

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 6287 - L2 Version 2  
Chandra X-Ray Center

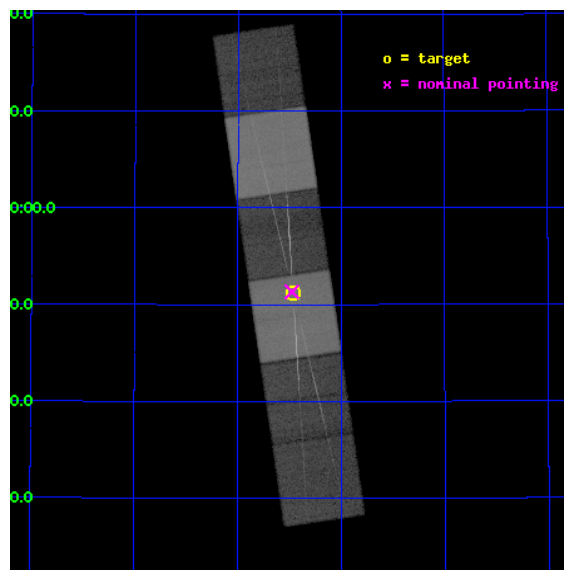
L2 Processing Date : Mar 29 2012

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# 1 Front

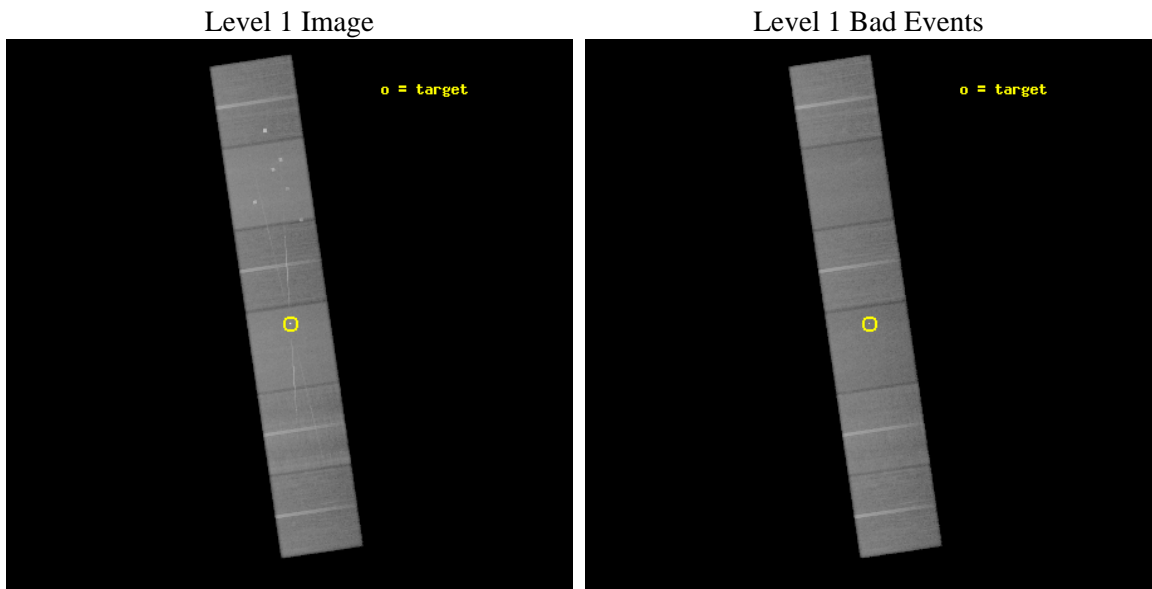
seq_num	200352	Sequence number
obs_id	6287	Observation id
title	Doppler Imaging of WR140's Collisionless Shocks at Apastron	Propo
observer	Dr Andrew Pollock	Principal investigator
object	WR 140	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	305.116667	Observer's specified target RA [deg]
dec_targ	43.854528	Observer's specified target Dec [deg]
ra_nom	305.11922910463	Nominal RA [deg]
dec_nom	43.855516624051	Nominal Dec [deg]
roll_nom	81.571977465474	Nominal Roll [deg]
revision	2	Processing version of data
ontime	49887.999814153	Sum of GTIs [s]
livetime	49256.287921559	Livetime [s]
ontime4	49887.999814153	Sum of GTIs [s]
ontime5	49887.999814153	Sum of GTIs [s]
ontime6	49887.999814153	Sum of GTIs [s]
ontime7	49887.999814153	Sum of GTIs [s]
ontime8	49887.999814153	Sum of GTIs [s]
ontime9	49887.999814153	Sum of GTIs [s]
l2events	758208	Number of level 2 events



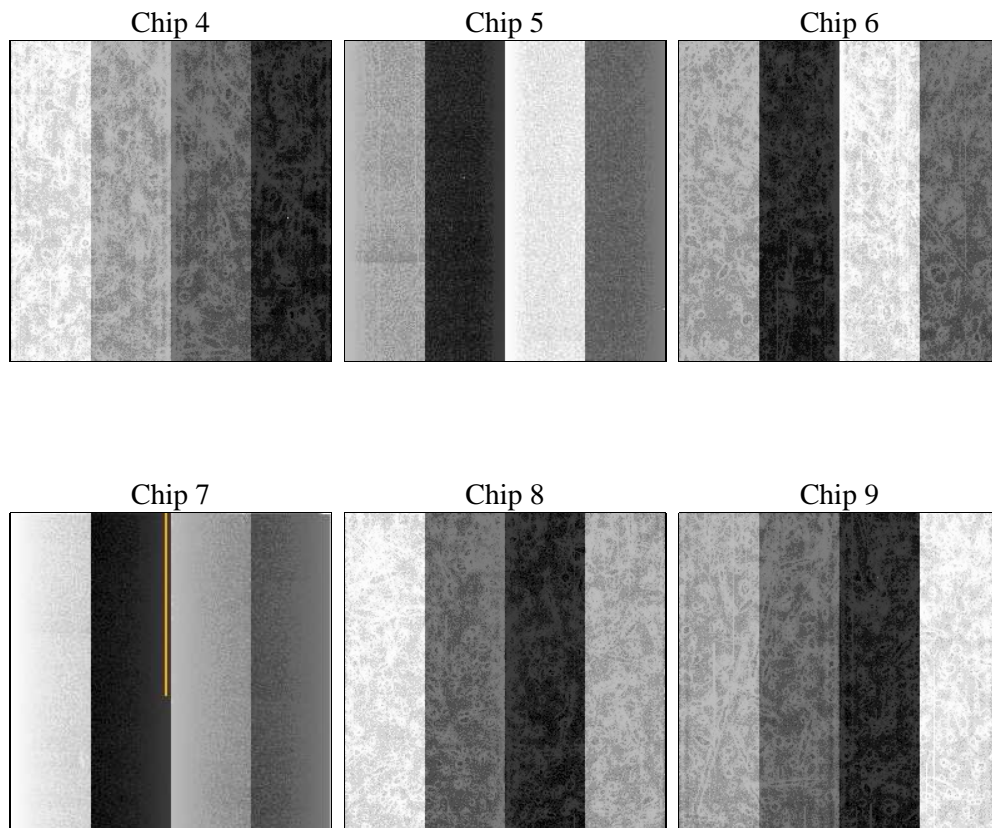
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	50000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	49887.999814153	Sum of GTIs [s]
caldbver	4.4.8	&#160	ontime4	49887.999814153	Sum of GTIs [s]
date	2012-03-29T14:27:56	Date and time of file creation	ontime5	49887.999814153	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	49887.999814153	Sum of GTIs [s]
			ontime7	49887.999814153	Sum of GTIs [s]
			ontime8	49887.999814153	Sum of GTIs [s]
			ontime9	49887.999814153	Sum of GTIs [s]
			l1events	3261328	Number of level 1 events

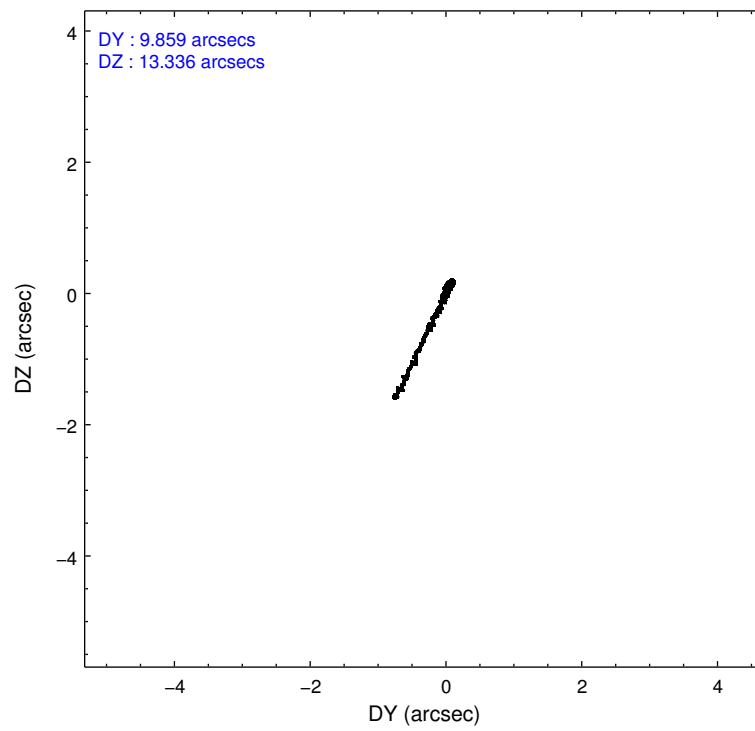
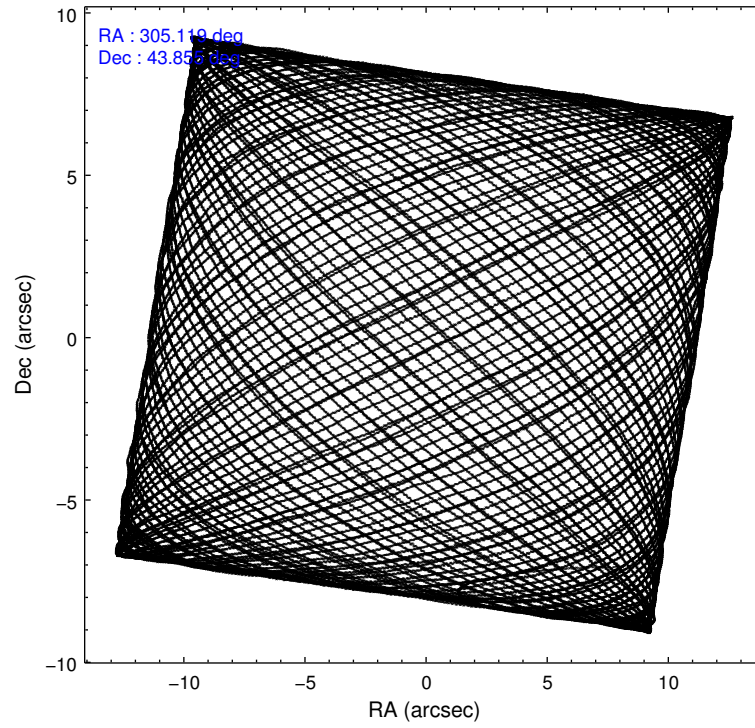
### 2.1.4 Events

