

# V&V Reference Report

## L2 ASCDS Version : 10.7.1

Observation 20193 - L2 Version 1  
Chandra X-Ray Center

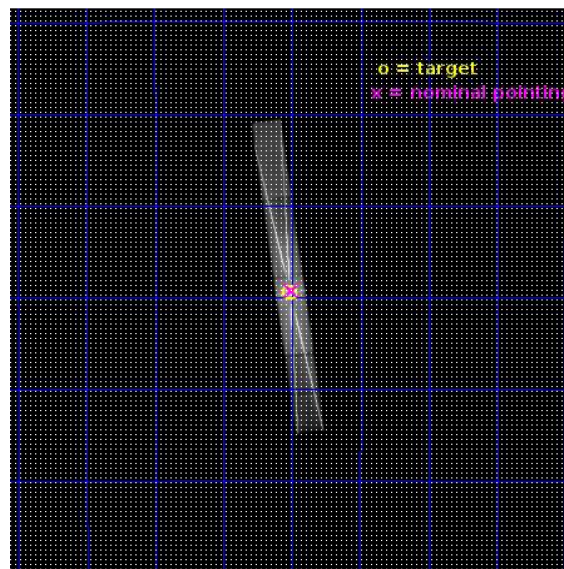
L2 Processing Date : Feb 17 2019

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# 1 Front

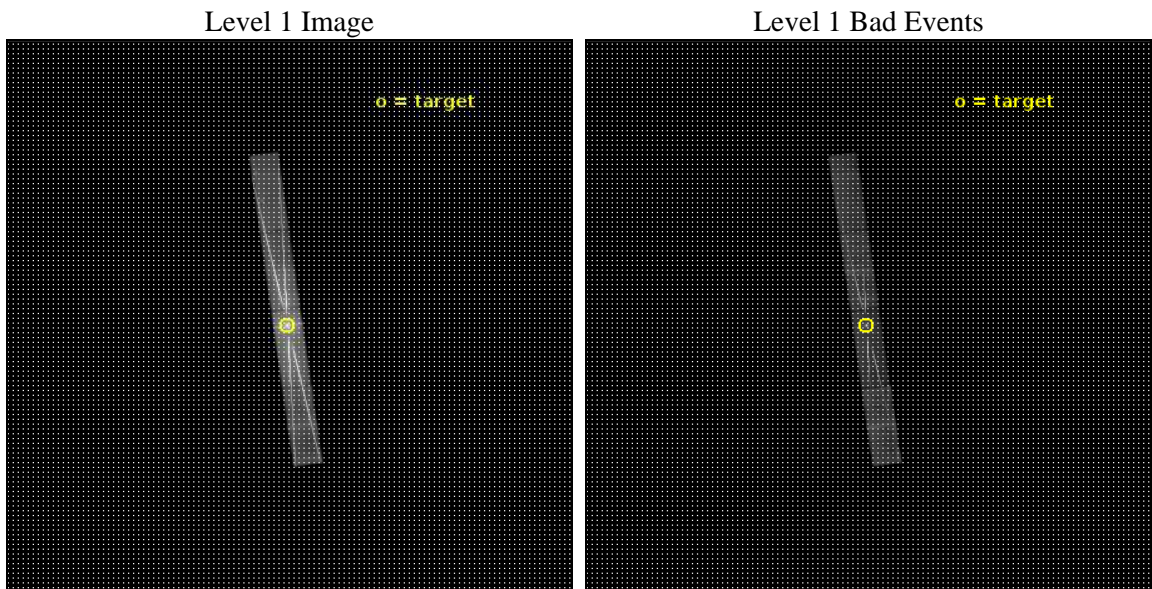
seq_num	401920	Sequence number
obs_id	20193	Observation id
title	Winds and jets in GX 13+1: a multi-wavelength campaign	Proposal ti
observer	Jeroen Homan	Principal investigator
object	GX 13+1	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	273.6295	Observer's specified target RA [deg]
dec_targ	-17.157208	Observer's specified target Dec [deg]
ra_nom	273.62602262818	Nominal RA [deg]
dec_nom	-17.154620777475	Nominal Dec [deg]
roll_nom	82.155603141695	Nominal Roll [deg]
revision	1	Processing version of data
ontime	25078.800996542	Sum of GTIs [s]
livetime	24249.469151559	Livetime [s]
ontime5	25078.800996542	Sum of GTIs [s]
ontime6	25078.800996542	Sum of GTIs [s]
ontime7	25078.800996542	Sum of GTIs [s]
ontime8	25078.800996542	Sum of GTIs [s]
l2events	2831798	Number of level 2 events



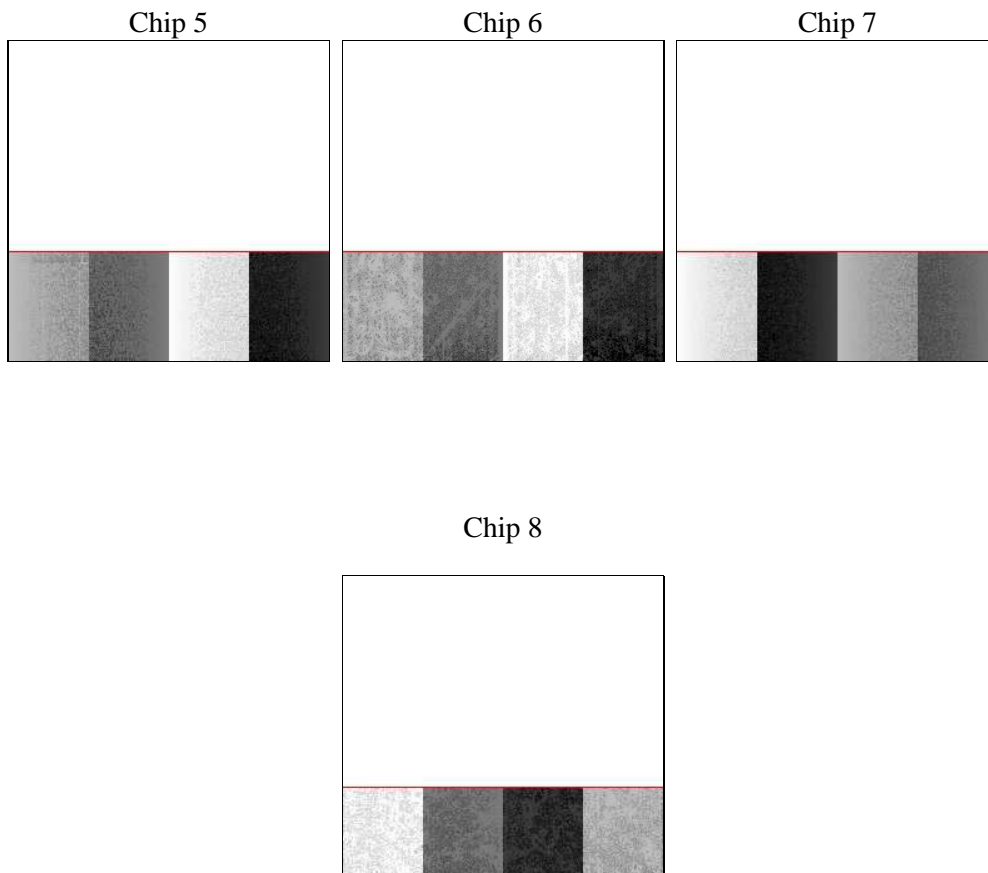
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	25078.800996542	Sum of GTIs [s]
caldbver	4.8.2	&#160	ontime5	25078.800996542	Sum of GTIs [s]
date	2019-02-17T23:55:43	Date and time of file creation	ontime6	25078.800996542	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	25078.800996542	Sum of GTIs [s]
			ontime8	25078.800996542	Sum of GTIs [s]
			l1events	3287638	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			zo_pos	(4072.44, 4077.76)	src1a sky pixel position
			zo_pos_tgd	(4071.80, 4077.06)	src1a sky pixel position via todetect

### 2.1.4 Events

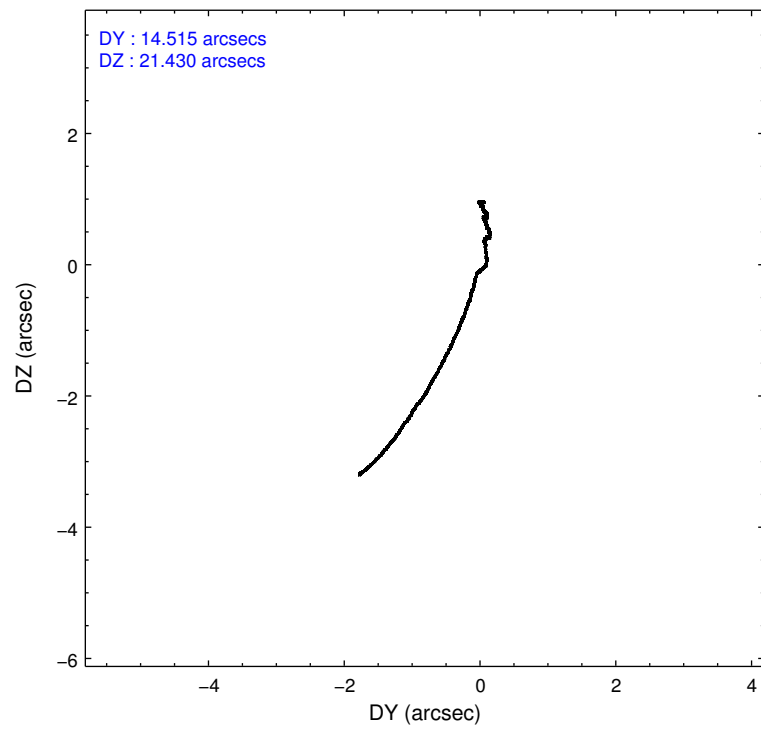
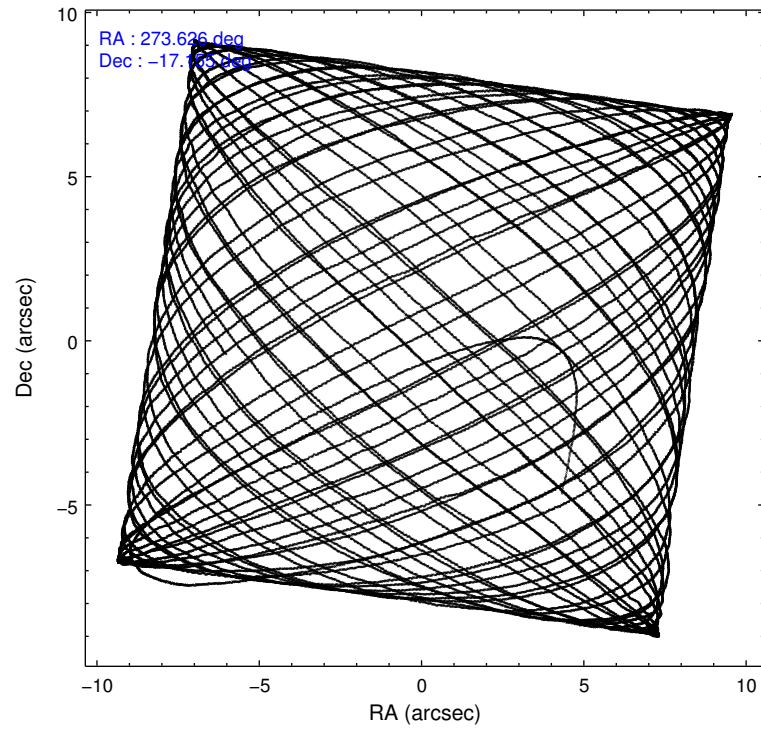
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	184861	1121322	1682561	298894
rejected events	54802	103116	127046	73691
rejected %	29%	9%	7%	24%

