

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 22993 - L2 Version 1
Chandra X-Ray Center

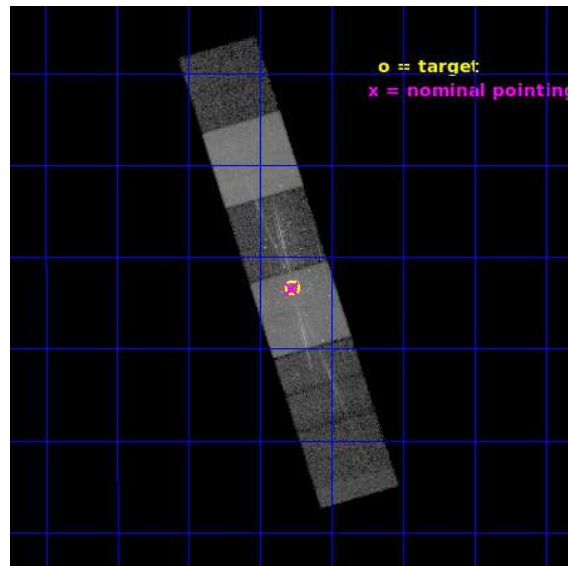
L2 Processing Date : Oct 24 2020

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1 Front

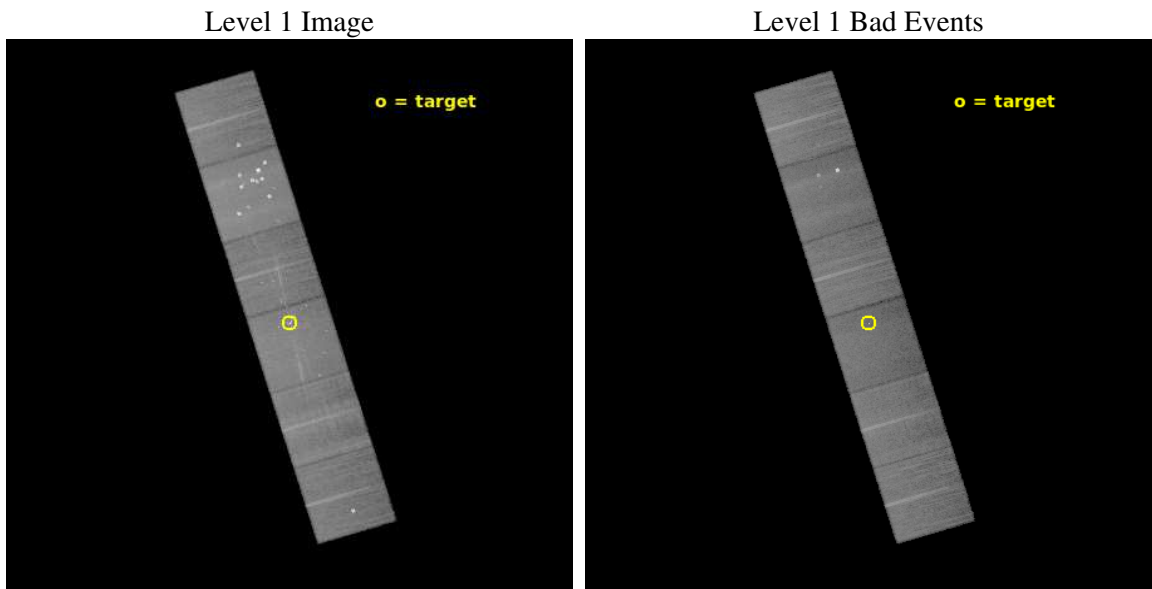
seq_num	201298	Sequence number
obs_id	22993	Observation id
title	THE TRUE NATURE OF X-RAYS FROM THE ORION TRAPEZIUM	Proposal title
observer	Norbert Schulz	Principal investigator
object	Orion Nebula Cluster	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.81875	Observer's specified target RA [deg]
dec_targ	-5.38975	Observer's specified target Dec [deg]
ra_nom	83.819489004849	Nominal RA [deg]
dec_nom	-5.3910577899422	Nominal Dec [deg]
roll_nom	73.007903043964	Nominal Roll [deg]
revision	1	Processing version of data
ontime	24946.502287745	Sum of GTIs [s]
livetime	24630.614654798	Livetime [s]
ontime4	24946.543327689	Sum of GTIs [s]
ontime5	24946.461247683	Sum of GTIs [s]
ontime6	24946.420207739	Sum of GTIs [s]
ontime7	24946.502287745	Sum of GTIs [s]
ontime8	24946.379167676	Sum of GTIs [s]
ontime9	24946.338127732	Sum of GTIs [s]
l2events	389598	Number of level 2 events



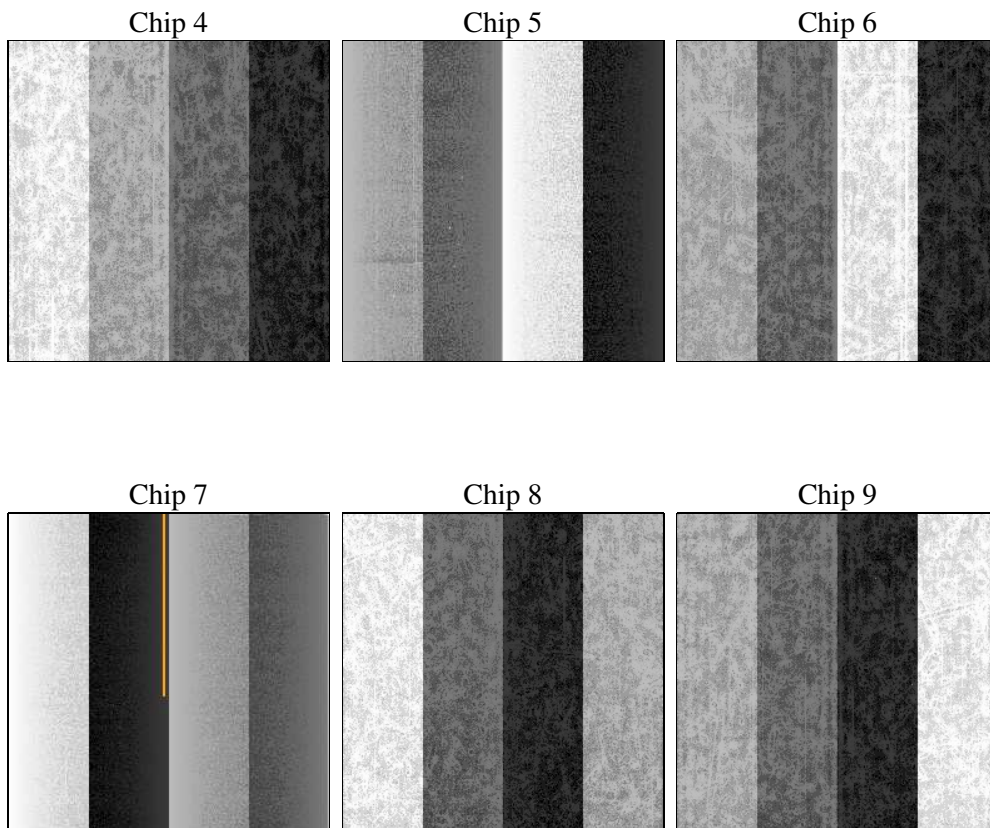
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	25000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	24946.502287745	Sum of GTIs [s]
caldsver	4.9.3	 	ontime4	24946.543327689	Sum of GTIs [s]
date	2020-10-24T03:41:31	Date and time of file creation	ontime5	24946.461247683	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	24946.420207739	Sum of GTIs [s]
			ontime7	24946.502287745	Sum of GTIs [s]
			ontime8	24946.379167676	Sum of GTIs [s]
			ontime9	24946.338127732	Sum of GTIs [s]
			l1events	1617568	Number of level 1 events
			tgmetho	TGDETECT	Method used to create src1a file
			ra_pos	(4101.74, 4107.81)	Grade 0 sky pixel position

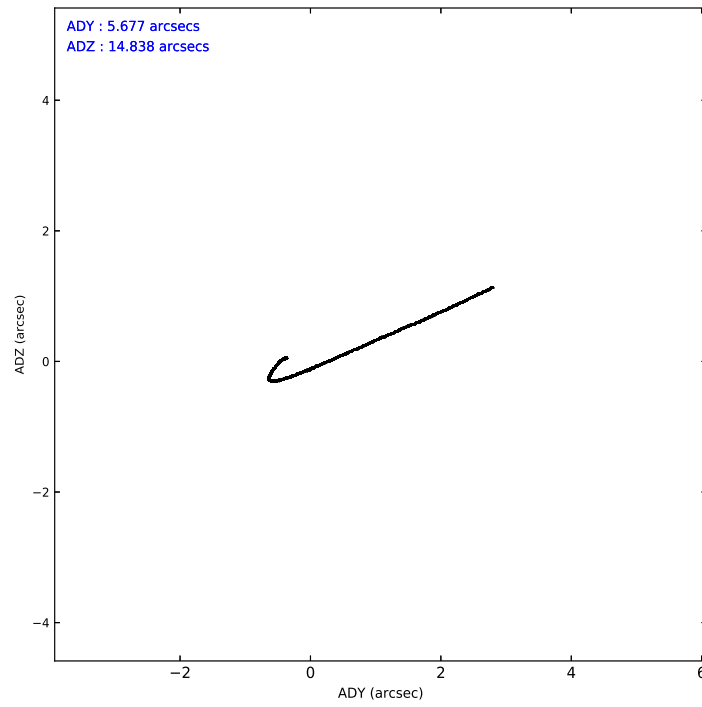
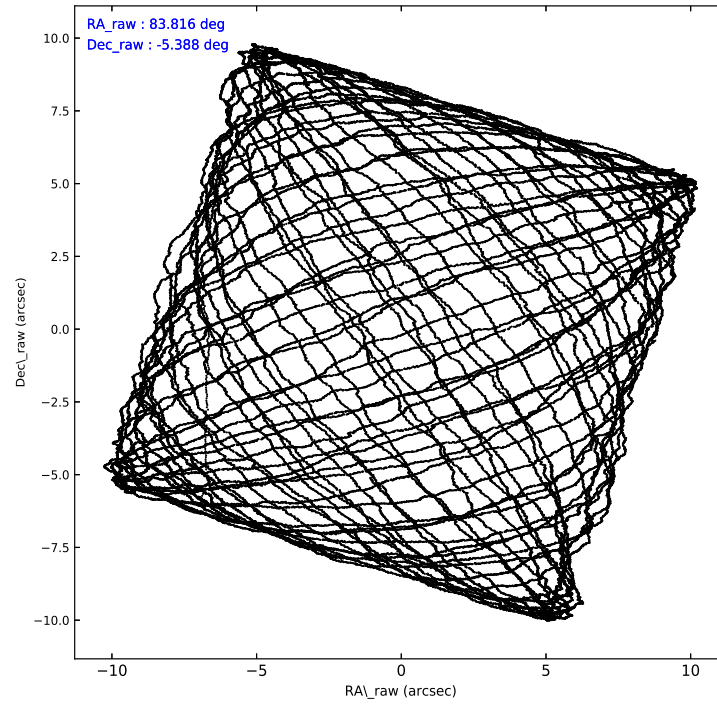
2.1.4 Events

