

V&V Reference Report

L2 ASCDS Version : 10.8.1

Observation 23006 - L2 Version 1
Chandra X-Ray Center

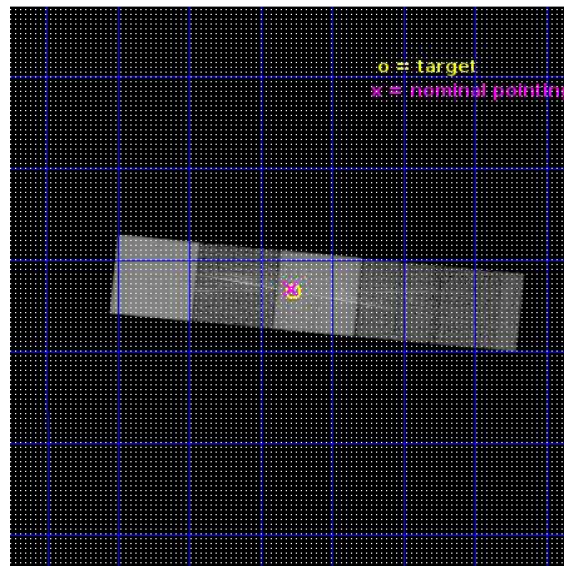
L2 Processing Date : Dec 14 2019

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1 Front

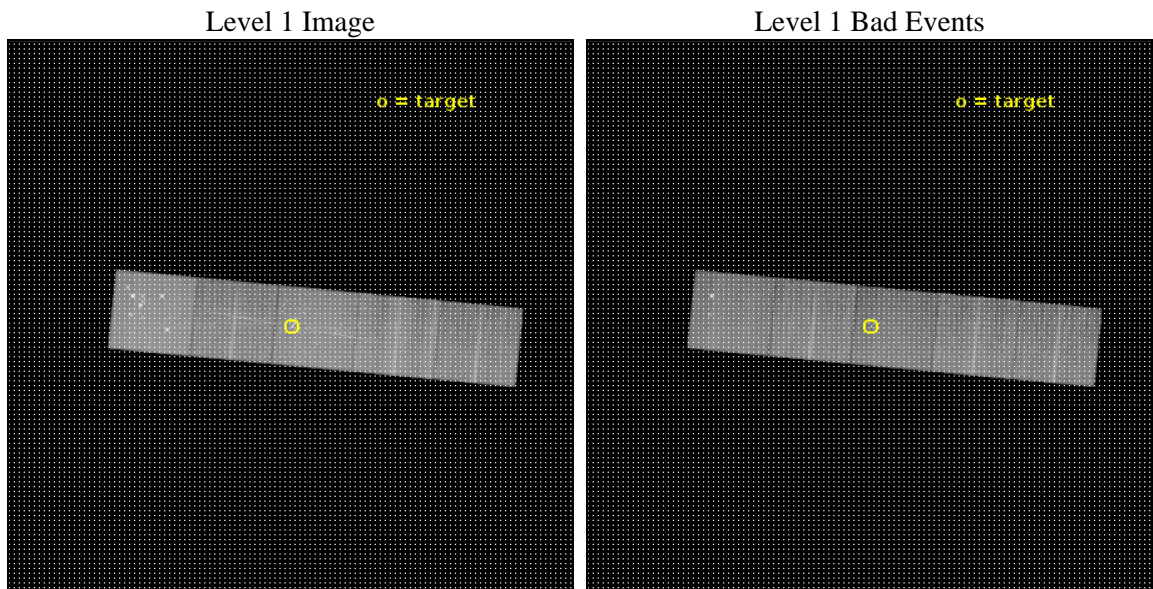
seq_num	201298	Sequence number
obs_id	23006	Observation id
title	THE TRUE NATURE OF X-RAYS FROM THE ORION TRAPEZIUM	Proposal title
observer	Norbert Schulz	Principal investigator
object	Orion Nebula Cluster	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.81875	Observer's specified target RA [deg]
dec_targ	-5.38975	Observer's specified target Dec [deg]
ra_nom	83.821501973548	Nominal RA [deg]
dec_nom	-5.3852718136101	Nominal Dec [deg]
roll_nom	5.6323029894177	Nominal Roll [deg]
revision	1	Processing version of data
ontime	25055.85628283	Sum of GTIs [s]
livetime	24728.483074642	Livetime [s]
ontime5	25055.815242887	Sum of GTIs [s]
ontime6	25055.774202824	Sum of GTIs [s]
ontime7	25055.85628283	Sum of GTIs [s]
ontime8	25055.73316288	Sum of GTIs [s]
ontime9	25055.692122817	Sum of GTIs [s]
l2events	374743	Number of level 2 events



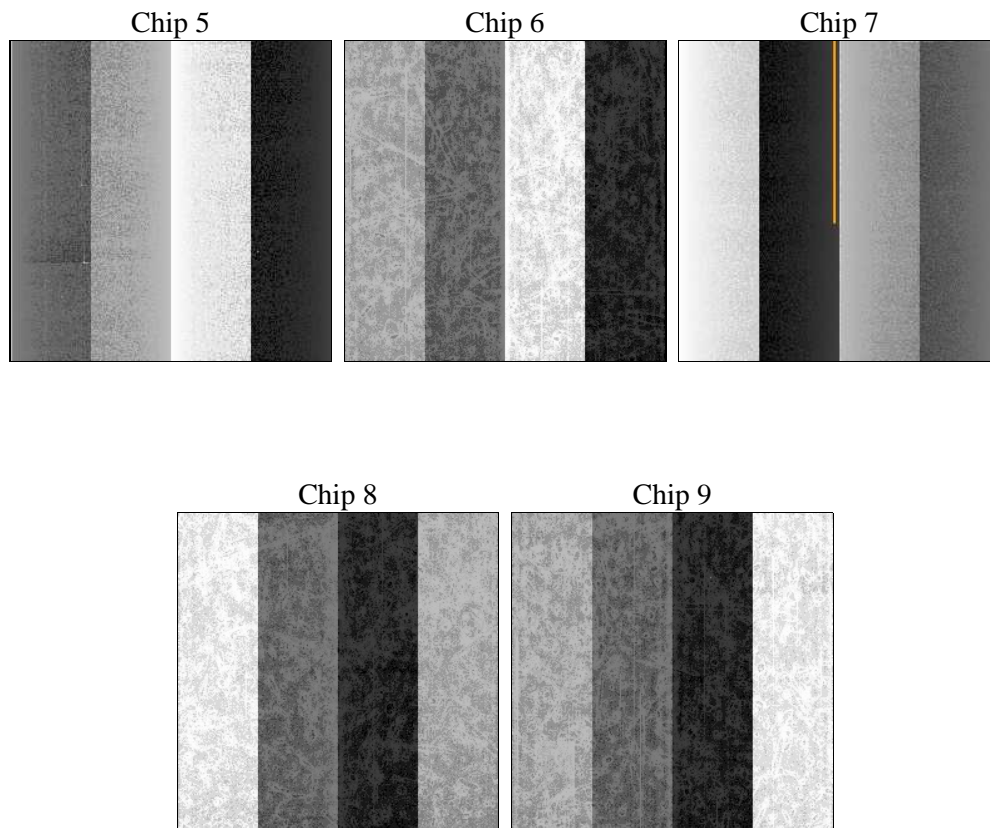
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25000.000000	[s] Scheduled observation exposure time
ascdsver	10.8.1	Processing system revision	ontime	25055.85628283	Sum of GTIs [s]
caldsver	4.8.4.2	 	ontime5	25055.815242887	Sum of GTIs [s]
date	2019-12-14T18:15:36	Date and time of file creation	ontime6	25055.774202824	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	25055.85628283	Sum of GTIs [s]
			ontime8	25055.73316288	Sum of GTIs [s]
			ontime9	25055.692122817	Sum of GTIs [s]
			l1events	1320389	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4118.11, 4064.37)	src1a sky pixel position

2.1.4 Events

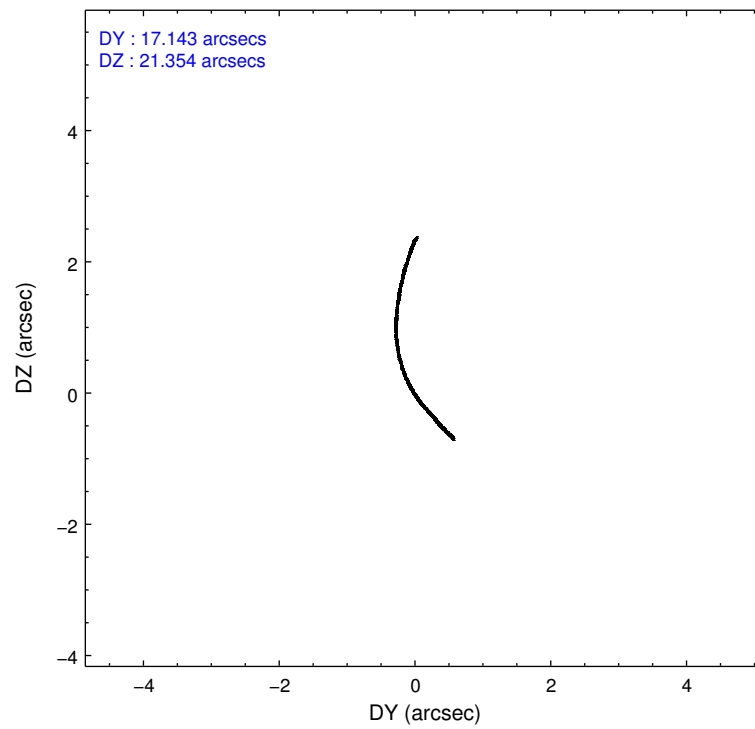
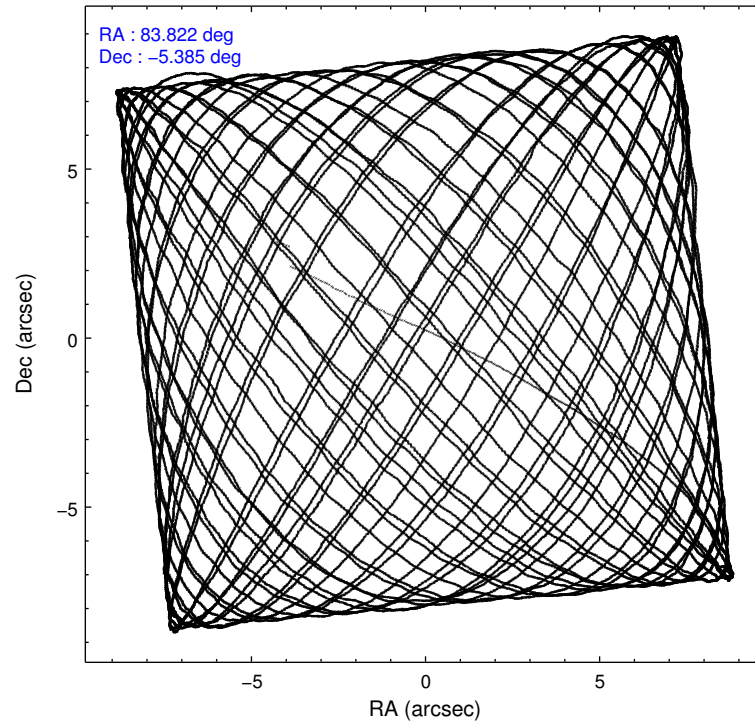
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	349358	216248	291779	264530	198474
rejected events	170616	177748	146271	186832	172642
rejected %	48%	82%	50%	70%	86%

