

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 2730 - L2 Version 001  
Chandra X-Ray Center

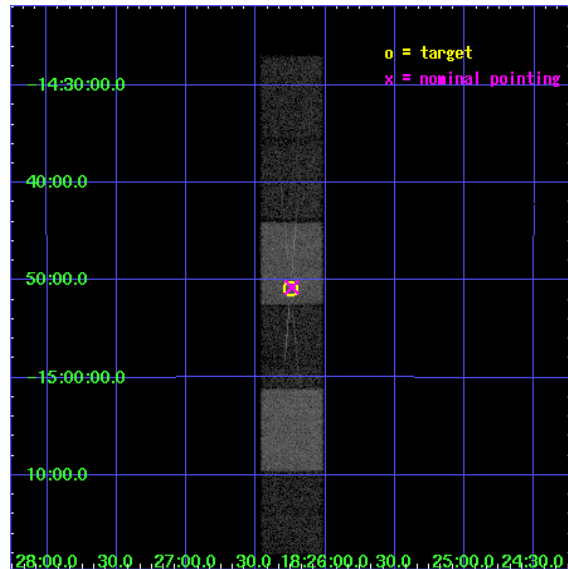
L2 Processing Date : Oct 13 2006

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# 1 Front

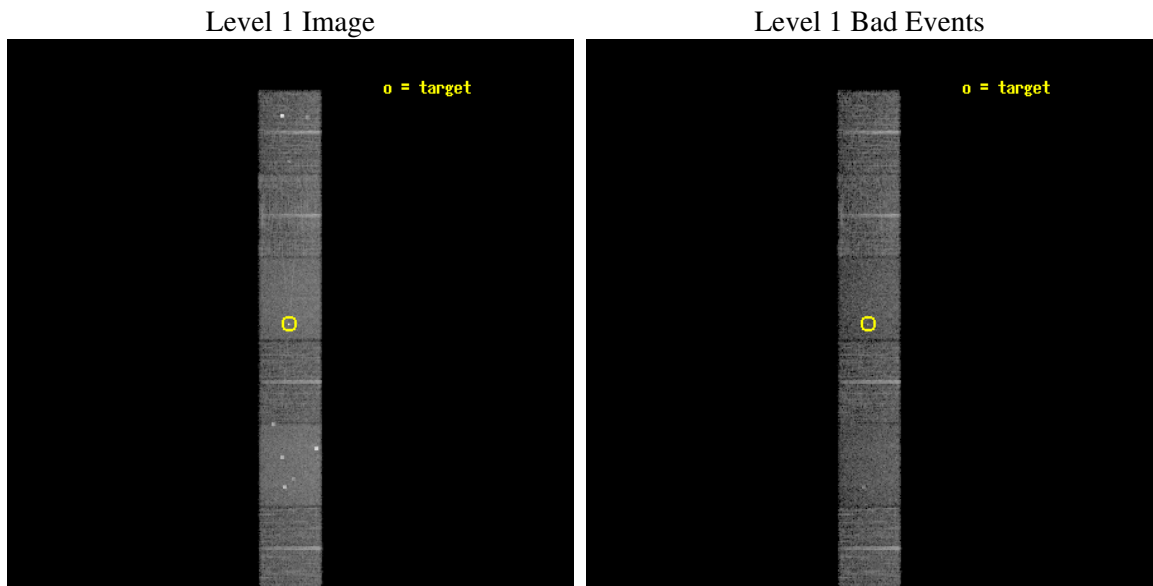
seq_num	400210
obs_id	2730
title	A CHANDRA STUDY OF NEARBY PERSISTENT MICROQUASAR LS 5039
observer	Prof. Walter Lewin
object	LS 5039
dtcycle	0
cycle	P
ra_targ	276.562083
dec_targ	-14.8475
ra_nom	276.5603392013
dec_nom	-14.846061086362
roll_nom	269.88960776477
revision	2
ontime	10780.0
livetime	10605.893649844
ontime4	10780.0
ontime5	10780.0
ontime6	10780.0
ontime7	10780.0
ontime8	10780.0
ontime9	10780.0
l2events	85733



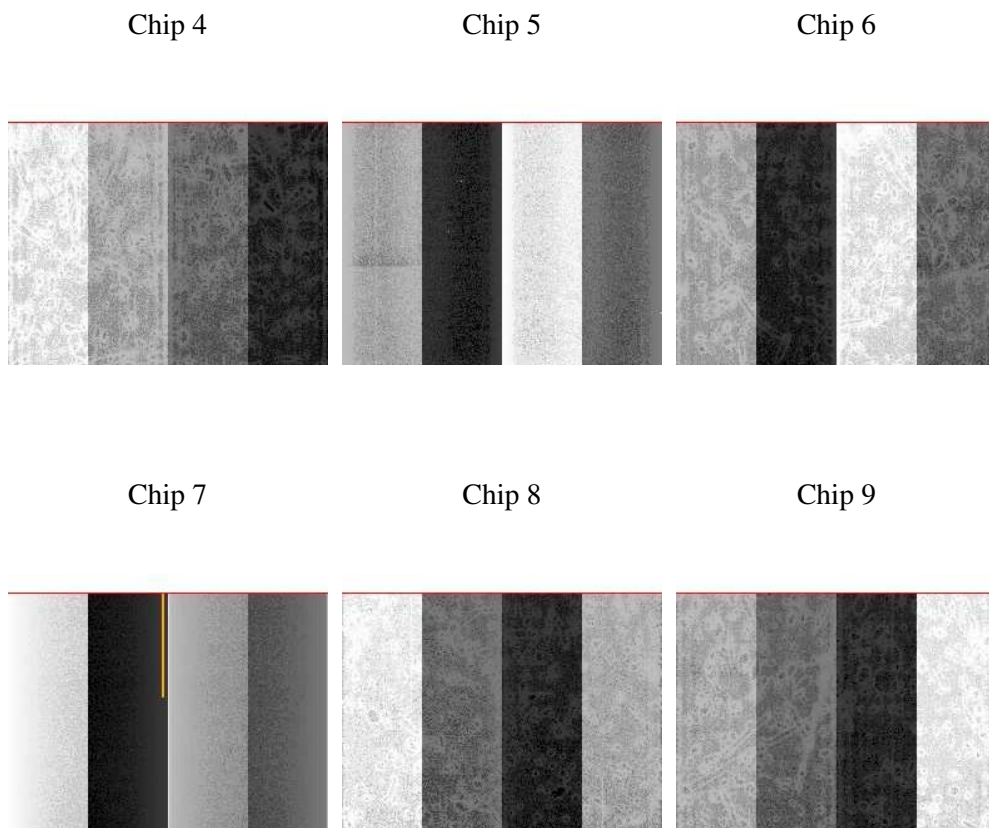
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1
ascdsver	7.6.9
caldbver	3.2.3
date	2006-10-02T23:31:32
revision	2

sched_exp_time	10617.339000
ontime	10784.044095457
ontime4	10784.044075549
ontime5	10784.044095457
ontime6	10784.044075549
ontime7	10784.044095457
ontime8	10784.044075549
ontime9	10784.044075549
l1events	379099

### 2.1.4 Events

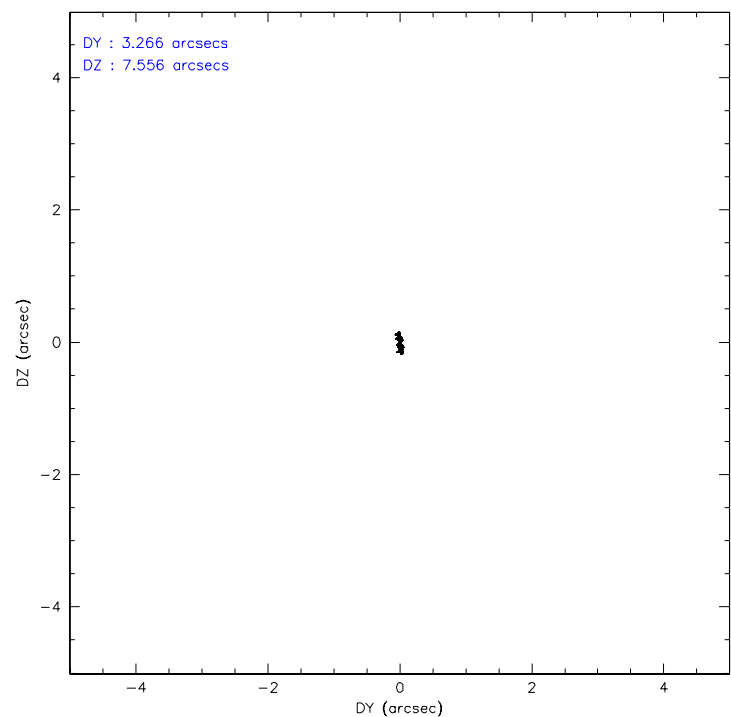
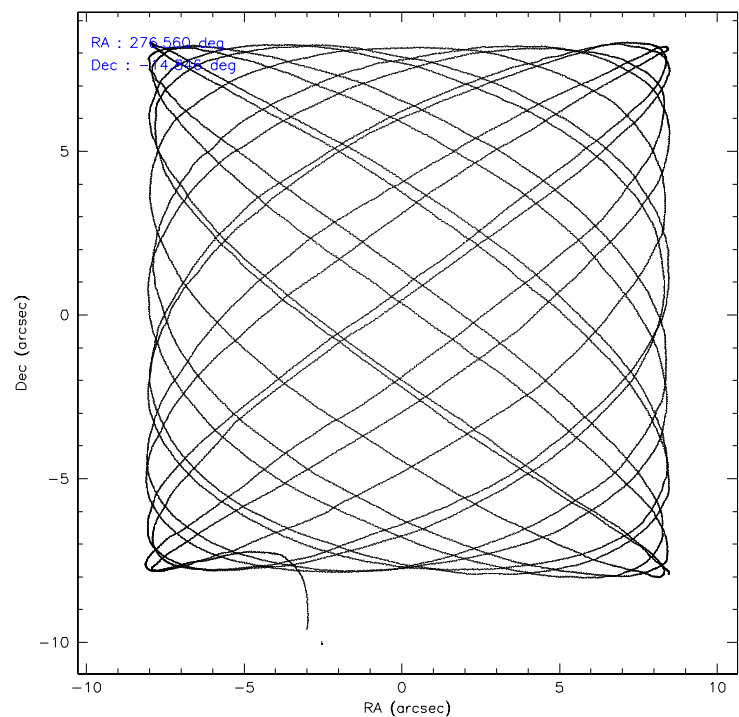
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	56634	77868	53690	68112	65326	57469
rejected events	48934	40071	45757	39491	50267	45607
rejected %	86%	51%	85%	57%	76%	79%

