

# V&V Reference Report

## L2 ASCDS Version : 7.6.7

Observation 5398 - L2 Version 002  
Chandra X-Ray Center

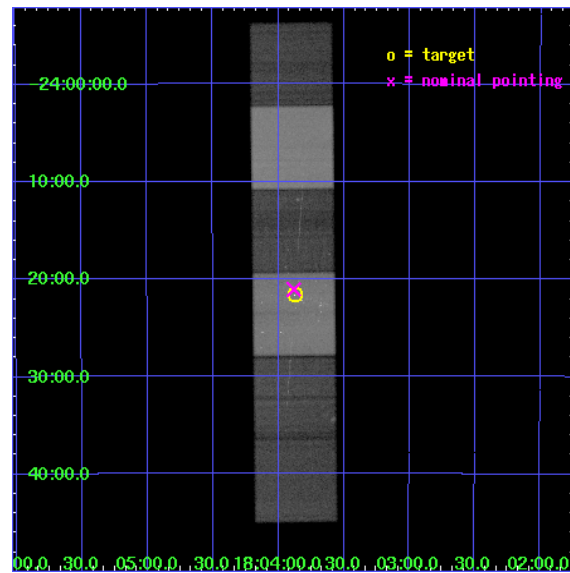
L2 Processing Date: Mar 3 2006

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>3</b>	<b>Gratings</b>	<b>17</b>
3.1	HEG Arm . . . . .	17
3.2	MEG Arm . . . . .	19
<b>A</b>	<b>Summary</b>	<b>21</b>
A.1	Status . . . . .	21
A.2	Comments . . . . .	21

# 1 Front

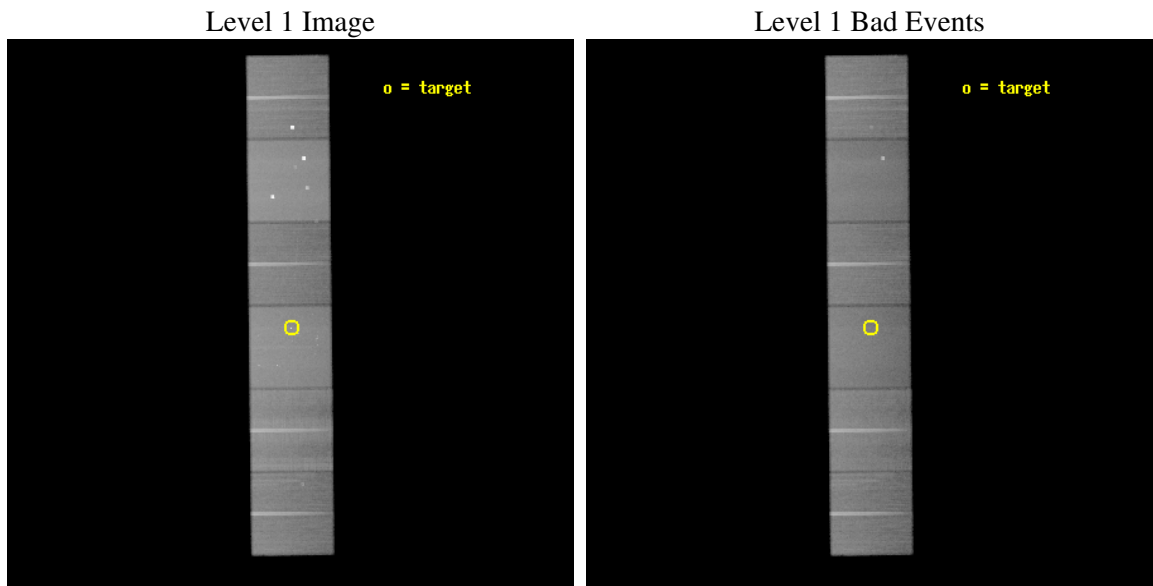
seq_num	200333
obs_id	5398
title	A Chandra HETGS Survey of O-Stars
observer	Dr. Wayne Waldron
object	9 Sgr
dtcycle	0
cycle	P
ra_targ	270.968333
dec_targ	-24.360722
ra_nom	270.97030838015
dec_nom	-24.35119575246
roll_nom	89.356084976381
revision	2
ontime	102524.67664719
livetime	101226.44745853
ontime4	102524.67664722
ontime5	102527.91763747
ontime6	102527.91770709
ontime7	102524.67664719
ontime8	102531.15862772
ontime9	102531.15862775
l2events	1186762



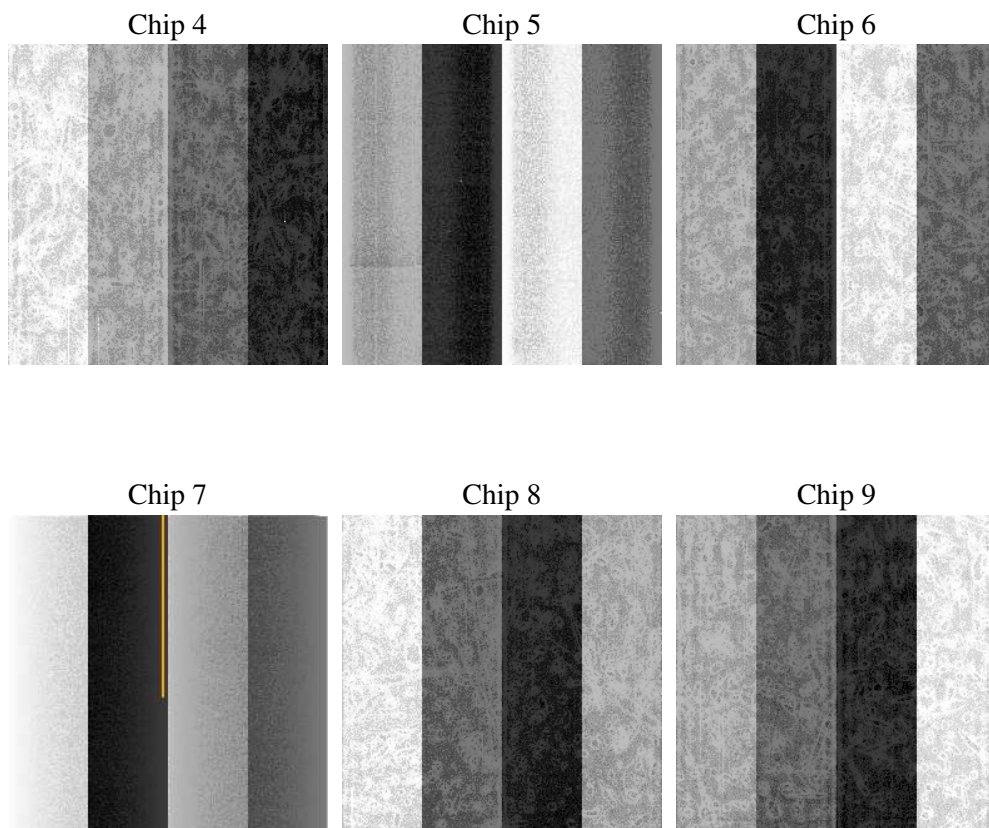
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1
ascdsver	7.6.7
caldbver	3.2.1
date	2006-03-03T12:38:43
revision	2

sched_exp_time	102350.000000
ontime	104198.55979276
ontime4	104198.55979279
ontime5	104201.80078304
ontime6	104201.80085266
ontime7	104198.55979276
ontime8	104205.04177329
ontime9	104205.04177332
l1events	5454746

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	855116	1147436	748802	1020863	943519	739010
rejected events	727094	630977	649894	630056	731271	641101
rejected %	85%	54%	86%	61%	77%	86%

