

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 6898 - L2 Version 2  
Chandra X-Ray Center

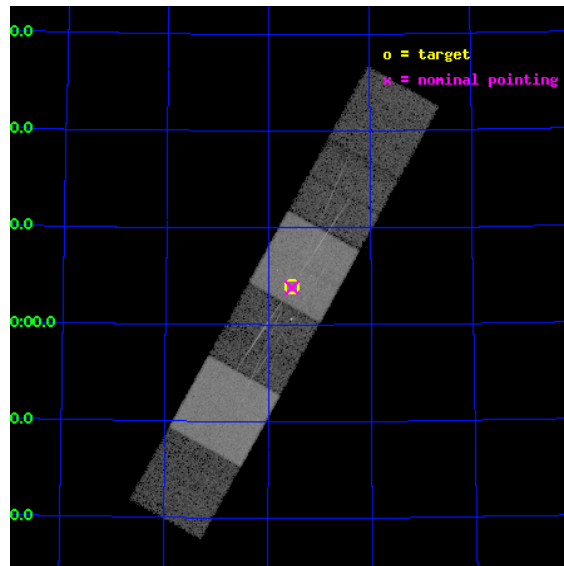
L2 Processing Date : Apr 4 2012

## 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	701315	Sequence number
obs_id	6898	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	148.88597655306	Nominal RA [deg]
dec_nom	69.063390384321	Nominal Dec [deg]
roll_nom	299.11384143897	Nominal Roll [deg]
revision	2	Processing version of data
ontime	14943.999944329	Sum of GTIs [s]
livetime	14754.770018838	Livetime [s]
ontime4	14943.999944329	Sum of GTIs [s]
ontime5	14943.999944329	Sum of GTIs [s]
ontime6	14943.999944329	Sum of GTIs [s]
ontime7	14943.999944329	Sum of GTIs [s]
ontime8	14943.999944329	Sum of GTIs [s]
ontime9	14940.758983999	Sum of GTIs [s]
l2events	231344	Number of level 2 events

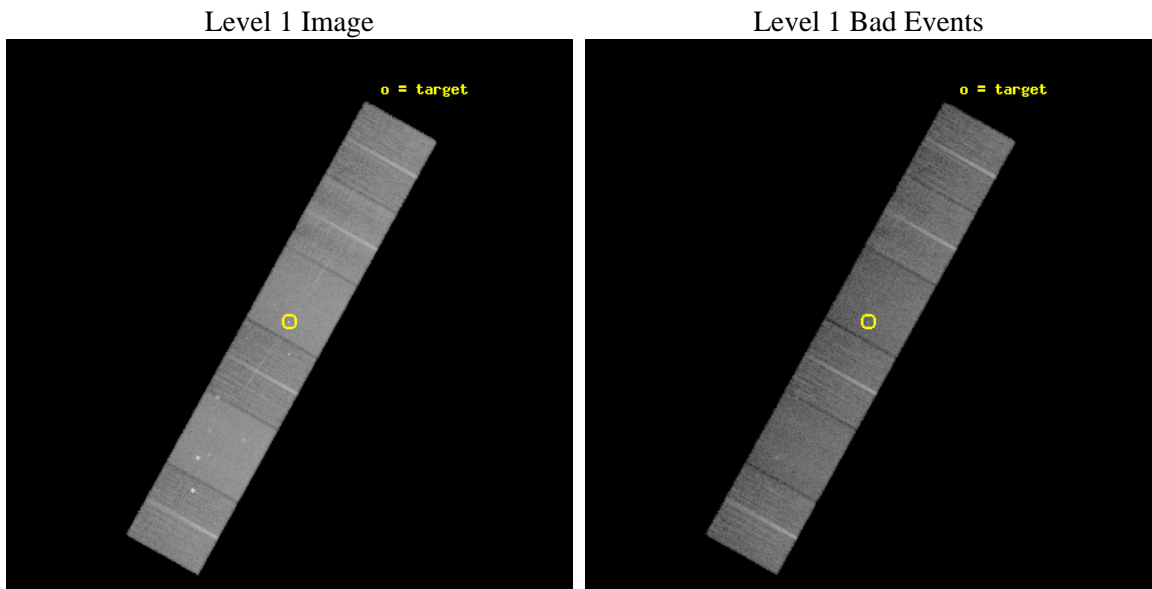




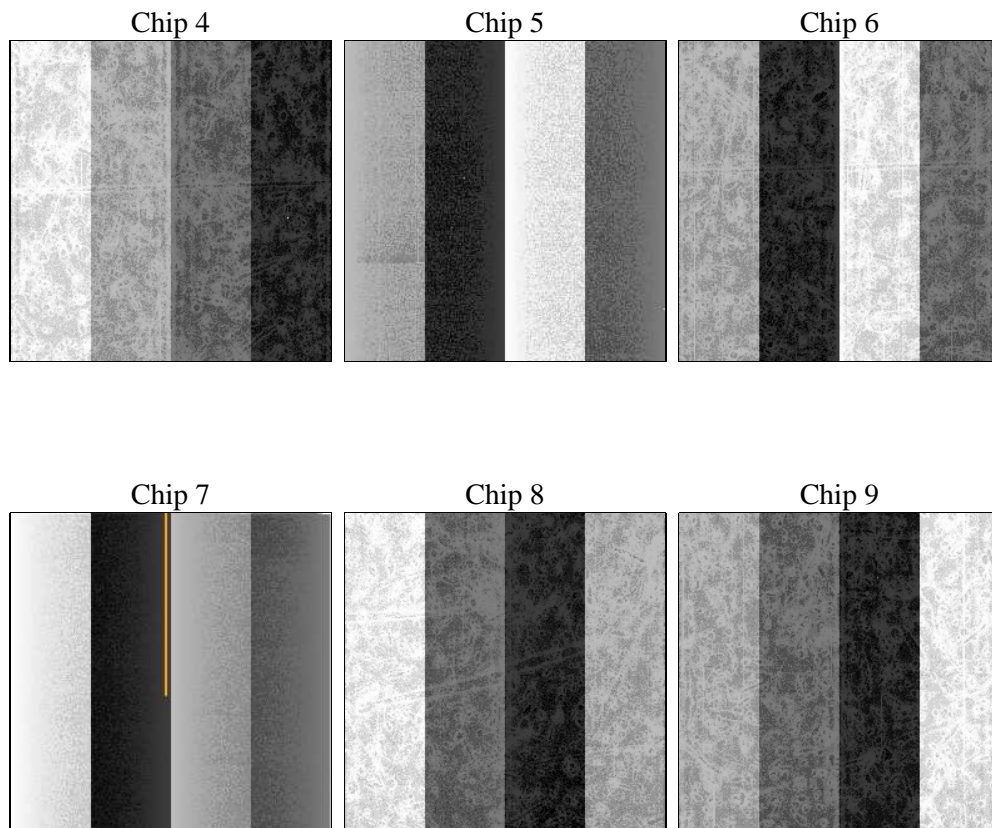
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14800.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3.1	Processing system revision	ontime	14943.999944329	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime4	14943.999944329	Sum of GTIs [s]
date	2012-04-04T05:29:58	Date and time of file creation	ontime5	14943.999944329	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	14943.999944329	Sum of GTIs [s]
			ontime7	14943.999944329	Sum of GTIs [s]
			ontime8	14943.999944329	Sum of GTIs [s]
			ontime9	14940.758983999	Sum of GTIs [s]
			l1events	1013322	Number of level 1 events

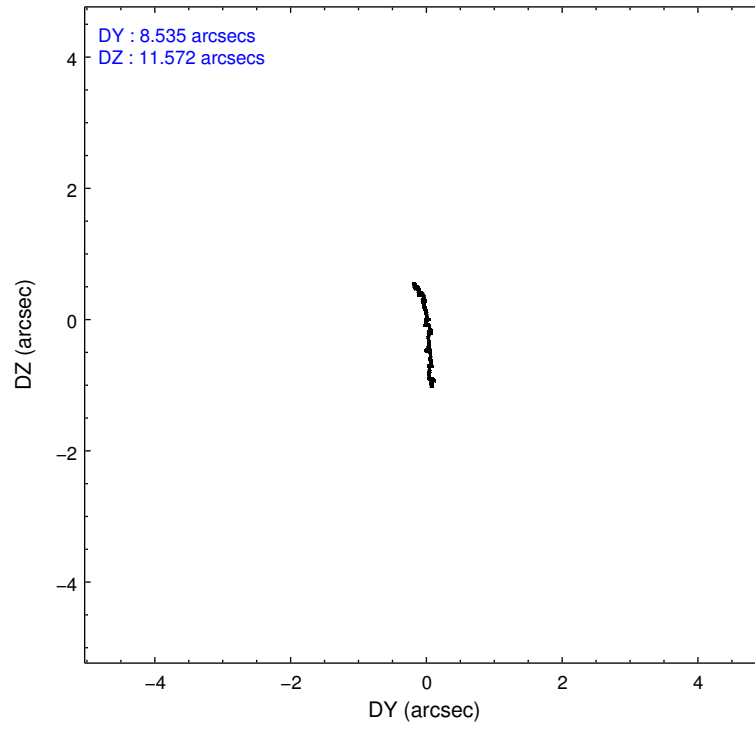
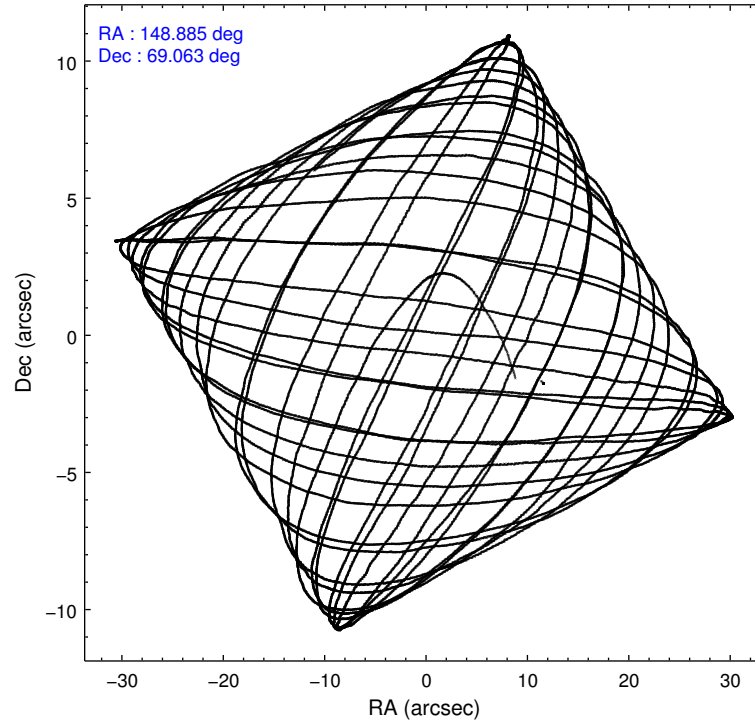
### 2.1.4 Events

