

V&V Reference Report

L2 ASCDS Version : 10.4.3

Observation 18737 - L2 Version 1
Chandra X-Ray Center

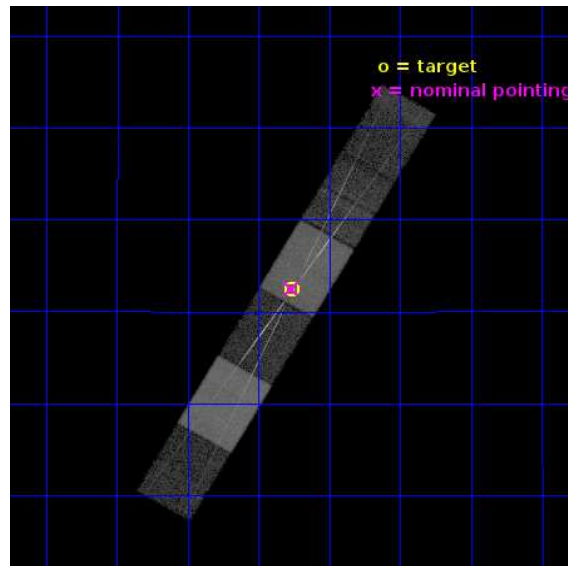
L2 Processing Date : Jan 3 2016

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1 Front

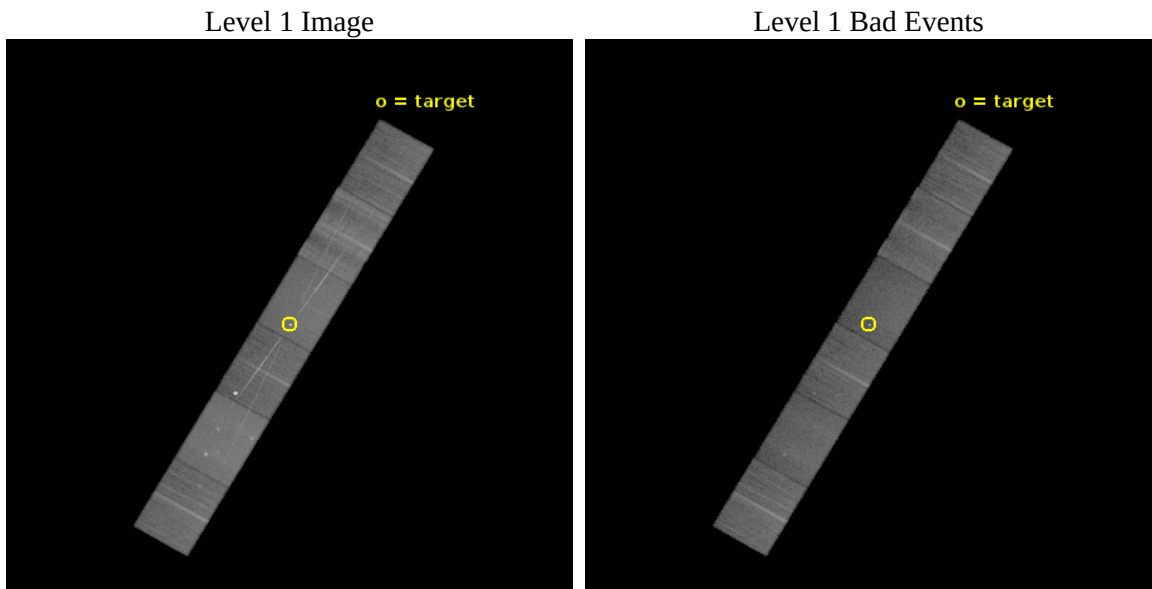
seq_num	703293	Sequence number
obs_id	18737	Observation id
title	Deciphering the ionised outflows in NGC 7469	Proposal title
observer	Prof Jelle Kaastra	Principal investigator
object	NGC 7469	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	345.815	Observer's specified target RA [deg]
dec_targ	8.873917	Observer's specified target Dec [deg]
ra_nom	345.81716561965	Nominal RA [deg]
dec_nom	8.8749944723709	Nominal Dec [deg]
roll_nom	300.15629043844	Nominal Roll [deg]
revision	1	Processing version of data
ontime	31792.5	Sum of GTIs [s]
livetime	31279.023549413	Livetime [s]
ontime4	31792.5	Sum of GTIs [s]
ontime5	31792.5	Sum of GTIs [s]
ontime6	31792.5	Sum of GTIs [s]
ontime7	31792.5	Sum of GTIs [s]
ontime8	31792.5	Sum of GTIs [s]
ontime9	31792.5	Sum of GTIs [s]
l2events	278590	Number of level 2 events



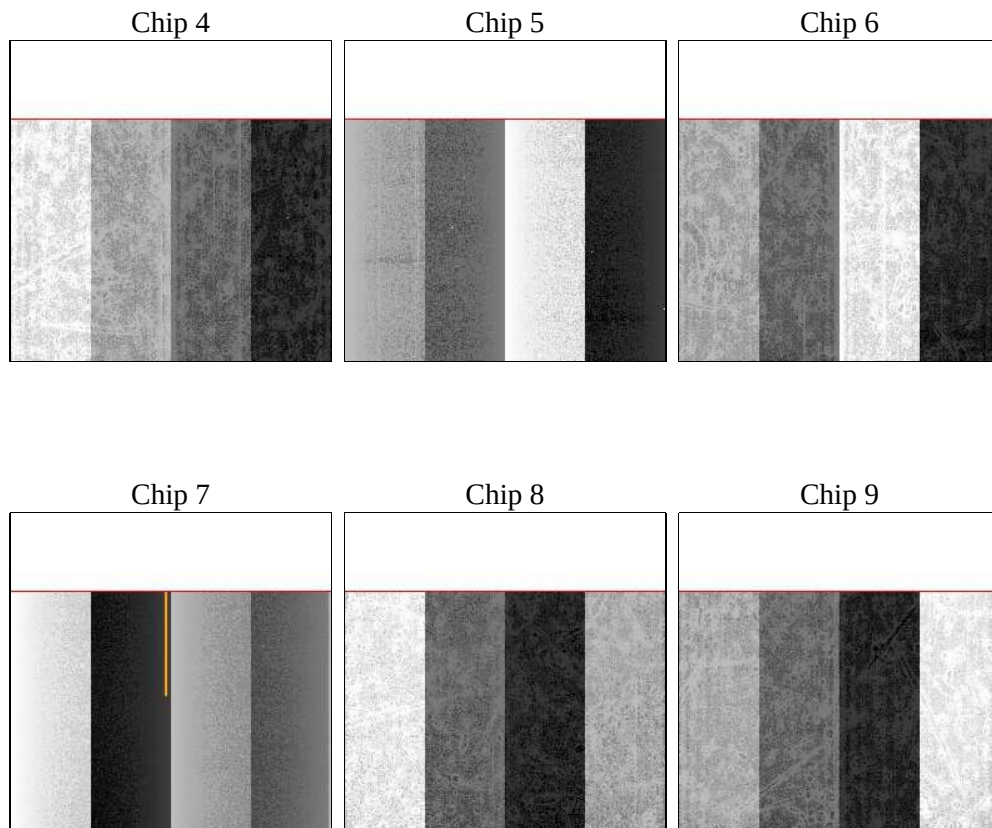
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	31781.667000	[s] Scheduled observation exposure time
ascdsver	10.4.3	Processing system revision	ontime	31792.5	Sum of GTIs [s]
caldsver	4.7.0	 	ontime4	31792.5	Sum of GTIs [s]
date	2016-01-04T01:15:47	Date and time of file creation	ontime5	31792.5	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	31792.5	Sum of GTIs [s]
			ontime7	31792.5	Sum of GTIs [s]
			ontime8	31792.5	Sum of GTIs [s]
			ontime9	31792.5	Sum of GTIs [s]
			l1events	1103579	Number of level 1 events
			tgmeth	FINDZO	Method used to create src1a file
				64111.57	

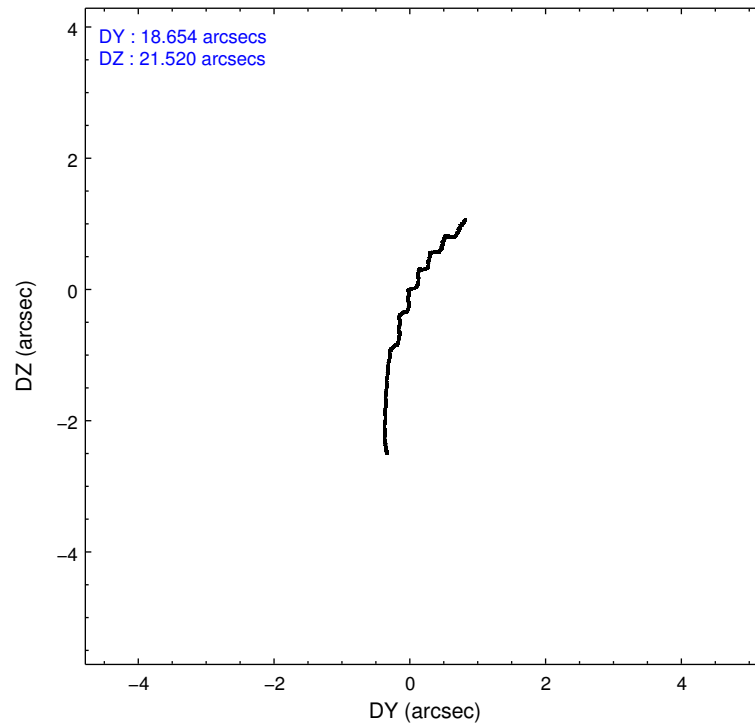
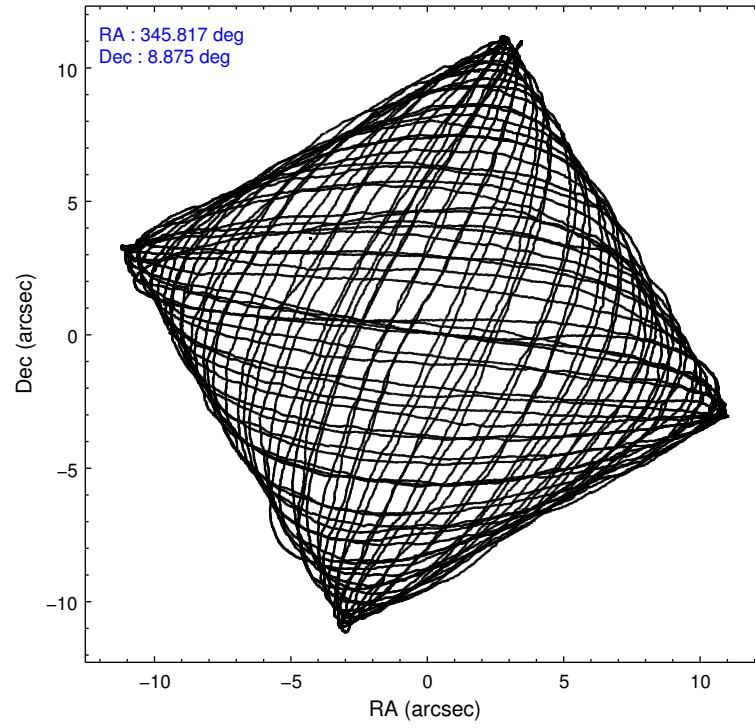
2.1.4 Events

