

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 3471 - L2 Version 3  
Chandra X-Ray Center

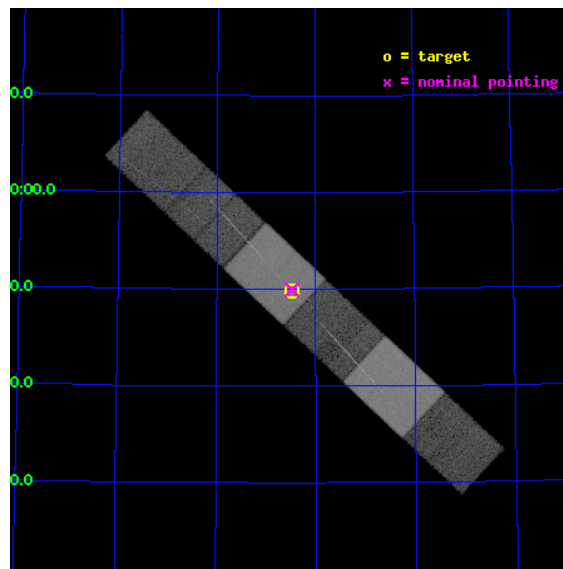
L2 Processing Date : Oct 4 2012

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# 1 Front

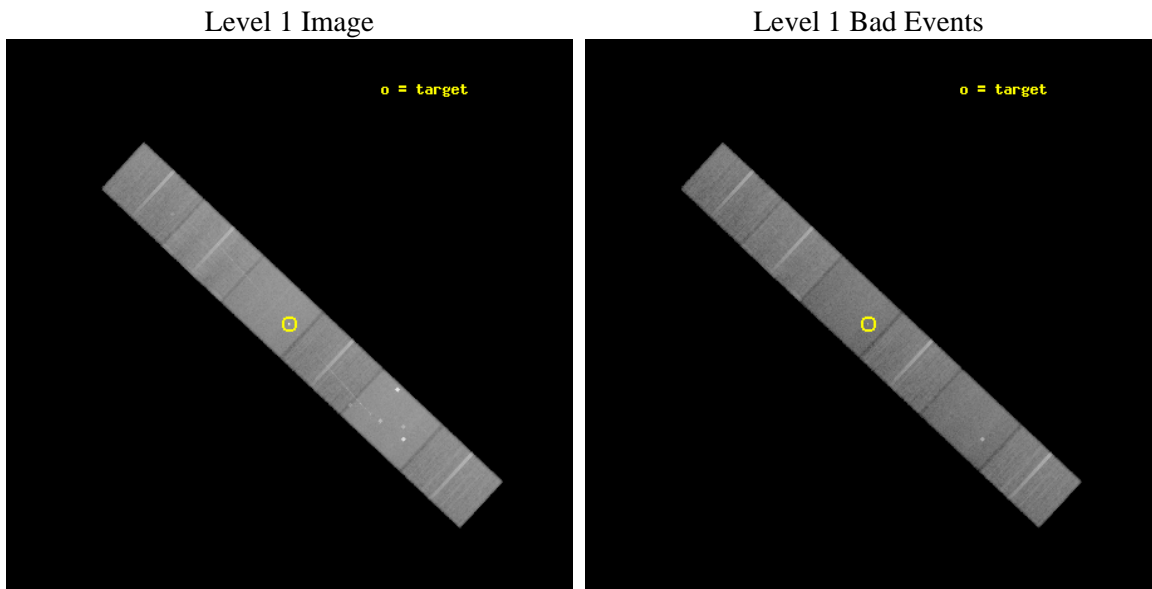
seq_num	200172	Sequence number
obs_id	3471	Observation id
title	A TALE OF TWO G STARS	Proposal title
observer	Dr. Thomas Ayres	Principal investigator
object	24 URSAE MAJORIS	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	143.62	Observer's specified target RA [deg]
dec_targ	69.830278	Observer's specified target Dec [deg]
ra_nom	143.61974713041	Nominal RA [deg]
dec_nom	69.832487320849	Nominal Dec [deg]
roll_nom	223.05686142366	Nominal Roll [deg]
revision	3	Processing version of data
ontime	45254.959039748	Sum of GTIs [s]
livetime	44524.052198851	Livetime [s]
ontime4	45254.959039748	Sum of GTIs [s]
ontime5	45257.5	Sum of GTIs [s]
ontime6	45257.5	Sum of GTIs [s]
ontime7	45254.959039748	Sum of GTIs [s]
ontime8	45257.5	Sum of GTIs [s]
ontime9	45257.5	Sum of GTIs [s]
l2events	346626	Number of level 2 events



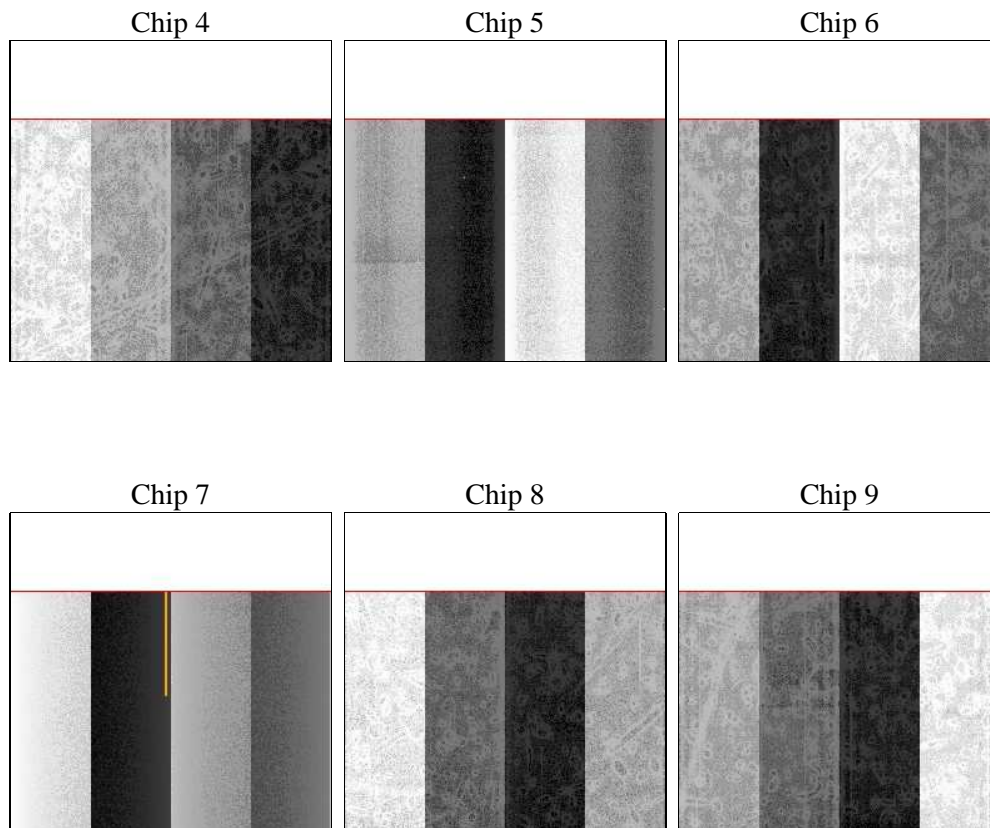
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	45500.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	45254.959039748	Sum of GTIs [s]
caldbver	4.5.2	&#160	ontime4	45254.959039748	Sum of GTIs [s]
date	2012-10-04T16:46:30	Date and time of file creation	ontime5	45257.5	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	45257.5	Sum of GTIs [s]
			ontime7	45254.959039748	Sum of GTIs [s]
			ontime8	45257.5	Sum of GTIs [s]
			ontime9	45257.5	Sum of GTIs [s]
			l1events	1584270	Number of level 1 events

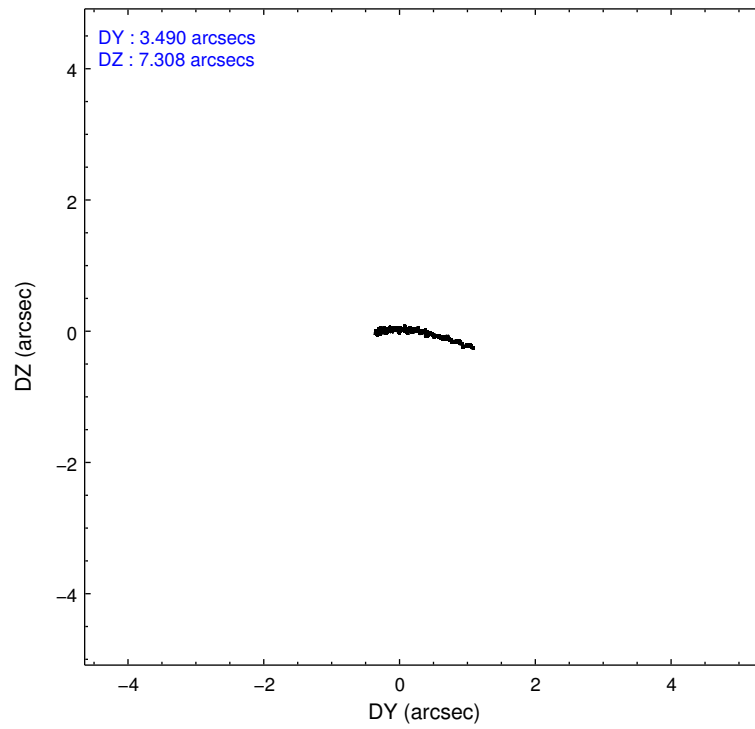
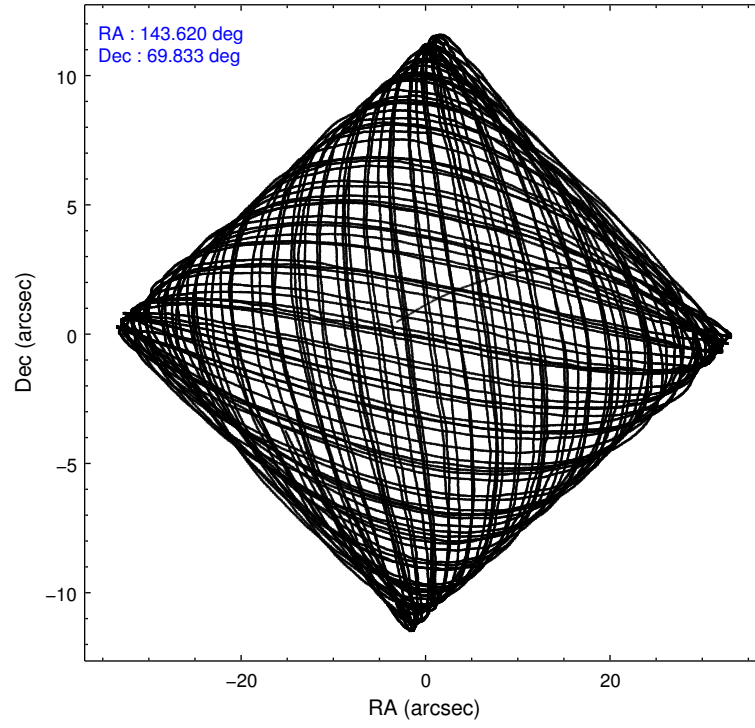
### 2.1.4 Events

