

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 20827 - L2 Version 1
Chandra X-Ray Center

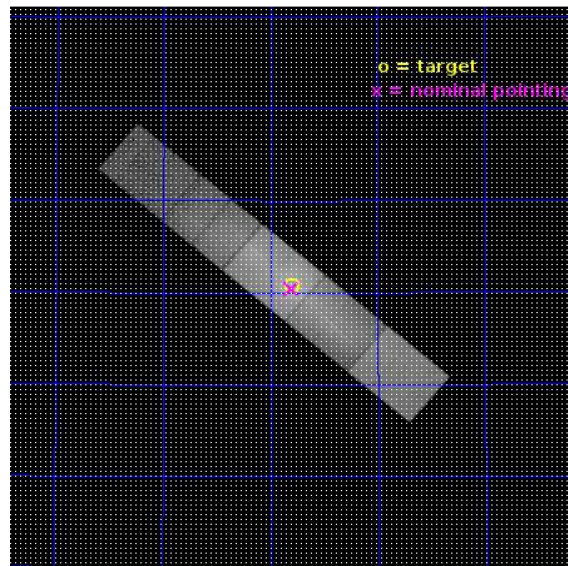
L2 Processing Date : Dec 4 2017

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1 Front

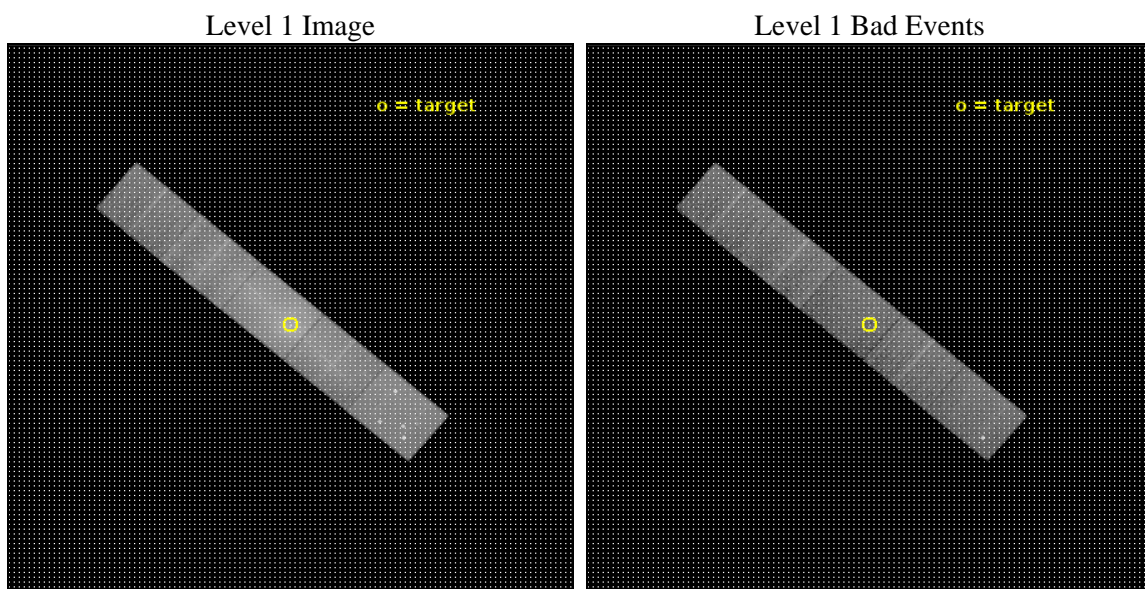
seq_num	703554	Sequence number
obs_id	20827	Observation id
title	Chandra/HETG Observations of NGC1275	Proposal title
observer	Christopher Reynolds	Principal investigator
object	NGC1275	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	49.950417	Observer's specified target RA [deg]
dec_targ	41.511667	Observer's specified target Dec [deg]
ra_nom	49.950937005357	Nominal RA [deg]
dec_nom	41.507116727635	Nominal Dec [deg]
roll_nom	220.15625770222	Nominal Roll [deg]
revision	1	Processing version of data
ontime	17232.5	Sum of GTIs [s]
livetime	16954.180178195	Livetime [s]
ontime5	17232.5	Sum of GTIs [s]
ontime6	17232.5	Sum of GTIs [s]
ontime7	17232.5	Sum of GTIs [s]
ontime8	17232.5	Sum of GTIs [s]
ontime9	17232.5	Sum of GTIs [s]
l2events	500749	Number of level 2 events



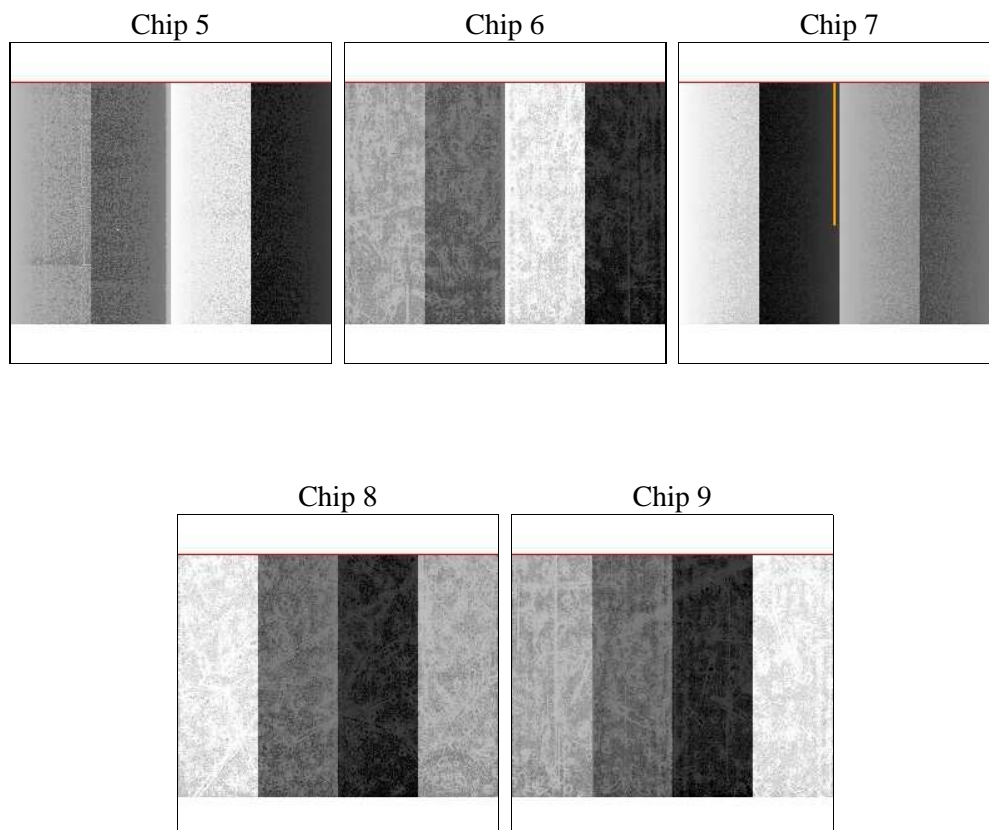
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	17150.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	17232.5	Sum of GTIs [s]
caldsver	4.7.6	 	ontime5	17232.5	Sum of GTIs [s]
date	2017-12-04T16:55:04	Date and time of file creation	ontime6	17232.5	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	17232.5	Sum of GTIs [s]
			ontime8	17232.5	Sum of GTIs [s]
			ontime9	17232.5	Sum of GTIs [s]
			l1events	975345	Number of level 1 events
			tgmetho	TGDETECT	Method used to create src1a file
			zo_pos	(4098.33, 4179.64)	src1a sky pixel position

2.1.4 Events

	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	194810	189780	308928	174111	107716
rejected events	83651	84821	71237	93714	84980
rejected %	42%	44%	23%	53%	78%

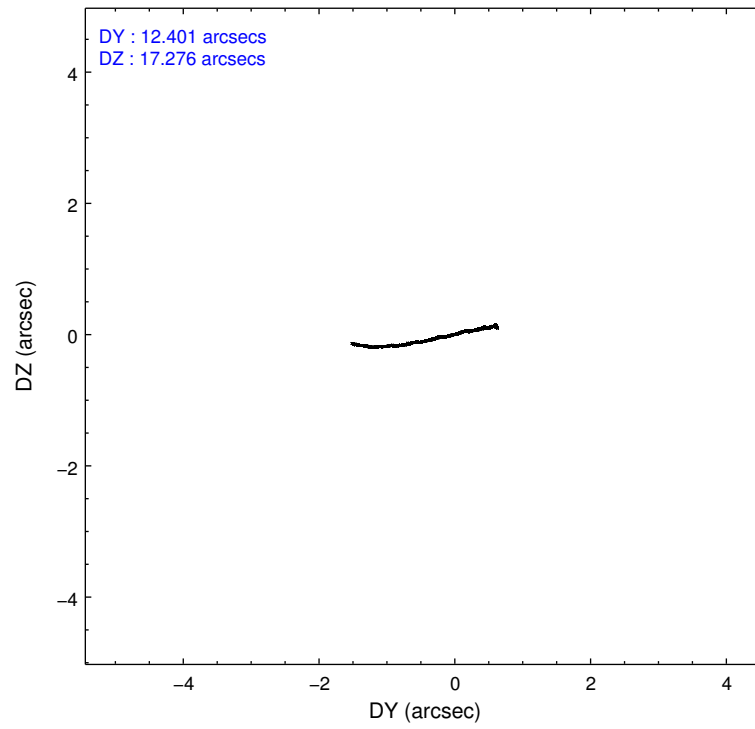
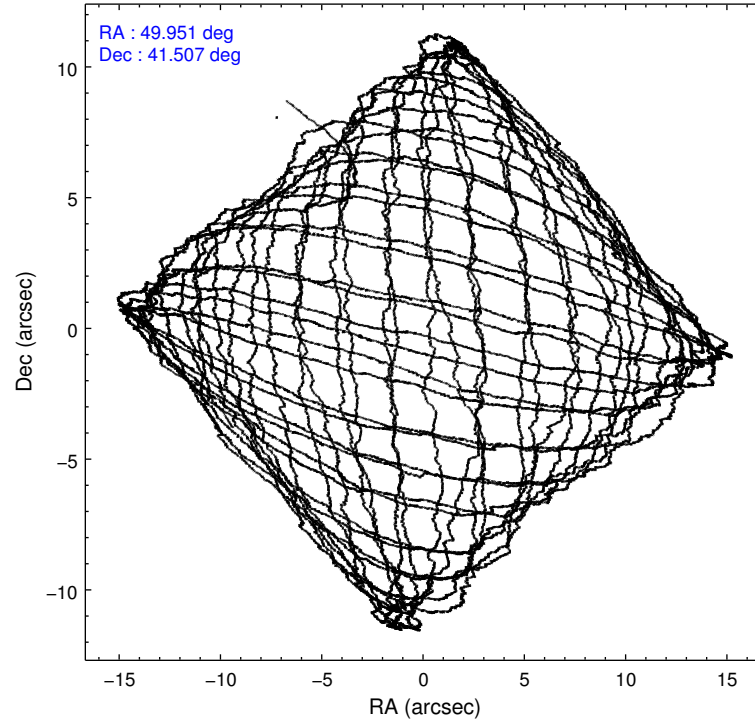
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	25803	75759	47109	46323	13063
	13%	39%	15%	26%	12%
grade 1 events	347	346	288	237	97
	0%	0%	0%	0%	0%
grade 2 events	32964	13703	58614	13411	3681
	16%	7%	18%	7%	3%
grade 3 events	4557	4585	24873	4987	1677
	2%	2%	8%	2%	1%
grade 4 events	4285	4581	24796	4843	1537
	2%	2%	8%	2%	1%
grade 5 events	11416	4785	14178	6928	5023
	5%	2%	4%	3%	4%
grade 6 events	43594	6355	82401	10849	2793
	22%	3%	26%	6%	2%
grade 7 events	71844	79666	56669	86533	79845
	36%	41%	18%	49%	74%

