

V&V Reference Report

L2 ASCDS Version : 10.6.4.1

Observation 21953 - L2 Version 1
Chandra X-Ray Center

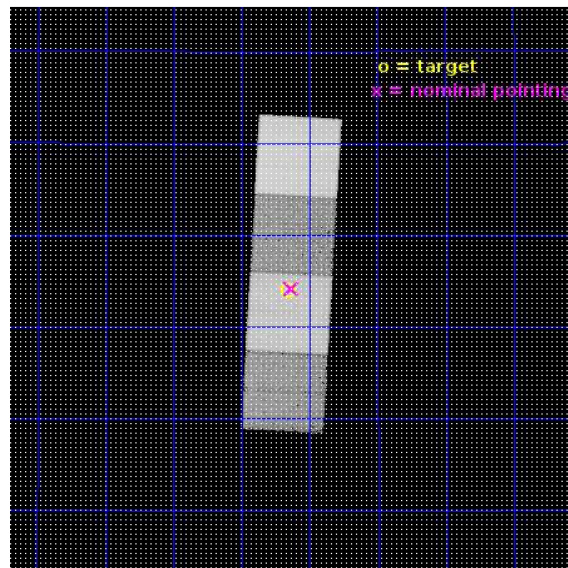
L2 Processing Date : Nov 3 2018

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1 Front

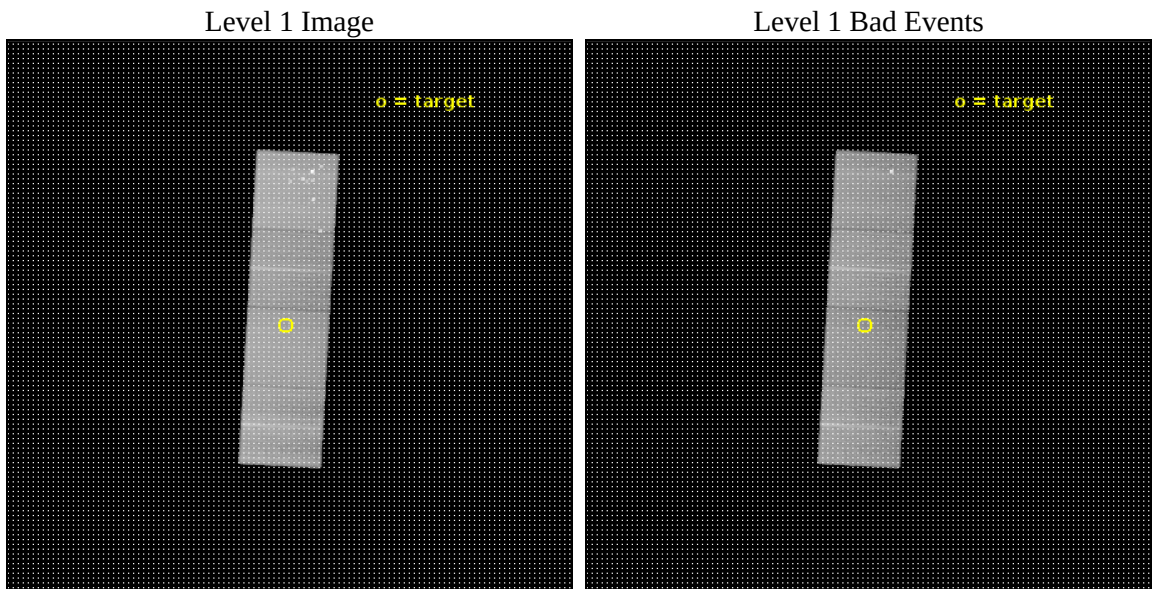
seq_num	201178	Sequence number
obs_id	21953	Observation id
title	An (X-ray Gratings) Tale of Two Young Stellar Objects	Proposal tit
observer	David Principe	Principal investigator
object	XZ Tau and HL Tau	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	67.91375	Observer's specified target RA [deg]
dec_targ	18.232028	Observer's specified target Dec [deg]
ra_nom	67.908646470017	Nominal RA [deg]
dec_nom	18.23602150291	Nominal Dec [deg]
roll_nom	93.158227576649	Nominal Roll [deg]
revision	1	Processing version of data
ontime	35061.000269771	Sum of GTIs [s]
livetime	34602.902489713	Livetime [s]
ontime5	35061.000269771	Sum of GTIs [s]
ontime6	35057.859179616	Sum of GTIs [s]
ontime7	35061.000269771	Sum of GTIs [s]
ontime8	35054.71813941	Sum of GTIs [s]
l2events	393793	Number of level 2 events



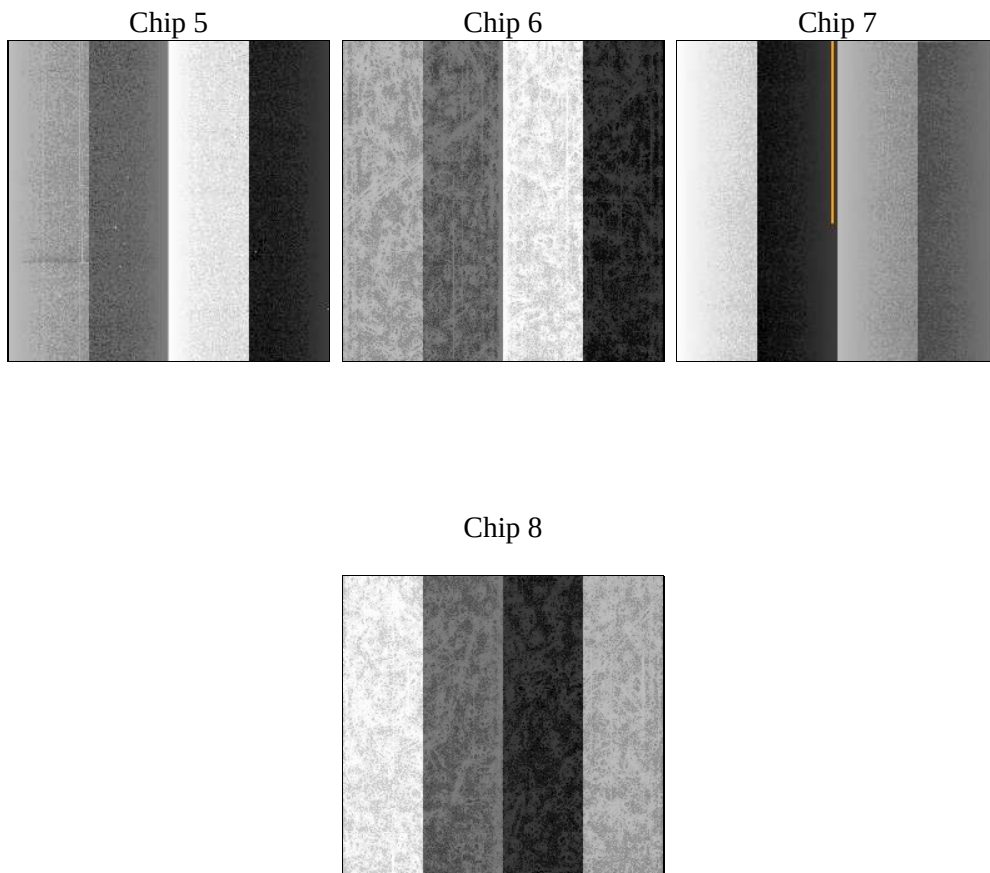
2 OBI

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	35061.000269771	Sum of GTIs [s]
caldsver	4.8.0.1	 	ontime5	35061.000269771	Sum of GTIs [s]
date	2018-11-03T23:17:42	Date and time of file creation	ontime6	35057.859179616	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	35061.000269771	Sum of GTIs [s]
			ontime8	35054.71813941	Sum of GTIs [s]
			l1events	1454196	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4086.90, 4071.74)	src1a sky pixel position

2.1.4 Events

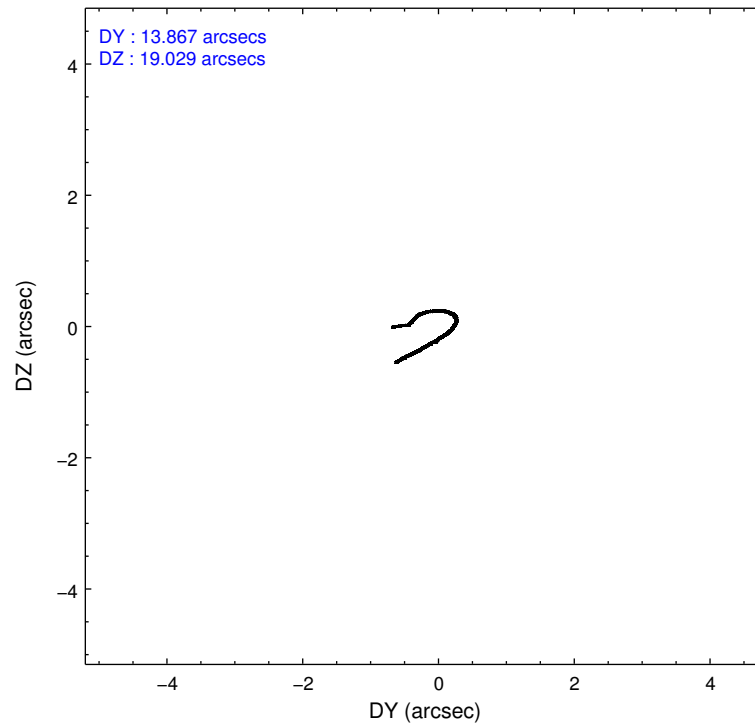
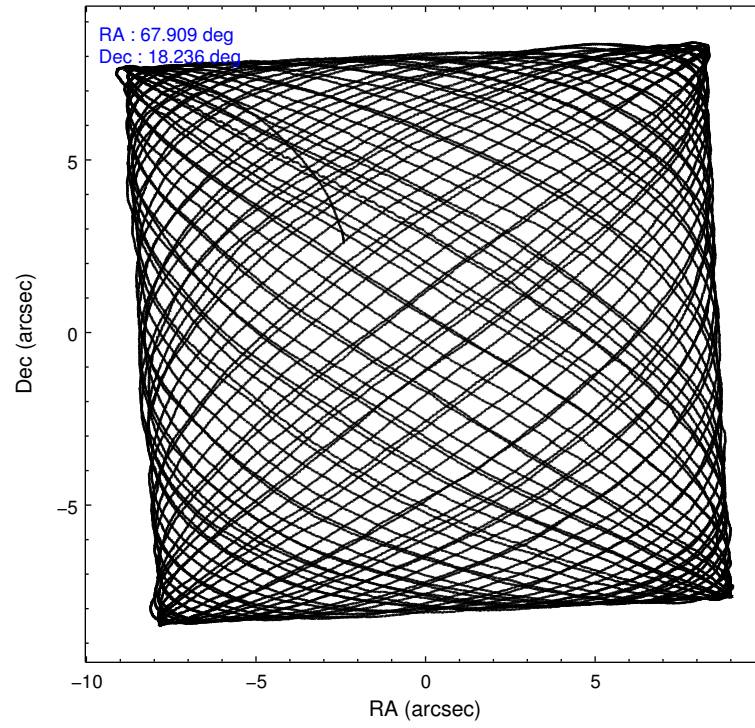
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	461362	290269	347668	354897
rejected events	233384	259912	199009	266222
rejected %	50%	89%	57%	75%

