

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 12226 - L2 Version 2  
Chandra X-Ray Center

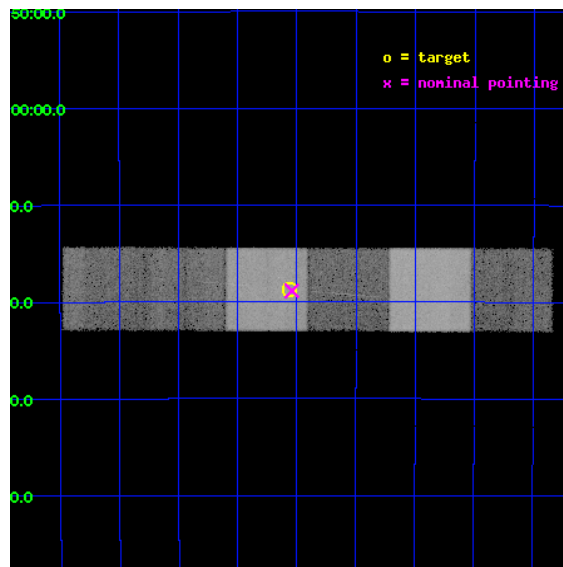
L2 Processing Date : Jun 28 2012

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# 1 Front

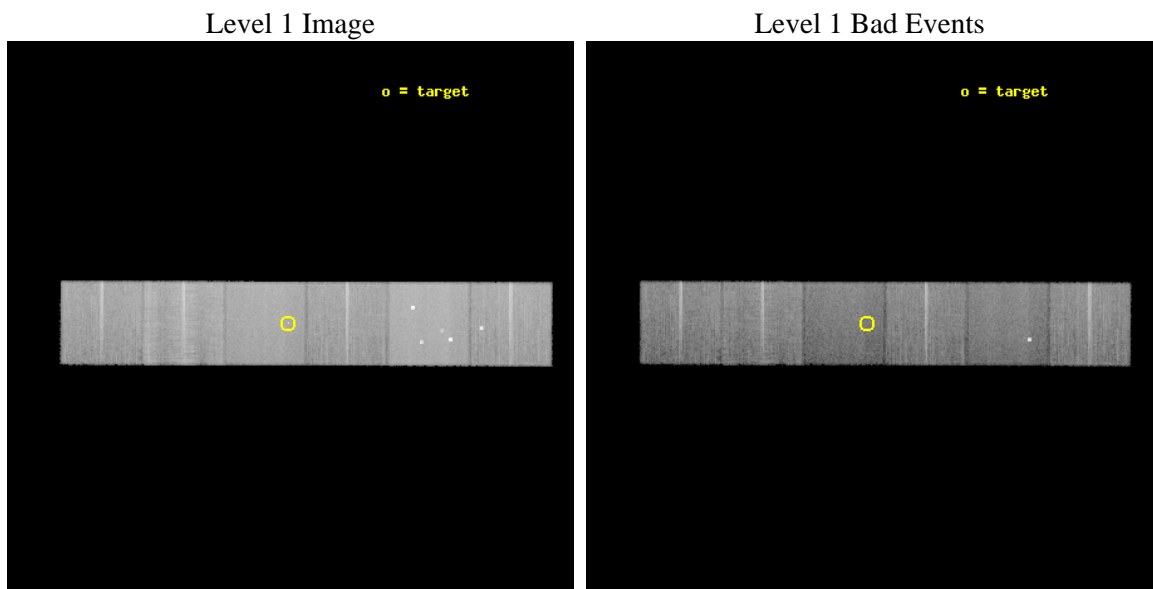
seq_num	200650	Sequence number
obs_id	12226	Observation id
title	X-ray emission mechanism in the Be star HD 42054	Proposal title
observer	Paola Testa	Principal investigator
object	HD 42054	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	91.765417	Observer's specified target RA [deg]
dec_targ	-34.312028	Observer's specified target Dec [deg]
ra_nom	91.760446473167	Nominal RA [deg]
dec_nom	-34.314589129514	Nominal Dec [deg]
roll_nom	180.15382357598	Nominal Roll [deg]
revision	2	Processing version of data
ontime	25983.999903262	Sum of GTIs [s]
livetime	25654.9748508	Livetime [s]
ontime4	25983.999903262	Sum of GTIs [s]
ontime5	25983.999903262	Sum of GTIs [s]
ontime6	25983.999903262	Sum of GTIs [s]
ontime7	25983.999903262	Sum of GTIs [s]
ontime8	25983.977699459	Sum of GTIs [s]
ontime9	25983.936659455	Sum of GTIs [s]
l2events	319318	Number of level 2 events



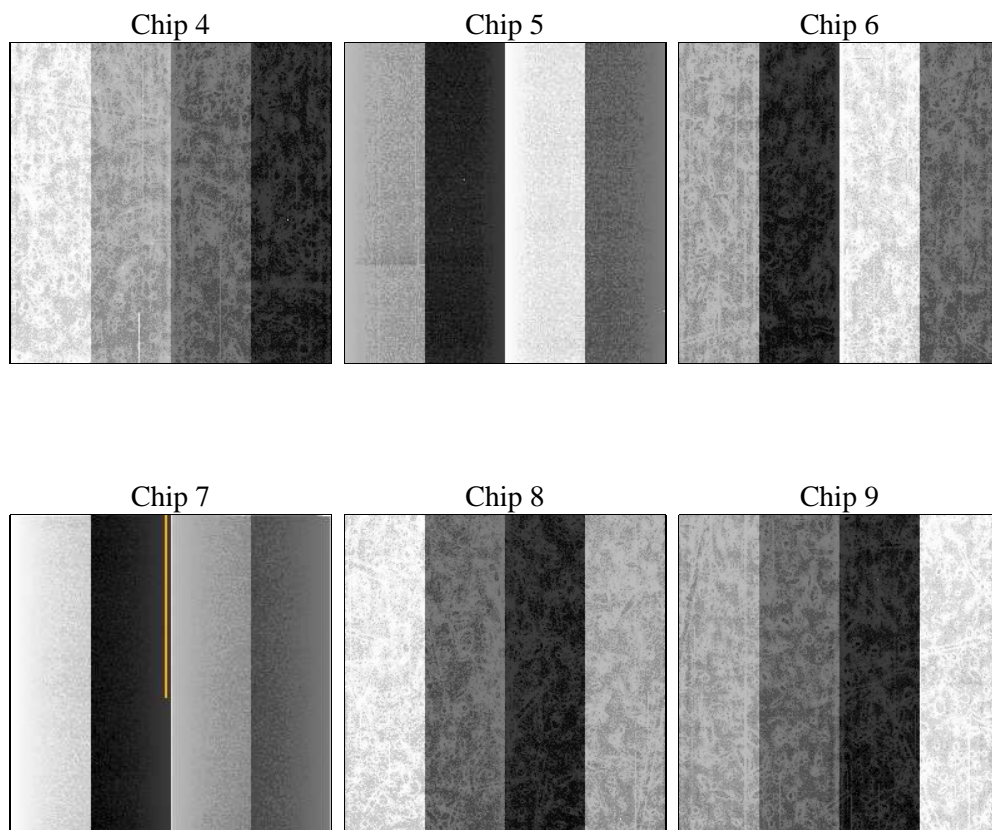
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25938.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	25983.999903262	Sum of GTIs [s]
caldsver	4.5.0	&#160	ontime4	25983.999903262	Sum of GTIs [s]
date	2012-06-28T22:20:53	Date and time of file creation	ontime5	25983.999903262	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	25983.999903262	Sum of GTIs [s]
			ontime7	25983.999903262	Sum of GTIs [s]
			ontime8	25983.977699459	Sum of GTIs [s]
			ontime9	25983.936659455	Sum of GTIs [s]
			l1events	1419444	Number of level 1 events

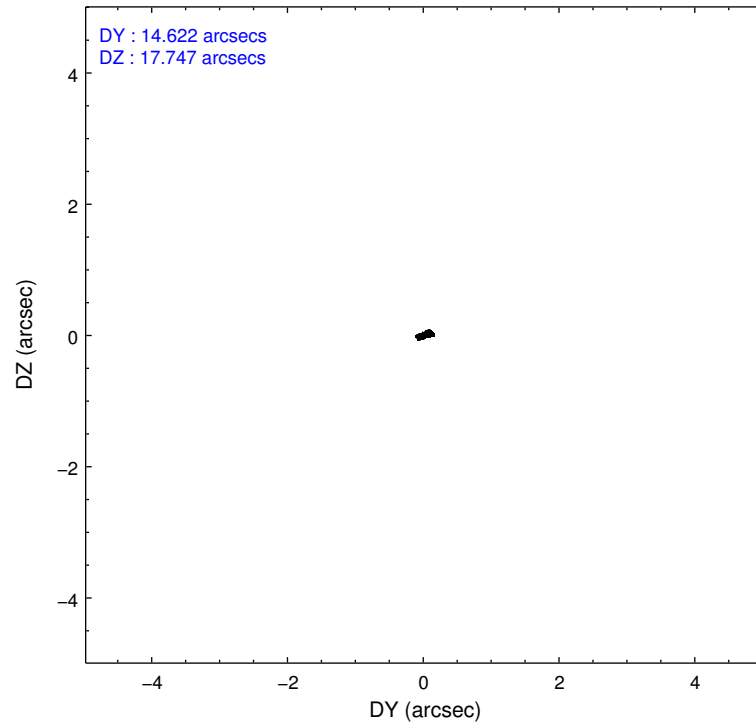
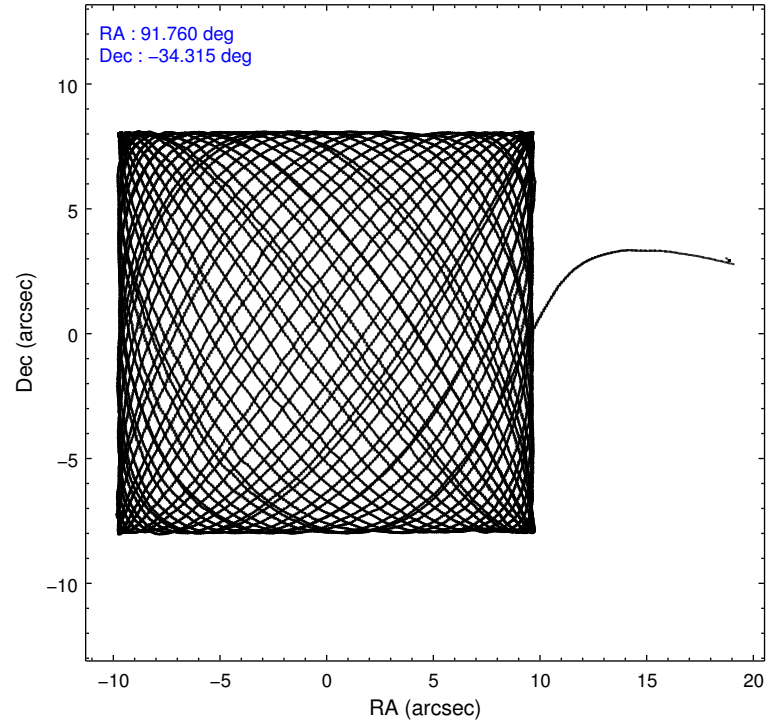
### 2.1.4 Events

