

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 11814 - L2 Version 3  
Chandra X-Ray Center

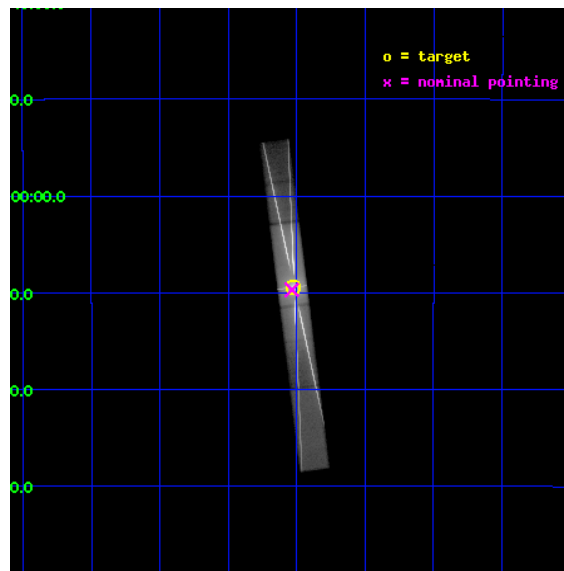
L2 Processing Date : Jul 11 2012

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# 1 Front

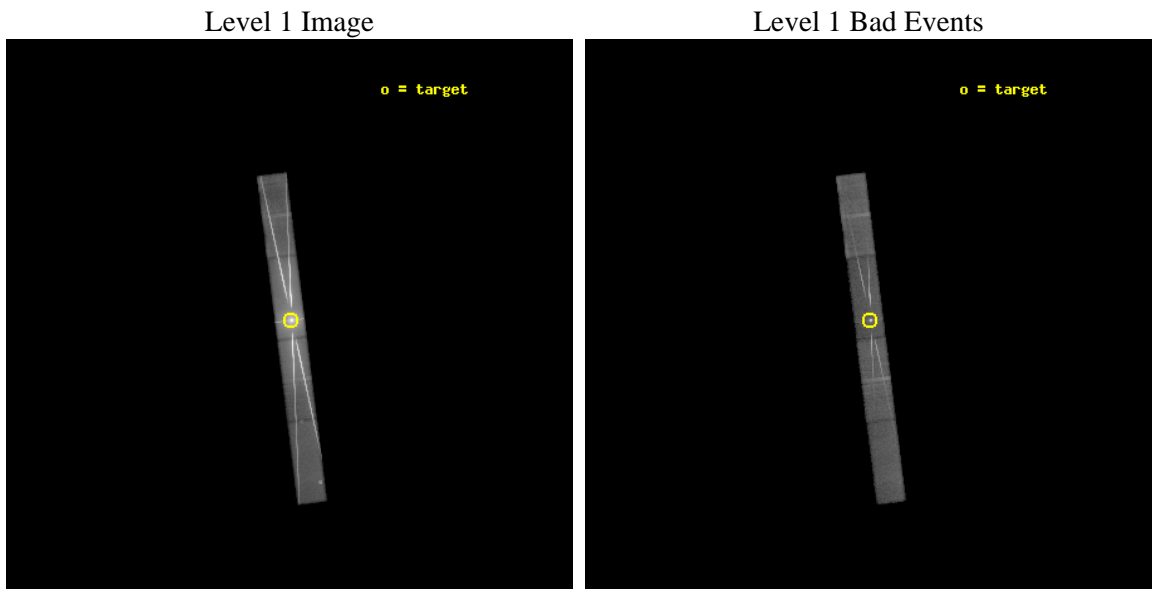
seq_num	401130	Sequence number
obs_id	11814	Observation id
title	Observe Bright Atol Sources at High Mass Accretion Rates	Proposal
observer	Prof Claude Canizares	Principal investigator
object	GX 13+1	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	273.631667	Observer's specified target RA [deg]
dec_targ	-17.157417	Observer's specified target Dec [deg]
ra_nom	273.63376581296	Nominal RA [deg]
dec_nom	-17.161817914952	Nominal Dec [deg]
roll_nom	262.84661957841	Nominal Roll [deg]
revision	3	Processing version of data
ontime	29079.59971118	Sum of GTIs [s]
liveltime	28117.965297989	Livetime [s]
ontime5	29079.599438727	Sum of GTIs [s]
ontime6	29079.558398724	Sum of GTIs [s]
ontime7	29079.59971118	Sum of GTIs [s]
ontime8	29079.51735872	Sum of GTIs [s]
l2events	2621664	Number of level 2 events



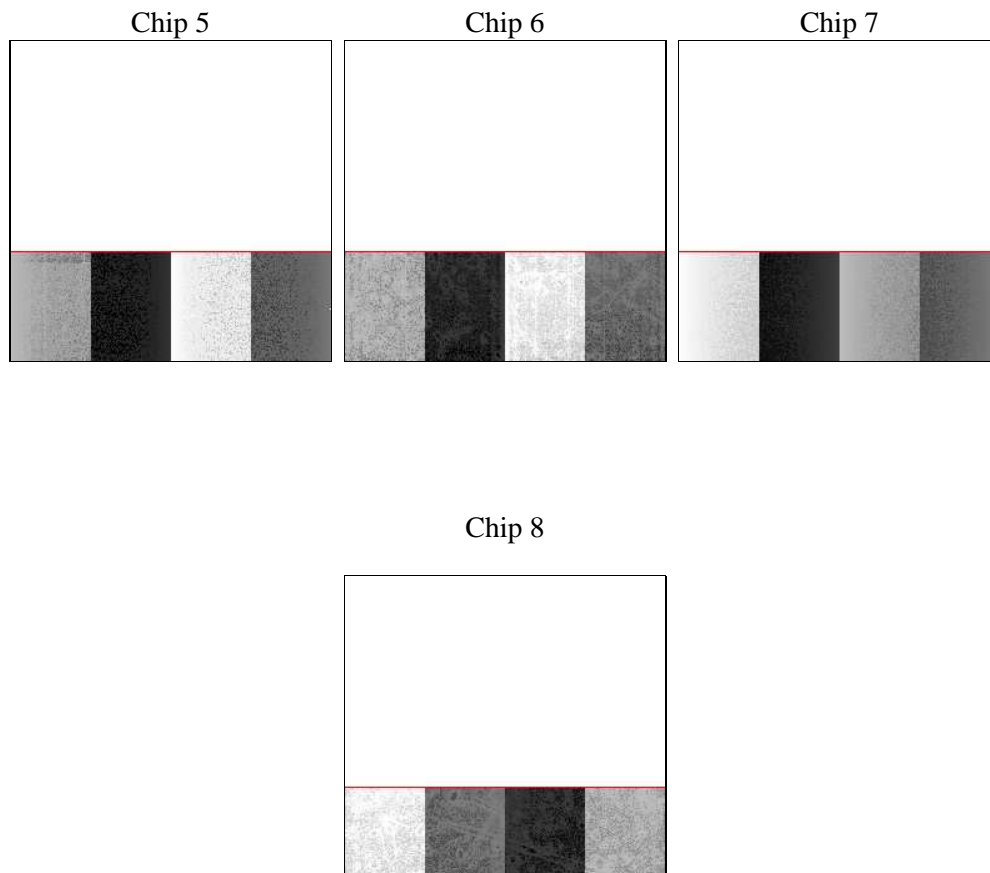
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	29000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	29079.59971118	Sum of GTIs [s]
caldsver	4.5.0	&#160	ontime5	29079.599438727	Sum of GTIs [s]
date	2012-07-01T03:11:07	Date and time of file creation	ontime6	29079.558398724	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	29079.59971118	Sum of GTIs [s]
			ontime8	29079.51735872	Sum of GTIs [s]
			l1events	3070479	Number of level 1 events

### 2.1.4 Events

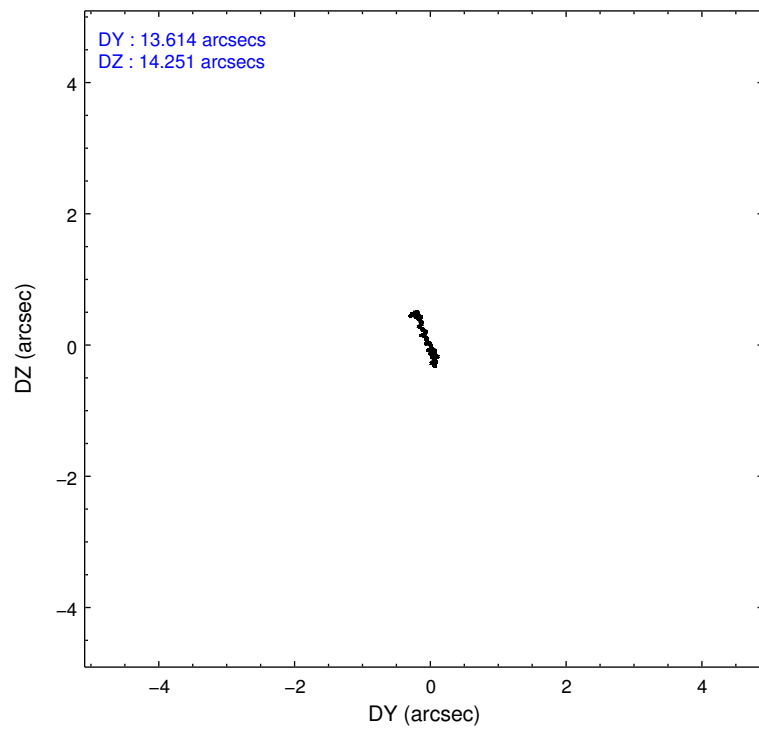
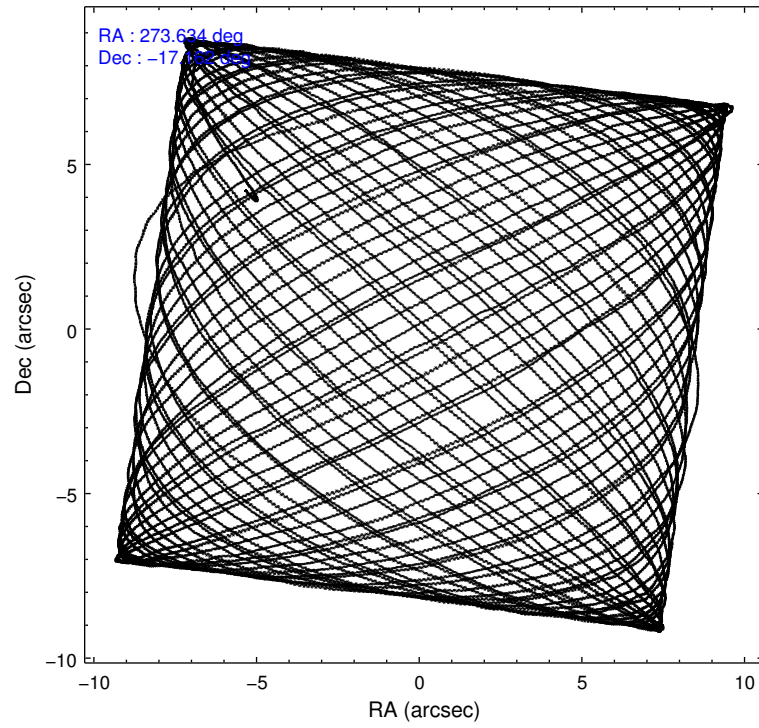
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	185160	1010861	1568736	305722
rejected events	56259	102275	108273	85276
rejected %	30%	10%	6%	27%