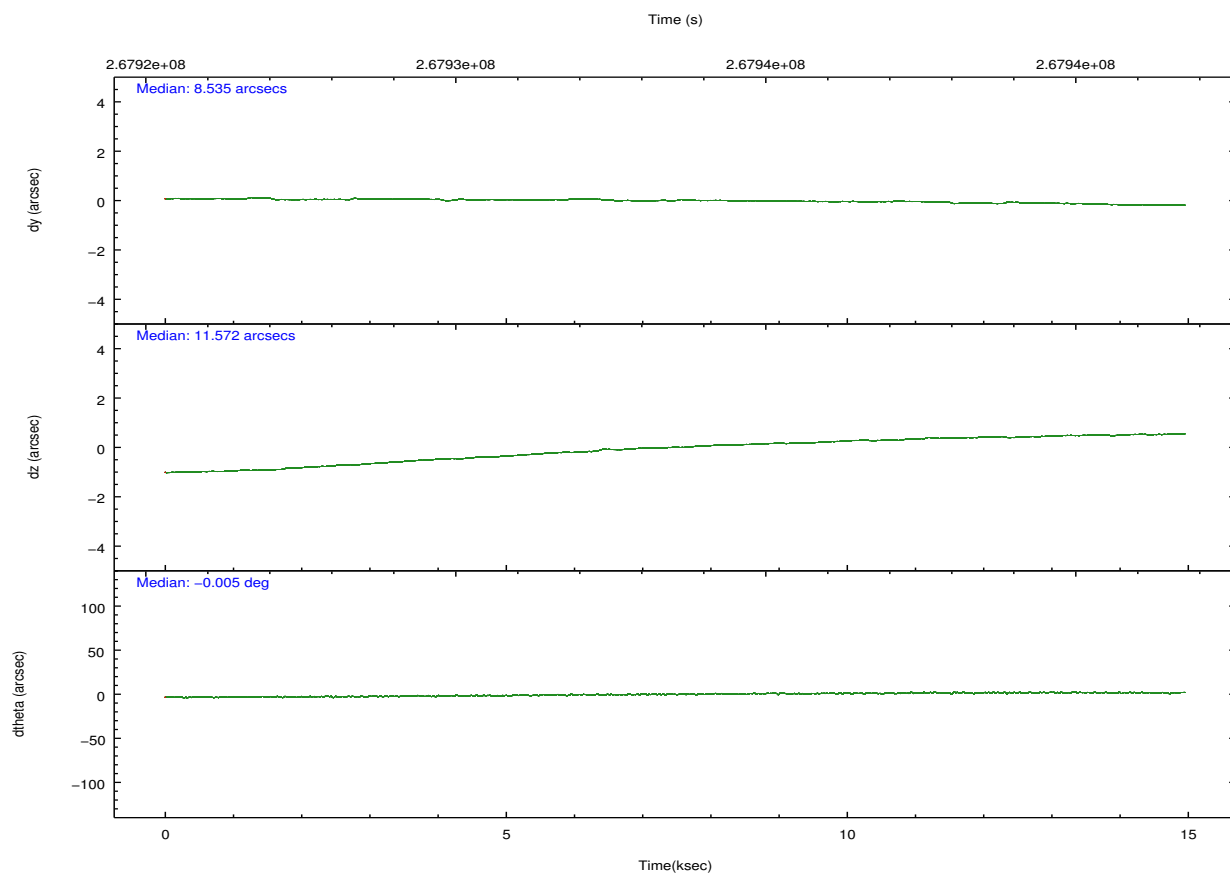
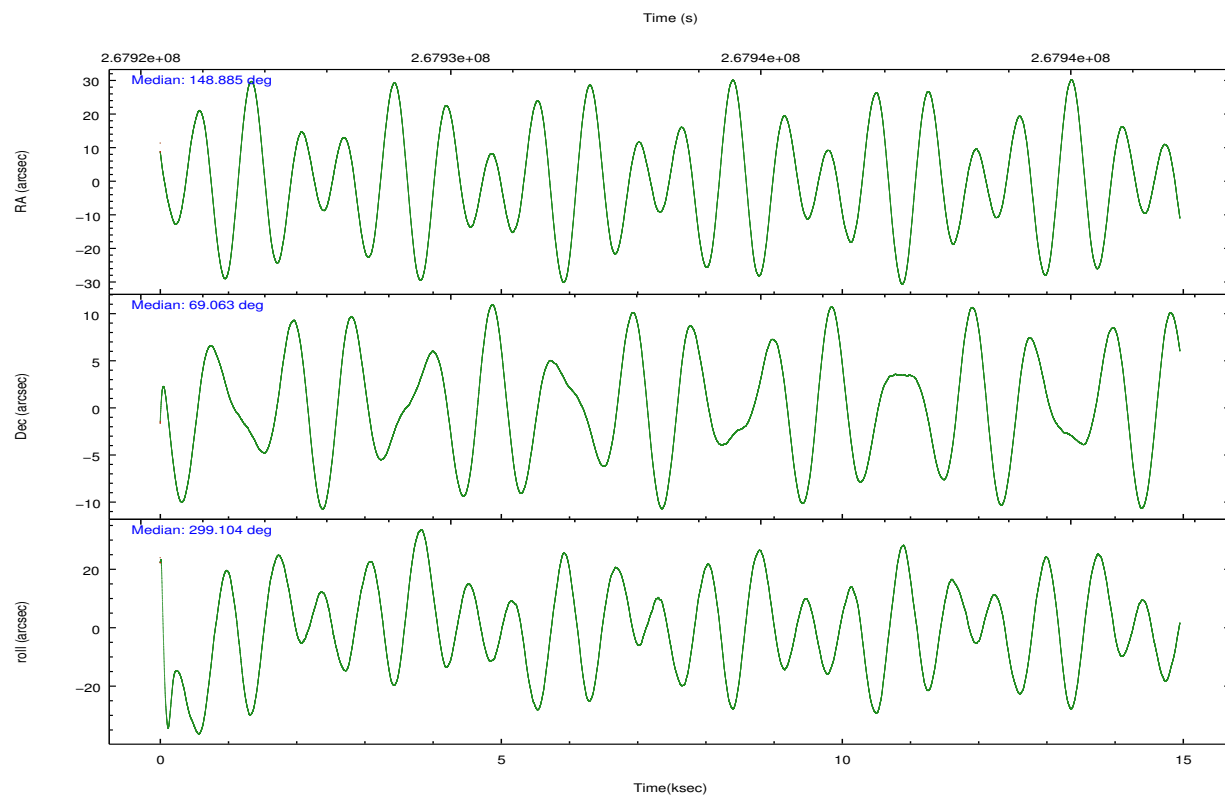
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	156506	207683	142920	192325	174562	139326	grade 0 events	11719	8675	8745	7773	12636	6960
rejected events	135141	113135	123598	110336	136008	122523		7%	4%	6%	4%	7%	4%
rejected %	86%	54%	86%	57%	77%	87%	grade 1 events	190	622	94	233	135	82
								0%	0%	0%	0%	0%	0%
							grade 2 events	3682	29053	3895	16969	8524	3347
								2%	13%	2%	8%	4%	2%
							grade 3 events	1777	3654	1708	7289	4159	1667
								1%	1%	1%	3%	2%	1%
							grade 4 events	1713	3455	1707	7250	3763	1587
								1%	1%	1%	3%	2%	1%
							grade 5 events	6191	15006	6339	17825	8465	6862
								3%	7%	4%	9%	4%	4%
							grade 6 events	2652	50392	3427	43279	9778	3352
								1%	24%	2%	22%	5%	2%
							grade 7 events	128582	96826	117005	91707	127102	115469
								82%	46%	81%	47%	72%	82%

## 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	148.819961	148.8859765530561	Subarray requested	NONE	NONE
[deg] Pointing Dec	69.077064	69.06339038432091	Alternating exposures requested	N	N
[deg] Pointing Roll	299.018801	299.1138414389734	[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)	267926216.184000	267924961.0984			
Observation start date	2006-06-28T23:55:51	2006-06-28T23:36:01			
[s] Observation end time (MET)	267941016.184000	267941801.84918			
Observation end date	2006-06-29T04:02:31	2006-06-29T04:16:41			
Read mode	TIMED	TIMED			