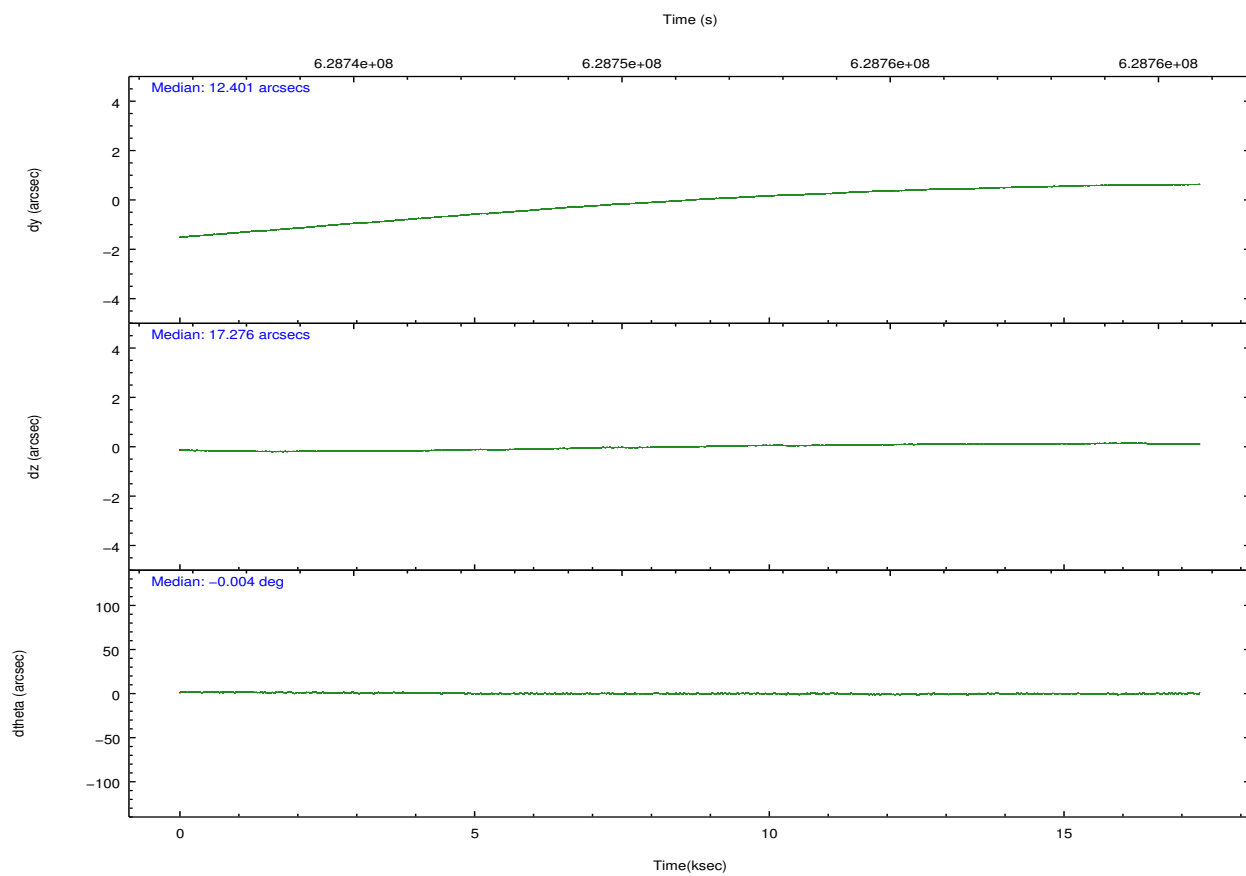
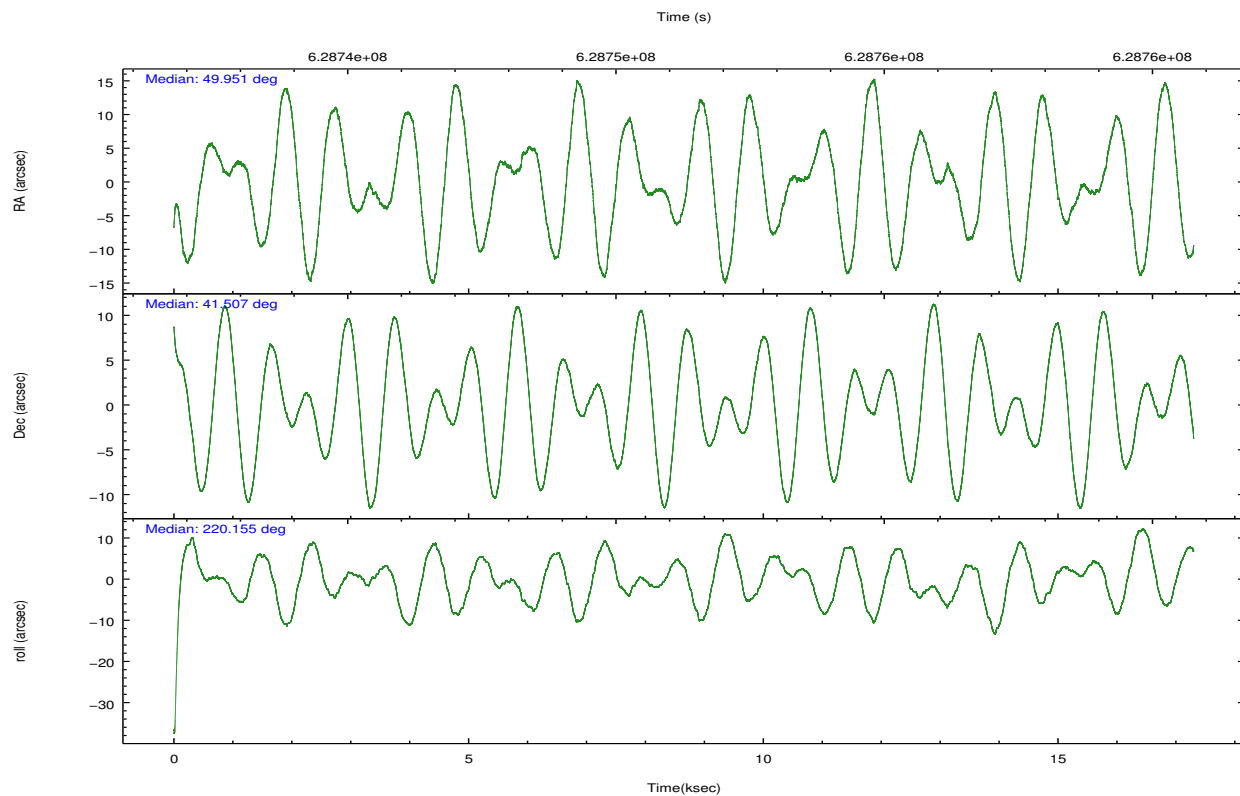
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-56789	ACIS-56789
Grating	HETG	HETG
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	49.962957	49.95093700535689
[deg] Pointing Dec	41.533049	41.50711672763484
[deg] Pointing Roll	219.991690	220.1562577022164
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1400660498719
[mm] SIM translation stage offset	0	0.00754346686406393
[s] Observation start time (MET)	628742754.184000	628741710.1354001
Observation start date	2017-12-04T02:44:45	2017-12-04T02:28:30
[s] Observation end time (MET)	628759904.184000	628760963.7365299
Observation end date	2017-12-04T07:30:35	2017-12-04T07:49:23
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	N	N
CCD I1 on	N	N
CCD I2 on	N	N
CCD I3 on	N	N
CCD S0 on	O1	N
CCD S1 on	Y	Y
CCD S2 on	Y	Y
CCD S3 on	Y	Y
CCD S4 on	Y	Y
CCD S5 on	O2	Y
Number of optional ACIS chips dropped	1	1
On-chip summing requested	N	N
Subarray requested	CUSTOM	CUSTOM
Subarray start row	125	125
Subarray row count	774	774
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	2.5

