

# V&V Reference Report

## L2 ASCDS Version : 8.4.3.1

Observation 6900 - L2 Version 2  
Chandra X-Ray Center

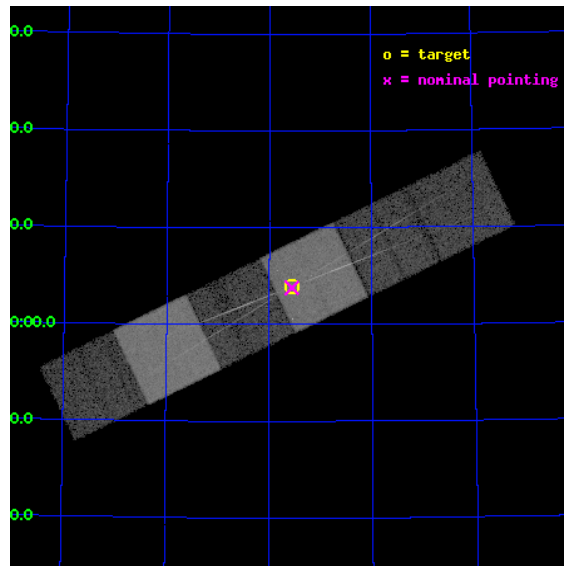
L2 Processing Date : Apr 6 2012

## 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

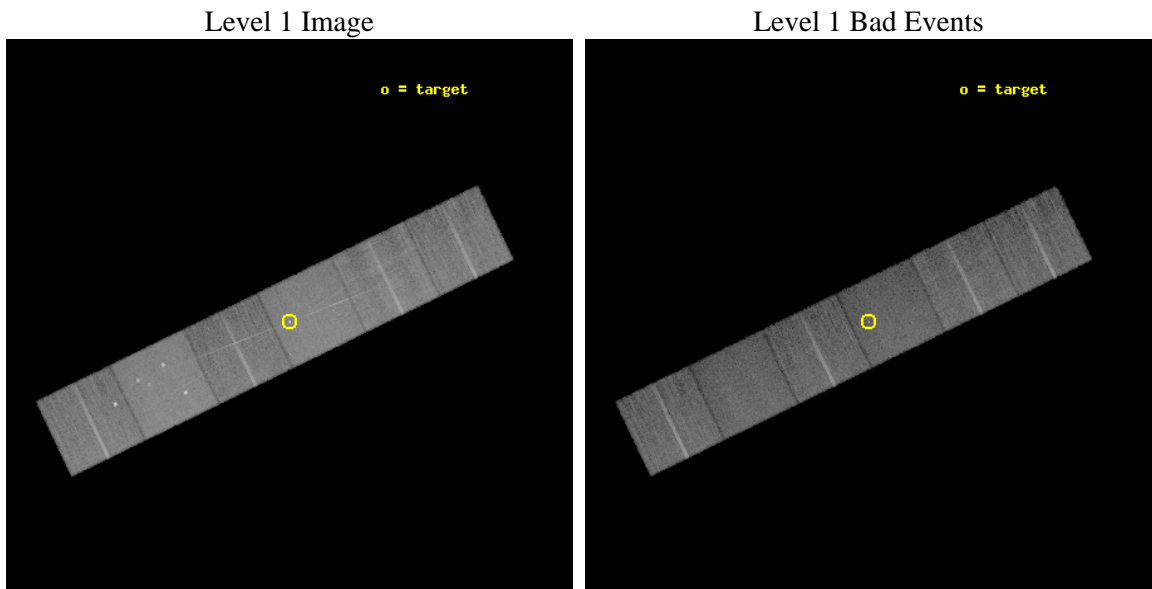
seq_num	701317	Sequence number
obs_id	6900	Observation id
title	Testing Broad-Band Jet-Powered Emission in the LLAGN M81*	Proposal
observer	Dr Jon Miller	Principal investigator
object	M81*	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	148.888333	Observer's specified target RA [deg]
dec_targ	69.065306	Observer's specified target Dec [deg]
ra_nom	148.88947974314	Nominal RA [deg]
dec_nom	69.063235110281	Nominal Dec [deg]
roll_nom	334.12718901396	Nominal Roll [deg]
revision	2	Processing version of data
ontime	14595.199945688	Sum of GTIs [s]
livetime	14410.386735802	Livetime [s]
ontime4	14595.199945688	Sum of GTIs [s]
ontime5	14595.199945688	Sum of GTIs [s]
ontime6	14591.959075034	Sum of GTIs [s]
ontime7	14595.199945688	Sum of GTIs [s]
ontime8	14595.199945688	Sum of GTIs [s]
ontime9	14595.199945688	Sum of GTIs [s]
l2events	225232	Number of level 2 events



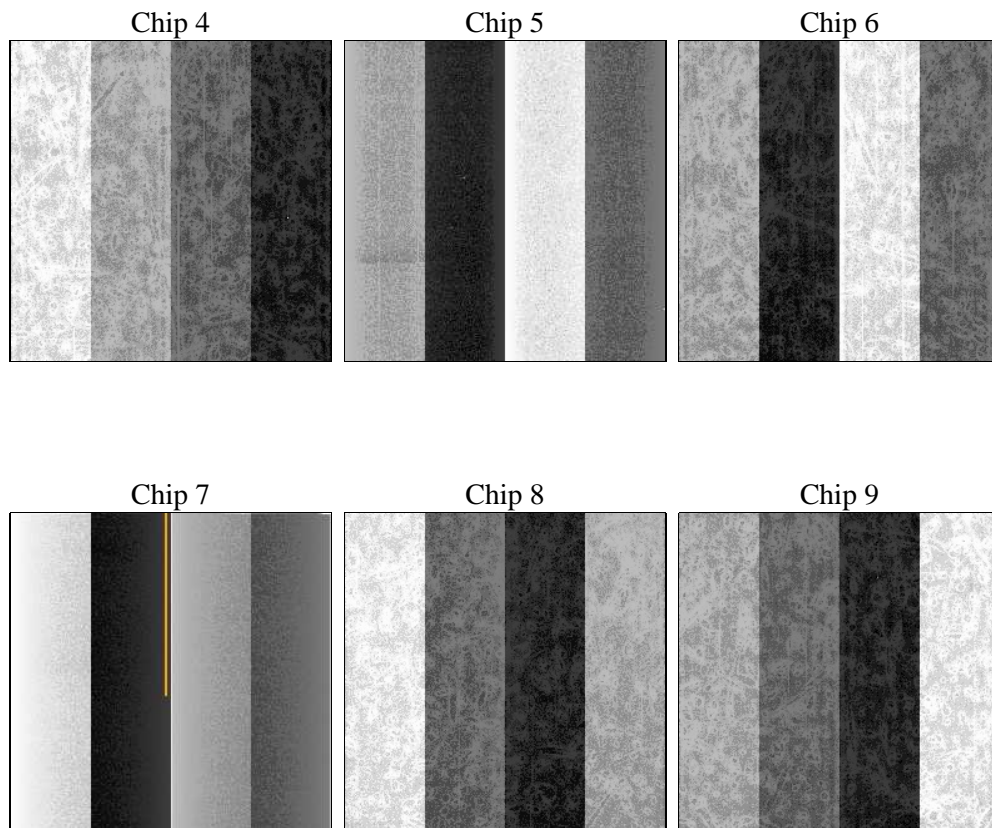
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14591.705000	[s] Scheduled observation exposure time
ascdsver	8.4.3.1	Processing system revision	ontime	14595.199945688	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime4	14595.199945688	Sum of GTIs [s]
date	2012-04-06T03:04:34	Date and time of file creation	ontime5	14595.199945688	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	14591.959075034	Sum of GTIs [s]
			ontime7	14595.199945688	Sum of GTIs [s]
			ontime8	14595.199945688	Sum of GTIs [s]
			ontime9	14595.199945688	Sum of GTIs [s]
			l1events	961194	Number of level 1 events

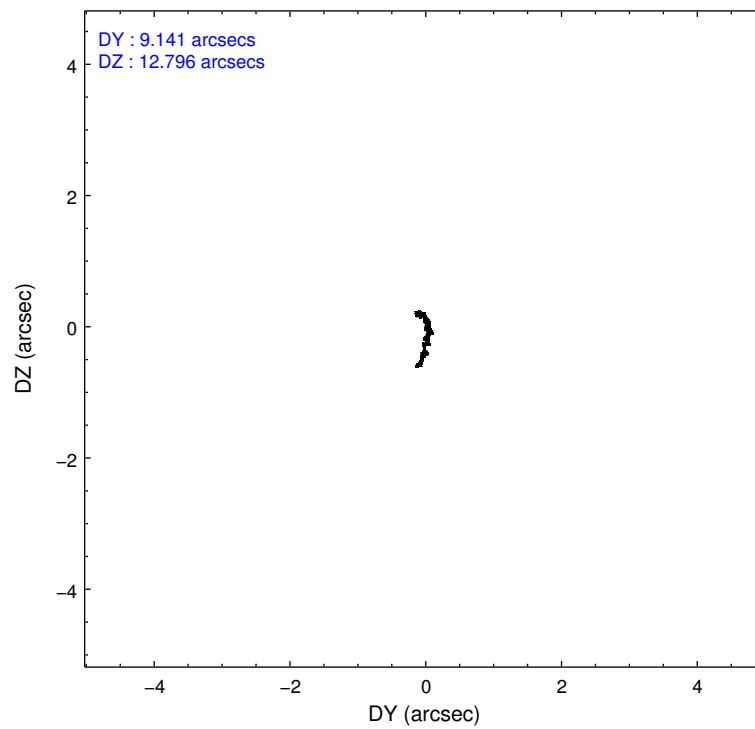
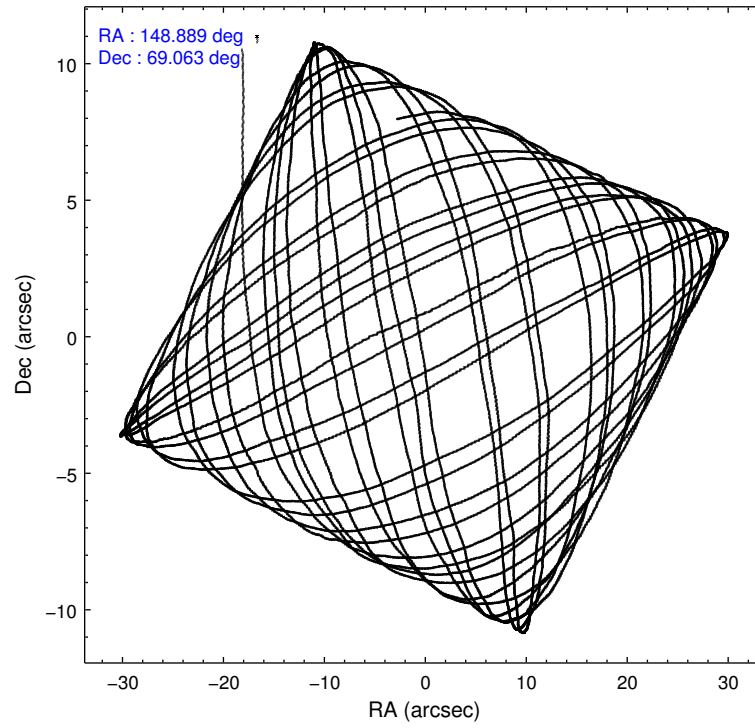
### 2.1.4 Events

