

# V&V Reference Report

## L2 ASCDS Version : 10.2.4

Observation 15781 - L2 Version 1  
Chandra X-Ray Center

L2 Processing Date : Aug 11 2014

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# 1 Front

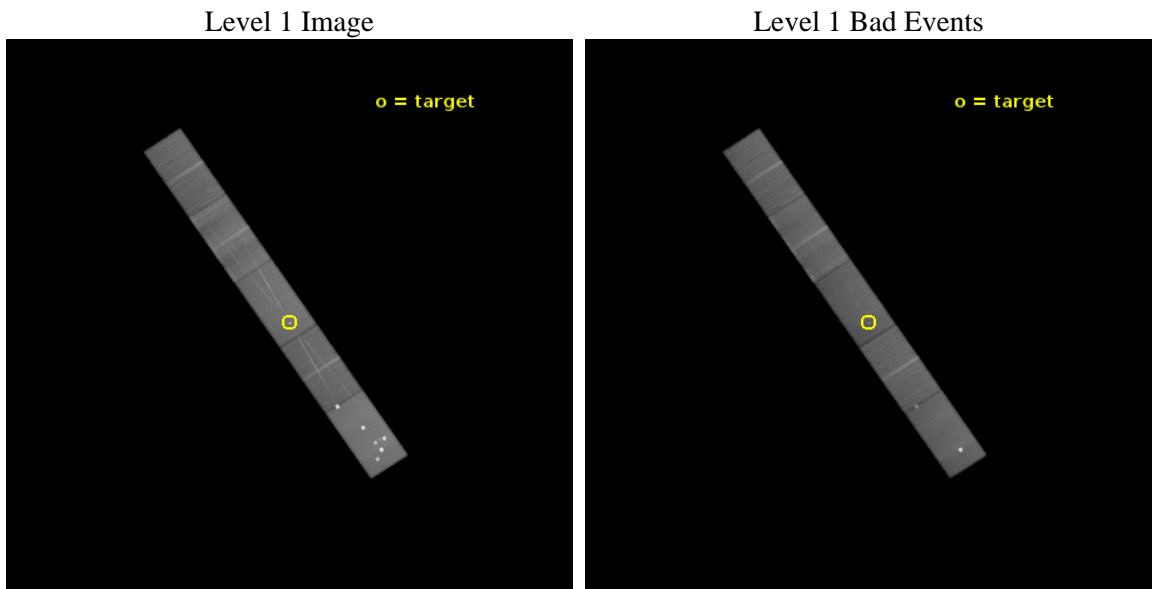
seq_num	401578	Sequence number
obs_id	15781	Observation id
title	SS 433 Jet Formation	Proposal title
observer	Dr. Herman Marshall	Principal investigator
object	SS 433	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	287.95625	Observer's specified target RA [deg]
dec_targ	4.982778	Observer's specified target Dec [deg]
ra_nom	287.95745043571	Nominal RA [deg]
dec_nom	4.9799000152478	Nominal Dec [deg]
roll_nom	236.15652329798	Nominal Roll [deg]
revision	1	Processing version of data
ontime	141316.09381419	Sum of GTIs [s]
livetime	138165.91104243	Livetime [s]
ontime5	141316.05277419	Sum of GTIs [s]
ontime6	141310.4885537	Sum of GTIs [s]
ontime7	141316.09381419	Sum of GTIs [s]
ontime8	141310.44751364	Sum of GTIs [s]
ontime9	141314.08860409	Sum of GTIs [s]
l2events	725960	Number of level 2 events



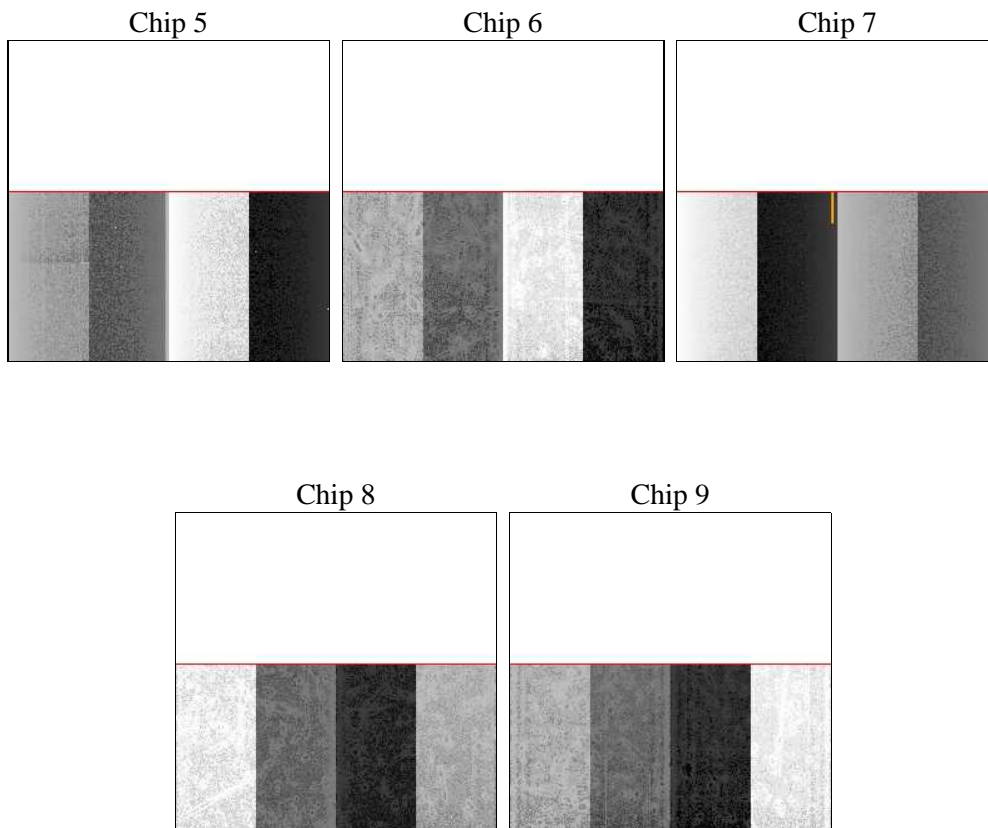
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	141217.450000	[s] Scheduled observation exposure time
ascdsver	10.2.4	Processing system revision	ontime	141316.09381419	Sum of GTIs [s]
caldbver	4.6.2	&#160	ontime5	141316.05277419	Sum of GTIs [s]
date	2014-08-11T17:32:16	Date and time of file creation	ontime6	141310.4885537	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	141316.09381419	Sum of GTIs [s]
			ontime8	141310.44751364	Sum of GTIs [s]
			ontime9	141314.08860409	Sum of GTIs [s]
			l1events	2860528	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4103.44, 4116.93)	src1a sky pixel position

### 2.1.4 Events

	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	957801	423797	576351	519327	383252
rejected events	390212	350957	288698	378806	333009
rejected %	40%	82%	50%	72%	86%

	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	212287	34625	31743	41209	17677
	22%	8%	5%	7%	4%
grade 1 events	1224	215	845	334	168
	0%	0%	0%	0%	0%
grade 2 events	91068	13589	61375	32323	10945
	9%	3%	10%	6%	2%
grade 3 events	29358	6403	26702	14478	5659
	3%	1%	4%	2%	1%
grade 4 events	21515	6491	26329	13803	5520
	2%	1%	4%	2%	1%
grade 5 events	61282	18609	52405	27007	20339
	6%	4%	9%	5%	5%
grade 6 events	213368	11735	141506	38709	10442
	22%	2%	24%	7%	2%
grade 7 events	327699	332130	235446	351464	312502
	34%	78%	40%	67%	81%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-56789	ACIS-56789	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	287.958931	287.9574504357127	CCD I2 on	N	N
[deg] Pointing Dec	5.007312	4.979900015247813	CCD I3 on	N	N
[deg] Pointing Roll	235.999770	236.1565232979796	CCD S0 on	O1	N
[s] Window start time (MET)	510019267.184000	510019267.184000	CCD S1 on	Y	Y
[s] Window stop time (MET)	512524867.184000	512524867.184000	CCD S2 on	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S3 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S4 on	Y	Y
[mm] SIM translation stage pos	-184.532523	-184.5306286120915	CCD S5 on	Y	Y
[mm] SIM translation stage offset	-5.6	-5.601893970916279	Number of optional ACIS chips dropped	1	1
[s] Observation start time (MET)	523972395.184000	523971454.50773	On-chip summing requested	N	N
Observation start date	2014-08-09T11:52:08	2014-08-09T11:37:34	Subarray requested	CUSTOM	CUSTOM
[s] Observation end time (MET)	524113613.184000	524113837.26563	Subarray start row	1	1
Observation end date	2014-08-11T03:05:46	2014-08-11T03:10:37	Subarray row count	542	542
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.8

