

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6372 - L2 Version 4
Chandra X-Ray Center

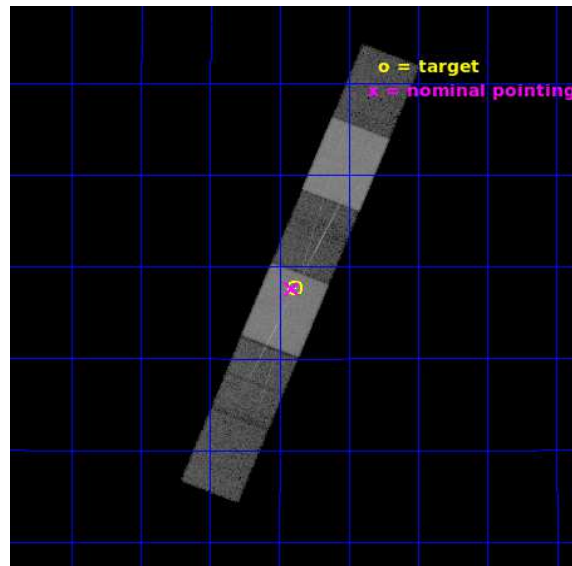
L2 Processing Date : Oct 10 2020

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	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
3	Gratings	17
3.1	HEG Arm	17
3.2	MEG Arm	19
A	Summary	21
A.1	Status	21
A.2	Comments	21

1 Front

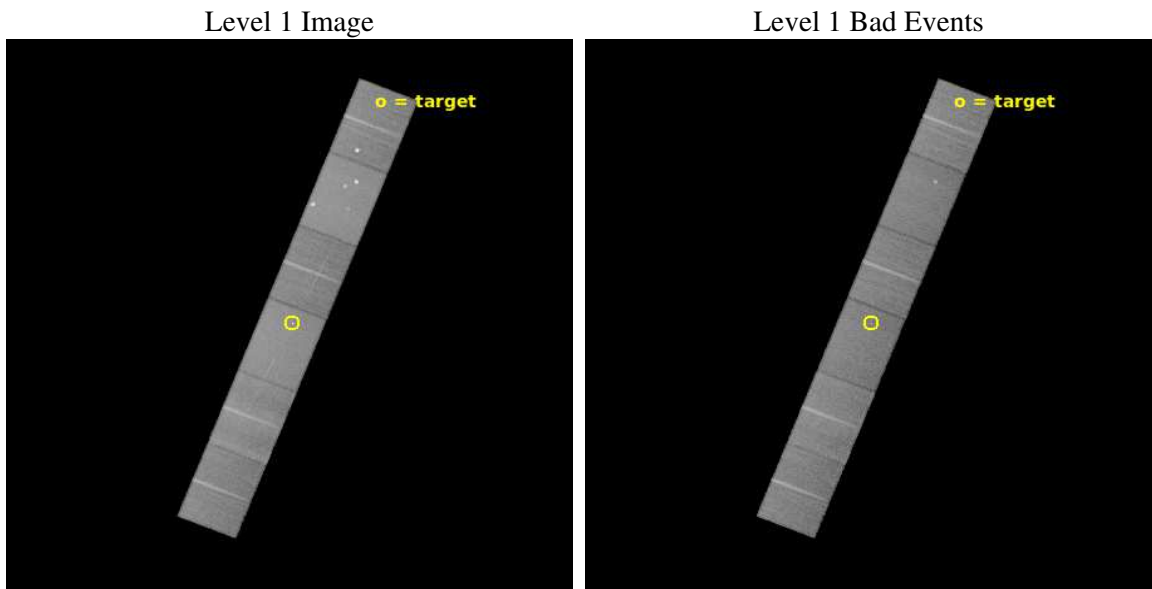
seq_num	300148	Sequence number
obs_id	6372	Observation id
title	Chandra HETG Spectroscopy of the VY Sculptoris Star TT Ari	Proposa
observer	Christopher Mauche	Principal investigator
object	TT Ari	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	31.72125	Observer's specified target RA [deg]
dec_targ	15.295278	Observer's specified target Dec [deg]
ra_nom	31.727366033046	Nominal RA [deg]
dec_nom	15.293514865524	Nominal Dec [deg]
roll_nom	111.7356622222	Nominal Roll [deg]
revision	4	Processing version of data
ontime	33167.5	Sum of GTIs [s]
livetime	32631.816106791	Livetime [s]
ontime4	33167.5	Sum of GTIs [s]
ontime5	33167.5	Sum of GTIs [s]
ontime6	33167.5	Sum of GTIs [s]
ontime7	33167.5	Sum of GTIs [s]
ontime8	33167.5	Sum of GTIs [s]
ontime9	33167.5	Sum of GTIs [s]
l2events	323631	Number of level 2 events



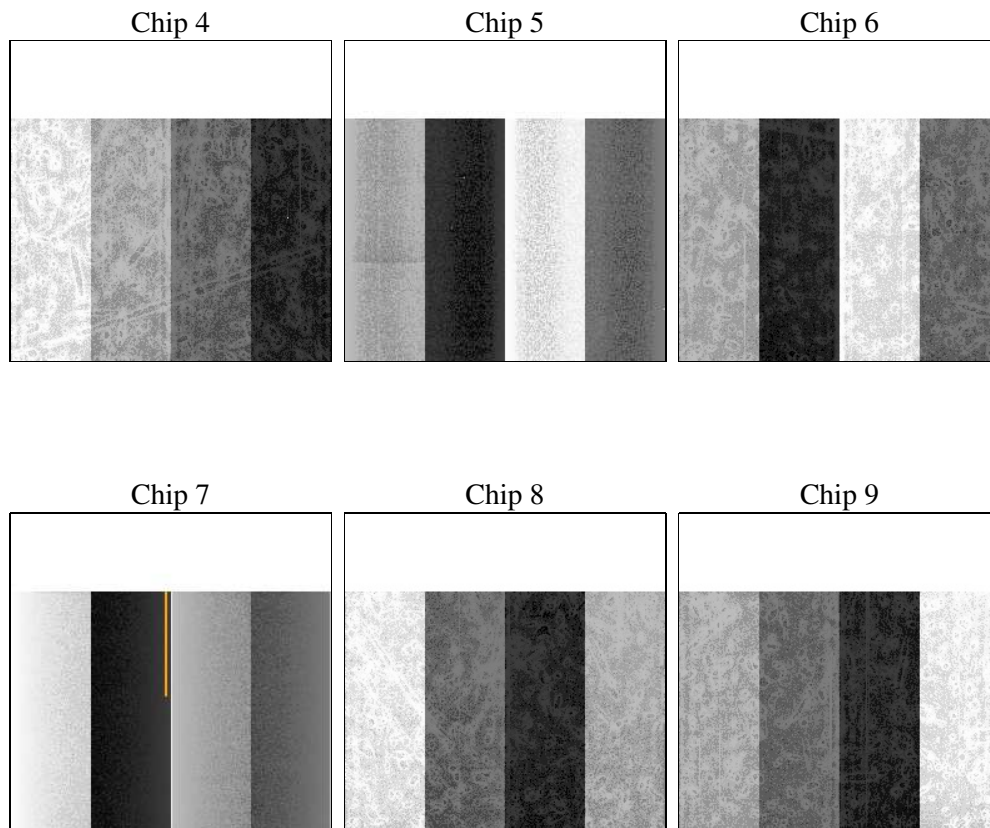
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	32988.526000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	33167.5	Sum of GTIs [s]
caldbver	4.9.2	 	ontime4	33167.5	Sum of GTIs [s]
date	2020-10-10T07:46:23	Date and time of file creation	ontime5	33167.5	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	33167.5	Sum of GTIs [s]
			ontime7	33167.5	Sum of GTIs [s]
			ontime8	33167.5	Sum of GTIs [s]
			ontime9	33167.5	Sum of GTIs [s]
			l1events	1420570	Number of level 1 events
			tgmetho	TGDETECT	Method used to create src1a file
				41140.00	

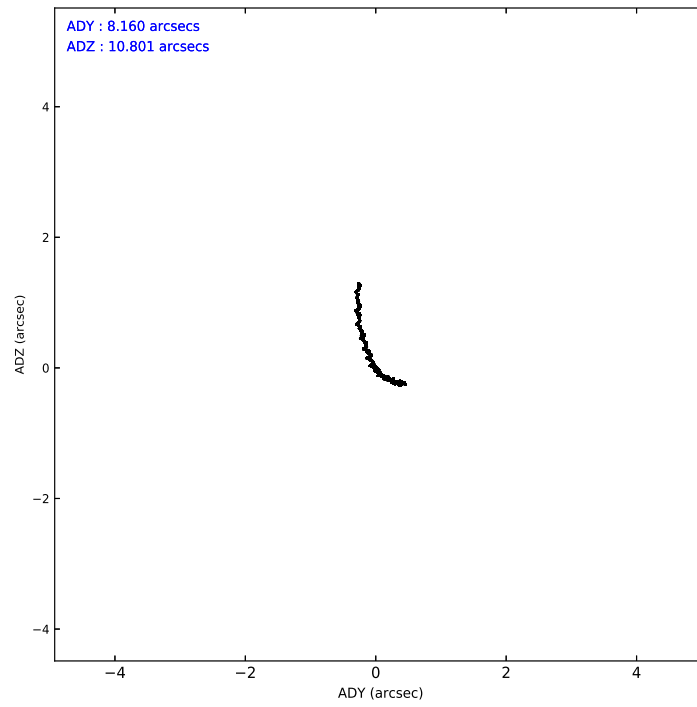
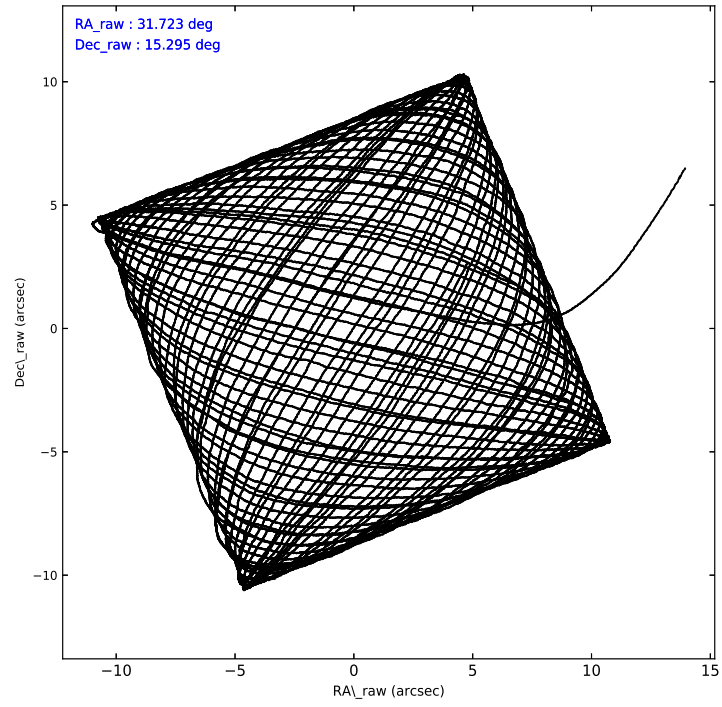
2.1.4 Events