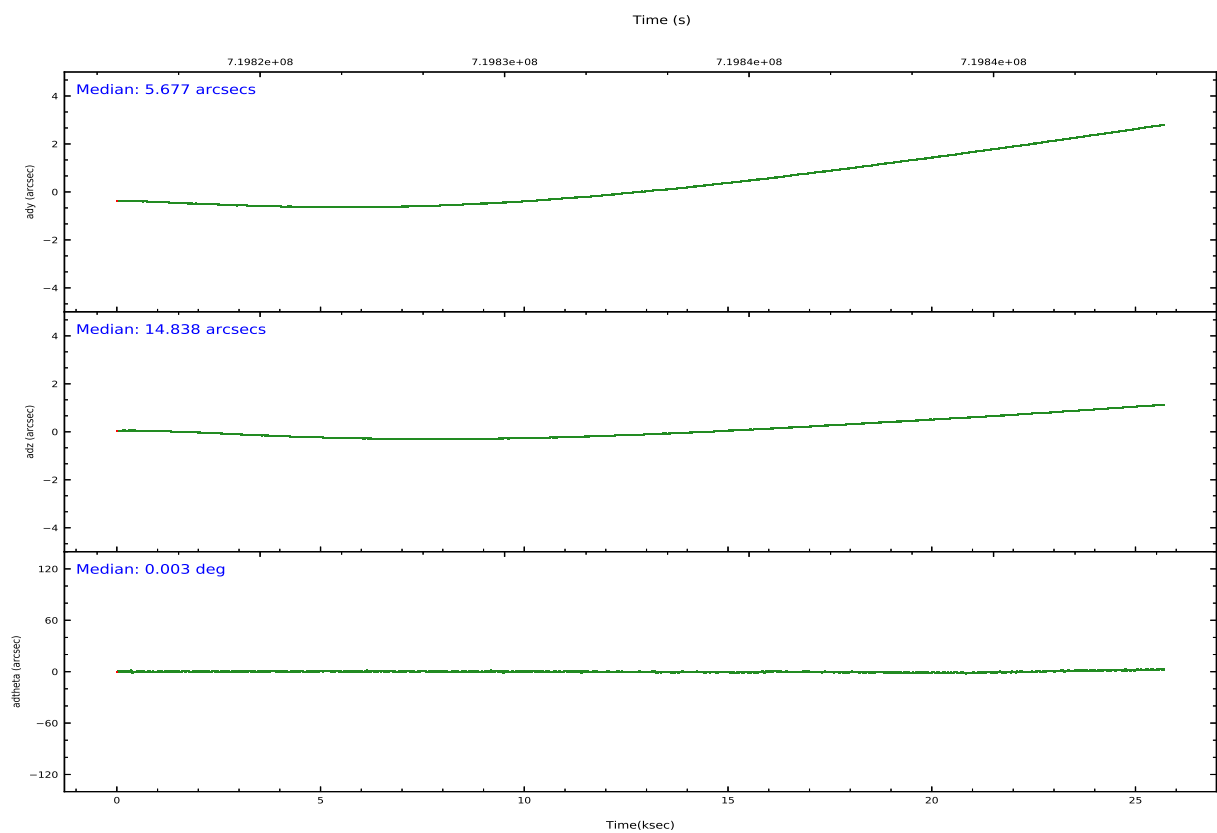
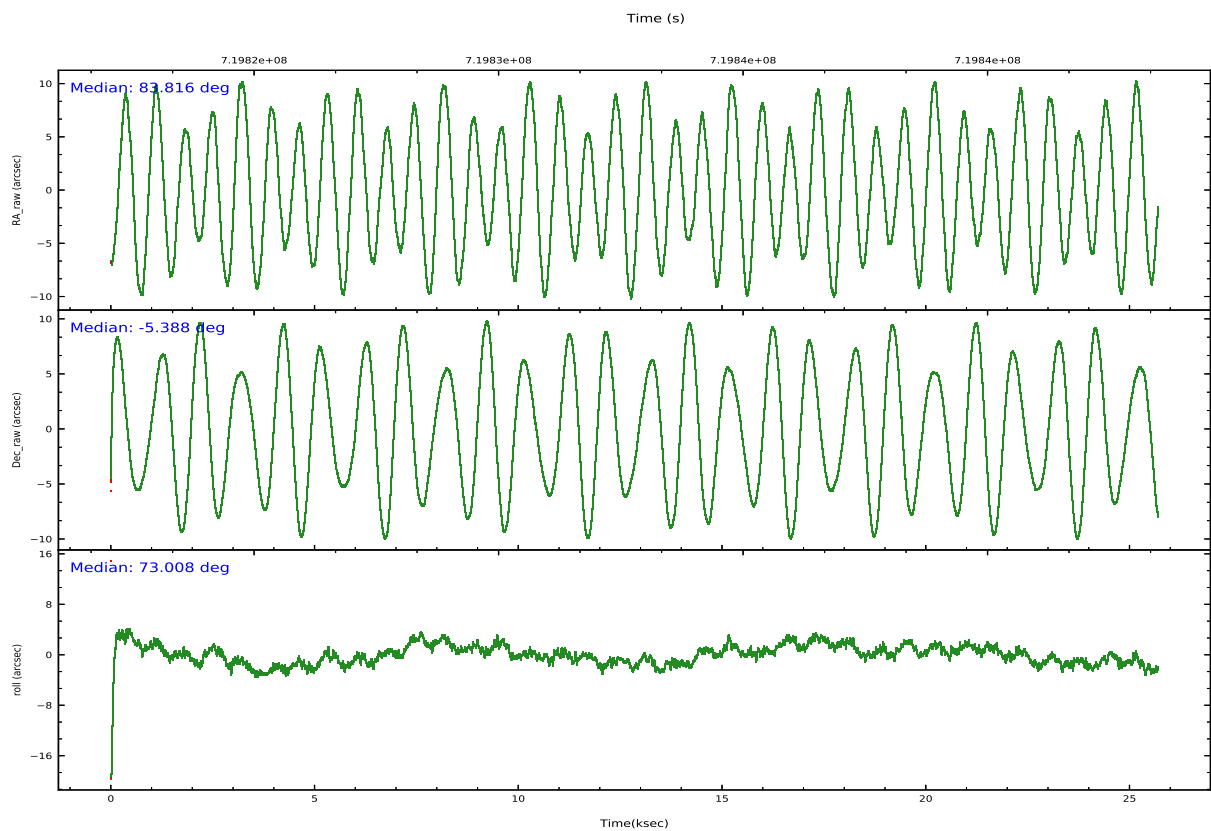
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	241363	387785	229292	288064	260844	210220	grade 0 events	14004	51813	19614	15841	24000	15753
rejected events	213017	177828	188310	146940	189311	178227		5%	13%	8%	5%	9%	7%
rejected %	88%	45%	82%	51%	72%	84%	grade 1 events	264	1013	150	456	209	154
								0%	0%	0%	0%	0%	0%
							grade 2 events	5479	60803	9588	31767	16410	6166
								2%	15%	4%	11%	6%	2%
							grade 3 events	2467	6397	2372	11494	6532	2249
								1%	1%	1%	3%	2%	1%
							grade 4 events	2310	4787	2382	11306	6322	2113
								0%	1%	1%	3%	2%	1%
							grade 5 events	9127	20720	8017	24444	13146	9666
								3%	5%	3%	8%	5%	4%
							grade 6 events	4091	86214	7034	70755	18286	5717
								1%	22%	3%	24%	7%	2%
							grade 7 events	203621	156038	180135	122001	175939	168402
								84%	40%	78%	42%	67%	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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	83.822486	83.819489004849	CCD I2 on	N	N
[deg] Pointing Dec	-5.414716	-5.3910577899422	CCD I3 on	N	N
[deg] Pointing Roll	72.858660	73.00790304396401	CCD S0 on	O1	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	719821187.184000	719819808.34763	CCD S5 on	O2	Y
Observation start date	2020-10-23T06:18:38	2020-10-23T05:56:48	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	719846187.184000	719847079.4993	On-chip summing requested	N	N
Observation end date	2020-10-23T13:15:18	2020-10-23T13:31:19	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



