

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 5477 - L2 Version 2  
Chandra X-Ray Center

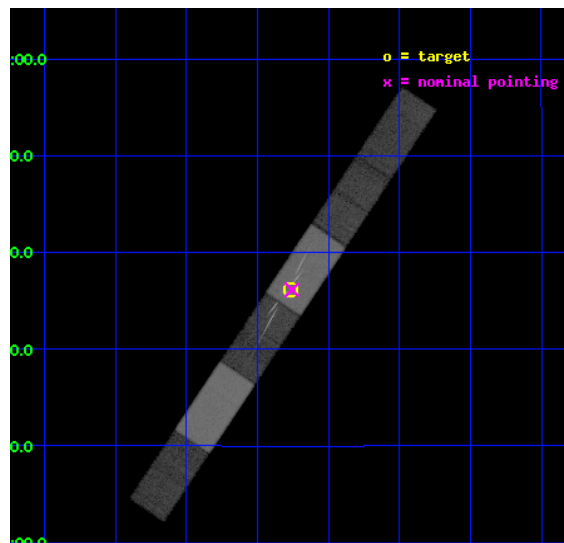
L2 Processing Date : Mar 17 2012

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>3</b>	<b>Gratings</b>	<b>17</b>
3.1	HEG Arm . . . . .	17
3.2	MEG Arm . . . . .	19
<b>A</b>	<b>Summary</b>	<b>21</b>
A.1	Status . . . . .	21
A.2	Comments . . . . .	21

# 1 Front

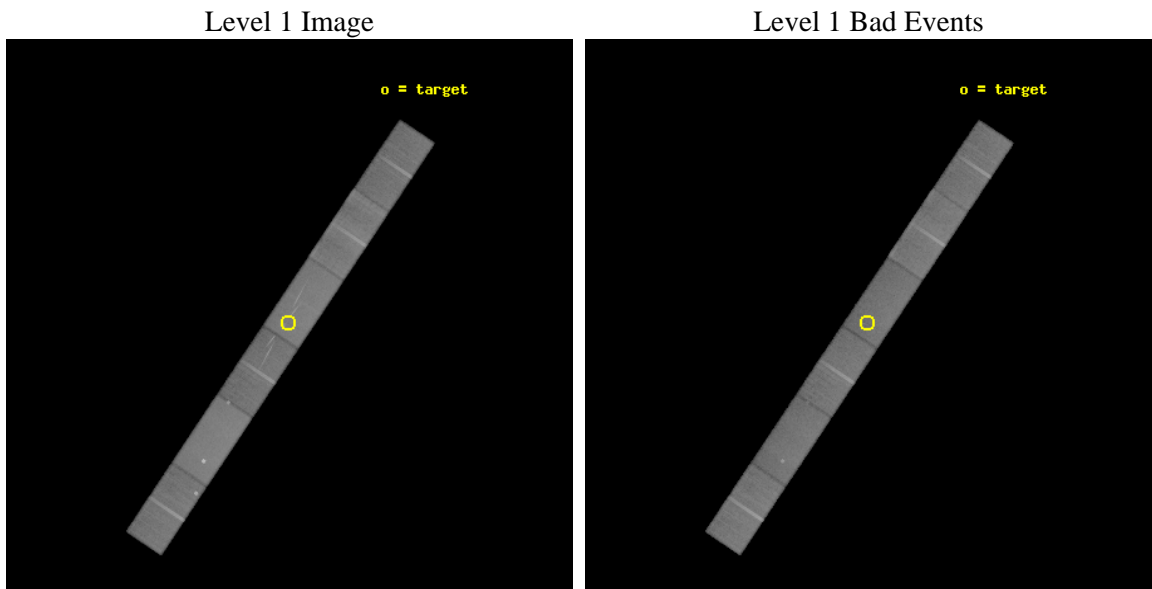
seq_num	400407	Sequence number
obs_id	5477	Observation id
title	X-RAY DIAGNOSTICS OF THE WIND OF HMXB X1908+075: POSSIBLE PROGENITOR BH-NS SYSTEM	Proposal title
observer	Prof. Saul Rappaport	Principal investigator
object	X1908+075: High N <sub>H</sub>	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	287.691667	Observer's specified target RA [deg]
dec_targ	7.601944	Observer's specified target Dec [deg]
ra_nom	287.68944627479	Nominal RA [deg]
dec_nom	7.6022370141375	Nominal Dec [deg]
roll_nom	303.83605079815	Nominal Roll [deg]
revision	2	Processing version of data
ontime	50182.299648106	Sum of GTIs [s]
livetime	48999.396568591	Livetime [s]
ontime4	50182.299648106	Sum of GTIs [s]
ontime5	50182.299648106	Sum of GTIs [s]
ontime6	50182.299648106	Sum of GTIs [s]
ontime7	50182.299648106	Sum of GTIs [s]
ontime8	50182.299648106	Sum of GTIs [s]
ontime9	50180.558628023	Sum of GTIs [s]
l2events	371892	Number of level 2 events



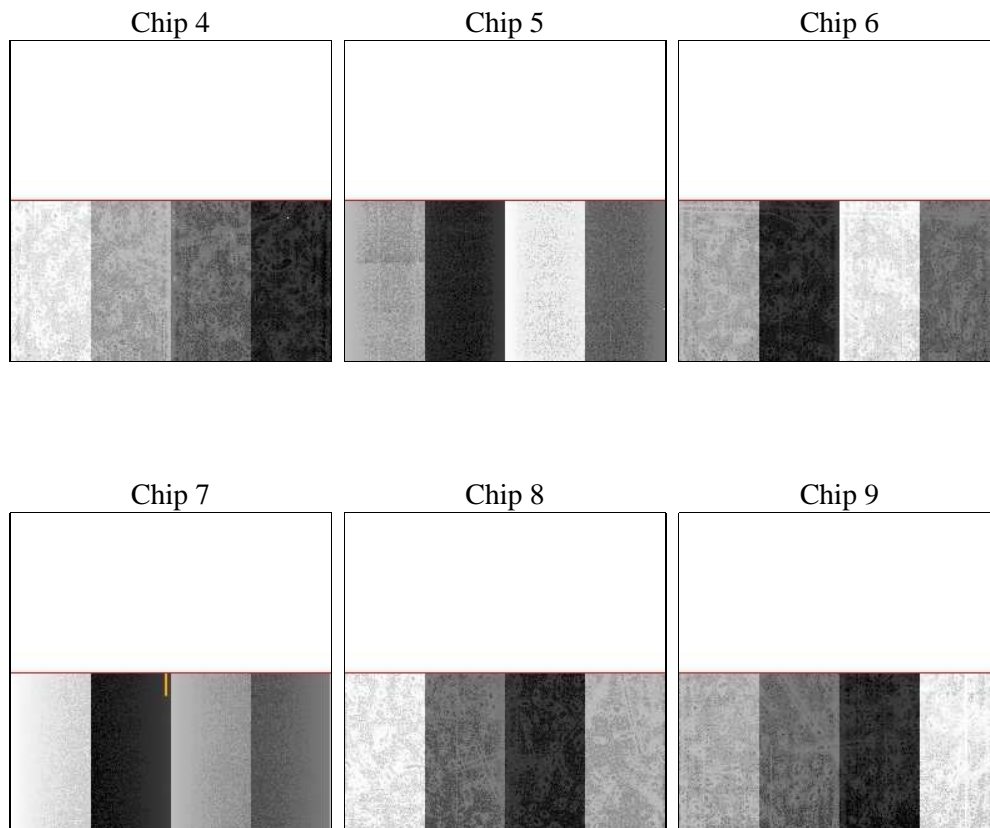
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	50000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	50182.299648106	Sum of GTIs [s]
caldbver	4.4.8	&#160	ontime4	50182.299648106	Sum of GTIs [s]
date	2012-03-17T17:41:04	Date and time of file creation	ontime5	50182.299648106	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	50182.299648106	Sum of GTIs [s]
			ontime7	50182.299648106	Sum of GTIs [s]
			ontime8	50182.299648106	Sum of GTIs [s]
			ontime9	50180.558628023	Sum of GTIs [s]
			l1events	1580003	Number of level 1 events

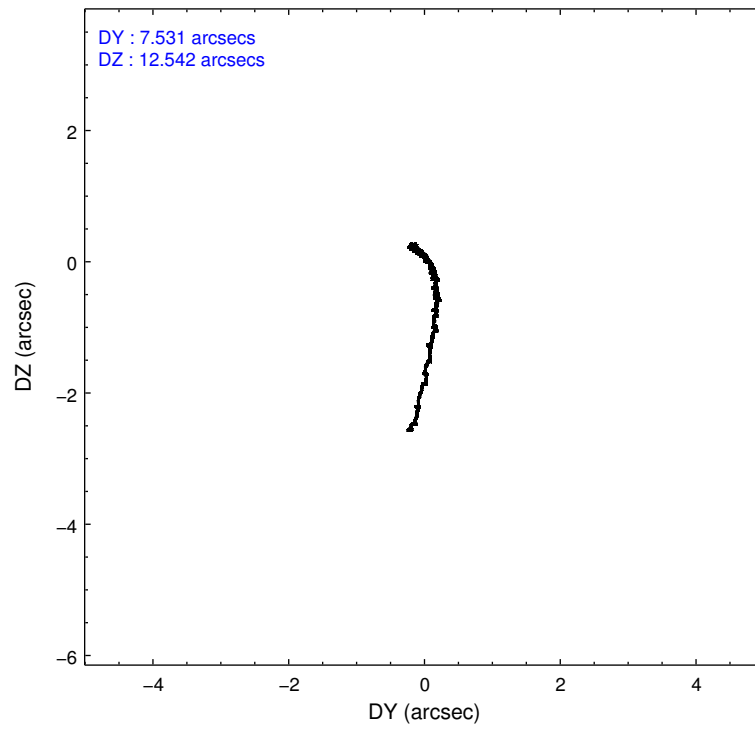
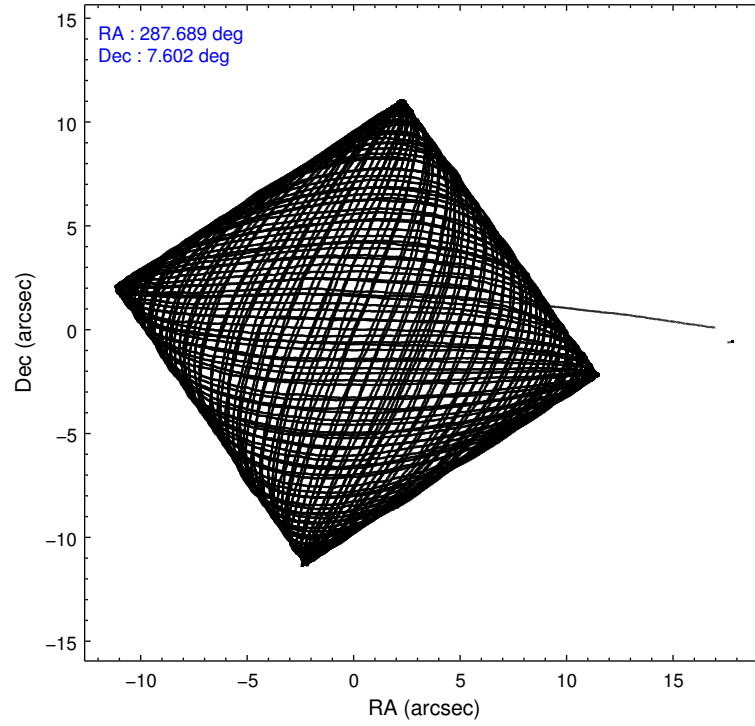
### 2.1.4 Events

