

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 20838 - L2 Version 1
Chandra X-Ray Center

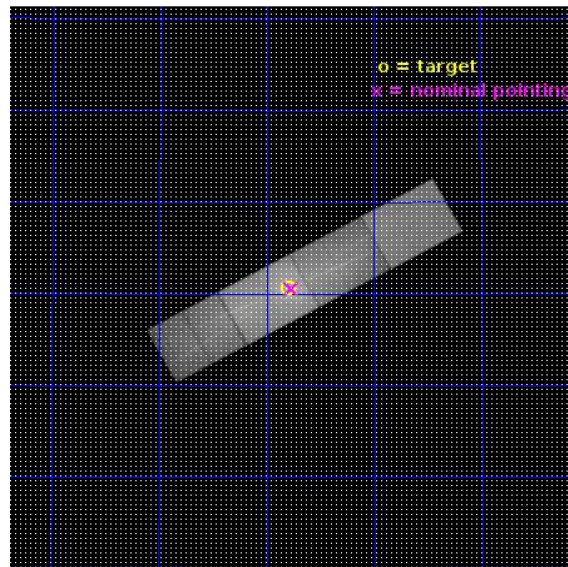
L2 Processing Date : Nov 1 2017

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1 Front

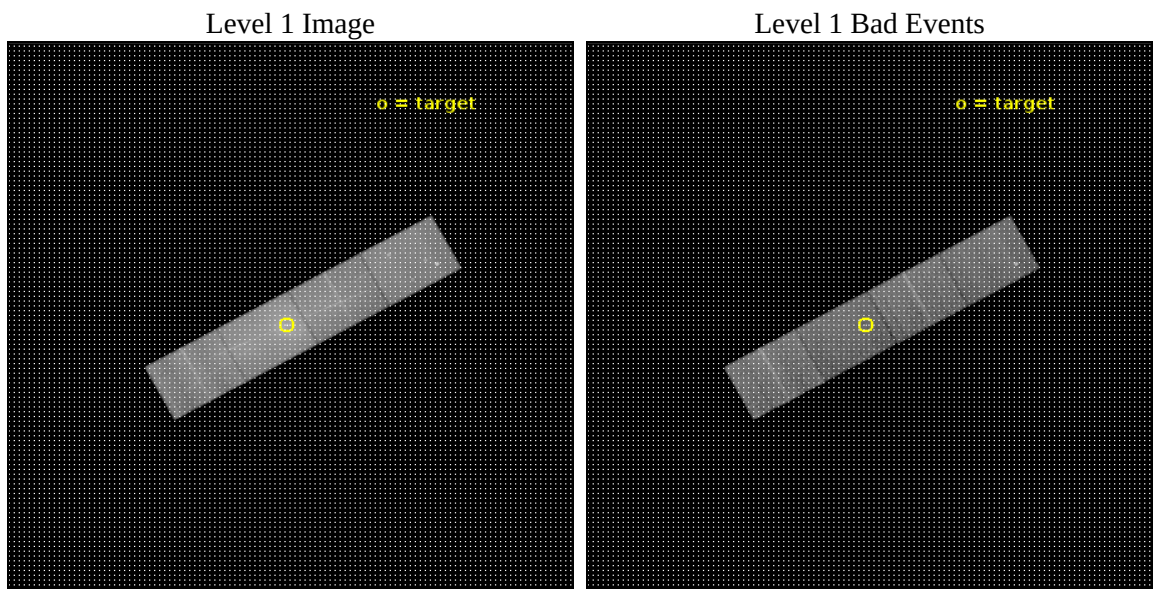
seq_num	703554	Sequence number
obs_id	20838	Observation id
title	Chandra/HETG Observations of NGC1275	Proposal title
observer	Christopher Reynolds	Principal investigator
object	NGC1275	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.950417	Observer's specified target RA [deg]
dec_targ	41.511667	Observer's specified target Dec [deg]
ra_nom	49.94247104853	Nominal RA [deg]
dec_nom	41.509752623214	Nominal Dec [deg]
roll_nom	151.16188467814	Nominal Roll [deg]
revision	1	Processing version of data
ontime	25087.199750662	Sum of GTIs [s]
livetime	24665.421050695	Livetime [s]
ontime5	25087.199750662	Sum of GTIs [s]
ontime6	25087.199750662	Sum of GTIs [s]
ontime7	25087.199750662	Sum of GTIs [s]
ontime8	25087.199750662	Sum of GTIs [s]
l2events	705887	Number of level 2 events



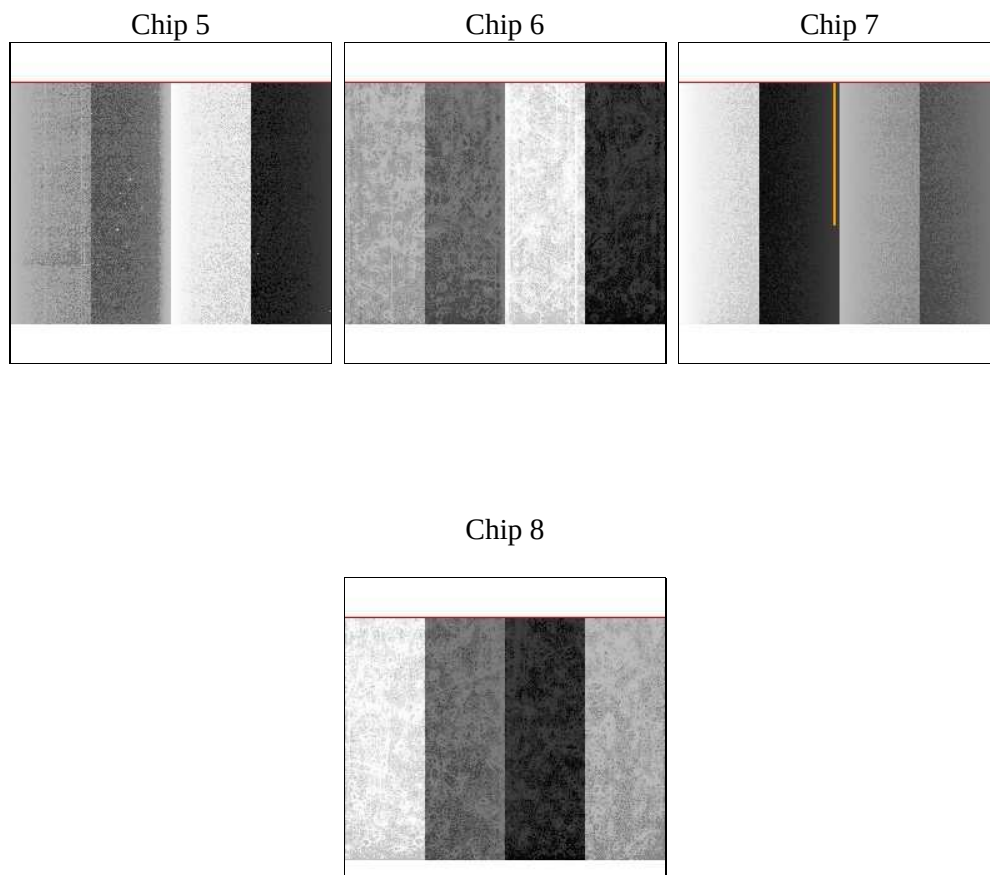
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25000.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	25087.199750662	Sum of GTIs [s]
caldsver	4.7.6	 	ontime5	25087.199750662	Sum of GTIs [s]
date	2017-11-01T21:21:05	Date and time of file creation	ontime6	25087.199750662	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	25087.199750662	Sum of GTIs [s]
			ontime8	25087.199750662	Sum of GTIs [s]
			l1events	1245794	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4051.39, 4111.46)	src1a sky pixel position

2.1.4 Events

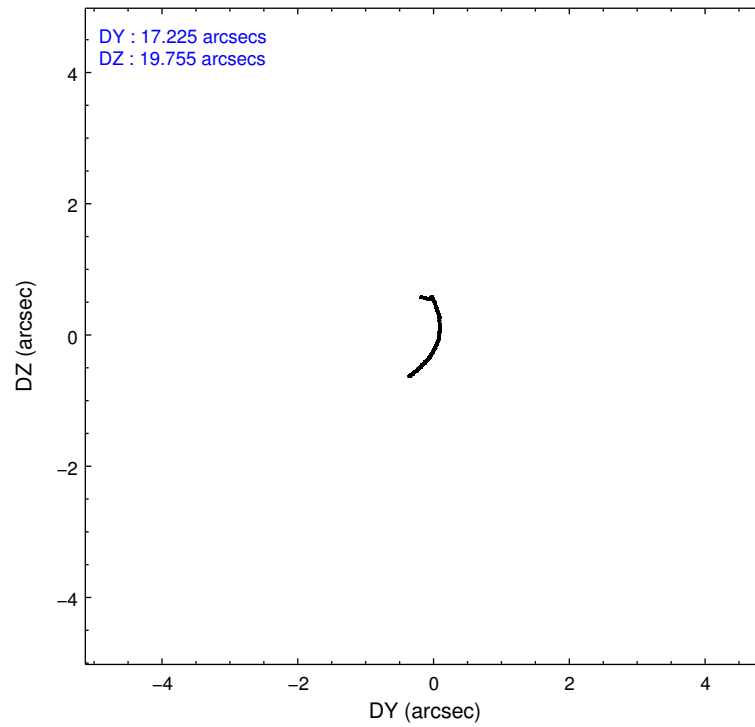
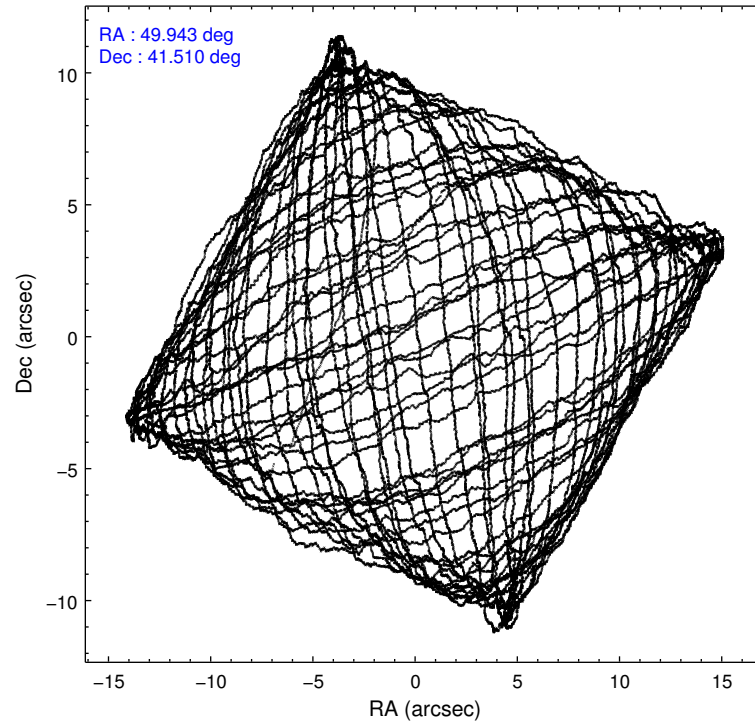
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	259108	285810	450723	250153
rejected events	115862	127465	103432	133735
rejected %	44%	44%	22%	53%

