

# V&V Reference Report

## L2 ASCDS Version : 10

Observation 14659 - L2 Version 4  
Chandra X-Ray Center

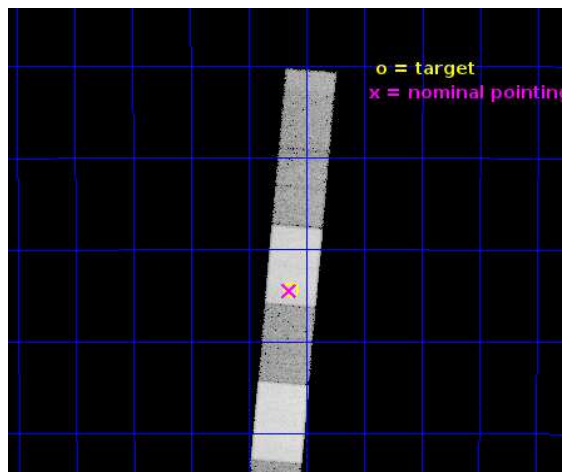
L2 Processing Date : Jun 5 2015

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# 1 Front

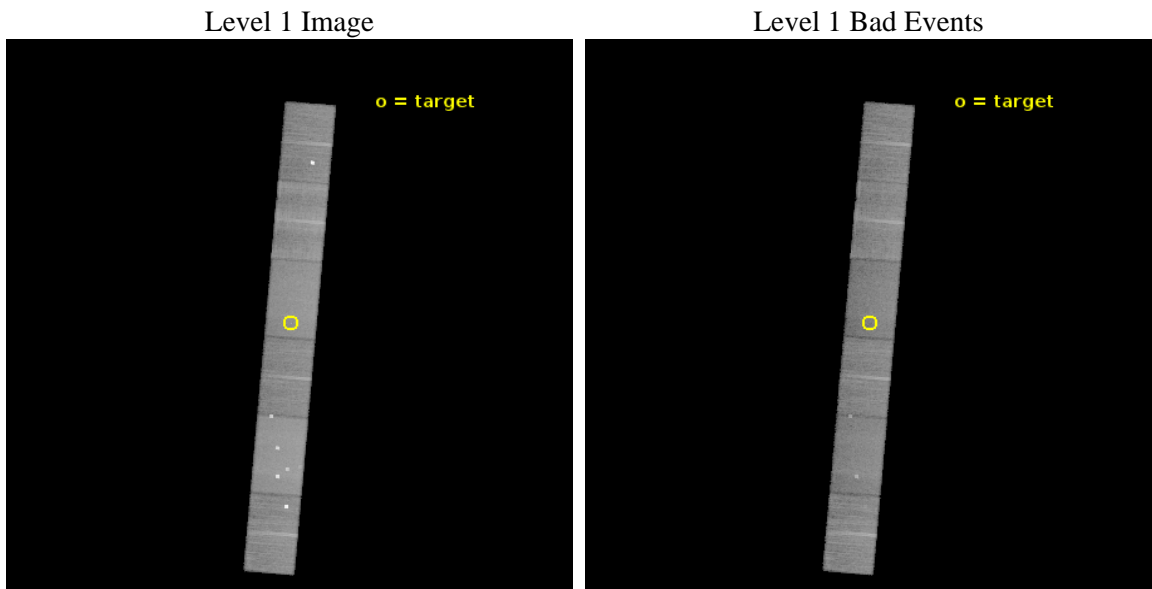
seq_num	401492	Sequence number
obs_id	14659	Observation id
title	The Disk-Wind-Jet Coupling in Black Hole Candidate IGR J17091-3624	&#160
observer	Ashley King	Principal investigator
object	IGR J17091-3624	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	257.283333	Observer's specified target RA [deg]
dec_targ	-36.406667	Observer's specified target Dec [deg]
ra_nom	257.28666595269	Nominal RA [deg]
dec_nom	-36.408085401992	Nominal Dec [deg]
roll_nom	274.85616511501	Nominal Roll [deg]
revision	4	Processing version of data
ontime	41295.798259377	Sum of GTIs [s]
livetime	40465.447281168	Livetime [s]
ontime4	41295.839299381	Sum of GTIs [s]
ontime5	41295.757219374	Sum of GTIs [s]
ontime6	41295.716179371	Sum of GTIs [s]
ontime7	41295.798259377	Sum of GTIs [s]
ontime8	41295.675139368	Sum of GTIs [s]
ontime9	41295.634099364	Sum of GTIs [s]
l2events	214429	Number of level 2 events



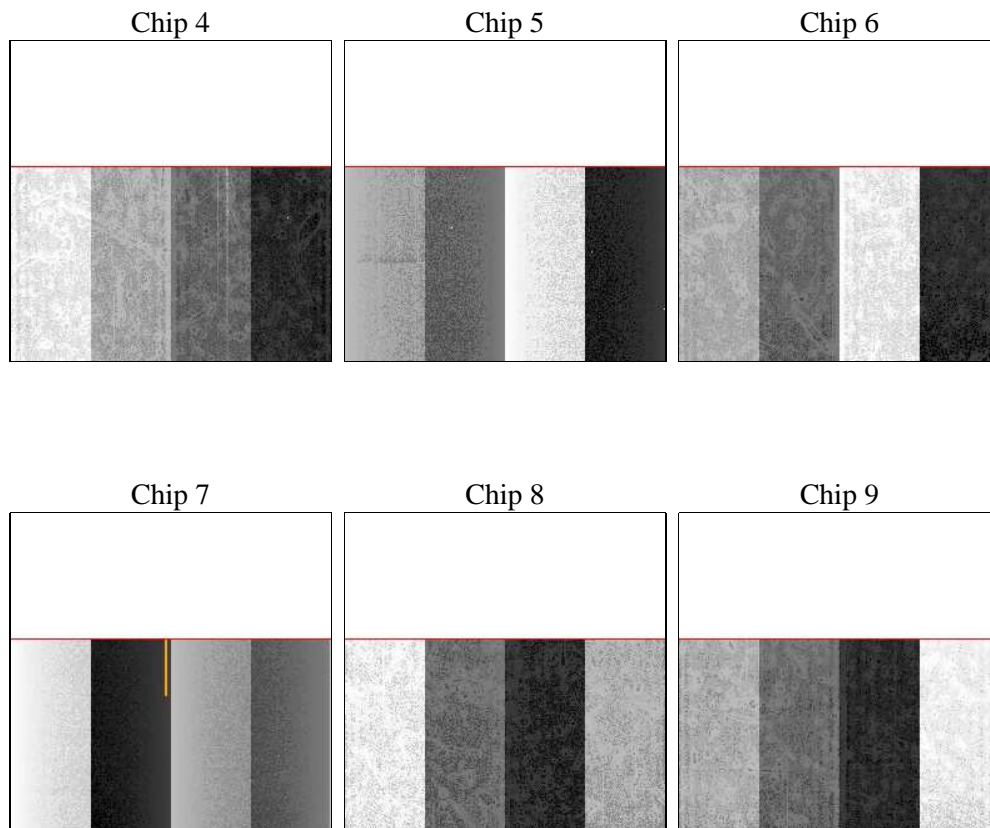
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	41227.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	41295.798259377	Sum of GTIs [s]
caldbver	4.6.4	&#160	ontime4	41295.839299381	Sum of GTIs [s]
date	2014-12-04T21:56:43	Date and time of file creation	ontime5	41295.757219374	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	41295.716179371	Sum of GTIs [s]
			ontime7	41295.798259377	Sum of GTIs [s]
			ontime8	41295.675139368	Sum of GTIs [s]
			ontime9	41295.634099364	Sum of GTIs [s]
			l1events	976679	Number of level 1 events
			tgmethod	NONE	Method used to create srcla file

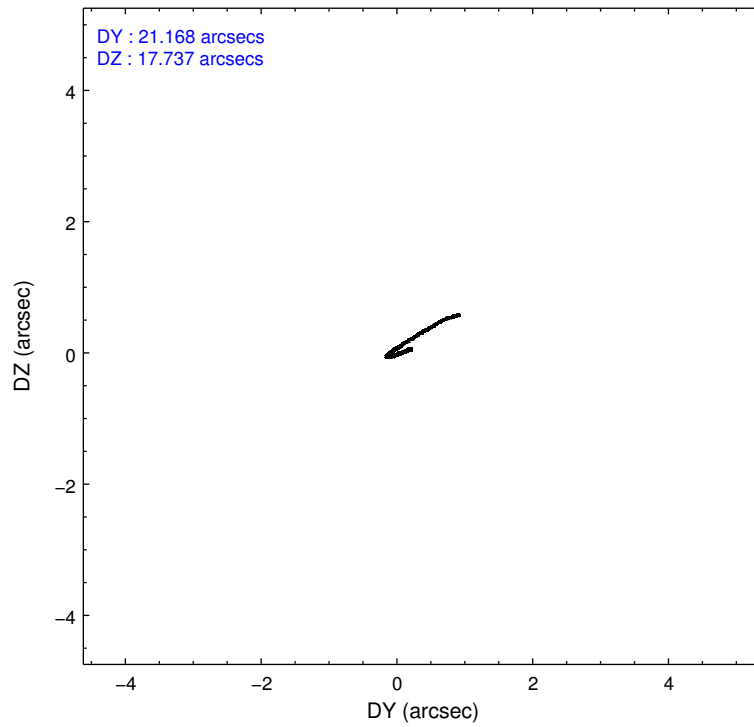
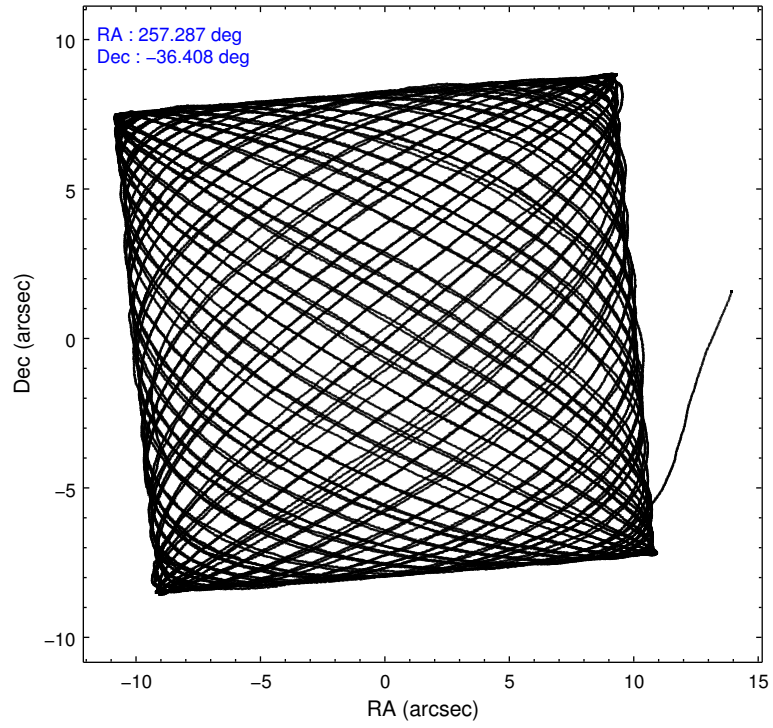
### 2.1.4 Events