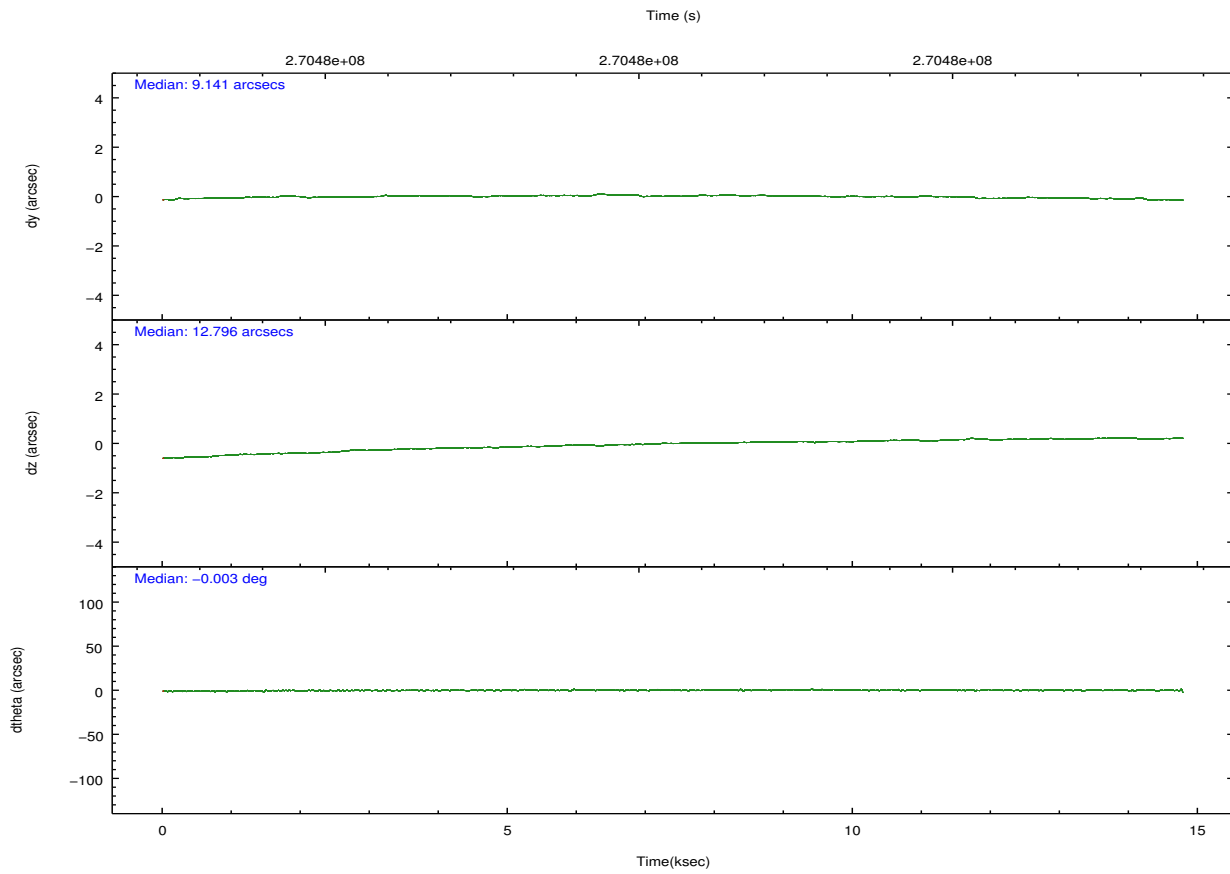
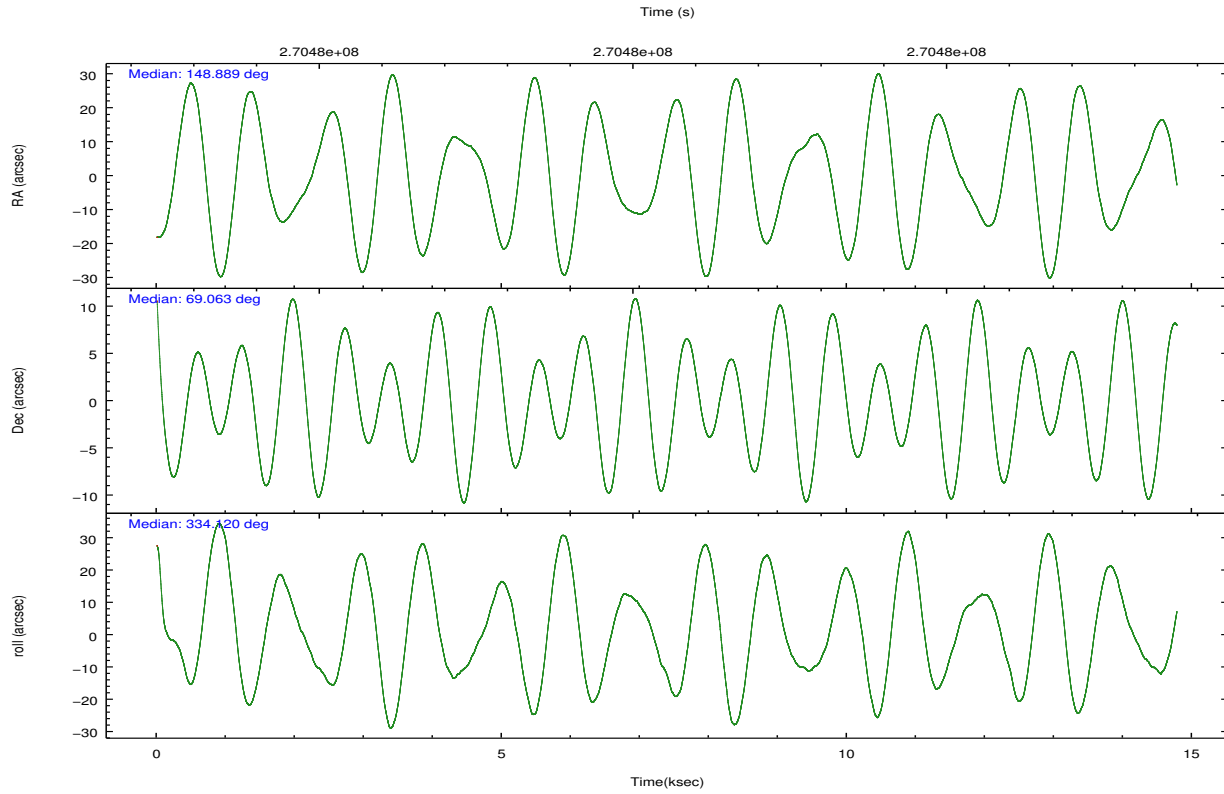
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	147378	198739	133203	183342	166645	131887	grade 0 events	10409	12010	8841	7822	12603	6759
rejected events	127782	104884	114371	102819	129230	115711		7%	6%	6%	4%	7%	5%
rejected %	86%	52%	85%	56%	77%	87%	grade 1 events	174	284	73	230	124	100
								0%	0%	0%	0%	0%	0%
							grade 2 events	3486	26945	3708	16455	8207	3118
								2%	13%	2%	8%	4%	2%
							grade 3 events	1642	3584	1571	7209	3719	1660
								1%	1%	1%	3%	2%	1%
							grade 4 events	1561	3557	1624	7120	3488	1526
								1%	1%	1%	3%	2%	1%
							grade 5 events	5770	14432	6139	17025	8138	6359
								3%	7%	4%	9%	4%	4%
							grade 6 events	2503	47780	3097	41930	9399	3117
								1%	24%	2%	22%	5%	2%
							grade 7 events	121833	90147	108150	85551	120967	109248
								82%	45%	81%	46%	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	148.813469	148.8894797431448	Subarray requested	NONE	NONE
[deg] Pointing Dec	69.060932	69.06323511028063	Alternating exposures requested	N	N
[deg] Pointing Roll	334.041538	334.12718901396	[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)	270473352.184000	270472219.98021			
Observation start date	2006-07-28T11:28:07	2006-07-28T11:10:19			
[s] Observation end time (MET)	270487944.184000	270488170.00596			
Observation end date	2006-07-28T15:31:19	2006-07-28T15:36:10			
Read mode	TIMED	TIMED			

