

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 5170 - L2 Version 4
Chandra X-Ray Center

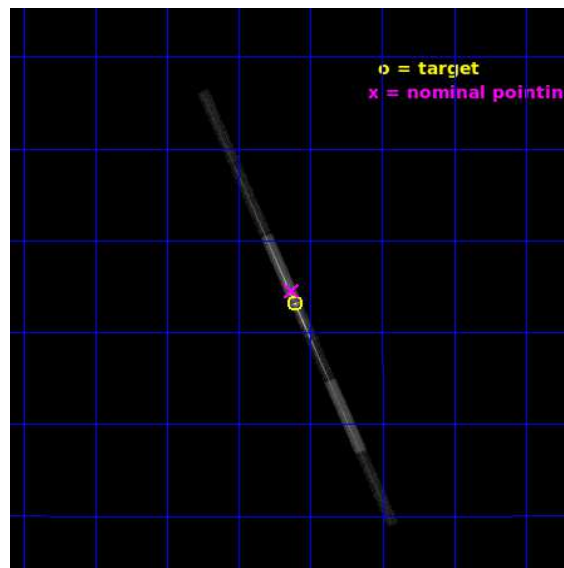
L2 Processing Date : Oct 8 2020

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1 Front

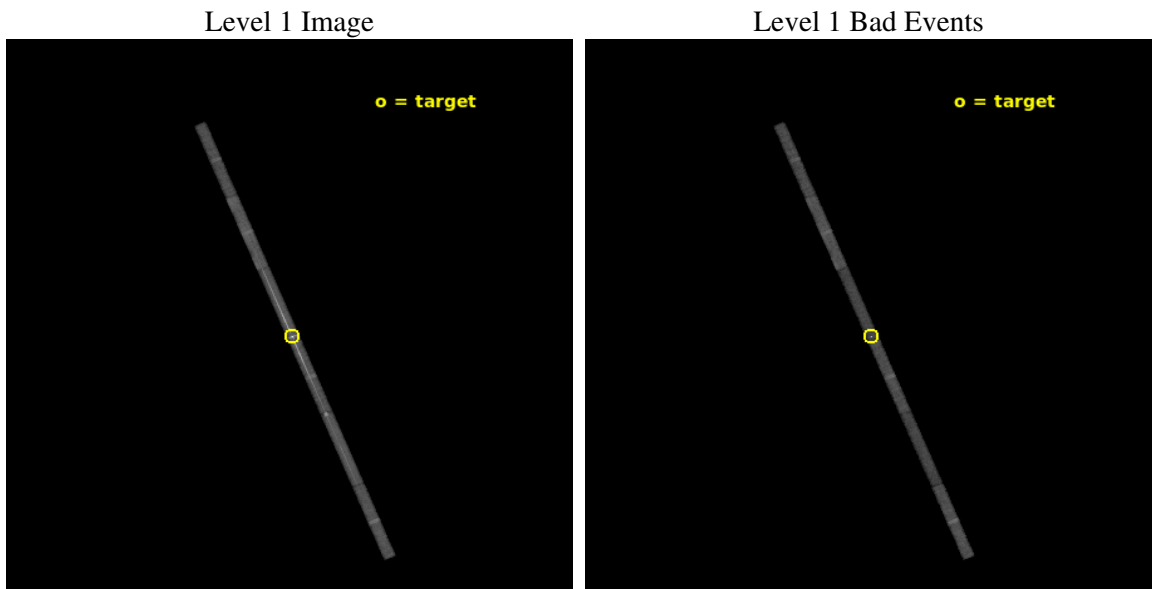
seq_num	790090	Sequence number
obs_id	5170	Observation id
title	AO5 Calibration Observations of 3C273	Proposal title
observer	CXC Calibration	Principal investigator
object	3C273	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	187.277917	Observer's specified target RA [deg]
dec_targ	2.052389	Observer's specified target Dec [deg]
ra_nom	187.28252436619	Nominal RA [deg]
dec_nom	2.0756086562644	Nominal Dec [deg]
roll_nom	247.15443768876	Nominal Roll [deg]
revision	4	Processing version of data
ontime	30064.794809371	Sum of GTIs [s]
livetime	28399.757592788	Livetime [s]
ontime4	30064.835849375	Sum of GTIs [s]
ontime5	30064.753769368	Sum of GTIs [s]
ontime6	30064.712729365	Sum of GTIs [s]
ontime7	30064.794809371	Sum of GTIs [s]
ontime8	30064.671689361	Sum of GTIs [s]
ontime9	30064.630649388	Sum of GTIs [s]
l2events	165842	Number of level 2 events



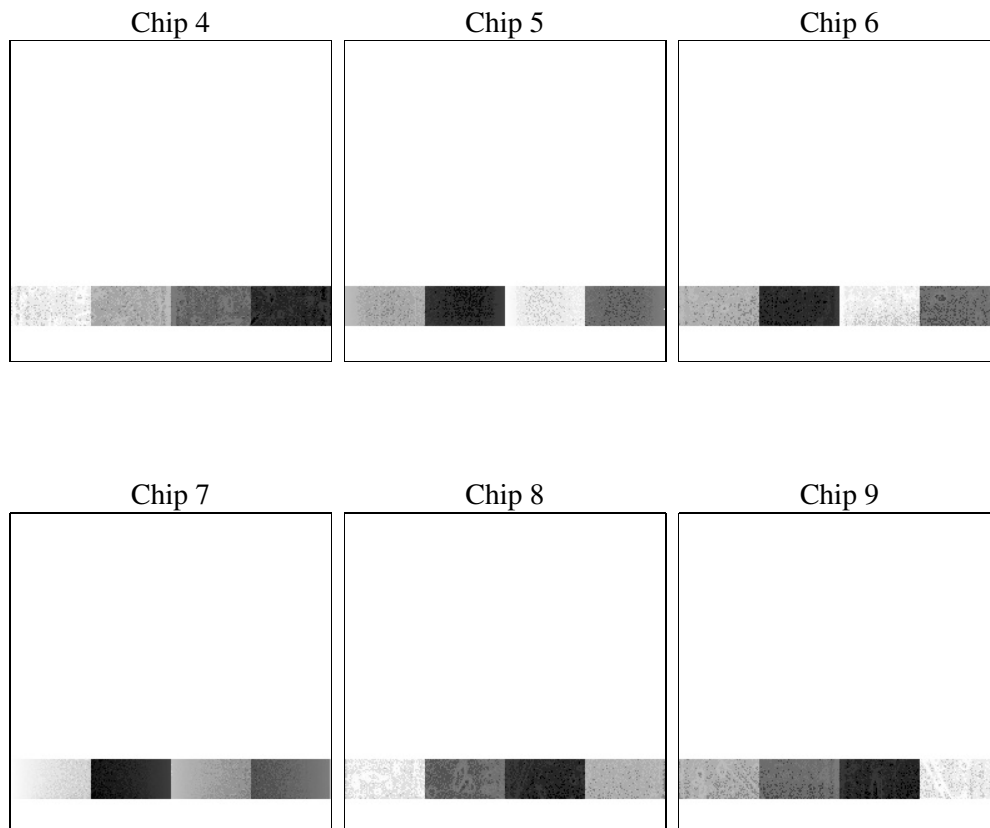
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	30064.794809371	Sum of GTIs [s]
caldbver	4.9.2	 	ontime4	30064.835849375	Sum of GTIs [s]
date	2020-10-08T14:18:57	Date and time of file creation	ontime5	30064.753769368	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	30064.712729365	Sum of GTIs [s]
			ontime7	30064.794809371	Sum of GTIs [s]
			ontime8	30064.671689361	Sum of GTIs [s]
			ontime9	30064.630649388	Sum of GTIs [s]
			l1events	377301	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			z0_pos	(4130.25, 3027.25)	src1a sky pixel position

2.1.4 Events

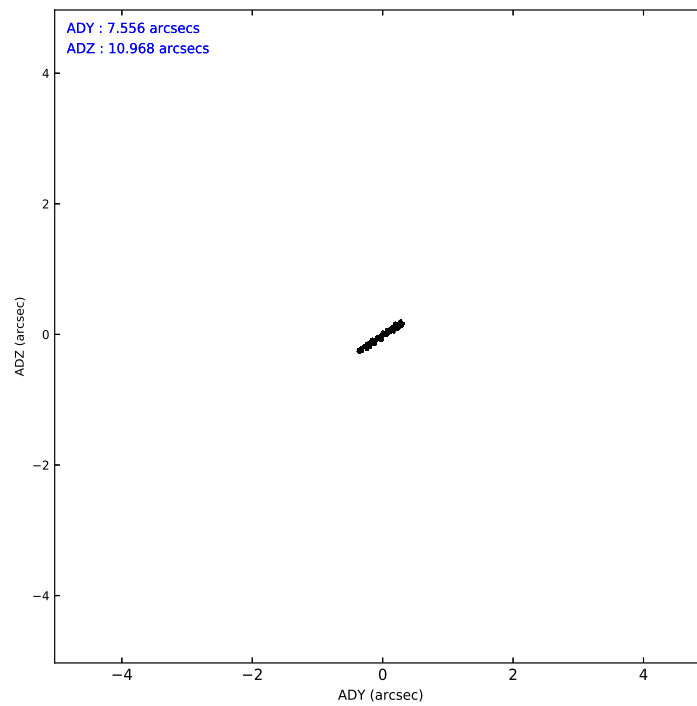
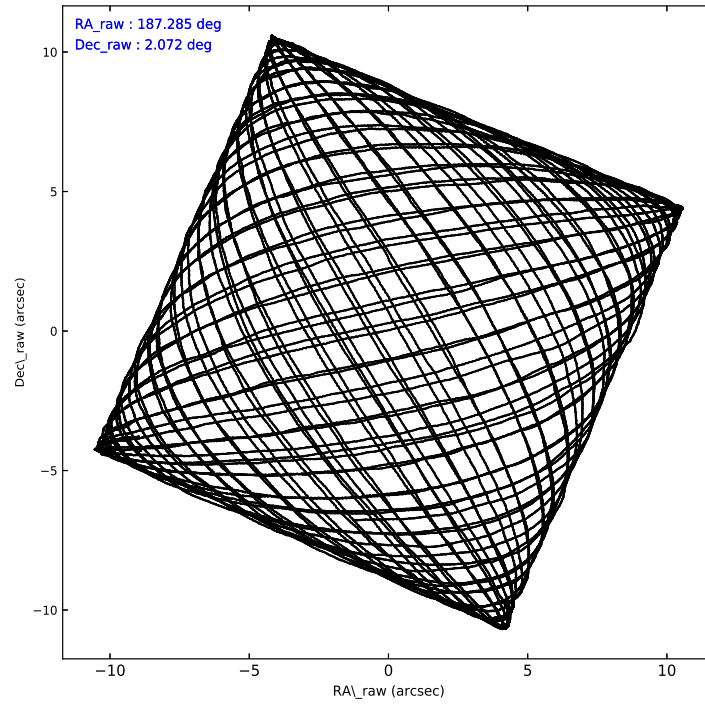
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	42602	51782	69502	125783	53851	33781
rejected events	37394	22436	33887	31402	41900	28890
rejected %	87%	43%	48%	24%	77%	85%

