

# V&V Reference Report

## L2 ASCDS Version : 7.6.8

Observation 4377 - L2 Version 001  
Chandra X-Ray Center

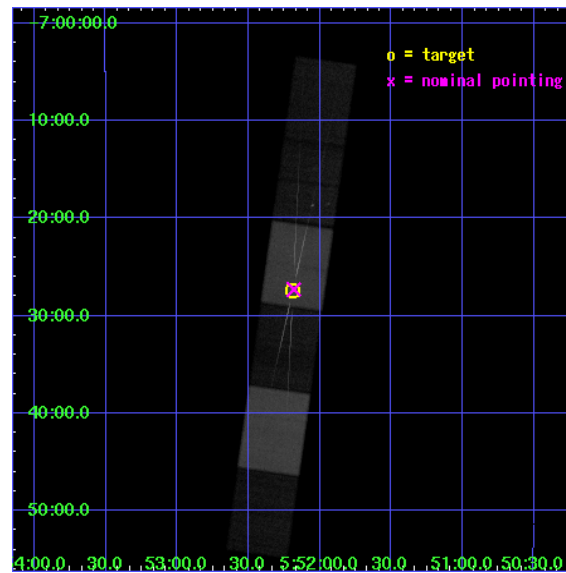
L2 Processing Date : Jul 22 2006

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# 1 Front

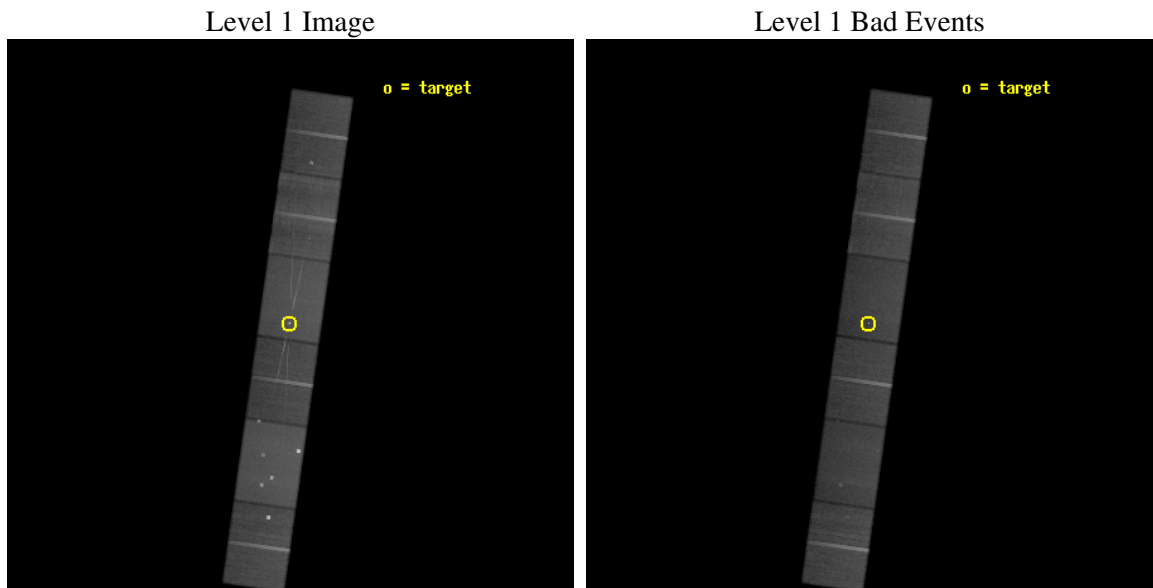
seq_num	700841
obs_id	4377
title	DECONVOLVING THE FE KA LINE IN NGC 2110
observer	Dr. Tracey Turner
object	NGC 2110
dtcycle	0
cycle	P
ra_targ	88.0475
dec_targ	-7.456389
ra_nom	88.045623038601
dec_nom	-7.4551333361788
roll_nom	278.06348686935
revision	2
ontime	96415.0
livetime	94857.814123351
ontime4	96412.459029734
ontime5	96415.0
ontime6	96409.91803956
ontime7	96415.0
ontime8	96415.0
ontime9	96409.91803956
l2events	764625



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images

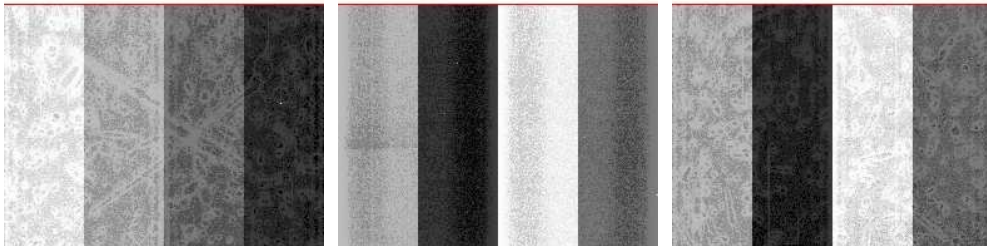


#### 2.1.2 Bias

Chip 4

Chip 5

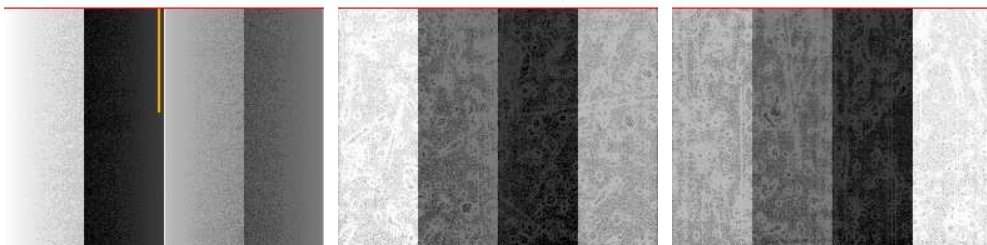
Chip 6



Chip 7

Chip 8

Chip 9



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.8
caldsver	3.2.2
date	2006-07-22T19:24:24
revision	2

sched_exp_time	96304.658000
ontime	96611.73609367
ontime4	96606.654173046
ontime5	96606.653963834
ontime6	96609.195123404
ontime7	96611.73609367
ontime8	96601.572003394
ontime9	96601.572122961
l1events	3499120

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	553268	724698	489315	657359	601022	473458
rejected events	469834	380585	422630	381431	475013	412110
rejected %	84%	52%	86%	58%	79%	87%

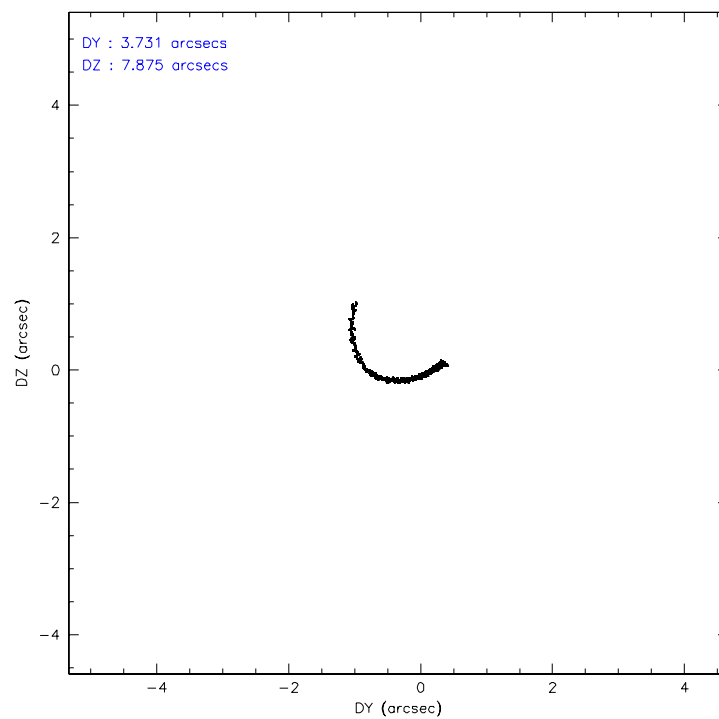
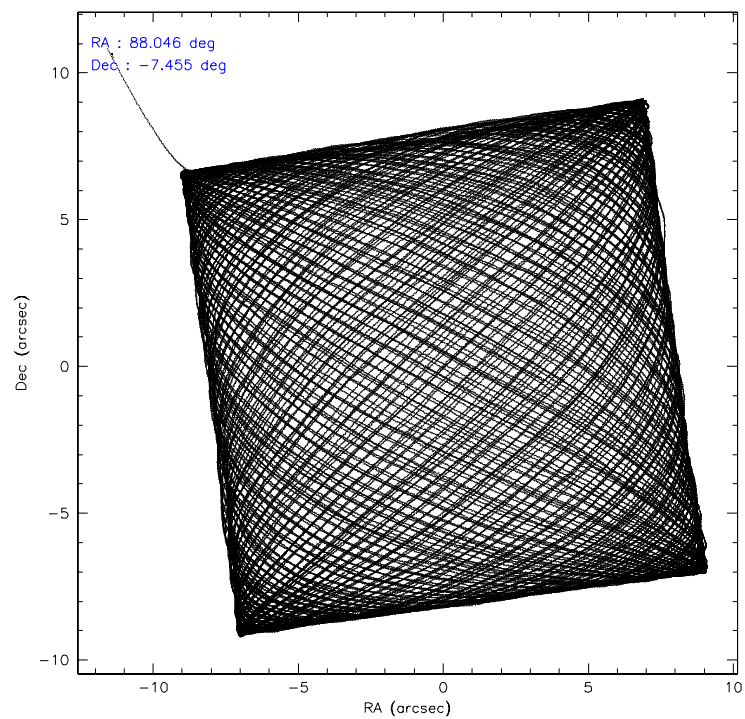
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	49774	66843	29662	20030	40266	27040
	8%	9%	6%	3%	6%	5%
grade 1 events	432	1922	212	564	351	229
	0%	0%	0%	0%	0%	0%
grade 2 events	12334	91425	12704	67265	27120	11196
	2%	12%	2%	10%	4%	2%
grade 3 events	6370	7902	6439	17643	13859	6326
	1%	1%	1%	2%	2%	1%
grade 4 events	6027	7845	6451	17197	12785	5895
	1%	1%	1%	2%	2%	1%
grade 5 events	19584	34046	20767	46824	26736	22222
	3%	4%	4%	7%	4%	4%
grade 6 events	9115	170791	11582	154367	32206	11037
	1%	23%	2%	23%	5%	2%
grade 7 events	449632	343924	401498	333469	447699	389513
	81%	47%	82%	50%	74%	82%