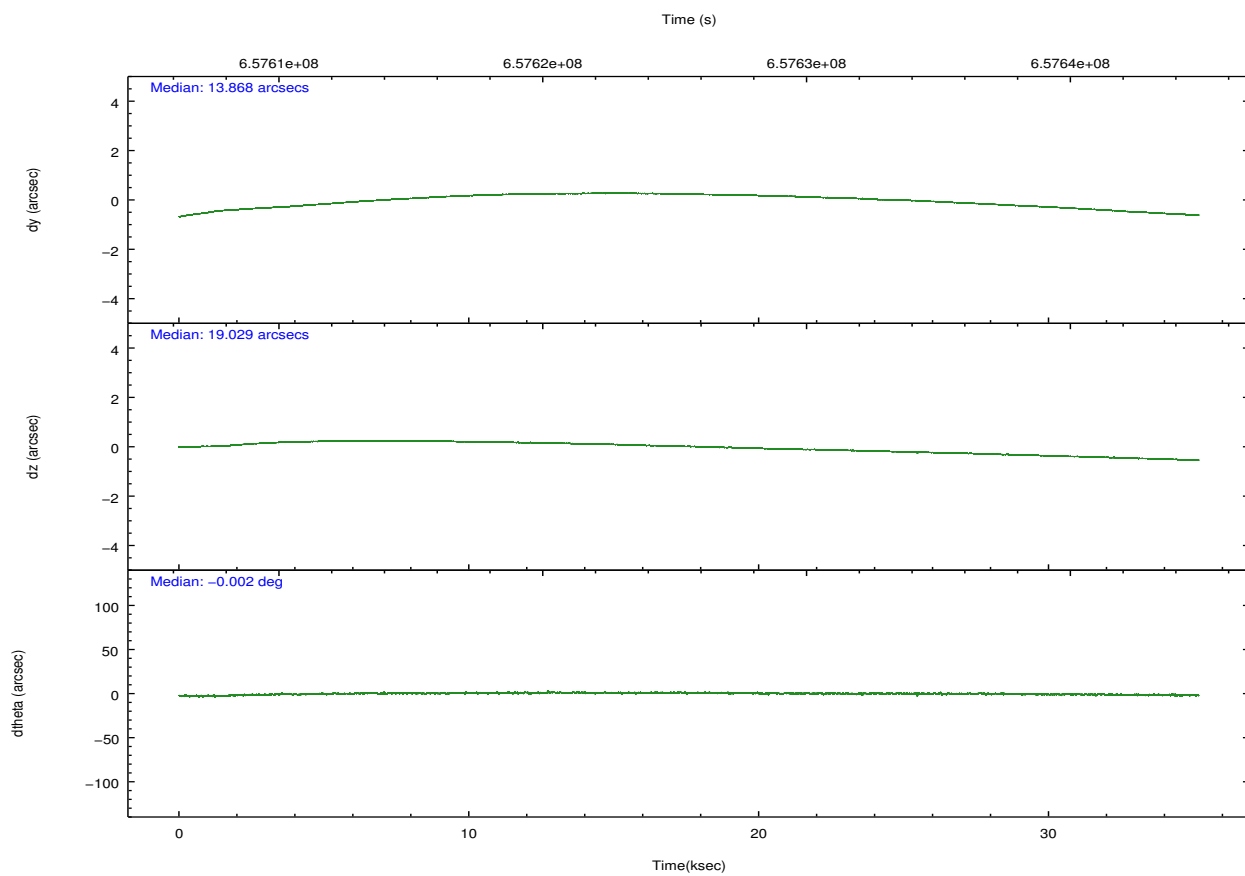
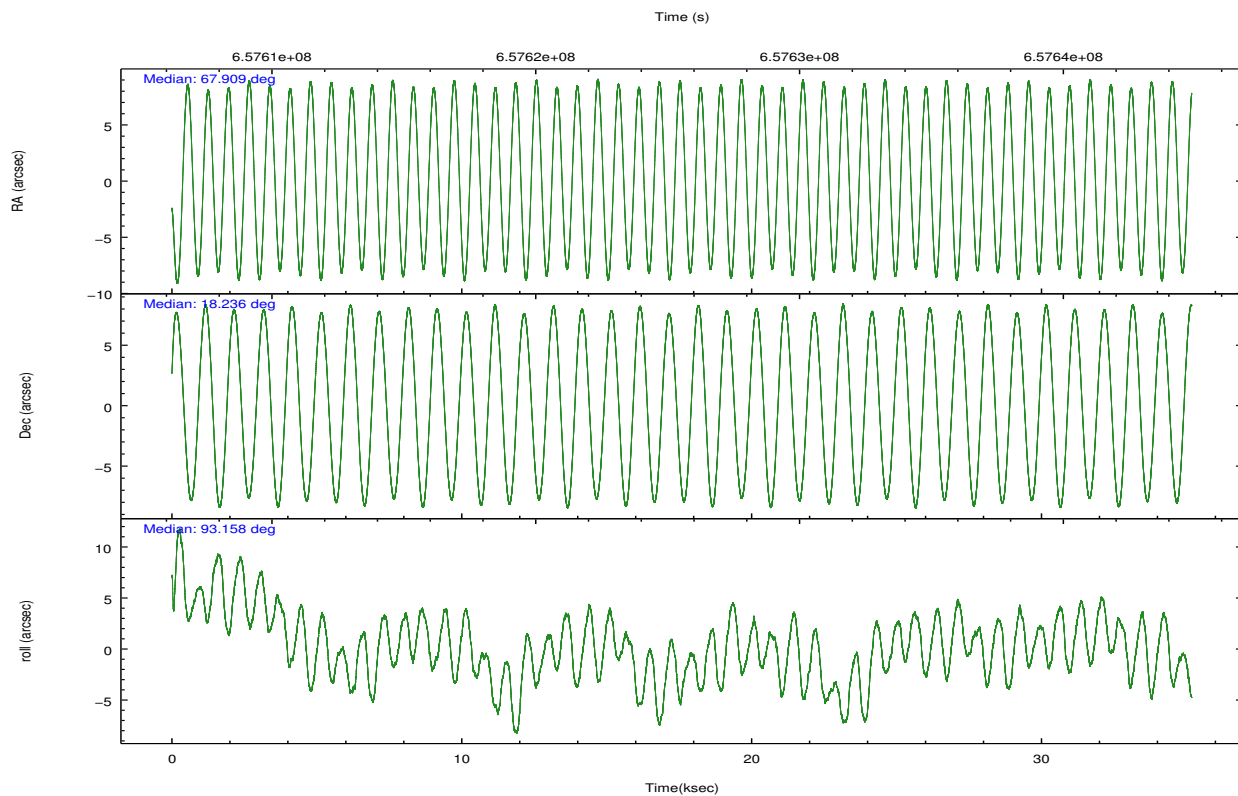
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	28826	8972	12095	23968
	6%	3%	3%	6%
grade 1 events	1127	136	493	289
	0%	0%	0%	0%
grade 2 events	69042	7925	31087	22195
	14%	2%	8%	6%
grade 3 events	7312	2741	11708	8904
	1%	0%	3%	2%
grade 4 events	7110	2699	11252	8474
	1%	0%	3%	2%
grade 5 events	27885	11522	33773	18296
	6%	3%	9%	5%
grade 6 events	115740	8024	82545	25178
	25%	2%	23%	7%
grade 7 events	204320	248250	164715	247593
	44%	85%	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	67.924785	67.90864647001683	CCD I2 on	N	N
[deg] Pointing Dec	18.213241	18.23602150291041	CCD I3 on	N	N
[deg] Pointing Roll	92.996556	93.15822757664913	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)	657608132.184000	657607341.67189	CCD S5 on	O2	N
Observation start date	2018-11-03T04:54:23	2018-11-03T04:42:21	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	657643132.184000	657643697.91155	On-chip summing requested	N	N
Observation end date	2018-11-03T14:37:43	2018-11-03T14:48:17	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



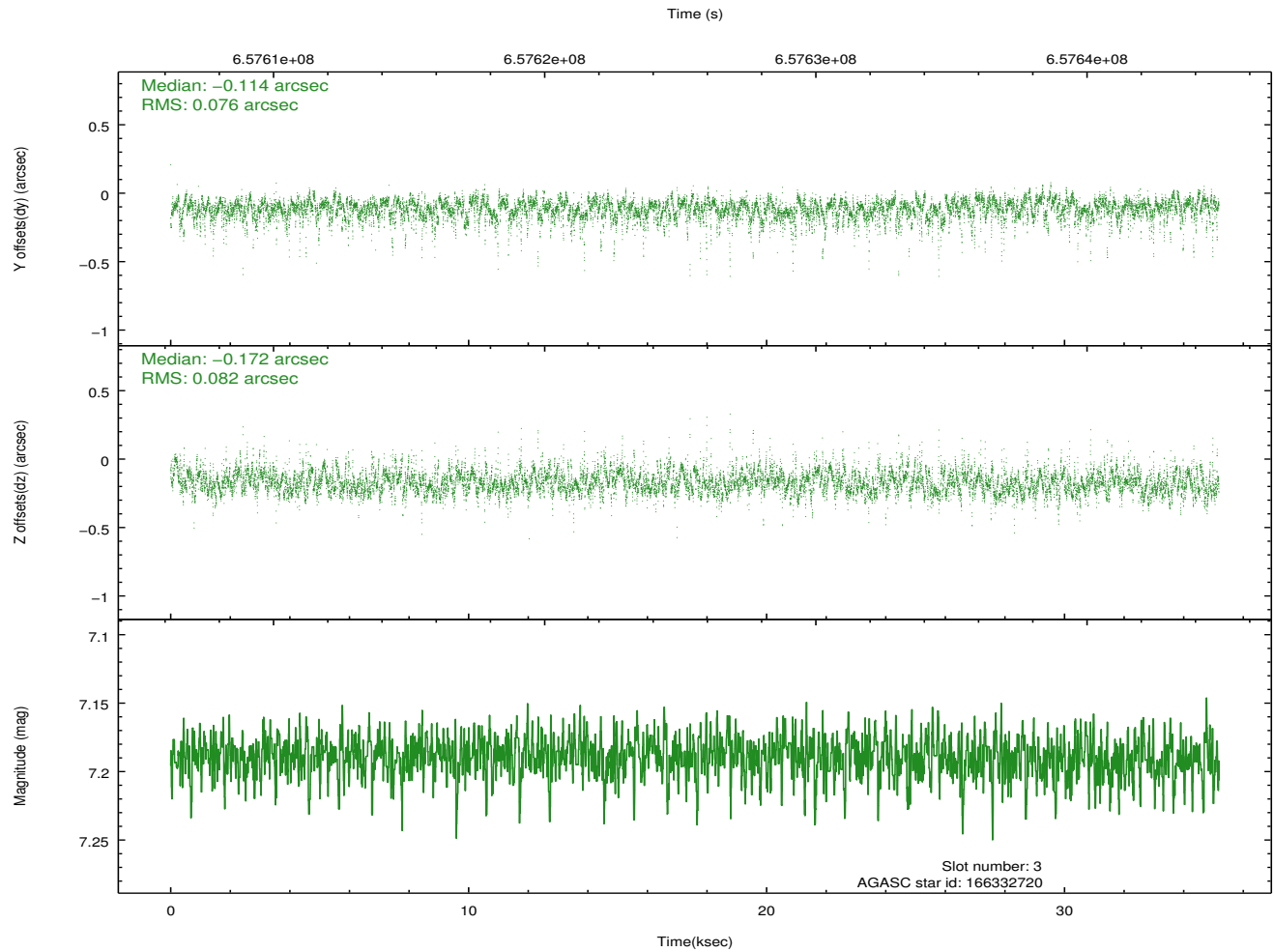
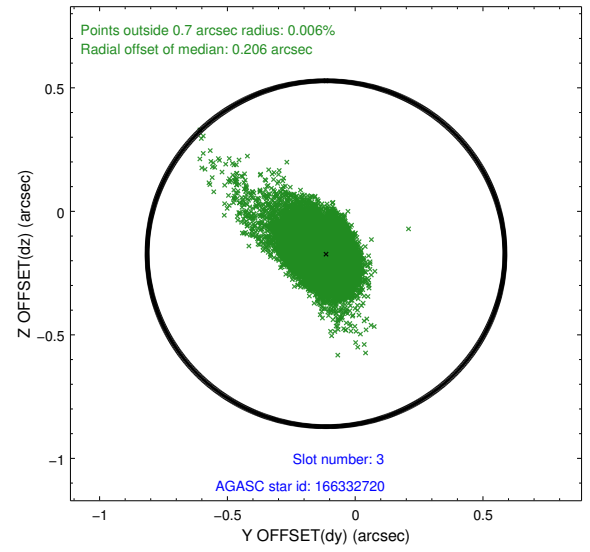
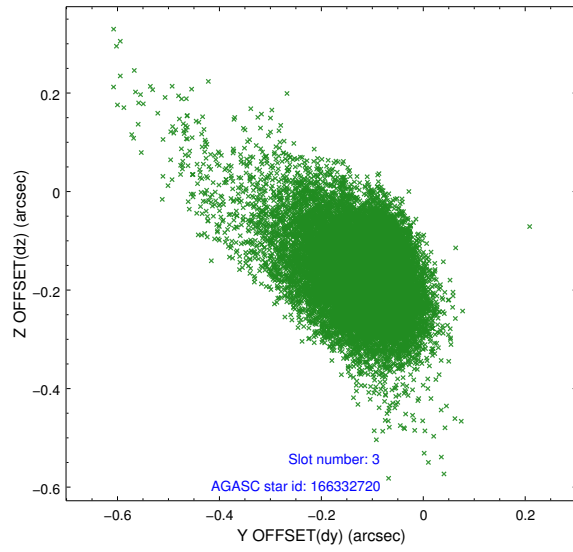


