

# V&V Reference Report

## L2 ASCDS Version : 7.6.8

Observation 3821 - L2 Version 001  
Chandra X-Ray Center

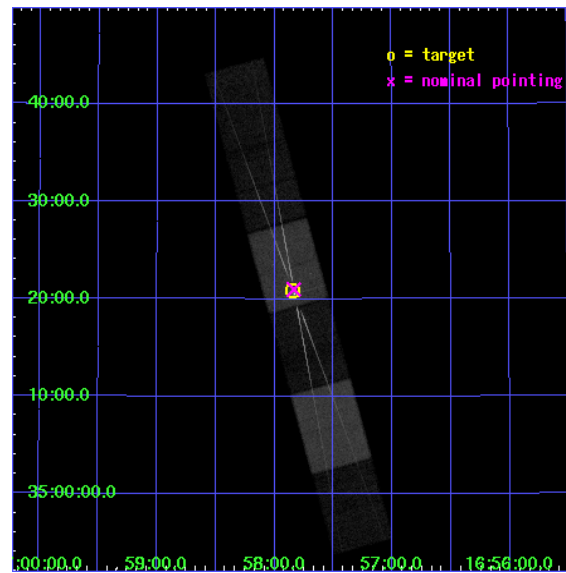
L2 Processing Date : Jul 7 2006

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# 1 Front

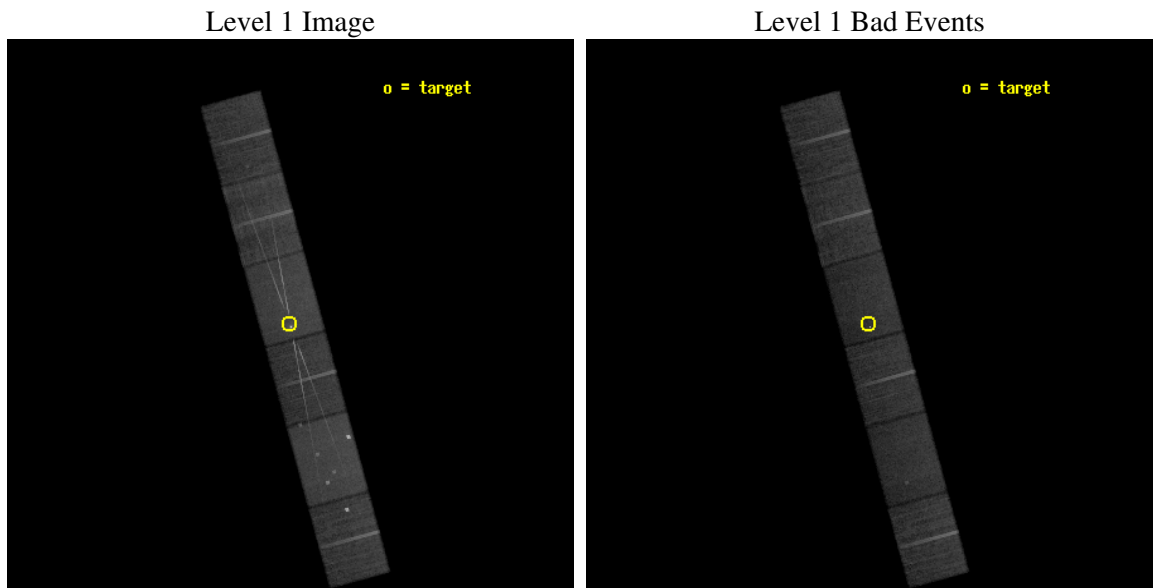
seq_num	400308
obs_id	3821
title	X-RAY TRANSMISSION SPECTROSCOPY DURING THE STAR-RISE OF HER X-1
observer	Dr. Mario Jimenez-Garate
object	HER X-1
dtcycle	0
cycle	P
ra_targ	254.460417
dec_targ	35.347778
ra_nom	254.45896178492
dec_nom	35.3496968999
roll_nom	254.69270050676
revision	2
ontime	30097.5
livetime	29611.39926959
ontime4	30097.5
ontime5	30097.5
ontime6	30097.5
ontime7	30097.5
ontime8	30097.5
ontime9	30094.959039748
l2events	285556



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images

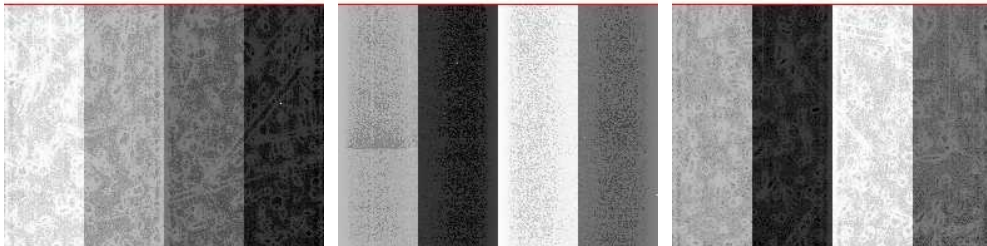


#### 2.1.2 Bias

Chip 4

Chip 5

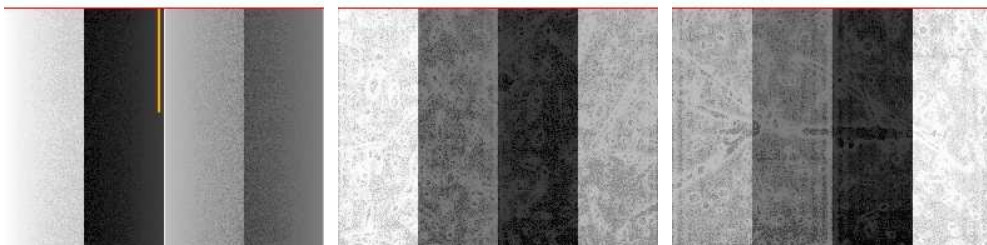
Chip 6



Chip 7

Chip 8

Chip 9



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.8
caldsver	3.2.2
date	2006-07-07T15:17:16
revision	2

sched_exp_time	29950.000000
ontime	30494.656264871
ontime4	30375.227364987
ontime5	30494.656264871
ontime6	30390.473604977
ontime7	30494.656264871
ontime8	30393.017923534
ontime9	30372.686424643
l1events	1147725

### 2.1.4 Events

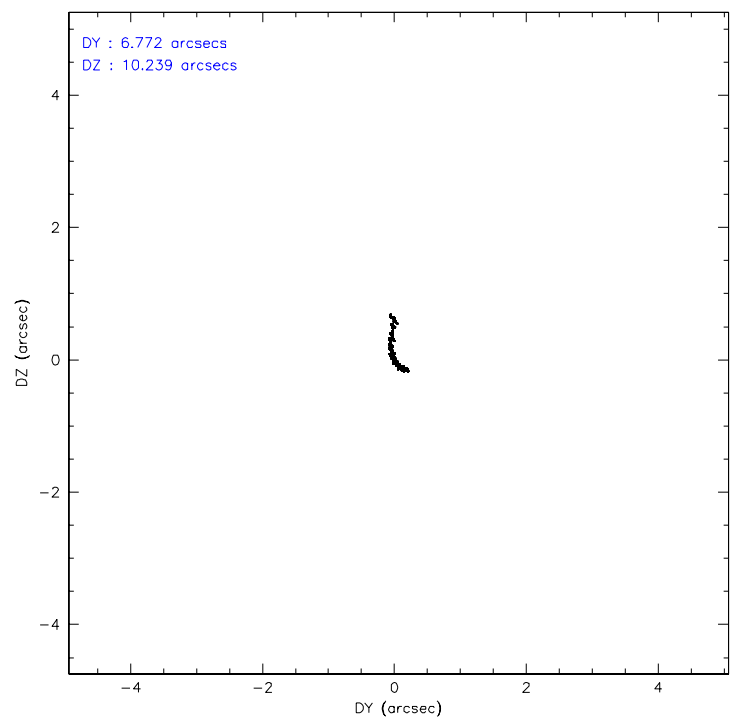
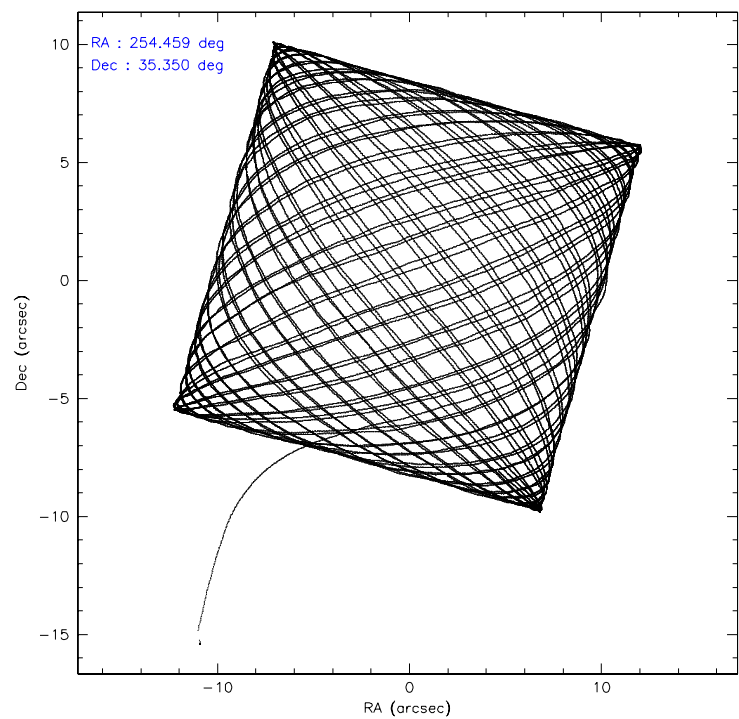
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	172298	229466	171096	228029	193356	153480
rejected events	144647	121288	133376	124424	147873	132824
rejected %	83%	52%	77%	54%	76%	86%