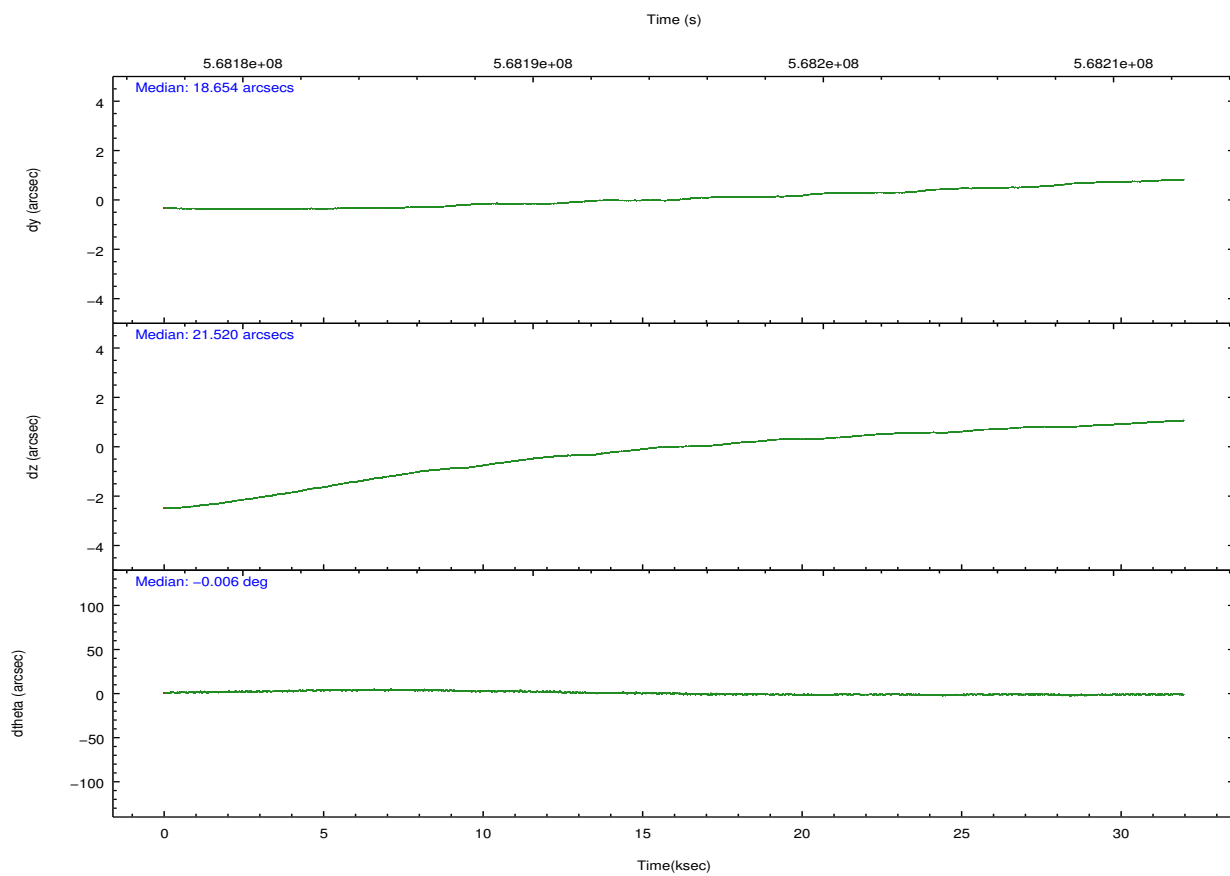
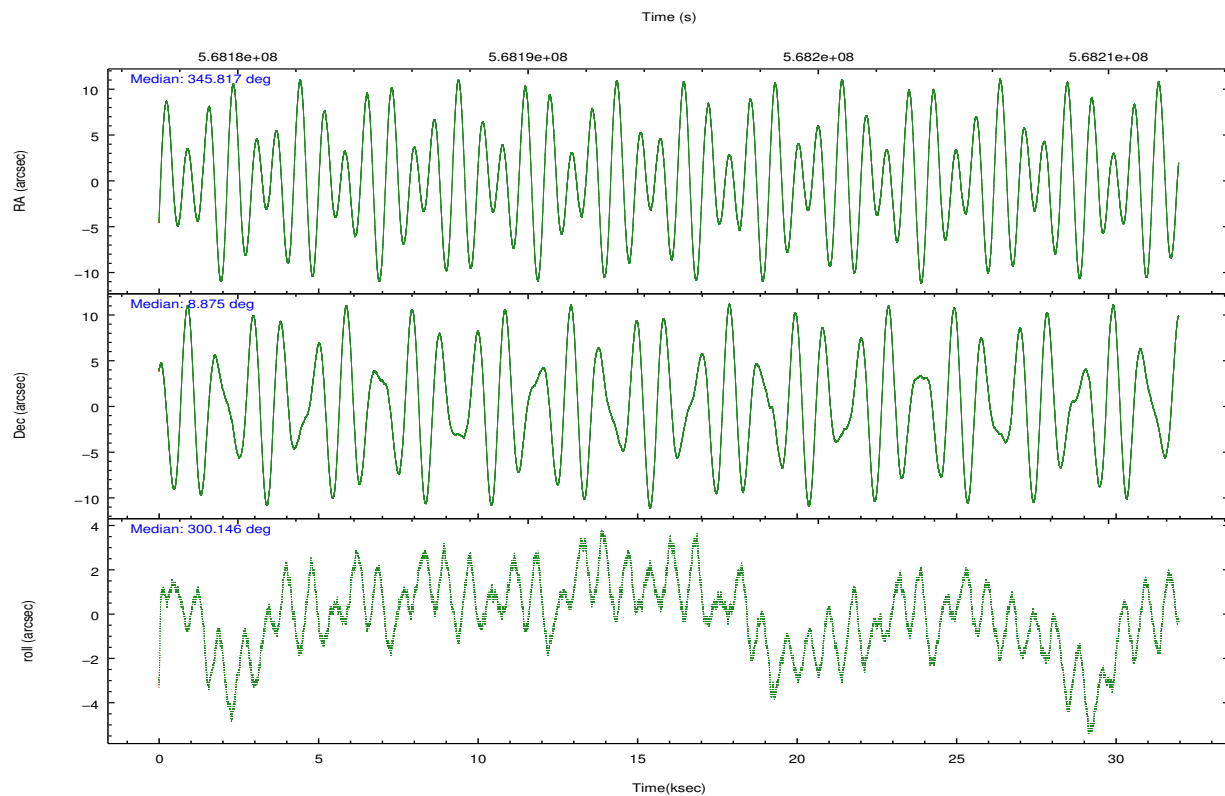
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	164574	224946	162387	203066	207777	140829	grade 0 events	7807	10349	26076	10937	24479	6756
rejected events	145296	115225	122653	104027	134927	122614		4%	4%	16%	5%	11%	4%
rejected %	88%	51%	75%	51%	64%	87%	grade 1 events	125	775	165	452	189	51
								0%	0%	0%	0%	0%	0%
							grade 2 events	4432	32810	5250	21566	14292	3989
								2%	14%	3%	10%	6%	2%
							grade 3 events	1947	4333	2153	8662	8887	1834
								1%	1%	1%	4%	4%	1%
							grade 4 events	1861	4058	2043	8649	8437	1802
								1%	1%	1%	4%	4%	1%
							grade 5 events	6549	15991	6699	19128	10065	7372
								3%	7%	4%	9%	4%	5%
							grade 6 events	3233	58182	4214	49233	16757	3836
								1%	25%	2%	24%	8%	2%
							grade 7 events	138620	98448	115787	84439	124671	115189
								84%	43%	71%	41%	60%	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	345.8171656196544	CCD I2 on	N	N
[deg] Pointing Dec	8.888339	8.874994472370933	CCD I3 on	N	N
[deg] Pointing Roll	300.003412	300.1562904384437	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)	568179058.184000	568177612.67532	On-chip summing requested	N	N
Observation start date	2016-01-03T03:29:50	2016-01-03T03:06:52	Subarray requested	CUSTOM	CUSTOM
[s] Observation end time (MET)	568210840.184000	568211056.37722	Subarray start row	1	1
Observation end date	2016-01-03T12:19:32	2016-01-03T12:24:16	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