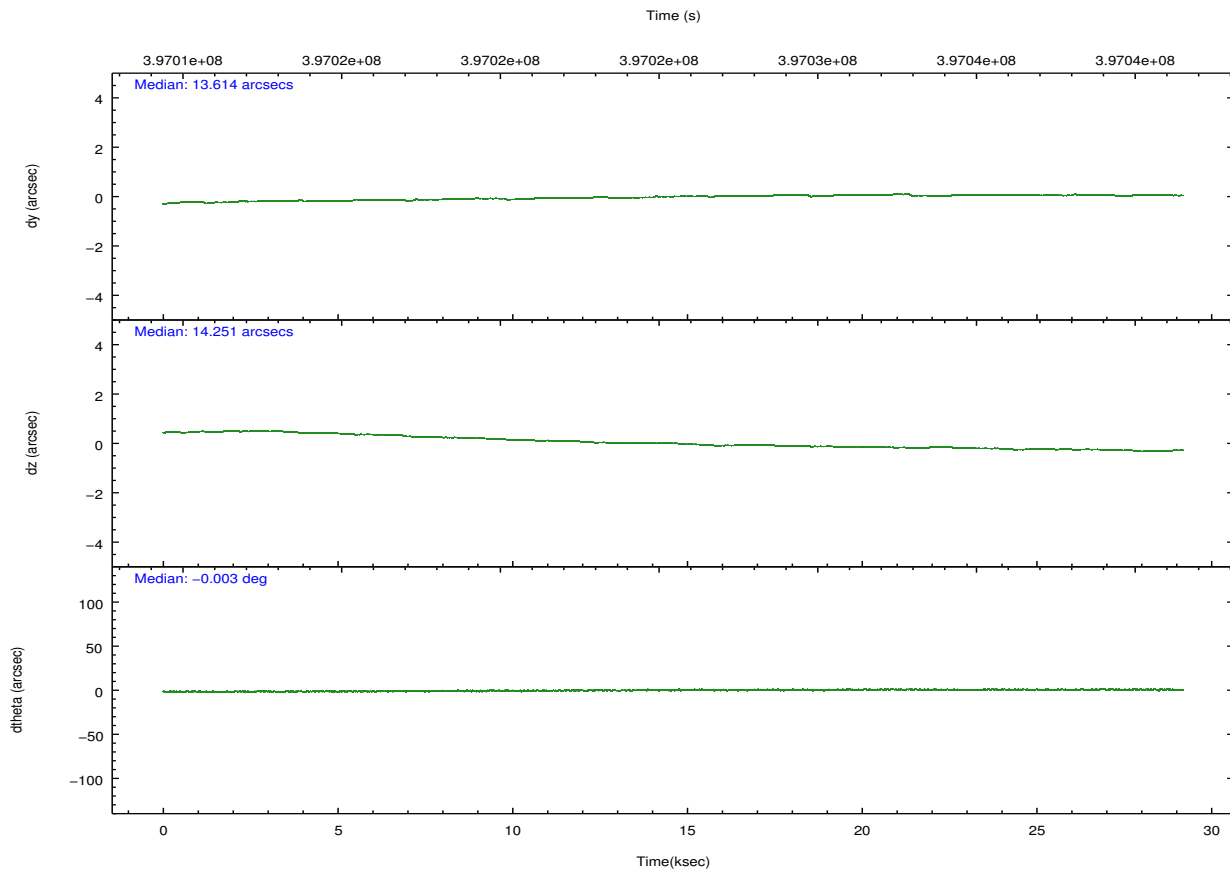
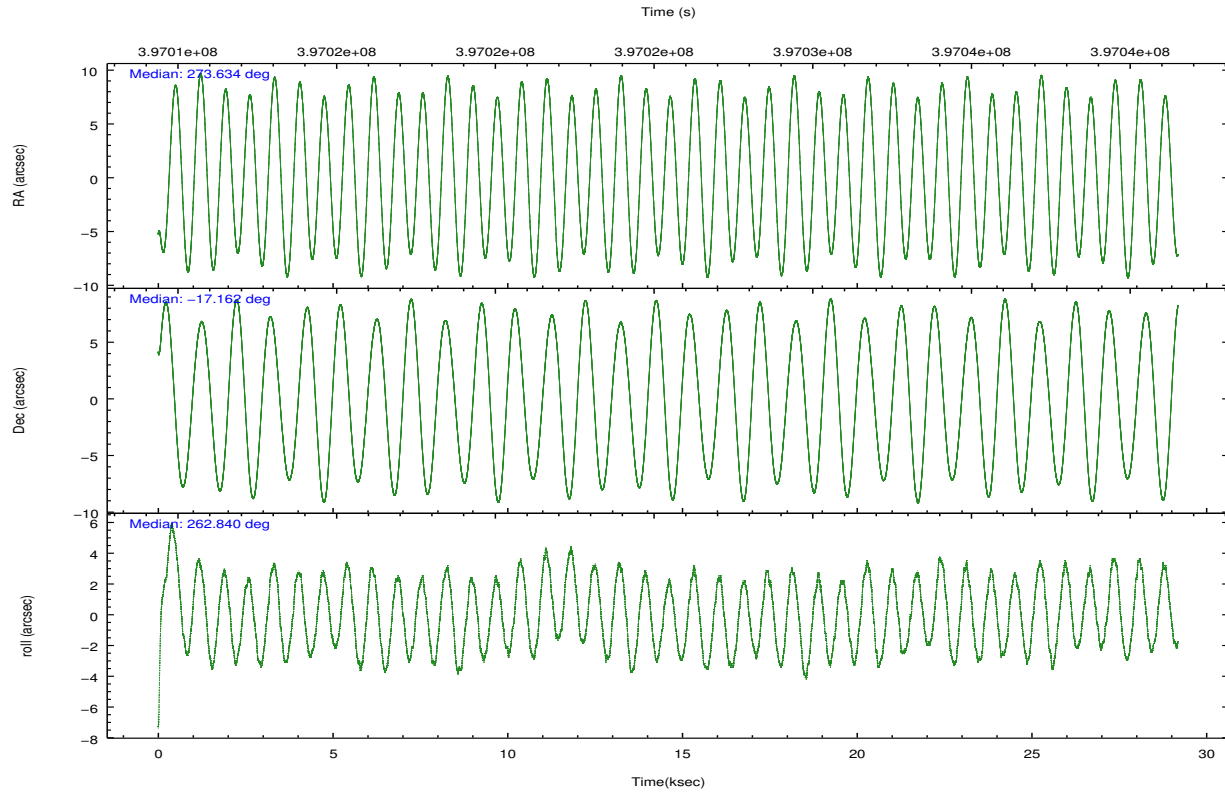
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	29721	641616	270666	155825
	16%	63%	17%	50%
grade 1 events	340	9476	5365	743
	0%	0%	0%	0%
grade 2 events	35506	123522	354119	28462
	19%	12%	22%	9%
grade 3 events	10613	43796	156137	10821
	5%	4%	9%	3%
grade 4 events	10500	43948	155723	10524
	5%	4%	9%	3%
grade 5 events	10549	11508	33799	5262
	5%	1%	2%	1%
grade 6 events	42564	55739	523881	14821
	22%	5%	33%	4%
grade 7 events	45367	81256	69046	79264
	24%	8%	4%	25%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	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	273.622304	273.6337658129592	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-17.136787	-17.16181791495245	Subarray start row	1	1
[deg] Pointing Roll	262.686614	262.8466195784098	Subarray row count	350	350
[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	1.2
[mm] SIM translation stage pos	-182.132523	-182.1370004450064			
[mm] SIM translation stage offset	-8	-7.995522138001405			
[s] Observation start time (MET)	397011025.184000	397009957.08056			
Observation start date	2010-08-01T00:49:19	2010-08-01T00:32:37			
[s] Observation end time (MET)	397040025.184000	397040930.01965			
Observation end date	2010-08-01T08:52:39	2010-08-01T09:08:50			
Read mode	TIMED	TIMED			

## 2.3 Aspect



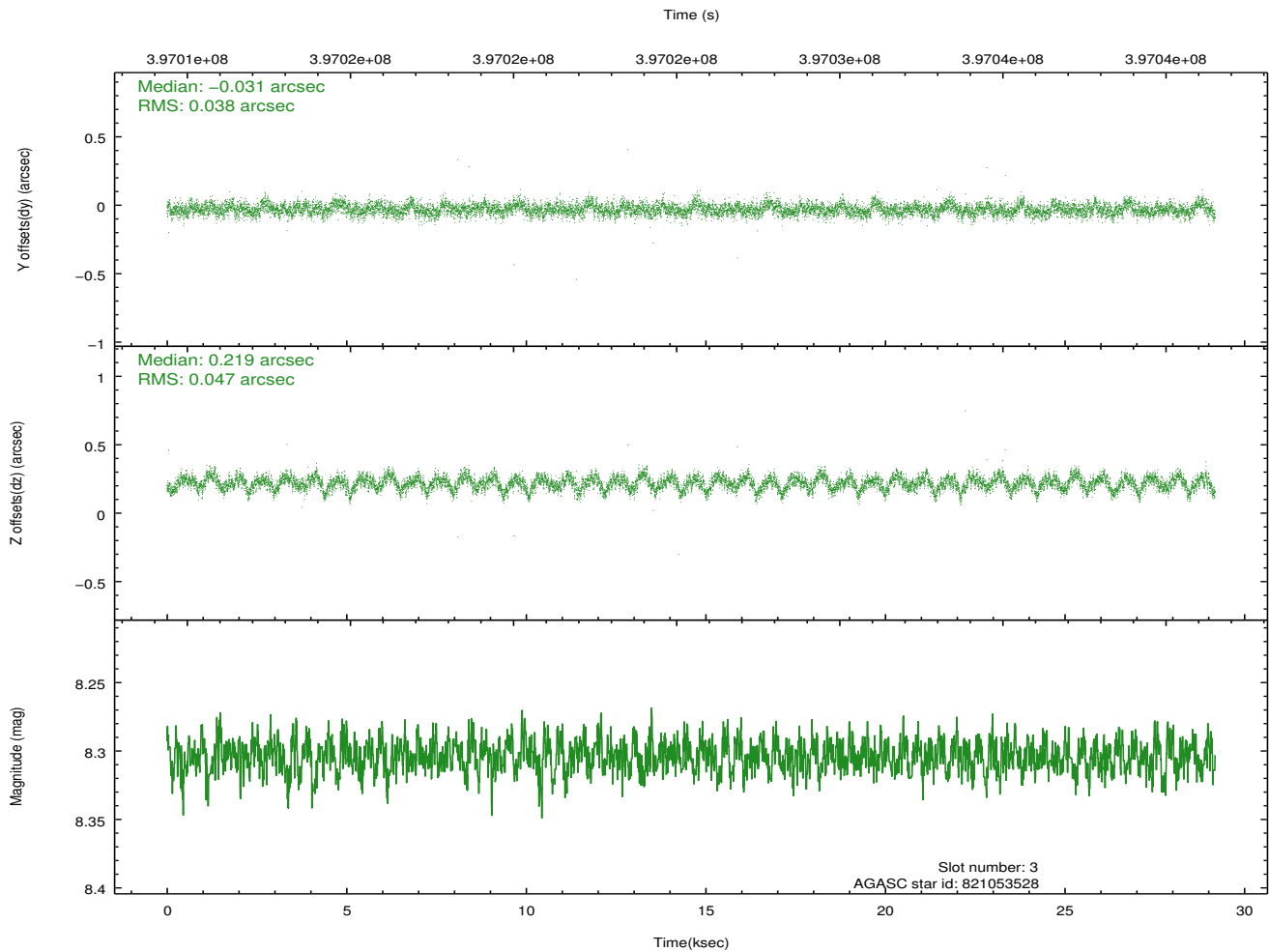
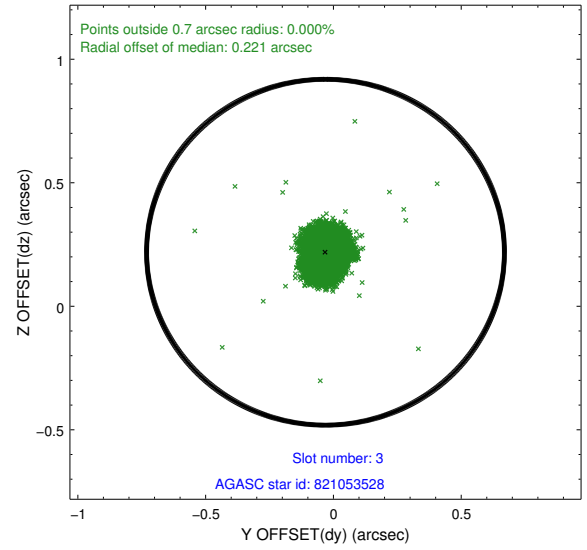
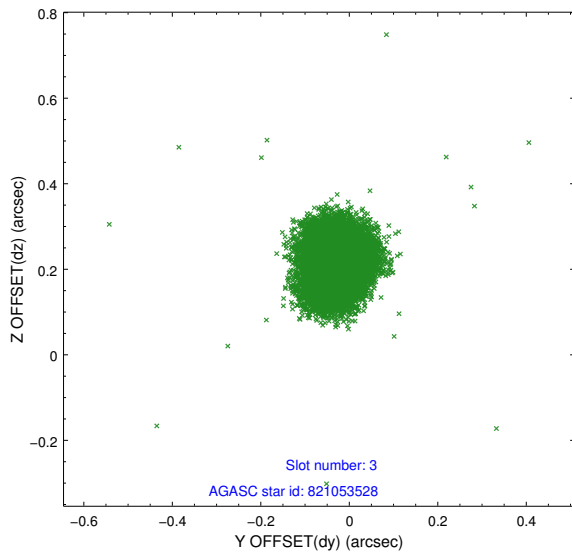