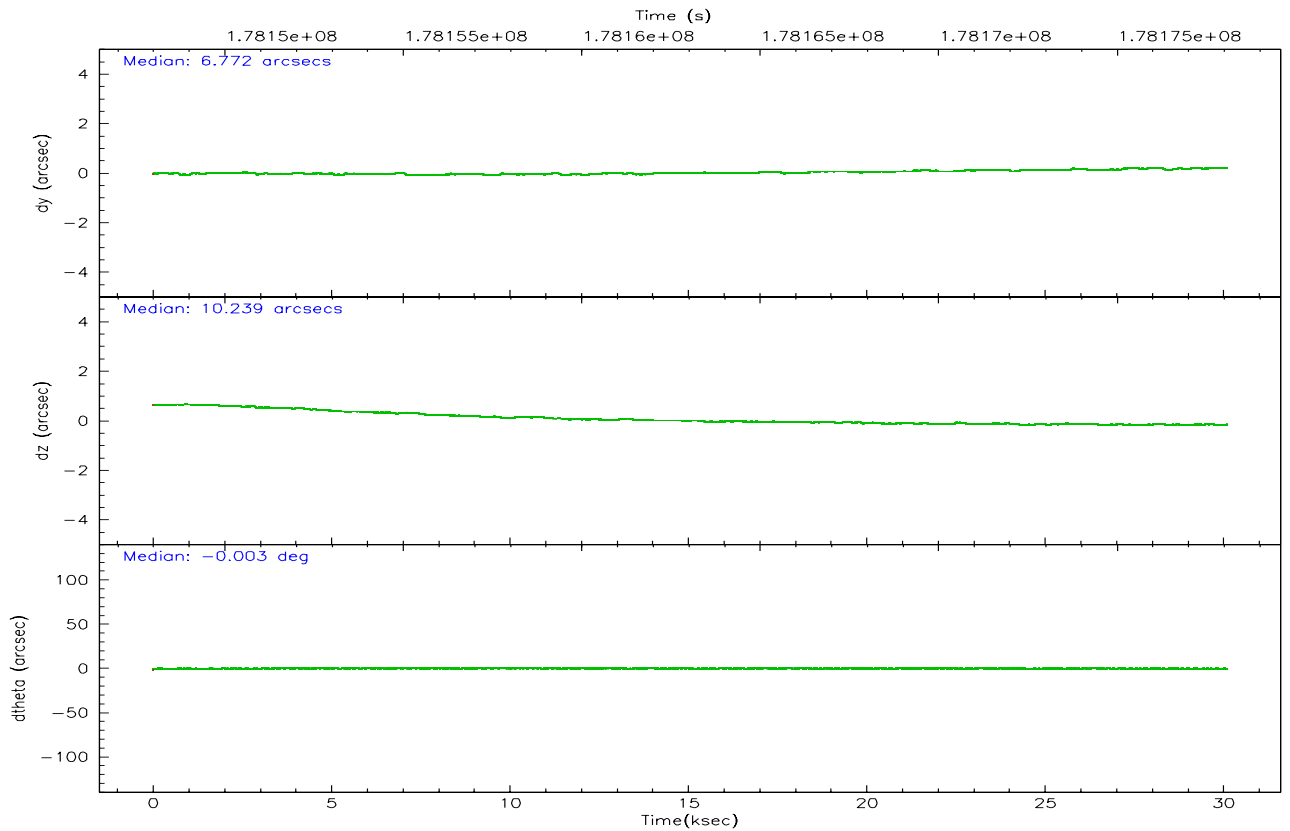
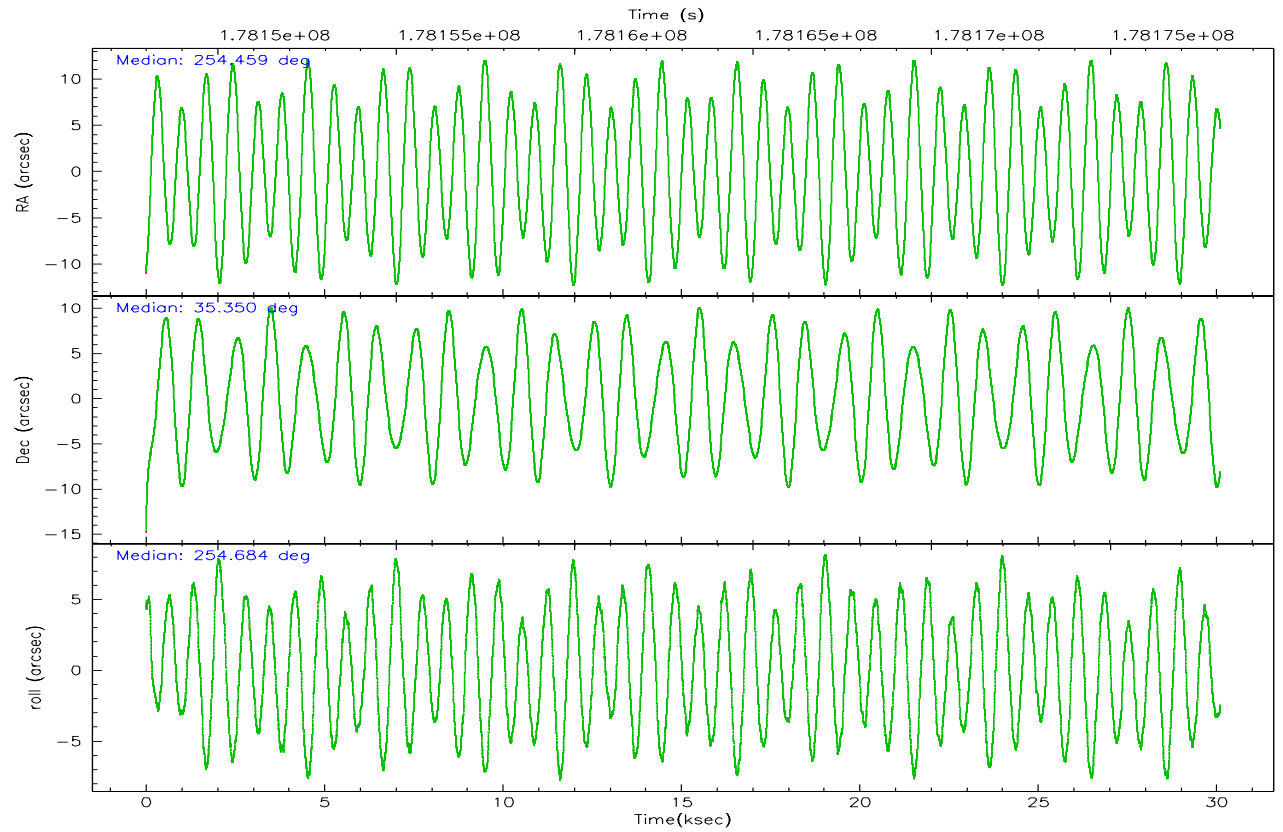
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	16489	14888	20369	9888	16897	9234
	9%	6%	11%	4%	8%	6%
grade 1 events	141	195	120	343	117	70
	0%	0%	0%	0%	0%	0%
grade 2 events	4137	33736	6436	25698	9105	3677
	2%	14%	3%	11%	4%	2%
grade 3 events	2104	3231	2744	6860	4389	2062
	1%	1%	1%	3%	2%	1%
grade 4 events	1947	2673	2778	6703	4257	1938
	1%	1%	1%	2%	2%	1%
grade 5 events	6162	11003	6587	15127	8497	6856
	3%	4%	3%	6%	4%	4%
grade 6 events	3215	55001	5602	55618	11157	3912
	1%	23%	3%	24%	5%	2%
grade 7 events	138103	108739	126460	107792	138937	125731
	80%	47%	73%	47%	71%	81%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	On-chip summing requested	N	N
Observation mode	POINTING	POINTING	Subarray requested	CUSTOM	CUSTOM
Pointing RA	254.450036	254.4589617849187	Subarray start row	1	1
Pointing Dec	35.375936	35.34969689990002	Subarray row count	774	774
Pointing Roll	254.541248	254.6927005067612	Alternating exposures requested	N	N
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Primary exposure time	0.000000	2.5
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-187.132523	-187.1254020033014			
SIM translation stage offset (mm)	-3	-3.007120579706367			
Phase constraints	Y	Y			
Phase period	1.700167	1.700167			
Phase epoch	50290.659249	50290.659249			
Phase start	0.130000	0.130000			
Phase end	0.780000	0.780000			
Phase start error	0.010000	0.010000			
Phase end error	0.010000	0.010000			
Observation start time	178148131.184000	178146979.79169			
Observation start date	2003-08-24T21:34:27	2003-08-24T21:16:19			
Observation end time	178178081.184000	178179369.79308			
Observation end date	2003-08-25T05:53:37	2003-08-25T06:16:09			
Read mode	TIMED	TIMED			

