

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 20842 - L2 Version 1
Chandra X-Ray Center

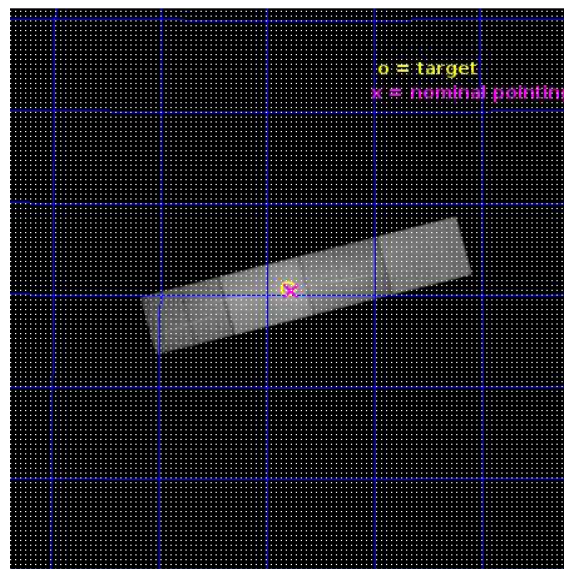
L2 Processing Date : Nov 10 2017

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1 Front

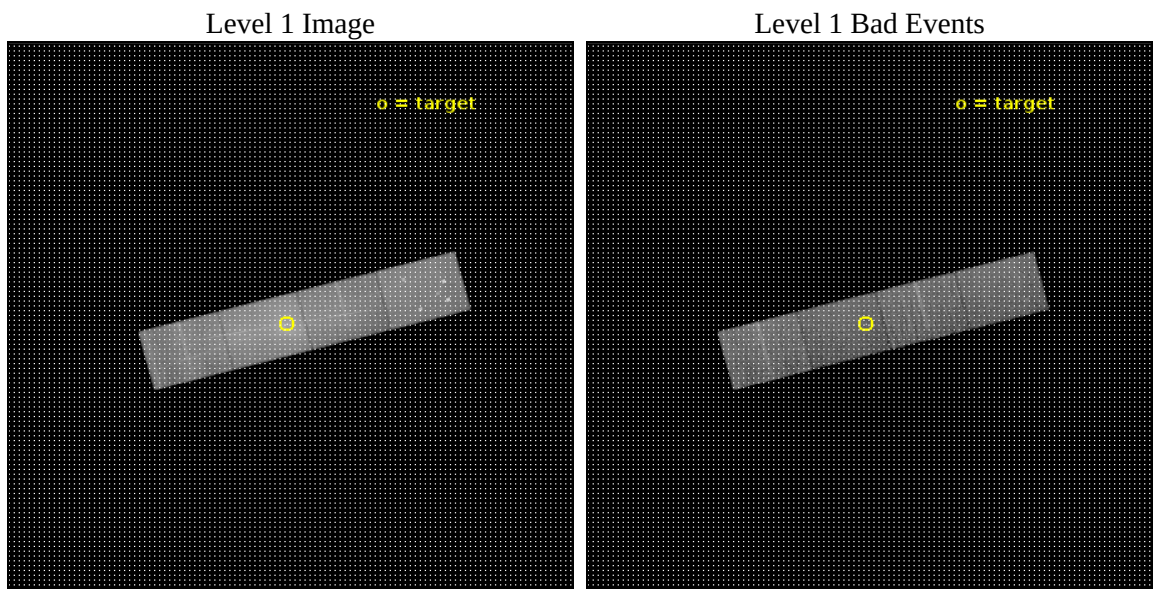
seq_num	703554	Sequence number
obs_id	20842	Observation id
title	Chandra/HETG Observations of NGC1275	Proposal title
observer	Christopher Reynolds	Principal investigator
object	NGC1275	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.950417	Observer's specified target RA [deg]
dec_targ	41.511667	Observer's specified target Dec [deg]
ra_nom	49.943406565058	Nominal RA [deg]
dec_nom	41.50837103216	Nominal Dec [deg]
roll_nom	165.1612742131	Nominal Roll [deg]
revision	1	Processing version of data
ontime	18645.599814653	Sum of GTIs [s]
livetime	18332.120553194	Livetime [s]
ontime5	18645.599814653	Sum of GTIs [s]
ontime6	18645.599814653	Sum of GTIs [s]
ontime7	18645.599814653	Sum of GTIs [s]
ontime8	18645.599814653	Sum of GTIs [s]
l2events	525817	Number of level 2 events



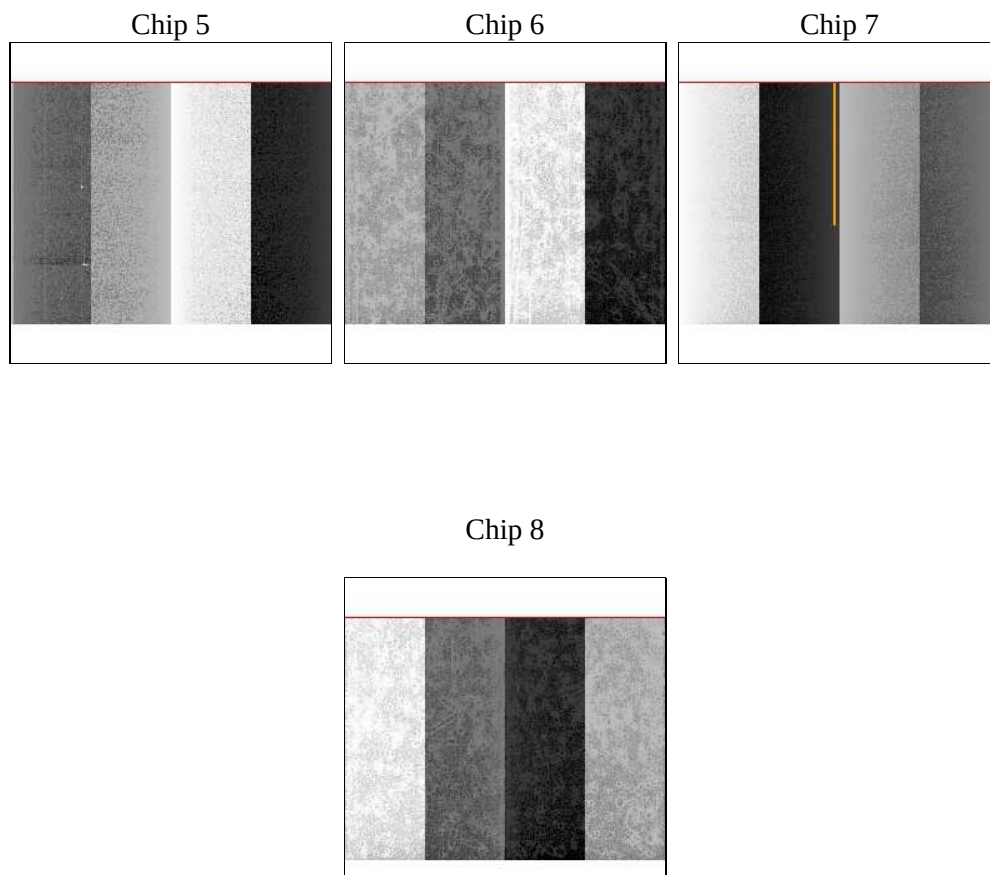
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	18555.553000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	18645.599814653	Sum of GTIs [s]
caldsver	4.7.6	 	ontime5	18645.599814653	Sum of GTIs [s]
date	2017-11-10T19:31:43	Date and time of file creation	ontime6	18645.599814653	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	18645.599814653	Sum of GTIs [s]
			ontime8	18645.599814653	Sum of GTIs [s]
			l1events	922170	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4056.54, 4121.57)	src1a sky pixel position

2.1.4 Events

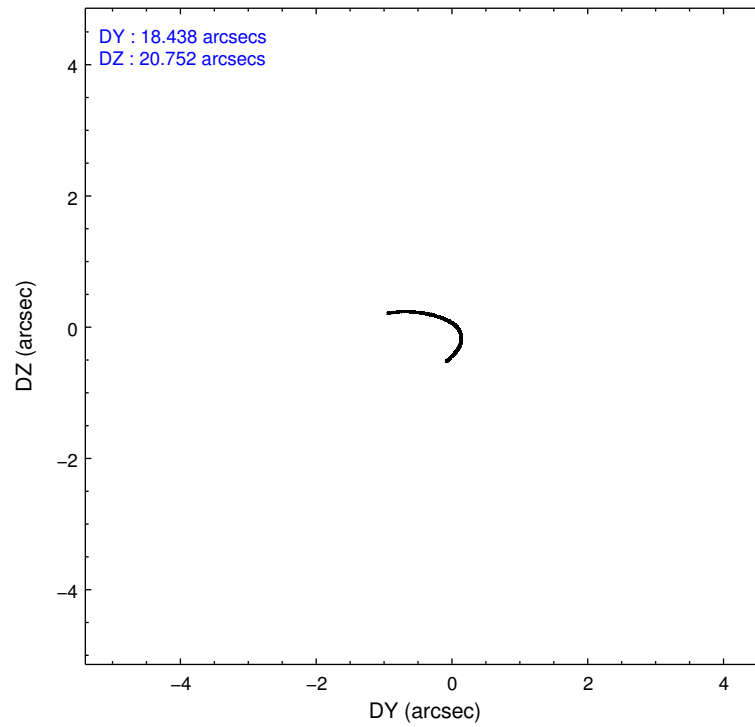
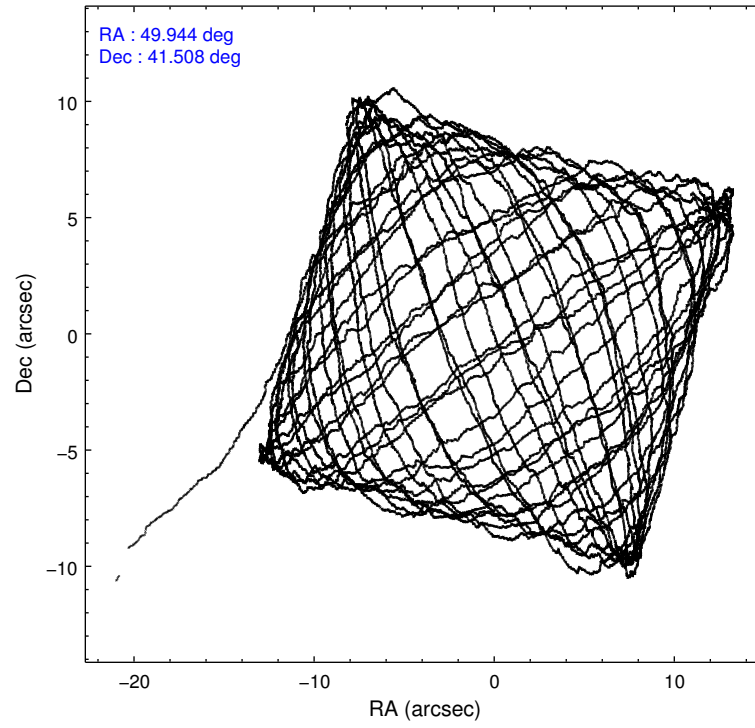
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	202955	205143	331613	182459
rejected events	81143	86925	73004	94516
rejected %	39%	42%	22%	51%