### Slot Statistics

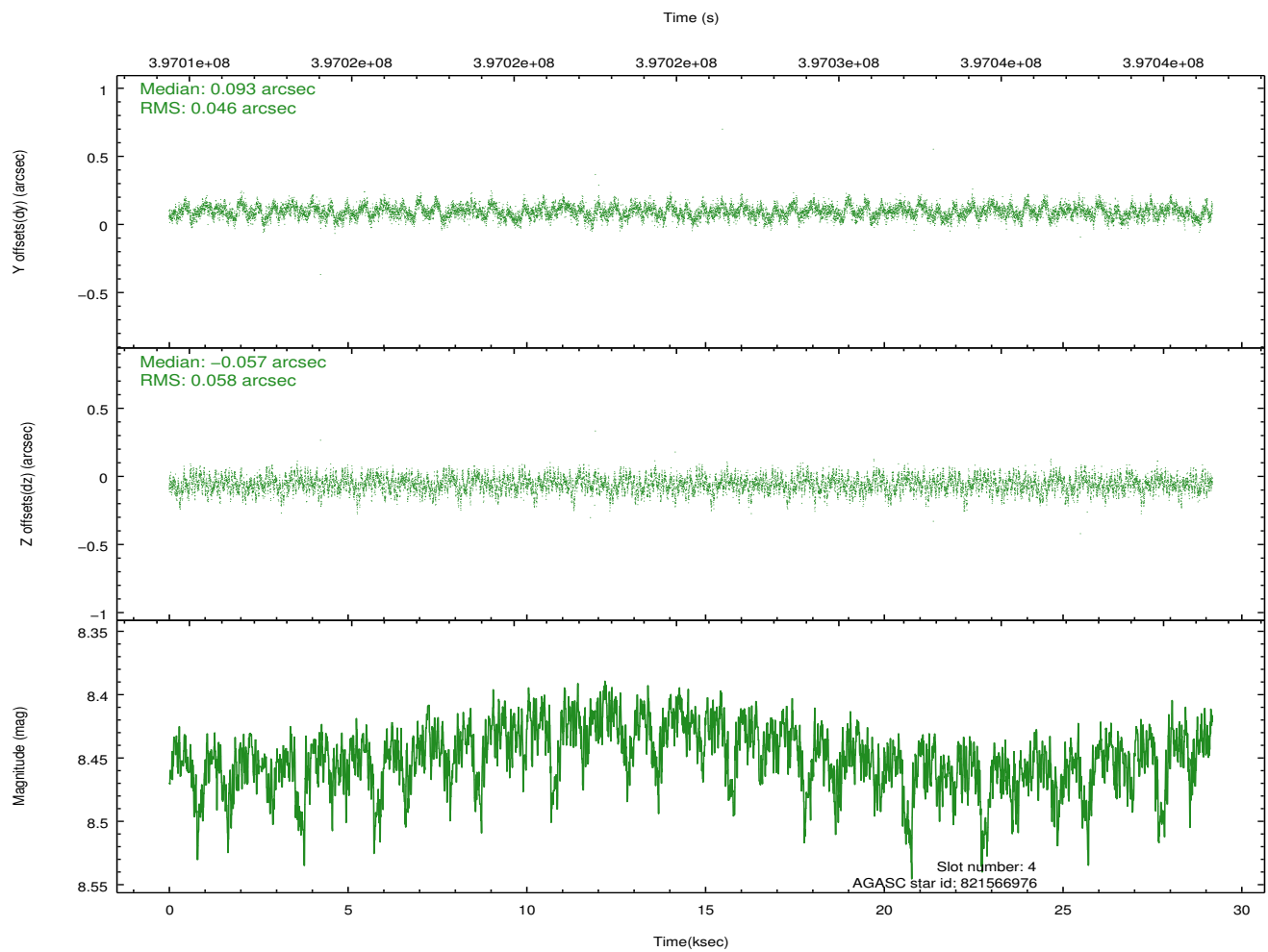
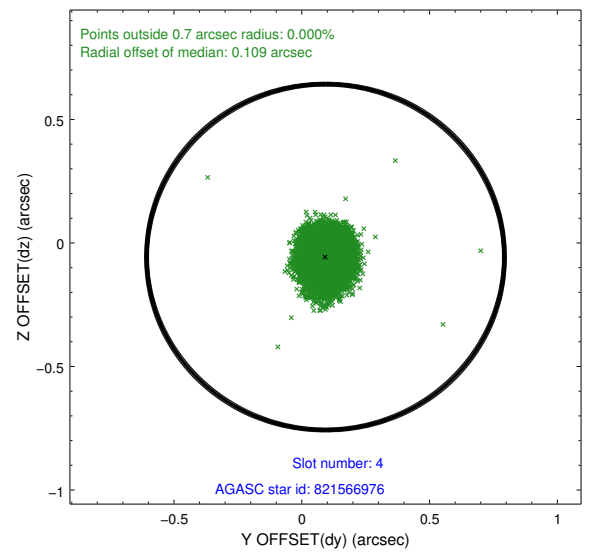
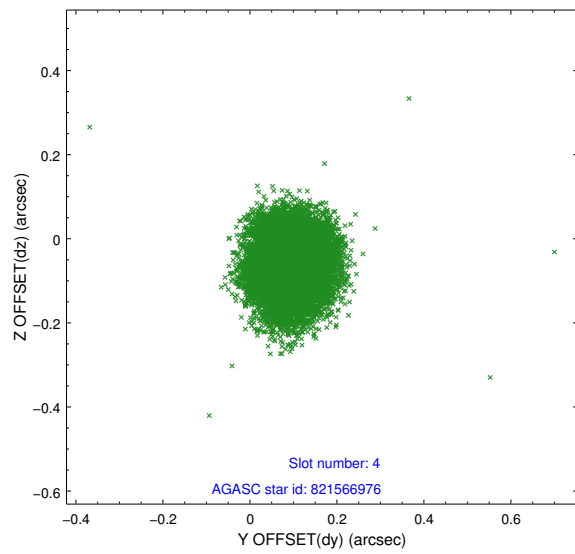
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.94	7119	-0.133	-0.082	0.009	0.015	0.000000	0.000000	-766.08	-1900.45
1	FID	ACIS-S-4	7.01	7118	0.134	0.079	0.008	0.013	0.000000	0.000000	2147.45	8.04
2	FID	ACIS-S-6	7.24	7117	-0.029	0.010	0.007	0.012	0.000000	0.000000	396.13	645.48
3	GUIDE	821053528	8.30	14231	-0.031	0.219	0.063	0.102	273.625019	-16.498449	-2279.97	-283.13
4	GUIDE	821566976	8.45	14229	0.093	-0.057	0.079	0.126	272.948338	-16.893938	-567.11	-2413.33
5	GUIDE	821570064	6.63	14236	-0.030	0.092	0.054	0.084	273.185111	-17.414521	1185.02	-1361.71
6	GUIDE	821579296	8.56	14221	-0.001	-0.034	0.064	0.105	273.605242	-17.813626	2424.65	252.62
7	GUIDE	821707704	8.95	14225	-0.033	-0.219	0.089	0.142	274.330077	-16.988328	-835.73	2349.51