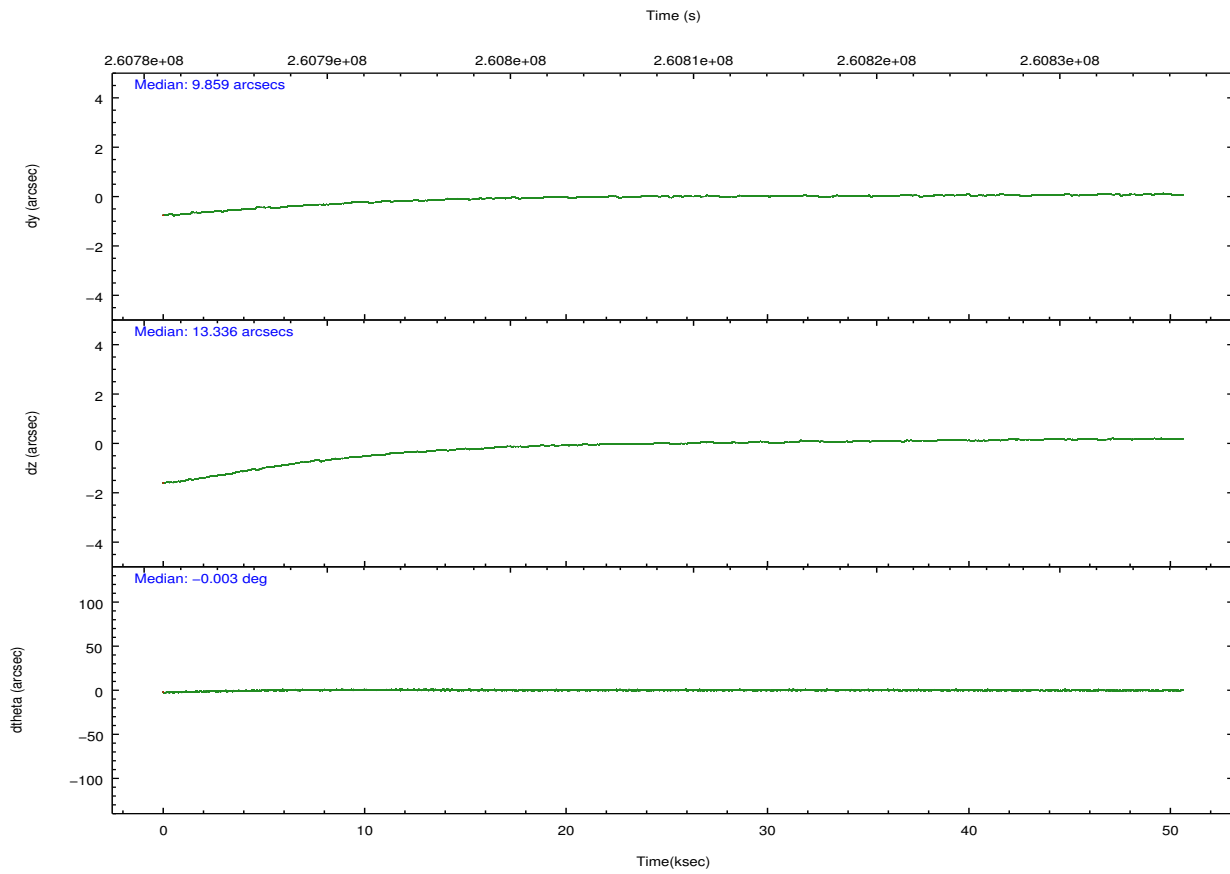
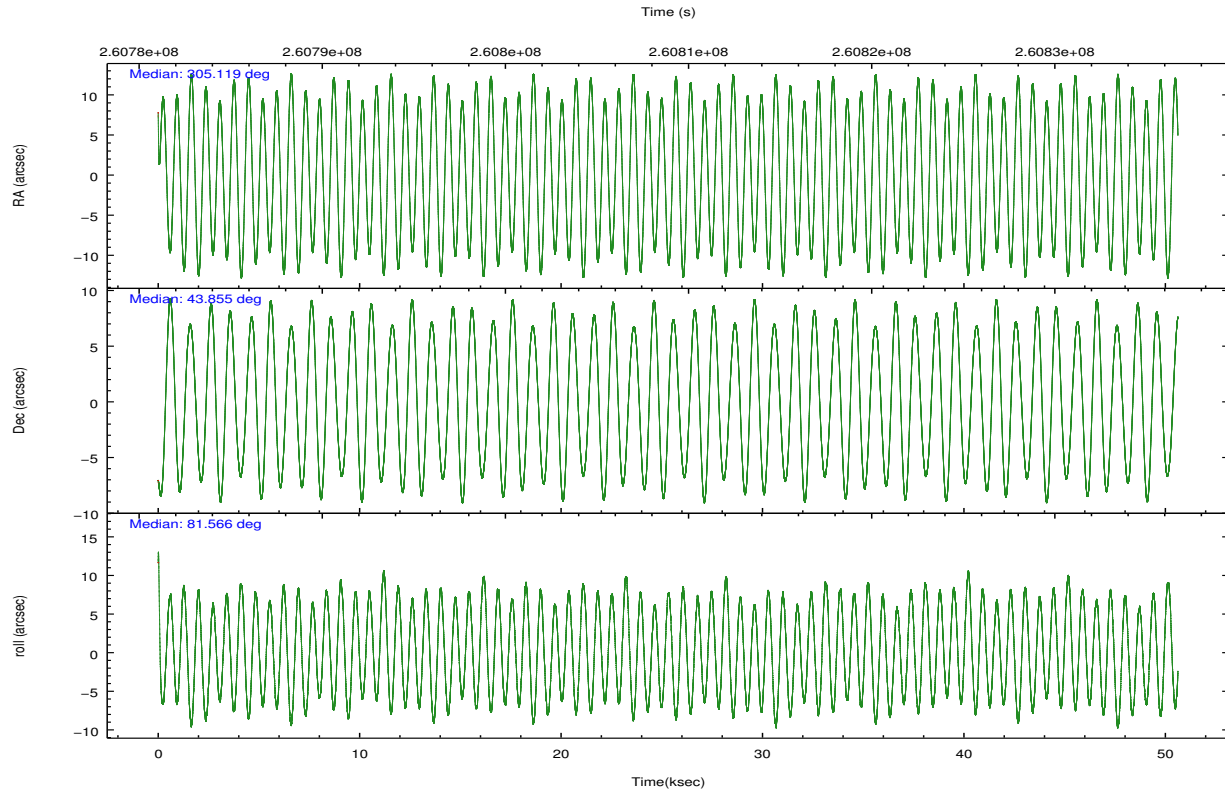
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	499575	666746	458400	620433	571064	445110	grade 0 events	35259	32156	31346	25629	43766	23201
rejected events	433524	358321	392879	351703	441676	390066		7%	4%	6%	4%	7%	5%
rejected %	86%	53%	85%	56%	77%	87%	grade 1 events	502	994	289	745	452	300
								0%	0%	0%	0%	0%	0%
							grade 2 events	11520	91198	12491	54494	28037	10852
								2%	13%	2%	8%	4%	2%
							grade 3 events	5511	12191	5320	23772	13193	5357
								1%	1%	1%	3%	2%	1%
							grade 4 events	5347	11824	5390	23787	12206	5215
								1%	1%	1%	3%	2%	1%
							grade 5 events	19811	48759	20266	57575	26974	21768
								3%	7%	4%	9%	4%	4%
							grade 6 events	8419	161090	10978	141074	32201	10423
								1%	24%	2%	22%	5%	2%
							grade 7 events	413206	308534	372320	293357	414235	367994
								82%	46%	81%	47%	72%	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	305.133573	305.1192291046341	Subarray requested	NONE	NONE
[deg] Pointing Dec	43.830328	43.85551662405148	Alternating exposures requested	N	N
[deg] Pointing Roll	81.405410	81.5719774654744	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	260784191.184000	260782841.73997			
Observation start date	2006-04-07T08:02:06	2006-04-07T07:40:41			
[s] Observation end time (MET)	260834191.184000	260834939.9299			
Observation end date	2006-04-07T21:55:26	2006-04-07T22:08:59			
Read mode	TIMED	TIMED			

## 2.3 Aspect



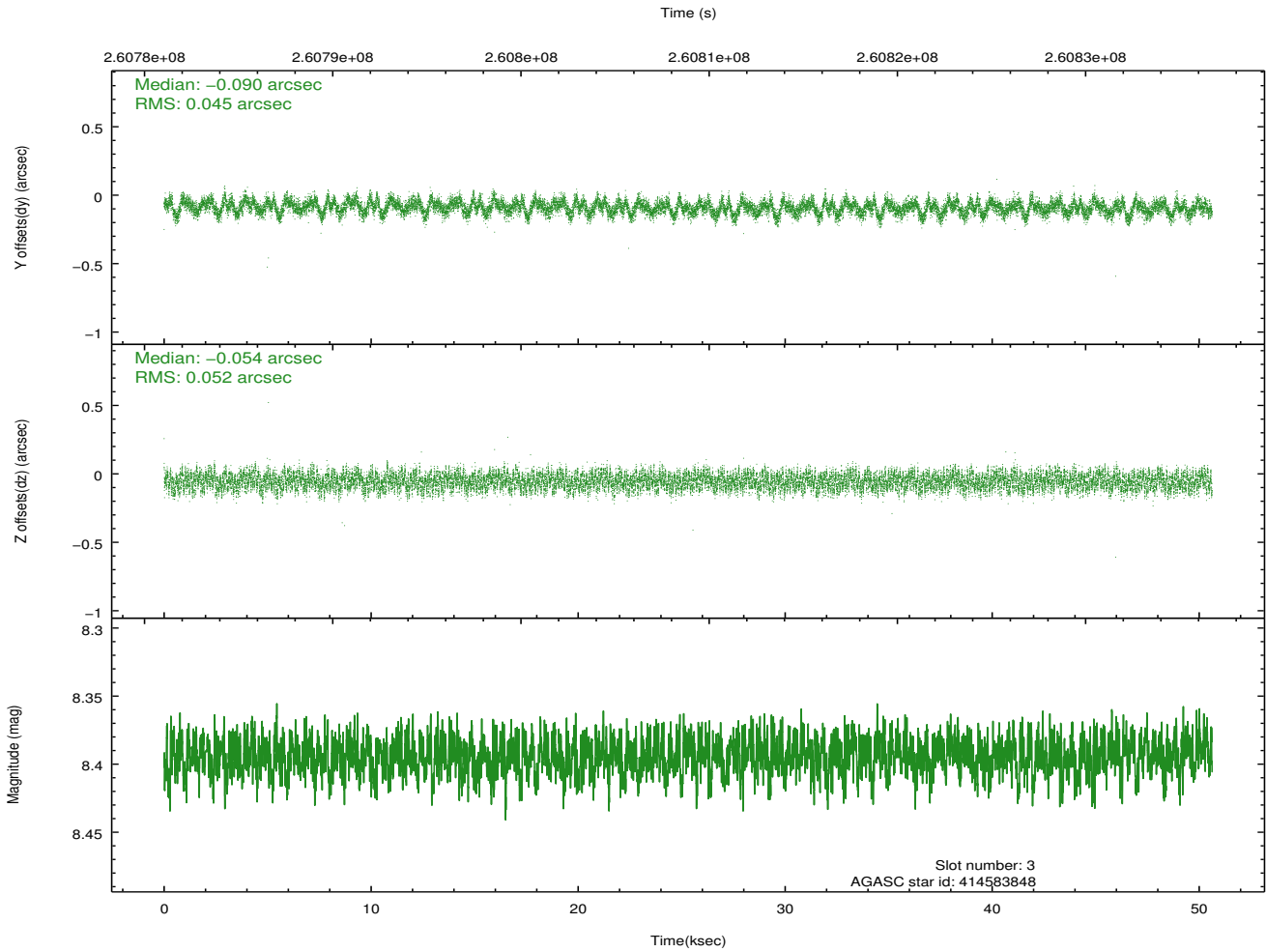
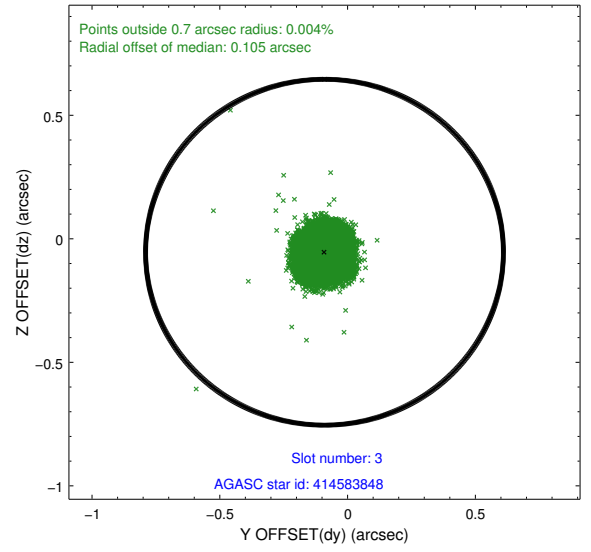
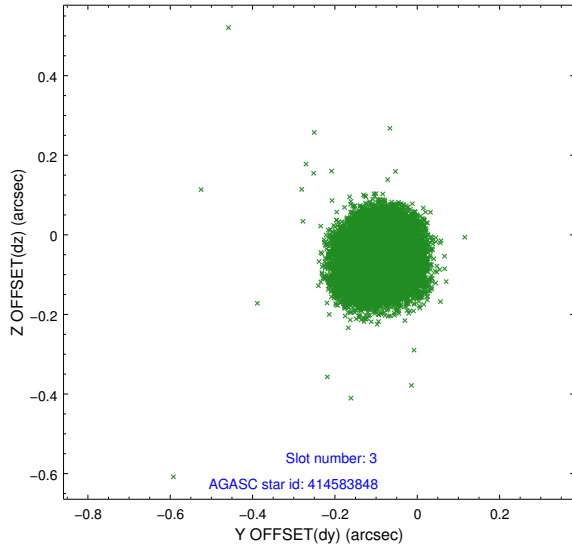