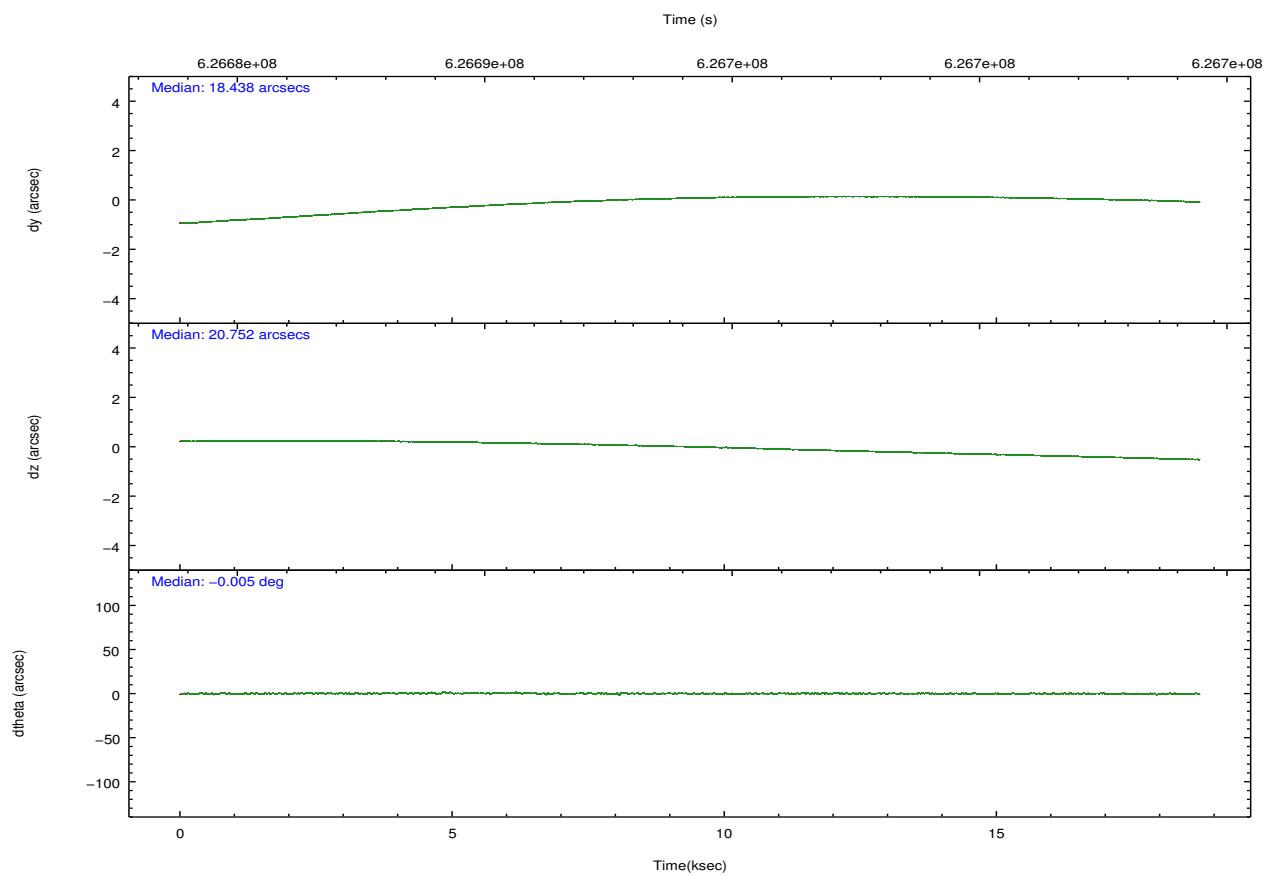
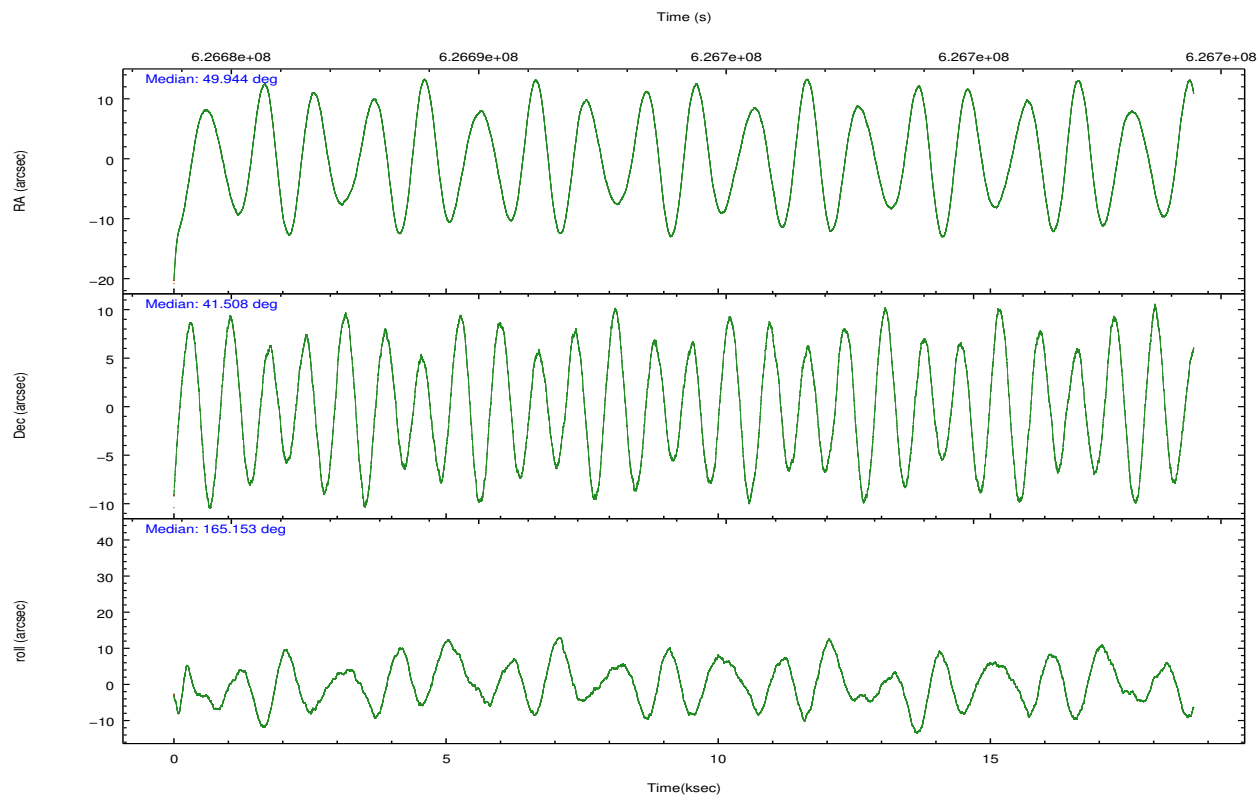
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	28833	85146	52097	52339
	14%	41%	15%	28%
grade 1 events	362	298	315	241
	0%	0%	0%	0%
grade 2 events	36266	15706	63789	14105
	17%	7%	19%	7%
grade 3 events	5016	5133	27221	5448
	2%	2%	8%	2%
grade 4 events	5026	5073	27092	5320
	2%	2%	8%	2%
grade 5 events	11567	5111	14602	7082
	5%	2%	4%	3%
grade 6 events	46683	7171	88455	10740
	23%	3%	26%	5%
grade 7 events	69202	81505	58042	87184
	34%	39%	17%	47%

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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	49.978656	49.94340656505832	CCD I2 on	N	N
[deg] Pointing Dec	41.515888	41.50837103216049	CCD I3 on	N	N
[deg] Pointing Roll	164.981285	165.1612742130957	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)	626684959.184000	626683894.38963	CCD S5 on	O2	N
Observation start date	2017-11-10T07:08:10	2017-11-10T06:51:34	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	626703514.184000	626704047.42831	On-chip summing requested	N	N
Observation end date	2017-11-10T12:17:25	2017-11-10T12:27:27	Subarray requested	CUSTOM	CUSTOM
Read mode	TIMED	TIMED	Subarray start row	125	125
			Subarray row count	774	774
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	2.4

2.3 Aspect



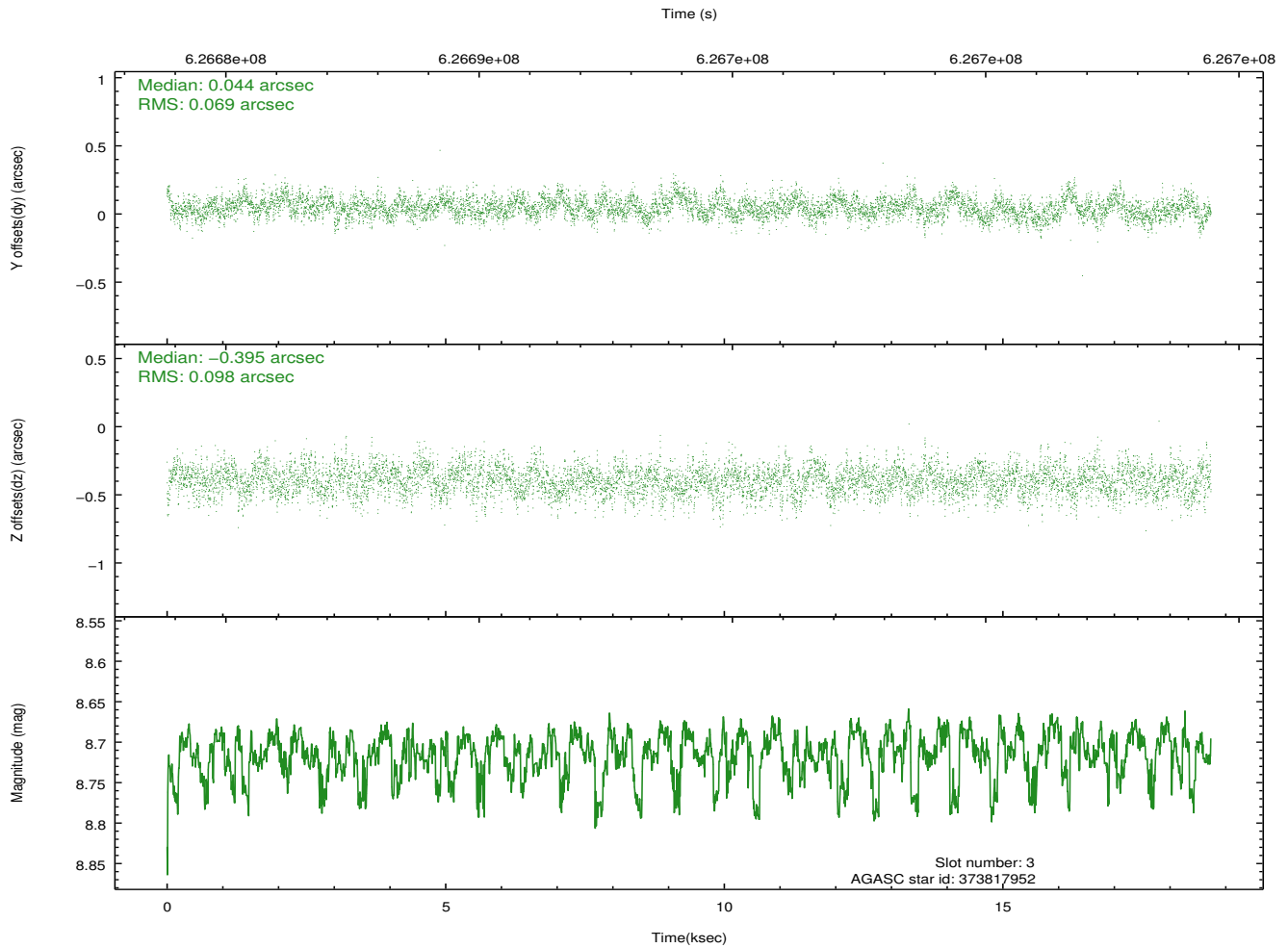
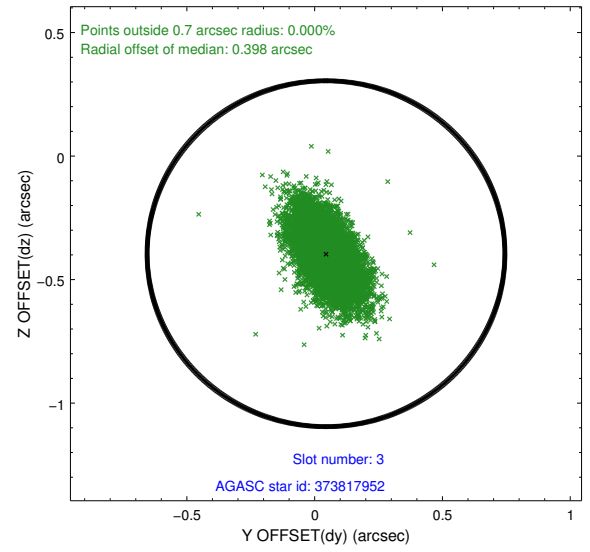
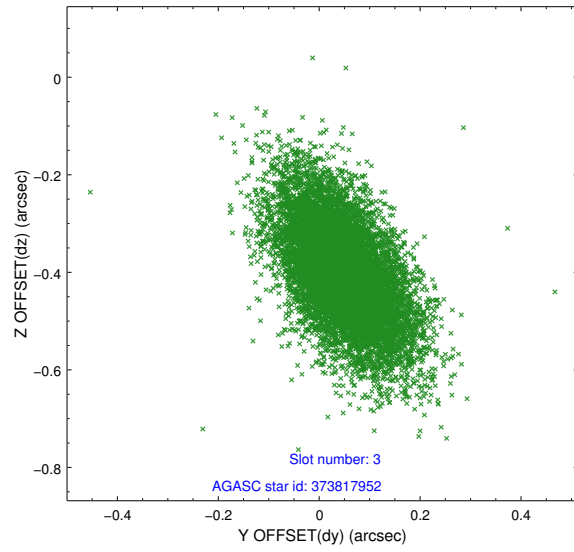