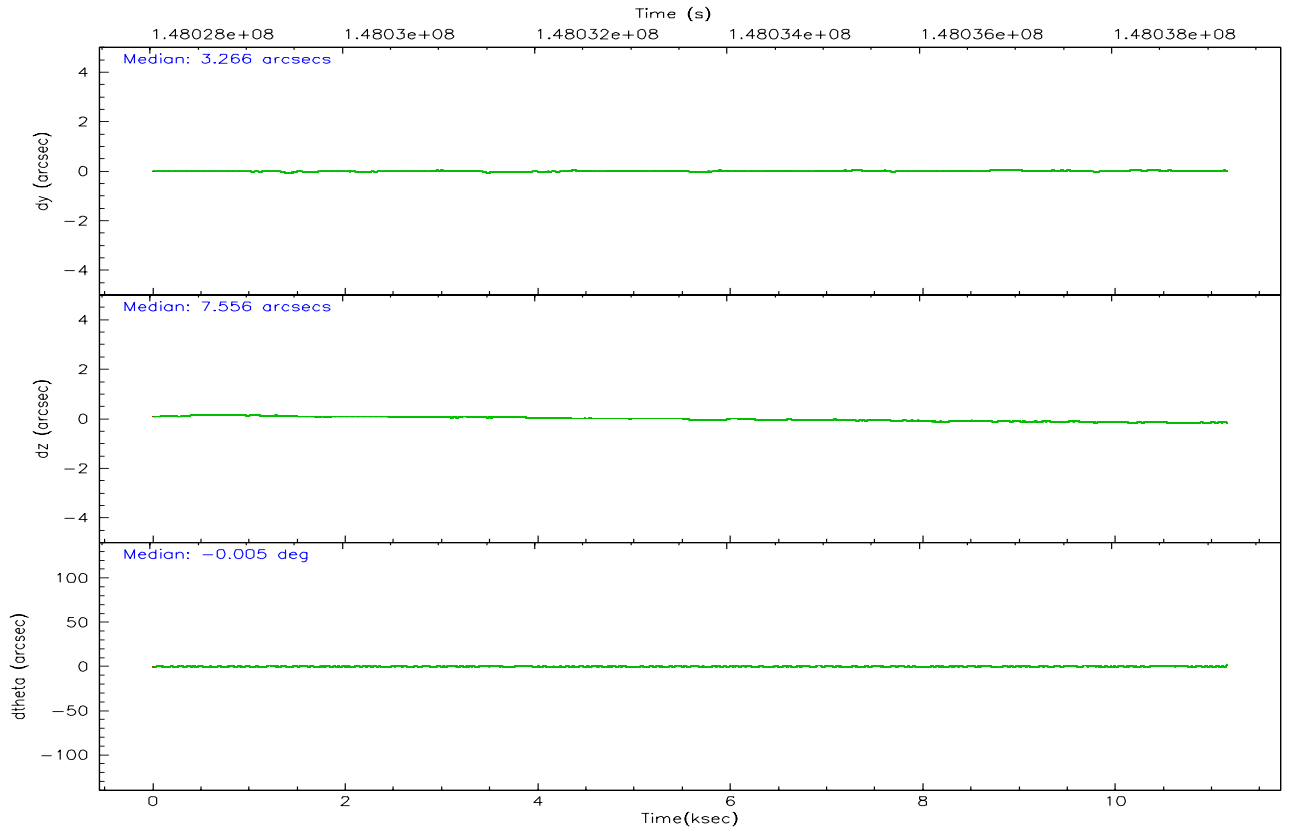
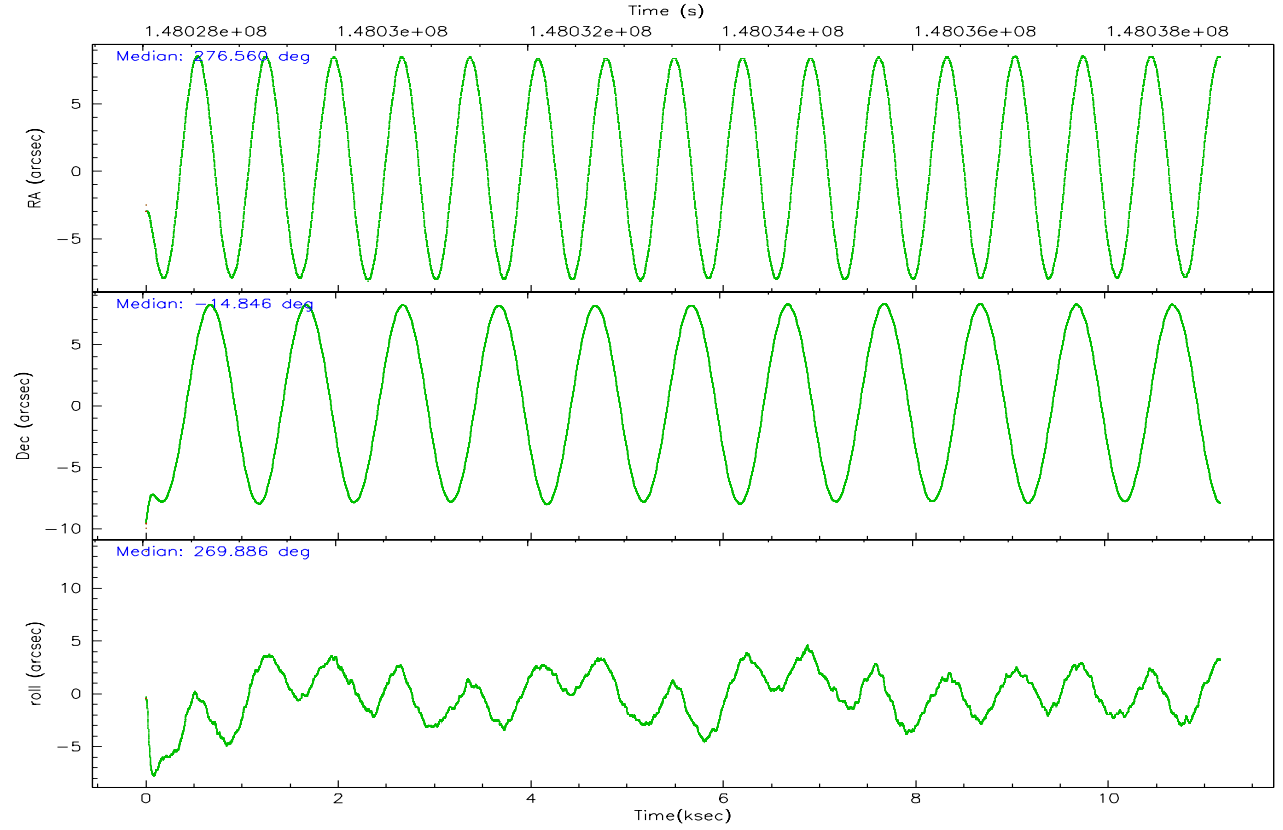
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	3571	7705	3680	2086	5276	7617
	6%	9%	6%	3%	8%	13%
grade 1 events	29	261	15	48	38	56
	0%	0%	0%	0%	0%	0%
grade 2 events	1498	9855	1467	6915	2918	1448
	2%	12%	2%	10%	4%	2%
grade 3 events	771	982	671	1853	1713	730
	1%	1%	1%	2%	2%	1%
grade 4 events	722	928	686	1889	1646	736
	1%	1%	1%	2%	2%	1%
grade 5 events	2050	3800	2243	4598	2815	2290
	3%	4%	4%	6%	4%	3%
grade 6 events	1142	18350	1433	15895	3513	1337
	2%	23%	2%	23%	5%	2%
grade 7 events	46851	35987	43495	34828	47407	43255
	82%	46%	81%	51%	72%	75%

