

# V&V Reference Report

## L2 ASCDS Version : 8.4.3.1

Observation 7362 - L2 Version 3  
Chandra X-Ray Center

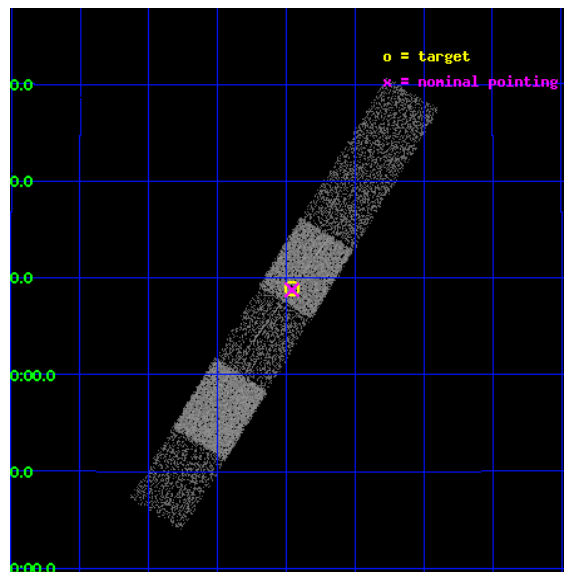
L2 Processing Date : Apr 16 2012

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# 1 Front

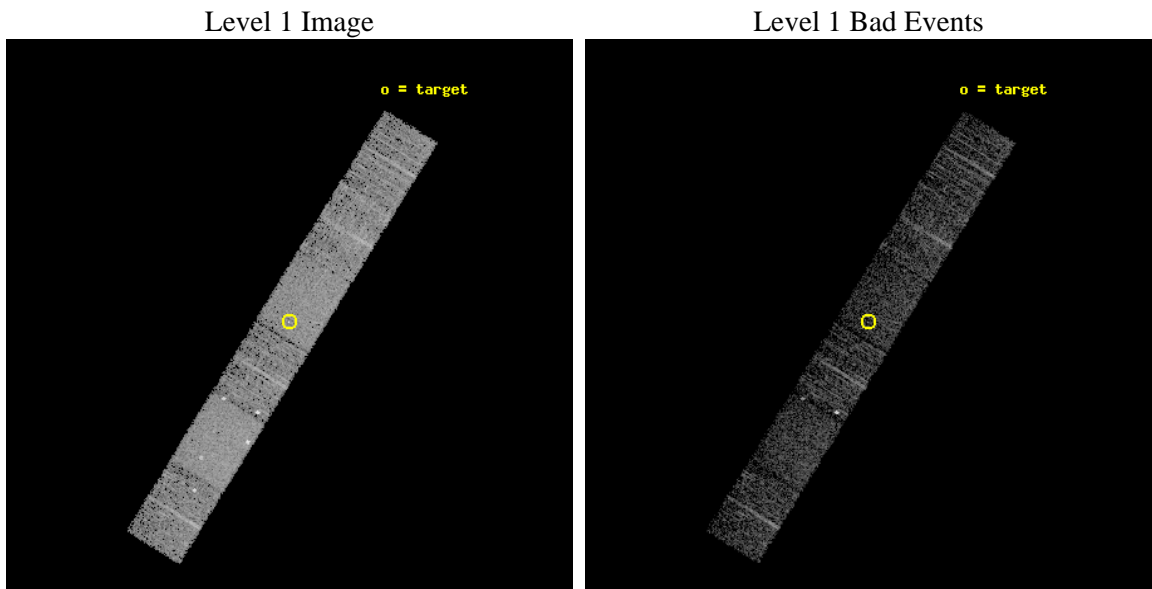
seq_num	701348	Sequence number
obs_id	7362	Observation id
title	Coordinated Spitzer/Chandra Observations of Gamma Ray Blazars	Prop
observer	Dr. Ann Wehrle	Principal investigator
object	3C454.3	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	343.490417	Observer's specified target RA [deg]
dec_targ	16.148194	Observer's specified target Dec [deg]
ra_nom	343.4897982532	Nominal RA [deg]
dec_nom	16.146207565492	Nominal Dec [deg]
roll_nom	301.75956466221	Nominal Roll [deg]
revision	3	Processing version of data
ontime	2145.0	Sum of GTIs [s]
liveltime	2110.3563895098	Livetime [s]
ontime4	2145.0	Sum of GTIs [s]
ontime5	2145.0	Sum of GTIs [s]
ontime6	2145.0	Sum of GTIs [s]
ontime7	2145.0	Sum of GTIs [s]
ontime8	2145.0	Sum of GTIs [s]
ontime9	2145.0	Sum of GTIs [s]
l2events	25030	Number of level 2 events



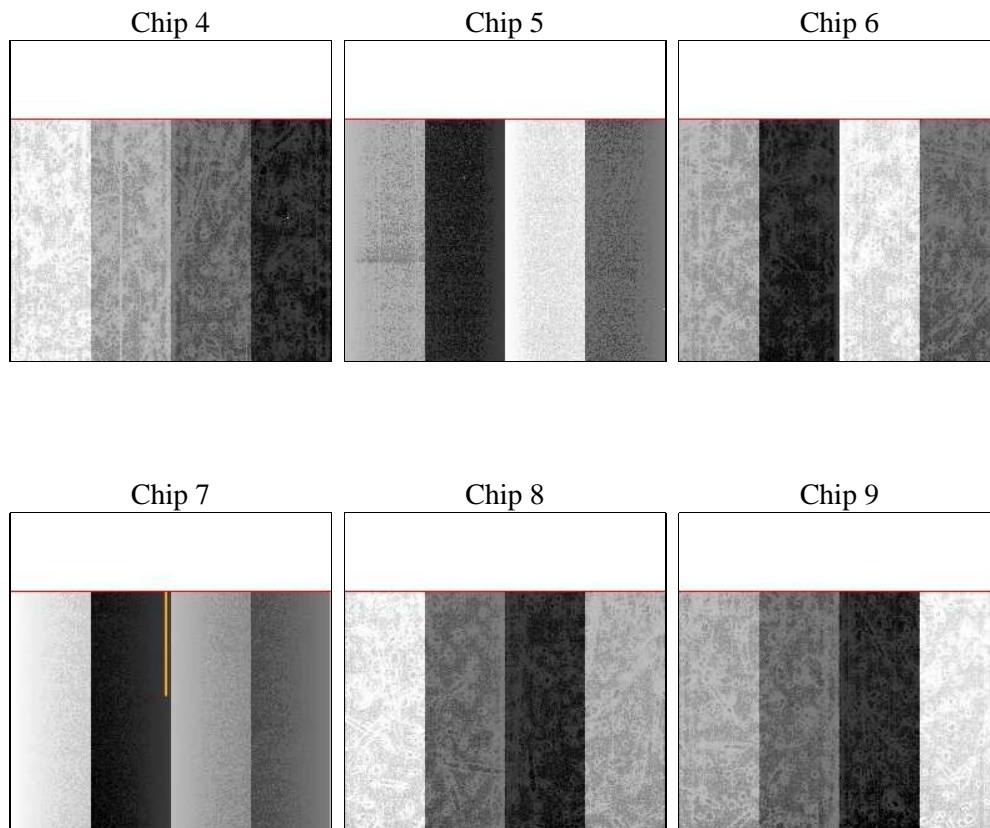
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	2000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3.1	Processing system revision	ontime	2145.0	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime4	2145.0	Sum of GTIs [s]
date	2012-04-16T13:10:56	Date and time of file creation	ontime5	2145.0	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	2145.0	Sum of GTIs [s]
			ontime7	2145.0	Sum of GTIs [s]
			ontime8	2145.0	Sum of GTIs [s]
			ontime9	2145.0	Sum of GTIs [s]
			l1events	114306	Number of level 1 events

### 2.1.4 Events

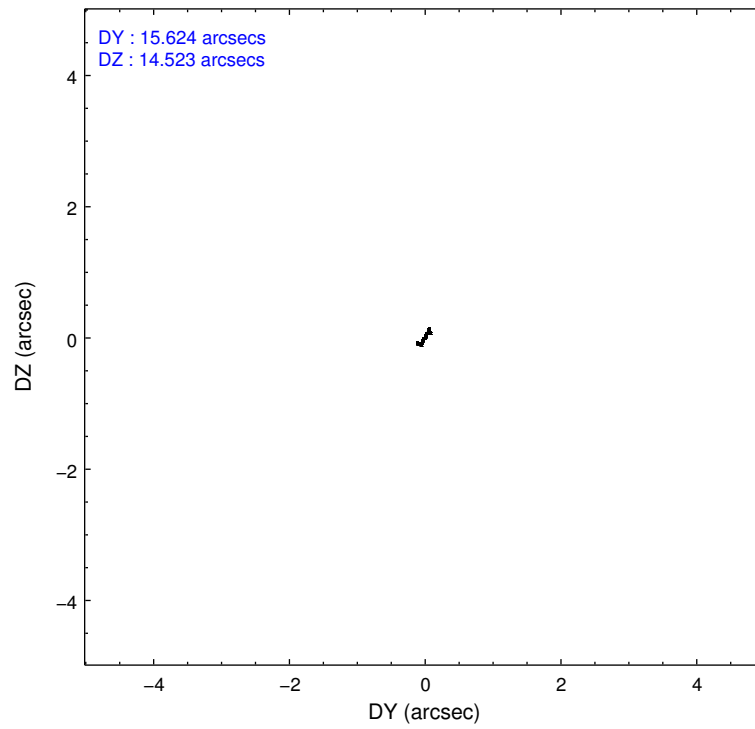
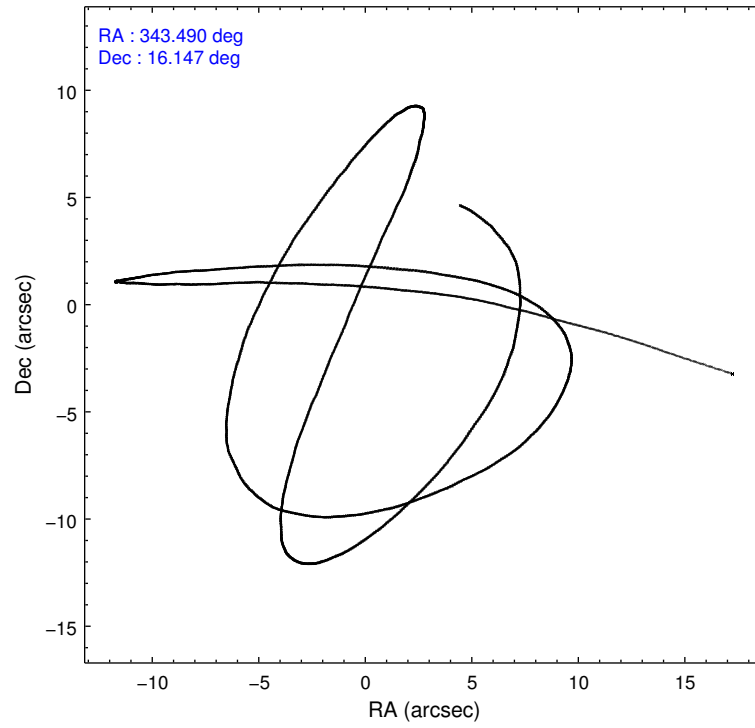
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	16212	24766	16587	21123	19679	15939
rejected events	13873	13265	14637	12351	15478	14051
rejected %	85%	53%	88%	58%	78%	88%