Slot Statistics

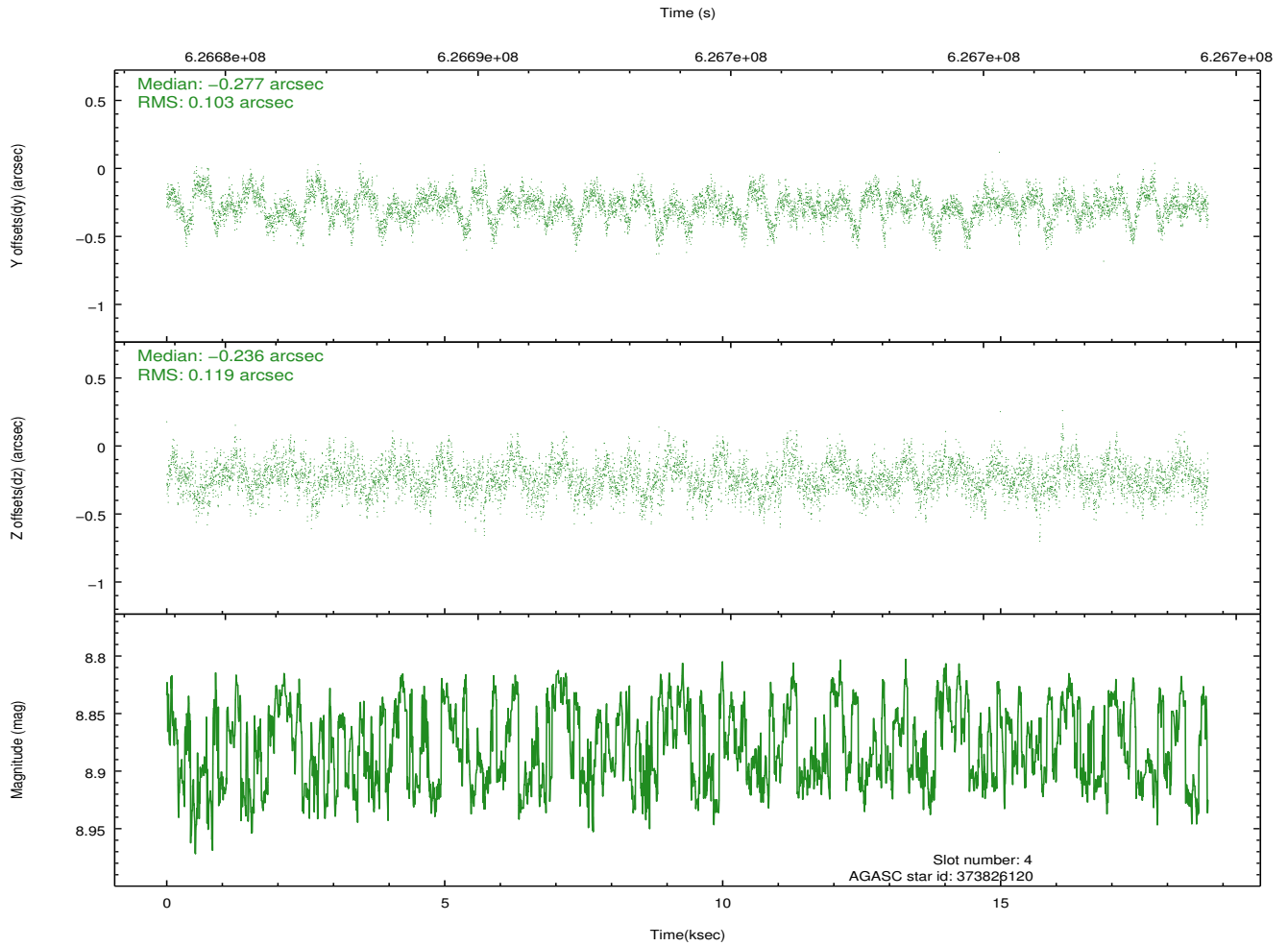
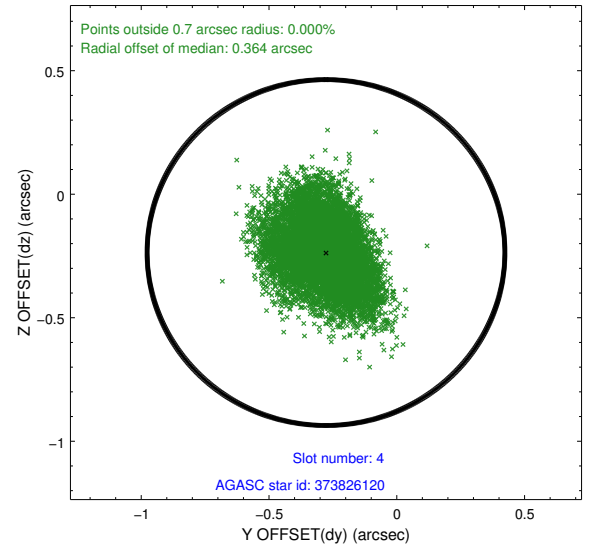
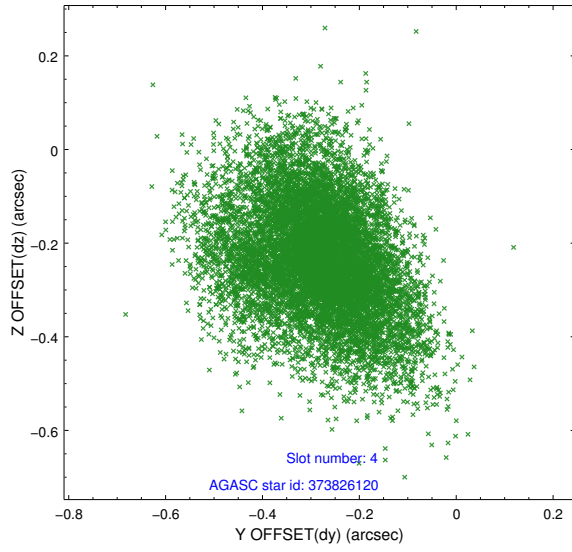
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.06	4569	-0.228	-0.097	0.016	0.027	0.000000	0.000000	-771.54	-1742.30
1	FID		ACIS-S-4	7.16	4570	0.528	0.135	0.019	0.046	0.000000	0.000000	2142.35	166.25
2	FID		ACIS-S-5	7.15	4570	-0.330	-0.029	0.012	0.022	0.000000	0.000000	-1824.25	159.93
3	GUIDE	used	373817952	8.71	9132	0.044	-0.395	0.123	0.215	49.913424	40.978510	-330.14	1914.49
4	GUIDE	used	373826120	8.88	9130	-0.277	-0.236	0.166	0.277	49.738165	41.186341	321.95	1314.24
5	GUIDE	used	376057824	8.30	9137	0.261	0.455	0.124	0.212	50.665569	41.926280	-1391.98	-1909.46
6	GUIDE	used	374358688	9.26	9130	-0.004	-0.153	0.174	0.284	49.259903	42.100043	2401.78	-1541.04
7	GUIDE	used	374352808	8.78	9122	-0.020	0.334	0.141	0.237	49.969955	42.208621	669.42	-2401.83