## 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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	276.545994	276.5603392013007	Subarray requested	CUSTOM	CUSTOM
Pointing Dec	-14.822594	-14.84606108636238	Subarray start row	1	1
Pointing Roll	269.729298	269.8896077647749	Subarray row count	774	774
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
SIM defocus (mm)	0	0.001444936568705701	Primary exposure time	0.000000	2.5
SIM translation stage pos (mm)	-187.132523	-187.1254020033014			
SIM translation stage offset (mm)	-3	-3.007120579706367			
Observation start time	148028578.184000	148027440.64996			
Observation start date	2002-09-10T07:01:54	2002-09-10T06:44:00			
Observation end time	148039196.184000	148039510.53796			
Observation end date	2002-09-10T09:58:52	2002-09-10T10:05:10			
Read mode	TIMED	TIMED			

2.3 Aspect





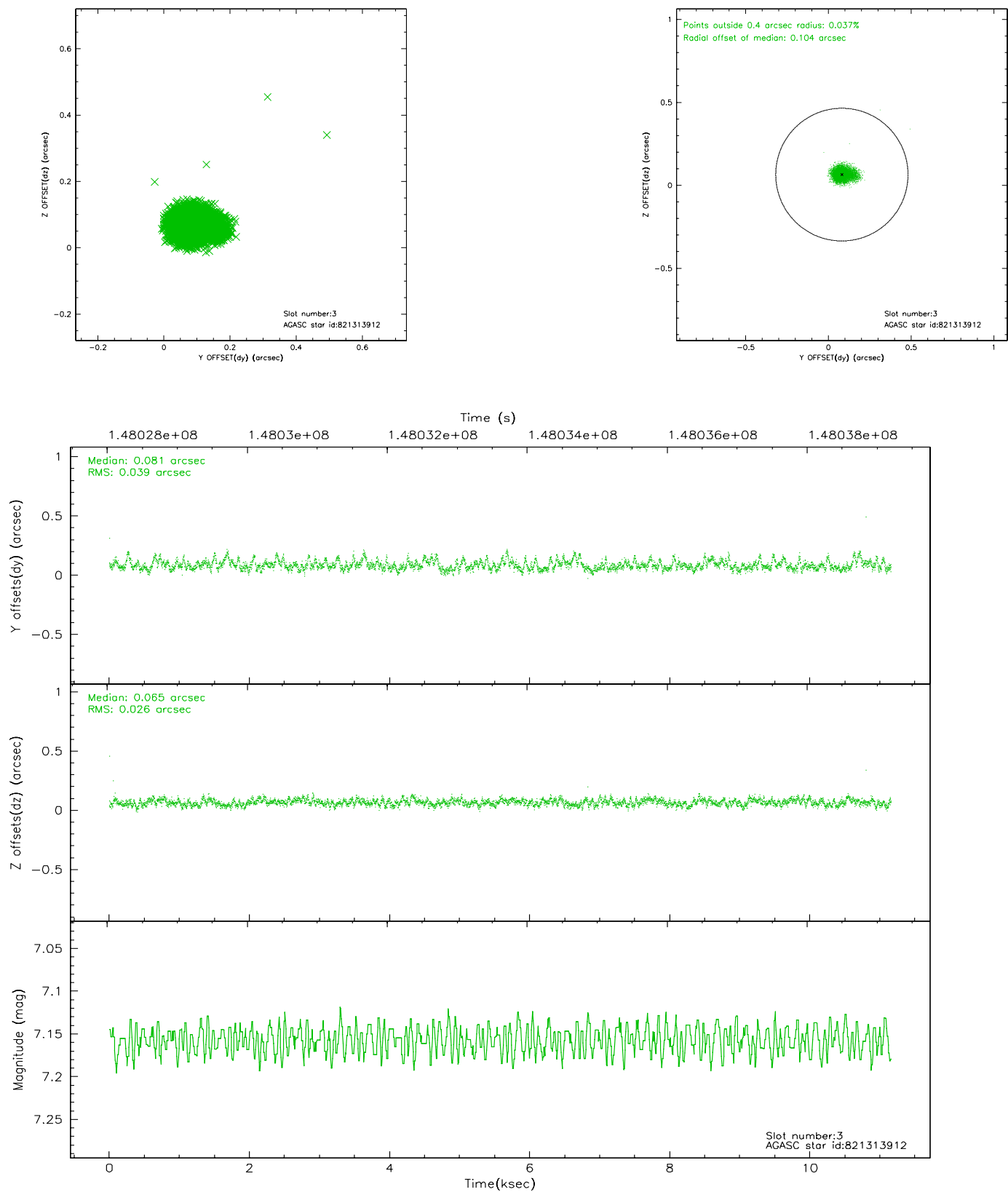
### Slot Statistics

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	2723	-0.038	-0.009	0.005	0.009	0.000000	0.000000	-755.71	-1790.84
1	FID	ACIS-S-4	7.20	2723	0.001	0.037	0.006	0.009	0.000000	0.000000	2157.36	117.24
2	FID	ACIS-S-6	7.38	2723	0.009	-0.022	0.007	0.011	0.000000	0.000000	406.86	755.07
3	GUIDE	821313912	7.16	5444	0.081	0.065	0.047	0.083	276.880488	-15.373623	1980.30	1171.28
4	GUIDE	821297368	7.89	5445	0.082	-0.039	0.043	0.070	276.313836	-15.122723	1086.48	-801.03
5	GUIDE	821172784	9.20	5444	0.241	-0.188	0.097	0.156	275.866733	-15.346945	1904.40	-2349.02
6	GUIDE	747380784	9.21	5440	-0.218	0.206	0.103	0.177	277.188264	-14.189338	-2285.91	2231.07
7	GUIDE	747390464	9.05	5439	-0.201	-0.046	0.067	0.111	276.079675	-14.163702	-2361.90	-1638.35