### 2.3 Aspect





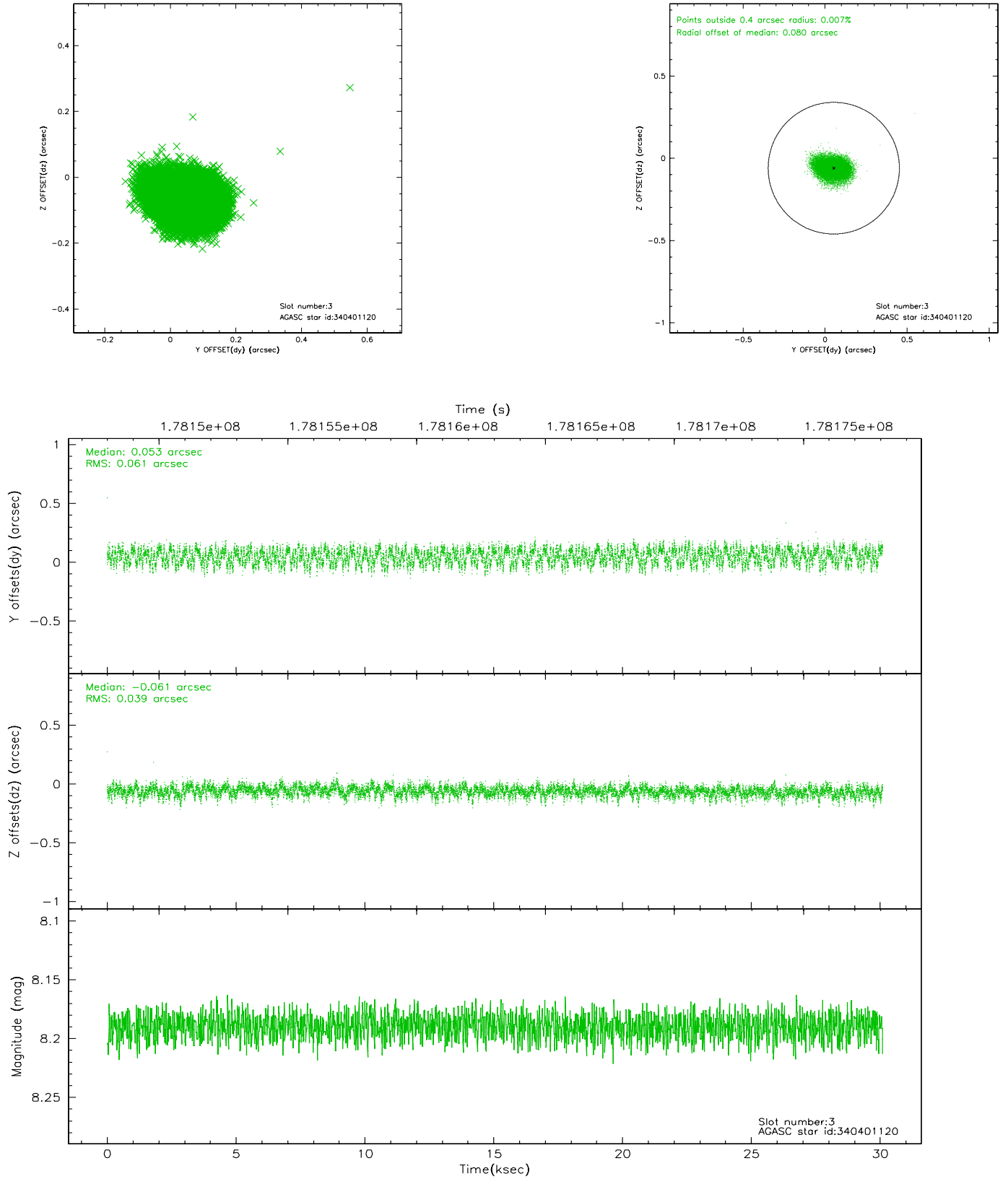
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	7343	-0.039	-0.059	0.008	0.013	0.000000	0.000000	-759.41	-1793.72
1	FID	ACIS-S-4	7.19	7343	0.038	0.035	0.005	0.009	0.000000	0.000000	2153.94	114.72
2	FID	ACIS-S-5	7.22	7343	-0.030	0.033	0.007	0.012	0.000000	0.000000	-1812.12	108.53
3	GUIDE	340401120	8.19	14682	0.053	-0.061	0.078	0.120	253.574895	35.128140	1536.36	-2248.12
4	GUIDE	340534080	8.83	14679	-0.001	0.085	0.079	0.128	255.228954	35.471551	-949.11	2107.08
5	GUIDE	340534896	8.60	14684	-0.036	-0.020	0.065	0.105	255.288450	35.541682	-1240.03	2205.56
6	GUIDE	341060696	9.19	14681	-0.093	0.067	0.078	0.132	254.855764	35.681180	-1378.32	849.03
7	GUIDE	340402112	8.51	14683	0.073	-0.071	0.092	0.147	253.640936	34.860529	2416.58	-1811.00