## 2.3 Aspect



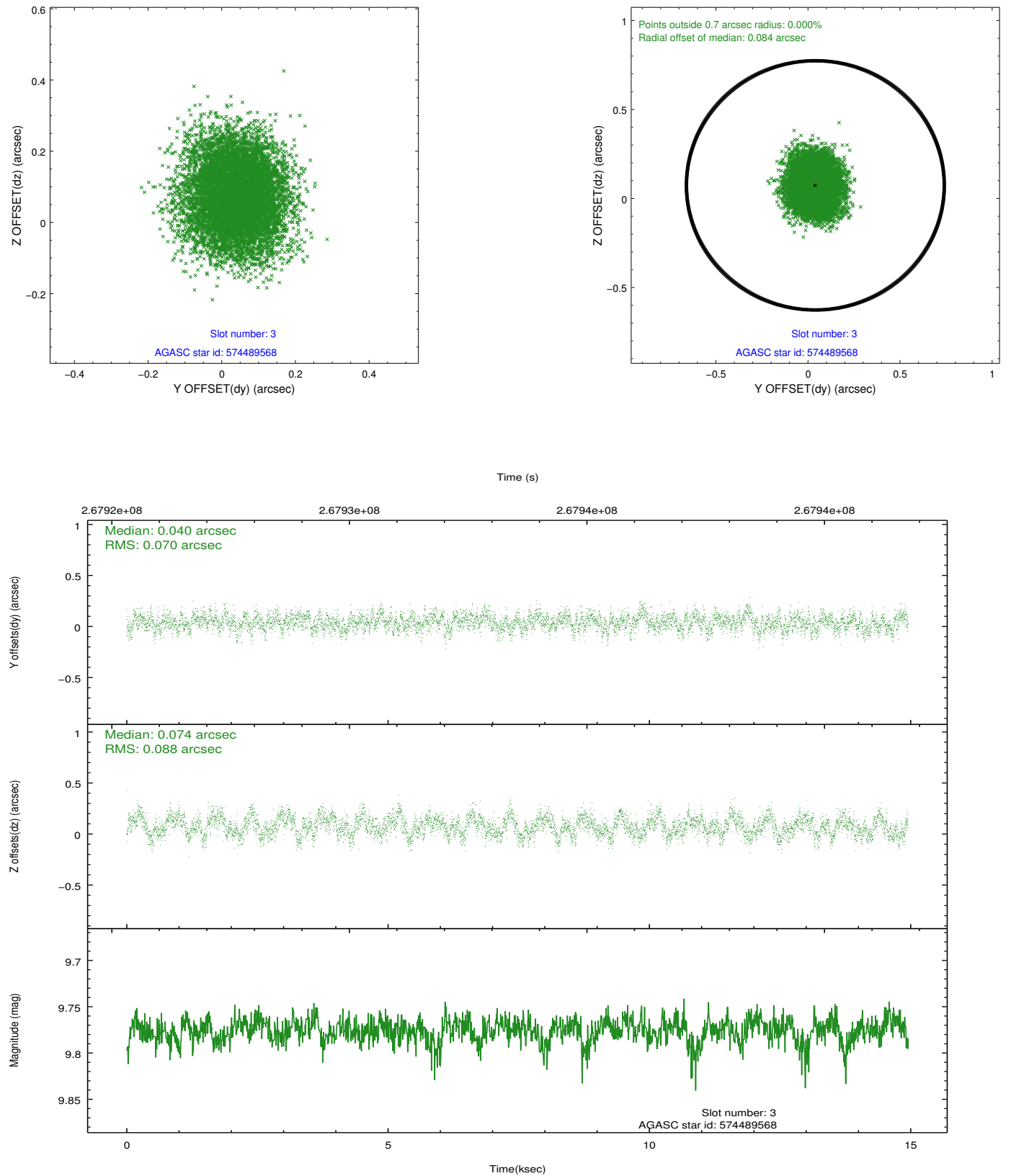


### Slot Statistics

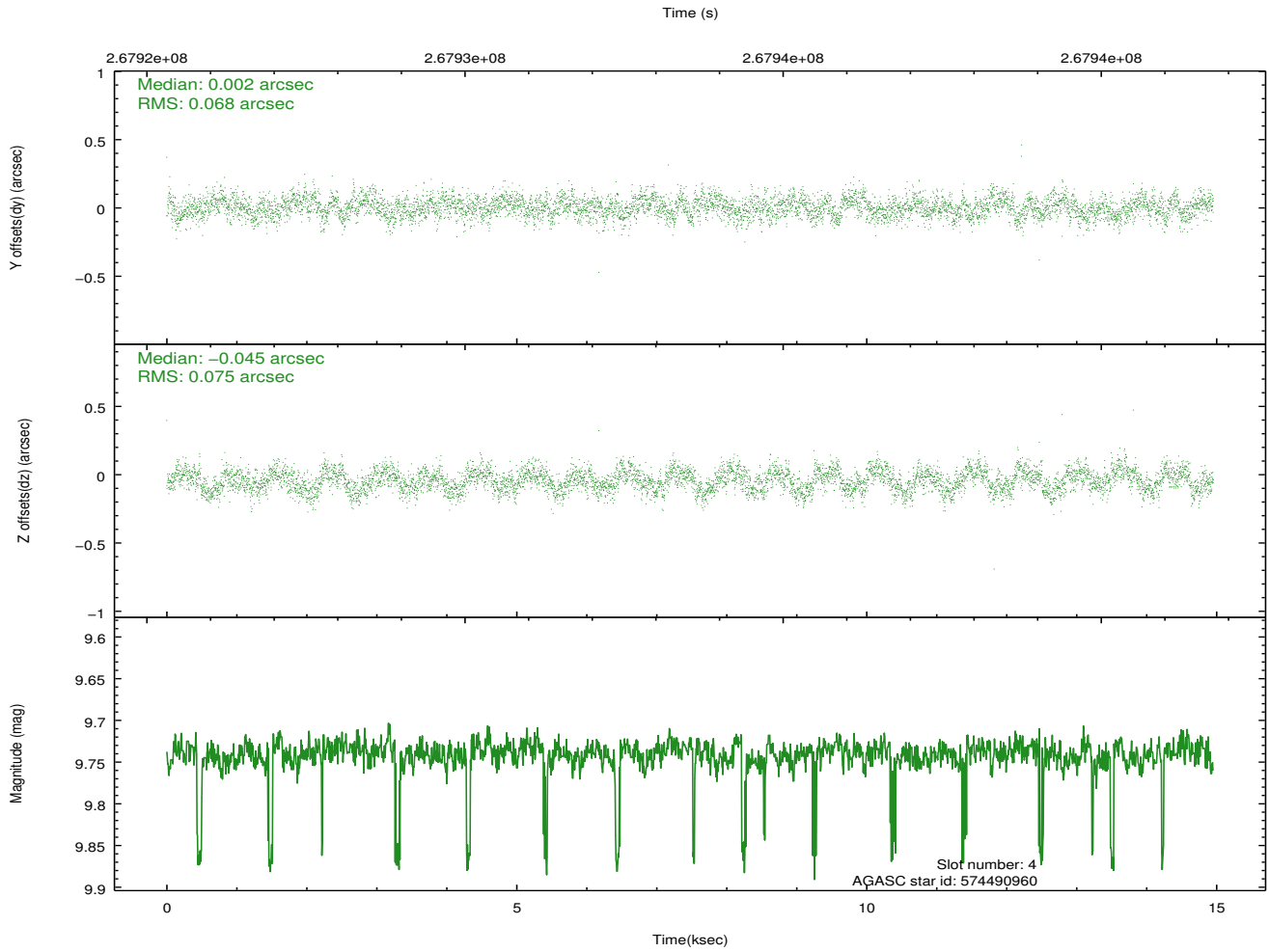
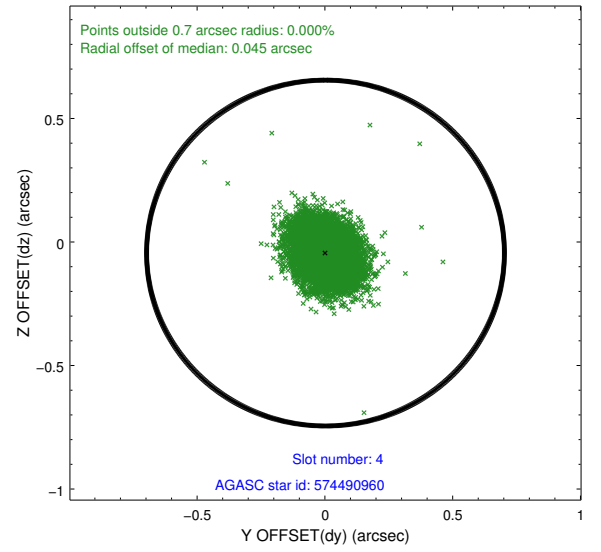
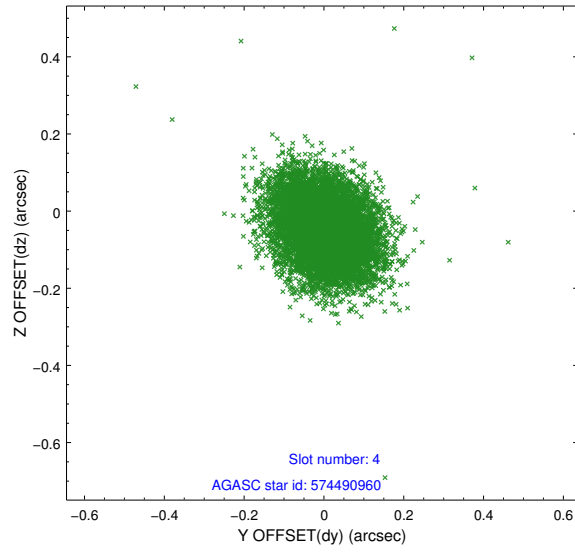
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.19	3648	0.035	-0.083	0.017	0.032	0.000000	0.000000	934.74	-1728.42
1	FID	ACIS-S-4	7.21	3647	0.098	0.045	0.017	0.025	0.000000	0.000000	2152.39	175.54
2	FID	ACIS-S-5	7.23	3648	-0.160	0.052	0.012	0.021	0.000000	0.000000	-1813.93	169.51
3	GUIDE	574489568	9.78	7286	0.040	0.074	0.121	0.191	147.223974	69.438157	-2138.06	-1120.80
4	GUIDE	574490960	9.74	7234	0.002	-0.045	0.107	0.171	148.185918	69.658768	-2219.71	323.85
5	GUIDE	574491280	9.32	7292	0.032	-0.088	0.147	0.235	148.611567	69.450135	-1302.53	420.79
6	GUIDE	574497600	10.44	7283	-0.067	0.055	0.175	0.298	147.824120	68.451903	1320.40	-2237.24
7	GUIDE	574491184	9.05	7290	0.003	0.005	0.112	0.171	148.582453	69.768699	-2321.00	949.51

