

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 12067 - L2 Version 2  
Chandra X-Ray Center

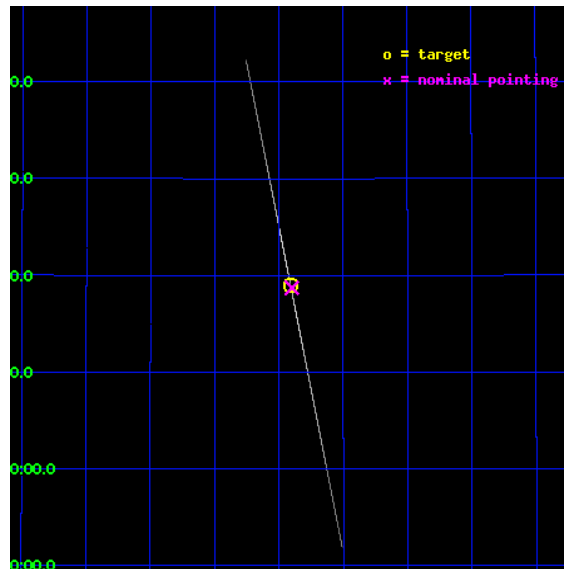
L2 Processing Date : Jun 18 2012

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# 1 Front

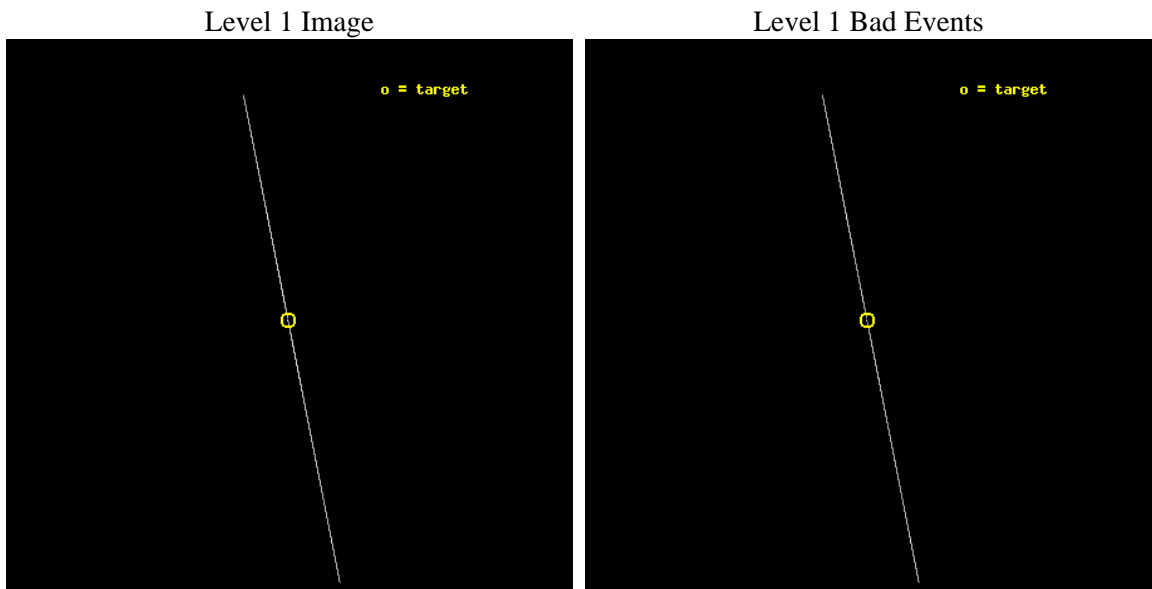
seq_num	401137	Sequence number
obs_id	12067	Observation id
title	Chandra High Resolution Spectroscopy of the Be X-Ray binary A0535+262	Proposal title
observer	Dr. Mark Reynolds	Principal investigator
object	1A0535+262	Source name
ra_targ	84.7275	Observer's specified target RA [deg]
dec_targ	26.315778	Observer's specified target Dec [deg]
ra_nom	84.72484778224	Nominal RA [deg]
dec_nom	26.312044415378	Nominal Dec [deg]
roll_nom	258.65780655892	Nominal Roll [deg]
revision	2	Processing version of data
ontime	11081.25	Sum of GTIs [s]
livetime	11037.963867188	Livetime [s]
ontime4	11081.25	Sum of GTIs [s]
ontime5	11081.25	Sum of GTIs [s]
ontime6	11081.25	Sum of GTIs [s]
ontime7	11081.25	Sum of GTIs [s]
ontime8	11081.25	Sum of GTIs [s]
ontime9	11081.25	Sum of GTIs [s]
l2events	699539	Number of level 2 events



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	11000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	11081.25	Sum of GTIs [s]
caldbver	4.4.10	&#160	ontime4	11081.25	Sum of GTIs [s]
date	2012-06-18T20:31:11	Date and time of file creation	ontime5	11081.25	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	11081.25	Sum of GTIs [s]
			ontime7	11081.25	Sum of GTIs [s]
			ontime8	11081.25	Sum of GTIs [s]
			ontime9	11081.25	Sum of GTIs [s]
			l1events	1550843	Number of level 1 events

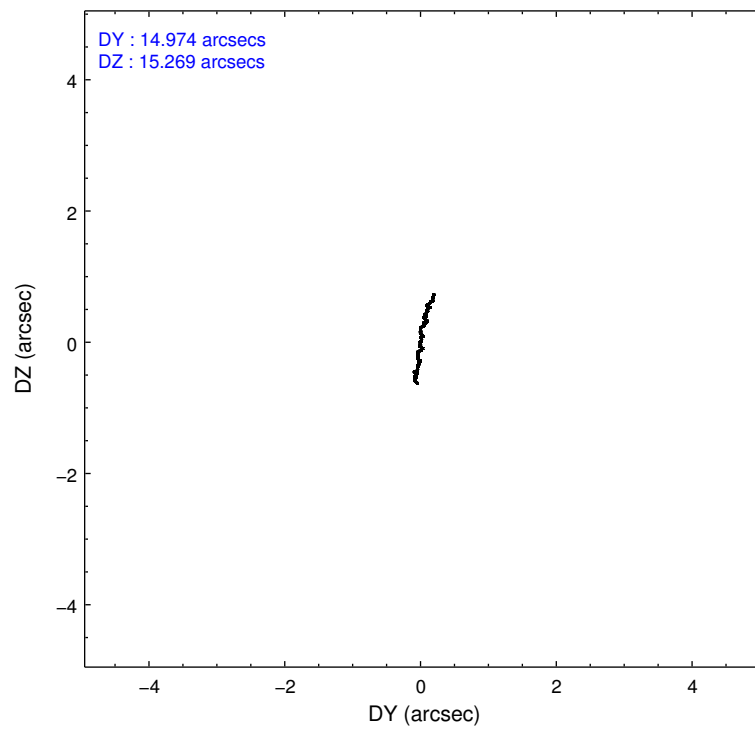
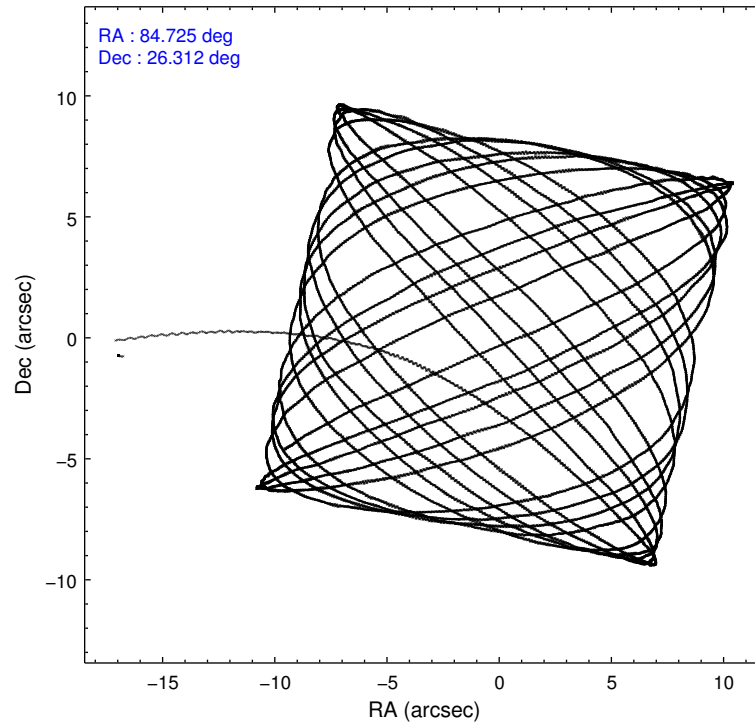
### 2.1.3 Events