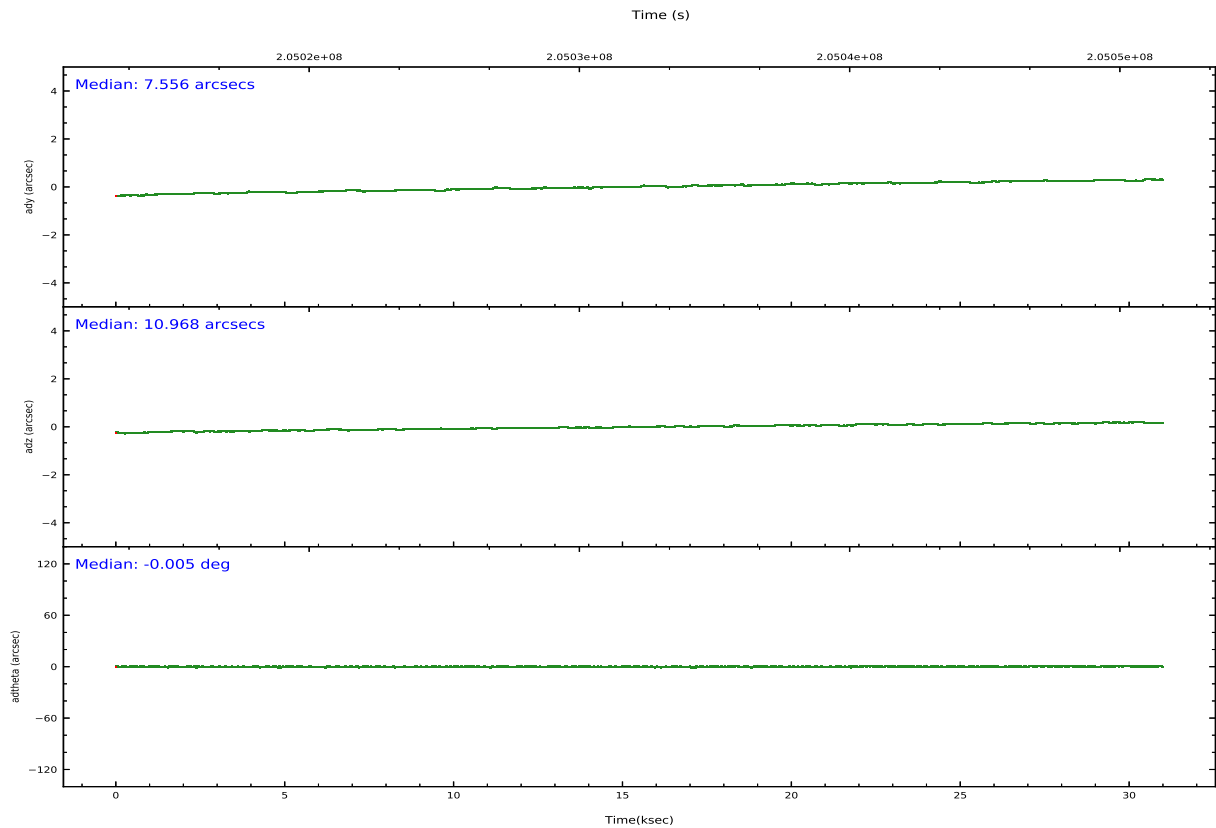
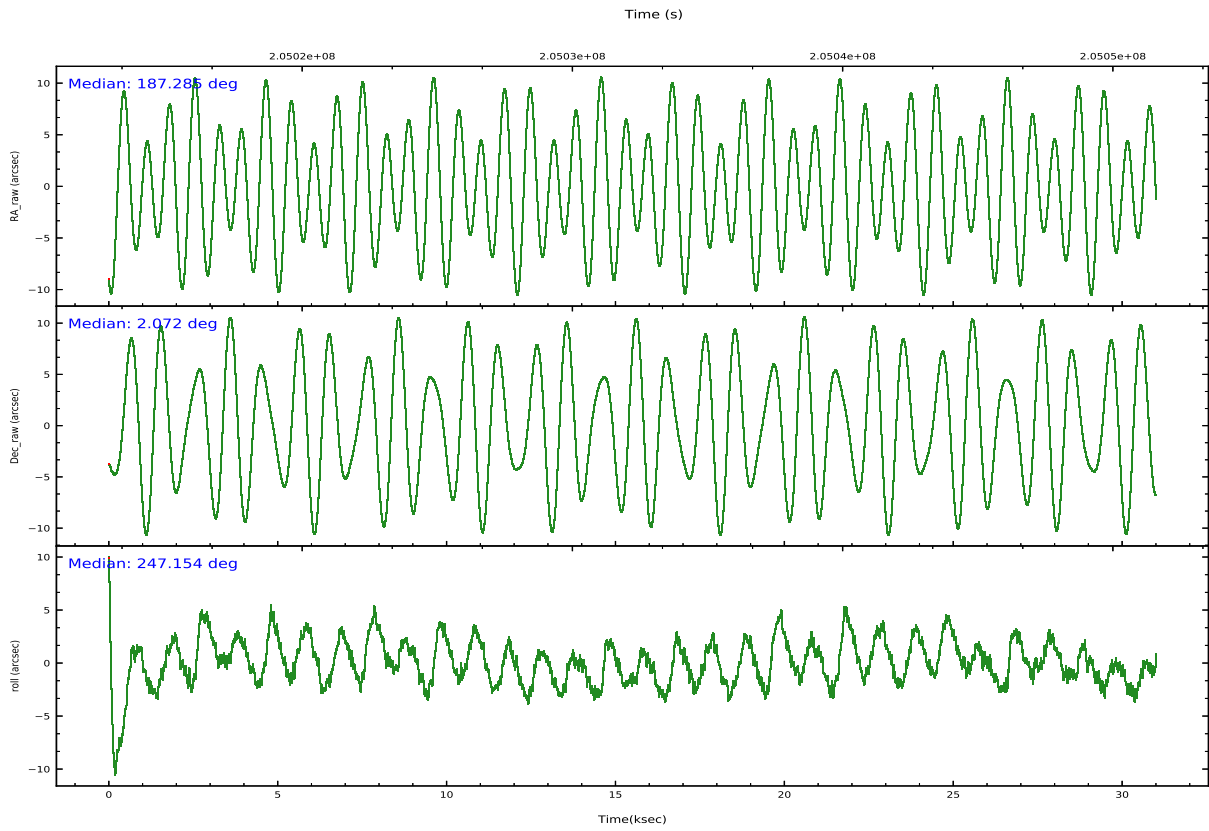
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	2182	8377	26503	20802	4455	2072
	5%	16%	38%	16%	8%	6%
grade 1 events	4	185	56	774	19	13
	0%	0%	0%	0%	0%	0%
grade 2 events	982	6391	4033	22688	2068	726
	2%	12%	5%	18%	3%	2%
grade 3 events	711	2337	1751	10678	1208	707
	1%	4%	2%	8%	2%	2%
grade 4 events	665	2128	1723	10510	1184	682
	1%	4%	2%	8%	2%	2%
grade 5 events	1181	3767	1196	6950	1642	1192
	2%	7%	1%	5%	3%	3%
grade 6 events	669	10113	1606	29703	3036	707
	1%	19%	2%	23%	5%	2%
grade 7 events	36208	18484	32634	23678	40239	27682
	84%	35%	46%	18%	74%	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	LETG	LETG	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	187.280818	187.28252436619	Subarray requested	CUSTOM	1/8
[deg] Pointing Dec	2.099316	2.0756086562644	Subarray start row	113	113
[deg] Pointing Roll	246.999958	247.15443768876	Subarray row count	128	128
[s] Window start time (MET)	202435264.184000	202435264.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	207619264.184000	207619264.184000	[s] Primary exposure time	0.000000	0.7
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-182.132523	-182.1370004450064			
[mm] SIM translation stage offset	-8	-7.995522138001405			
[s] Observation start time (MET)	205019282.184000	205018257.45105			
Observation start date	2004-06-30T21:46:58	2004-06-30T21:30:57			
[s] Observation end time (MET)	205049282.184000	205050091.38996			
Observation end date	2004-07-01T06:06:58	2004-07-01T06:21:31			
Read mode	TIMED	TIMED			