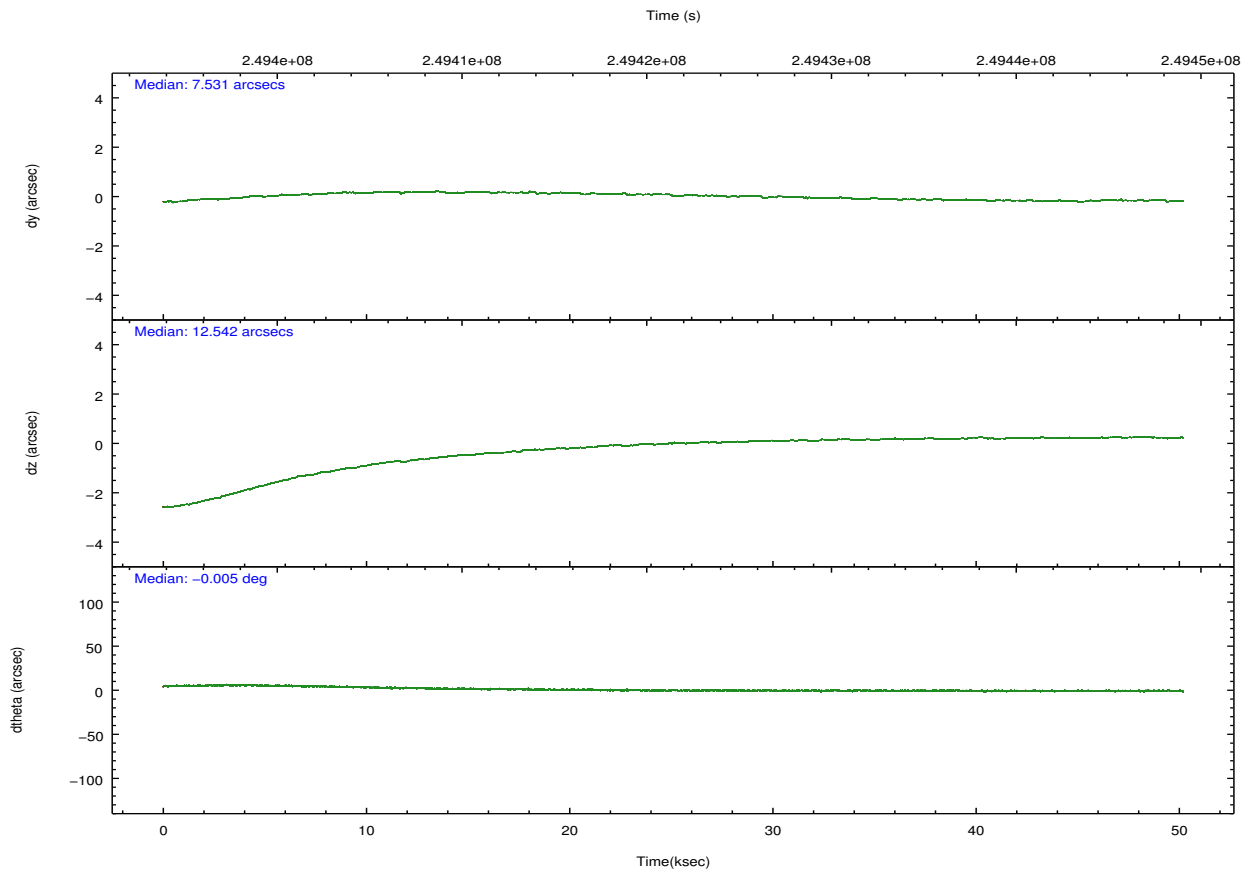
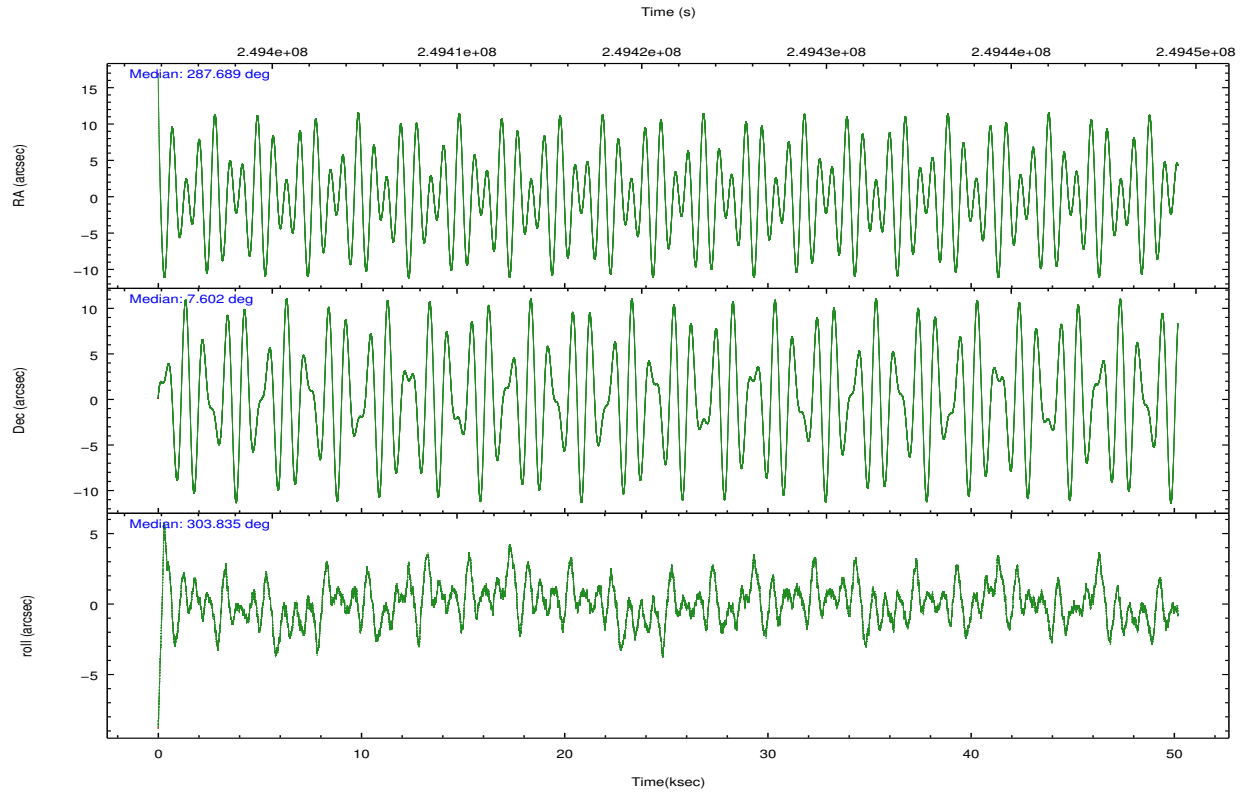
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	243679	318735	220771	305137	281374	210307	grade 0 events	15218	17849	13723	14490	18499	10172
rejected events	212158	170879	187682	165143	219431	184110		6%	5%	6%	4%	6%	4%
rejected %	87%	53%	85%	54%	77%	87%	grade 1 events	183	2017	109	479	142	83
								0%	0%	0%	0%	0%	0%
							grade 2 events	6148	40639	6591	28770	13461	5083
								2%	12%	2%	9%	4%	2%
							grade 3 events	3148	8163	3346	13296	7115	3129
								1%	2%	1%	4%	2%	1%
							grade 4 events	2974	7994	3533	12969	6716	2998
								1%	2%	1%	4%	2%	1%
							grade 5 events	8709	25612	9235	27111	12333	9883
								3%	8%	4%	8%	4%	4%
							grade 6 events	4383	74588	6087	71446	16894	5043
								1%	23%	2%	23%	6%	2%
							grade 7 events	202916	141873	178147	136576	206214	173916
								83%	44%	80%	44%	73%	82%

## 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	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	287.664624	287.6894462747902	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	7.613921	7.602237014137536	Subarray start row	1	1
[deg] Pointing Roll	303.682715	303.8360507981507	Subarray row count	512	512
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	1.7
[mm] SIM translation stage pos	-183.992523	-183.9875365069546			
[mm] SIM translation stage offset	-6.14	-6.144986076053243			
Phase constraints	Y	Y			
[d] Phase period	4.400700	4.400700			
[d] Phase epoch (MJD)	52631.383000	52631.383000			
Phase start	0.934200	0.934200			
Phase end	0.065800	0.065800			
Phase start error	0.004200	0.004200			
Phase end error	0.004200	0.004200			
[s] Observation start time (MET)	249396513.184000	249395321.32413			
Observation start date	2005-11-26T12:47:29	2005-11-26T12:28:41			
[s] Observation end time (MET)	249446513.184000	249447156.60153			
Observation end date	2005-11-27T02:40:49	2005-11-27T02:52:36			
Read mode	TIMED	TIMED			