## 2.3 Aspect

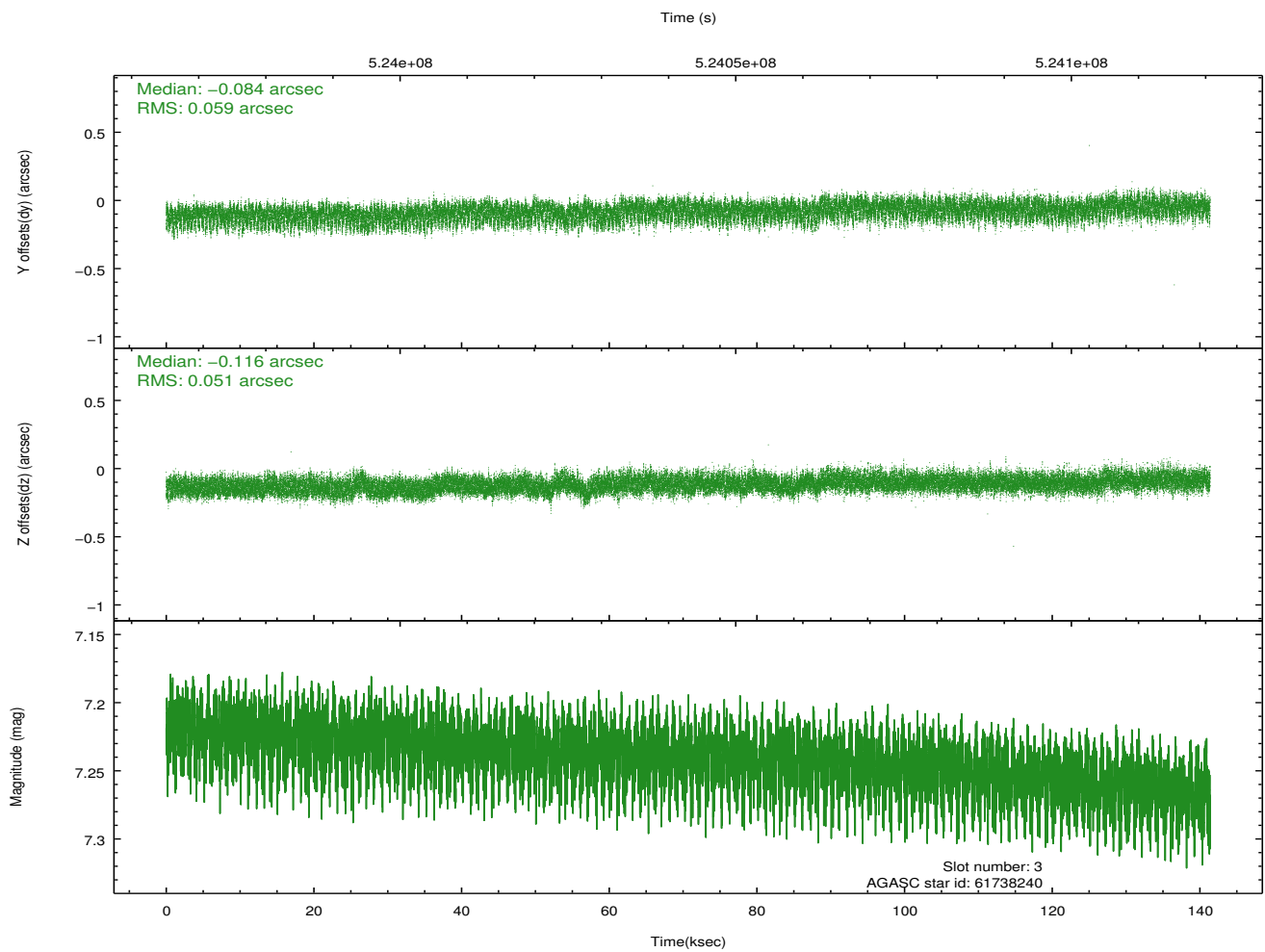


### Slot Statistics

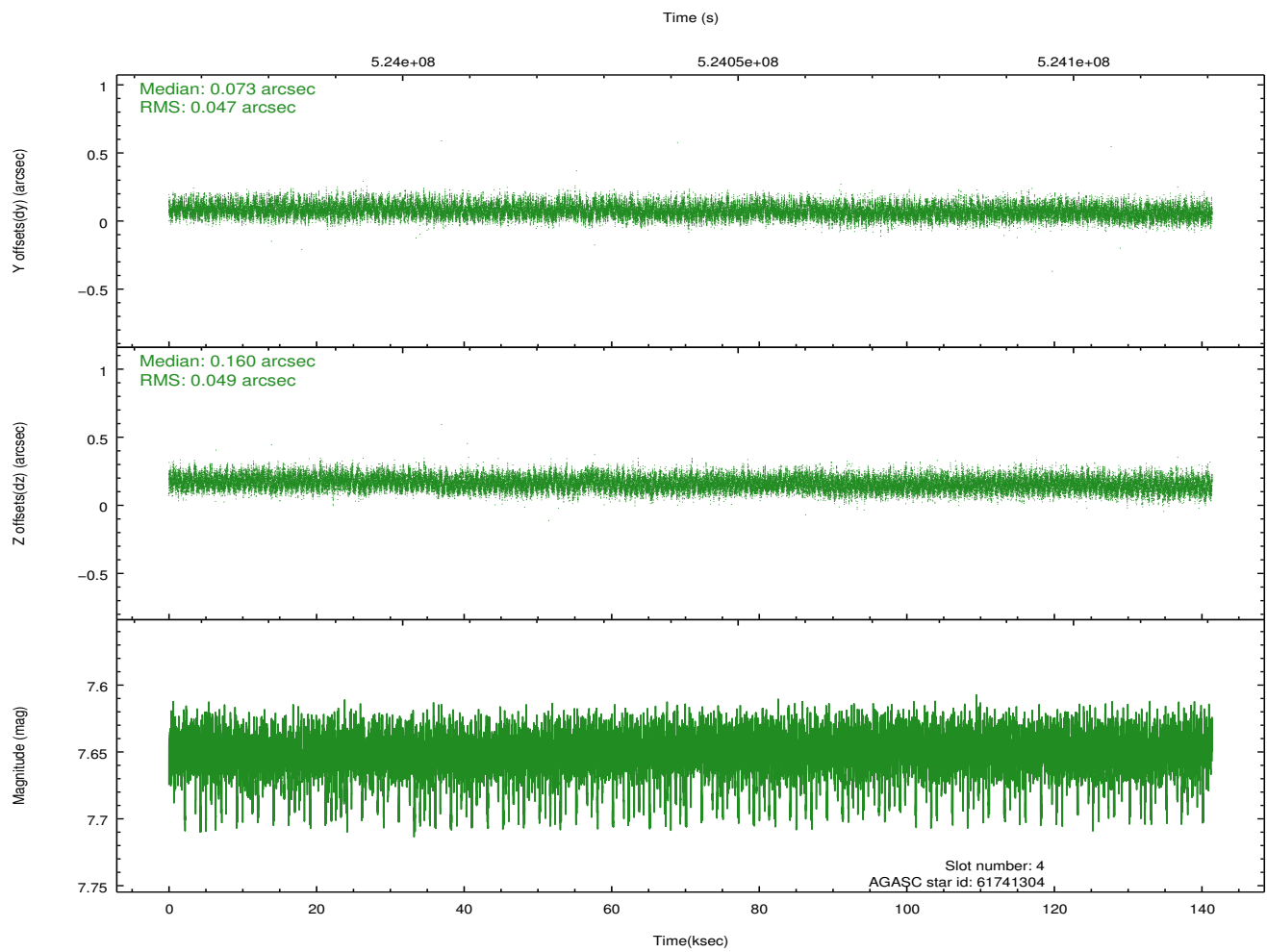
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.07	34489	-0.148	-0.101	0.054	0.069	0.000000	0.000000	-772.75	-1854.82
1	FID	ACIS-S-4	7.16	34488	0.320	0.091	0.043	0.085	0.000000	0.000000	2141.05	53.89
2	FID	ACIS-S-5	7.20	34487	-0.195	0.009	0.053	0.062	0.000000	0.000000	-1825.74	47.43
3	GUIDE	61738240	7.24	68974	-0.084	-0.116	0.085	0.131	287.996556	4.354861	1871.86	1425.53
4	GUIDE	61741304	7.65	68963	0.073	0.160	0.073	0.116	287.957418	5.377327	-1101.29	-748.89
5	GUIDE	61741480	8.38	68945	-0.073	-0.138	0.097	0.152	287.973237	4.806511	570.71	446.81
6	GUIDE	61743800	7.48	68966	0.211	0.062	0.101	0.159	287.776811	5.274666	-432.49	-1079.28
7	GUIDE	61744976	7.58	68968	-0.133	0.031	0.075	0.121	288.430364	5.306675	-1838.90	798.16

