196	435	139	506	162	101
								0%	0%	0%	0%	0%	0%
							grade 2 events	5214	37764	7079	28523	11870	4645
								2%	13%	3%	9%	4%	2%
							grade 3 events	2450	5875	3079	12714	5820	2542
								1%	2%	1%	4%	2%	1%
							grade 4 events	2414	5741	3033	12393	5498	2459
								1%	2%	1%	4%	2%	1%
							grade 5 events	8170	21248	8676	25241	11260	9035
								3%	7%	4%	8%	4%	4%
							grade 6 events	3752	66925	5715	67039	13728	4513
								1%	23%	2%	23%	5%	2%
							grade 7 events	175838	129124	153137	125439	173894	150849
								81%	45%	75%	43%	71%	81%

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	146.919469	146.92036997775	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-30.978206	-30.954440867825	Subarray start row	1	1
[deg] Pointing Roll	61.048387	61.206005847467	Subarray row count	774	774
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	2.5
[mm] SIM translation stage pos	-187.132523	-187.1228876879999			
[mm] SIM translation stage offset	-3	-3.009634895007935			
[s] Observation start time (MET)	250451867.184000	250450890.46043			
Observation start date	2005-12-08T17:56:43	2005-12-08T17:41:30			
[s] Observation end time (MET)	250481867.184000	250482839.7119			
Observation end date	2005-12-09T02:16:43	2005-12-09T02:33:59			
Read mode	TIMED	TIMED			

2.3 Aspect



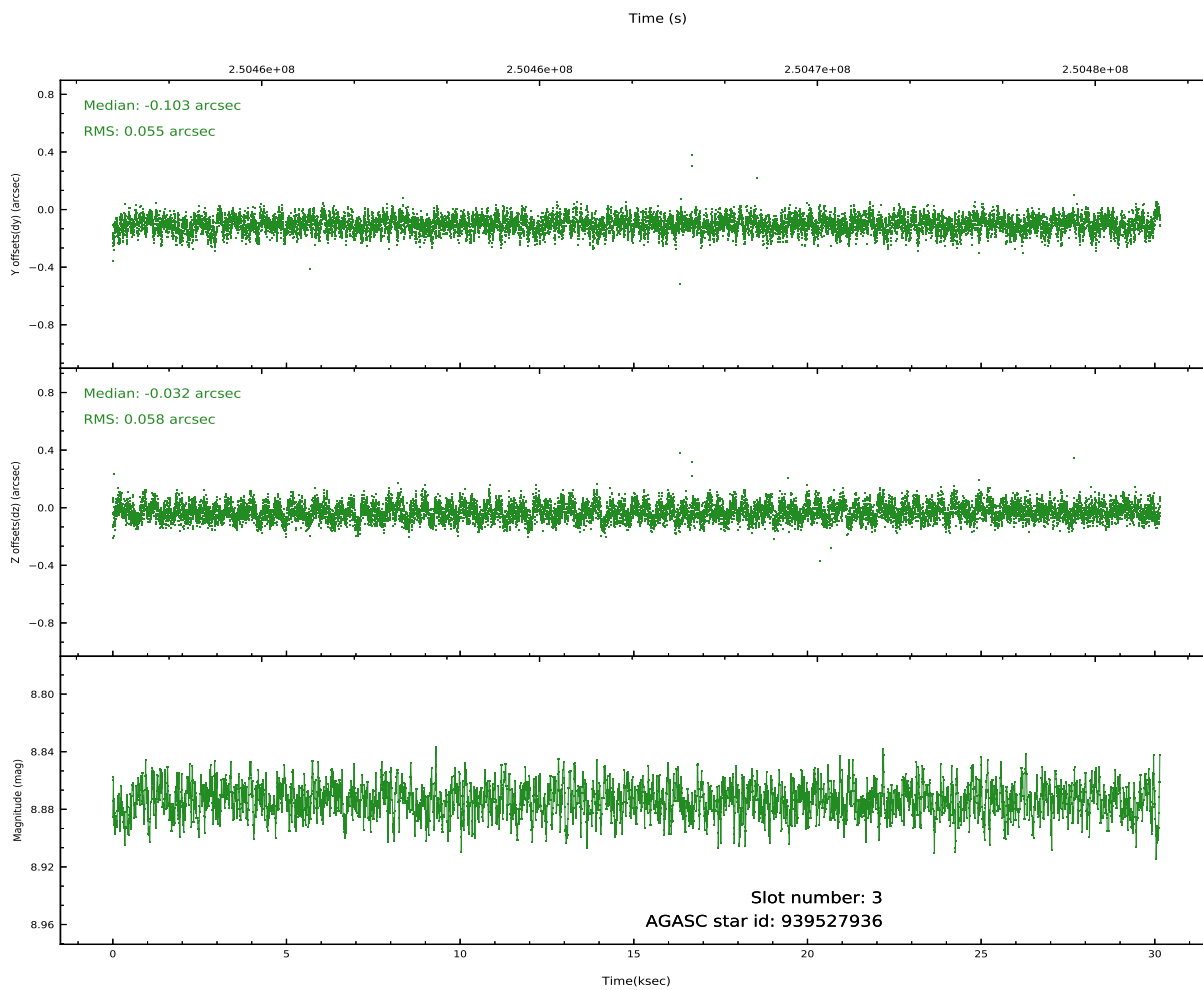
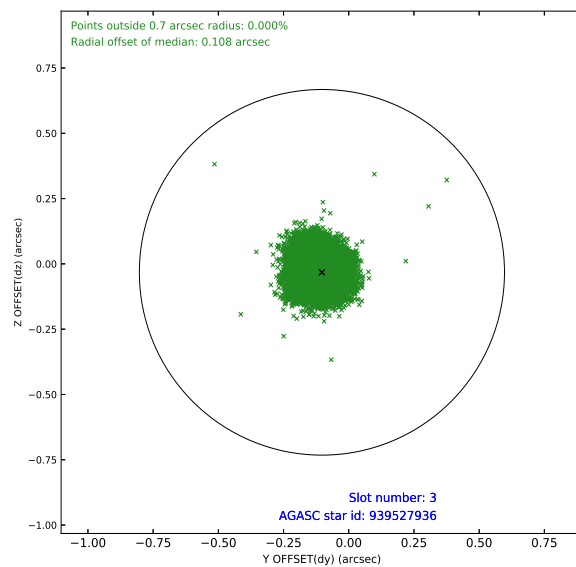
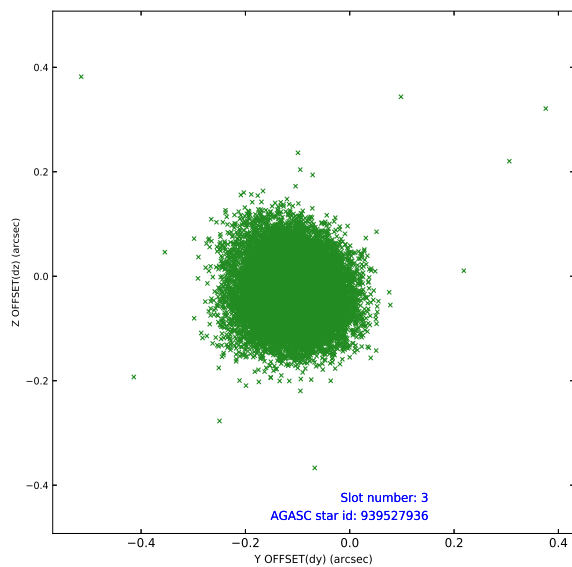


Slot Statistics

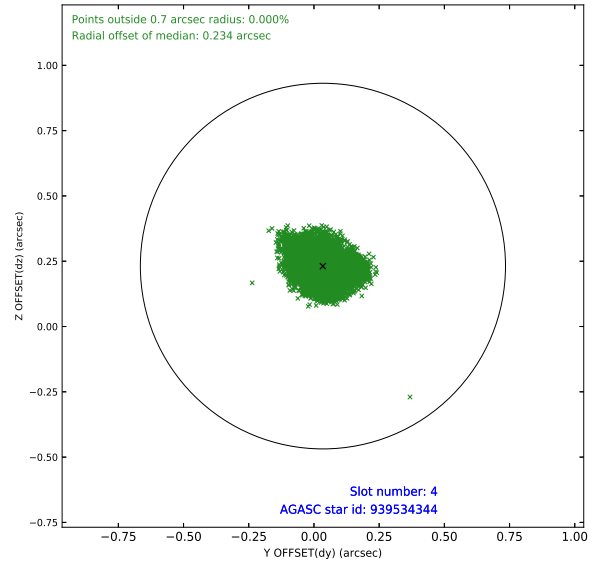
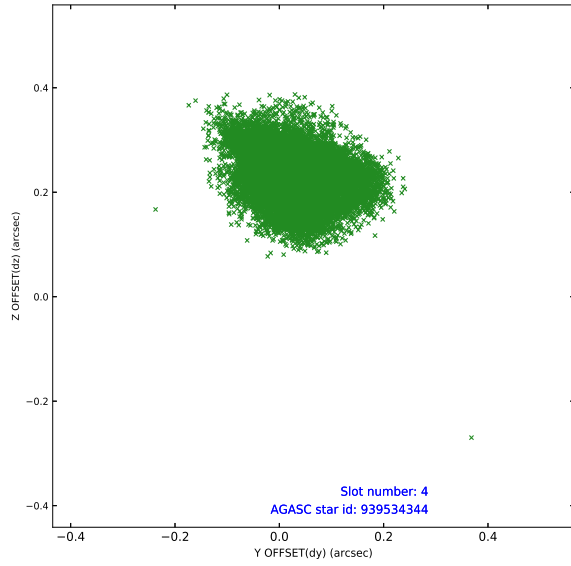
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.18	7355	1.000	0.036	0.073	0.011	0.033	0.000000	0.000000	935.99	-1790
1	FID		ACIS-S-2	7.09	7354	1.000	-0.173	-0.113	0.012	0.023	0.000000	0.000000	-760.09	-1794
2	FID		ACIS-S-4	7.19	7353	1.000	0.112	0.046	0.009	0.016	0.000000	0.000000	2153.27	114
3	GUIDE	used	939527936	8.87	14625	1.000	-0.103	-0.032	0.086	0.134	146.559458	-30.580866	710.04	1668
4	GUIDE	used	939534344	7.43	14710	1.000	0.034	0.231	0.085	0.135	146.766481	-31.268117	-1141.18	-92
5	GUIDE	used	939536488	8.98	14701	1.000	0.149	-0.052	0.069	0.113	146.629105	-31.360261	-1636.71	114
6	GUIDE	used	939527696	8.61	14704	1.000	-0.136	-0.089	0.061	0.102	146.792310	-30.270932	2036.38	1579
7	GUIDE	used	939532752	9.49	14693	1.000	0.057	-0.056	0.133	0.243	147.948677	-30.729629	2312.53	-2360