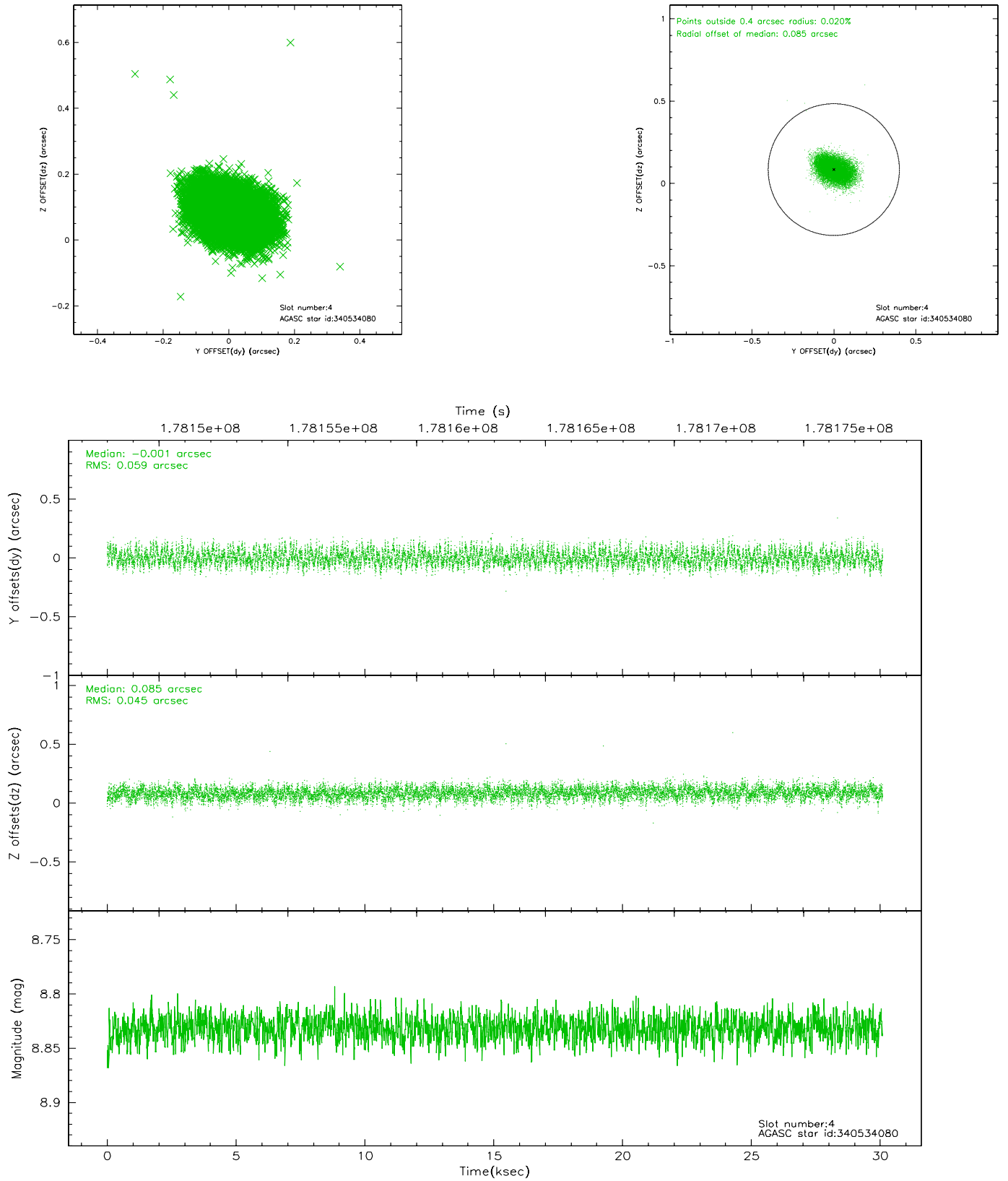


## 2.4 Star Slots

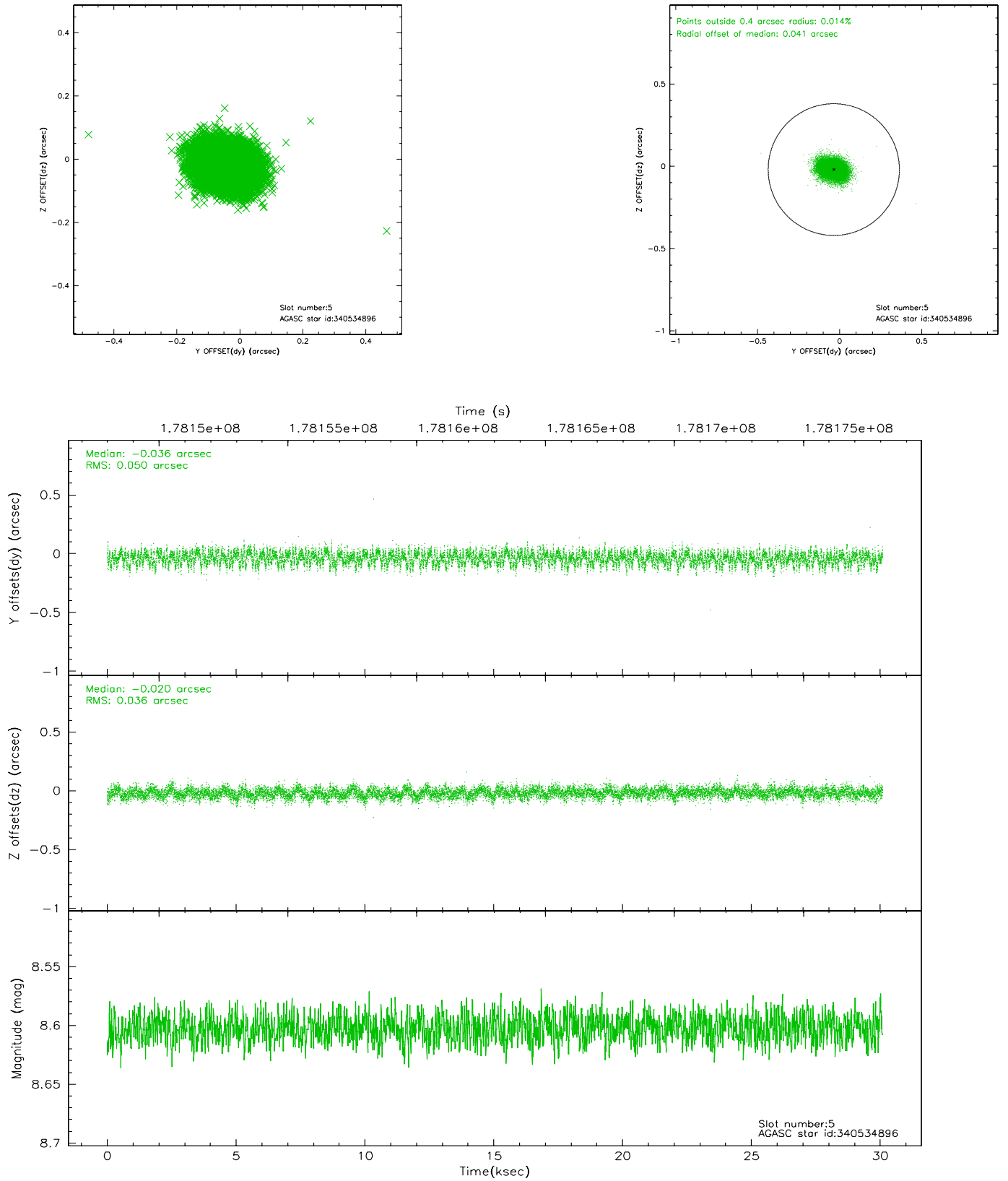
### 2.4.1 Slot 3



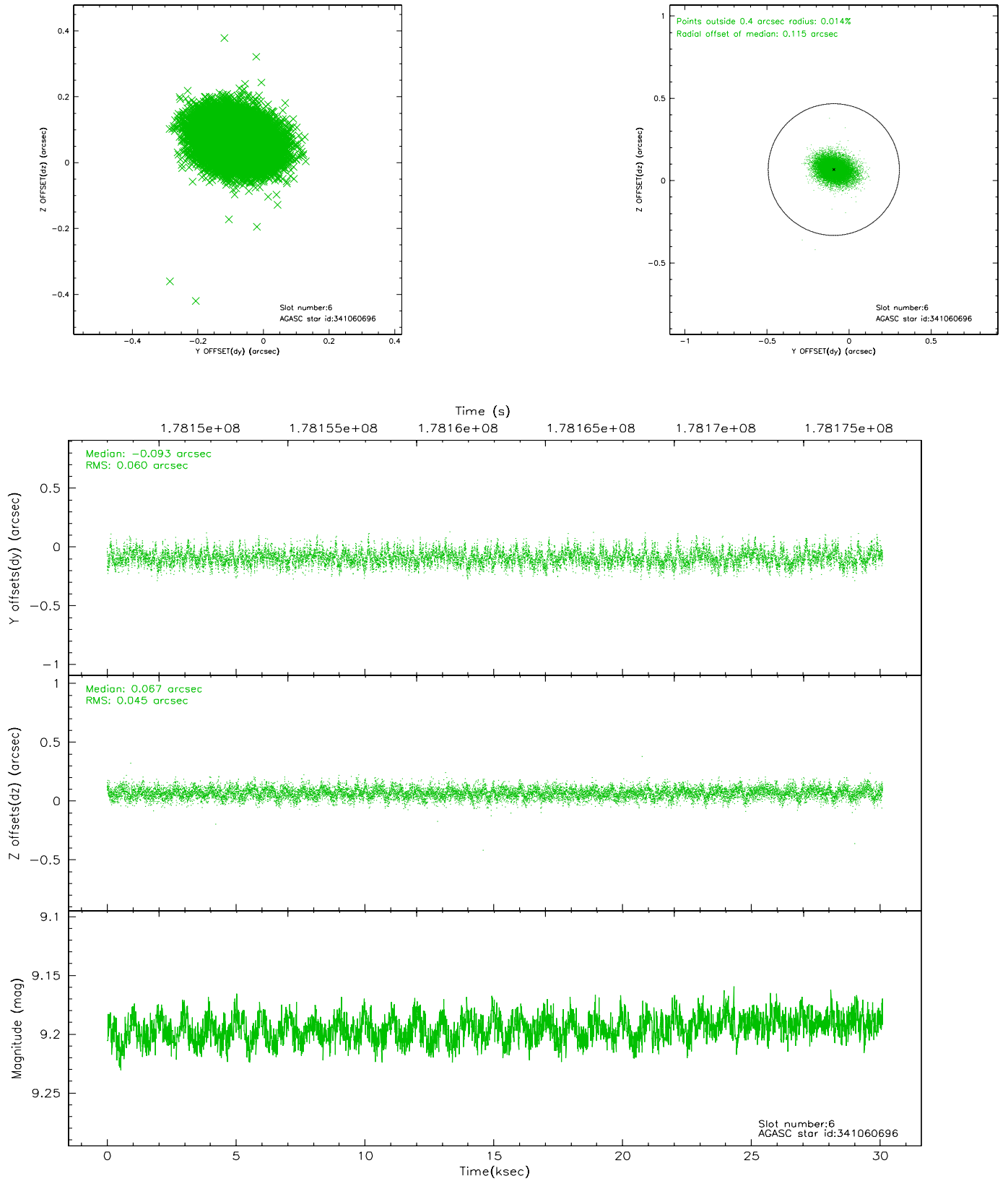
## 2.4.2 Slot 4