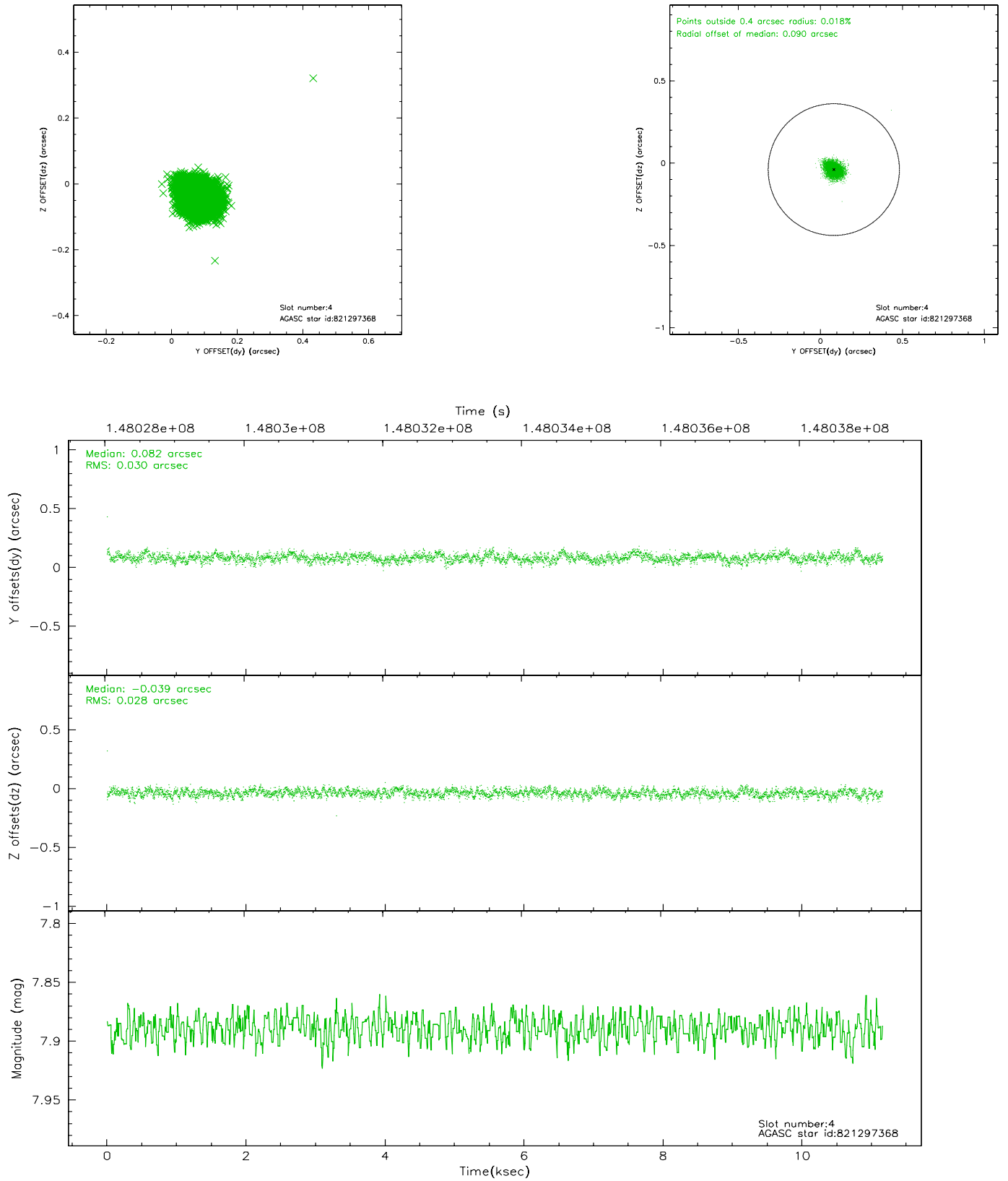


## 2.4 Star Slots

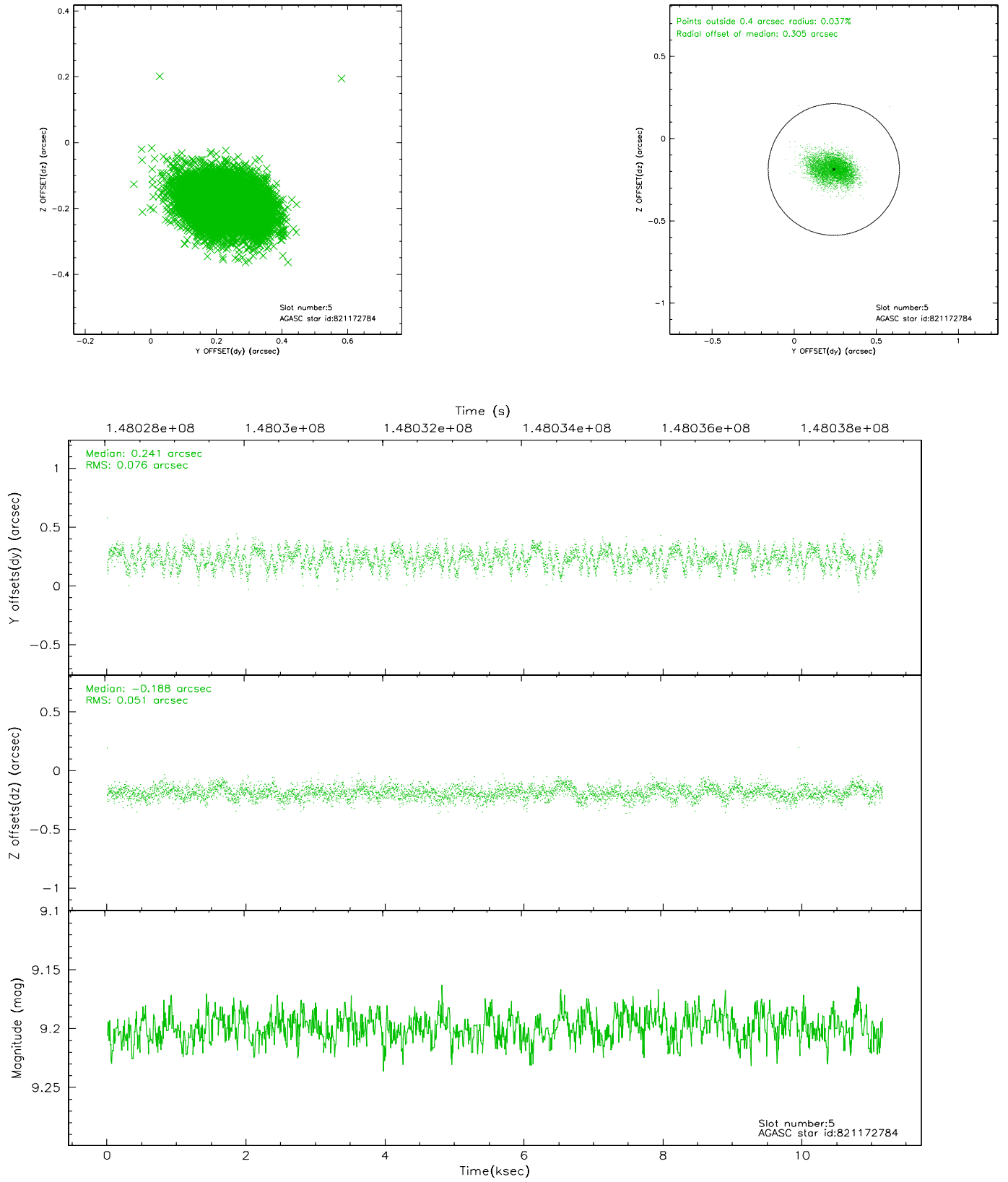
### 2.4.1 Slot 3



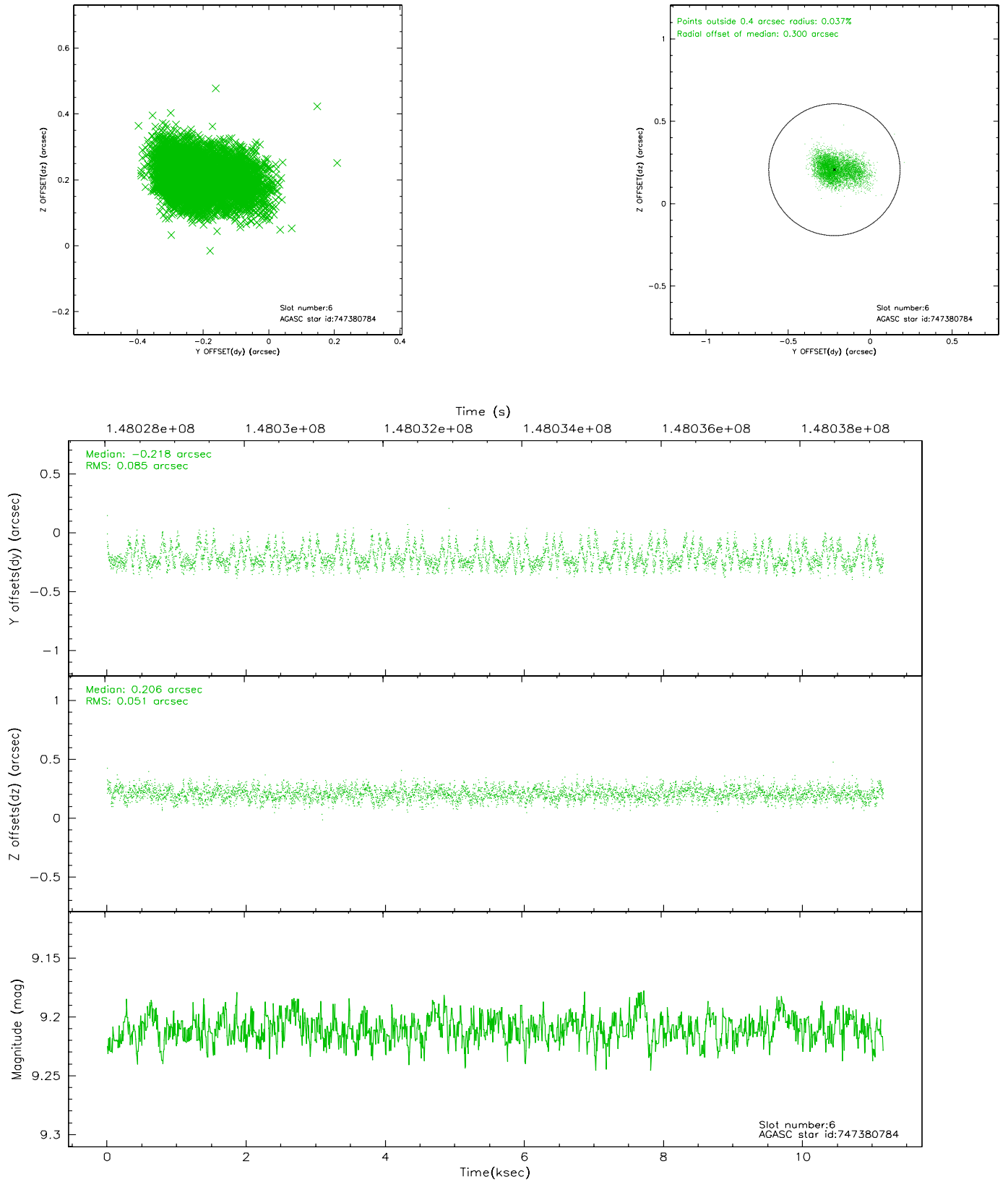