2.4 Star Slots

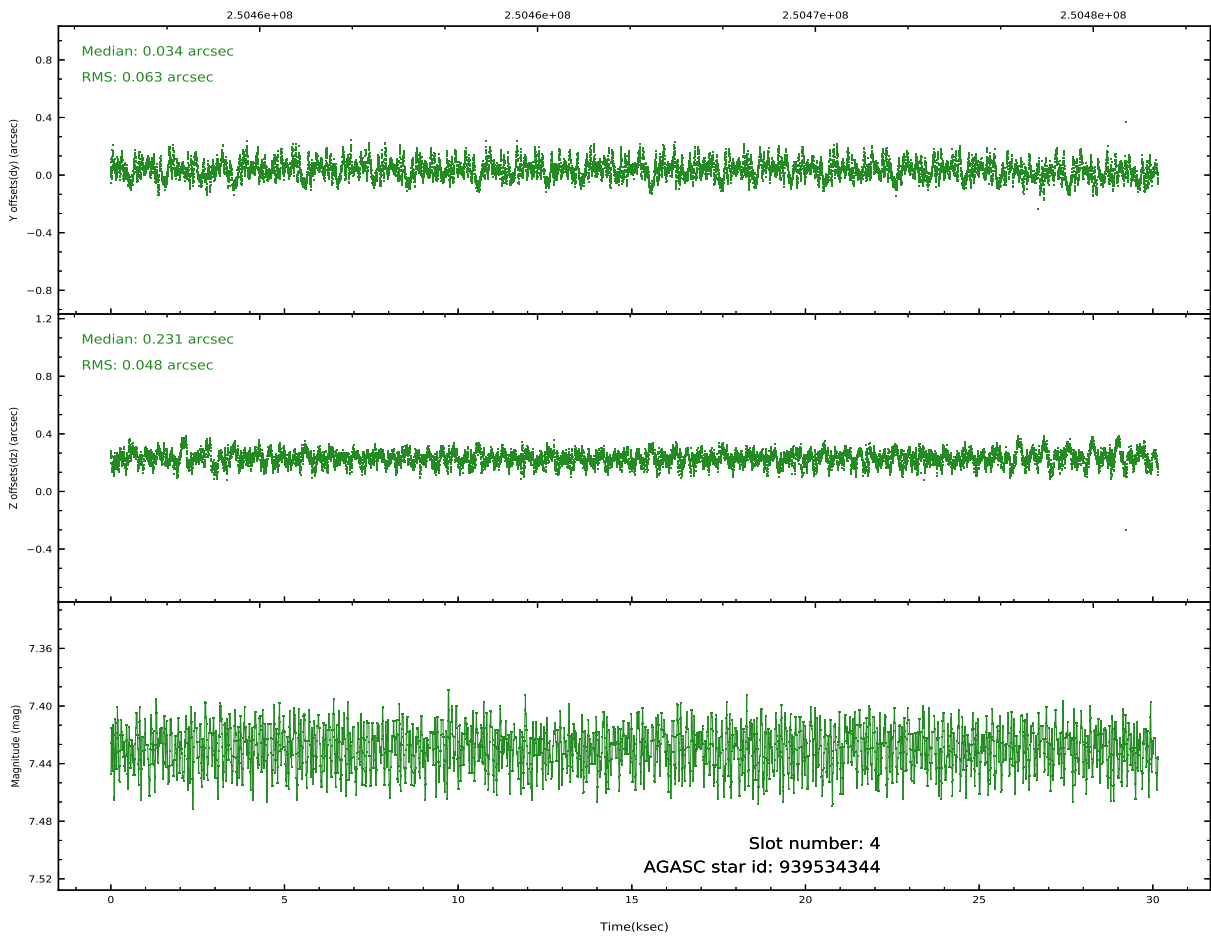
2.4.1 Slot 3



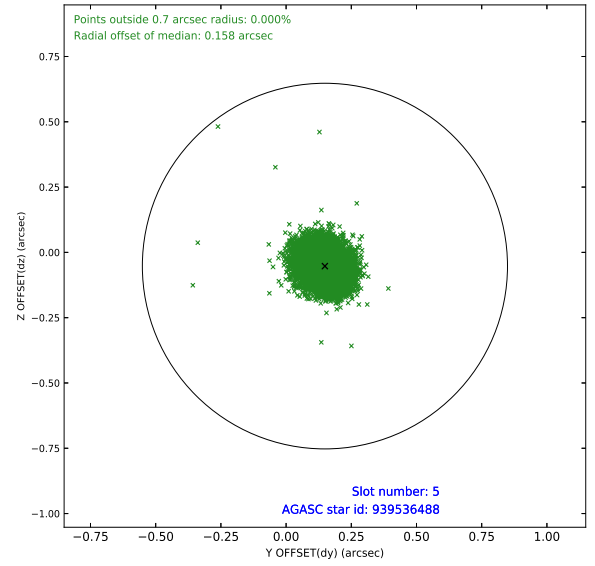
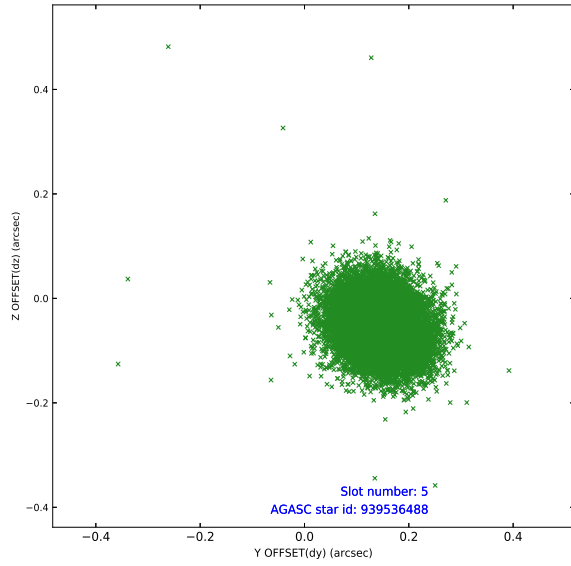
2.4.2 Slot 4