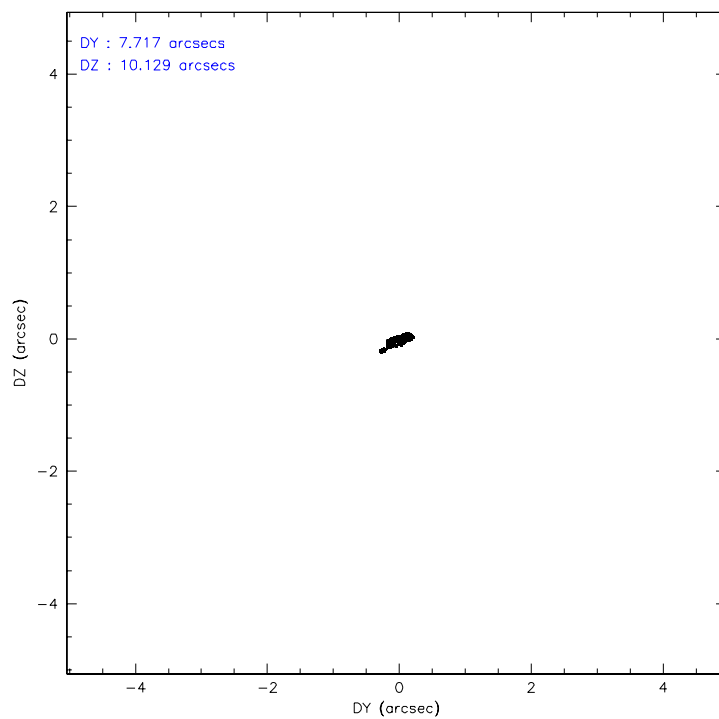
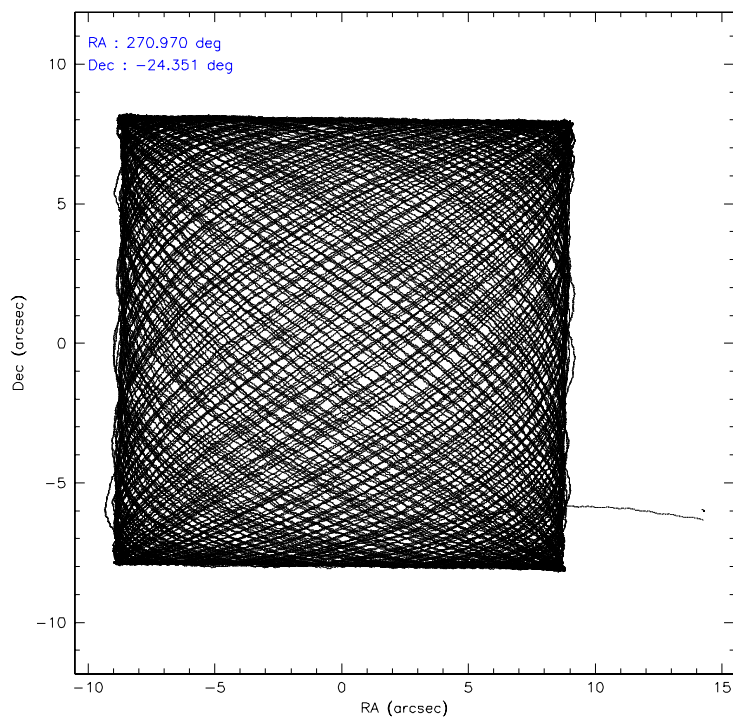
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	75416	53867	43669	23630	72985	43654
	8%	4%	5%	2%	7%	5%
grade 1 events	1078	5522	430	635	670	462
	0%	0%	0%	0%	0%	0%
grade 2 events	20508	170049	20543	100368	46966	19036
	2%	14%	2%	9%	4%	2%
grade 3 events	9737	10479	9140	20315	21952	9462
	1%	0%	1%	1%	2%	1%
grade 4 events	9452	10095	8888	19549	20494	9246
	1%	0%	1%	1%	2%	1%
grade 5 events	33248	52876	34403	65029	45737	36786
	3%	4%	4%	6%	4%	4%
grade 6 events	15657	281744	19419	234135	54426	18865
	1%	24%	2%	22%	5%	2%
grade 7 events	690020	562804	612310	557202	680289	601499
	80%	49%	81%	54%	72%	81%

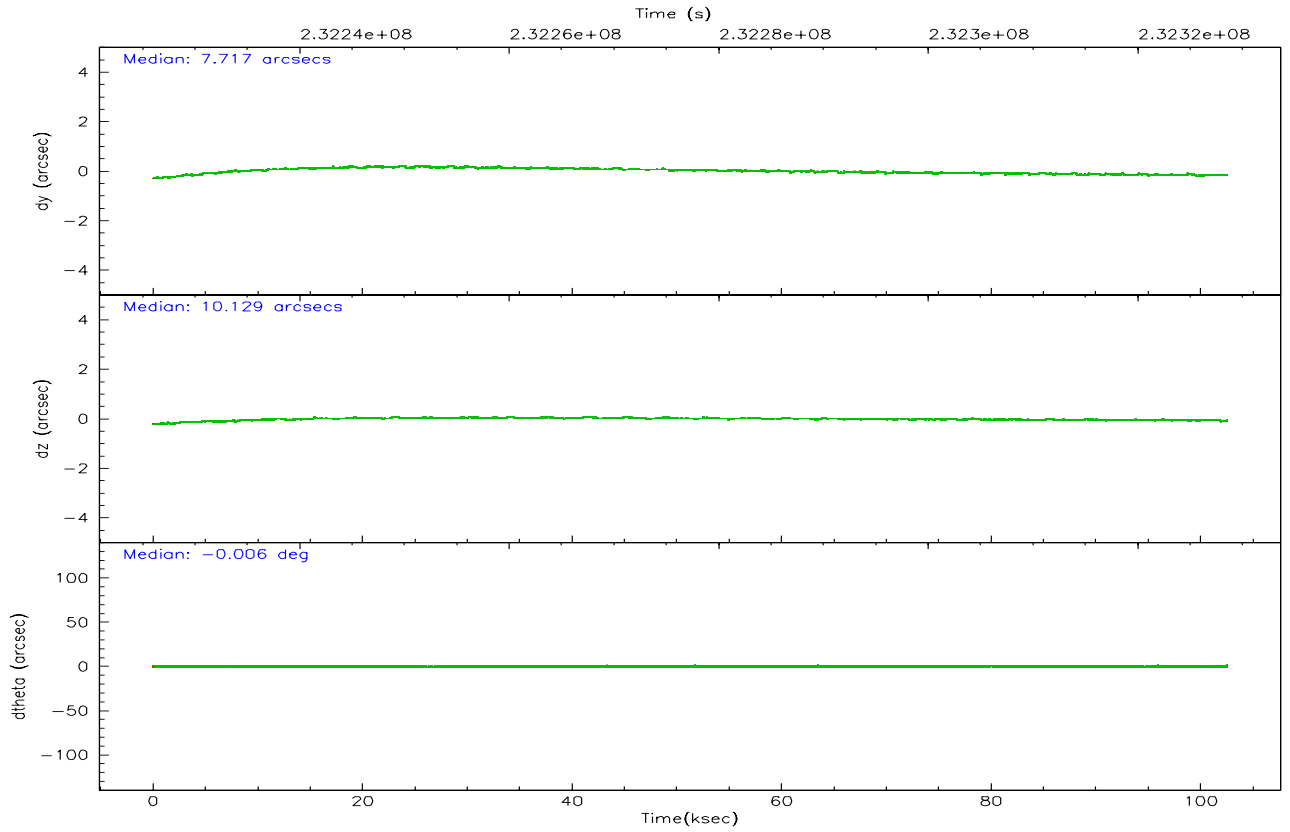
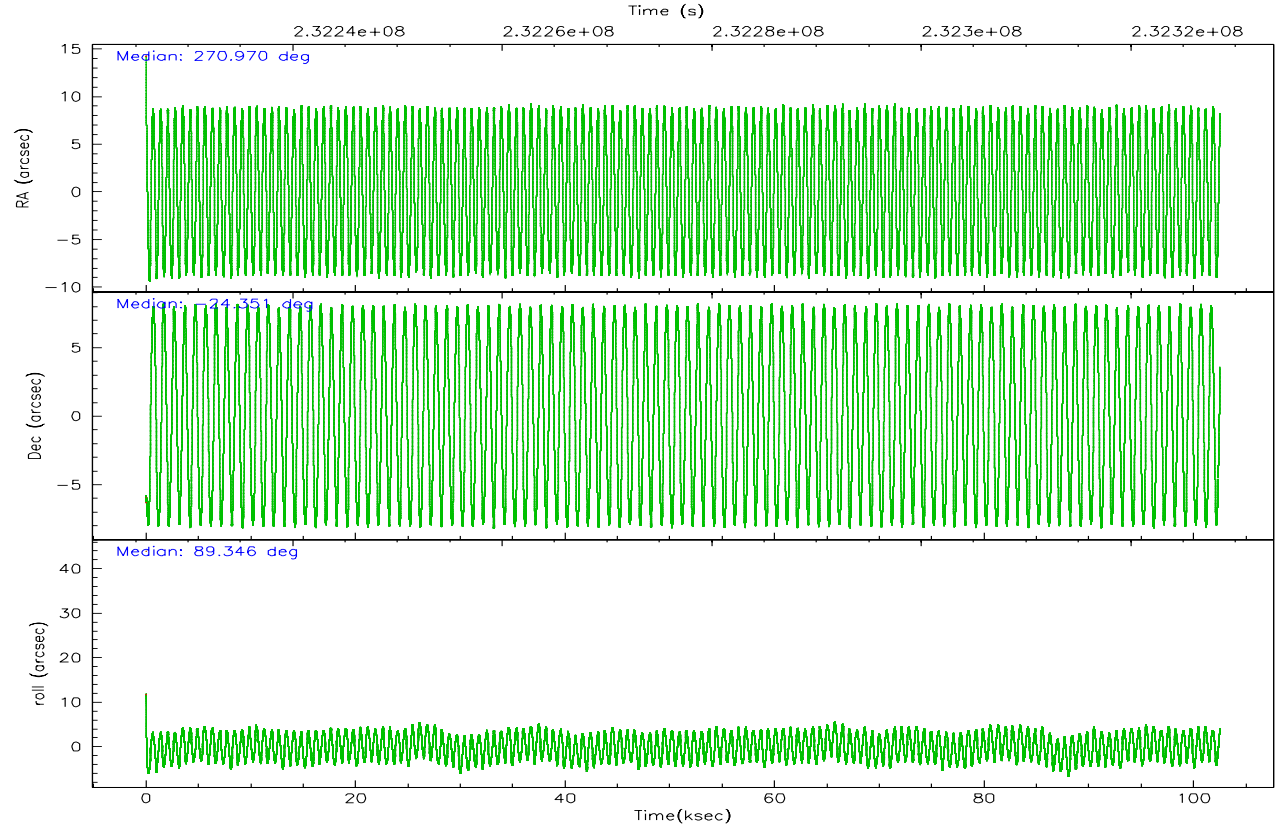