## 2.4.2 Slot 4



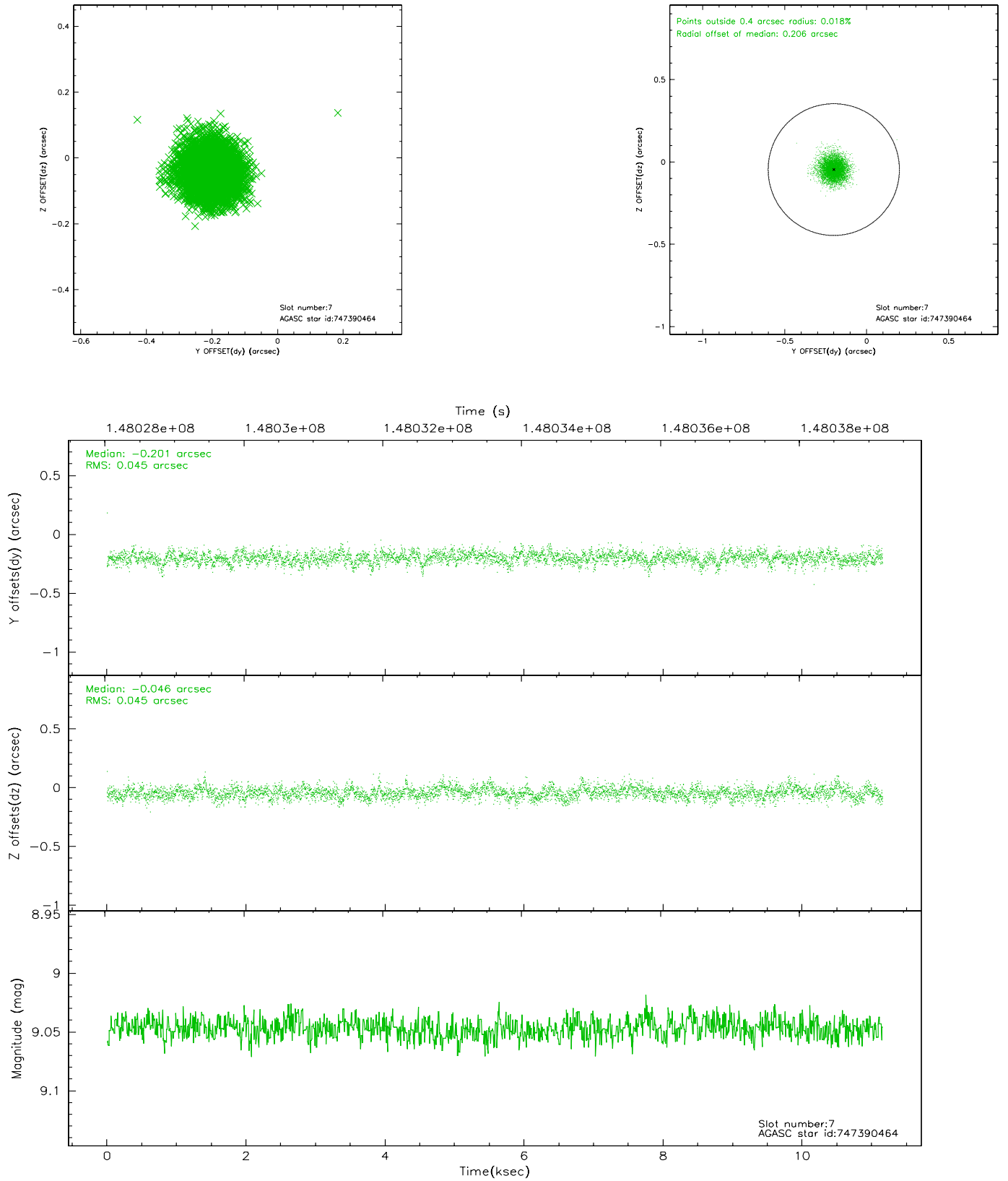
### 2.4.3 Slot 5



## 2.4.4 Slot 6

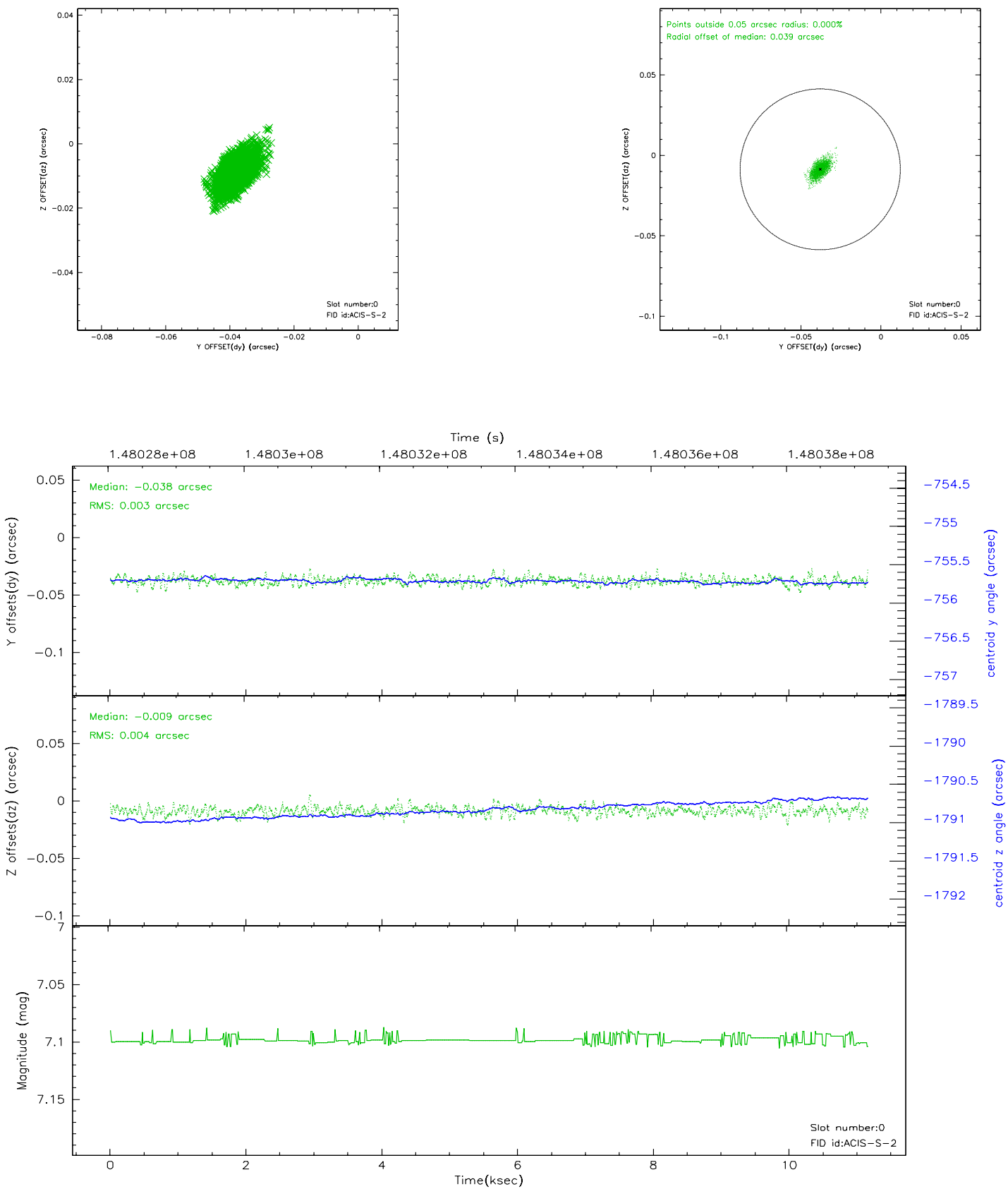


## 2.4.5 Slot 7

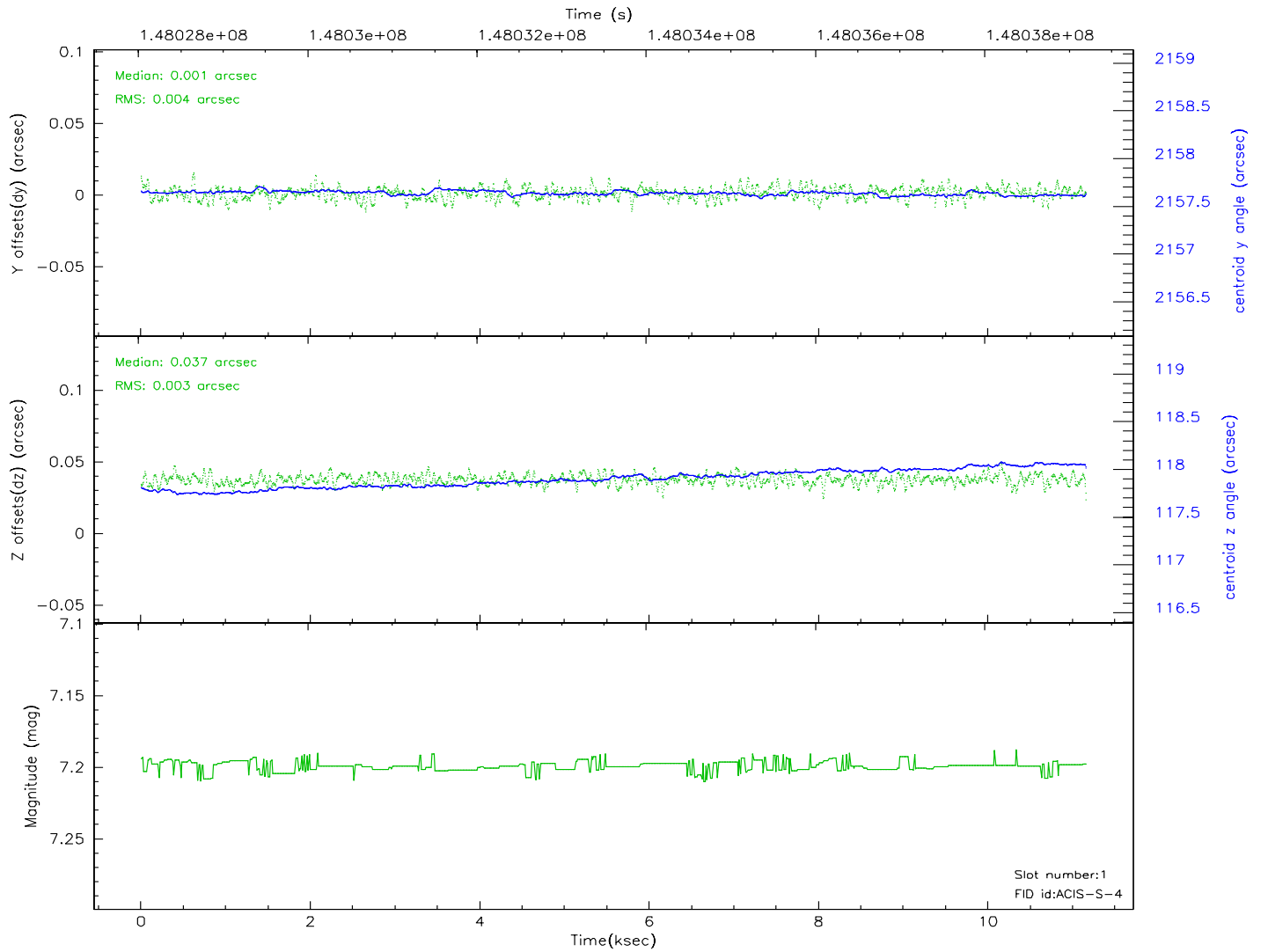