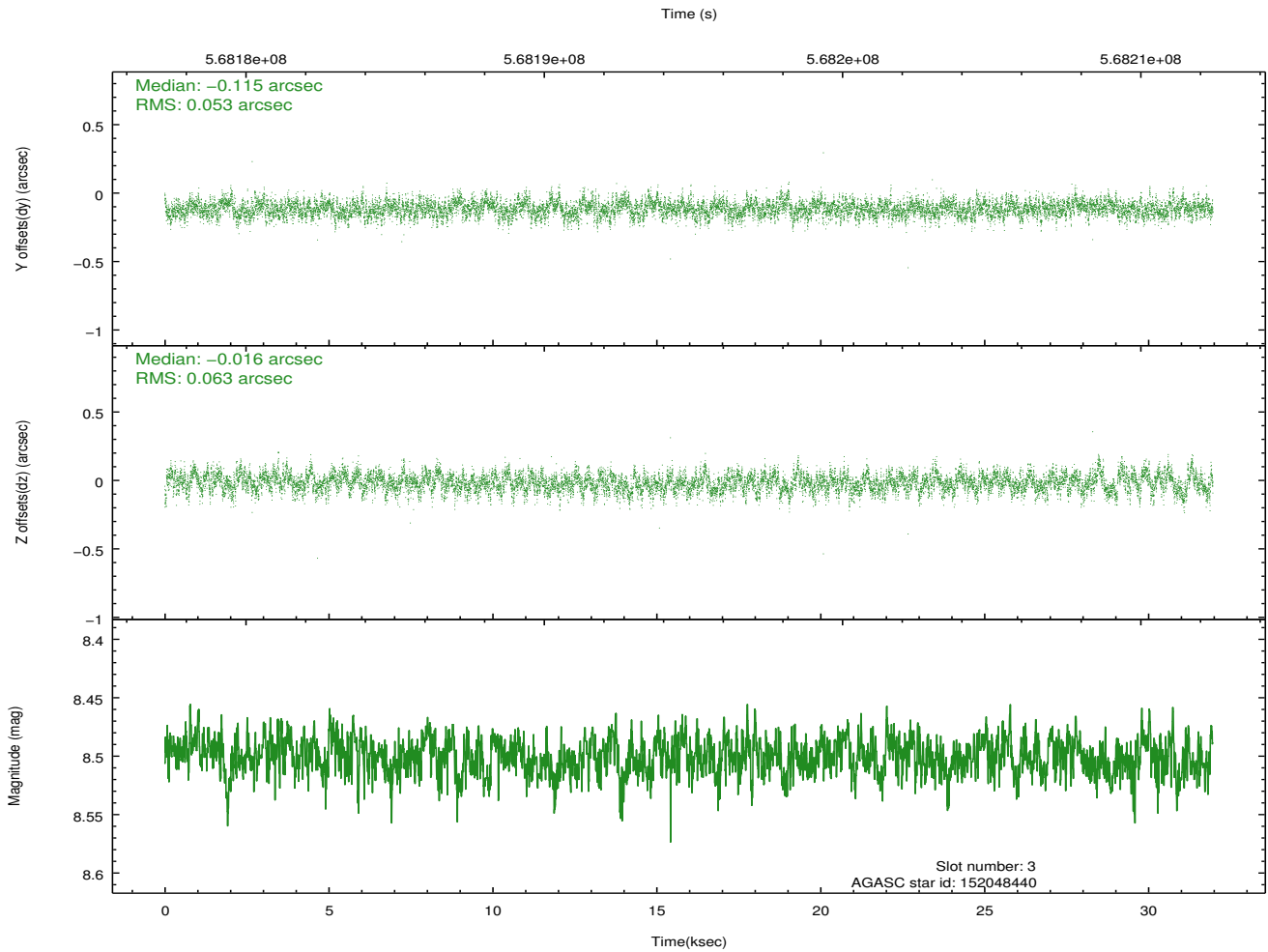
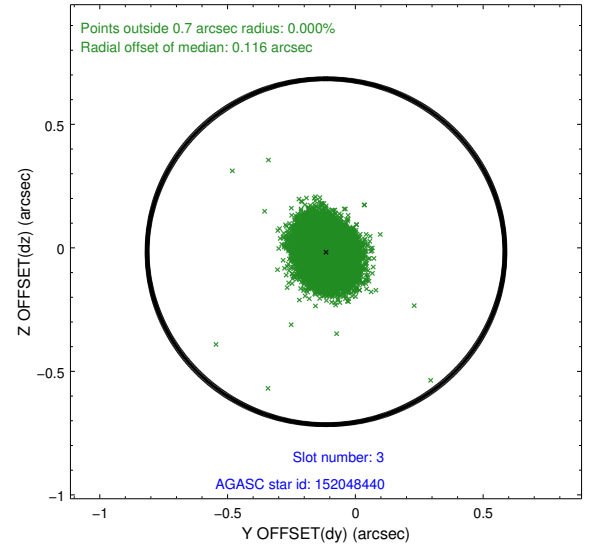
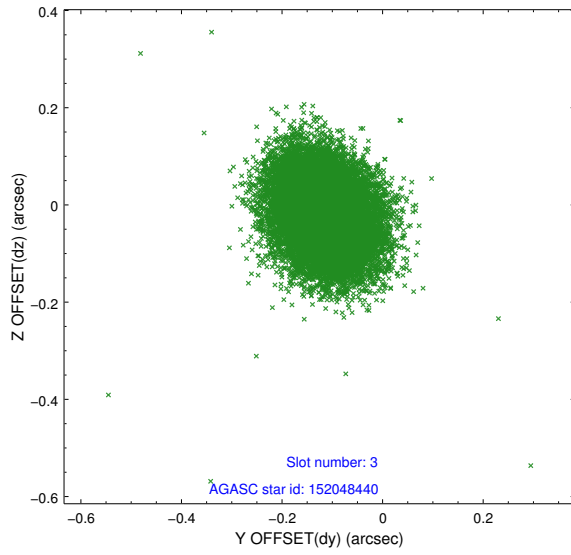


Slot Statistics

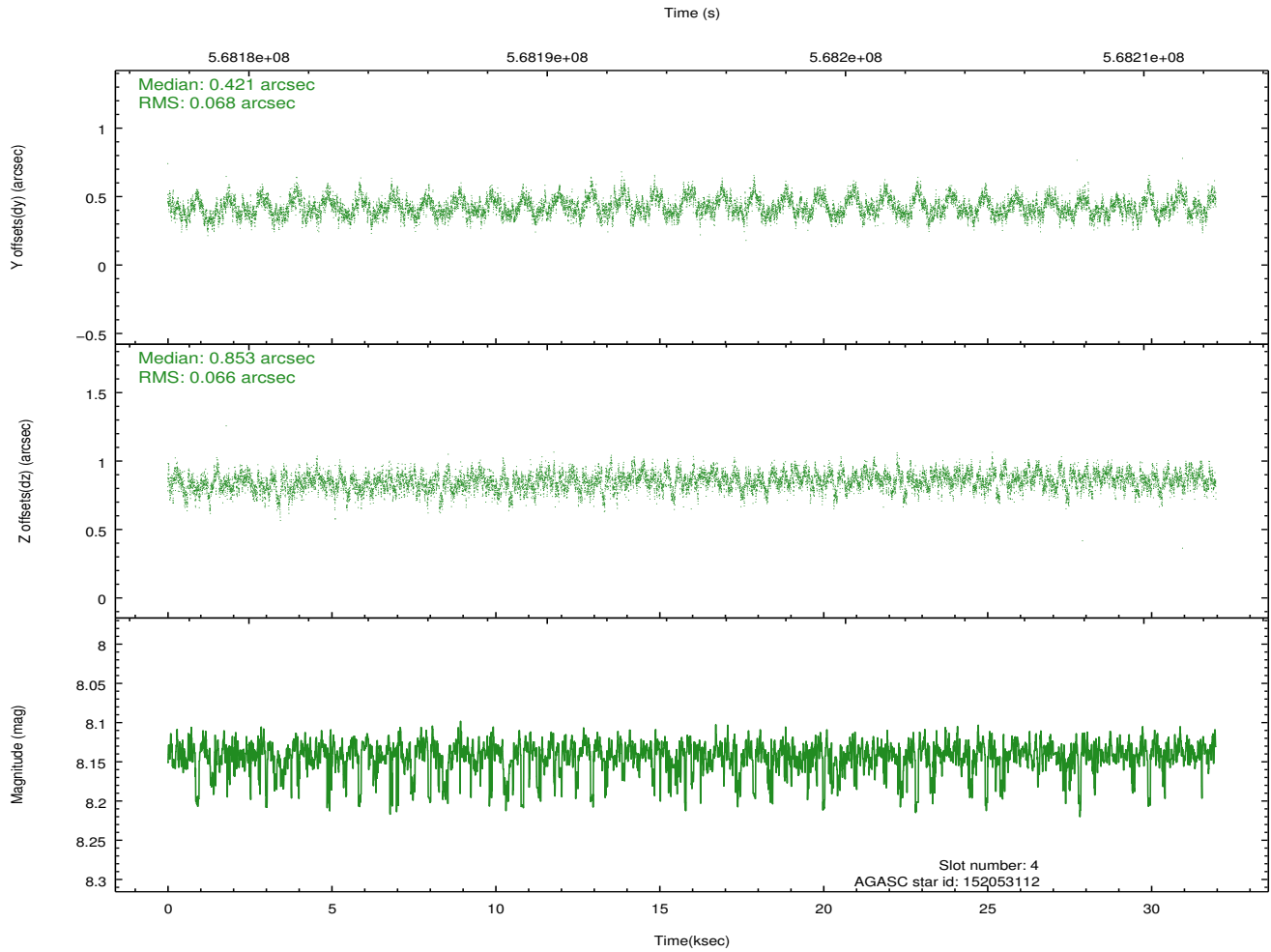
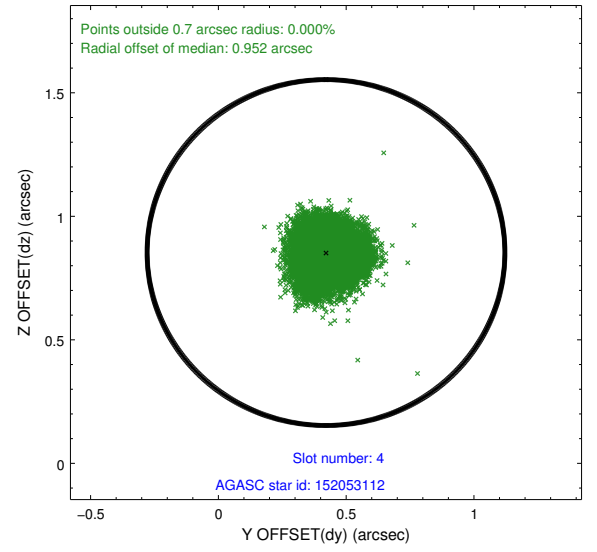
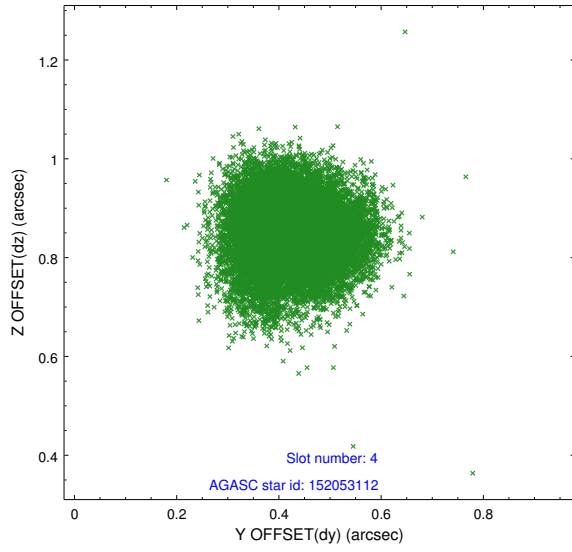
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.12	7797	-0.219	-0.089	0.044	0.063	0.000000	0.000000	-771.77	-1804.97
1	FID		ACIS-S-4	7.21	7798	0.495	0.131	0.013	0.022	0.000000	0.000000	2142.14	103.74
2	FID		ACIS-S-5	7.23	7797	-0.306	-0.032	0.040	0.056	0.000000	0.000000	-1824.68	97.21
3	GUIDE	used	152048440	8.50	15590	-0.115	-0.016	0.087	0.141	346.200519	9.070077	157.32	1582.83
4	GUIDE	used	152053112	8.14	15584	0.421	0.853	0.101	0.160	345.154715	8.750450	-706.07	-2212.53
5	GUIDE	used	152051576	8.84	15581	-0.072	-0.150	0.122	0.204	345.475827	8.657019	156.87	-1393.76
6	GUIDE	used	152052088	8.98	15585	-0.075	-0.177	0.127	0.202	345.509667	8.677615	153.15	-1251.94
7	GUIDE	used	152056136	6.63	15594	-0.157	-0.514	0.081	0.126	346.466795	8.896005	1172.56	2089.97

