

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 14425 - L2 Version 2
Chandra X-Ray Center

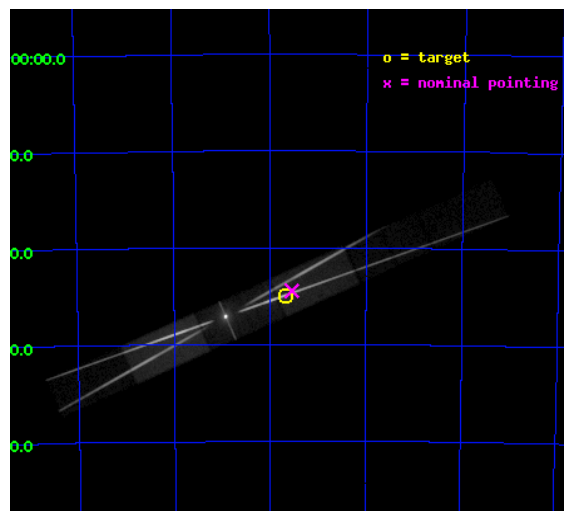
L2 Processing Date : May 1 2012

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1 Front

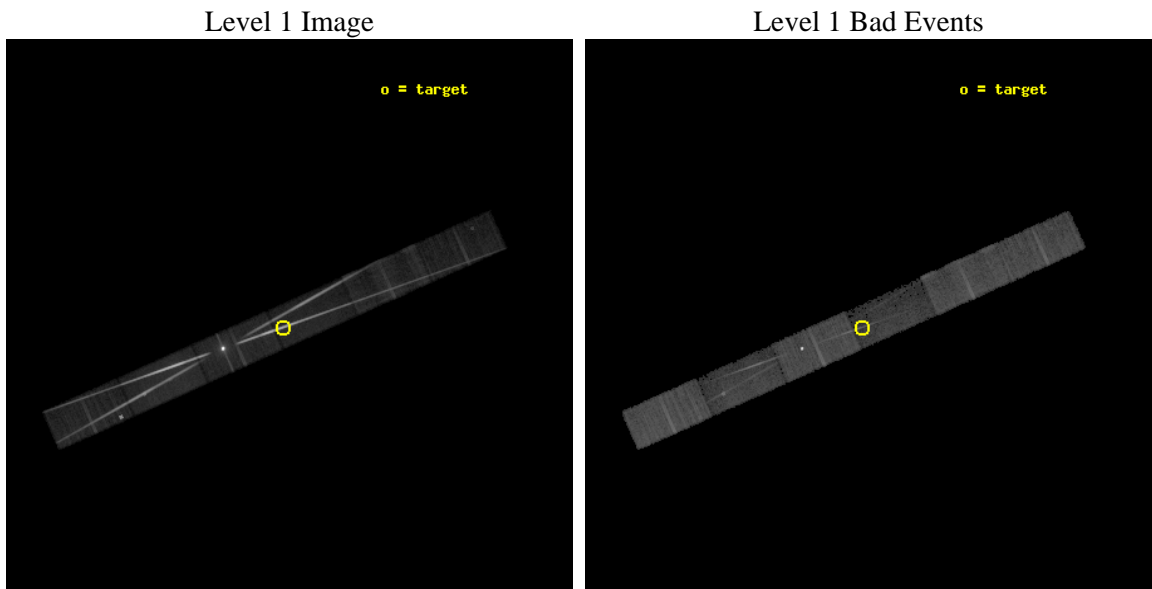
seq_num	401429	Sequence number
obs_id	14425	Observation id
title	An HETGS Observation of the Transient MAXI J1305-704	Proposal titl
observer	Dr Jon Miller	Principal investigator
object	MAXI J1305-704	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	196.41625	Observer's specified target RA [deg]
dec_targ	-70.415	Observer's specified target Dec [deg]
ra_nom	196.38524561637	Nominal RA [deg]
dec_nom	-70.407521552815	Nominal Dec [deg]
roll_nom	335.93418539293	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30088.299789071	Sum of GTIs [s]
livetime	29379.054841601	Livetime [s]
ontime4	30088.299789071	Sum of GTIs [s]
ontime5	30088.299789071	Sum of GTIs [s]
ontime6	30086.55874896	Sum of GTIs [s]
ontime7	30088.299789071	Sum of GTIs [s]
ontime8	30088.299789071	Sum of GTIs [s]
ontime9	30088.299789071	Sum of GTIs [s]
l2events	1605705	Number of level 2 events



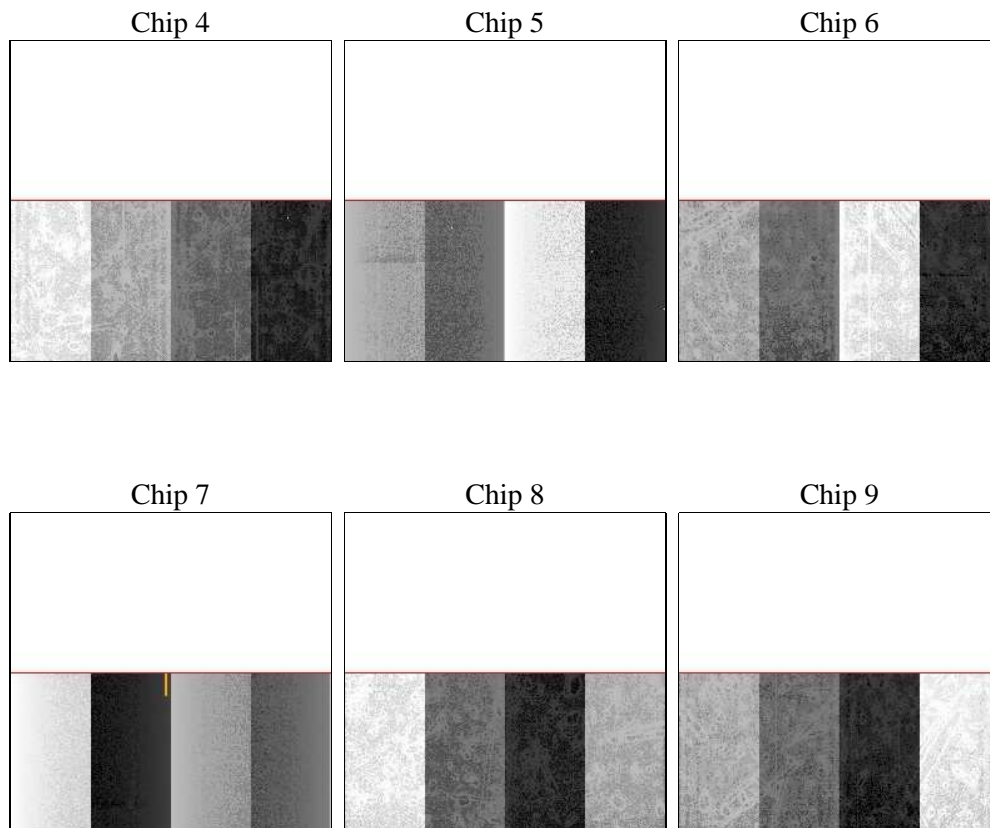
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30003.919000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	30088.299789071	Sum of GTIs [s]
caldsver	4.4.9	 	ontime4	30088.299789071	Sum of GTIs [s]
date	2012-04-30T15:02:45	Date and time of file creation	ontime5	30088.299789071	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	30086.55874896	Sum of GTIs [s]
			ontime7	30088.299789071	Sum of GTIs [s]
			ontime8	30088.299789071	Sum of GTIs [s]
			ontime9	30088.299789071	Sum of GTIs [s]
			l1events	2152901	Number of level 1 events

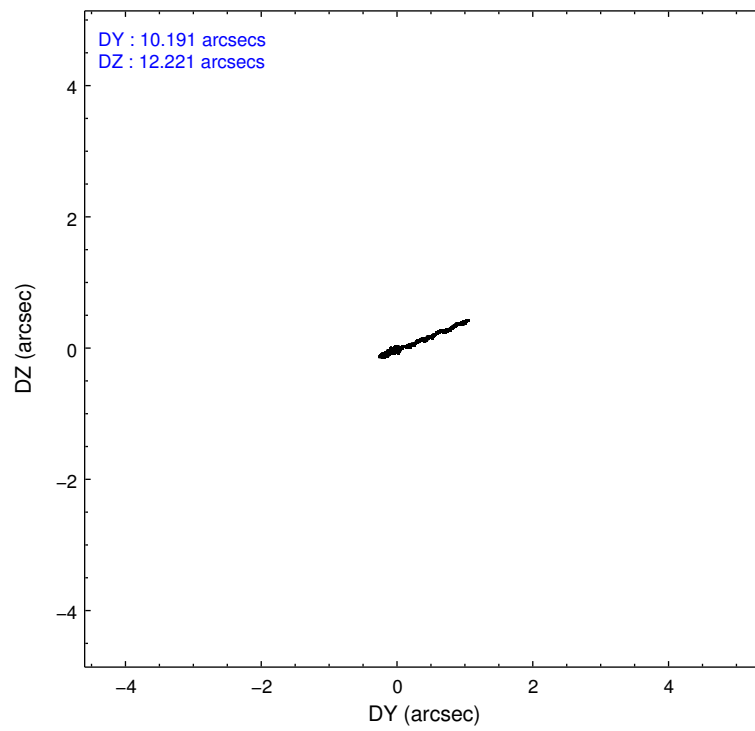
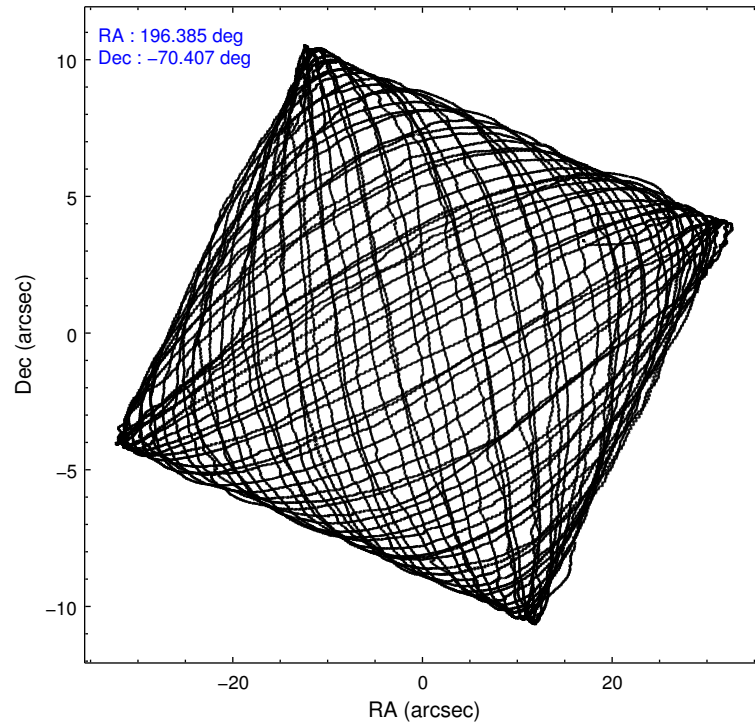
2.1.4 Events

