

# V&V Reference Report

## L2 ASCDS Version : 10.2.4

Observation 16537 - L2 Version 1  
Chandra X-Ray Center

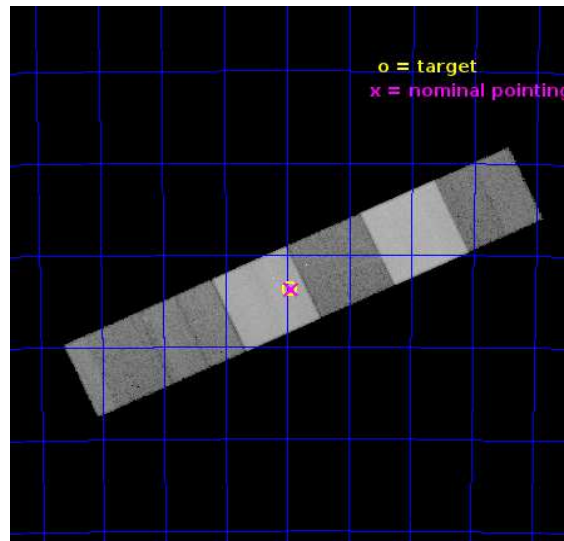
L2 Processing Date : Sep 30 2014

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# 1 Front

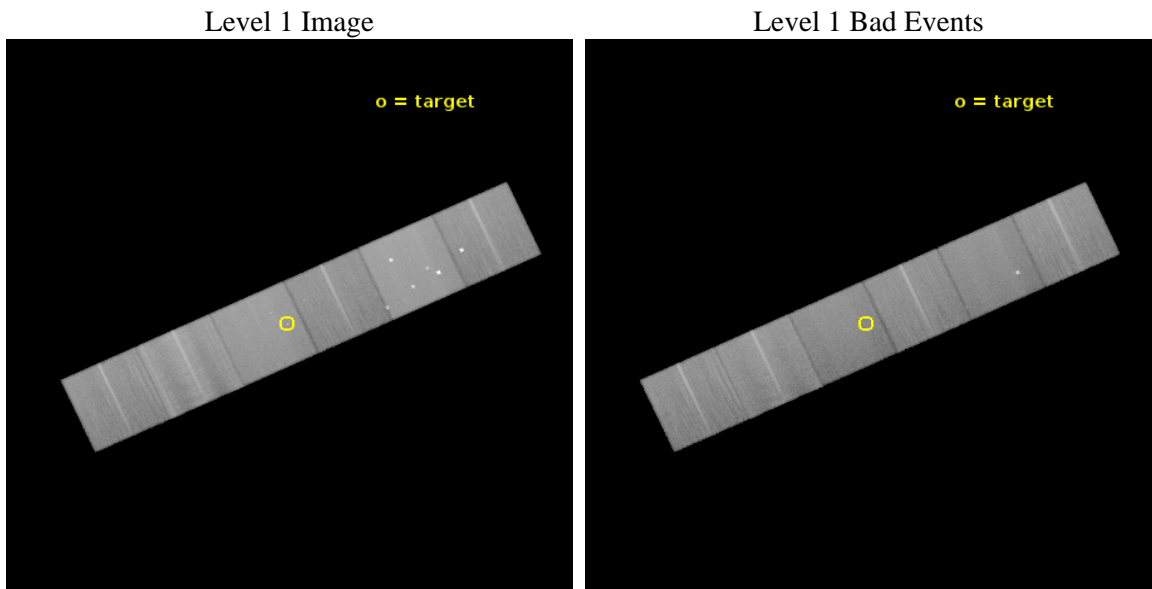
seq_num	200943	Sequence number
obs_id	16537	Observation id
title	Testing the wind-shock paradigm for B-type star X-ray production with theta Carinae (B0.2V)	Proposal title
observer	Dr. Veronique Petit	Principal investigator
object	HD 93030	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	160.739167	Observer's specified target RA [deg]
dec_targ	-64.394444	Observer's specified target Dec [deg]
ra_nom	160.73302540613	Nominal RA [deg]
dec_nom	-64.396078791513	Nominal Dec [deg]
roll_nom	155.15108819937	Nominal Roll [deg]
revision	1	Processing version of data
ontime	69958.399739444	Sum of GTIs [s]
livetime	69072.544358052	Livetime [s]
ontime4	69958.399739444	Sum of GTIs [s]
ontime5	69958.399739444	Sum of GTIs [s]
ontime6	69958.399739444	Sum of GTIs [s]
ontime7	69958.399739444	Sum of GTIs [s]
ontime8	69958.399739444	Sum of GTIs [s]
ontime9	69955.158759058	Sum of GTIs [s]
l2events	627396	Number of level 2 events