2.3 Aspect



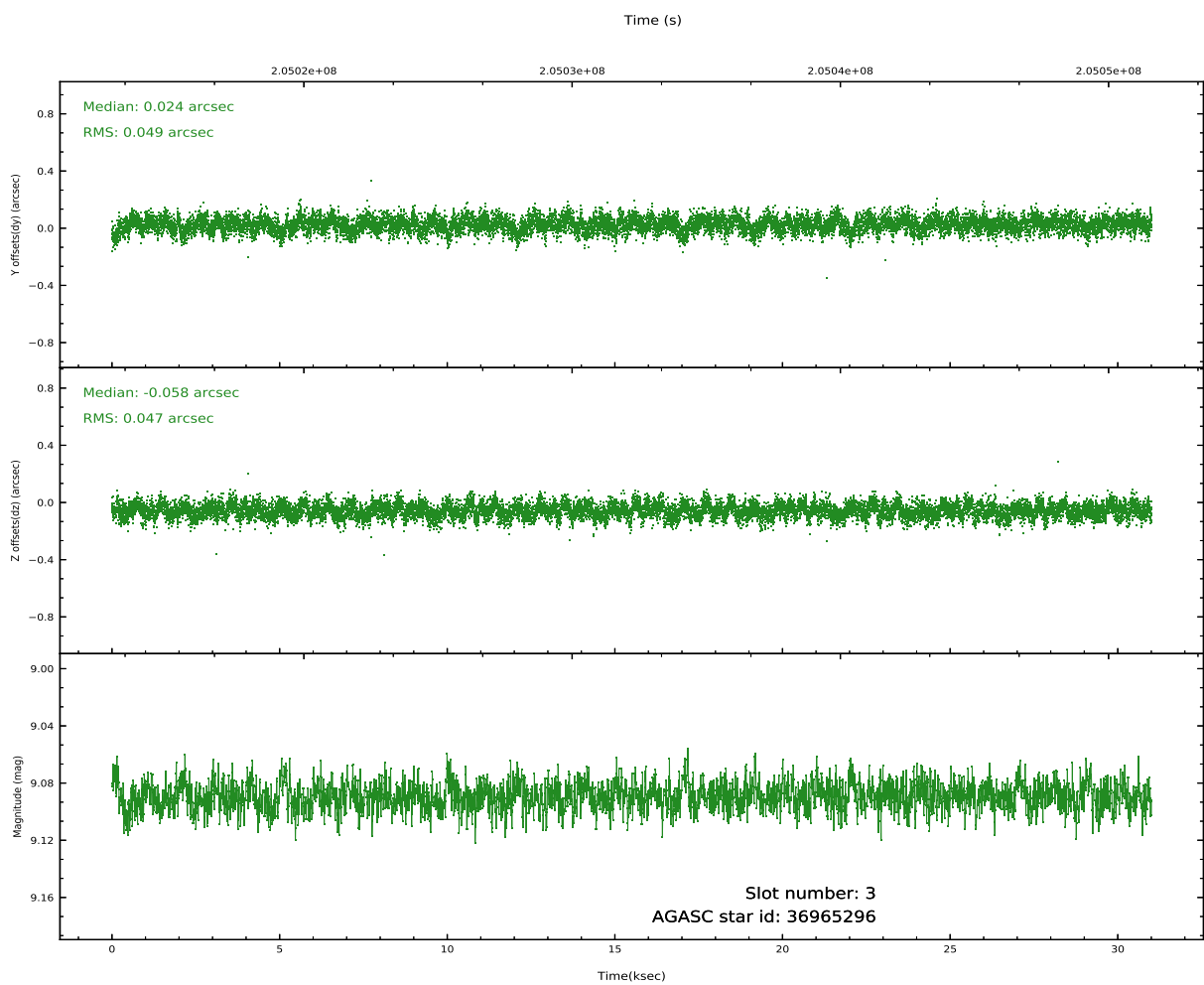
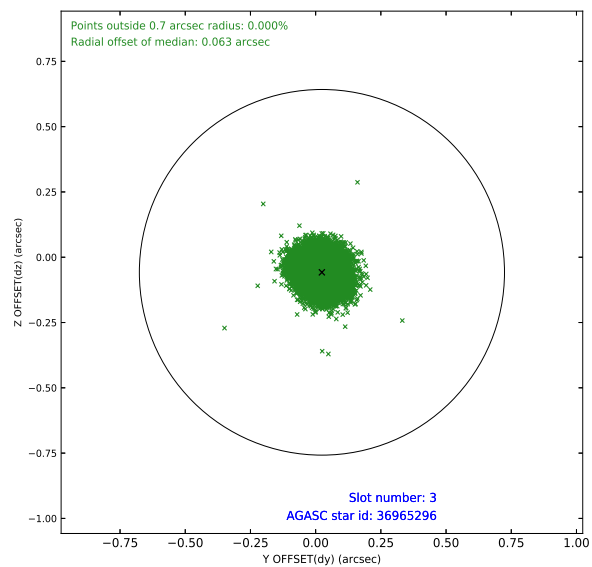
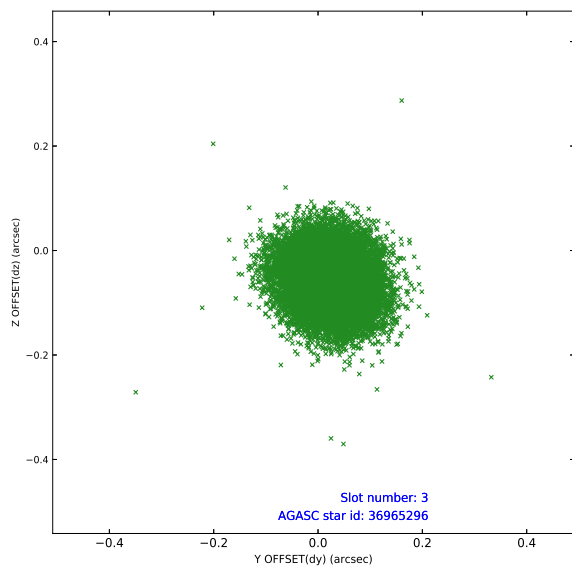


Slot Statistics

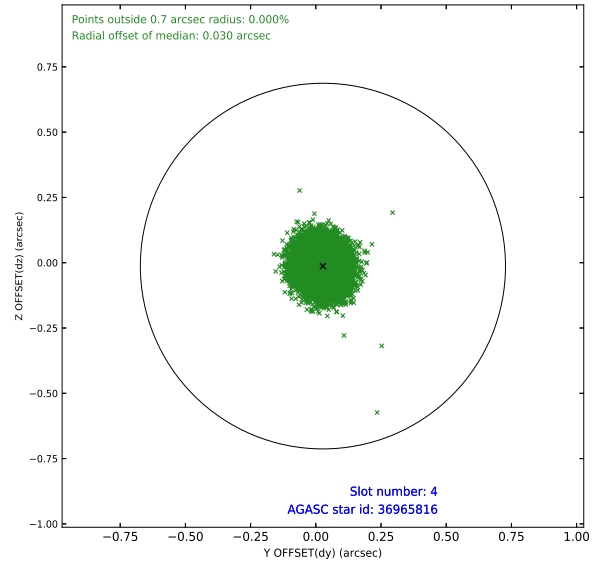
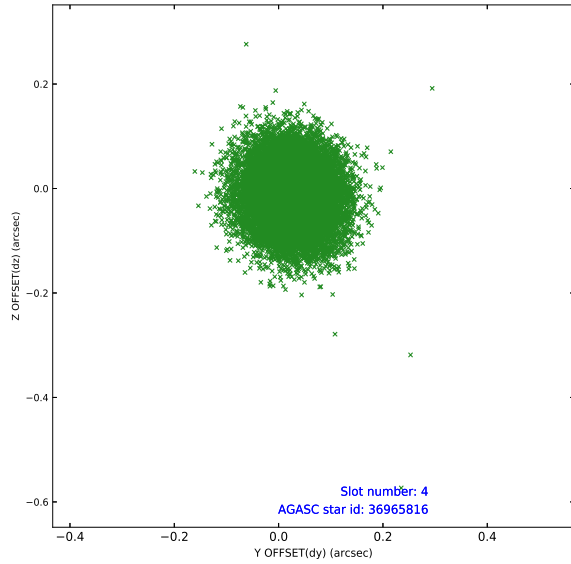
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-2	7.08	7563	1.000	-0.090	-0.150	0.011	0.017	0.000000	0.000000	-759.81	-1897
1	FID		ACIS-S-4	7.17	7562	1.000	0.152	0.084	0.007	0.013	0.000000	0.000000	2153.65	11
2	FID		ACIS-S-5	7.22	7562	1.000	-0.093	0.074	0.010	0.016	0.000000	0.000000	-1812.60	5
3	GUIDE	used	36965296	9.09	15121	1.000	0.024	-0.058	0.072	0.117	186.926292	1.837429	1366.53	-805
4	GUIDE	used	36965816	9.26	15114	1.000	0.027	-0.013	0.076	0.122	186.823353	1.771455	1729.98	-1053
5	GUIDE	used	36965896	9.72	15103	1.000	0.082	-0.096	0.113	0.179	187.153754	1.617178	1776.79	257
6	GUIDE	used	37356352	7.67	15126	1.000	-0.470	-0.163	0.067	0.101	187.433784	2.618460	-1935.35	-224
7	GUIDE	used	37883040	9.99	15105	1.000	0.341	0.332	0.158	0.256	187.575516	1.280402	2299.60	2129