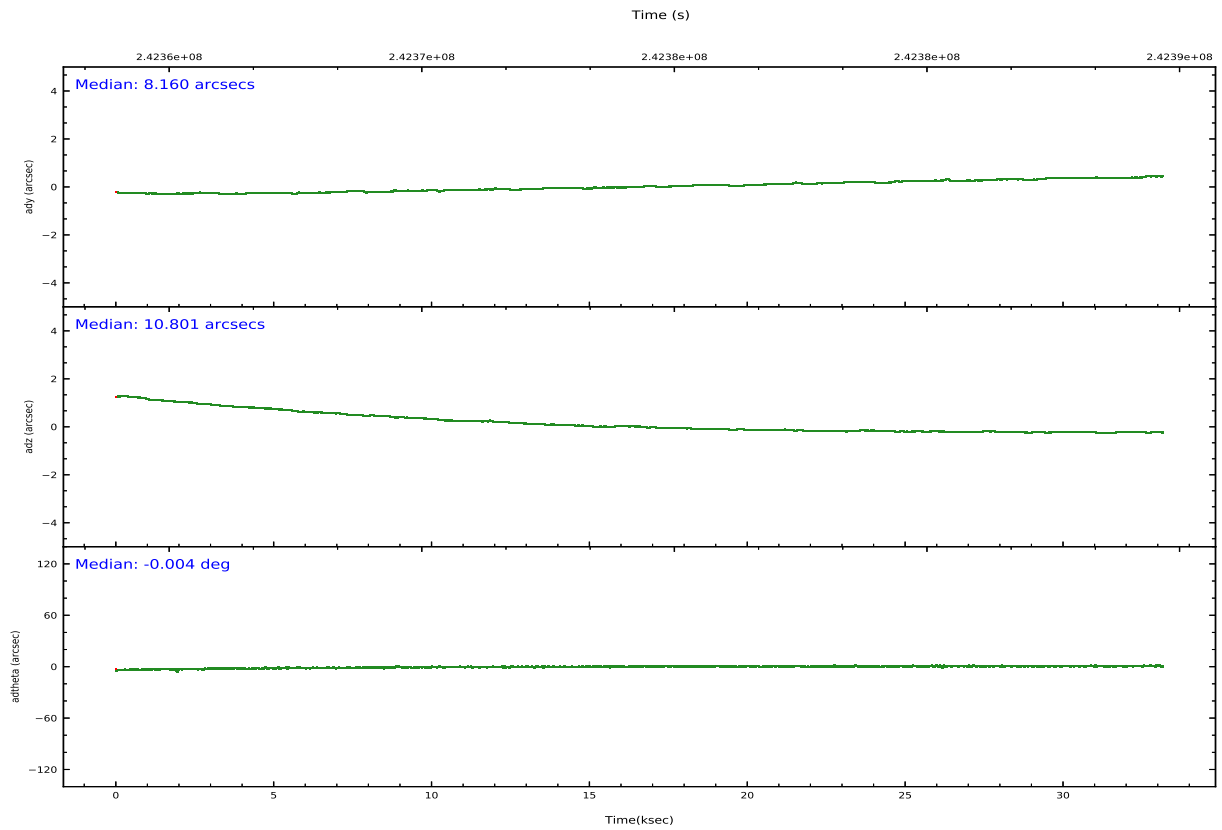
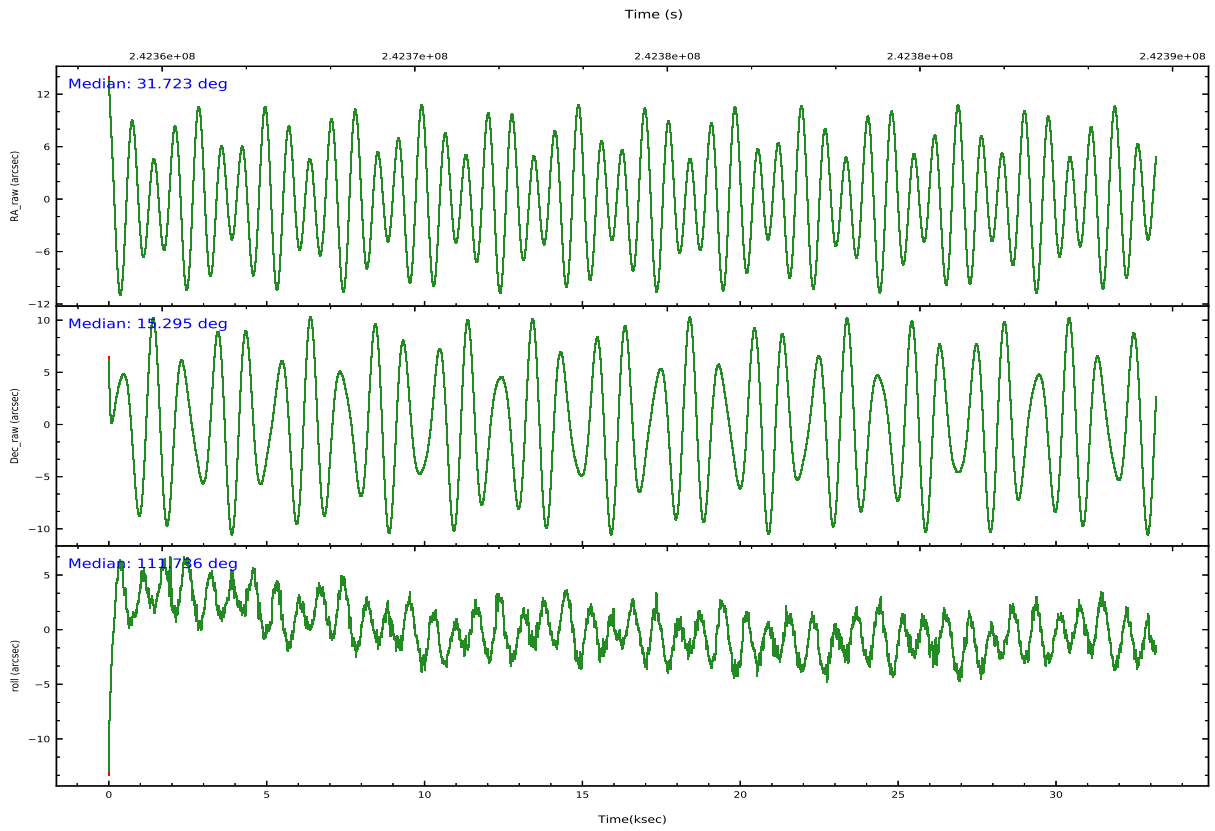
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	223981	303555	192734	265527	248484	186289	grade 0 events	22535	21324	11730	11066	18108	10600
rejected events	187372	158396	166188	152026	192913	161351		10%	7%	6%	4%	7%	5%
rejected %	83%	52%	86%	57%	77%	86%	grade 1 events	215	423	85	287	150	106
								0%	0%	0%	0%	0%	0%
							grade 2 events	5445	45482	5215	23320	12208	4929
								2%	14%	2%	8%	4%	2%
							grade 3 events	2633	6071	2595	10662	5936	2604
								1%	1%	1%	4%	2%	1%
							grade 4 events	2562	6004	2468	10641	5358	2423
								1%	1%	1%	4%	2%	1%
							grade 5 events	8546	22558	8580	24638	11416	9295
								3%	7%	4%	9%	4%	4%
							grade 6 events	4116	69264	4963	59927	14943	4884
								1%	22%	2%	22%	6%	2%
							grade 7 events	177929	132429	157098	124986	180365	151448
								79%	43%	81%	47%	72%	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	31.745817	31.727366033046	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	15.277945	15.293514865524	Subarray start row	1	1
[deg] Pointing Roll	111.569666	111.7356622222	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	-187.1254020033014			
[mm] SIM translation stage offset	-3	-3.007120579706367			
[s] Observation start time (MET)	242358492.184000	242357187.71244			
Observation start date	2005-09-06T01:47:08	2005-09-06T01:26:27			
[s] Observation end time (MET)	242391481.184000	242391697.41403			
Observation end date	2005-09-06T10:56:57	2005-09-06T11:01:37			
Read mode	TIMED	TIMED			