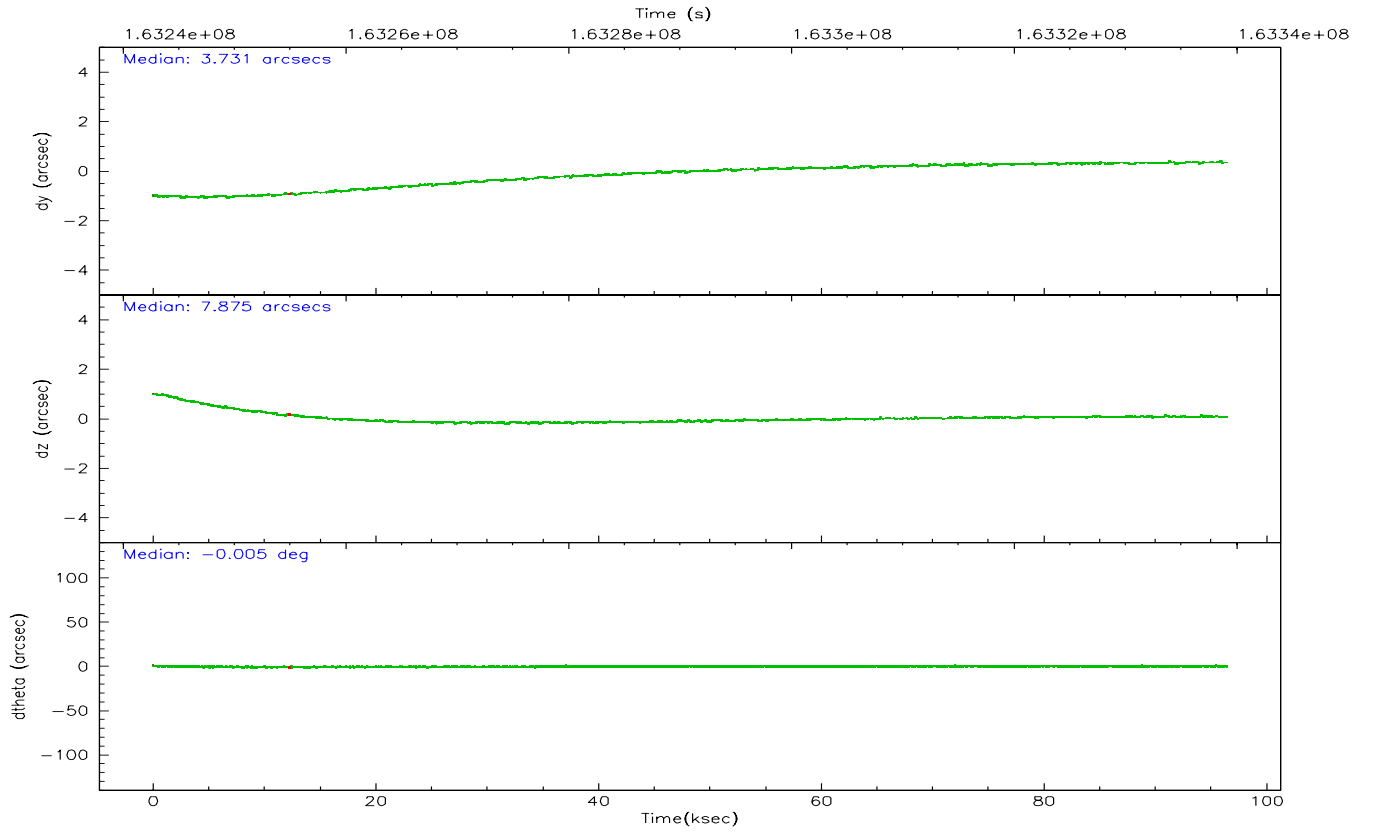
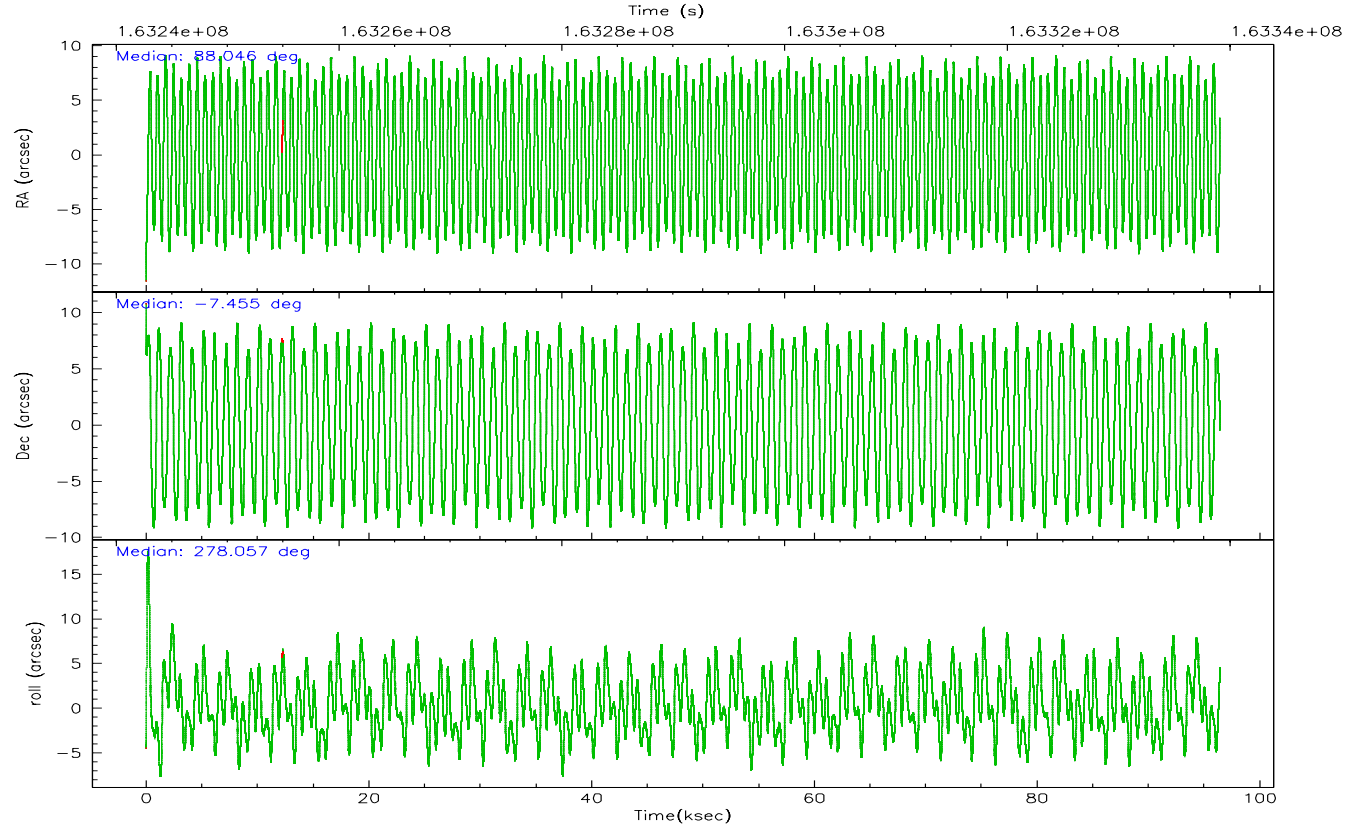