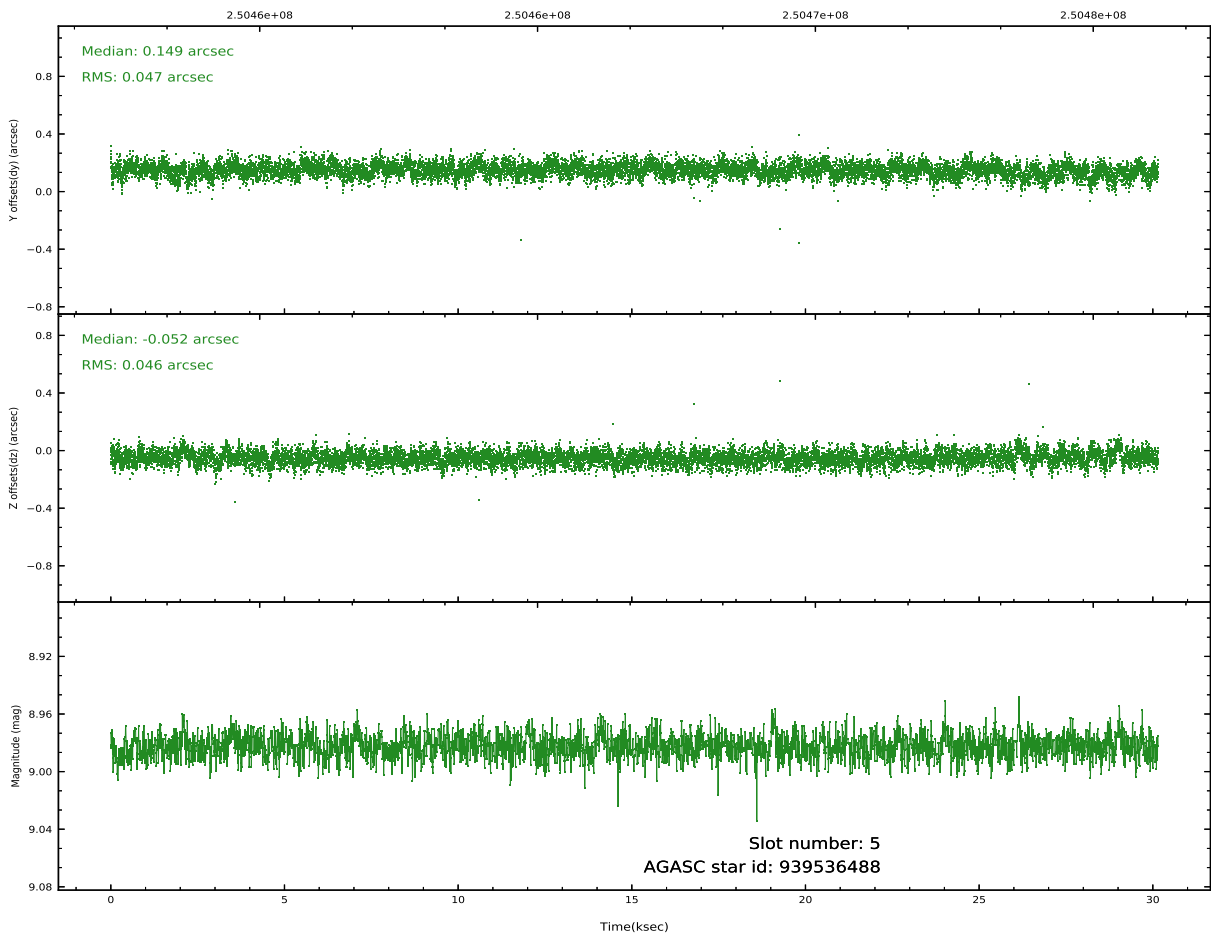
Time (s)



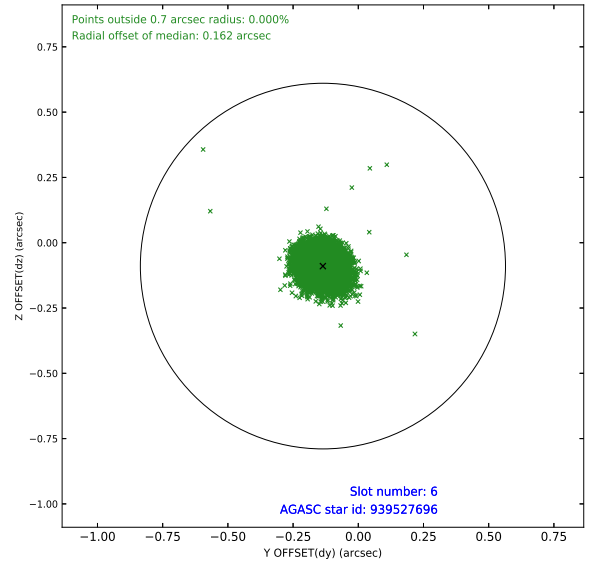
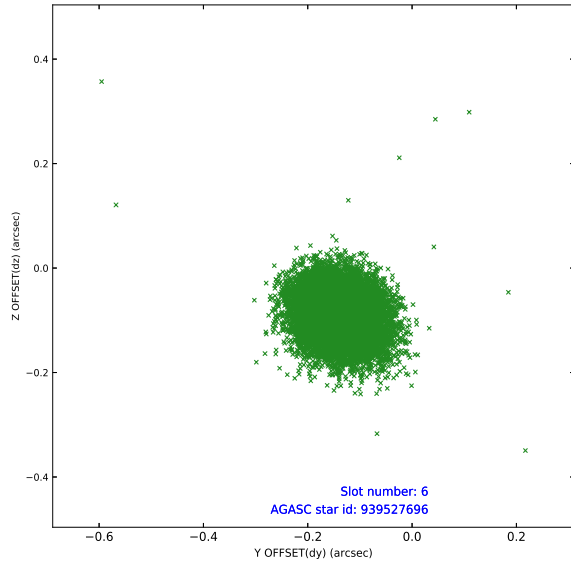
2.4.3 Slot 5



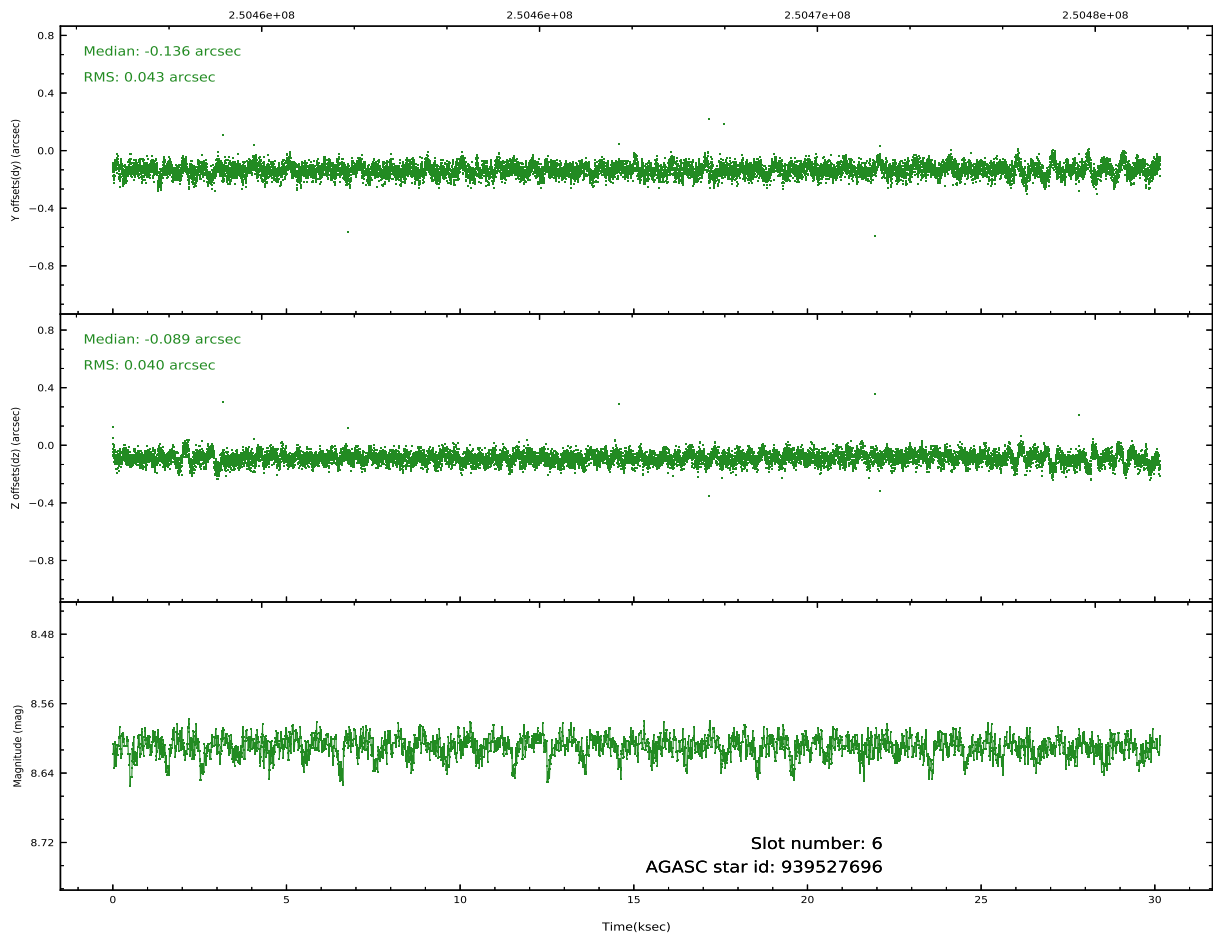
Time (s)



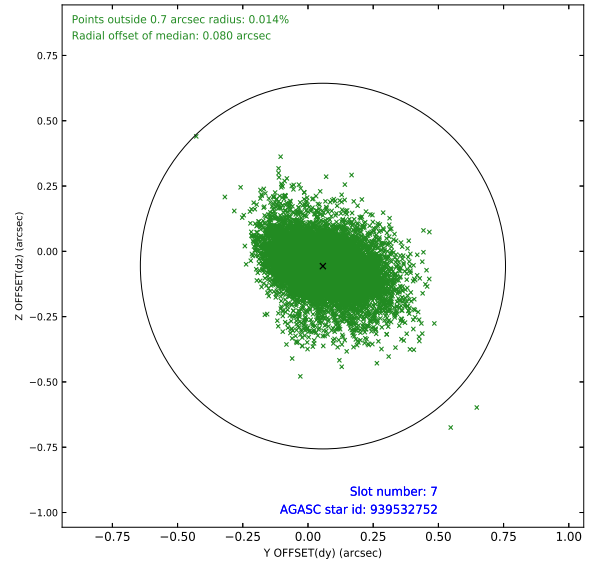
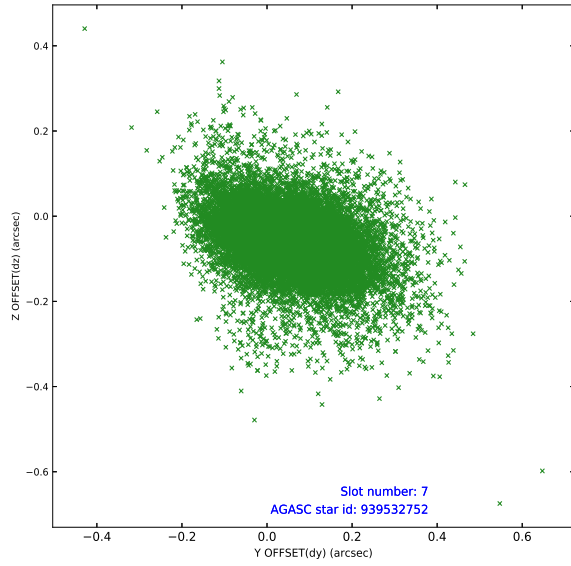
2.4.4 Slot 6



