

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 12118 - L2 Version 2  
Chandra X-Ray Center

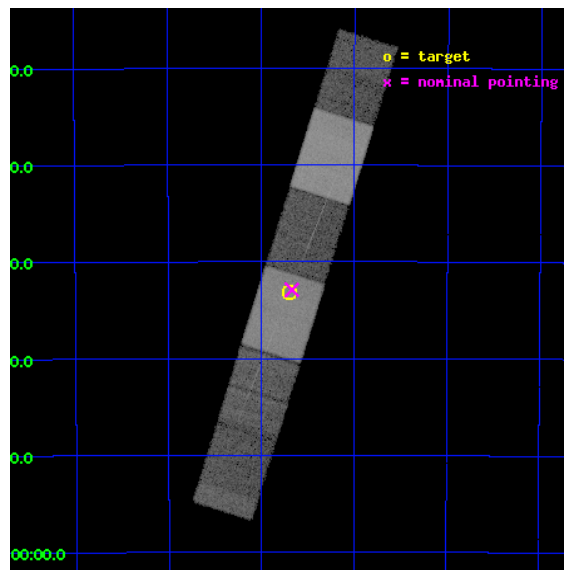
L2 Processing Date : Jul 3 2012

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# 1 Front

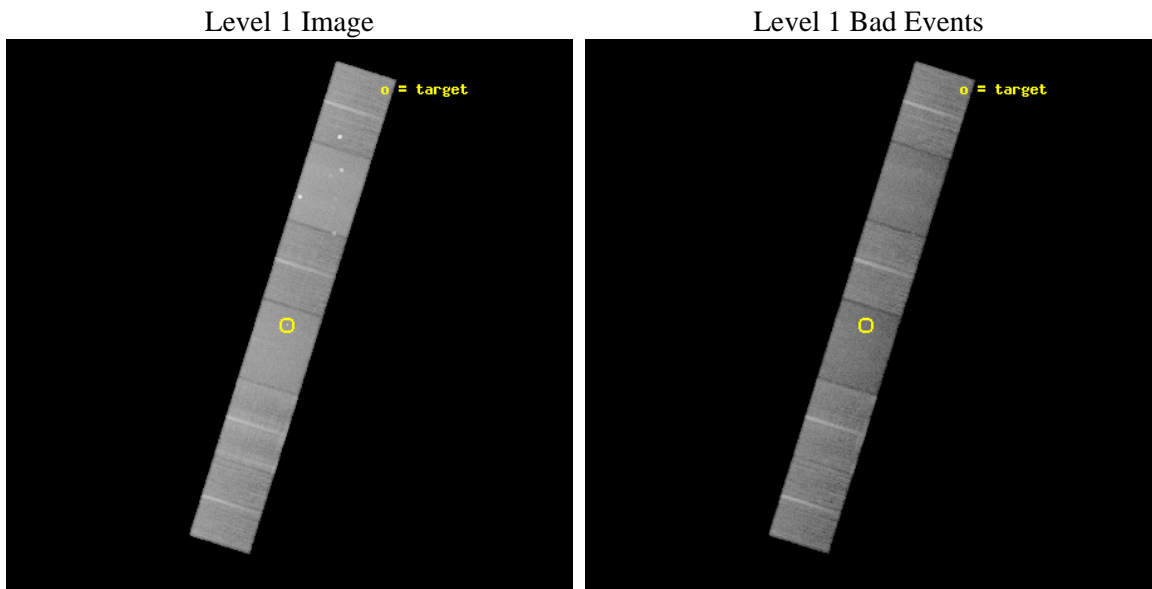
seq_num	702323	Sequence number
obs_id	12118	Observation id
title	The First Test of General Relativity in a Strong Gravitational Field	&#160
observer	Dr. Norbert Schartel	Principal investigator
object	1H0707-495	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	107.172917	Observer's specified target RA [deg]
dec_targ	-49.551611	Observer's specified target Dec [deg]
ra_nom	107.16727611695	Nominal RA [deg]
dec_nom	-49.548434820139	Nominal Dec [deg]
roll_nom	107.37805386608	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30047.140115738	Sum of GTIs [s]
livetime	29561.852741139	Livetime [s]
ontime4	30047.181155741	Sum of GTIs [s]
ontime5	30047.099075735	Sum of GTIs [s]
ontime6	30047.058035731	Sum of GTIs [s]
ontime7	30047.140115738	Sum of GTIs [s]
ontime8	30047.016995728	Sum of GTIs [s]
ontime9	30046.975955725	Sum of GTIs [s]
l2events	283135	Number of level 2 events



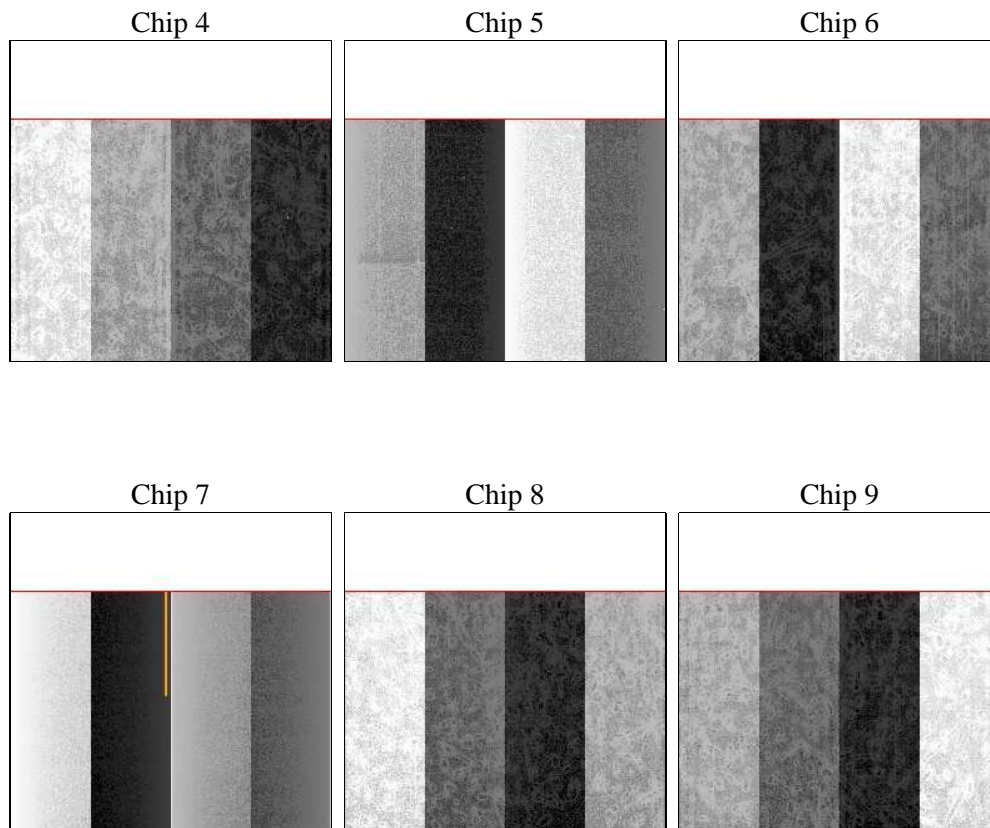
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	30047.140115738	Sum of GTIs [s]
caldbver	4.5.0	&#160	ontime4	30047.181155741	Sum of GTIs [s]
date	2012-07-03T08:56:36	Date and time of file creation	ontime5	30047.099075735	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	30047.058035731	Sum of GTIs [s]
			ontime7	30047.140115738	Sum of GTIs [s]
			ontime8	30047.016995728	Sum of GTIs [s]
			ontime9	30046.975955725	Sum of GTIs [s]
			l1events	1209188	Number of level 1 events

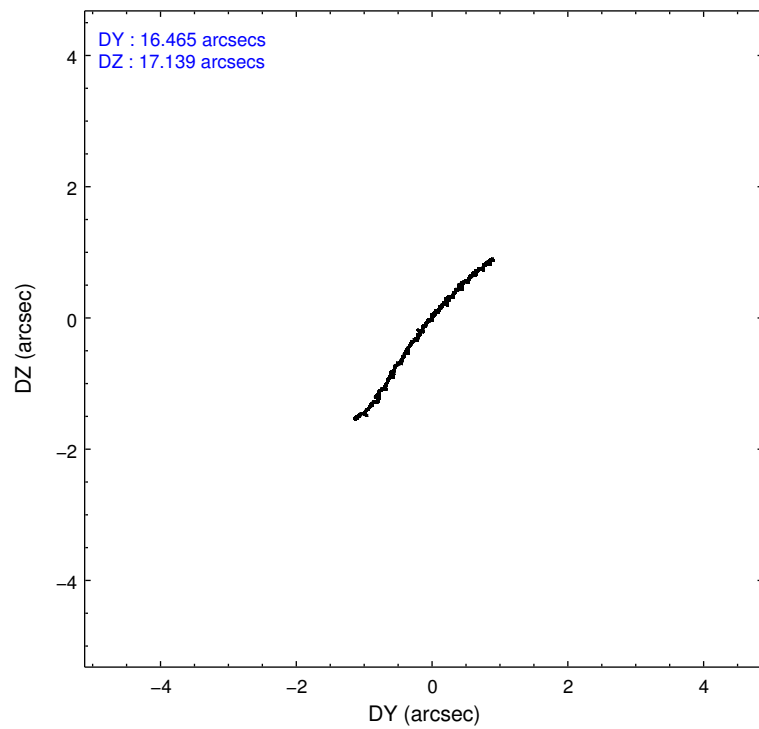
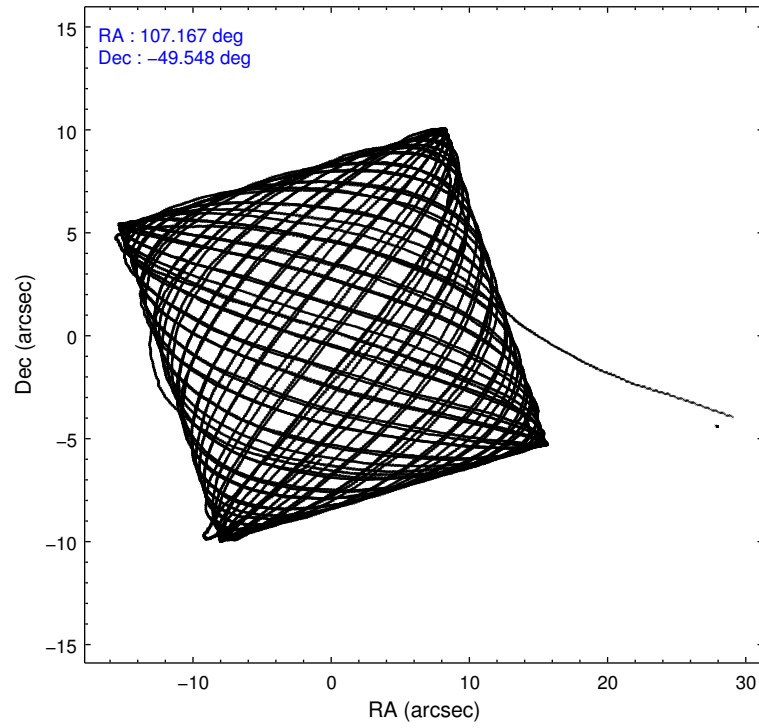
### 2.1.4 Events

