

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 19930 - L2 Version 2
Chandra X-Ray Center

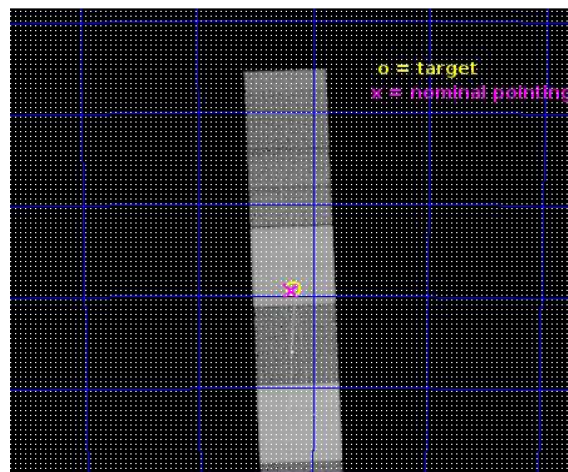
L2 Processing Date : Feb 20 2018

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1 Front

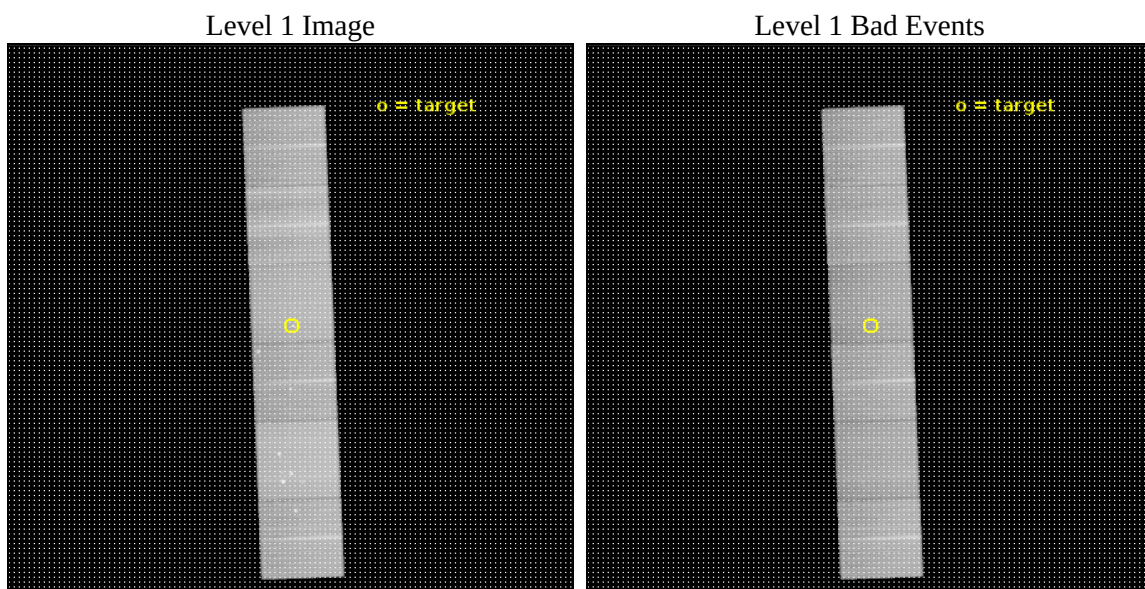
seq_num	401882	Sequence number
obs_id	19930	Observation id
title	HETG Spectroscopy of the Ultra-Luminous X-ray Source NGC 1313 X-1	
observer	Claude Canizares	Principal investigator
object	NGC 1313 X-1	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.583333	Observer's specified target RA [deg]
dec_targ	-66.486389	Observer's specified target Dec [deg]
ra_nom	49.59421152641	Nominal RA [deg]
dec_nom	-66.490700035562	Nominal Dec [deg]
roll_nom	267.72017898115	Nominal Roll [deg]
revision	2	Processing version of data
ontime	46342.400690556	Sum of GTIs [s]
livetime	45755.585308968	Livetime [s]
ontime4	46342.400690556	Sum of GTIs [s]
ontime5	46342.400690556	Sum of GTIs [s]
ontime6	46342.400690556	Sum of GTIs [s]
ontime7	46342.400690556	Sum of GTIs [s]
ontime8	46339.159690261	Sum of GTIs [s]
ontime9	46342.400690556	Sum of GTIs [s]
l2events	596413	Number of level 2 events



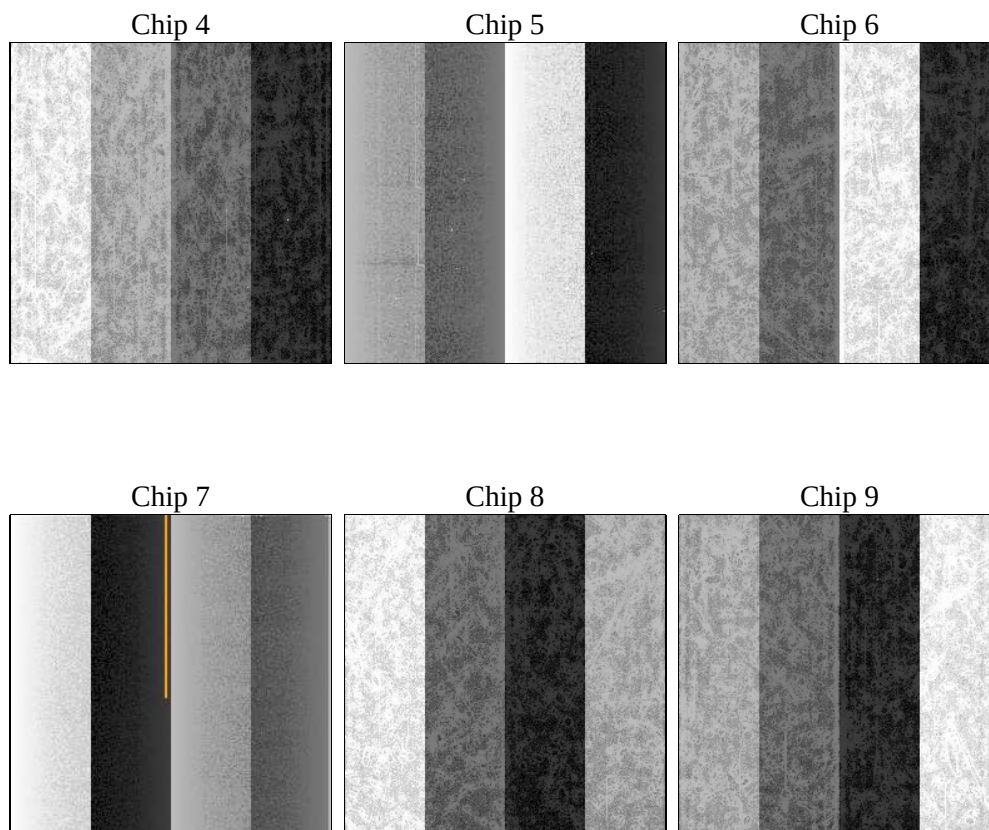
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	46400.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	46342.400690556	Sum of GTIs [s]
caldsver	4.7.7	 	ontime4	46342.400690556	Sum of GTIs [s]
date	2018-02-20T22:01:36	Date and time of file creation	ontime5	46342.400690556	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	46342.400690556	Sum of GTIs [s]
			ontime7	46342.400690556	Sum of GTIs [s]
			ontime8	46339.159690261	Sum of GTIs [s]
			ontime9	46342.400690556	Sum of GTIs [s]
			l1events	2624324	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			src1a_pos	(4128.42, 4127.72)	src1a sky pixel position

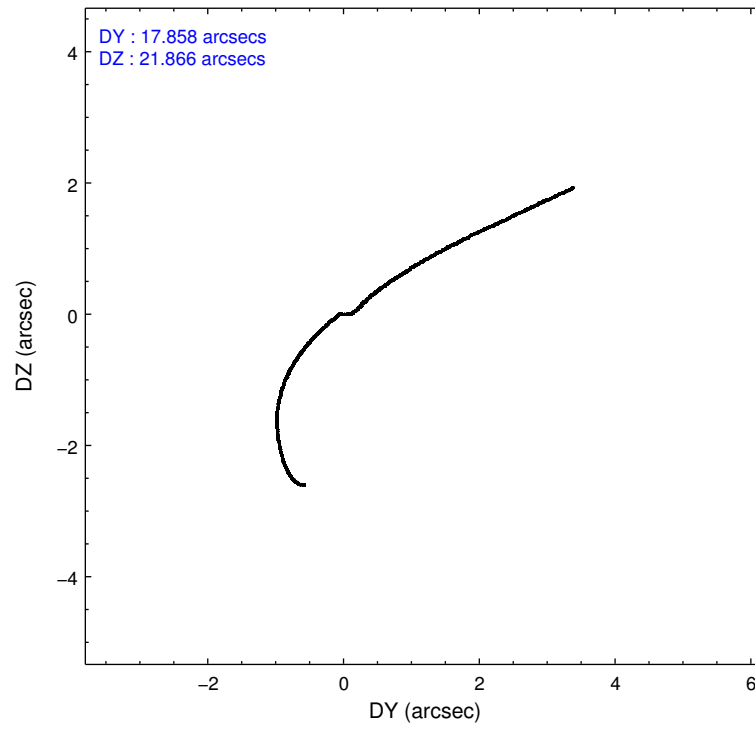
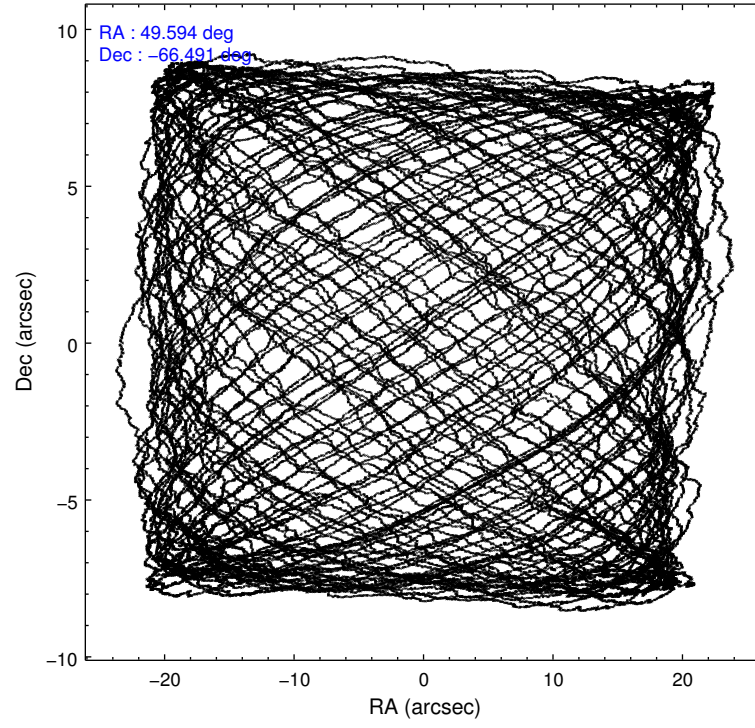
2.1.4 Events