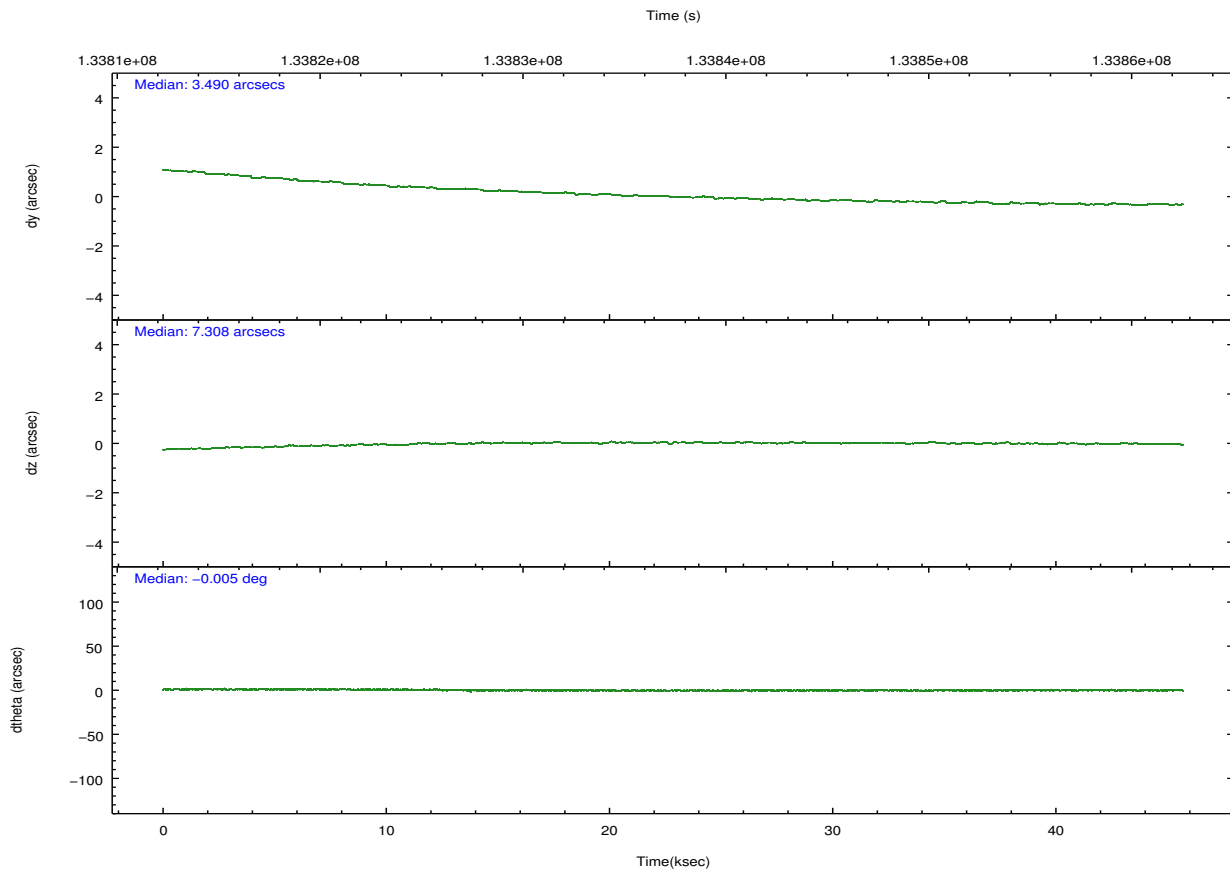
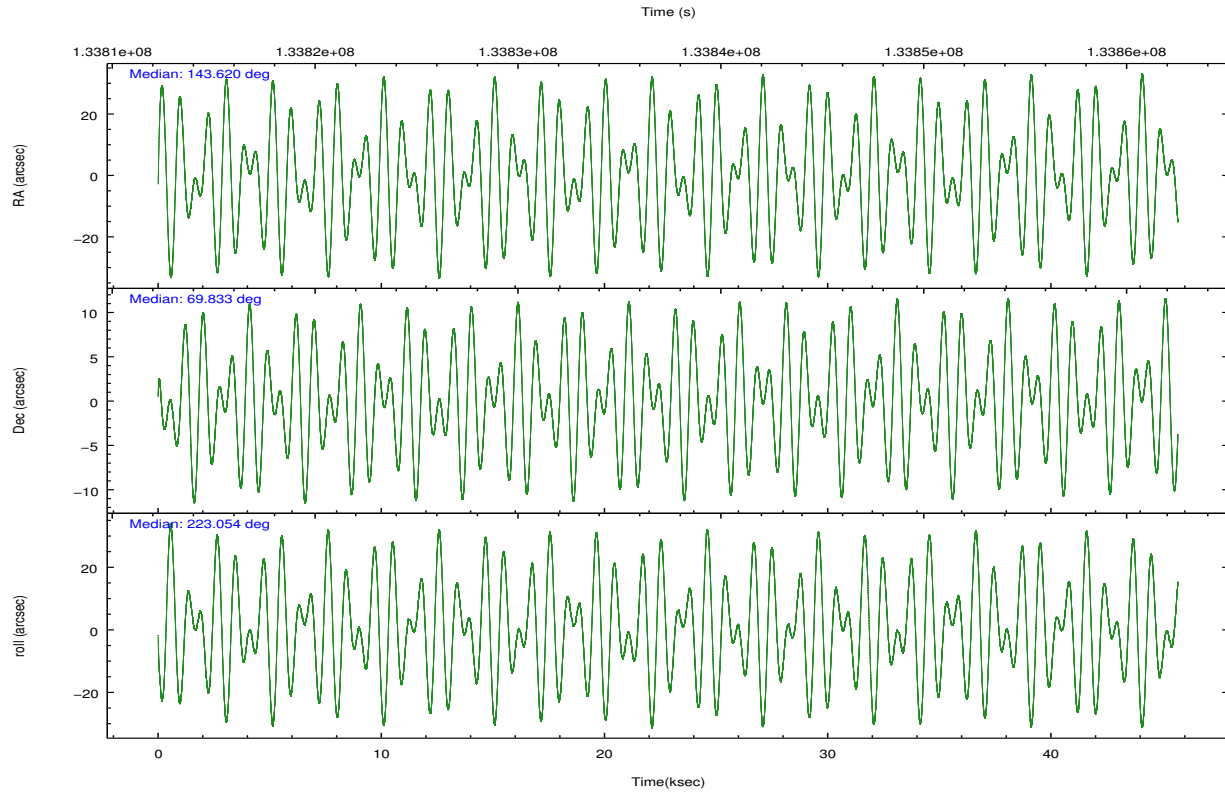
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	244599	330054	222084	285932	286206	215395	grade 0 events	10811	34388	11004	12333	18981	10878
rejected events	217656	167850	195320	163695	227134	188725		4%	10%	4%	4%	6%	5%
rejected %	88%	50%	87%	57%	79%	87%	grade 1 events	89	2360	91	300	162	76
								0%	0%	0%	0%	0%	0%
							grade 2 events	6299	40857	5289	24961	12400	5303
								2%	12%	2%	8%	4%	2%
							grade 3 events	2627	6962	2720	11592	6241	2844
								1%	2%	1%	4%	2%	1%
							grade 4 events	2538	6801	2738	11302	5831	2633
								1%	2%	1%	3%	2%	1%
							grade 5 events	7900	24205	9270	27120	11888	9647
								3%	7%	4%	9%	4%	4%
							grade 6 events	4669	73204	5015	62057	15619	5014
								1%	22%	2%	21%	5%	2%
							grade 7 events	209666	141277	185957	136267	215084	179000
								85%	42%	83%	47%	75%	83%

## 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	143.641831	143.6197471304136	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	69.858654	69.83248732084914	Subarray start row	1	1
[deg] Pointing Roll	222.879507	223.0568614236616	Subarray row count	774	774
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	2.5
[mm] SIM translation stage pos	-187.132523	-187.1254020033014			
[mm] SIM translation stage offset	-3	-3.007120579706367			
[s] Observation start time (MET)	133814744.184000	133814023.88044			
Observation start date	2002-03-29T18:44:40	2002-03-29T18:33:43			
[s] Observation end time (MET)	133860244.184000	133861013.98234			
Observation end date	2002-03-30T07:23:00	2002-03-30T07:36:53			
Read mode	TIMED	TIMED			