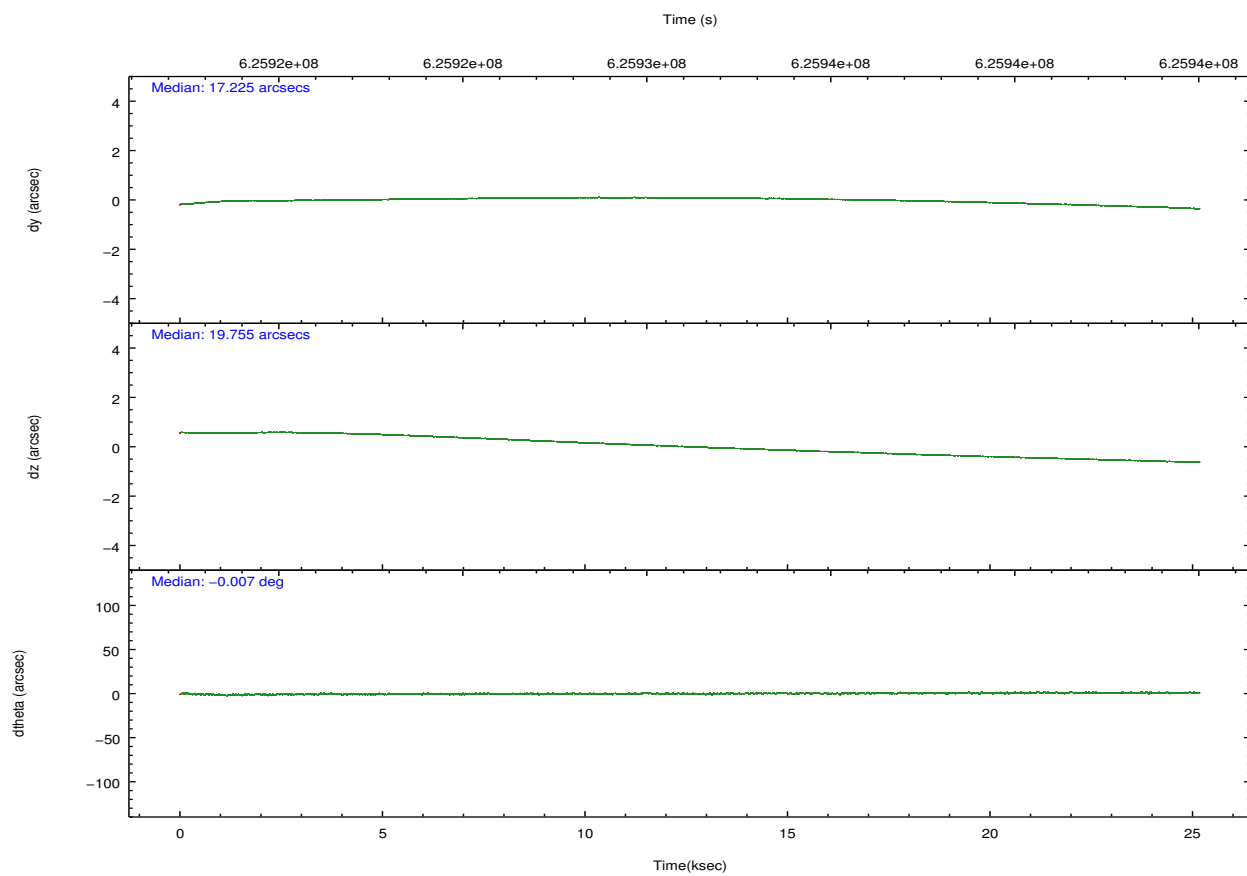
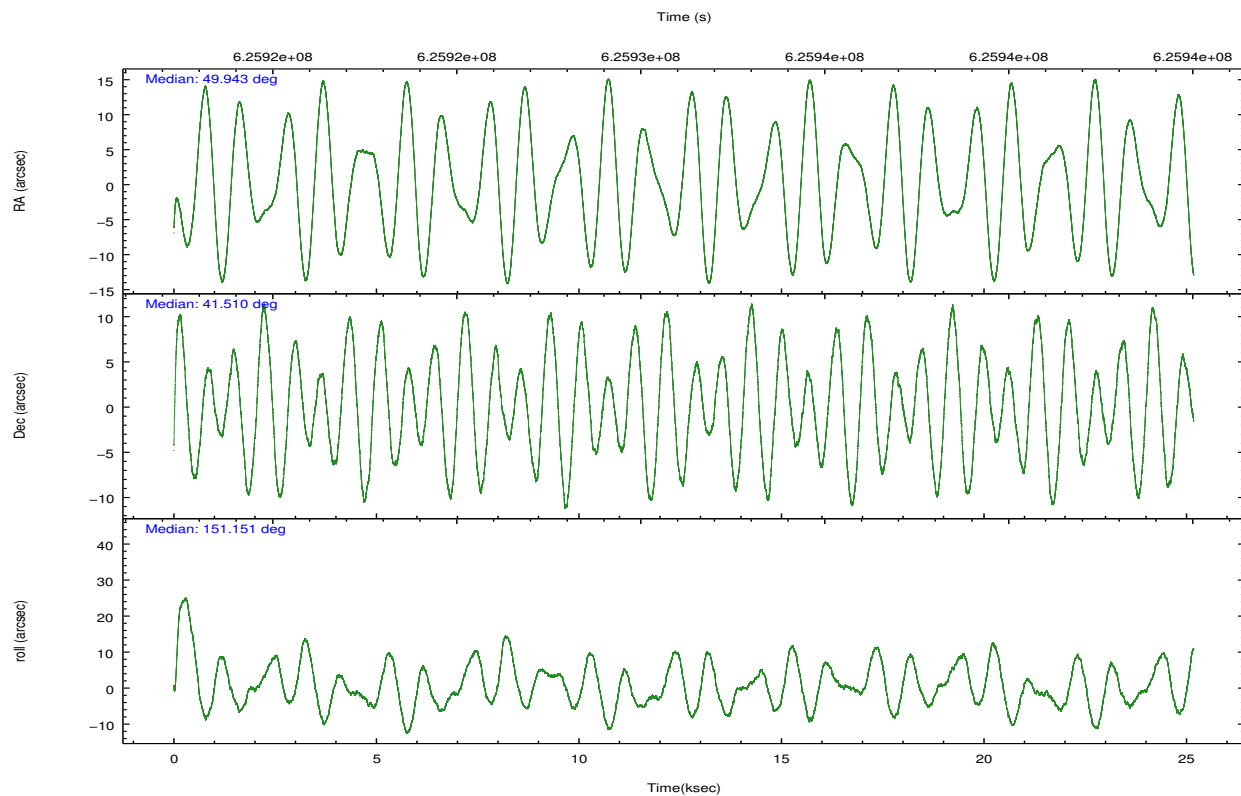
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	21013	113676	68999	68923
	8%	39%	15%	27%
grade 1 events	531	447	434	338
	0%	0%	0%	0%
grade 2 events	46982	21593	85134	19125
	18%	7%	18%	7%
grade 3 events	5965	6638	36842	7002
	2%	2%	8%	2%
grade 4 events	5648	6627	35939	6581
	2%	2%	7%	2%
grade 5 events	15111	6829	20232	9691
	5%	2%	4%	3%
grade 6 events	63654	9830	120413	14799
	24%	3%	26%	5%
grade 7 events	100204	120170	82730	123694
	38%	42%	18%	49%

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	49.979102	49.94247104853029	CCD I2 on	N	N
[deg] Pointing Dec	41.510659	41.50975262321369	CCD I3 on	N	N
[deg] Pointing Roll	150.980986	151.161884678142	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	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	625918748.184000	625917621.2572	CCD S5 on	O2	N
Observation start date	2017-11-01T10:17:59	2017-11-01T10:00:21	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	625943748.184000	625944413.73377	On-chip summing requested	N	N
Observation end date	2017-11-01T17:14:39	2017-11-01T17:26:53	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