## 2.2 Compared Parameters

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	88.028402	88.04562303860116	Subarray start row	1	1
Pointing Dec	-7.433950	-7.455133336178812	Subarray row count	774	774
Pointing Roll	277.904632	278.0634868693458	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	-187.1228876879999			
SIM translation stage offset (mm)	-3	-3.009634895007935			
Observation start time	163242838.184000	163241797.13442			
Observation start date	2003-03-05T09:12:54	2003-03-05T08:56:37			
Observation end time	163339143.184000	163339457.60103			
Observation end date	2003-03-06T11:57:59	2003-03-06T12:04:17			
Read mode	TIMED	TIMED			

## 2.3 Aspect



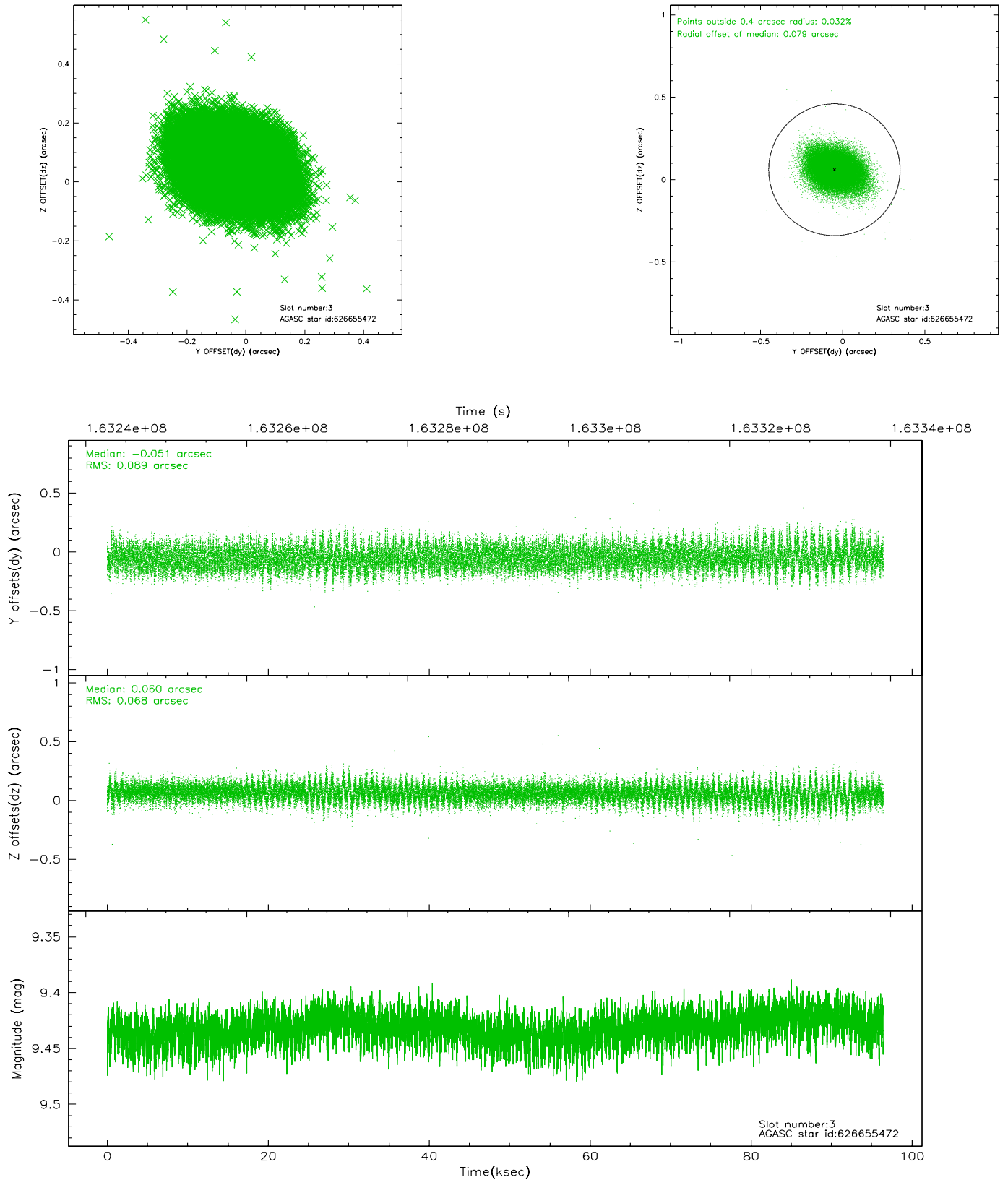


### Slot Statistics

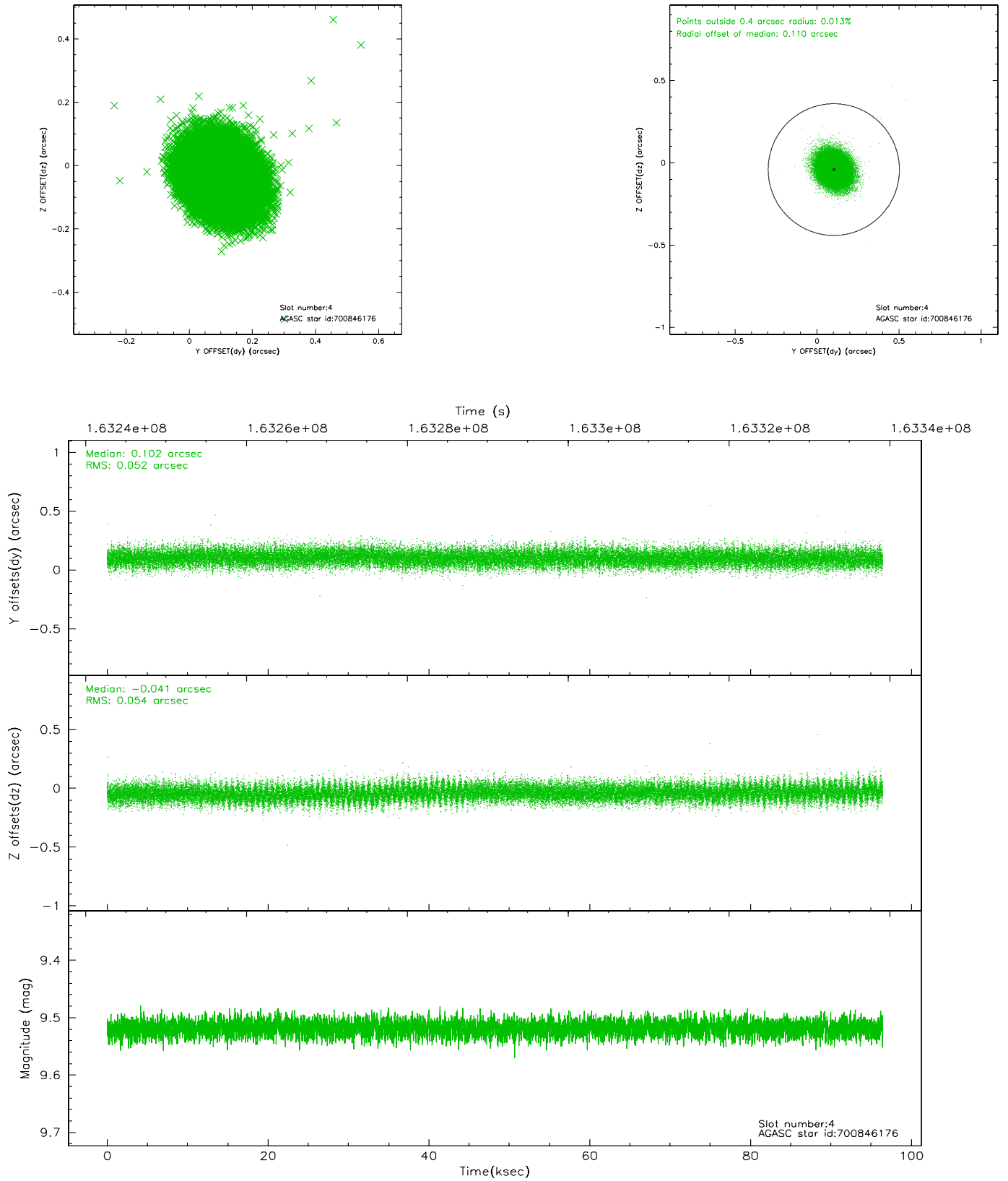
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	23516	-0.048	-0.008	0.009	0.016	0.000000	0.000000	-756.01	-1791.27
1	FID	ACIS-S-4	7.20	23515	0.010	0.026	0.018	0.038	0.000000	0.000000	2157.31	117.39
2	FID	ACIS-S-5	7.23	23517	0.007	-0.009	0.015	0.032	0.000000	0.000000	-1808.95	110.84
3	GUIDE	626655472	9.43	47005	-0.051	0.060	0.119	0.194	88.462423	-7.026382	-1239.34	1737.85
4	GUIDE	700846176	9.52	47002	0.102	-0.041	0.079	0.130	87.663400	-7.965223	1716.46	-1551.72
5	GUIDE	700976888	9.83	46759	0.148	0.063	0.096	0.158	88.438648	-7.916314	1922.25	1210.53
6	GUIDE	626524448	8.65	47024	-0.190	-0.163	0.080	0.126	87.380980	-6.987266	-1909.03	-2070.42
7	GUIDE	626656280	9.52	46993	-0.005	0.080	0.114	0.192	88.685870	-7.378153	125.52	2352.66