2.3 Aspect





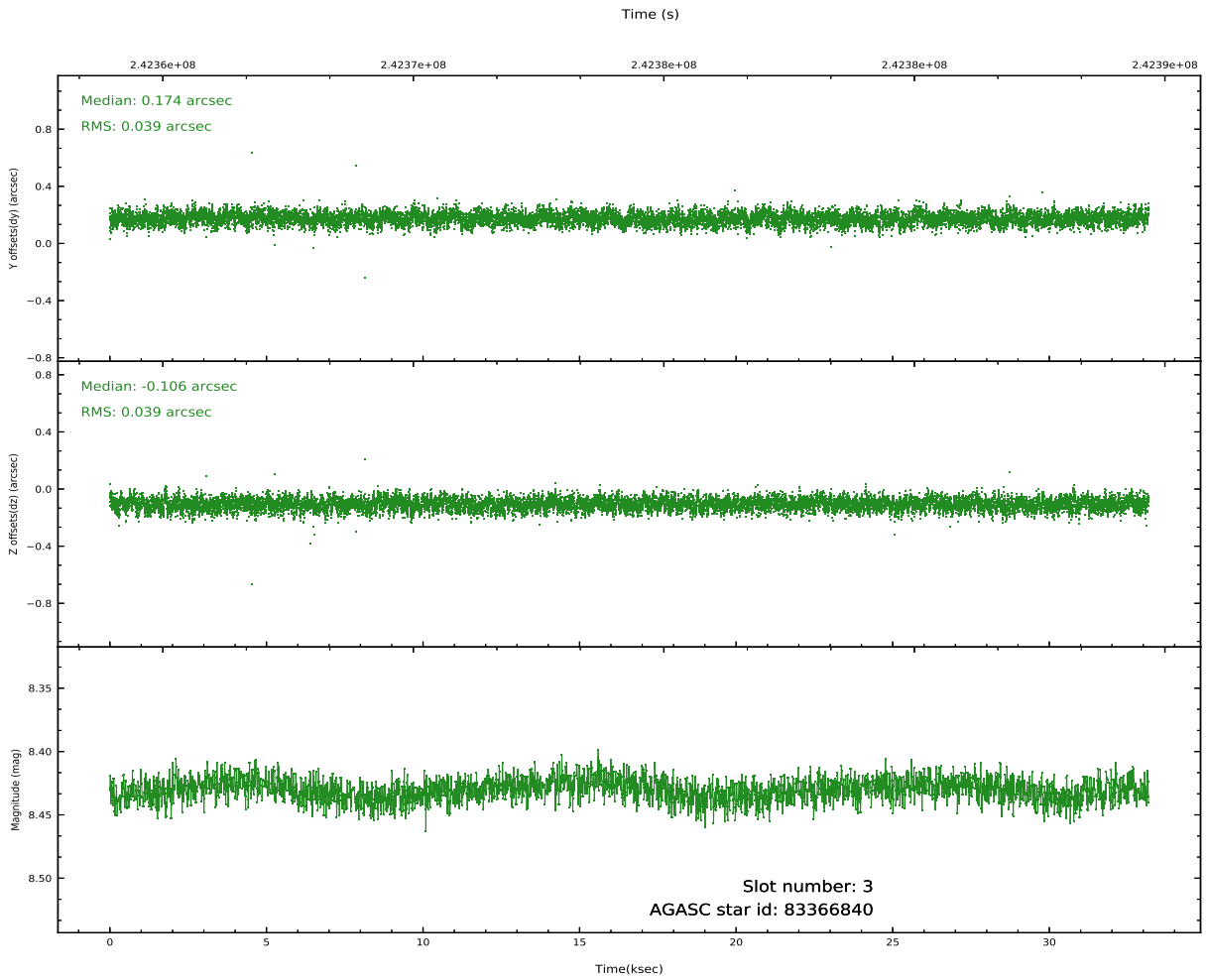
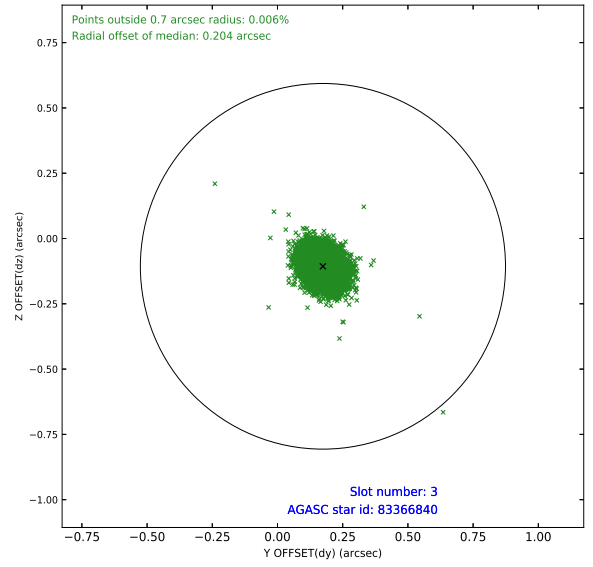
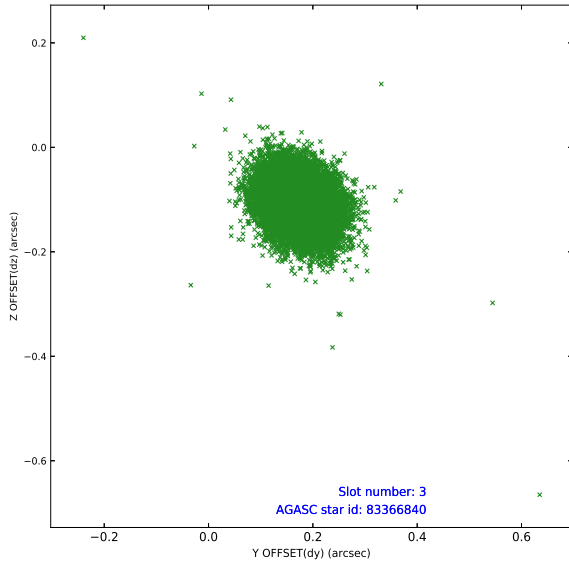
Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.10	8091	1.000	-0.075	-0.137	0.009	0.022	0.000000	0.000000	-760.82	-1794
1	FID		ACIS-S-4	7.19	8091	1.000	0.183	0.073	0.011	0.017	0.000000	0.000000	2152.68	114
2	FID		ACIS-S-5	7.24	8091	1.000	-0.140	0.073	0.016	0.029	0.000000	0.000000	-1813.67	107
3	GUIDE	used	83366840	8.43	16174	1.000	0.174	-0.106	0.057	0.094	31.673303	14.583774	-2230.89	1153
4	GUIDE	used	158211640	9.28	16168	1.000	0.027	-0.037	0.074	0.121	31.349537	15.537415	1375.06	934
5	GUIDE	used	159131712	7.91	16178	1.000	0.055	0.199	0.057	0.095	32.565244	15.023039	-1895.66	-2313
6	GUIDE	used	158210600	8.26	16182	1.000	-0.230	-0.055	0.066	0.104	31.131603	15.630068	1964.28	1513
7	GUIDE	used	158215416	9.23	16169	1.000	-0.027	0.001	0.094	0.151	31.249092	15.295299	694.17	1580

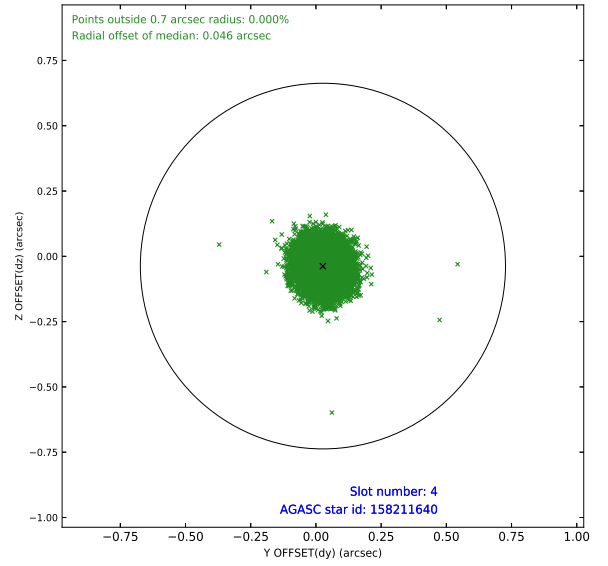
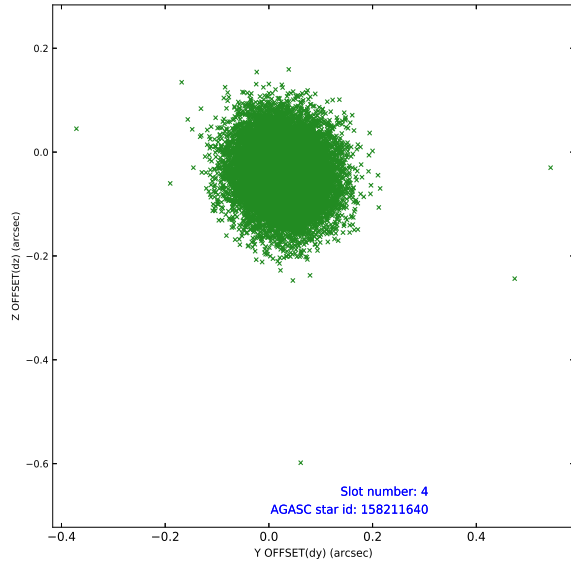
∞