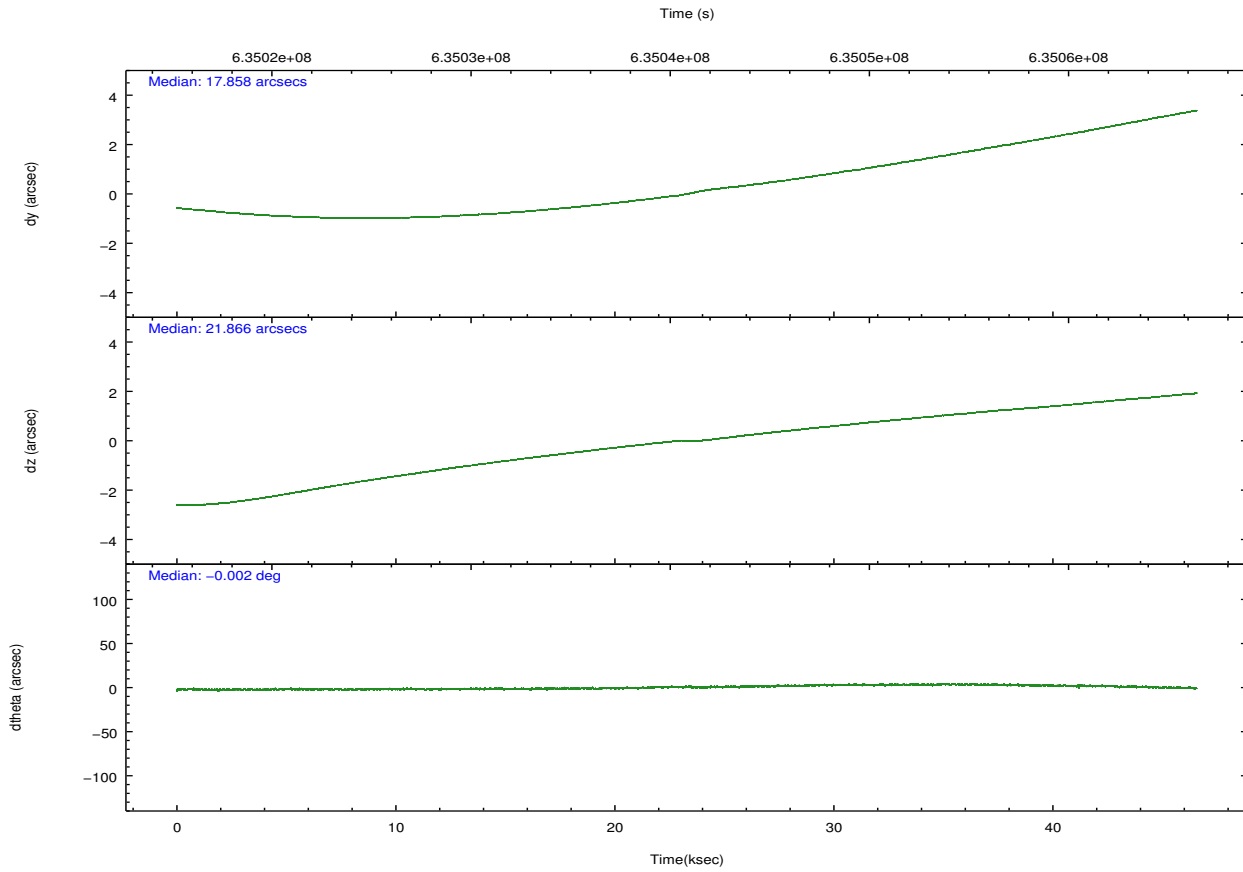
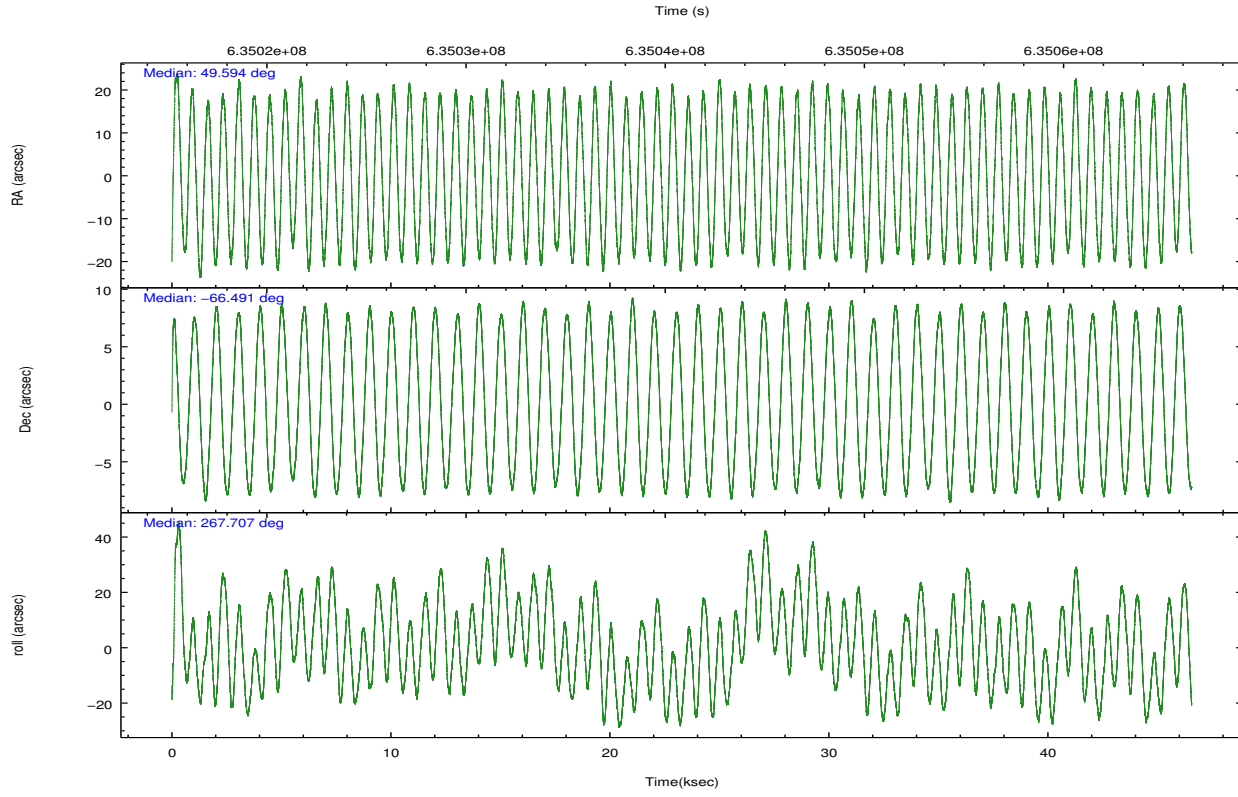
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	416713	558860	369387	449672	473187	356505	grade 0 events	19147	23244	17485	17367	40601	14658
rejected events	371198	286427	324087	251559	337940	314601		4%	4%	4%	3%	8%	4%
rejected %	89%	51%	87%	55%	71%	88%	grade 1 events	386	1591	261	667	402	214
								0%	0%	0%	0%	0%	0%
							grade 2 events	10374	85647	10171	42104	30911	9633
								2%	15%	2%	9%	6%	2%
							grade 3 events	4380	8618	3827	15844	15004	4282
								1%	1%	1%	3%	3%	1%
							grade 4 events	4164	8117	3945	15532	14085	4088
								0%	1%	1%	3%	2%	1%
							grade 5 events	16789	37575	15606	43535	24432	17854
								4%	6%	4%	9%	5%	5%
							grade 6 events	7453	146831	9873	107285	34666	9243
								1%	26%	2%	23%	7%	2%
							grade 7 events	354020	247237	308219	207338	313086	296533
								84%	44%	83%	46%	66%	83%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	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	49.561432	49.59421152641026	CCD I2 on	N	N
[deg] Pointing Dec	-66.466569	-66.49070003556248	CCD I3 on	N	N
[deg] Pointing Roll	267.533493	267.7201789811461	CCD S0 on	O1	Y
[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)	635017719.184000	635016607.77952	CCD S5 on	Y	Y
Observation start date	2018-02-14T17:47:30	2018-02-14T17:30:07	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	635064119.184000	635064987.78237	On-chip summing requested	N	N
Observation end date	2018-02-15T06:40:50	2018-02-15T06:56:27	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