## 2.3 Aspect



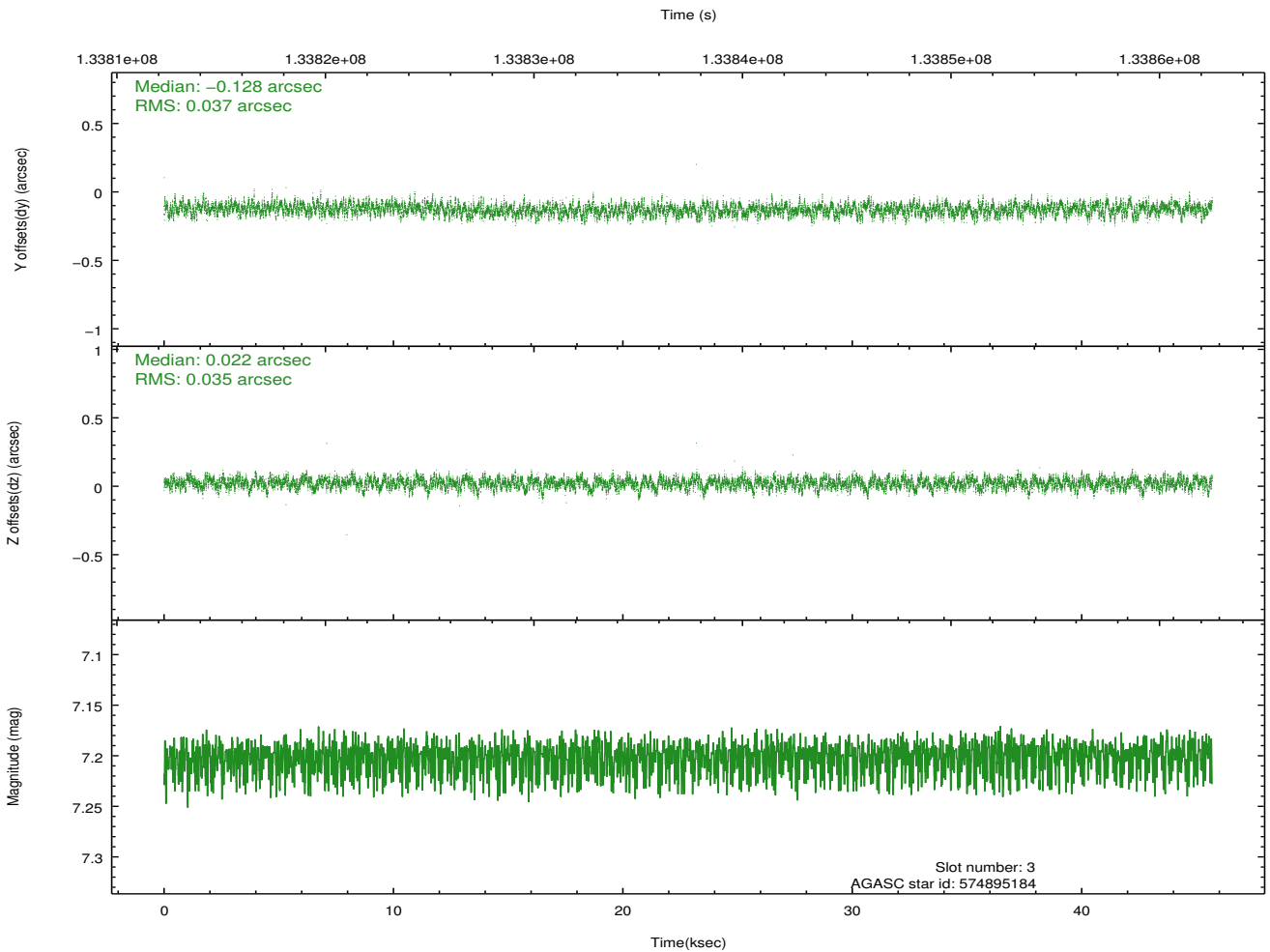
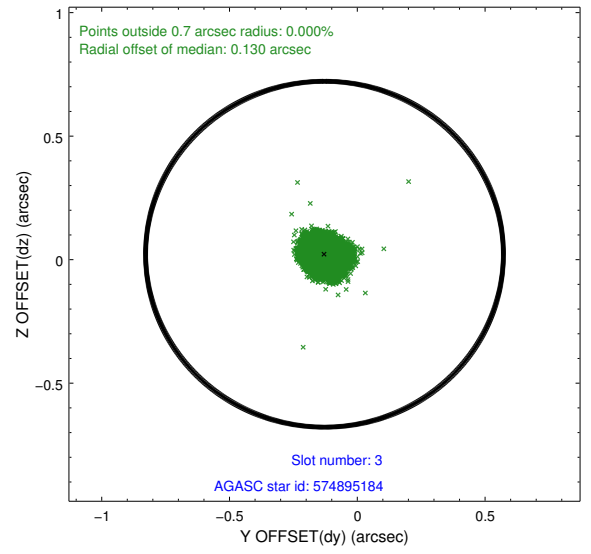
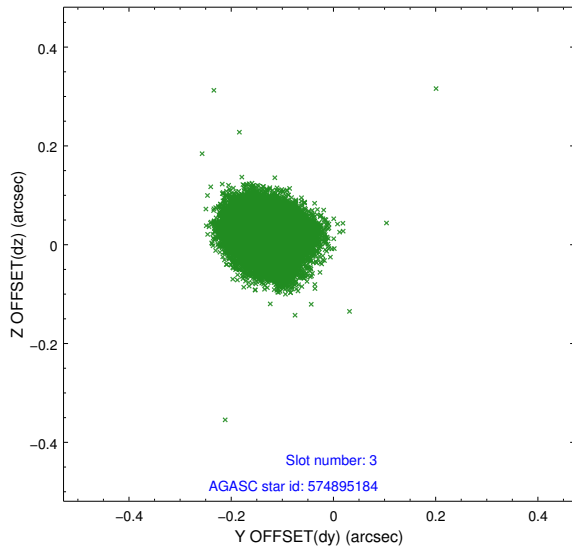


### Slot Statistics

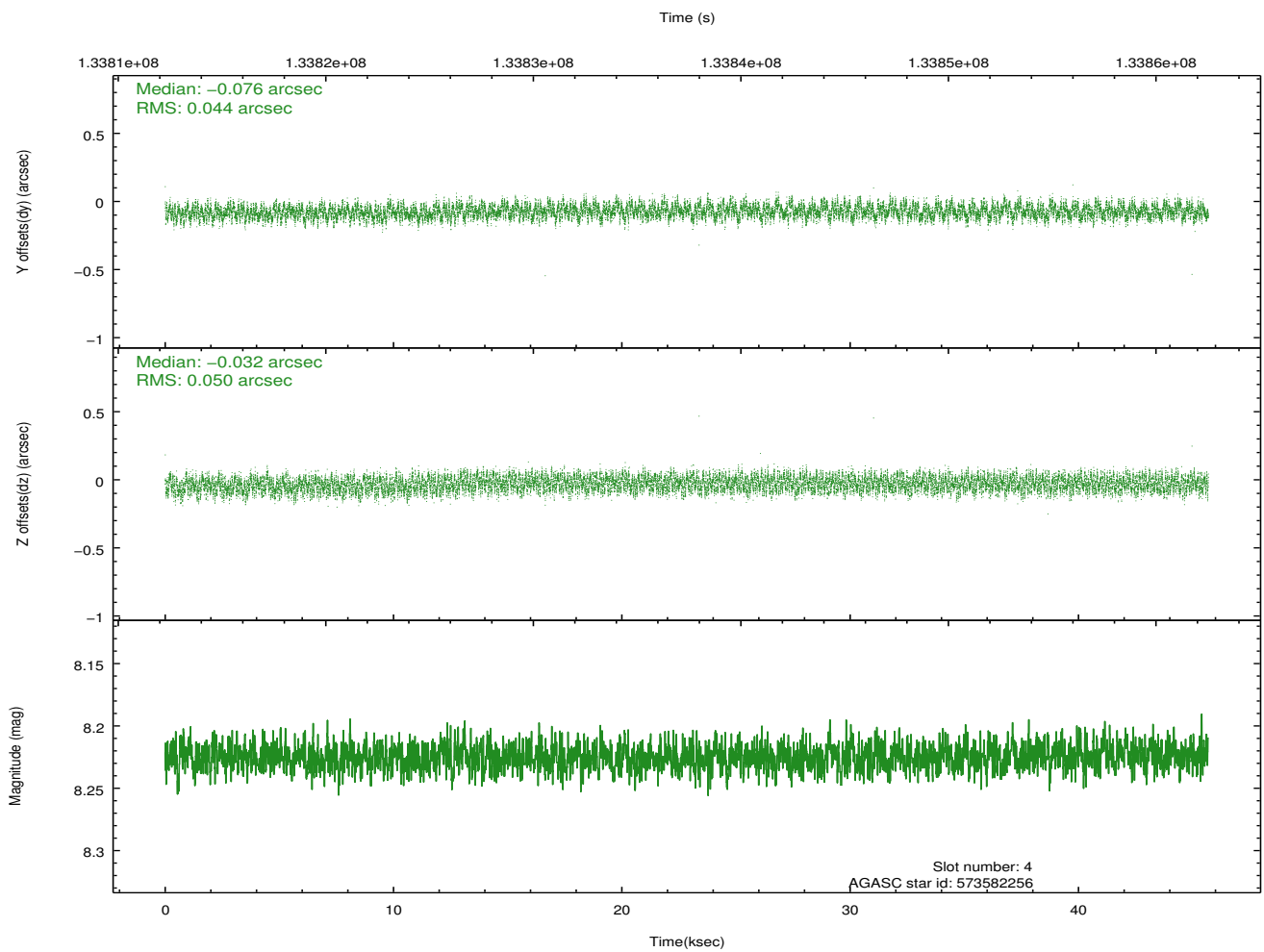
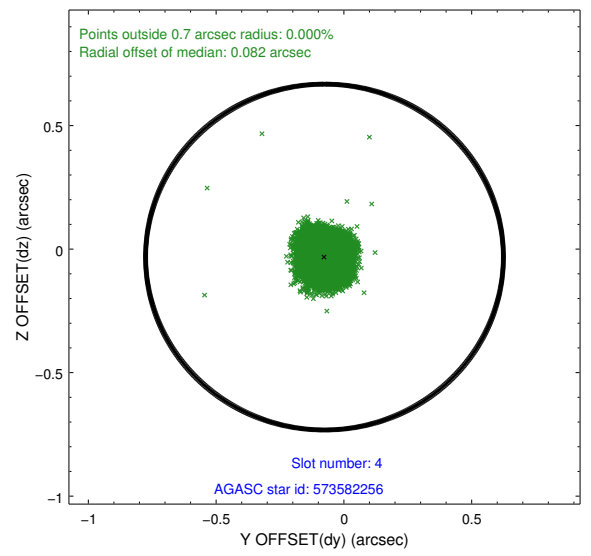
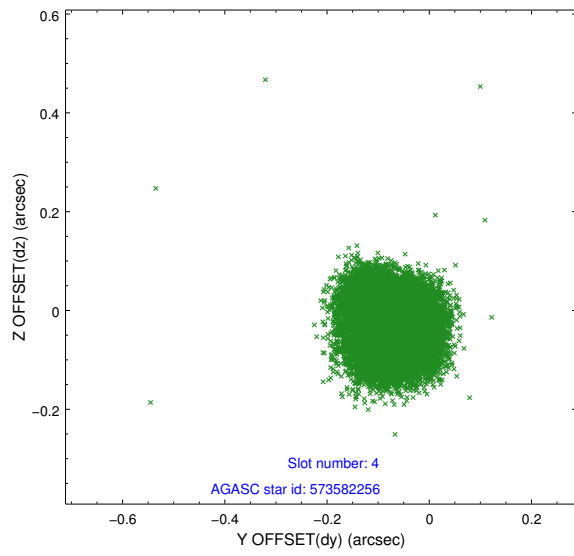
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	11141	-0.052	-0.044	0.008	0.014	0.000000	0.000000	-756.09	-1790.59
1	FID	ACIS-S-4	7.20	11140	0.038	0.037	0.010	0.018	0.000000	0.000000	2157.26	118.00
2	FID	ACIS-S-5	7.23	11142	-0.019	0.015	0.010	0.018	0.000000	0.000000	-1808.93	111.59
3	GUIDE	574895184	7.20	22285	-0.128	0.022	0.055	0.087	144.571194	70.266109	-1831.01	-312.81
4	GUIDE	573582256	8.22	22278	-0.076	-0.032	0.073	0.110	143.901691	69.156997	1475.09	2076.81
5	GUIDE	574896672	9.33	22271	-0.029	0.049	0.073	0.118	144.520516	70.337168	-1956.23	-543.80
6	GUIDE	573583384	9.41	22279	0.097	-0.043	0.118	0.189	142.247635	69.383402	2446.36	36.30
7	GUIDE	573578552	9.47	22274	0.139	0.006	0.117	0.200	141.668881	69.706297	2152.26	-1303.35