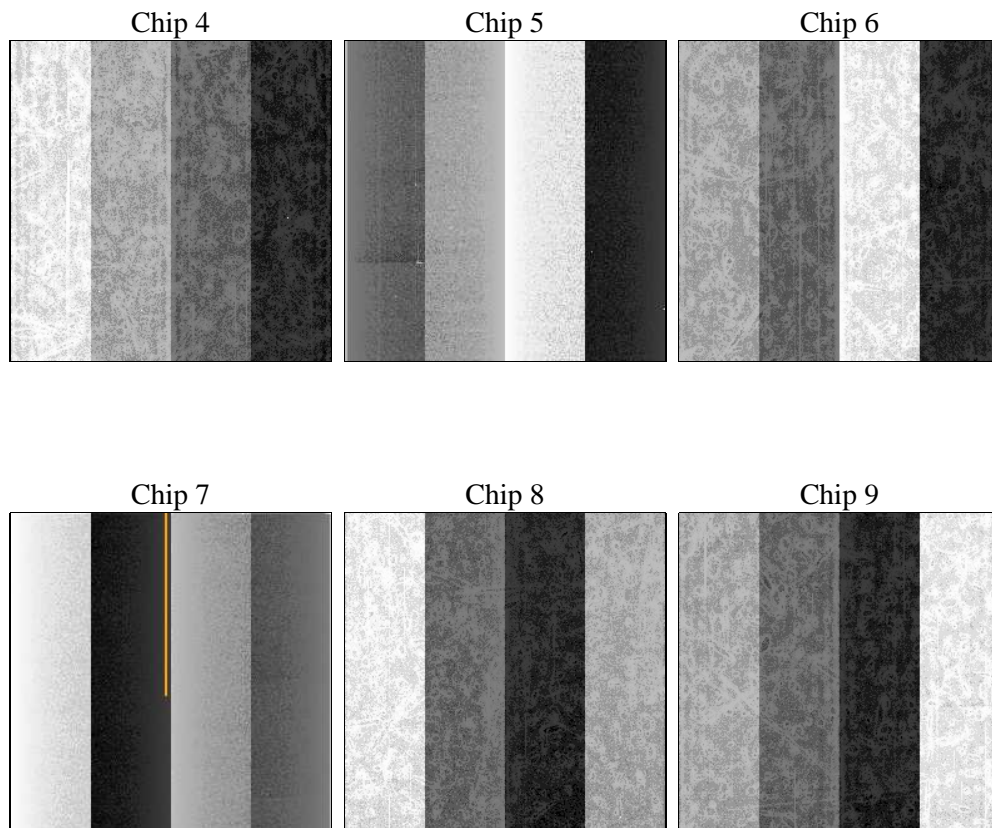
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	70000.249000	[s] Scheduled observation exposure time
ascdsver	10.2.4	Processing system revision	ontime	69958.399739444	Sum of GTIs [s]
caldbver	4.6.3	&#160	ontime4	69958.399739444	Sum of GTIs [s]
date	2014-09-30T20:22:49	Date and time of file creation	ontime5	69958.399739444	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	69958.399739444	Sum of GTIs [s]
			ontime7	69958.399739444	Sum of GTIs [s]
			ontime8	69958.399739444	Sum of GTIs [s]
			ontime9	69955.158759058	Sum of GTIs [s]
			l1events	2692913	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zpc_pos	(4076.00, 4100.55)	src1a sky pixel position

### 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	411944	610836	360846	475237	481863	352187	grade 0 events	33620	41096	14449	18402	39588	15943
rejected events	350047	302079	318025	266204	348338	306892		8%	6%	4%	3%	8%	4%
rejected %	84%	49%	88%	56%	72%	87%	grade 1 events	394	5915	213	550	378	225
								0%	0%	0%	0%	0%	0%
							grade 2 events	11137	96852	9821	43550	31338	10313
								2%	15%	2%	9%	6%	2%
							grade 3 events	4730	10072	4400	17734	13960	4689
								1%	1%	1%	3%	2%	1%
							grade 4 events	4490	9813	4297	17739	13319	4468
								1%	1%	1%	3%	2%	1%
							grade 5 events	18675	43823	18416	49003	26922	20273
								4%	7%	5%	10%	5%	5%
							grade 6 events	7922	150935	9857	111615	35331	9884
								1%	24%	2%	23%	7%	2%
							grade 7 events	330976	252330	299393	216644	321027	286392
								80%	41%	82%	45%	66%	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	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	160.796191	160.7330254061256	CCD I2 on	N	N
[deg] Pointing Dec	-64.393226	-64.39607879151329	CCD I3 on	N	N
[deg] Pointing Roll	155.051422	155.1510881993706	CCD S0 on	O1	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	528387876.184000	528386486.45275	CCD S5 on	O2	Y
Observation start date	2014-09-29T14:23:29	2014-09-29T14:01:26	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	528457877.184000	528458102.69422	On-chip summing requested	N	N
Observation end date	2014-09-30T09:50:10	2014-09-30T09:55:02	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect

