

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 12035 - L2 Version 2  
Chandra X-Ray Center

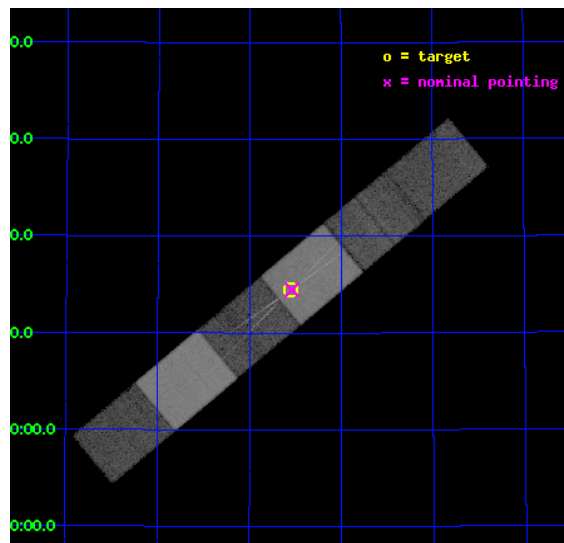
L2 Processing Date : Jun 17 2012

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# 1 Front

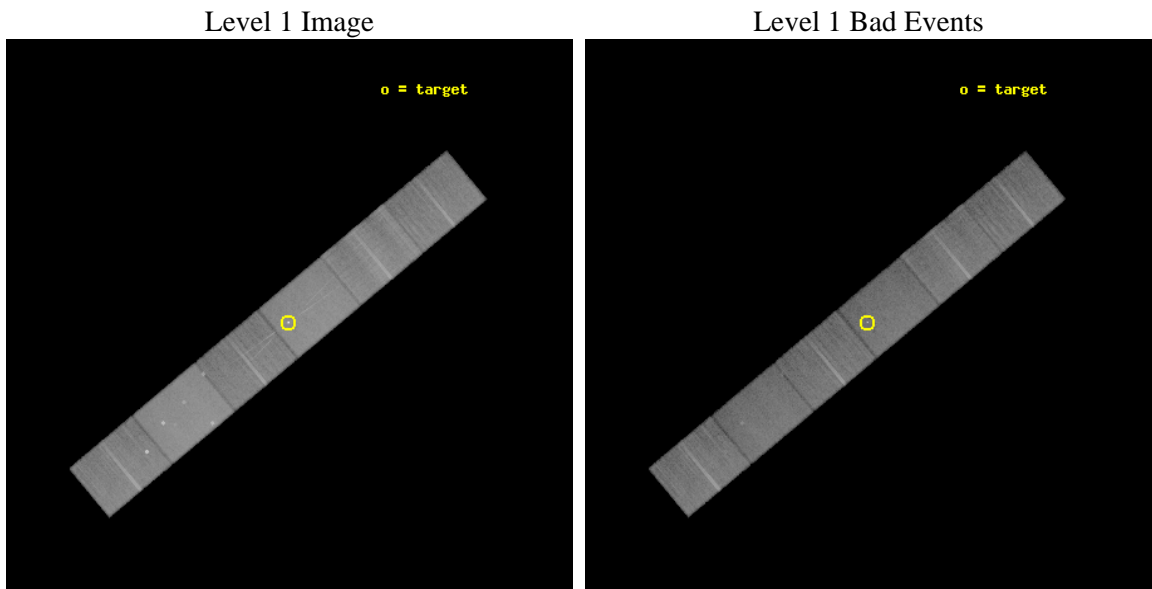
seq_num	300255	Sequence number
obs_id	12035	Observation id
title	The Nature of the Soft Component in the Symbiotic Star CH Cygni	Pr
observer	Dr Koji Mukai	Principal investigator
object	CH Cygni	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	291.137917	Observer's specified target RA [deg]
dec_targ	50.241417	Observer's specified target Dec [deg]
ra_nom	291.13469242734	Nominal RA [deg]
dec_nom	50.241057068651	Nominal Dec [deg]
roll_nom	320.15911925196	Nominal Roll [deg]
revision	2	Processing version of data
ontime	22717.5	Sum of GTIs [s]
livetime	22350.592670717	Livetime [s]
ontime4	22717.5	Sum of GTIs [s]
ontime5	22717.5	Sum of GTIs [s]
ontime6	22717.5	Sum of GTIs [s]
ontime7	22717.5	Sum of GTIs [s]
ontime8	22717.5	Sum of GTIs [s]
ontime9	22714.959029615	Sum of GTIs [s]
l2events	333133	Number of level 2 events



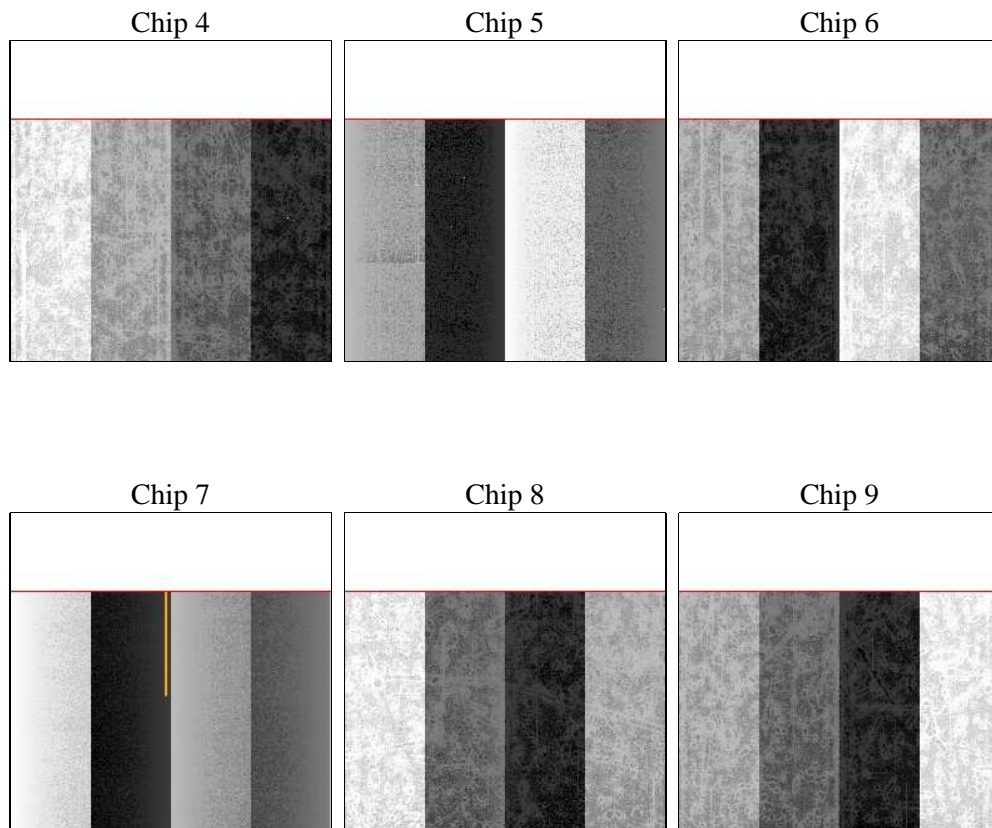
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	22500.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	22717.5	Sum of GTIs [s]
caldbver	4.4.10	&#160	ontime4	22717.5	Sum of GTIs [s]
date	2012-06-17T17:19:57	Date and time of file creation	ontime5	22717.5	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	22717.5	Sum of GTIs [s]
			ontime7	22717.5	Sum of GTIs [s]
			ontime8	22717.5	Sum of GTIs [s]
			ontime9	22714.959029615	Sum of GTIs [s]
			l1events	1376983	Number of level 1 events

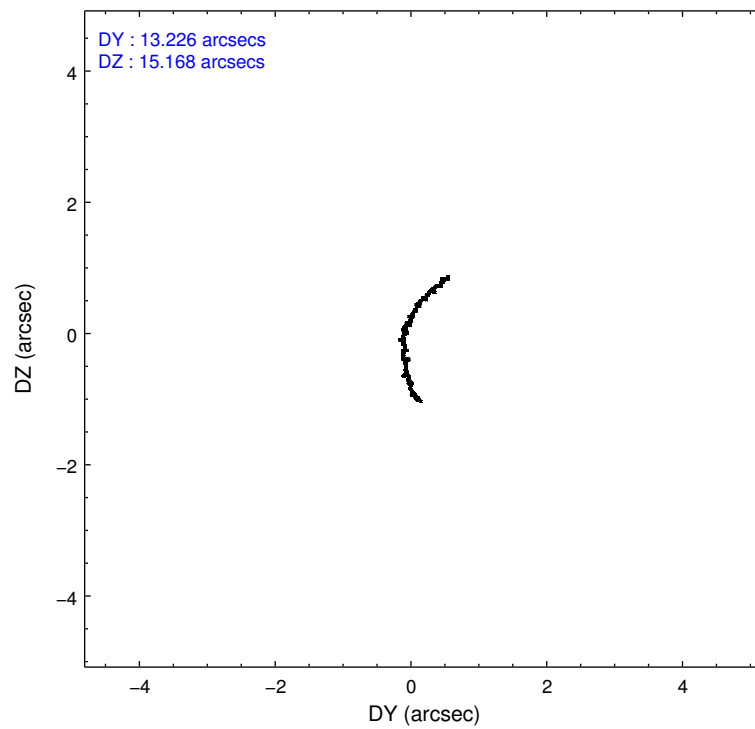
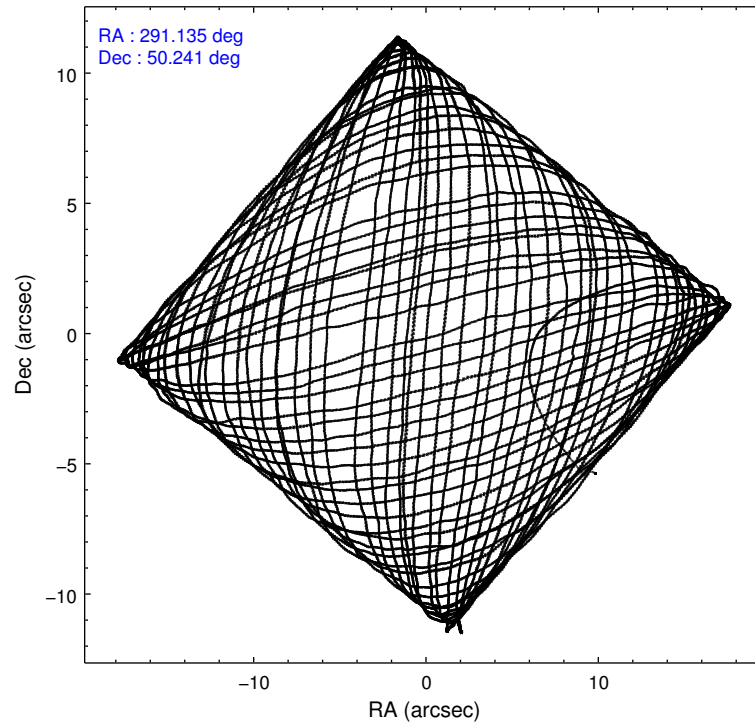
### 2.1.4 Events