Slot Statistics

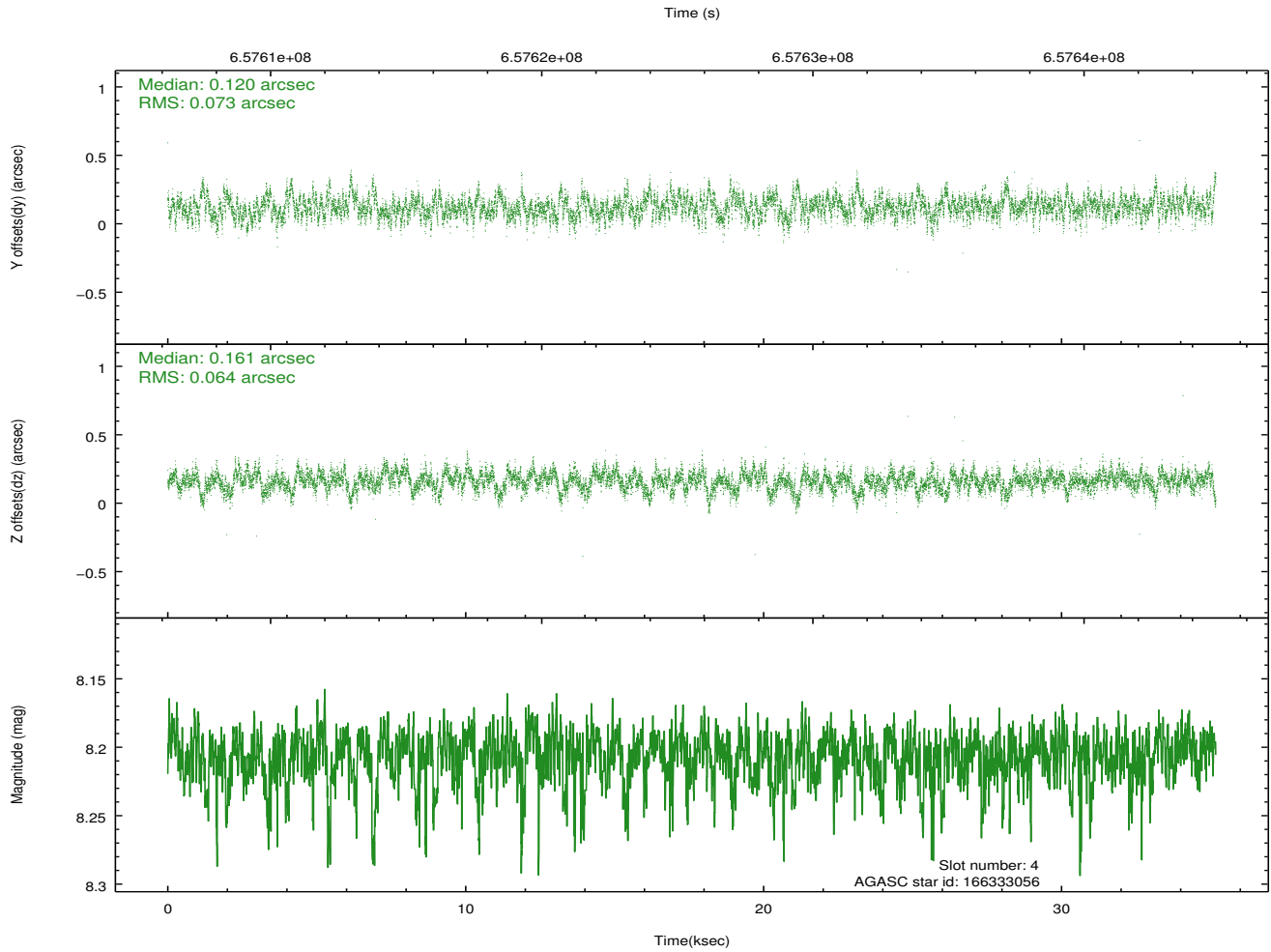
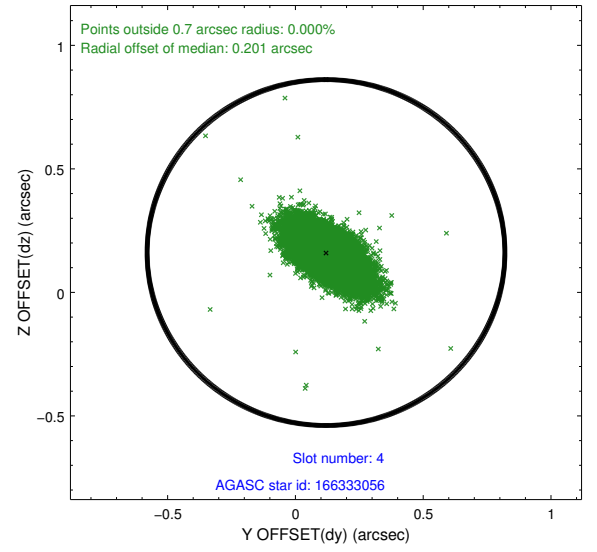
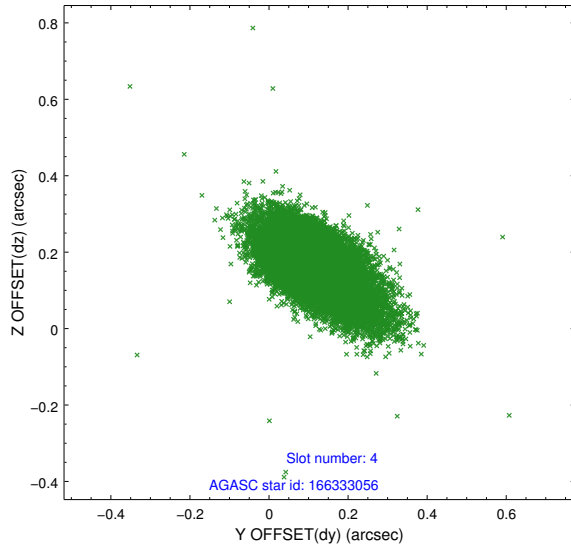
id	status	used	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		7.12	8579	1.000	-0.503	-0.349	0.013	0.037	0.000000	0.000000	-767.30	-1740
1	FID		7.24	8580	1.000	0.523	0.297	0.011	0.028	0.000000	0.000000	2147.04	168
2	FID		7.36	8580	1.000	-0.049	0.058	0.013	0.020	0.000000	0.000000	395.26	805
3	GUIDE	used	7.19	17159	1.000	-0.114	-0.172	0.106	0.199	67.335629	17.544937	-2293.92	2143
4	GUIDE	used	8.21	17155	1.000	0.120	0.161	0.097	0.180	67.813257	17.557208	-2337.69	506
5	GUIDE	used	7.10	17163	1.000	-0.184	-0.359	0.110	0.174	67.376458	17.863163	-1157.95	1939
6	GUIDE	used	9.03	17140	1.000	0.485	0.595	0.183	0.273	68.167699	17.861525	-1306.64	-764
7	GUIDE	used	9.10	17141	1.000	-0.287	-0.201	0.155	0.245	68.020035	18.861675	2314.63	-446