## 2.3 Aspect



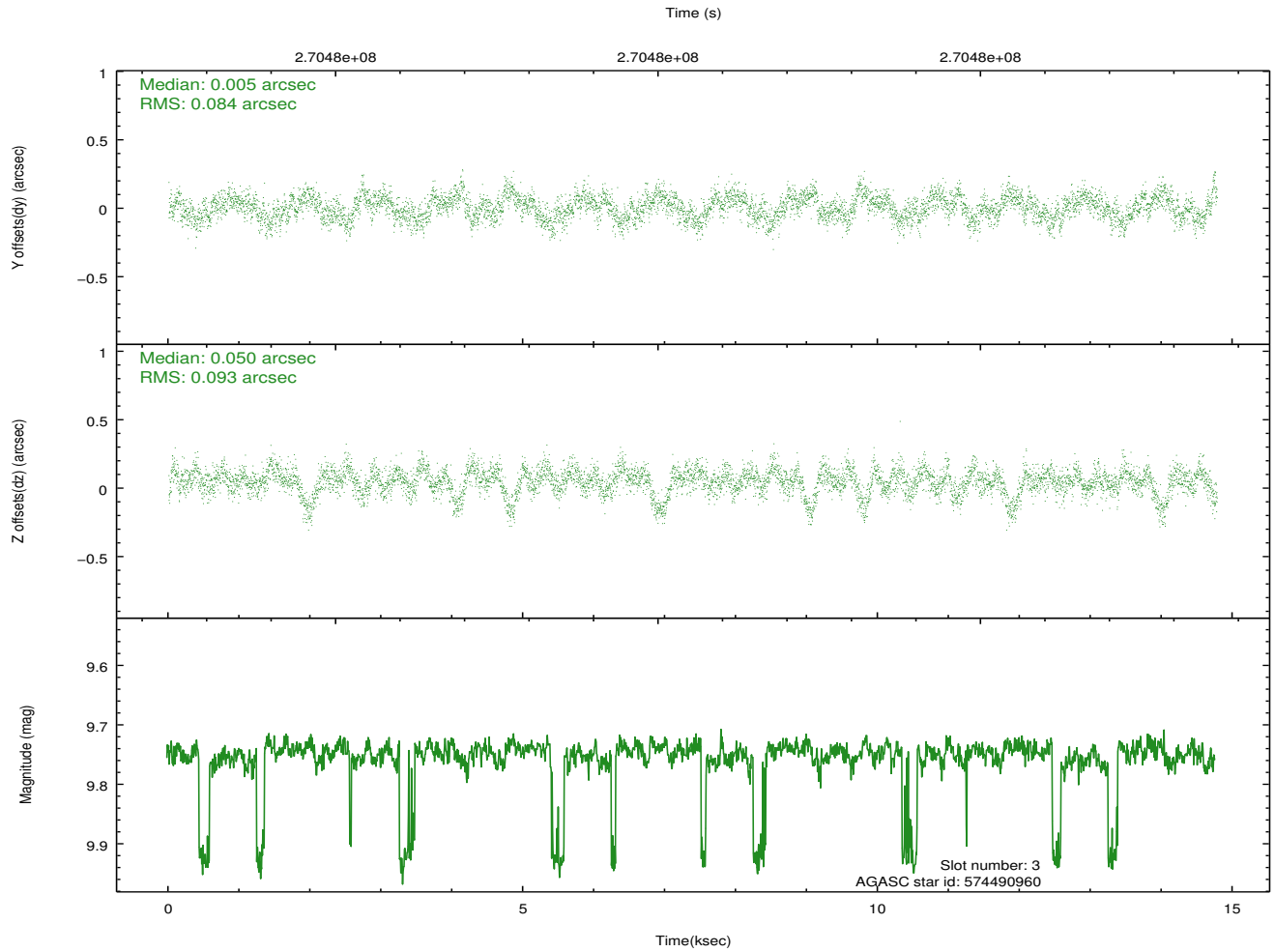
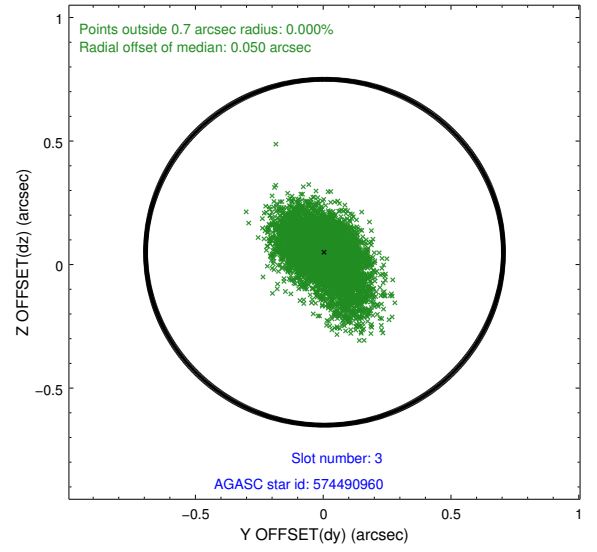
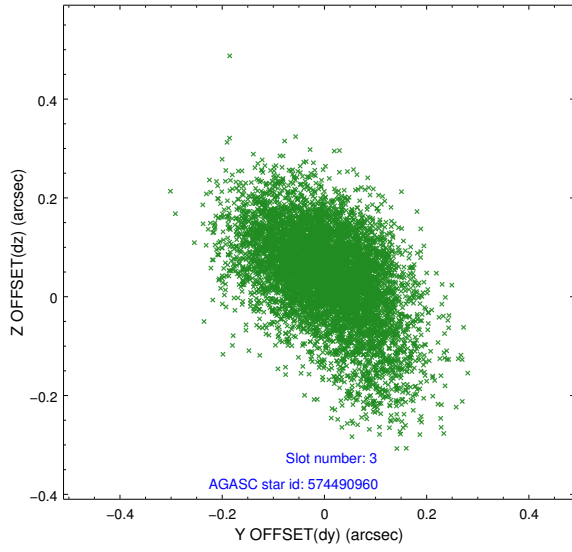


### Slot Statistics

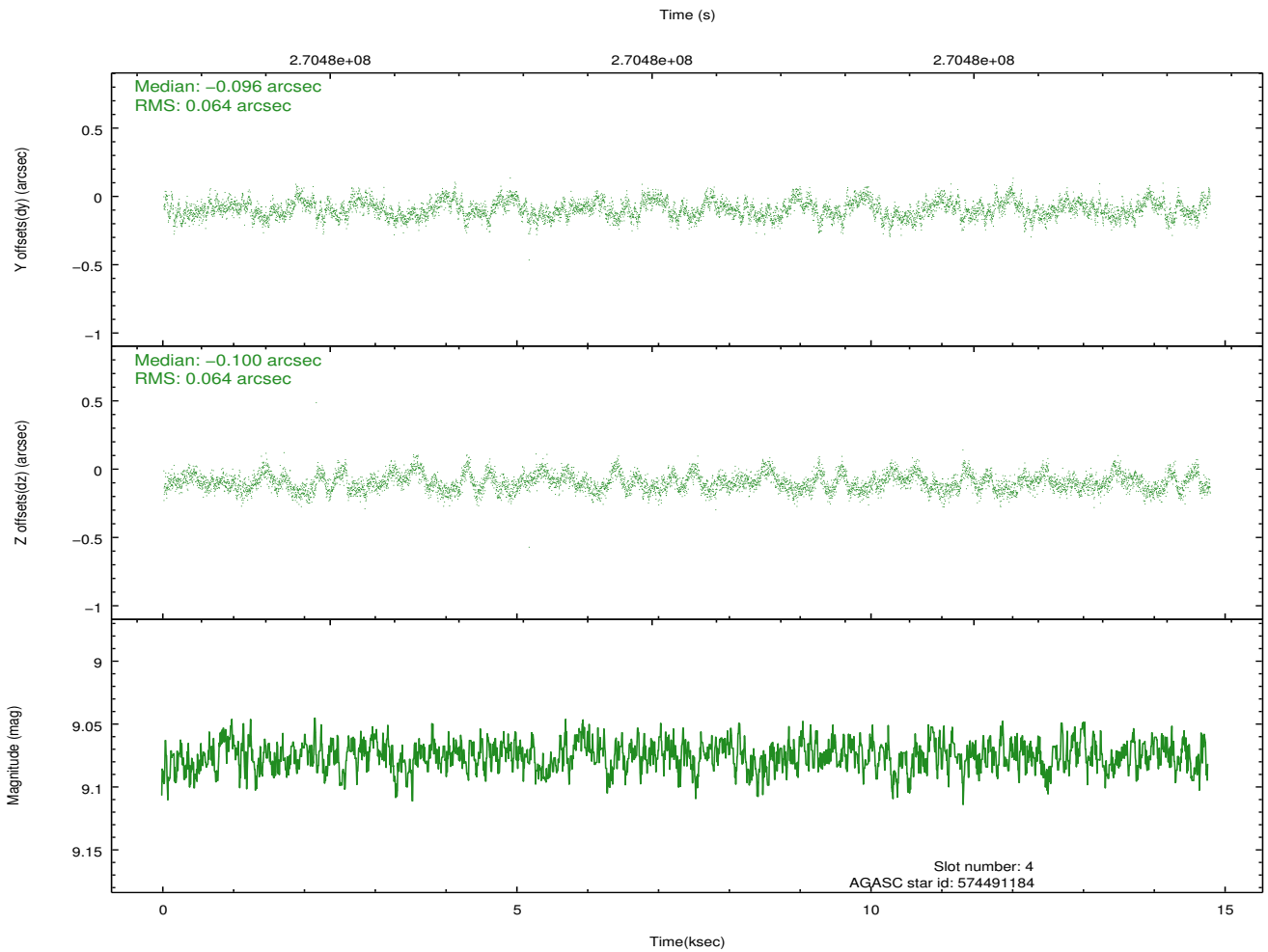
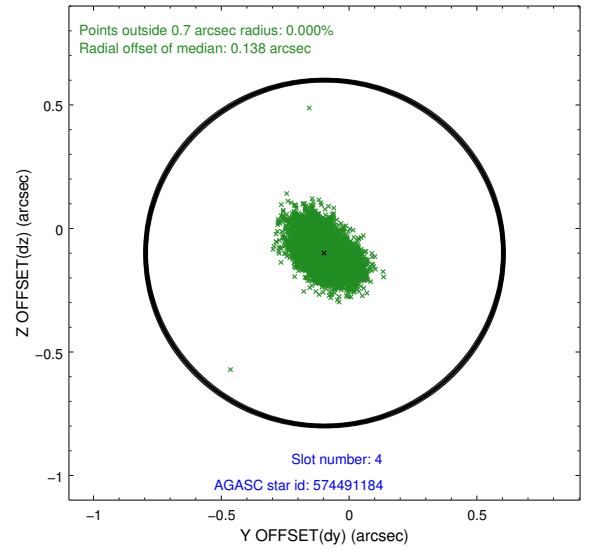
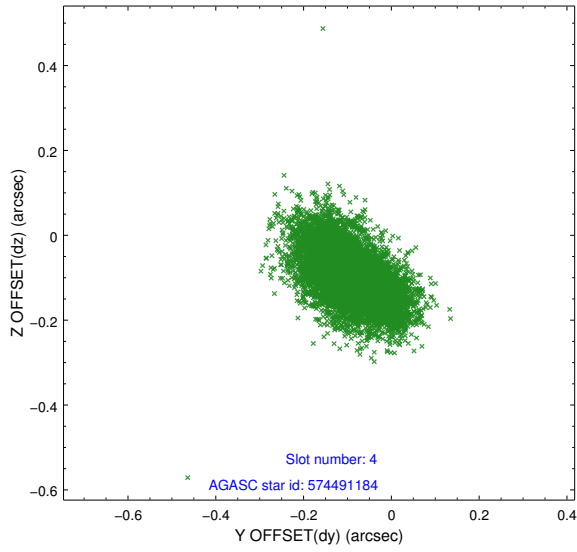
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	3605	-0.008	-0.043	0.009	0.016	0.000000	0.000000	-761.97	-1734.03
1	FID	ACIS-S-4	7.20	3605	0.127	0.016	0.006	0.011	0.000000	0.000000	2151.32	174.16
2	FID	ACIS-S-5	7.23	3604	-0.150	0.036	0.008	0.014	0.000000	0.000000	-1814.53	168.25
3	GUIDE	574490960	9.75	7168	0.005	0.050	0.127	0.230	148.185918	69.658768	-1649.99	1595.11
4	GUIDE	574491184	9.08	7205	-0.096	-0.100	0.096	0.159	148.582453	69.768699	-1374.58	2166.02
5	GUIDE	574491280	9.34	7205	-0.059	0.054	0.088	0.147	148.611567	69.450135	-843.55	1148.31
6	GUIDE	574500920	10.12	7103	-0.023	0.165	0.172	0.265	147.014605	68.742334	-1623.45	-2027.37
7	GUIDE	574489160	9.95	7200	0.175	-0.146	0.199	0.324	149.677320	68.172146	2437.28	-2363.14

