

V&V Reference Report

L2 ASCDS Version : 10.4.3

Observation 18623 - L2 Version 1
Chandra X-Ray Center

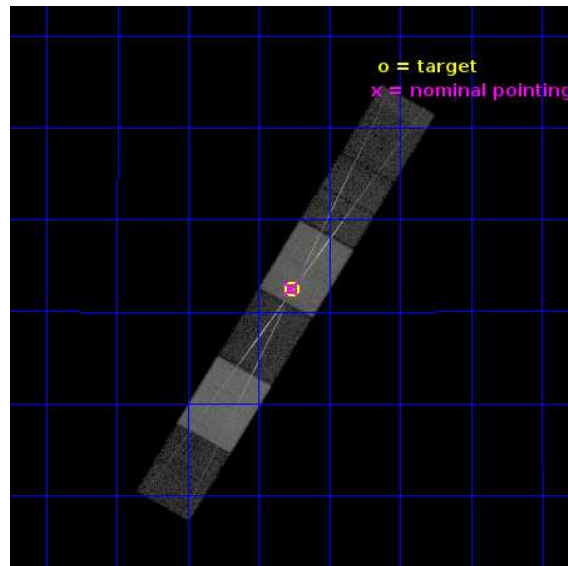
L2 Processing Date : Jan 5 2016

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1 Front

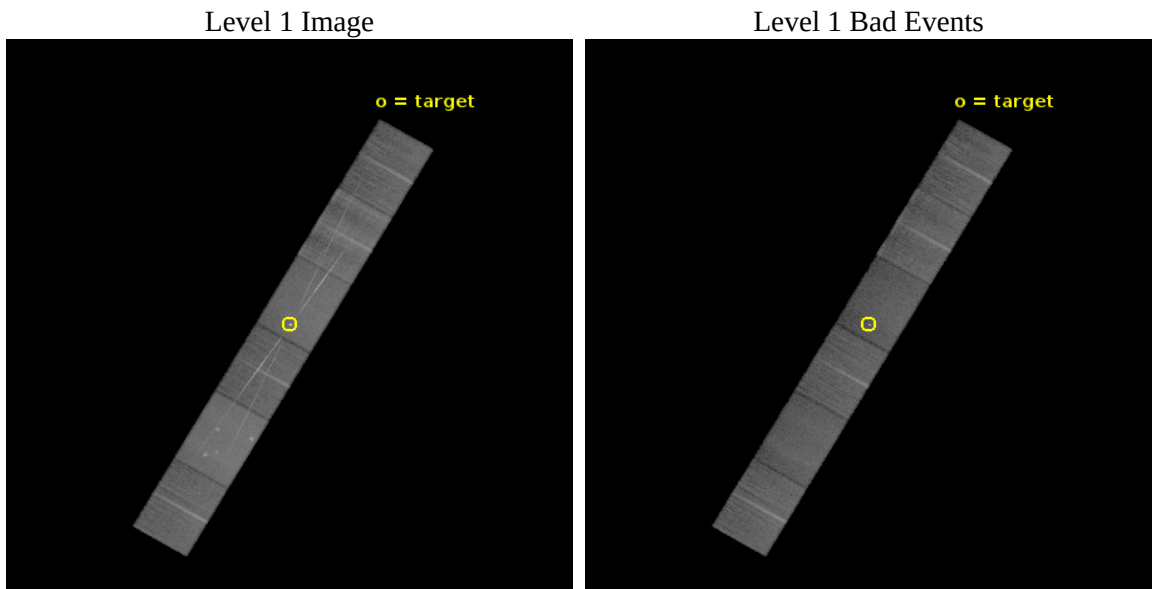
seq_num	703293	Sequence number
obs_id	18623	Observation id
title	Deciphering the ionised outflows in NGC 7469	Proposal title
observer	Prof Jelle Kaastra	Principal investigator
object	NGC 7469	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	345.815	Observer's specified target RA [deg]
dec_targ	8.873917	Observer's specified target Dec [deg]
ra_nom	345.81715954086	Nominal RA [deg]
dec_nom	8.8750073345944	Nominal Dec [deg]
roll_nom	300.1562903762	Nominal Roll [deg]
revision	1	Processing version of data
ontime	36625.0	Sum of GTIs [s]
livetime	36033.474482889	Livetime [s]
ontime4	36625.0	Sum of GTIs [s]
ontime5	36625.0	Sum of GTIs [s]
ontime6	36625.0	Sum of GTIs [s]
ontime7	36625.0	Sum of GTIs [s]
ontime8	36622.458979726	Sum of GTIs [s]
ontime9	36622.458969712	Sum of GTIs [s]
l2events	326040	Number of level 2 events



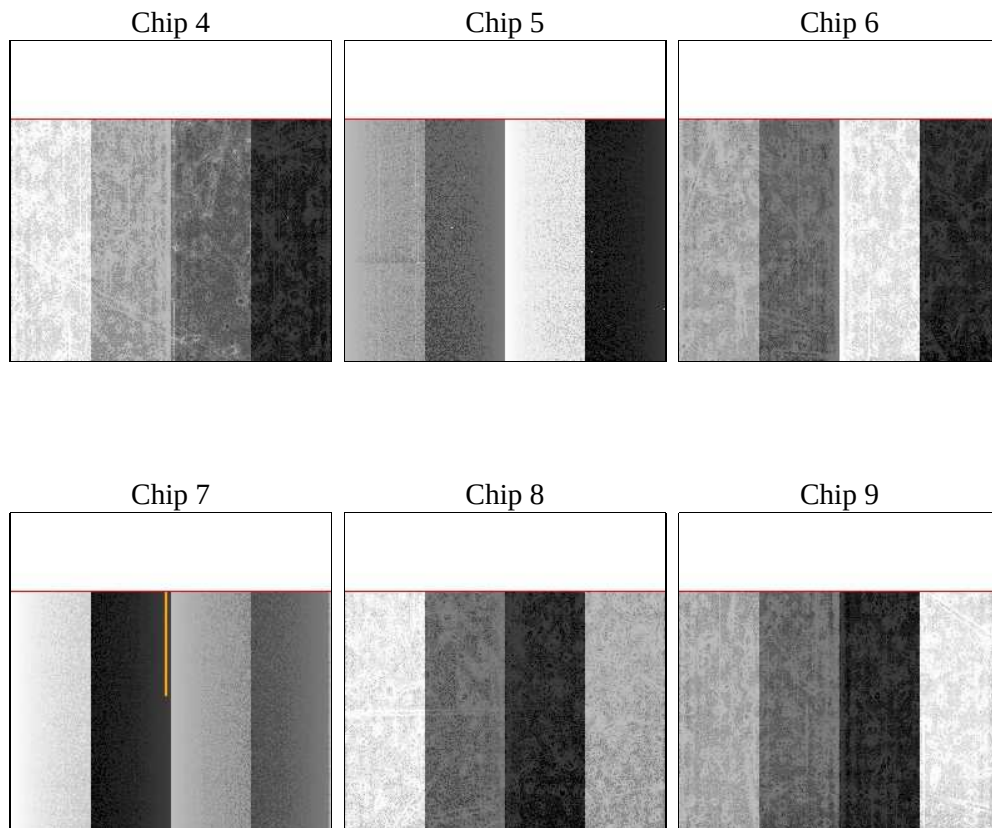
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	36600.000000	[s] Scheduled observation exposure time
ascdsver	10.4.3	Processing system revision	ontime	36625.0	Sum of GTIs [s]
caldsver	4.7.0	 	ontime4	36625.0	Sum of GTIs [s]
date	2016-01-05T18:00:38	Date and time of file creation	ontime5	36625.0	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	36625.0	Sum of GTIs [s]
			ontime7	36625.0	Sum of GTIs [s]
			ontime8	36622.458979726	Sum of GTIs [s]
			ontime9	36622.458969712	Sum of GTIs [s]
			l1events	1243908	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			src1a_pos	(4110.96, 4088.82)	src1a sky pixel position

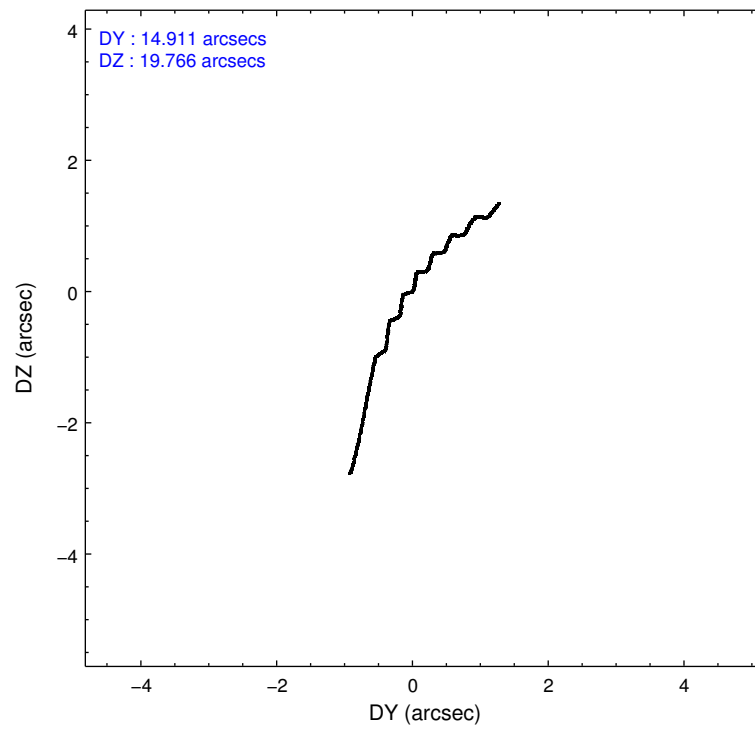
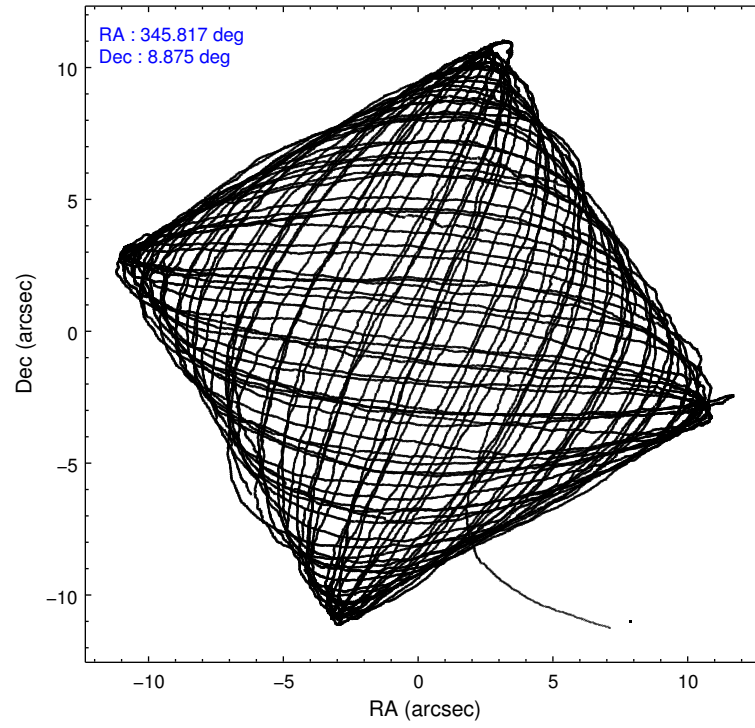
2.1.4 Events