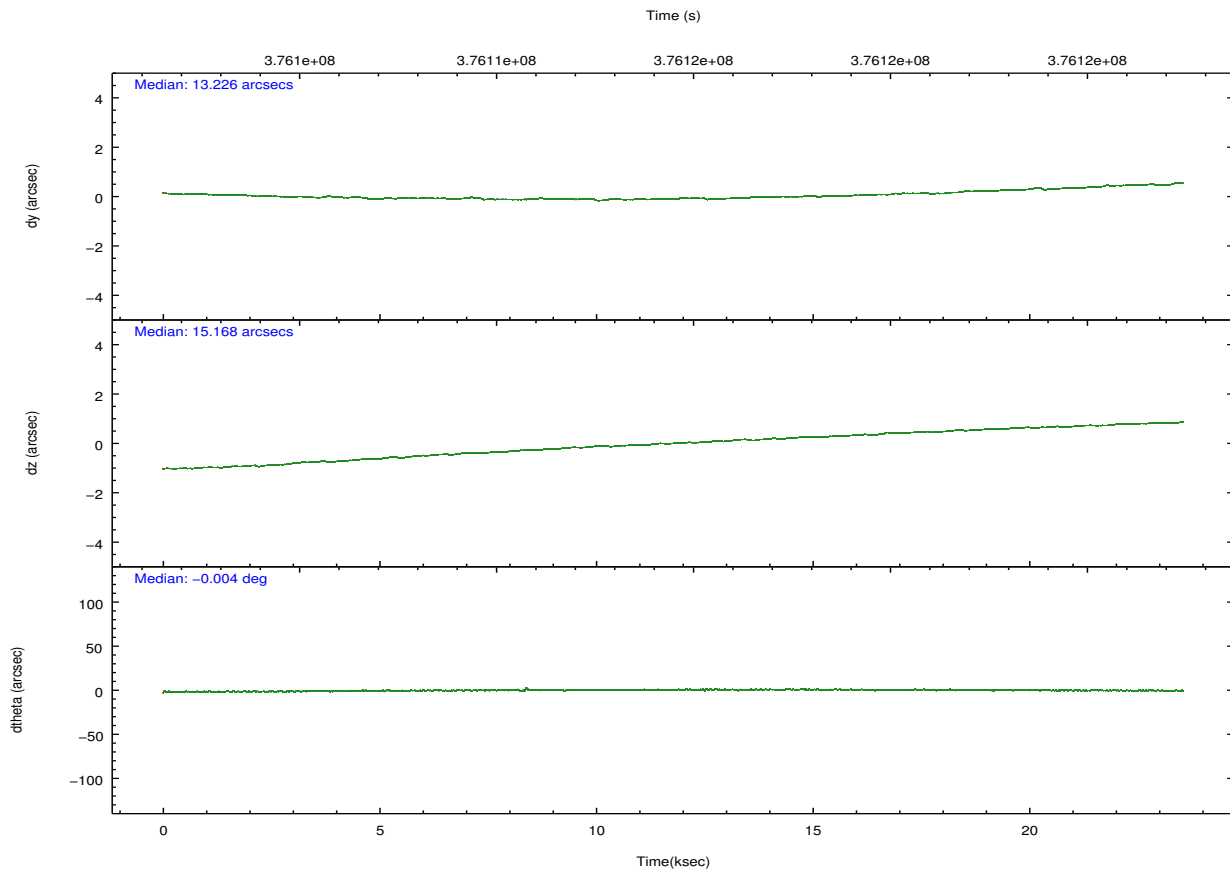
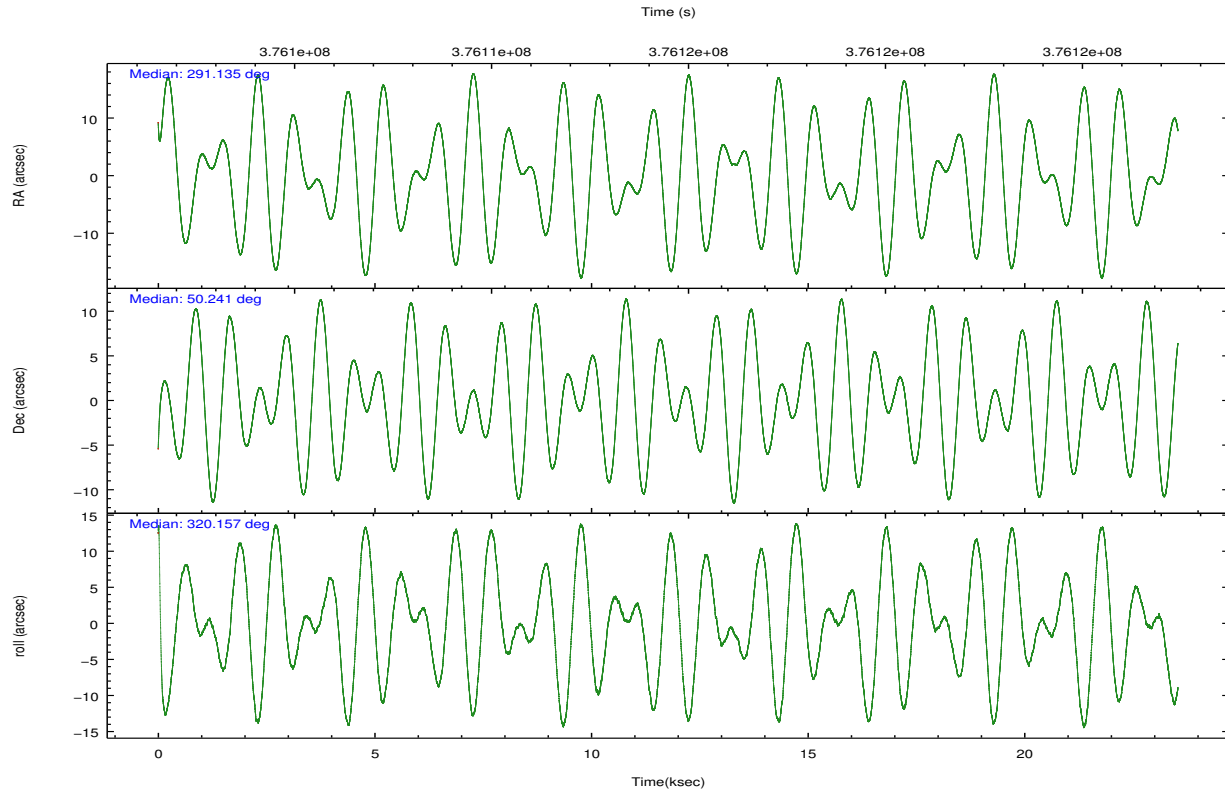
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	211964	291154	186399	267822	239271	180373	grade 0 events	15238	13777	11075	11059	17889	9598
rejected events	182087	154412	160199	149971	181118	156584		7%	4%	5%	4%	7%	5%
rejected %	85%	53%	85%	55%	75%	86%	grade 1 events	211	854	82	339	171	94
								0%	0%	0%	0%	0%	0%
							grade 2 events	5726	40814	5506	24455	13122	4920
								2%	14%	2%	9%	5%	2%
							grade 3 events	2470	5693	2440	10293	6121	2339
								1%	1%	1%	3%	2%	1%
							grade 4 events	2392	5542	2339	10180	5619	2318
								1%	1%	1%	3%	2%	1%
							grade 5 events	8567	21461	8554	24610	11775	9440
								4%	7%	4%	9%	4%	5%
							grade 6 events	4055	70951	4847	61886	15440	4624
								1%	24%	2%	23%	6%	2%
							grade 7 events	173305	132062	151556	125000	169134	147040
								81%	45%	81%	46%	70%	81%

## 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	291.092417	291.1346924273435	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	50.245364	50.24105706865099	Subarray start row	1	1
[deg] Pointing Roll	320.034981	320.1591192519586	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	-187.1228876879999			
[mm] SIM translation stage offset	-3	-3.009634895007935			
[s] Observation start time (MET)	376103575.184000	376101761.04342			
Observation start date	2009-12-02T01:11:49	2009-12-02T00:42:41			
[s] Observation end time (MET)	376126075.184000	376127090.8447			
Observation end date	2009-12-02T07:26:49	2009-12-02T07:44:50			
Read mode	TIMED	TIMED			