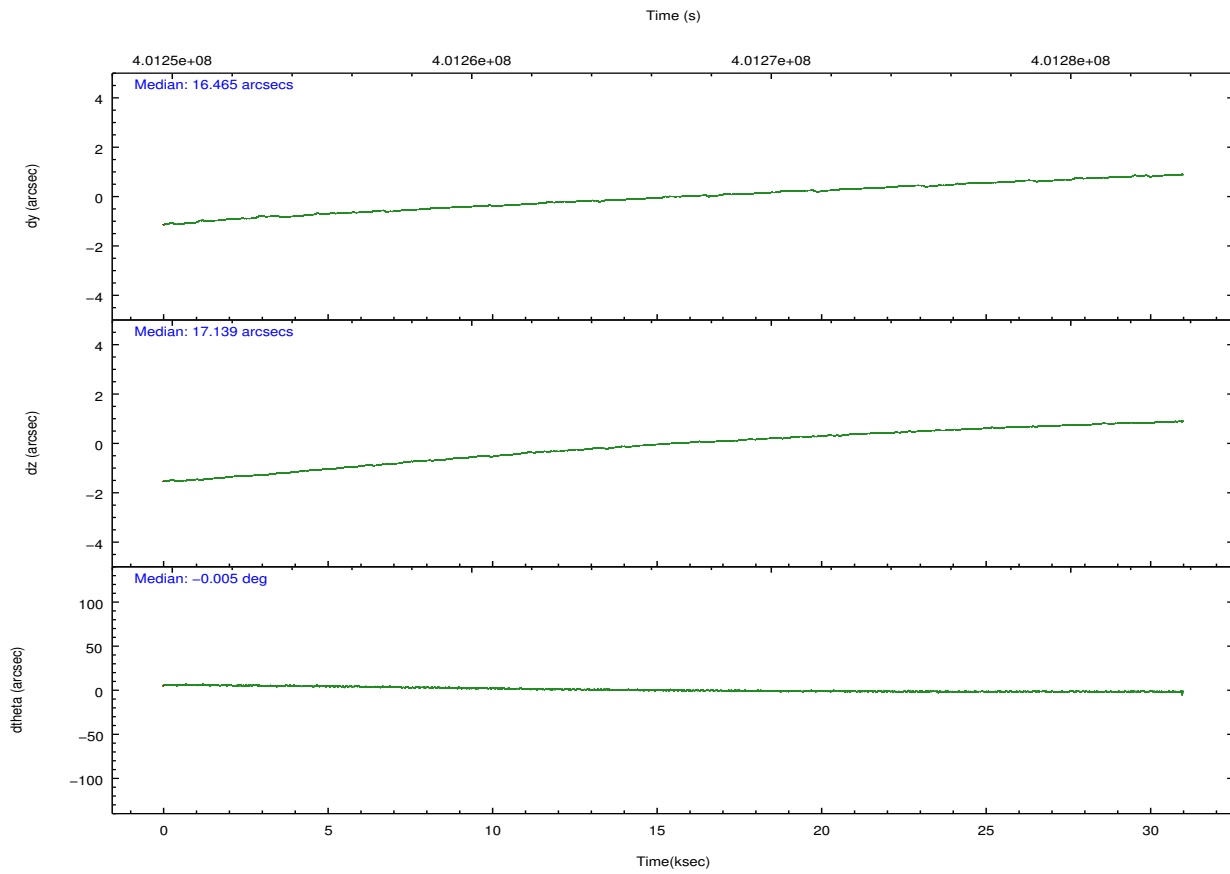
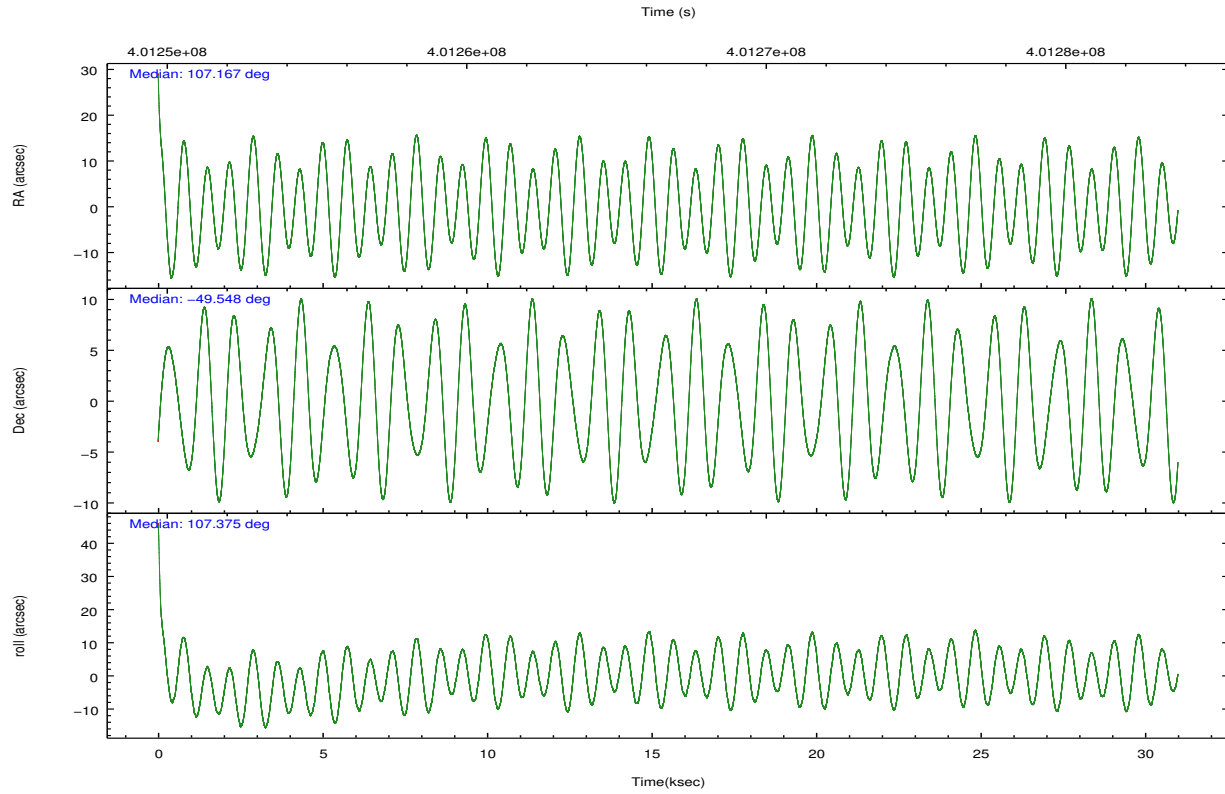
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	196545	256857	170106	203316	218060	164304	grade 0 events	16862	17903	6940	9050	18392	7214
rejected events	166449	125462	150476	109515	158264	144258		8%	6%	4%	4%	8%	4%
rejected %	84%	48%	88%	53%	72%	87%	grade 1 events	167	624	86	250	163	80
								0%	0%	0%	0%	0%	0%
							grade 2 events	5223	36820	4333	19600	13632	4354
								2%	14%	2%	9%	6%	2%
							grade 3 events	2264	5941	2196	8733	6376	2241
								1%	2%	1%	4%	2%	1%
							grade 4 events	2173	5821	2093	8495	6030	2101
								1%	2%	1%	4%	2%	1%
							grade 5 events	7326	20137	7381	21132	10639	7962
								3%	7%	4%	10%	4%	4%
							grade 6 events	3577	64919	4069	47926	15371	4140
								1%	25%	2%	23%	7%	2%
							grade 7 events	158953	104692	143008	88130	147457	136212
								80%	40%	84%	43%	67%	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	107.198688	107.1672761169502	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-49.566674	-49.54843482013857	Subarray start row	1	1
[deg] Pointing Roll	107.245325	107.3780538660829	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)	401252212.184000	401250760.01035			
Observation start date	2010-09-19T02:55:46	2010-09-19T02:32:40			
[s] Observation end time (MET)	401282212.184000	401283148.98701			
Observation end date	2010-09-19T11:15:46	2010-09-19T11:32:28			
Read mode	TIMED	TIMED			

