

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 1944 - L2 Version 5  
Chandra X-Ray Center

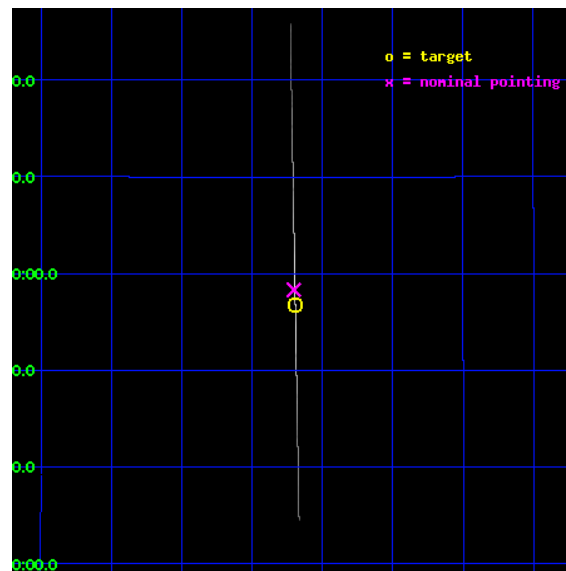
L2 Processing Date : Sep 14 2012

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# 1 Front

seq_num	400157	Sequence number
obs_id	1944	Observation id
title	ACCRETION DISK STRUCTURE IN VARIOUS SPECTRAL STATES OF GRS 1915+105	&#160
observer	Dr. Ronald Remillard	Principal investigator
object	GRS 1915+105	Source name
ra_targ	288.798333	Observer's specified target RA [deg]
dec_targ	10.945806	Observer's specified target Dec [deg]
ra_nom	288.80066336377	Nominal RA [deg]
dec_nom	10.972096180647	Nominal Dec [deg]
roll_nom	88.942554945216	Nominal Roll [deg]
revision	5	Processing version of data
ontime	30543.0	Sum of GTIs [s]
livetime	30423.69140625	Livetime [s]
ontime4	30543.0	Sum of GTIs [s]
ontime5	30543.0	Sum of GTIs [s]
ontime6	30543.0	Sum of GTIs [s]
ontime7	30543.0	Sum of GTIs [s]
ontime8	30543.0	Sum of GTIs [s]
ontime9	30543.0	Sum of GTIs [s]
l2events	4581135	Number of level 2 events

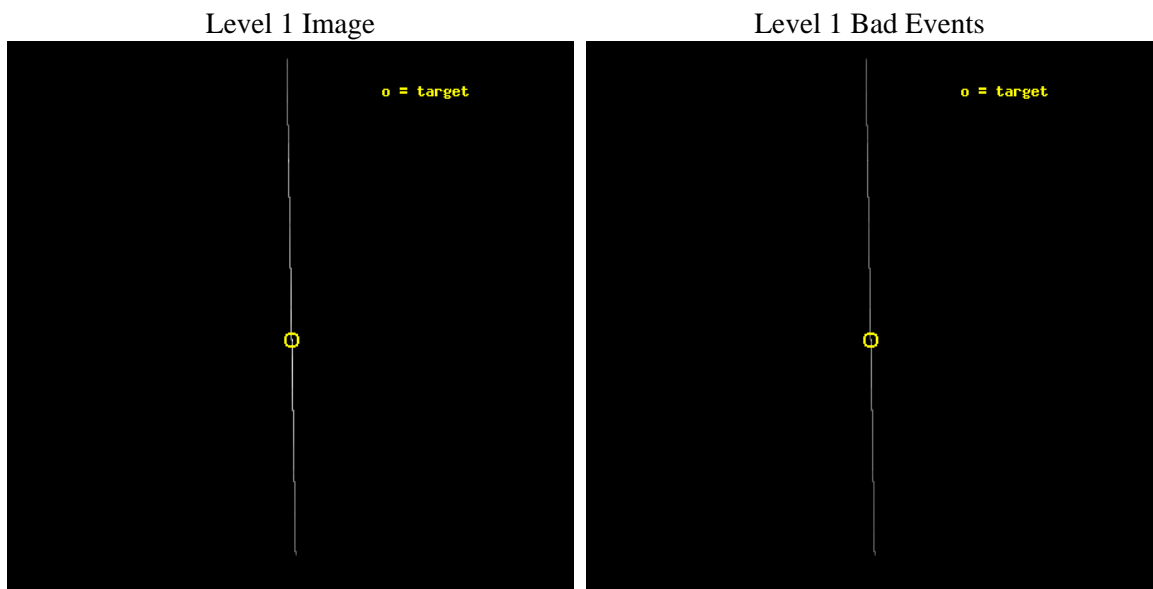




## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	30198.318000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	30543.0	Sum of GTIs [s]
caldsver	4.5.1.1	&#160	ontime4	30543.0	Sum of GTIs [s]
date	2012-09-14T07:00:48	Date and time of file creation	ontime5	30543.0	Sum of GTIs [s]
revision	6	Processing version of data	ontime6	30543.0	Sum of GTIs [s]
			ontime7	30543.0	Sum of GTIs [s]
			ontime8	30543.0	Sum of GTIs [s]
			ontime9	30543.0	Sum of GTIs [s]
			l1events	5036880	Number of level 1 events

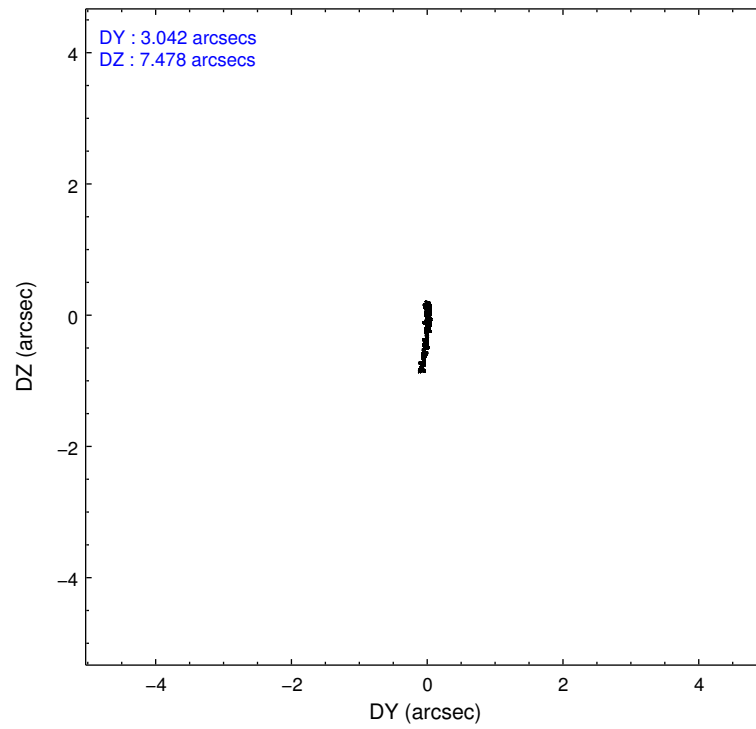
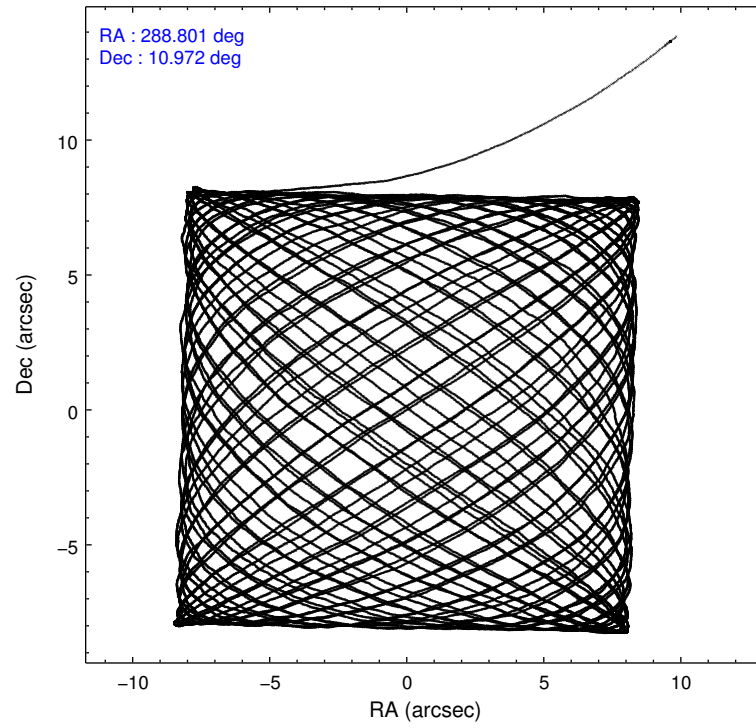
### 2.1.3 Events