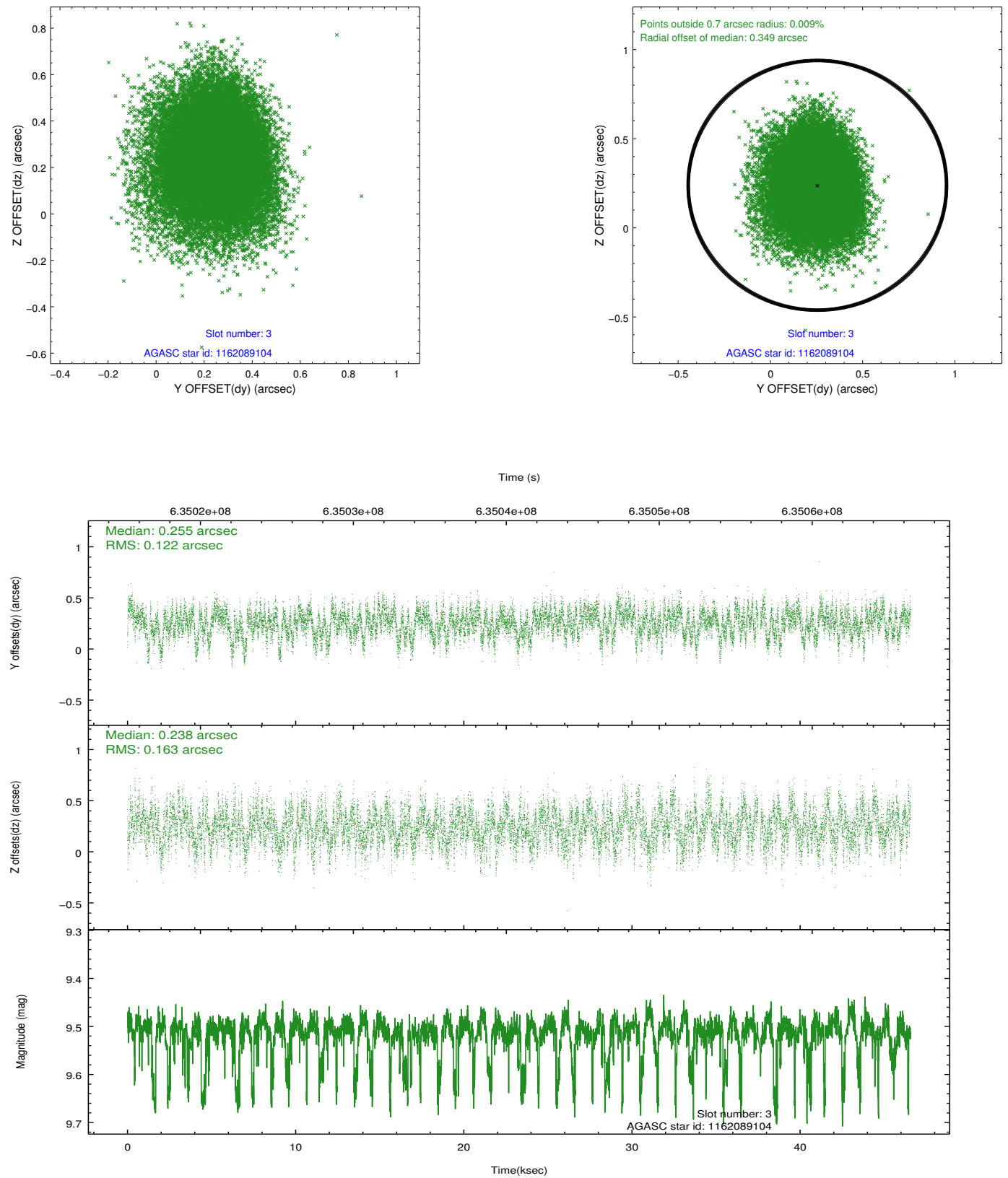


Slot Statistics

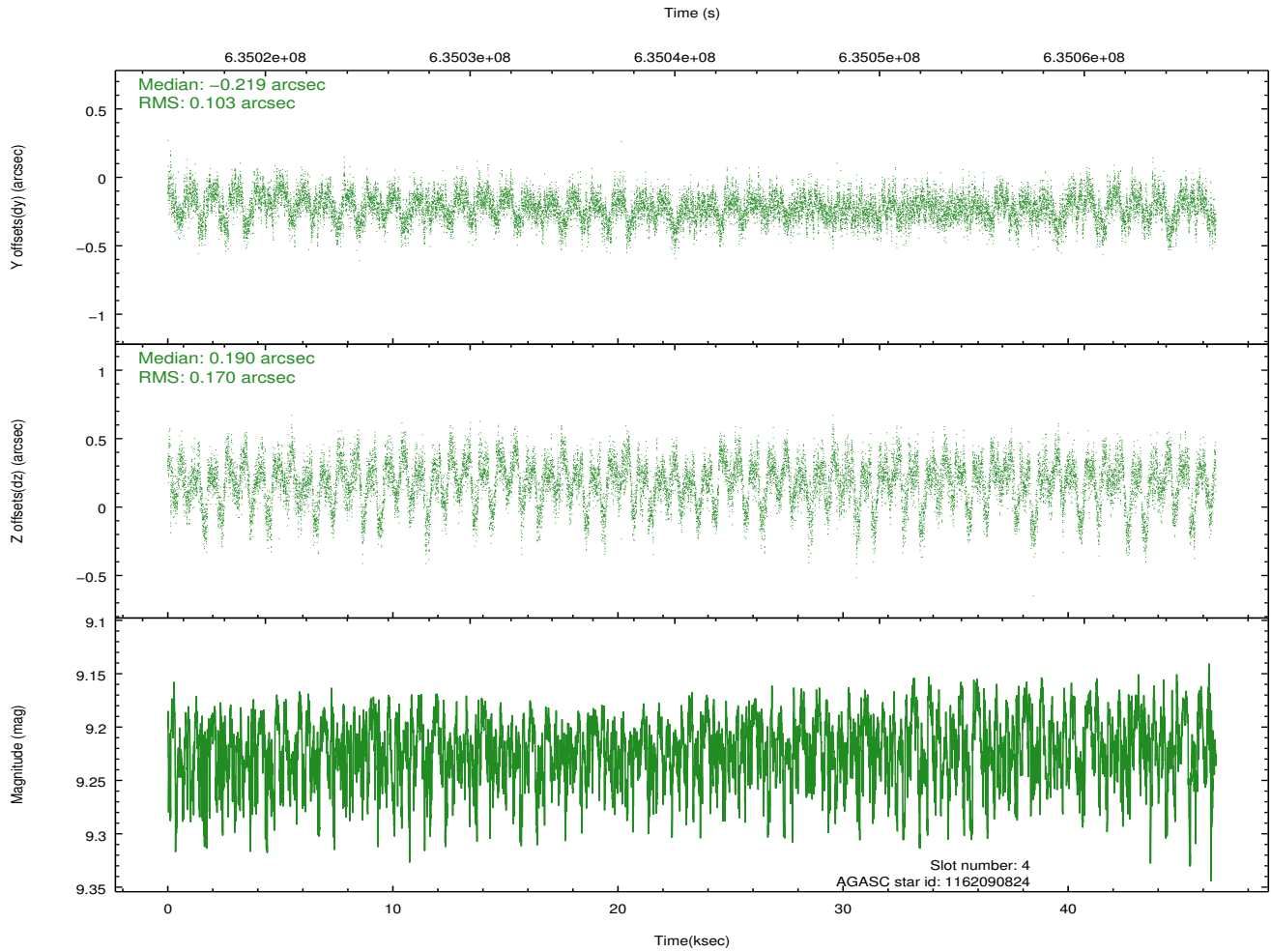
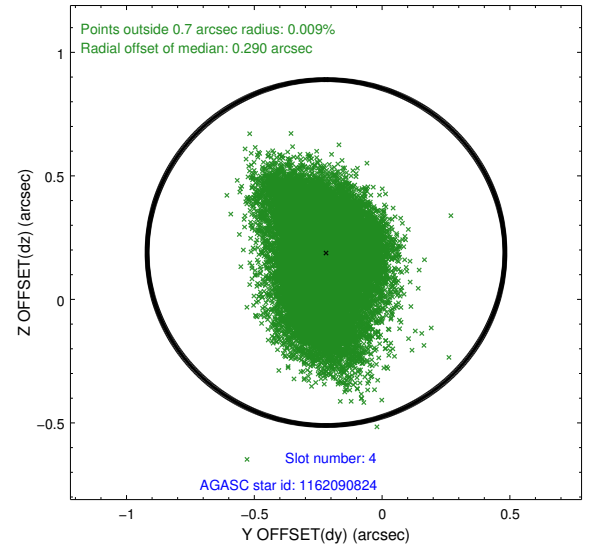
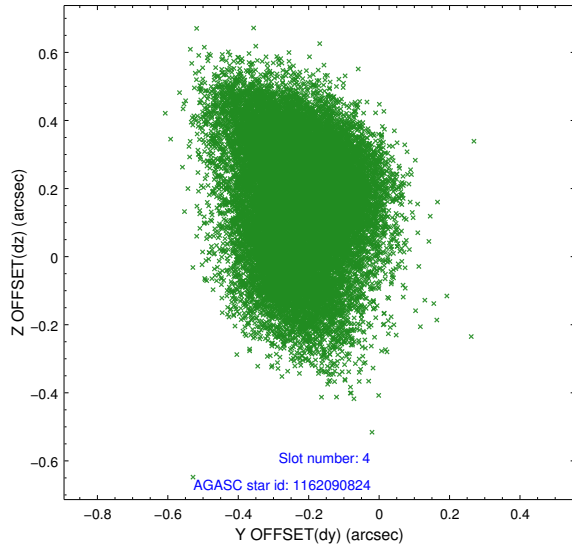
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.08	11358	-0.303	-0.213	0.035	0.049	0.000000	0.000000	-771.72	-1743.41
1	FID		ACIS-S-4	7.16	11356	0.343	0.177	0.024	0.033	0.000000	0.000000	2142.27	165.38
2	FID		ACIS-S-6	7.32	11358	-0.059	0.039	0.022	0.035	0.000000	0.000000	390.58	802.68
3	GUIDE	used	1162089104	9.51	22593	0.255	0.238	0.216	0.355	48.422126	-66.410699	-114.56	-1647.40
4	GUIDE	used	1162090824	9.22	22677	-0.219	0.190	0.207	0.358	48.677982	-66.885202	1568.47	-1181.61
5	GUIDE	used	1162094224	9.66	22682	-0.055	-0.436	0.193	0.317	49.638584	-66.701903	841.93	146.02
6	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
7	GUIDE	used	1162090992	9.89	22517	0.027	0.041	0.239	0.411	50.044571	-66.449898	-87.21	691.79