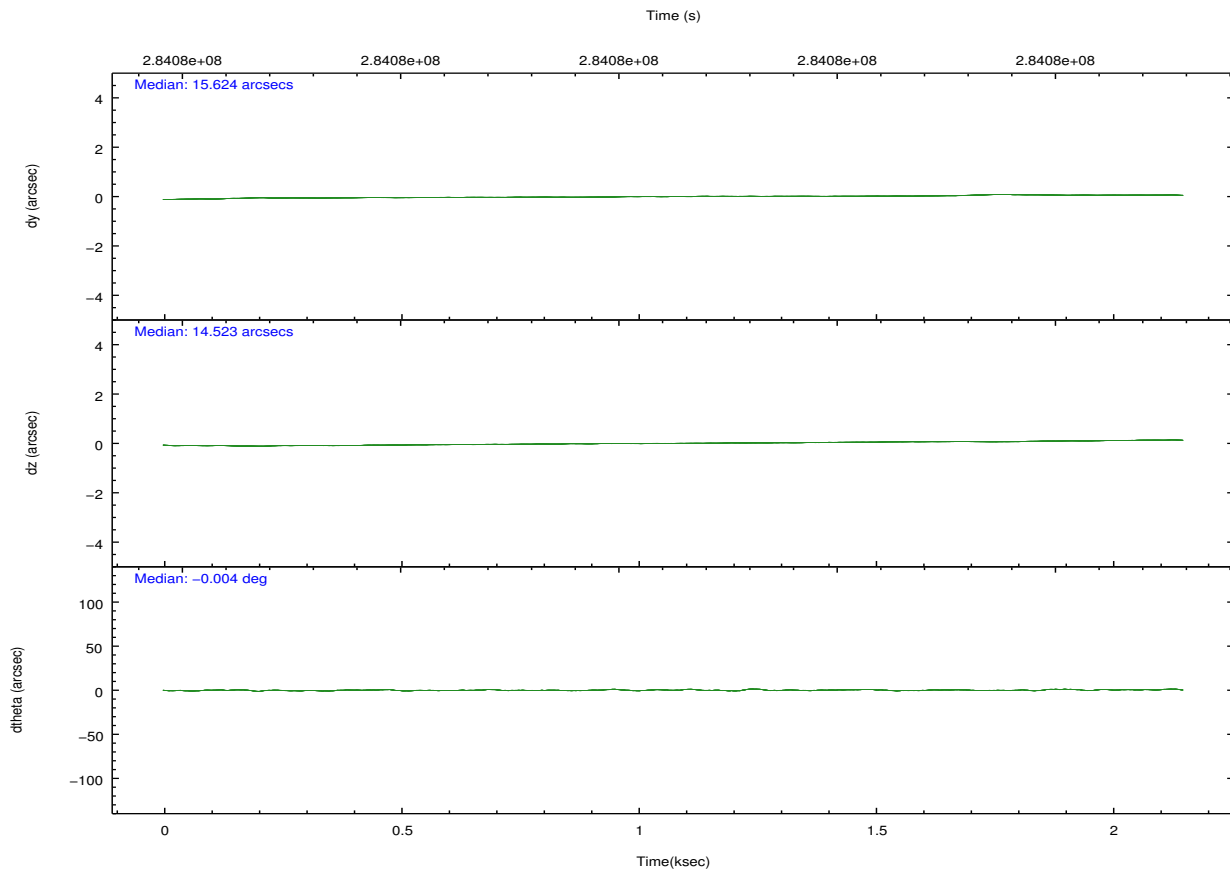
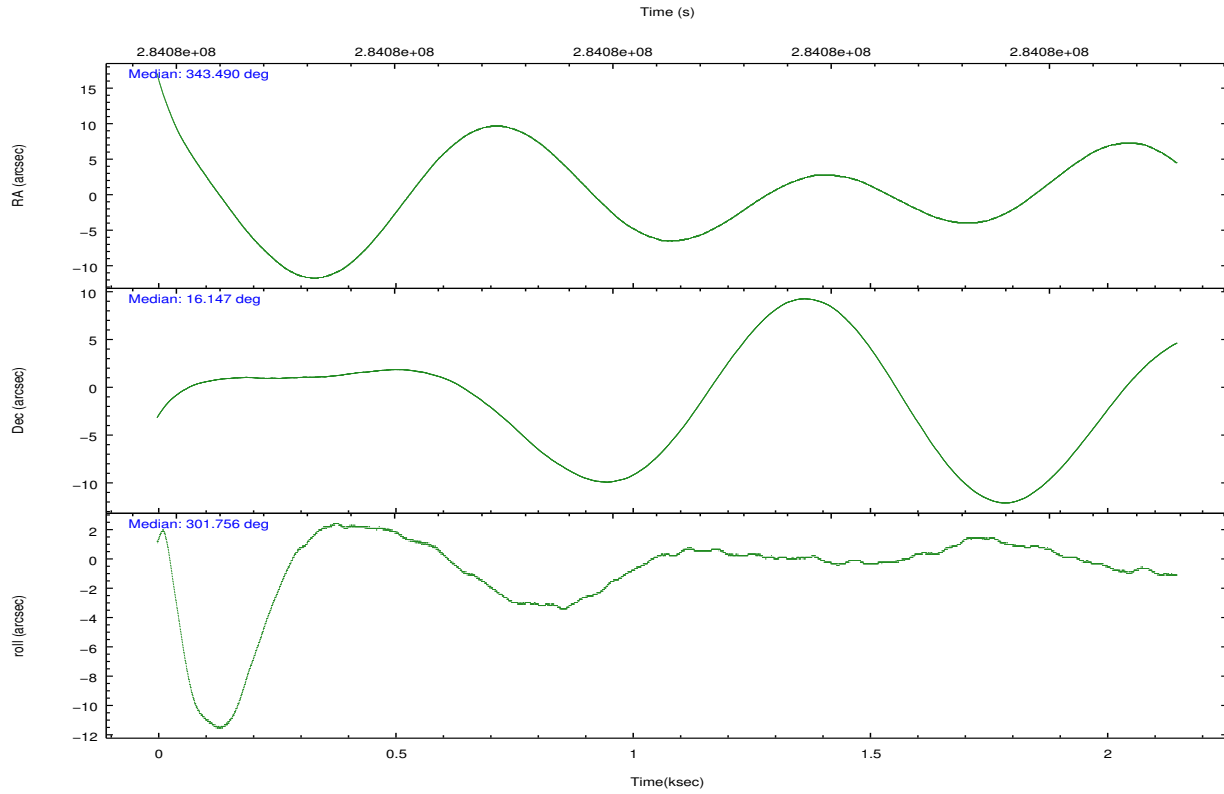
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	1335	2003	816	846	1403	798
	8%	8%	4%	4%	7%	5%
grade 1 events	19	152	841	23	12	10
	0%	0%	5%	0%	0%	0%
grade 2 events	406	3301	412	1882	992	374
	2%	13%	2%	8%	5%	2%
grade 3 events	206	474	200	809	498	213
	1%	1%	1%	3%	2%	1%
grade 4 events	188	498	193	834	447	206
	1%	2%	1%	3%	2%	1%
grade 5 events	696	1870	717	1943	925	732
	4%	7%	4%	9%	4%	4%
grade 6 events	316	5696	416	4788	1078	366
	1%	22%	2%	22%	5%	2%
grade 7 events	13046	10772	12992	9998	14324	13240
	80%	43%	78%	47%	72%	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	343.464459	343.4897982532013	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	16.158820	16.14620756549171	Subarray start row	1	1
[deg] Pointing Roll	301.609916	301.7595646622061	Subarray row count	774	774
[s] Window start time (MET)	281597465.184000	281597465.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	285195365.184000	285195365.184000	[s] Primary exposure time	0.000000	2.5
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-187.132523	-187.1254020033014			
[mm] SIM translation stage offset	-3	-3.007120579706367			
[s] Observation start time (MET)	284075697.184000	284074545.13378			
Observation start date	2007-01-01T21:53:52	2007-01-01T21:35:45			
[s] Observation end time (MET)	284077697.184000	284078535.97147			
Observation end date	2007-01-01T22:27:12	2007-01-01T22:42:15			
Read mode	TIMED	TIMED			

## 2.3 Aspect



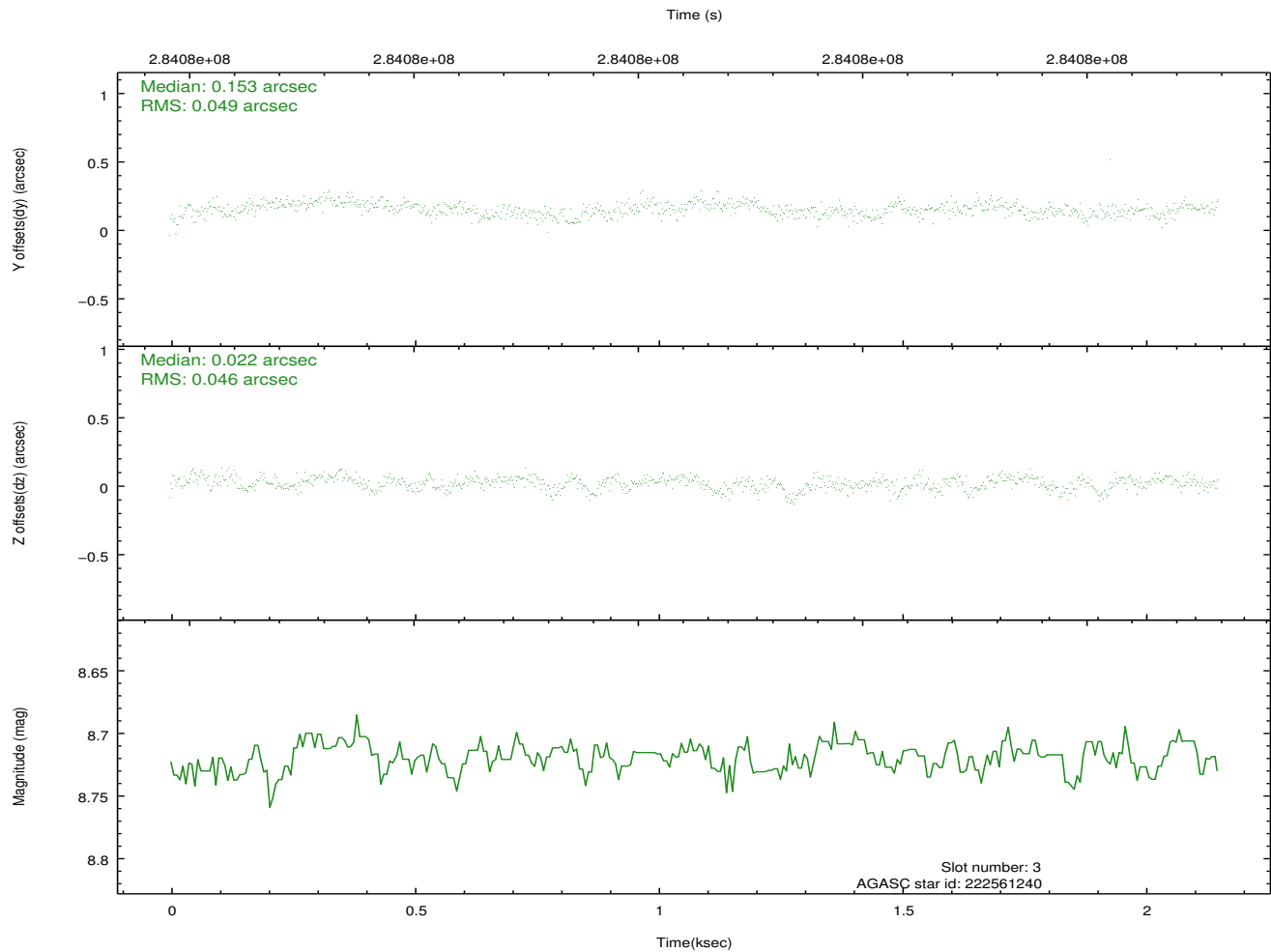
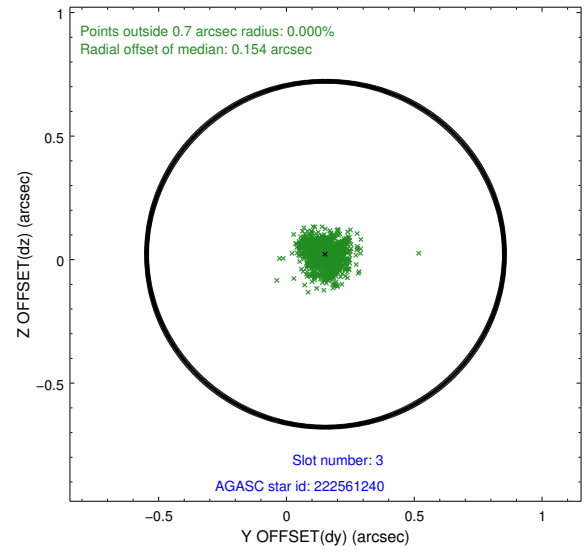
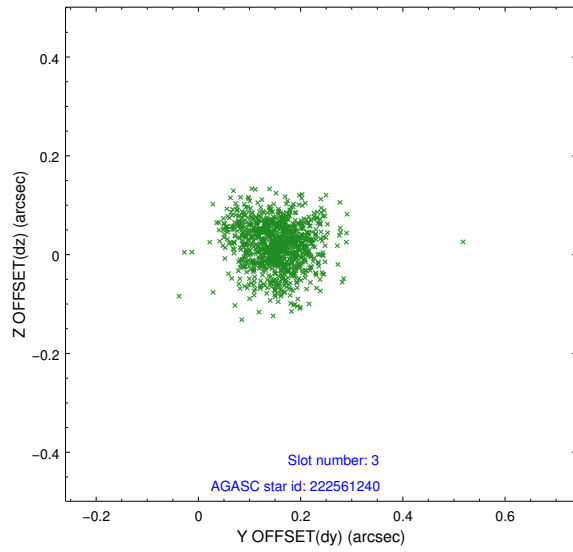