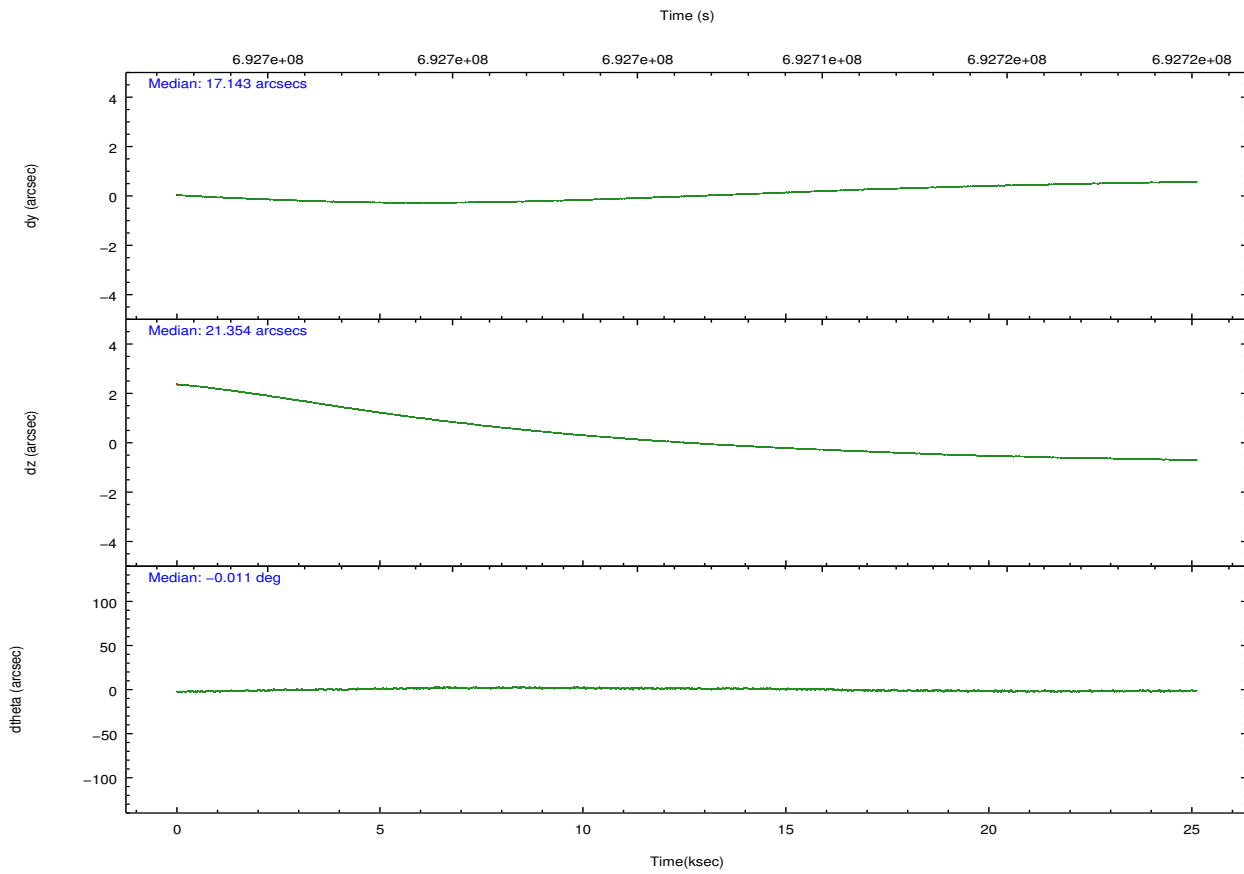
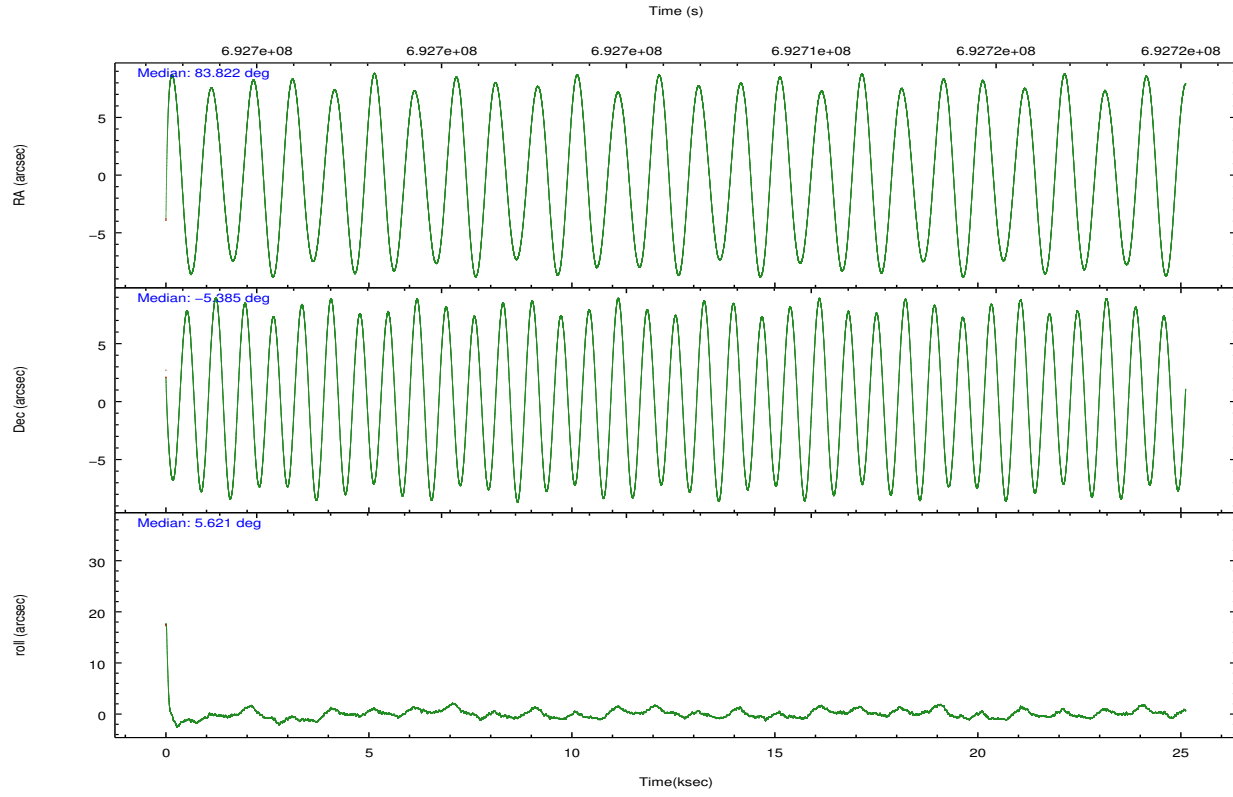
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	33118	19800	16801	26109	9878
	9%	9%	5%	9%	4%
grade 1 events	810	172	523	245	132
	0%	0%	0%	0%	0%
grade 2 events	53384	7317	32574	18108	5709
	15%	3%	11%	6%	2%
grade 3 events	5270	2657	12543	7464	2434
	1%	1%	4%	2%	1%
grade 4 events	4496	2714	12121	7063	2372
	1%	1%	4%	2%	1%
grade 5 events	22311	9199	25392	13994	10615
	6%	4%	8%	5%	5%
grade 6 events	82495	6018	71493	18959	5442
	23%	2%	24%	7%	2%
grade 7 events	147474	168371	120332	172588	161892
	42%	77%	41%	65%	81%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-56789	ACIS-56789	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	83.799305	83.82150197354817	CCD I2 on	N	N
[deg] Pointing Dec	-5.401542	-5.385271813610106	CCD I3 on	N	N
[deg] Pointing Roll	5.473581	5.632302989417724	CCD S0 on	O1	N
[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)	692693890.184000	692692588.96302	CCD S5 on	O2	Y
Observation start date	2019-12-14T06:57:01	2019-12-14T06:36:28	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	692718890.184000	692719840.63967	On-chip summing requested	N	N
Observation end date	2019-12-14T13:53:41	2019-12-14T14:10:40	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect





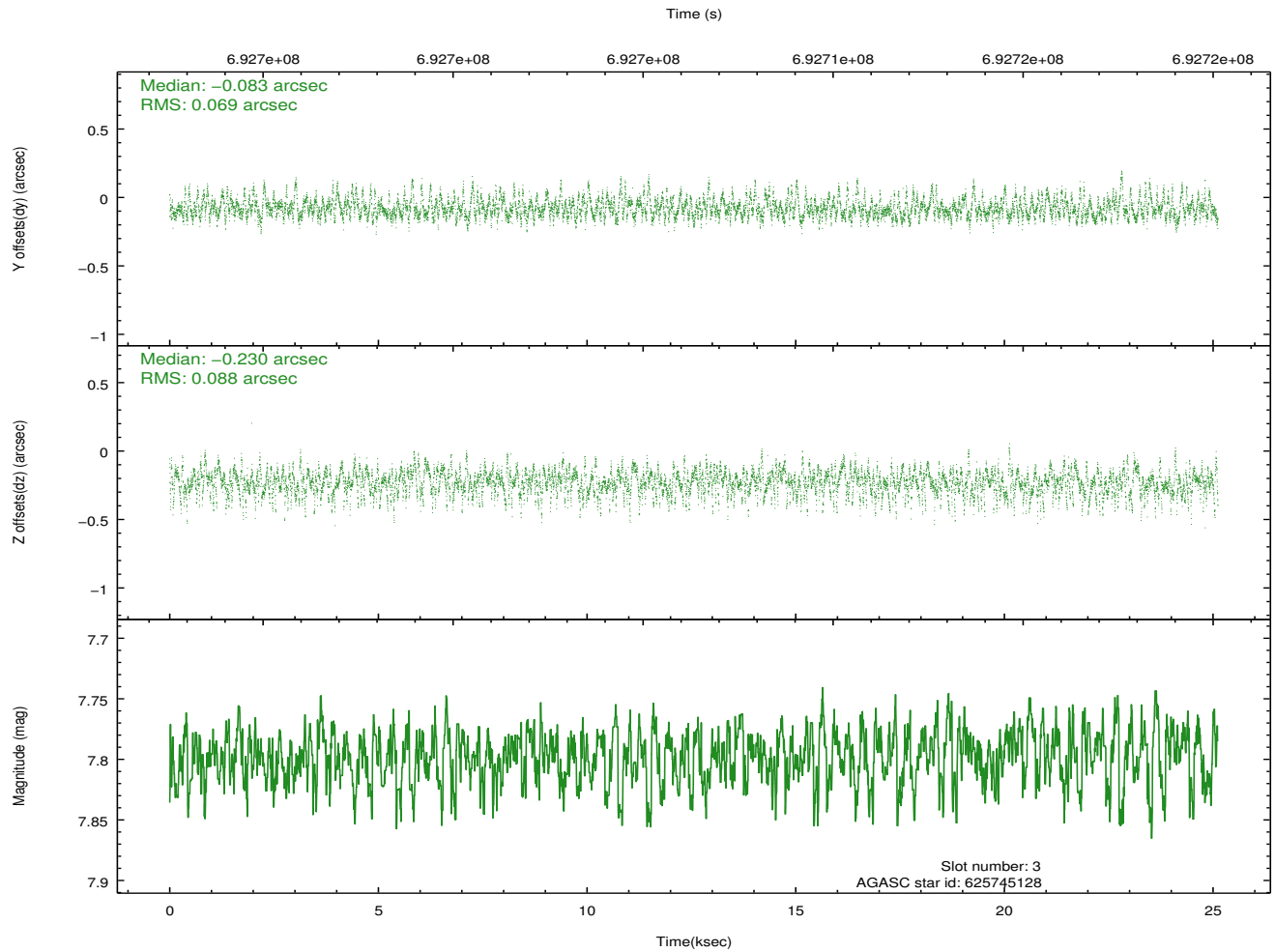
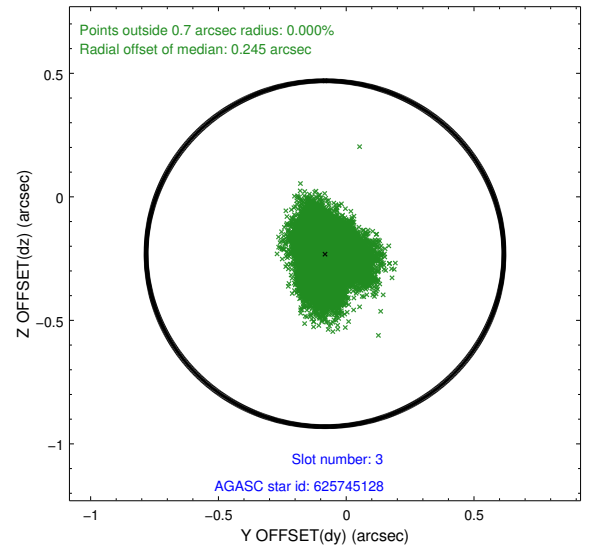
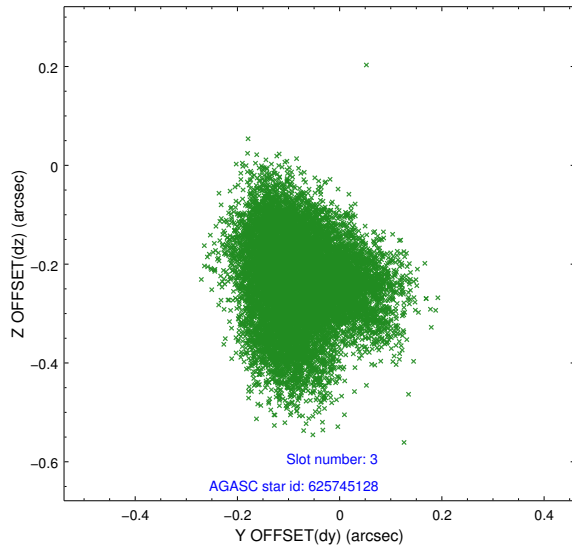
Slot Statistics