2.4 Star Slots

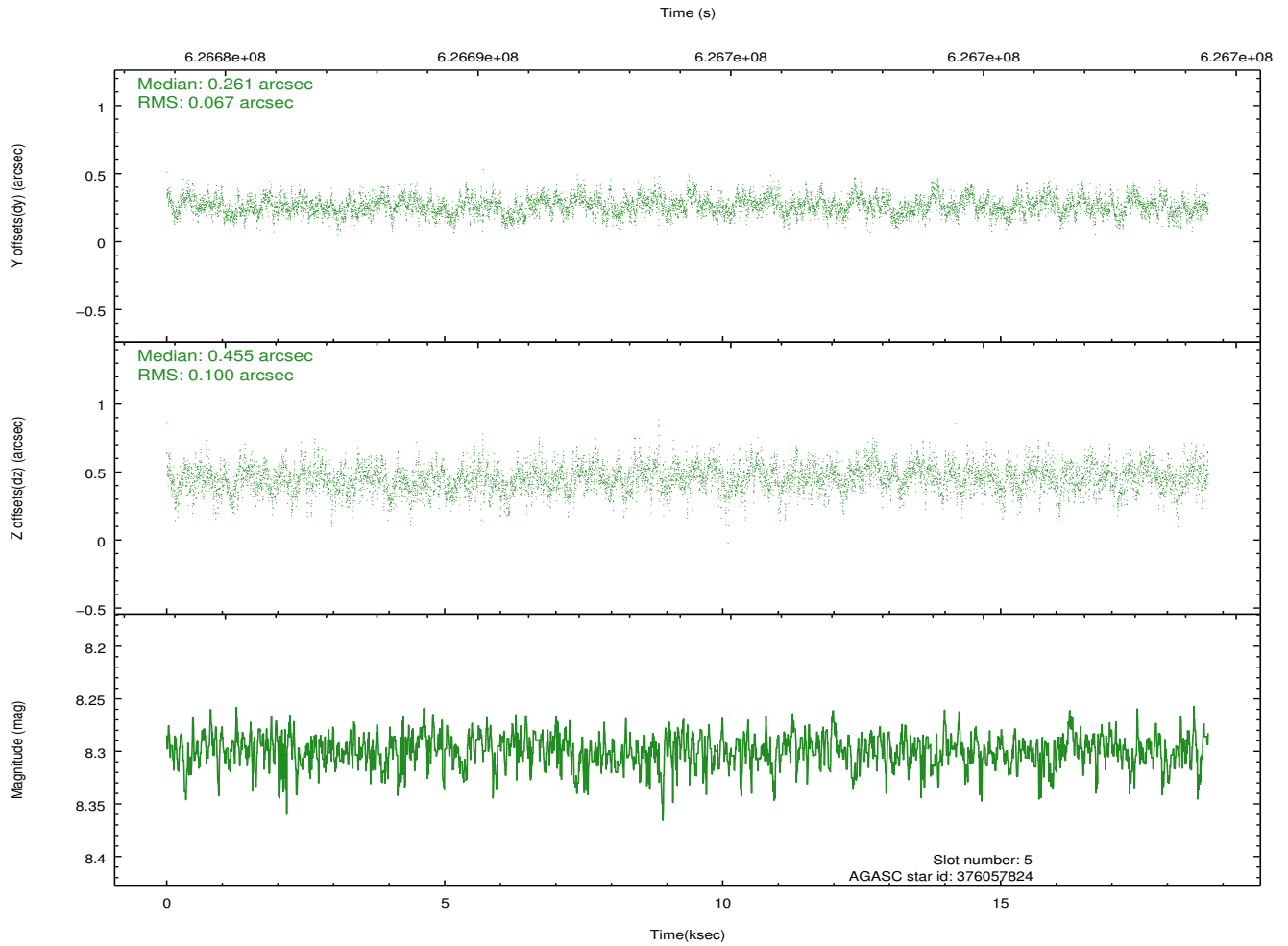
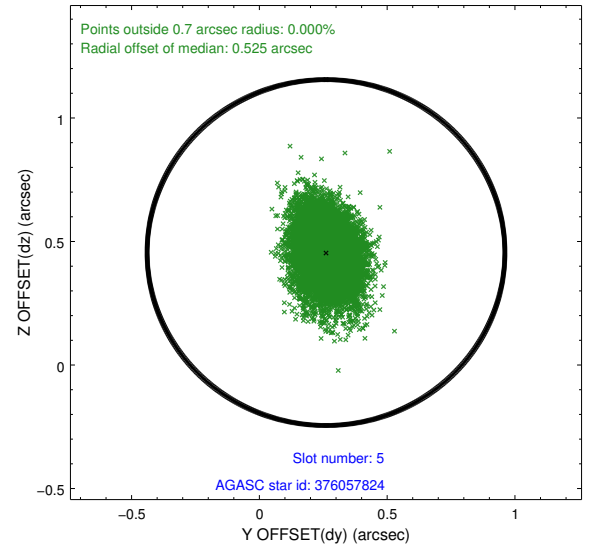
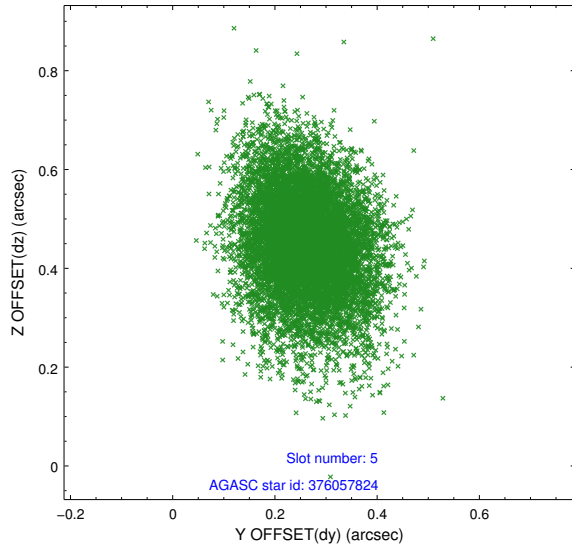
2.4.1 Slot 3



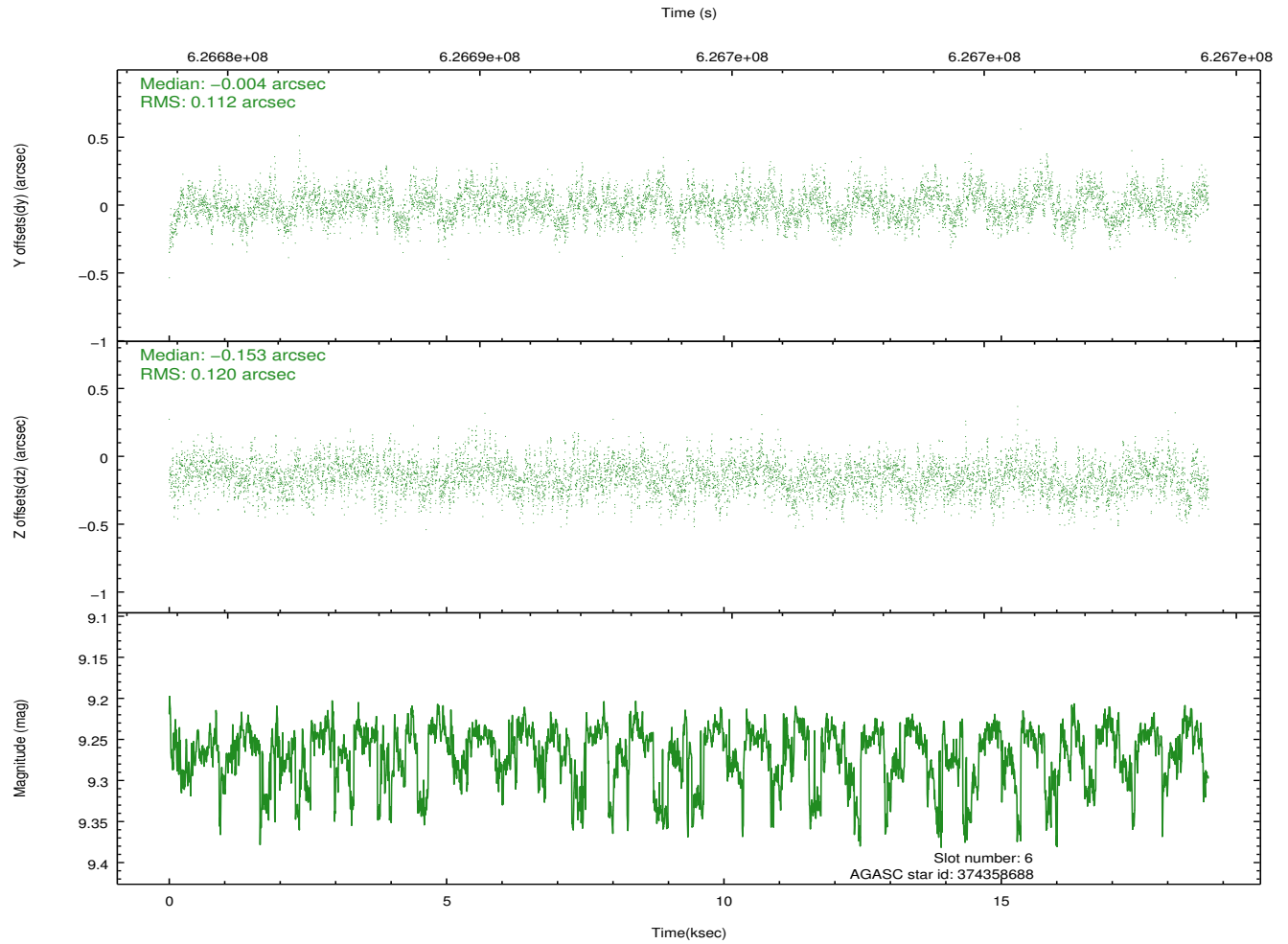
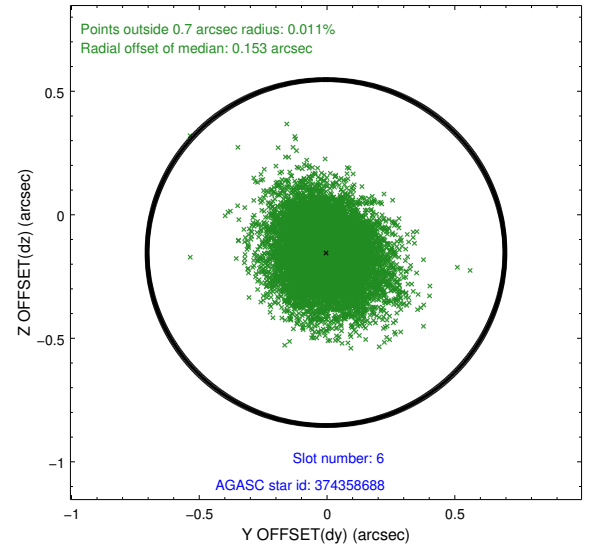
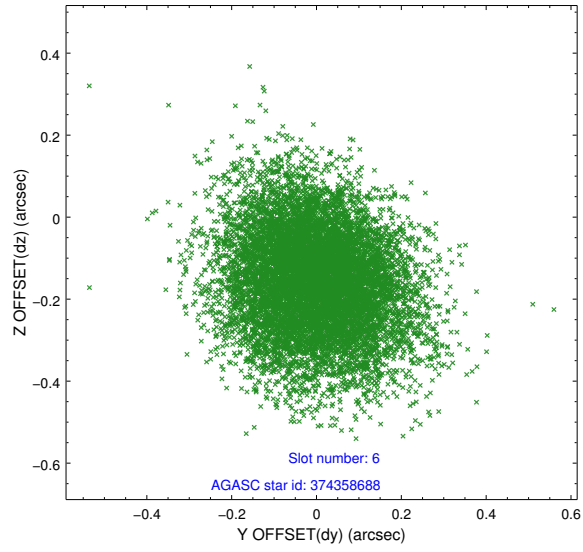
2.4.2 Slot 4