## 2.3 Aspect



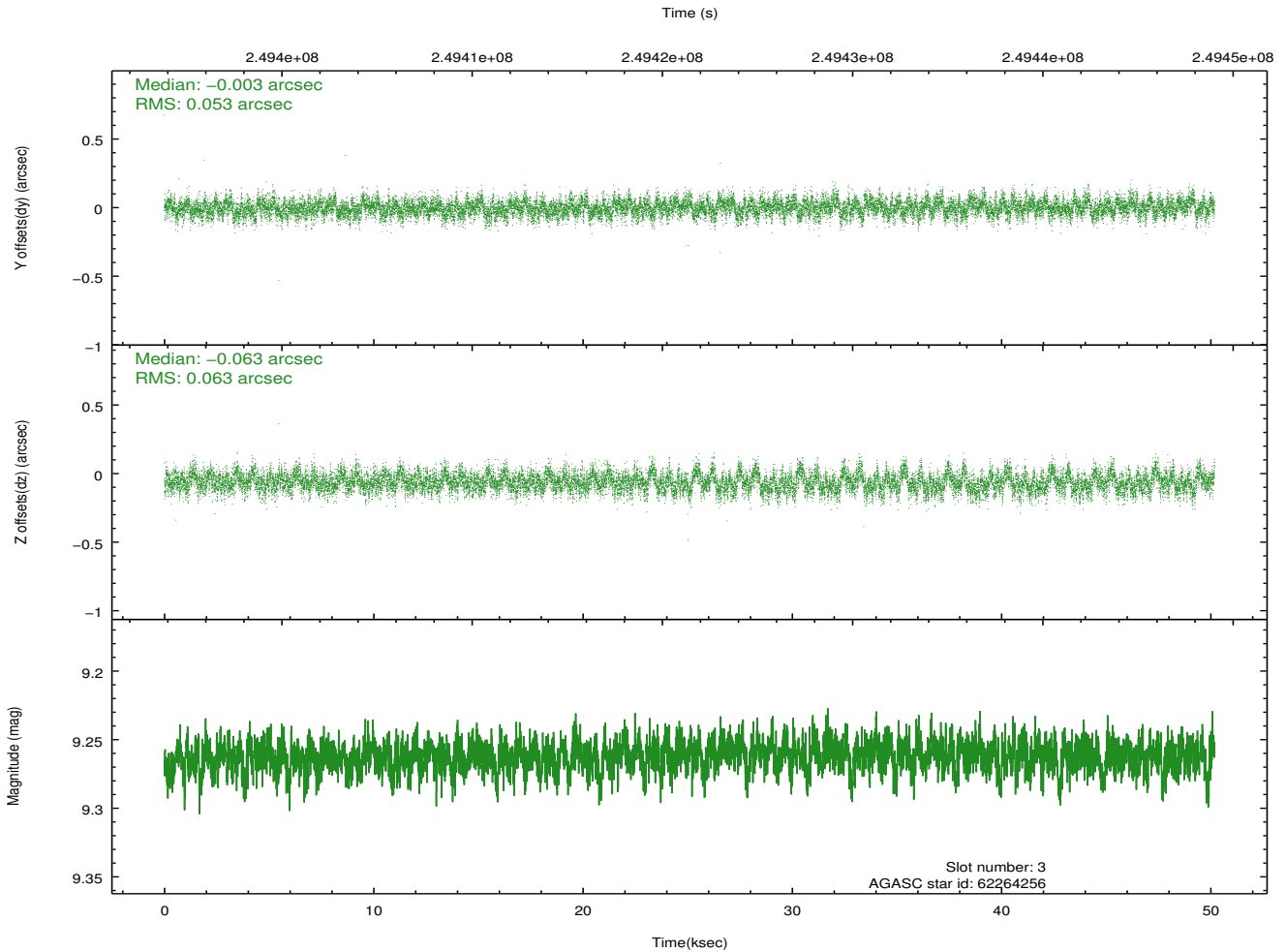
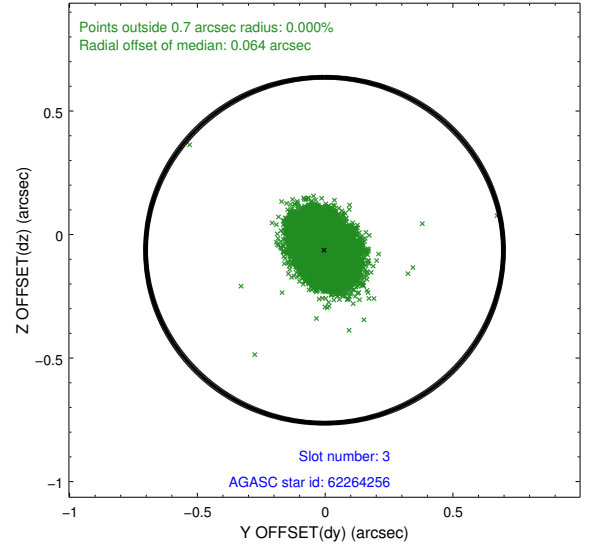
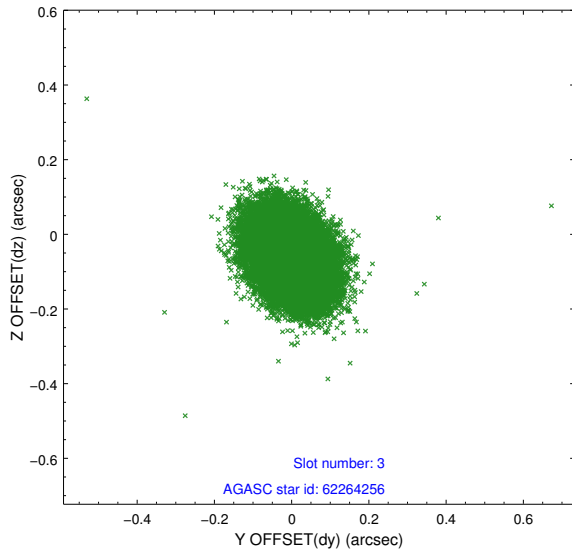


### Slot Statistics

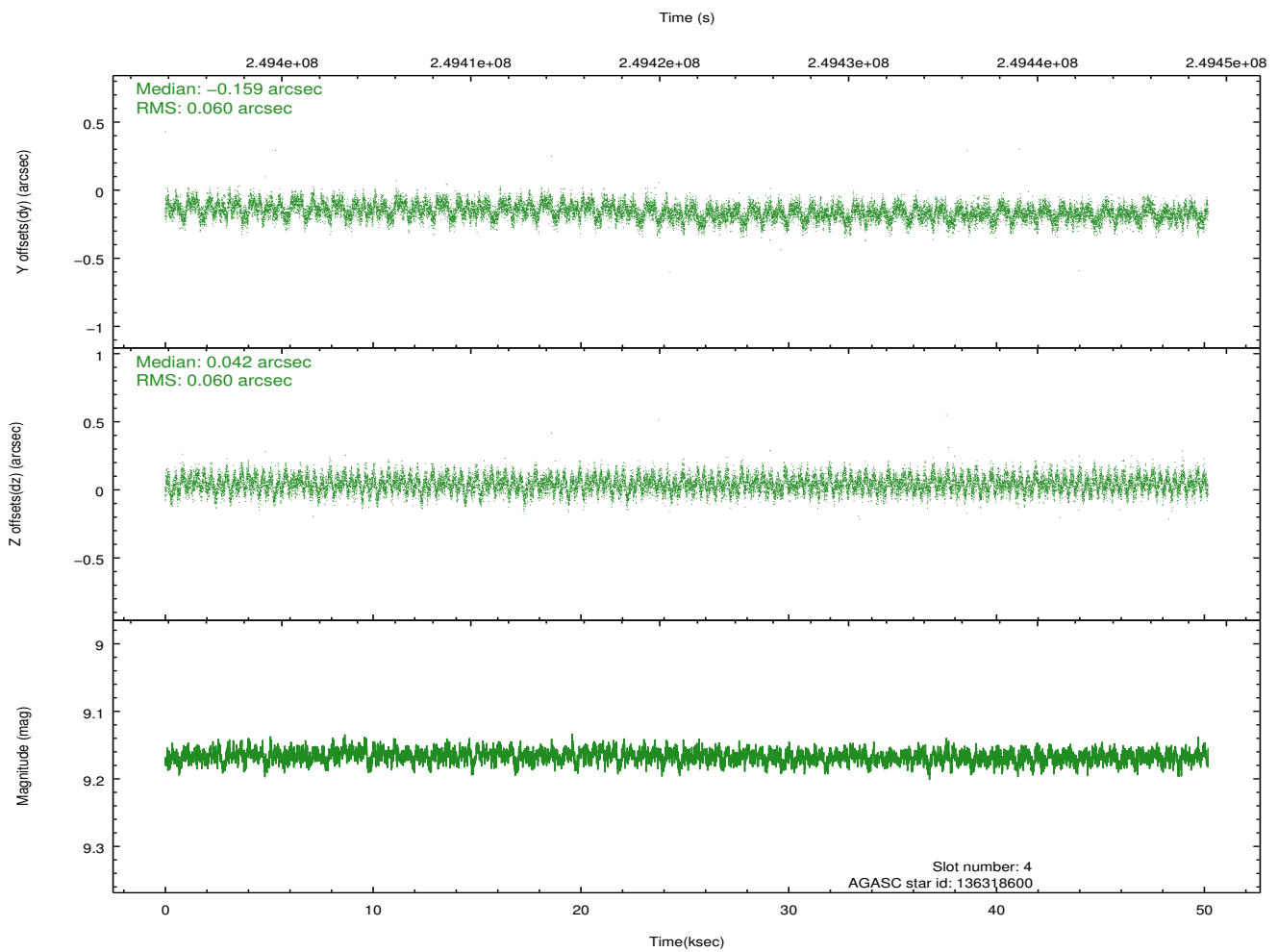
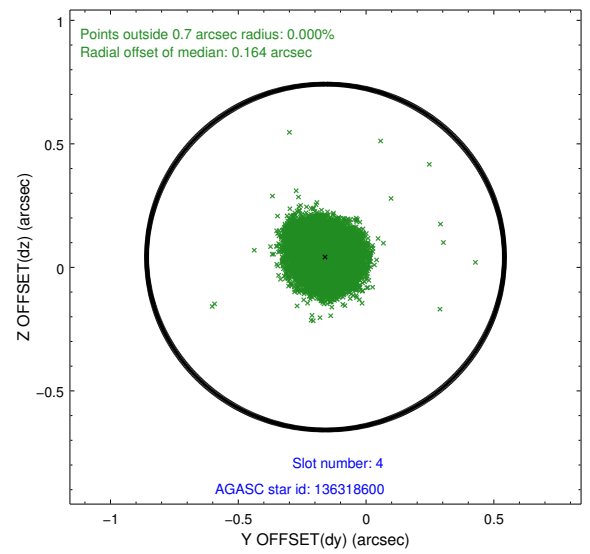
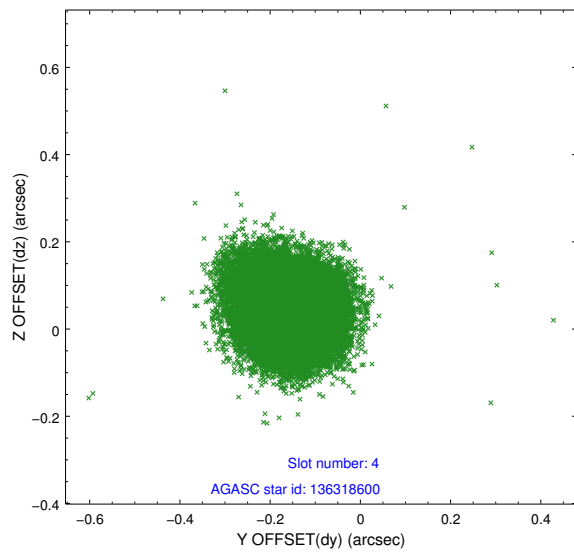
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	12240	-0.085	-0.081	0.017	0.057	0.000000	0.000000	-759.91	-1860.23
1	FID	ACIS-S-4	7.18	12241	0.110	0.061	0.016	0.027	0.000000	0.000000	2153.53	48.43
2	FID	ACIS-S-5	7.23	12240	-0.058	0.026	0.016	0.051	0.000000	0.000000	-1812.78	42.01
3	GUIDE	62264256	9.26	24465	-0.003	-0.063	0.087	0.143	287.525458	7.120381	1203.28	-1398.87
4	GUIDE	136318600	9.17	24459	-0.159	0.042	0.091	0.143	287.193672	7.971966	-2004.09	-681.68
5	GUIDE	62269344	9.21	24470	-0.043	0.095	0.136	0.214	287.709625	6.869502	2319.70	-1352.17
6	GUIDE	62266544	9.13	24468	0.182	-0.011	0.111	0.175	287.736503	6.865055	2386.48	-1281.22
7	GUIDE	62259480	9.23	24424	0.017	-0.058	0.098	0.156	288.069646	7.483083	1193.82	942.25