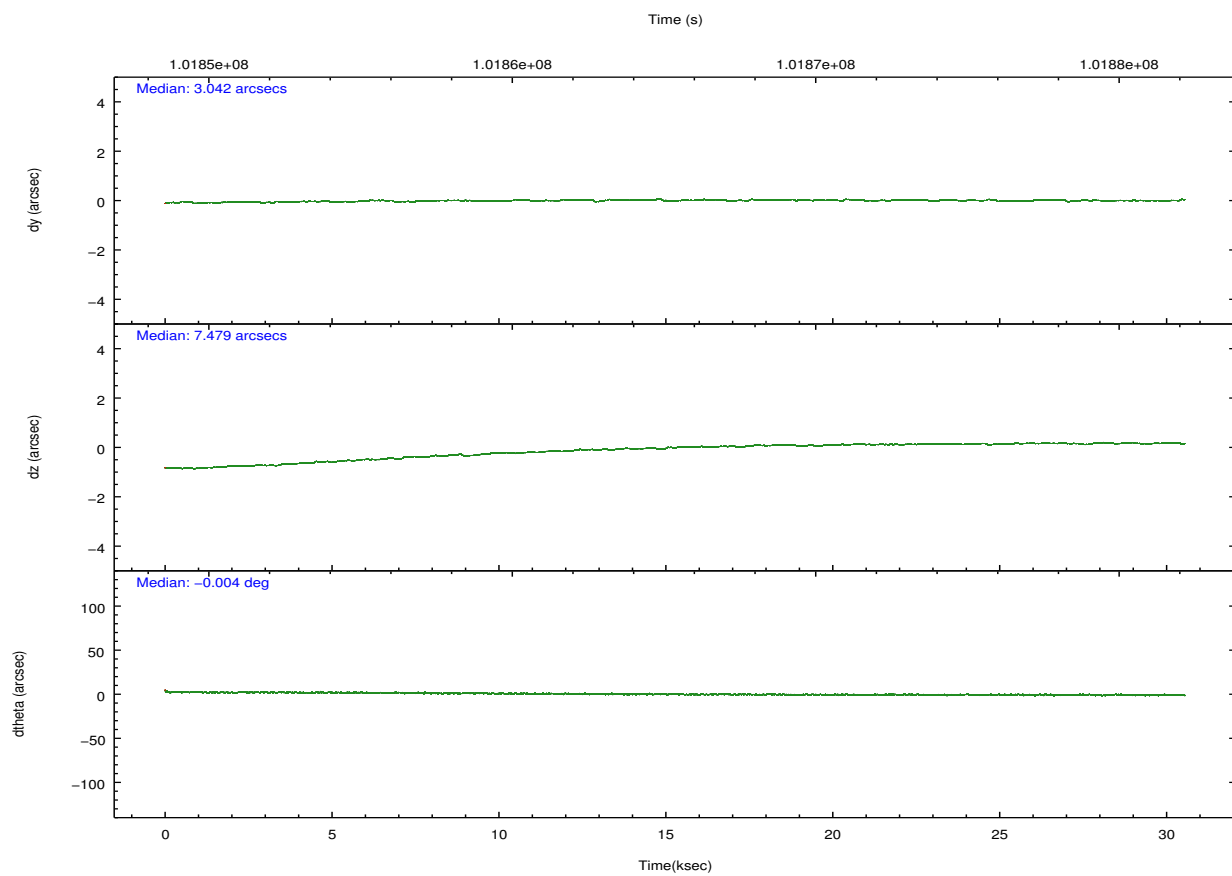
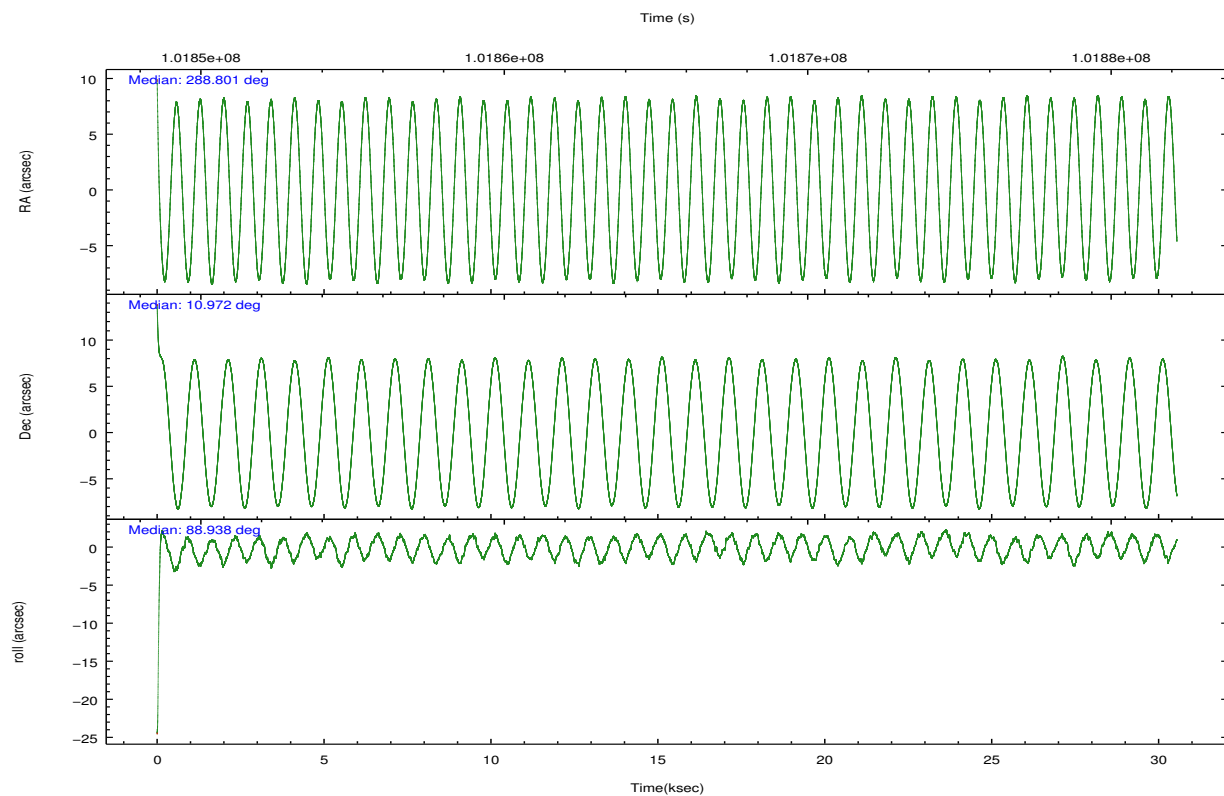
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	73882	304464	1047539	2838008	649140	123847	grade 0 events	9091	53412	131922	369662	253972	28445
rejected events	7911	22999	25512	85629	19864	9841		12%	17%	12%	13%	39%	22%
rejected %	10%	7%	2%	3%	3%	7%	grade 1 events	144	219	500	4617	801	191
								0%	0%	0%	0%	0%	0%
							grade 2 events	36873	98587	772075	813014	288678	59691
								49%	32%	73%	28%	44%	48%
							grade 3 events	5436	7874	11892	221714	20524	5913
								7%	2%	1%	7%	3%	4%
							grade 4 events	5902	7704	11776	220178	20139	6407
								7%	2%	1%	7%	3%	5%
							grade 5 events	6691	17021	12485	58130	13071	8347
								9%	5%	1%	2%	2%	6%
							grade 6 events	9745	119647	106889	1150693	51955	14853
								13%	39%	10%	40%	8%	11%
							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_GRADED	CC33_GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	288.814348	288.8006633637727	Subarray requested	NONE	NONE
[deg] Pointing Dec	10.948306	10.97209618064724	Alternating exposures requested	N	N
[deg] Pointing Roll	88.783328	88.94255494521616	[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	-184.032523	-184.025251236478			
[mm] SIM translation stage offset	-6.1	-6.107271346529842			
[s] Observation start time (MET)	101850439.184000	101849376.60195			
Observation start date	2001-03-24T19:46:15	2001-03-24T19:29:36			
[s] Observation end time (MET)	101880637.184000	101880951.72818			
Observation end date	2001-03-25T04:09:33	2001-03-25T04:15:51			
Read mode	CONTINUOUS	CONTINUOUS			