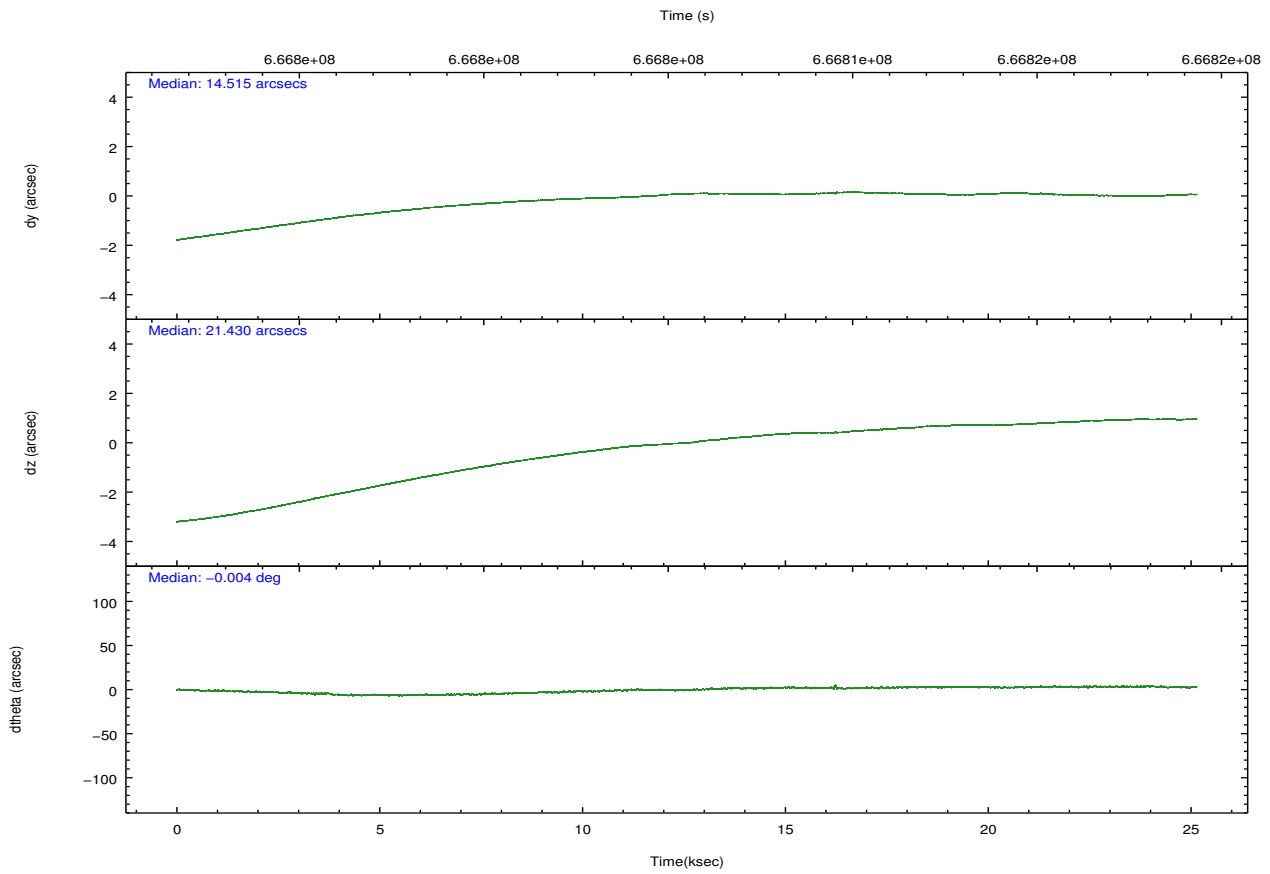
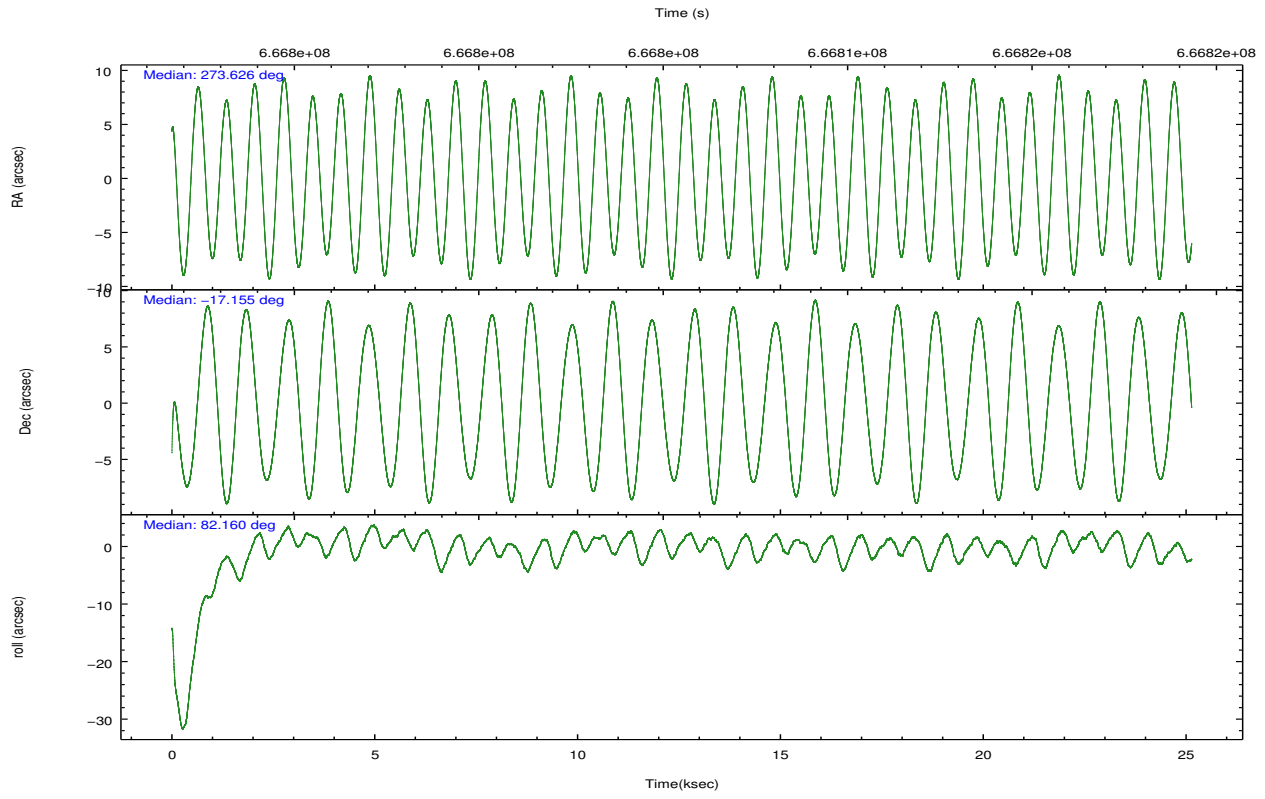
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	26815	712102	278740	160075
	14%	63%	16%	53%
grade 1 events	286	13979	6398	802
	0%	1%	0%	0%
grade 2 events	39935	142720	375583	29214
	21%	12%	22%	9%
grade 3 events	9602	49646	163826	10782
	5%	4%	9%	3%
grade 4 events	9732	49346	162661	10728
	5%	4%	9%	3%
grade 5 events	9383	15331	39374	5070
	5%	1%	2%	1%
grade 6 events	43988	64474	574847	14416
	23%	5%	34%	4%
grade 7 events	45120	73724	81132	67807
	24%	6%	4%	22%

## 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	273.637230	273.6260226281794	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-17.179903	-17.15462077747512	Subarray start row	1	1
[deg] Pointing Roll	82.002281	82.15560314169491	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)	666793073.184000	666791738.3822401			
Observation start date	2019-02-17T12:16:44	2019-02-17T11:55:38			
[s] Observation end time (MET)	666818073.184000	666818742.52135			
Observation end date	2019-02-17T19:13:24	2019-02-17T19:25:42			
Read mode	TIMED	TIMED			

