

V&V Reference Report

L2 ASCDS Version : 10.1

Observation 14661 - L2 Version 2
Chandra X-Ray Center

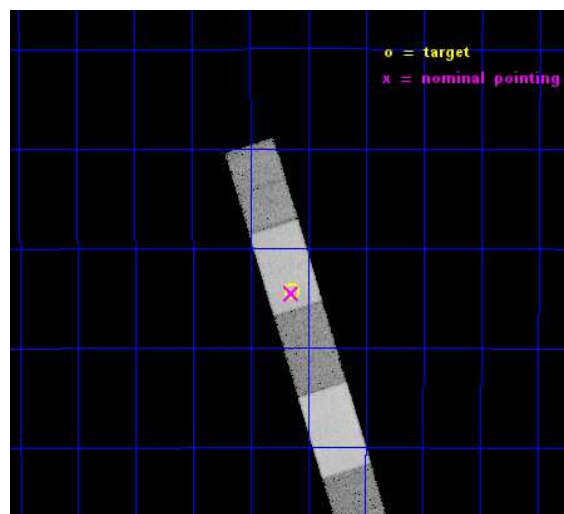
L2 Processing Date : Dec 9 2014

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1 Front

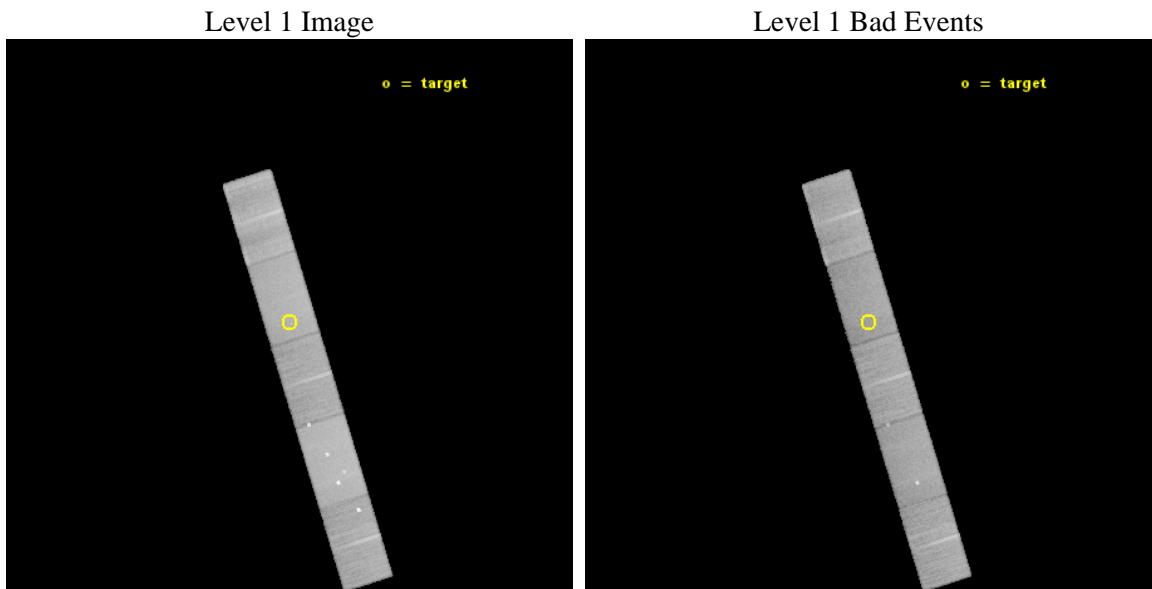
seq_num	401494	Sequence number
obs_id	14661	Observation id
title	The Disk-Wind-Jet Coupling in Black Hole Candidate IGR J17091-3624	
observer	Ashley King	Principal investigator
object	IGR J17091-3624	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	257.283333	Observer's specified target RA [deg]
dec_targ	-36.406667	Observer's specified target Dec [deg]
ra_nom	257.28575774773	Nominal RA [deg]
dec_nom	-36.408981436091	Nominal Dec [deg]
roll_nom	252.64929335035	Nominal Roll [deg]
revision	2	Processing version of data
ontime	39999.650193632	Sum of GTIs [s]
livetime	39195.361378152	Livetime [s]
ontime4	39997.44500339	Sum of GTIs [s]
ontime5	39999.609153628	Sum of GTIs [s]
ontime6	39999.568113625	Sum of GTIs [s]
ontime7	39999.650193632	Sum of GTIs [s]
ontime8	39999.527073622	Sum of GTIs [s]
l2events	208041	Number of level 2 events



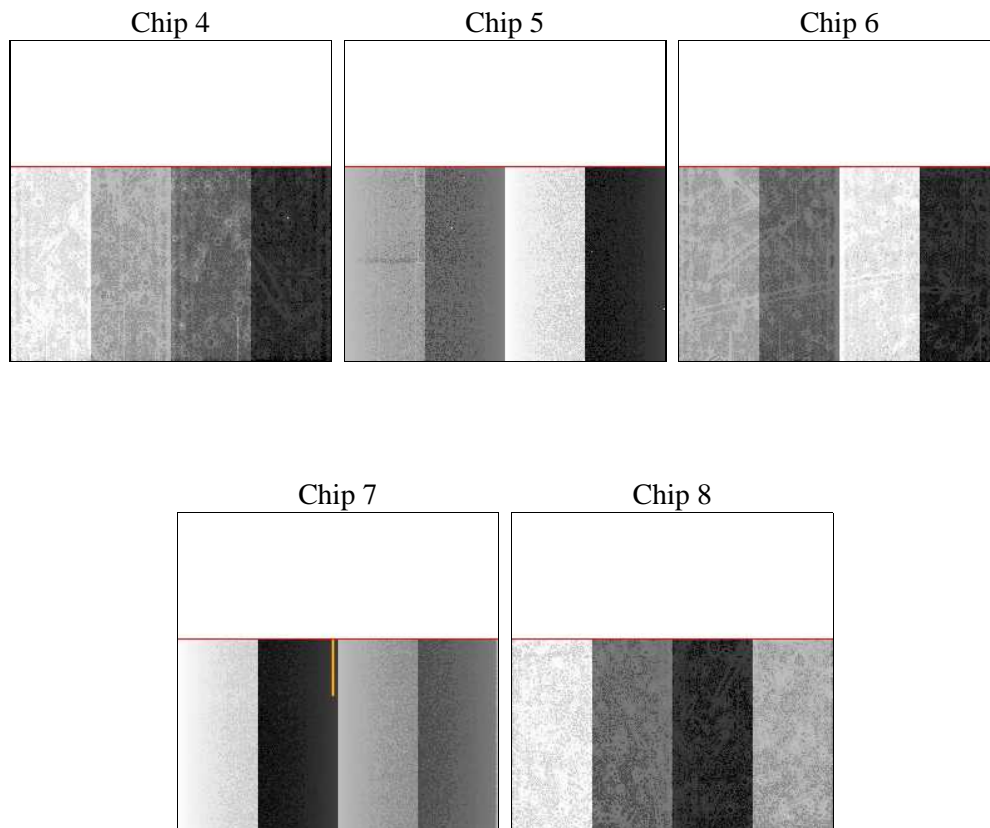
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	39928.503000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	39999.650193632	Sum of GTIs [s]
caldsver	4.6.4	 	ontime4	39997.44500339	Sum of GTIs [s]
date	2014-12-09T05:10:49	Date and time of file creation	ontime5	39999.609153628	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	39999.568113625	Sum of GTIs [s]
			ontime7	39999.650193632	Sum of GTIs [s]
			ontime8	39999.527073622	Sum of GTIs [s]
			l1events	818215	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4119.85, 4110.14)	src1a sky pixel position

2.1.4 Events

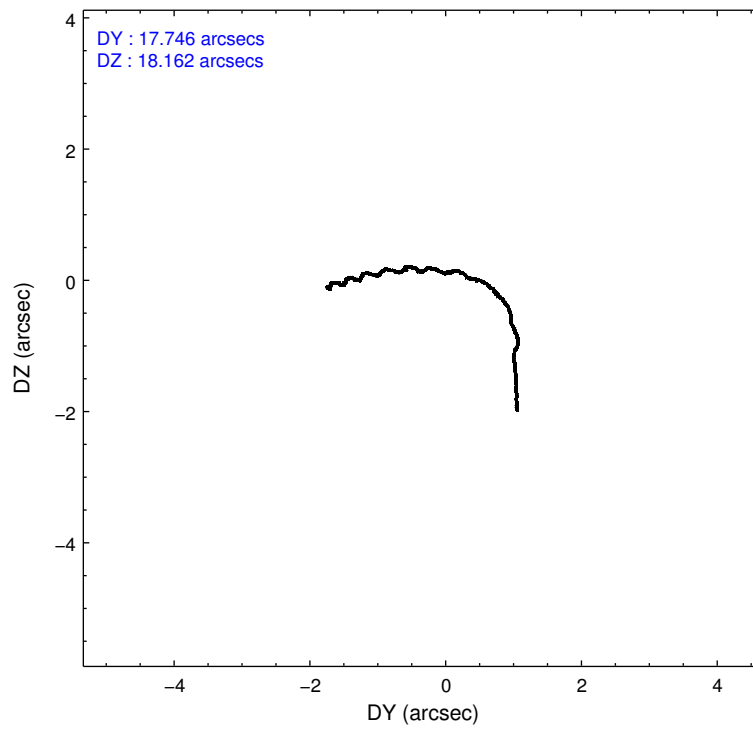
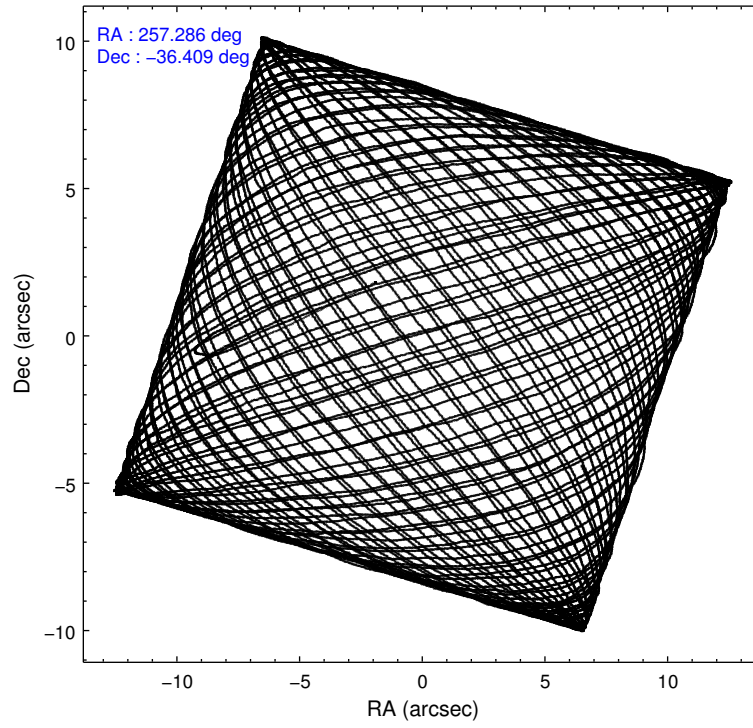
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	140837	209809	130019	165336	172214
rejected events	118341	106150	113798	91900	124638
rejected %	84%	50%	87%	55%	72%

