

V&V Reference Report

L2 ASCDS Version : 10.8.1

Observation 22867 - L2 Version 1
Chandra X-Ray Center

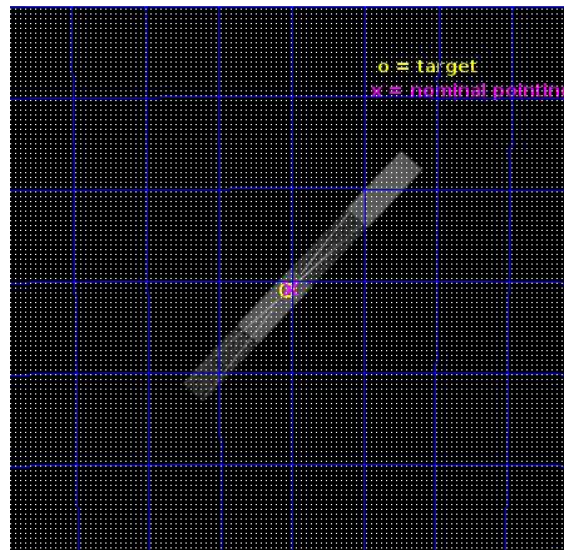
L2 Processing Date : Oct 12 2019

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1 Front

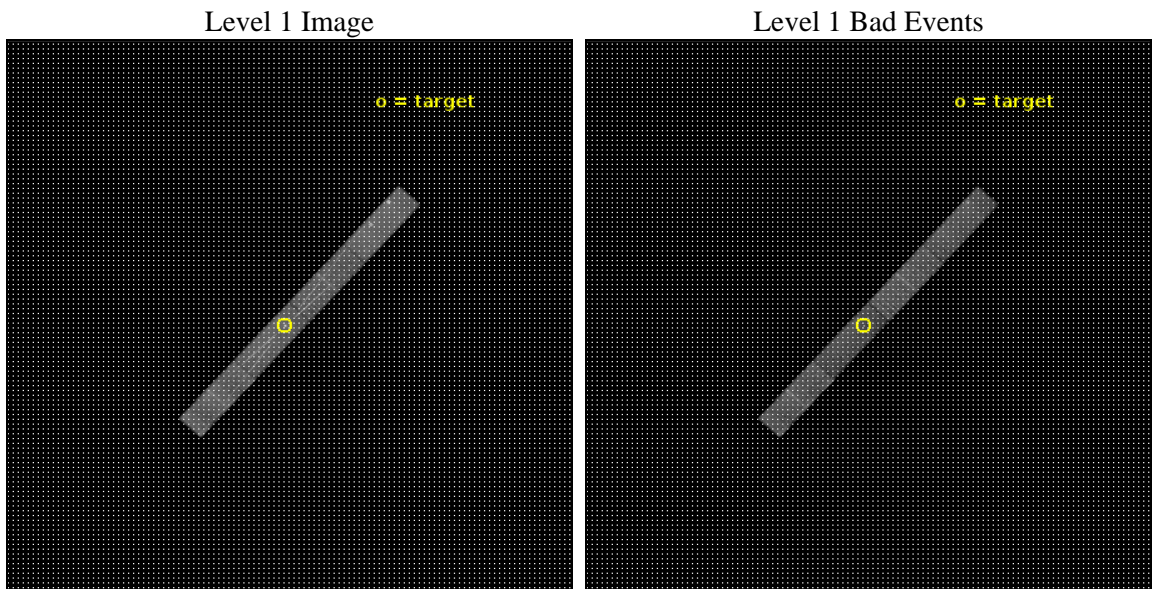
seq_num	201234	Sequence number
obs_id	22867	Observation id
title	Eta Carinae: X-ray Emission Line Diagnostics On the Approach to Periastron Passage	Proposal title
observer	Michael Corcoran	Principal investigator
object	Eta Carinae	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	161.264583	Observer's specified target RA [deg]
dec_targ	-59.684444	Observer's specified target Dec [deg]
ra_nom	161.2508808245	Nominal RA [deg]
dec_nom	-59.68164877756	Nominal Dec [deg]
roll_nom	132.14479678535	Nominal Roll [deg]
revision	1	Processing version of data
ontime	18076.800718307	Sum of GTIs [s]
livetime	17479.018292697	Livetime [s]
ontime5	18076.800718307	Sum of GTIs [s]
ontime6	18076.800718307	Sum of GTIs [s]
ontime7	18076.800718307	Sum of GTIs [s]
ontime8	18076.800718307	Sum of GTIs [s]
l2events	120269	Number of level 2 events



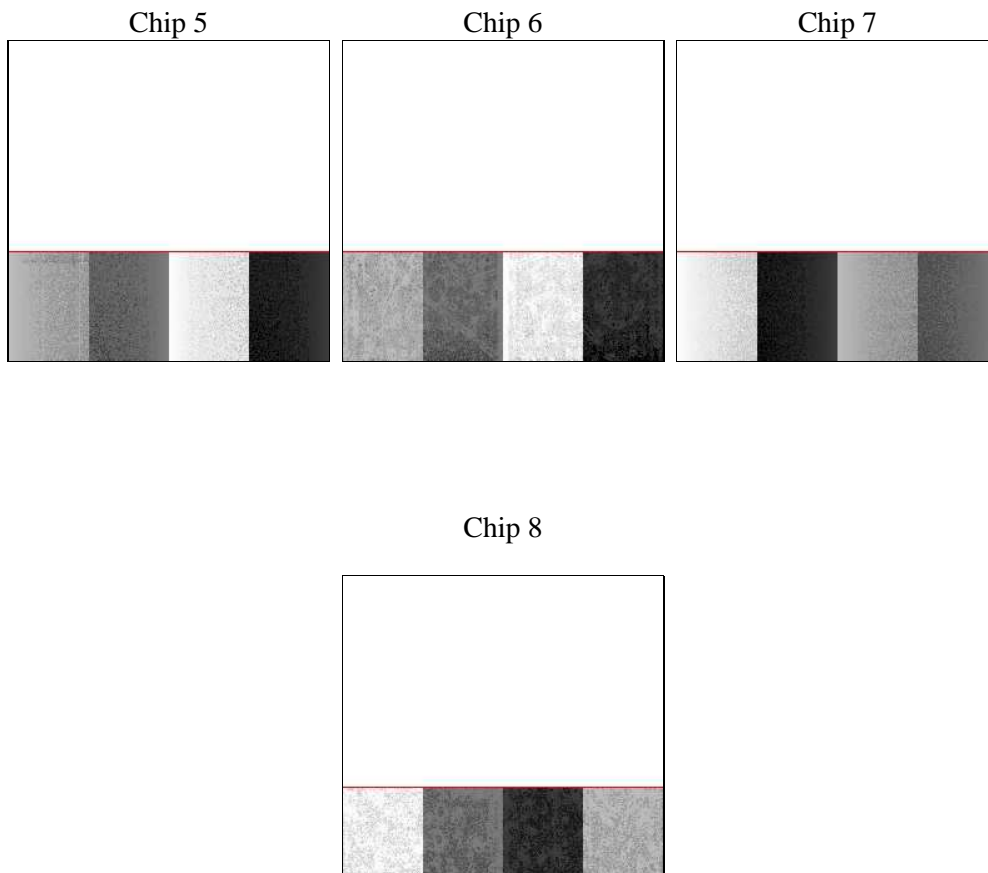
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	18000.000000	[s] Scheduled observation exposure time
ascdsver	10.8.1	Processing system revision	ontime	18076.800718307	Sum of GTIs [s]
caldbver	4.8.4.2	 	ontime5	18076.800718307	Sum of GTIs [s]
date	2019-10-12T12:27:22	Date and time of file creation	ontime6	18076.800718307	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	18076.800718307	Sum of GTIs [s]
			ontime8	18076.800718307	Sum of GTIs [s]
			l1events	328491	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			zo_pos	(4045.63, 4076.02)	src1a sky pixel position
			zo_pos_tgd	(4045.48, 4076.08)	src1a sky pixel position via todetect

2.1.4 Events

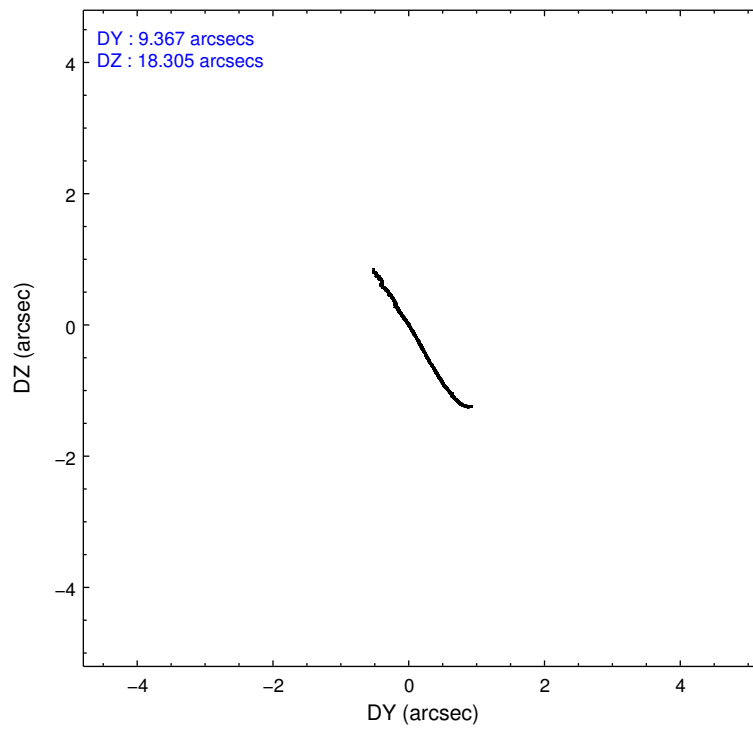
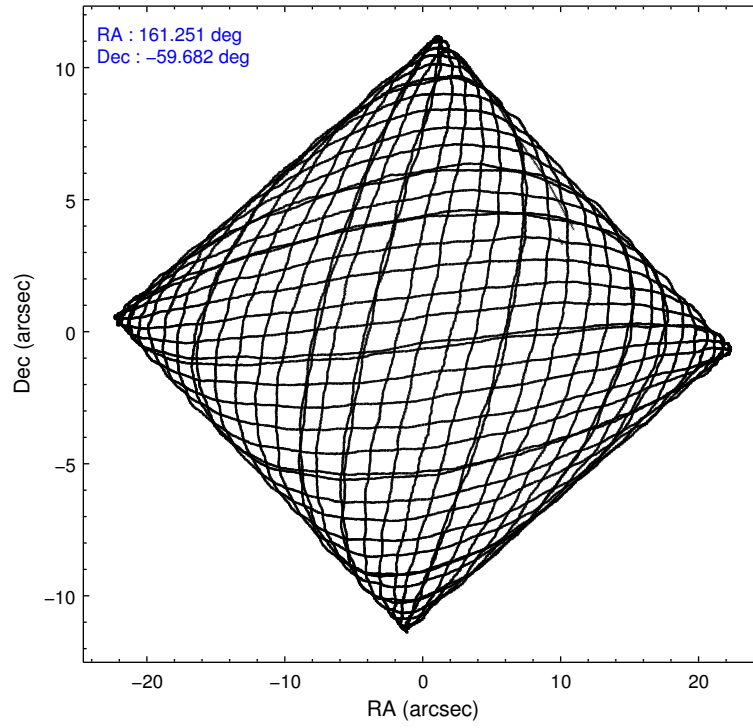
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	90442	70171	95264	72614
rejected events	41361	50671	38397	51320
rejected %	45%	72%	40%	70%