### Slot Statistics

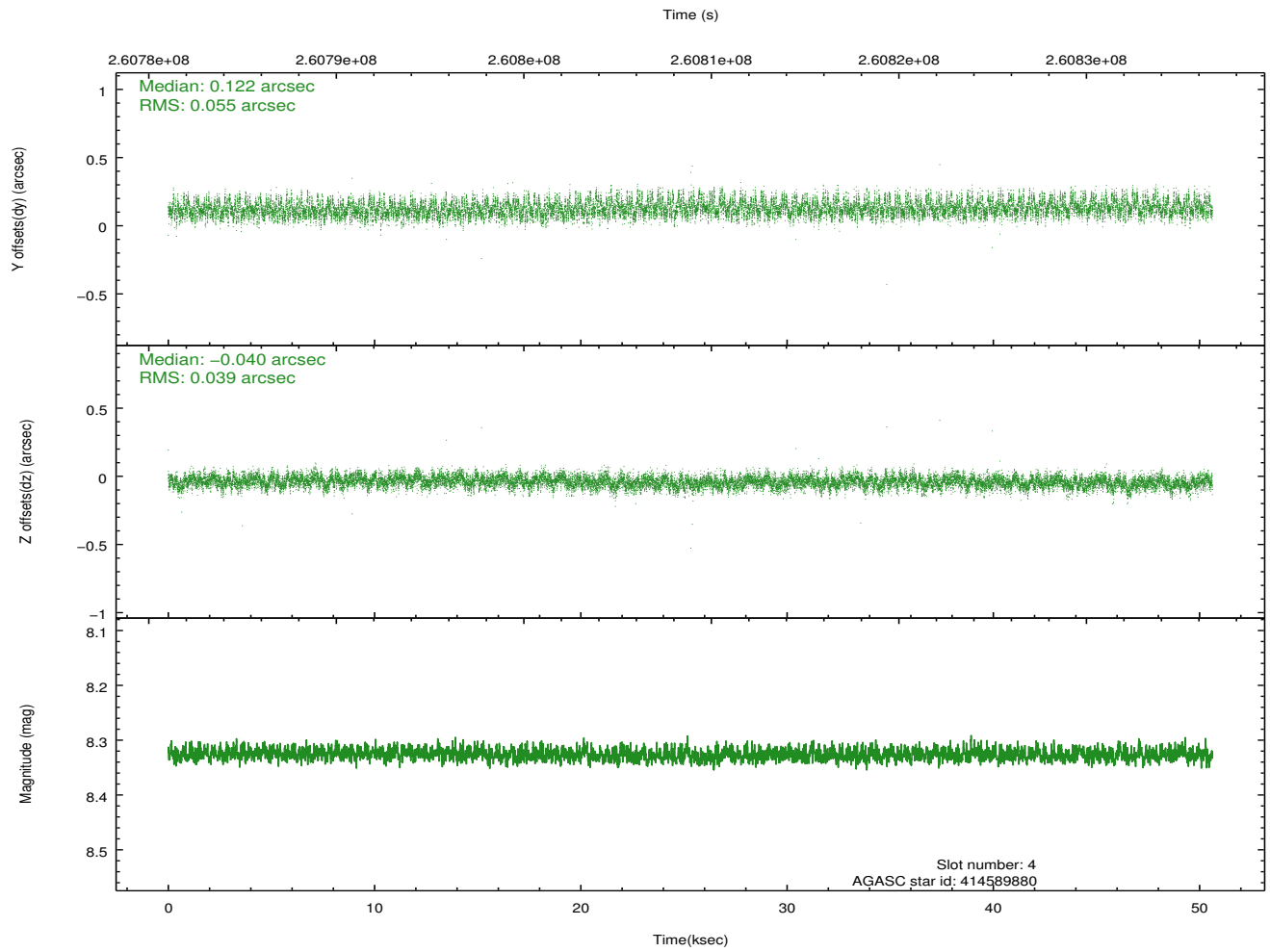
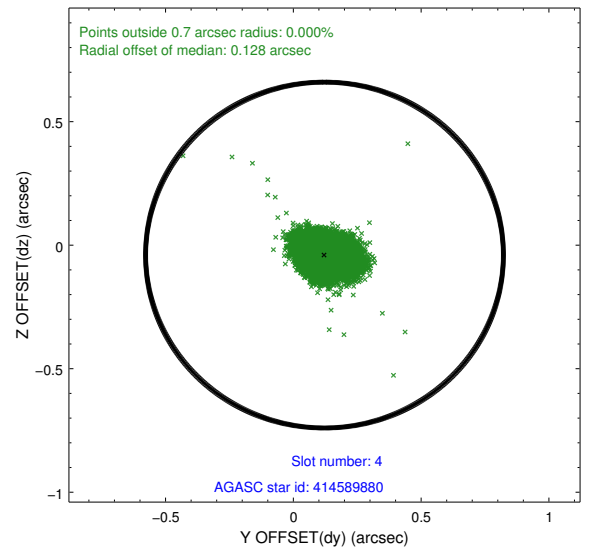
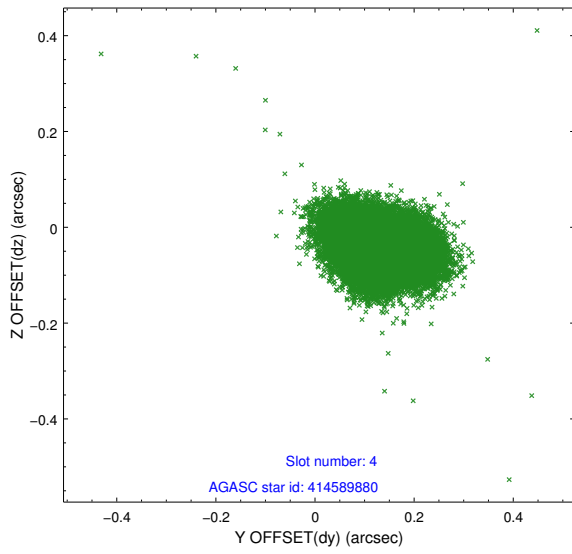
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	12347	-0.021	-0.048	0.010	0.022	0.000000	0.000000	-762.63	-1734.51
1	FID	ACIS-S-4	7.20	12348	0.132	0.023	0.011	0.021	0.000000	0.000000	2150.83	174.04
2	FID	ACIS-S-5	7.23	12348	-0.142	0.034	0.014	0.023	0.000000	0.000000	-1815.60	167.74
3	GUIDE	414583848	8.39	24683	-0.090	-0.054	0.075	0.115	304.983045	43.966065	425.29	459.04
4	GUIDE	414589880	8.33	24688	0.122	-0.040	0.070	0.116	304.207809	43.327162	-2139.90	2128.51
5	GUIDE	414723776	9.31	24680	0.144	0.238	0.099	0.162	305.795174	43.432480	-1150.44	-1922.69
6	GUIDE	414583128	8.33	24684	-0.128	-0.089	0.072	0.114	304.426562	44.225700	1142.25	2017.65
7	GUIDE	414725232	6.90	12348	-0.102	-0.108	0.062	0.107	305.116565	43.854522	79.72	57.05

