

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 20844 - L2 Version 2
Chandra X-Ray Center

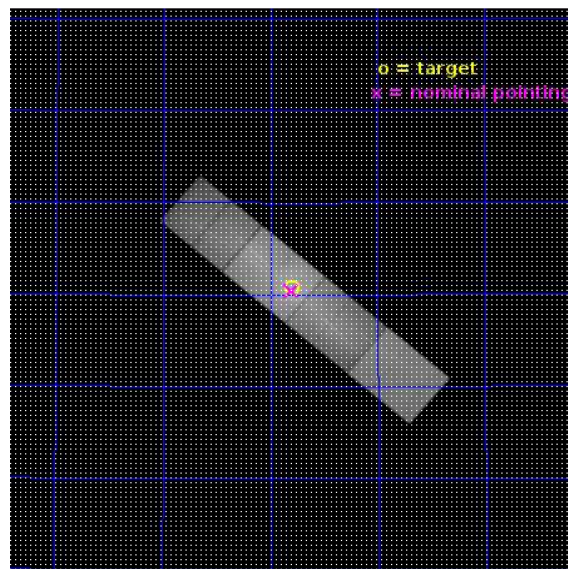
L2 Processing Date : Dec 6 2017

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1 Front

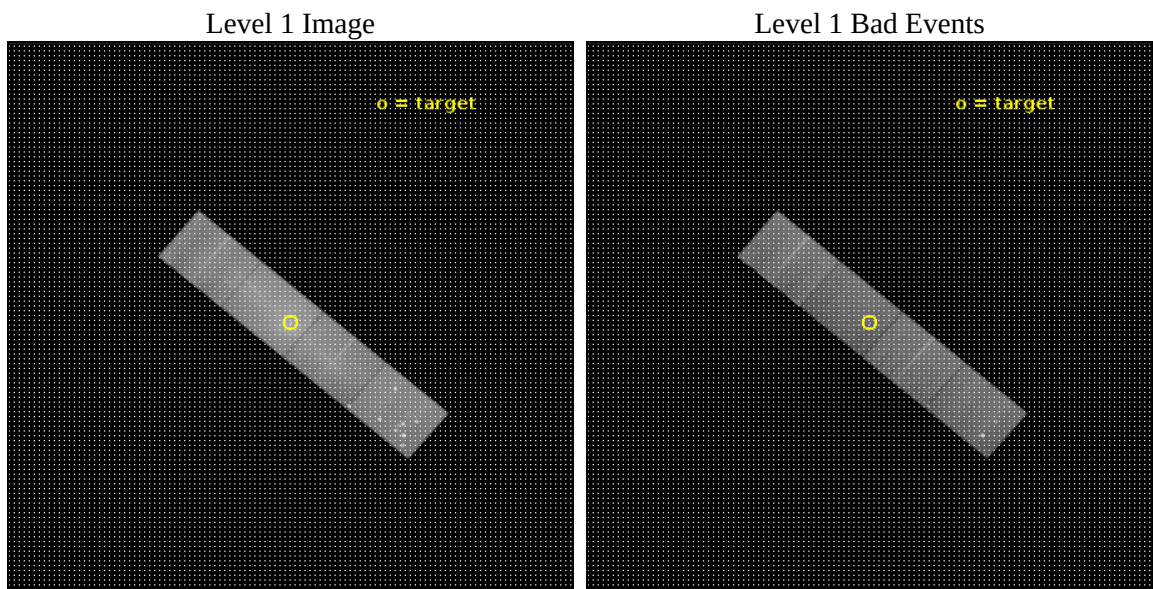
seq_num	703554	Sequence number
obs_id	20844	Observation id
title	Chandra/HETG Observations of NGC1275	Proposal title
observer	Christopher Reynolds	Principal investigator
object	NGC1275	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.950417	Observer's specified target RA [deg]
dec_targ	41.511667	Observer's specified target Dec [deg]
ra_nom	49.950988731714	Nominal RA [deg]
dec_nom	41.50709397161	Nominal Dec [deg]
roll_nom	220.15624176156	Nominal Roll [deg]
revision	2	Processing version of data
ontime	35087.763334632	Sum of GTIs [s]
livetime	34497.850097957	Livetime [s]
ontime5	35087.722294688	Sum of GTIs [s]
ontime6	35087.681254625	Sum of GTIs [s]
ontime7	35087.763334632	Sum of GTIs [s]
ontime8	35087.640214682	Sum of GTIs [s]
l2events	970687	Number of level 2 events



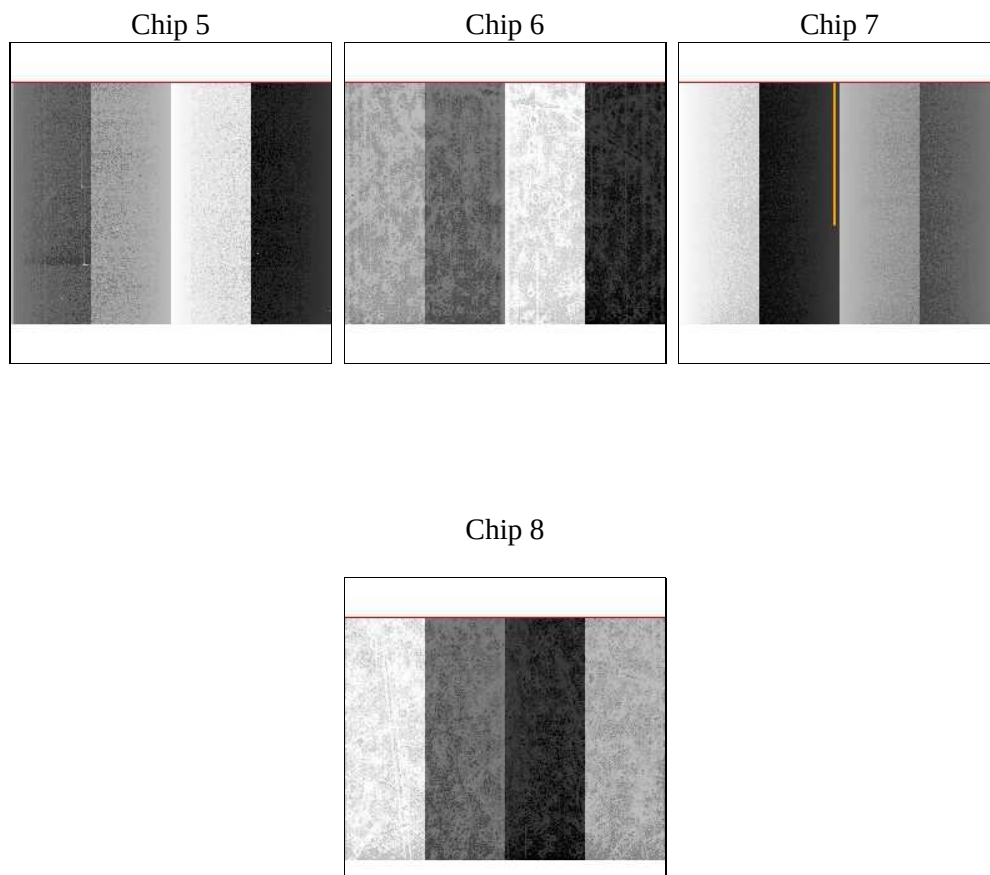
2 OBI

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	Processing system revision	ontime	35087.763334632	Sum of GTIs [s]
caldsver	4.7.6	 	ontime5	35087.722294688	Sum of GTIs [s]
date	2017-12-05T18:23:16	Date and time of file creation	ontime6	35087.681254625	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	35087.763334632	Sum of GTIs [s]
			ontime8	35087.640214682	Sum of GTIs [s]
			l1events	1788998	Number of level 1 events
			tgmethod	MANUAL	Method used to create src1a file
			zo_pos	(4098.35, 4130.42)	src1a sky pixel position
			zo_pos_tgd	(4098.35, 4130.42)	src1a sky pixel position via radetect

2.1.4 Events

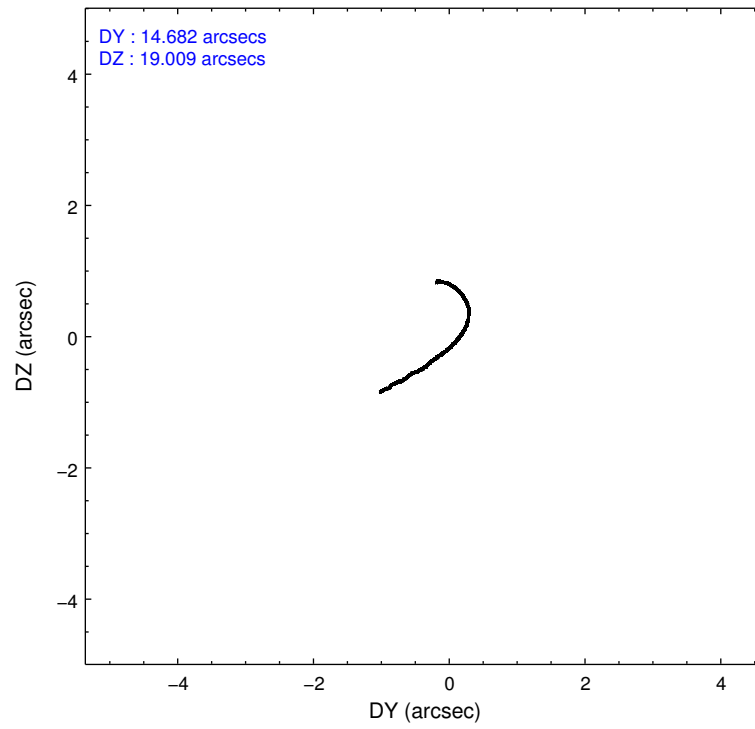
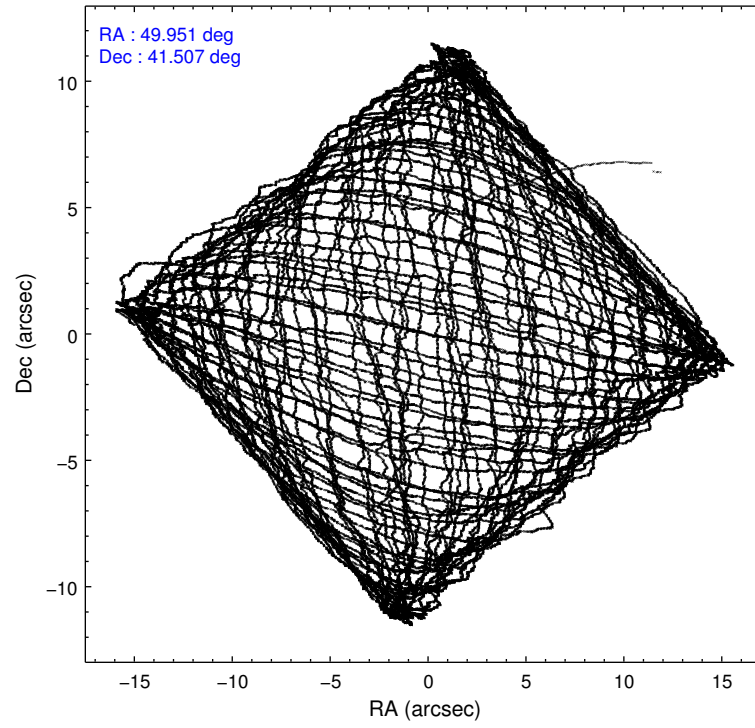
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	416257	397504	623469	351768
rejected events	172837	184296	144901	190528
rejected %	41%	46%	23%	54%