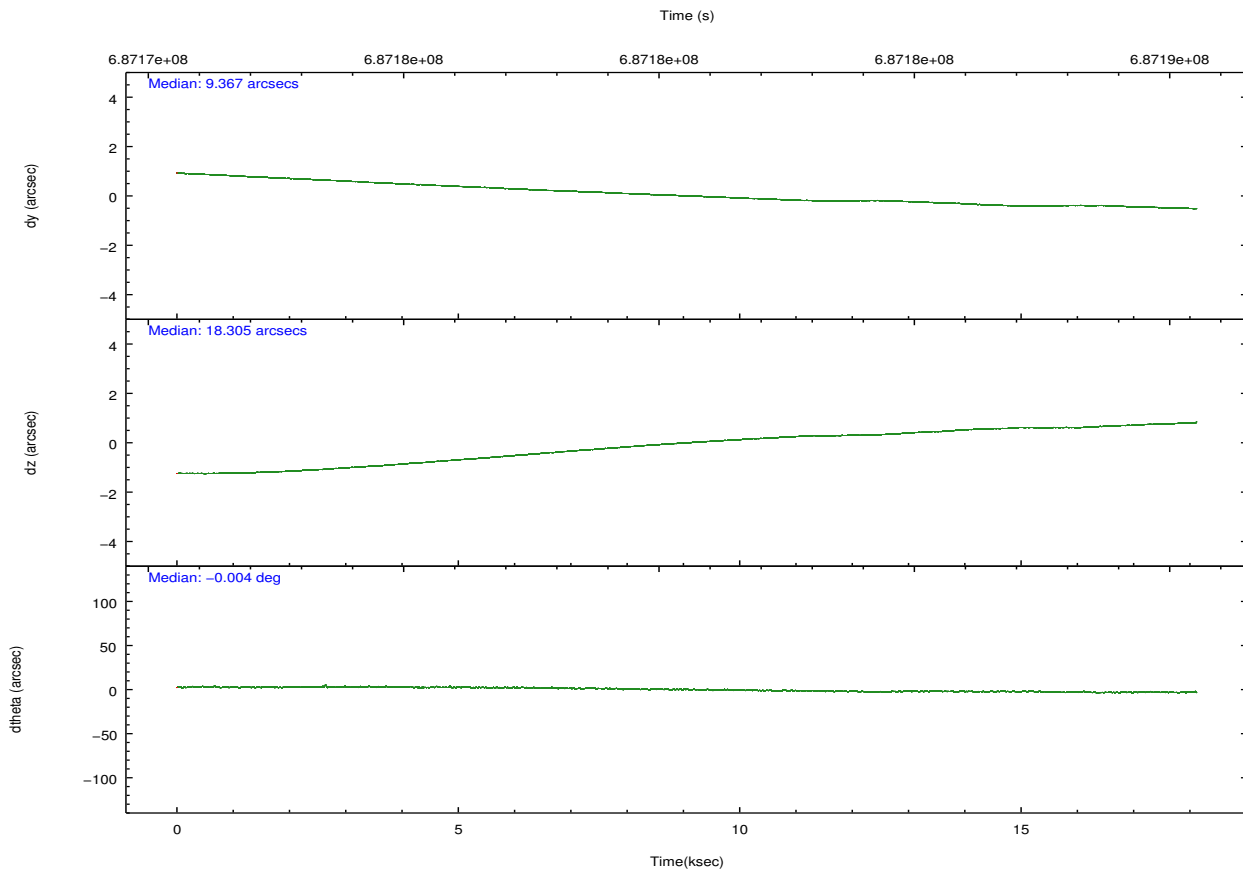
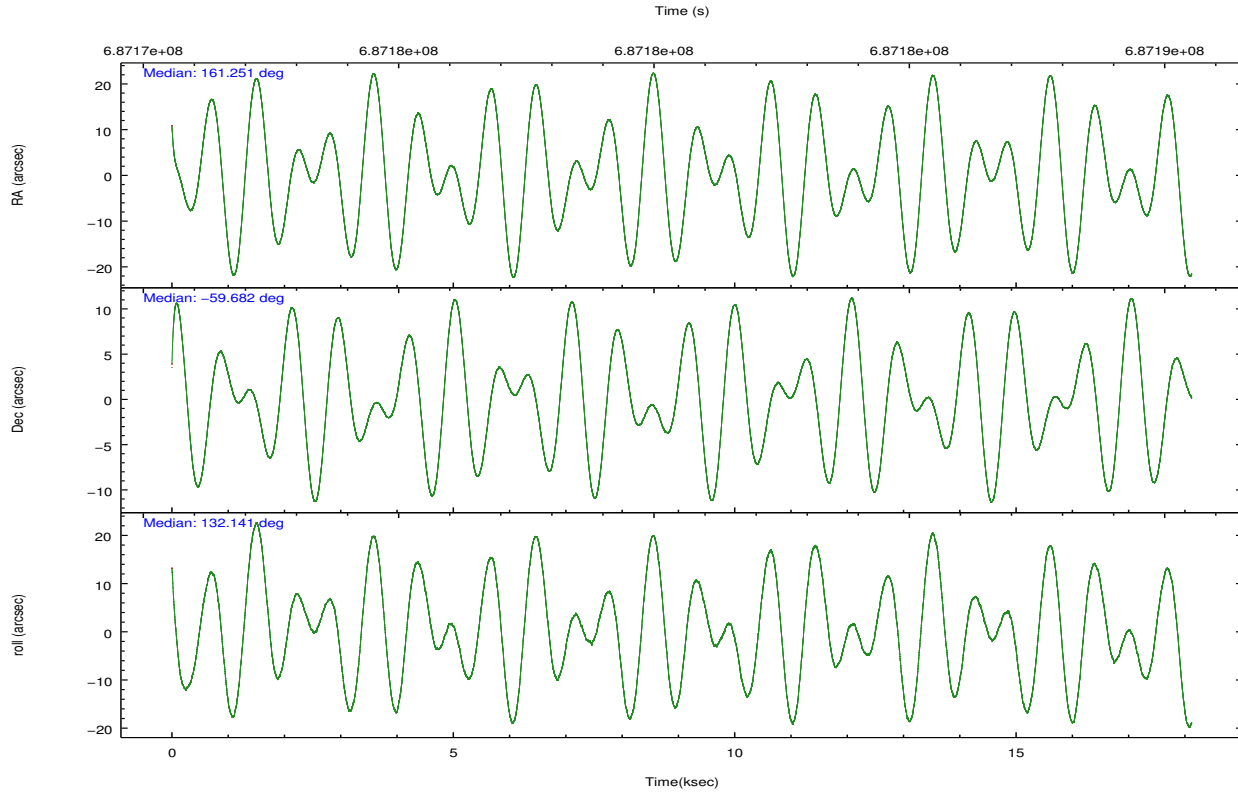
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	10510	11672	7438	7535
	11%	16%	7%	10%
grade 1 events	874	48	418	39
	0%	0%	0%	0%
grade 2 events	13746	3101	12065	4434
	15%	4%	12%	6%
grade 3 events	2166	1270	5707	2158
	2%	1%	5%	2%
grade 4 events	1990	1358	5568	2067
	2%	1%	5%	2%
grade 5 events	5526	2160	7535	3178
	6%	3%	7%	4%
grade 6 events	20675	2103	26097	5103
	22%	2%	27%	7%
grade 7 events	34955	48459	30436	48100
	38%	69%	31%	66%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	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	161.302873	161.2508808245018	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-59.689722	-59.68164877756016	Subarray start row	1	1
[deg] Pointing Roll	132.033057	132.1447967853513	Subarray row count	350	350
[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	1.2
[mm] SIM translation stage pos	-182.132523	-182.1370004450064			
[mm] SIM translation stage offset	-8	-7.995522138001405			
Phase constraints	Y	Y			
[d] Phase period	2024.000000	2024.000000			
[d] Phase epoch (MJD)	56871.291953	56871.291953			
Phase start	0.797000	0.797000			
Phase end	0.930000	0.930000			
Phase start error	0.010000	0.010000			
Phase end error	0.010000	0.010000			
[s] Observation start time (MET)	687171593.184000	687170296.5799			
Observation start date	2019-10-11T08:58:44	2019-10-11T08:38:16			
[s] Observation end time (MET)	687189593.184000	687190647.95612			
Observation end date	2019-10-11T13:58:44	2019-10-11T14:17:27			
Read mode	TIMED	TIMED			

2.3 Aspect





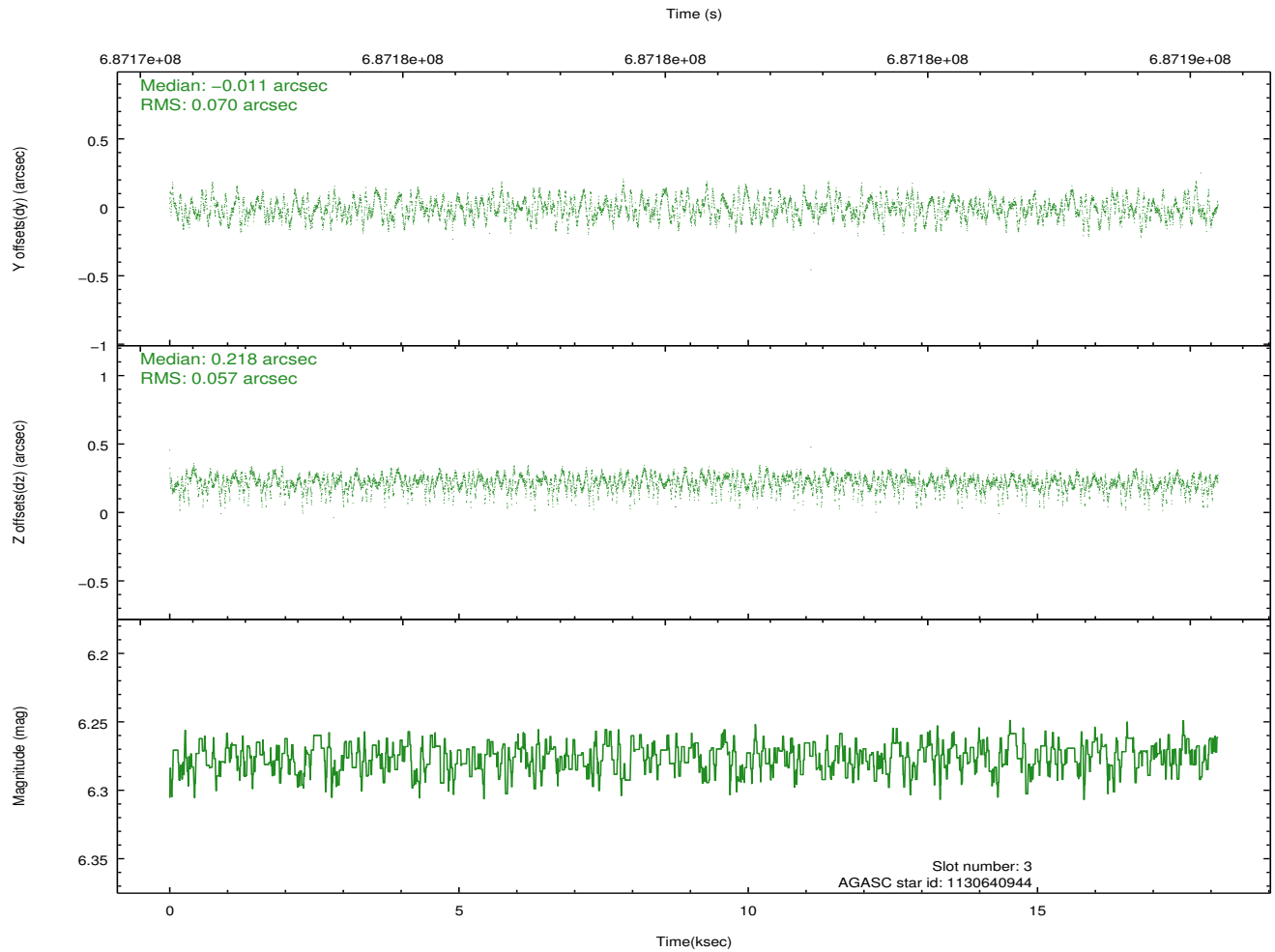
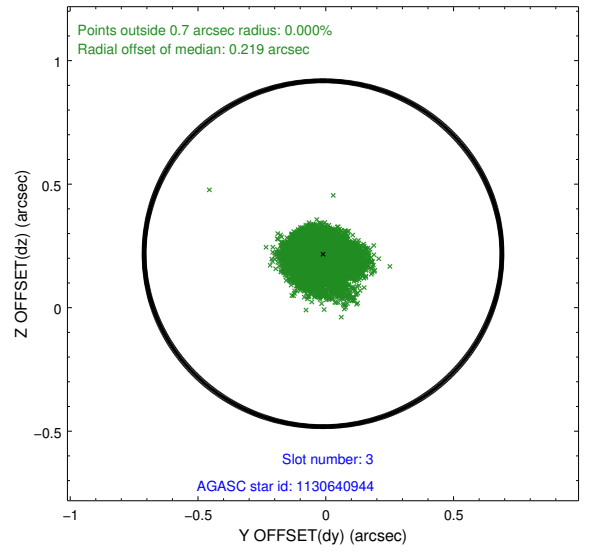
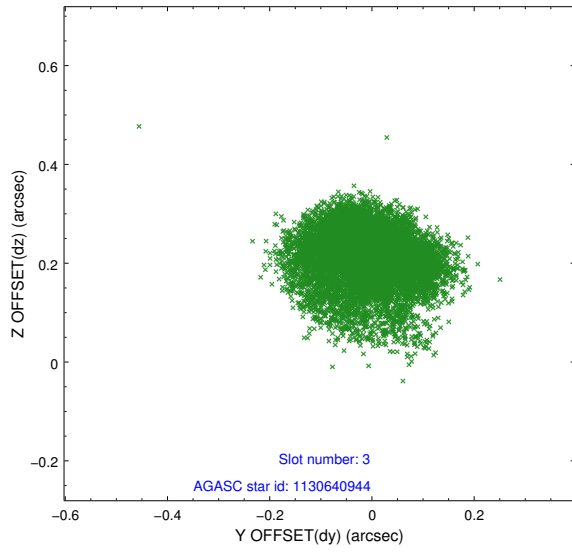
Slot Statistics