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-1	7.14	6126	1.000	0.431	-0.115	0.035	0.072	0.000000	0.000000	926.37	-1738
1	FID		ACIS-S-2	7.06	6127	1.000	-0.211	-0.121	0.026	0.054	0.000000	0.000000	-770.10	-1743
2	FID		ACIS-S-5	7.12	6125	1.000	-0.247	0.241	0.024	0.065	0.000000	0.000000	-1823.67	158
3	GUIDE	used	625745128	7.80	12252	1.000	-0.083	-0.230	0.120	0.193	83.769930	-4.731835	124.38	2409
4	GUIDE	used	625745136	7.20	12250	1.000	-0.082	-0.002	0.116	0.191	83.600341	-4.804339	-505.84	2207
5	GUIDE	used	625874672	7.69	12246	1.000	-0.173	-0.561	0.104	0.163	84.403143	-4.934124	2315.70	1467
6	GUIDE	used	626272760	6.66	12248	1.000	0.129	0.060	0.134	0.271	84.363987	-5.938389	1828.92	-2117
7	GUIDE	used	626272880	7.67	12248	1.000	0.210	0.744	0.121	0.197	83.815609	-6.032748	-158.02	-2267

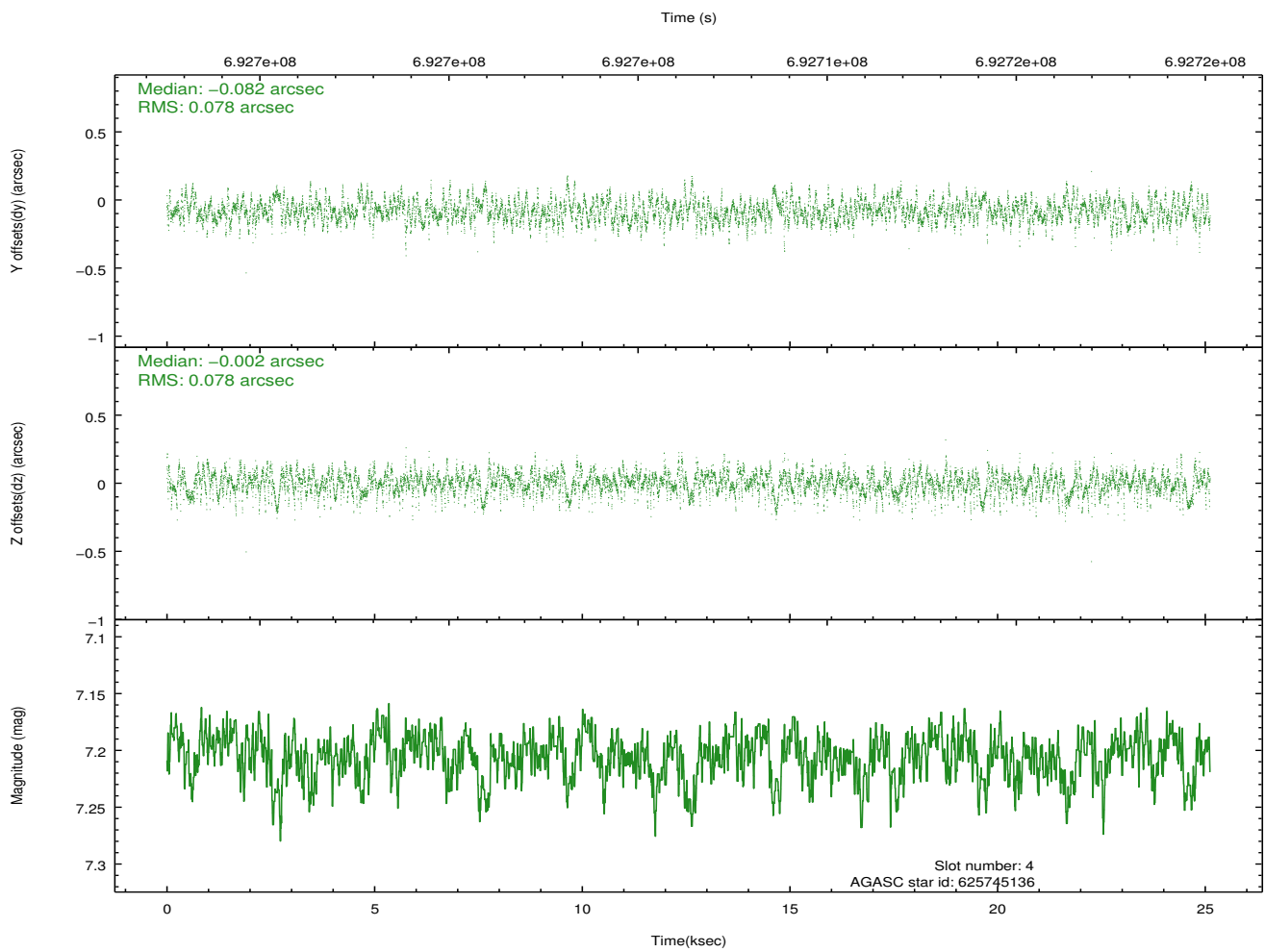
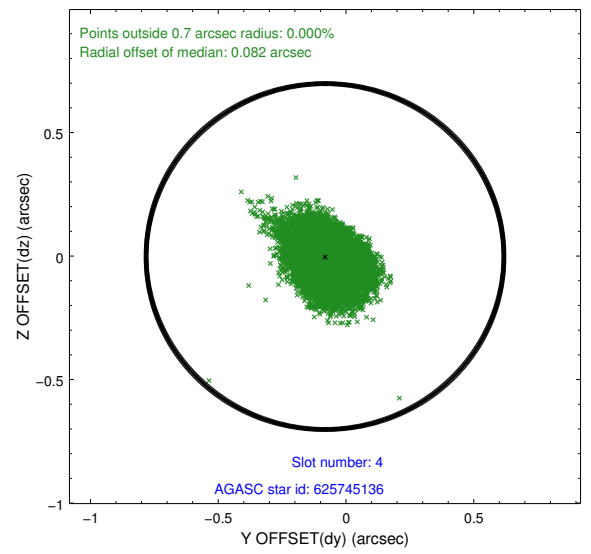
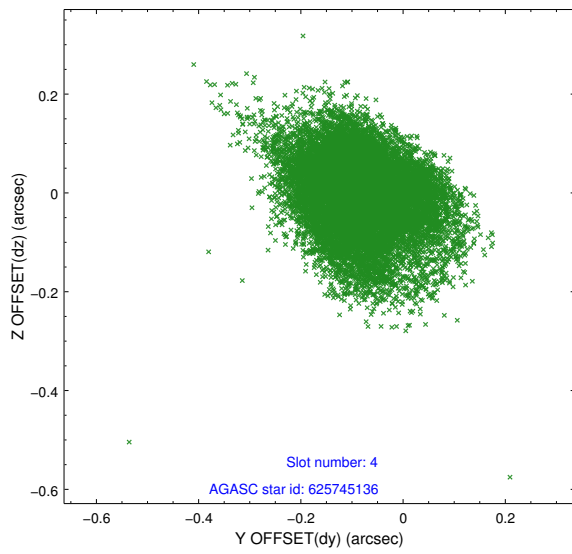
∞