## 2.2 Compared Parameters

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	NONE	NONE
Pointing RA	270.985315	270.9703083801459	Alternating exposures requested	N	N
Pointing Dec	-24.374722	-24.35119575246034	Primary exposure time	0.000000	3.2
Pointing Roll	89.205648	89.35608497638108			
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-190.132523	-190.1400660498719			
SIM translation stage offset (mm)	0	0.00754346686406393			
Observation start time	232226193.184000	232224138.72401			
Observation start date	2005-05-11T19:15:29	2005-05-11T18:42:18			
Observation end time	232328543.184000	232329467.7288			
Observation end date	2005-05-12T23:41:19	2005-05-12T23:57:47			
Read mode	TIMED	TIMED			

## 2.3 Aspect



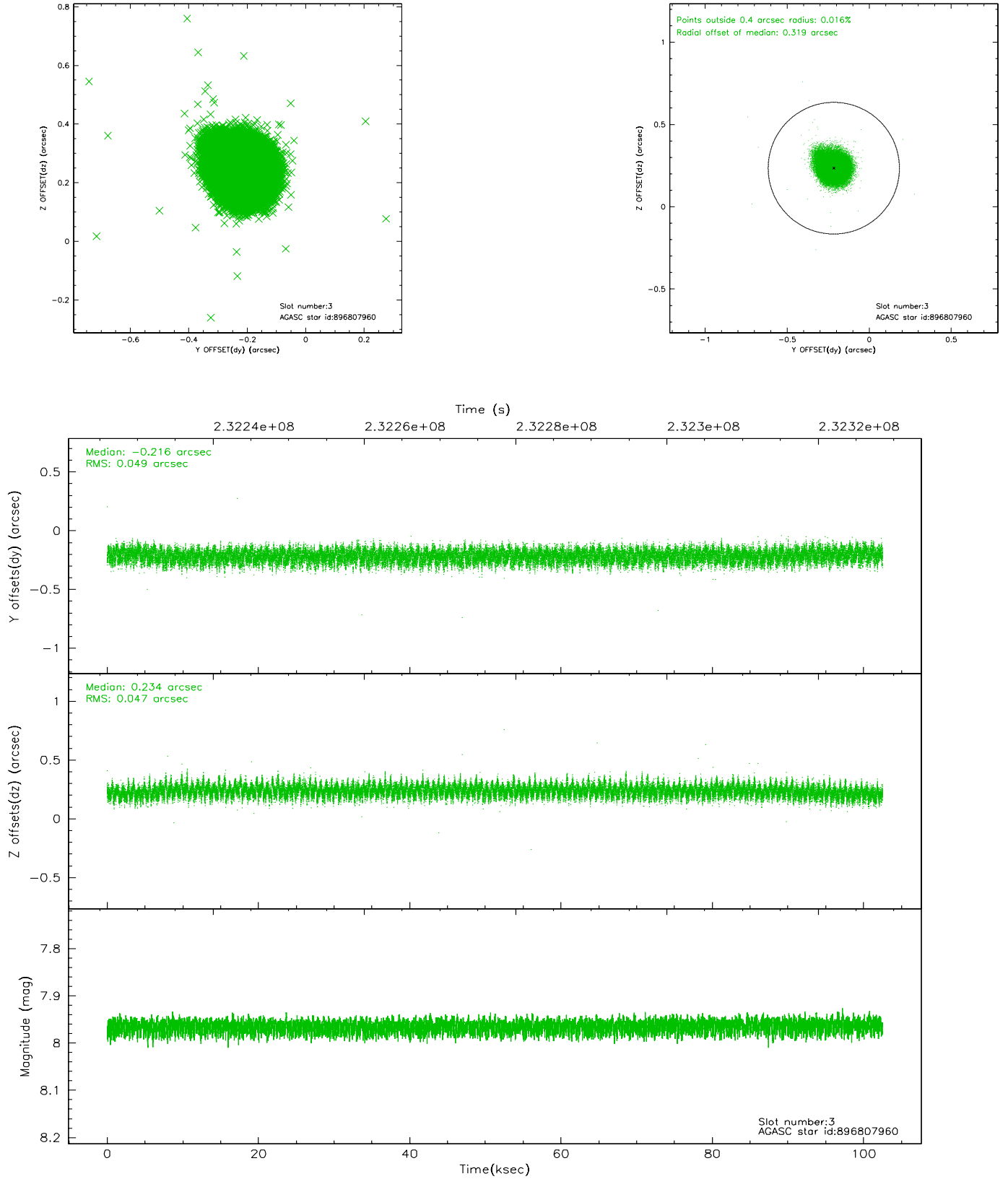


### Slot Statistics

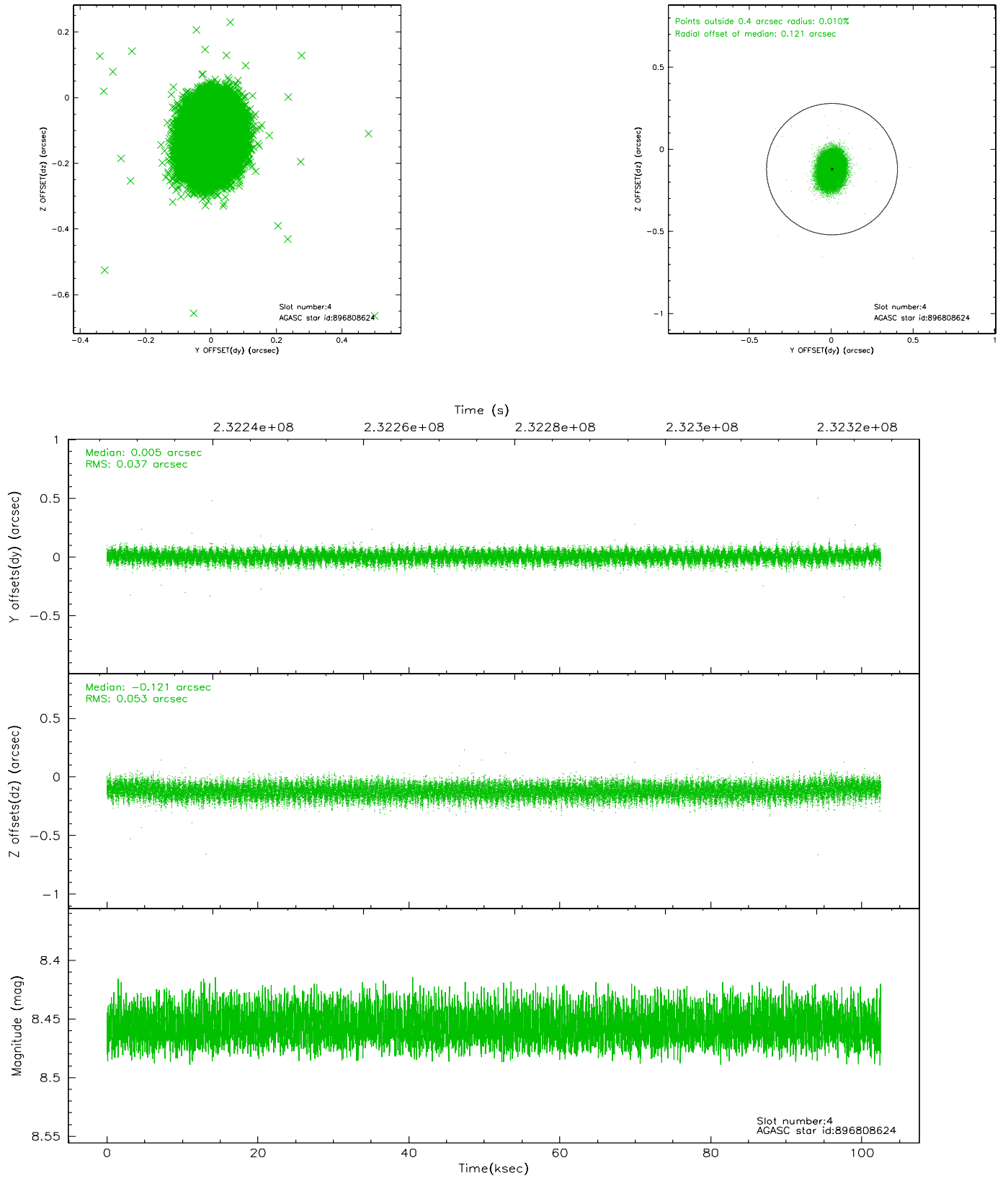
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	25002	-0.034	0.003	0.008	0.019	0.000000	0.000000	-760.48	-1731.39
1	FID	ACIS-S-4	7.21	25001	0.062	0.016	0.008	0.019	0.000000	0.000000	2152.89	177.28
2	FID	ACIS-S-5	7.23	25003	-0.059	-0.009	0.008	0.014	0.000000	0.000000	-1813.51	170.72
3	GUIDE	896807960	7.96	50004	-0.216	0.234	0.072	0.115	271.641091	-23.945331	1571.01	-2135.46
4	GUIDE	896808624	8.46	49989	0.005	-0.121	0.068	0.112	270.460163	-24.157029	756.47	1735.73
5	GUIDE	897319440	7.77	50008	0.054	0.141	0.065	0.102	271.242462	-24.680808	-1090.42	-856.30
6	GUIDE	897324960	7.66	50008	0.050	-0.312	0.057	0.090	270.333871	-24.632185	-961.47	2118.28
7	GUIDE	897327936	7.22	50005	0.107	0.055	0.060	0.097	271.293962	-24.398569	-72.38	-1012.82