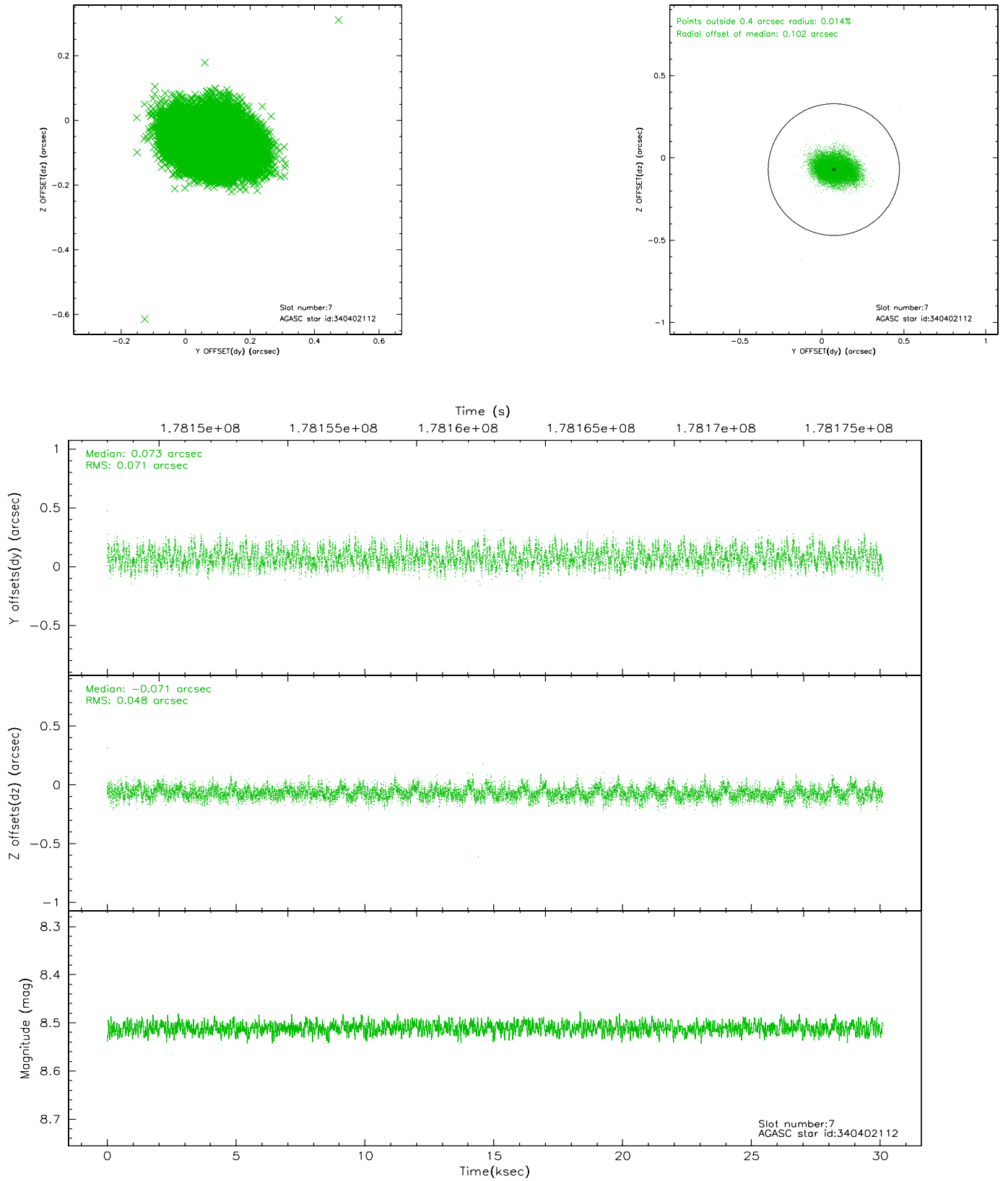
### 2.4.3 Slot 5



## 2.4.4 Slot 6

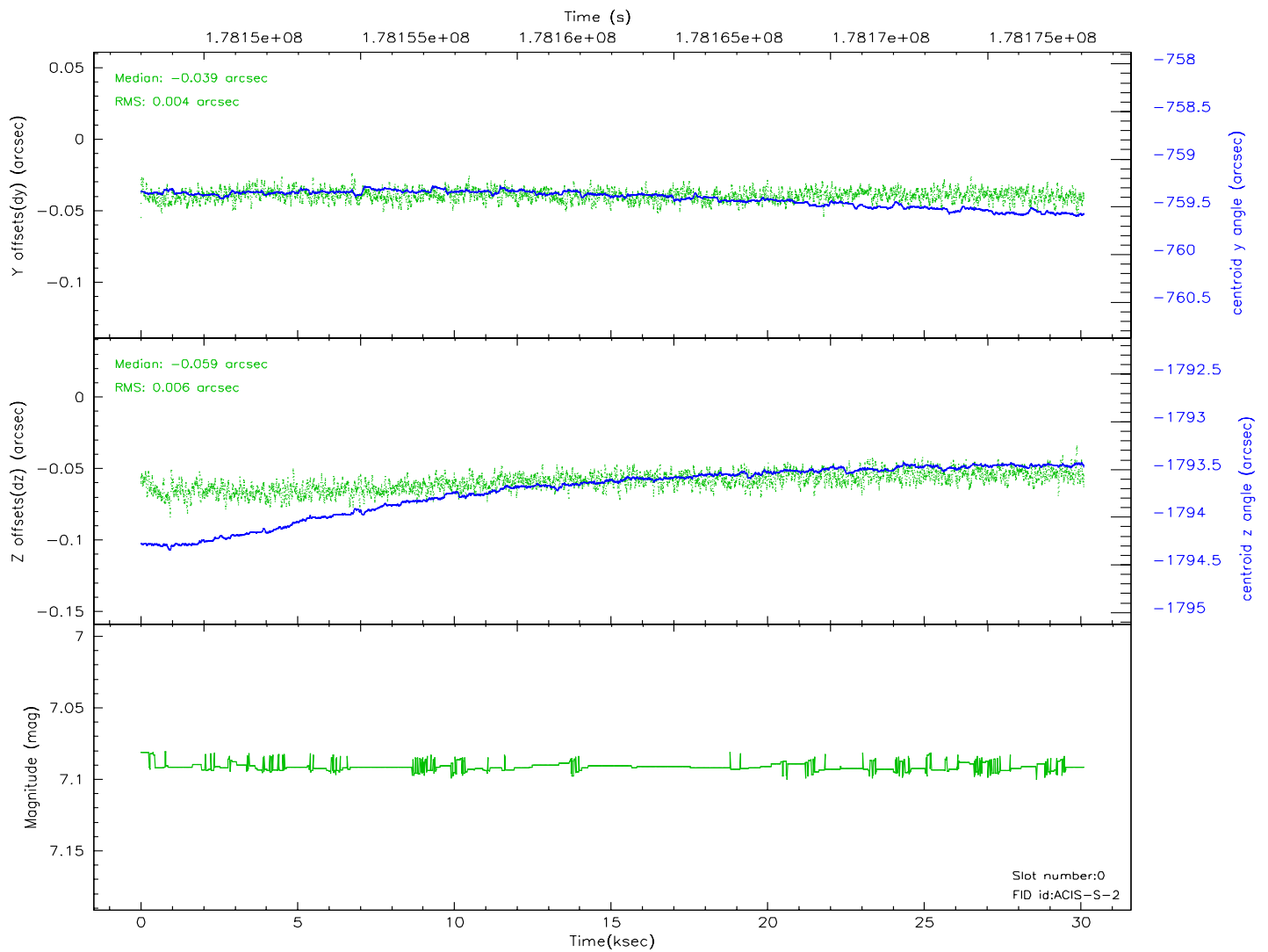
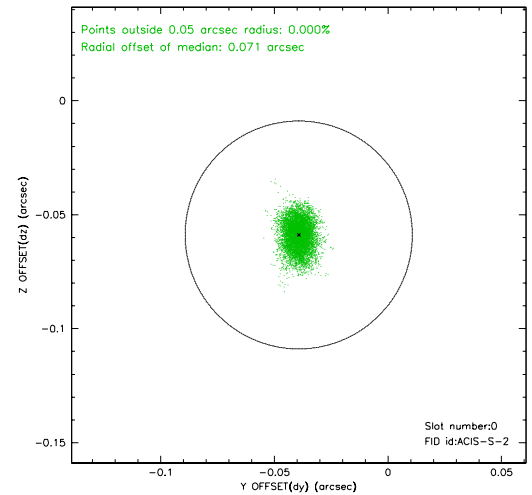
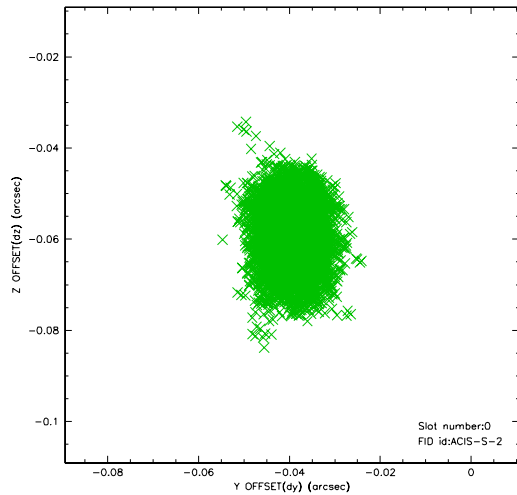