## 2.4 Star Slots

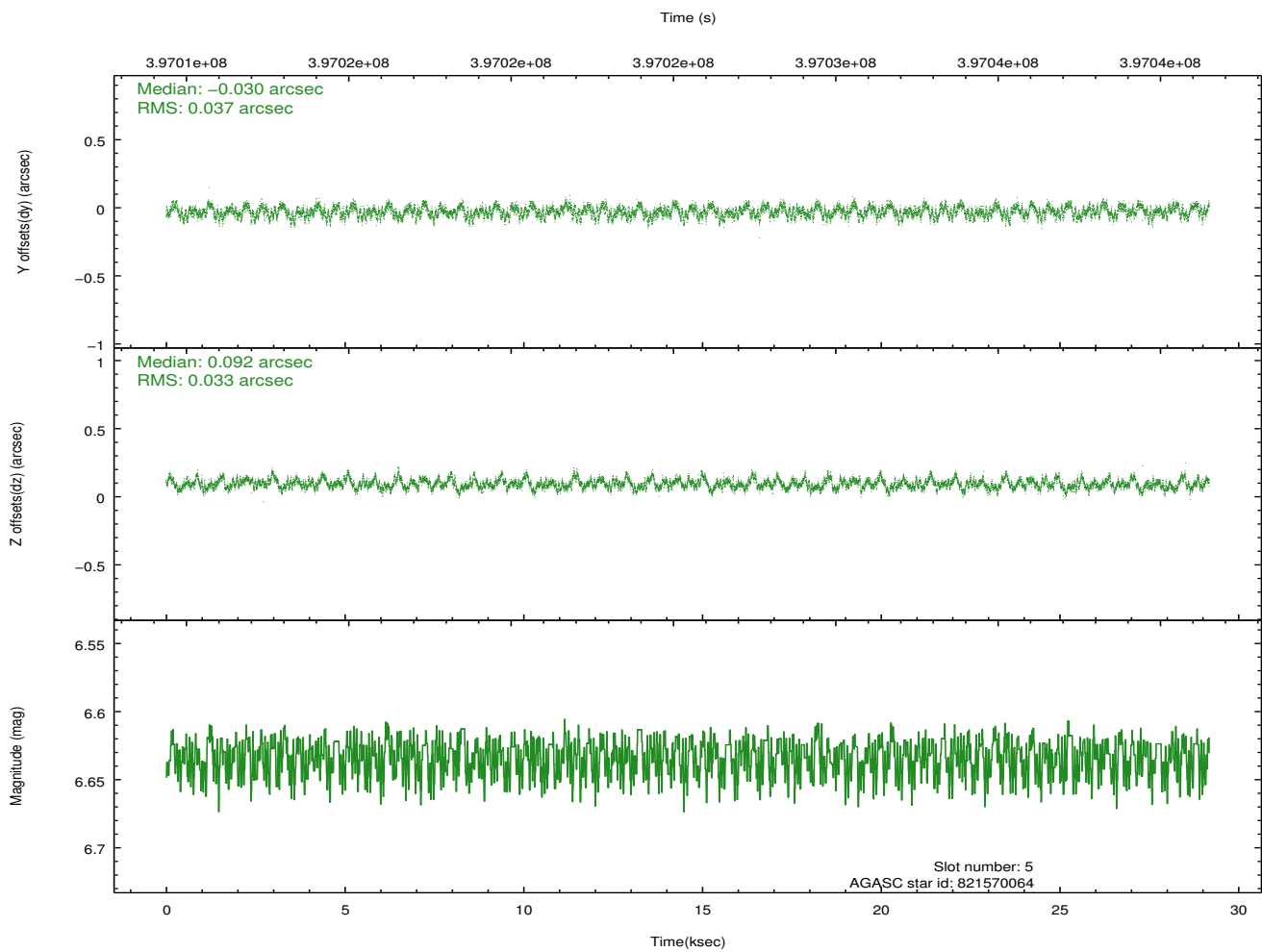
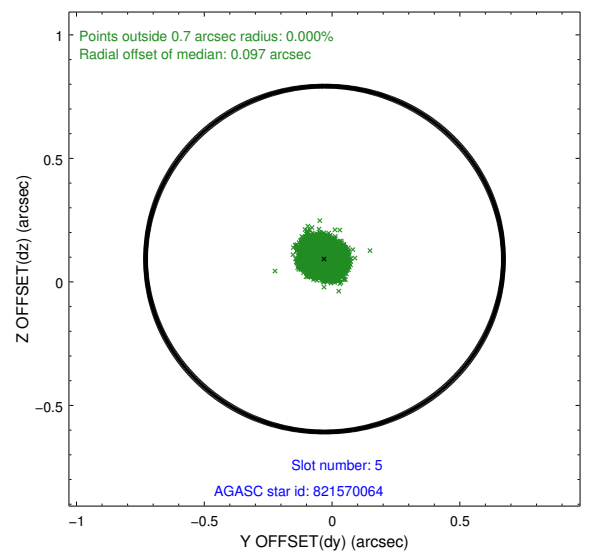
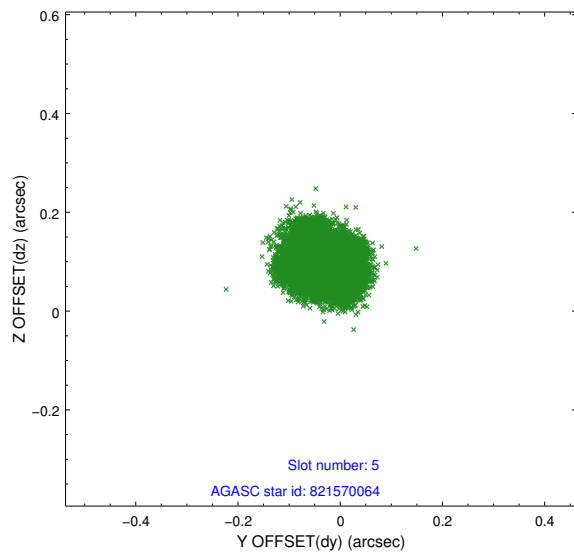
### 2.4.1 Slot 3



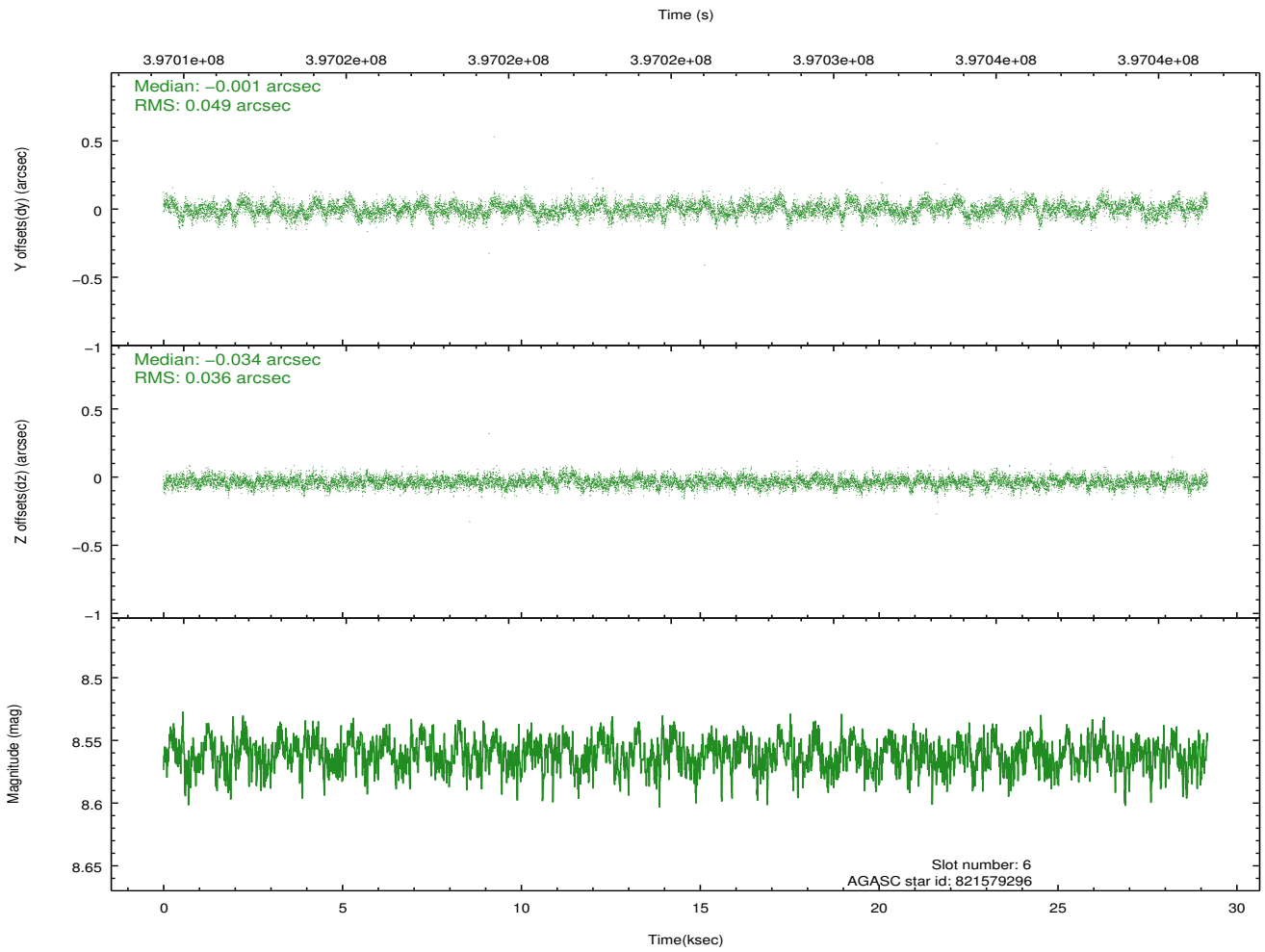
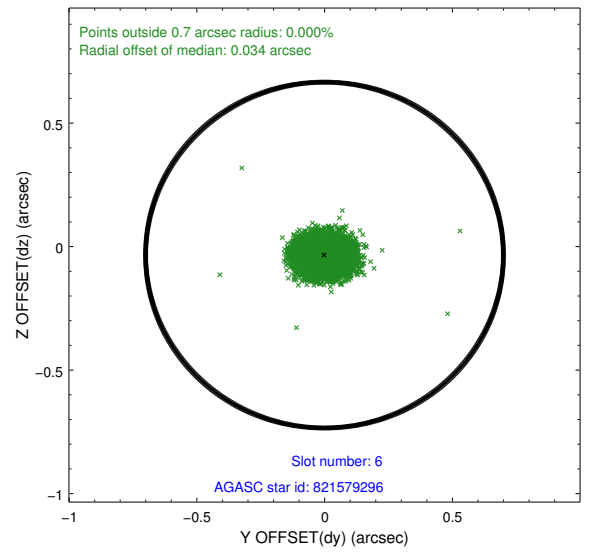
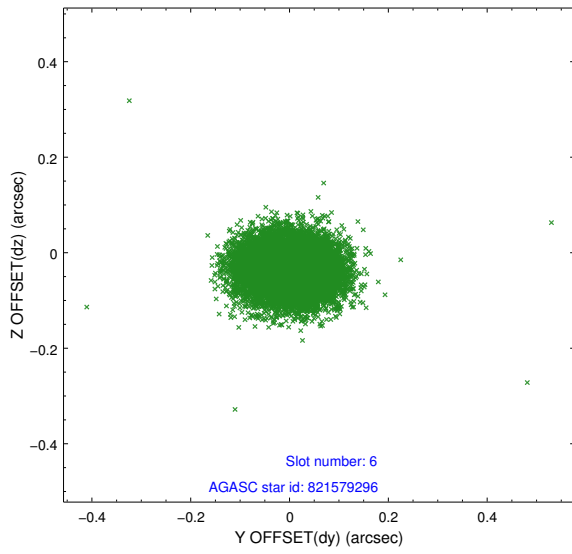
## 2.4.2 Slot 4



