

# V&V Reference Report

## L2 ASCDS Version : 10.4.1

Observation 17701 - L2 Version 1  
Chandra X-Ray Center

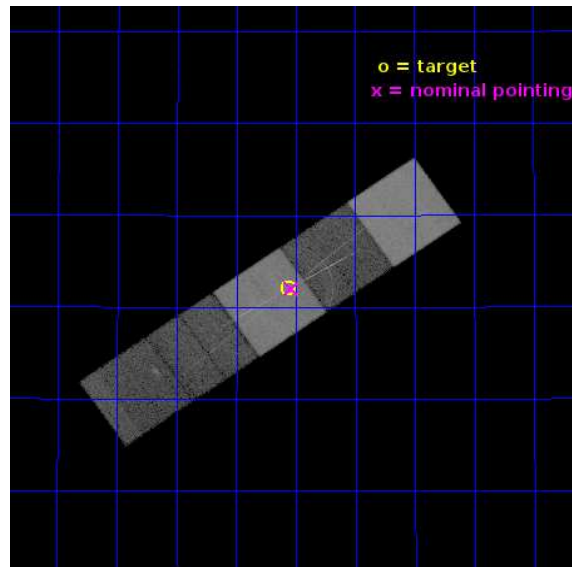
L2 Processing Date : Jul 12 2015

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# 1 Front

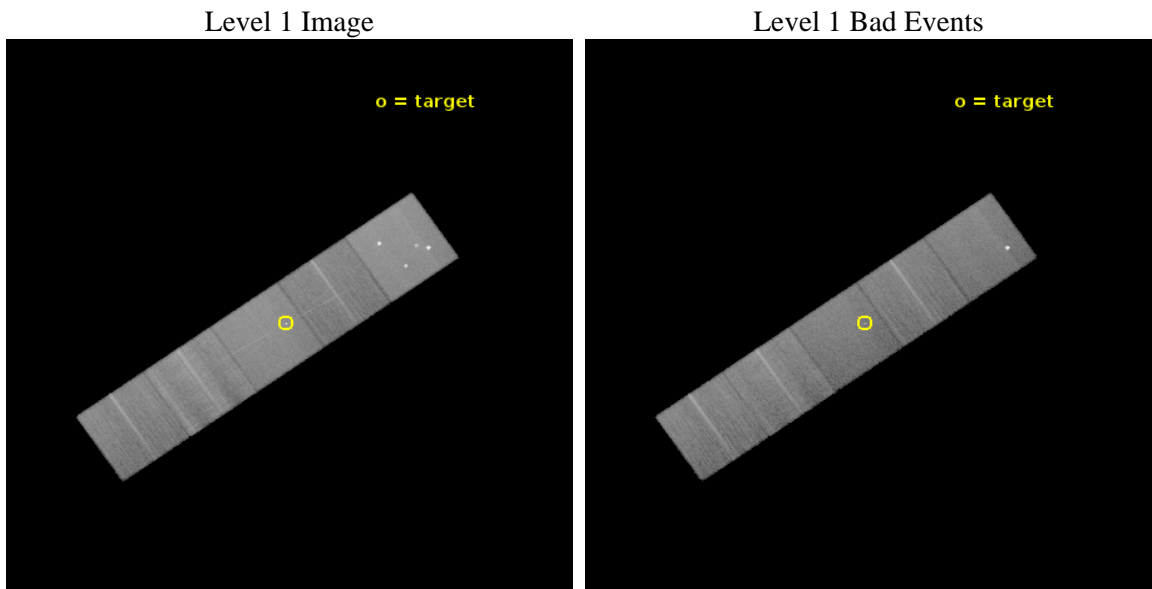
seq_num	401697	Sequence number
obs_id	17701	Observation id
title	The Next Step for V404 Cyg	Proposal title
observer	Dr. Joseph Neilsen	Principal investigator
object	V404 Cyg	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	306.015833	Observer's specified target RA [deg]
dec_targ	33.867278	Observer's specified target Dec [deg]
ra_nom	306.00929947116	Nominal RA [deg]
dec_nom	33.866890248299	Nominal Dec [deg]
roll_nom	145.1602676872	Nominal Roll [deg]
revision	1	Processing version of data
ontime	40035.878792167	Sum of GTIs [s]
livetime	39512.780561762	Livetime [s]
ontime5	40035.837752223	Sum of GTIs [s]
ontime6	40035.79671216	Sum of GTIs [s]
ontime7	40035.878792167	Sum of GTIs [s]
ontime8	40035.755672216	Sum of GTIs [s]
ontime9	40035.714632154	Sum of GTIs [s]
l2events	372459	Number of level 2 events



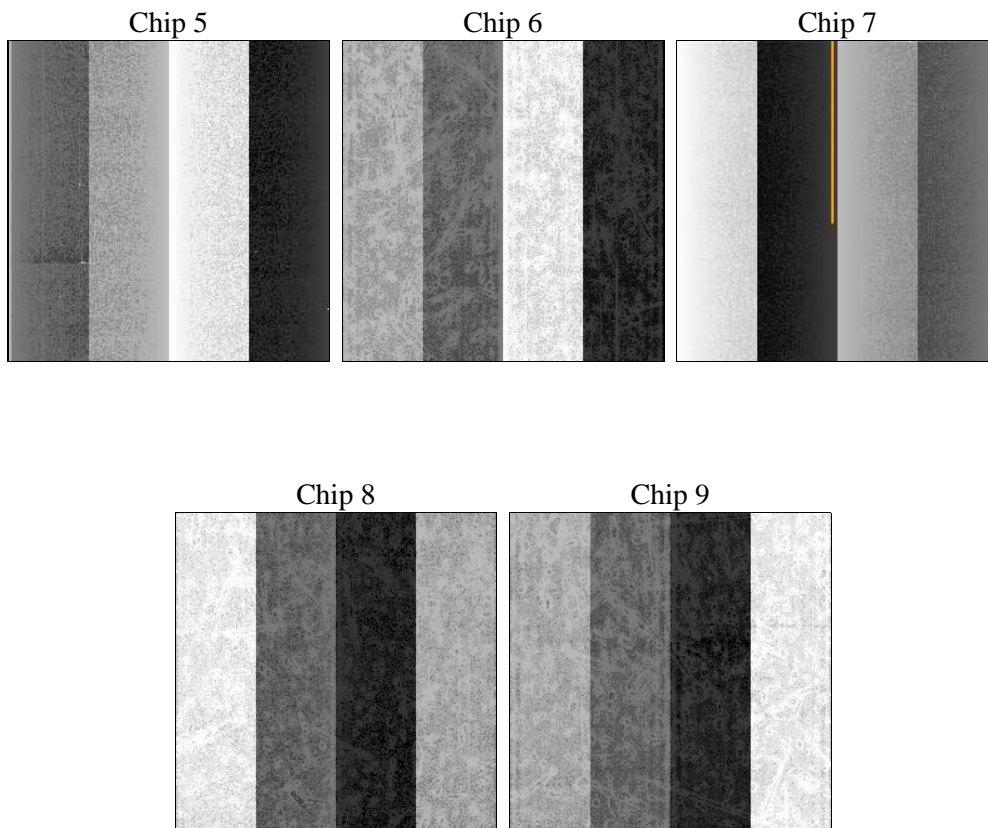
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	40000.000000	[s] Scheduled observation exposure time
ascdsver	10.4.1	Processing system revision	ontime	40035.878792167	Sum of GTIs [s]
caldbver	4.6.8	&#160	ontime5	40035.837752223	Sum of GTIs [s]
date	2015-07-12T18:18:34	Date and time of file creation	ontime6	40035.79671216	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	40035.878792167	Sum of GTIs [s]
			ontime8	40035.755672216	Sum of GTIs [s]
			ontime9	40035.714632154	Sum of GTIs [s]
			l1events	1374100	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4056.53, 4098.53)	src1a sky pixel position

### 2.1.4 Events

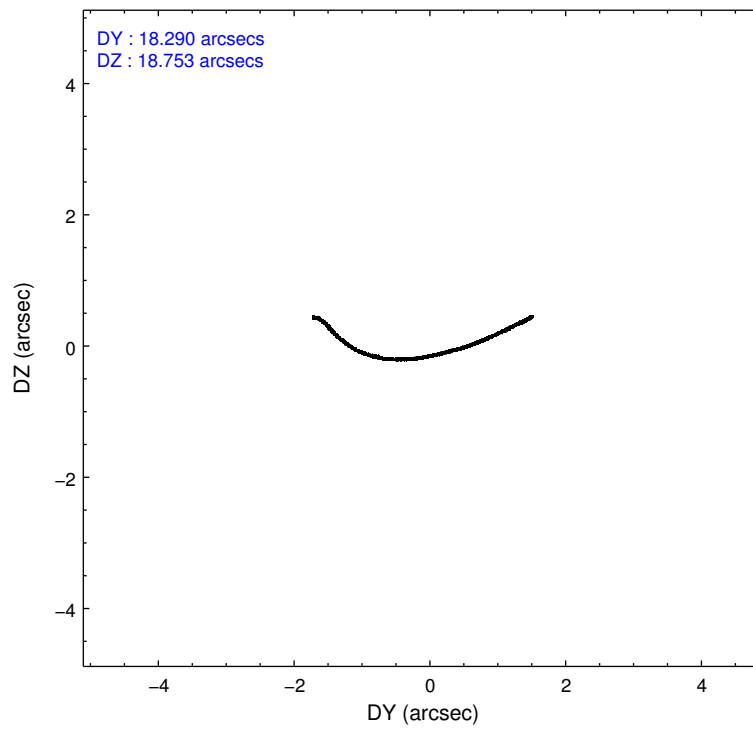
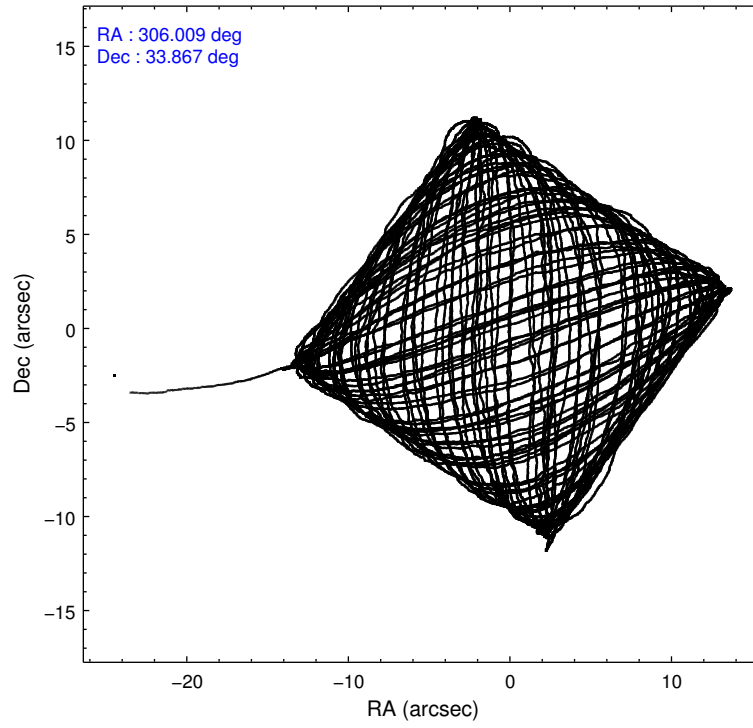
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	368712	217860	293125	282147	212256
rejected events	188627	183749	158601	204318	183903
rejected %	51%	84%	54%	72%	86%