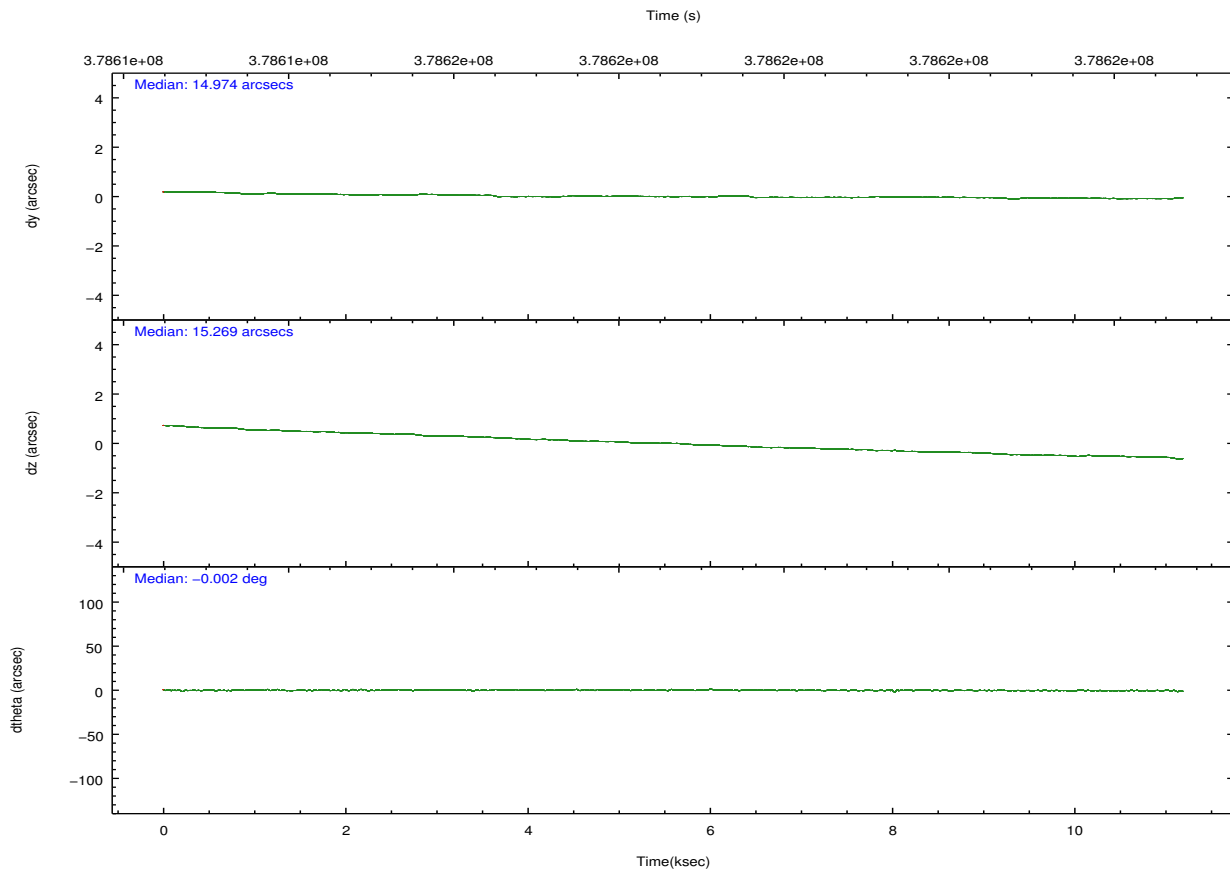
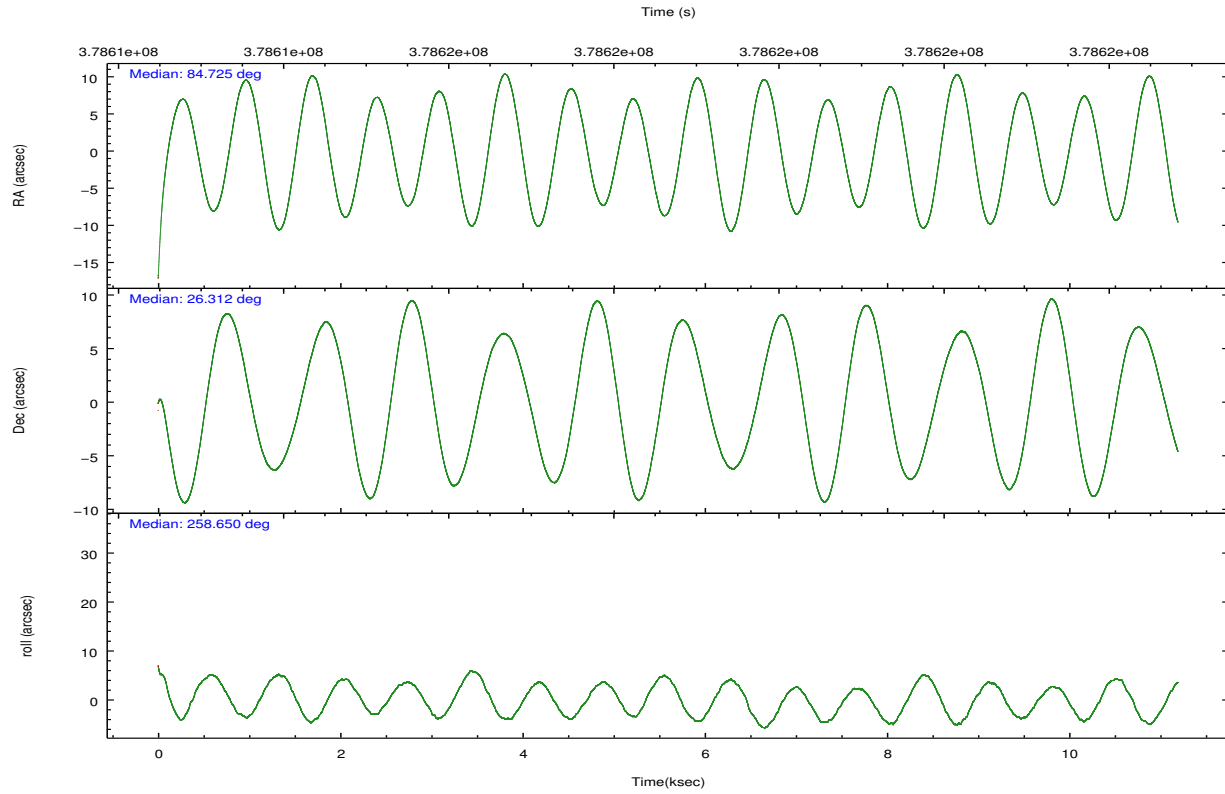
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	168232	158111	380725	384703	301586	157486	grade 0 events	3190	6461	29233	41098	48184	4925
rejected events	148574	70392	145331	85007	193000	133500		1%	4%	7%	10%	15%	3%
rejected %	88%	44%	38%	22%	63%	84%	grade 1 events	64	50	124	367	259	76
								0%	0%	0%	0%	0%	0%
							grade 2 events	9079	41208	171442	101098	34833	11393
								5%	26%	45%	26%	11%	7%
							grade 3 events	2468	3124	3494	21769	6693	2240
								1%	1%	0%	5%	2%	1%
							grade 4 events	2548	2932	3434	21610	6351	2452
								1%	1%	0%	5%	2%	1%
							grade 5 events	2074	5228	3442	7964	4111	2546
								1%	3%	0%	2%	1%	1%
							grade 6 events	2381	34015	27864	114200	12548	2984
								1%	21%	7%	29%	4%	1%
							grade 7 events	146428	65093	141692	76597	188607	130870
								87%	41%	37%	19%	62%	83%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	CC33_GRADED	CC33_GRADED	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	84.714669	84.72484778224	CCD I2 on	N	N
[deg] Pointing Dec	26.337847	26.31204441537841	CCD I3 on	N	N
[deg] Pointing Roll	258.505698	258.6578065589233	CCD S0 on	O1	Y
[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	-183.992523	-183.985022191653	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-6.14	-6.147500391354811	CCD S4 on	Y	Y
[s] Observation start time (MET)	378613243.184000	378611805.77018	CCD S5 on	Y	Y
Observation start date	2009-12-31T02:19:37	2009-12-31T01:56:45	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	378624243.184000	378624659.27083	On-chip summing requested	N	N
Observation end date	2009-12-31T05:22:57	2009-12-31T05:30:59	Subarray requested	NONE	NONE
Read mode	CONTINUOUS	CONTINUOUS	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	0

## 2.3 Aspect





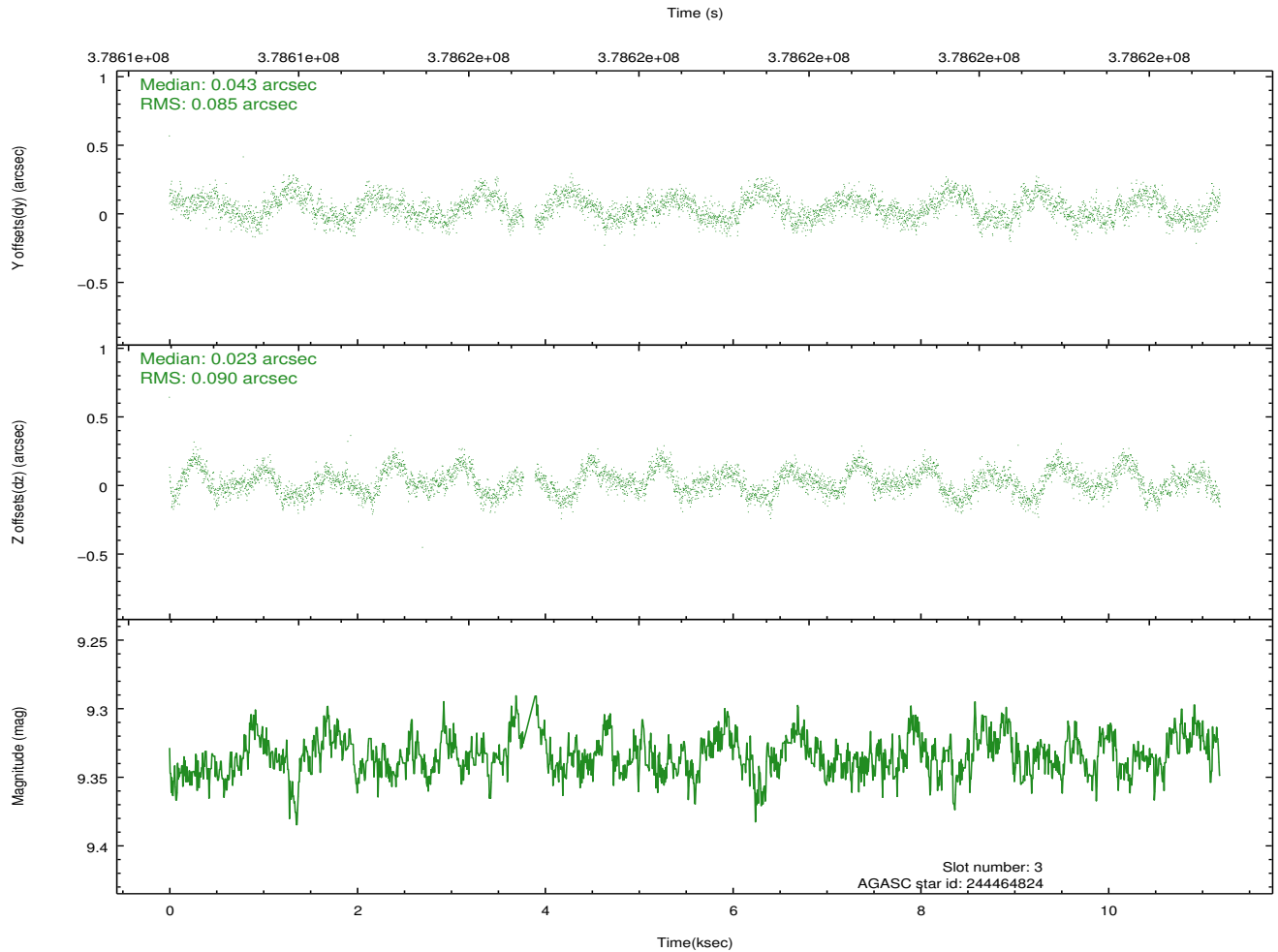
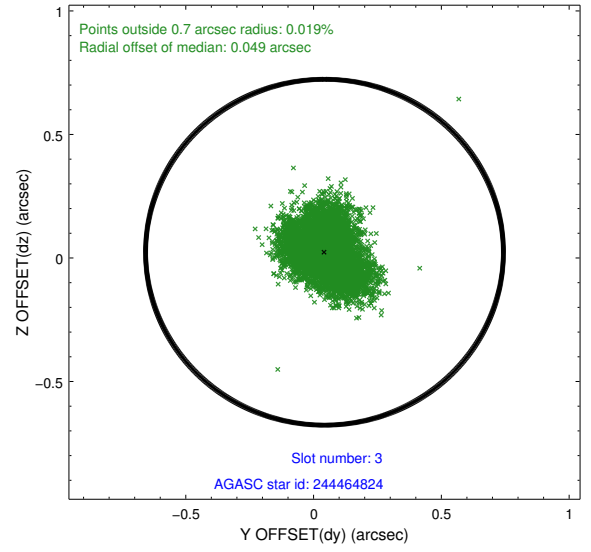
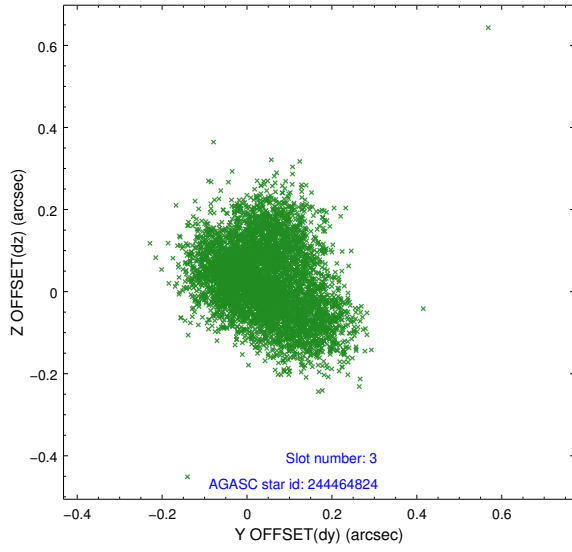
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.82	2730	-0.078	-0.122	0.011	0.019	0.000000	0.000000	-767.66	-1863.46
1	FID	ACIS-S-4	6.88	2730	0.207	0.070	0.007	0.012	0.000000	0.000000	2145.75	44.59
2	FID	ACIS-S-5	6.94	2730	-0.160	0.061	0.009	0.016	0.000000	0.000000	-1819.94	38.89
3	GUIDE	244464824	9.33	5393	0.043	0.023	0.134	0.204	84.469132	26.011484	1309.33	-543.77
4	GUIDE	244469192	8.72	5387	0.199	-0.104	0.100	0.165	83.894873	25.870782	2169.82	-2268.63
5	GUIDE	244976832	9.01	5450	-0.144	0.026	0.101	0.164	84.079575	26.357761	333.93	-2023.03
6	GUIDE	244982936	8.92	5457	-0.017	0.095	0.097	0.151	84.571386	26.917175	-1951.55	-866.77
7	GUIDE	244979896	8.35	5458	-0.076	-0.051	0.094	0.149	85.403275	26.615563	-1427.59	1971.21