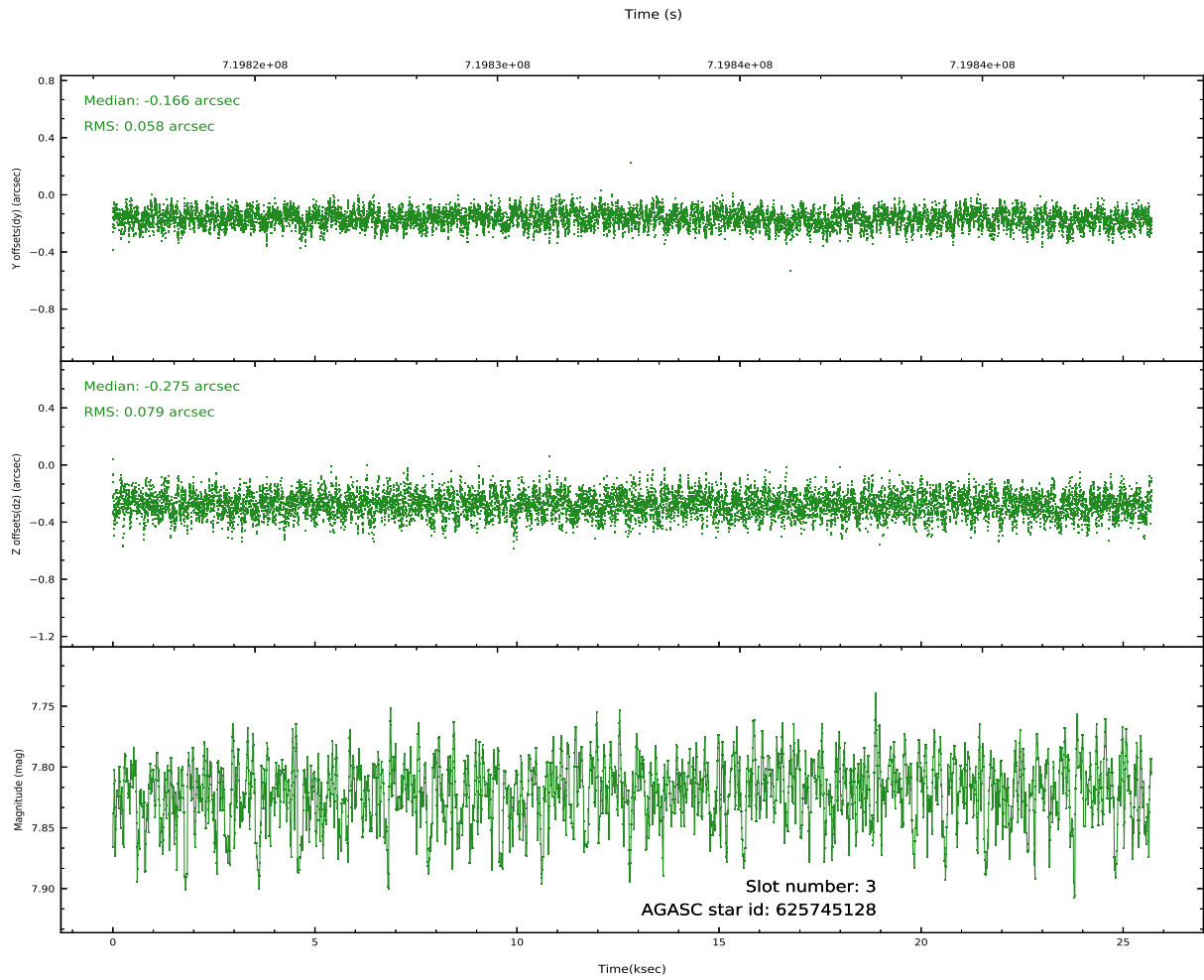
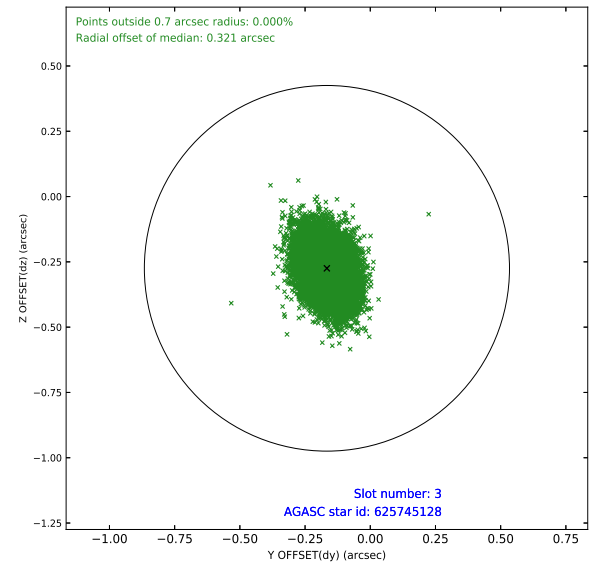
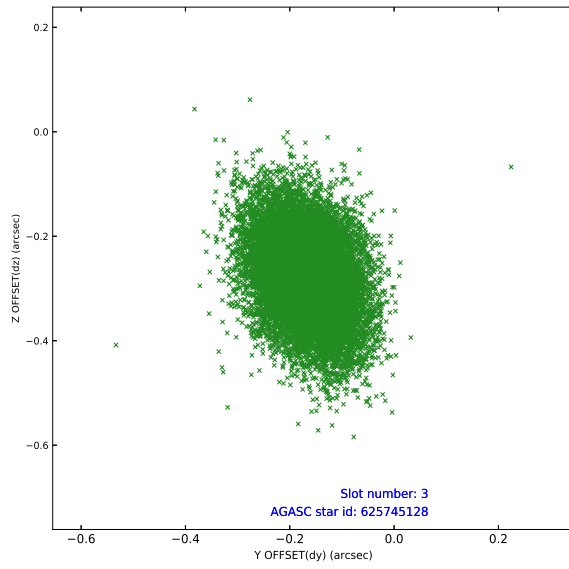


Slot Statistics

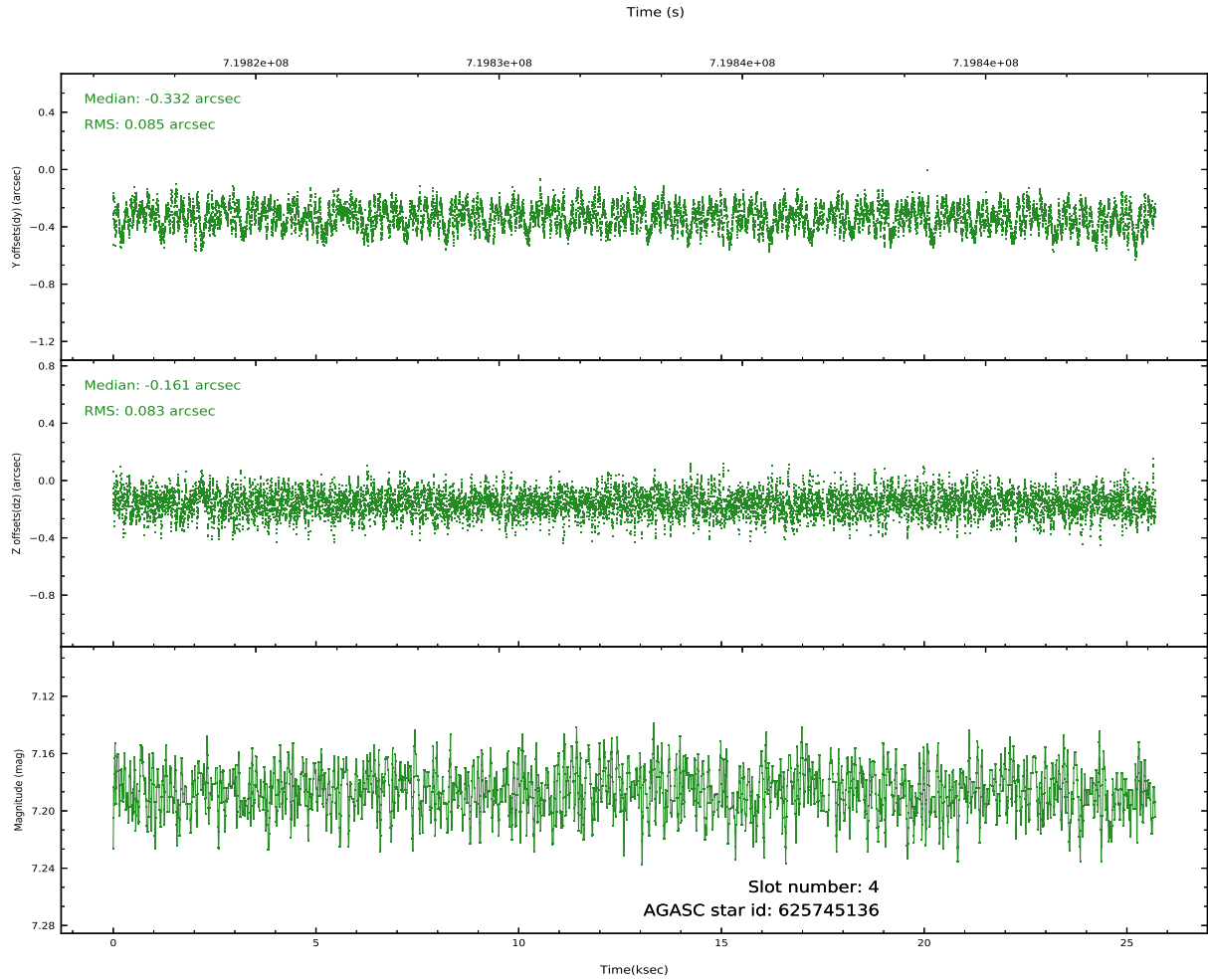
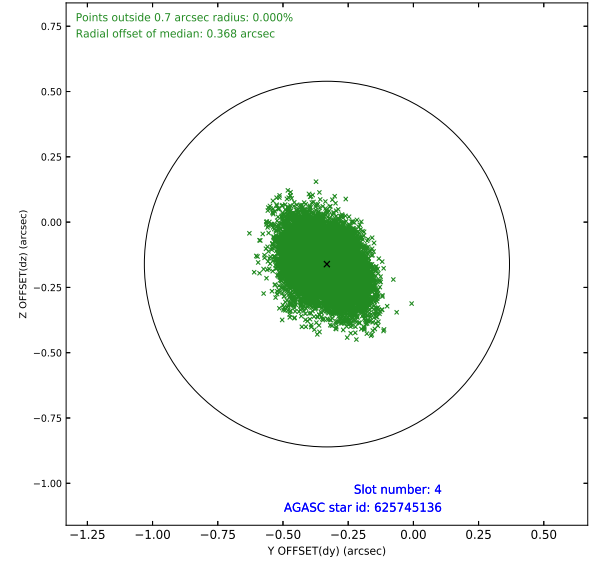
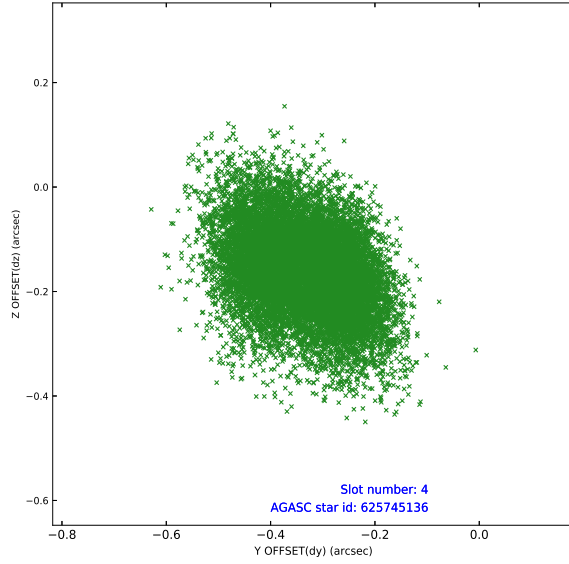
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.10	6269	1.000	0.072	-0.062	0.038	0.077	0.000000	0.000000	-758.94	-1736
1	FID		ACIS-S-4	7.24	6270	1.000	0.151	-0.016	0.047	0.068	0.000000	0.000000	2154.55	171
2	FID		ACIS-S-5	7.23	6270	1.000	-0.255	0.096	0.017	0.038	0.000000	0.000000	-1811.77	166
3	GUIDE	used	625745128	7.82	12531	1.000	-0.166	-0.275	0.104	0.172	83.769930	-4.731835	2293.71	904
4	GUIDE	used	625745136	7.19	12512	1.000	-0.332	-0.161	0.126	0.202	83.600341	-4.804339	1865.08	1409
5	GUIDE	used	625874672	7.67	12529	1.000	0.200	0.062	0.123	0.206	84.403143	-4.934124	2267.01	-1480
6	GUIDE	used	626272760	6.61	12539	1.000	0.206	0.151	0.132	0.210	84.363987	-5.938389	-1230.02	-2408
7	GUIDE	used	626272880	7.65	12534	1.000	0.096	0.231	0.111	0.181	83.815609	-6.032748	-2132.96	-632