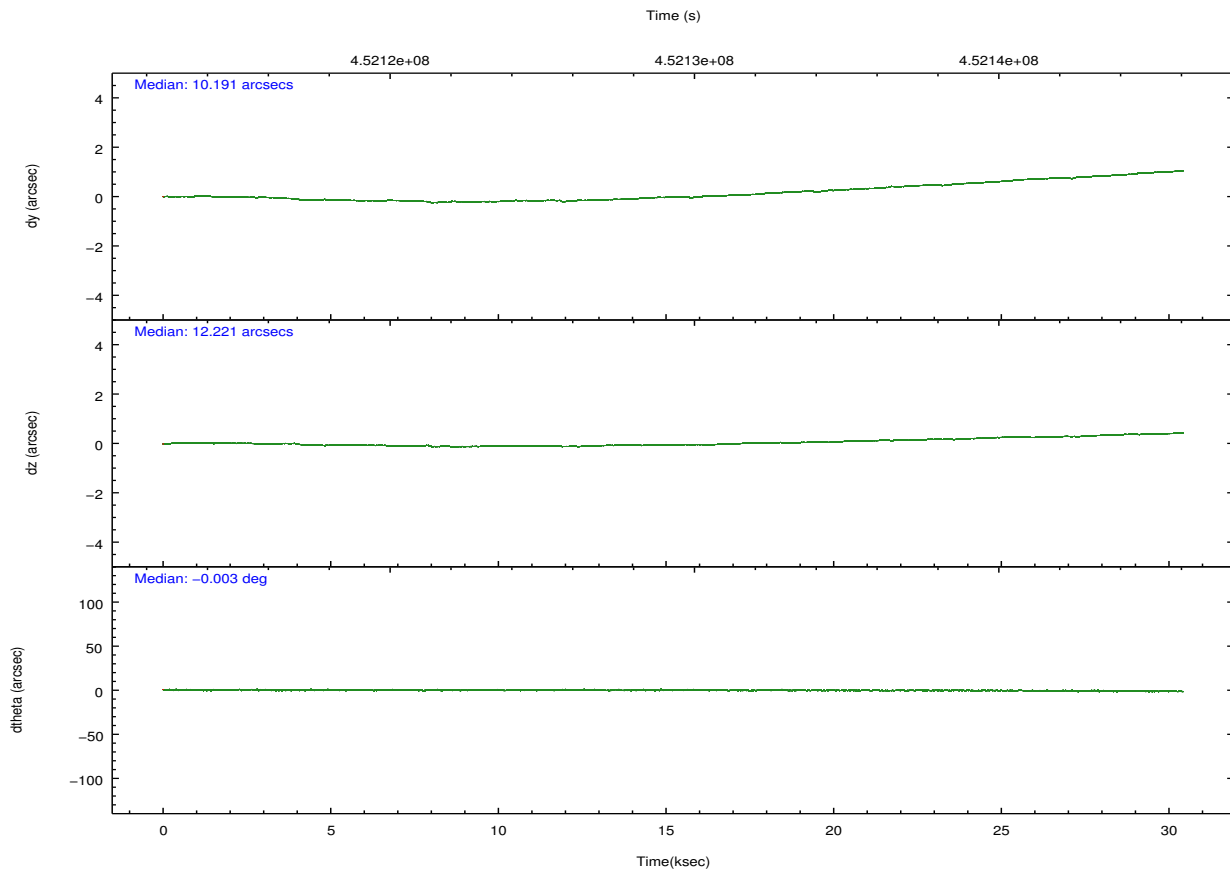
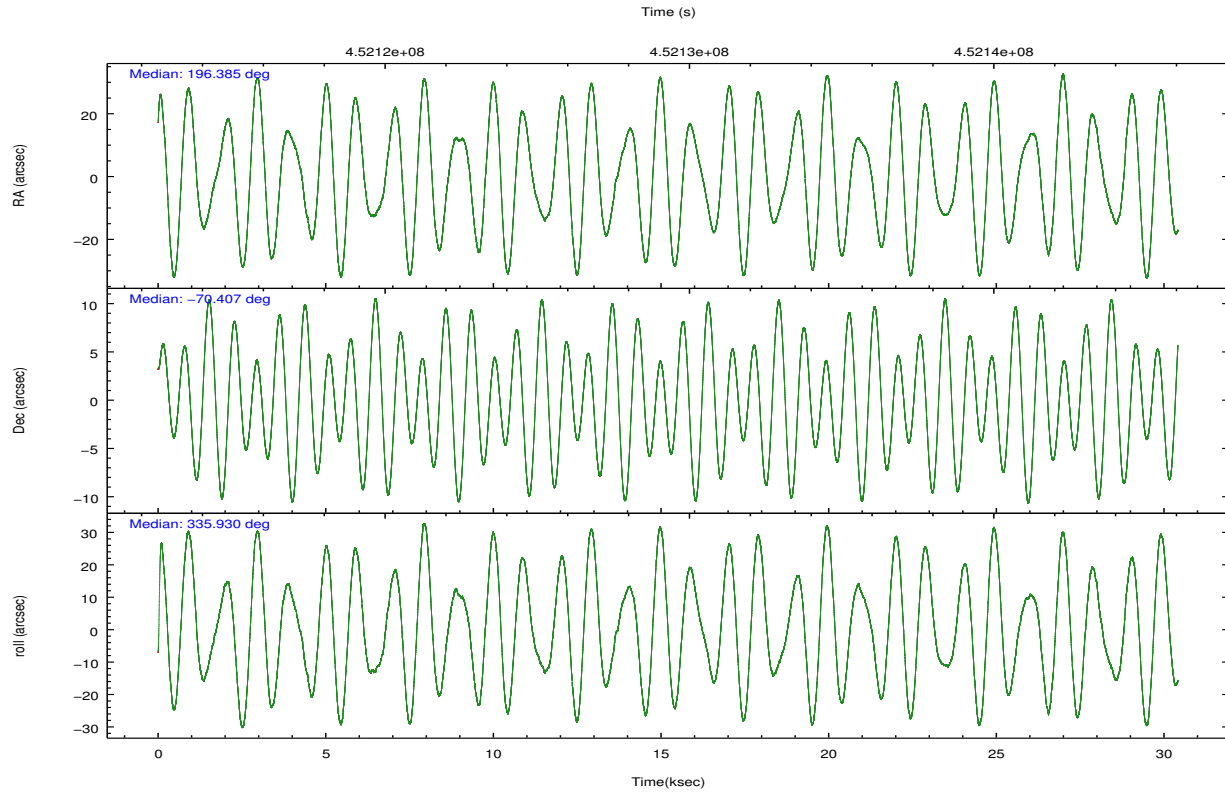
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	184800	585009	731309	419497	143464	88822	grade 0 events	78926	170563	413969	90996	38180	12579
rejected events	87336	53819	139804	37361	76413	68480		42%	29%	56%	21%	26%	14%
rejected %	47%	9%	19%	8%	53%	77%	grade 1 events	300	1177	32731	379	141	83
								0%	0%	4%	0%	0%	0%
							grade 2 events	9544	154257	84017	101447	10829	3077
								5%	26%	11%	24%	7%	3%
							grade 3 events	3237	50262	30348	45217	4576	1511
								1%	8%	4%	10%	3%	1%
							grade 4 events	3144	50153	30359	44367	4411	1402
								1%	8%	4%	10%	3%	1%
							grade 5 events	2605	13367	21416	10191	4303	2783
								1%	2%	2%	2%	2%	3%
							grade 6 events	2620	105989	32866	100131	9059	1775
								1%	18%	4%	23%	6%	1%
							grade 7 events	84424	39241	85603	26769	71965	65612
								45%	6%	11%	6%	50%	73%

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	196.304234	196.3852456163743	CCD I2 on	N	N
[deg] Pointing Dec	-70.410720	-70.40752155281504	CCD I3 on	N	N
[deg] Pointing Roll	335.701248	335.9341853929321	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	-183.992523	-183.9875365069546	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-6.14	-6.144986076053243	CCD S4 on	Y	Y
[s] Observation start time (MET)	452114492.184000	452113434.0565	CCD S5 on	Y	Y
Observation start date	2012-04-29T19:20:26	2012-04-29T19:03:54	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	452144496.184000	452144720.13316	On-chip summing requested	N	N
Observation end date	2012-04-30T03:40:30	2012-04-30T03:45:20	Subarray requested	CUSTOM	1/2
Read mode	TIMED	TIMED	Subarray start row	1	1
			Subarray row count	512	512
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.7

2.3 Aspect



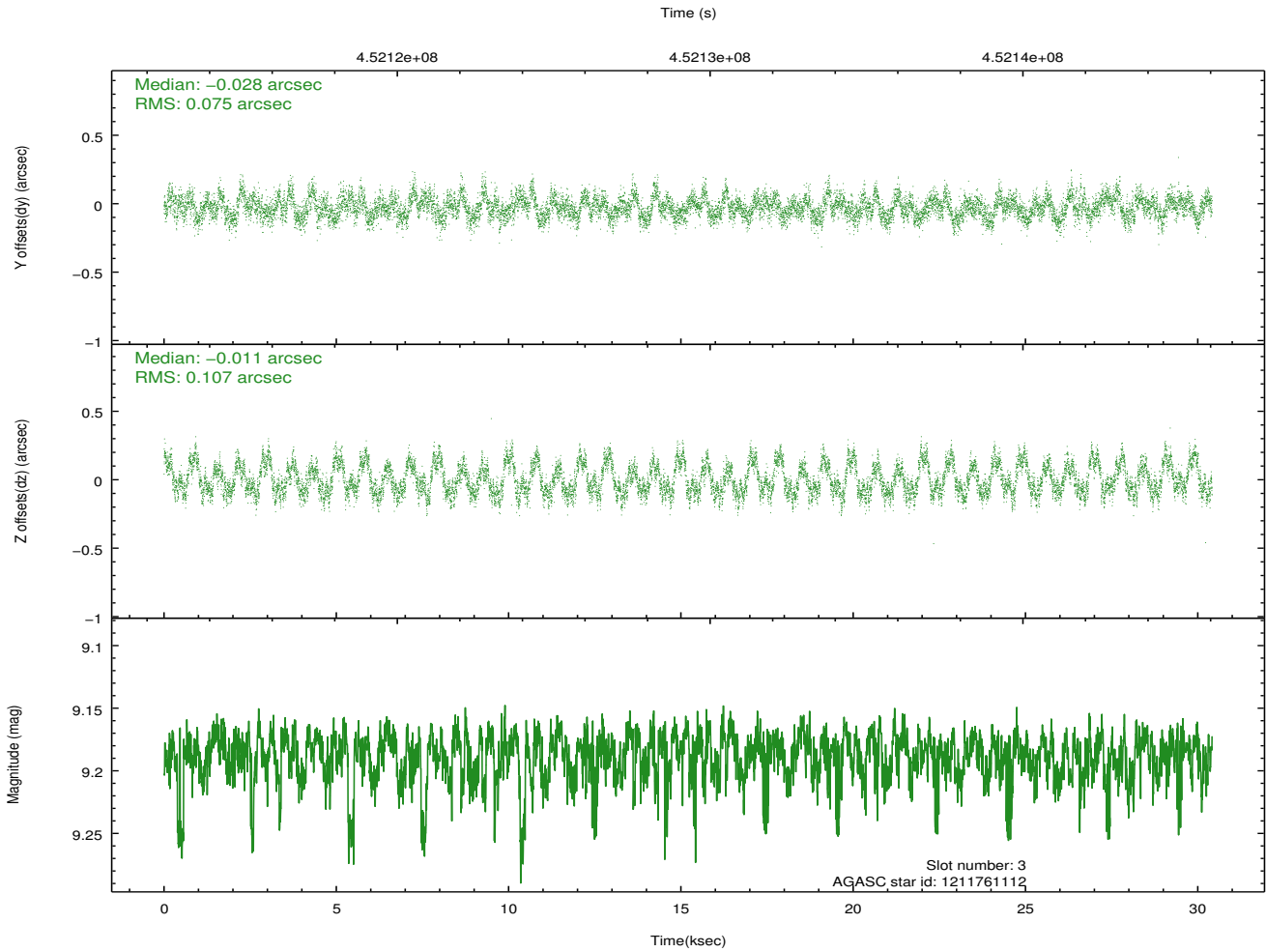
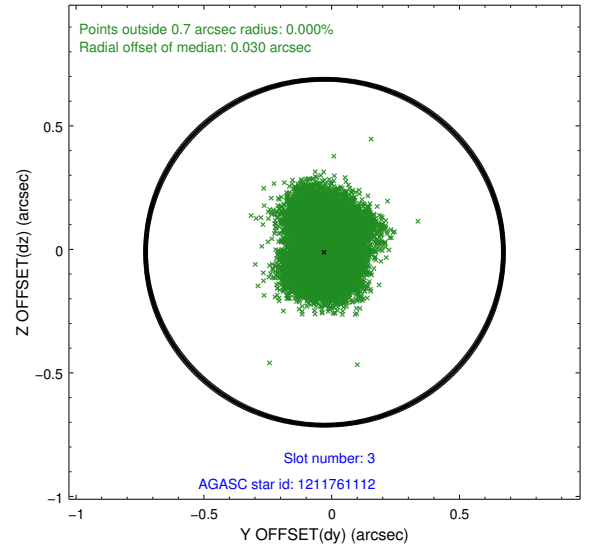
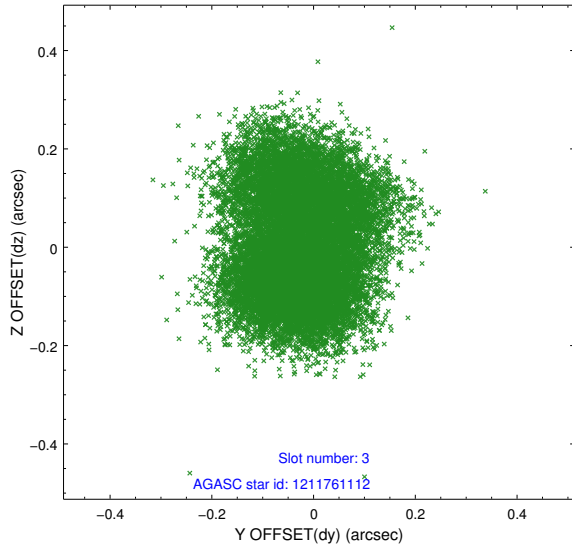