## 2.3 Aspect



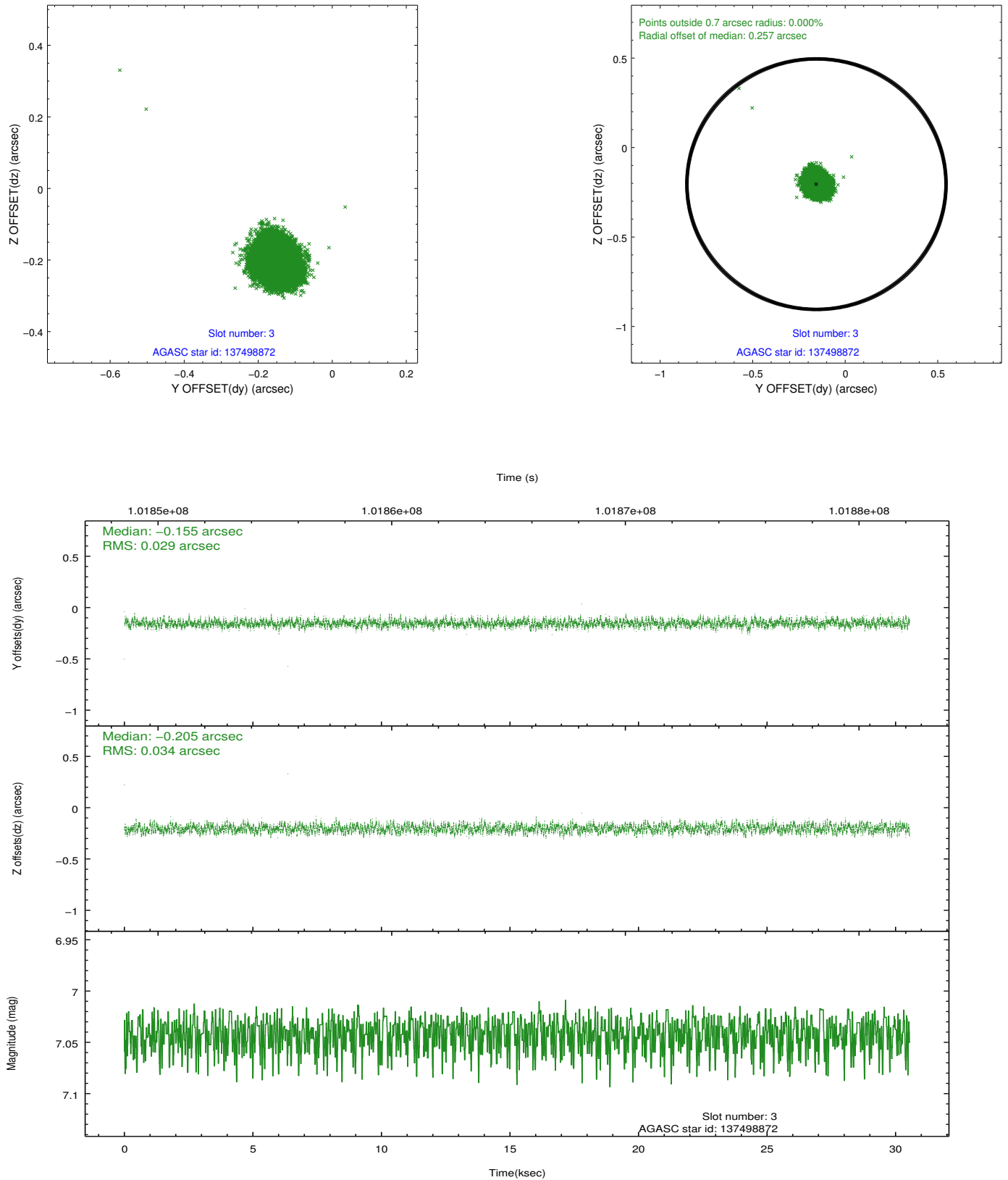


### Slot Statistics

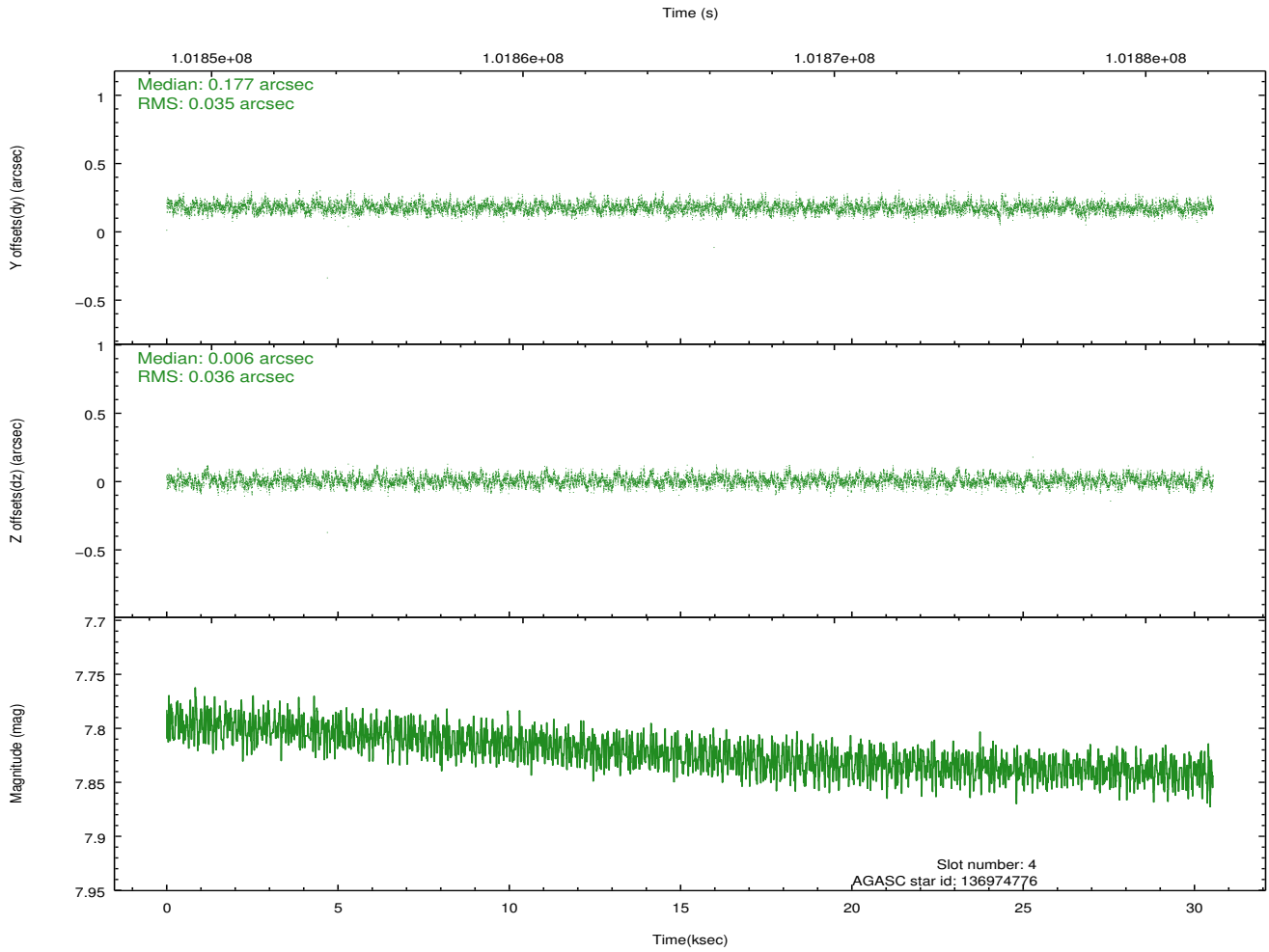
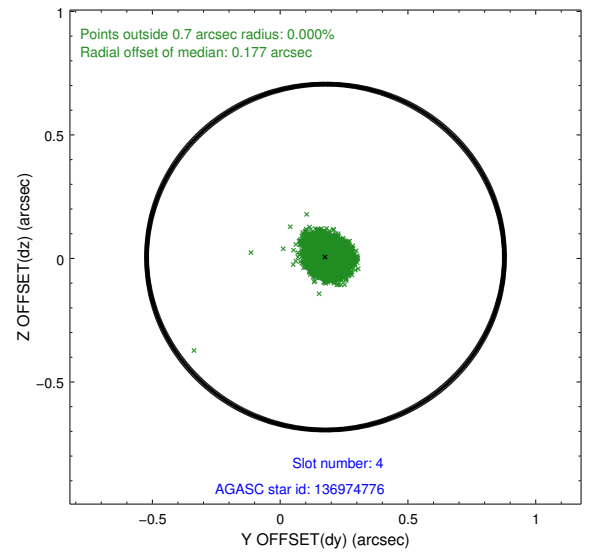
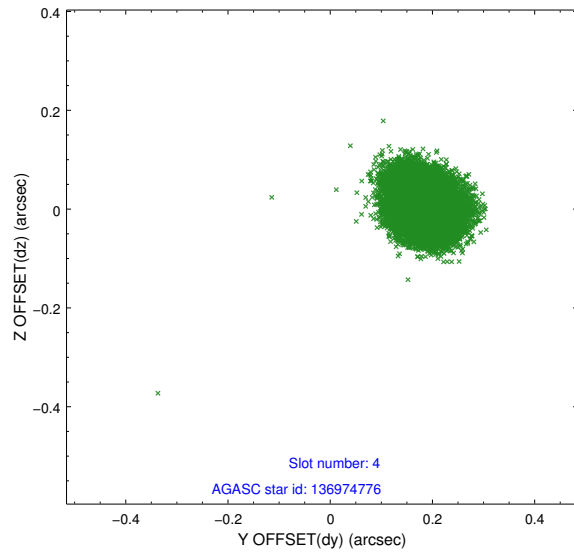
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	7451	-0.022	-0.097	0.014	0.021	0.000000	0.000000	-755.28	-1854.48
1	FID	ACIS-S-4	7.18	7451	-0.041	0.036	0.006	0.011	0.000000	0.000000	2157.96	54.03
2	FID	ACIS-S-5	7.23	7451	0.032	0.068	0.012	0.019	0.000000	0.000000	-1807.97	47.83
3	GUIDE	137498872	7.04	14901	-0.155	-0.205	0.047	0.074	288.350862	11.344926	1393.39	1665.61
4	GUIDE	136974776	7.82	14900	0.177	0.006	0.053	0.085	288.742109	10.409402	-1945.14	214.28
5	GUIDE	137497048	7.98	14837	-0.244	0.095	0.048	0.077	288.896055	11.554718	2187.82	-241.94
6	GUIDE	136977584	8.42	14894	0.211	-0.023	0.056	0.091	288.635599	10.555283	-1427.88	602.06
7	GUIDE	137102976	8.50	14898	0.010	0.126	0.059	0.096	289.193436	10.979652	141.74	-1337.08