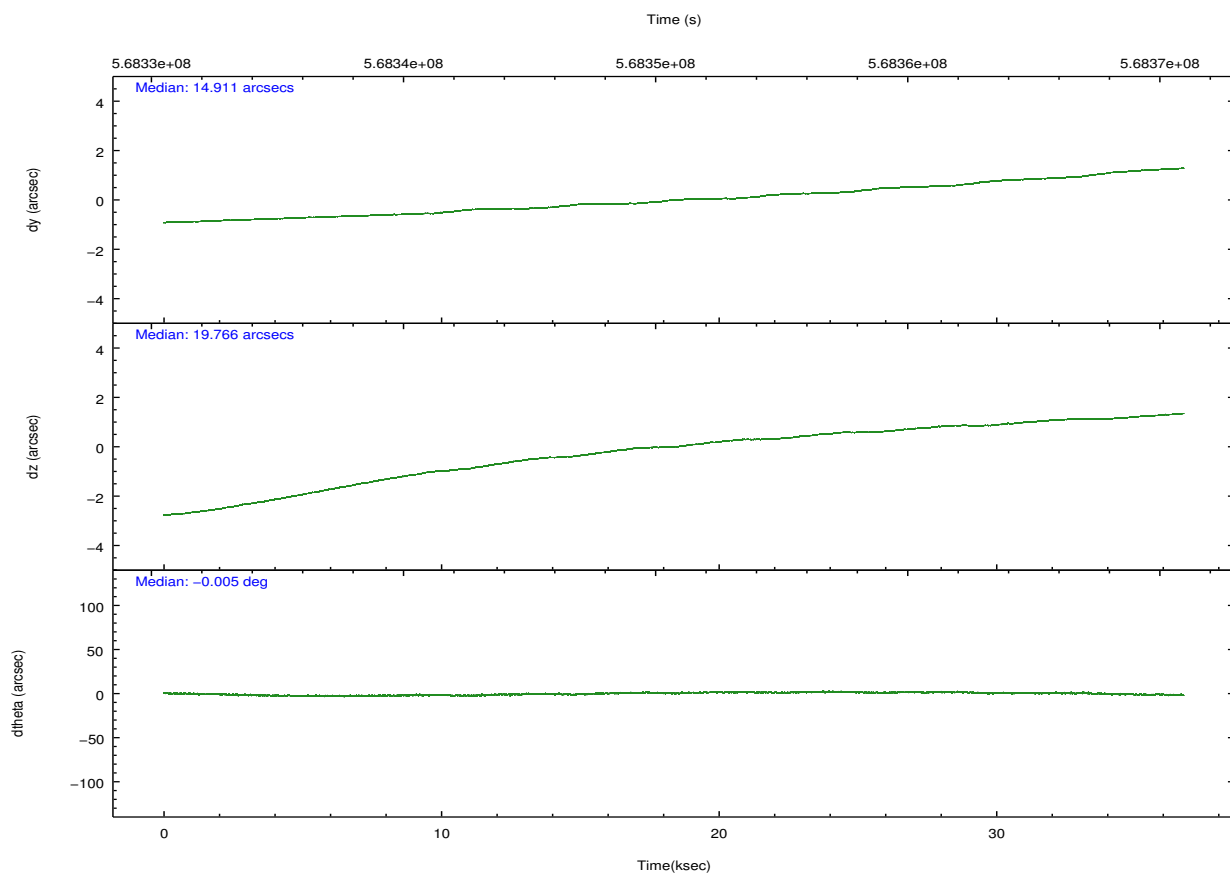
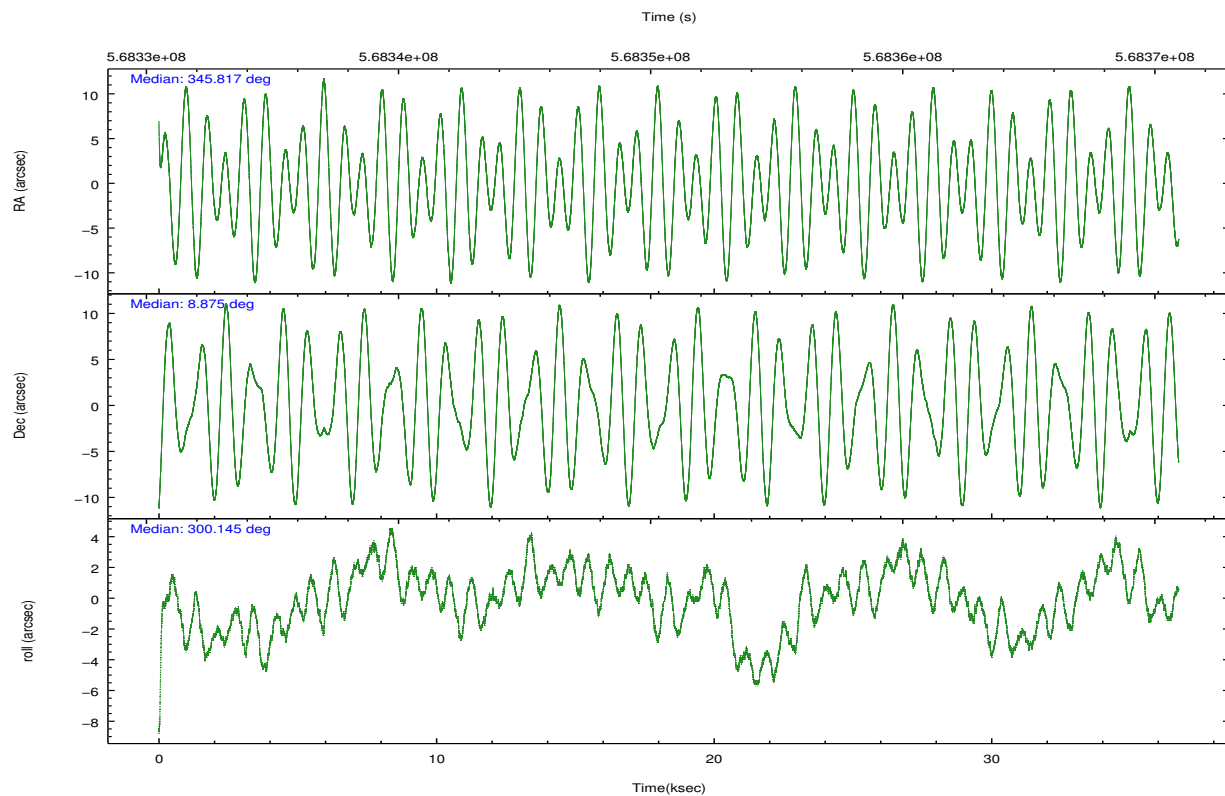
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	183160	260069	179552	237851	222266	161010	grade 0 events	8136	13065	18573	13107	22455	7939
rejected events	162440	132197	145094	121131	156958	139780		4%	5%	10%	5%	10%	4%
rejected %	88%	50%	80%	50%	70%	86%	grade 1 events	112	560	104	555	157	78
								0%	0%	0%	0%	0%	0%
							grade 2 events	4811	38346	5930	24970	14463	4503
								2%	14%	3%	10%	6%	2%
							grade 3 events	2159	4998	2626	10392	6278	2256
								1%	1%	1%	4%	2%	1%
							grade 4 events	2161	4673	2554	10022	5995	2123
								1%	1%	1%	4%	2%	1%
							grade 5 events	7750	18540	7671	22380	11143	8342
								4%	7%	4%	9%	5%	5%
							grade 6 events	3453	66805	4778	58238	16120	4410
								1%	25%	2%	24%	7%	2%
							grade 7 events	154578	113082	137316	98187	145655	131359
								84%	43%	76%	41%	65%	81%

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	345.792893	345.8171595408553	CCD I2 on	N	N
[deg] Pointing Dec	8.888339	8.875007334594388	CCD I3 on	N	N
[deg] Pointing Roll	300.003412	300.156290376203	CCD S0 on	O1	Y
[s] Window start time (MET)	567075668.184000	567075668.184000	CCD S1 on	Y	Y
[s] Window stop time (MET)	568000868.184000	568000868.184000	CCD S2 on	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S3 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S4 on	Y	Y
[mm] SIM translation stage pos	-187.132523	-187.1254020033014	CCD S5 on	Y	Y
[mm] SIM translation stage offset	-3	-3.007120579706367	Number of optional ACIS chips dropped	0	0
[s] Observation start time (MET)	568332488.184000	568331122.83404	On-chip summing requested	N	N
Observation start date	2016-01-04T22:07:00	2016-01-04T21:45:22	Subarray requested	CUSTOM	CUSTOM
[s] Observation end time (MET)	568369088.184000	568370165.08626	Subarray start row	1	1
Observation end date	2016-01-05T08:17:00	2016-01-05T08:36:05	Subarray row count	774	774
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	2.5