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	7.13	4419	1.000	-0.250	-0.204	0.039	0.064	0.000000	0.000000	-761.96	-1904
1	FID		ACIS-S-4	7.21	4419	1.000	0.672	0.175	0.037	0.050	0.000000	0.000000	2152.15	4
2	FID		ACIS-S-5	7.25	4420	1.000	-0.453	0.037	0.040	0.051	0.000000	0.000000	-1814.70	-2
3	GUIDE	used	1130640944	6.28	8839	1.000	-0.011	0.218	0.097	0.154	162.022531	-59.919161	-1487.89	-406
4	GUIDE	used	1130642000	7.92	8838	1.000	0.372	0.333	0.083	0.136	162.836255	-59.743891	-2030.33	-1913
5	GUIDE	used	1130643264	6.66	8840	1.000	-0.379	-0.451	0.081	0.128	160.322990	-59.676912	1216.50	1300
6	GUIDE	used	1130632200	7.54	8834	1.000	0.157	-0.015	0.104	0.166	161.433843	-59.407820	593.57	-857
7	GUIDE	used	1174033144	8.48	8830	1.000	-0.136	-0.072	0.096	0.159	161.168741	-60.059230	-826.82	1069

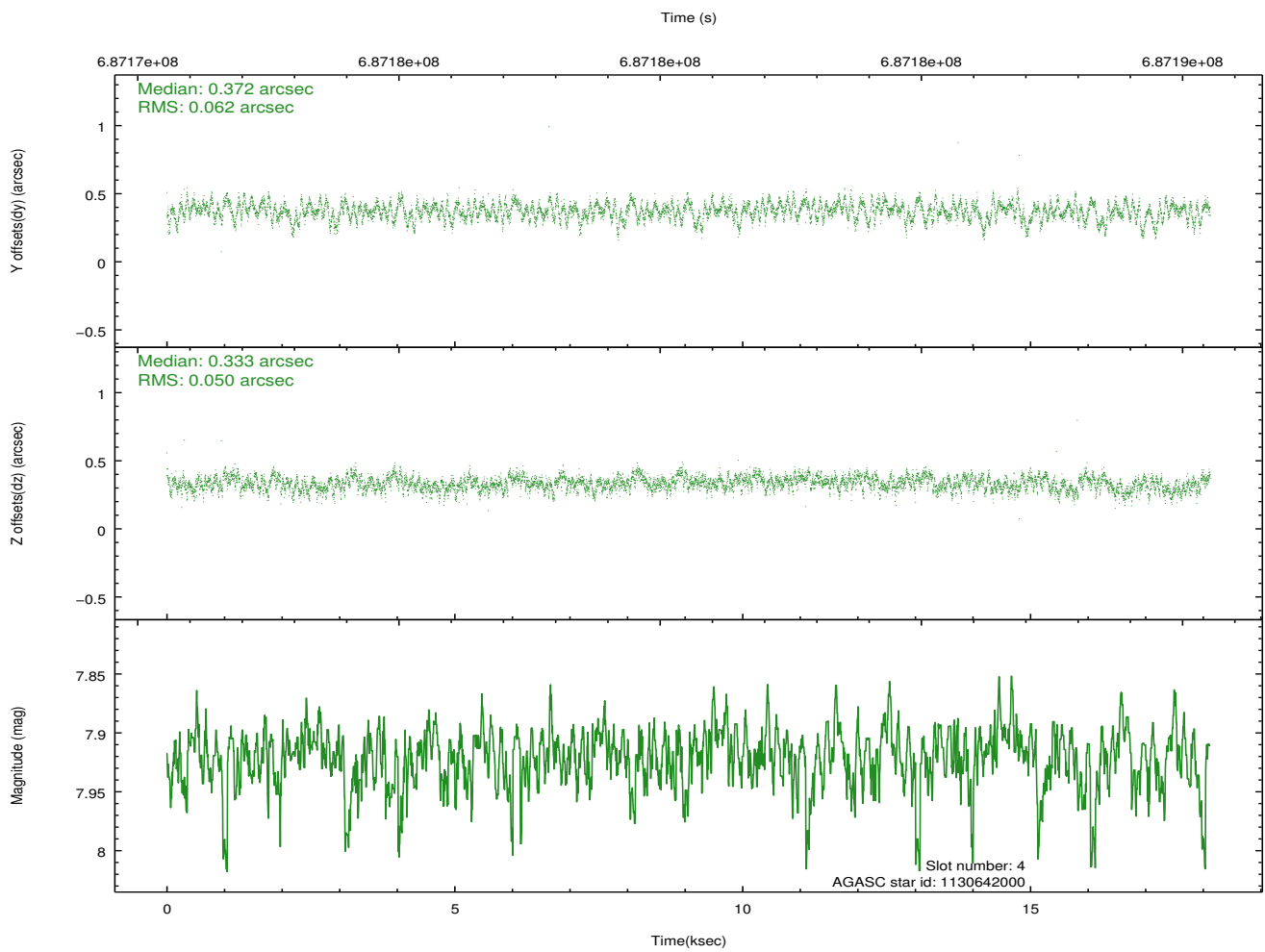
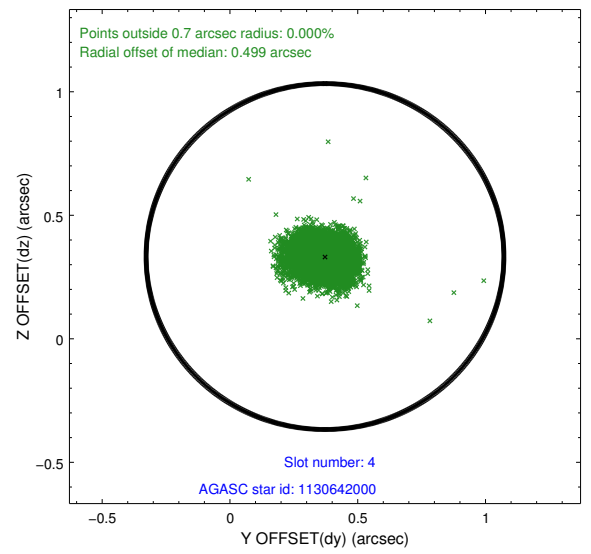
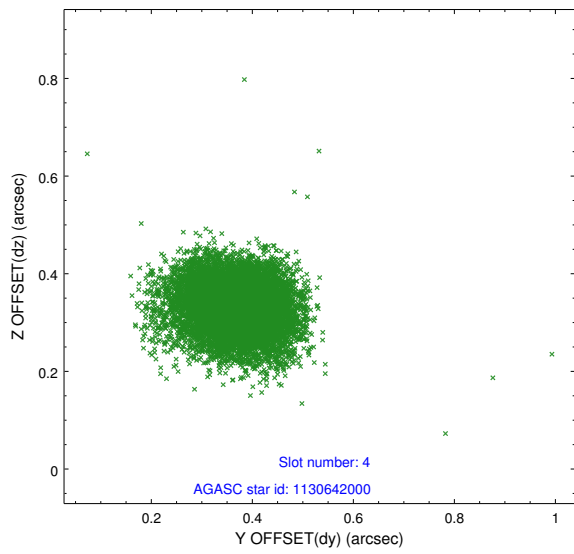
∞