## 2.4 Star Slots

### 2.4.1 Slot 3

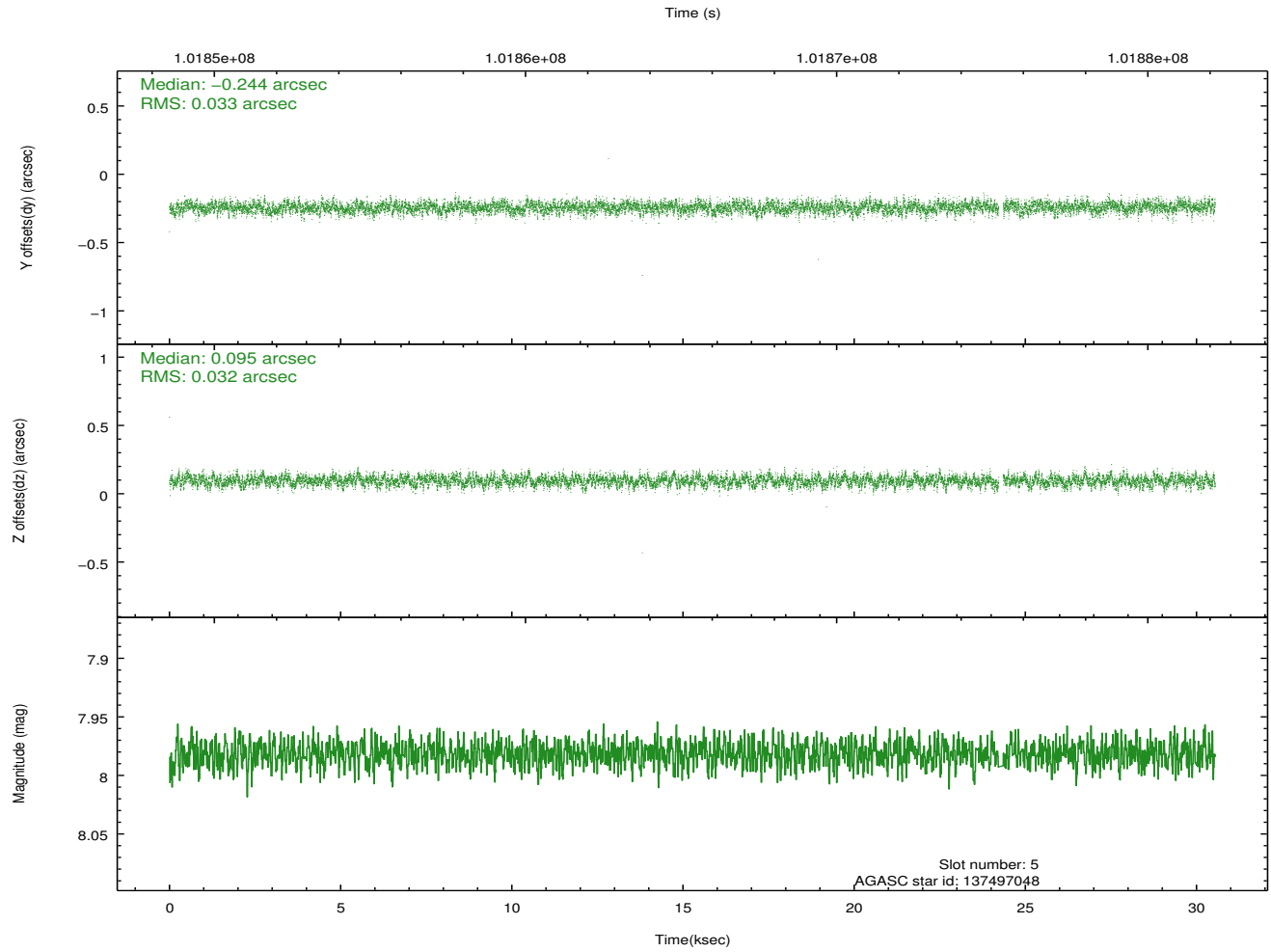
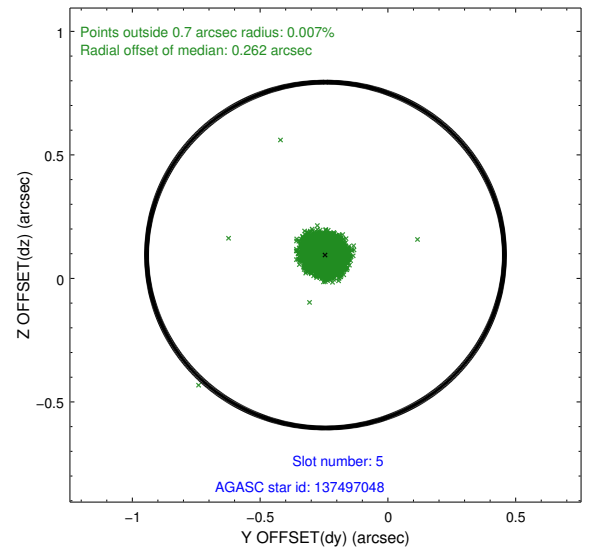
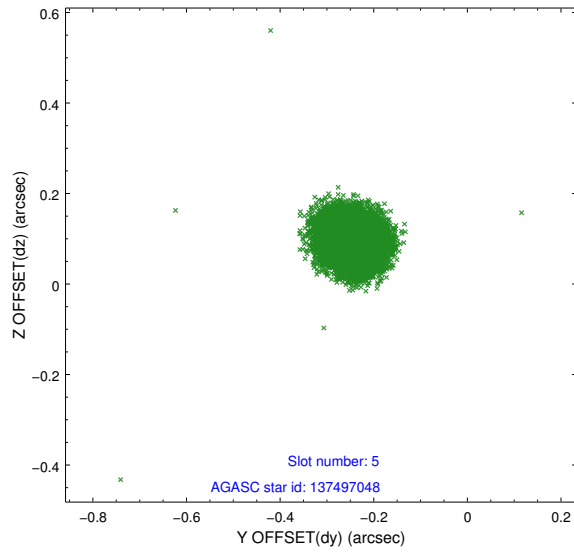


## 2.4.2 Slot 4

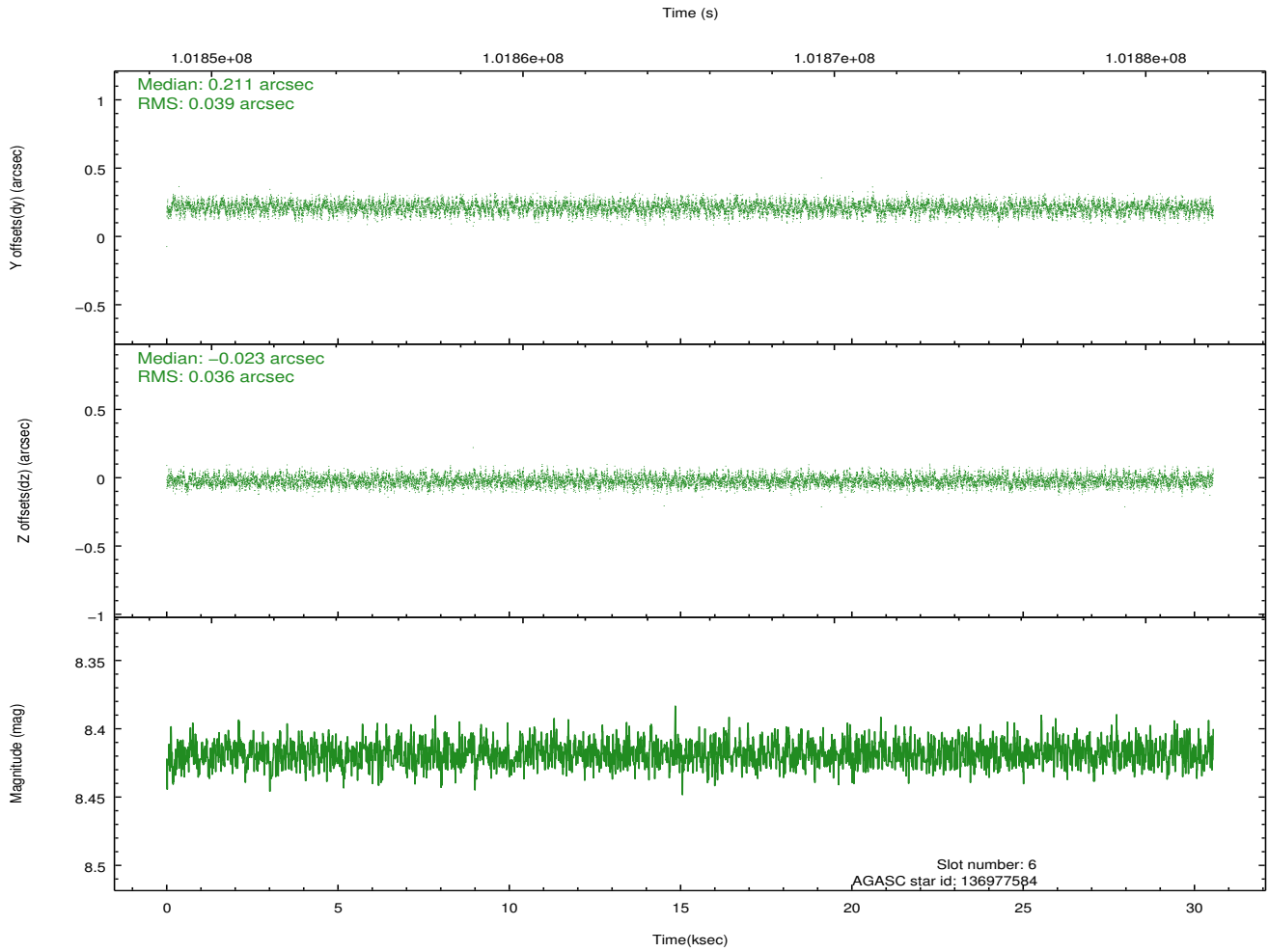
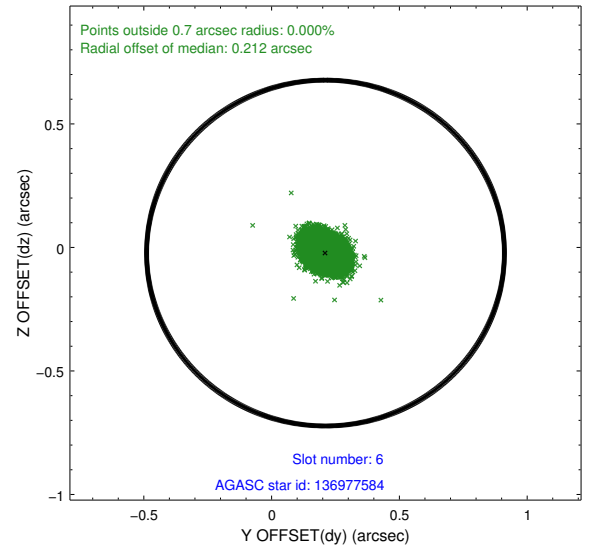
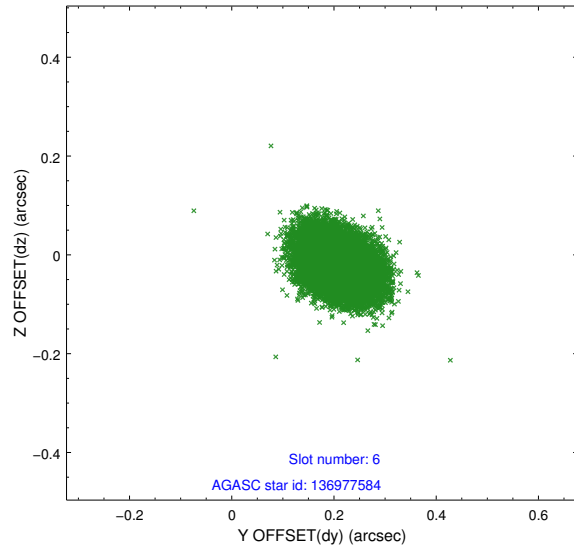