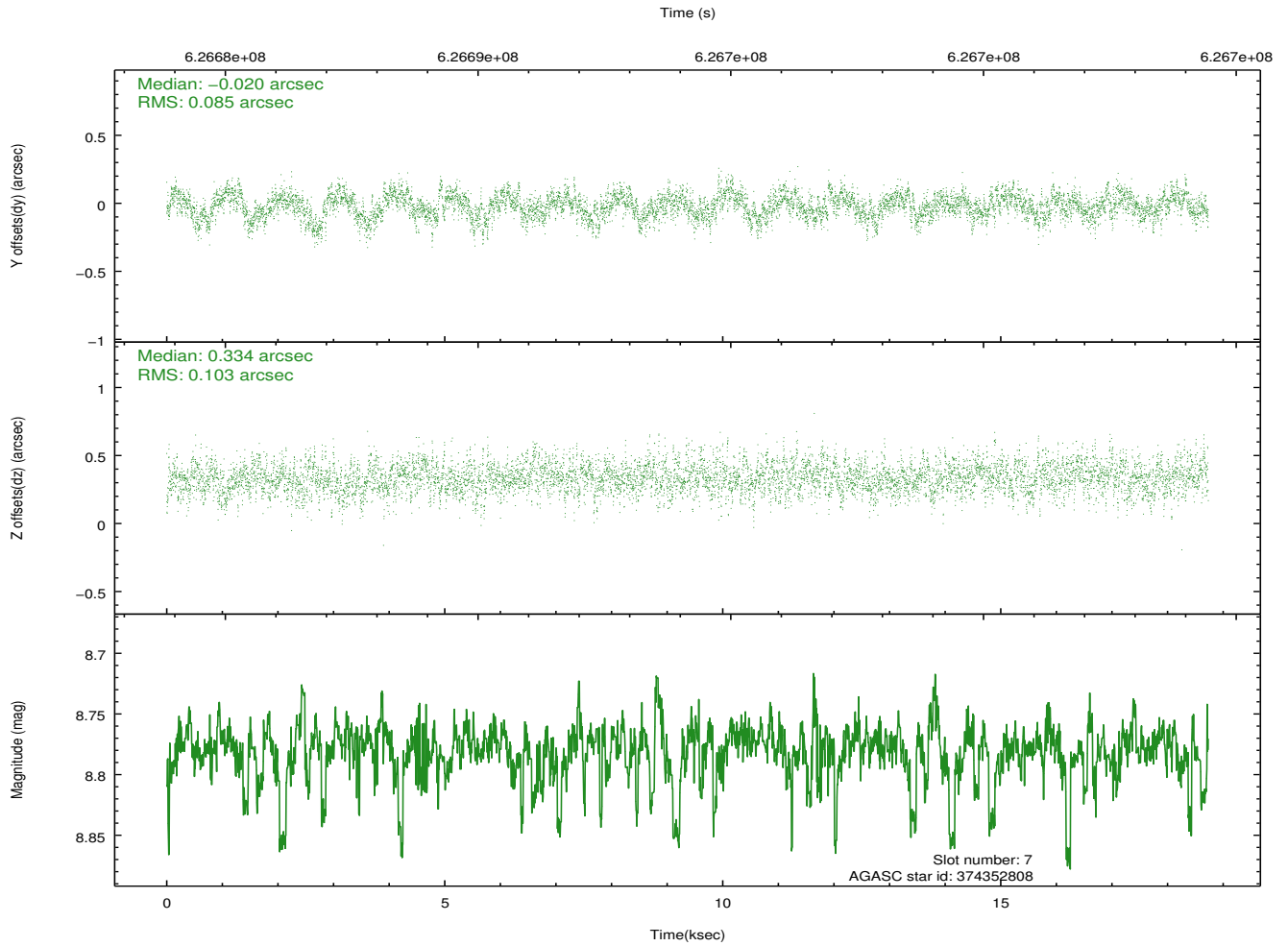
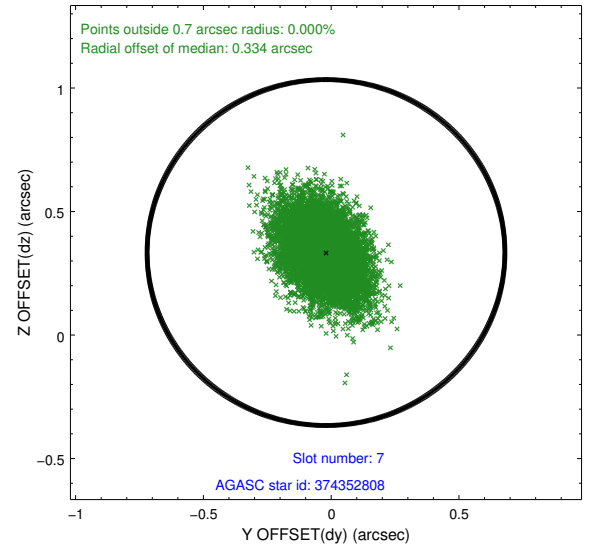
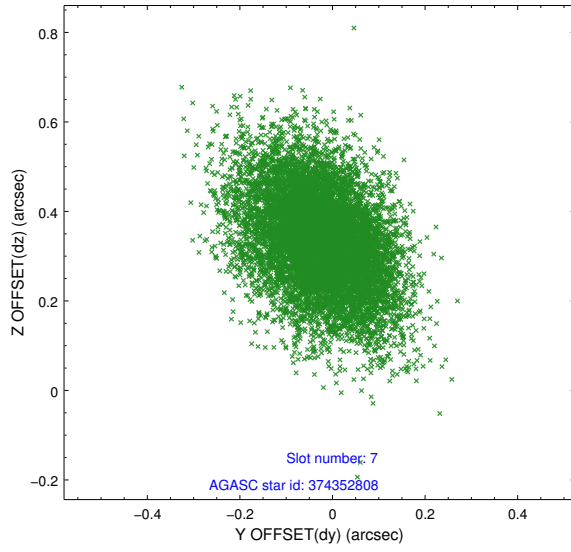
2.4.3 Slot 5



