

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 4589 - L2 Version 5
Chandra X-Ray Center

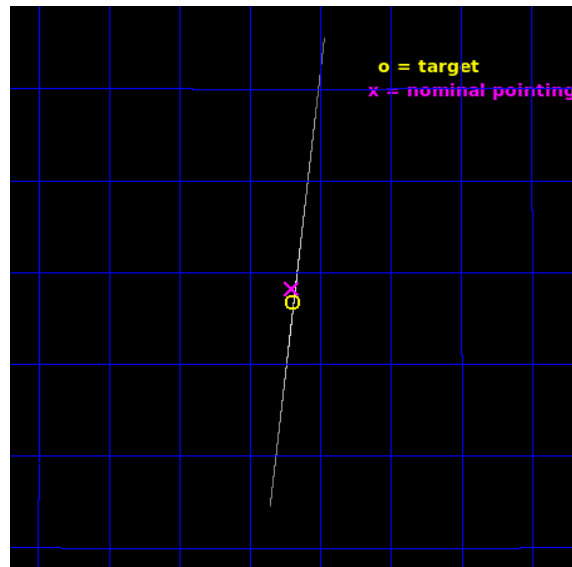
L2 Processing Date : Sep 24 2020

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1 Front

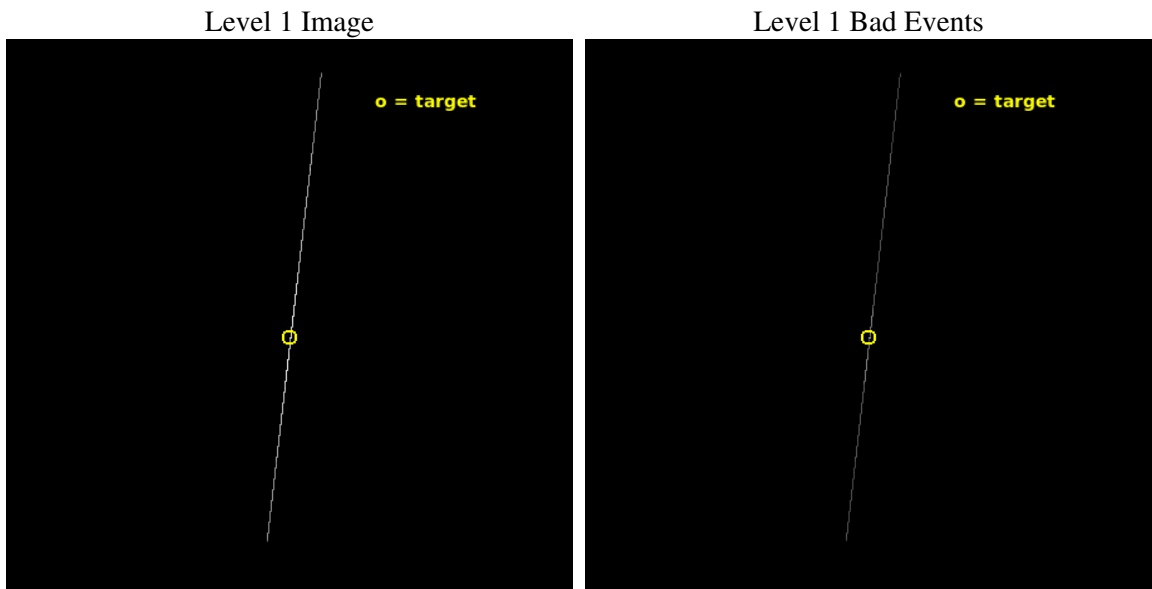
seq_num	400371	Sequence number
obs_id	4589	Observation id
title	Probe the relativistic Out-flow in the microquasar GRS1915+105 with HETG/Chandra	Proposal title
observer	Dr. Yuxin Feng	Principal investigator
object	GRS 1915+105	Source name
ra_targ	288.798333	Observer's specified target RA [deg]
dec_targ	10.945806	Observer's specified target Dec [deg]
ra_nom	288.80055697616	Nominal RA [deg]
dec_nom	10.970401227546	Nominal Dec [deg]
roll_nom	96.302376913882	Nominal Roll [deg]
revision	5	Processing version of data
ontime	30138.25	Sum of GTIs [s]
livetime	30020.522460938	Livetime [s]
ontime4	30138.25	Sum of GTIs [s]
ontime5	30138.25	Sum of GTIs [s]
ontime6	30138.25	Sum of GTIs [s]
ontime7	30138.25	Sum of GTIs [s]
ontime8	30138.25	Sum of GTIs [s]
ontime9	30138.25	Sum of GTIs [s]
l2events	3692627	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	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	30138.25	Sum of GTIs [s]
caldbver	4.9.2	 	ontime4	30138.25	Sum of GTIs [s]
date	2020-09-25T01:24:22	Date and time of file creation	ontime5	30138.25	Sum of GTIs [s]
revision	5	Processing version of data	ontime6	30138.25	Sum of GTIs [s]
			ontime7	30138.25	Sum of GTIs [s]
			ontime8	30138.25	Sum of GTIs [s]
			ontime9	30138.25	Sum of GTIs [s]
			l1events	4152350	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
				4112.40	

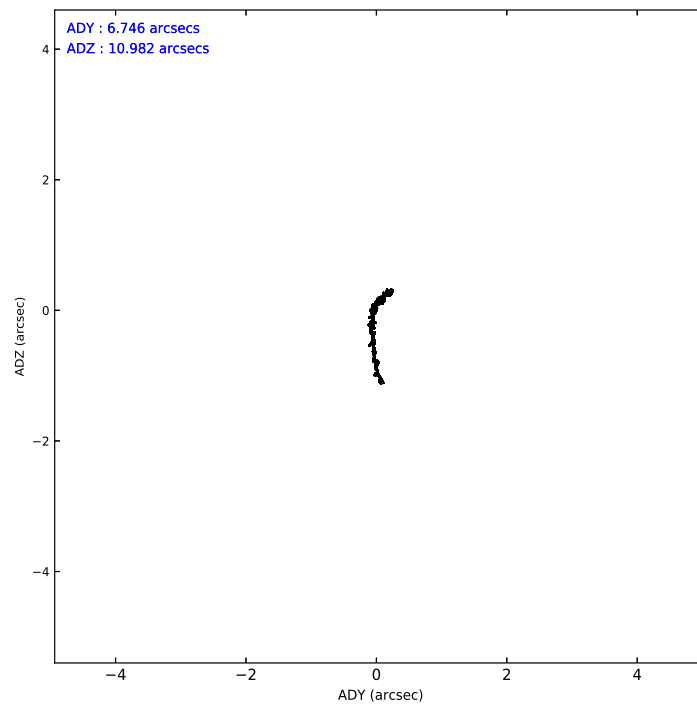
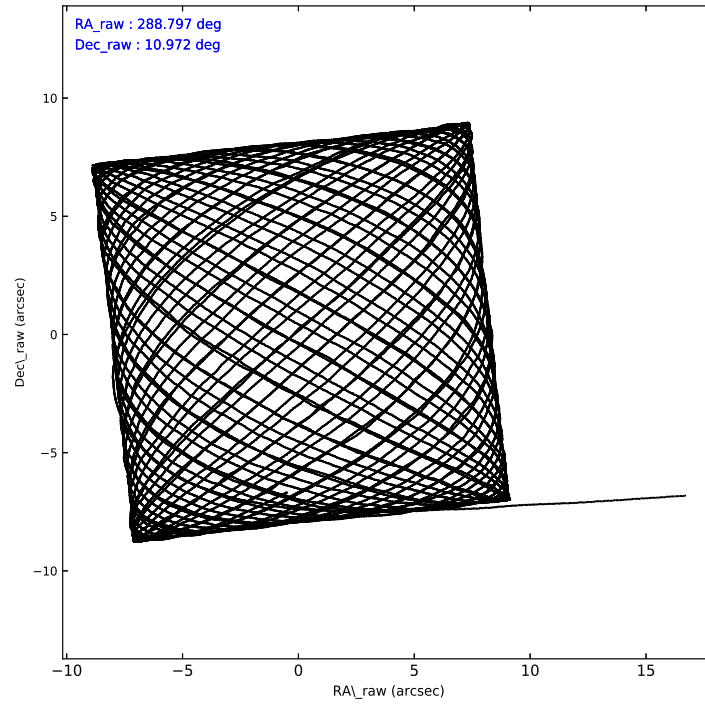
2.1.3 Events