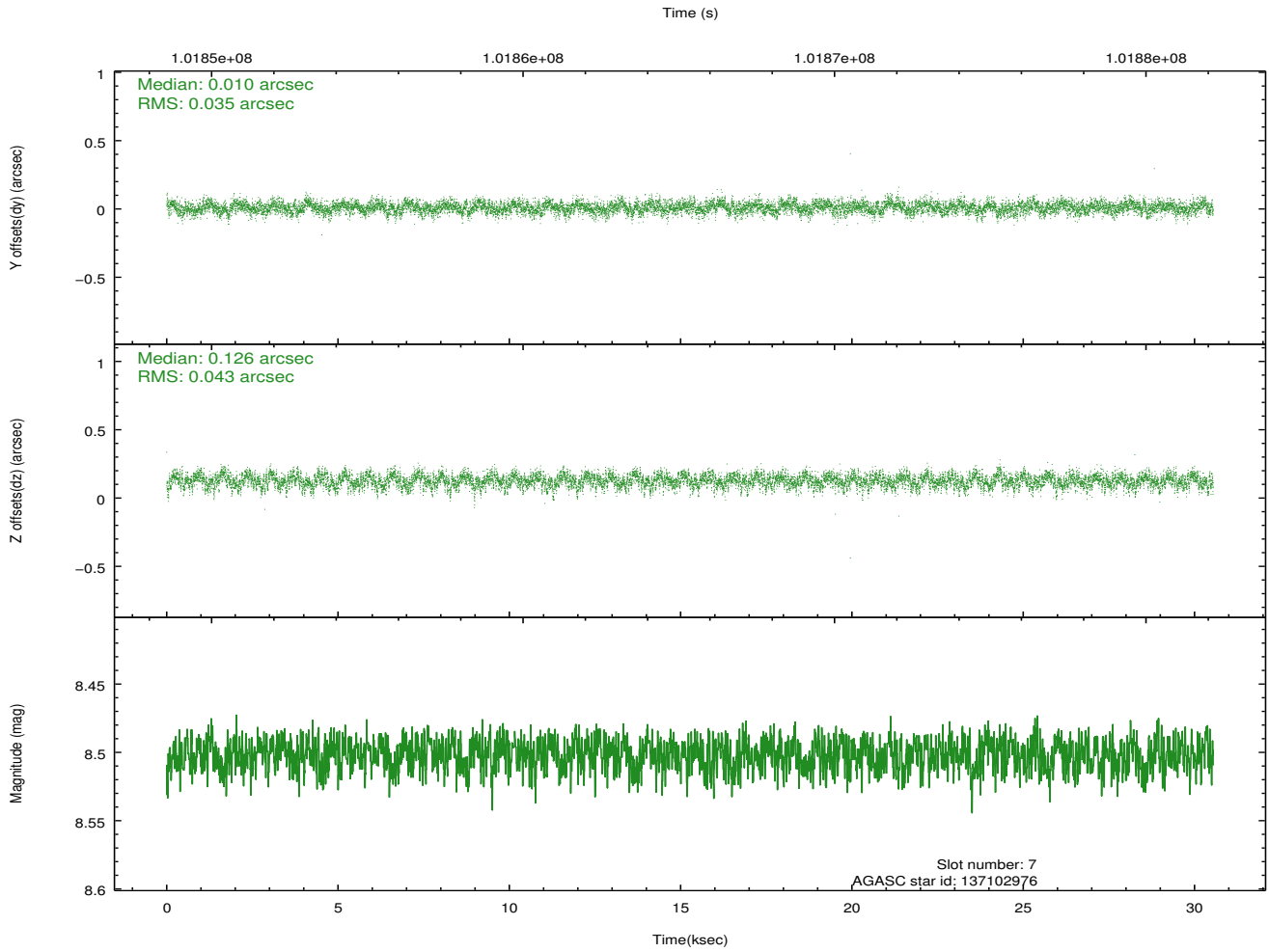
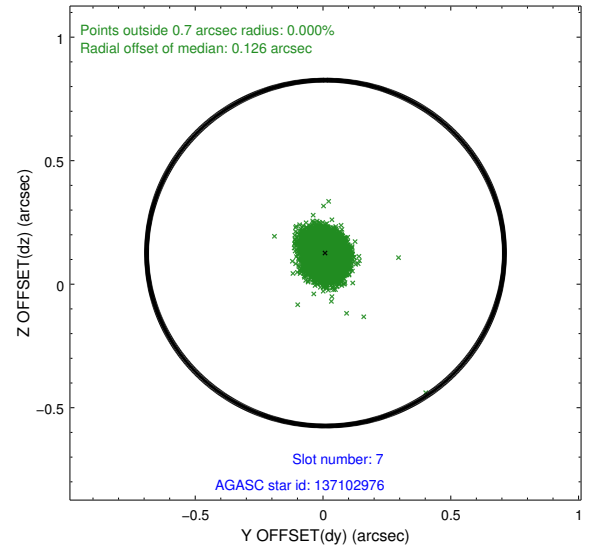
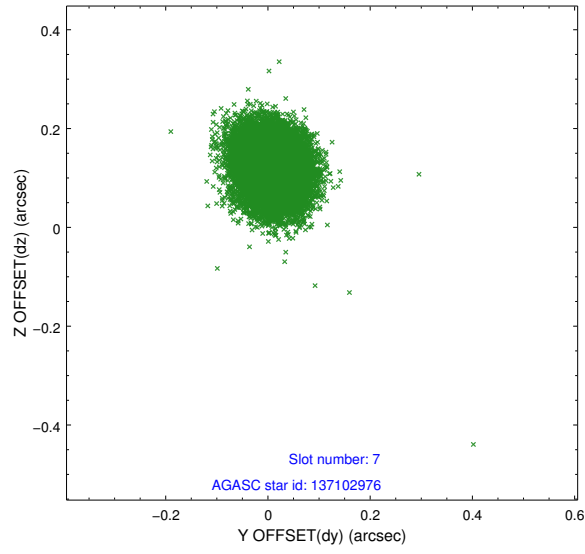
### 2.4.3 Slot 5