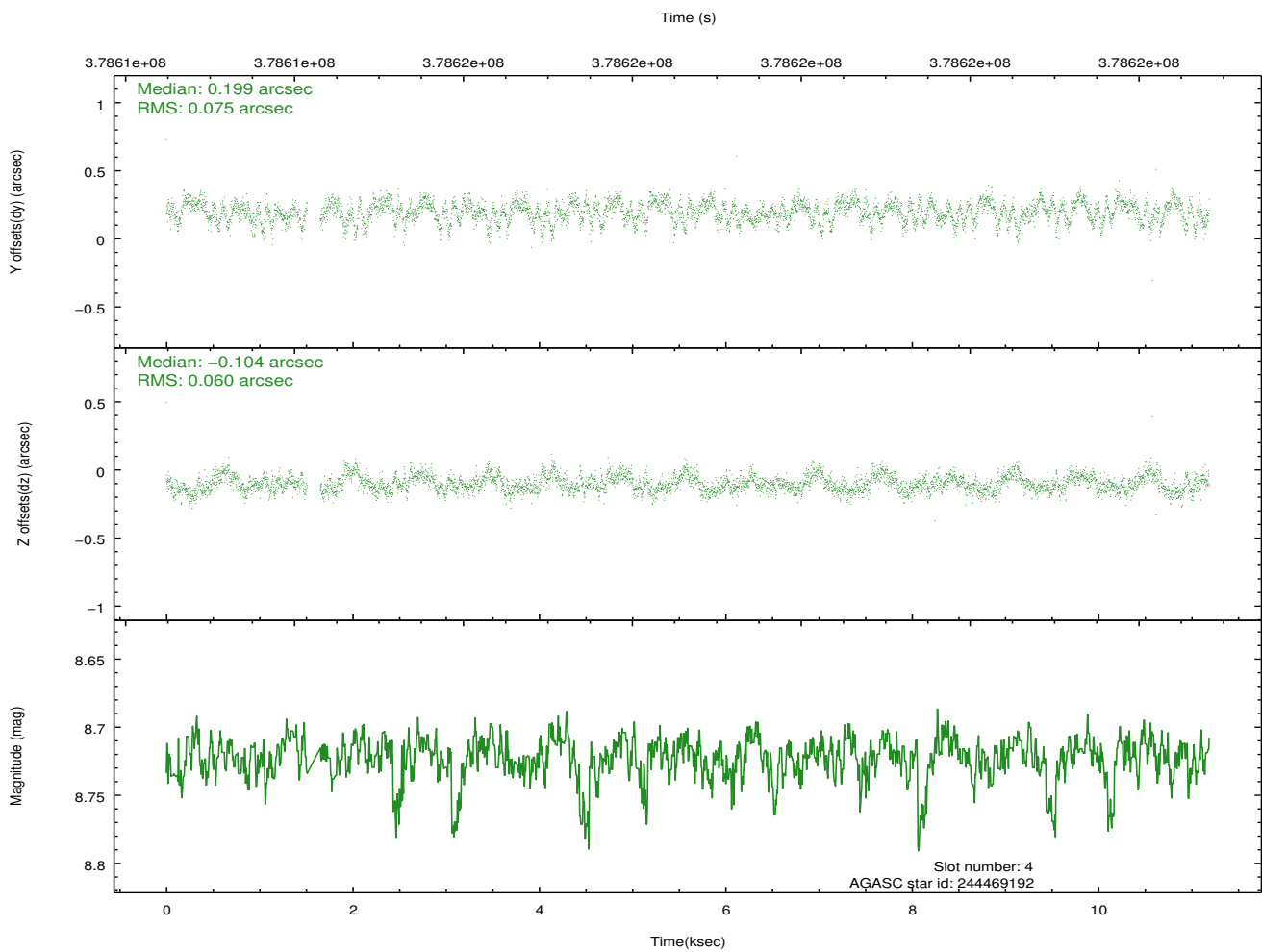
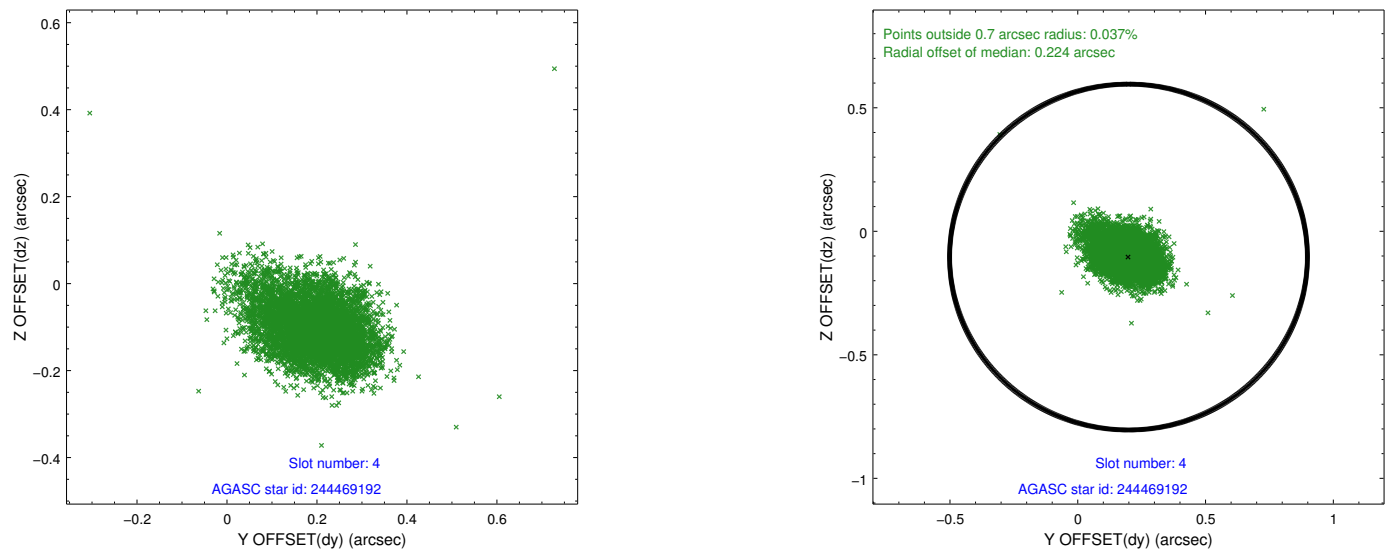
∞