### Slot Statistics

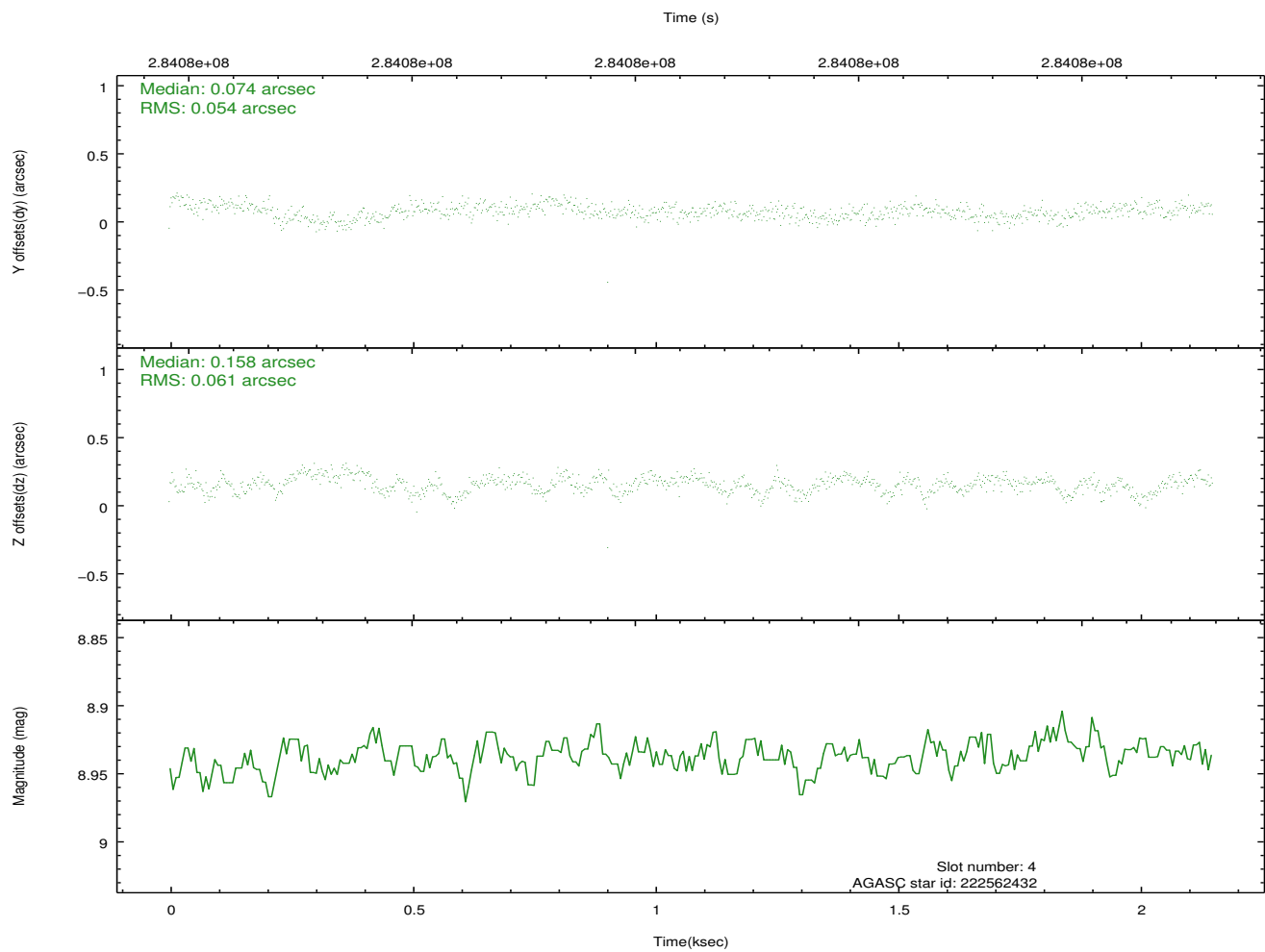
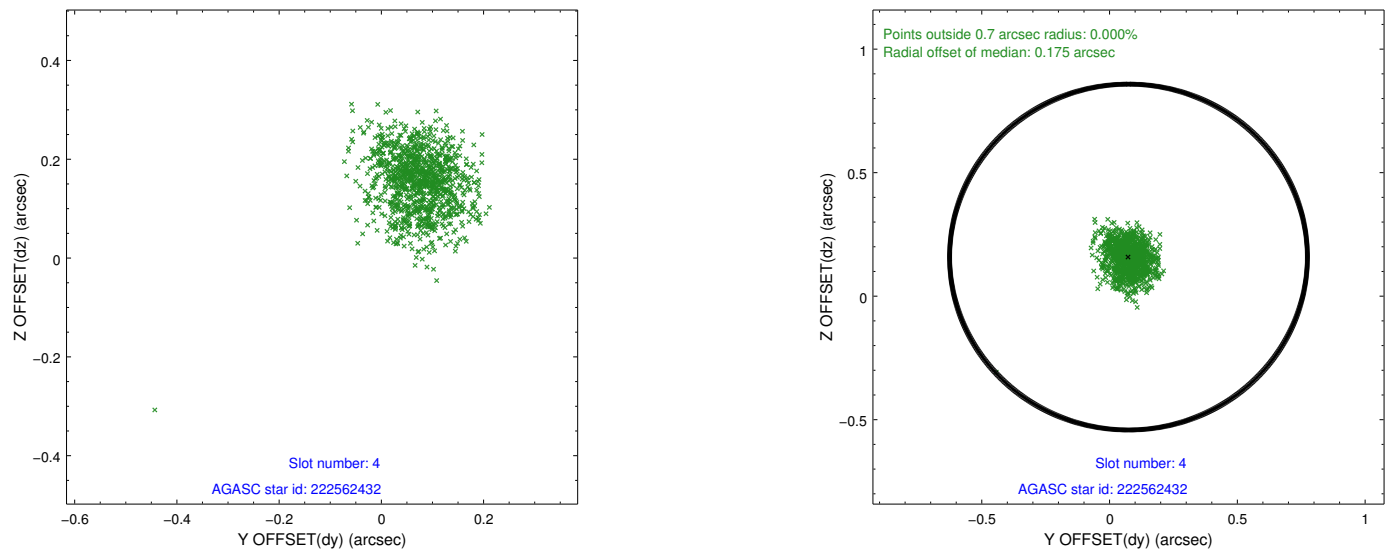
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.18	525	0.078	-0.038	0.007	0.012	0.000000	0.000000	927.68	-1793.67
1	FID	ACIS-S-5	7.24	525	-0.168	0.045	0.006	0.010	0.000000	0.000000	-1819.84	100.77
2	FID	ACIS-S-6	7.37	525	0.069	0.006	0.008	0.014	0.000000	0.000000	389.98	748.08
3	GUIDE	222561240	8.72	1049	0.153	0.022	0.070	0.113	343.355884	15.743652	1076.10	-1103.23
4	GUIDE	222562432	8.94	1050	0.074	0.158	0.086	0.137	343.698150	16.309399	-37.42	971.36
5	GUIDE	222563736	8.82	1048	-0.045	0.066	0.094	0.146	343.076284	16.308502	-1162.70	-857.29
6	GUIDE	222565592	8.24	1050	-0.197	-0.073	0.073	0.119	343.291662	16.508291	-1385.42	150.18
7	GUIDE	222565552	9.36	1049	0.019	-0.170	0.103	0.164	343.598601	15.997226	737.63	90.50

## 2.4 Star Slots

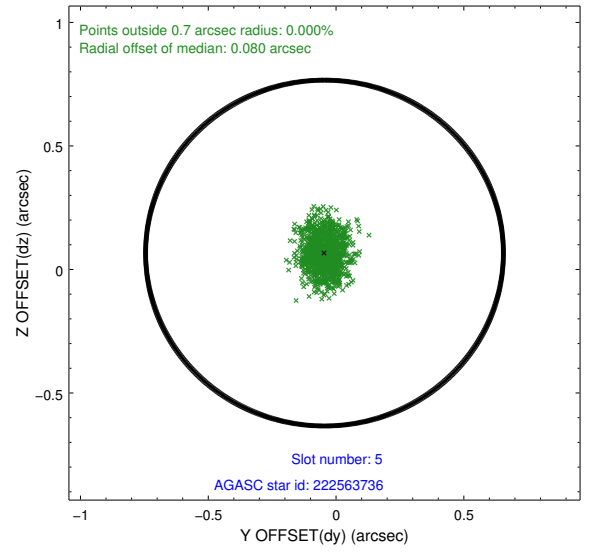
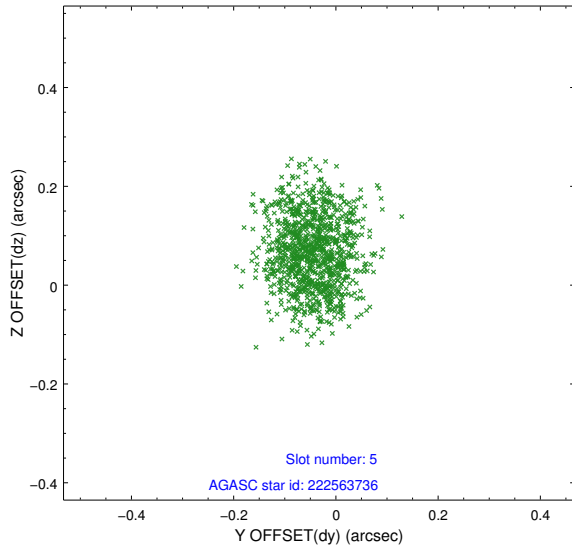
### 2.4.1 Slot 3