## 2.3 Aspect





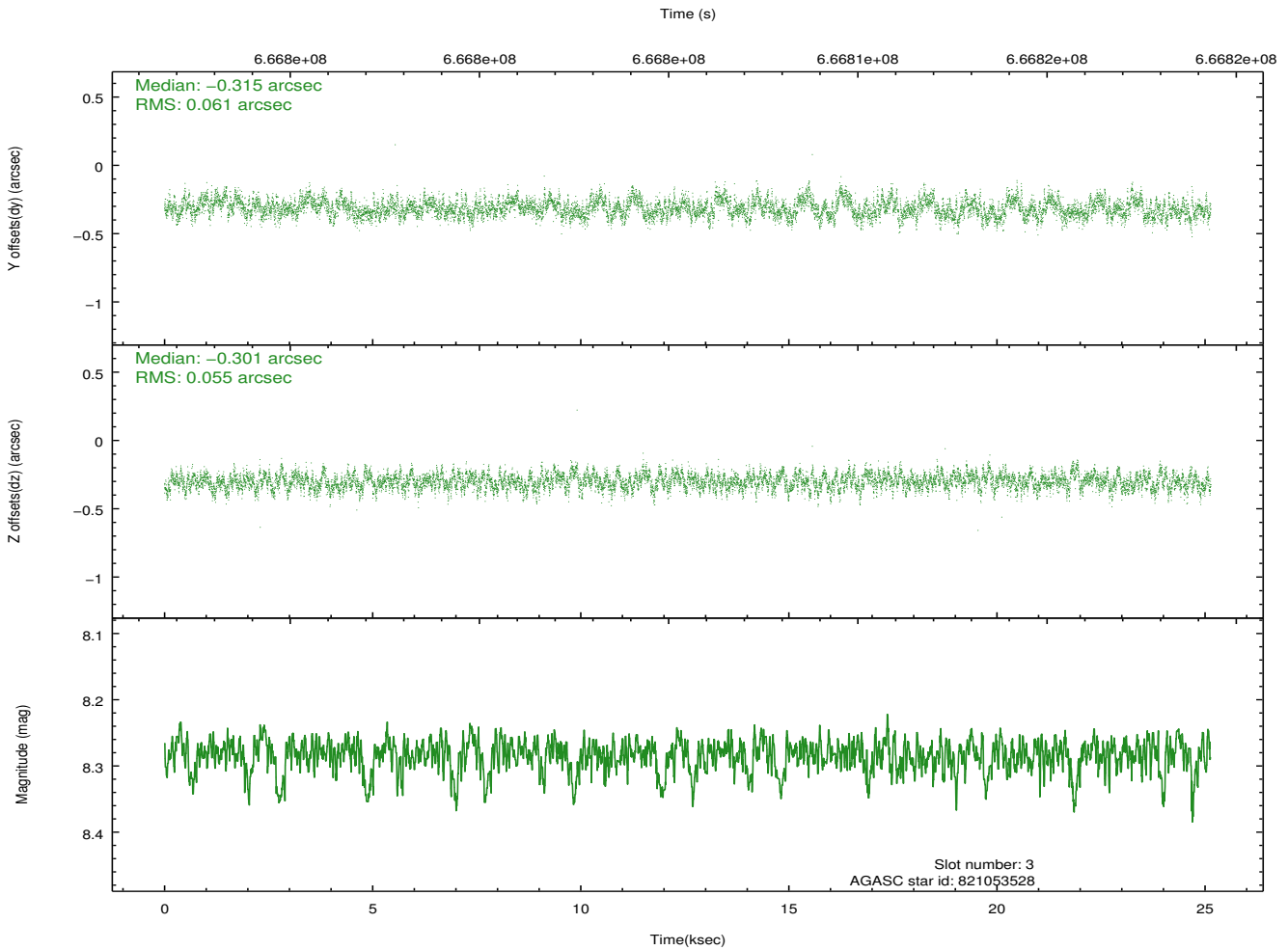
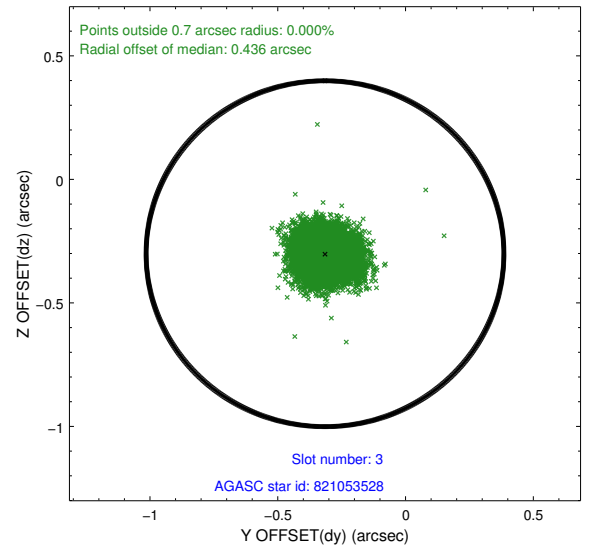
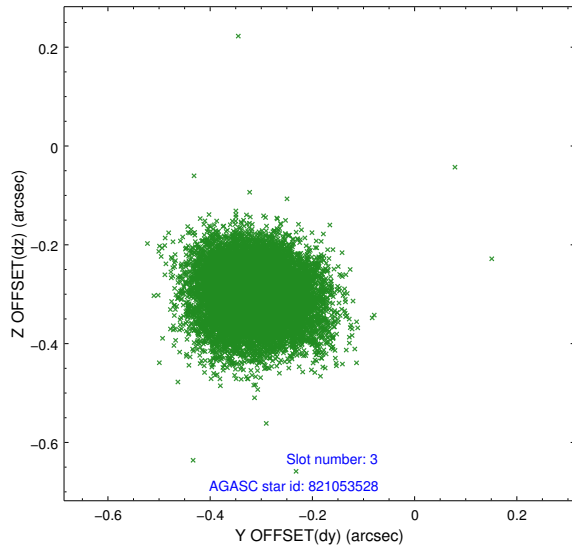
### Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-2	7.07	6132	1.000	-0.325	-0.265	0.027	0.081	0.000000	0.000000	-766.93	-1907
1	FID		ACIS-S-4	7.15	6130	1.000	0.813	0.228	0.016	0.088	0.000000	0.000000	2147.41	1
2	FID		ACIS-S-5	7.19	6132	1.000	-0.514	0.045	0.027	0.058	0.000000	0.000000	-1819.81	-5
3	GUIDE	used	821053528	8.28	12255	1.000	-0.315	-0.301	0.087	0.139	273.625019	-16.498449	2422.58	382
4	GUIDE	used	821561440	7.92	12258	1.000	0.739	0.782	0.090	0.143	273.991252	-17.607934	-1357.64	-1416
5	GUIDE	used	821570064	6.61	12264	1.000	-0.042	-0.139	0.077	0.119	273.185111	-17.414521	-1054.65	1419
6	GUIDE	used	821036968	7.02	12263	1.000	-0.624	-0.596	0.091	0.143	273.201148	-16.575658	1942.28	1791
7	GUIDE	used	821035568	7.87	12256	1.000	0.243	0.259	0.118	0.192	273.834124	-16.831485	1336.00	-497

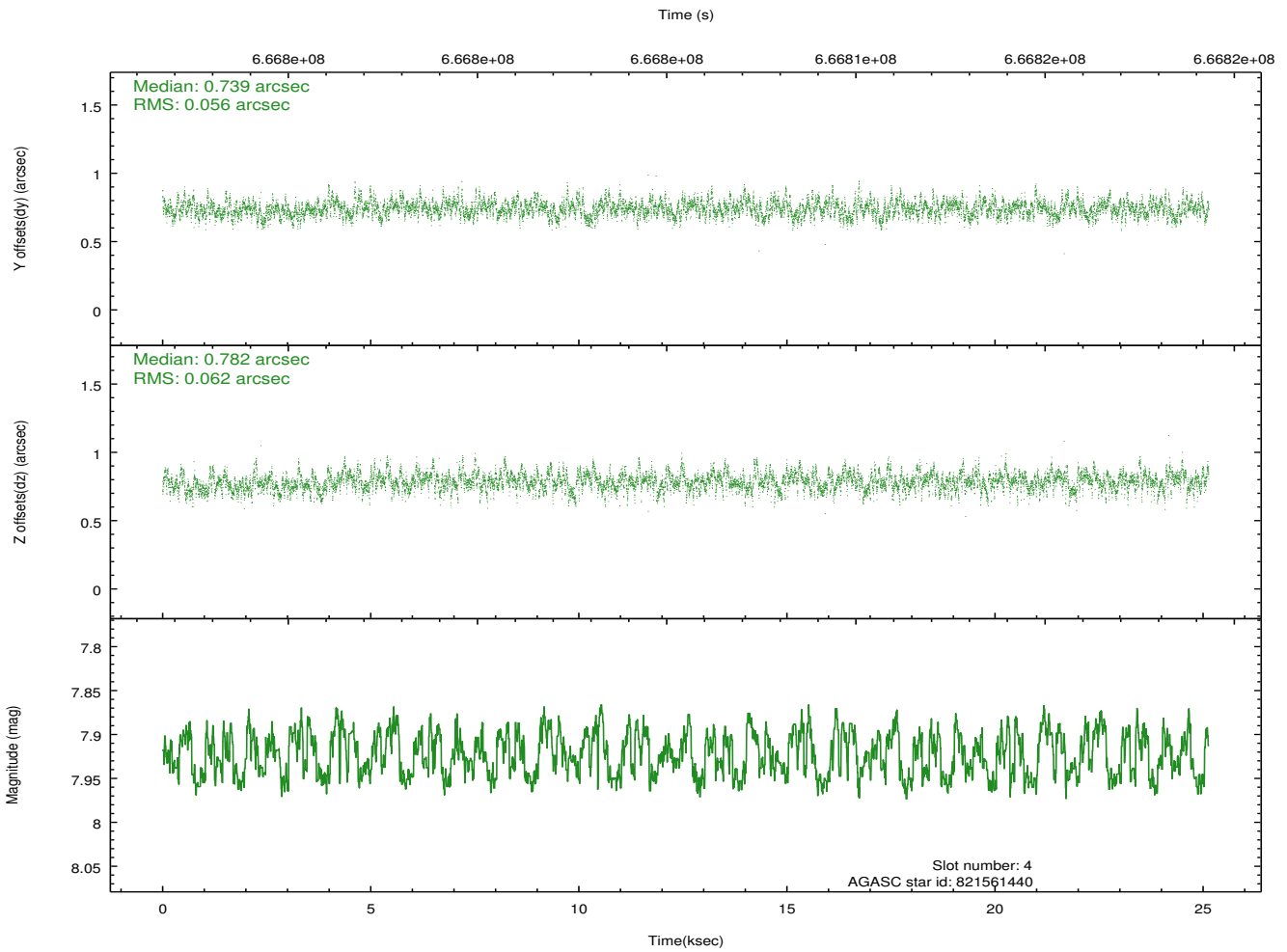
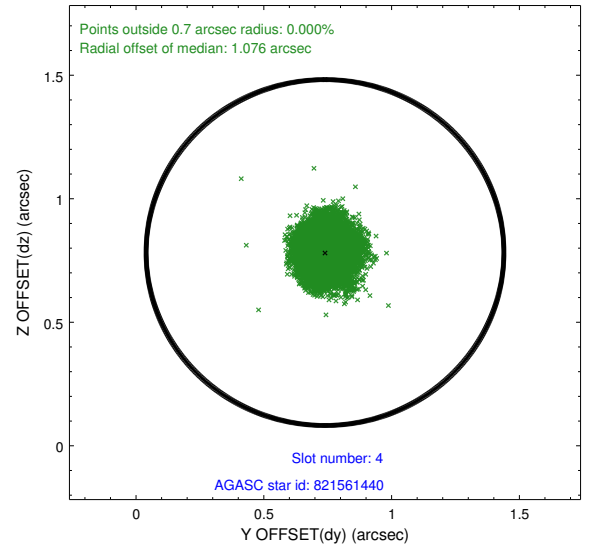
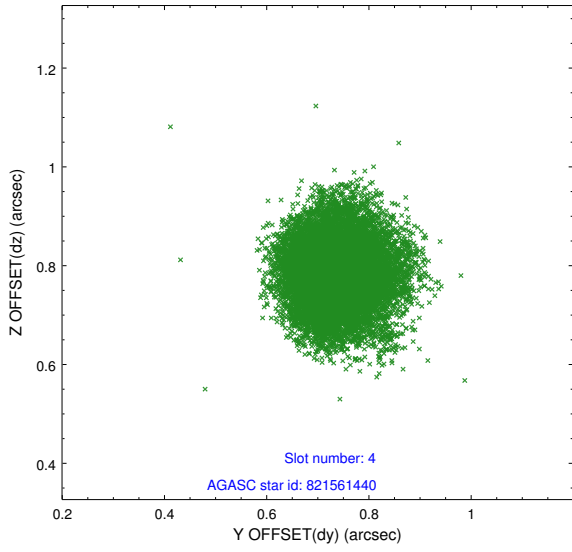
∞