2.4 Star Slots

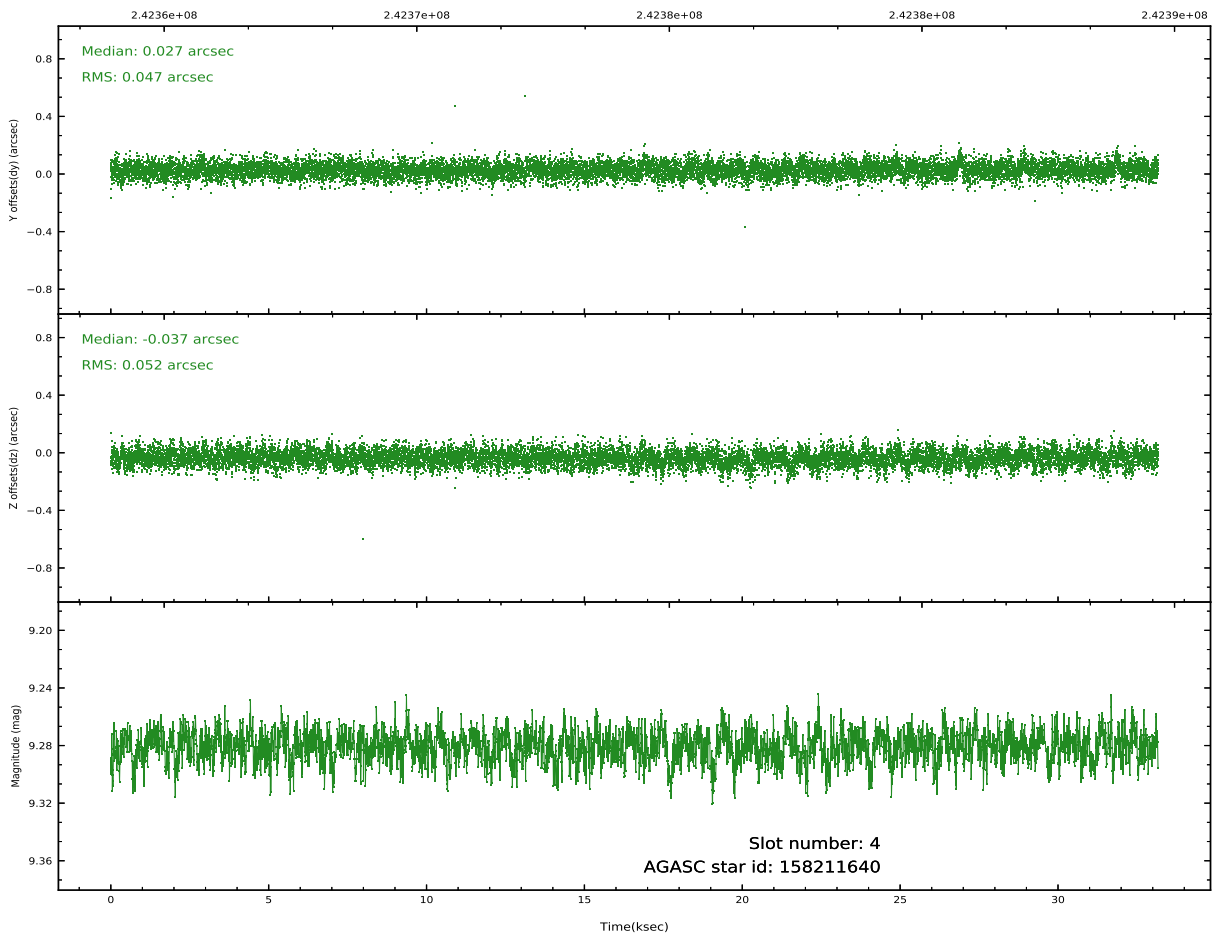
2.4.1 Slot 3



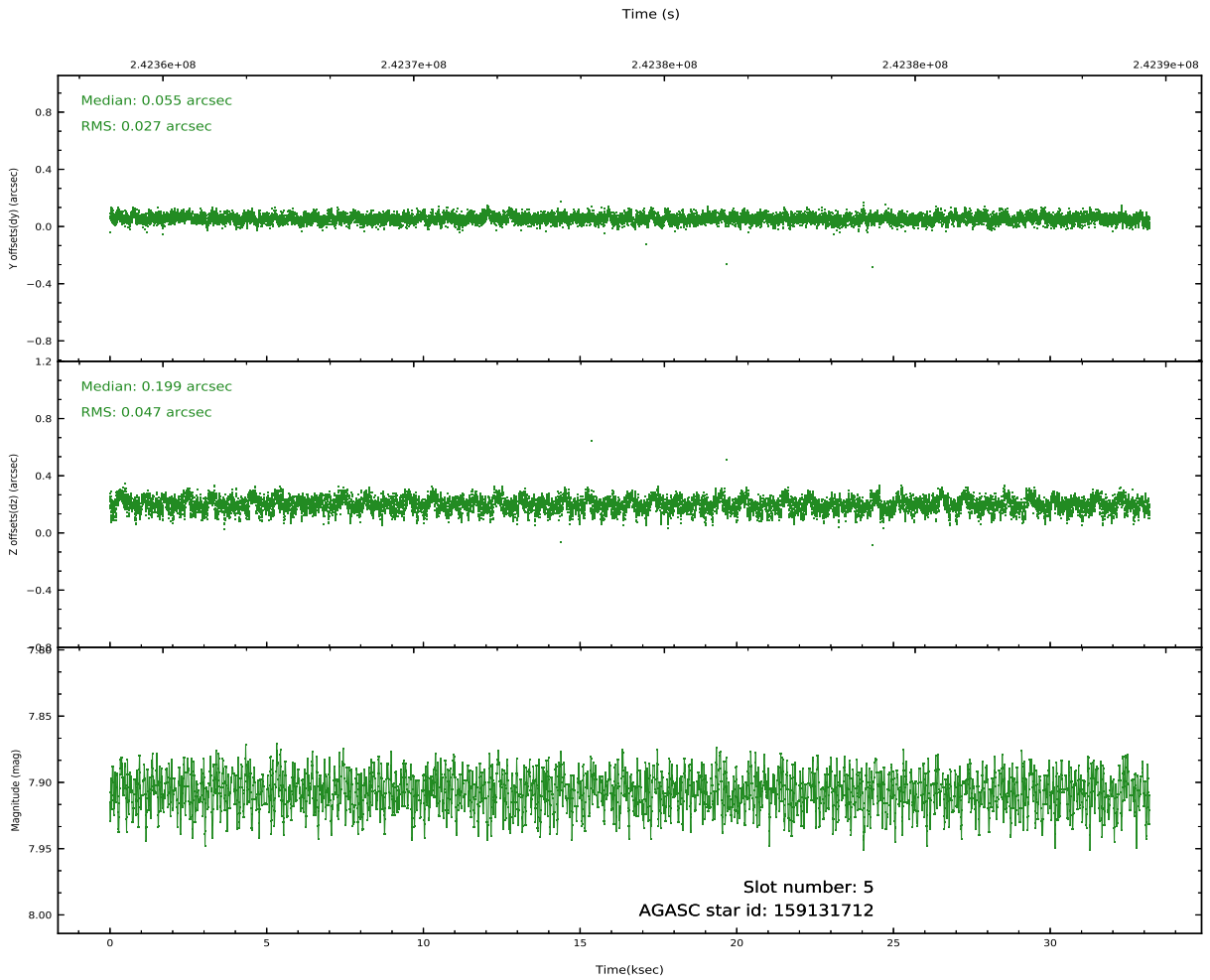
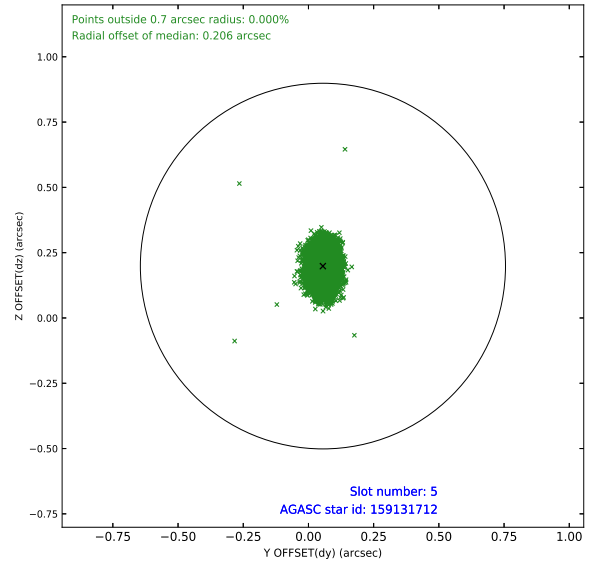
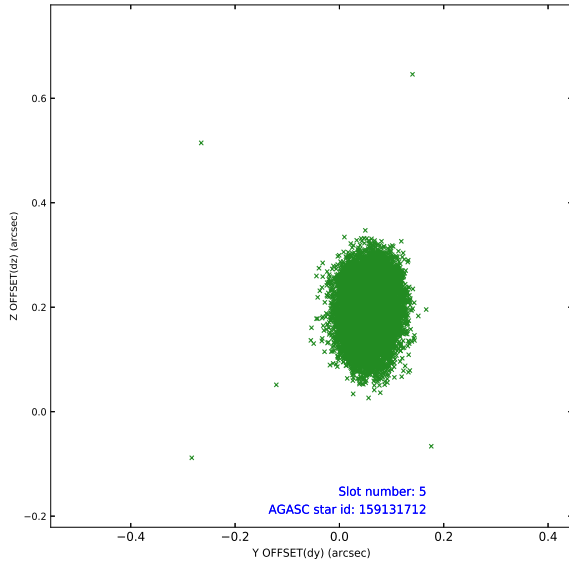
2.4.2 Slot 4



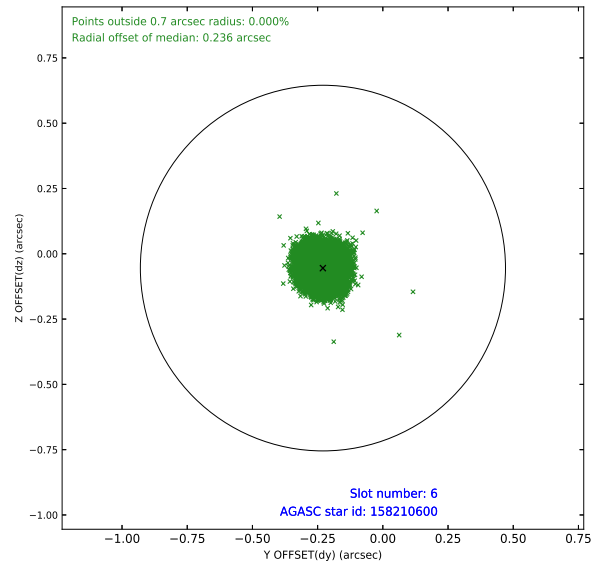
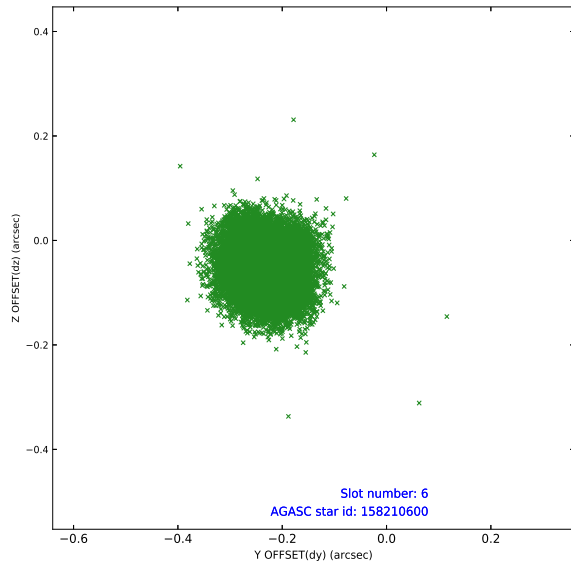
Time (s)



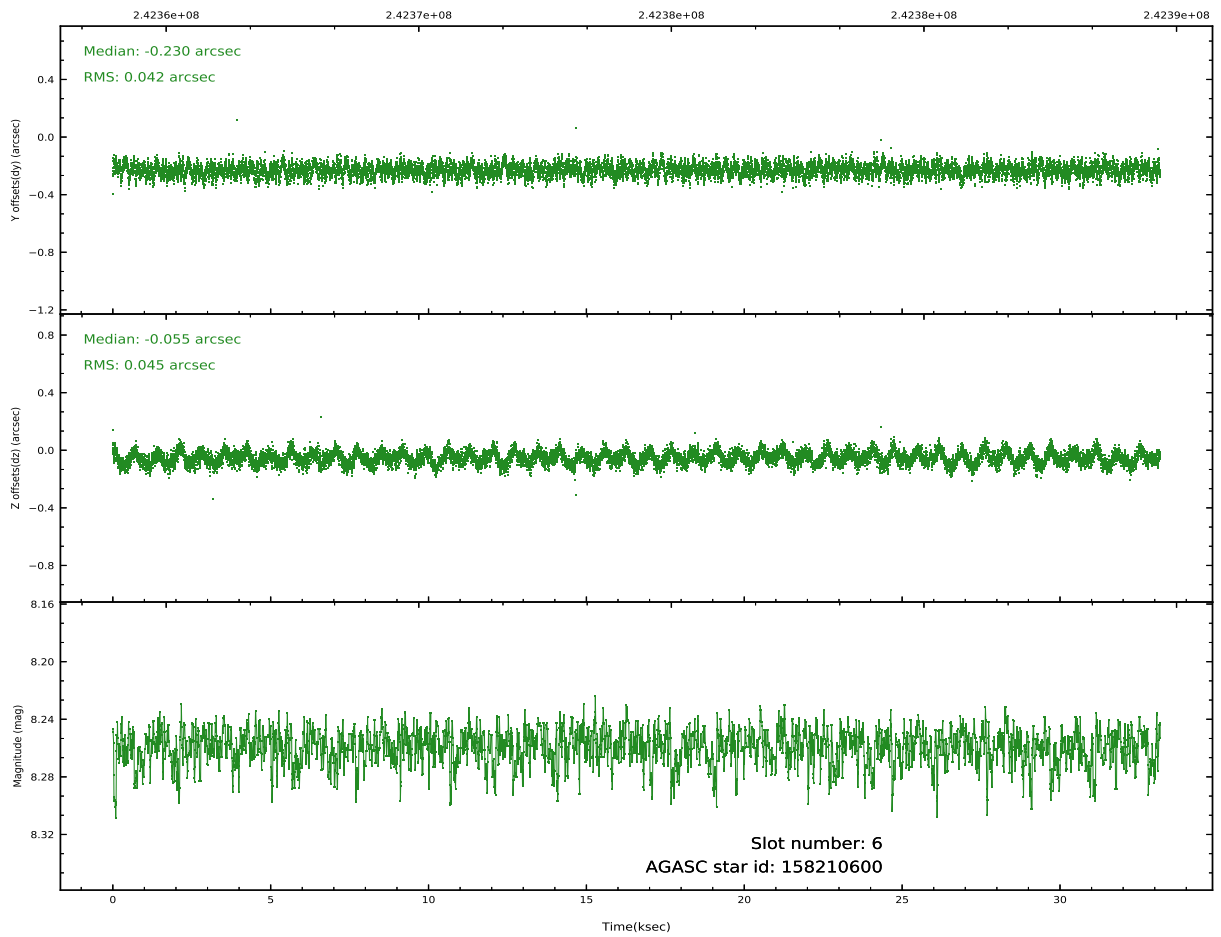
2.4.3 Slot 5



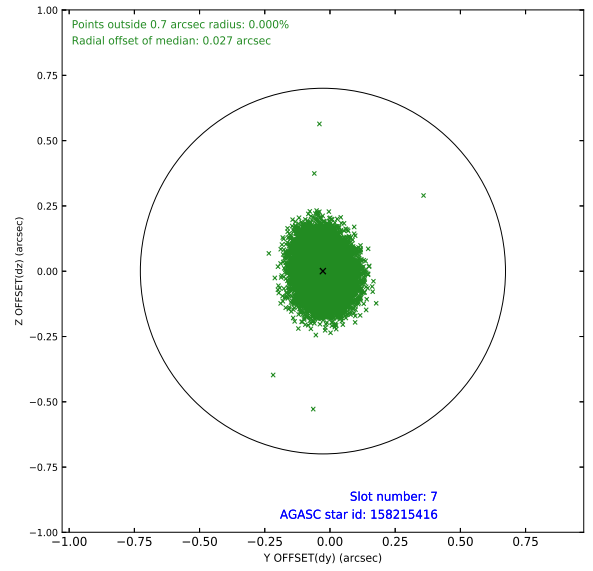
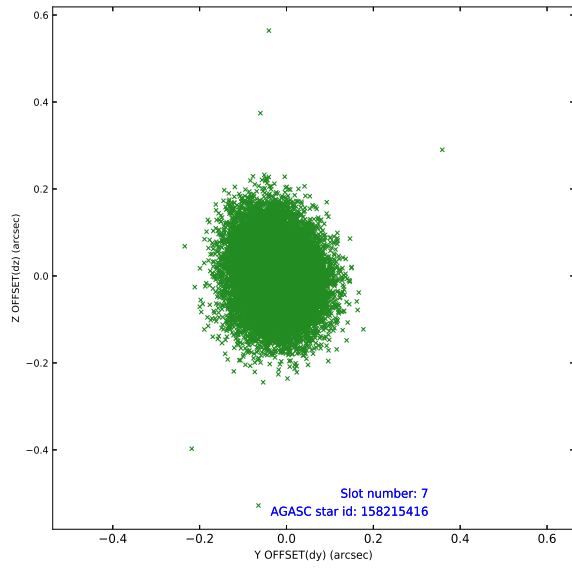
2.4.4 Slot 6



