

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 6892 - L2 Version 2  
Chandra X-Ray Center

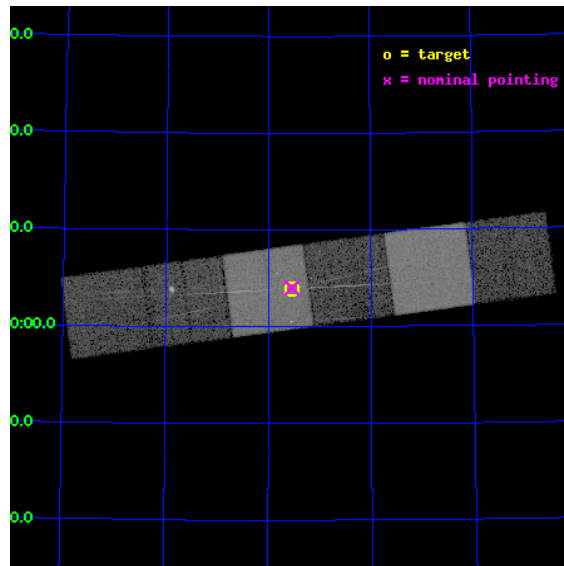
L2 Processing Date : Mar 27 2012

## 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	701309	Sequence number
obs_id	6892	Observation id
title	Testing Broad-Band Jet-Powered Emission in the LLAGN M81*	Proposal
observer	Dr Jon Miller	Principal investigator
object	M81*	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	148.888333	Observer's specified target RA [deg]
dec_targ	69.065306	Observer's specified target Dec [deg]
ra_nom	148.88549640588	Nominal RA [deg]
dec_nom	69.067095922636	Nominal Dec [deg]
roll_nom	172.29363832517	Nominal Roll [deg]
revision	2	Processing version of data
ontime	14950.296201319	Sum of GTIs [s]
livetime	14760.98654883	Livetime [s]
ontime4	14950.337241322	Sum of GTIs [s]
ontime5	14950.255161315	Sum of GTIs [s]
ontime6	14950.214121312	Sum of GTIs [s]
ontime7	14950.296201319	Sum of GTIs [s]
ontime8	14943.691130549	Sum of GTIs [s]
ontime9	14946.891051054	Sum of GTIs [s]
l2events	216733	Number of level 2 events

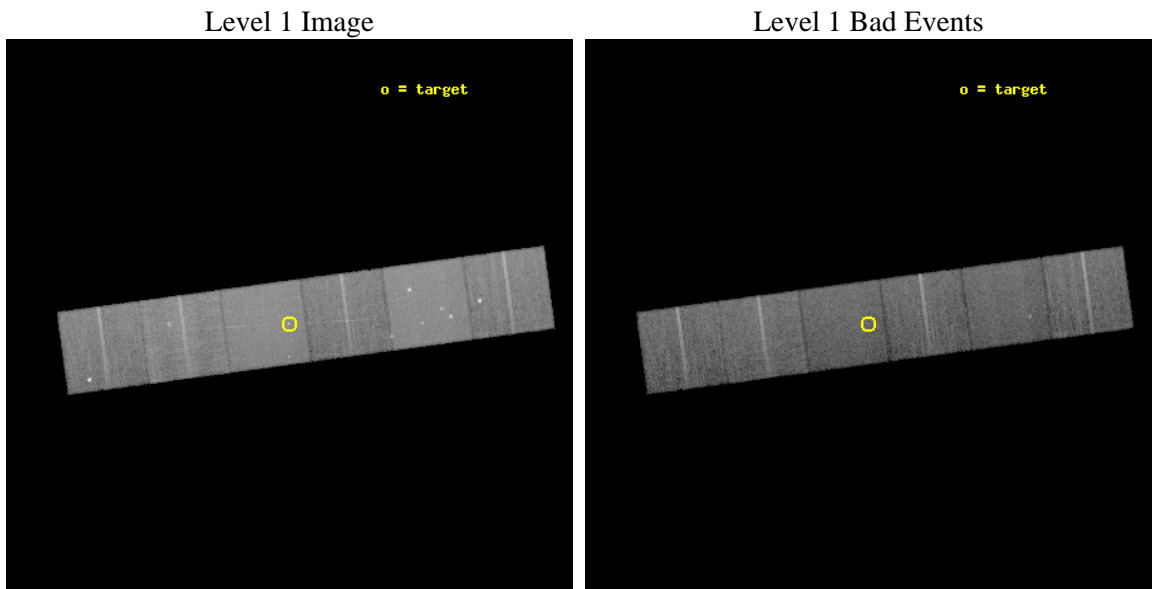




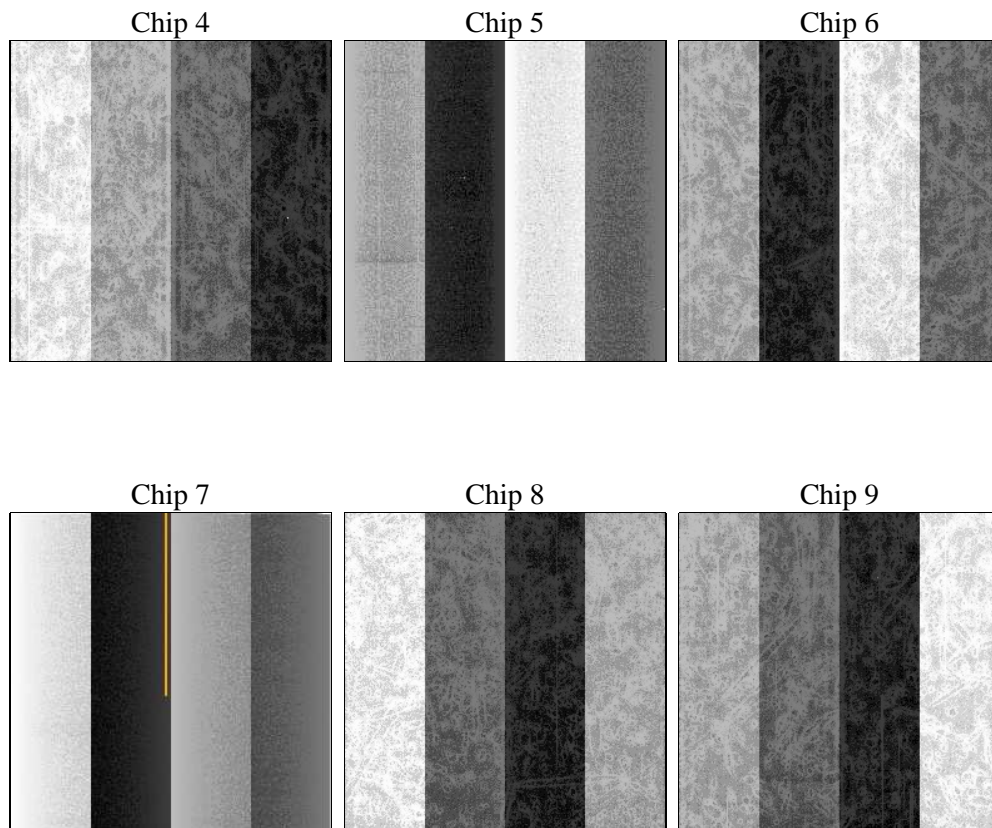
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	14950.296201319	Sum of GTIs [s]
caldsver	4.4.8	&#160	ontime4	14950.337241322	Sum of GTIs [s]
date	2012-03-25T02:16:48	Date and time of file creation	ontime5	14950.255161315	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	14950.214121312	Sum of GTIs [s]
			ontime7	14950.296201319	Sum of GTIs [s]
			ontime8	14943.691130549	Sum of GTIs [s]
			ontime9	14946.891051054	Sum of GTIs [s]
			l1events	940263	Number of level 1 events

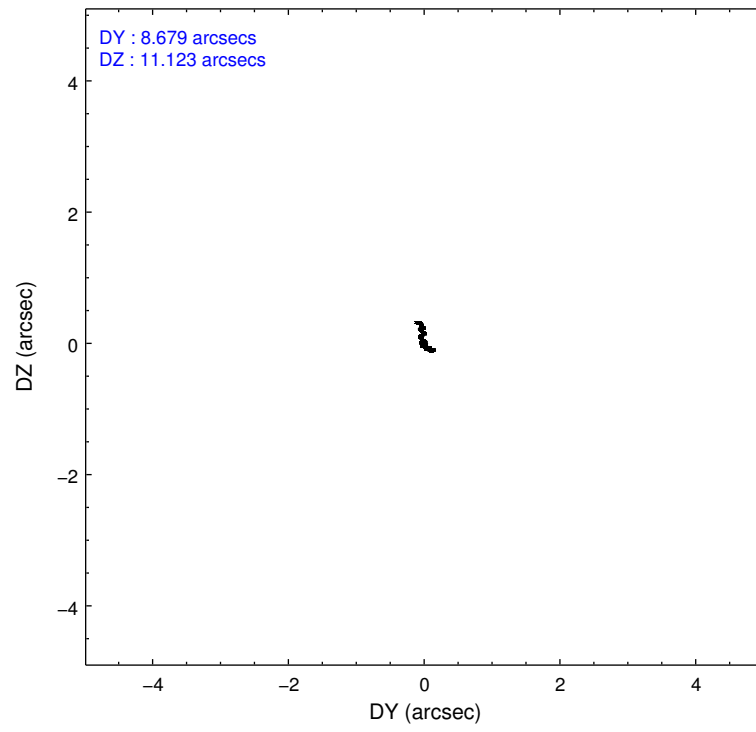
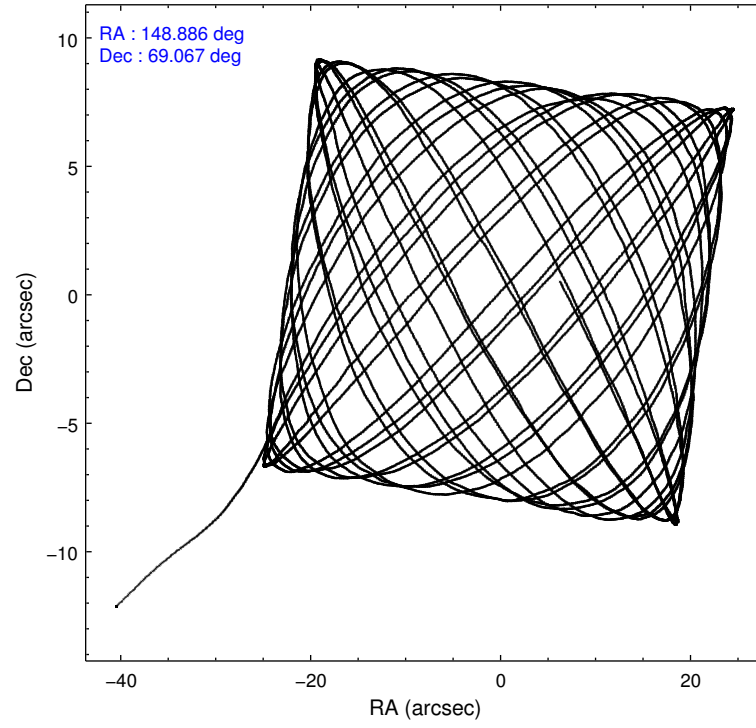
### 2.1.4 Events

