

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 5478 - L2 Version 002  
Chandra X-Ray Center

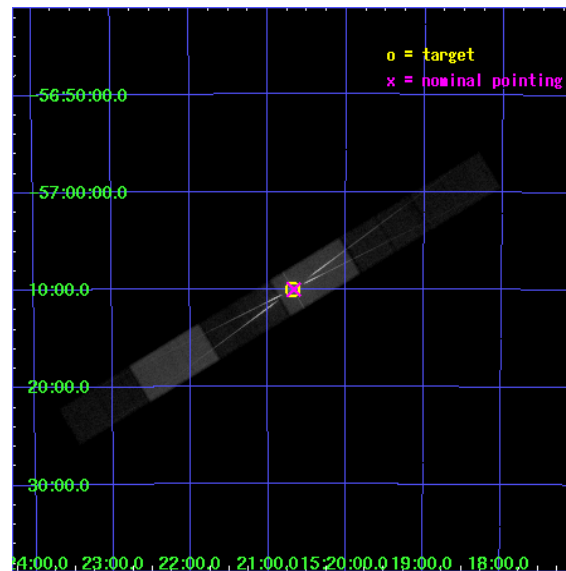
L2 Processing Date : Mar 8 2006

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# 1 Front

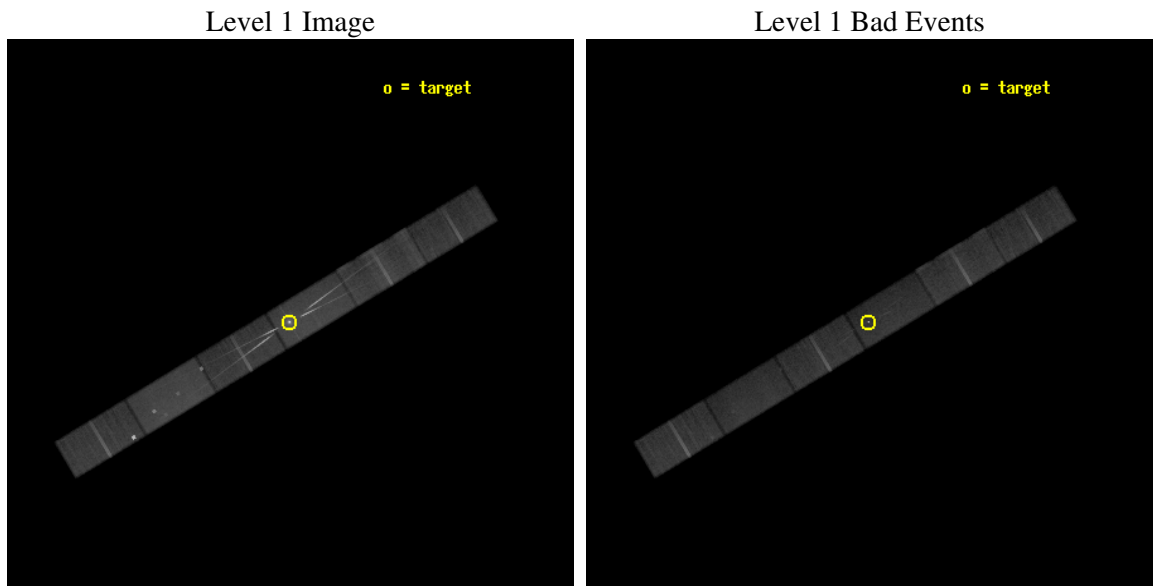
seq_num	400408
obs_id	5478
title	Accretion Disk Mapping using the P Cygni Line Profiles in Circinus X-1
observer	Dr. Norbert Schulz
object	Cir X-1
dtcycle	0
cycle	P
ra_targ	230.170833
dec_targ	-57.166667
ra_nom	230.1668677986
dec_nom	-57.167313108798
roll_nom	328.89699236755
revision	2
ontime	52652.399630785
livetime	51411.271063465
ontime4	52648.917550802
ontime5	52652.399630785
ontime6	52650.658610702
ontime7	52652.399630785
ontime8	52652.399630785
ontime9	52652.399630785
l2events	499682



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images

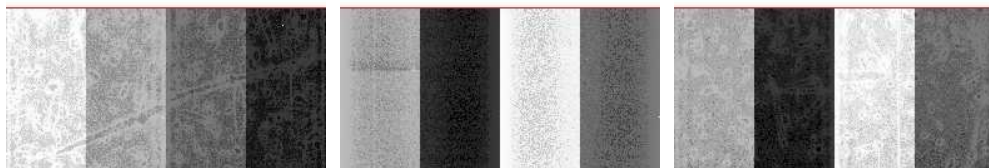


#### 2.1.2 Bias

Chip 4

Chip 5

Chip 6



Chip 7

Chip 8

Chip 9



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.7.1
caldsver	3.2.1
date	2006-03-08T17:41:50
revision	2

sched_exp_time	52500.000000
ontime	52866.214012057
ontime4	52862.731932074
ontime5	52866.214012057
ontime6	52864.472991973
ontime7	52866.214012057
ontime8	52866.214012057
ontime9	52866.214012057
l1events	1711919

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	261172	310860	273182	389421	275557	201727
rejected events	206476	169165	188194	172456	210226	174588
rejected %	79%	54%	68%	44%	76%	86%

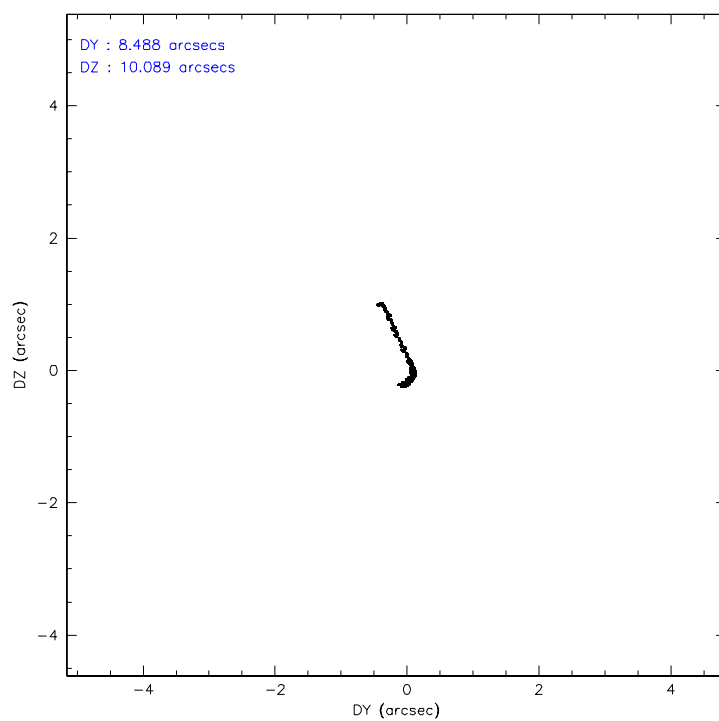
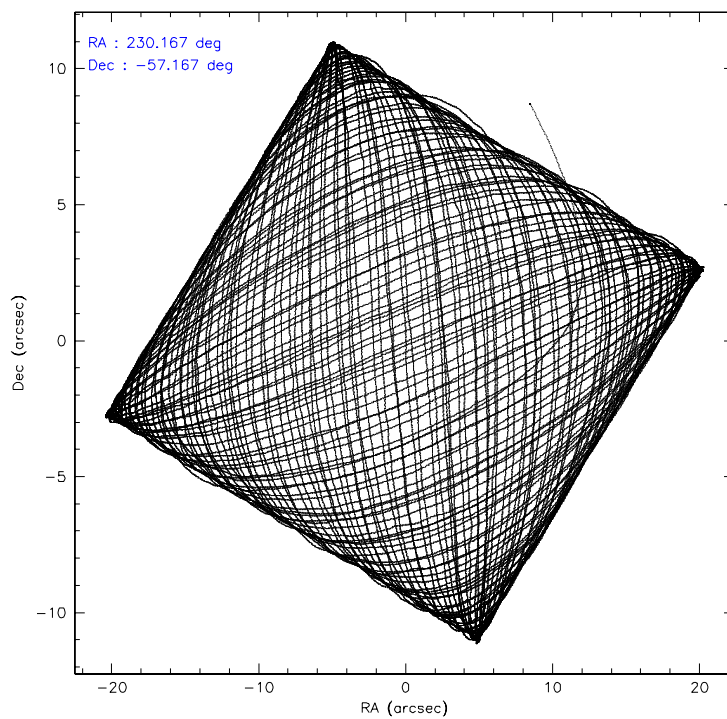
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	38549	11538	46694	26415	22152	11355
	14%	3%	17%	6%	8%	5%
grade 1 events	216	362	261	816	151	91
	0%	0%	0%	0%	0%	0%
grade 2 events	5954	44501	14576	53006	13431	5081
	2%	14%	5%	13%	4%	2%
grade 3 events	3115	5055	6281	17078	6958	3006
	1%	1%	2%	4%	2%	1%
grade 4 events	2993	4447	6169	16805	6580	2879
	1%	1%	2%	4%	2%	1%
grade 5 events	8508	16661	9343	23947	11844	9286
	3%	5%	3%	6%	4%	4%
grade 6 events	4307	76753	11427	104263	16406	4935
	1%	24%	4%	26%	5%	2%
grade 7 events	197530	151543	178431	147091	198035	165094
	75%	48%	65%	37%	71%	81%