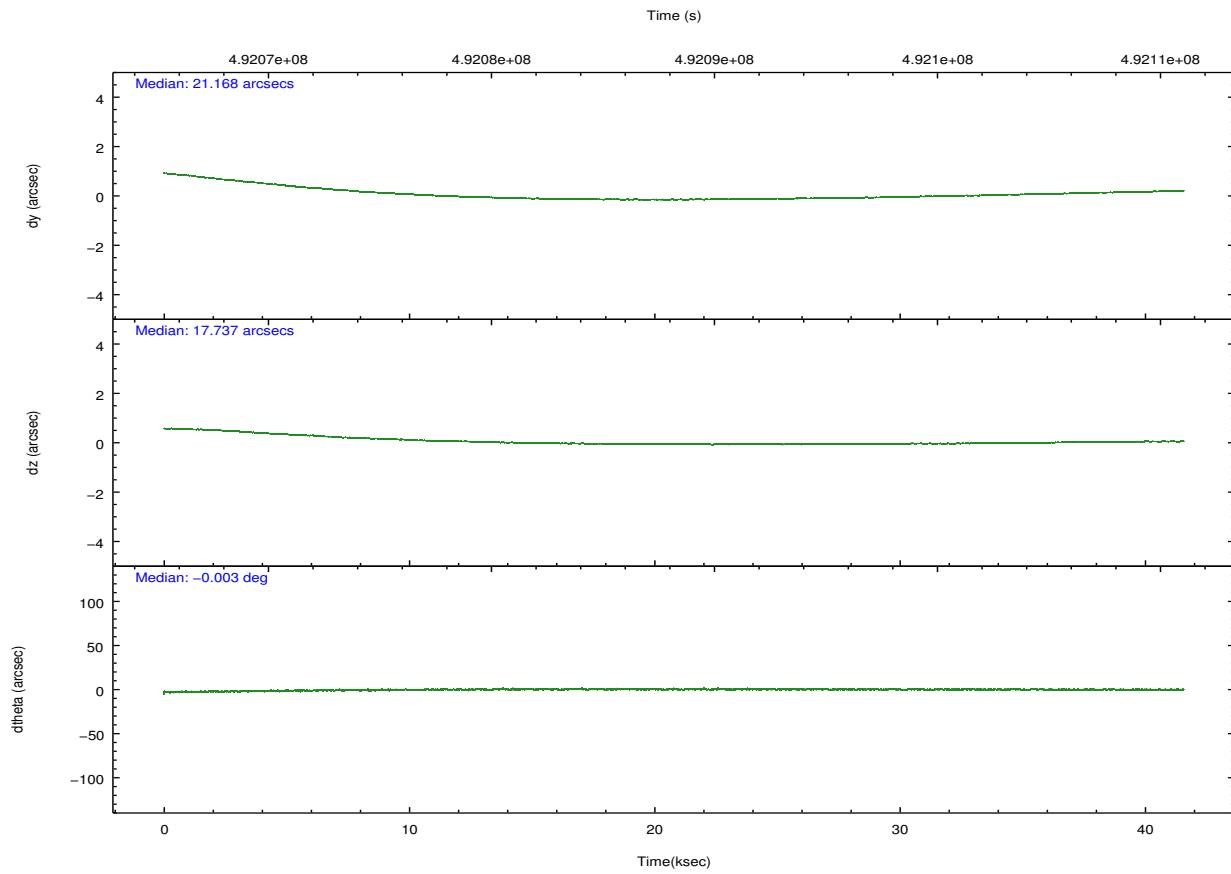
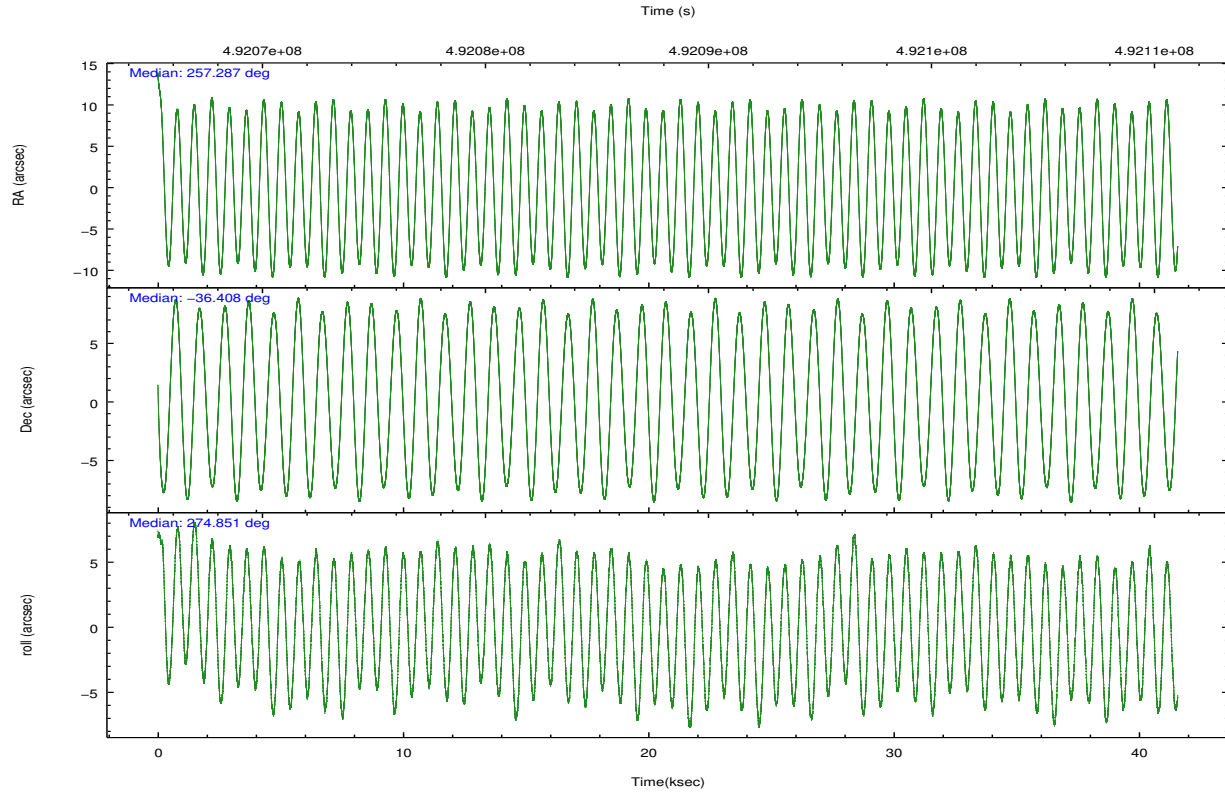
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	158866	219864	127199	163415	166704	140631	grade 0 events	24035	24460	5165	6259	11804	22199
rejected events	124664	106123	111654	91389	122732	107915		15%	11%	4%	3%	7%	15%
rejected %	78%	48%	87%	55%	73%	76%	grade 1 events	131	2201	59	178	93	106
								0%	1%	0%	0%	0%	0%
							grade 2 events	3735	29645	3460	14768	10371	3478
								2%	13%	2%	9%	6%	2%
							grade 3 events	1823	4195	1769	6443	4831	1810
								1%	1%	1%	3%	2%	1%
							grade 4 events	1771	3978	1753	6511	4632	1788
								1%	1%	1%	3%	2%	1%
							grade 5 events	5929	15166	6096	16612	8931	6807
								3%	6%	4%	10%	5%	4%
							grade 6 events	2842	51471	3398	38050	12335	3442
								1%	23%	2%	23%	7%	2%
							grade 7 events	118600	88748	105499	74594	113707	101001
								74%	40%	82%	45%	68%	71%

## 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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	257.266879	257.2866659526884	CCD I2 on	N	N
[deg] Pointing Dec	-36.385851	-36.40808540199166	CCD I3 on	N	N
[deg] Pointing Roll	274.687803	274.8561651150134	CCD S0 on	Y	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-185.262523	-185.2547514189408	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-4.87	-4.877771164067013	CCD S4 on	Y	Y
[s] Observation start time (MET)	492067722.184000	492066648.29073	CCD S5 on	O1	Y
Observation start date	2013-08-05T05:27:35	2013-08-05T05:10:48	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	492108949.184000	492109862.29308	On-chip summing requested	N	N
Observation end date	2013-08-05T16:54:42	2013-08-05T17:11:02	Subarray requested	CUSTOM	CUSTOM
Read mode	TIMED	TIMED	Subarray start row	1	1
			Subarray row count	620	620
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	2