## 2.4 Star Slots

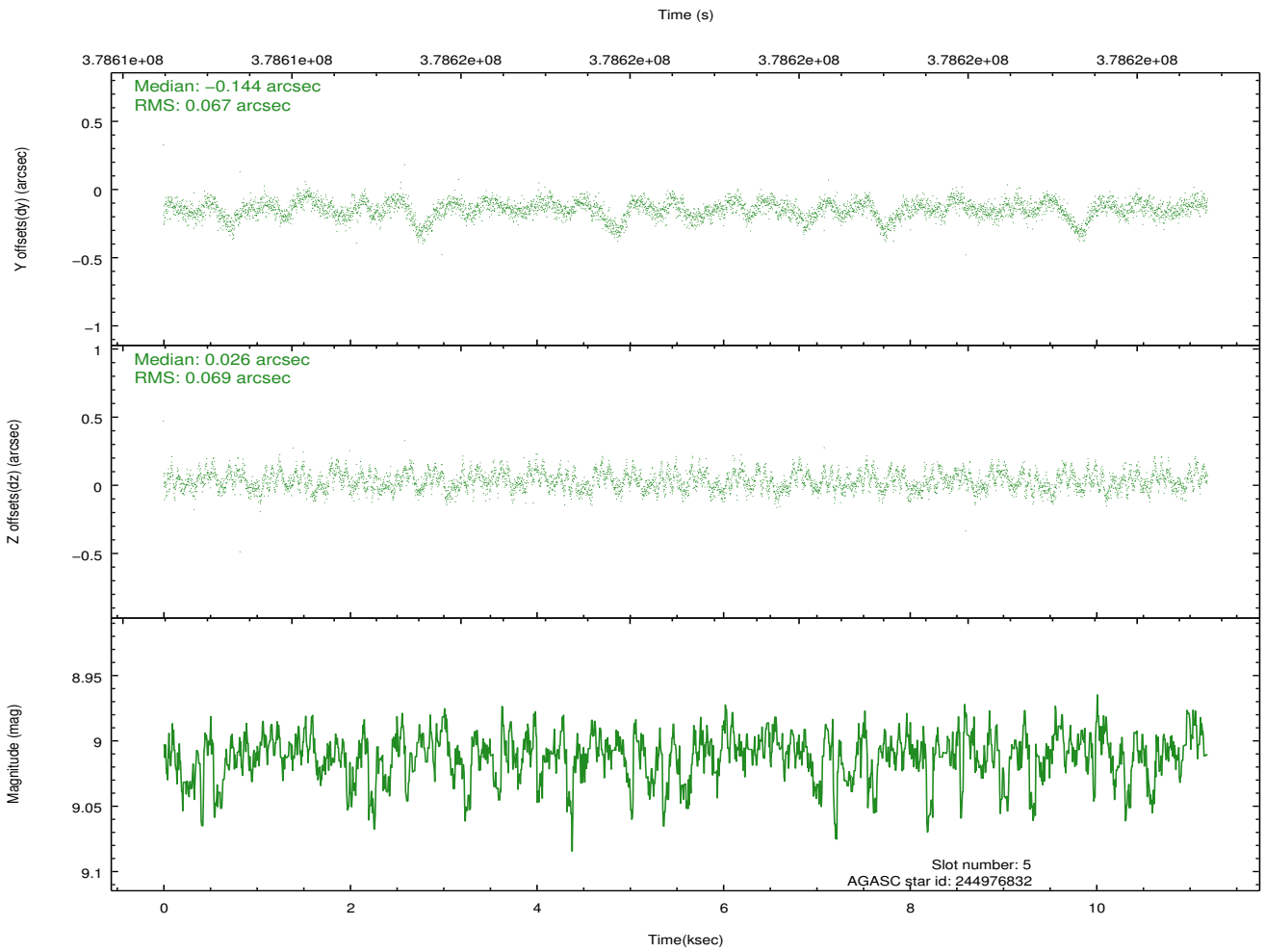
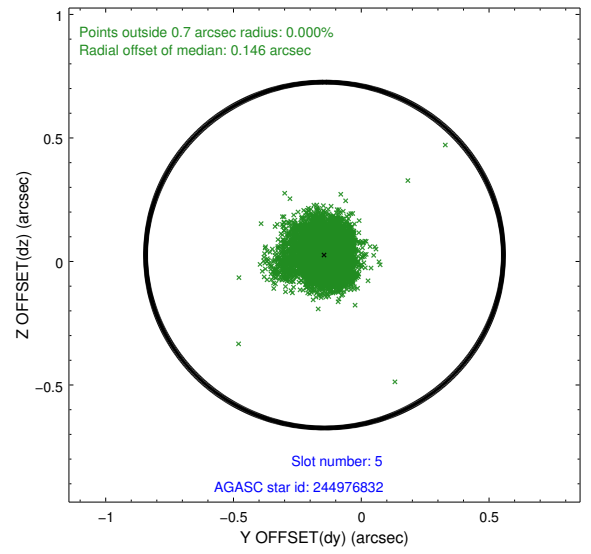
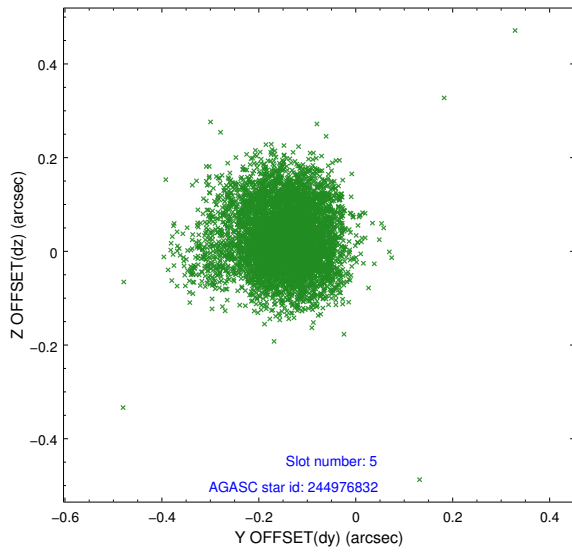
### 2.4.1 Slot 3