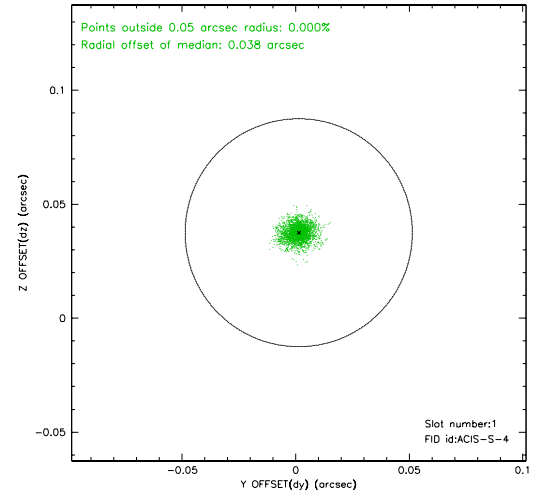
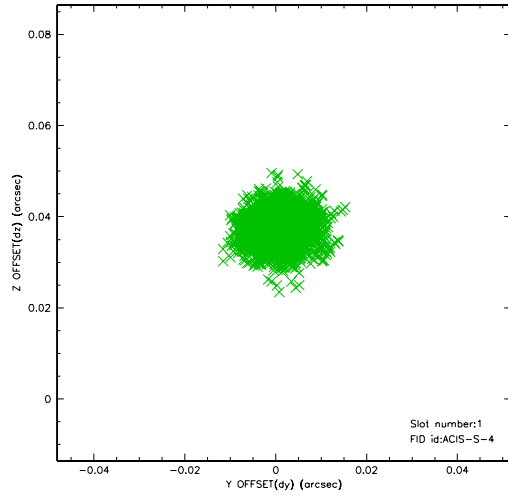


## 2.5 FID Slots

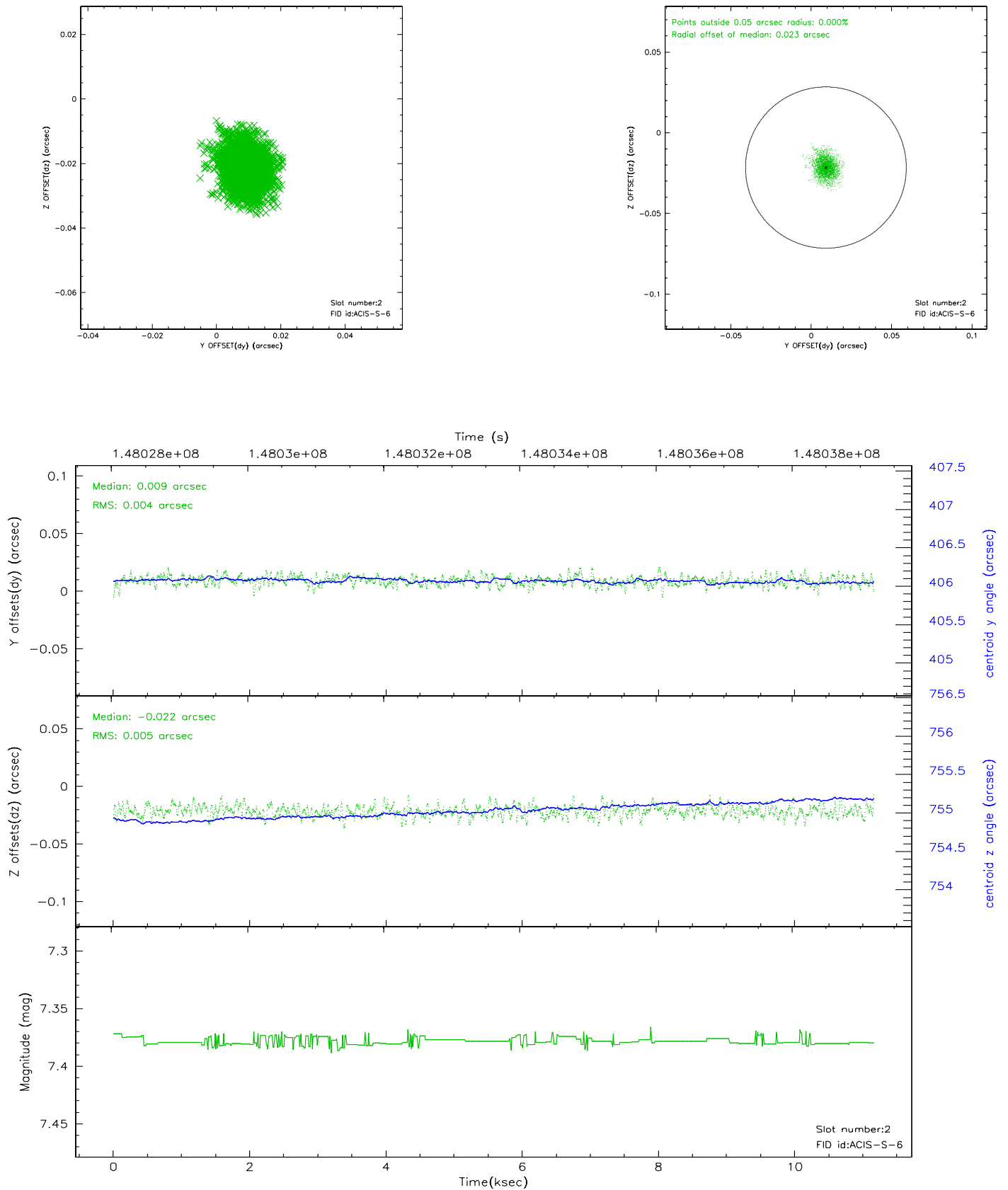
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