## 2.3 Aspect





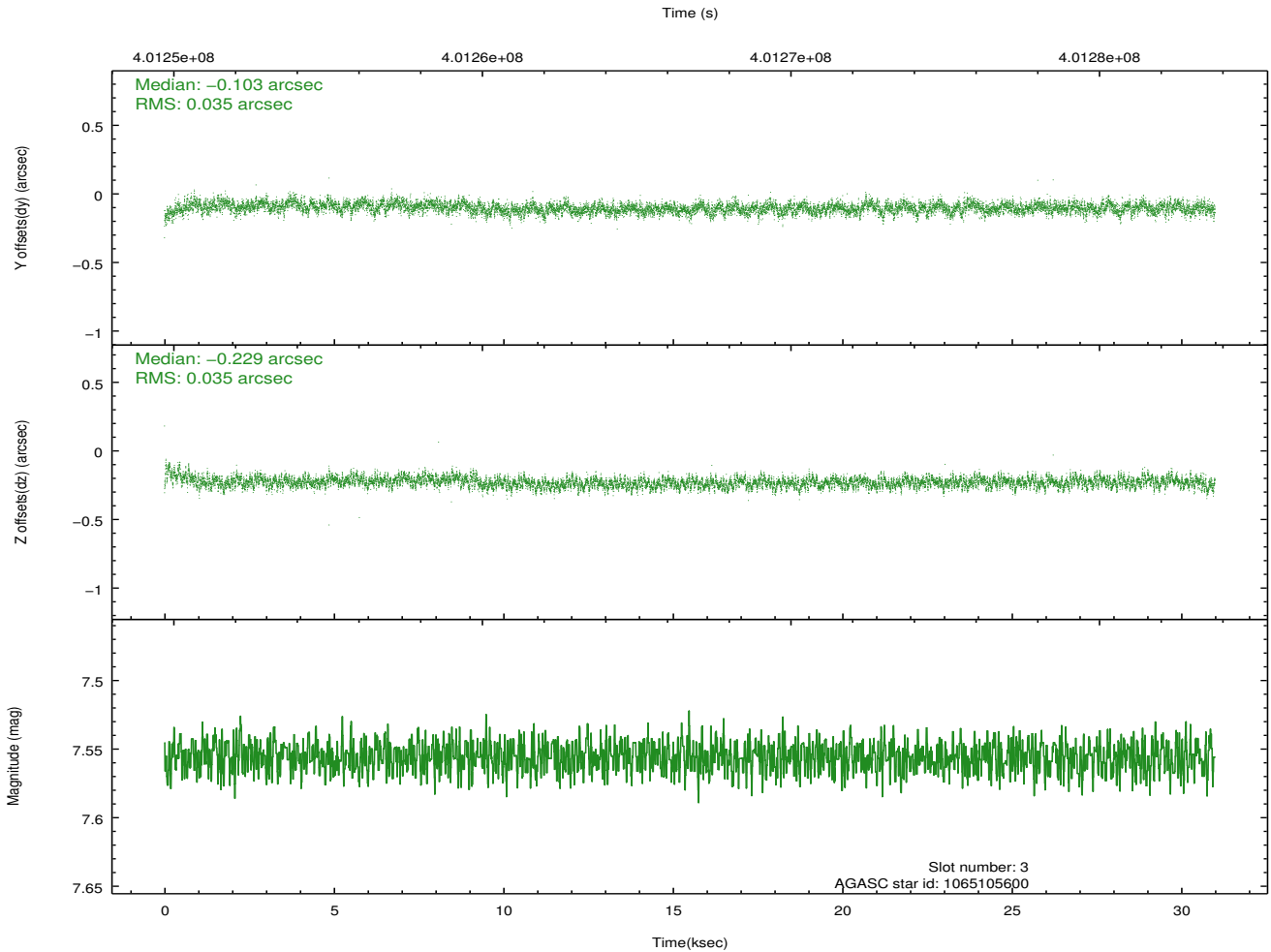
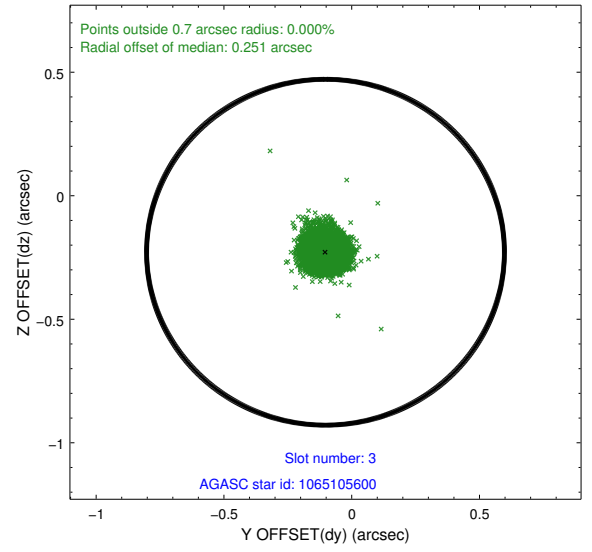
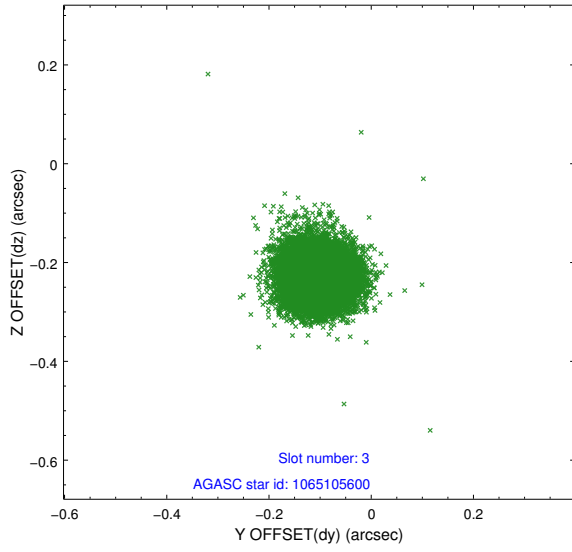
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.88	7560	-0.117	-0.044	0.026	0.054	0.000000	0.000000	-769.32	-1800.58
1	FID	ACIS-S-4	6.96	7560	0.204	0.070	0.012	0.022	0.000000	0.000000	2144.23	107.98
2	FID	ACIS-S-5	6.99	7559	-0.116	-0.018	0.020	0.054	0.000000	0.000000	-1822.10	101.59
3	GUIDE	1065105600	7.56	15119	-0.103	-0.229	0.051	0.085	106.289320	-49.073997	2317.37	1526.17
4	GUIDE	1065231344	7.46	15052	0.036	0.019	0.064	0.101	108.108874	-49.825503	-1528.37	-1738.64
5	GUIDE	1065238920	7.32	15120	-0.058	0.144	0.068	0.108	108.105033	-49.327001	181.77	-2282.80
6	GUIDE	1065242432	7.84	15116	0.096	-0.086	0.069	0.114	107.094192	-50.100313	-1763.50	799.79
7	GUIDE	1065237304	8.79	15113	0.031	0.153	0.082	0.131	106.981941	-48.917125	2384.78	-202.88

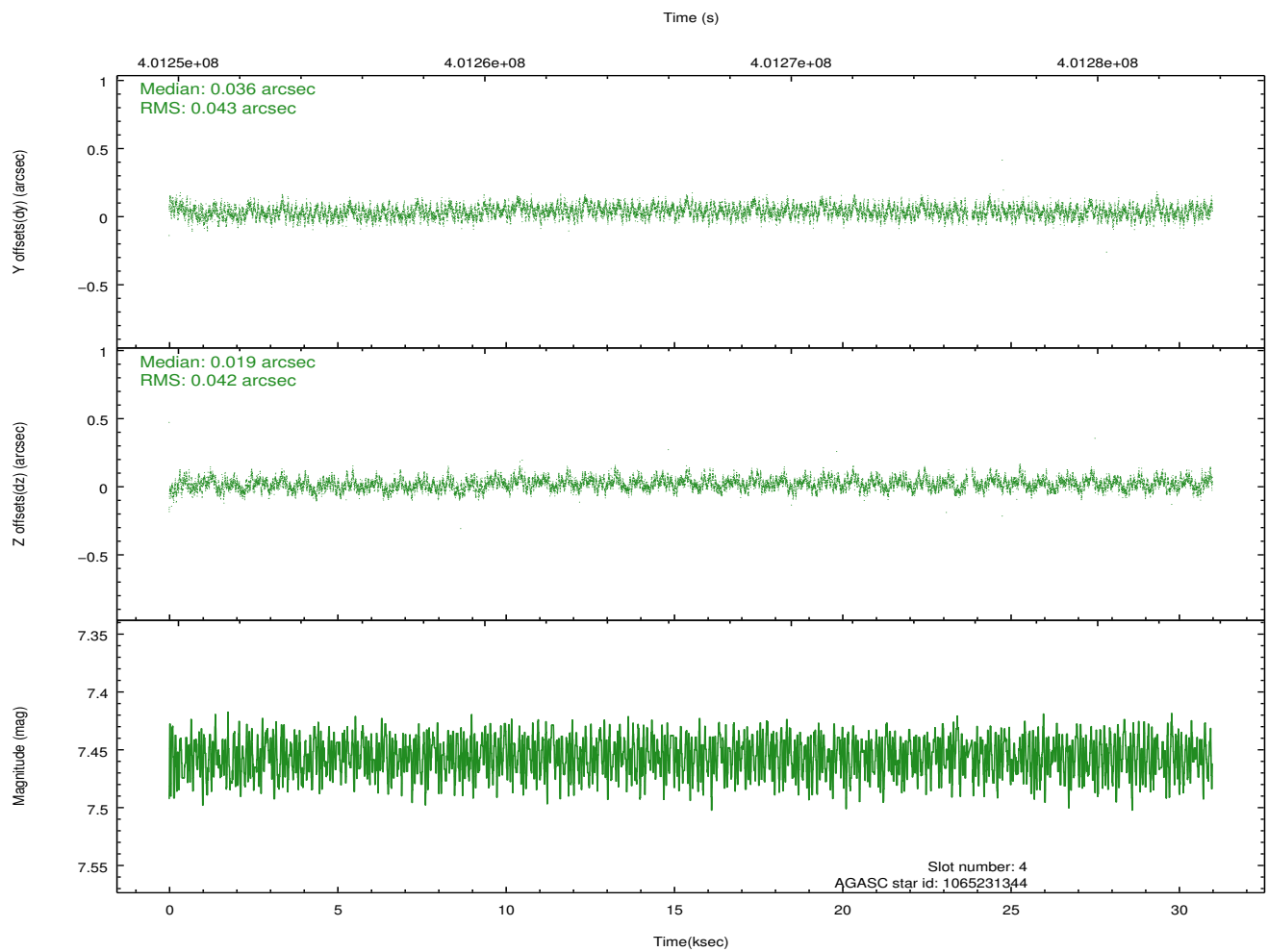
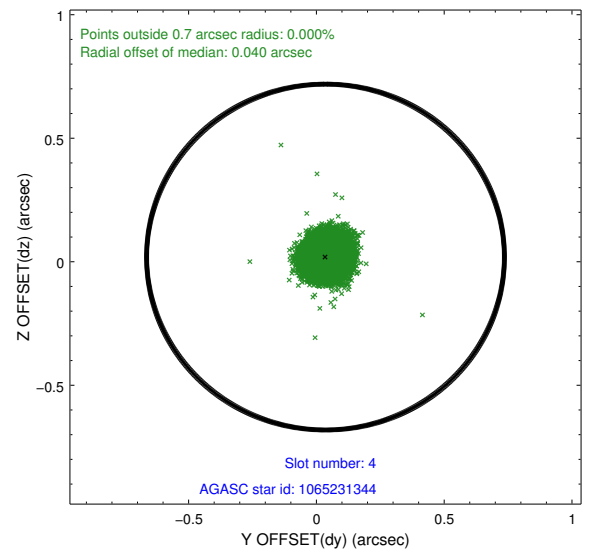
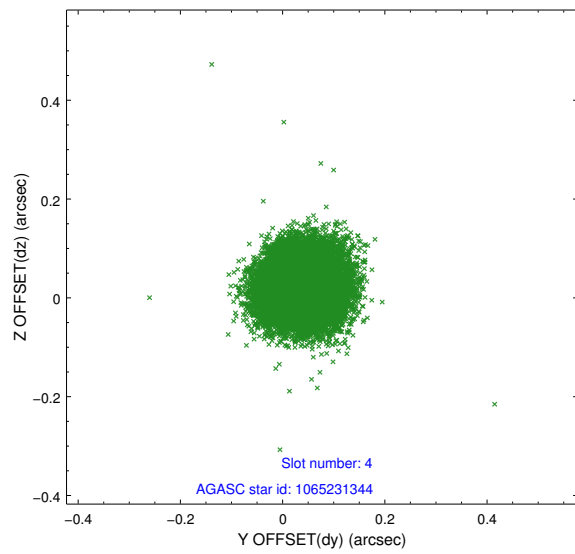
∞