## 2.3 Aspect





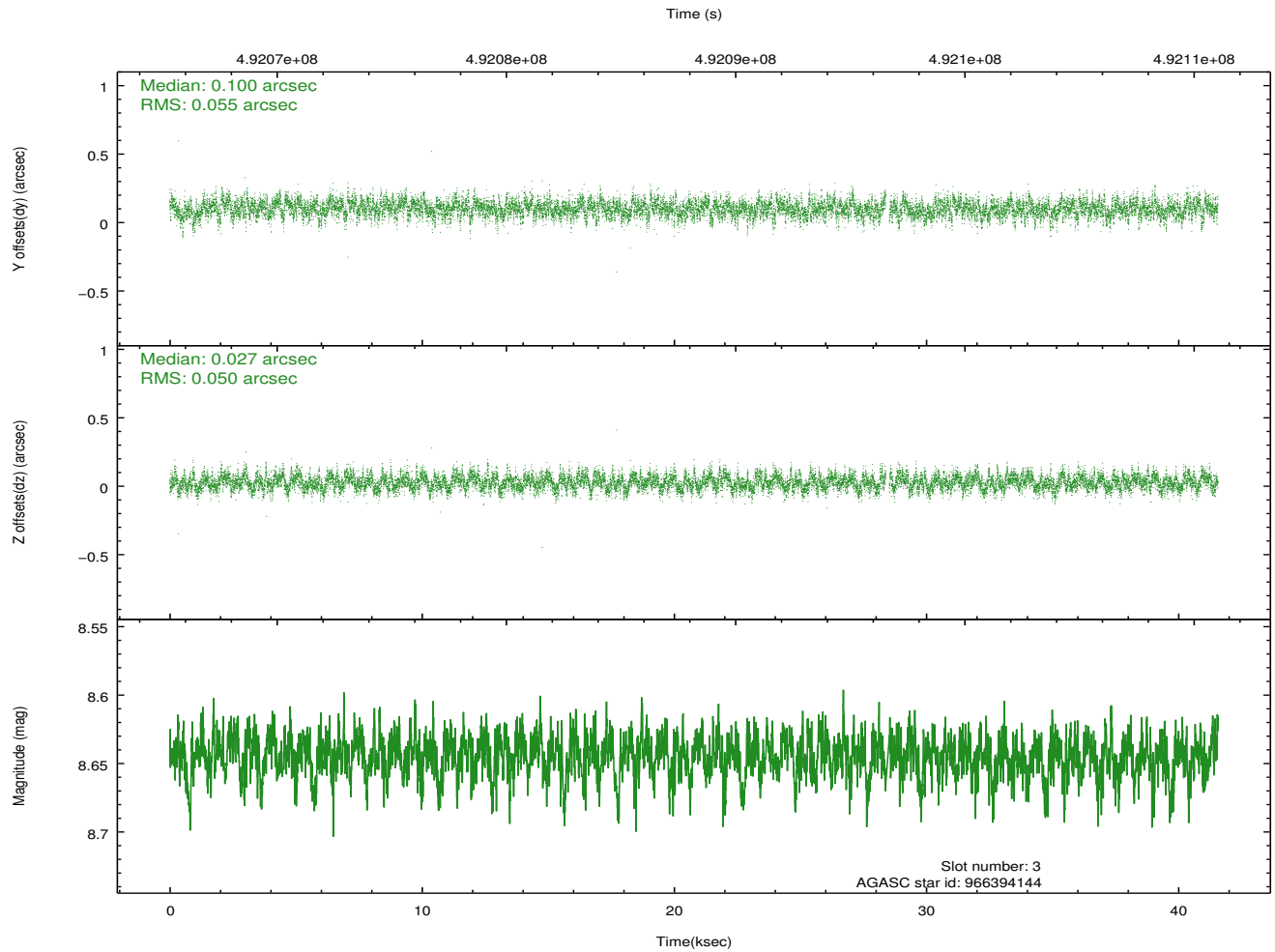
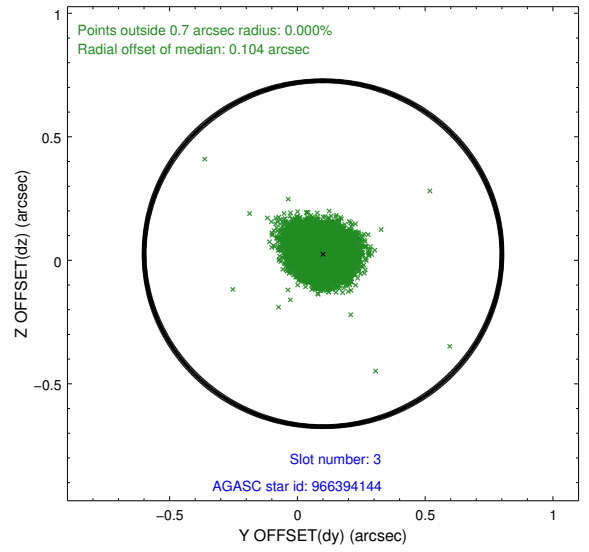
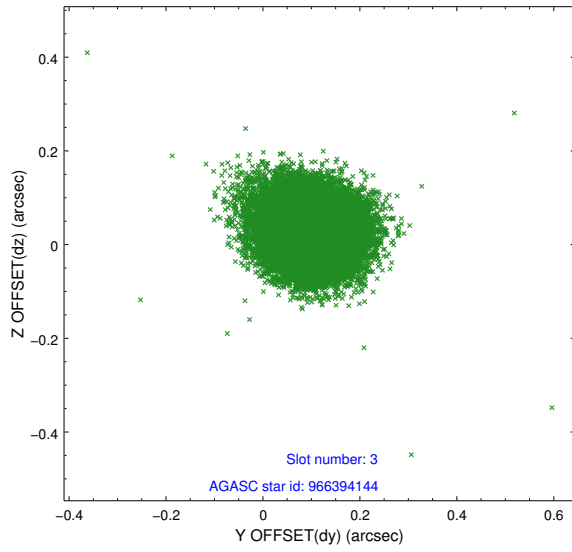
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.05	10140	-0.171	-0.131	0.009	0.017	0.000000	0.000000	-774.25	-1839.97
1	FID		ACIS-S-4	7.14	10139	0.332	0.117	0.009	0.018	0.000000	0.000000	2139.56	68.69
2	FID		ACIS-S-5	7.18	10140	-0.192	0.022	0.008	0.021	0.000000	0.000000	-1827.07	62.34
3	GUIDE	used	966394144	8.64	20204	0.100	0.027	0.078	0.125	256.902901	-37.062041	2343.56	-1241.36
4	GUIDE	used	966395864	7.61	20277	0.077	0.008	0.092	0.142	256.670769	-36.077904	-1240.70	-1638.43
5	GUIDE	used	966402904	8.09	20273	-0.117	-0.094	0.054	0.088	257.709598	-36.005094	-1257.84	1396.73
6	GUIDE	used	966396120	7.86	20278	-0.024	-0.104	0.074	0.125	256.737004	-36.720258	1079.67	-1622.25
7	GUIDE	used	966401448	7.93	20276	-0.029	0.158	0.087	0.129	256.771484	-35.758991	-2363.31	-1258.25

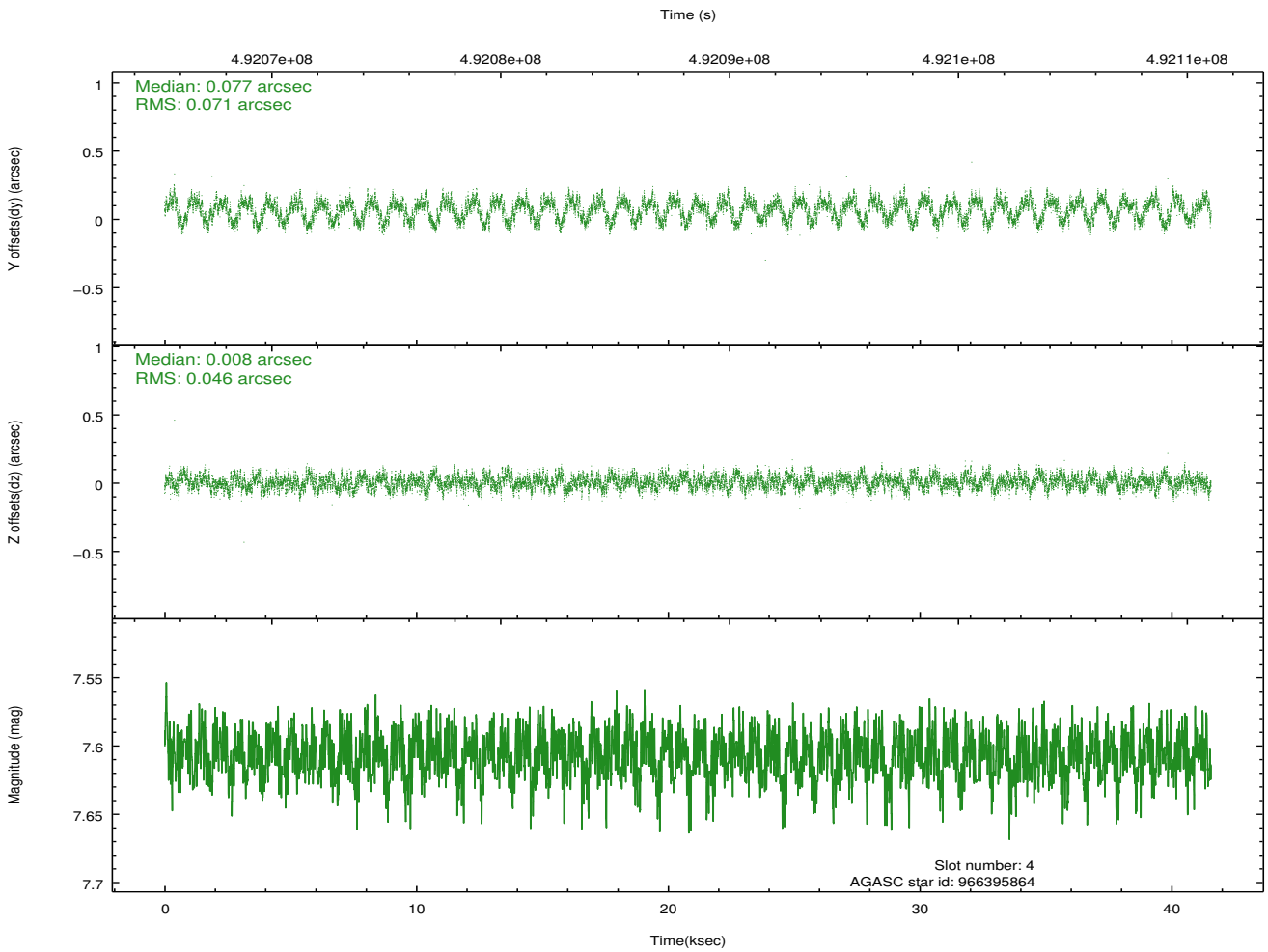
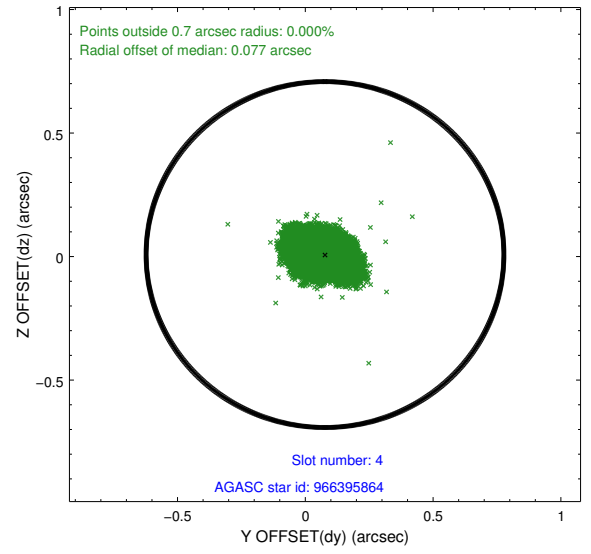
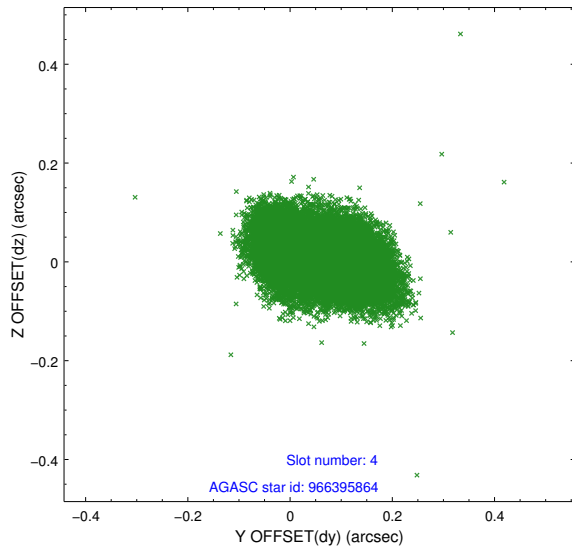
∞