## 2.4 Star Slots

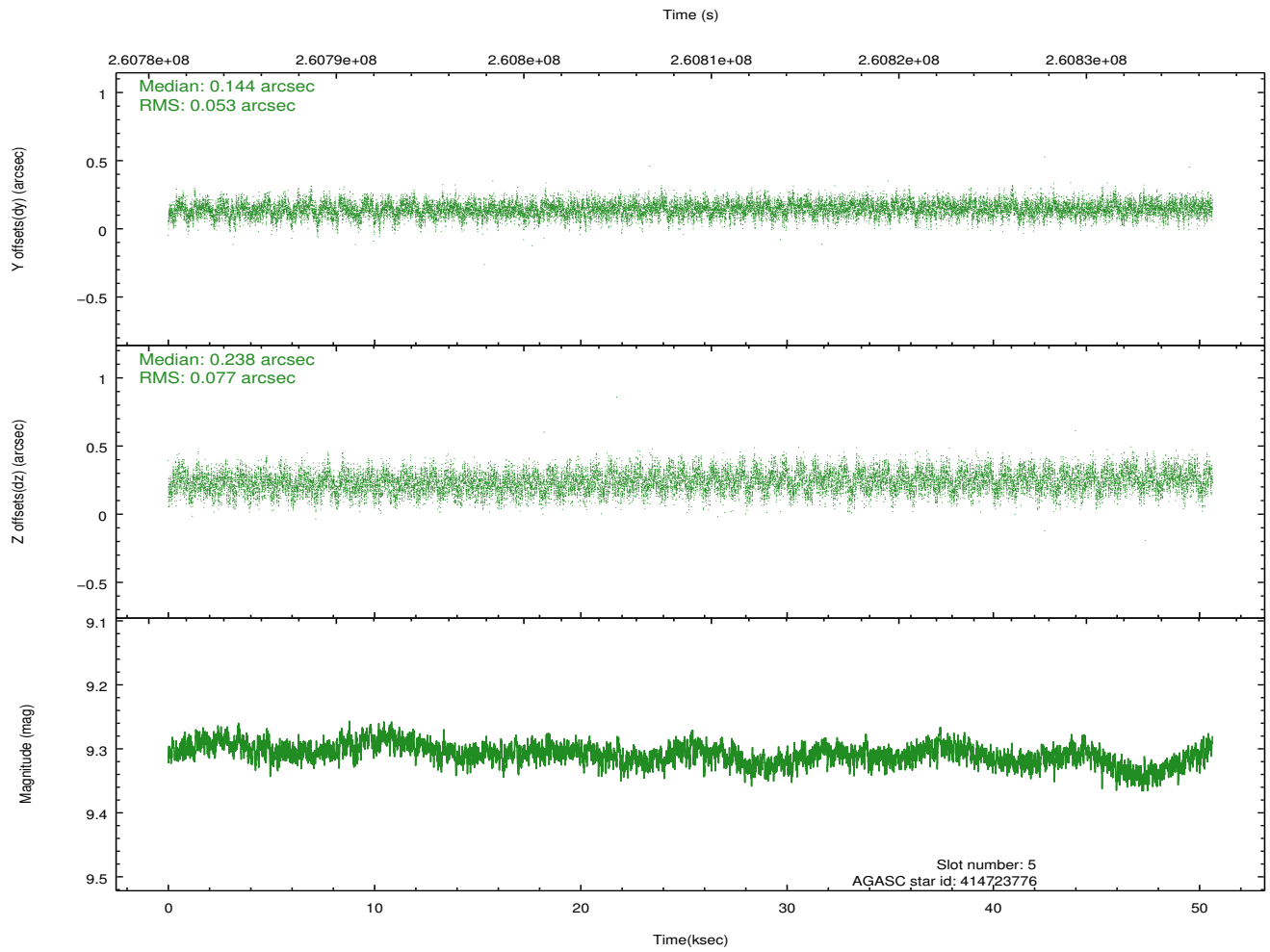
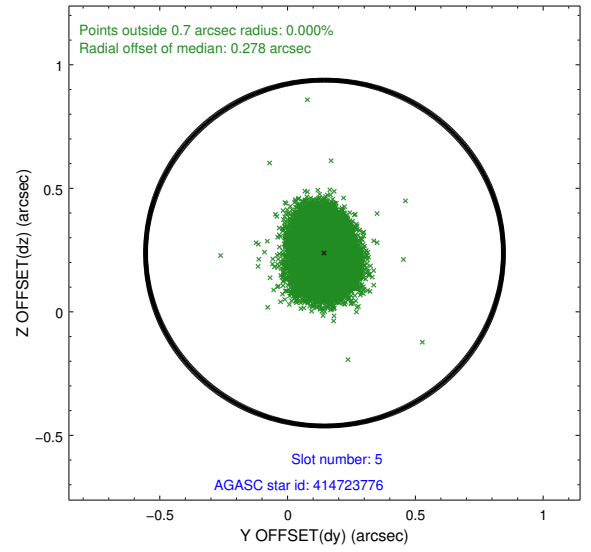
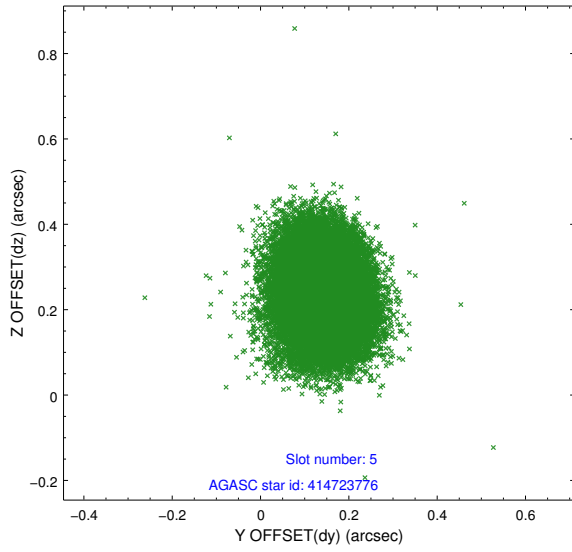
### 2.4.1 Slot 3



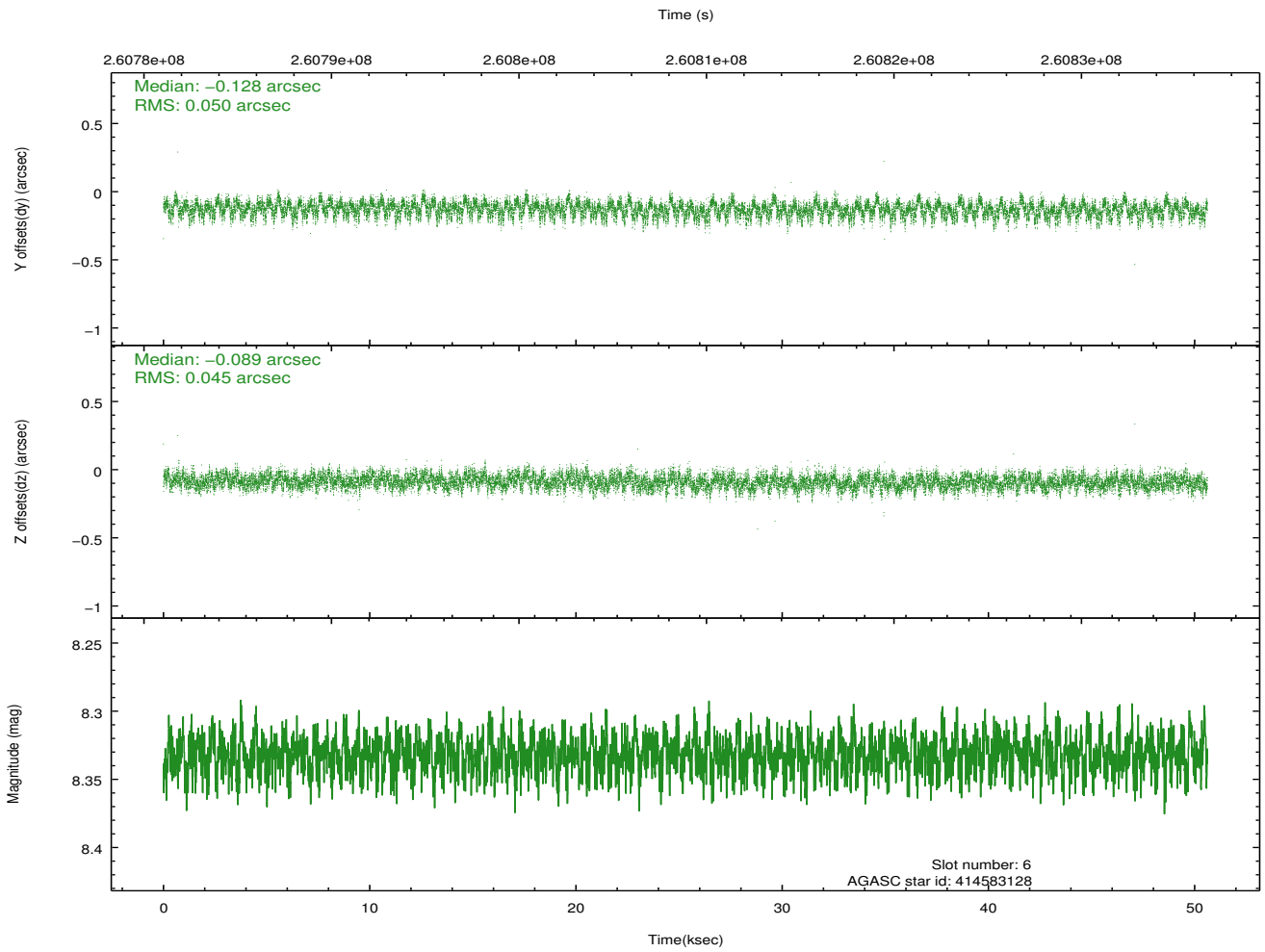
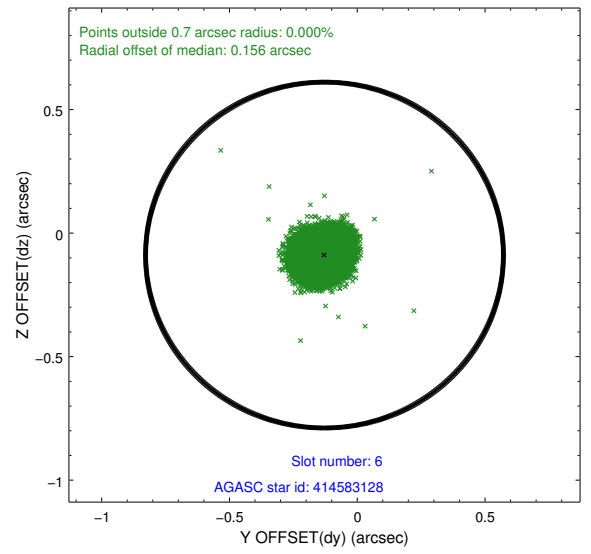
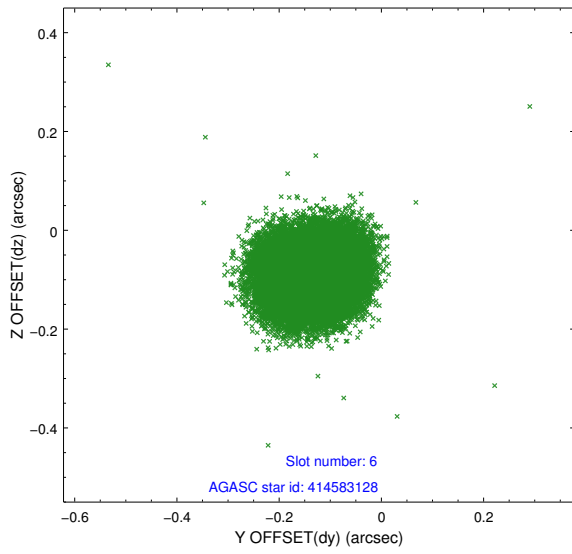
## 2.4.2 Slot 4