## 2.4 Star Slots

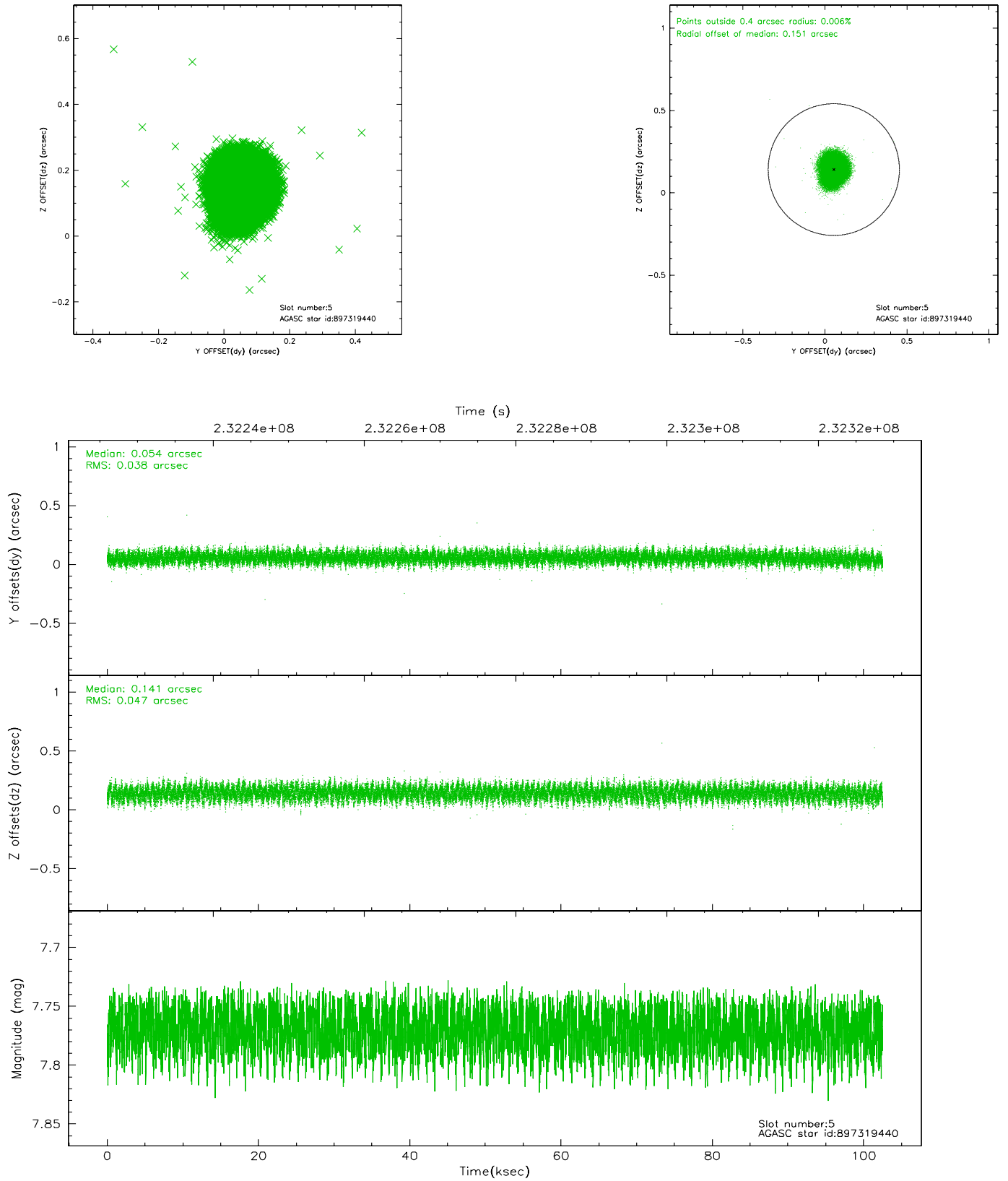
### 2.4.1 Slot 3



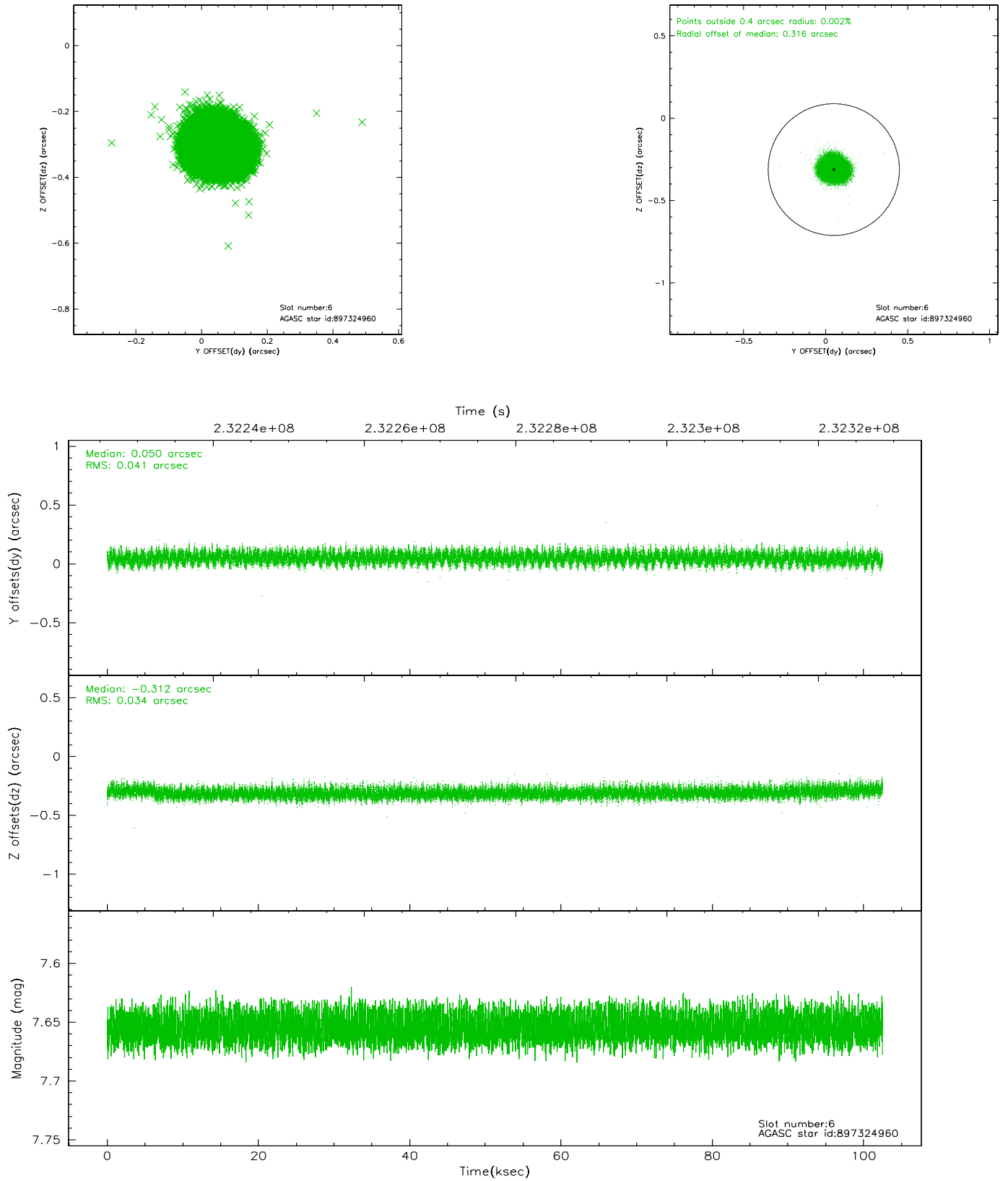
## 2.4.2 Slot 4



### 2.4.3 Slot 5