Slot Statistics

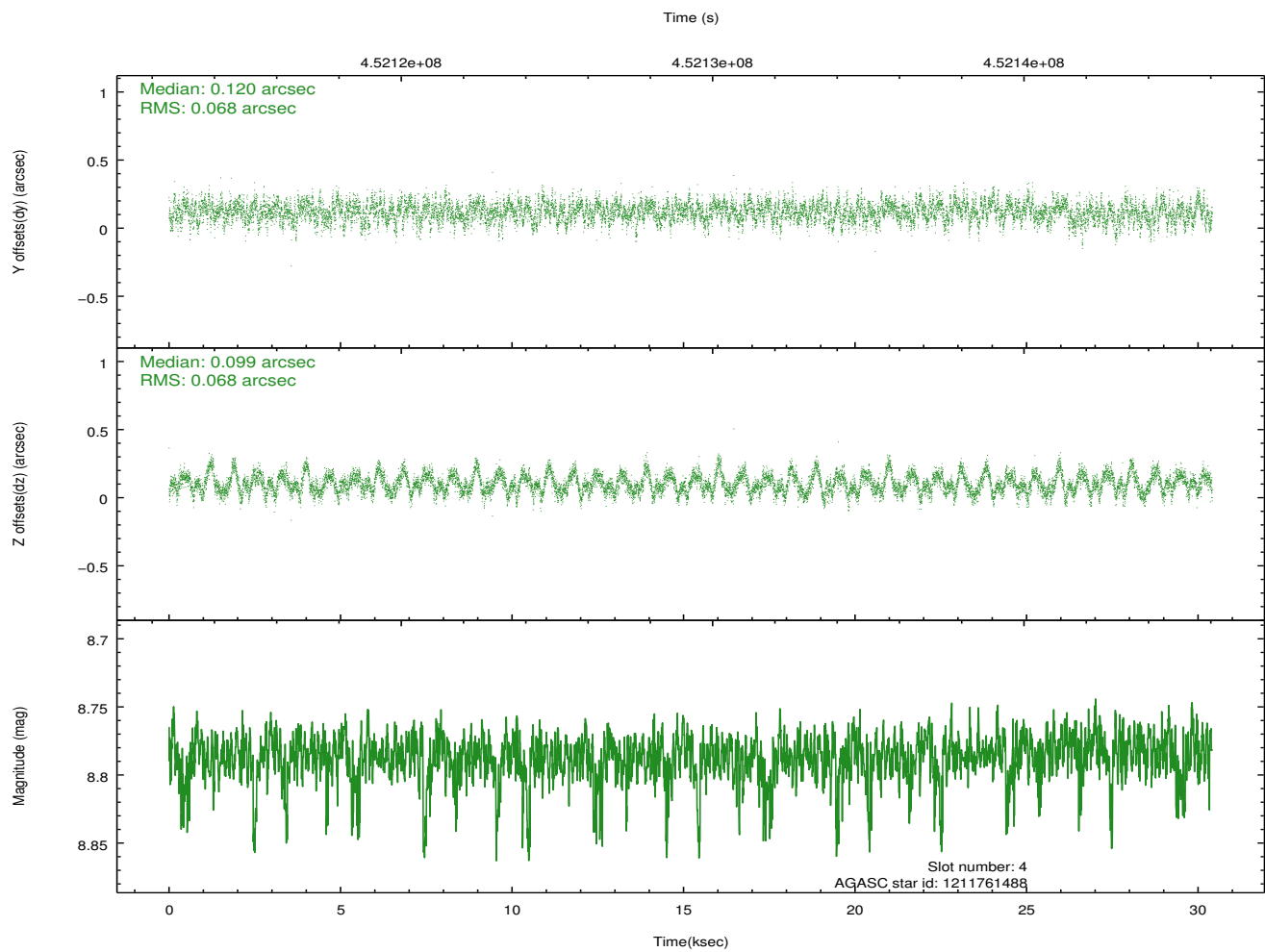
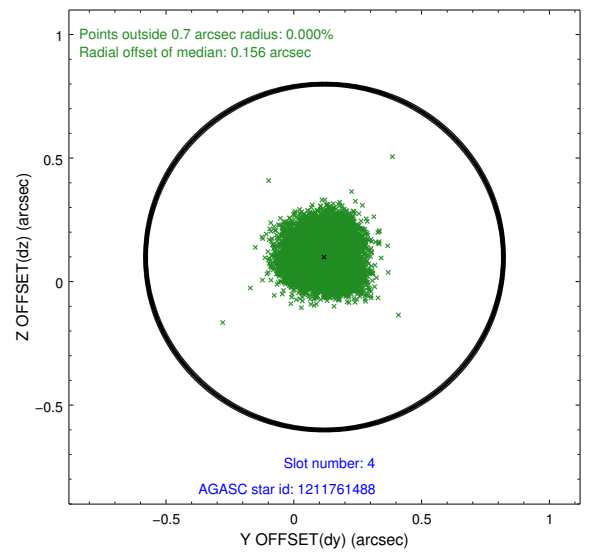
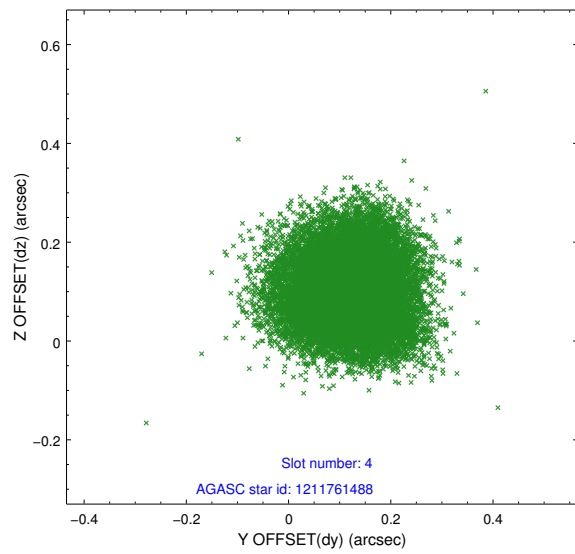
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.98	7419	-0.103	-0.088	0.012	0.029	0.000000	0.000000	-762.93	-1860.29
1	FID	ACIS-S-4	7.06	7419	0.223	0.073	0.008	0.027	0.000000	0.000000	2150.69	48.17
2	FID	ACIS-S-5	7.10	7419	-0.153	0.023	0.013	0.045	0.000000	0.000000	-1815.67	41.97
3	GUIDE	1211761112	9.19	14804	-0.028	-0.011	0.142	0.220	194.773240	-70.163025	-2061.47	21.52
4	GUIDE	1211761488	8.79	14830	0.120	0.099	0.104	0.163	197.719594	-70.808627	2124.23	-634.00
5	GUIDE	1211763704	8.61	14830	-0.061	-0.208	0.075	0.122	196.884473	-69.863810	-153.16	2086.92
6	GUIDE	1211766144	8.82	14762	0.073	0.300	0.087	0.139	194.954604	-70.685819	-1049.22	-1579.84
7	GUIDE	1211892432	8.57	14834	-0.100	-0.192	0.085	0.140	198.098714	-70.321889	1864.02	1157.03