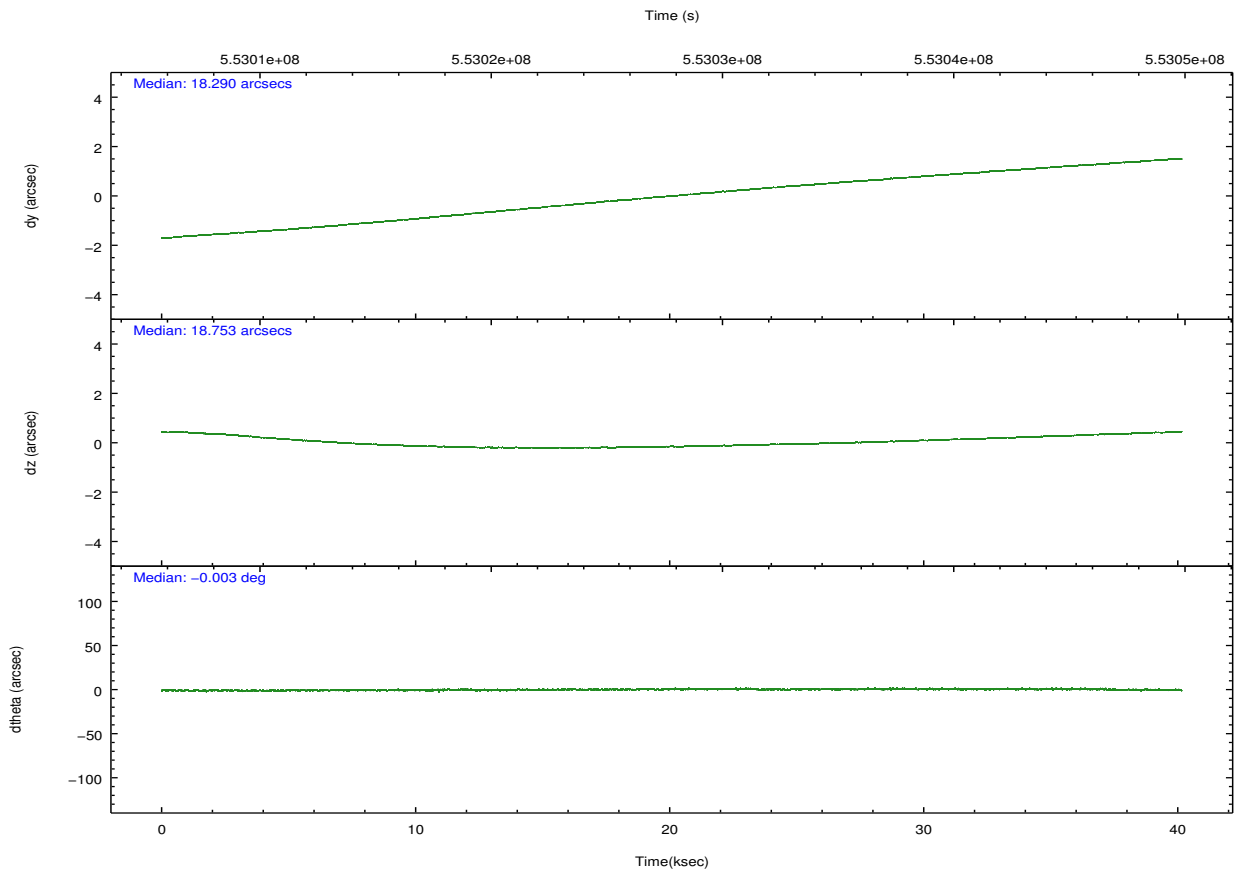
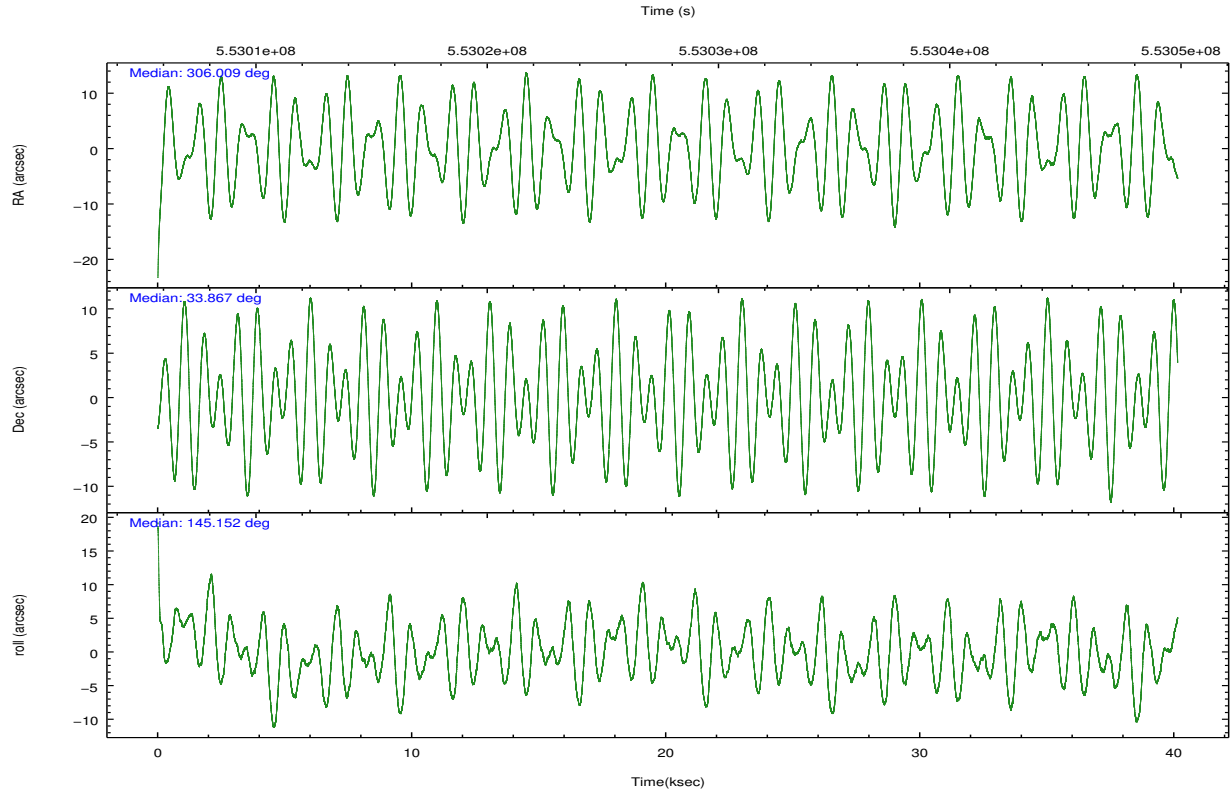
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	28927	15584	13709	24507	11202
	7%	7%	4%	8%	5%
grade 1 events	661	126	397	209	121
	0%	0%	0%	0%	0%
grade 2 events	51493	6821	28599	18348	5923
	13%	3%	9%	6%	2%
grade 3 events	5786	2809	11584	7687	2811
	1%	1%	3%	2%	1%
grade 4 events	5295	2869	11404	7401	2666
	1%	1%	3%	2%	1%
grade 5 events	25014	11043	28523	15435	12170
	6%	5%	9%	5%	5%
grade 6 events	88604	6032	69247	19891	5755
	24%	2%	23%	7%	2%
grade 7 events	162932	172576	129662	188669	171608
	44%	79%	44%	66%	80%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-56789	ACIS-56789	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	306.042266	306.0092994711604	Subarray requested	NONE	NONE
[deg] Pointing Dec	33.864923	33.86689024829909	Alternating exposures requested	N	N
[deg] Pointing Roll	144.985274	145.1602676872031	[s] Primary exposure time	0.000000	3.1
[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)	553007899.184000	553006699.2913899			
Observation start date	2015-07-11T13:17:11	2015-07-11T12:58:19			
[s] Observation end time (MET)	553047899.184000	553049133.78128			
Observation end date	2015-07-12T00:23:51	2015-07-12T00:45:33			
Read mode	TIMED	TIMED			

## 2.3 Aspect



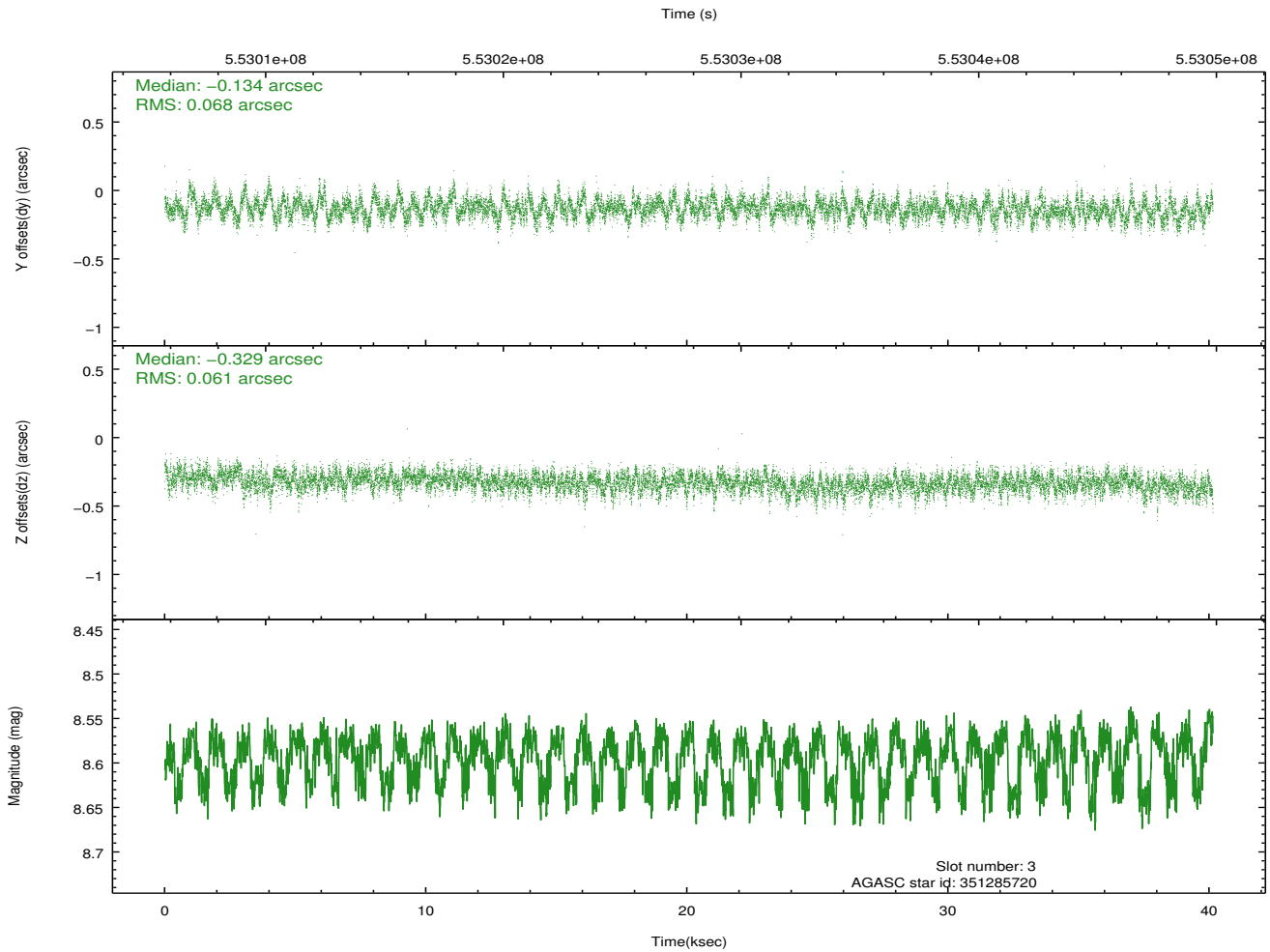
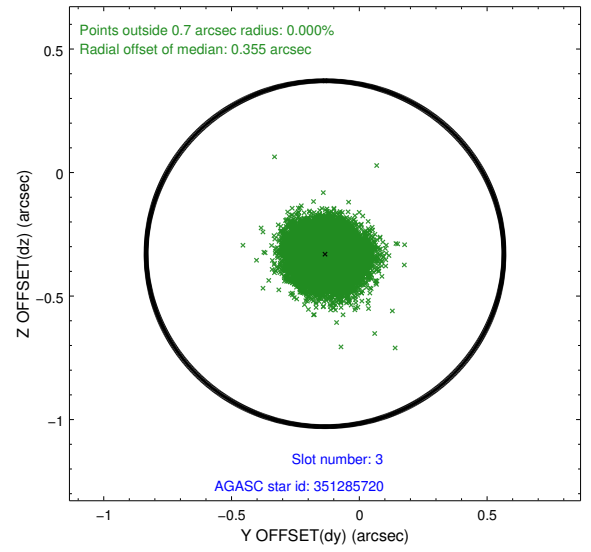
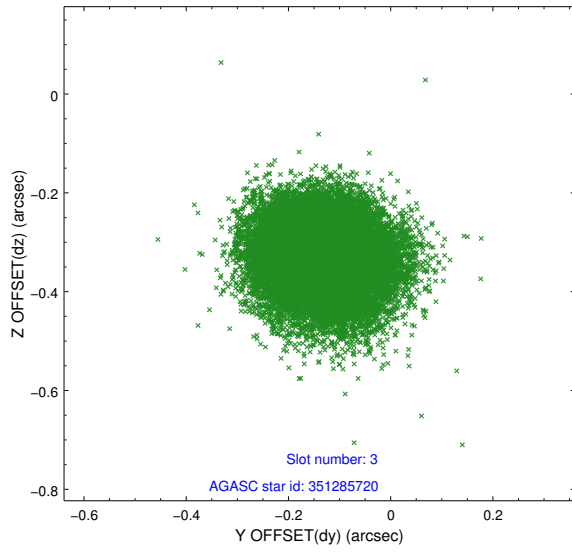