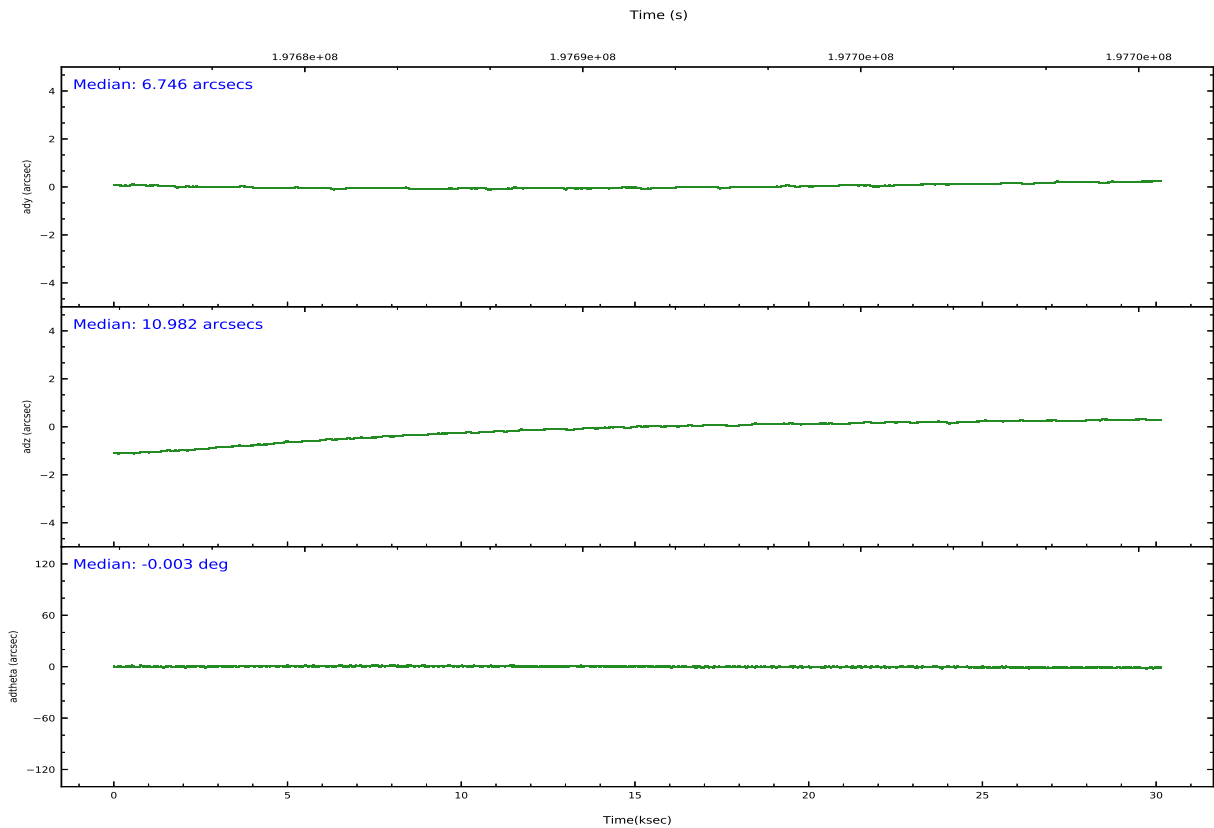
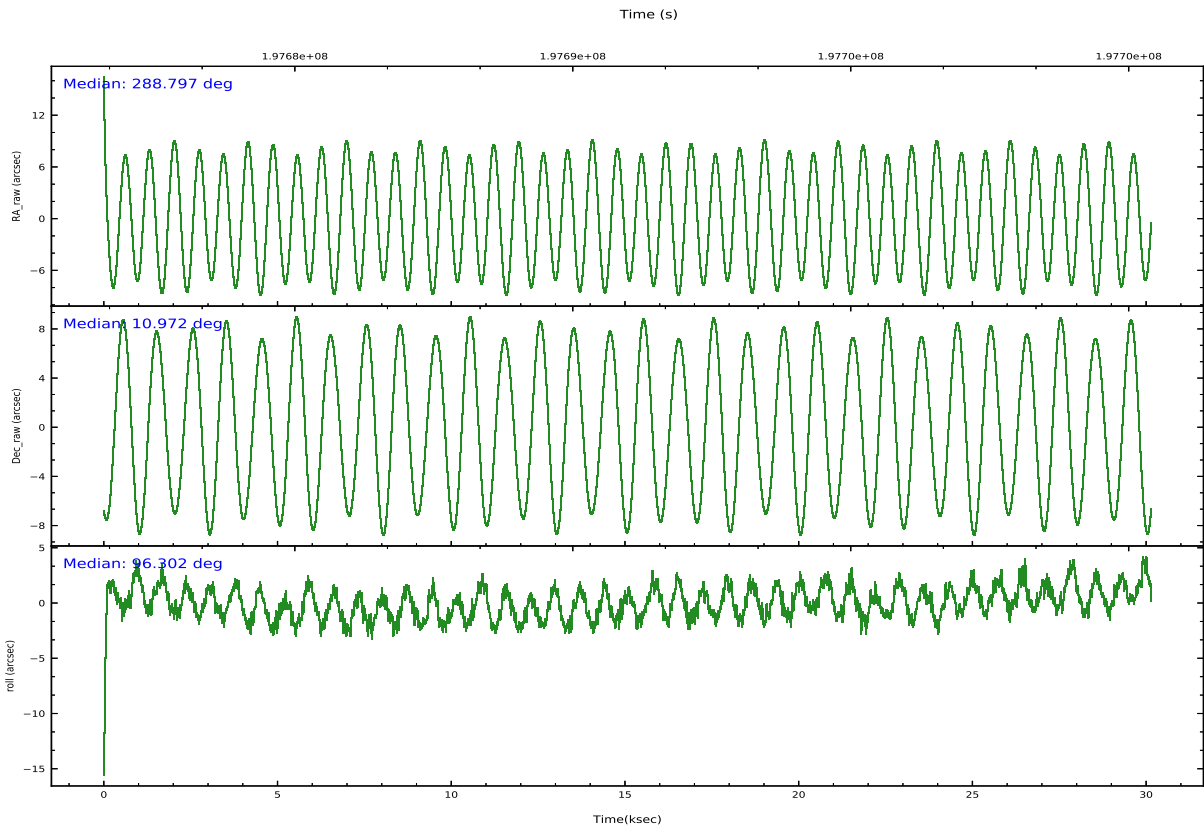
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	84712	293427	870695	2266629	513667	123220	grade 0 events	5214	40047	12186	151115	26002	7131
rejected events	21377	34804	30967	85467	30927	23548		6%	13%	1%	6%	5%	5%
rejected %	25%	11%	3%	3%	6%	19%	grade 1 events	120	193	139	1433	305	151
								0%	0%	0%	0%	0%	0%
							grade 2 events	48152	102096	734929	865483	394741	78122
								56%	34%	84%	38%	76%	63%
							grade 3 events	4913	4547	5114	87617	9279	4611
								5%	1%	0%	3%	1%	3%
							grade 4 events	5137	4312	4882	86403	8884	5144
								6%	1%	0%	3%	1%	4%
							grade 5 events	7830	17298	12462	58246	13455	9480
								9%	5%	1%	2%	2%	7%
							grade 6 events	13346	124934	100983	1016332	61001	18581
								15%	42%	11%	44%	11%	15%
							grade 7 events	0	0	0	0	0	0
								0%	0%	0%	0%	0%	0%

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	CC33_GRADED	CC33_GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	288.813890	288.80055697616	Subarray requested	NONE	NONE
[deg] Pointing Dec	10.950300	10.970401227546	Alternating exposures requested	N	N
[deg] Pointing Roll	96.141703	96.302376913882	[s] Primary exposure time	0.000000	0
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-194.132523	-194.1227414875429			
[mm] SIM translation stage offset	4	3.990218904535112			
[s] Observation start time (MET)	197674646.184000	197673583.75174			
Observation start date	2004-04-06T21:36:22	2004-04-06T21:19:43			
[s] Observation end time (MET)	197704646.184000	197705633.96565			
Observation end date	2004-04-07T05:56:22	2004-04-07T06:13:53			
Read mode	CONTINUOUS	CONTINUOUS			

2.3 Aspect



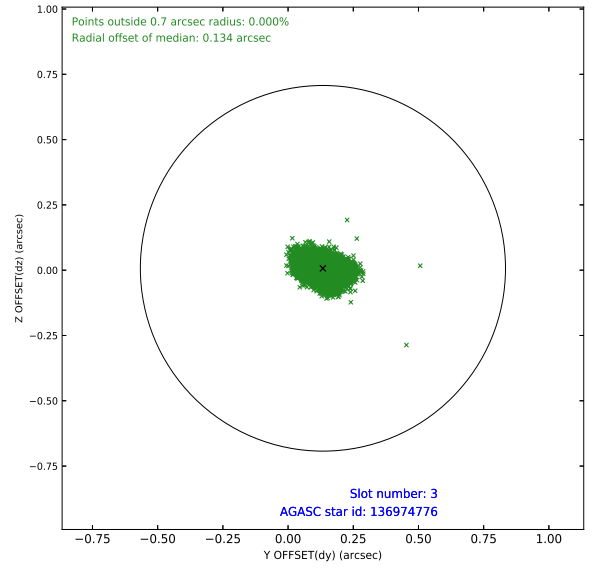
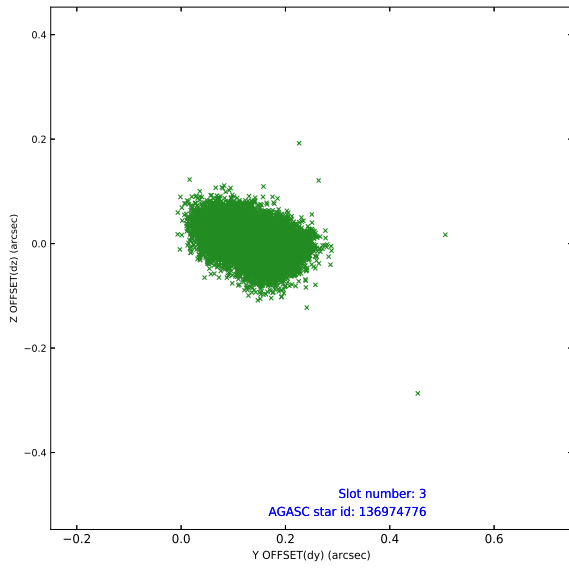


Slot Statistics

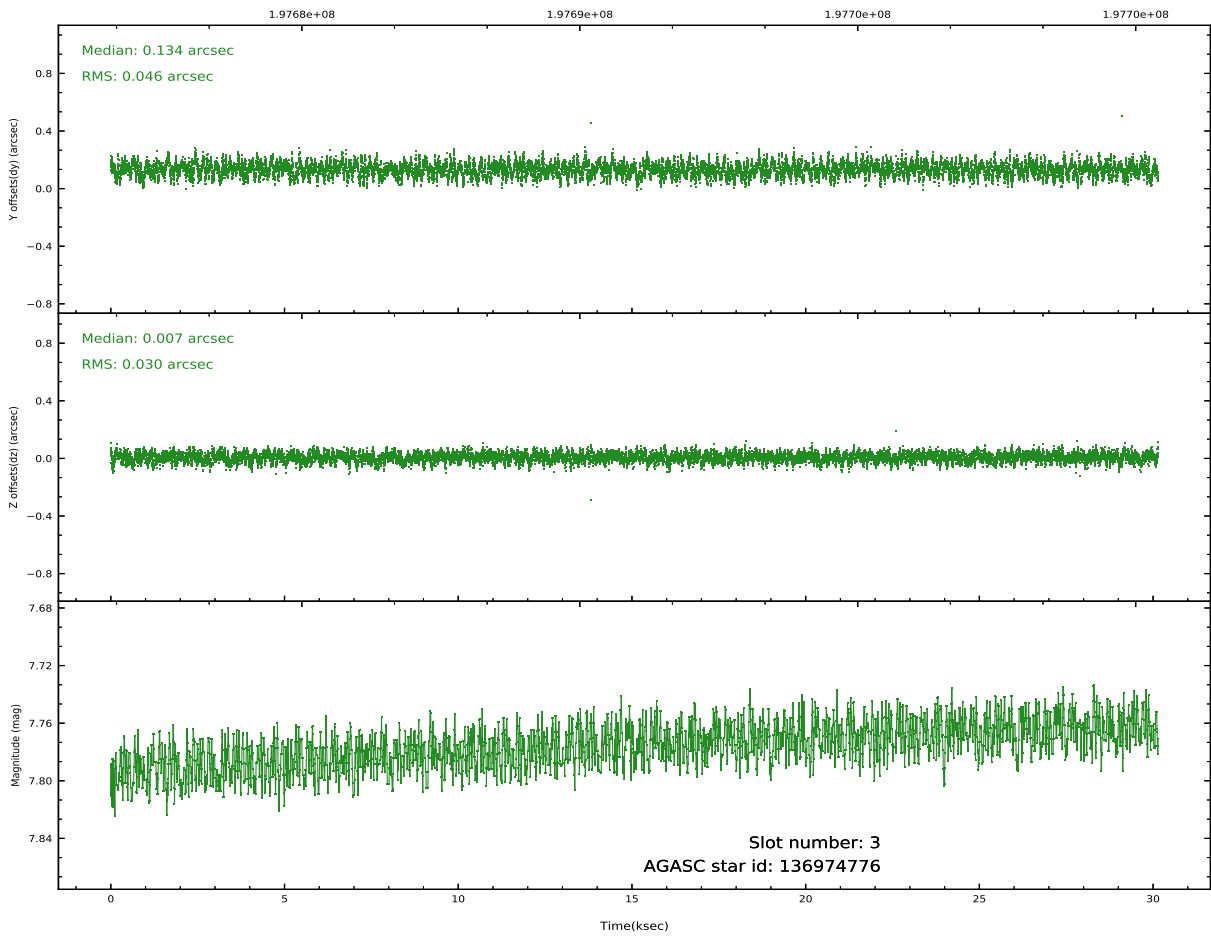
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-2	7.11	7353	1.000	-0.050	-0.023	0.007	0.013	0.000000	0.000000	-759.84	-1650
1	FID		ACIS-S-4	7.20	7352	1.000	0.083	0.016	0.009	0.015	0.000000	0.000000	2153.56	258
2	FID		ACIS-S-6	7.32	7353	1.000	-0.060	0.014	0.008	0.015	0.000000	0.000000	402.25	895
3	GUIDE	used	136974776	7.78	14706	1.000	0.134	0.007	0.059	0.096	288.742109	10.409402	-1908.50	461
4	GUIDE	used	136977584	8.42	14705	1.000	0.208	-0.024	0.062	0.101	288.635599	10.555283	-1345.94	779
5	GUIDE	used	137102976	8.53	14702	1.000	0.082	0.078	0.062	0.100	289.193436	10.979652	-37.33	-1344
6	GUIDE	used	137497048	7.99	14706	1.000	-0.244	0.094	0.063	0.096	288.896055	11.554718	2131.65	-521
7	GUIDE	used	137498872	7.05	14705	1.000	-0.182	-0.154	0.043	0.072	288.350862	11.344926	1588.66	1472