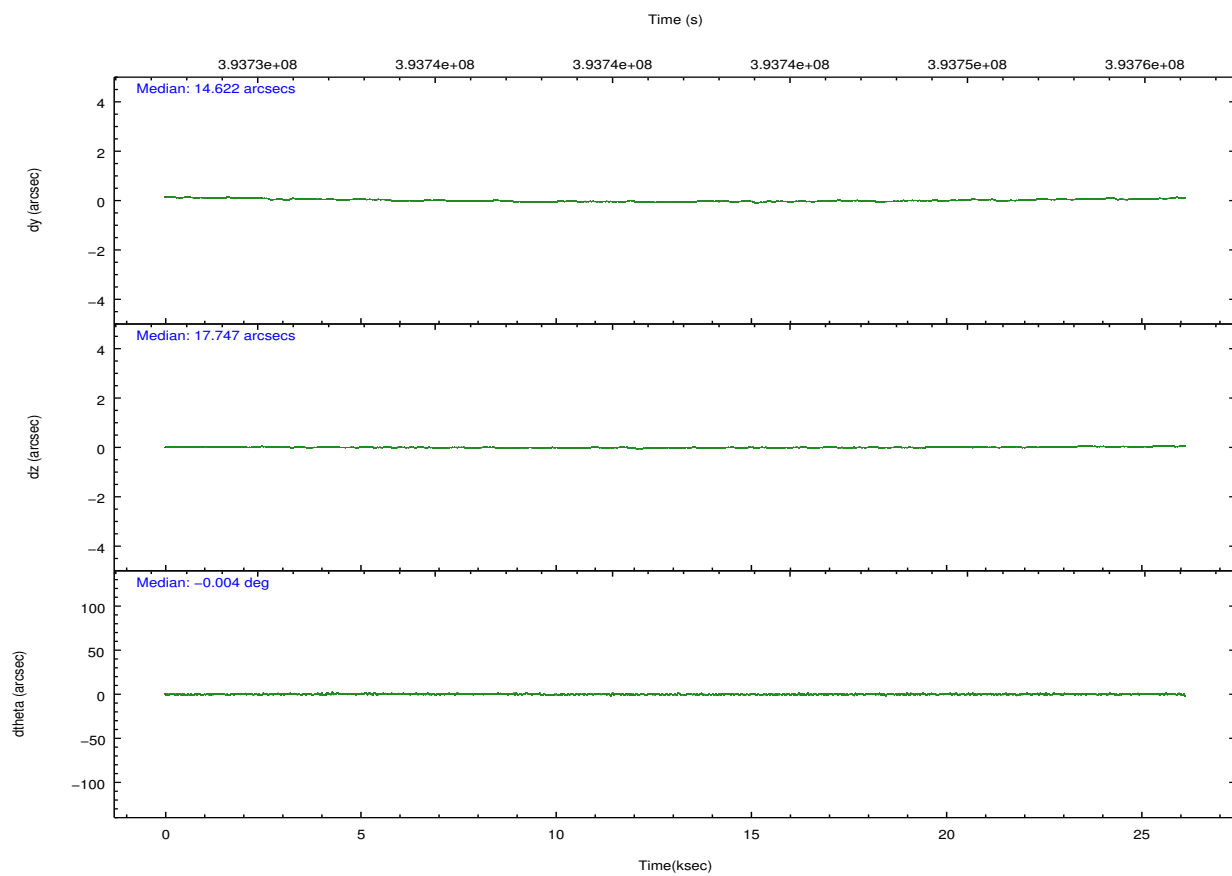
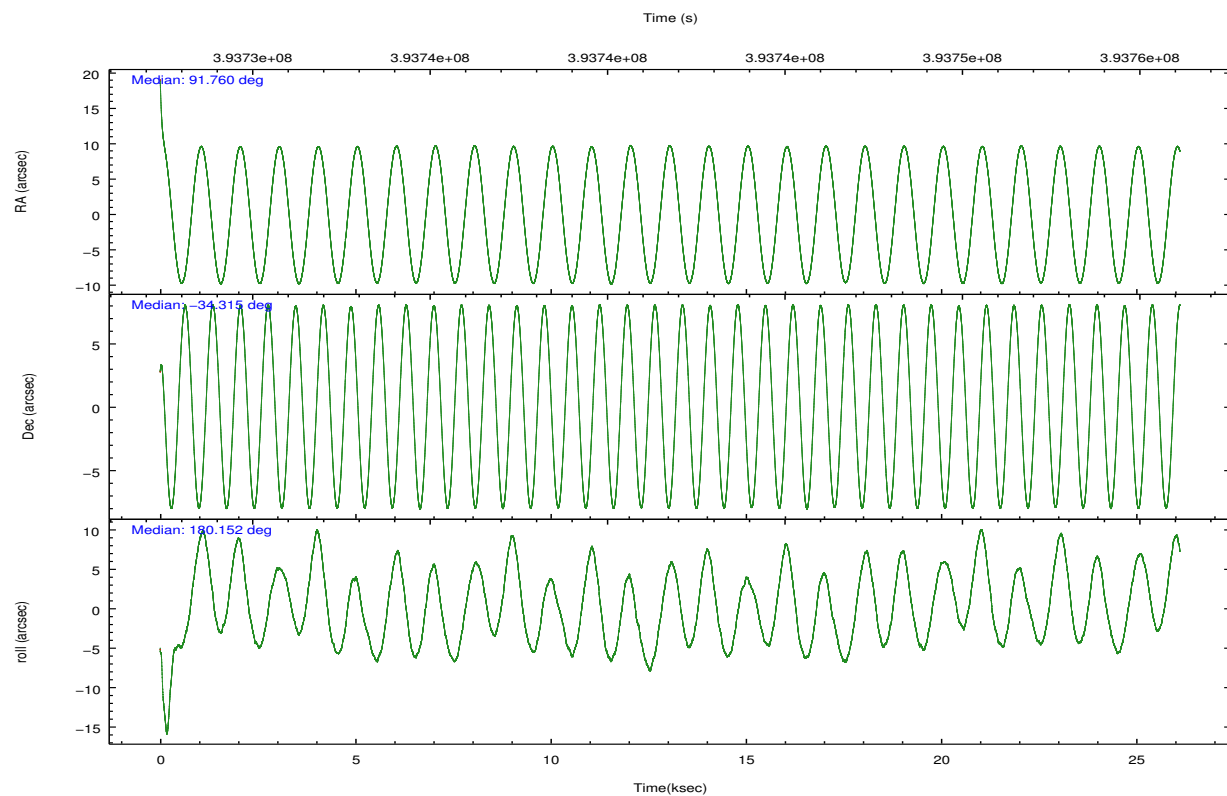
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	230371	304556	196250	236128	256441	195698	grade 0 events	13902	19366	7475	10005	20431	8336
rejected events	202057	152891	174576	128403	189411	172652		6%	6%	3%	4%	7%	4%
rejected %	87%	50%	88%	54%	73%	88%	grade 1 events	223	528	105	295	233	116
								0%	0%	0%	0%	0%	0%
							grade 2 events	5598	45228	4944	21919	15798	5177
								2%	14%	2%	9%	6%	2%
							grade 3 events	2511	5439	2310	9674	6992	2439
								1%	1%	1%	4%	2%	1%
							grade 4 events	2359	5157	2233	9564	6523	2338
								1%	1%	1%	4%	2%	1%
							grade 5 events	8623	22604	8837	24714	12885	9755
								3%	7%	4%	10%	5%	4%
							grade 6 events	3958	76514	4717	56592	17300	4759
								1%	25%	2%	23%	6%	2%
							grade 7 events	193197	129720	165629	103365	176279	162778
								83%	42%	84%	43%	68%	83%

## 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	91.788824	91.76044647316725	CCD I2 on	N	N
[deg] Pointing Dec	-34.300530	-34.31458912951356	CCD I3 on	N	N
[deg] Pointing Roll	180.013190	180.1538235759802	CCD S0 on	O1	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	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	393728869.184000	393727324.20034	CCD S5 on	Y	Y
Observation start date	2010-06-24T01:06:43	2010-06-24T00:42:04	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	393754807.184000	393755794.6018	On-chip summing requested	N	N
Observation end date	2010-06-24T08:19:01	2010-06-24T08:36:34	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect



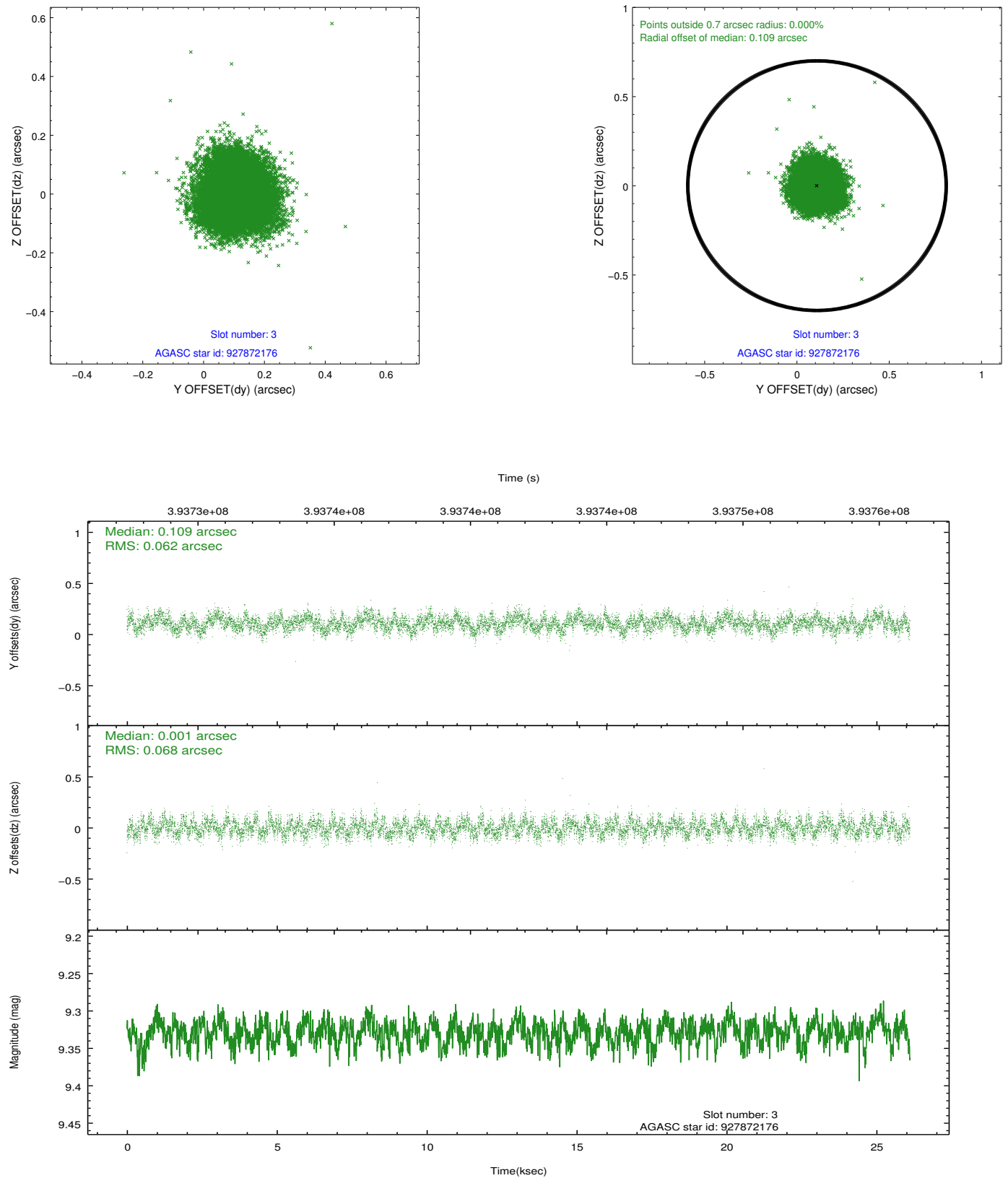


Slot Statistics

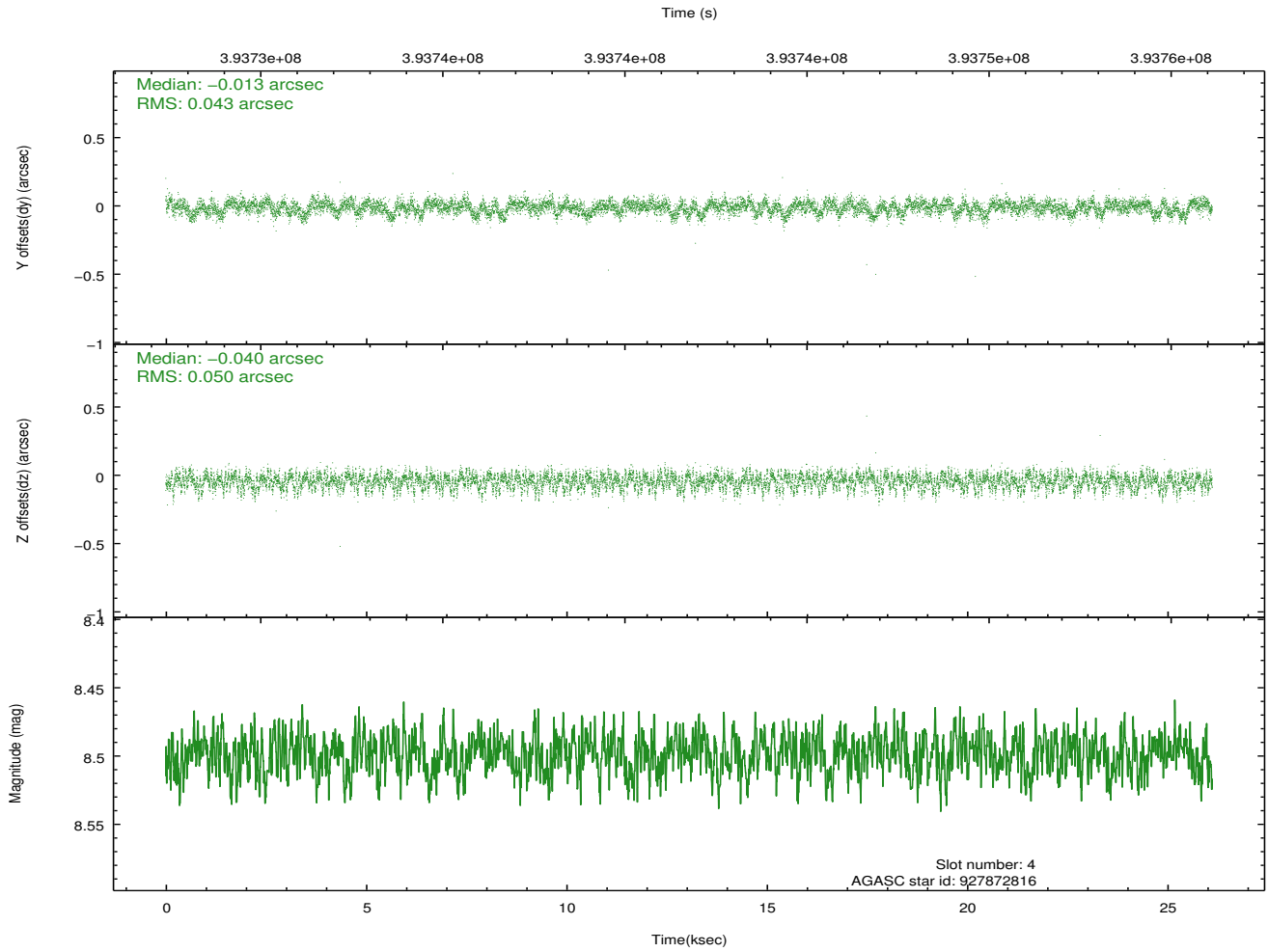
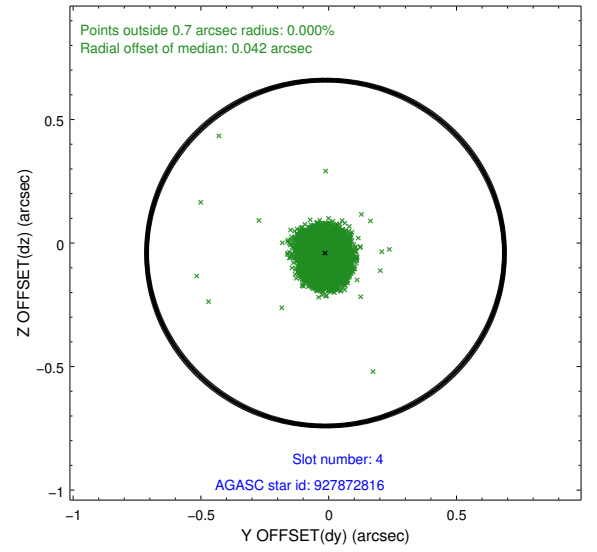
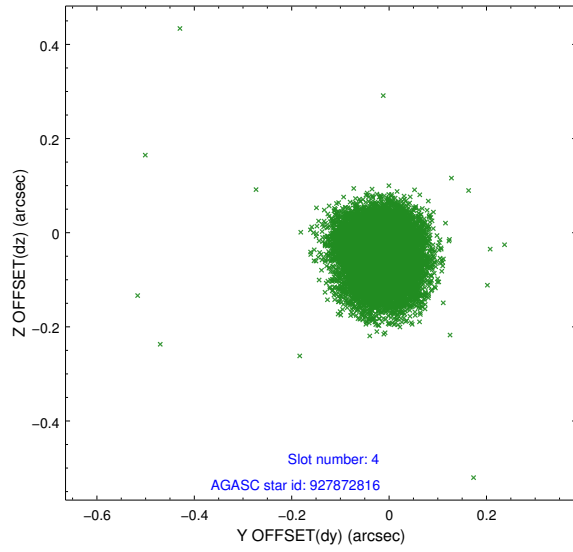
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.96	6371	-0.018	-0.018	0.006	0.010	0.000000	0.000000	928.39	-1734.81
1	FID	ACIS-S-4	6.96	6371	0.060	0.004	0.006	0.010	0.000000	0.000000	2145.96	169.24
2	FID	ACIS-S-6	7.10	6370	-0.065	0.024	0.006	0.011	0.000000	0.000000	394.46	806.76
3	GUIDE	927872176	9.33	12726	0.109	0.001	0.099	0.154	92.070987	-34.660650	-835.14	1297.81
4	GUIDE	927872816	8.50	12736	-0.013	-0.040	0.070	0.112	91.602635	-34.723224	551.07	1522.29
5	GUIDE	927874824	6.95	12740	-0.106	0.023	0.066	0.108	91.923027	-34.639966	-397.65	1222.66
6	GUIDE	927873680	8.04	12738	0.012	0.052	0.057	0.091	91.920469	-34.486300	-390.52	669.58
7	GUIDE	928003024	8.50	12733	-0.004	-0.033	0.082	0.133	92.356326	-34.950295	-1674.19	2344.09