2.4 Star Slots

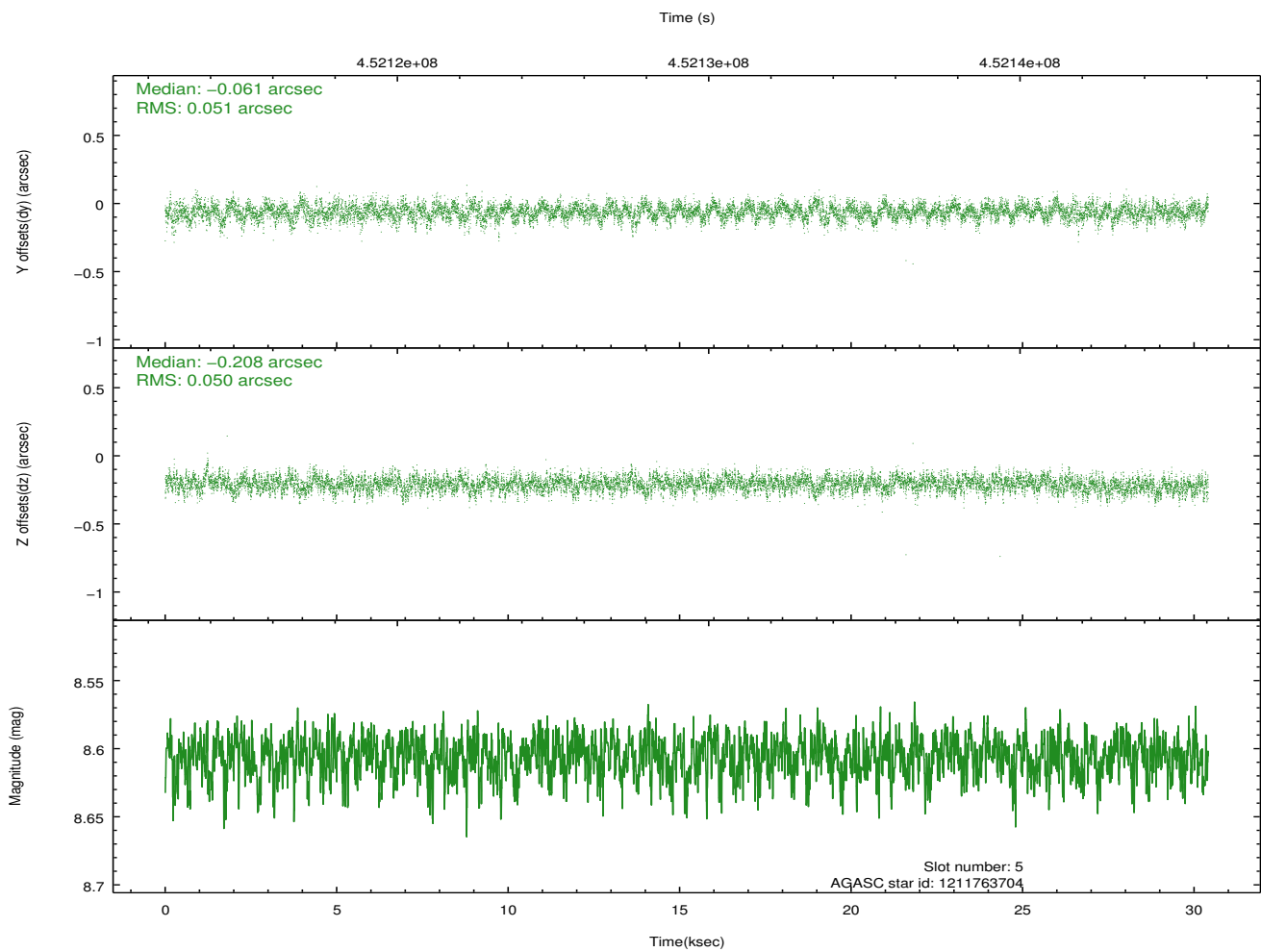
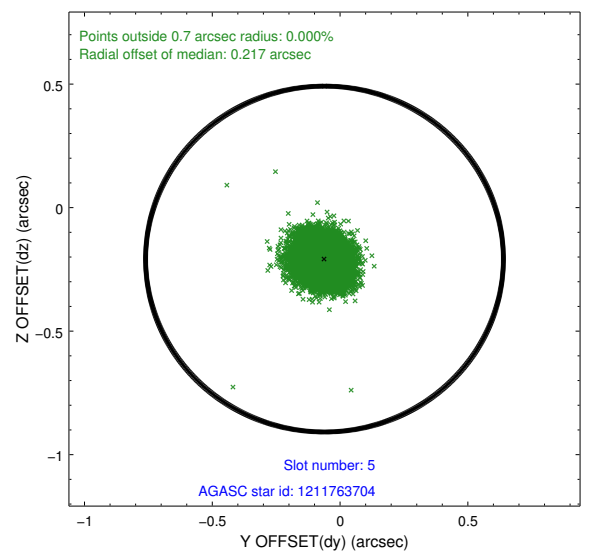
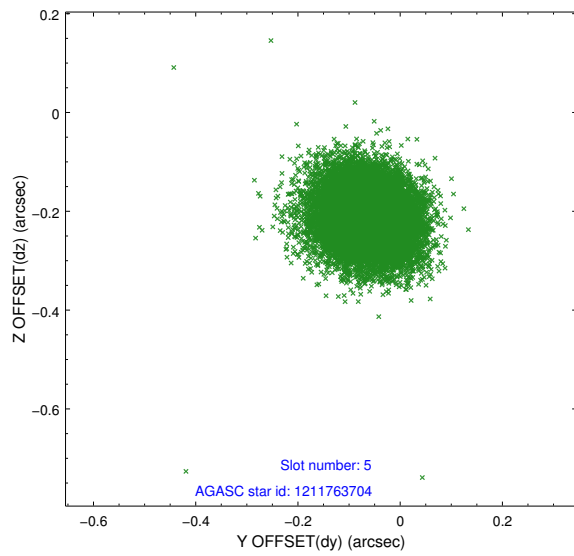
2.4.1 Slot 3



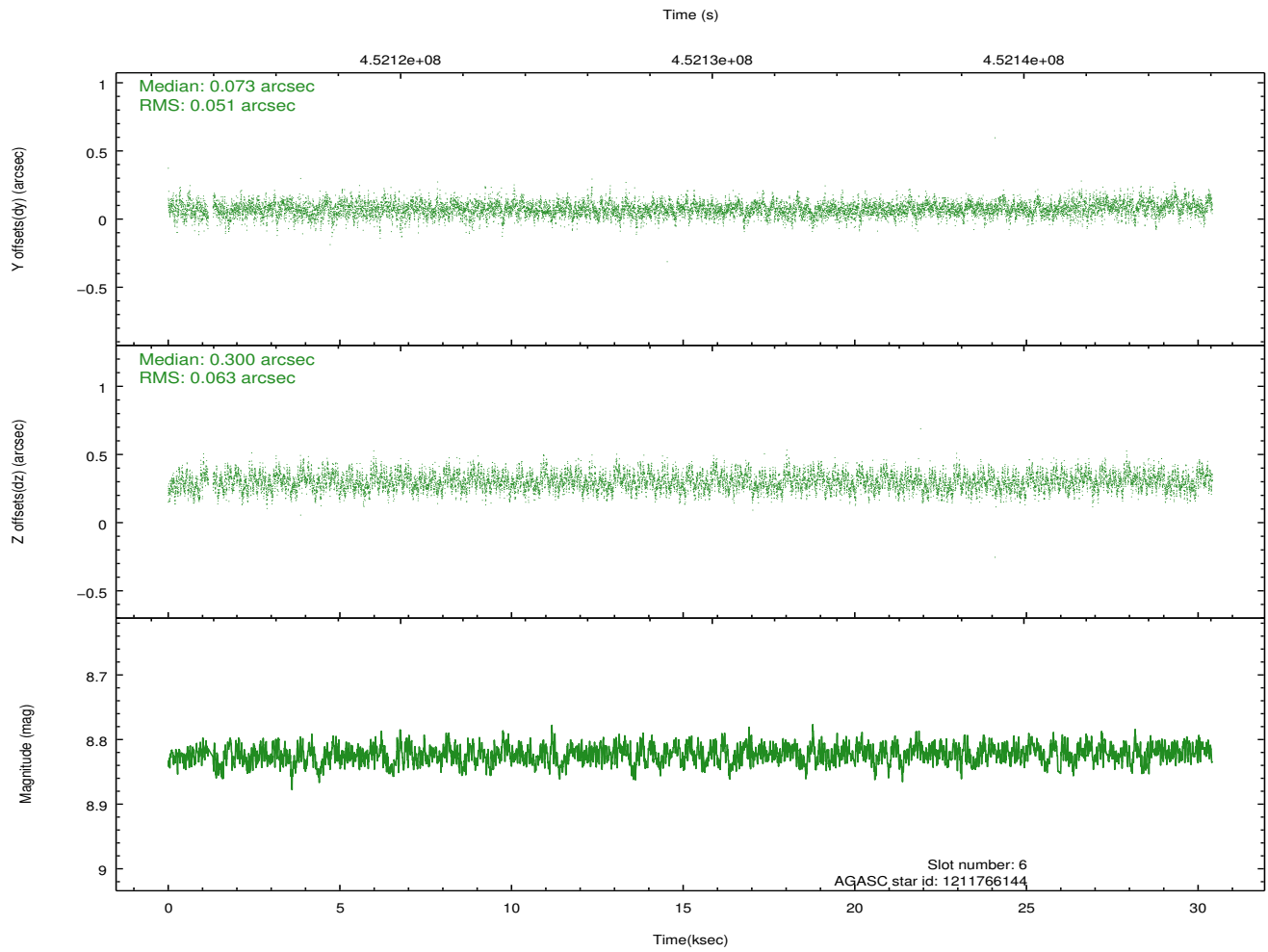
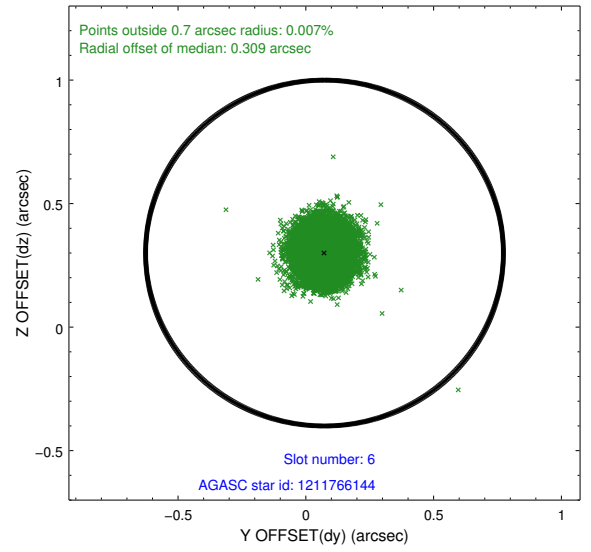
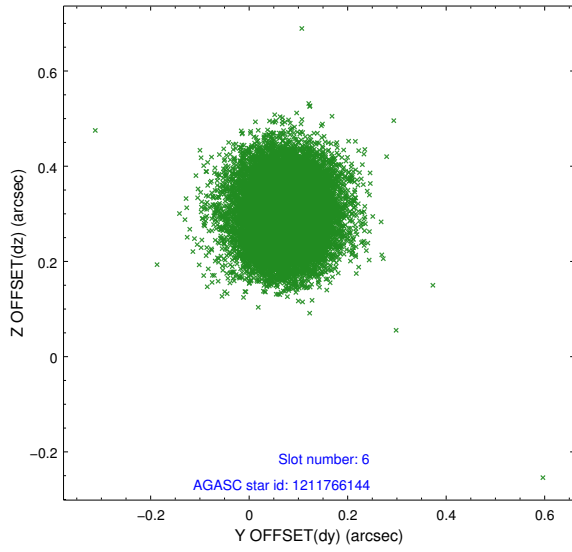
2.4.2 Slot 4