## 2.4 Star Slots

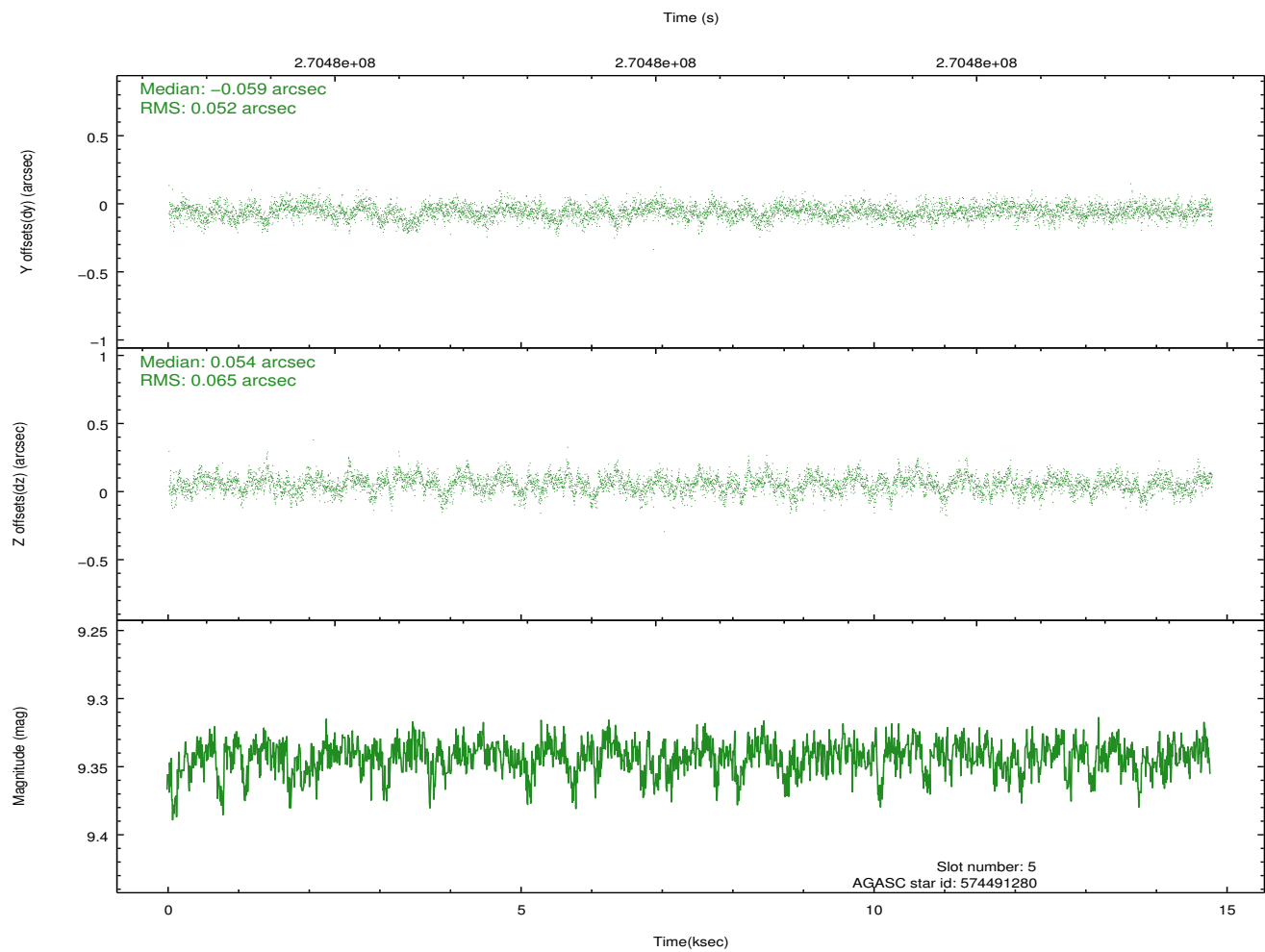
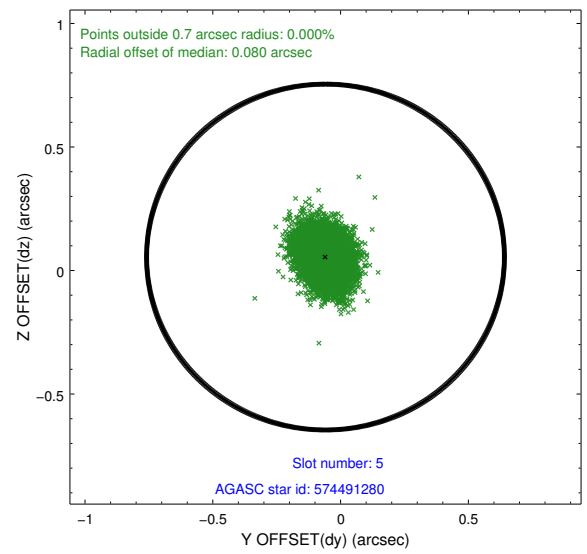
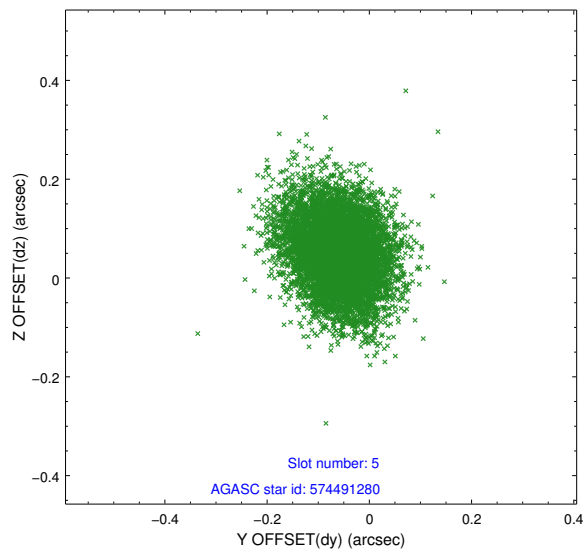
### 2.4.1 Slot 3