### Slot Statistics

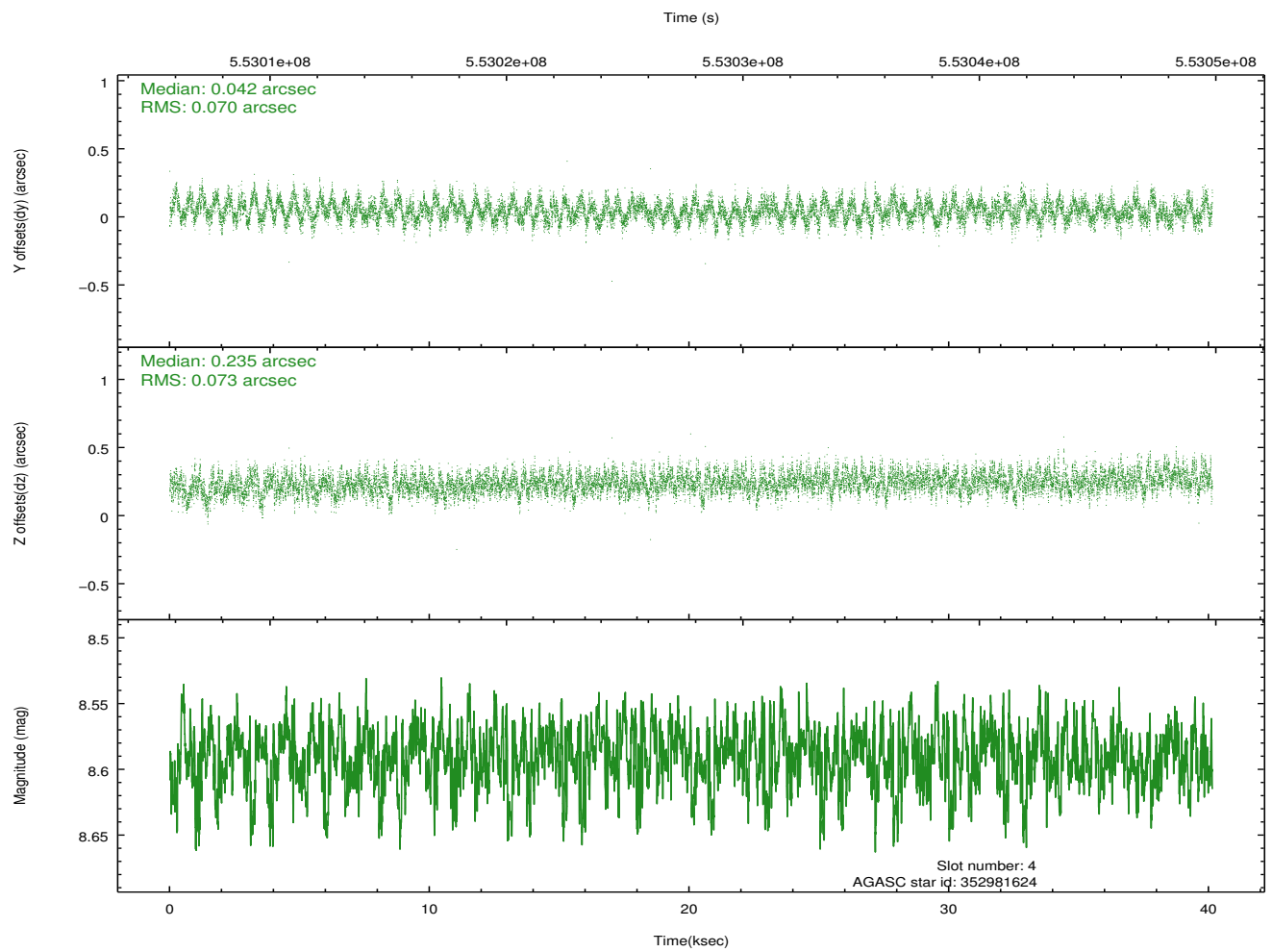
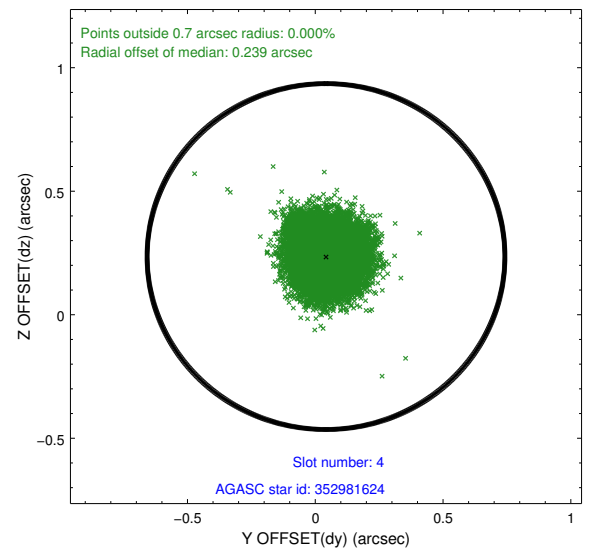
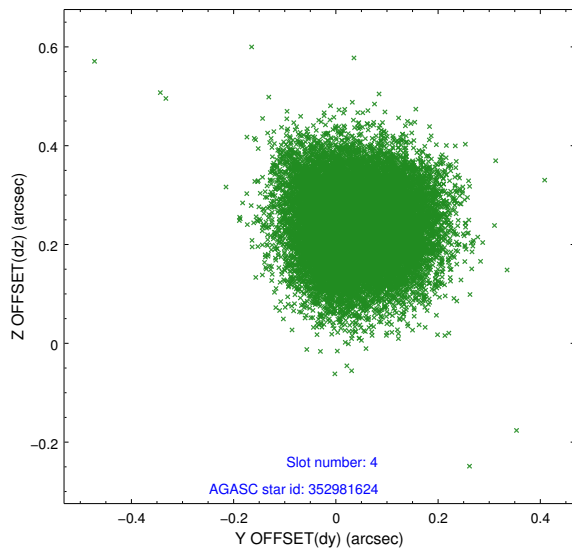
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.98	9790	-0.116	-0.085	0.025	0.048	0.000000	0.000000	-771.44	-1740.31
1	FID		ACIS-S-4	7.06	9791	0.346	0.080	0.036	0.052	0.000000	0.000000	2142.32	168.30
2	FID		ACIS-S-5	7.08	9792	-0.249	0.009	0.018	0.032	0.000000	0.000000	-1824.36	161.95
3	GUIDE	used	351285720	8.59	19577	-0.134	-0.329	0.097	0.158	305.127244	33.817841	2150.73	1699.13
4	GUIDE	used	352981624	8.59	19578	0.042	0.235	0.108	0.173	306.081516	34.222239	643.14	-1120.04
5	GUIDE	used	352985512	8.89	19576	0.239	0.301	0.102	0.164	306.411799	34.272698	-55.97	-1834.34
6	GUIDE	used	351282120	9.23	19565	-0.161	-0.358	0.124	0.193	305.232648	33.763598	1779.67	1683.06
7	GUIDE	used	351276136	8.77	19573	0.008	0.152	0.125	0.209	305.889488	34.377539	1431.56	-1250.67