2.3 Aspect



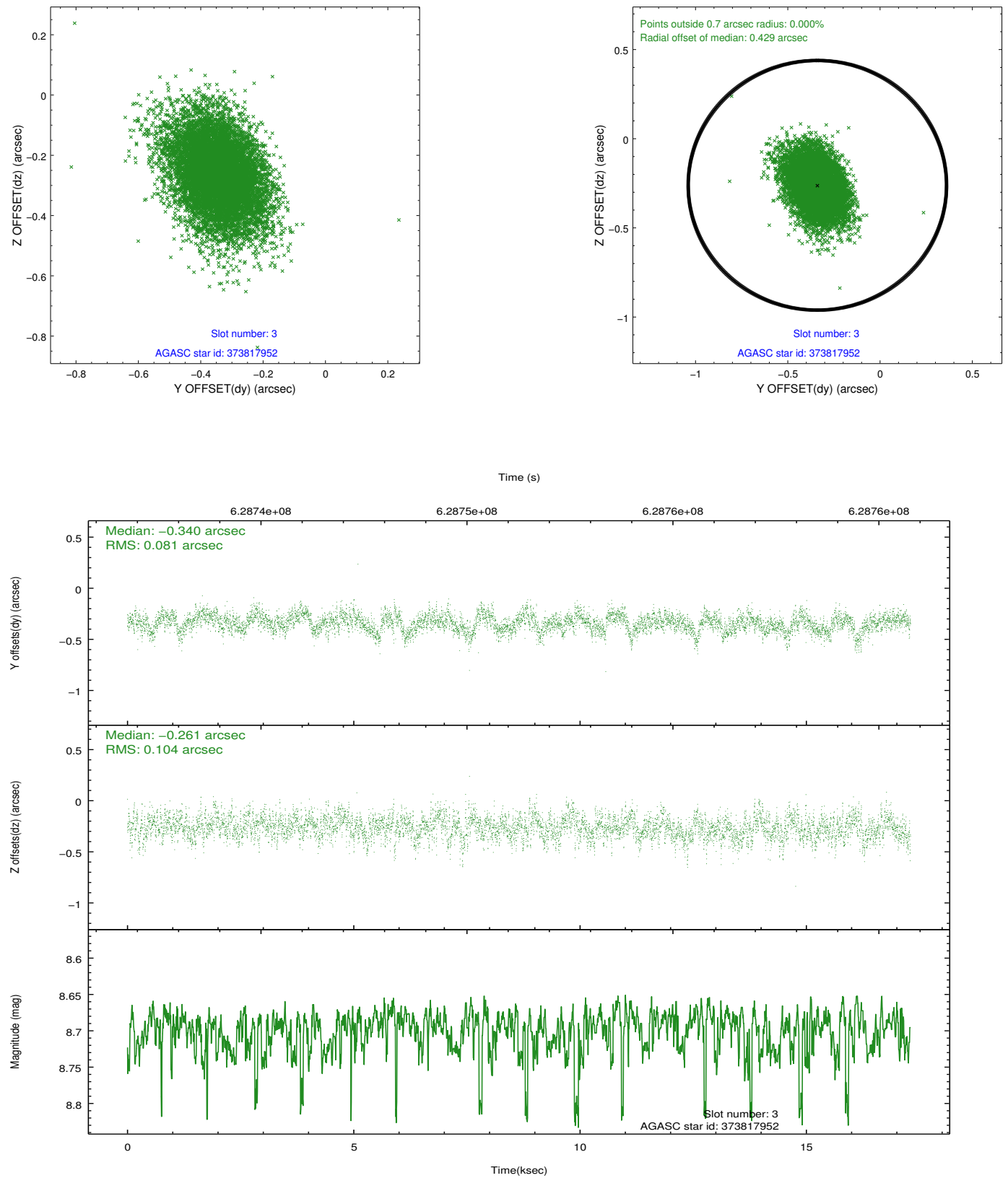


Slot Statistics

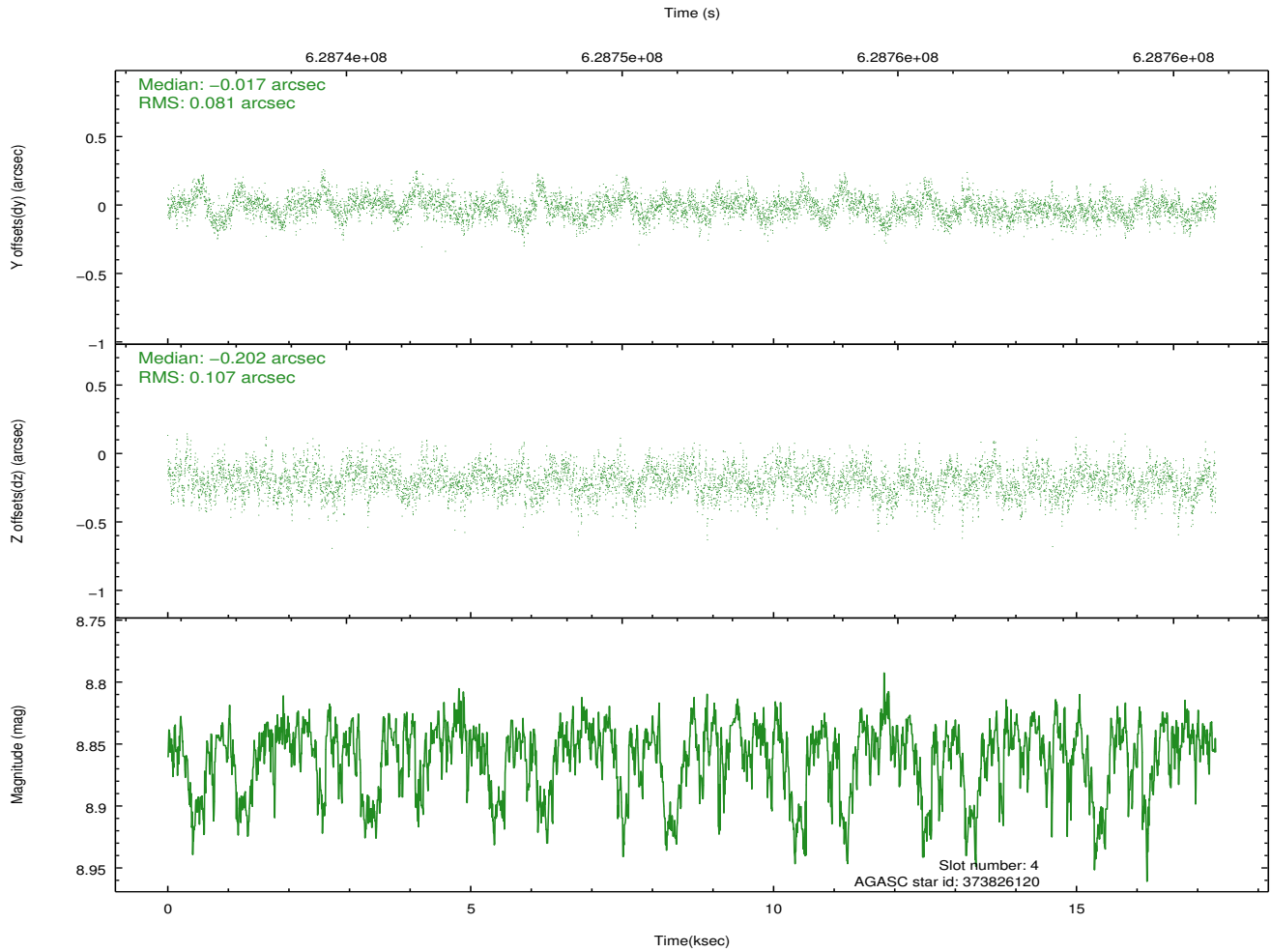
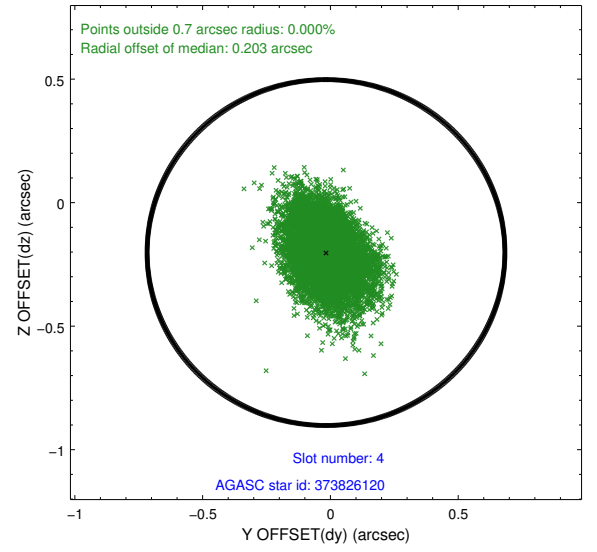
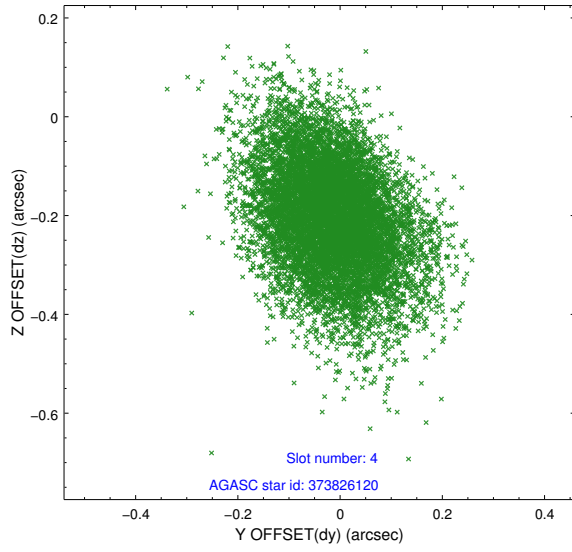
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.00	4221	-0.126	-0.065	0.017	0.027	0.000000	0.000000	-765.25	-1738.77
1	FID		ACIS-S-4	7.12	4221	0.371	0.079	0.024	0.042	0.000000	0.000000	2148.41	169.62
2	FID		ACIS-S-5	7.13	4220	-0.282	-0.003	0.033	0.048	0.000000	0.000000	-1817.94	163.46
3	GUIDE	used	373817952	8.70	8433	-0.340	-0.261	0.137	0.233	49.913424	40.978510	1386.13	1443.22
4	GUIDE	used	373826120	8.85	8436	-0.017	-0.202	0.140	0.238	49.738165	41.186341	1268.72	564.50
5	GUIDE	used	374352808	8.69	8433	0.174	0.209	0.125	0.210	49.969955	42.208621	-1576.63	-1850.61
6	GUIDE	used	374357808	8.64	8436	0.220	0.336	0.134	0.221	49.921429	42.176083	-1402.65	-1844.16
7	GUIDE	used	376057824	8.30	8430	-0.036	-0.077	0.119	0.205	50.665569	41.926280	-2356.27	119.70