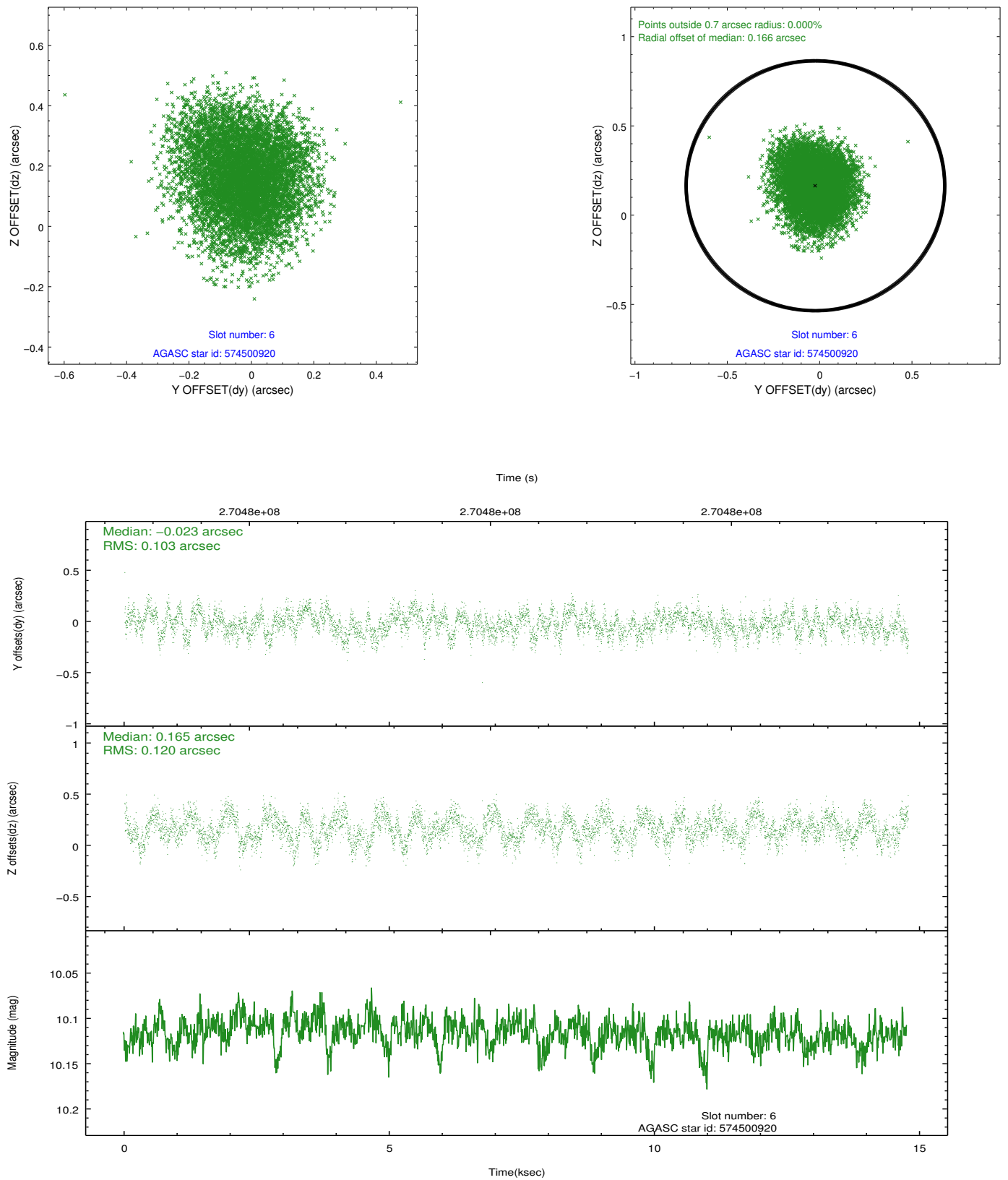
## 2.4.2 Slot 4



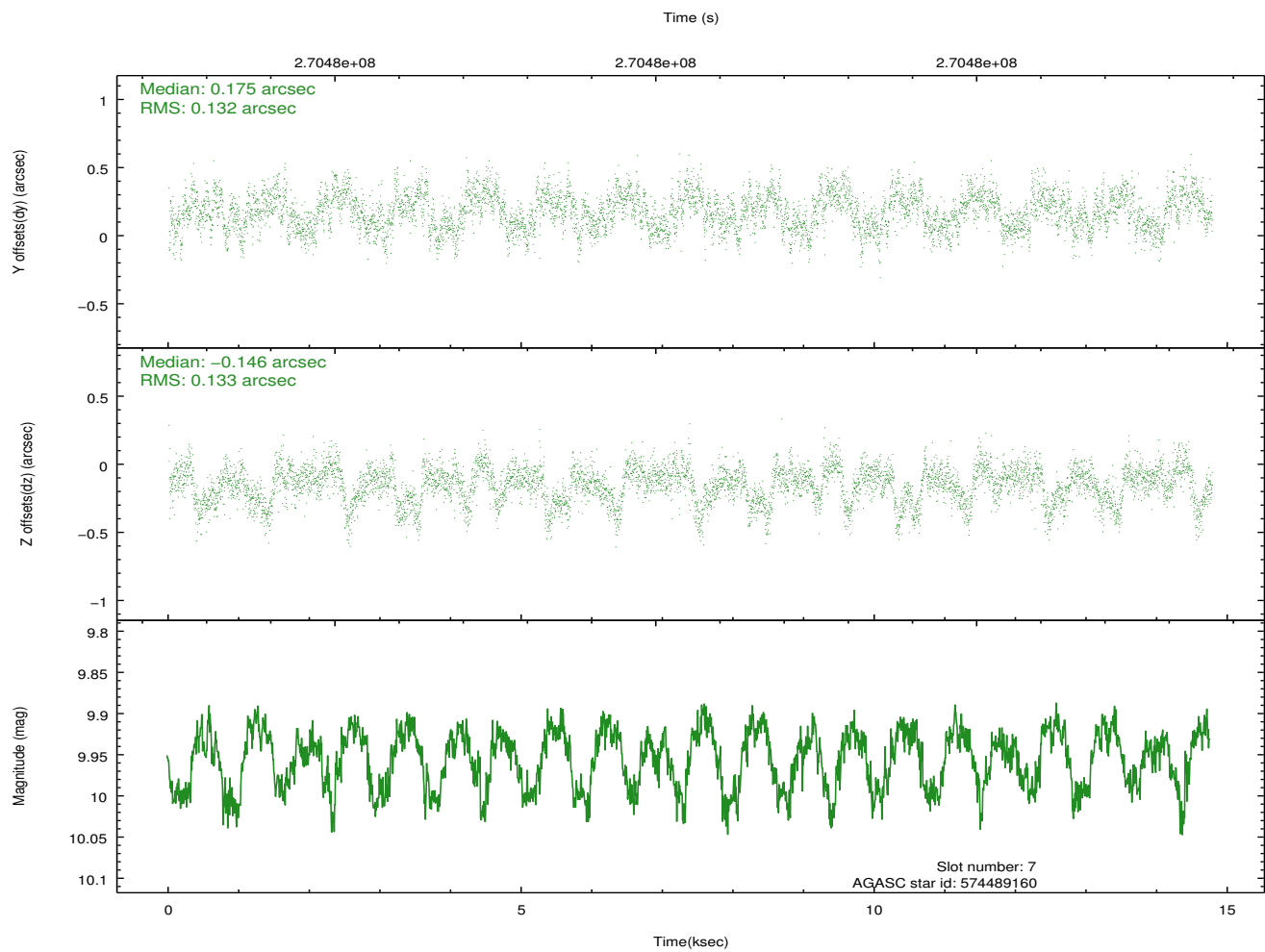
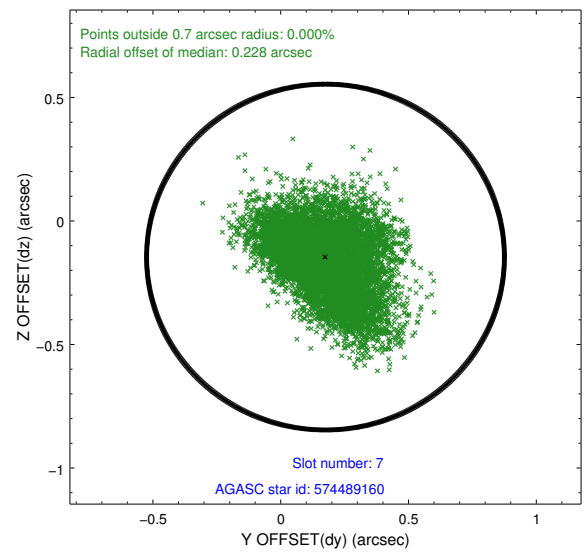
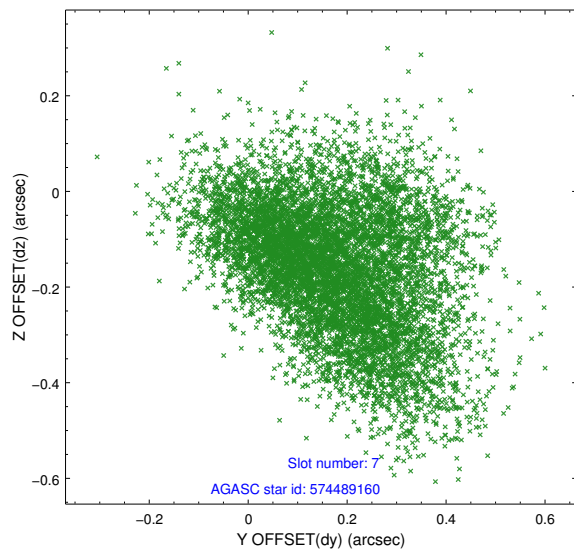
### 2.4.3 Slot 5



## 2.4.4 Slot 6

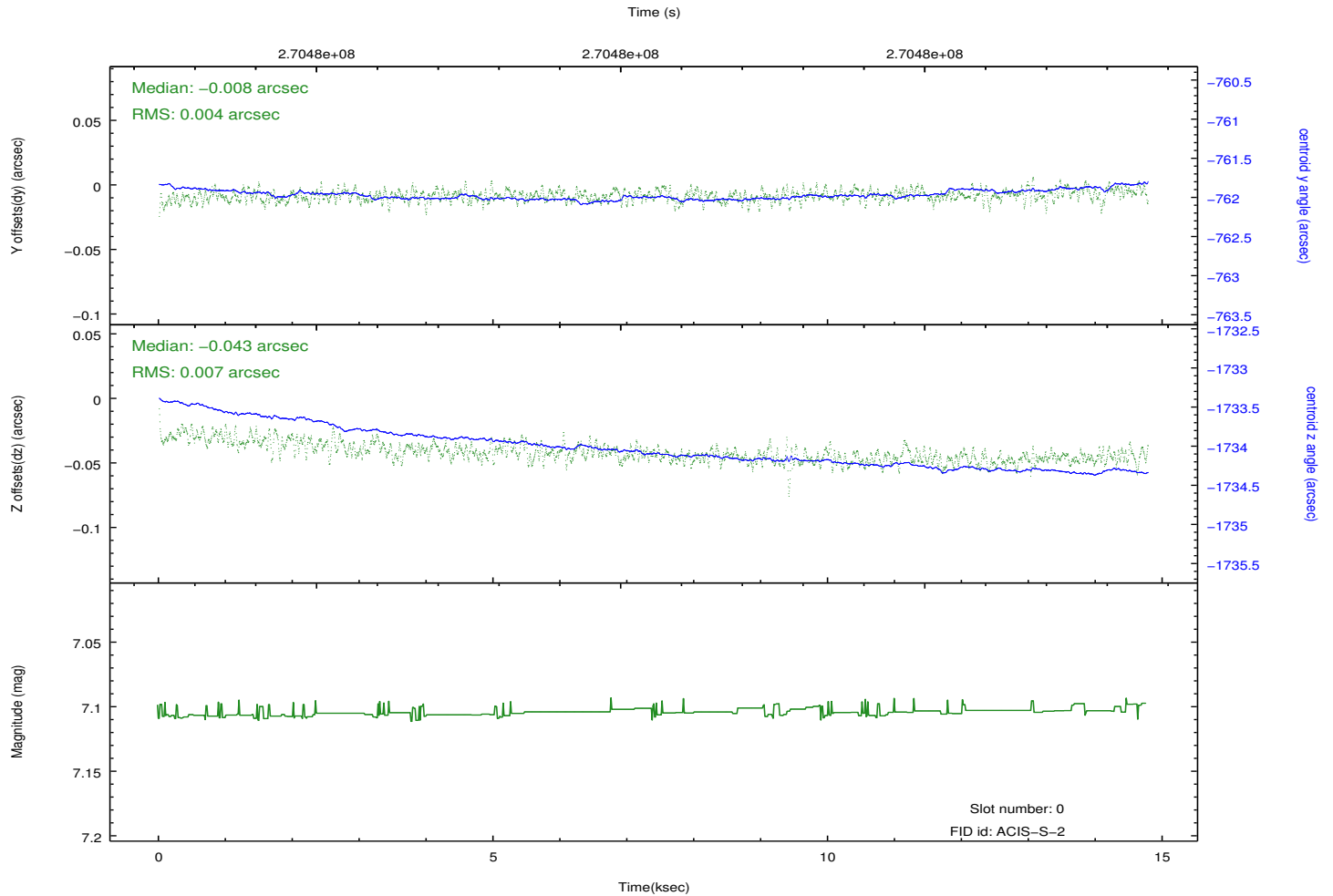
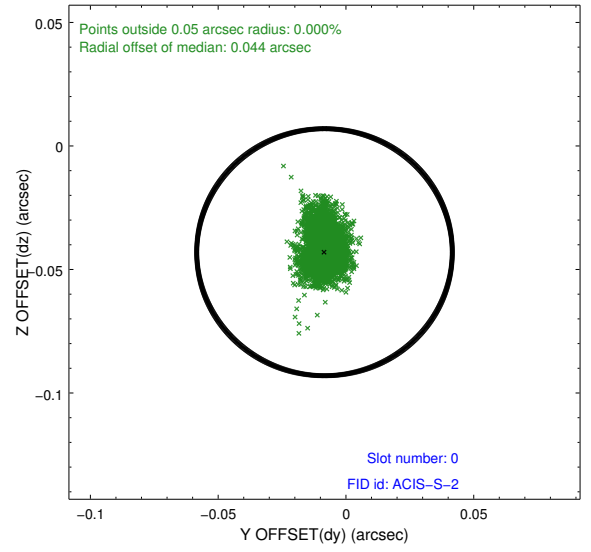
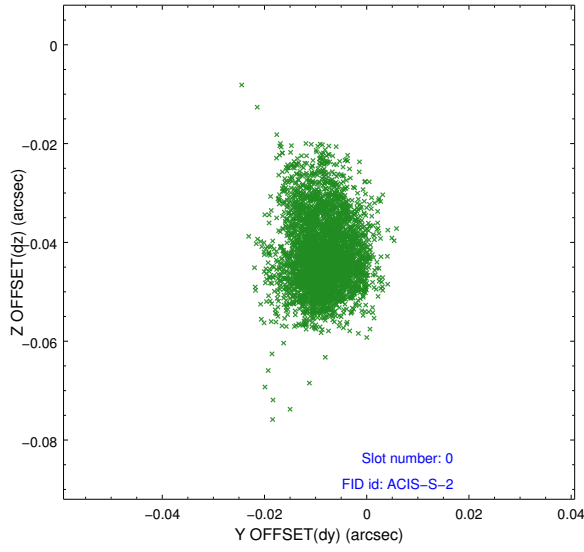