2.4 Star Slots

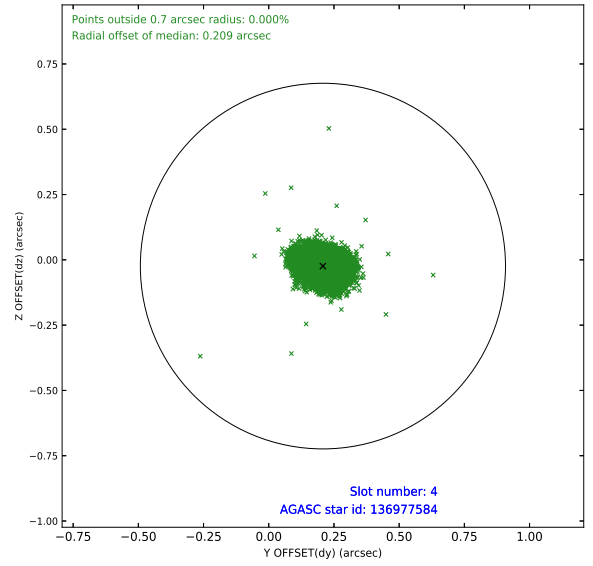
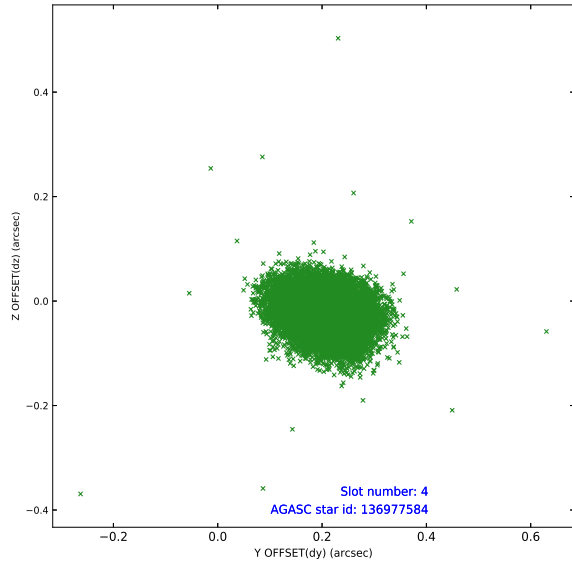
2.4.1 Slot 3



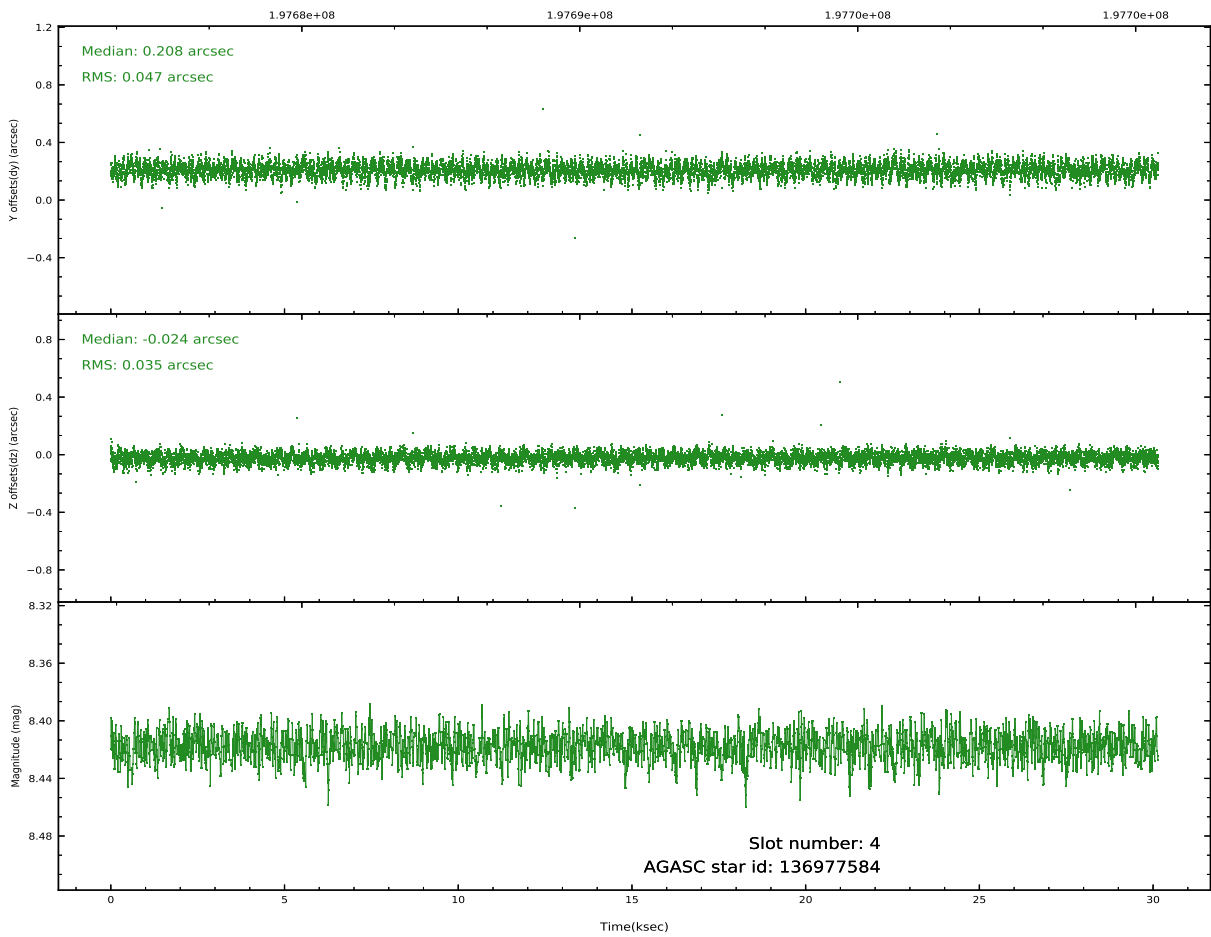
Time (s)



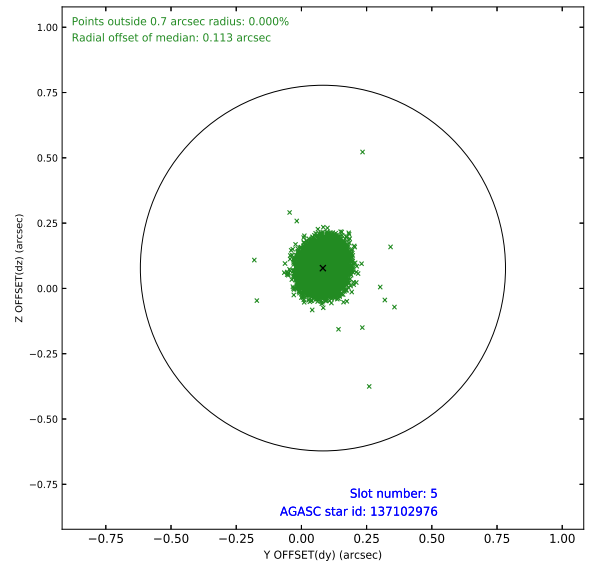
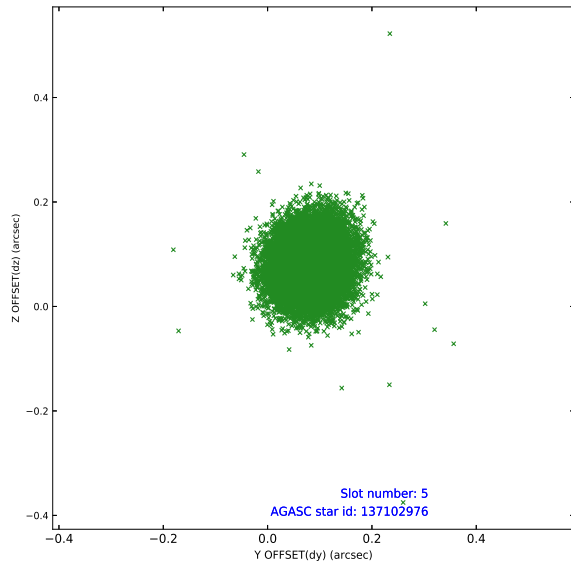
2.4.2 Slot 4