## 2.4 Star Slots

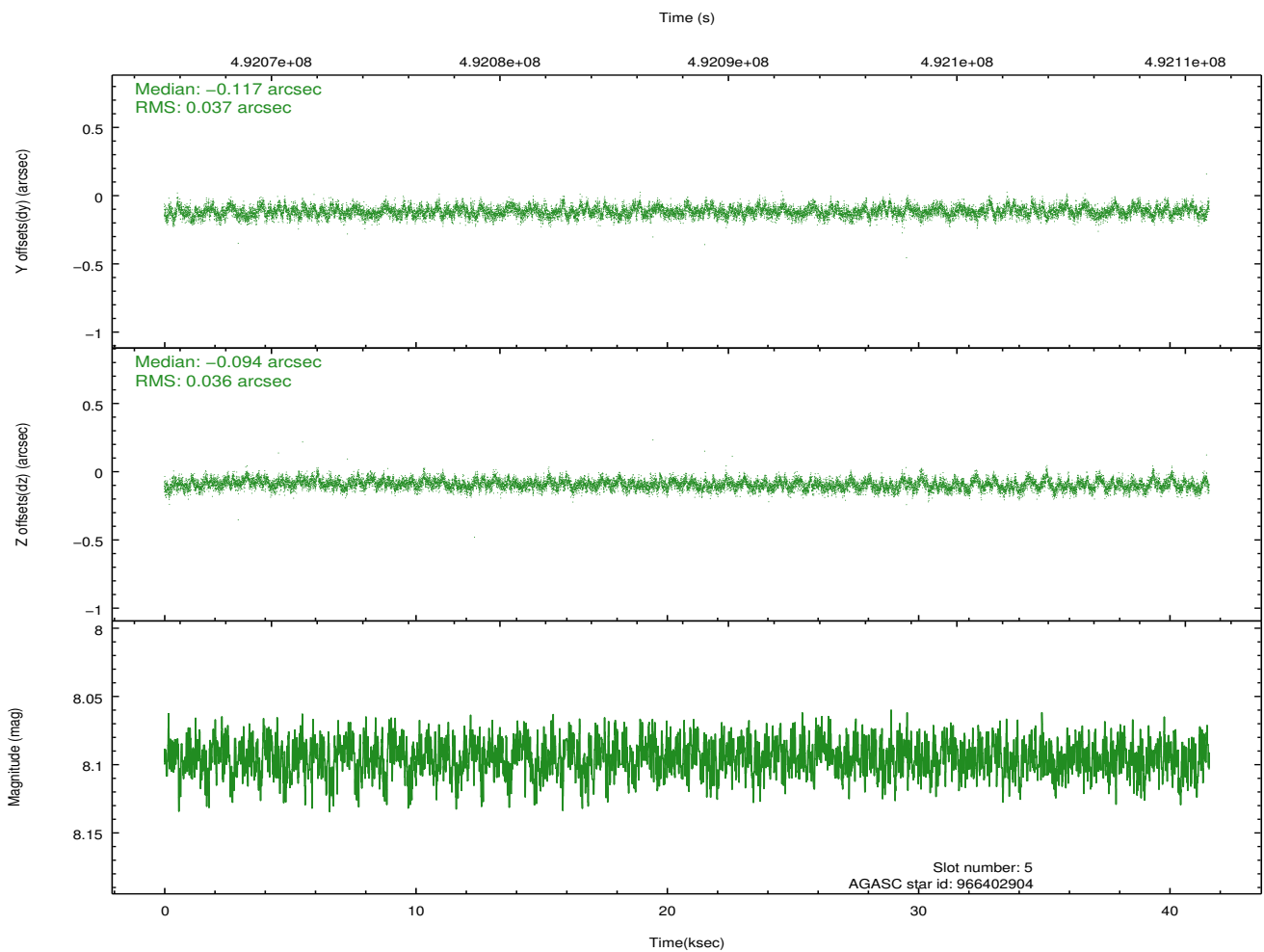
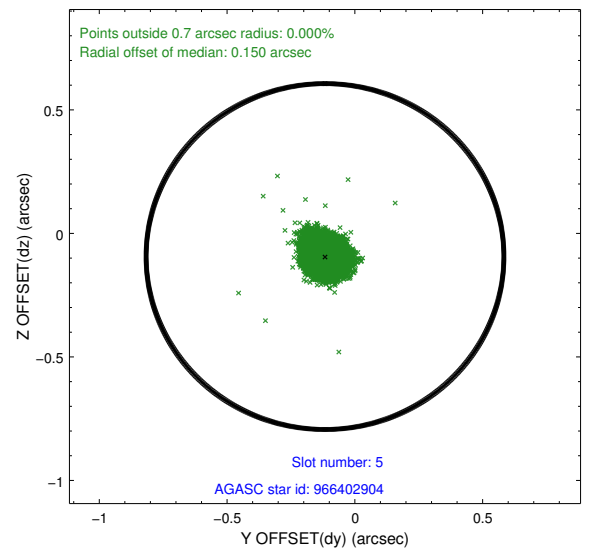
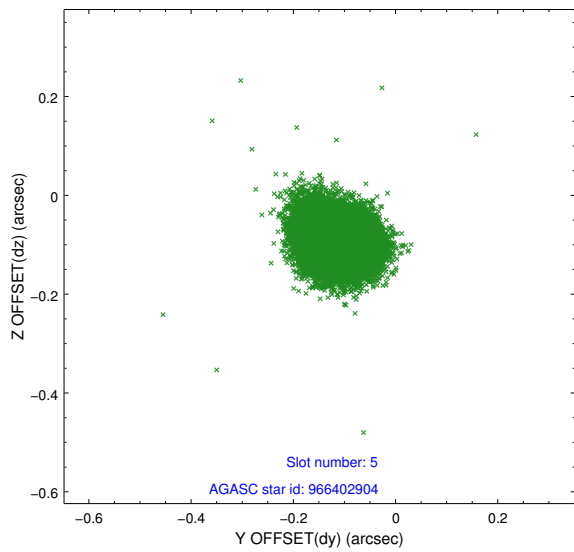
### 2.4.1 Slot 3



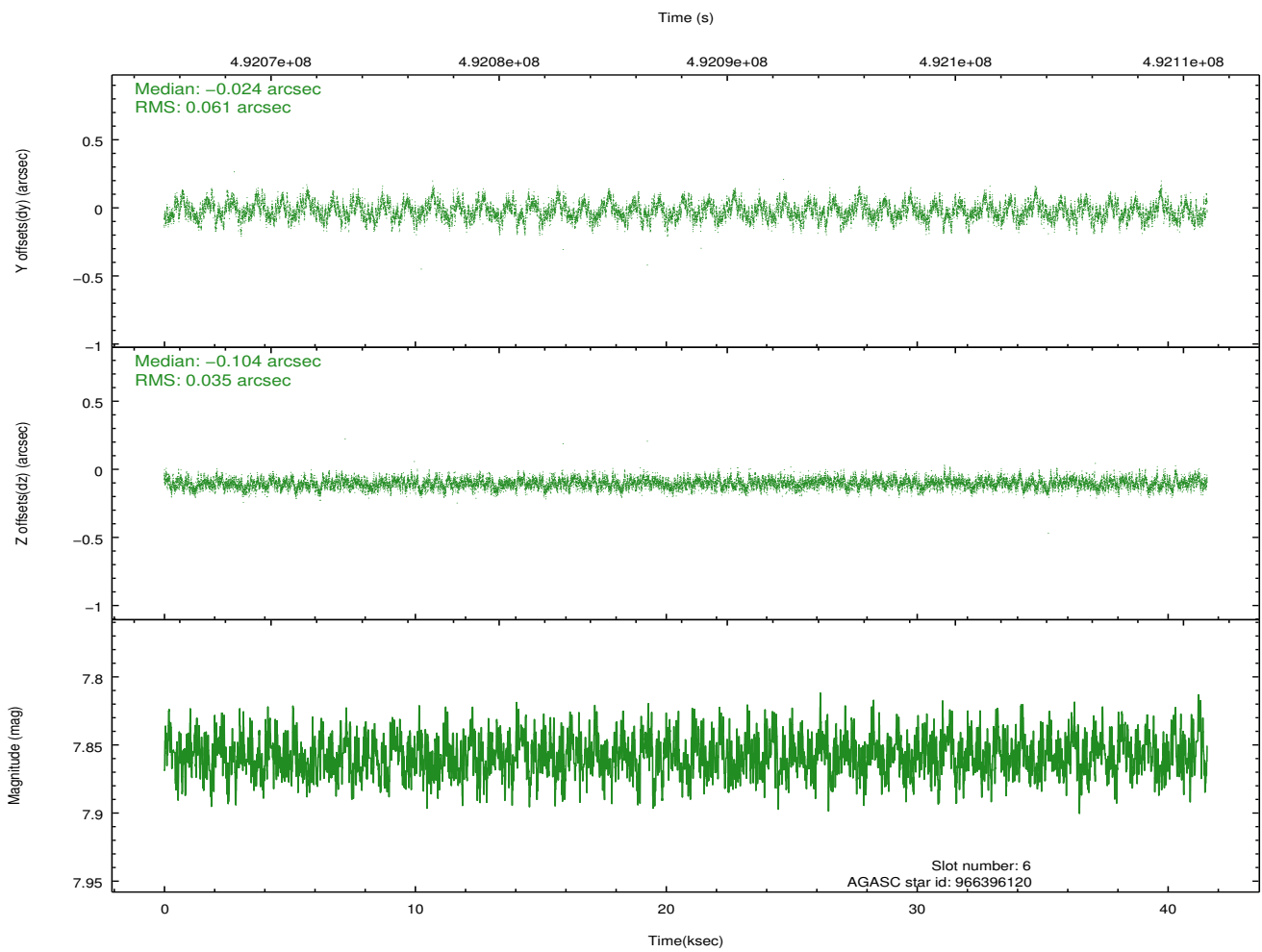
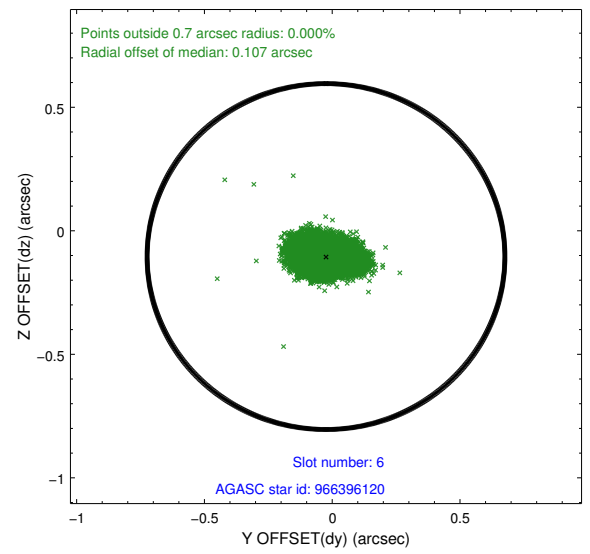
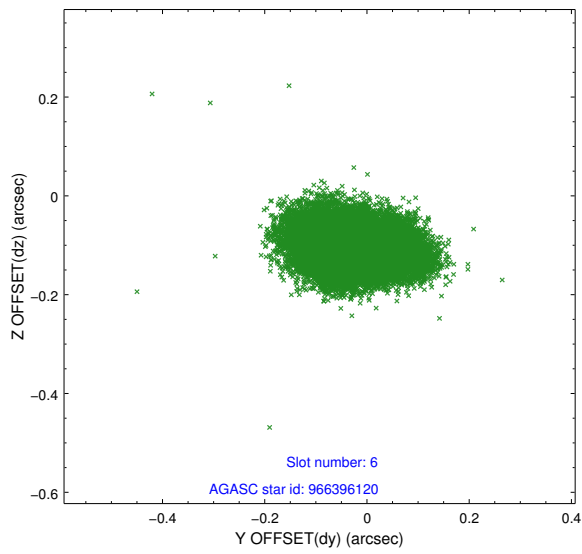
## 2.4.2 Slot 4