2.4 Star Slots

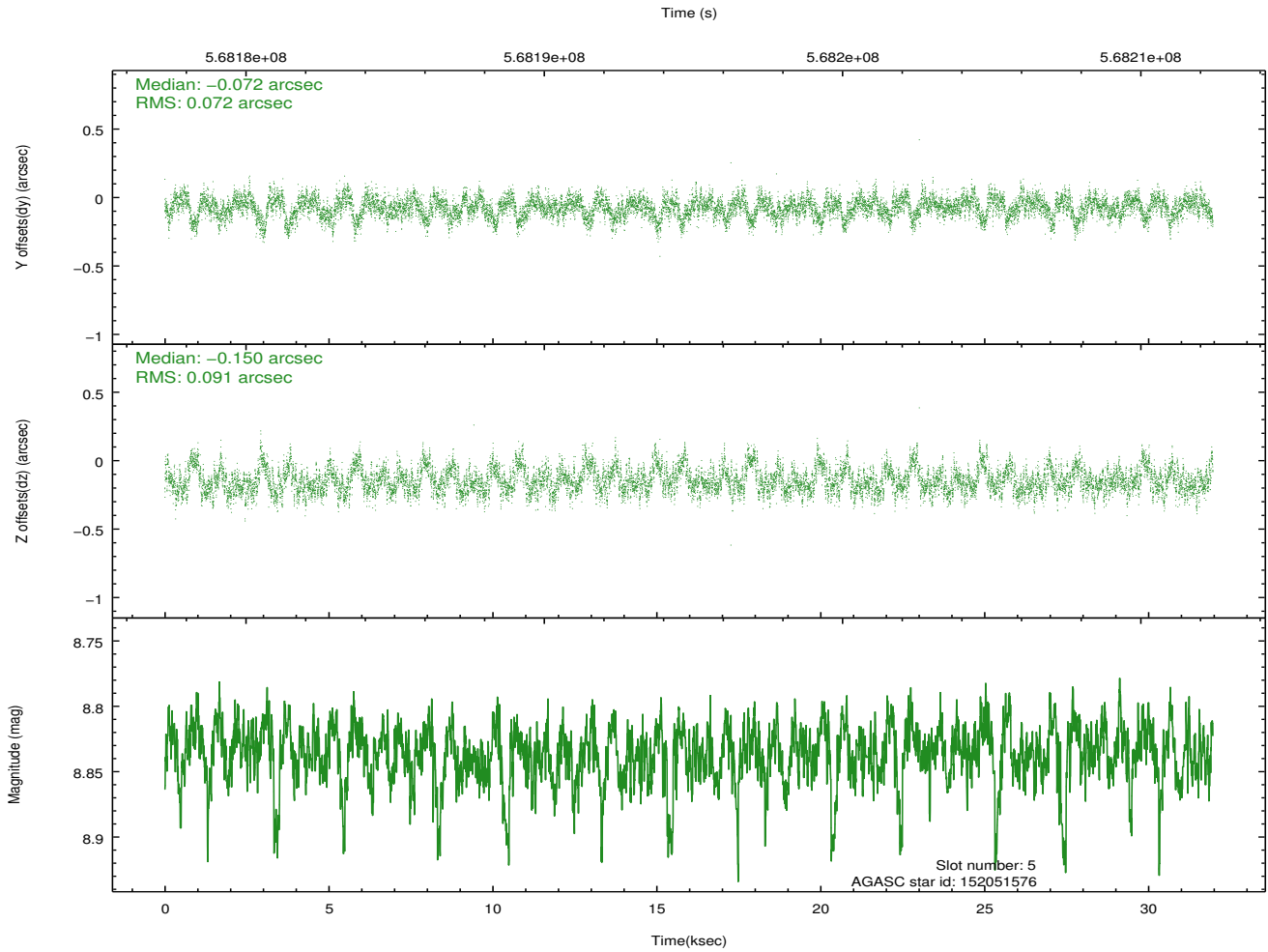
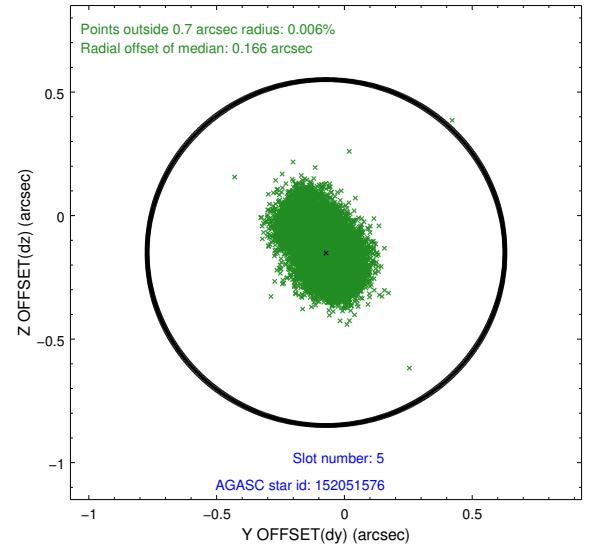
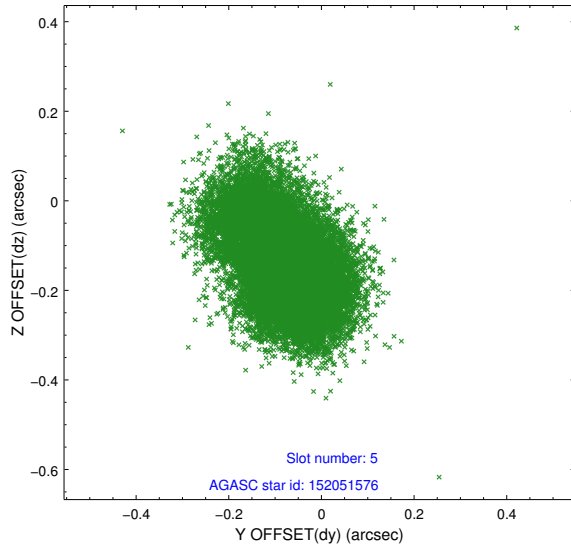
2.4.1 Slot 3



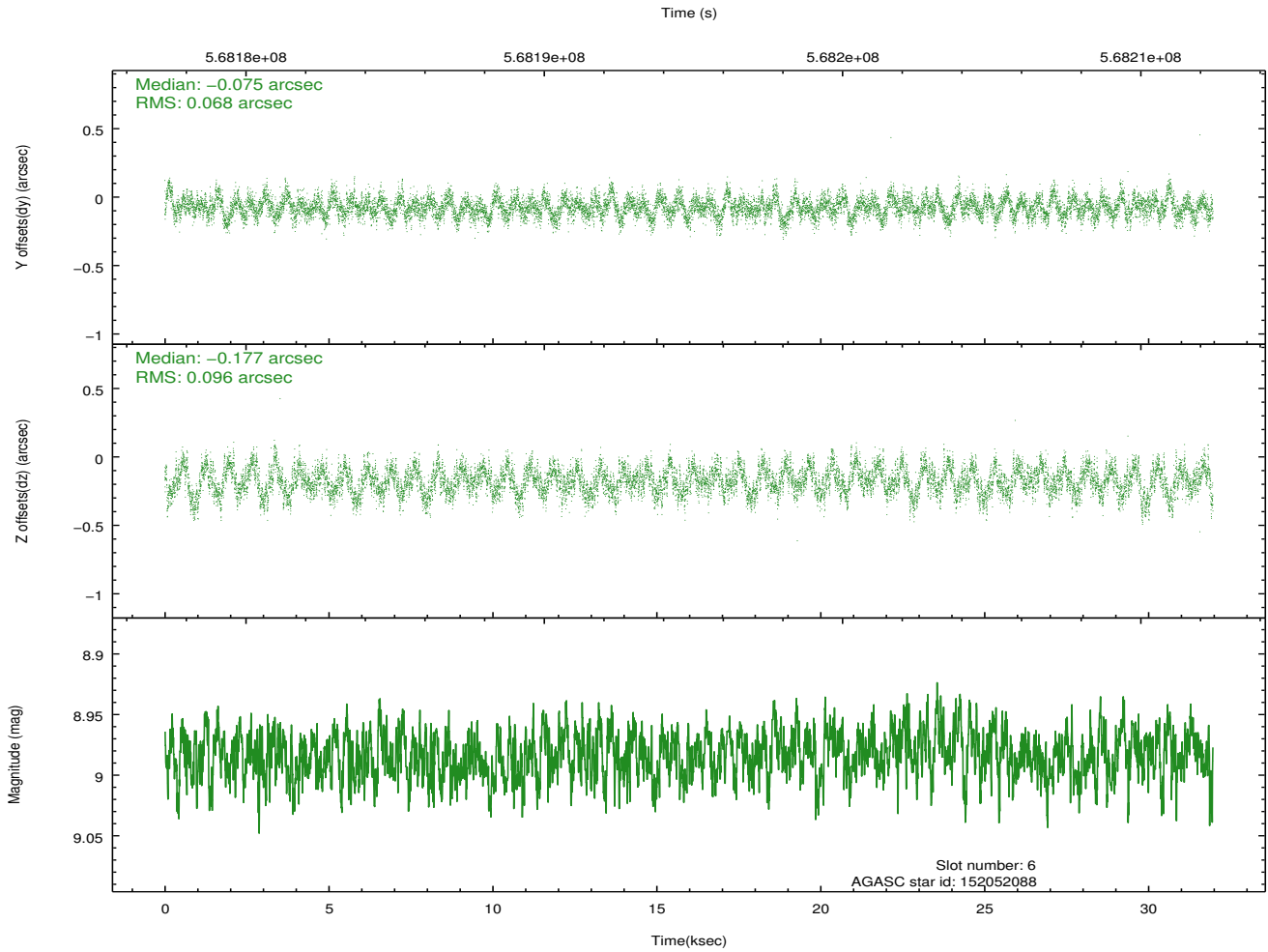
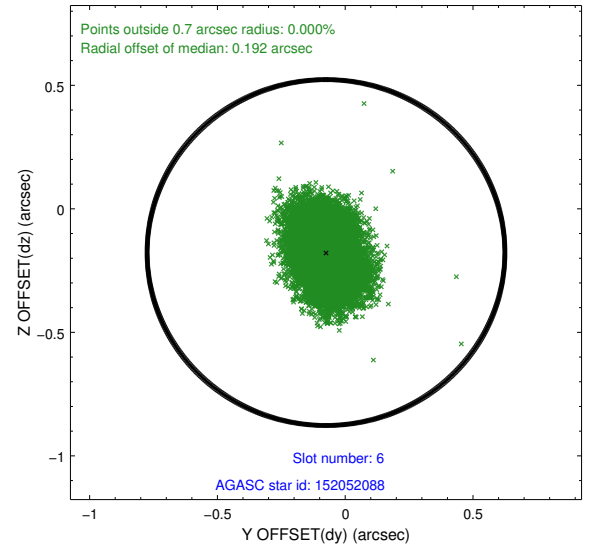
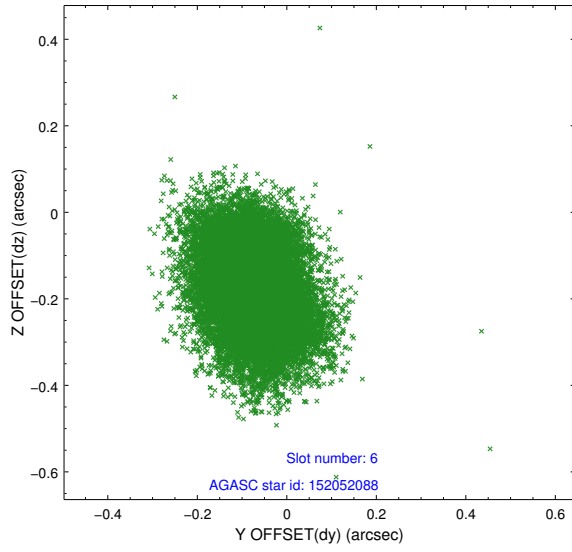
2.4.2 Slot 4



