

V&V Reference Report

L2 ASCDS Version : 10.6.4.1

Observation 21951 - L2 Version 2
Chandra X-Ray Center

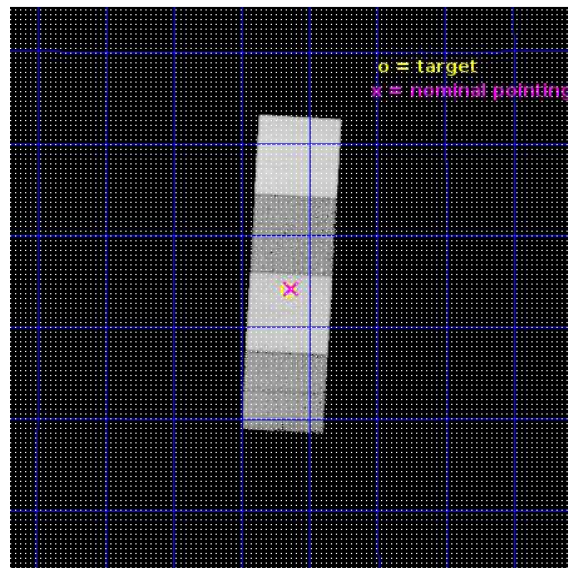
L2 Processing Date : Nov 4 2018

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1 Front

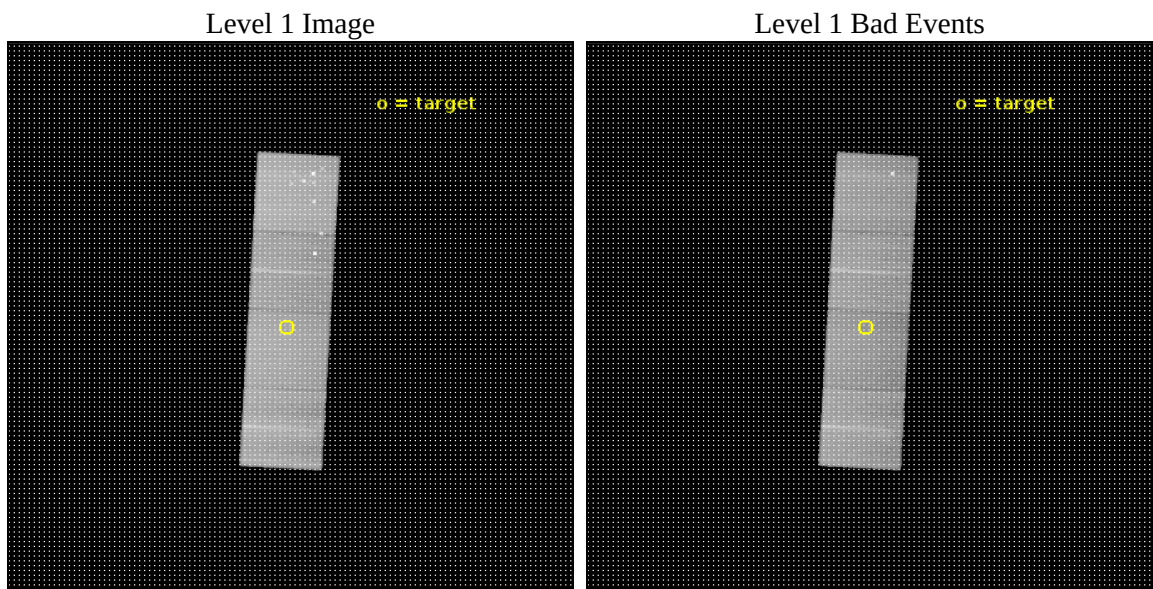
seq_num	201178	Sequence number
obs_id	21951	Observation id
title	An (X-ray Gratings) Tale of Two Young Stellar Objects	Proposal tit
observer	David Principe	Principal investigator
object	XZ Tau and HL Tau	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	67.91375	Observer's specified target RA [deg]
dec_targ	18.232028	Observer's specified target Dec [deg]
ra_nom	67.908455858364	Nominal RA [deg]
dec_nom	18.236332504525	Nominal Dec [deg]
roll_nom	93.158271448198	Nominal Roll [deg]
revision	2	Processing version of data
ontime	35060.658068895	Sum of GTIs [s]
livetime	34602.564759944	Livetime [s]
ontime5	35060.617028952	Sum of GTIs [s]
ontime6	35054.293818355	Sum of GTIs [s]
ontime7	35060.658068895	Sum of GTIs [s]
ontime8	35054.252798557	Sum of GTIs [s]
l2events	394837	Number of level 2 events



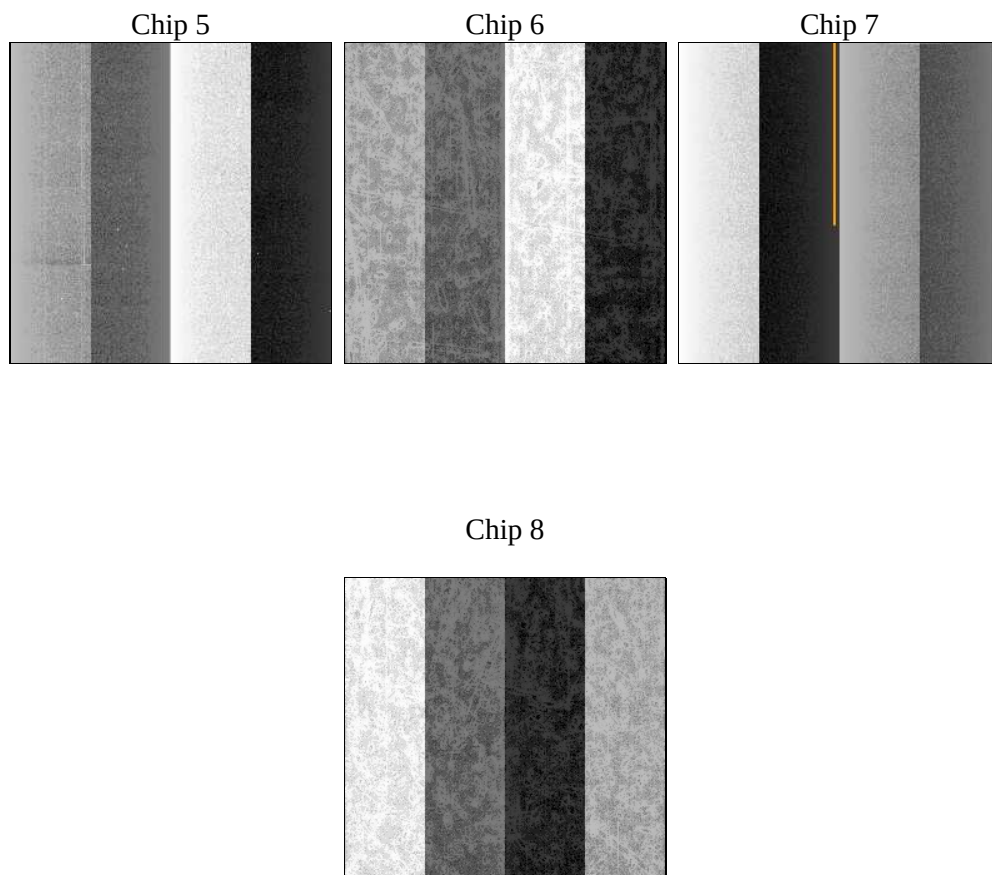
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	35000.000000	[s] Scheduled observation exposure time
ascdsver	10.6.4.1	Processing system revision	ontime	35060.658068895	Sum of GTIs [s]
caldsver	4.8.0.1	 	ontime5	35060.617028952	Sum of GTIs [s]
date	2018-11-04T23:37:42	Date and time of file creation	ontime6	35054.293818355	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	35060.658068895	Sum of GTIs [s]
			ontime8	35054.252798557	Sum of GTIs [s]
			l1events	1449762	Number of level 1 events
			tgmethod	MANUAL	Method used to create src1a file
			zo_pos	(4085.25, 4069.25)	src1a sky pixel position

2.1.4 Events

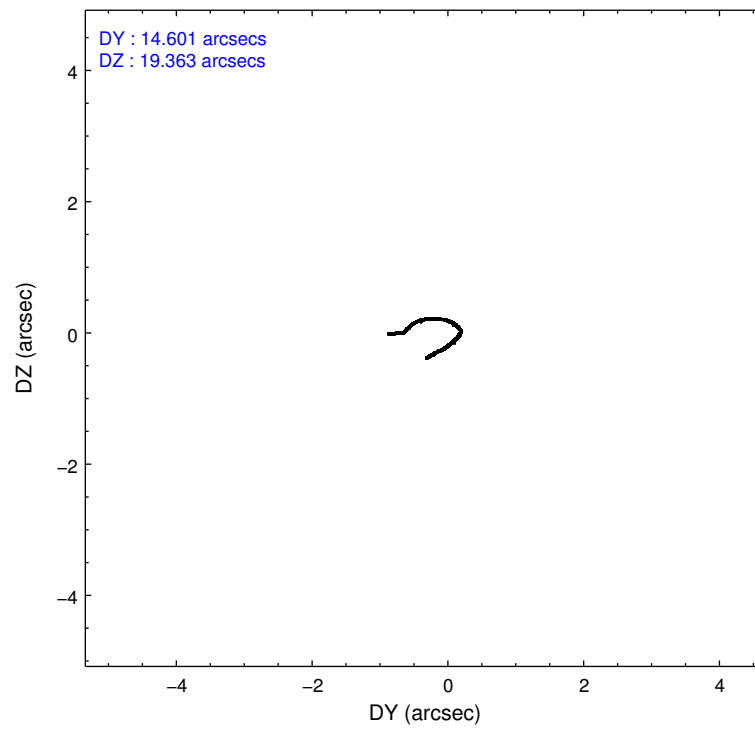
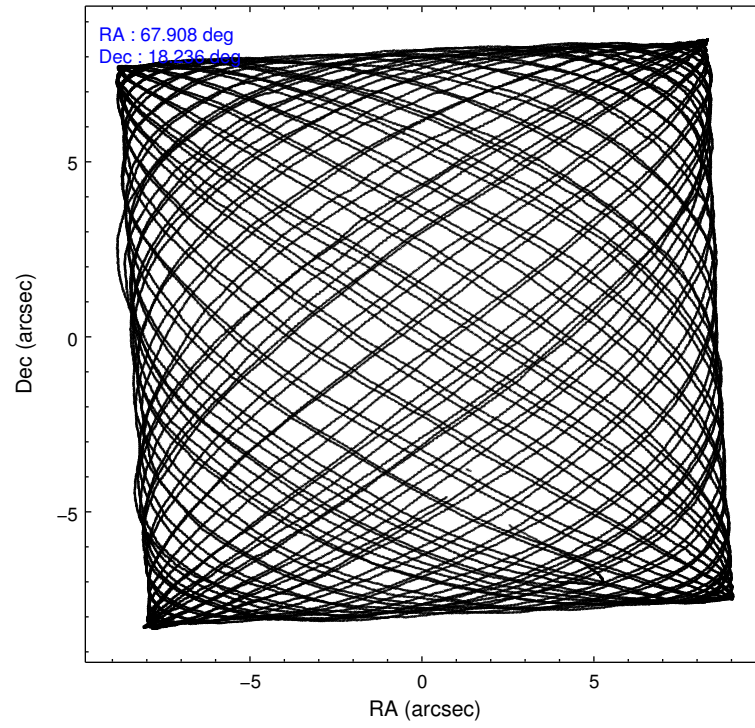
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	454887	294213	347258	353404
rejected events	232654	252801	197983	265762
rejected %	51%	85%	57%	75%