## 2.4 Star Slots

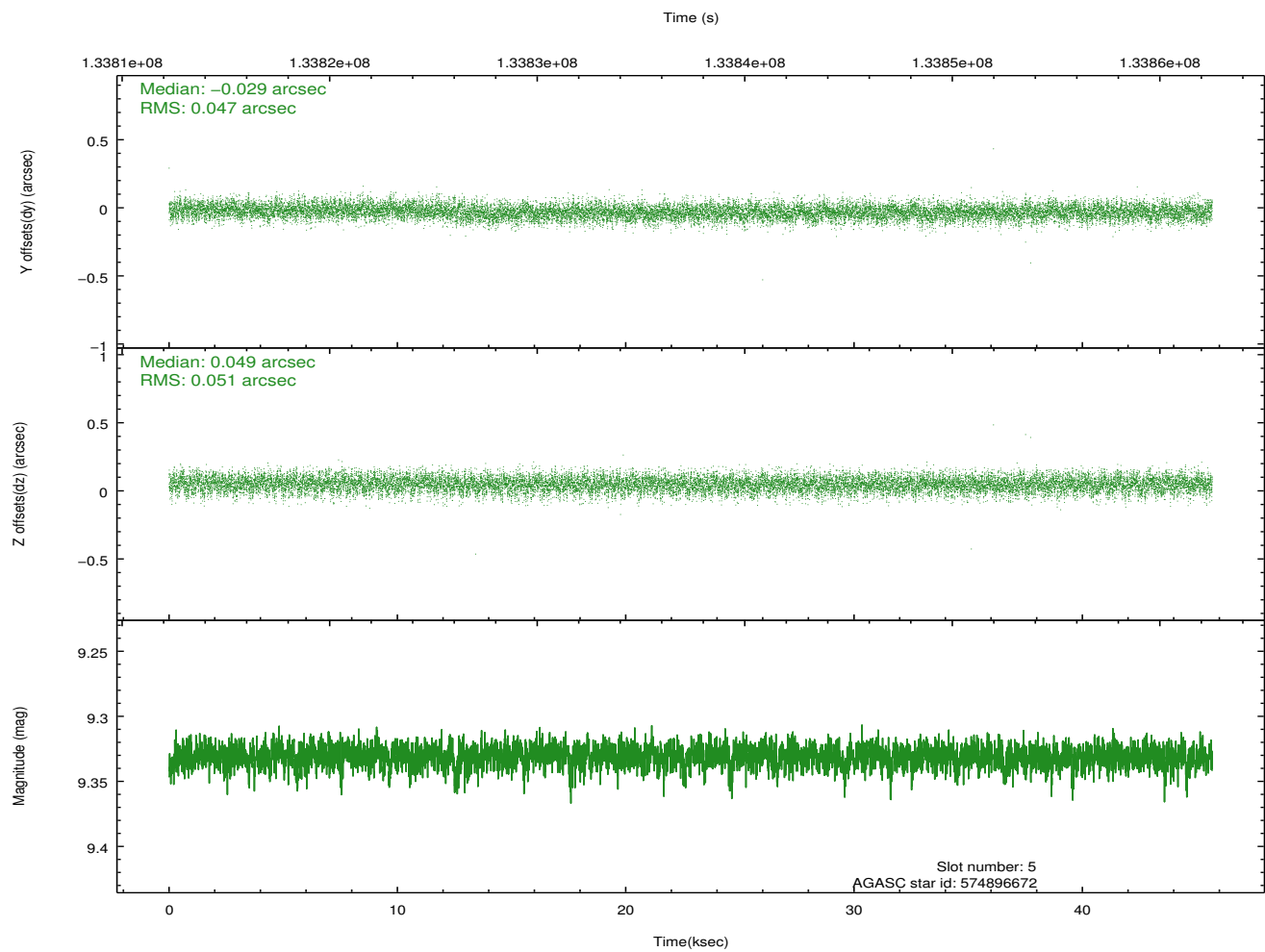
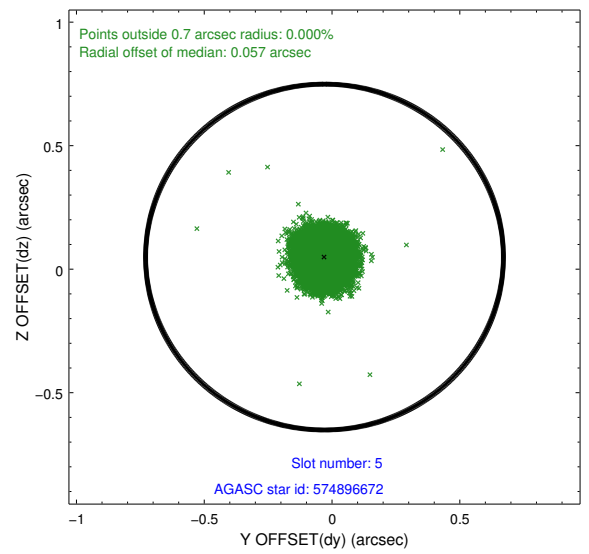
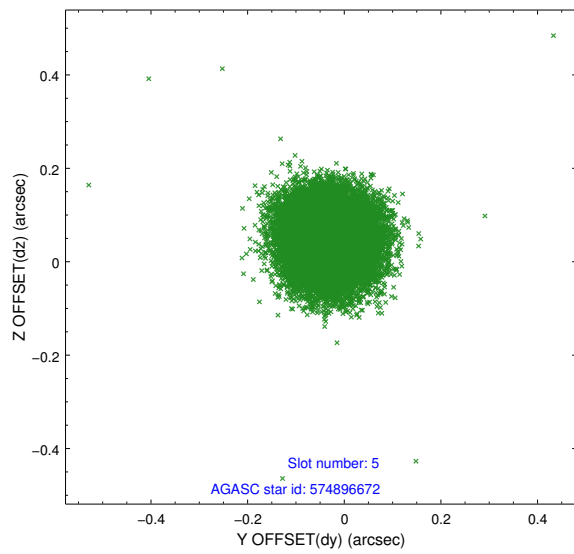
### 2.4.1 Slot 3



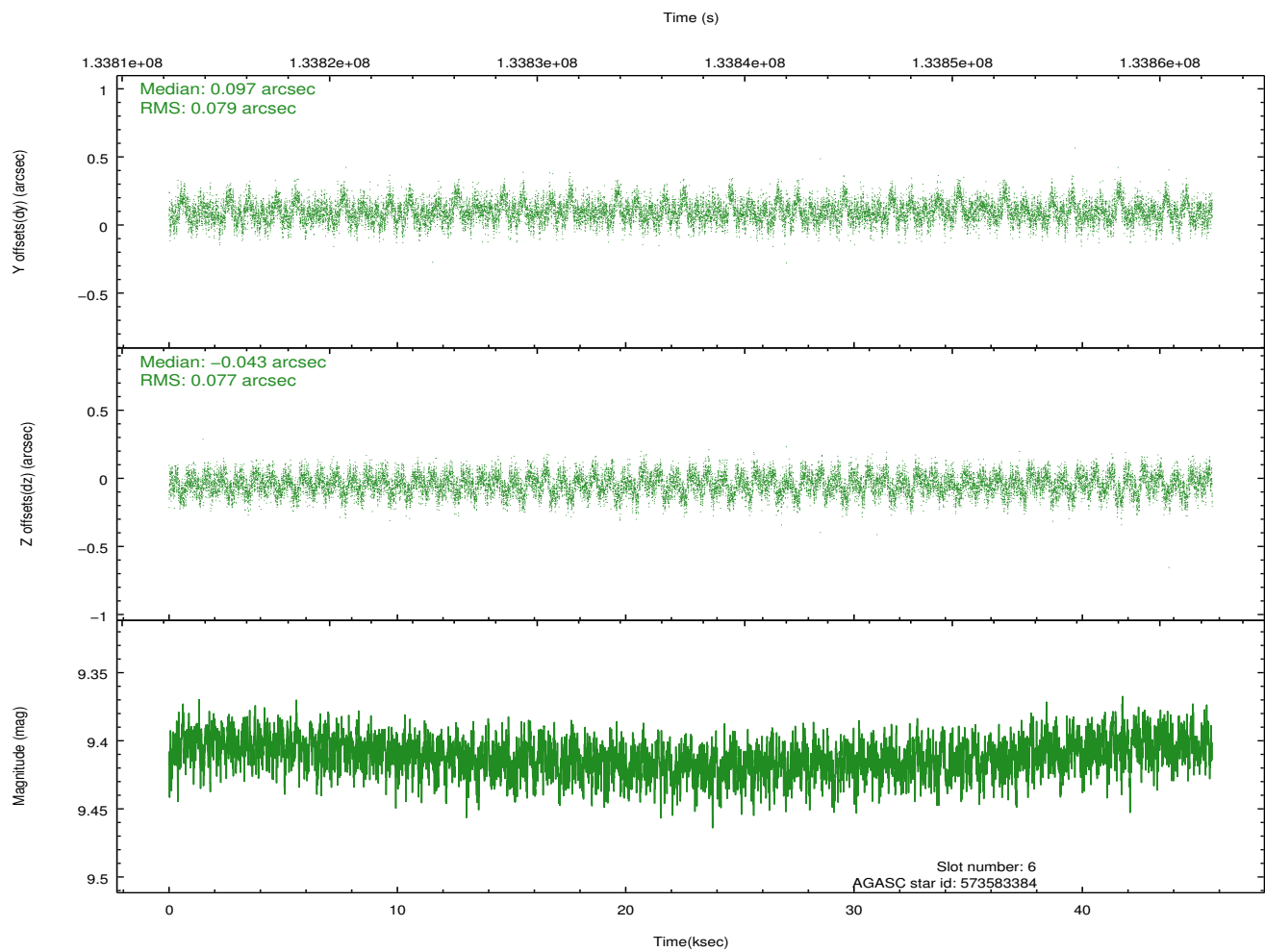
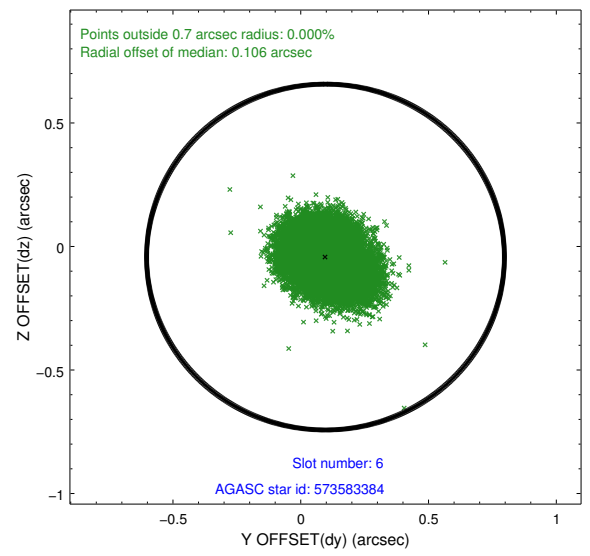
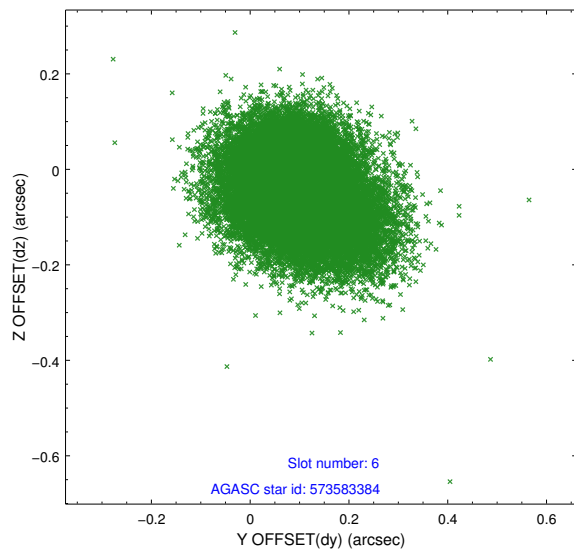
## 2.4.2 Slot 4