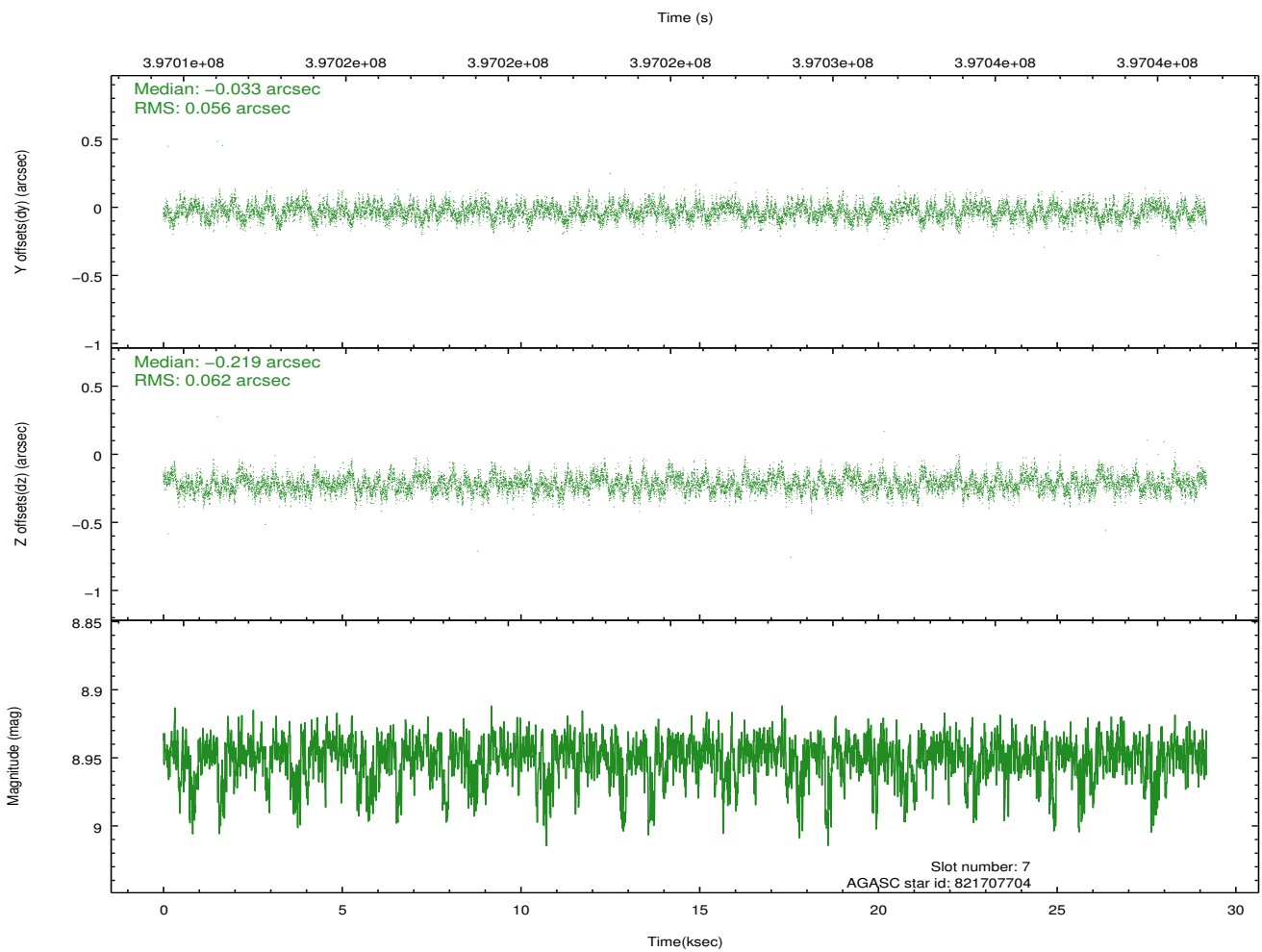
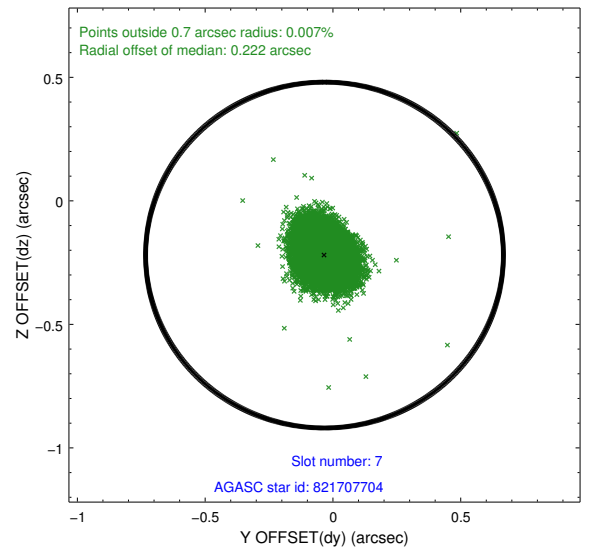
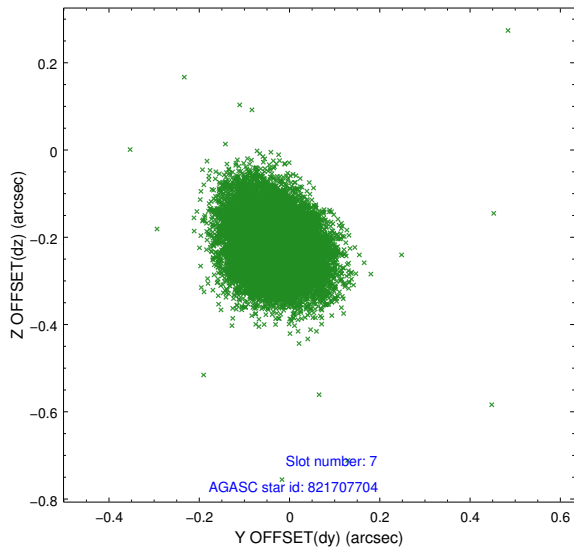
### 2.4.3 Slot 5



## 2.4.4 Slot 6

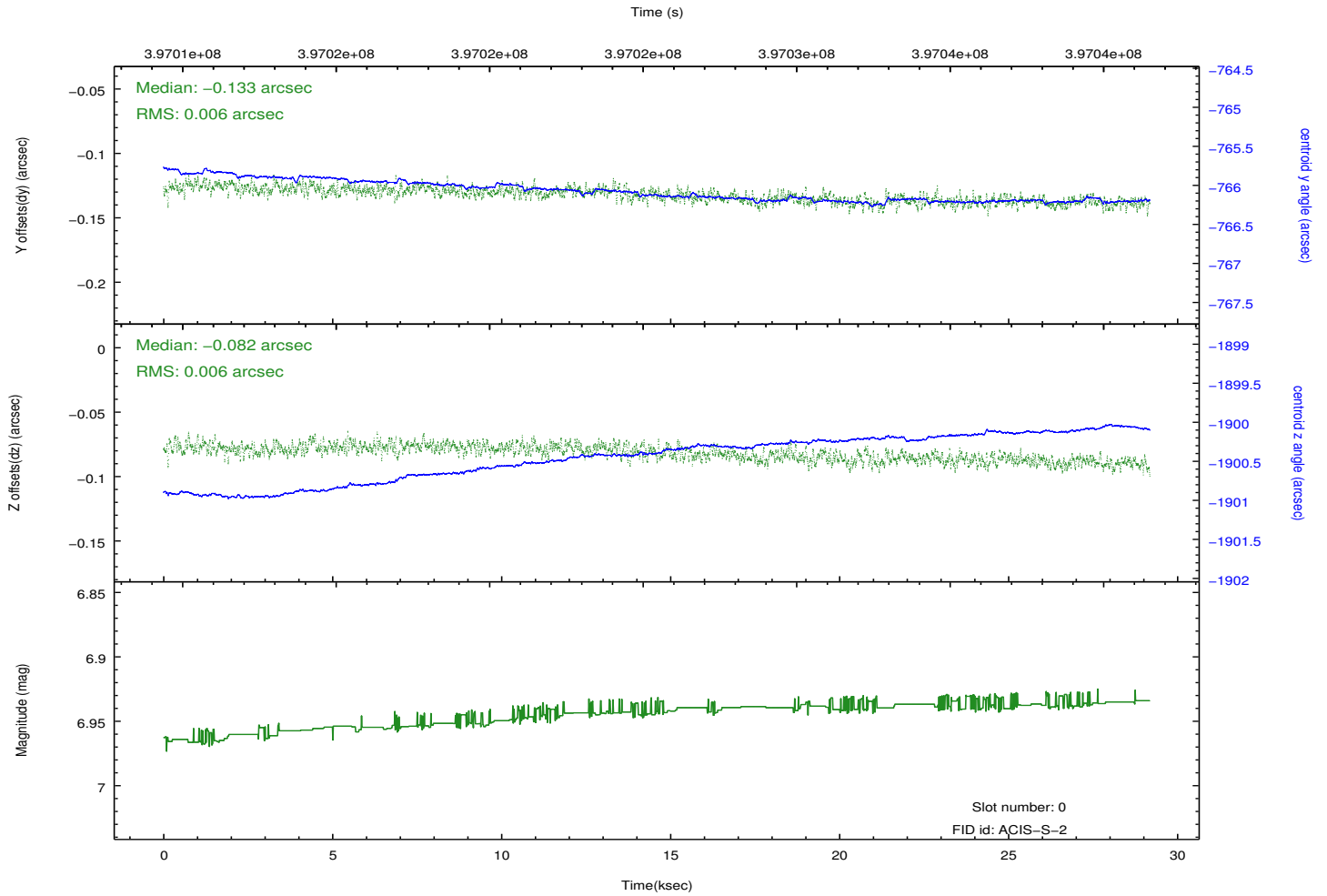
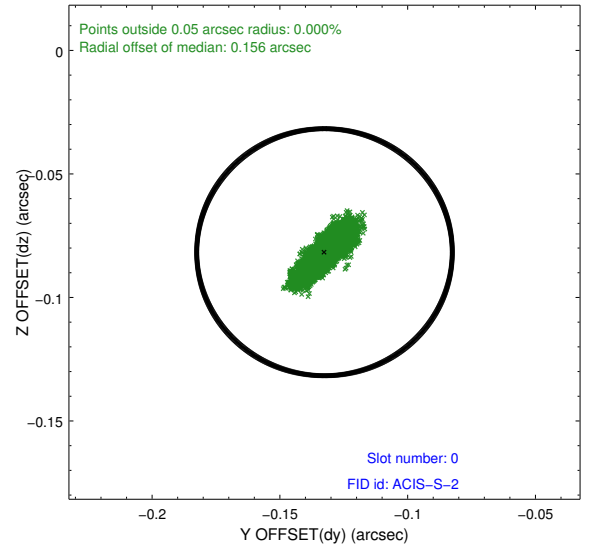
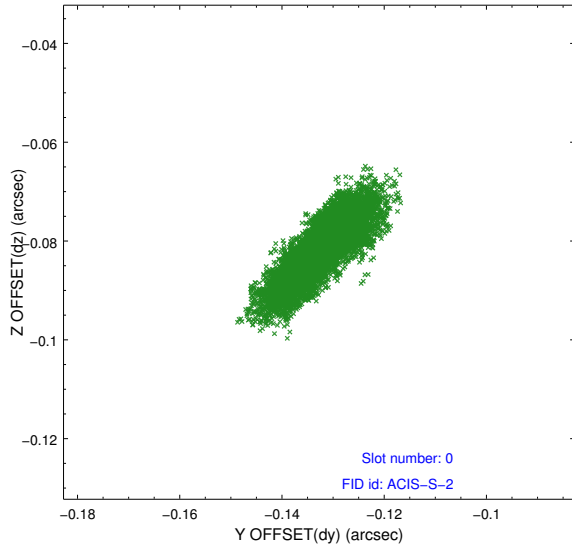