2.4 Star Slots

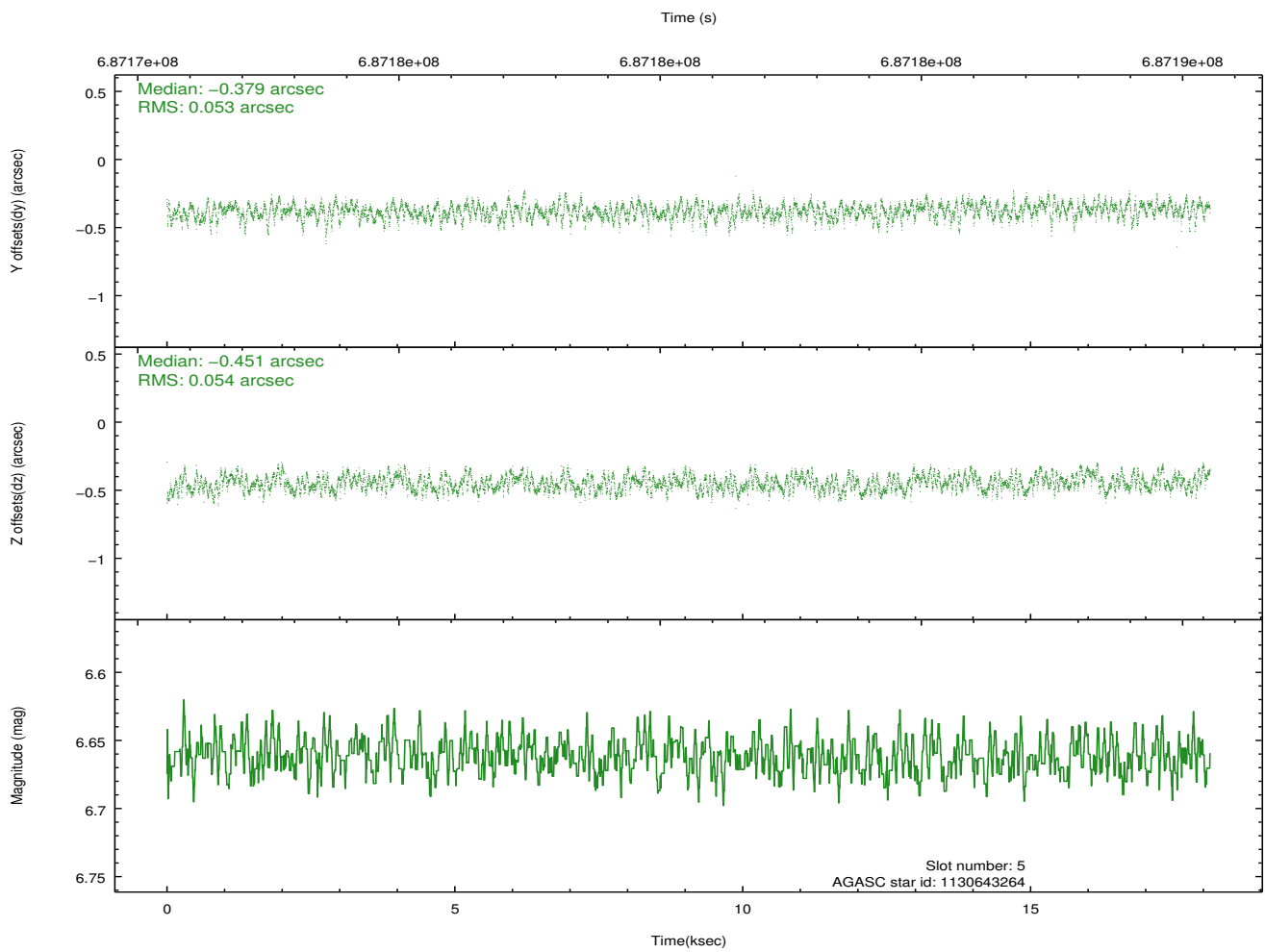
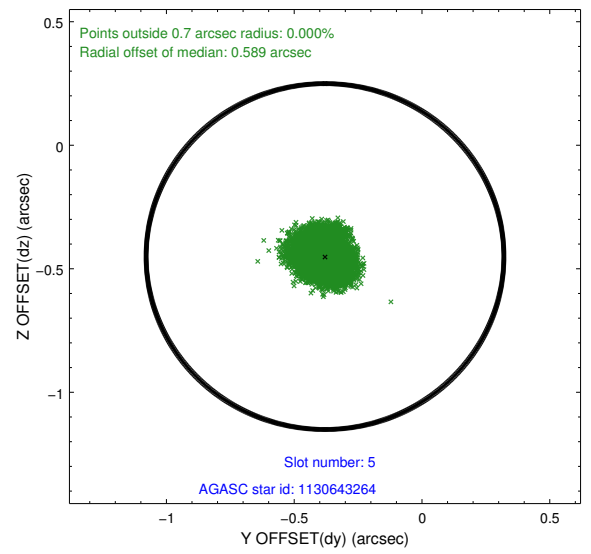
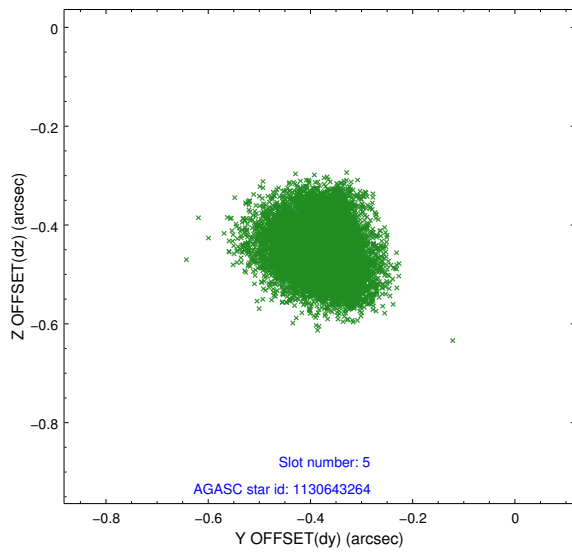
2.4.1 Slot 3



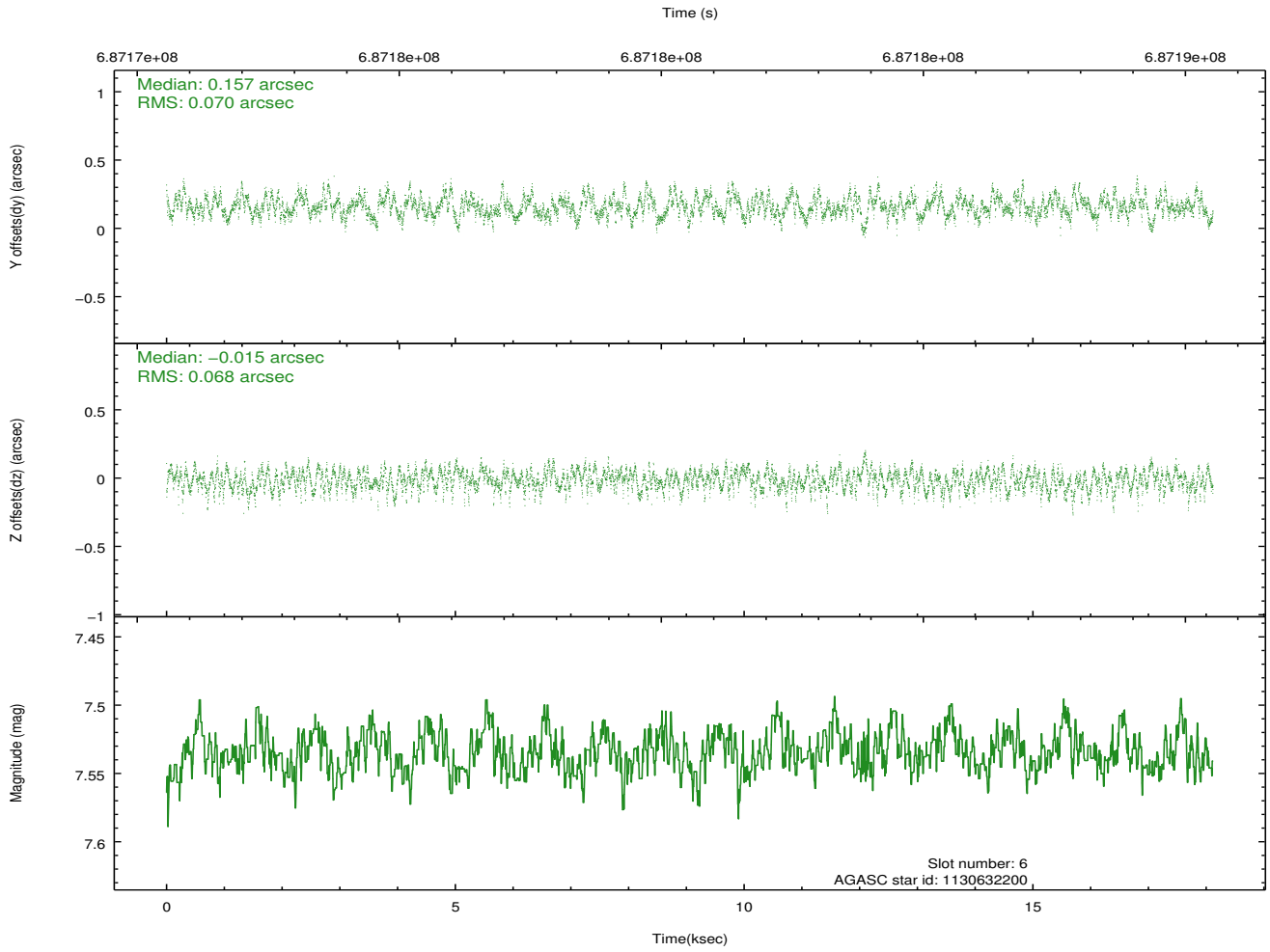
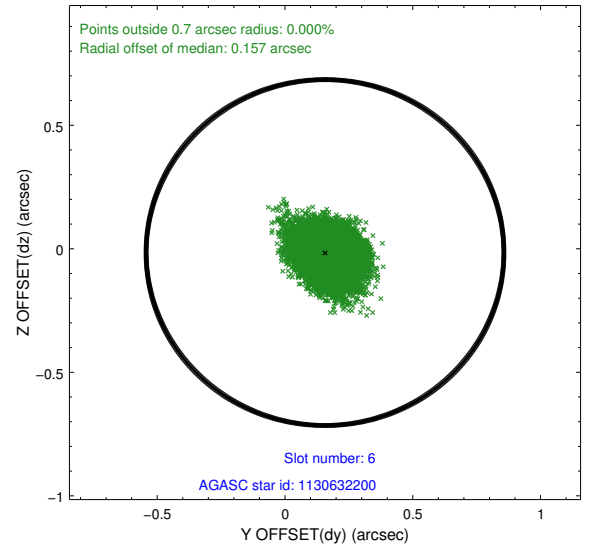
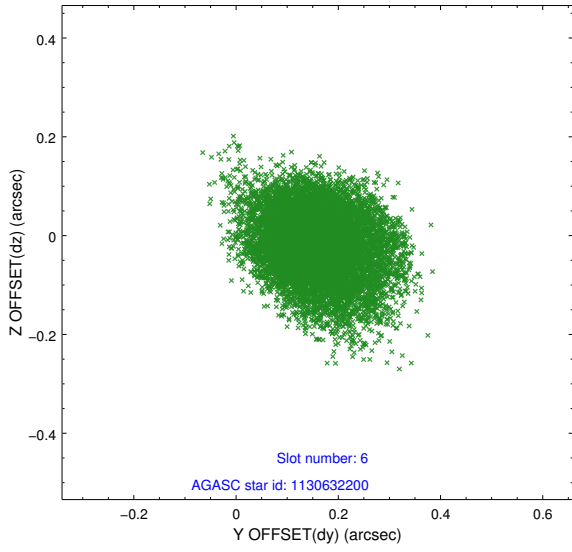
2.4.2 Slot 4