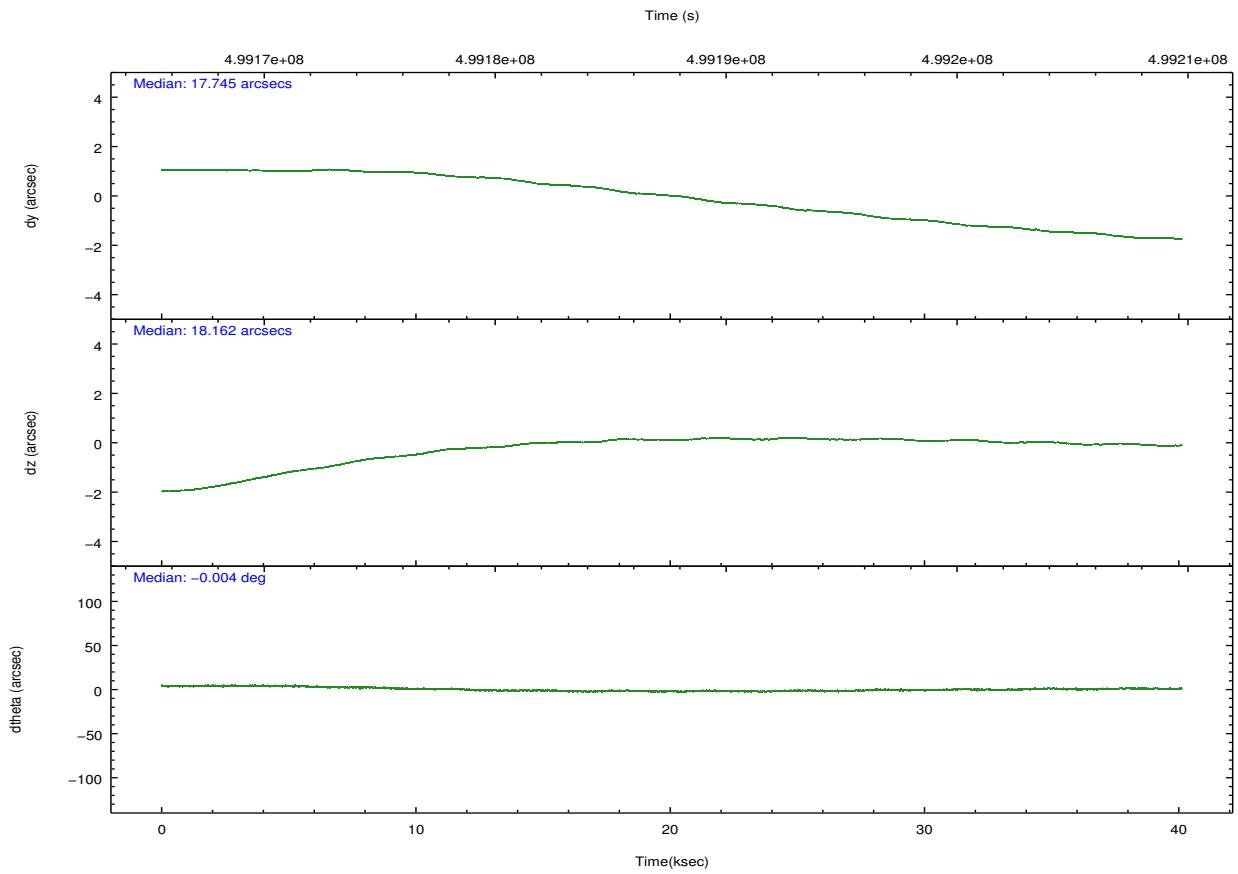
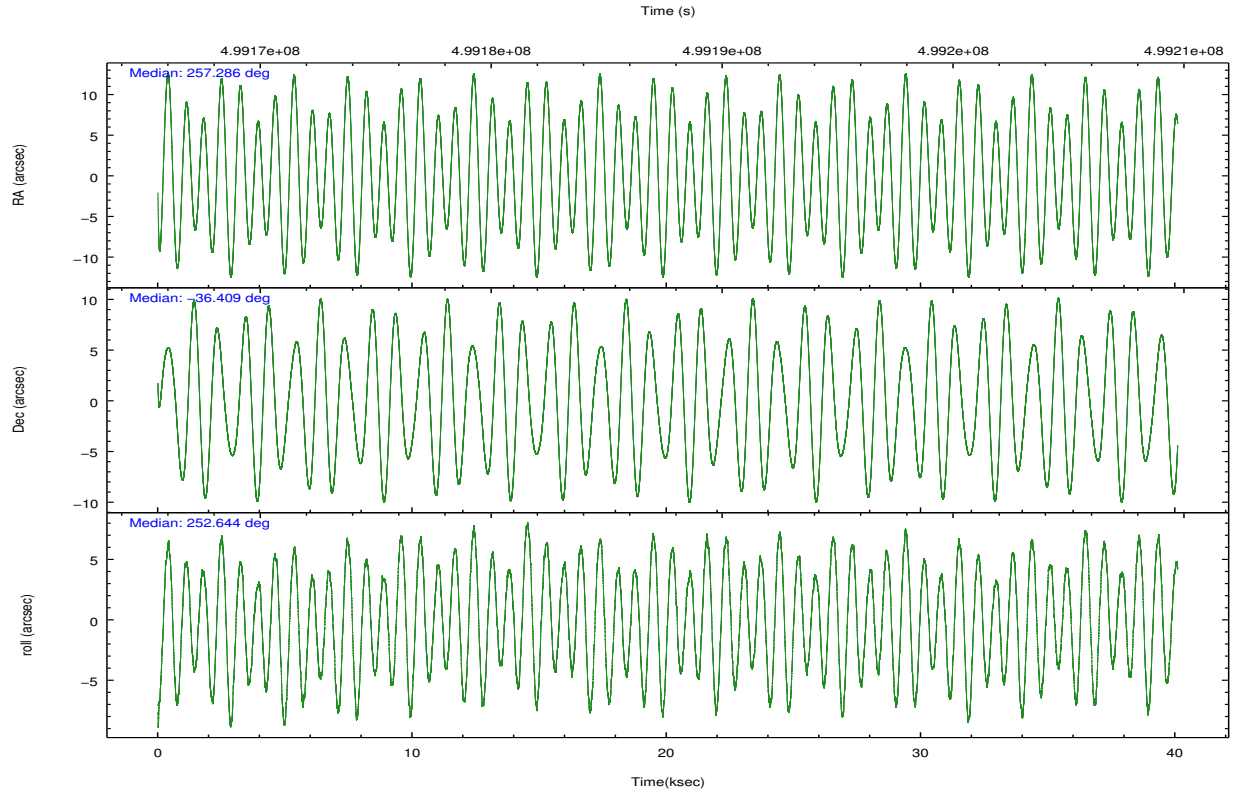
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	11941	12817	5521	6586	13751
	8%	6%	4%	3%	7%
grade 1 events	81	2518	50	193	106
	0%	1%	0%	0%	0%
grade 2 events	4005	28728	3567	14945	10867
	2%	13%	2%	9%	6%
grade 3 events	1910	4807	1802	6689	5173
	1%	2%	1%	4%	3%
grade 4 events	1796	4760	1773	6784	4921
	1%	2%	1%	4%	2%
grade 5 events	5577	16179	6382	17180	8763
	3%	7%	4%	10%	5%
grade 6 events	2846	52550	3558	38437	12877
	2%	25%	2%	23%	7%
grade 7 events	112681	87450	107366	74522	115756
	80%	41%	82%	45%	67%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-45678	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	257.277864	257.2857577477336	CCD I2 on	N	N
[deg] Pointing Dec	-36.382382	-36.40898143609132	CCD I3 on	N	N
[deg] Pointing Roll	252.487988	252.6492933503518	CCD S0 on	Y	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	-185.262523	-185.2547514189408	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-4.87	-4.877771164067013	CCD S4 on	Y	Y
[s] Observation start time (MET)	499167769.184000	499166546.92843	CCD S5 on	O1	N
Observation start date	2013-10-26T09:41:42	2013-10-26T09:22:26	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	499207698.184000	499207922.5932	On-chip summing requested	N	N
Observation end date	2013-10-26T20:47:11	2013-10-26T20:52:02	Subarray requested	CUSTOM	CUSTOM
Read mode	TIMED	TIMED	Subarray start row	1	1
			Subarray row count	620	620
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	2