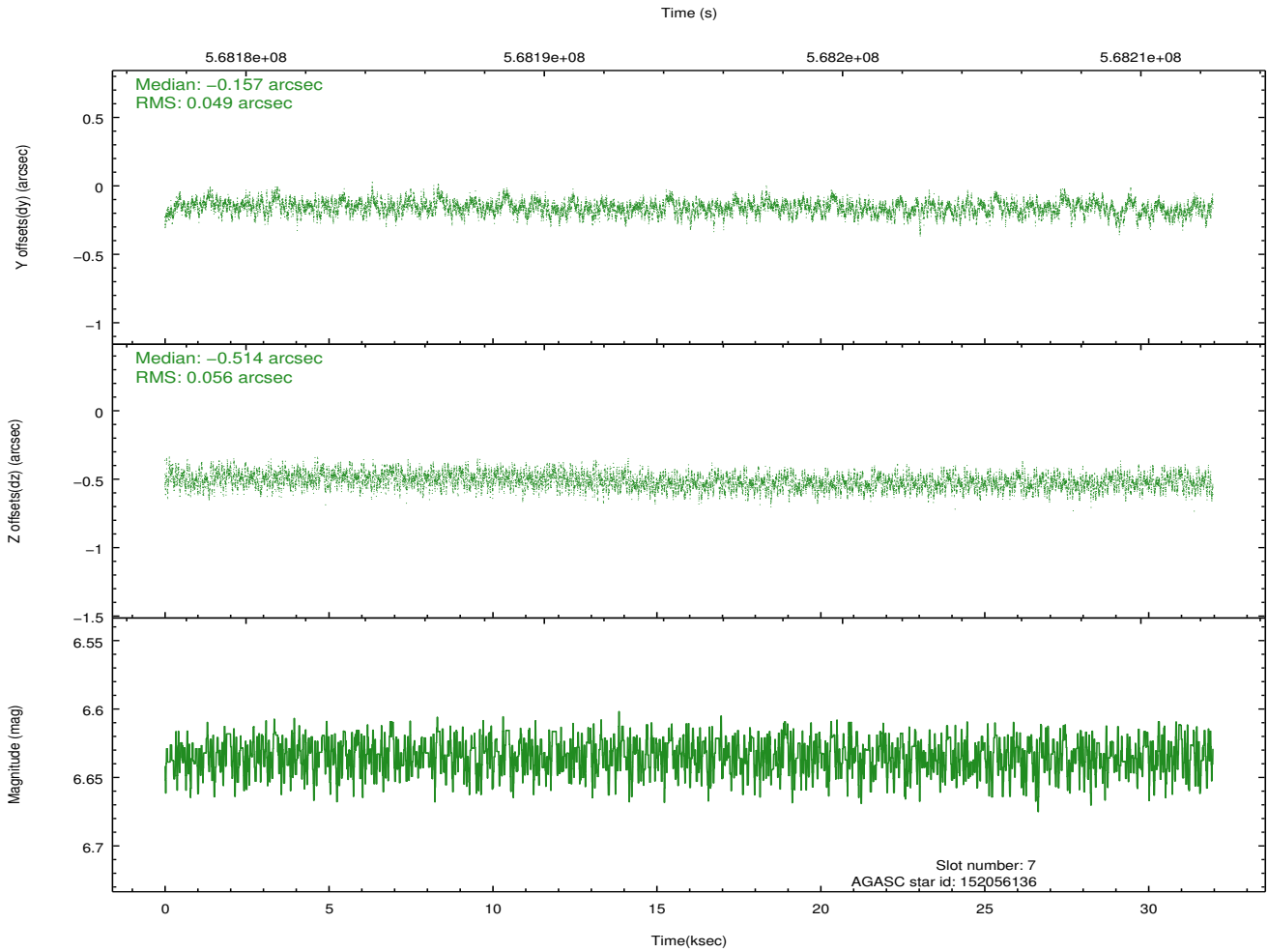
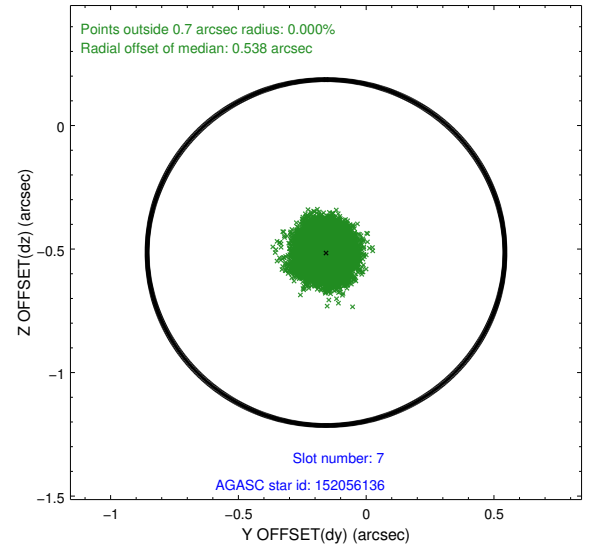
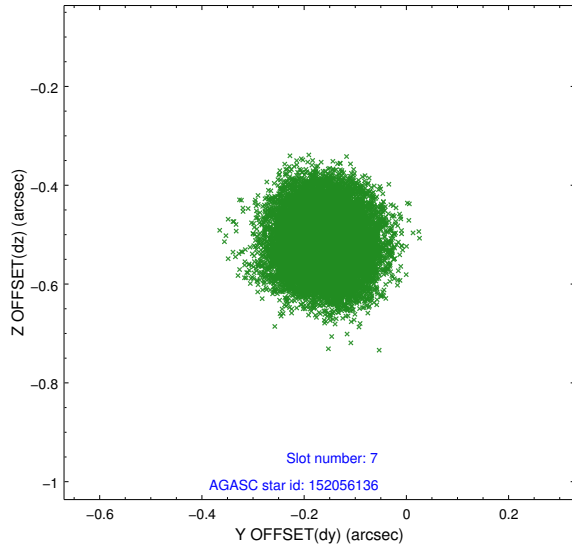
2.4.3 Slot 5