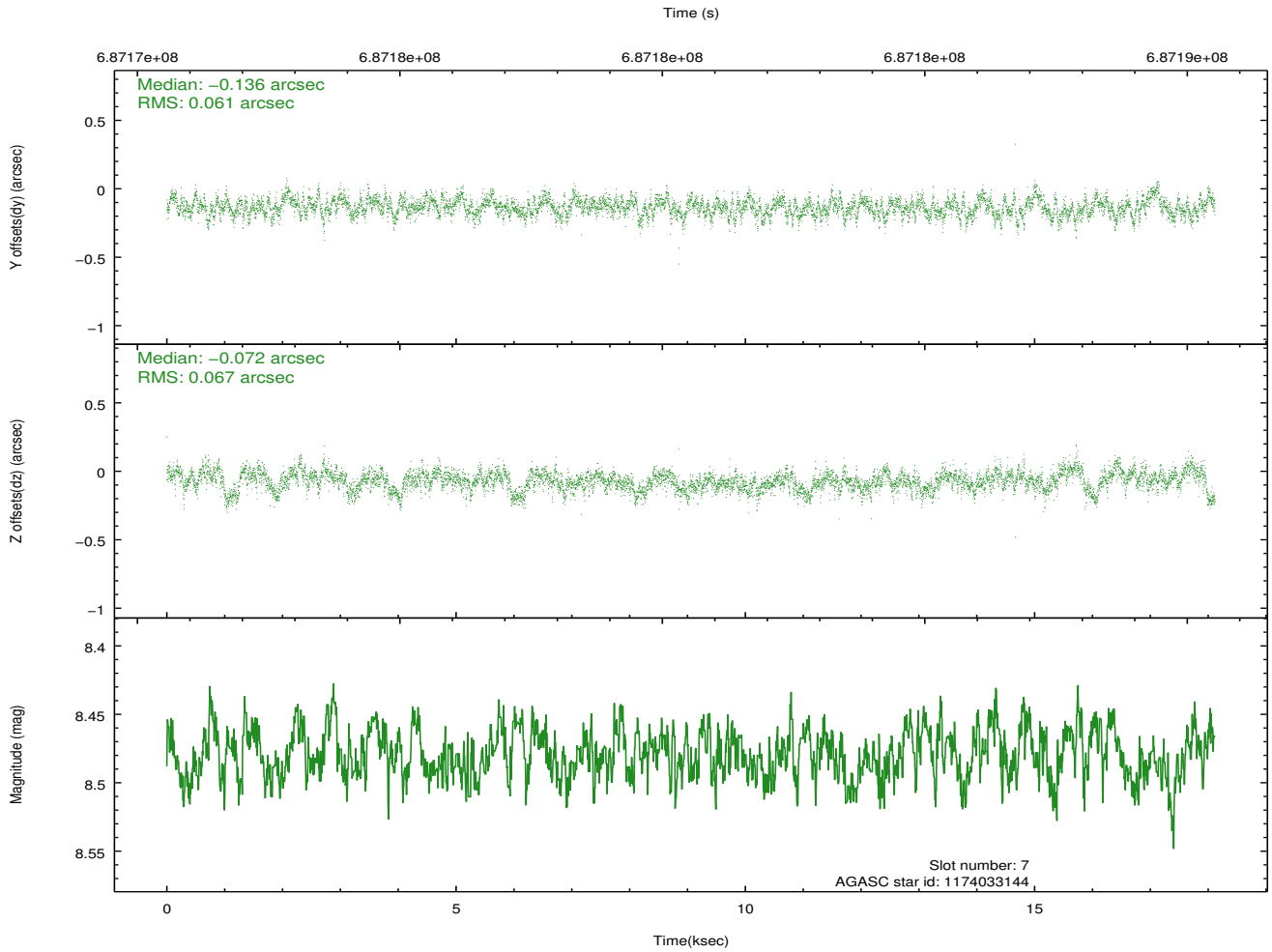
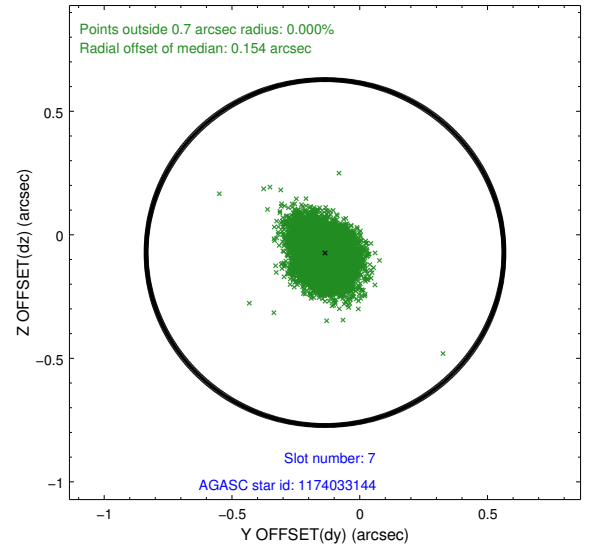
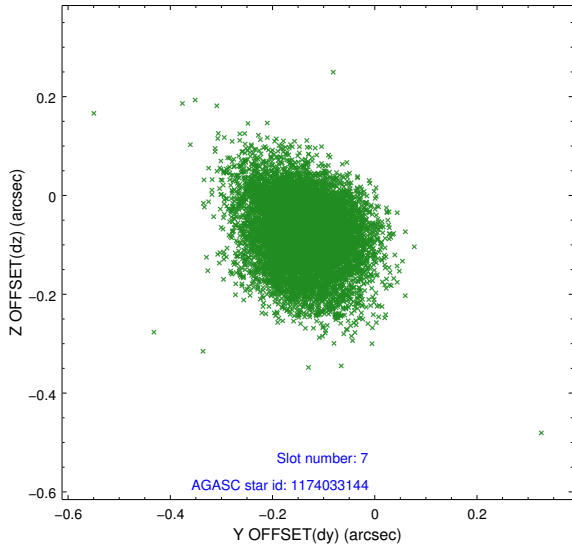
2.4.3 Slot 5



2.4.4 Slot 6

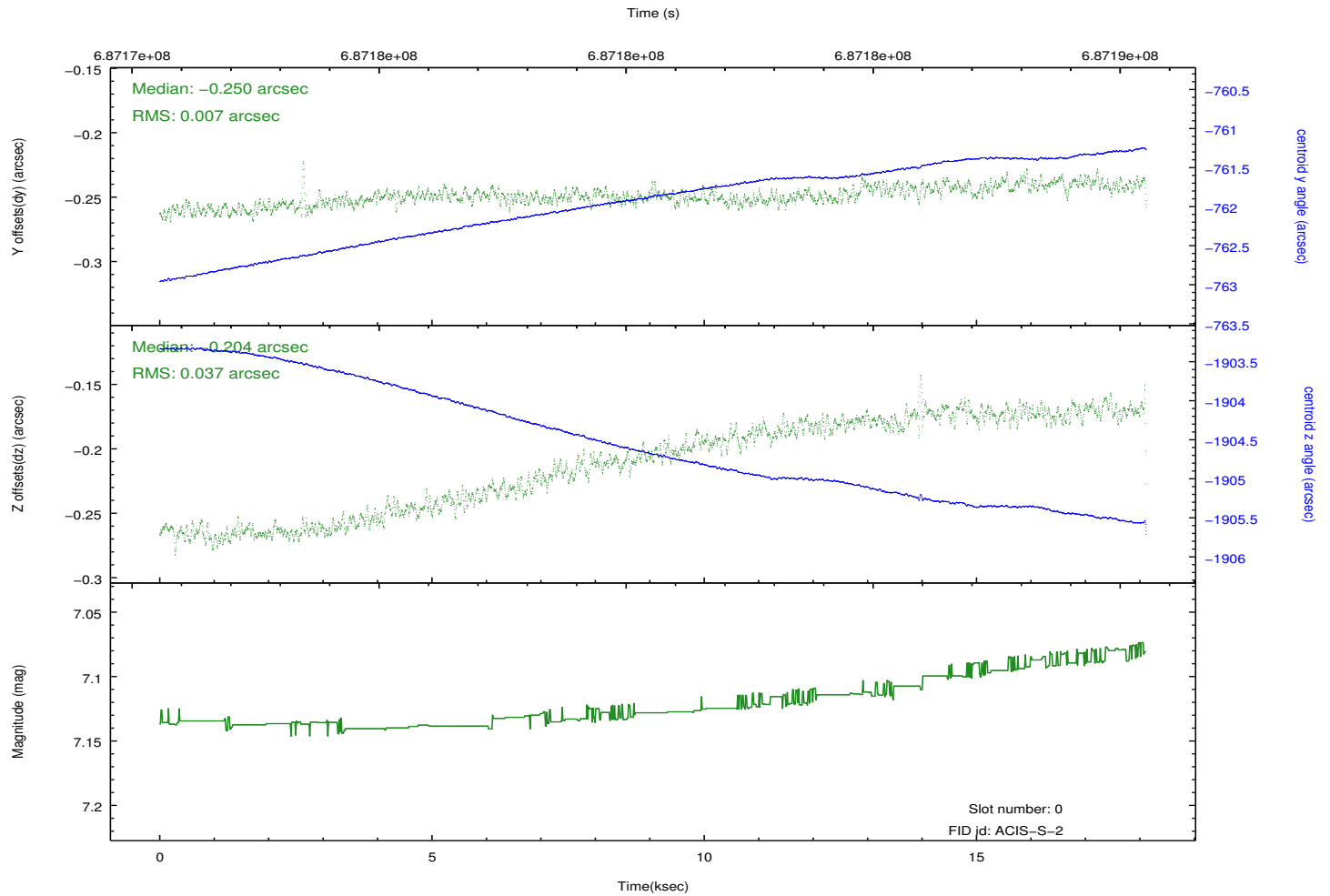
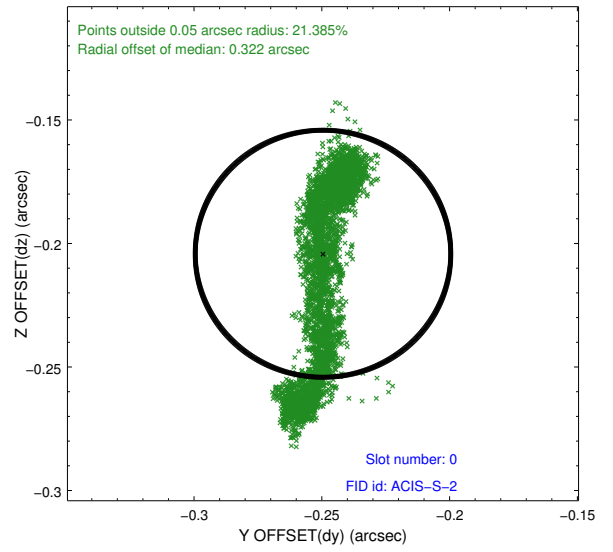
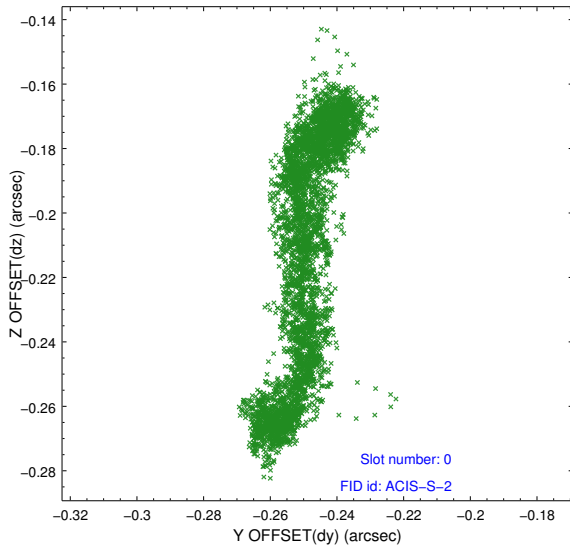