## 2.4 Star Slots

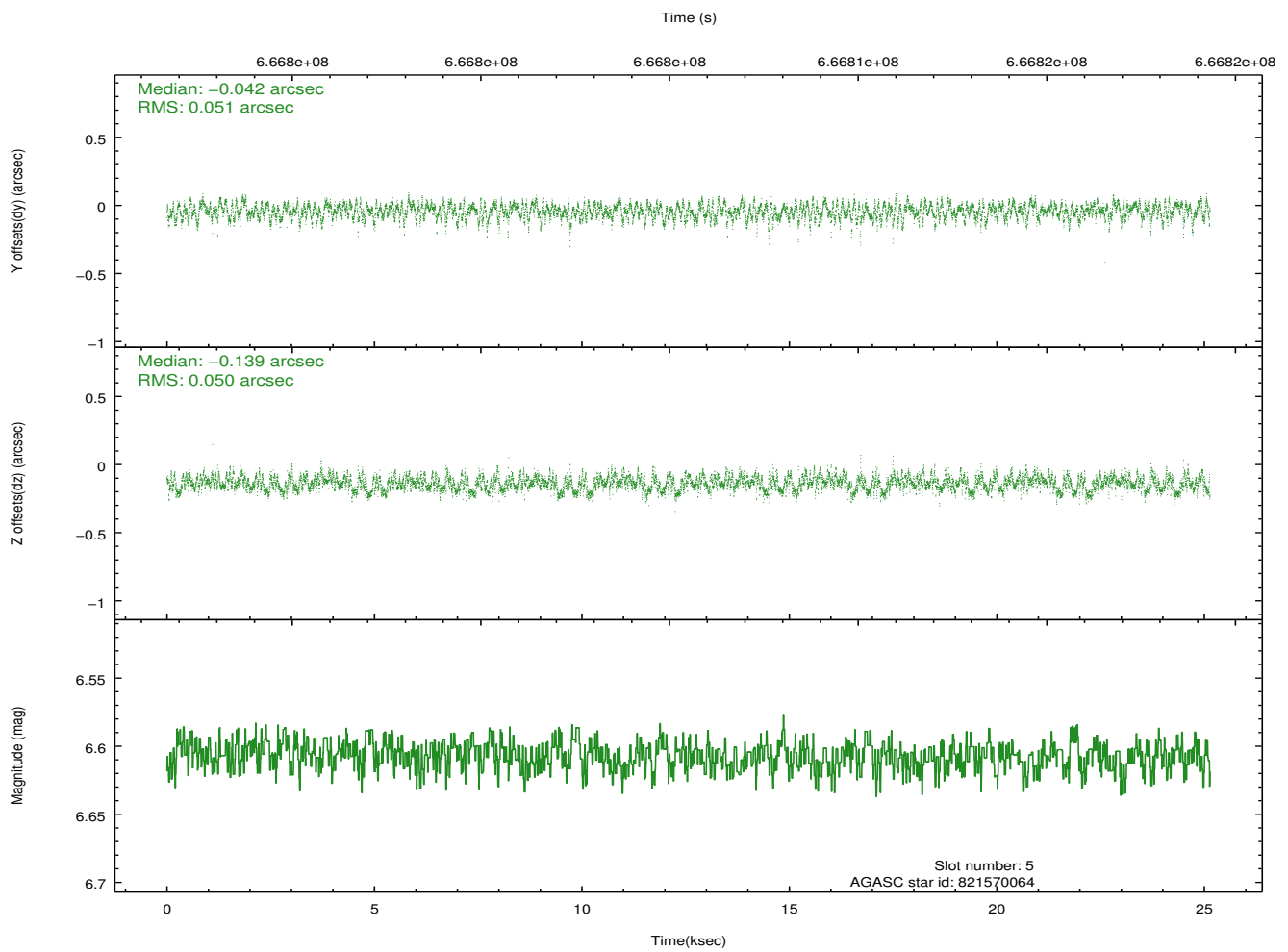
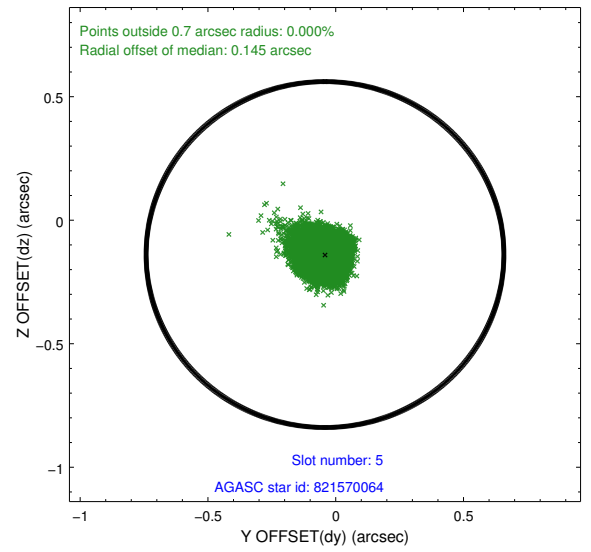
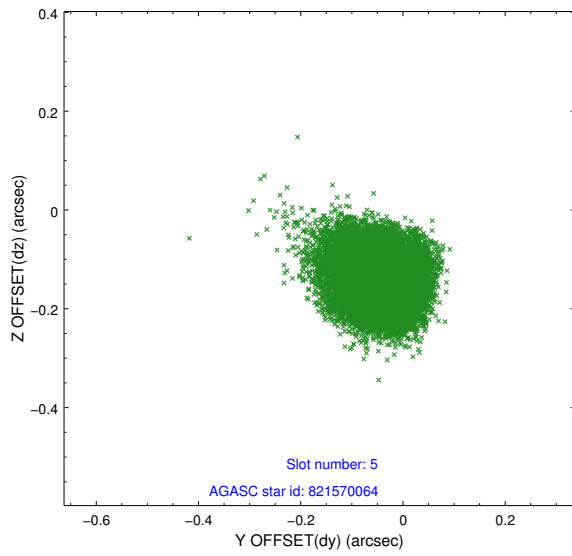
### 2.4.1 Slot 3



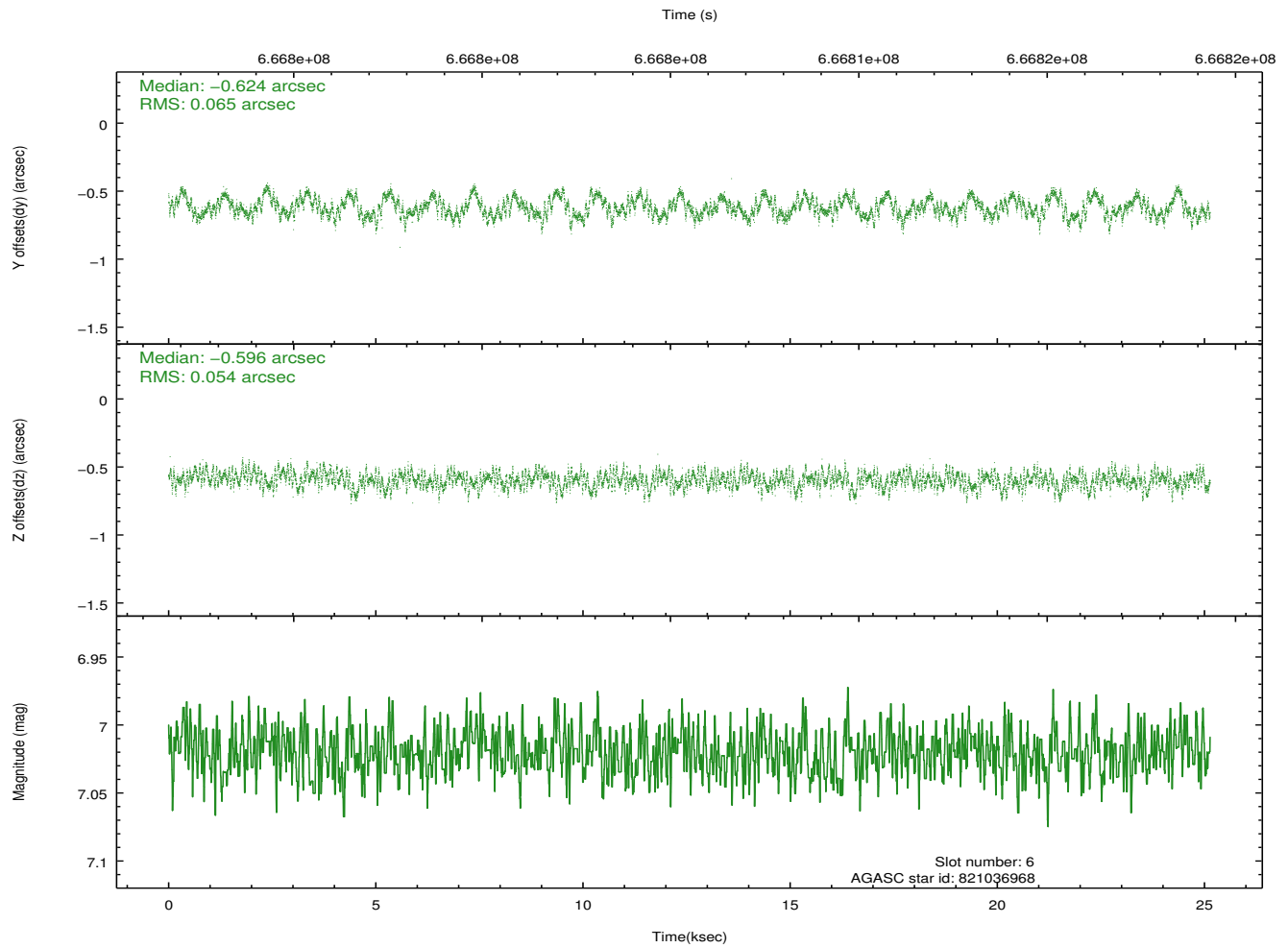
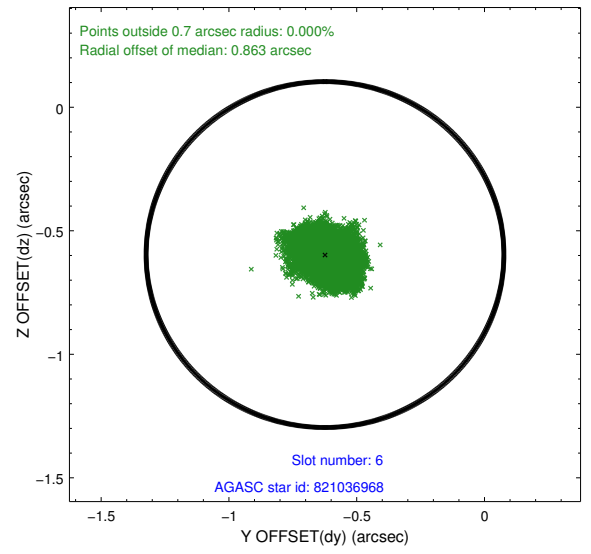
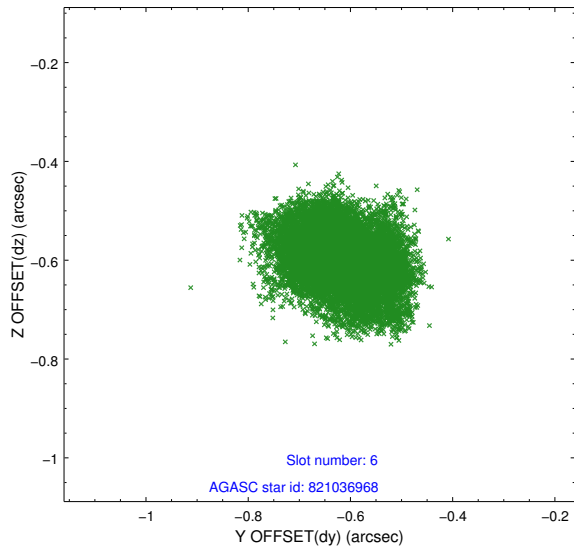
### 2.4.2 Slot 4