## 2.4 Star Slots

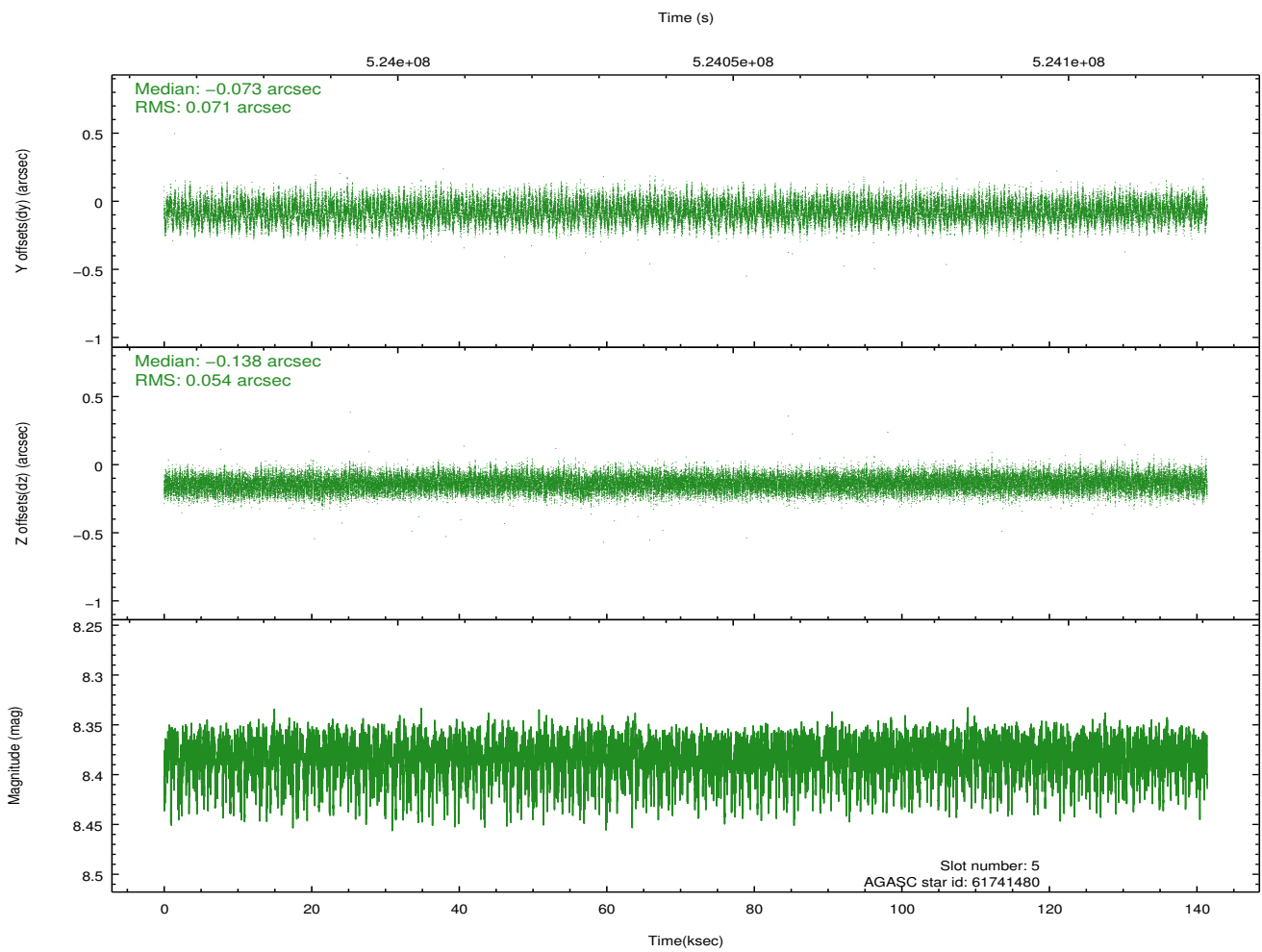
### 2.4.1 Slot 3



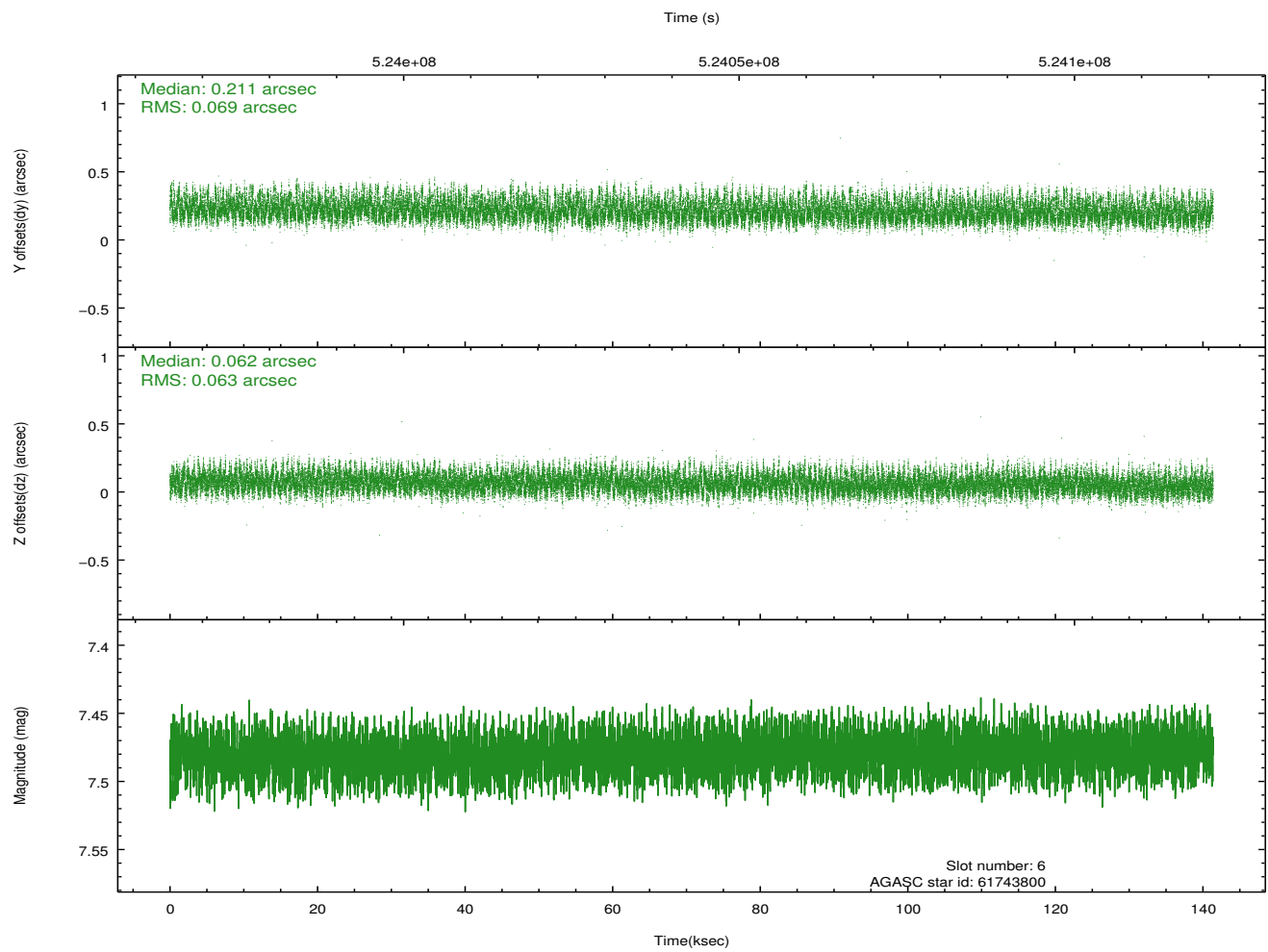
## 2.4.2 Slot 4



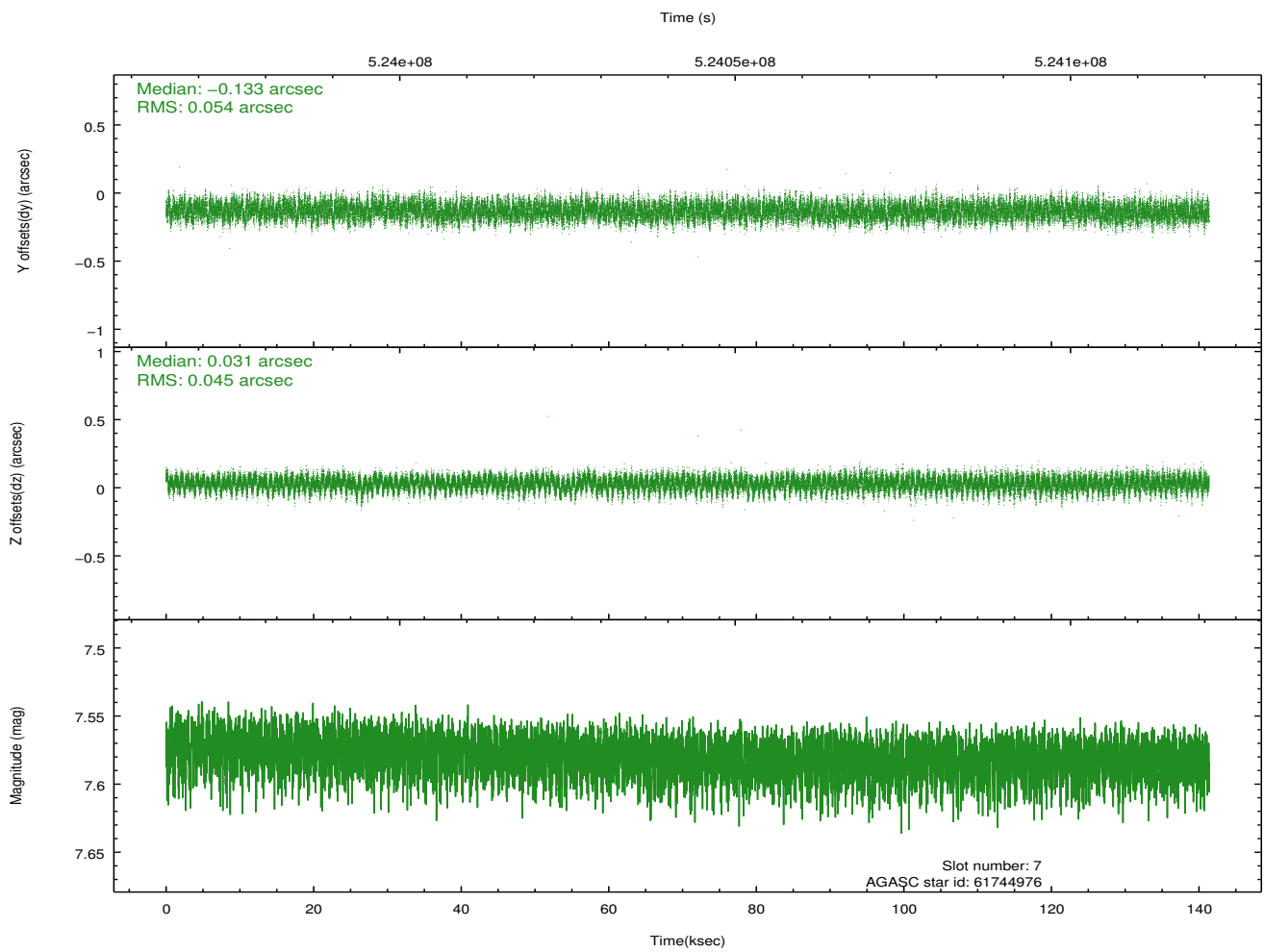