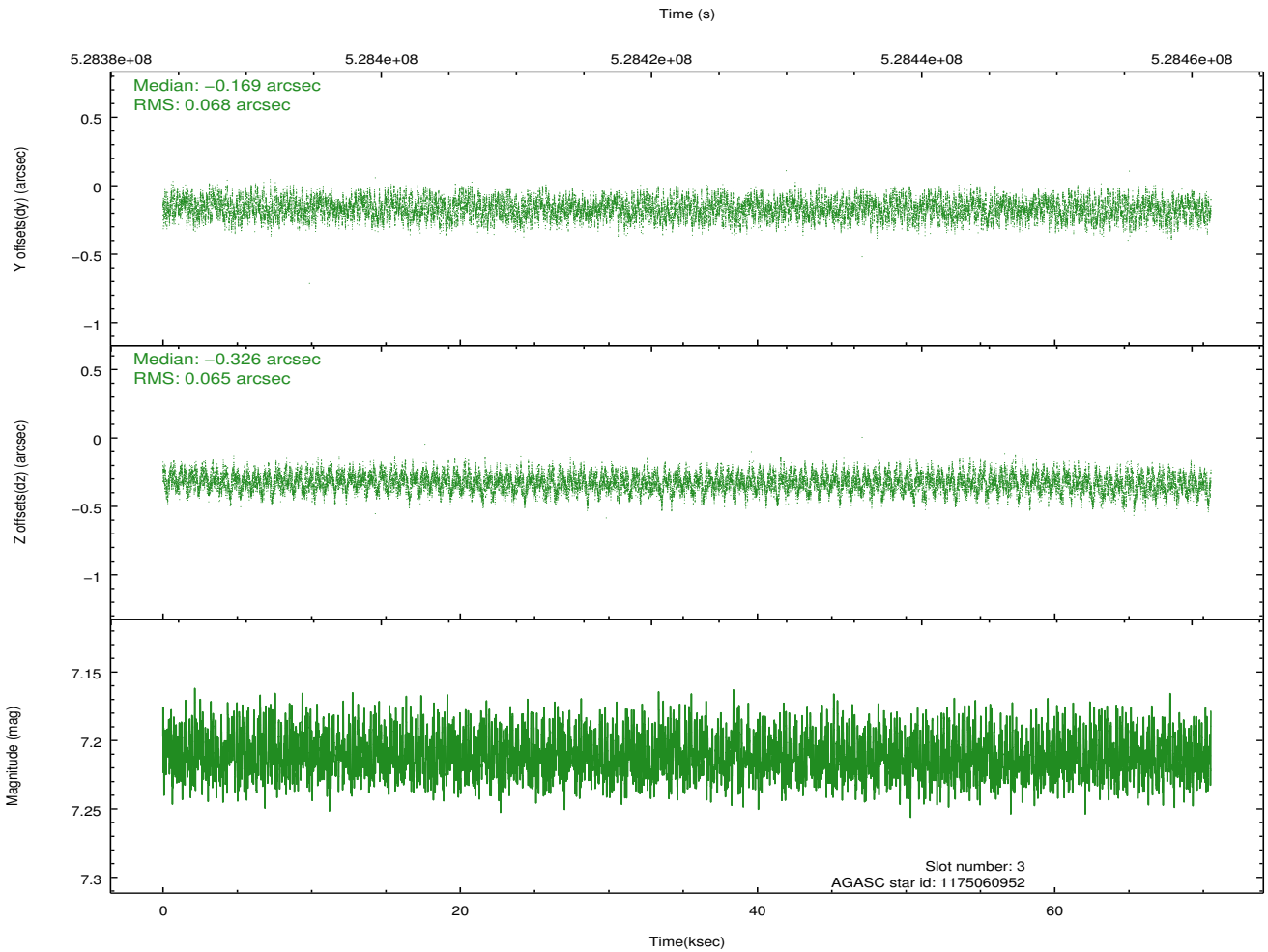
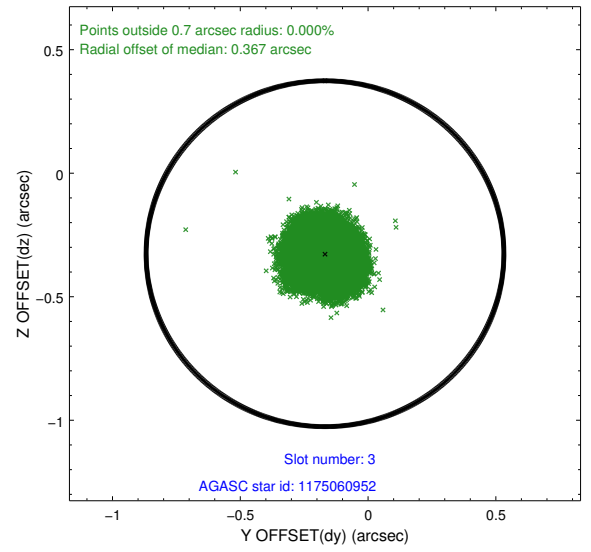
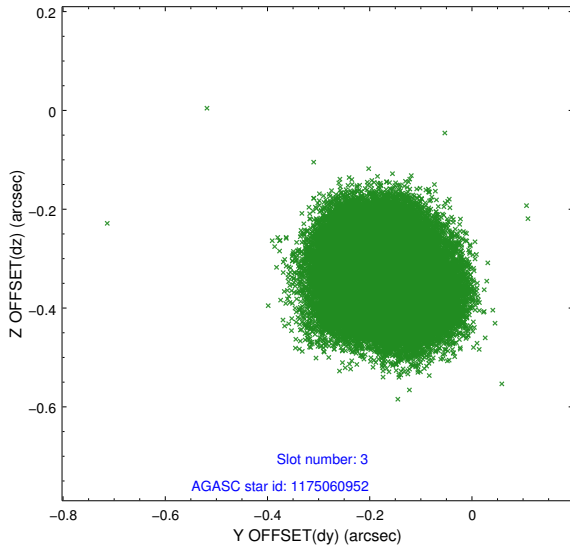