2.3 Aspect



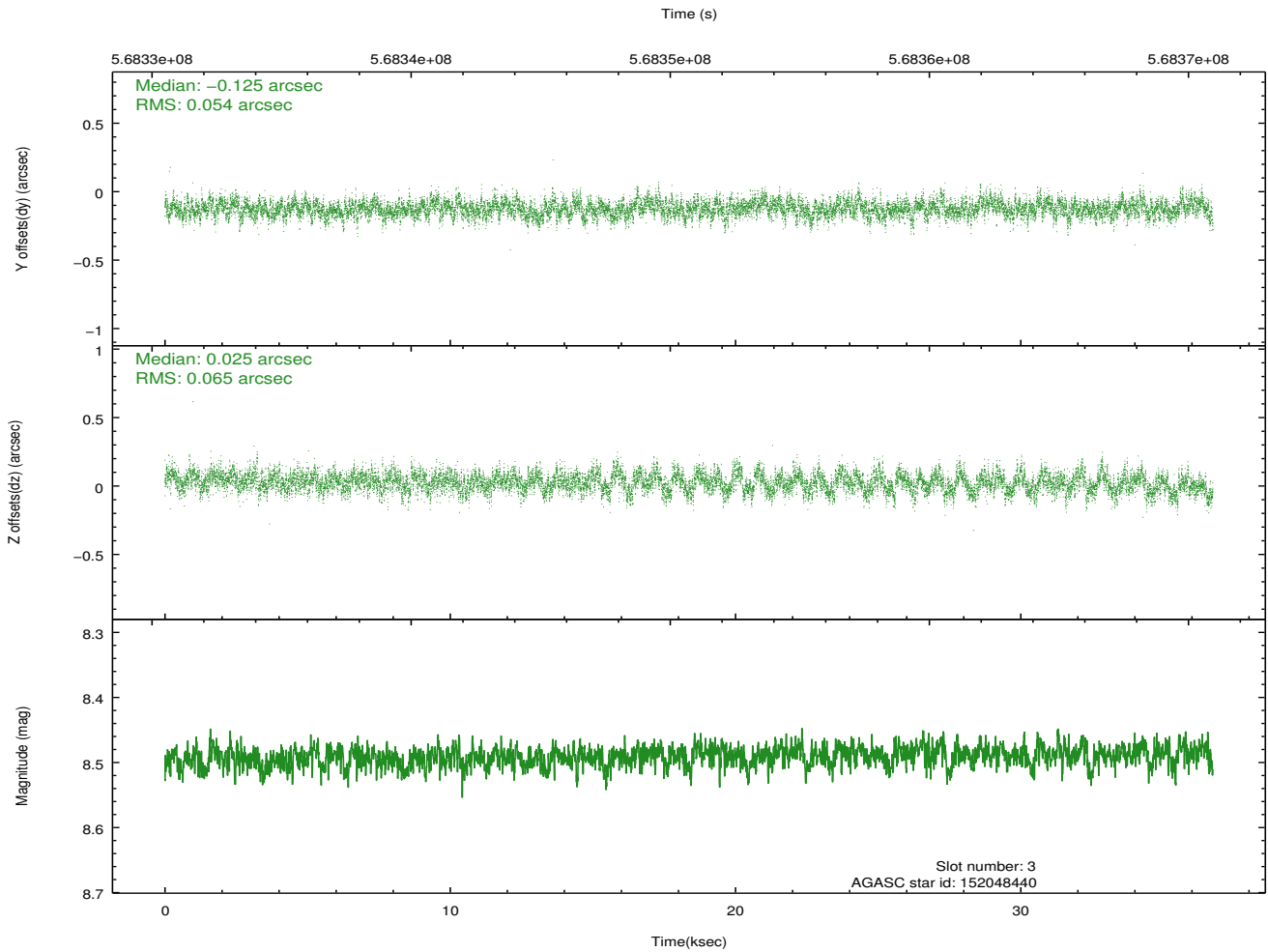
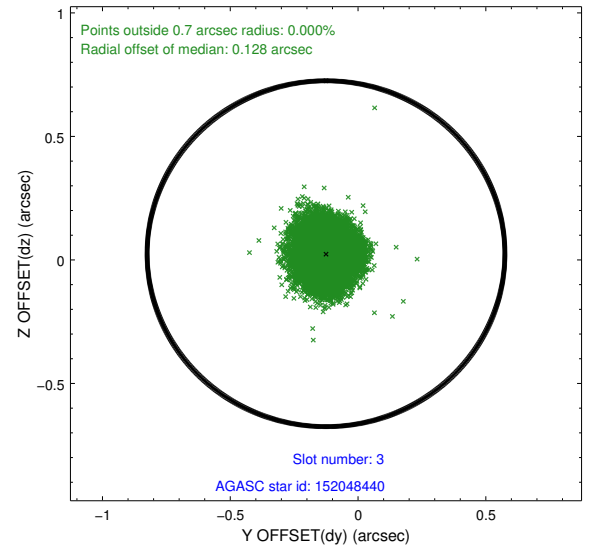
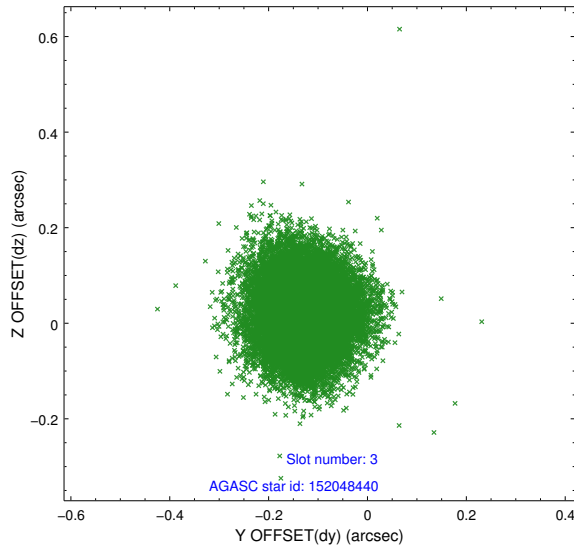


Slot Statistics

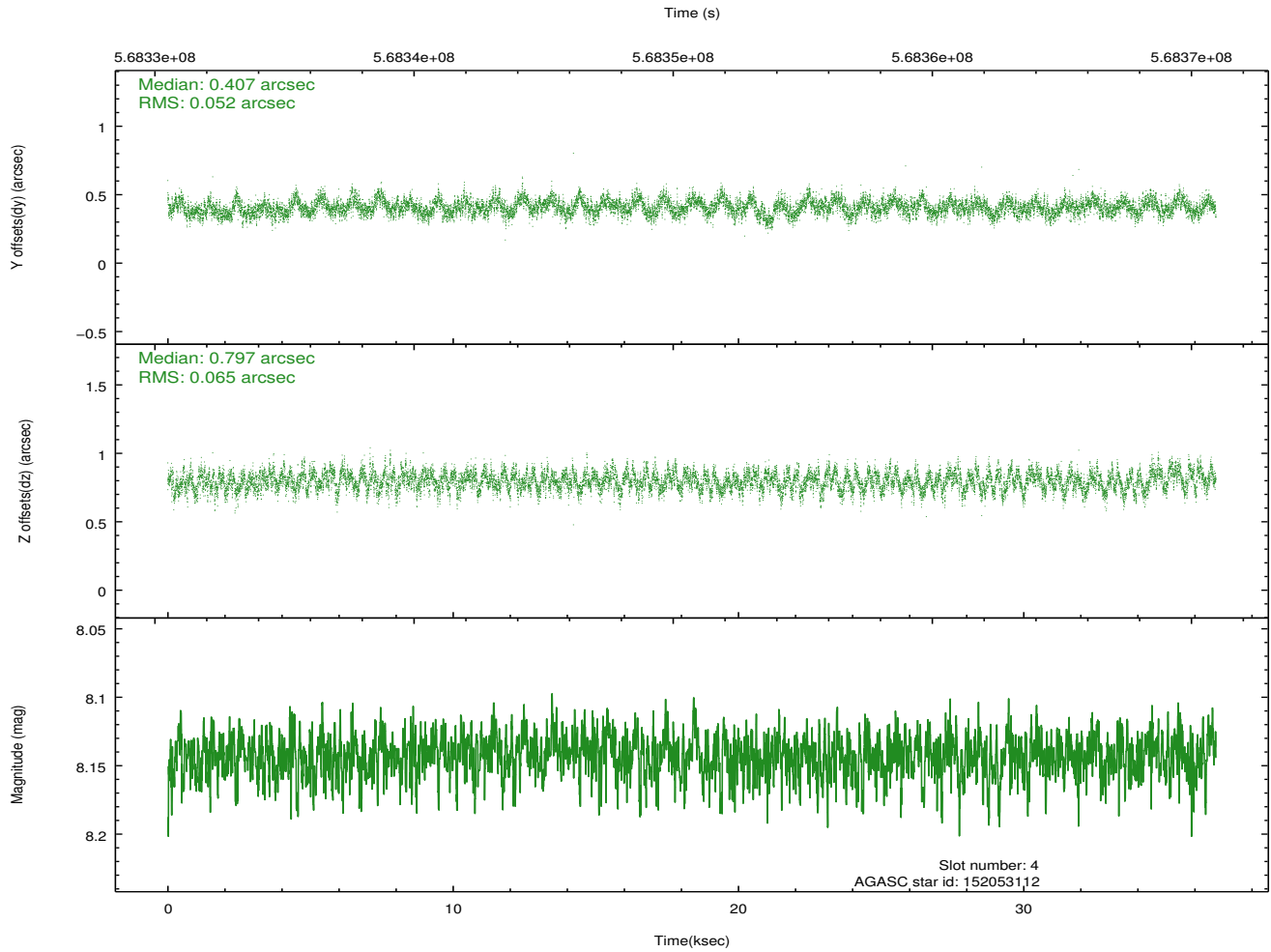
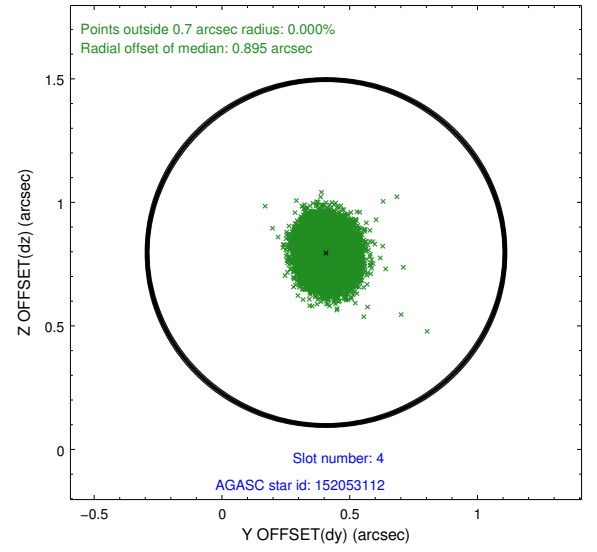
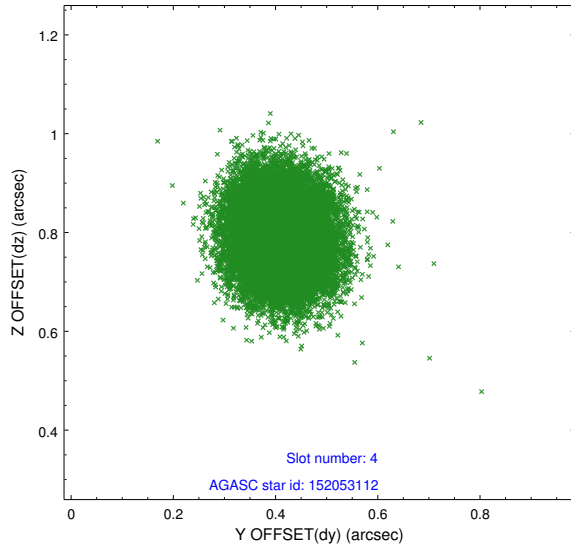
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.11	8960	-0.196	-0.115	0.021	0.046	0.000000	0.000000	-767.88	-1803.21
1	FID		ACIS-S-4	7.21	8961	0.410	0.125	0.010	0.019	0.000000	0.000000	2145.97	105.49
2	FID		ACIS-S-5	7.23	8962	-0.245	-0.002	0.020	0.037	0.000000	0.000000	-1820.76	99.02
3	GUIDE	used	152048440	8.49	17908	-0.125	0.025	0.090	0.146	346.200519	9.070077	157.36	1582.84
4	GUIDE	used	152053112	8.14	17916	0.407	0.797	0.090	0.142	345.154715	8.750450	-706.02	-2212.63
5	GUIDE	used	152051576	8.85	17912	-0.084	-0.139	0.103	0.166	345.475827	8.657019	156.93	-1393.76
6	GUIDE	used	152052088	8.97	17917	-0.074	-0.234	0.122	0.189	345.509667	8.677615	153.21	-1252.01
7	GUIDE	used	152056136	6.62	17922	-0.120	-0.449	0.075	0.122	346.466795	8.896005	1172.65	2090.03