## 2.3 Aspect



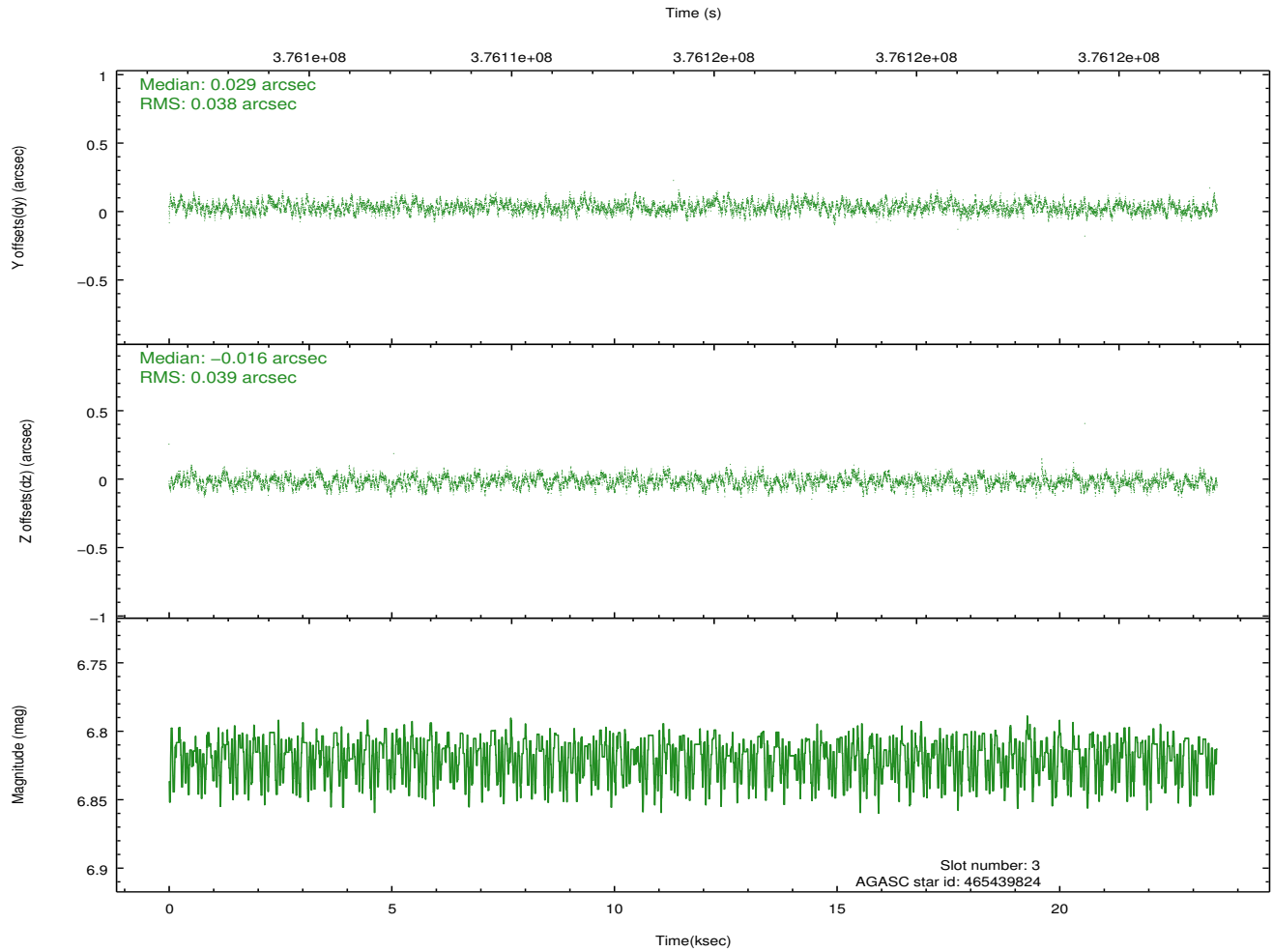
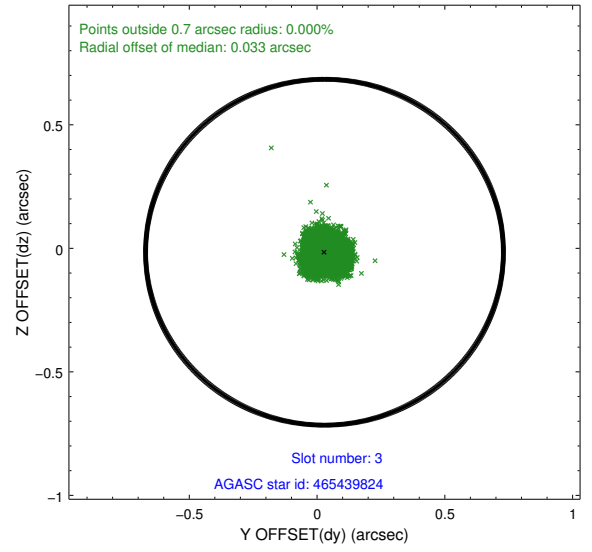
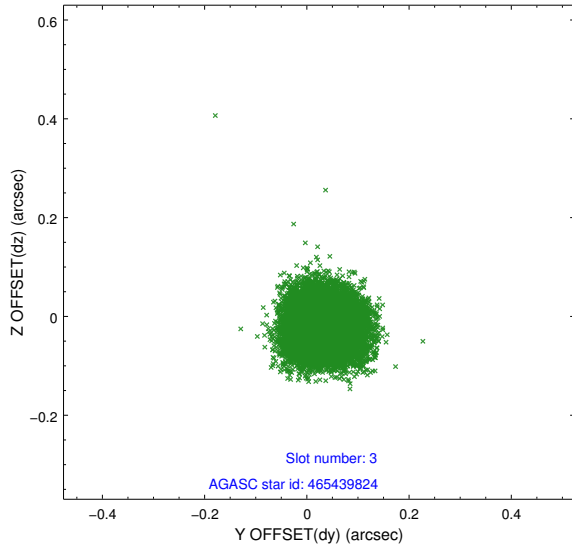


### Slot Statistics

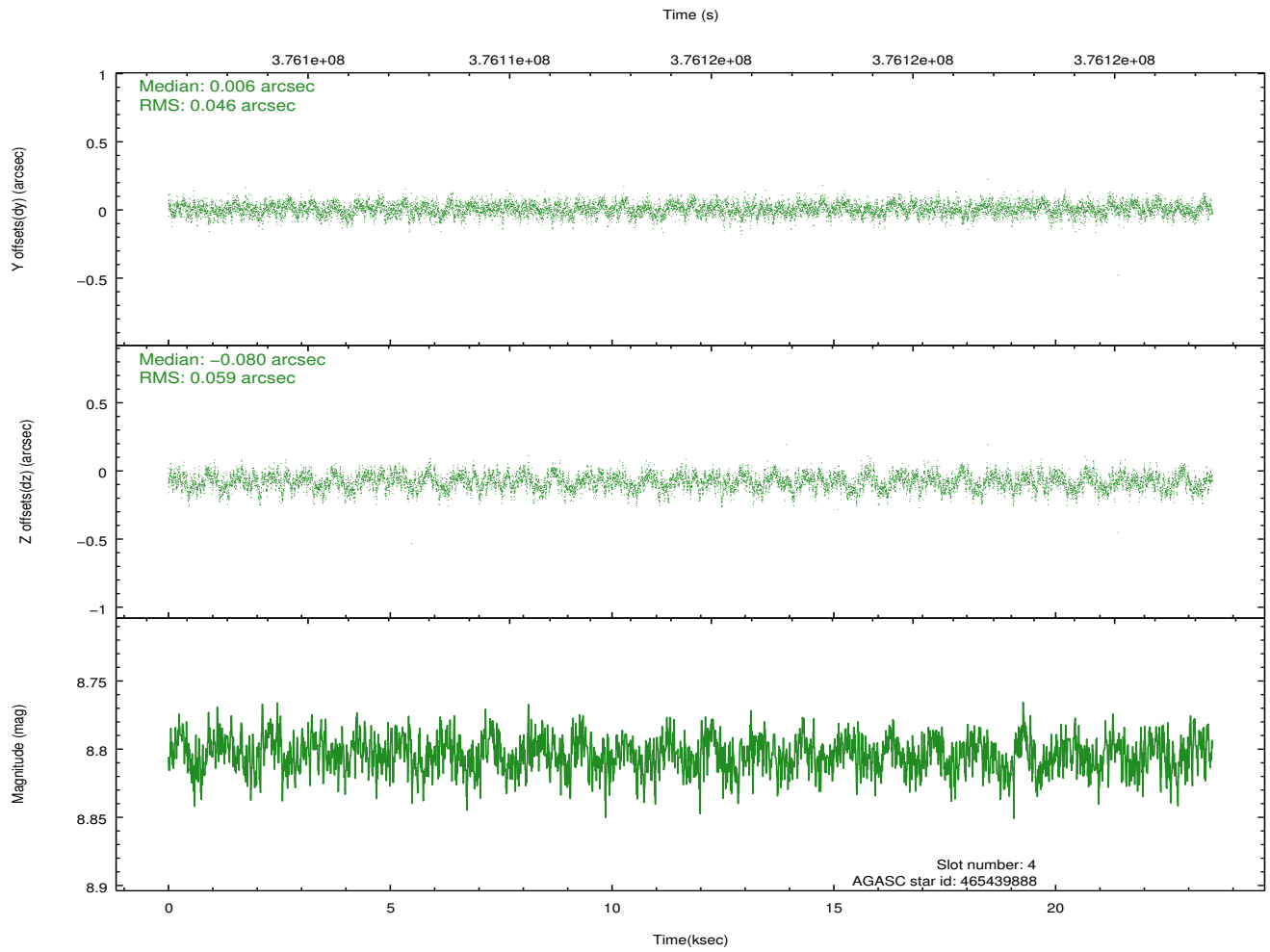
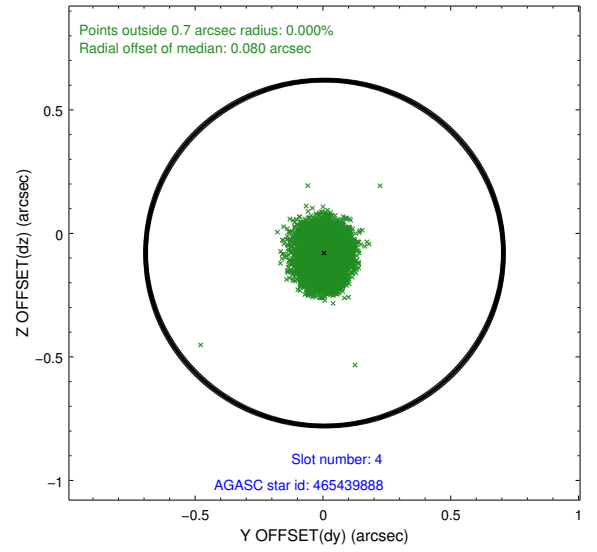
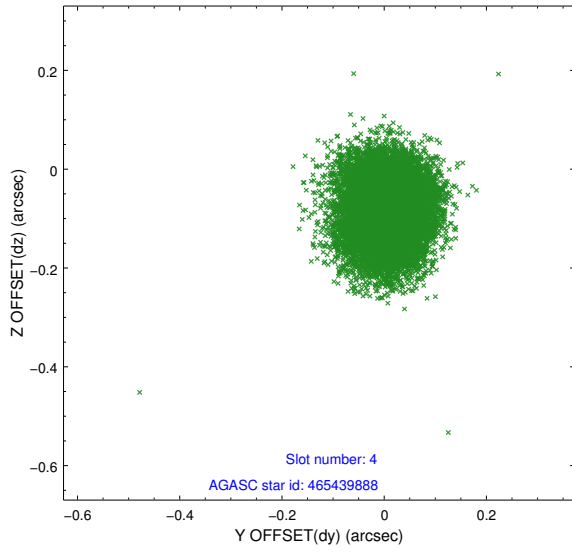
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.87	5742	-0.080	-0.077	0.015	0.028	0.000000	0.000000	-766.09	-1798.72
1	FID	ACIS-S-4	6.95	5741	0.179	0.058	0.013	0.024	0.000000	0.000000	2147.39	109.72
2	FID	ACIS-S-5	7.00	5742	-0.130	0.027	0.013	0.025	0.000000	0.000000	-1818.80	103.54
3	GUIDE	465439824	6.82	11478	0.029	-0.016	0.059	0.092	290.131117	50.340225	-1921.13	-1145.62
4	GUIDE	465439888	8.80	11475	0.006	-0.080	0.080	0.128	291.753626	50.234695	1187.19	953.42
5	GUIDE	465447224	8.27	11479	-0.111	-0.035	0.075	0.117	291.830226	50.402668	928.55	1527.87
6	GUIDE	465456704	7.04	11479	0.013	0.139	0.080	0.146	290.849115	50.271291	-489.35	-286.99
7	GUIDE	465447232	8.94	11476	0.056	-0.010	0.088	0.143	291.671863	50.155078	1229.94	613.44