### Slot Statistics

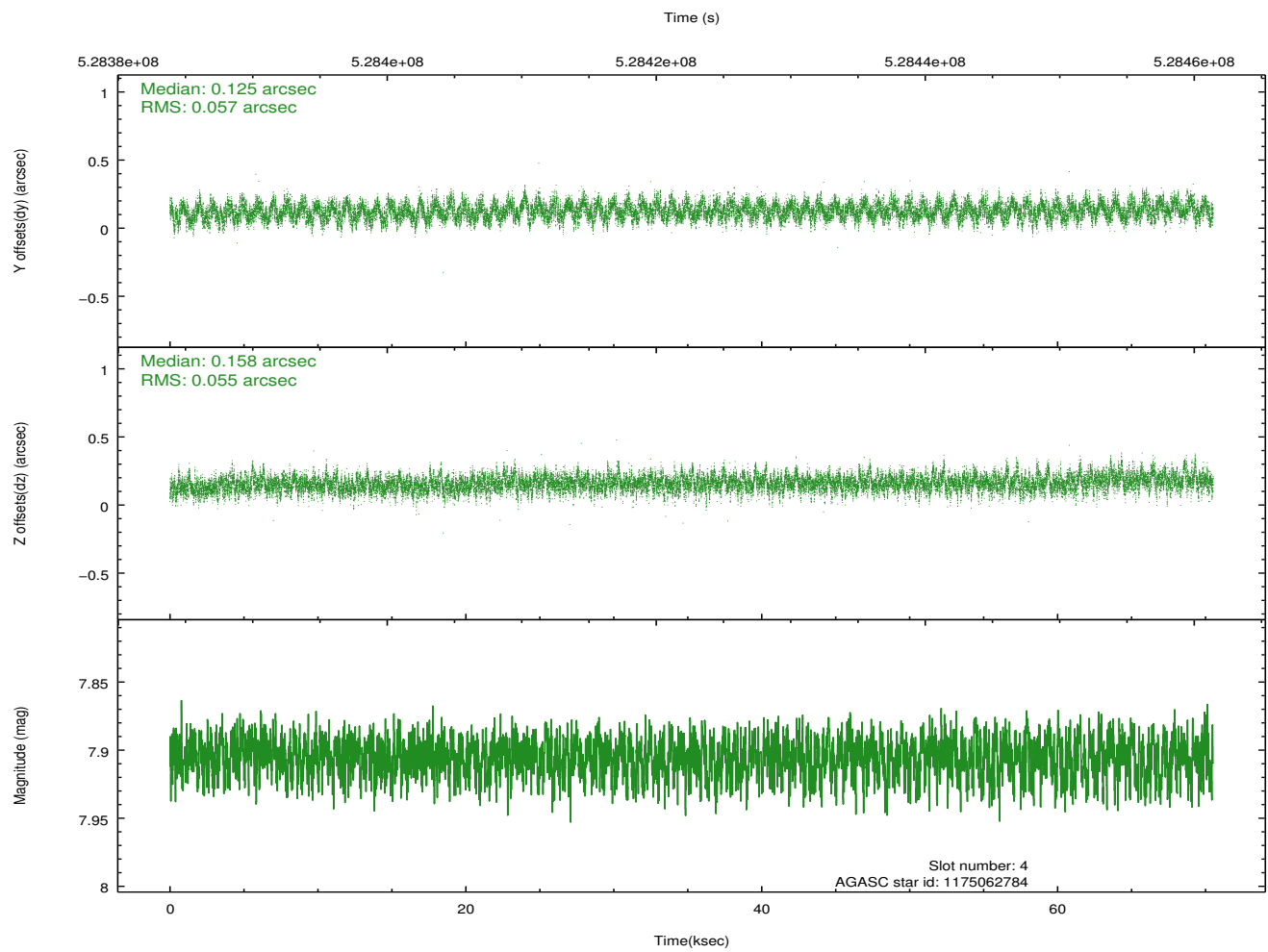
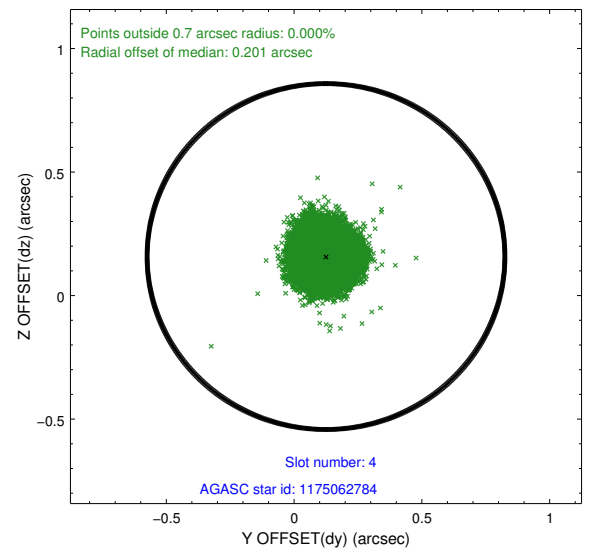
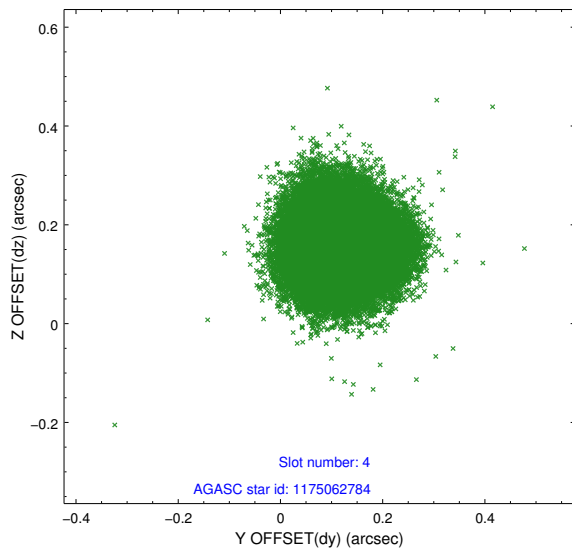
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.94	17200	-0.170	-0.021	0.021	0.034	0.000000	0.000000	-780.02	-1745.07
1	FID	ACIS-S-4	7.02	17200	0.329	0.089	0.024	0.050	0.000000	0.000000	2133.78	163.60
2	FID	ACIS-S-5	7.06	17200	-0.190	-0.059	0.024	0.035	0.000000	0.000000	-1832.97	157.03
3	GUIDE	1175060952	7.21	34402	-0.169	-0.326	0.104	0.156	160.276743	-64.474379	606.37	607.49
4	GUIDE	1175062784	7.90	34397	0.125	0.158	0.085	0.135	161.170427	-63.809772	346.94	-2153.18
5	GUIDE	1175063096	6.86	34397	-0.068	-0.030	0.094	0.148	159.845125	-64.111789	1778.59	-277.88
6	GUIDE	1175065256	7.35	34402	-0.039	0.058	0.061	0.103	160.089650	-64.008701	1592.31	-779.13
7	GUIDE	1175071144	6.99	34398	0.144	0.140	0.096	0.168	161.916283	-64.547174	-1810.88	-214.53