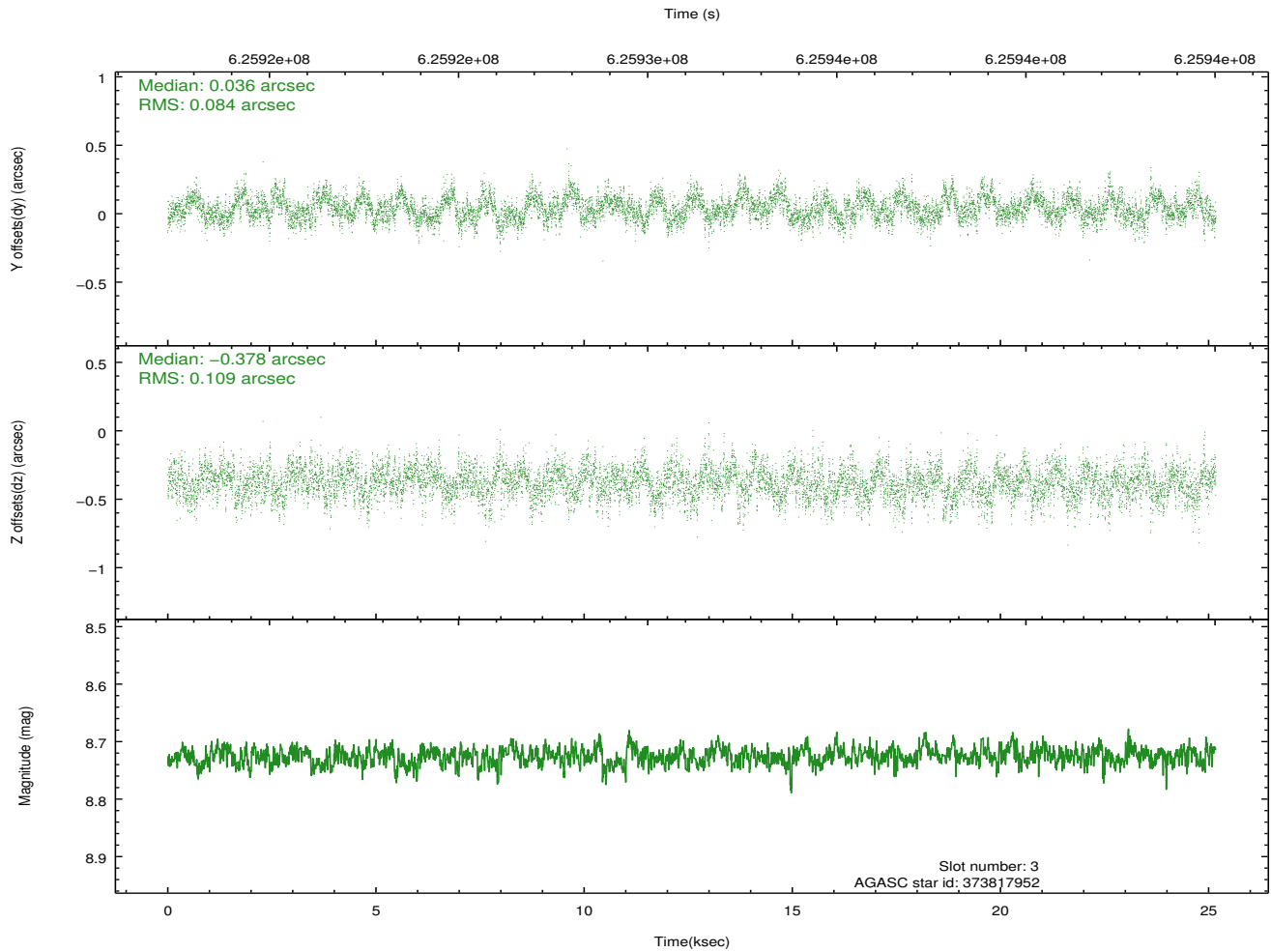
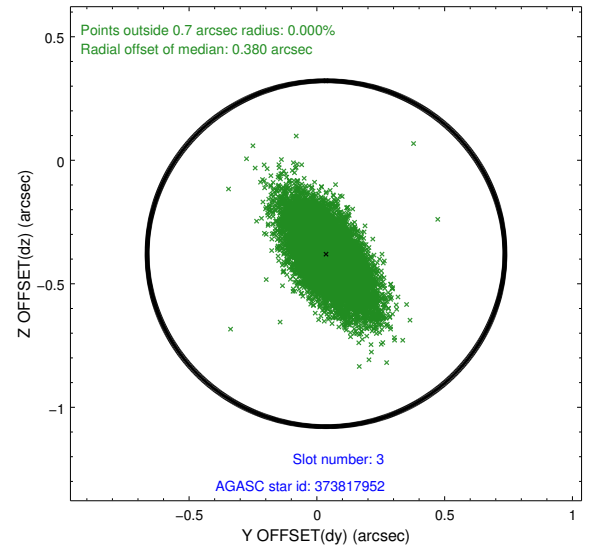
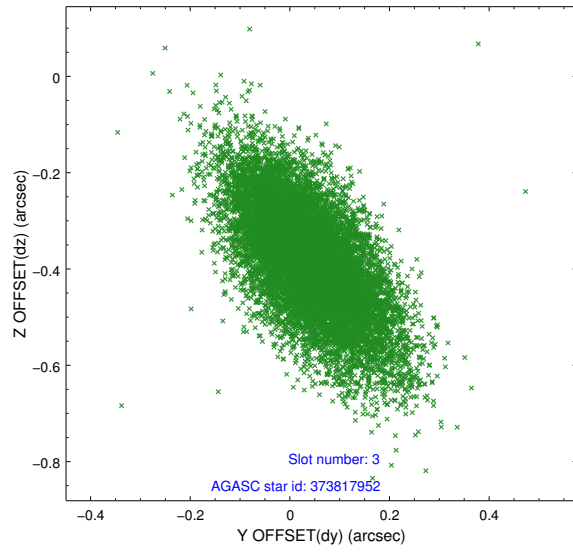


Slot Statistics

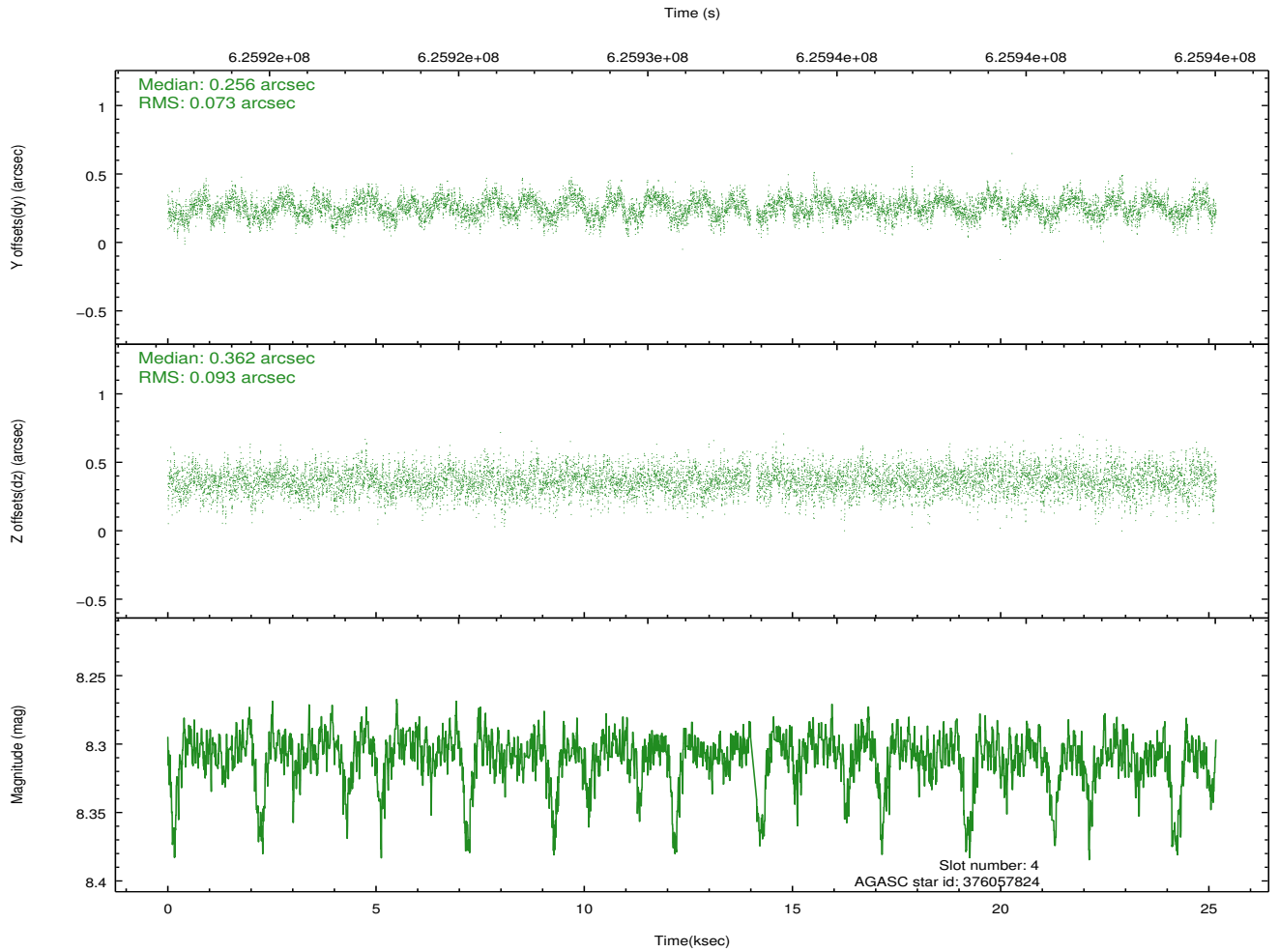
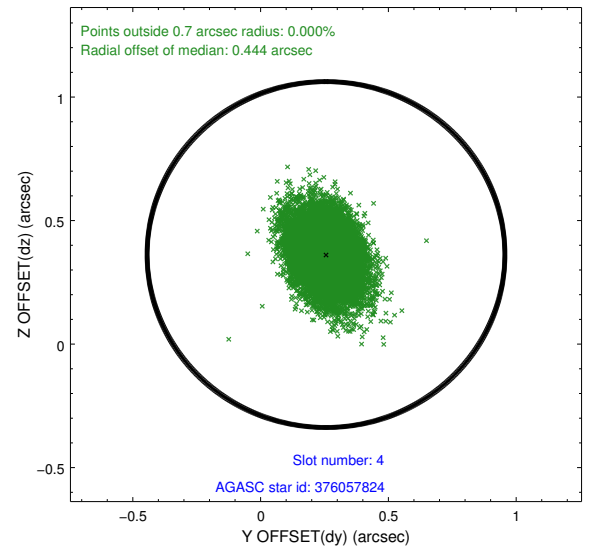
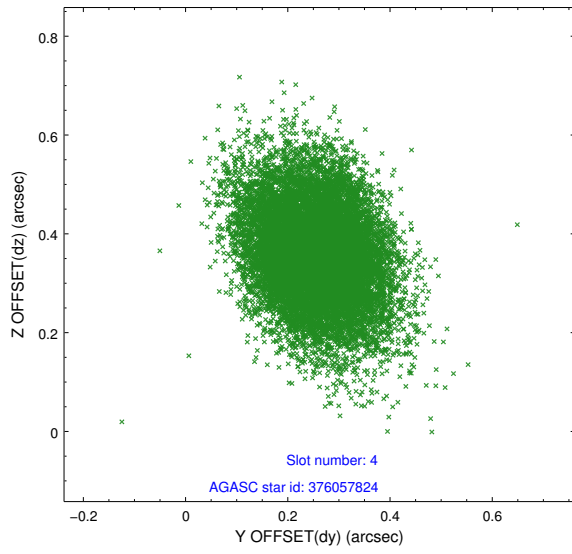
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-4	7.20	6141	0.410	0.010	0.009	0.014	0.000000	0.000000	2143.53	167.55
1	FID		ACIS-S-5	7.19	6141	-0.467	-0.002	0.008	0.013	0.000000	0.000000	-1823.39	160.82
2	FID		ACIS-S-6	7.35	6141	0.028	0.005	0.012	0.019	0.000000	0.000000	391.24	804.69
3	GUIDE	used	373817952	8.73	12267	0.036	-0.378	0.140	0.252	49.913424	40.978510	-773.34	1761.68
4	GUIDE	used	376057824	8.31	12207	0.256	0.362	0.123	0.207	50.665569	41.926280	-878.18	-2205.69
5	GUIDE	used	376070040	8.37	12276	-0.054	-0.092	0.140	0.241	50.072031	41.897206	457.58	-1337.51
6	GUIDE	used	374357808	8.65	12273	-0.159	0.069	0.133	0.235	49.921429	42.176083	1296.99	-2019.73
7	GUIDE	used	374352808	8.73	12272	-0.085	0.042	0.143	0.243	49.969955	42.208621	1240.88	-2184.89