2.4 Star Slots

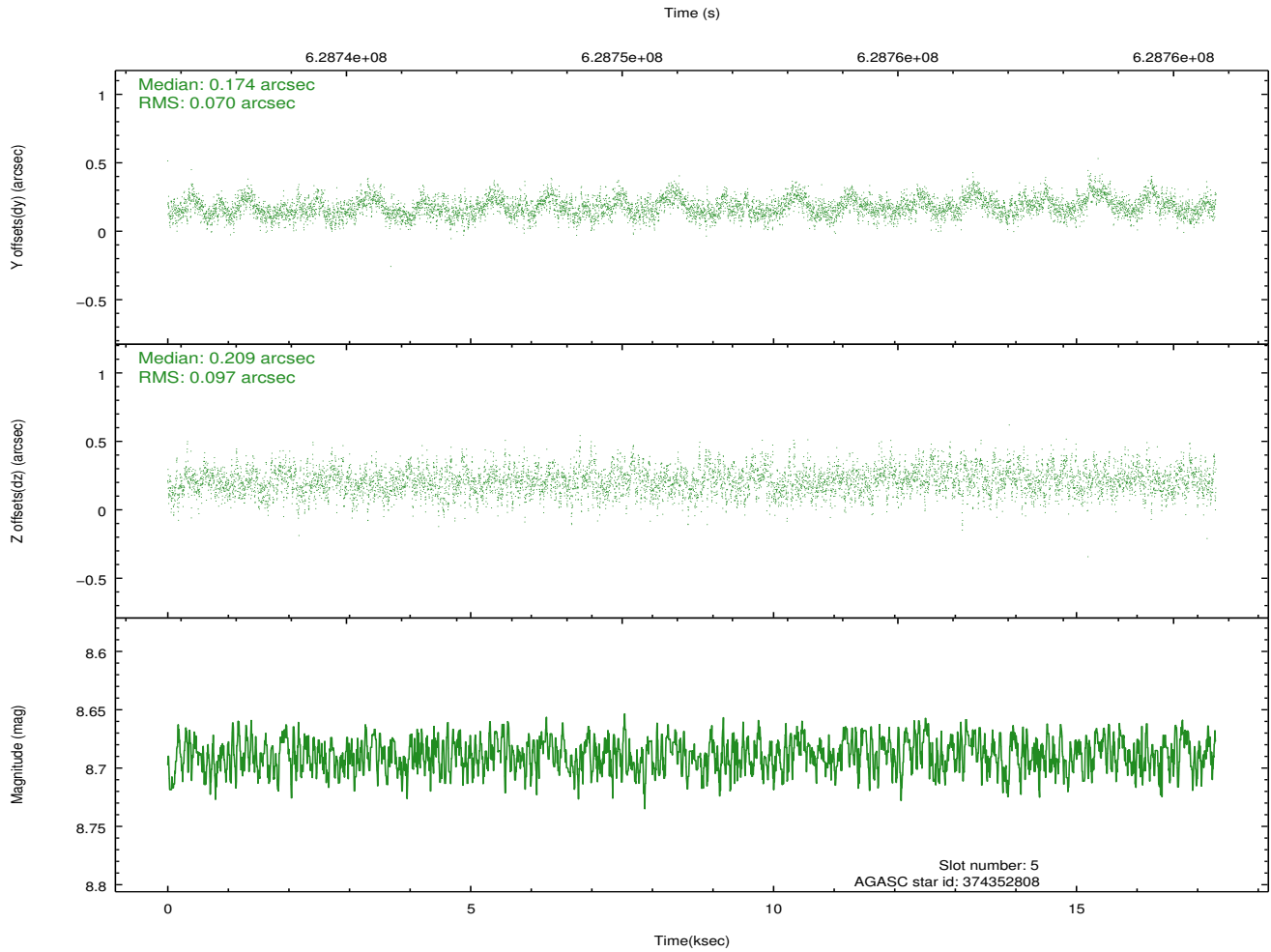
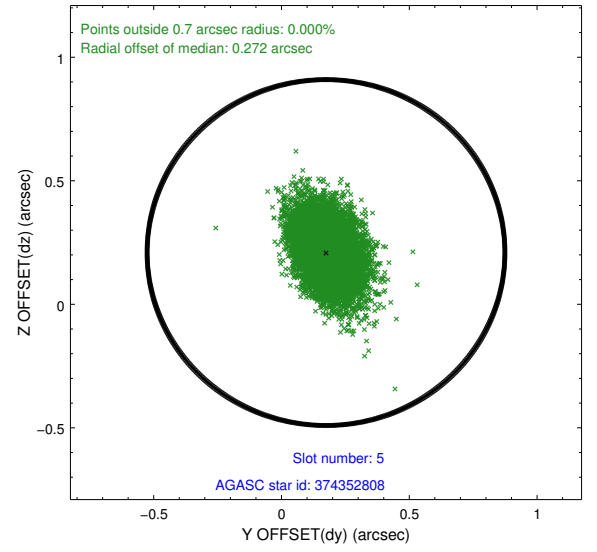
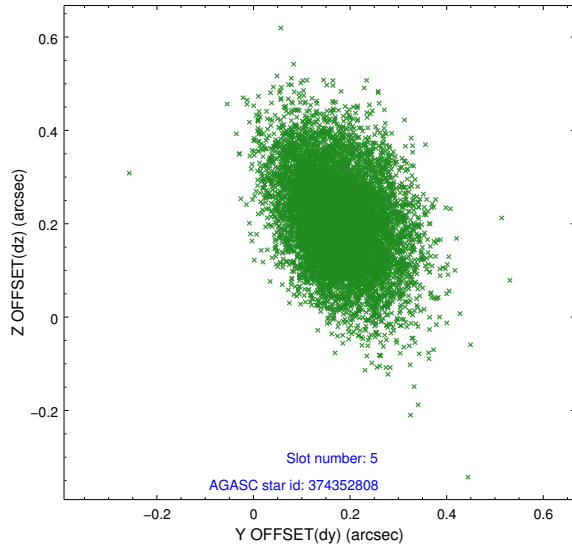
2.4.1 Slot 3



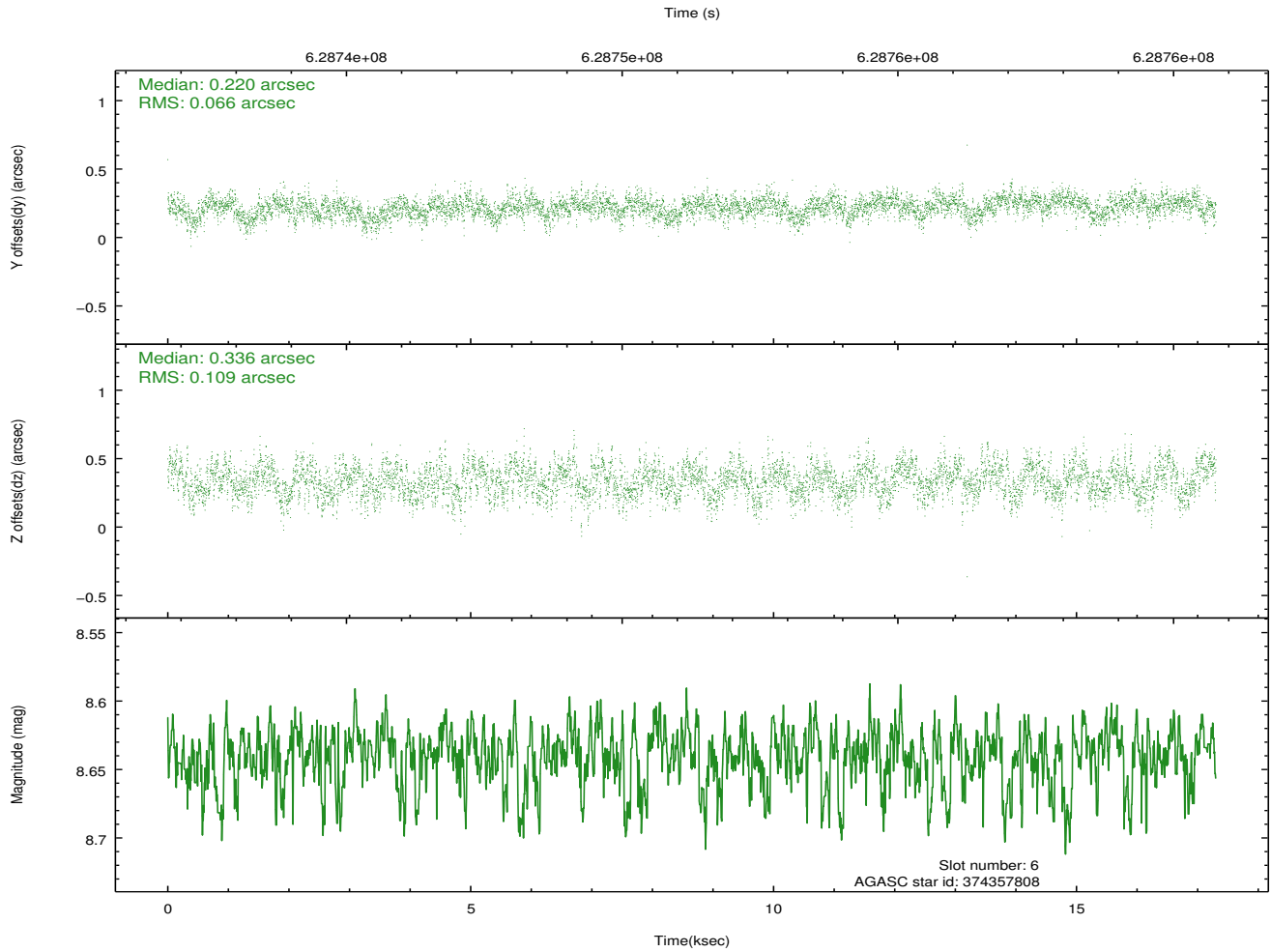
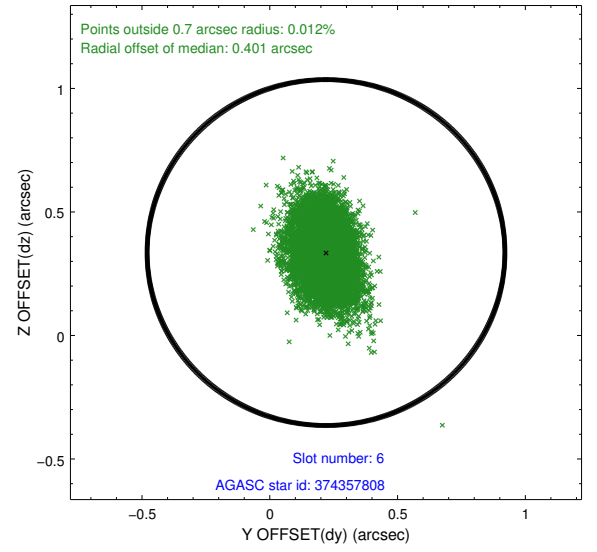
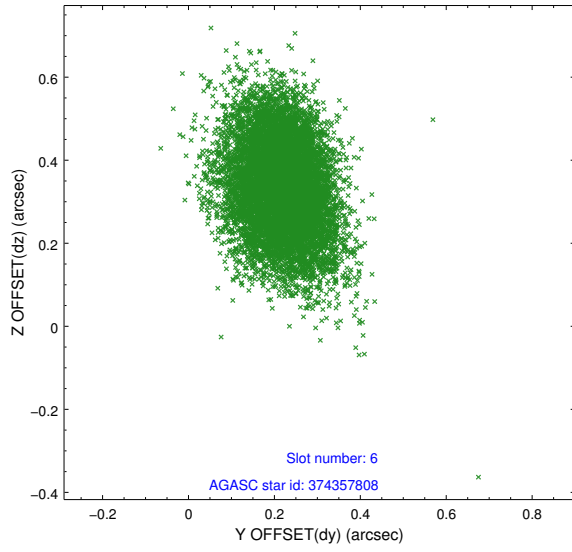
2.4.2 Slot 4