## 2.4 Star Slots

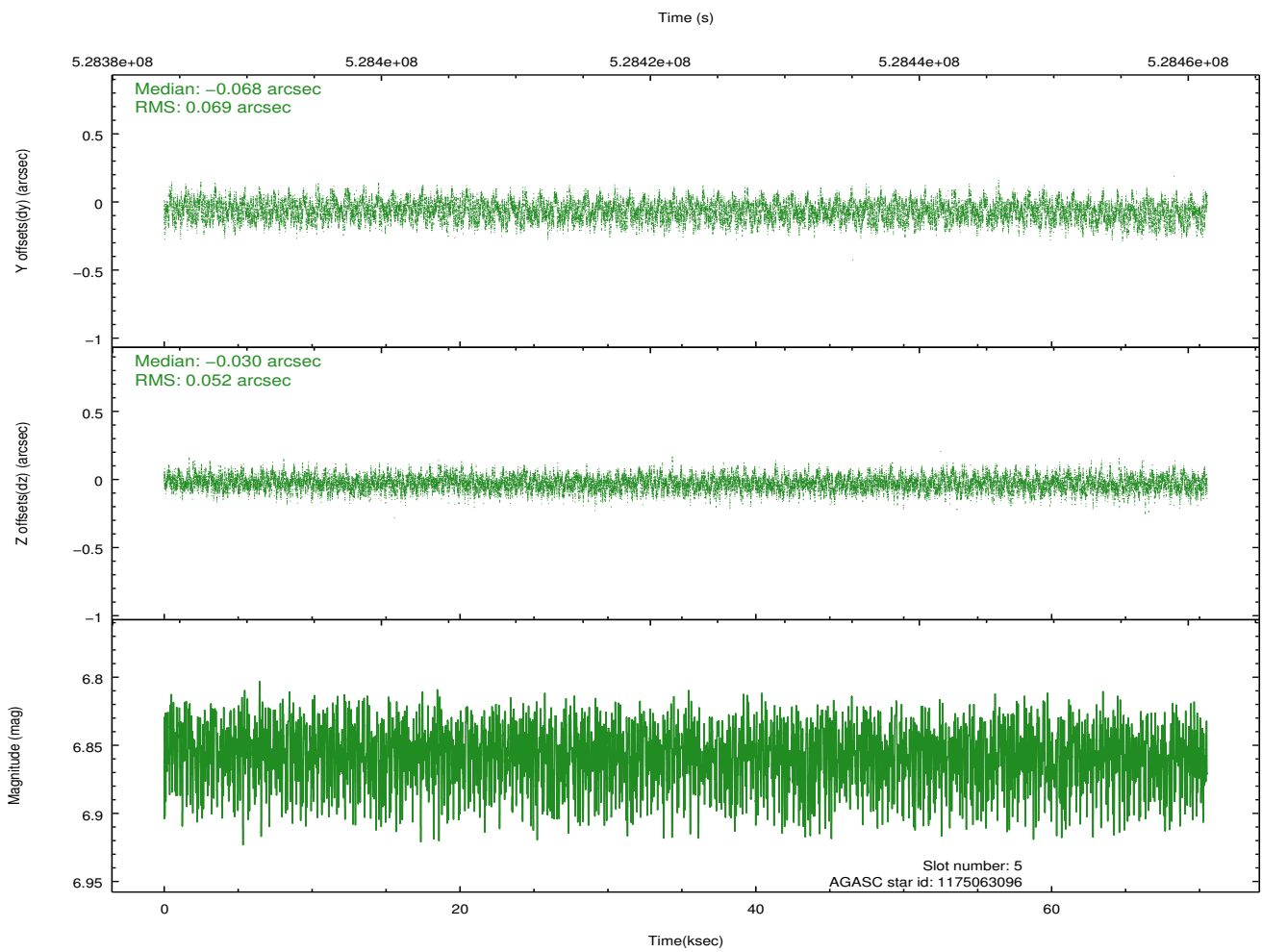
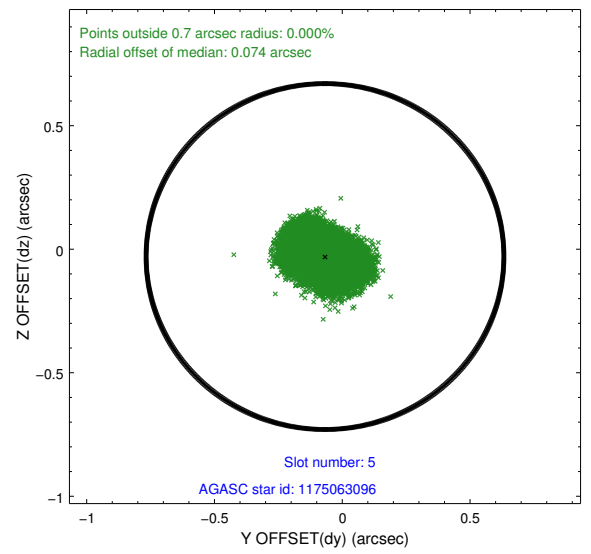
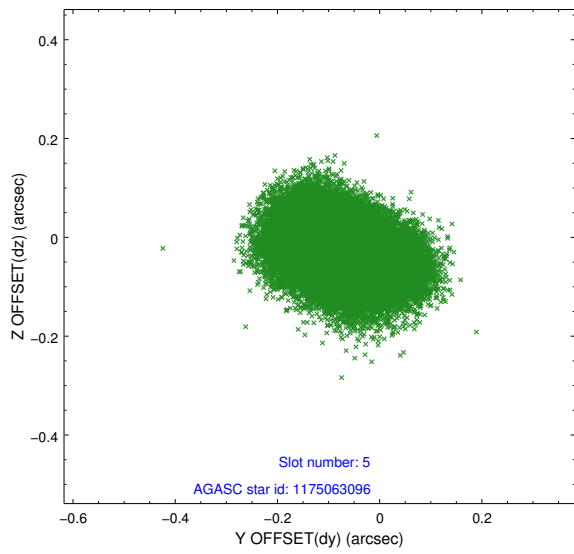
### 2.4.1 Slot 3