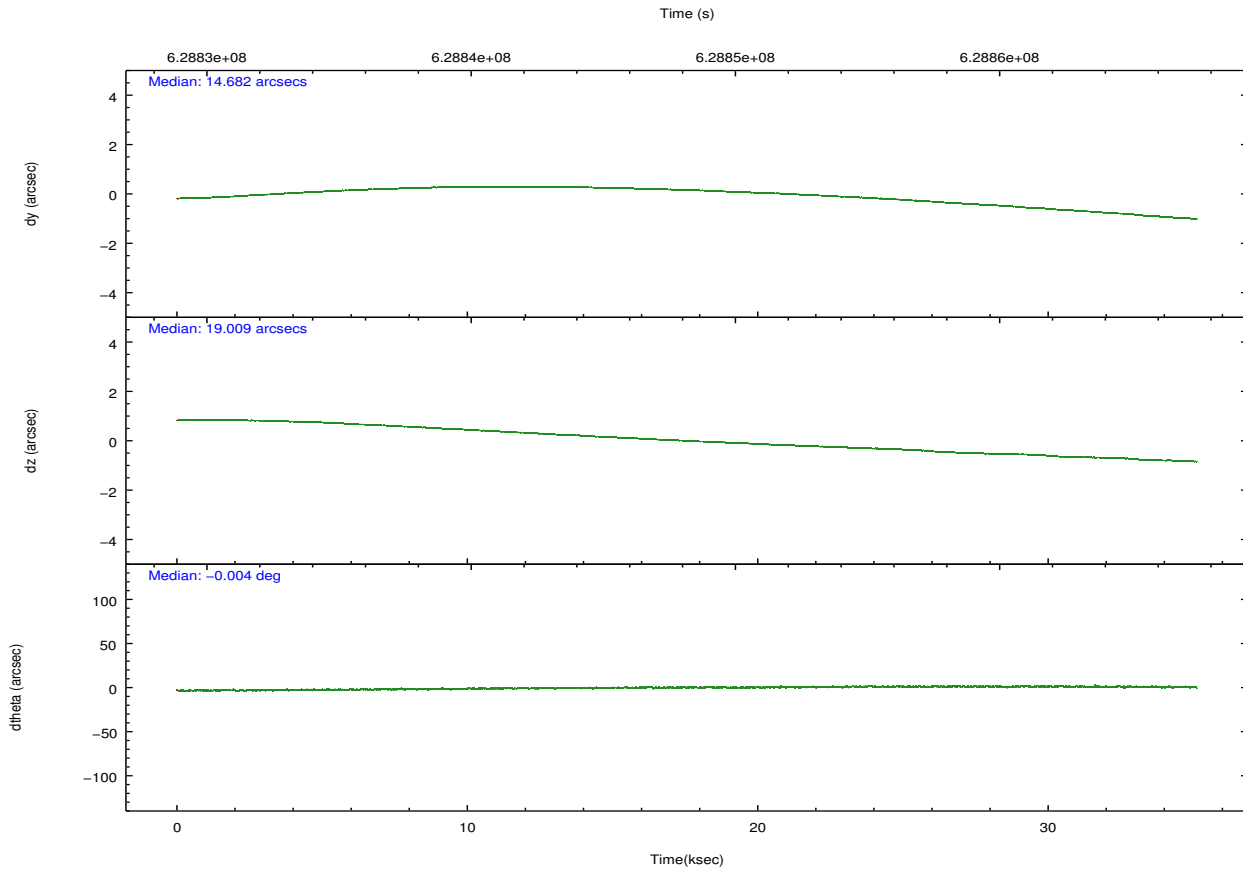
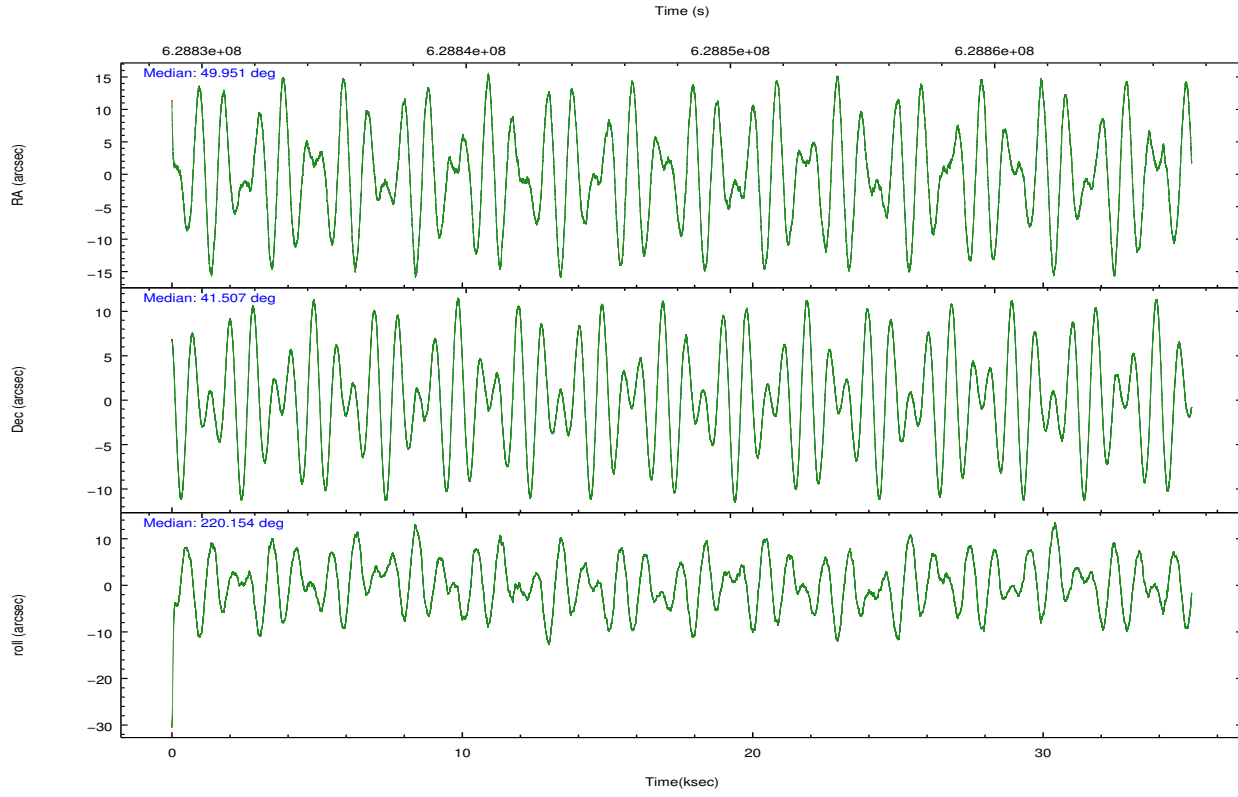
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	60861	151485	94156	94827
	14%	38%	15%	26%
grade 1 events	777	602	626	384
	0%	0%	0%	0%
grade 2 events	70999	30281	116707	26219
	17%	7%	18%	7%
grade 3 events	10701	9156	50365	10063
	2%	2%	8%	2%
grade 4 events	10134	8921	49823	9656
	2%	2%	7%	2%
grade 5 events	22822	9521	28530	13540
	5%	2%	4%	3%
grade 6 events	90771	13387	167584	20500
	21%	3%	26%	5%
grade 7 events	149192	174151	115678	176579
	35%	43%	18%	50%

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	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	49.962960	49.95098873171372	CCD I2 on	N	N
[deg] Pointing Dec	41.533038	41.50709397161021	CCD I3 on	N	N
[deg] Pointing Roll	219.991694	220.1562417615563	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)	628830703.184000	628829509.07805	CCD S5 on	O2	N
Observation start date	2017-12-05T03:10:34	2017-12-05T02:51:49	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	628865703.184000	628866645.34273	On-chip summing requested	N	N
Observation end date	2017-12-05T12:53:54	2017-12-05T13:10:45	Subarray requested	CUSTOM	CUSTOM
Read mode	TIMED	TIMED	Subarray start row	125	125
			Subarray row count	774	774
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	2.4