## 2.4 Star Slots

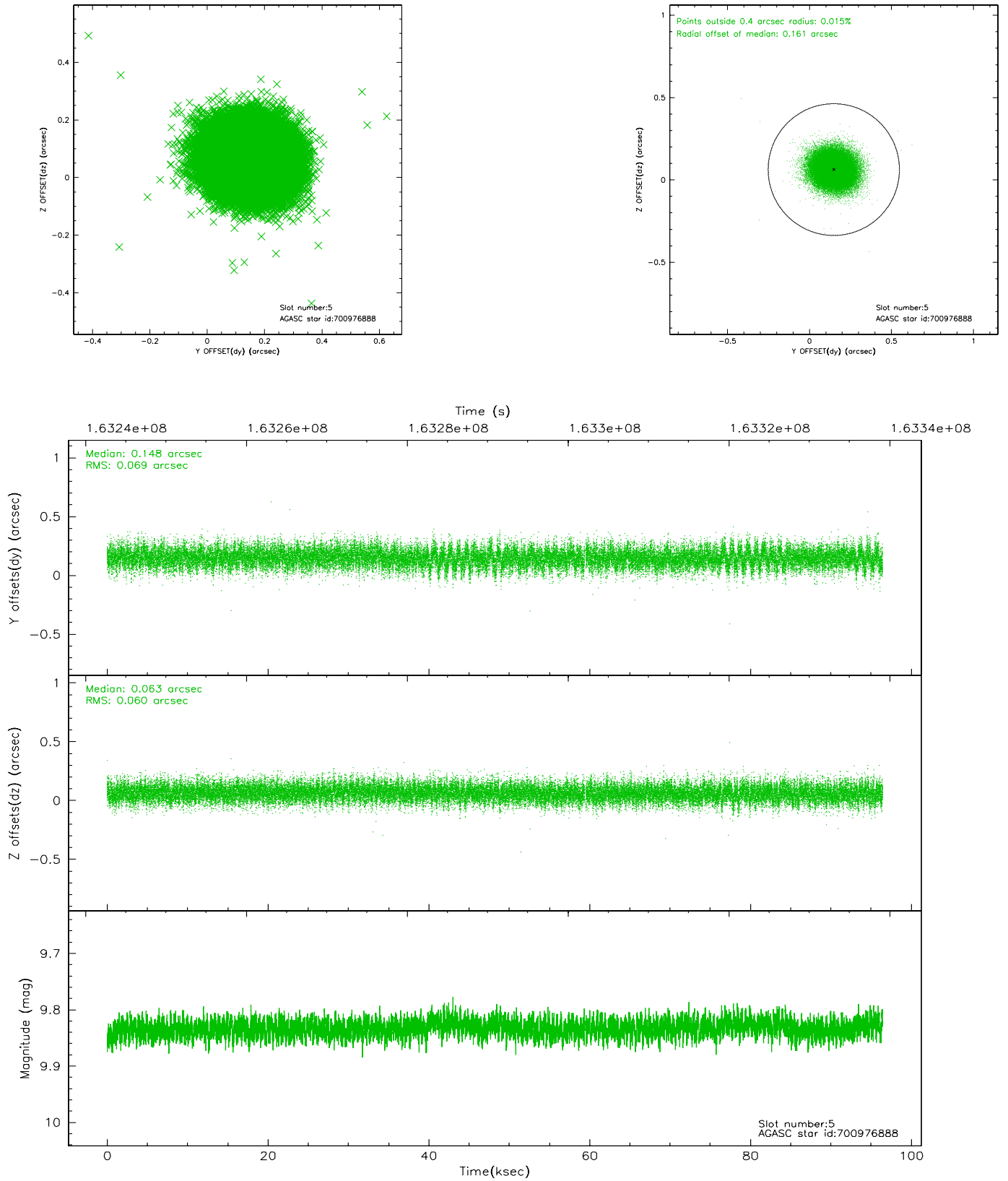
### 2.4.1 Slot 3



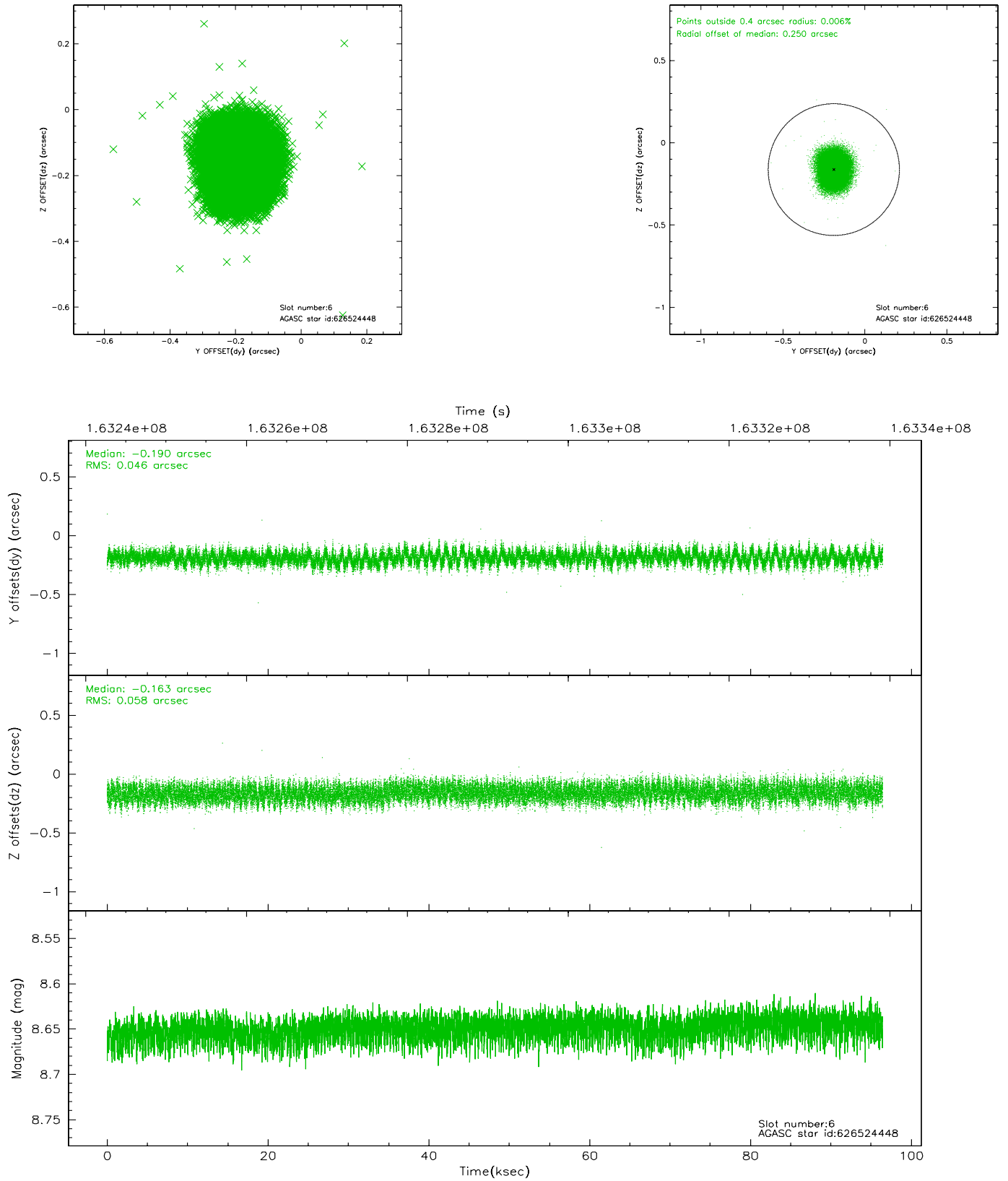
## 2.4.2 Slot 4



### 