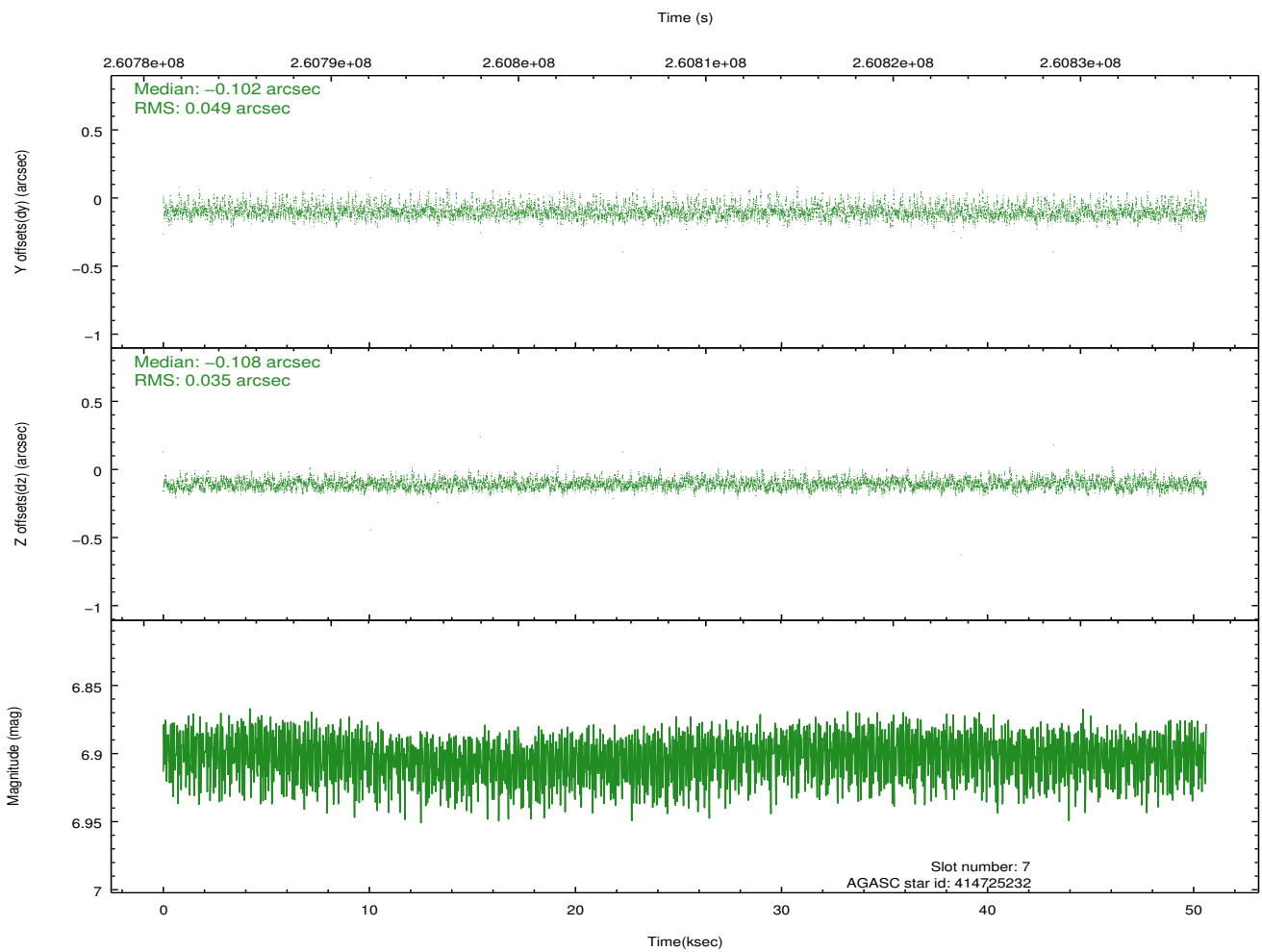
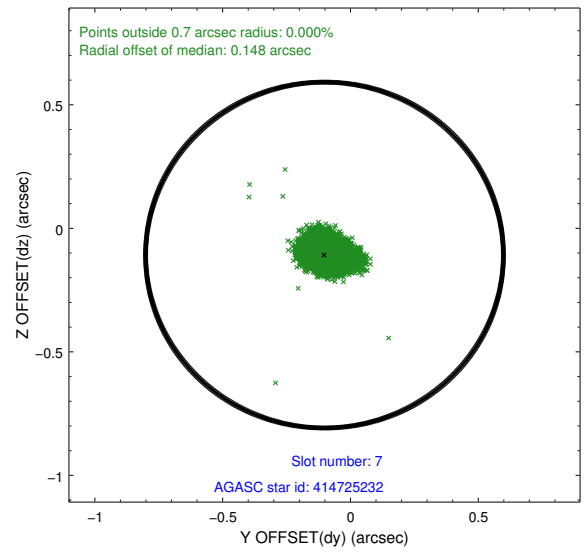
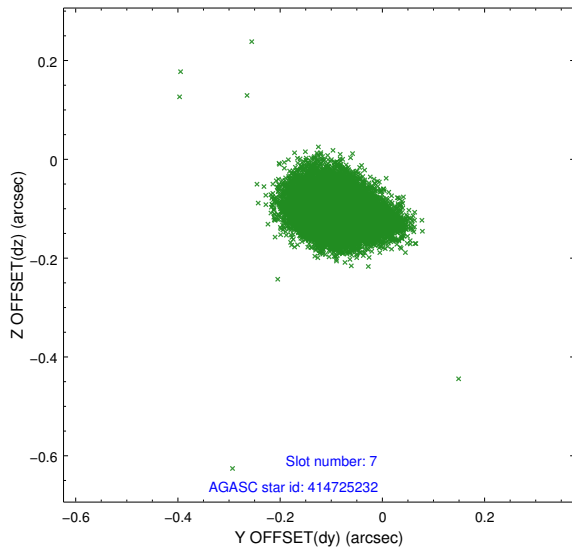
### 2.4.3 Slot 5



### 2.4.4 Slot 6

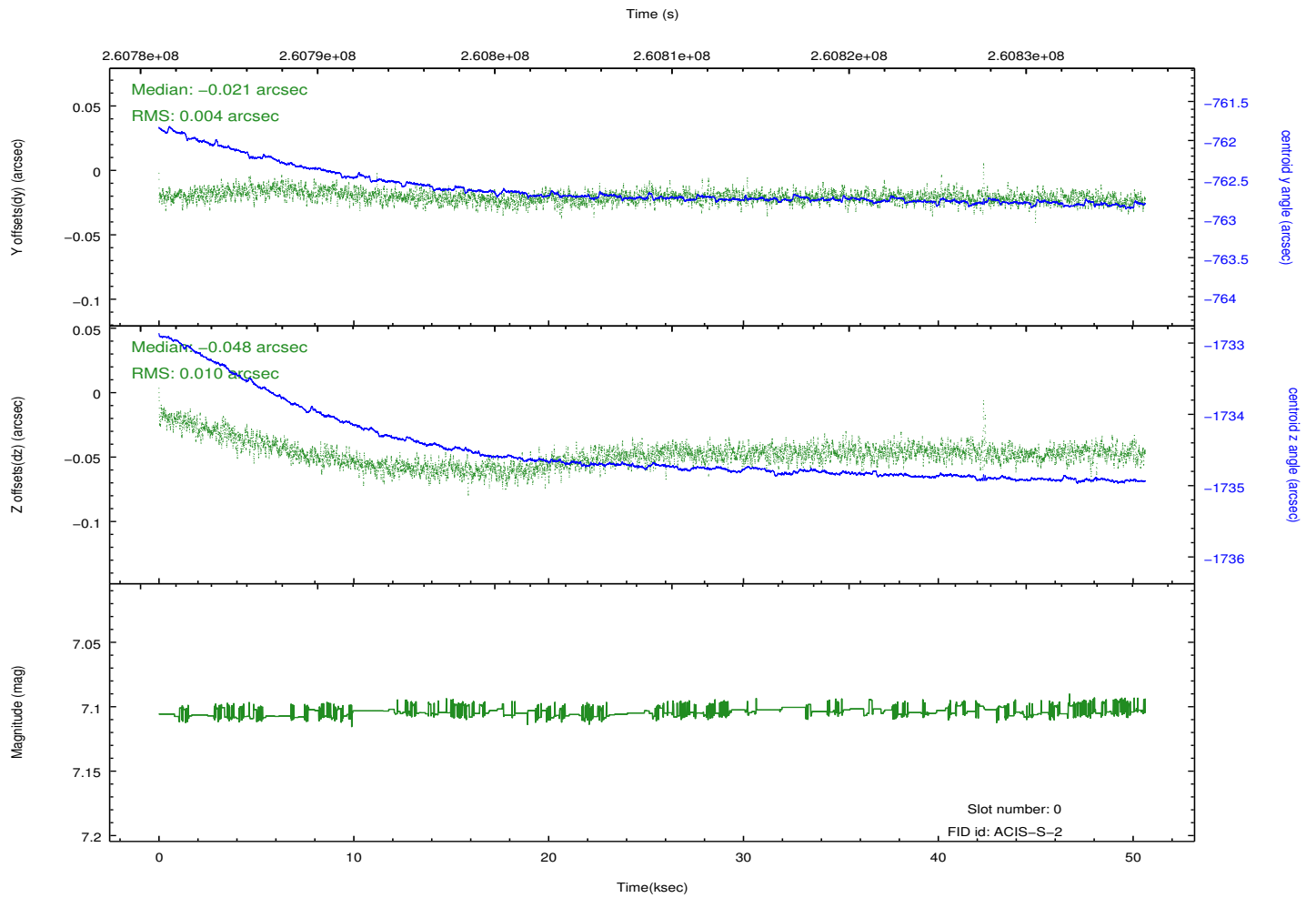
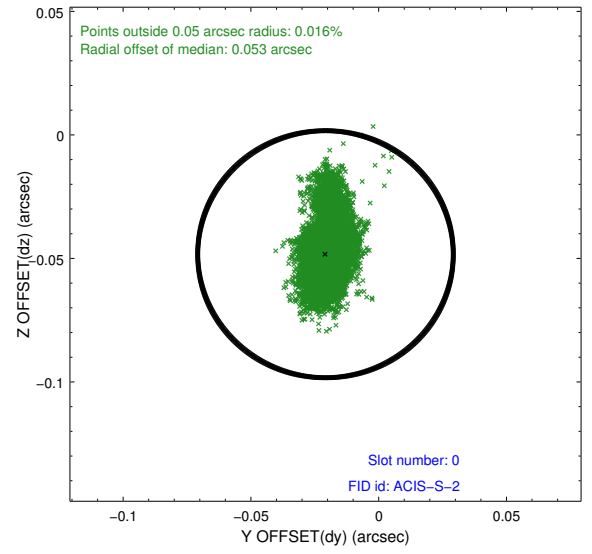
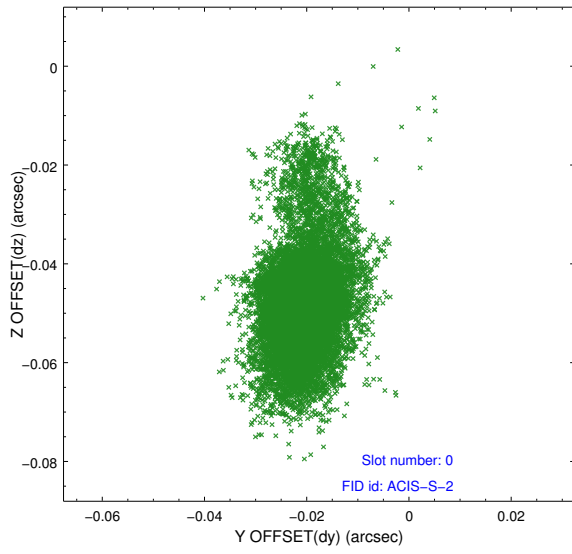