2.3 Aspect



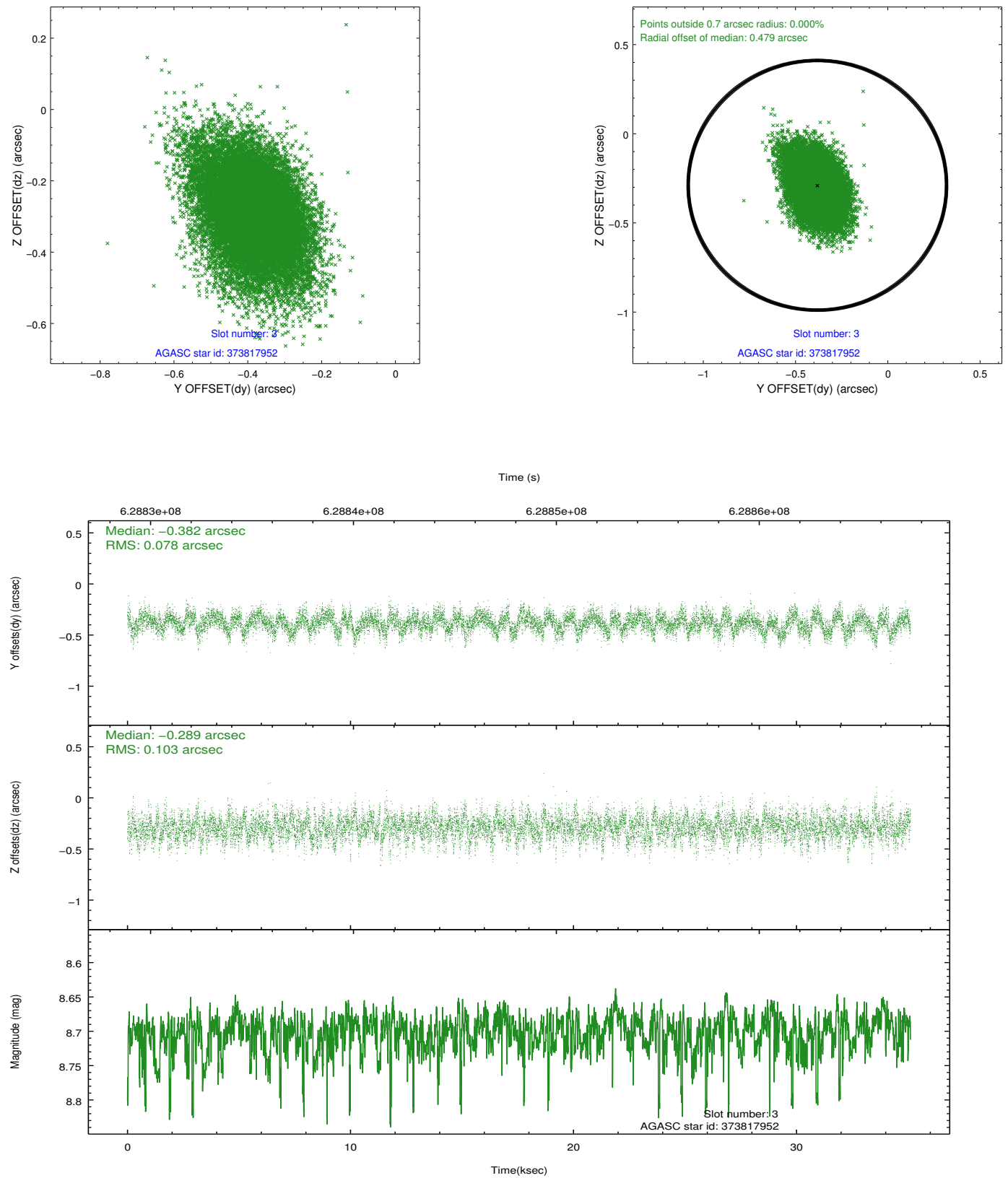


Slot Statistics

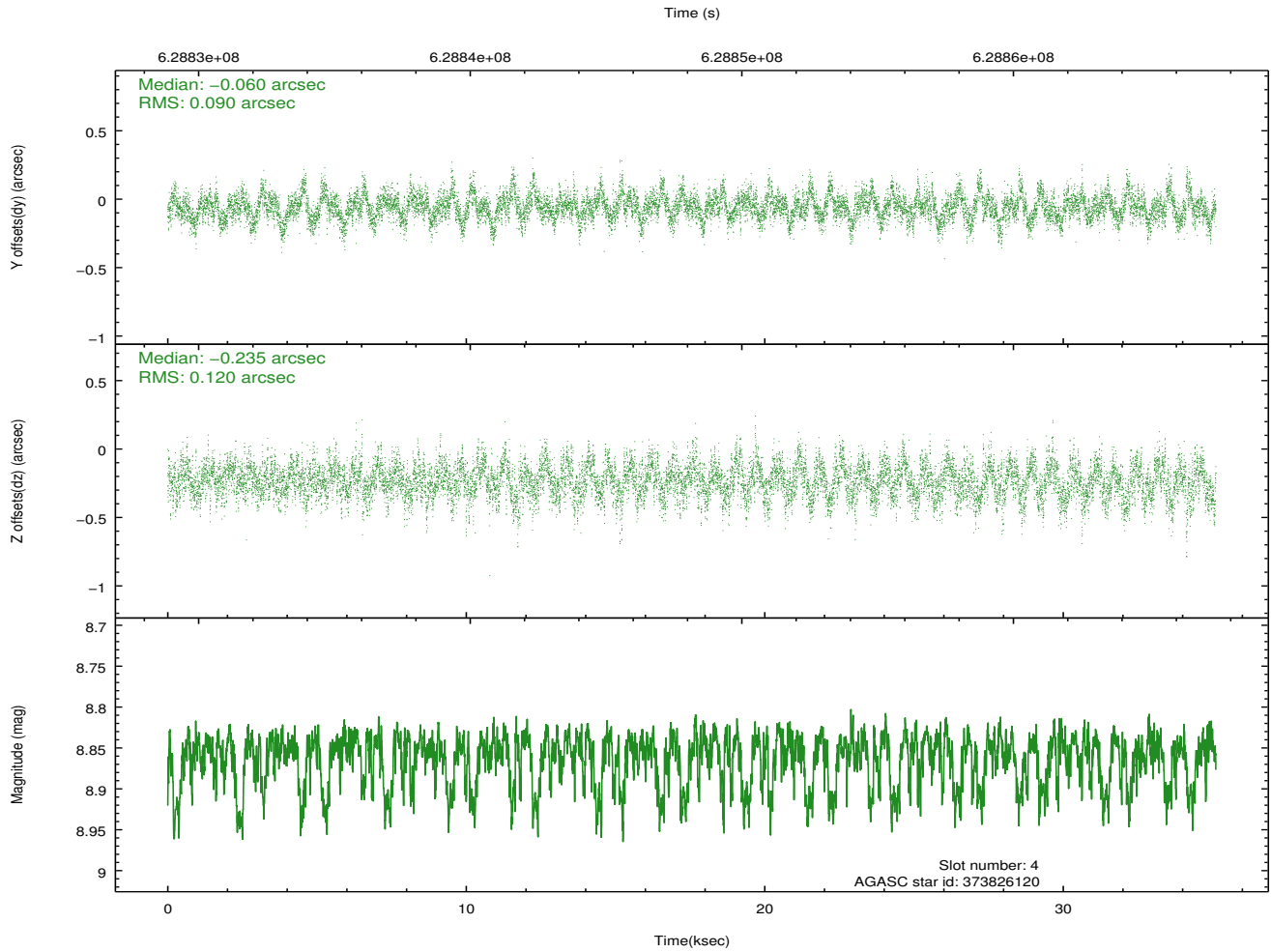
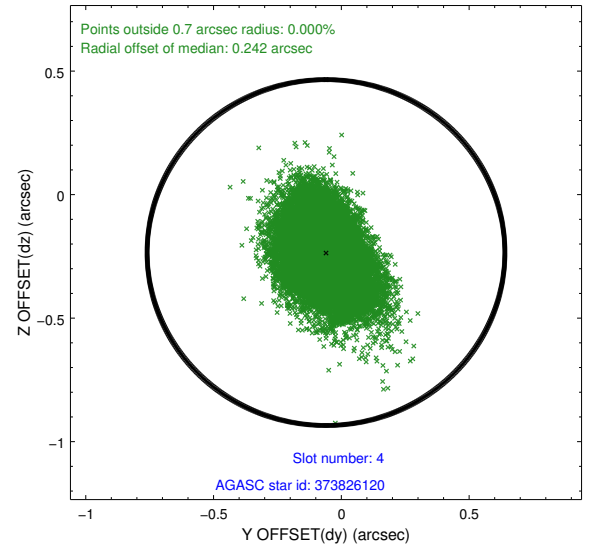
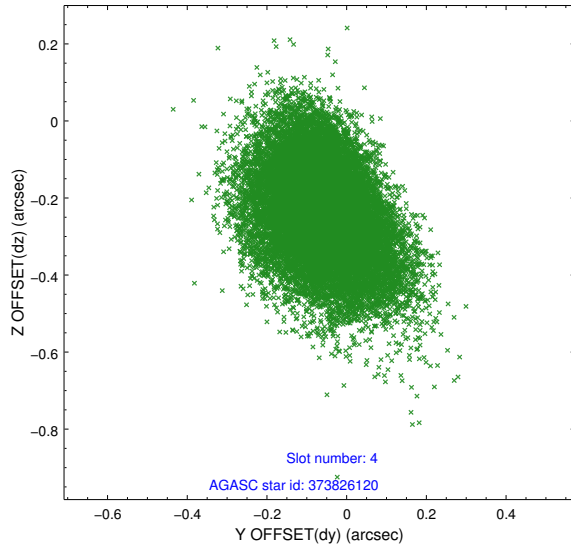
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.05	8564	-0.211	-0.105	0.033	0.051	0.000000	0.000000	-767.73	-1740.64
1	FID		ACIS-S-4	7.17	8565	0.503	0.127	0.008	0.017	0.000000	0.000000	2146.23	168.05
2	FID		ACIS-S-5	7.16	8564	-0.326	-0.017	0.034	0.053	0.000000	0.000000	-1820.65	161.60
3	GUIDE	used	373817952	8.70	17113	-0.382	-0.289	0.133	0.232	49.913424	40.978510	1386.15	1443.05
4	GUIDE	used	373826120	8.86	17119	-0.060	-0.235	0.159	0.263	49.738165	41.186341	1268.66	564.23
5	GUIDE	used	374352808	8.69	17118	0.194	0.271	0.122	0.210	49.969955	42.208621	-1576.60	-1850.76
6	GUIDE	used	374357808	8.64	17114	0.251	0.332	0.123	0.208	49.921429	42.176083	-1402.43	-1844.23
7	GUIDE	used	376057824	8.31	17120	-0.004	-0.076	0.118	0.200	50.665569	41.926280	-2356.08	119.64