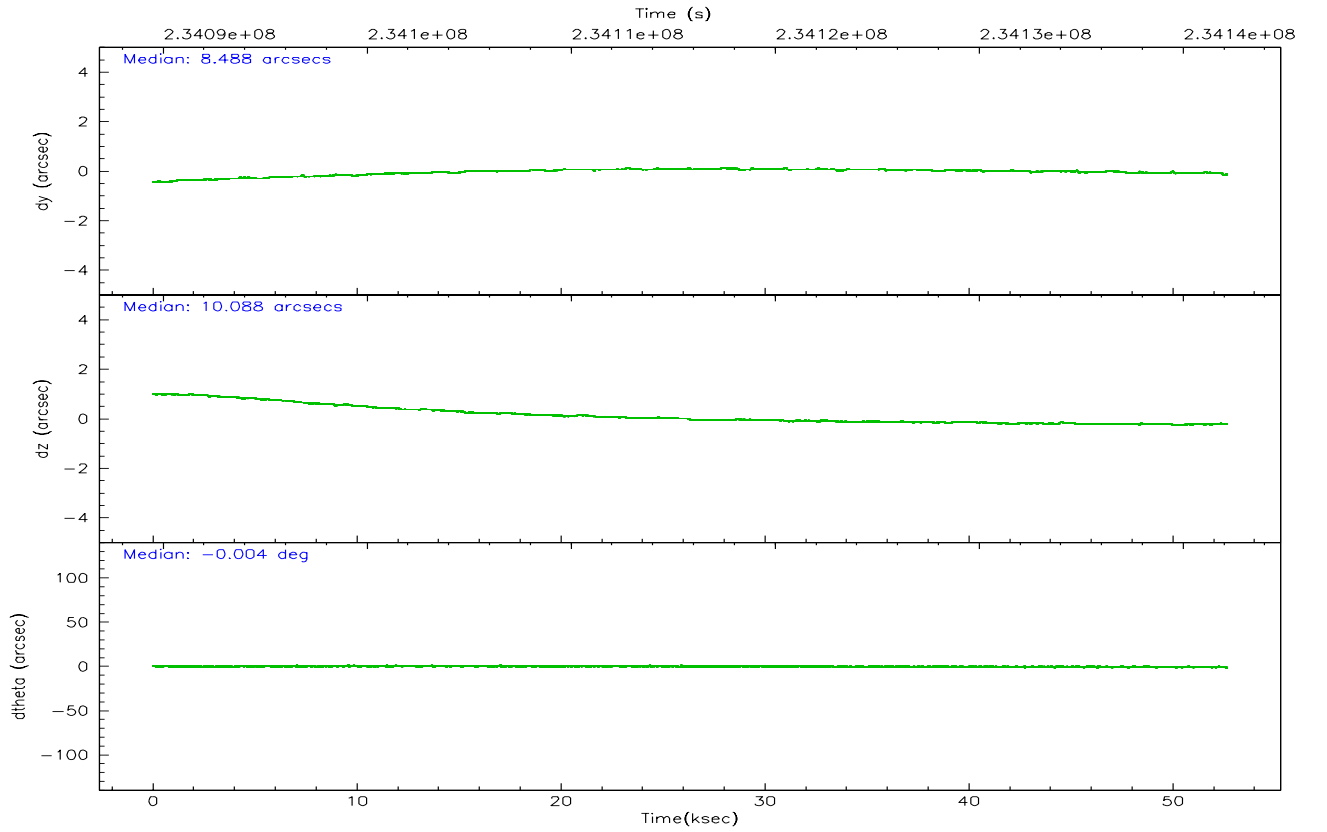
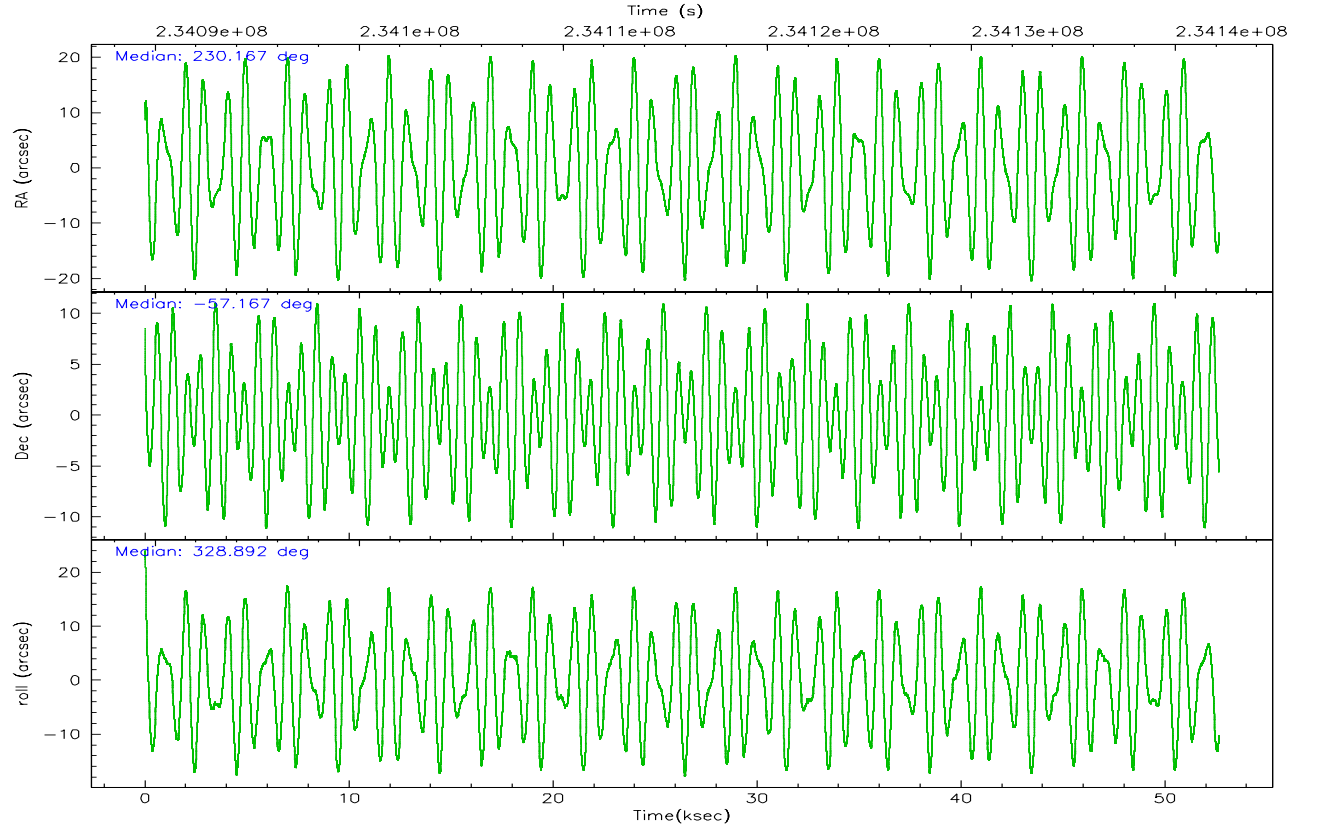


## 2.2 Compared Parameters

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	1/2
Pointing RA	230.116700	230.1668677986042	Subarray start row	1	1
Pointing Dec	-57.167158	-57.16731310879845	Subarray row count	512	512
Pointing Roll	328.698206	328.8969923675467	Alternating exposures requested	N	N
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Primary exposure time	0.000000	1.7
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-183.992523	-183.985022191653			
SIM translation stage offset (mm)	-6.14	-6.147500391354811			
Phase constraints	Y	Y			
Phase period	16.539600	16.539600			
Phase epoch	53522.276300	53522.276300			
Phase start	0.020000	0.020000			
Phase end	0.100000	0.100000			
Phase start error	0.000000	0.000000			
Phase end error	0.000000	0.000000			
Observation start time	234089666.184000	234088558.45898			
Observation start date	2005-06-02T08:53:22	2005-06-02T08:35:58			
Observation end time	234142166.184000	234143091.02396			
Observation end date	2005-06-02T23:28:22	2005-06-02T23:44:51			
Read mode	TIMED	TIMED			