2.3 Aspect





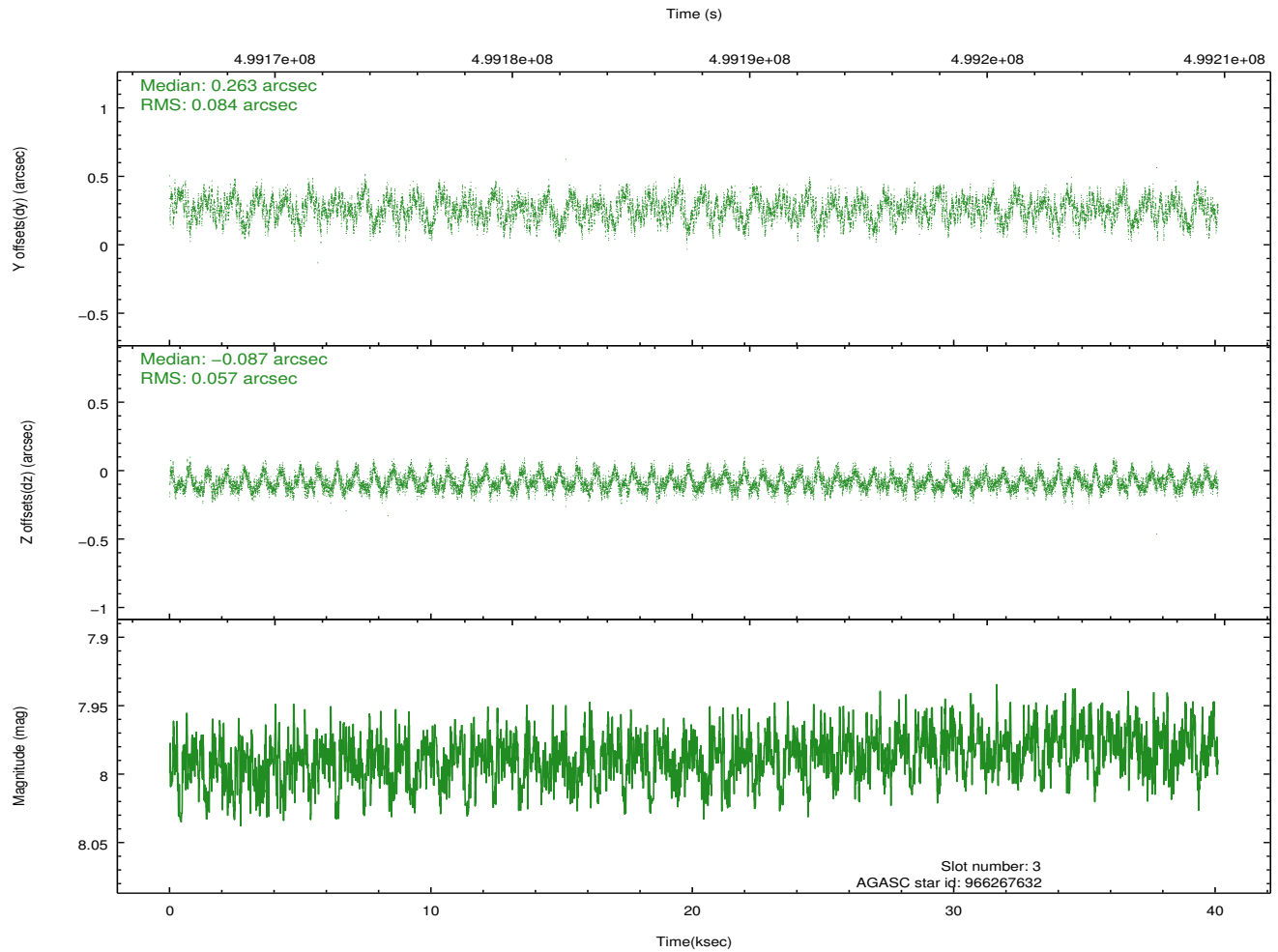
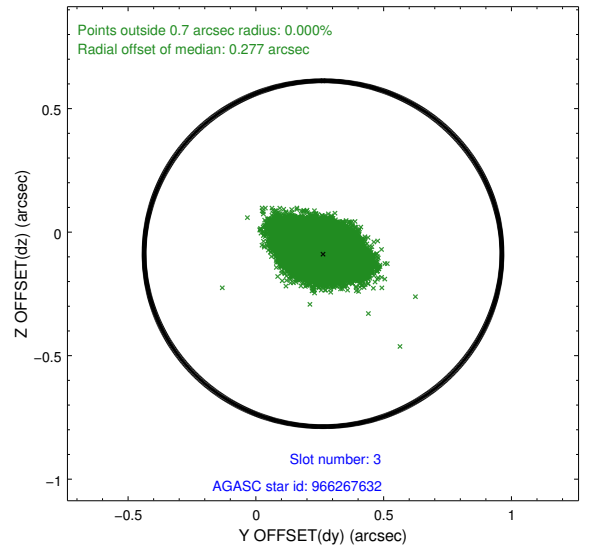
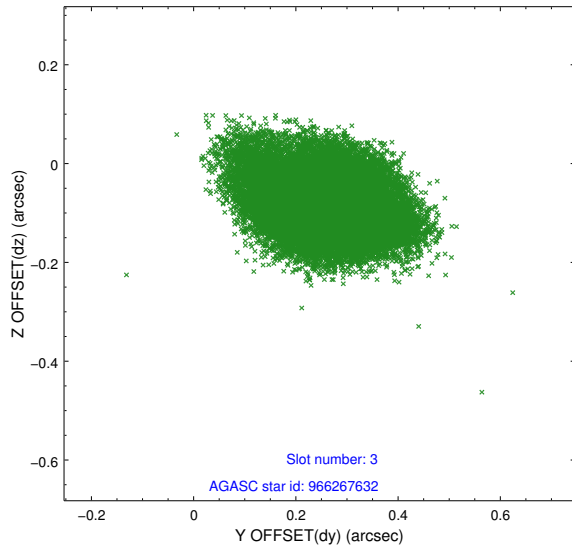
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.02	9782	-0.126	-0.102	0.017	0.057	0.000000	0.000000	-770.47	-1840.02
1	FID		ACIS-S-4	7.10	9779	0.250	0.089	0.029	0.043	0.000000	0.000000	2143.19	68.61
2	FID		ACIS-S-5	7.14	9781	-0.157	0.021	0.030	0.062	0.000000	0.000000	-1823.32	62.26
3	GUIDE	used	966267632	7.99	19561	0.263	-0.087	0.108	0.175	256.428991	-36.740525	1977.70	-1943.90
4	GUIDE	used	966395864	7.61	19559	0.100	0.024	0.074	0.116	256.670769	-36.077904	-507.68	-2012.60
5	GUIDE	used	966396120	7.85	19557	-0.041	-0.067	0.067	0.109	256.737004	-36.720258	1634.43	-1120.69
6	GUIDE	used	966402904	8.08	19558	-0.215	-0.115	0.062	0.102	257.709598	-36.005094	-1670.72	791.09
7	GUIDE	used	965880312	8.22	19559	-0.105	0.238	0.068	0.107	256.959867	-35.621278	-2331.13	-1711.31

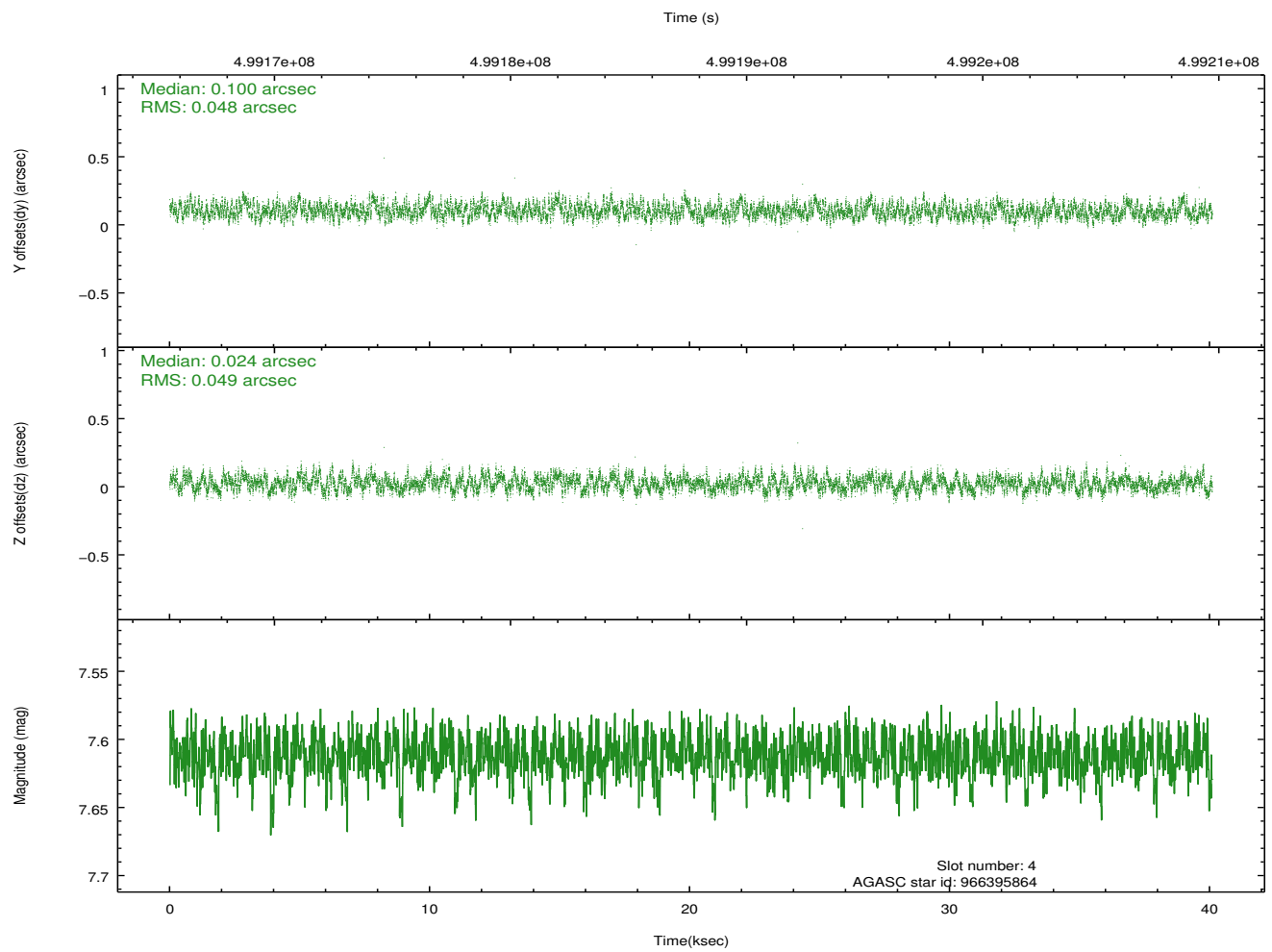
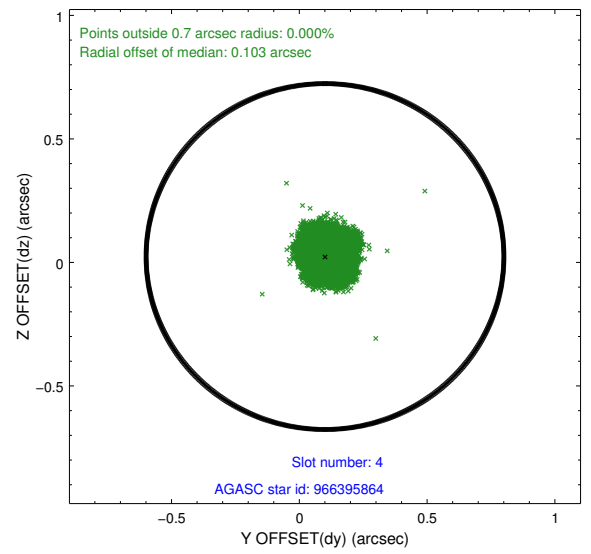
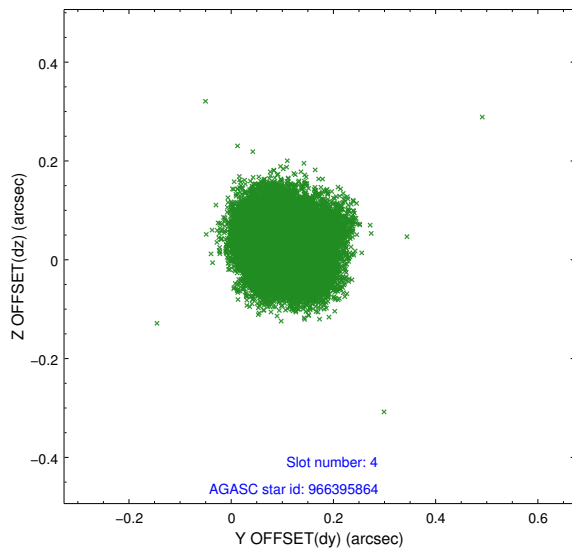
∞