2.4 Star Slots

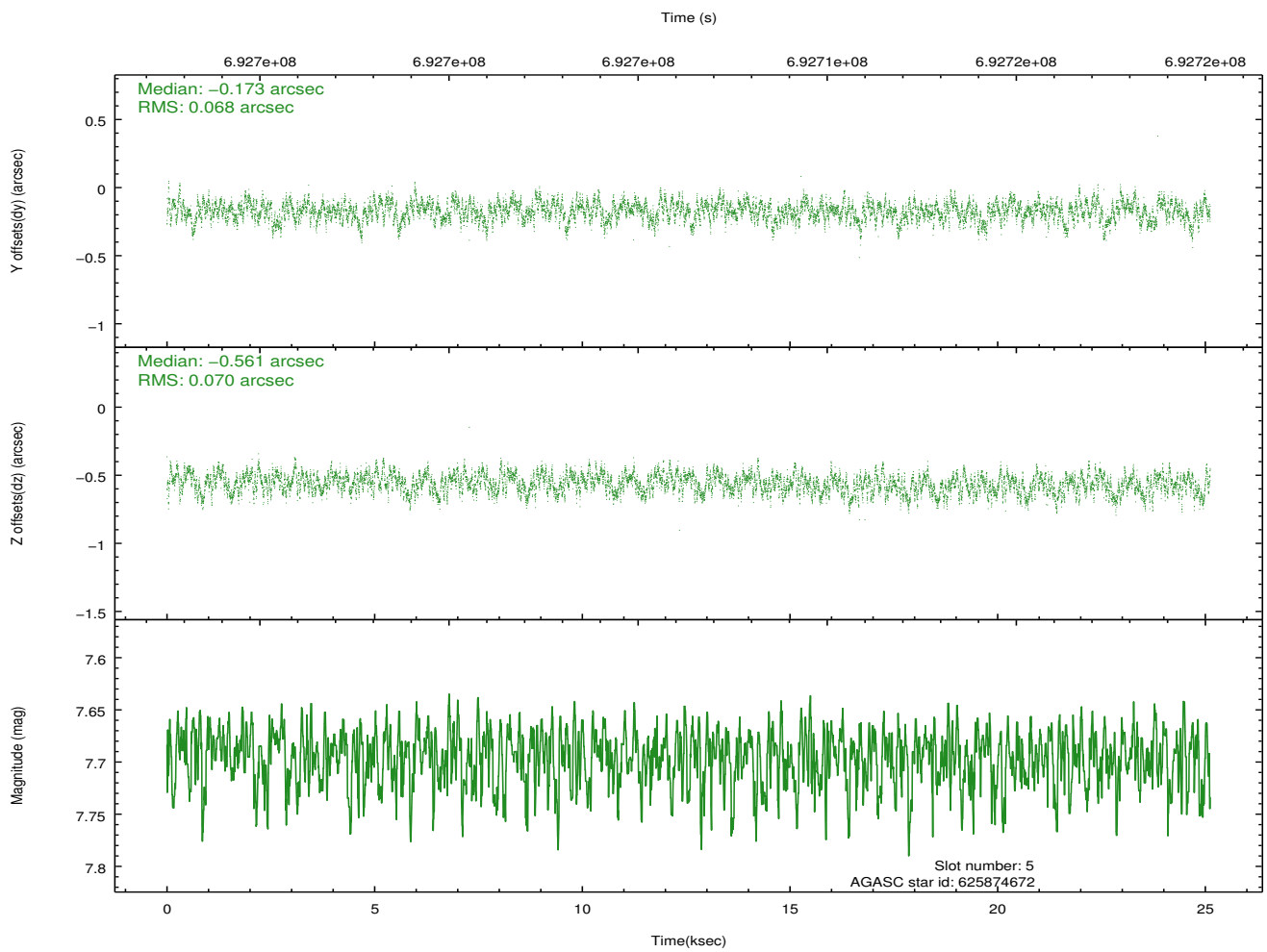
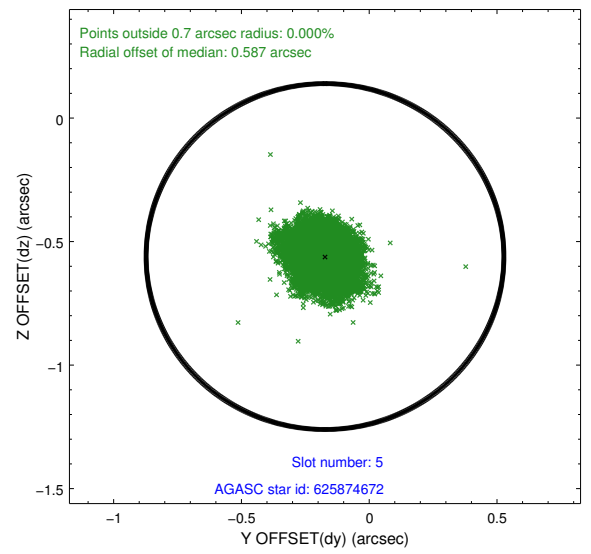
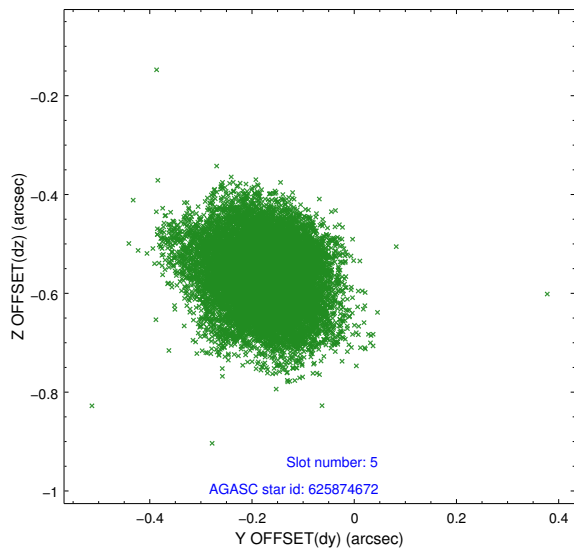
2.4.1 Slot 3



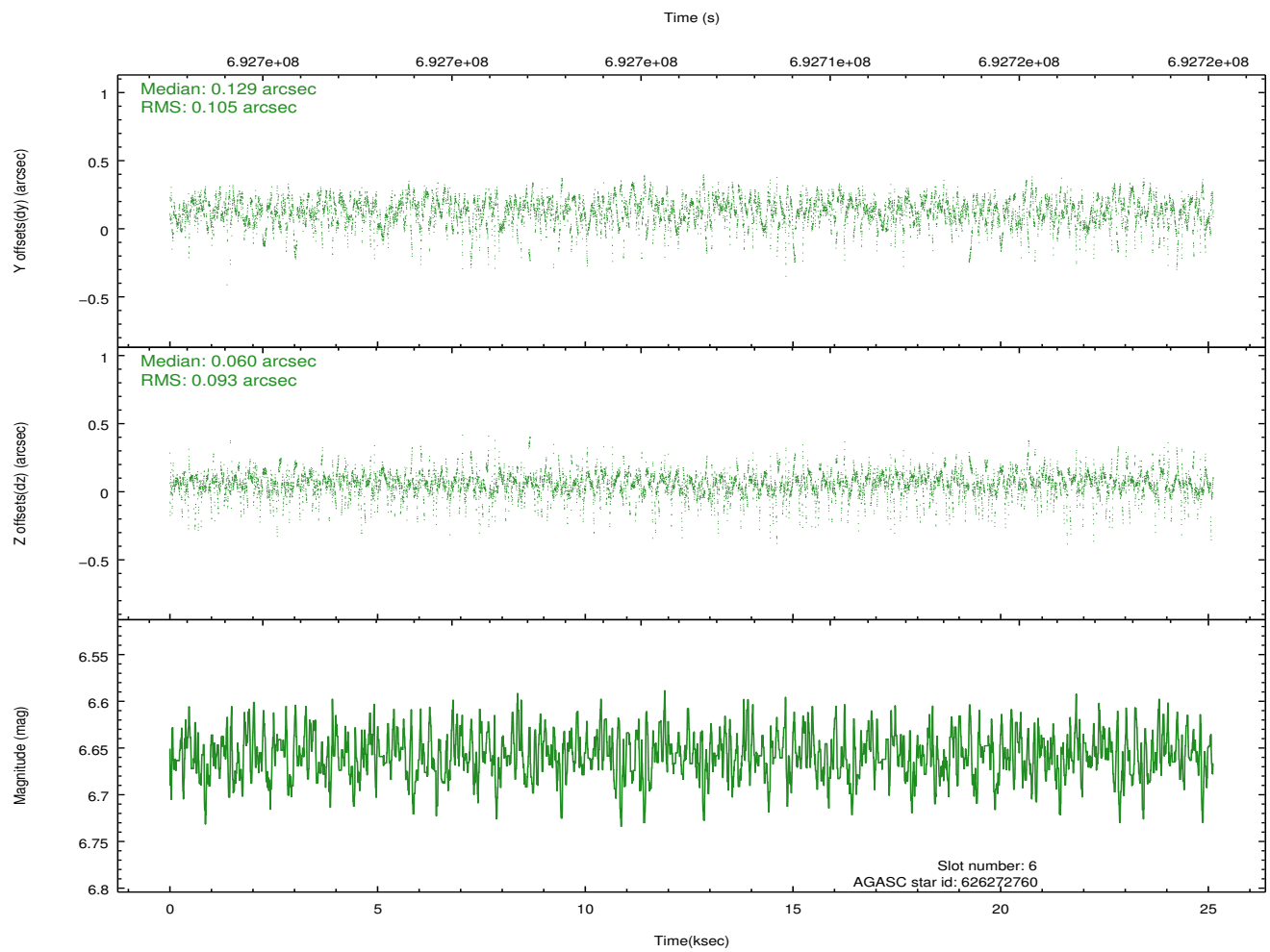
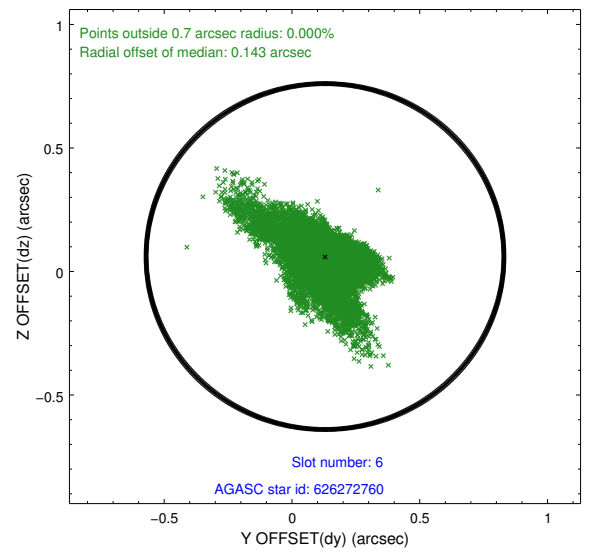
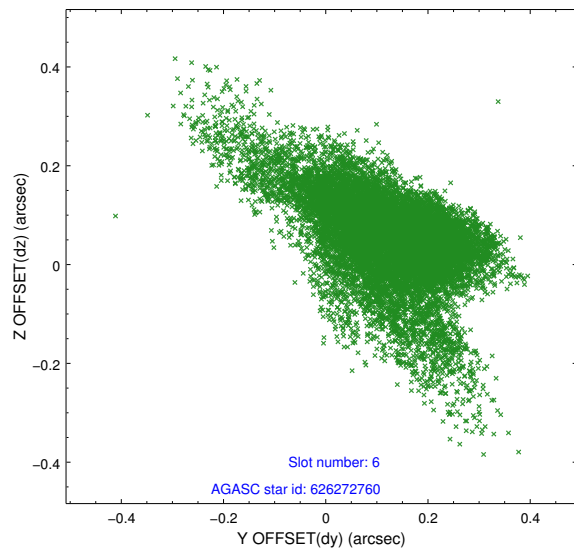
2.4.2 Slot 4