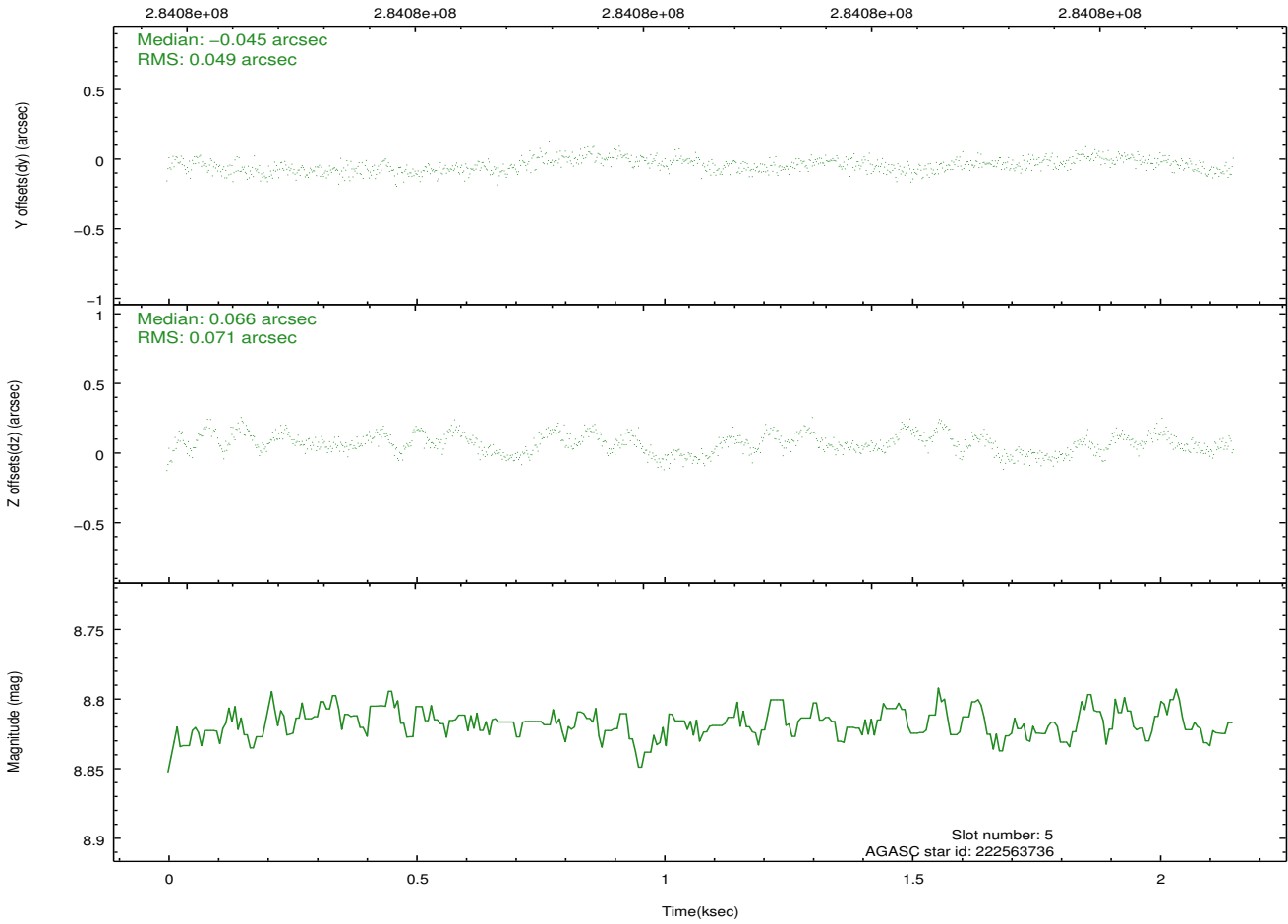
## 2.4.2 Slot 4



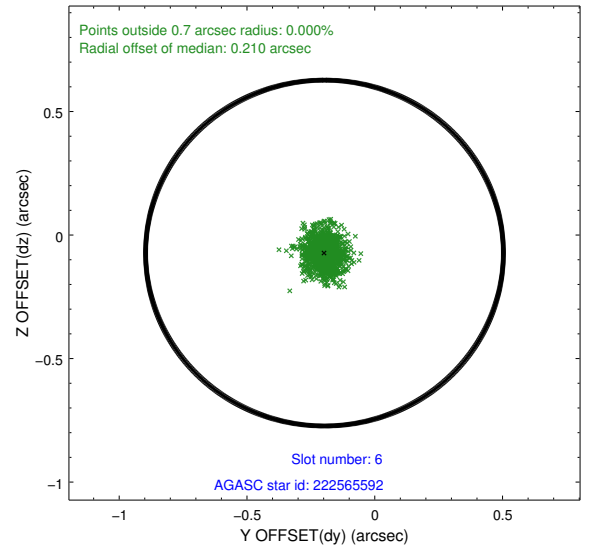
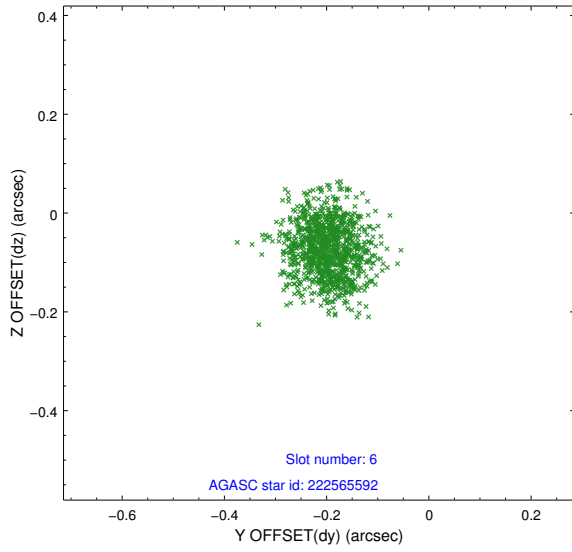
### 2.4.3 Slot 5



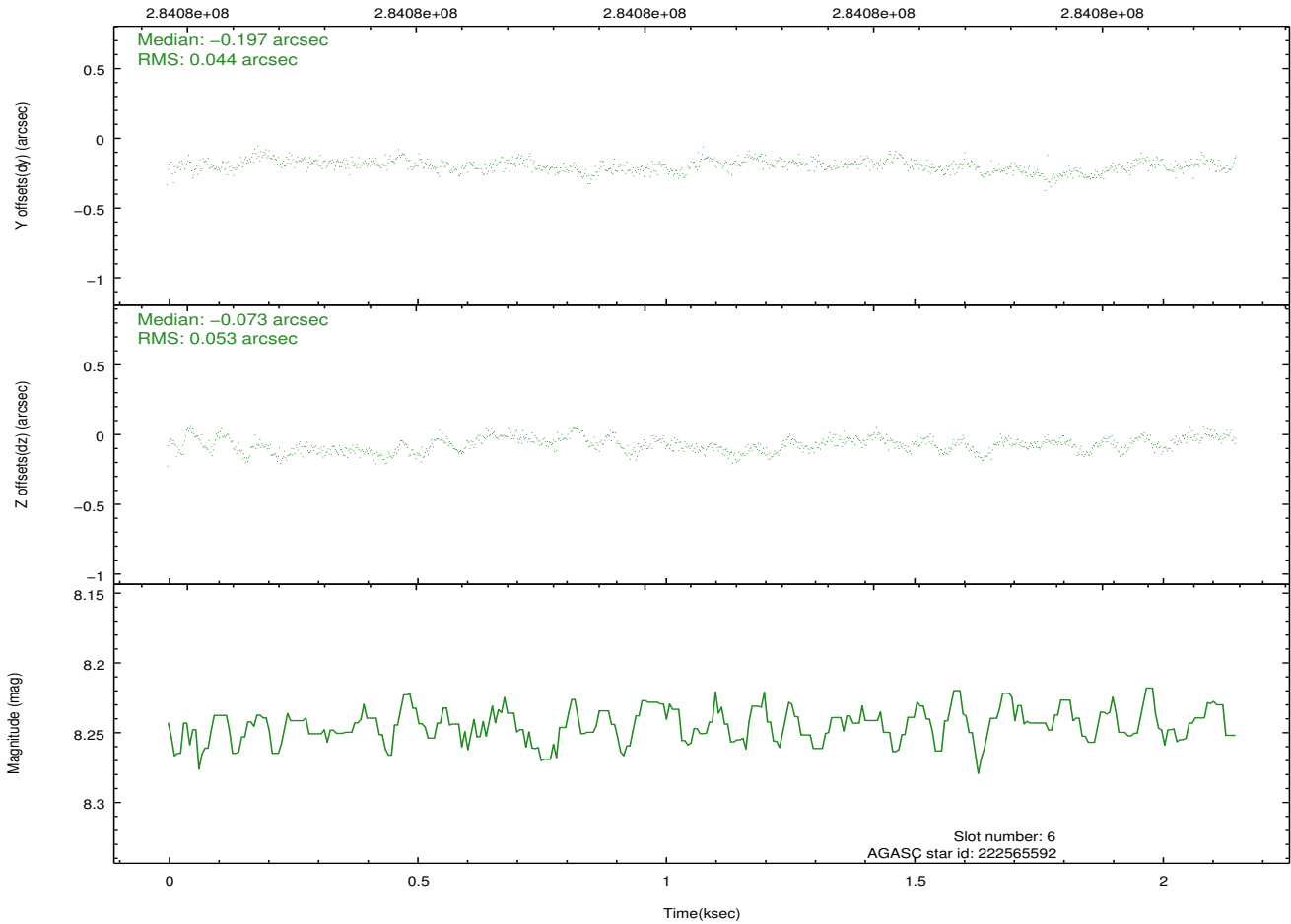
Time (s)



