

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 2744 - L2 Version 4  
Chandra X-Ray Center

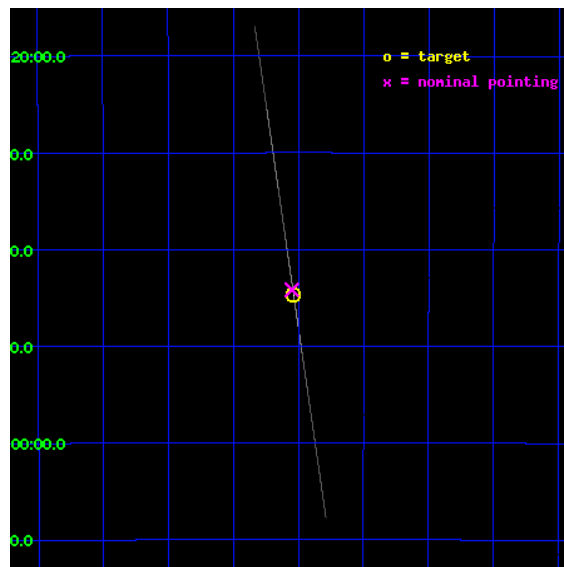
L2 Processing Date : Oct 5 2012

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# 1 Front

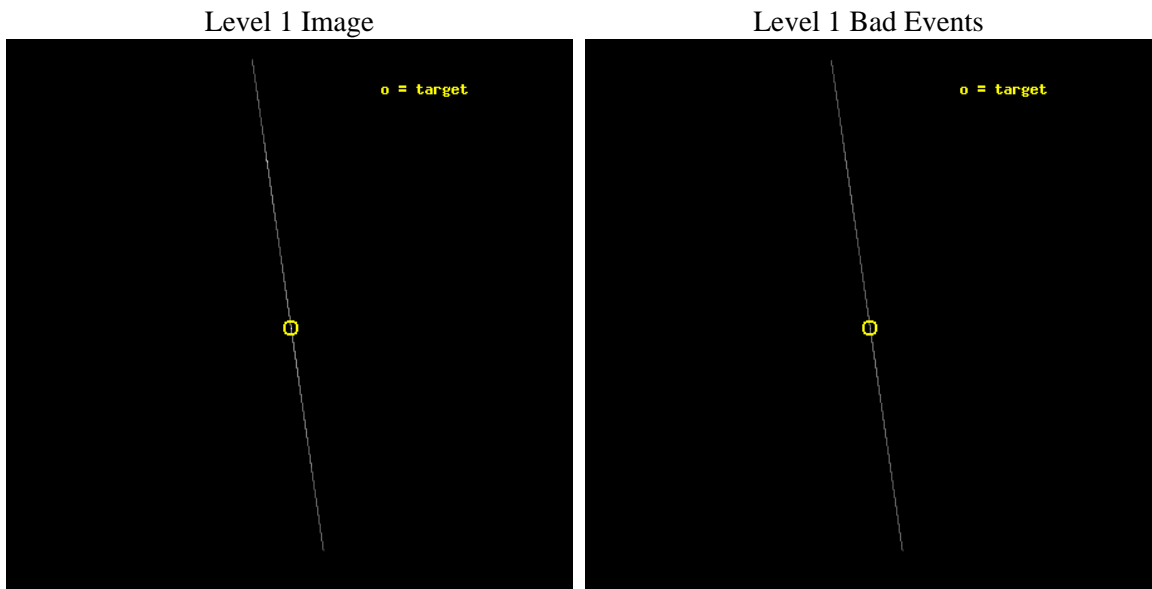
seq_num	400224	Sequence number
obs_id	2744	Observation id
title	WIND ACCRETION IN LOW-MASS X-RAY BINARIES	Proposal title
observer	Dr Duncan Galloway	Principal investigator
object	GX 1+4	Source name
ra_targ	263.009167	Observer's specified target RA [deg]
dec_targ	-24.745444	Observer's specified target Dec [deg]
ra_nom	263.01256698753	Nominal RA [deg]
dec_nom	-24.736228929378	Nominal Dec [deg]
roll_nom	81.618793129966	Nominal Roll [deg]
revision	4	Processing version of data
ontime	20336.0	Sum of GTIs [s]
livetime	20256.5625	Livetime [s]
ontime4	20336.0	Sum of GTIs [s]
ontime5	20336.0	Sum of GTIs [s]
ontime6	20336.0	Sum of GTIs [s]
ontime7	20336.0	Sum of GTIs [s]
ontime8	20336.0	Sum of GTIs [s]
ontime9	20336.0	Sum of GTIs [s]
l2events	442002	Number of level 2 events



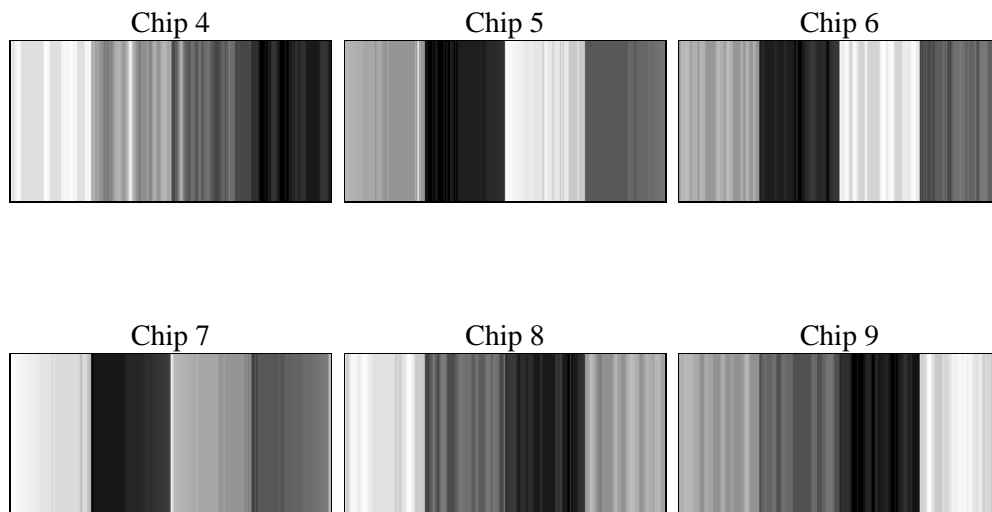
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	20336.0	Sum of GTIs [s]
caldbver	4.5.2	&#160	ontime4	20336.0	Sum of GTIs [s]
date	2012-10-05T17:28:55	Date and time of file creation	ontime5	20336.0	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	20336.0	Sum of GTIs [s]
			ontime7	20336.0	Sum of GTIs [s]
			ontime8	20336.0	Sum of GTIs [s]
			ontime9	20336.0	Sum of GTIs [s]
			l1events	586921	Number of level 1 events

### 2.1.4 Events

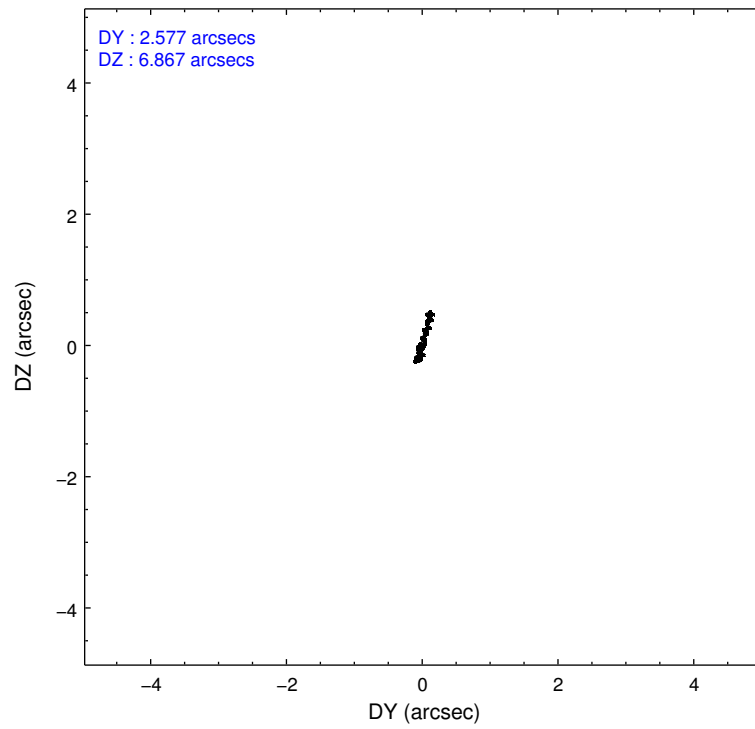
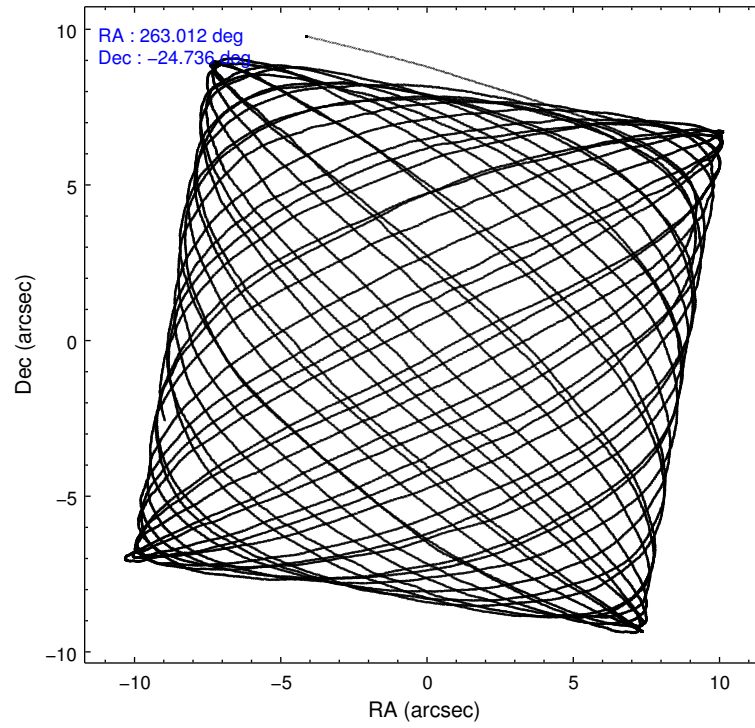
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	27922	135194	59900	270378	63302	30225
rejected events	5089	15103	6207	20195	9043	6408
rejected %	18%	11%	10%	7%	14%	21%