### 2.4.3 Slot 5



## 2.4.4 Slot 6

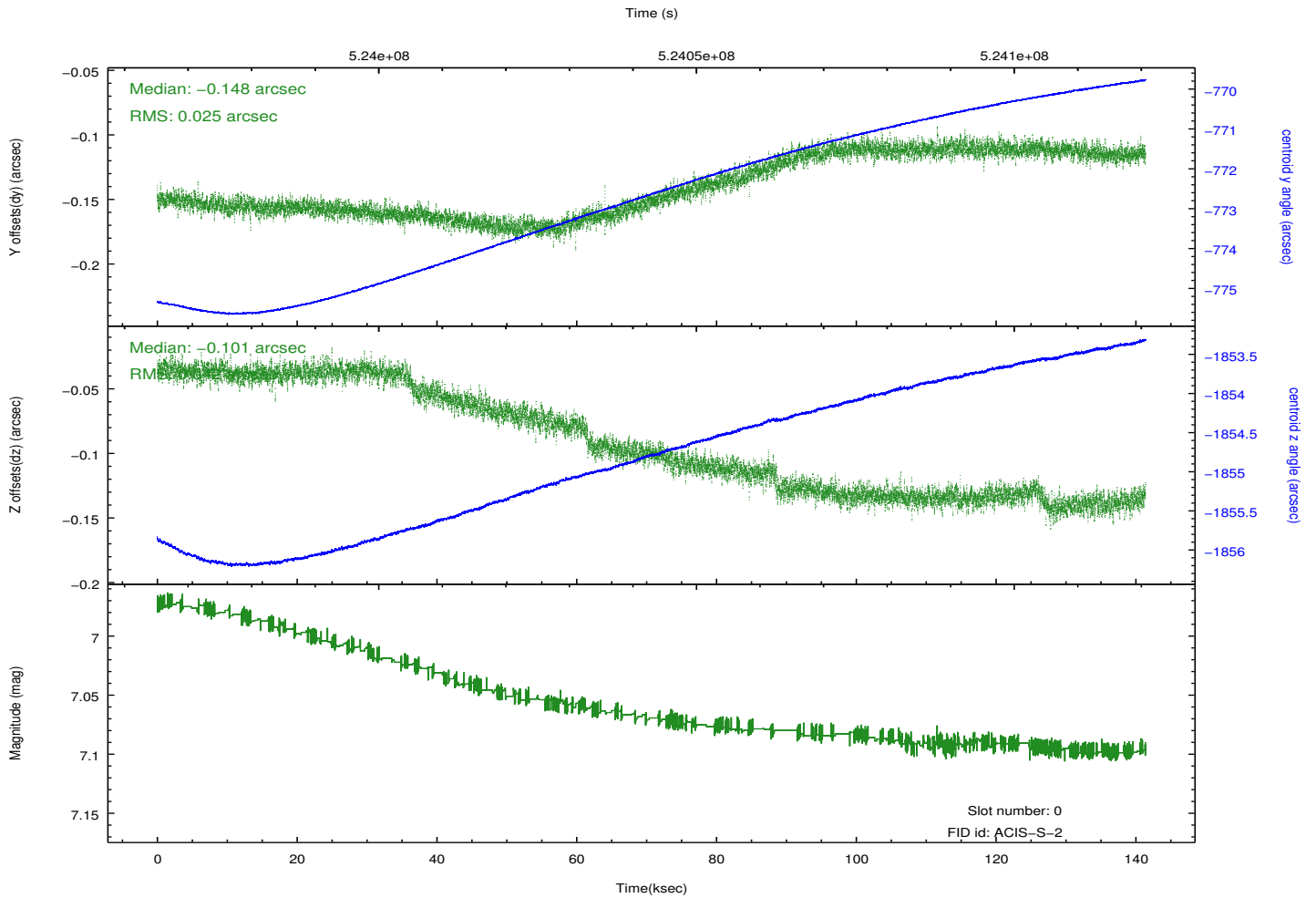
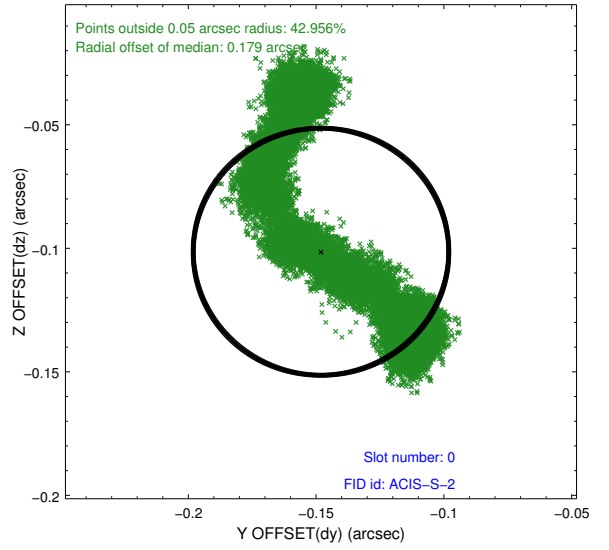
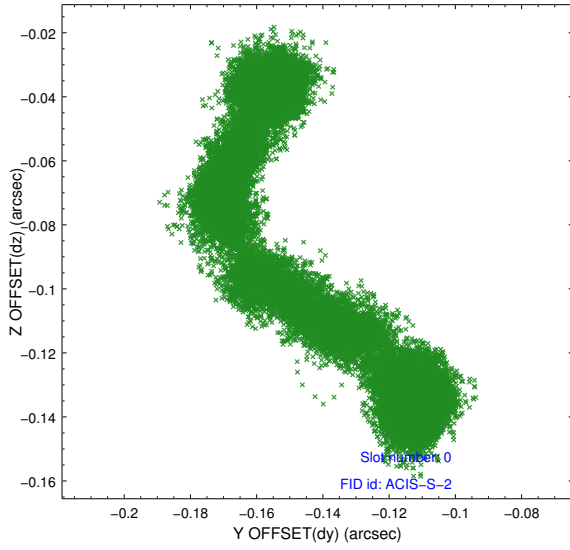