2.4 Star Slots

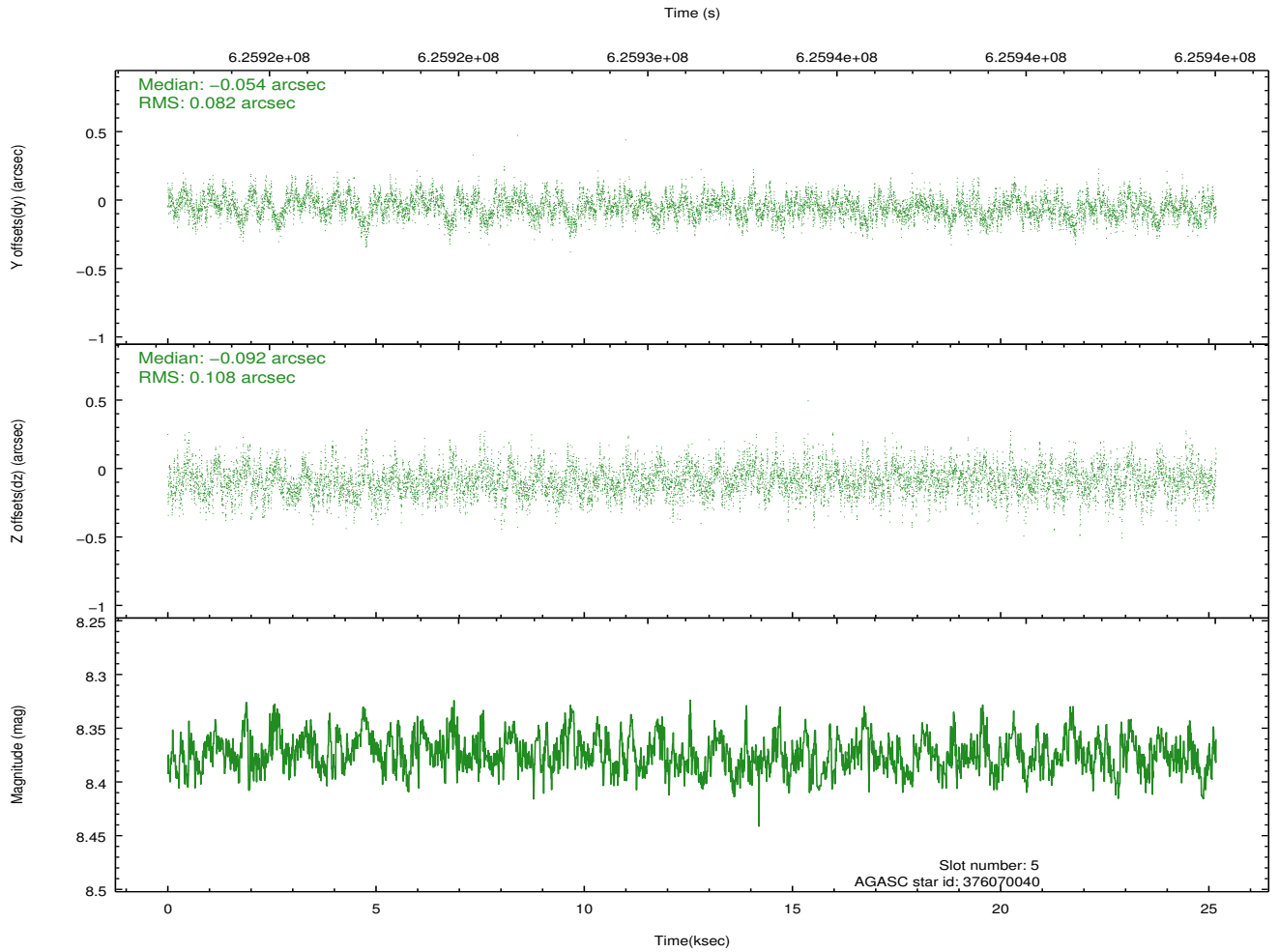
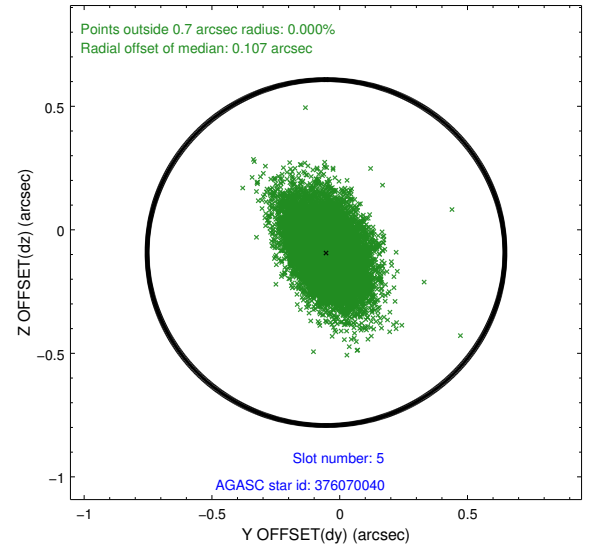
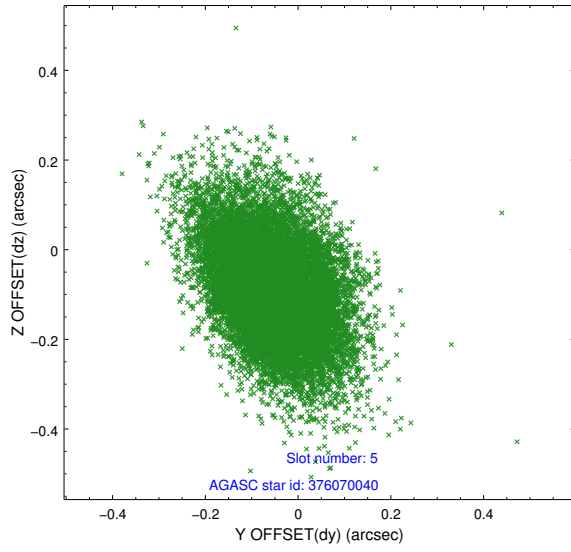
2.4.1 Slot 3



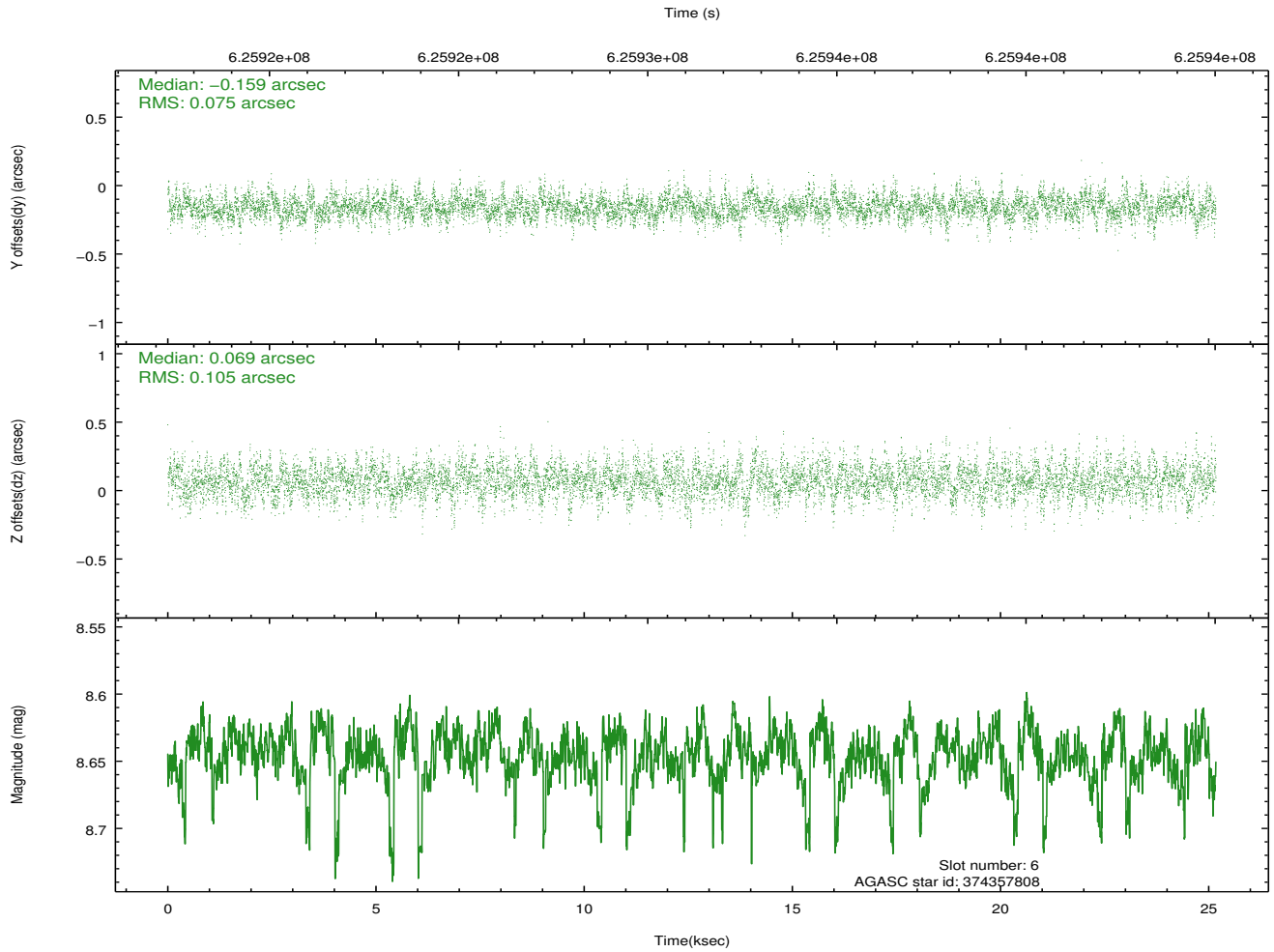
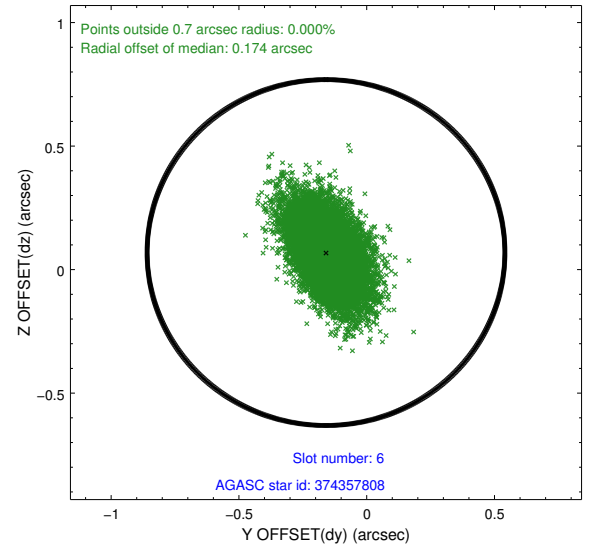
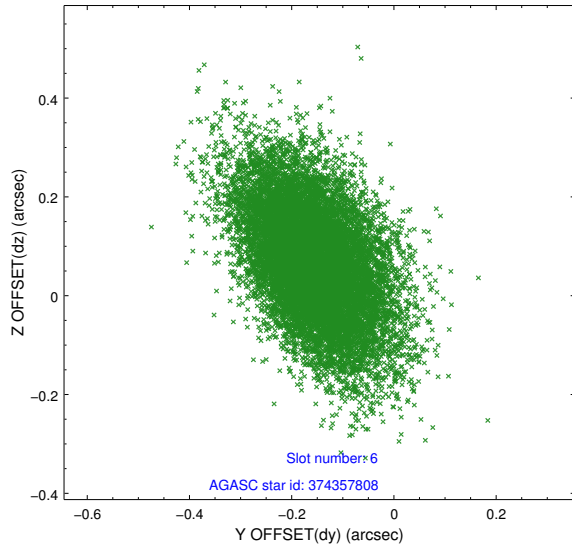
2.4.2 Slot 4