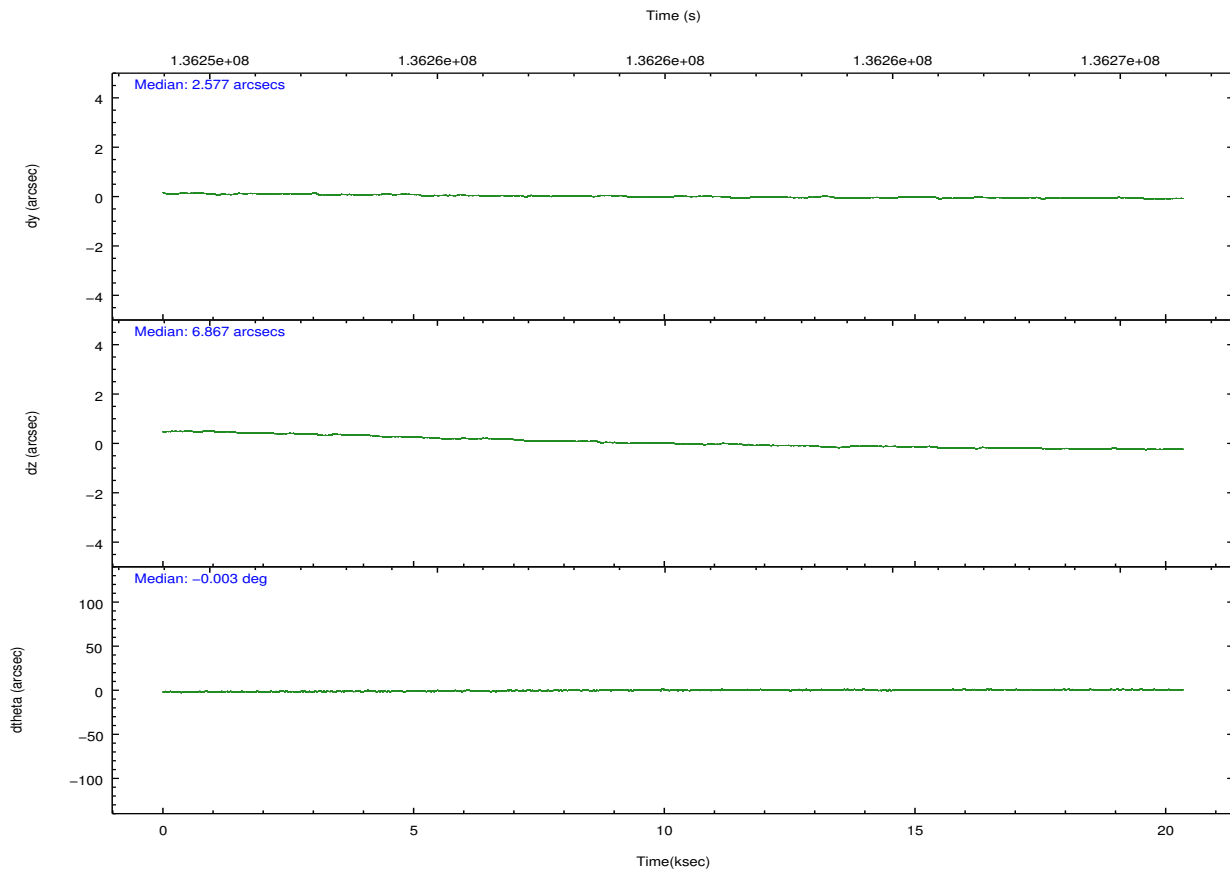
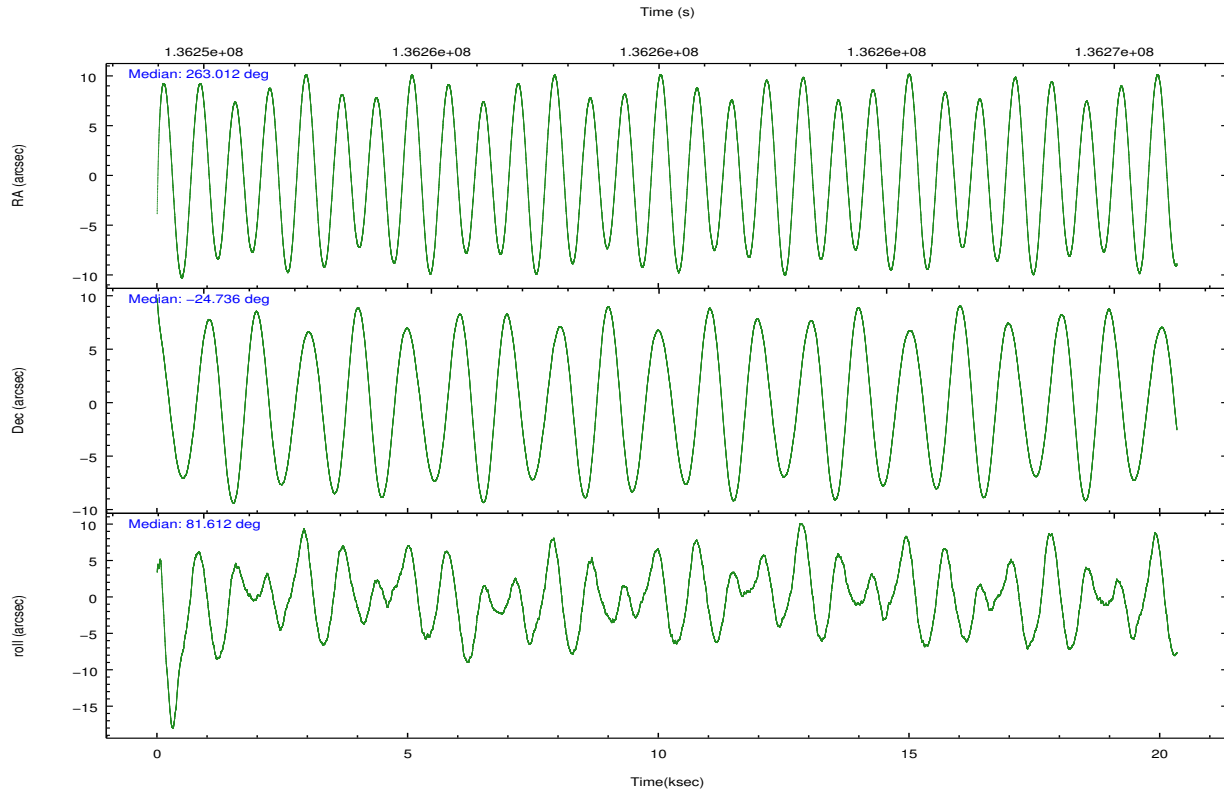
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	2727	36360	5302	45808	13009	3443
	9%	26%	8%	16%	20%	11%
grade 1 events	72	171	94	561	186	72
	0%	0%	0%	0%	0%	0%
grade 2 events	9518	33155	32937	62582	17395	9335
	34%	24%	54%	23%	27%	30%
grade 3 events	3212	2374	3067	23822	6318	2919
	11%	1%	5%	8%	9%	9%
grade 4 events	3240	2309	3140	22825	5952	3027
	11%	1%	5%	8%	9%	10%
grade 5 events	4232	11220	5197	15696	7086	5436
	15%	8%	8%	5%	11%	17%
grade 6 events	4921	49605	10163	99084	13356	5993
	17%	36%	16%	36%	21%	19%
grade 7 events	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%

## 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_FAINT	CC33_FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	263.023970	263.0125669875345	Subarray requested	NONE	NONE
[deg] Pointing Dec	-24.761452	-24.73622892937838	Alternating exposures requested	N	N
[deg] Pointing Roll	81.466935	81.61879312996567	[s] Primary exposure time	0.000000	0
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-184.272523	-184.2691398207293			
[mm] SIM translation stage offset	-5.86	-5.863382762278519			
[s] Observation start time (MET)	136250345.184000	136249298.41692			
Observation start date	2002-04-26T23:18:01	2002-04-26T23:01:38			
[s] Observation end time (MET)	136270345.184000	136270978.1928			
Observation end date	2002-04-27T04:51:21	2002-04-27T05:02:58			
Read mode	CONTINUOUS	CONTINUOUS			

## 2.3 Aspect



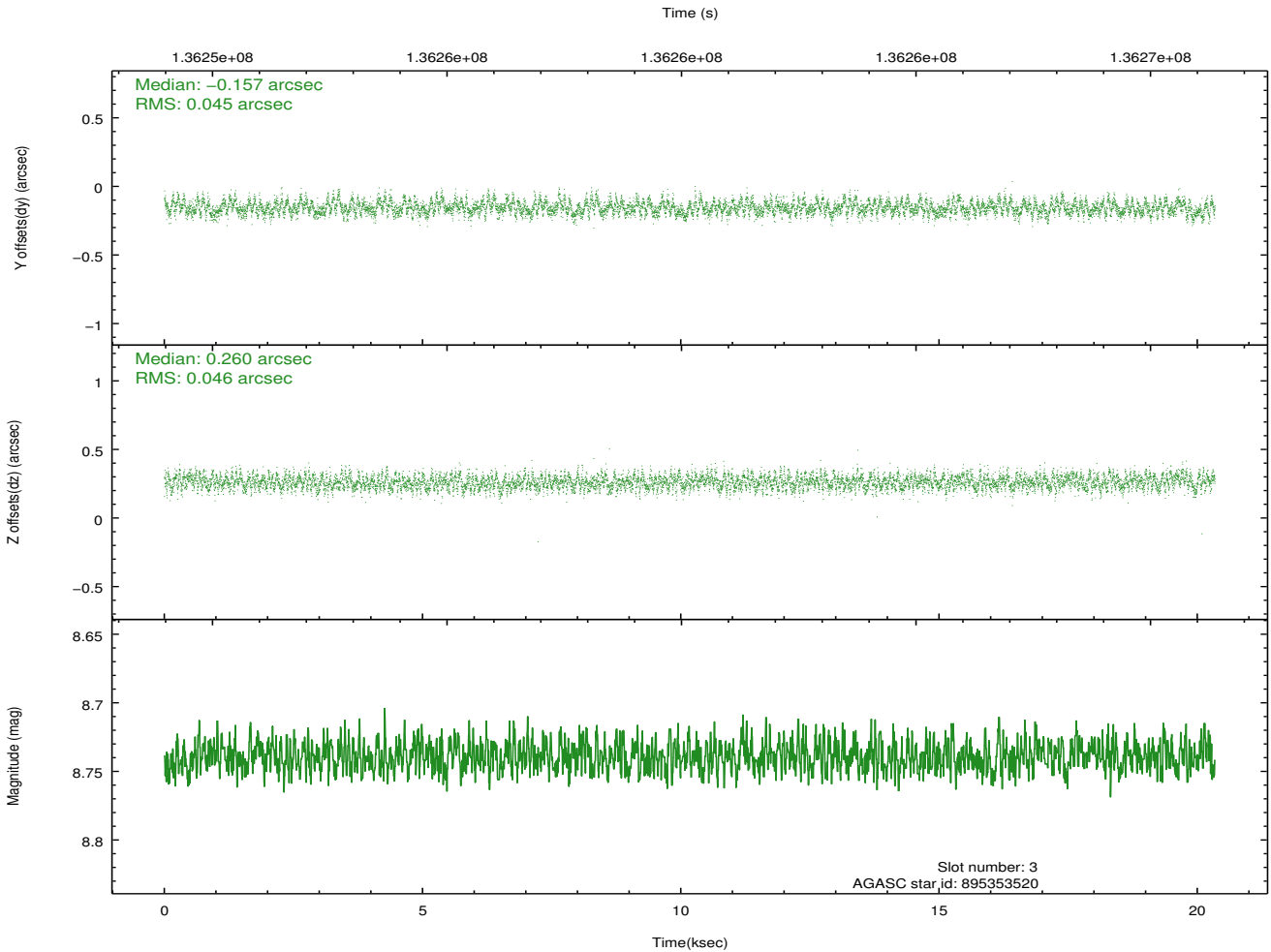
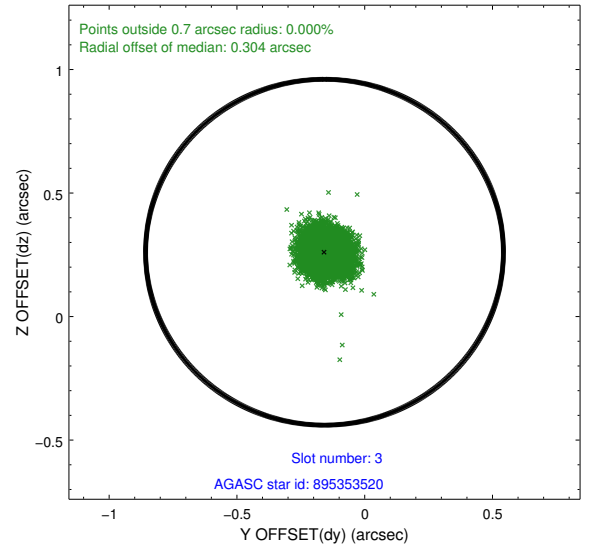
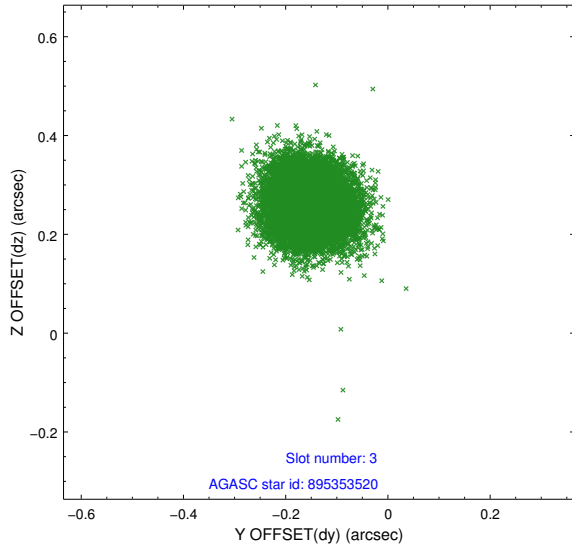