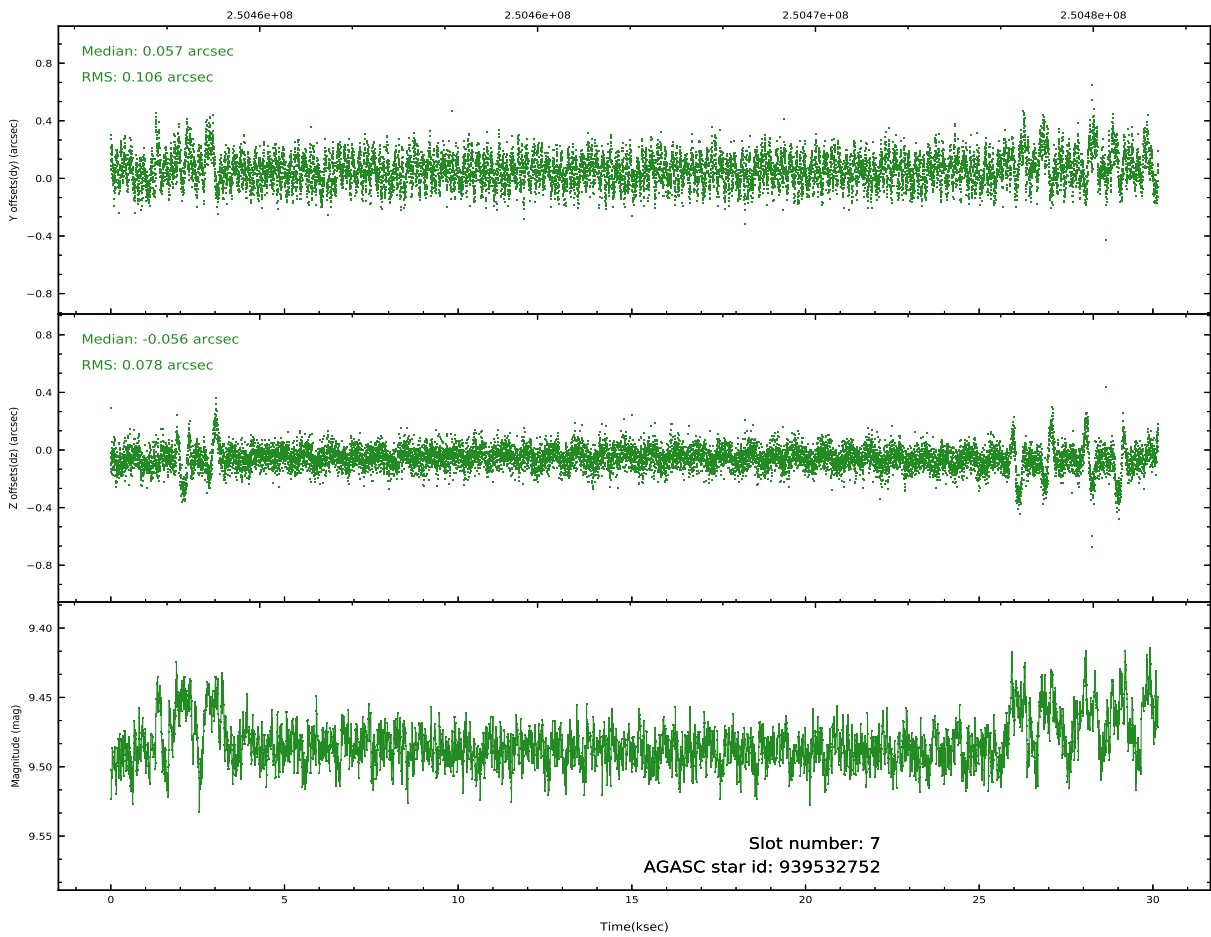
Time (s)



2.4.5 Slot 7

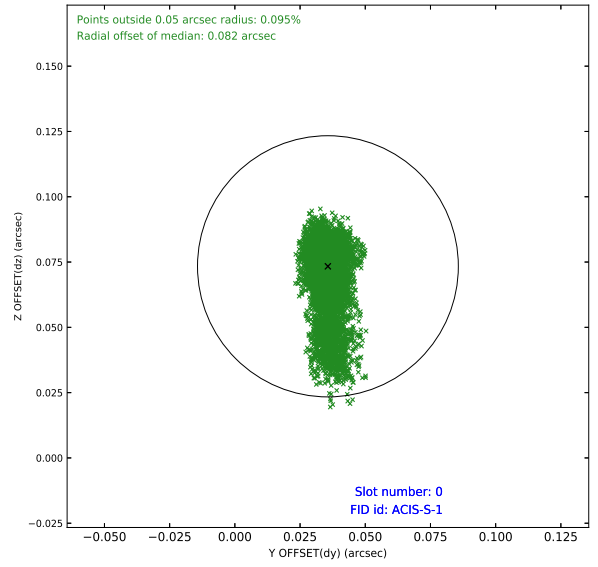
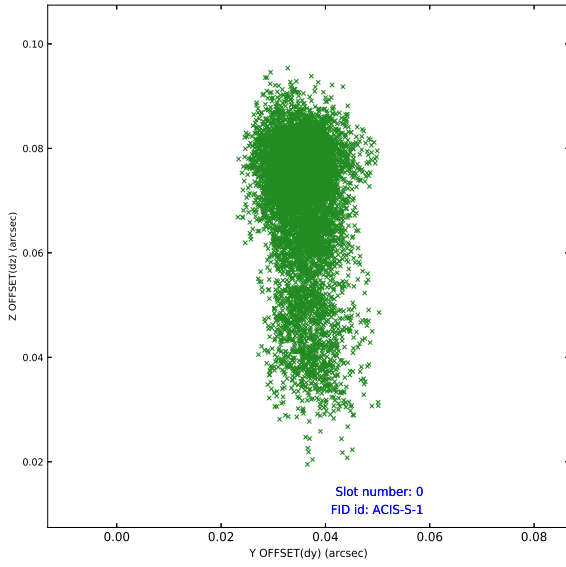


Time (s)