2.4.5 Slot 7

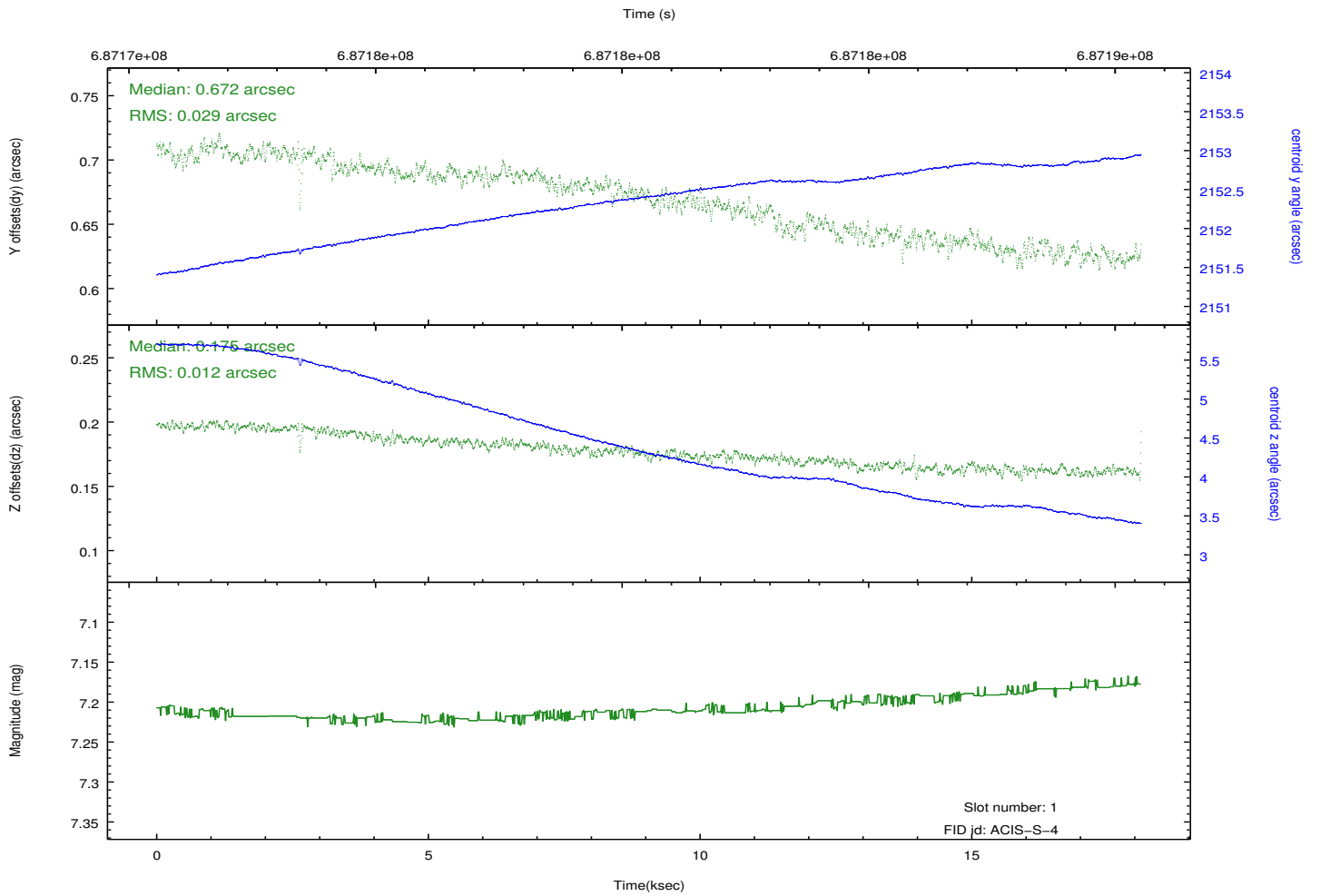
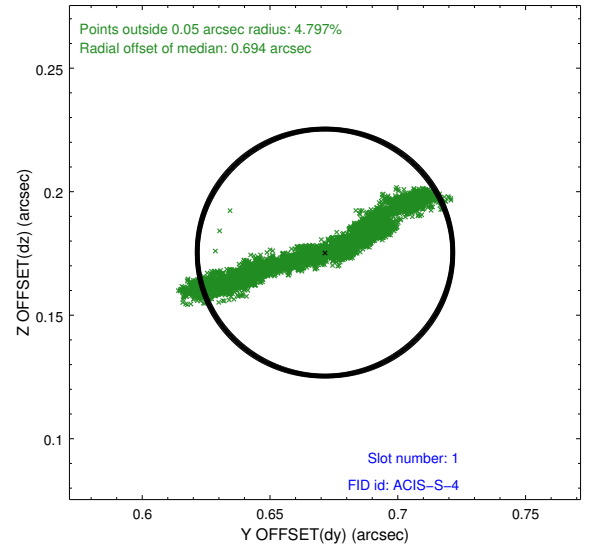
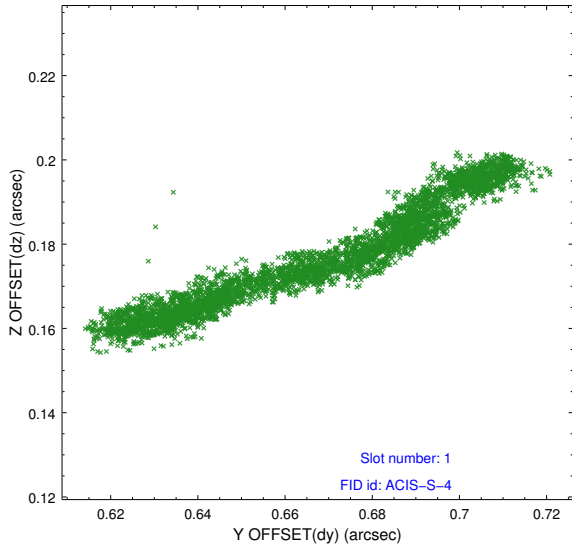


2.5 FID Slots

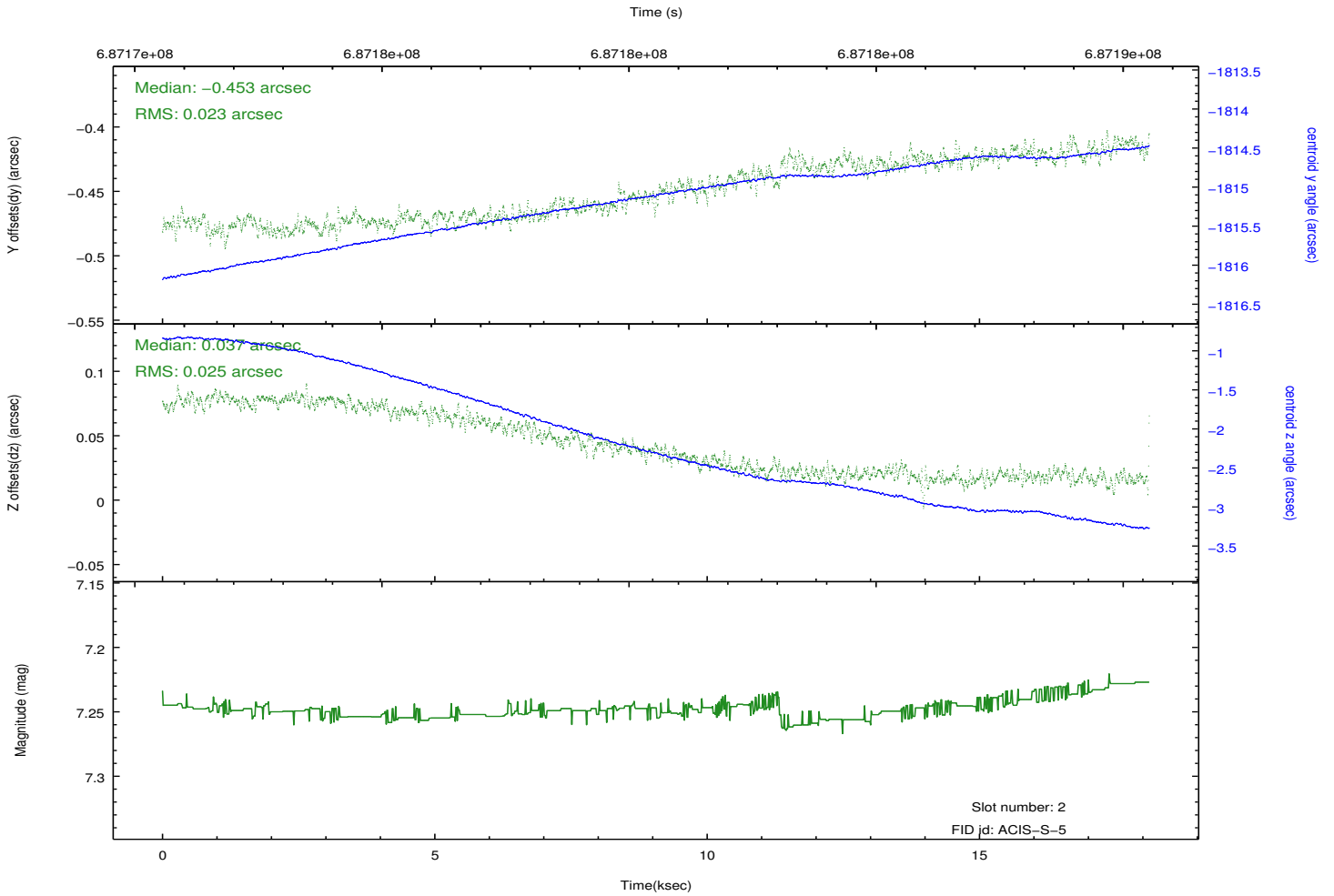
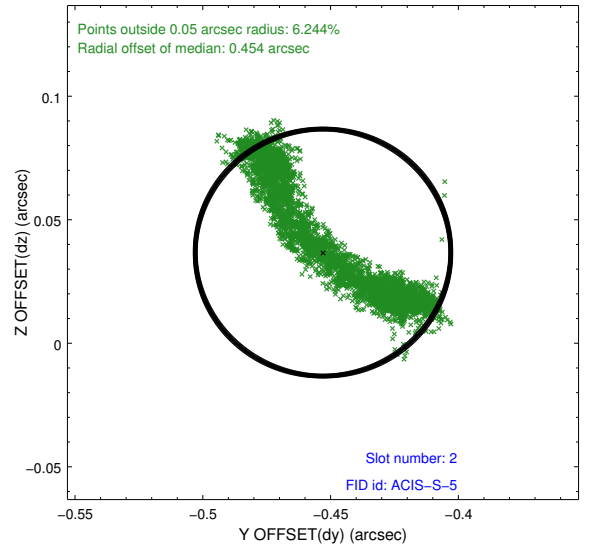
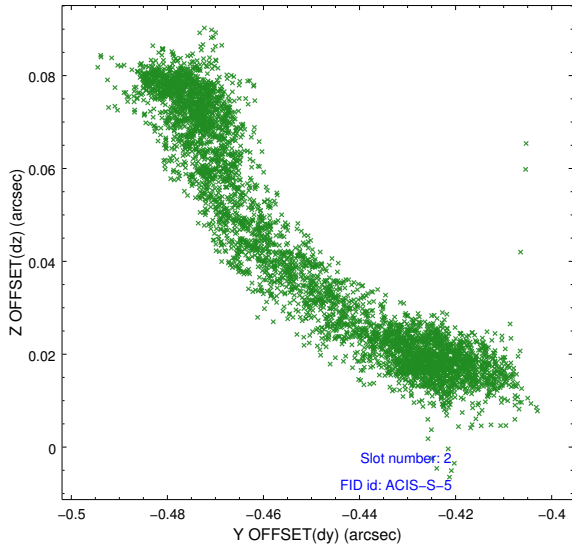
2.5.1 Slot 0