## 2.4 Star Slots

### 2.4.1 Slot 3

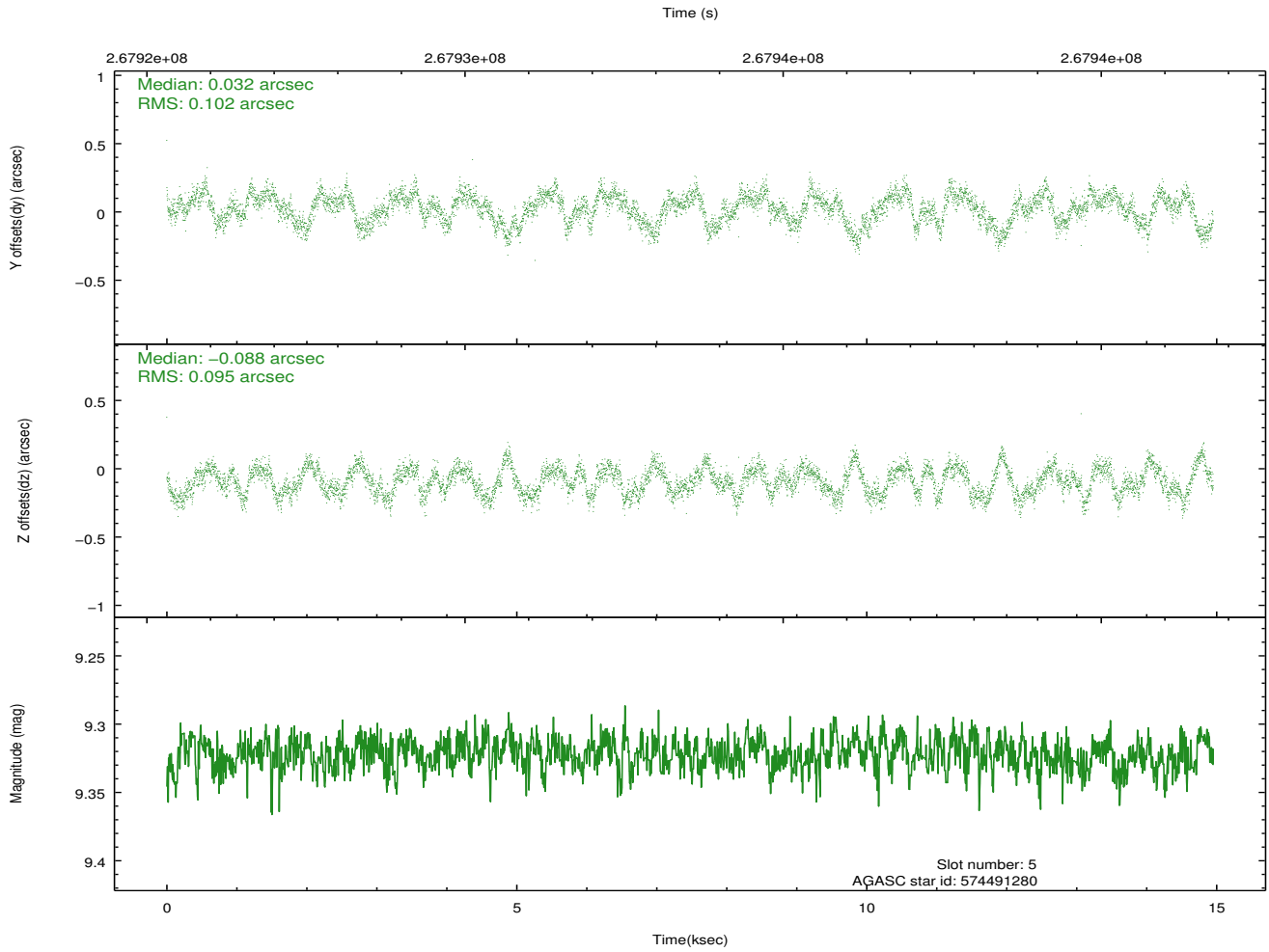
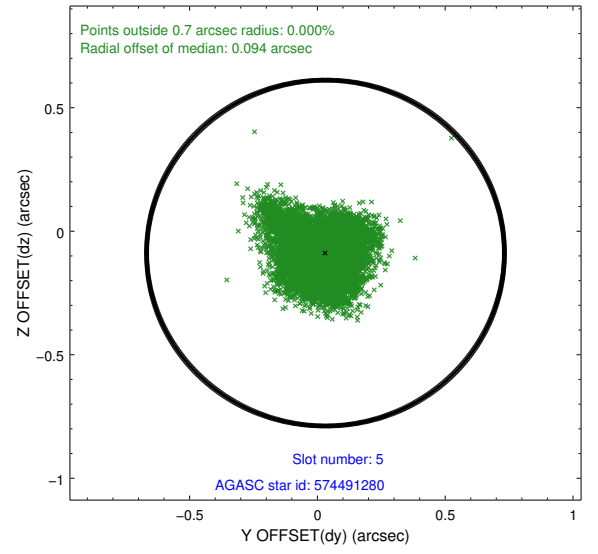
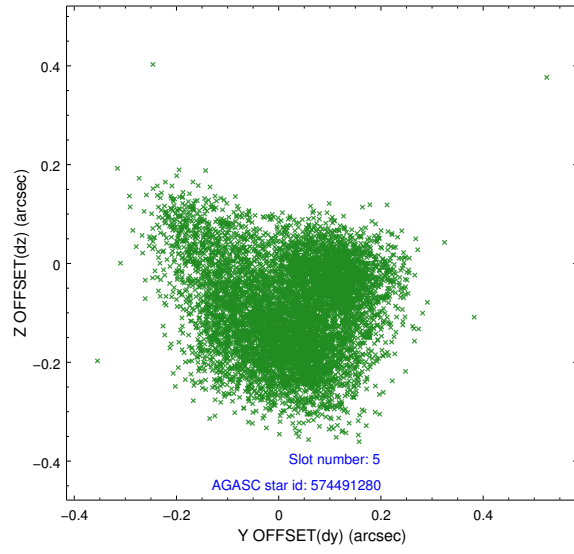


## 2.4.2 Slot 4

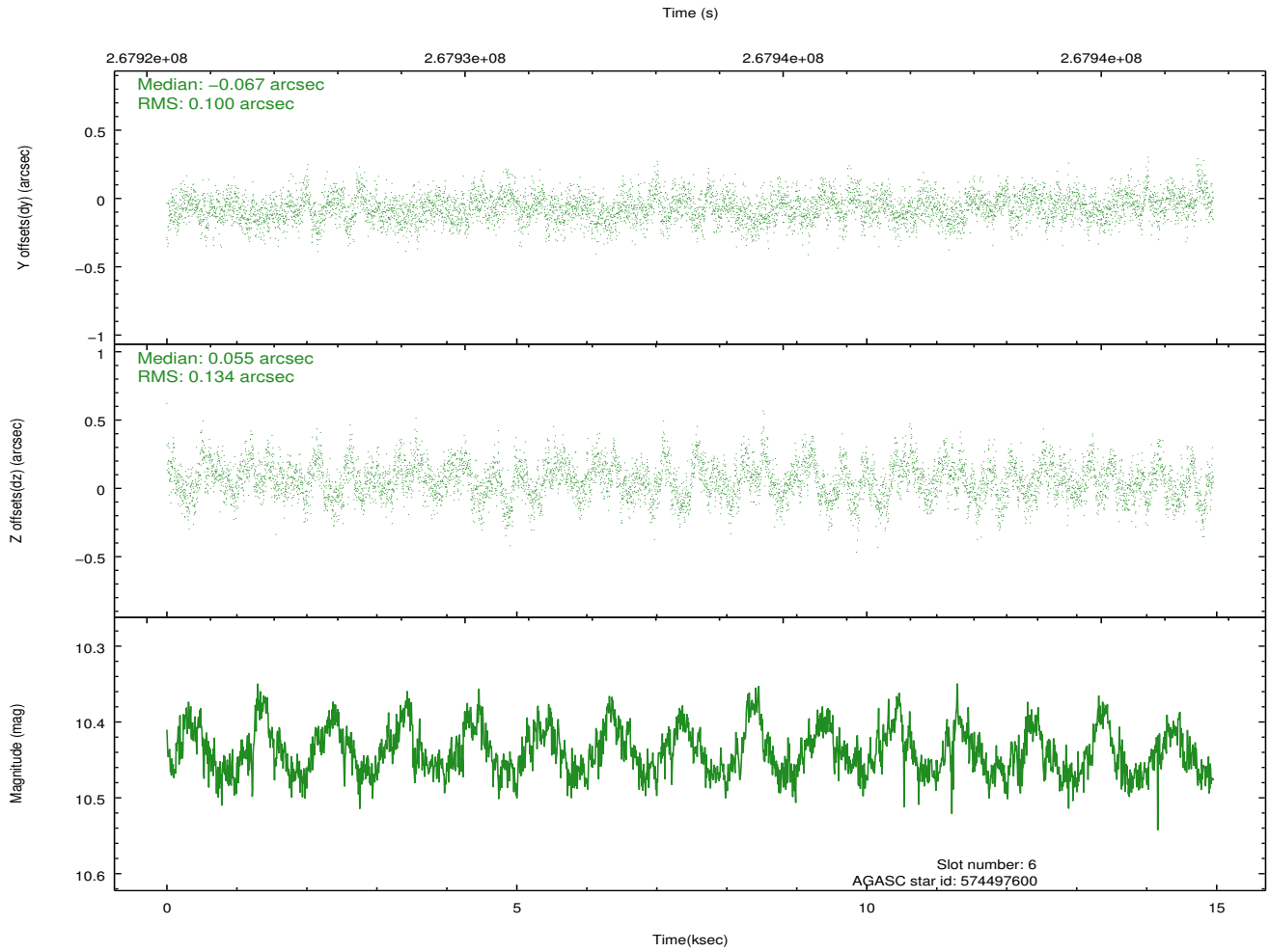
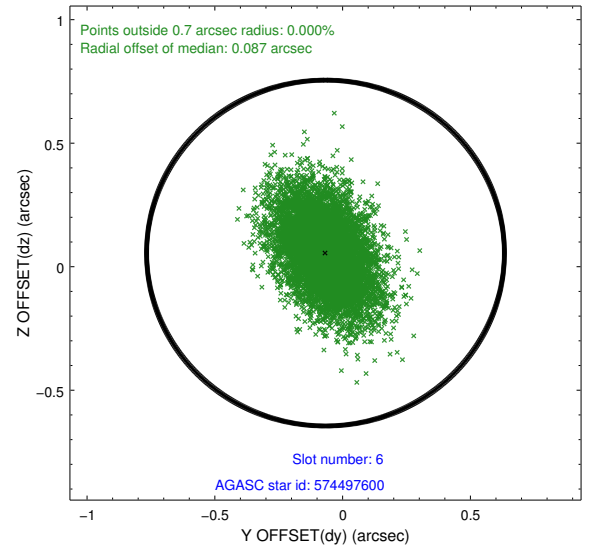
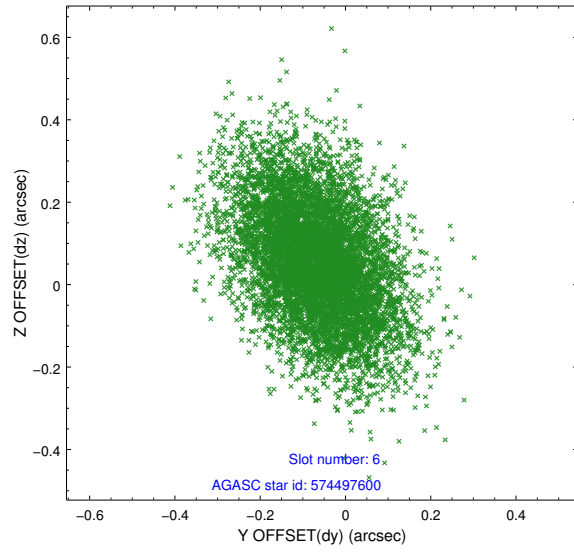