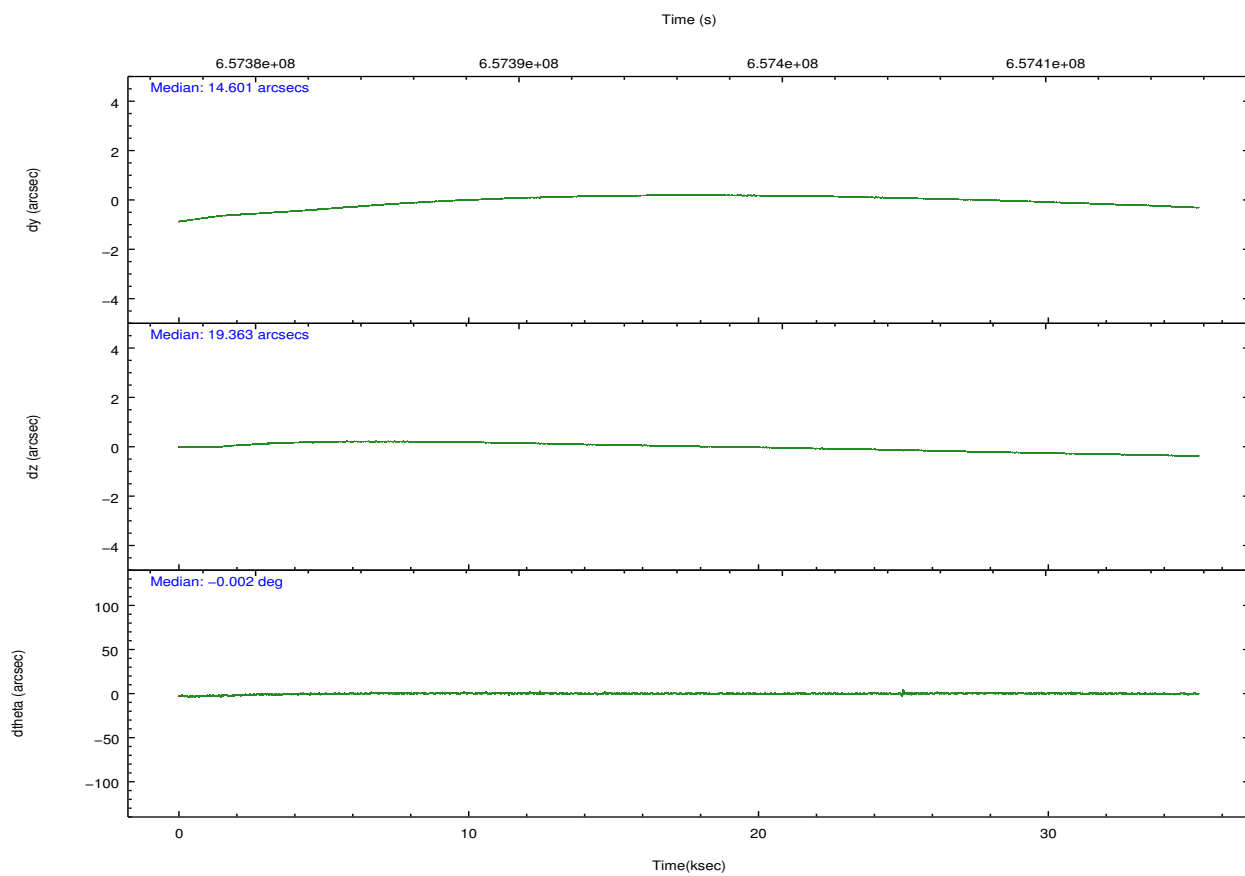
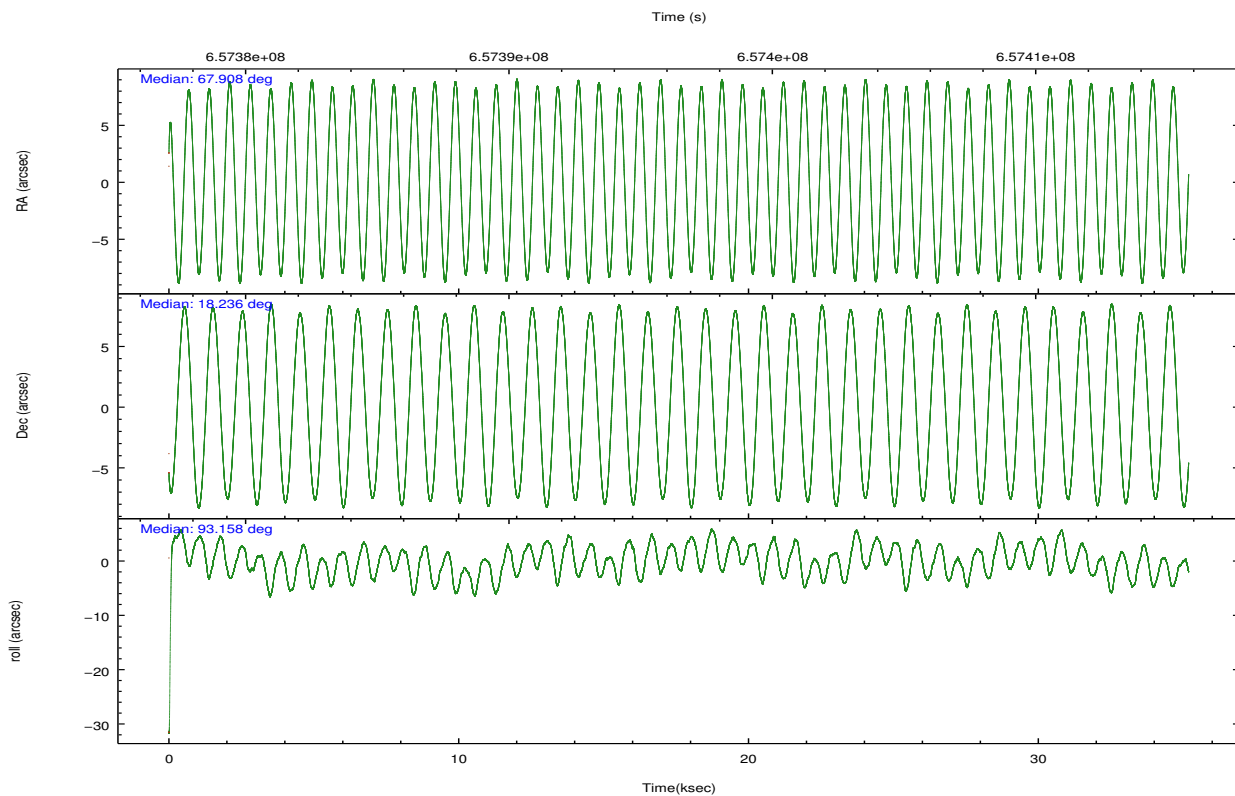
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	25607	20025	12493	23524
	5%	6%	3%	6%
grade 1 events	1237	175	525	272
	0%	0%	0%	0%
grade 2 events	66789	8005	31058	21717
	14%	2%	8%	6%
grade 3 events	7444	2697	11522	9004
	1%	0%	3%	2%
grade 4 events	6759	2595	11465	8317
	1%	0%	3%	2%
grade 5 events	28014	11428	33765	18457
	6%	3%	9%	5%
grade 6 events	115688	8102	82765	25108
	25%	2%	23%	7%
grade 7 events	203349	241186	163665	247005
	44%	81%	47%	69%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	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	67.924585	67.90845585836446	CCD I2 on	N	N
[deg] Pointing Dec	18.213569	18.23633250452547	CCD I3 on	N	N
[deg] Pointing Roll	92.996613	93.15827144819778	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	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	657379022.184000	657378231.60825	CCD S5 on	O2	N
Observation start date	2018-10-31T13:15:53	2018-10-31T13:03:51	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	657414022.184000	657414461.77291	On-chip summing requested	N	N
Observation end date	2018-10-31T22:59:13	2018-10-31T23:07:41	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