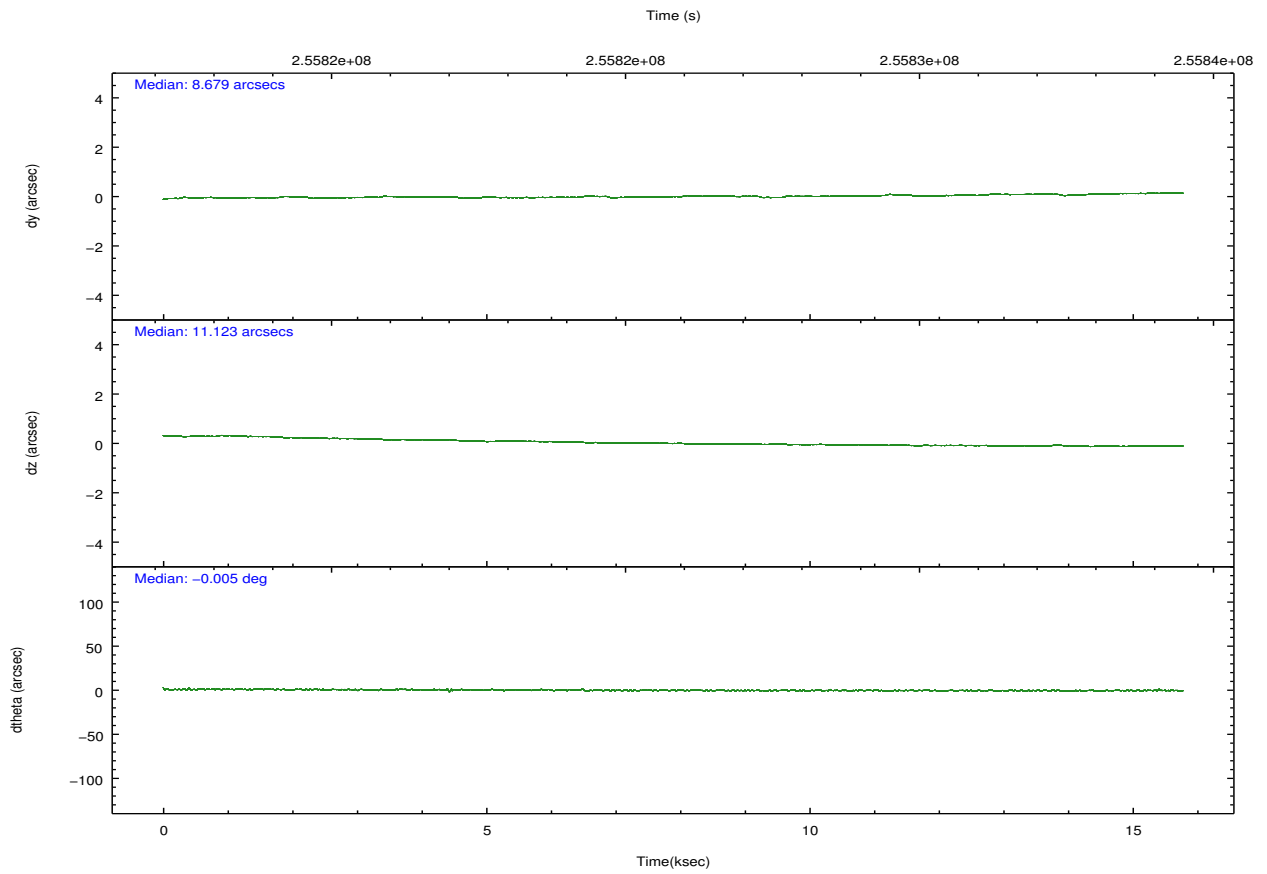
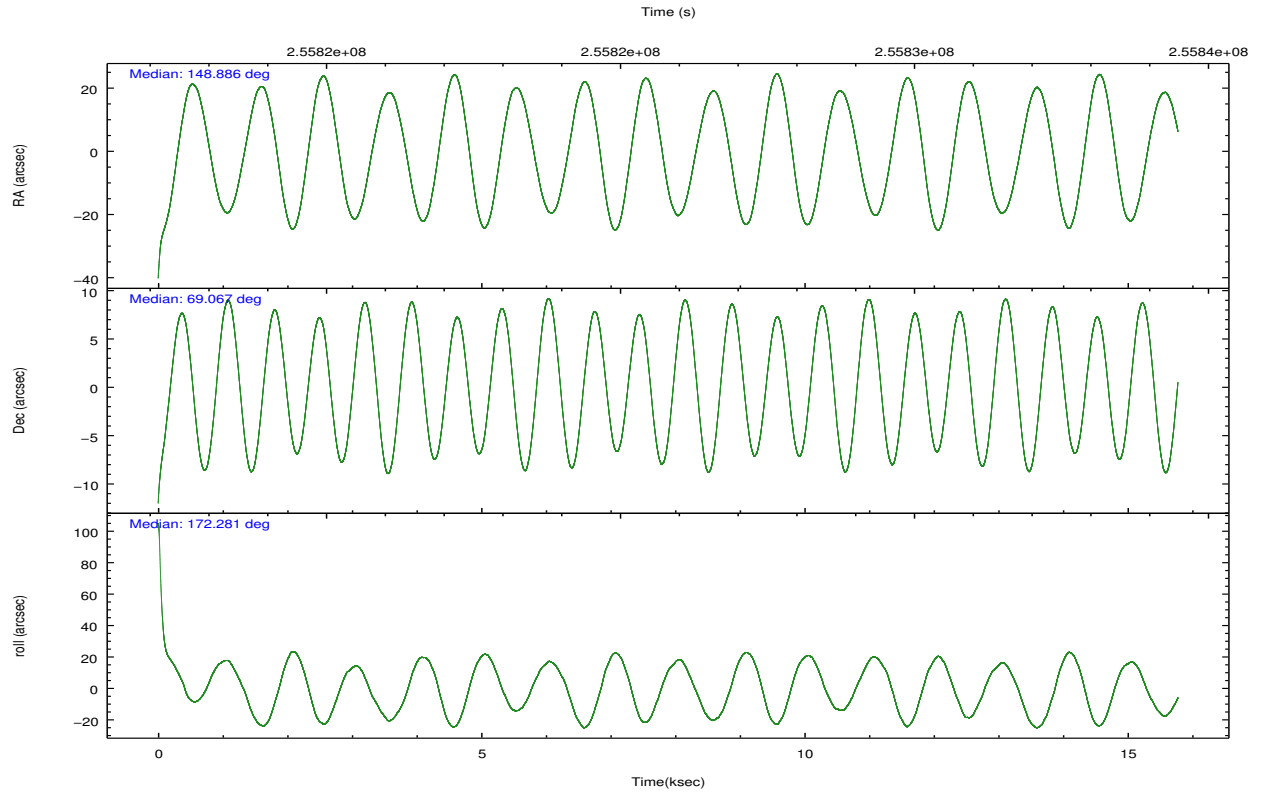
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	146444	192871	127583	177095	164976	131294	grade 0 events	10681	11469	7596	7213	12721	6840
rejected events	126655	102318	110264	100585	126769	110622		7%	5%	5%	4%	7%	5%
rejected %	86%	53%	86%	56%	76%	84%	grade 1 events	154	655	68	198	128	60
								0%	0%	0%	0%	0%	0%
							grade 2 events	3412	26016	3522	15548	8473	7612
								2%	13%	2%	8%	5%	5%
							grade 3 events	1672	3396	1564	6808	3773	1596
								1%	1%	1%	3%	2%	1%
							grade 4 events	1523	3268	1514	6873	3589	1485
								1%	1%	1%	3%	2%	1%
							grade 5 events	5685	13952	5941	16556	8125	6297
								3%	7%	4%	9%	4%	4%
							grade 6 events	2507	46415	3127	40081	9657	3150
								1%	24%	2%	22%	5%	2%
							grade 7 events	120810	87700	104251	83818	118510	104254
								82%	45%	81%	47%	71%	79%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
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
[deg] Pointing RA	148.955672	148.8854964058754	Subarray requested	NONE	NONE
[deg] Pointing Dec	69.077804	69.06709592263554	Alternating exposures requested	N	N
[deg] Pointing Roll	172.071405	172.2936383251727	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	255818689.184000	255817275.13406			
Observation start date	2006-02-08T20:43:44	2006-02-08T20:21:15			
[s] Observation end time (MET)	255833689.184000	255834147.65984			
Observation end date	2006-02-09T00:53:44	2006-02-09T01:02:27			
Read mode	TIMED	TIMED			