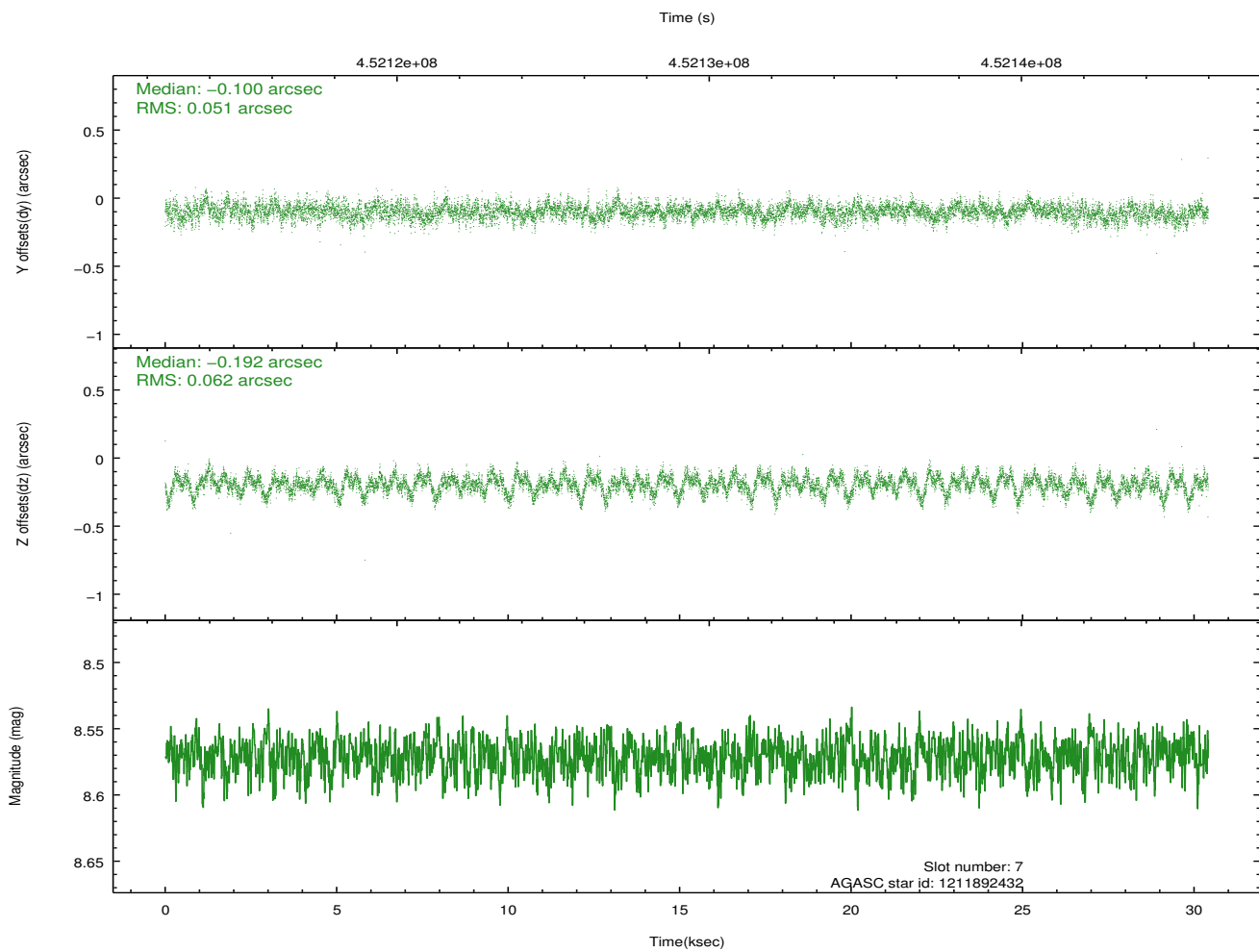
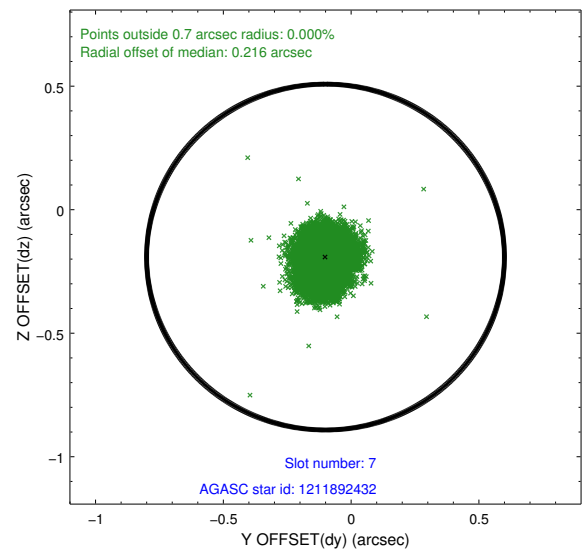
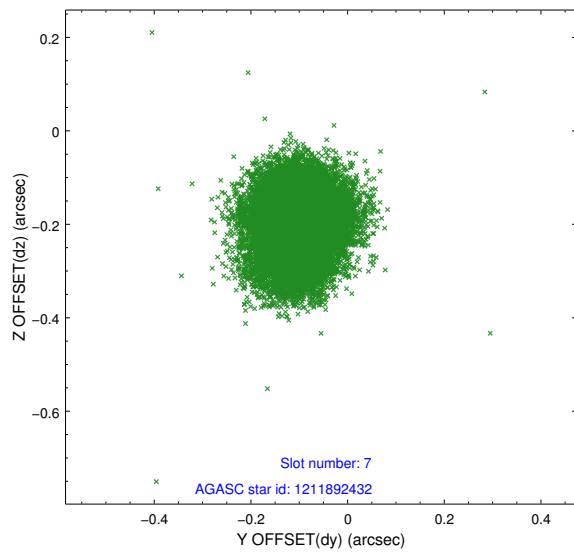
2.4.3 Slot 5



2.4.4 Slot 6

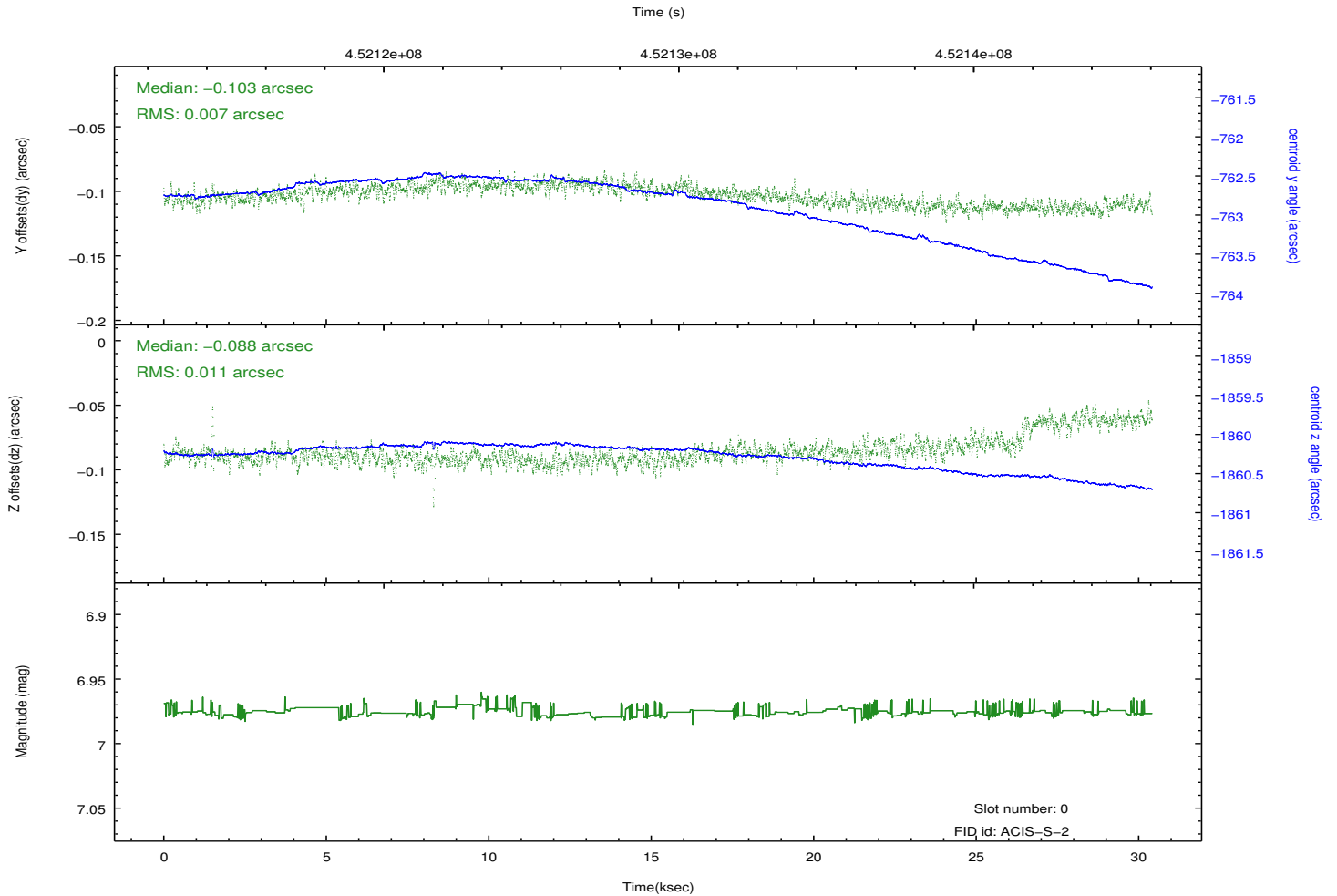
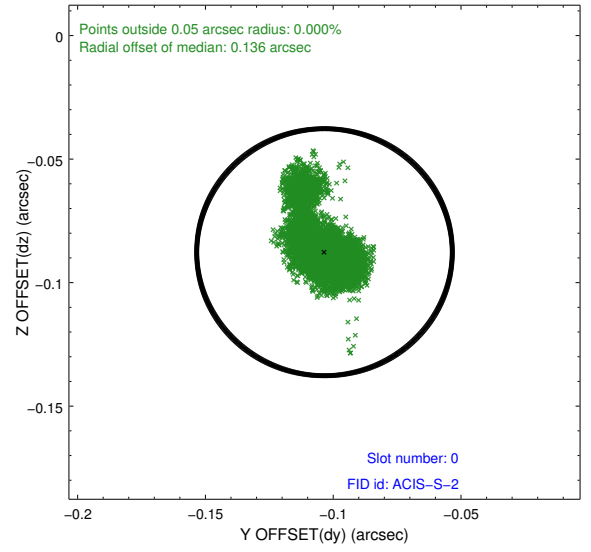
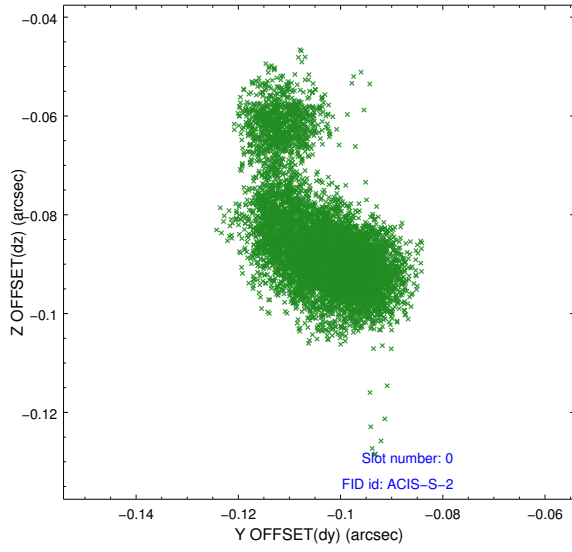


