

V&V Reference Report

L2 ASCDS Version : 10.3.3

Observation 17647 - L2 Version 1
Chandra X-Ray Center

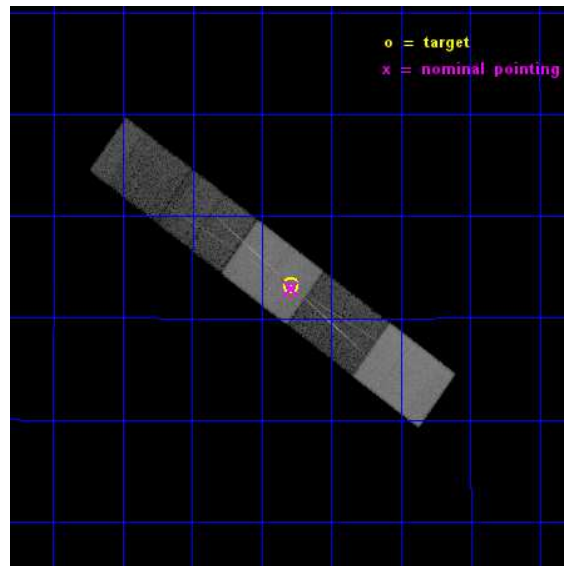
L2 Processing Date : Apr 14 2015

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1 Front

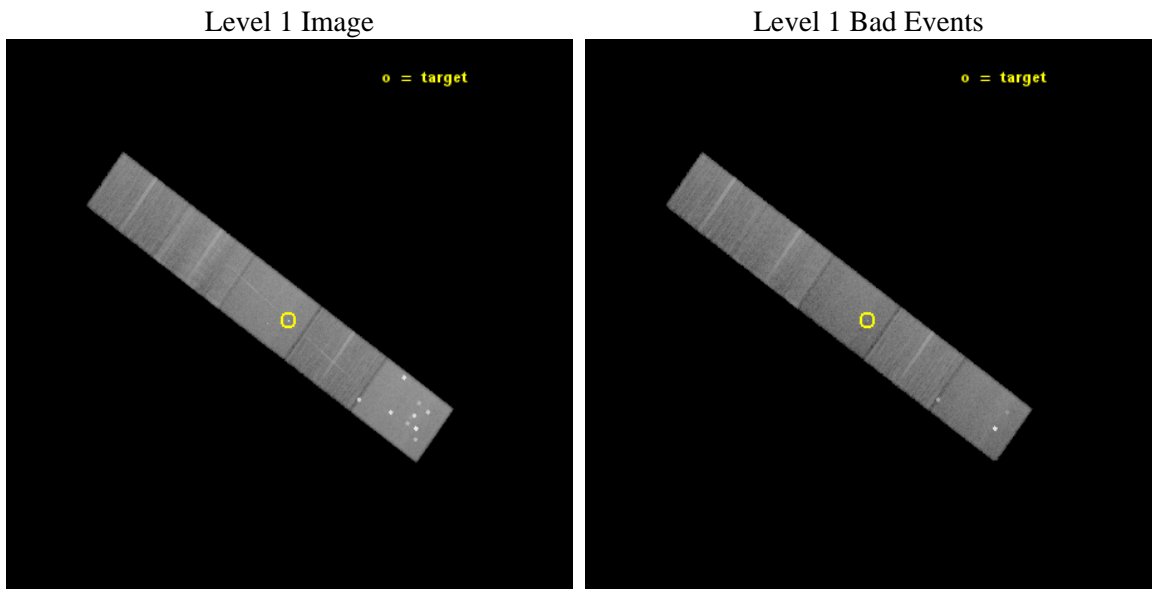
seq_num	703109	Sequence number
obs_id	17647	Observation id
title	An X-ray, UV, and radio probe of the PG 1211+143 inflow-outflow dynamics	Proposal title
observer	Prof. Julia Lee	Principal investigator
object	PG 1211+143	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	183.573333	Observer's specified target RA [deg]
dec_targ	14.053472	Observer's specified target Dec [deg]
ra_nom	183.57189872499	Nominal RA [deg]
dec_nom	14.048215176302	Nominal Dec [deg]
roll_nom	216.15697204308	Nominal Roll [deg]
revision	1	Processing version of data
ontime	42945.599573255	Sum of GTIs [s]
livetime	42223.576416532	Livetime [s]
ontime5	42945.599573255	Sum of GTIs [s]
ontime6	42943.158553004	Sum of GTIs [s]
ontime7	42945.599573255	Sum of GTIs [s]
ontime8	42945.599573255	Sum of GTIs [s]
ontime9	42945.599573255	Sum of GTIs [s]
l2events	260350	Number of level 2 events



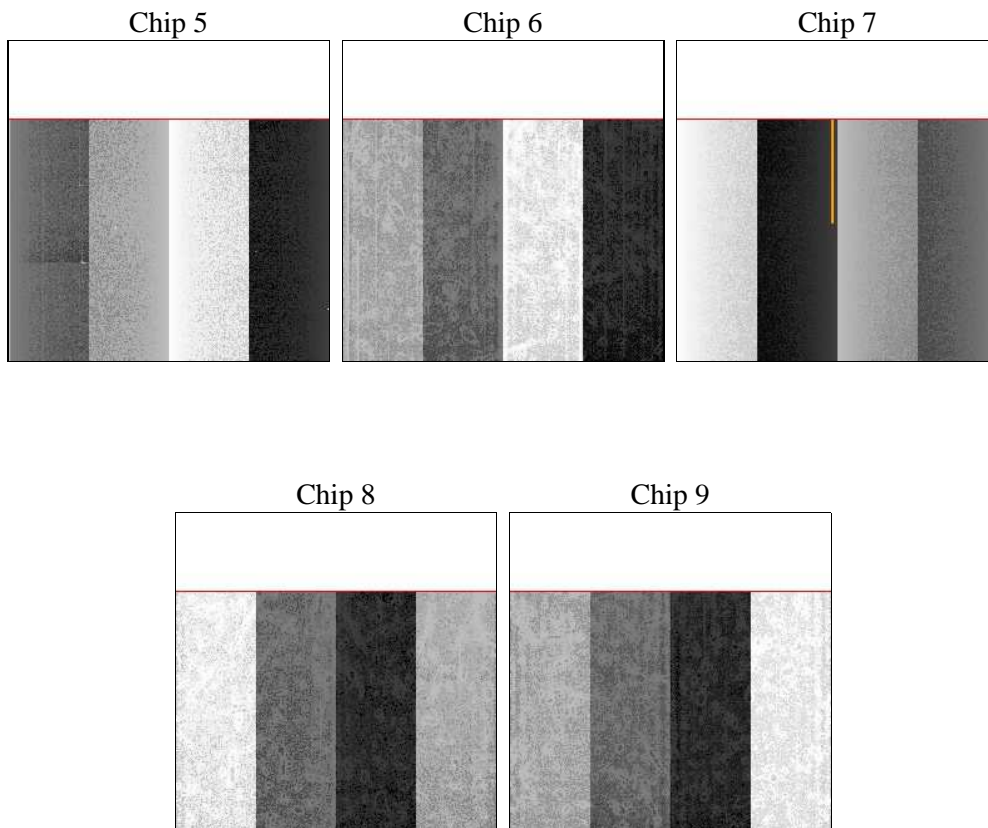
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	42871.376000	[s] Scheduled observation exposure time
ascdsver	10.3.3	Processing system revision	ontime	42945.599573255	Sum of GTIs [s]
caldbver	4.6.7	 	ontime5	42945.599573255	Sum of GTIs [s]
date	2015-04-14T21:11:38	Date and time of file creation	ontime6	42943.158553004	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	42945.599573255	Sum of GTIs [s]
			ontime8	42945.599573255	Sum of GTIs [s]
			ontime9	42945.599573255	Sum of GTIs [s]
			l1events	1043592	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4084.24, 4135.97)	src1a sky pixel position

2.1.4 Events

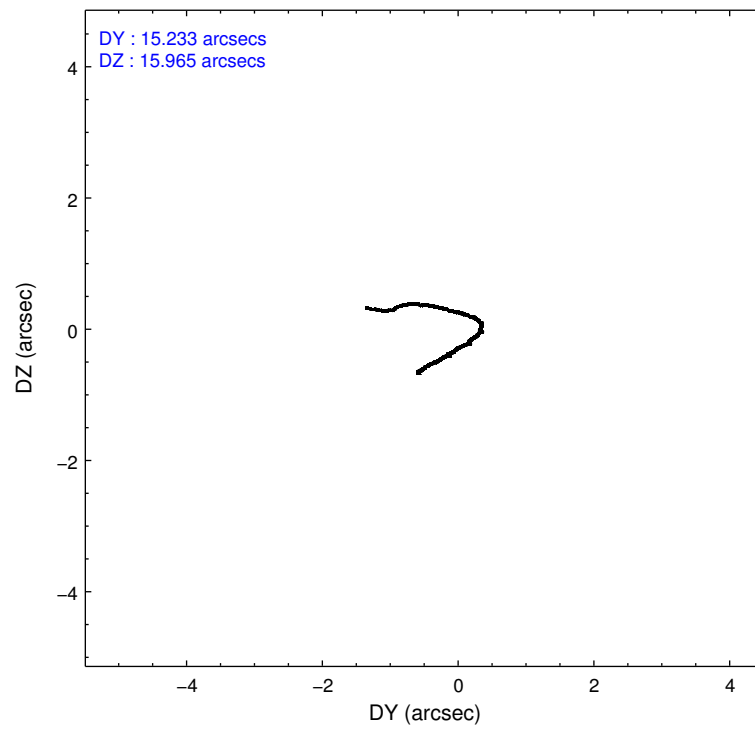
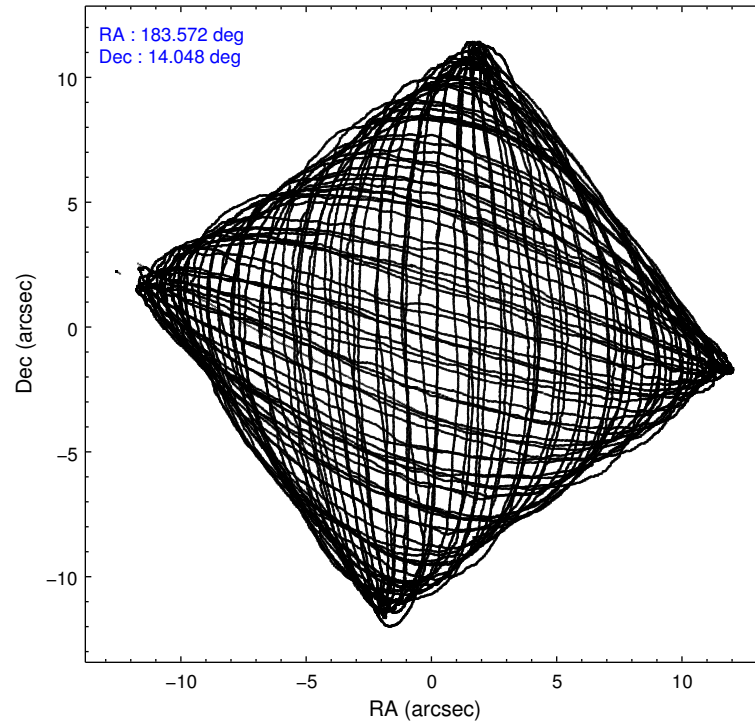
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	321059	156019	211784	201686	153044
rejected events	148594	135189	116315	147011	133572
rejected %	46%	86%	54%	72%	87%