## 2.3 Aspect



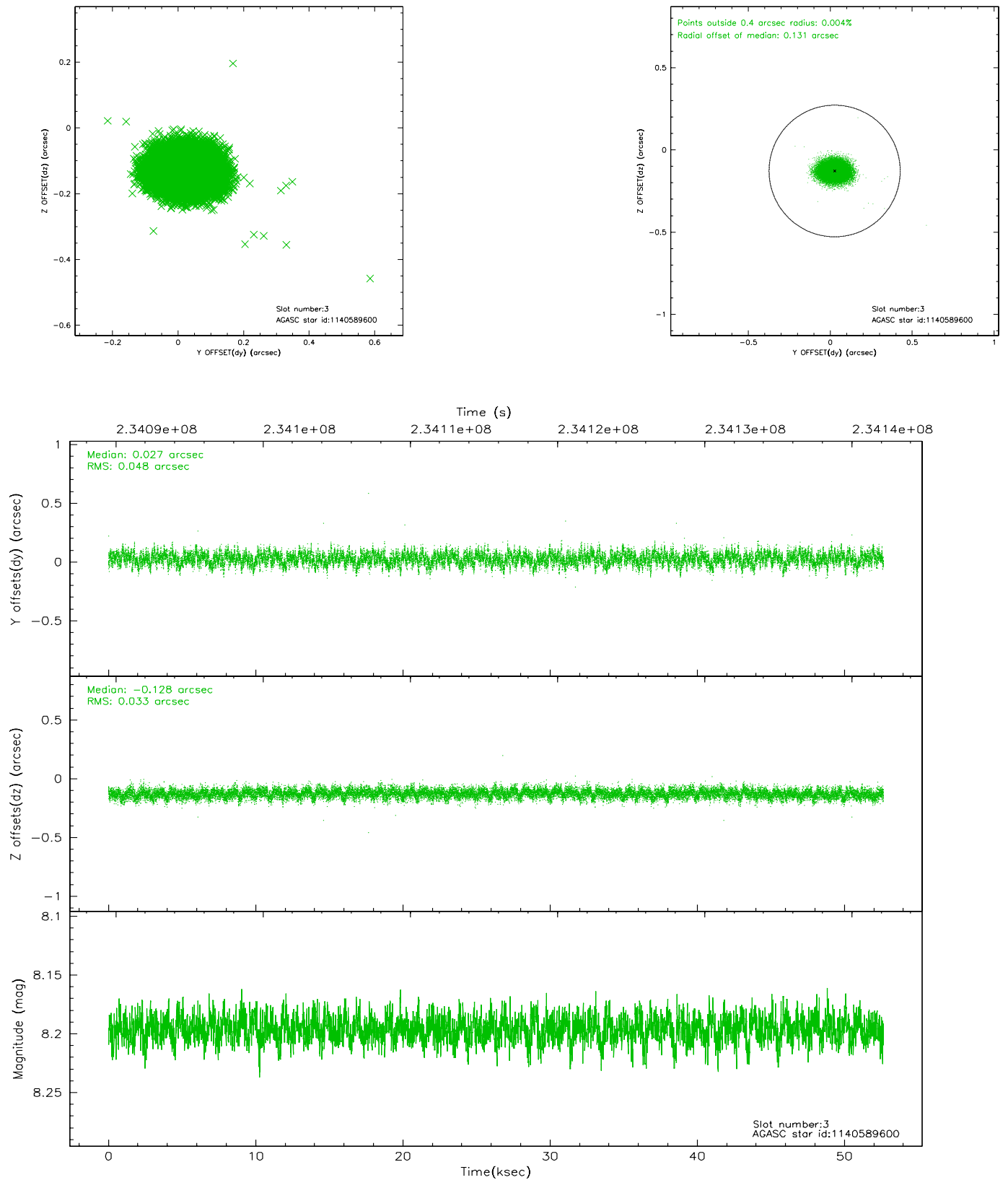


### Slot Statistics

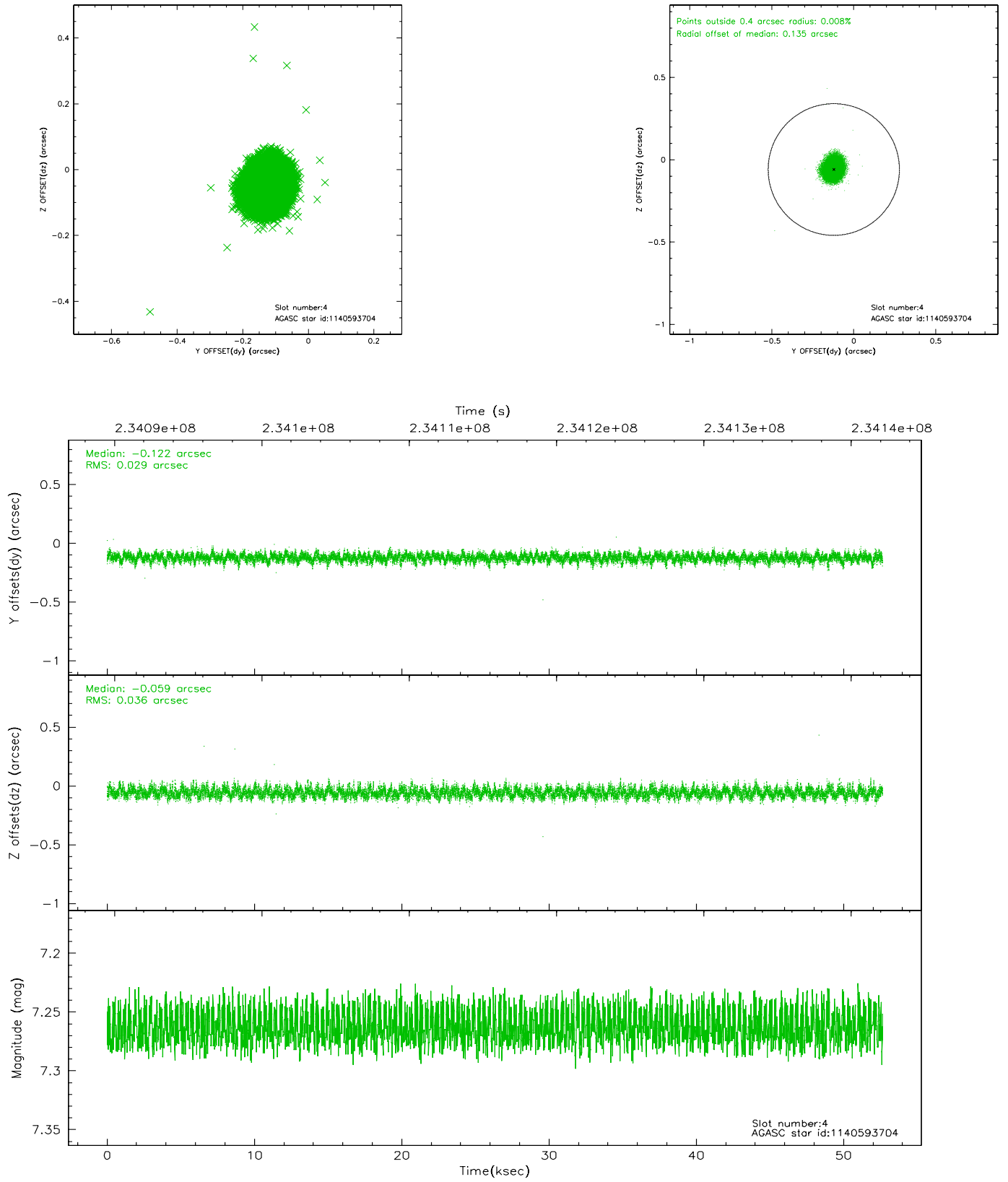
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	12843	-0.037	-0.106	0.008	0.014	0.000000	0.000000	-760.85	-1858.29
1	FID	ACIS-S-4	7.18	12841	0.077	0.046	0.011	0.032	0.000000	0.000000	2152.56	50.33
2	FID	ACIS-S-5	7.23	12842	-0.070	0.068	0.011	0.028	0.000000	0.000000	-1813.74	44.02
3	GUIDE	1140589600	8.20	25683	0.027	-0.128	0.061	0.102	229.869393	-56.335120	-1977.48	2302.14
4	GUIDE	1140593704	7.26	25685	-0.122	-0.059	0.048	0.078	229.741417	-57.540991	80.89	-1528.07
5	GUIDE	1140722888	8.13	25685	-0.061	0.096	0.052	0.085	230.457489	-57.599243	1371.01	-988.58
6	GUIDE	1140726128	7.85	25683	0.090	0.046	0.059	0.097	231.437568	-57.014209	1939.08	1794.38
7	GUIDE	1140591736	8.61	25675	0.067	0.047	0.080	0.125	228.676984	-57.228571	-2266.20	-1671.64