2.4 Star Slots

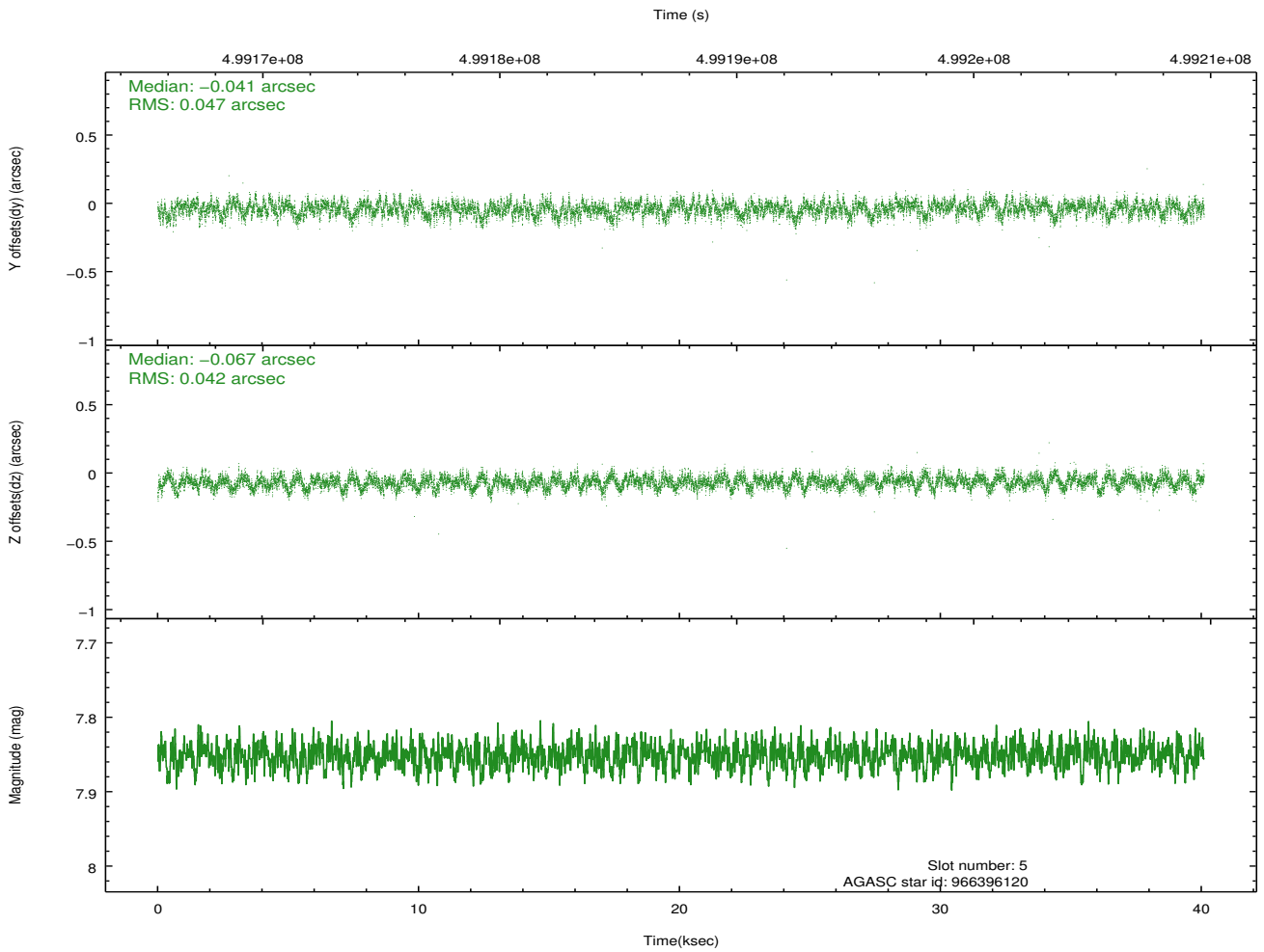
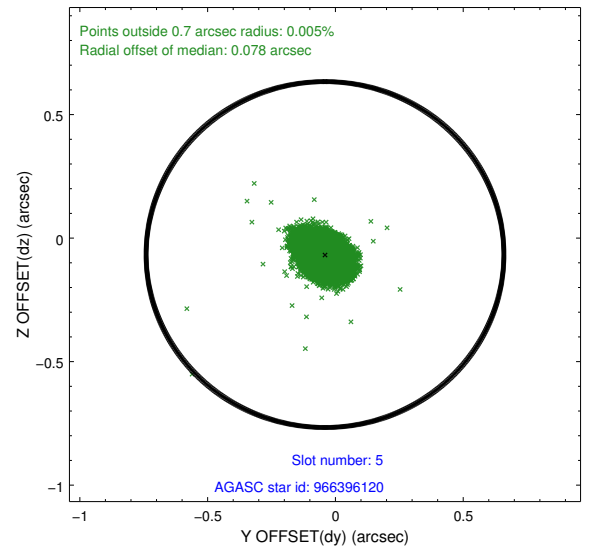
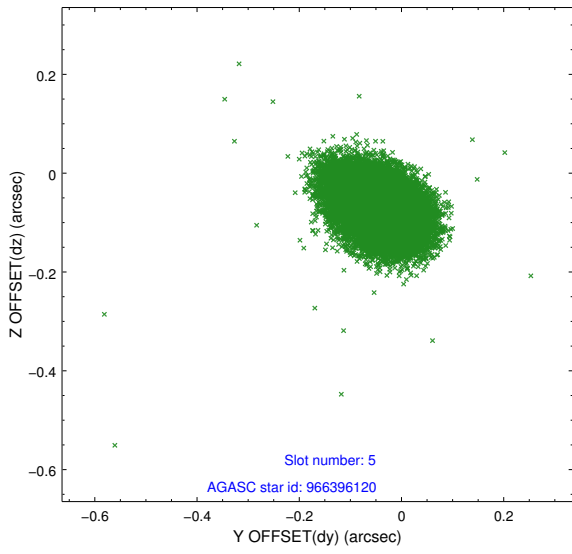
2.4.1 Slot 3



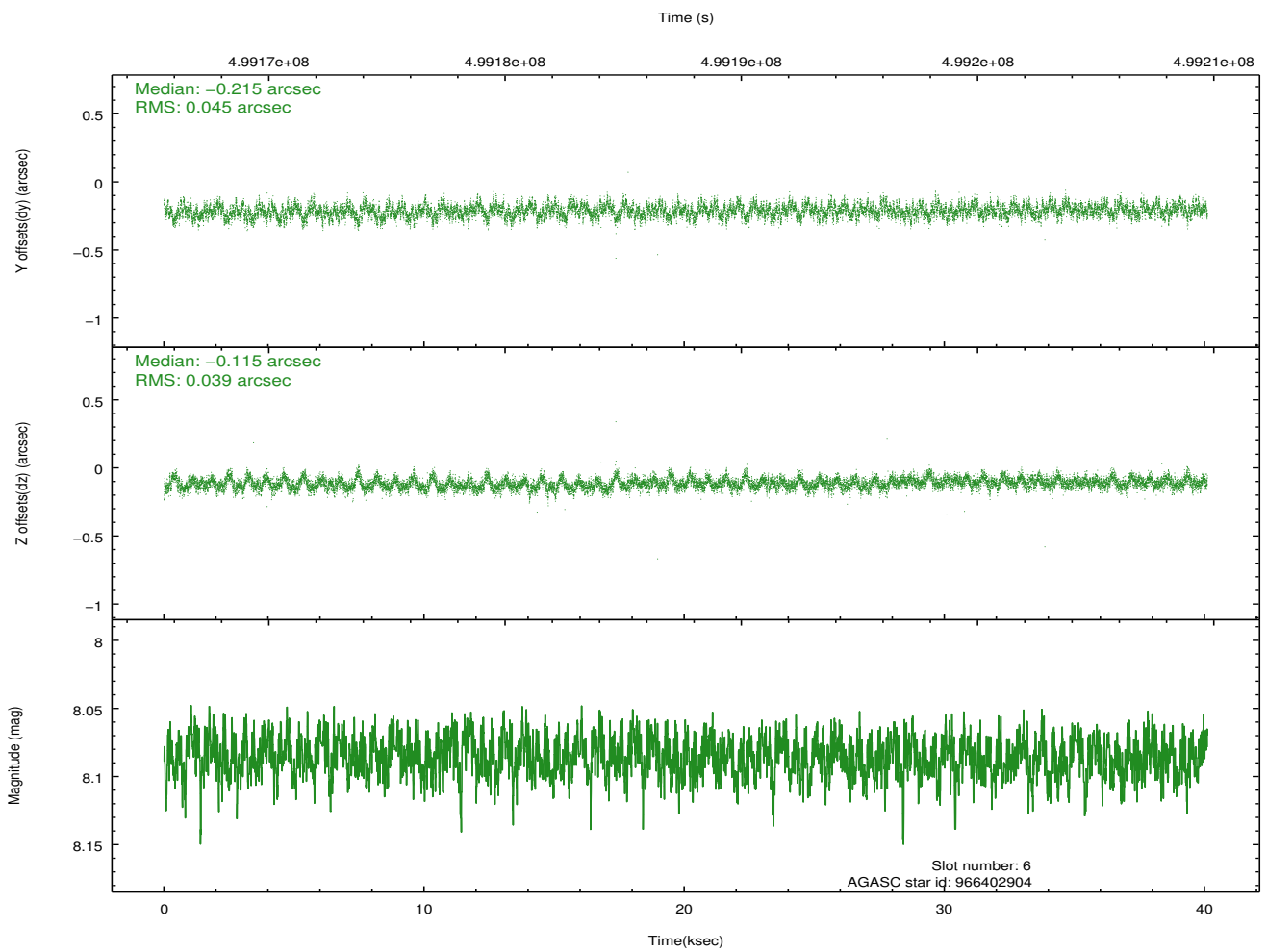
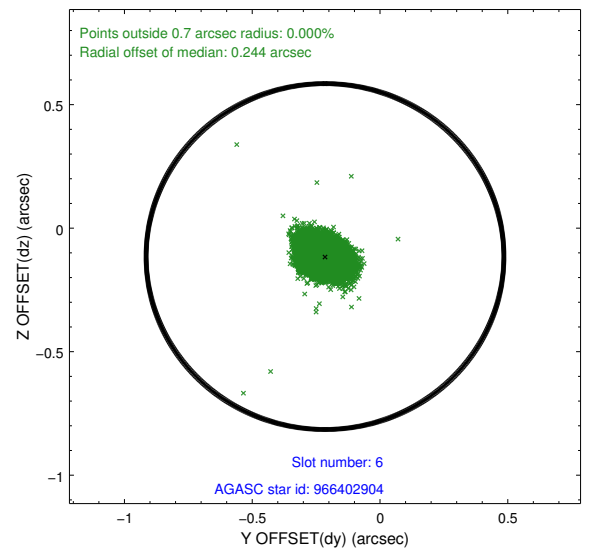
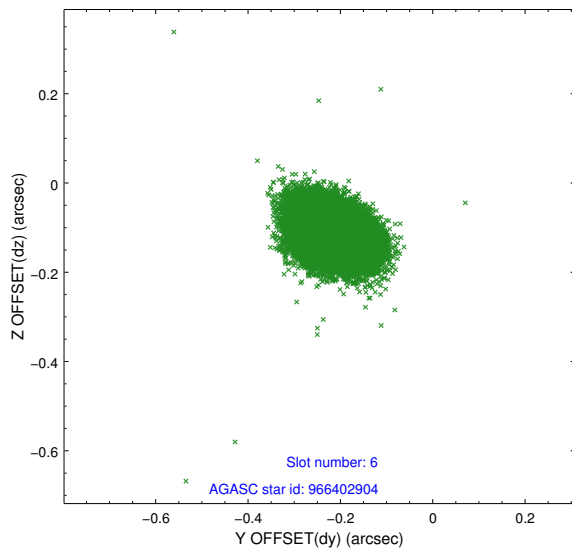
2.4.2 Slot 4