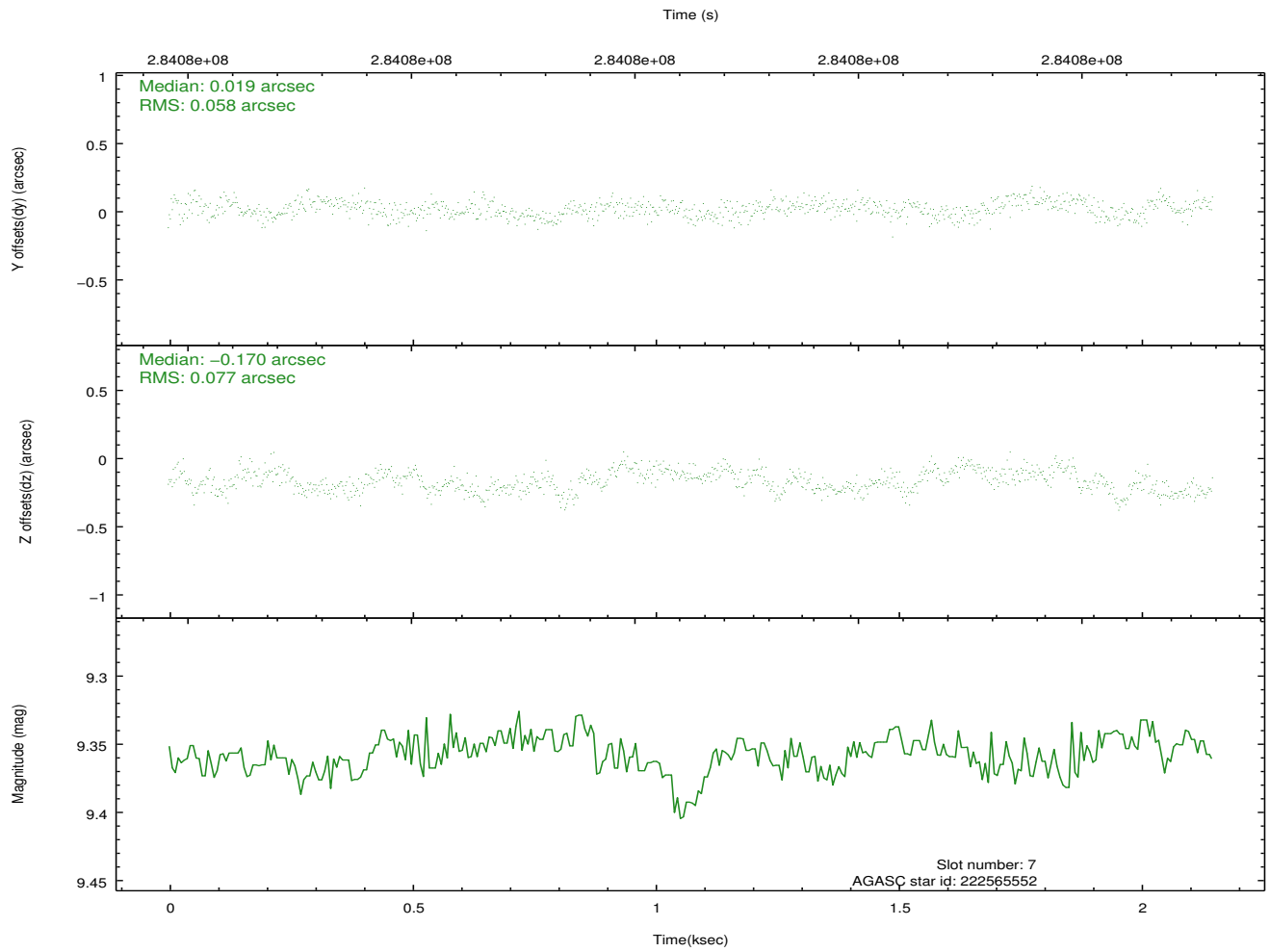
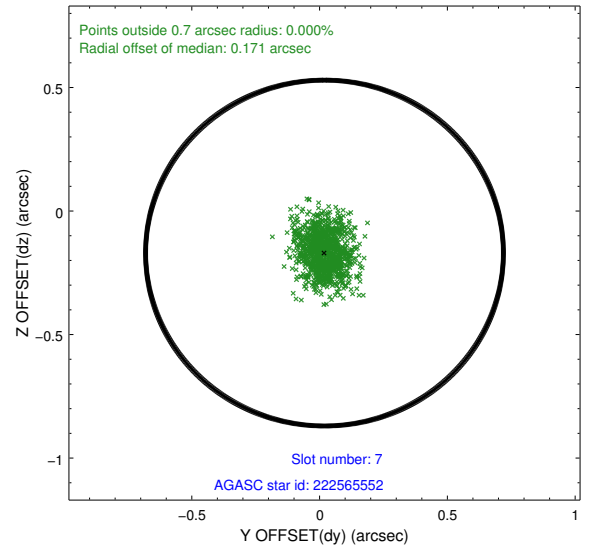
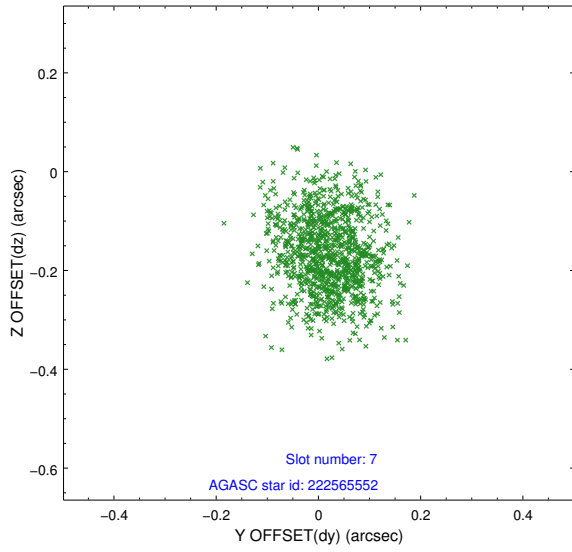
### 2.4.4 Slot 6



Time (s)

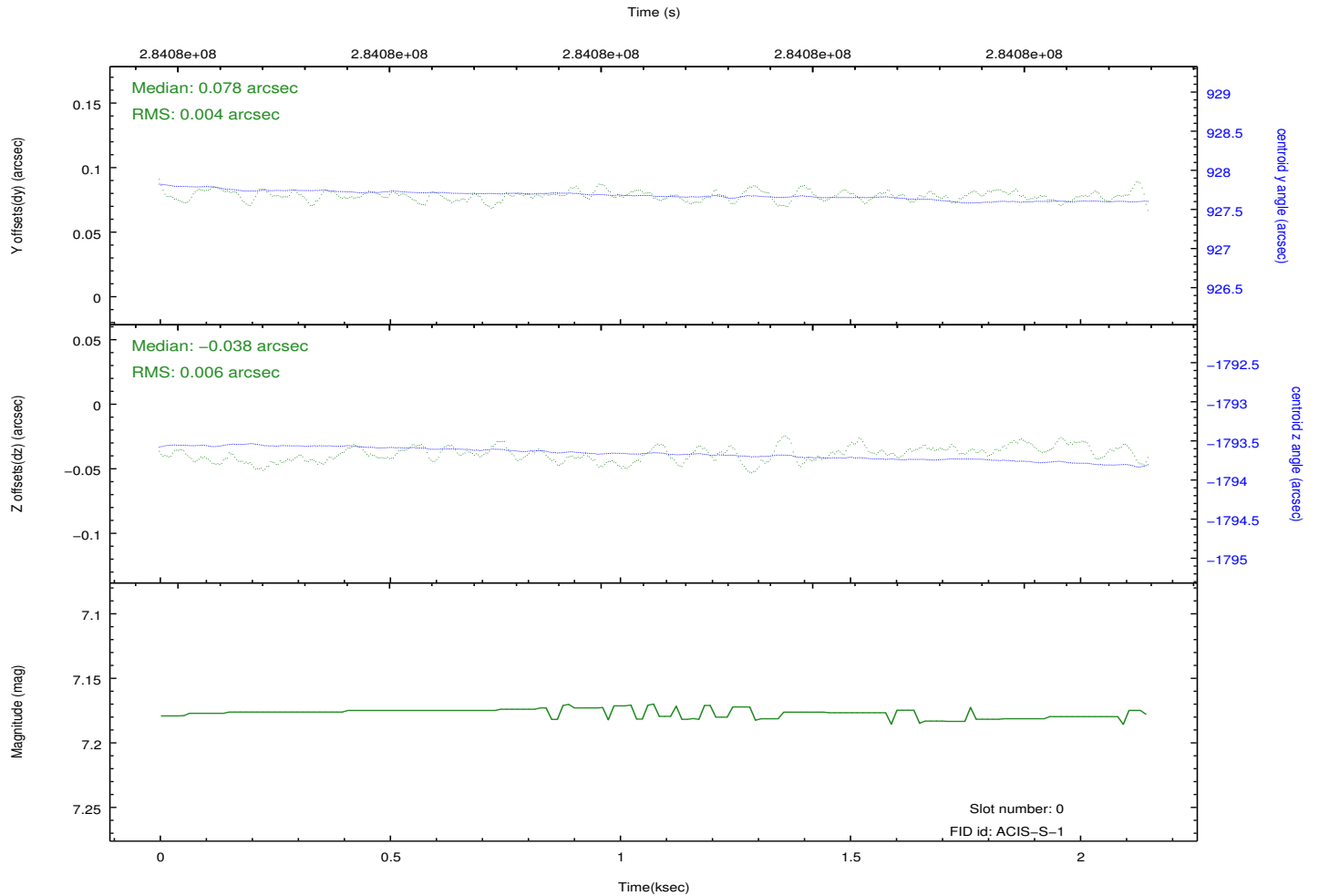
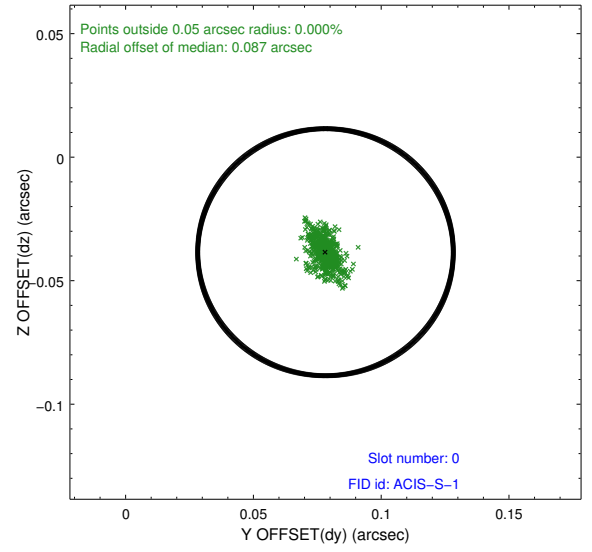
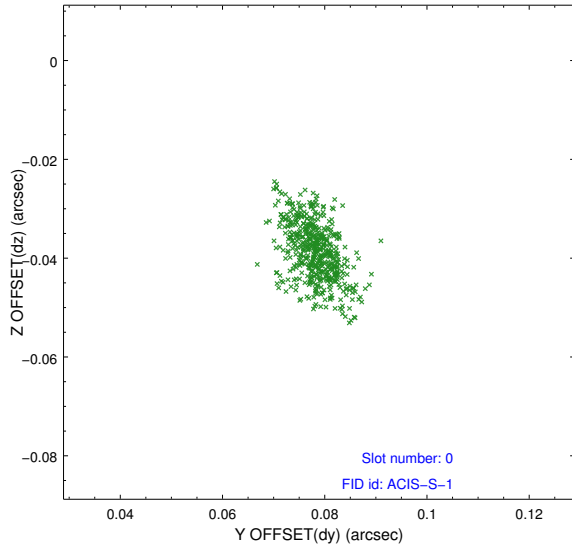