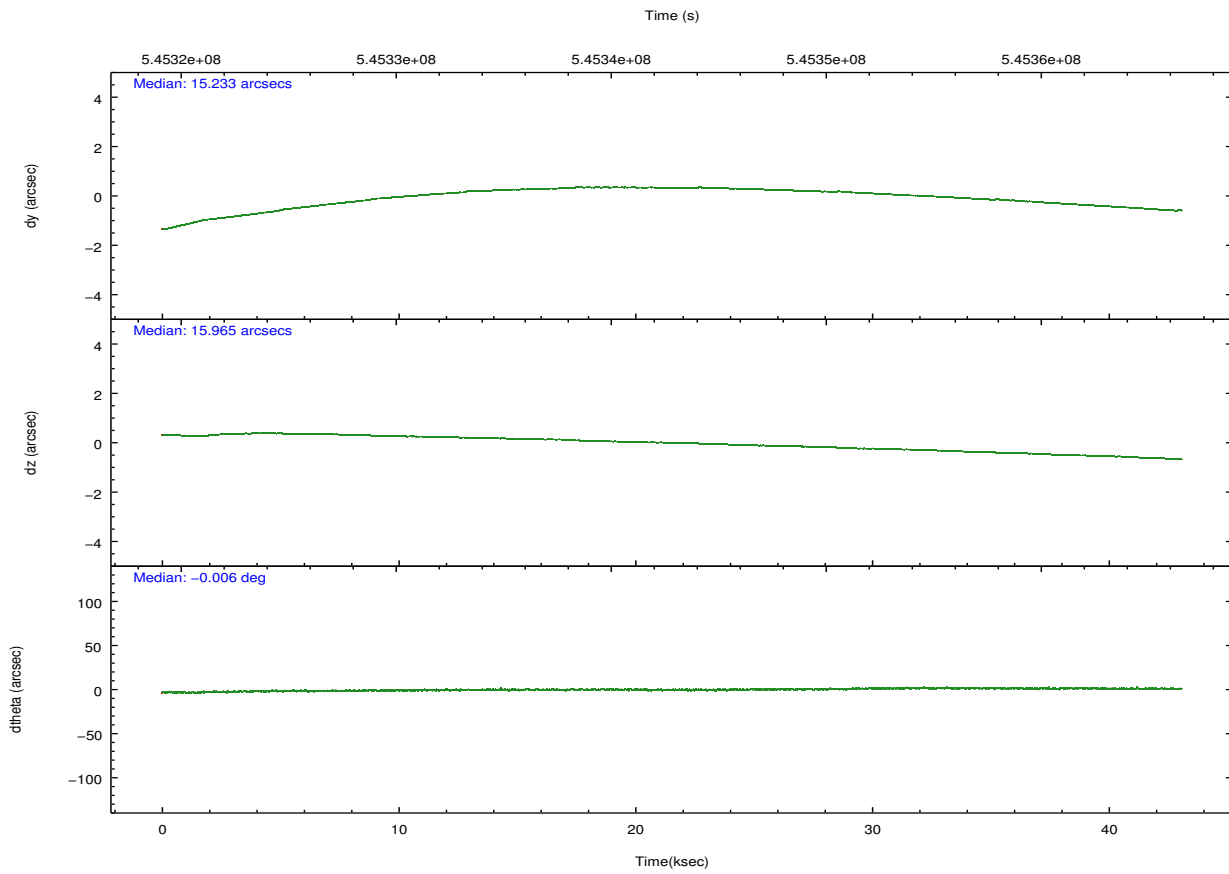
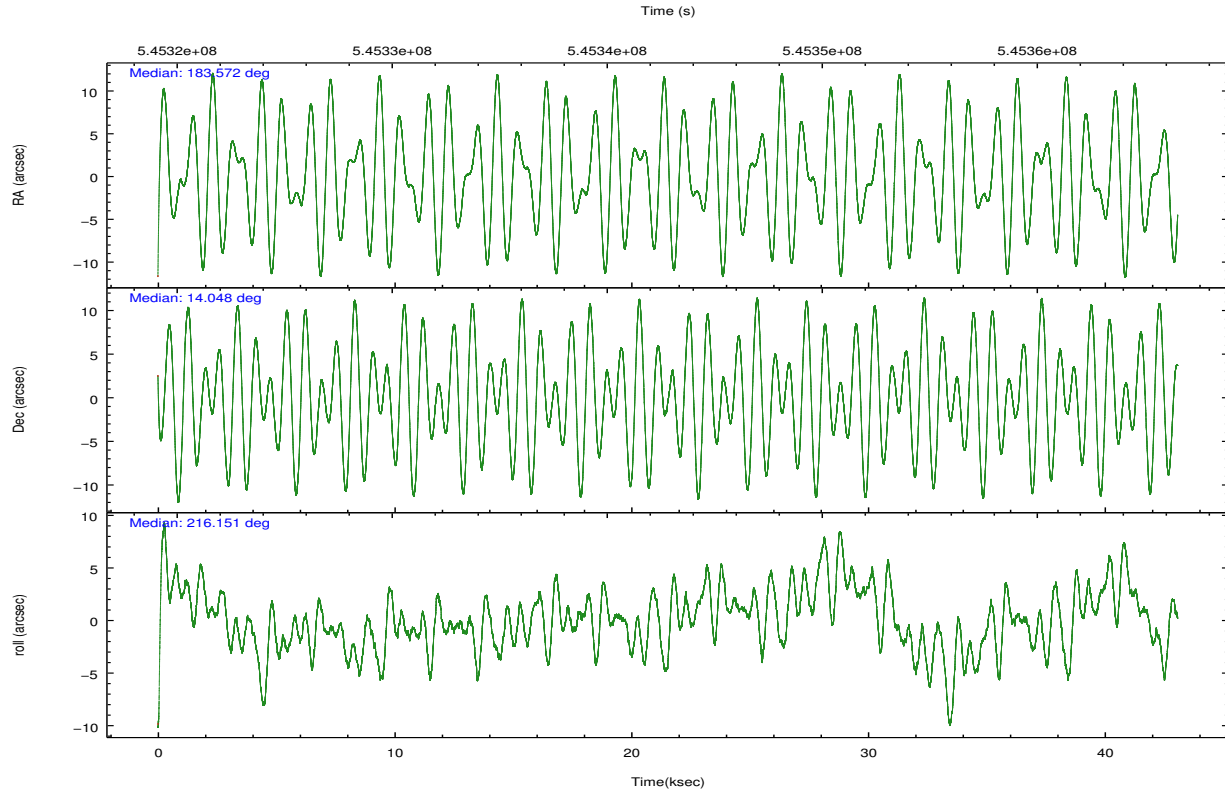
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	49562	8006	9345	15576	6719
	15%	5%	4%	7%	4%
grade 1 events	651	77	274	119	79
	0%	0%	0%	0%	0%
grade 2 events	44329	4435	20151	12982	4320
	13%	2%	9%	6%	2%
grade 3 events	7274	2045	8425	5918	2182
	2%	1%	3%	2%	1%
grade 4 events	5109	2061	8246	5459	2008
	1%	1%	3%	2%	1%
grade 5 events	20526	7781	21144	11115	8609
	6%	4%	9%	5%	5%
grade 6 events	66217	4284	49309	14742	4244
	20%	2%	23%	7%	2%
grade 7 events	127391	127330	94890	135775	124883
	39%	81%	44%	67%	81%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-56789	ACIS-56789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	183.582991	183.5718987249934	CCD I2 on	N	N
[deg] Pointing Dec	14.073468	14.04821517630219	CCD I3 on	N	N
[deg] Pointing Roll	215.997654	216.1569720430824	CCD S0 on	O1	N
[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	-187.132523	-187.1254020033014	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-3	-3.007120579706367	CCD S4 on	Y	Y
[s] Observation start time (MET)	545321466.184000	545320440.64745	CCD S5 on	Y	Y
Observation start date	2015-04-13T14:09:59	2015-04-13T13:54:00	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	545364337.184000	545364562.28742	On-chip summing requested	N	N
Observation end date	2015-04-14T02:04:30	2015-04-14T02:09:22	Subarray requested	CUSTOM	CUSTOM
Read mode	TIMED	TIMED	Subarray start row	1	1
			Subarray row count	774	774
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	2.4