2.4 Star Slots

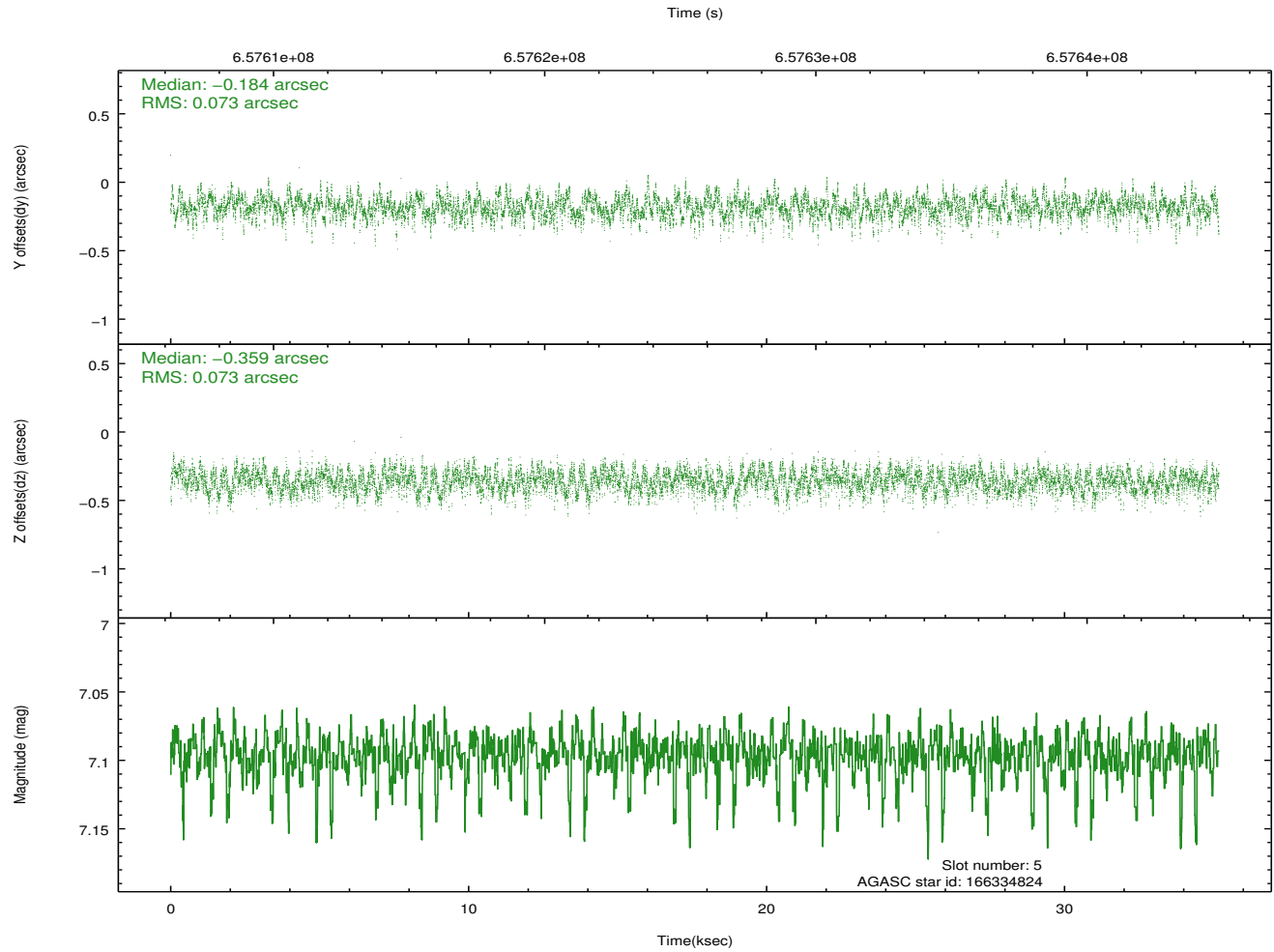
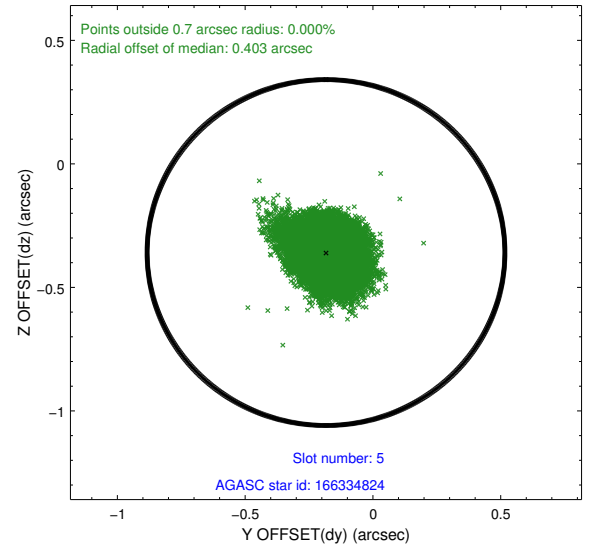
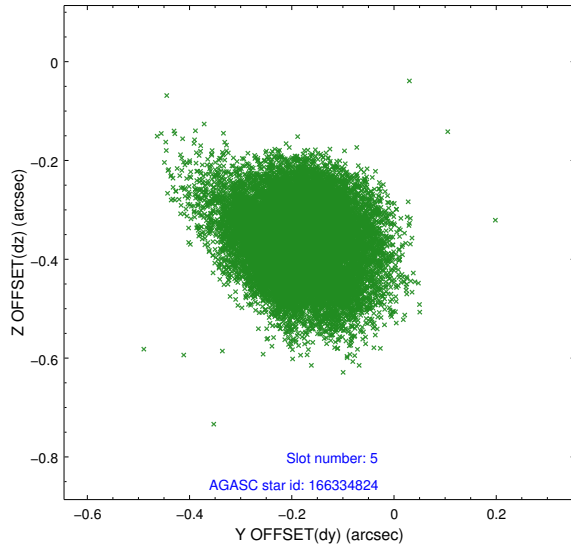
2.4.1 Slot 3



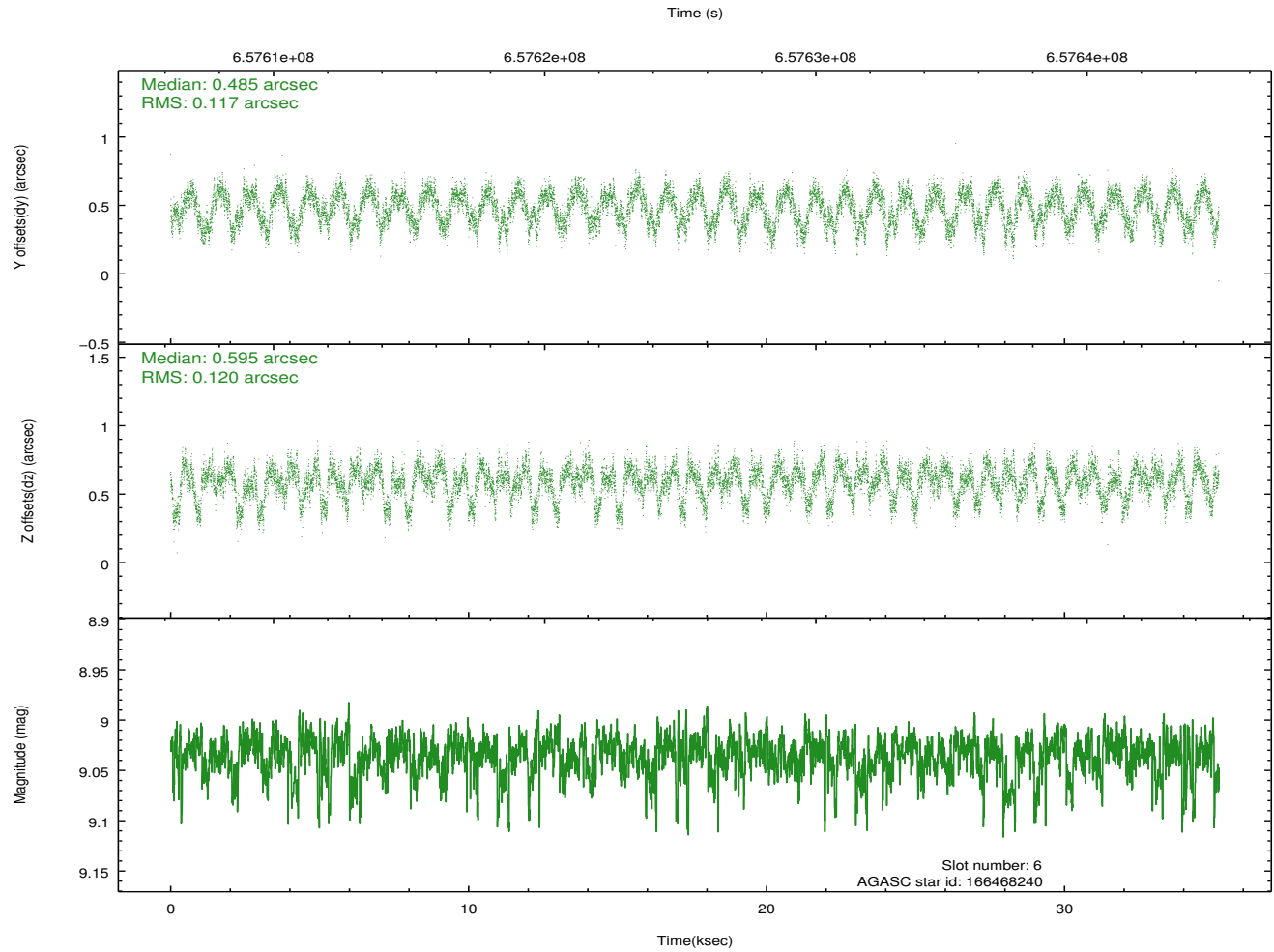
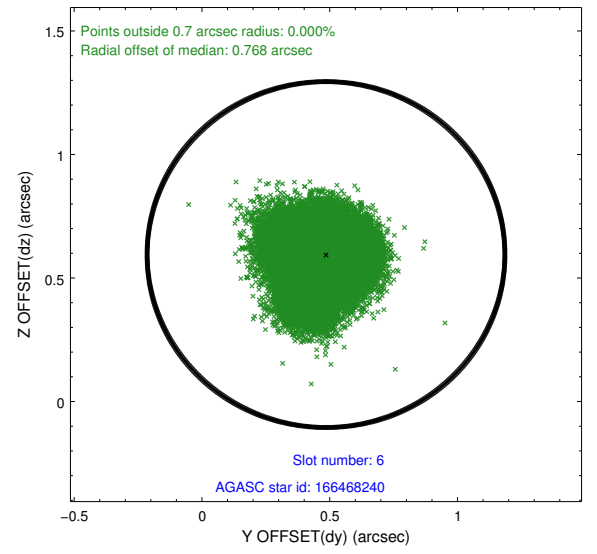
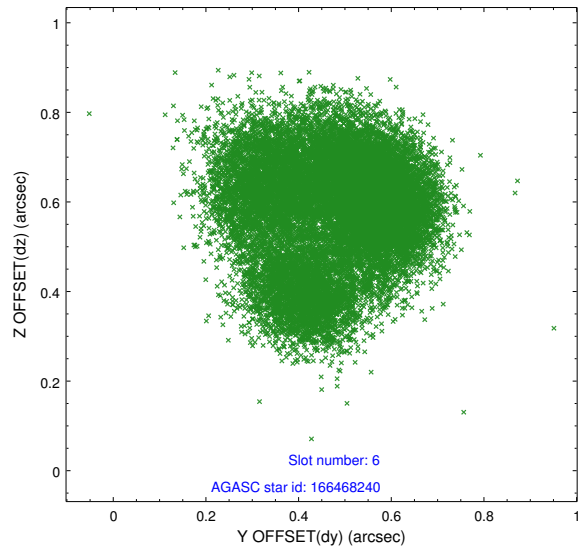
2.4.2 Slot 4