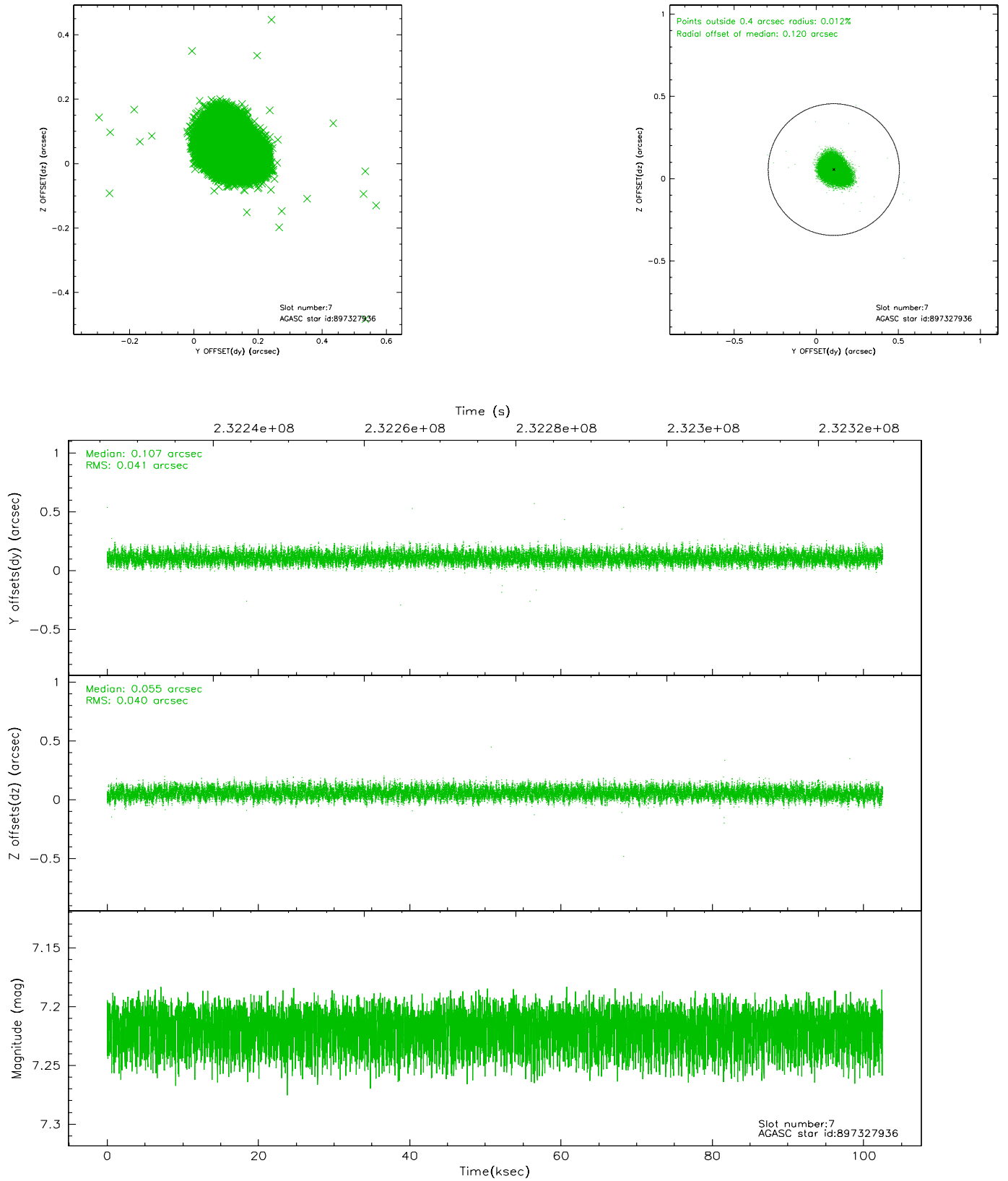


## 2.4.4 Slot 6



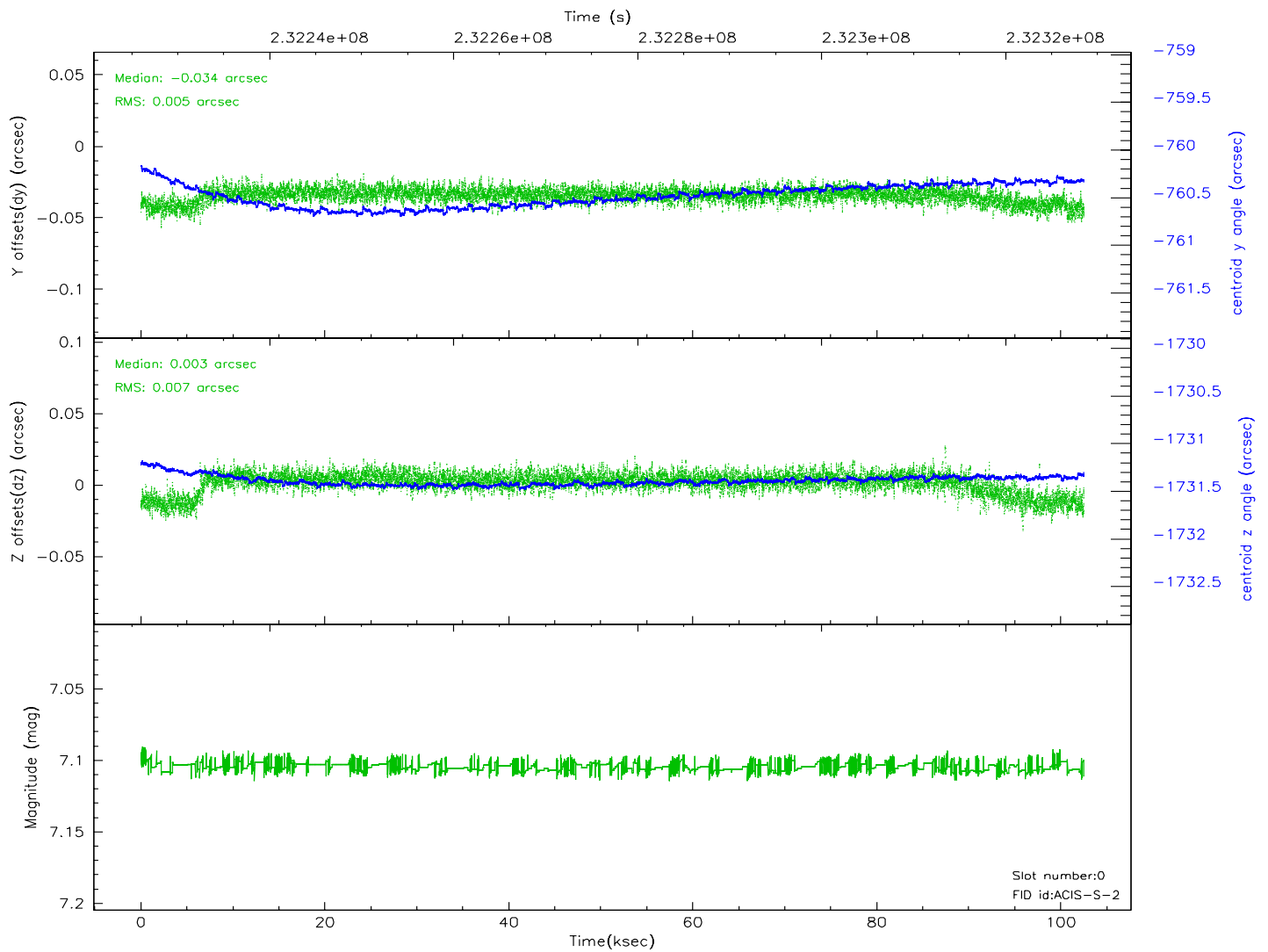
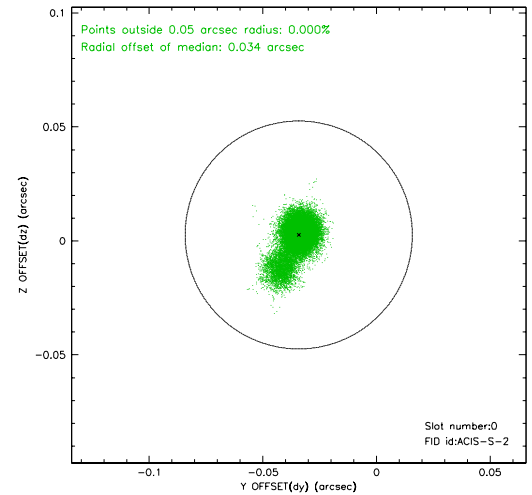
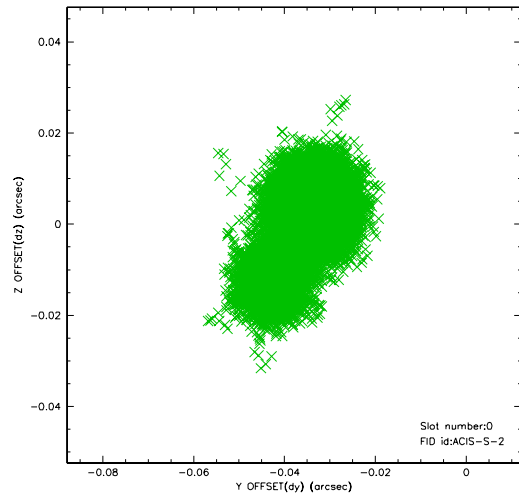