2.4 Star Slots

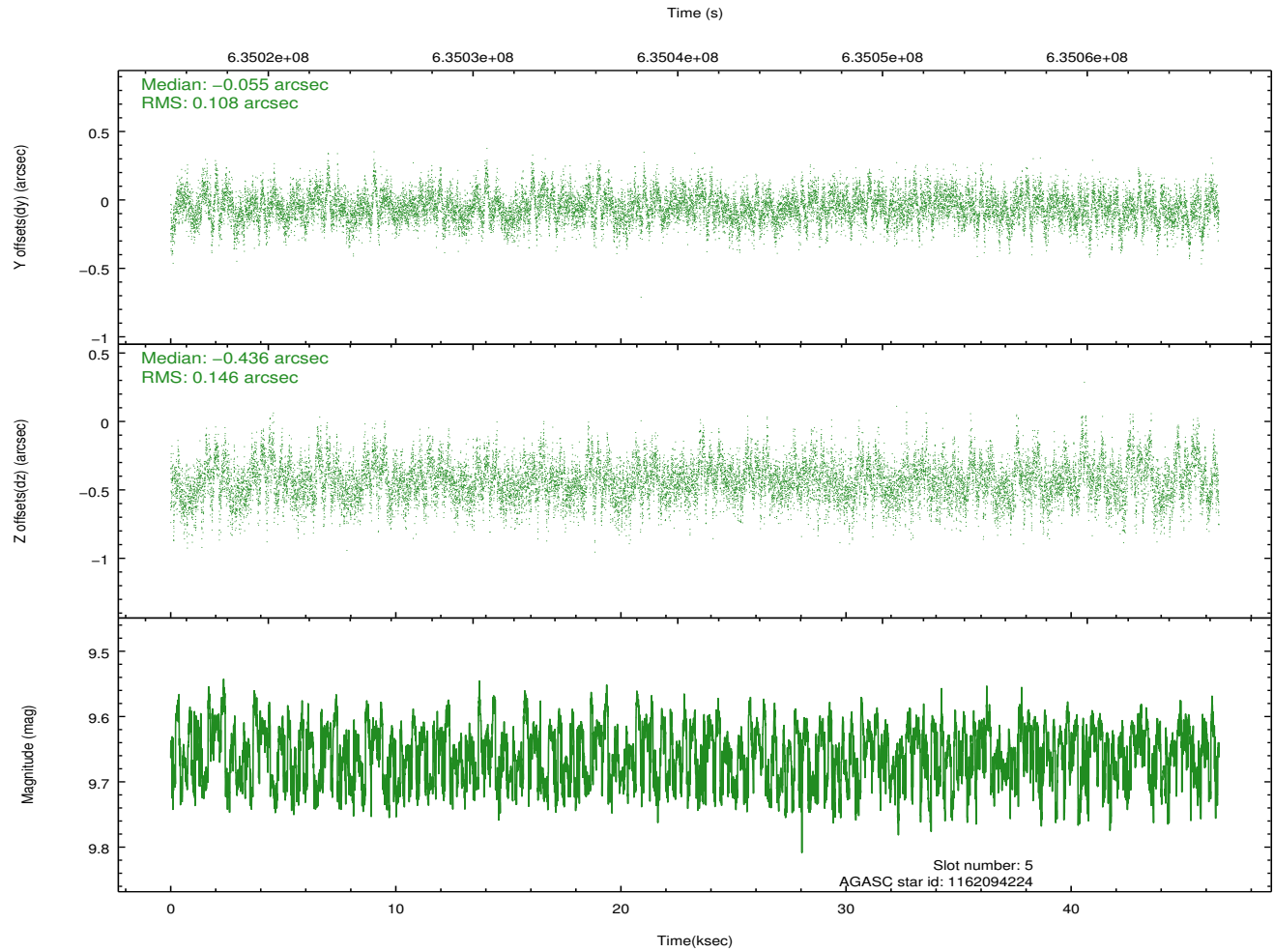
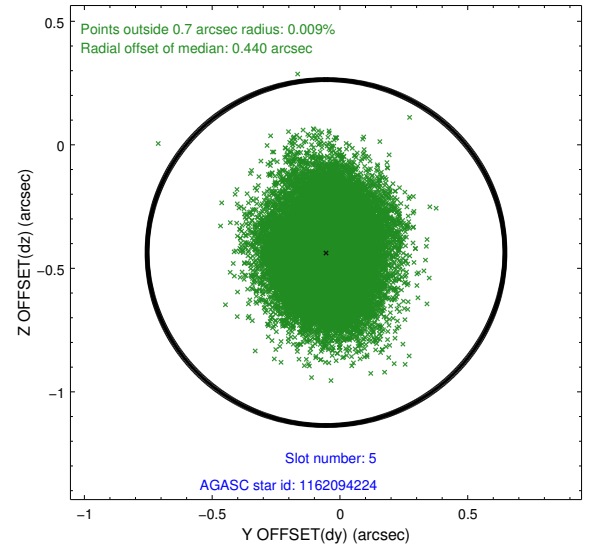
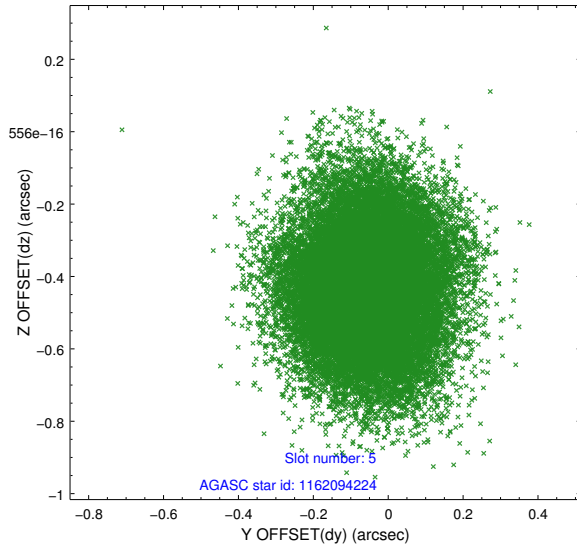
2.4.1 Slot 3



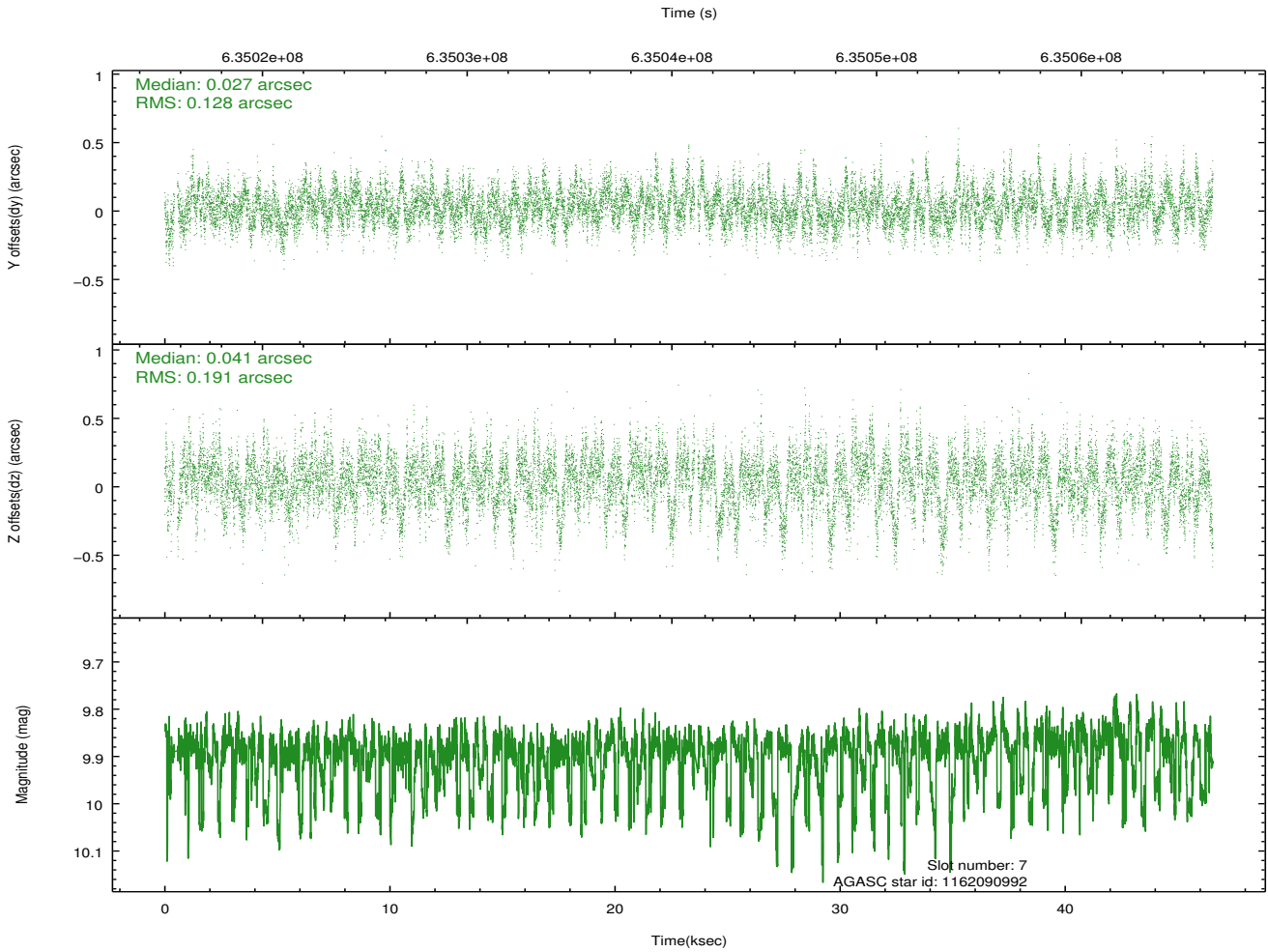
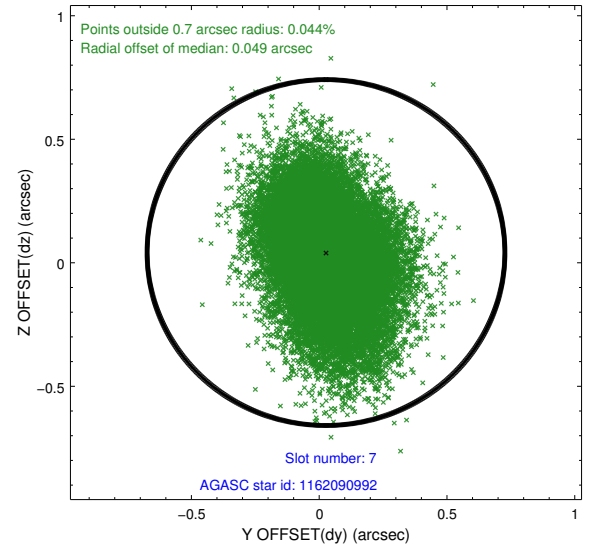
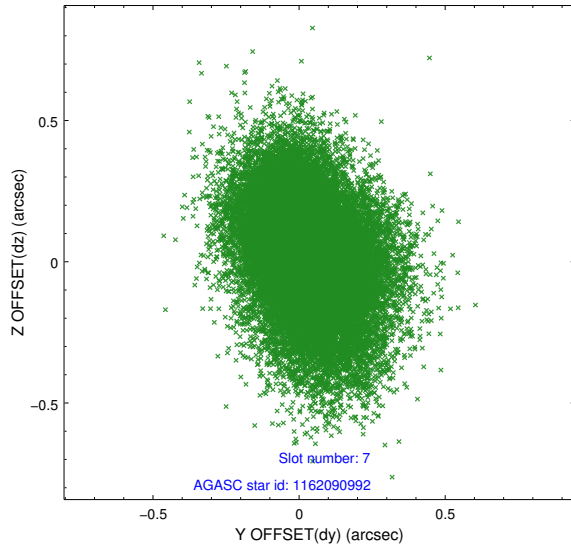
2.4.2 Slot 4