## 2.3 Aspect



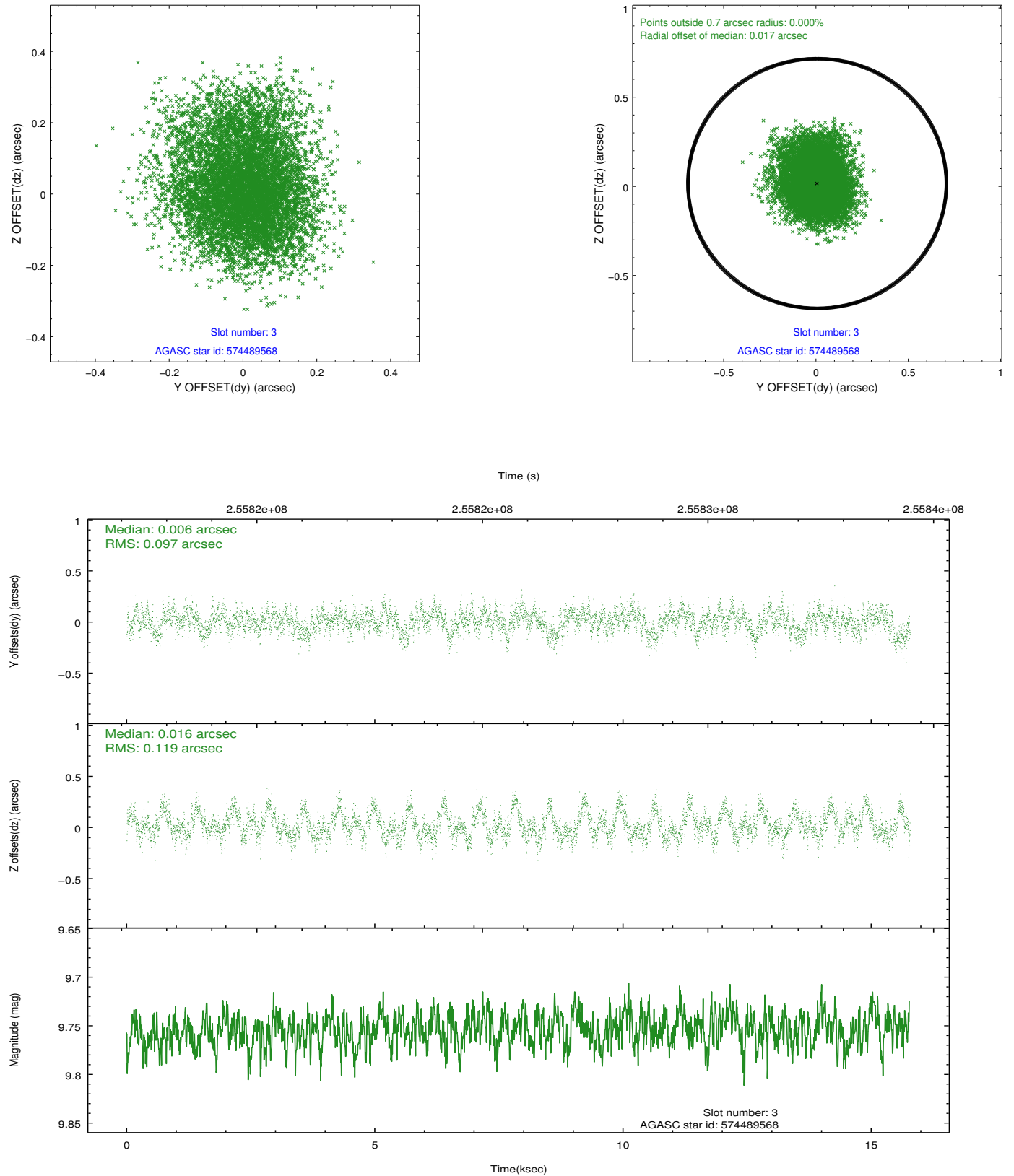


### Slot Statistics

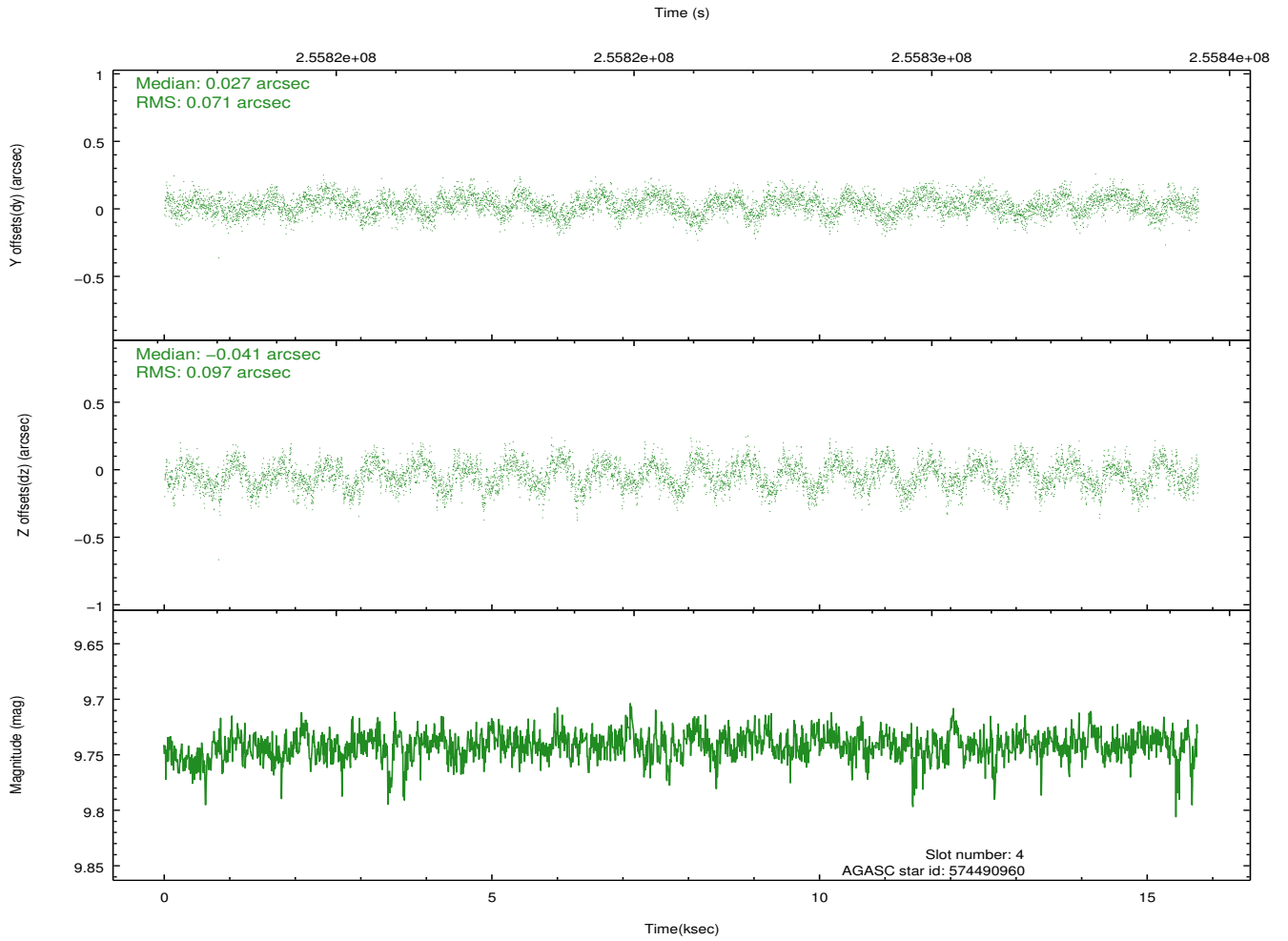
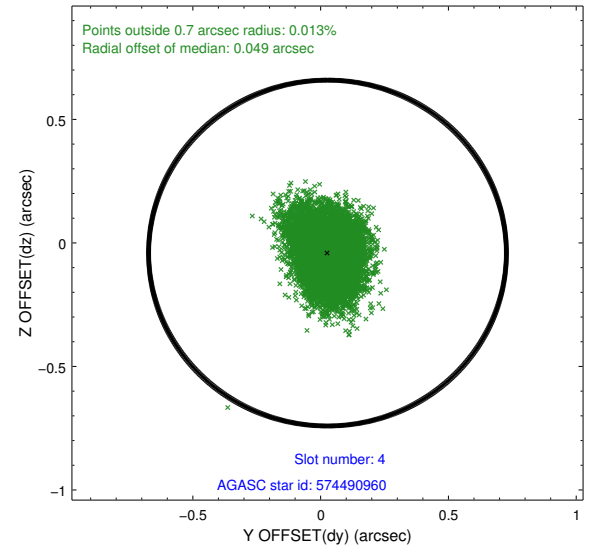
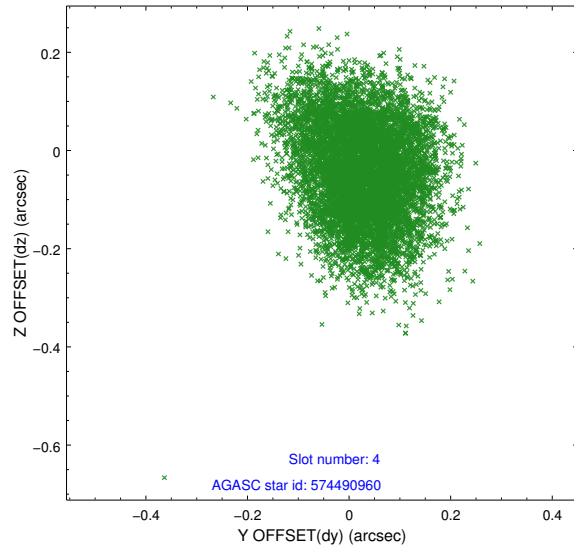
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	3848	-0.033	-0.014	0.008	0.013	0.000000	0.000000	-761.49	-1732.41
1	FID	ACIS-S-4	7.21	3847	0.132	0.020	0.007	0.012	0.000000	0.000000	2151.79	175.86
2	FID	ACIS-S-5	7.23	3849	-0.130	0.003	0.007	0.012	0.000000	0.000000	-1814.10	169.77
3	GUIDE	574489568	9.75	7695	0.006	0.016	0.167	0.266	147.223974	69.438157	2351.81	-1013.26
4	GUIDE	574490960	9.74	7690	0.027	-0.041	0.128	0.207	148.185918	69.658768	1244.31	-1944.57
5	GUIDE	574491280	9.33	7684	0.063	-0.106	0.102	0.163	148.611567	69.450135	616.94	-1268.56
6	GUIDE	574500920	10.11	7689	0.045	0.116	0.158	0.268	147.014605	68.742334	2347.69	1506.18
7	GUIDE	574491184	9.07	7690	-0.129	0.003	0.092	0.145	148.582453	69.768699	804.25	-2400.64