## 2.4 Star Slots

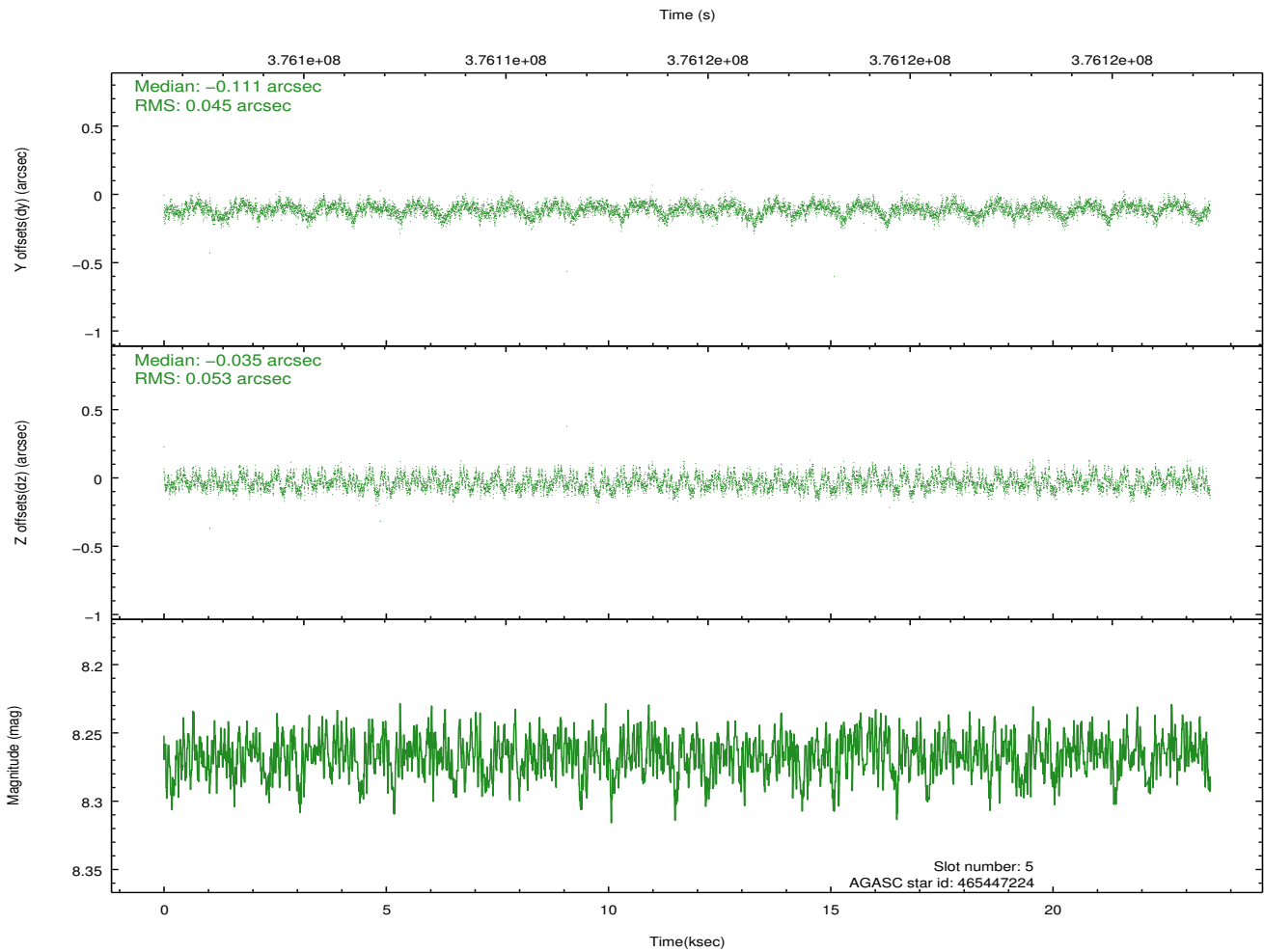
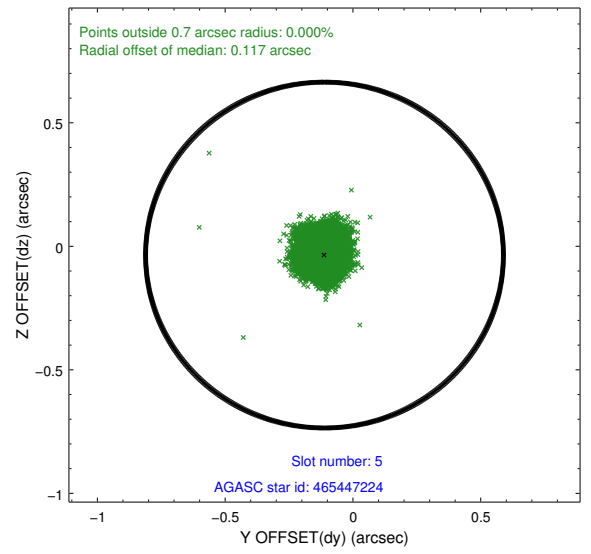
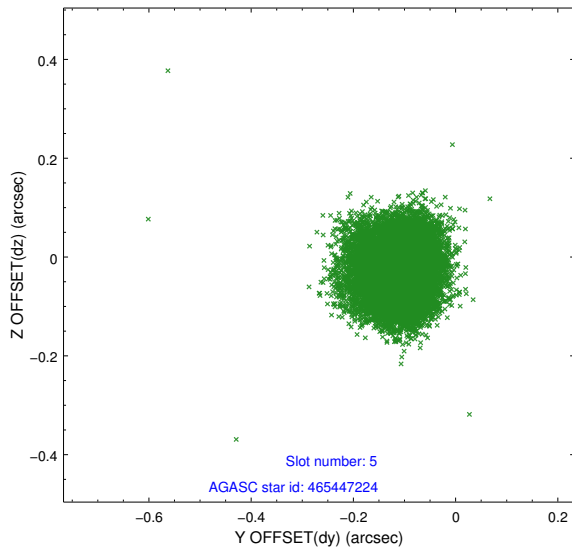
### 2.4.1 Slot 3



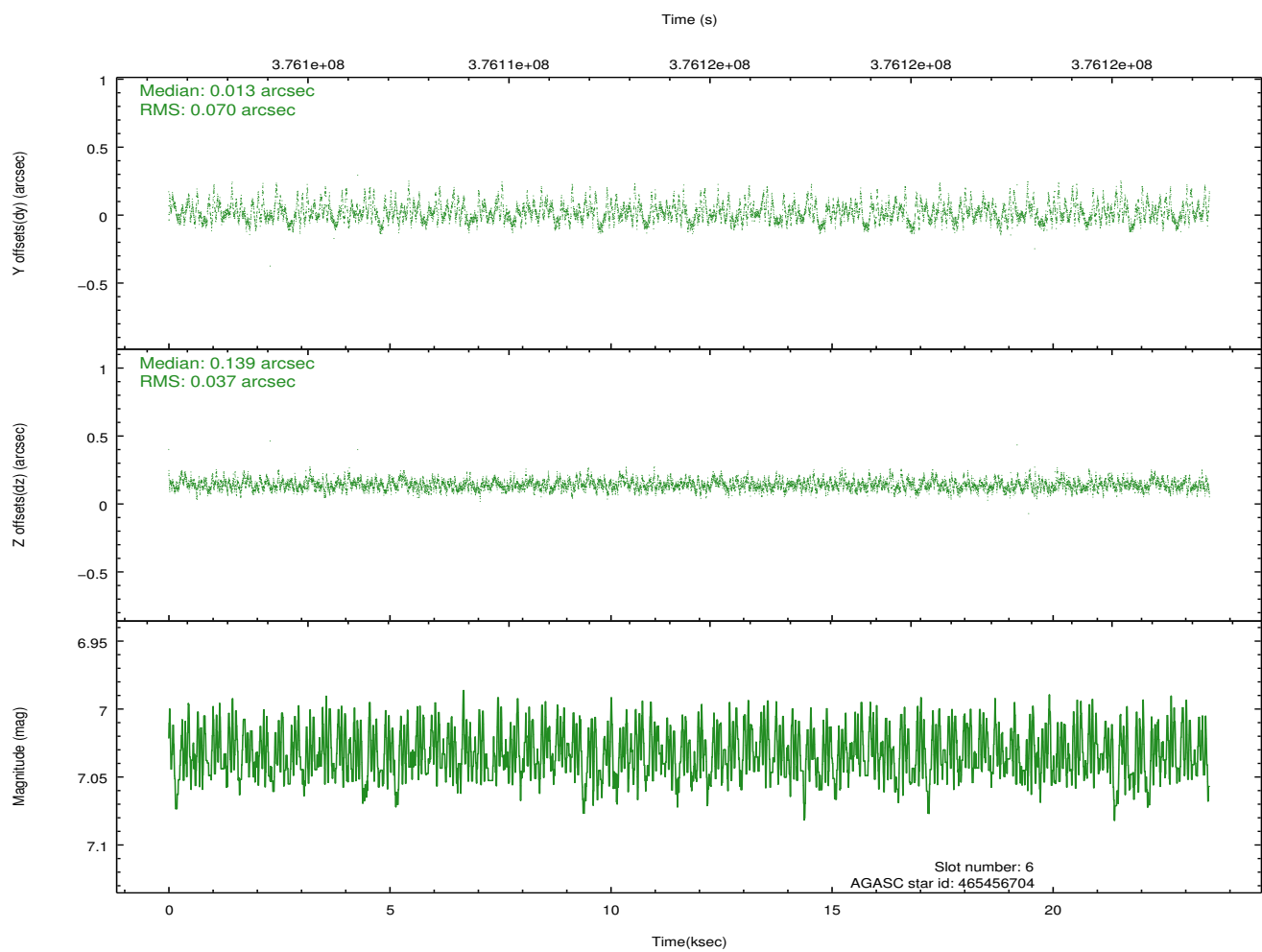
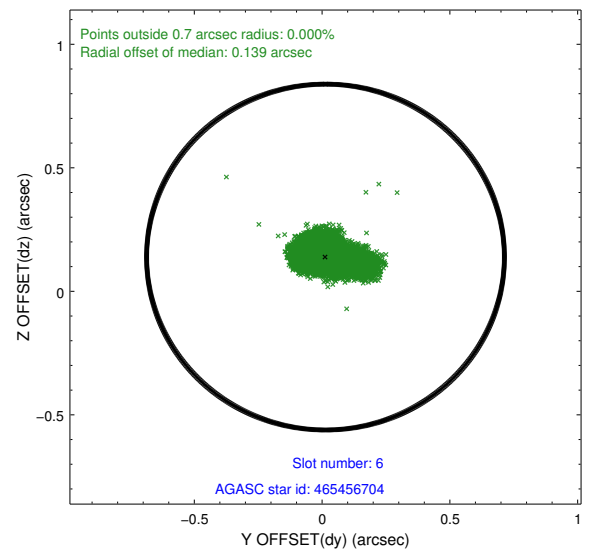
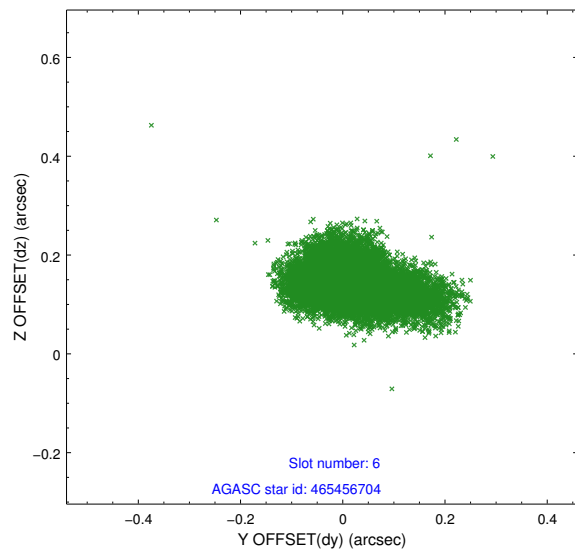
## 2.4.2 Slot 4