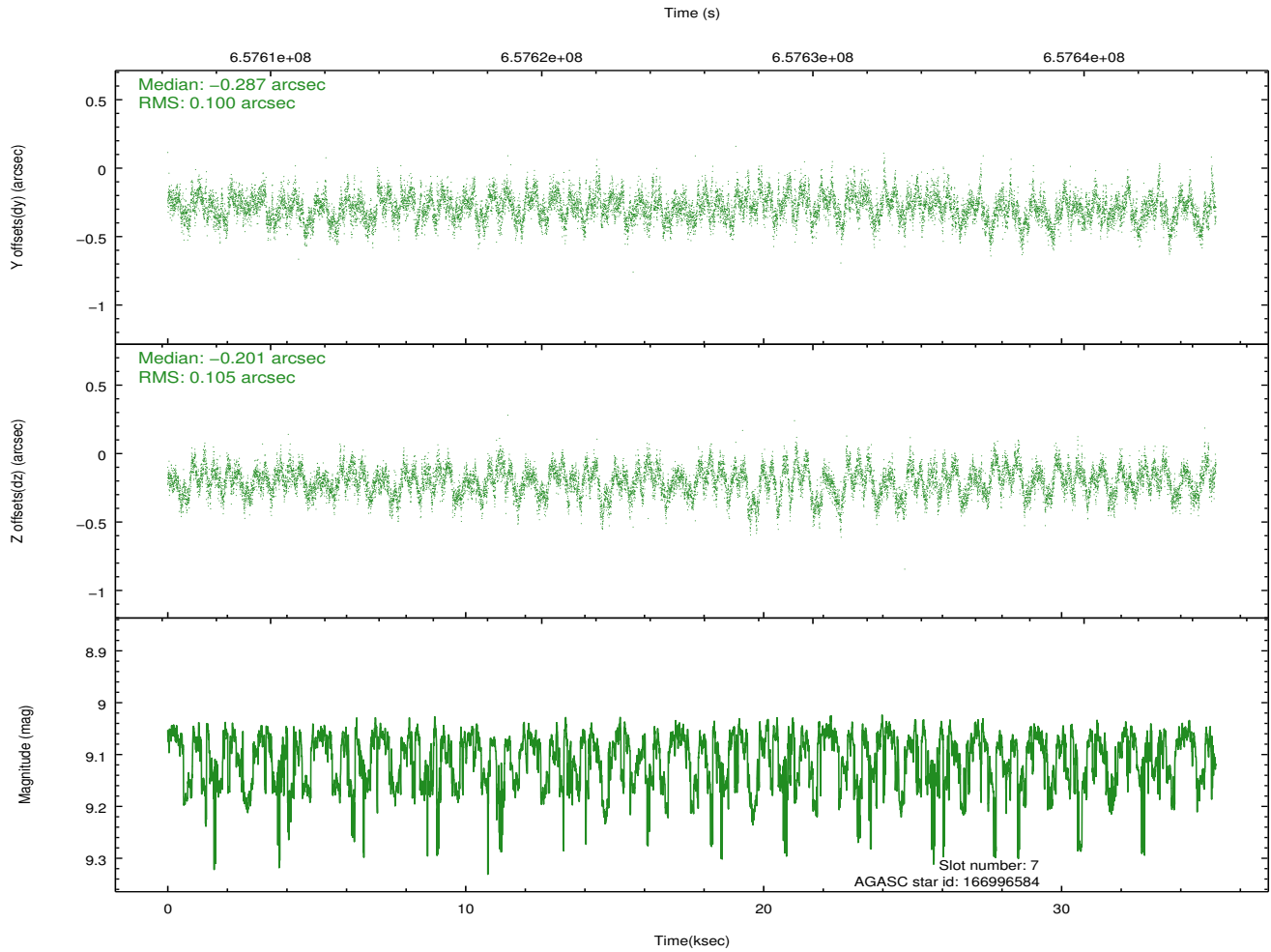
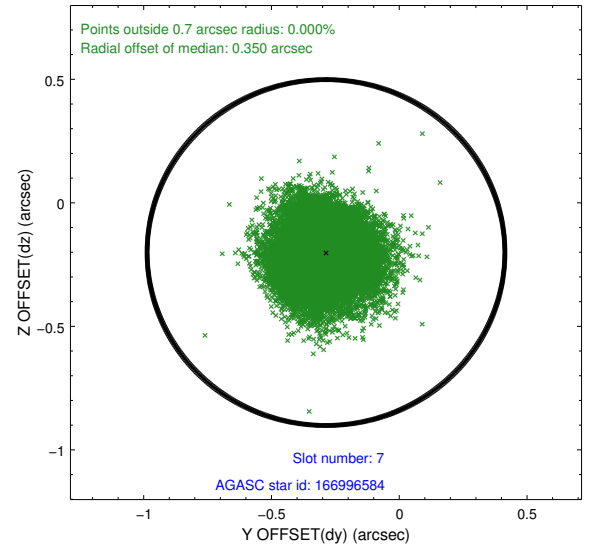
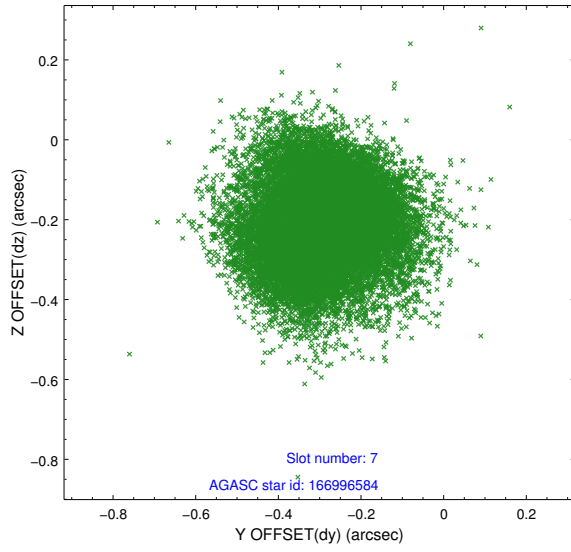
2.4.3 Slot 5