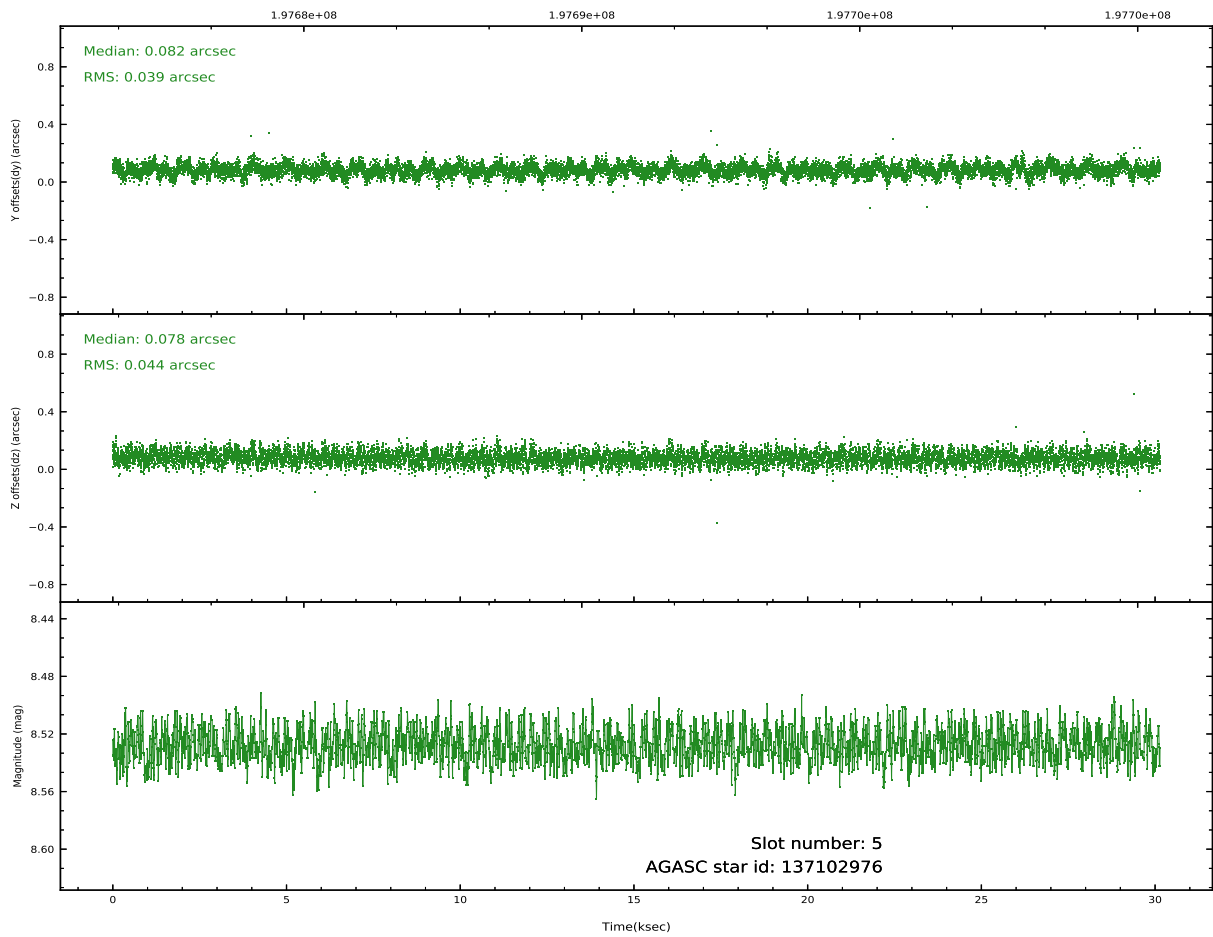
Time (s)



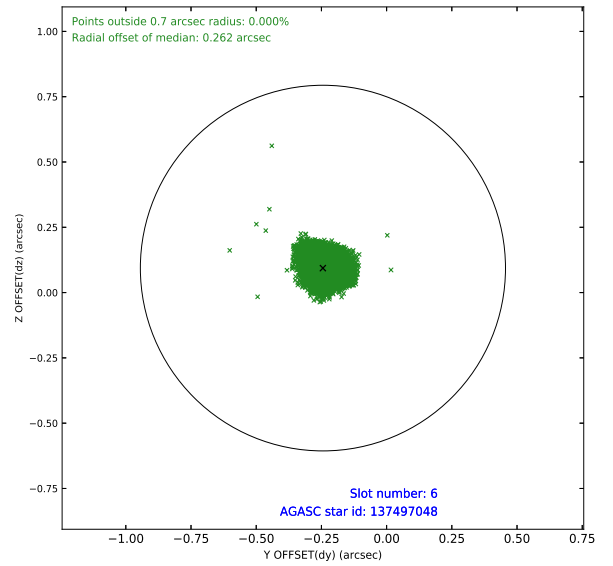
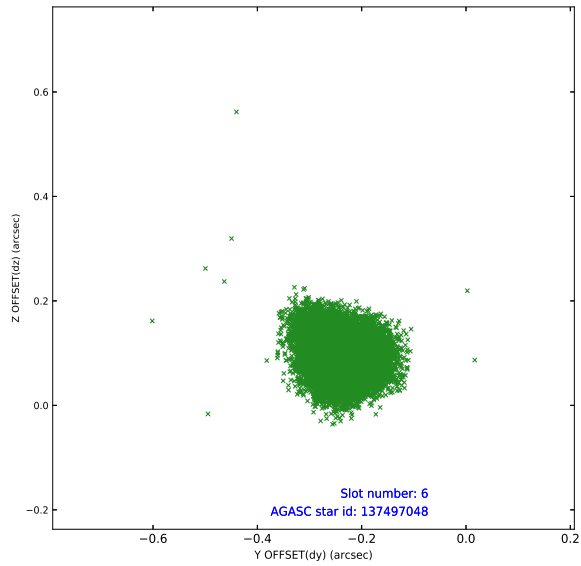
2.4.3 Slot 5



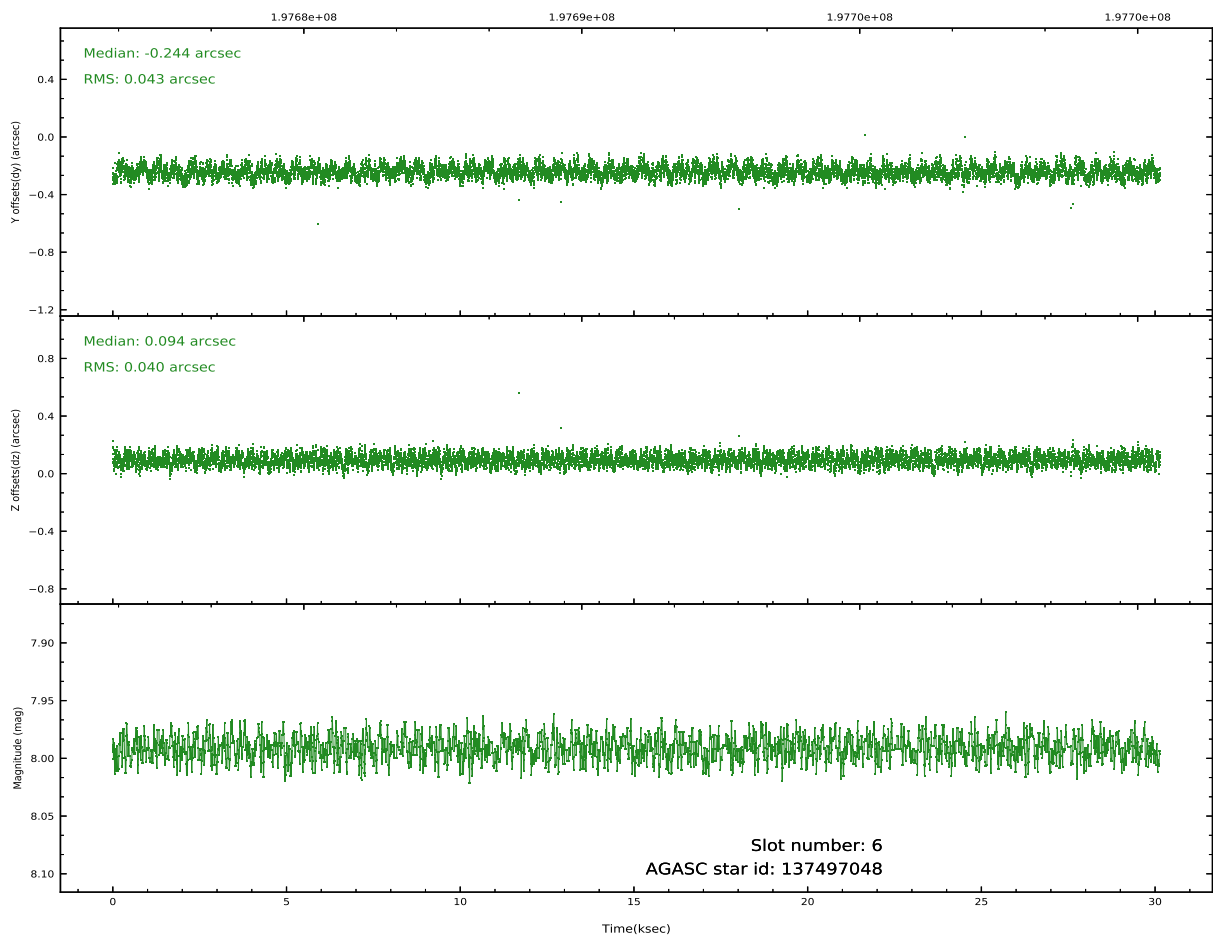
Time (s)



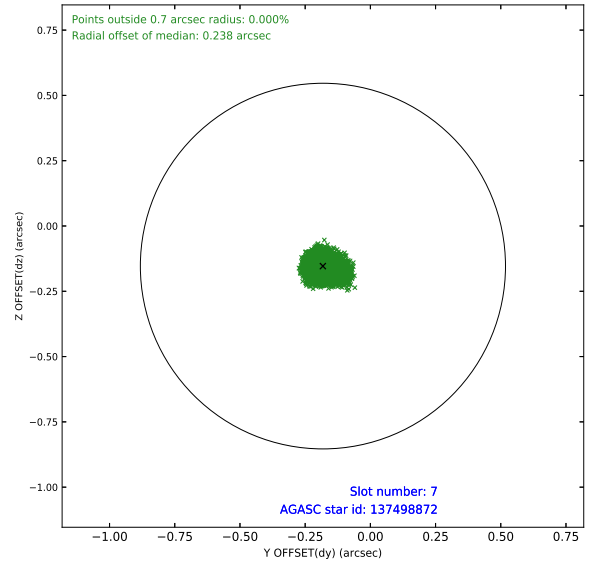
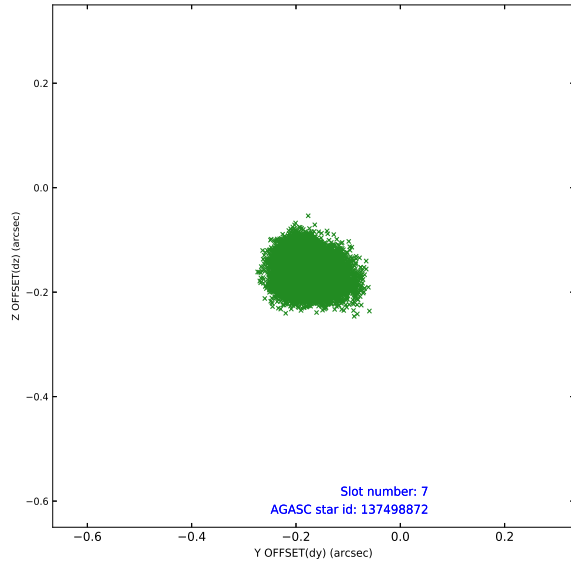
2.4.4 Slot 6