## 2.4 Star Slots

### 2.4.1 Slot 3

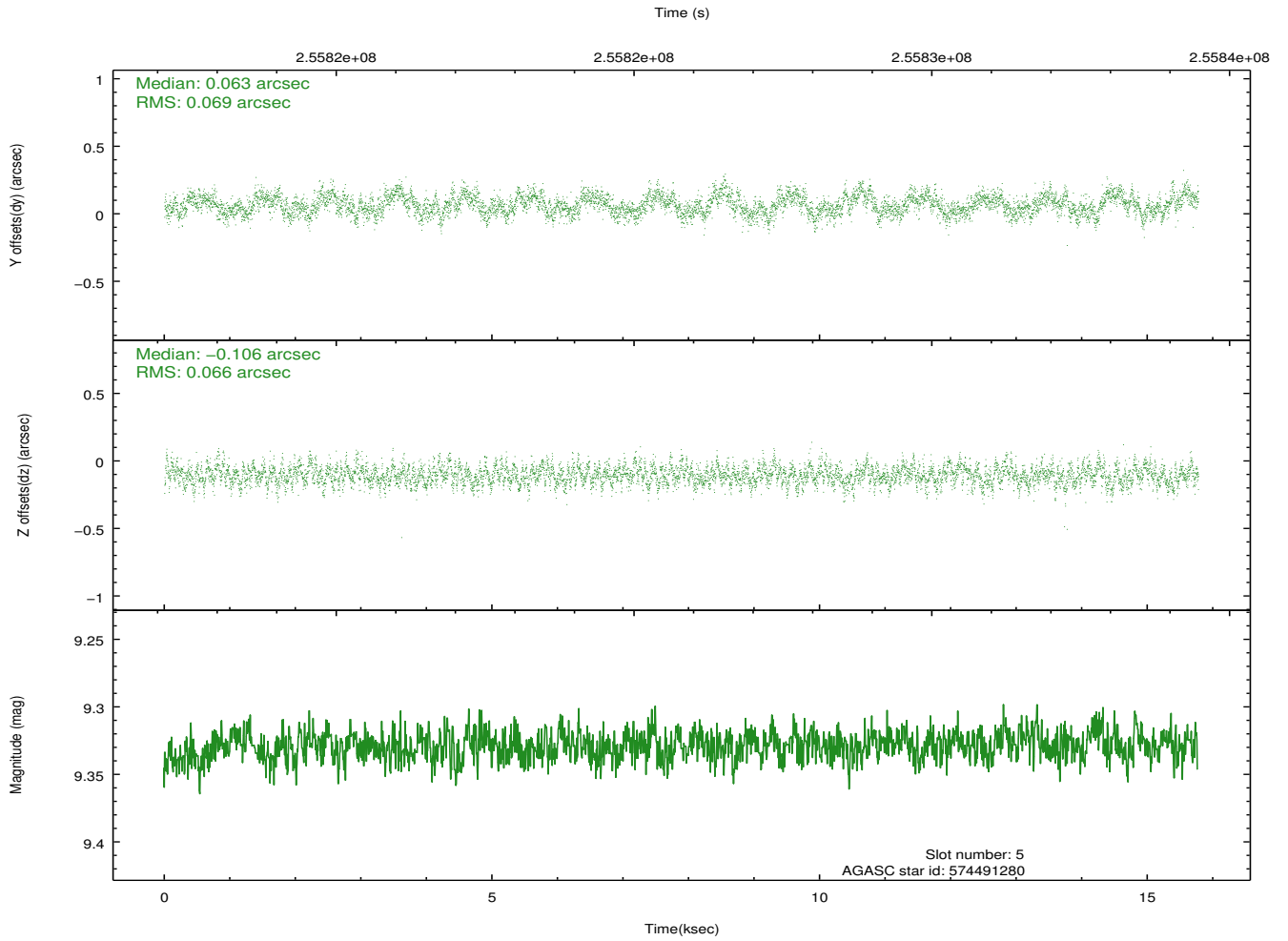
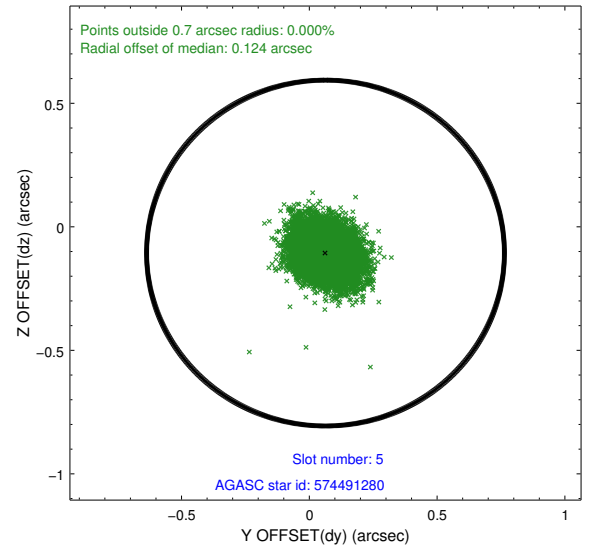
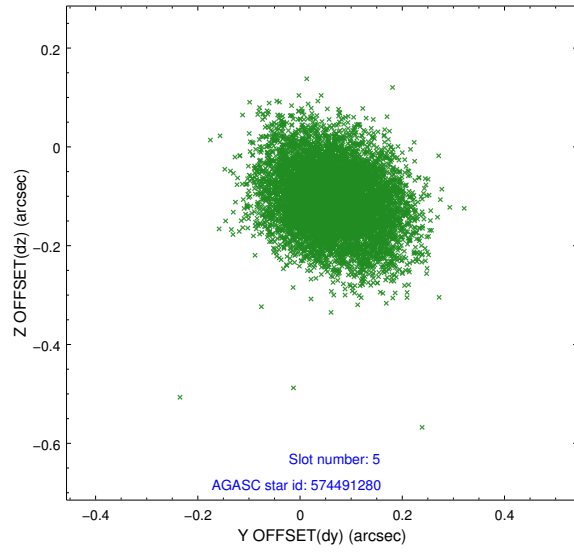