2.4 Star Slots

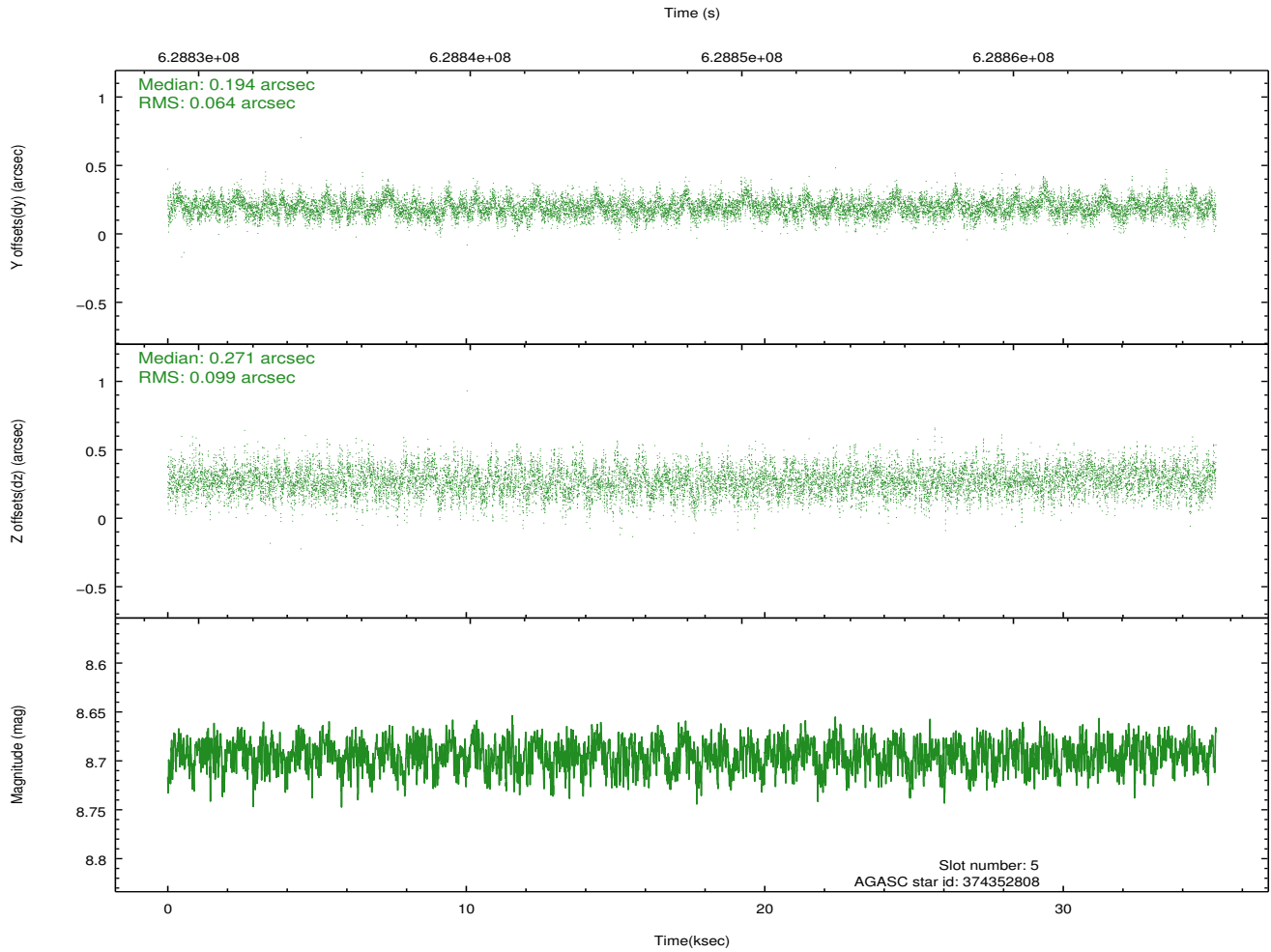
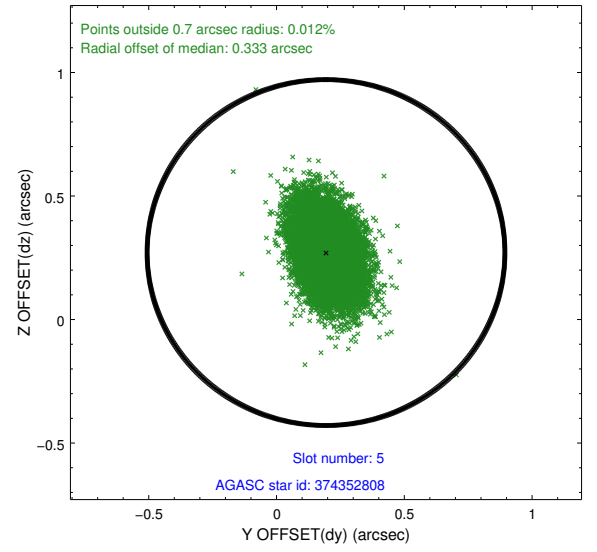
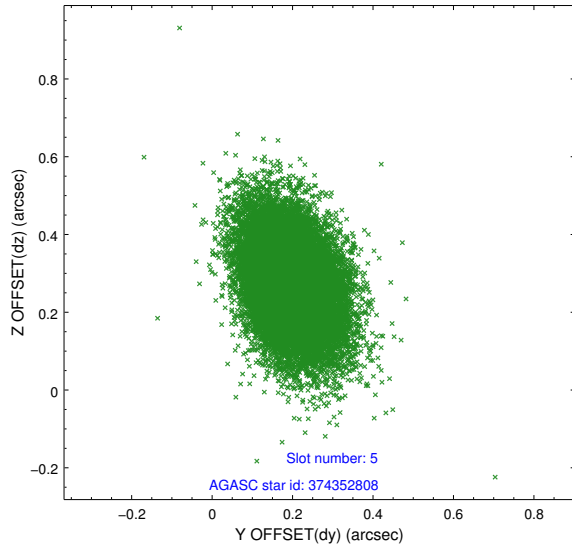
2.4.1 Slot 3



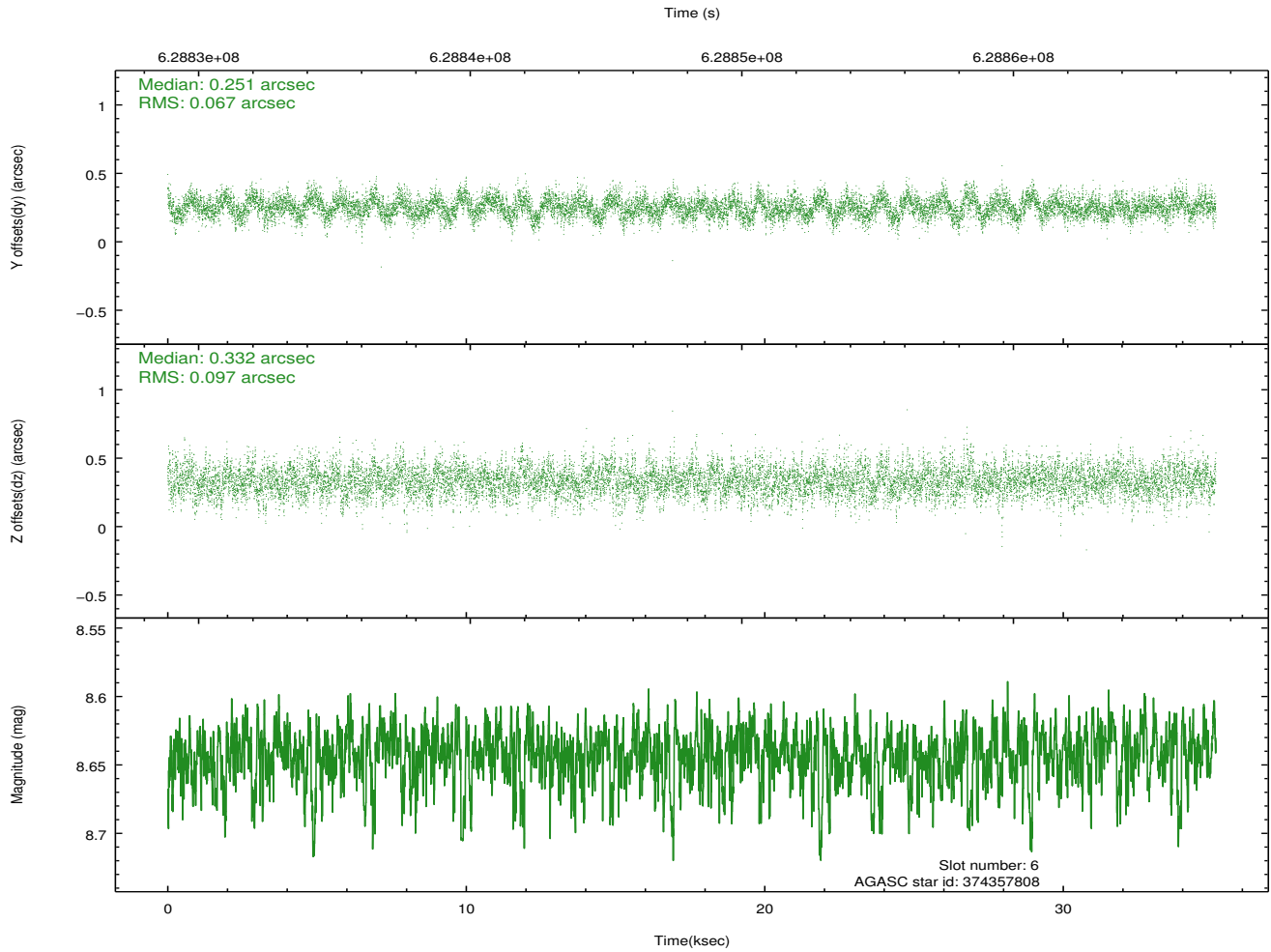
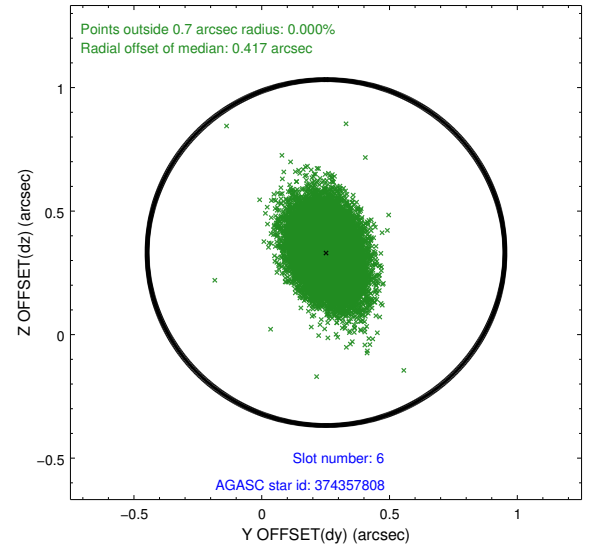
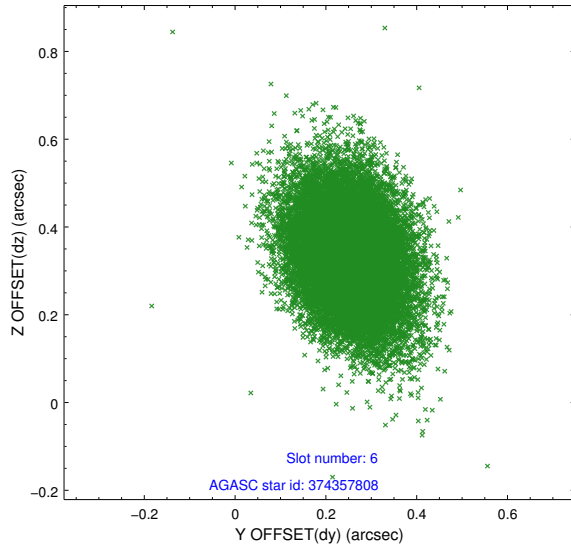
2.4.2 Slot 4