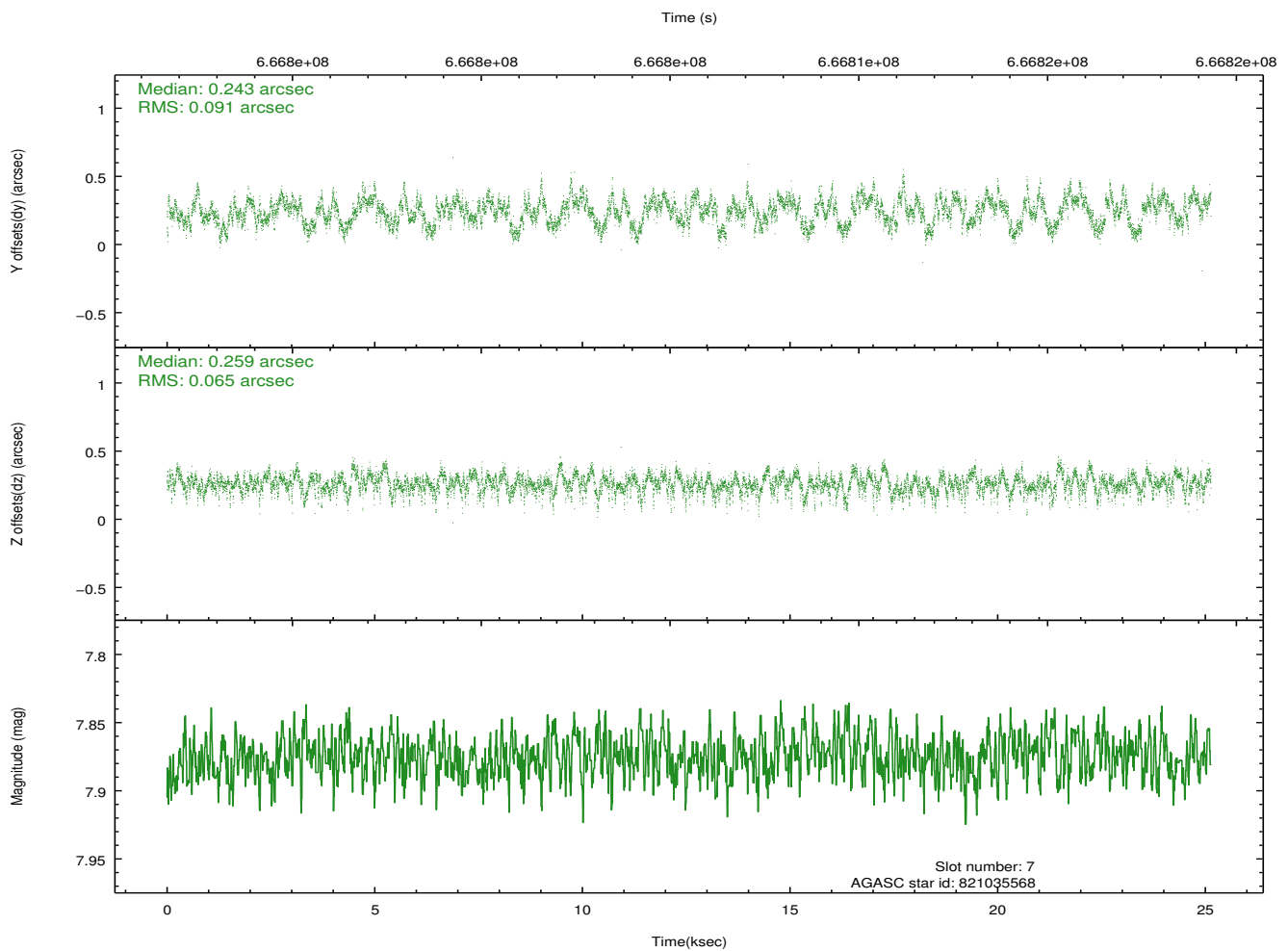
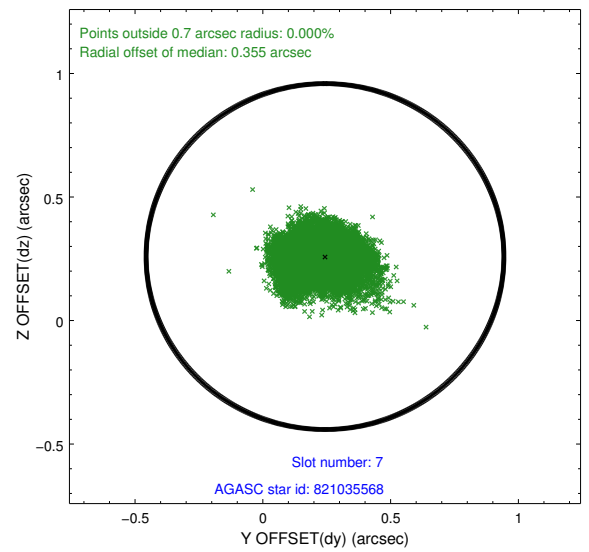
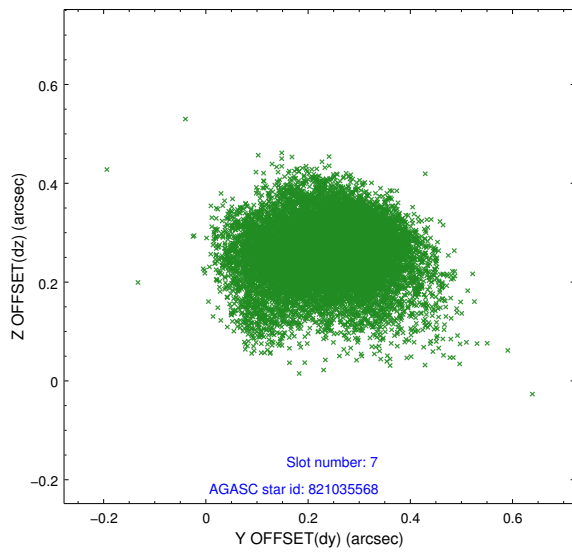
### 2.4.3 Slot 5



### 2.4.4 Slot 6

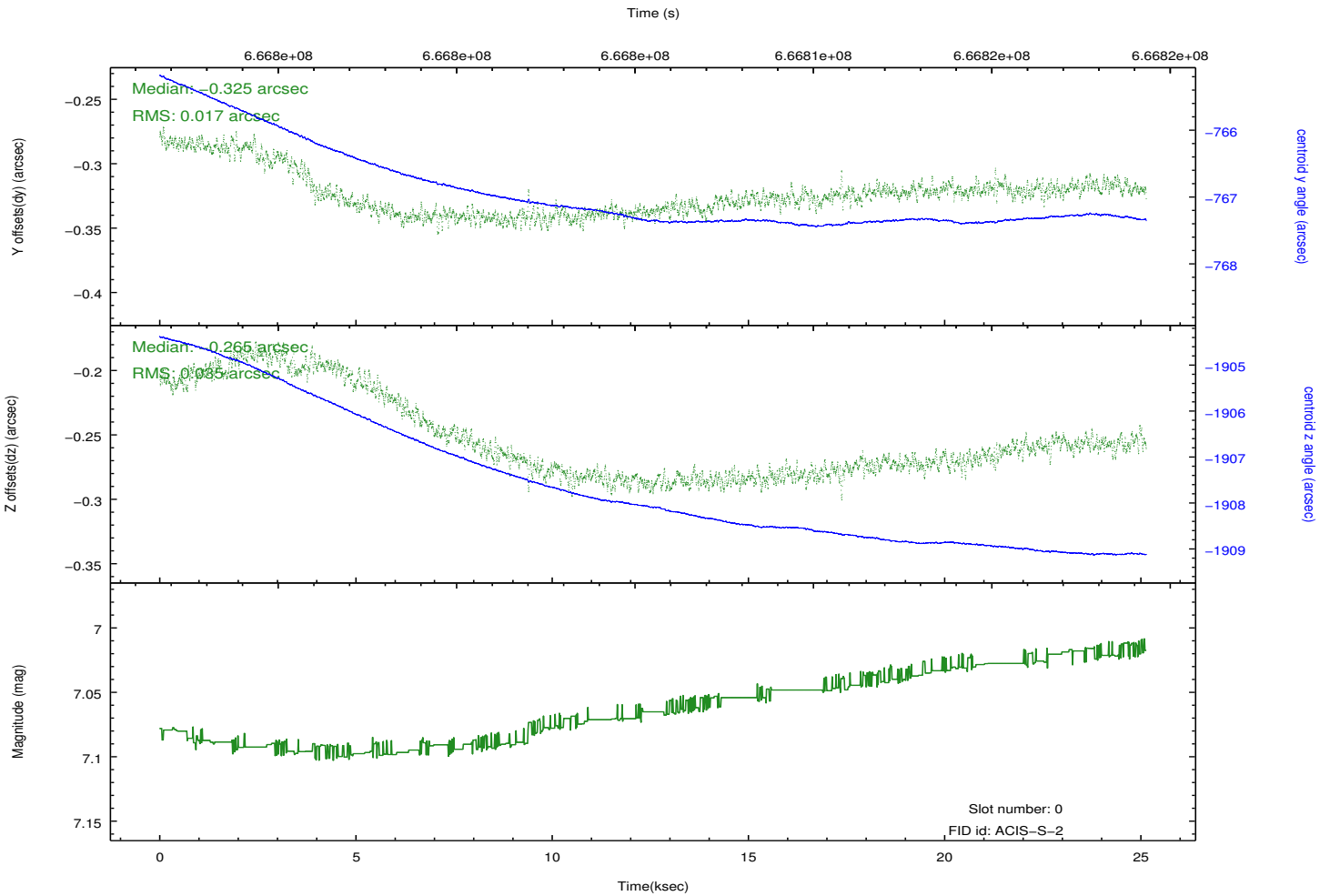
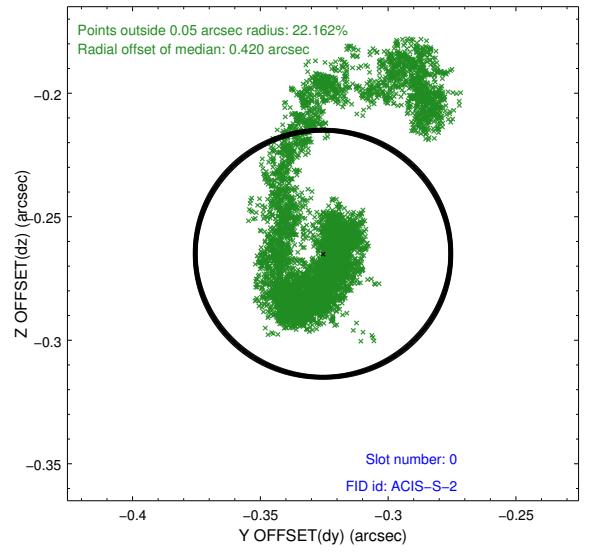
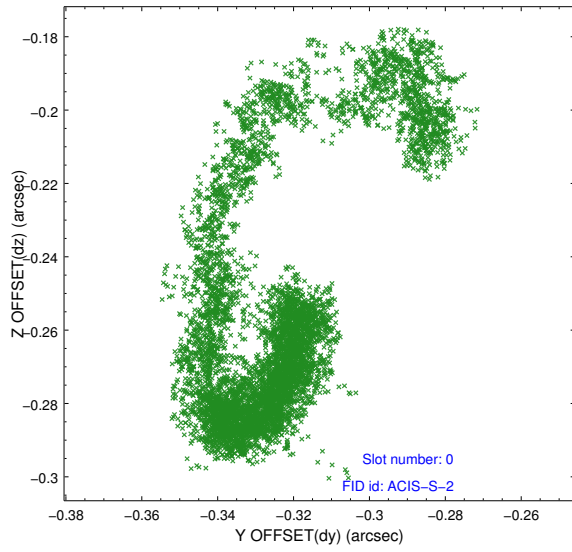