2.4 Star Slots

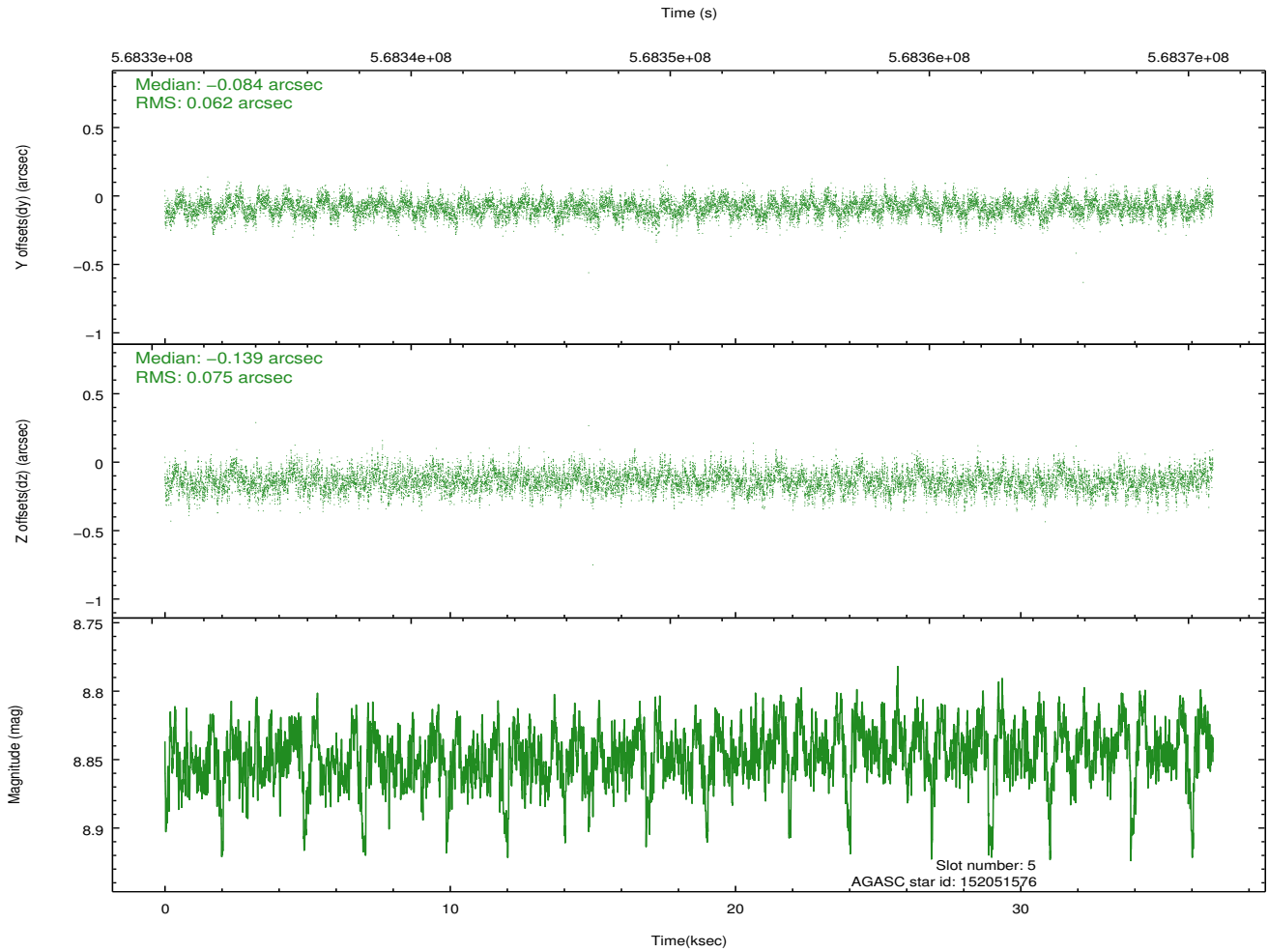
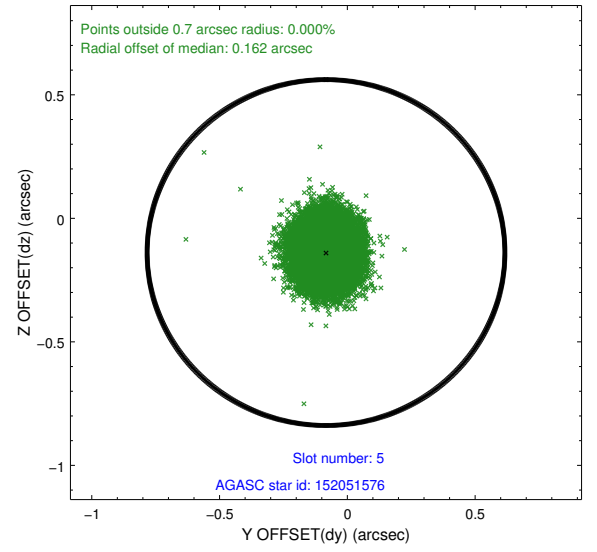
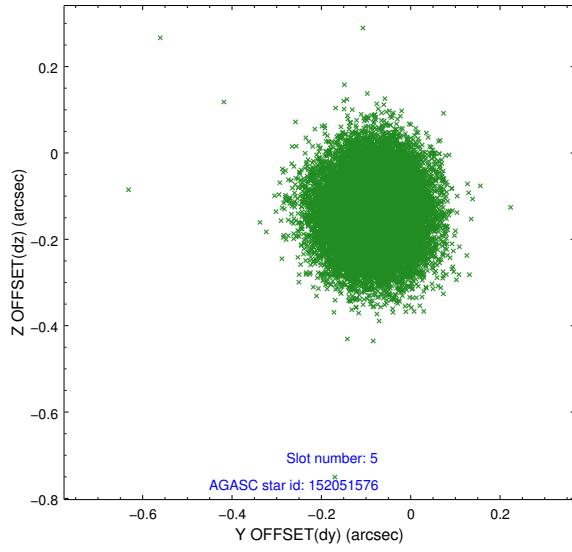
2.4.1 Slot 3



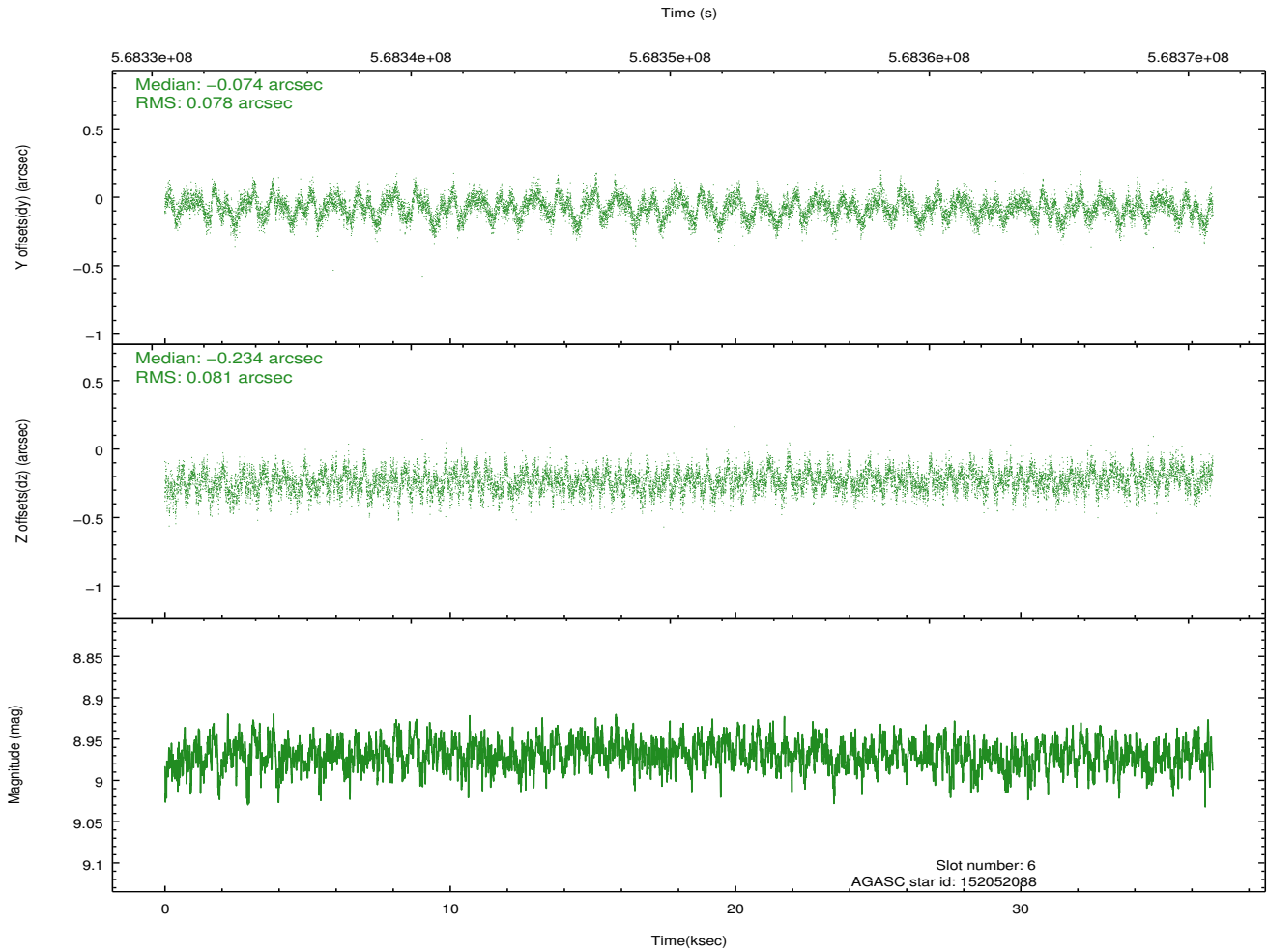
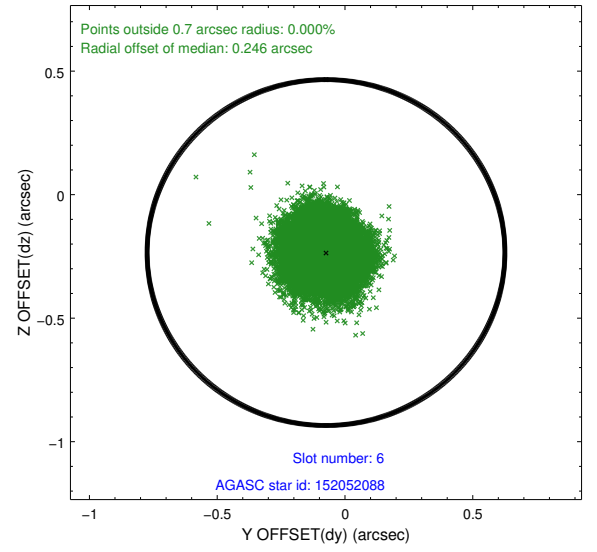
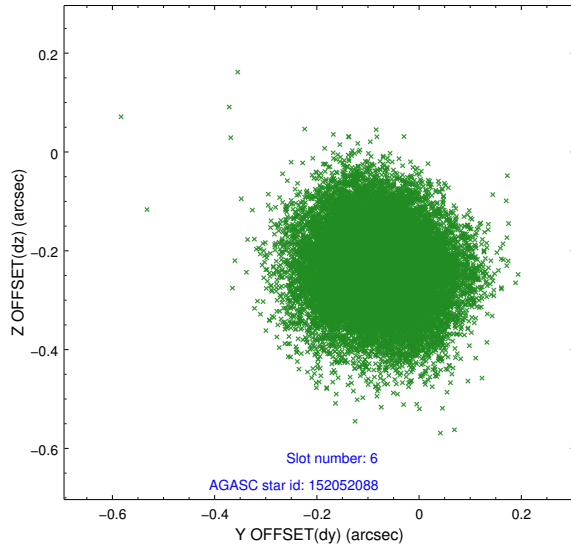
2.4.2 Slot 4