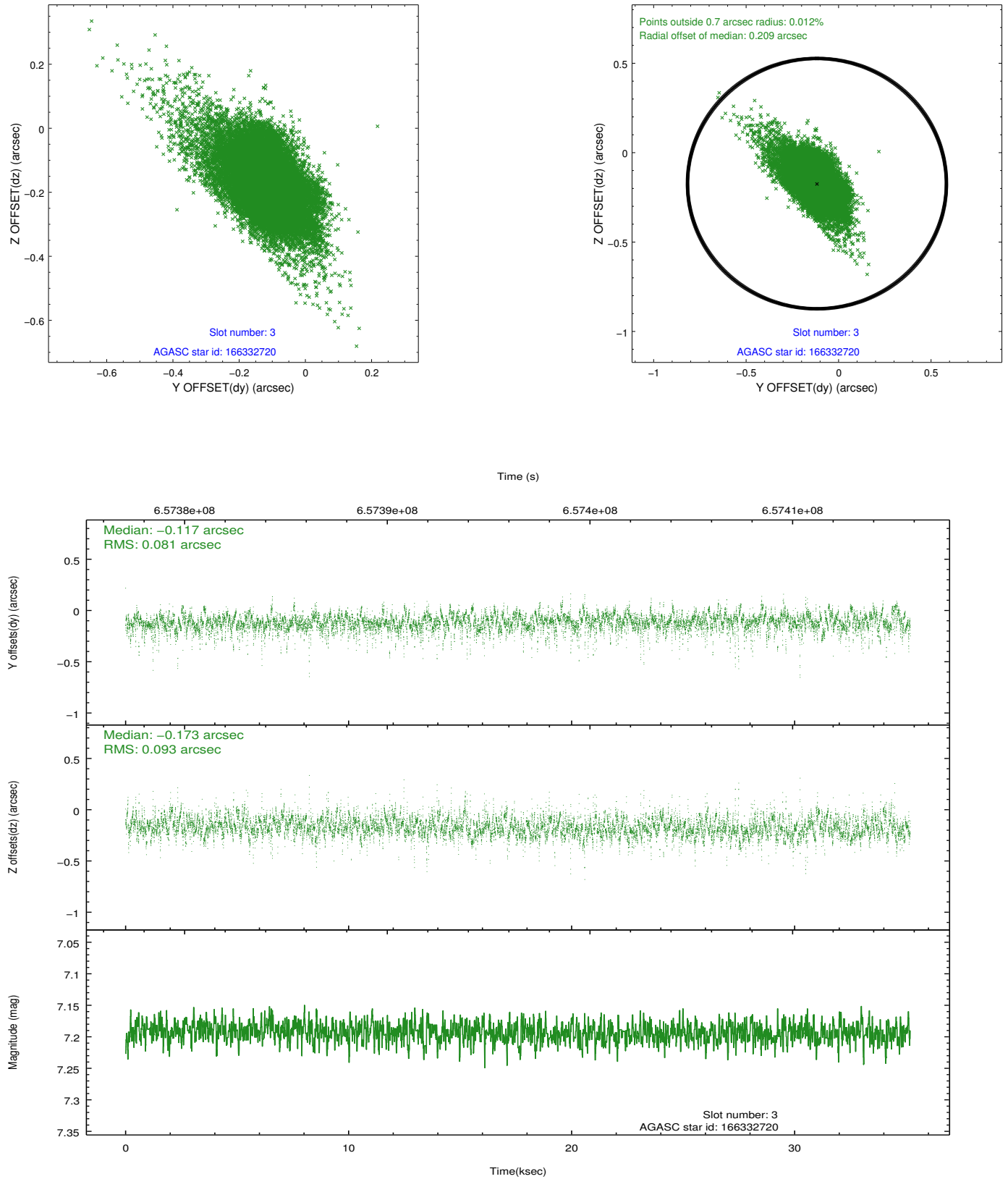


Slot Statistics

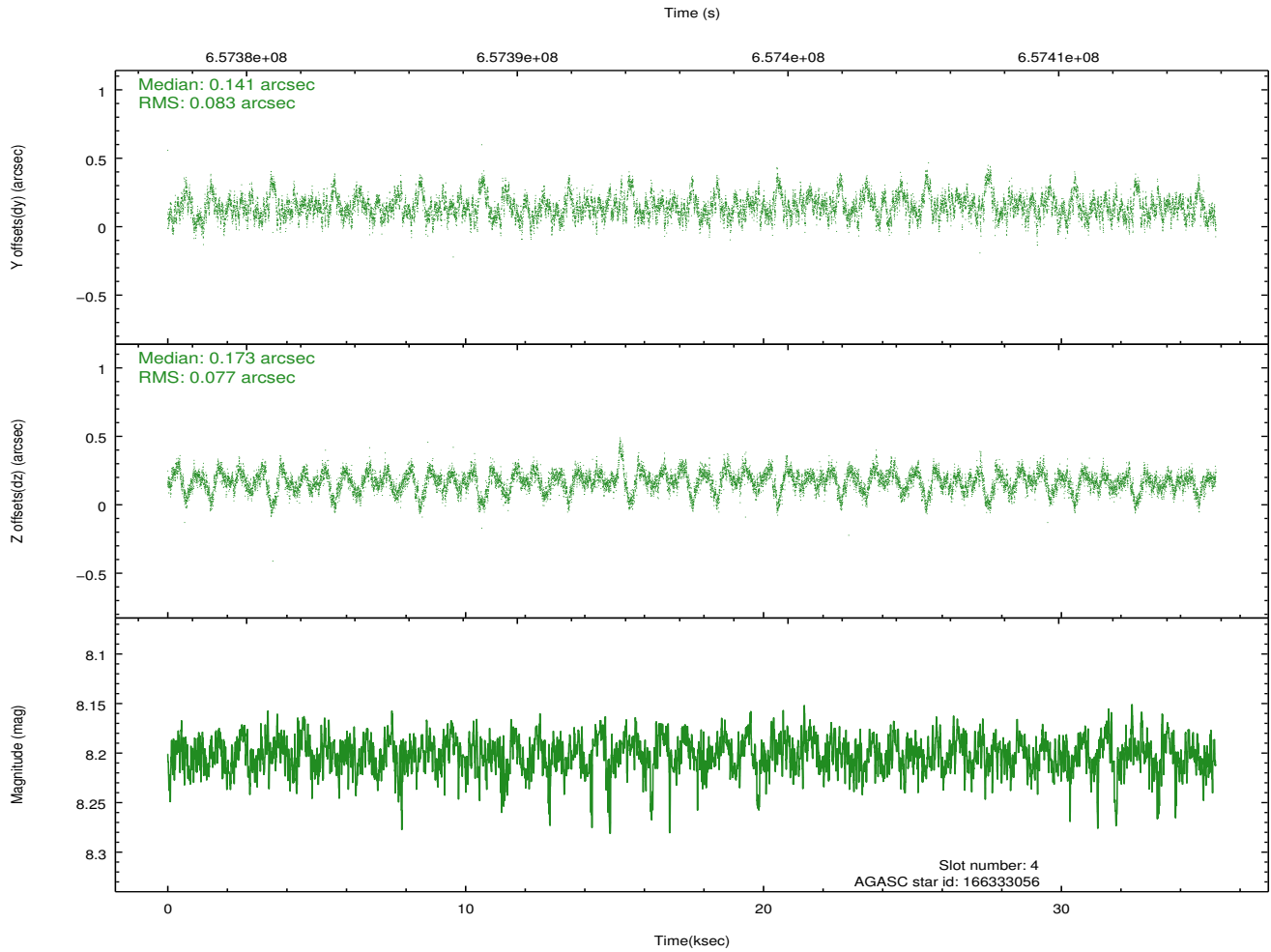
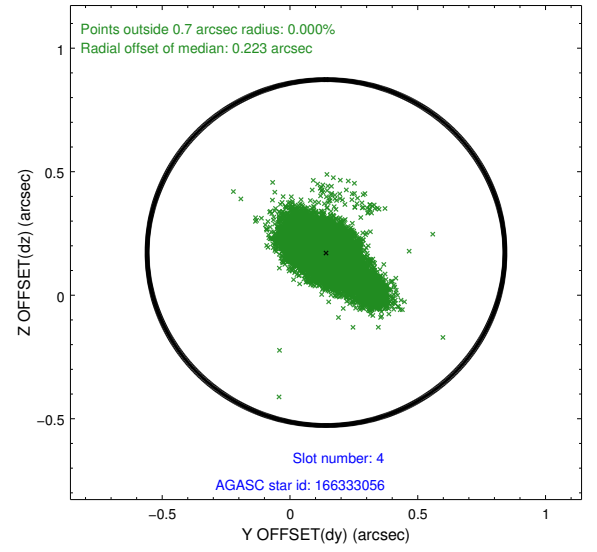
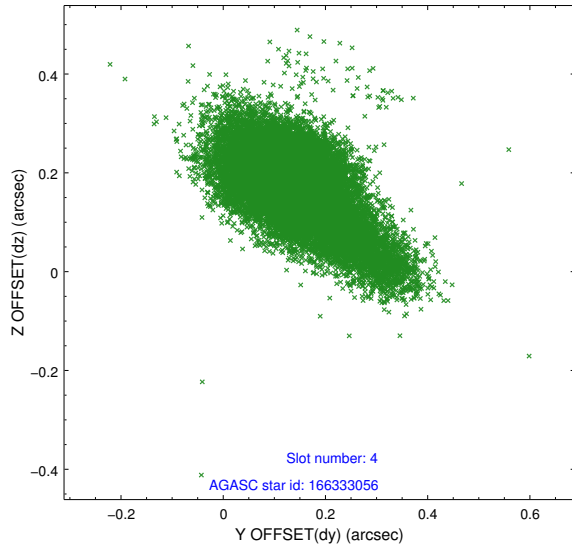
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.12	8581	1.000	-0.532	-0.367	0.017	0.037	0.000000	0.000000	-768.06	-1741
1	FID		ACIS-S-4	7.23	8582	1.000	0.554	0.316	0.017	0.034	0.000000	0.000000	2146.33	167
2	FID		ACIS-S-6	7.36	8582	1.000	-0.048	0.054	0.012	0.024	0.000000	0.000000	394.53	805
3	GUIDE	used	166332720	7.19	17164	1.000	-0.117	-0.173	0.119	0.224	67.335629	17.544937	-2295.03	2142
4	GUIDE	used	166333056	8.20	17159	1.000	0.141	0.173	0.111	0.220	67.813257	17.557208	-2338.79	505
5	GUIDE	used	166334824	7.10	17165	1.000	-0.181	-0.365	0.108	0.180	67.376458	17.863163	-1159.07	1939
6	GUIDE	used	166468240	9.02	17073	1.000	0.456	0.561	0.122	0.194	68.167699	17.861525	-1307.79	-764
7	GUIDE	used	166996584	9.11	17142	1.000	-0.309	-0.223	0.203	0.357	68.020035	18.861675	2313.50	-446