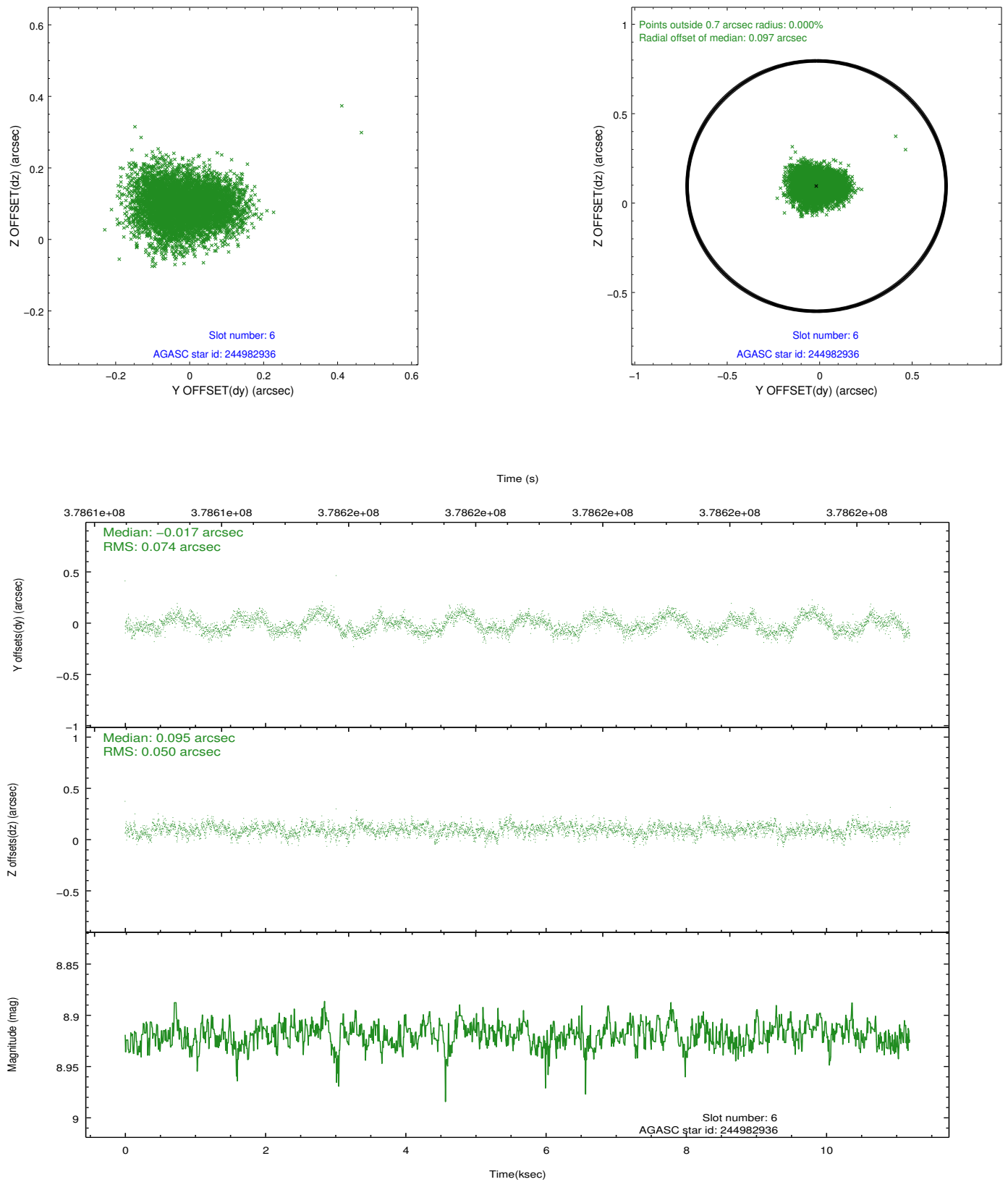
## 2.4.2 Slot 4



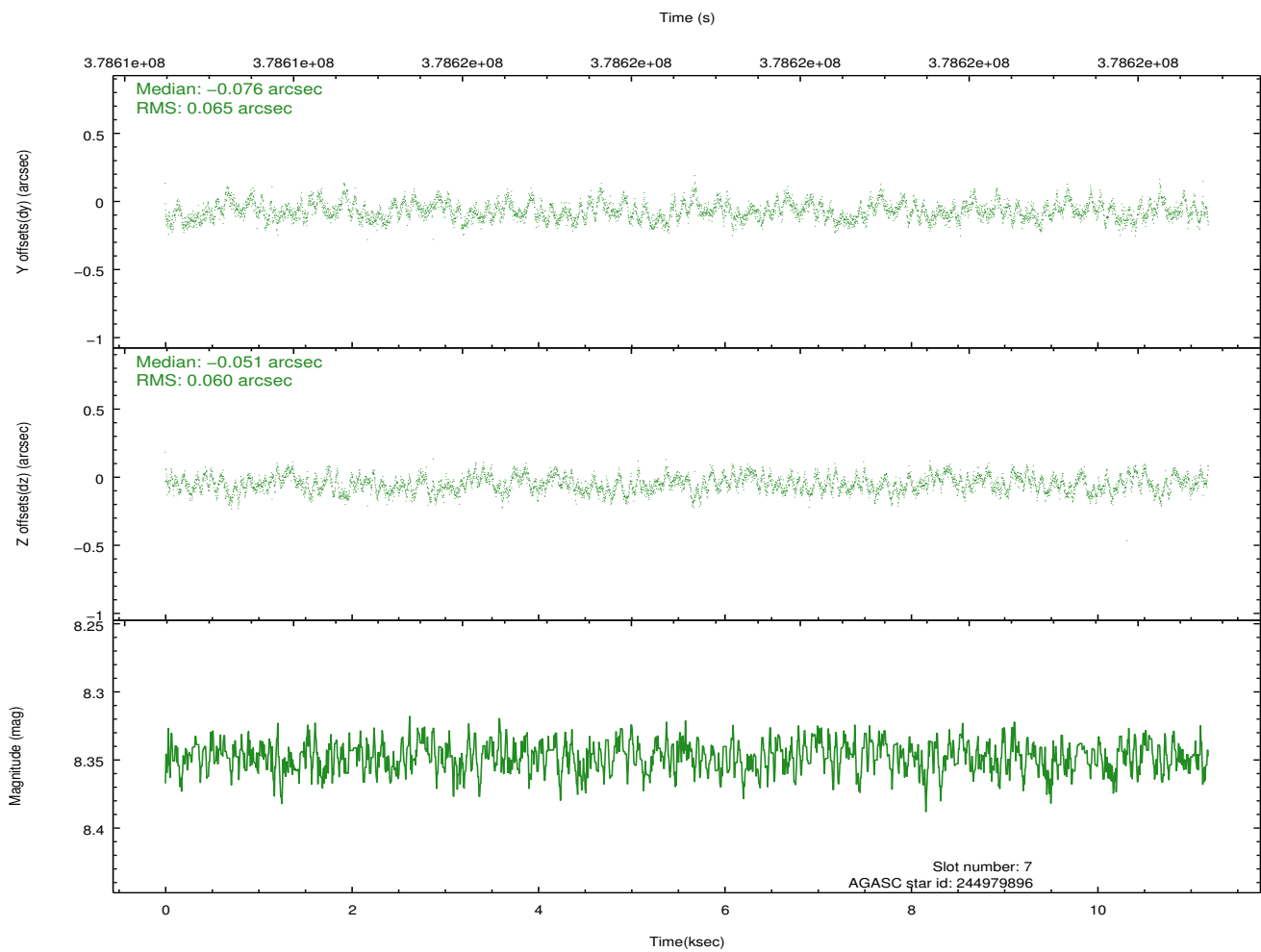
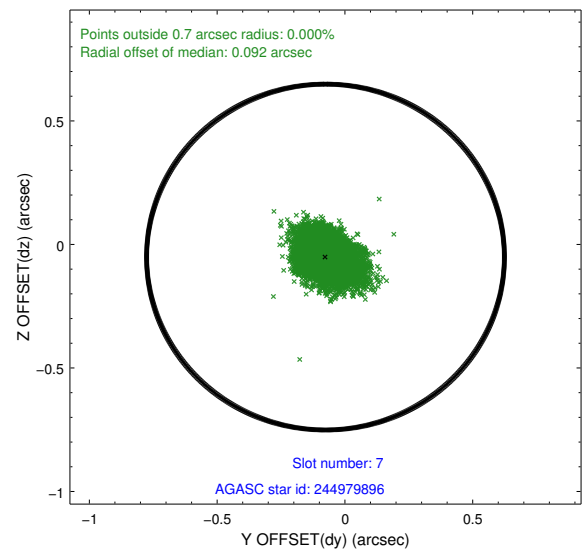
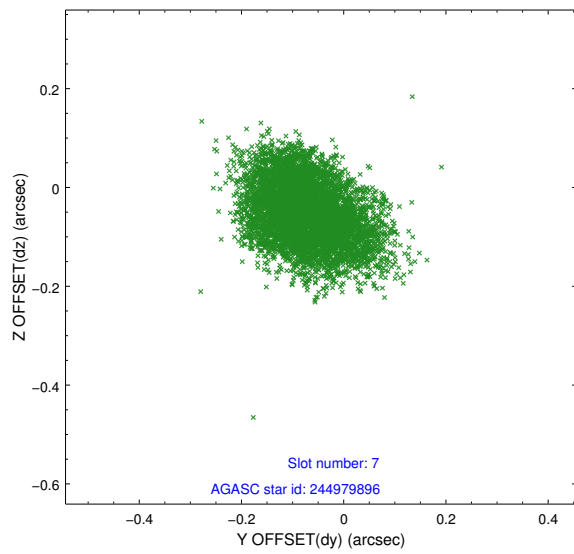
### 2.4.3 Slot 5



## 2.4.4 Slot 6

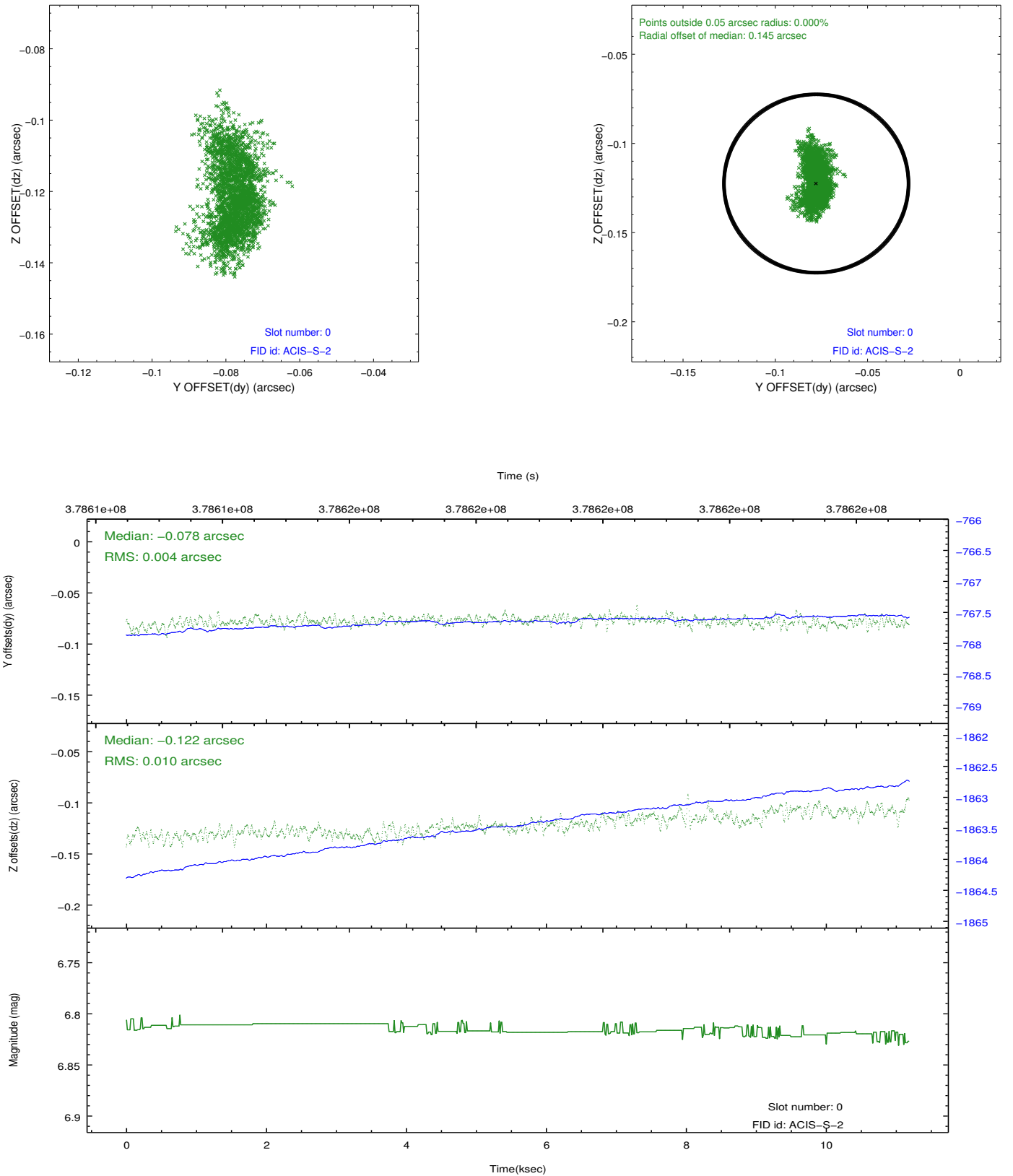


## 2.4.5 Slot 7

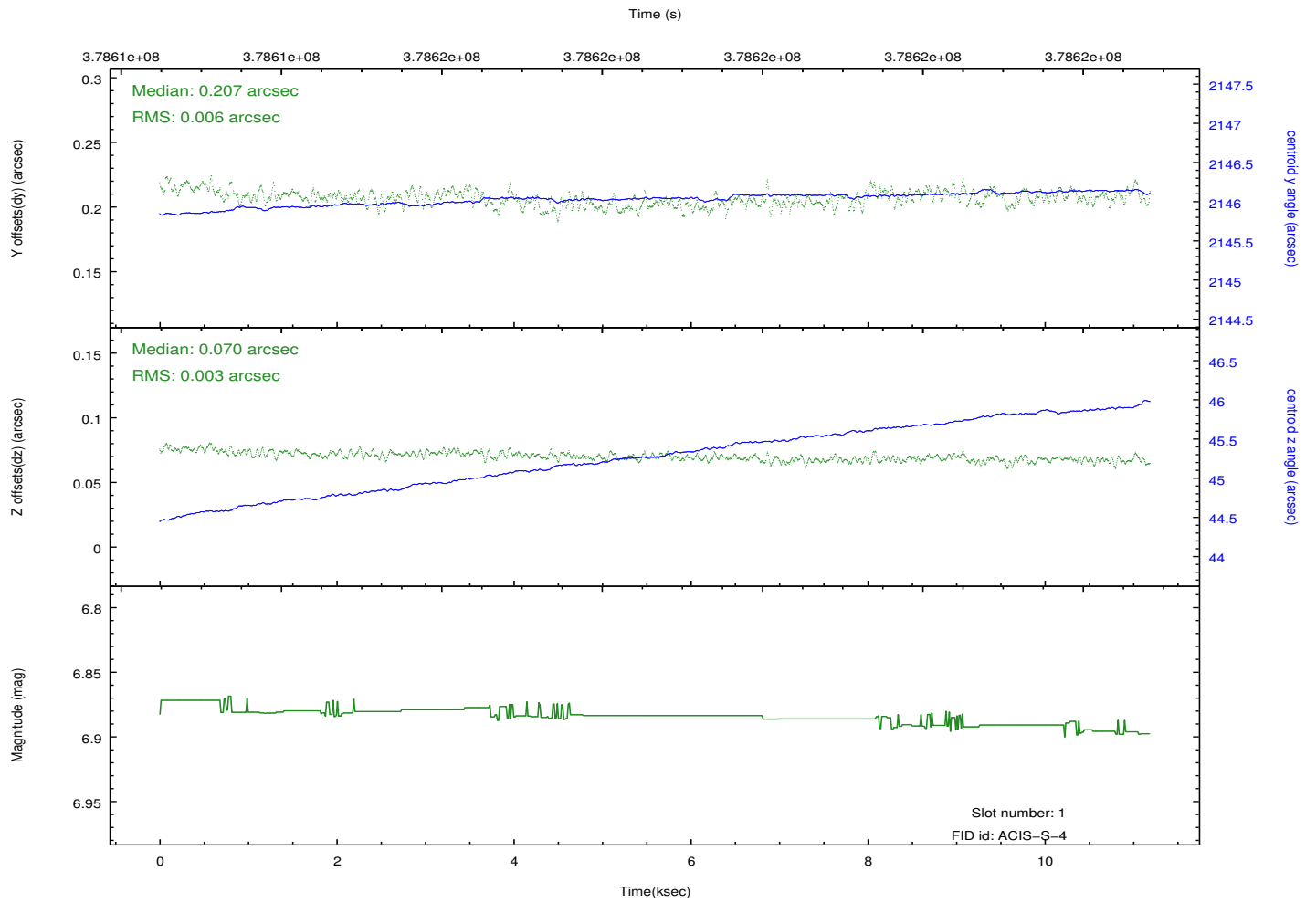
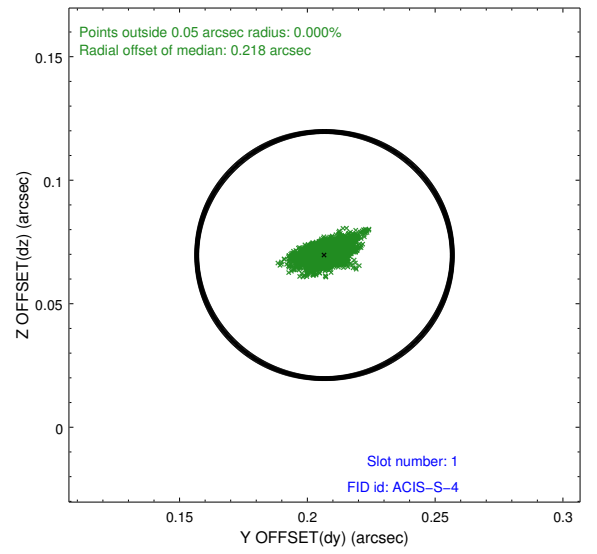
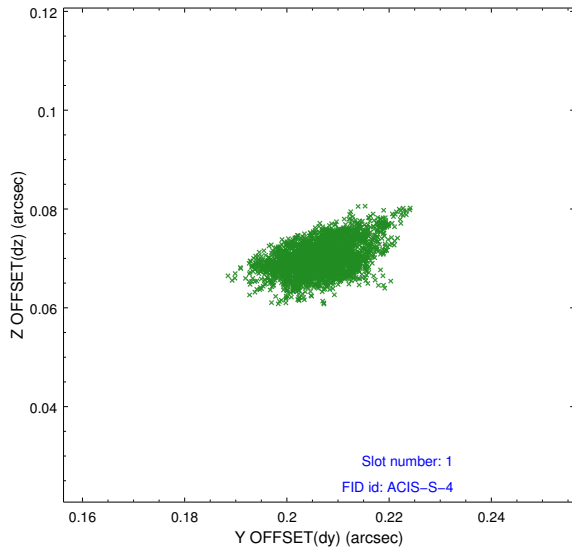