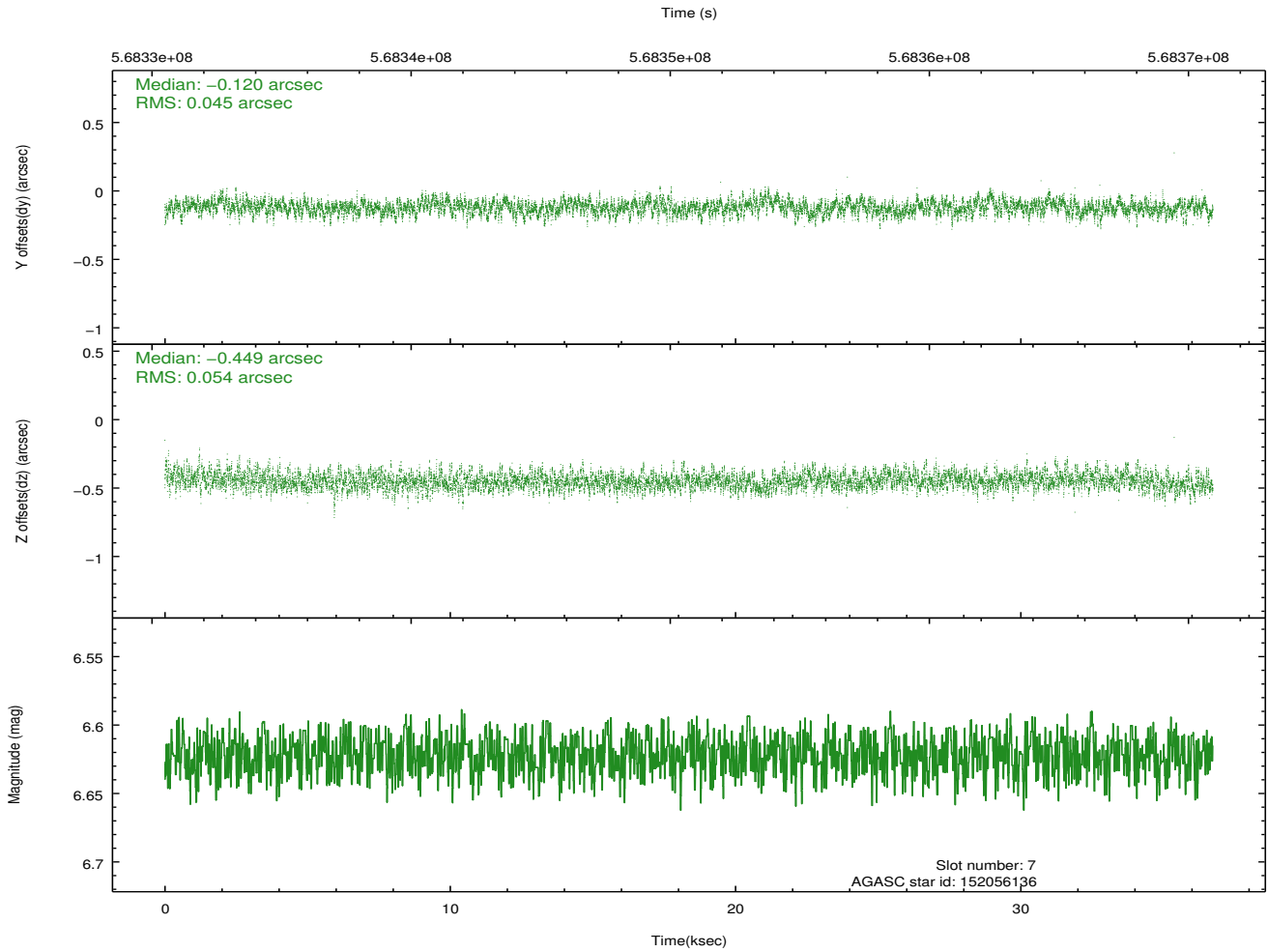
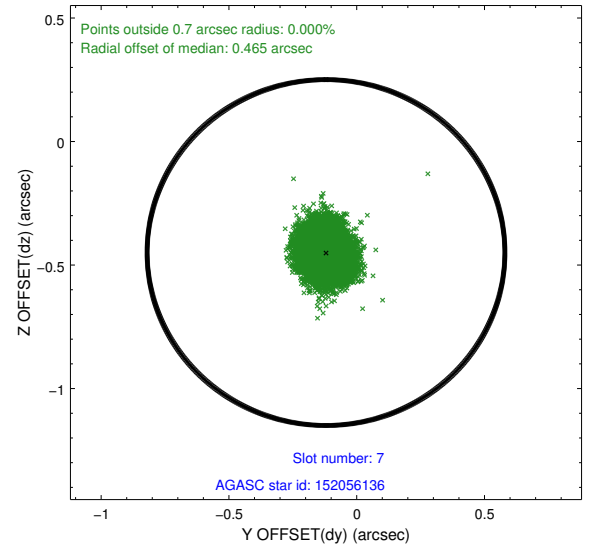
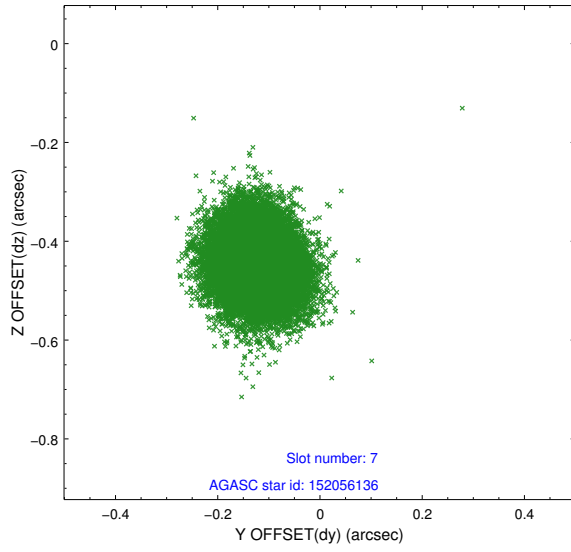
2.4.3 Slot 5