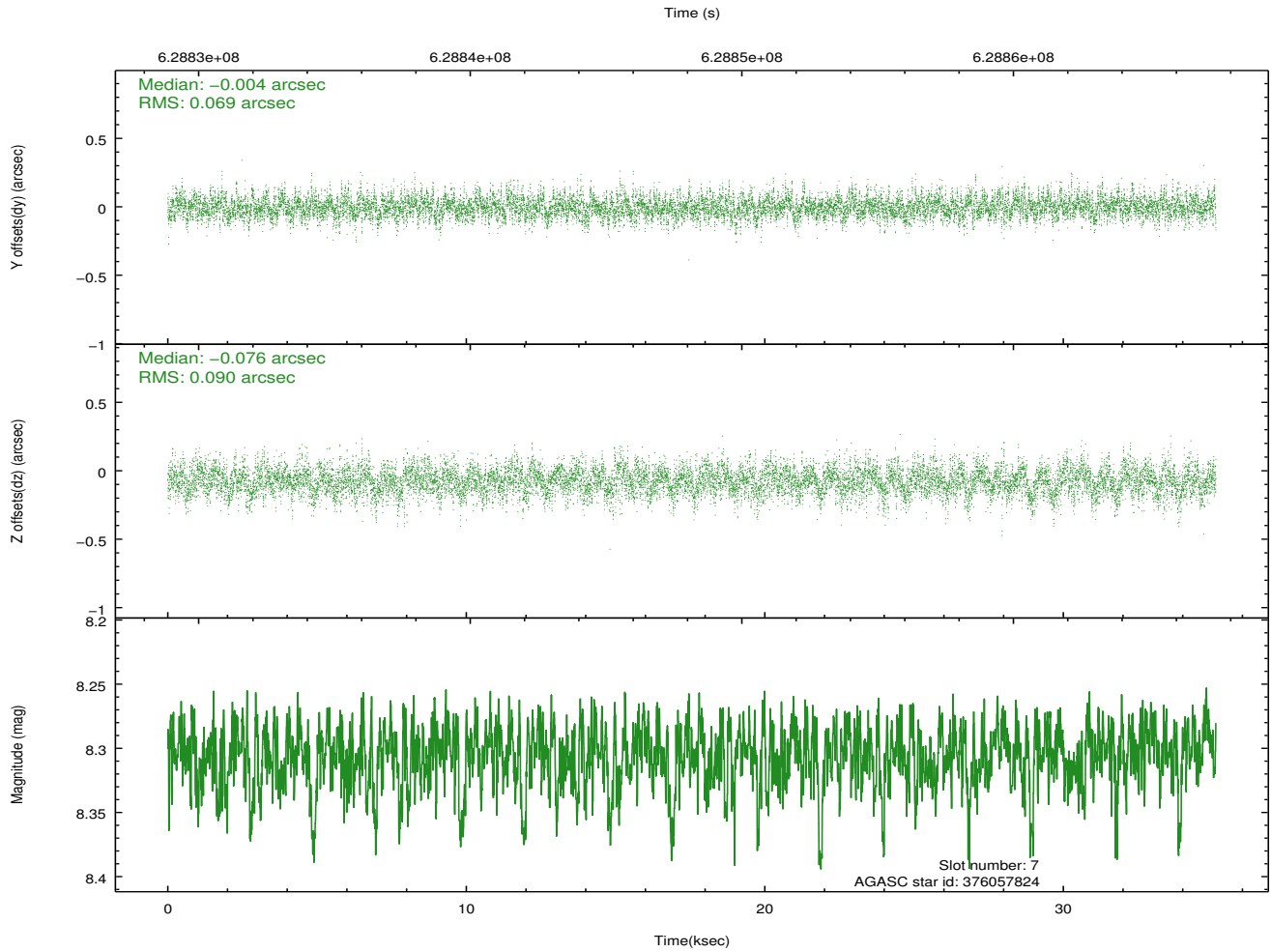
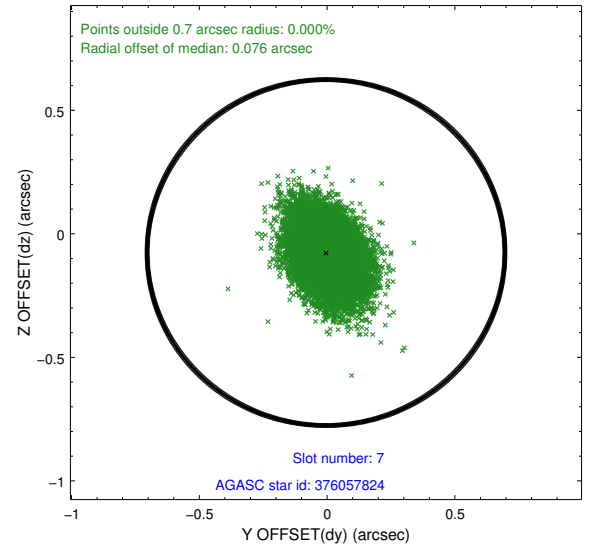
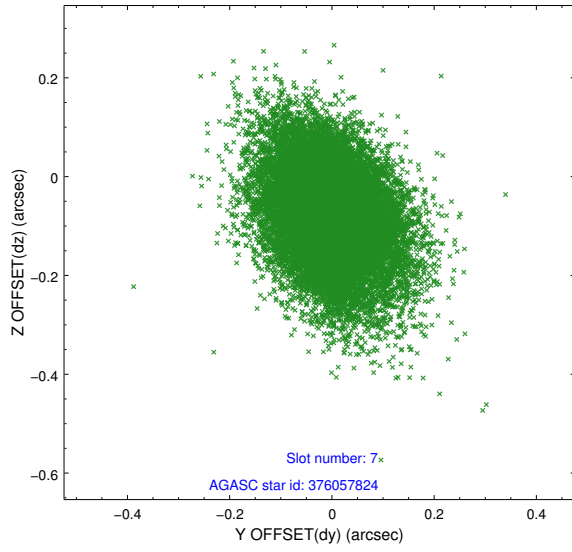
2.4.3 Slot 5