2.4.5 Slot 7

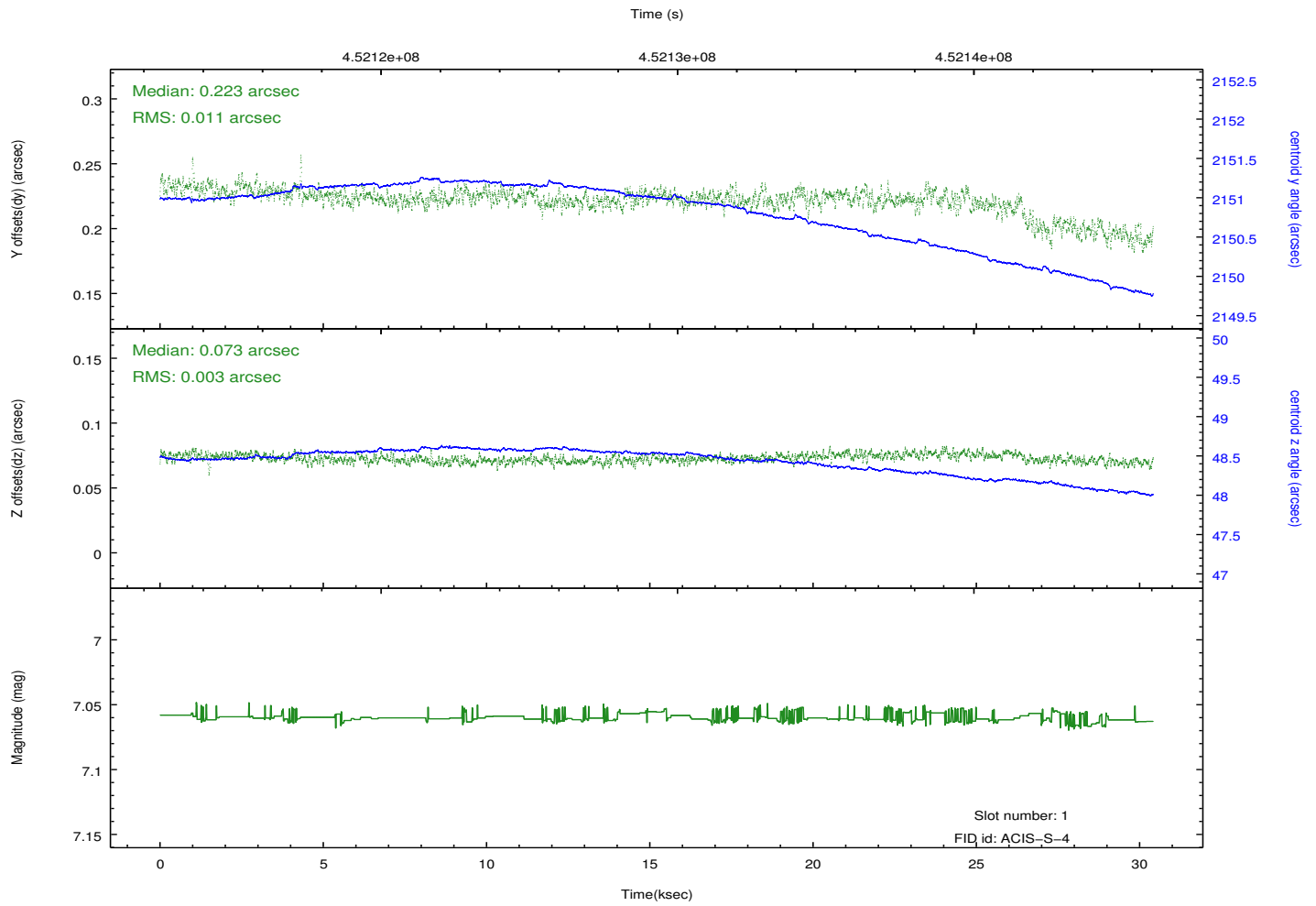
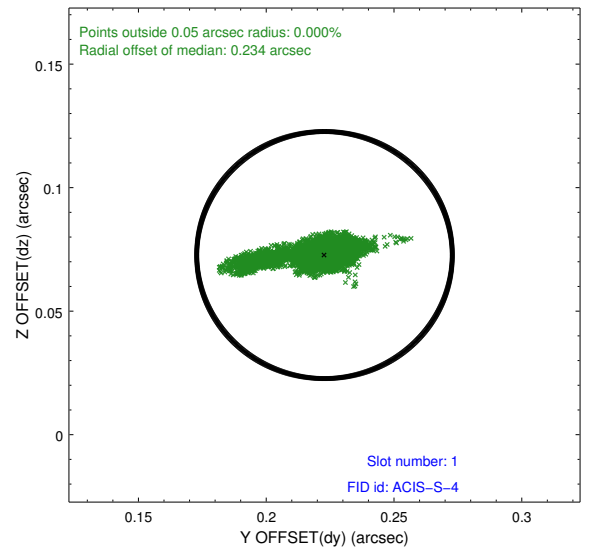
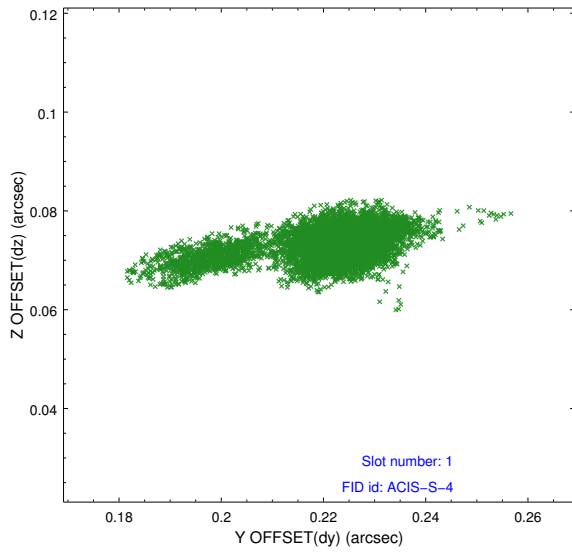


2.5 FID Slots

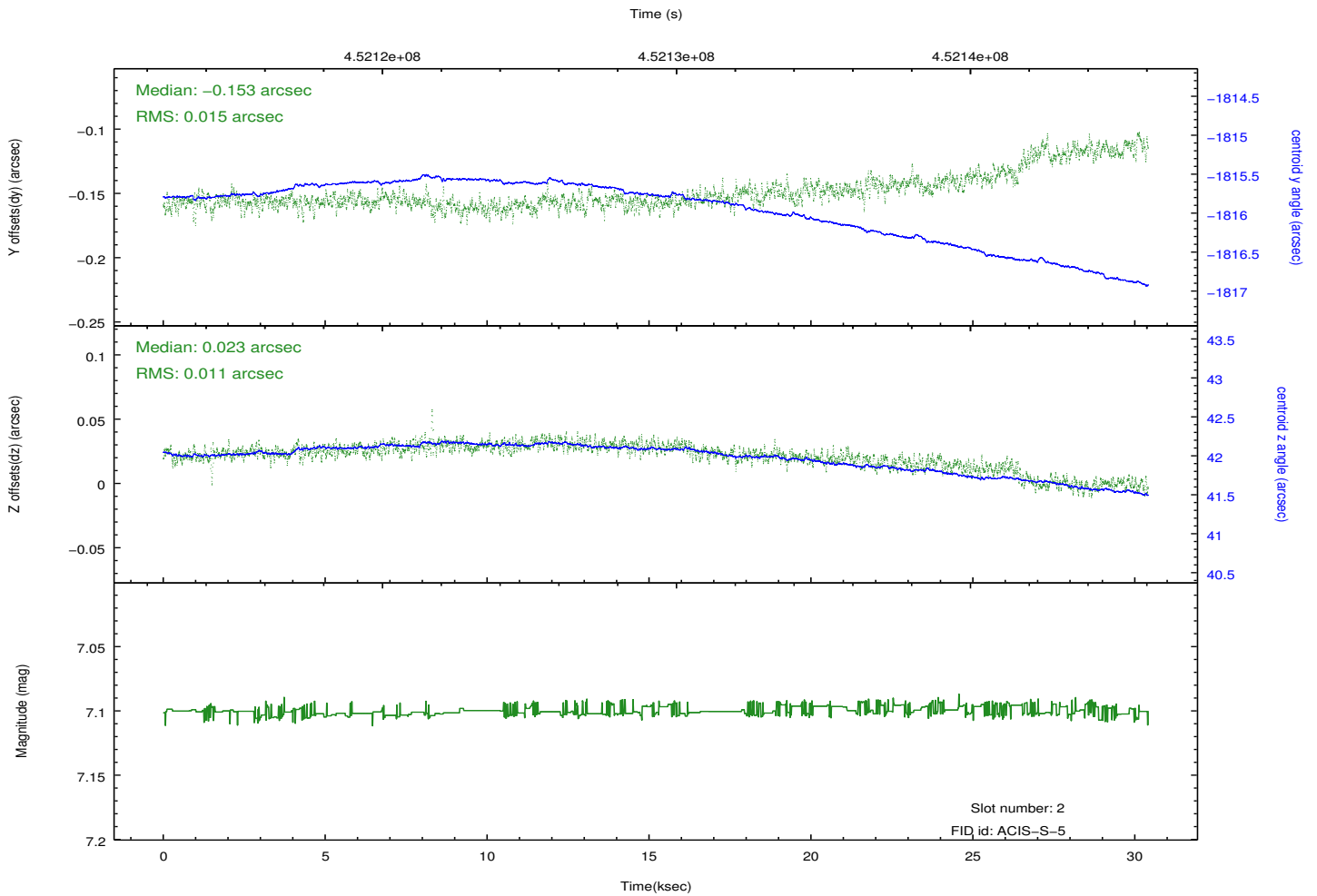
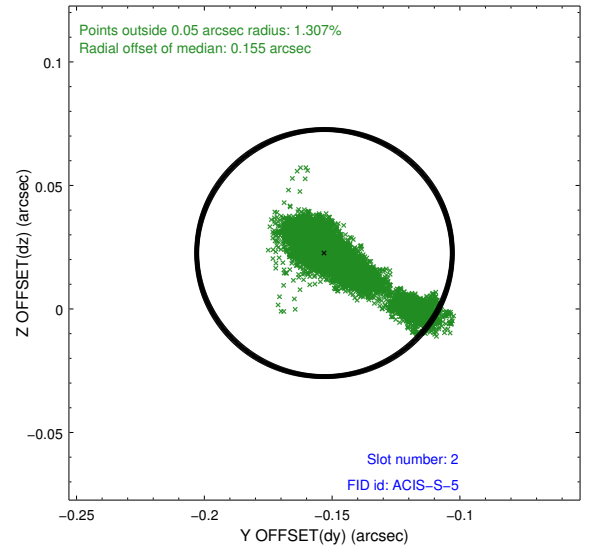
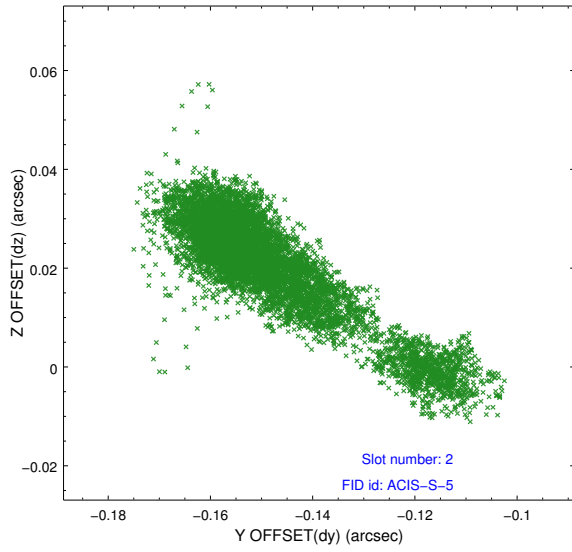
2.5.1 Slot 0