## 2.4 Star Slots

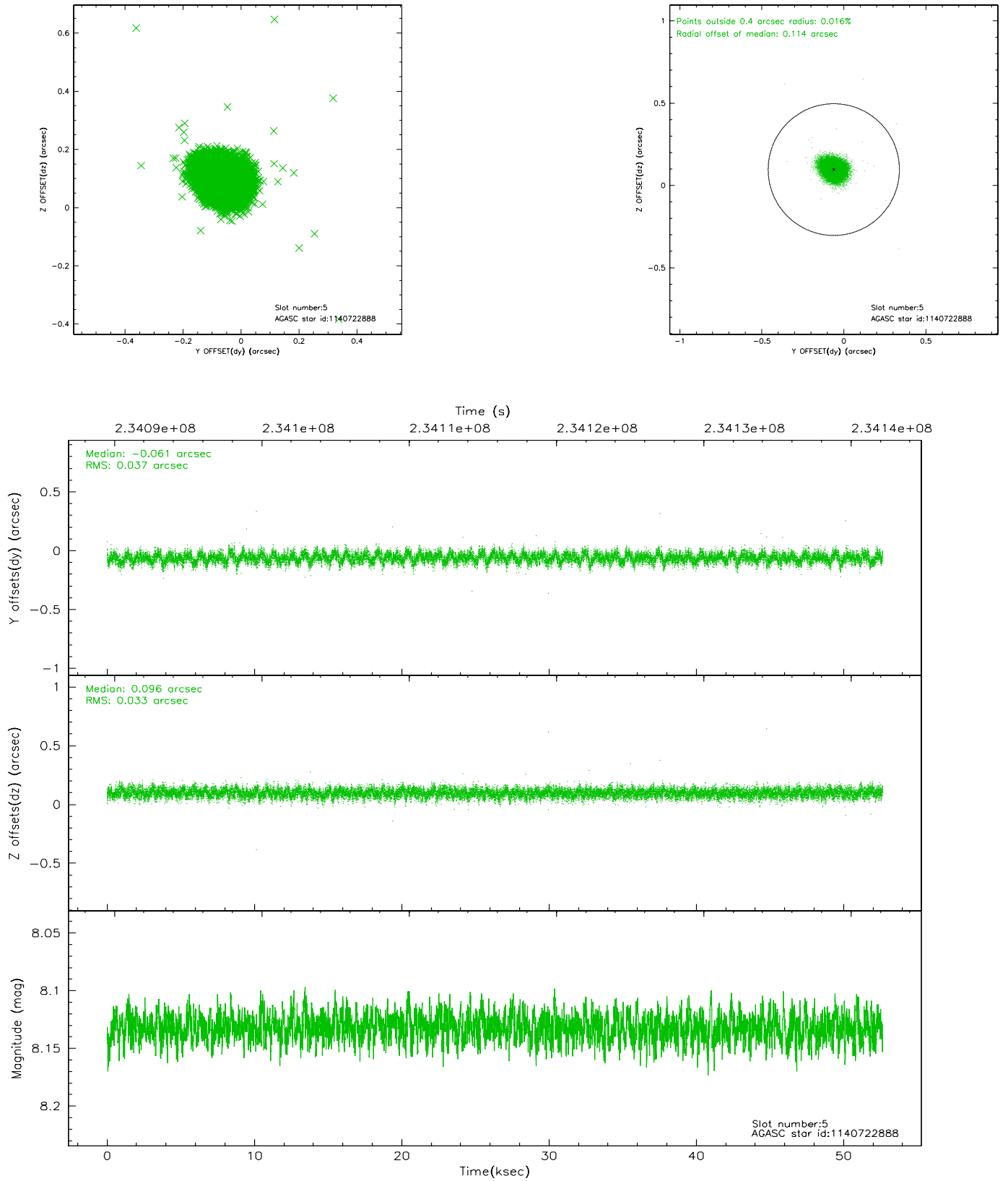
### 2.4.1 Slot 3



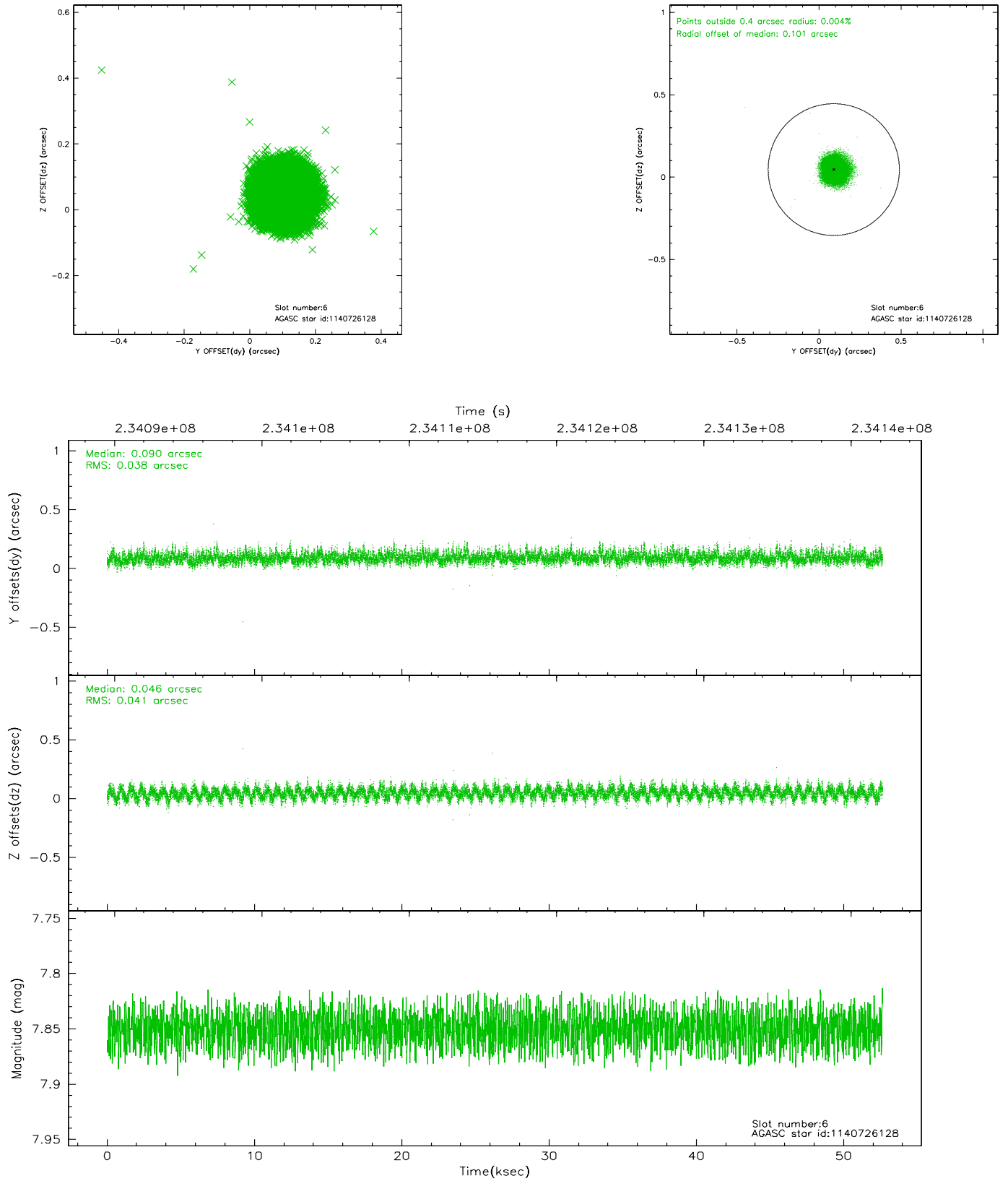
## 2.4.2 Slot 4



### 2.4.3 Slot 5

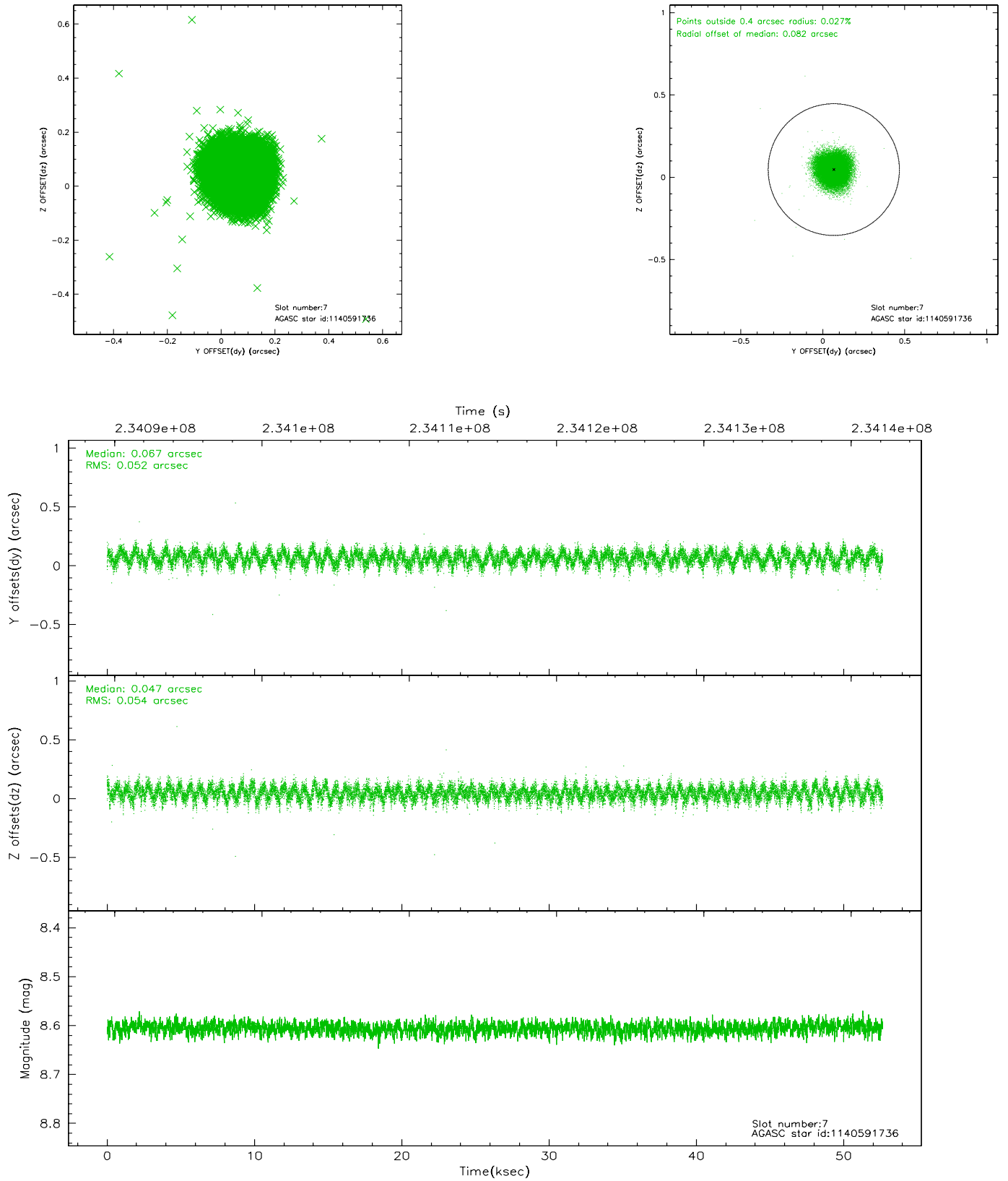


## 2.4.4 Slot 6



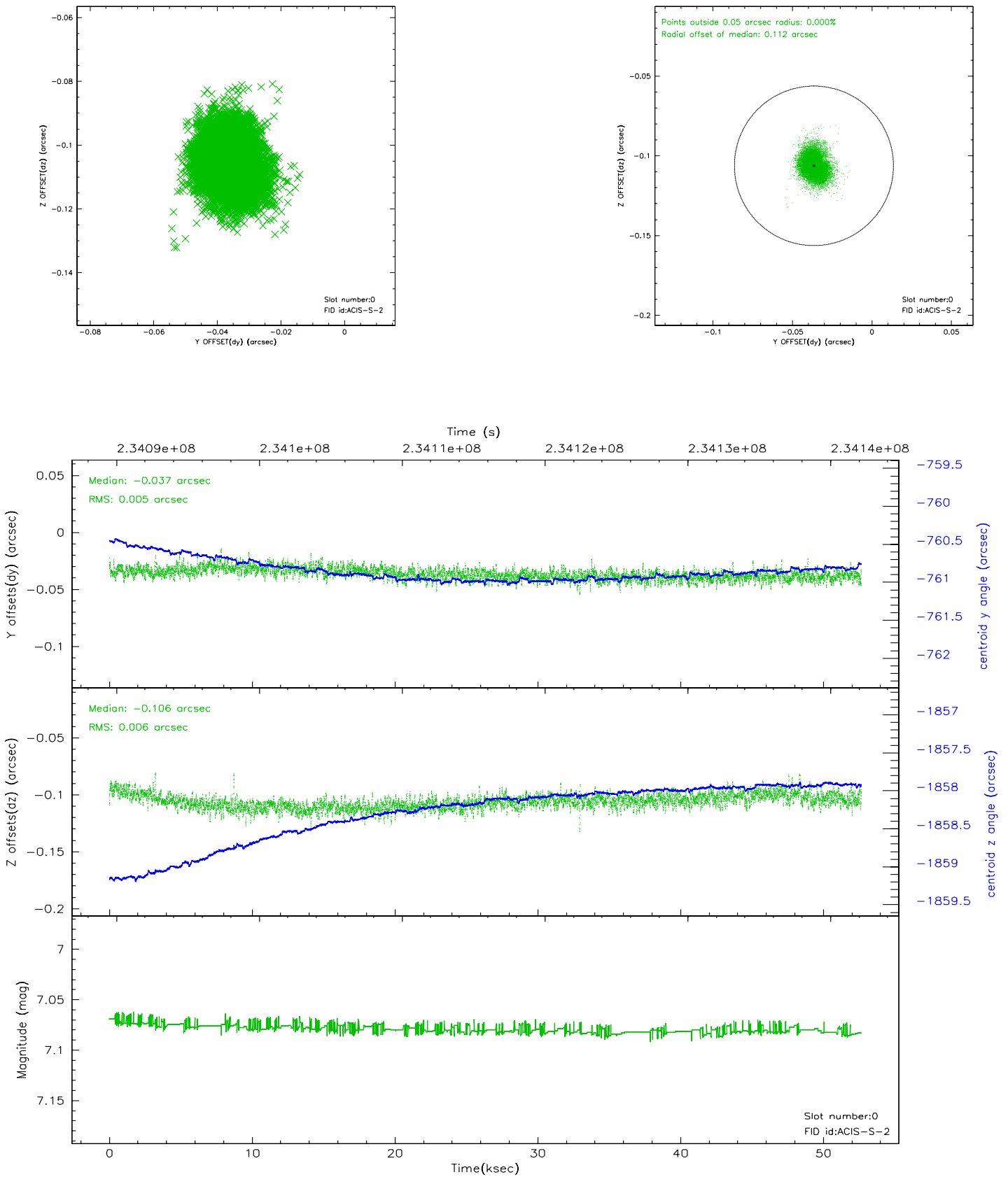