## 2.4.4 Slot 6

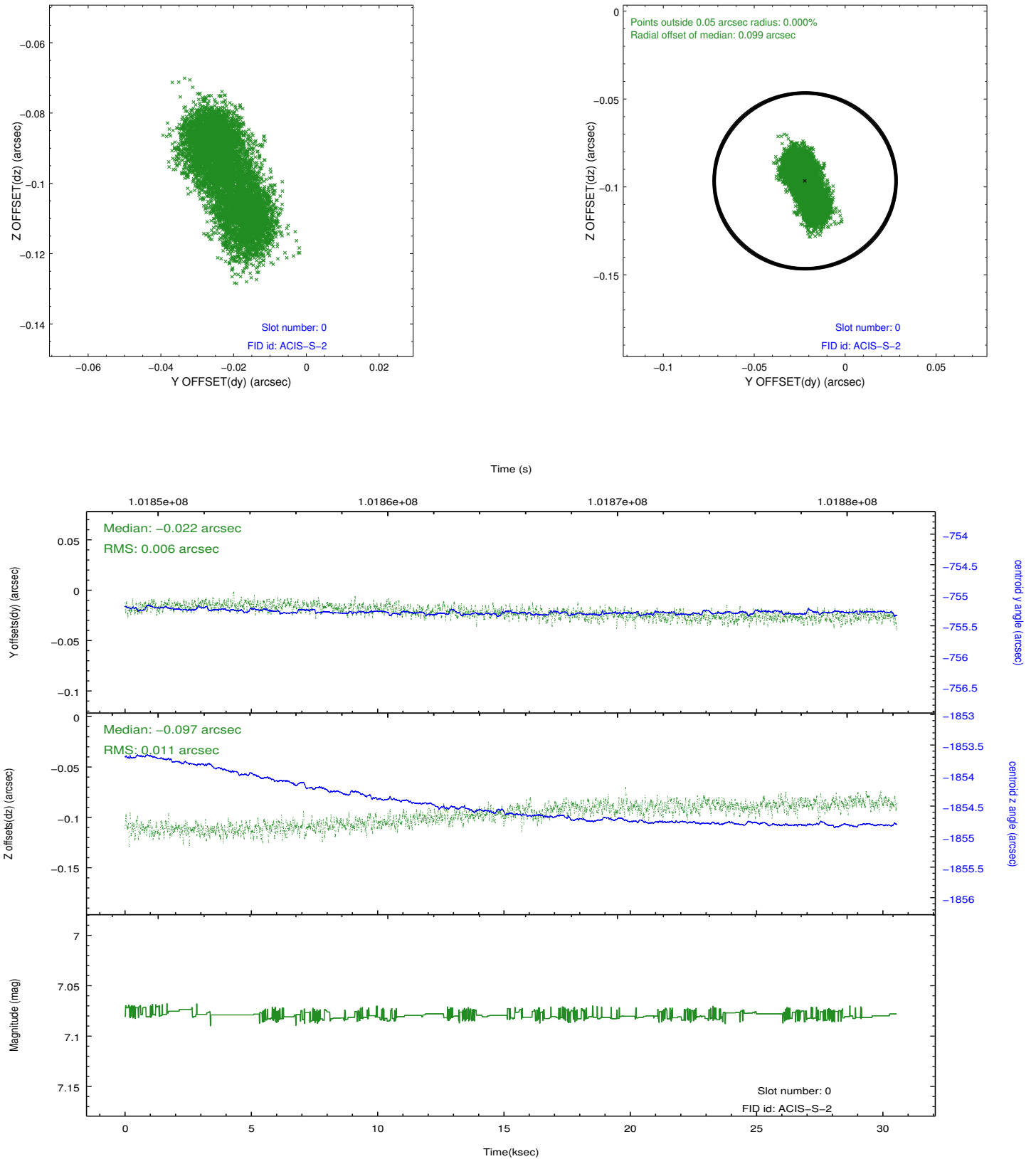


## 2.4.5 Slot 7

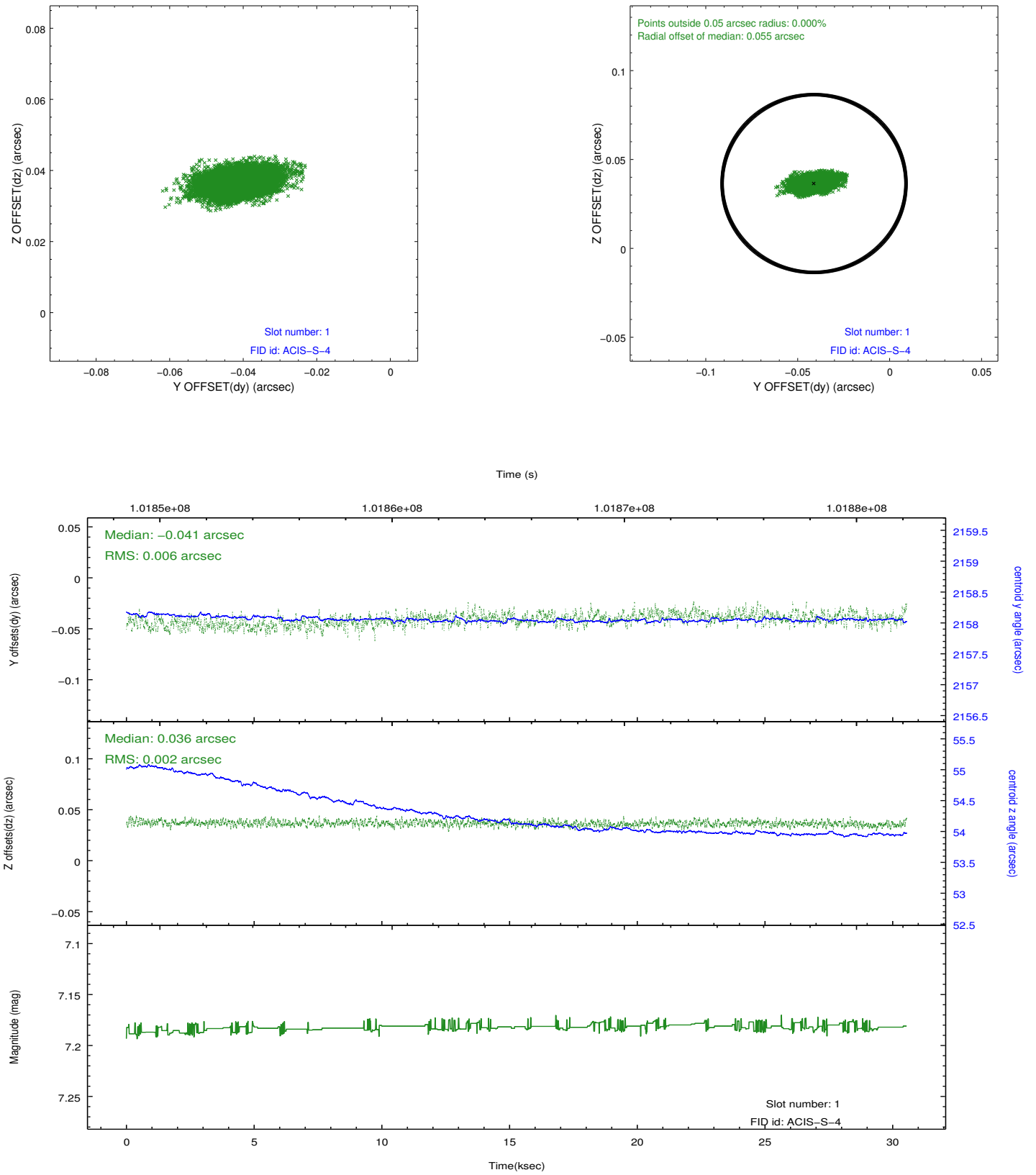


## 2.5 FID Slots

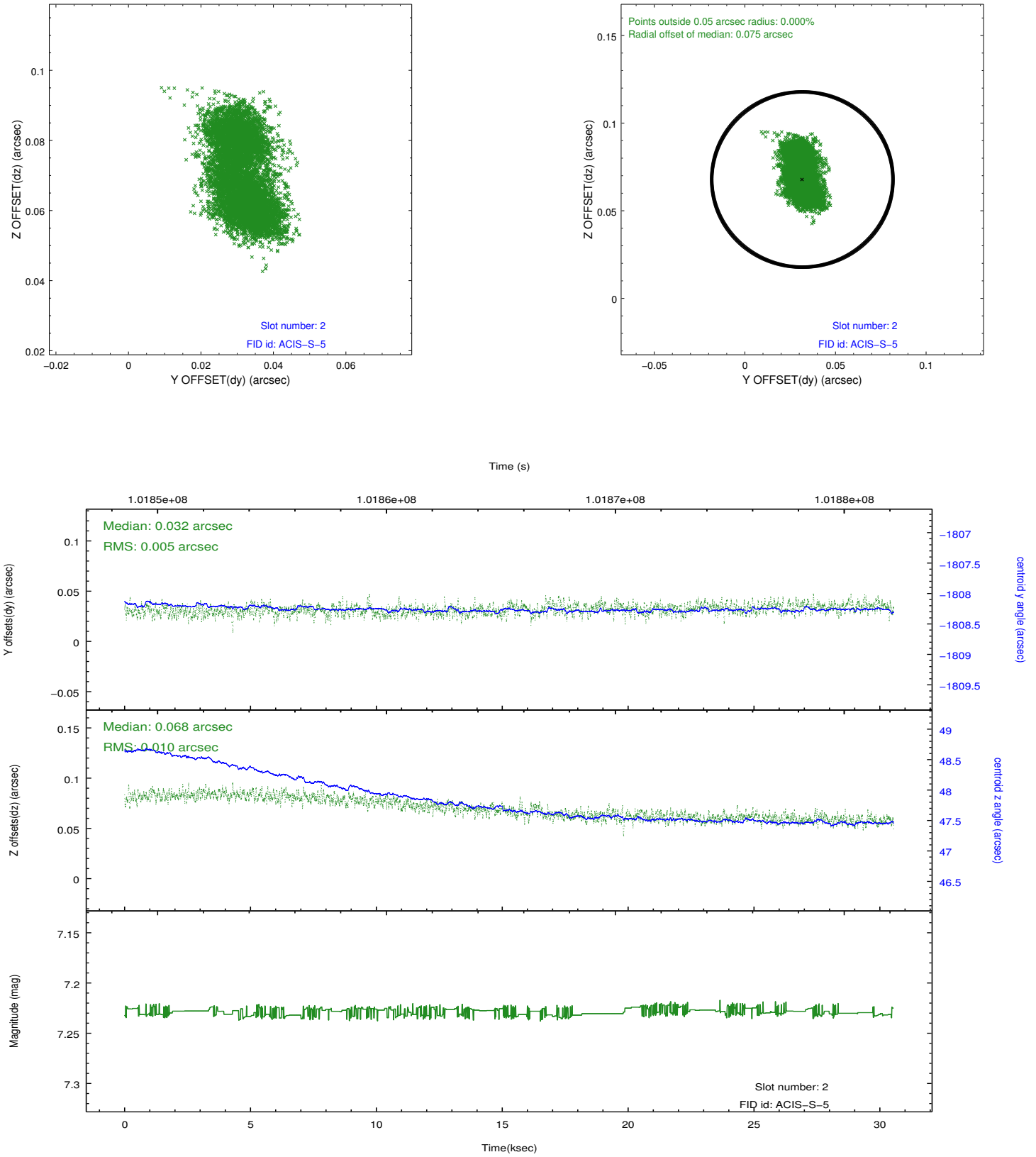
### 2.5.1 Slot 0



## 2.5.2 Slot 1

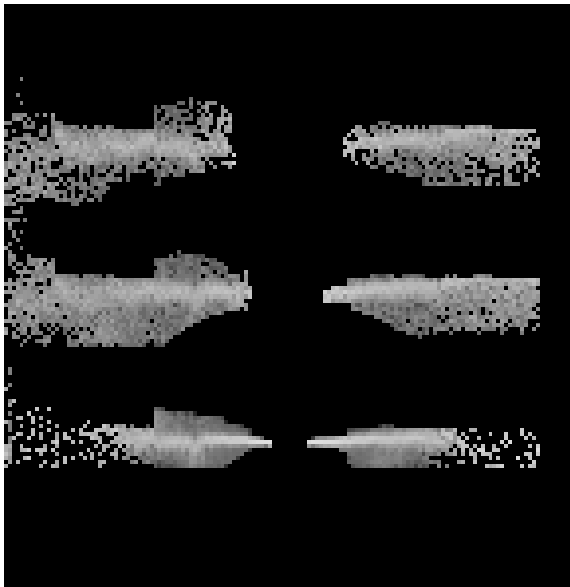


### 2.5.3 Slot 2

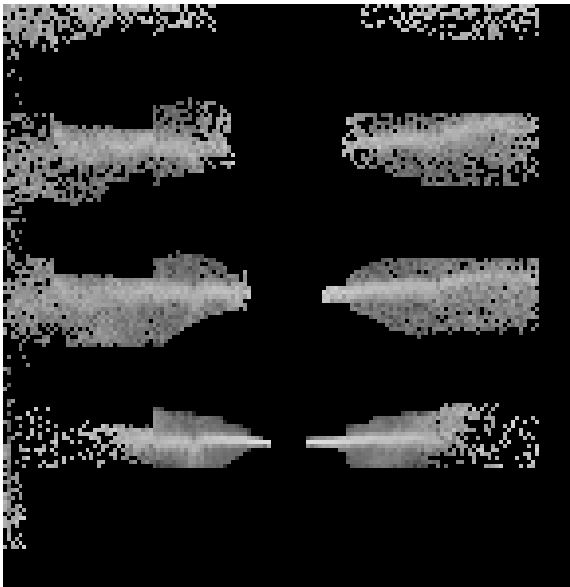


# 3 Gratings

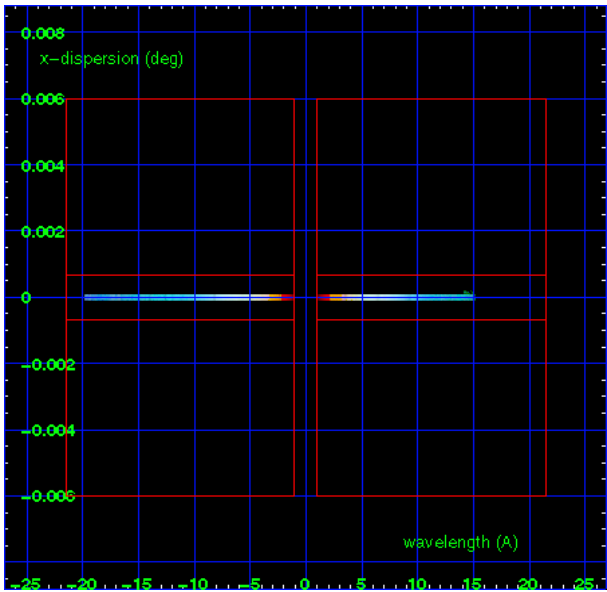