2.4.4 Slot 6

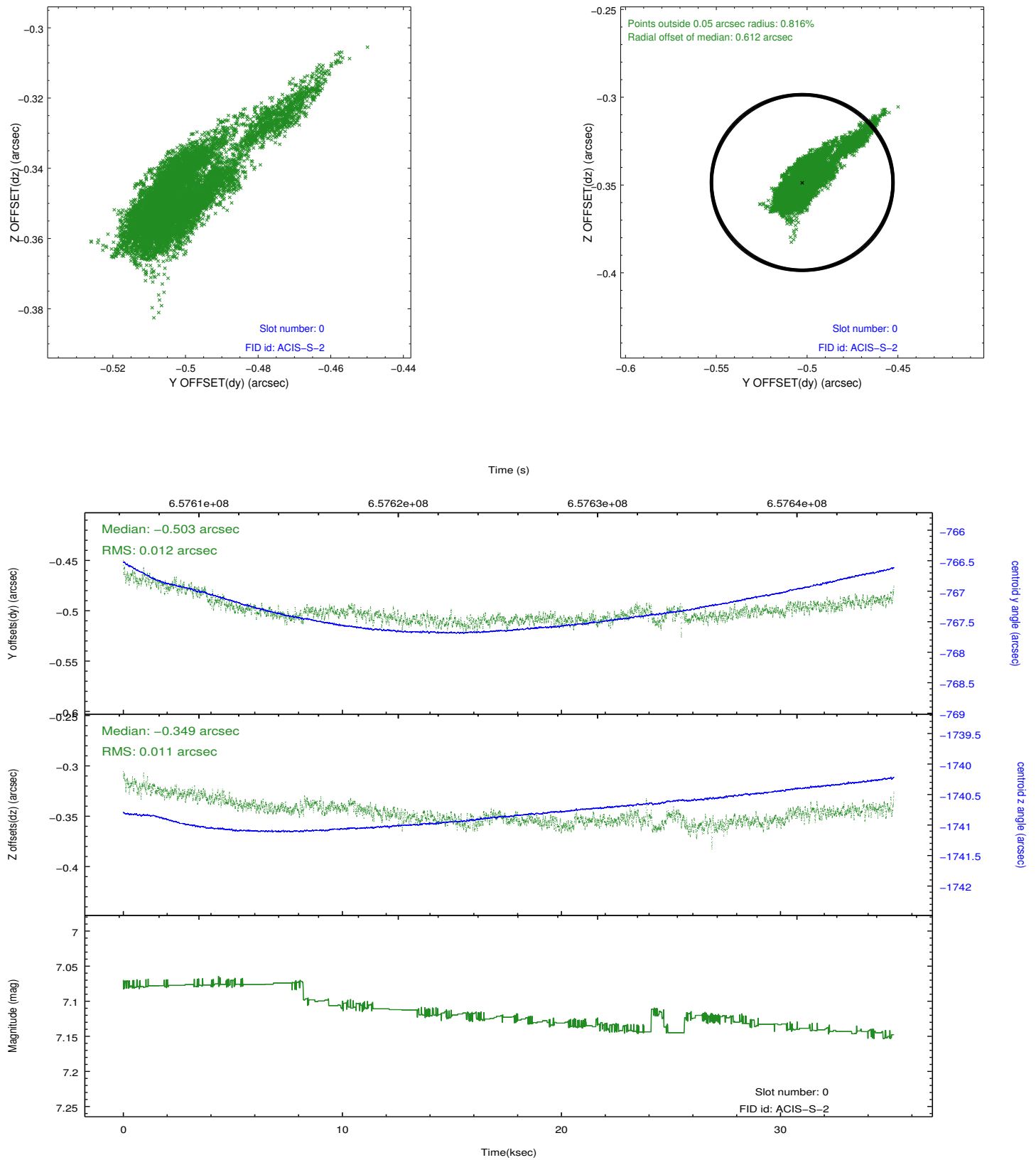


2.4.5 Slot 7

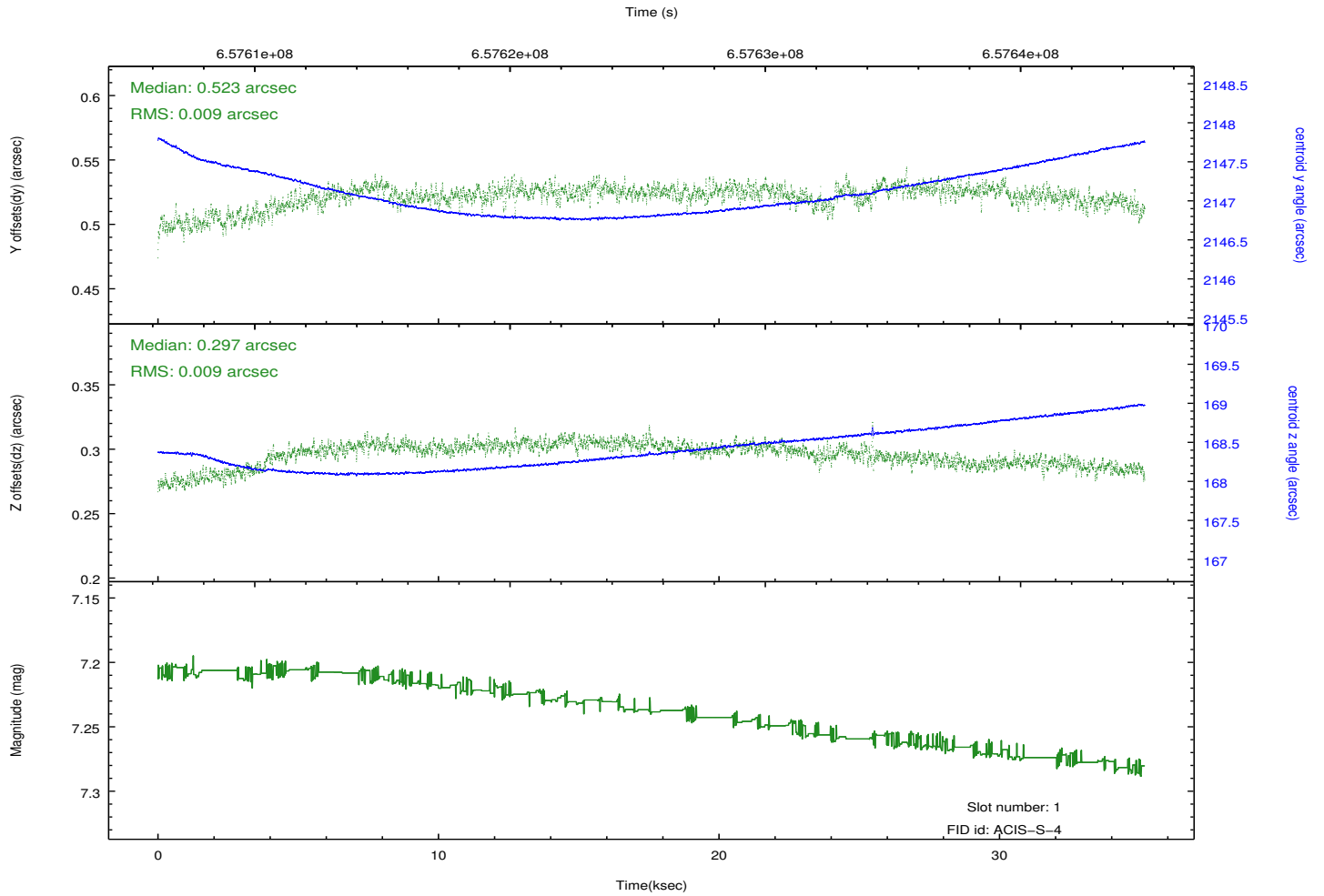
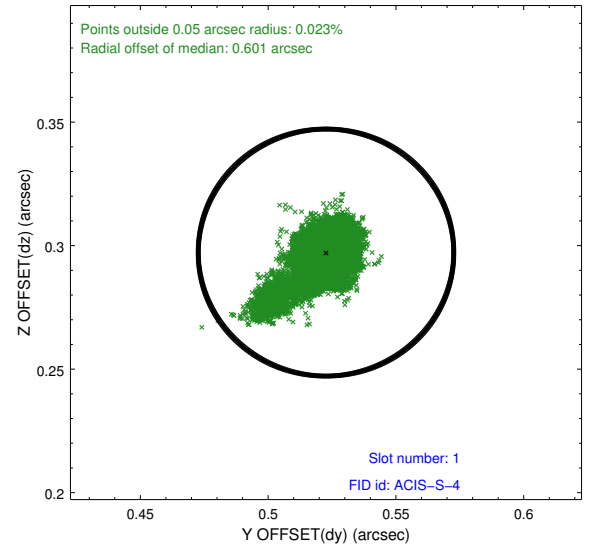
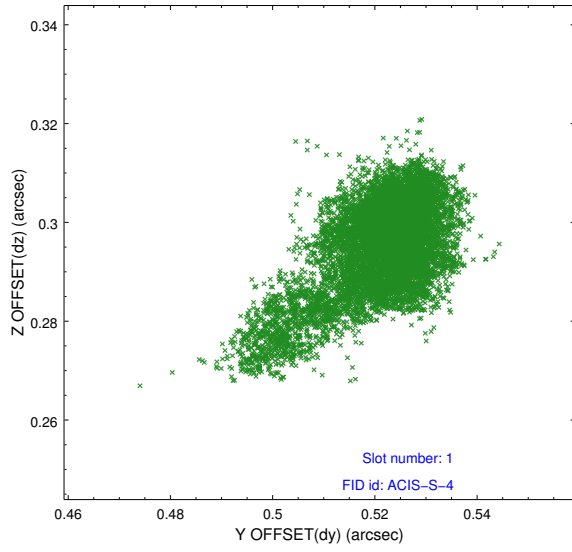


2.5 FID Slots

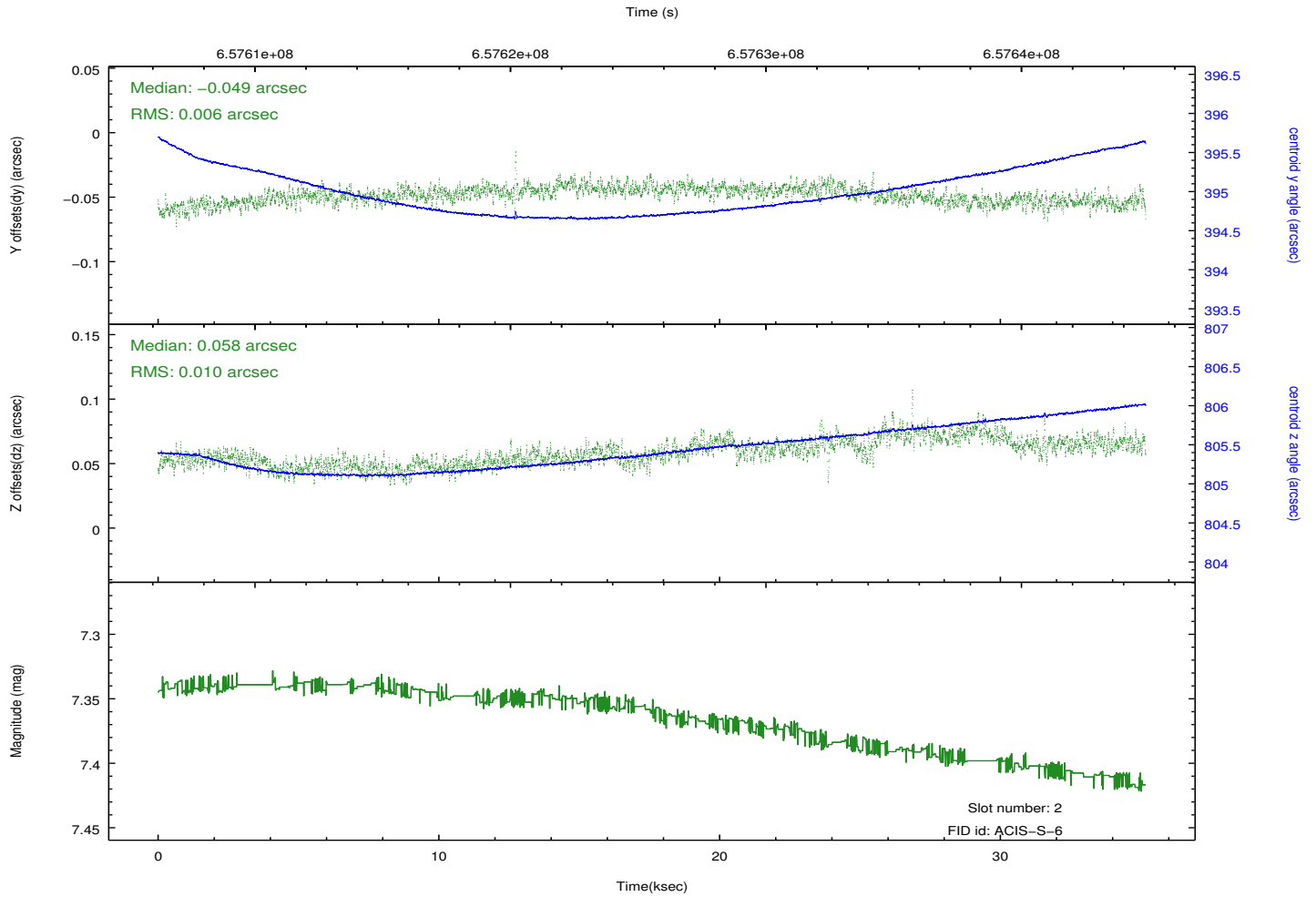
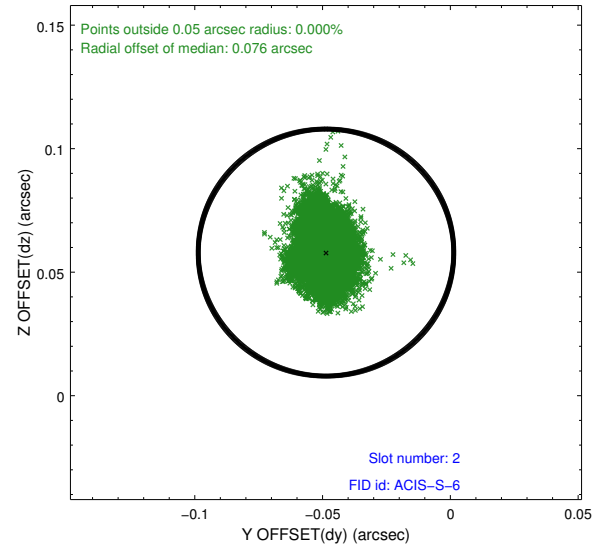
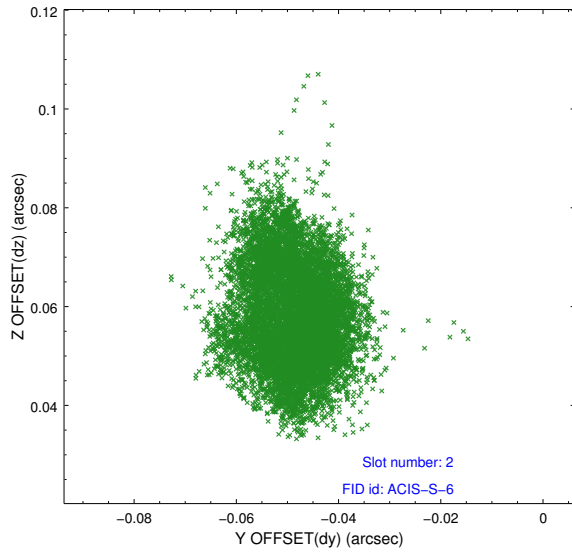
2.5.1 Slot 0