## 2.4 Star Slots

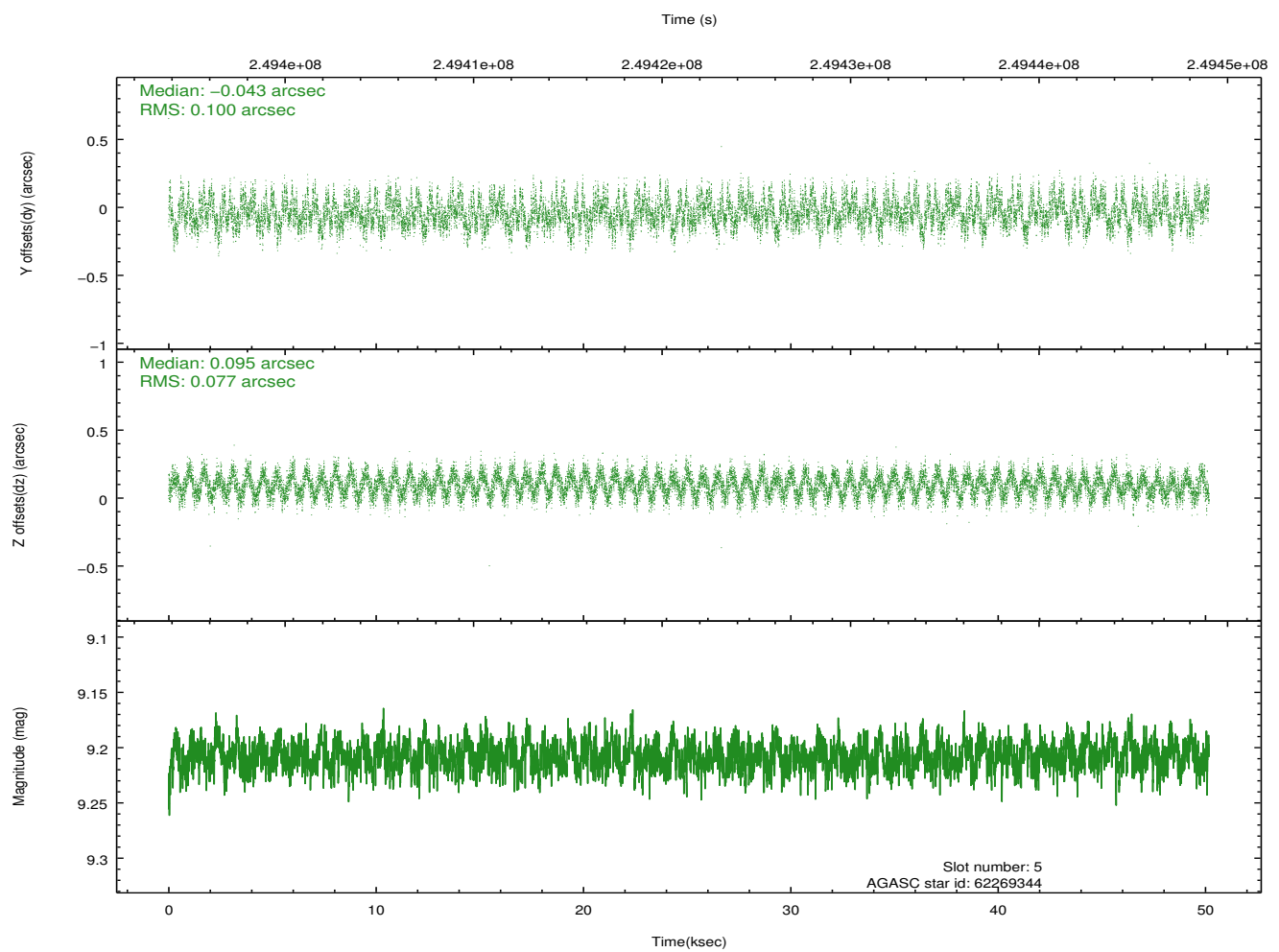
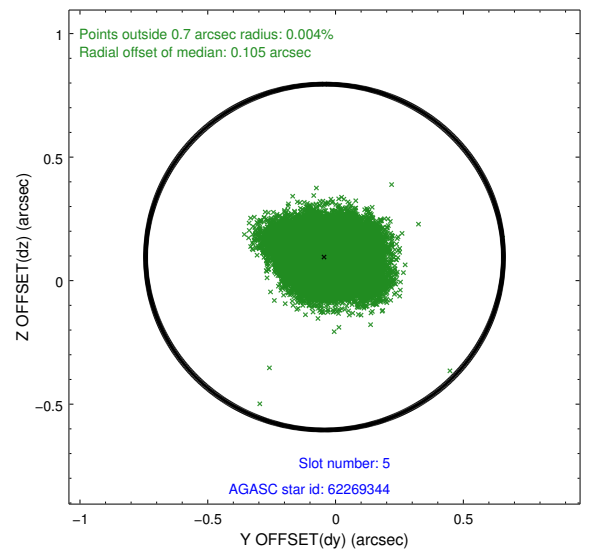
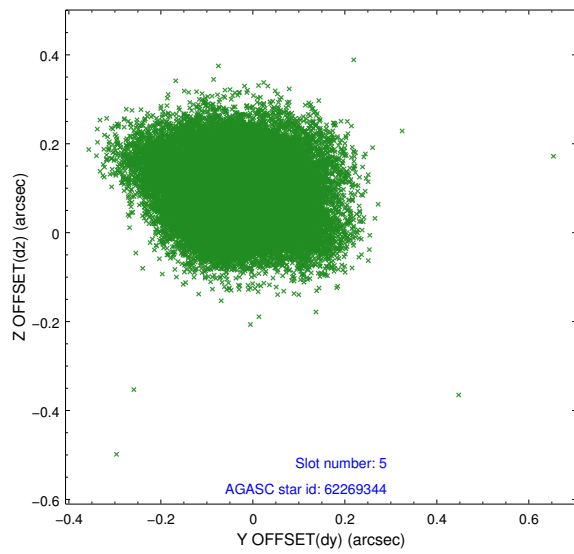
### 2.4.1 Slot 3



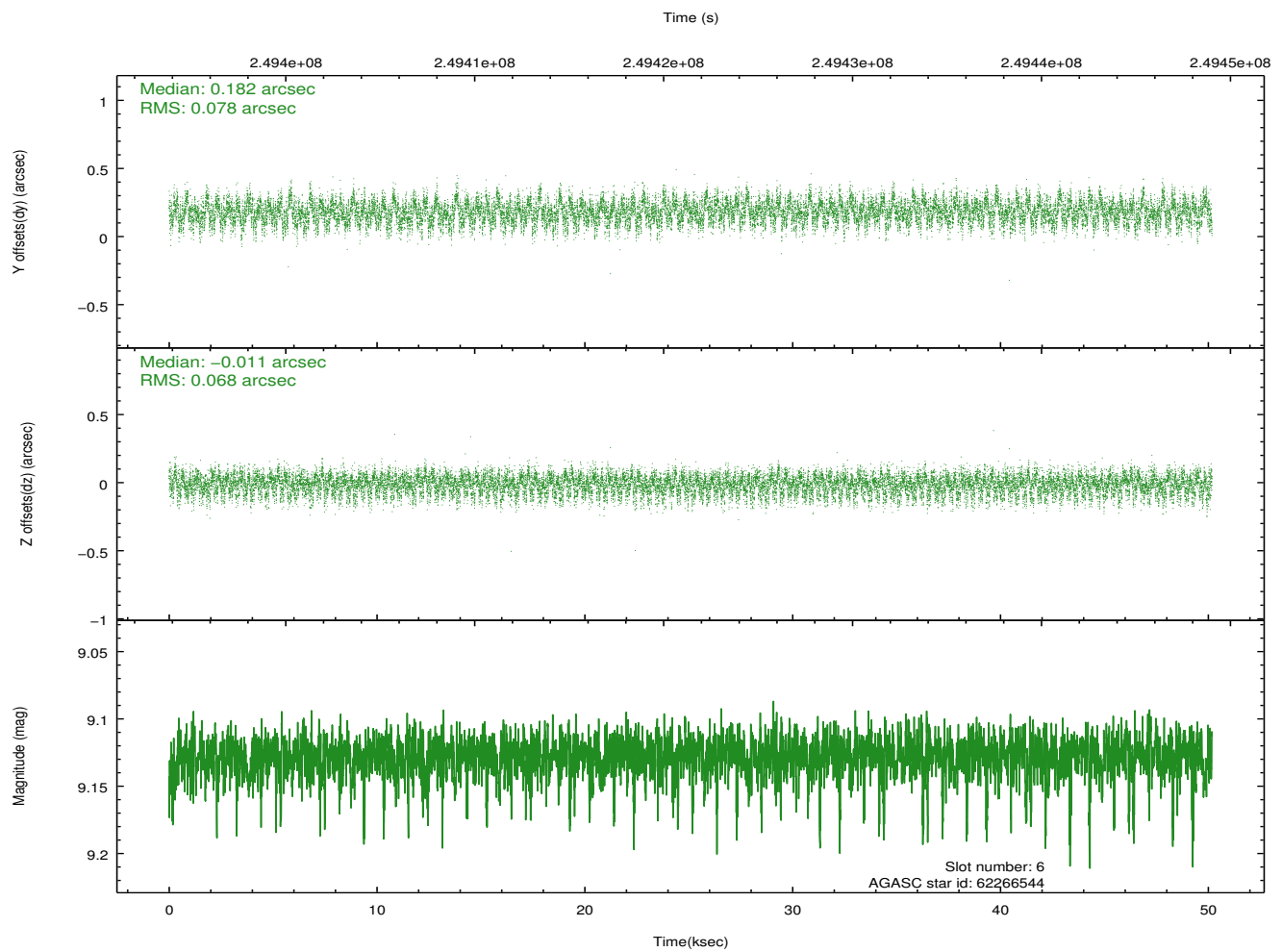
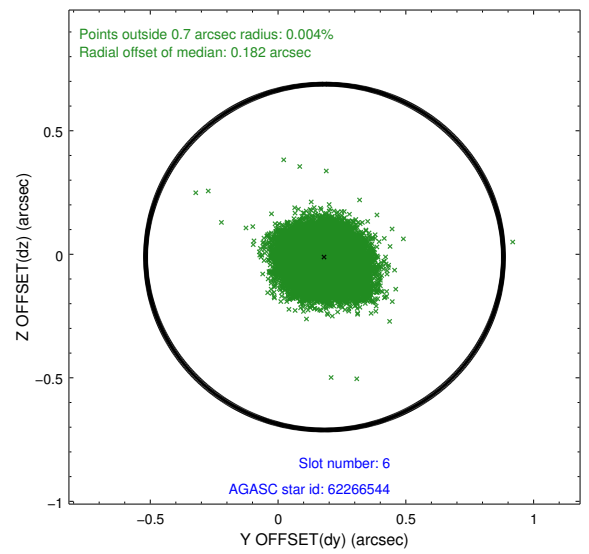
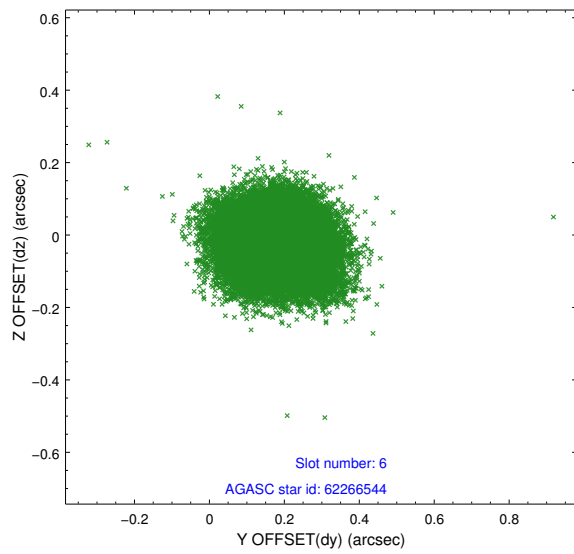
## 2.4.2 Slot 4