### 2.4.5 Slot 7

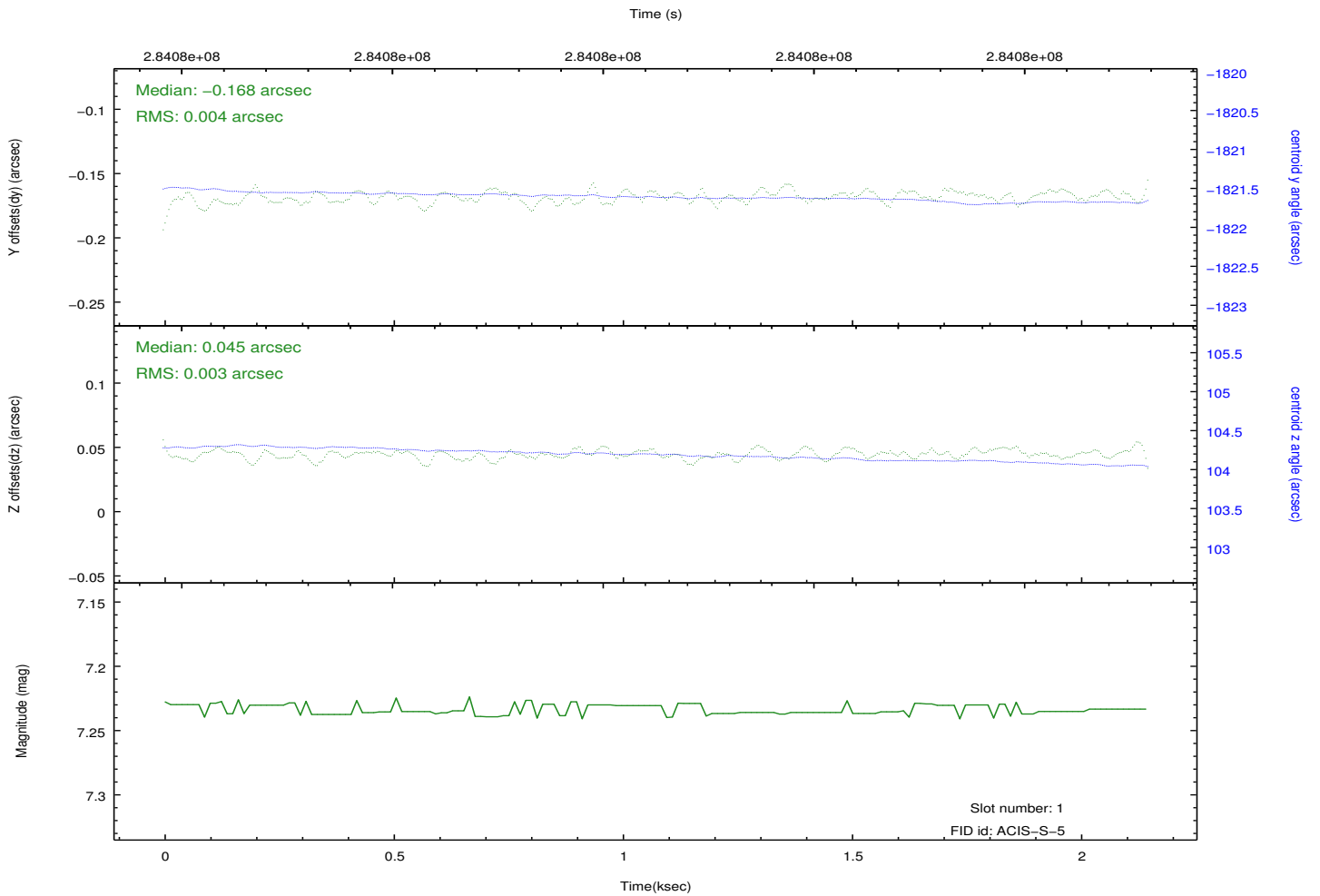
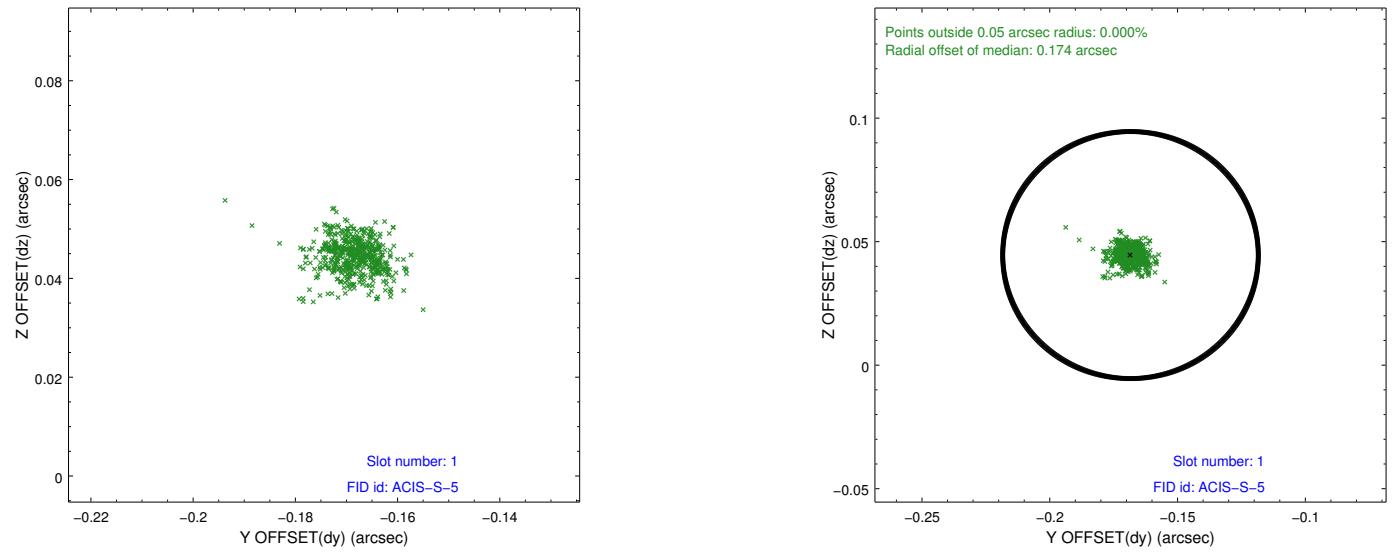


## 2.5 FID Slots

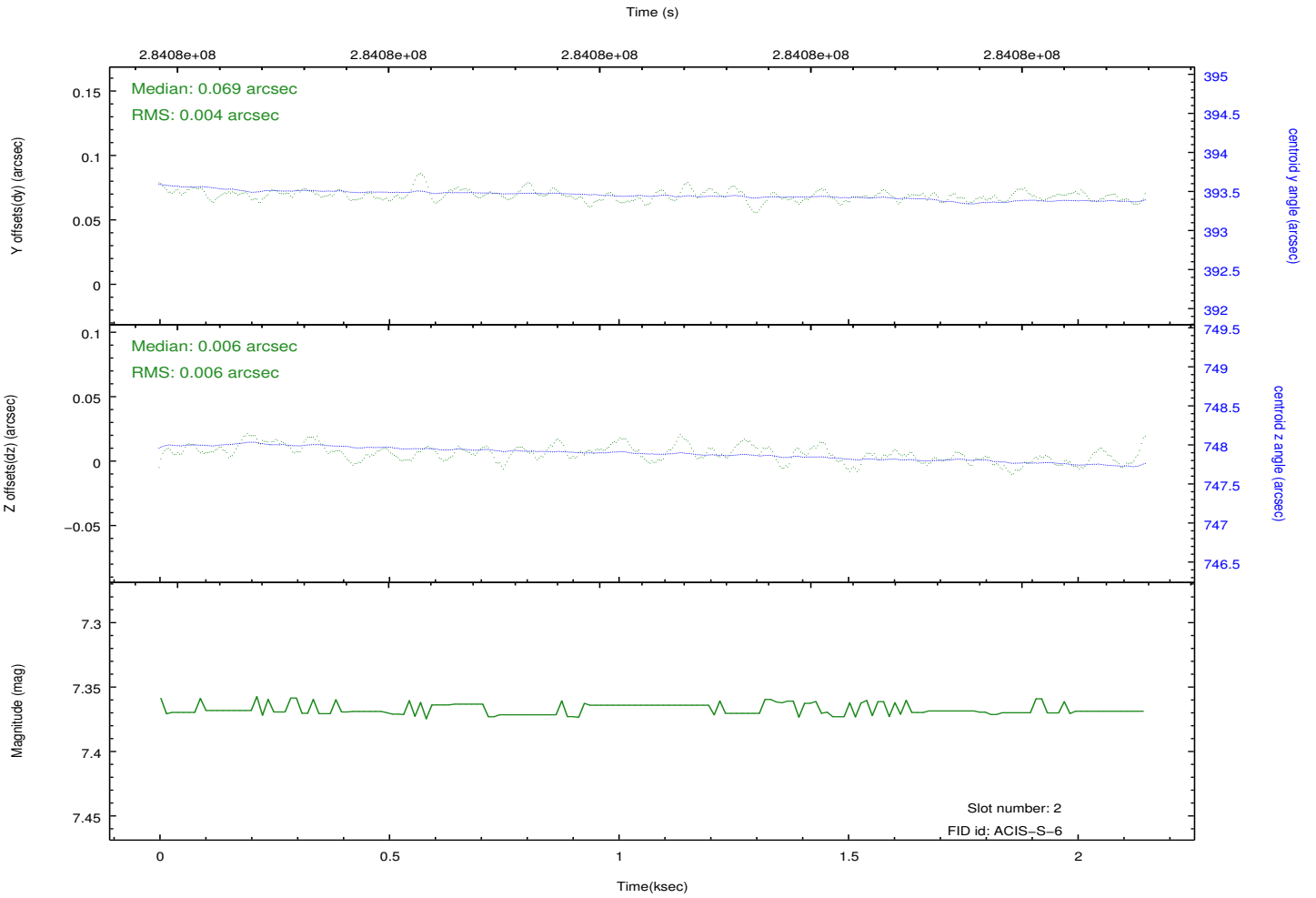
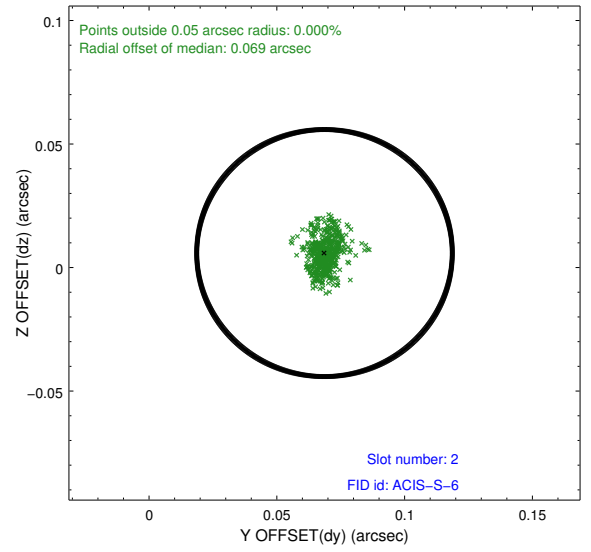
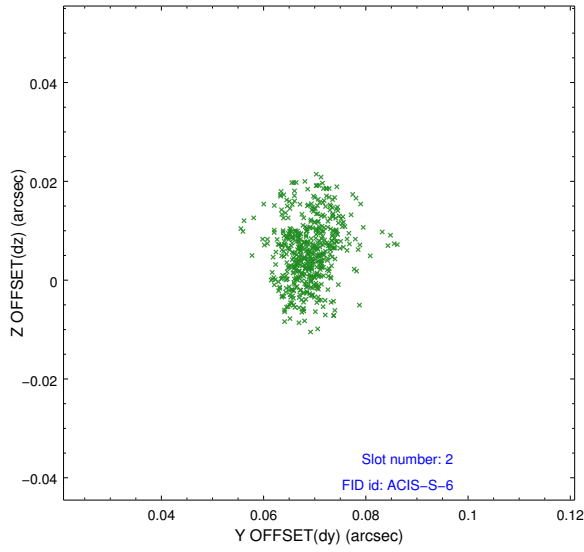
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