## 2.5 FID Slots

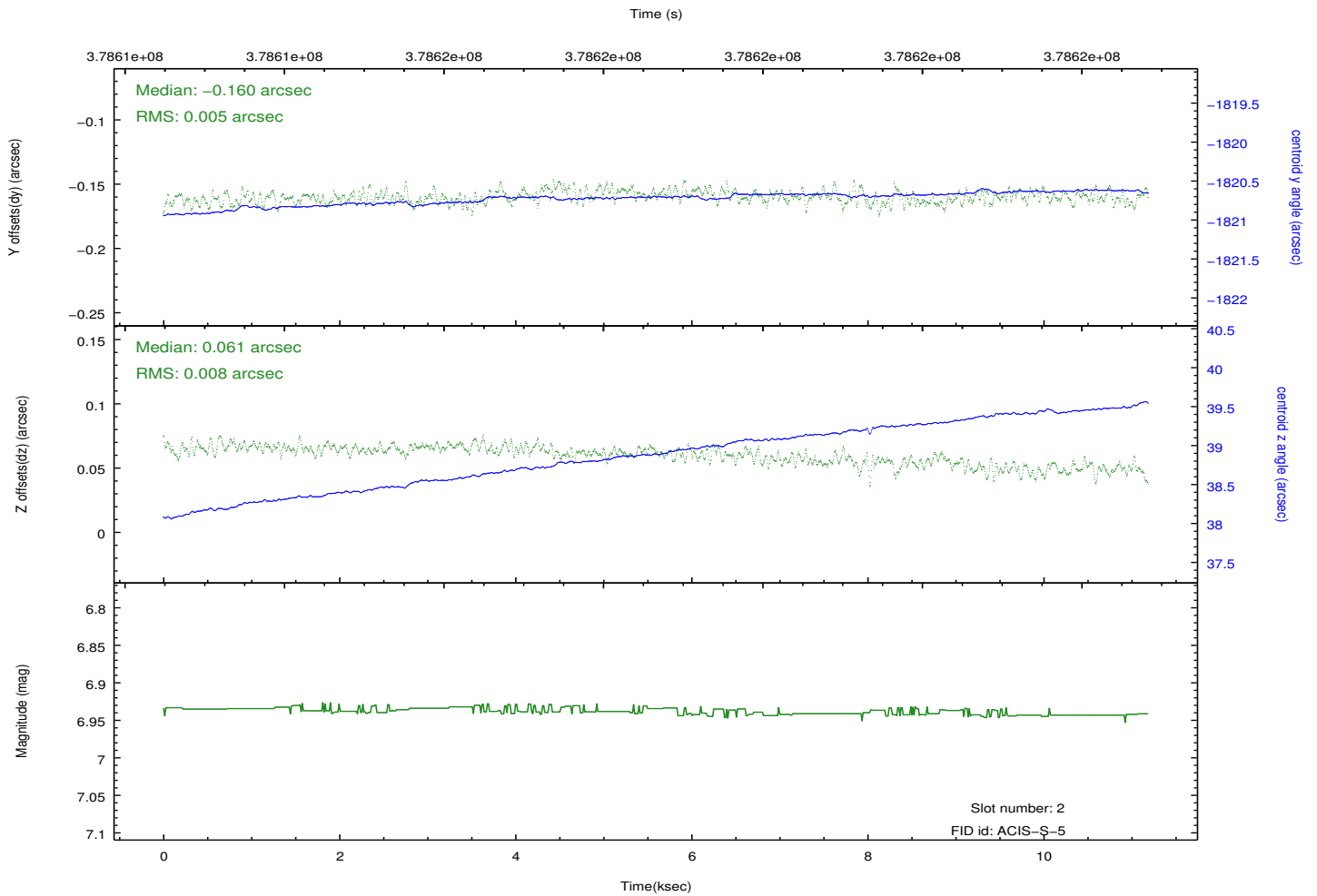
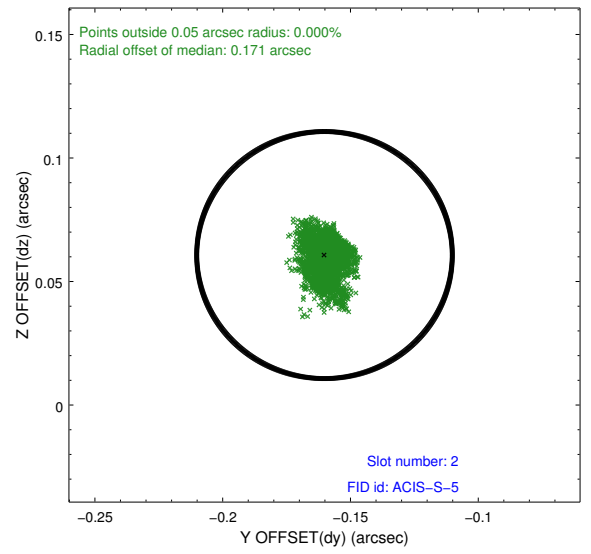
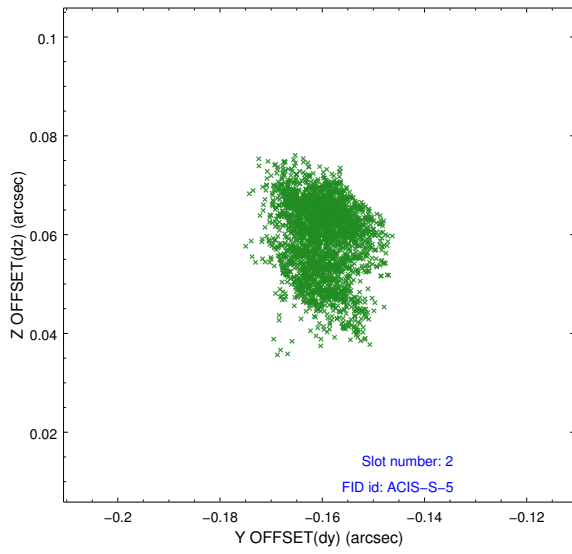
### 2.5.1 Slot 0