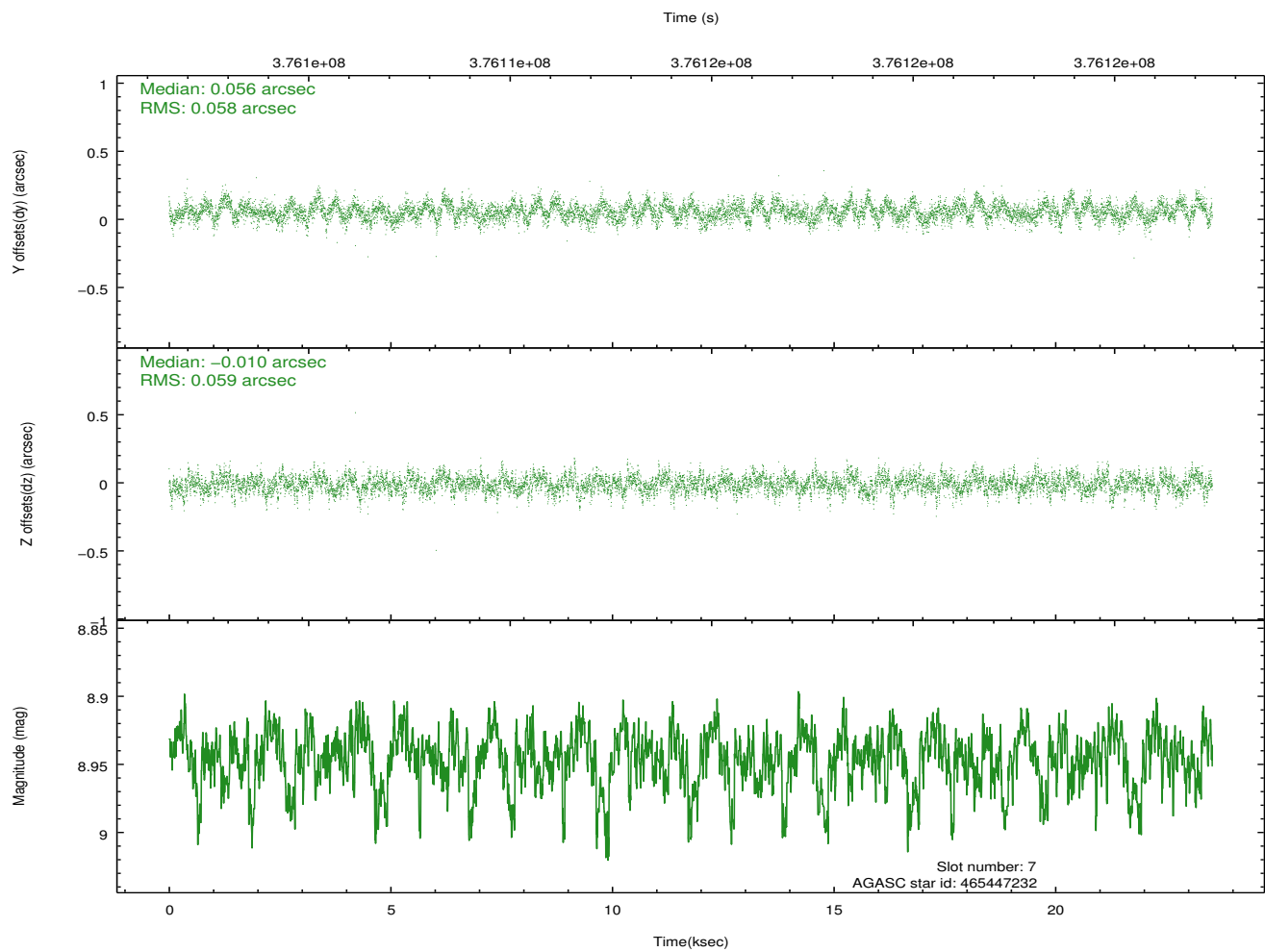
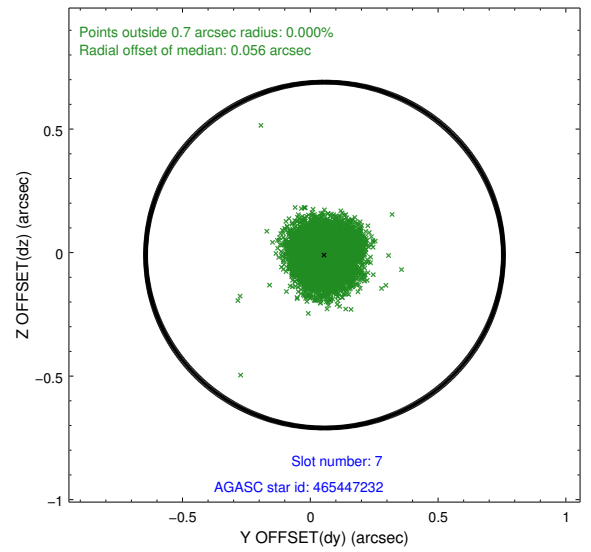
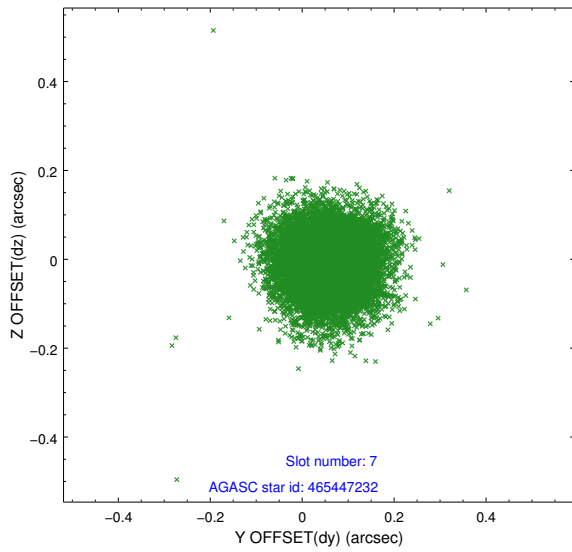
### 2.4.3 Slot 5