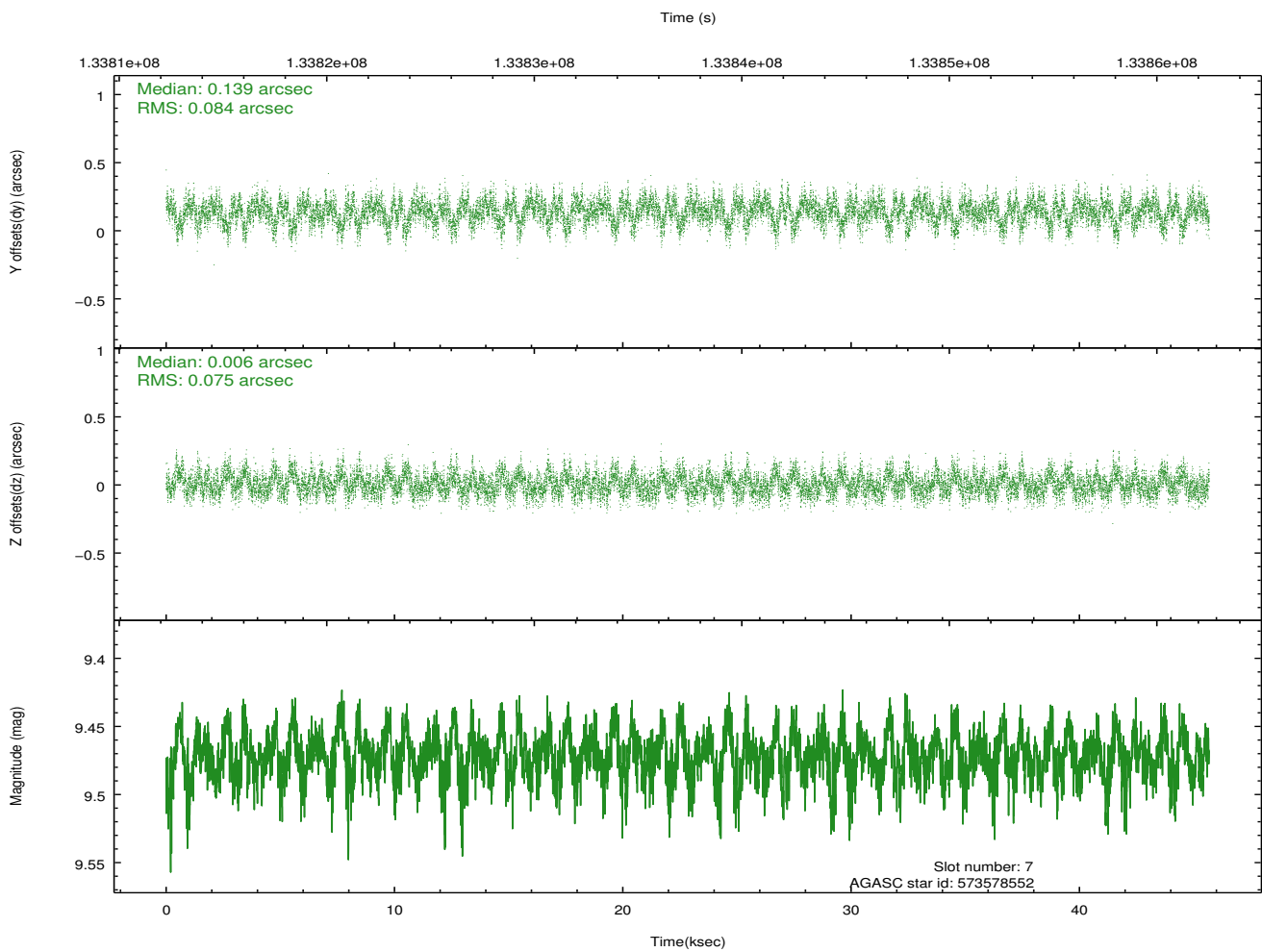
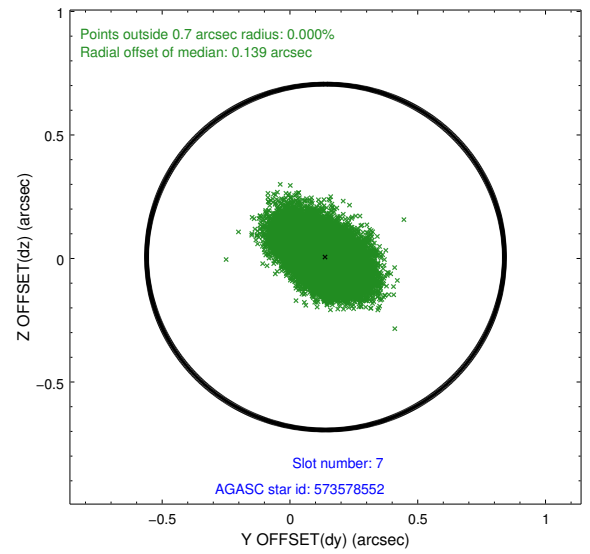
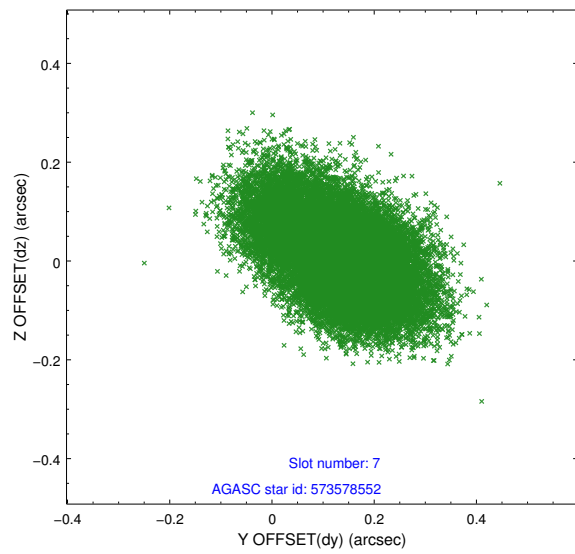
### 2.4.3 Slot 5