### Slot Statistics

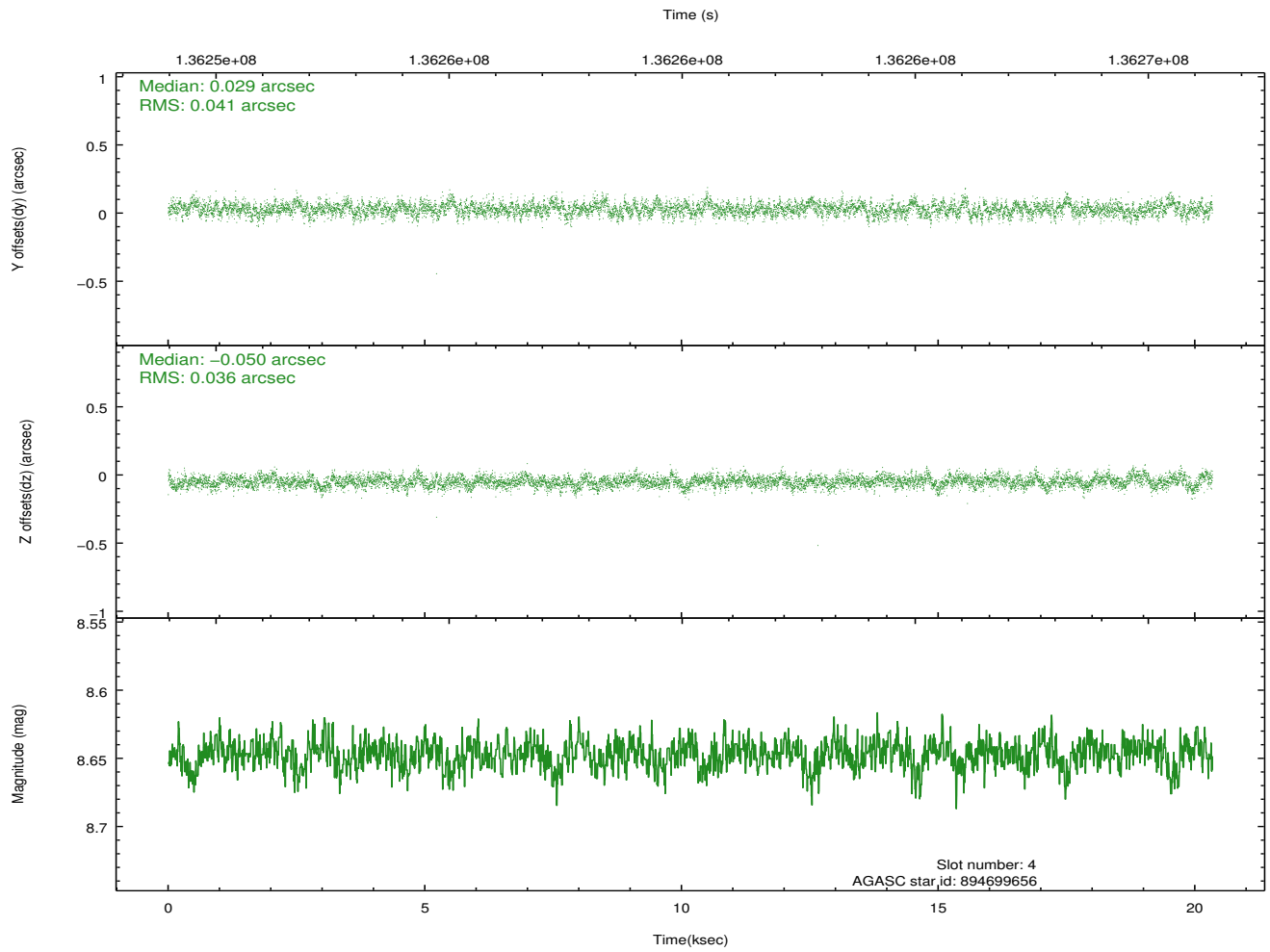
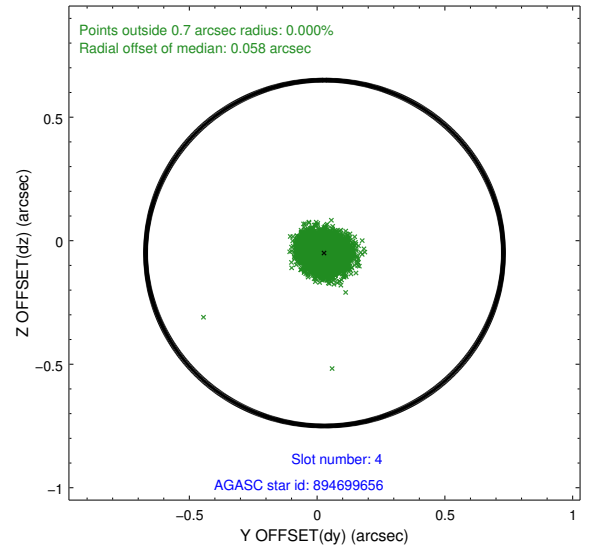
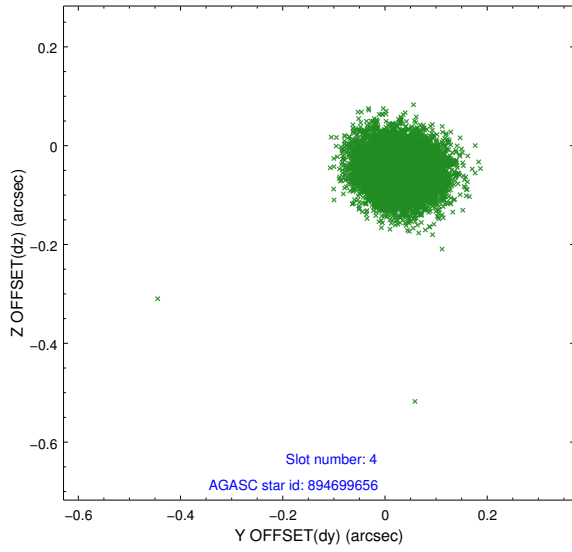
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	4961	-0.037	-0.119	0.007	0.011	0.000000	0.000000	-754.87	-1849.05
1	FID	ACIS-S-4	7.19	4961	-0.021	0.049	0.006	0.010	0.000000	0.000000	2158.37	59.33
2	FID	ACIS-S-5	7.23	4961	0.026	0.078	0.006	0.011	0.000000	0.000000	-1807.39	53.30
3	GUIDE	895353520	8.74	9920	-0.157	0.260	0.069	0.107	263.803092	-24.654210	753.75	-2465.14
4	GUIDE	894699656	8.65	9921	0.029	-0.050	0.058	0.095	263.251476	-24.323201	1670.98	-504.94
5	GUIDE	894699080	9.46	9920	-0.099	-0.167	0.082	0.133	262.542072	-24.037504	2340.10	1952.50
6	GUIDE	894700152	9.46	9920	-0.013	0.063	0.087	0.143	263.301771	-24.142954	2337.46	-572.54
7	GUIDE	895223264	9.68	9901	0.241	-0.101	0.096	0.158	263.266819	-25.047627	-900.76	-937.36