2.4 Star Slots

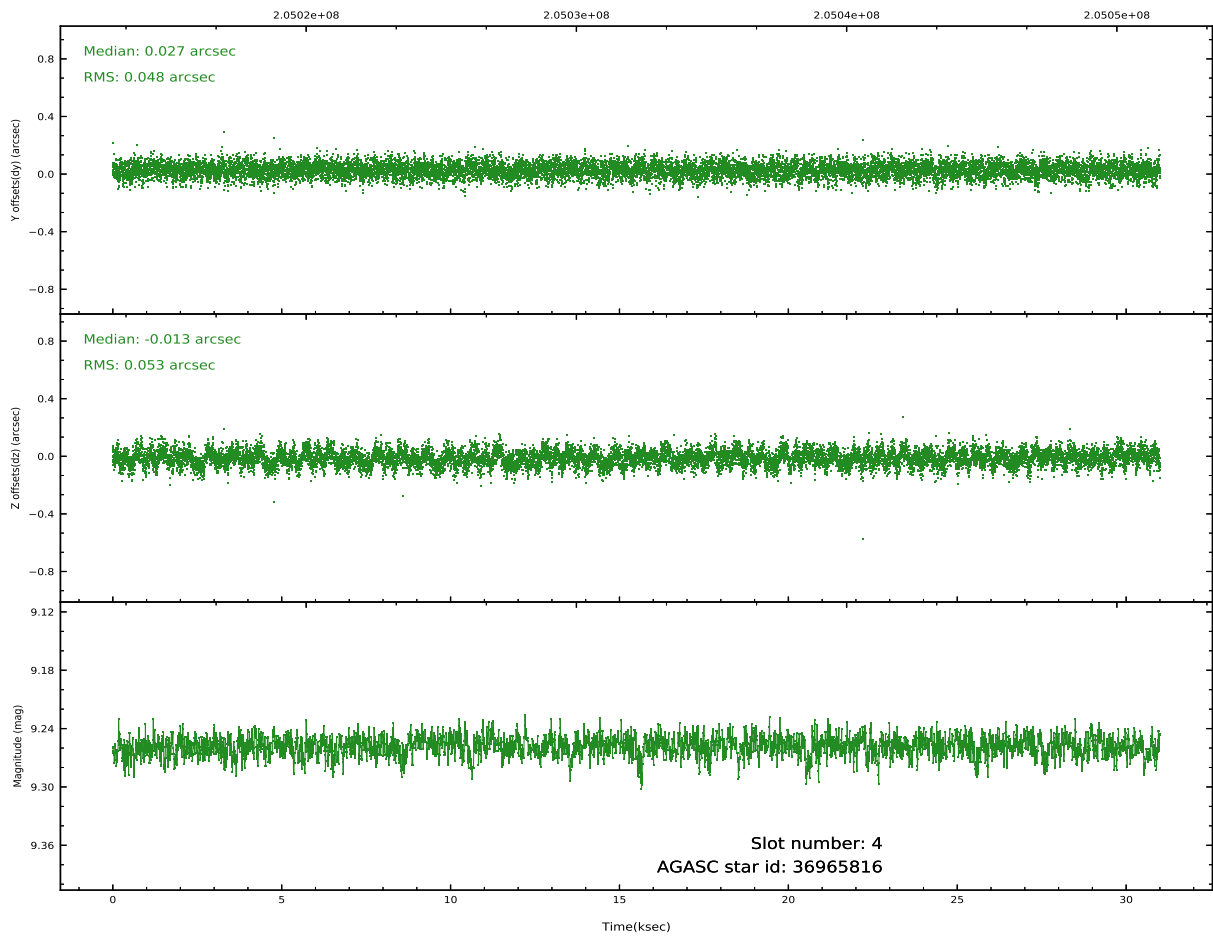
2.4.1 Slot 3



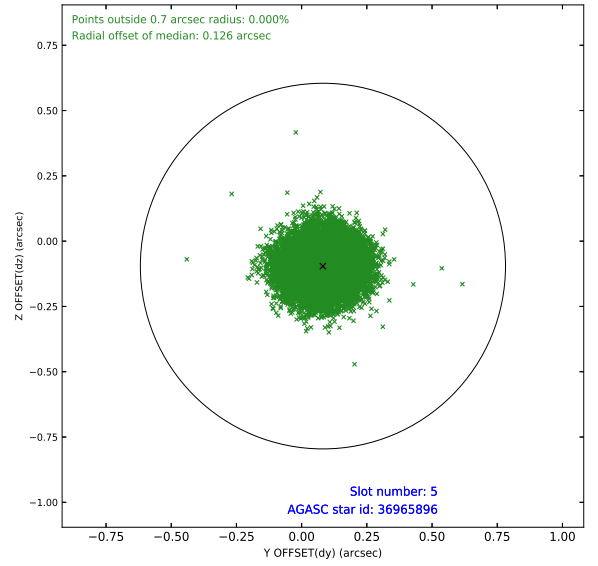
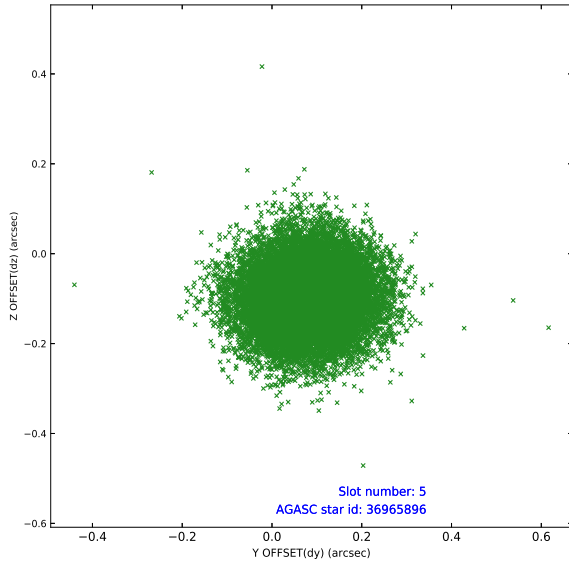
2.4.2 Slot 4



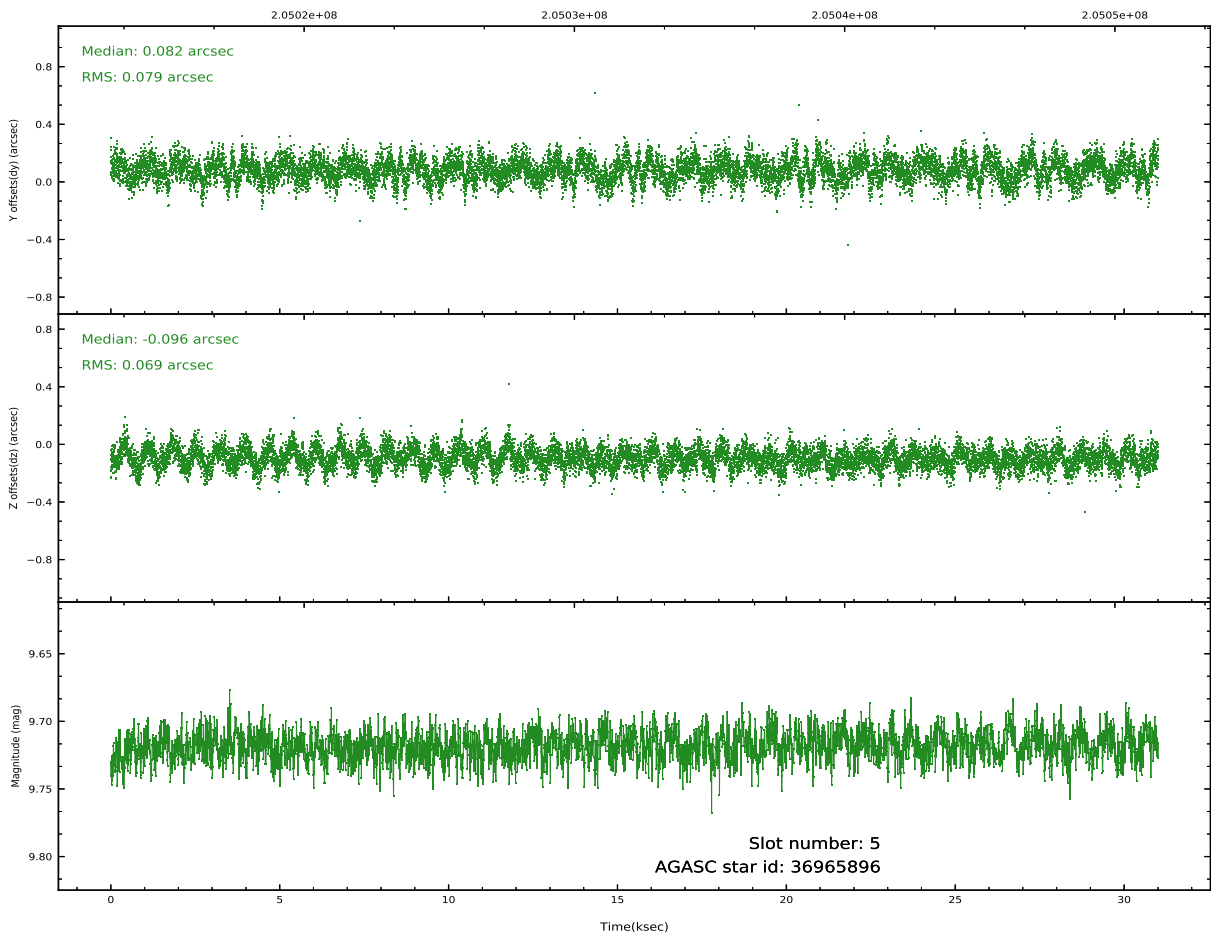
Time (s)



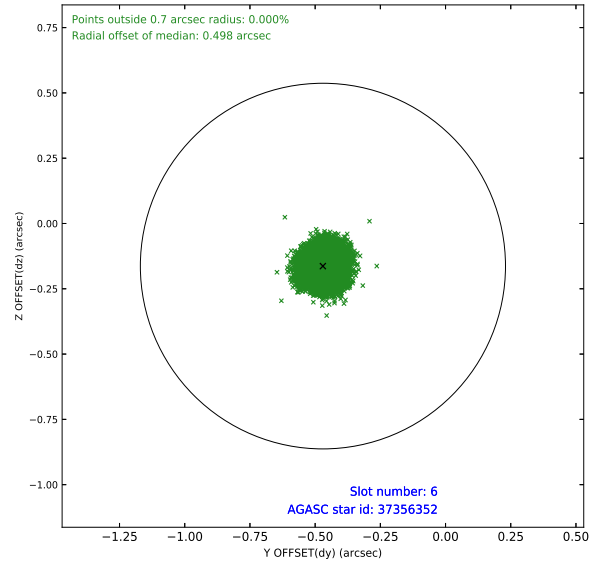
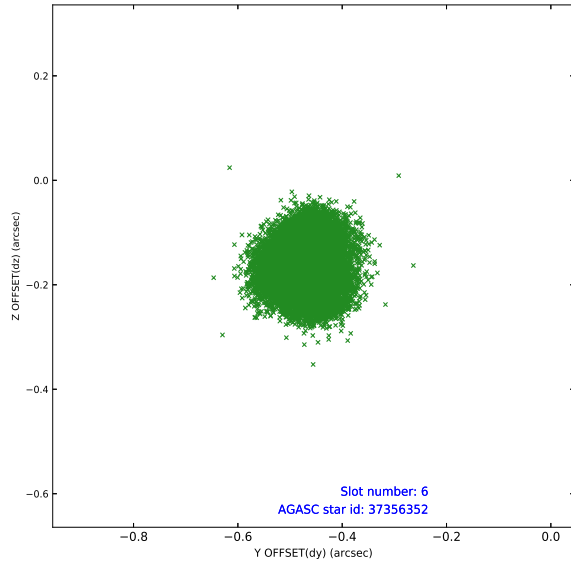
2.4.3 Slot 5