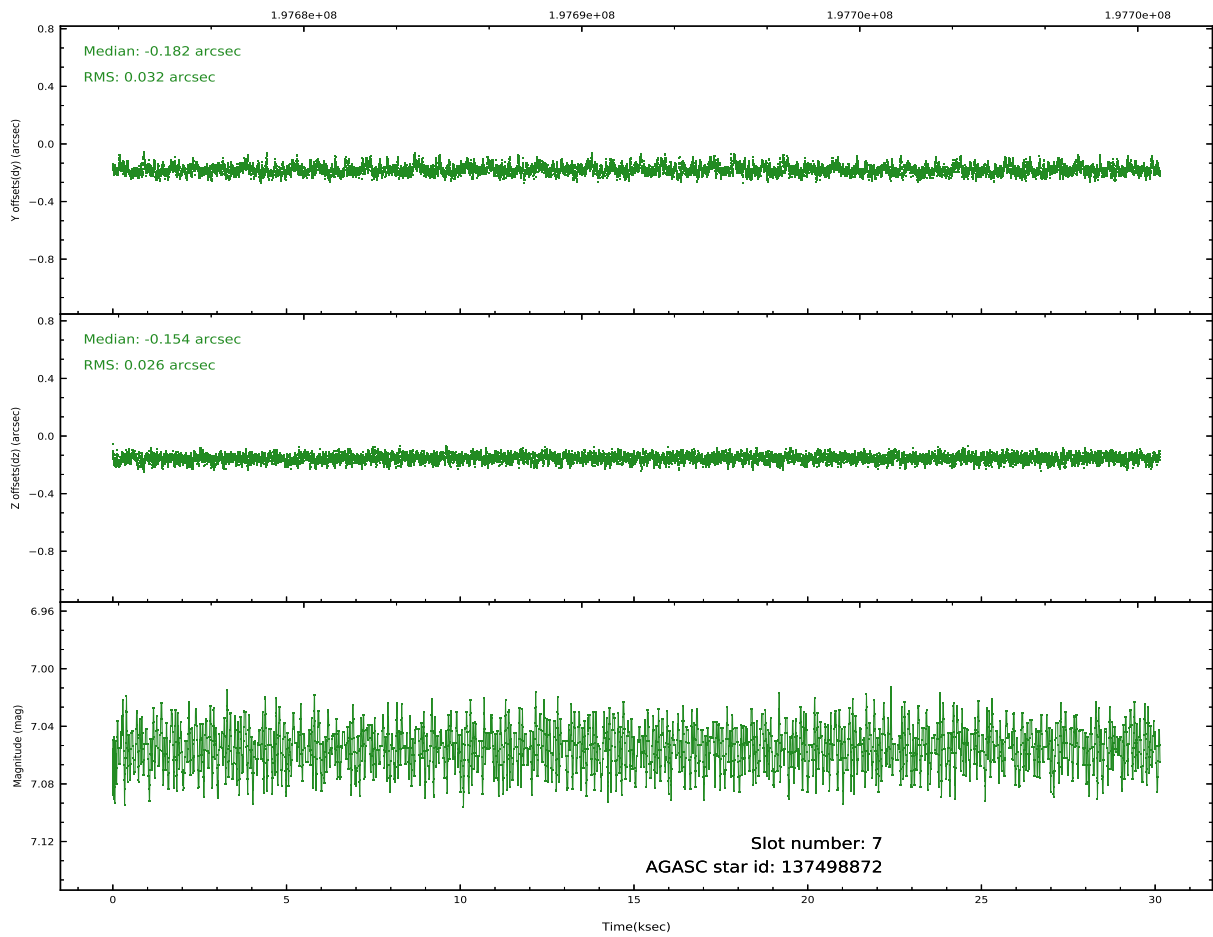
Time (s)



2.4.5 Slot 7

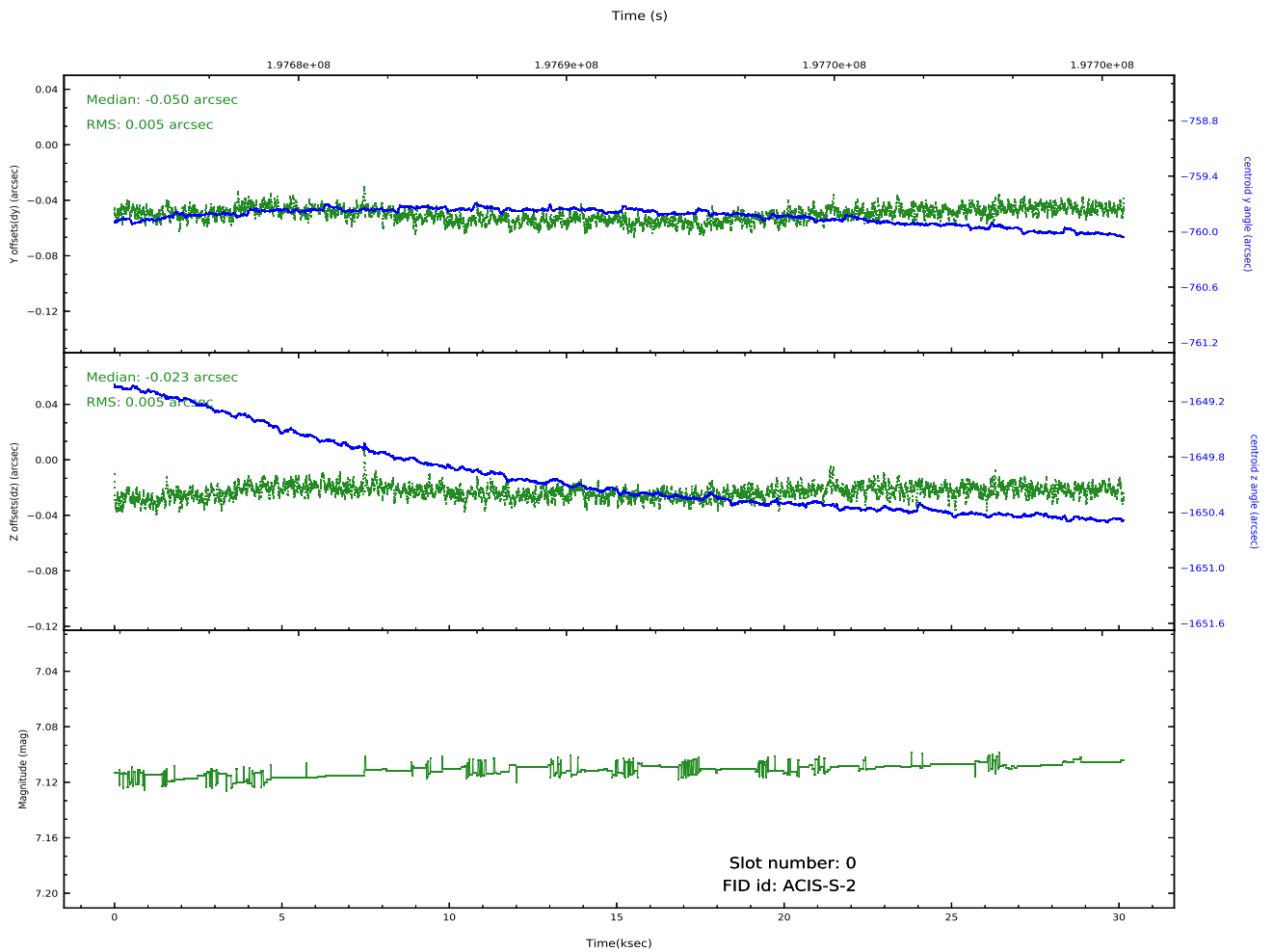
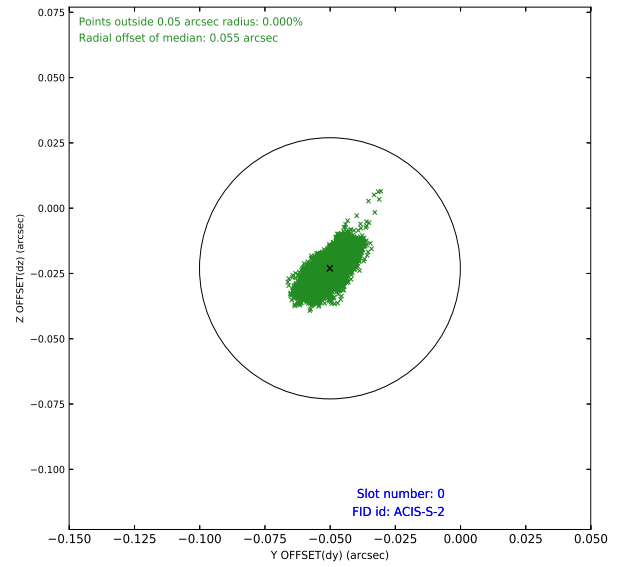
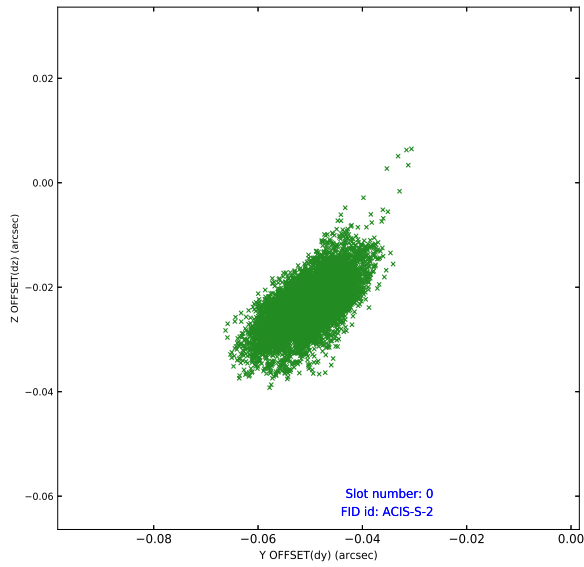


Time (s)

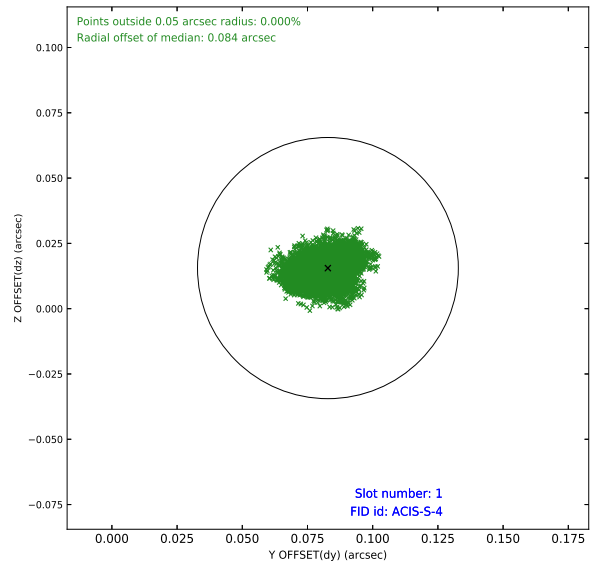
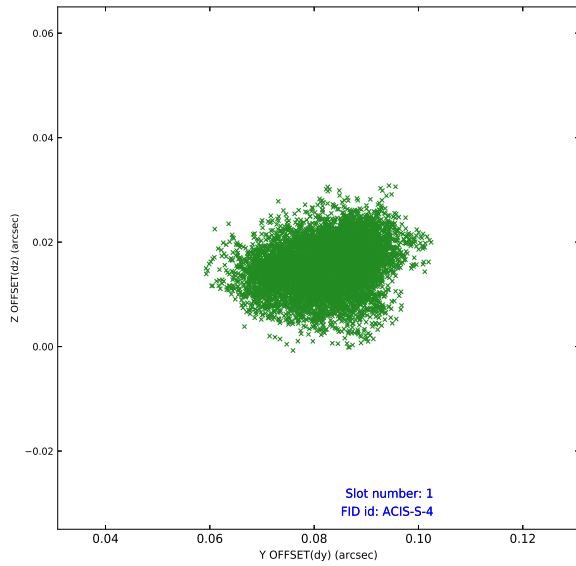