## 2.4.5 Slot 7

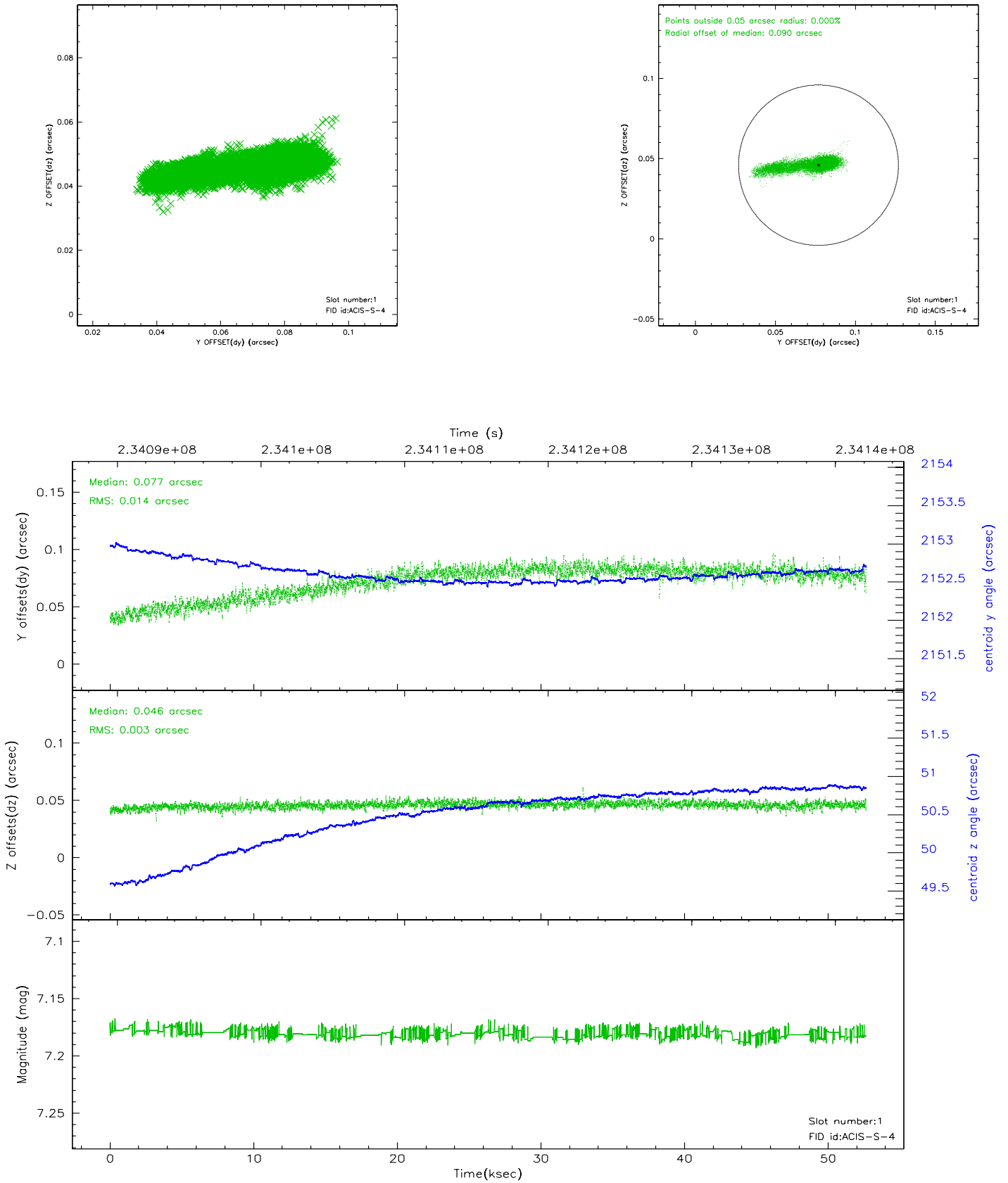


## 2.5 FID Slots

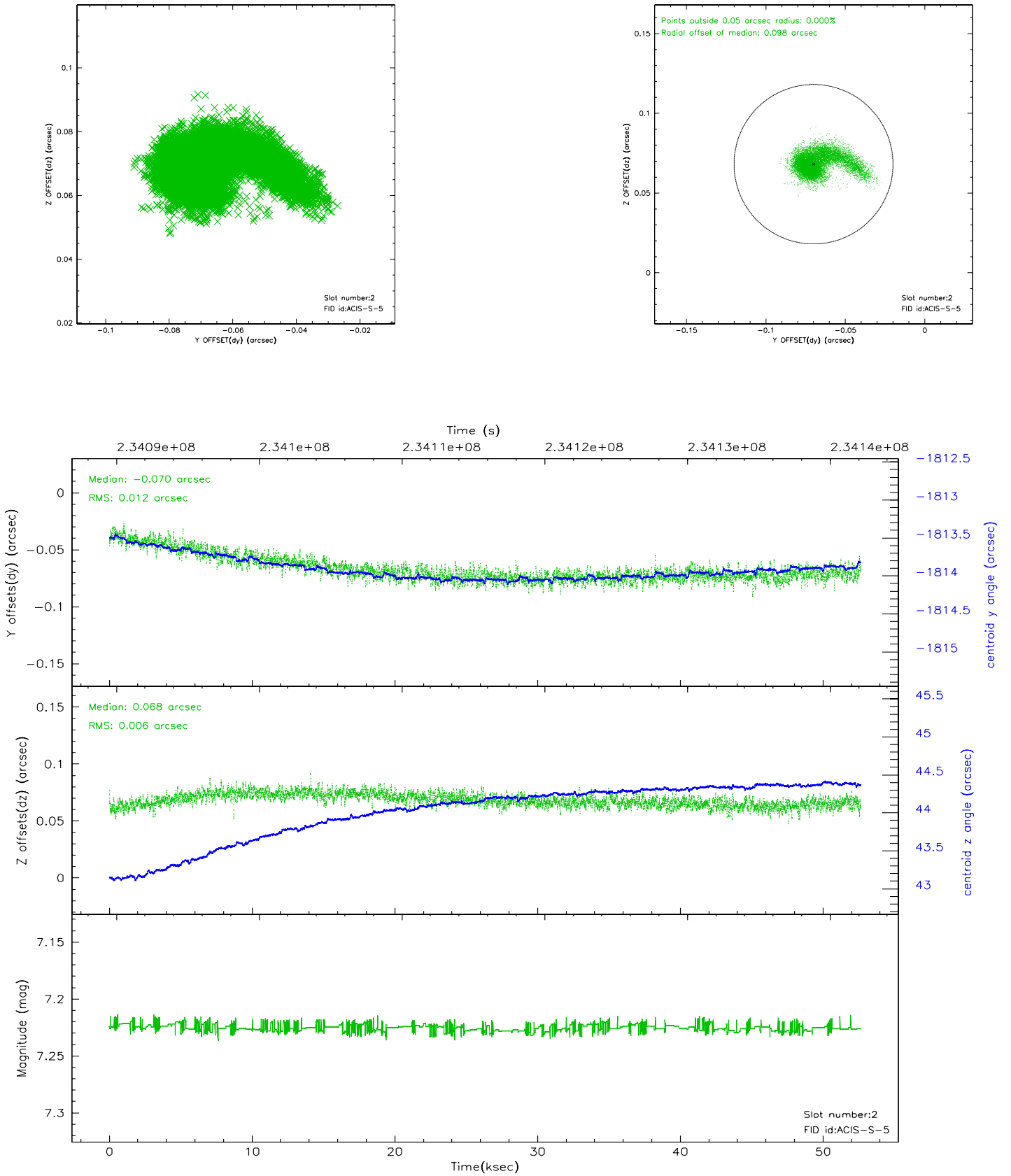
### 2.5.1 Slot 0



## 2.5.2 Slot 1

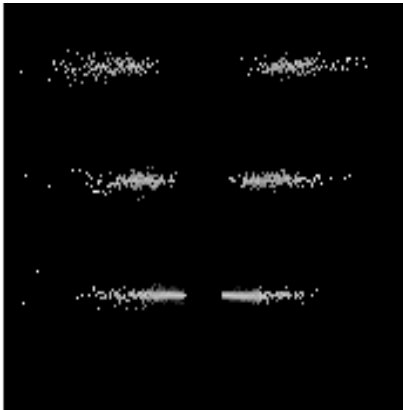


### 2.5.3 Slot 2

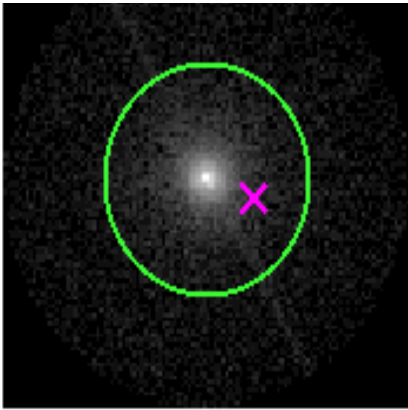