## 2.4.5 Slot 7

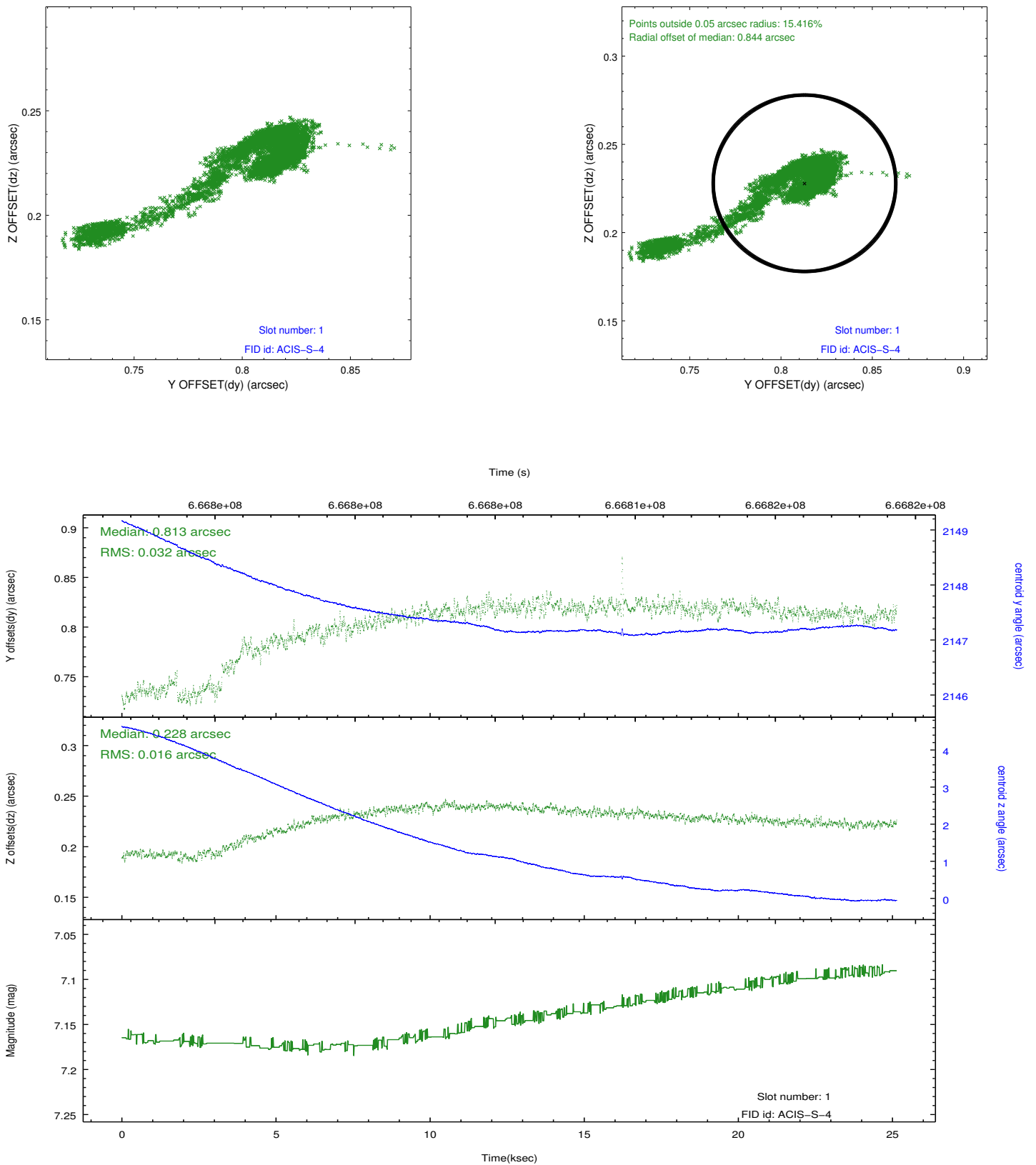


## 2.5 FID Slots

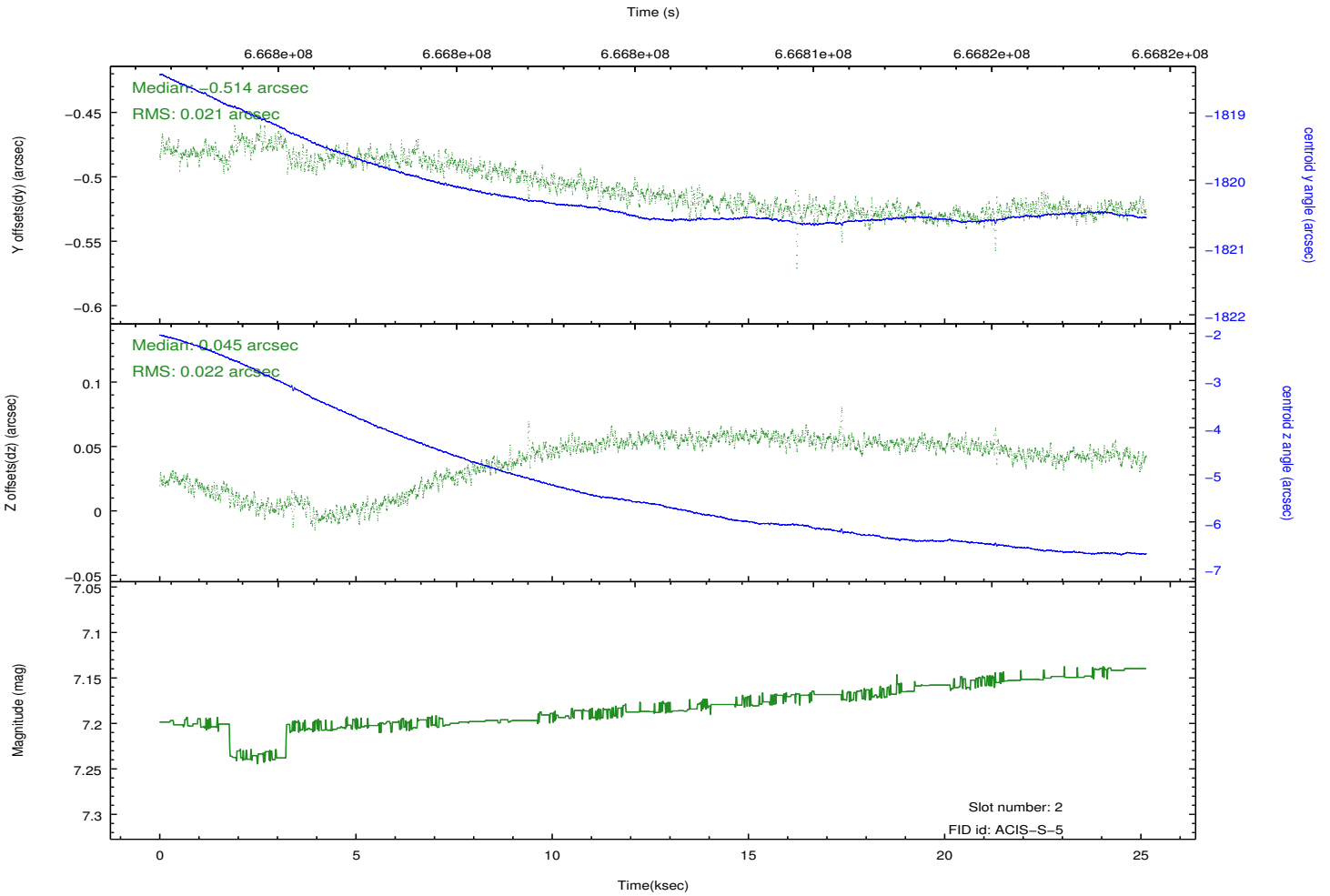
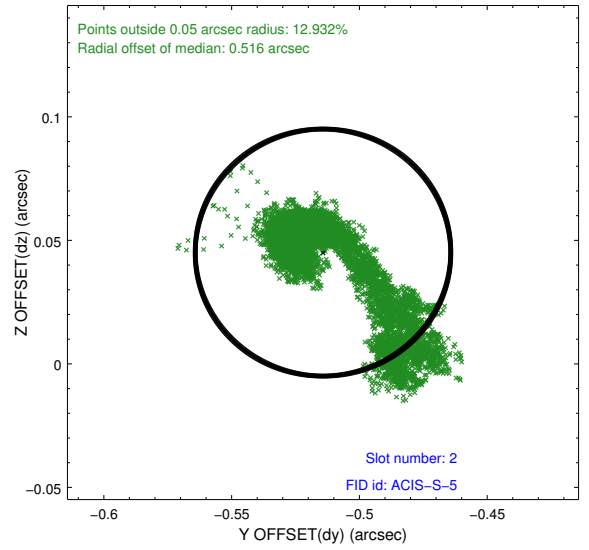
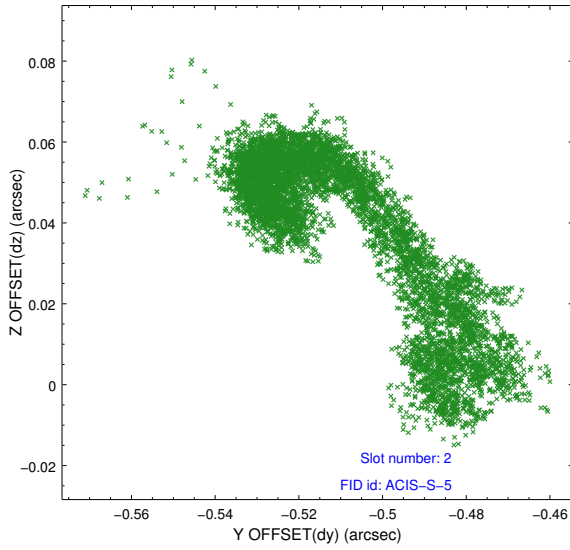
### 2.5.1 Slot 0