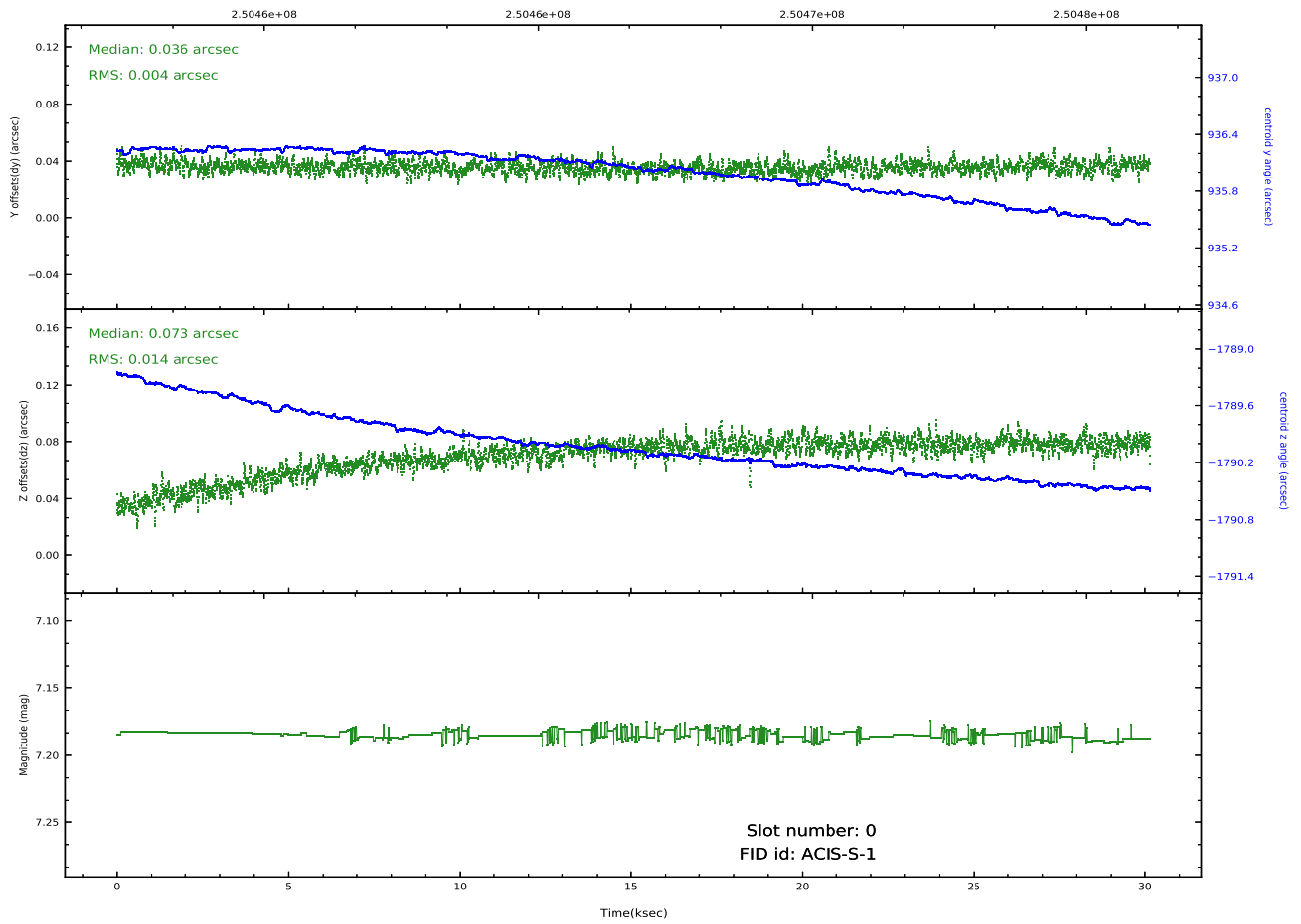


2.5 FID Slots

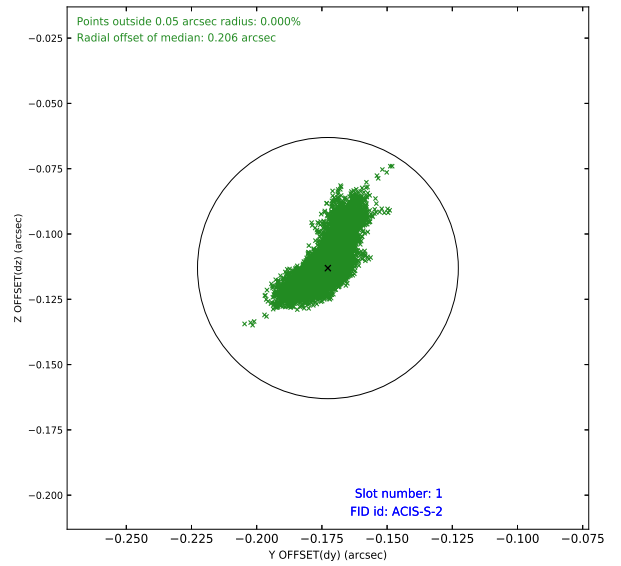
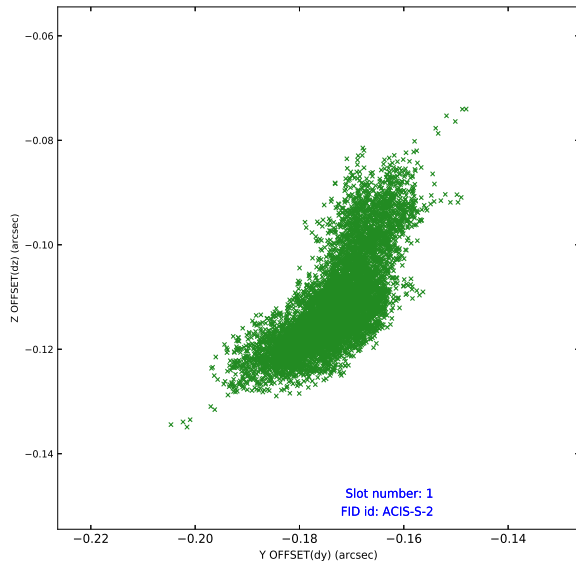
2.5.1 Slot 0



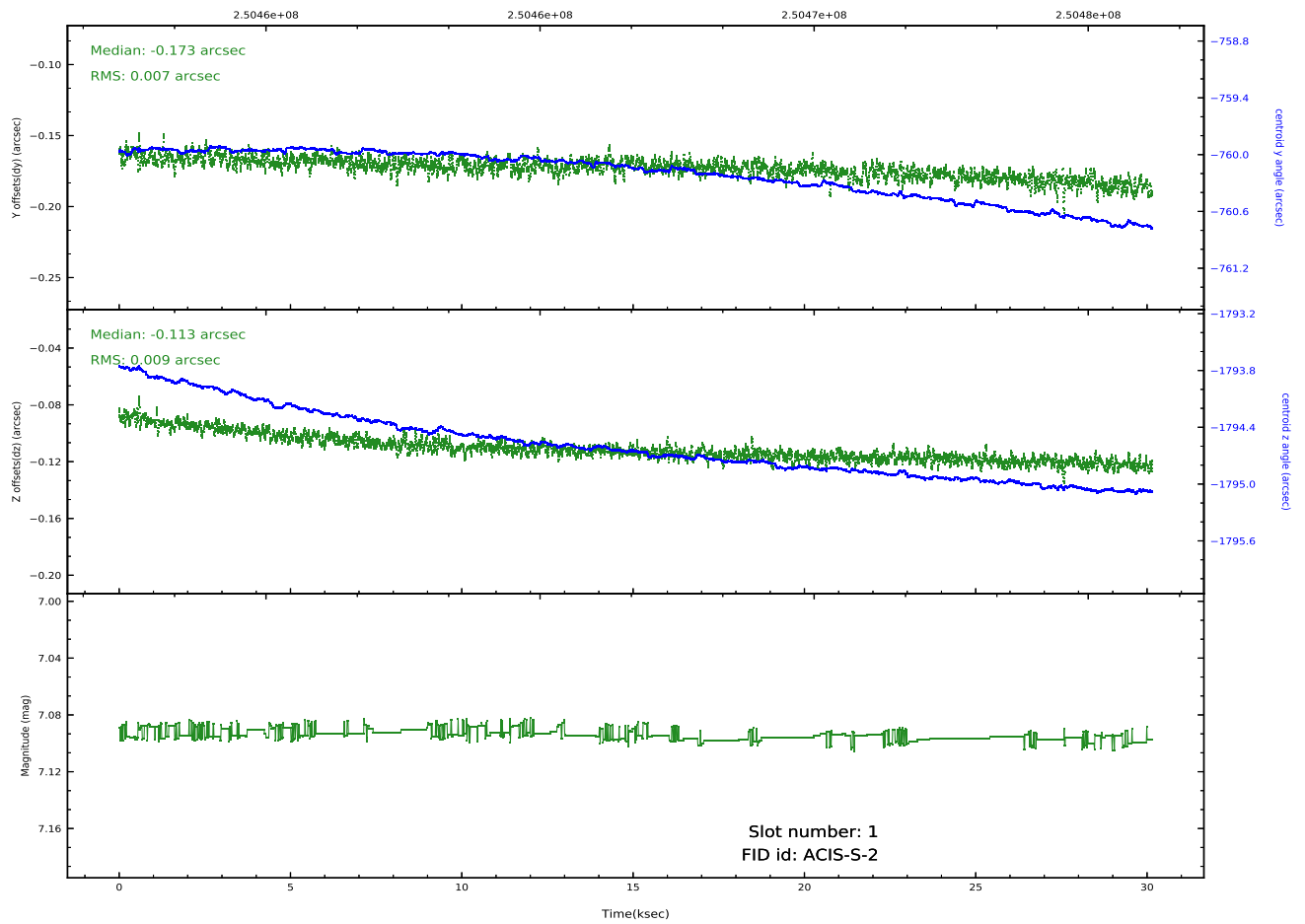
Time (s)