## 2.4.5 Slot 7

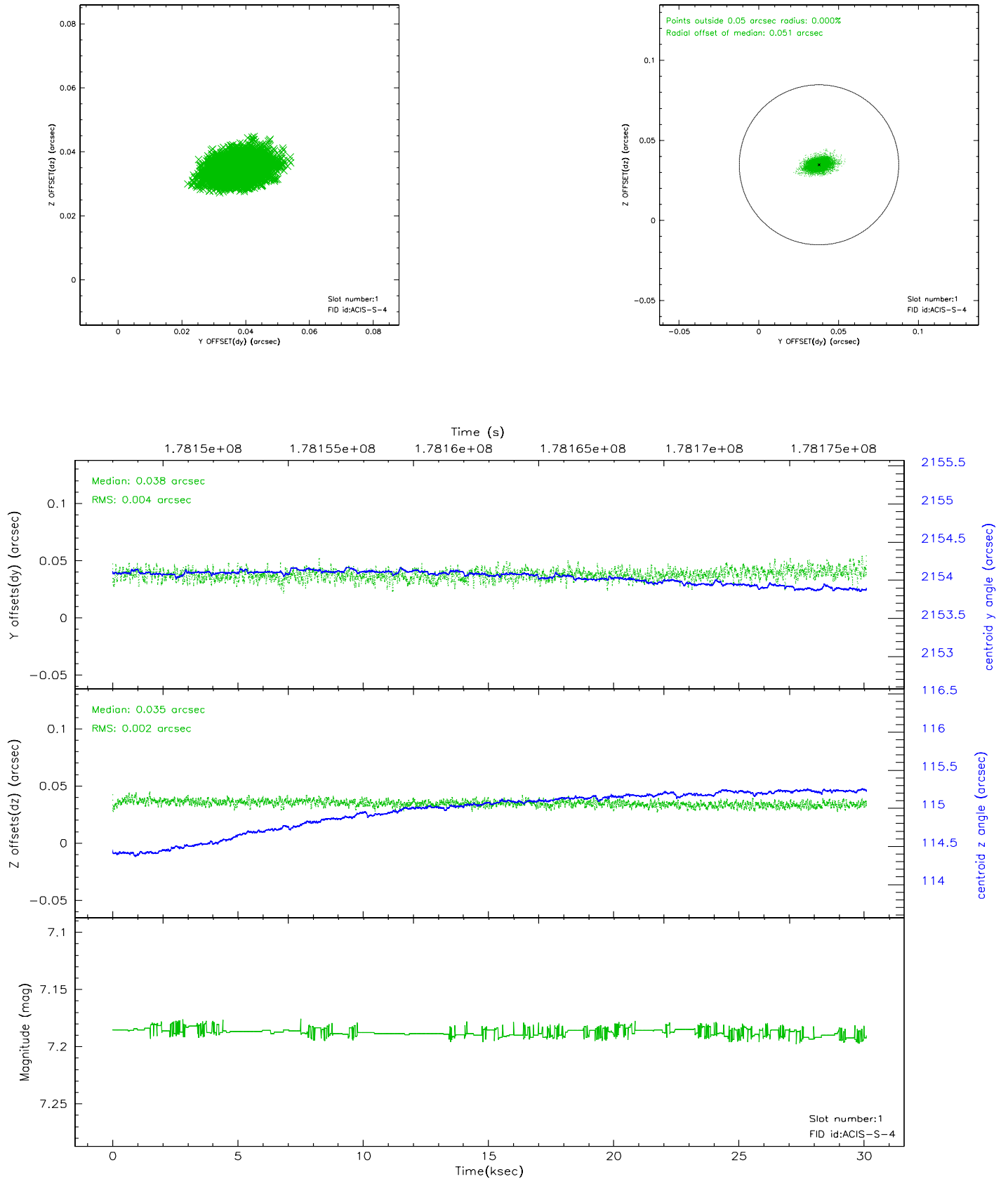


## 2.5 FID Slots

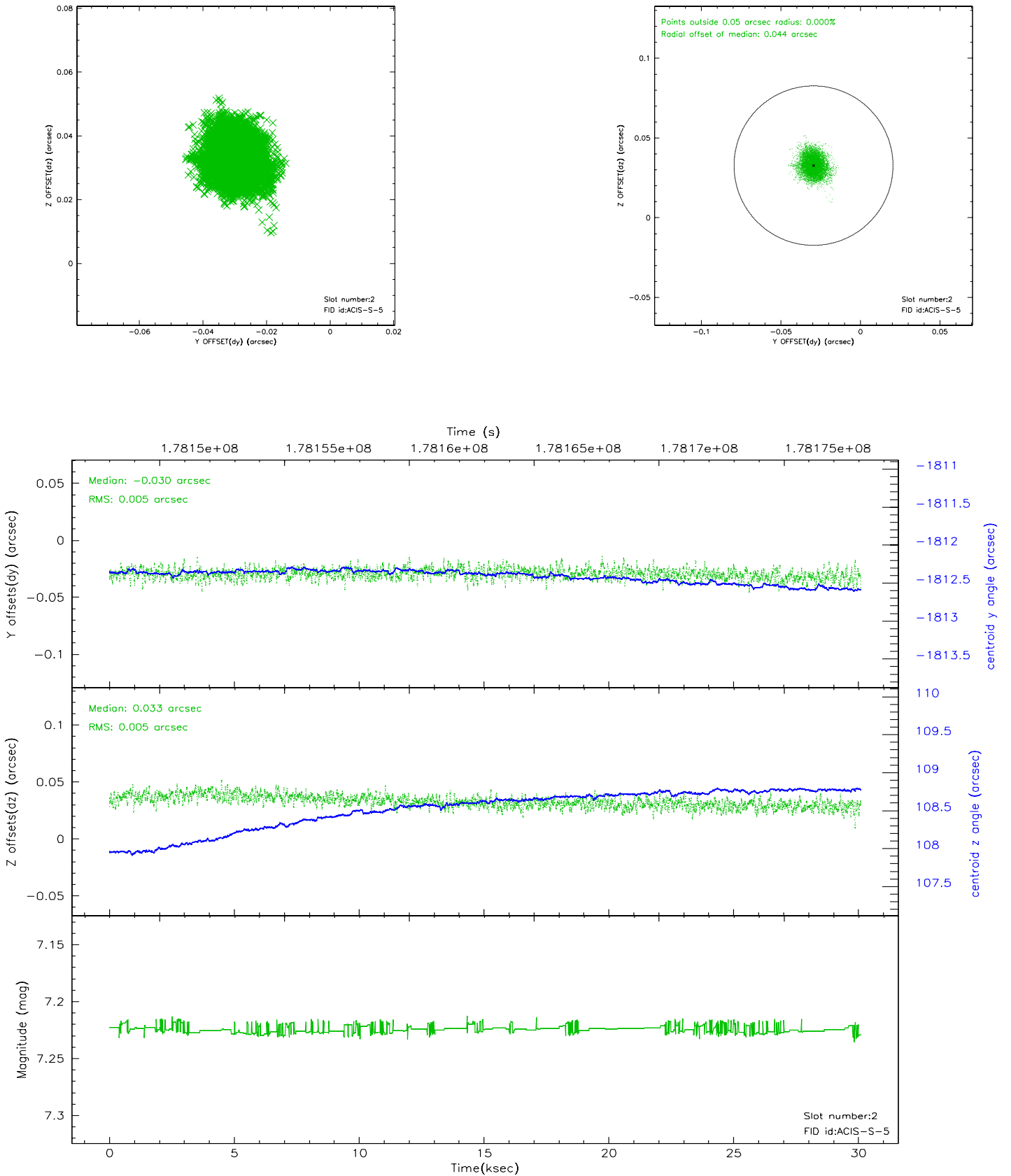
### 2.5.1 Slot 0



## 2.5.2 Slot 1



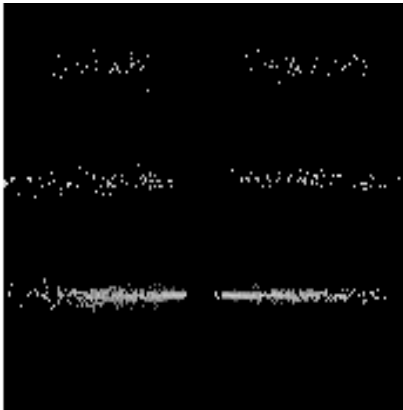
### 2.5.3 Slot 2



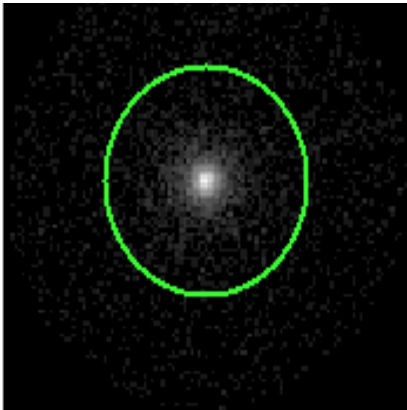


# 3 Gratings

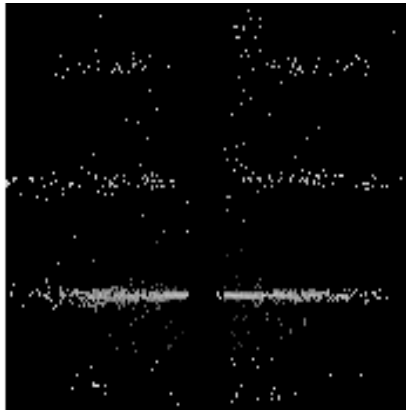
## 3.1 HEG Arm



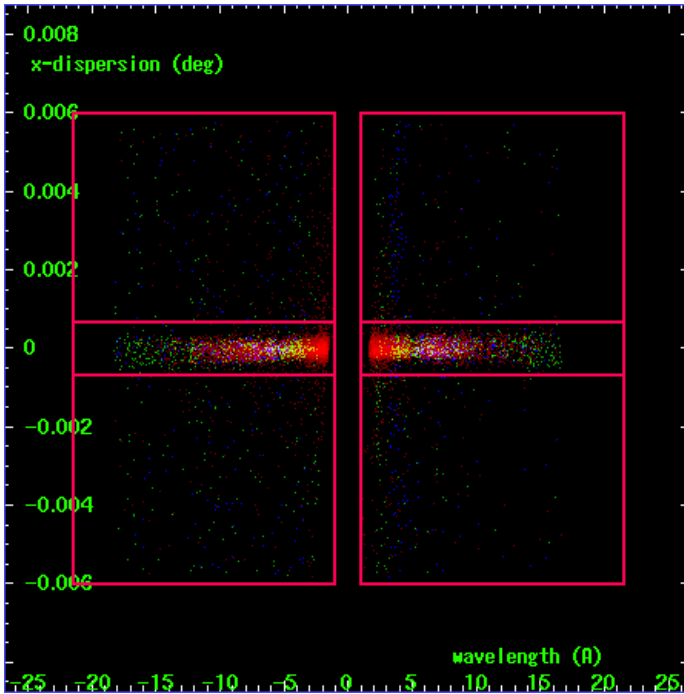