## 2.4.2 Slot 4

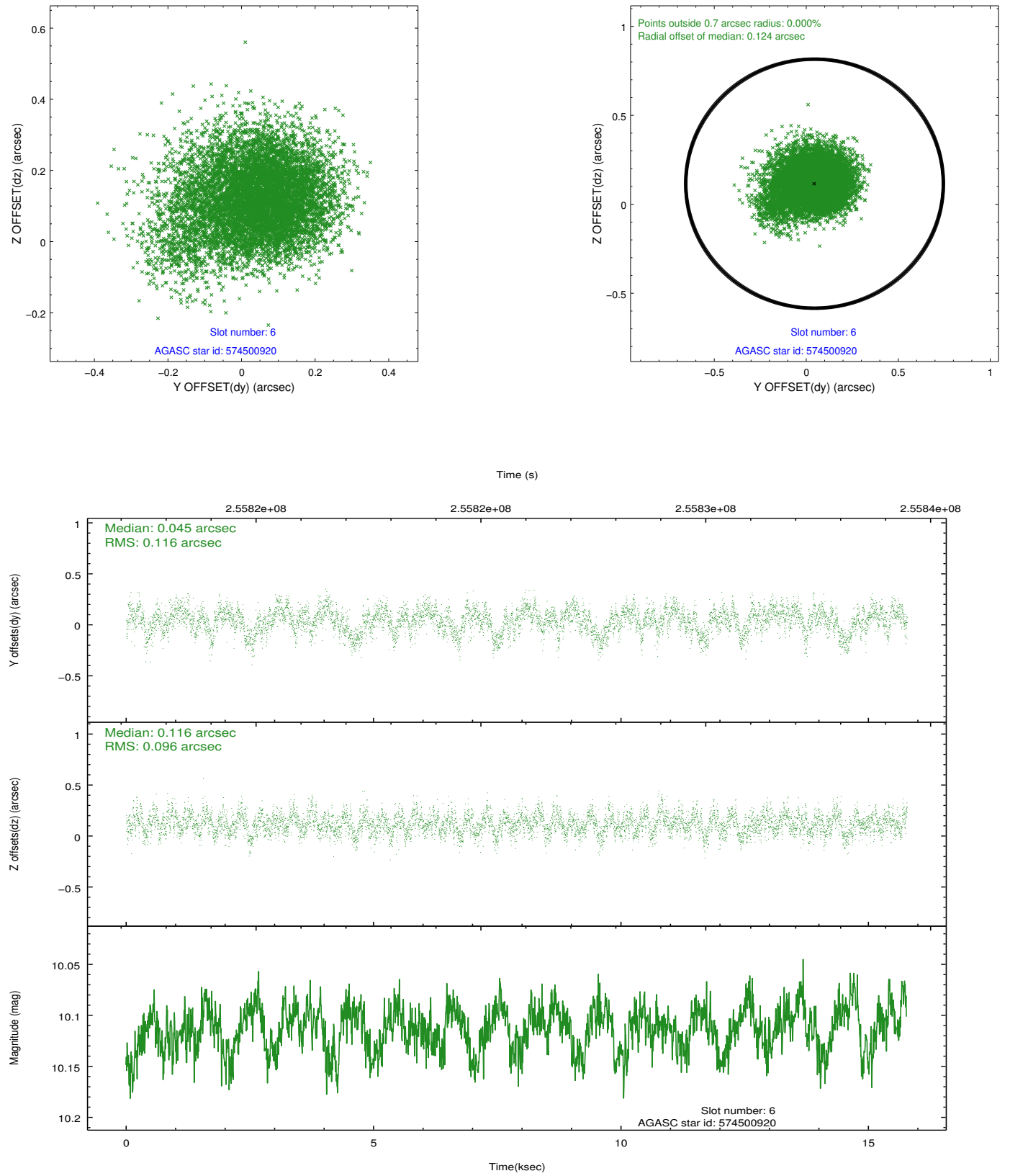




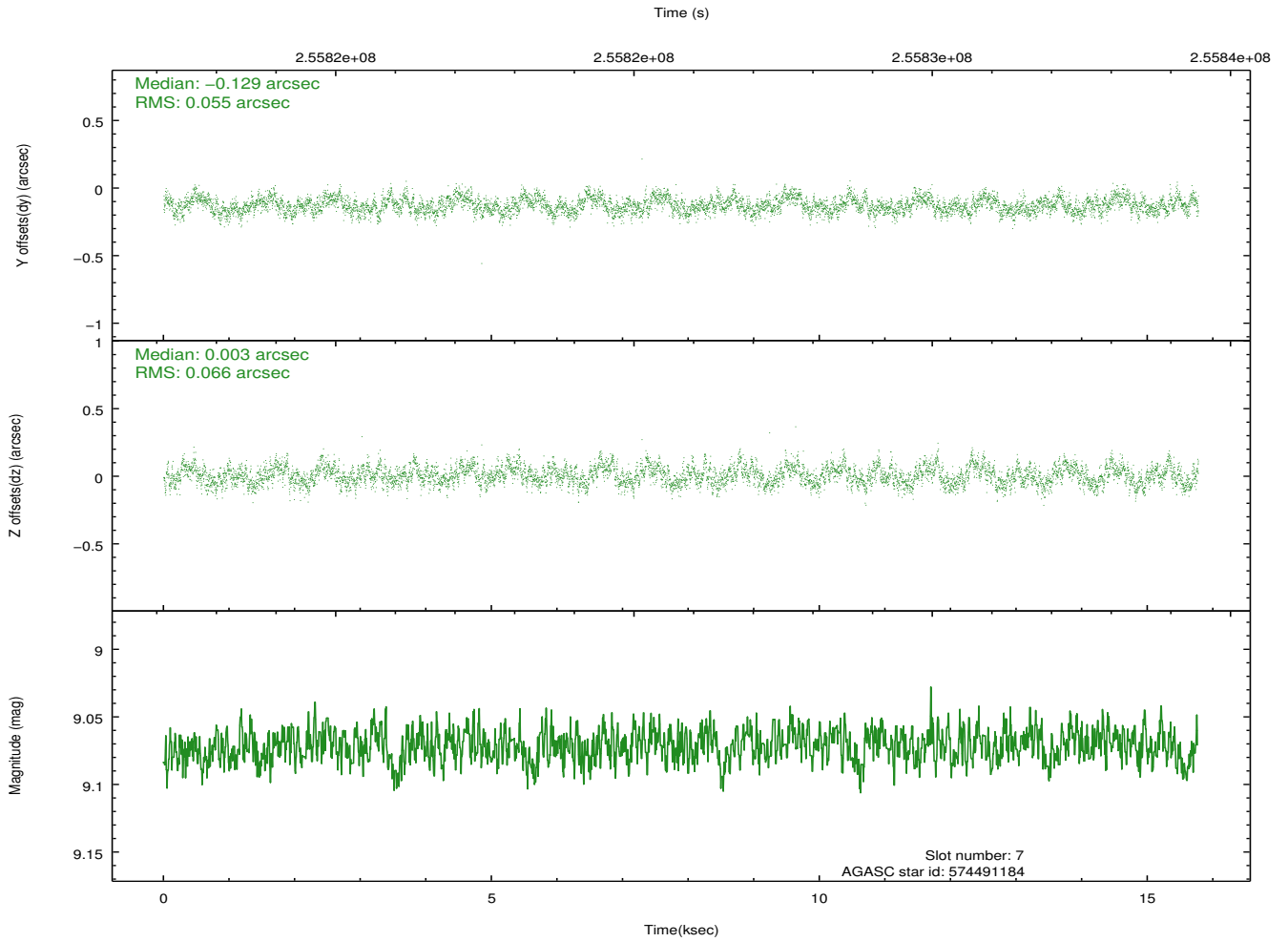
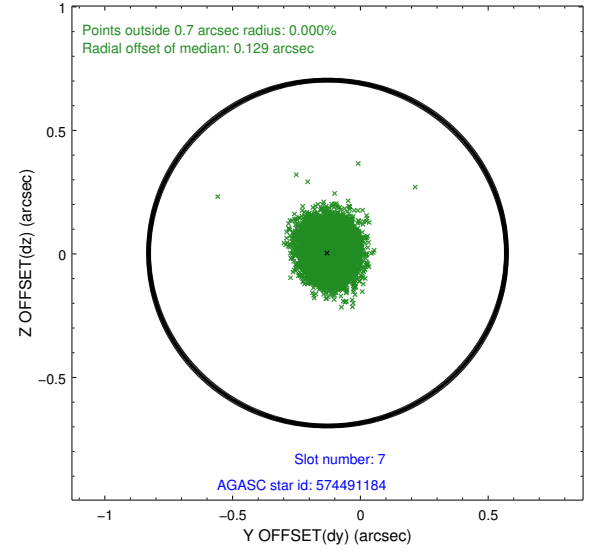
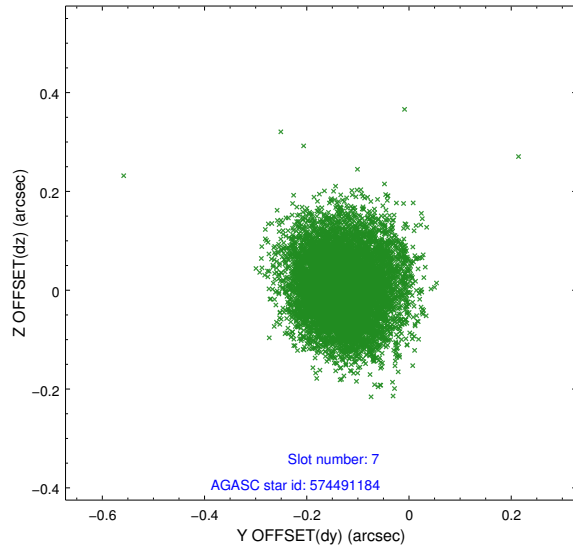
### 2.4.3 Slot 5