2.4.3 Slot 5

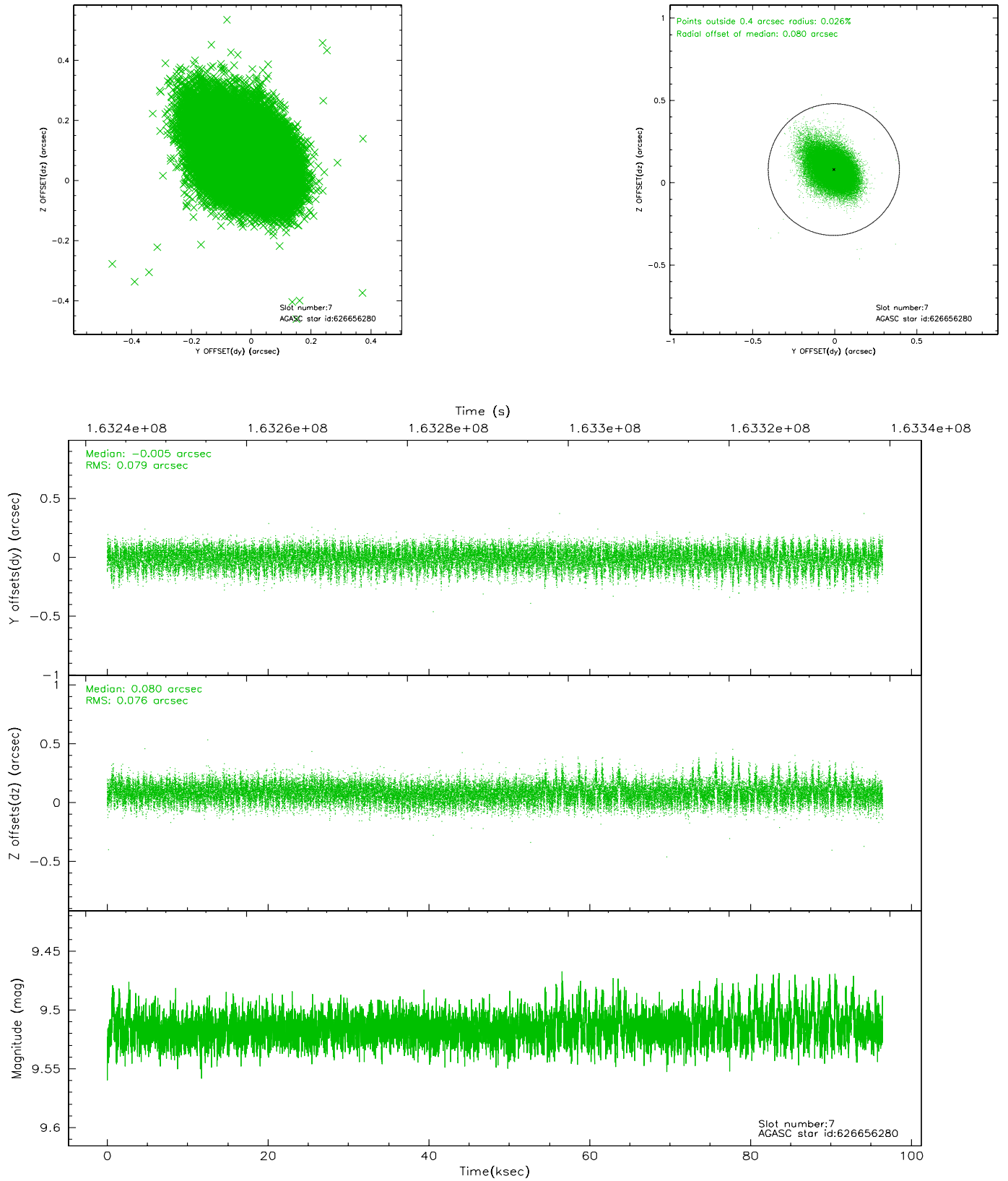


## 2.4.4 Slot 6



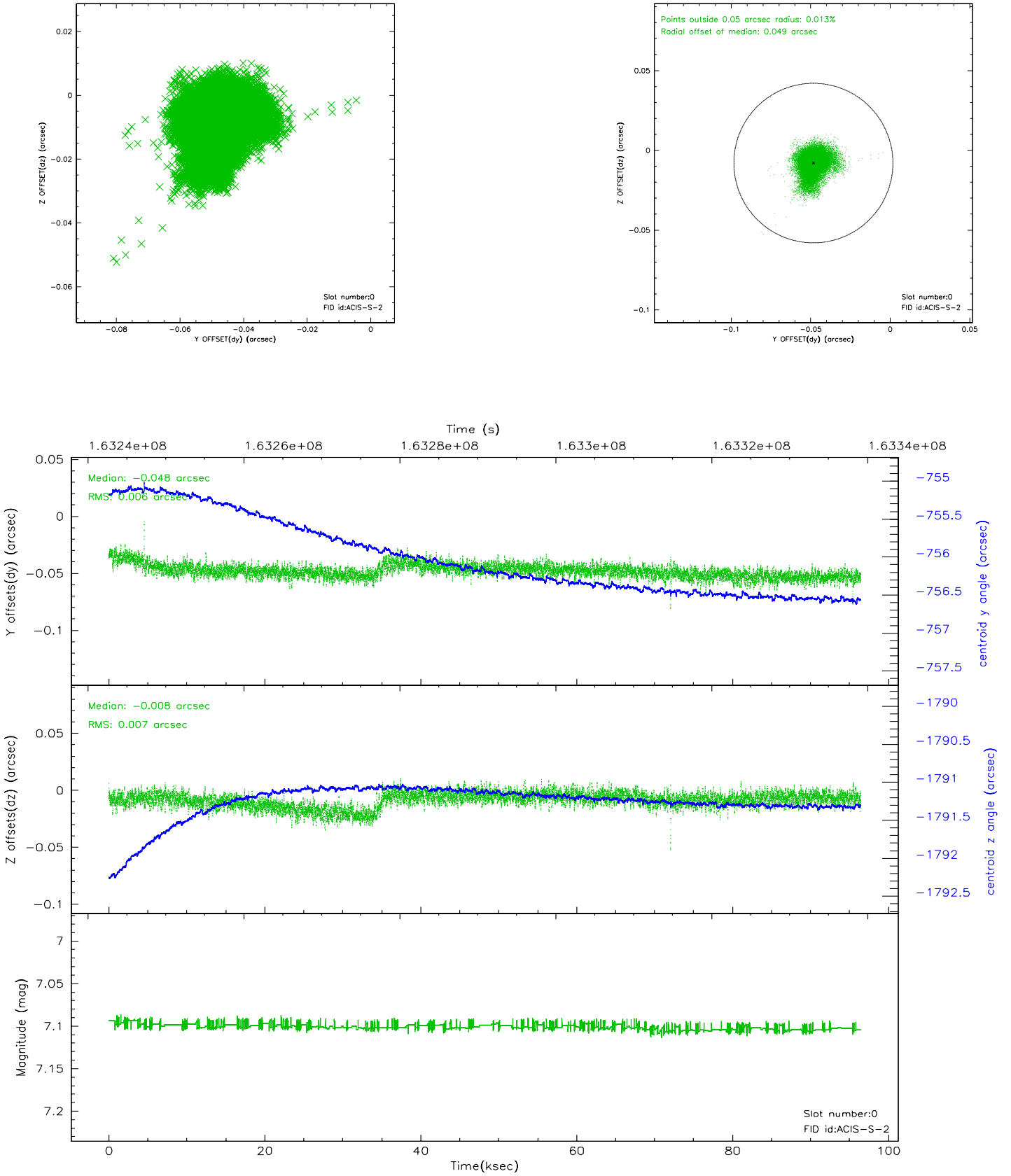


## 2.4.5 Slot 7