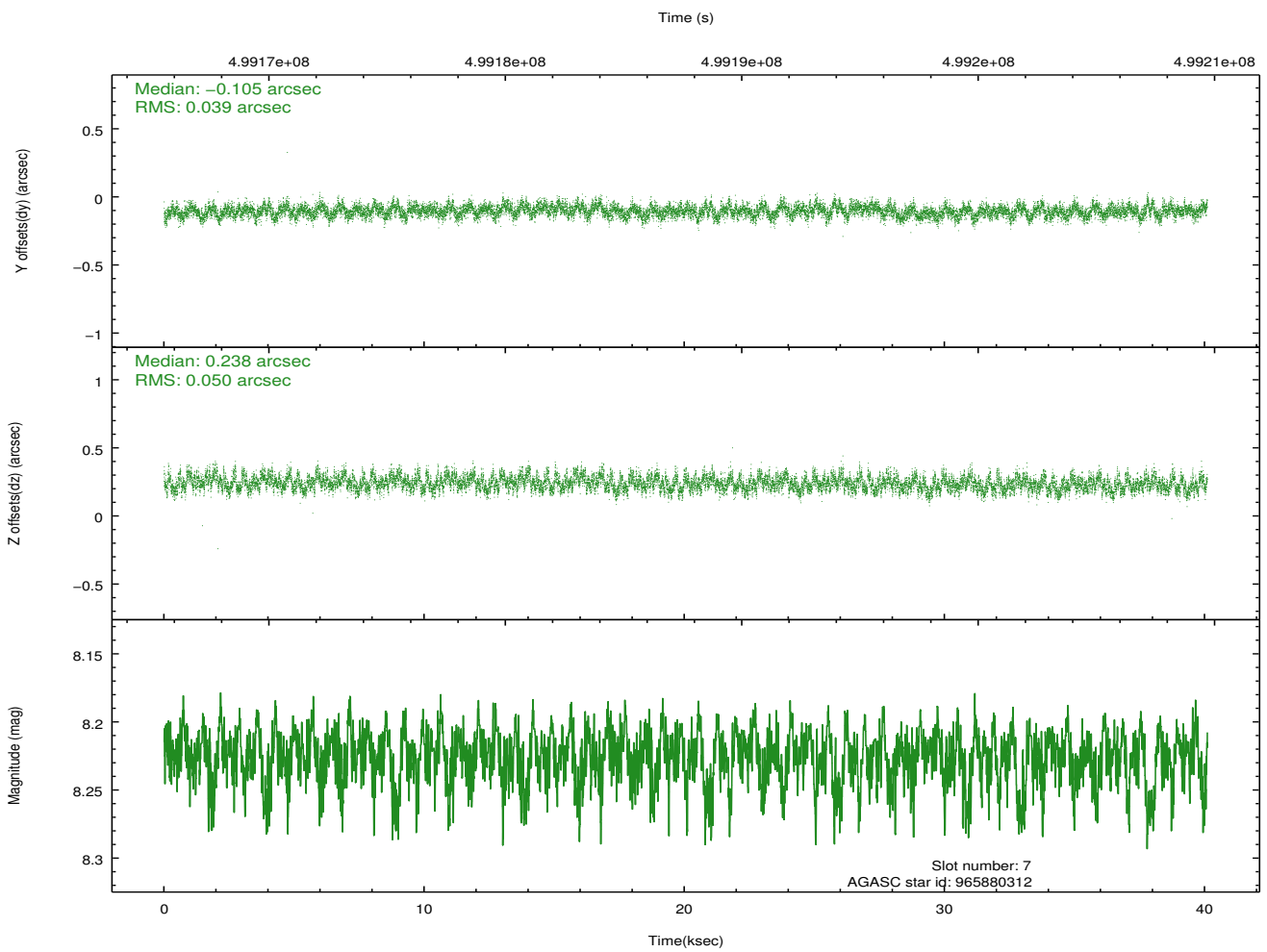
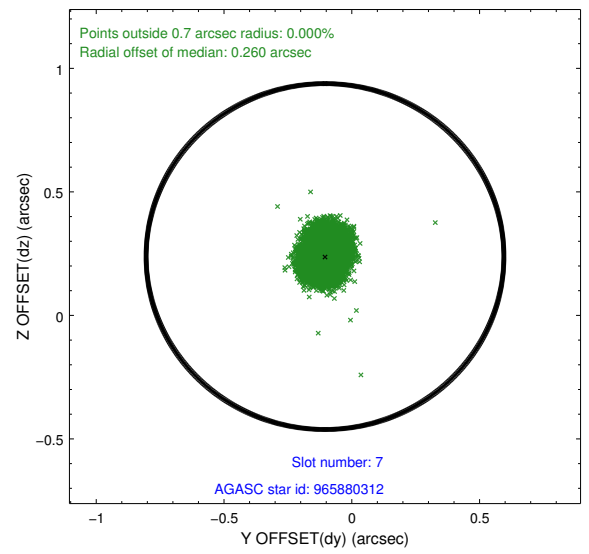
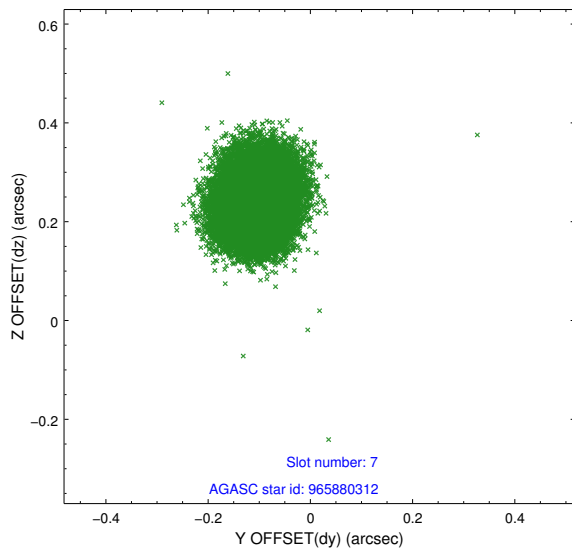
2.4.3 Slot 5



2.4.4 Slot 6

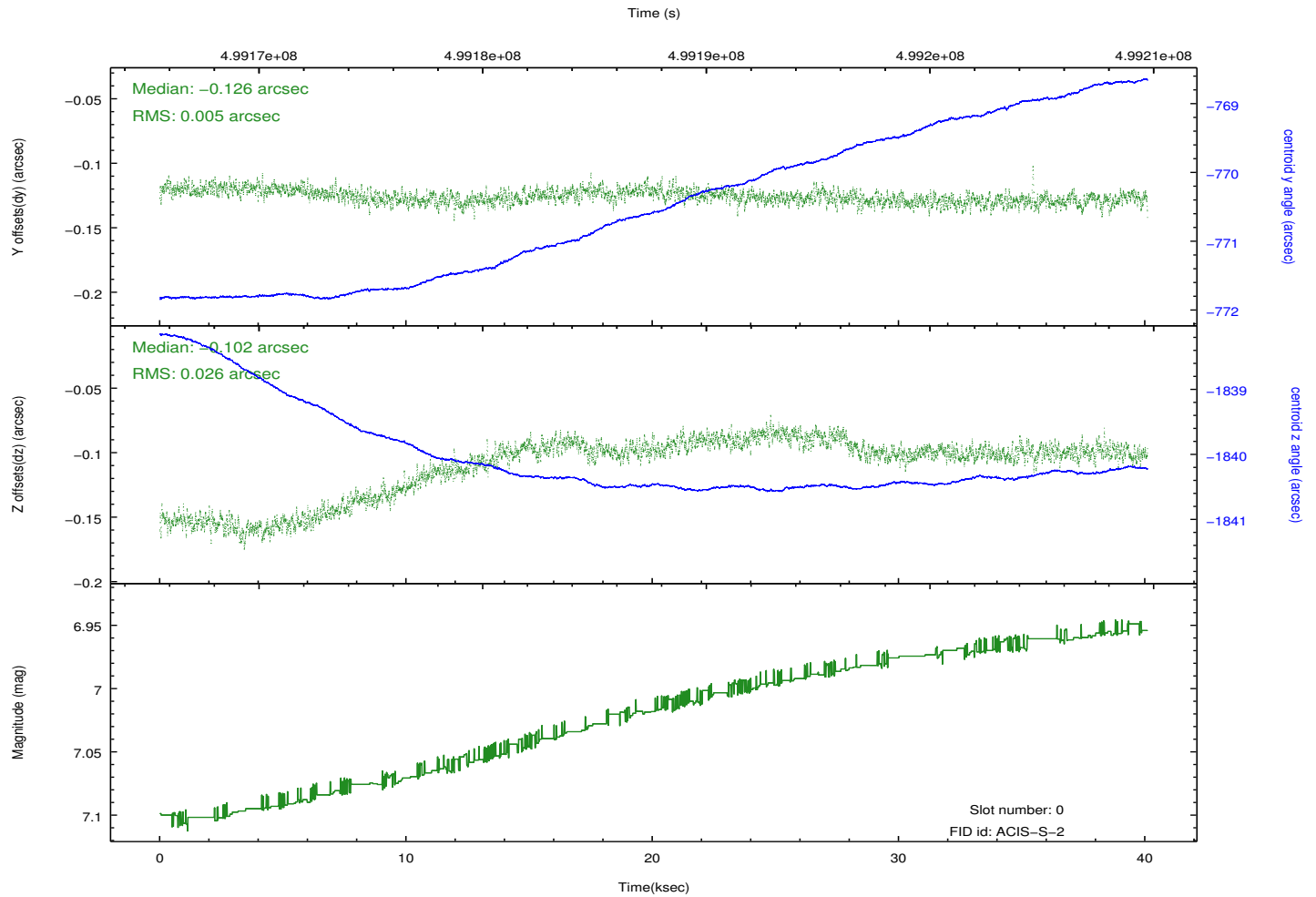
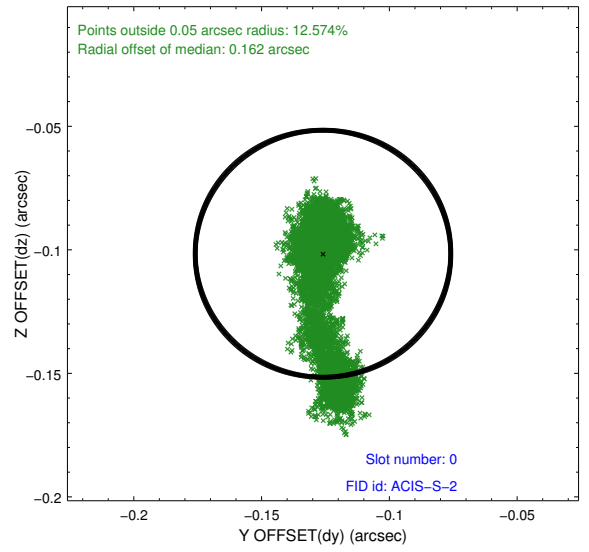
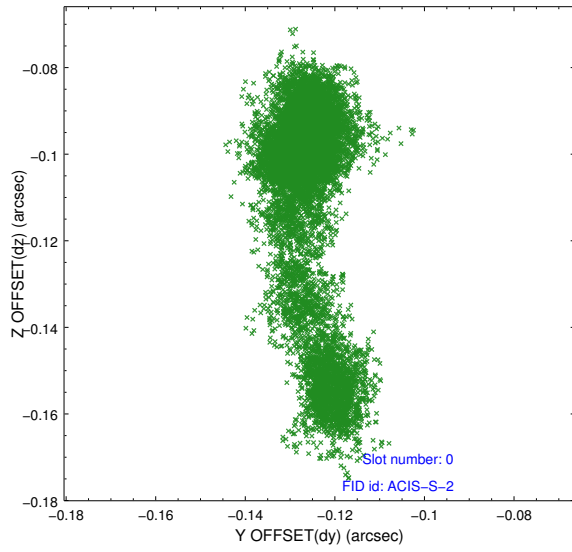