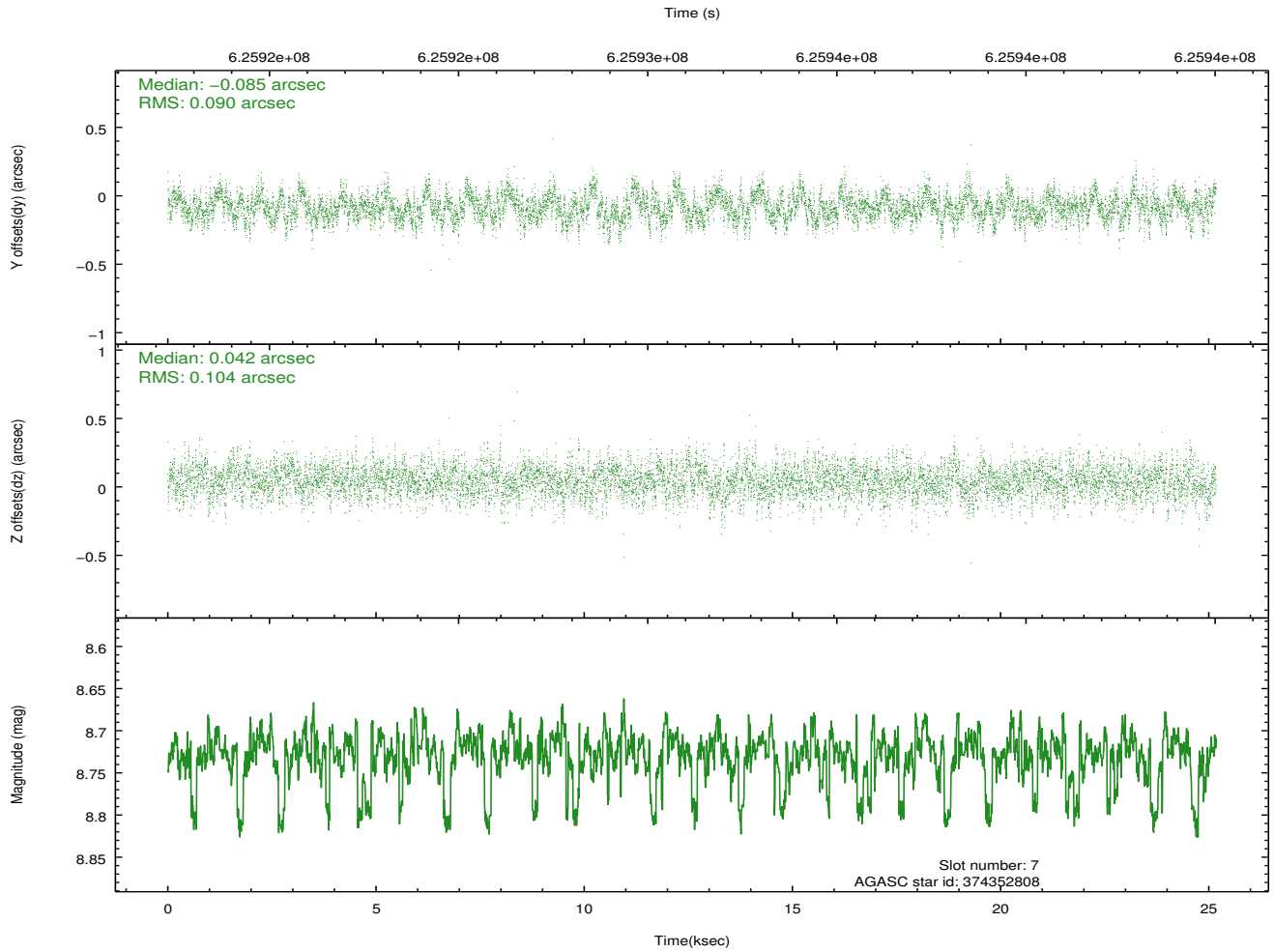
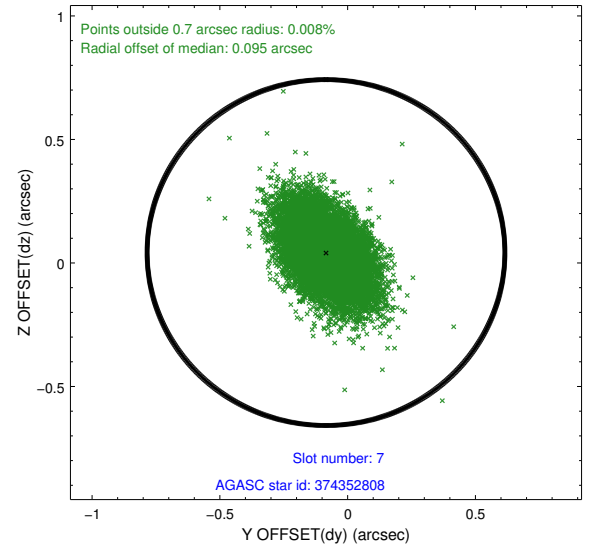
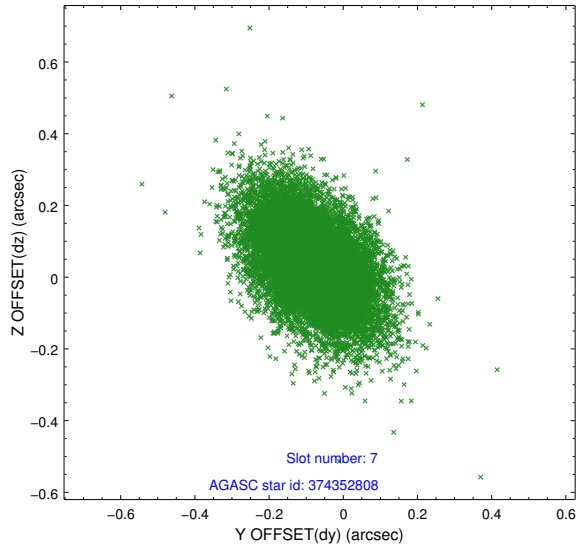
2.4.3 Slot 5