## 2.4.4 Slot 6

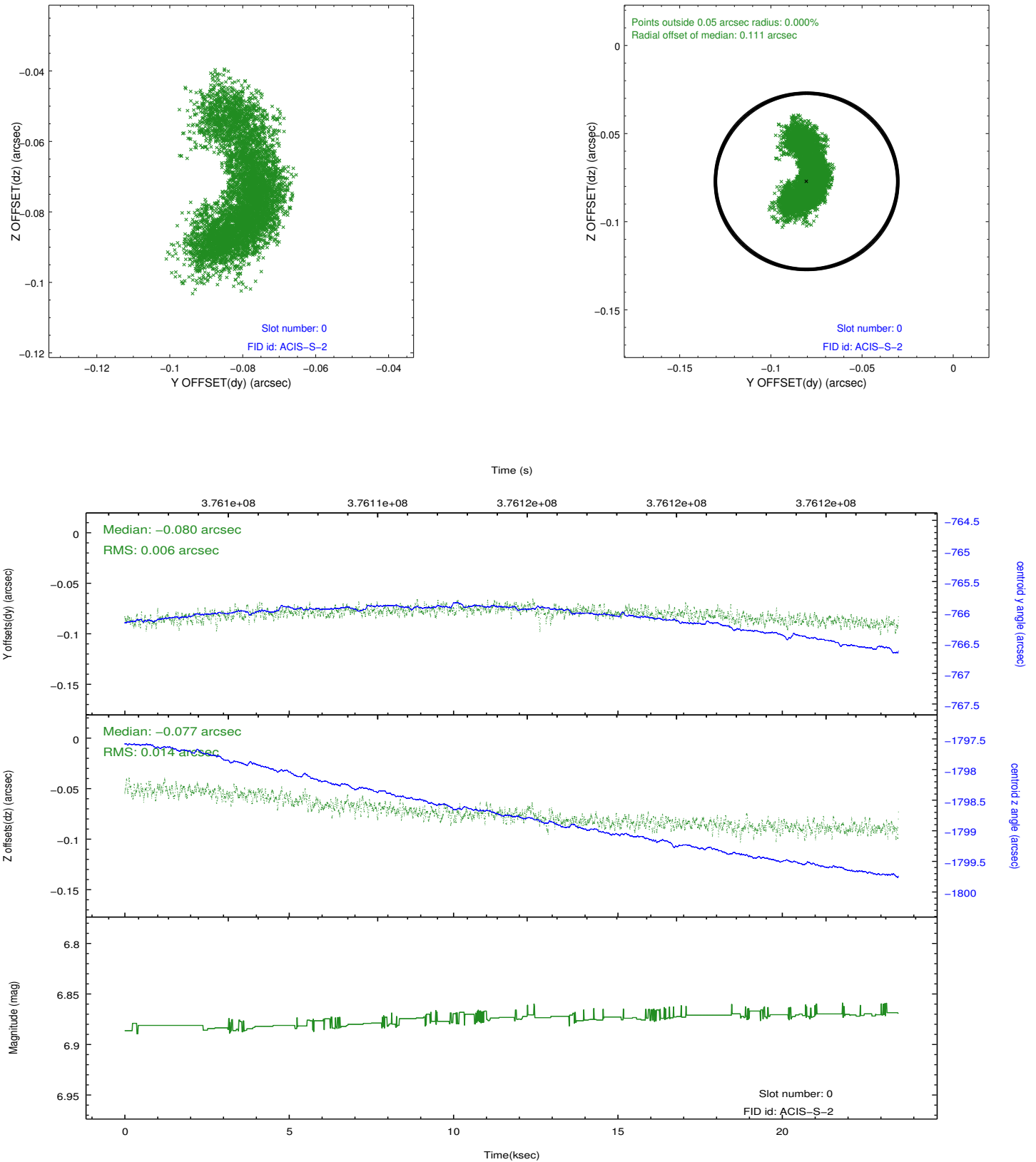


## 2.4.5 Slot 7

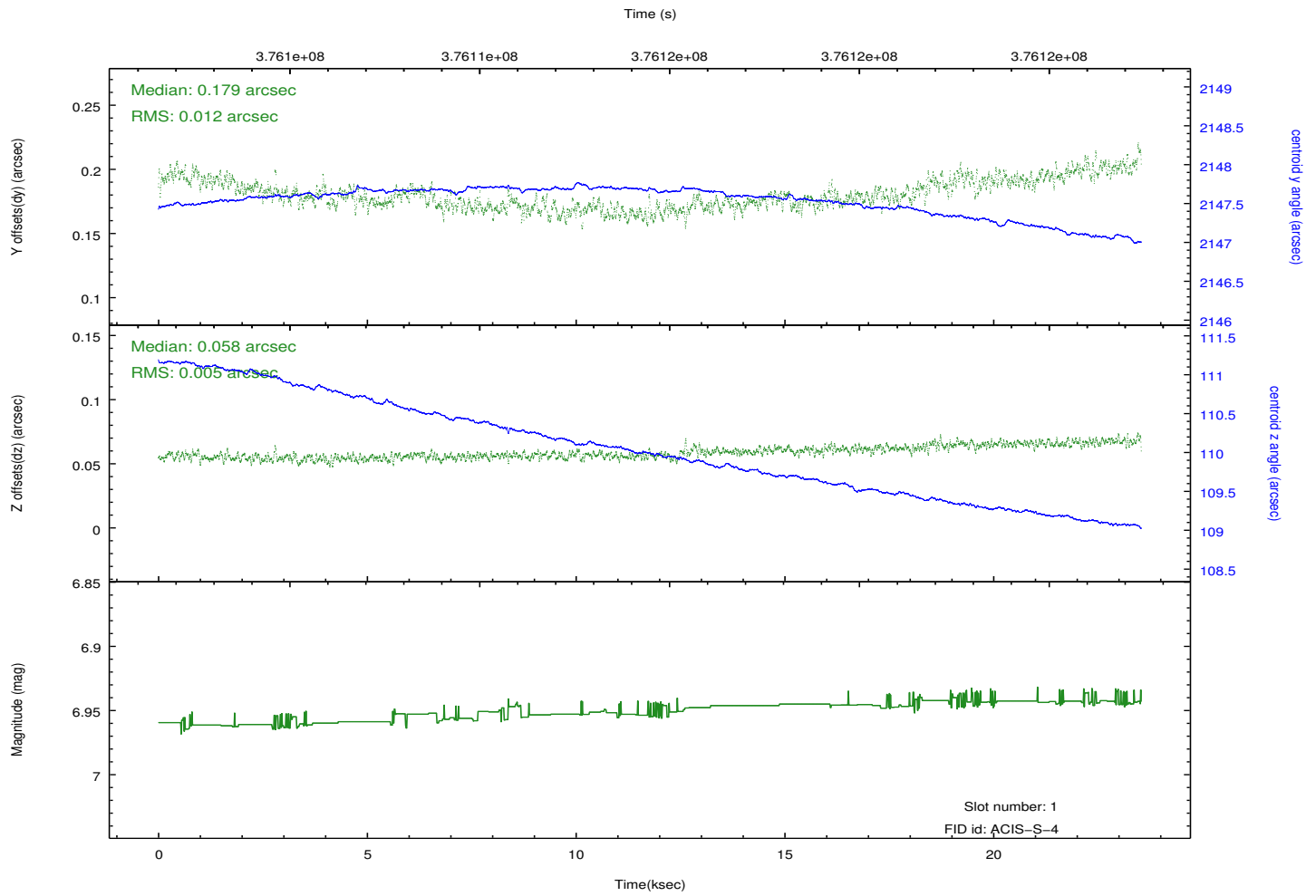
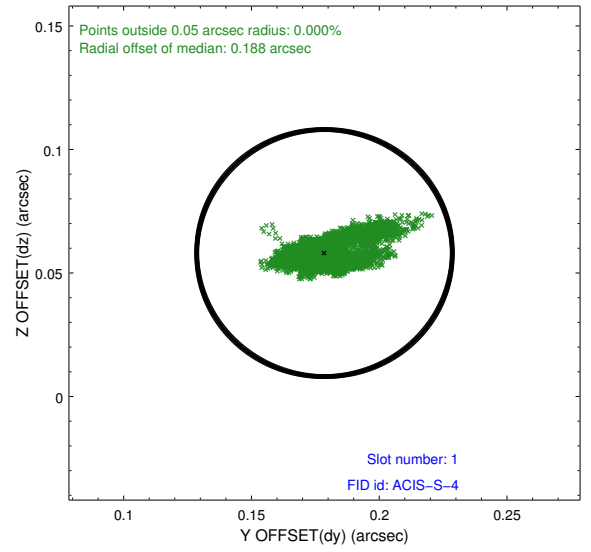
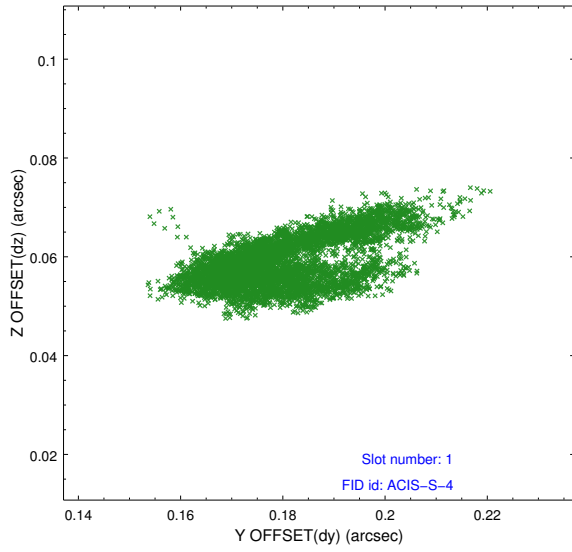


## 2.5 FID Slots

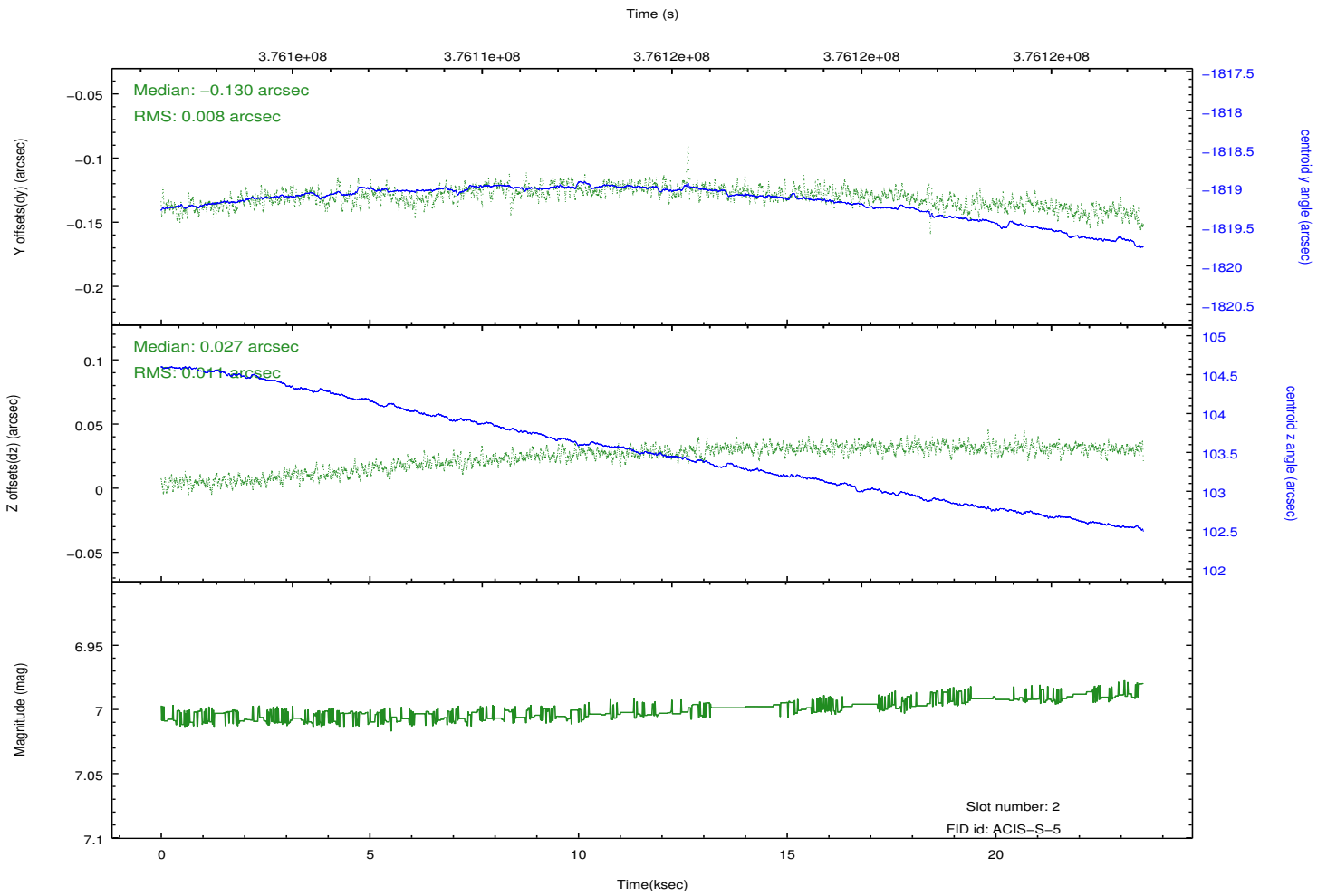
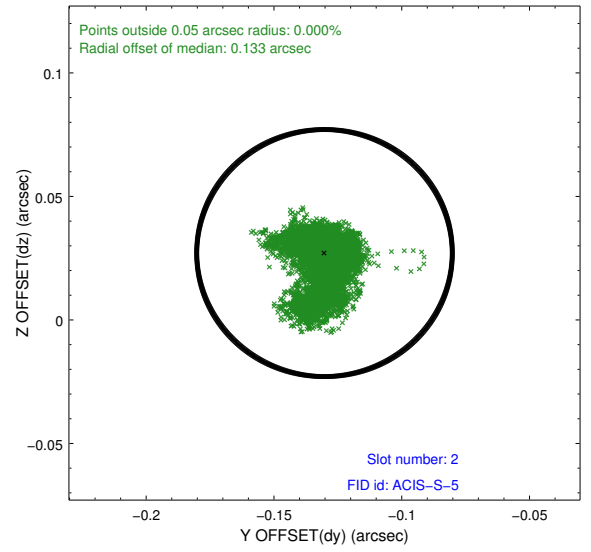
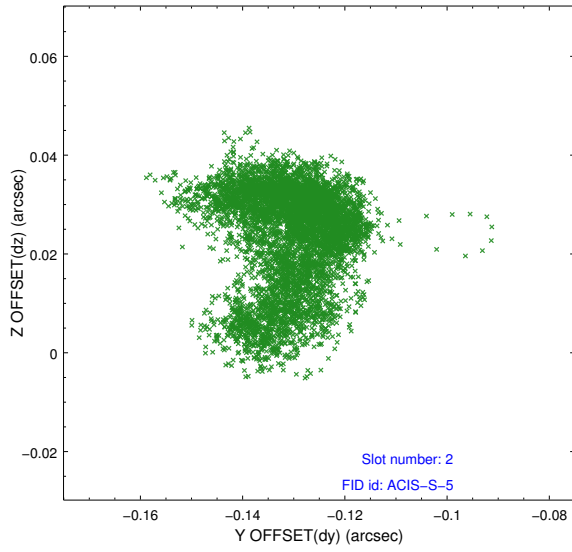
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