## 2.4.4 Slot 6

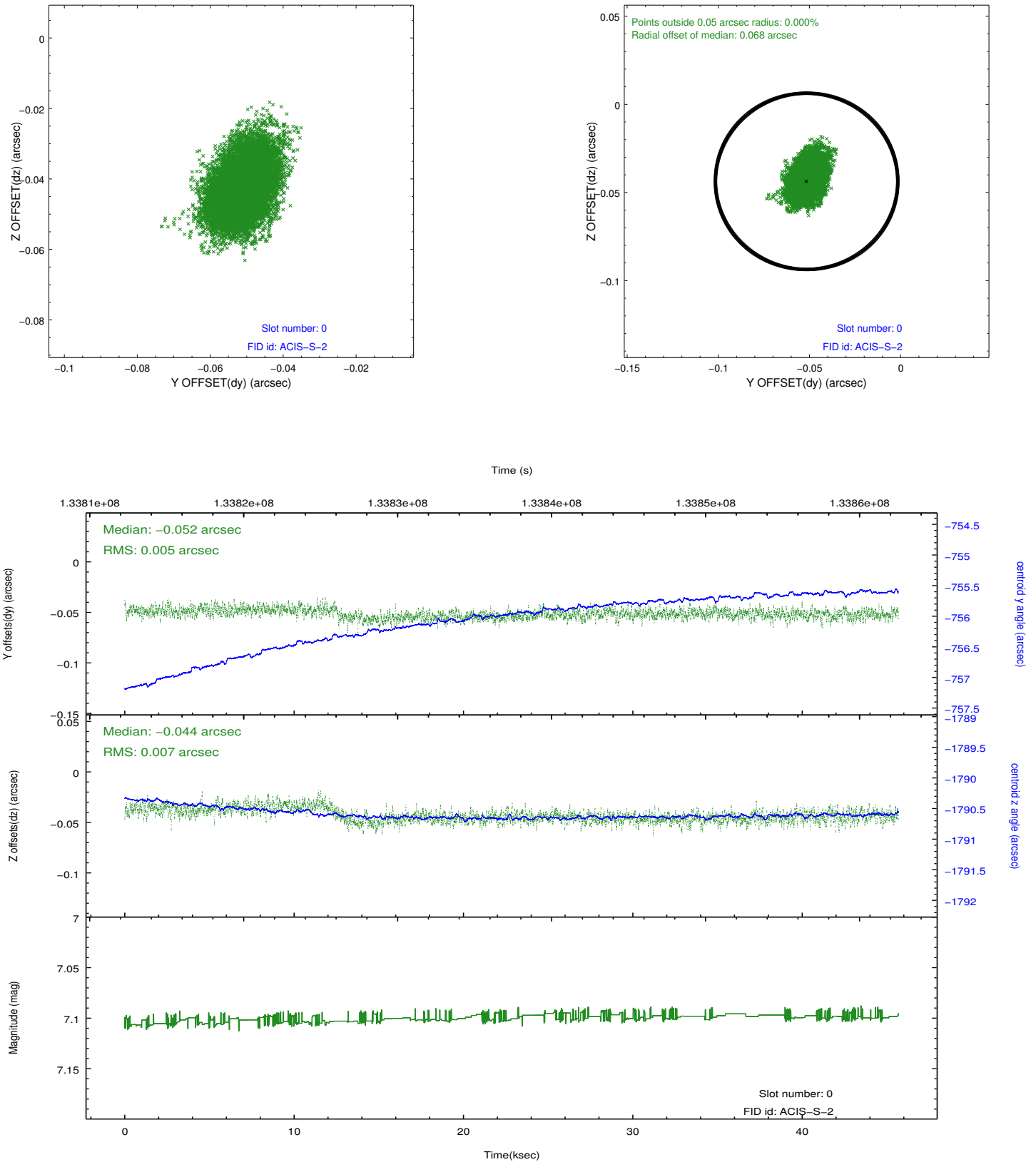


## 2.4.5 Slot 7

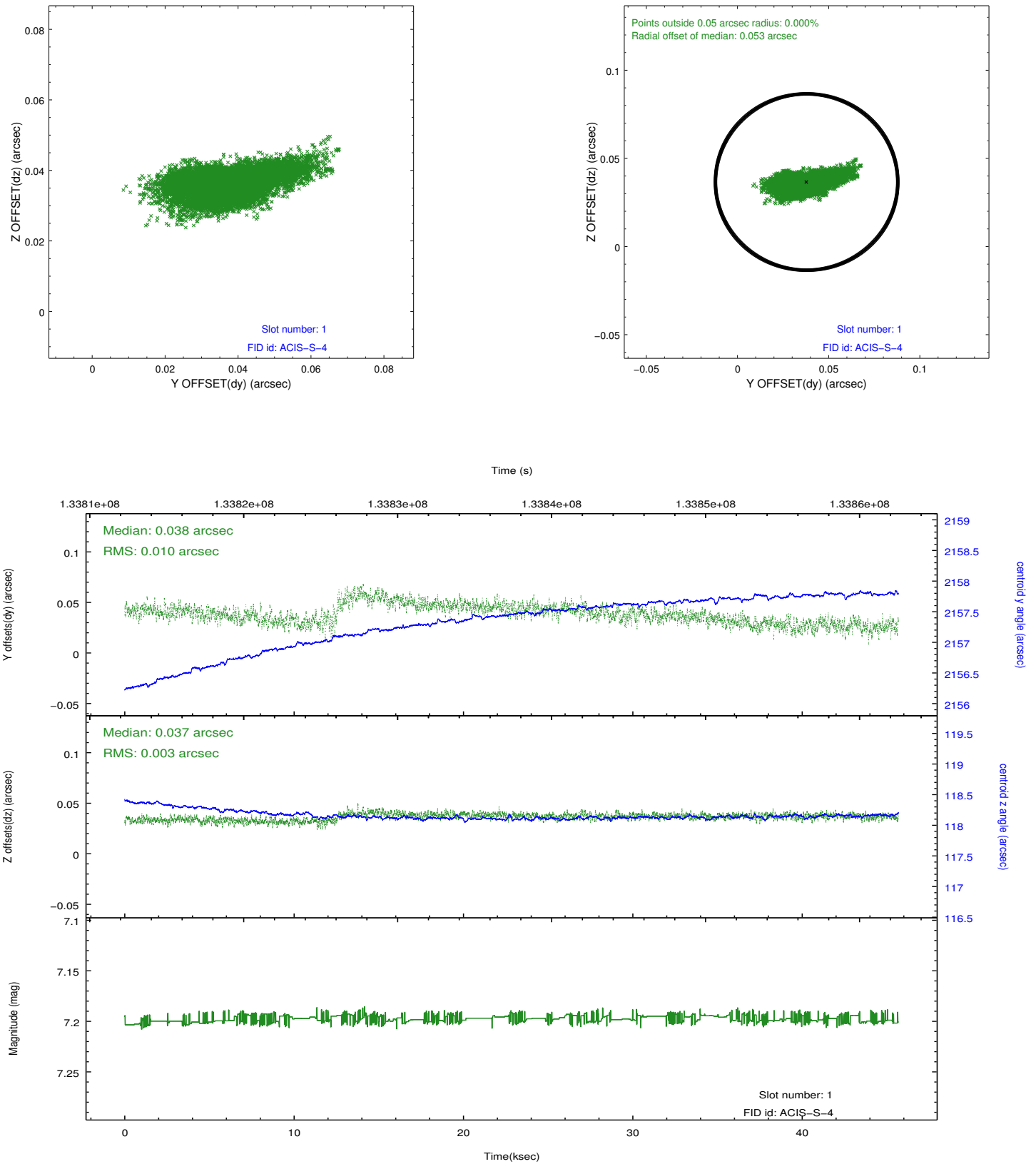


## 2.5 FID Slots

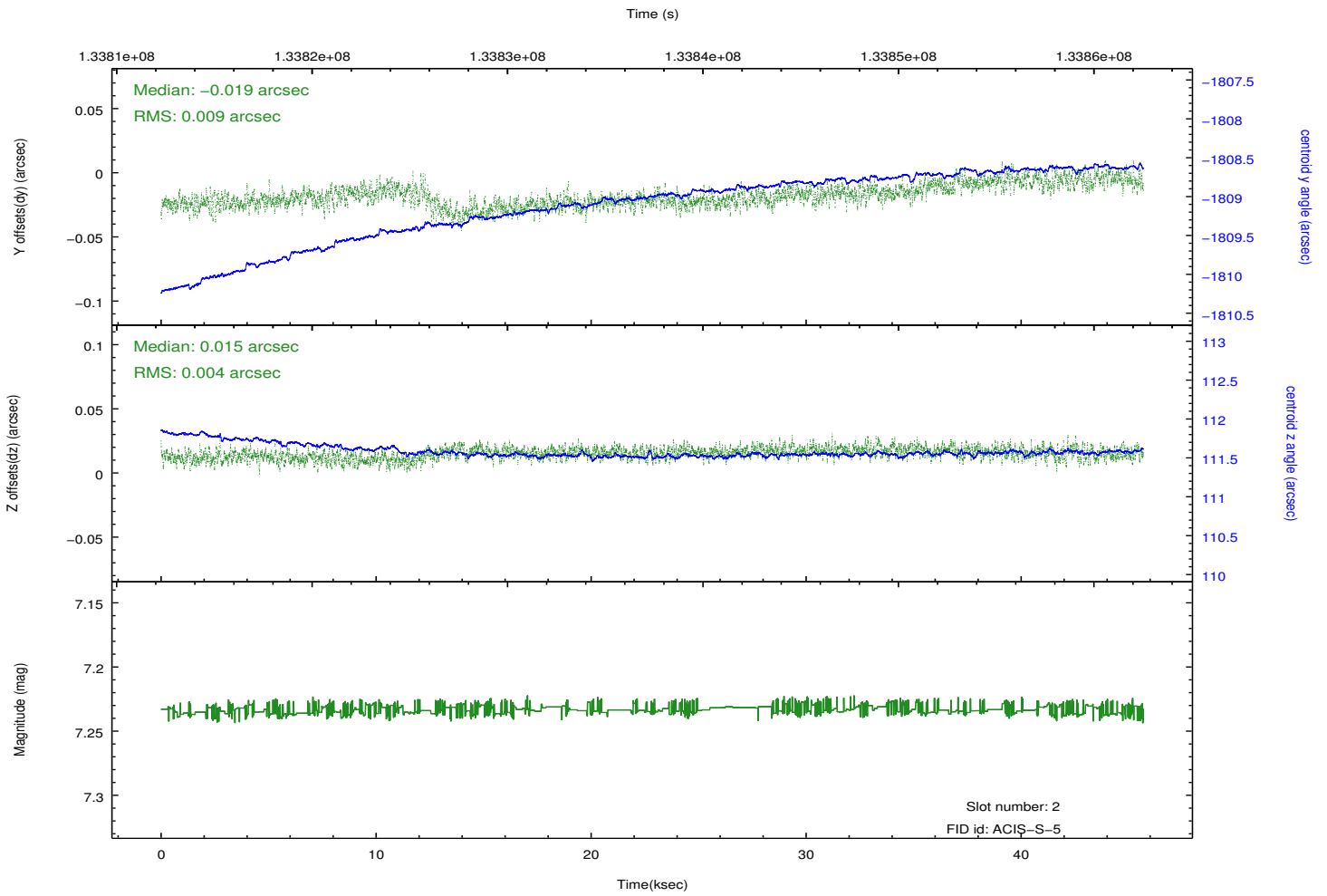
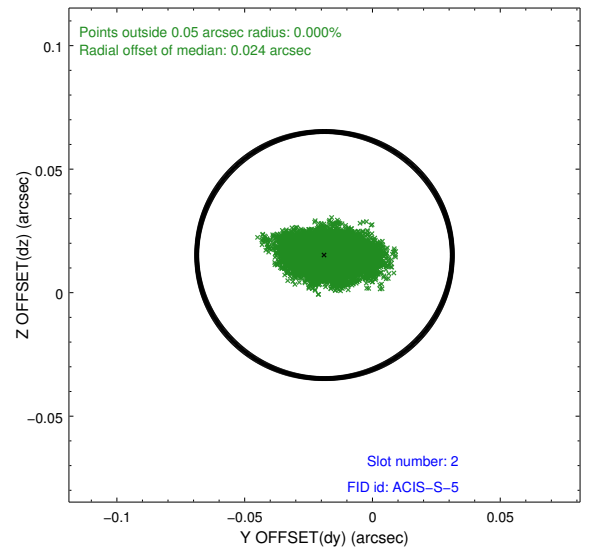
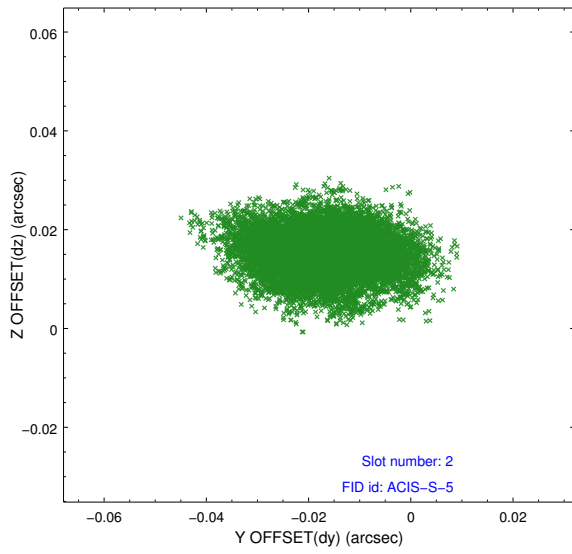
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