## 2.4.4 Slot 6

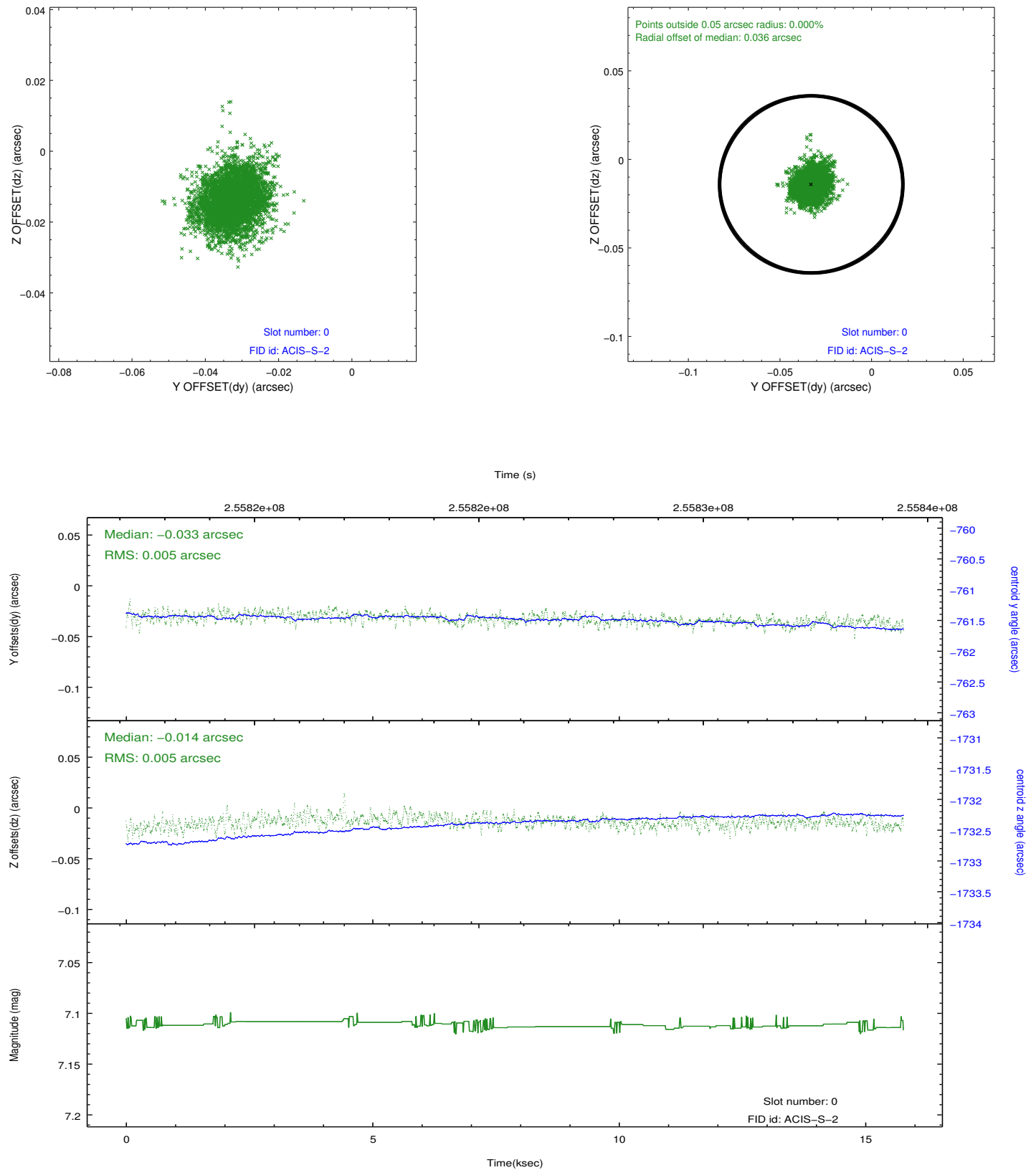


## 2.4.5 Slot 7

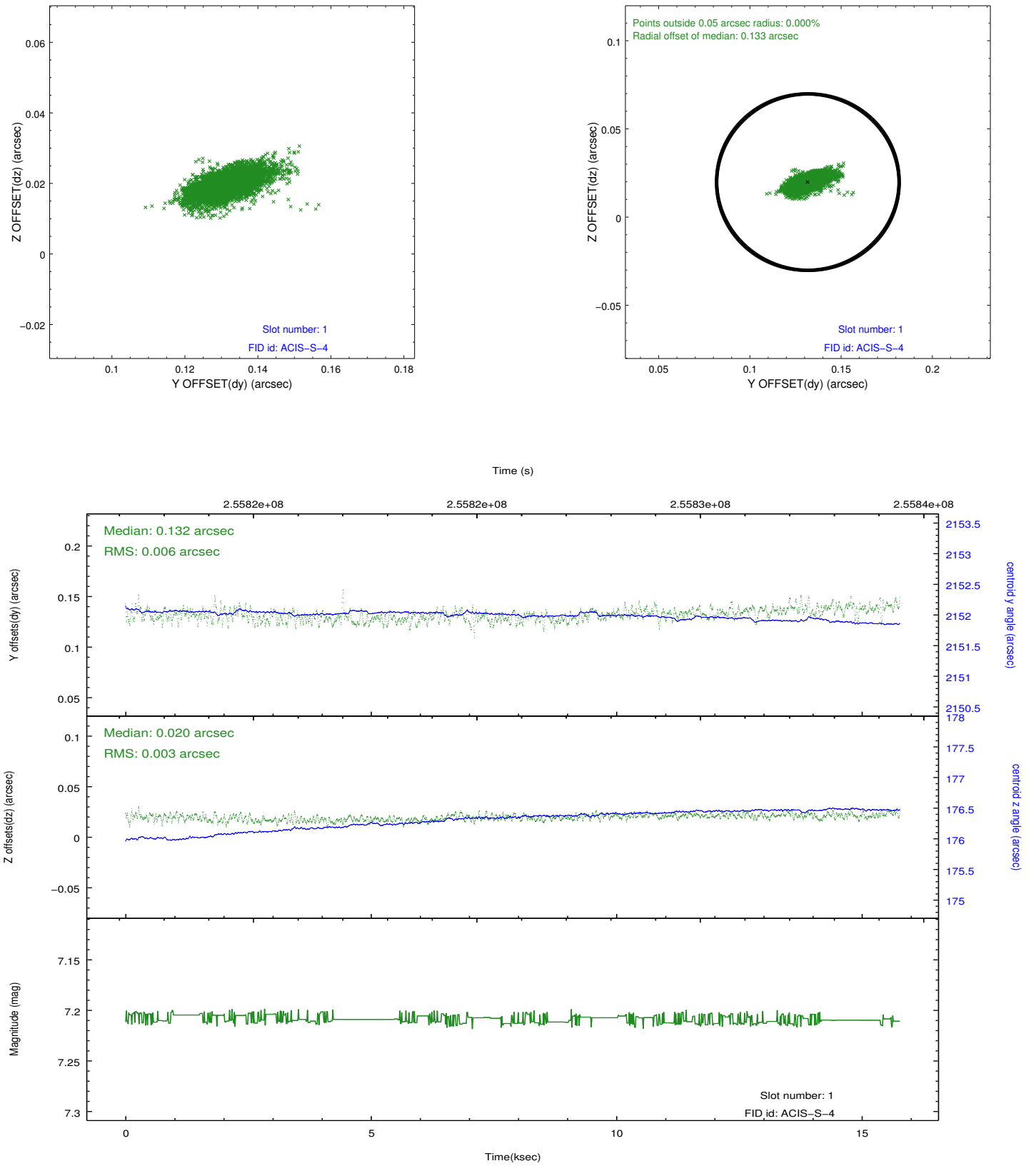


## 2.5 FID Slots

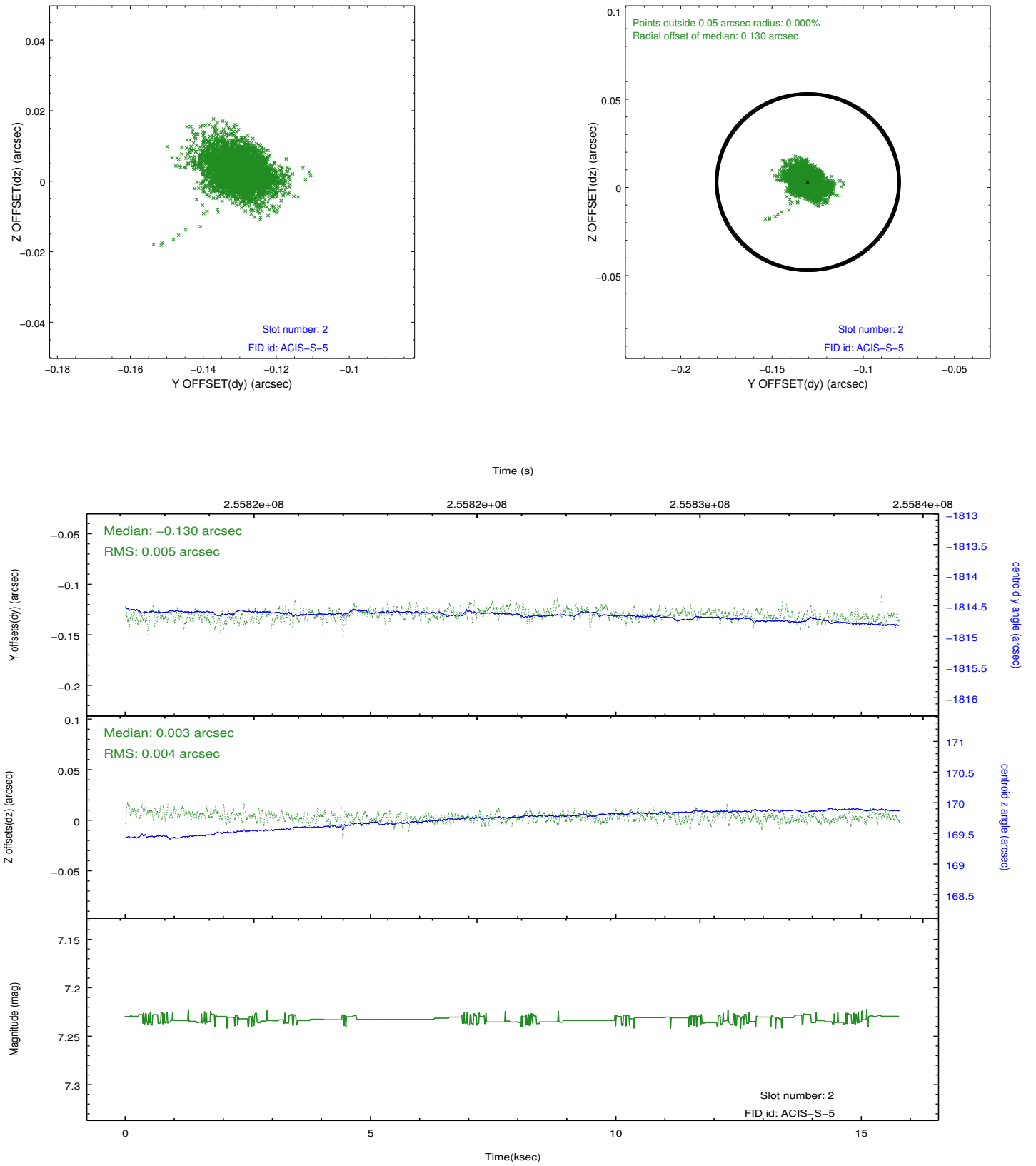
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