## 2.4.5 Slot 7

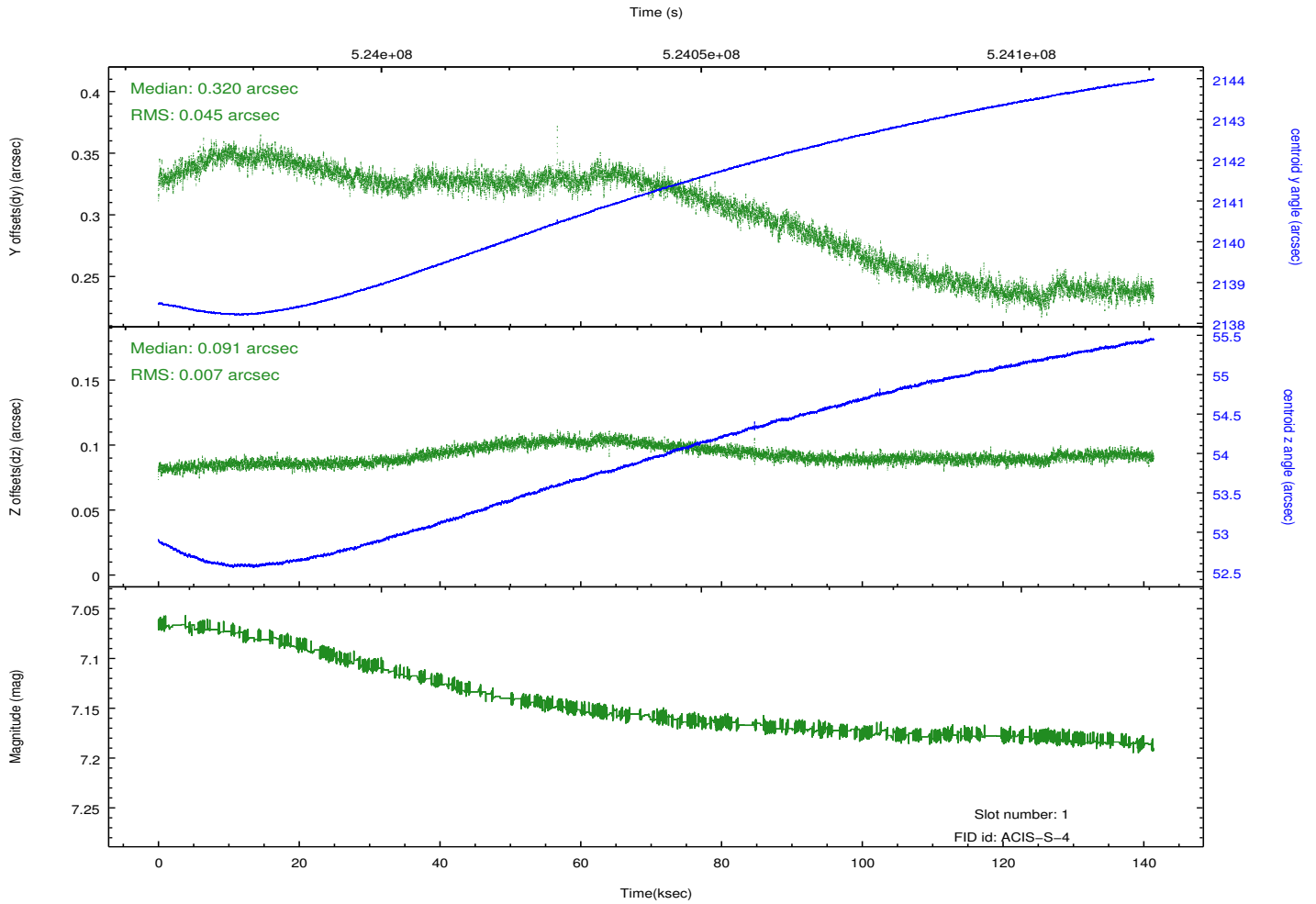
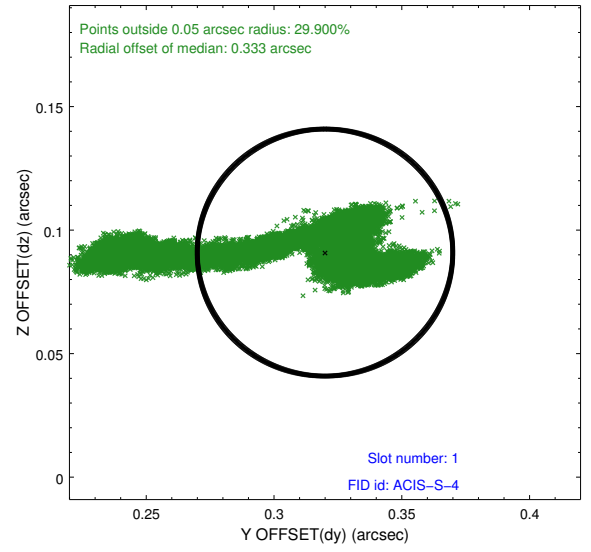
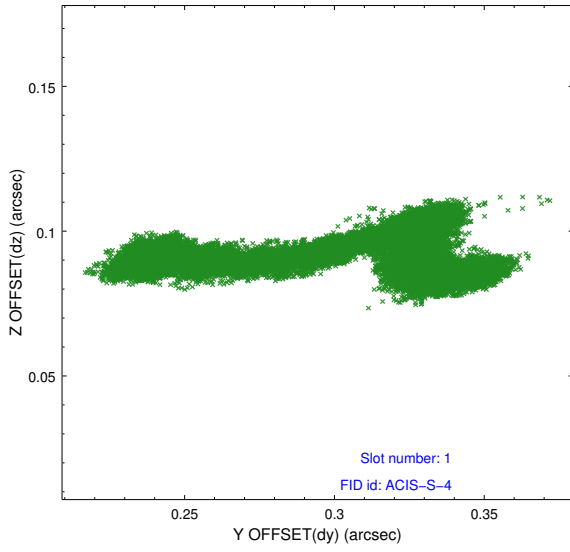


## 2.5 FID Slots

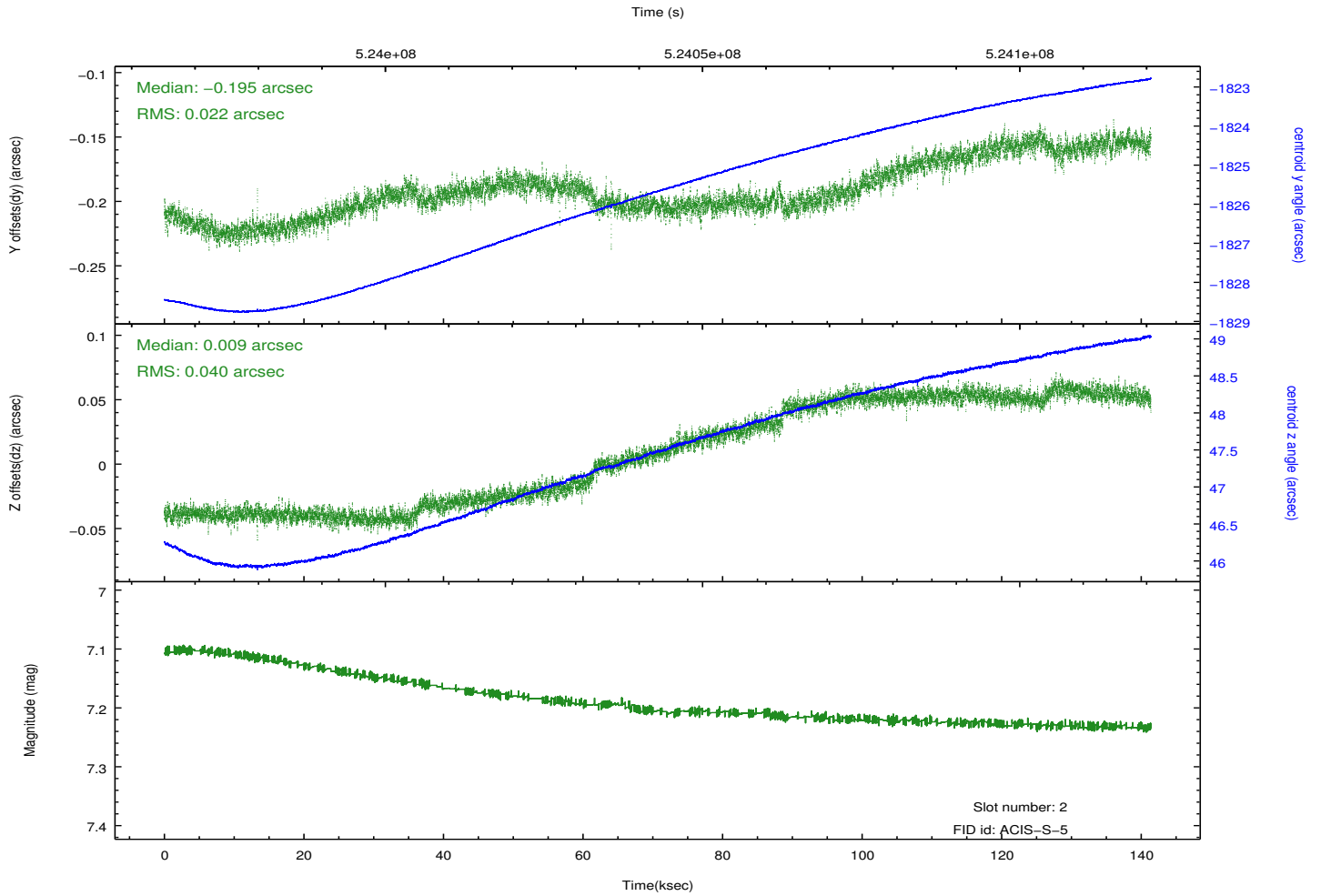
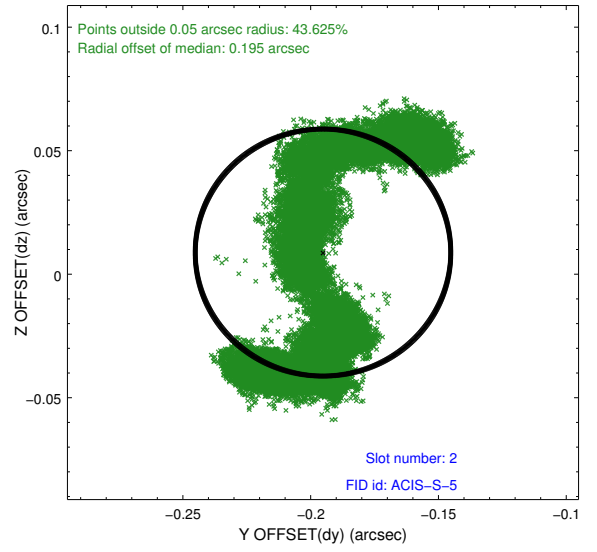
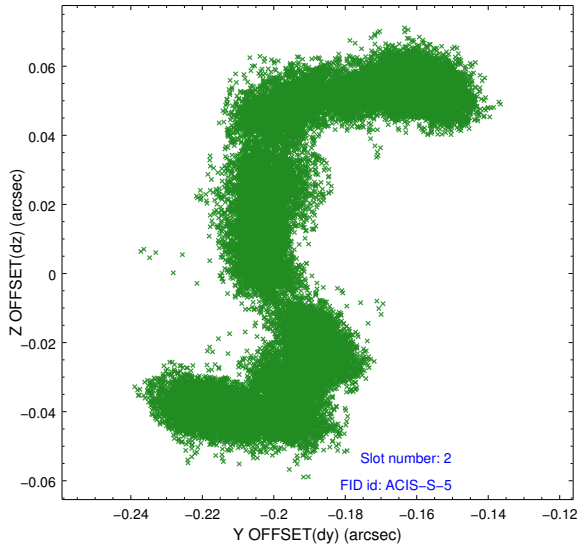
### 2.5.1 Slot 0