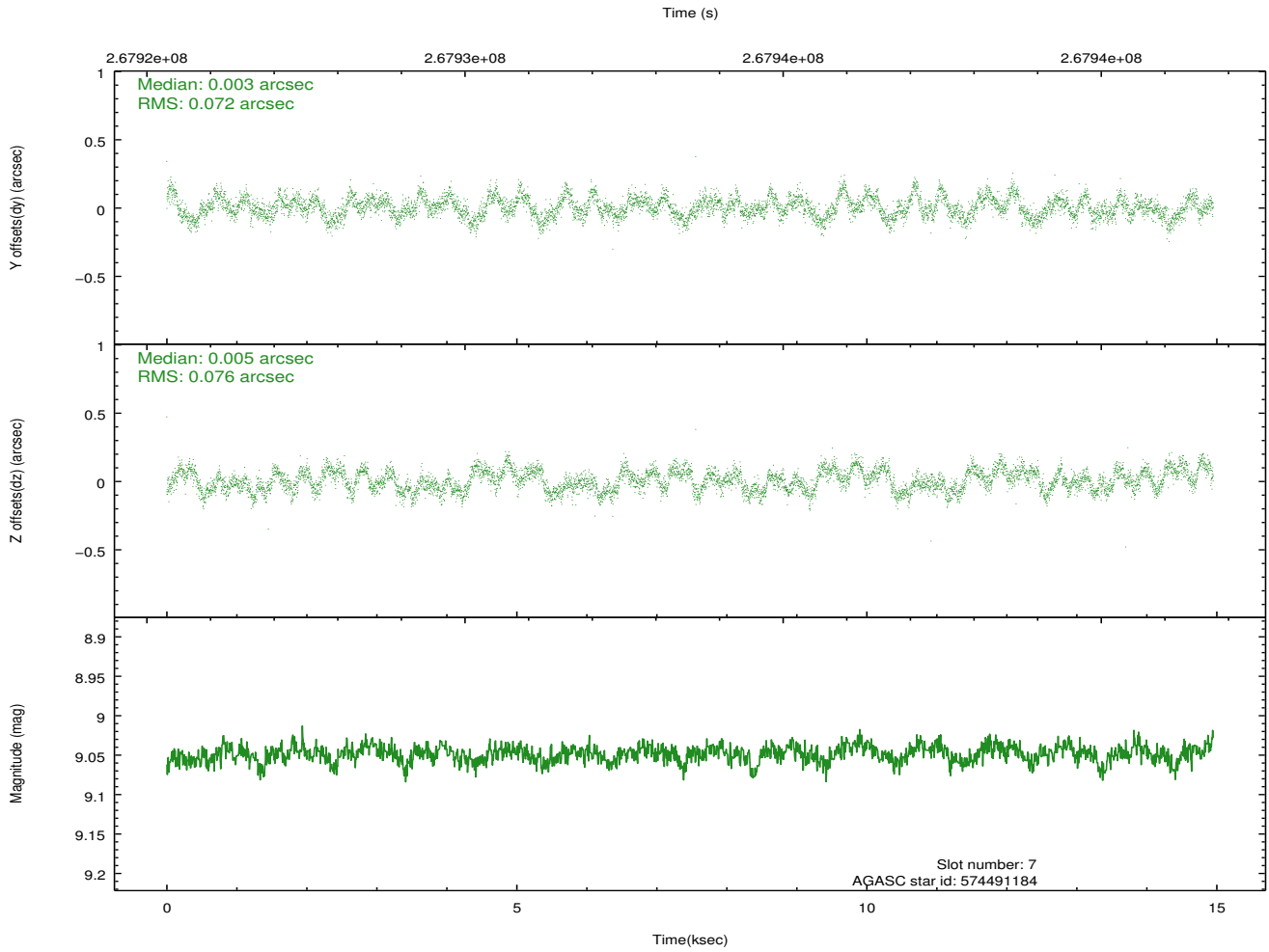
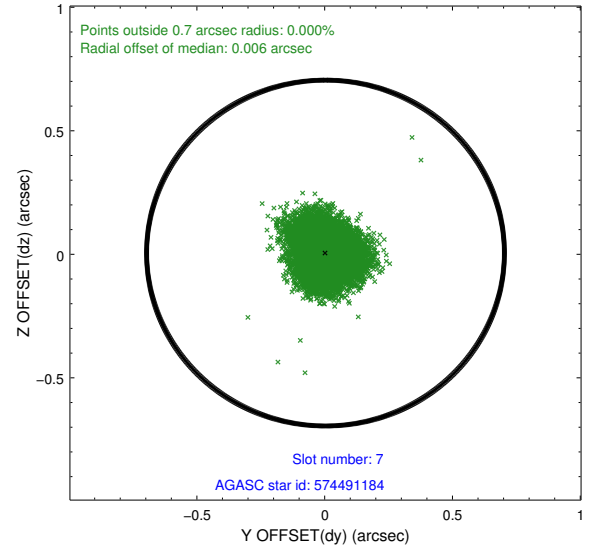
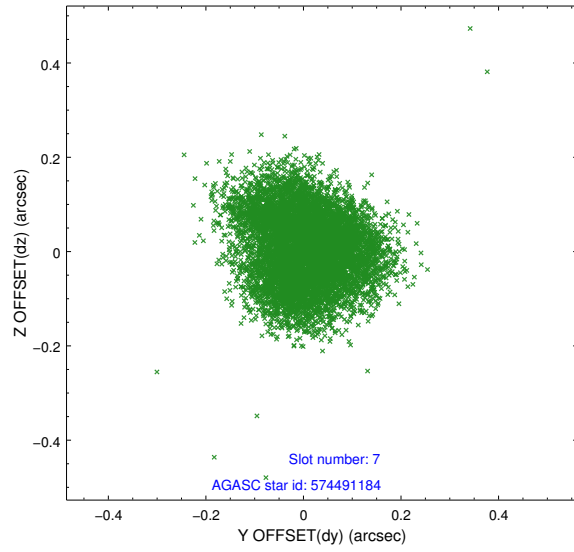
### 2.4.3 Slot 5