2.4.4 Slot 6

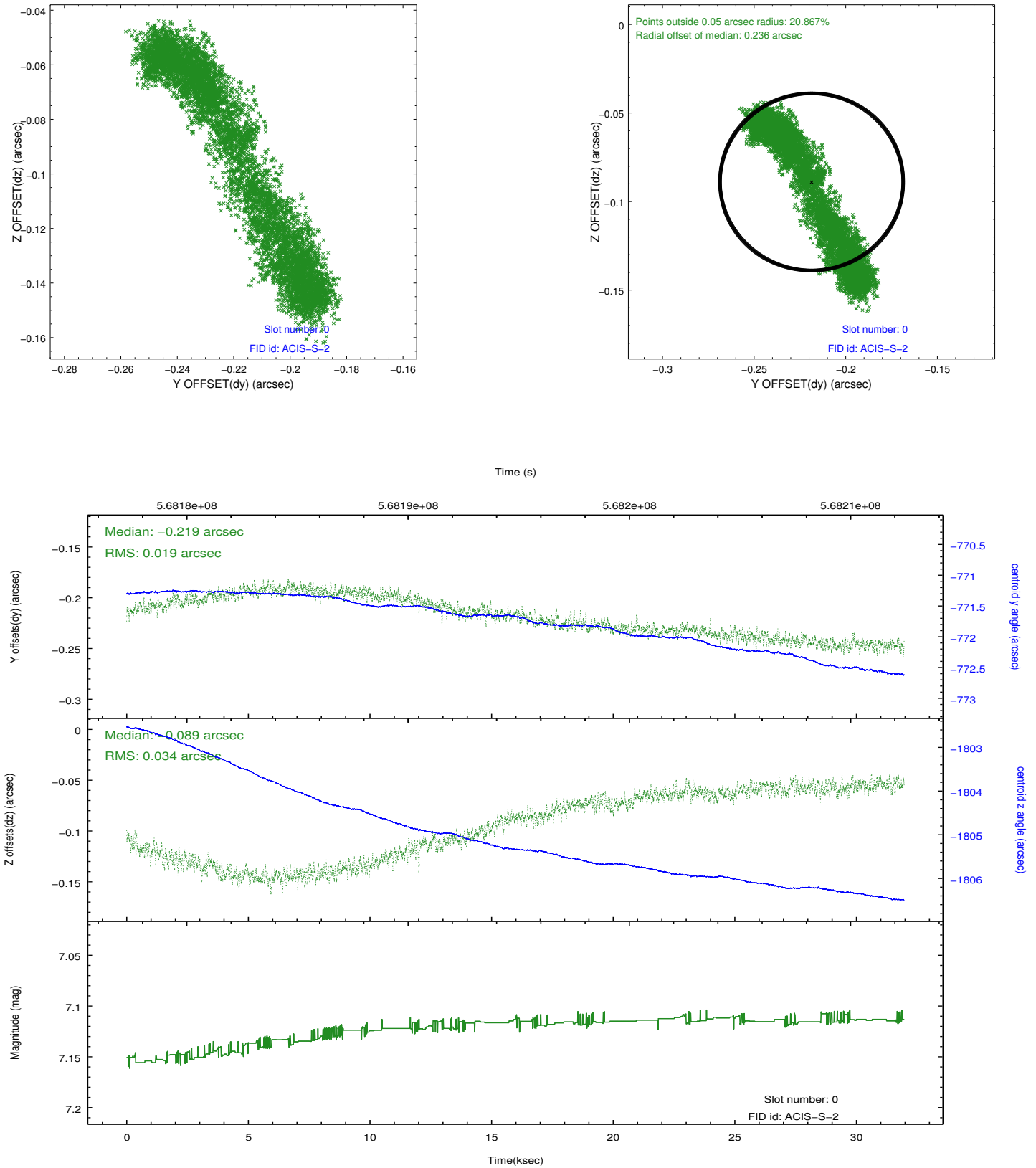


2.4.5 Slot 7

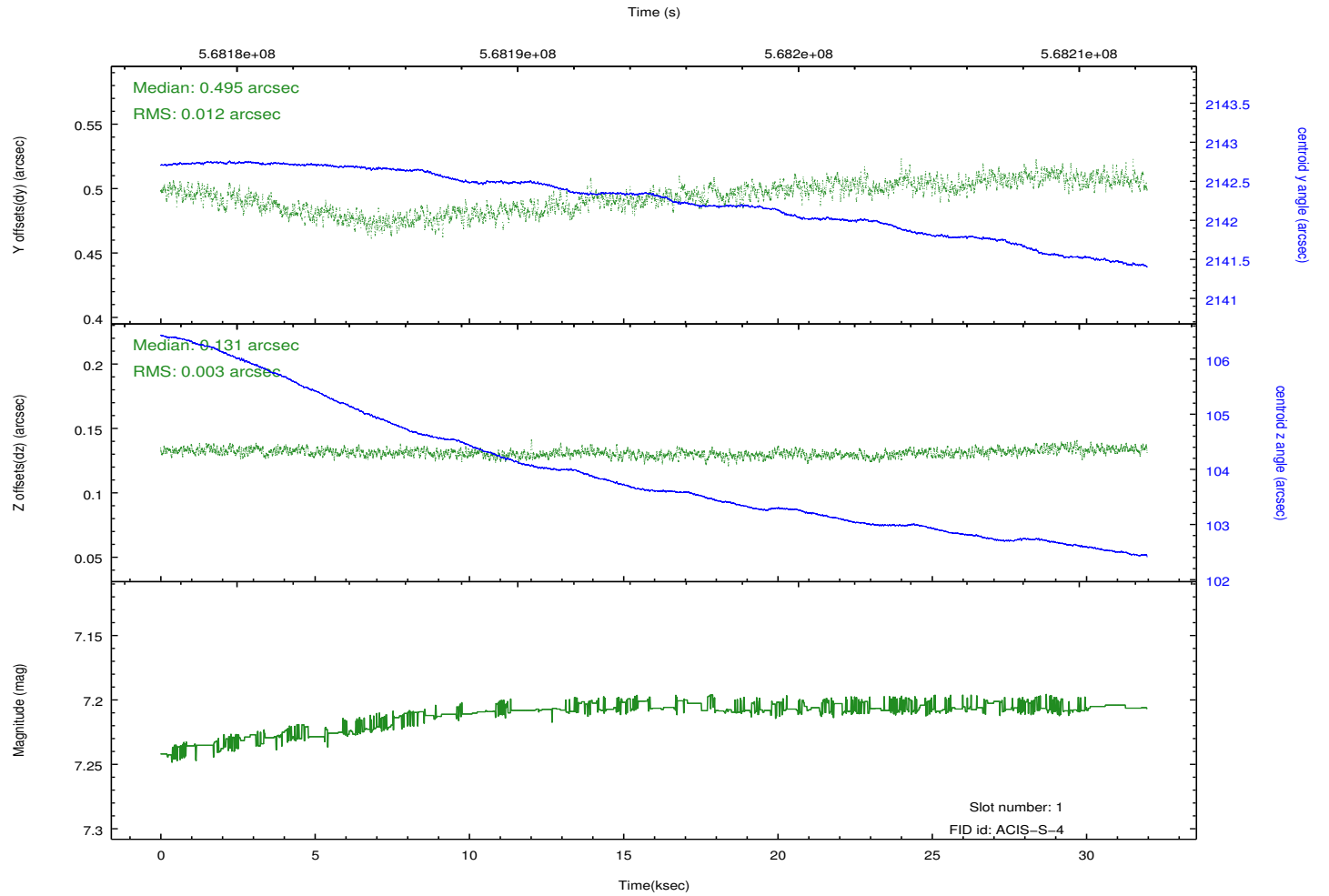
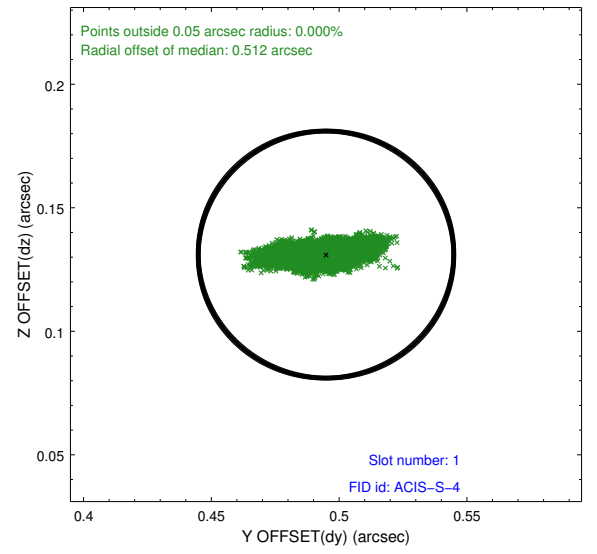
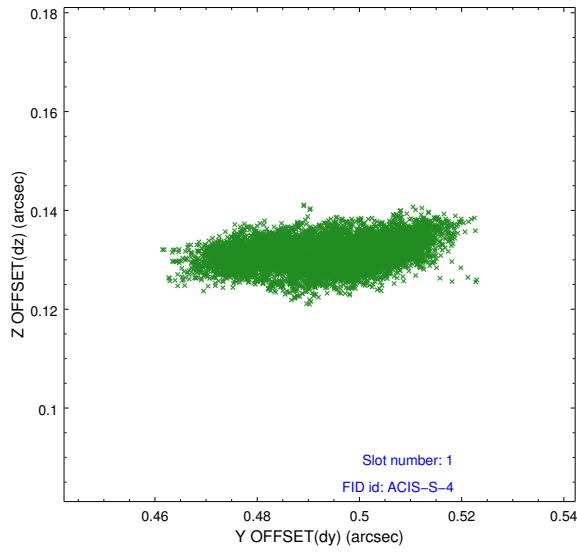


2.5 FID Slots

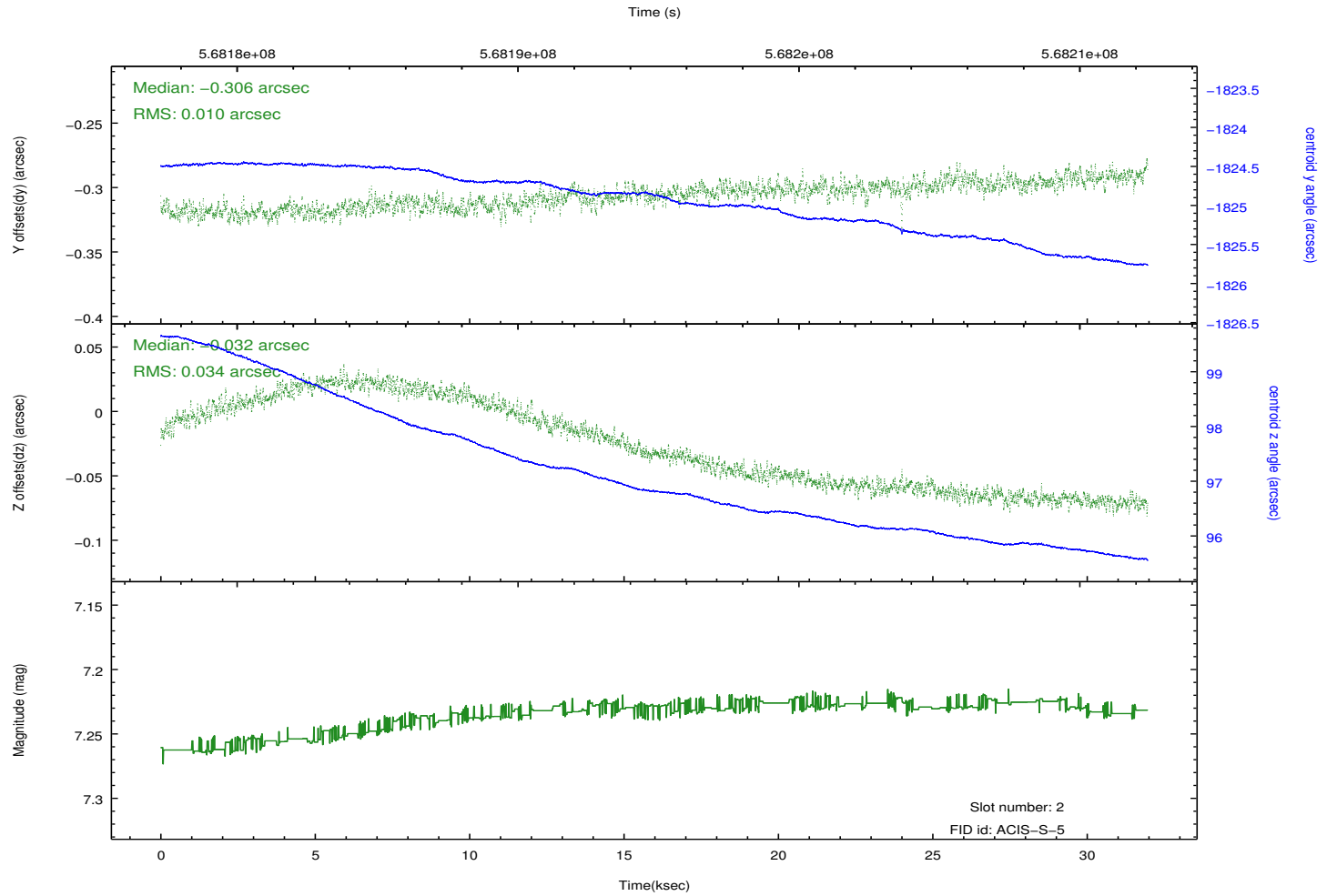
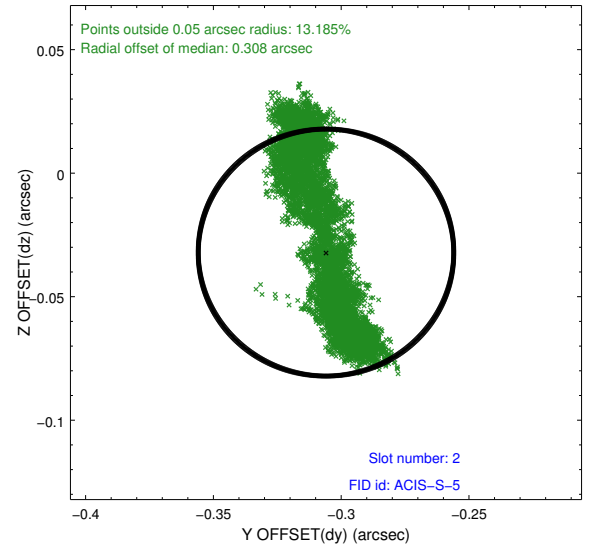
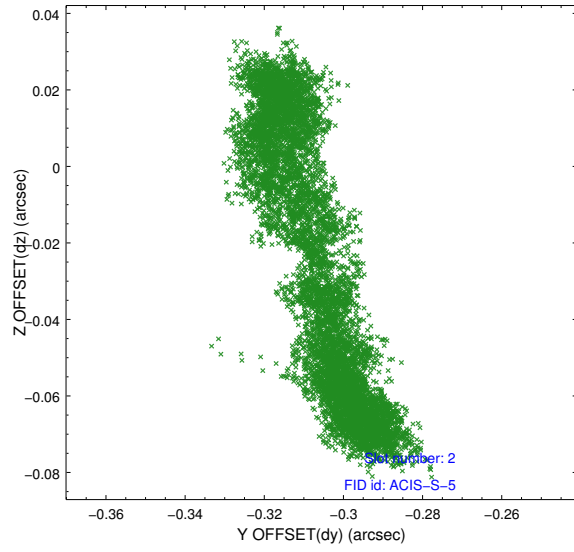
2.5.1 Slot 0