## 2.4.5 Slot 7

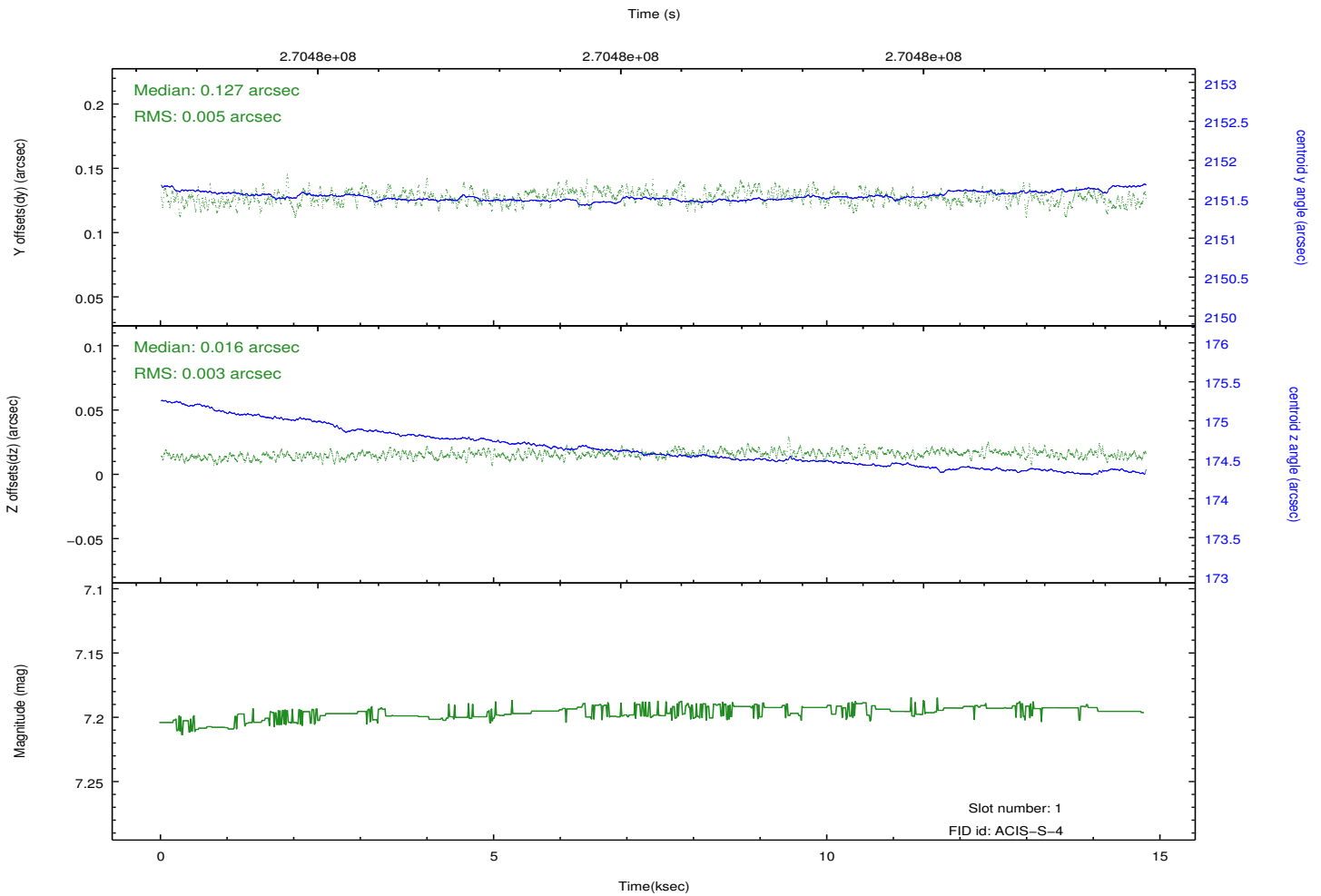
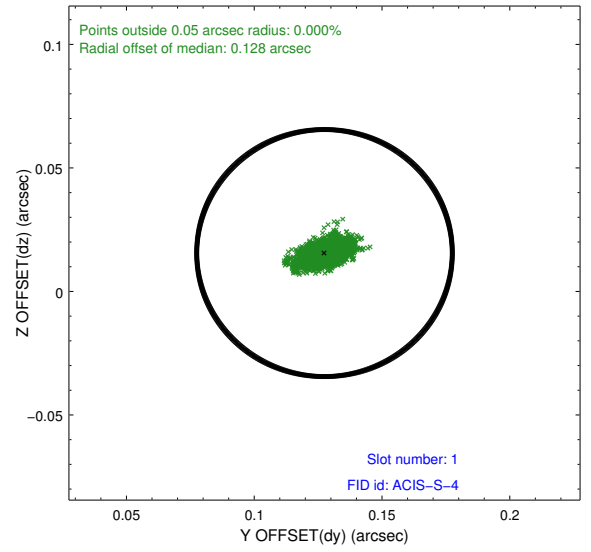
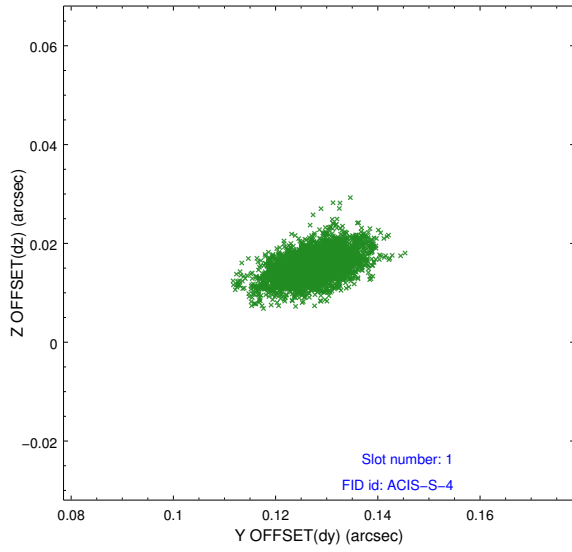


## 2.5 FID Slots

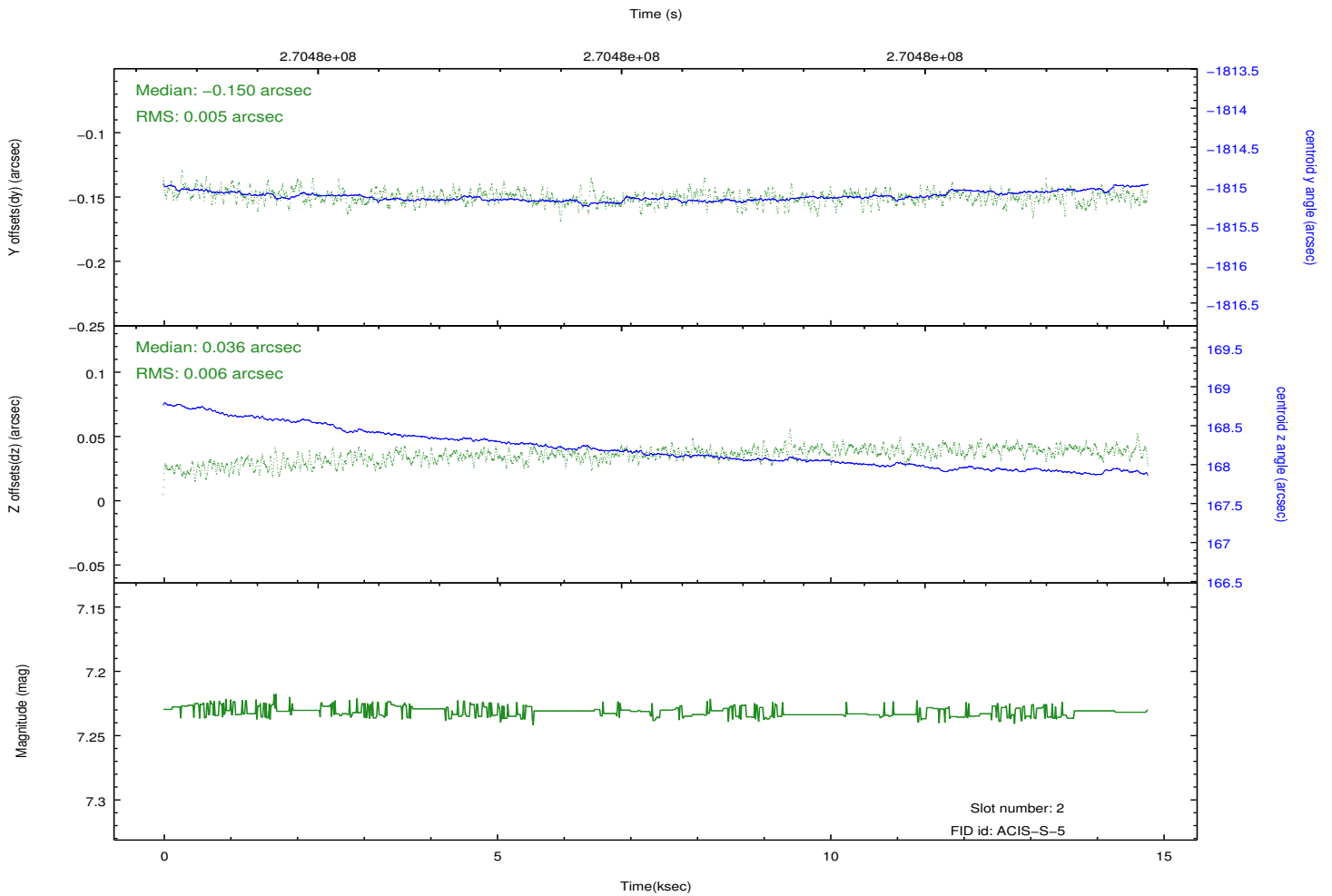
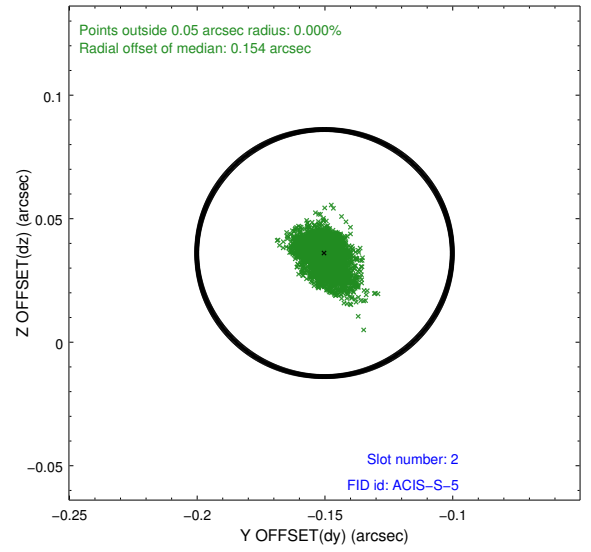
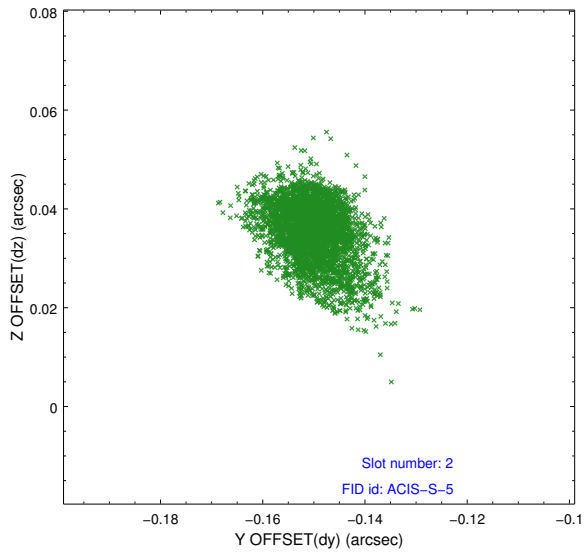
### 2.5.1 Slot 0