## 3.1 HEG Arm



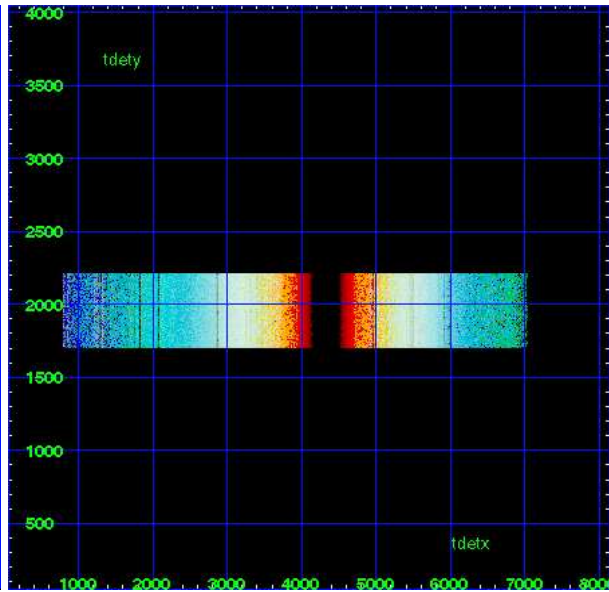
HEG Order Sort 123



HEG Order Sort ALL

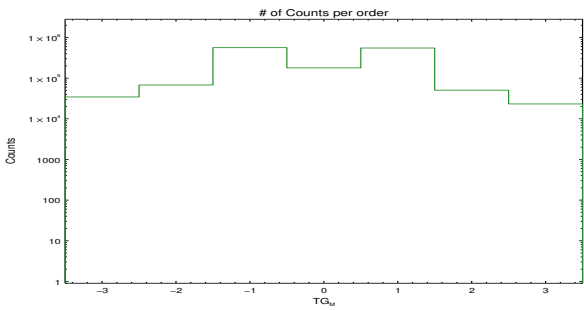


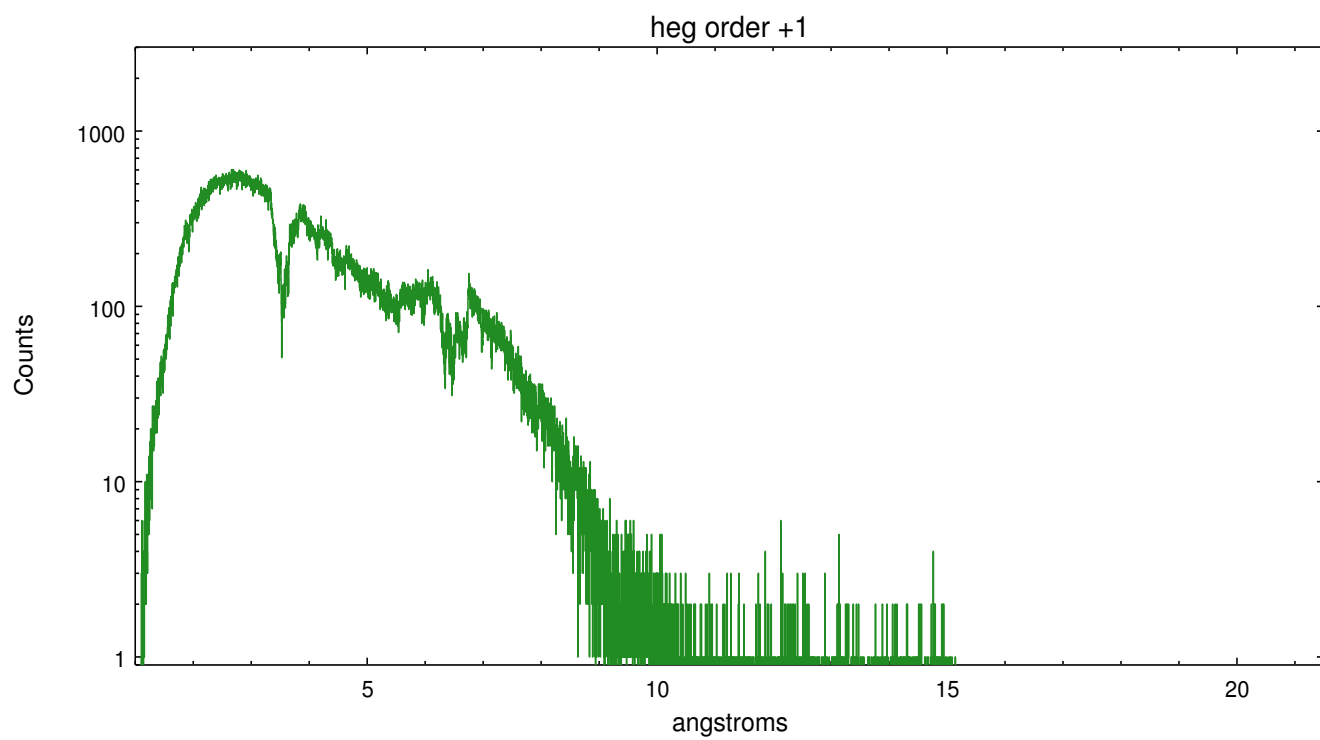
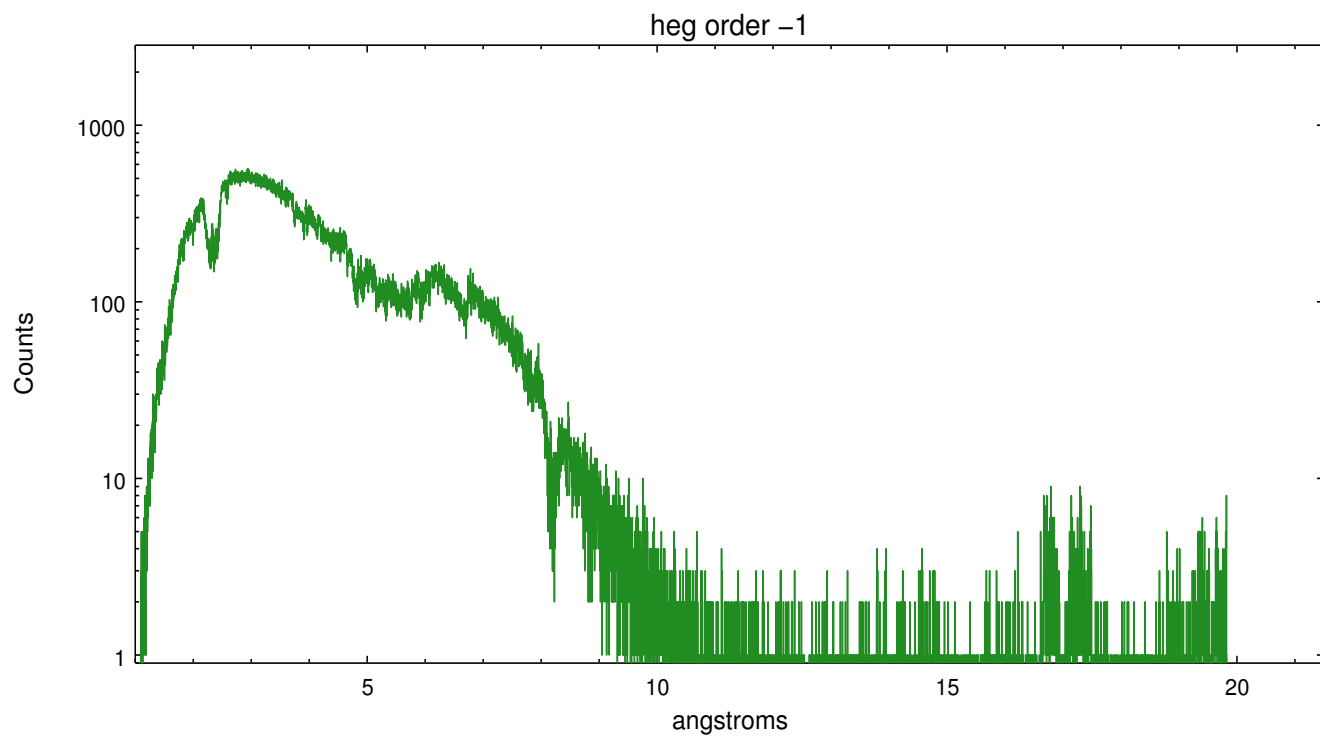
Spot Image HEG



Full Detector HEG

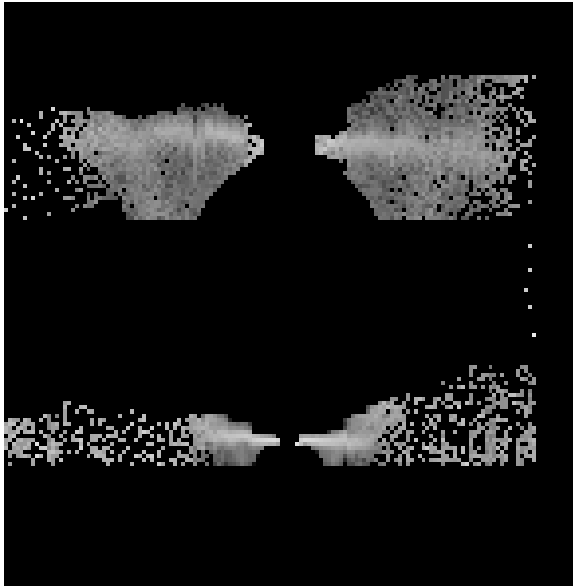
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	34463	67898	562622	179011	551549	50614	23203