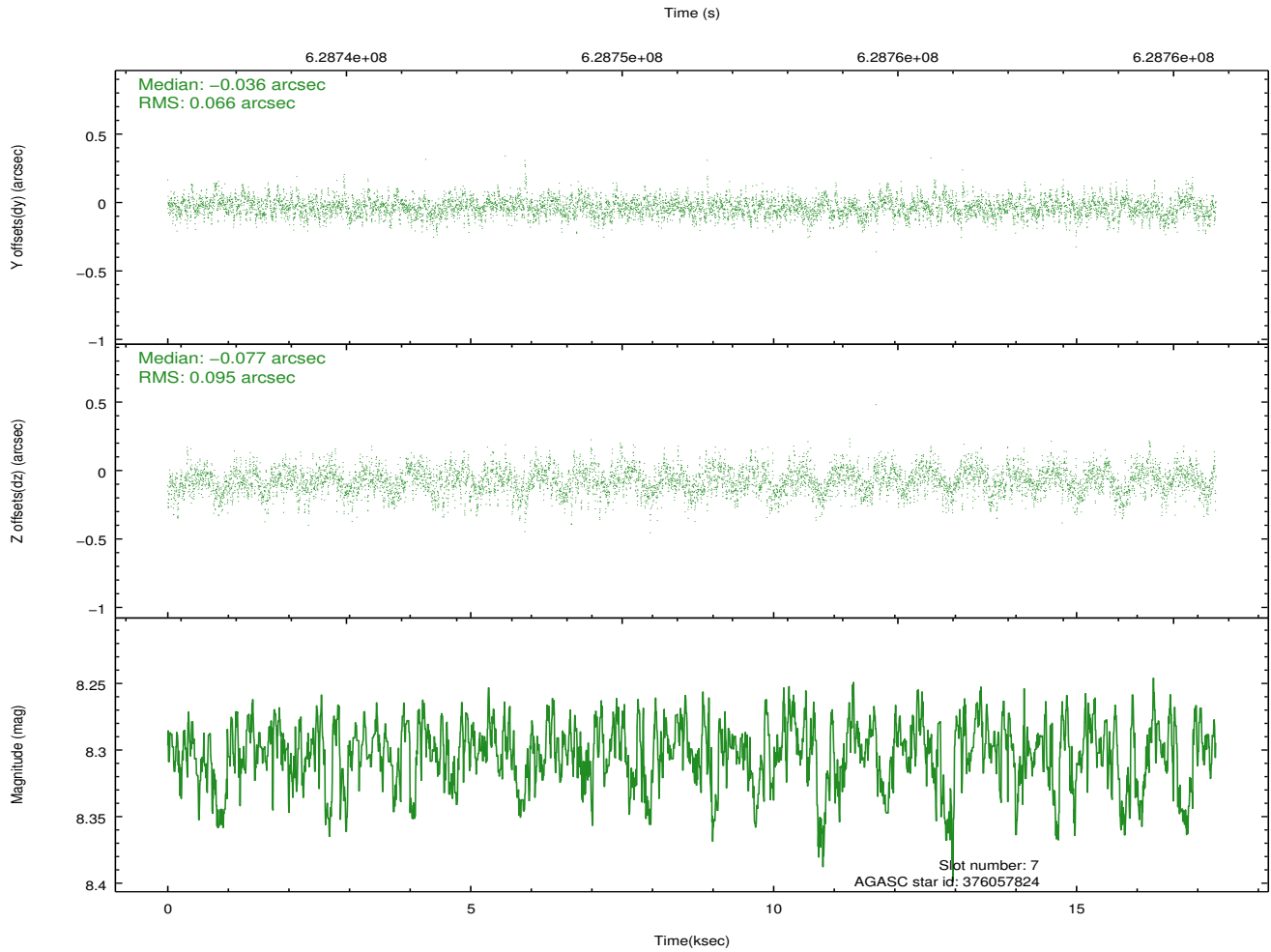
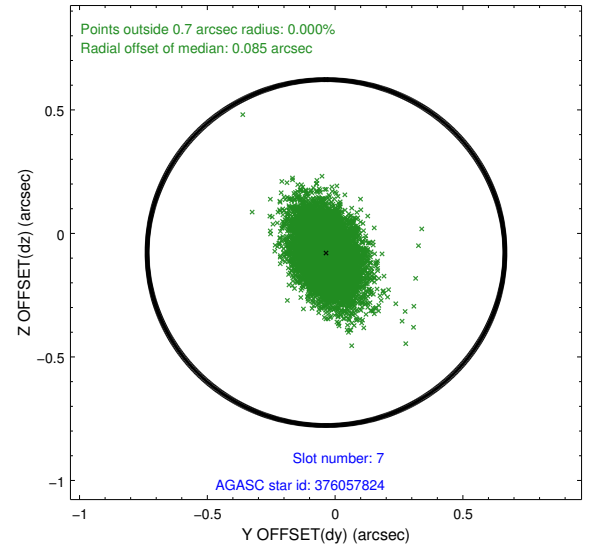
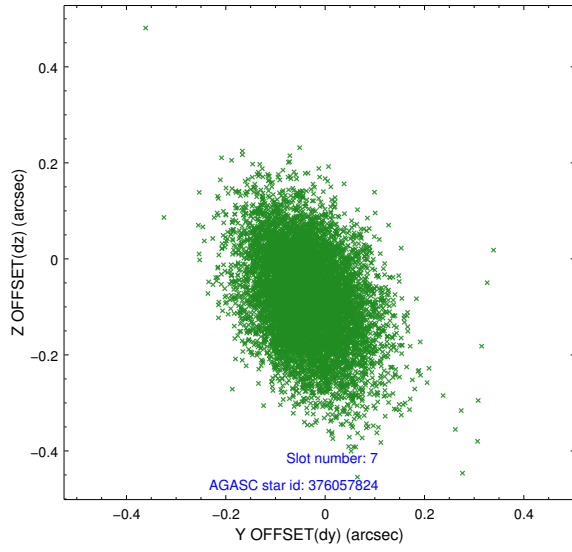
2.4.3 Slot 5