2.4 Star Slots

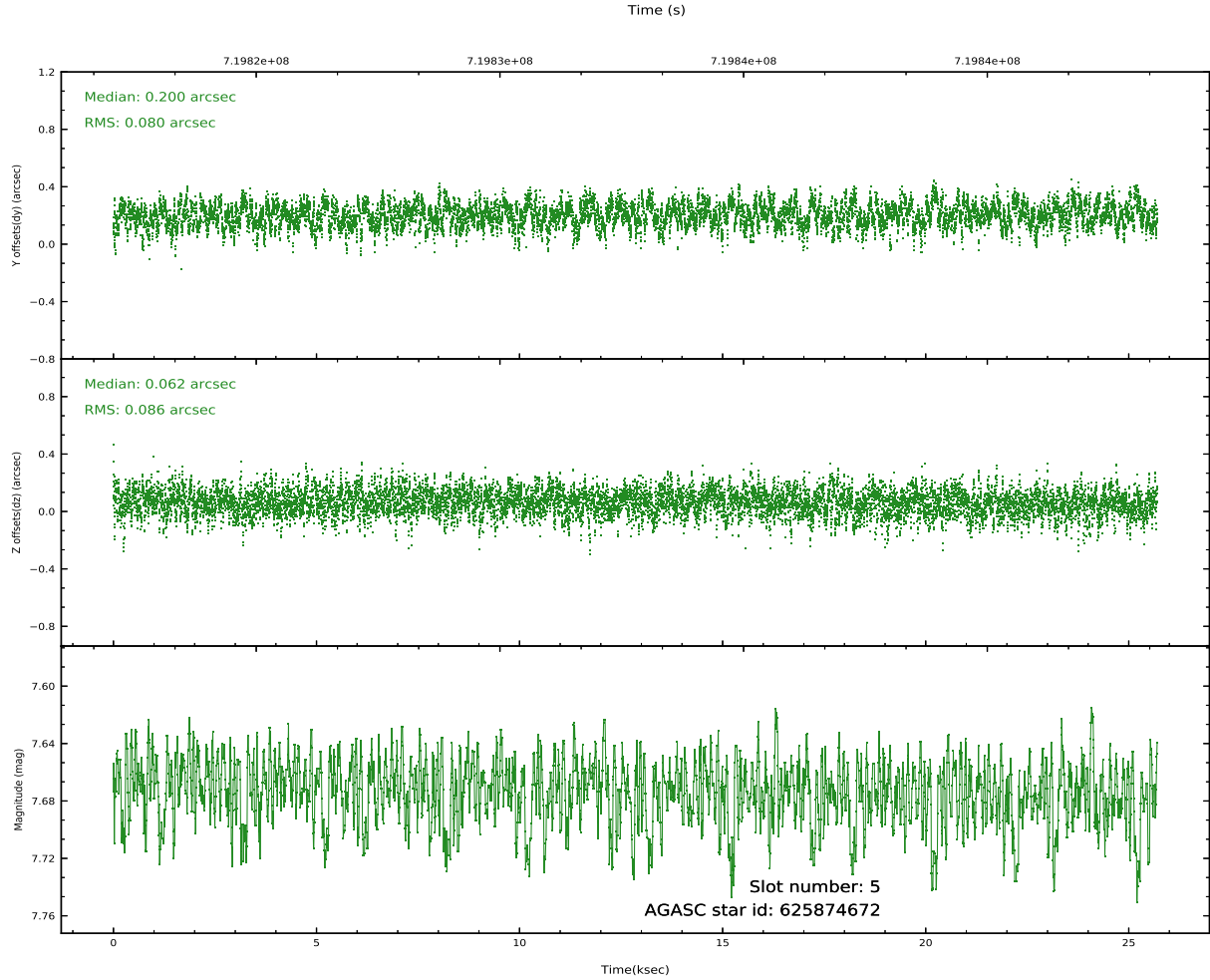
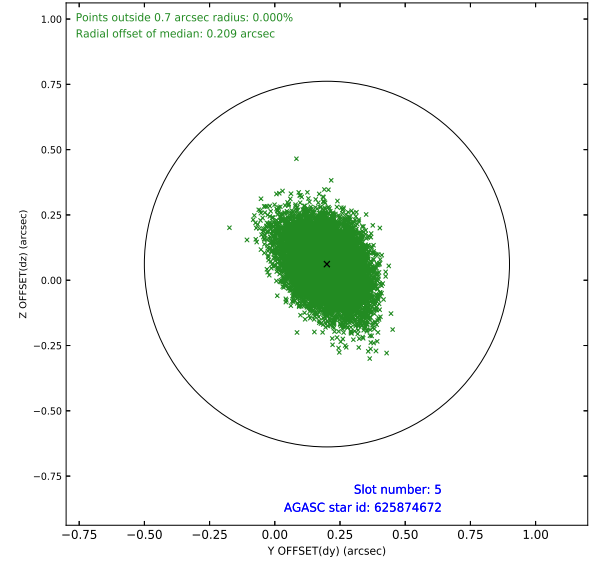
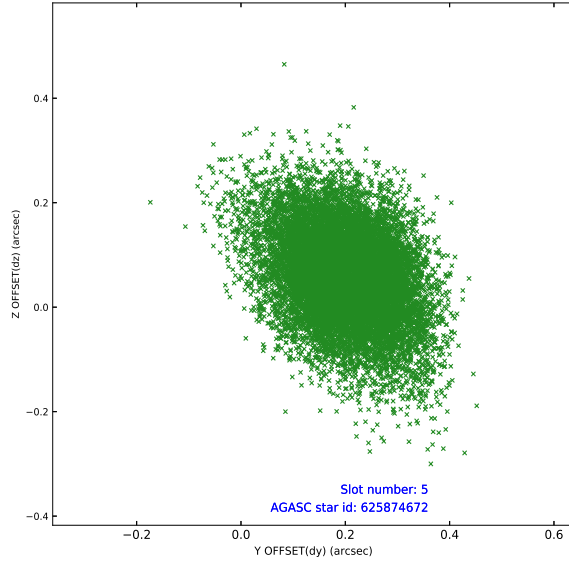
2.4.1 Slot 3



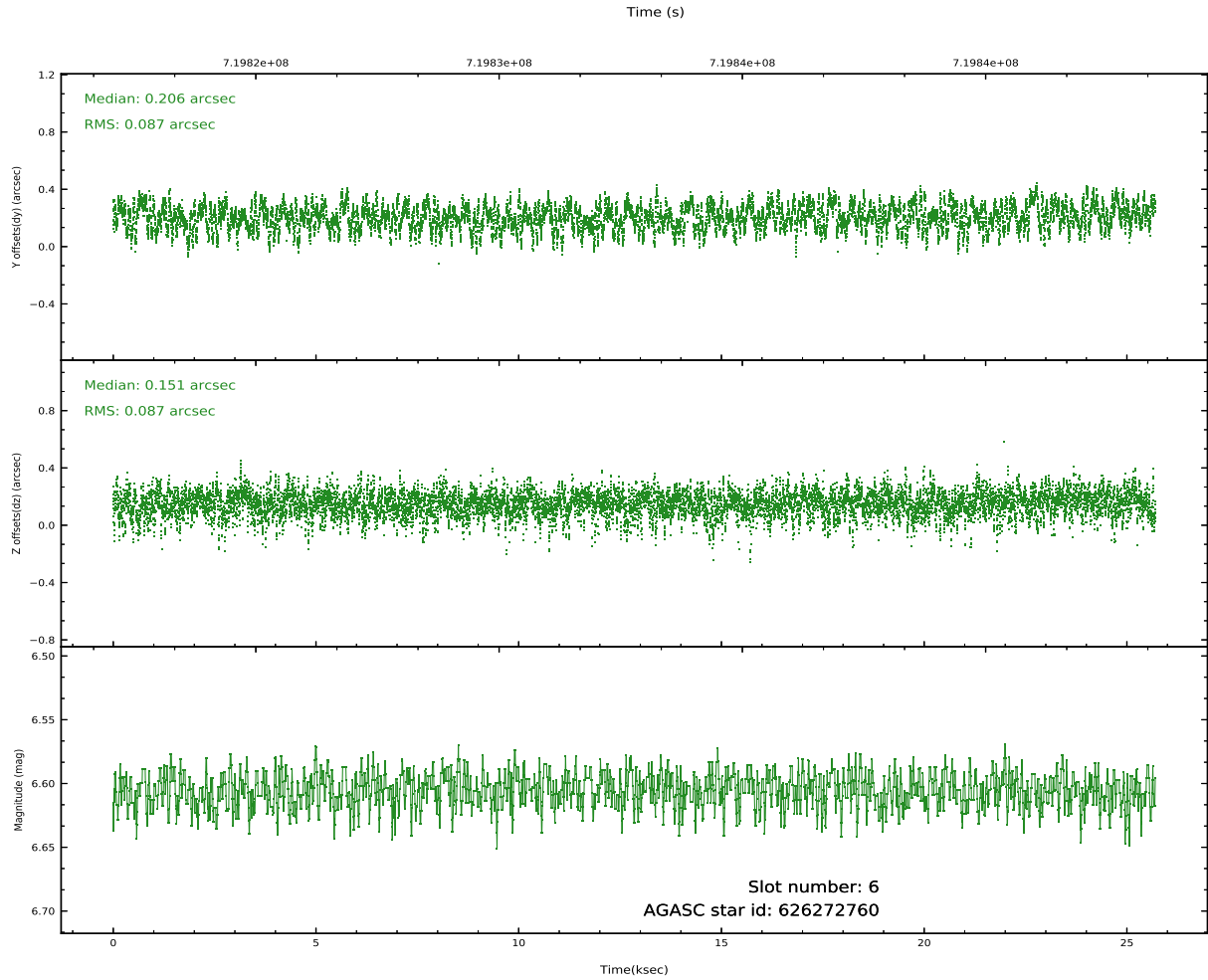
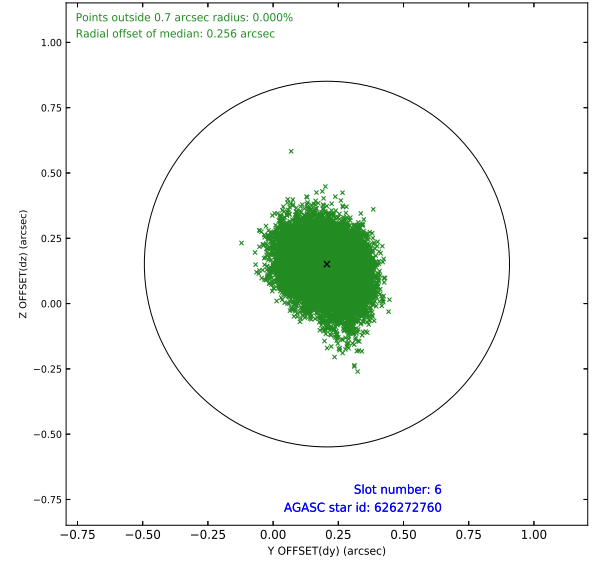
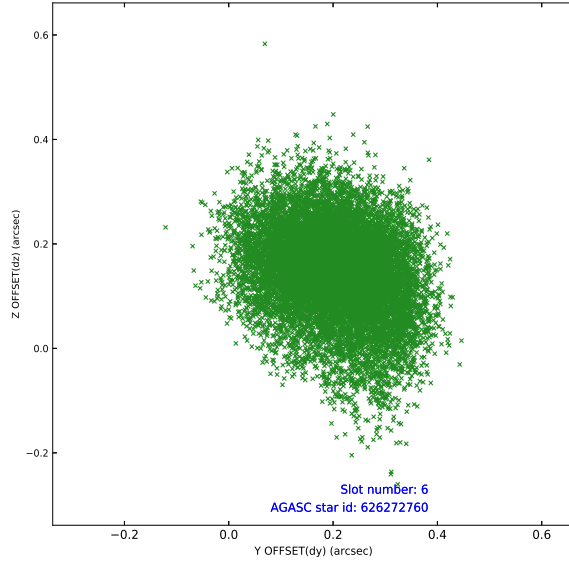
2.4.2 Slot 4