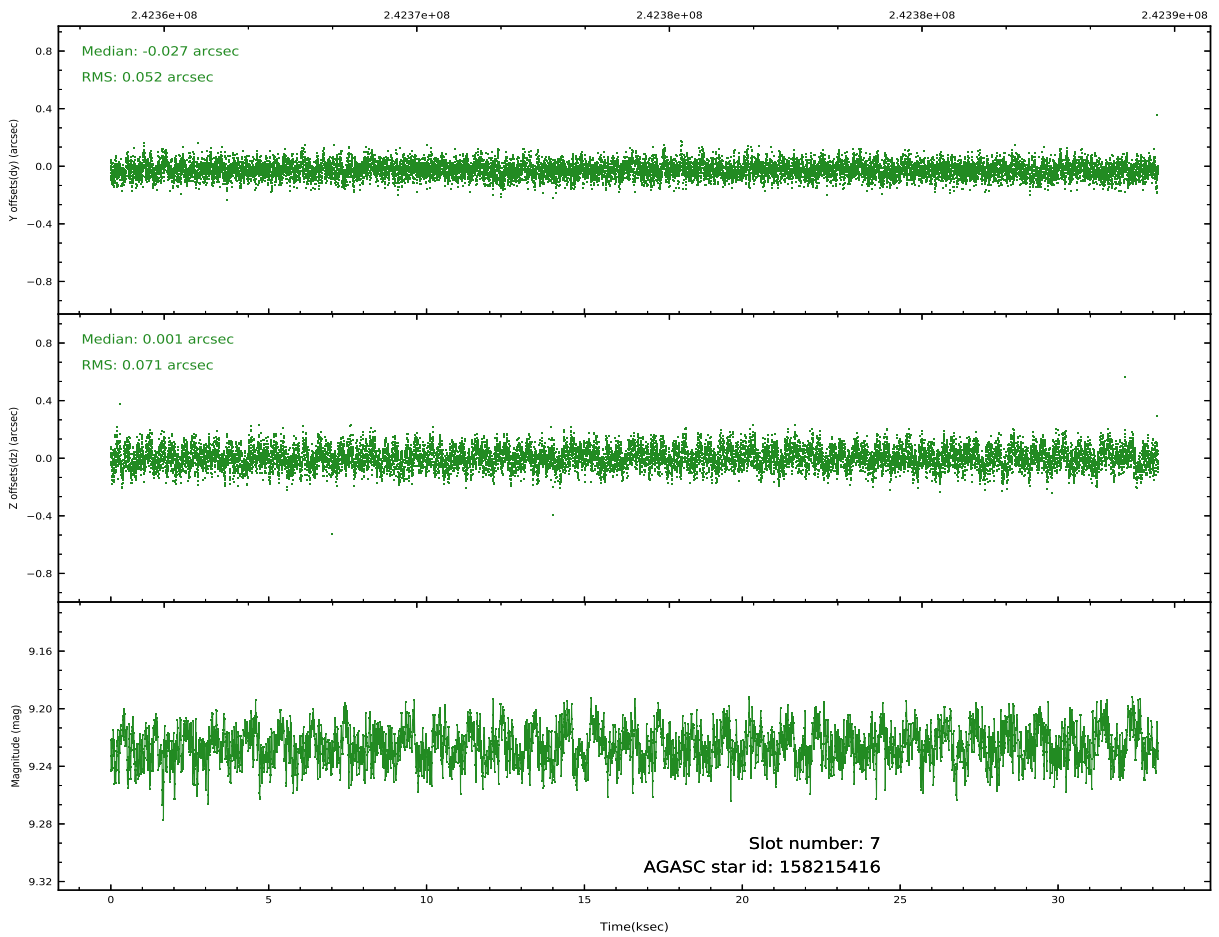
Time (s)



2.4.5 Slot 7

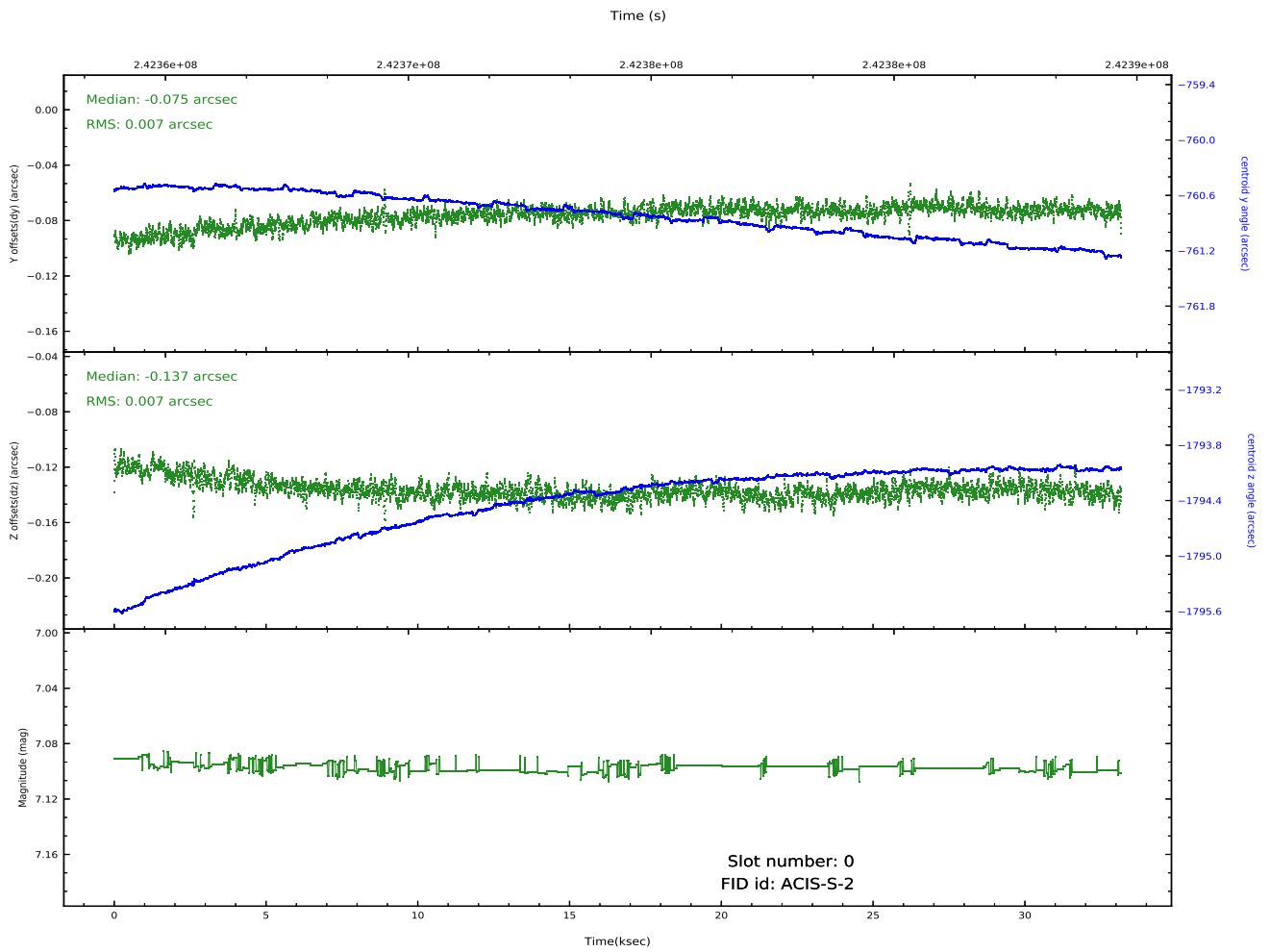
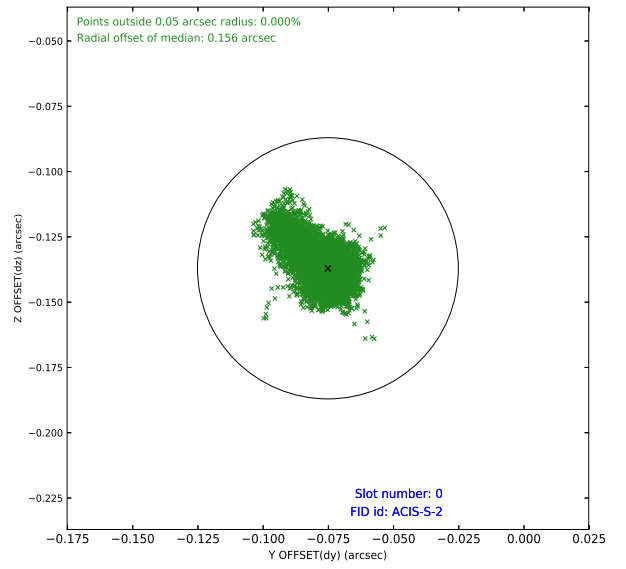
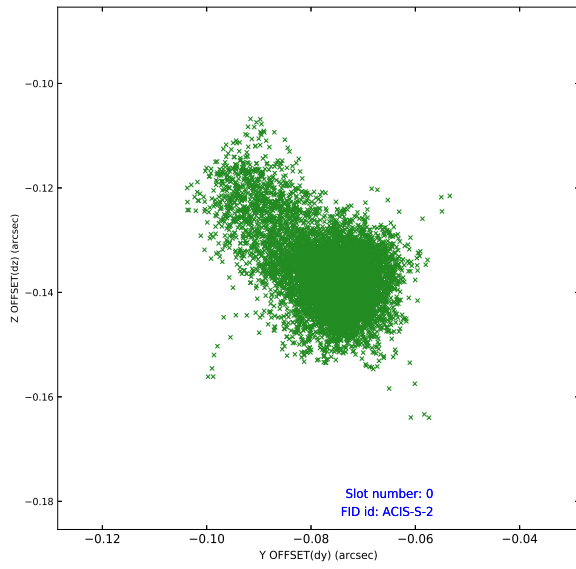


Time (s)