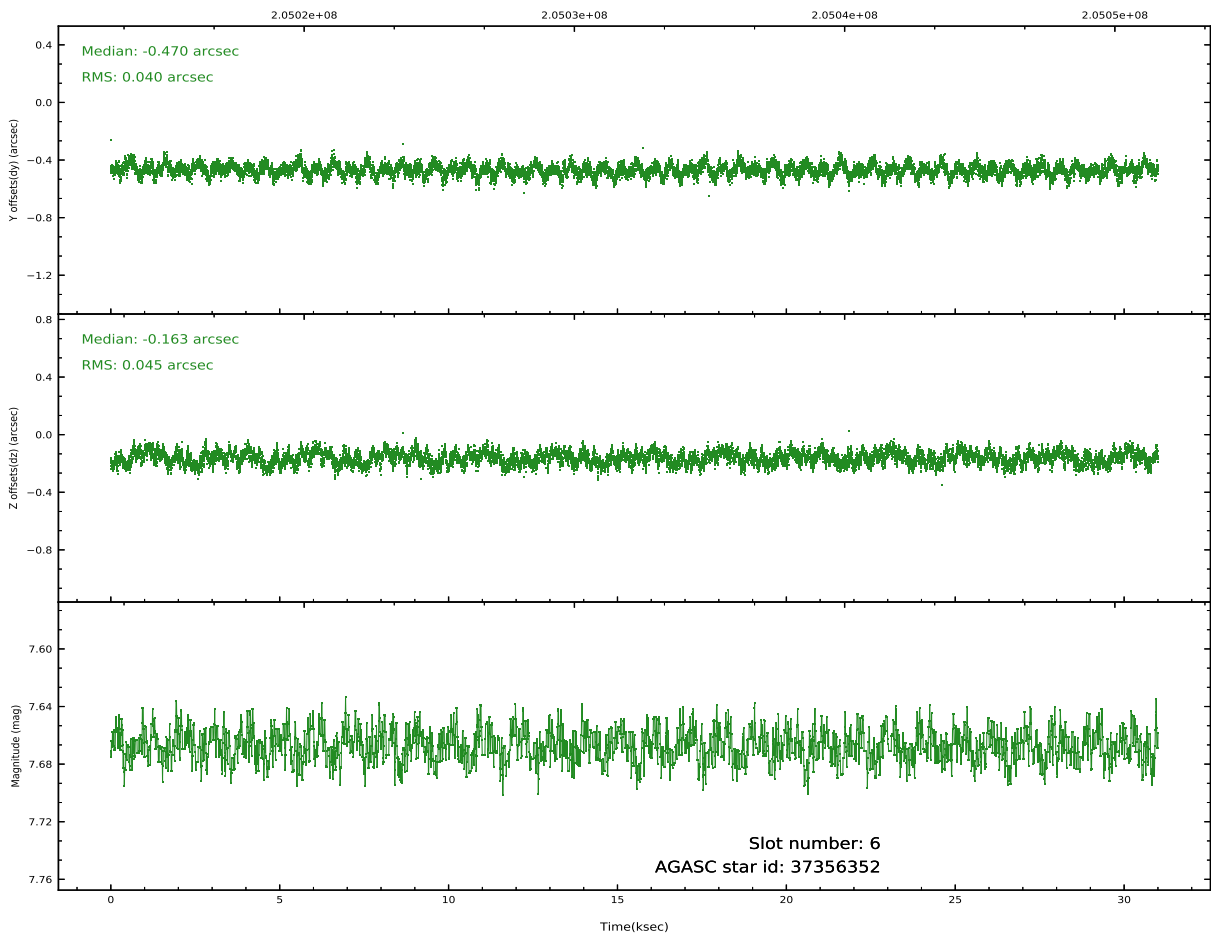
Time (s)



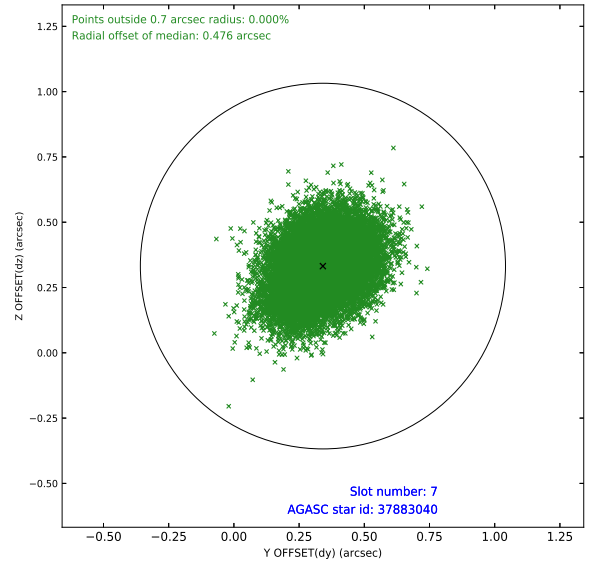
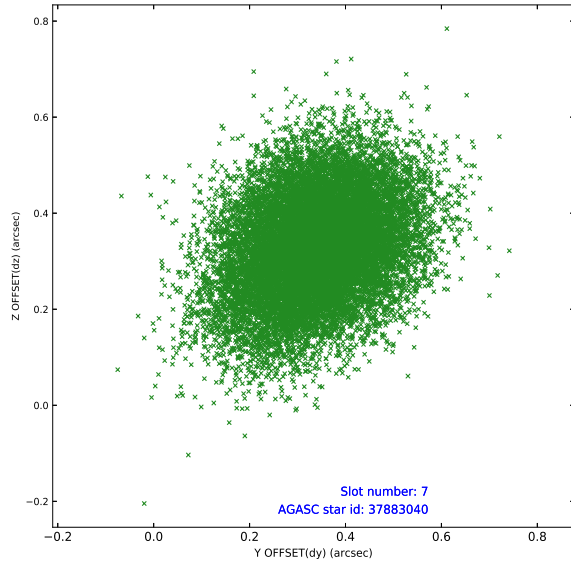
2.4.4 Slot 6



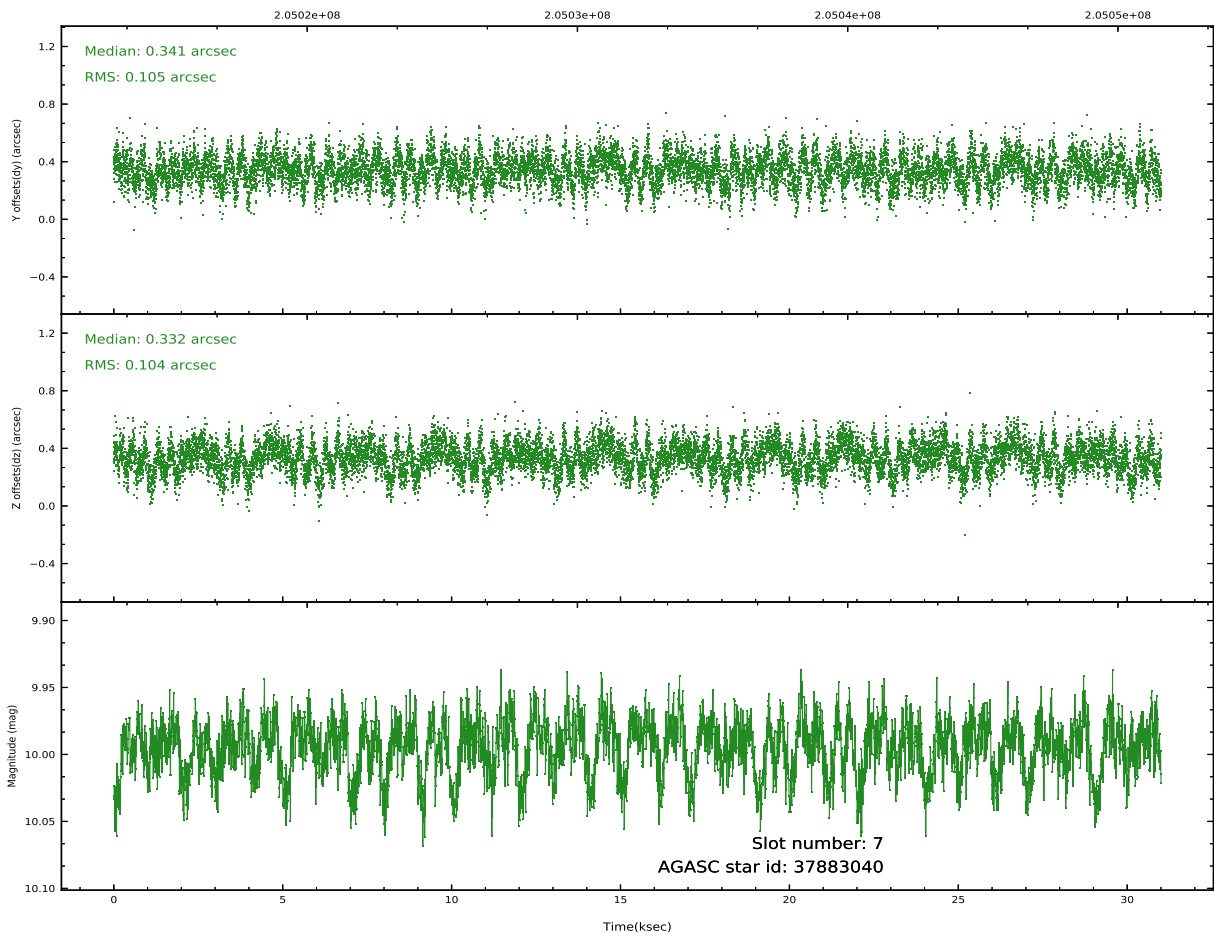
Time (s)