2.4.3 Slot 5

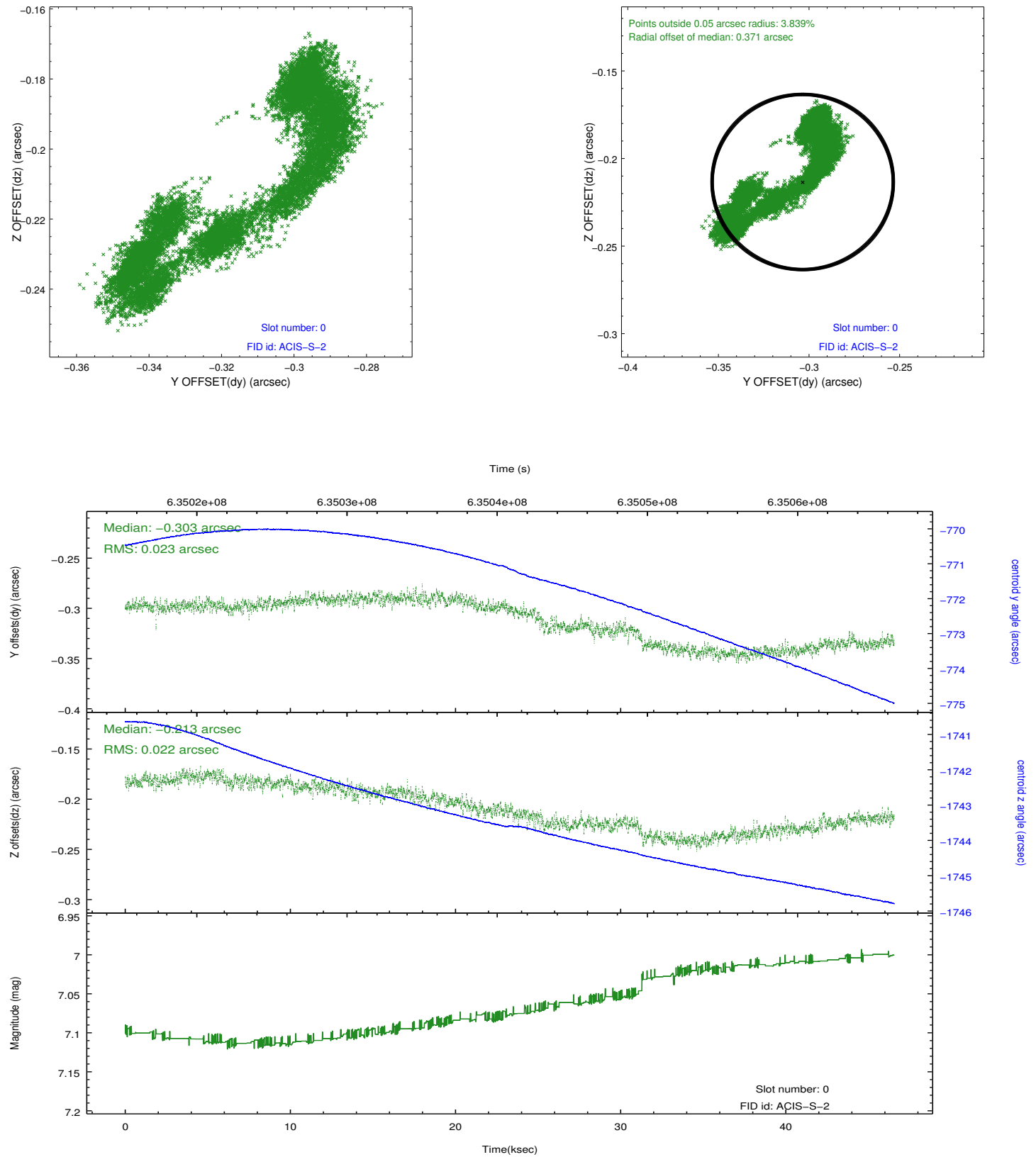


2.4.4 Slot 7

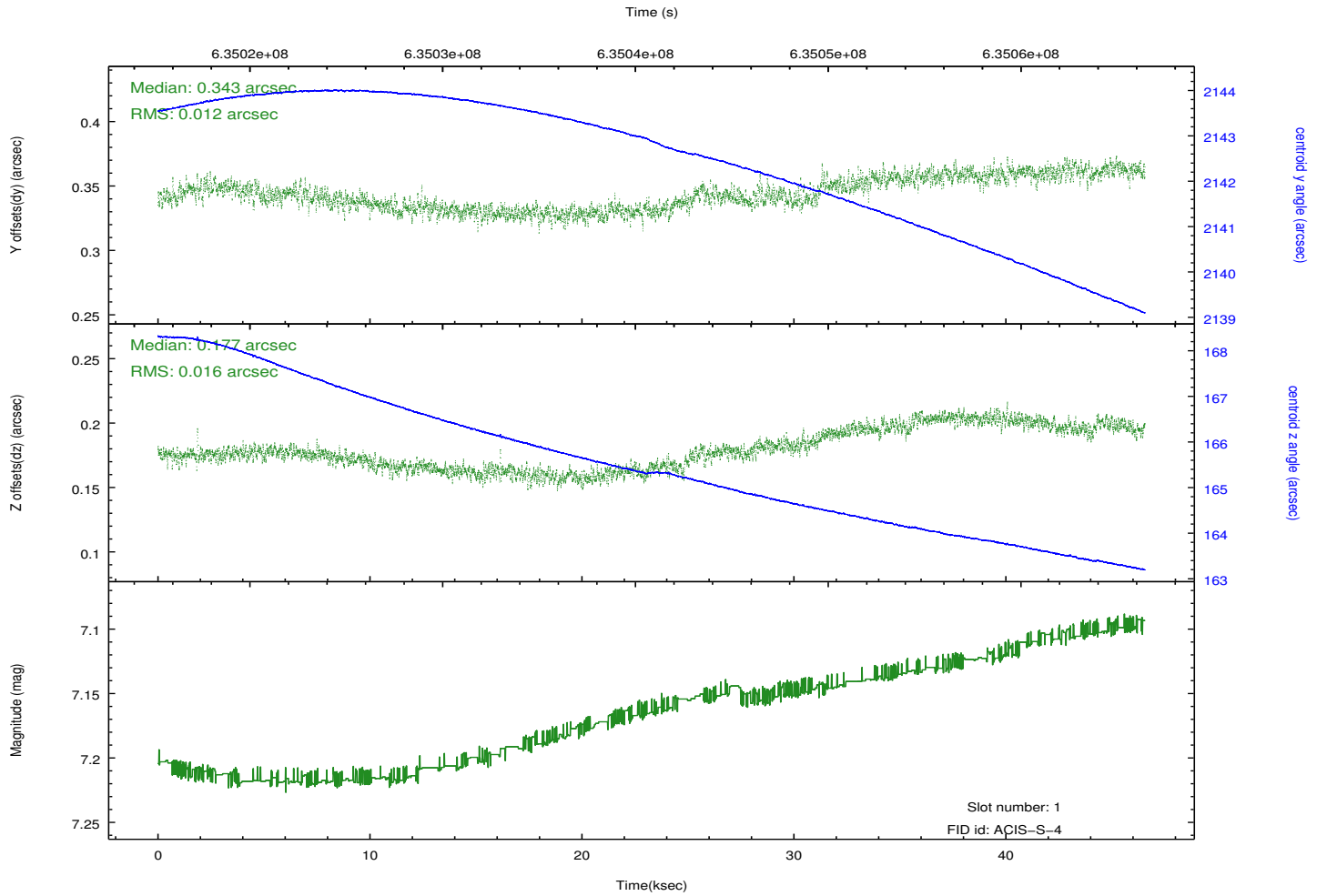
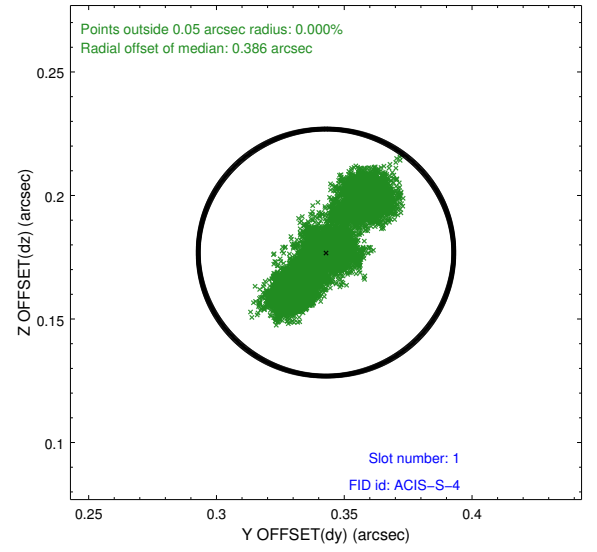
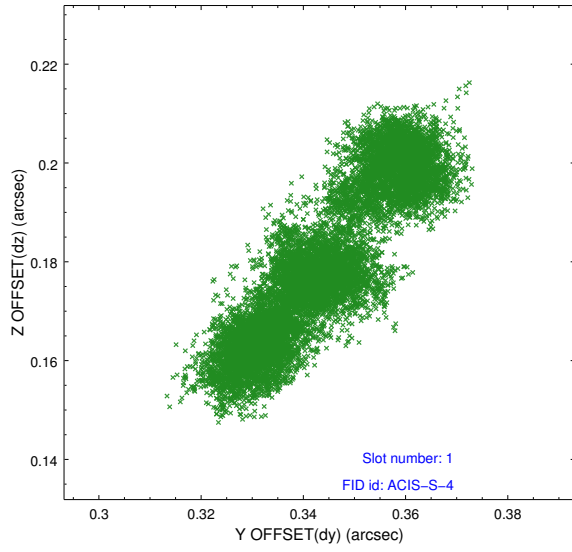