## 2.5.2 Slot 1

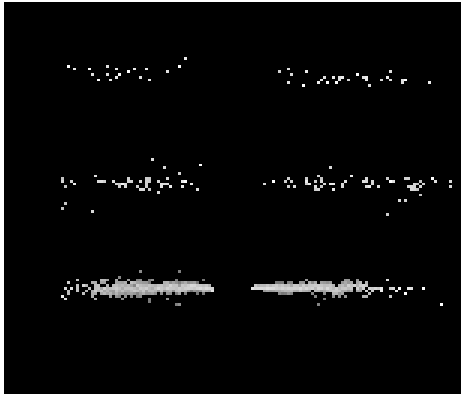


### 2.5.3 Slot 2

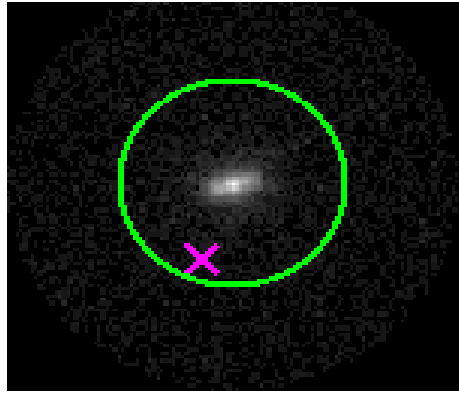


# 3 Gratings

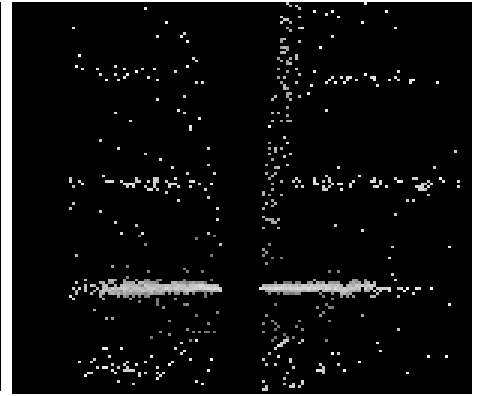
## 3.1 HEG Arm



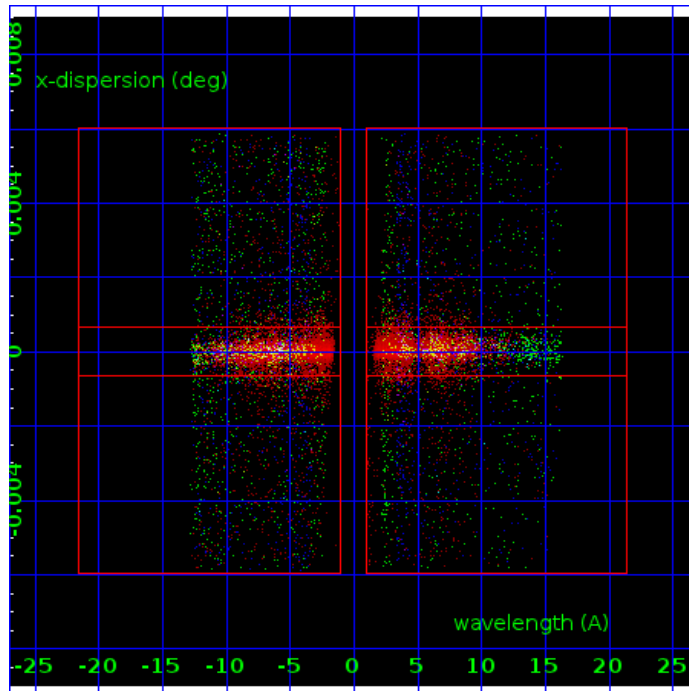
HEG Order Sort 123



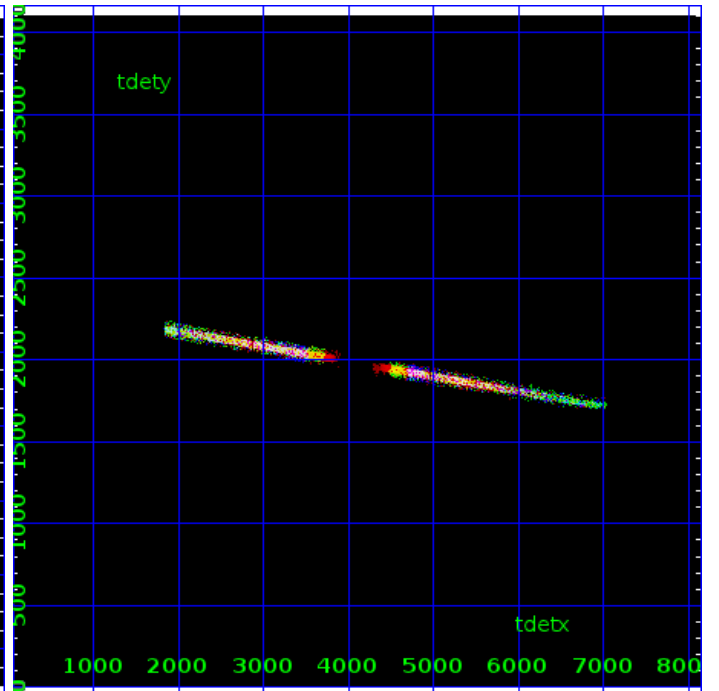
HEG Zero Order



HEG Order Sort ALL

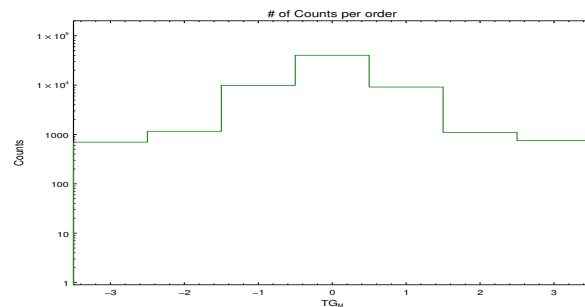


Spot Image HEG

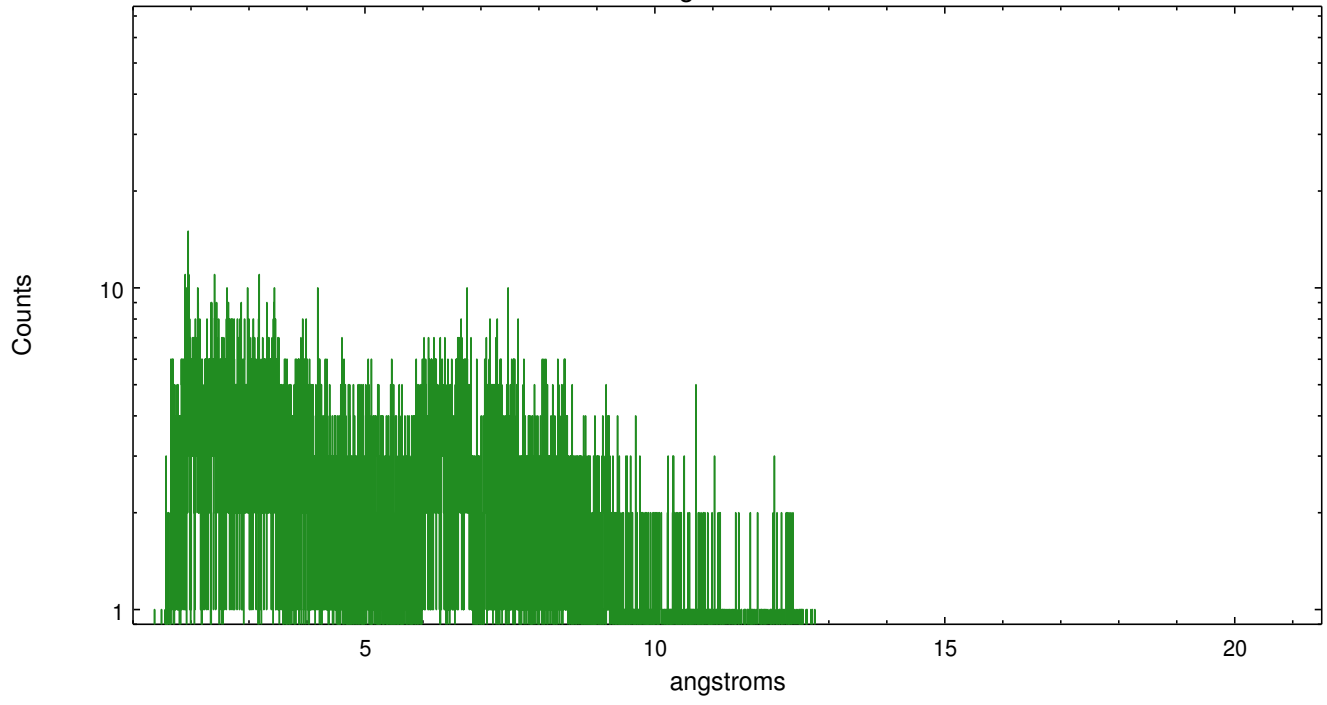


Full Detector HEG

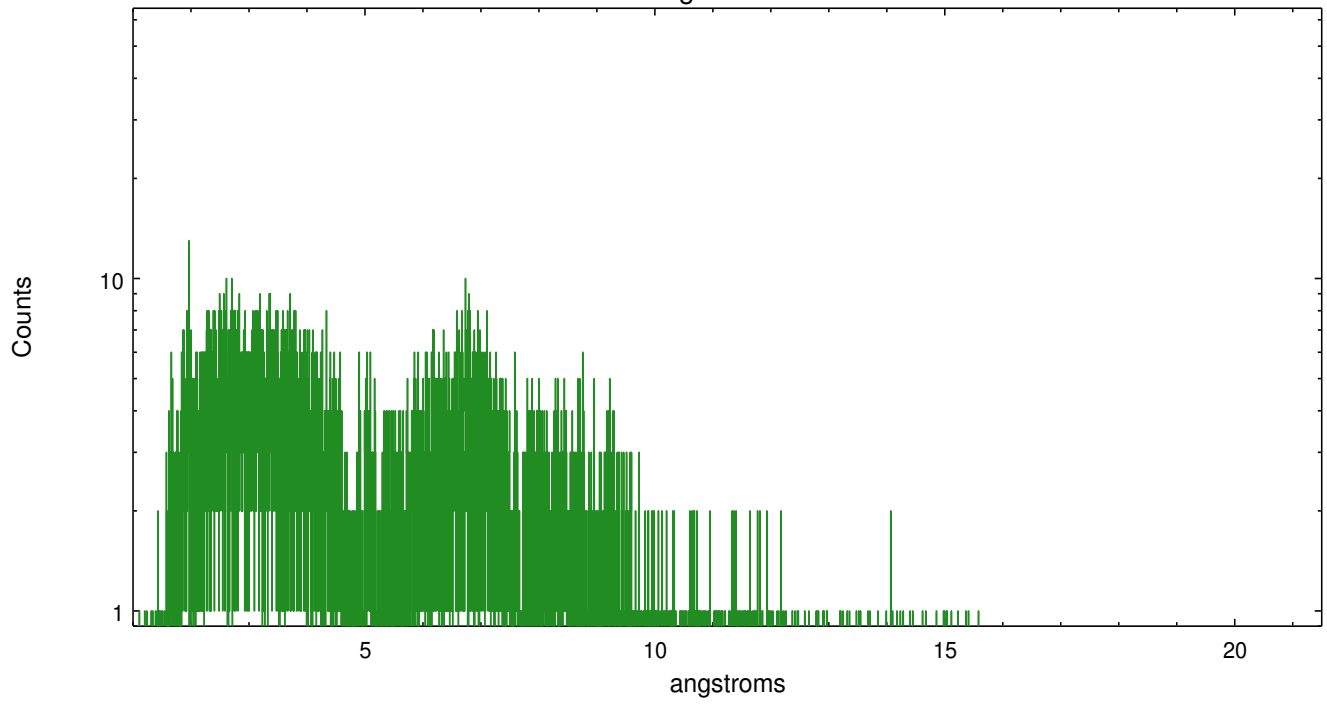
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	698	1159	9873	40199	9138	1103	751