2.4 Star Slots

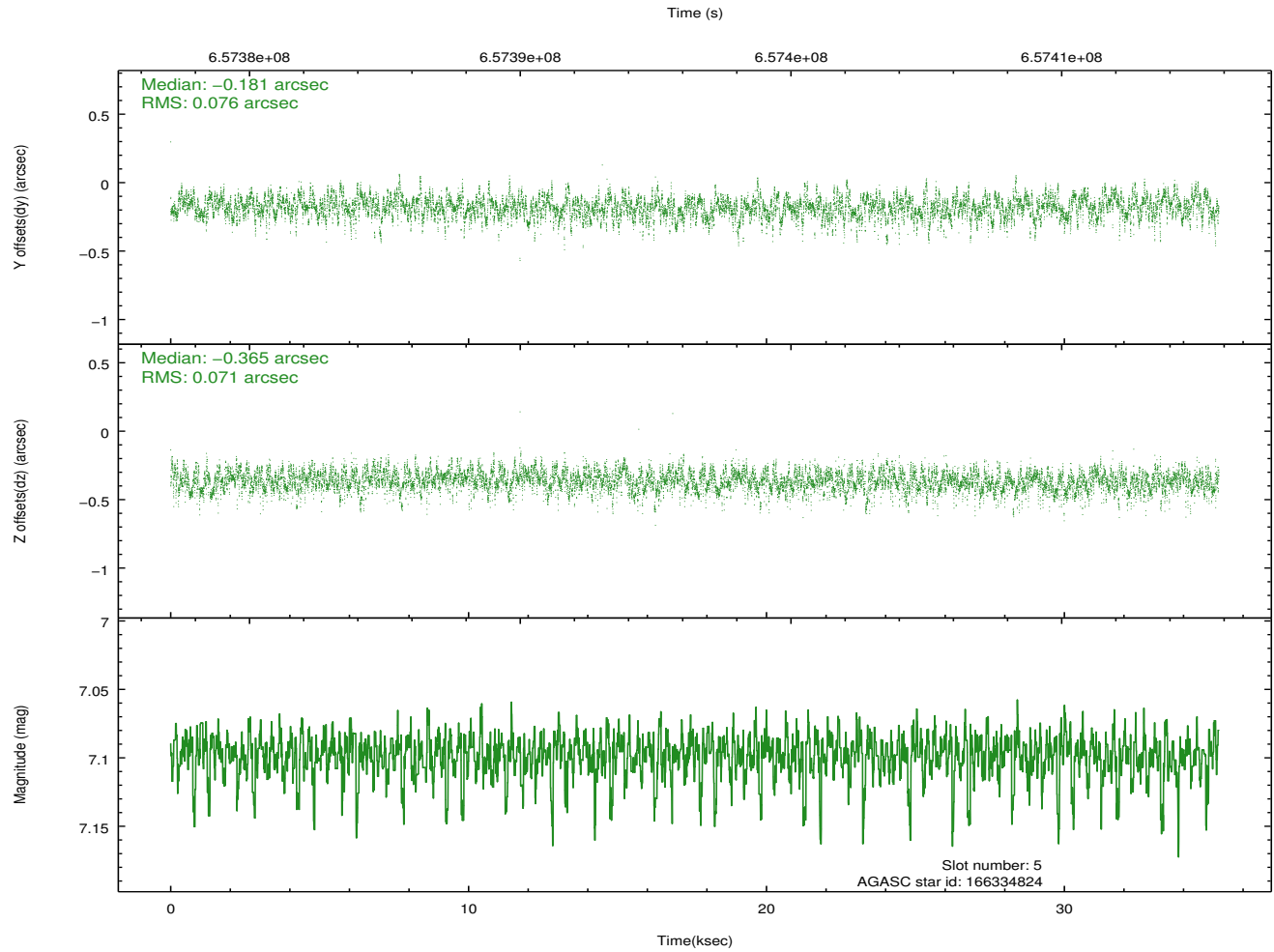
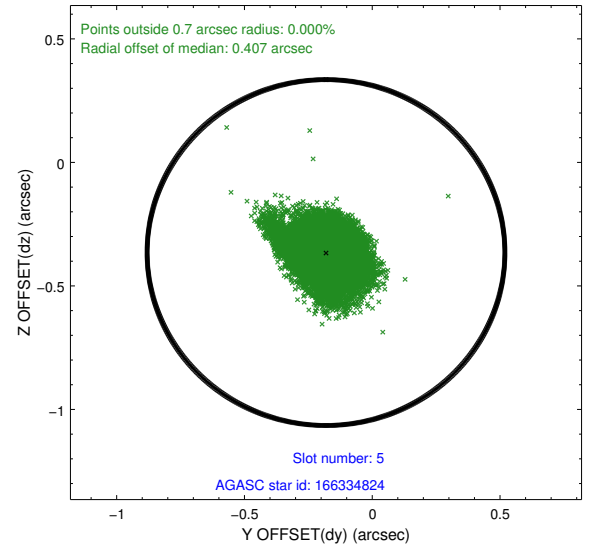
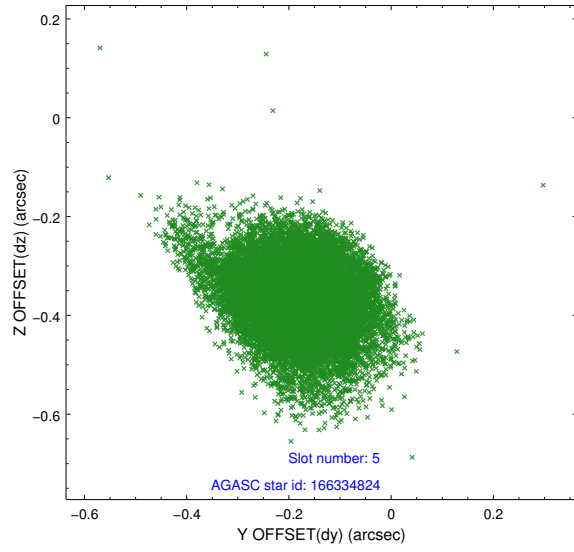
2.4.1 Slot 3



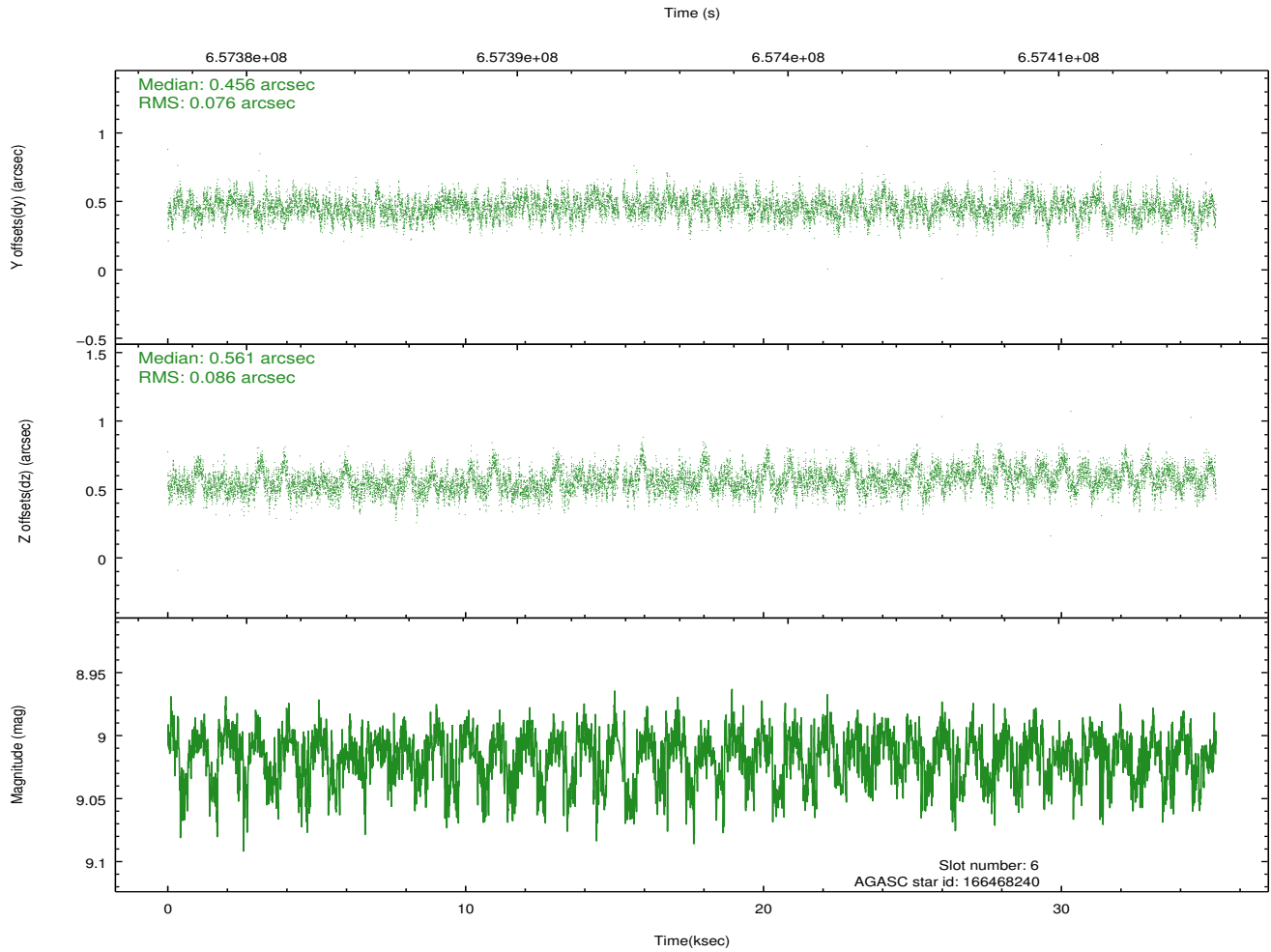
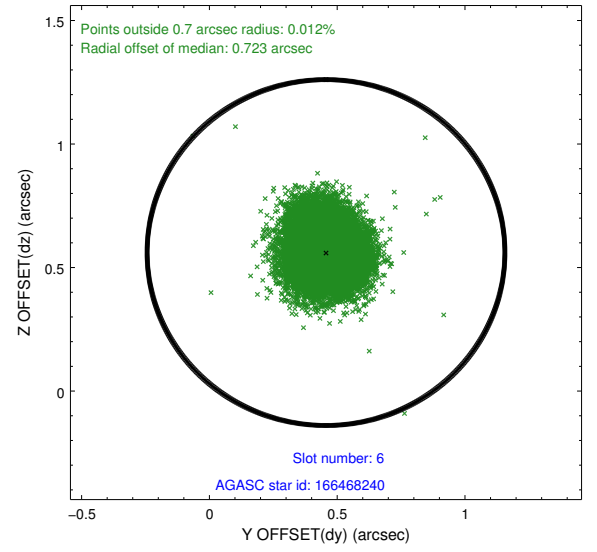
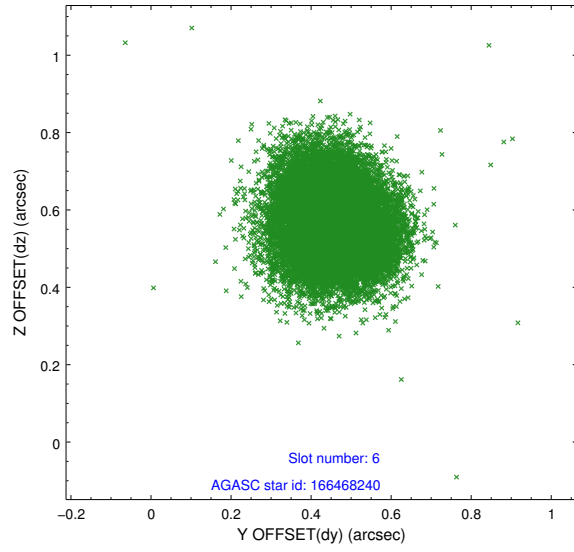
2.4.2 Slot 4