2.4.4 Slot 6

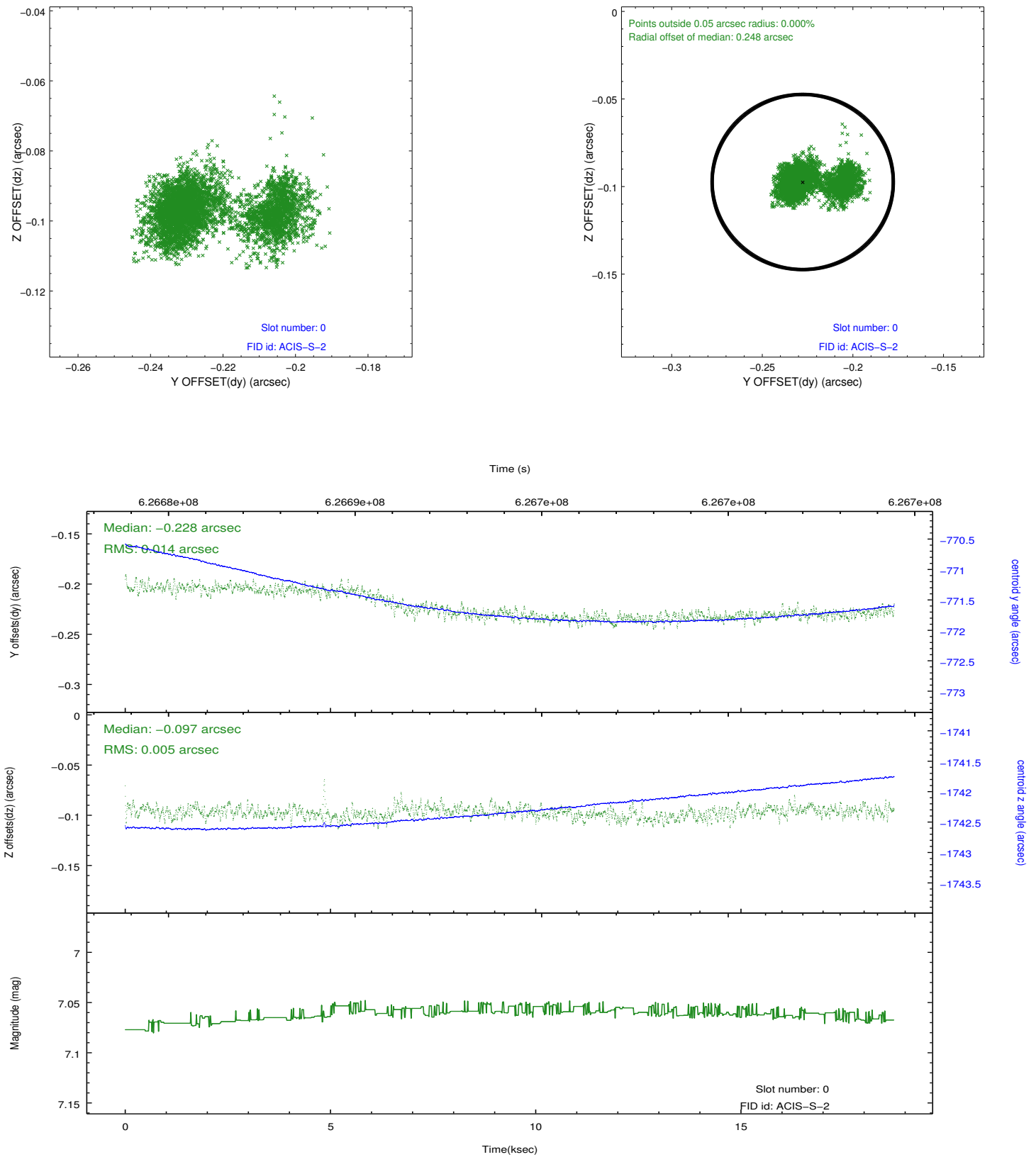


2.4.5 Slot 7

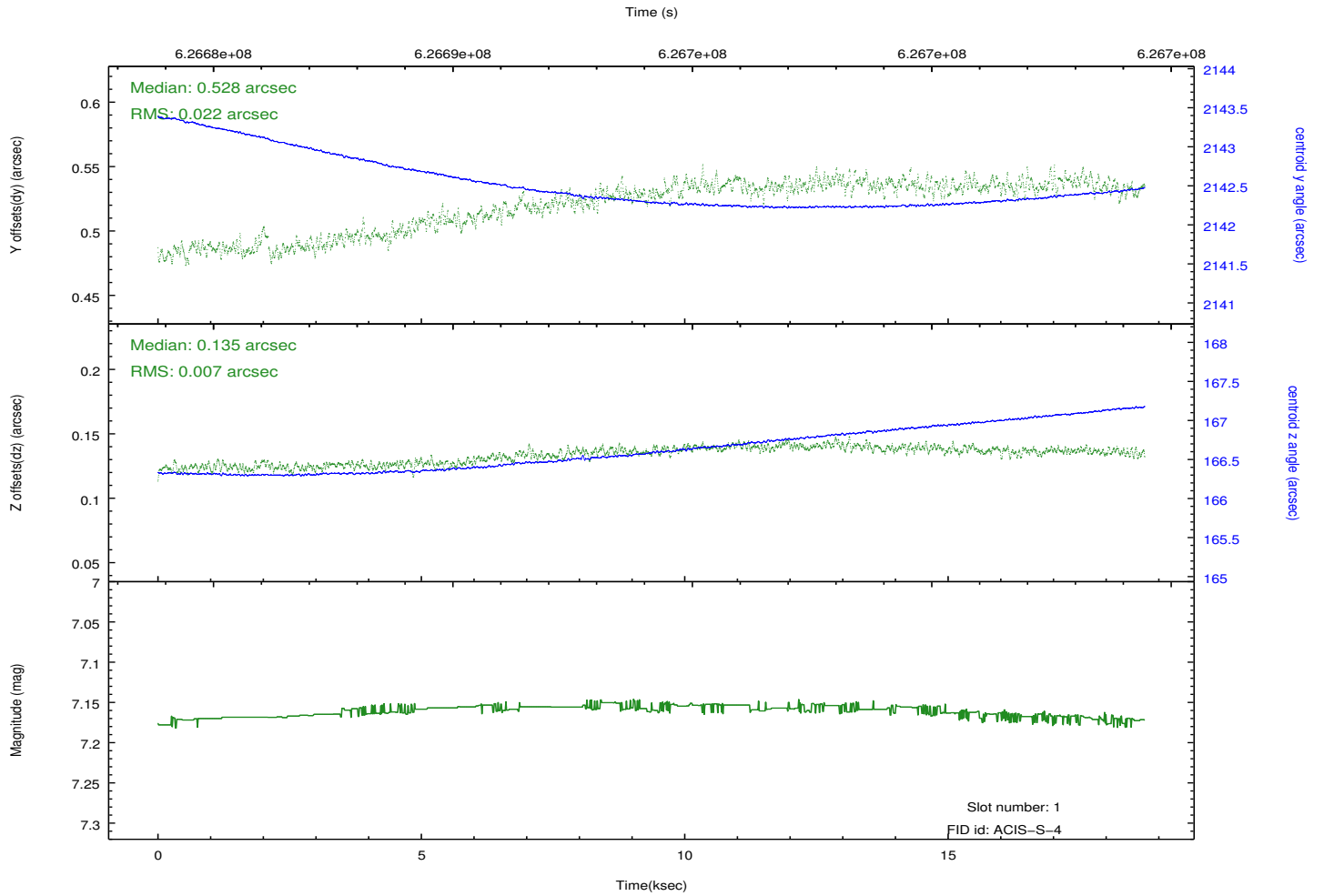
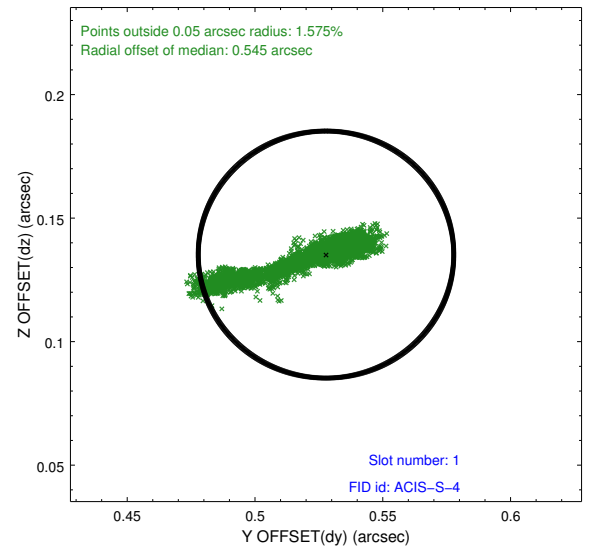
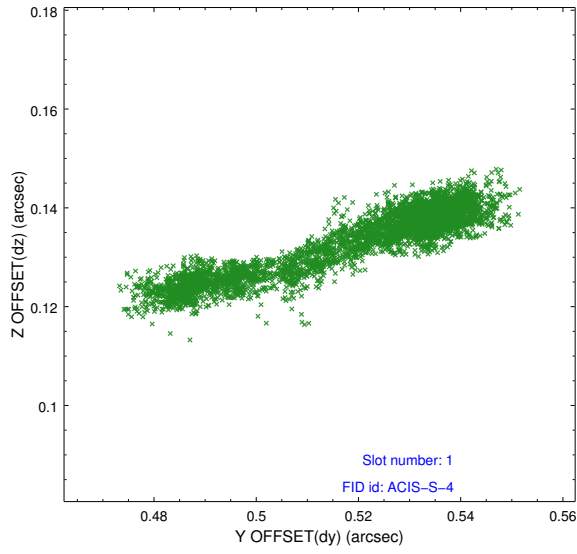


2.5 FID Slots

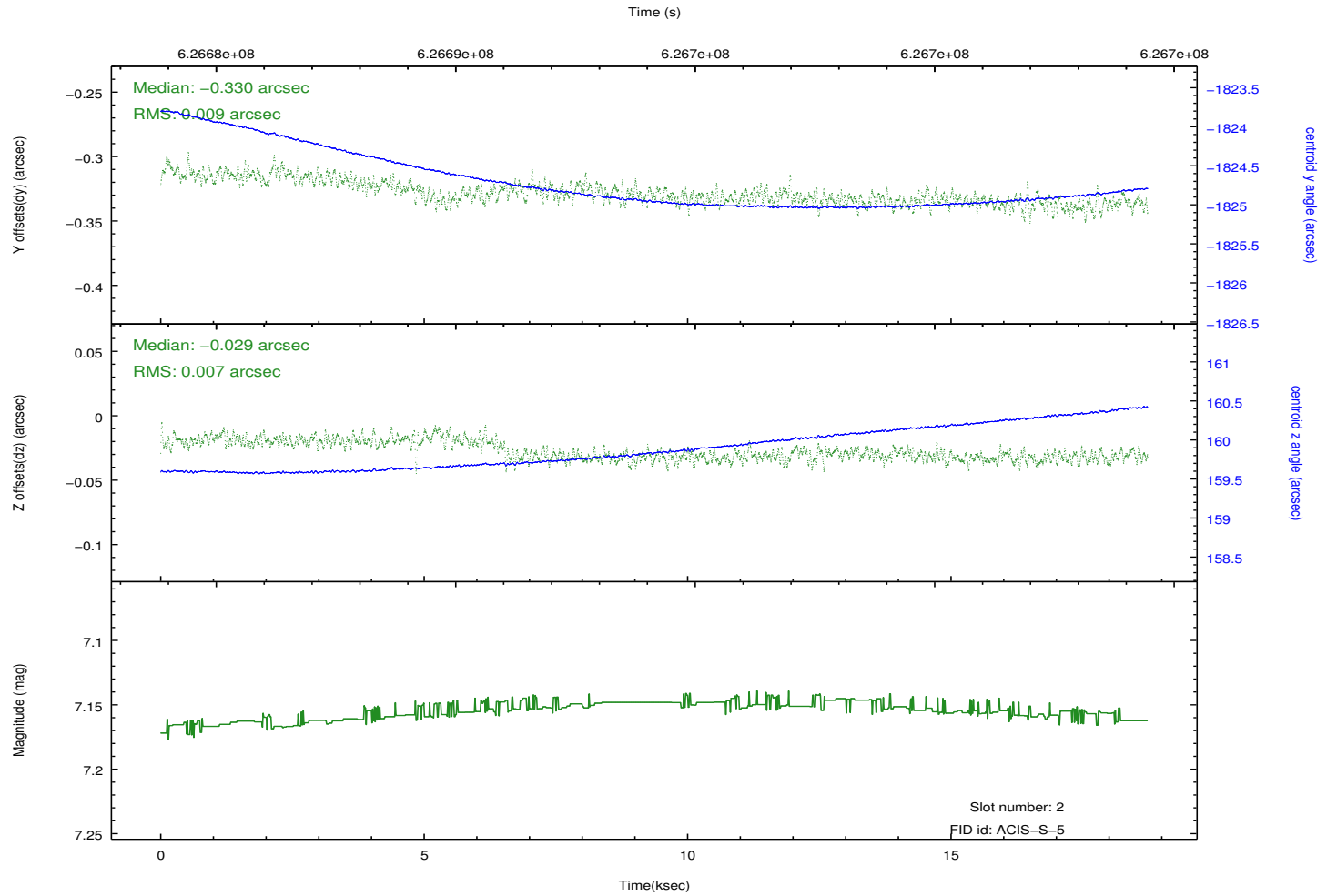
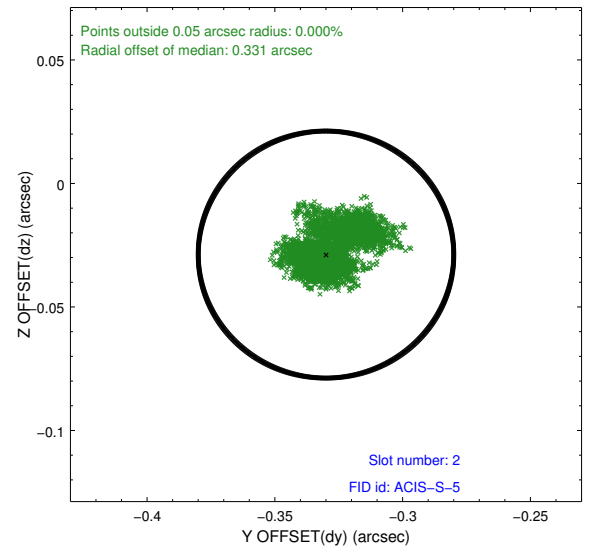
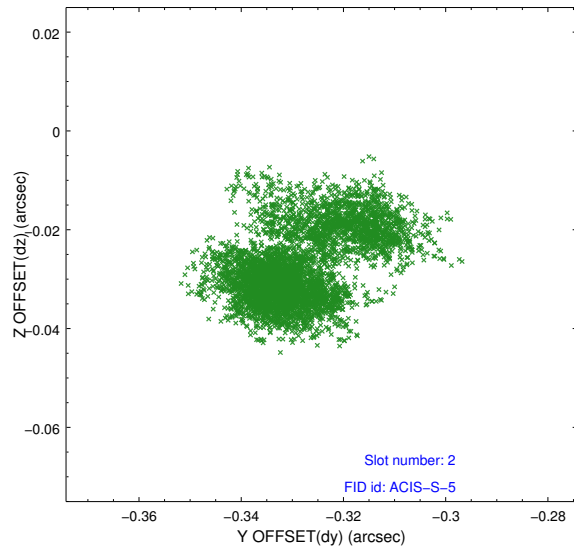
2.5.1 Slot 0