## 2.4.4 Slot 6

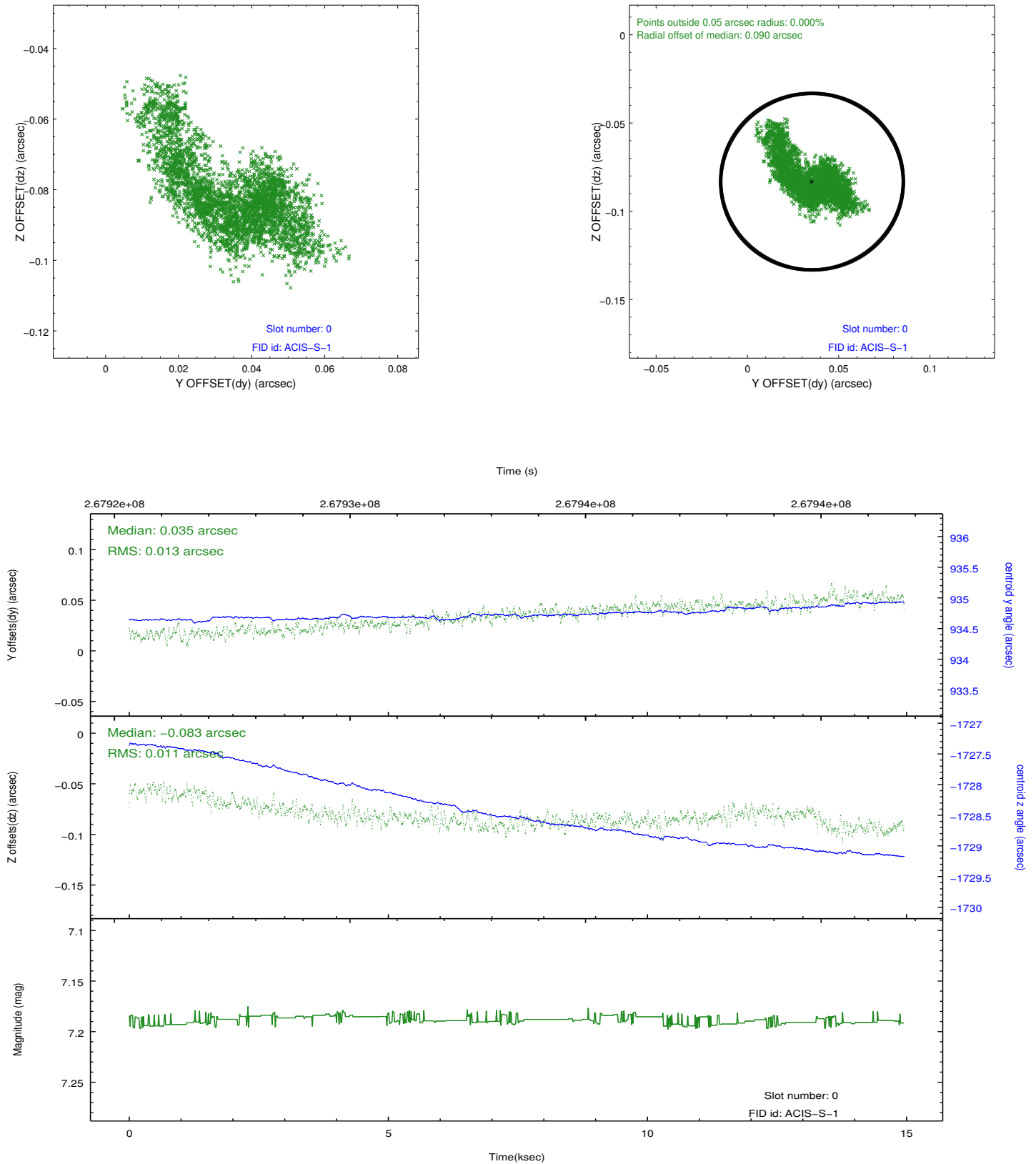


## 2.4.5 Slot 7

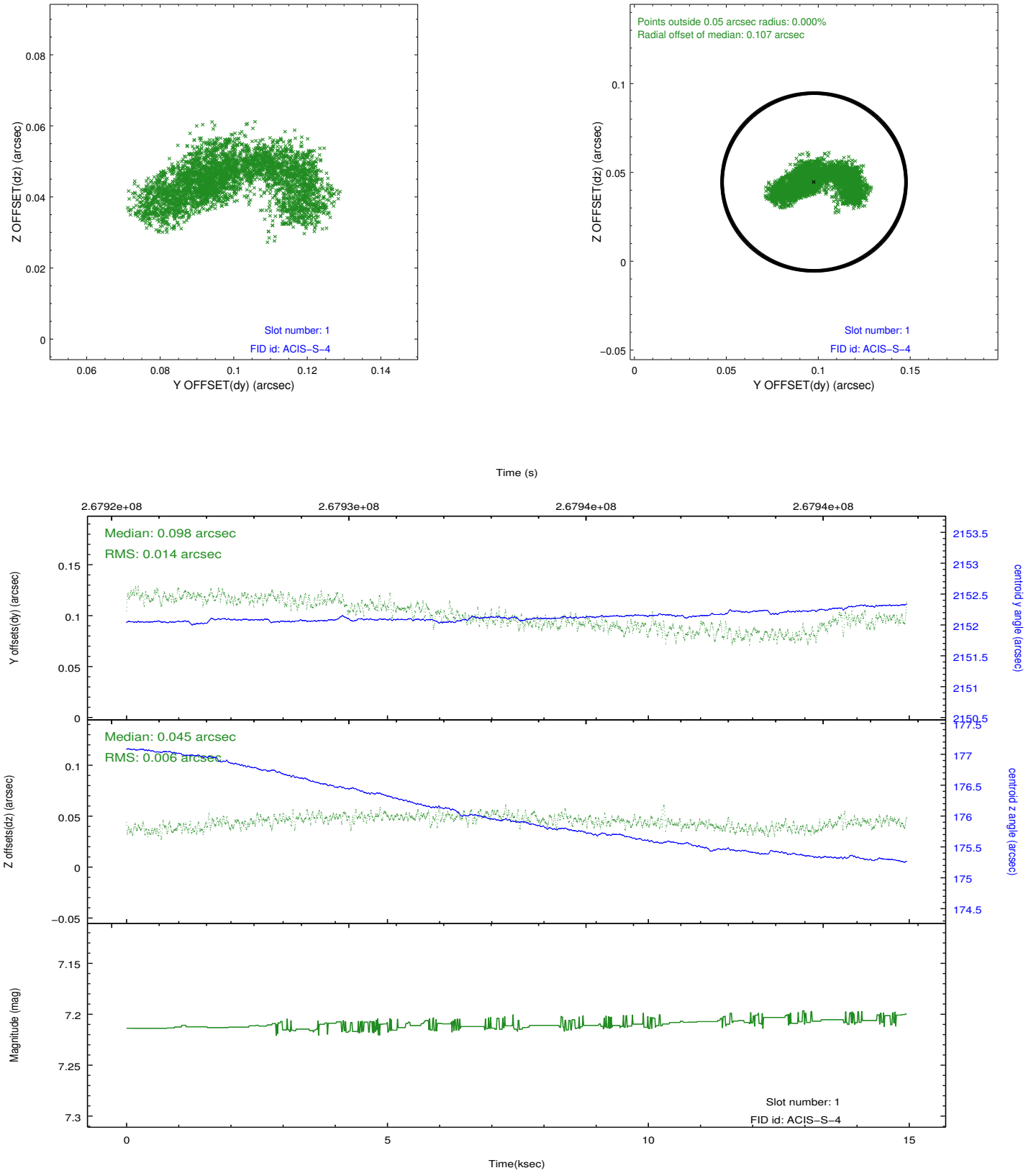


## 2.5 FID Slots

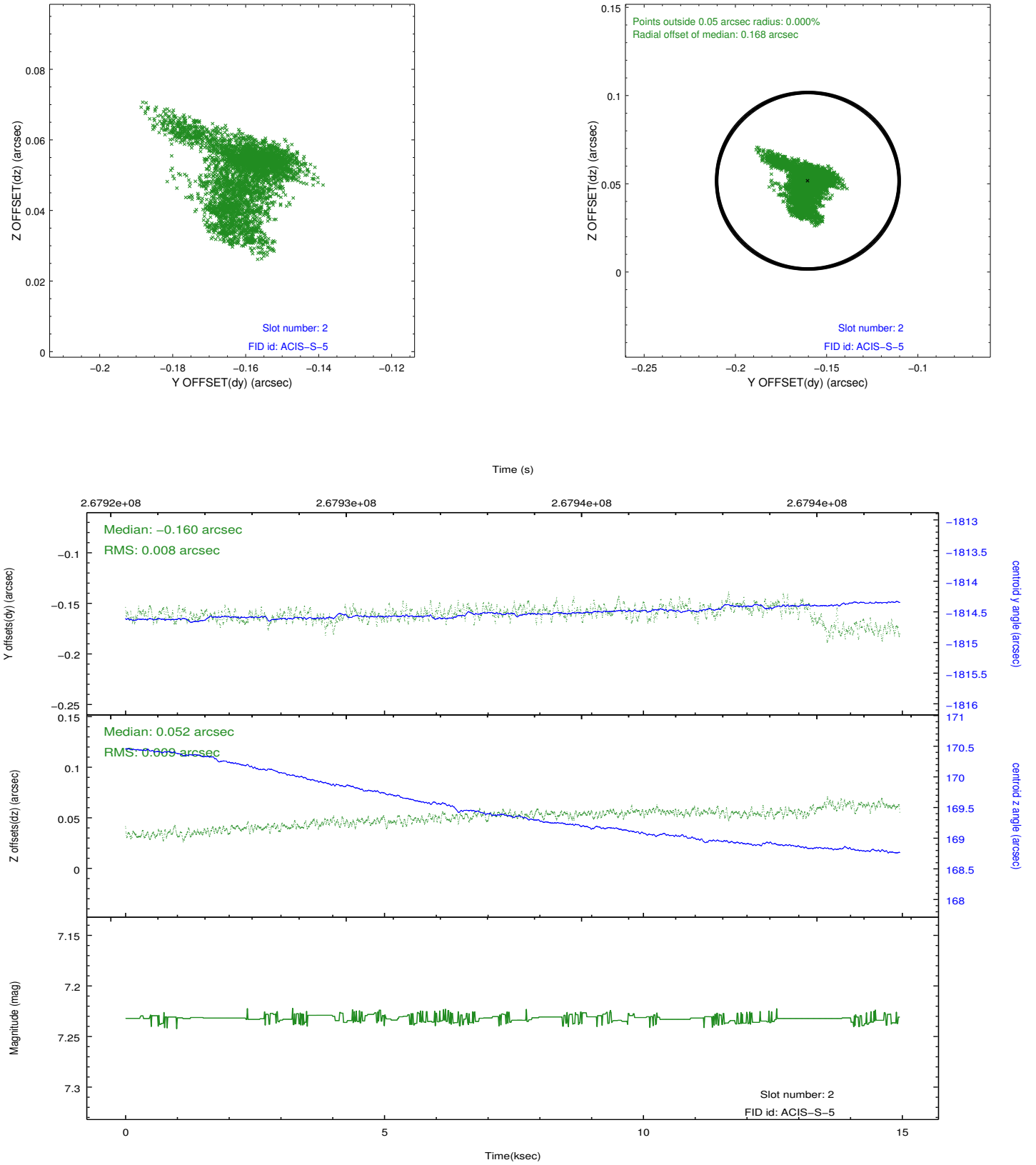
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