2.4.4 Slot 6

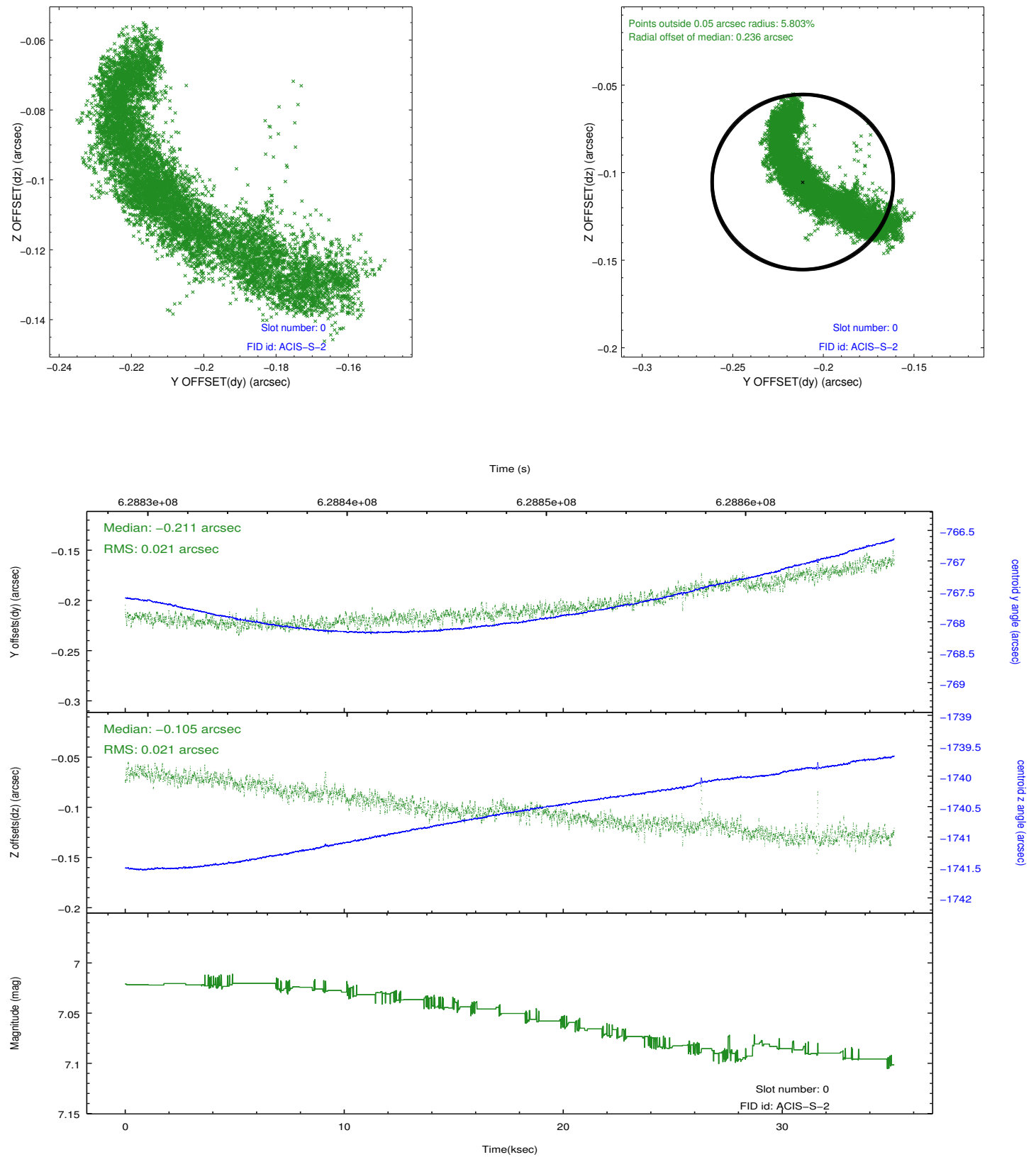


2.4.5 Slot 7

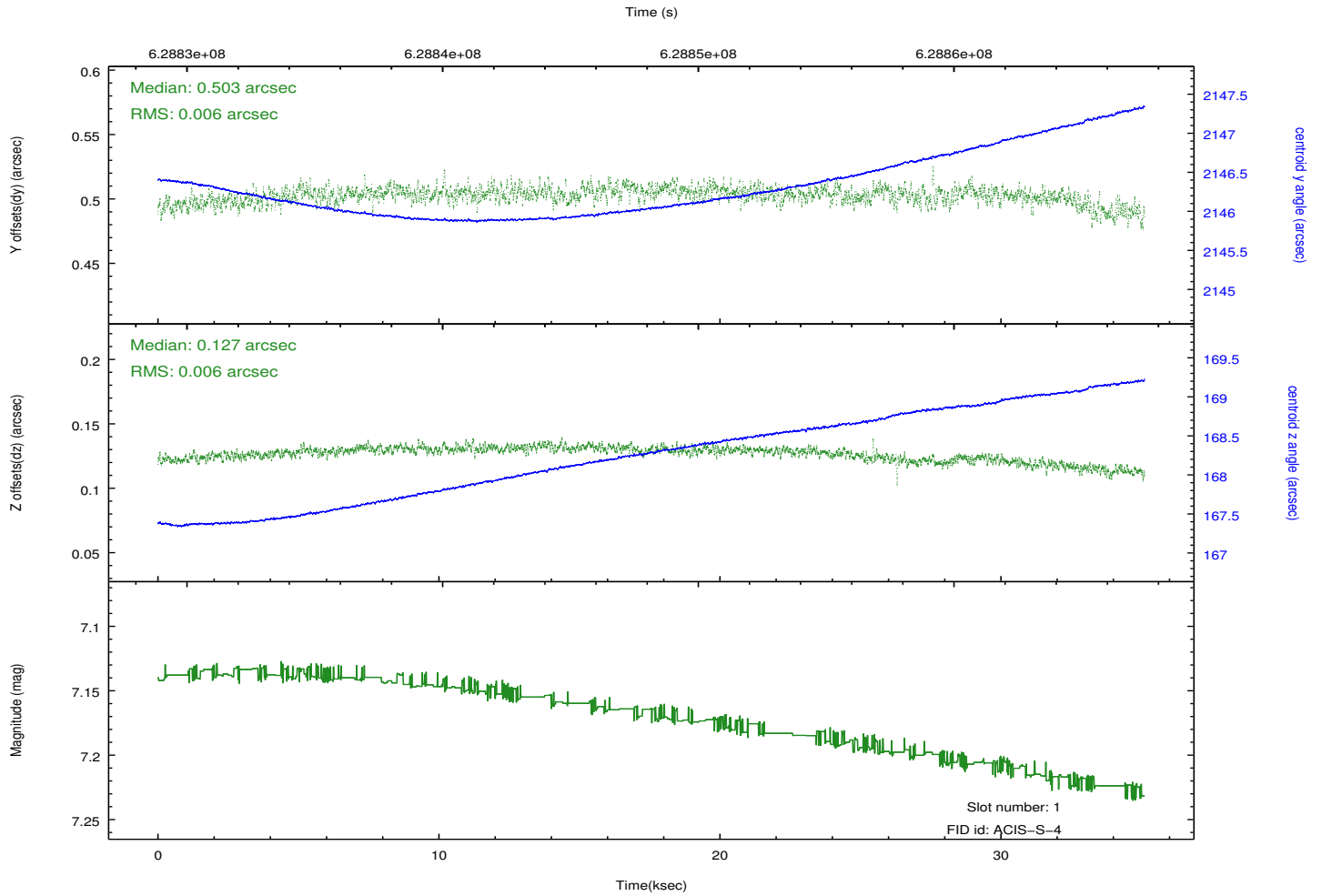
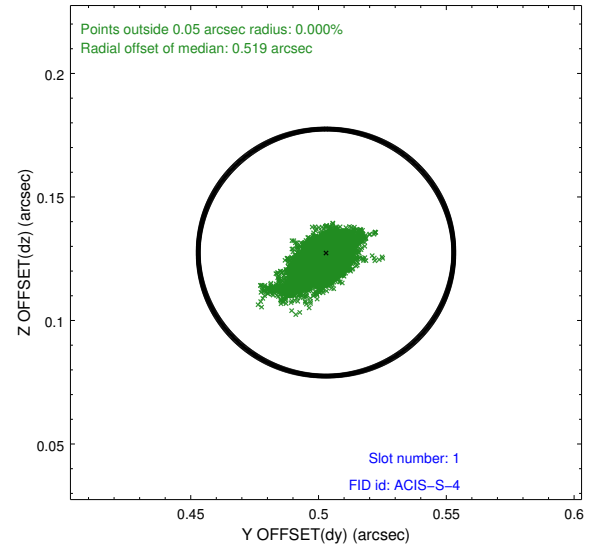
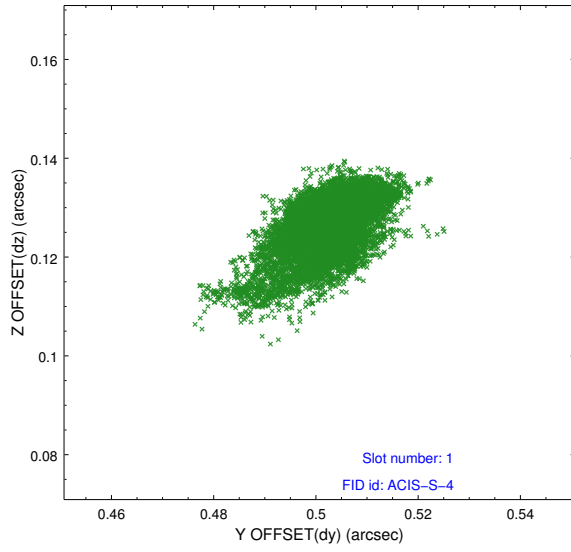


2.5 FID Slots

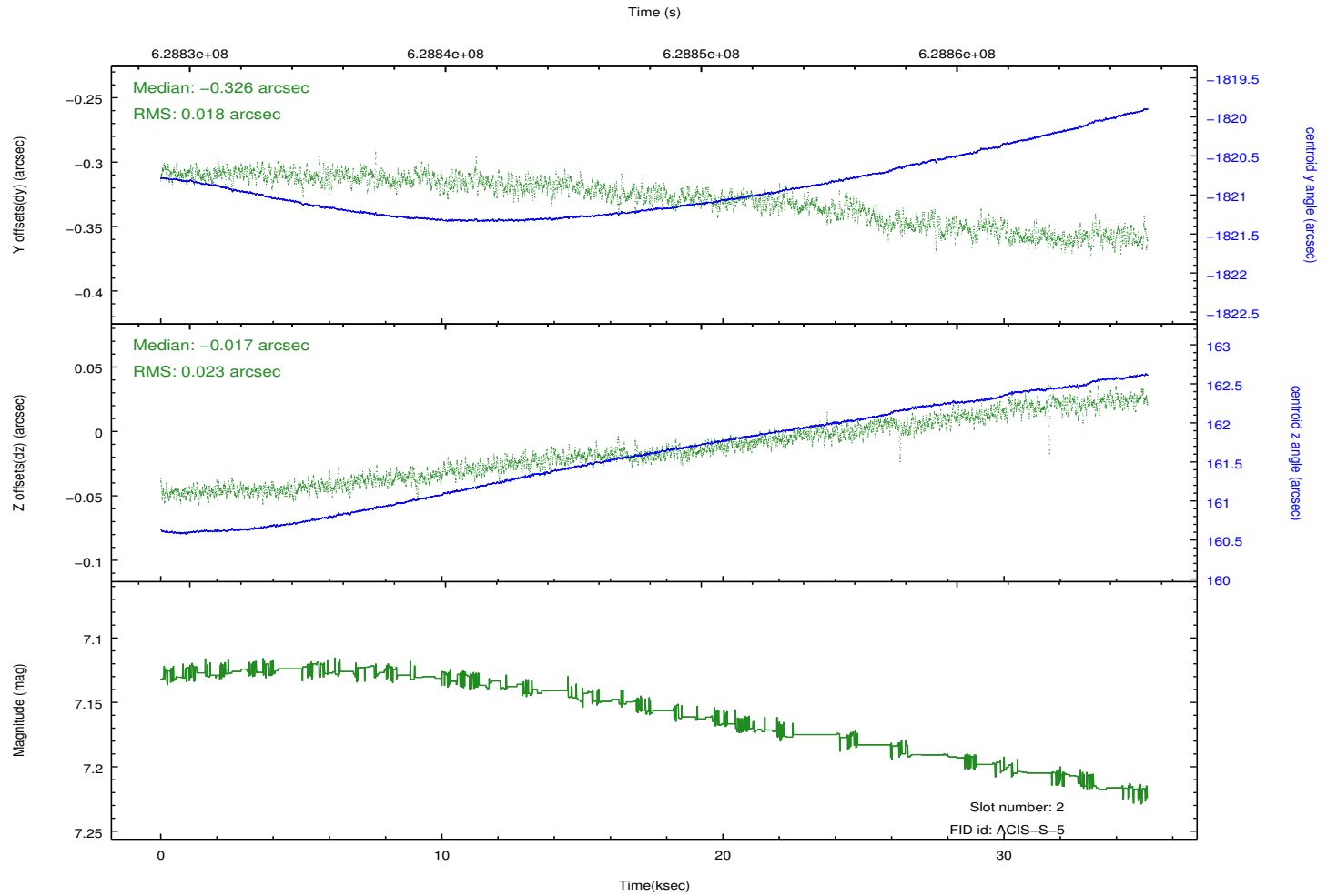
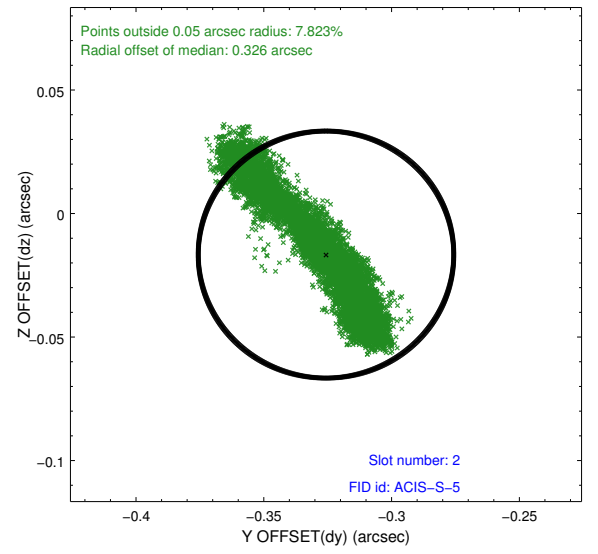
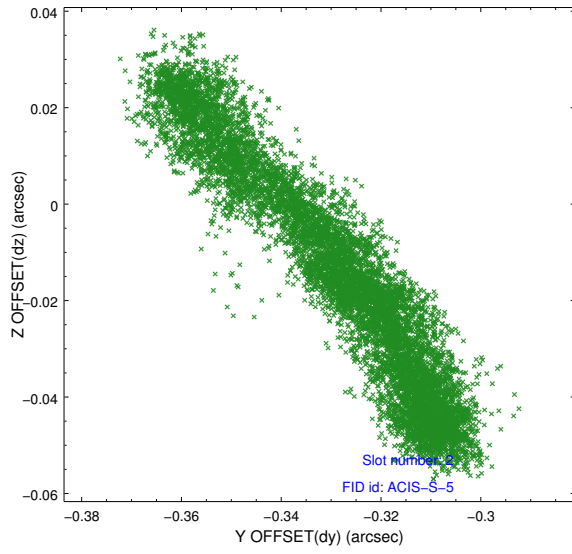
2.5.1 Slot 0