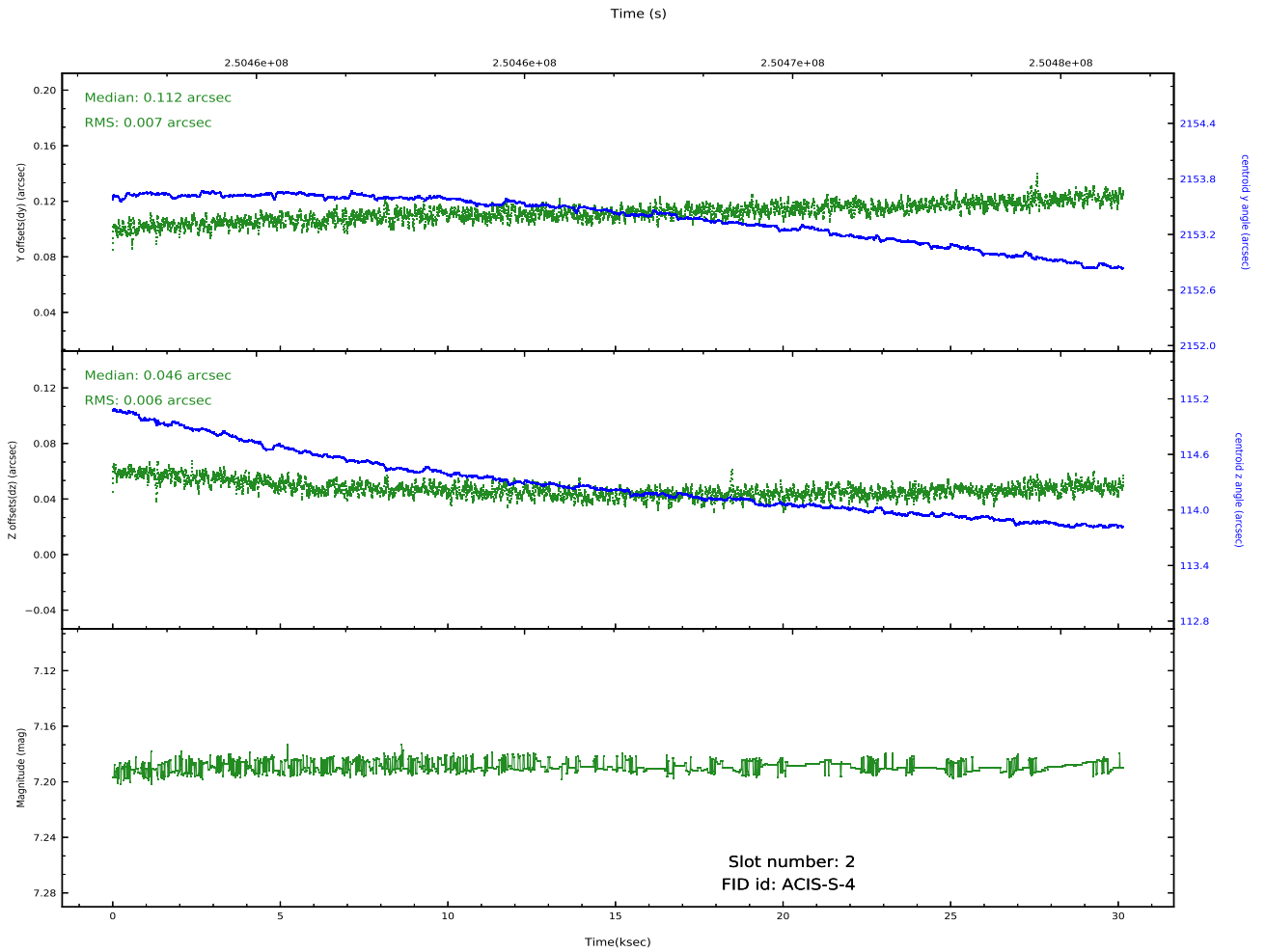
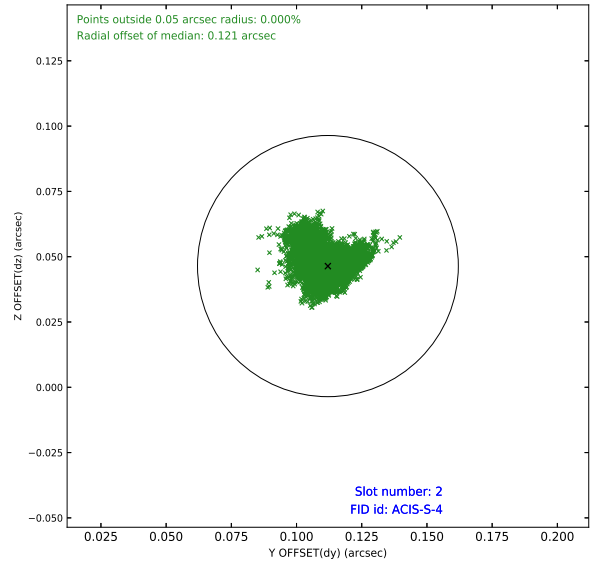
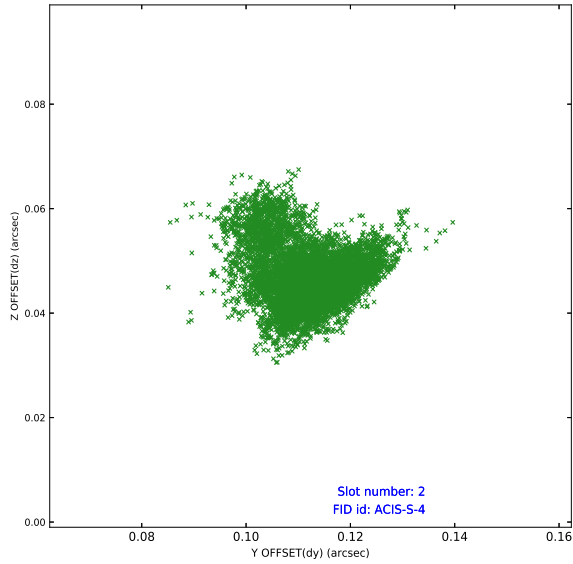
2.5.2 Slot 1



Time (s)