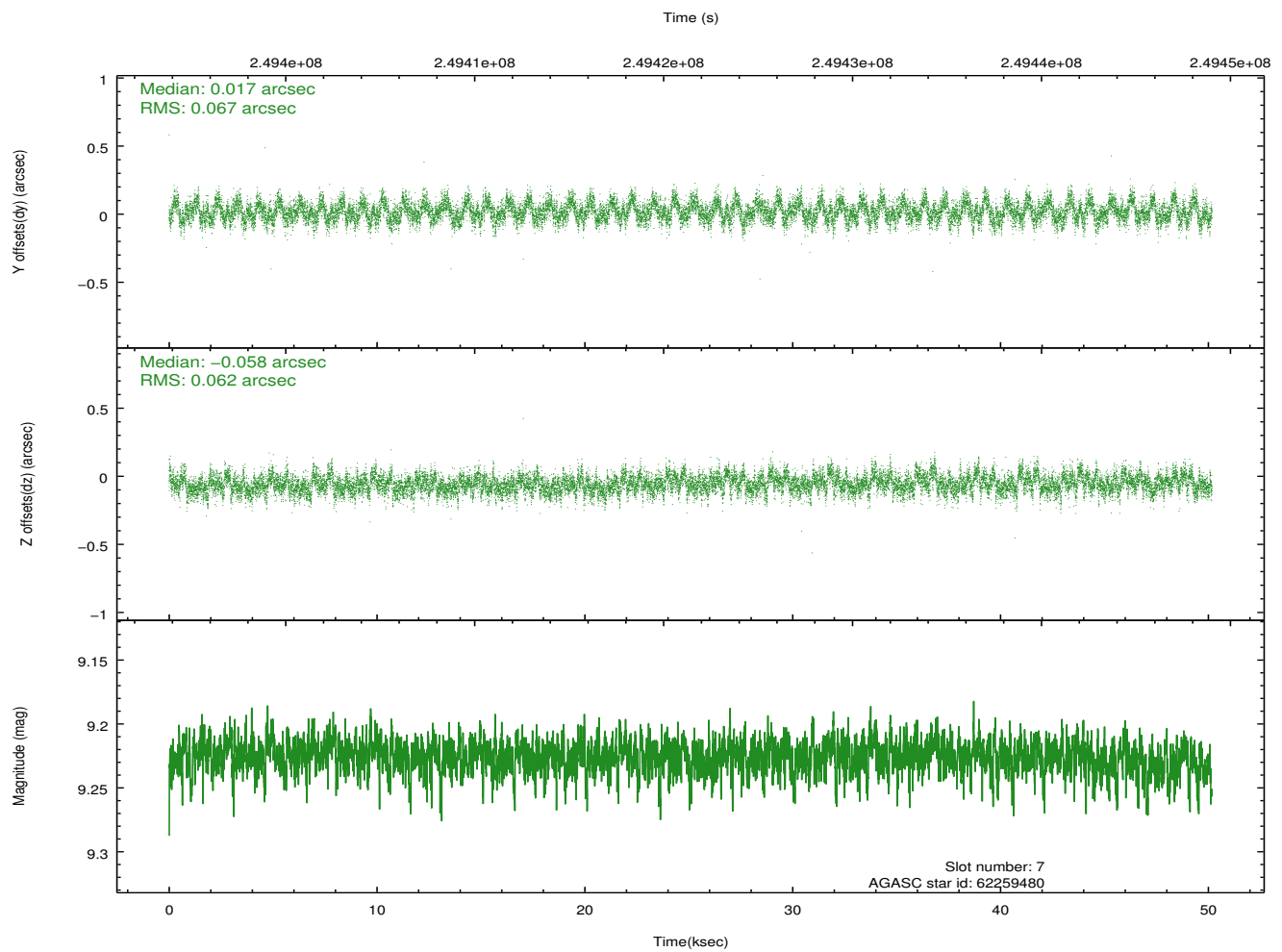
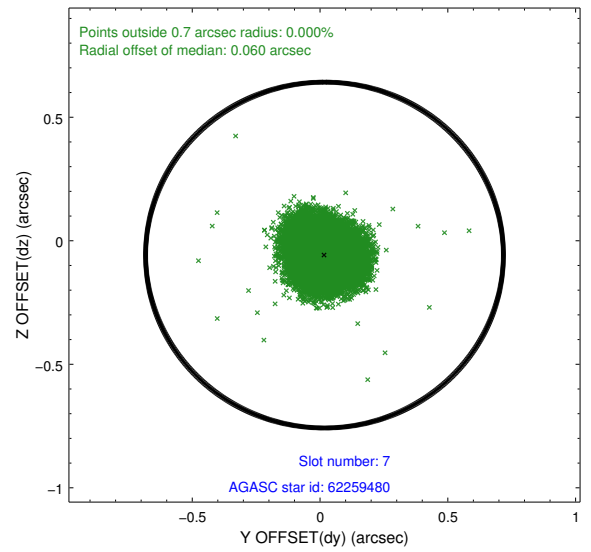
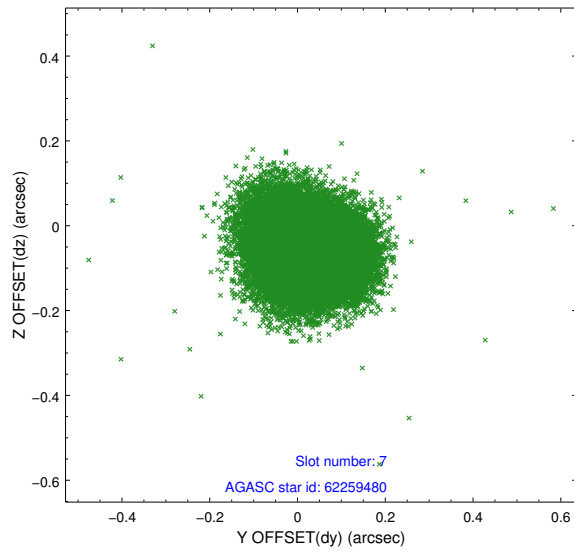
### 2.4.3 Slot 5



## 2.4.4 Slot 6

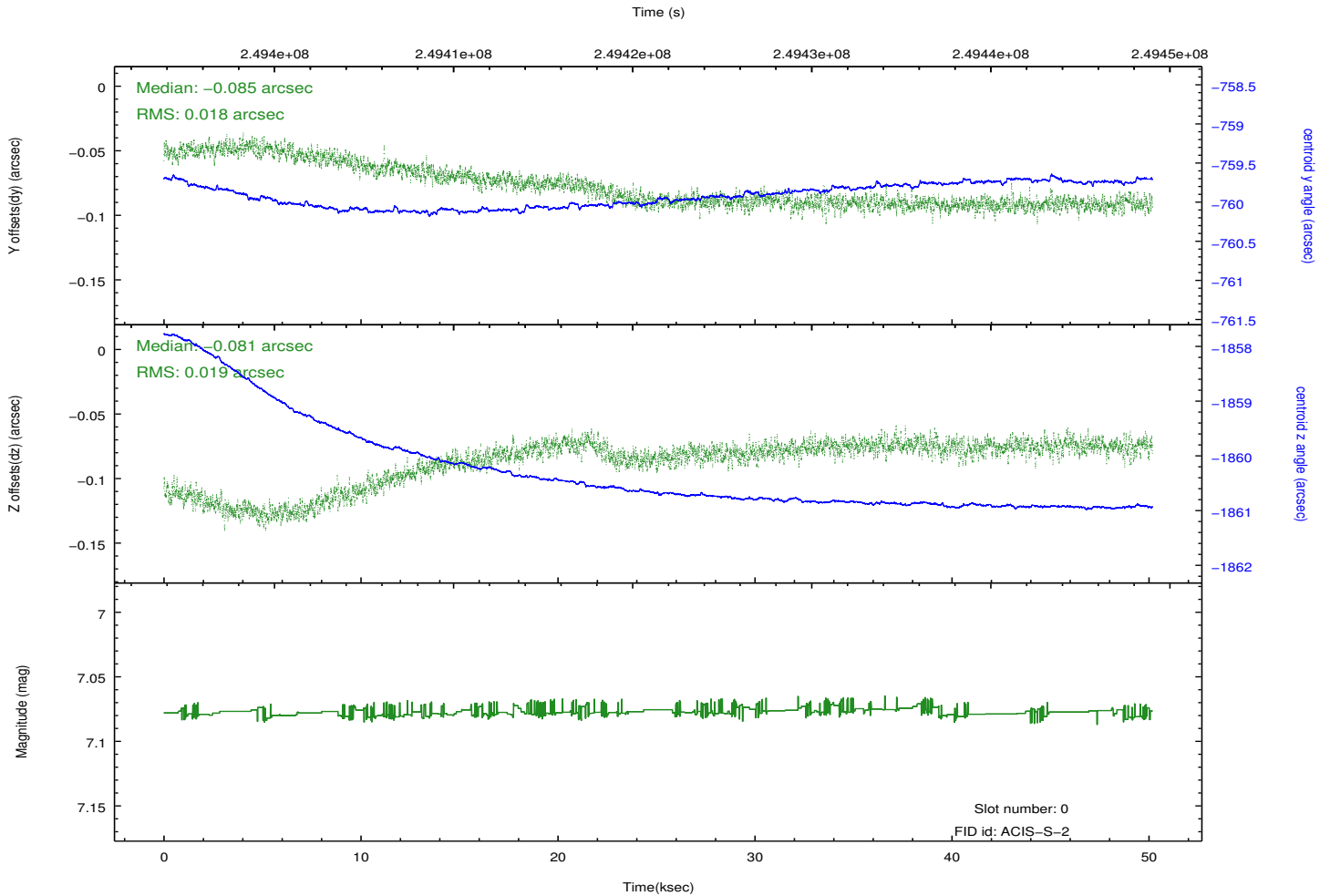
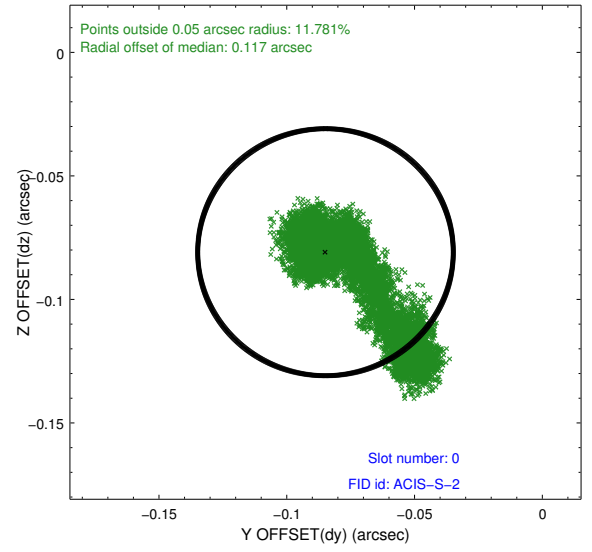
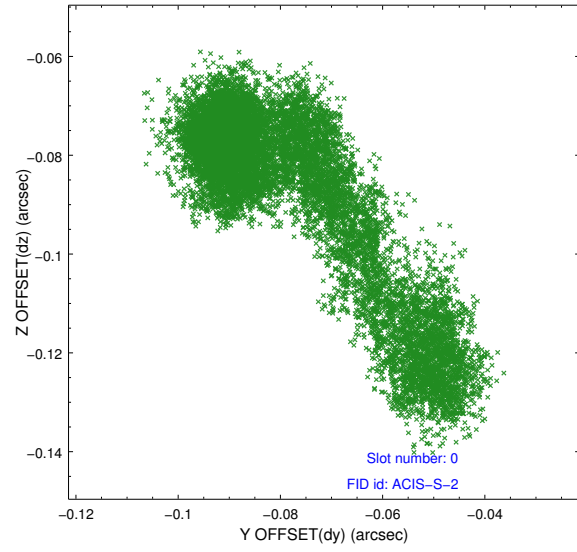