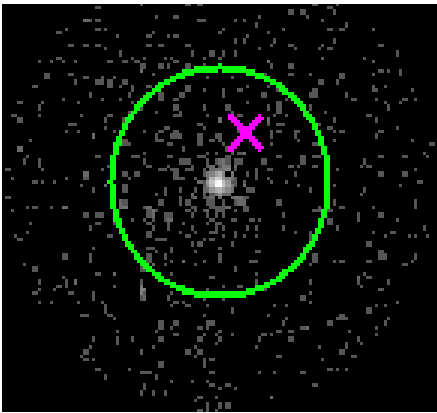


# 3 Gratings

## 3.1 HEG Arm



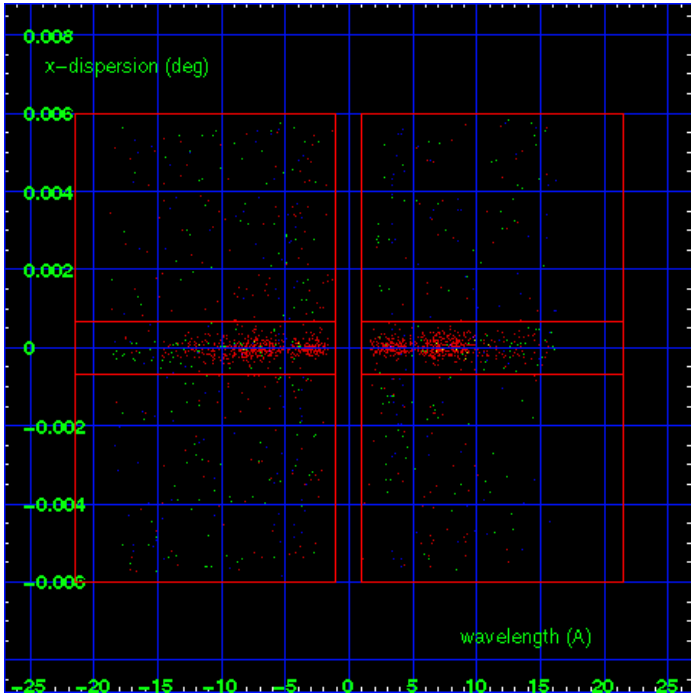
HEG Order Sort 123



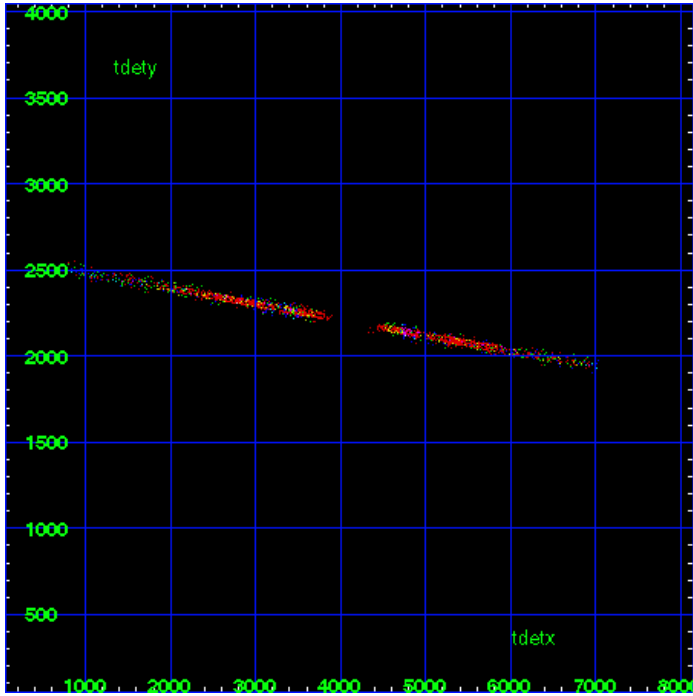
HEG Zero Order



HEG Order Sort ALL

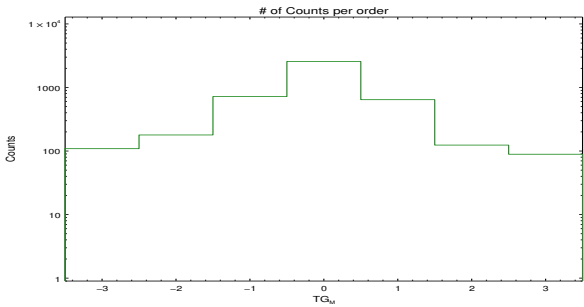


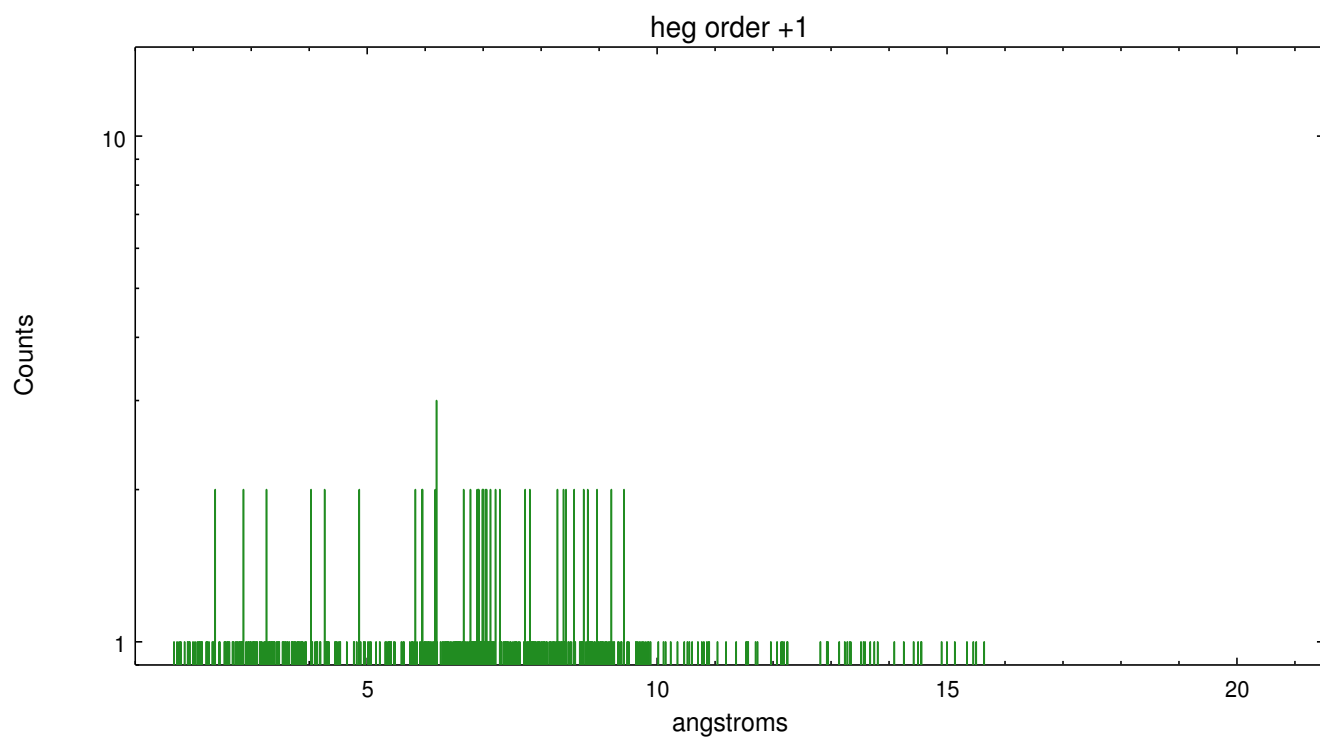
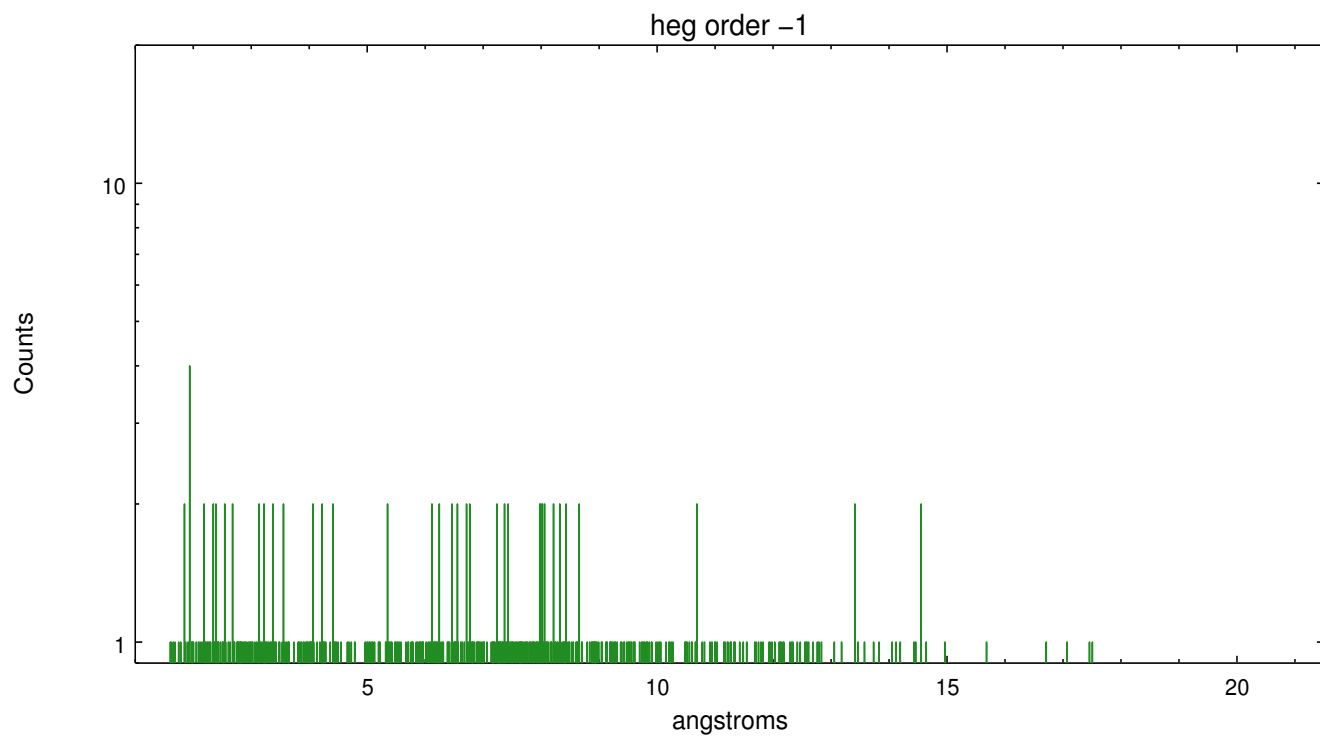
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	109	179	719	2566	643	124	89