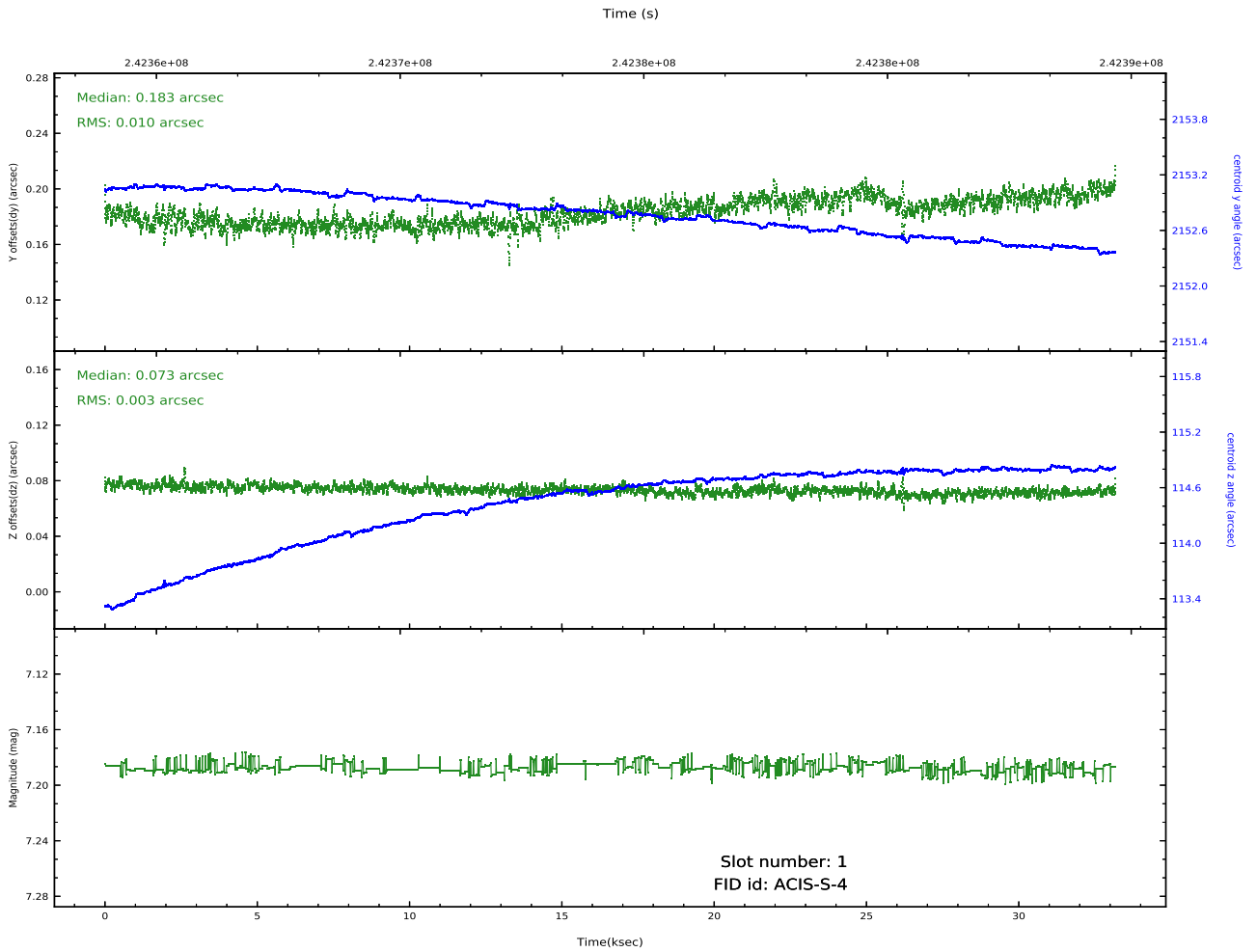
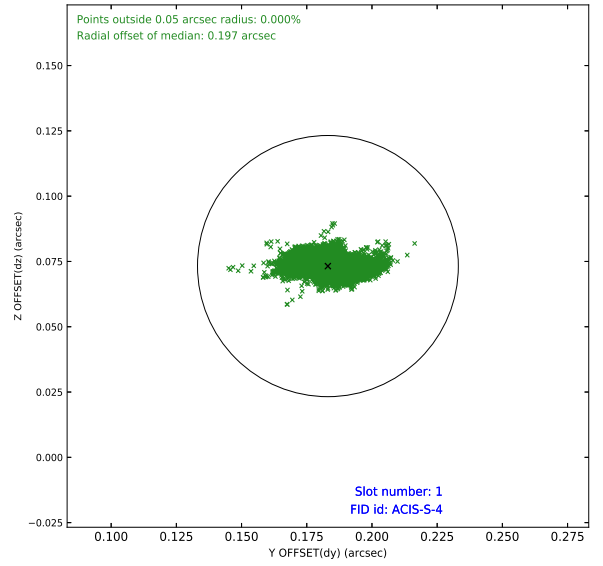
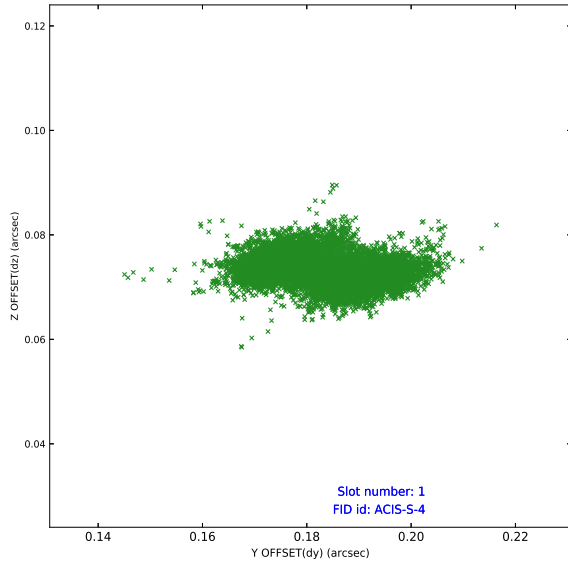


2.5 FID Slots

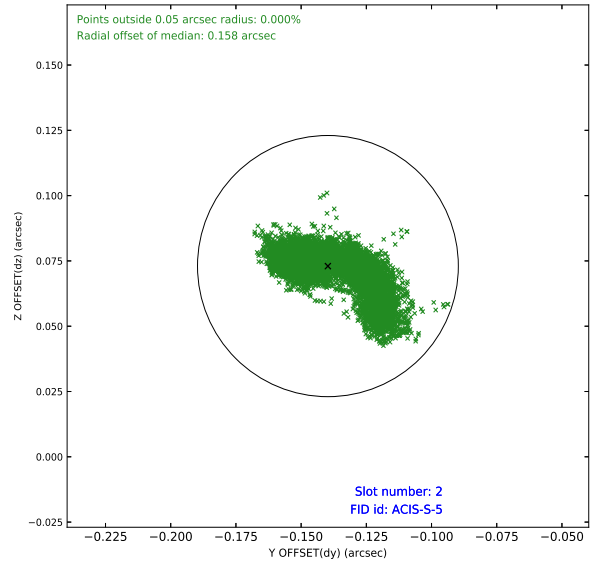
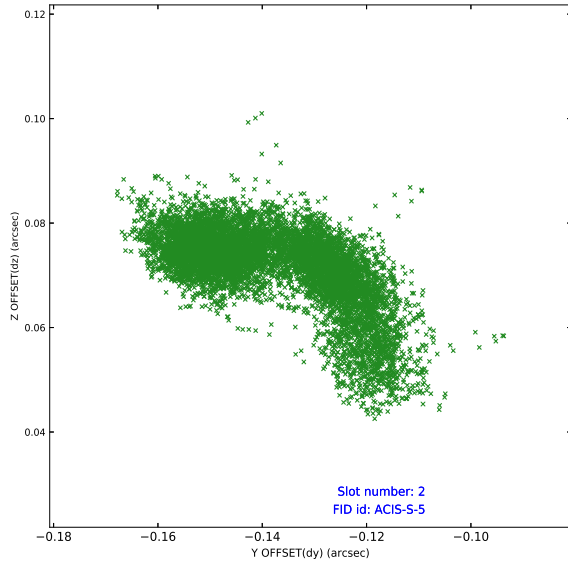
2.5.1 Slot 0



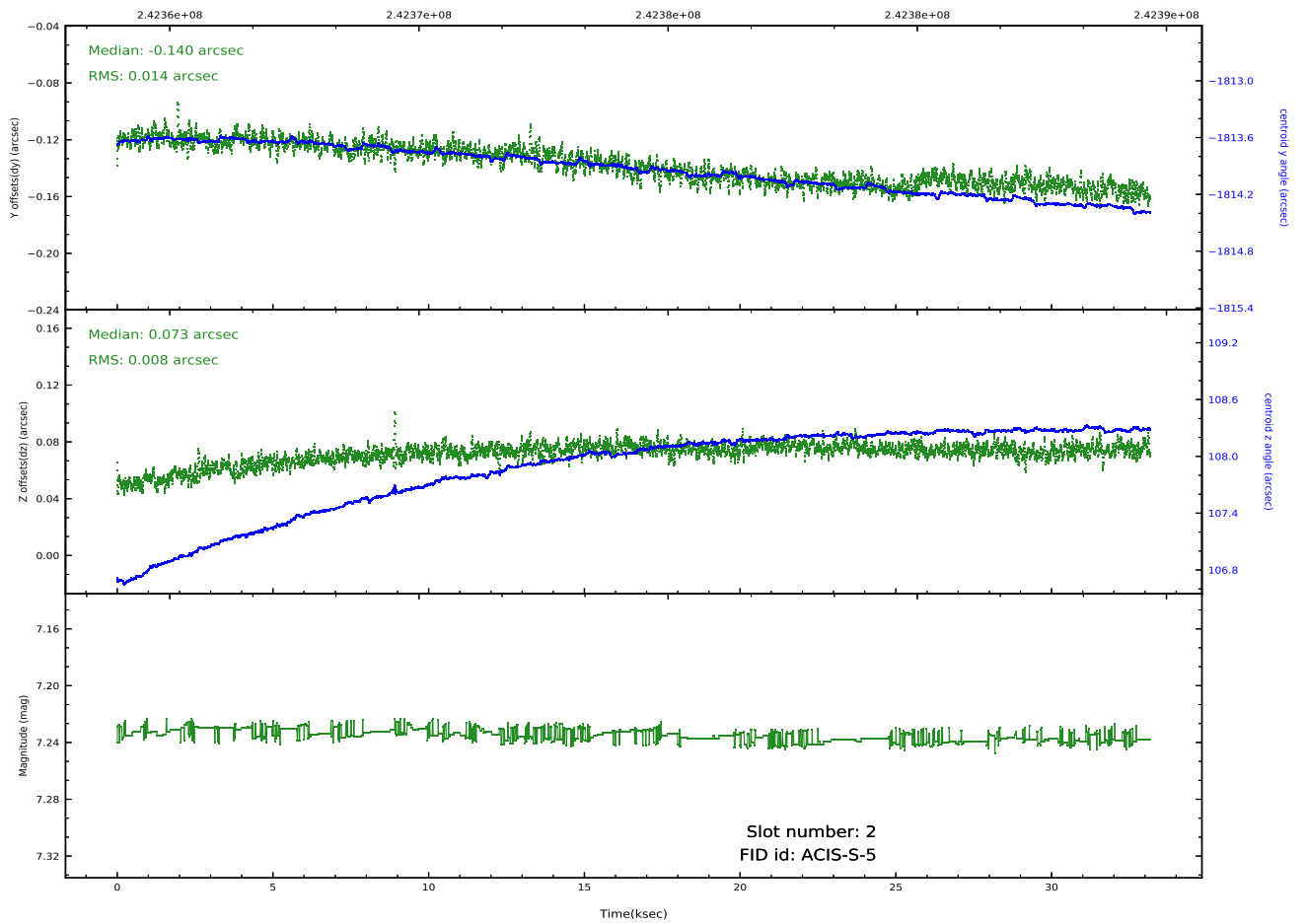
2.5.2 Slot 1



2.5.3 Slot 2

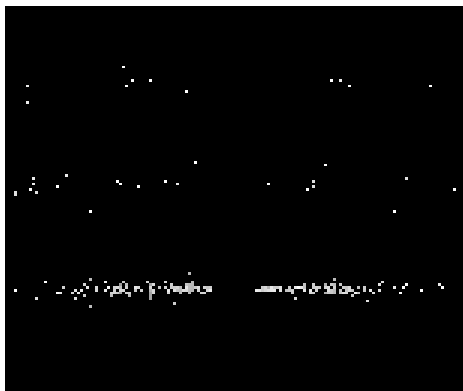


Time (s)