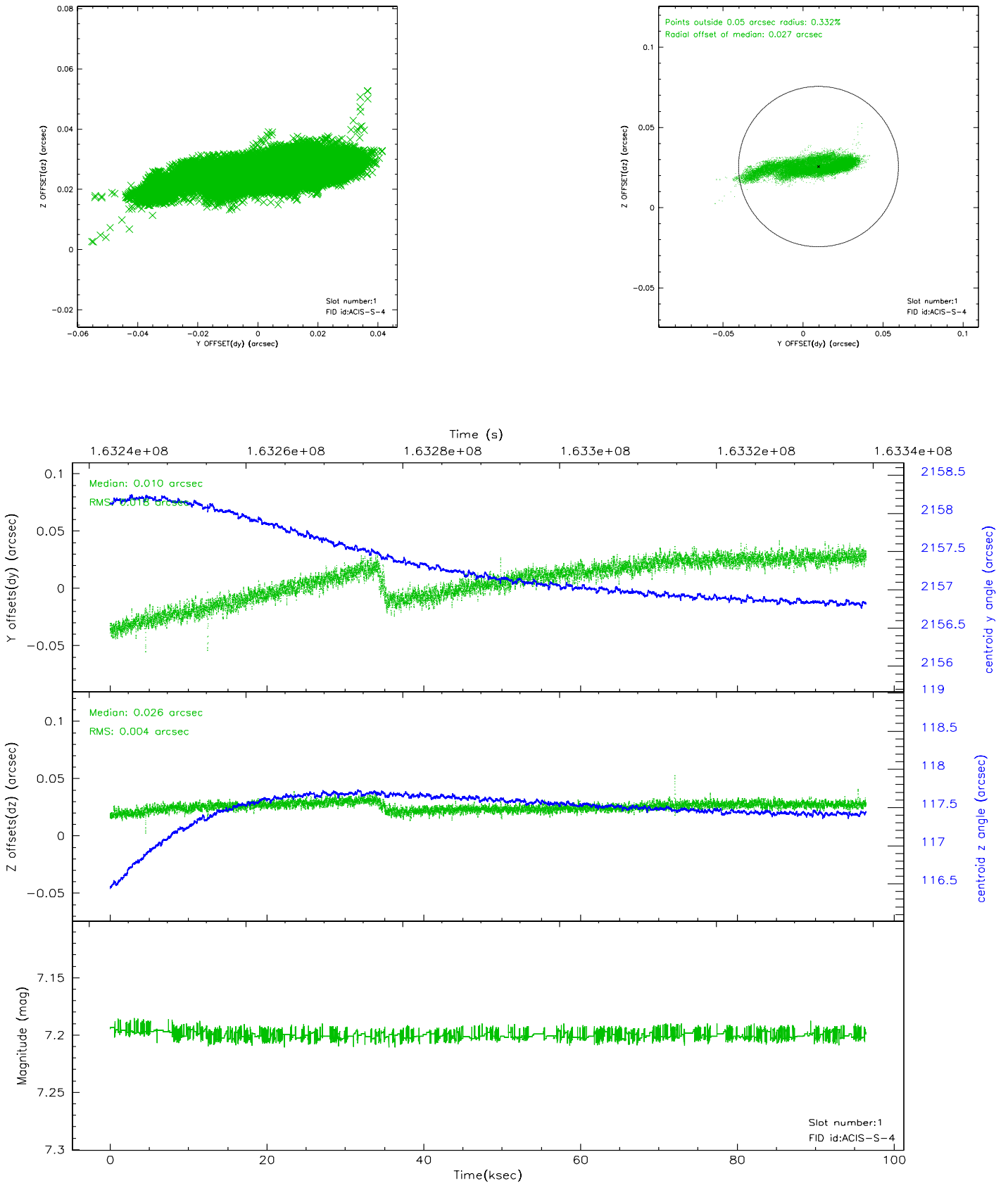


## 2.5 FID Slots

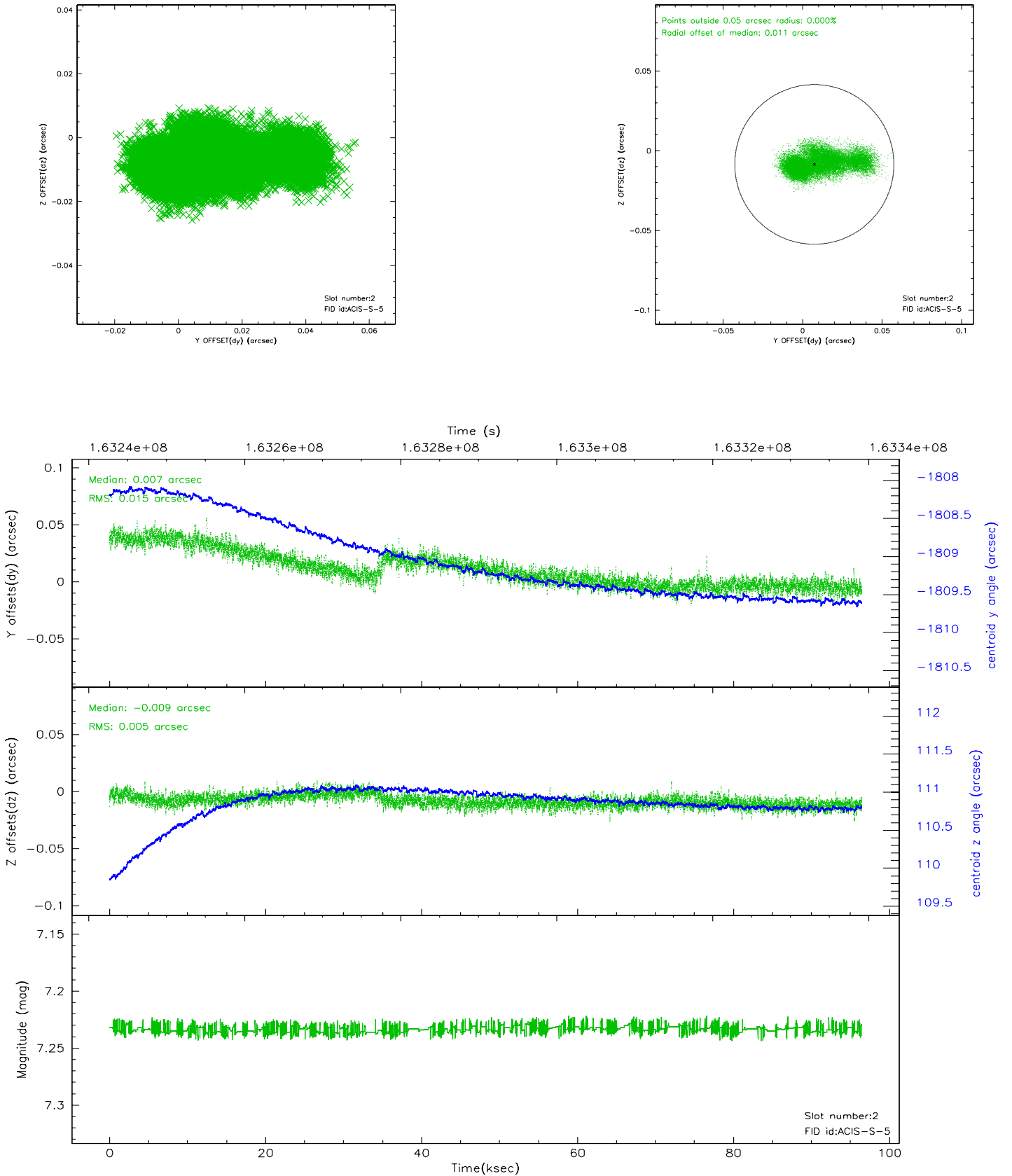
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