2.4.4 Slot 6

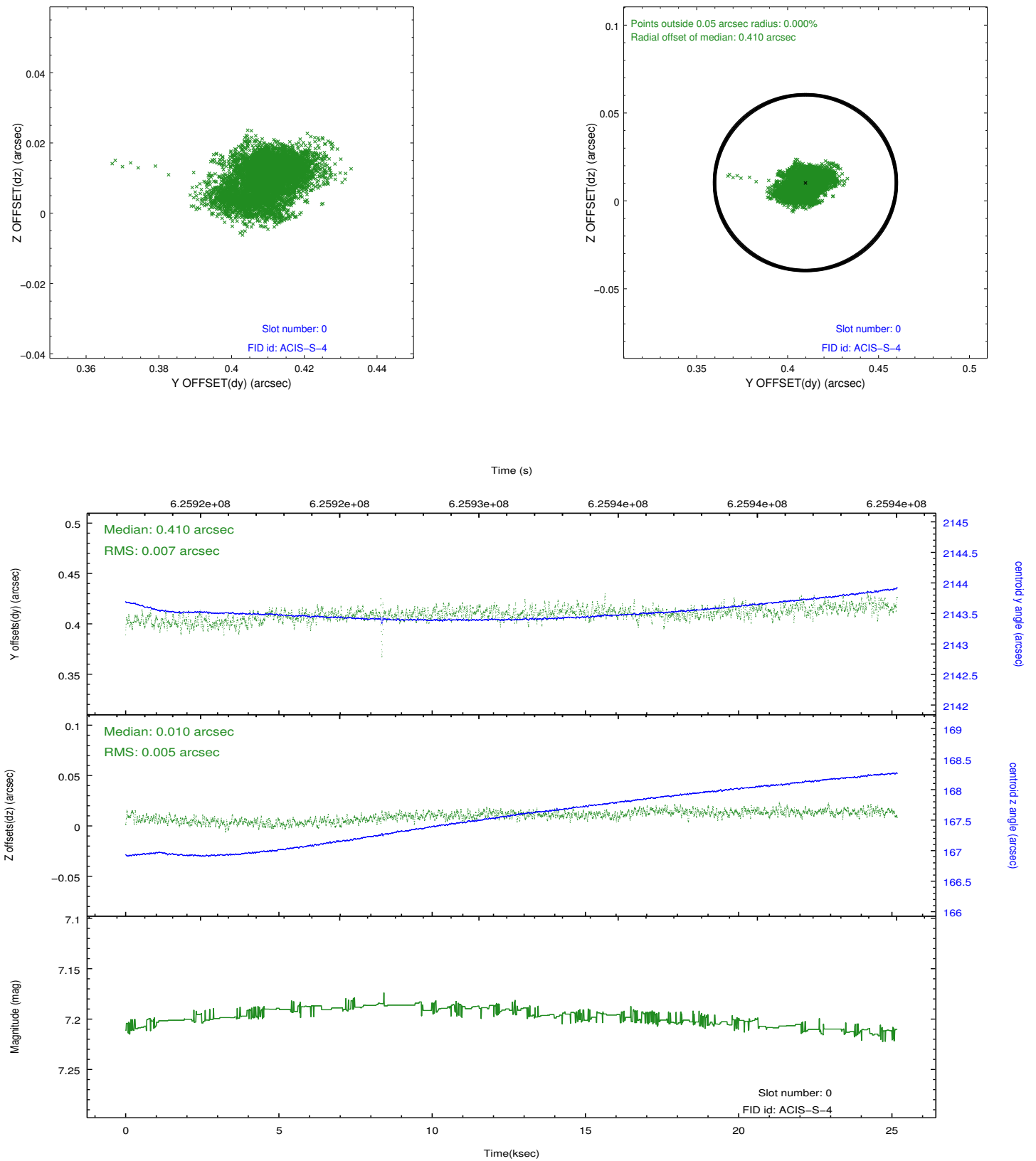


2.4.5 Slot 7

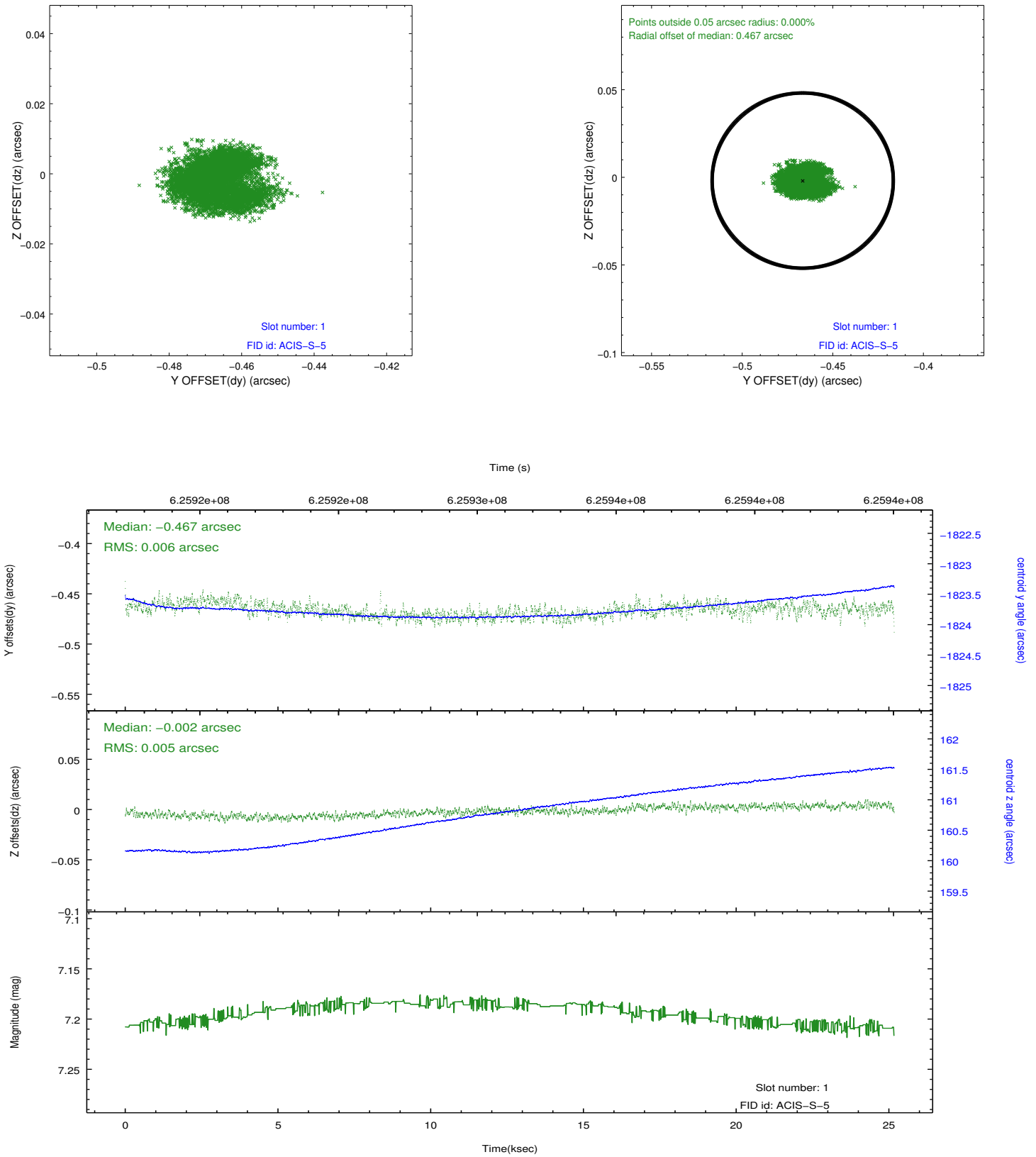


2.5 FID Slots

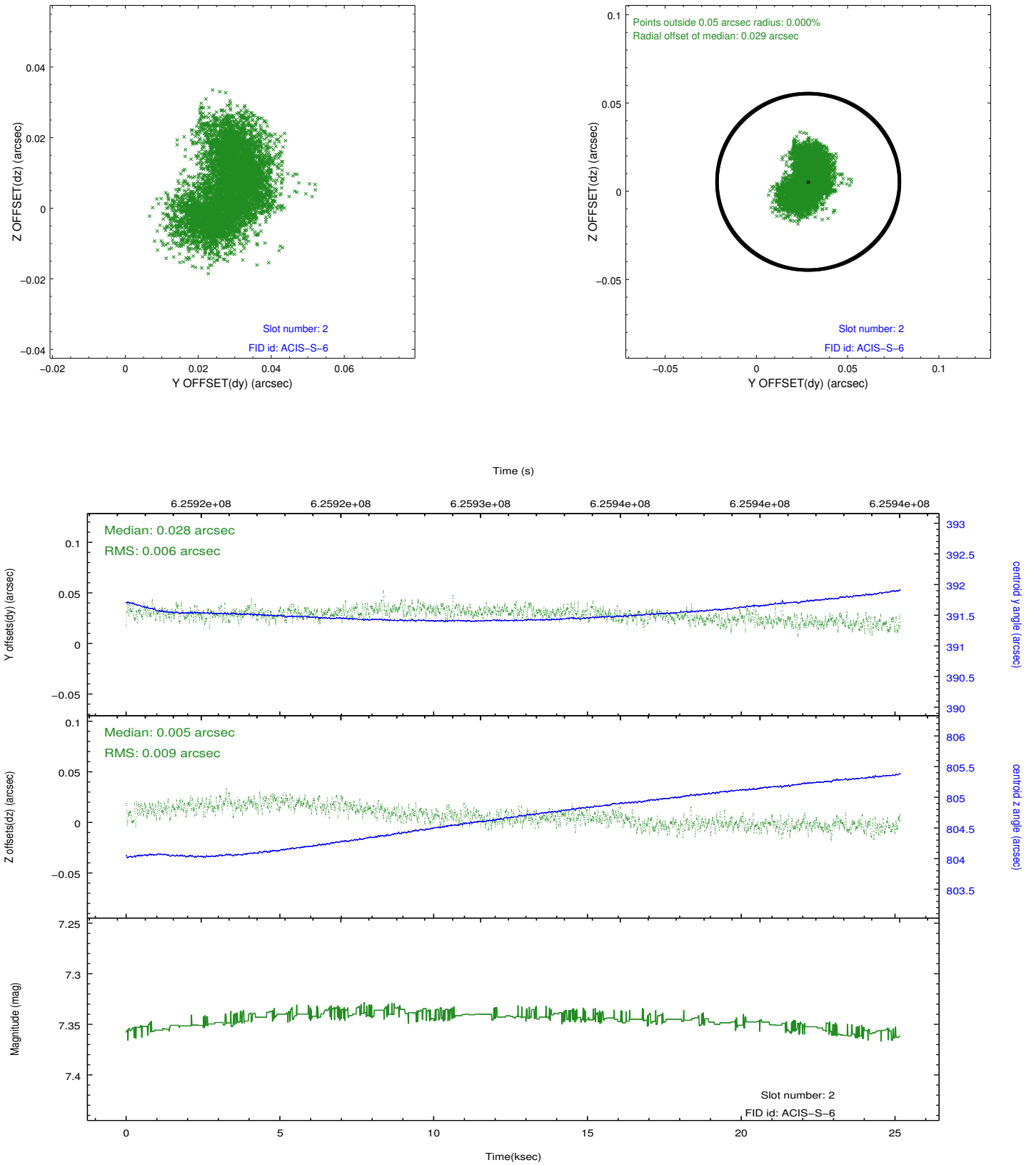
2.5.1 Slot 0



2.5.2 Slot 1

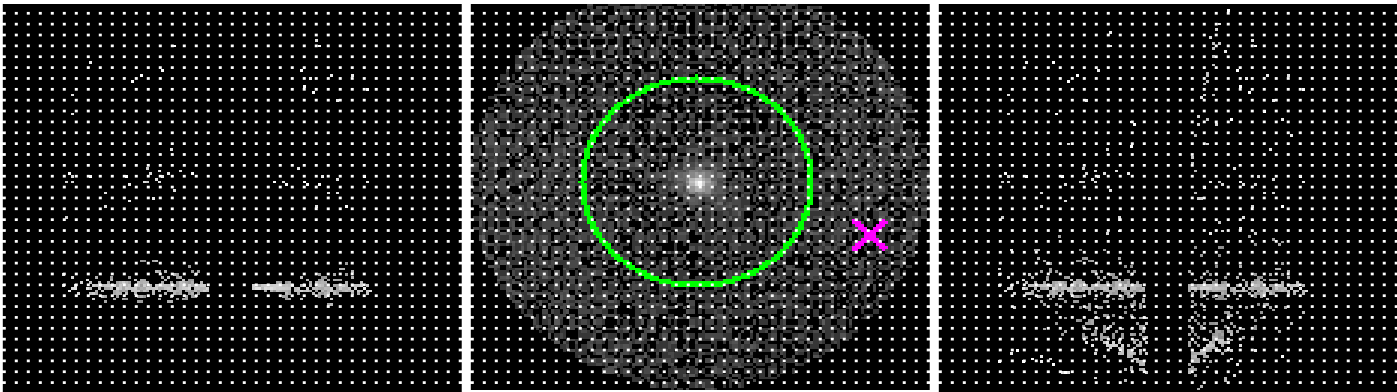


2.5.3 Slot 2



3 Gratings

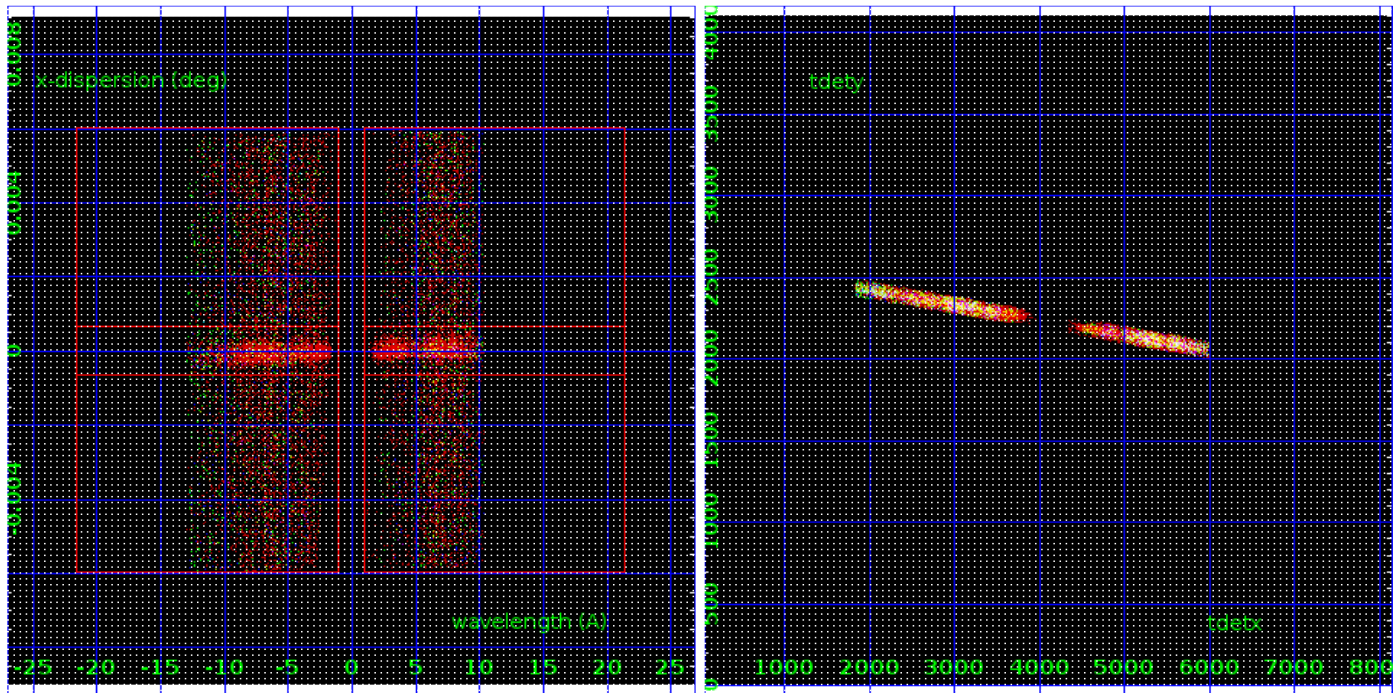