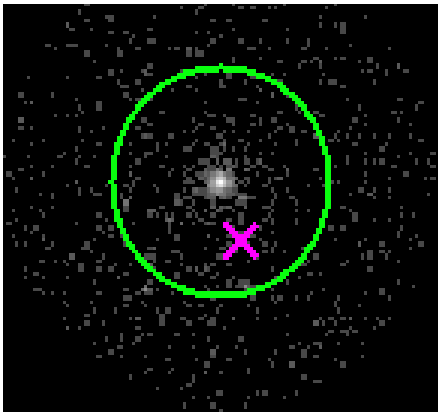


# 3 Gratings

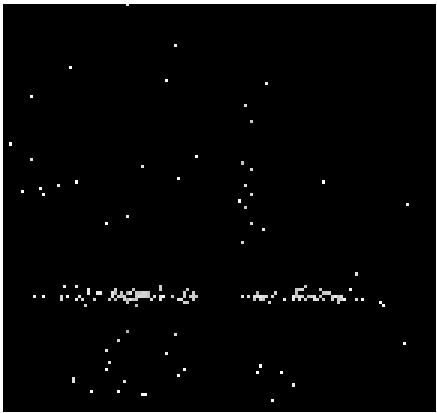
## 3.1 HEG Arm



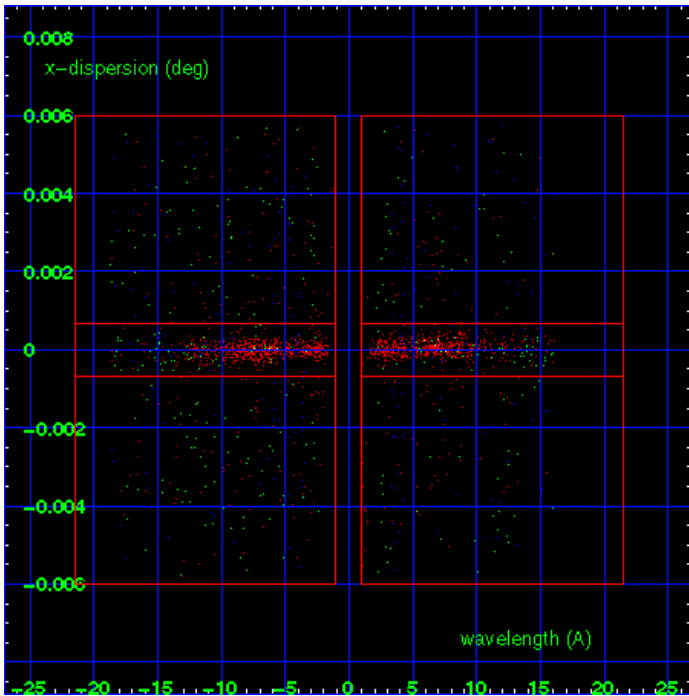
HEG Order Sort 123



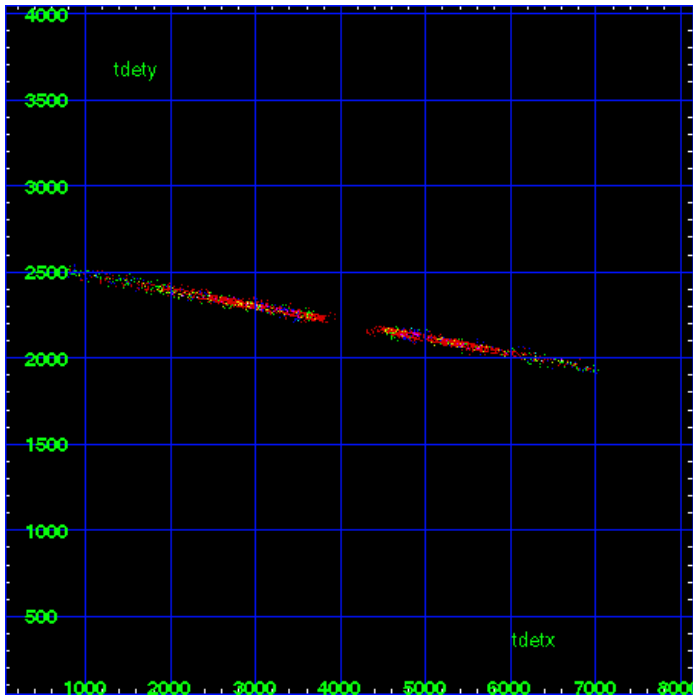
HEG Zero Order



HEG Order Sort ALL

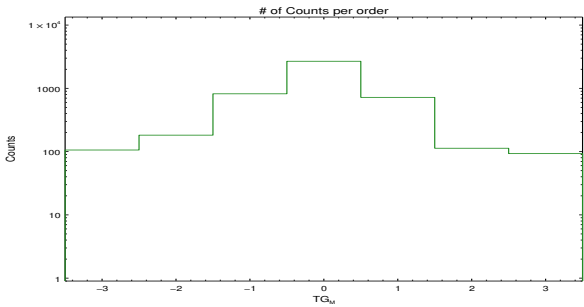


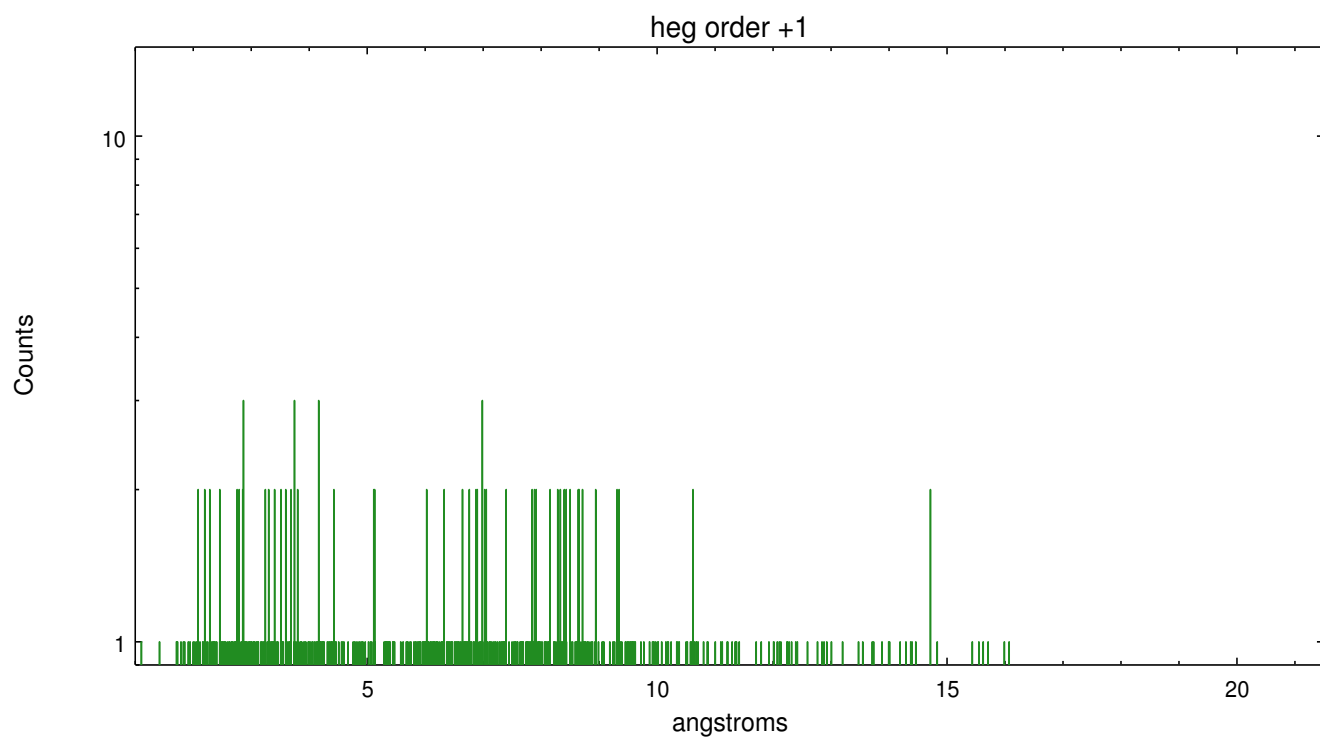
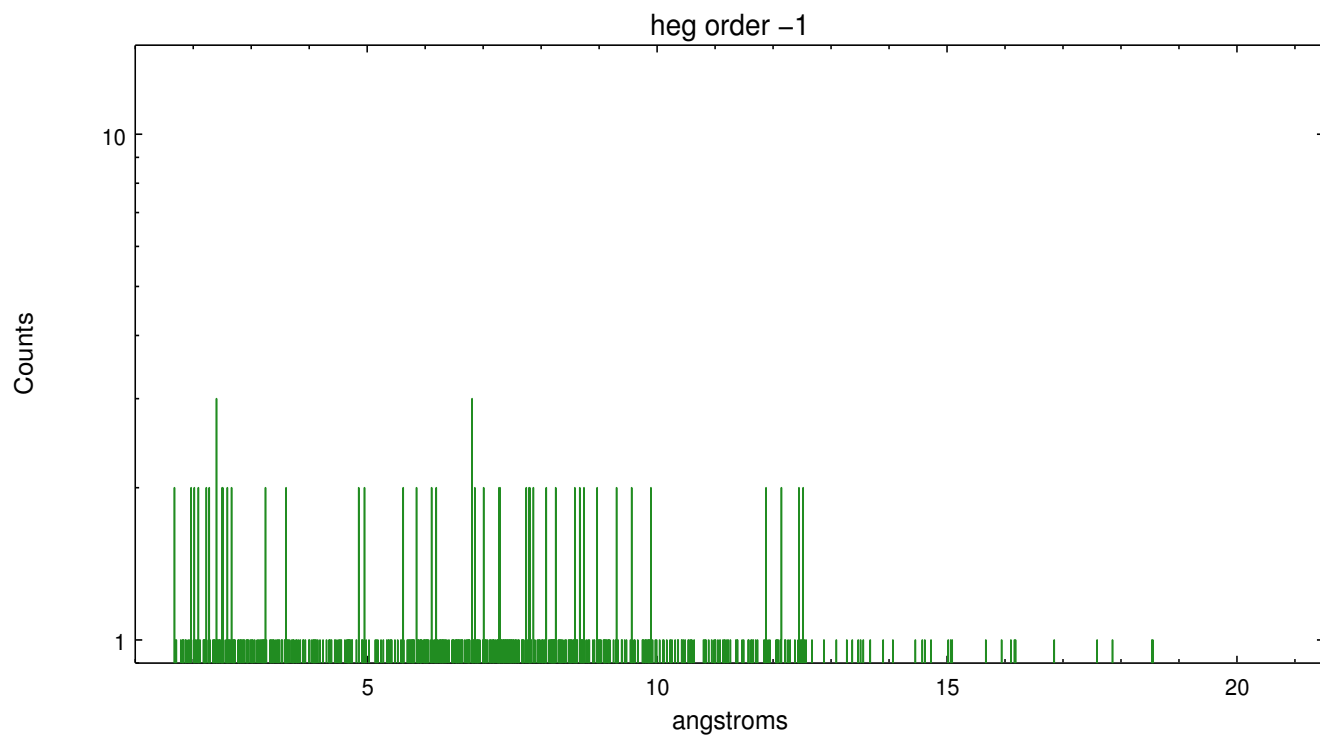
Spot Image HEG



Full Detector HEG

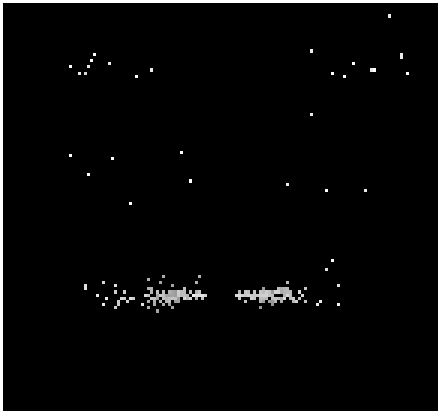
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	106	182	820	2679	720	113	93