2.5.2 Slot 1

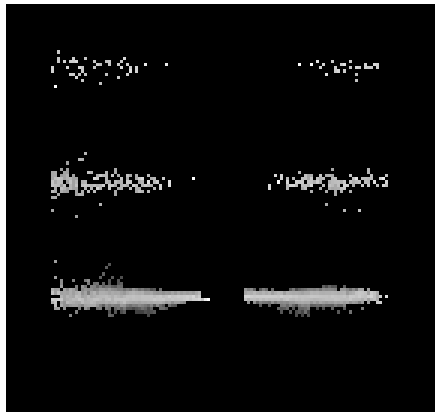


2.5.3 Slot 2

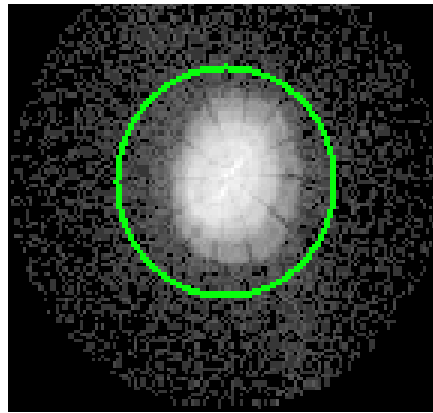


3 Gratings

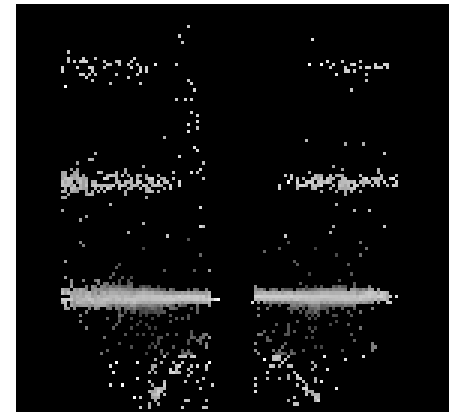
3.1 HEG Arm



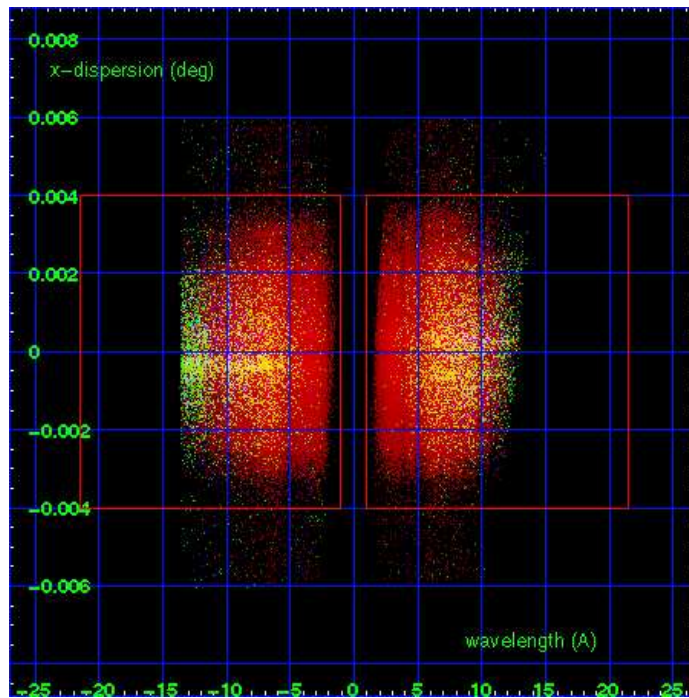
HEG Order Sort 123



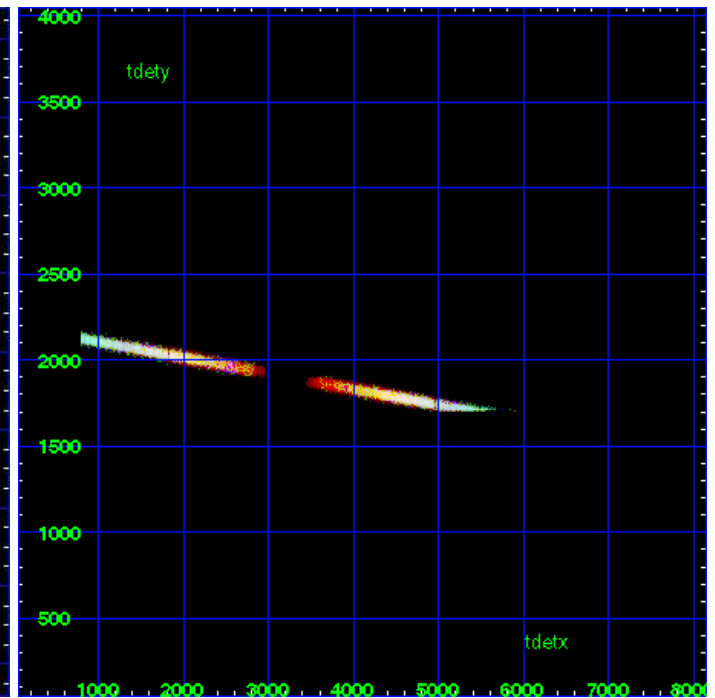
HEG Zero Order



HEG Order Sort ALL

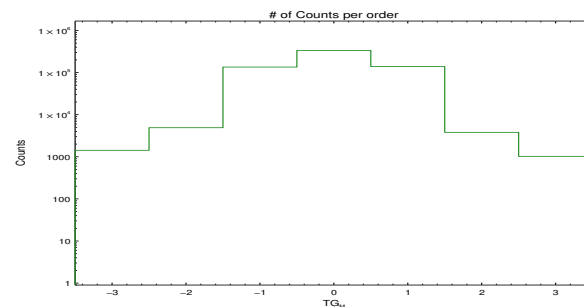


Spot Image HEG

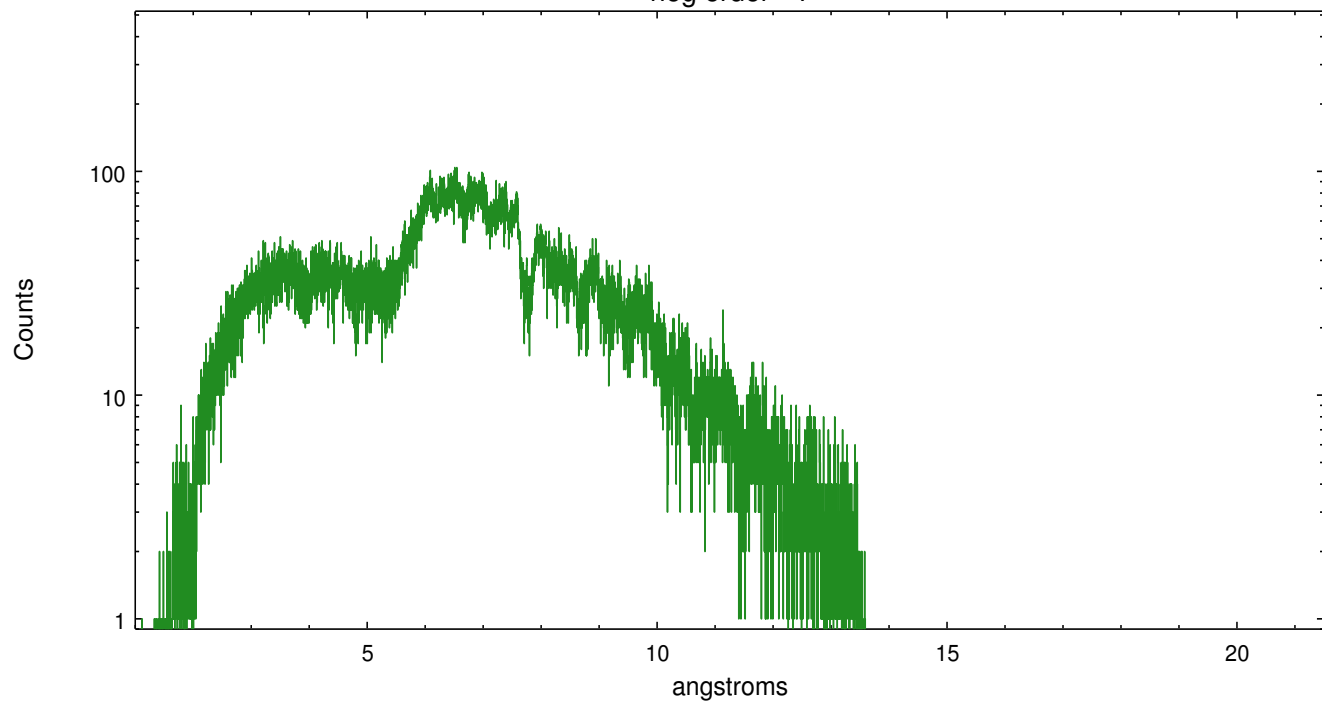


Full Detector HEG

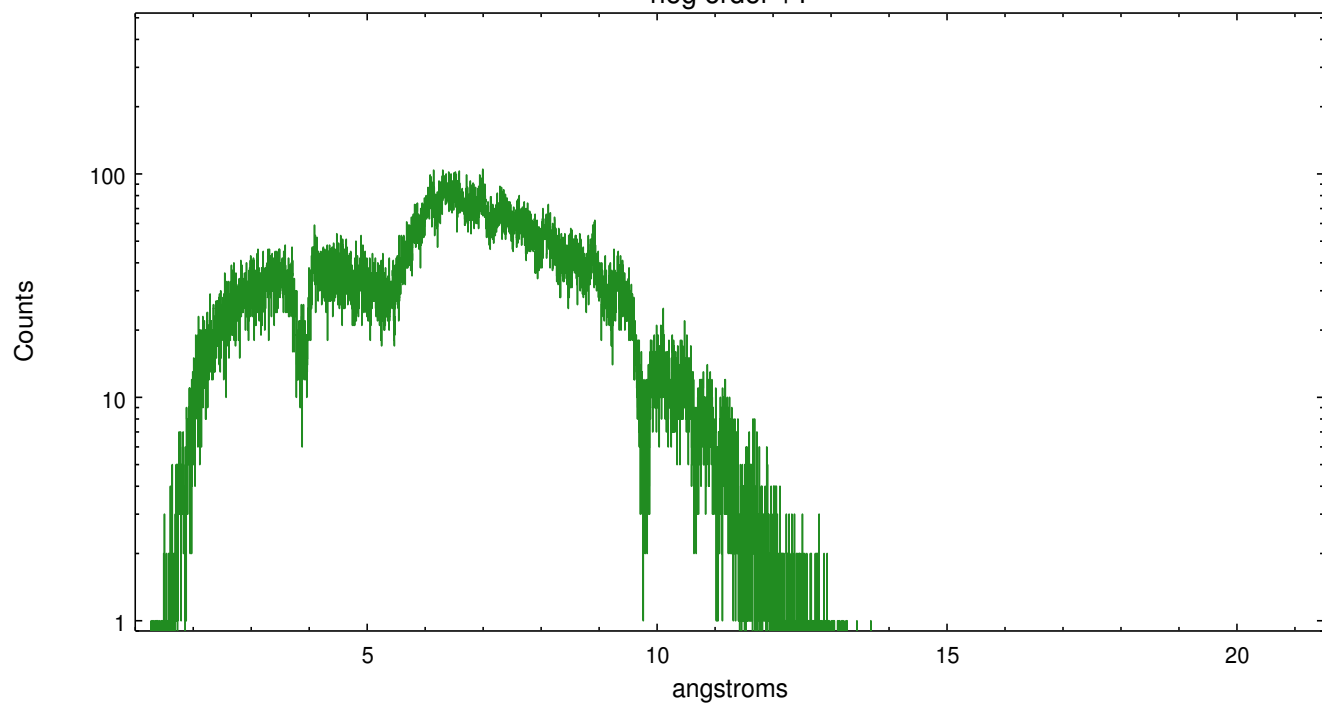
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1423	4901	135069	334100	138774	3802	1023