2.4.4 Slot 6

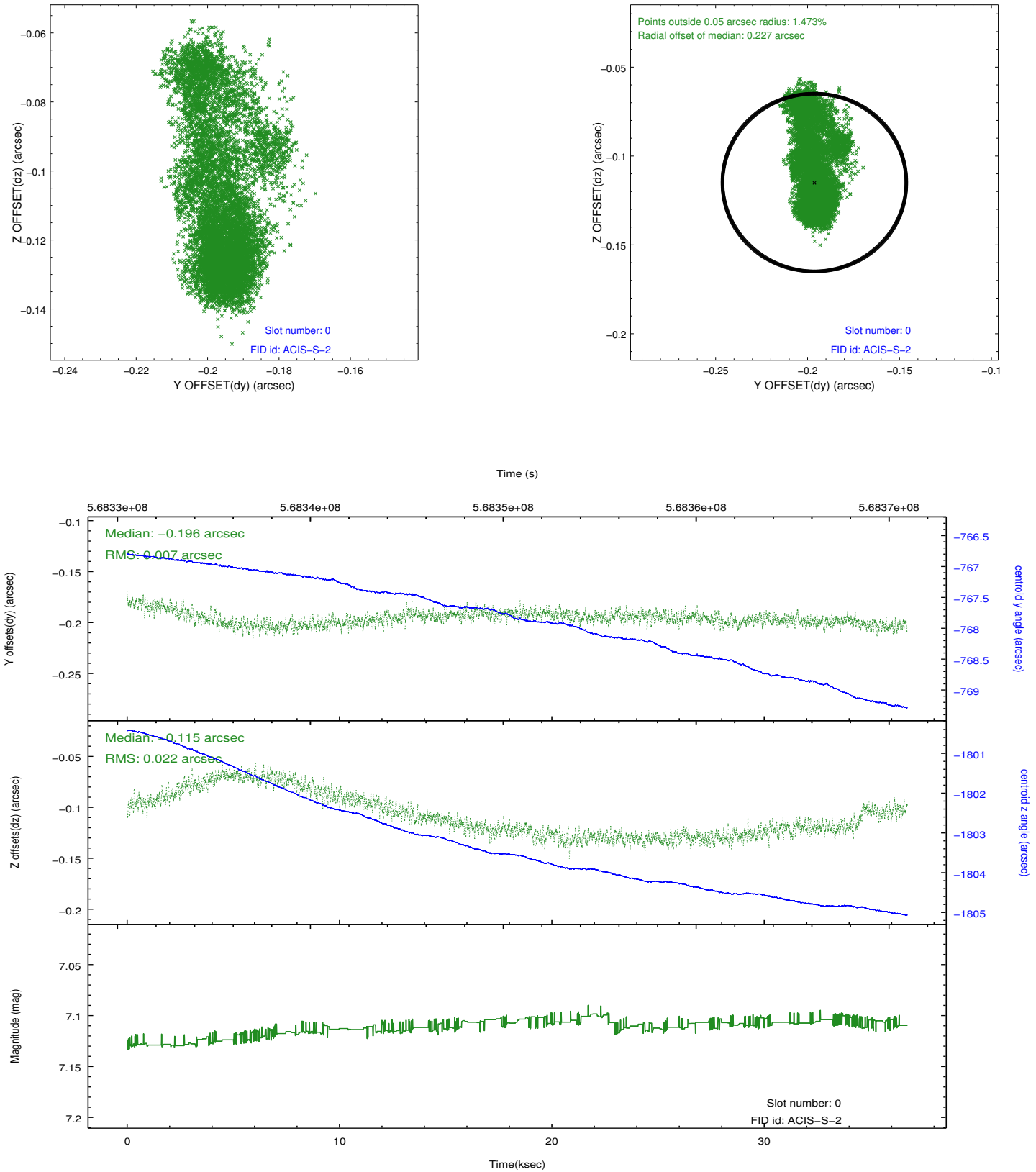


2.4.5 Slot 7

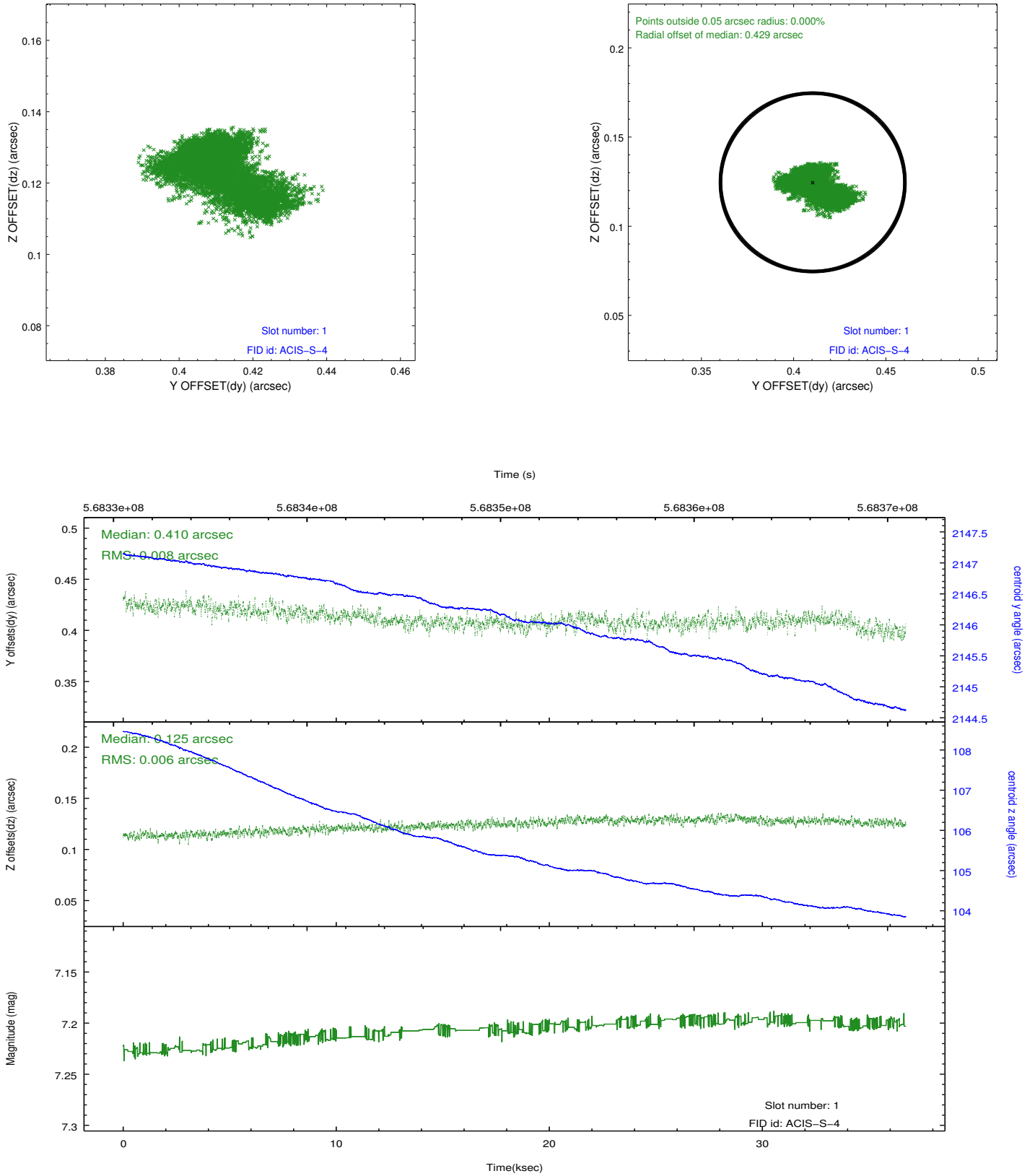


2.5 FID Slots

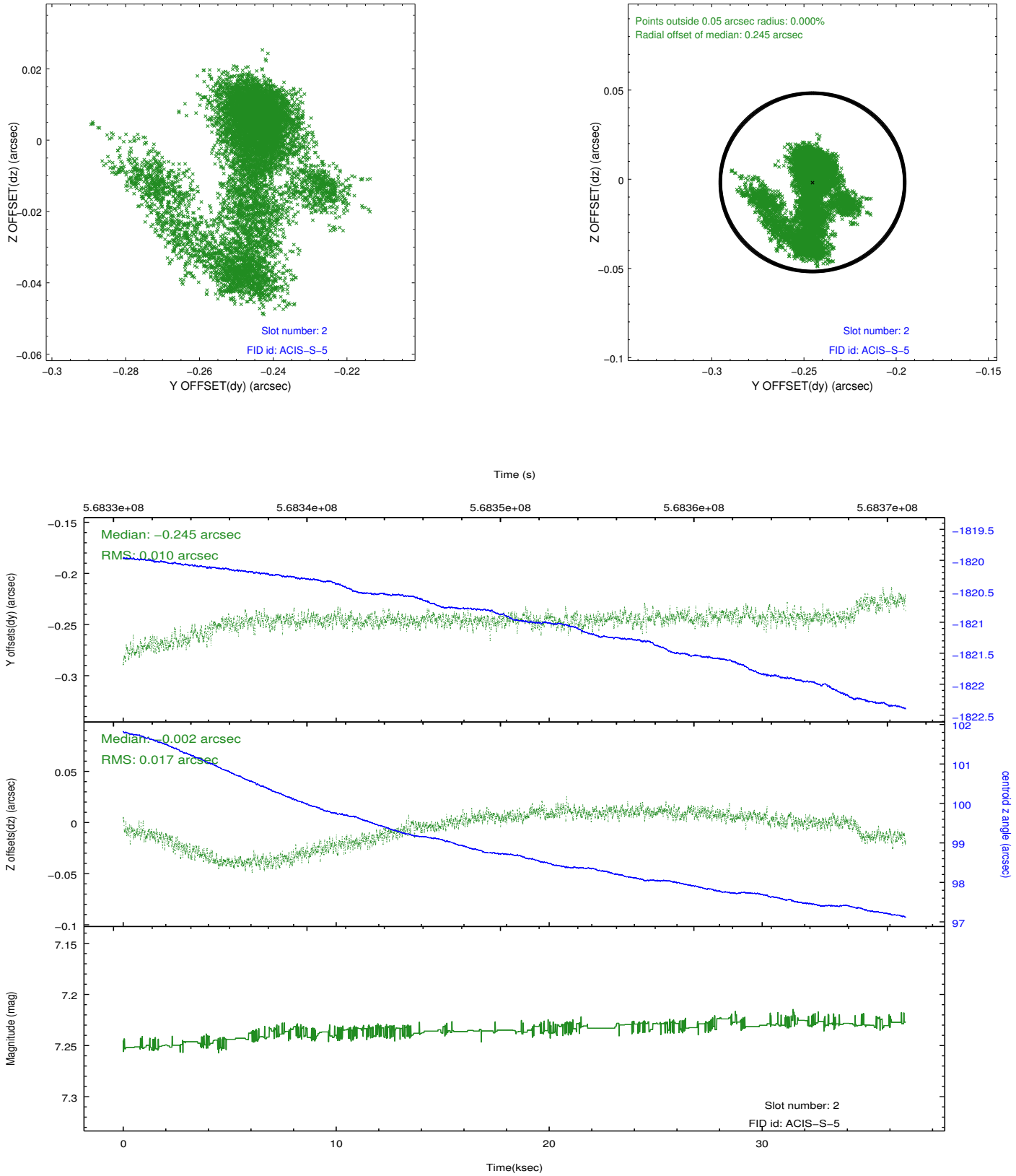
2.5.1 Slot 0



2.5.2 Slot 1

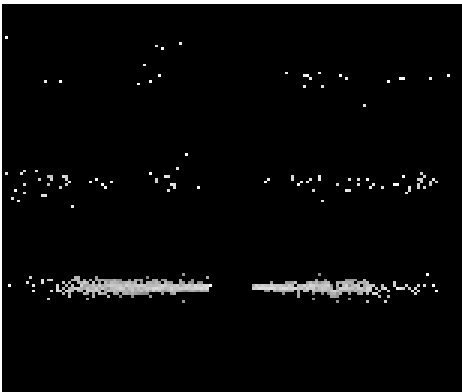


2.5.3 Slot 2

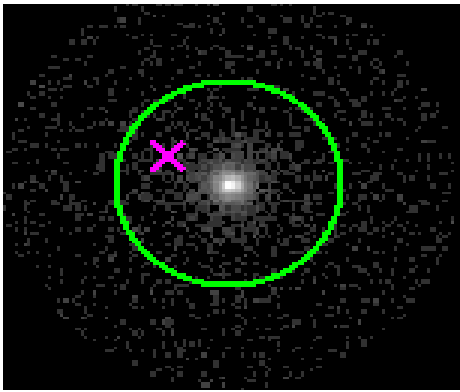


3 Gratings

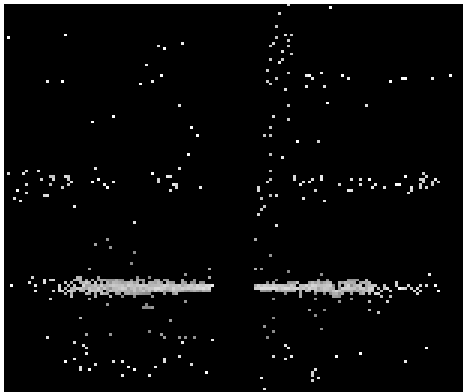
3.1 HEG Arm