## 2.4 Star Slots

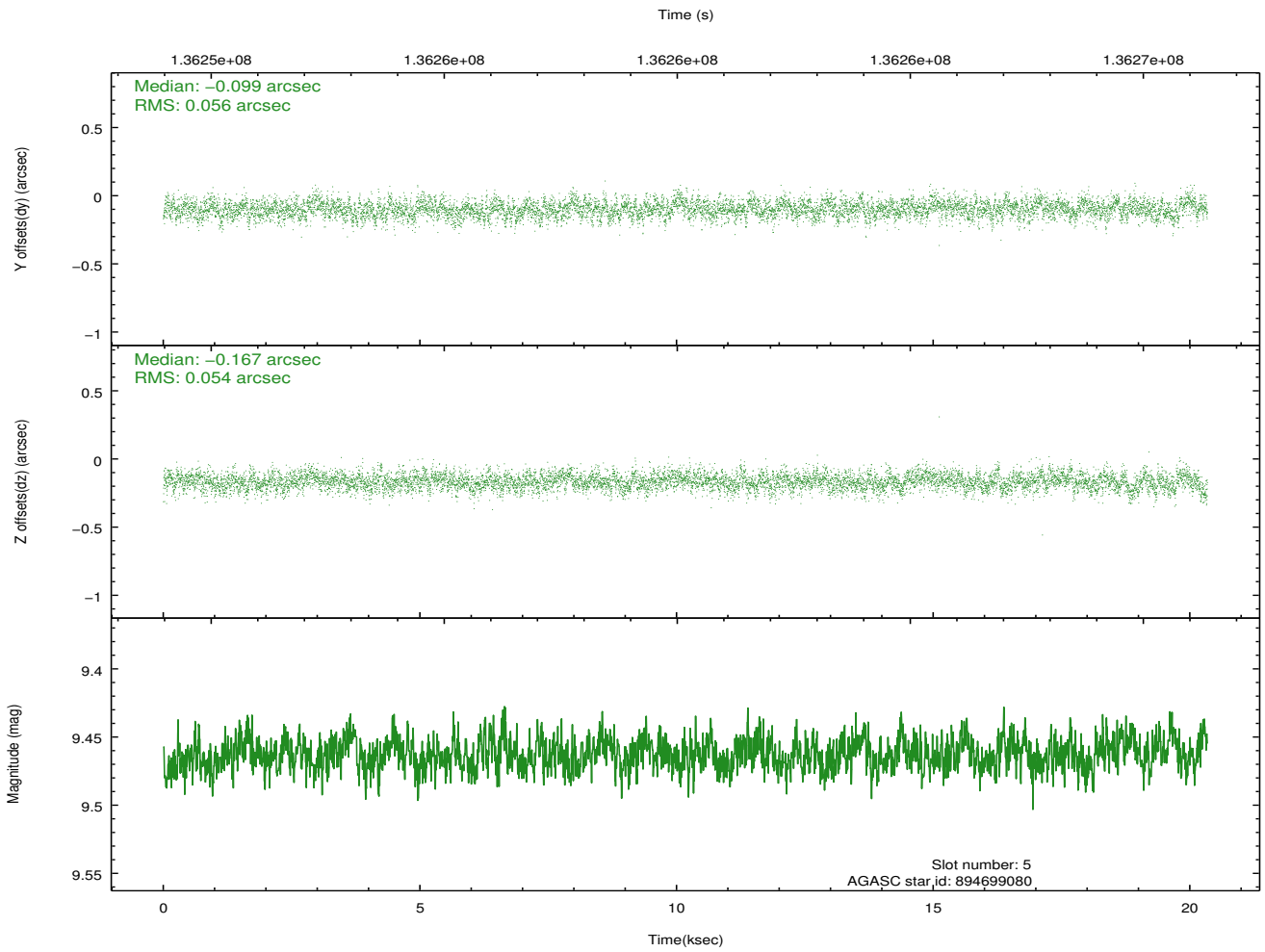
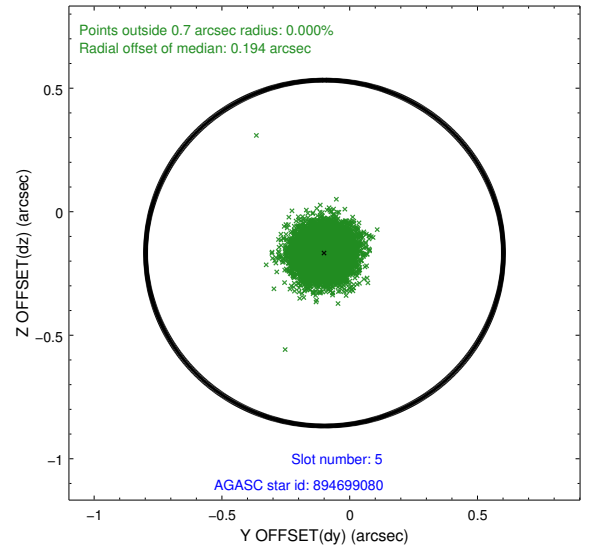
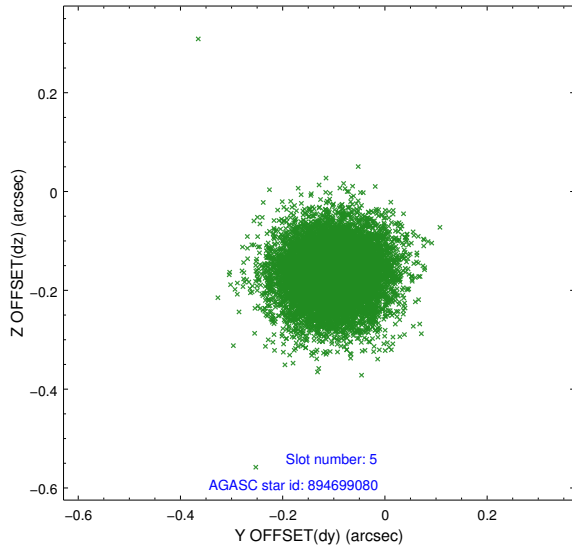
### 2.4.1 Slot 3



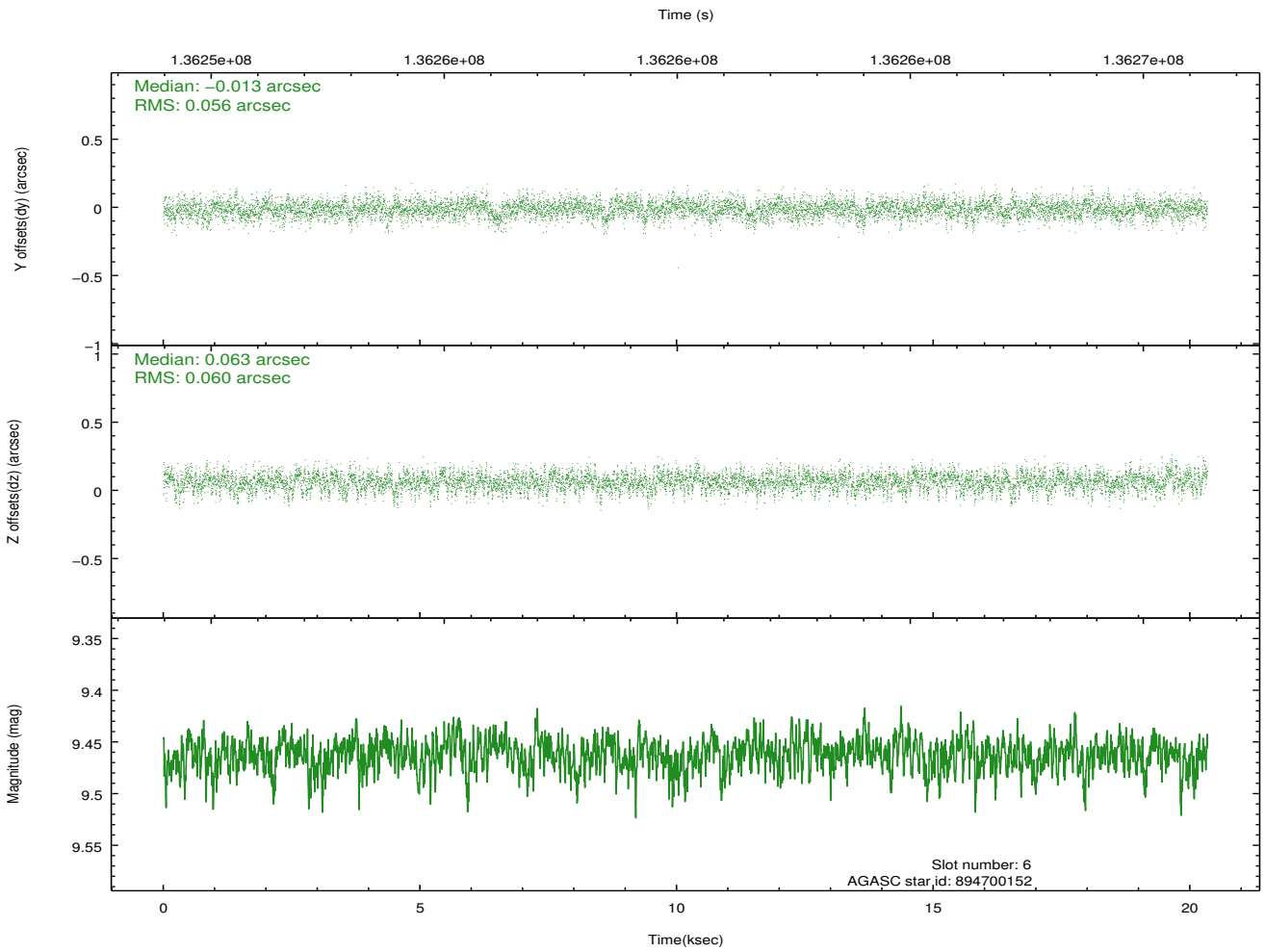
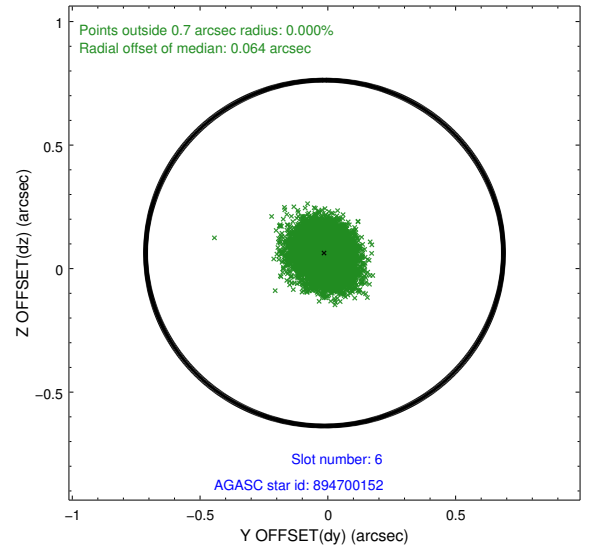
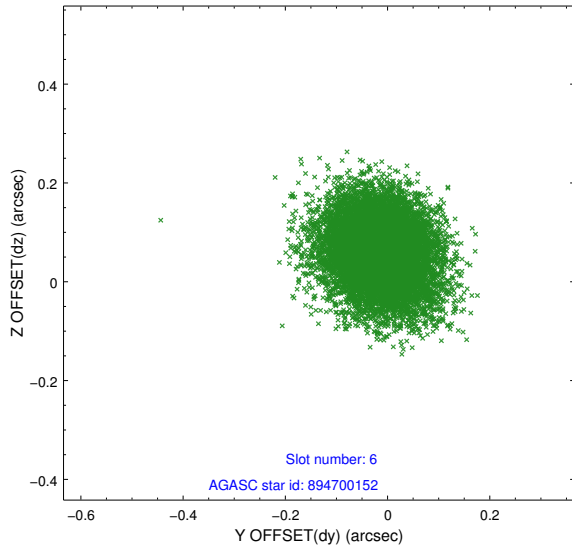
### 2.4.2 Slot 4