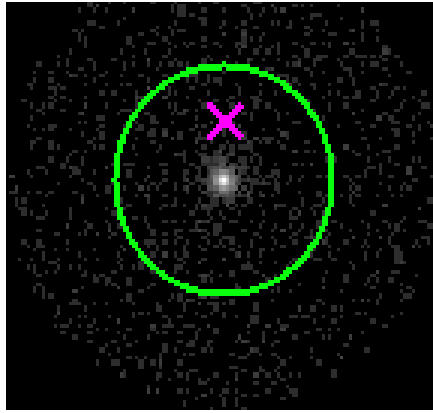


# 3 Gratings

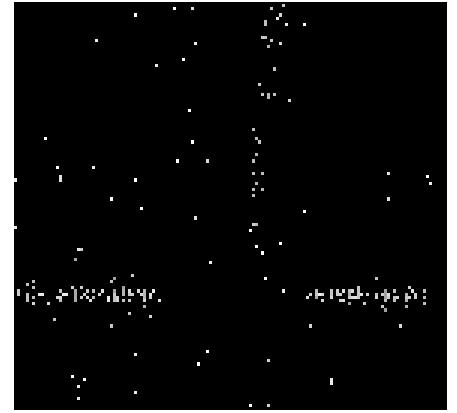
## 3.1 HEG Arm



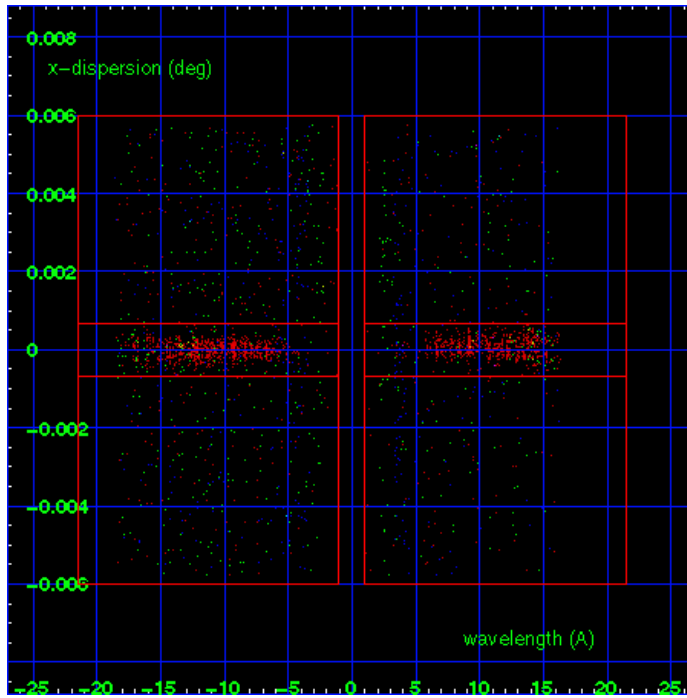
HEG Order Sort 123



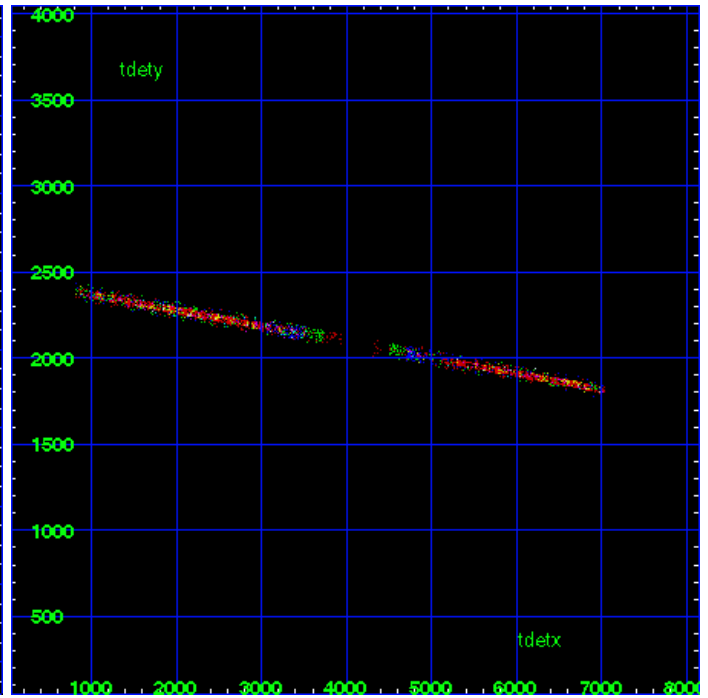
HEG Zero Order



HEG Order Sort ALL

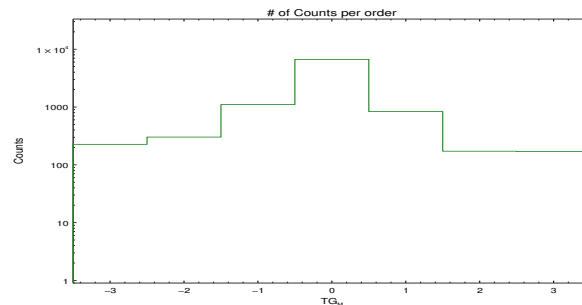


Spot Image HEG

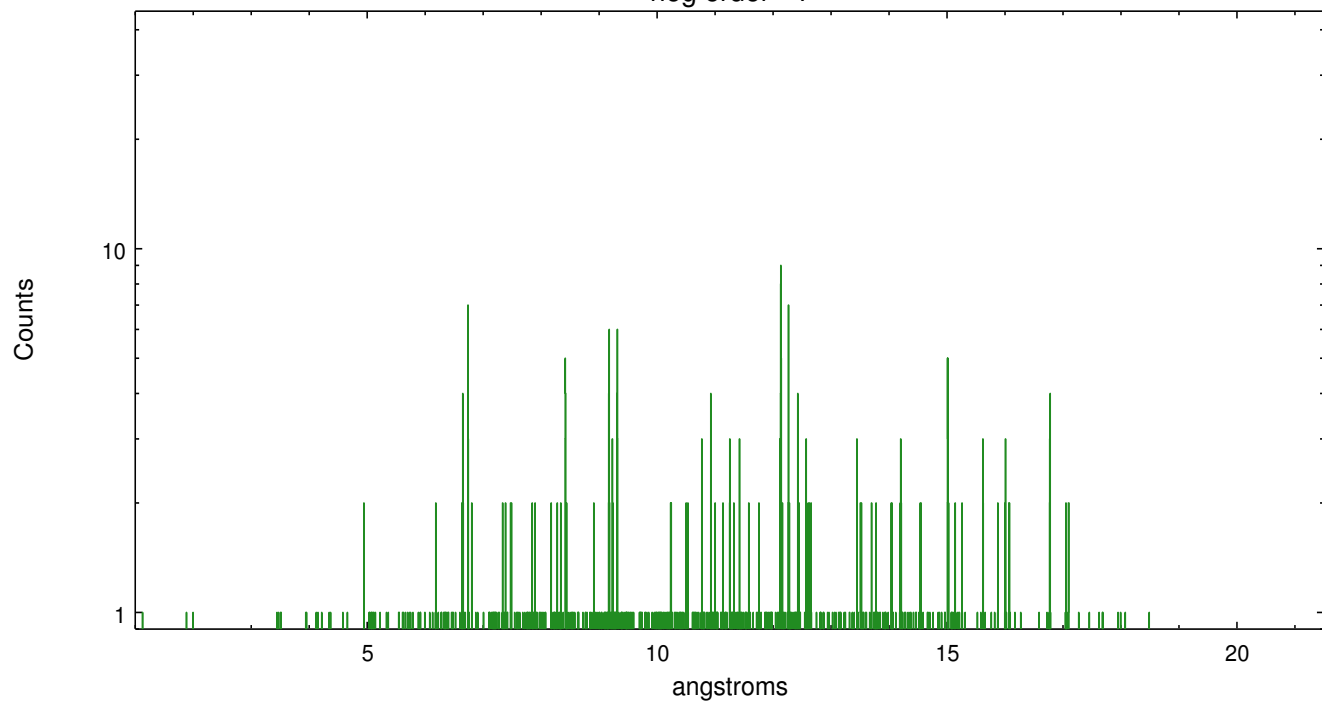


Full Detector HEG

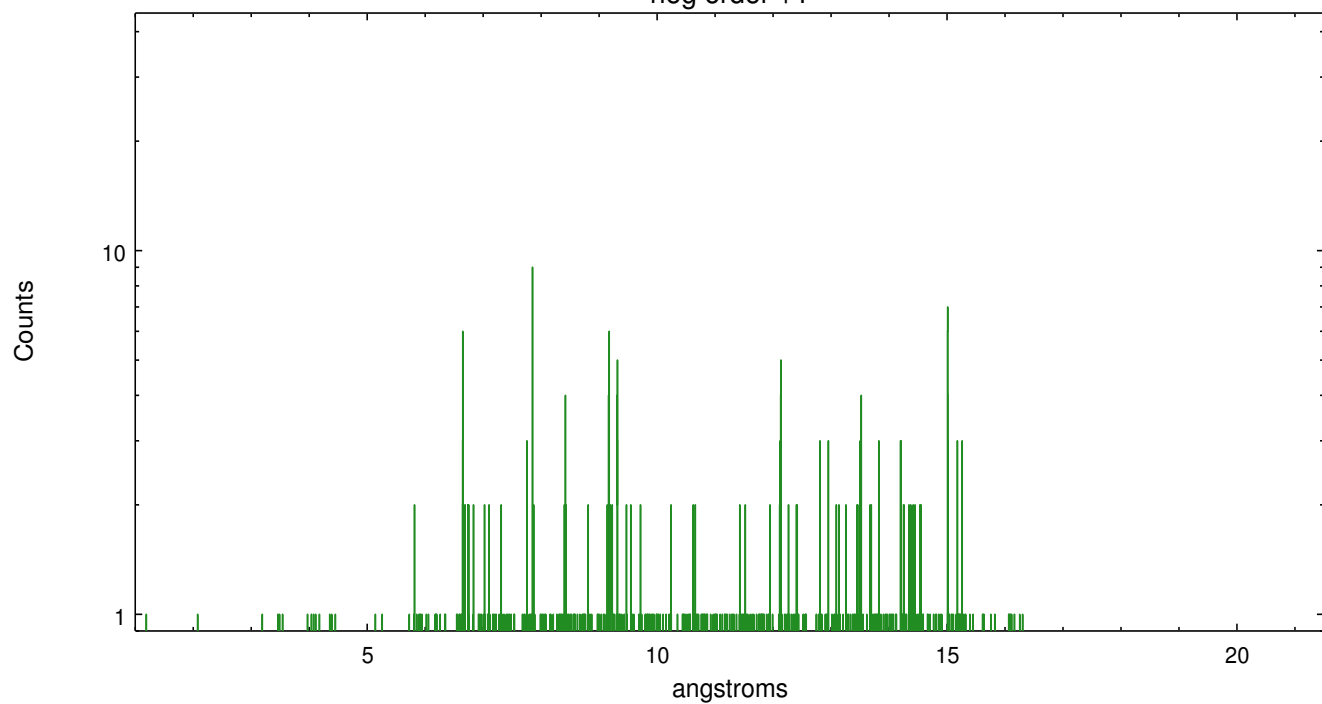
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	226	302	1106	6664	834	172	170