2.5 FID Slots

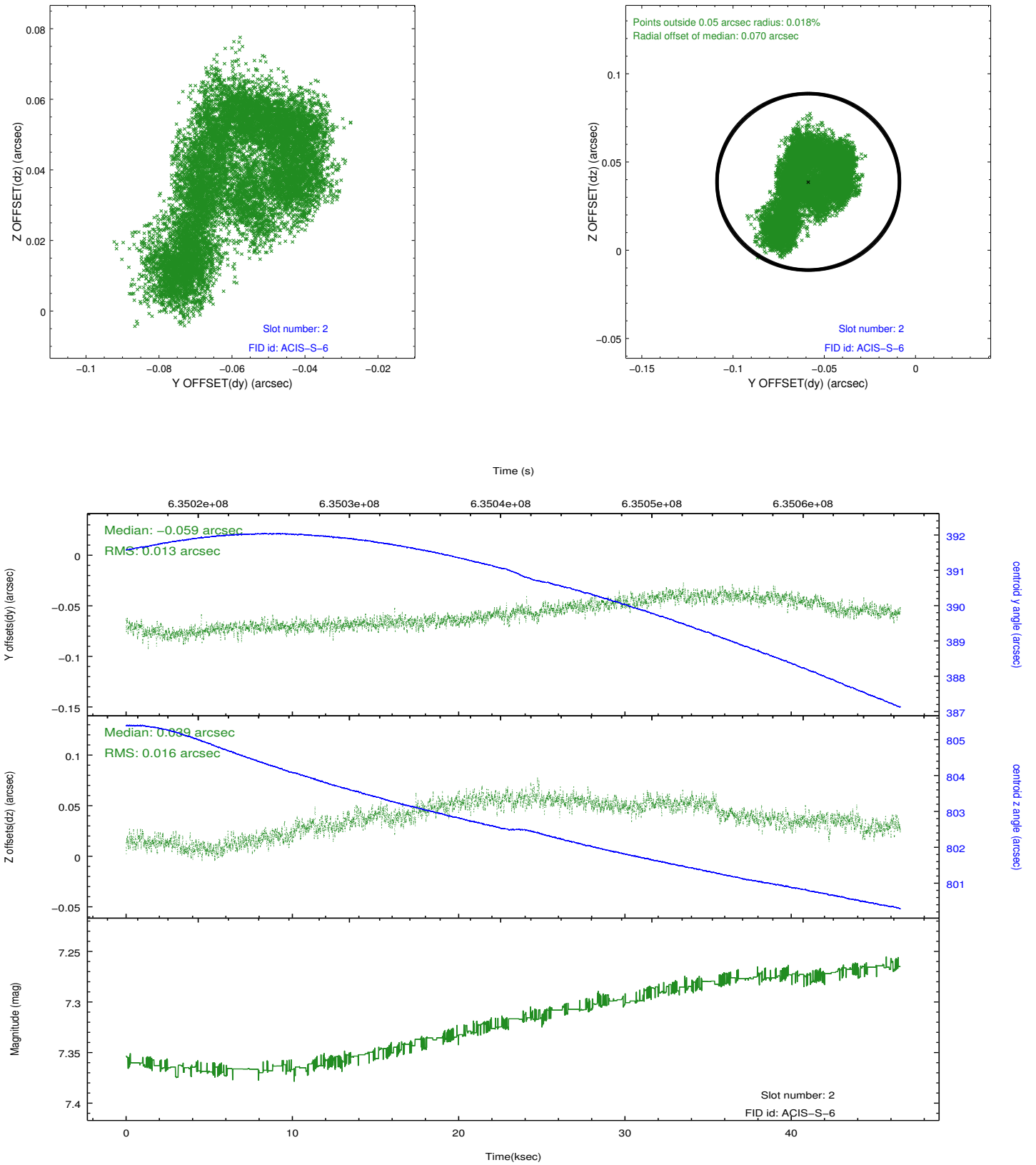
2.5.1 Slot 0



2.5.2 Slot 1

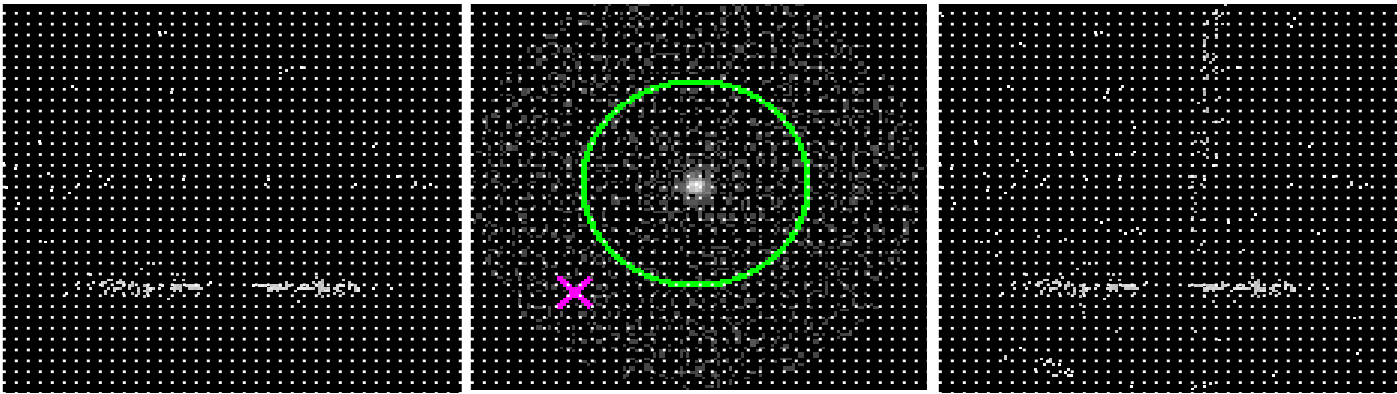


2.5.3 Slot 2



3 Gratings

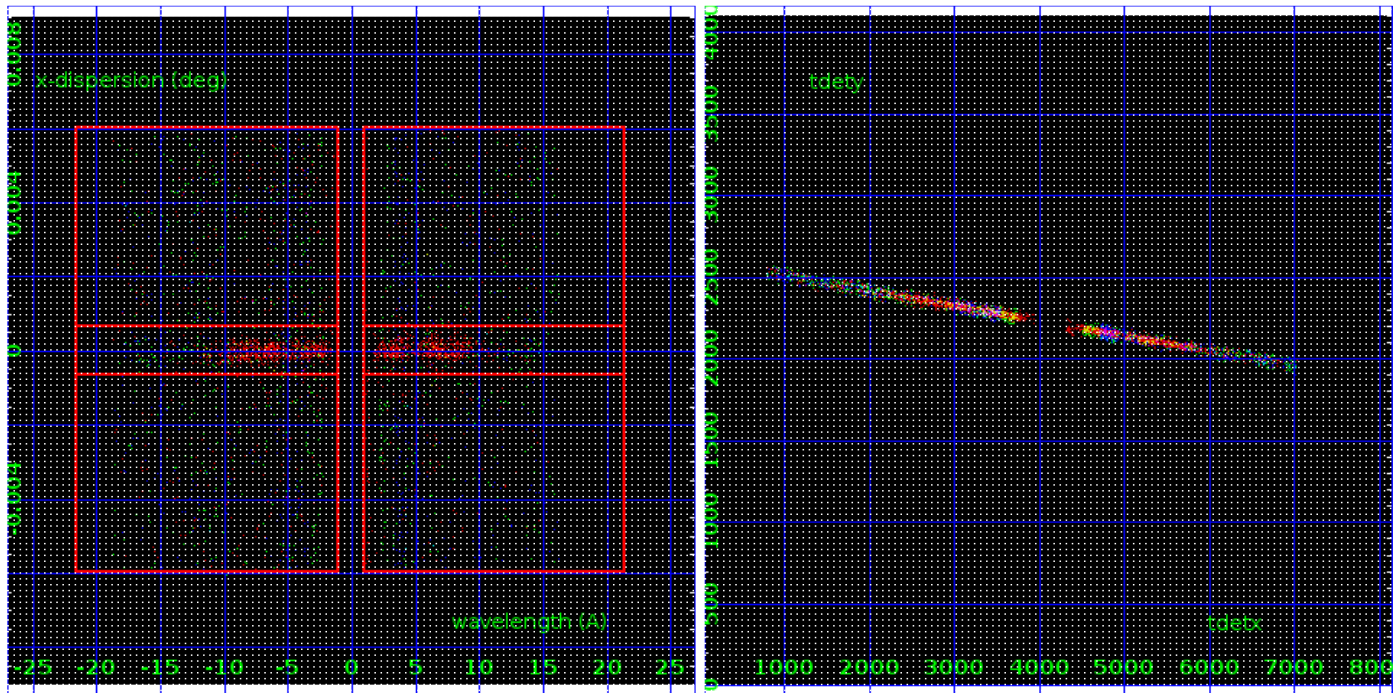
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