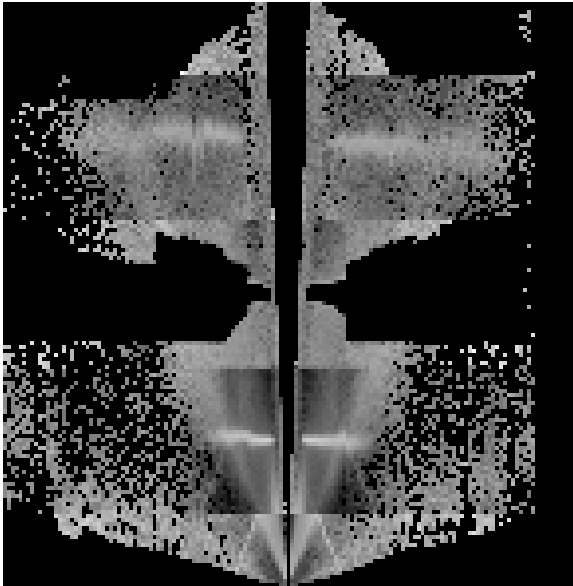




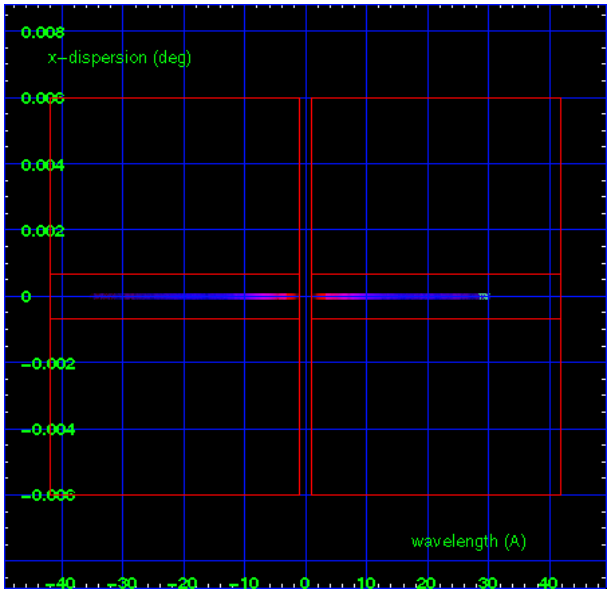
3.2 MEG Arm



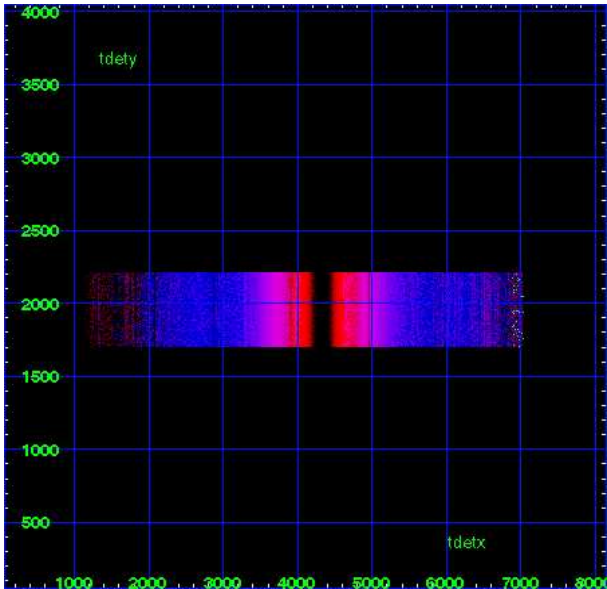
MEG Order Sort 123



MEG Order Sort ALL

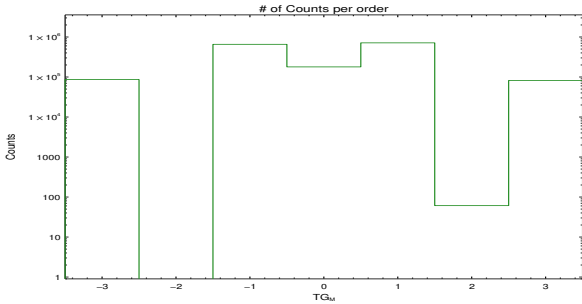


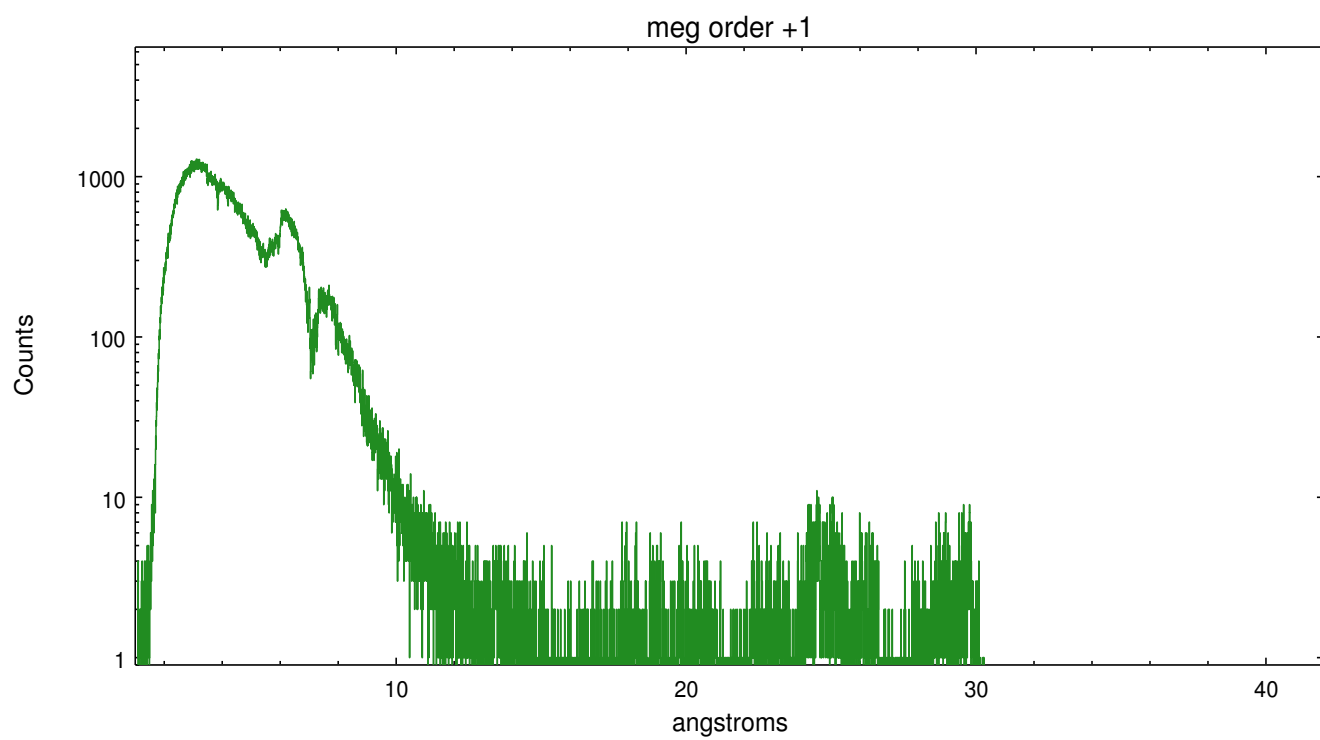
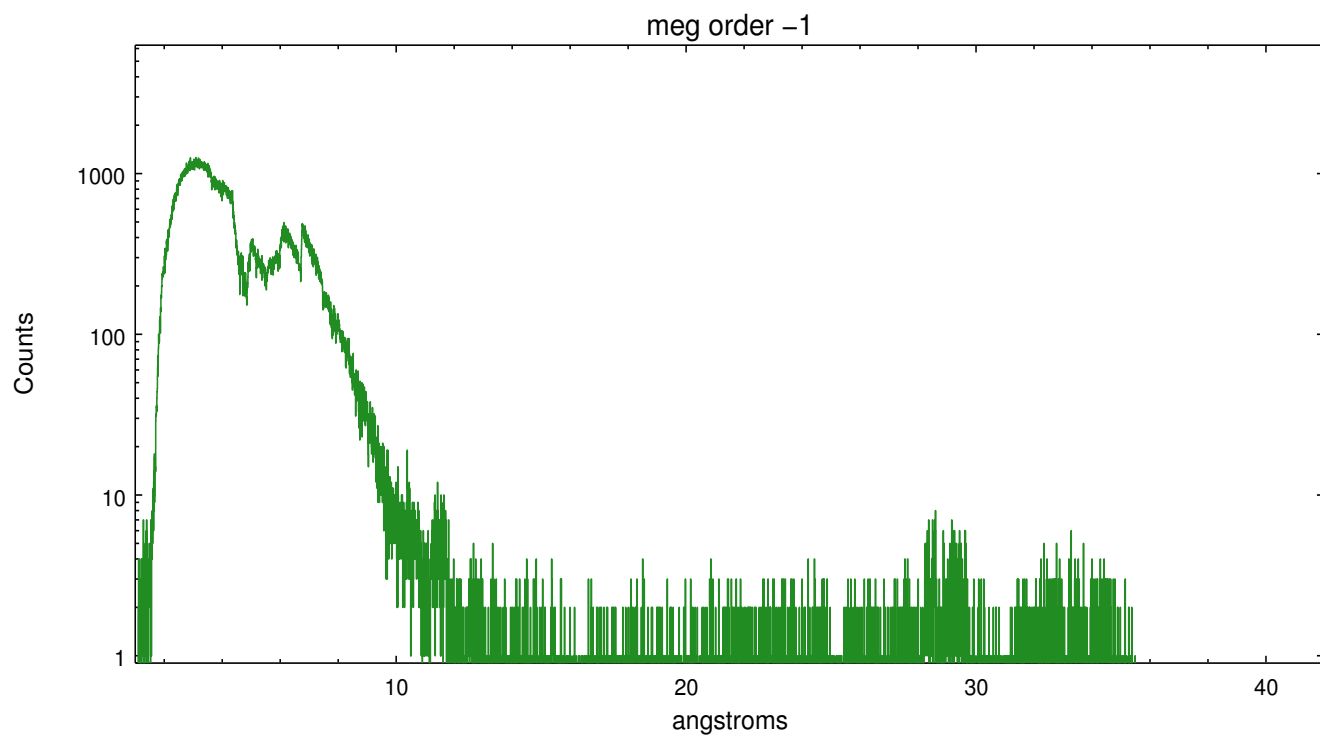
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	86429	0	655948	179011	714163	61	81956





## A Summary

### A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.10.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.546

### A.2 Comments