## 2.5.2 Slot 1

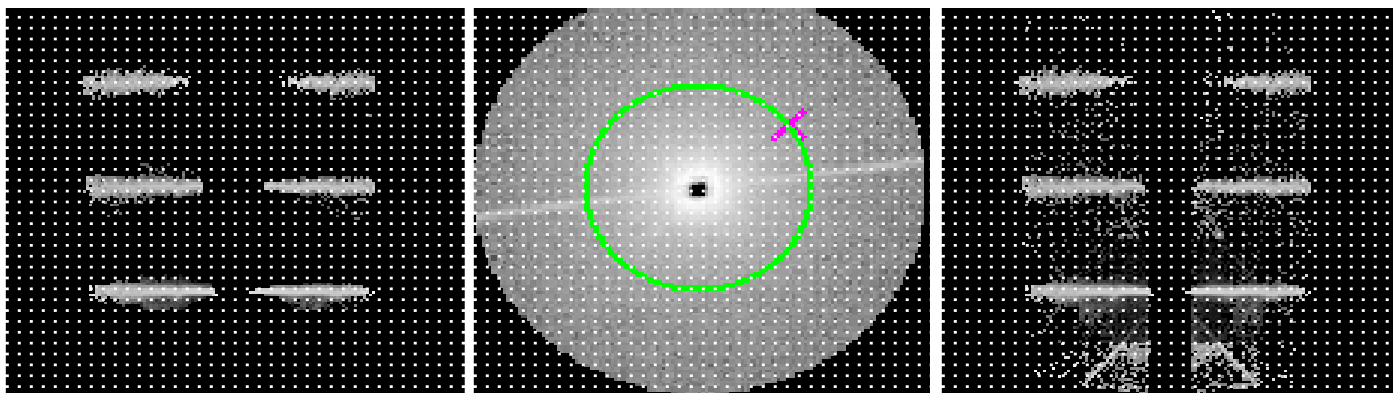


### 2.5.3 Slot 2



### 3 Gratings

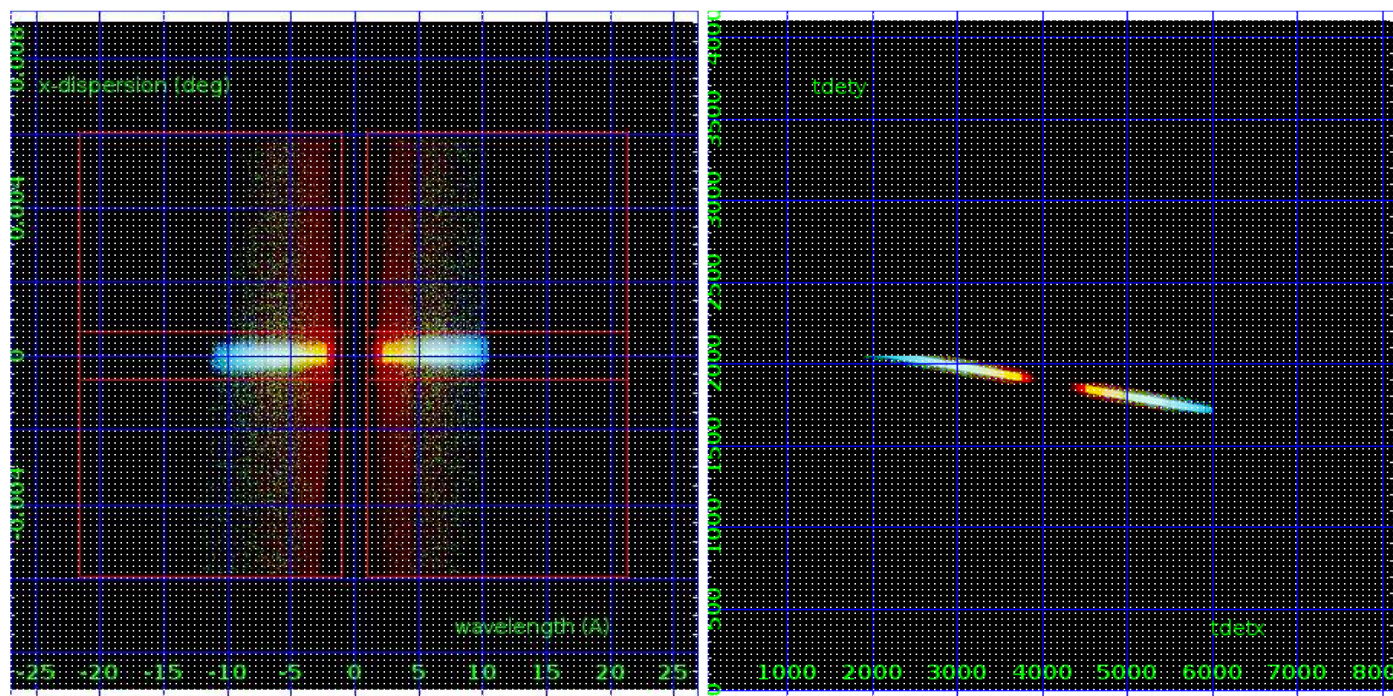
#### 3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

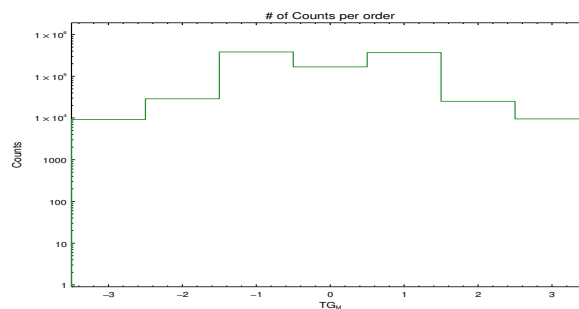
HEG Order Sort ALL

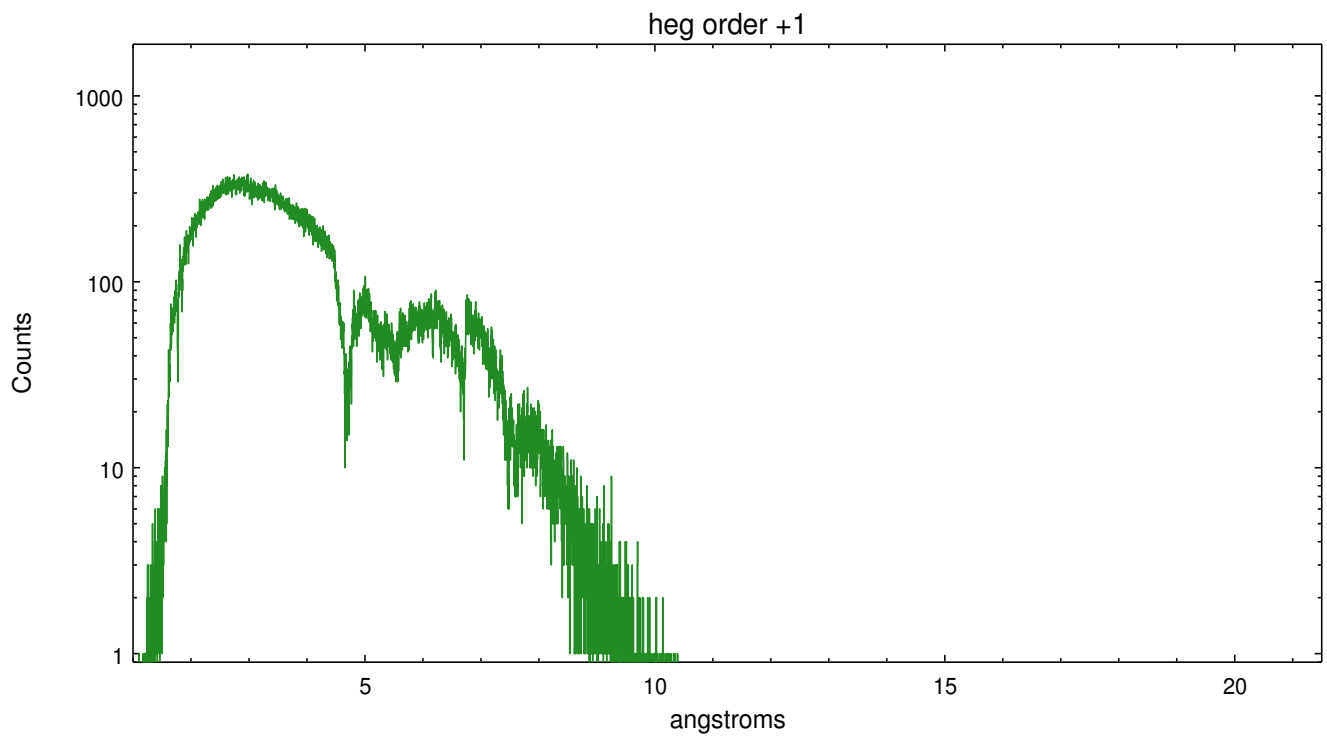
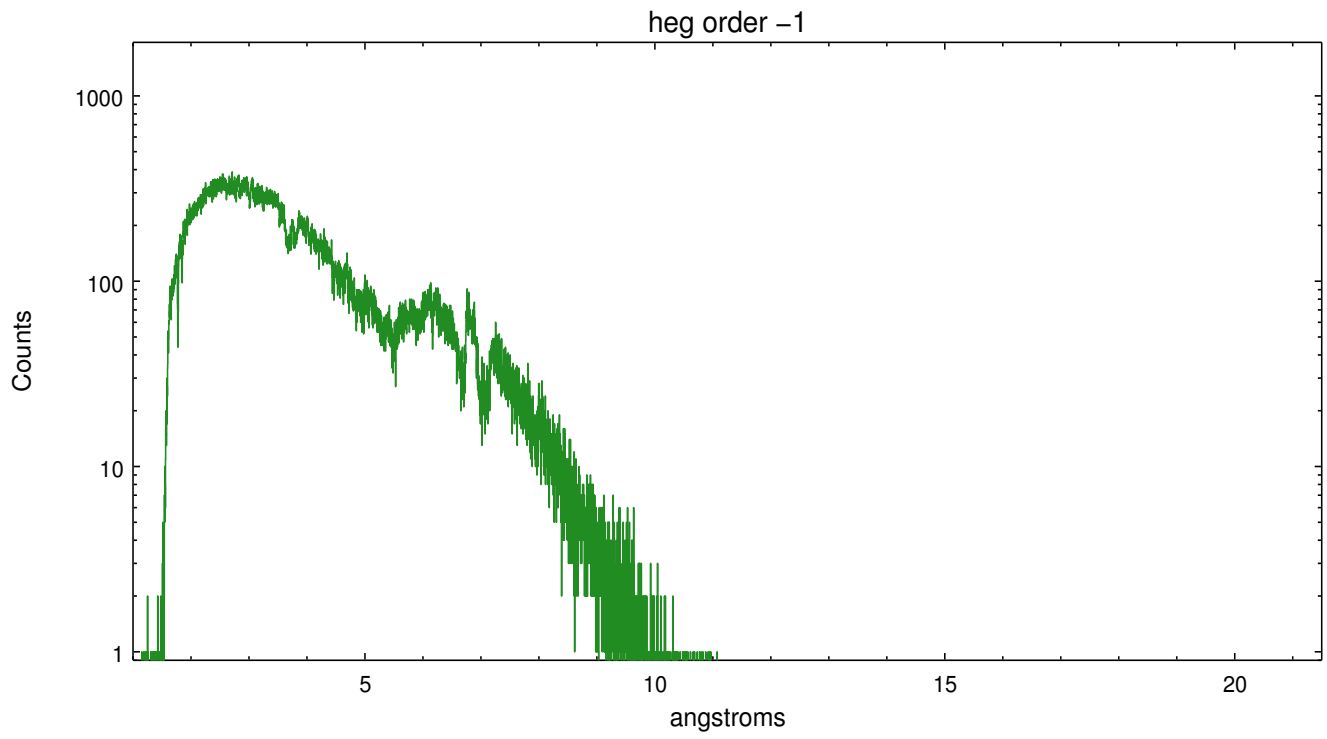