## 2.4.5 Slot 7

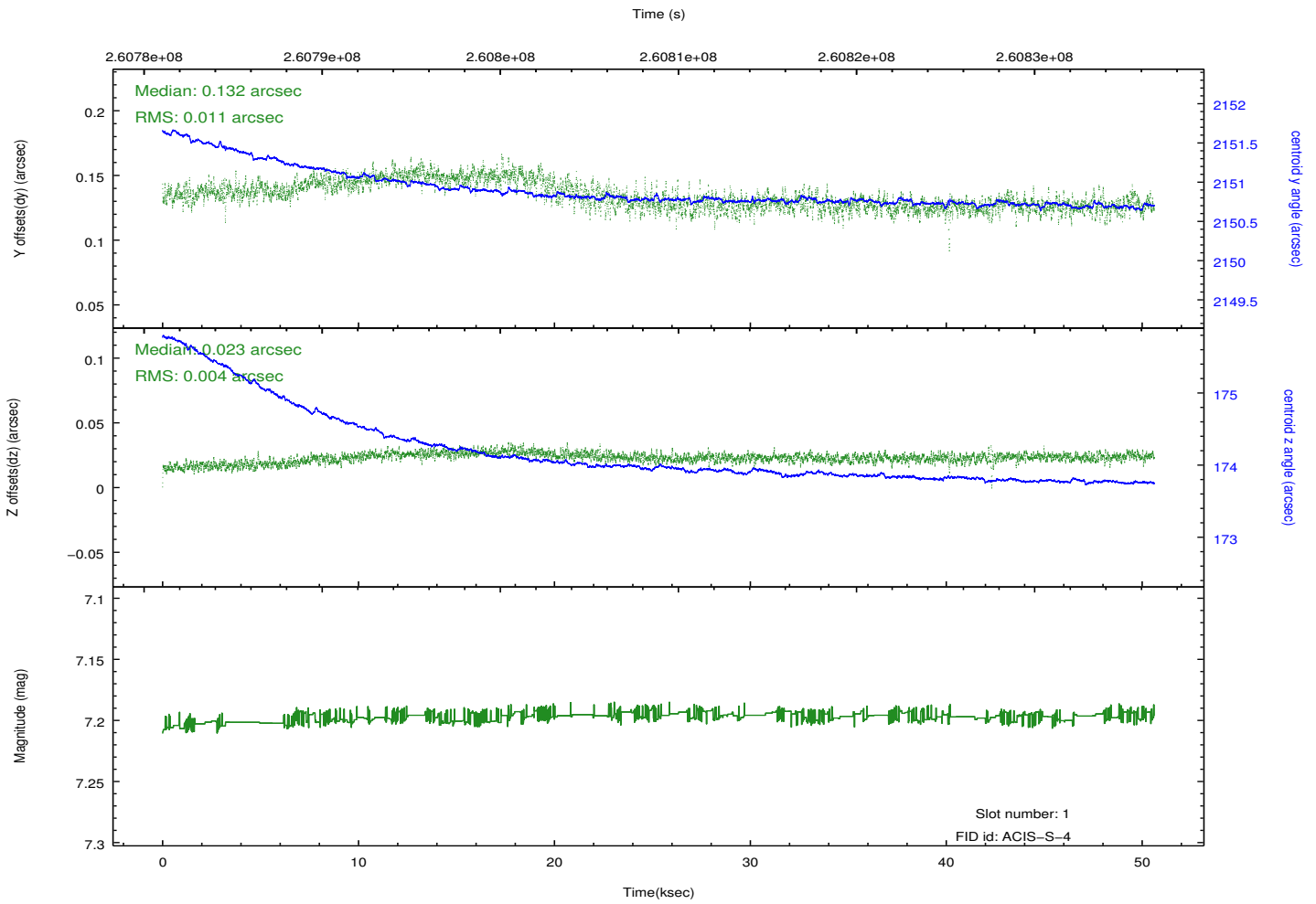
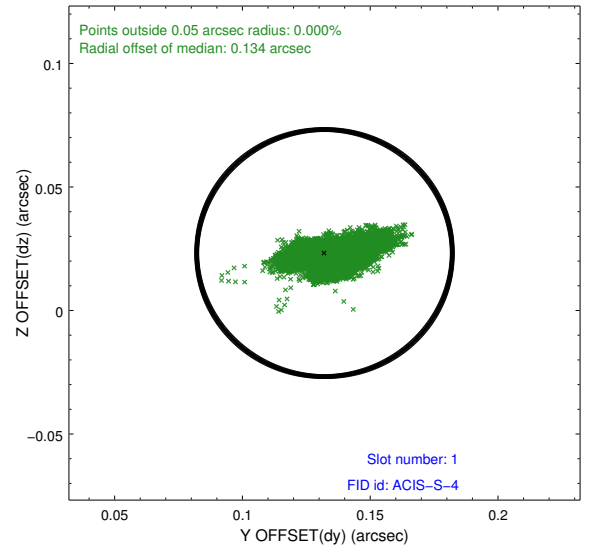
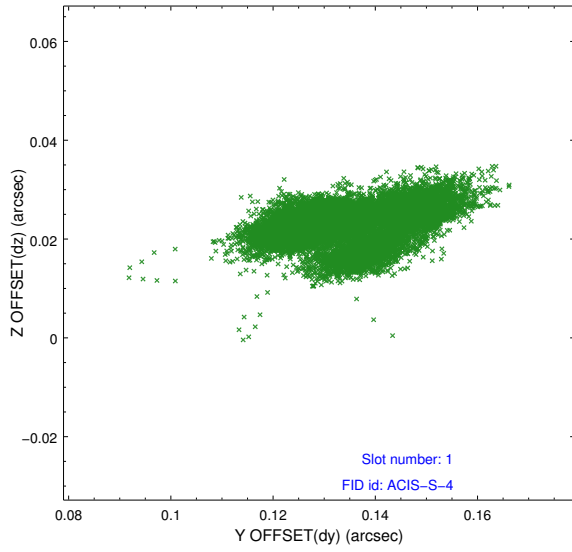


## 2.5 FID Slots

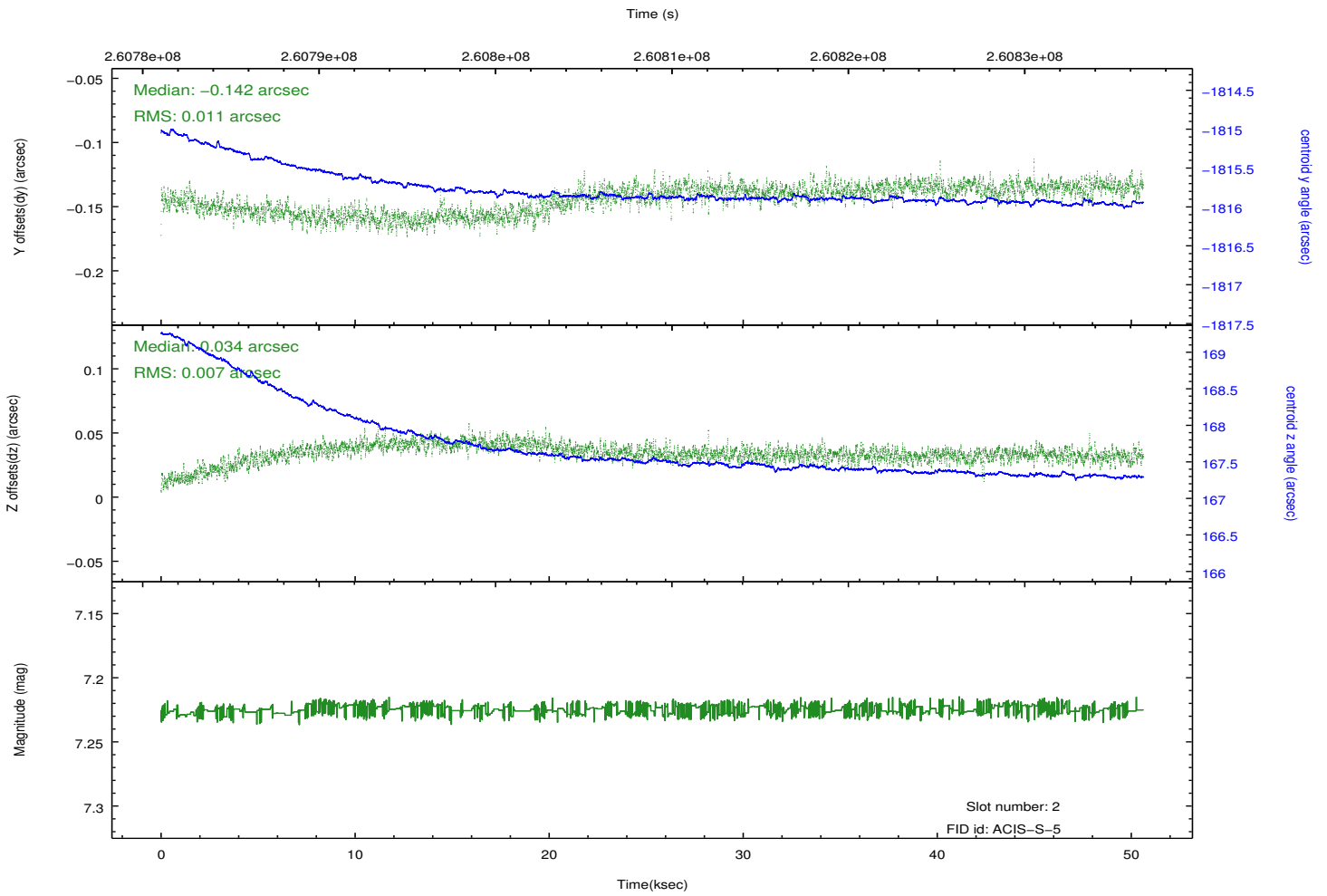
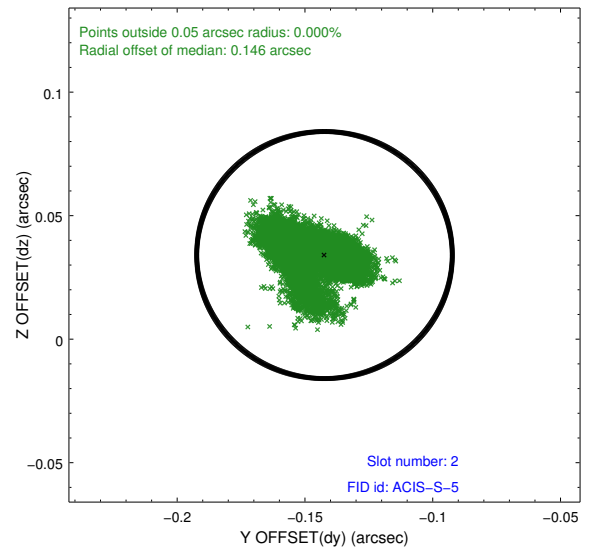
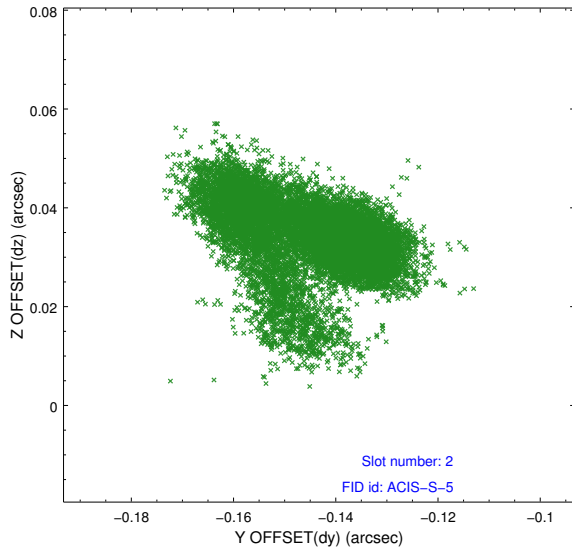
### 2.5.1 Slot 0