2.4.5 Slot 7

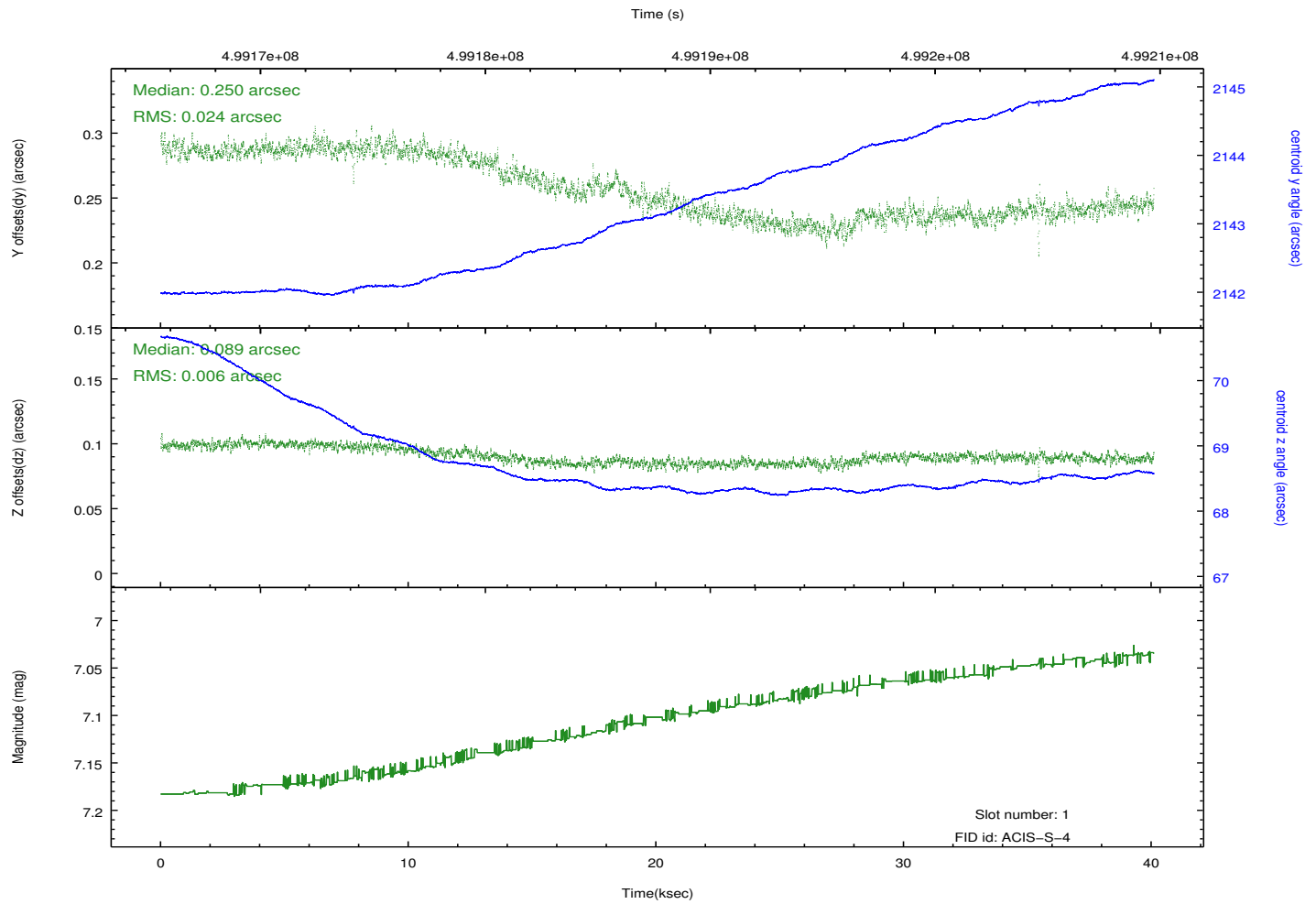
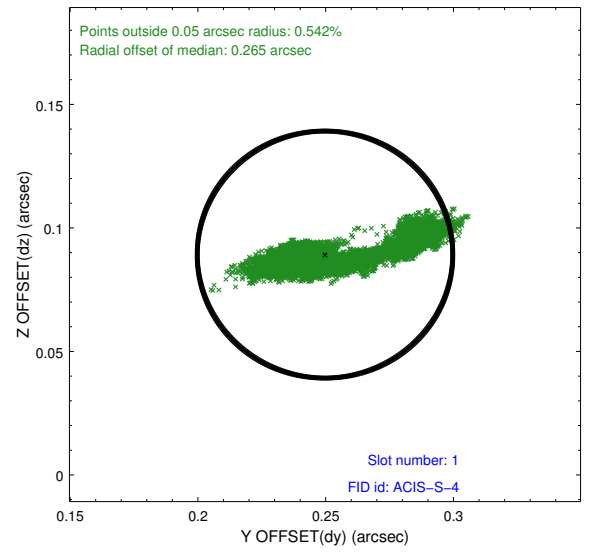
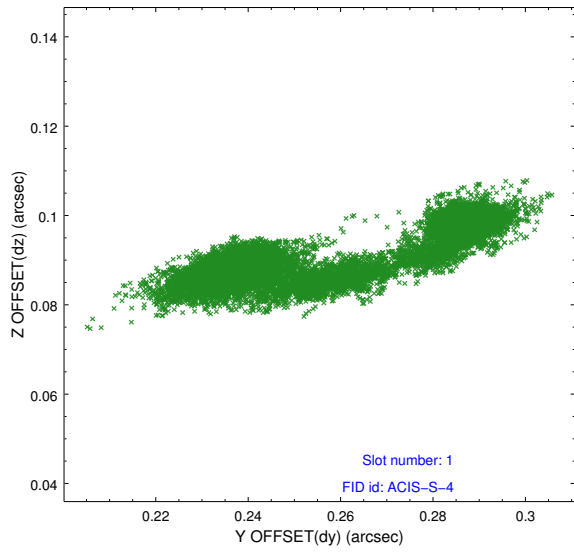


2.5 FID Slots

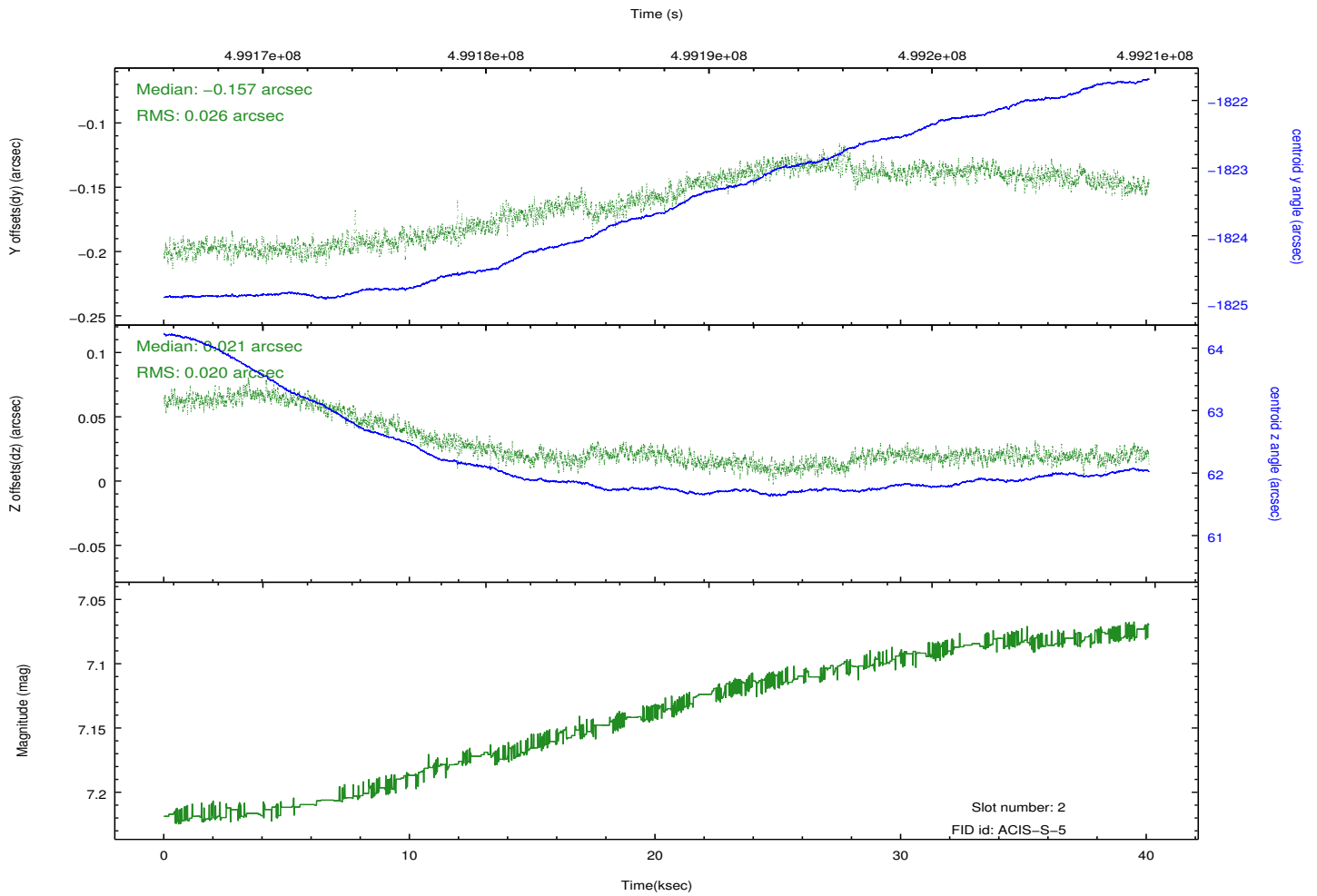
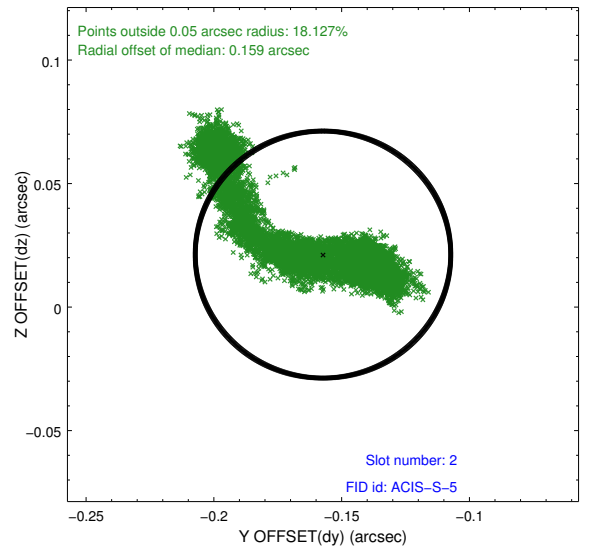
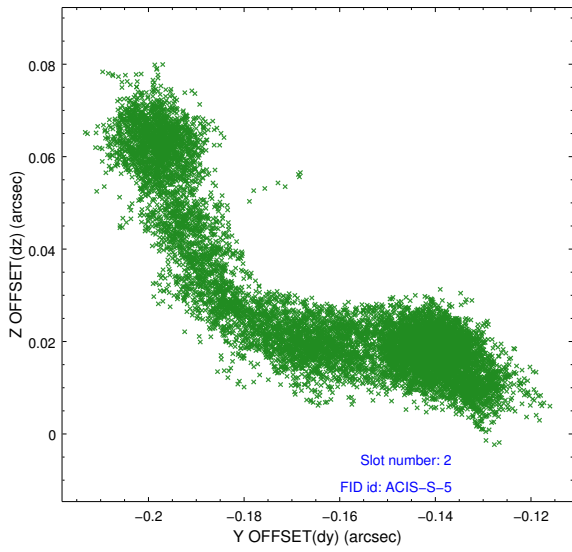
2.5.1 Slot 0