## 2.4 Star Slots

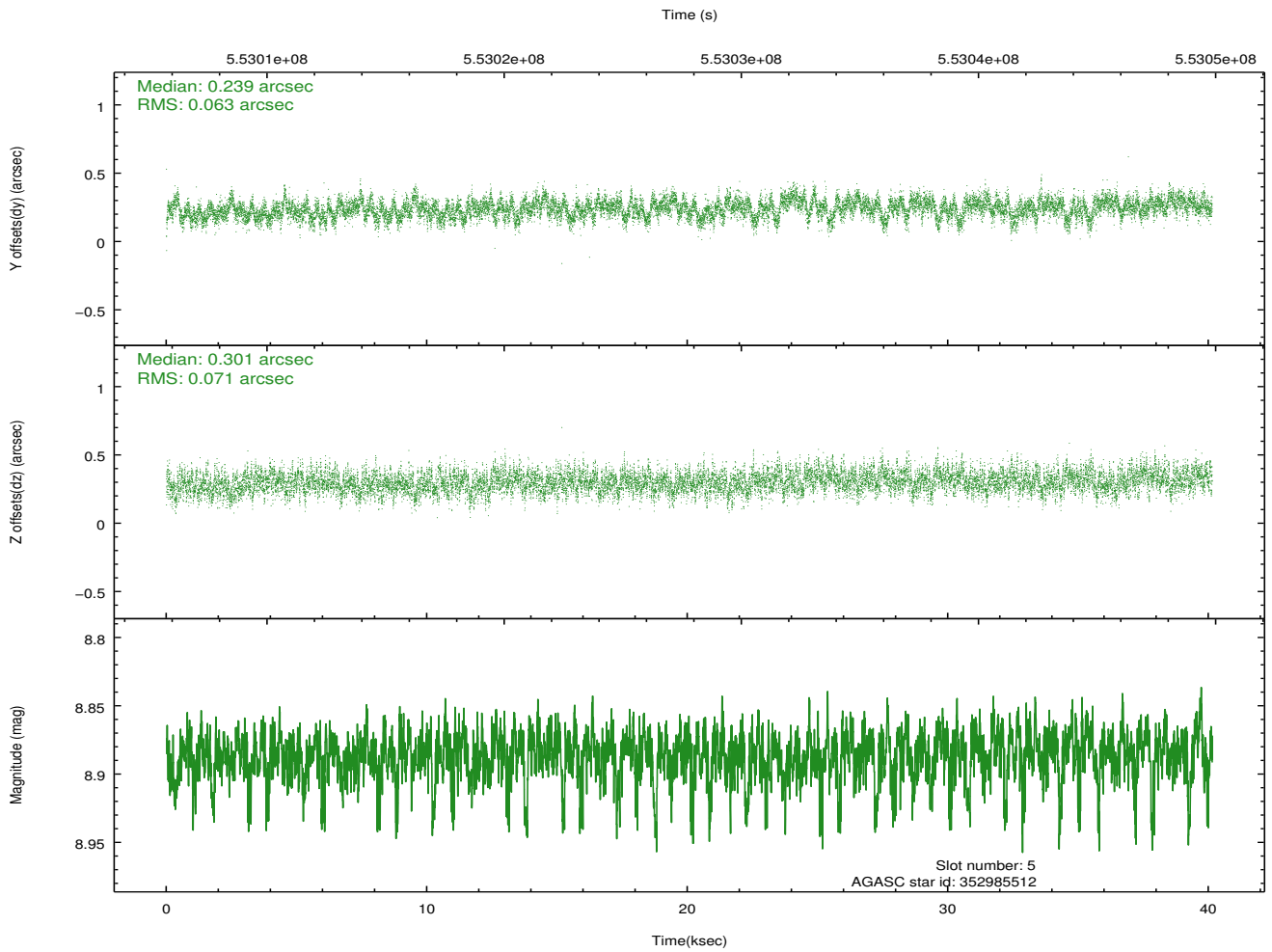
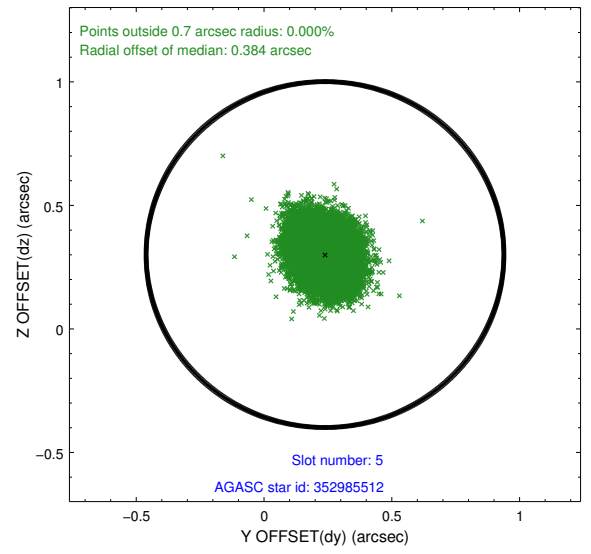
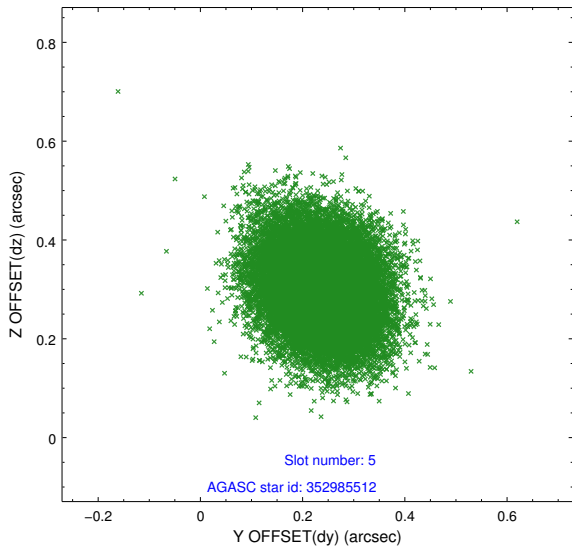
### 2.4.1 Slot 3



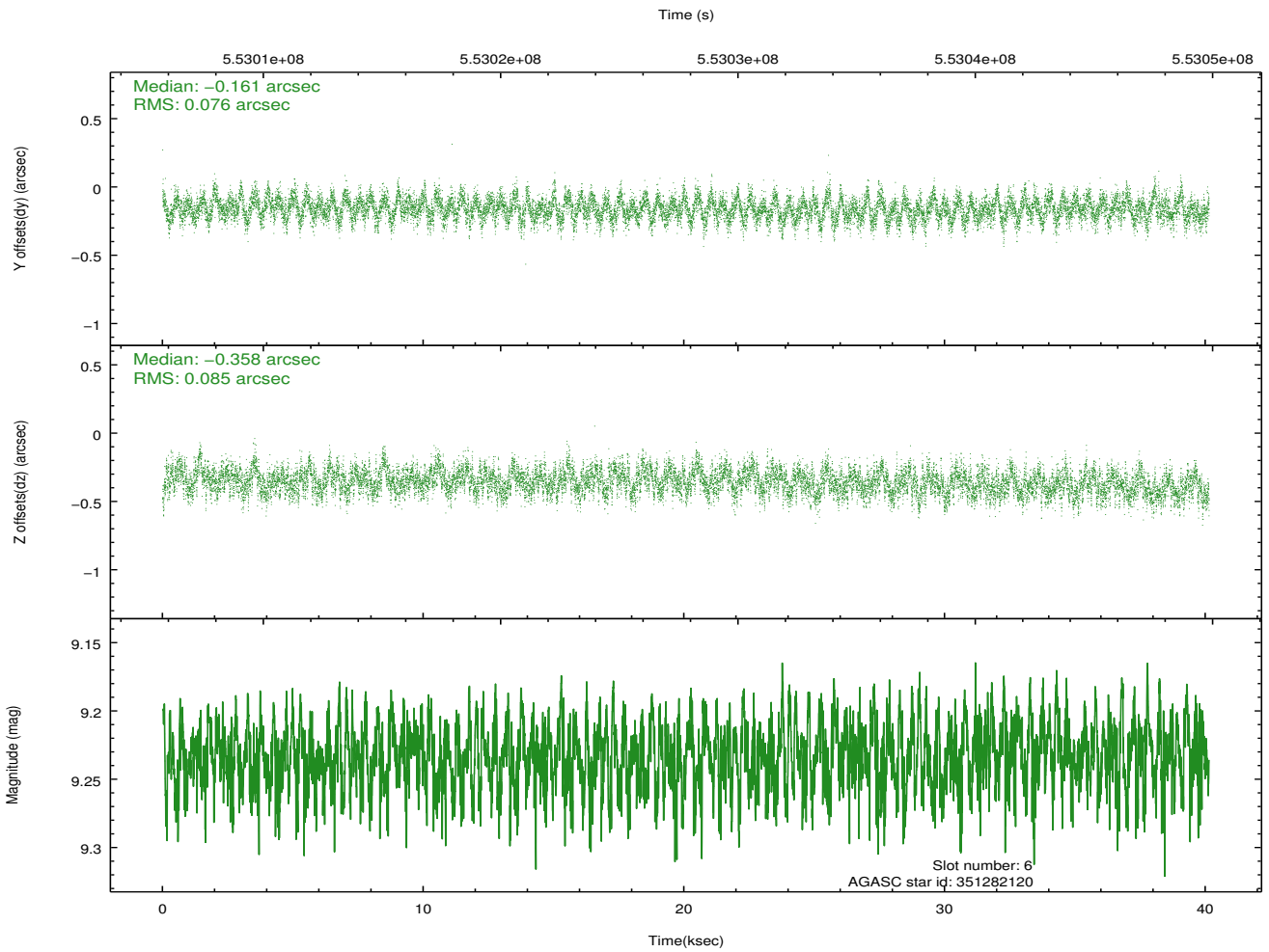
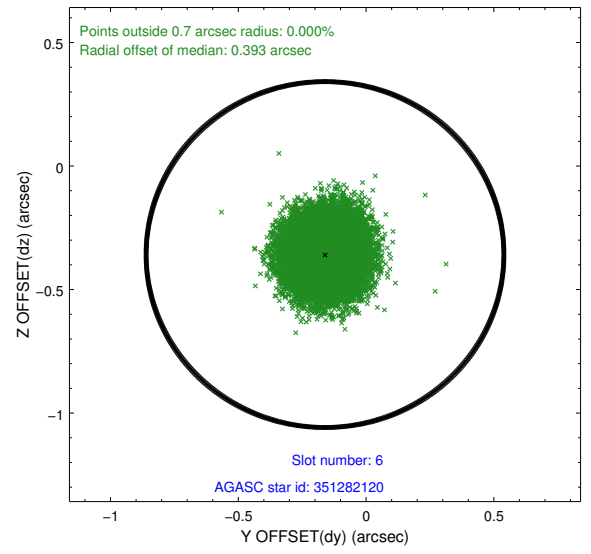
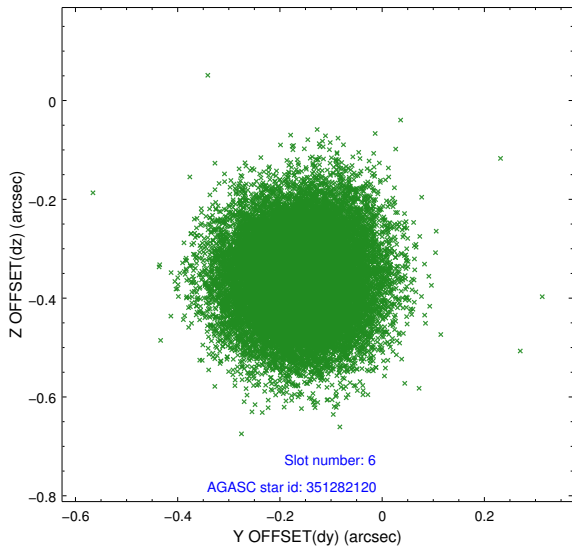
## 2.4.2 Slot 4