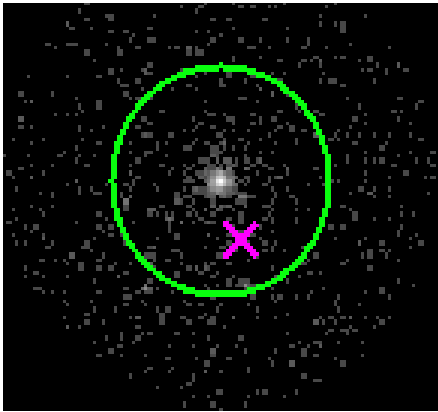




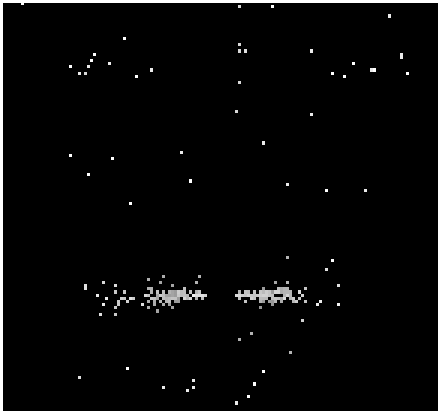
3.2 MEG Arm



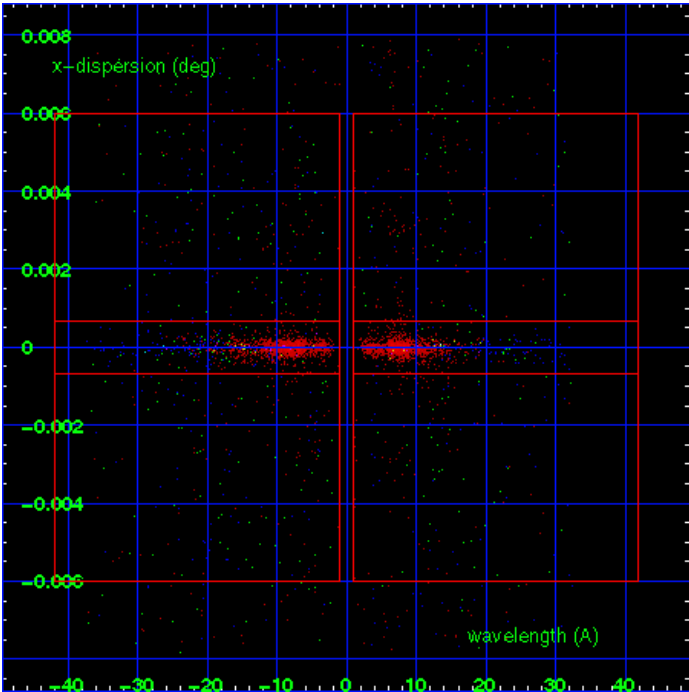
MEG Order Sort 123



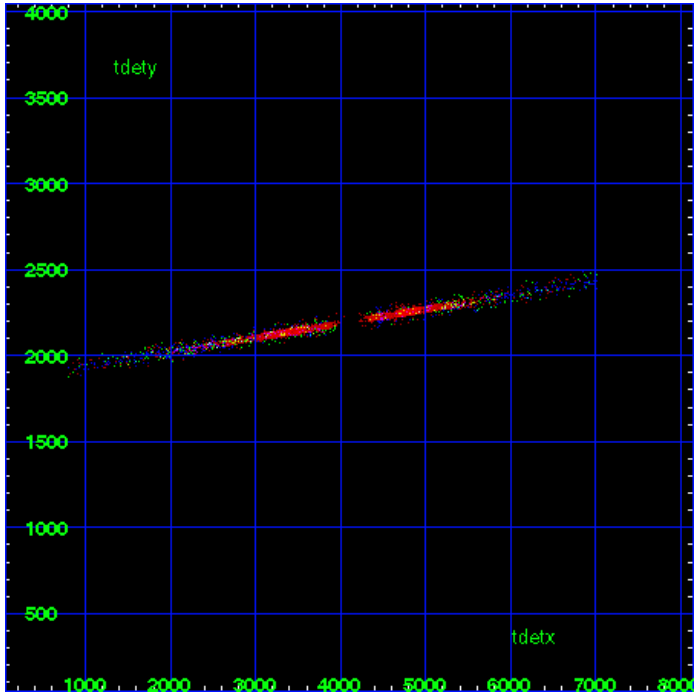
MEG Zero Order



MEG Order Sort ALL

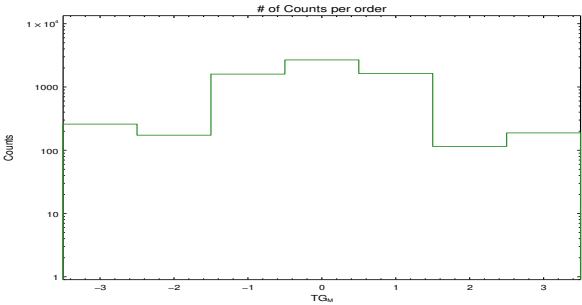


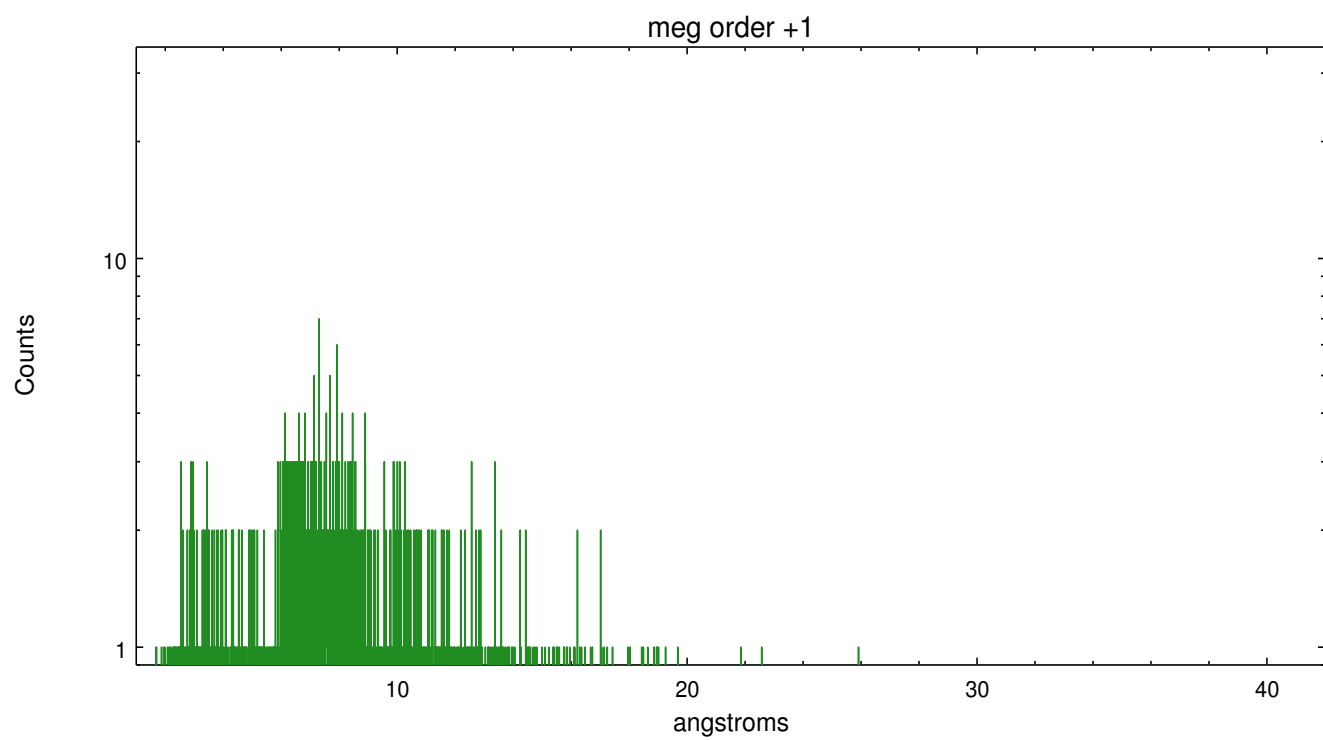
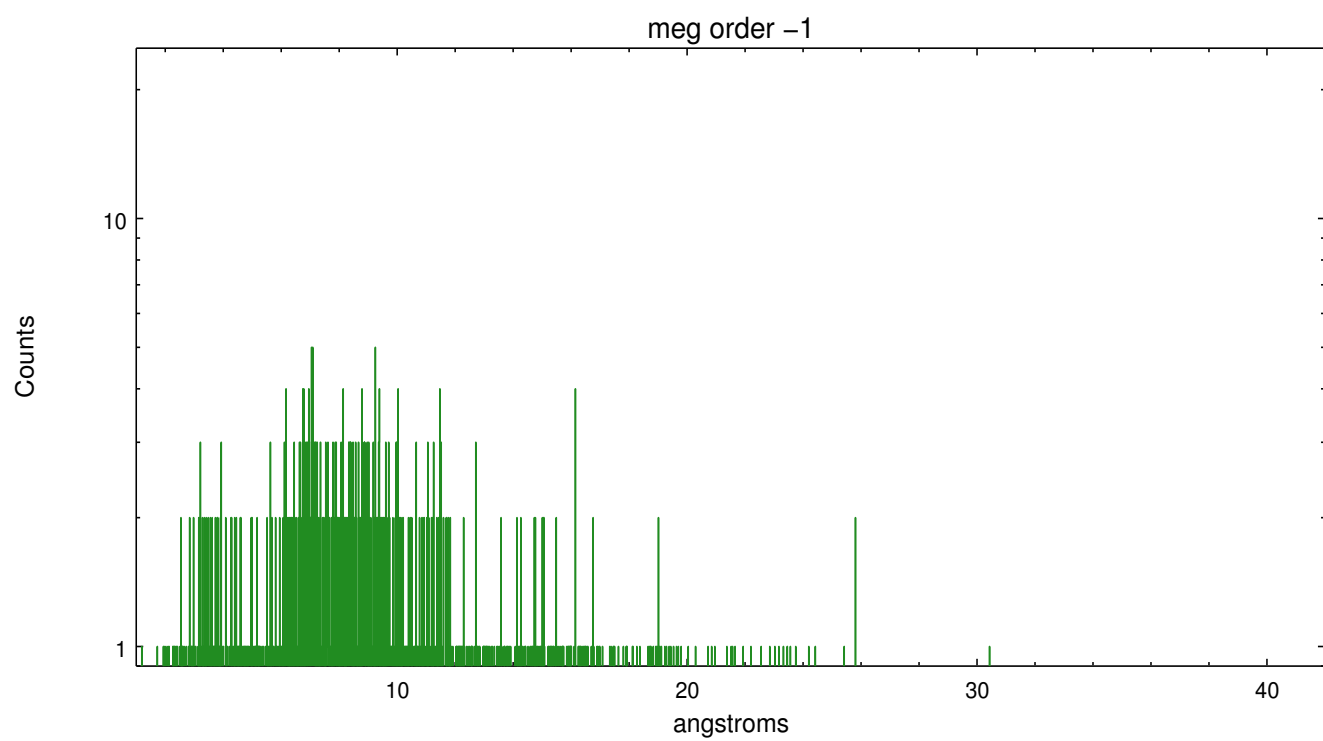
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	259	173	1598	2679	1632	115	188





## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.04.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.9439999

### A.2 Comments