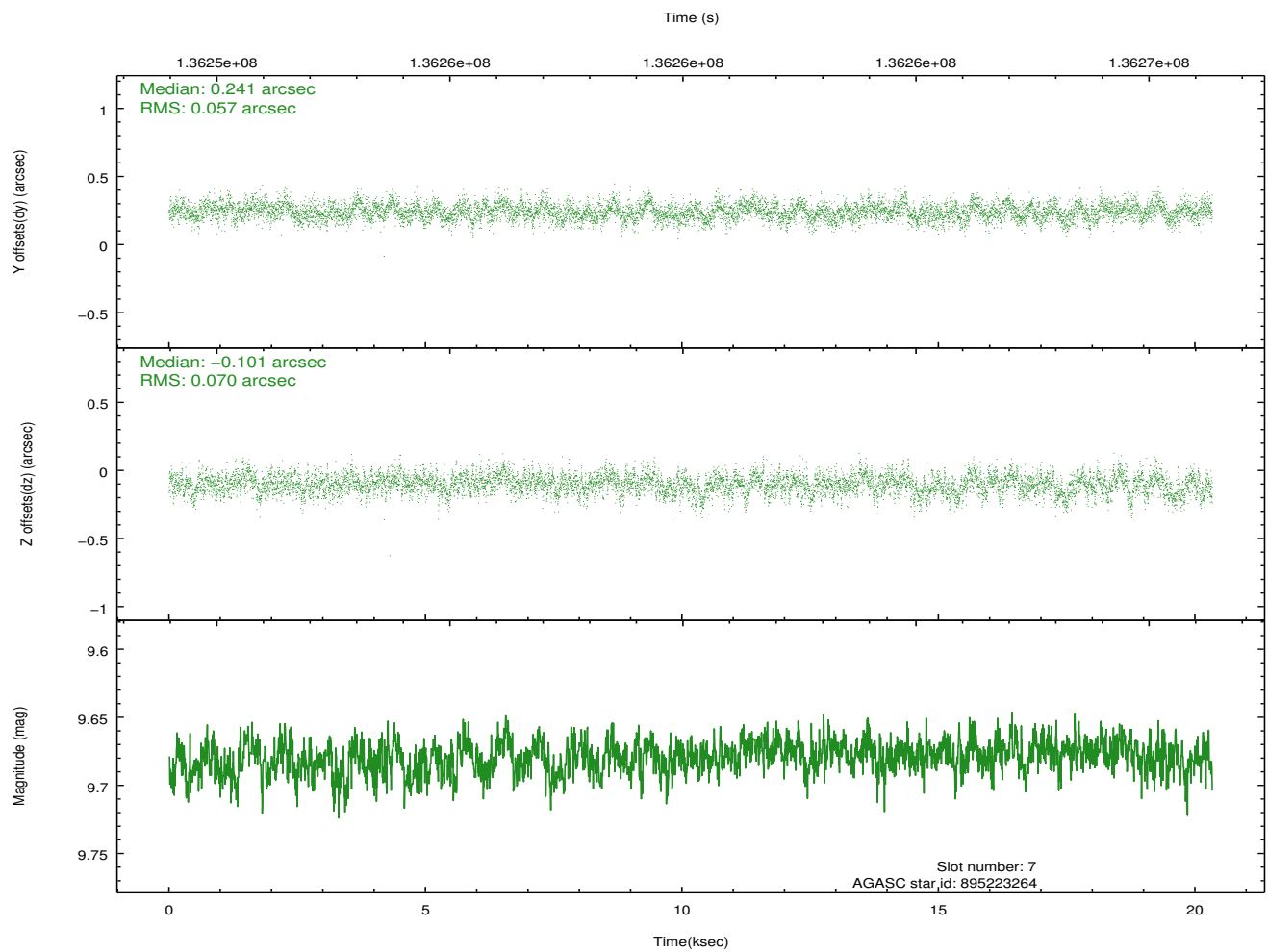
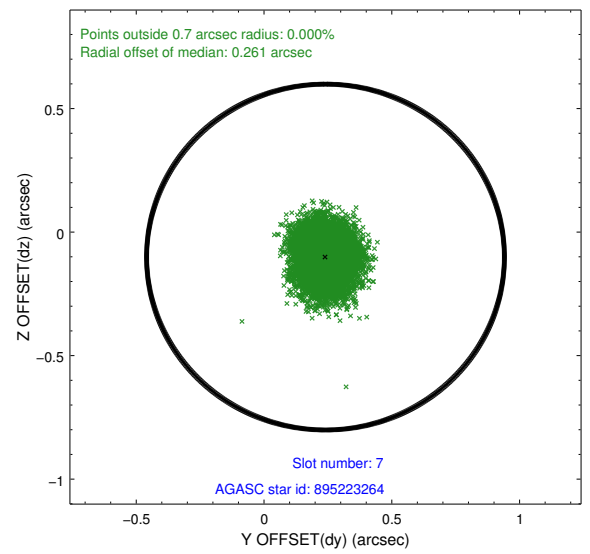
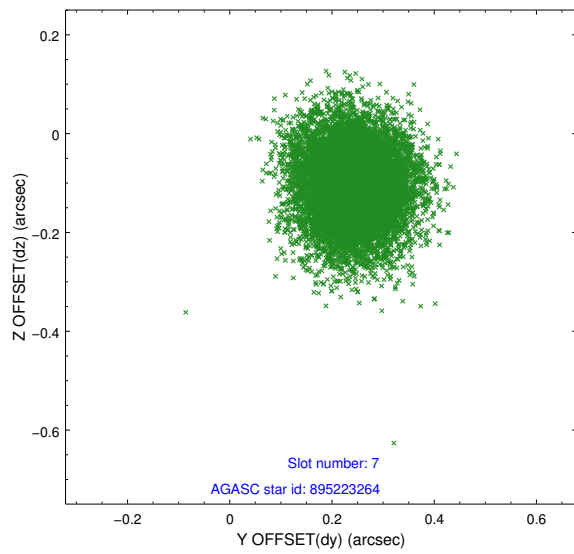
### 2.4.3 Slot 5



### 2.4.4 Slot 6

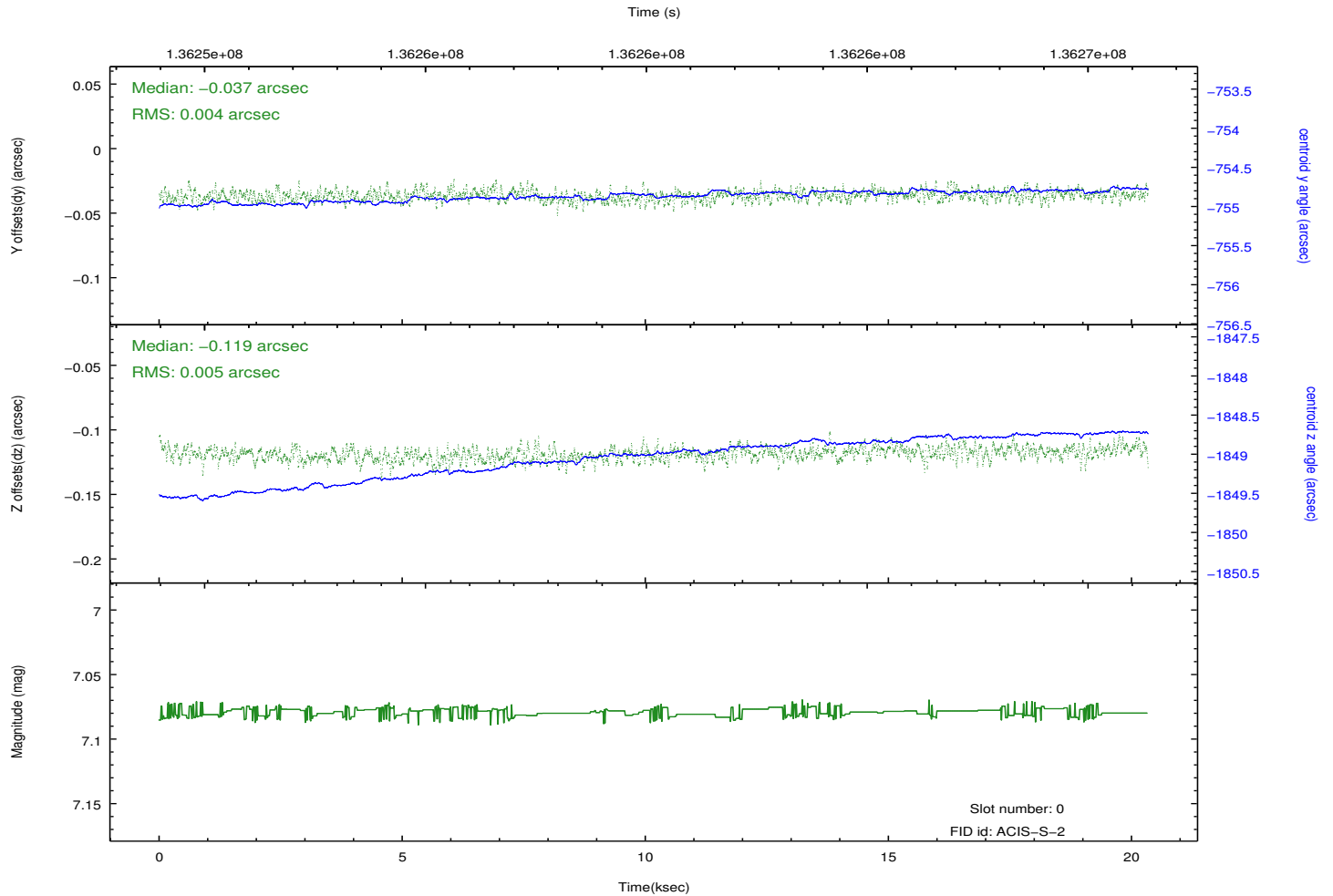
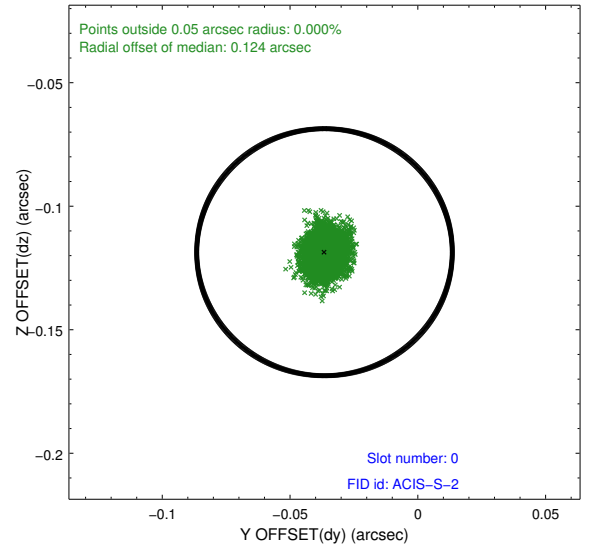
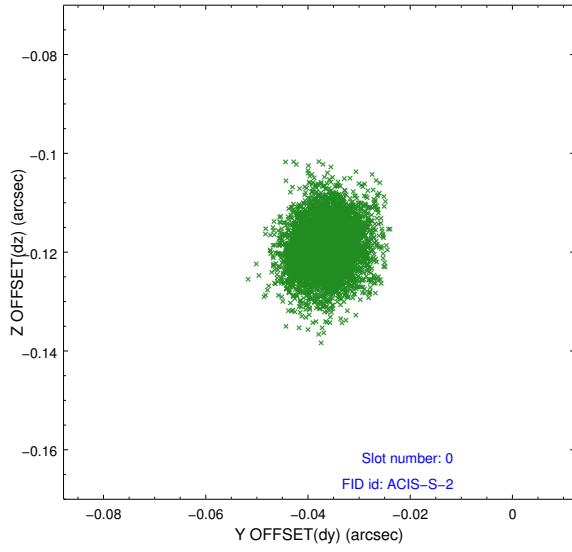