2.3 Aspect



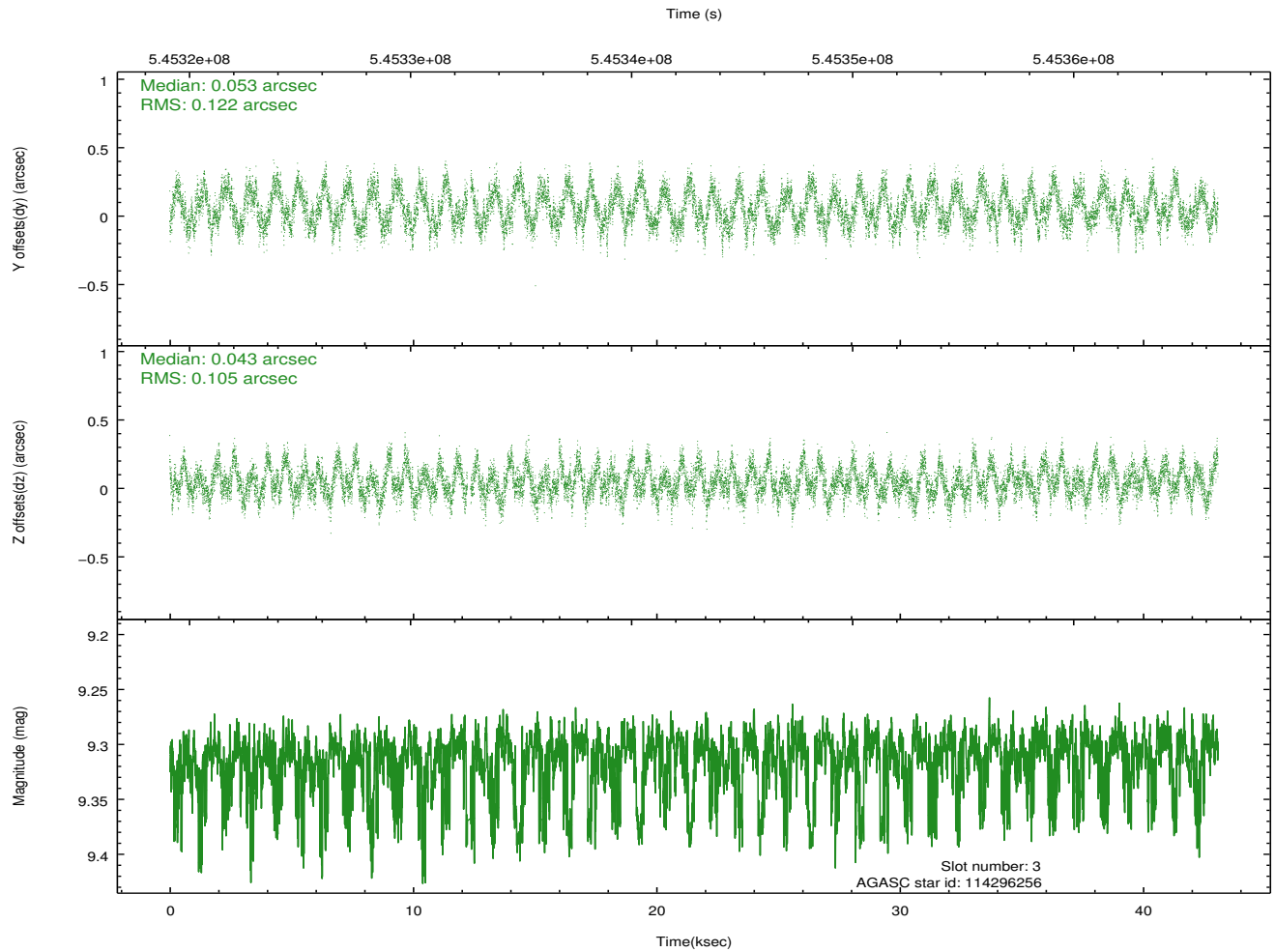
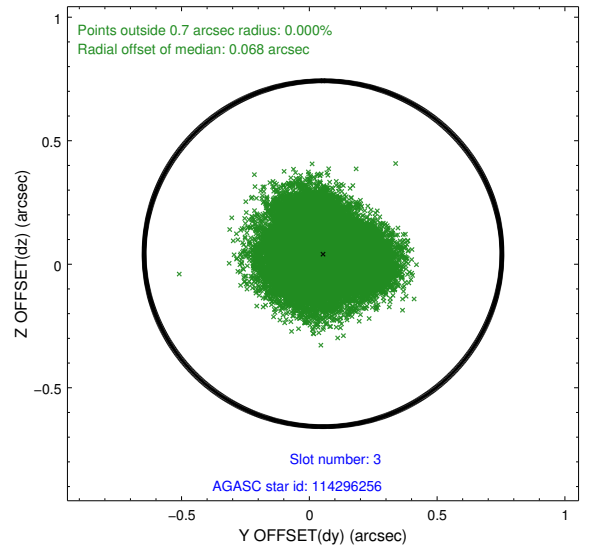
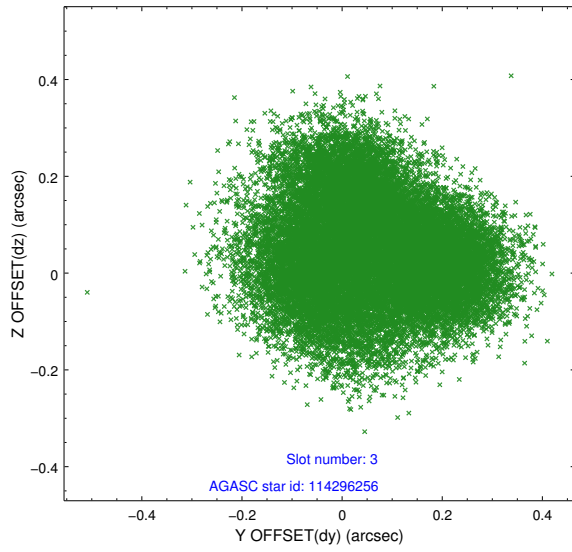


Slot Statistics

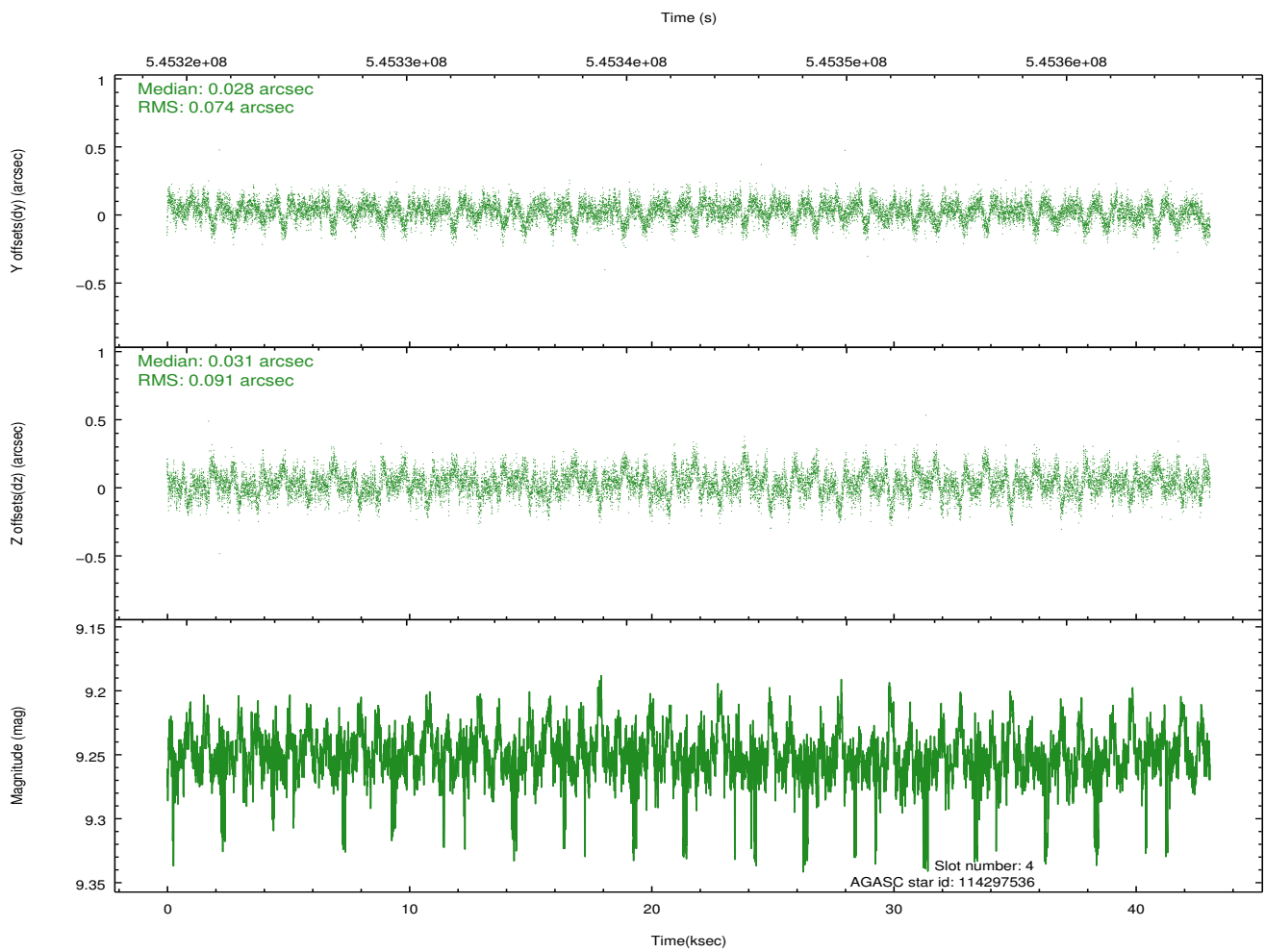
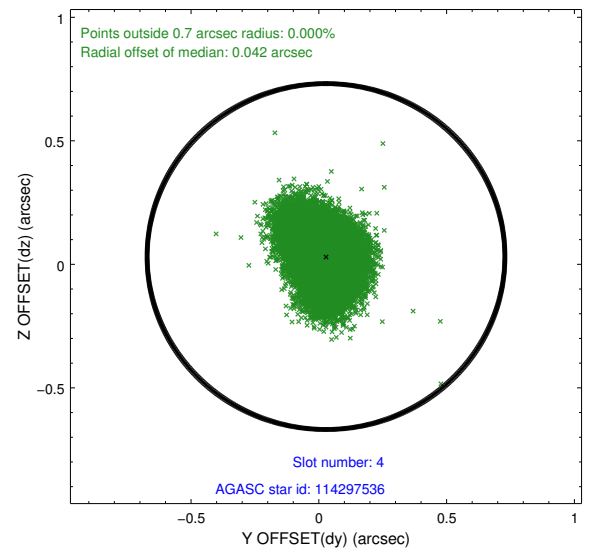
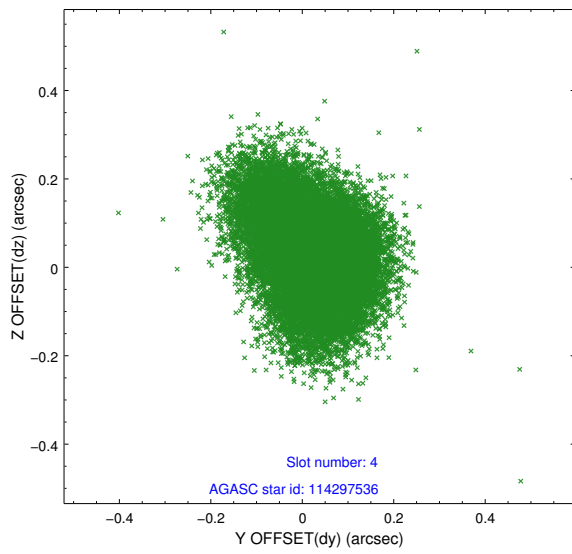
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.09	10507	0.087	0.026	0.018	0.028	0.000000	0.000000	928.24	-1795.01
1	FID		ACIS-S-5	7.12	10507	-0.210	0.058	0.014	0.023	0.000000	0.000000	-1821.06	102.55
2	FID		ACIS-S-6	7.26	10504	0.102	-0.074	0.009	0.015	0.000000	0.000000	393.79	746.39
3	GUIDE	used	114296256	9.31	20928	0.053	0.043	0.177	0.258	182.985406	14.017213	1806.69	-1064.43
4	GUIDE	used	114297536	9.25	20996	0.028	0.031	0.123	0.207	183.757120	14.264956	-896.33	-200.54
5	GUIDE	used	114301168	9.16	20994	0.038	-0.076	0.149	0.241	182.996668	14.071189	1660.34	-1198.50
6	GUIDE	used	114303096	9.28	21000	-0.056	0.008	0.134	0.217	183.214020	14.515722	105.09	-2044.78
7	GUIDE	used	115217168	9.56	20992	-0.098	-0.001	0.239	0.382	184.139200	14.158763	-1752.18	890.64