## 2.5.2 Slot 1

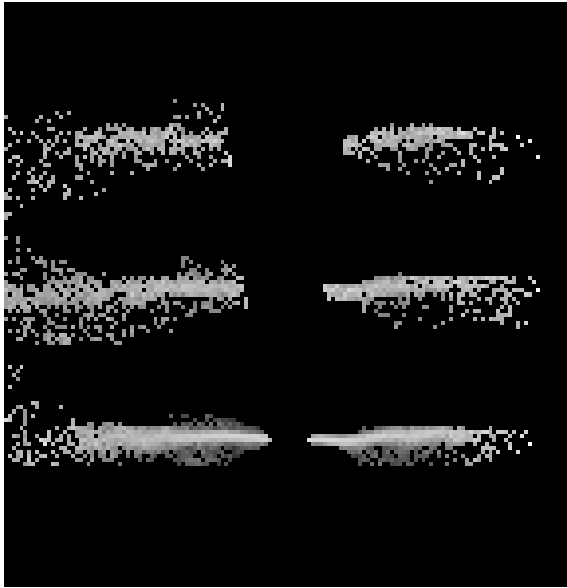


### 2.5.3 Slot 2

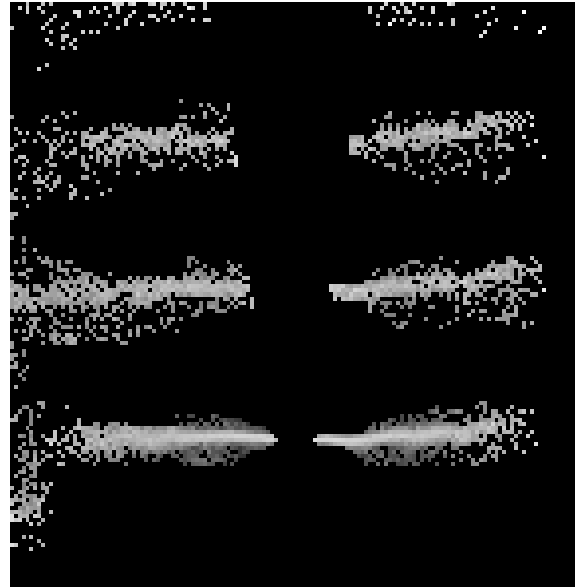


# 3 Gratings

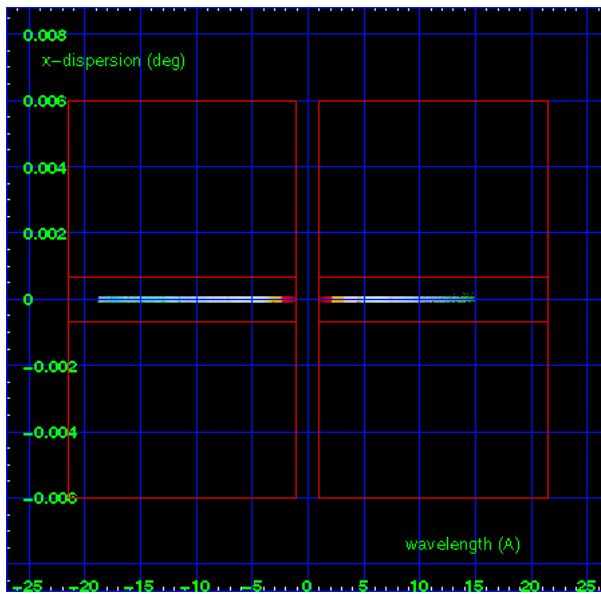
## 3.1 HEG Arm



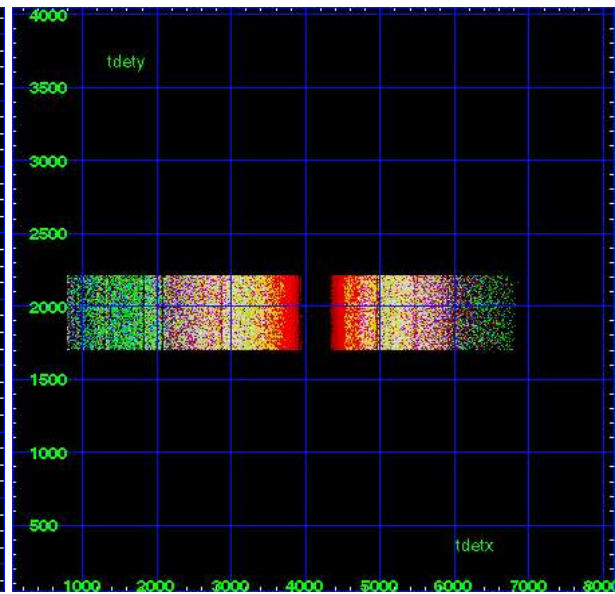
HEG Order Sort 123



HEG Order Sort ALL

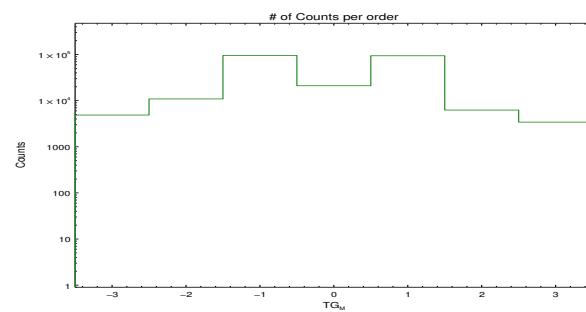


Spot Image HEG

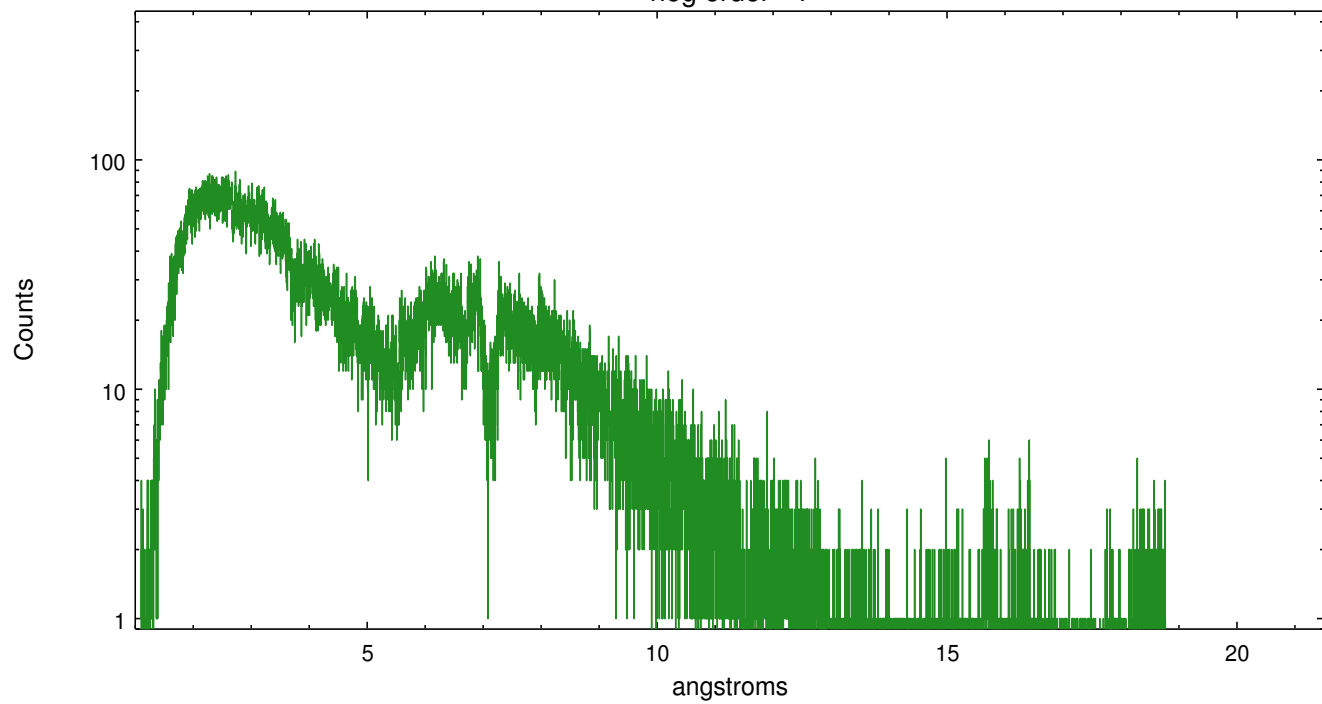


Full Detector HEG

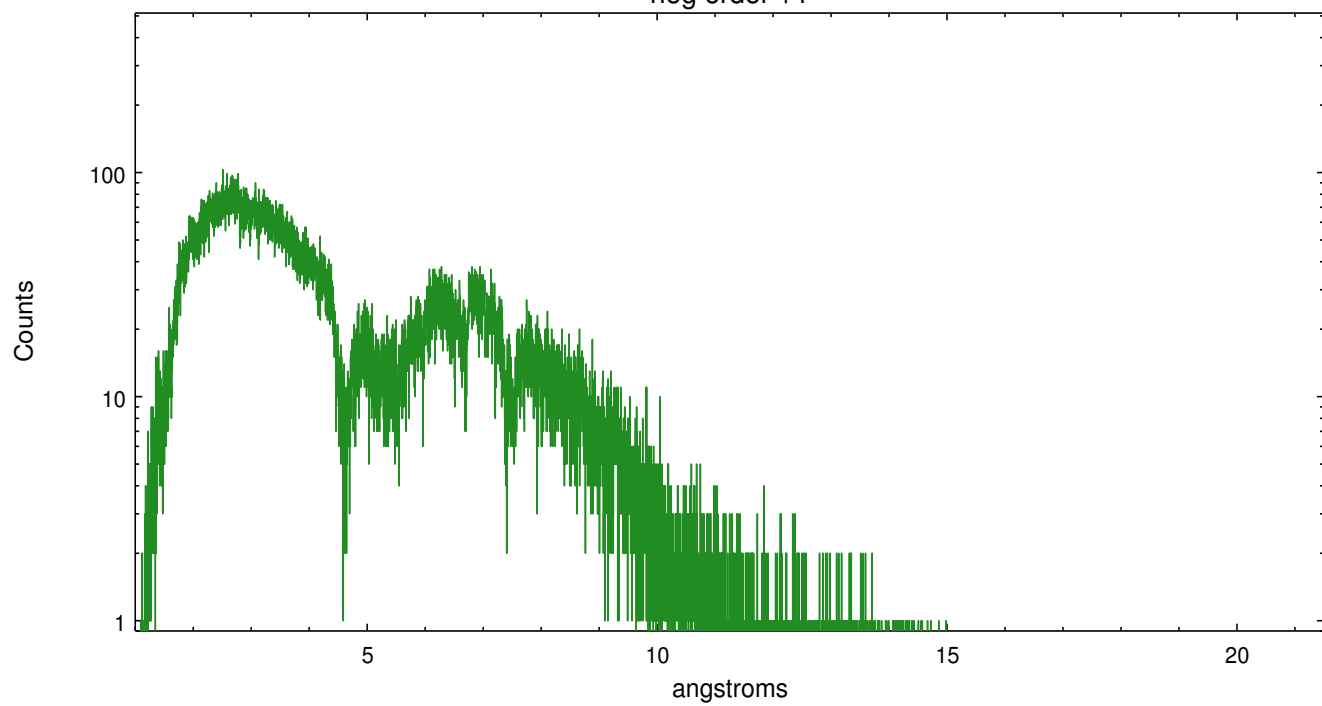
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	4874	10904	95413	21079	94122	6253	3423