## 2.4.5 Slot 7

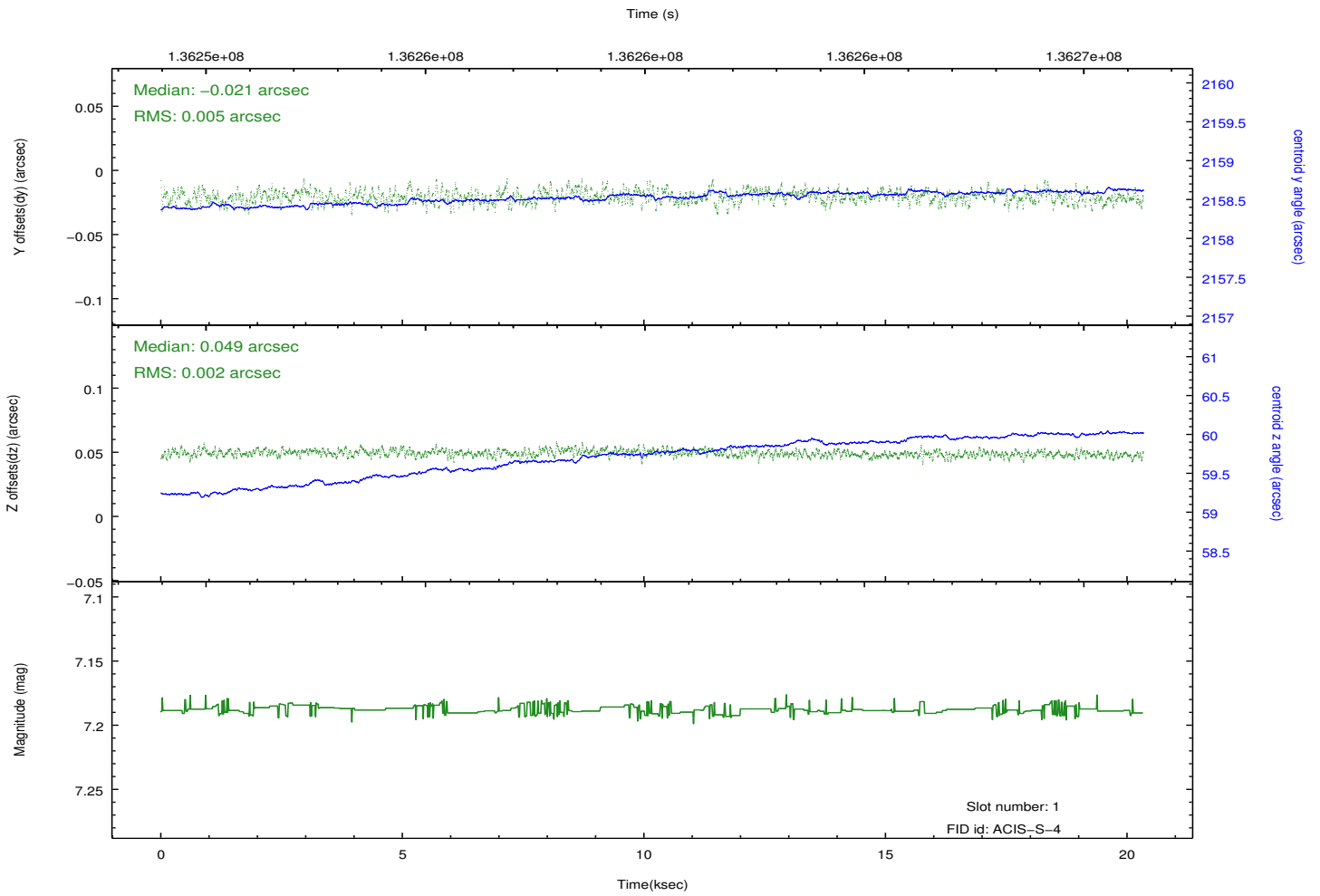
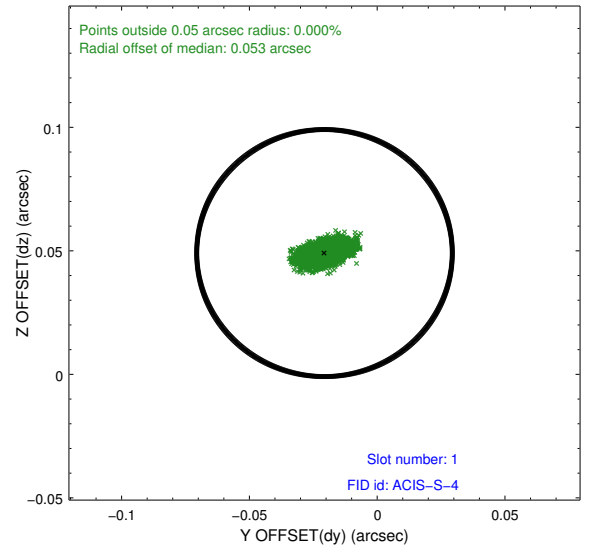
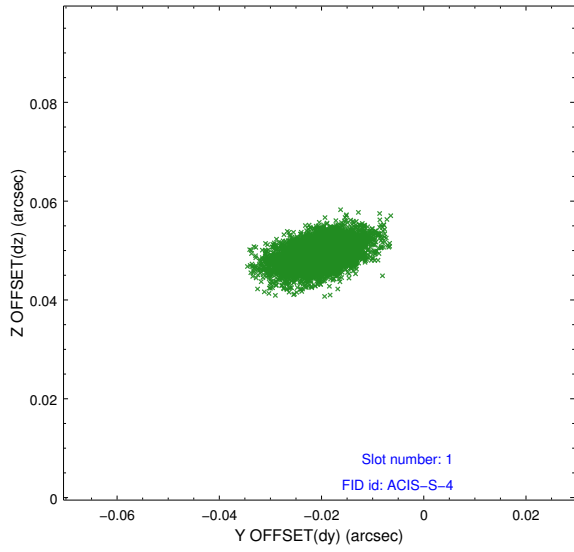


## 2.5 FID Slots

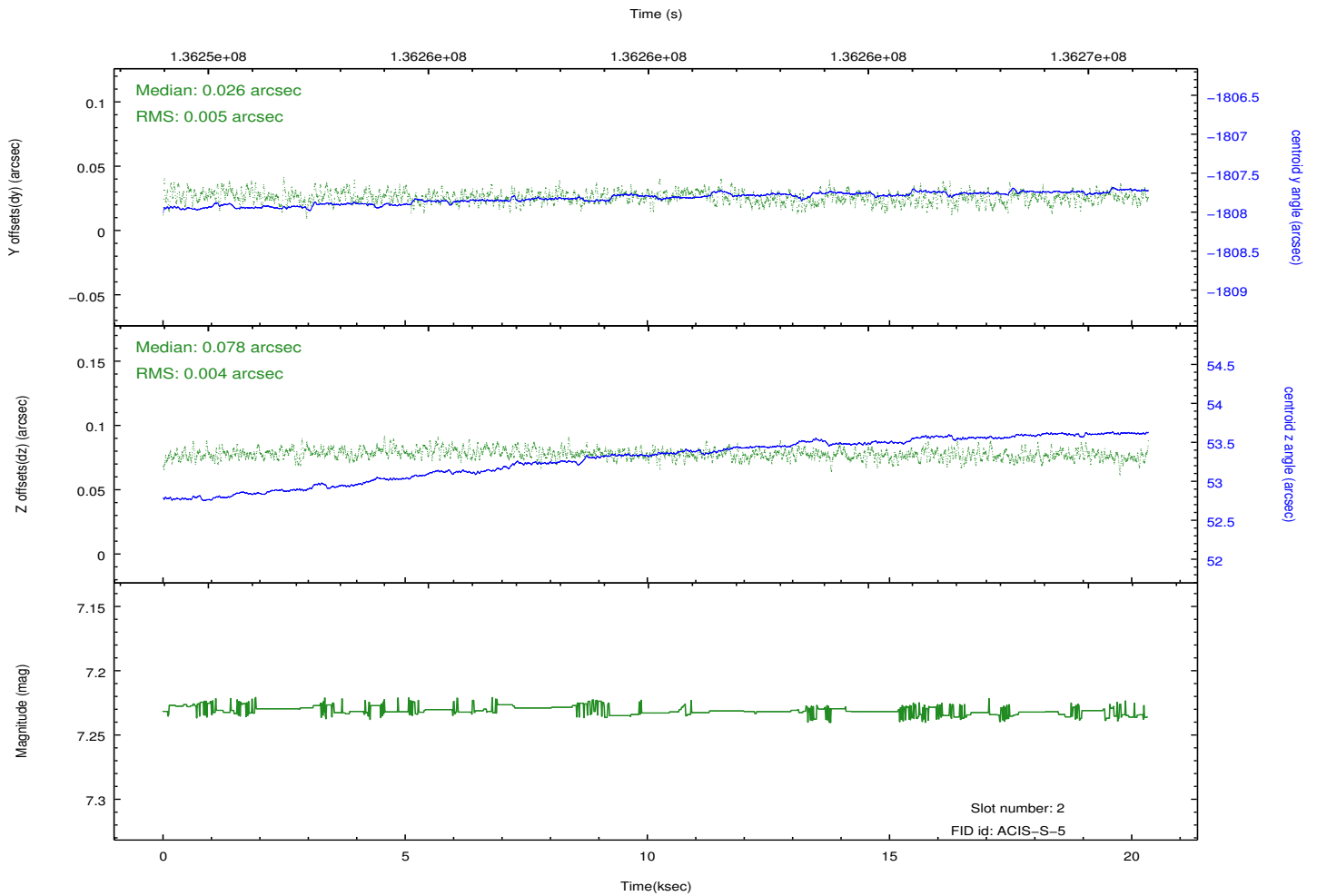
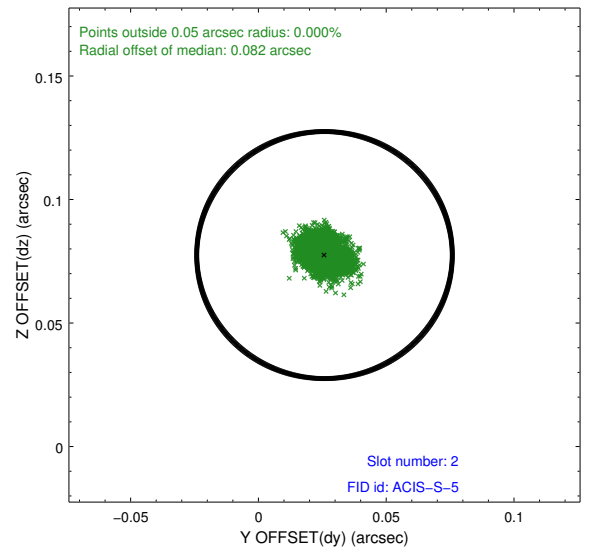
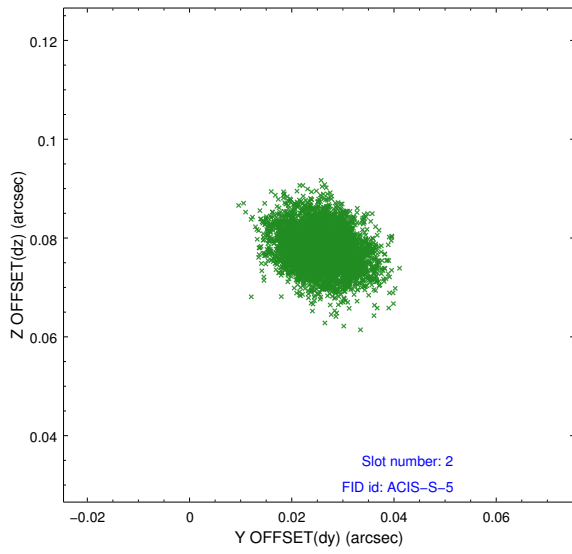
### 2.5.1 Slot 0