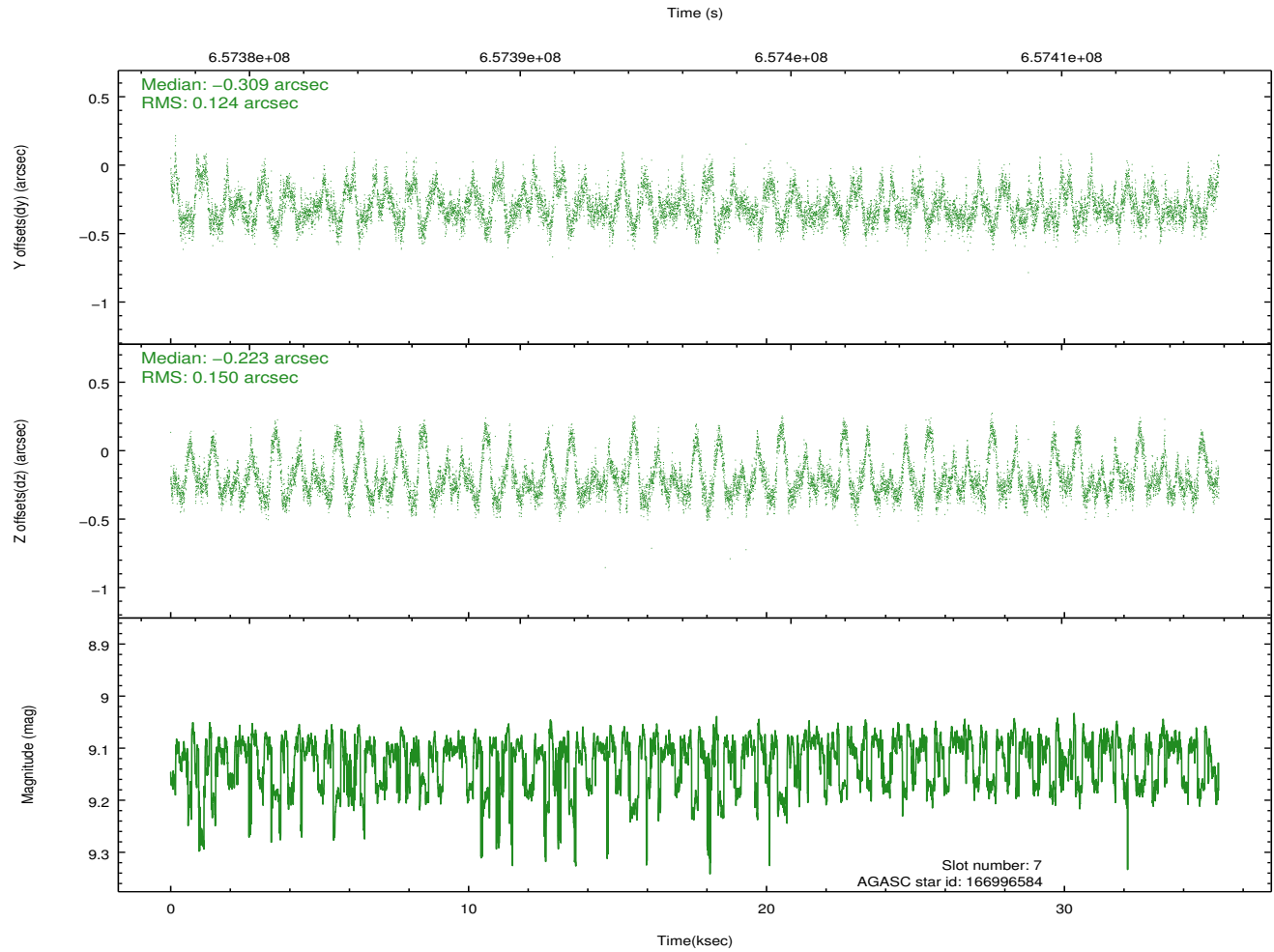
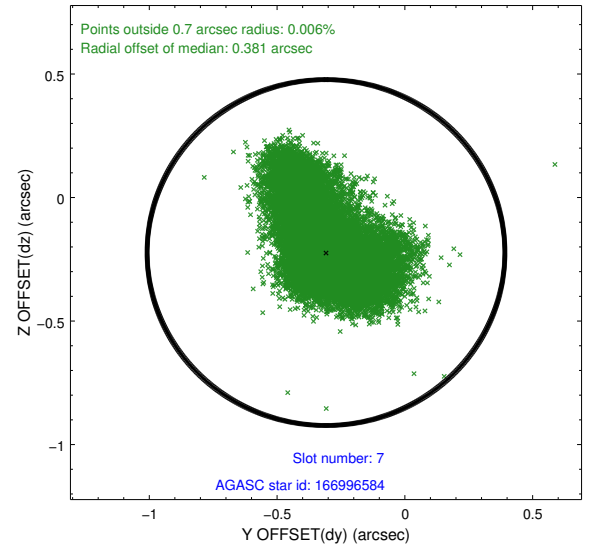
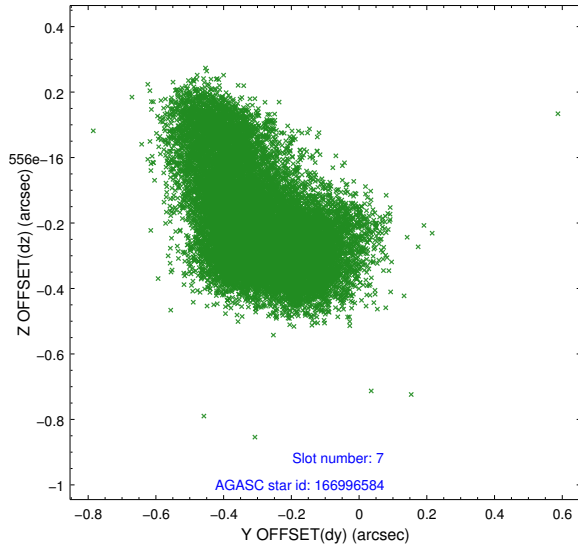
2.4.3 Slot 5