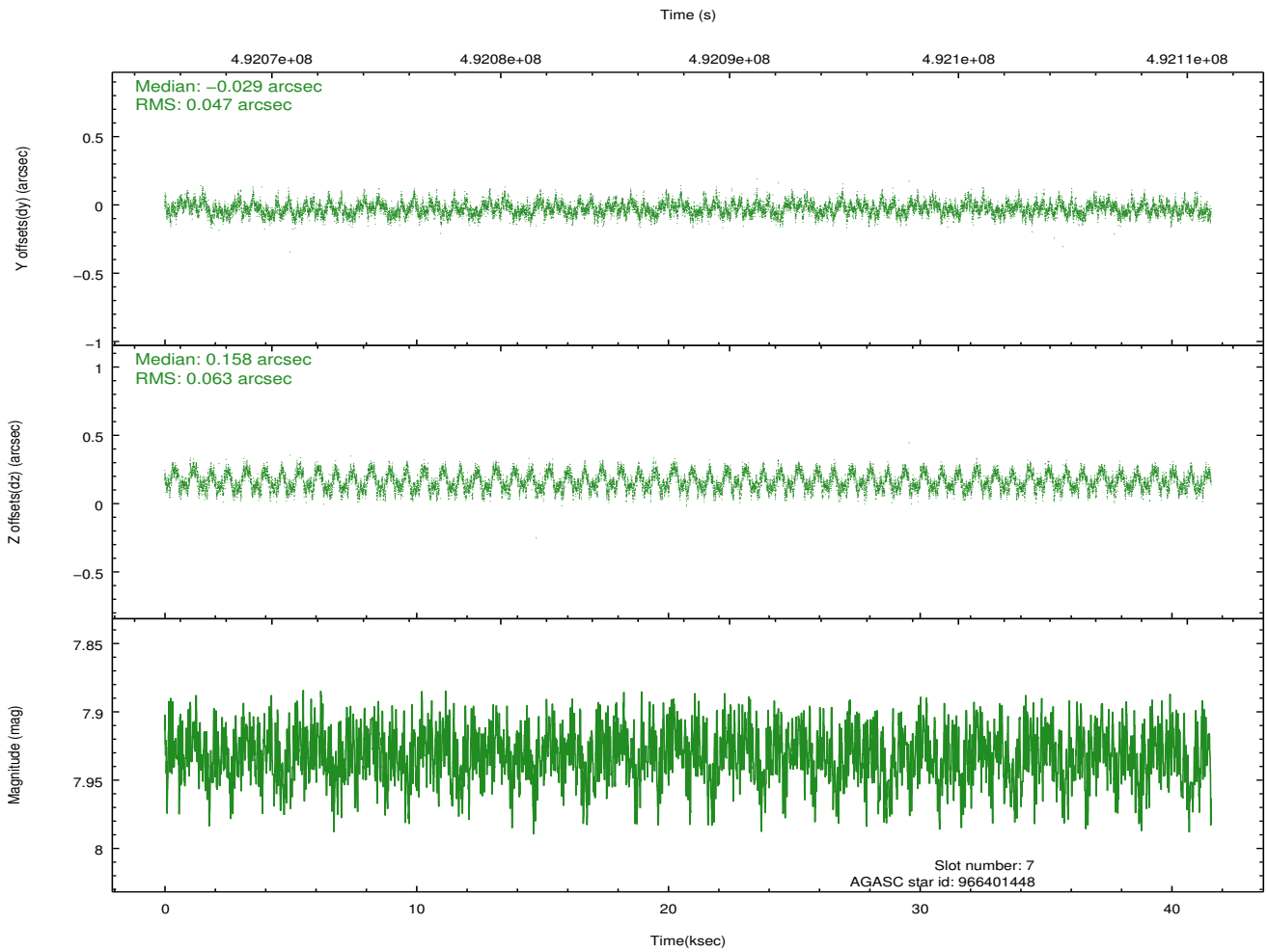
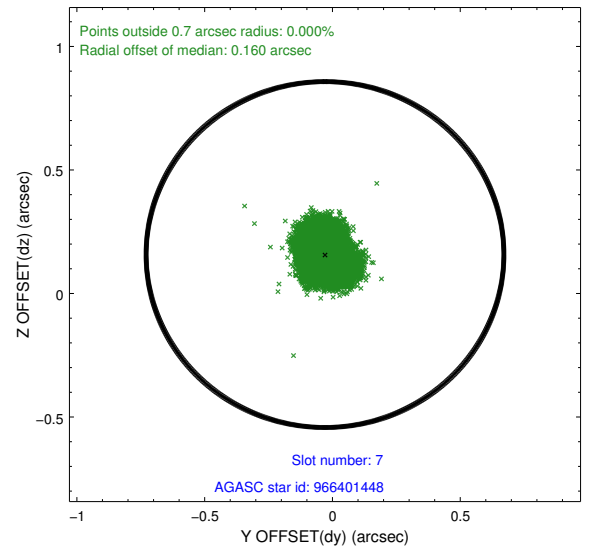
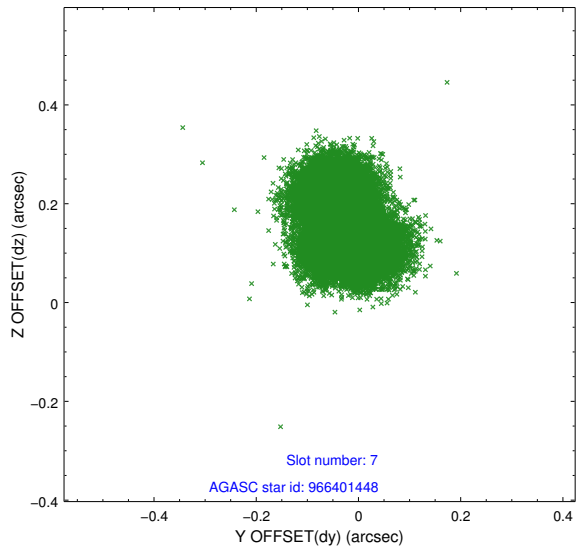
### 2.4.3 Slot 5