2.5.2 Slot 1

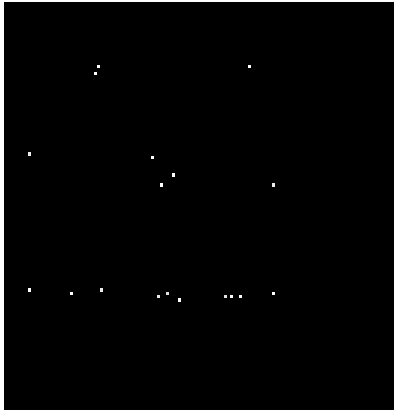


2.5.3 Slot 2

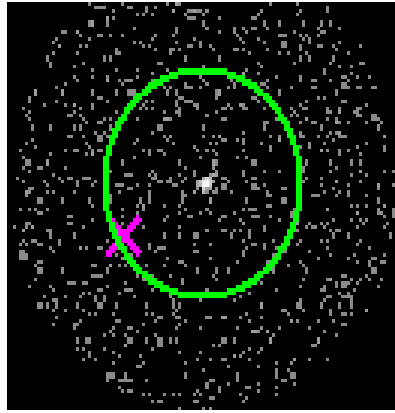


3 Gratings

3.1 HEG Arm



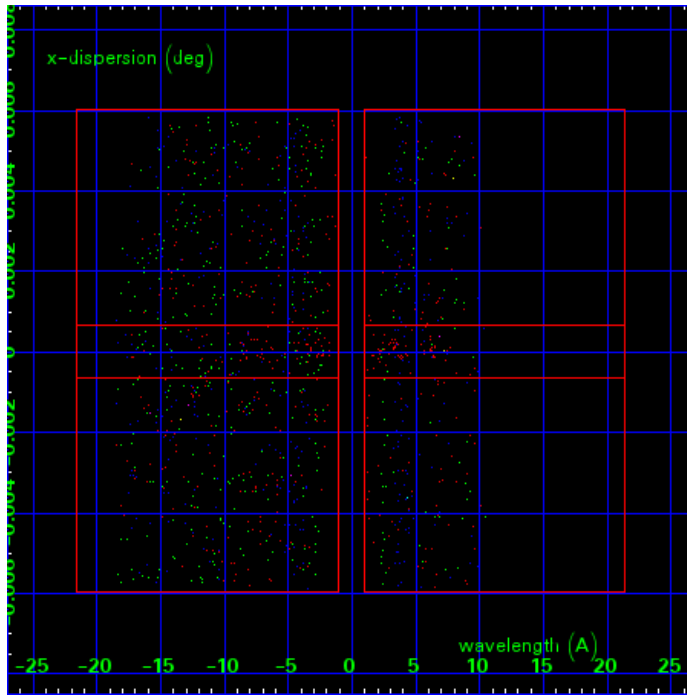
HEG Order Sort 123



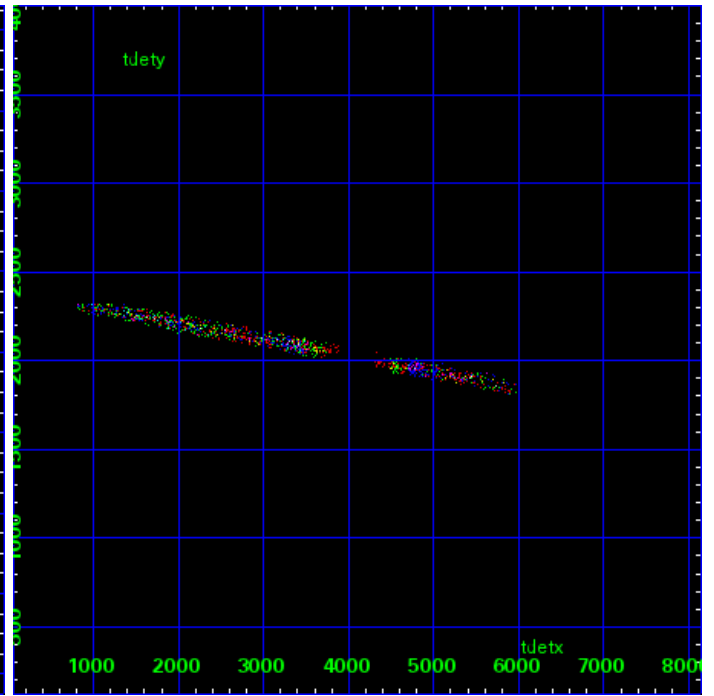
HEG Zero Order



HEG Order Sort ALL

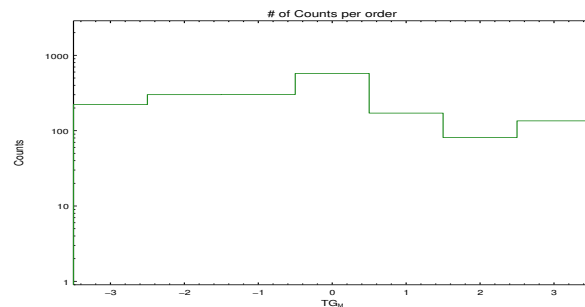


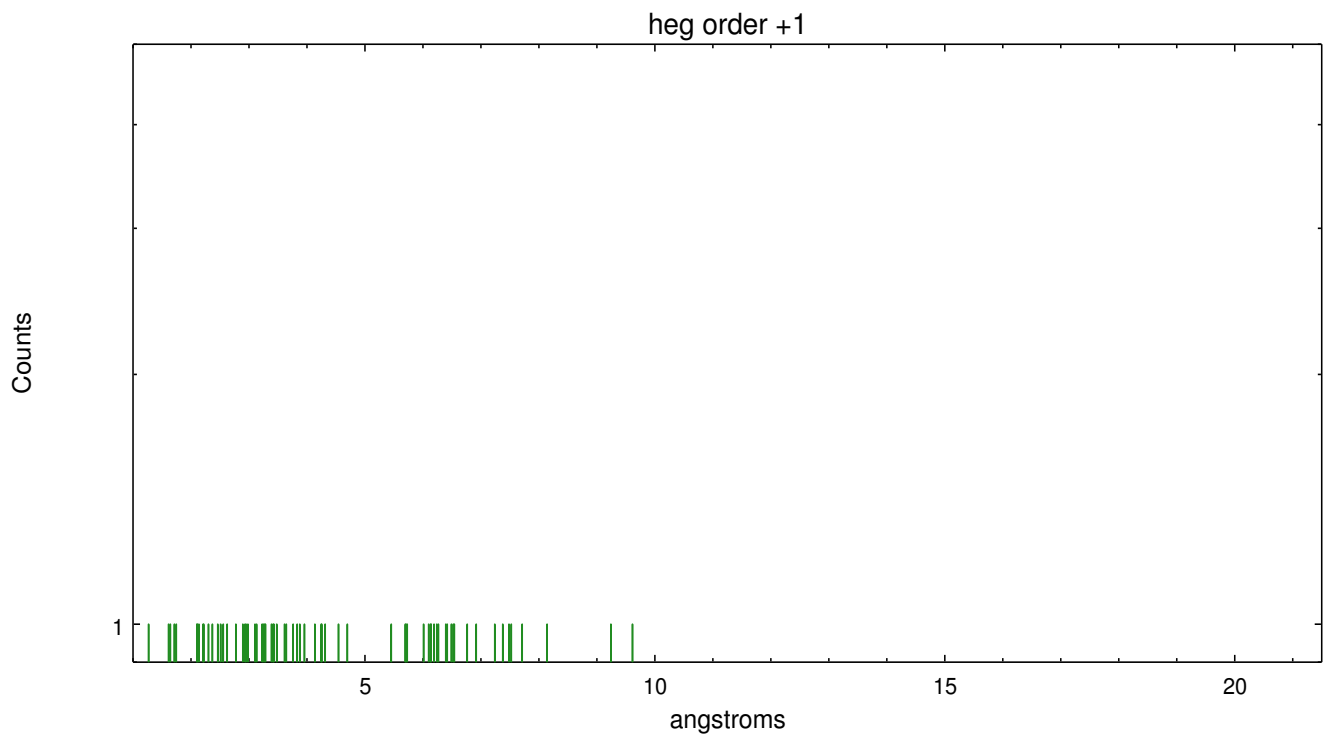
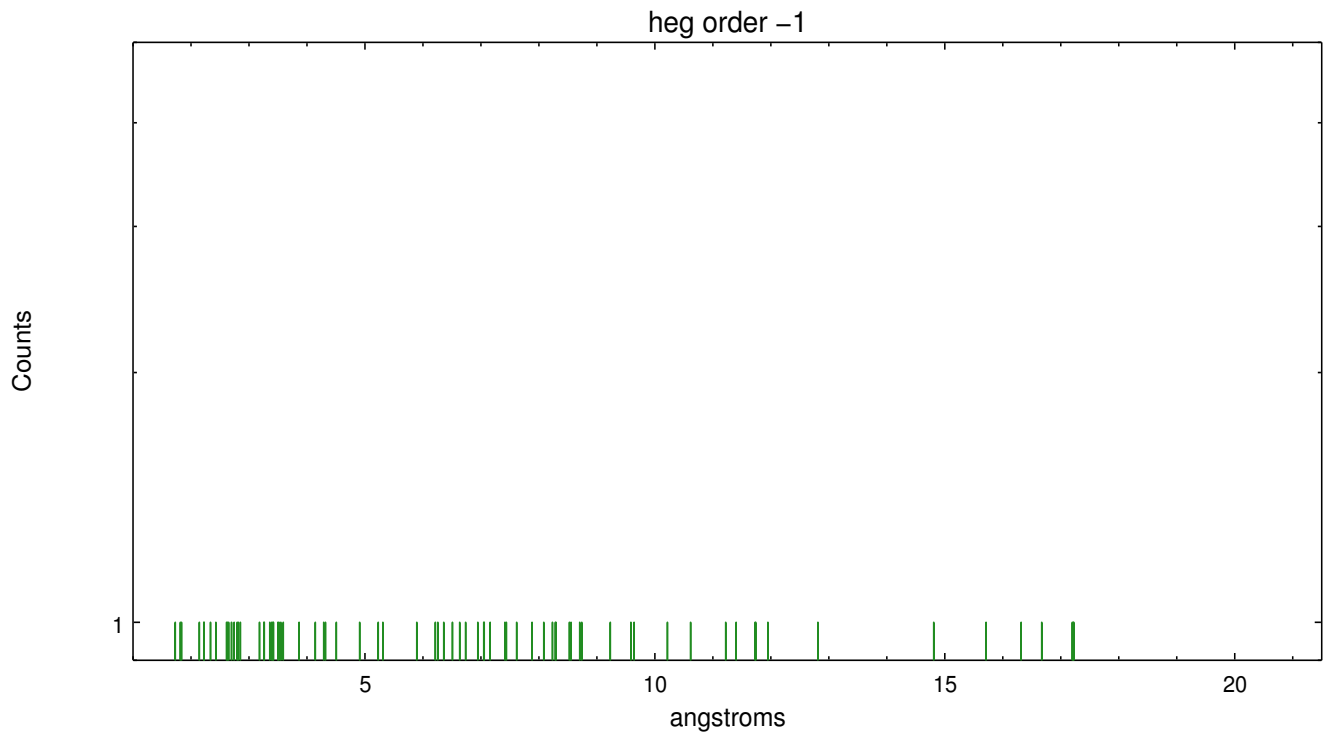
Spot Image HEG



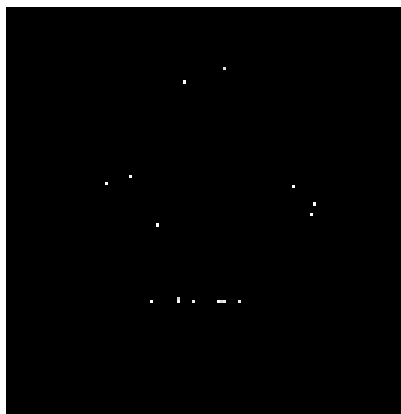
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	222	301	302	575	171	81	135