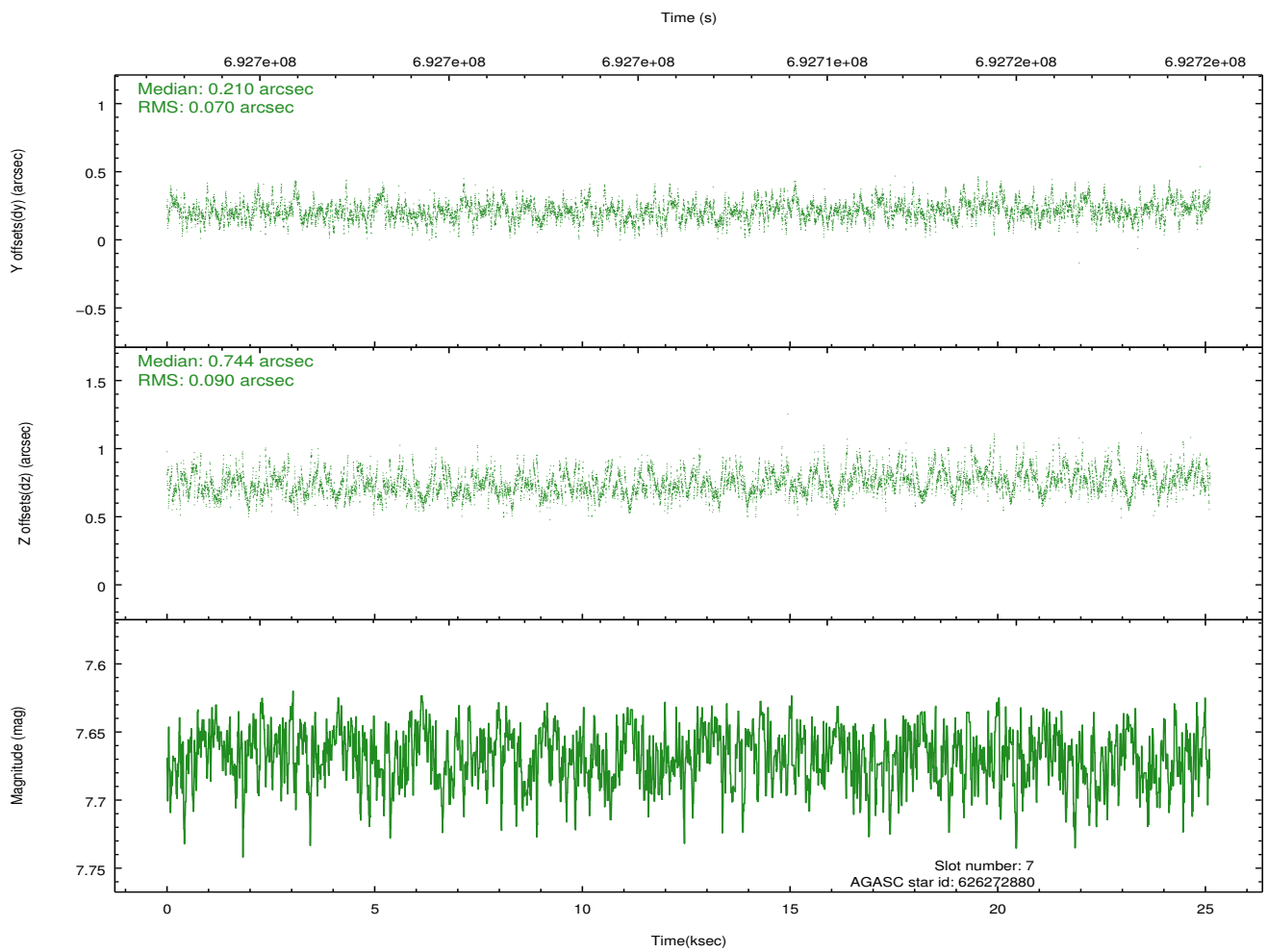
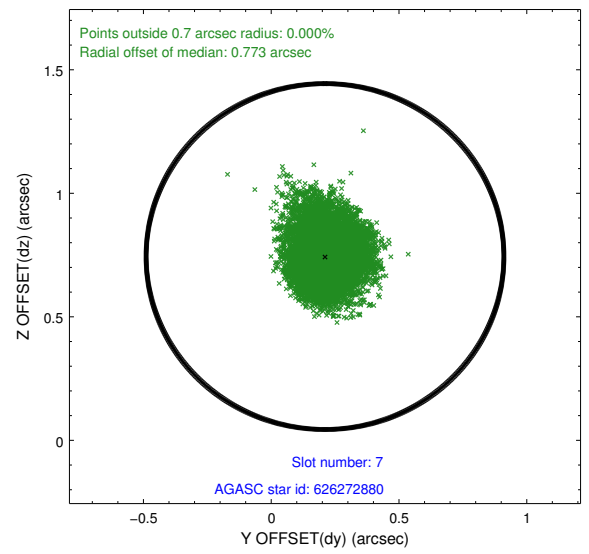
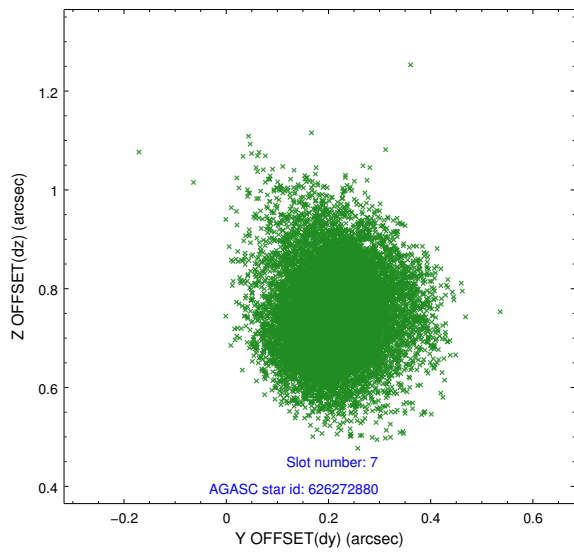
2.4.3 Slot 5



2.4.4 Slot 6

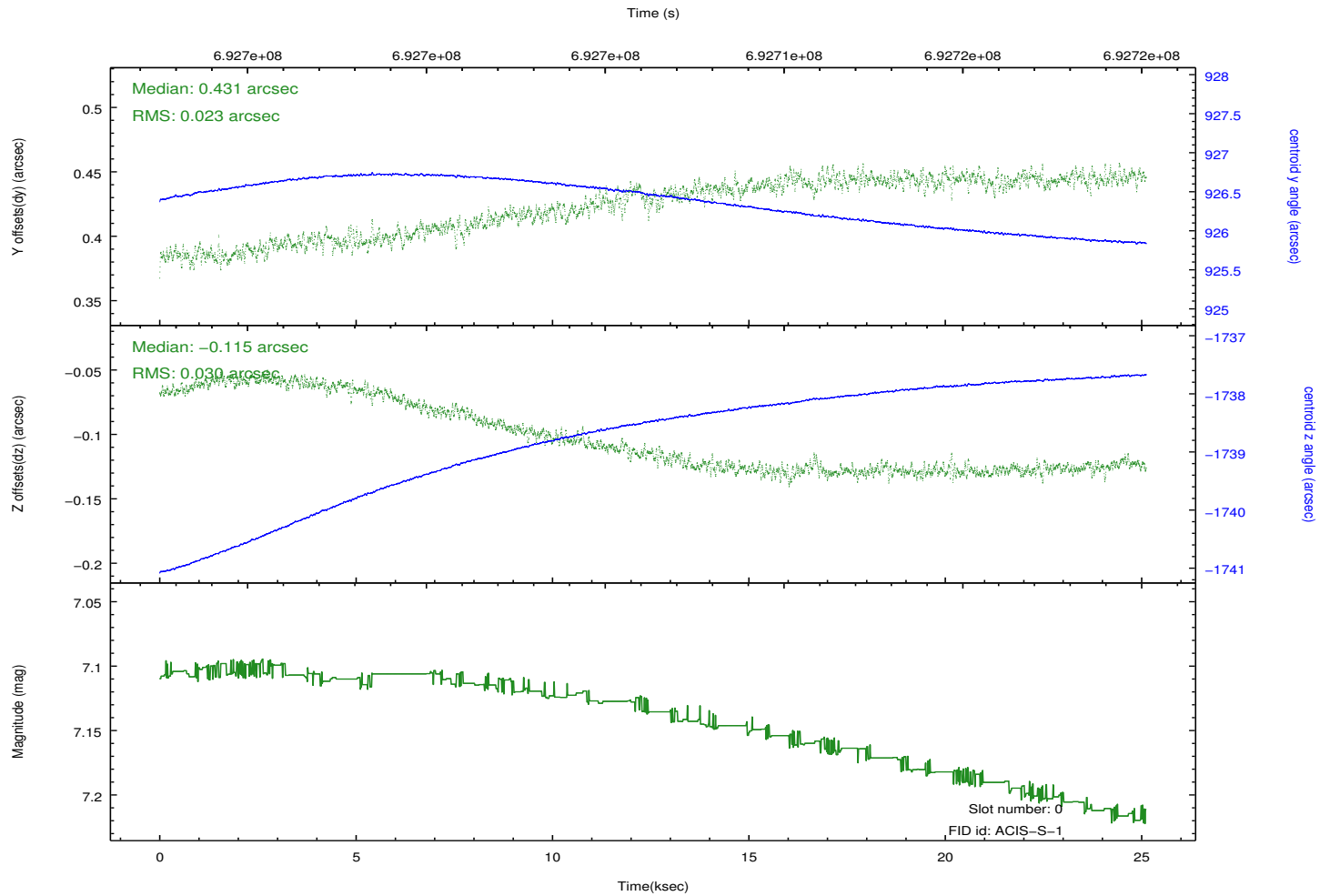
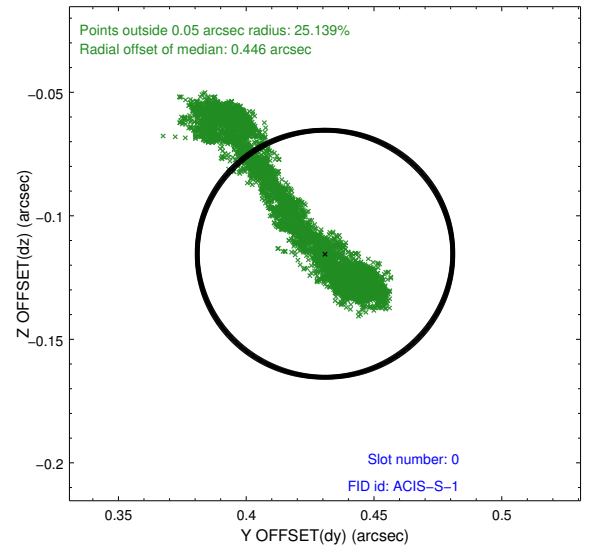
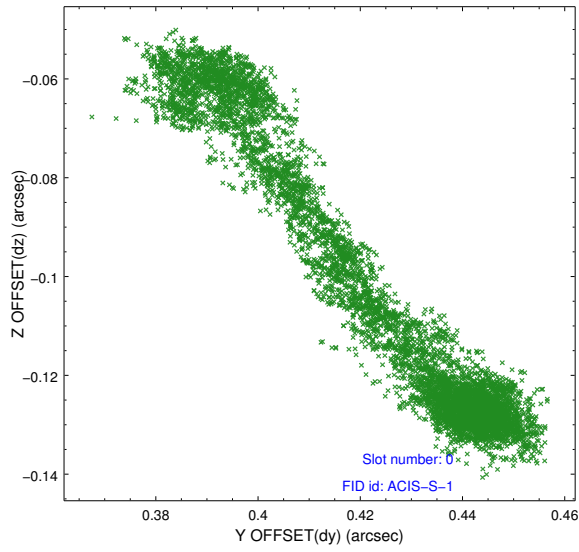