## 2.4 Star Slots

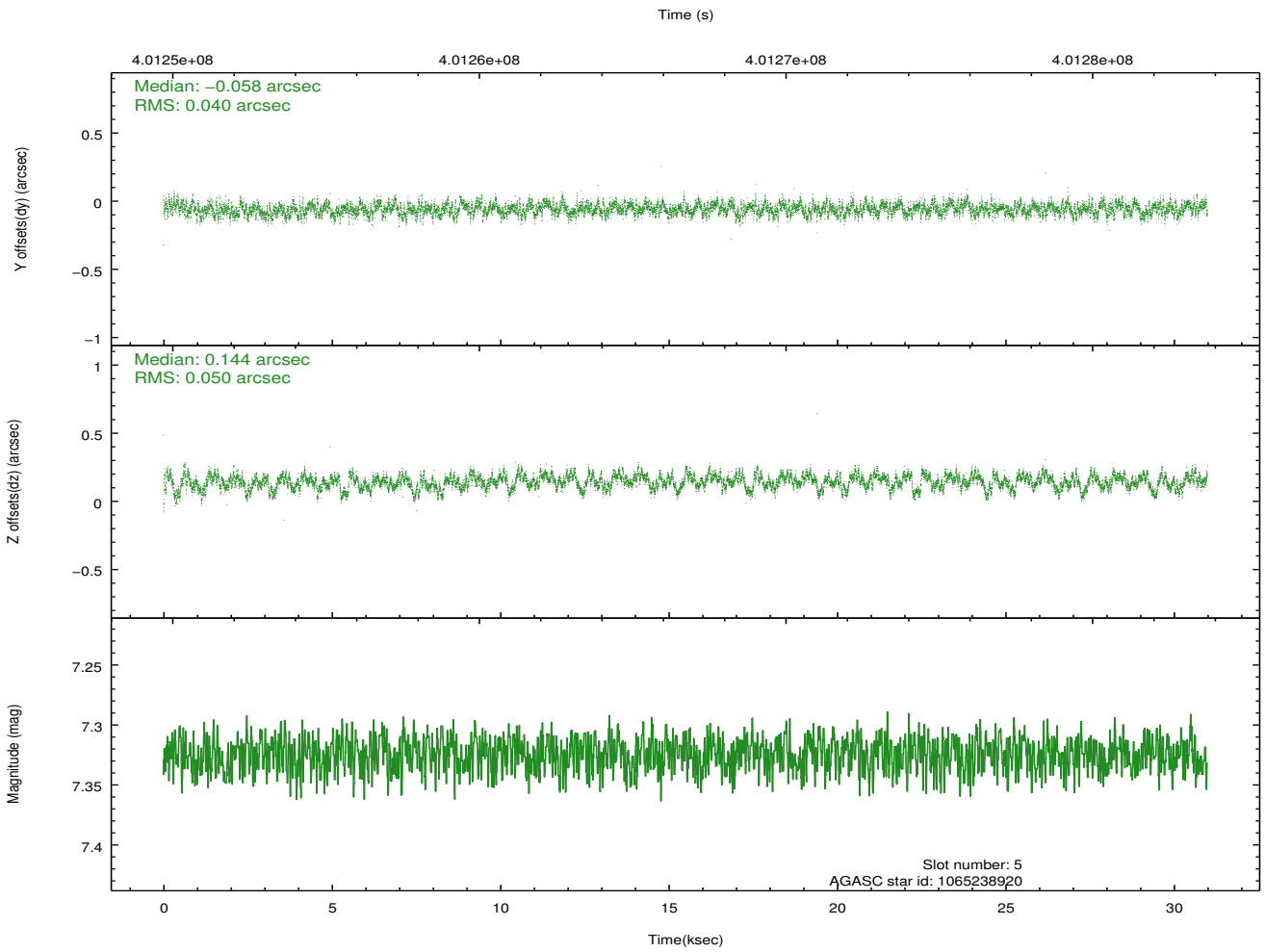
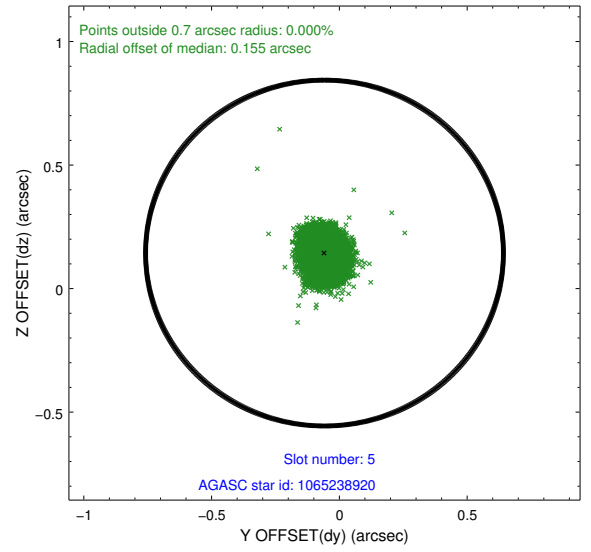
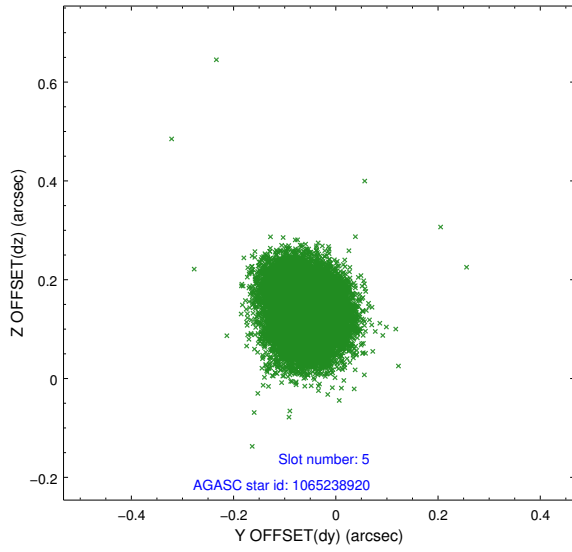
### 2.4.1 Slot 3



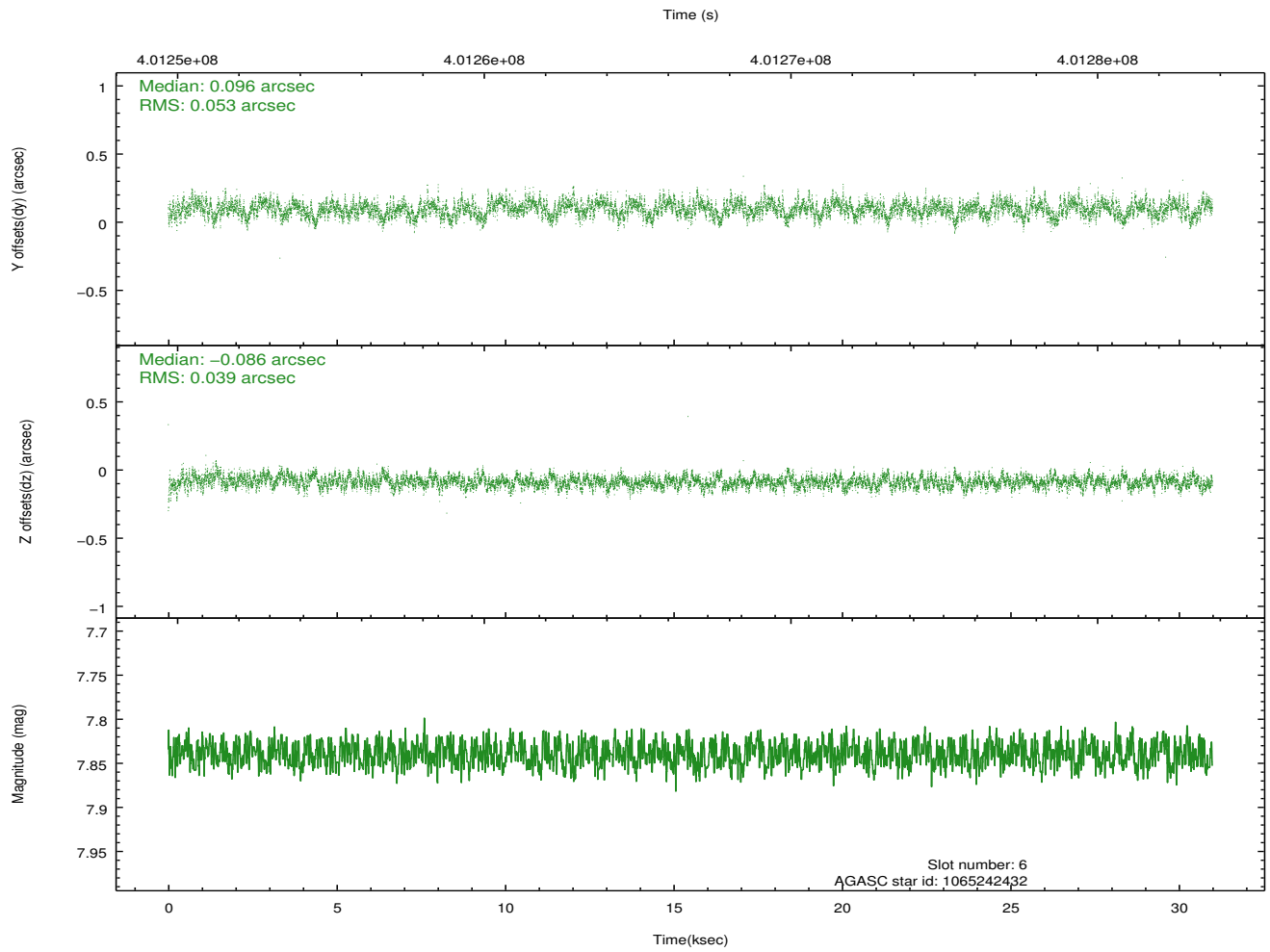
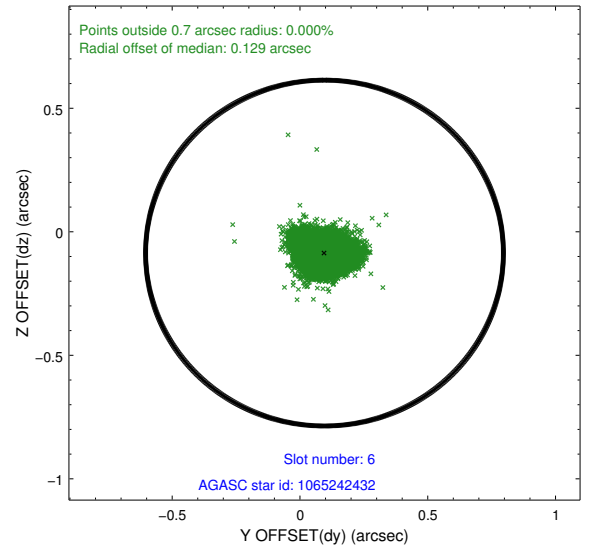
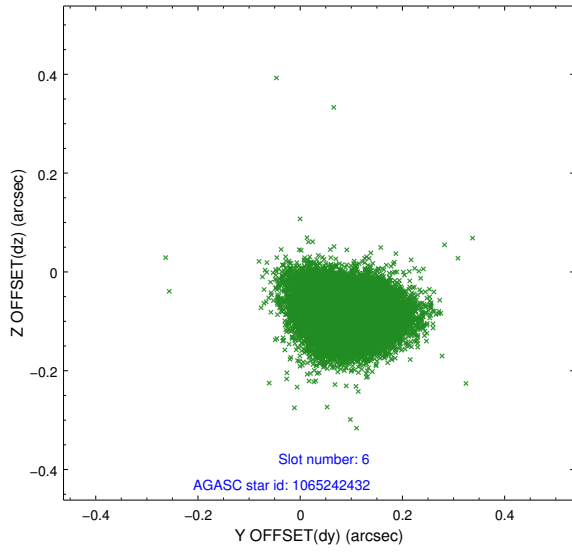
## 2.4.2 Slot 4