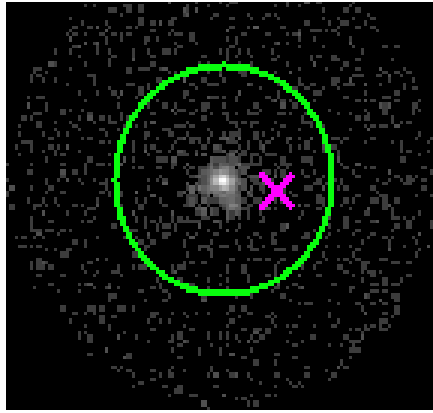


# 3 Gratings

## 3.1 HEG Arm



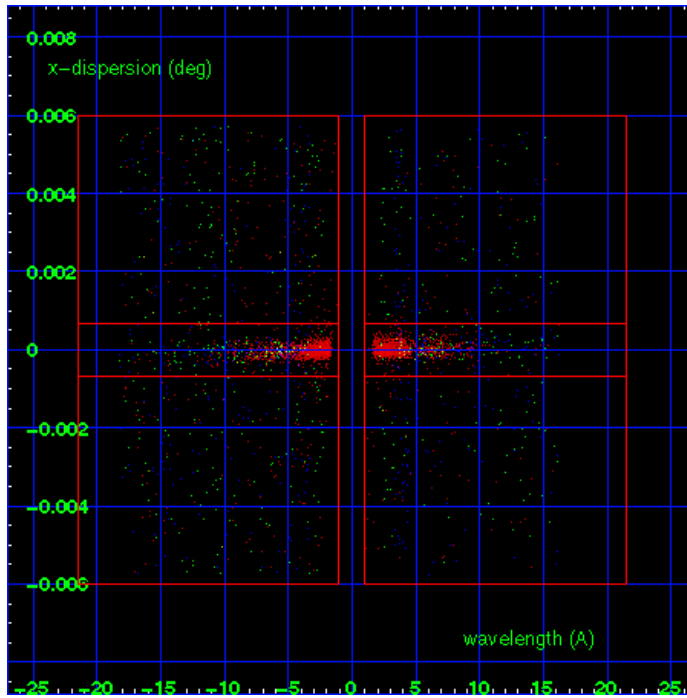
HEG Order Sort 123



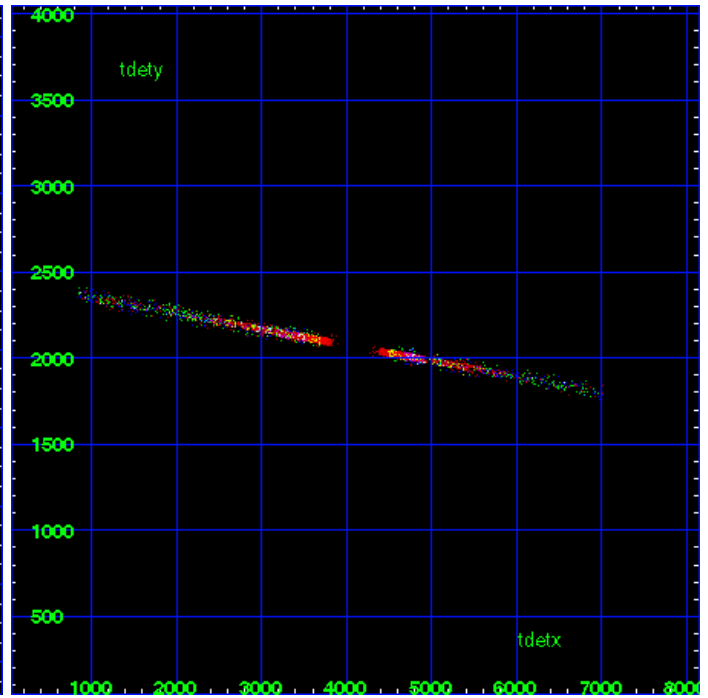
HEG Zero Order



HEG Order Sort ALL

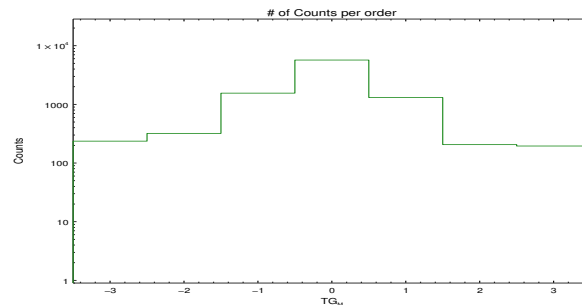


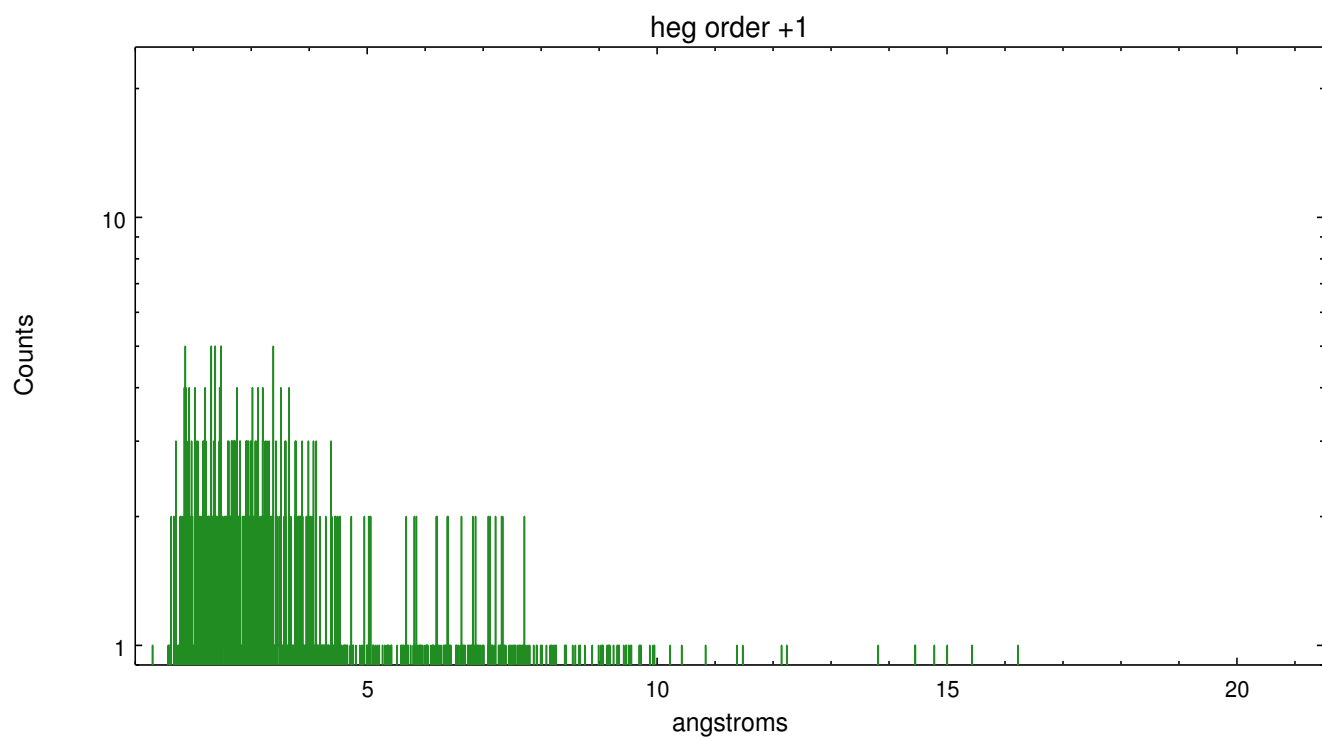
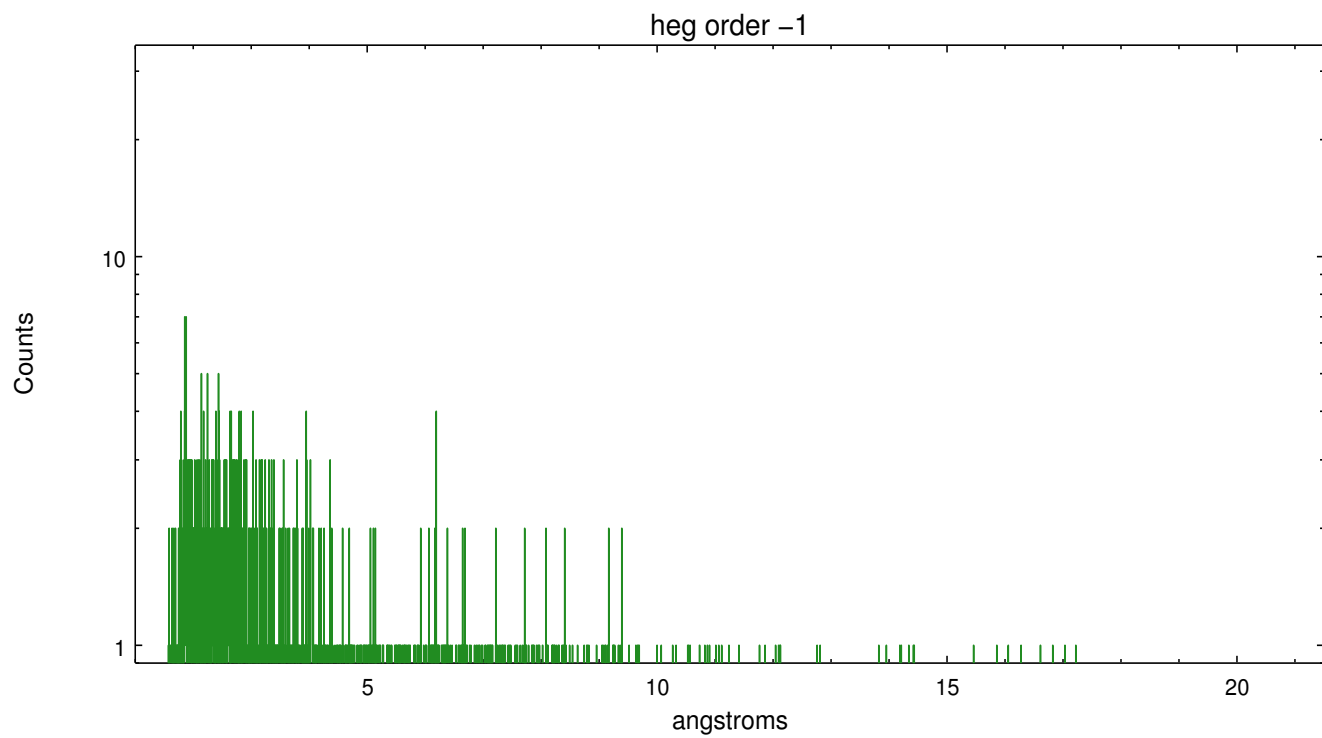
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	236	320	1553	5694	1307	206	195