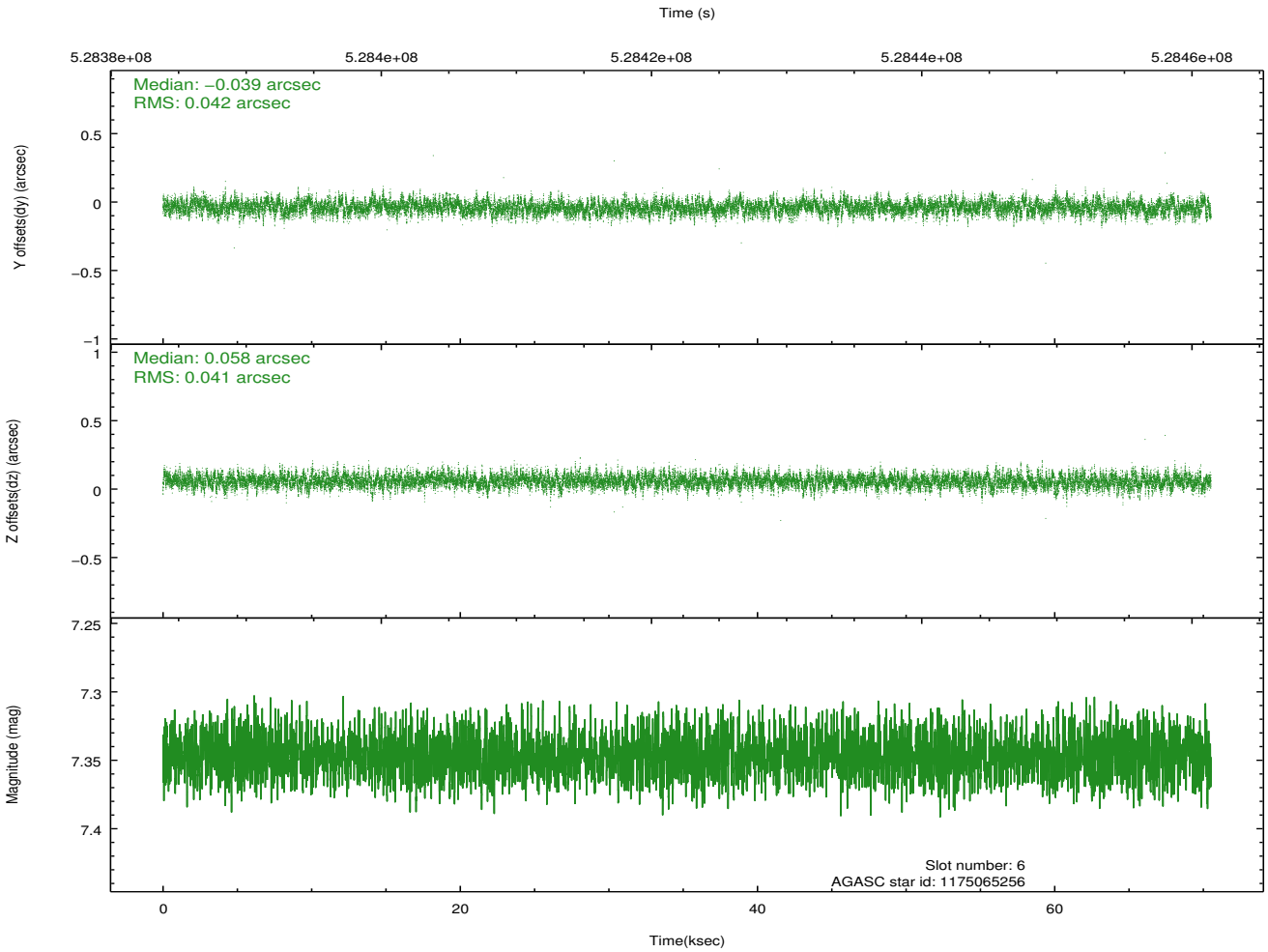
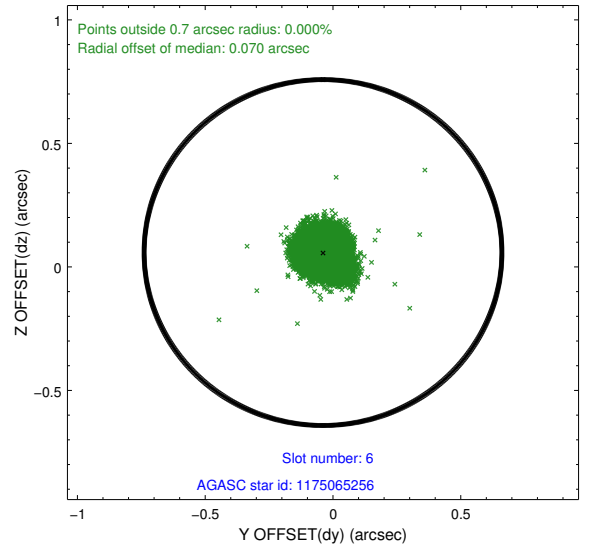
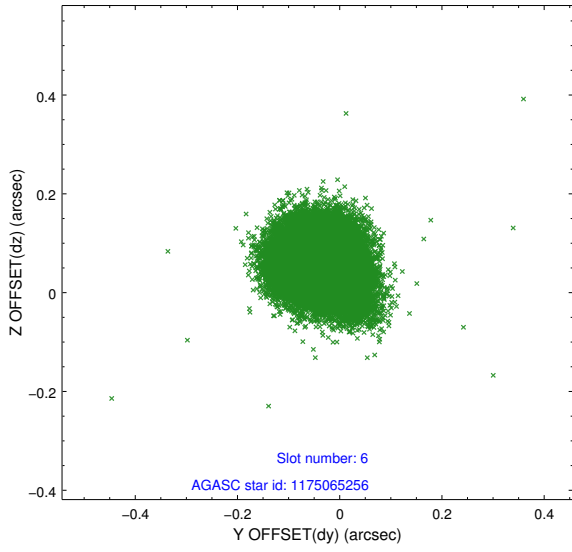
## 2.4.2 Slot 4