2.4.5 Slot 7

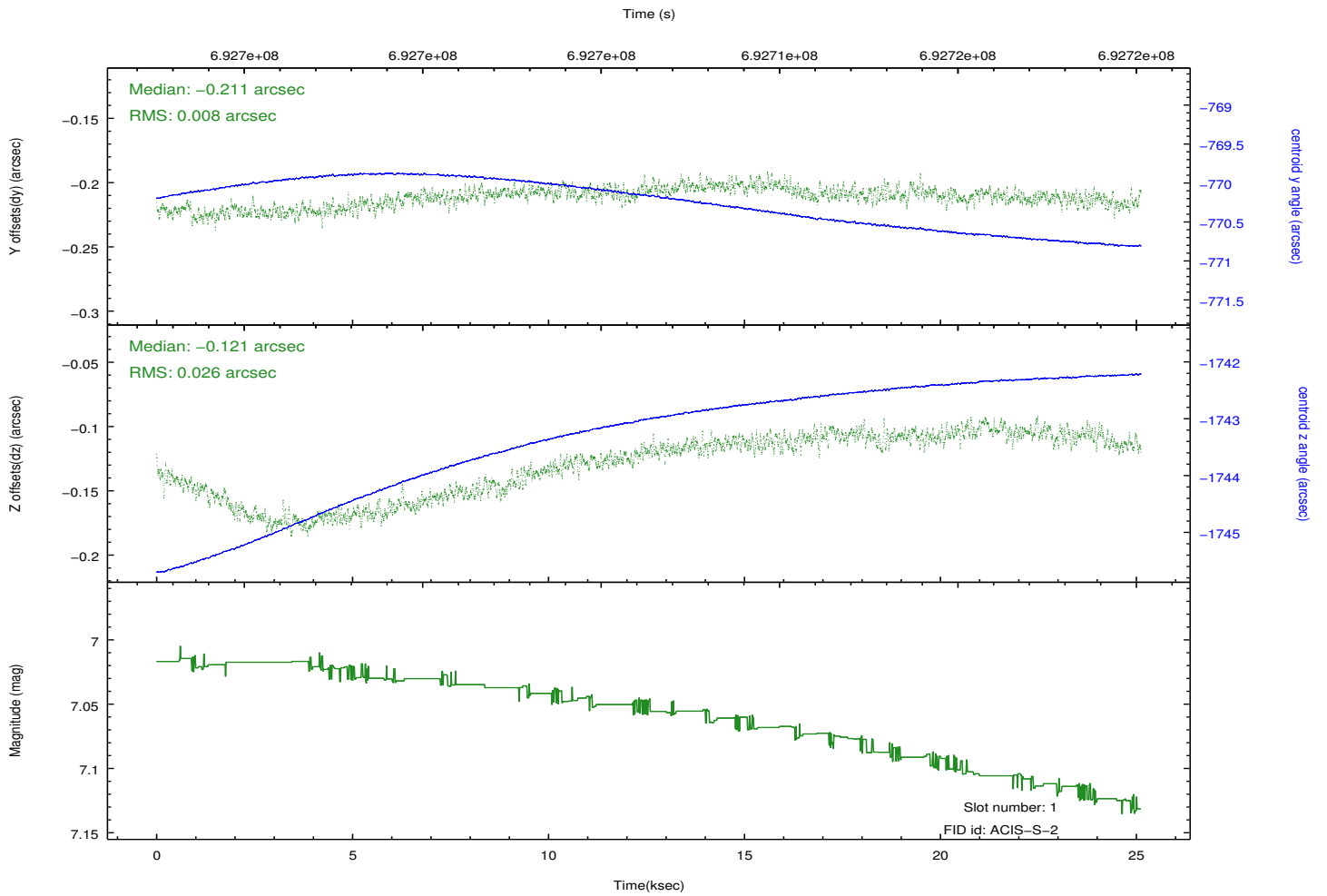
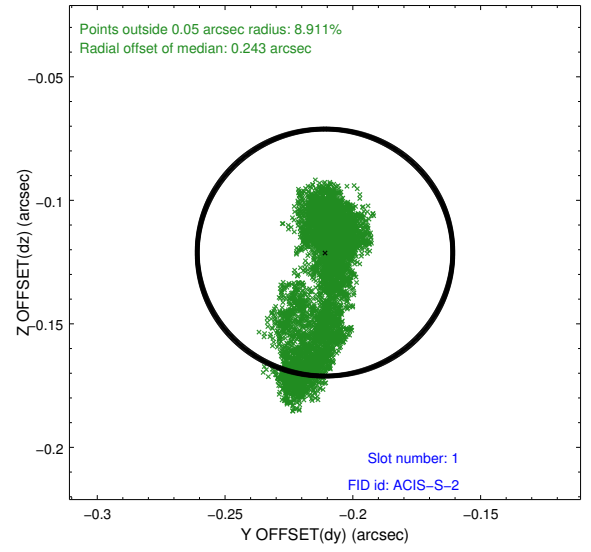
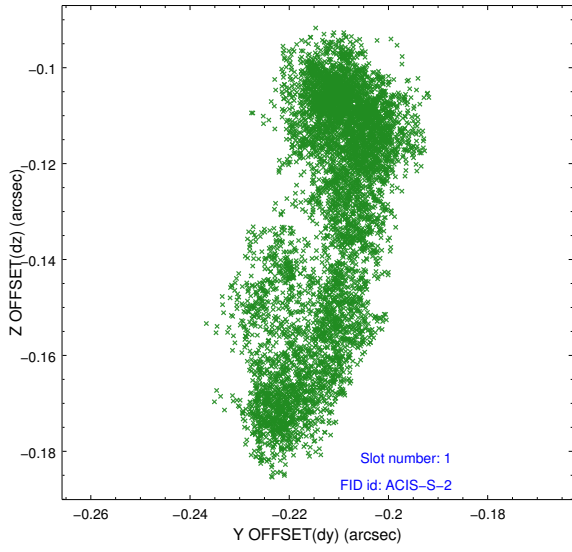


2.5 FID Slots

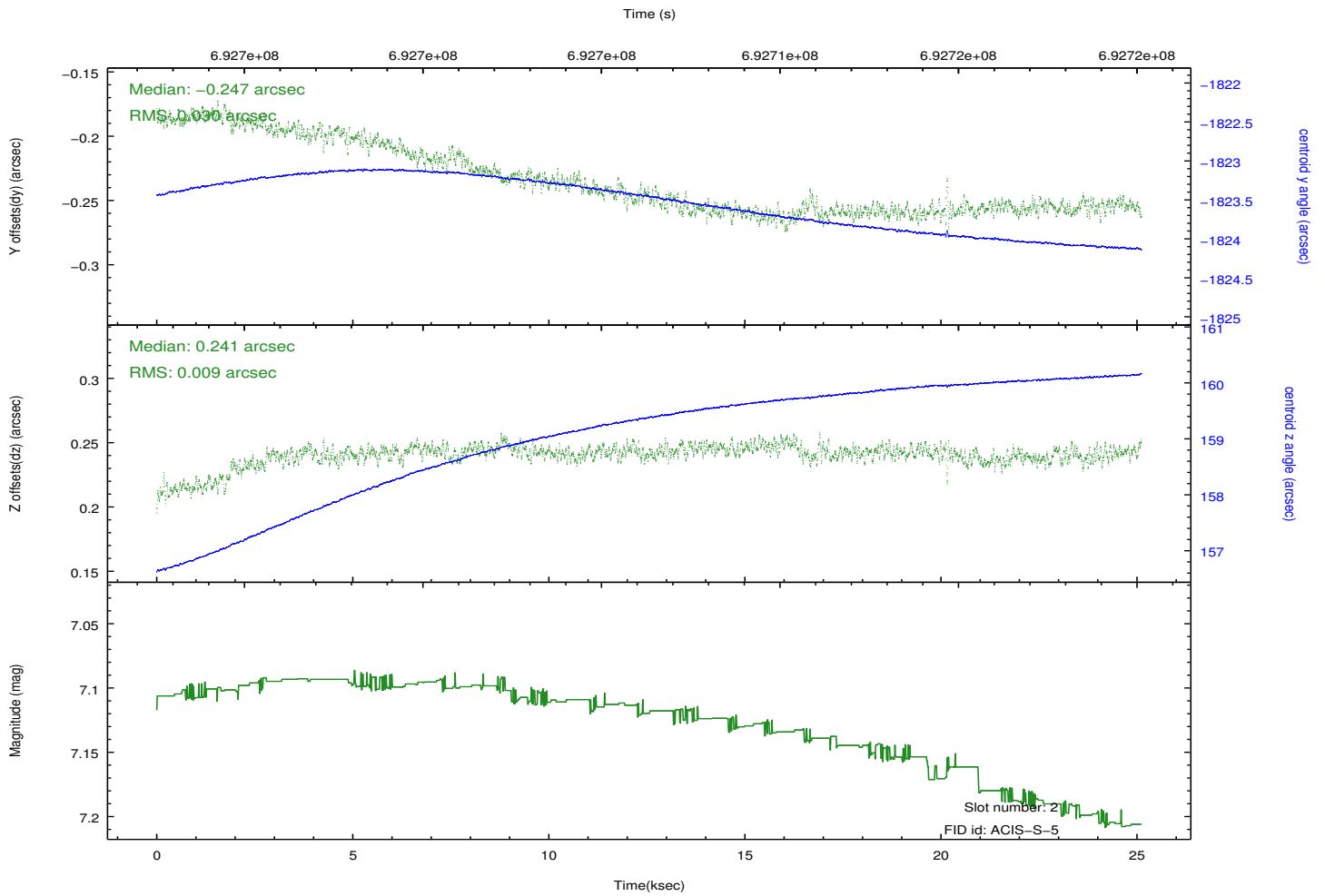
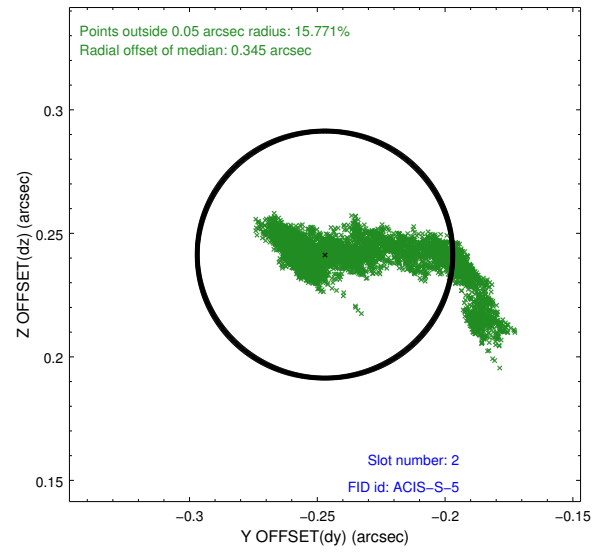
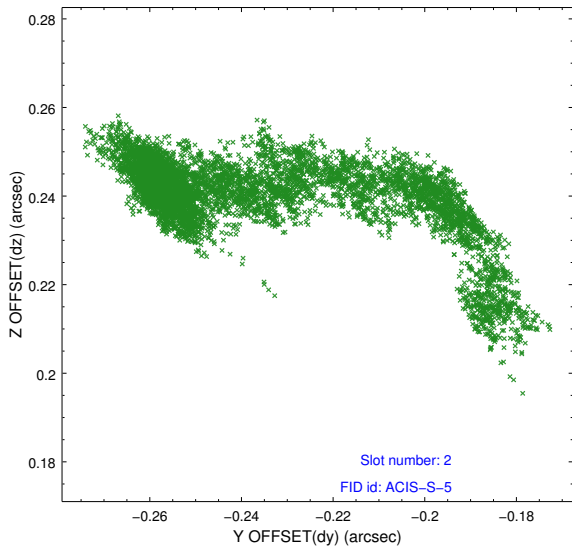
2.5.1 Slot 0