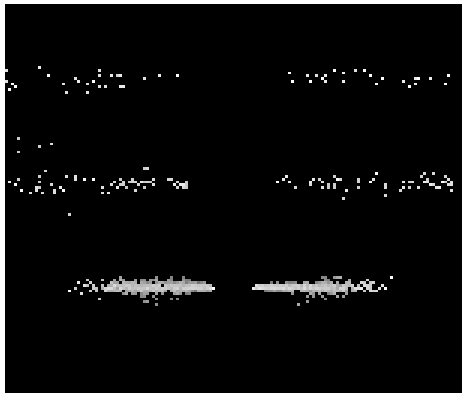


2.5.3 Slot 2

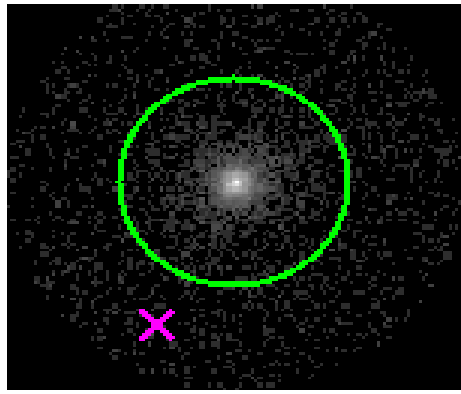


3 Gratings

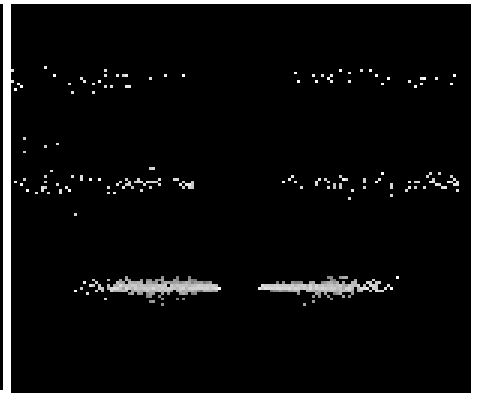
3.1 HEG Arm



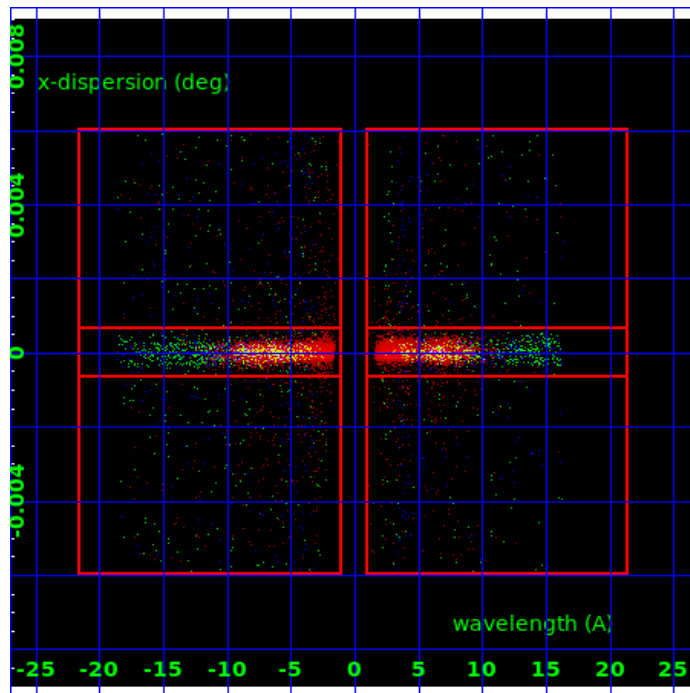
HEG Order Sort 123



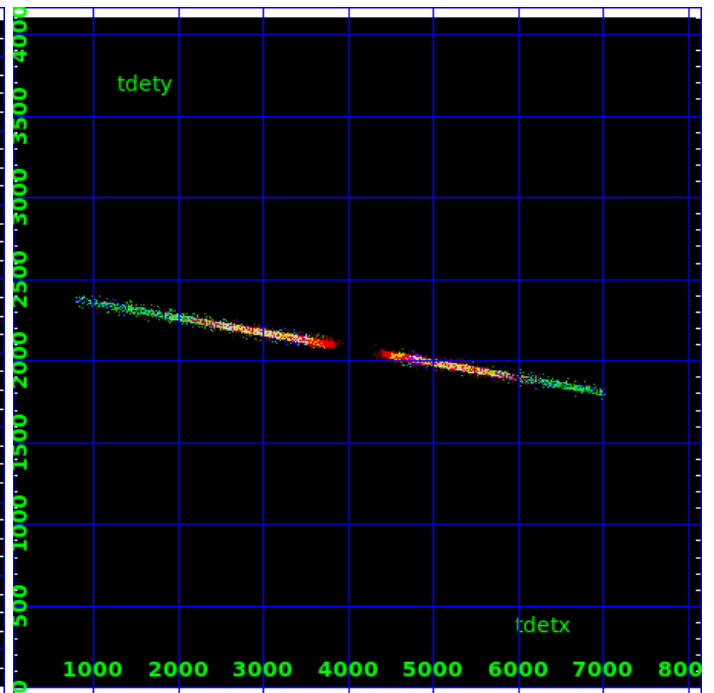
HEG Zero Order



HEG Order Sort ALL

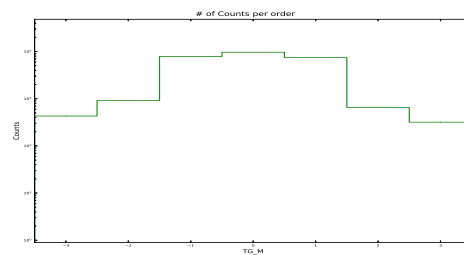


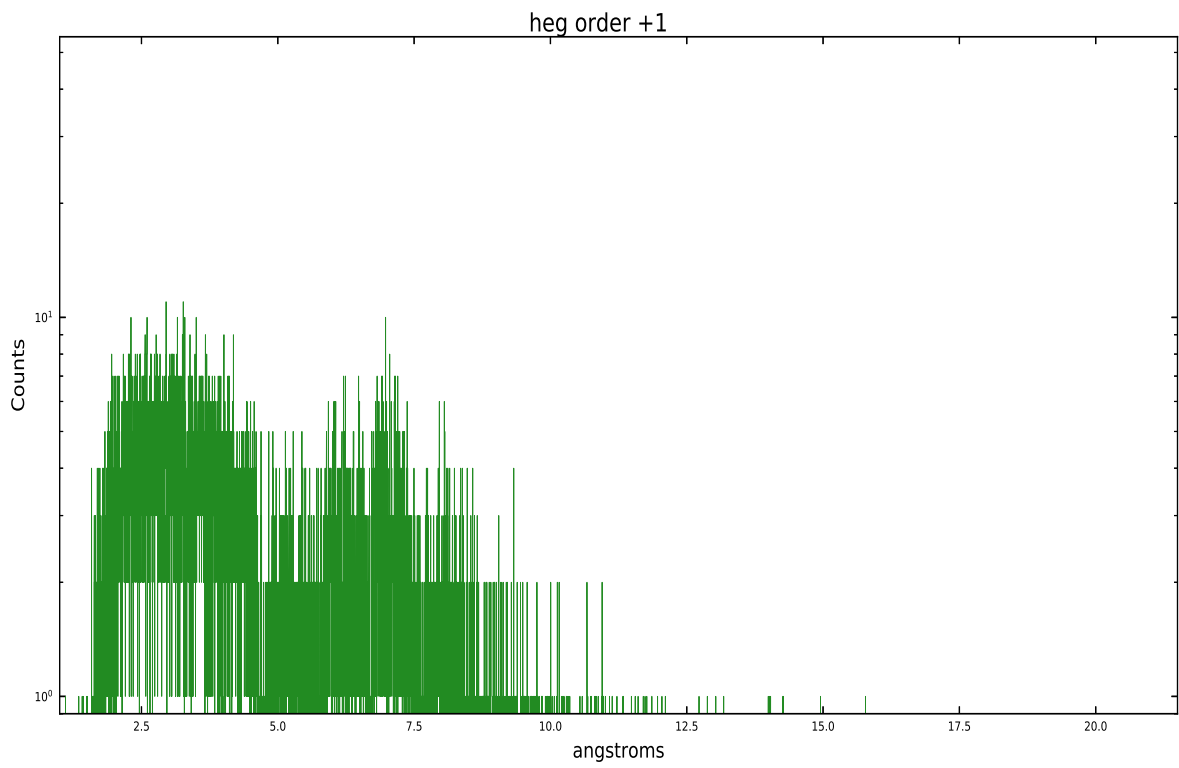
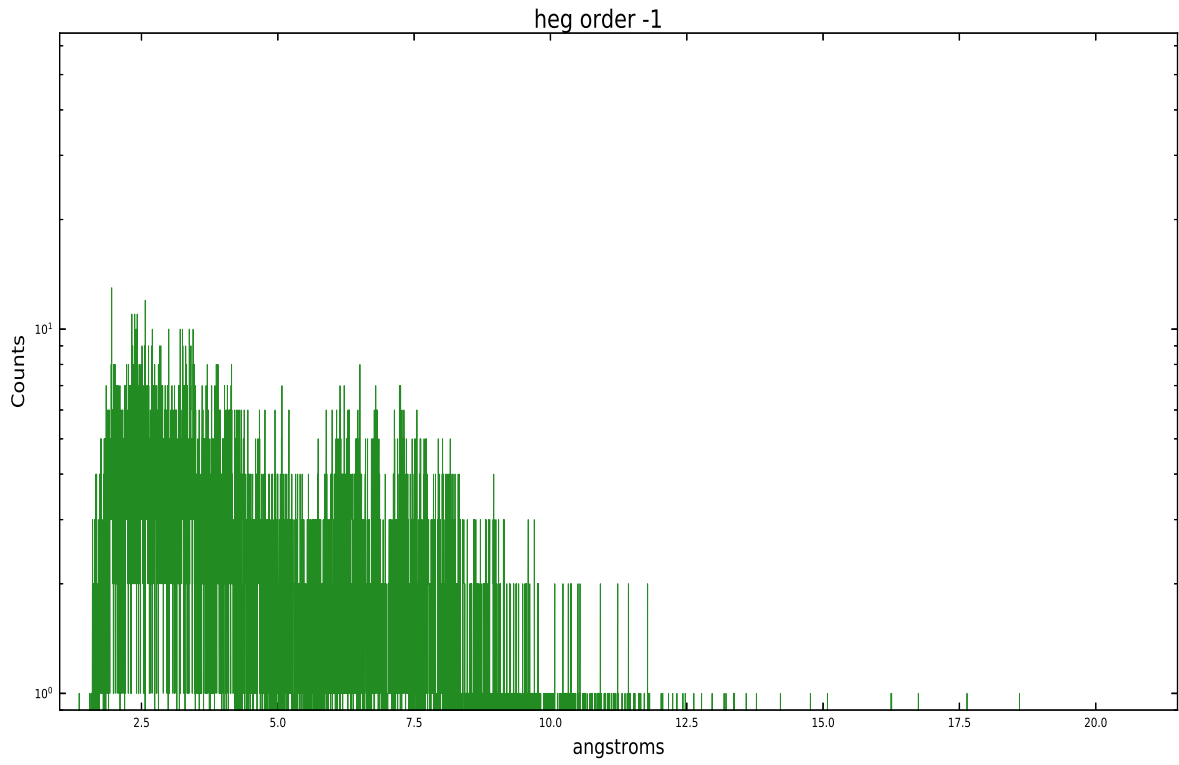
Spot Image HEG



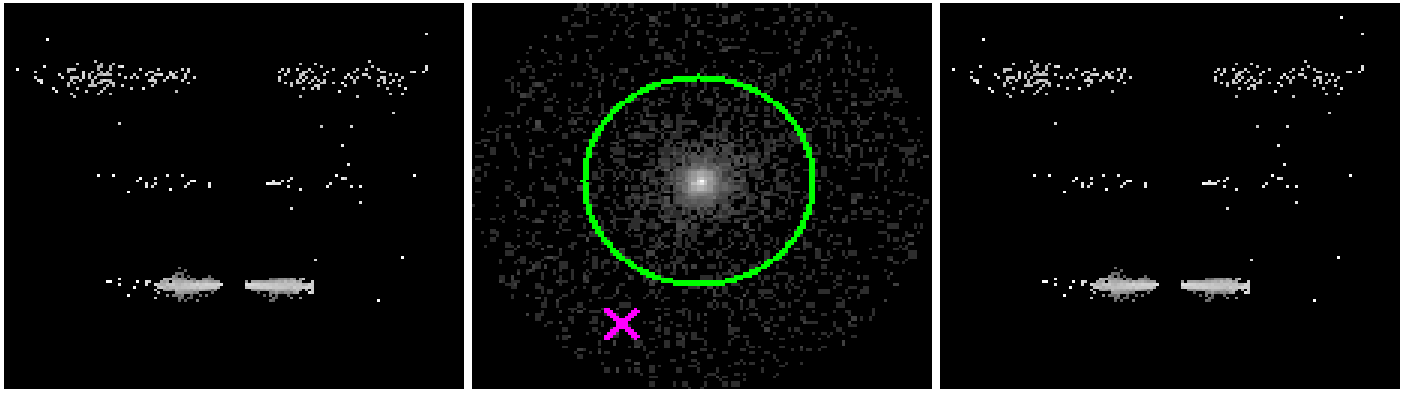
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	429	915	7864	9653	7436	655	318