# 3 Gratings

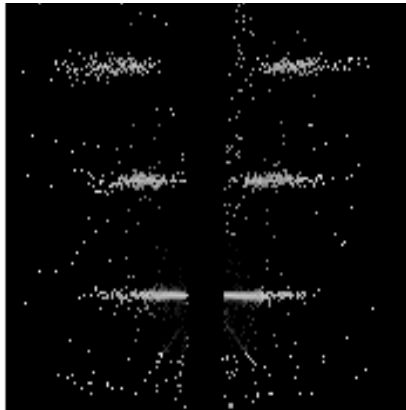
## 3.1 HEG Arm



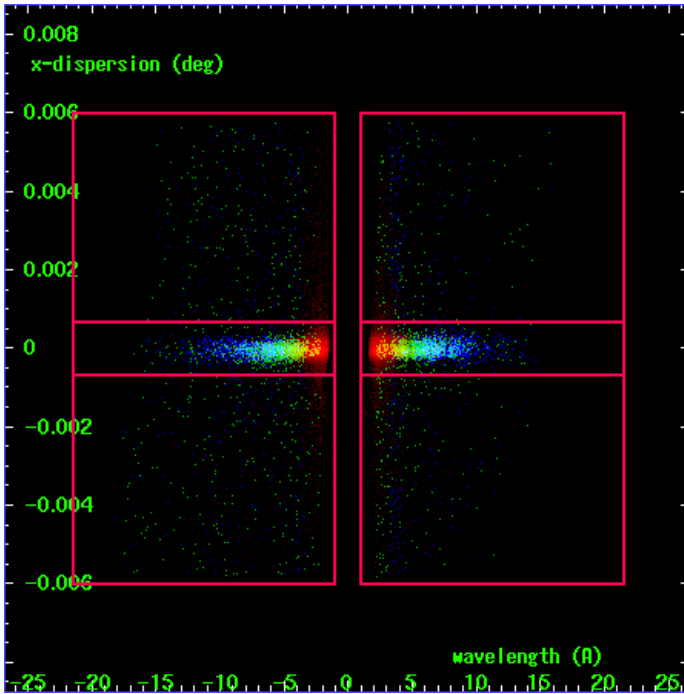
HEG Order Sort 123



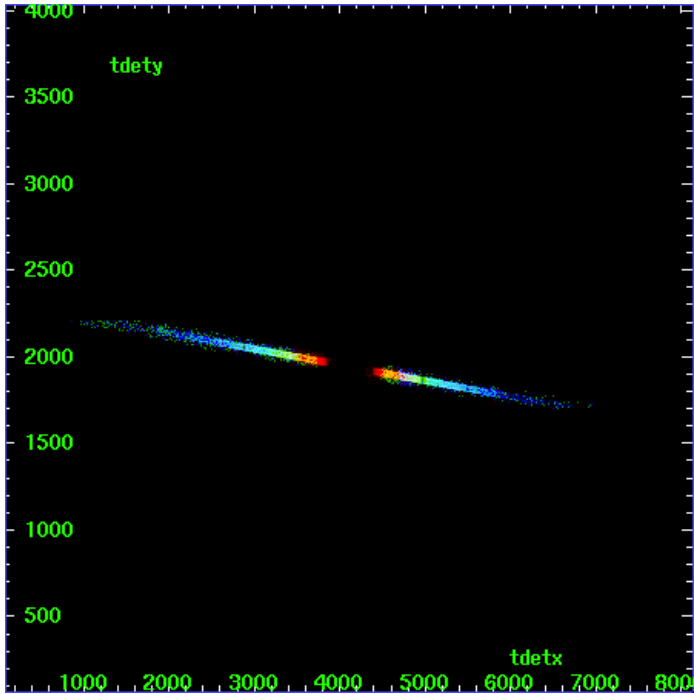
HEG Zero Order



HEG Order Sort ALL