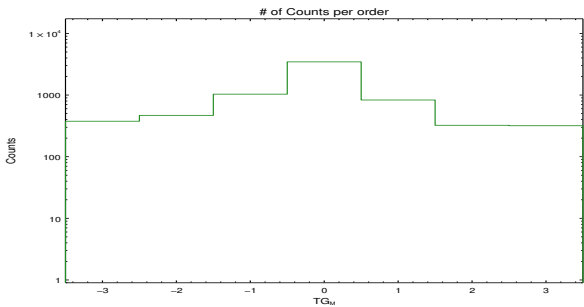
HEG Order Sort ALL

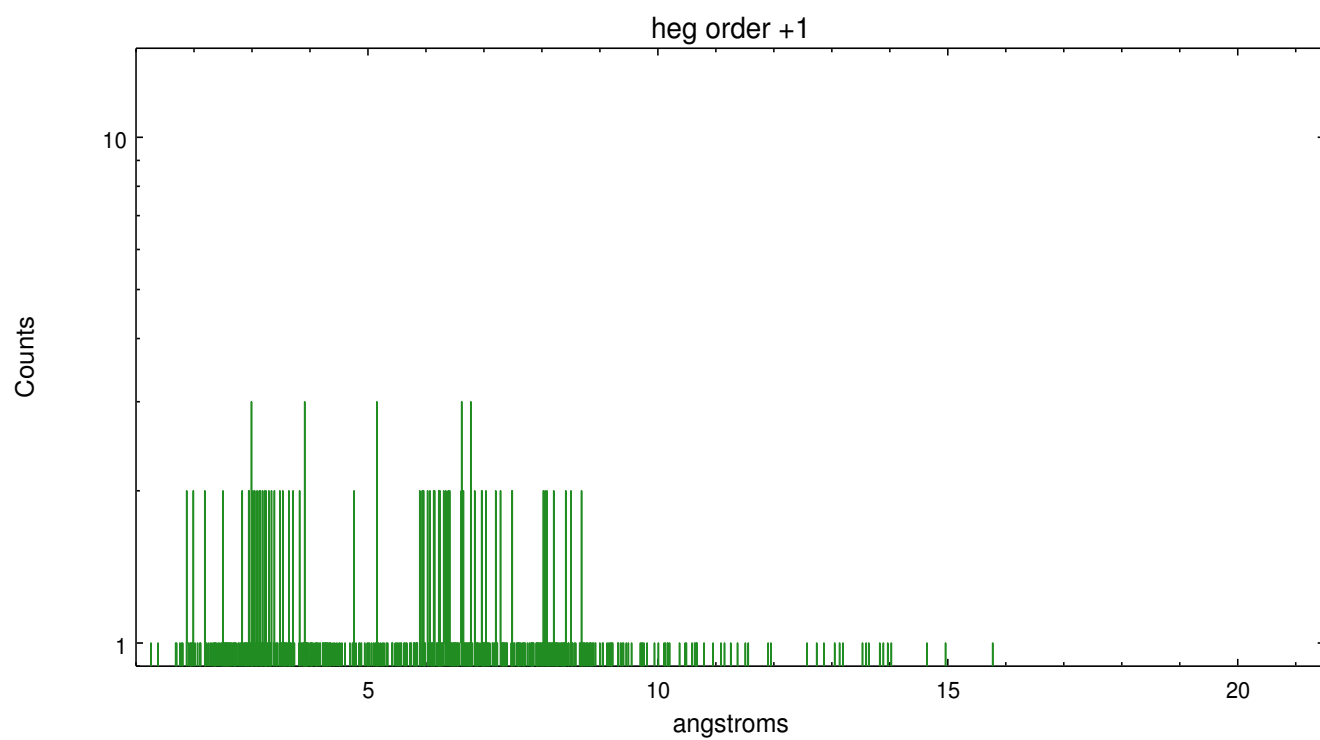
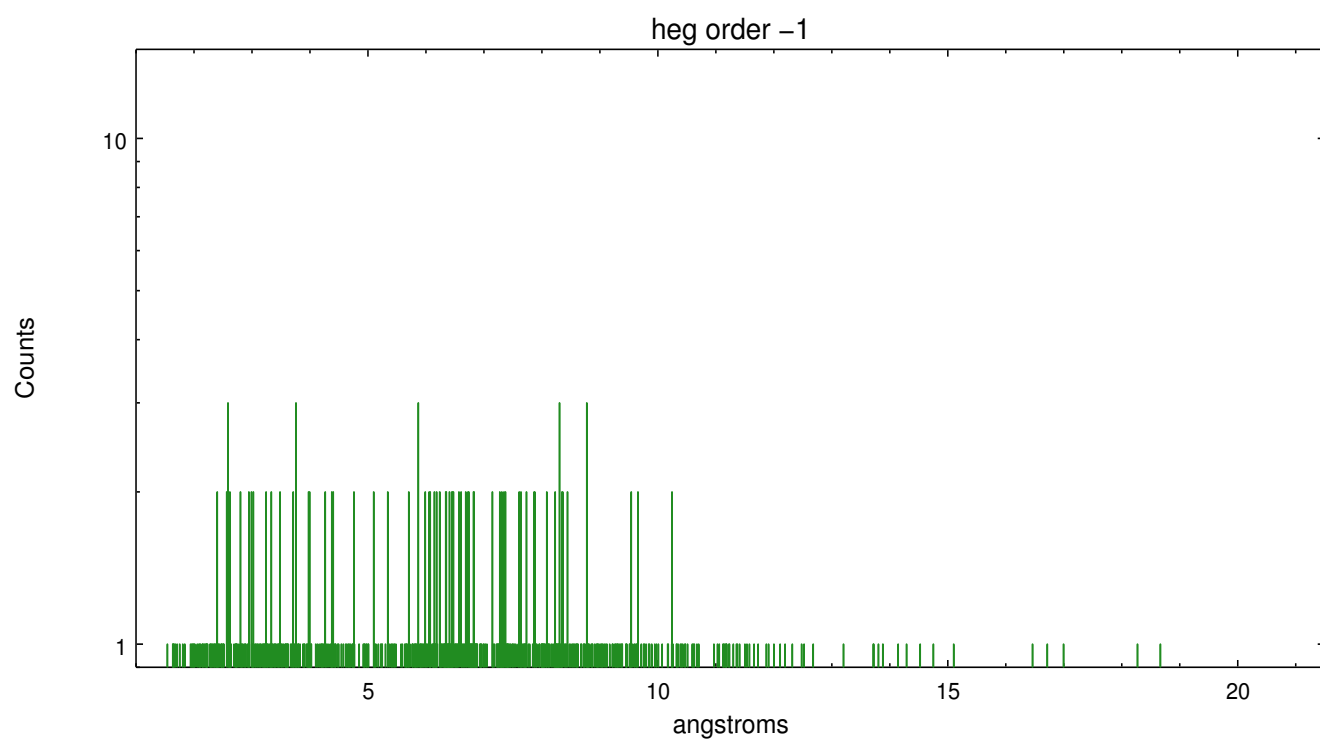


Spot Image HEG

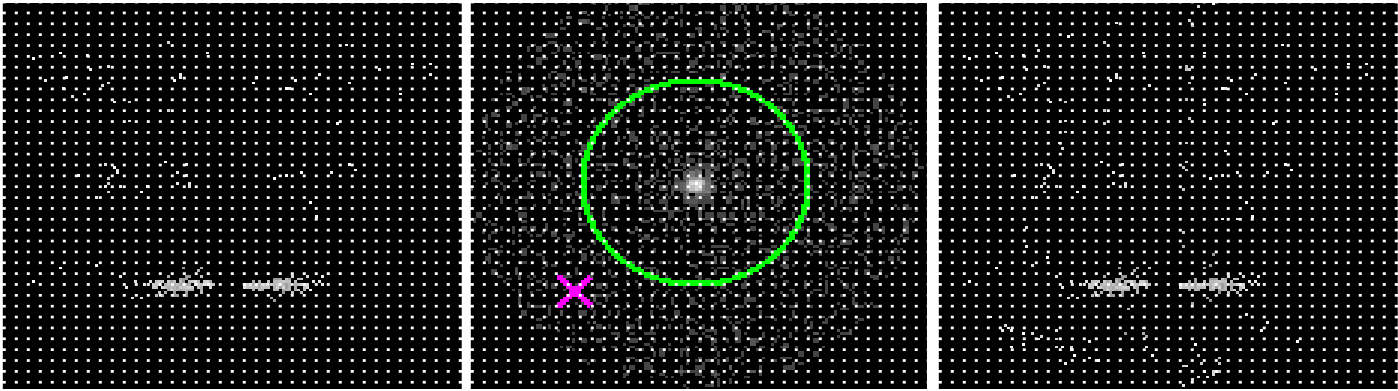
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	376	468	1034	3454	831	323	318