2.5.2 Slot 1

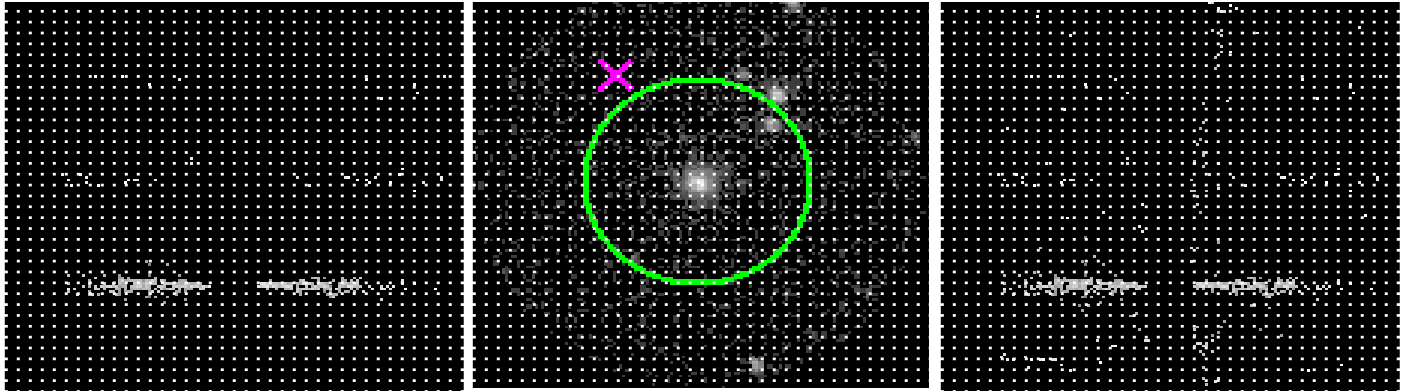


2.5.3 Slot 2



3 Gratings

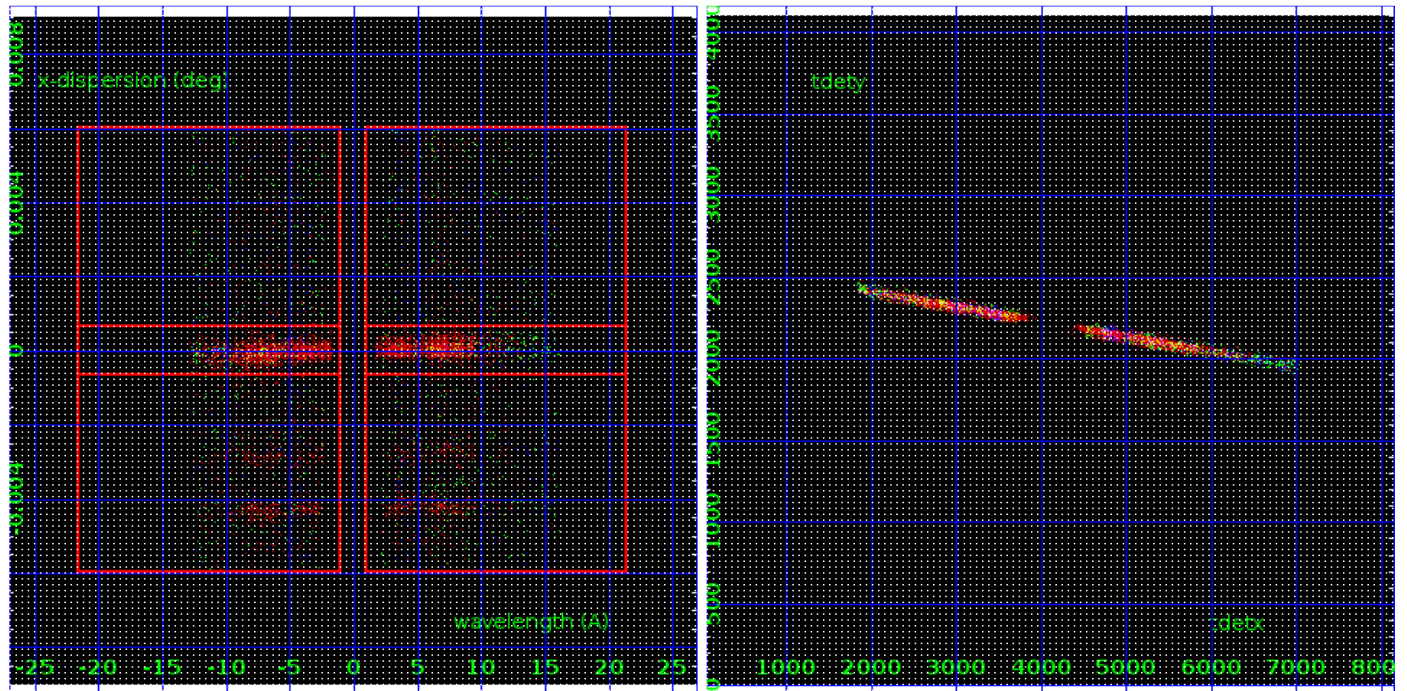
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

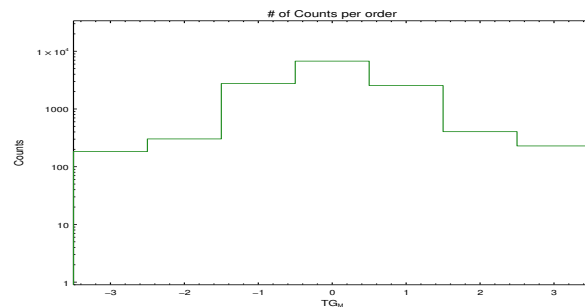
HEG Order Sort ALL



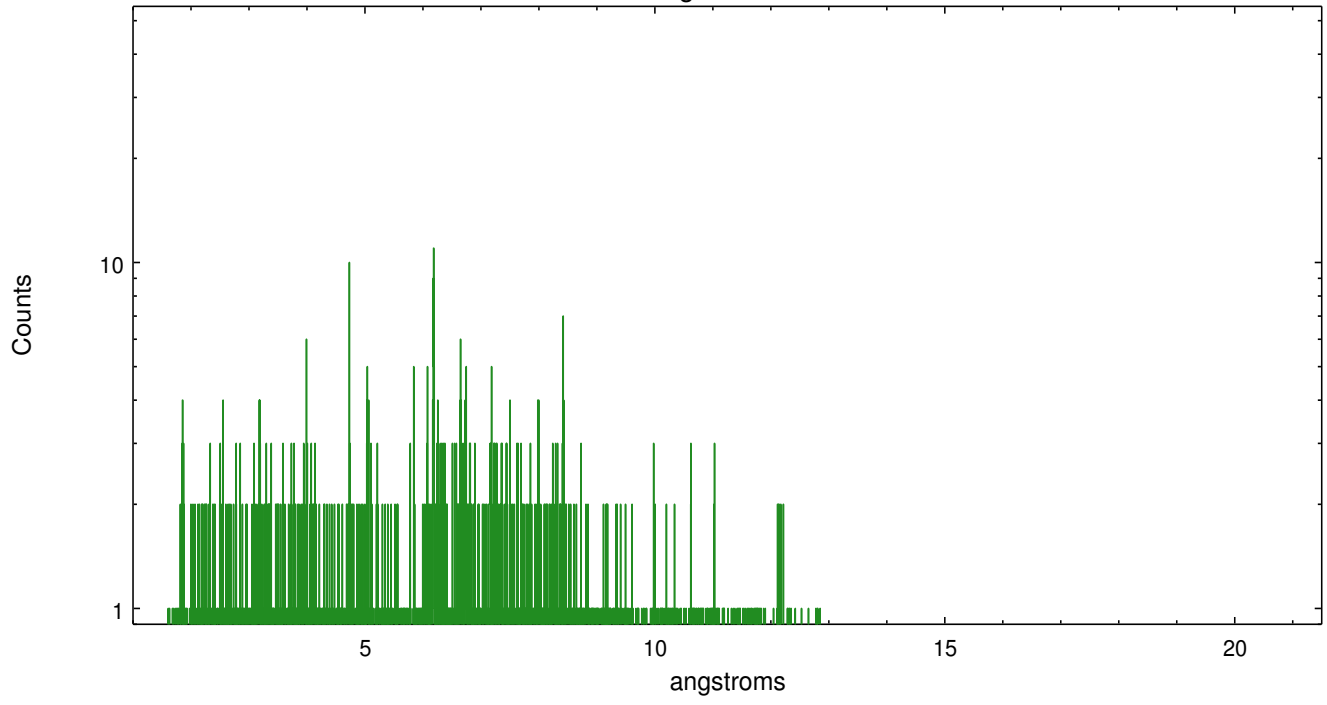
Spot Image HEG

Full Detector HEG

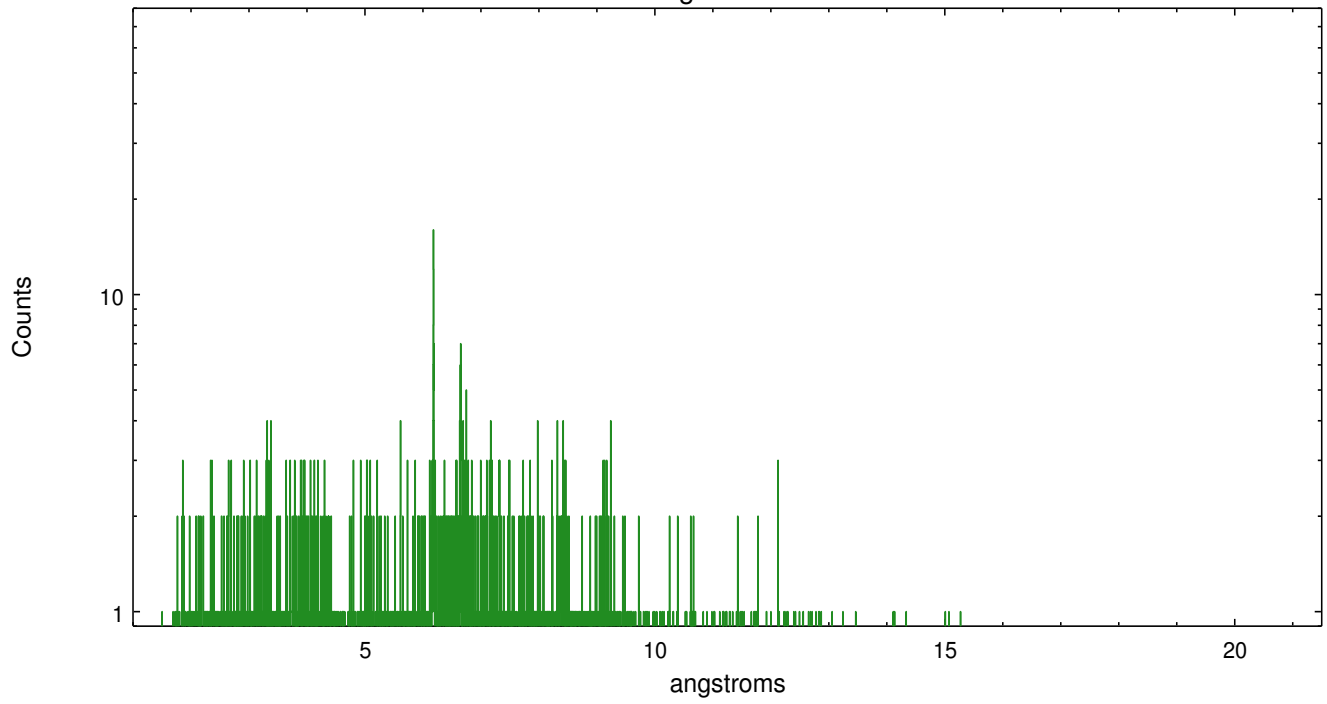
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	183	303	2757	6745	2545	405	229