2.4.5 Slot 7

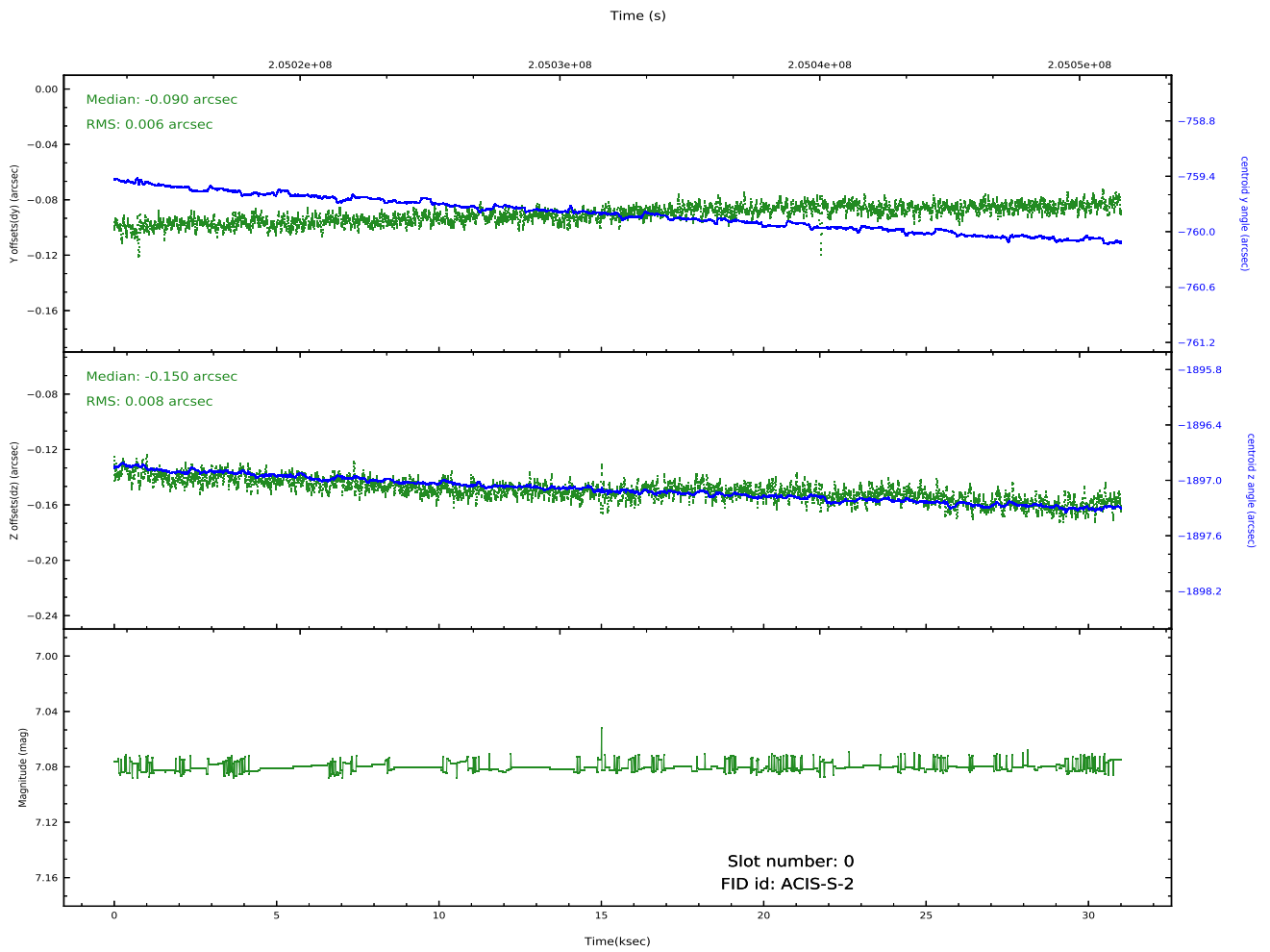
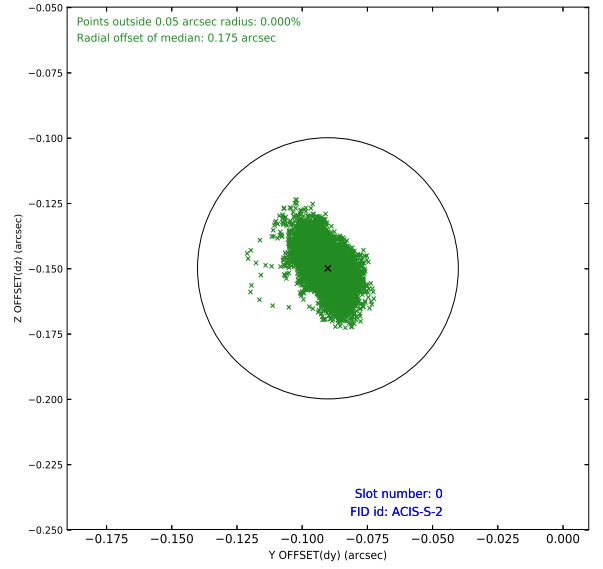
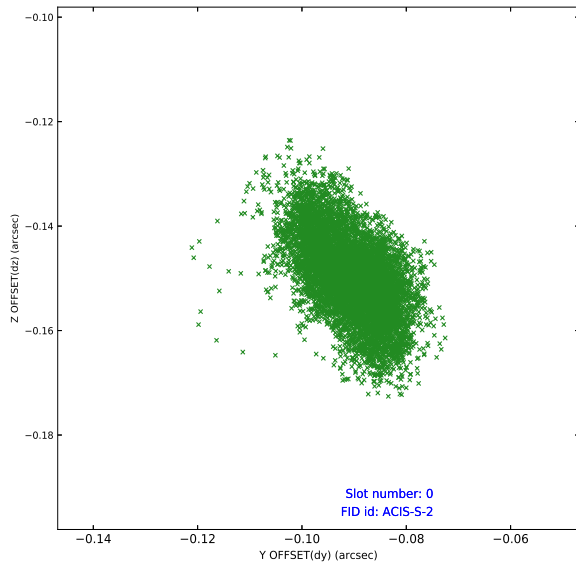


Time (s)

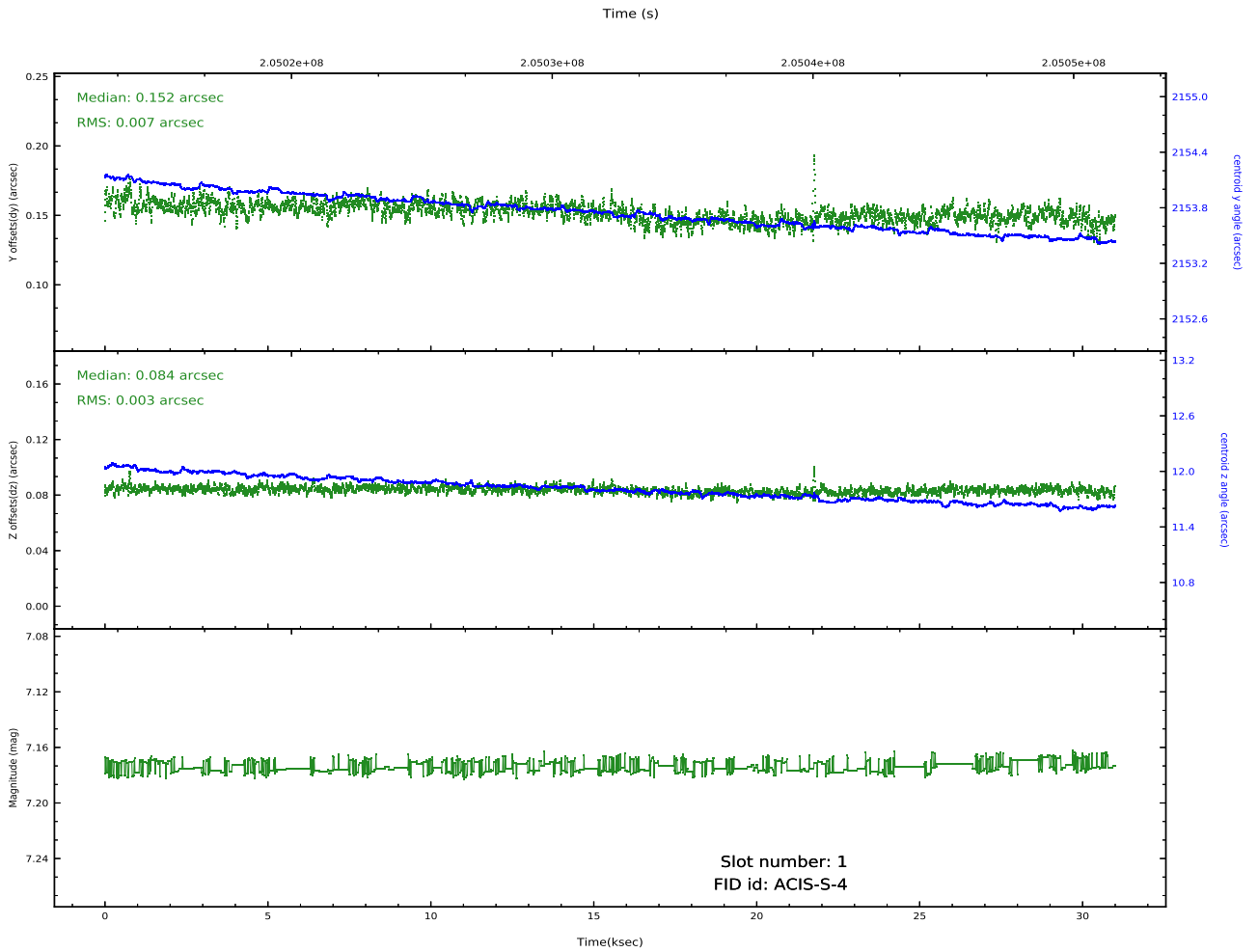
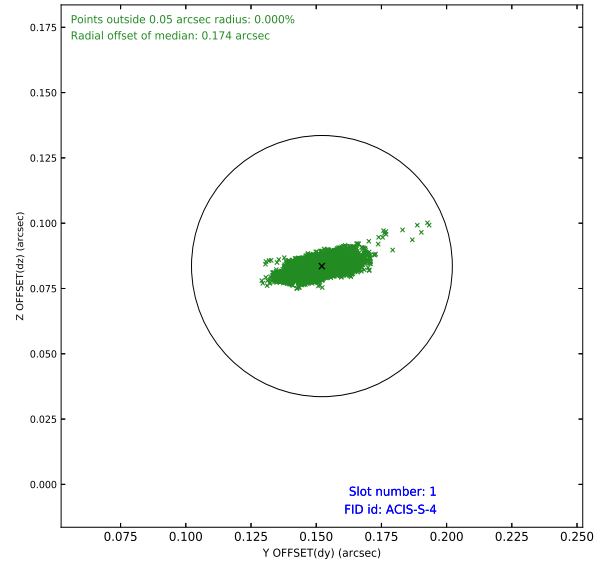
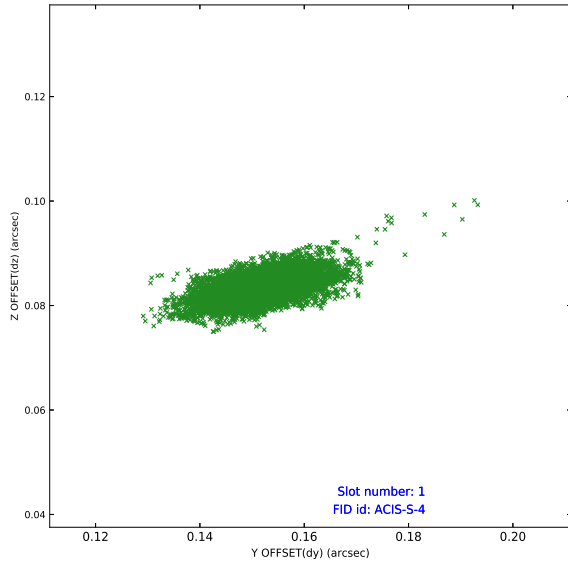