## 2.4 Star Slots

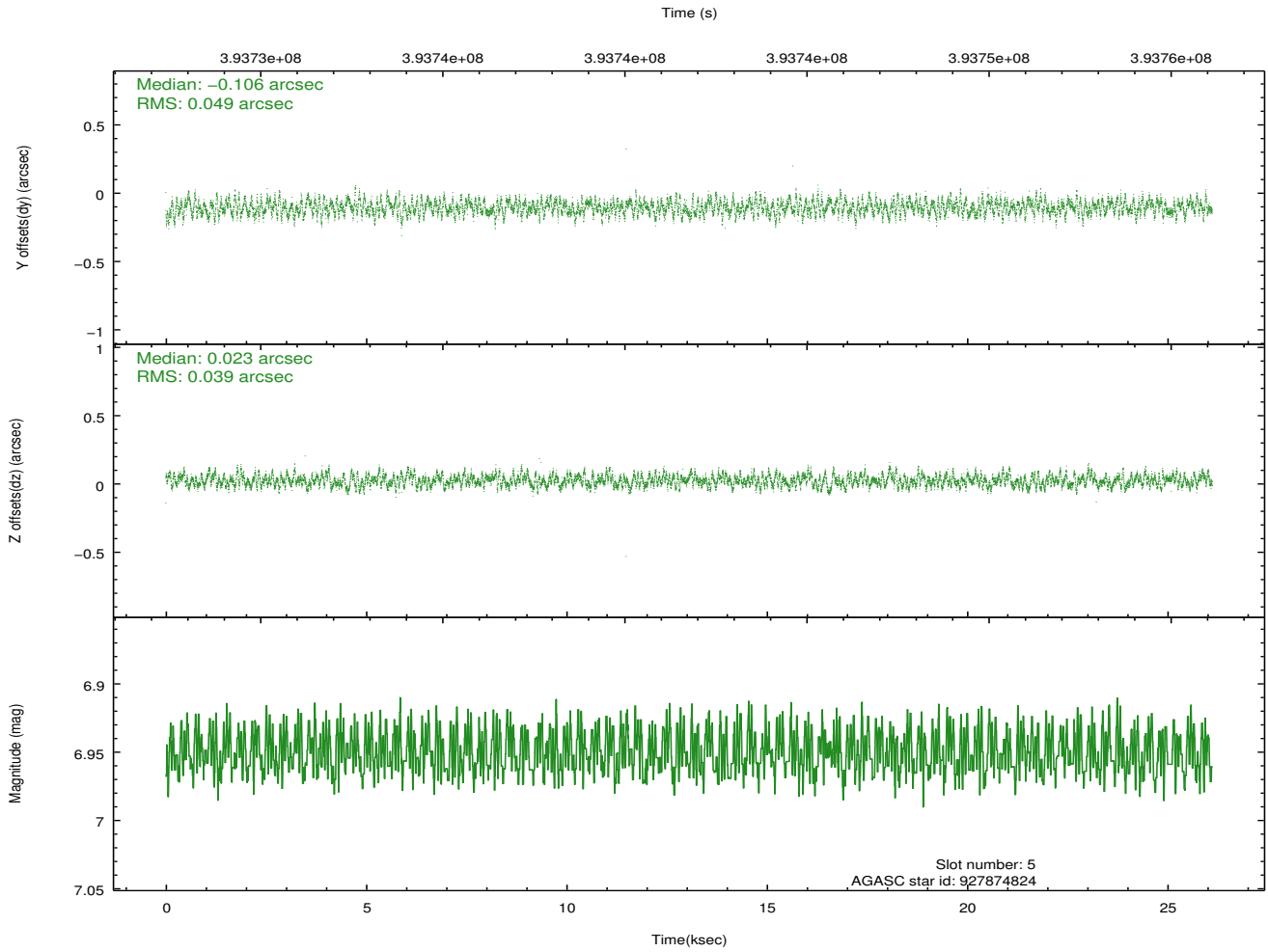
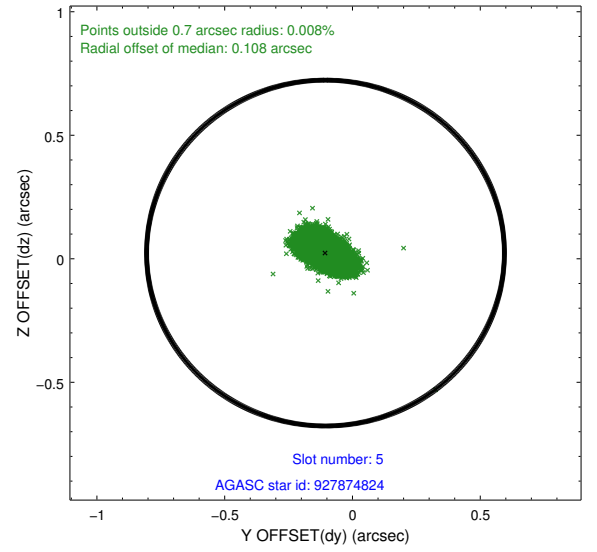
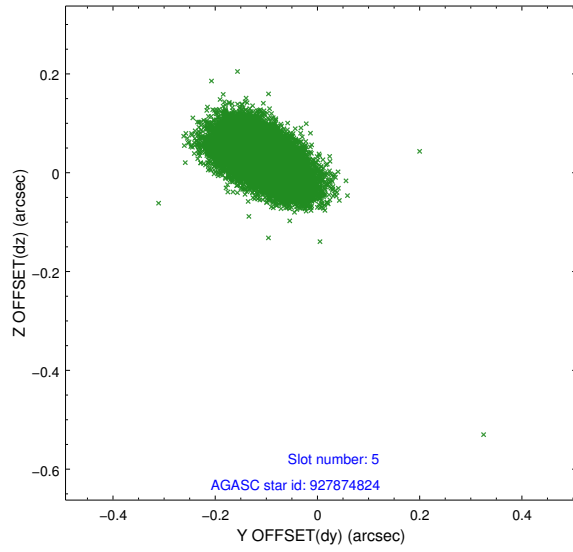
### 2.4.1 Slot 3



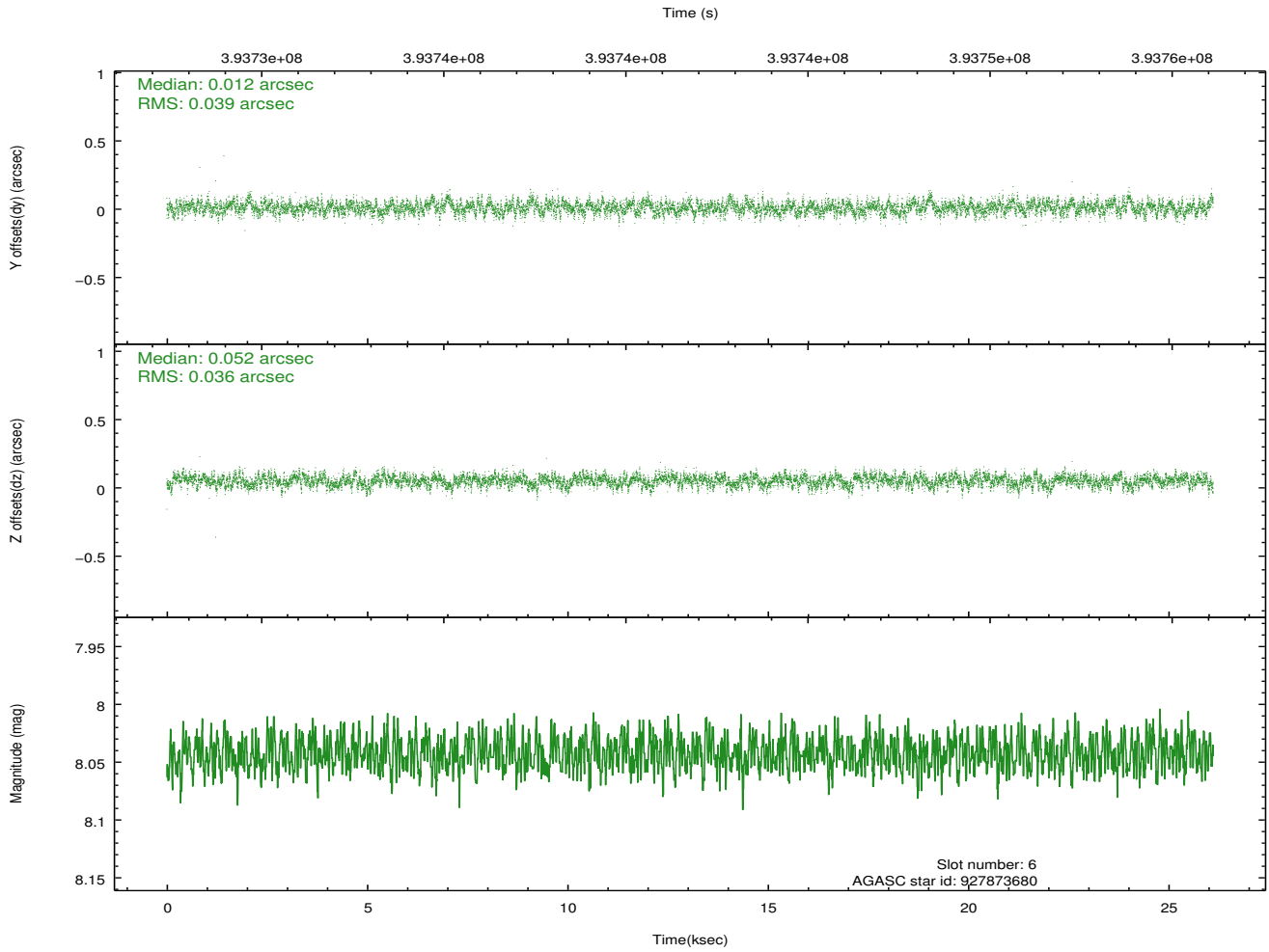
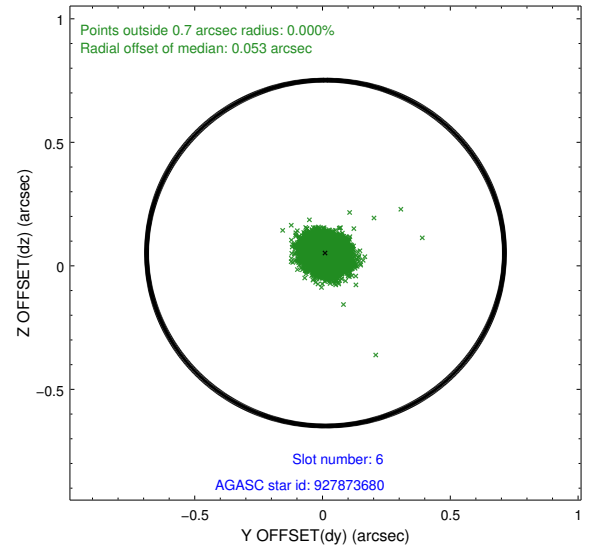
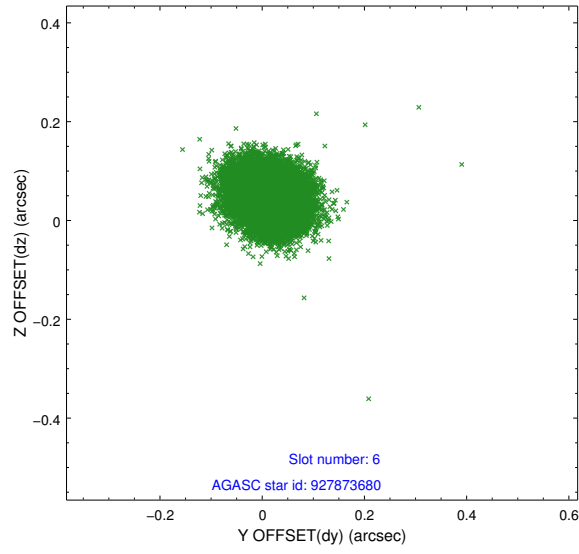
## 2.4.2 Slot 4