2.5 FID Slots

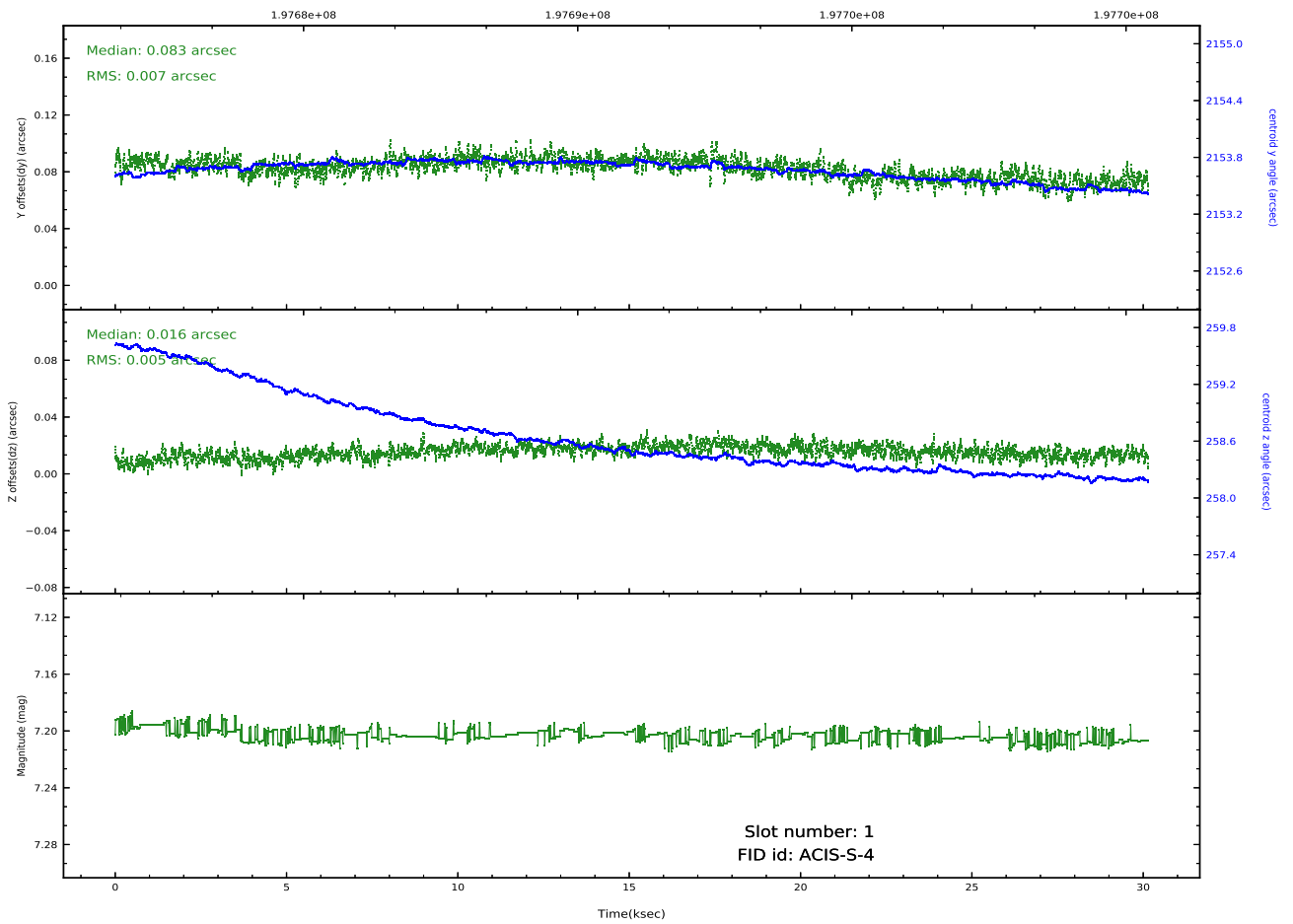
2.5.1 Slot 0



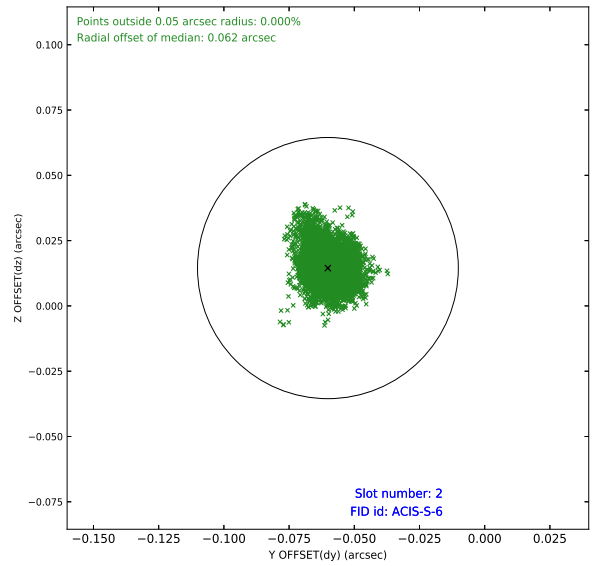
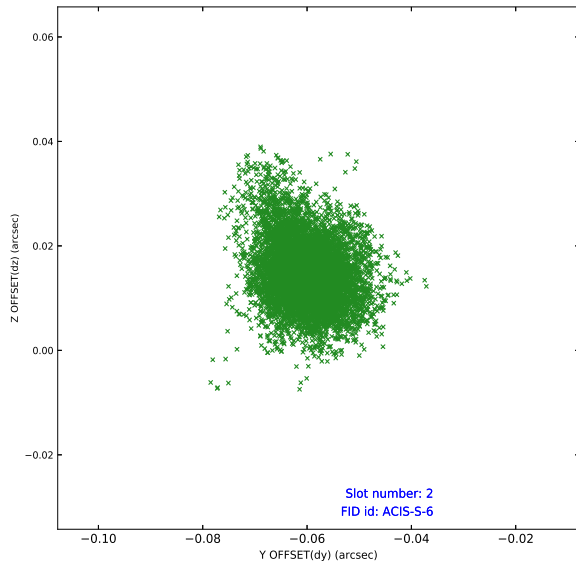
2.5.2 Slot 1



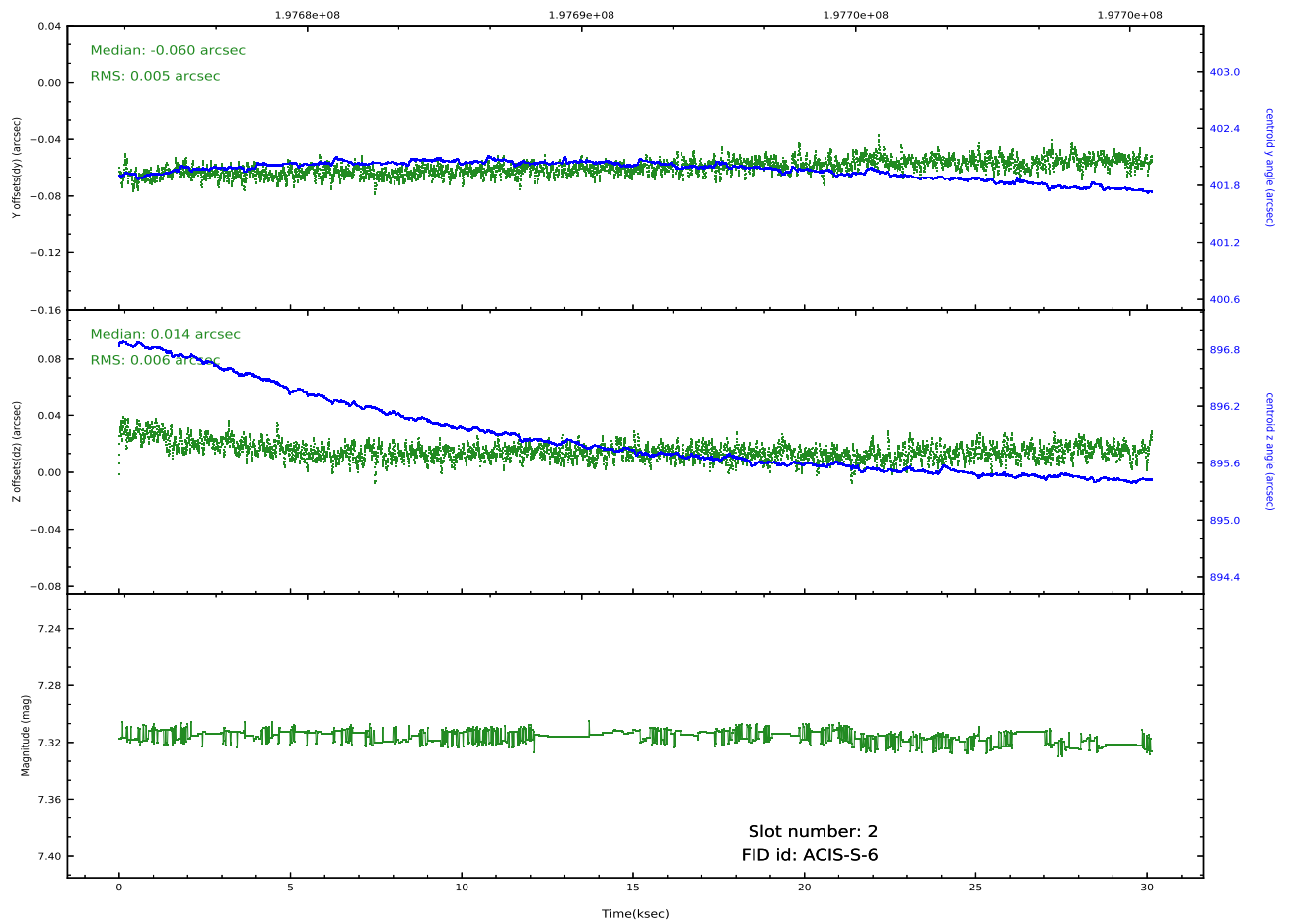
Time (s)