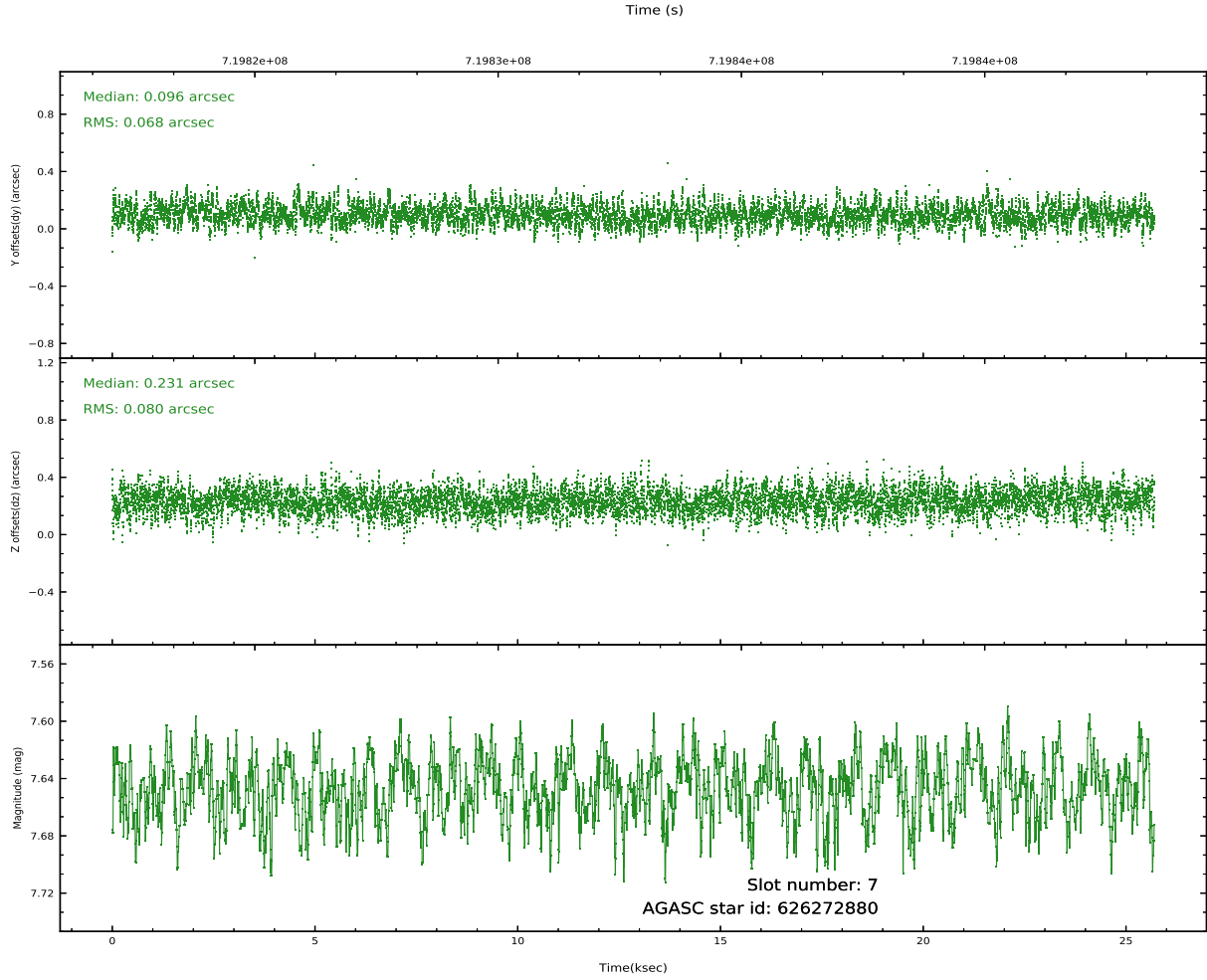
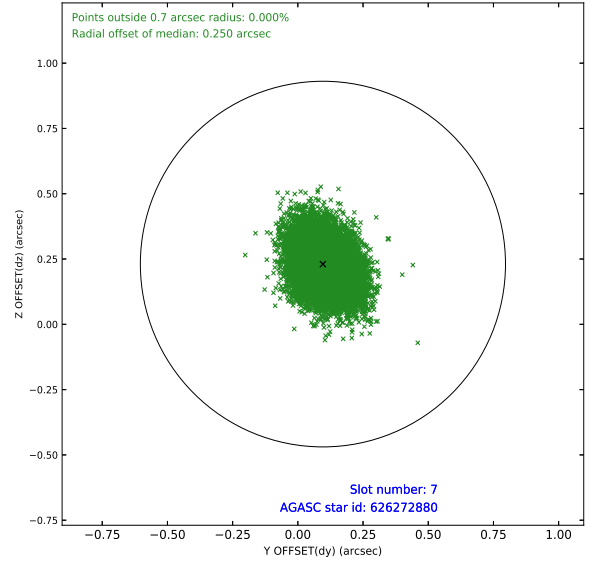
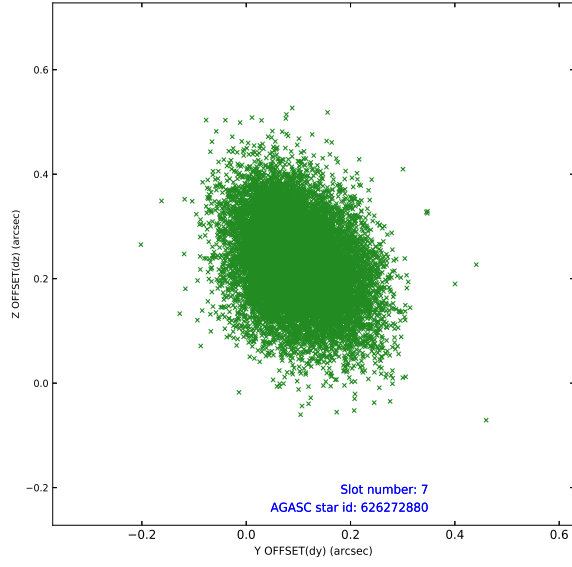
2.4.3 Slot 5