2.5.2 Slot 1

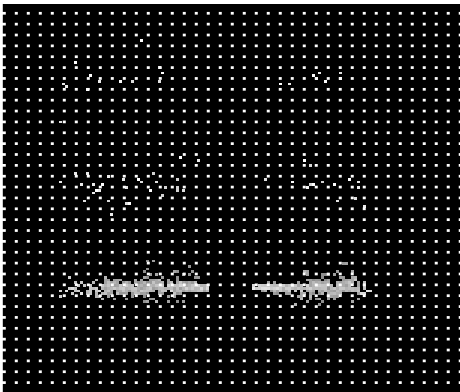


2.5.3 Slot 2

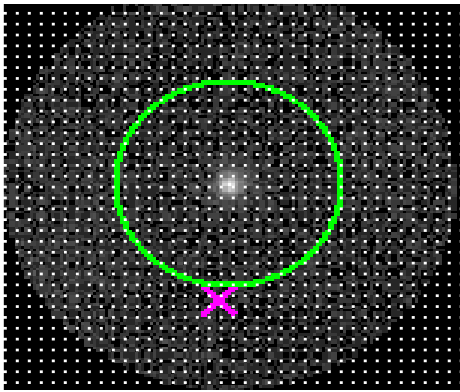


3 Gratings

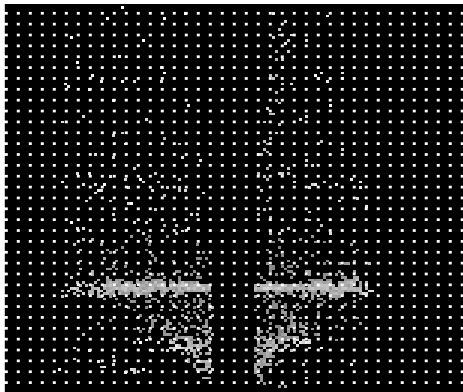
3.1 HEG Arm



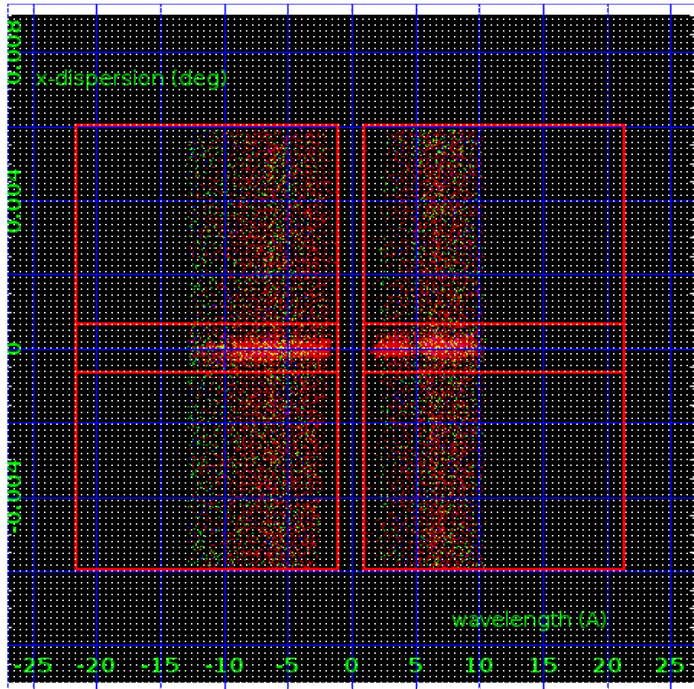
HEG Order Sort 123



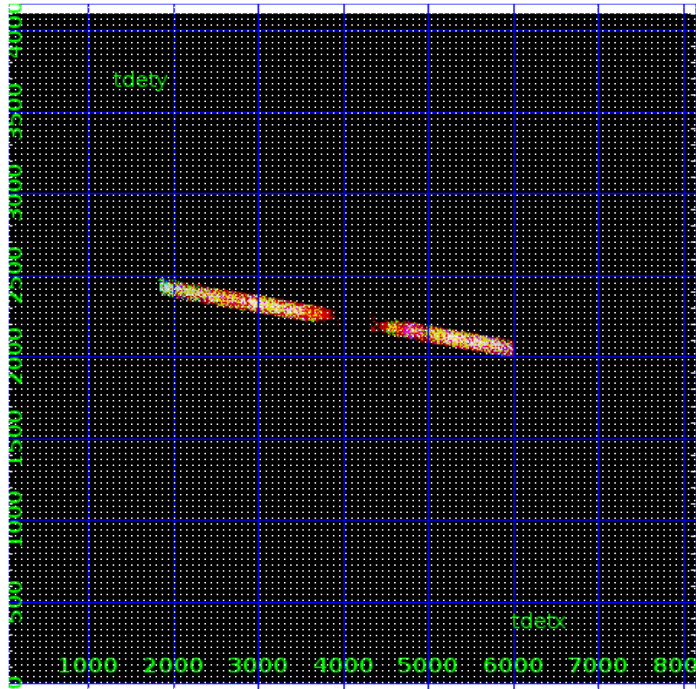
HEG Zero Order



HEG Order Sort ALL

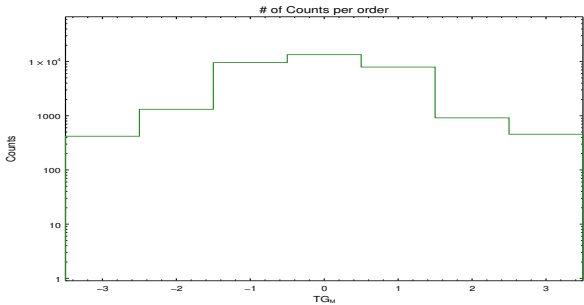


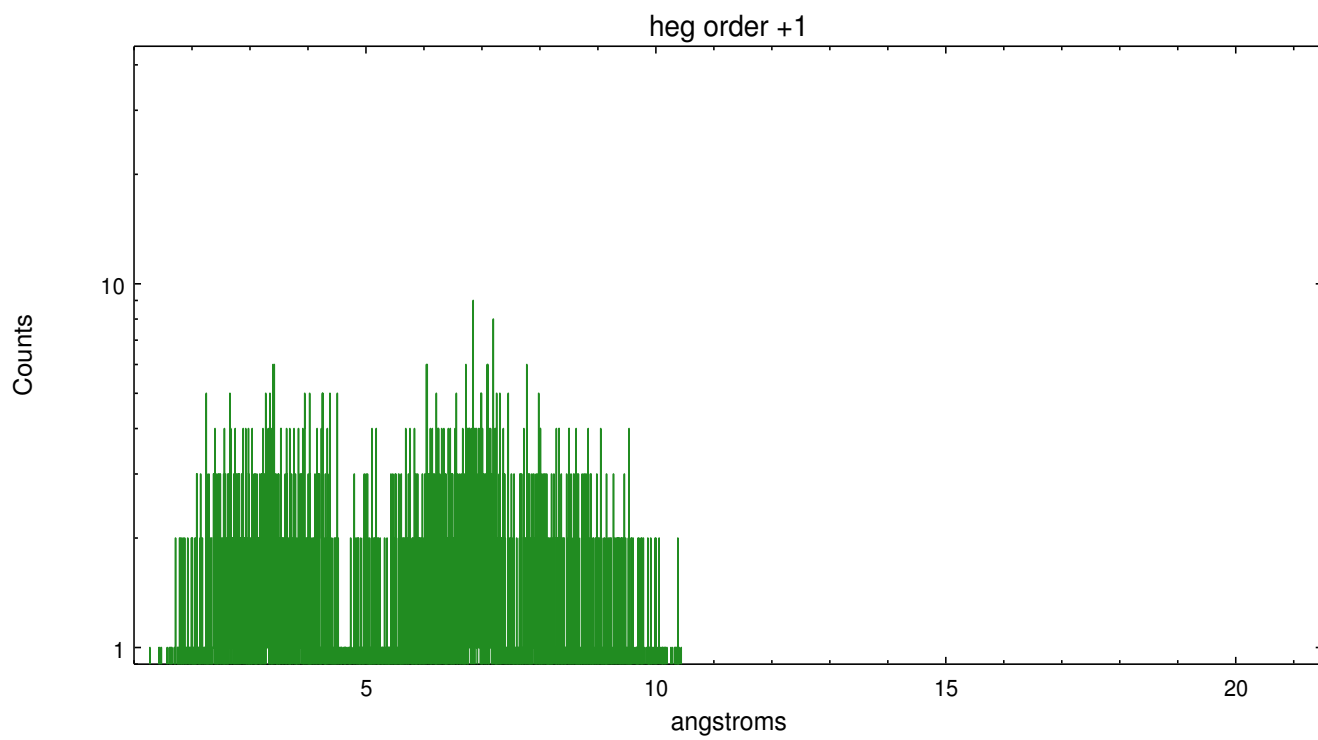
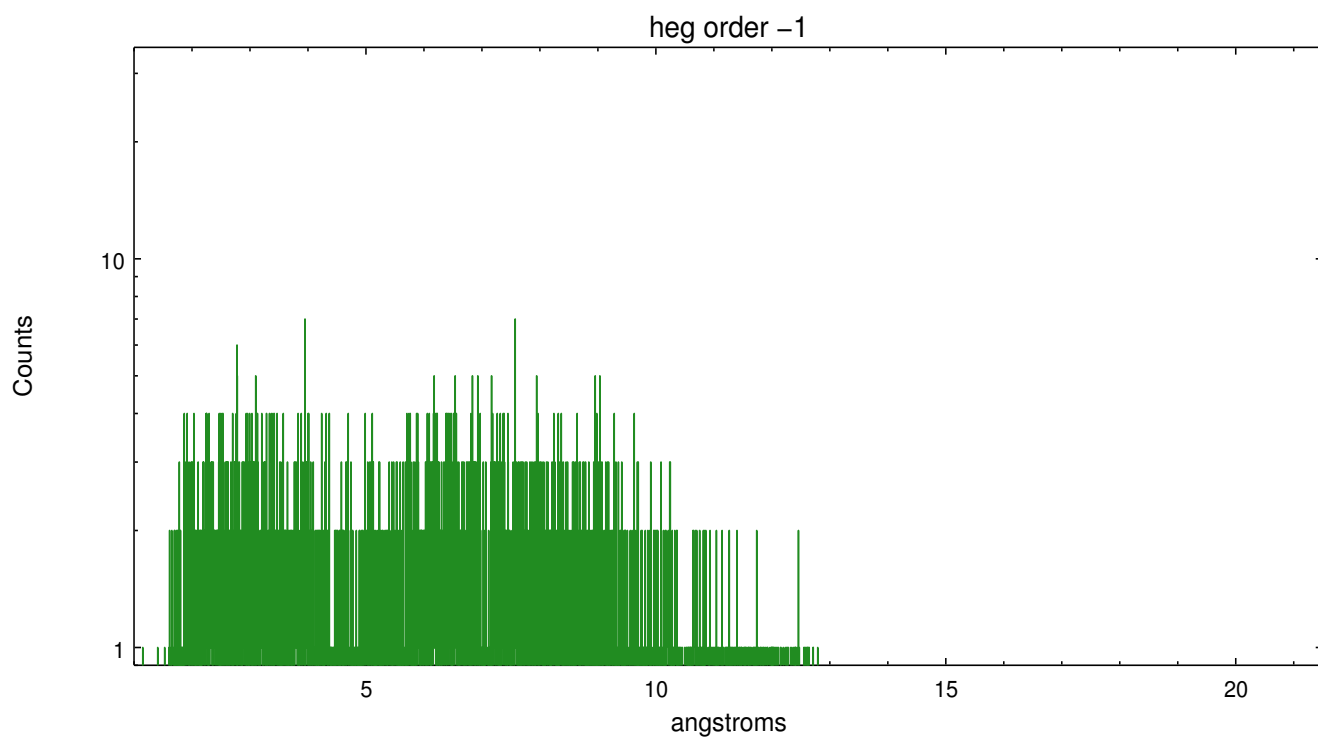
Spot Image HEG



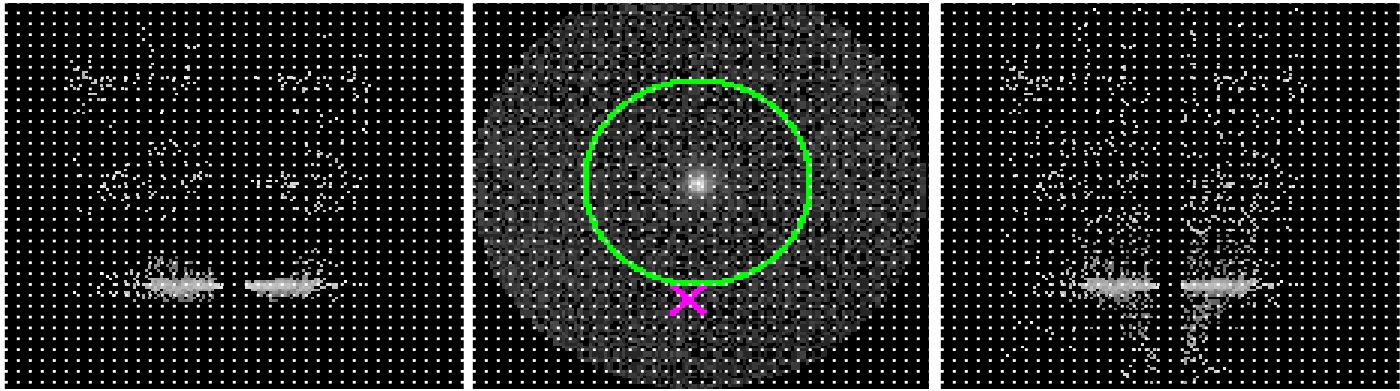
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	419	1317	9589	13426	7921	915	456