## 2.4.5 Slot 7

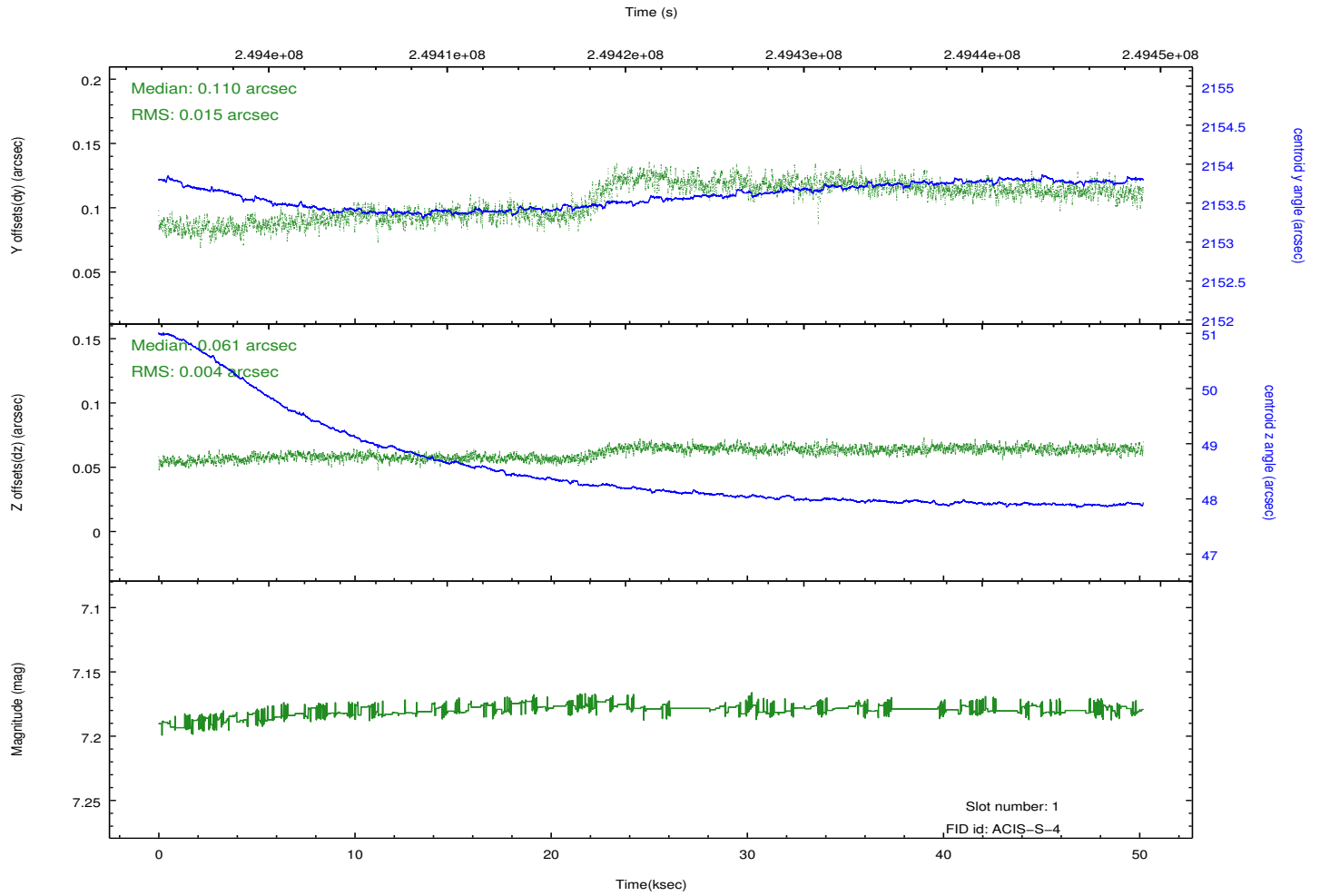
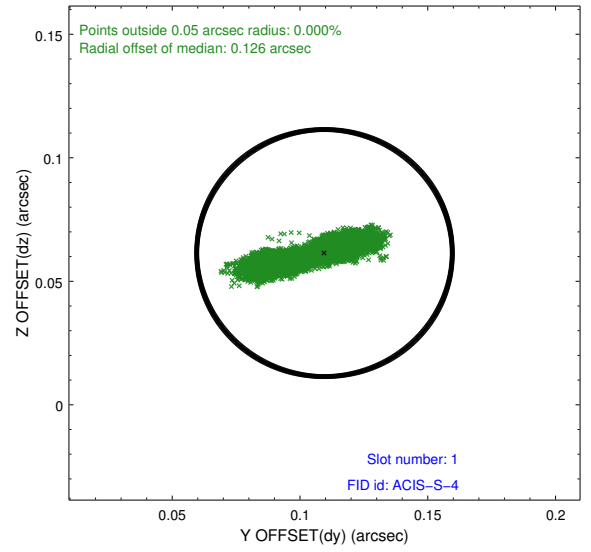
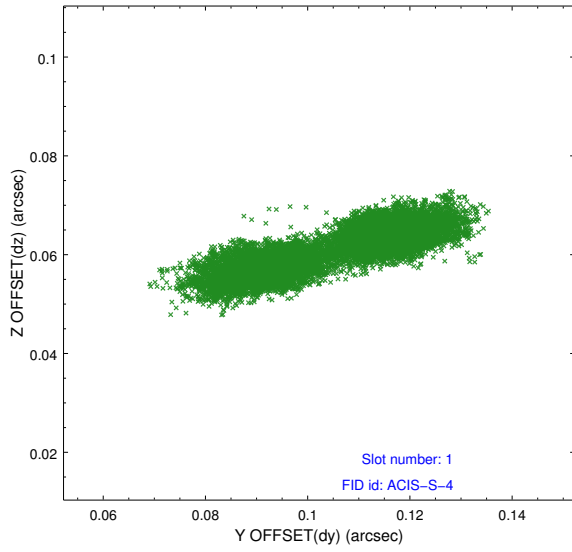


## 2.5 FID Slots

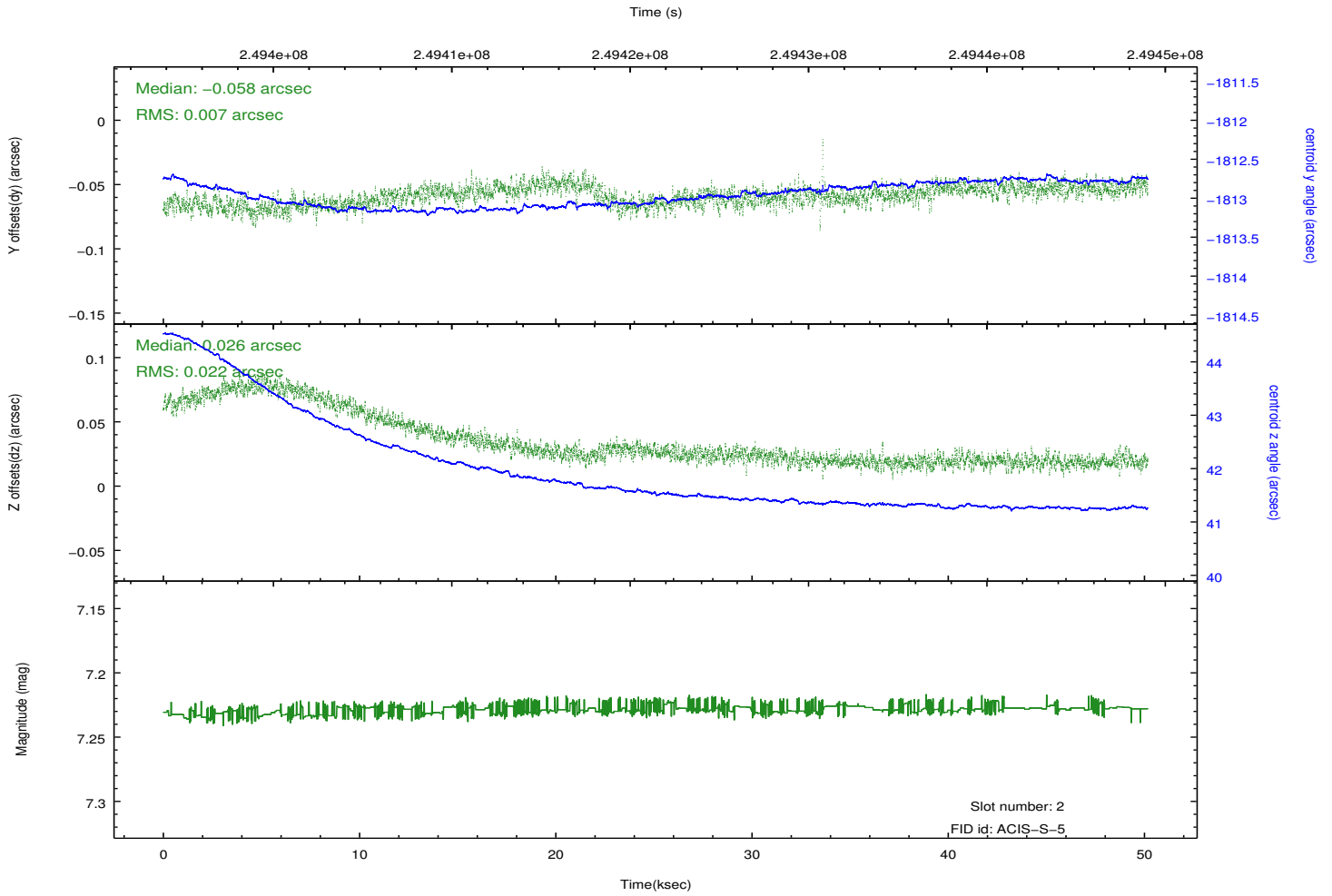
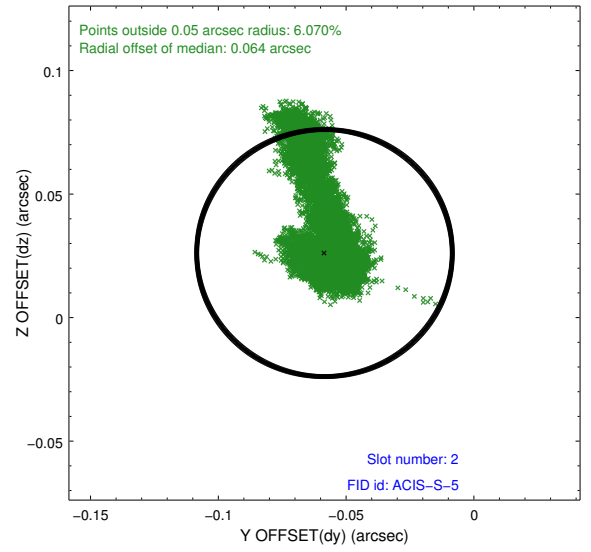
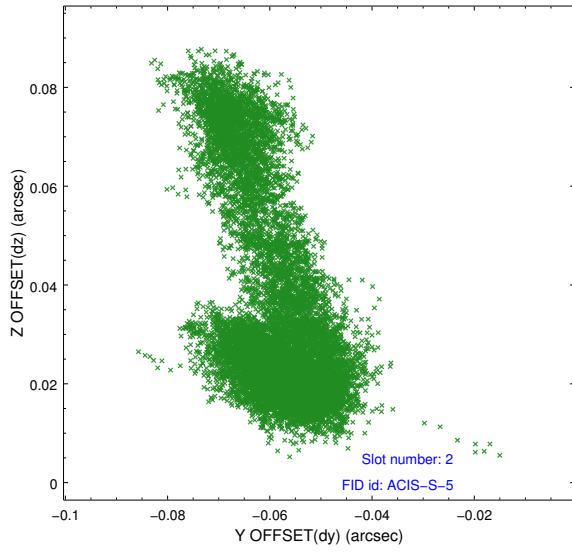
### 2.5.1 Slot 0