## 2.4.5 Slot 7

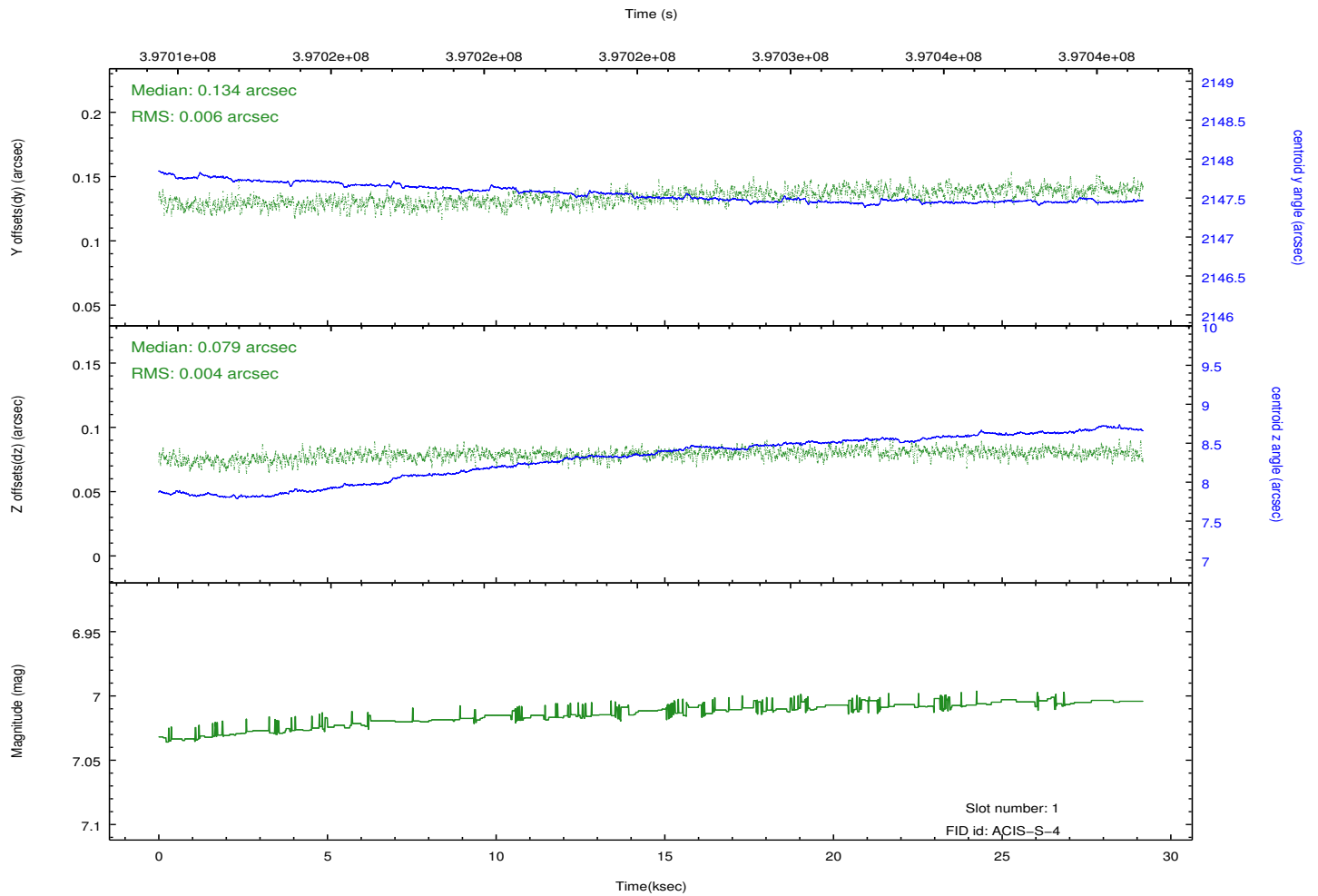
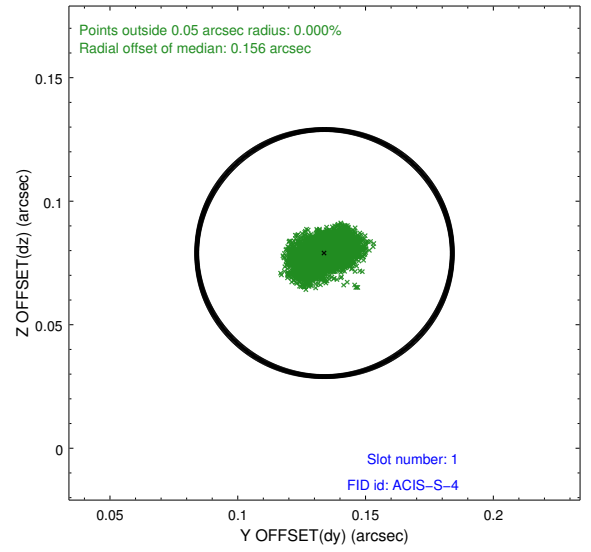
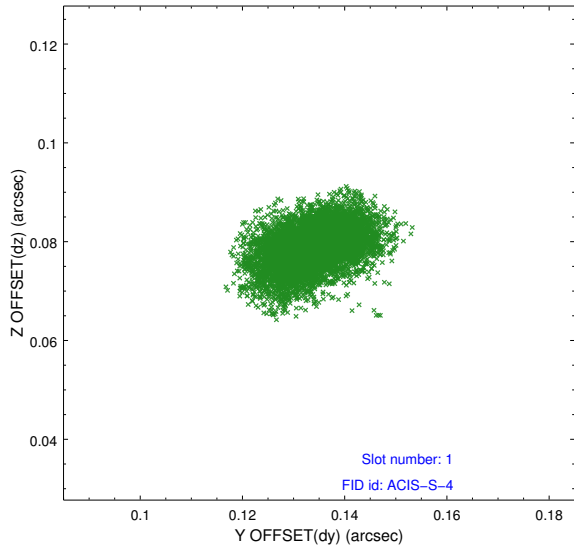


## 2.5 FID Slots

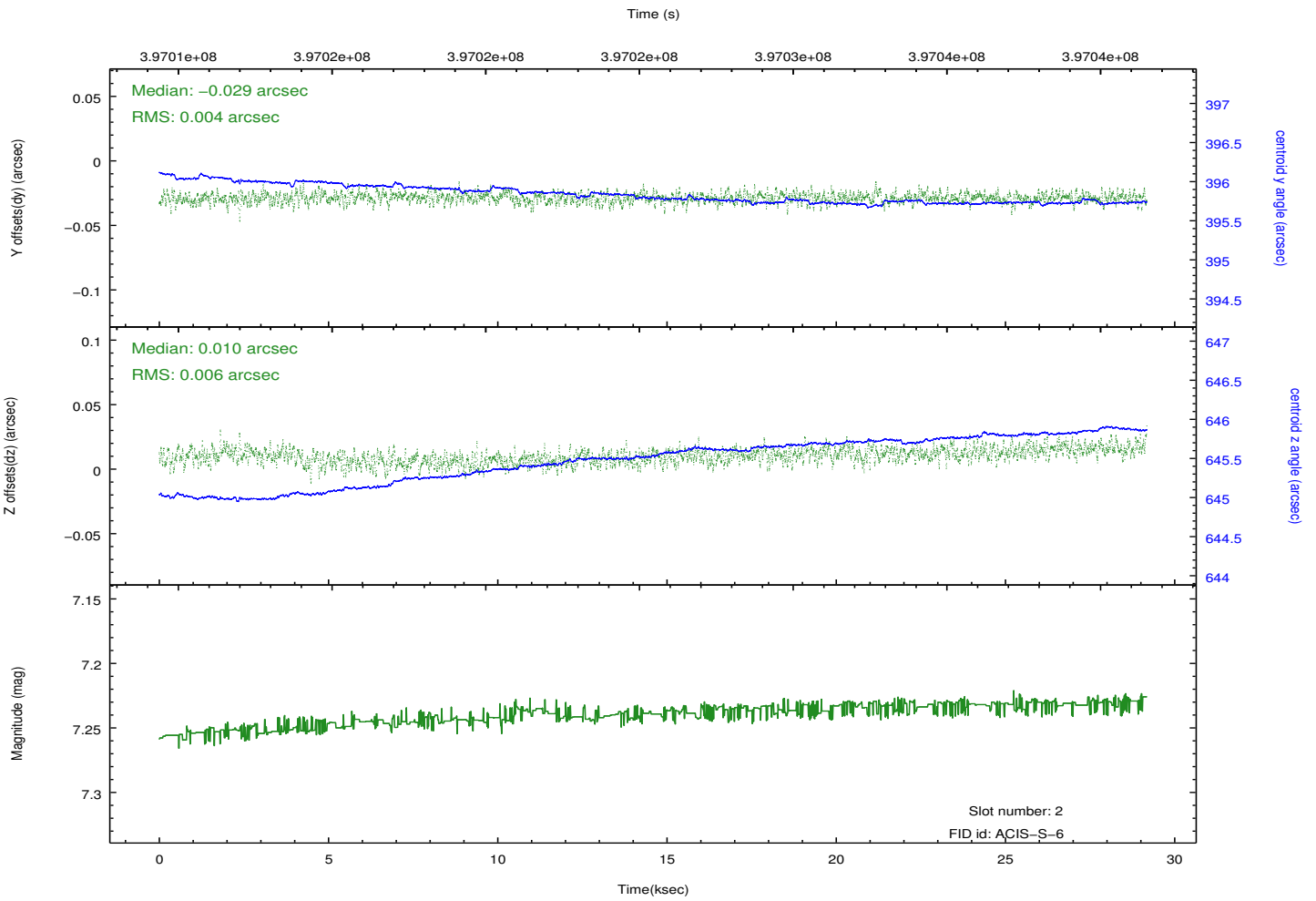
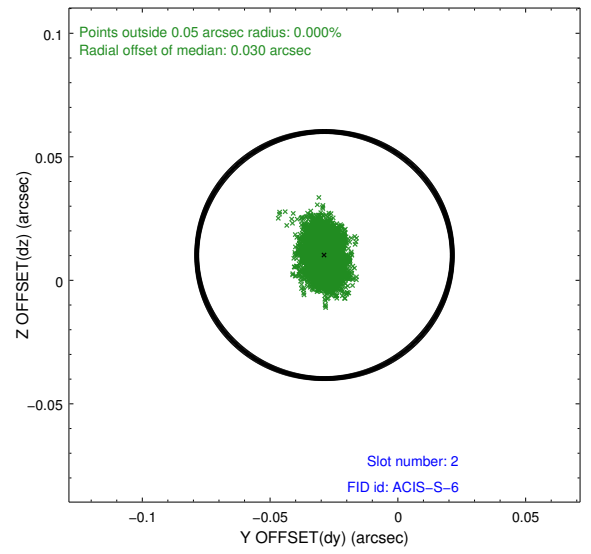
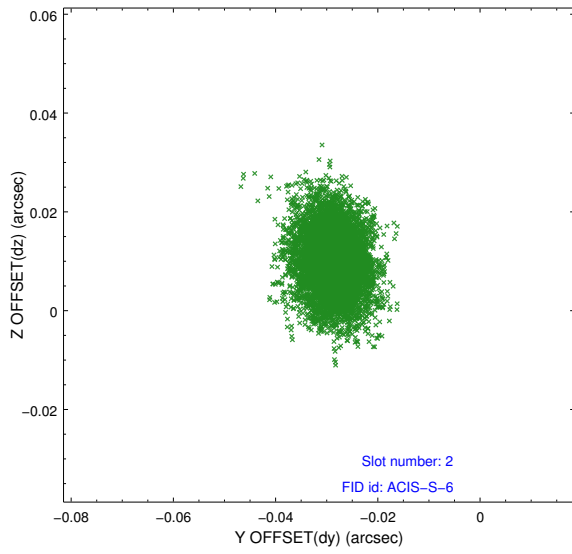
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