2.4.4 Slot 6

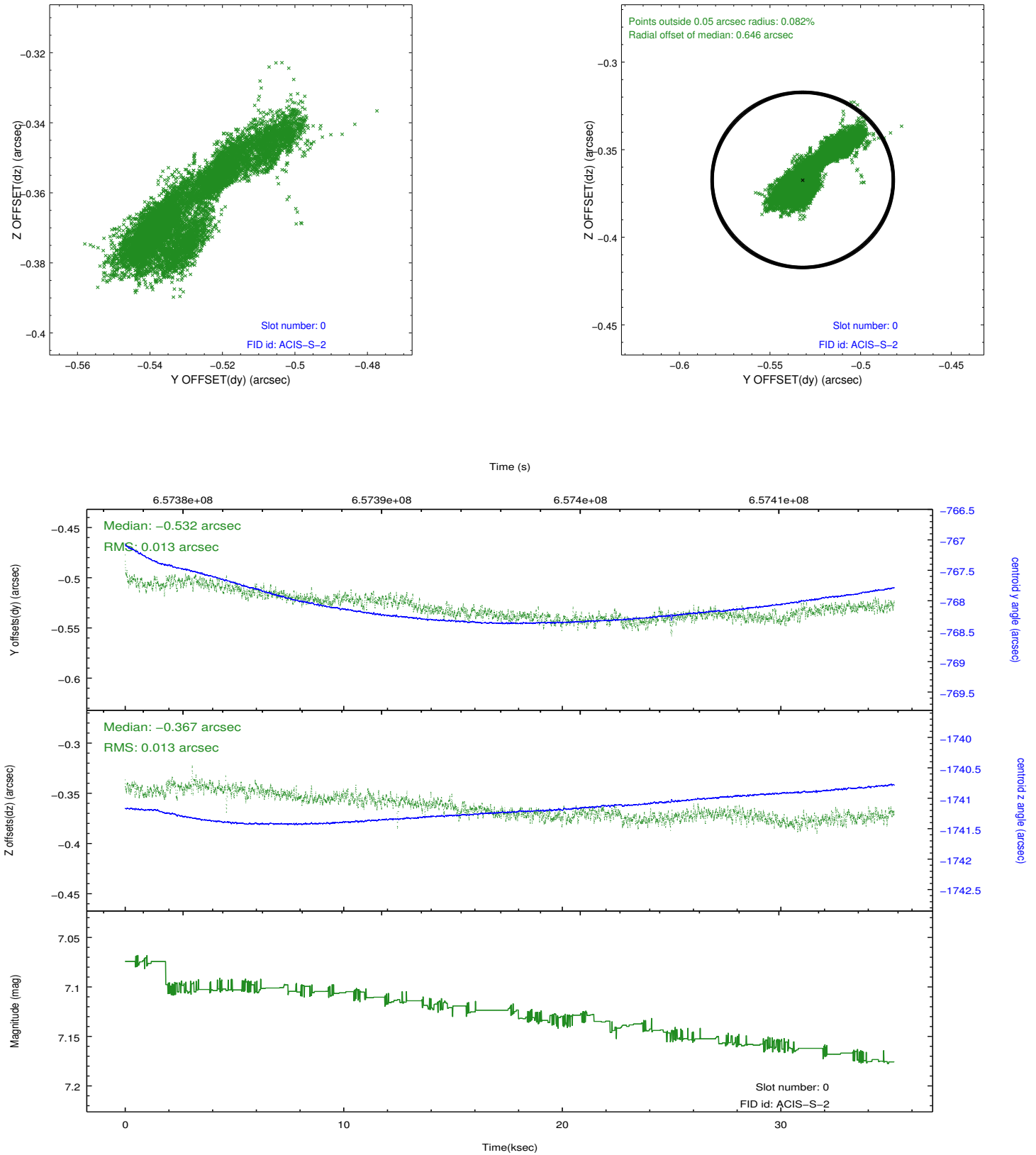


2.4.5 Slot 7

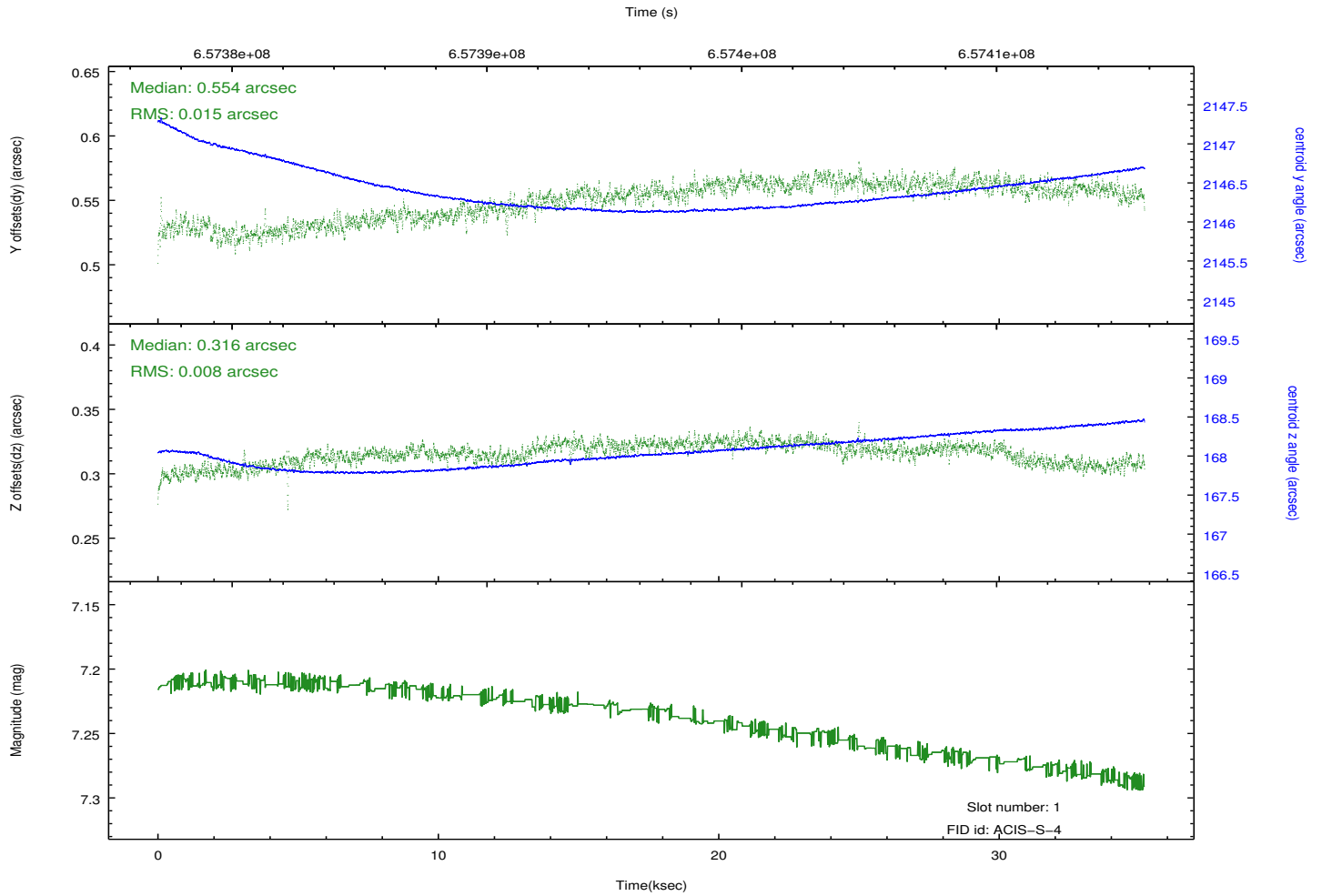
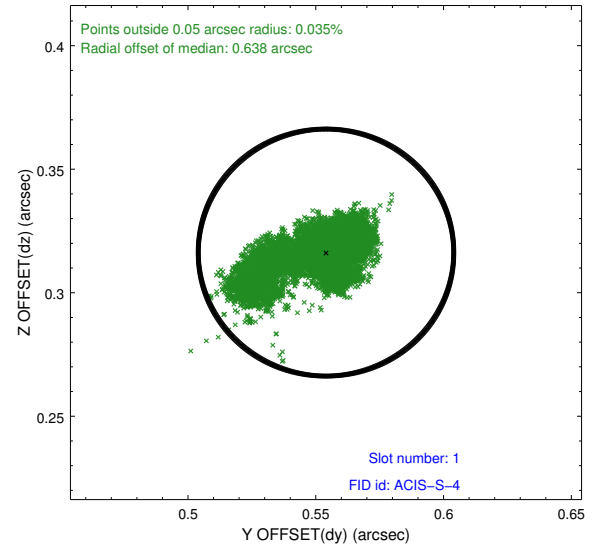
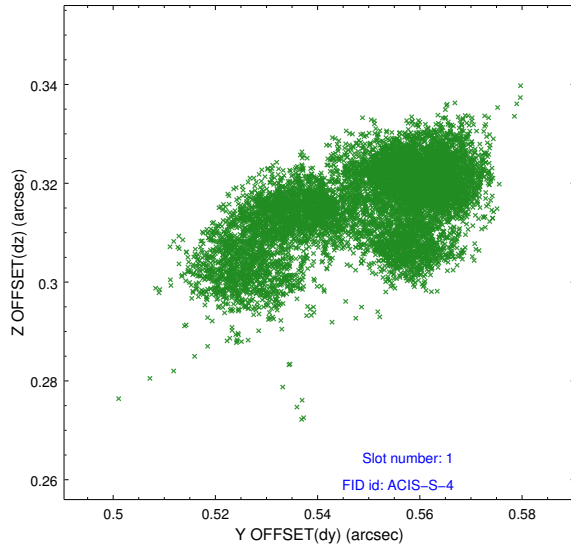


2.5 FID Slots

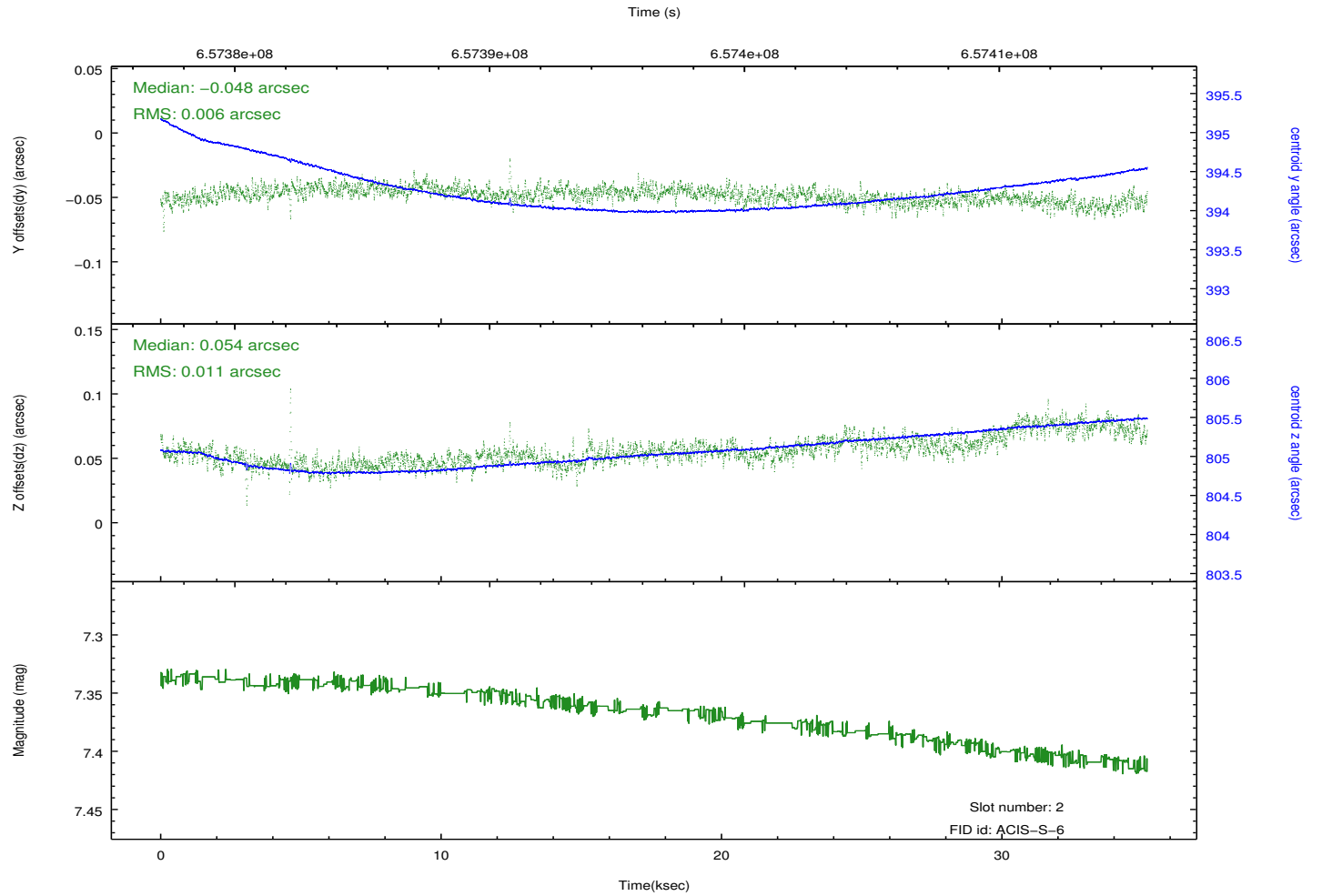
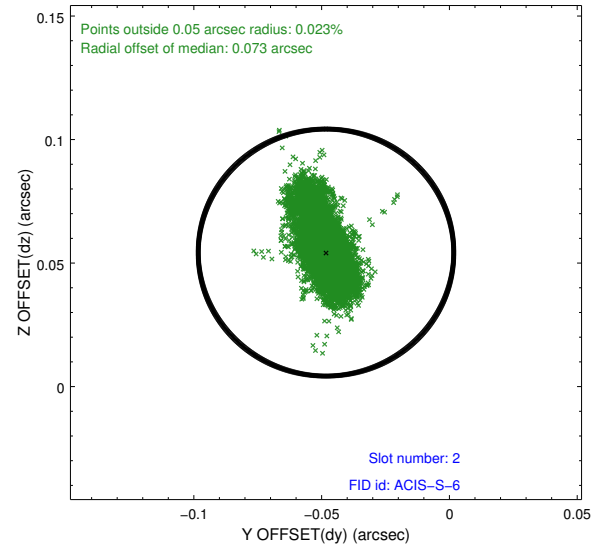
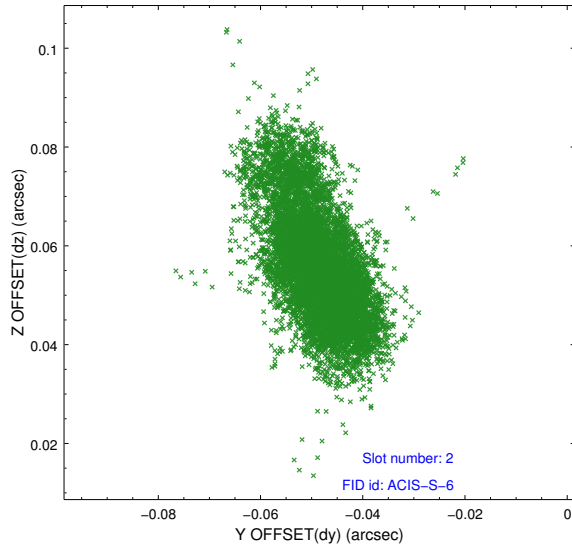
2.5.1 Slot 0