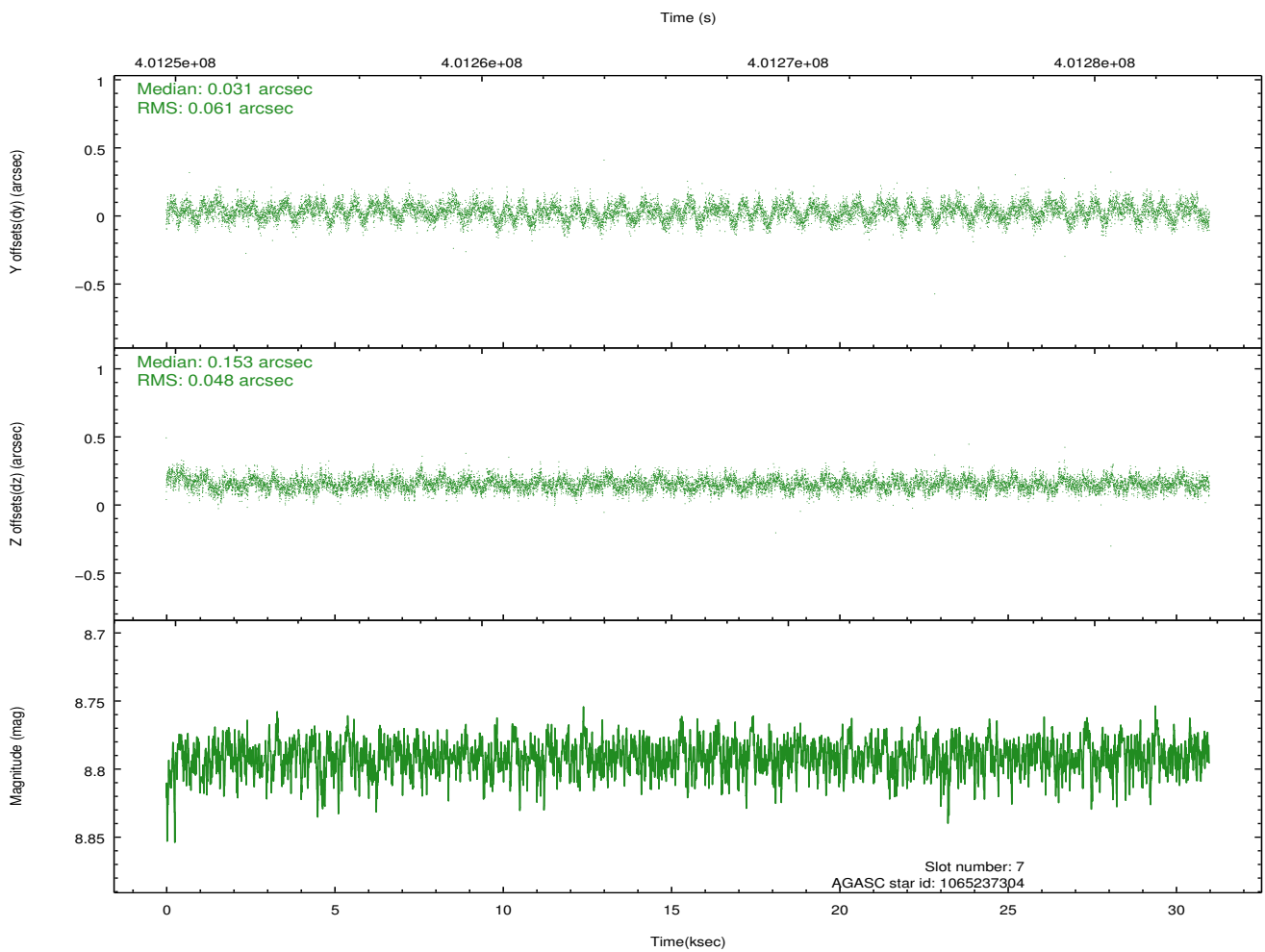
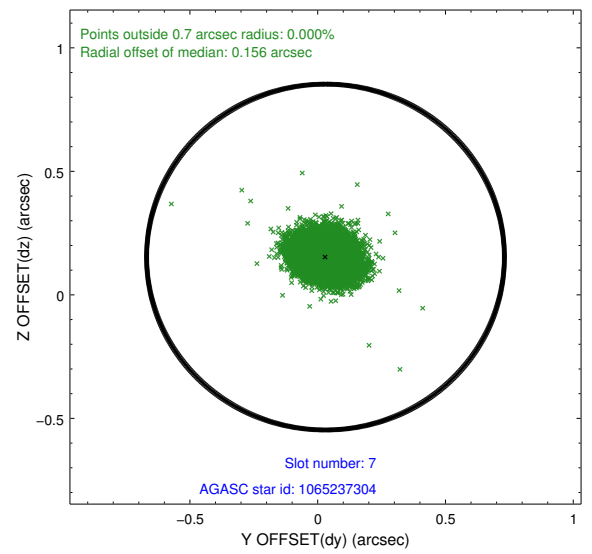
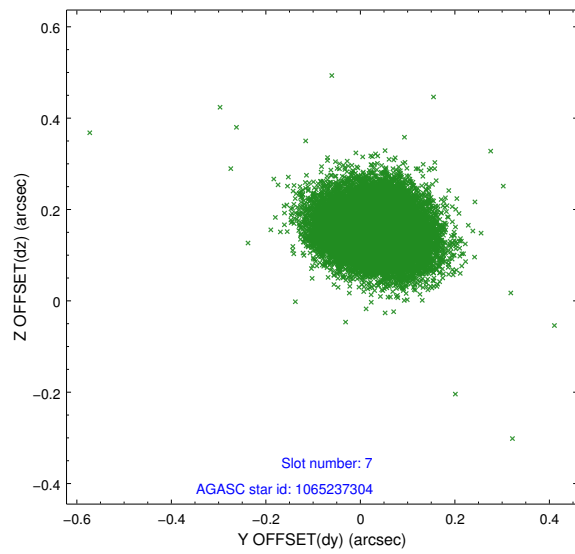
### 2.4.3 Slot 5



### 2.4.4 Slot 6

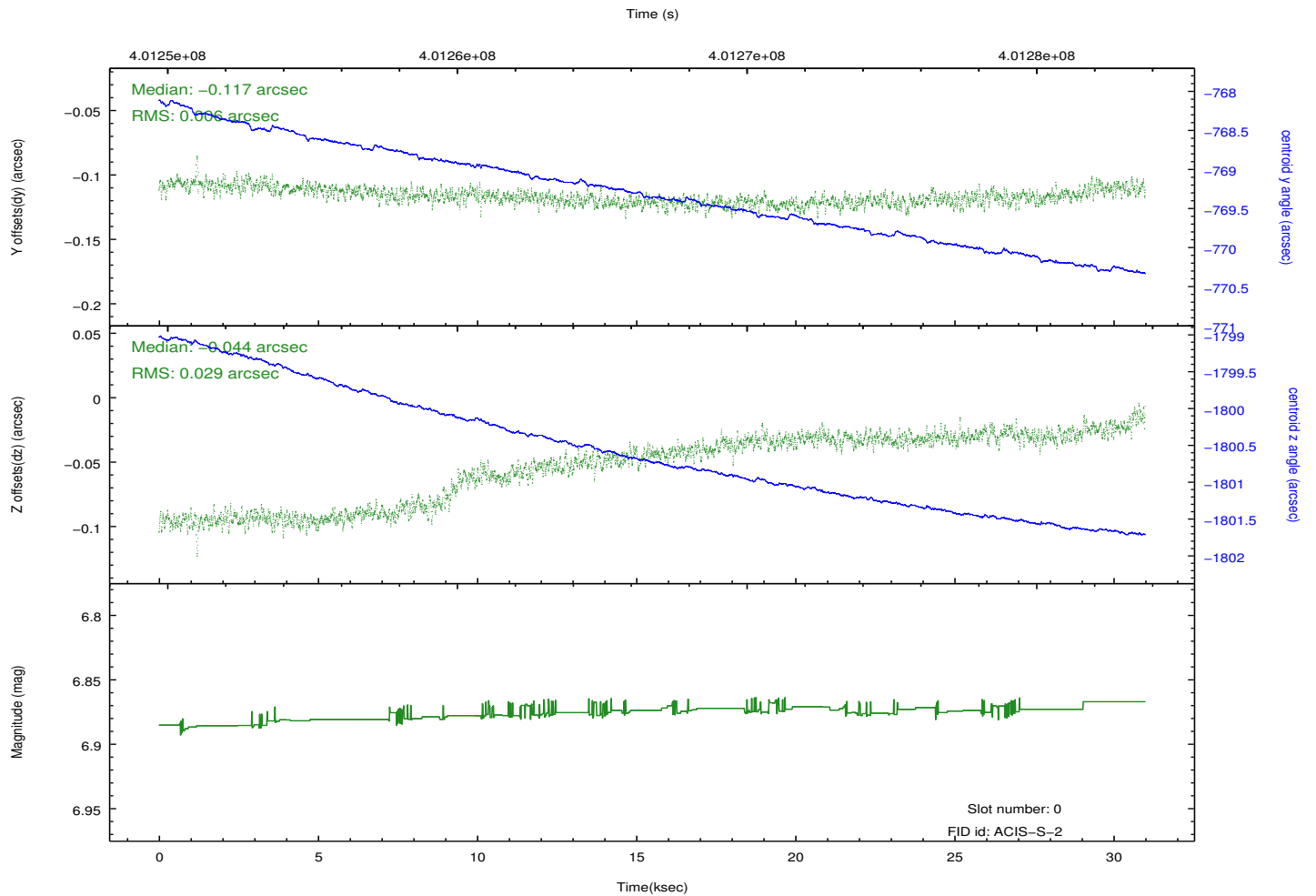
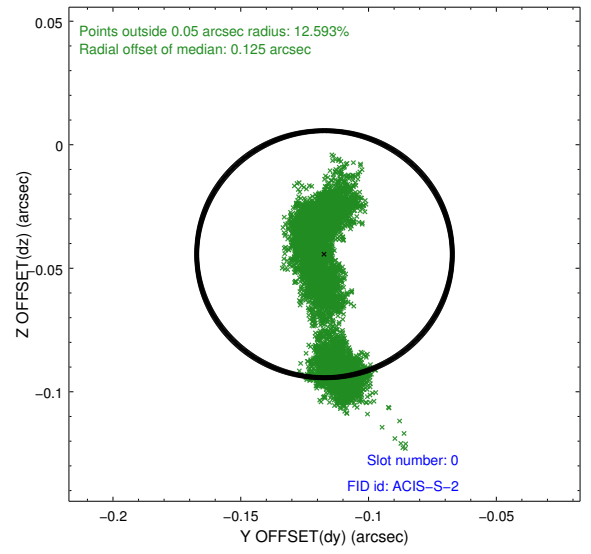
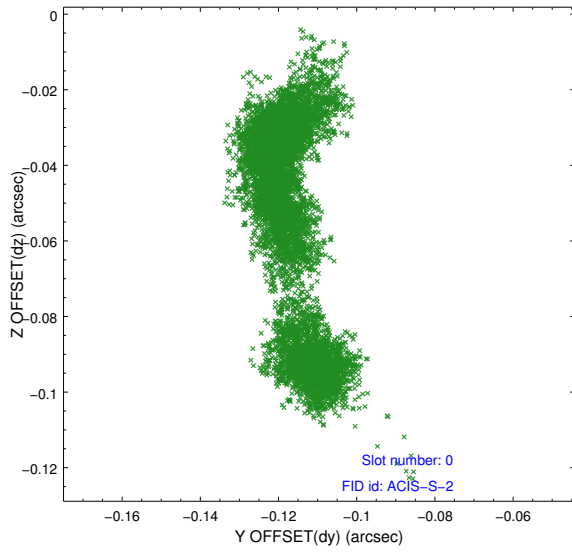