## 2.5.2 Slot 1

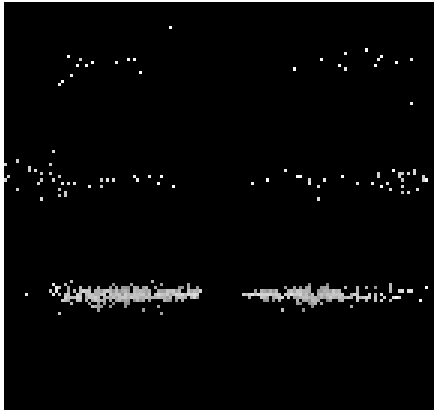


### 2.5.3 Slot 2

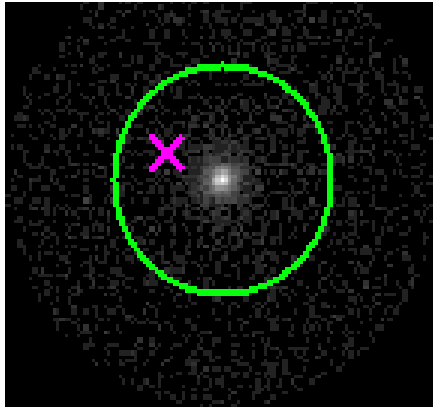


### 3 Gratings

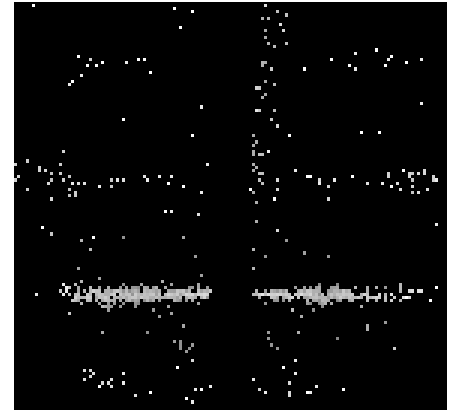
#### 3.1 HEG Arm



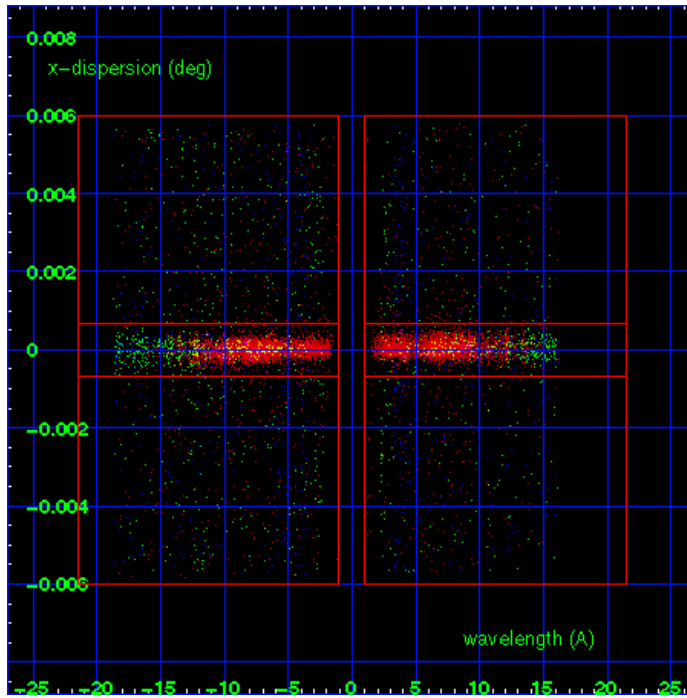
HEG Order Sort 123



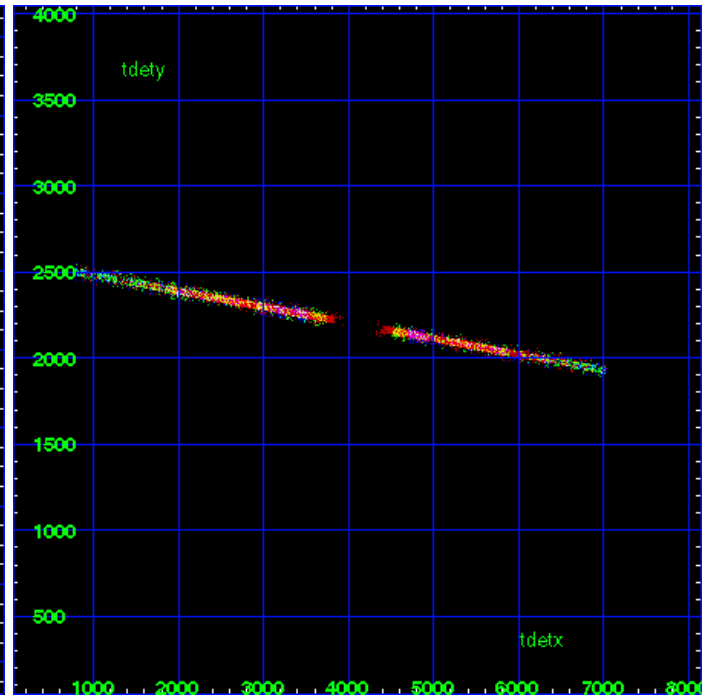
HEG Zero Order



HEG Order Sort ALL

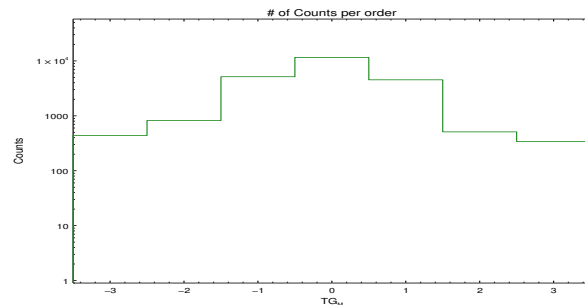


Spot Image HEG

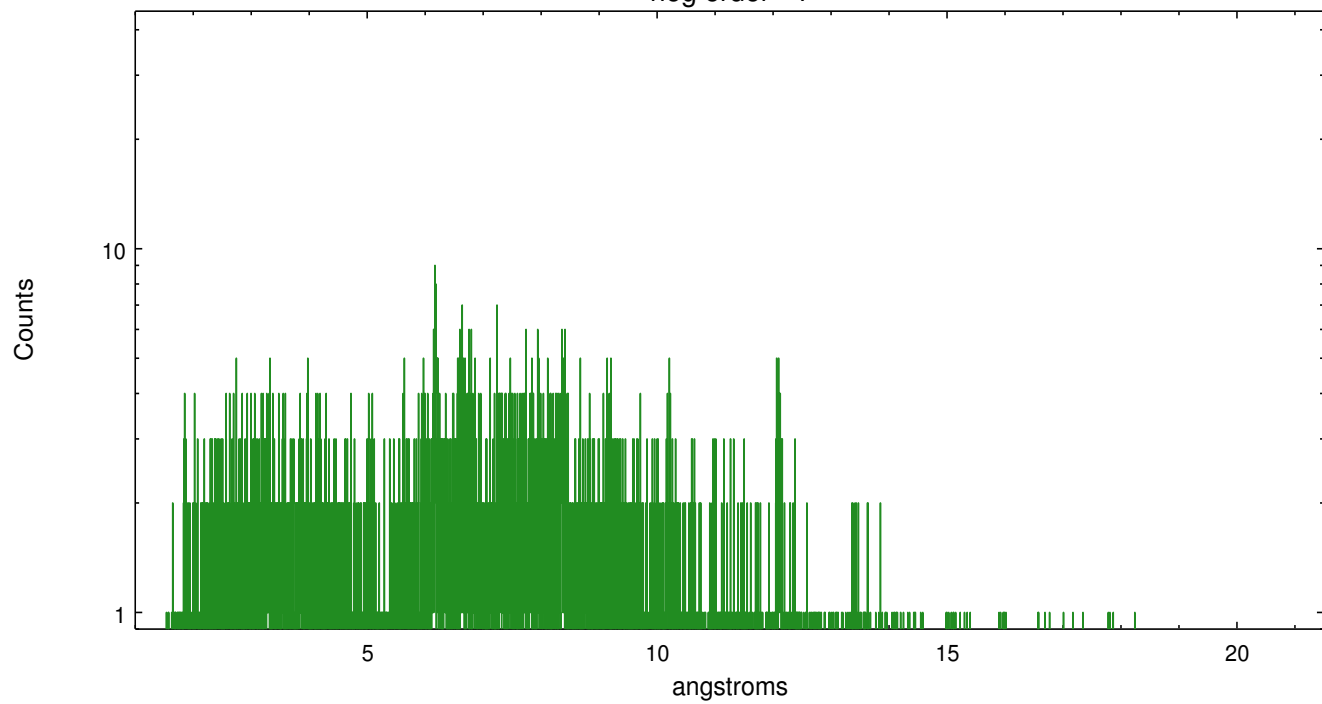


Full Detector HEG

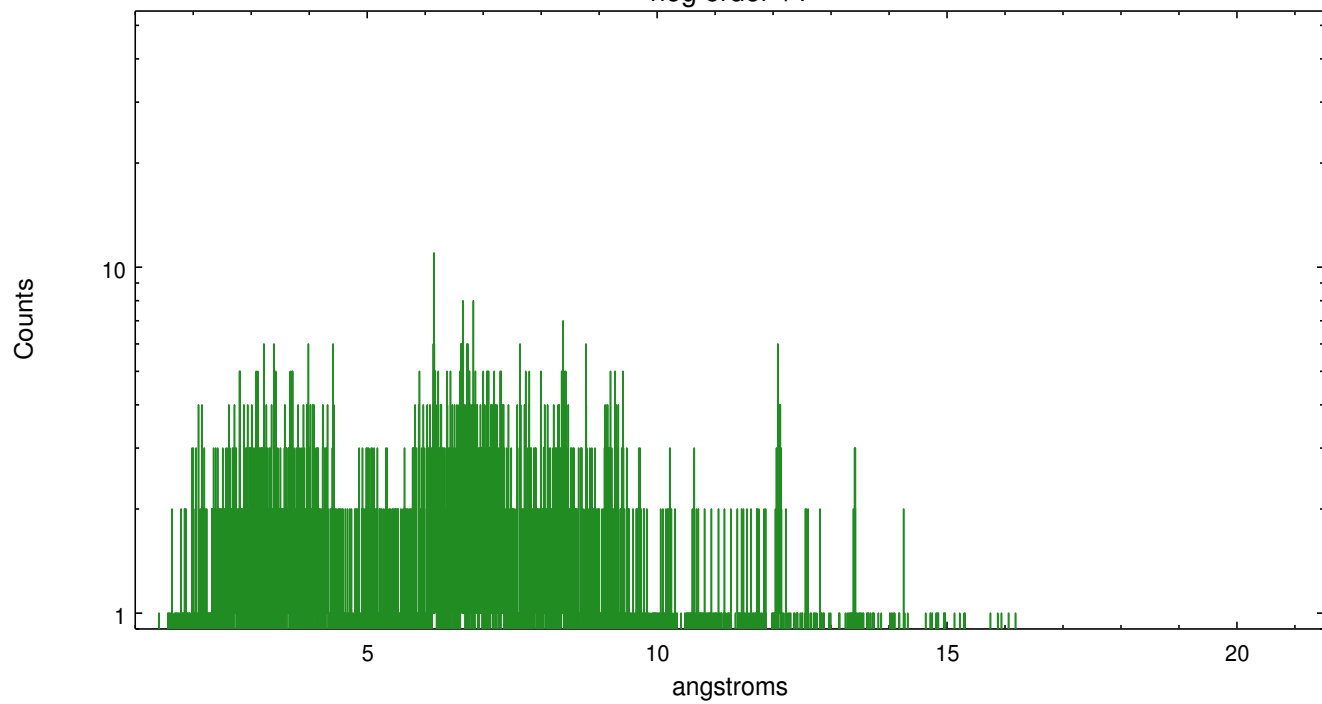
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	438	821	5155	11577	4528	510	339