## 2.4.4 Slot 6

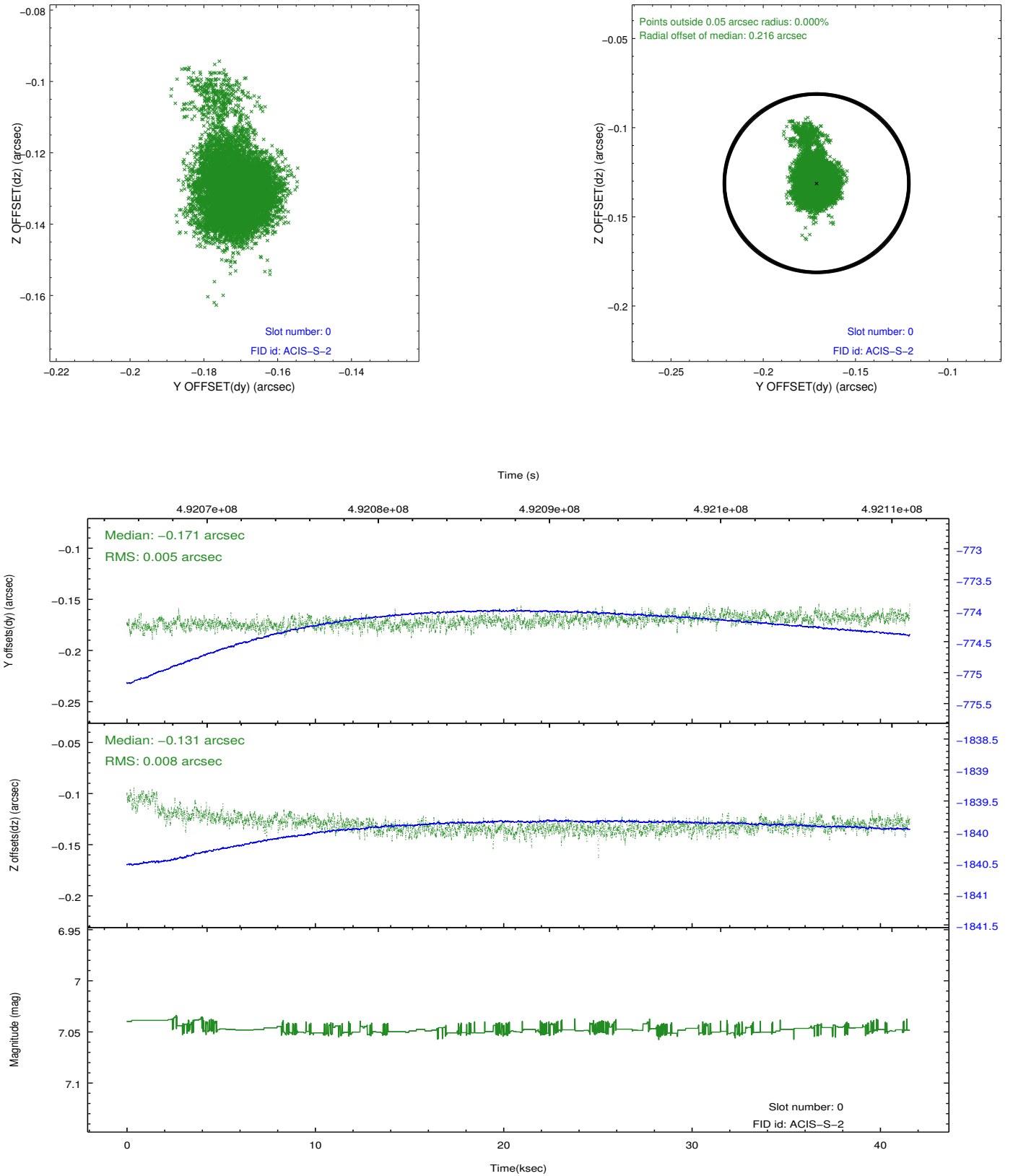


## 2.4.5 Slot 7

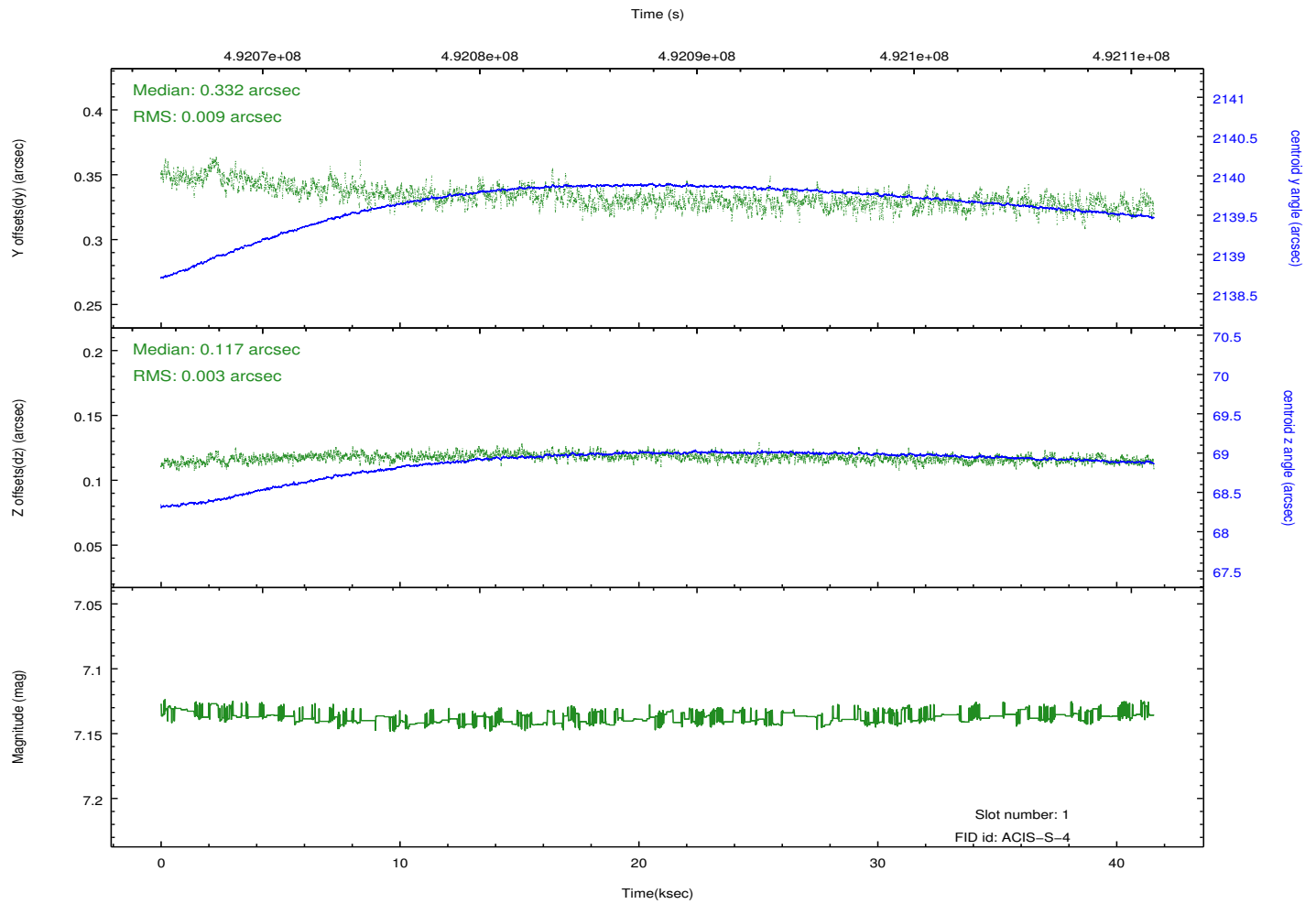
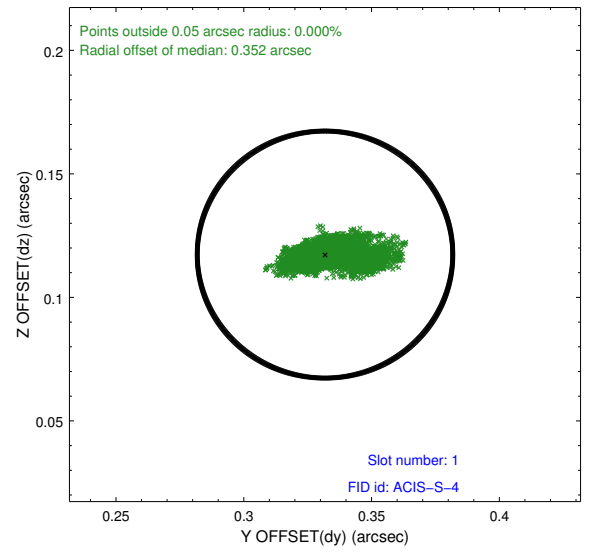
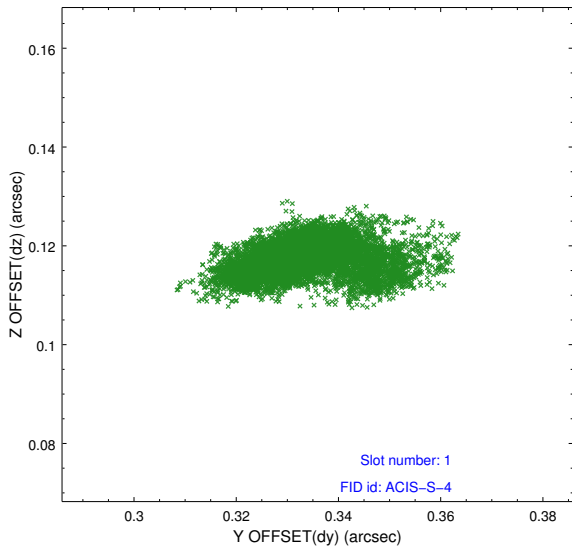


## 2.5 FID Slots

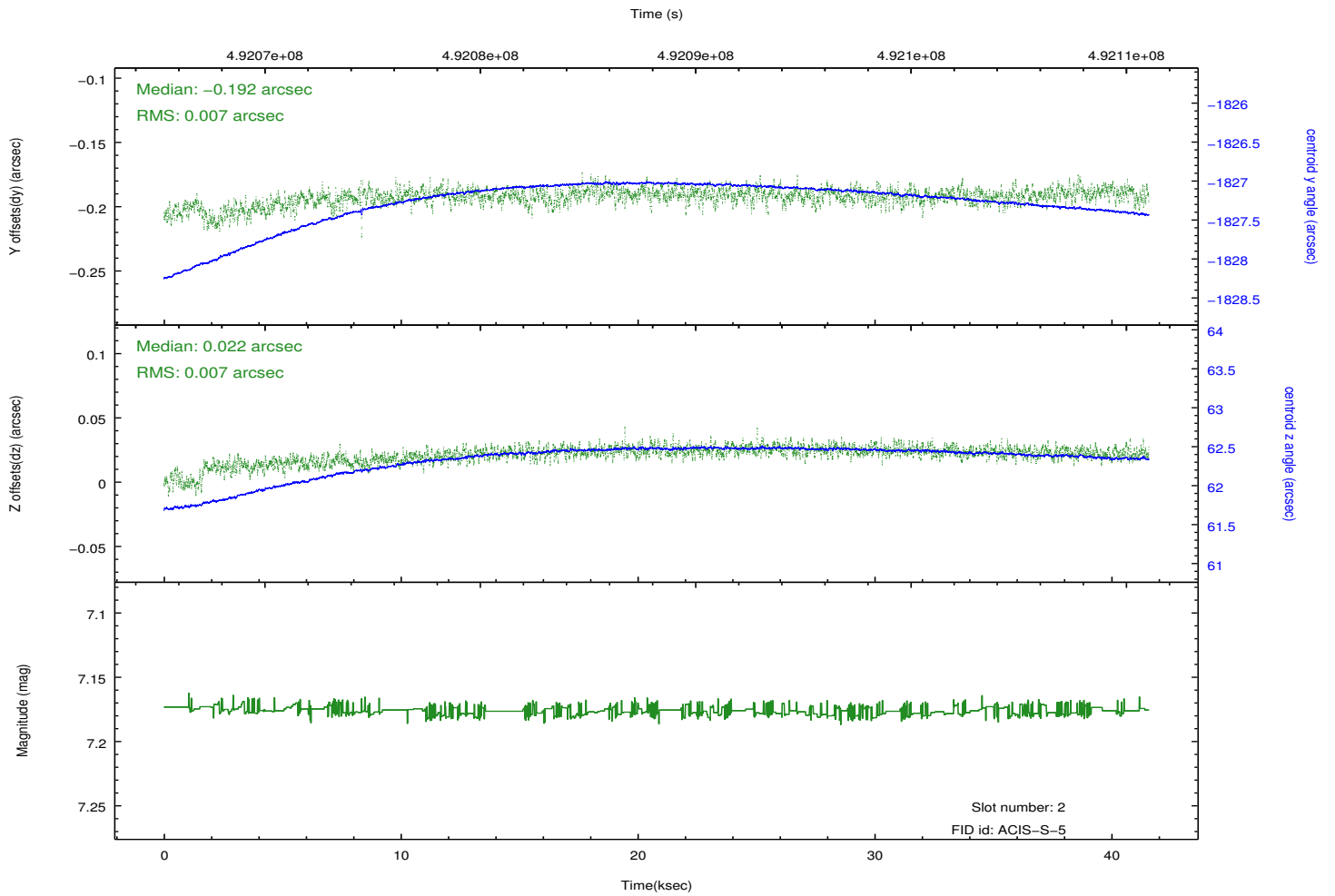
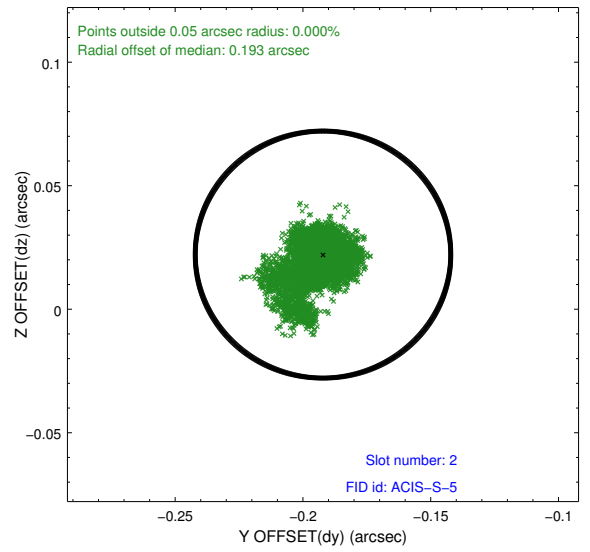
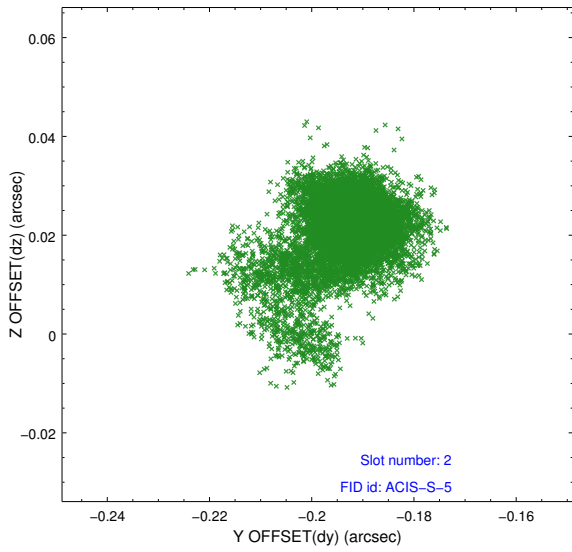
### 2.5.1 Slot 0