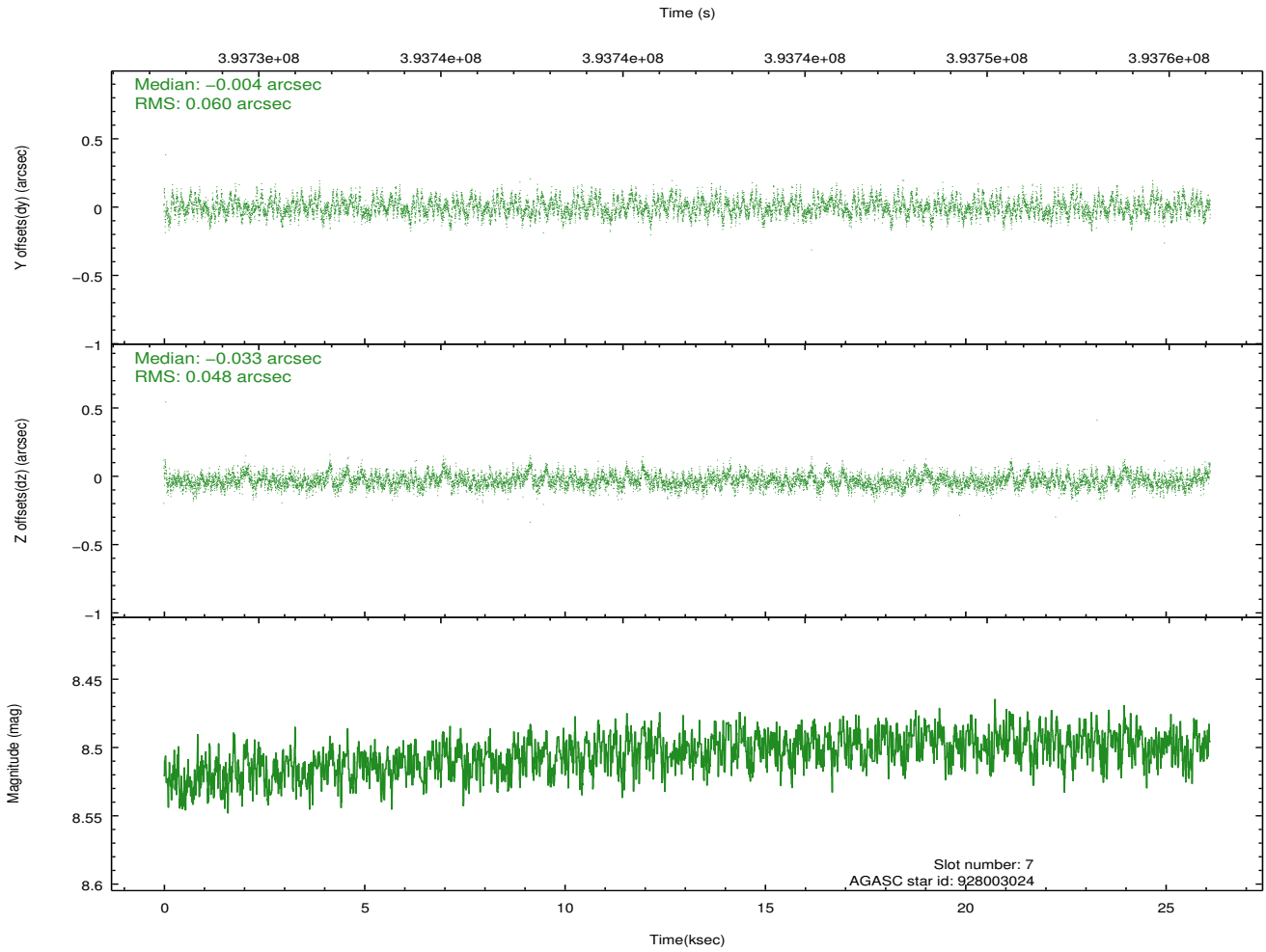
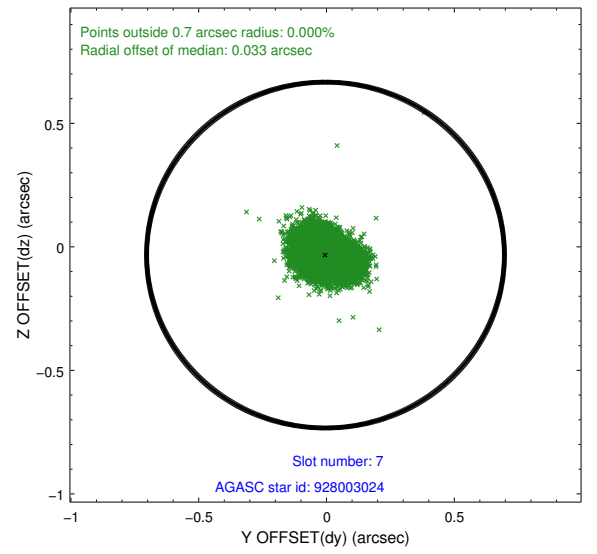
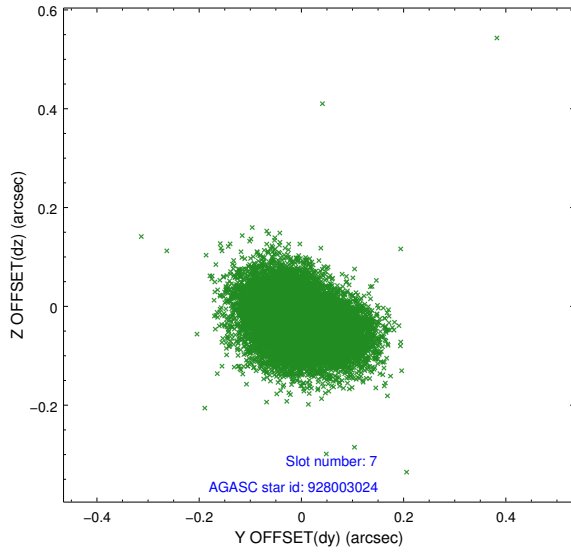
### 2.4.3 Slot 5