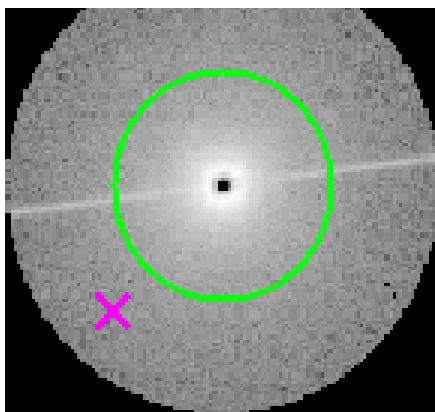


### 3 Gratings

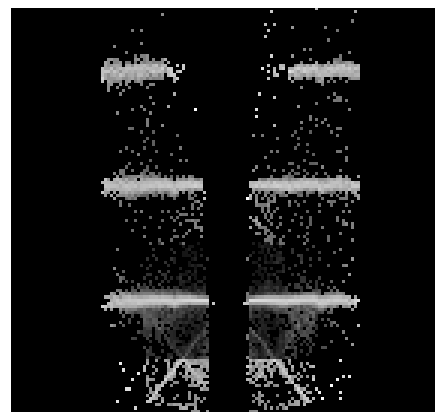
#### 3.1 HEG Arm



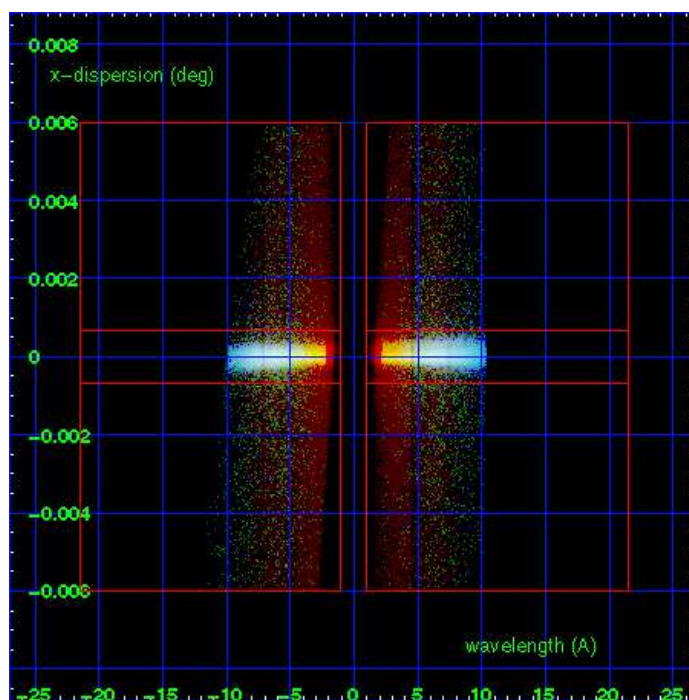
HEG Order Sort 123



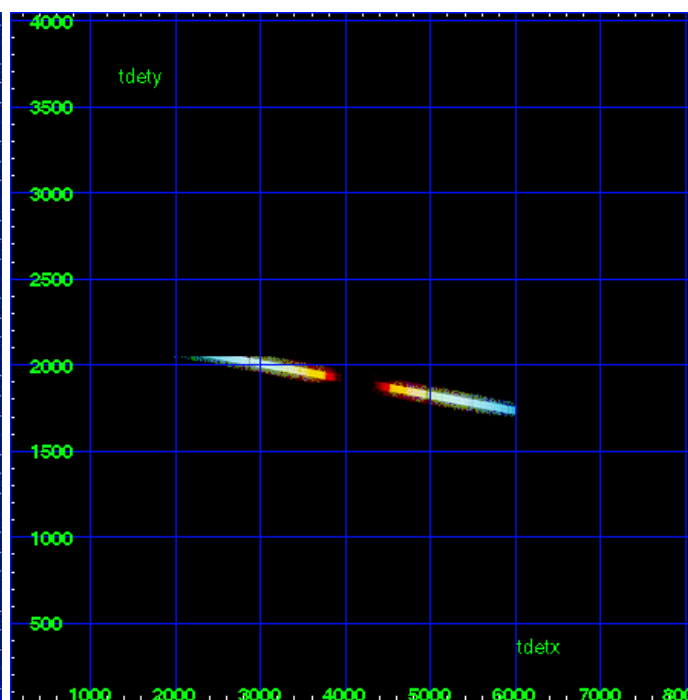
HEG Zero Order



HEG Order Sort ALL

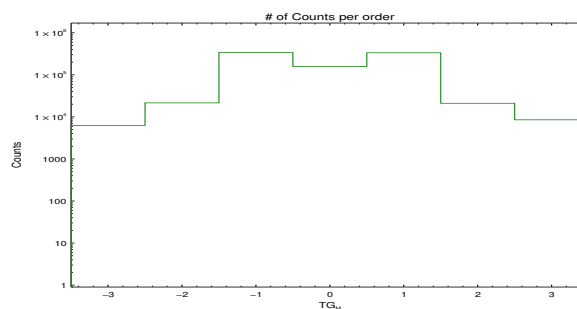


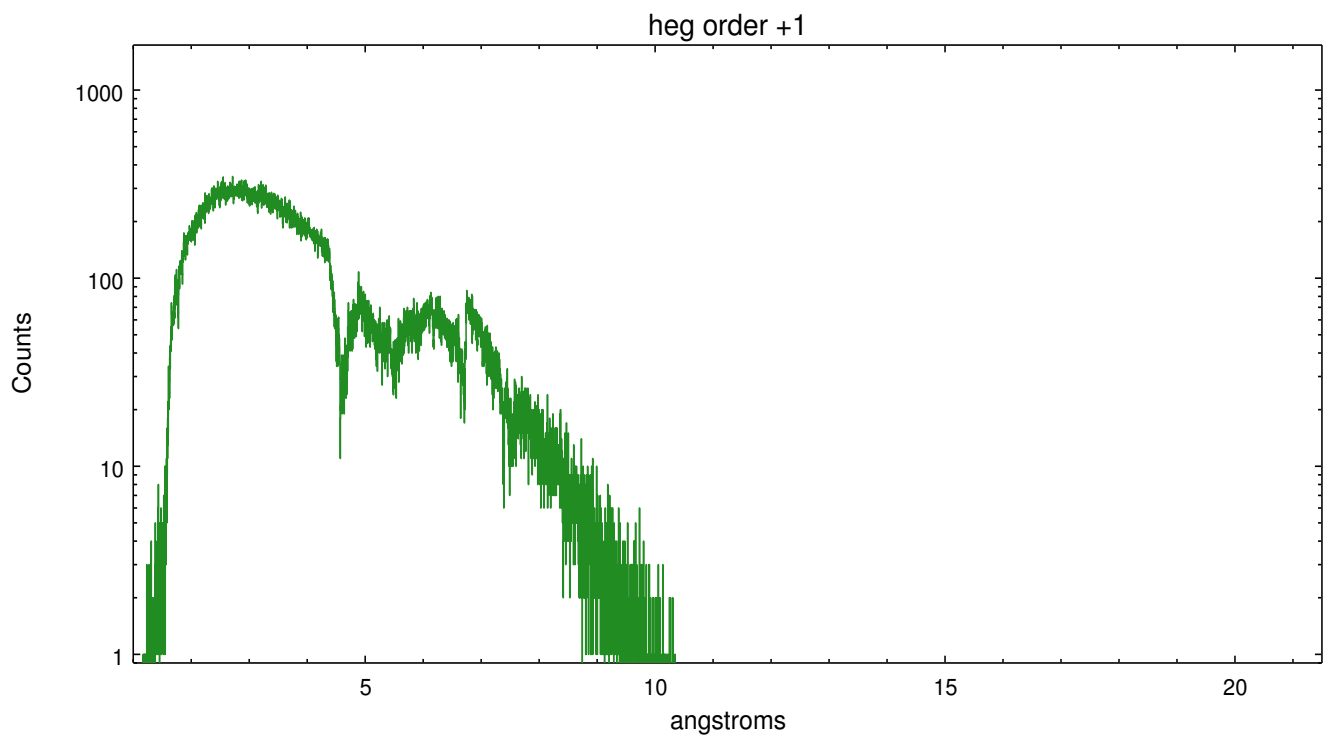
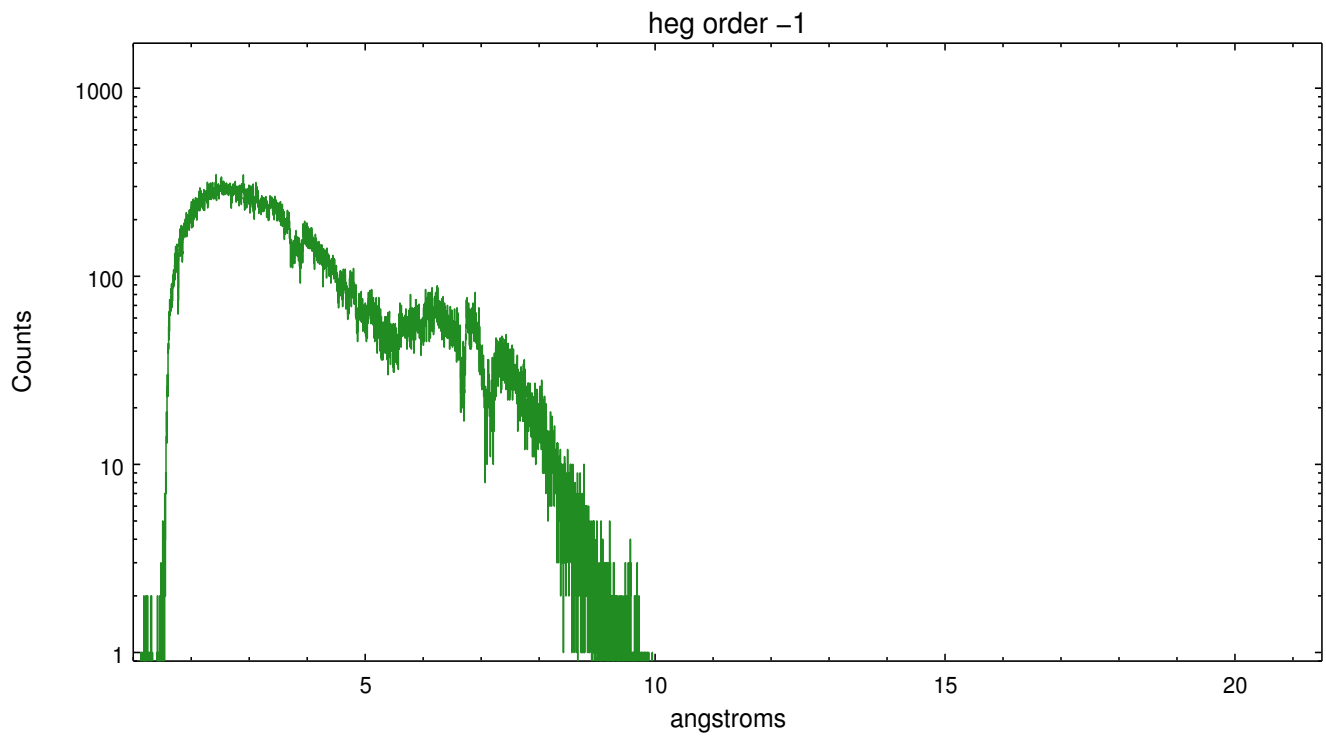
Spot Image HEG



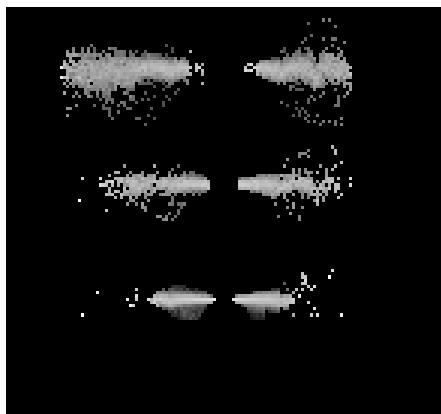
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	6277	21559	340948	157074	334988	21055	8535