2.4.4 Slot 6

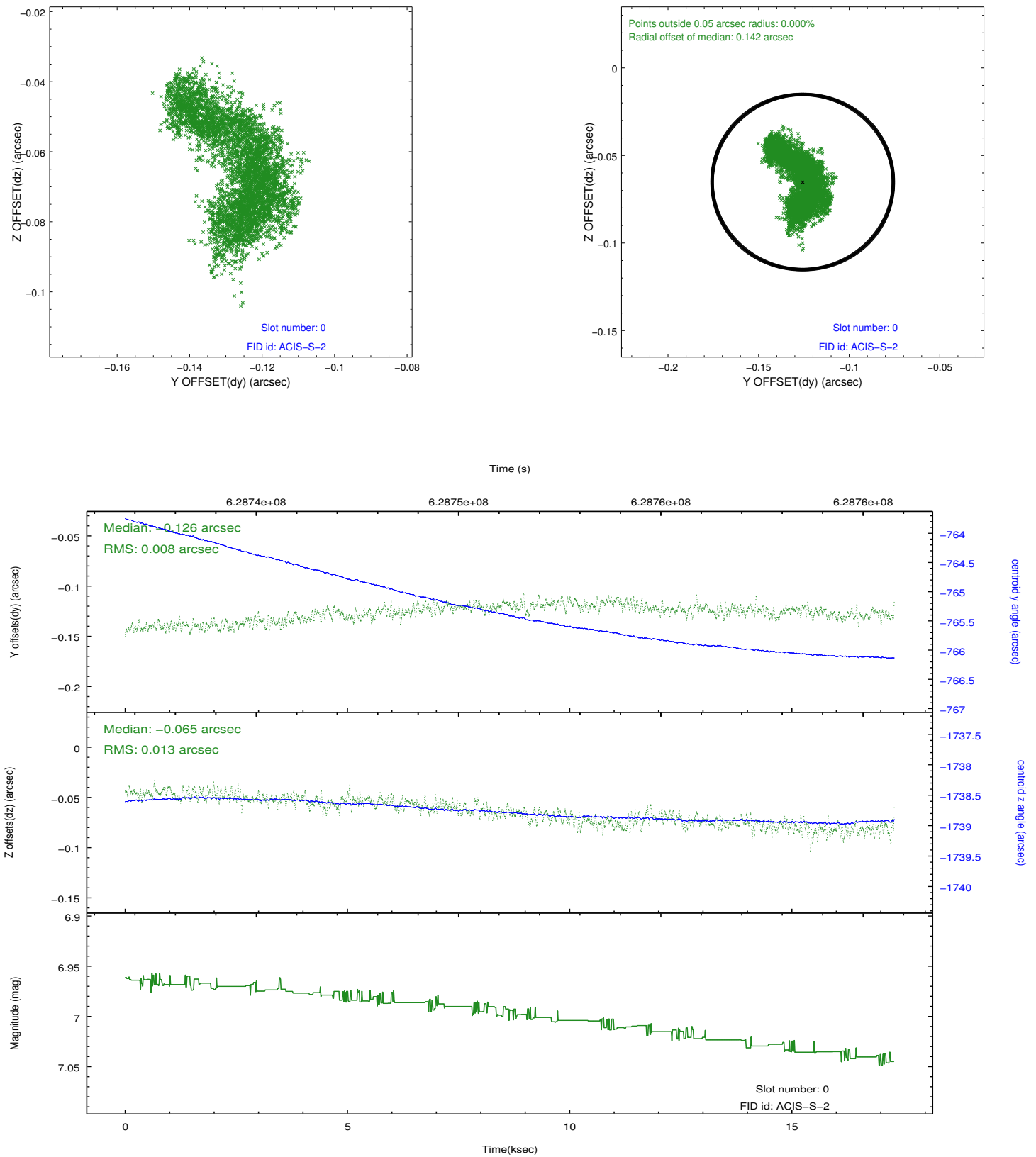


2.4.5 Slot 7

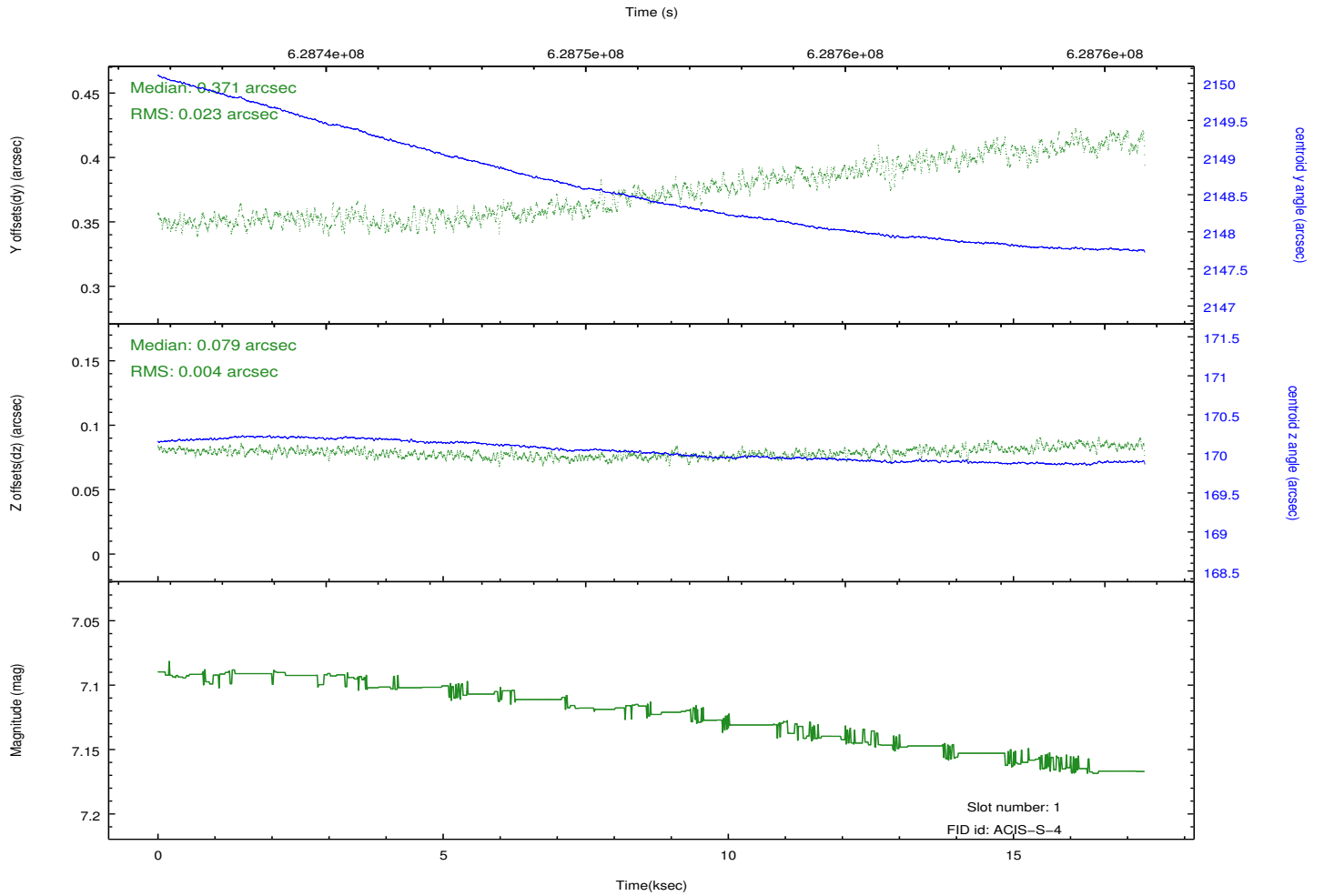
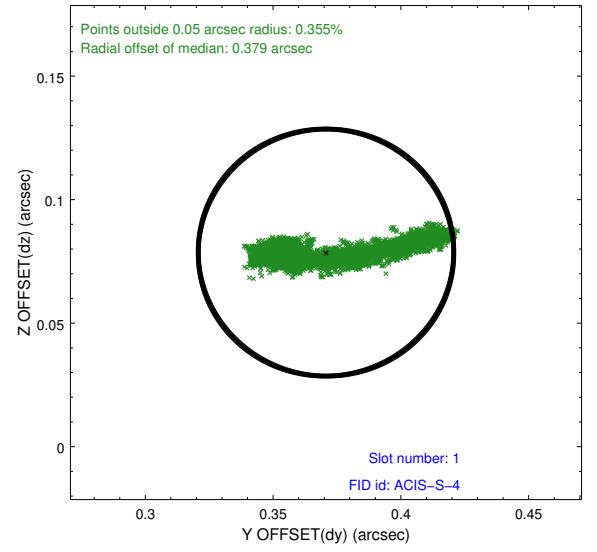
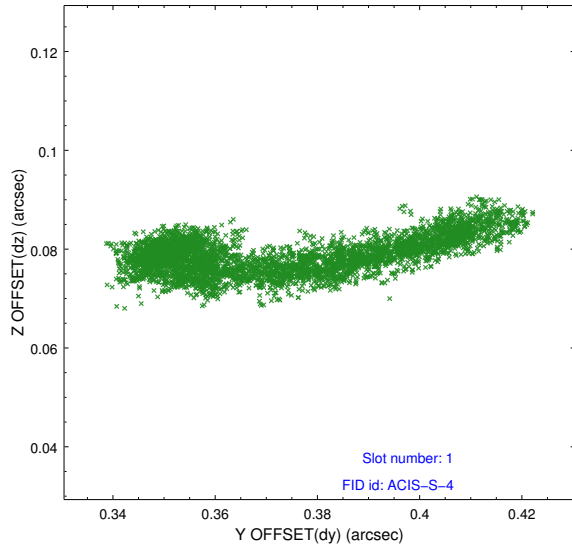