## 2.5.2 Slot 1

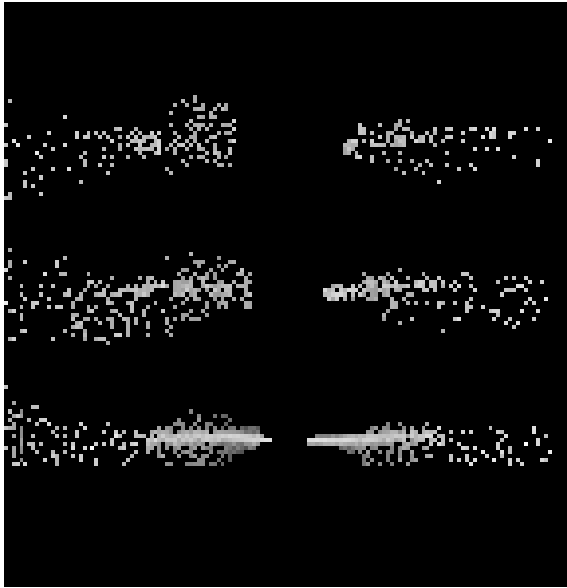


### 2.5.3 Slot 2

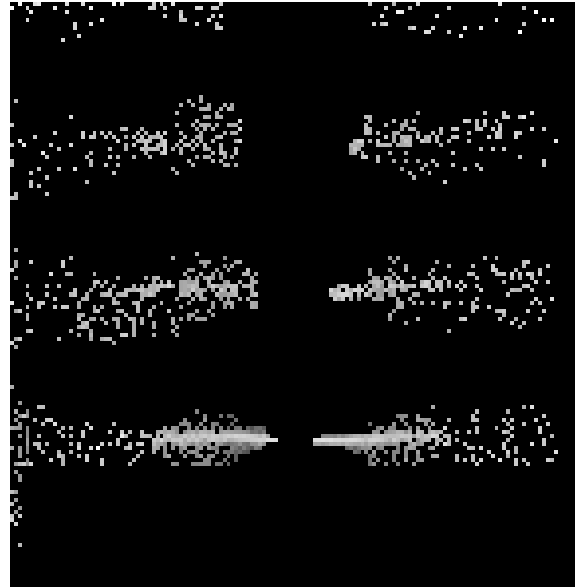


# 3 Gratings

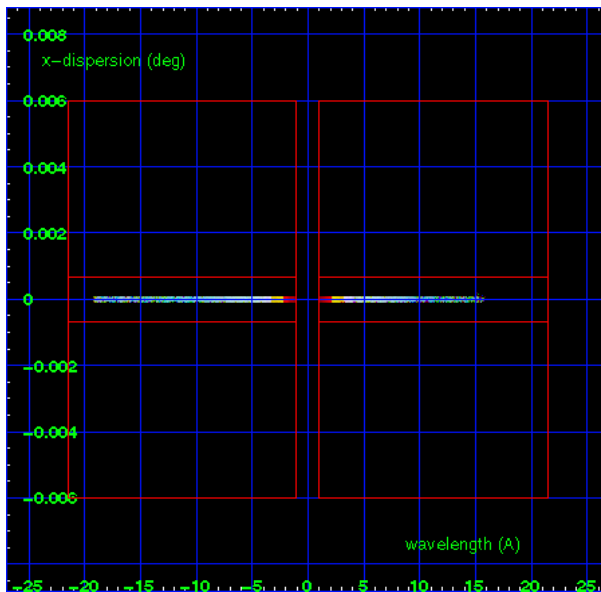
## 3.1 HEG Arm



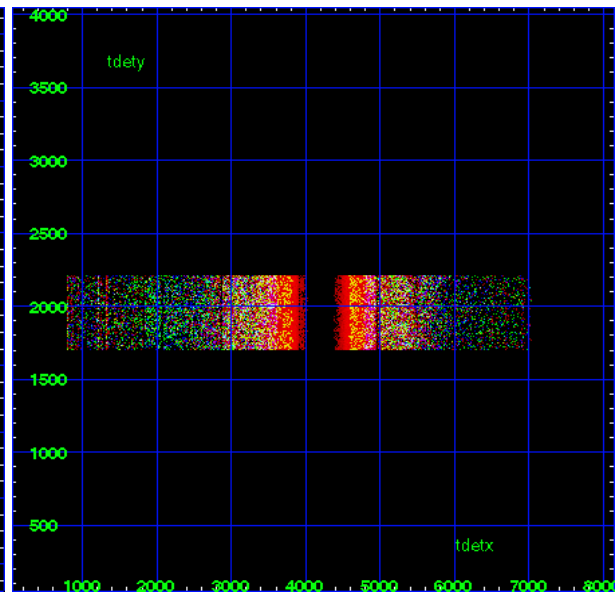
HEG Order Sort 123



HEG Order Sort ALL

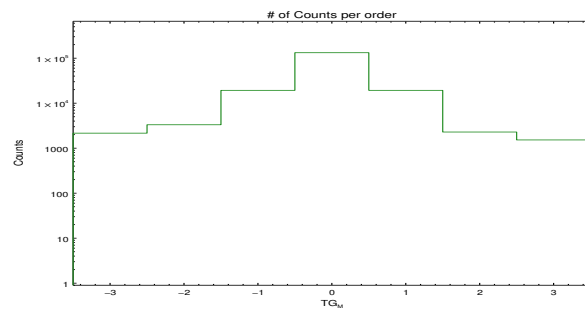


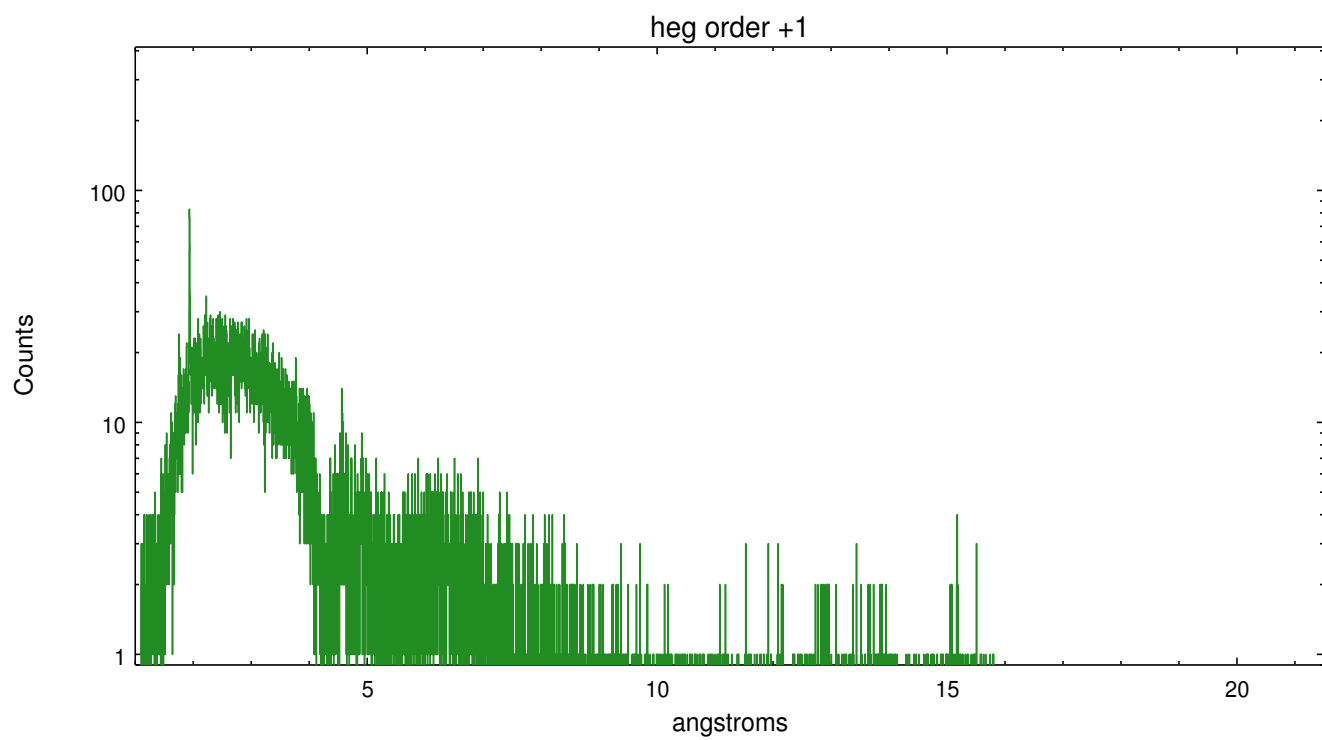
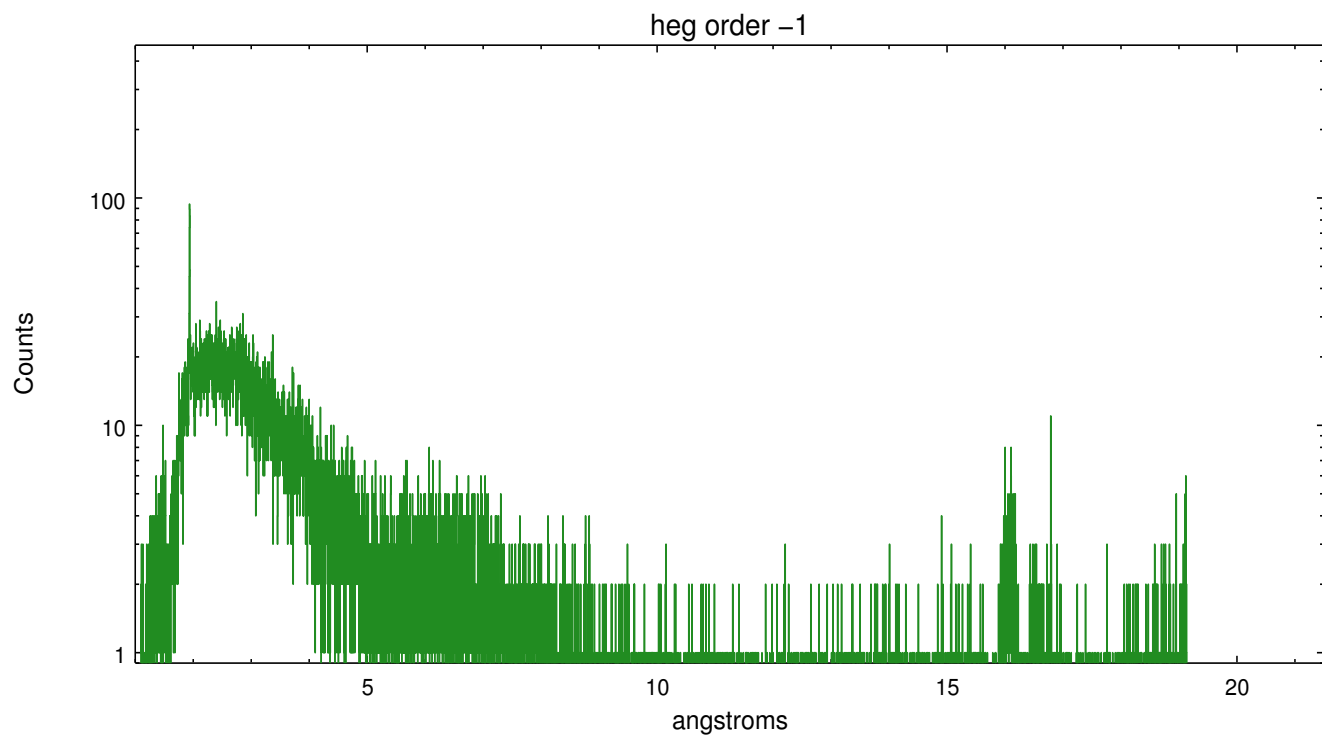
Spot Image HEG