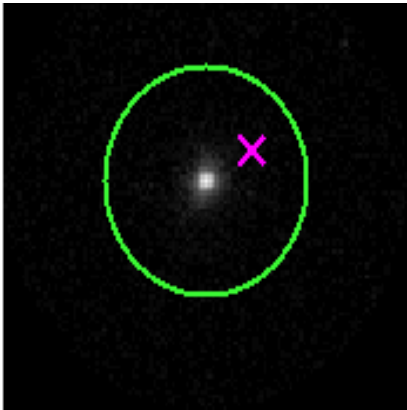


# 3 Gratings

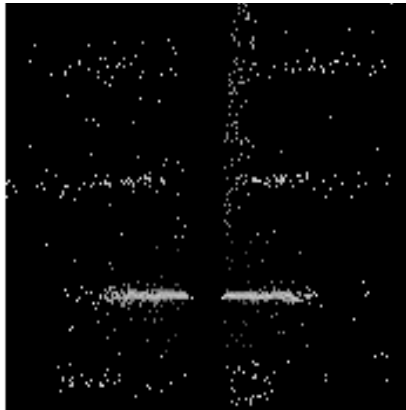
## 3.1 HEG Arm



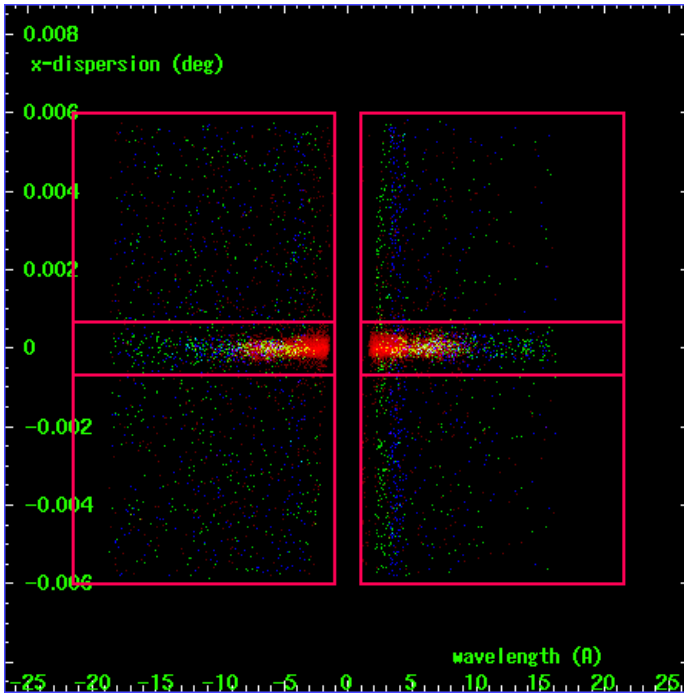
HEG Order Sort 123



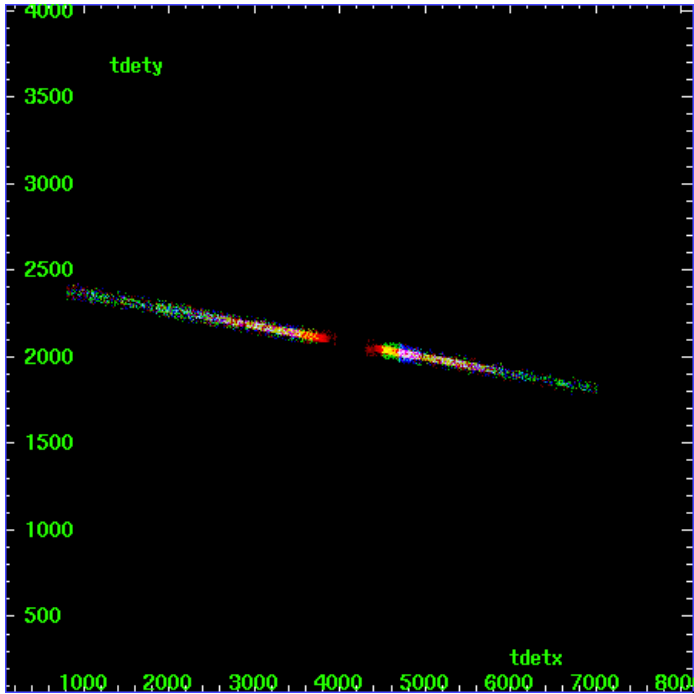
HEG Zero Order



HEG Order Sort ALL

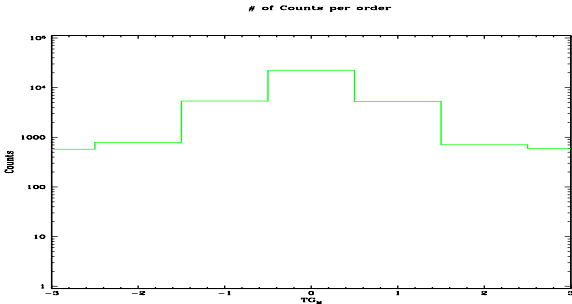


Spot Image HEG

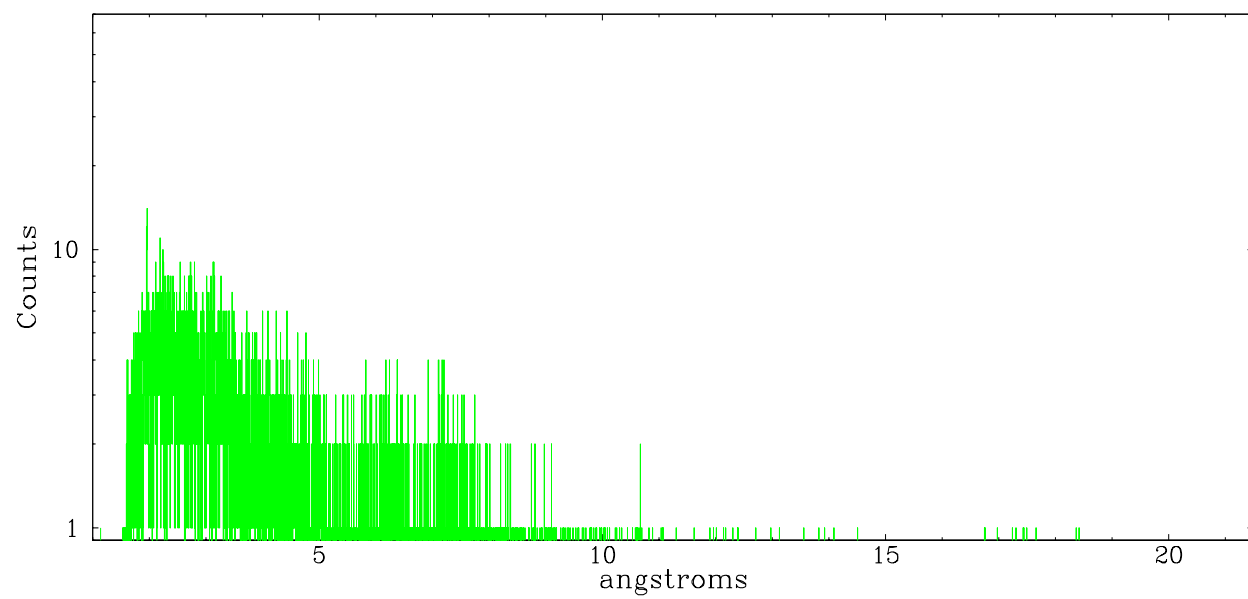


Full Detector HEG

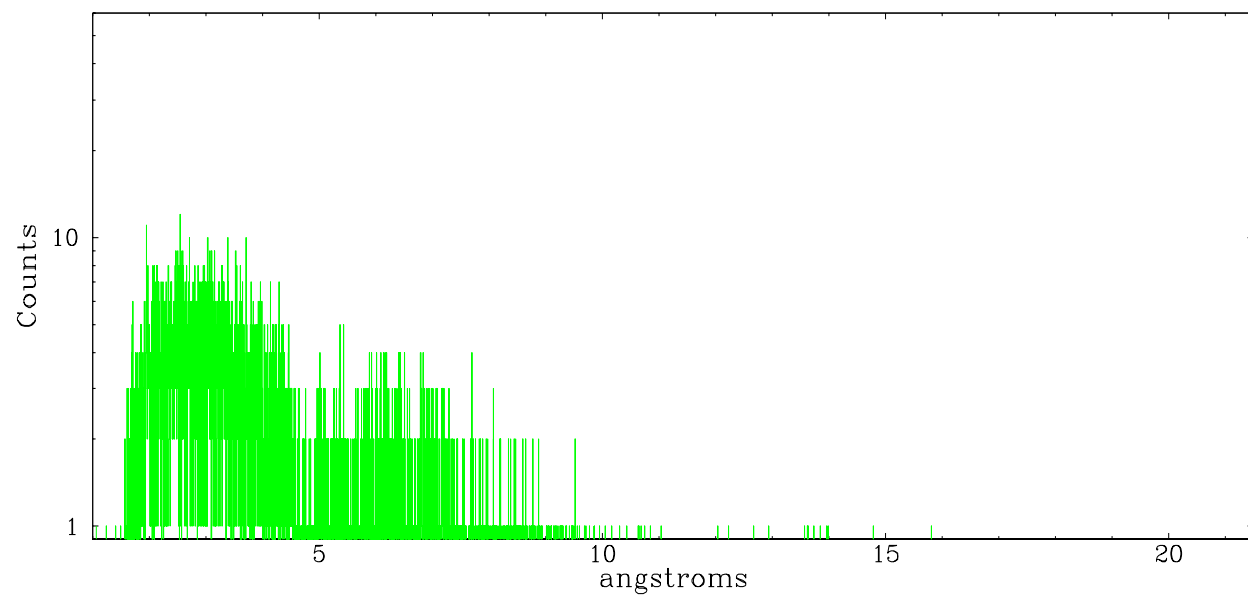
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	577	797	5372	22310	5293	707	595