2.5 FID Slots

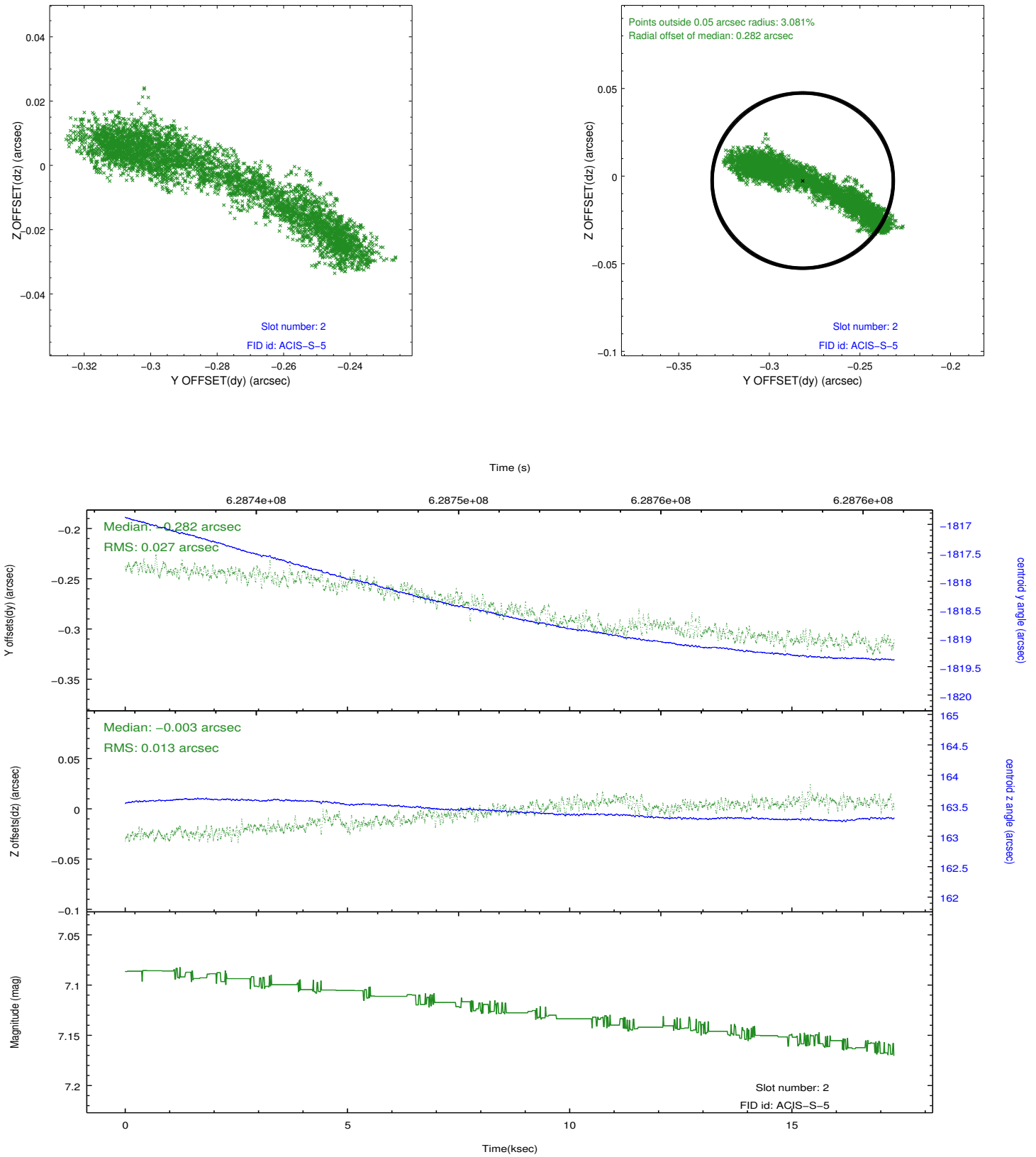
2.5.1 Slot 0



2.5.2 Slot 1

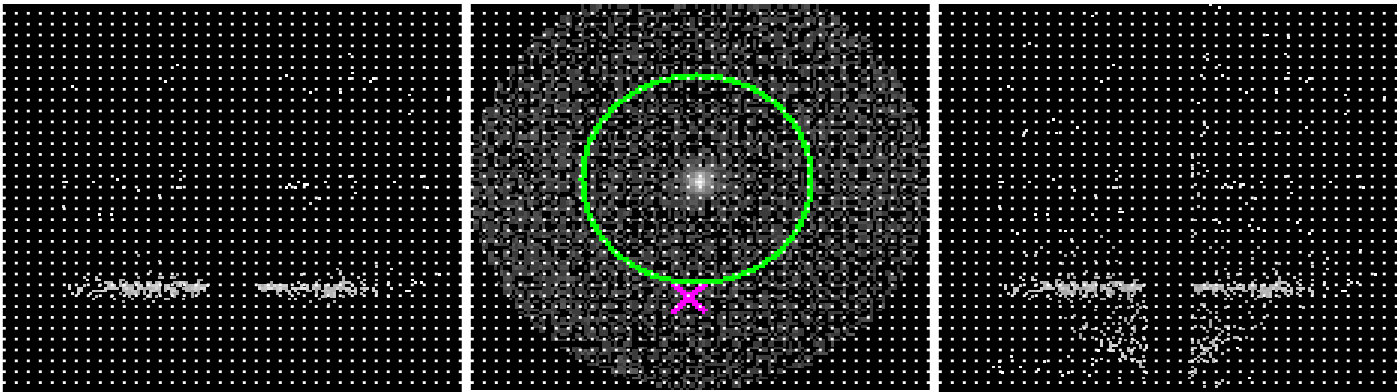


2.5.3 Slot 2



3 Gratings

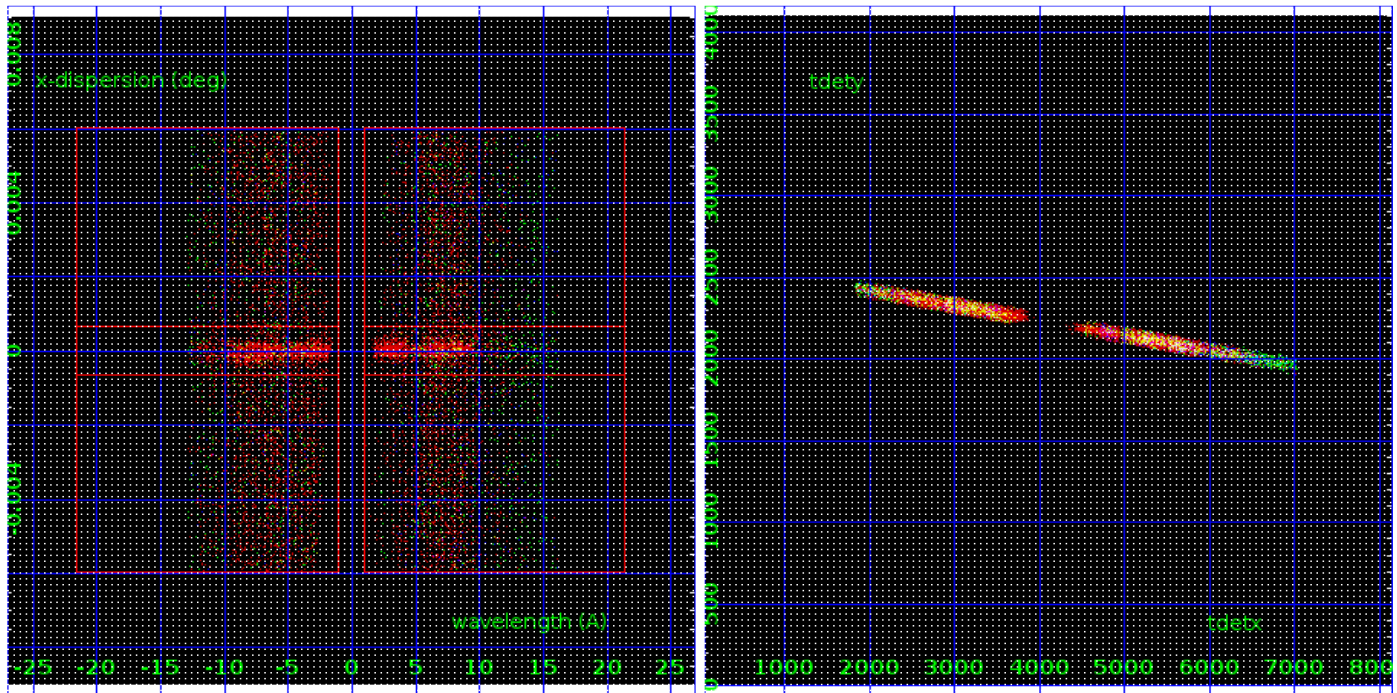
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

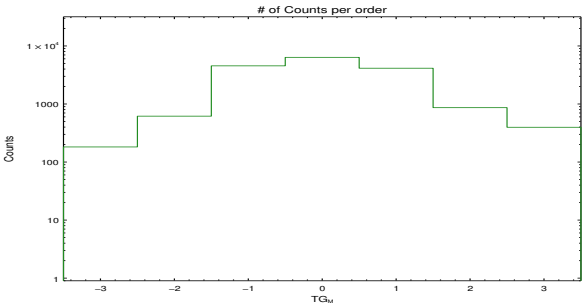
HEG Order Sort ALL

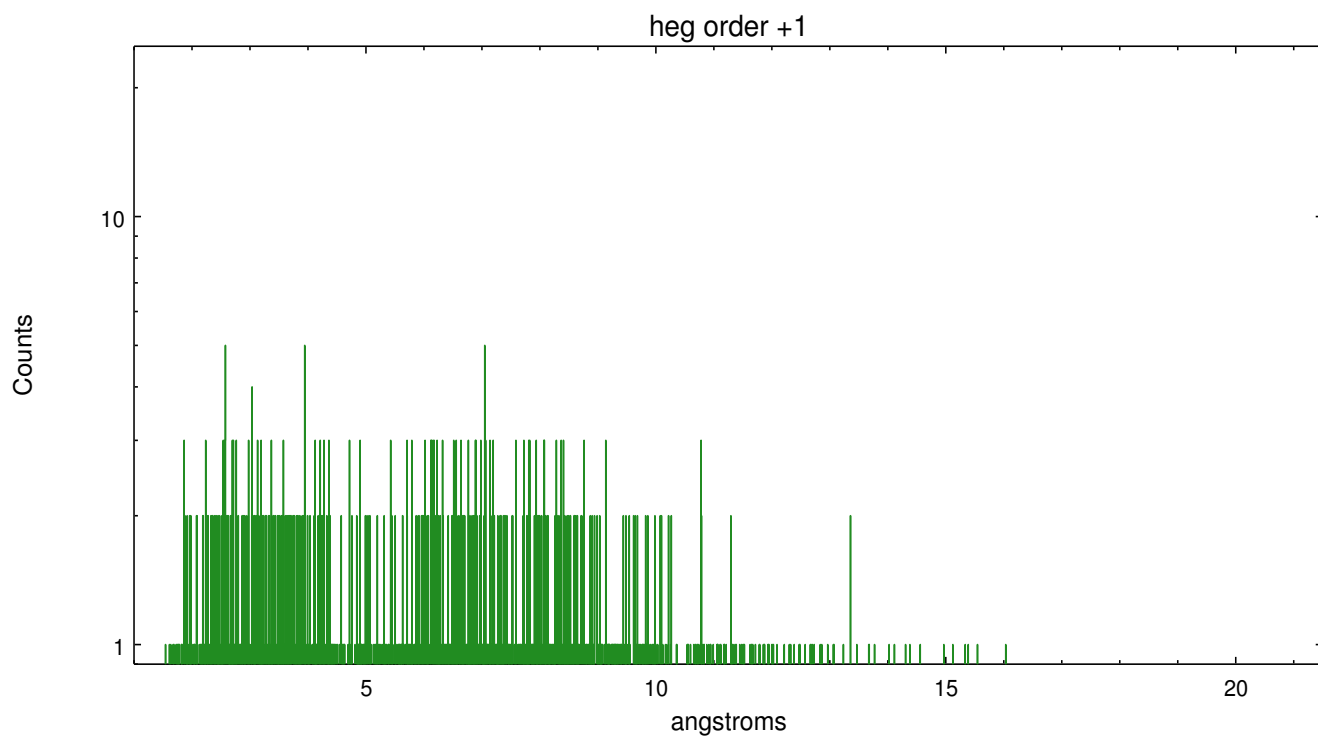
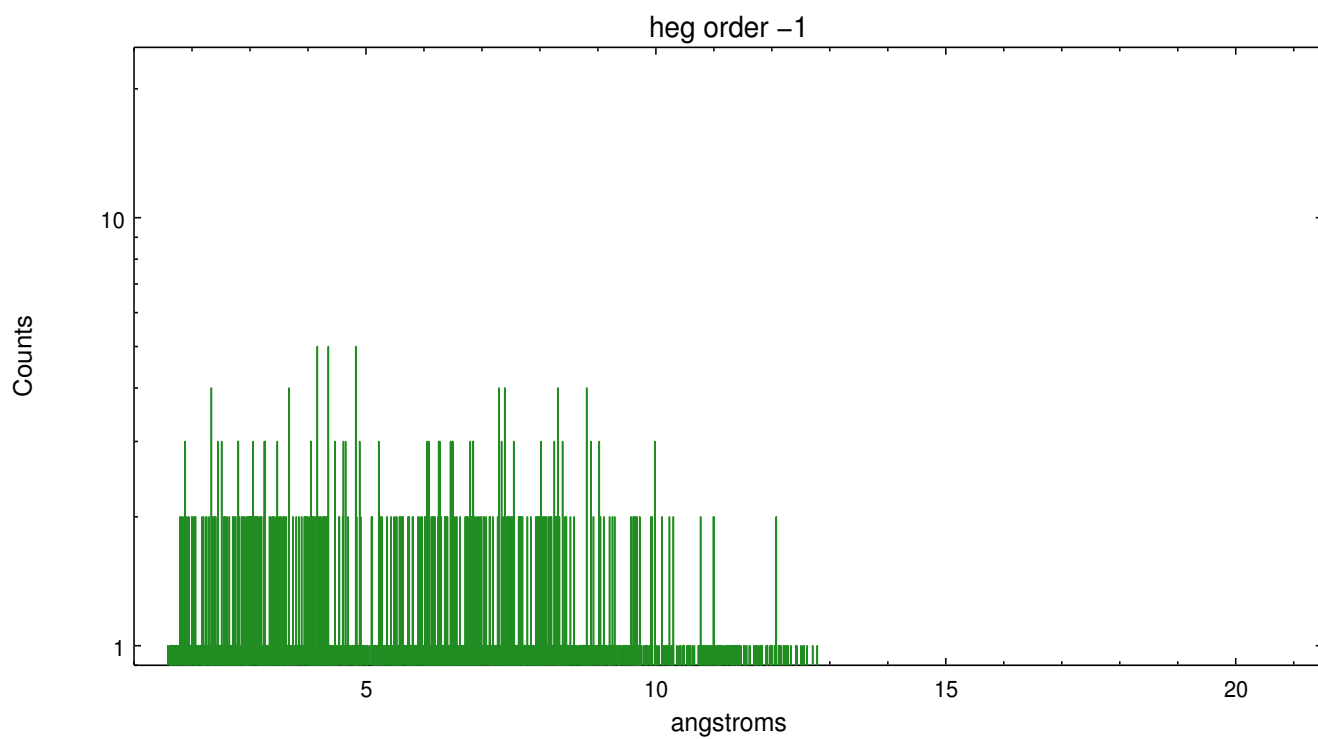


Spot Image HEG

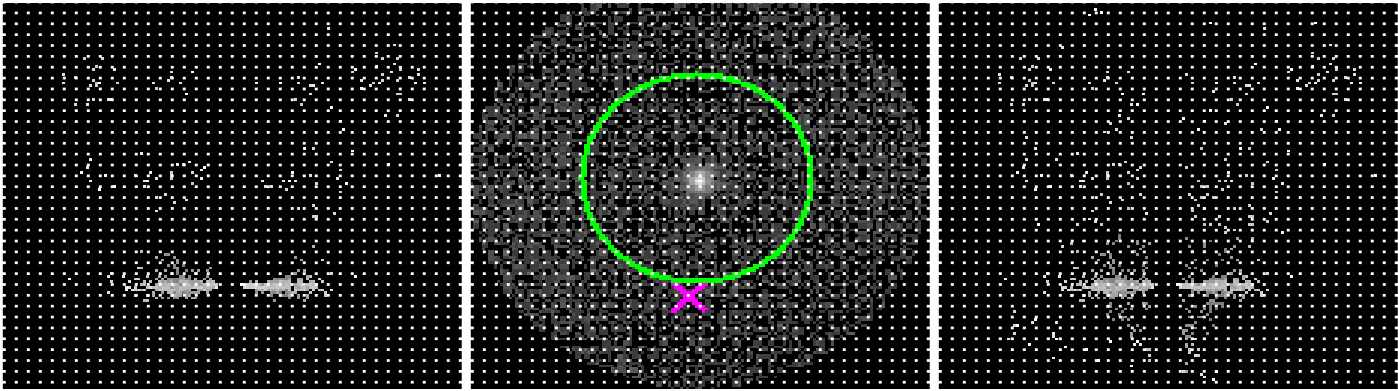
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	182	617	4543	6360	4132	865	397