2.5.3 Slot 2

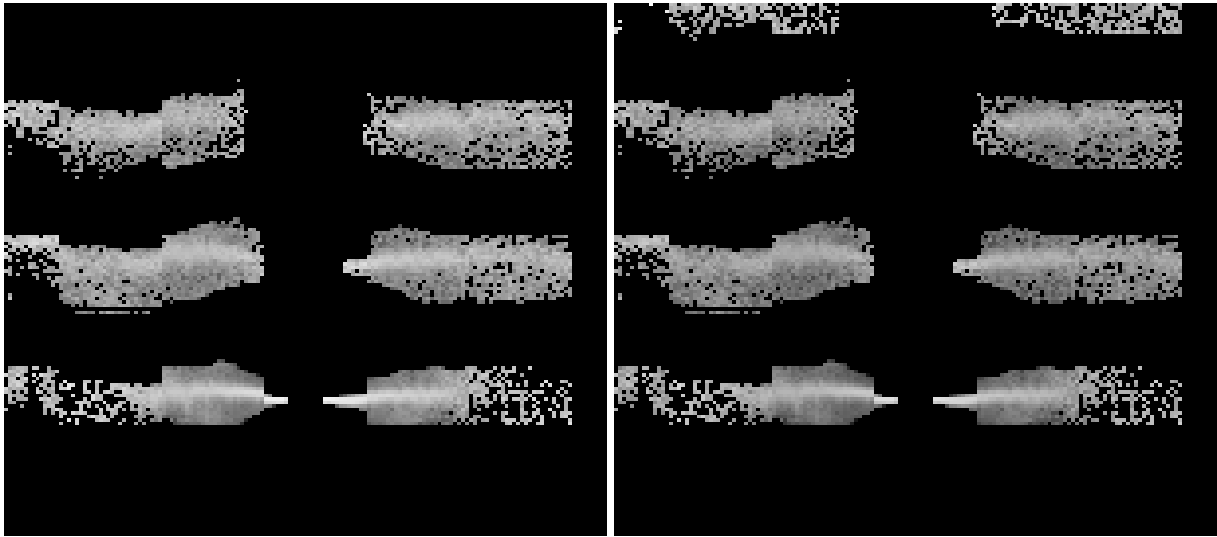


Time (s)



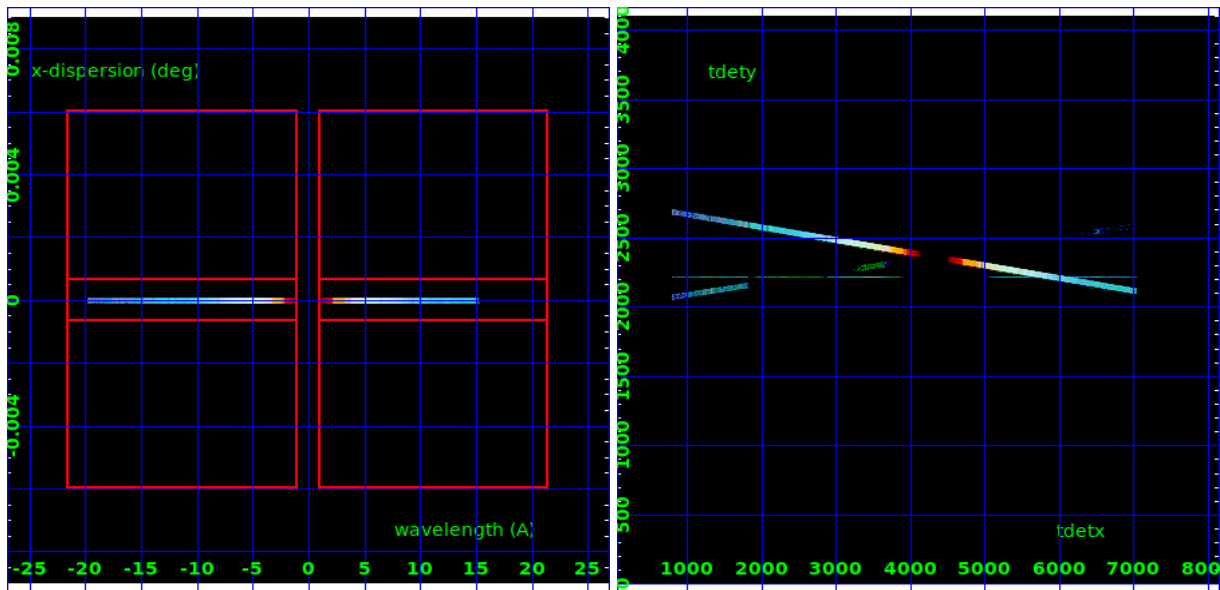
3 Gratings

3.1 HEG Arm



HEG Order Sort 123

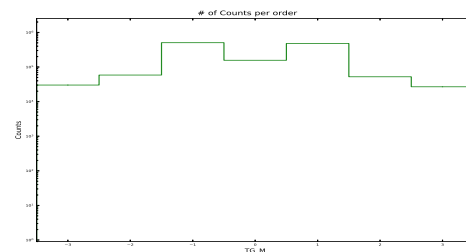
HEG Order Sort ALL

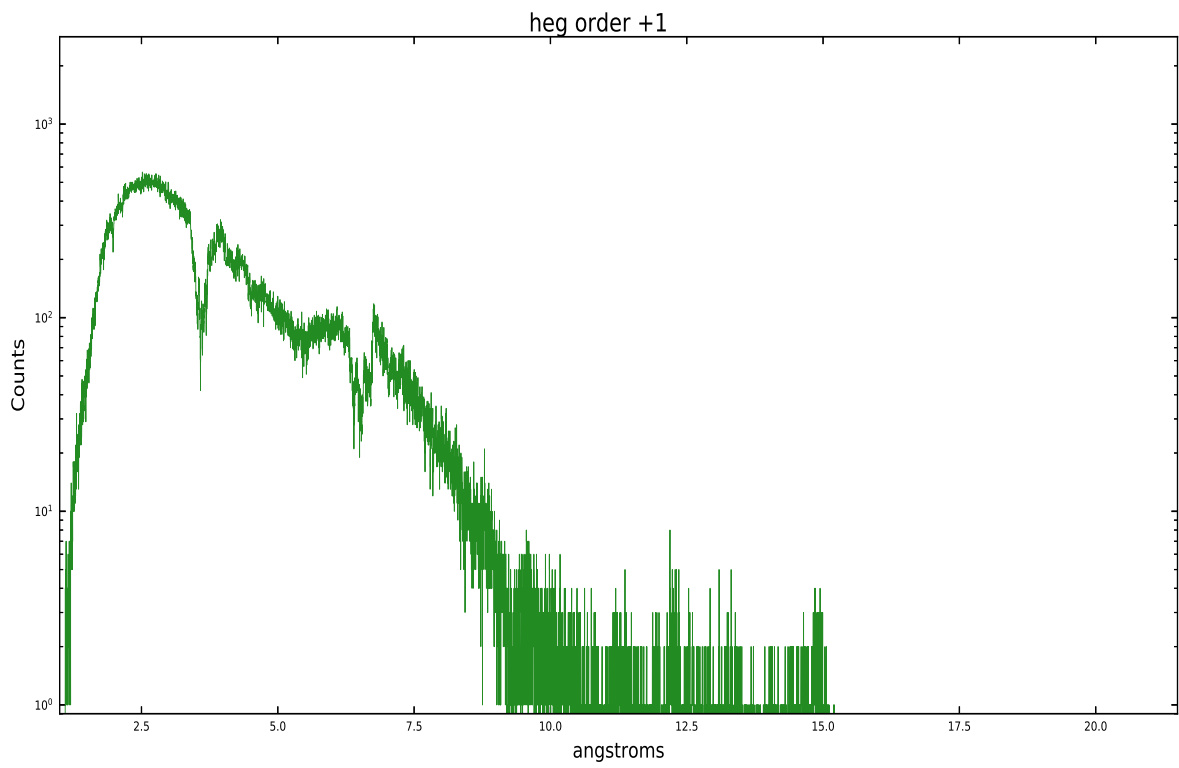
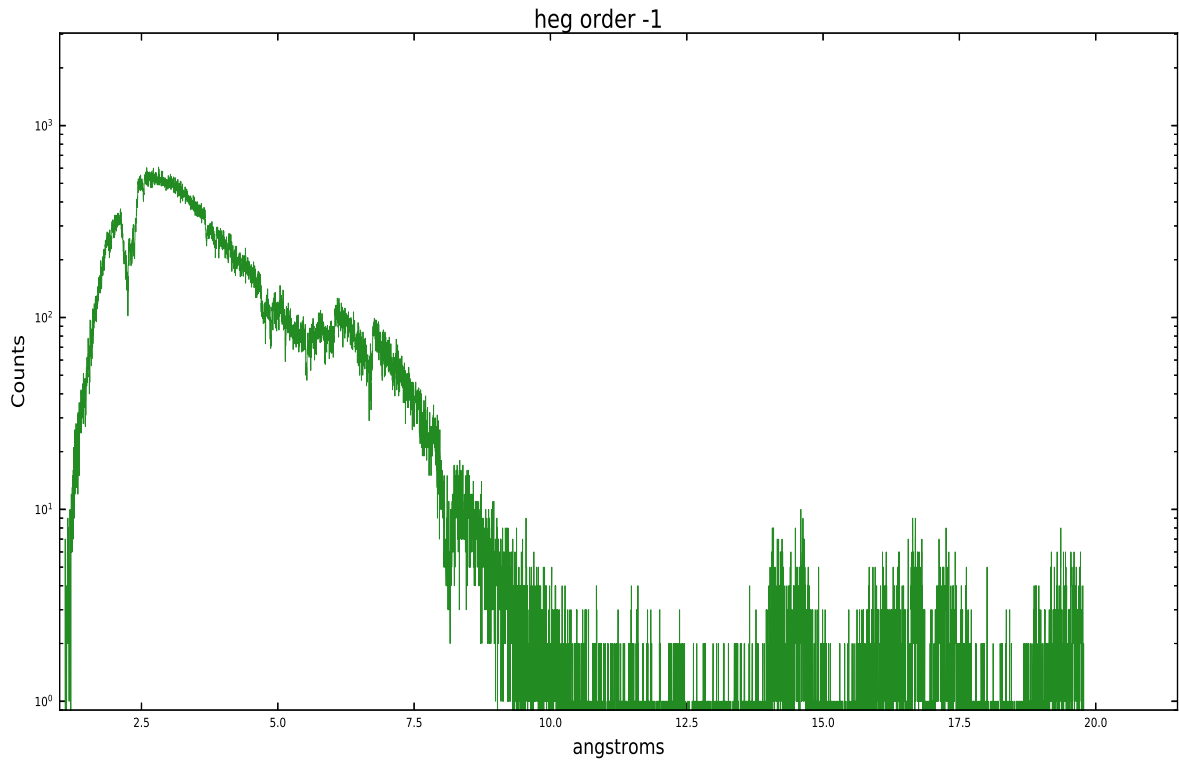