2.4 Star Slots

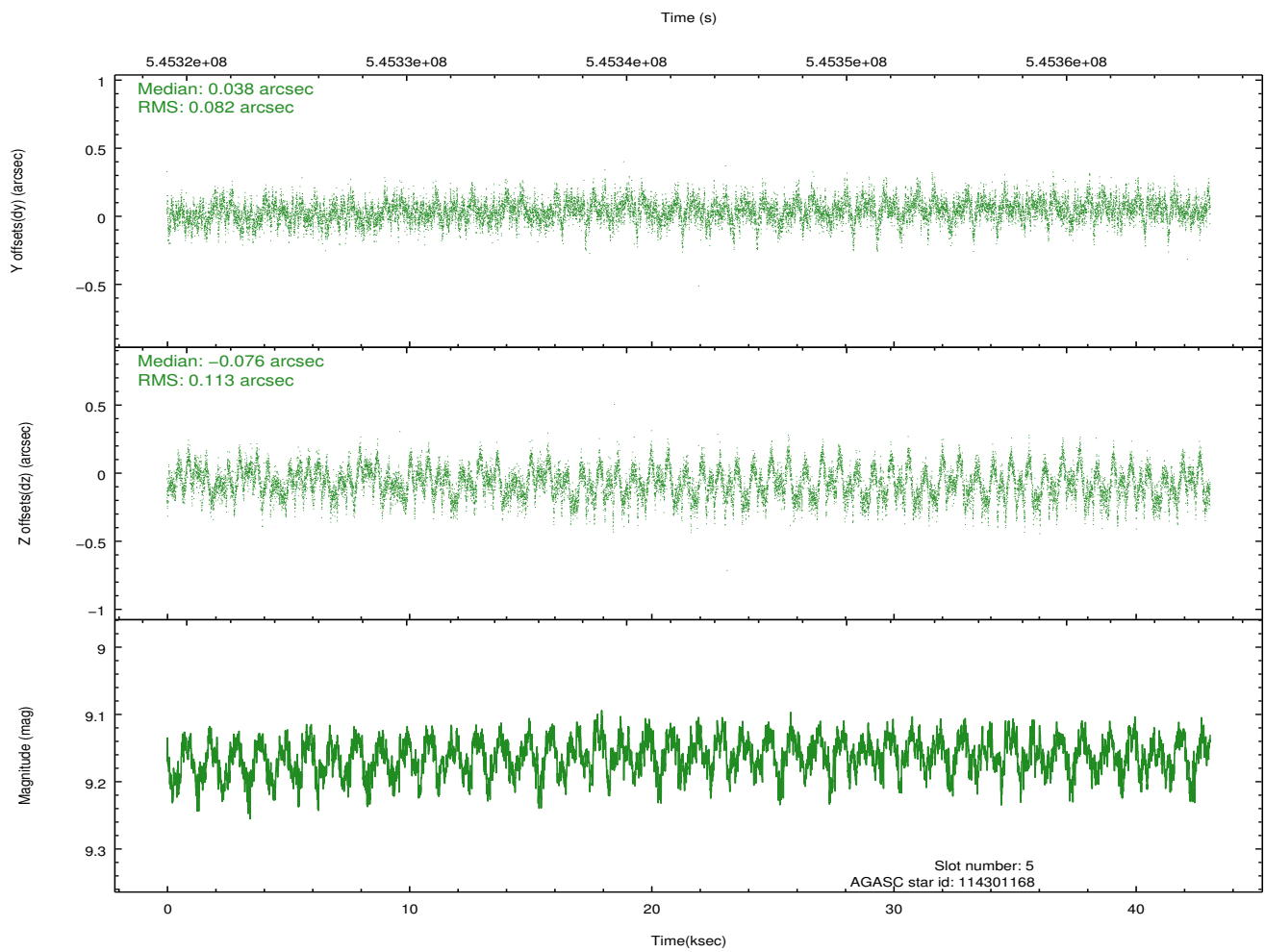
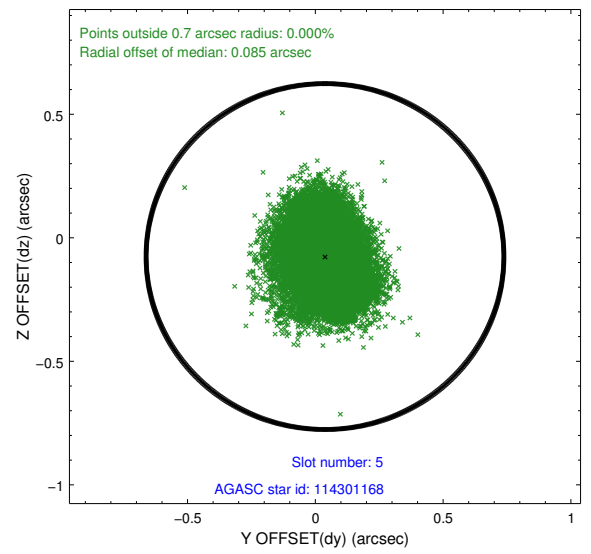
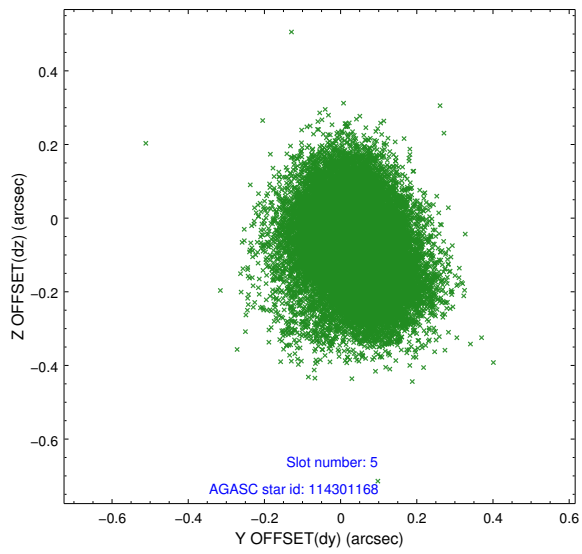
2.4.1 Slot 3



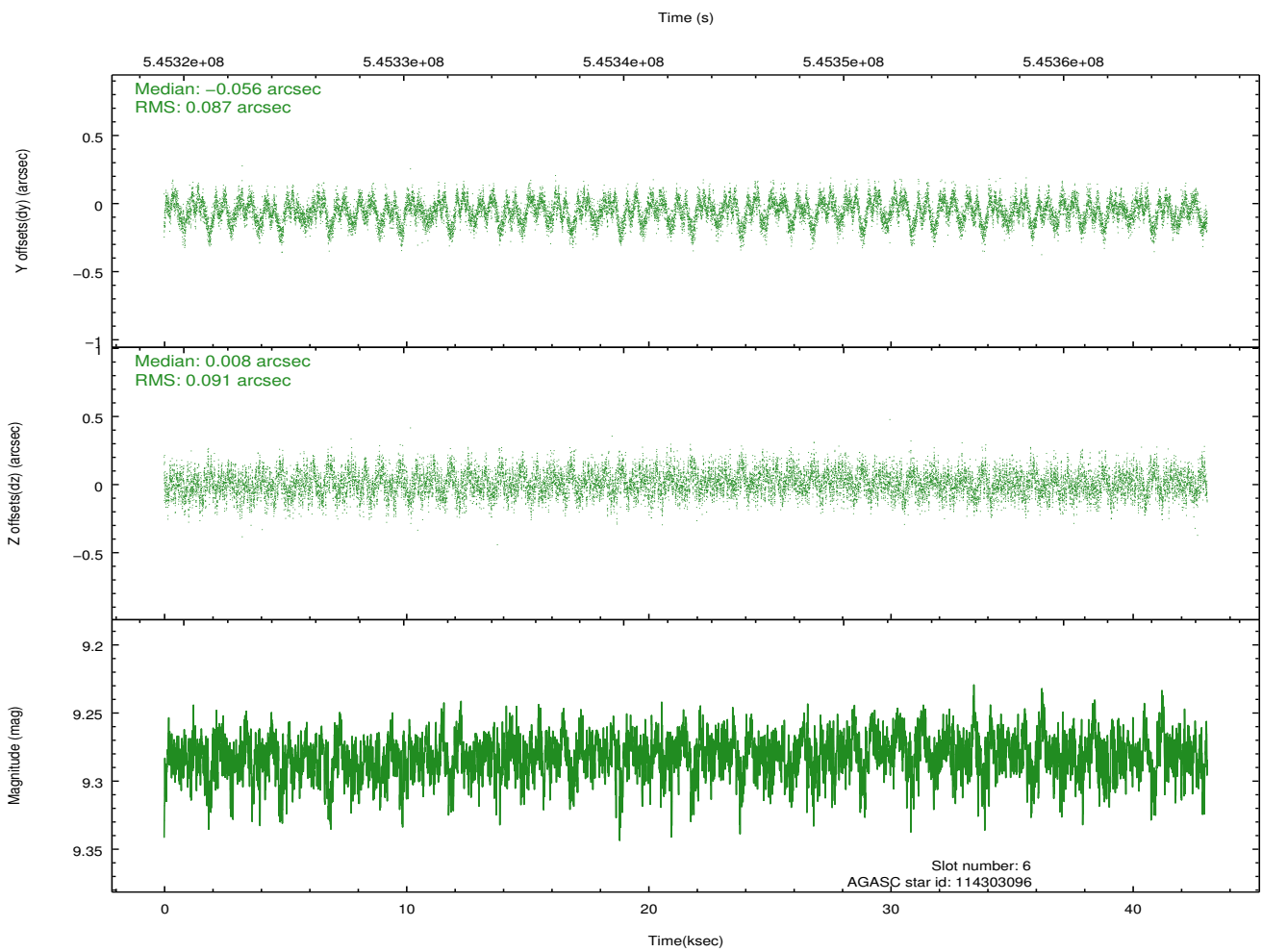
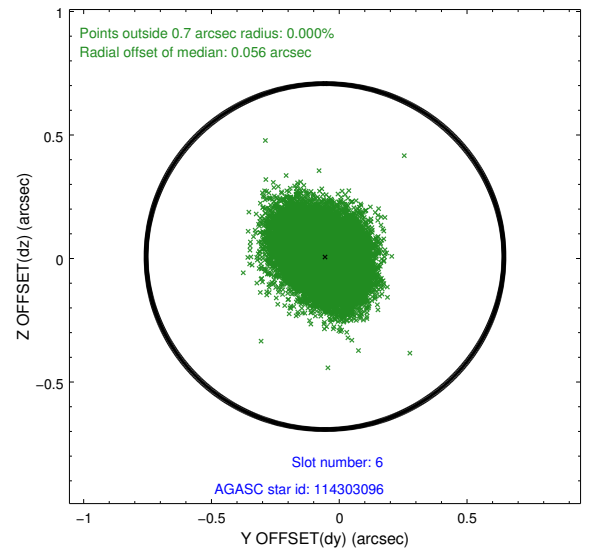
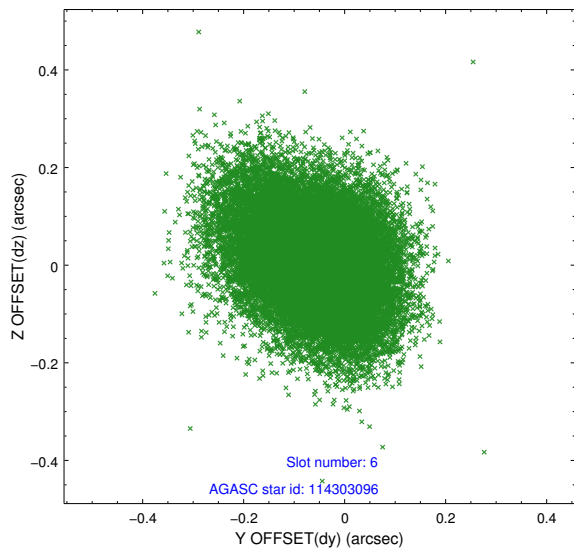
2.4.2 Slot 4