2.5.2 Slot 1

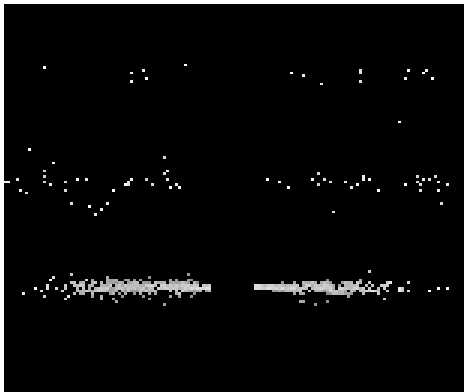


2.5.3 Slot 2

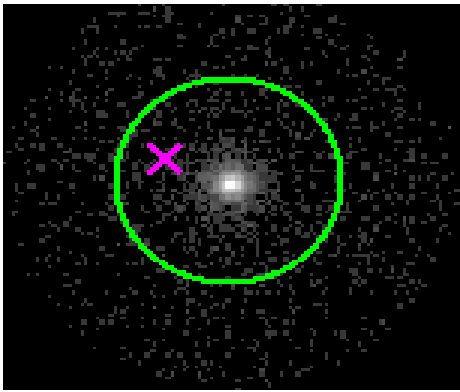


3 Gratings

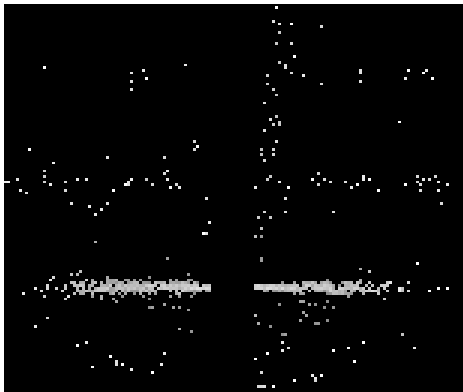
3.1 HEG Arm



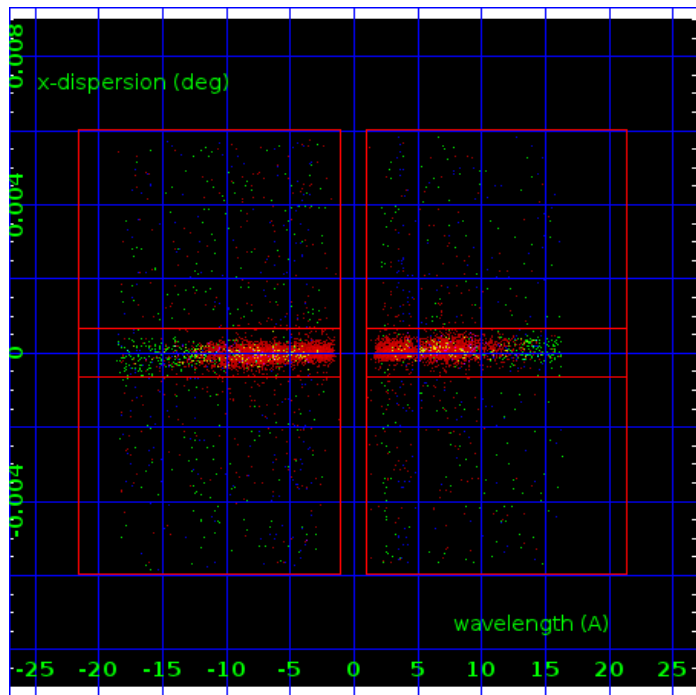
HEG Order Sort 123



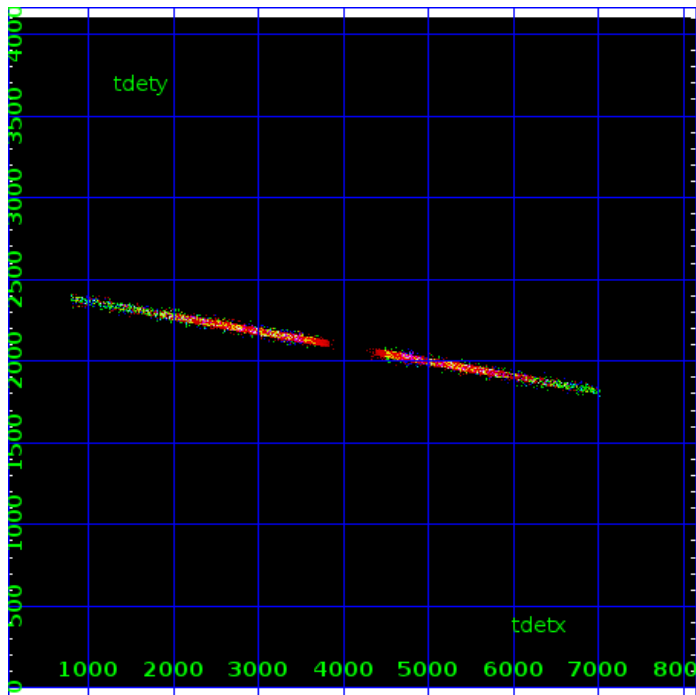
HEG Zero Order



HEG Order Sort ALL

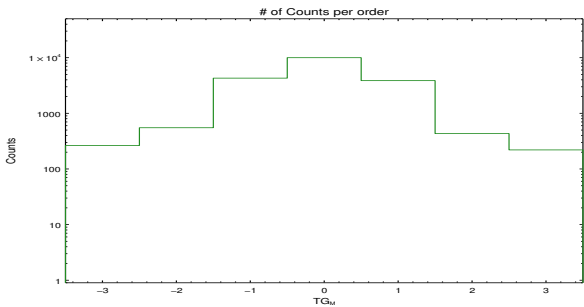


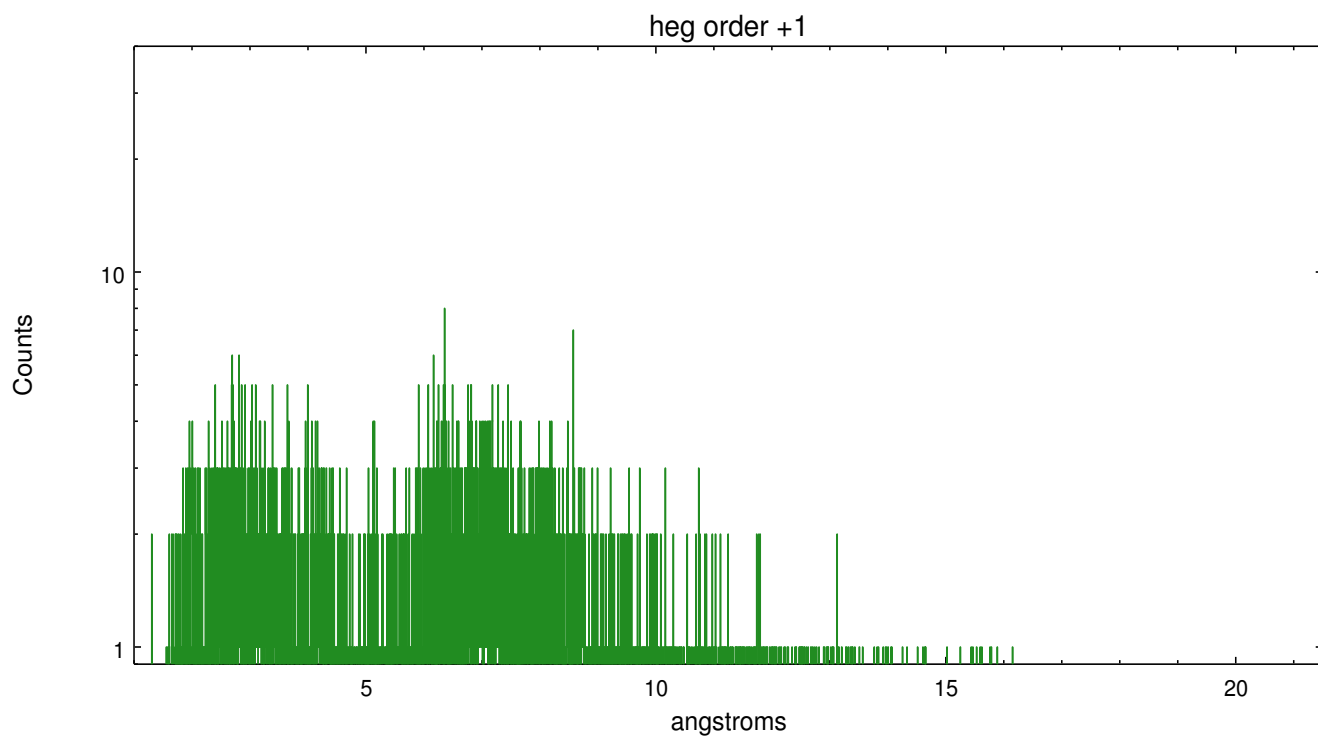
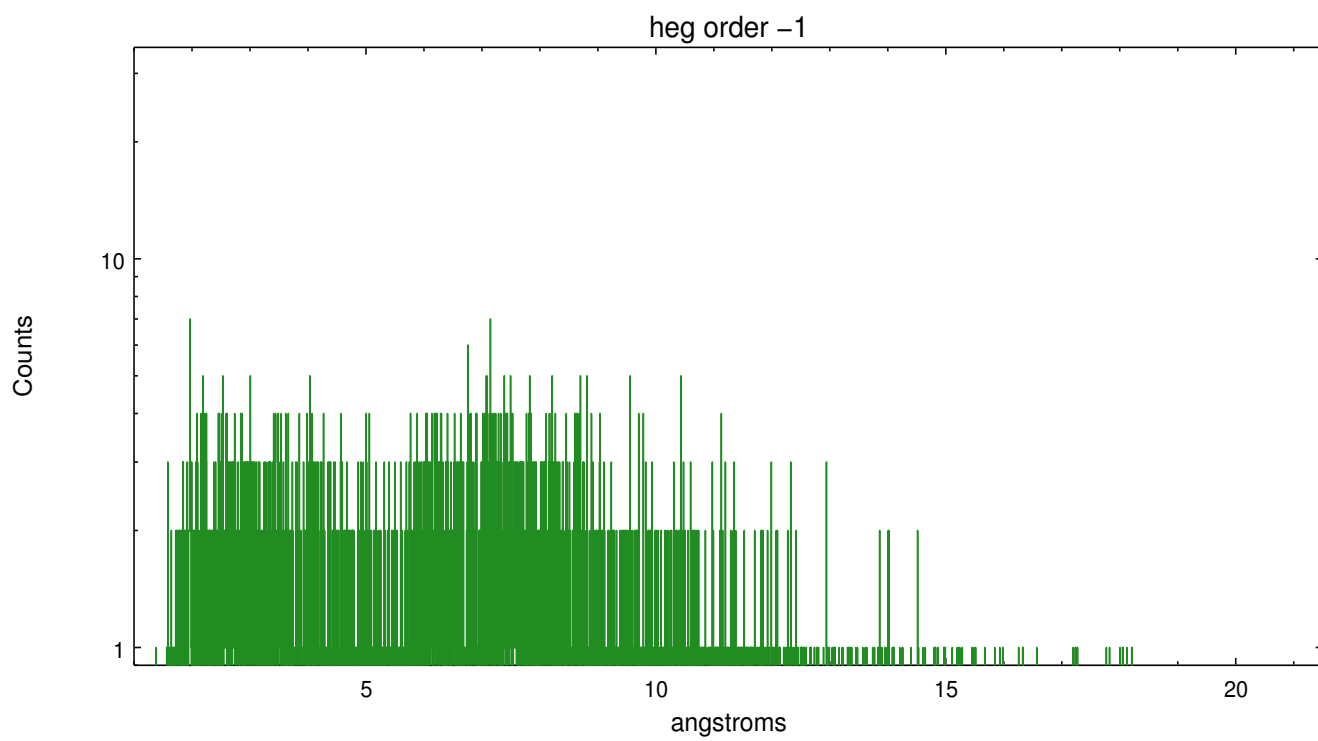
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	264	551	4288	10002	3870	432	220