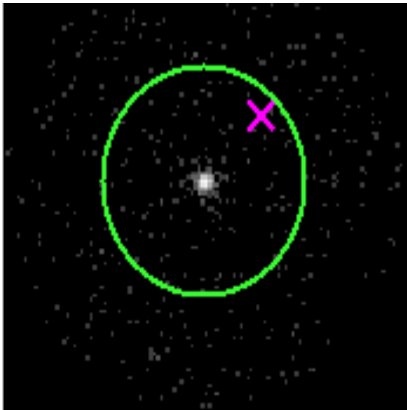


# 3 Gratings

## 3.1 HEG Arm



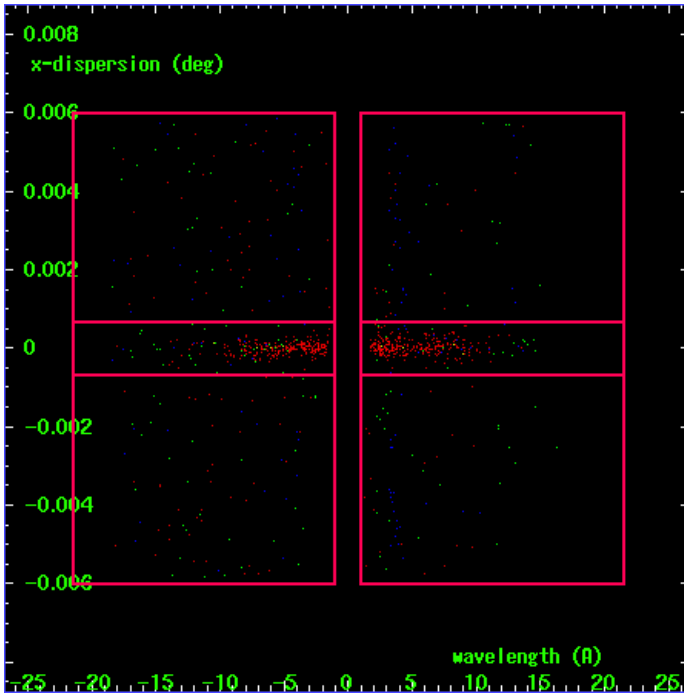
HEG Order Sort 123



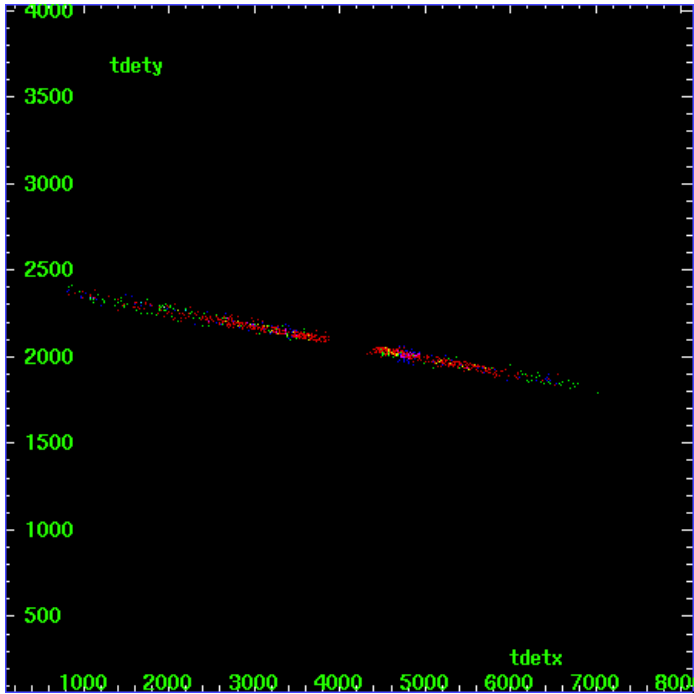
HEG Zero Order



HEG Order Sort ALL

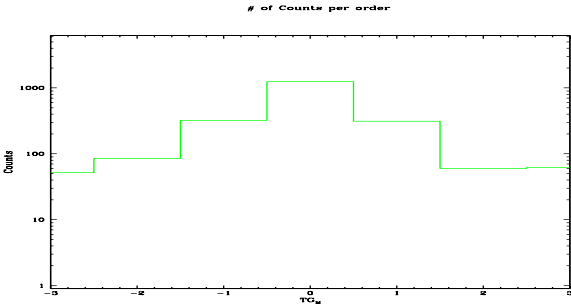


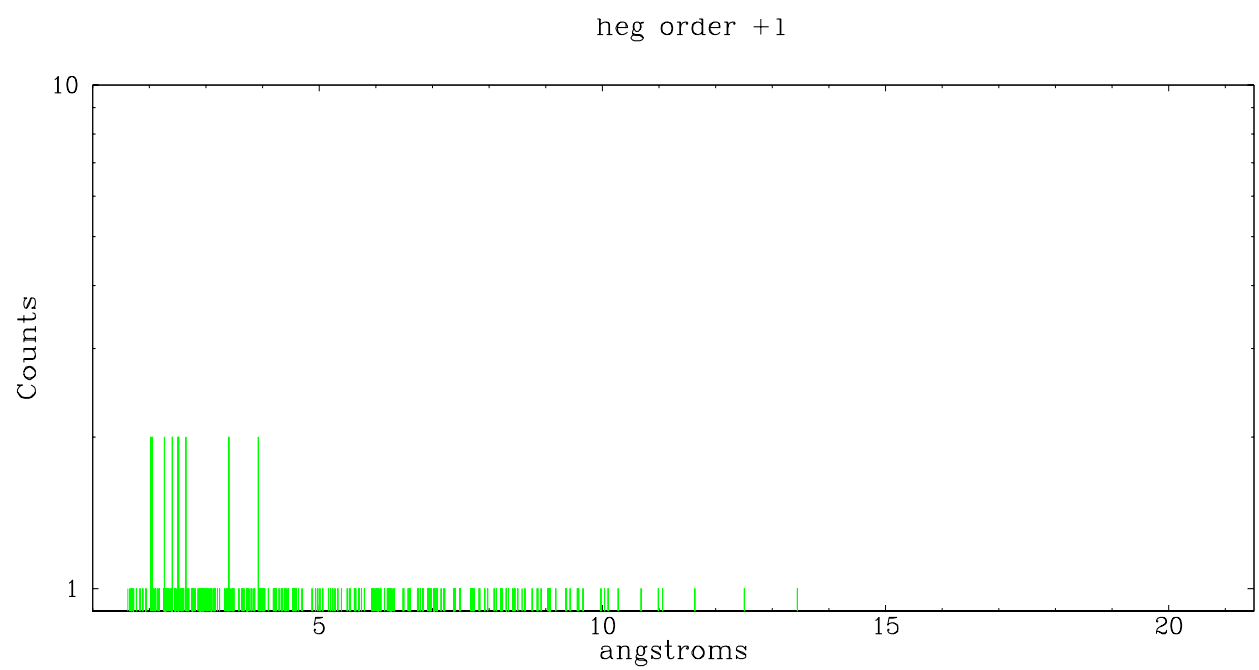
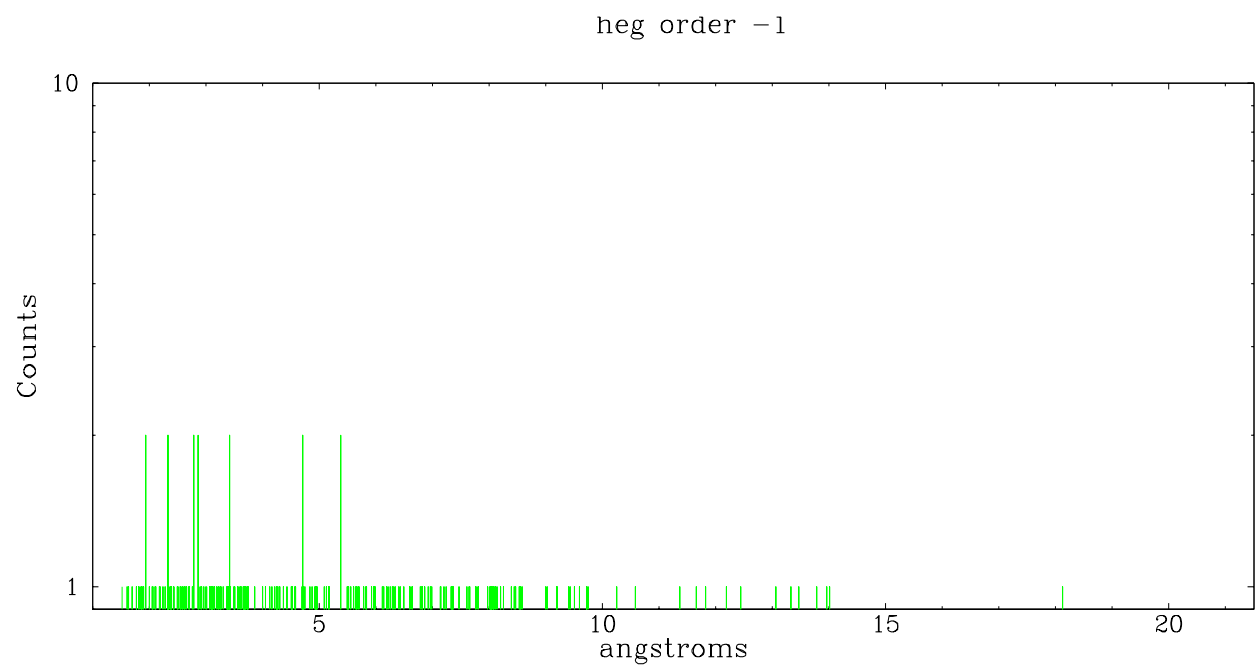
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	52	85	321	1242	313	60	62