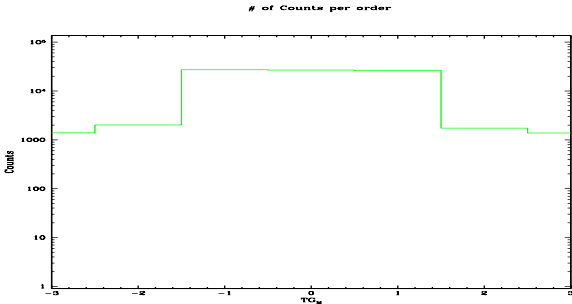


Spot Image HEG

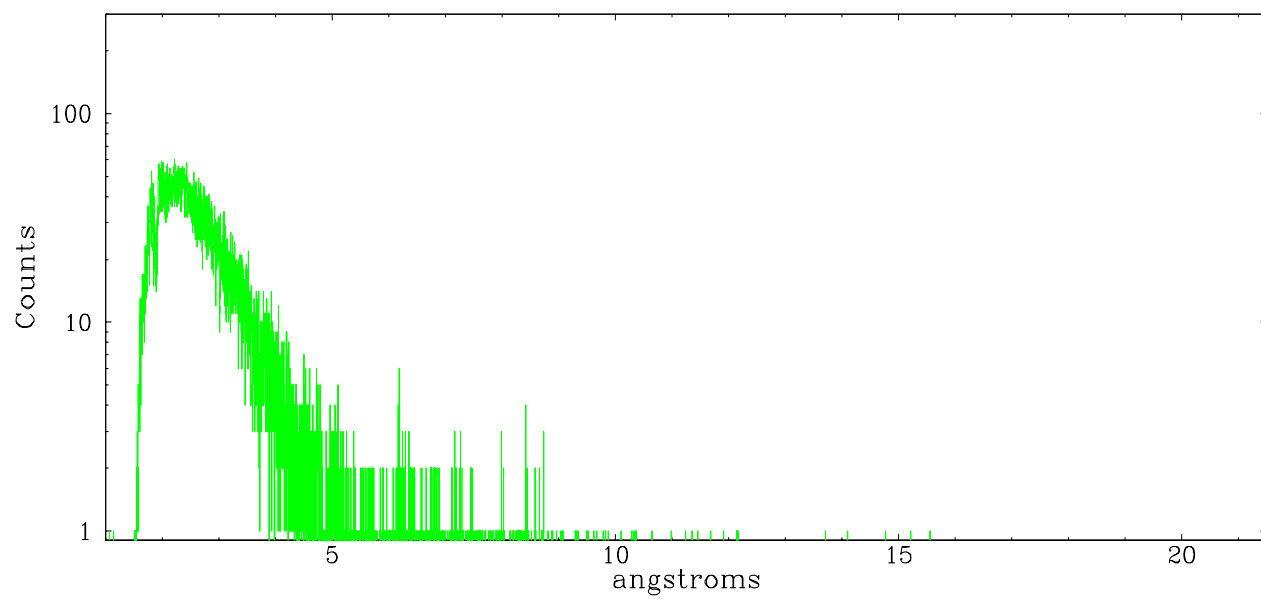


Full Detector HEG

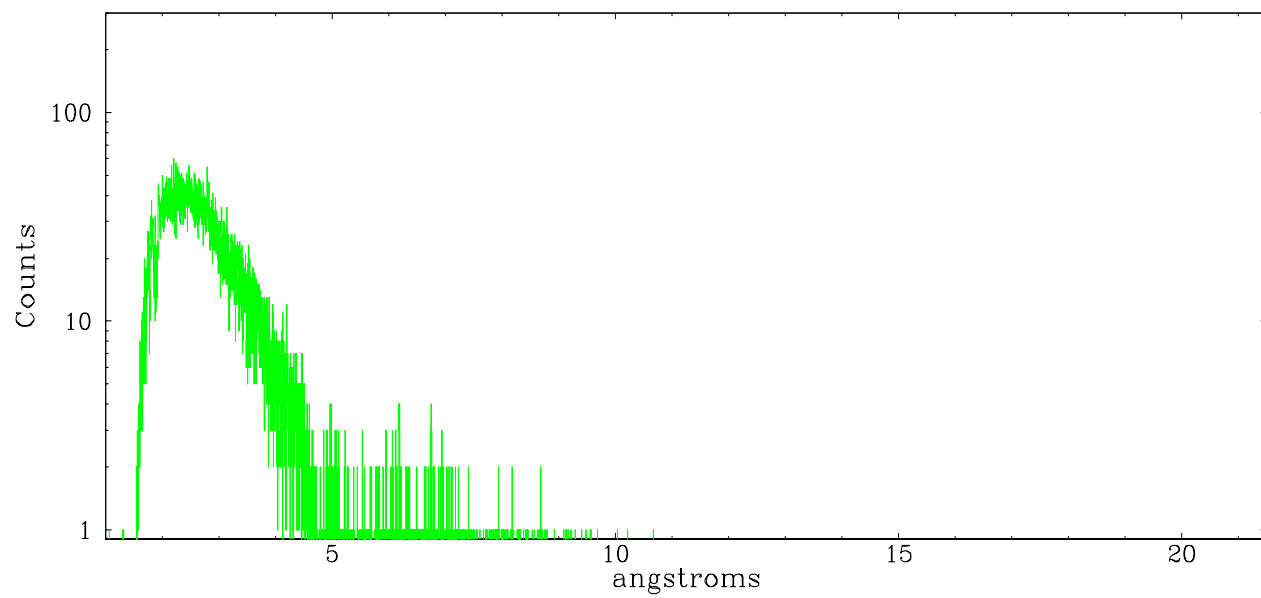
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1389	2014	27120	26637	26060	1735	1379