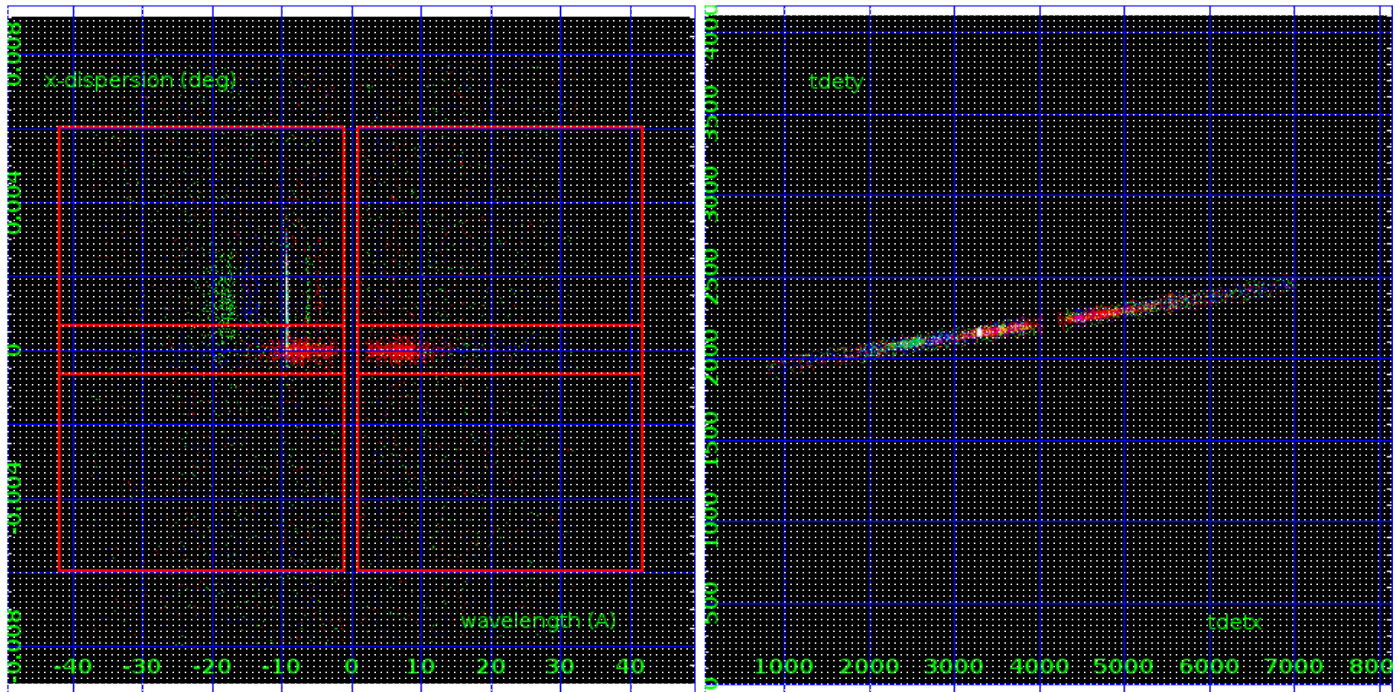
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

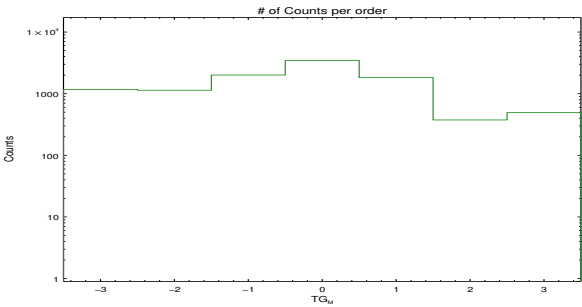
MEG Order Sort ALL

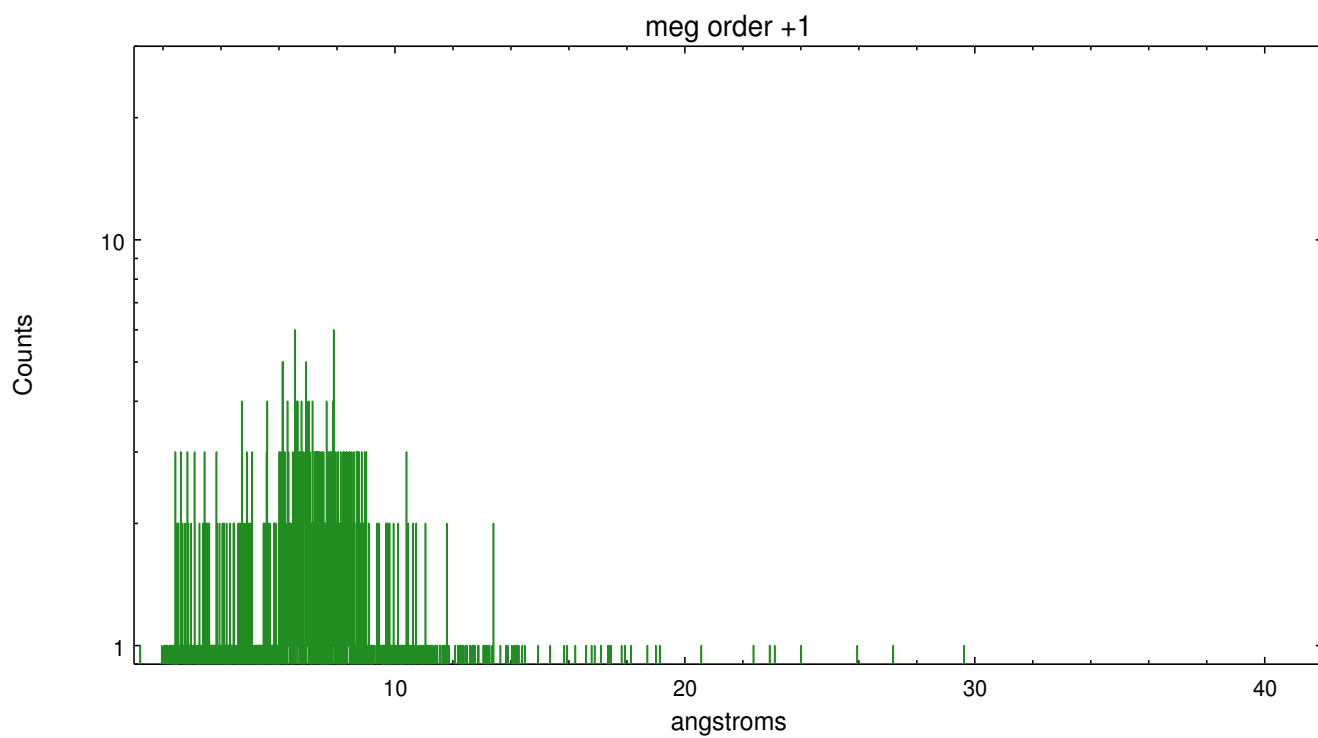
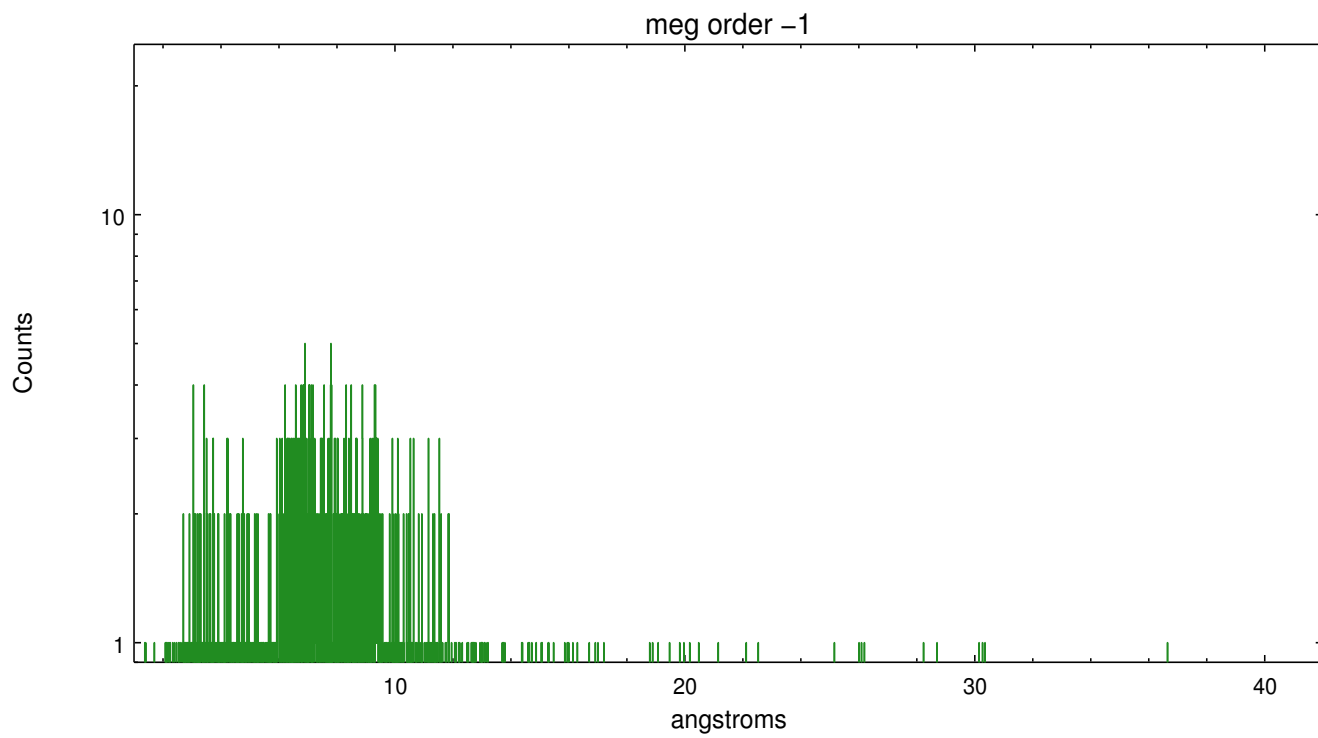


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1170	1138	2007	3454	1821	375	493





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2018.02.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	46.342400690556

A.2 Comments

Note: there is a very bright off-axis source on the MEG negative order side, at about $m\lambda = -9.4$ Å. (which is probably ULX NGC 1313 X-2)

Note: aspect star slot 6 omitted due to low quality solution.