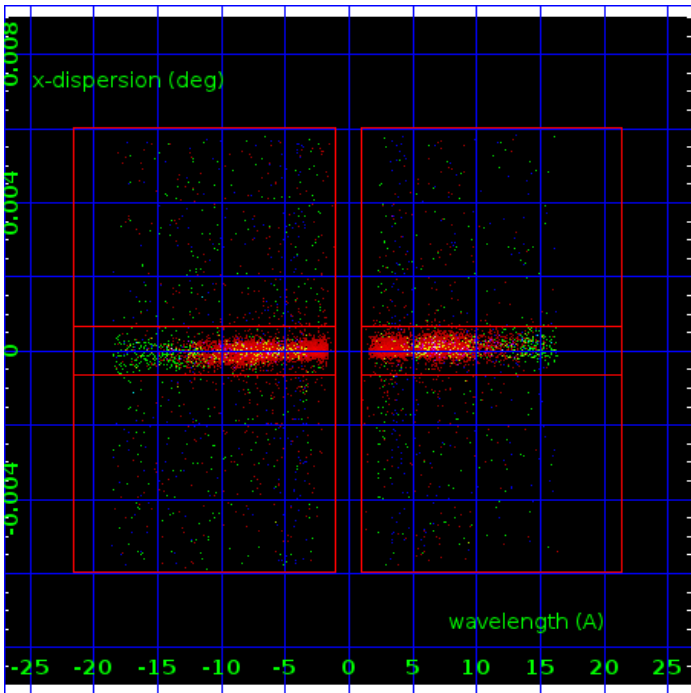
HEG Order Sort 123



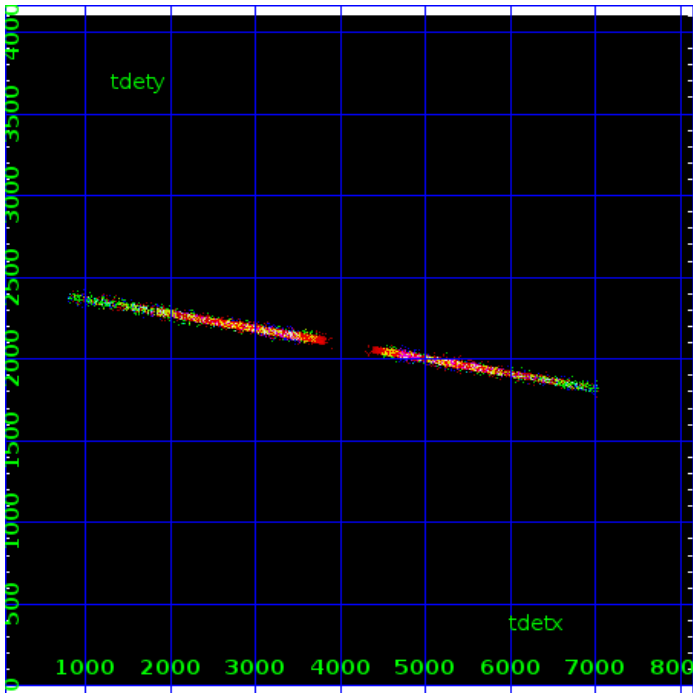
HEG Zero Order



HEG Order Sort ALL

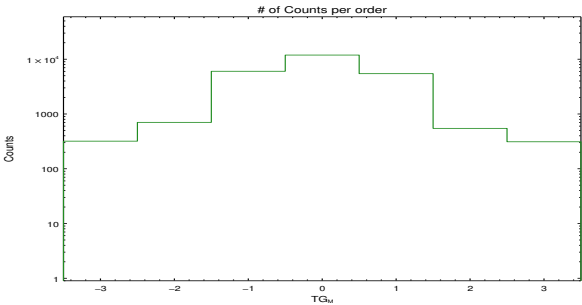


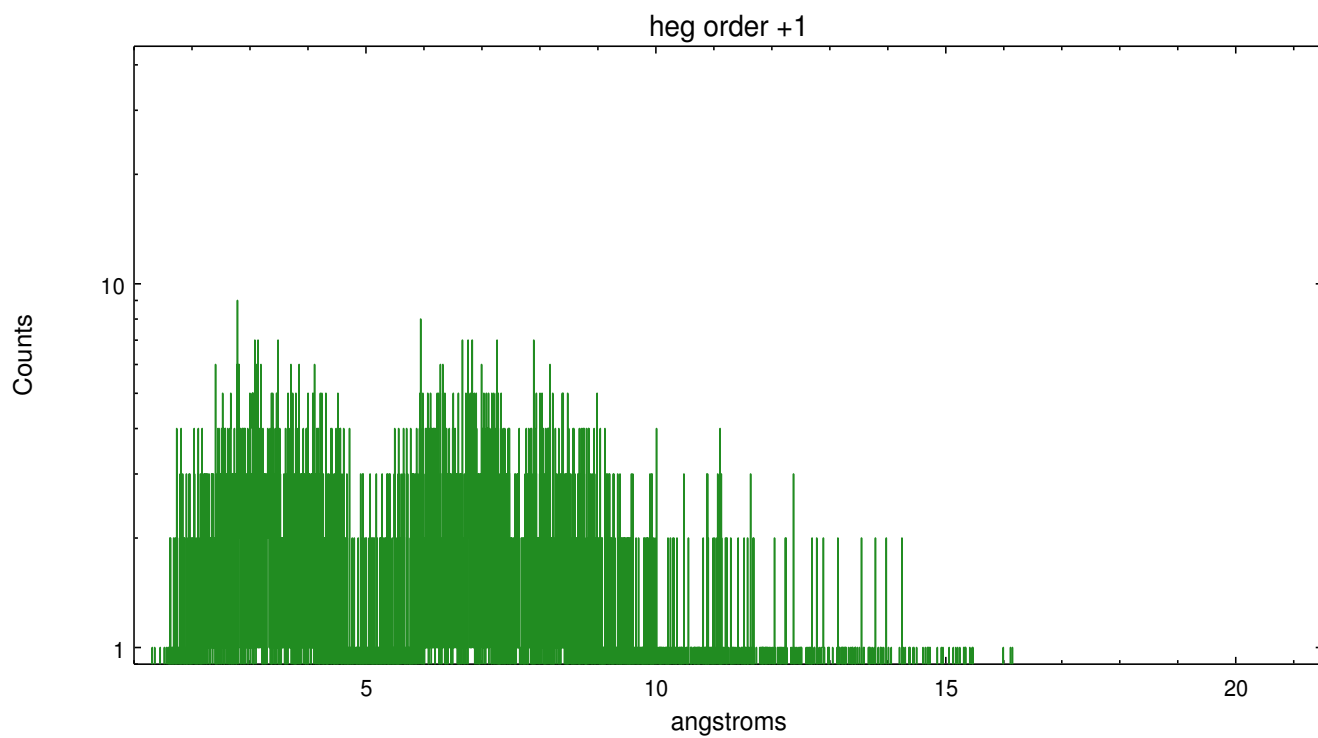
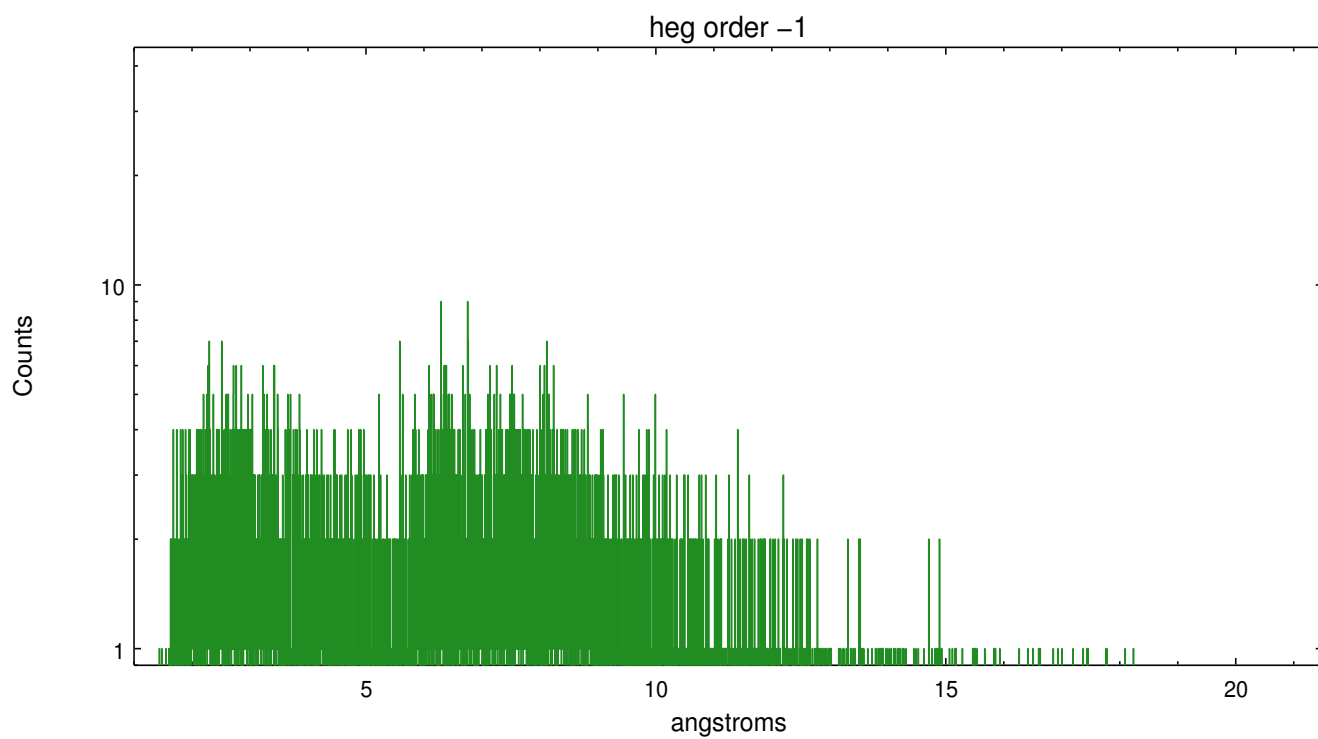
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	319	703	6024	11911	5451	546	311