## 2.5.2 Slot 1

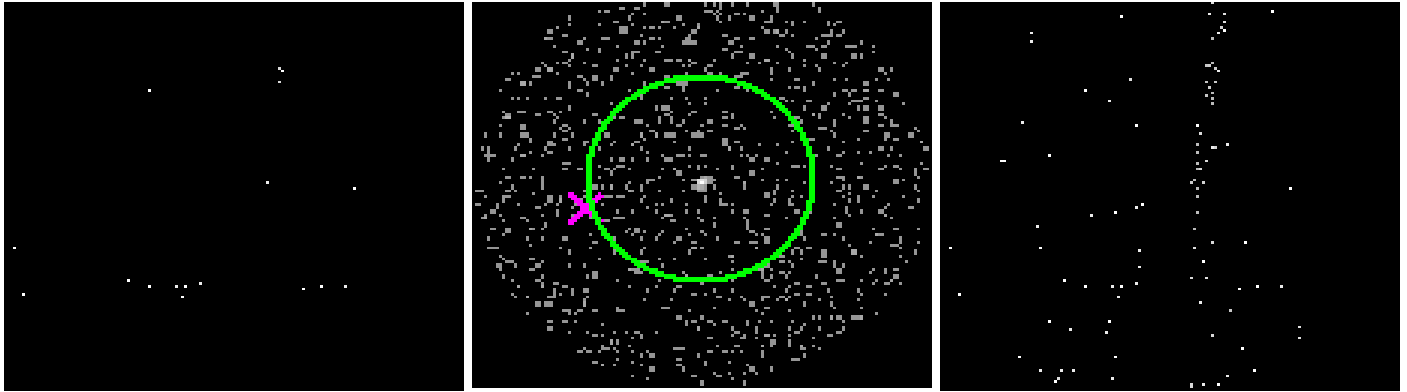


### 2.5.3 Slot 2



### 3 Gratings

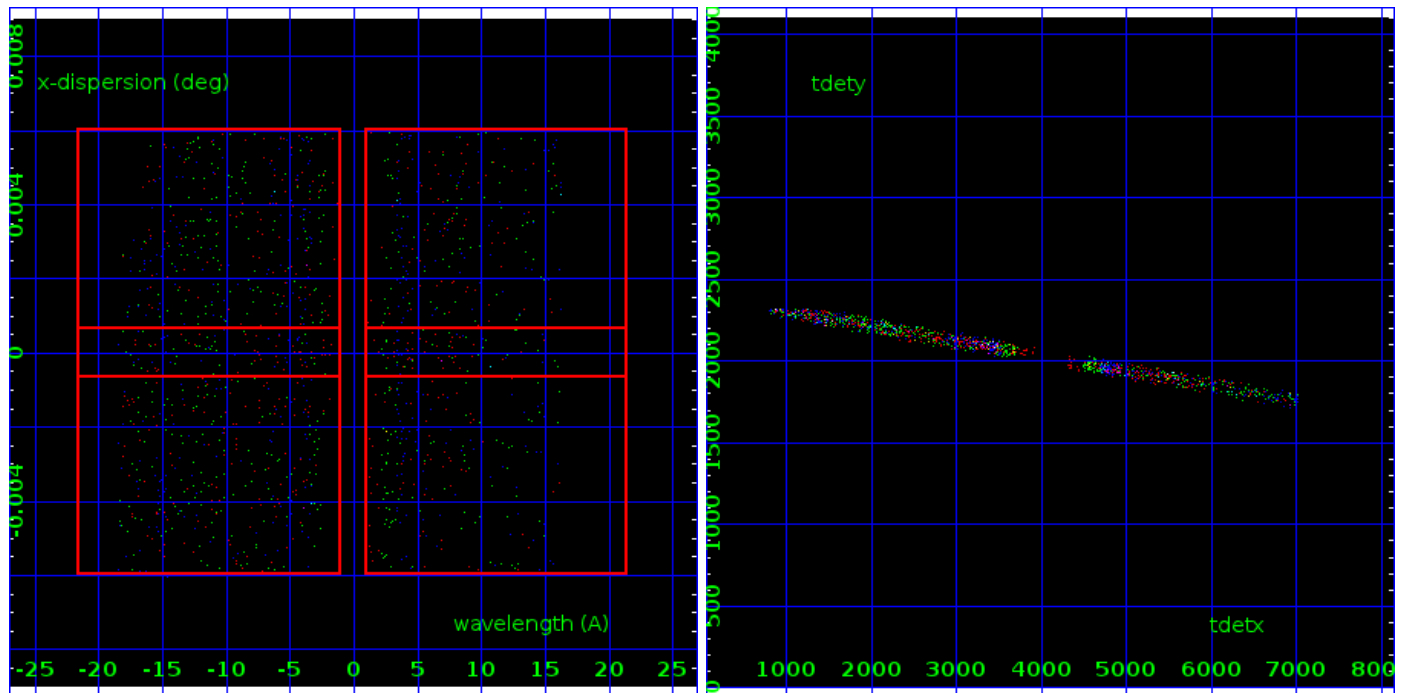
#### 3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

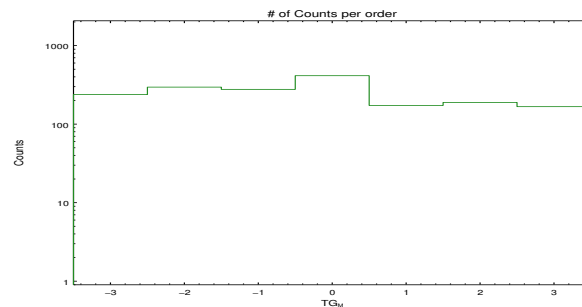
HEG Order Sort ALL

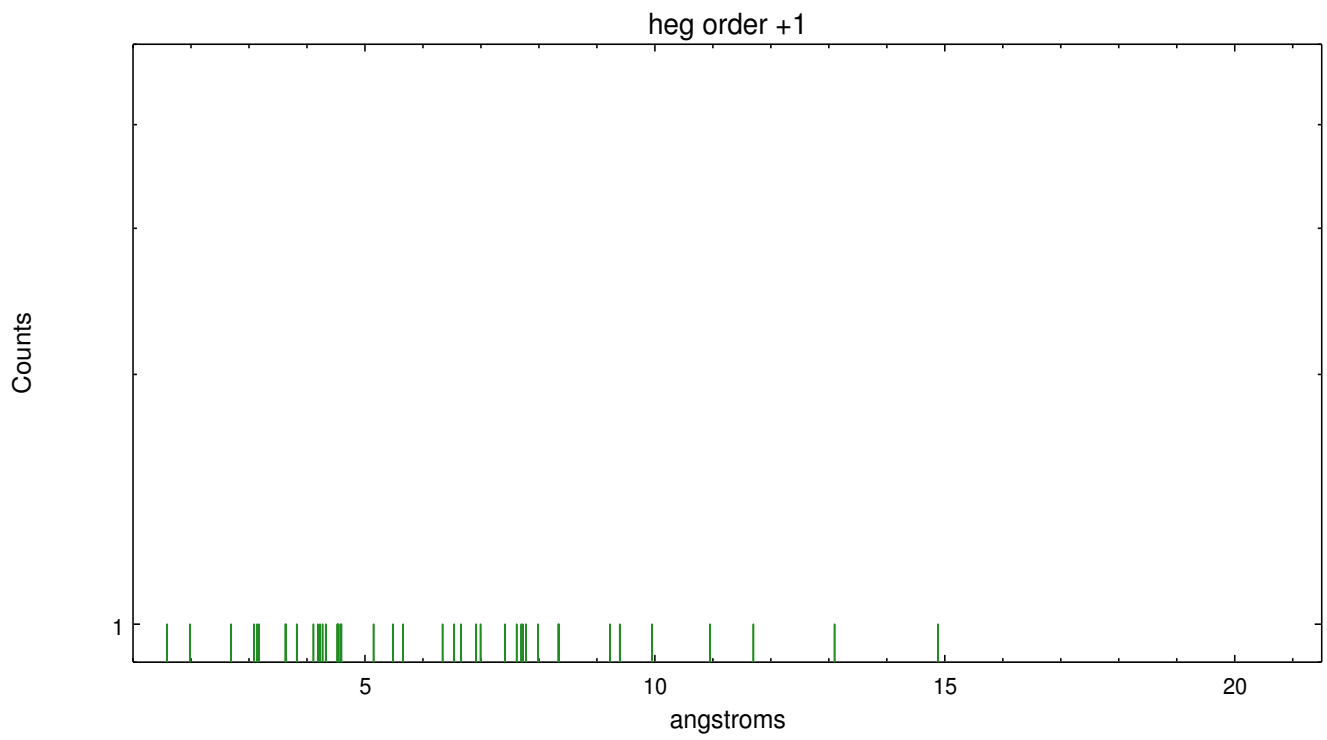
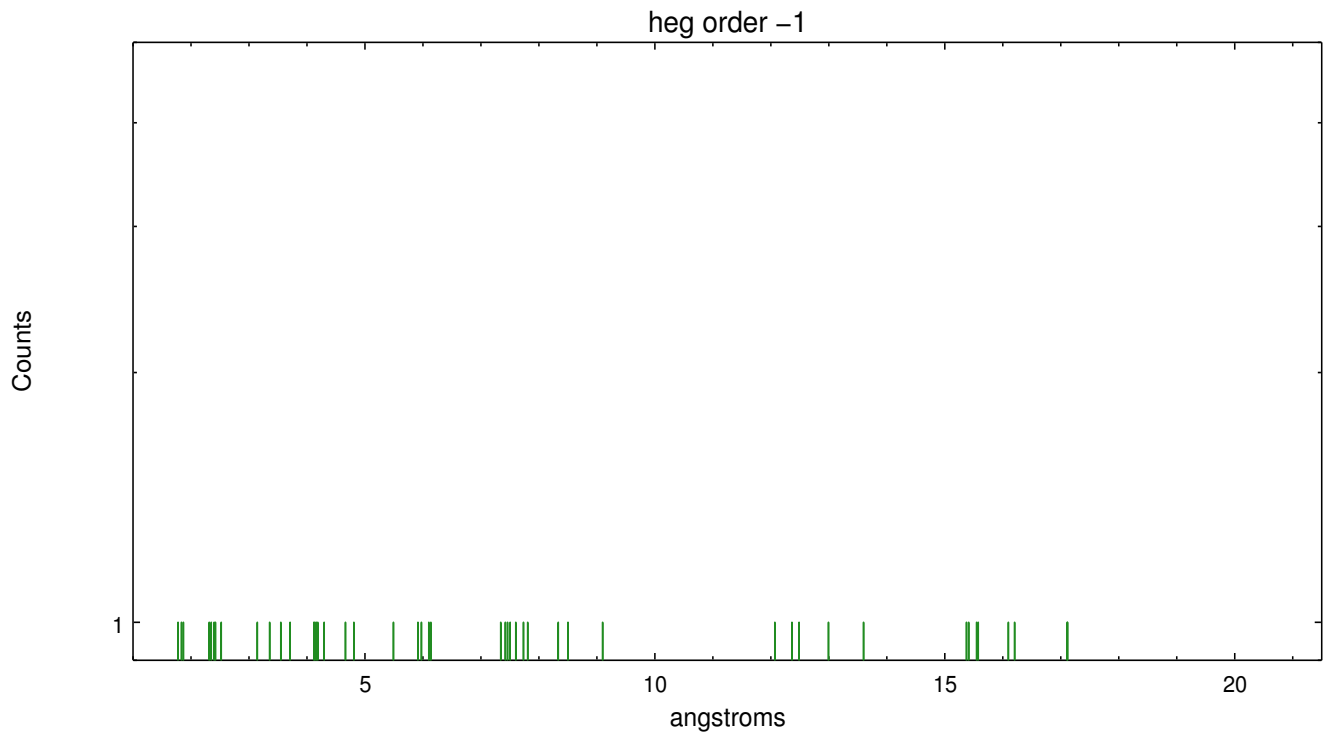