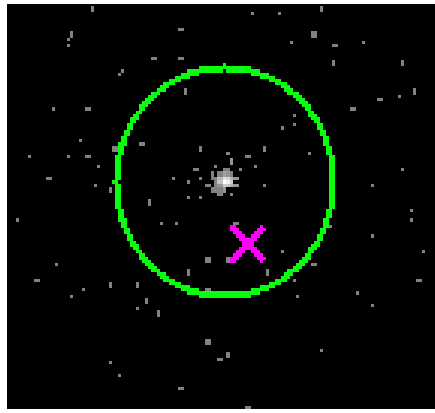


### 3 Gratings

#### 3.1 HEG Arm



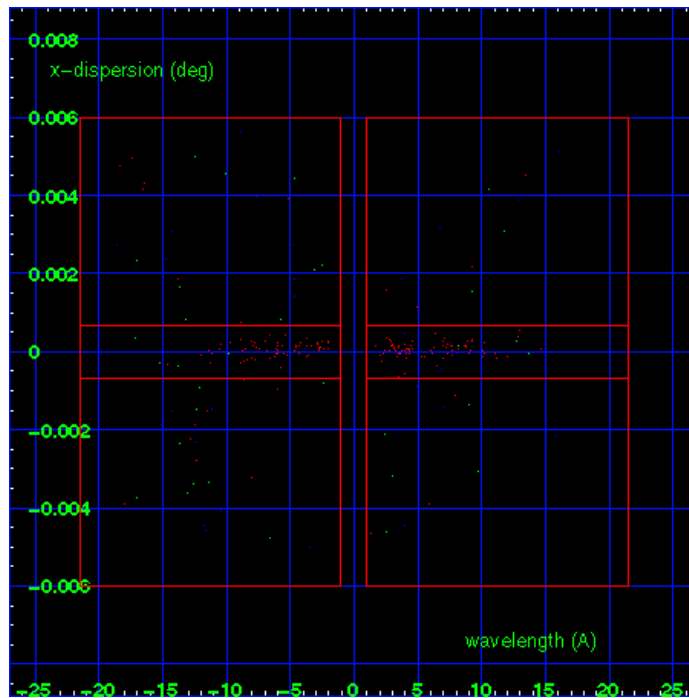
HEG Order Sort 123



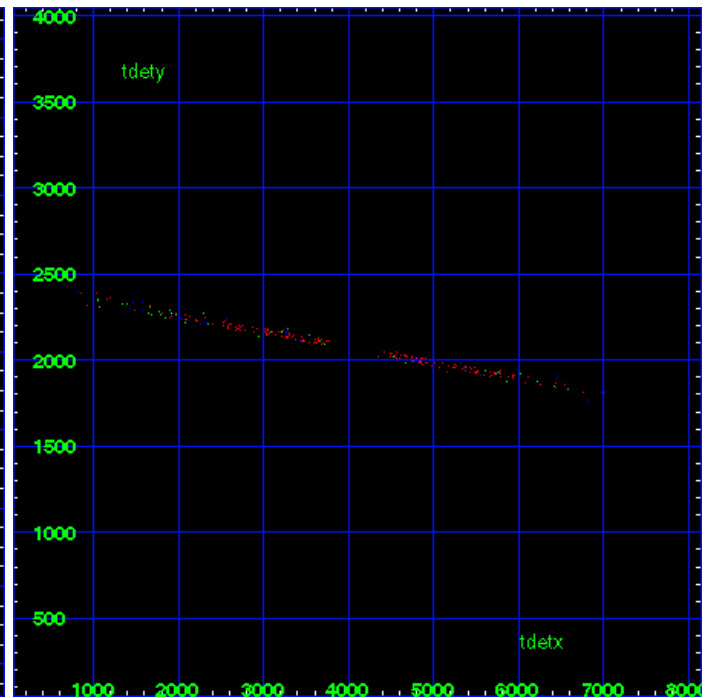
HEG Zero Order



HEG Order Sort ALL

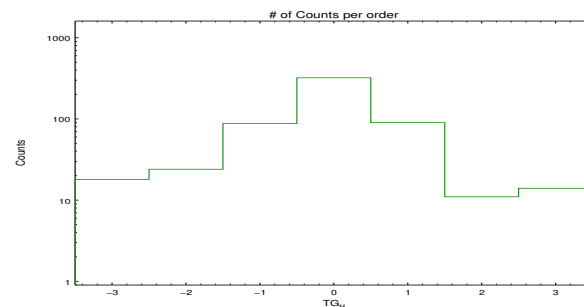


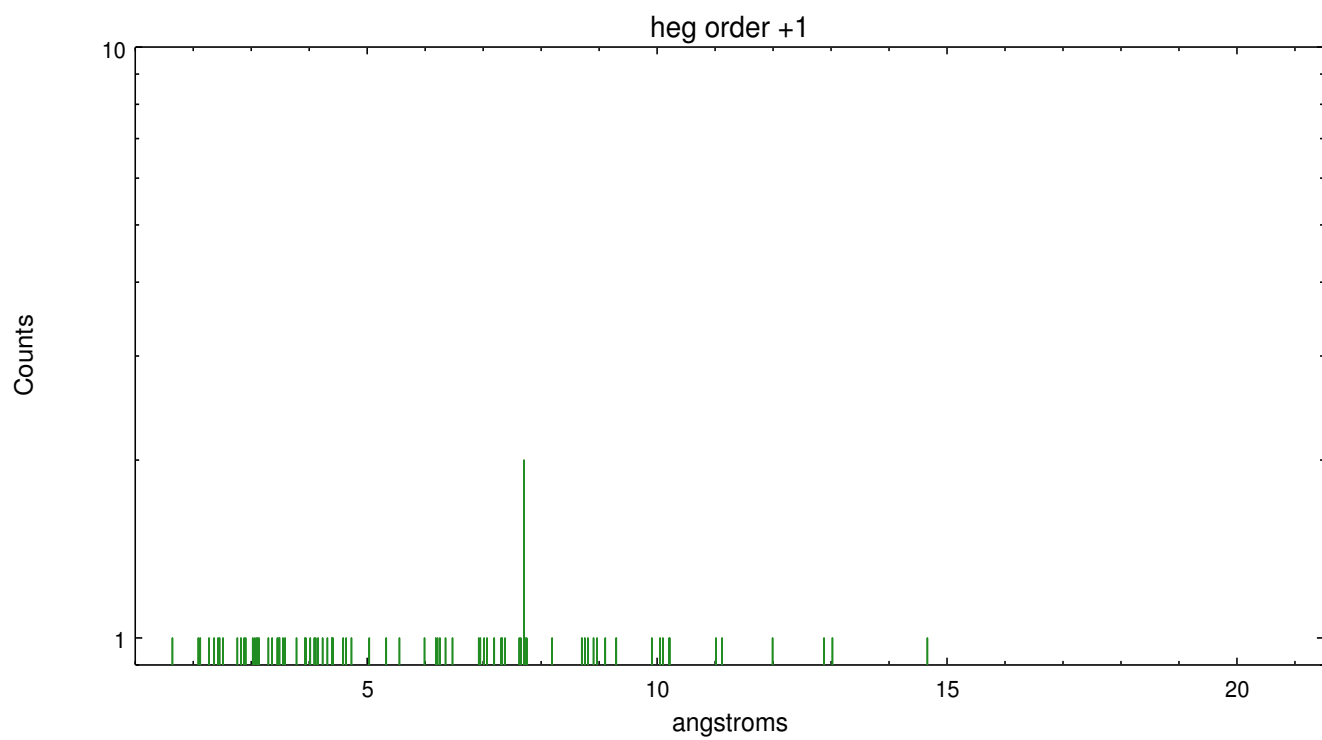
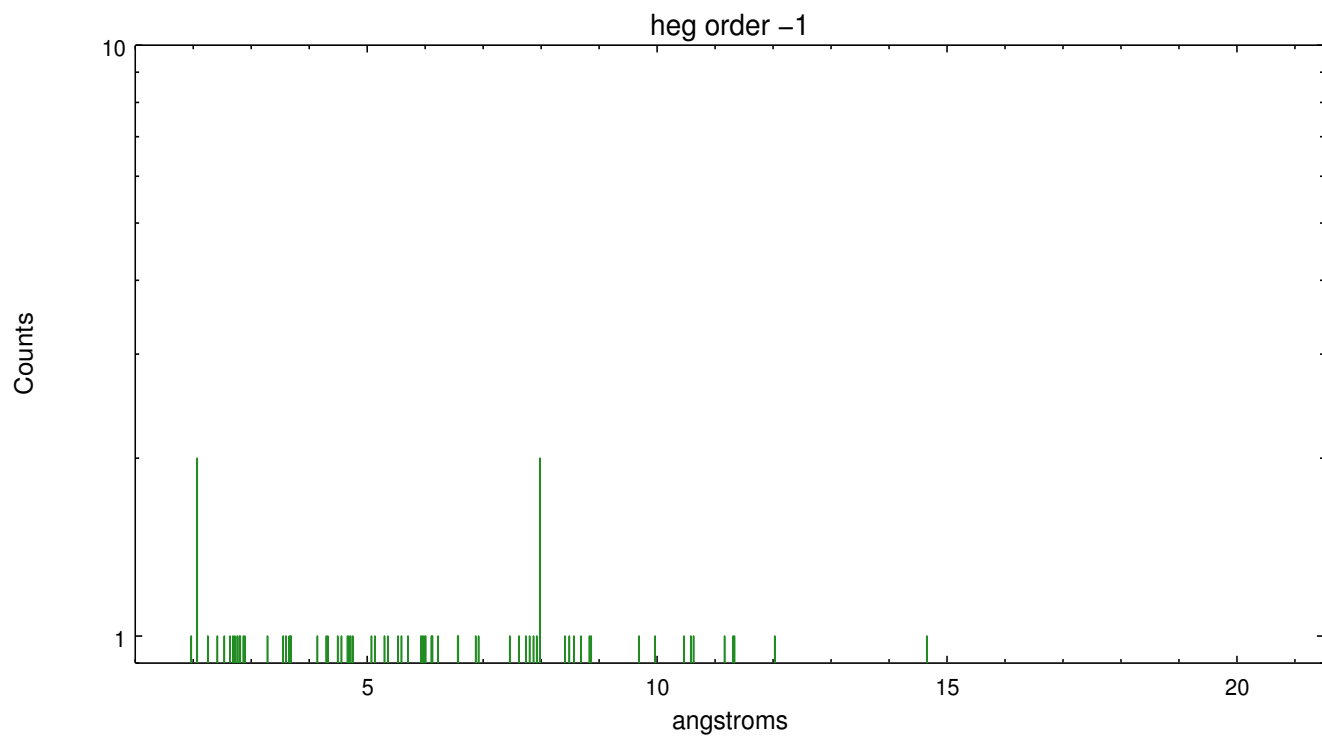
Spot Image HEG