## 2.4.5 Slot 7

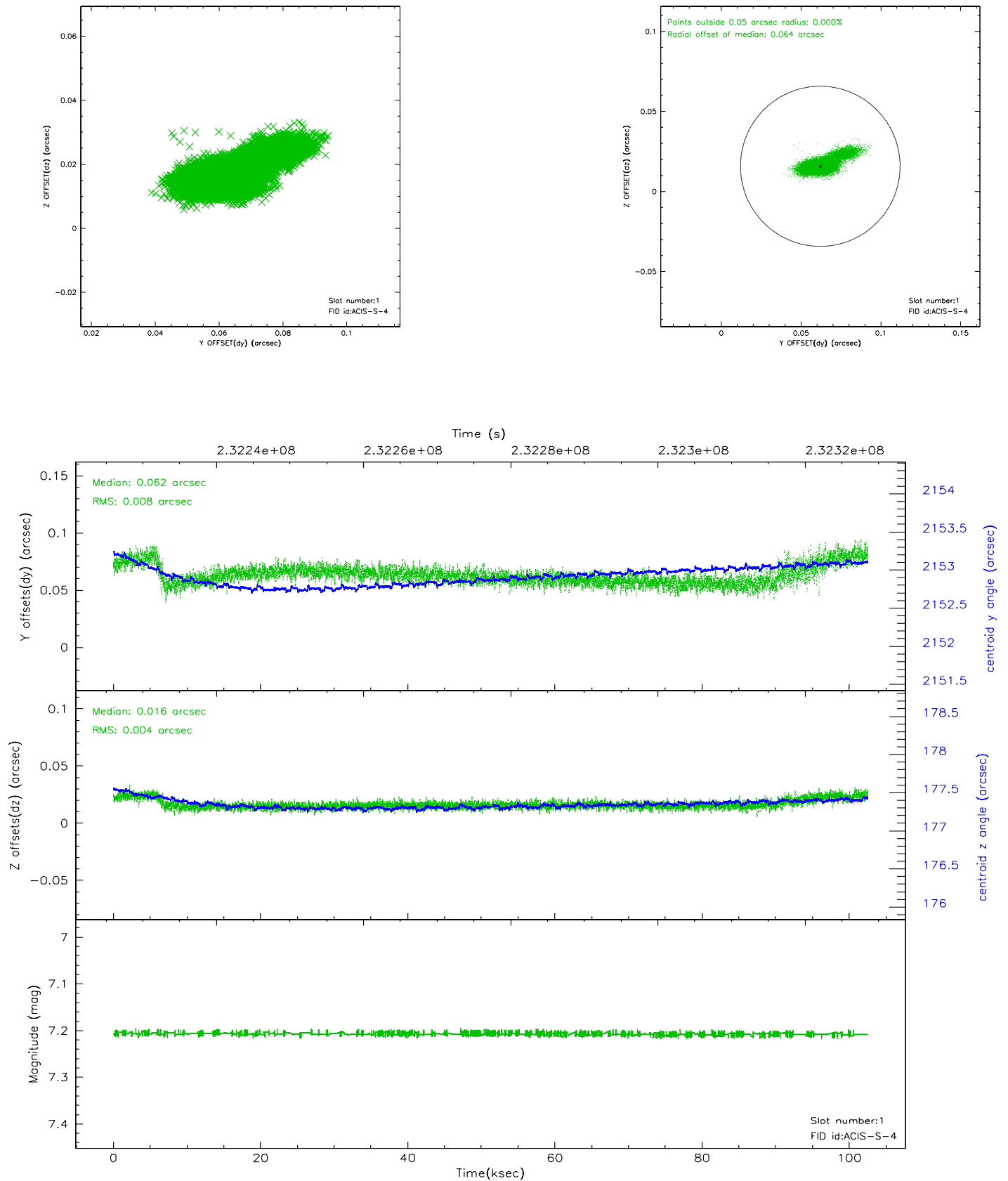


## 2.5 FID Slots

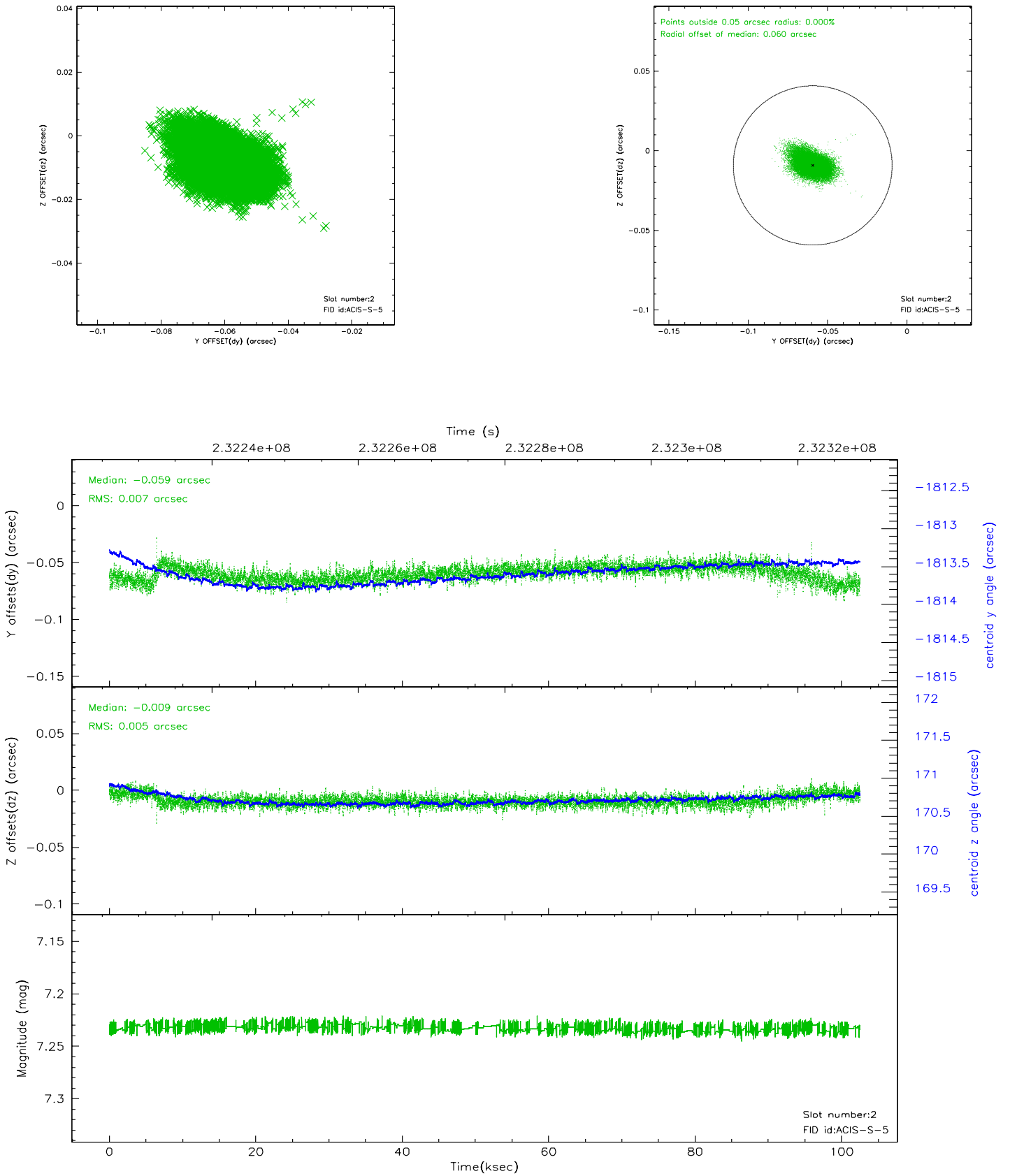
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