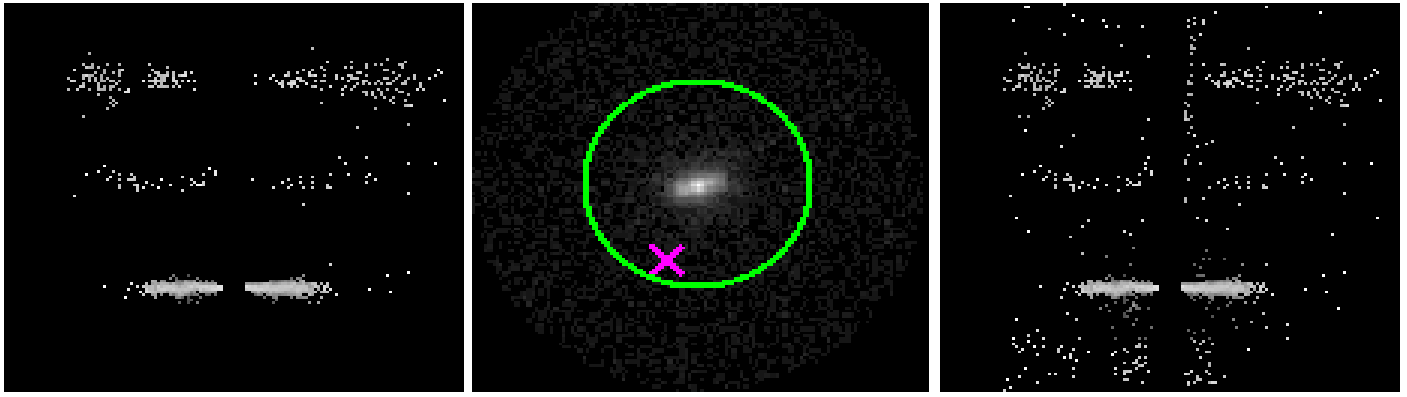
heg order -1



heg order +1



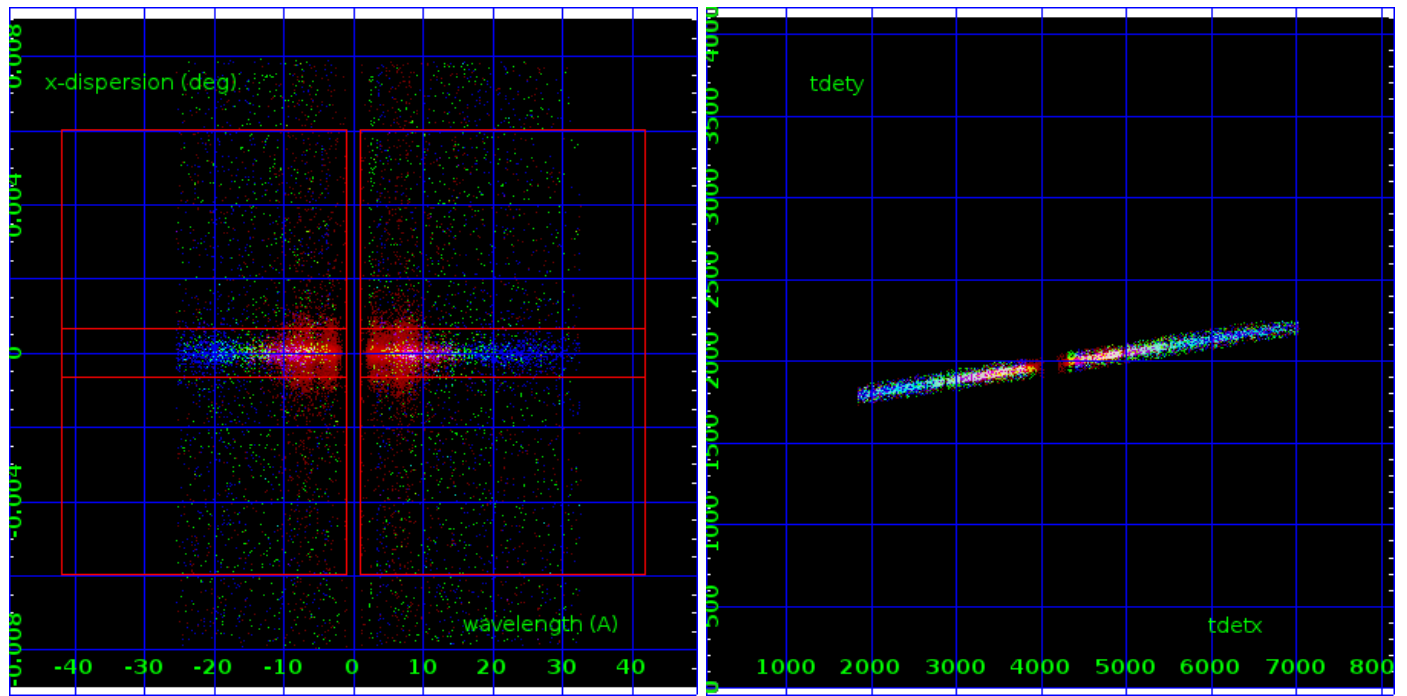
### 3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

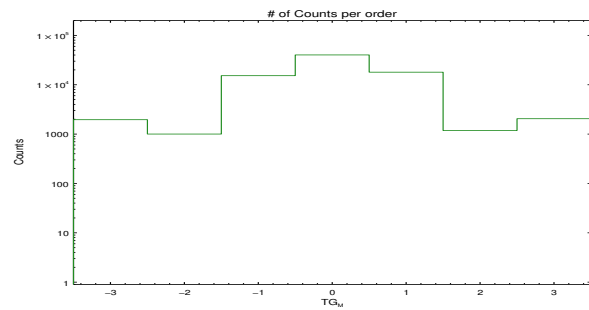
MEG Order Sort ALL

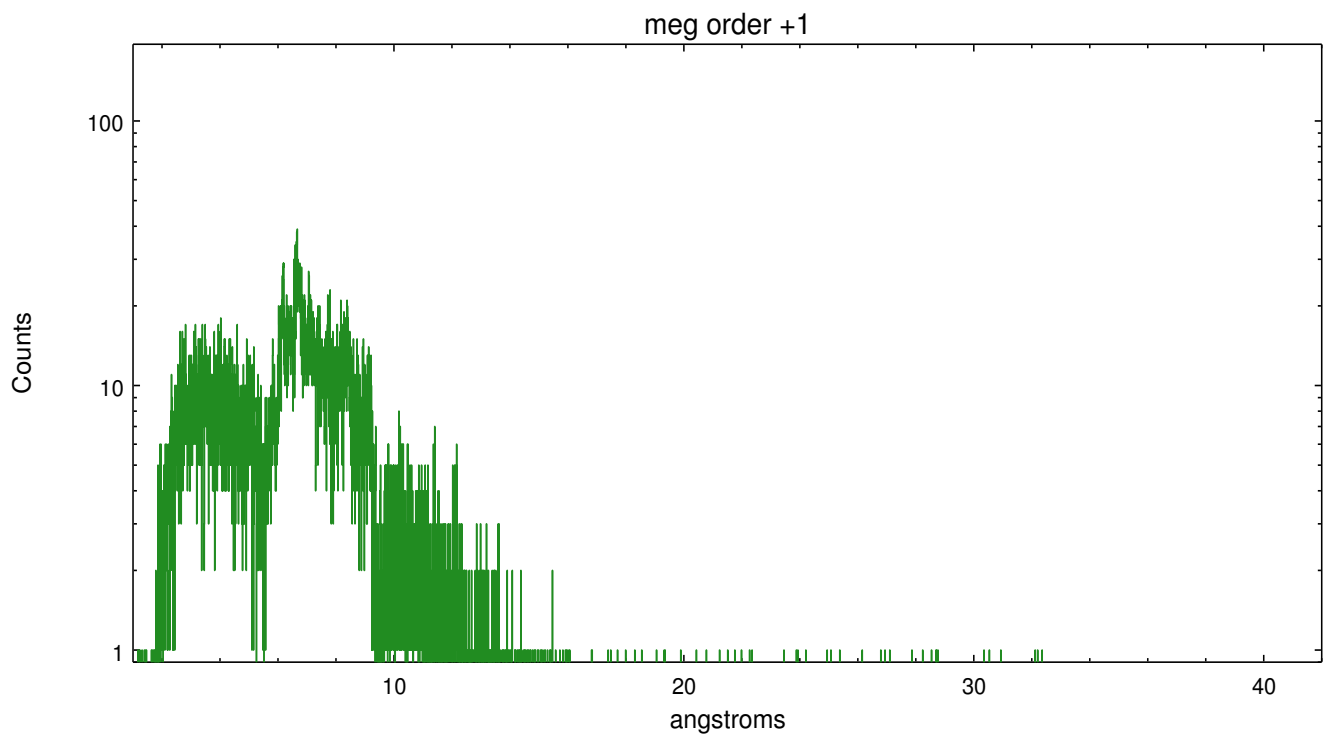