## 2.4.4 Slot 6

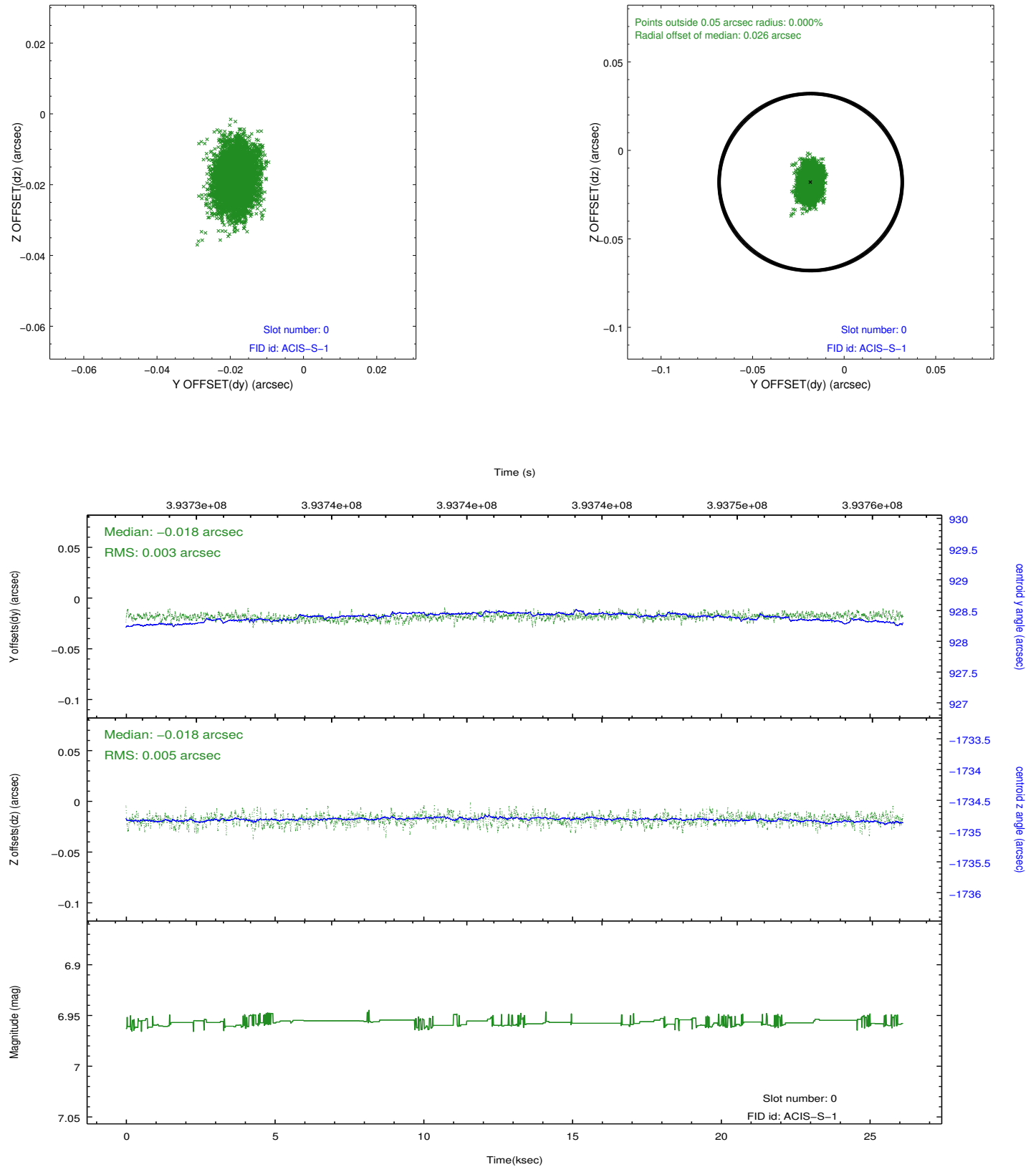


## 2.4.5 Slot 7

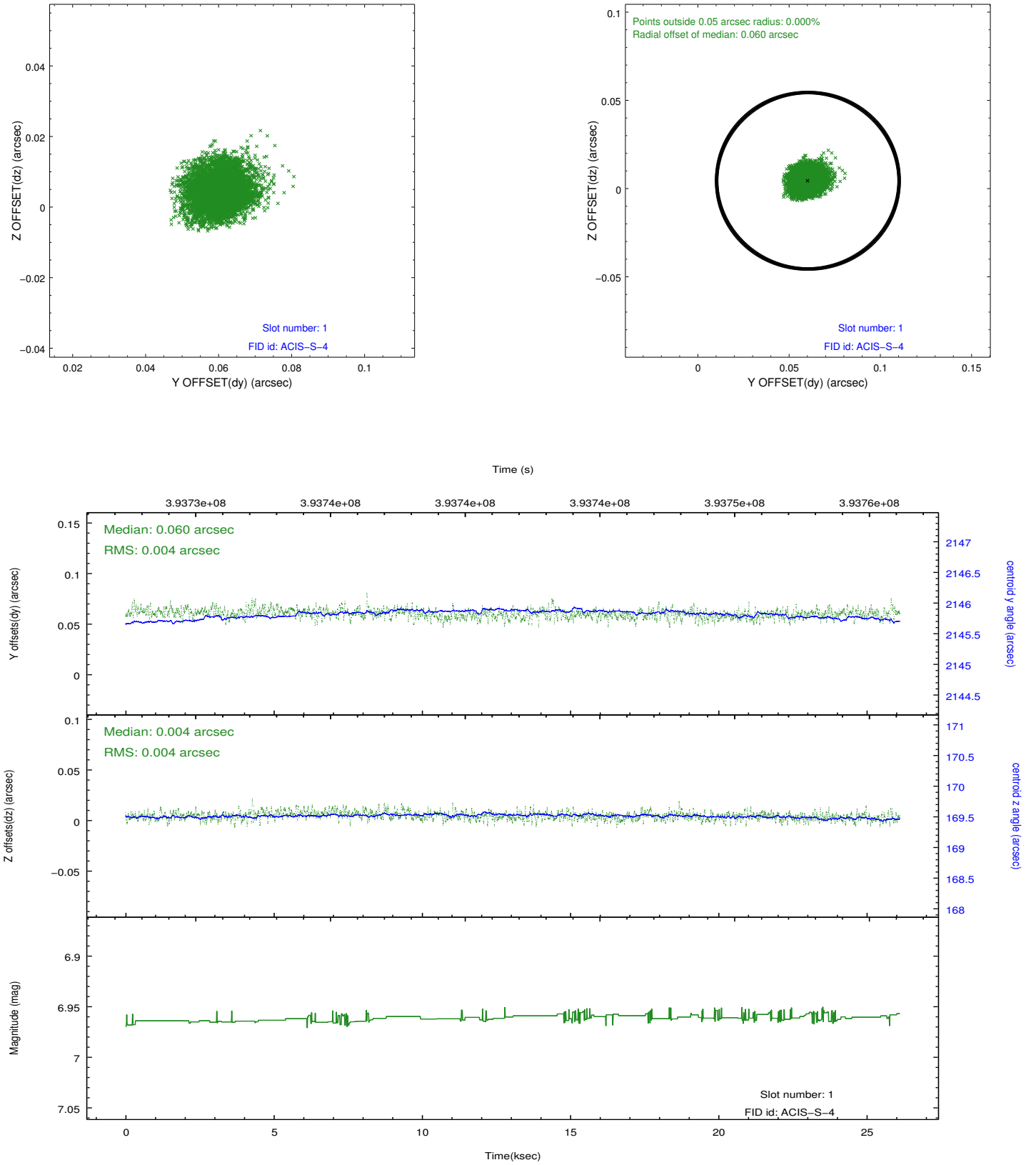


## 2.5 FID Slots

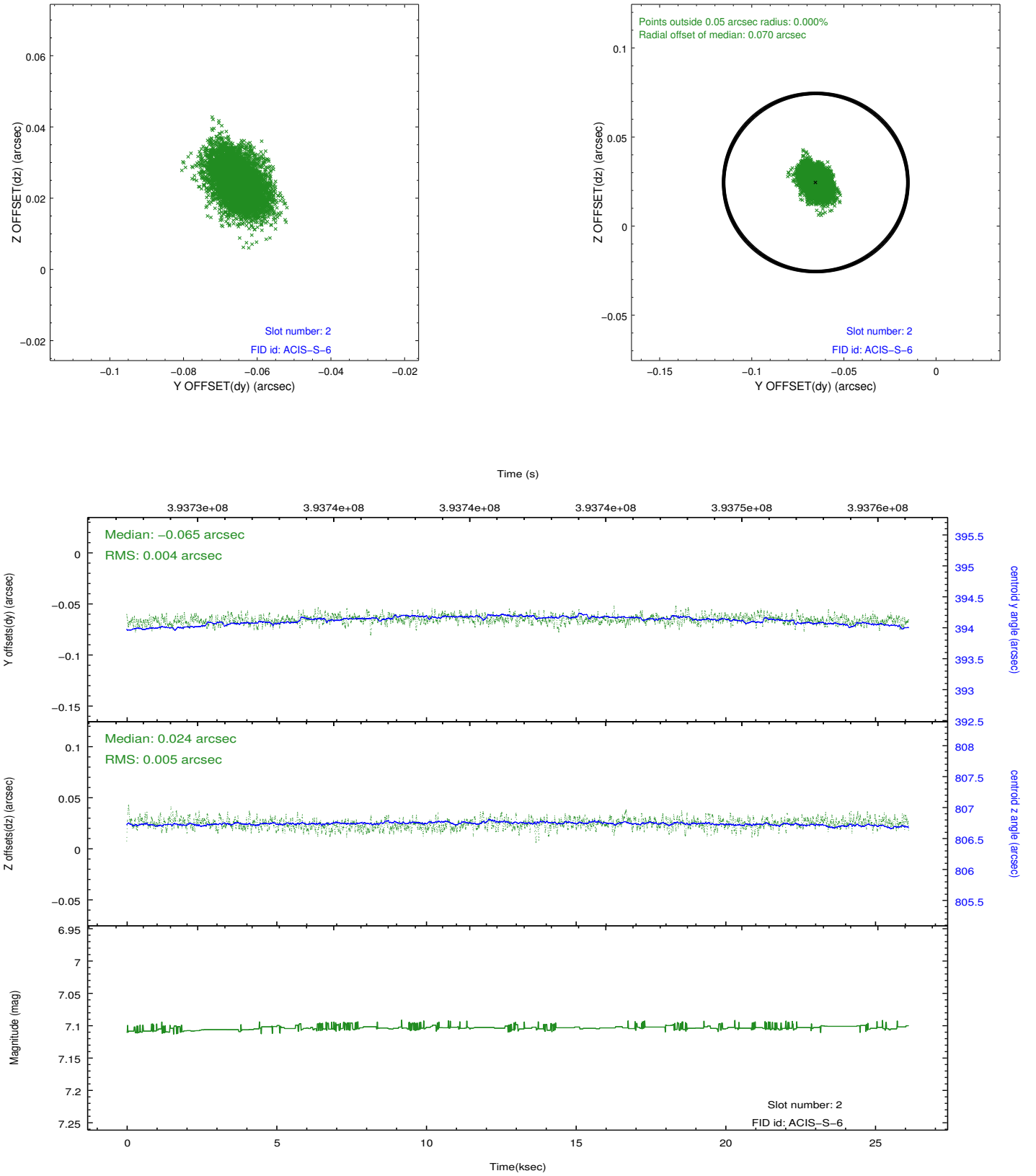
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