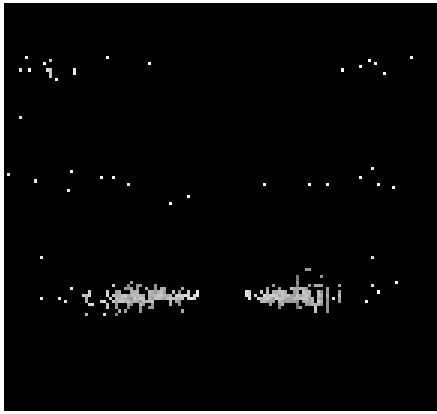
heg order -1



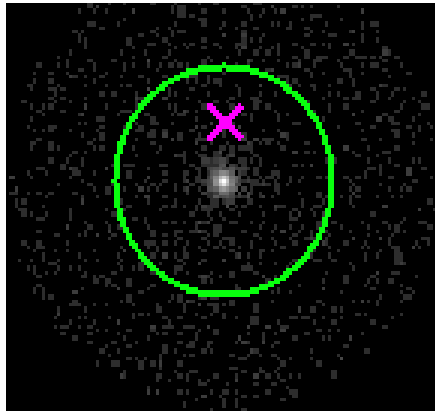
heg order +1



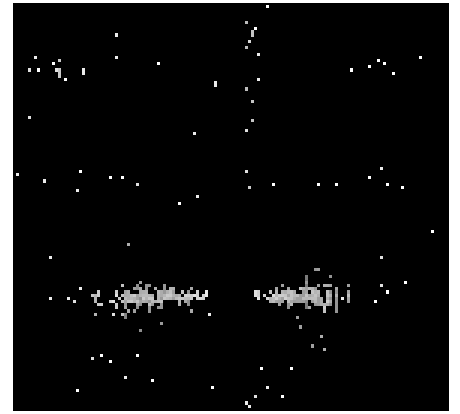
### 3.2 MEG Arm



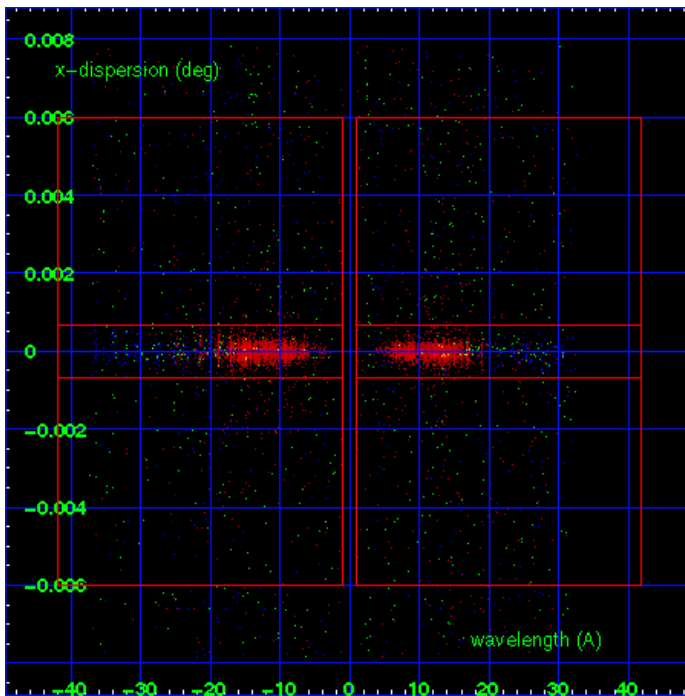
MEG Order Sort 123



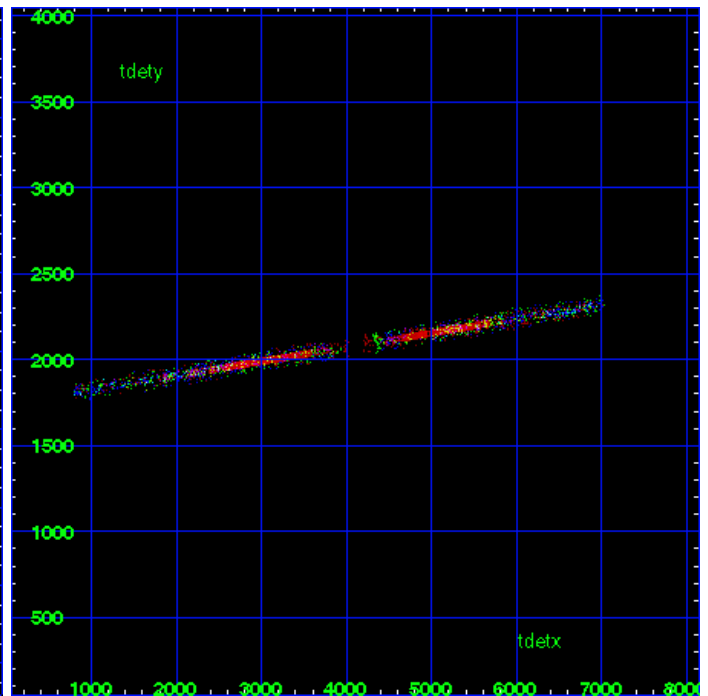
MEG Zero Order



MEG Order Sort ALL

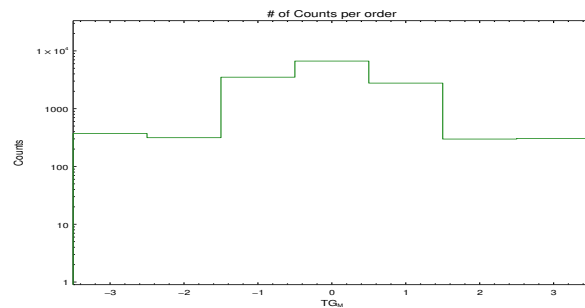


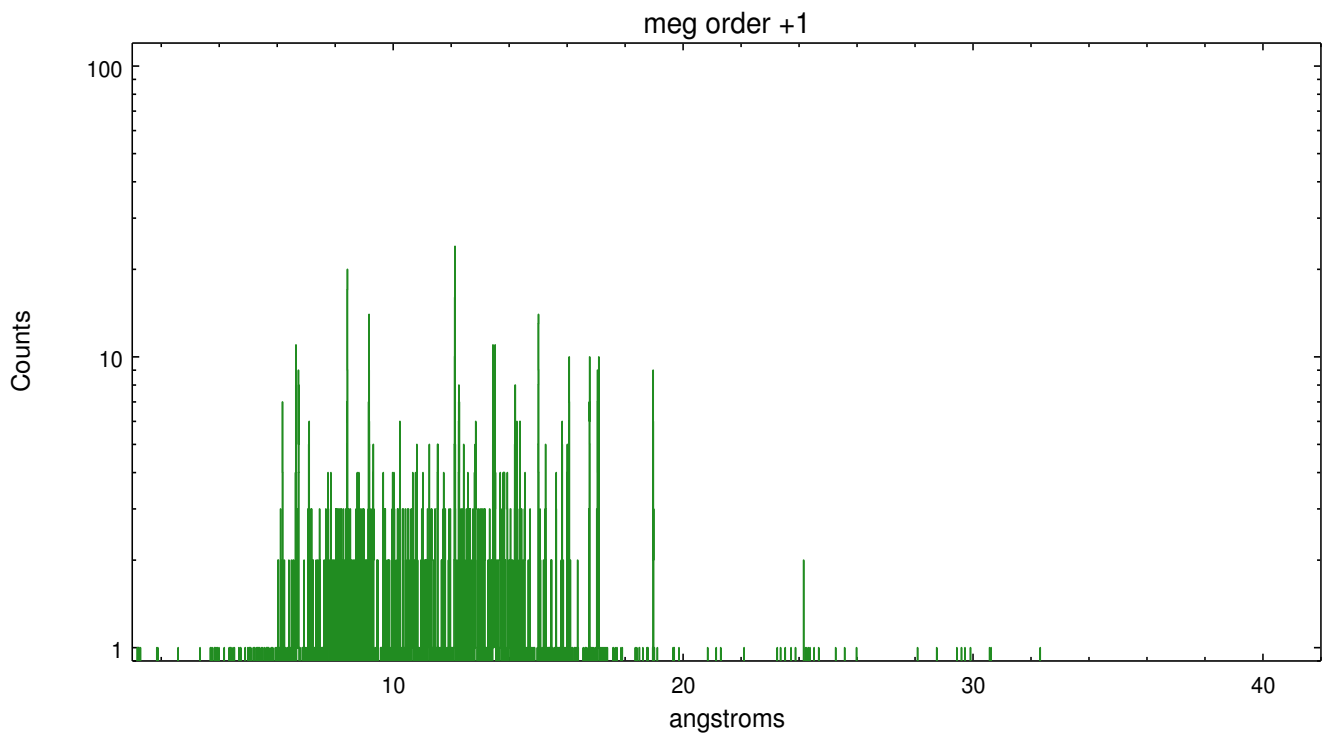
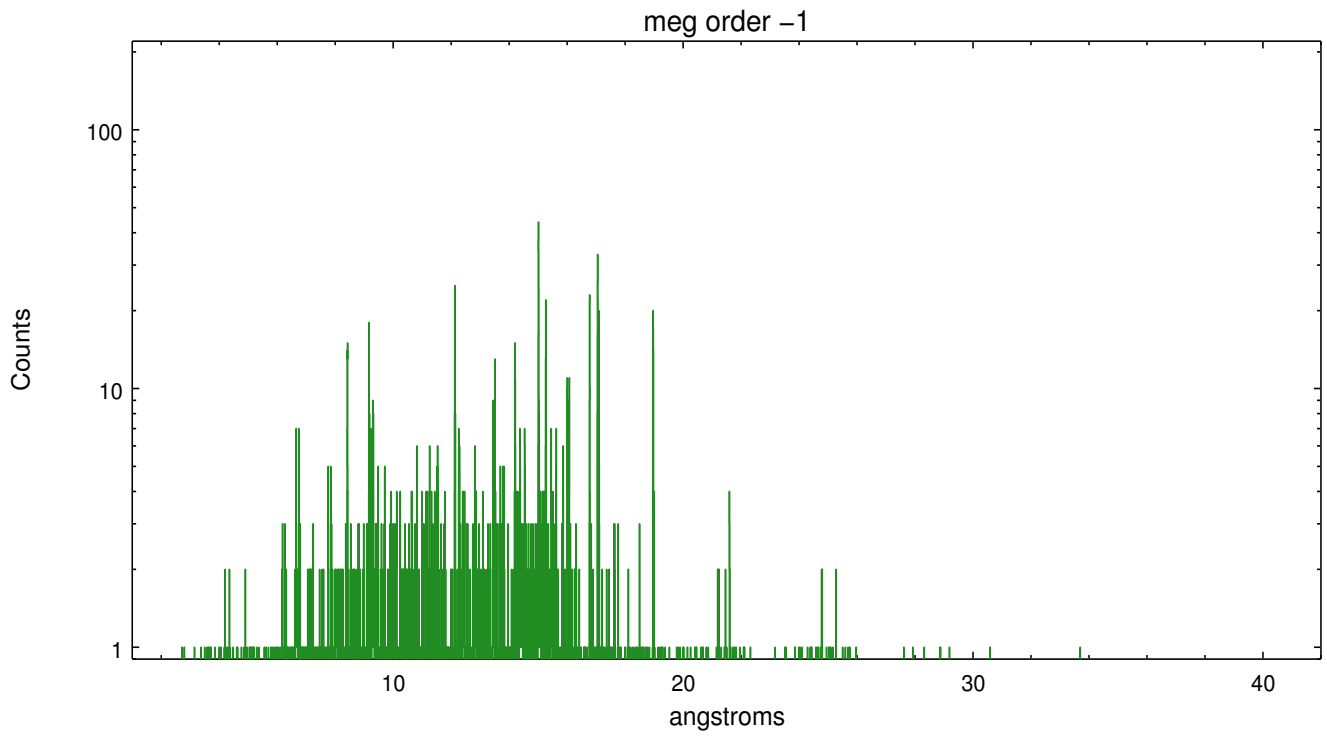
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	372	315	3506	6664	2769	298	305





## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.10.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	45.257

### A.2 Comments