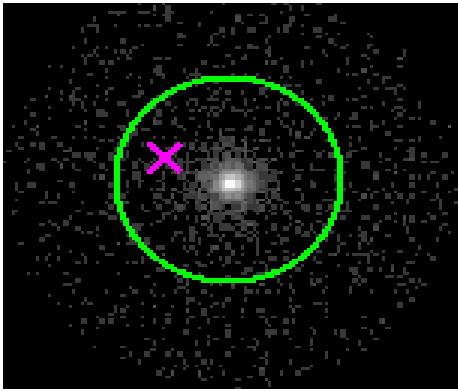




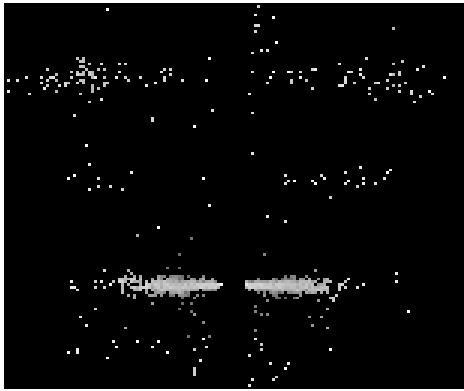
3.2 MEG Arm



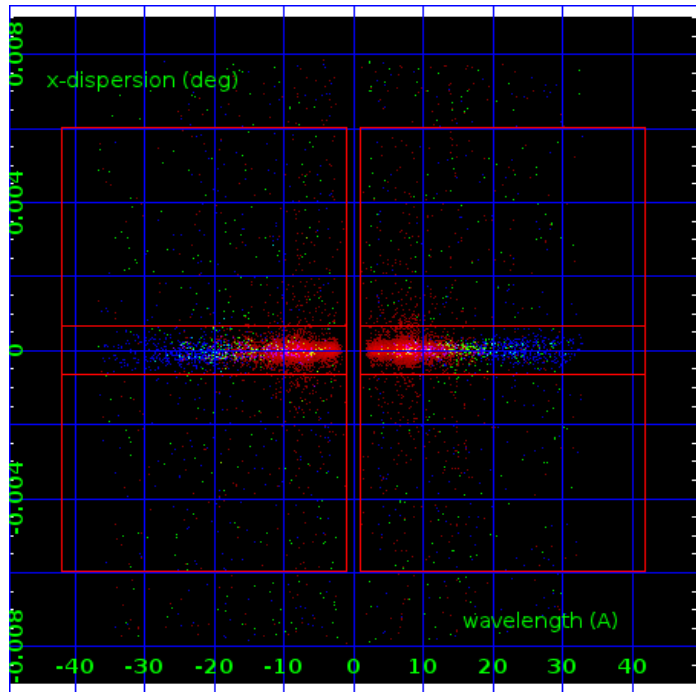
MEG Order Sort 123



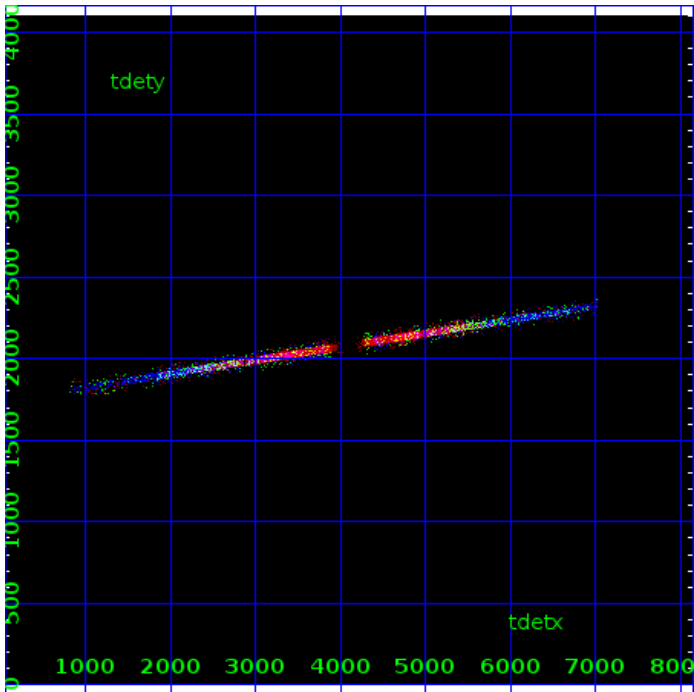
MEG Zero Order



MEG Order Sort ALL

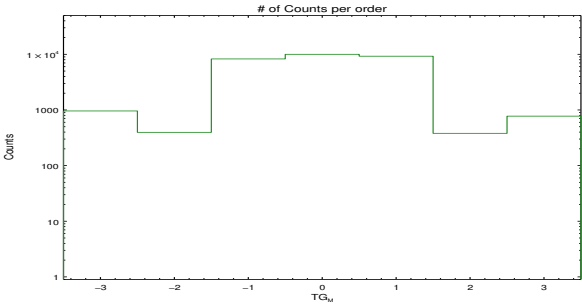


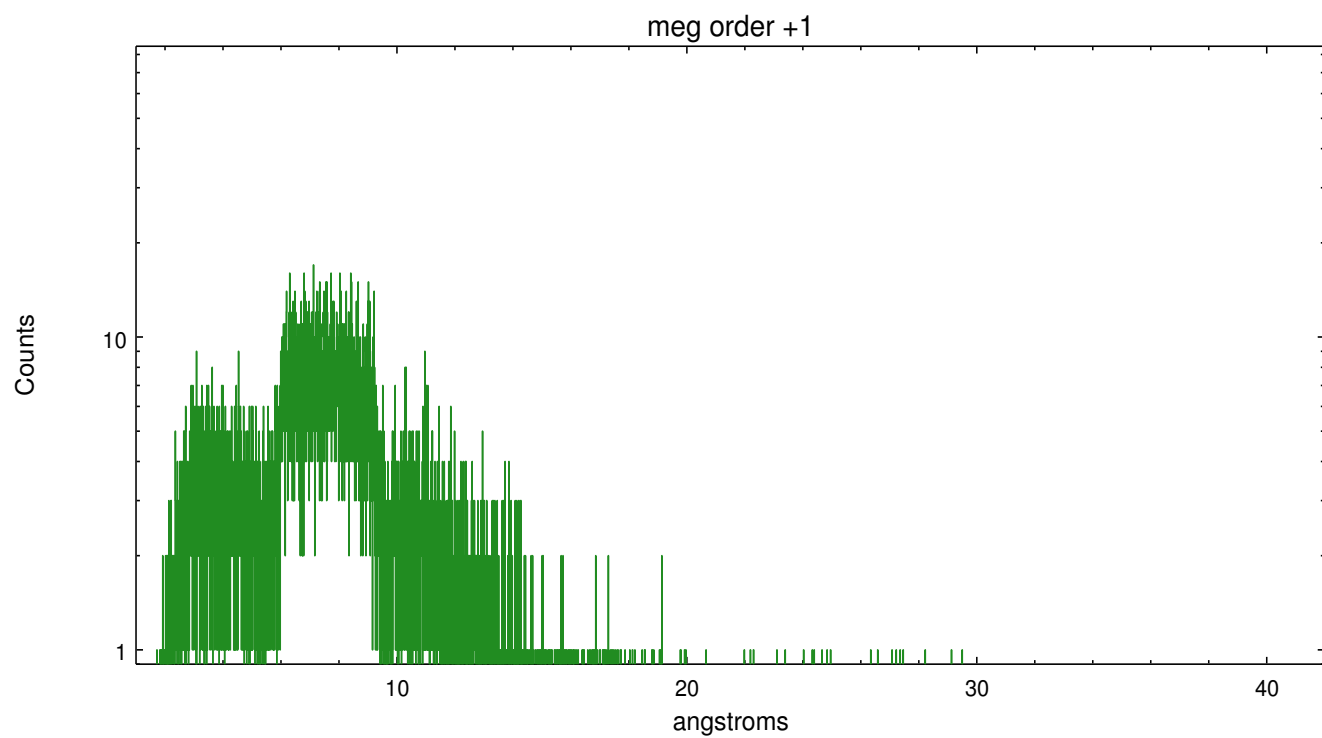
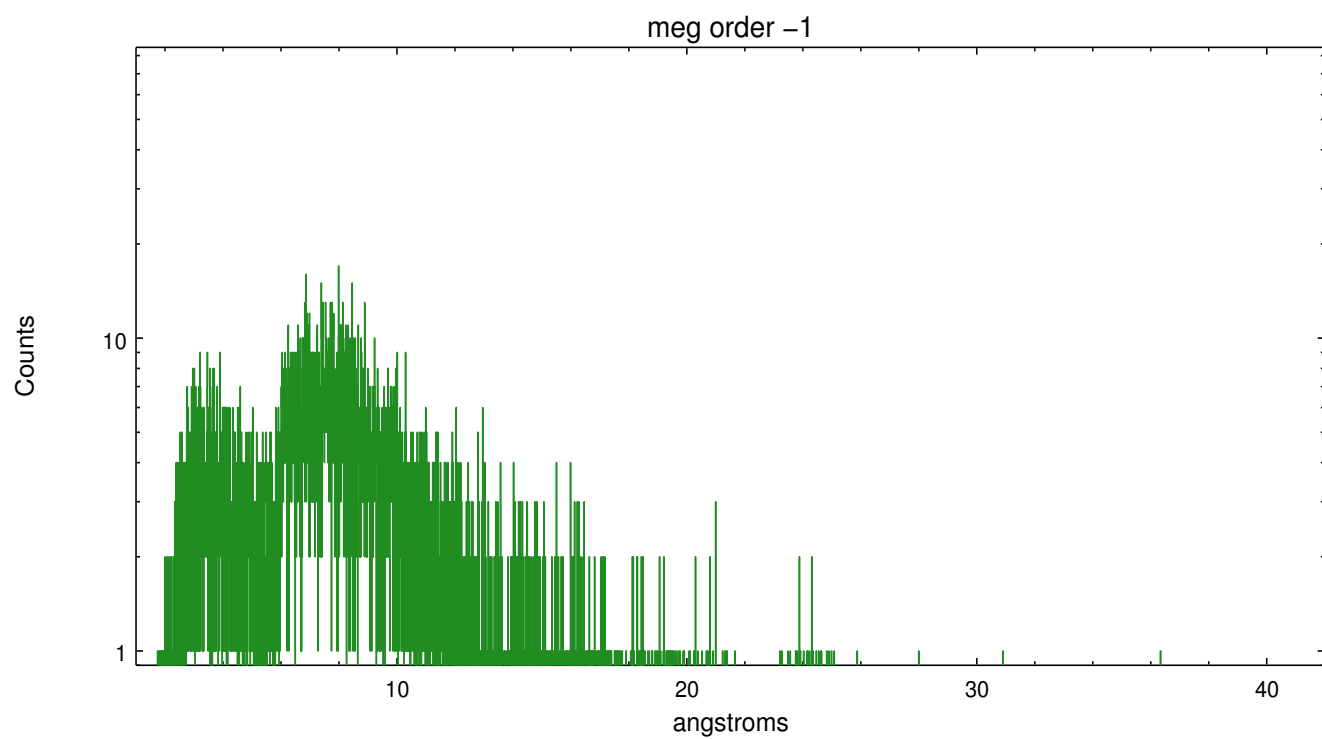
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	960	396	8266	10002	9245	380	774





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2016.01.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	31.7925

A.2 Comments

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.

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Preferred window missed by slightly more than 1 day due to spacecraft constraints.