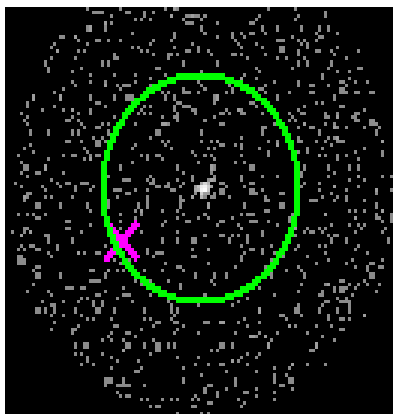




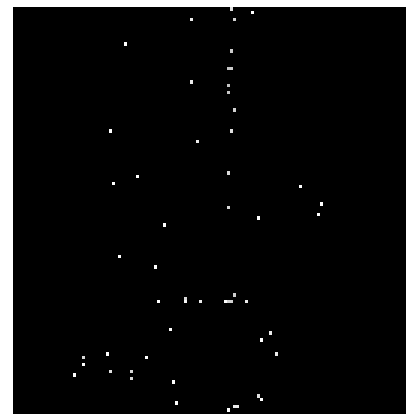
3.2 MEG Arm



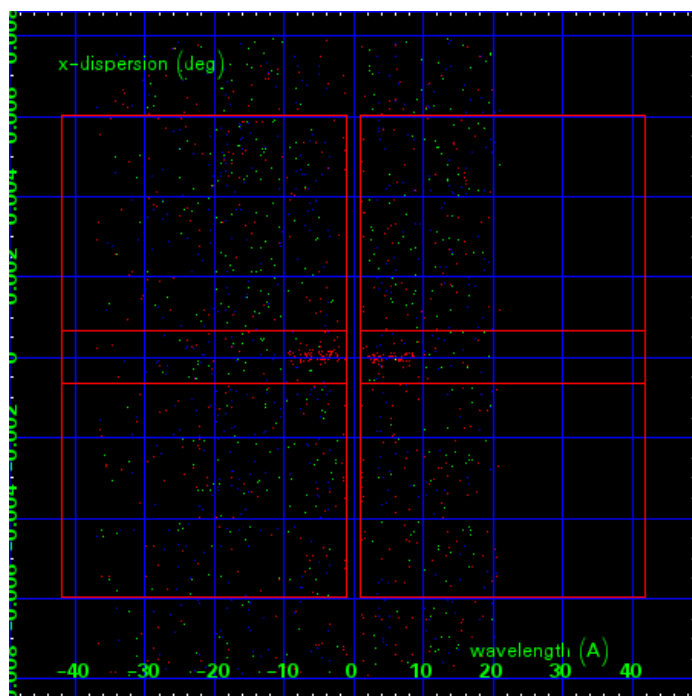
MEG Order Sort 123



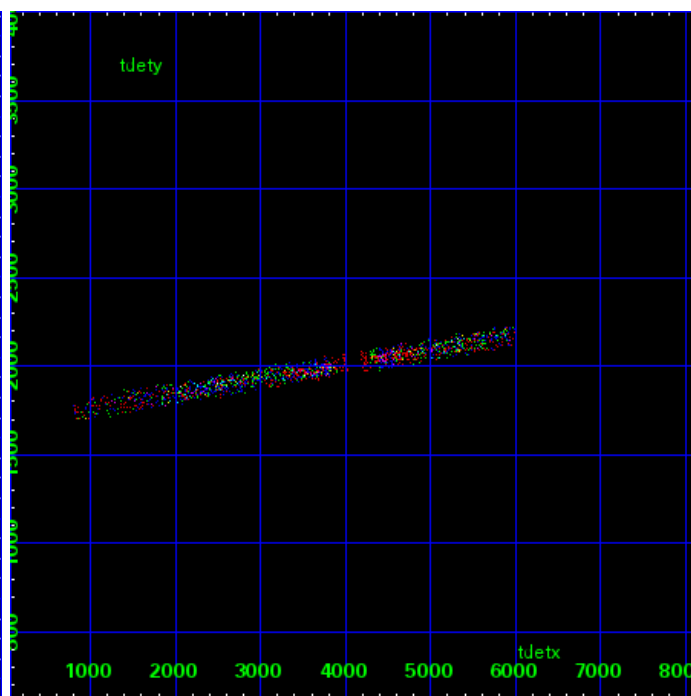
MEG Zero Order



MEG Order Sort ALL

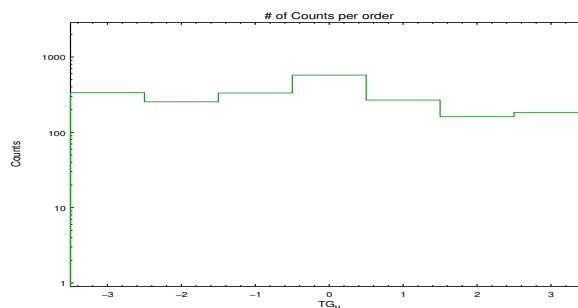


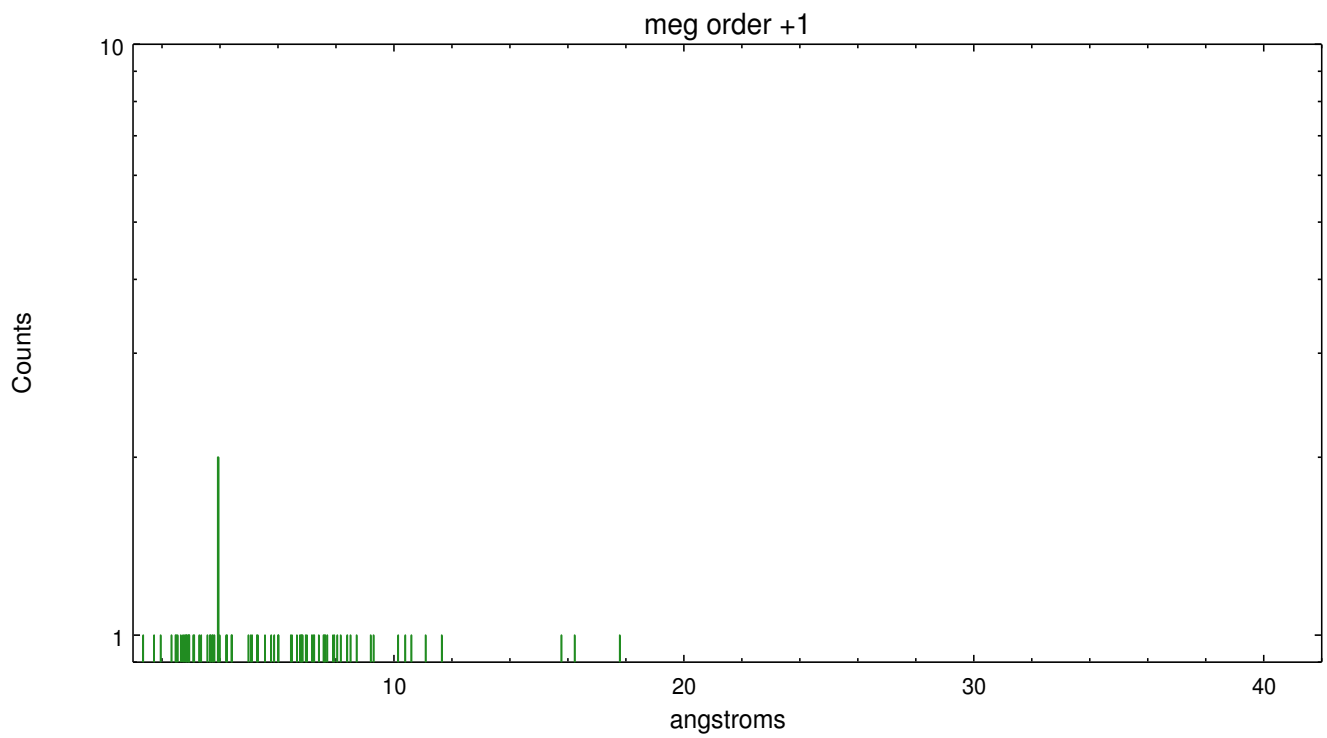
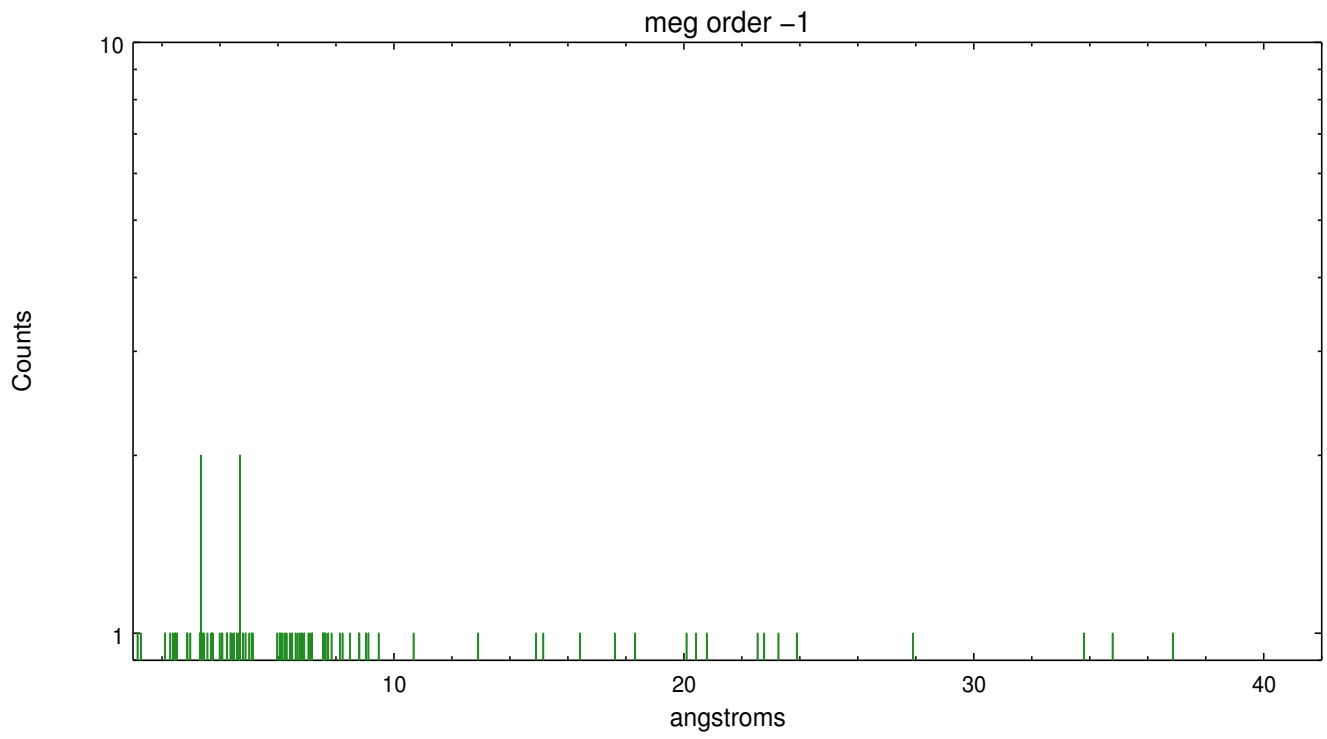
Spot Image MEG



Full Detector MEG

	order	order	order	order	order	order	order
	-3	-2	-1	0	1	2	3
Events	336	254	333	575	268	161	184





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.05.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	39.999650193632

A.2 Comments

For operational reasons, it was necessary to drop chip S5 for this observation. Therefore, the positive spectral orders for both meg and heg have been truncated at about 20 and 10 A, respectively. This should be taken into account in the data analysis.

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These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.