Spot Image HEG

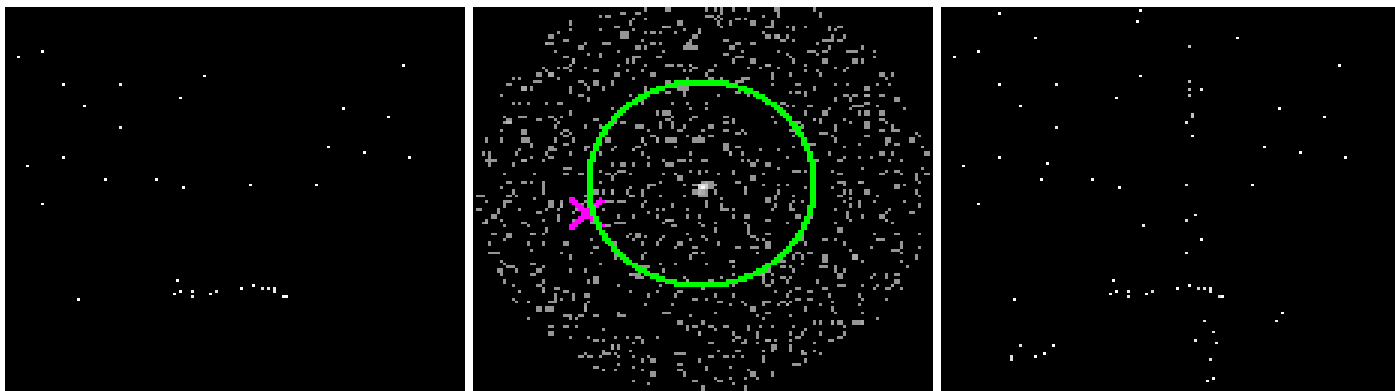
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	238	296	277	414	173	189	167





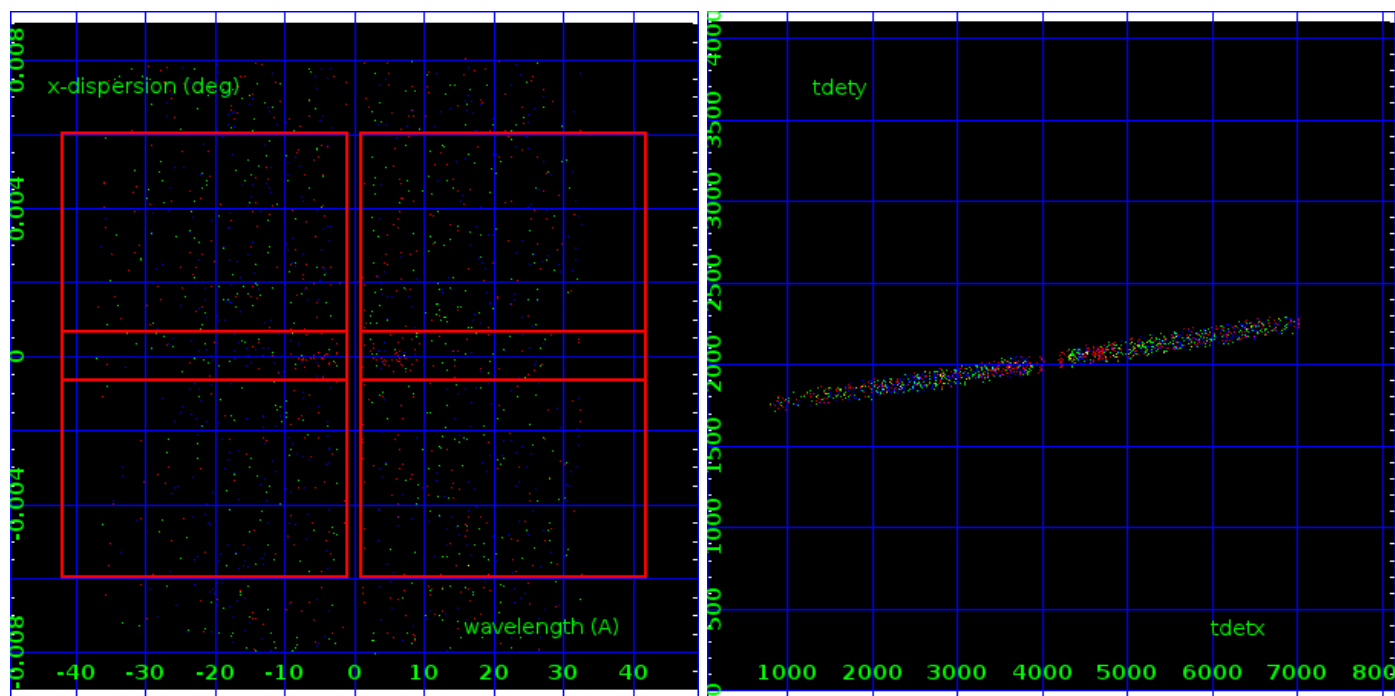
### 3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

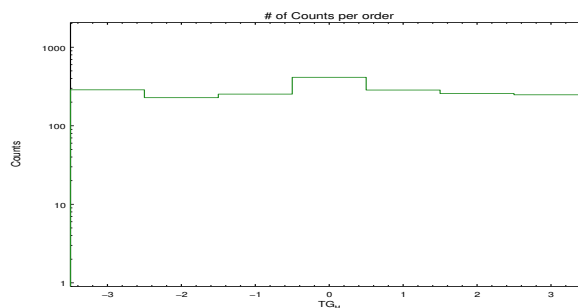
MEG Order Sort ALL

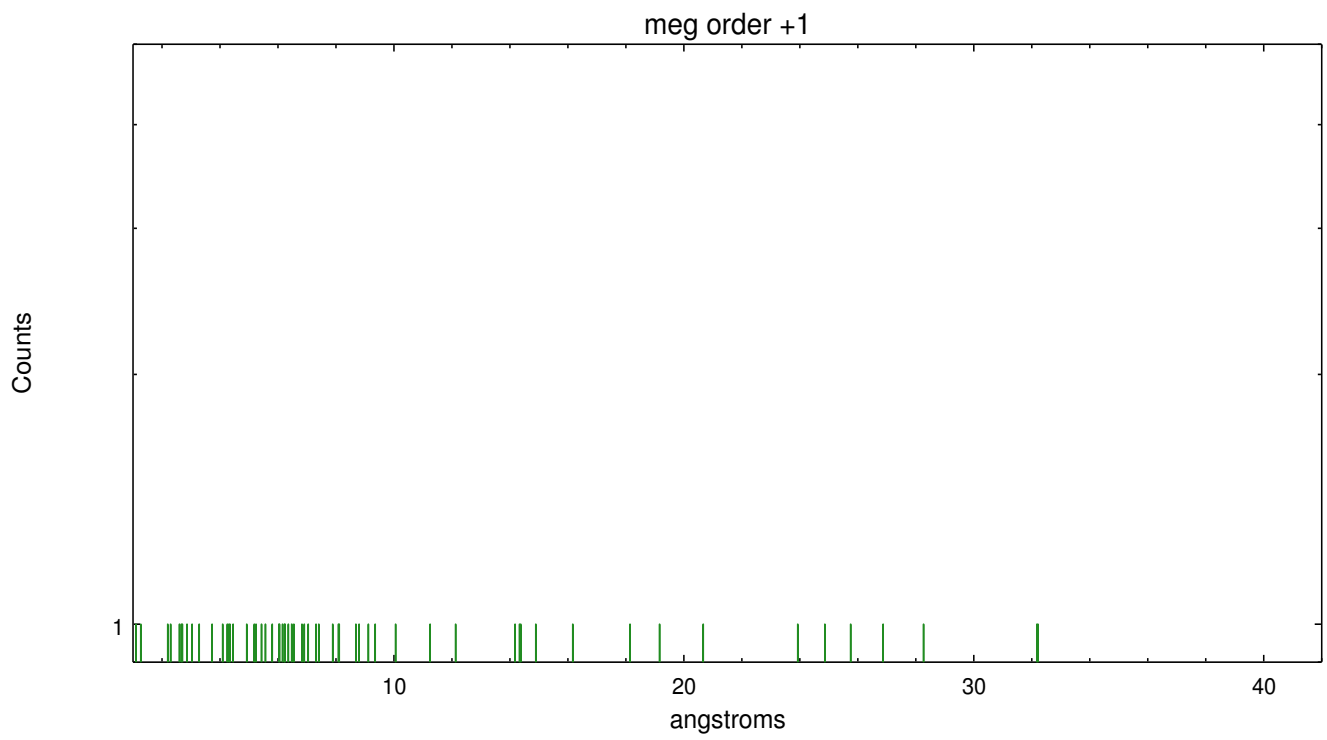
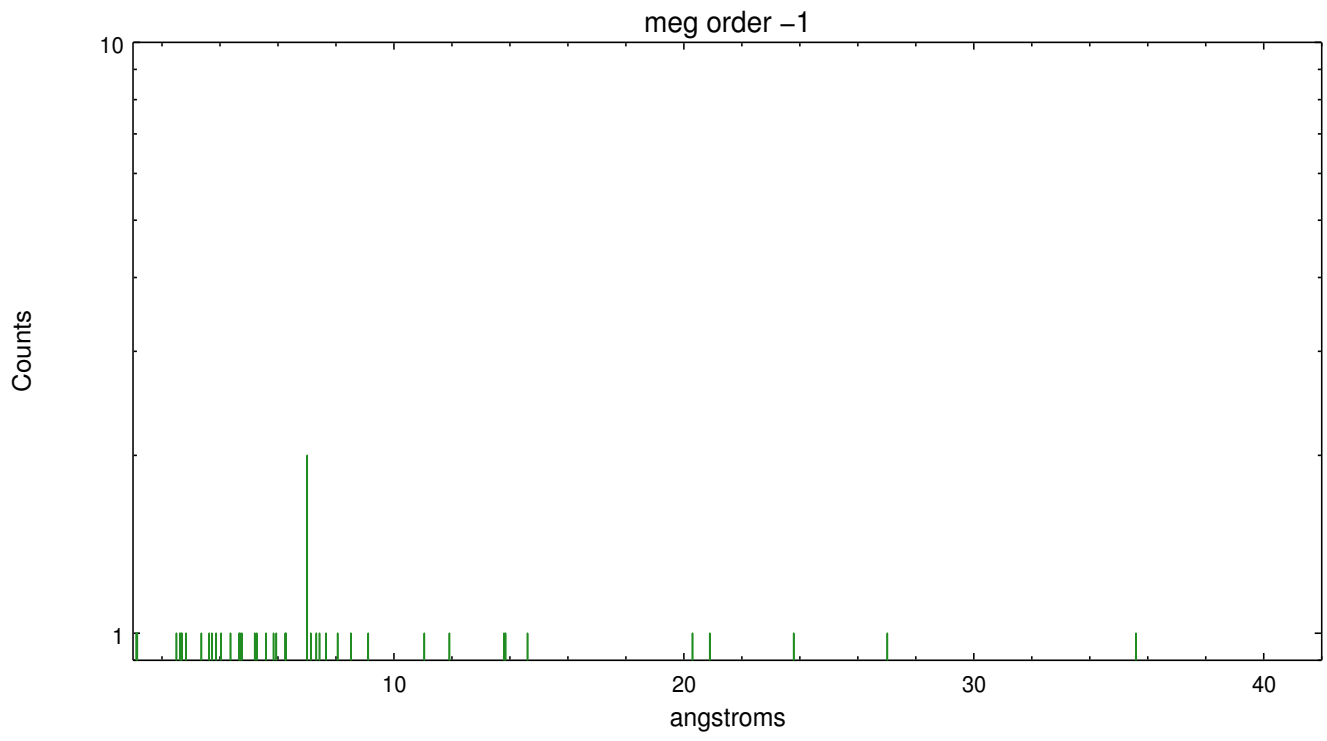


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	287	228	253	414	285	257	248





# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.06.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	41.295798259377

## A.2 Comments

Source is too faint to be identified by the software tools. Position of the zeroth order for purposes of spectral extraction was determined by eye to be sky coordinates  $x=4126.0$ ,  $y=4104.25$ . === Note that the coordinates of the source provided by the observer are incorrect. Source is slightly off-axis by about 2 arcsec.