2.5.2 Slot 1

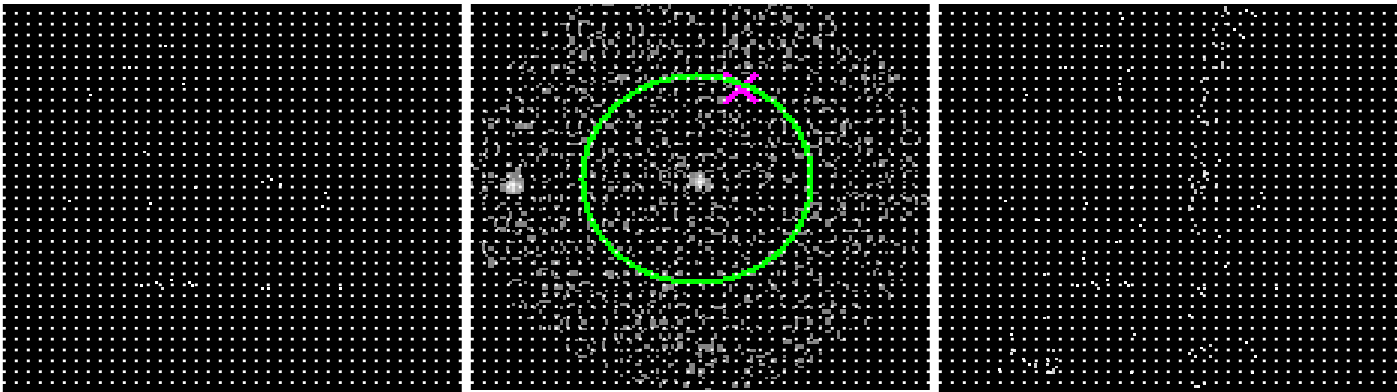


2.5.3 Slot 2



3 Gratings

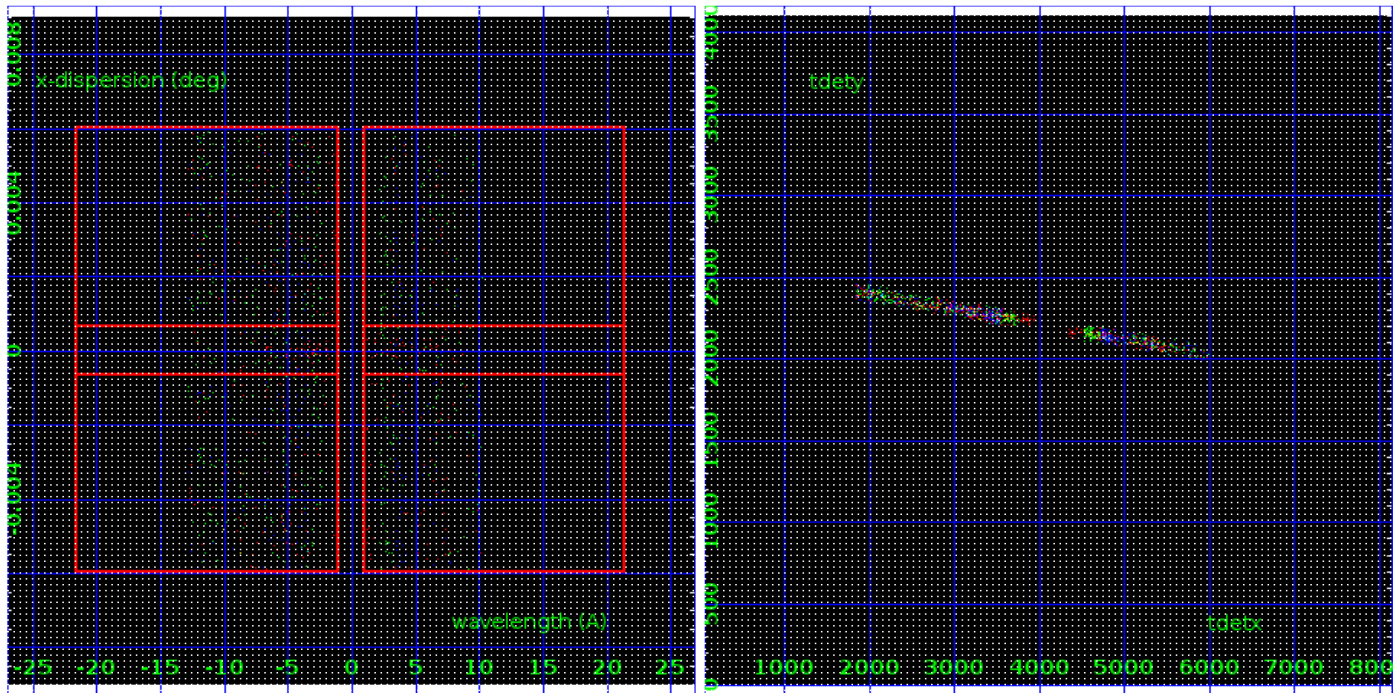
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

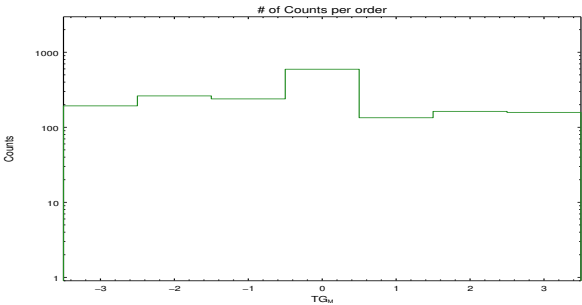
HEG Order Sort ALL

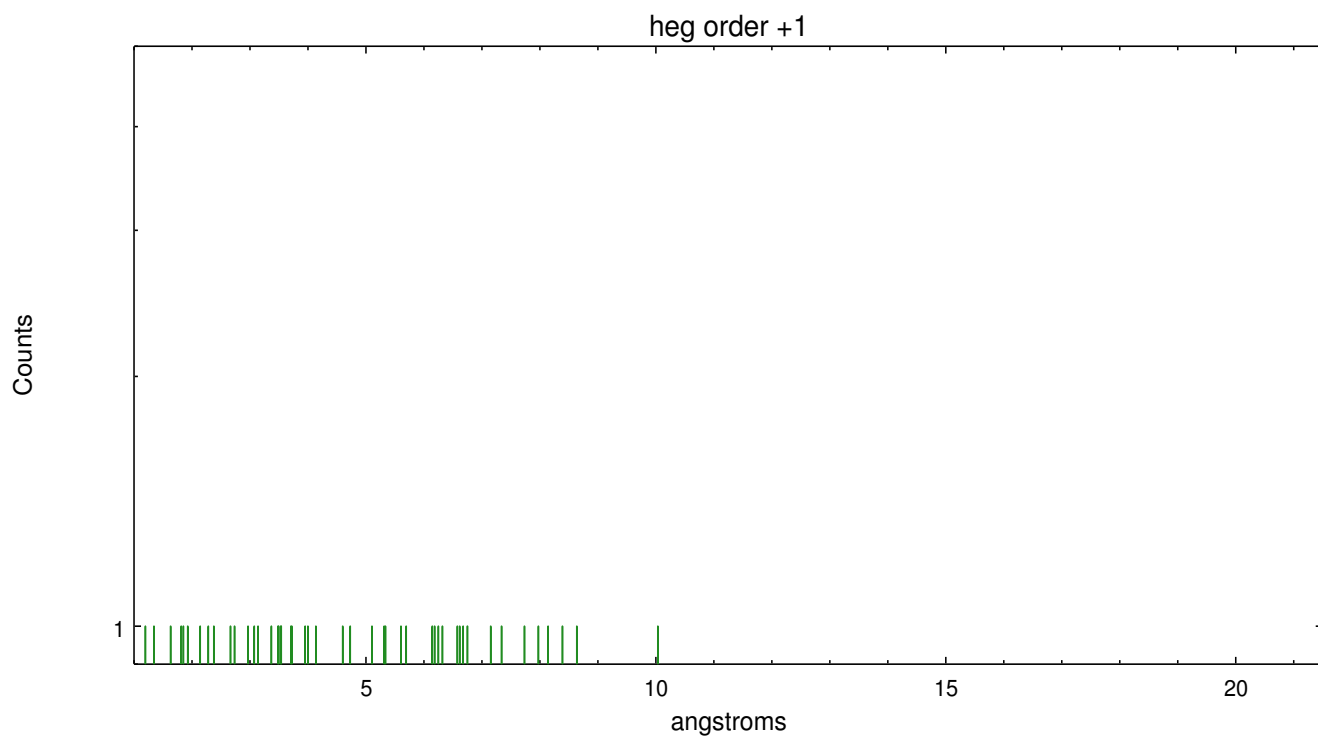
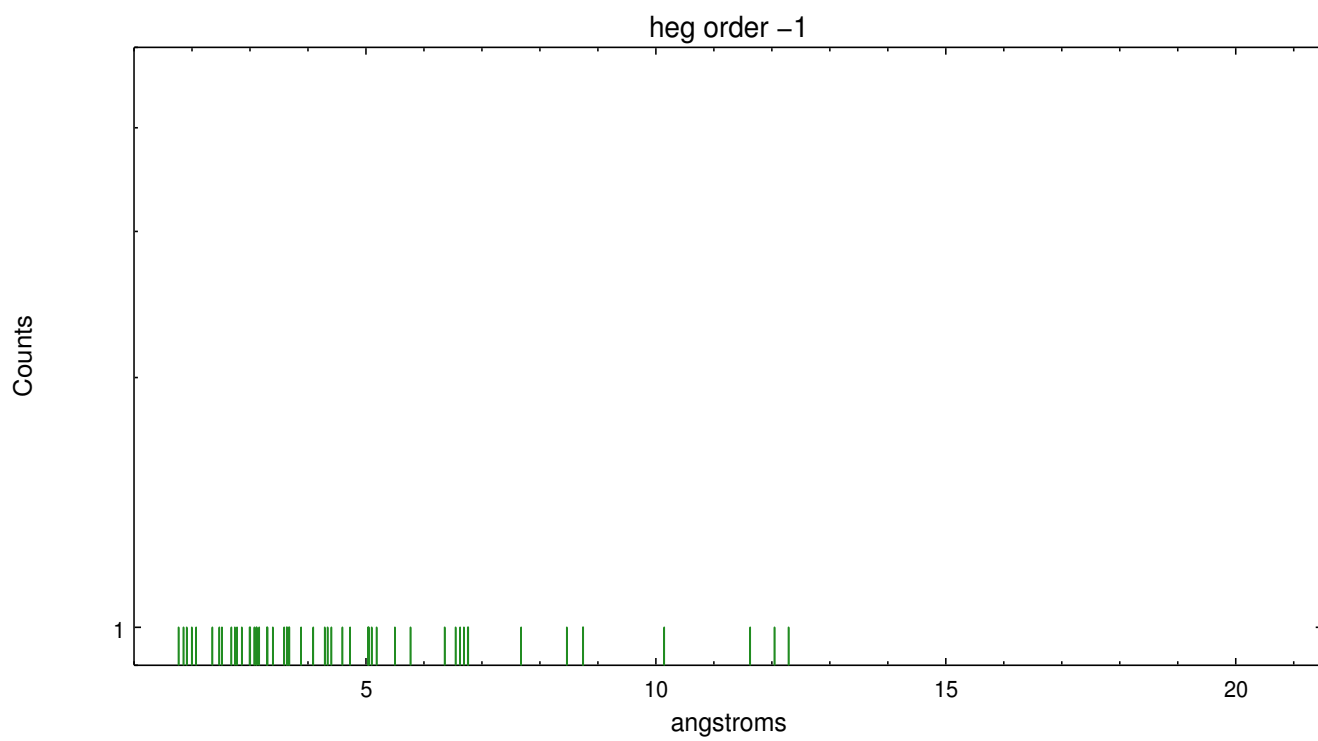


Spot Image HEG

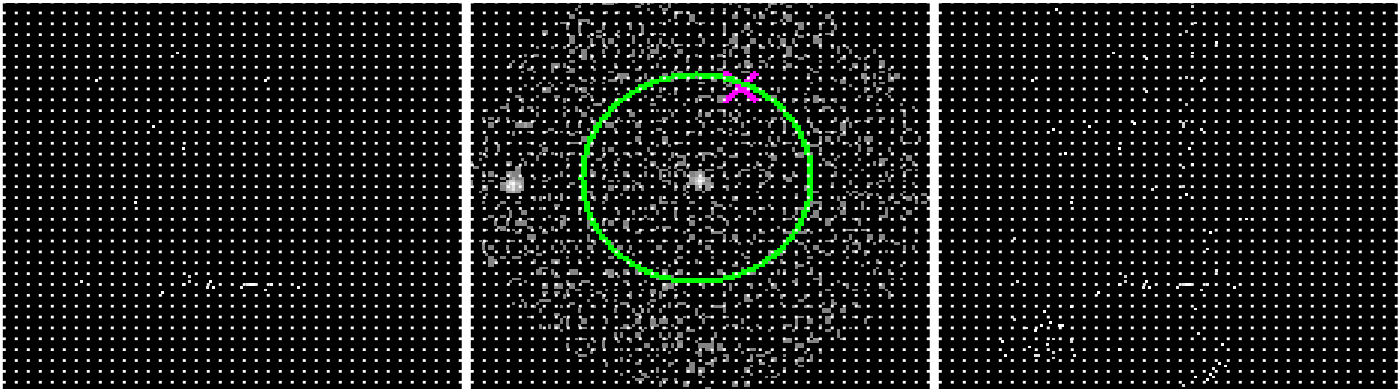
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	193	262	239	594	134	163	158