Spot Image HEG

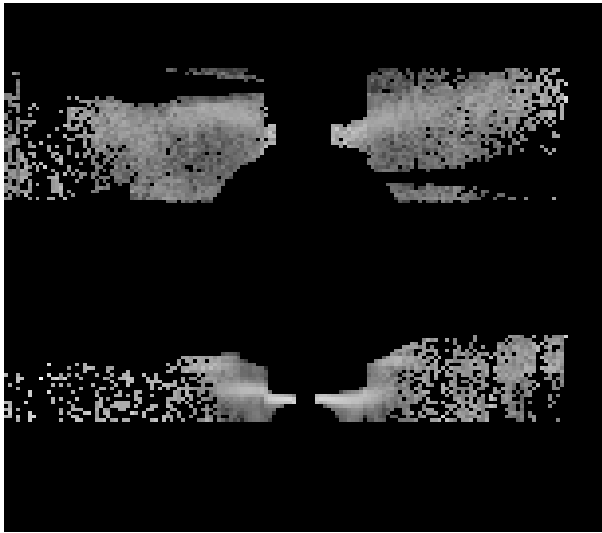
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	30117	58595	505386	156574	478220	52288	26860

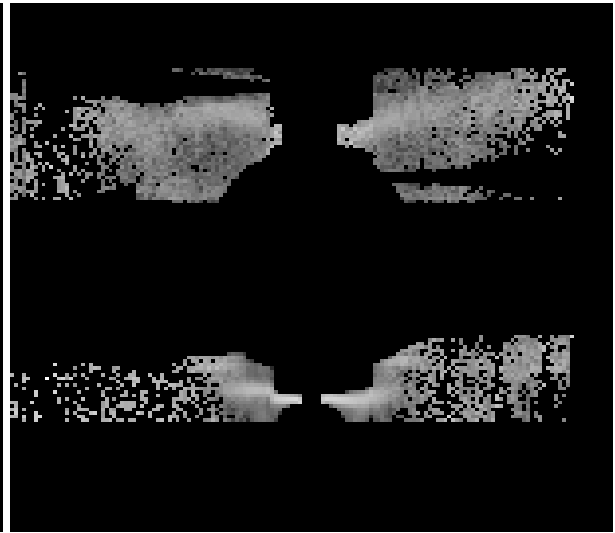




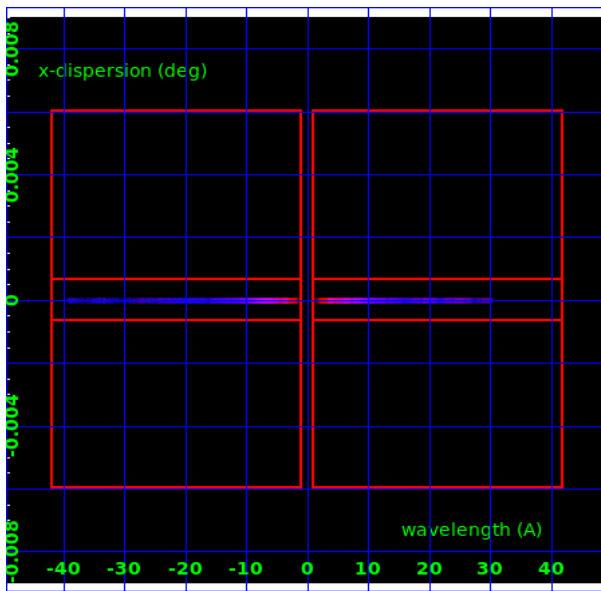
3.2 MEG Arm



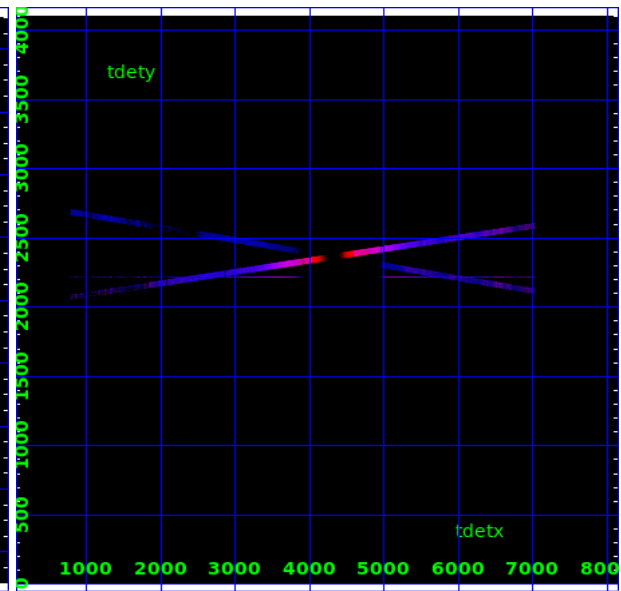
MEG Order Sort 123



MEG Order Sort ALL

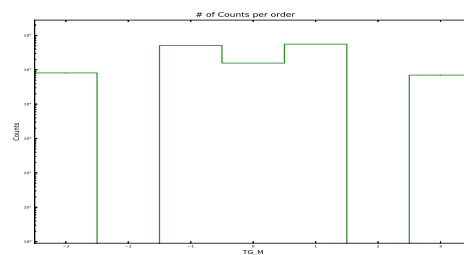


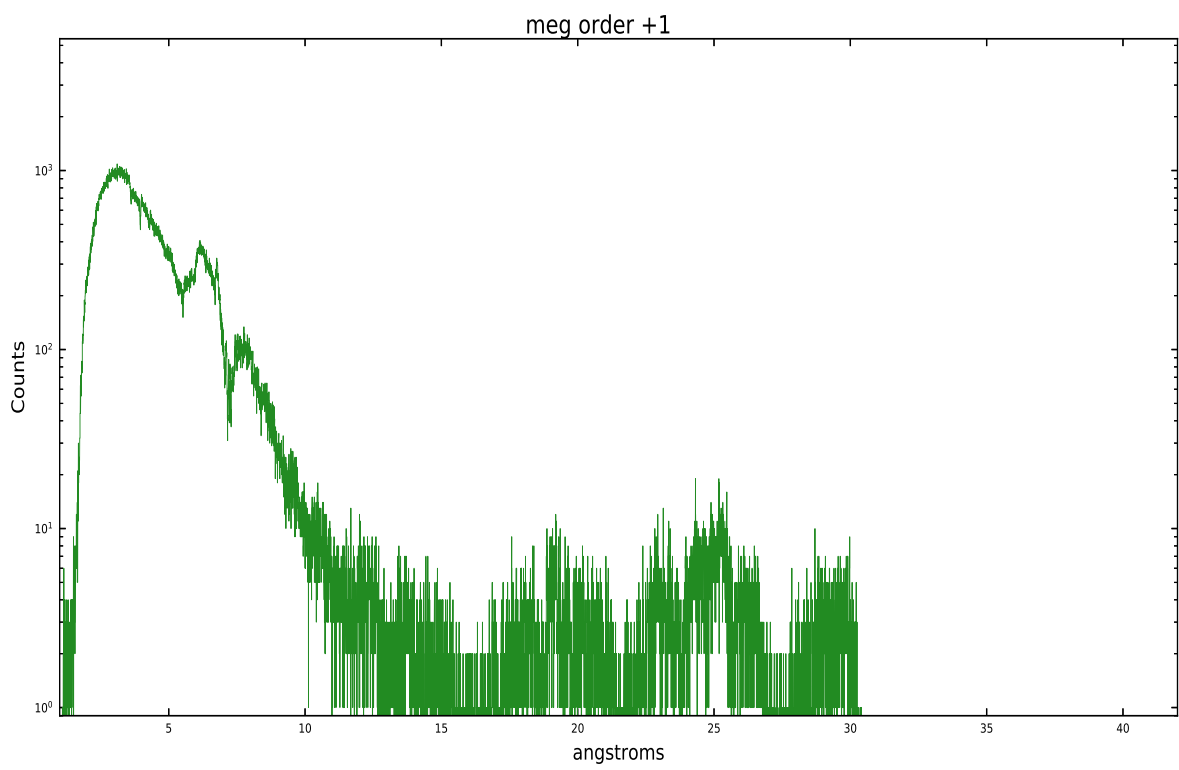
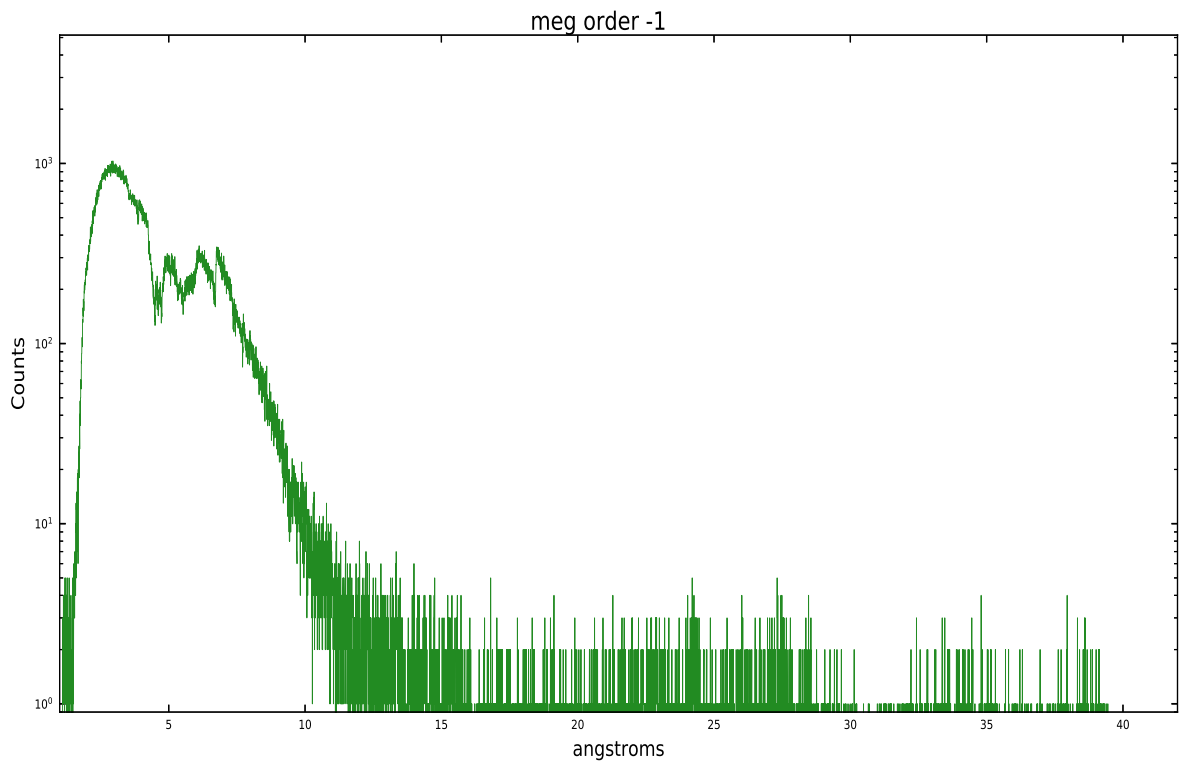
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	81007	0	506739	156574	557743	0	70054





A Summary

A.1 Status

V&V Scientist	Melania Nynka
V&V Date (YYYY-MM-DD)	2020.10.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.142

A.2 Comments