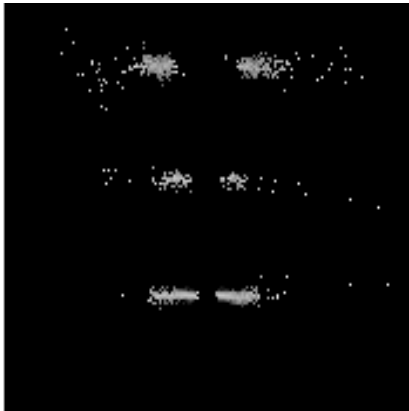
heg order -1



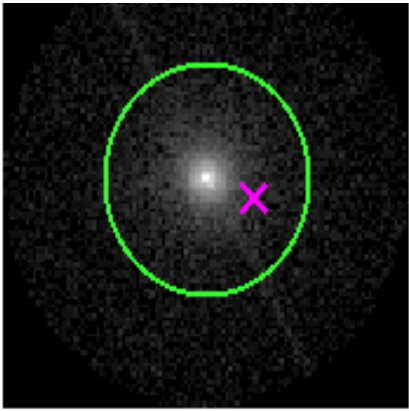
heg order +1



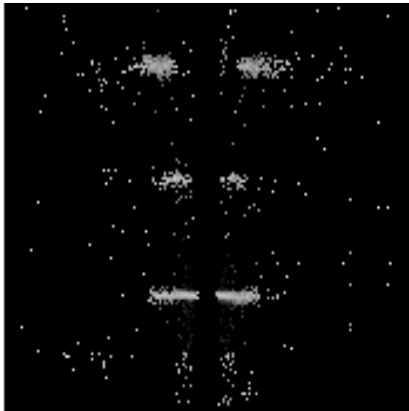
### 3.2 MEG Arm



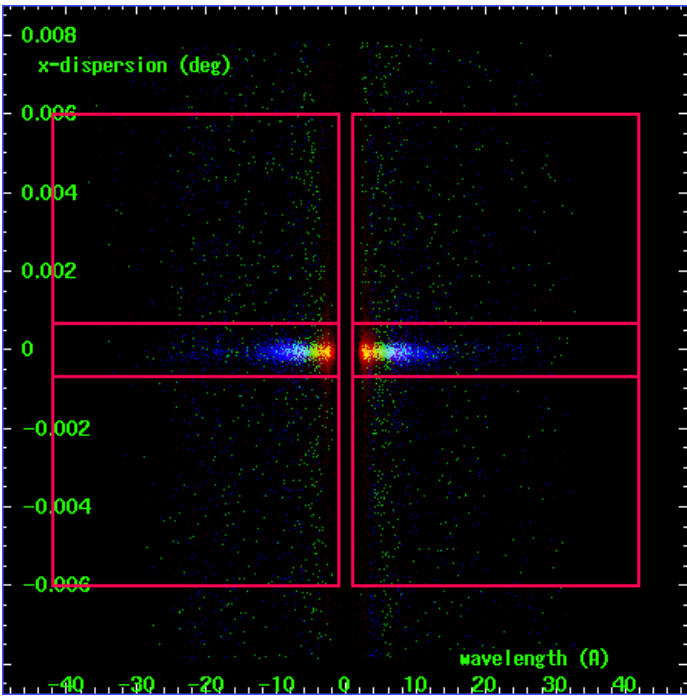
MEG Order Sort 123



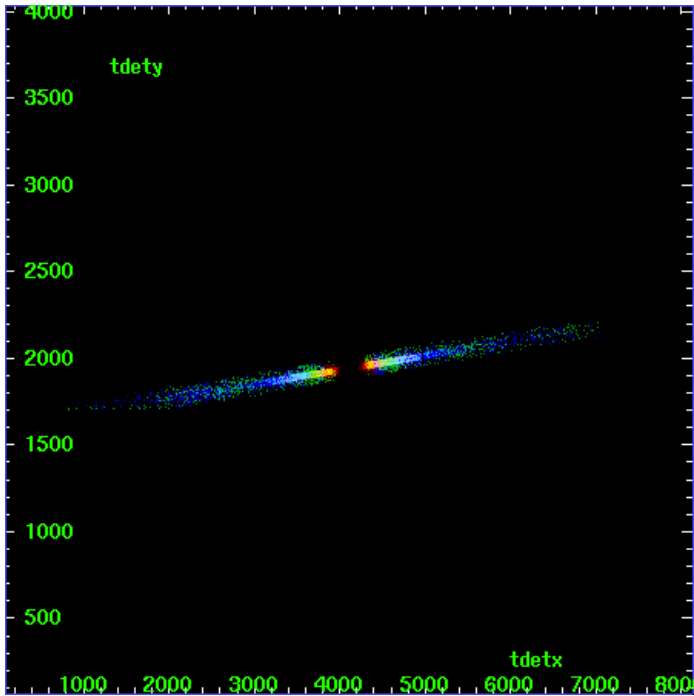
MEG Zero Order



MEG Order Sort ALL

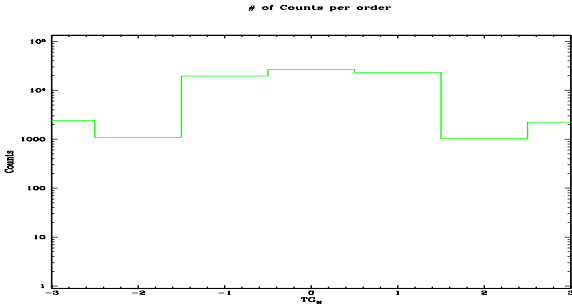


Spot Image MEG

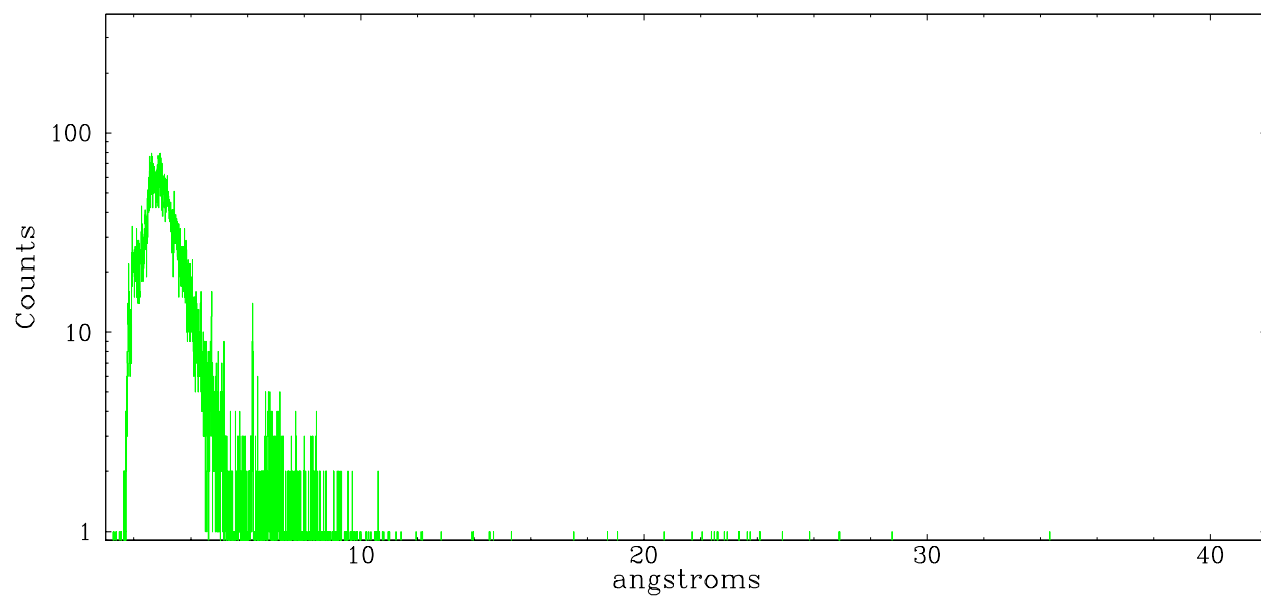


Full Detector MEG

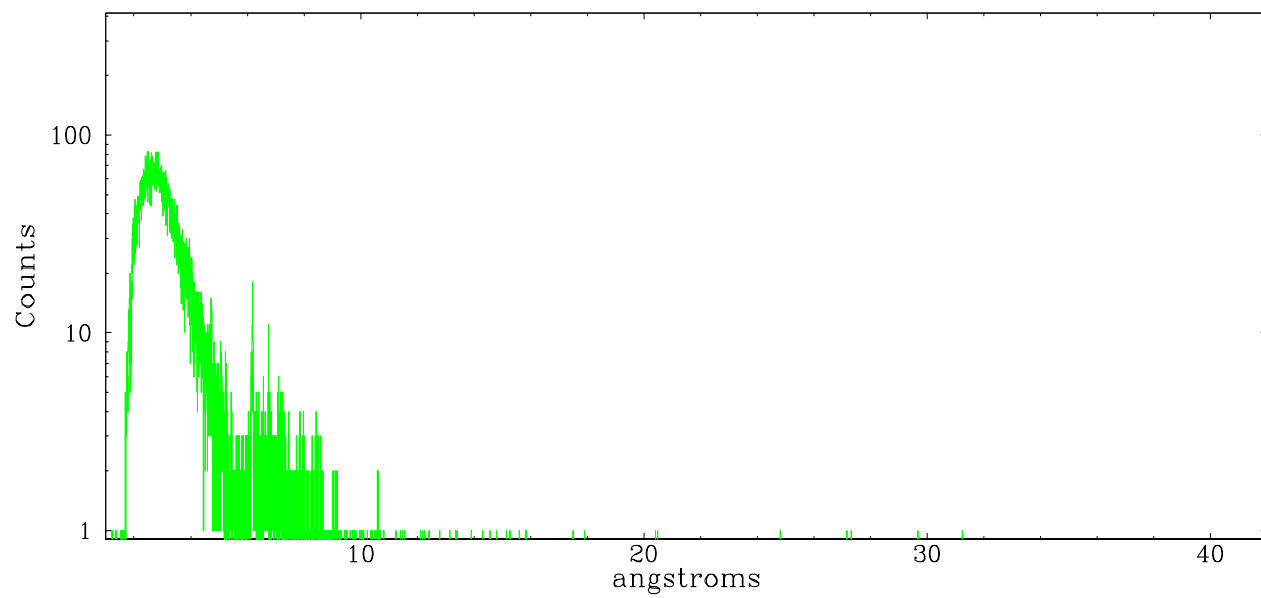
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2433	1087	19554	26637	23229	1030	2236



meg order -1



meg order +1





# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2006.03.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	52.65239

## A.2 Comments

Phase constraint met for first 48ksec of the observation.