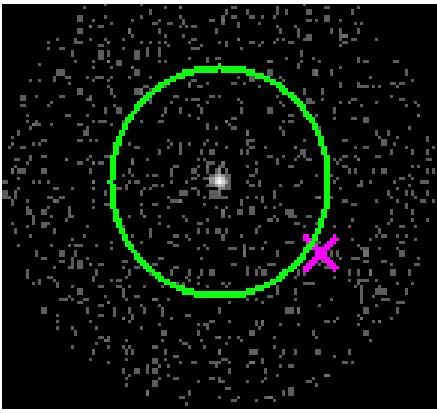


# 3 Gratings

## 3.1 HEG Arm



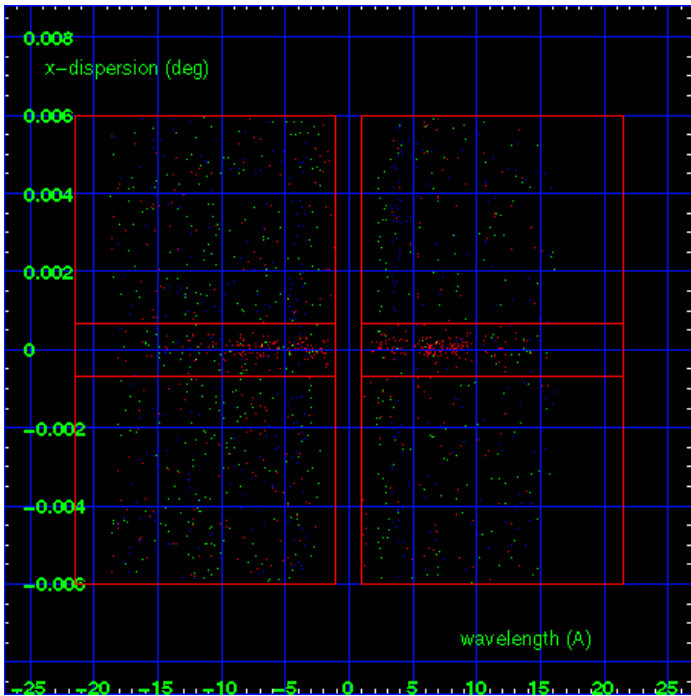
HEG Order Sort 123



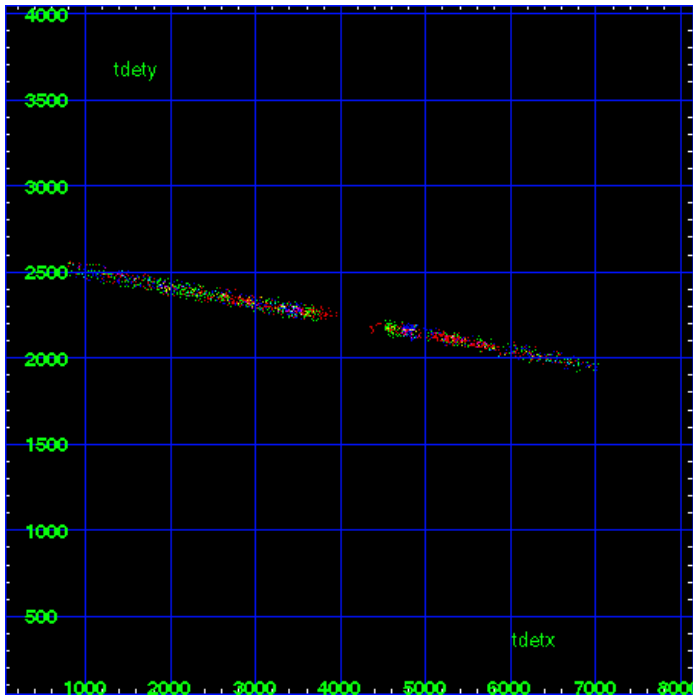
HEG Zero Order



HEG Order Sort ALL

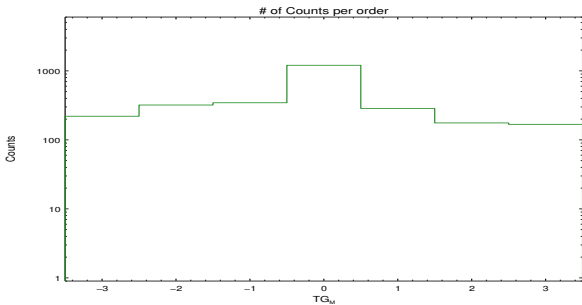


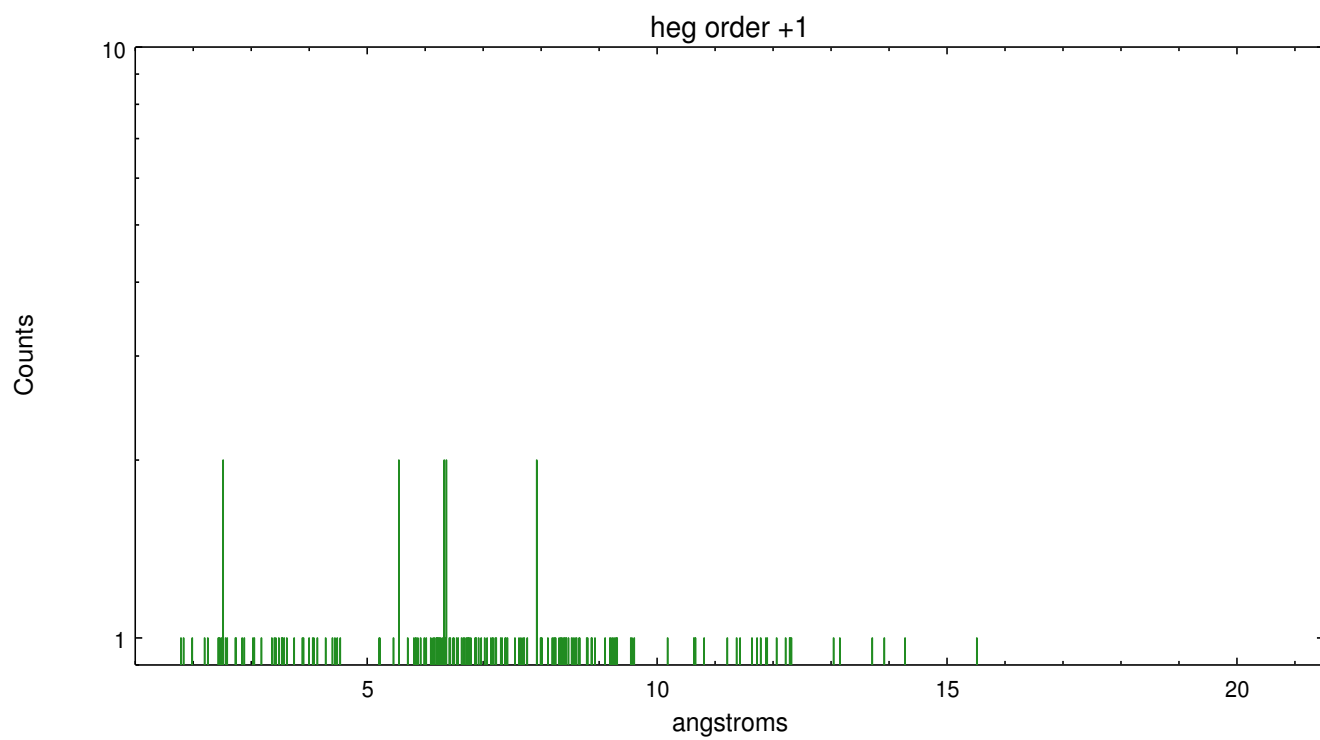
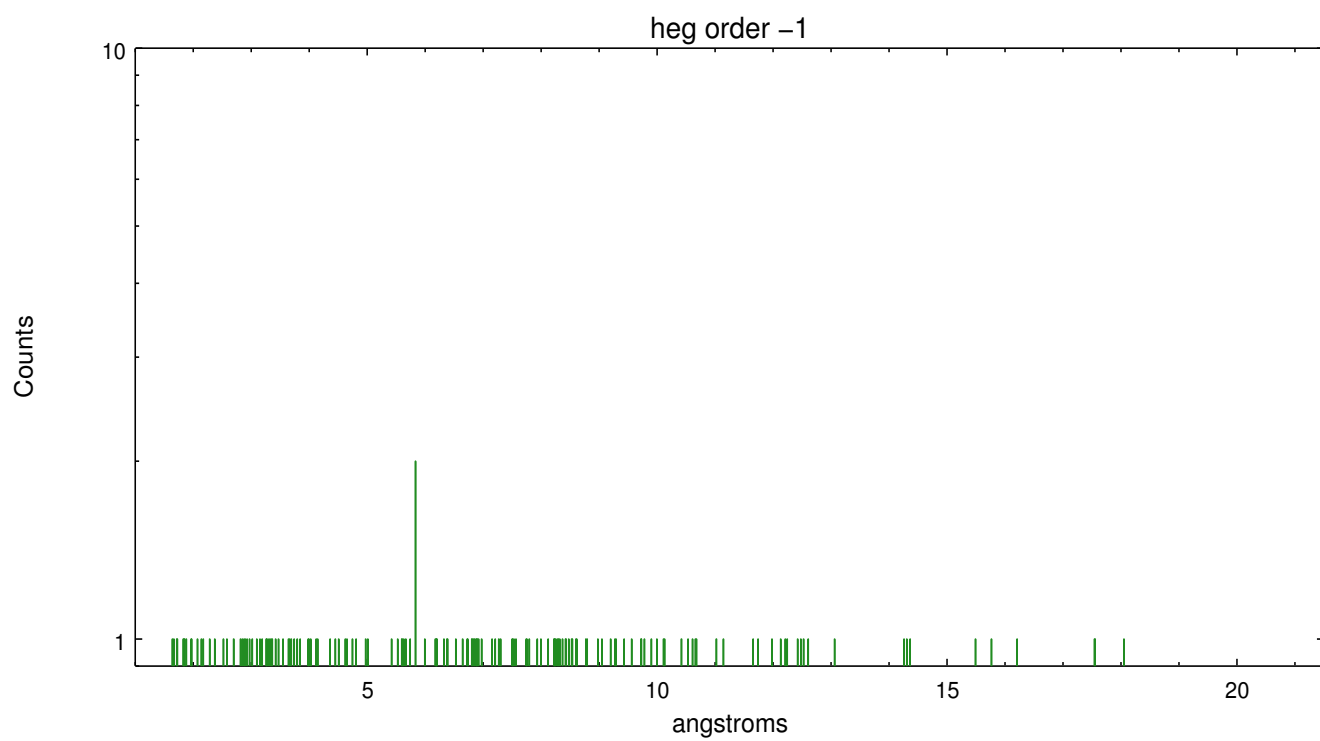
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	220	320	345	1205	286	176	168