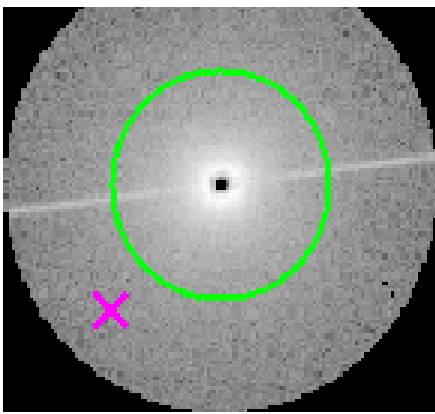




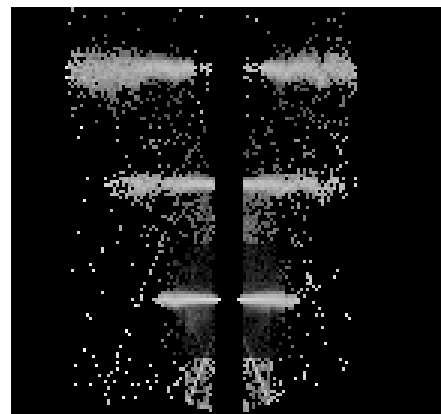
### 3.2 MEG Arm



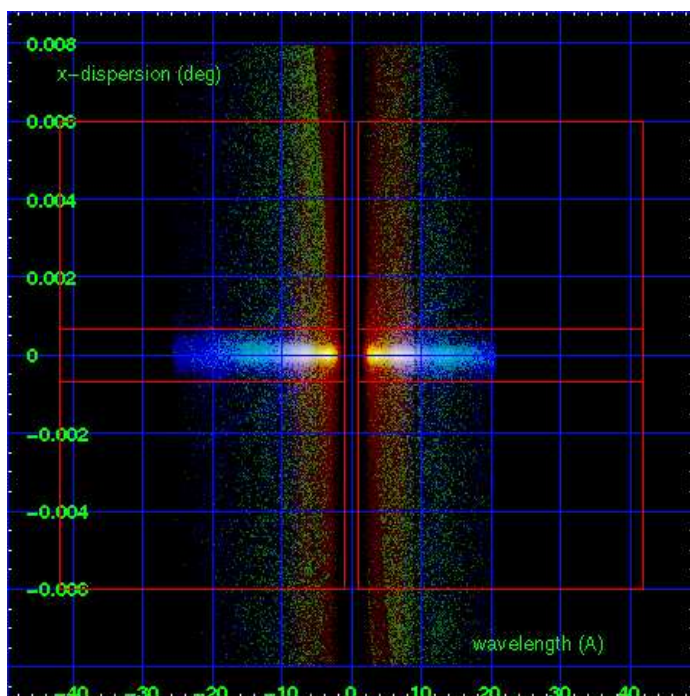
MEG Order Sort 123



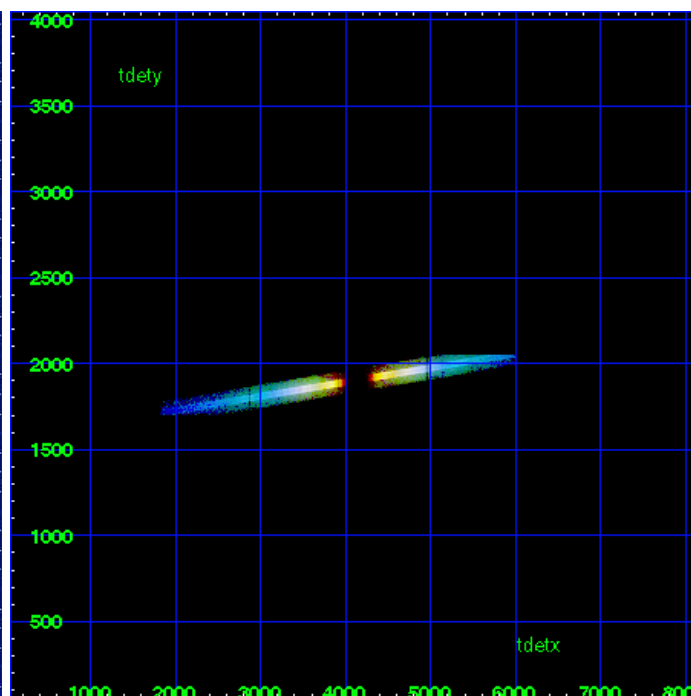
MEG Zero Order



MEG Order Sort ALL

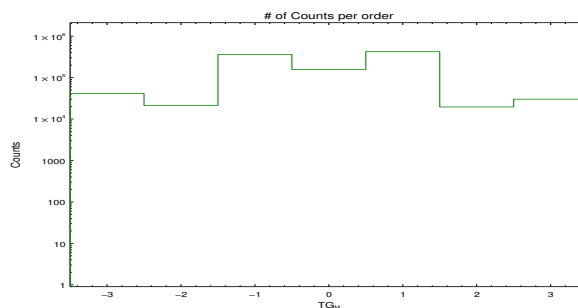


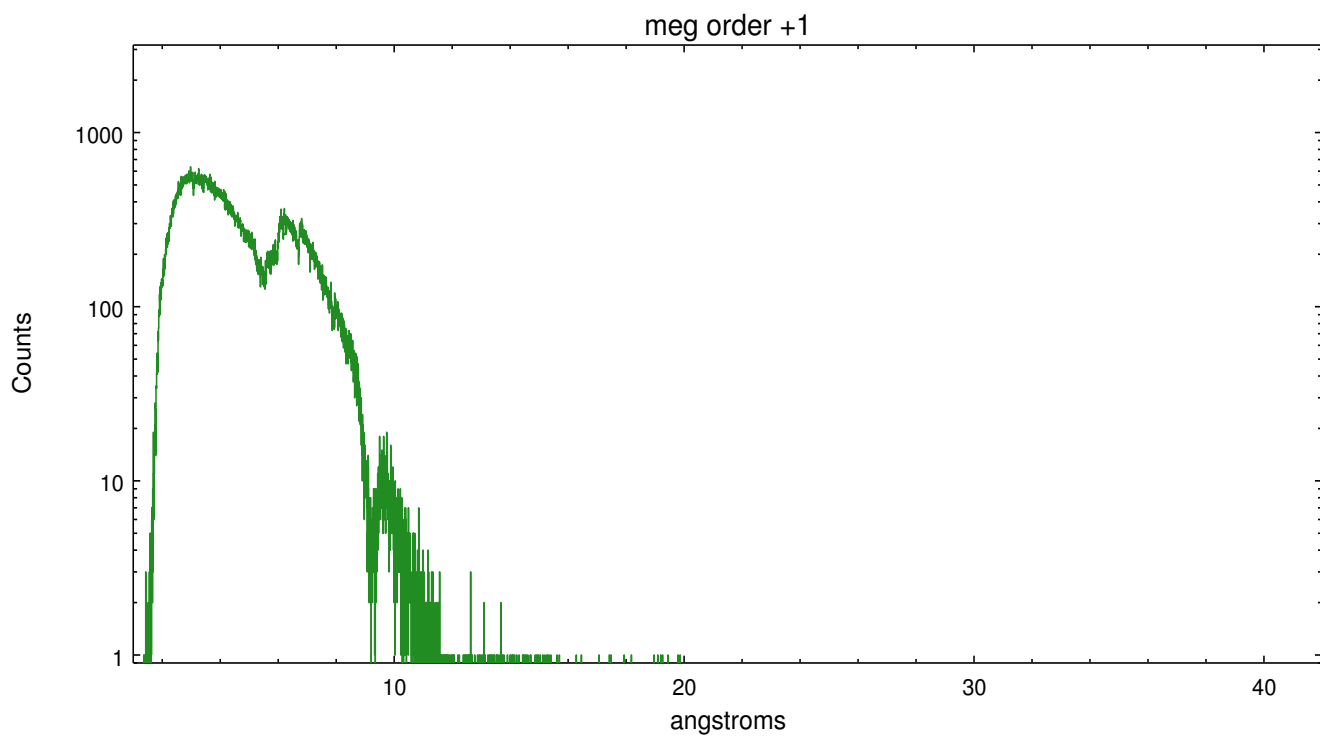
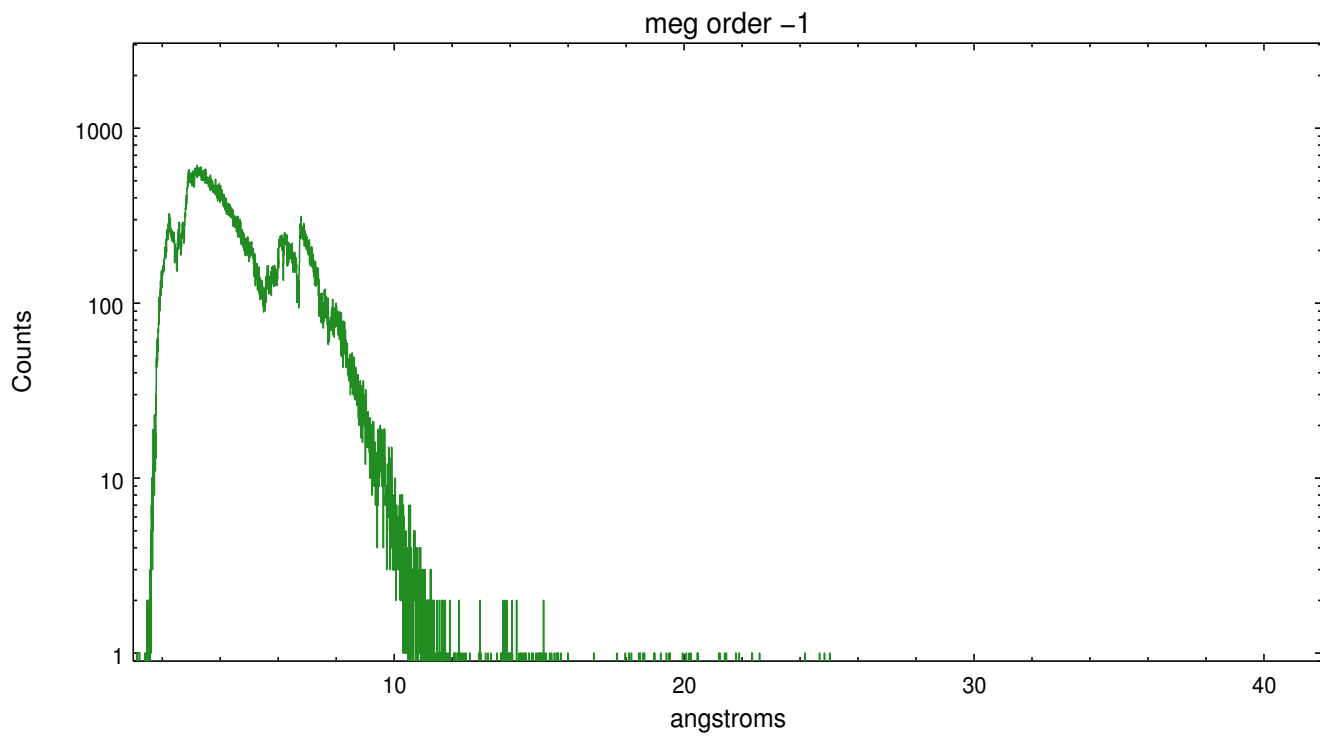
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	41310	21331	361828	157074	423193	19545	30133





# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.07.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	29.07959971118

## A.2 Comments

WARNING: grating spectra are visible in the 'level 1 bad-events' image, meaning that the grating spectra may have CCD pileup (and unreliable fluxes).