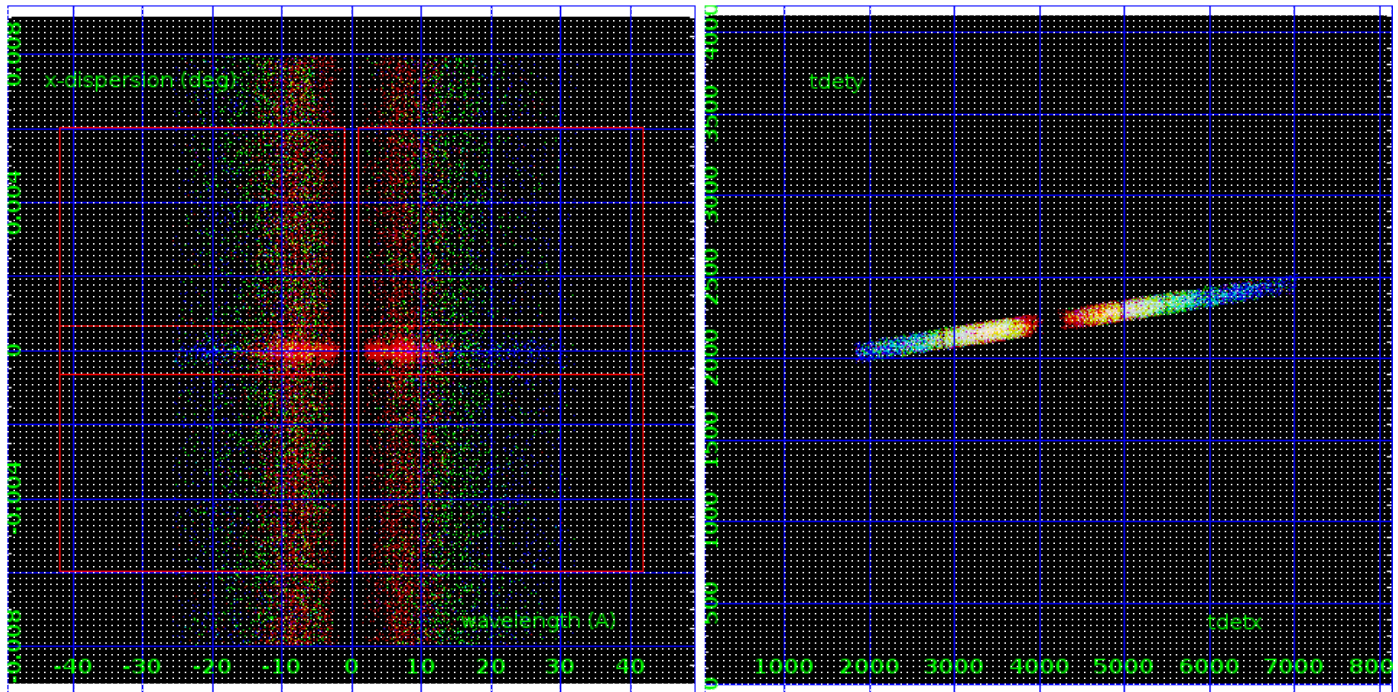
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

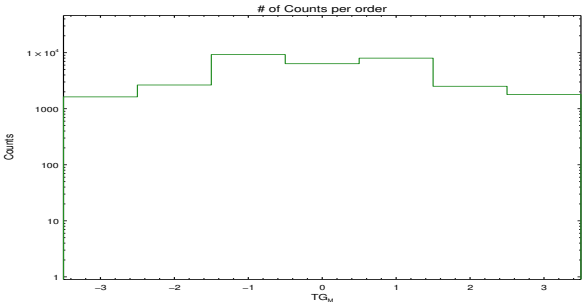
MEG Order Sort ALL

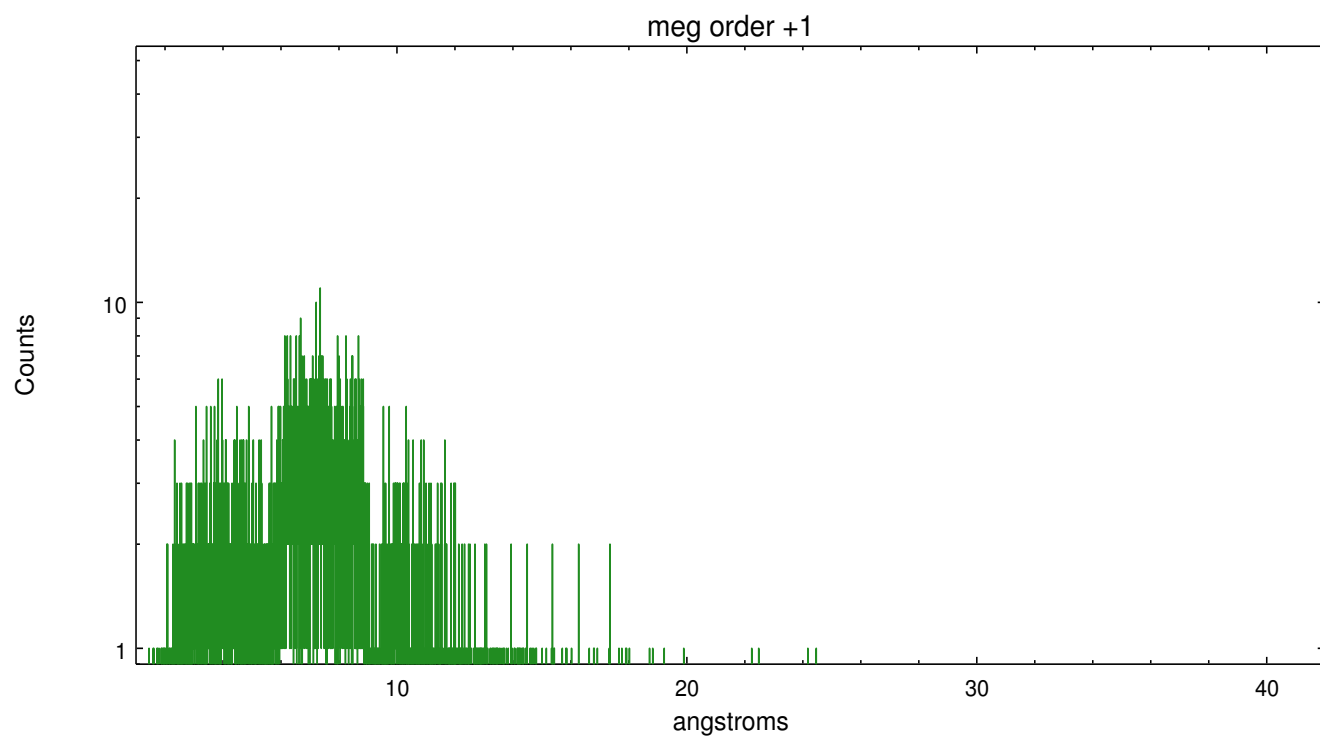
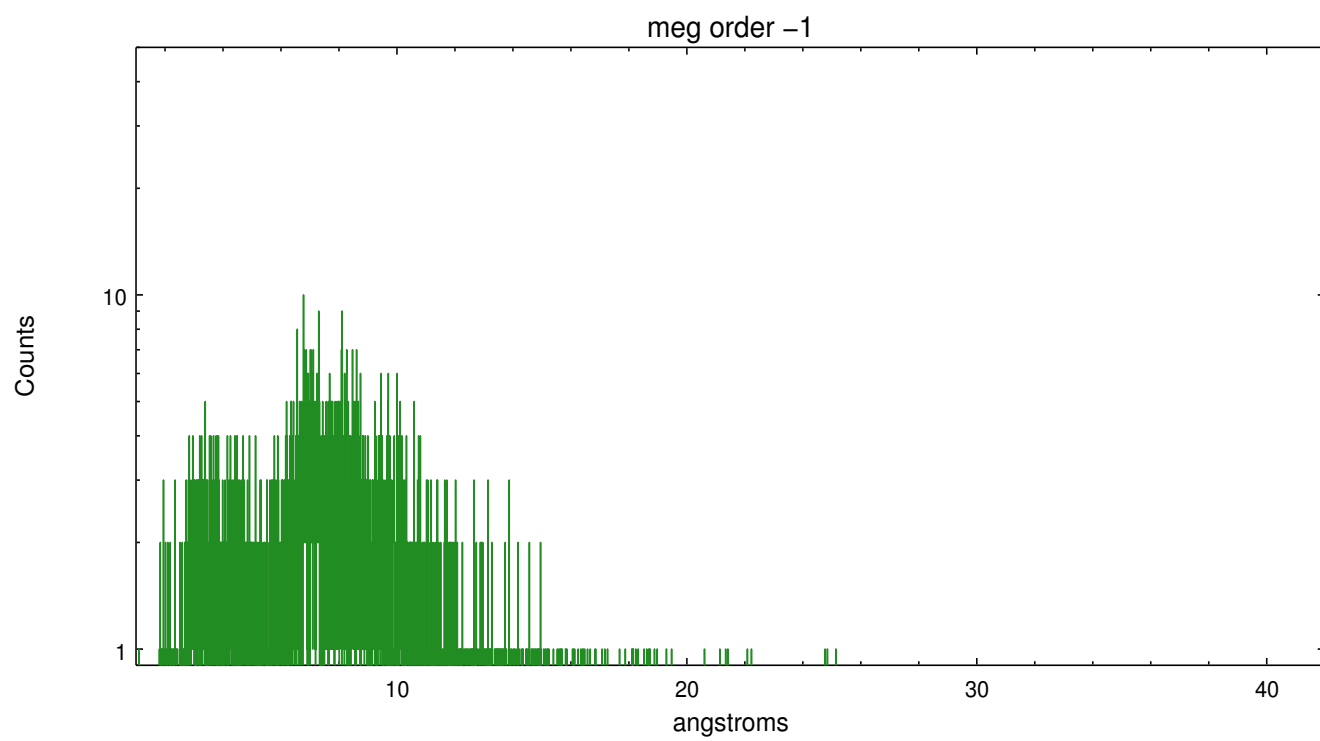


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1627	2650	9236	6360	7986	2512	1790





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2017.12.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	17.2325

A.2 Comments