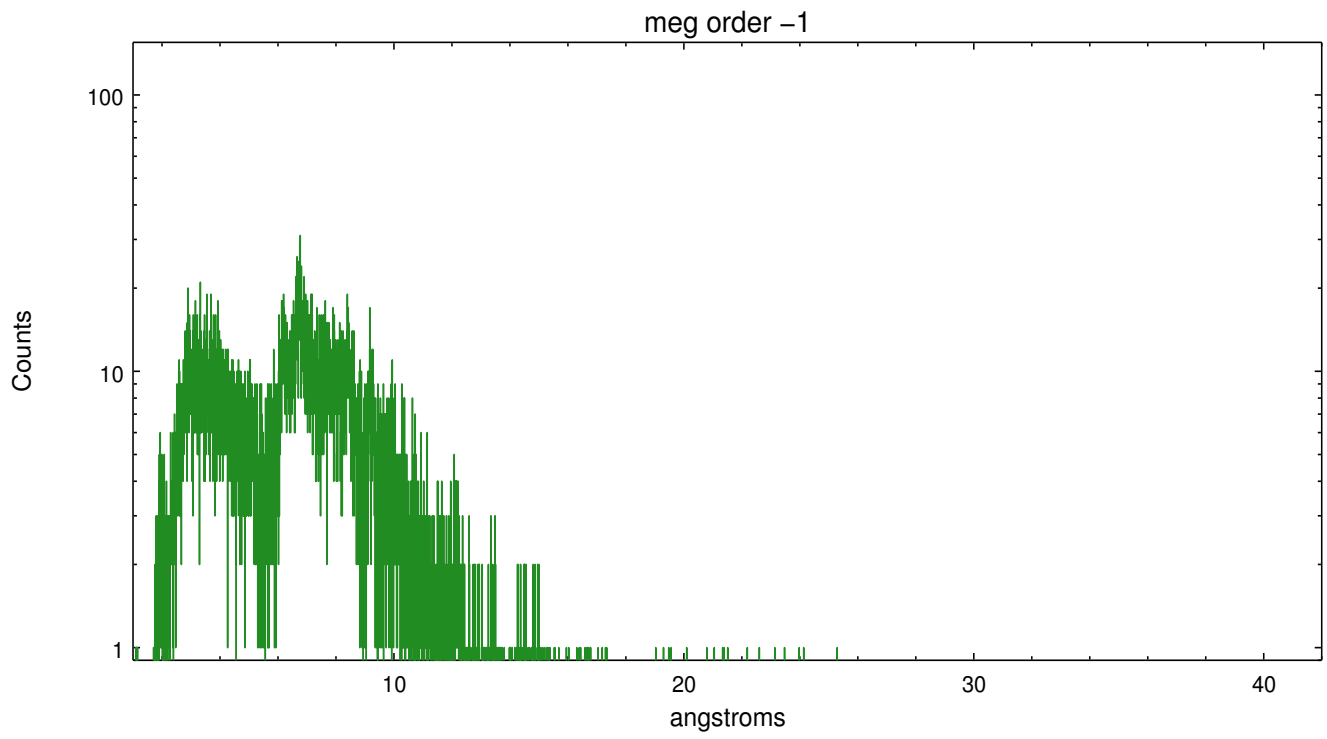


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1960	1002	15277	40199	17961	1182	2052





# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2014.08.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	141.31609381419

## A.2 Comments