## 2.4.5 Slot 7

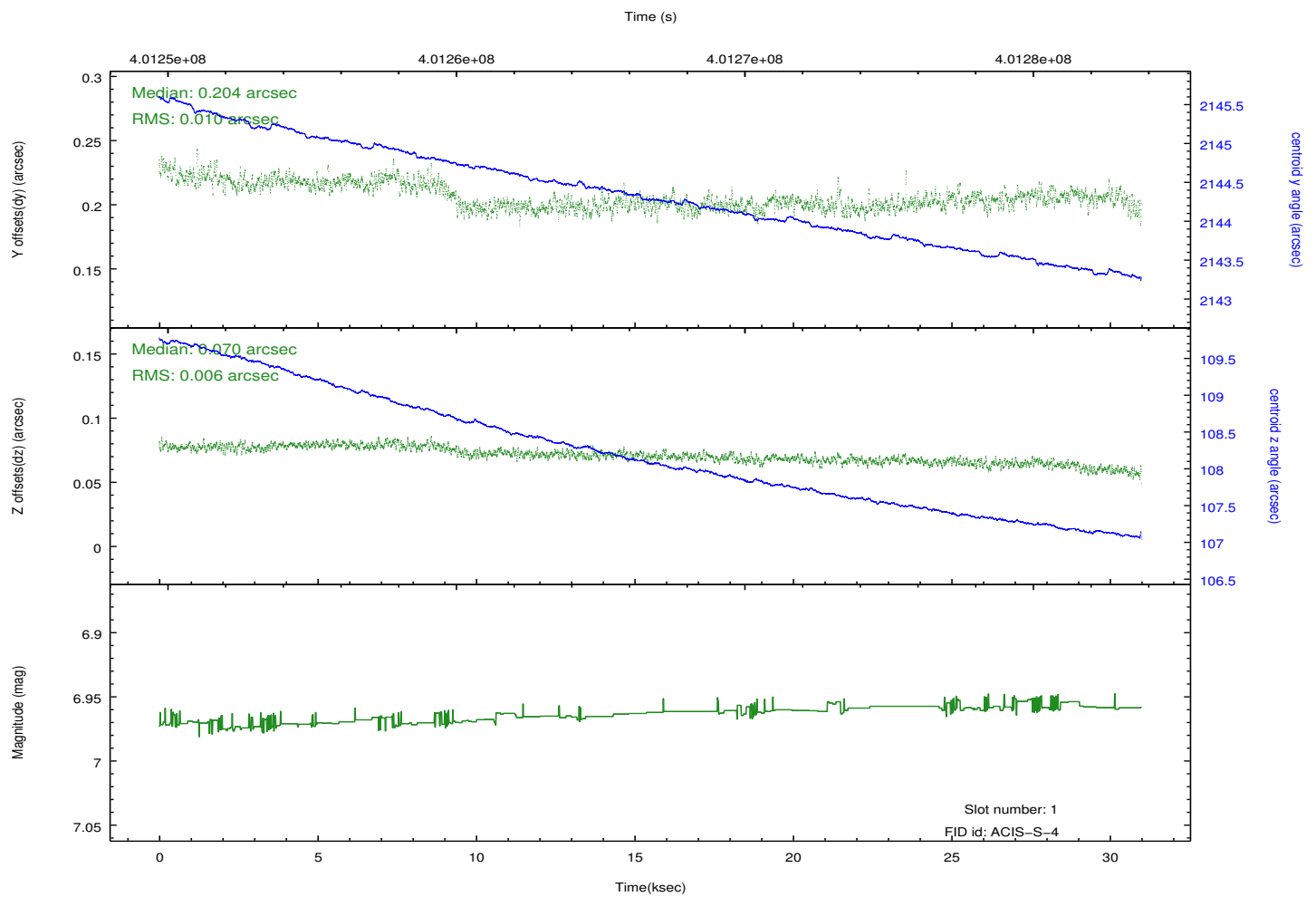
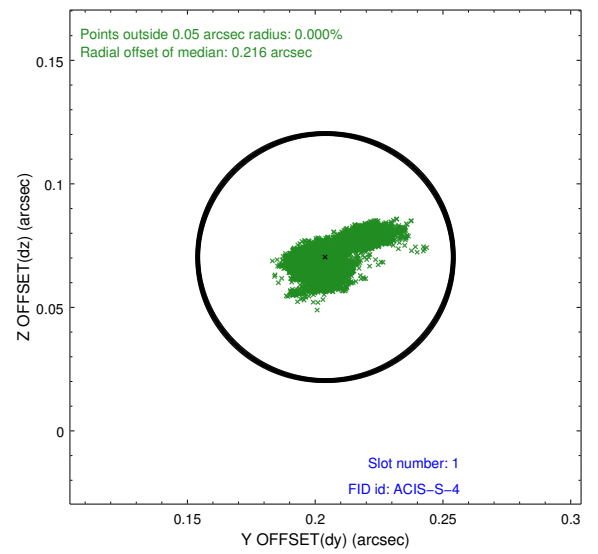
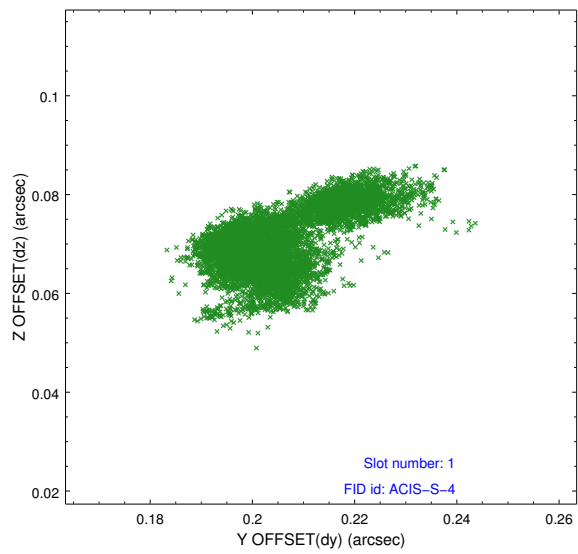


## 2.5 FID Slots

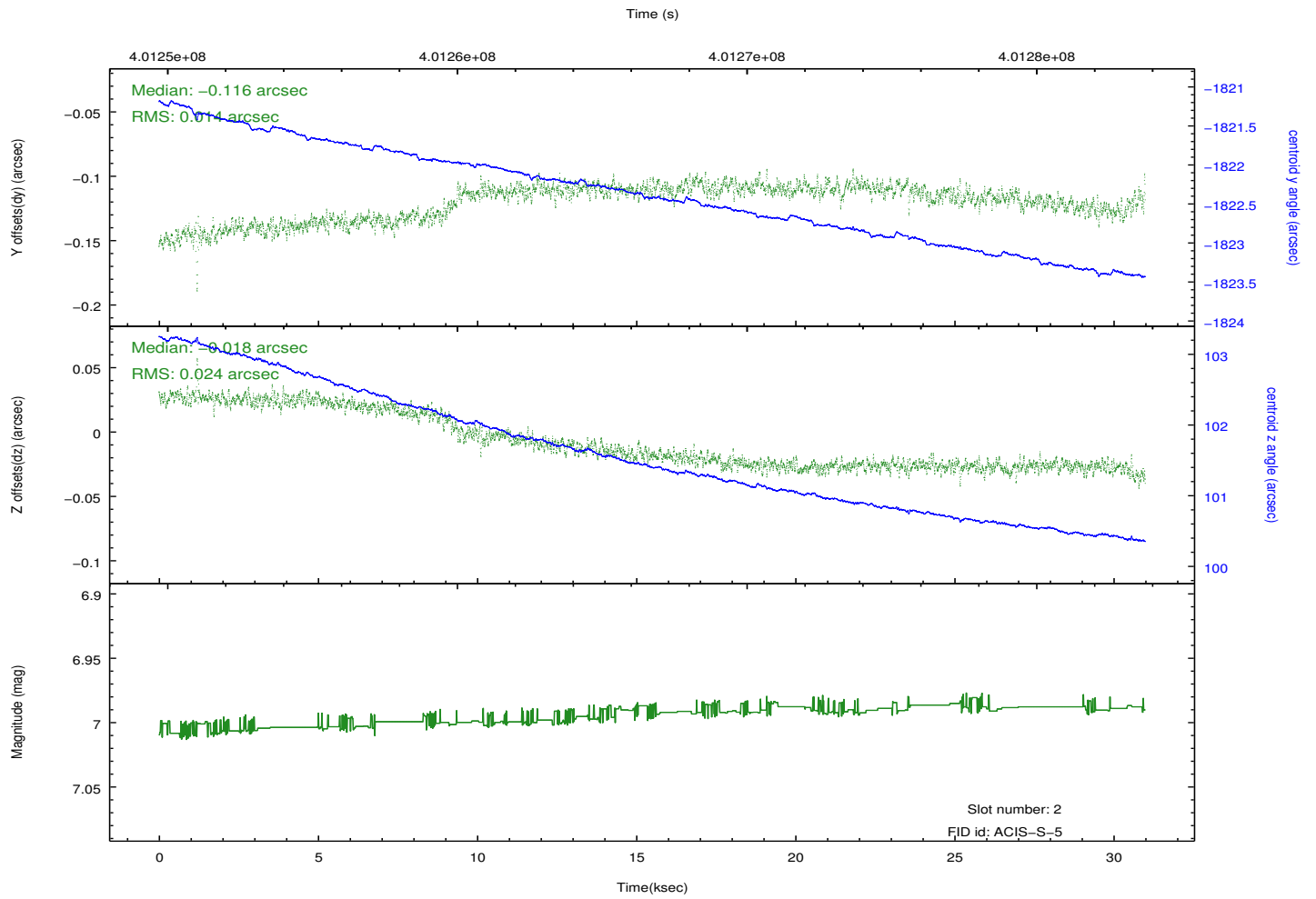
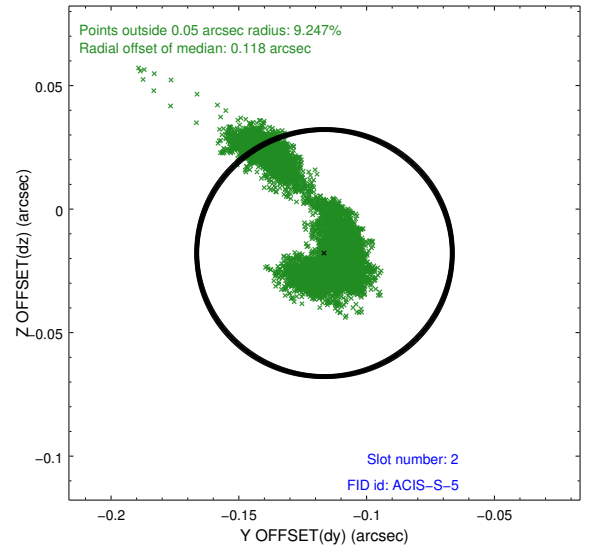
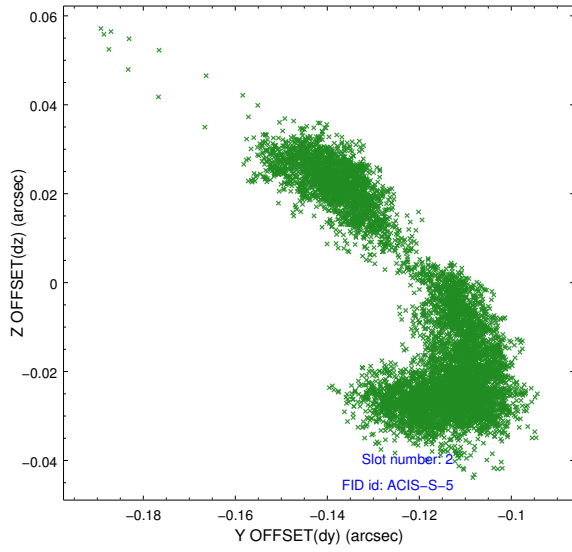
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