2.5 FID Slots

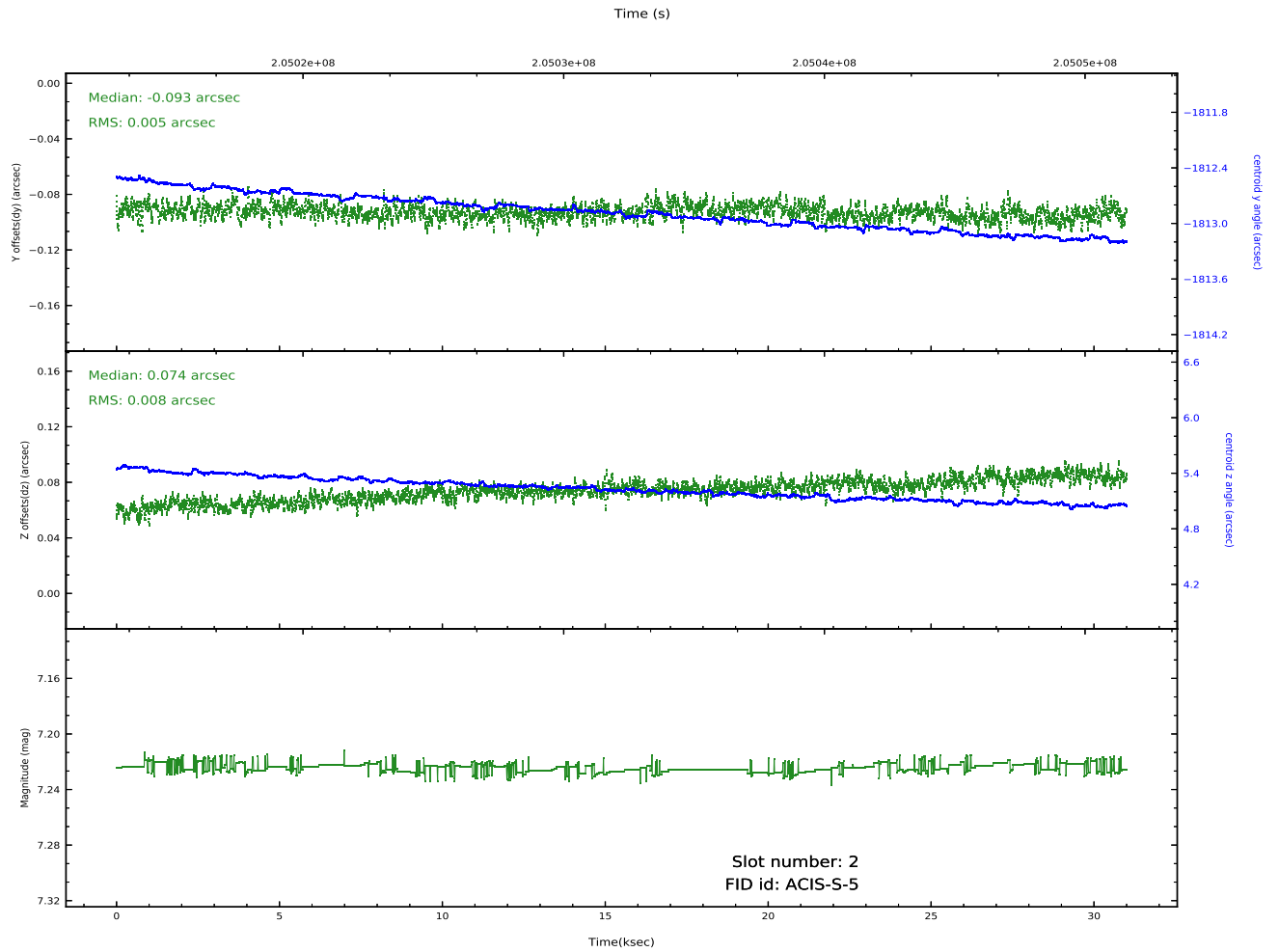
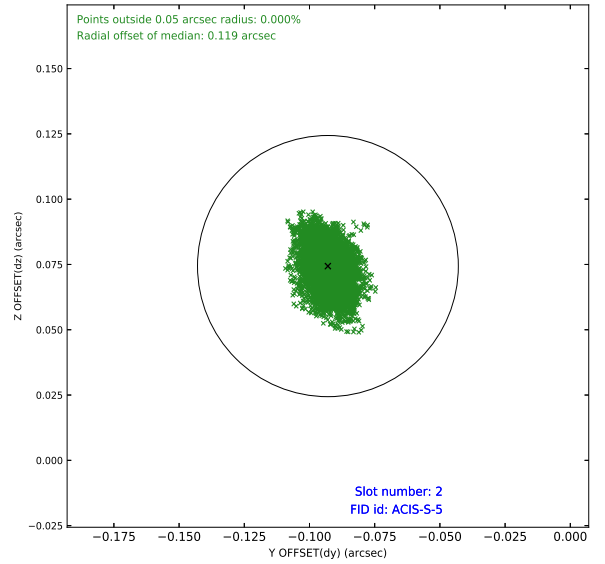
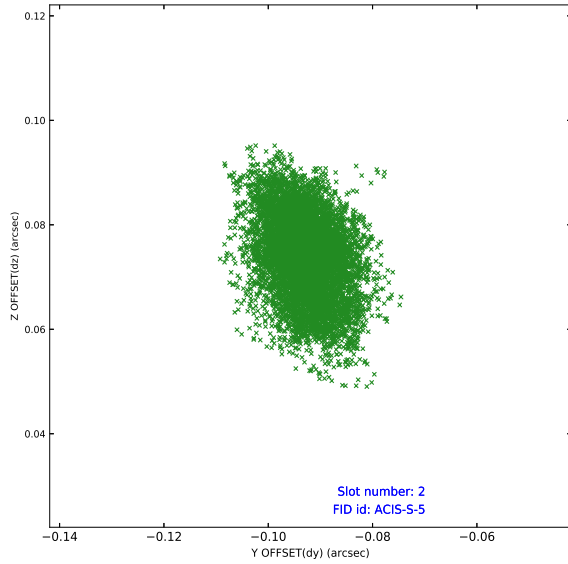
2.5.1 Slot 0