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

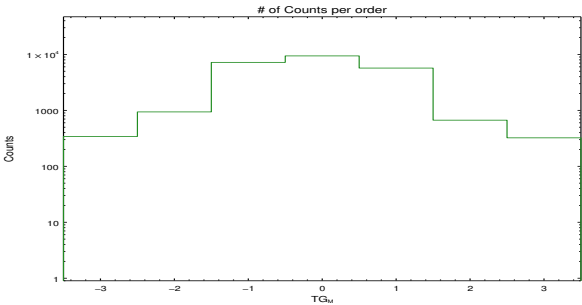
HEG Order Sort ALL

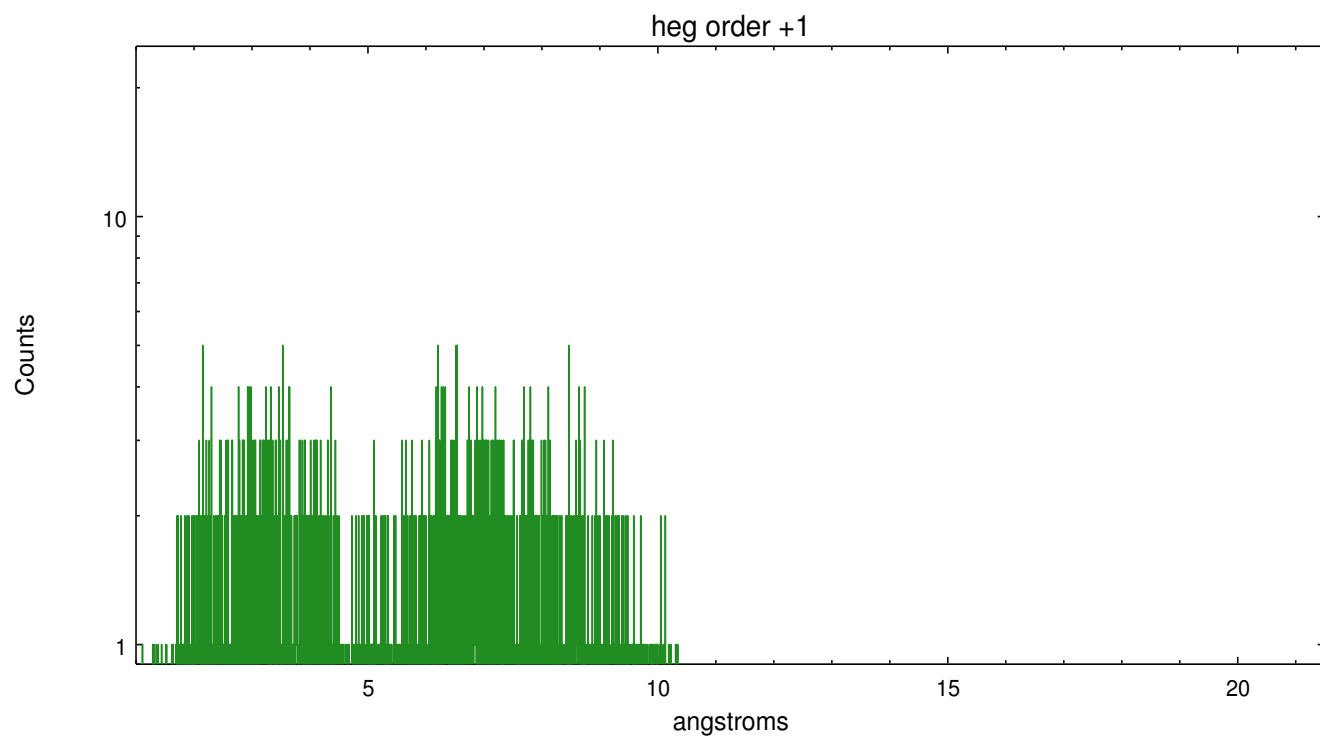
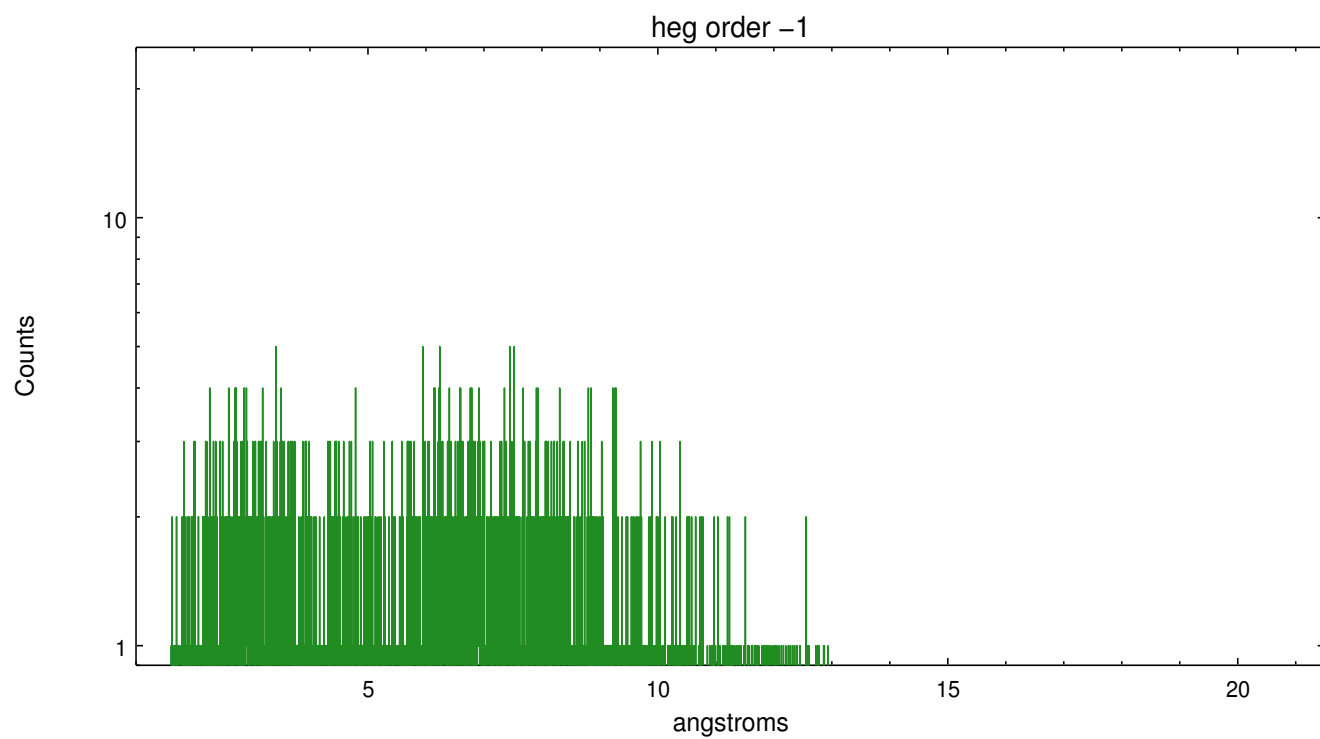


Spot Image HEG

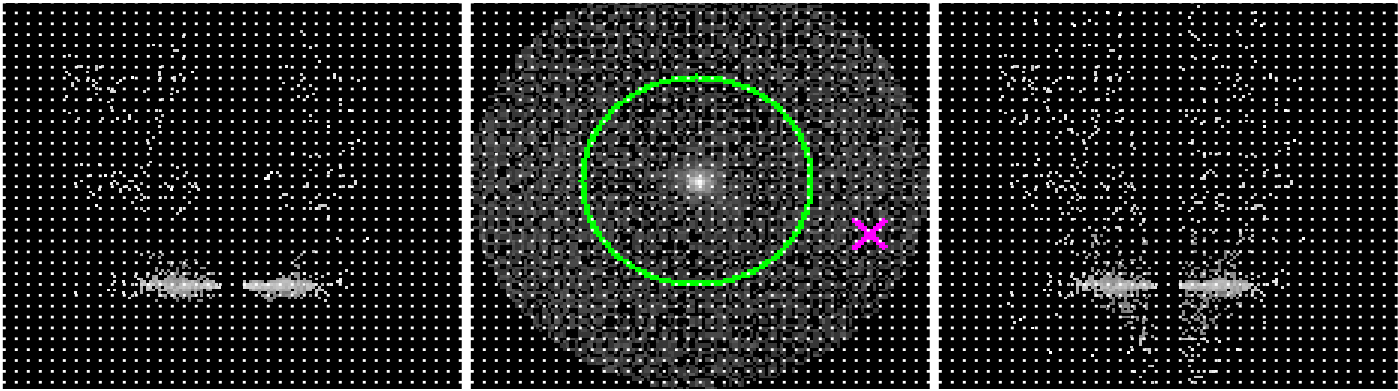
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	342	939	7207	9413	5702	668	323