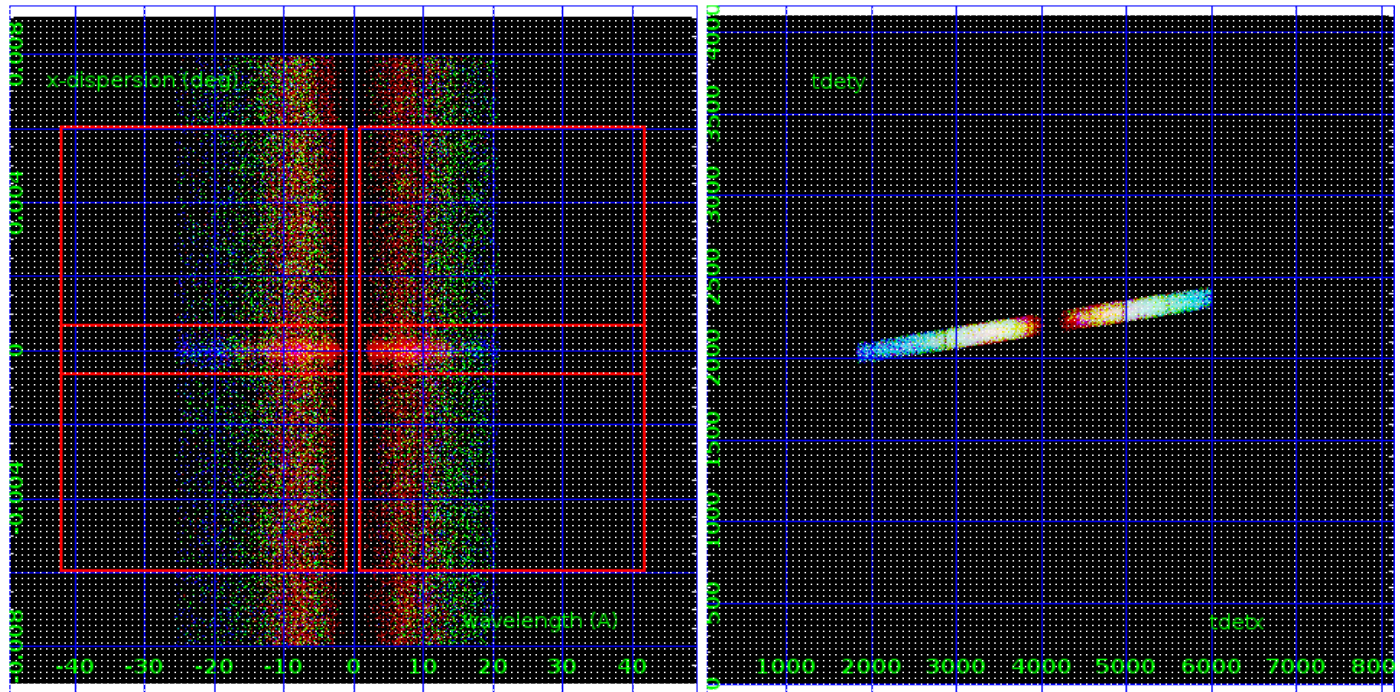
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

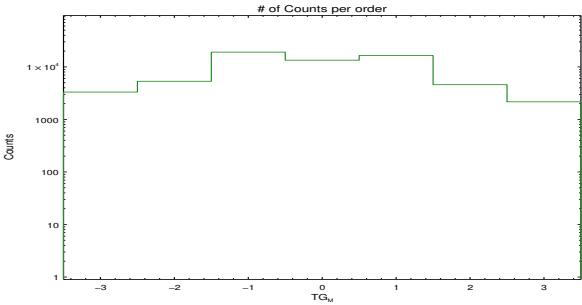
MEG Order Sort ALL

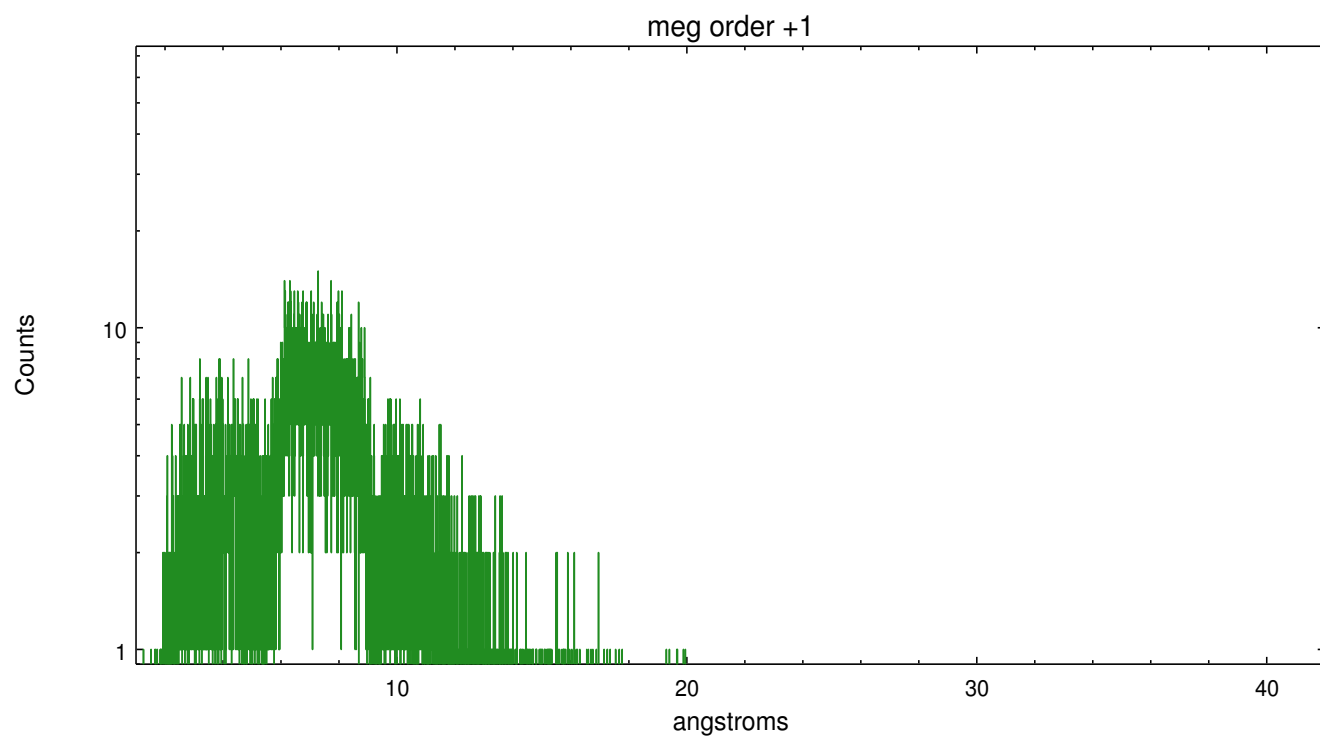
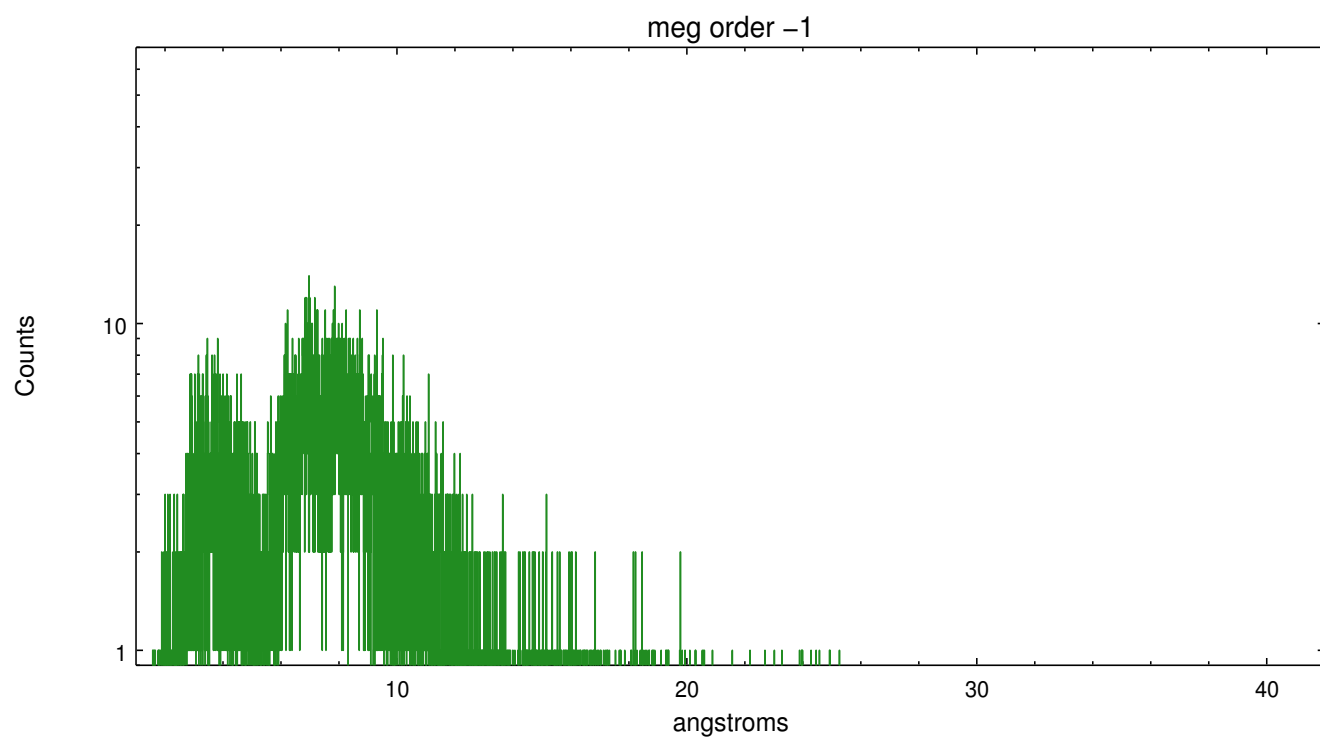


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3320	5323	19099	13426	16439	4587	2167





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2017.12.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	35.087763334632

A.2 Comments

Note: the tgdetect2 position was visibly slightly offset from the source, possibly due to the extended halo emission; used the original tgdetect output position.