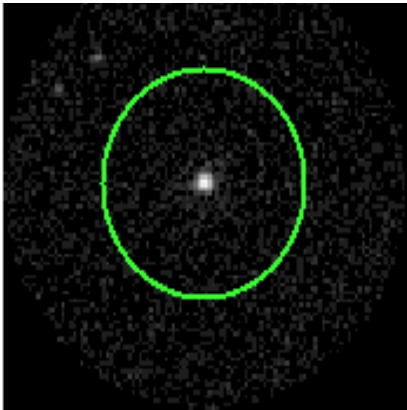


# 3 Gratings

## 3.1 HEG Arm



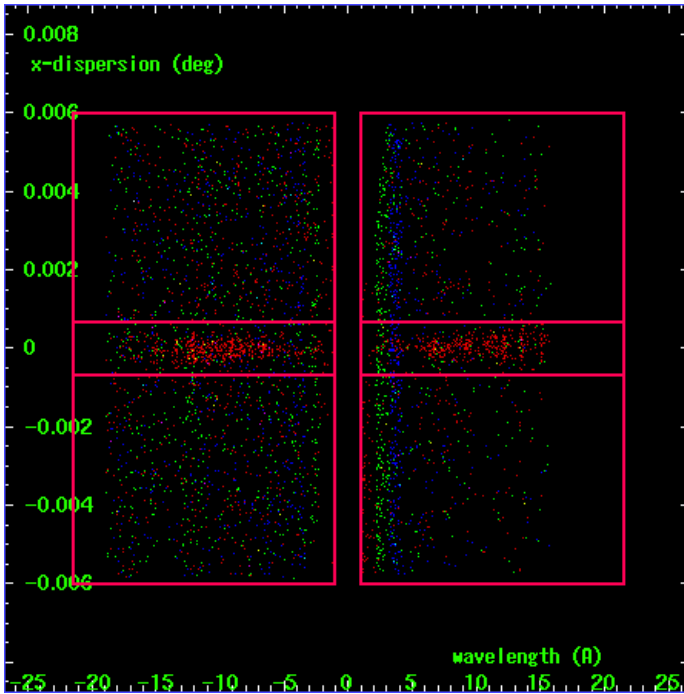
HEG Order Sort 123



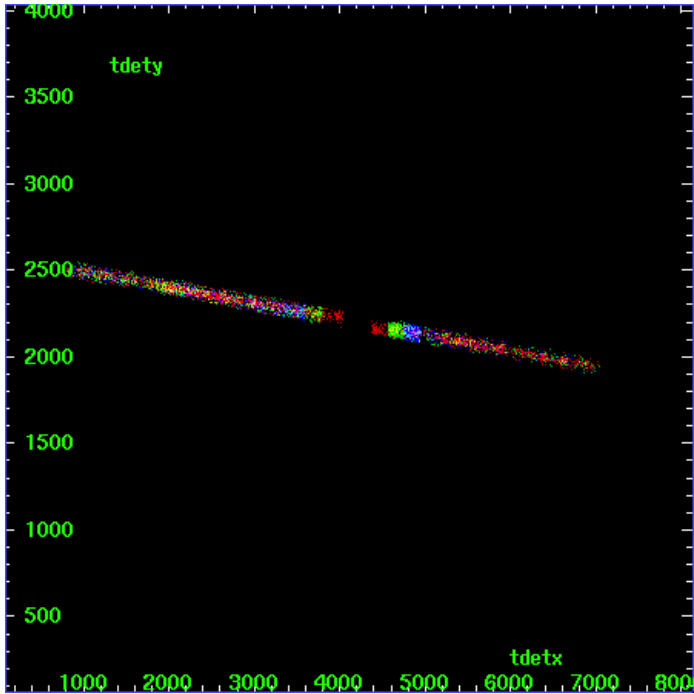
HEG Zero Order



HEG Order Sort ALL

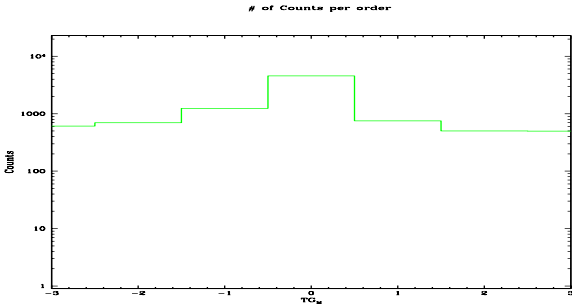


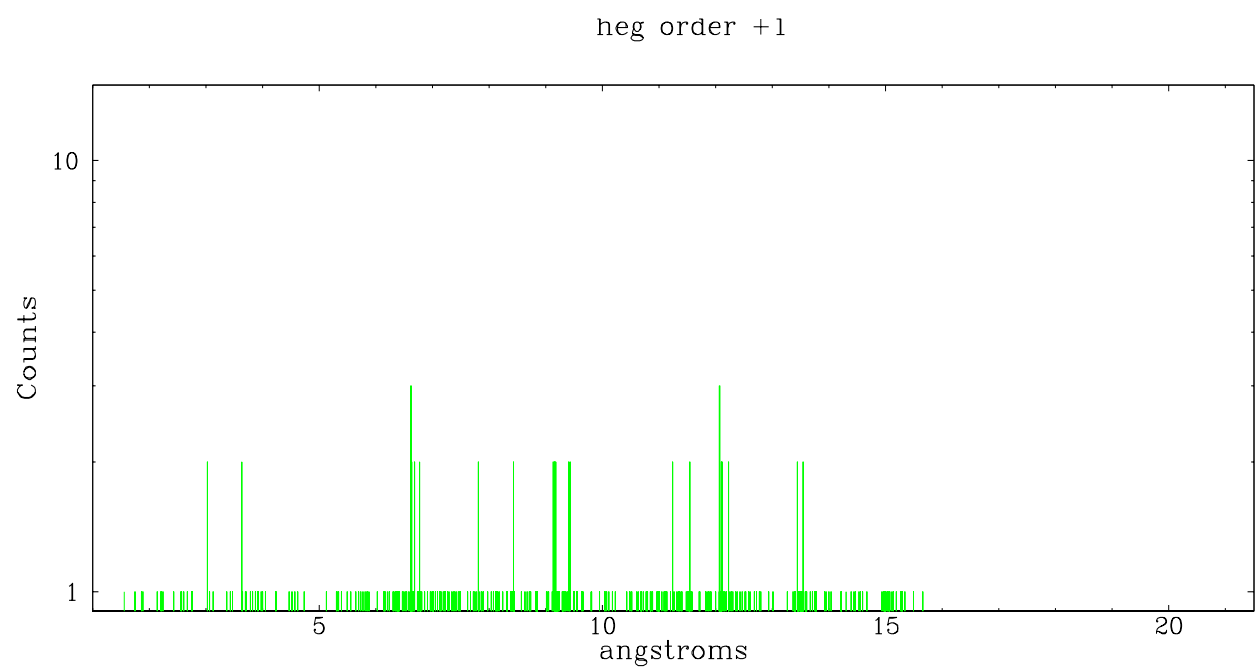
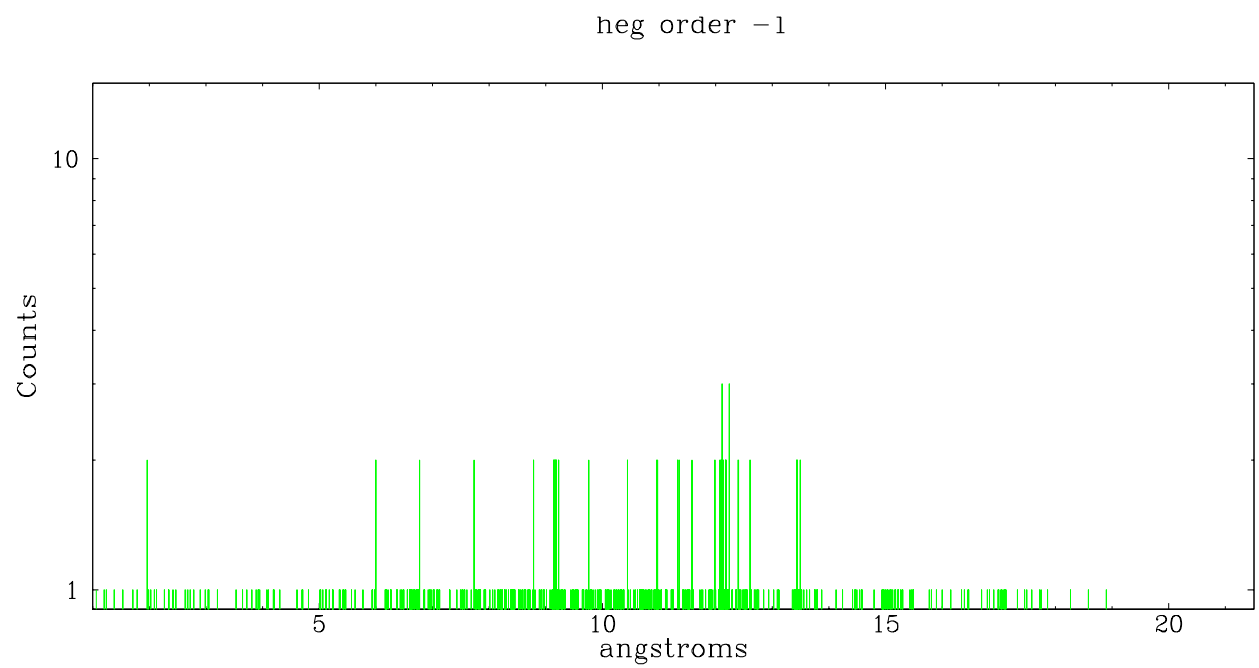
Spot Image HEG



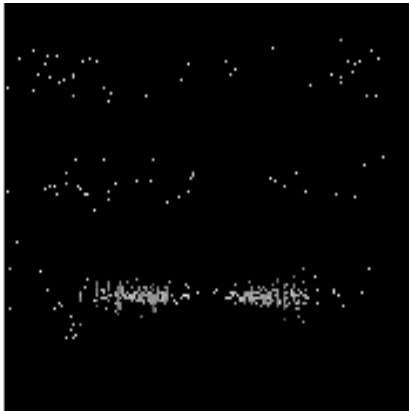
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	611	697	1237	4577	749	503	498