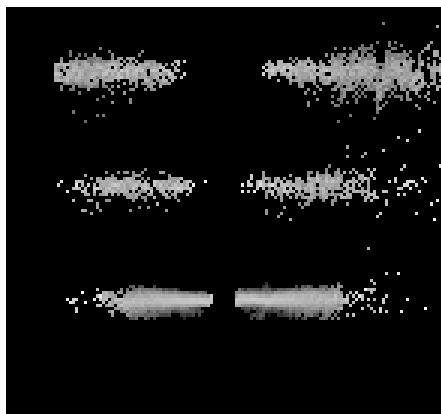
heg order -1



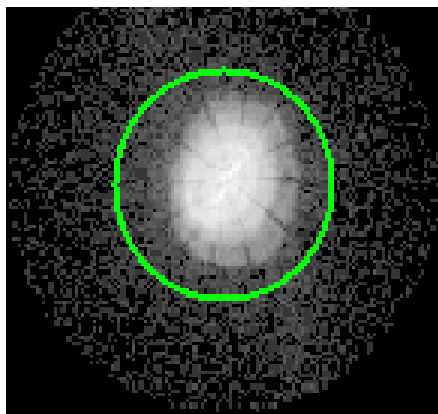
heg order +1



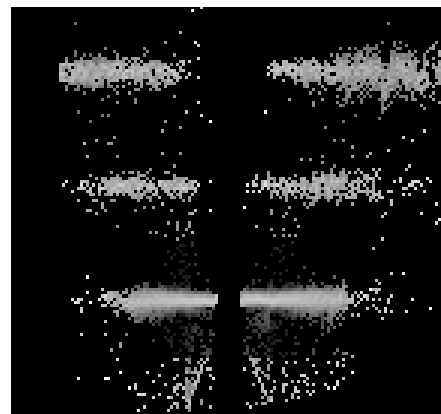
3.2 MEG Arm



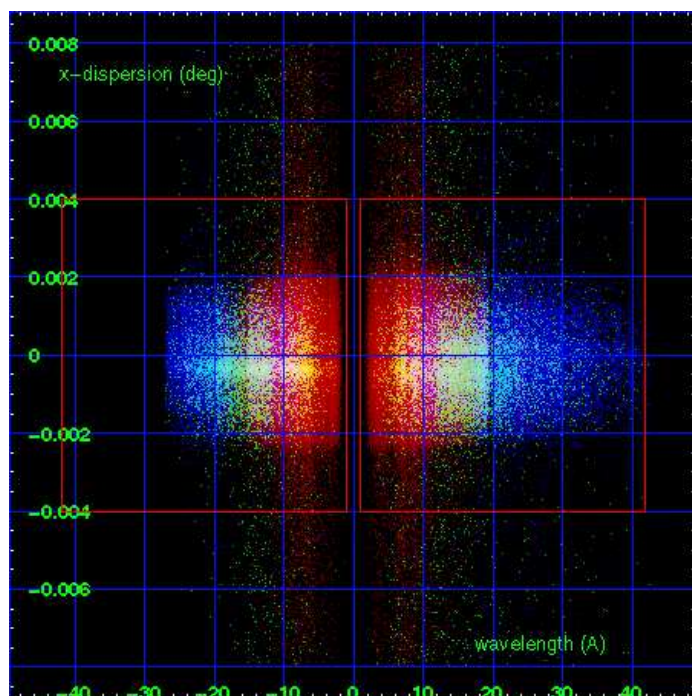
MEG Order Sort 123



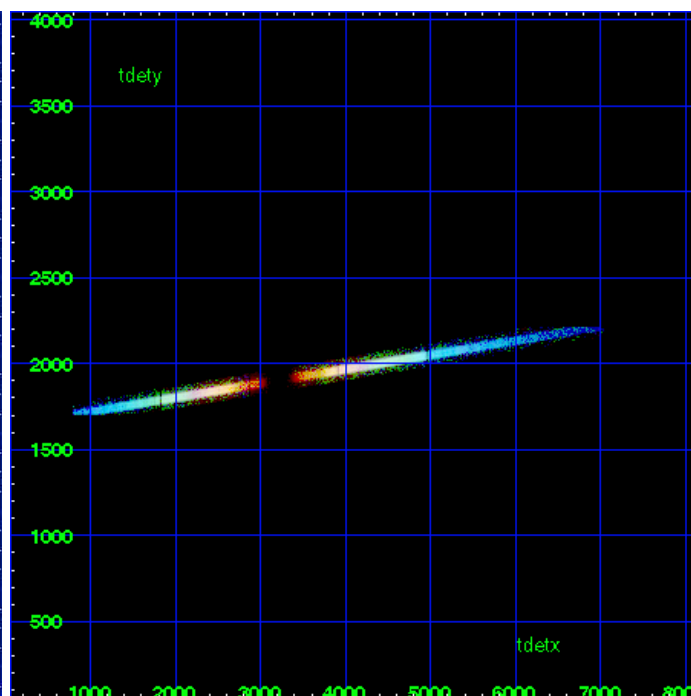
MEG Zero Order



MEG Order Sort ALL

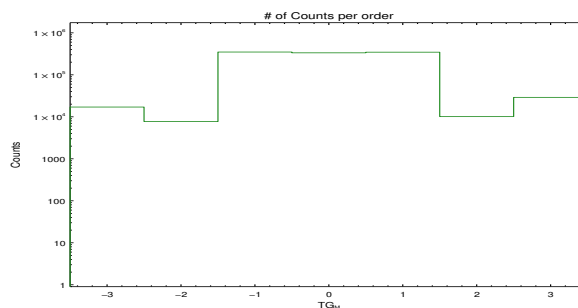


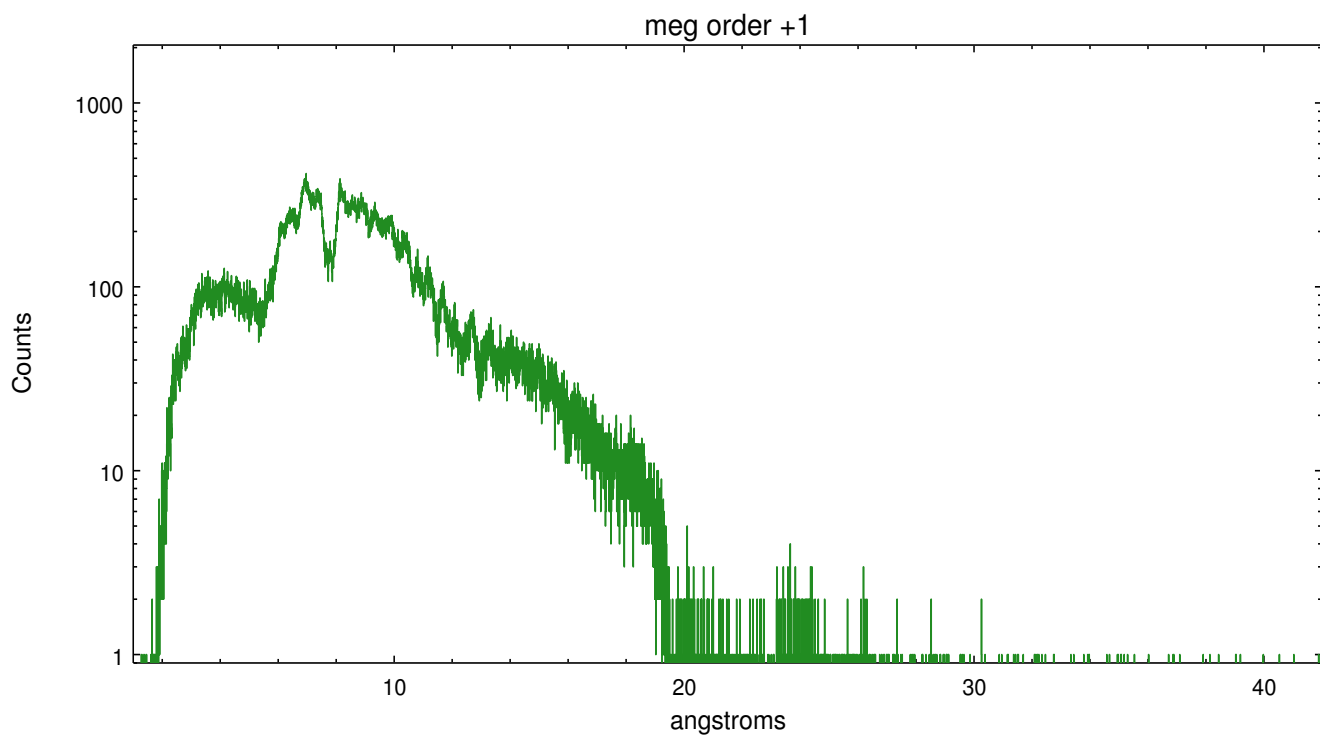
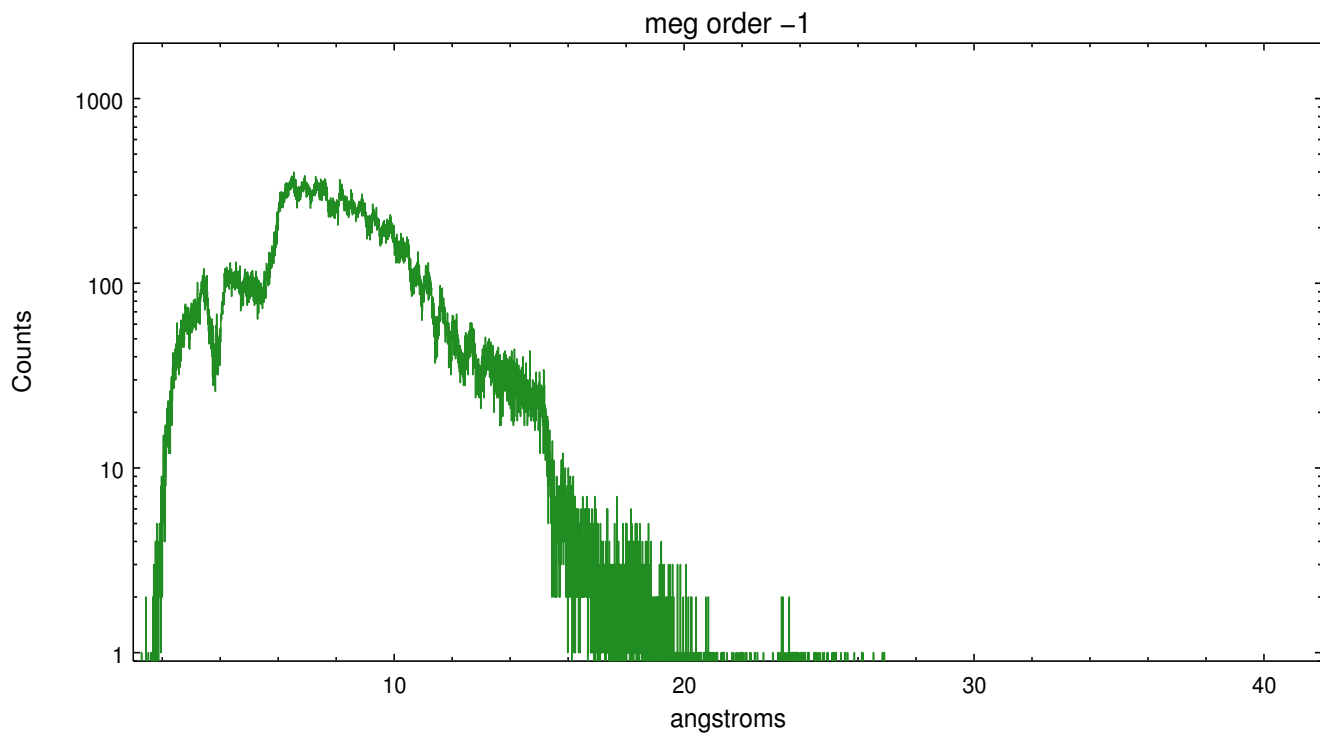
Spot Image MEG



Full Detector MEG

	order	order	order	order	order	order	order
	-3	-2	-1	0	1	2	3
Events	17075	7705	348780	334100	345775	10107	29030





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.05.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.088299789071

A.2 Comments

Due to a celestial coordinate error, the zeroth order is about 7 arcmin off-axis. A custom extraction was performed to center on the observed zeroth order source location, and to adjust extraction parameters accordingly for the large off-axis PSF. Specifically, the `tgextract` cross-dispersion regions were enlarged to include the entire width of the spectrum, and the background extraction was omitted. Note that there are no grating response matrix calibration products for such far off-axis line-spread functions. Detailed analysis requiring line profiles will require ray-trace simulations.