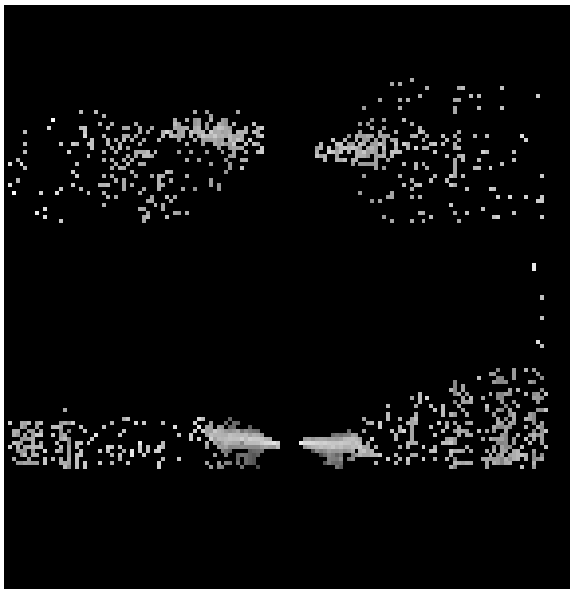
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2158	3319	19291	132507	19290	2287	1526

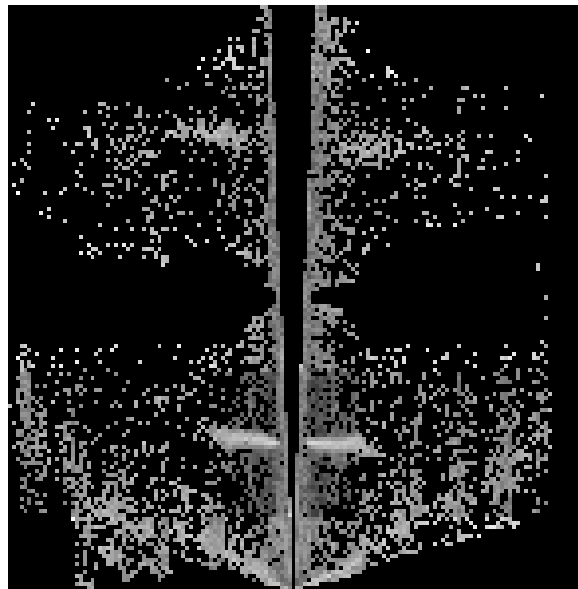




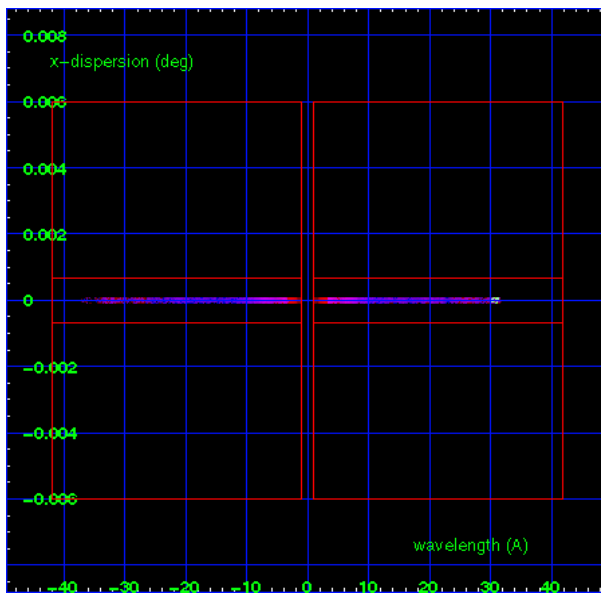
### 3.2 MEG Arm



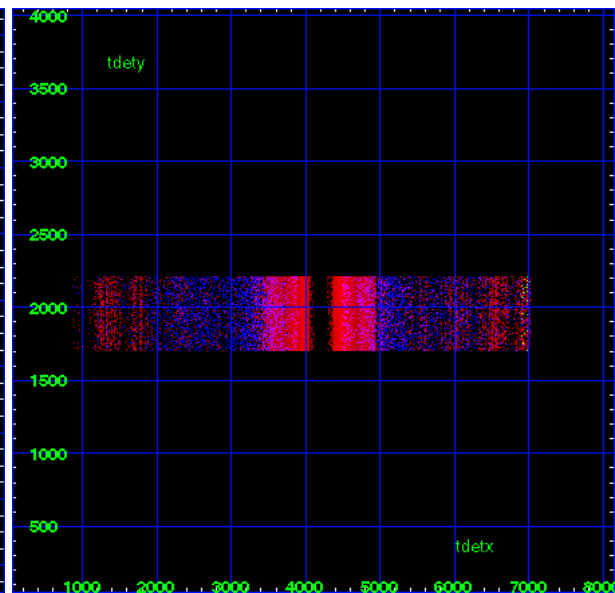
MEG Order Sort 123



MEG Order Sort ALL

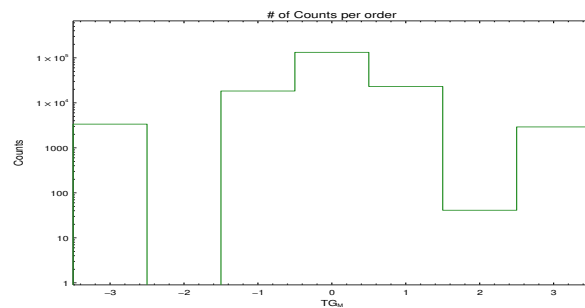


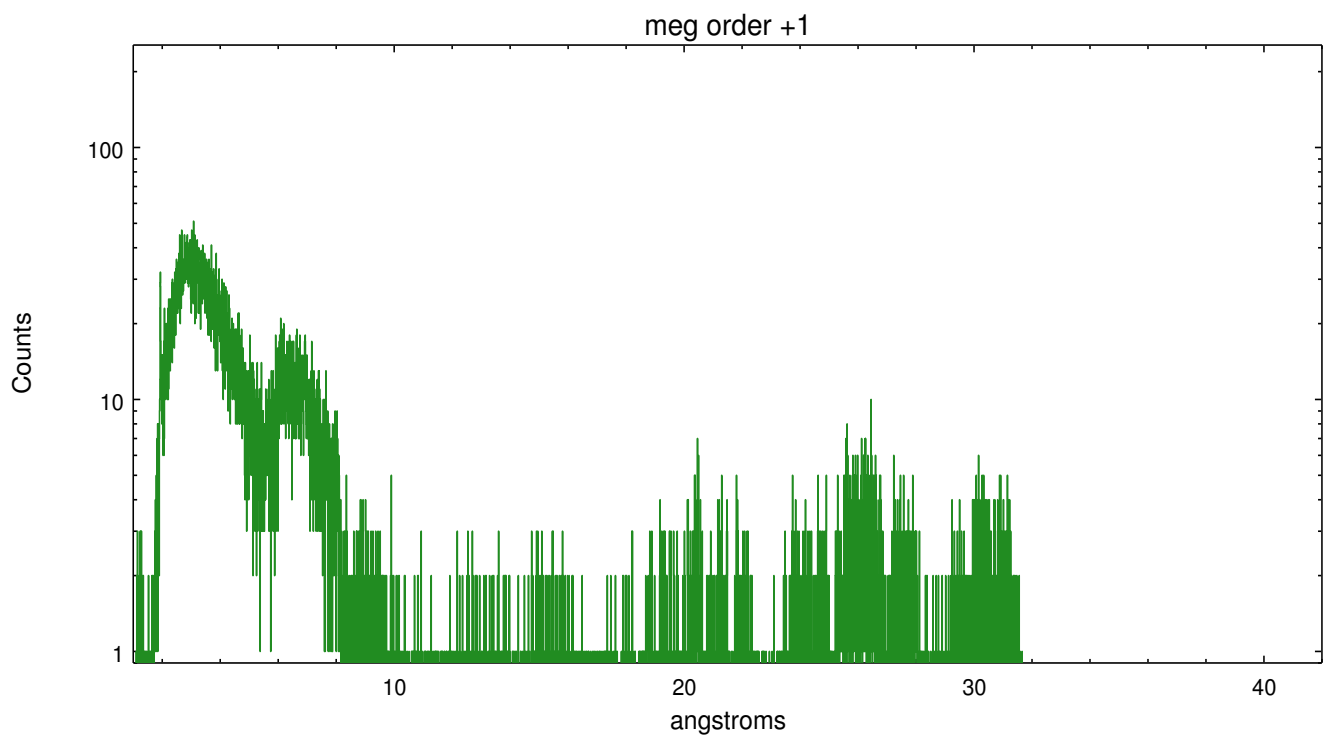
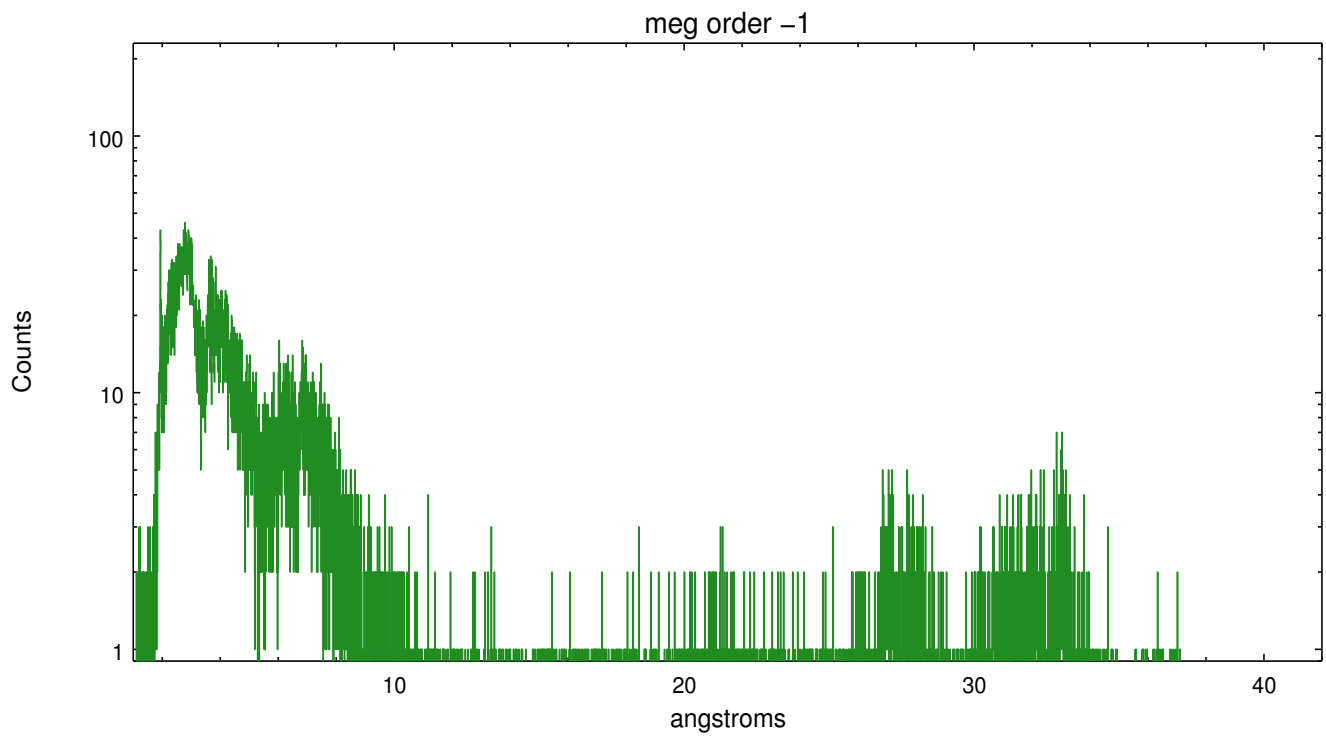
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3362	0	18309	132507	23083	41	2915





# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.10.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.339

## A.2 Comments