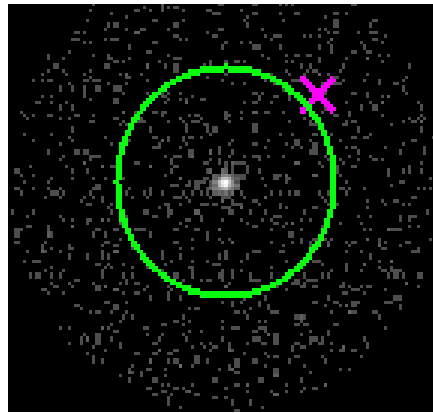


### 3 Gratings

#### 3.1 HEG Arm



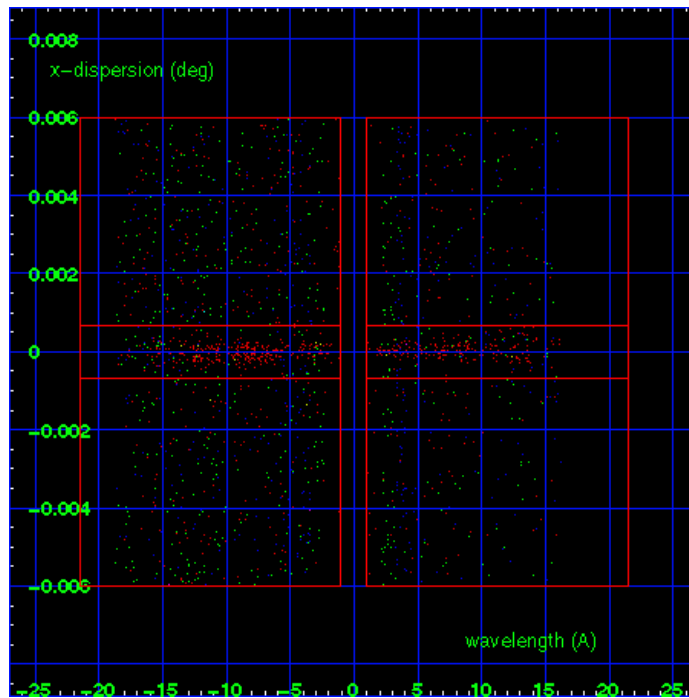
HEG Order Sort 123



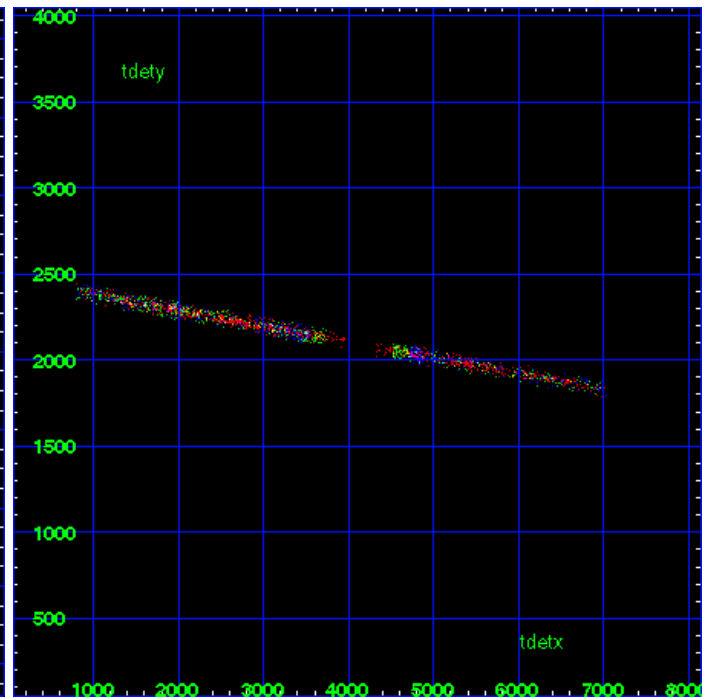
HEG Zero Order



HEG Order Sort ALL

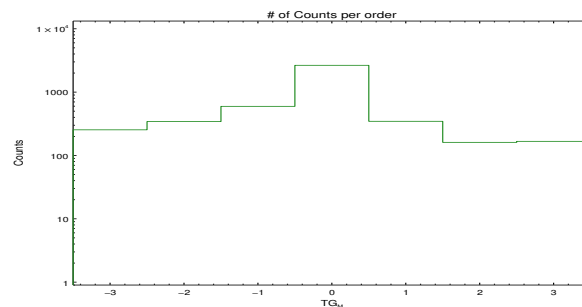


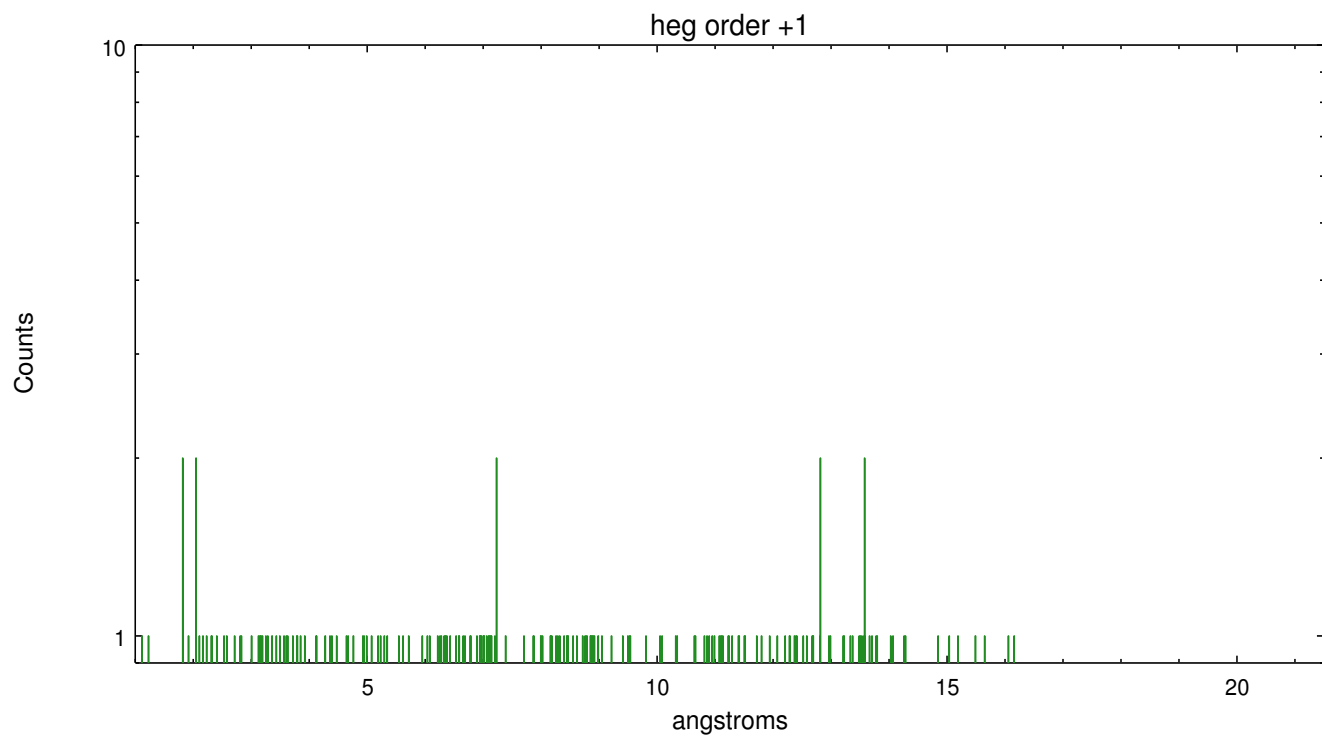
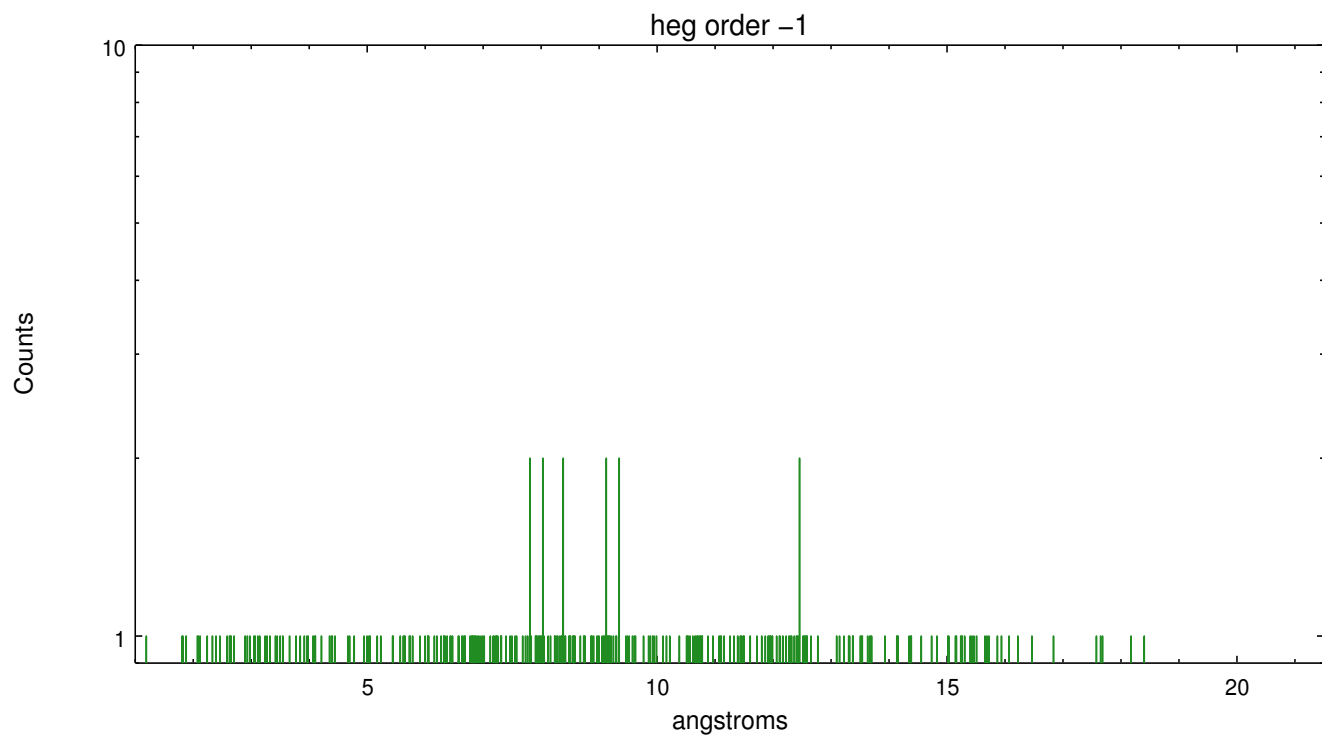
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	254	343	596	2649	346	161	167