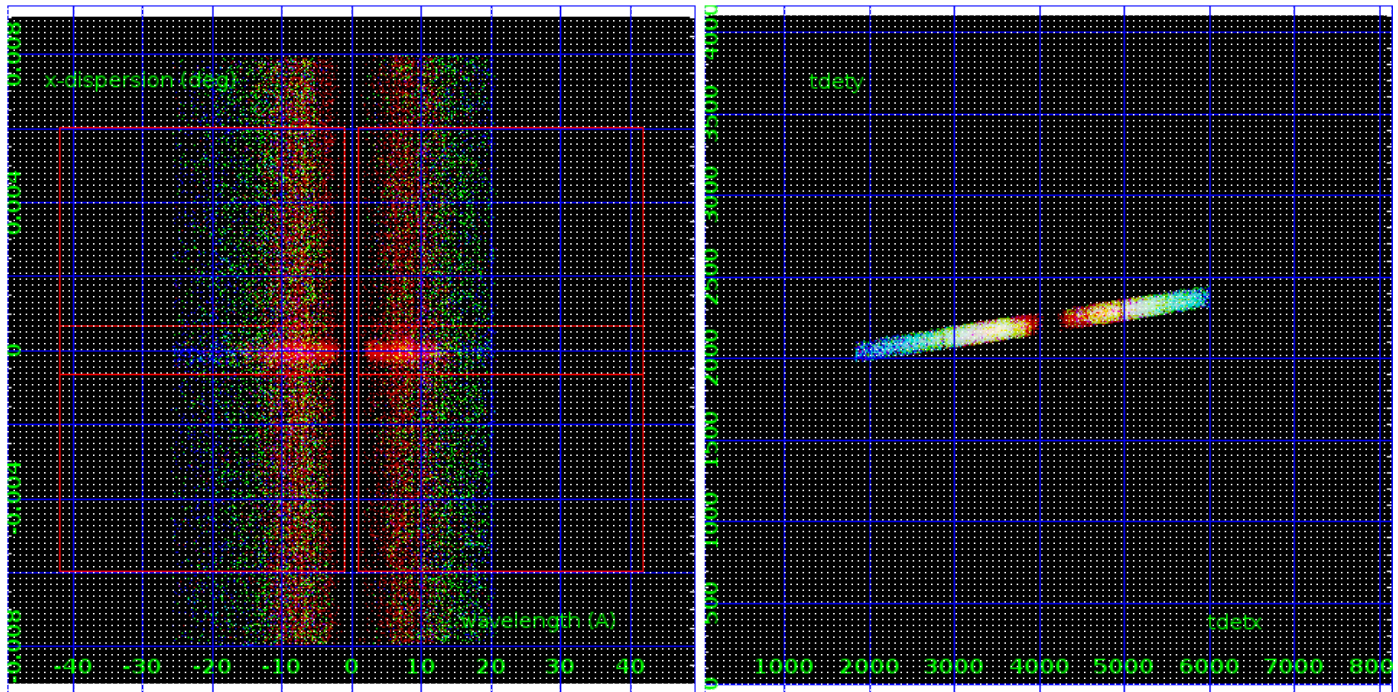
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

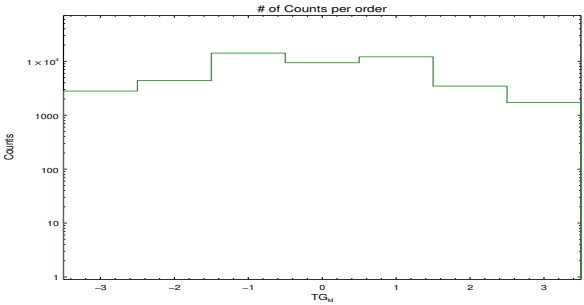
MEG Order Sort ALL

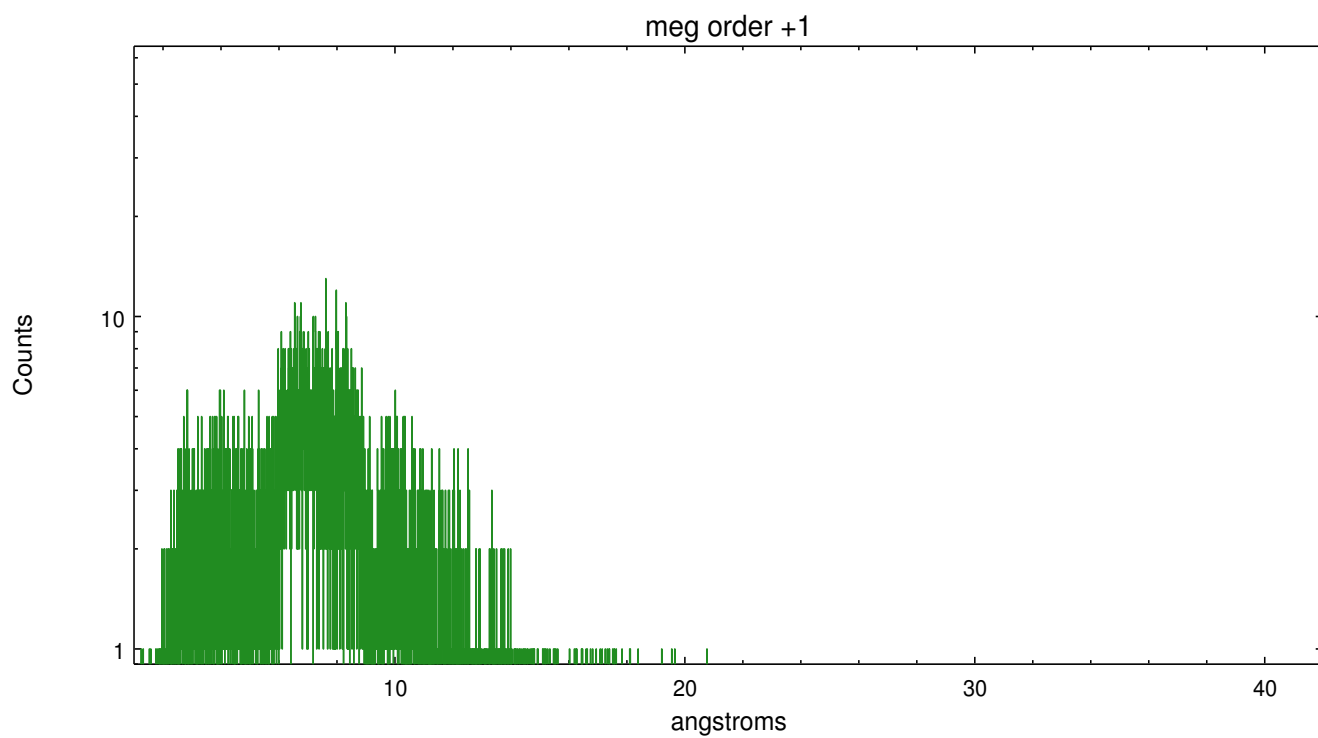
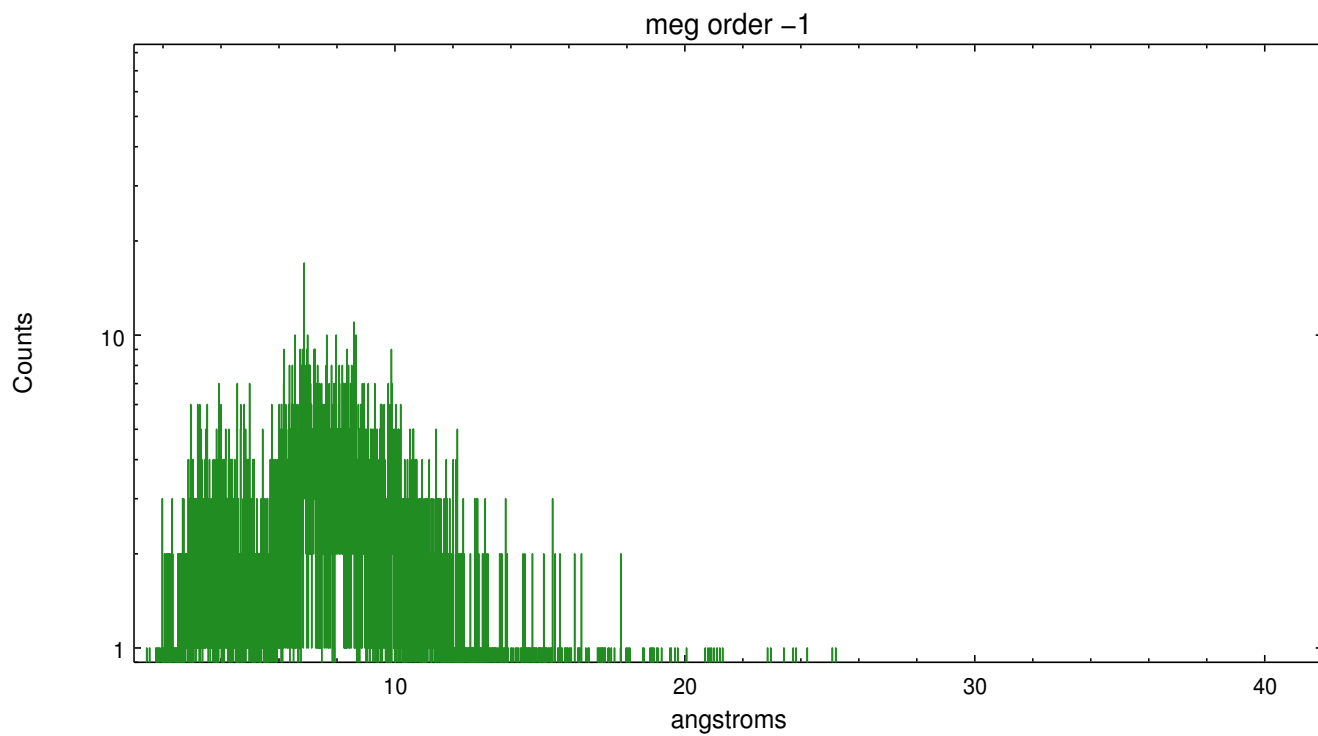


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2806	4389	14195	9413	12096	3469	1714





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2017.11.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.087199750662

A.2 Comments