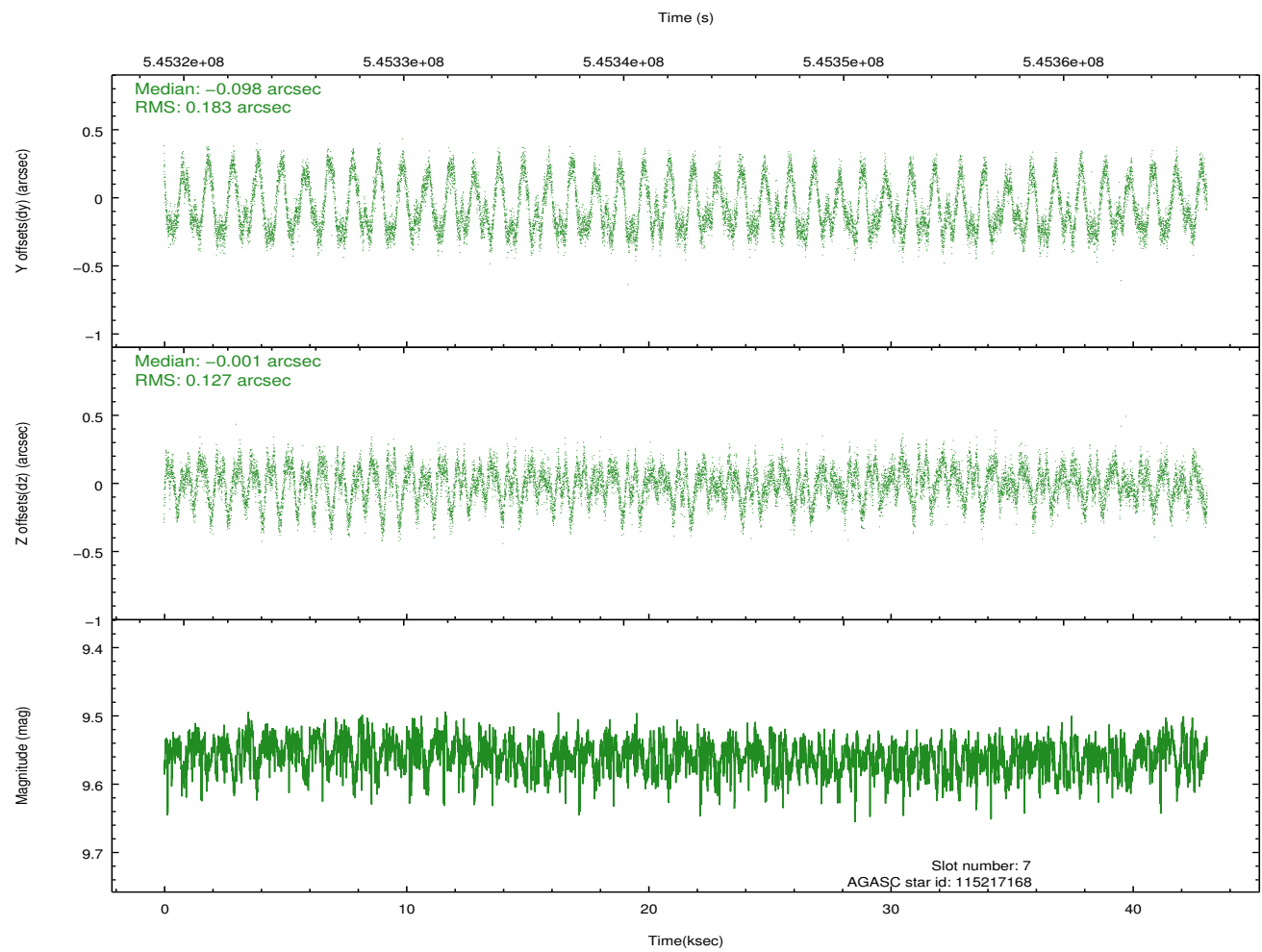
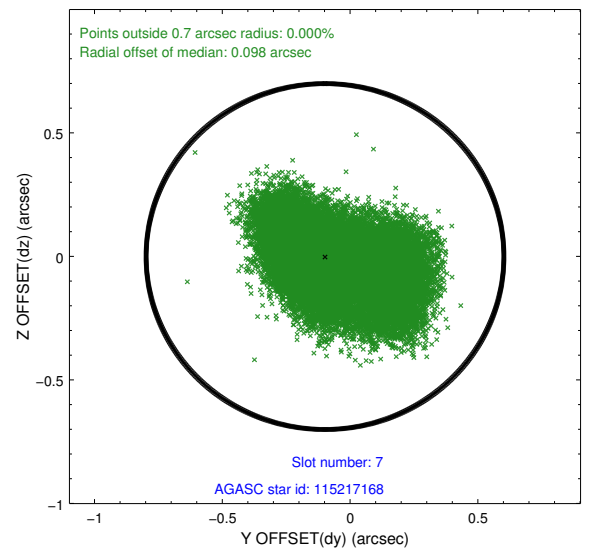
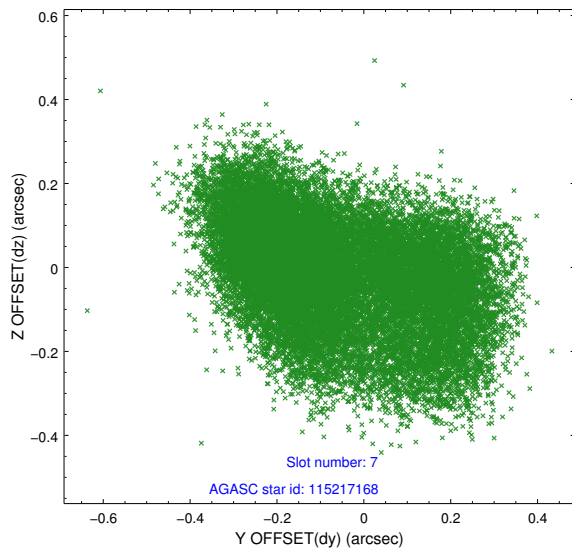
2.4.3 Slot 5



2.4.4 Slot 6

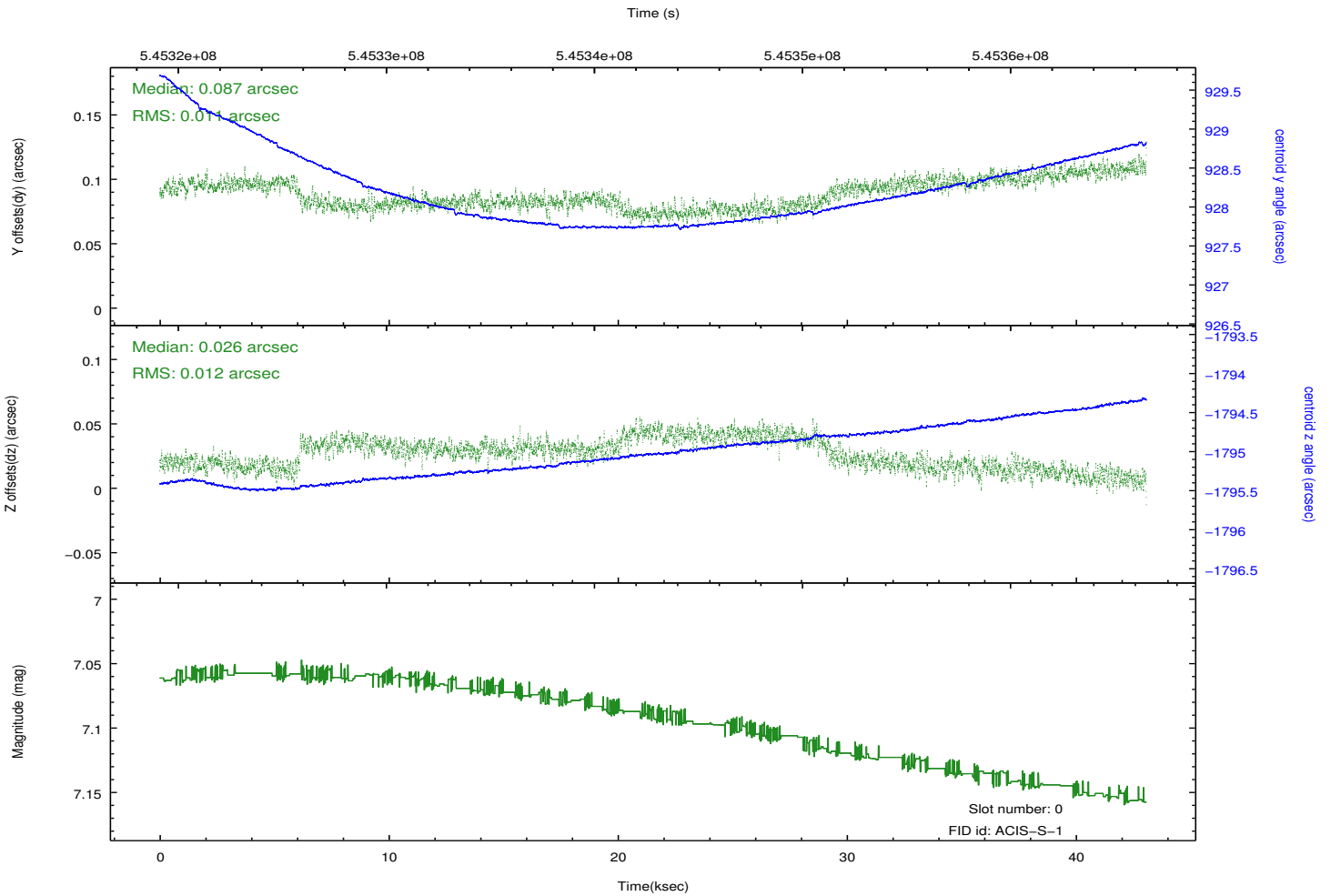
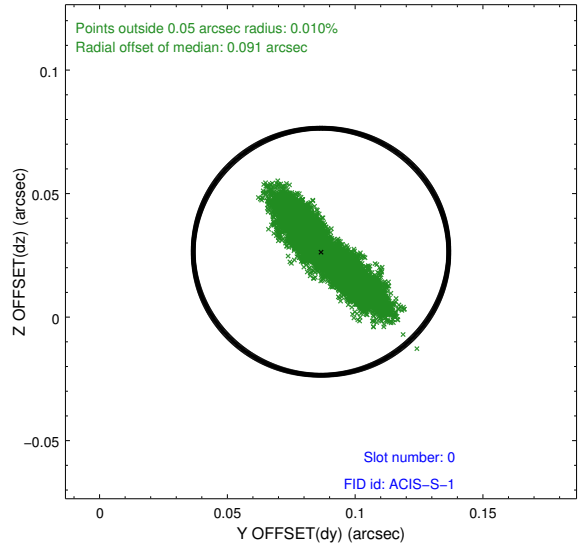
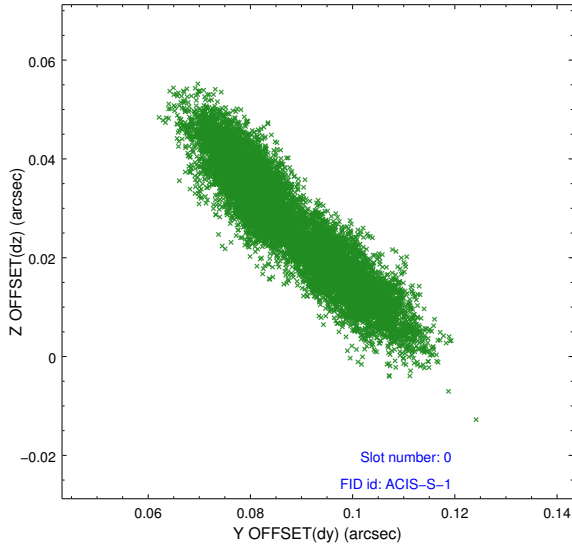