## 2.5.2 Slot 1

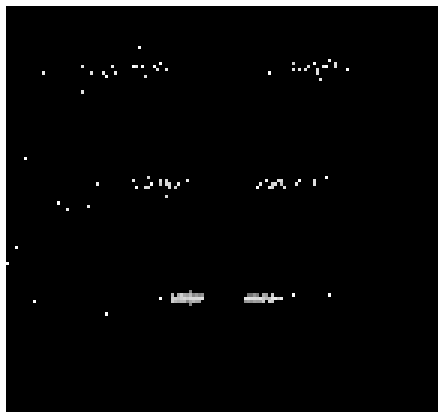


### 2.5.3 Slot 2

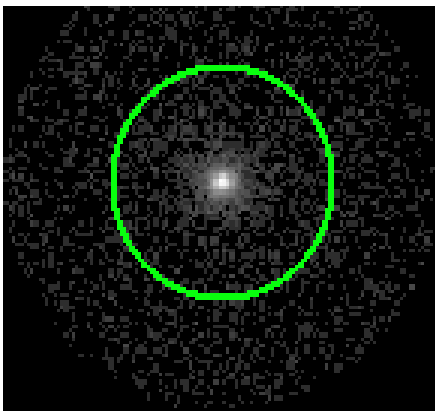


### 3 Gratings

#### 3.1 HEG Arm



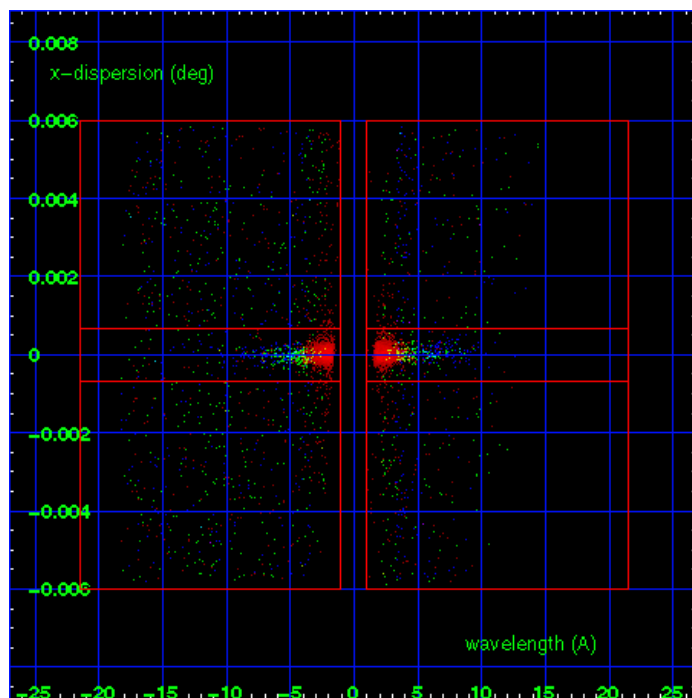
HEG Order Sort 123



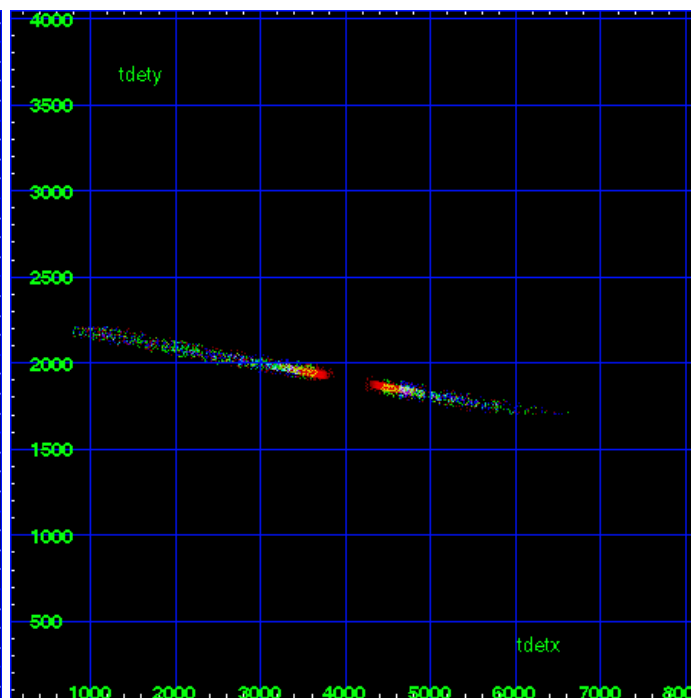
HEG Zero Order



HEG Order Sort ALL

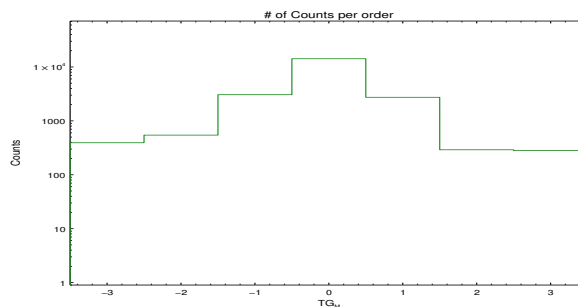


Spot Image HEG

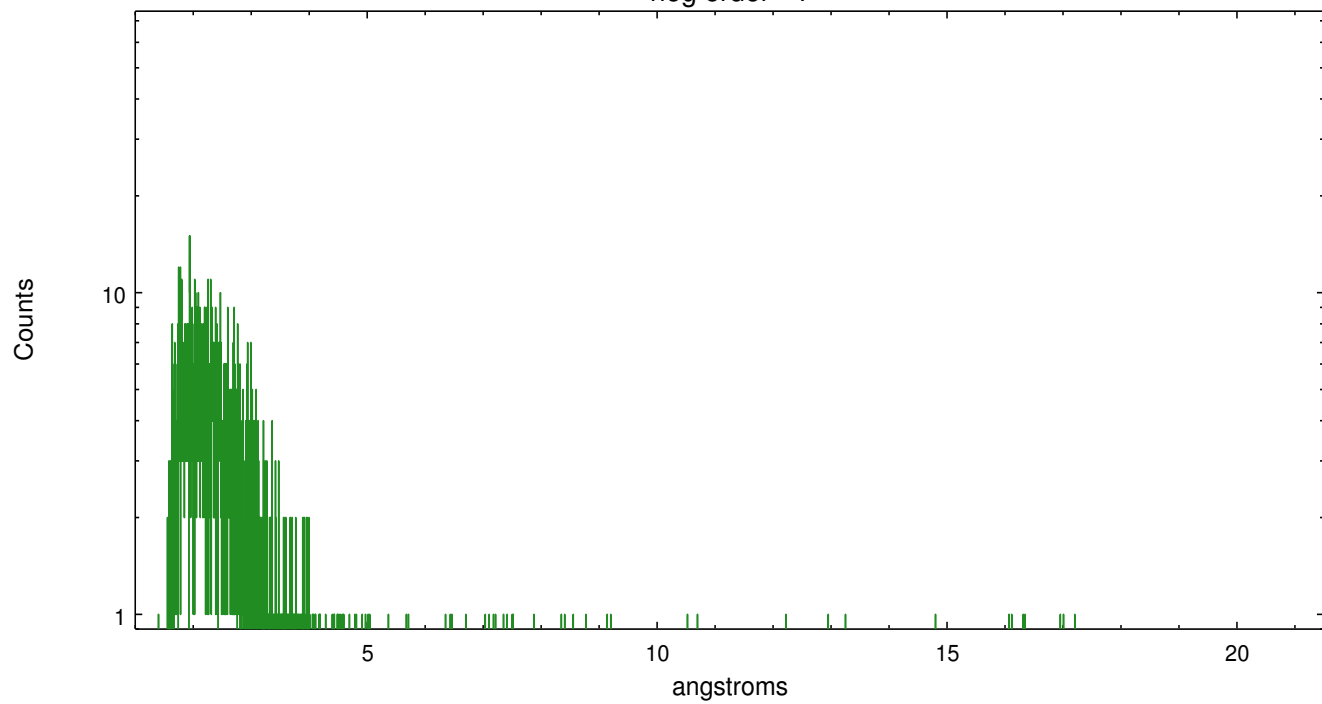


Full Detector HEG

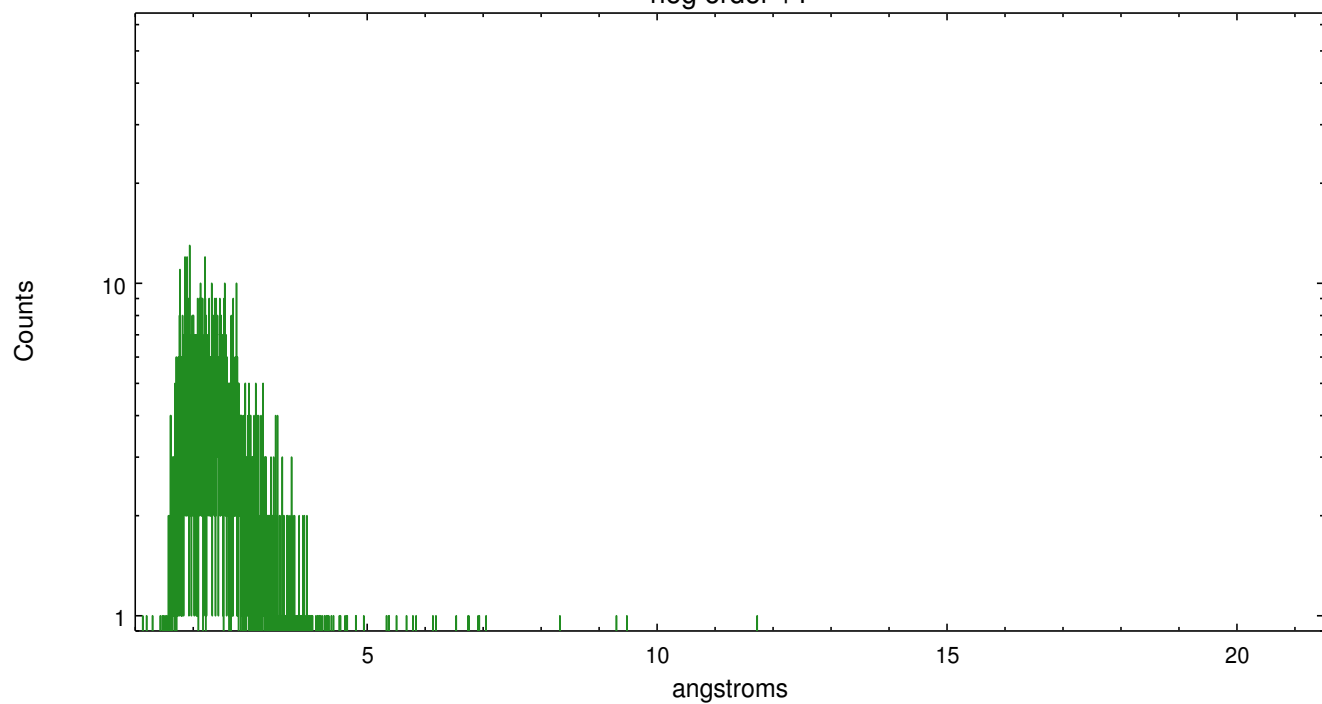
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	393	544	3061	14221	2735	291	282