2.5.2 Slot 1

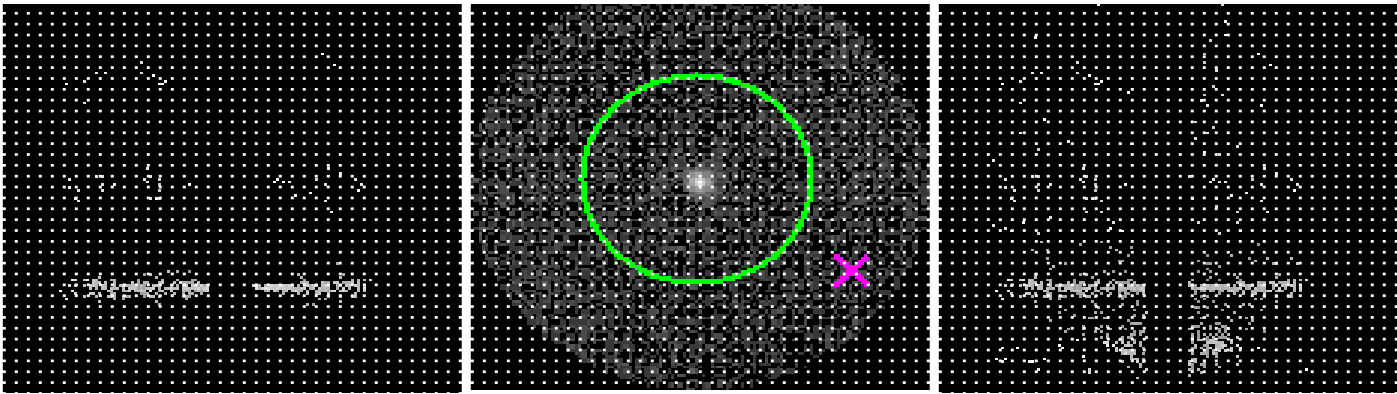


2.5.3 Slot 2



3 Gratings

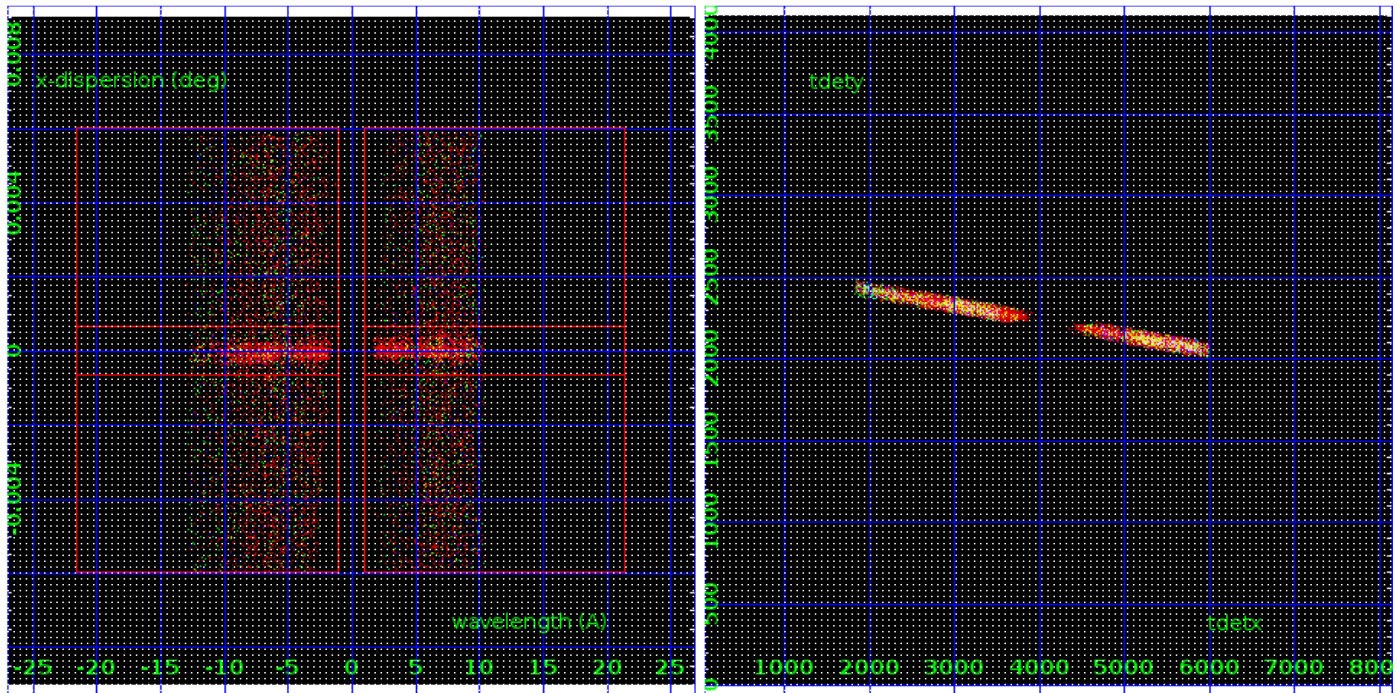
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

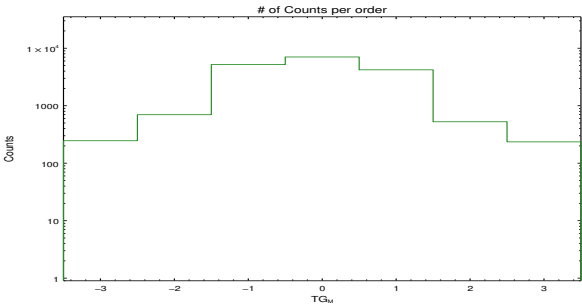
HEG Order Sort ALL

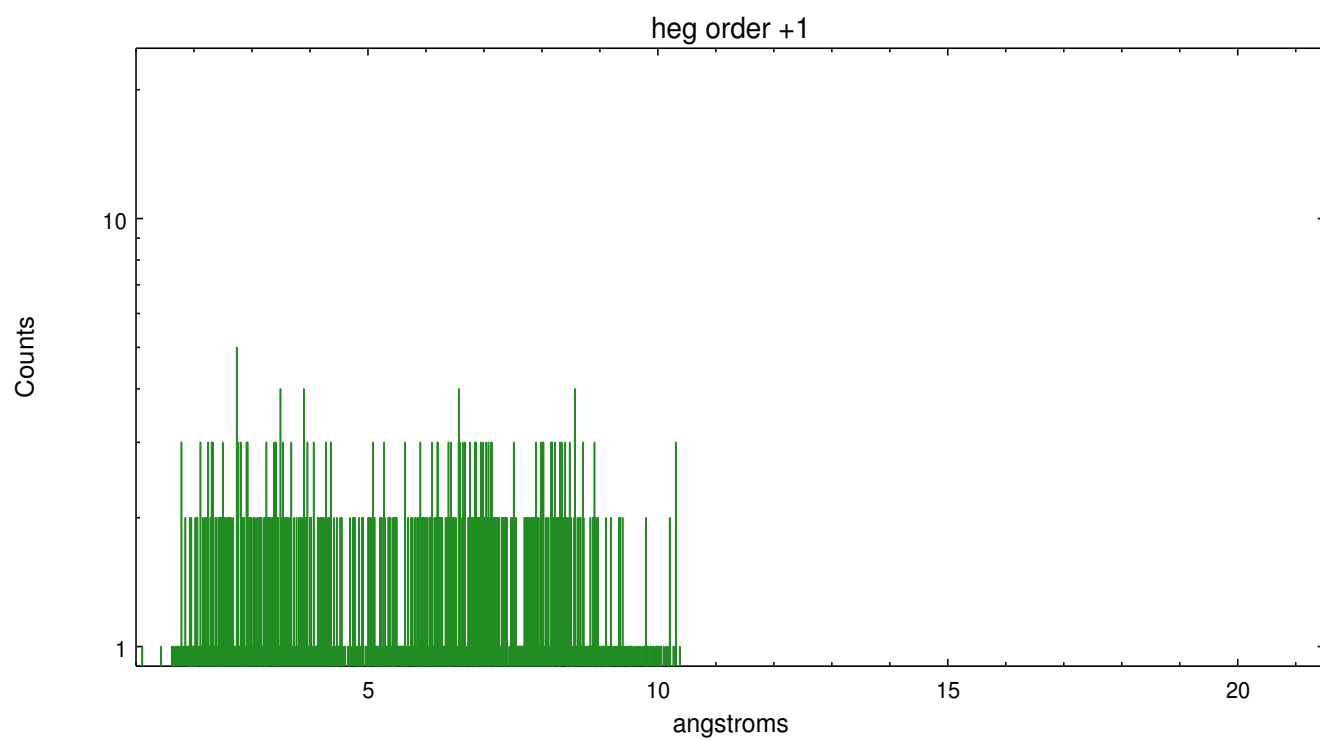
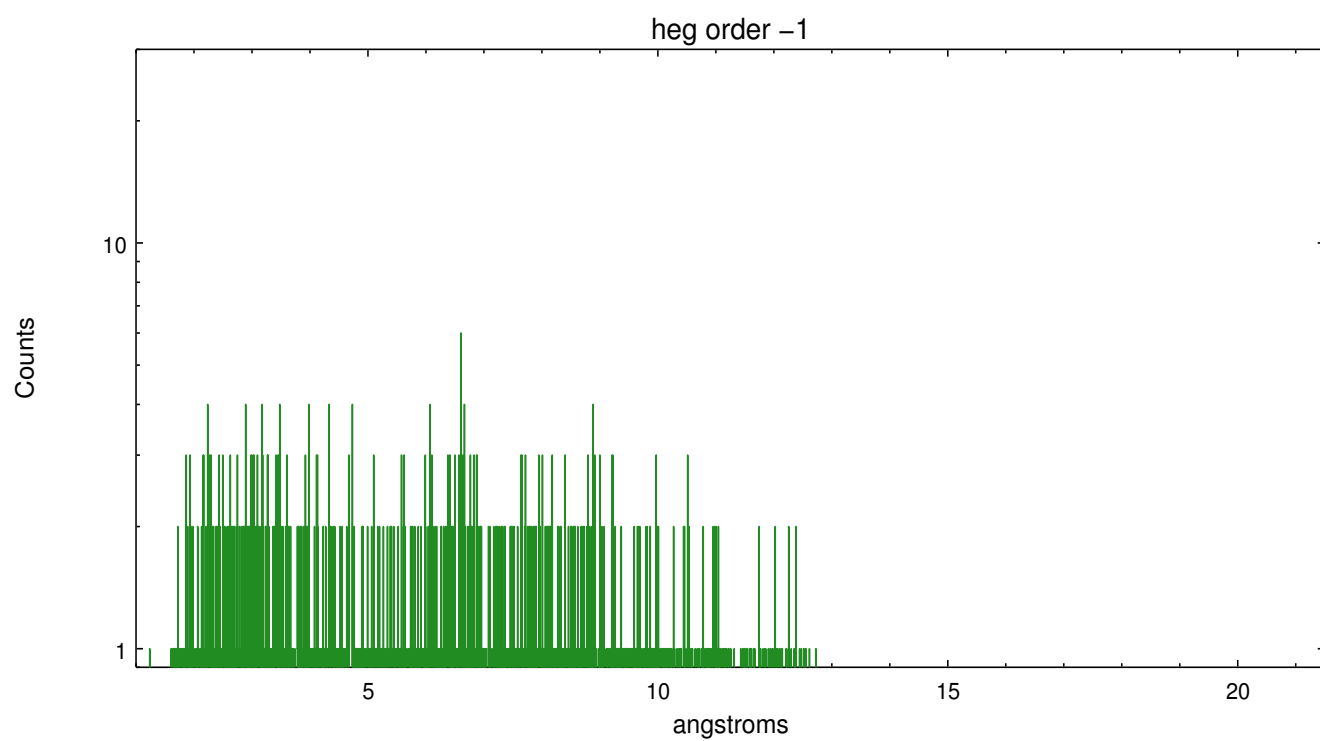