2.4.5 Slot 7

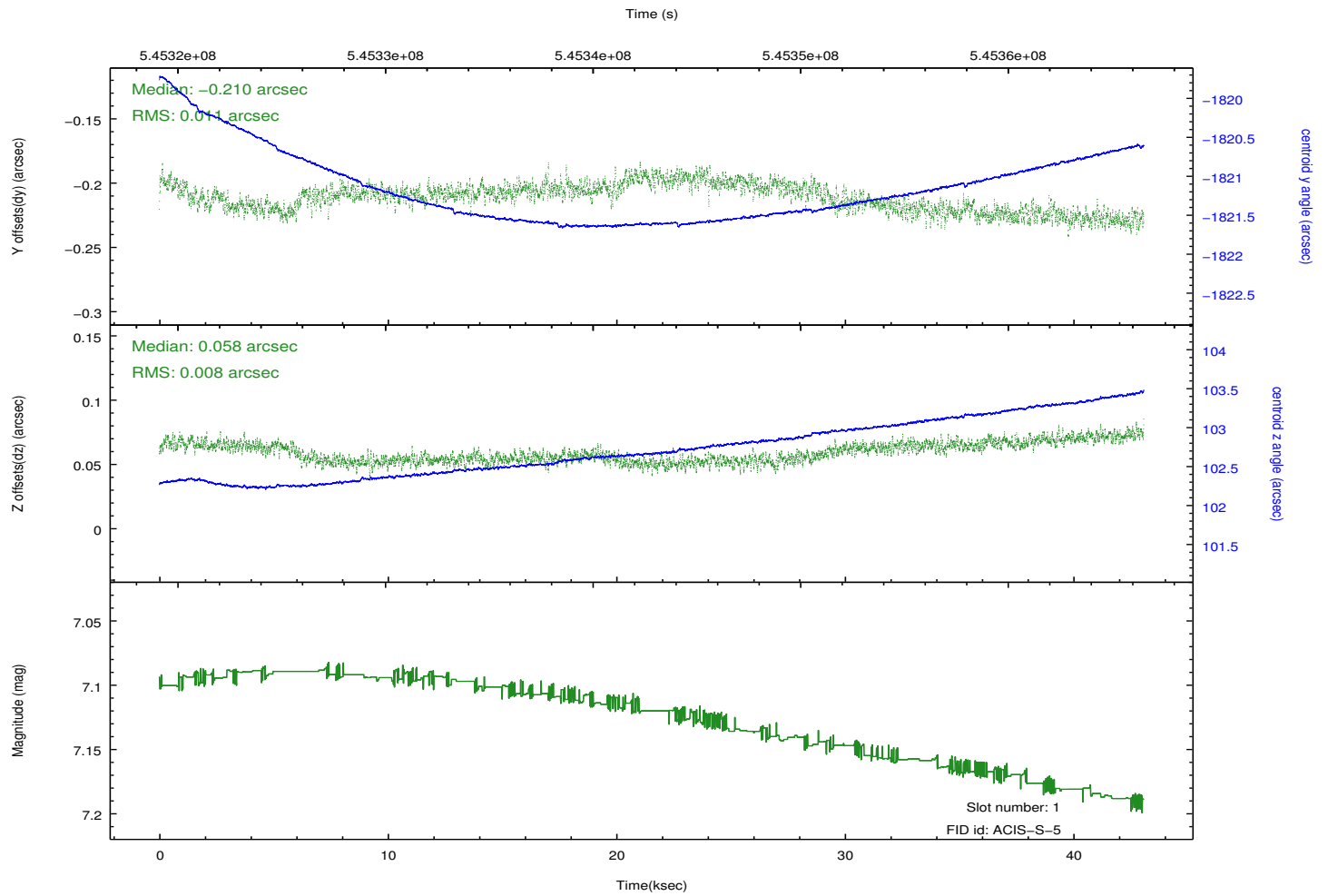
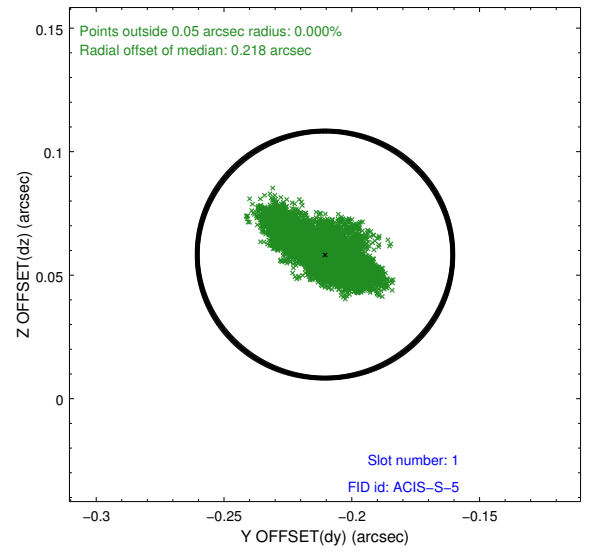
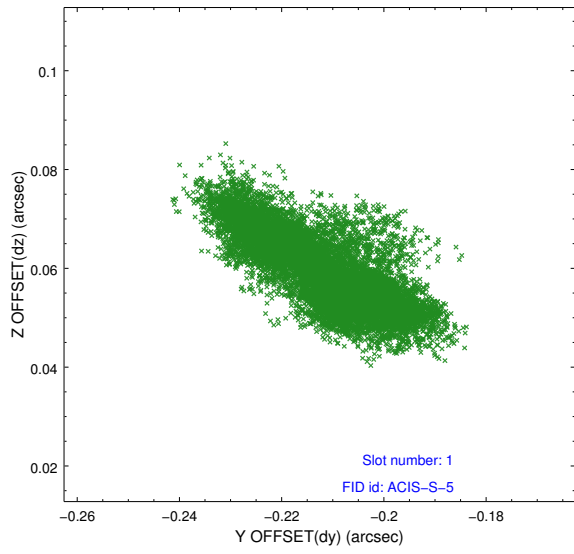


2.5 FID Slots

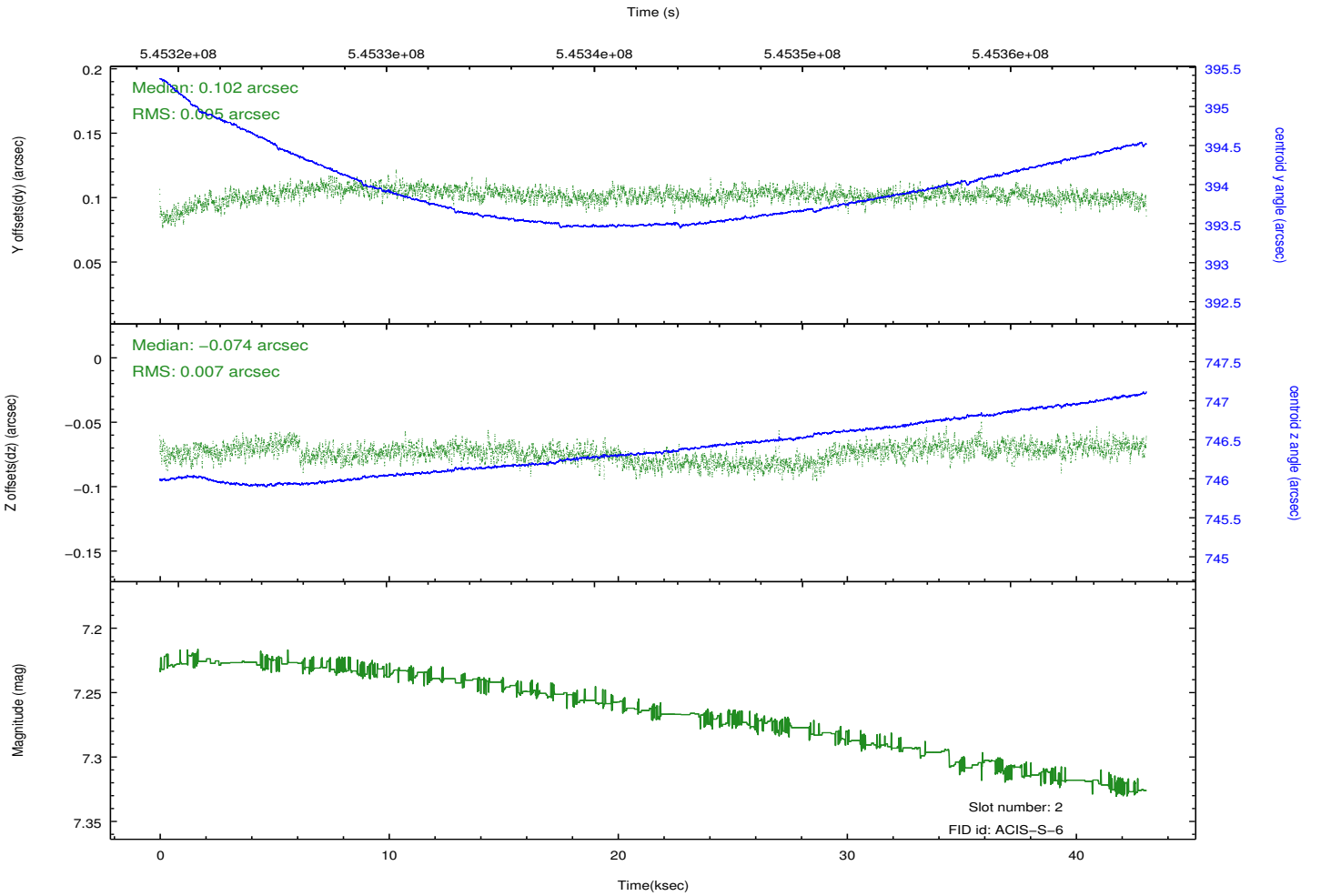
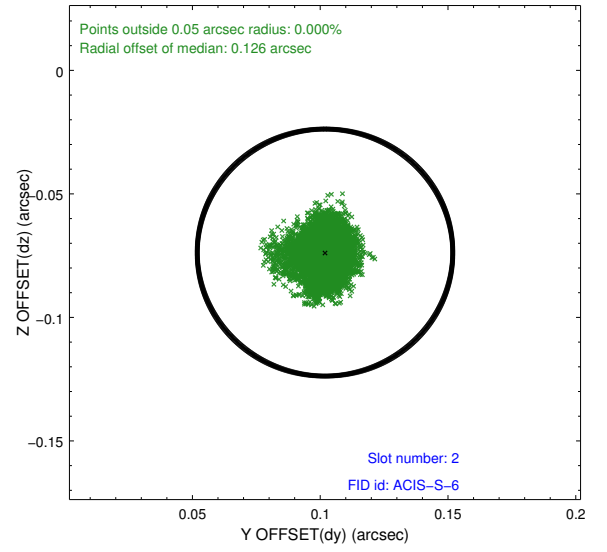
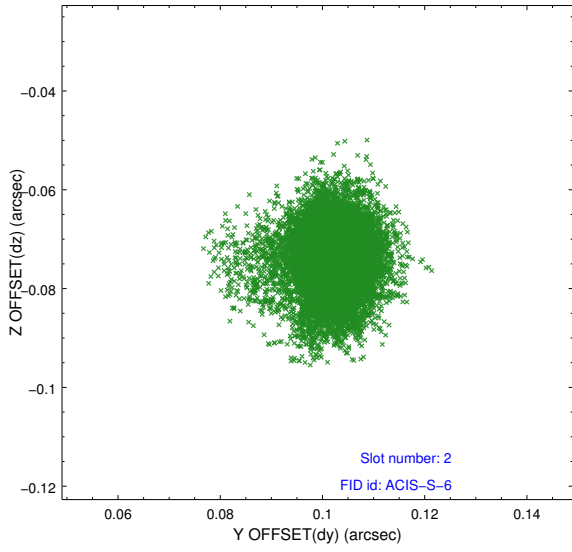
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