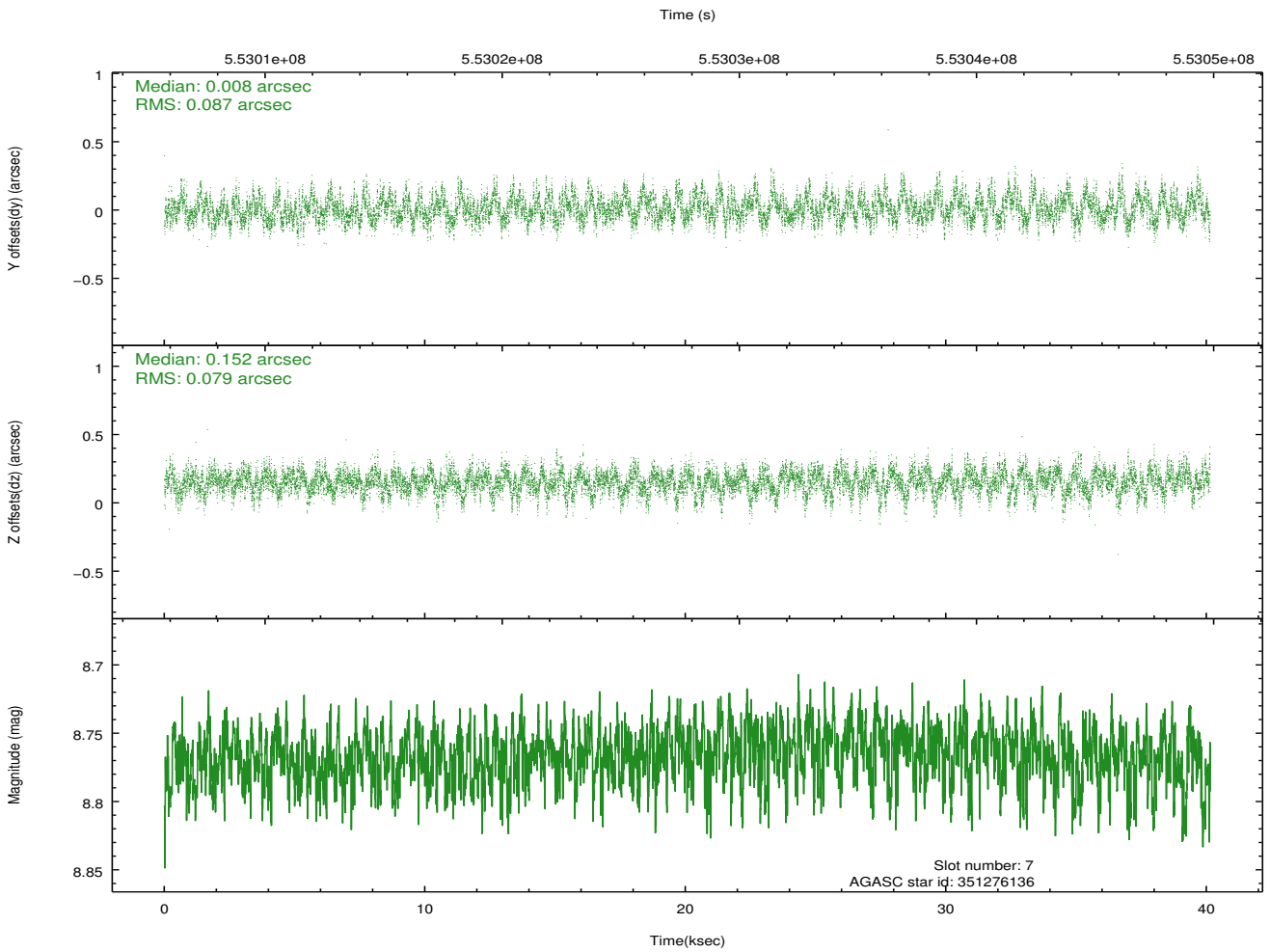
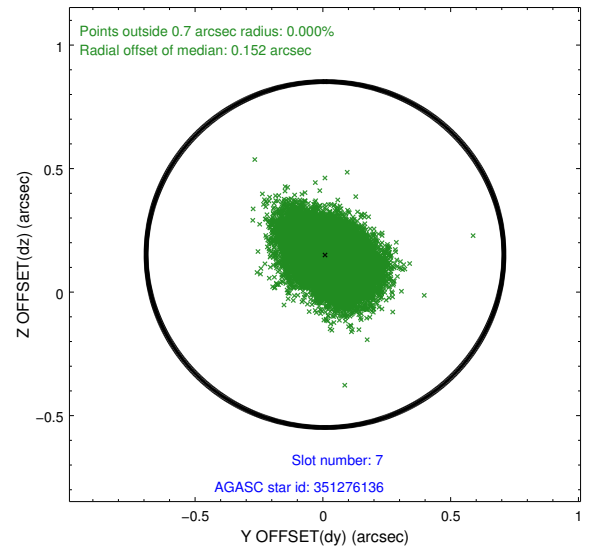
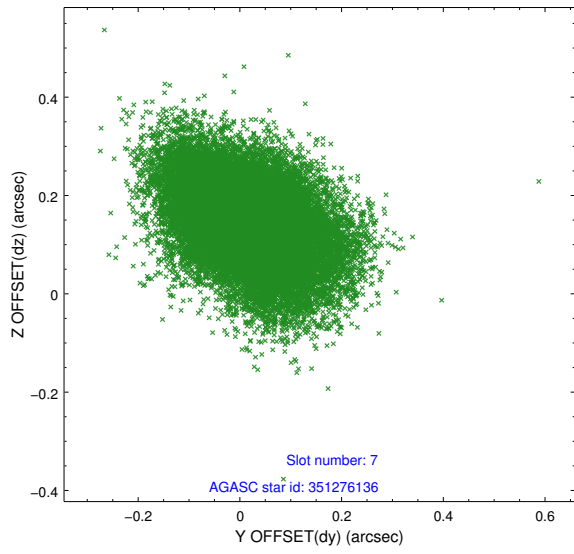
### 2.4.3 Slot 5