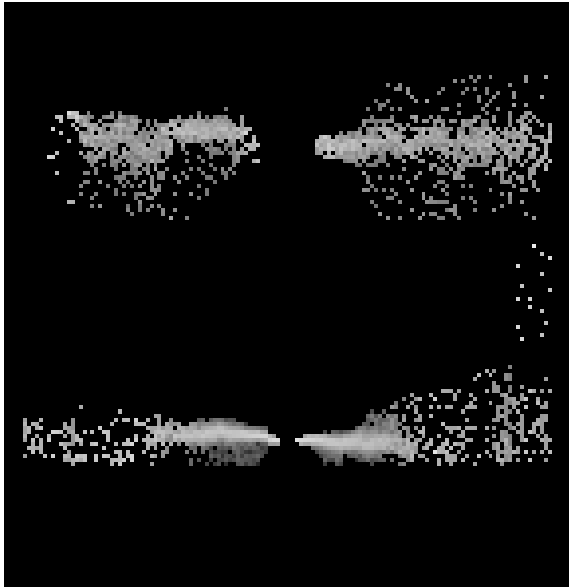
heg order -1



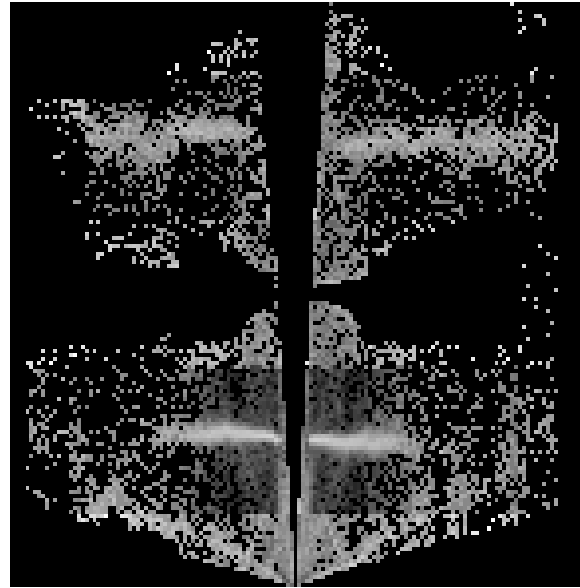
heg order +1



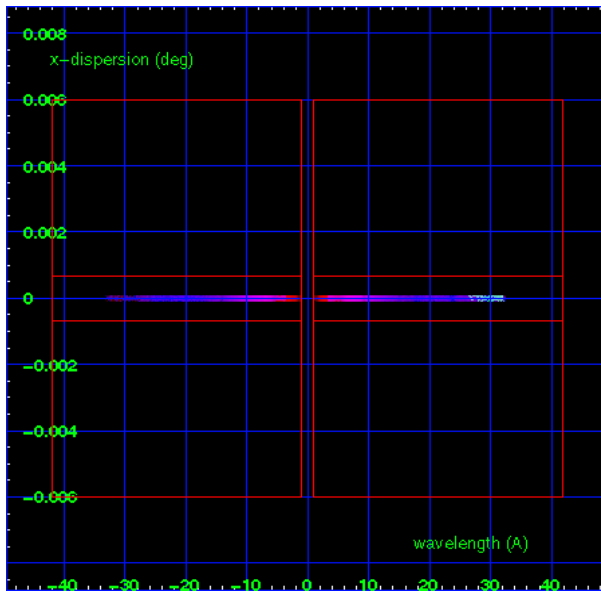
### 3.2 MEG Arm



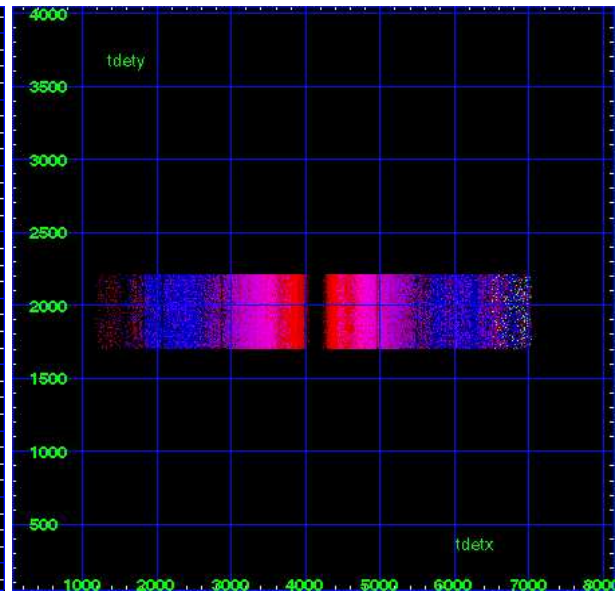
MEG Order Sort 123



MEG Order Sort ALL

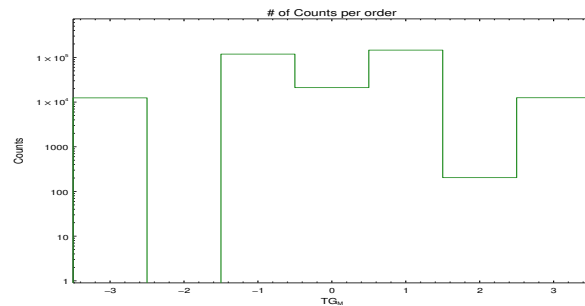


Spot Image MEG

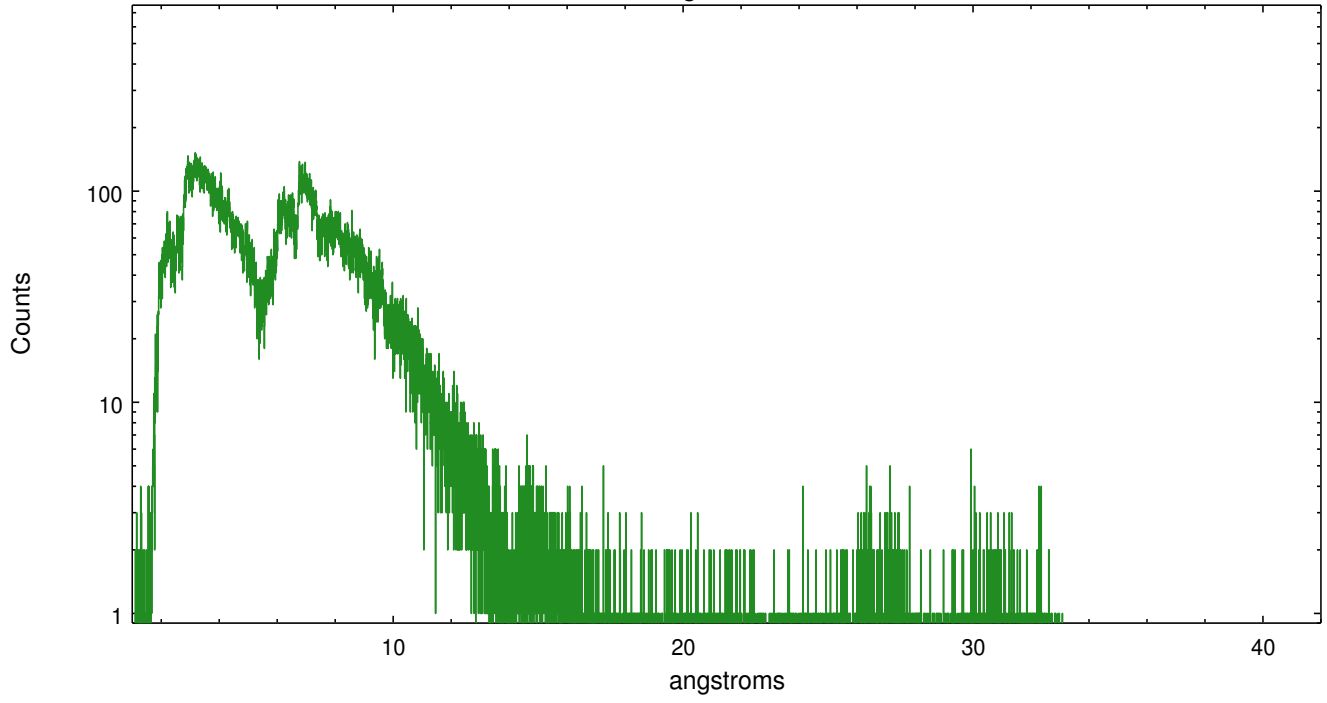


Full Detector MEG

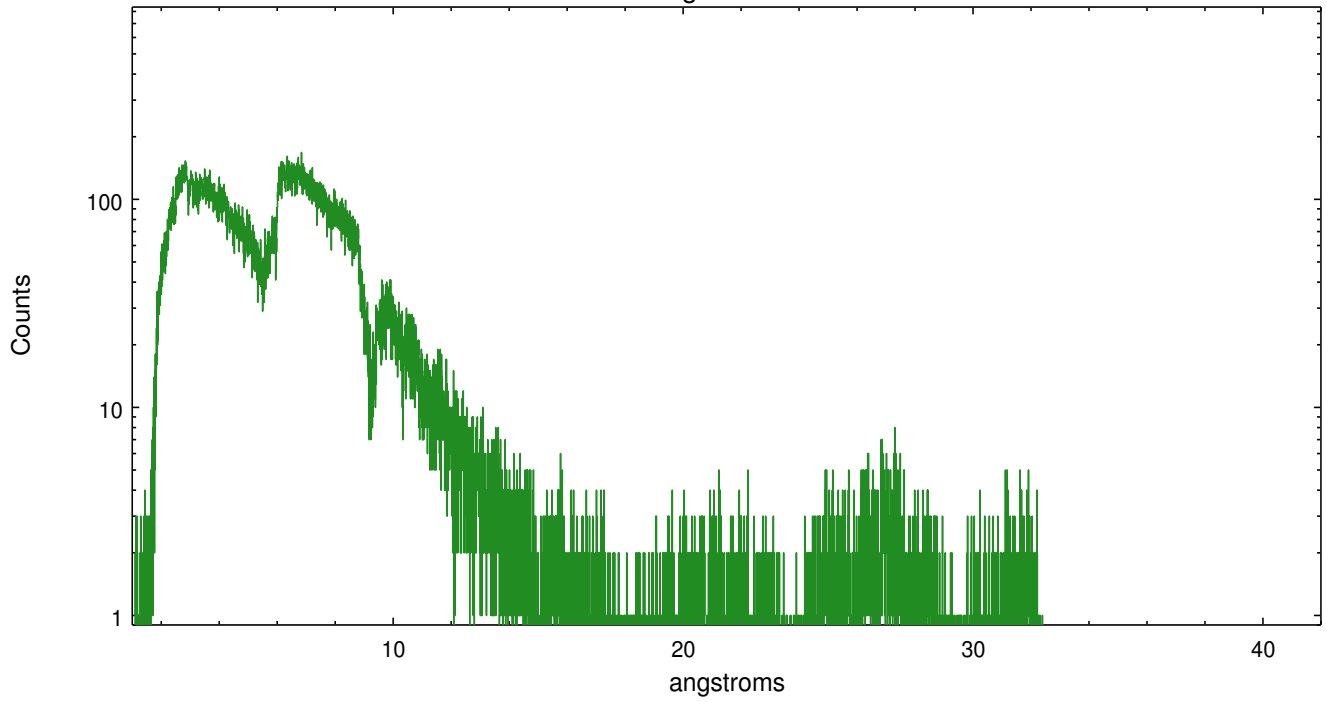
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	12431	0	118503	21079	145515	204	12522



meg order -1



meg order +1



# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.06.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	11.08125

## A.2 Comments