2.5.2 Slot 1

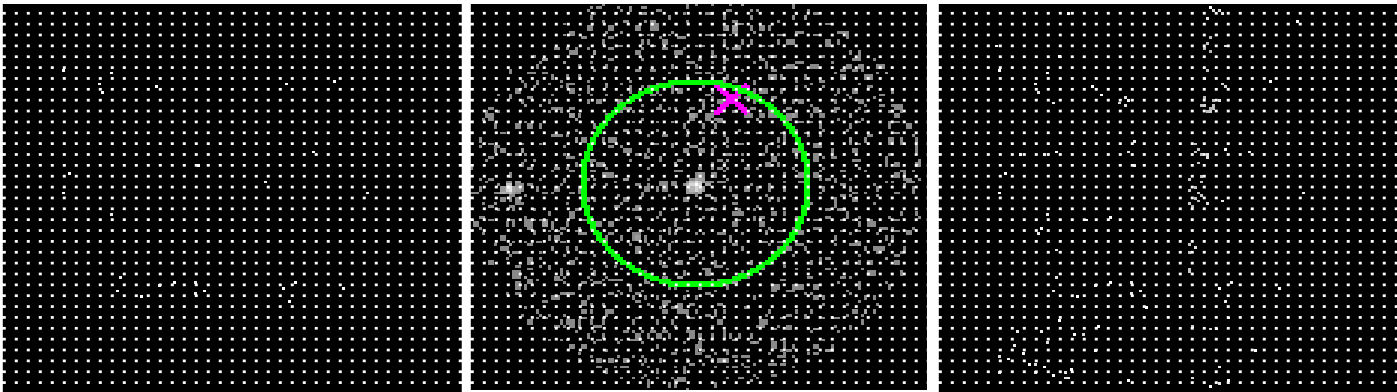


2.5.3 Slot 2



3 Gratings

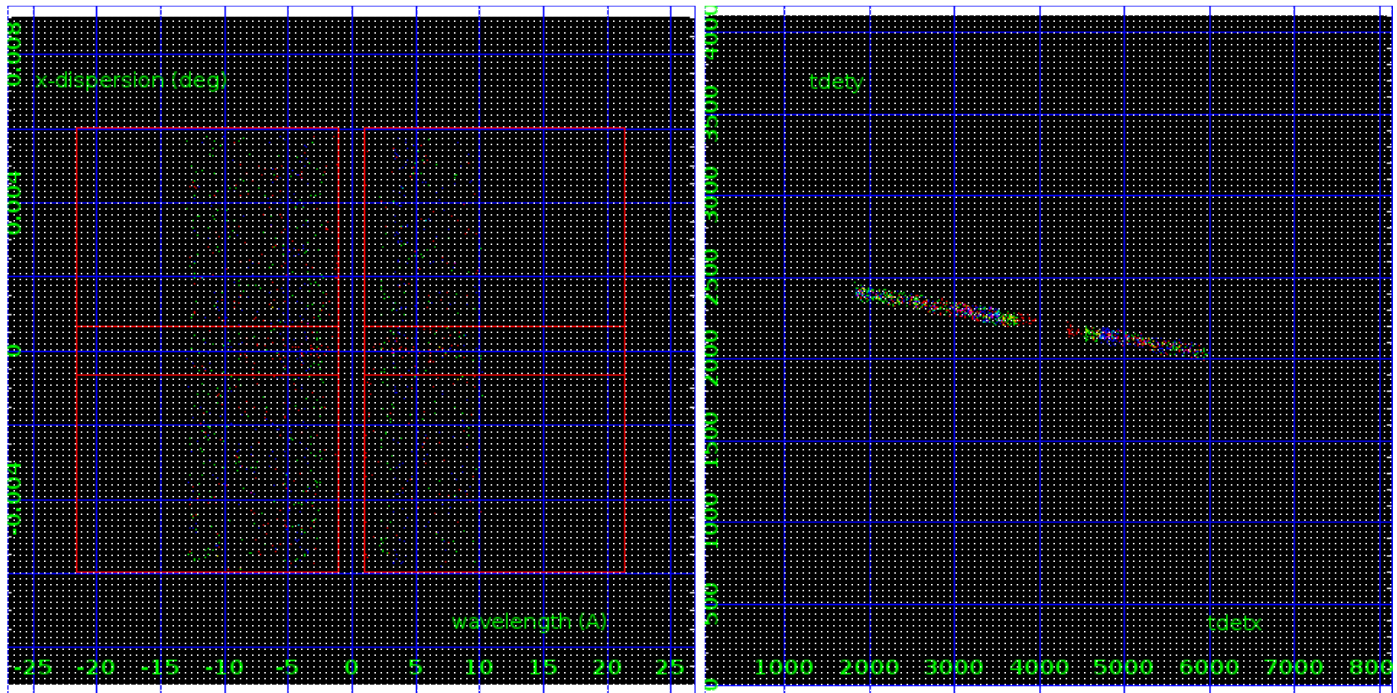
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

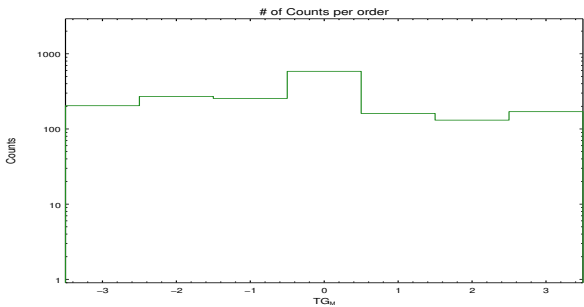
HEG Order Sort ALL

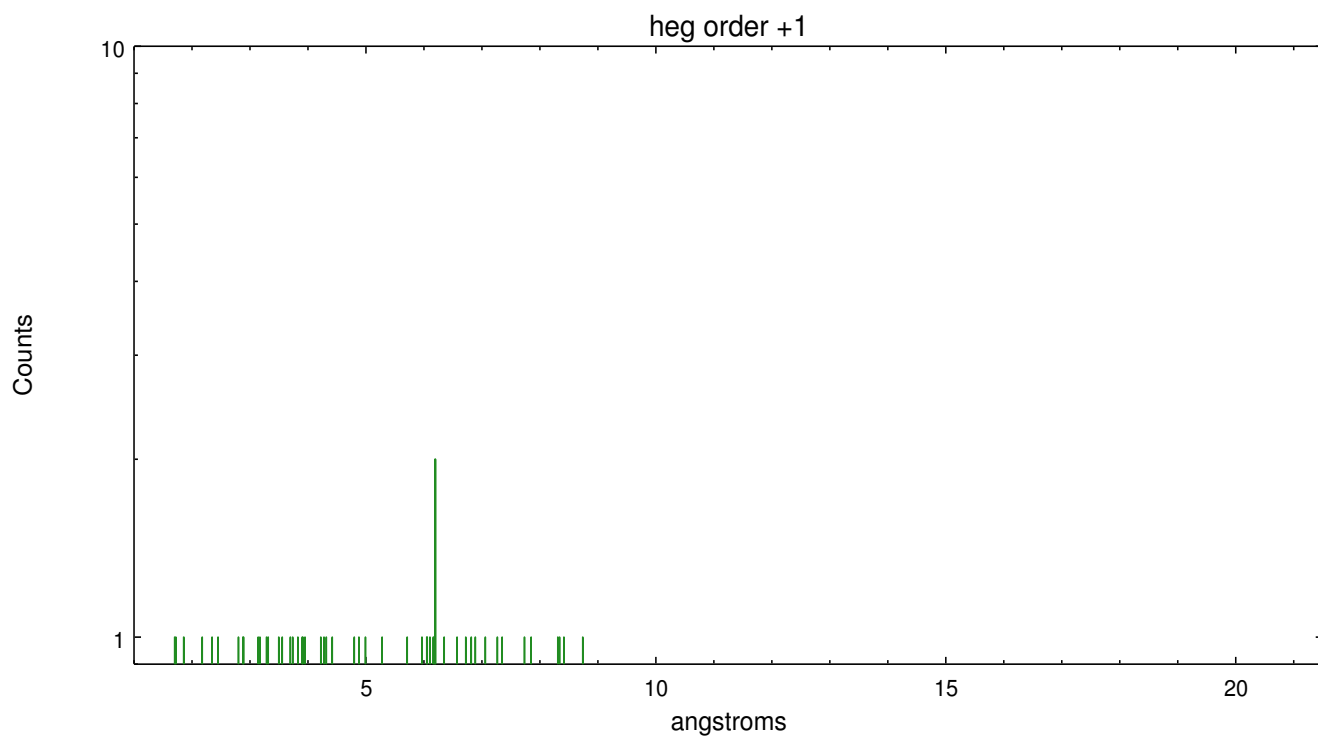
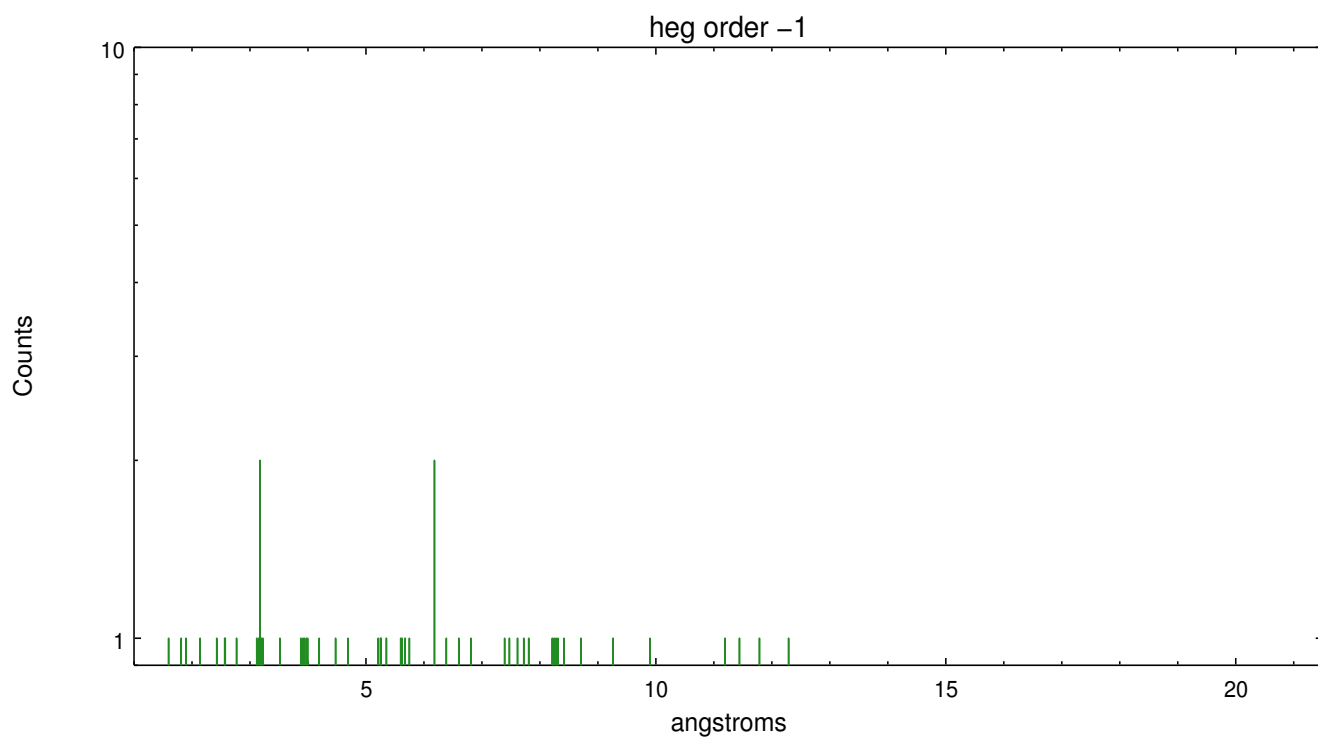