HEG Order Sort 123



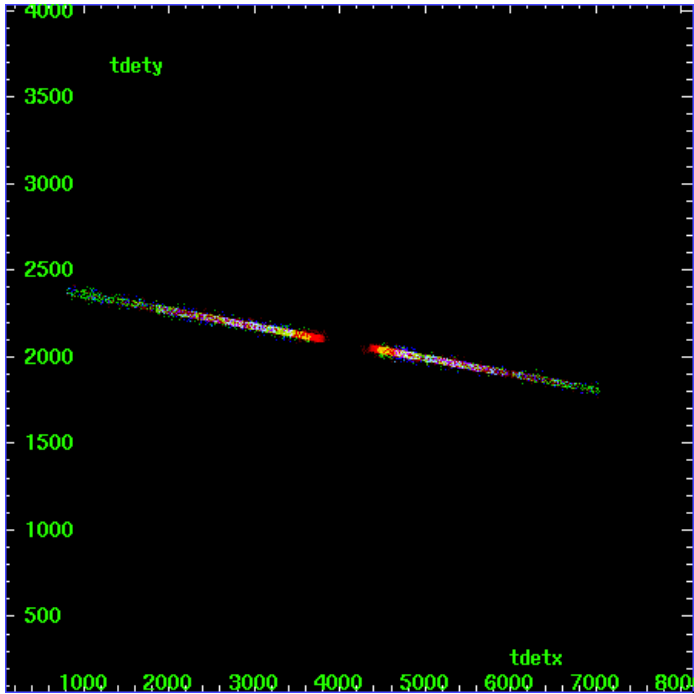
HEG Zero Order



HEG Order Sort ALL

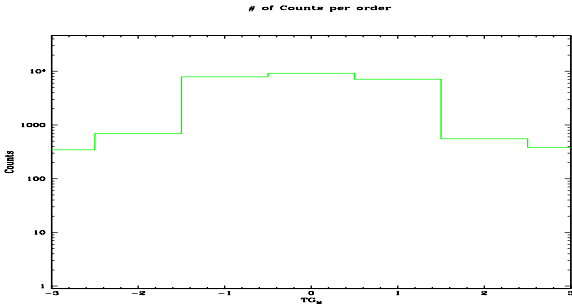


Spot Image HEG

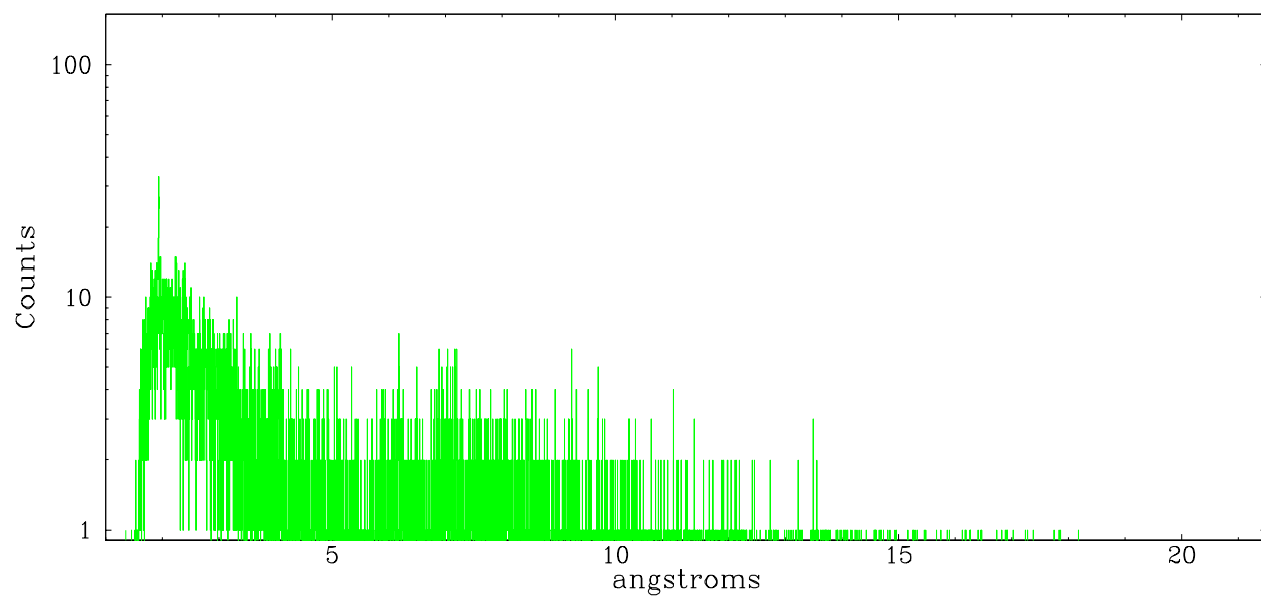


Full Detector HEG

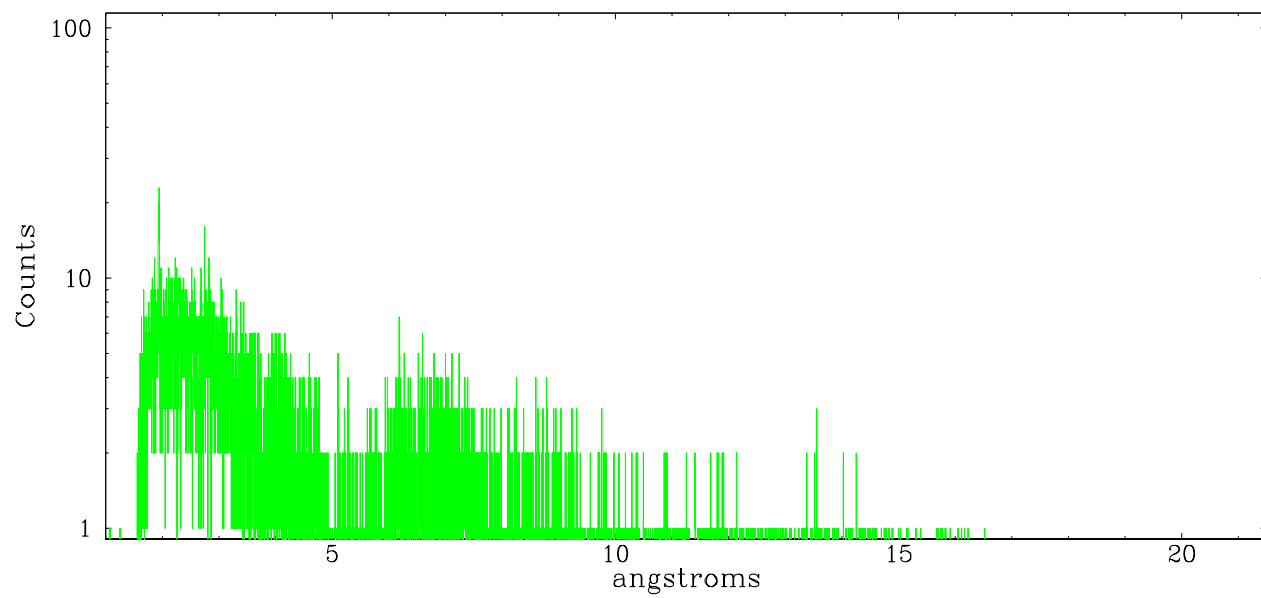
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	345	692	7915	9204	7108	555	383