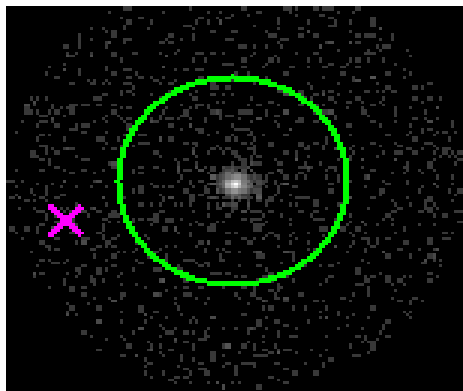


3 Gratings

3.1 HEG Arm



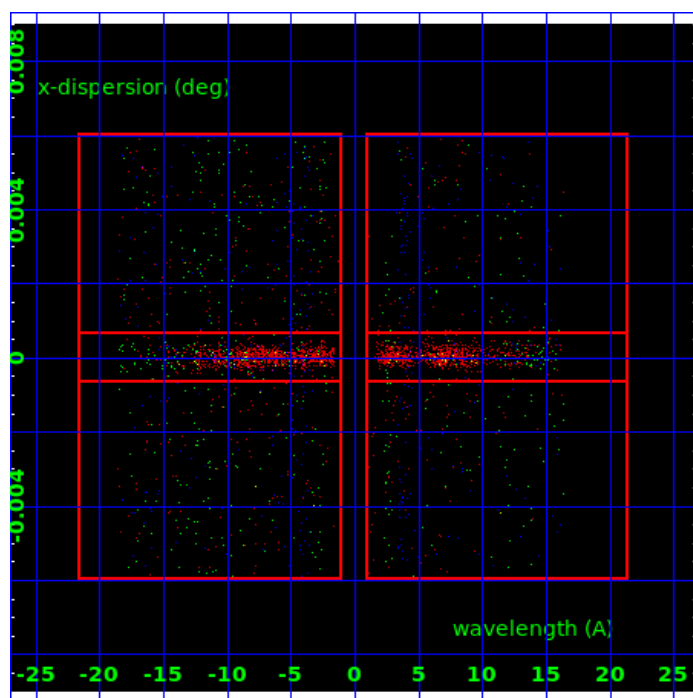
HEG Order Sort 123



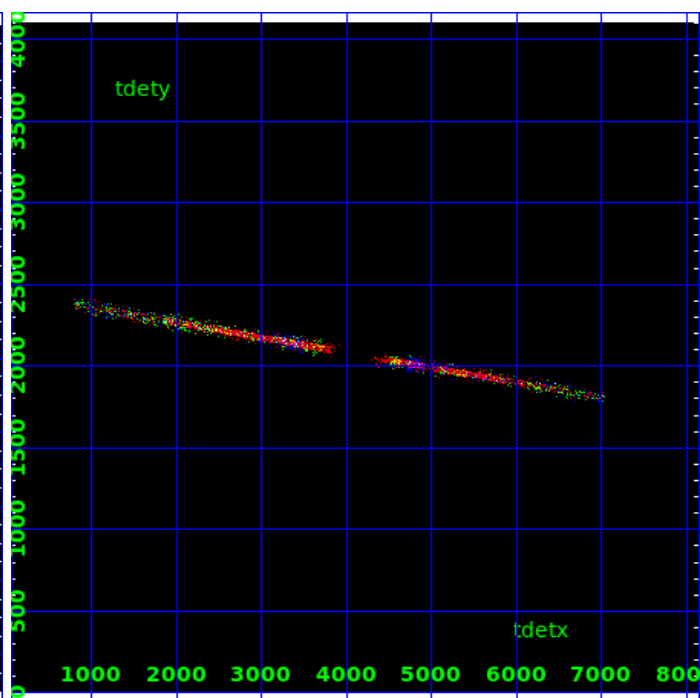
HEG Zero Order



HEG Order Sort ALL

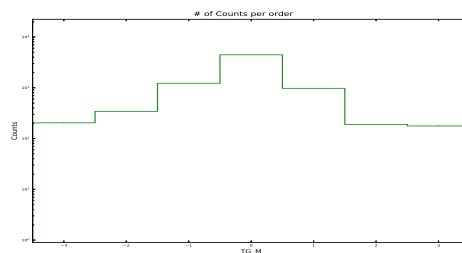


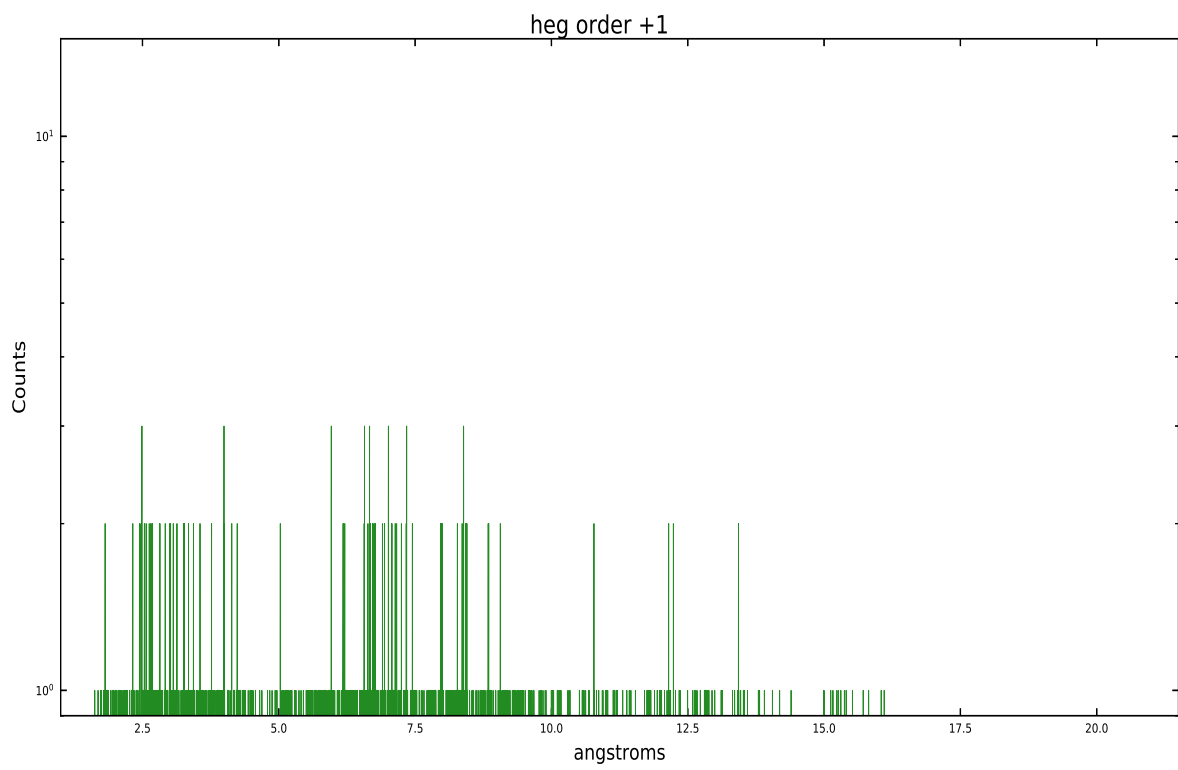
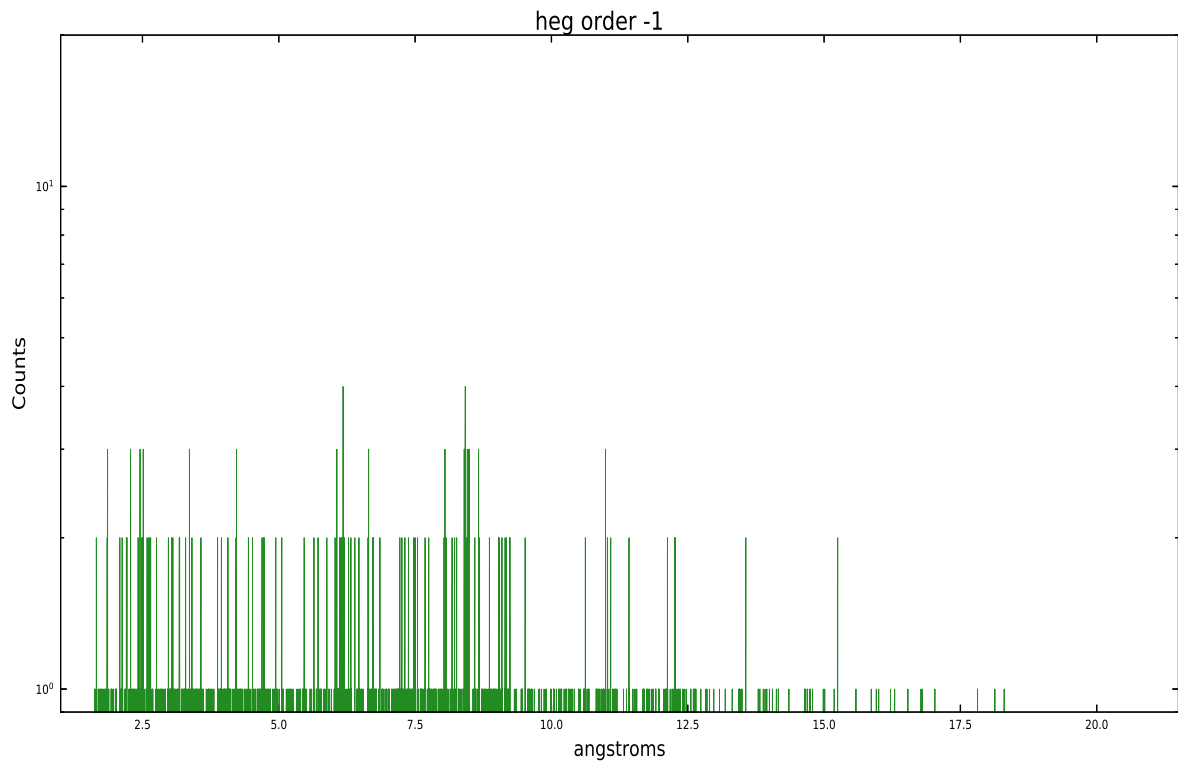
Spot Image HEG