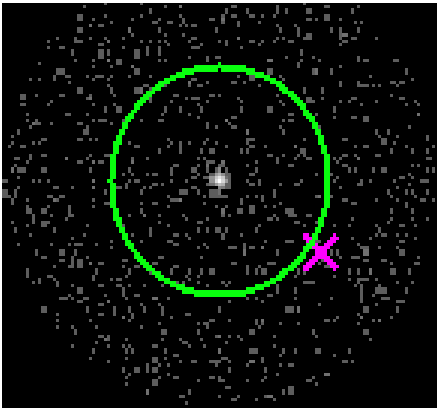




3.2 MEG Arm



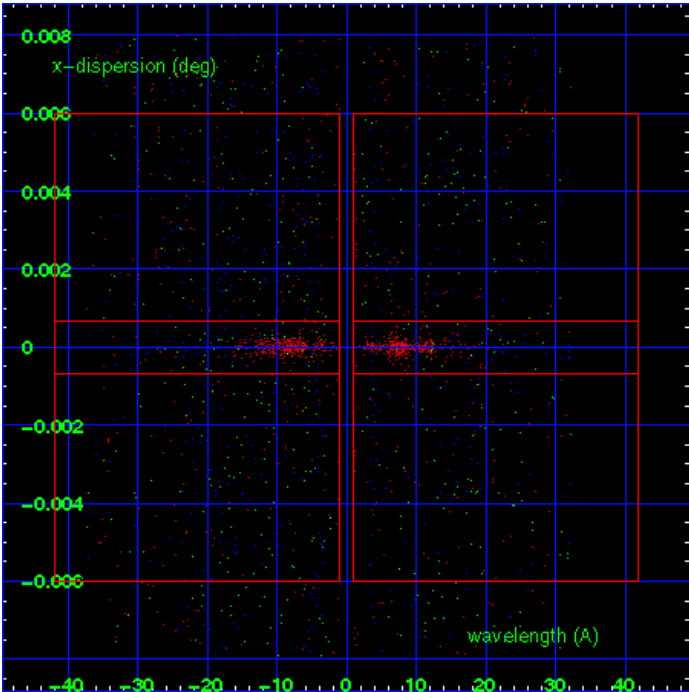
MEG Order Sort 123



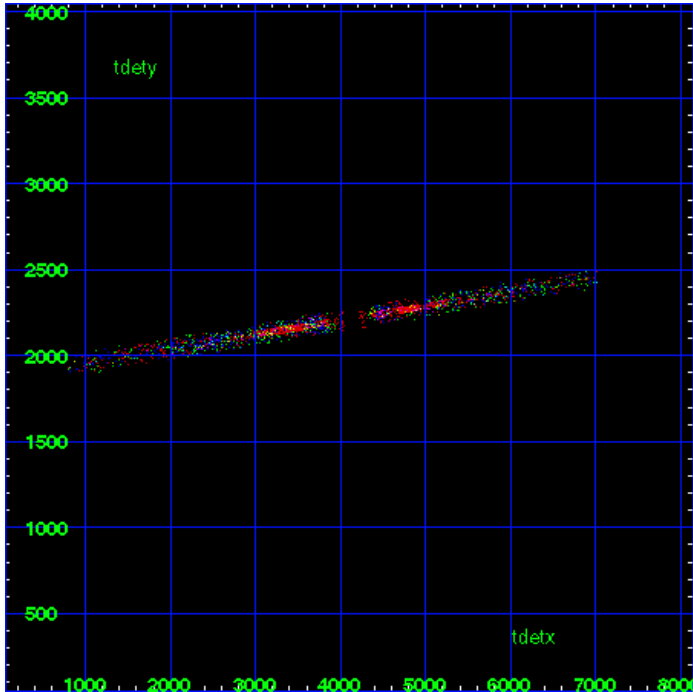
MEG Zero Order



MEG Order Sort ALL

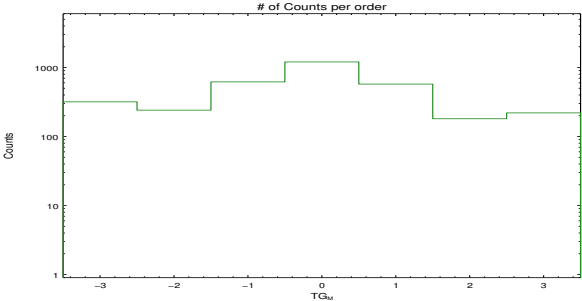


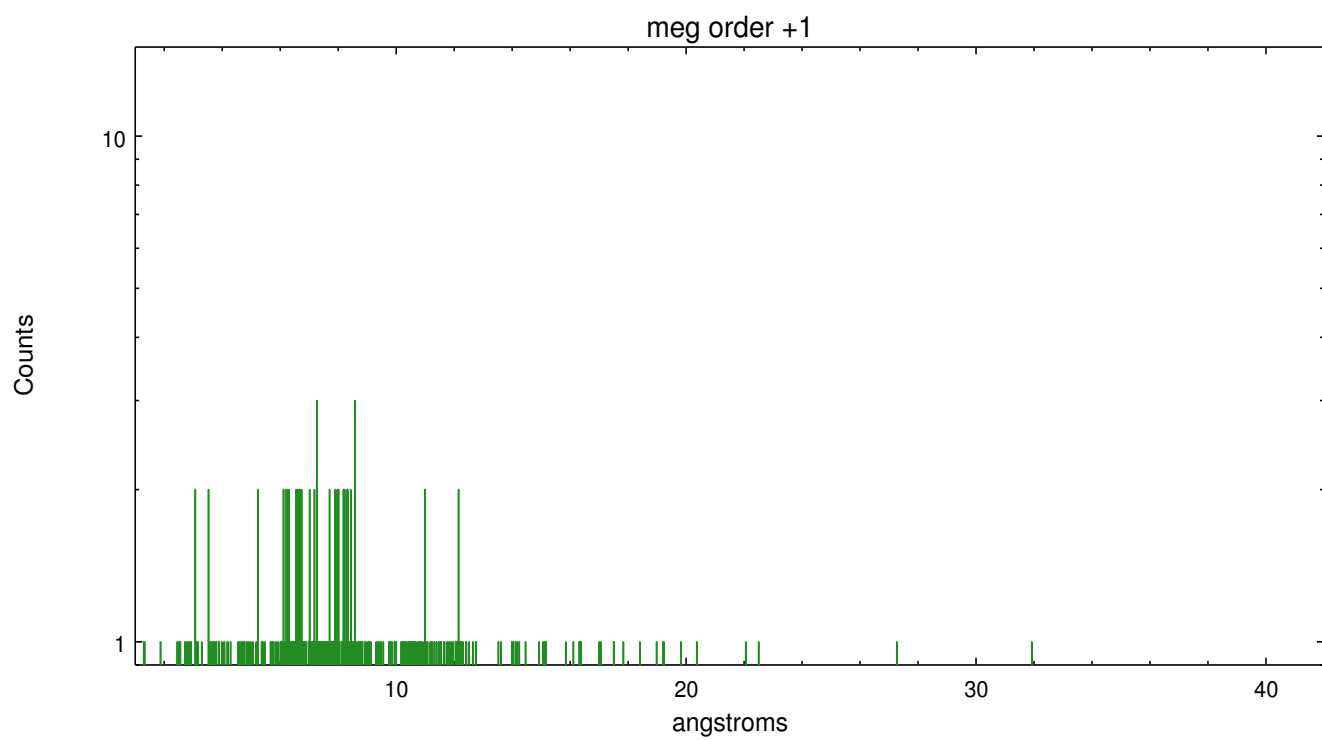
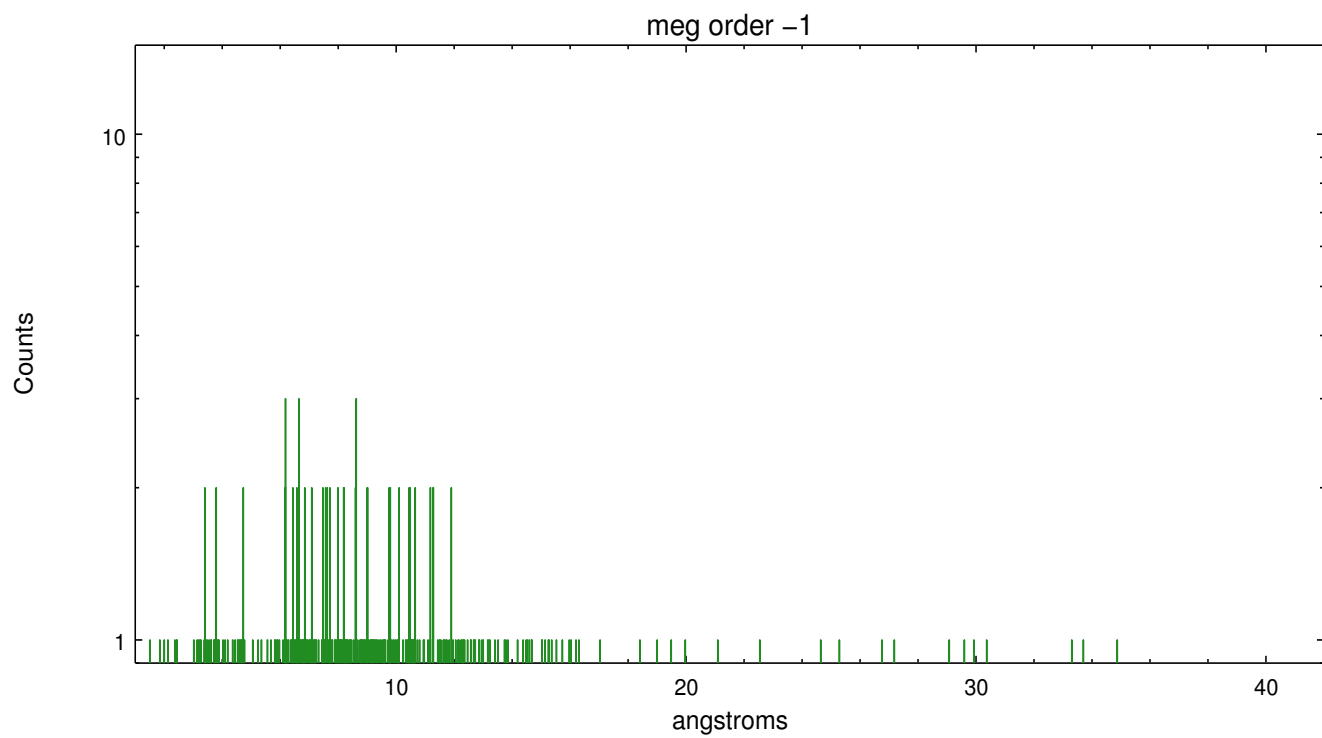
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	318	241	619	1205	575	181	220





## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.07.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.983999903262

### A.2 Comments

Target star is monitored in optical wavelengths in guide star slot 7.