## 2.5.2 Slot 1

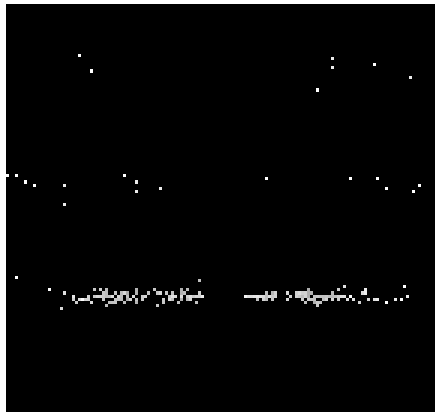


### 2.5.3 Slot 2

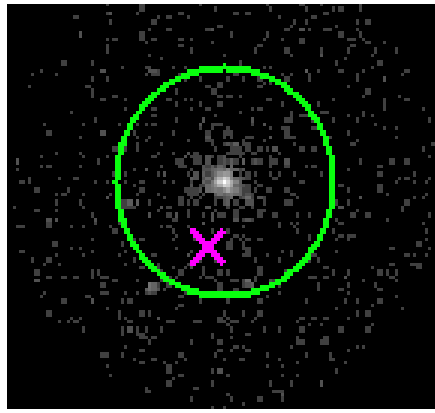


### 3 Gratings

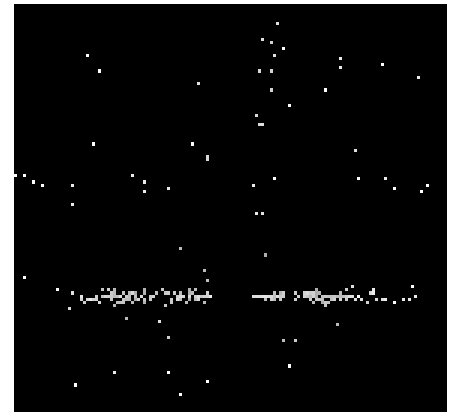
#### 3.1 HEG Arm



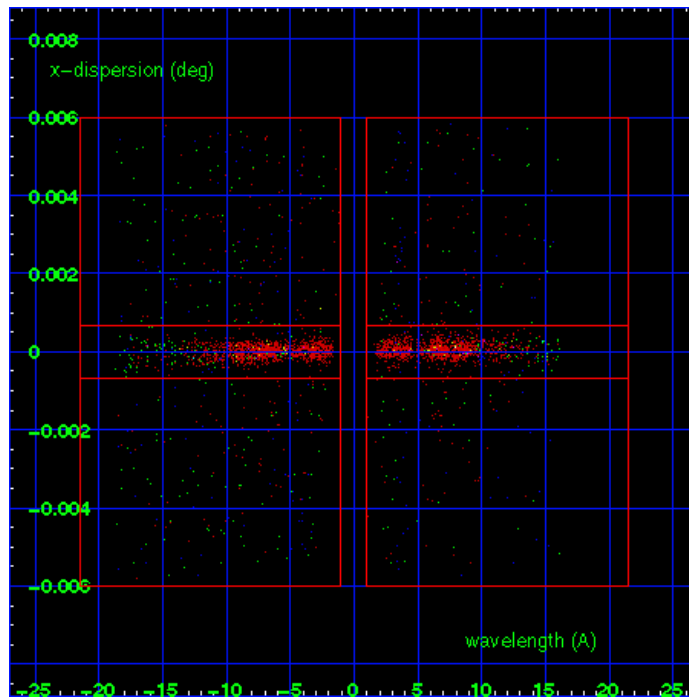
HEG Order Sort 123



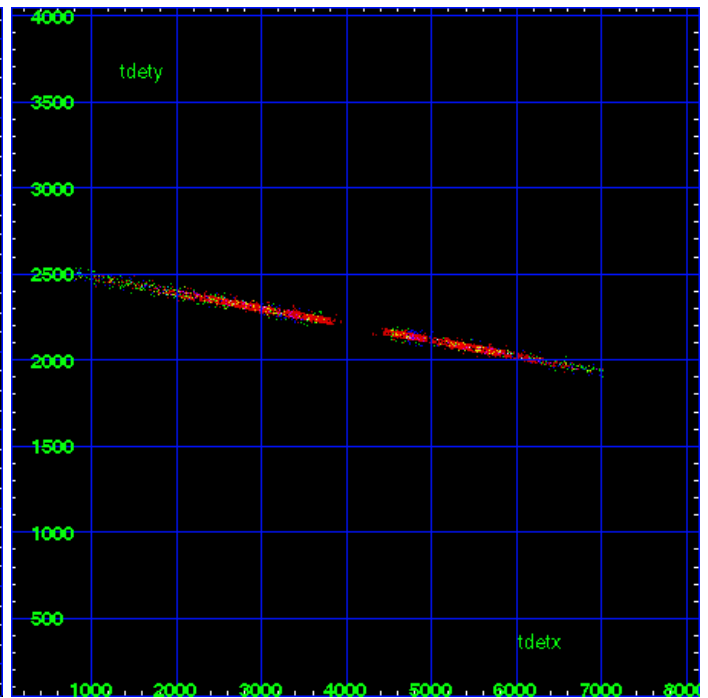
HEG Zero Order



HEG Order Sort ALL

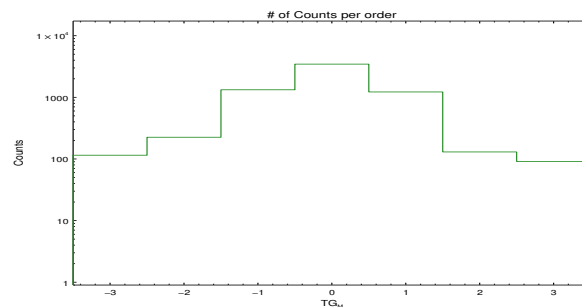


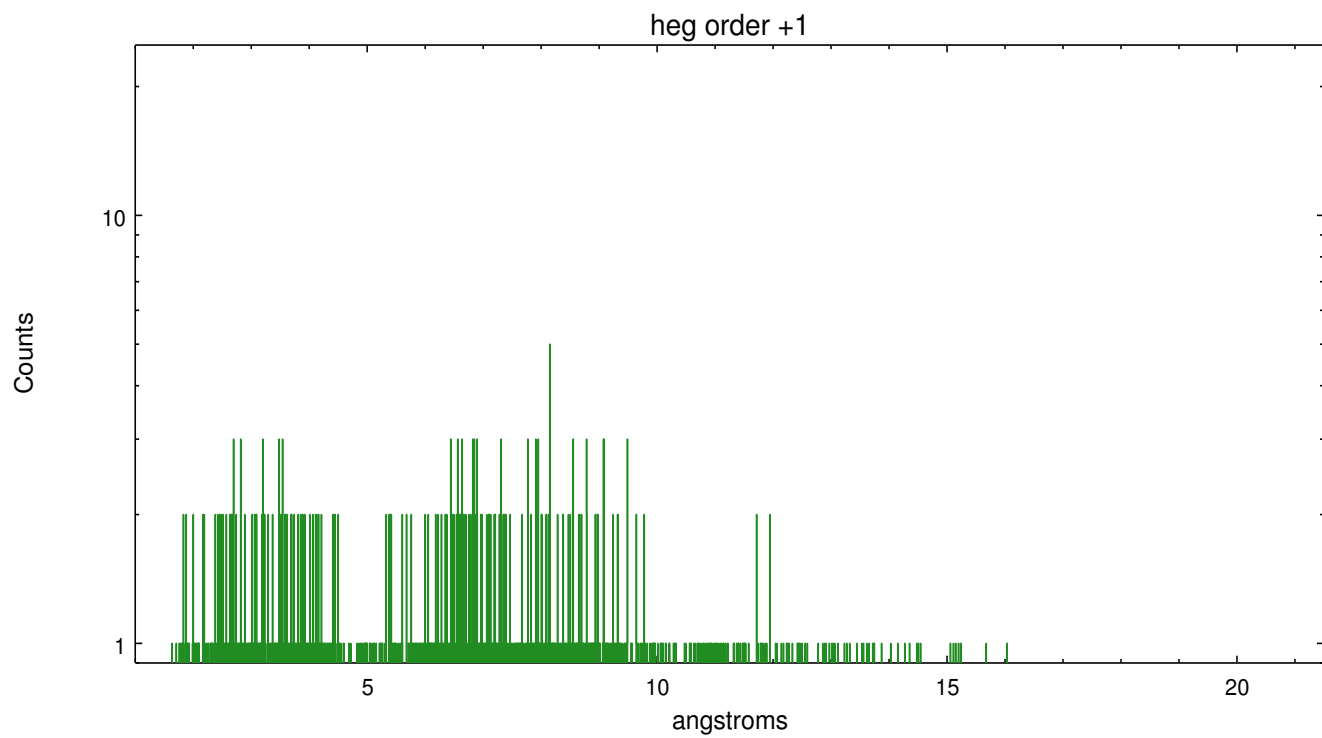
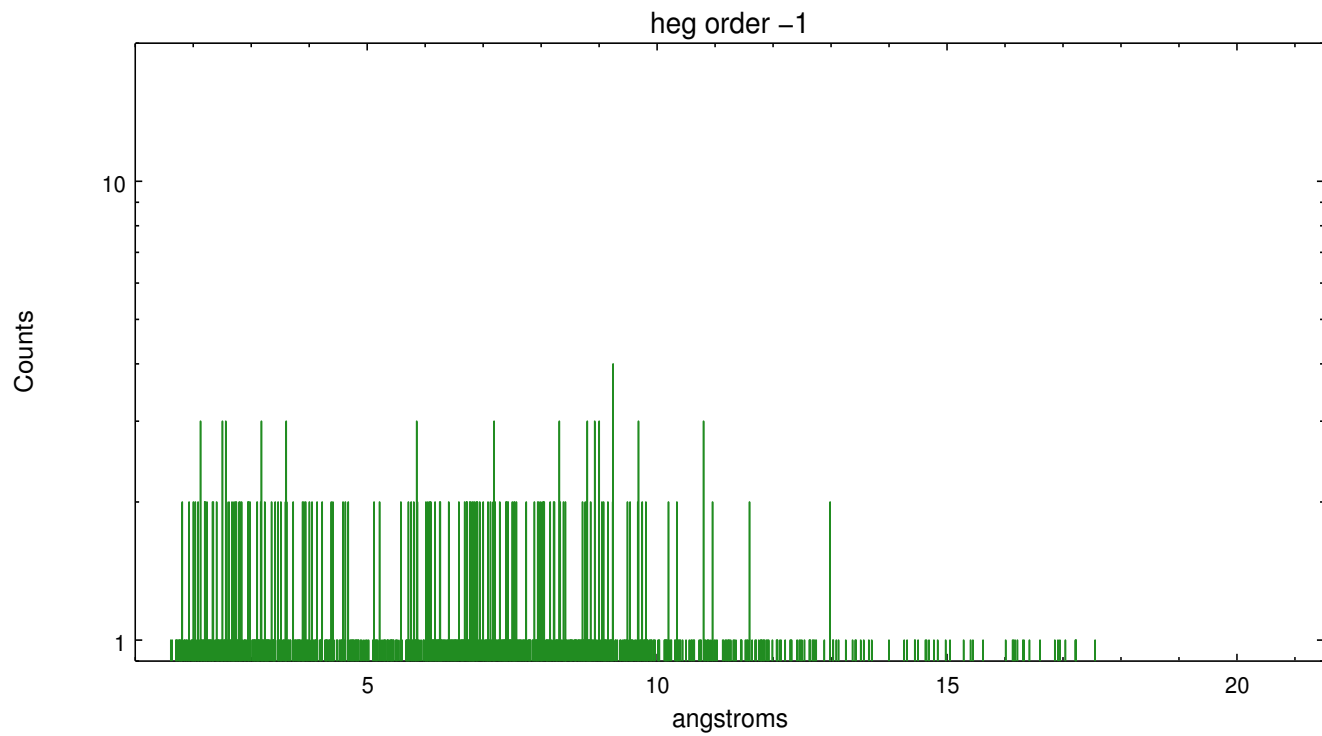
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	115	225	1326	3458	1223	130	91