Spot Image HEG

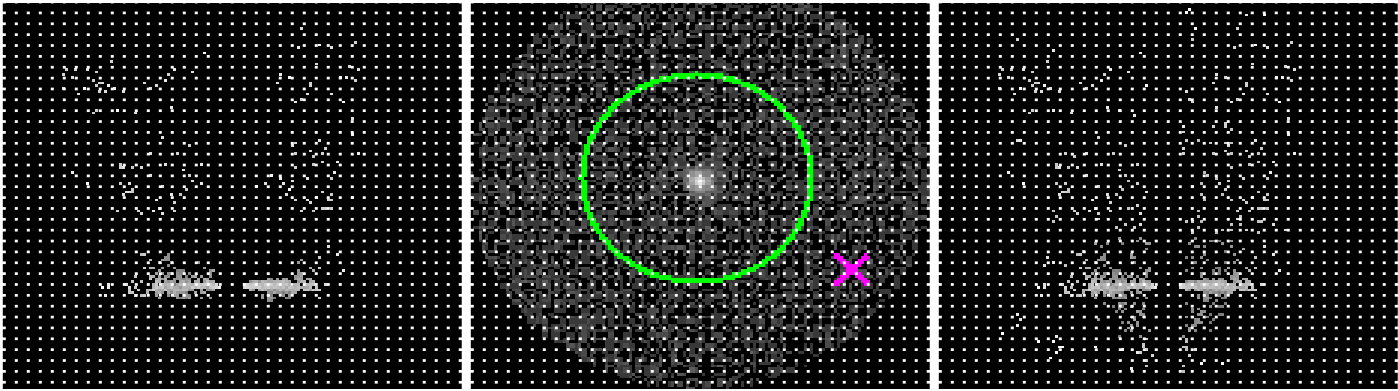
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	246	698	5199	7053	4215	526	235





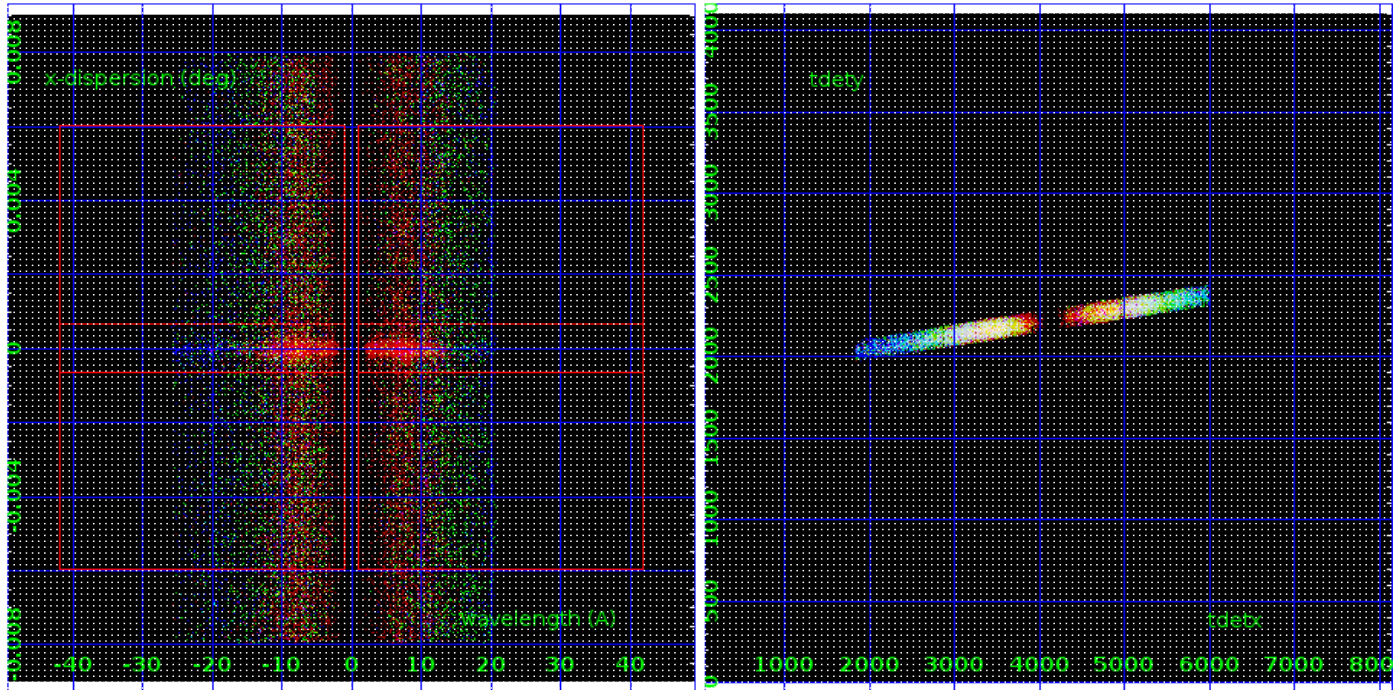
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

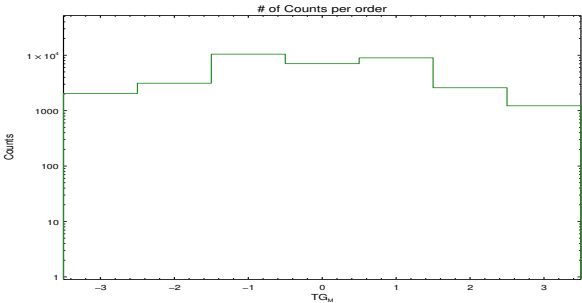
MEG Order Sort ALL

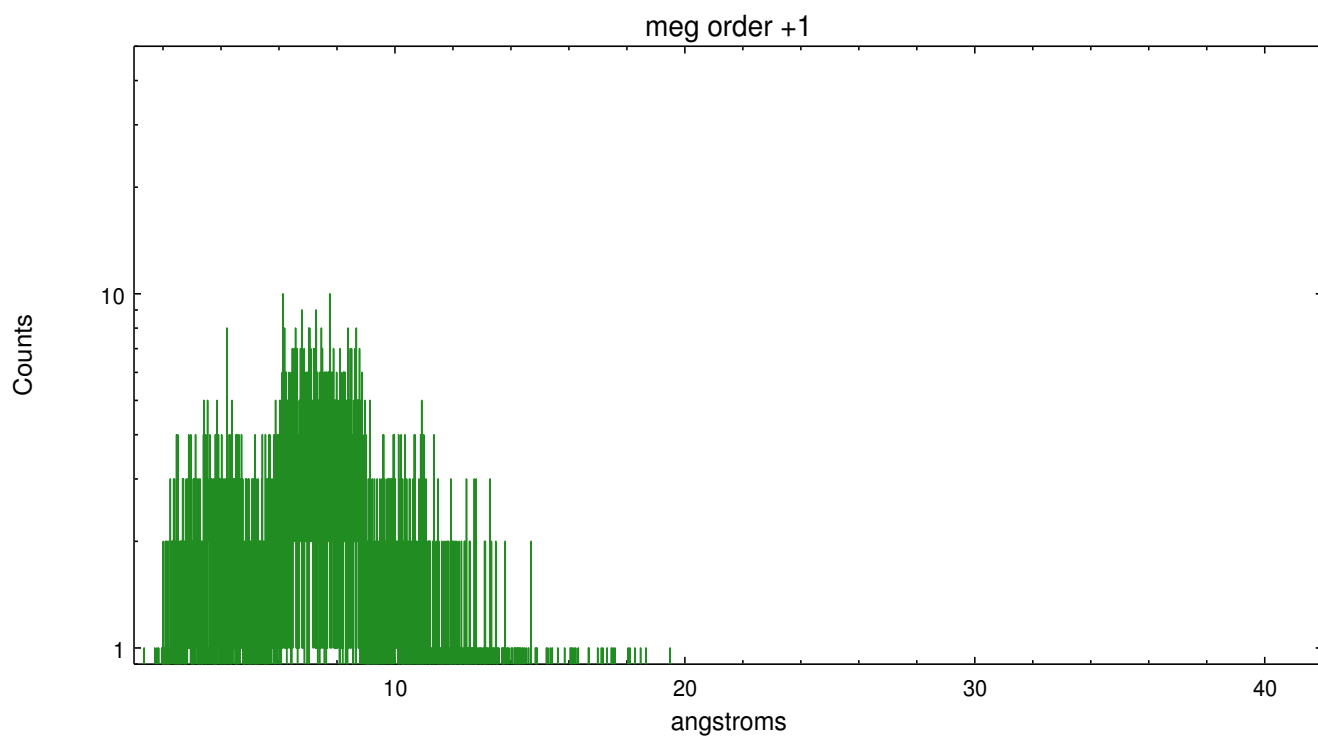
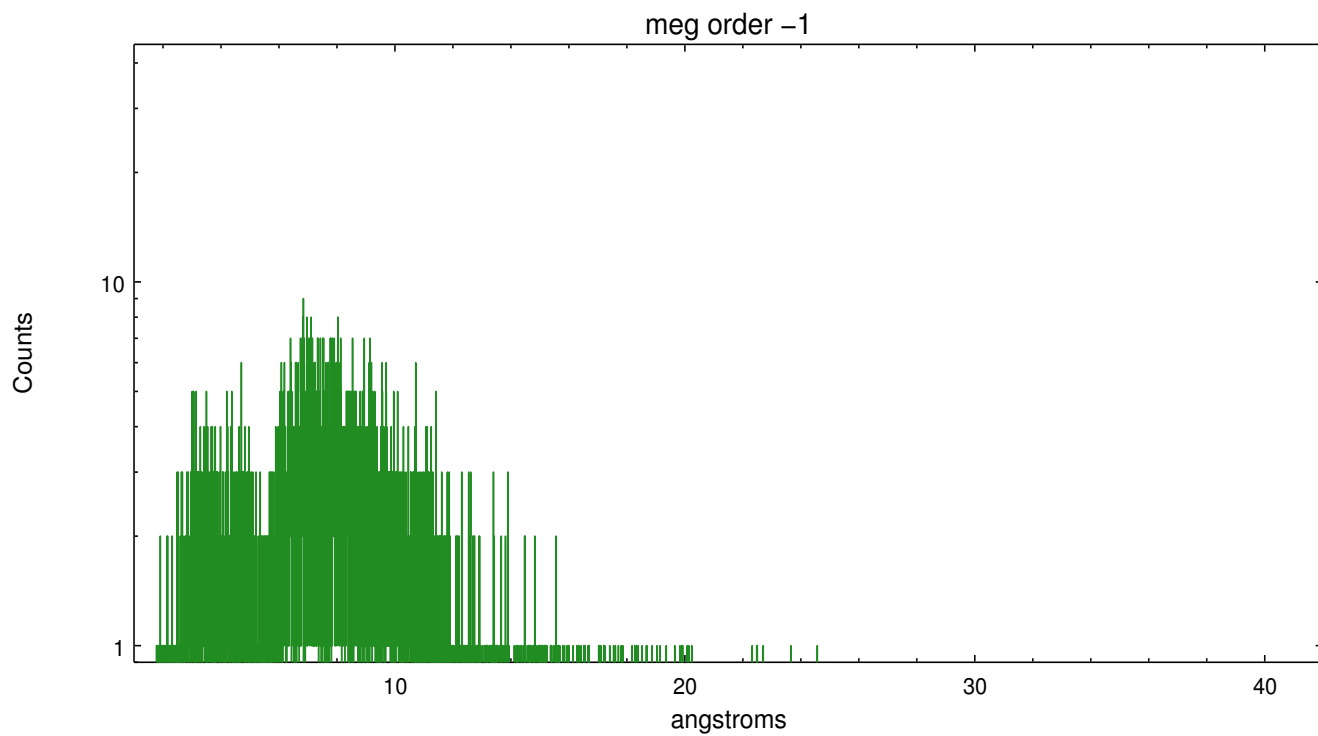


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2049	3124	10459	7053	8965	2592	1225





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2017.11.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	18.645599814653

A.2 Comments