2.4.4 Slot 6

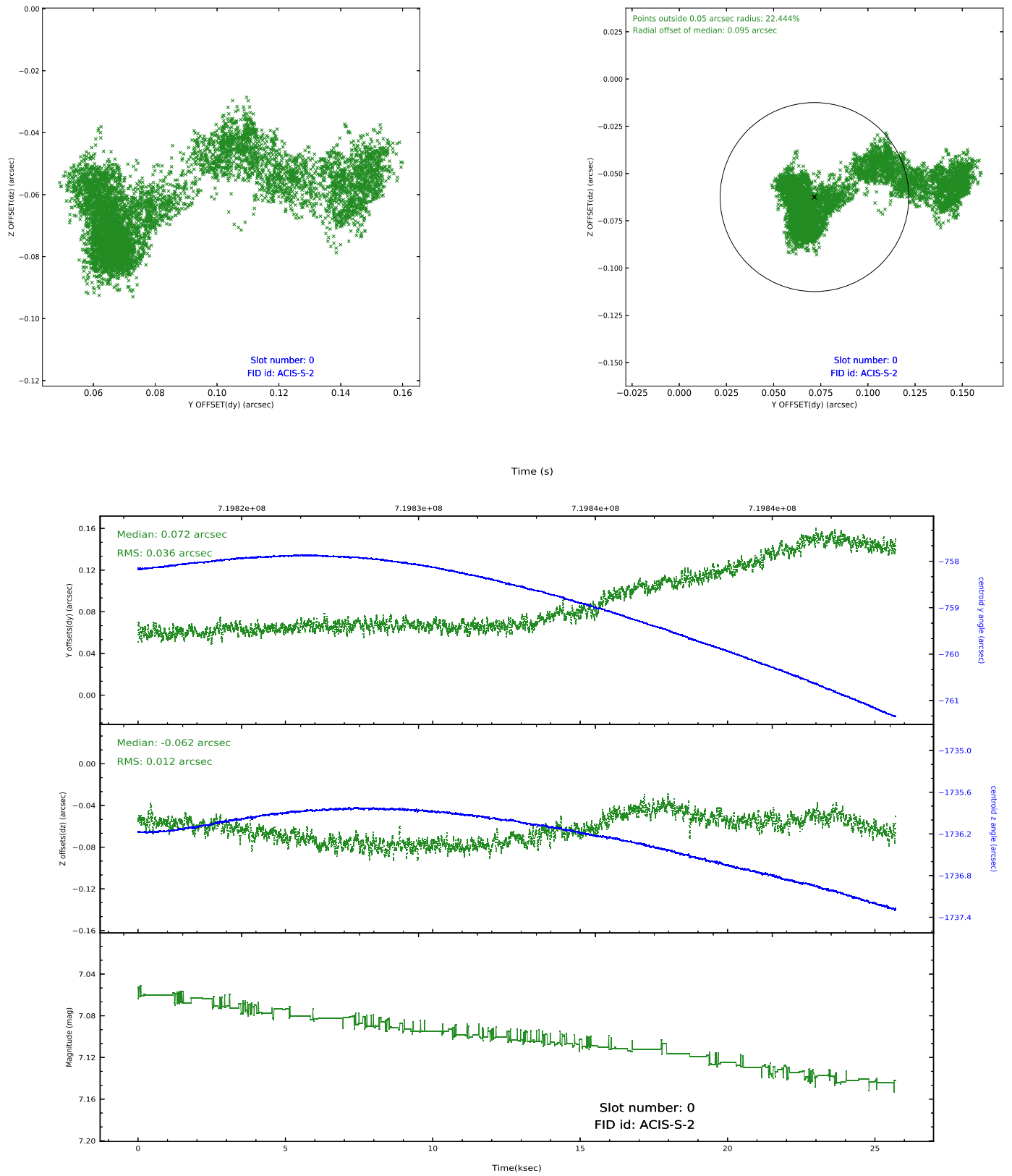


2.4.5 Slot 7

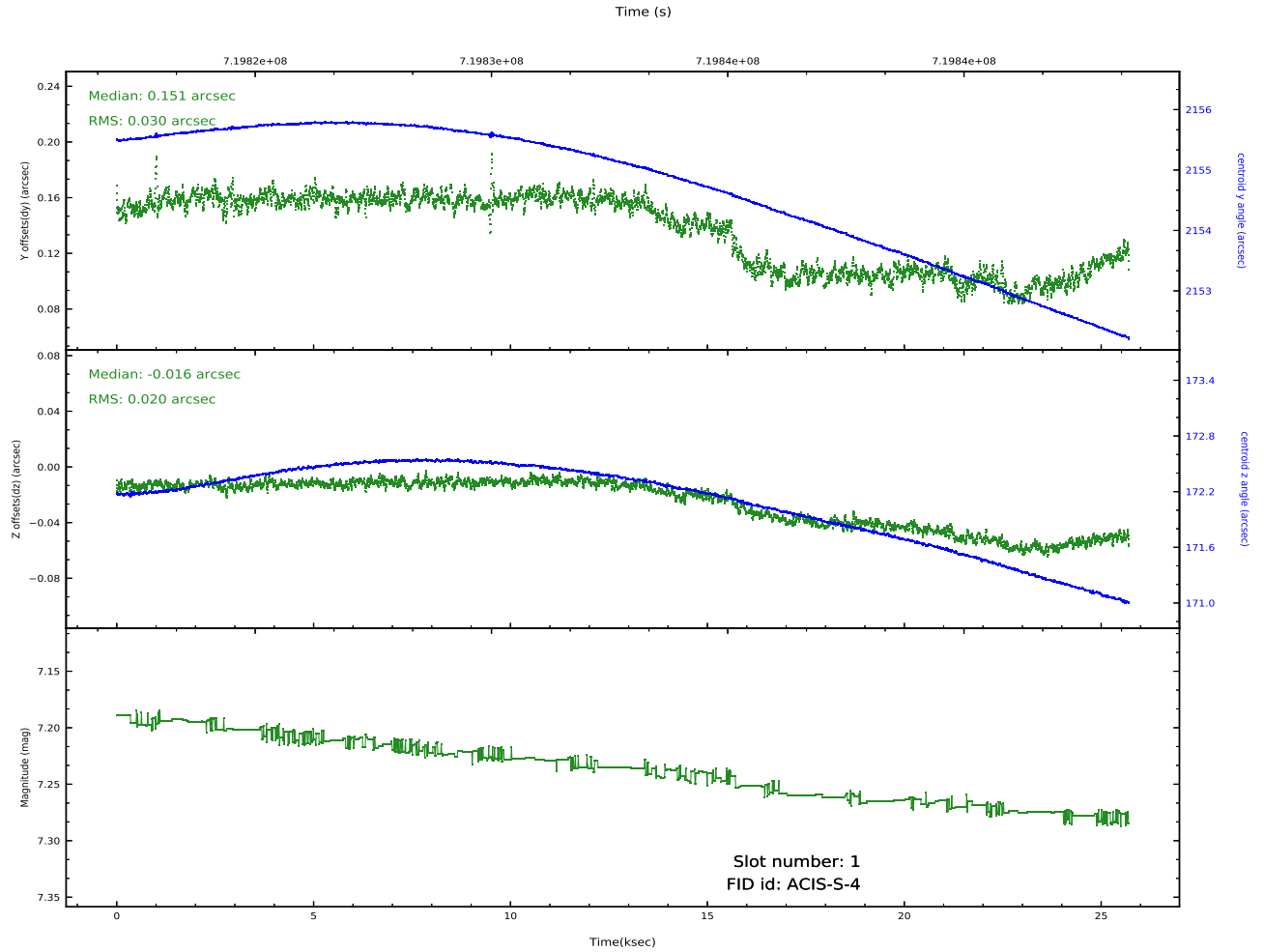
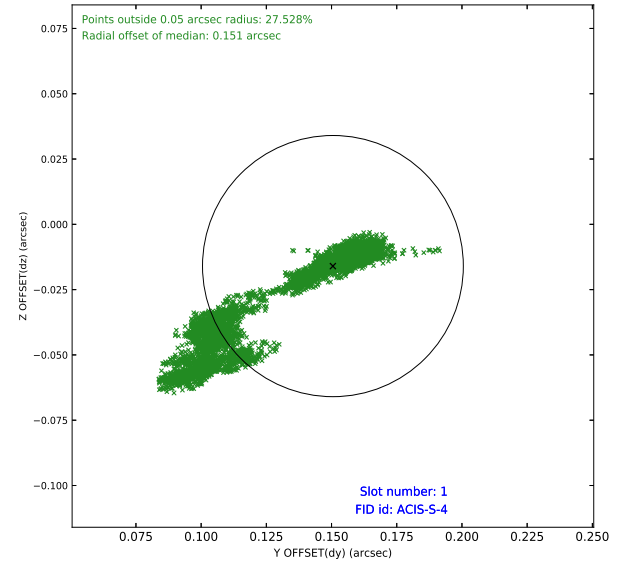
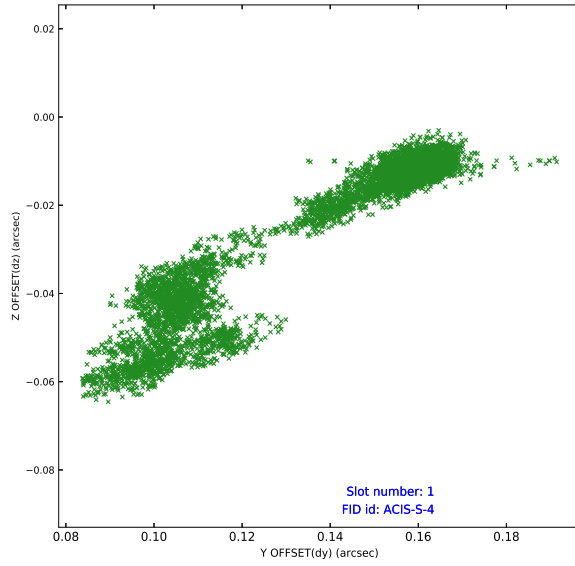


2.5 FID Slots

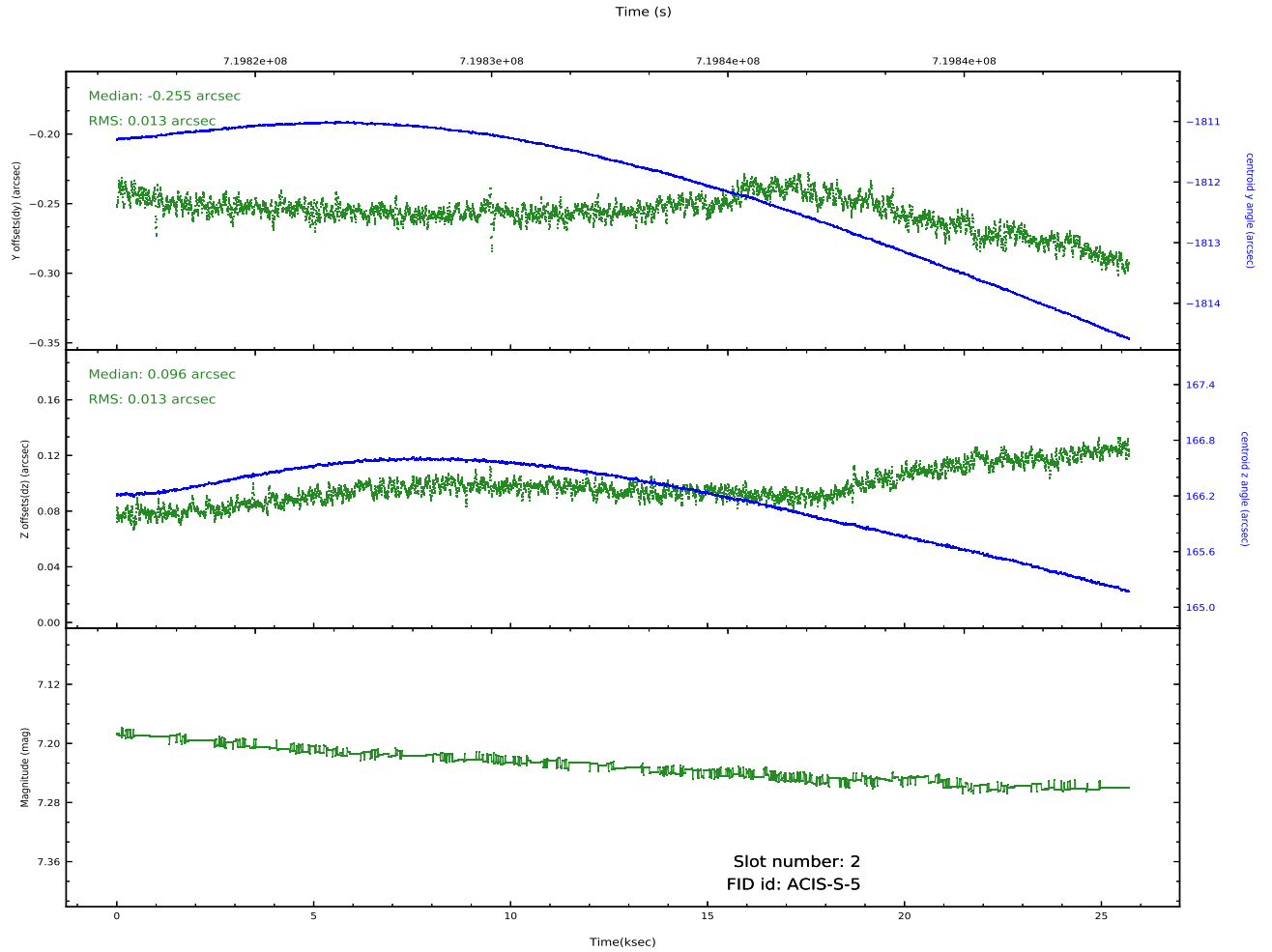
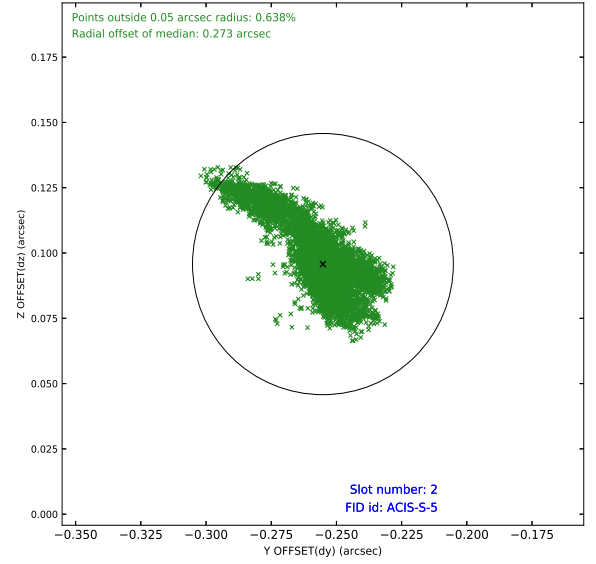
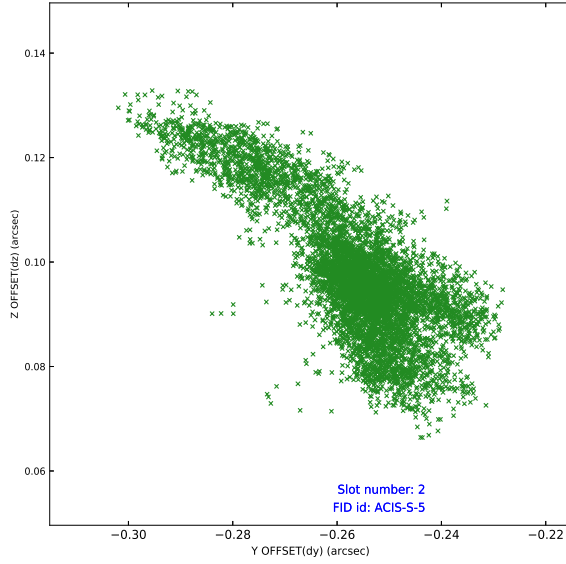
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