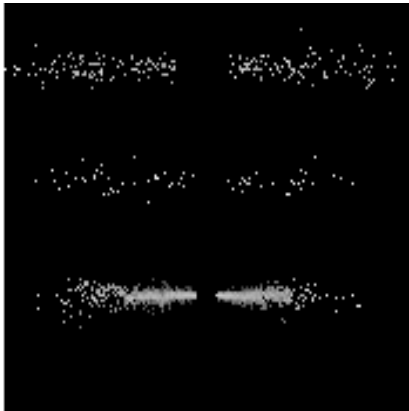
heg order -1



heg order +1



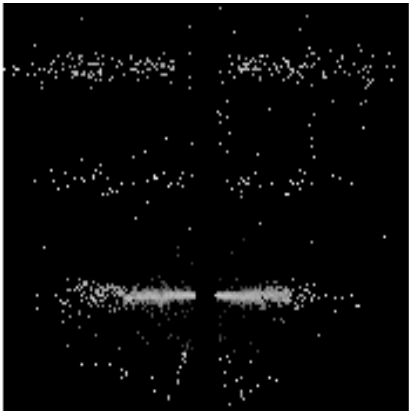
### 3.2 MEG Arm



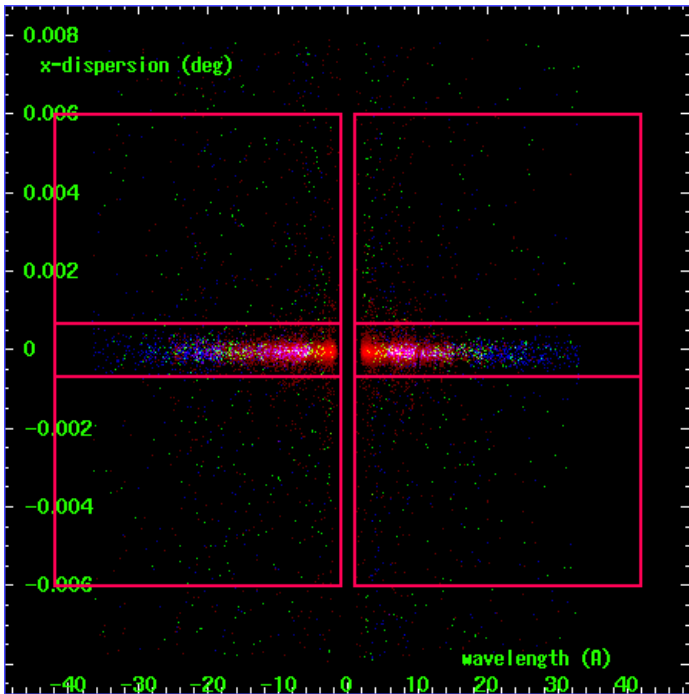
MEG Order Sort 123



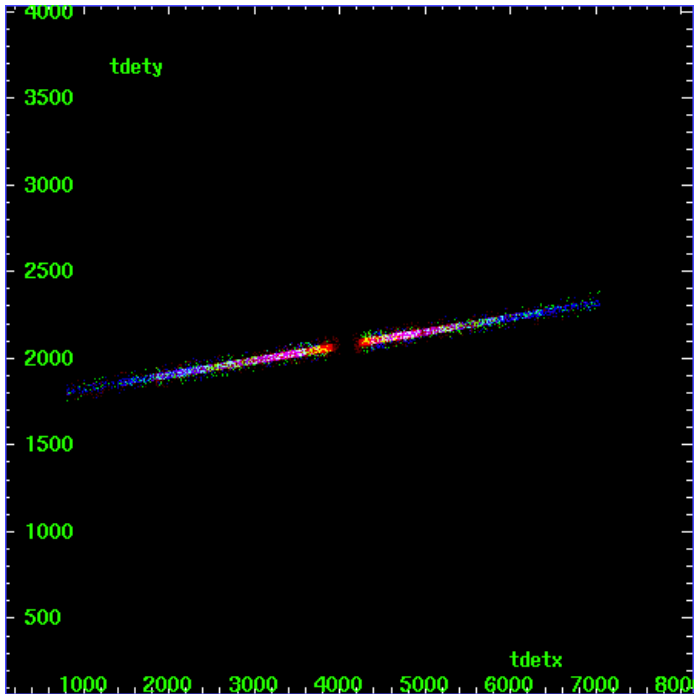
MEG Zero Order



MEG Order Sort ALL

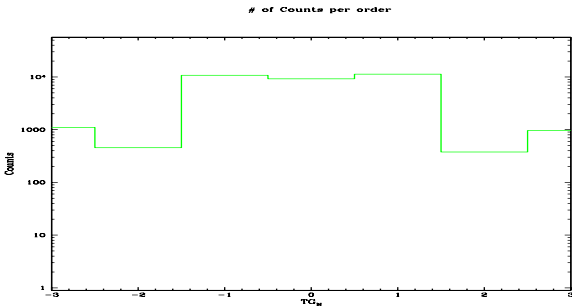


Spot Image MEG

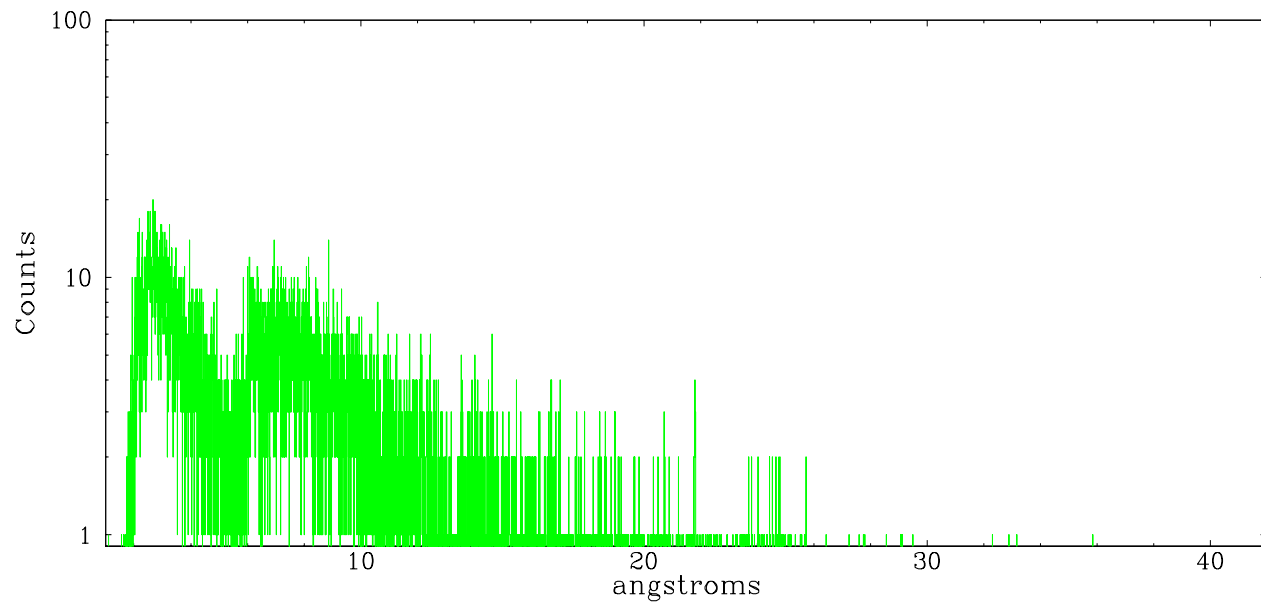


Full Detector MEG

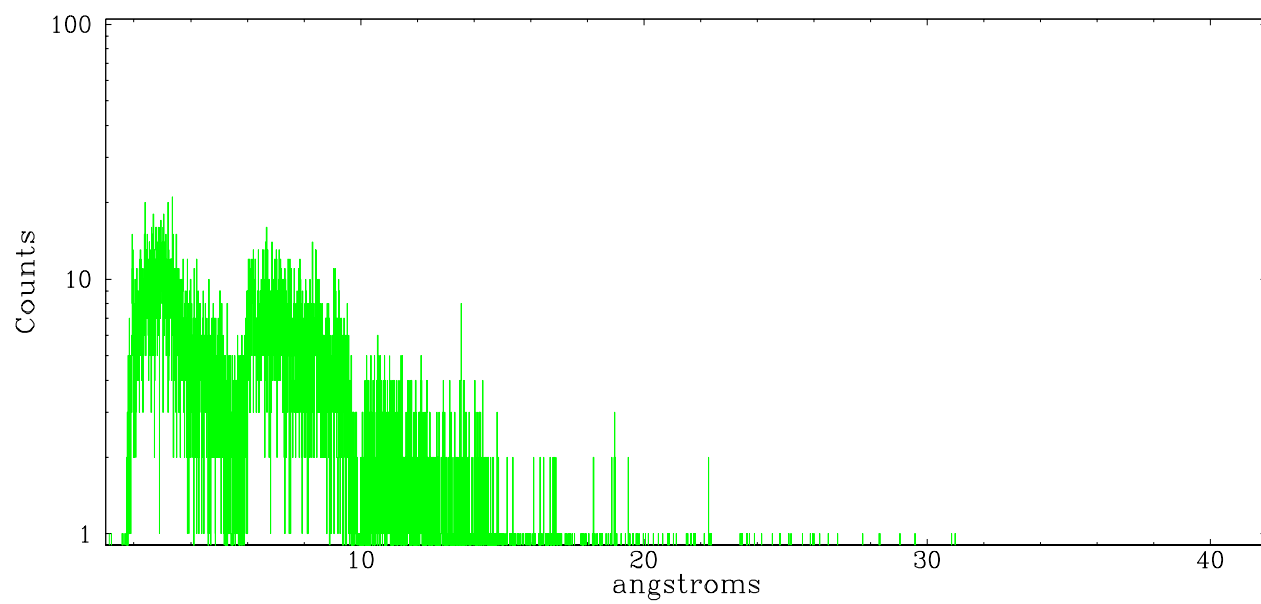
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1105	454	10798	9204	11306	378	963



meg order -1



meg order +1



## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.07.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.098

### A.2 Comments