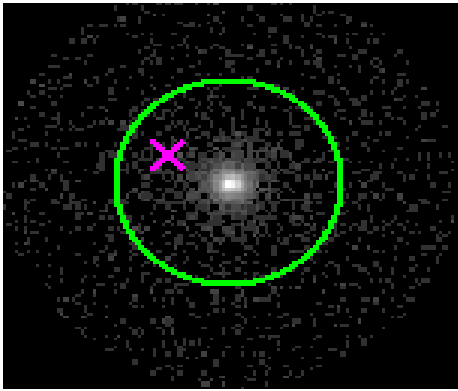




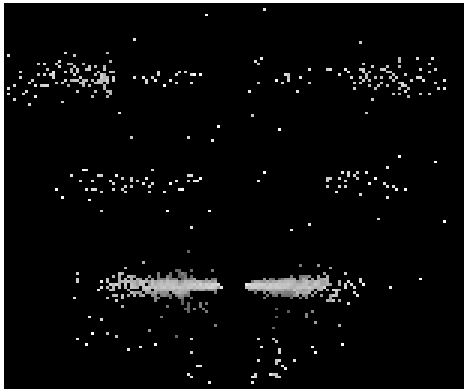
3.2 MEG Arm



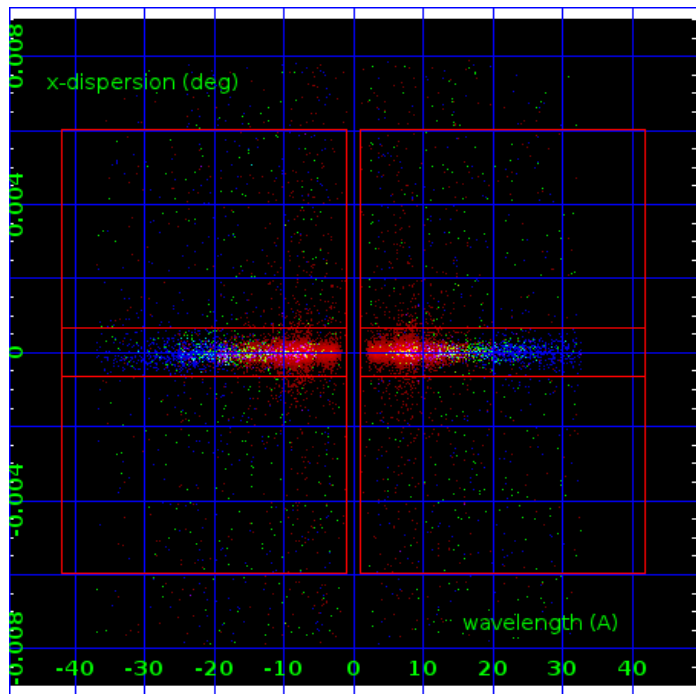
MEG Order Sort 123



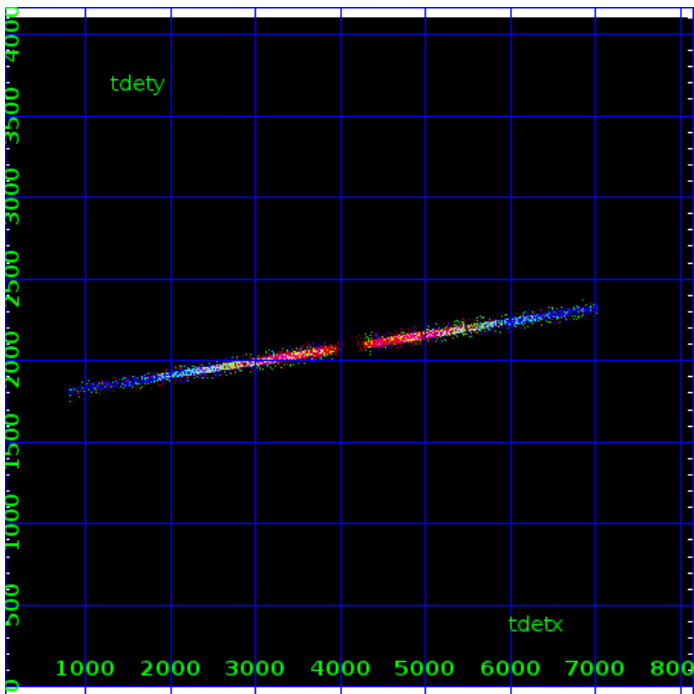
MEG Zero Order



MEG Order Sort ALL

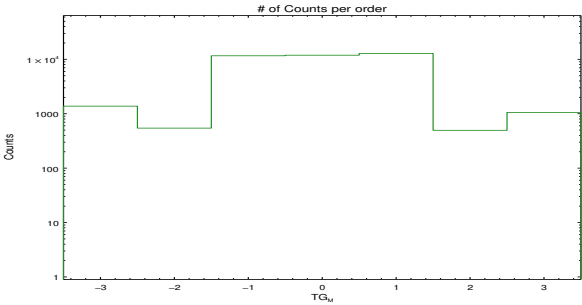


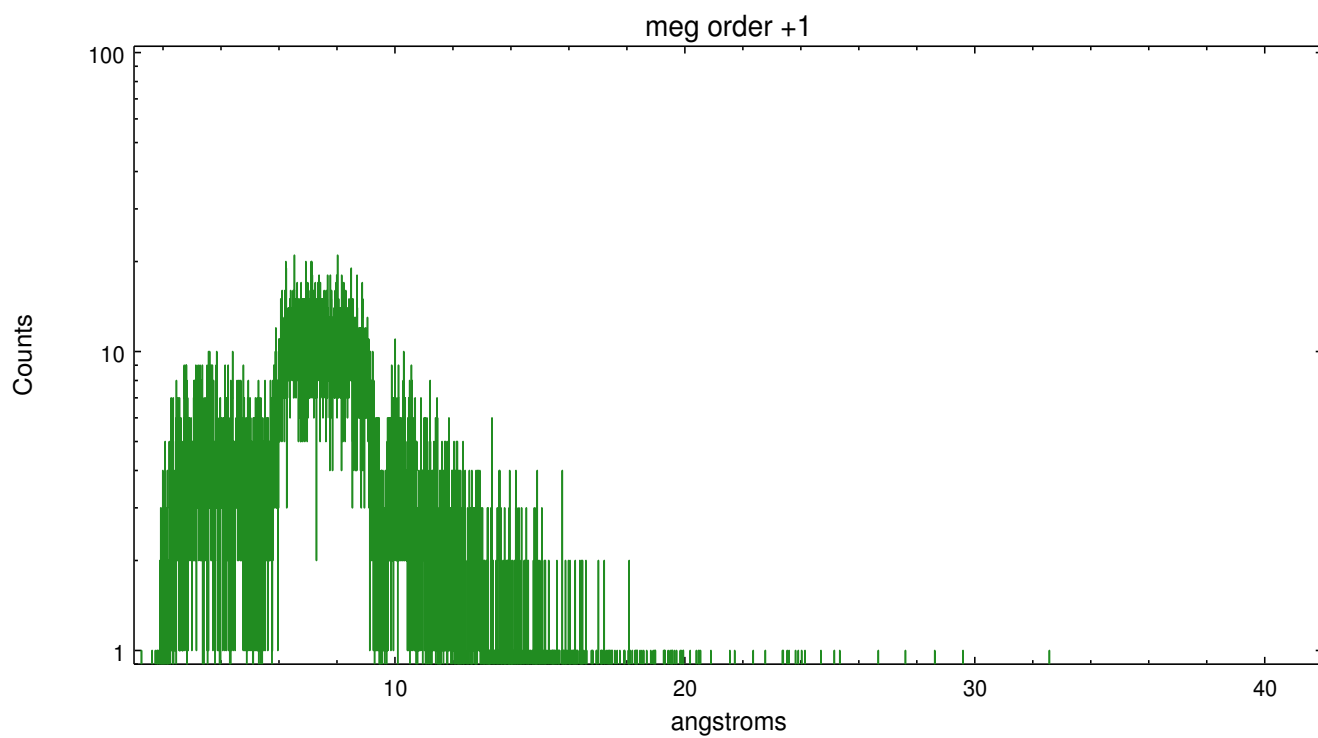
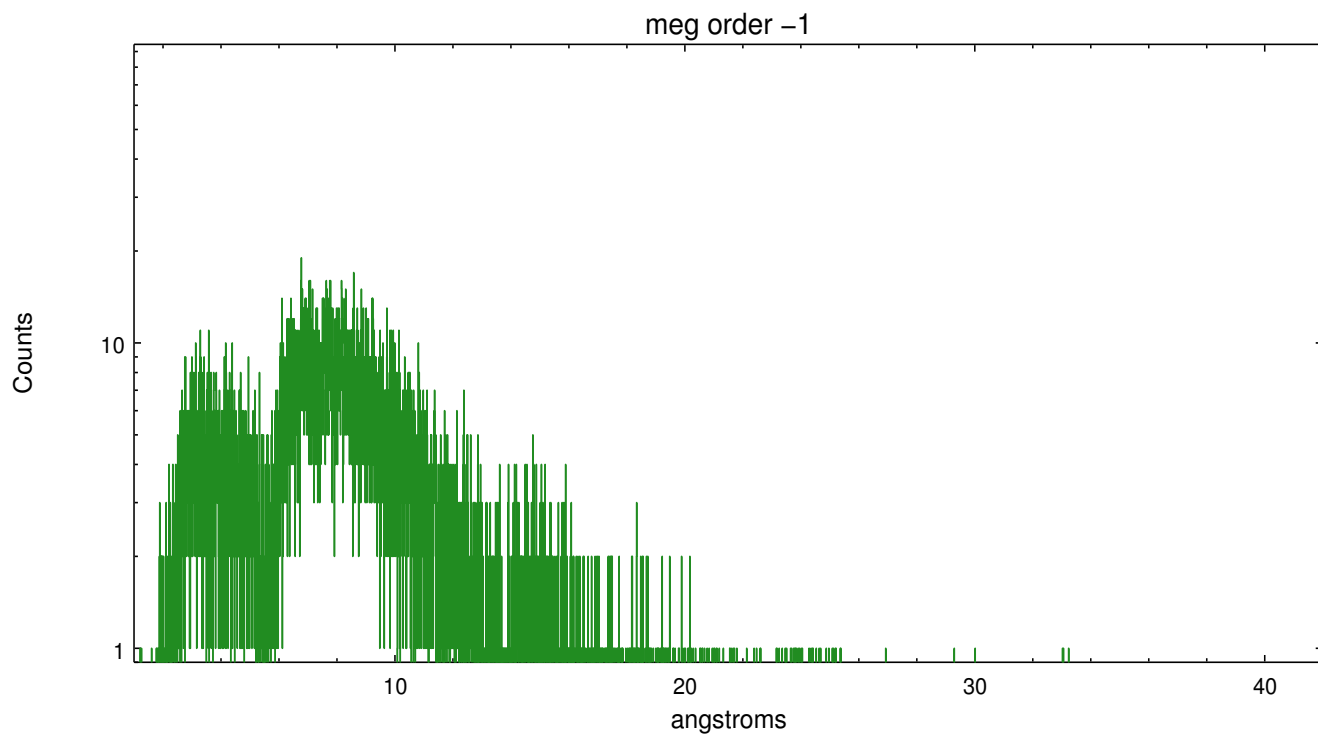
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1379	544	11634	11911	12832	496	1058





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2016.01.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	36.625

A.2 Comments

Time preference not met.

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Zeroth order piled up. The zeroth order sky position was determined using a software tool developed by CXC called findzero, which is available in CIAO as part of the tgdetect2 tool. The tool calculates the point of intersection of the readout streak on the ACIS CCD and the meg or leg dispersed spectral arm, rather than using a centroid position of the source. The findzero results are more accurate than source centroid in this case.