heg order -1



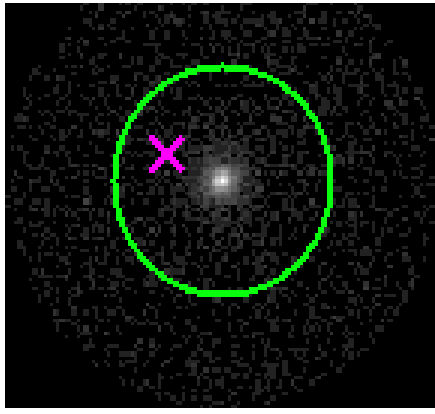
heg order +1



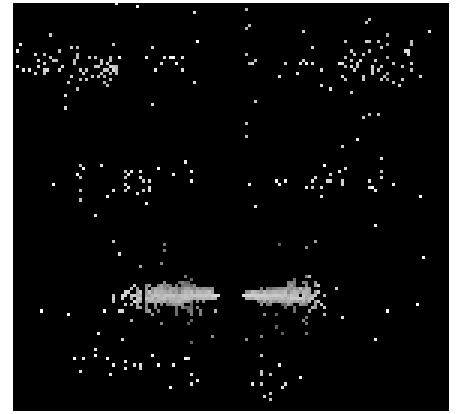
### 3.2 MEG Arm



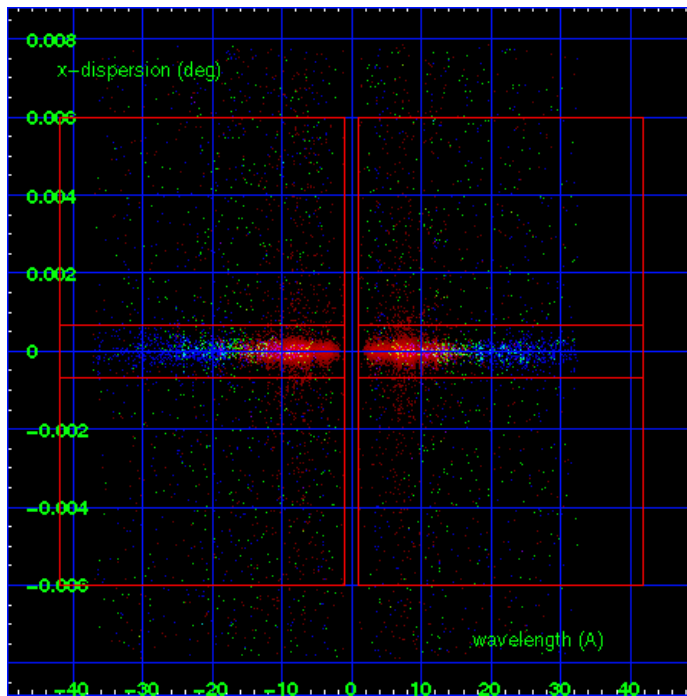
MEG Order Sort 123



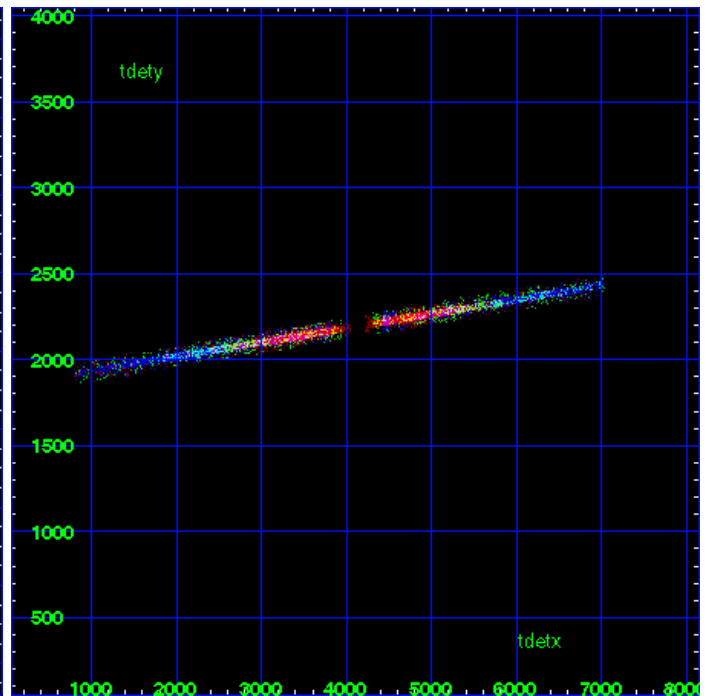
MEG Zero Order



MEG Order Sort ALL

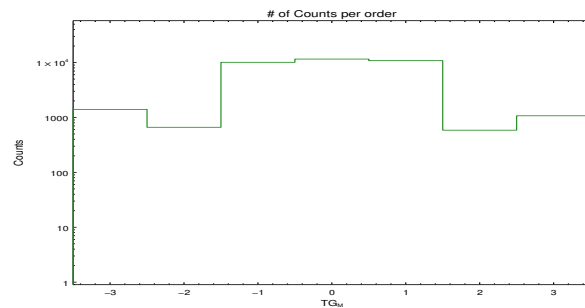


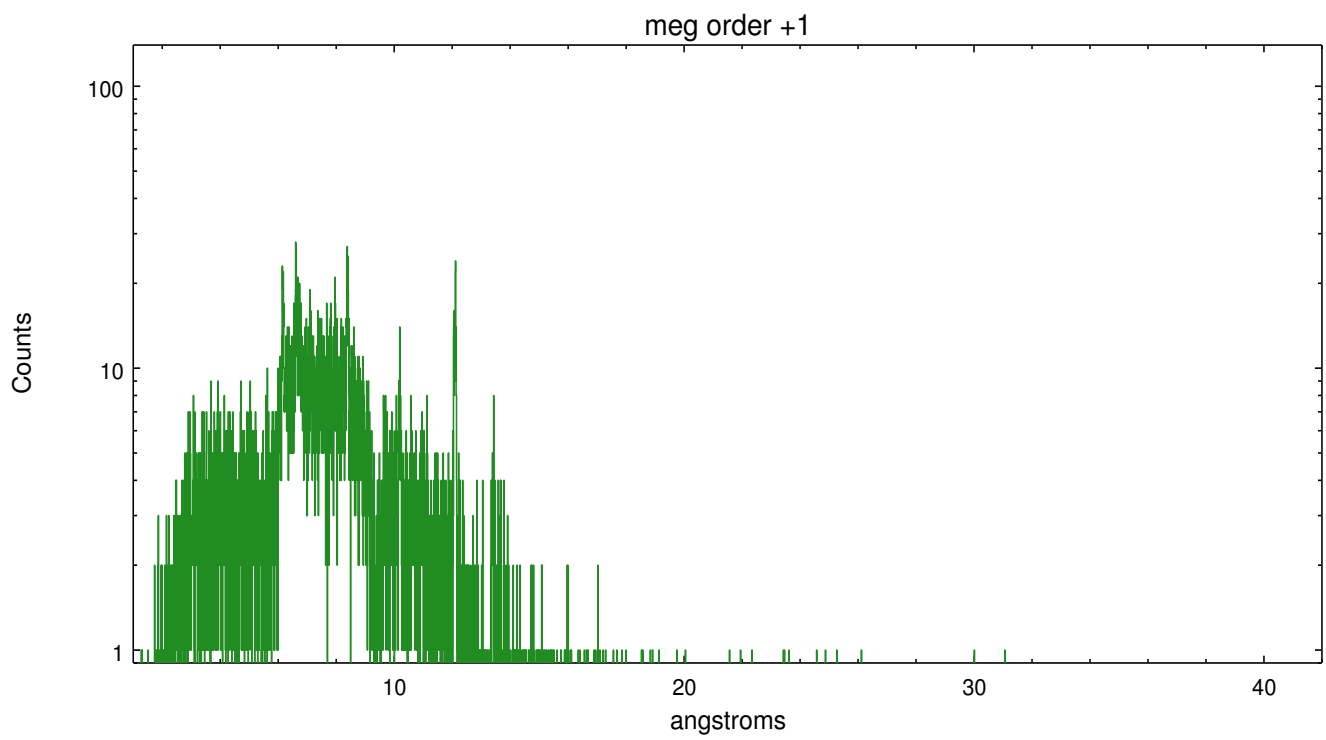
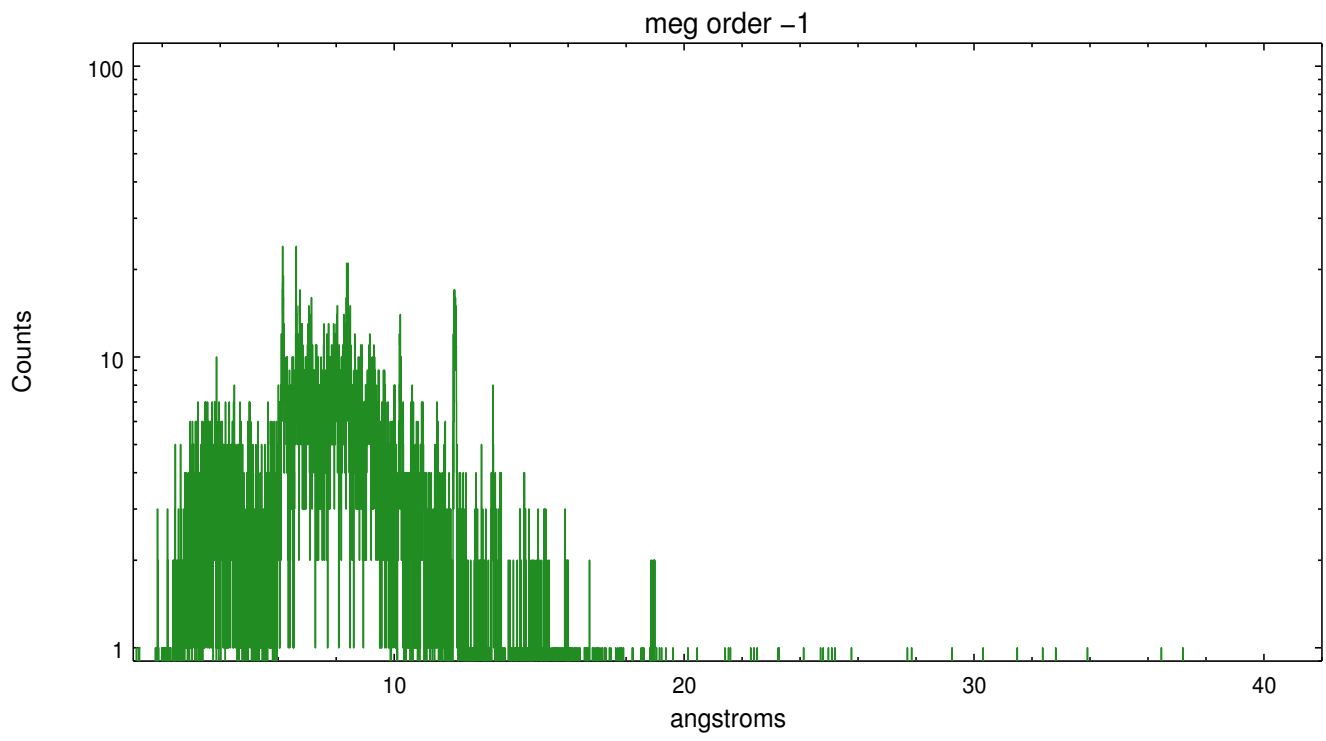
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1403	662	10098	11577	10837	586	1073





## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.04.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	49.8879998

### A.2 Comments

Optical monitoring of the target during the observation in slot 7.