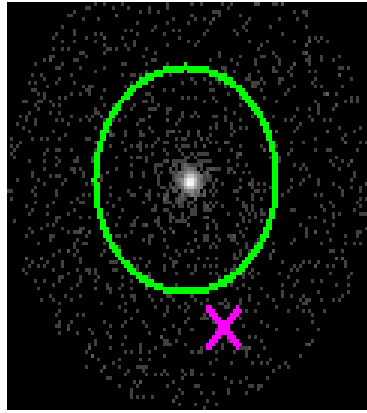


3 Gratings

3.1 HEG Arm



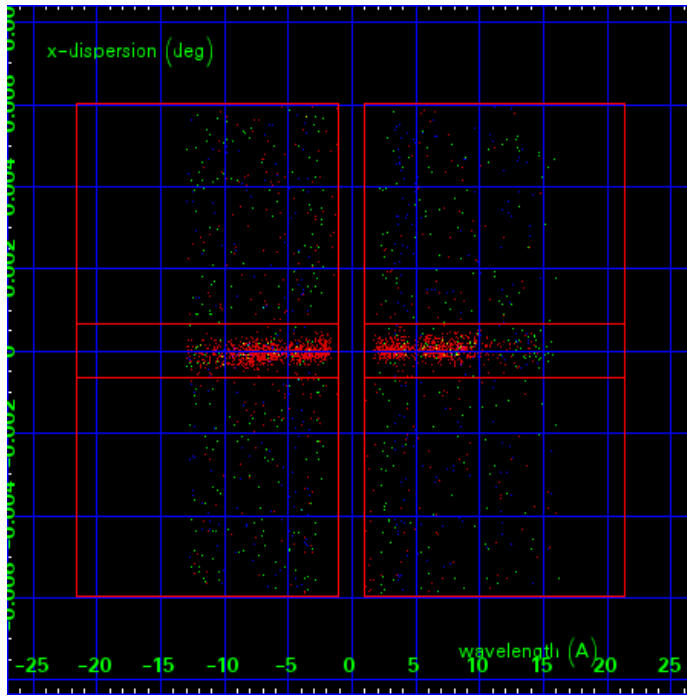
HEG Order Sort 123



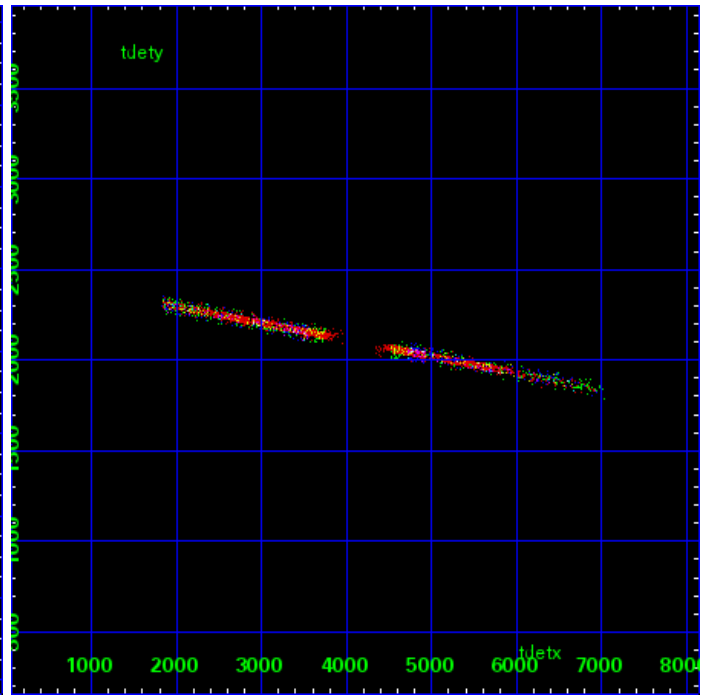
HEG Zero Order



HEG Order Sort ALL

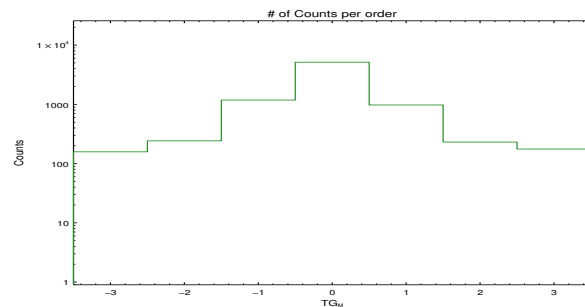


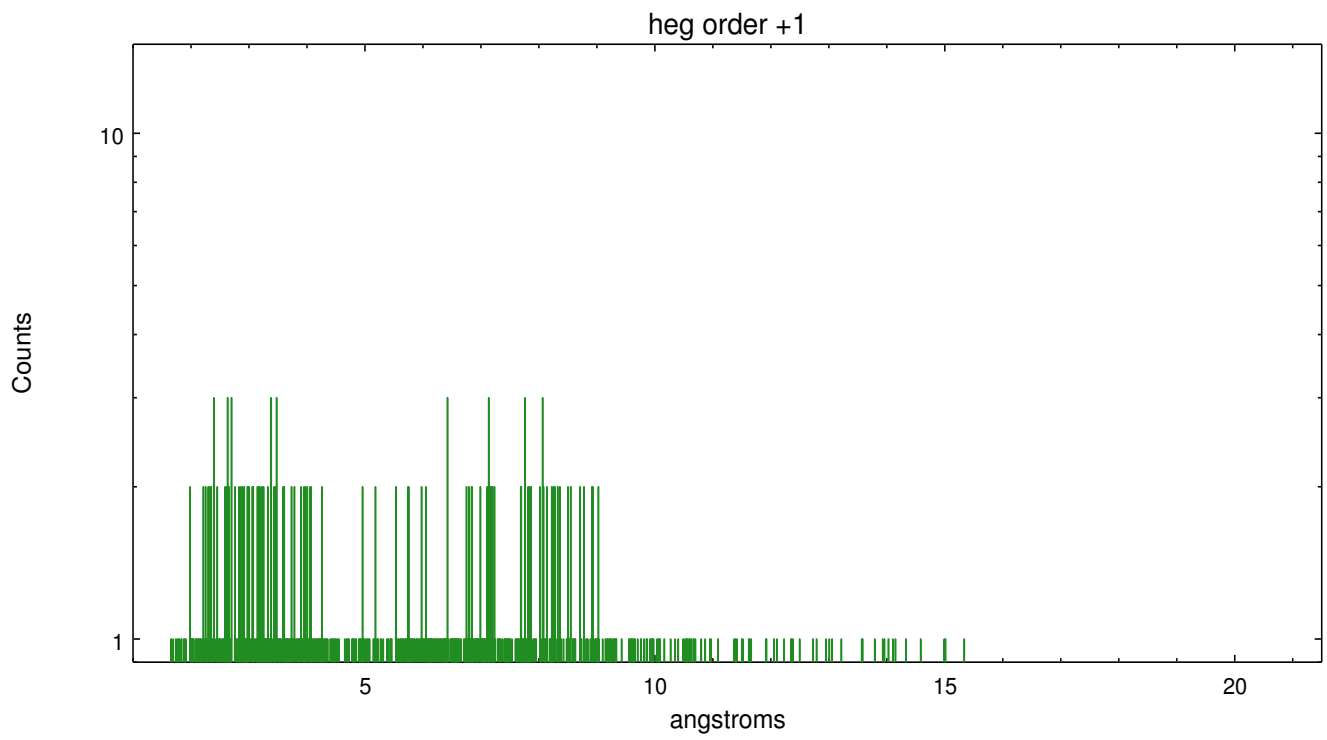
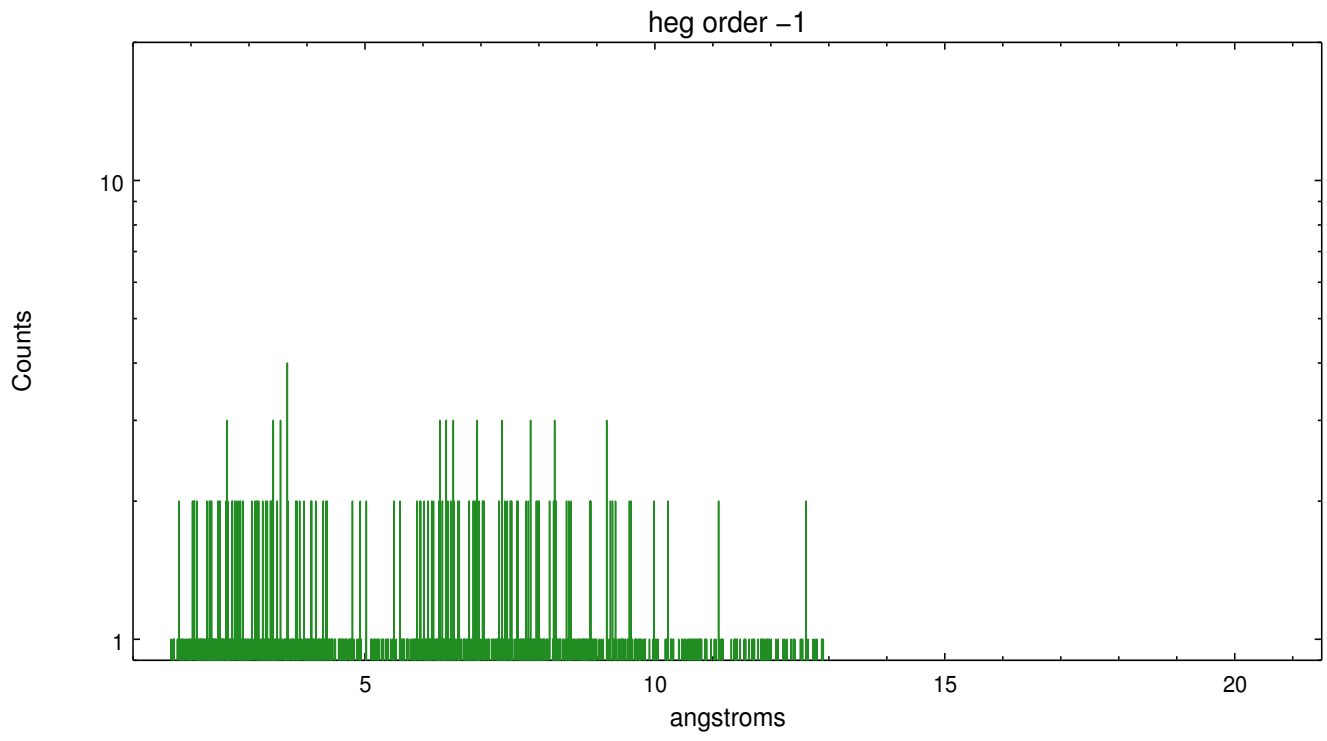
Spot Image HEG