Spot Image HEG

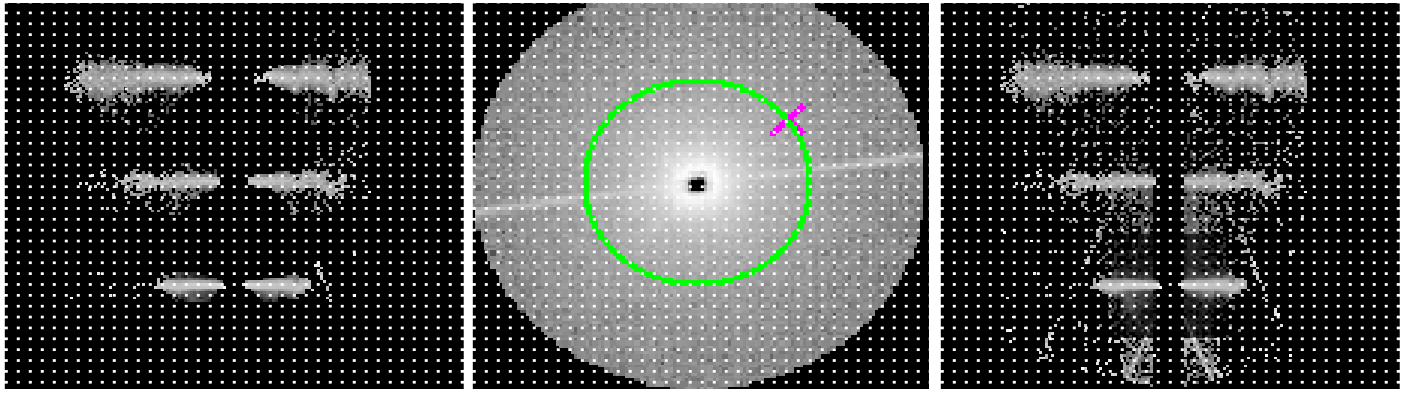
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	9250	28862	383054	167902	369207	25125	9510





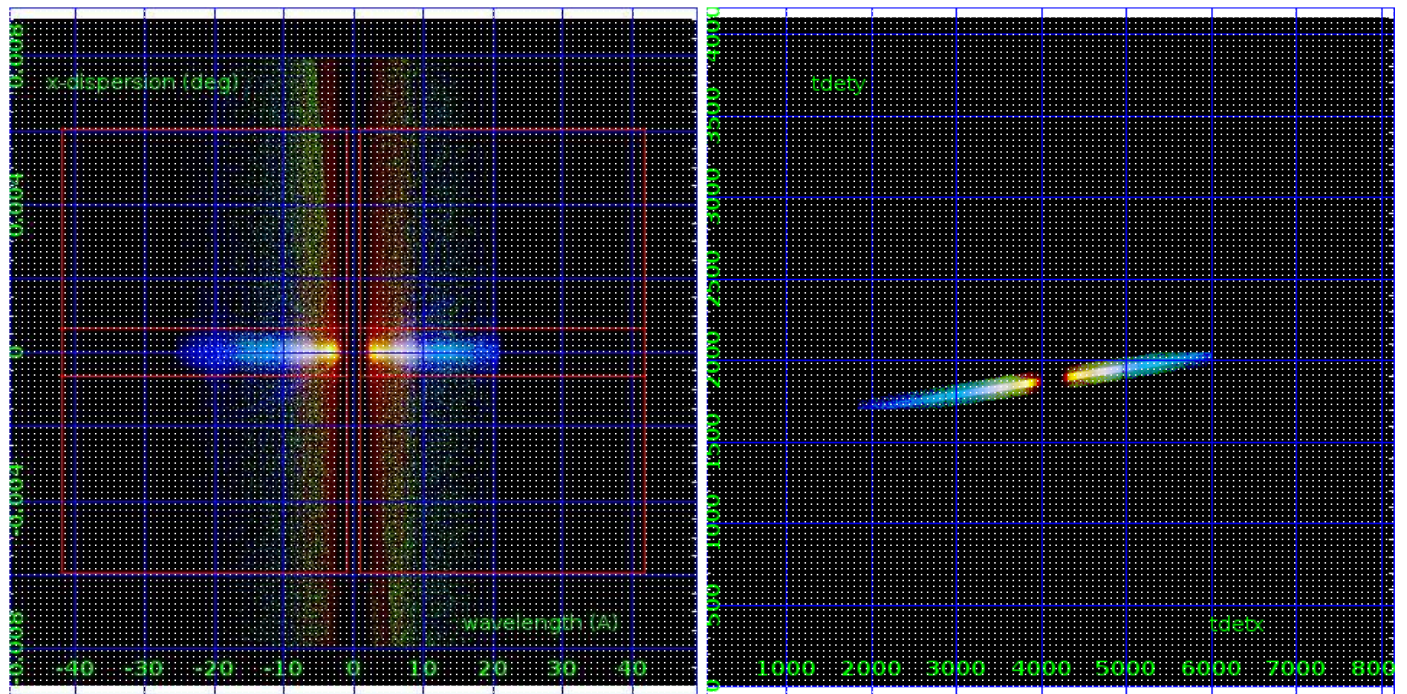
### 3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

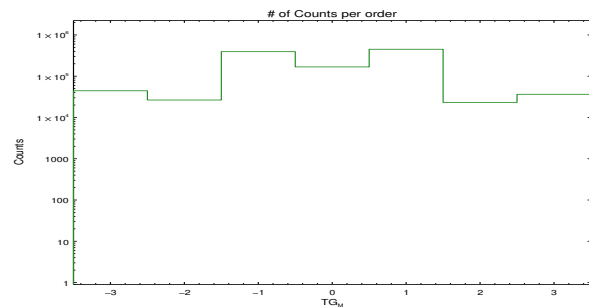
MEG Order Sort ALL

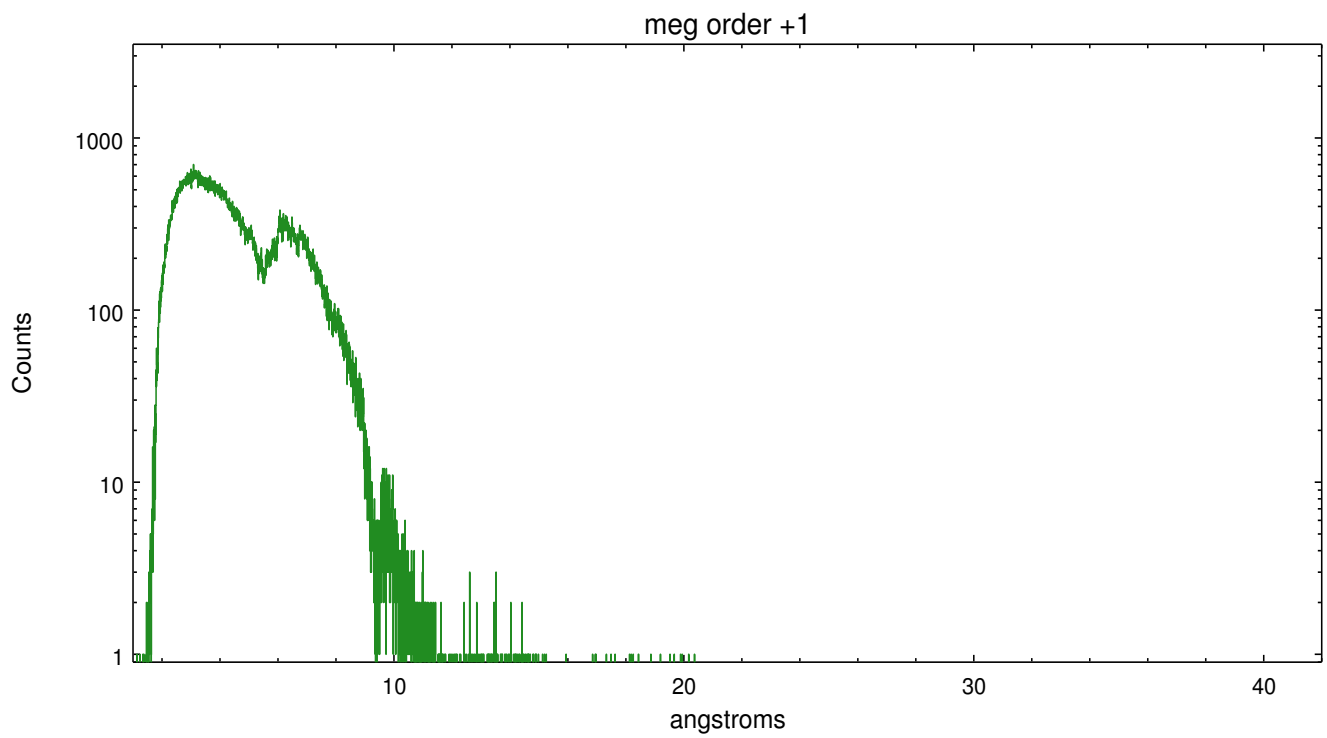
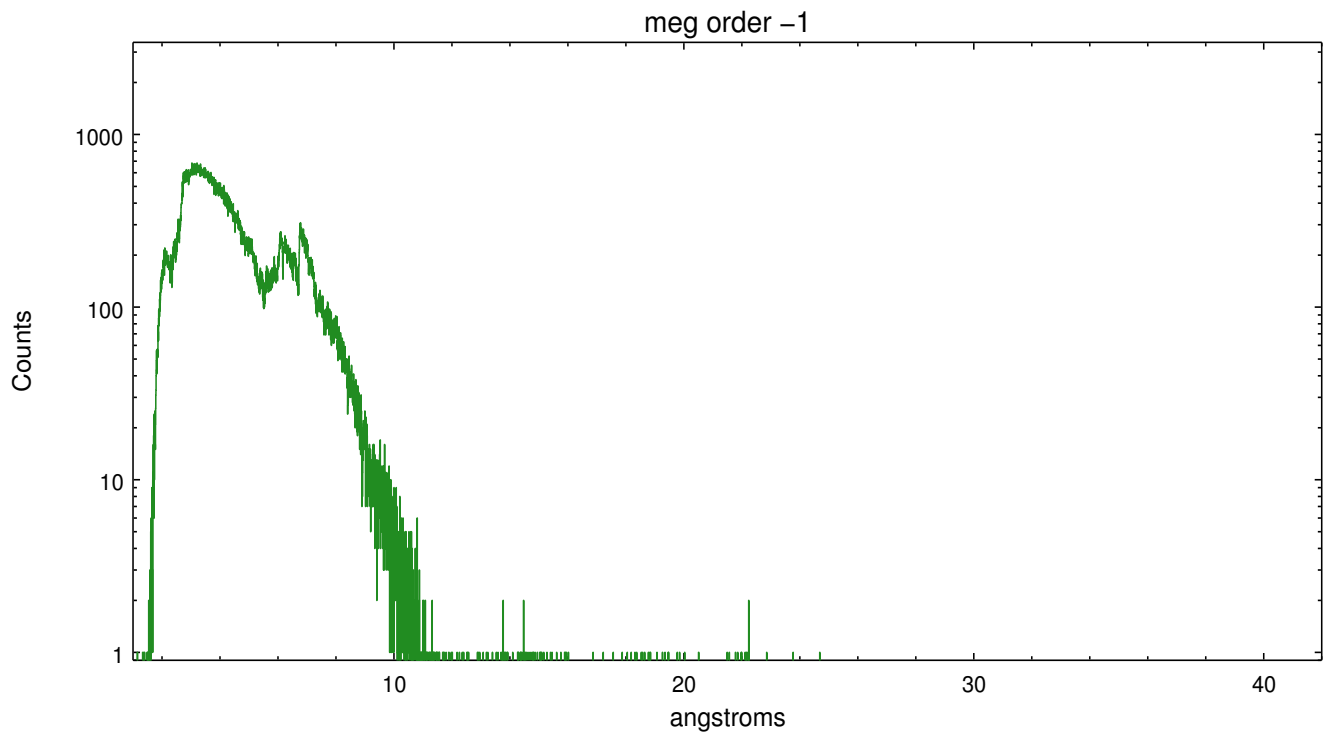


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	44356	26474	393333	167902	449313	23215	36417





# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2019.02.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.078800996542

## A.2 Comments