Spot Image HEG

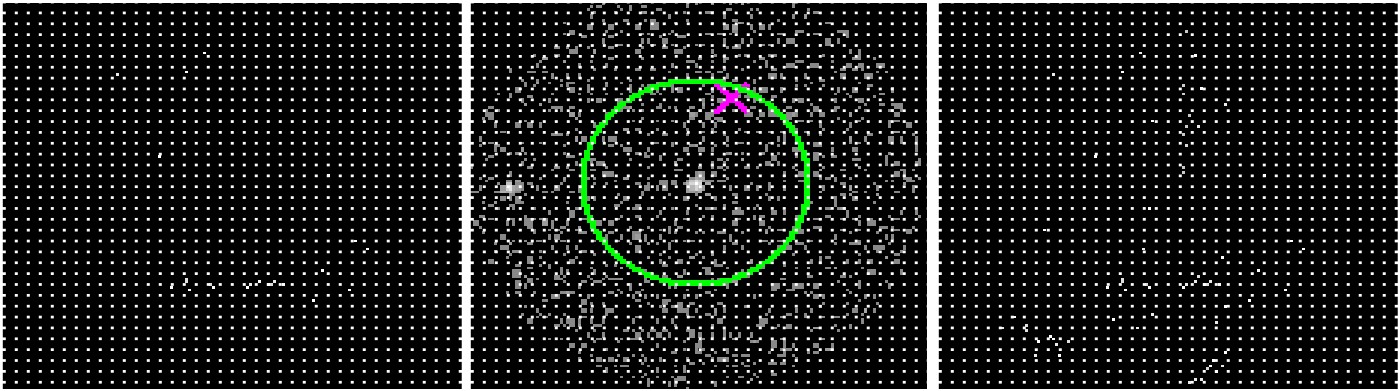
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	204	271	255	584	161	131	170





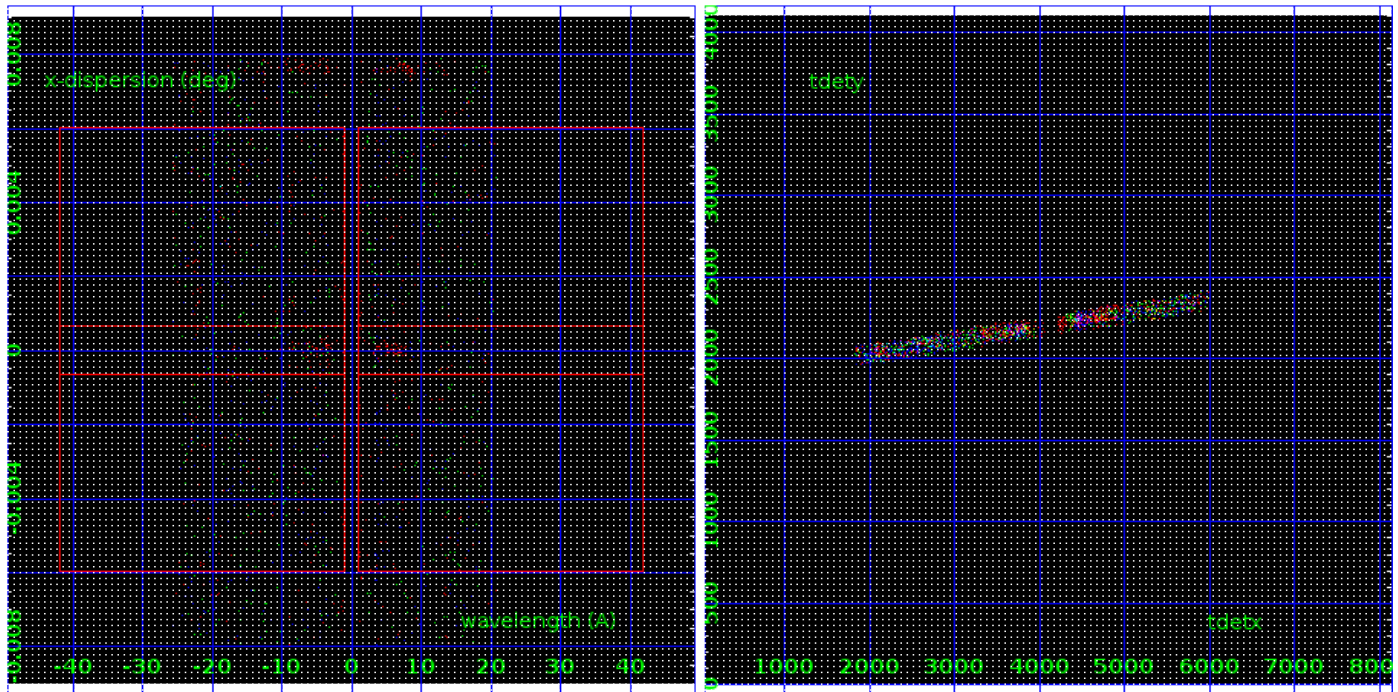
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

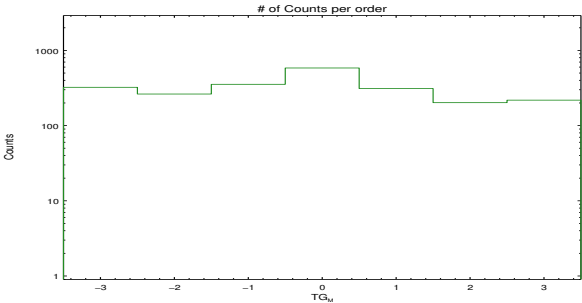
MEG Order Sort ALL

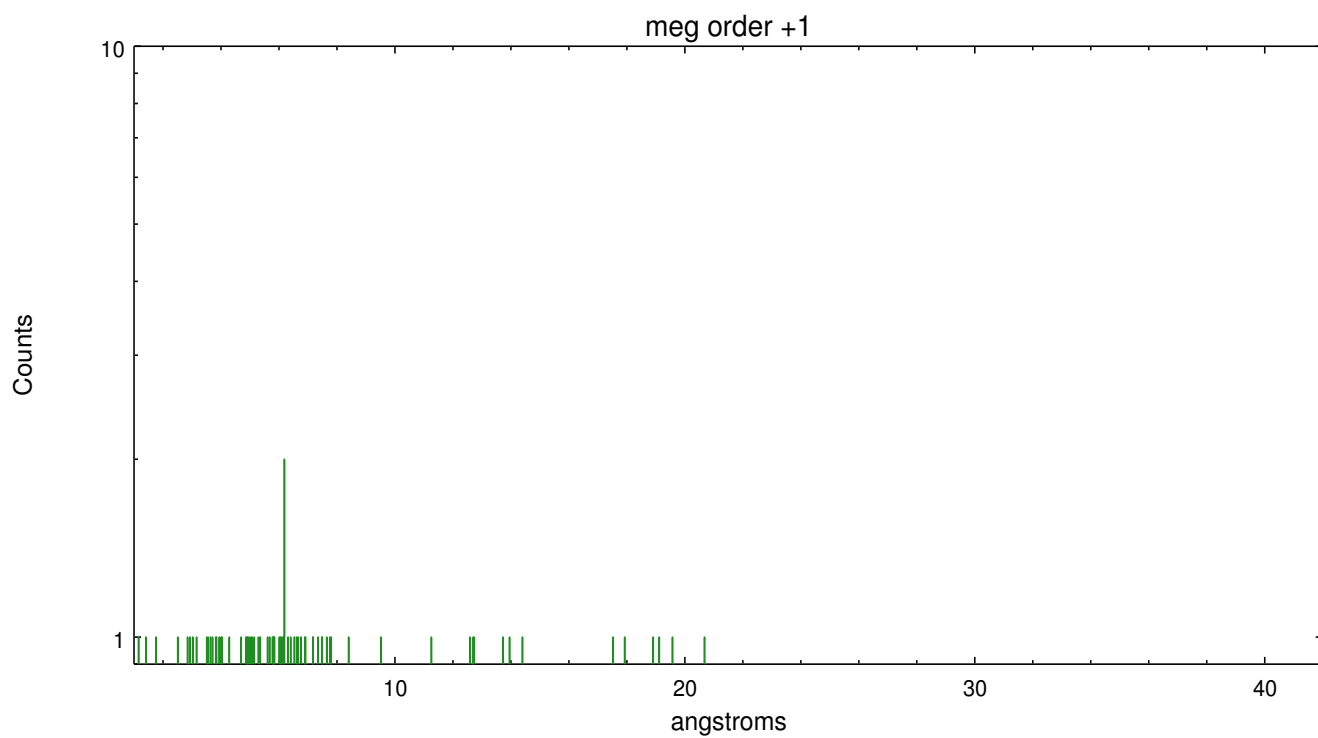
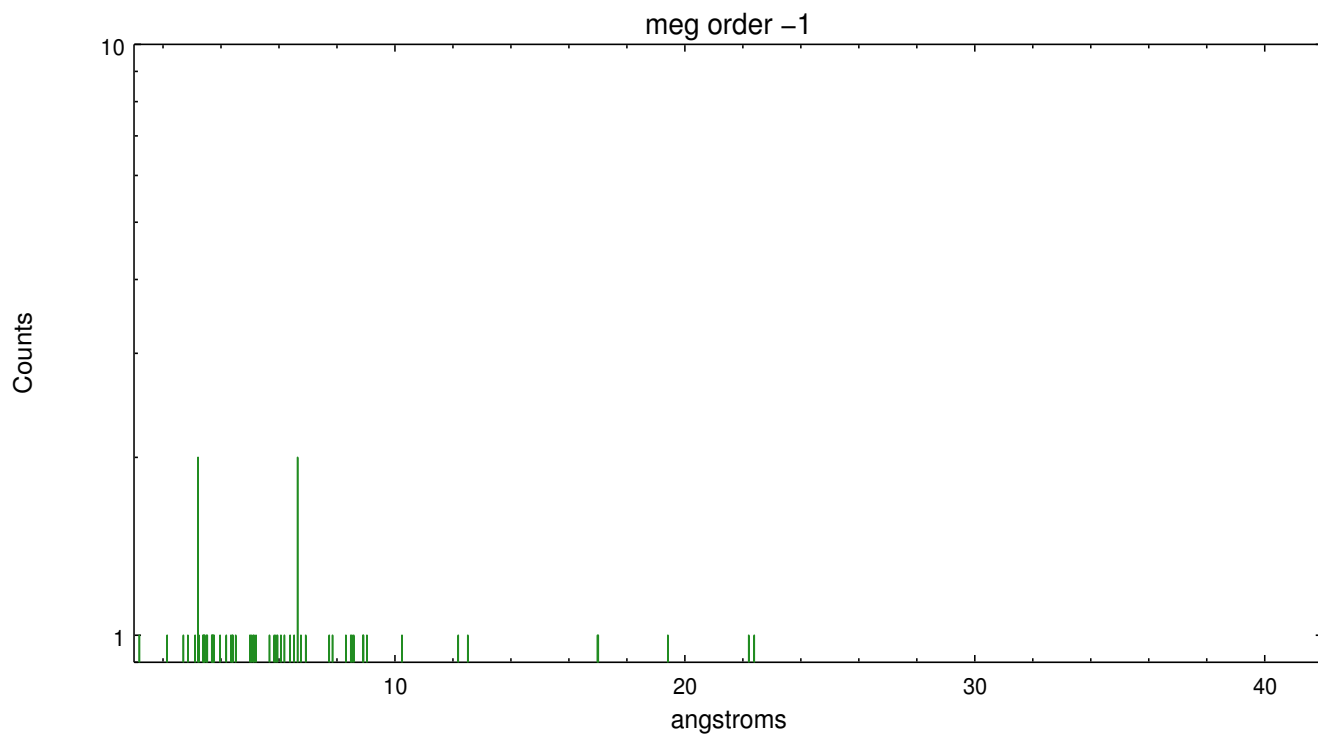


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	323	263	354	584	311	202	218





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2018.11.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	35.061000269771

A.2 Comments