## 2.4.4 Slot 6

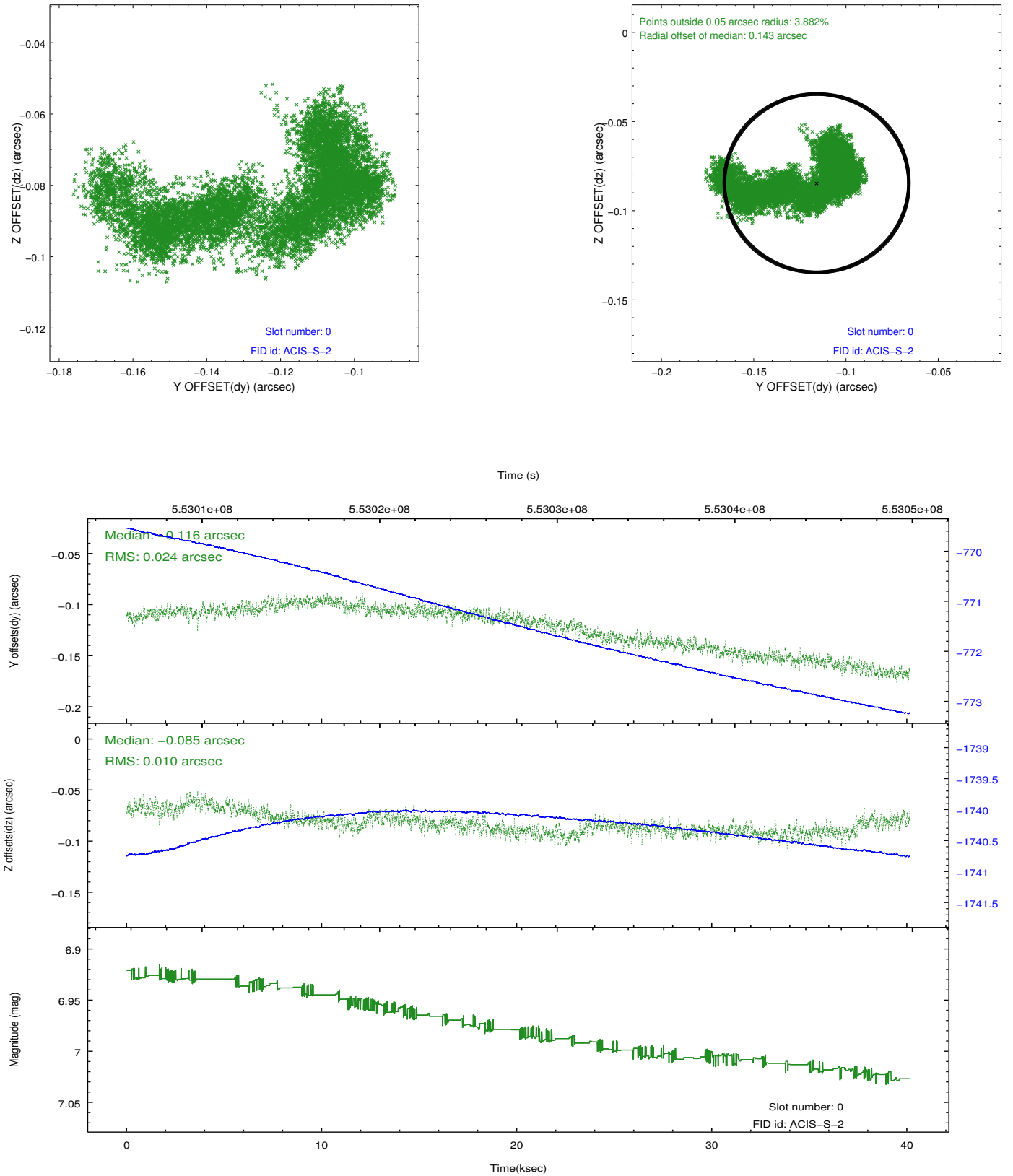


### 2.4.5 Slot 7

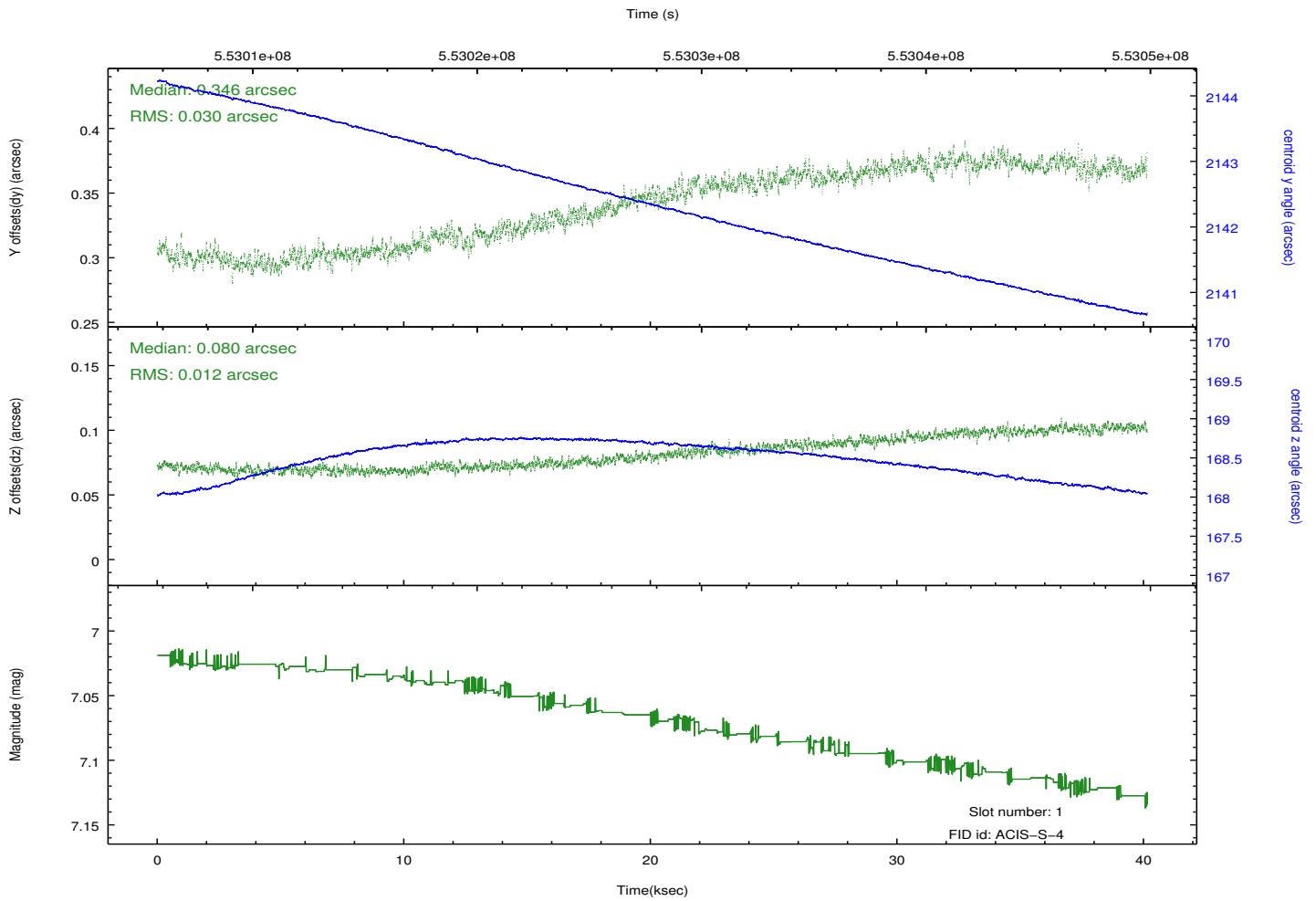
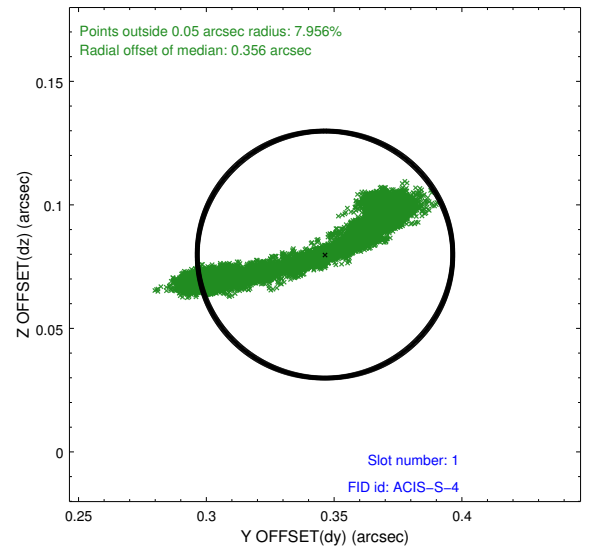
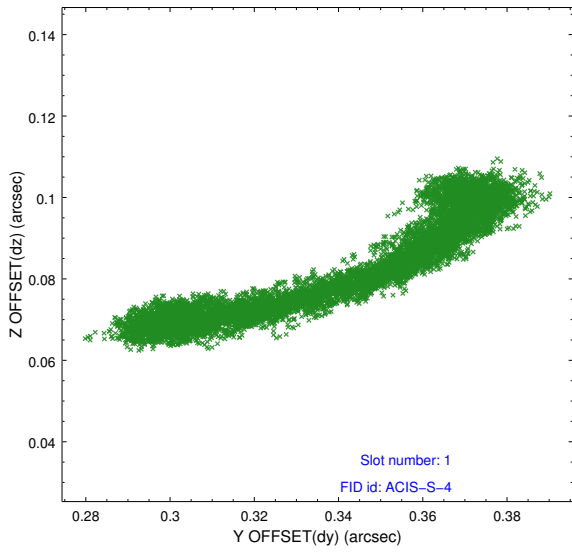


## 2.5 FID Slots

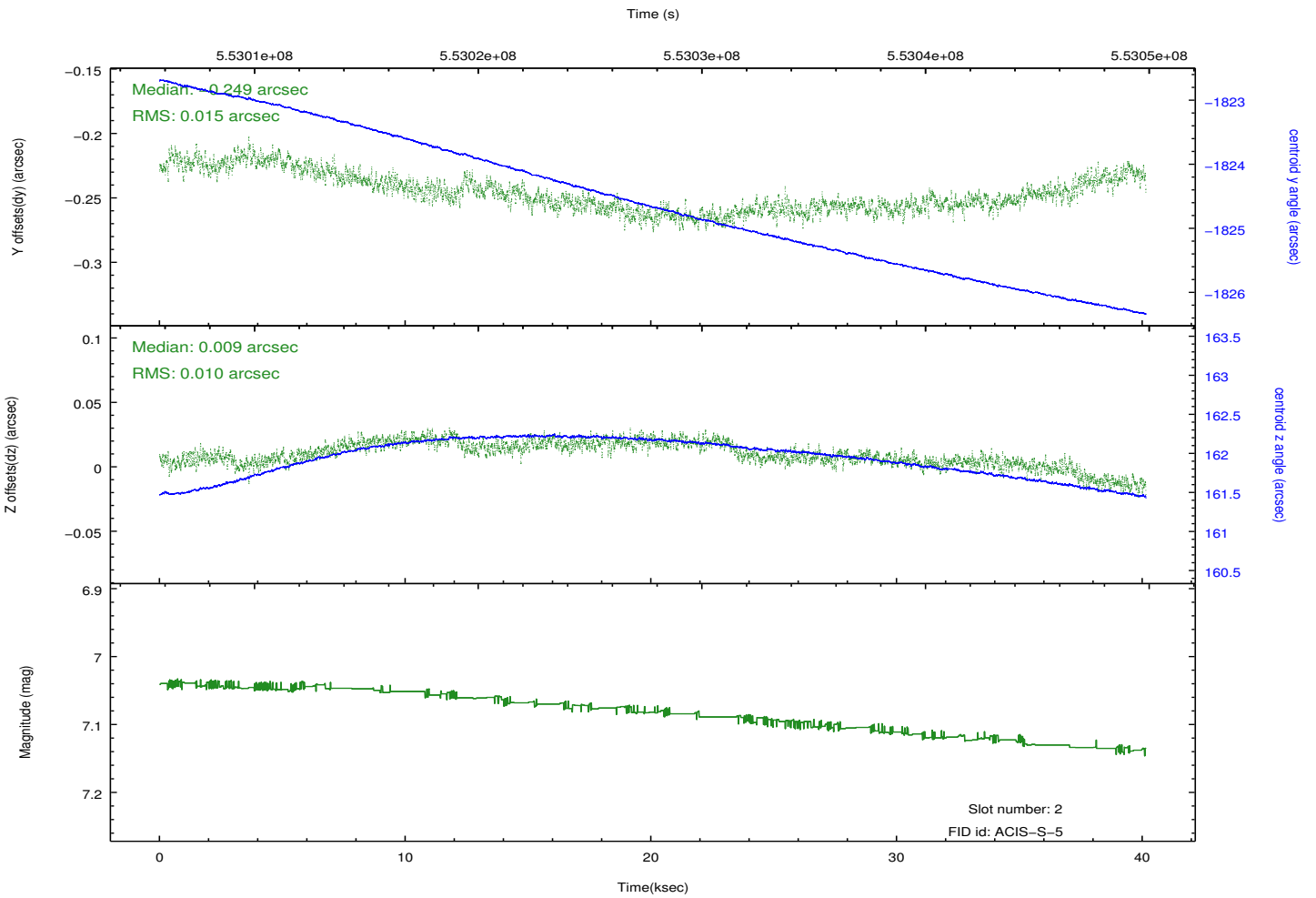
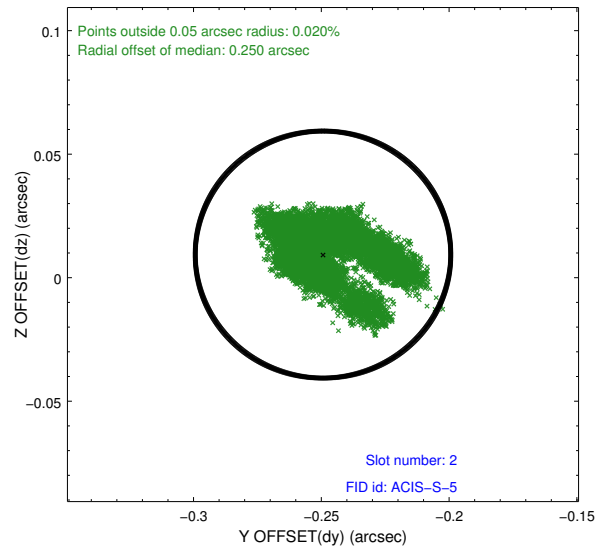
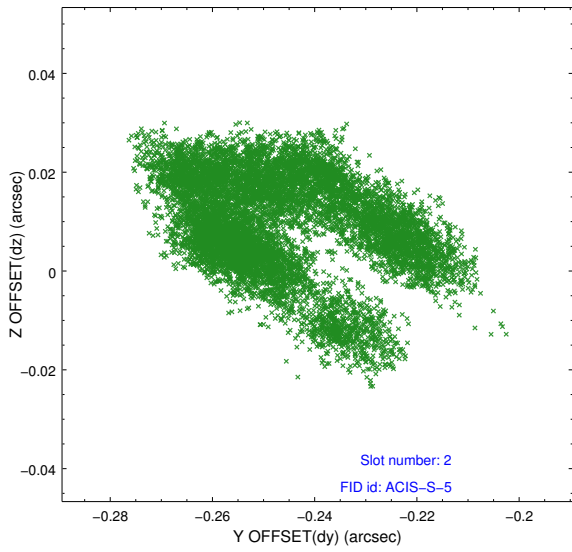
### 2.5.1 Slot 0