2.5.2 Slot 1

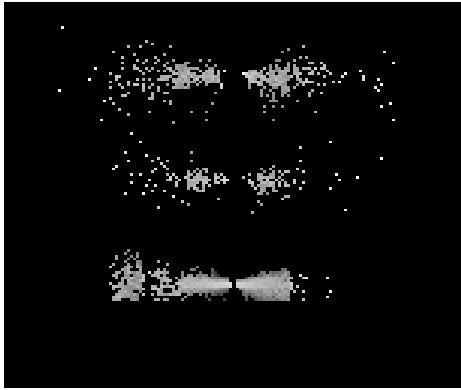


2.5.3 Slot 2

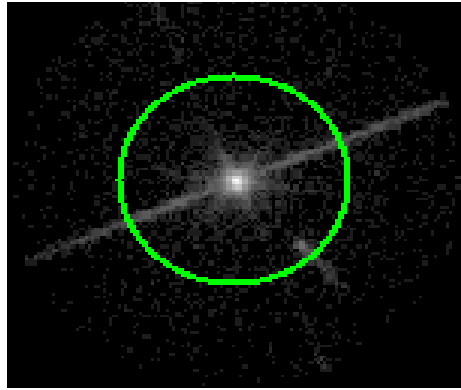


3 Gratings

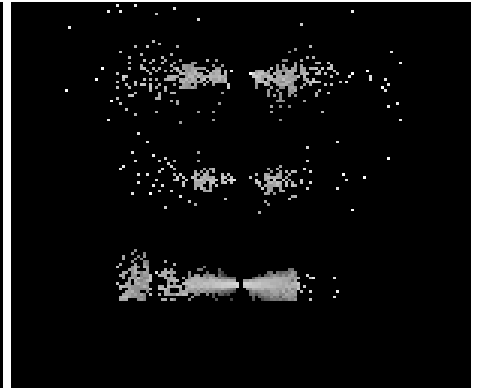
3.1 LETG Arm



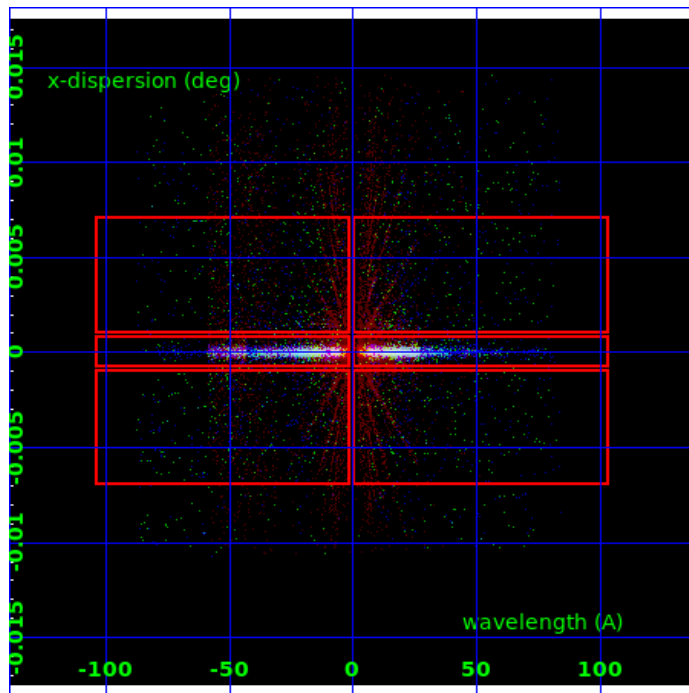
LETG Order Sort 123



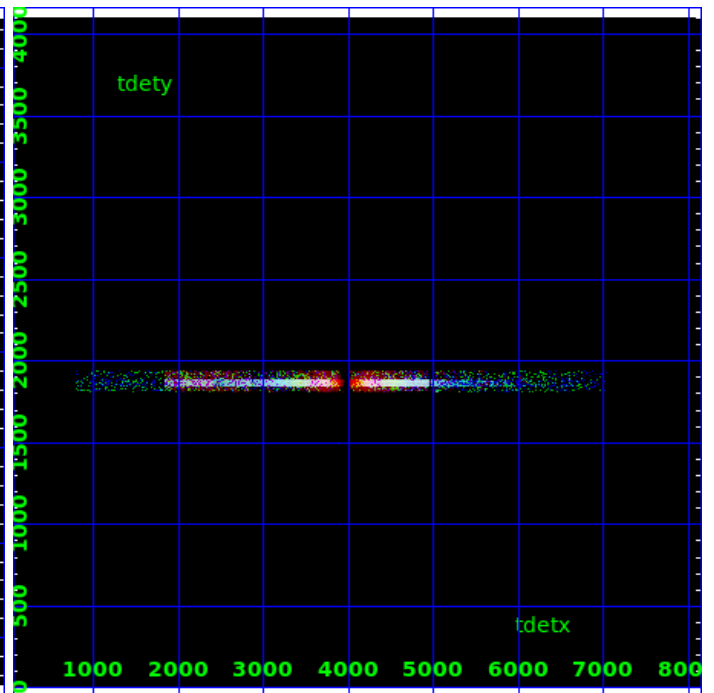
LETG Zero Order



LETG Order Sort ALL

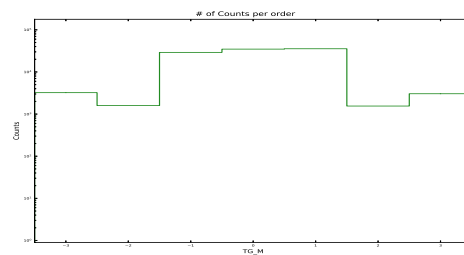


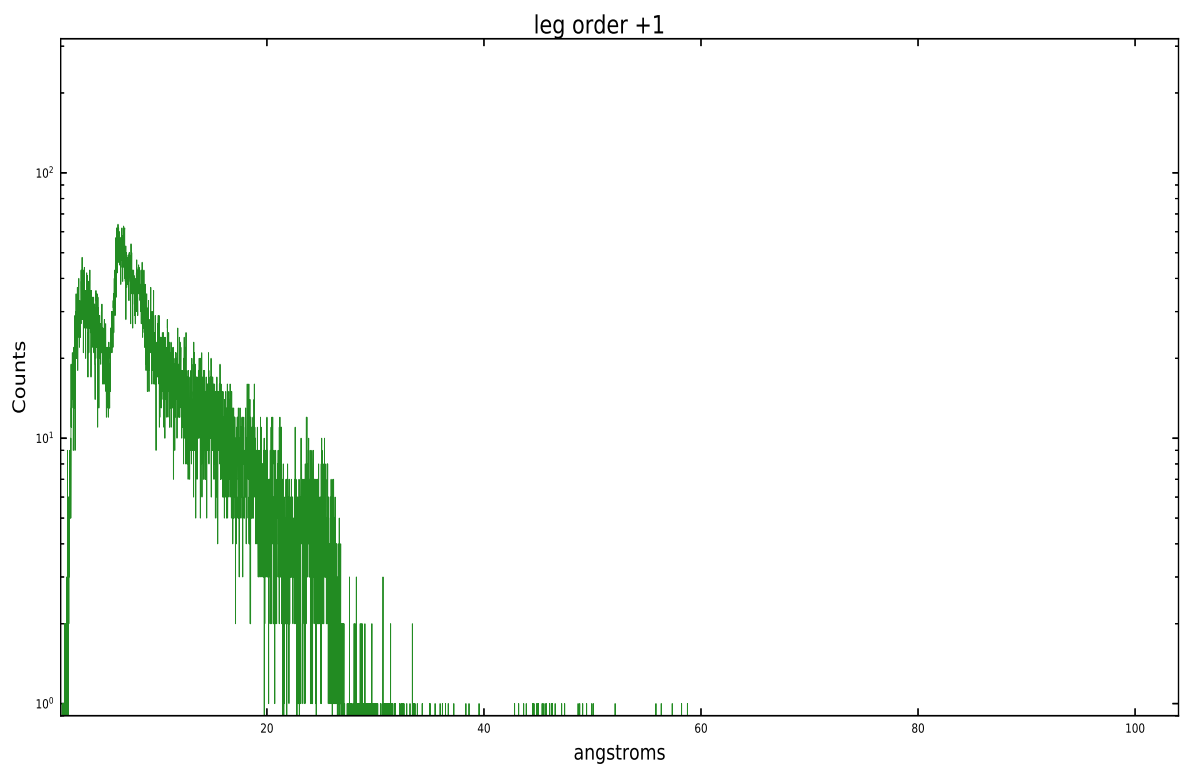
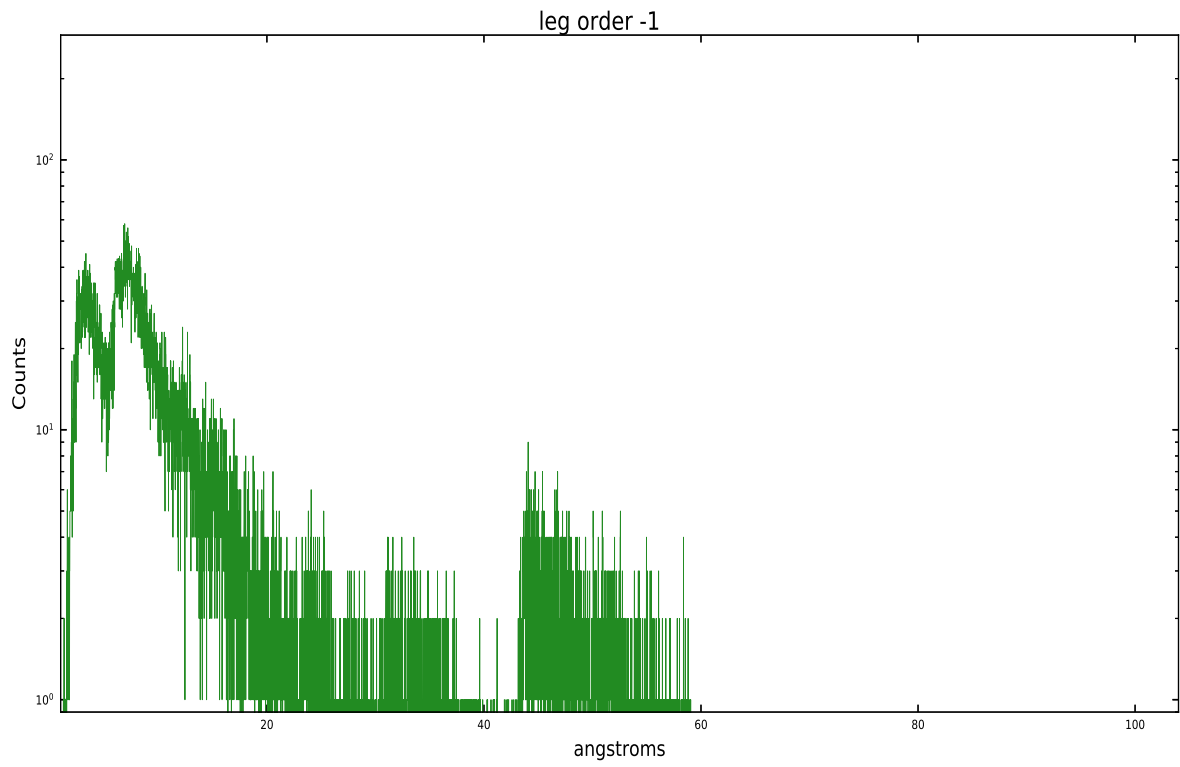
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3228	1594	29136	34835	35572	1552	3043





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2020.10.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.064

A.2 Comments