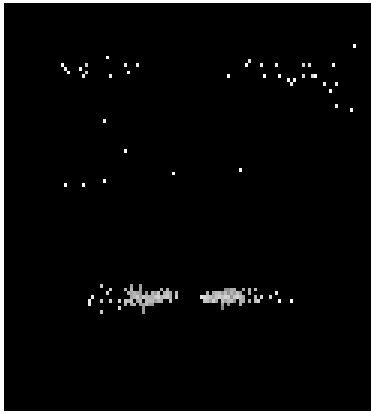
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	158	242	1181	5146	976	231	176

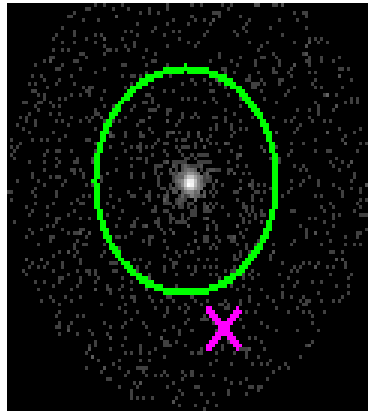




3.2 MEG Arm



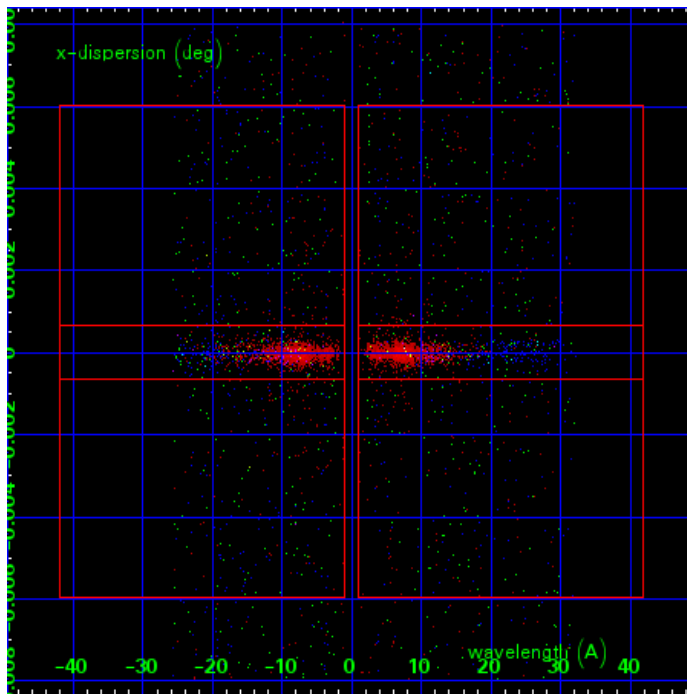
MEG Order Sort 123



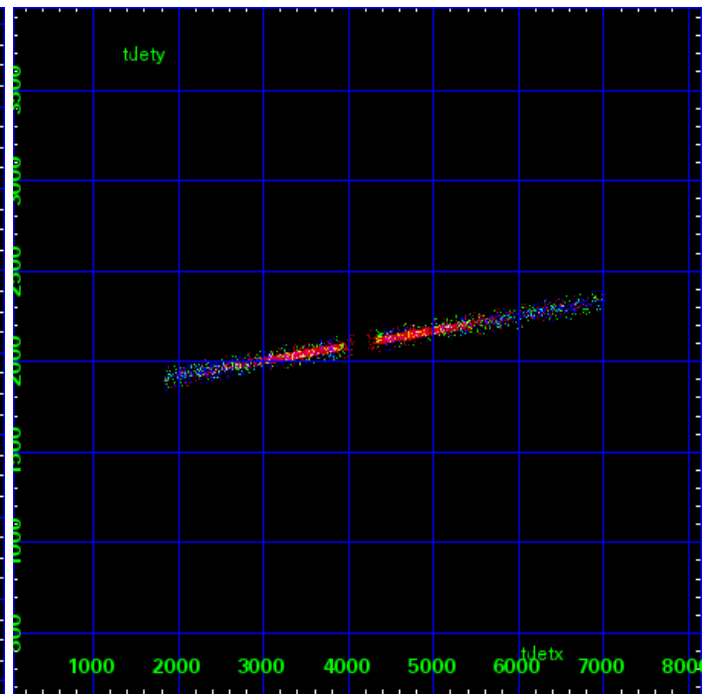
MEG Zero Order



MEG Order Sort ALL

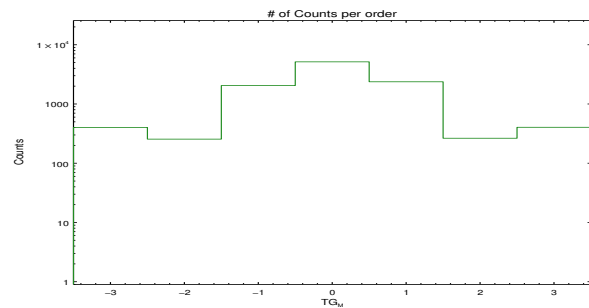


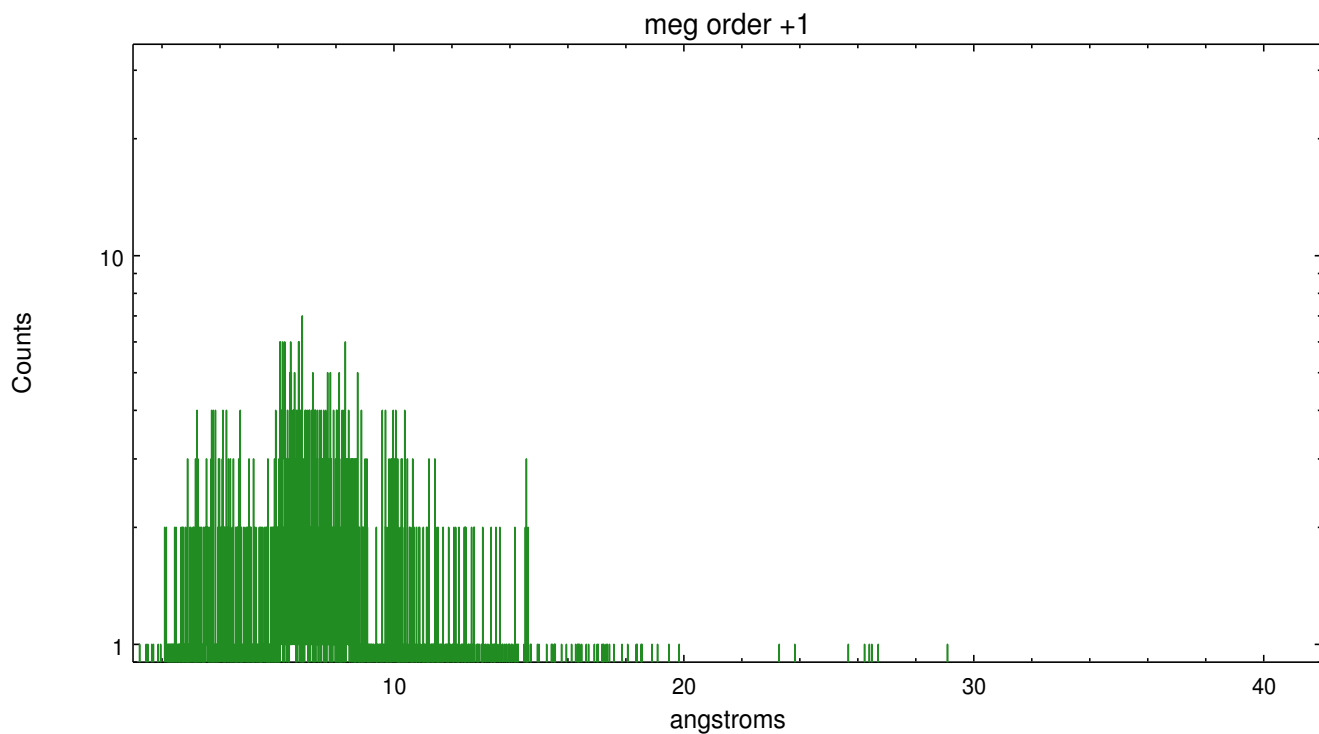
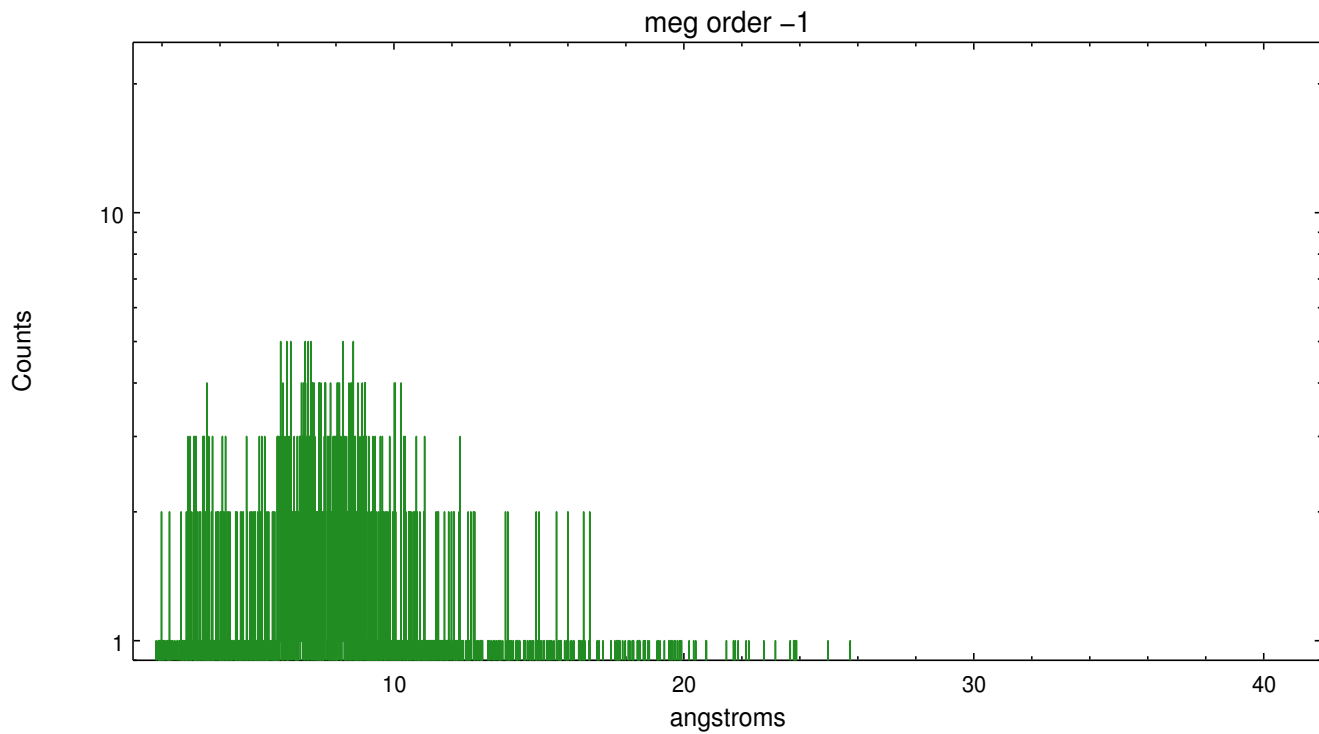
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	402	255	2045	5146	2371	264	404





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.04.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	42.945599573255

A.2 Comments