## 2.5.2 Slot 1

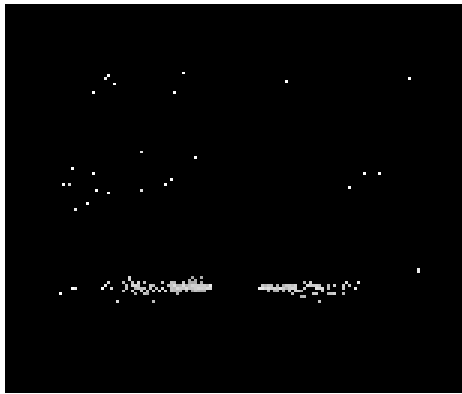


### 2.5.3 Slot 2

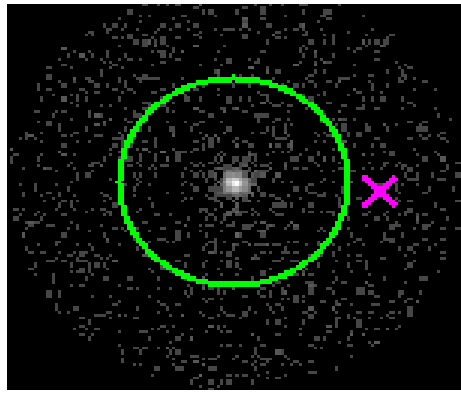


# 3 Gratings

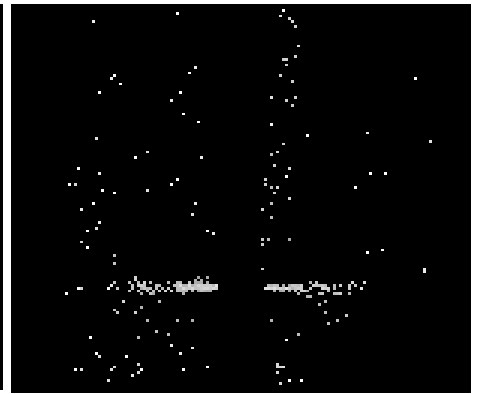
## 3.1 HEG Arm



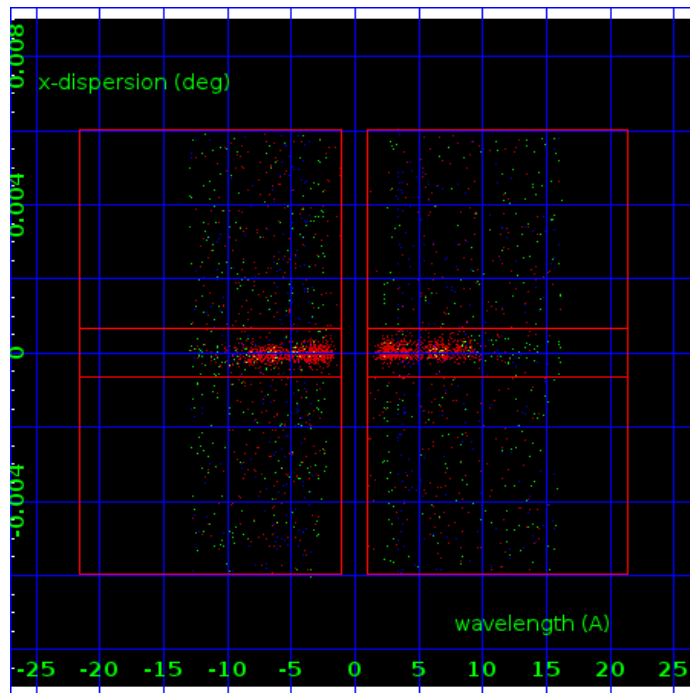
HEG Order Sort 123



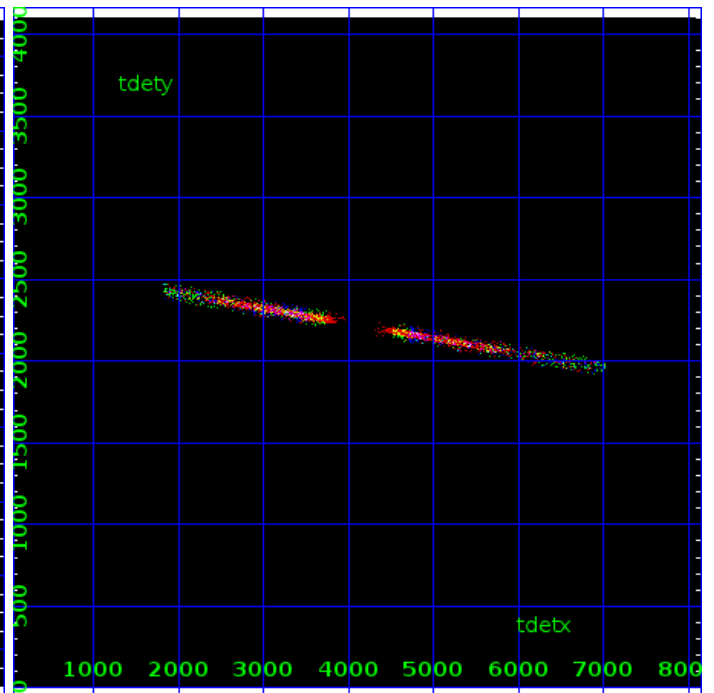
HEG Zero Order



HEG Order Sort ALL

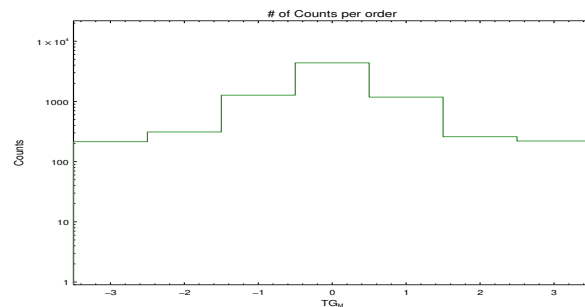


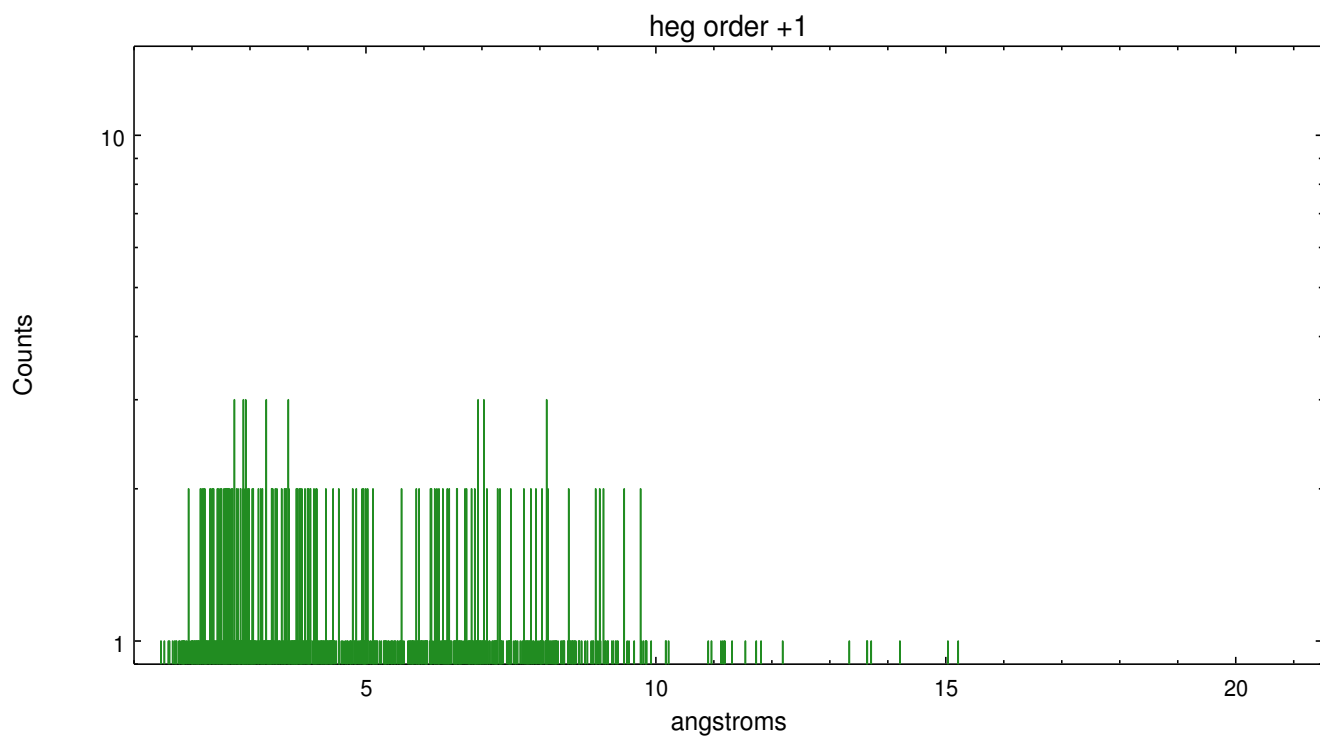
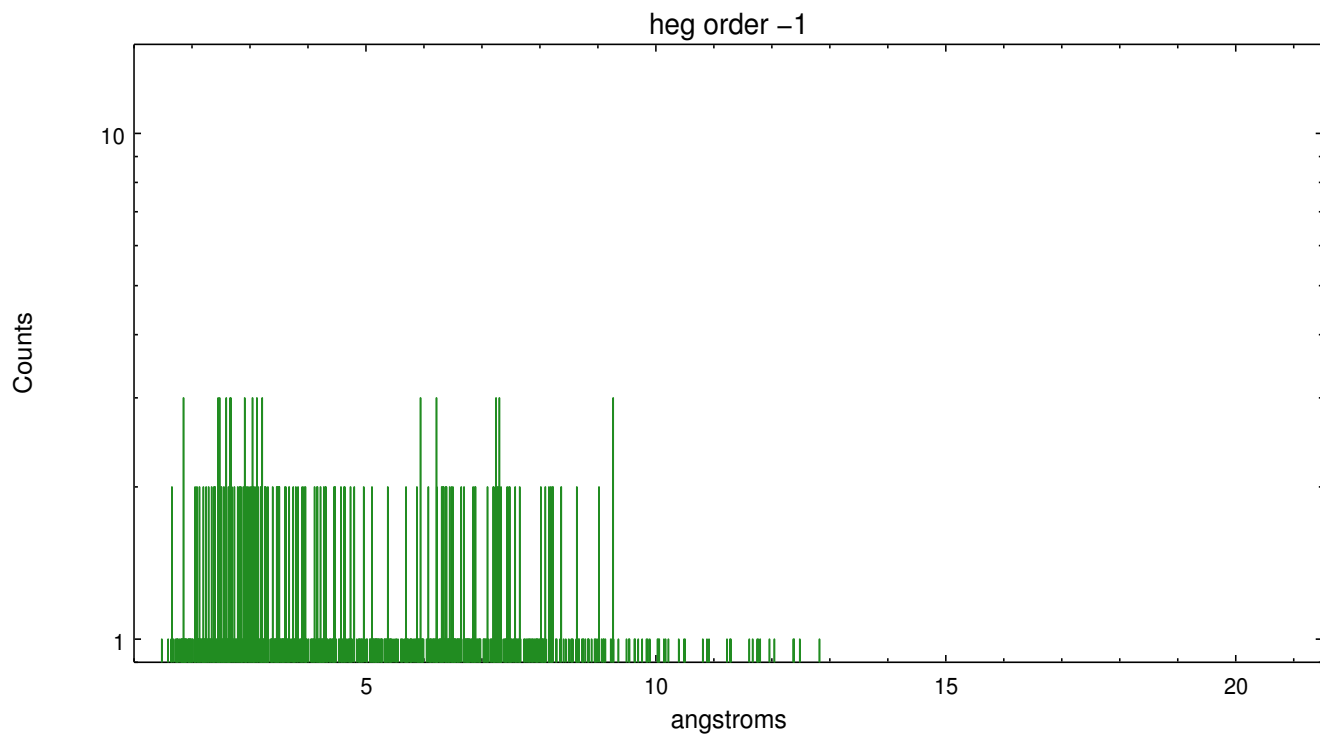
Spot Image HEG