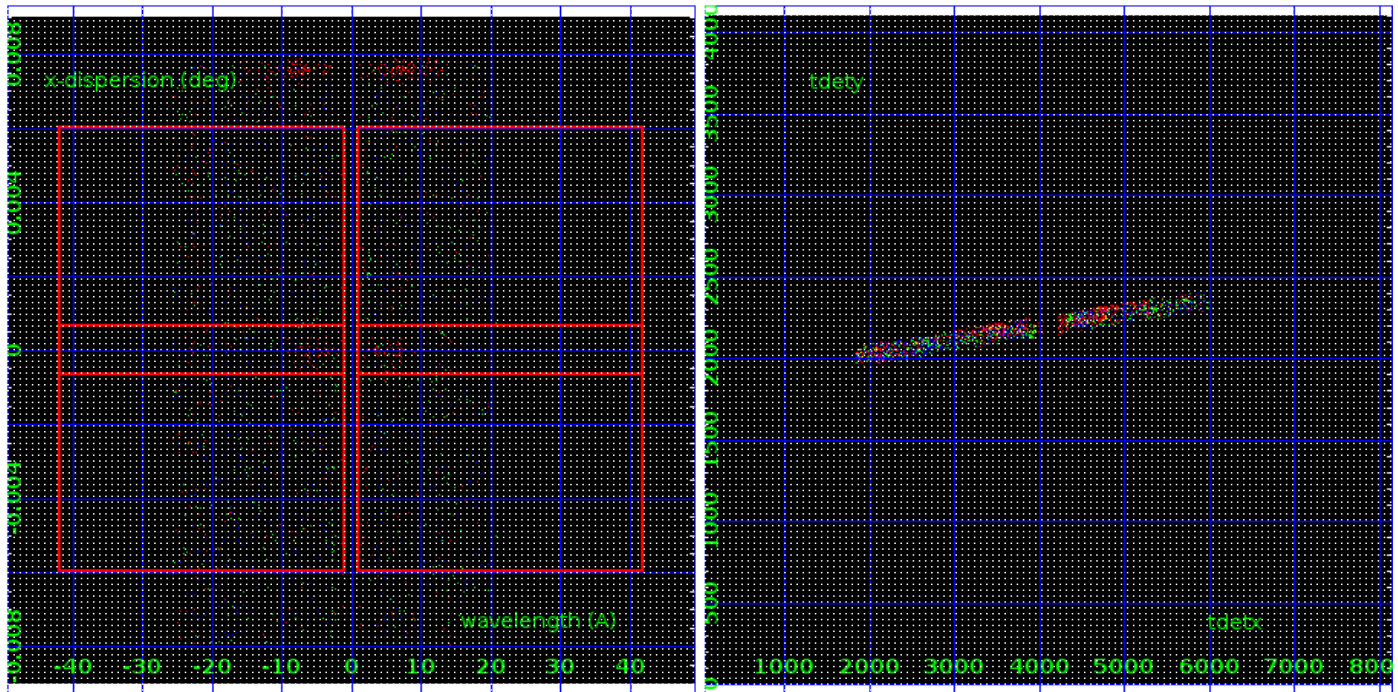
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

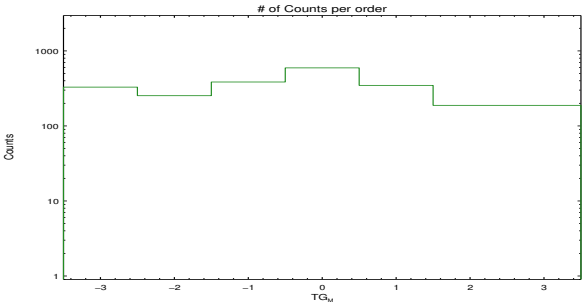
MEG Order Sort ALL

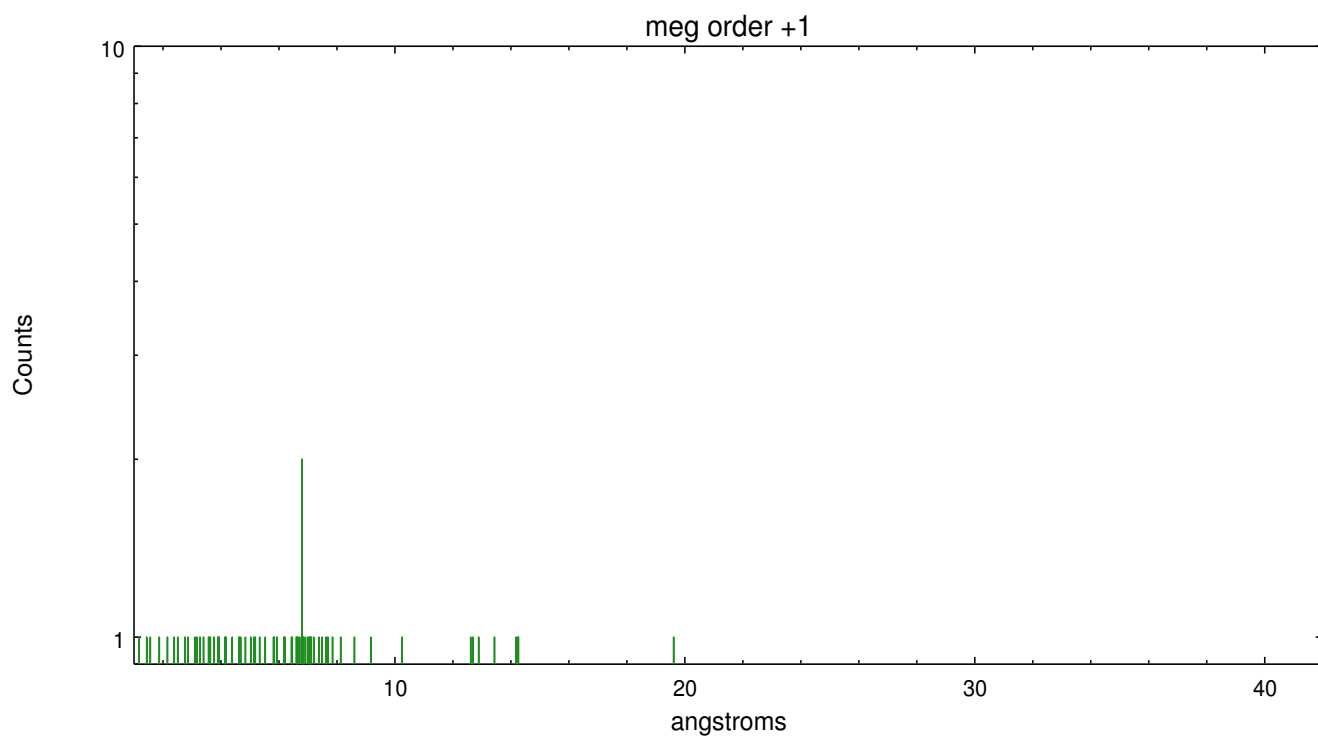
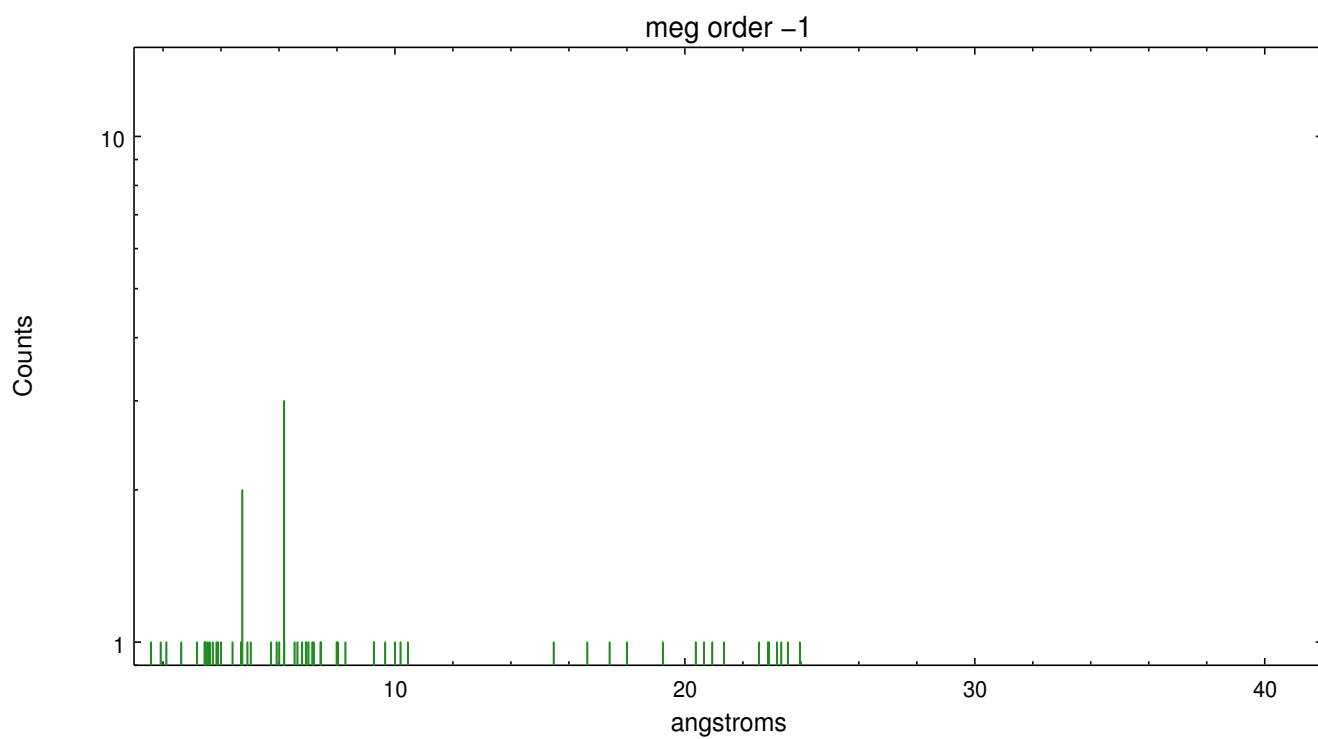


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	329	253	385	594	347	188	188





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2018.11.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	35.060658068895

A.2 Comments

Standard software processing technique using the tools tgdetect selected the wrong star for spectral extract. This obsid has been reprocessed using the star HL Tau as the source for the spectral extraction in this processing of the data. The zeroth order position was specified manually as the brightest X-ray emission in the source. The investigator will want to verify that the zeroth order position is at the desired position for extraction of the spectrum. The nearby star XZ Tau can also be the source for a spectral extraction using TGCat or CIAO tools.