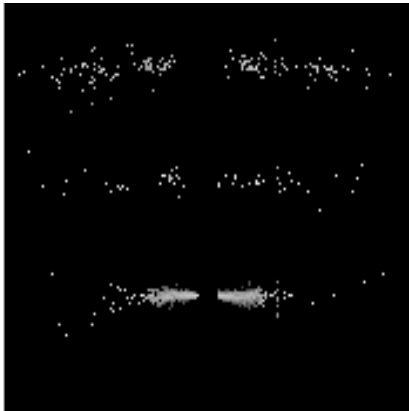
heg order -1



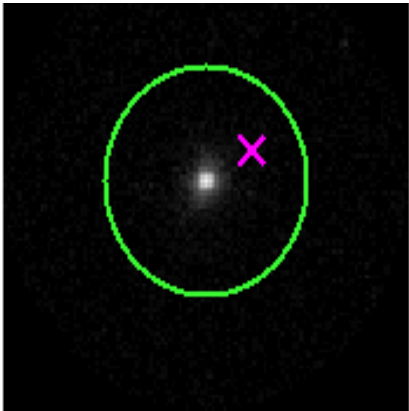
heg order +1



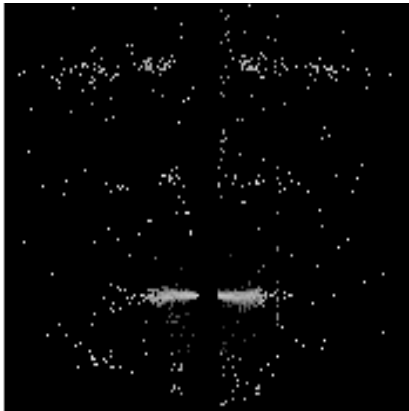
### 3.2 MEG Arm



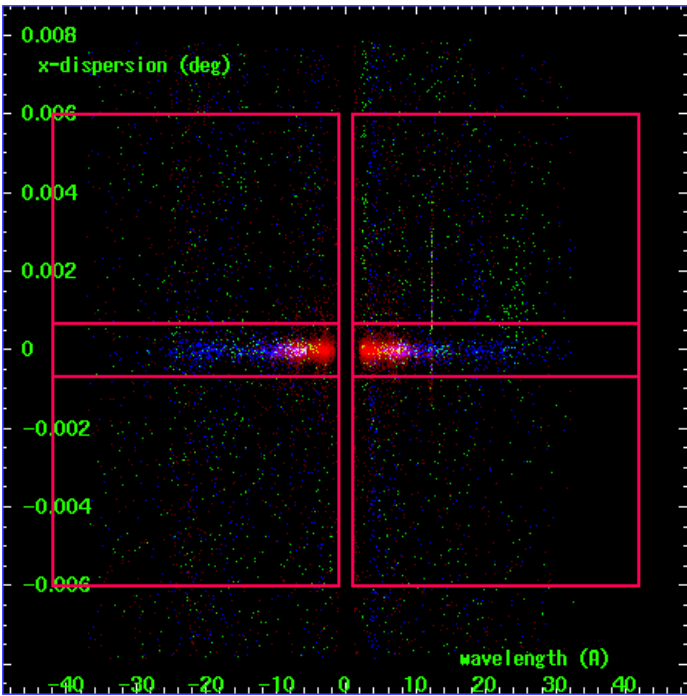
MEG Order Sort 123



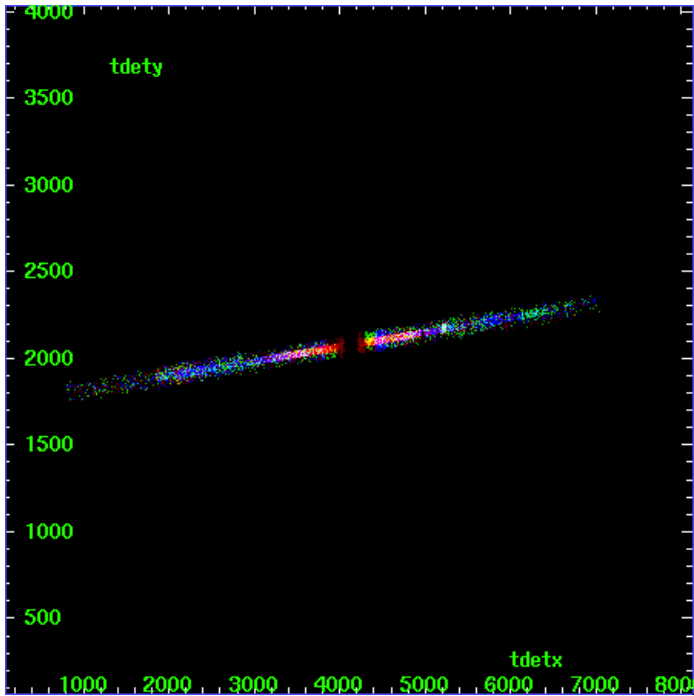
MEG Zero Order



MEG Order Sort ALL

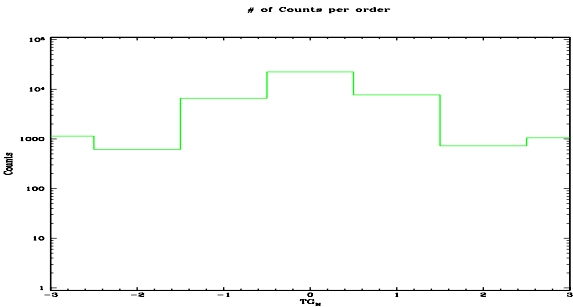


Spot Image MEG

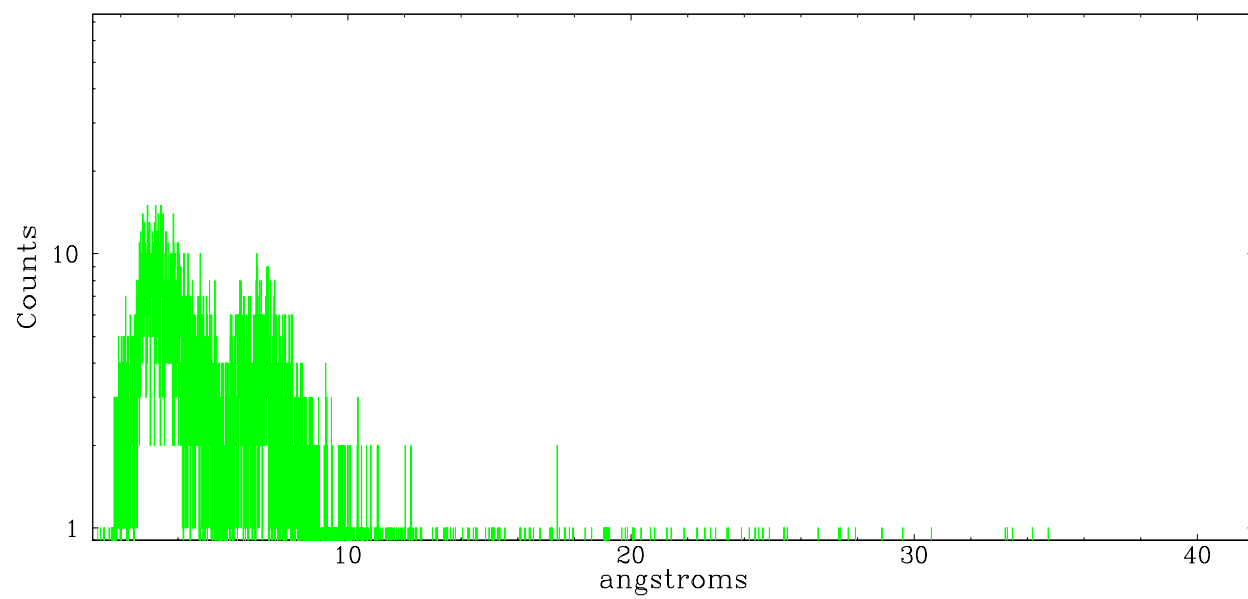


Full Detector MEG

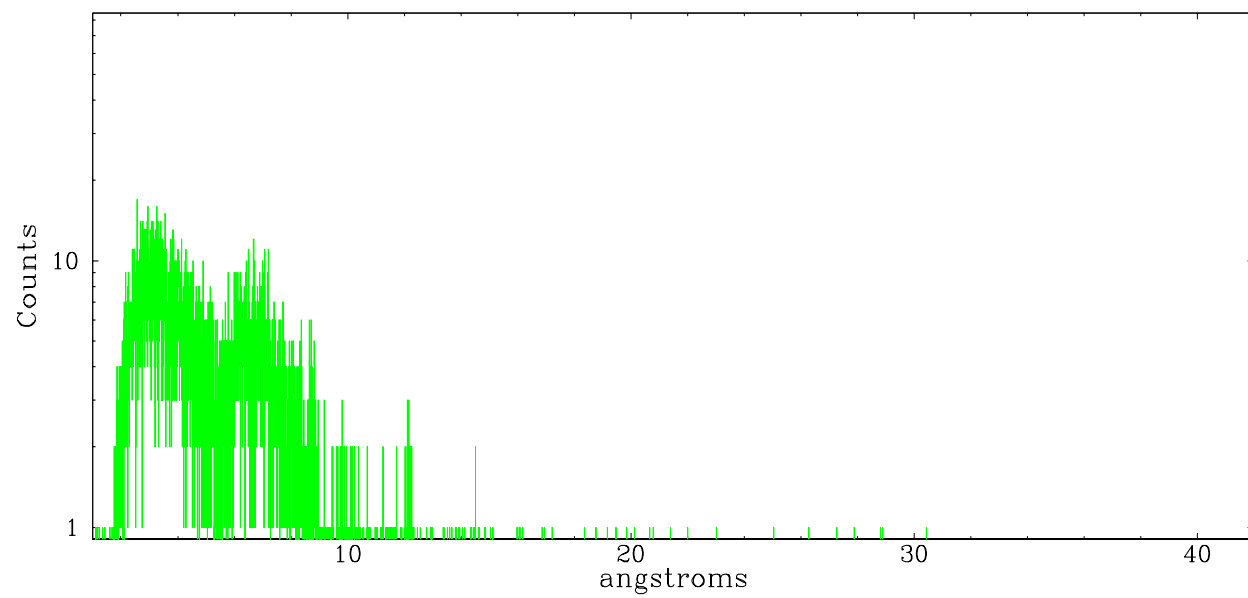
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1139	620	6641	22310	7698	728	1053



meg order -1



meg order +1





## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.07.23
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	96.412

### A.2 Comments