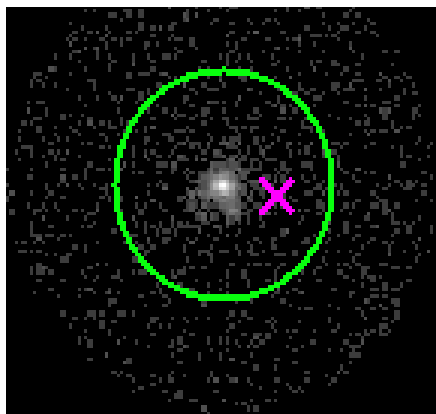




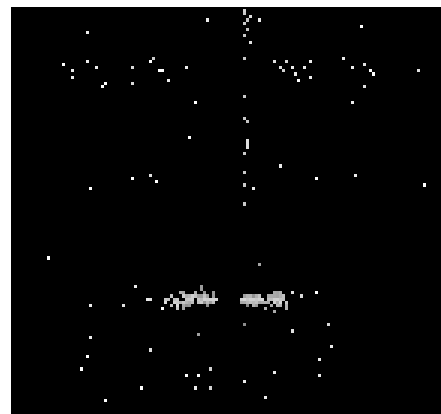
### 3.2 MEG Arm



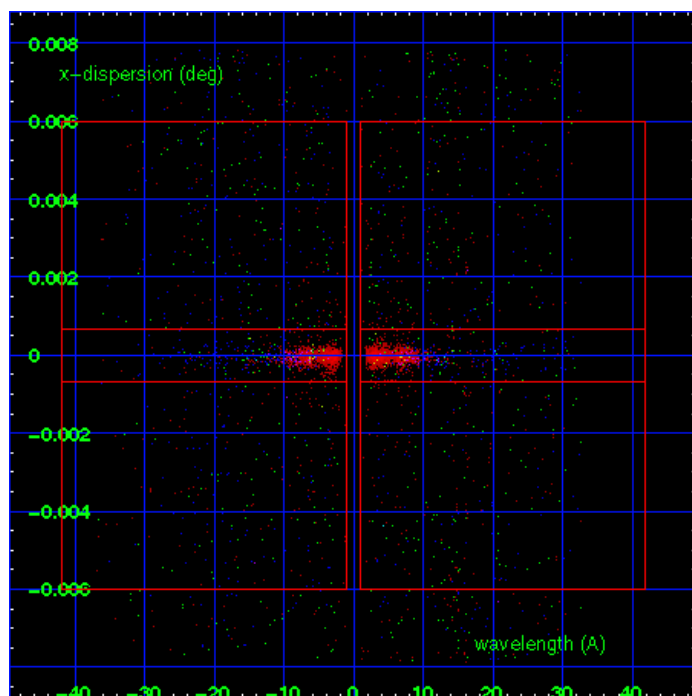
MEG Order Sort 123



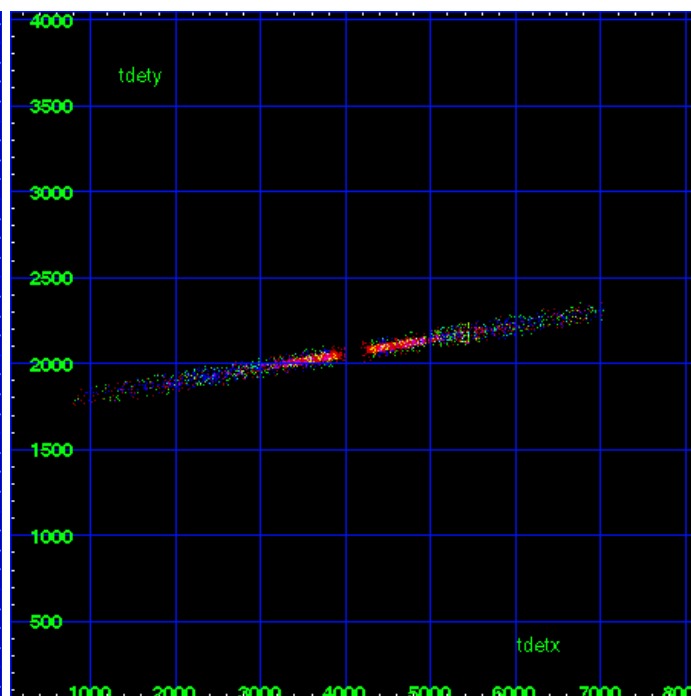
MEG Zero Order



MEG Order Sort ALL

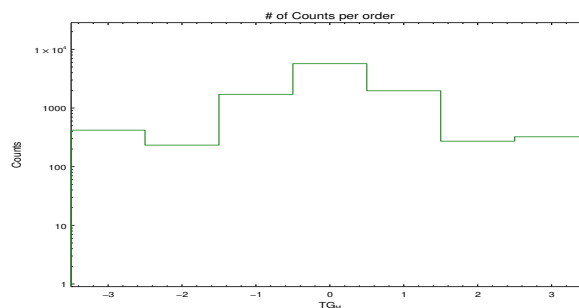


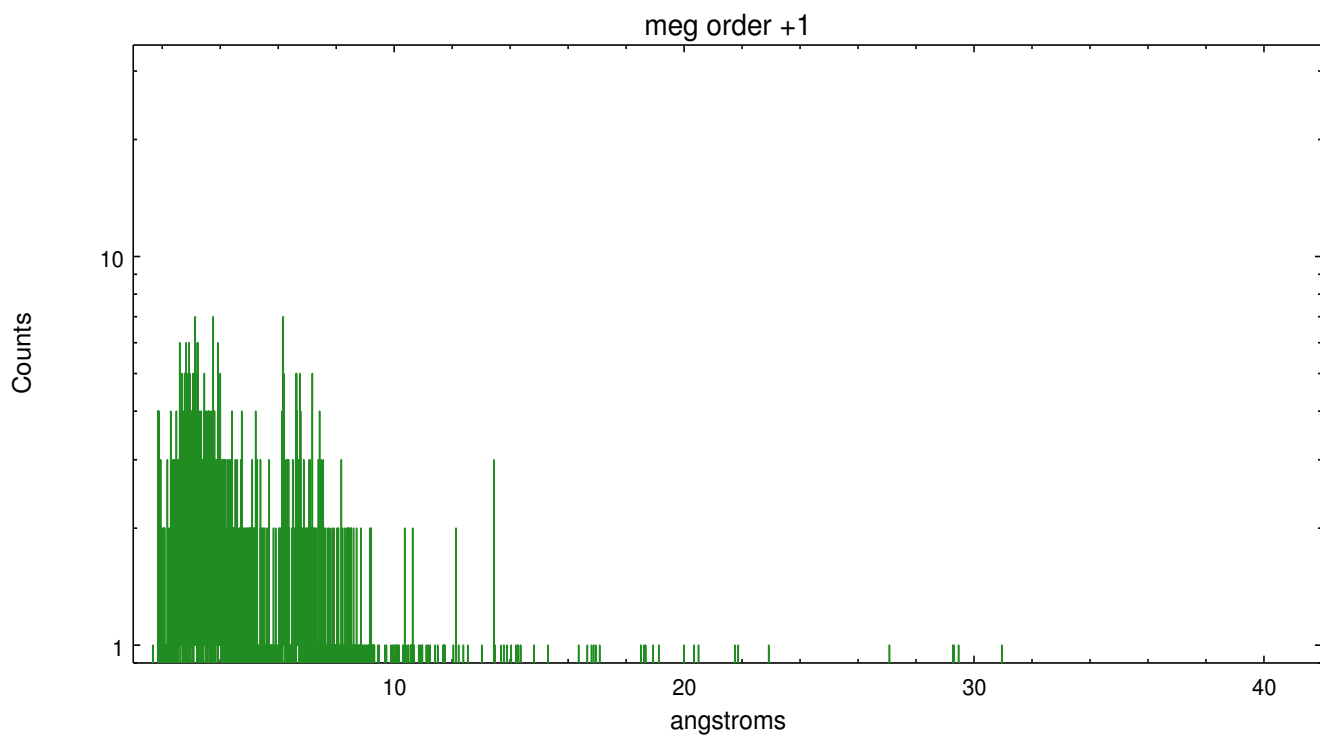
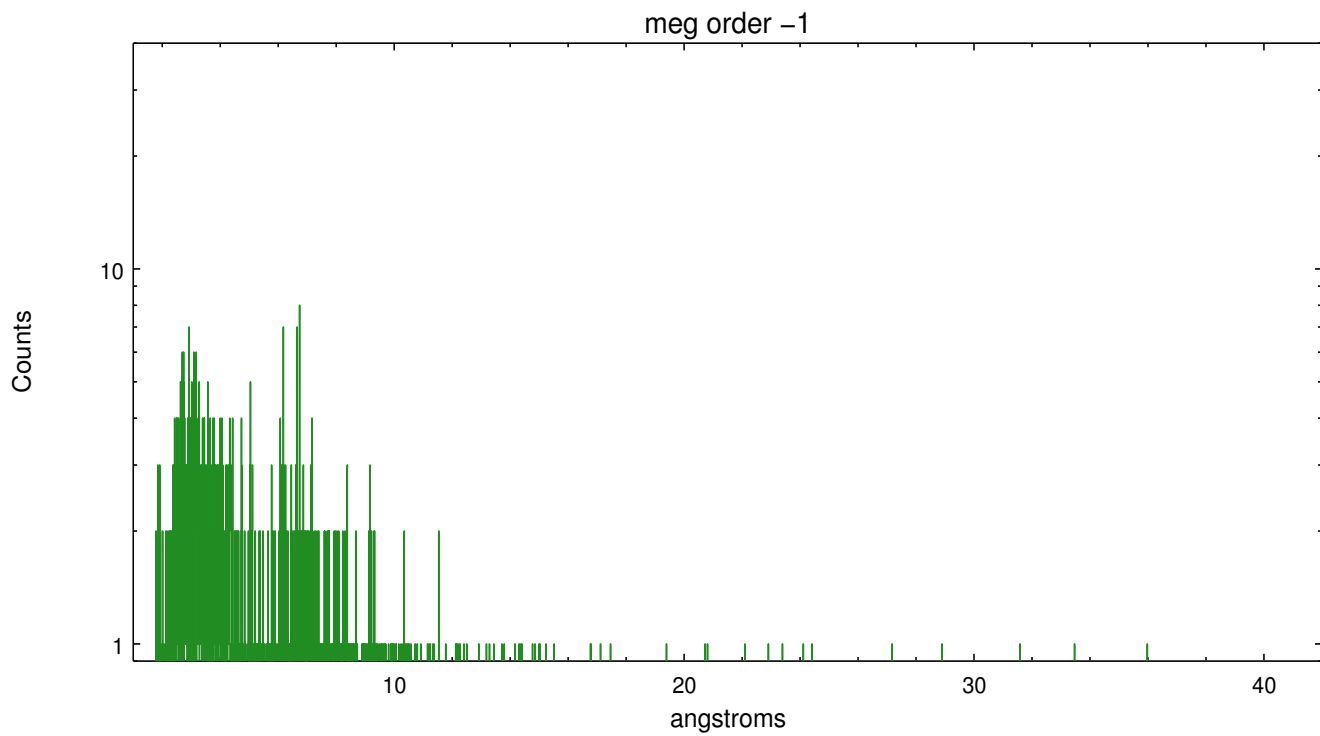
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	419	233	1709	5694	1966	272	323





# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.06.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	22.7175

## A.2 Comments