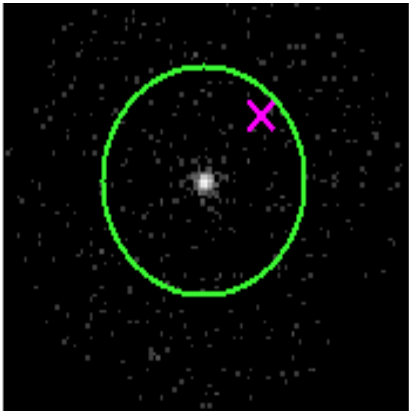




3.2 MEG Arm



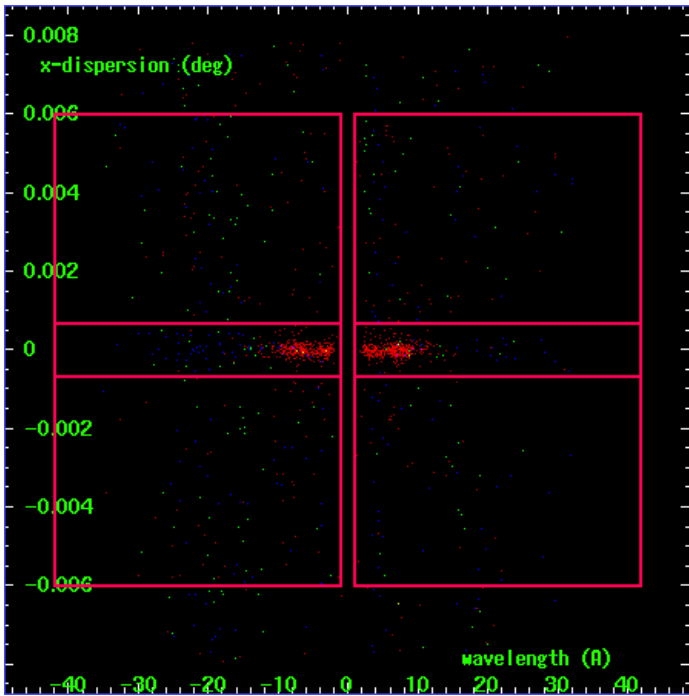
MEG Order Sort 123



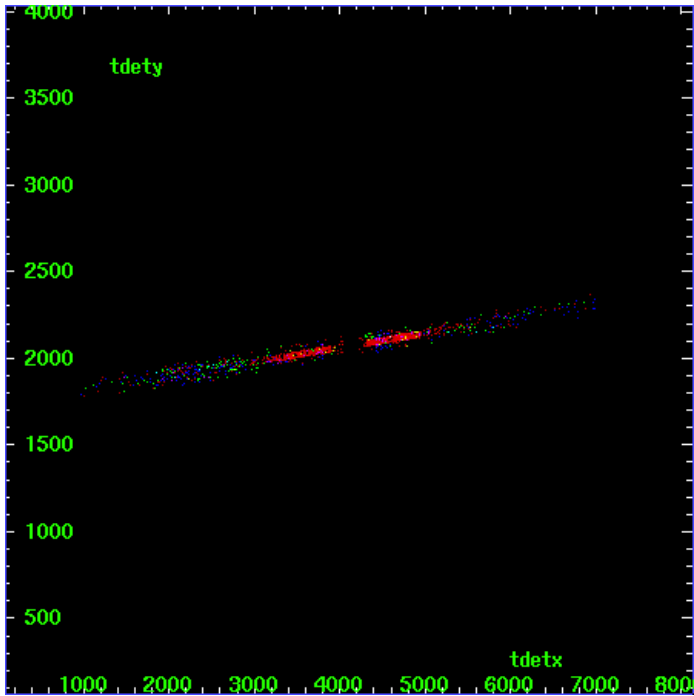
MEG Zero Order



MEG Order Sort ALL

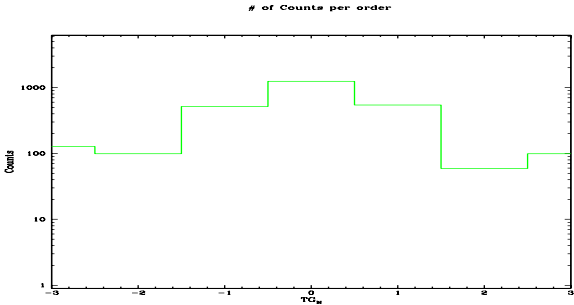


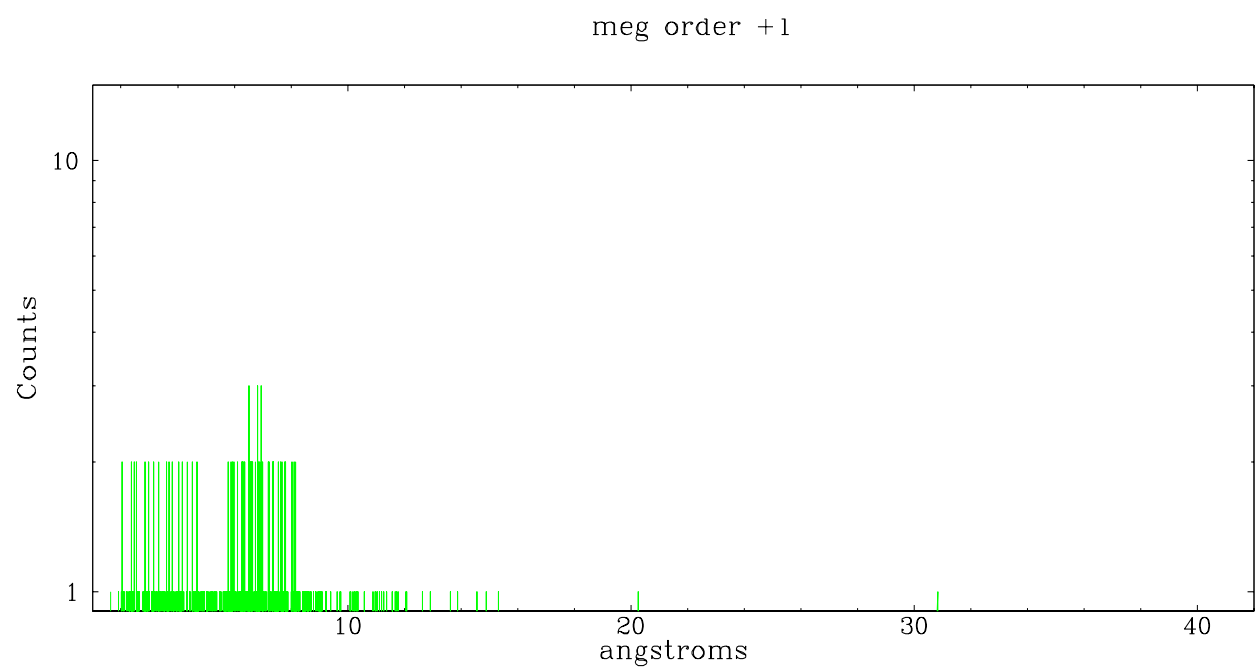
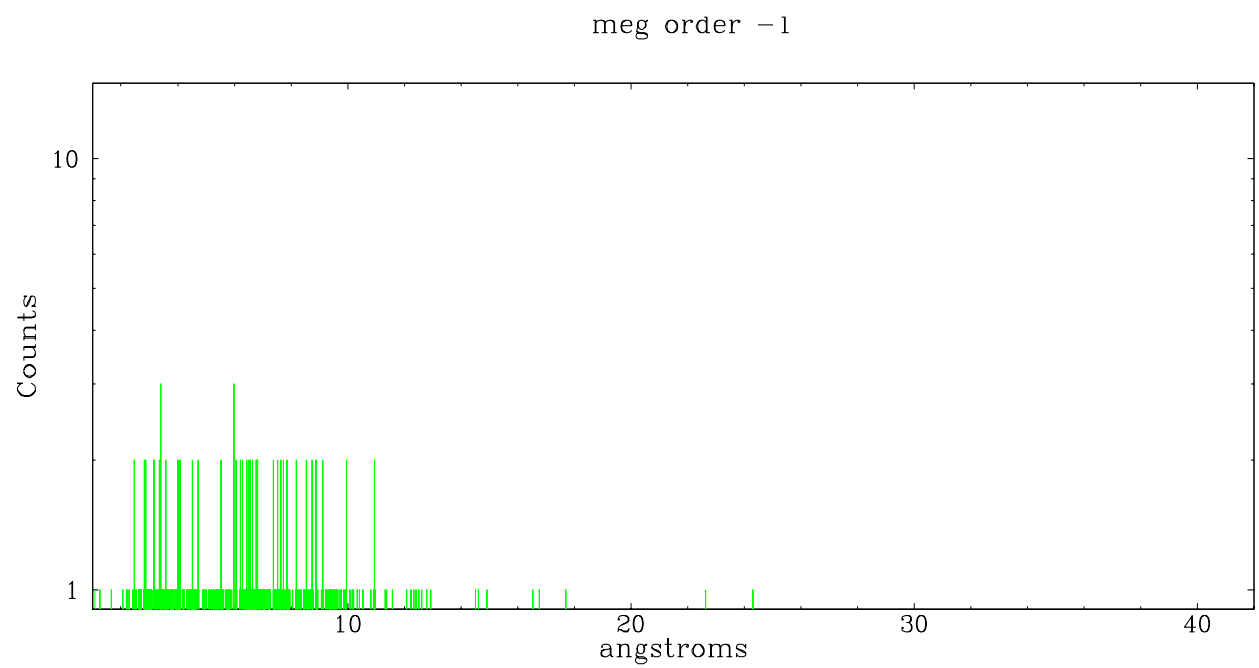
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	128	99	515	1242	543	59	99





## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.10.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.782

### A.2 Comments