2.5.2 Slot 1

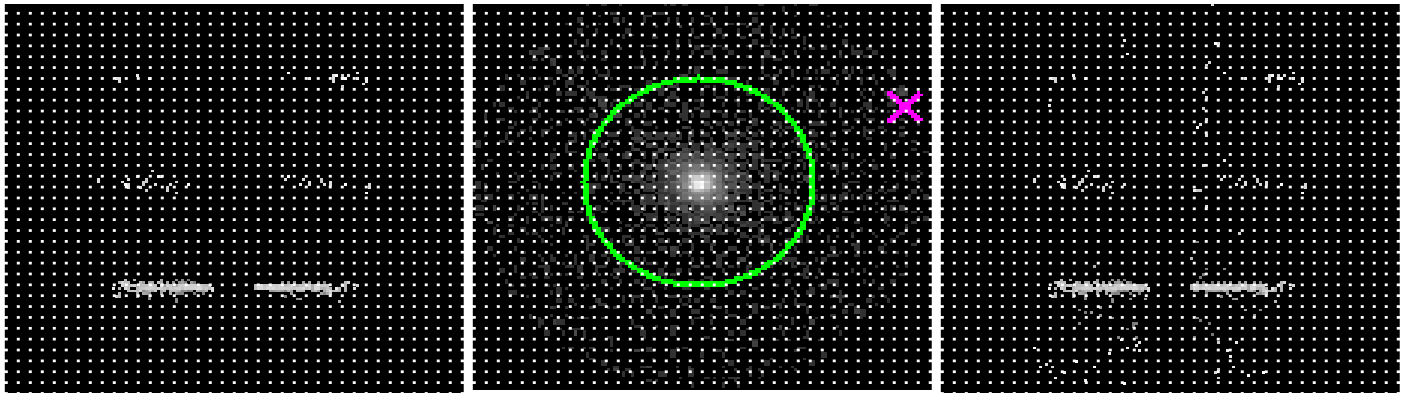


2.5.3 Slot 2



3 Gratings

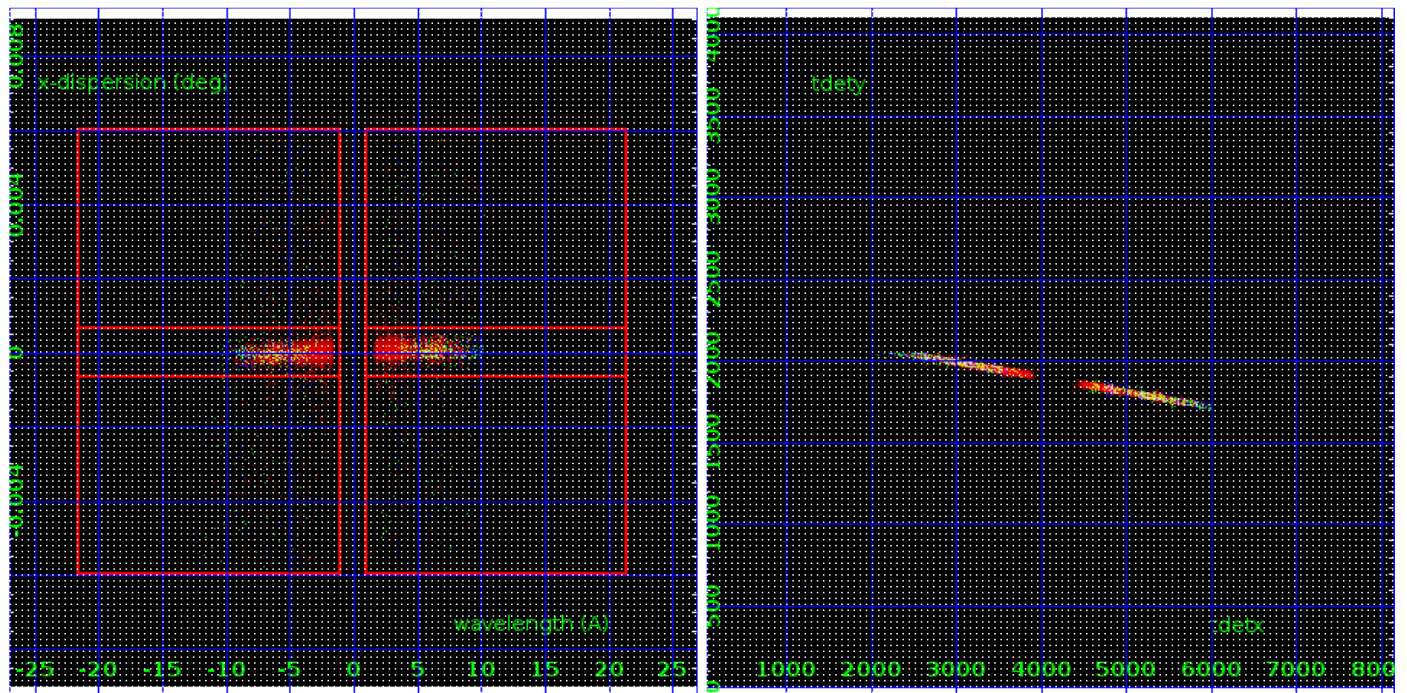
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

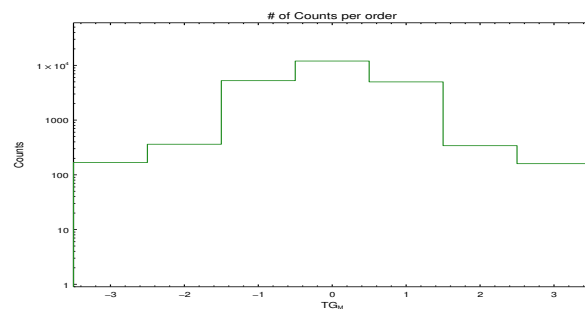
HEG Order Sort ALL



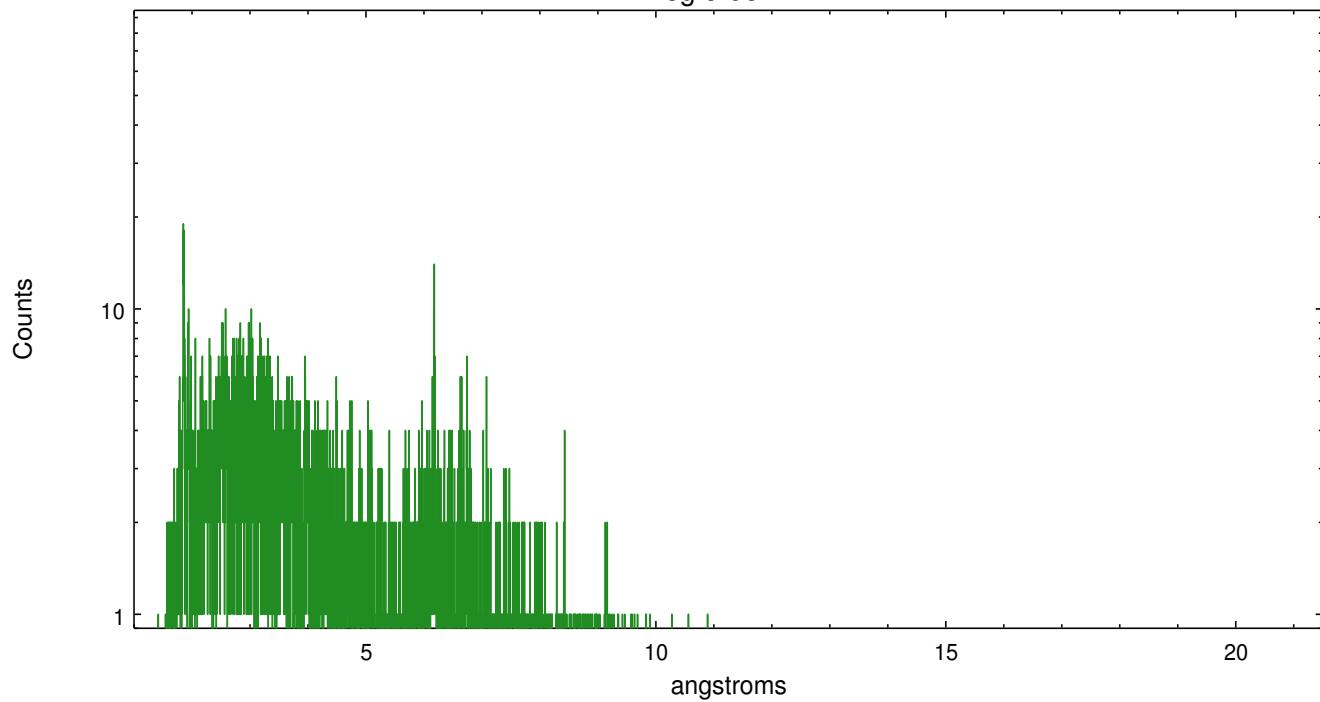
Spot Image HEG

Full Detector HEG

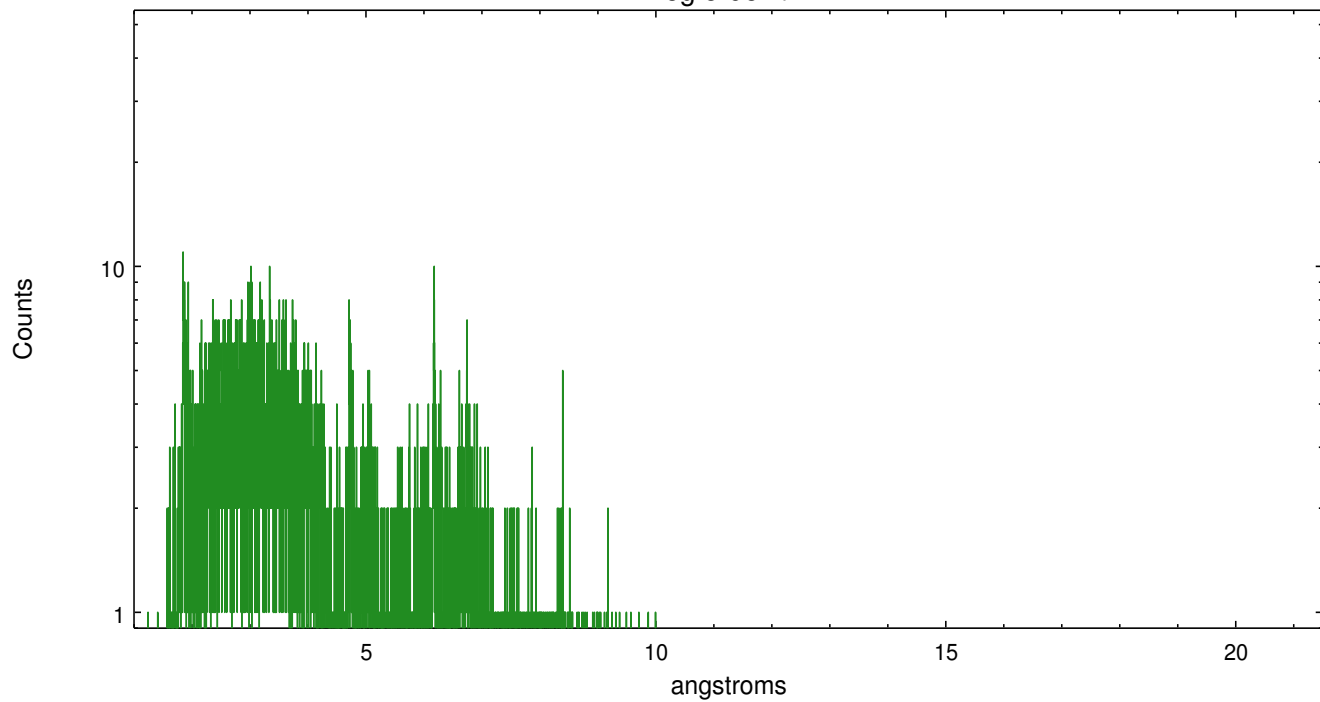
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	168	362	5258	11996	4990	341	160