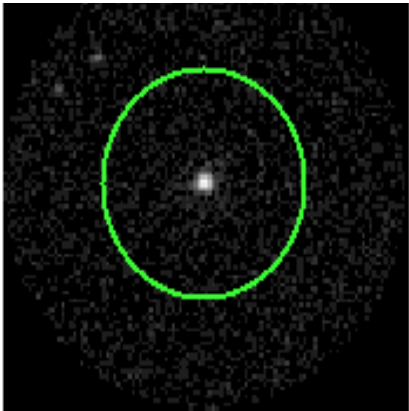




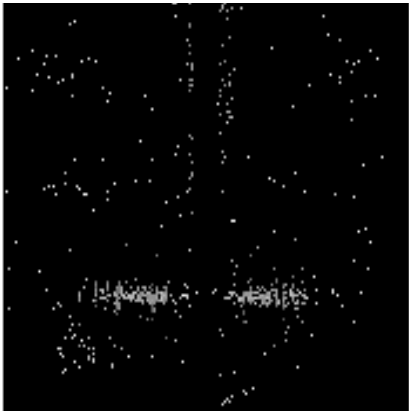
3.2 MEG Arm



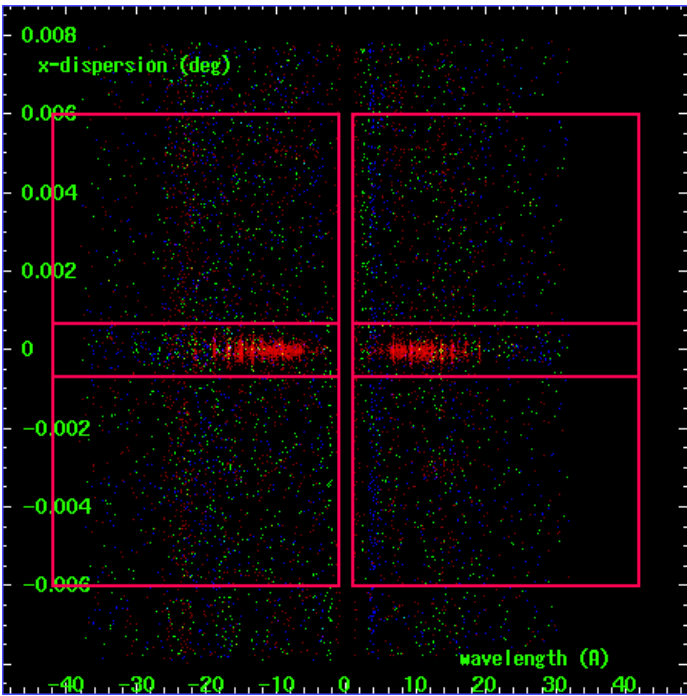
MEG Order Sort 123



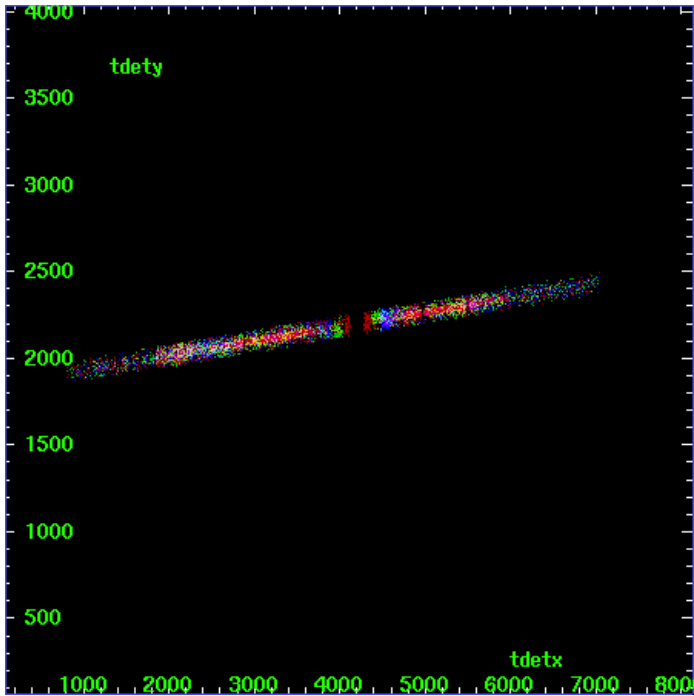
MEG Zero Order



MEG Order Sort ALL

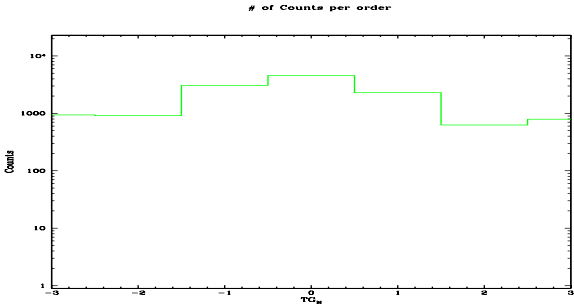


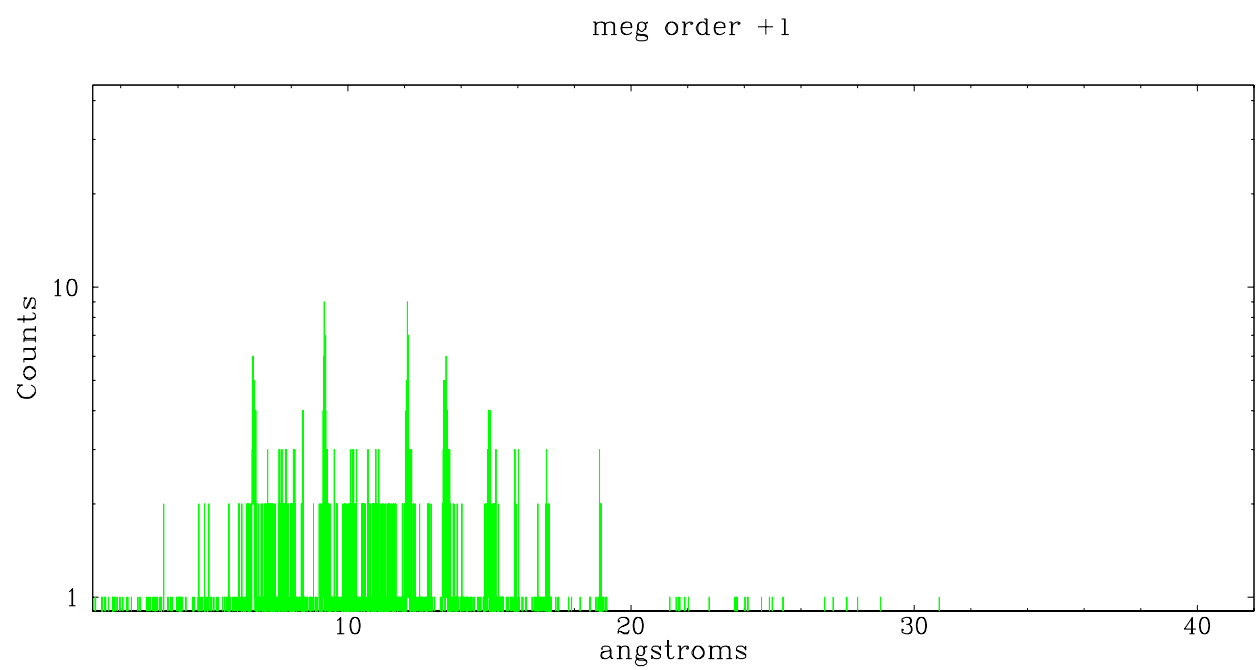
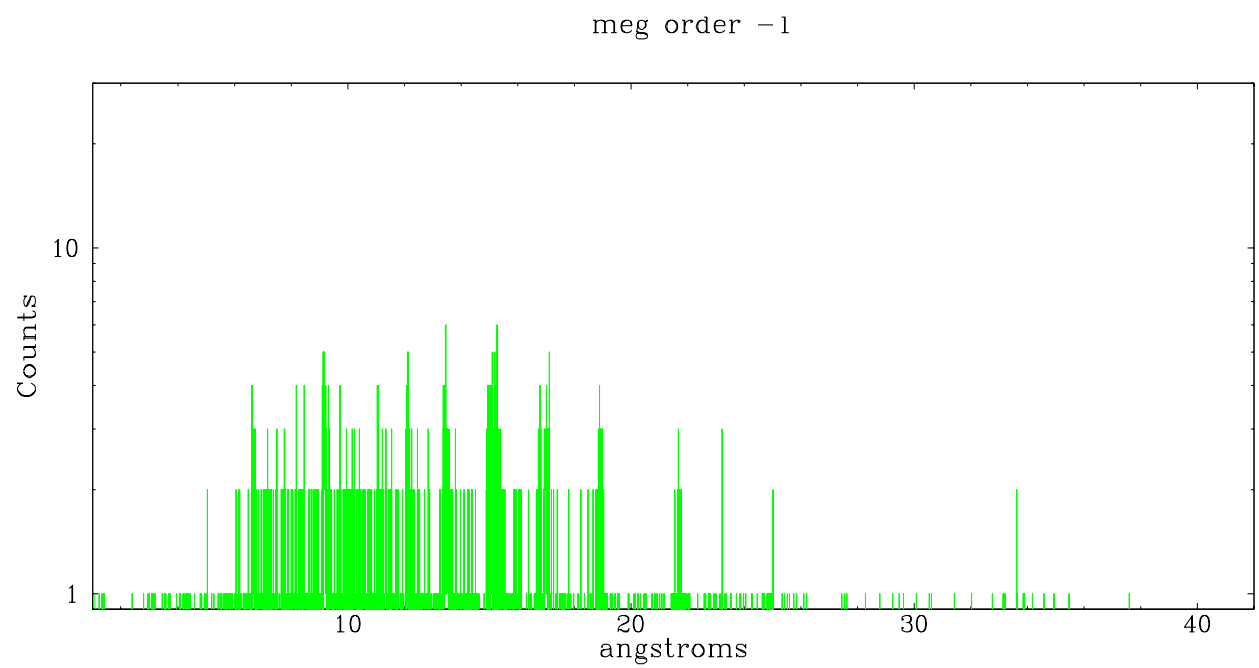
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	942	913	3063	4577	2287	627	790







## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.03.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	102.5246

### A.2 Comments