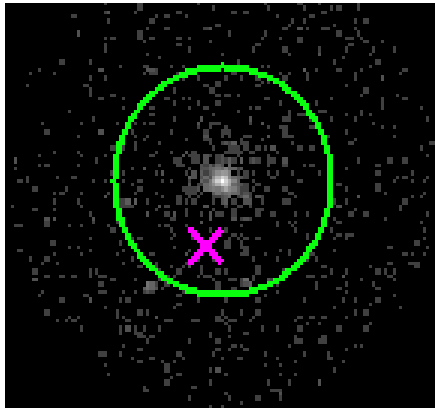




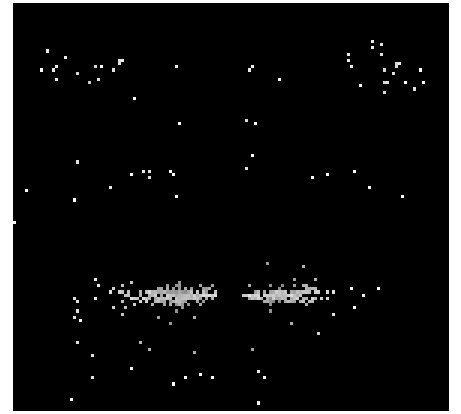
### 3.2 MEG Arm



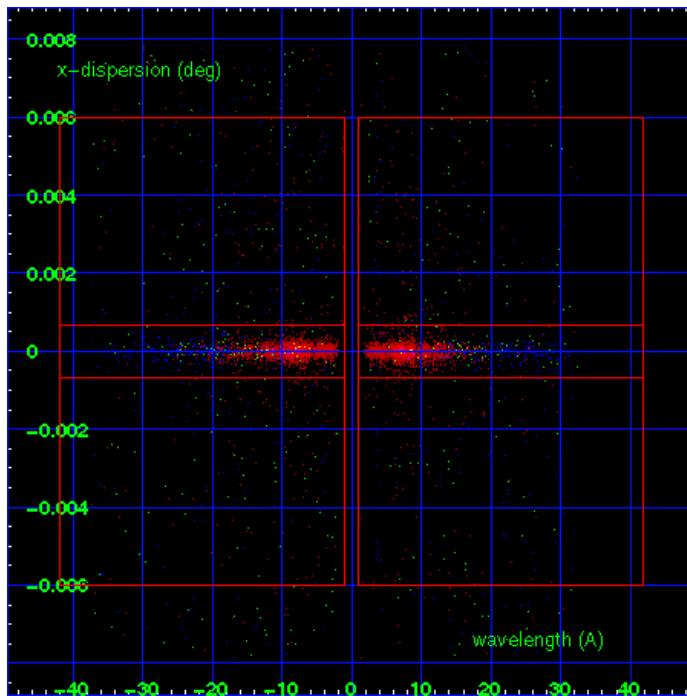
MEG Order Sort 123



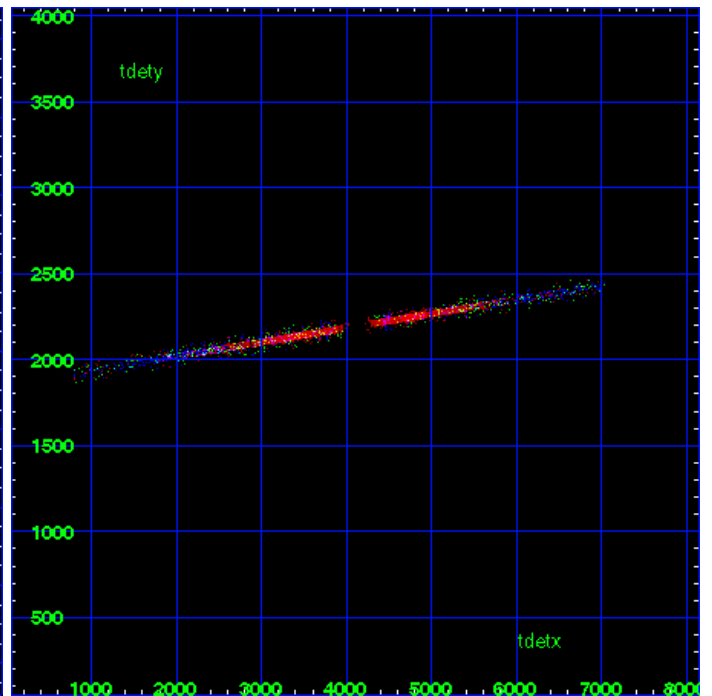
MEG Zero Order



MEG Order Sort ALL

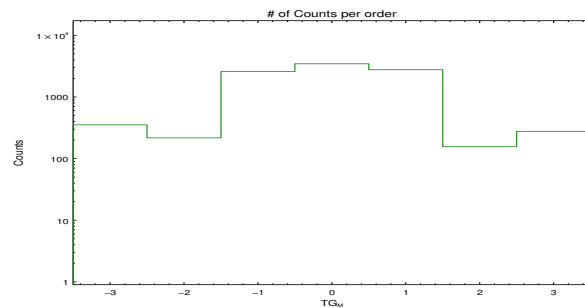


Spot Image MEG

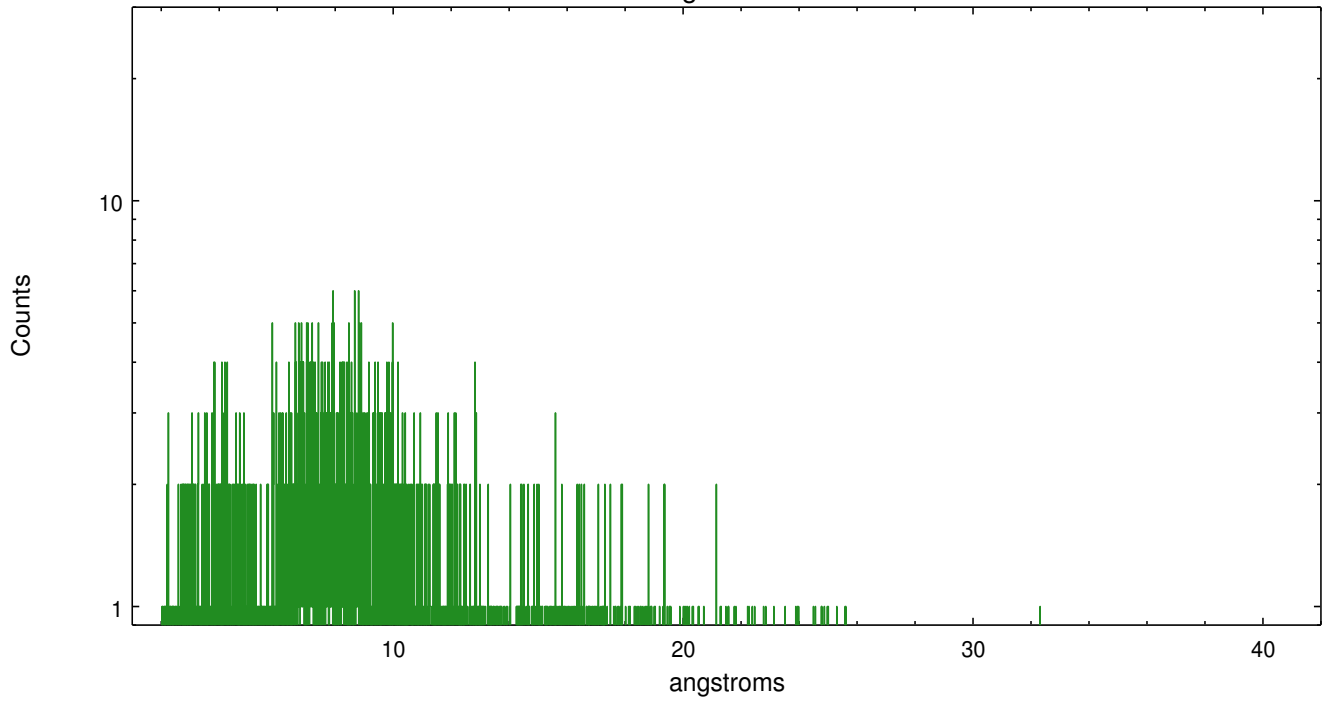


Full Detector MEG

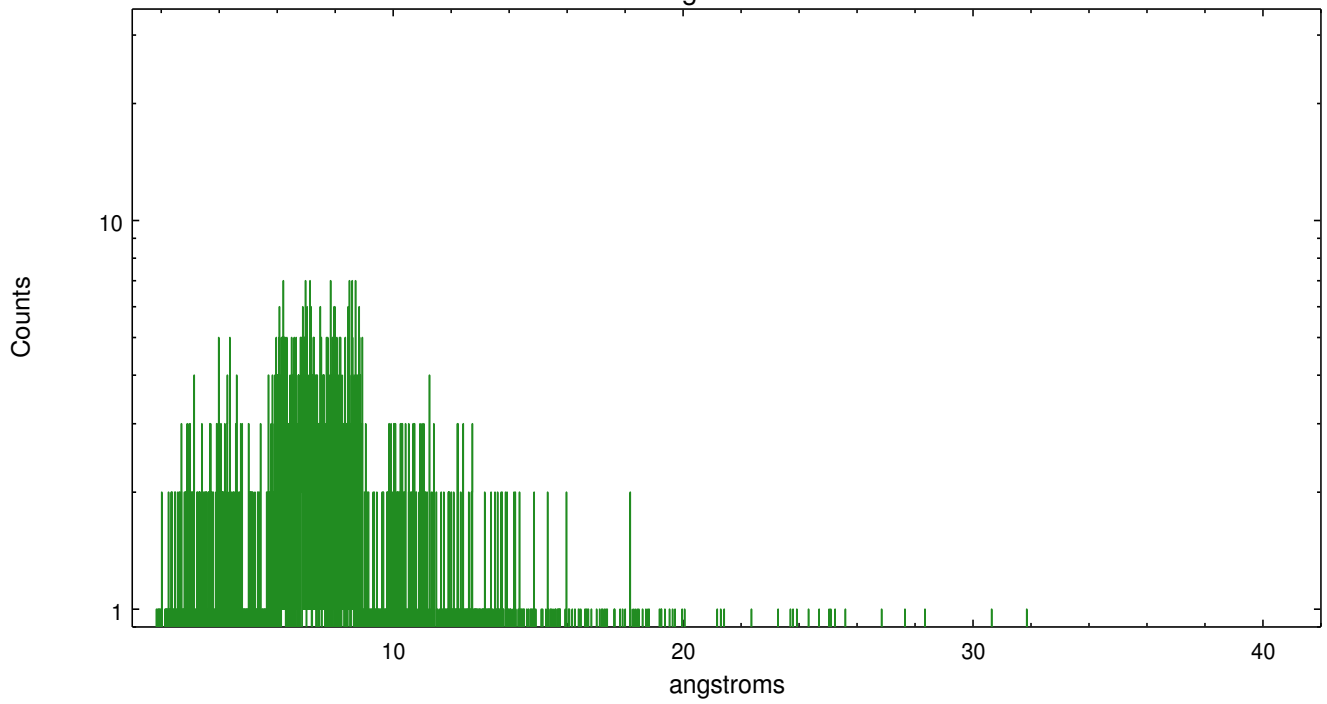
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	353	217	2580	3458	2770	156	277



meg order -1



meg order +1



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.04.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.5951999

## A.2 Comments