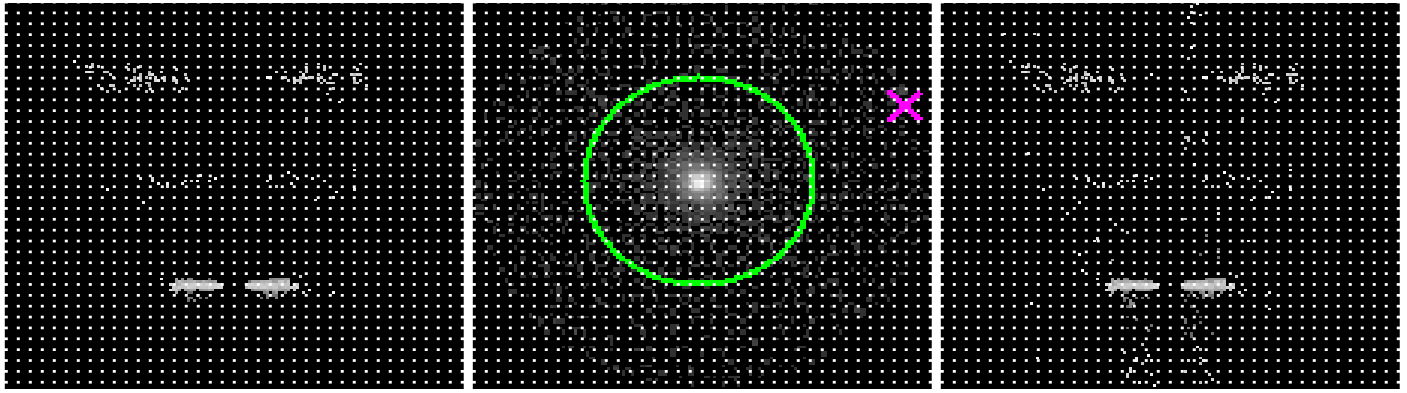
heg order -1



heg order +1



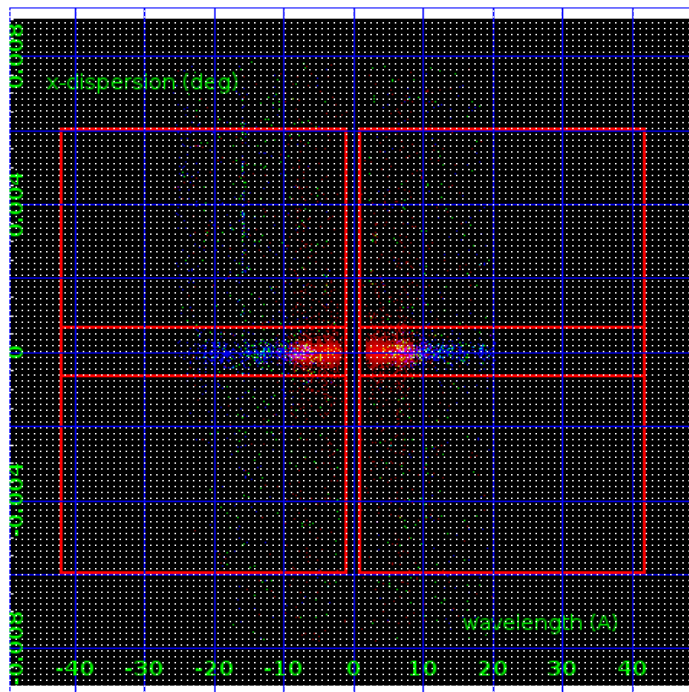
3.2 MEG Arm



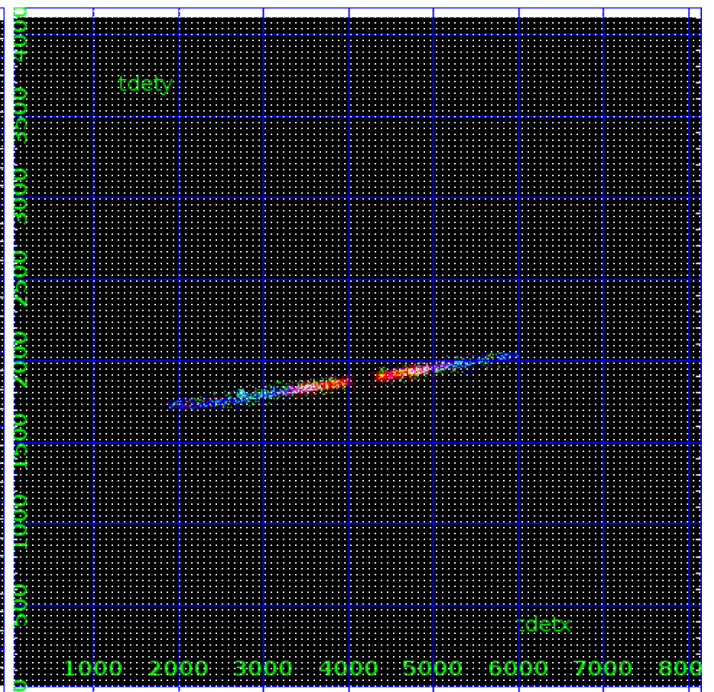
MEG Order Sort 123

MEG Zero Order

MEG Order Sort ALL

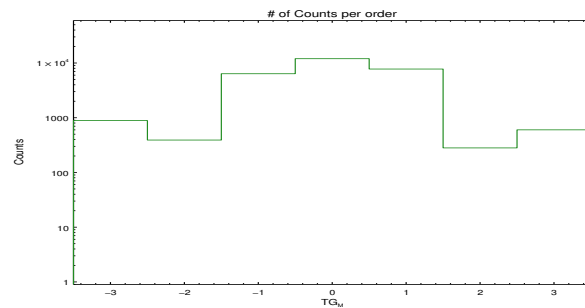


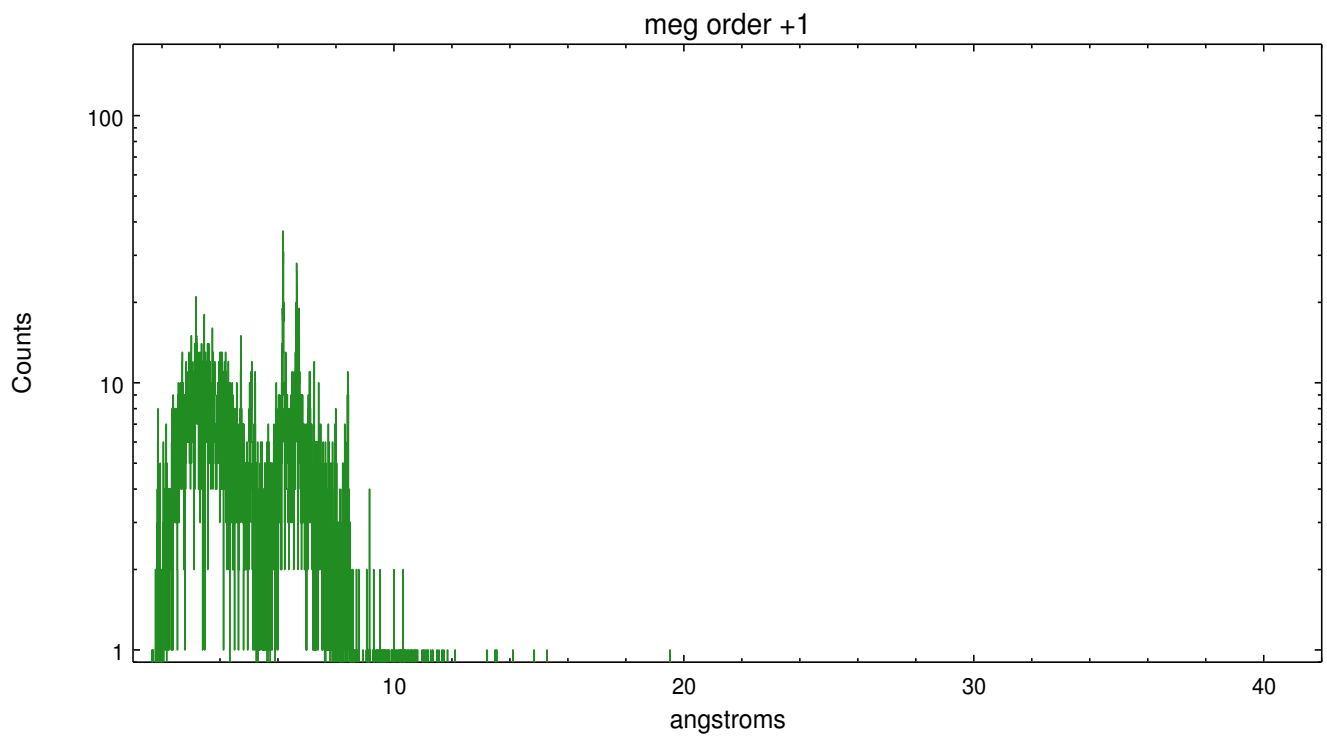
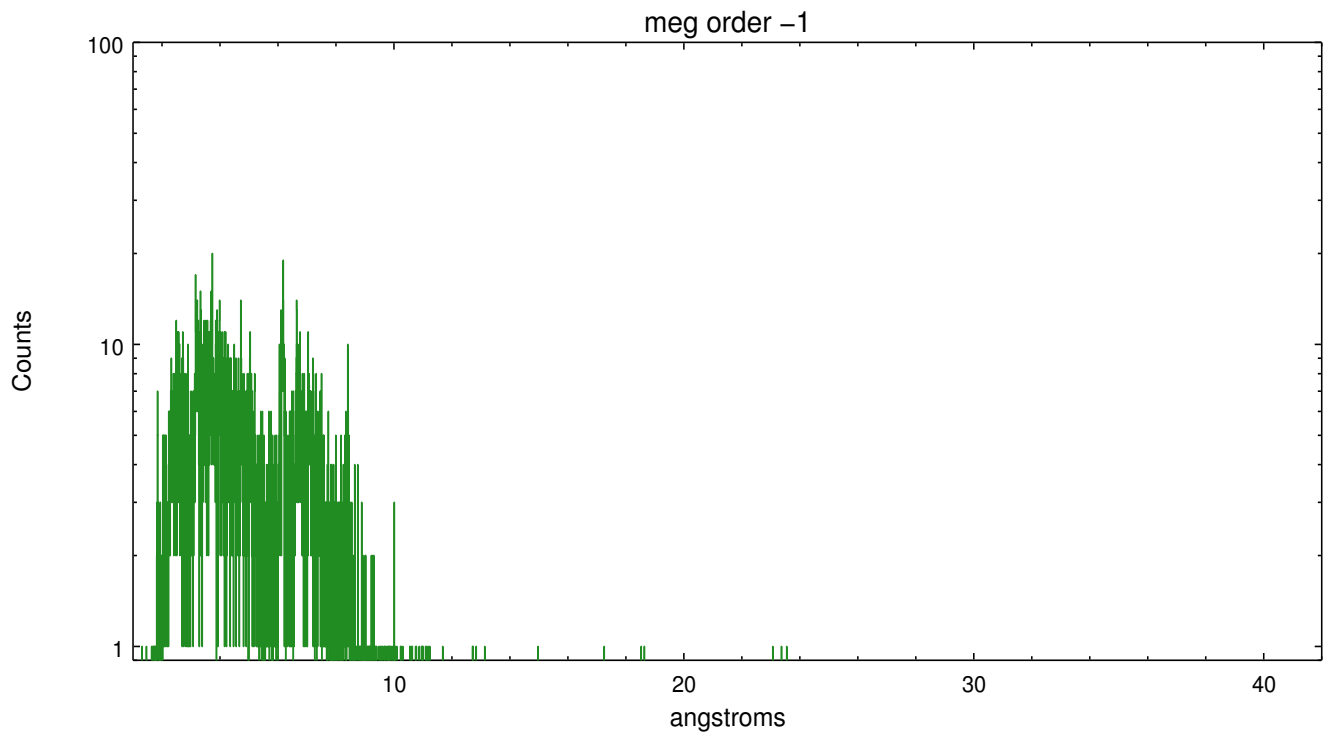
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	887	391	6371	11996	7758	281	601





A Summary

A.1 Status

V&V Scientist	David Principe
V&V Date (YYYY-MM-DD)	2019.10.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	18.076800718307

A.2 Comments

Zeroth order piled up.