heg order -1



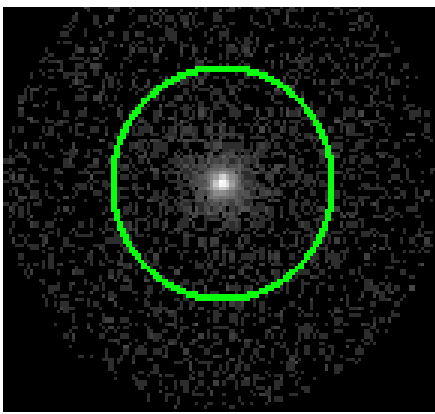
heg order +1



### 3.2 MEG Arm



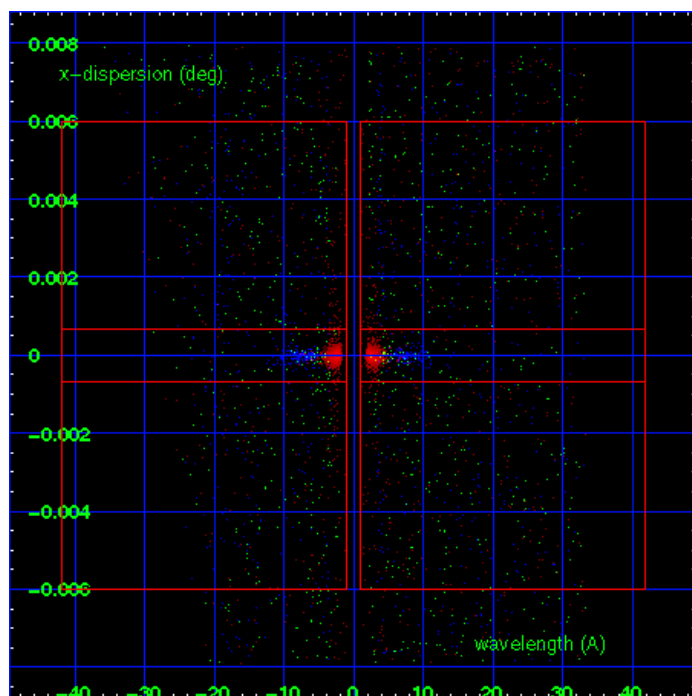
MEG Order Sort 123



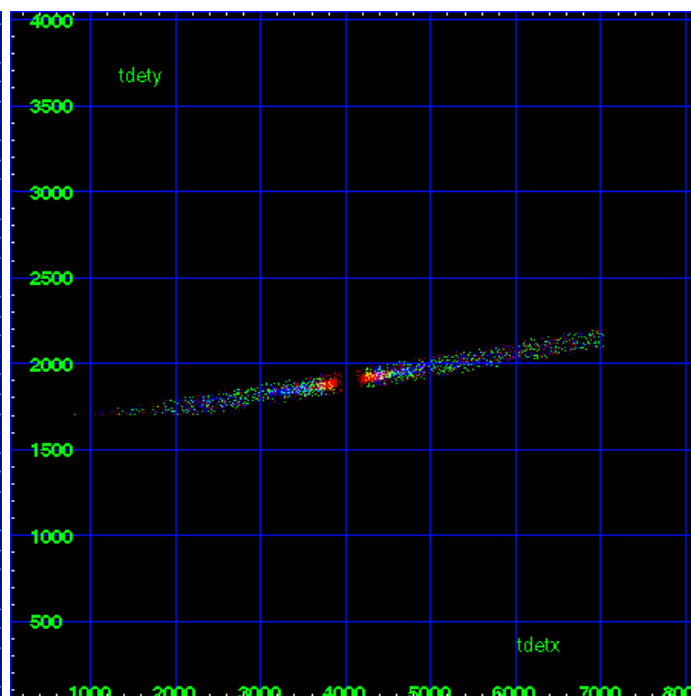
MEG Zero Order



MEG Order Sort ALL

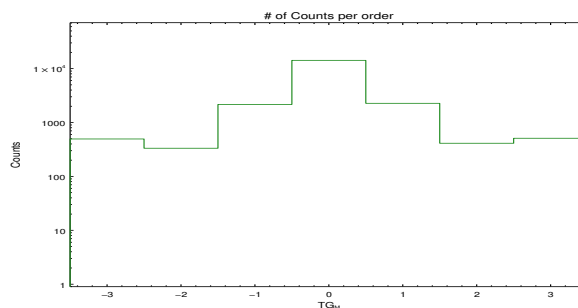


Spot Image MEG

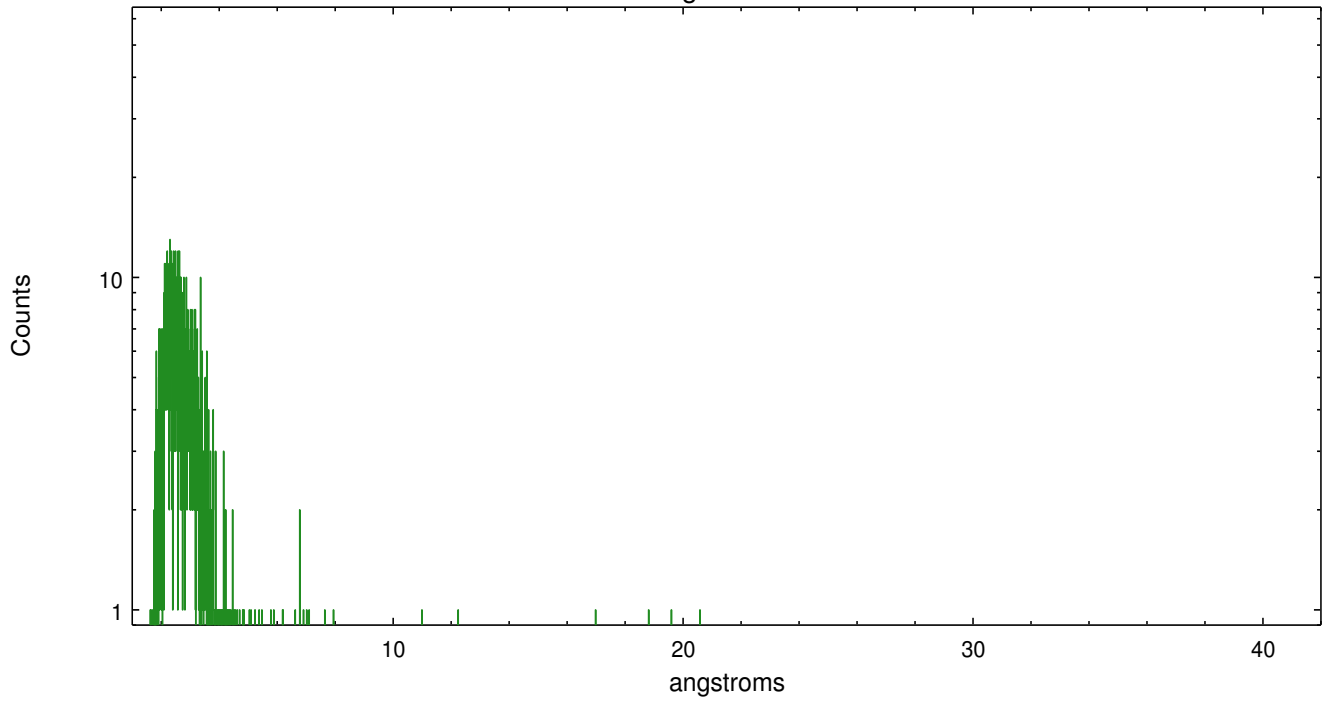


Full Detector MEG

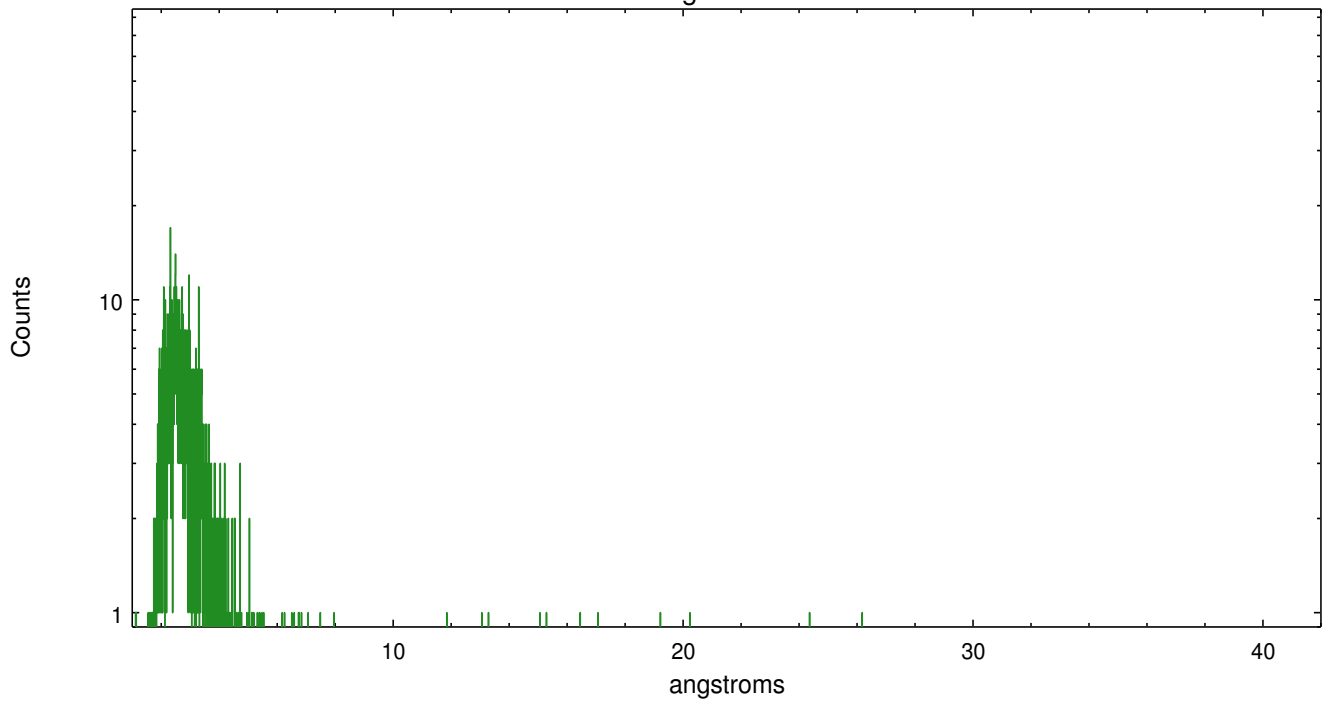
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	495	333	2164	14221	2269	412	510



meg order -1



meg order +1



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.03.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	50.18229

## A.2 Comments

Phase constraint met for all by last few ksecs of exposure.