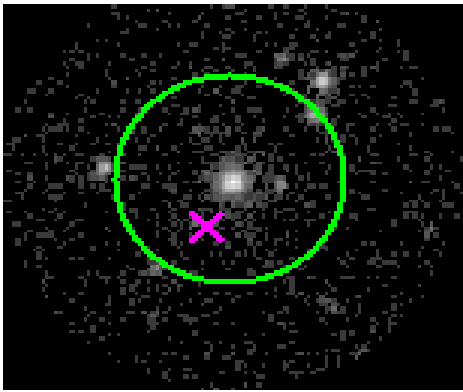


3 Gratings

3.1 HEG Arm



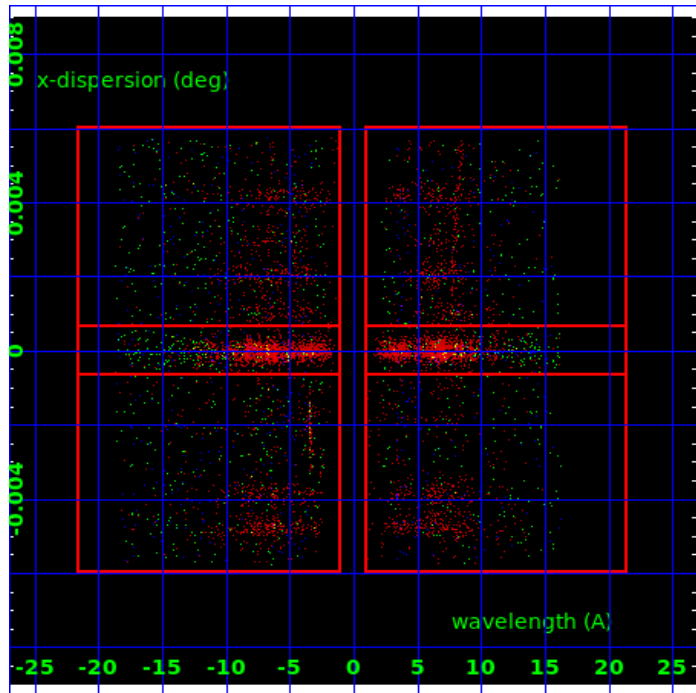
HEG Order Sort 123



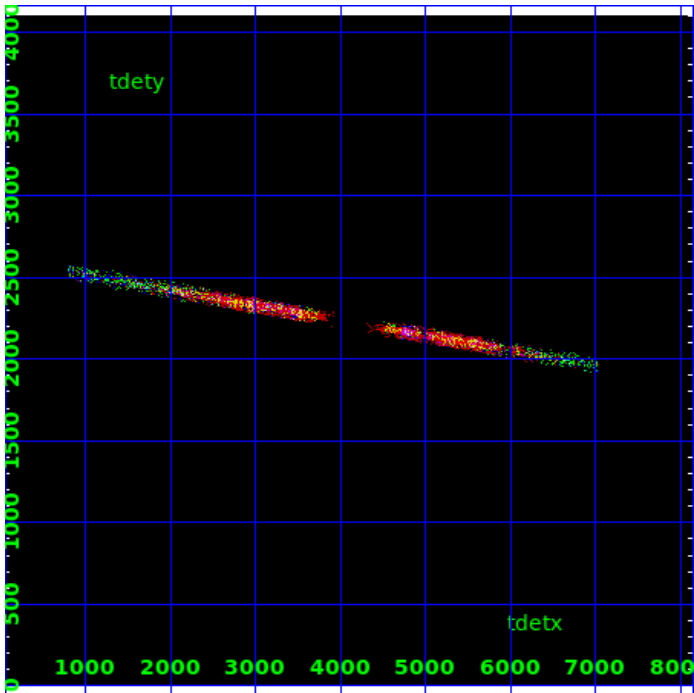
HEG Zero Order



HEG Order Sort ALL

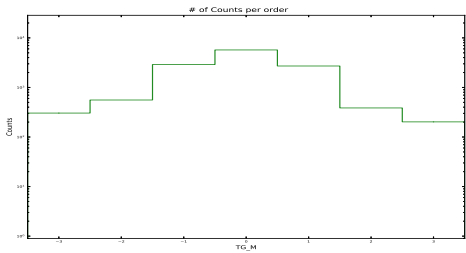


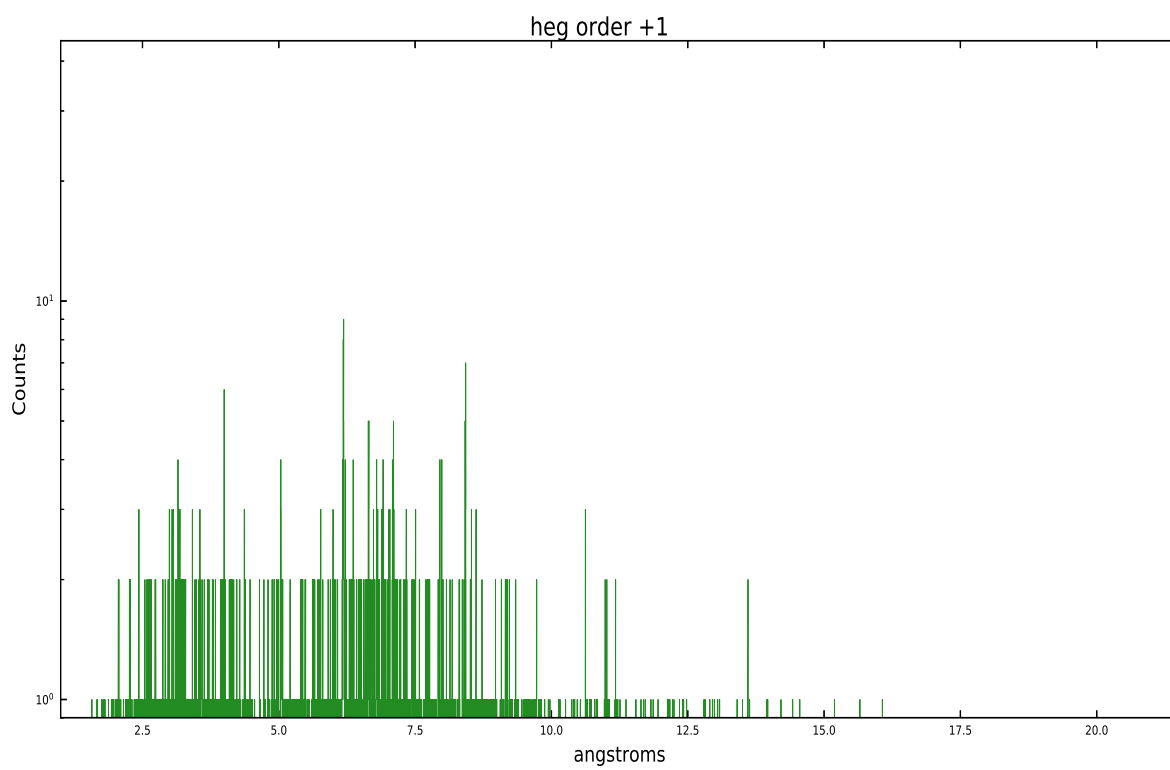
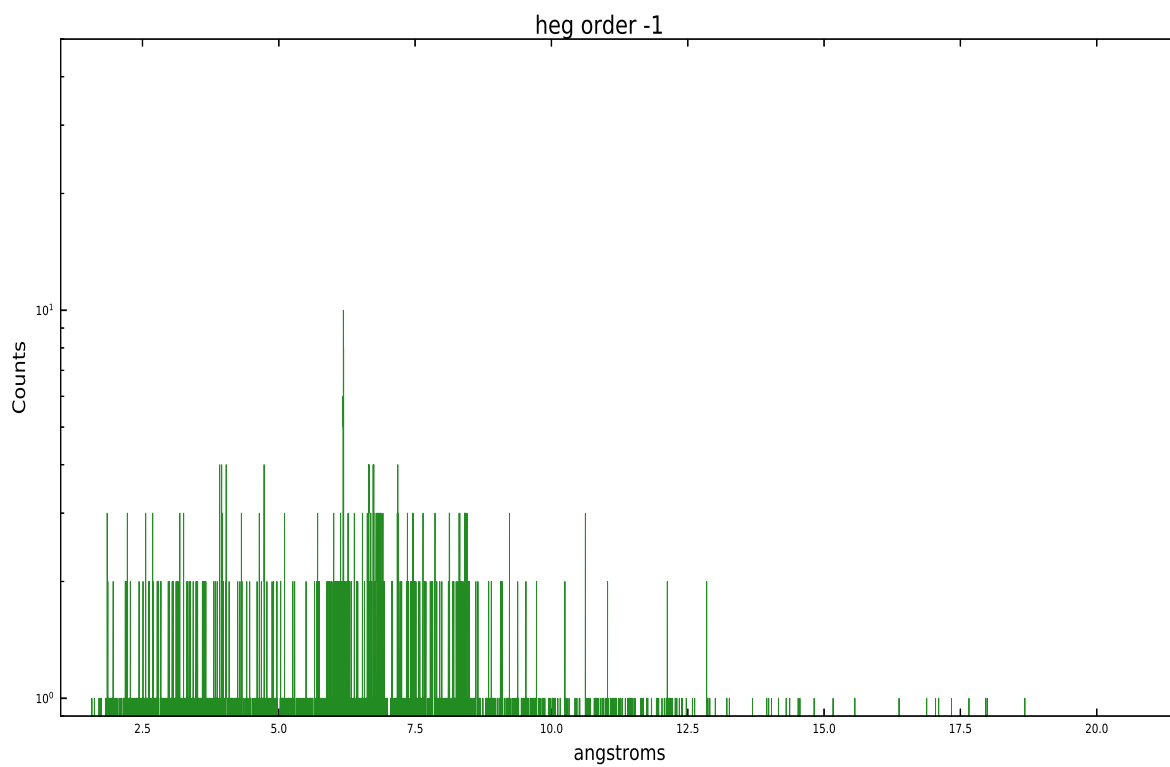
Spot Image HEG