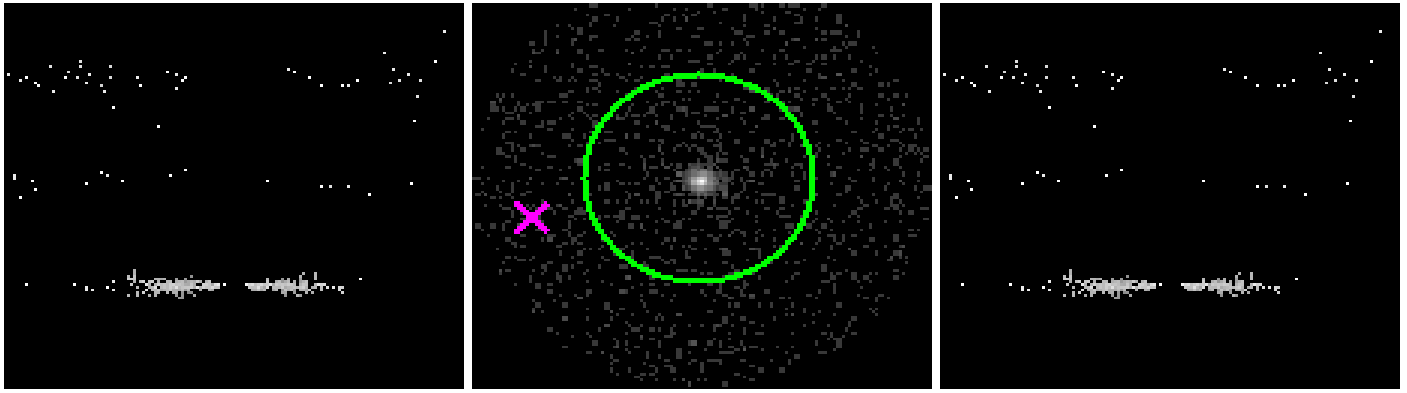
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	204	343	1226	4466	975	190	177





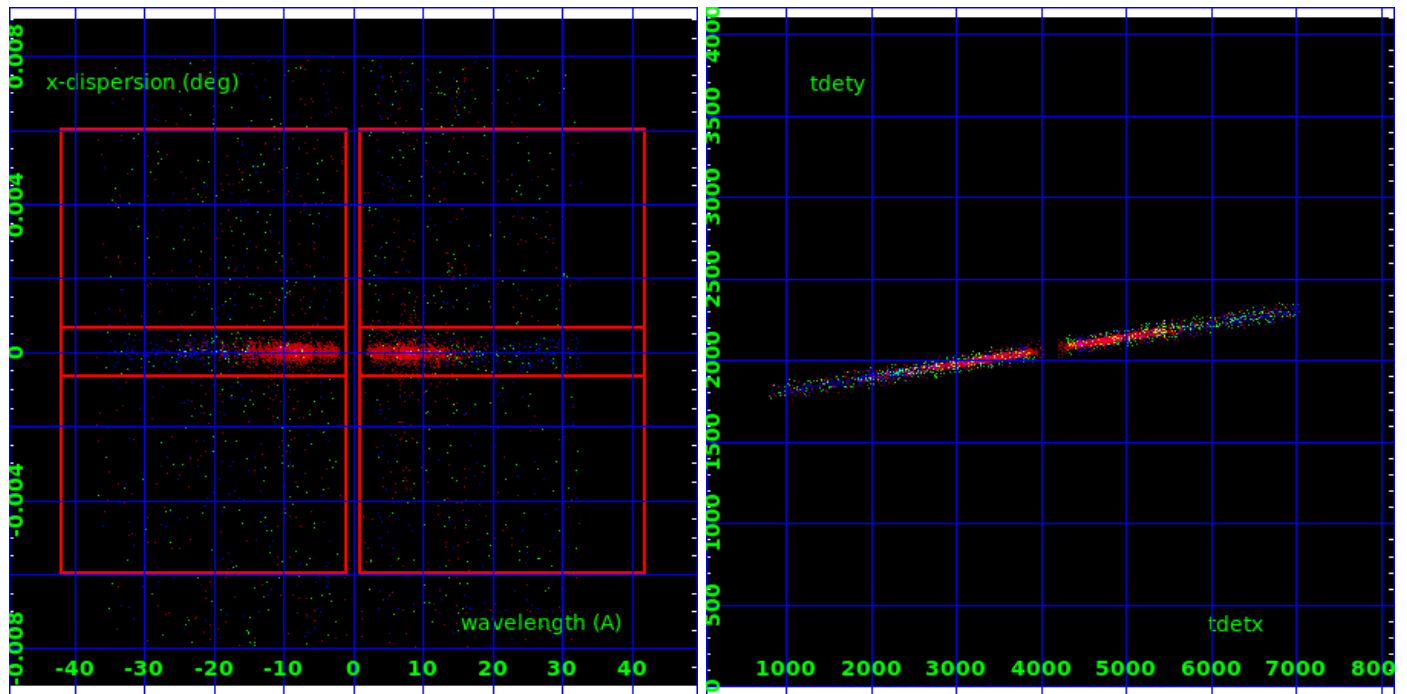
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

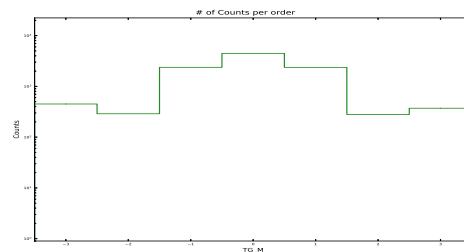
MEG Order Sort ALL

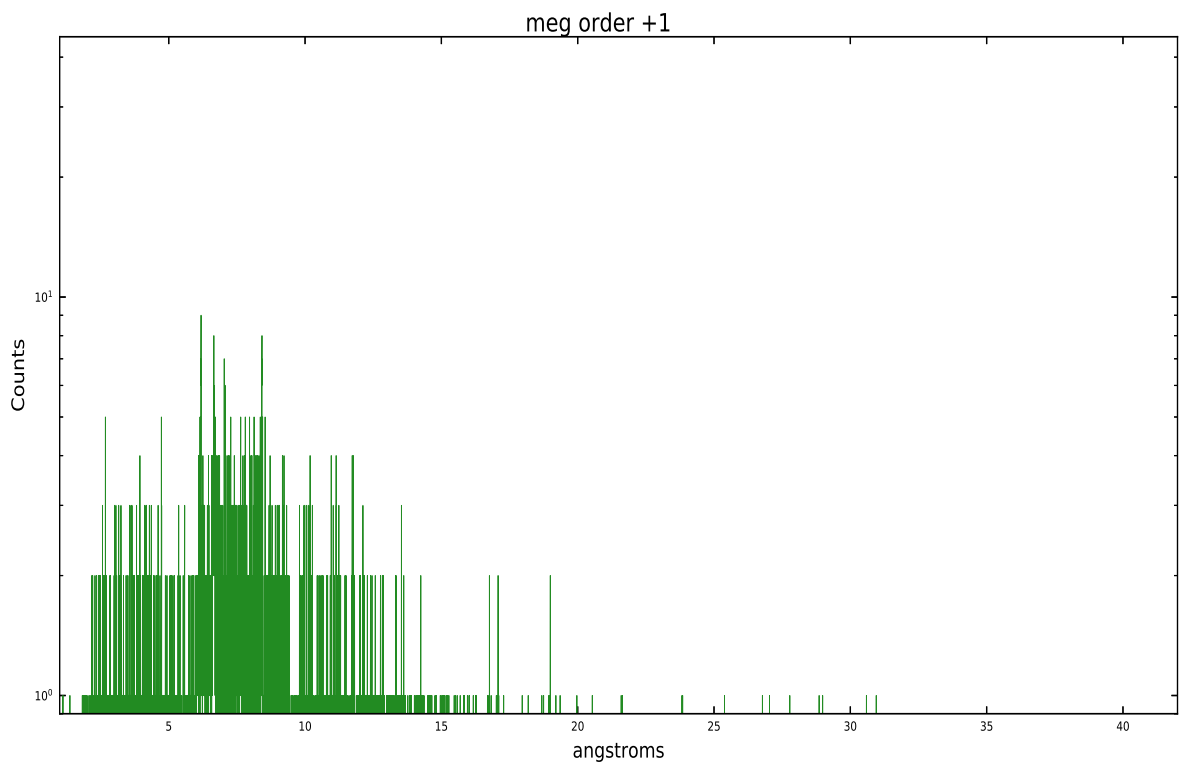
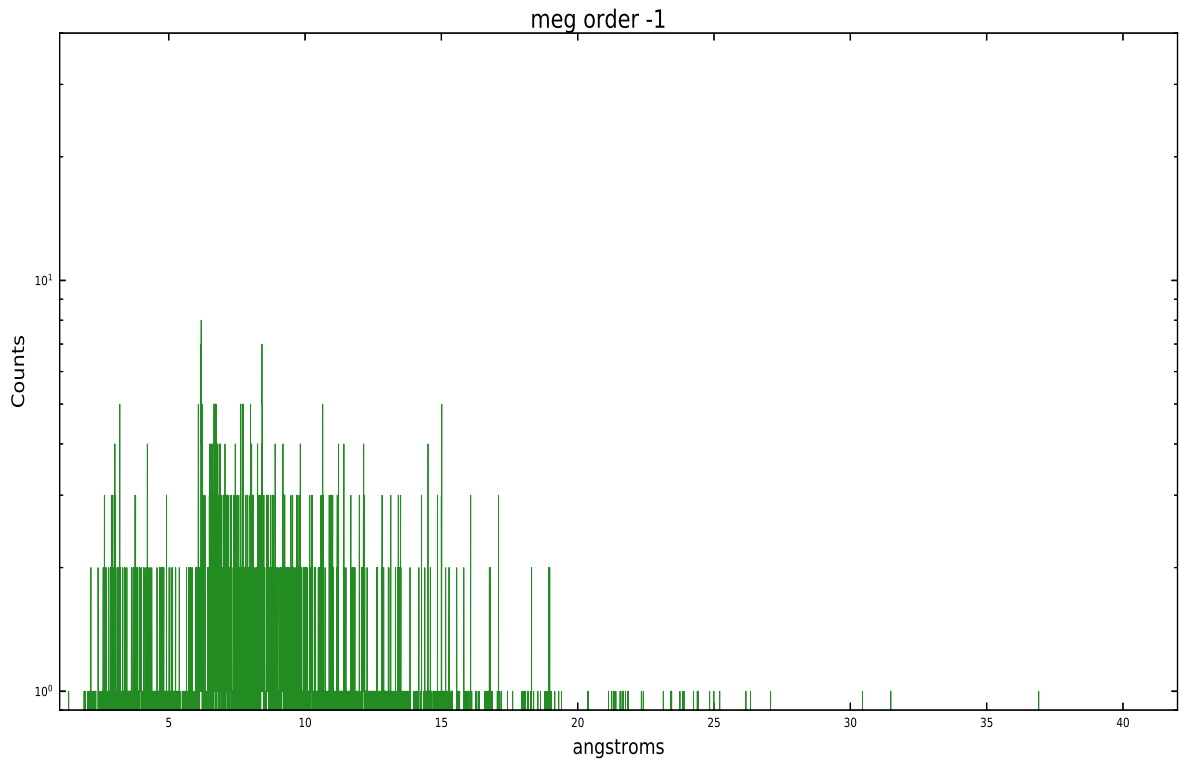


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	450	289	2373	4466	2369	280	371





A Summary

A.1 Status

V&V Scientist	Melania Nynka
V&V Date (YYYY-MM-DD)	2020.10.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	33.1675

A.2 Comments