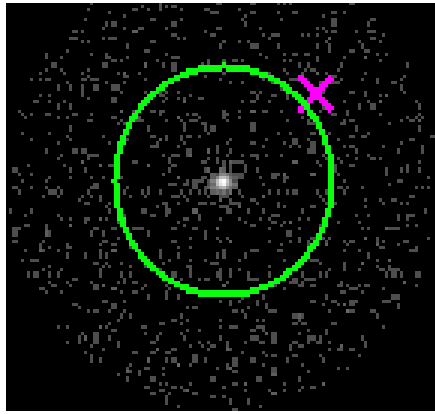




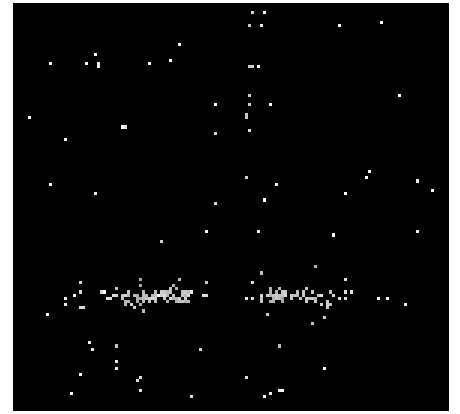
### 3.2 MEG Arm



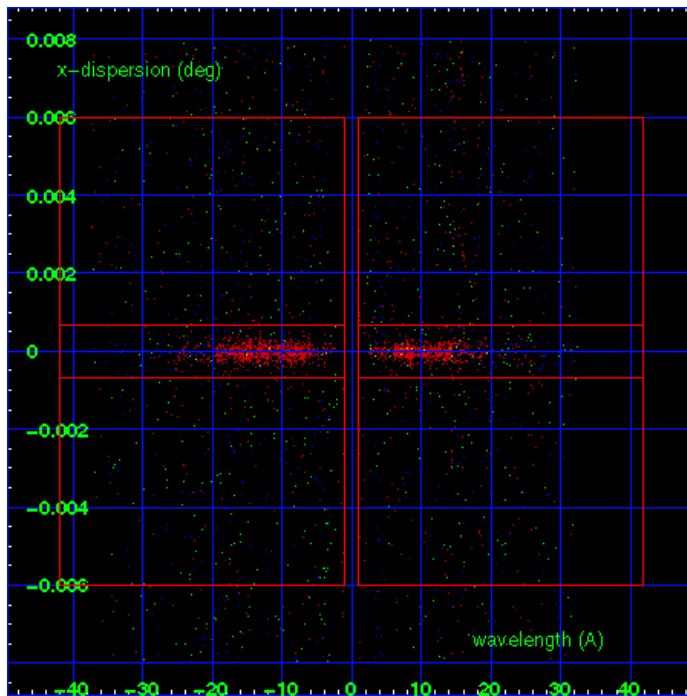
MEG Order Sort 123



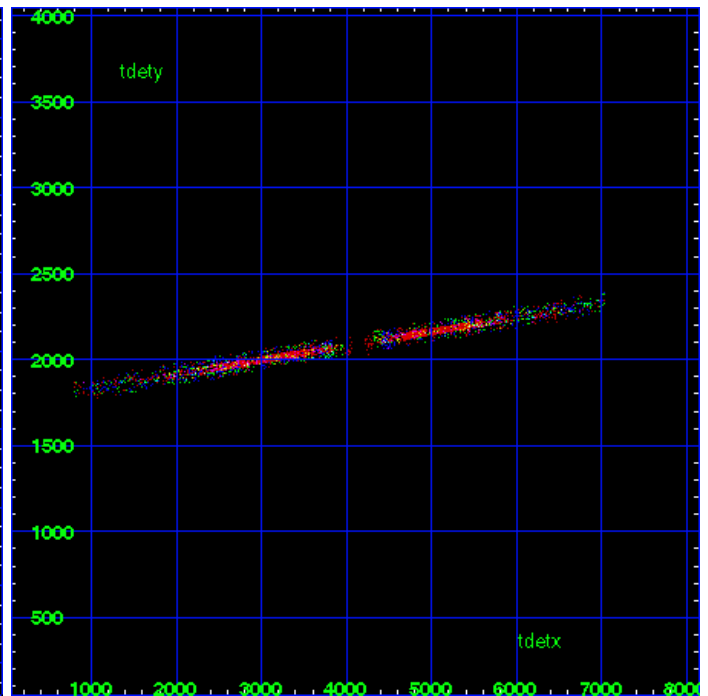
MEG Zero Order



MEG Order Sort ALL

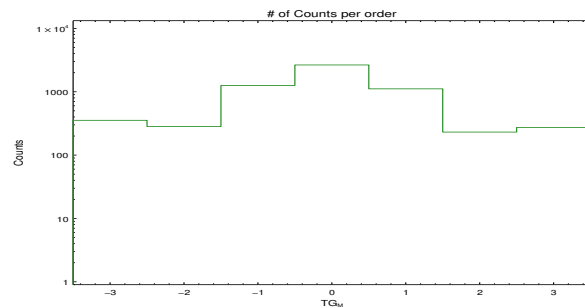


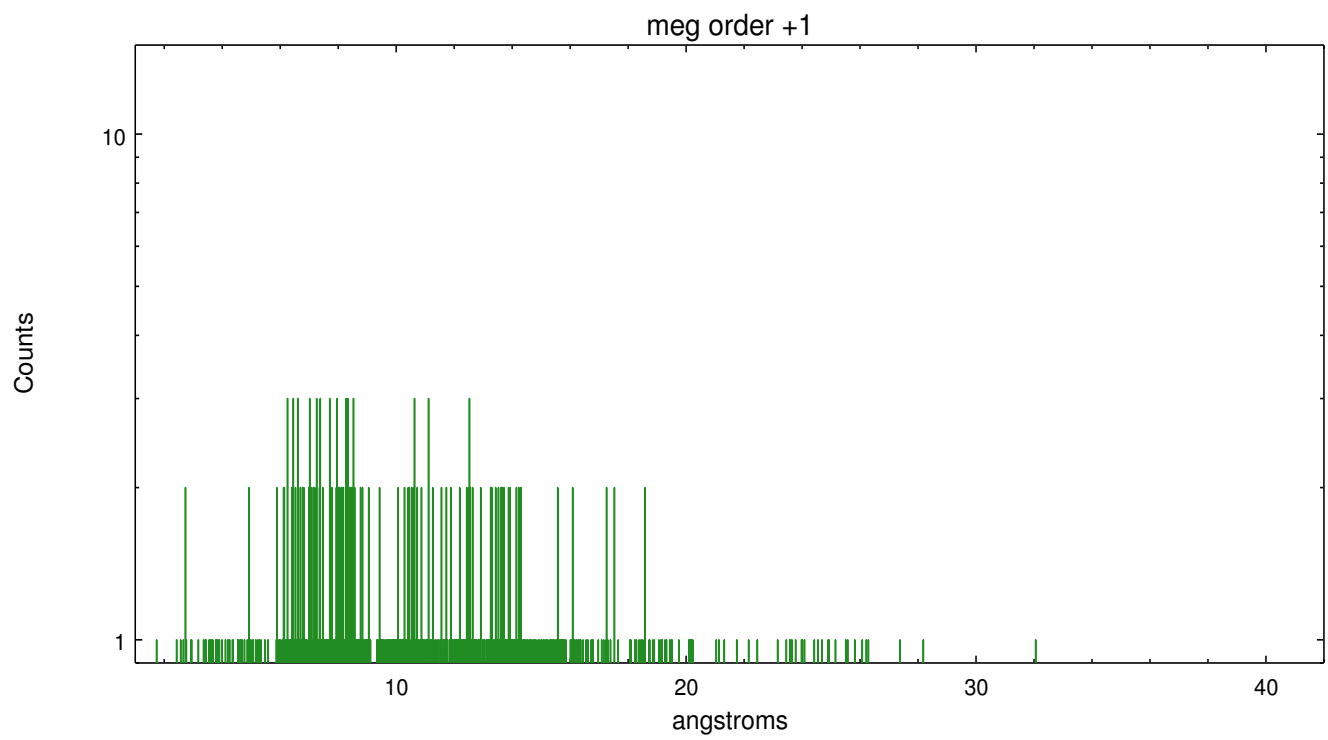
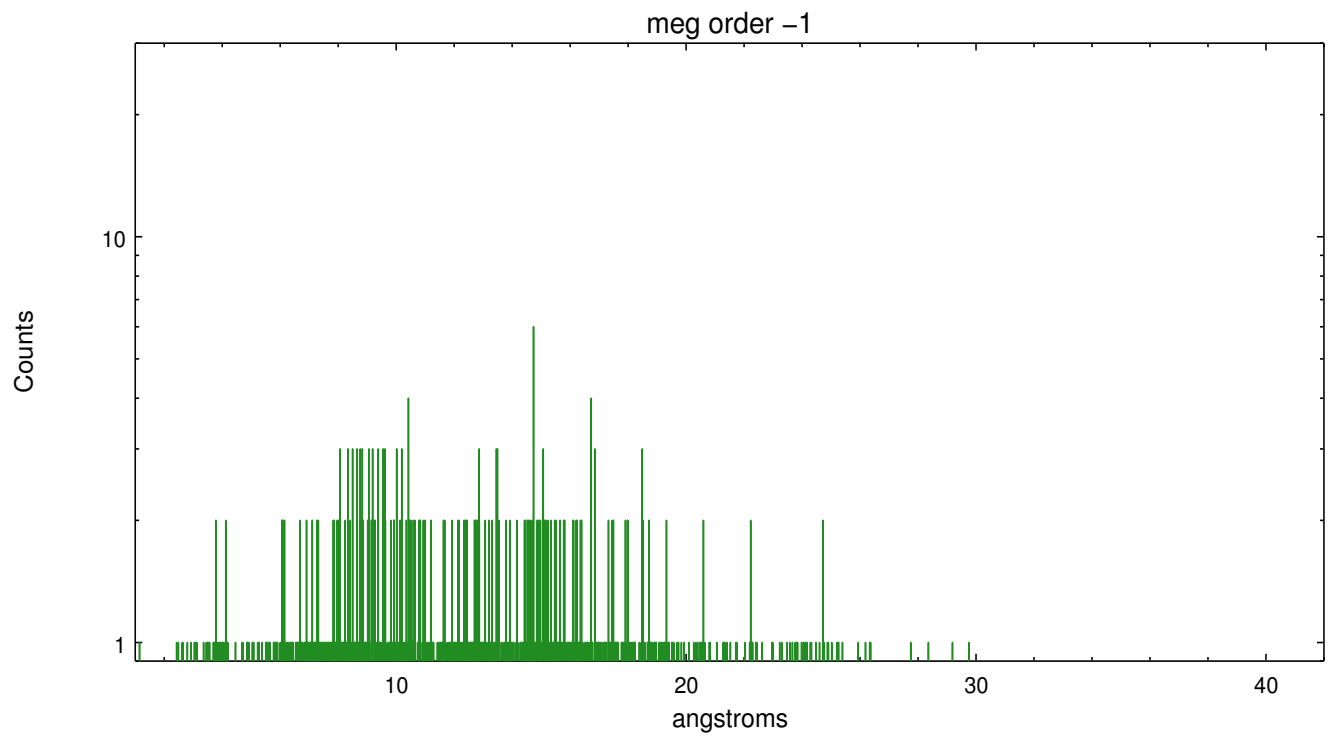
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	354	283	1257	2649	1112	231	273





## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.07.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.047140121818

### A.2 Comments