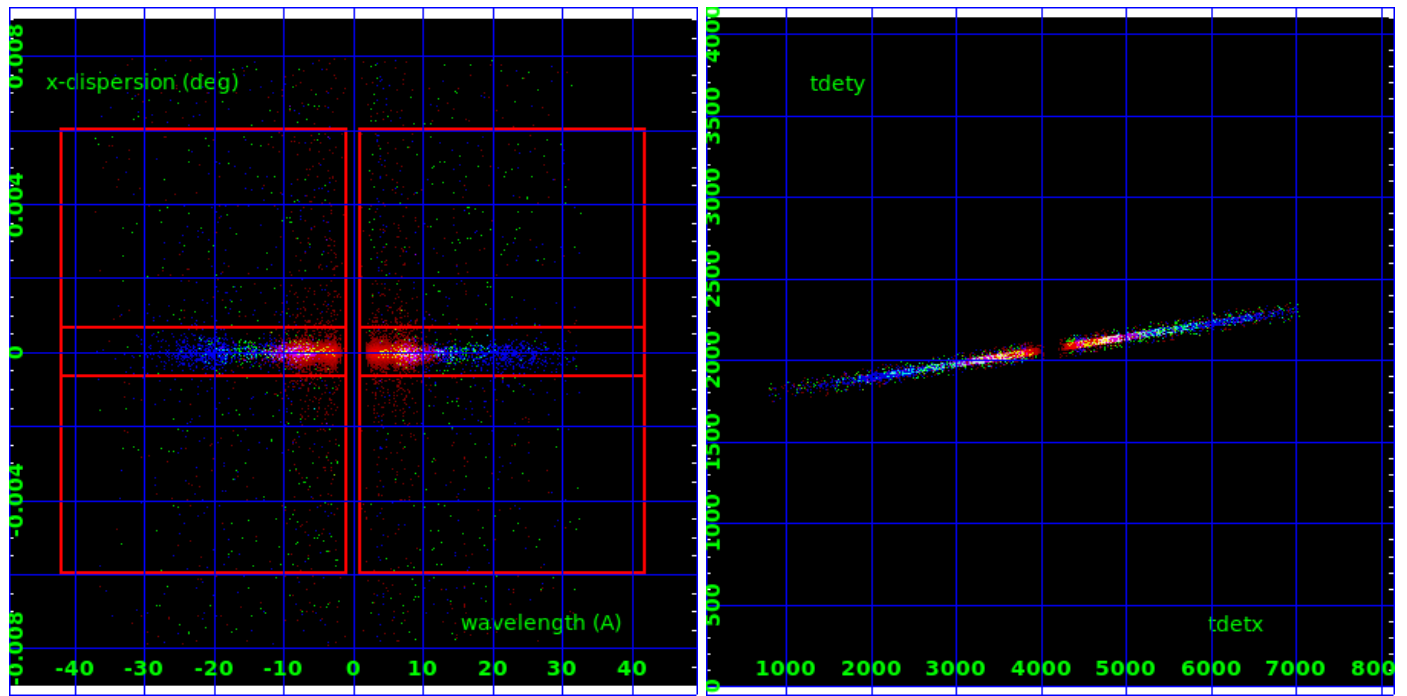
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

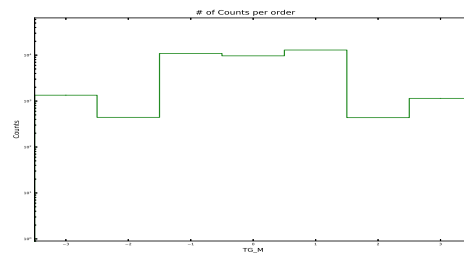
MEG Order Sort ALL

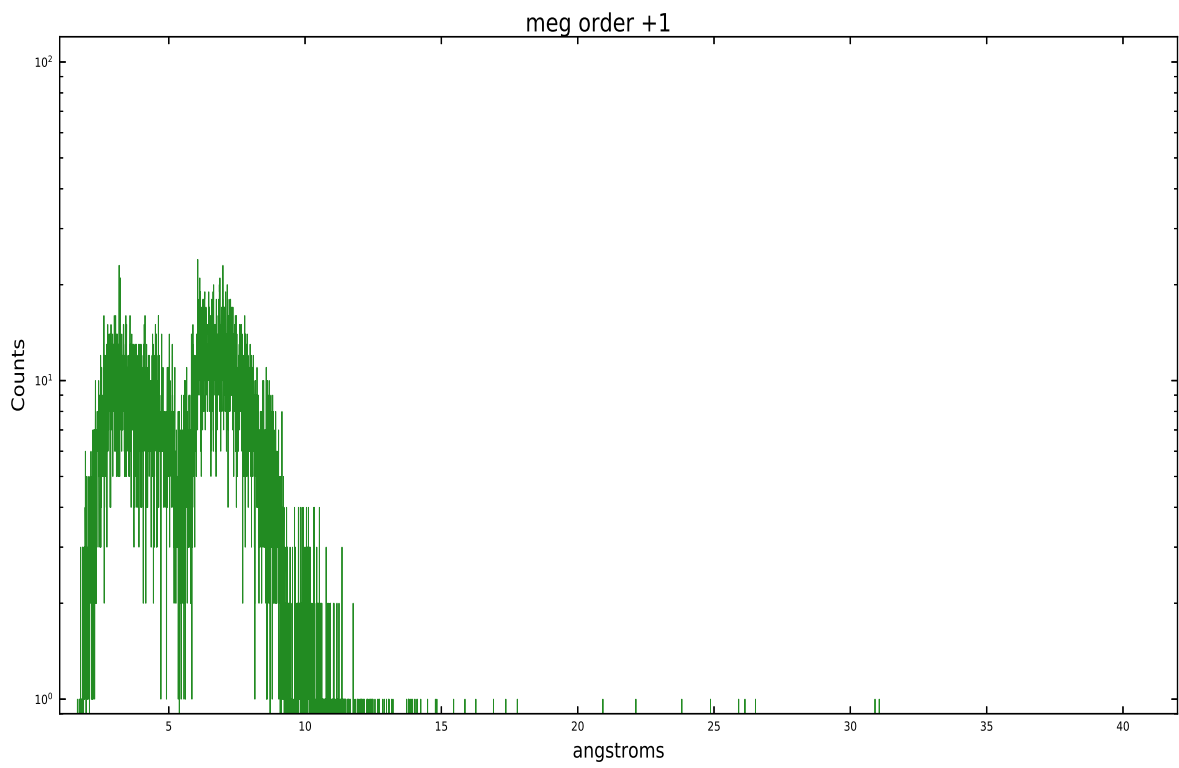
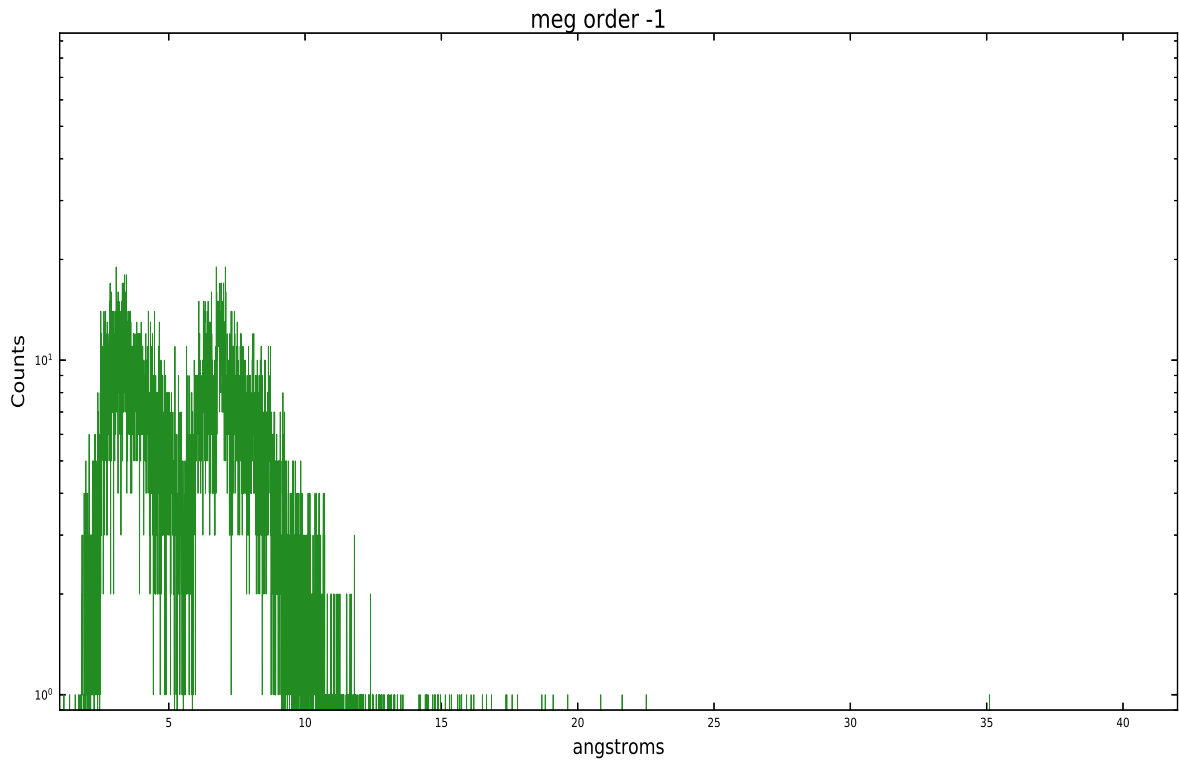


Spot Image MEG

Full Detector MEG

	order	order	order	order	order	order	order
	-3	-2	-1	0	1	2	3
Events	1342	442	10873	9653	12923	436	1145





A Summary

A.1 Status

V&V Scientist	David Principe
V&V Date (YYYY-MM-DD)	2020.10.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.07995

A.2 Comments