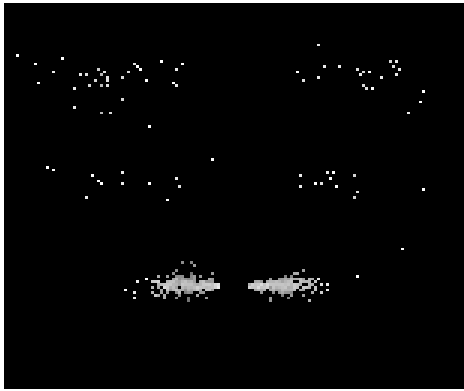
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	304	558	2897	5713	2709	386	202

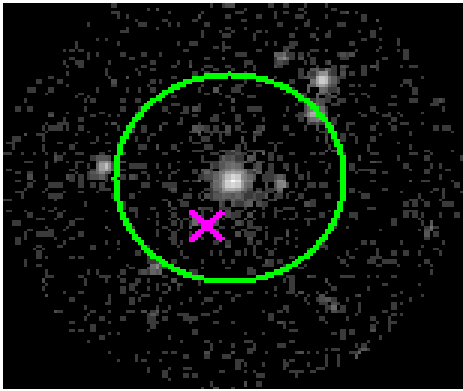




3.2 MEG Arm



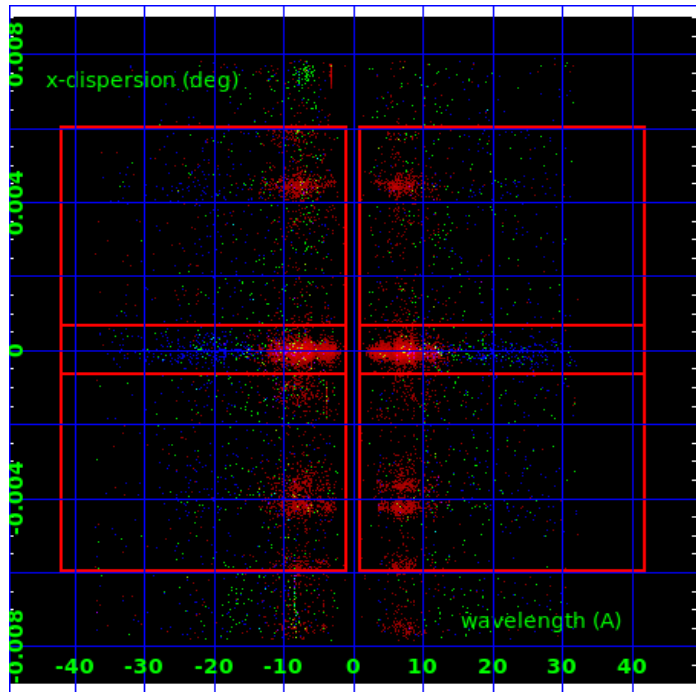
MEG Order Sort 123



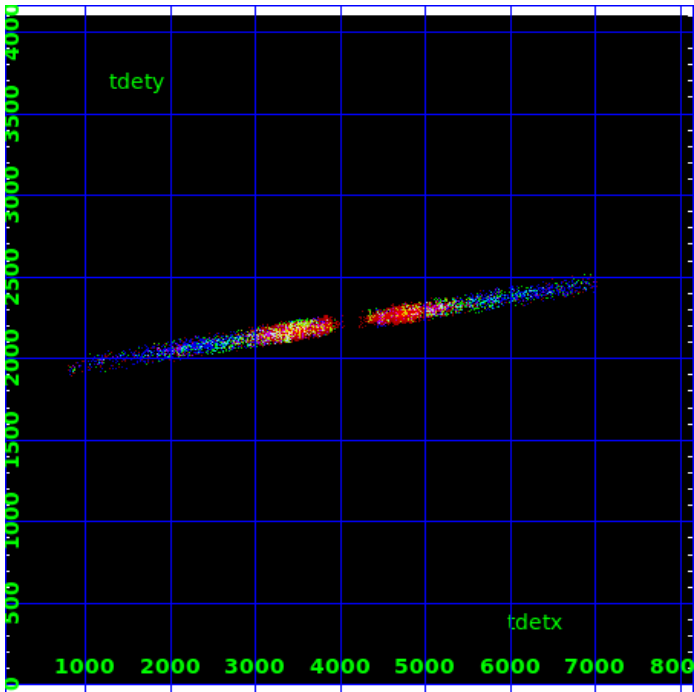
MEG Zero Order



MEG Order Sort ALL

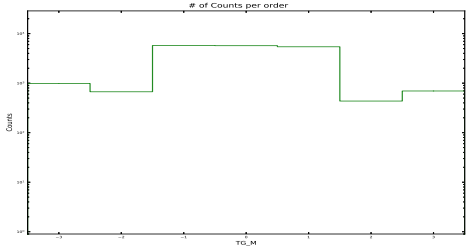


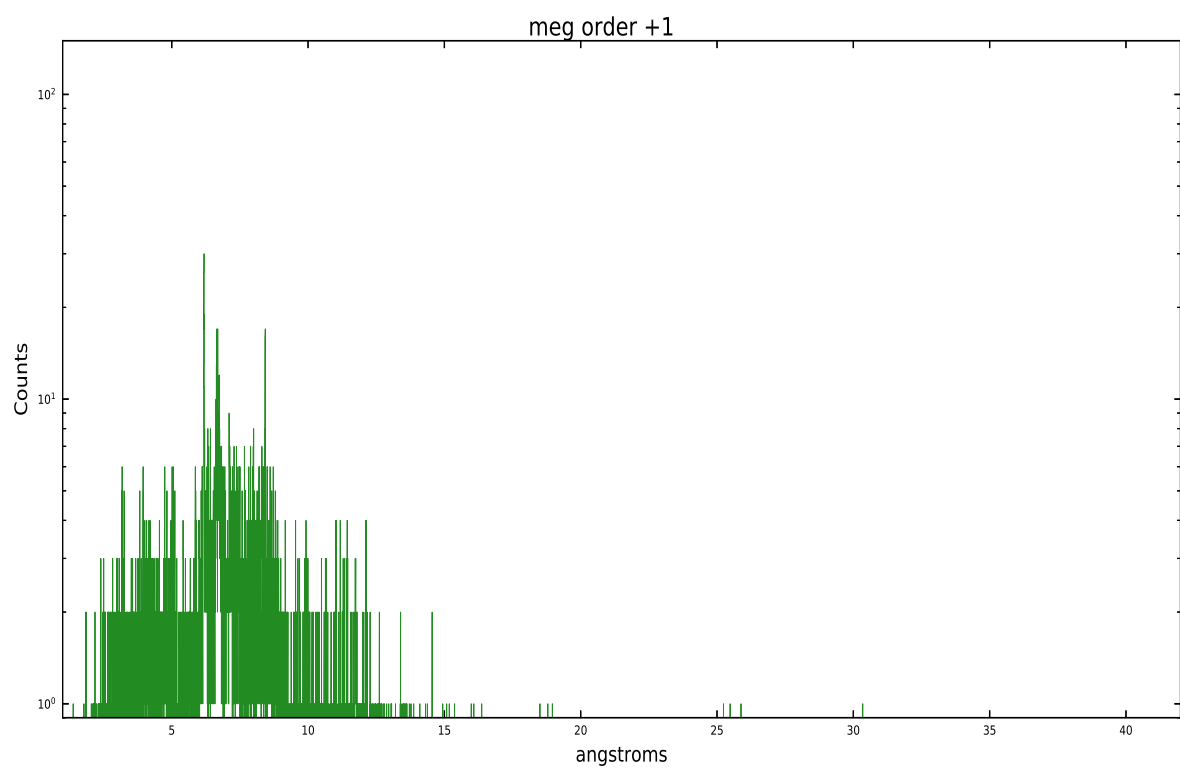
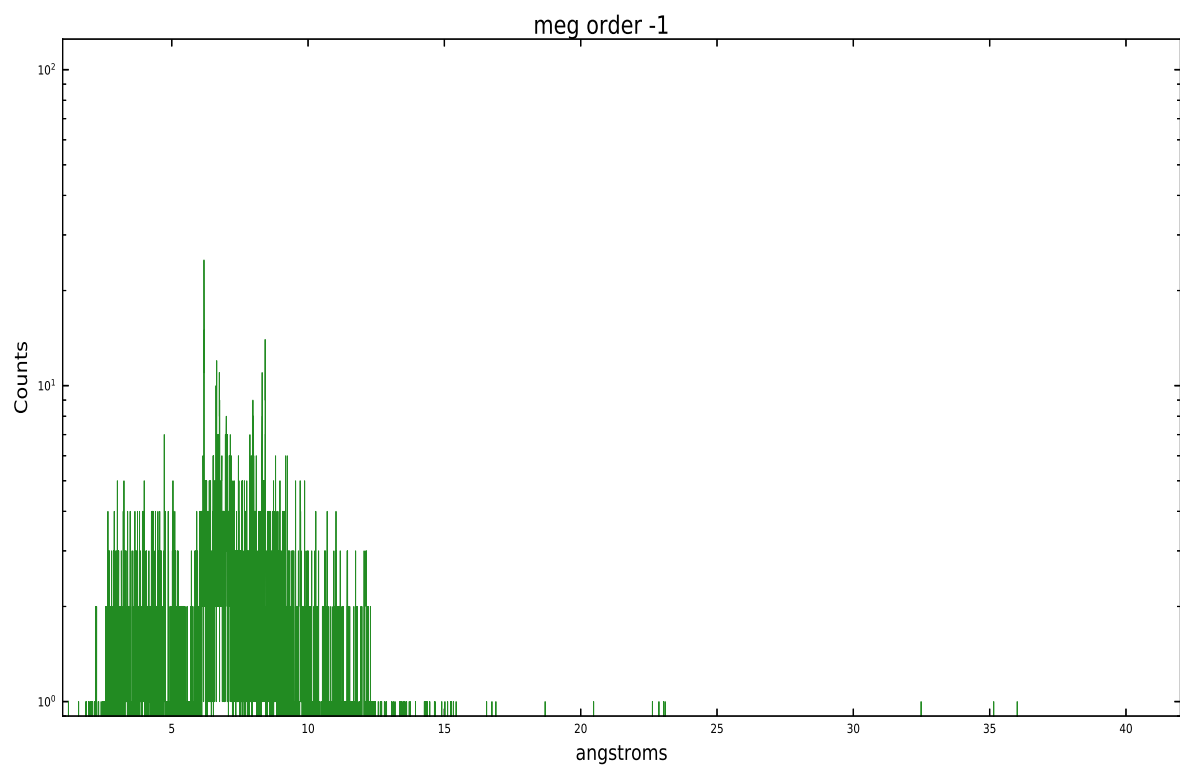
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	987	670	5753	5713	5428	435	695





A Summary

A.1 Status

V&V Scientist	Melania Nynka
V&V Date (YYYY-MM-DD)	2020.10.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	24.946502287745

A.2 Comments