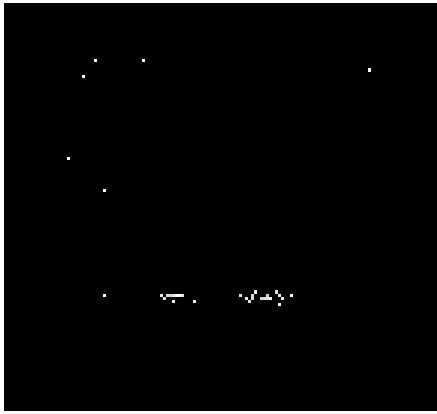
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	18	24	88	321	90	11	14

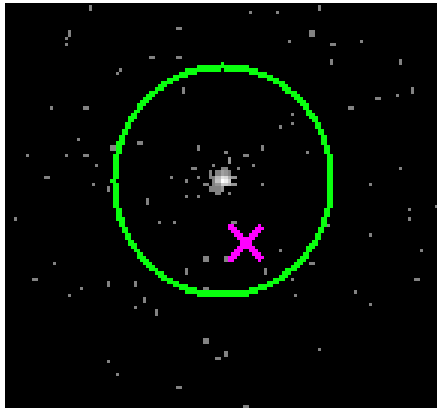




### 3.2 MEG Arm



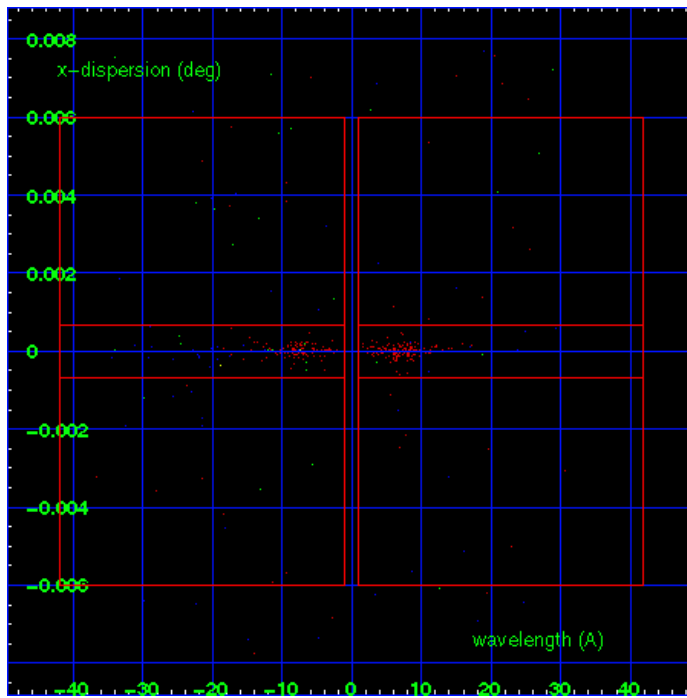
MEG Order Sort 123



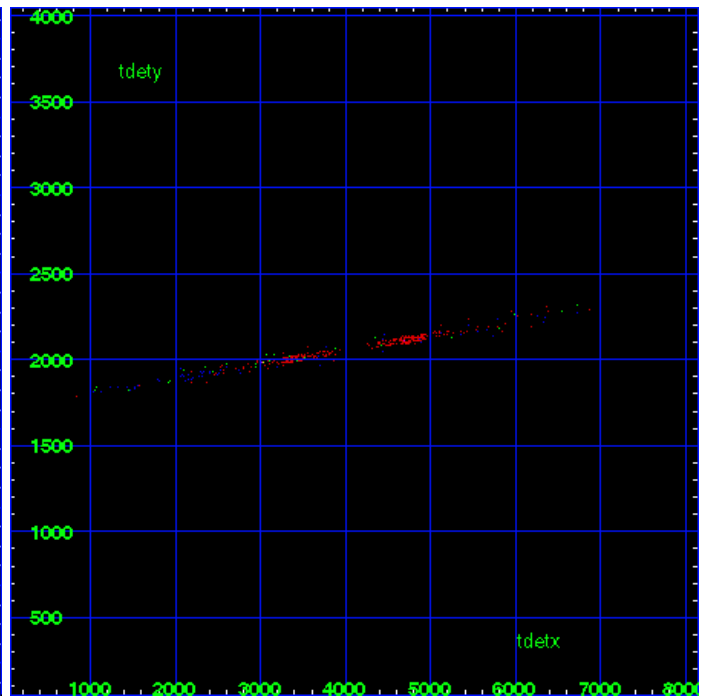
MEG Zero Order



MEG Order Sort ALL

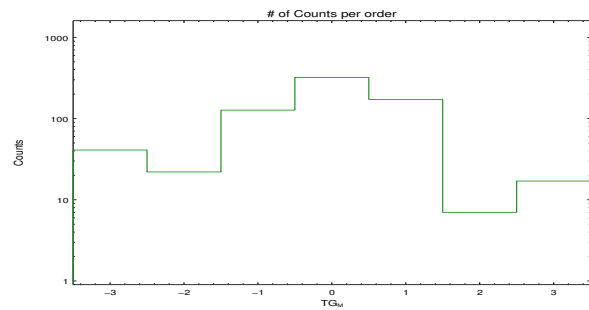


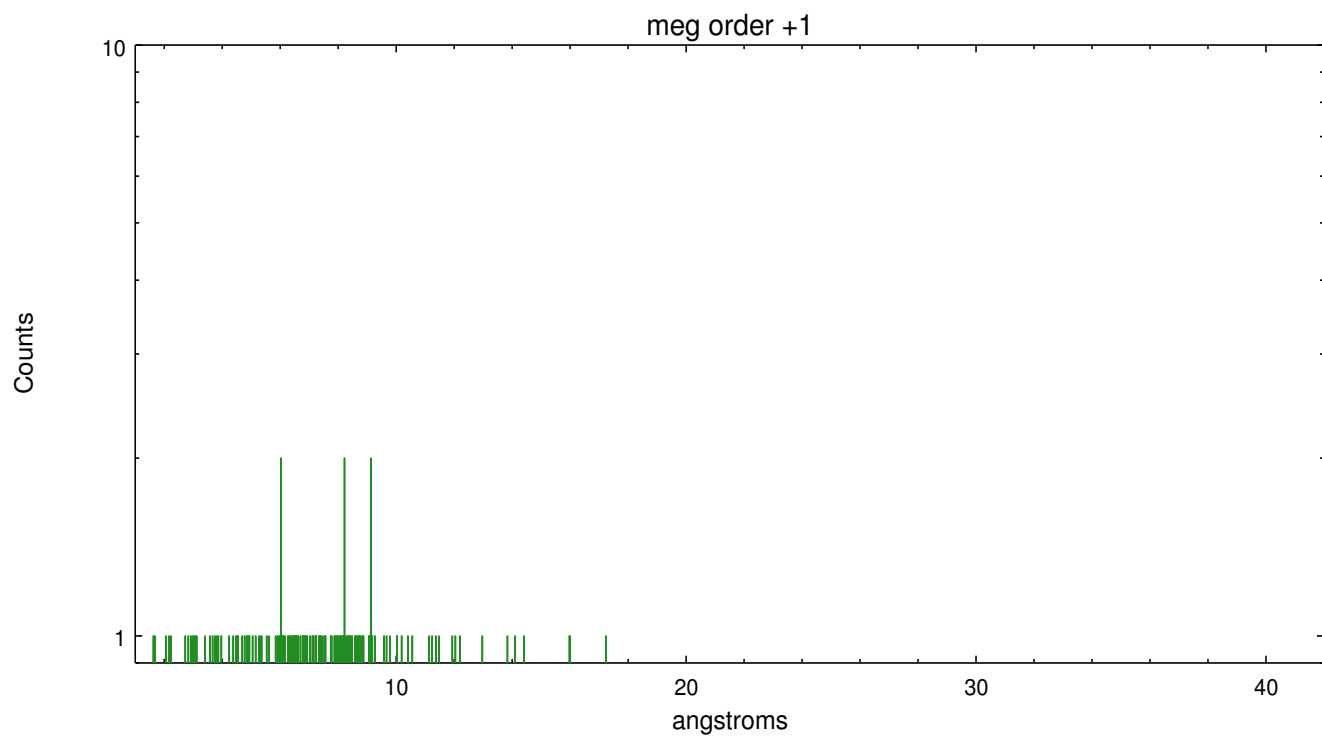
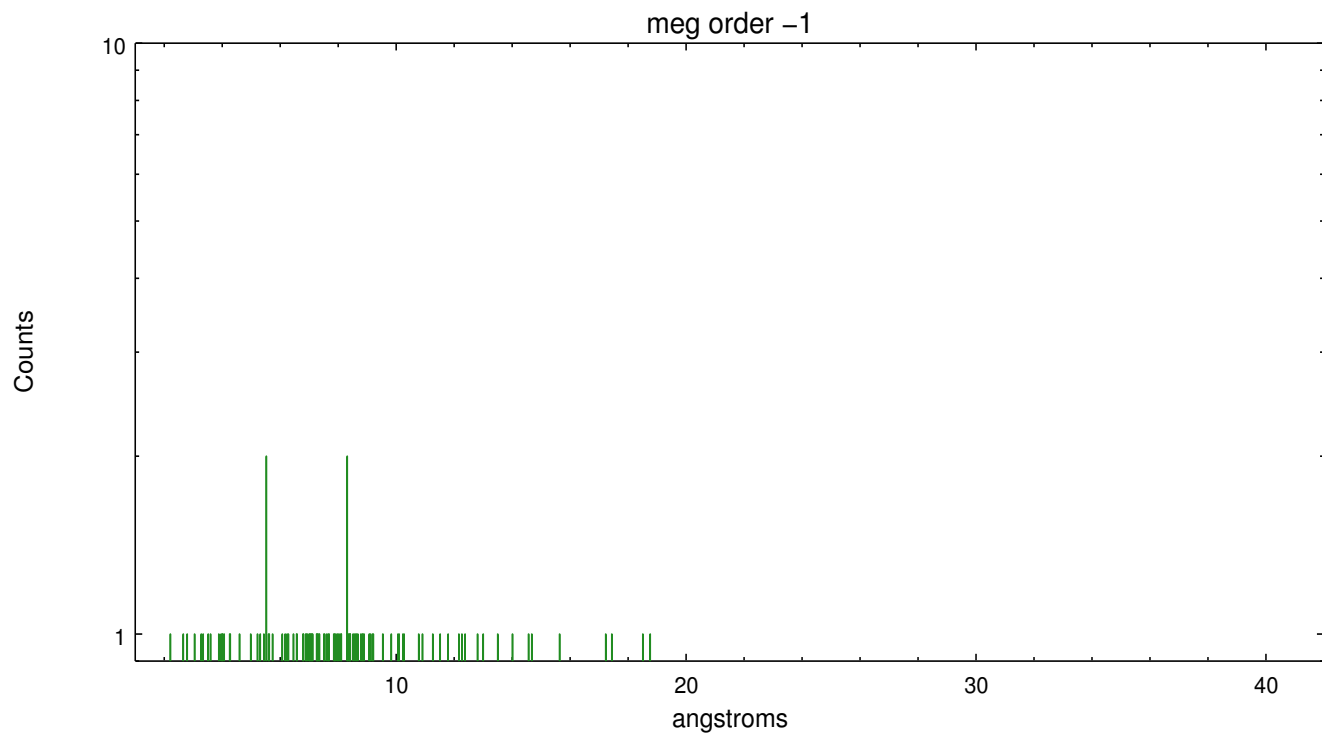
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	41	22	127	321	172	7	17





# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.04.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	2.145

## A.2 Comments