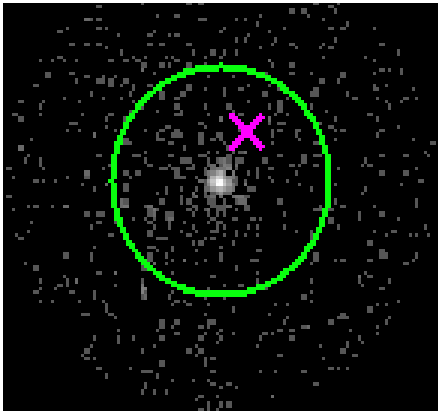




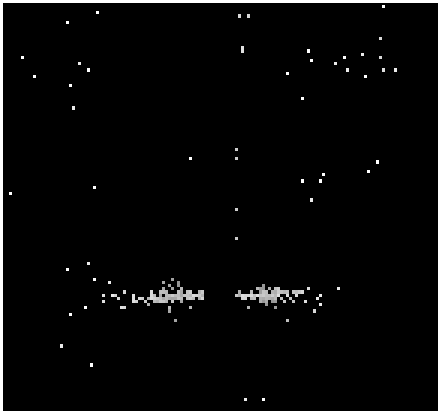
3.2 MEG Arm



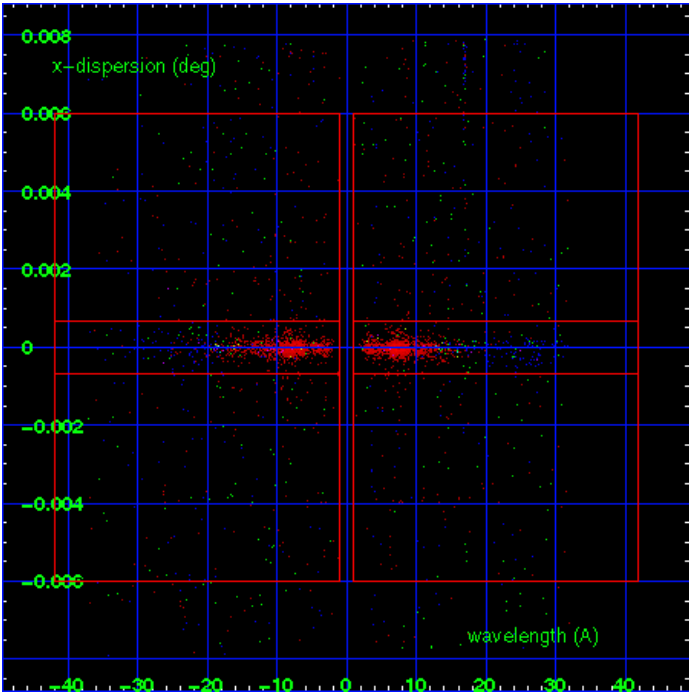
MEG Order Sort 123



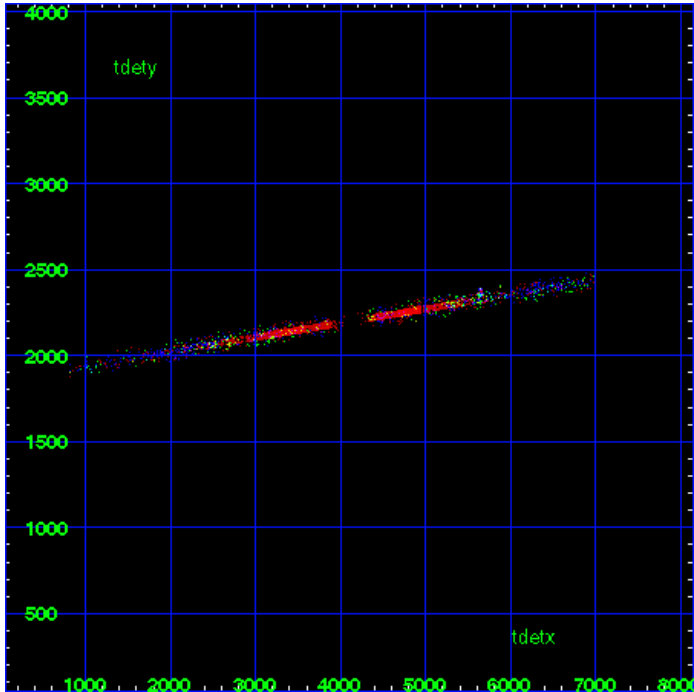
MEG Zero Order



MEG Order Sort ALL

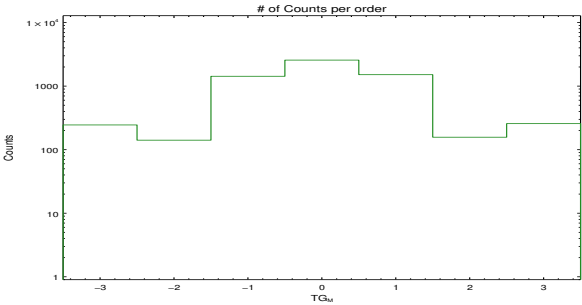


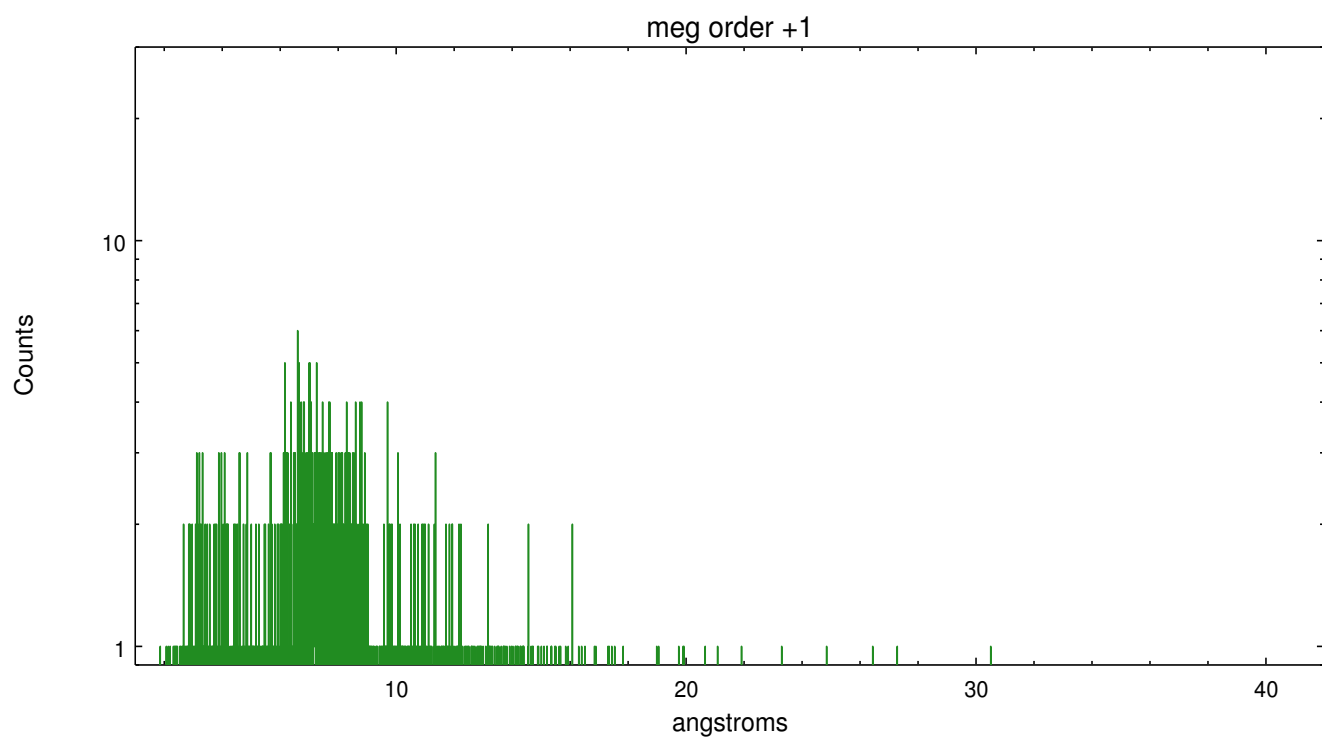
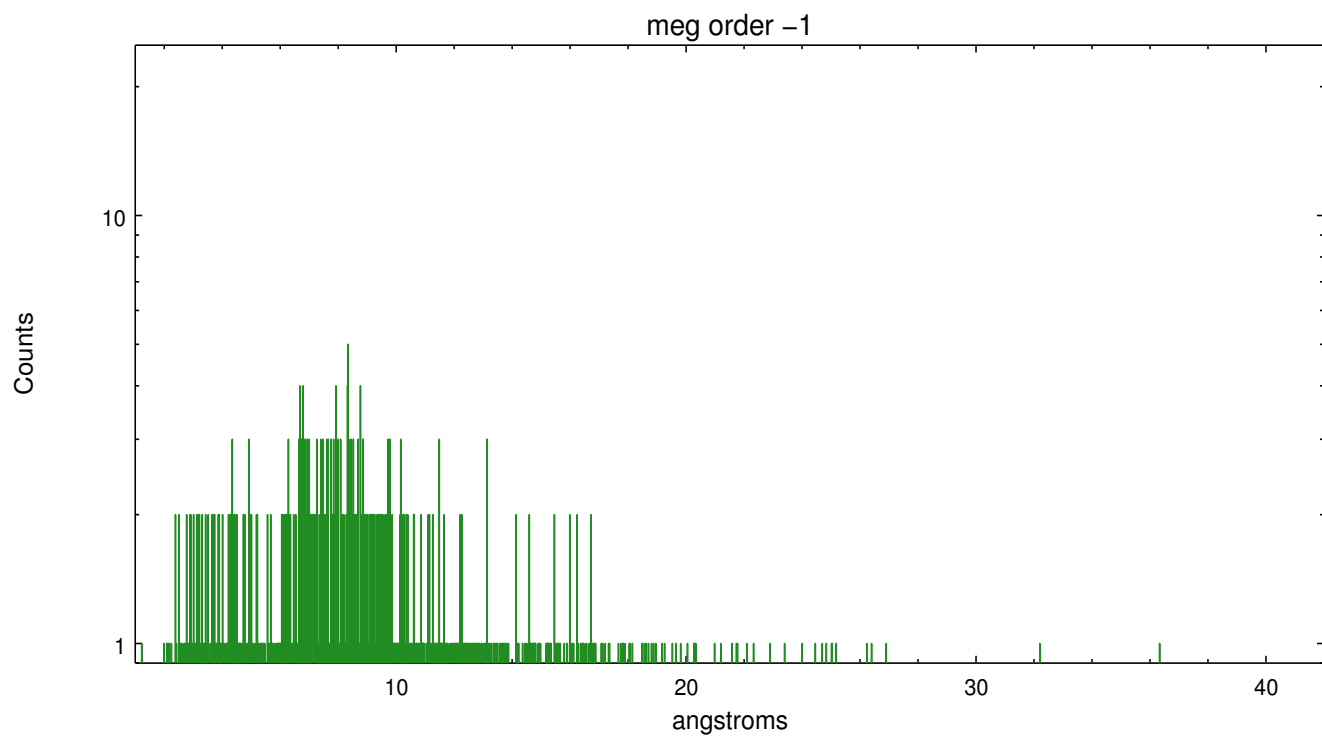
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	245	141	1428	2566	1514	157	257





# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.03.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.9503999

## A.2 Comments

Possible low-level contamination of one of the MEG +1 background regions (near  $\sim 16$  A) by an off-axis source.