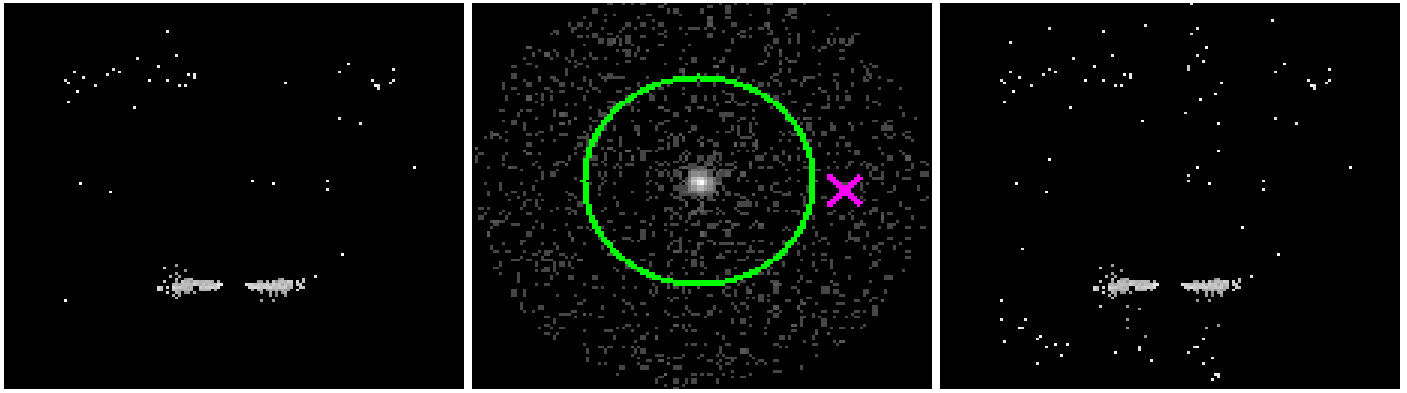
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	214	311	1270	4368	1179	259	220





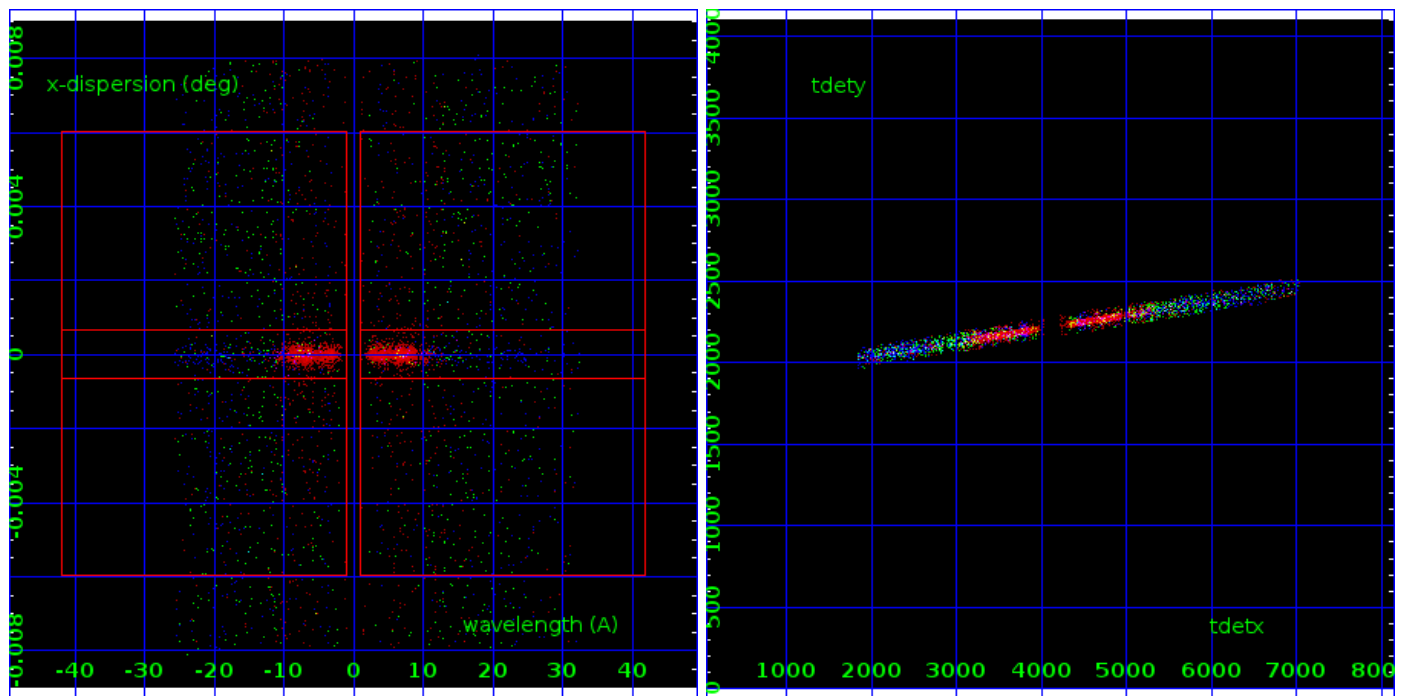
### 3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

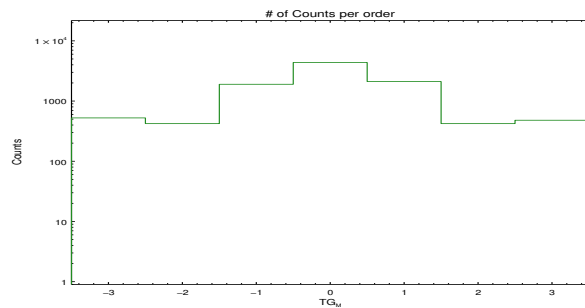
MEG Order Sort ALL

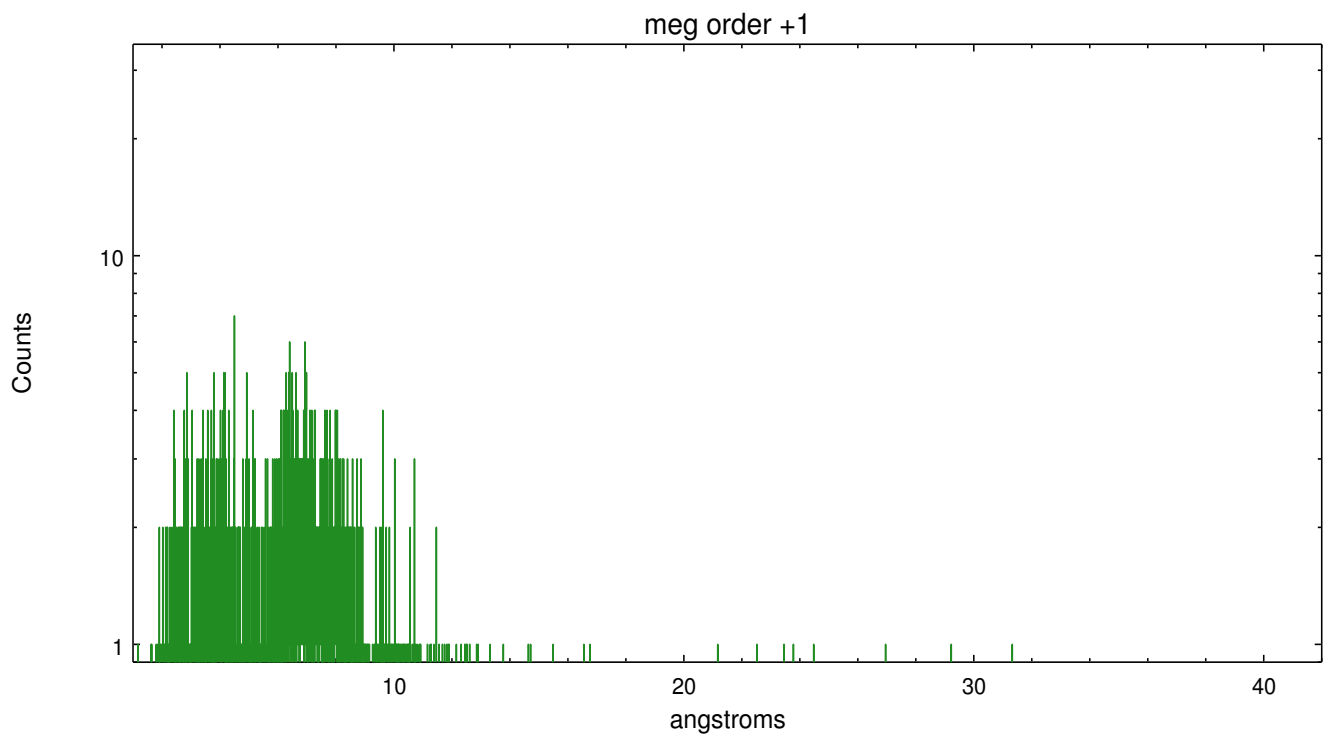
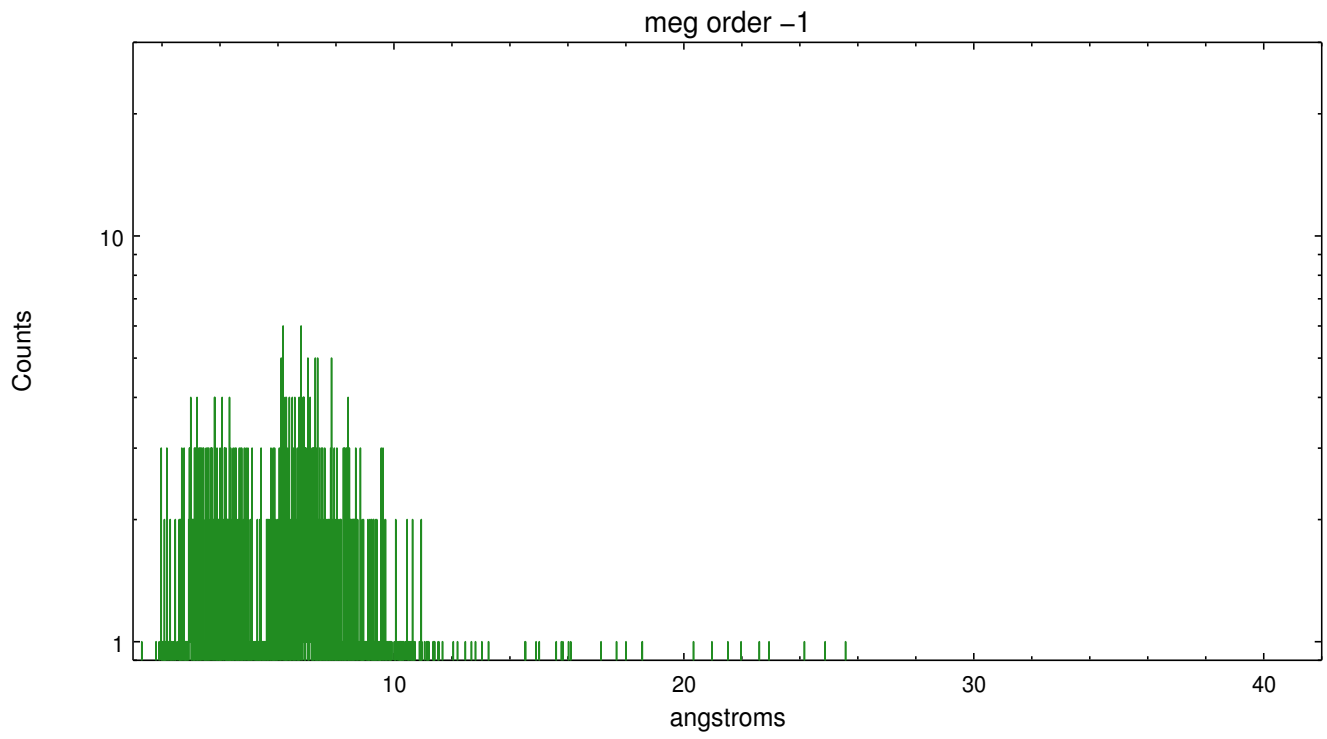


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	525	422	1899	4368	2107	422	480





## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.07.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	40.035878792167

### A.2 Comments