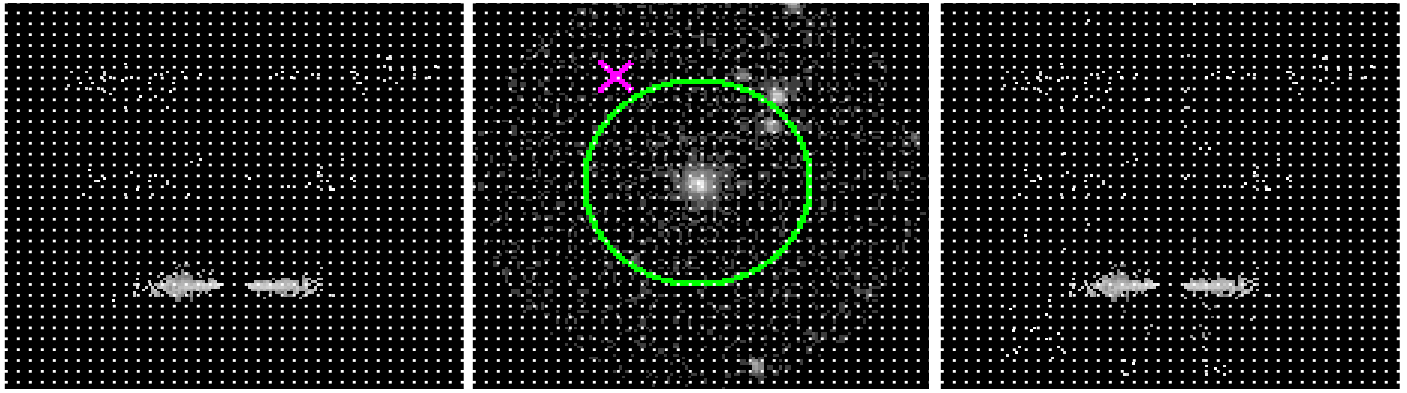
heg order -1



heg order +1



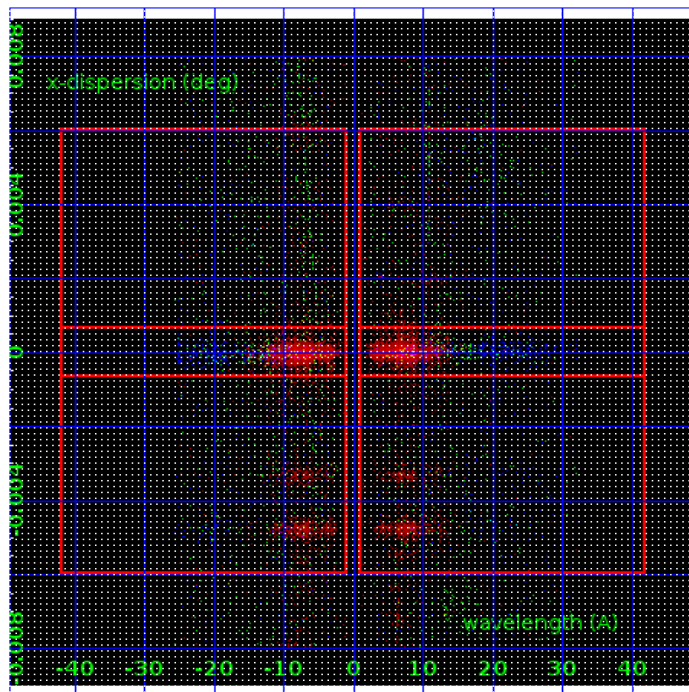
3.2 MEG Arm



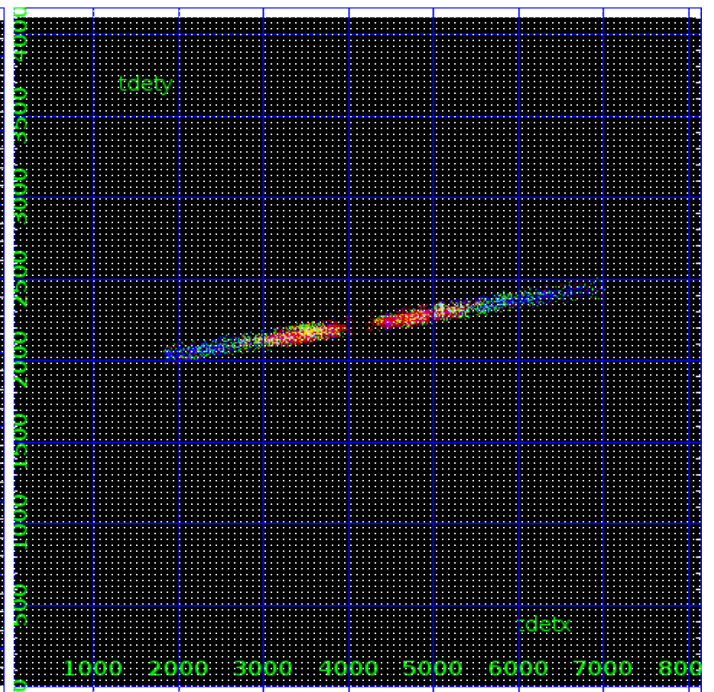
MEG Order Sort 123

MEG Zero Order

MEG Order Sort ALL

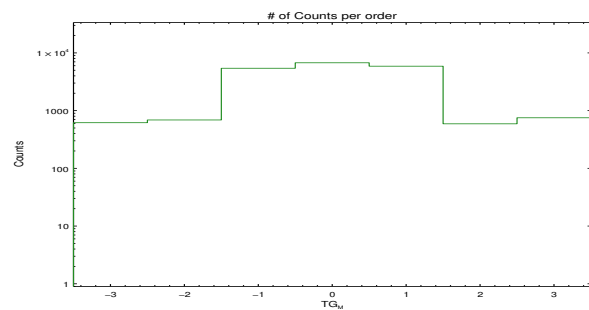


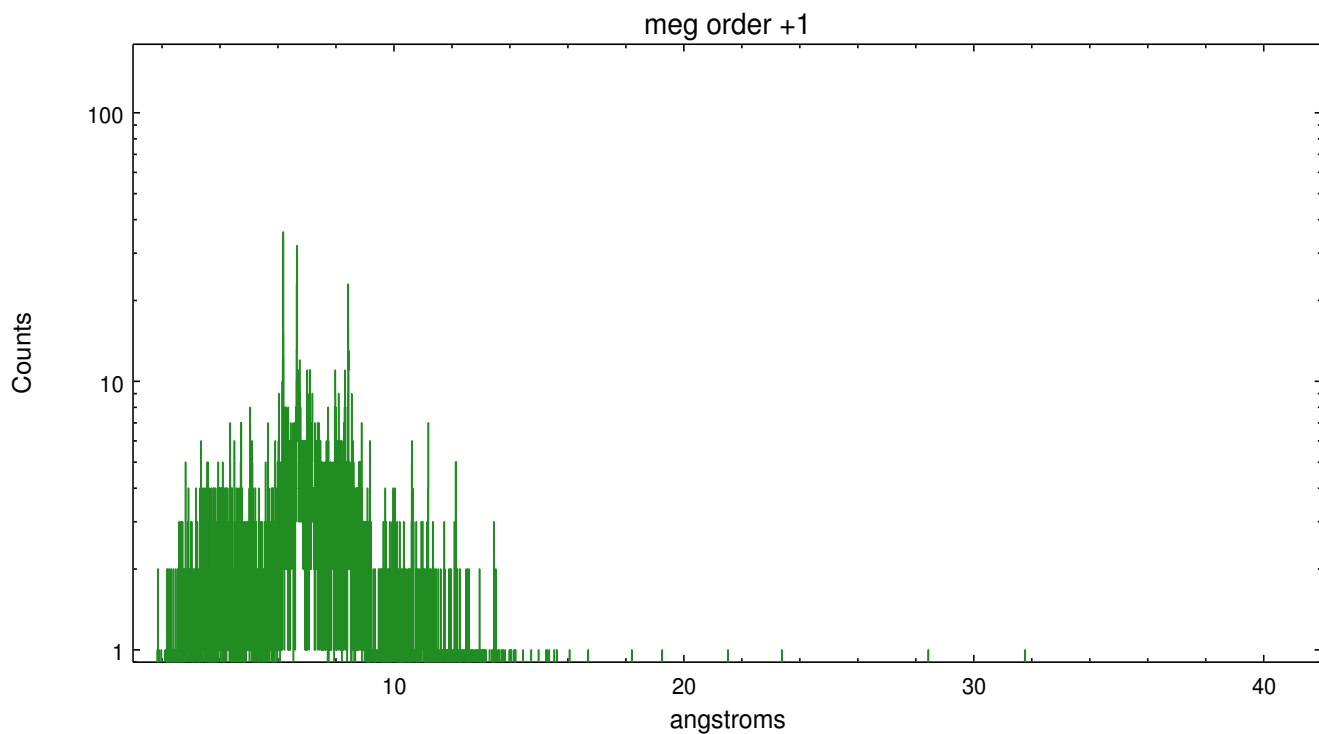
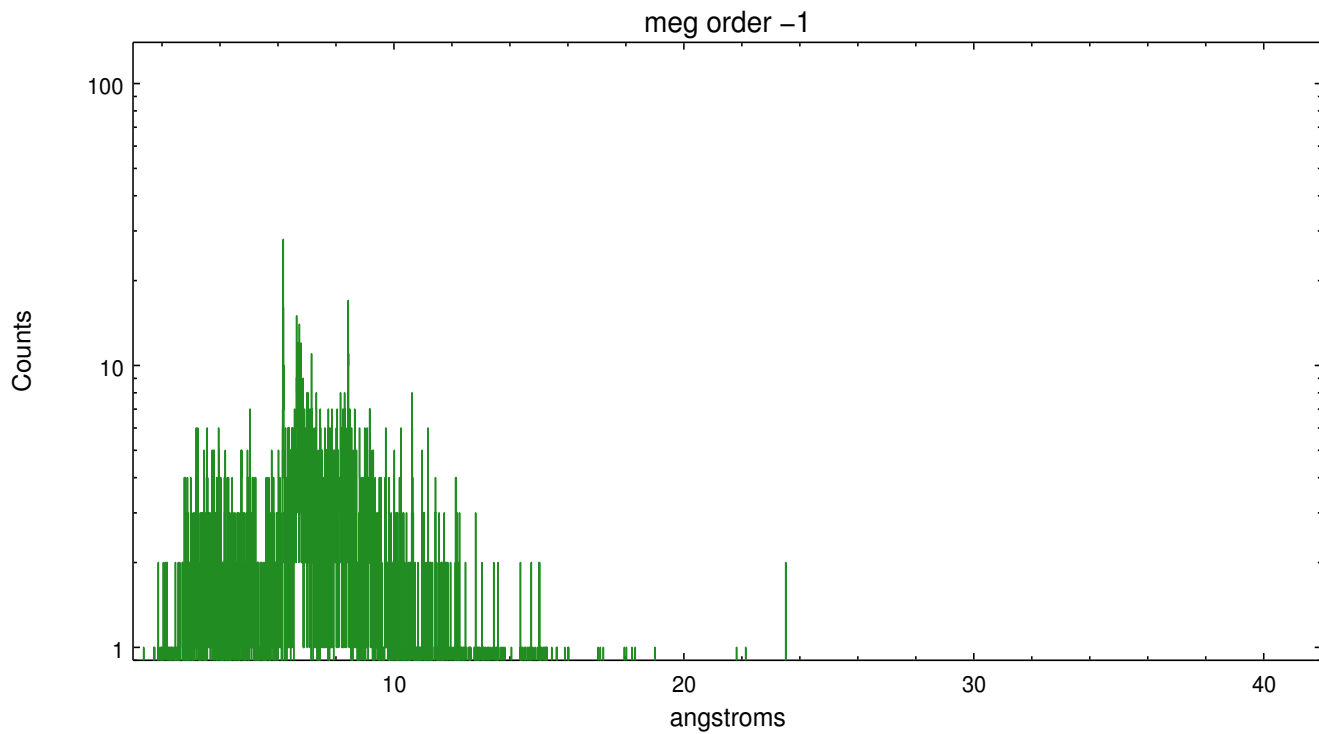
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	618	689	5417	6745	5882	591	752





A Summary

A.1 Status

V&V Scientist	Melania Nynka
V&V Date (YYYY-MM-DD)	2019.12.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.05585628283

A.2 Comments