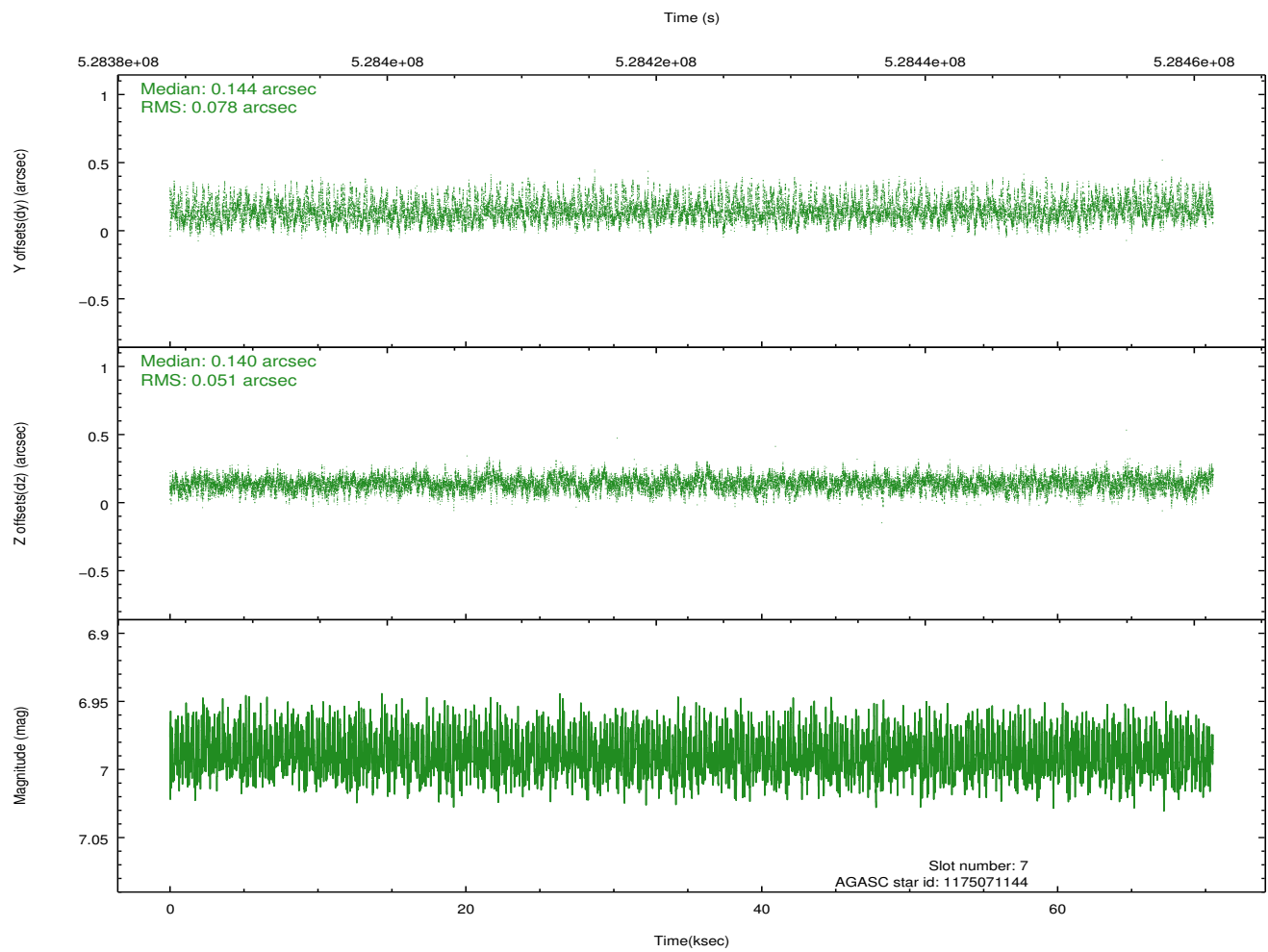
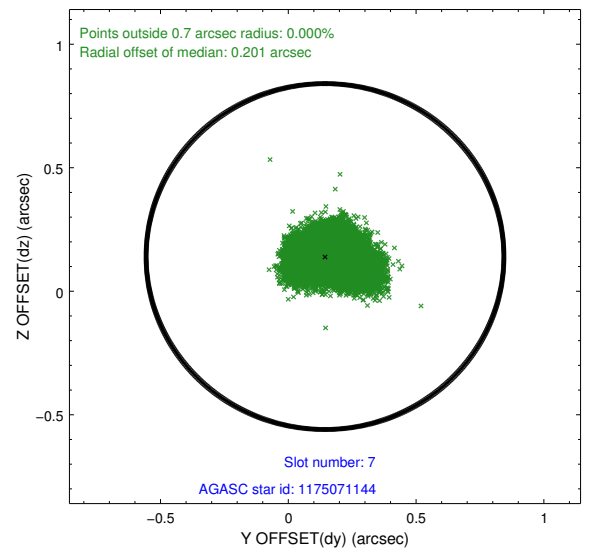
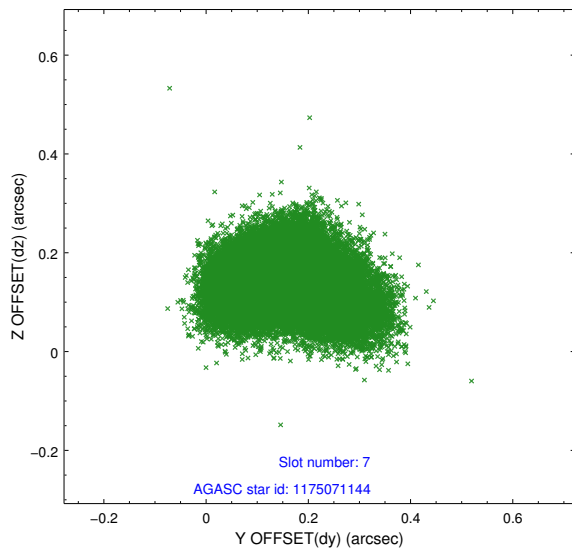
### 2.4.3 Slot 5



### 2.4.4 Slot 6

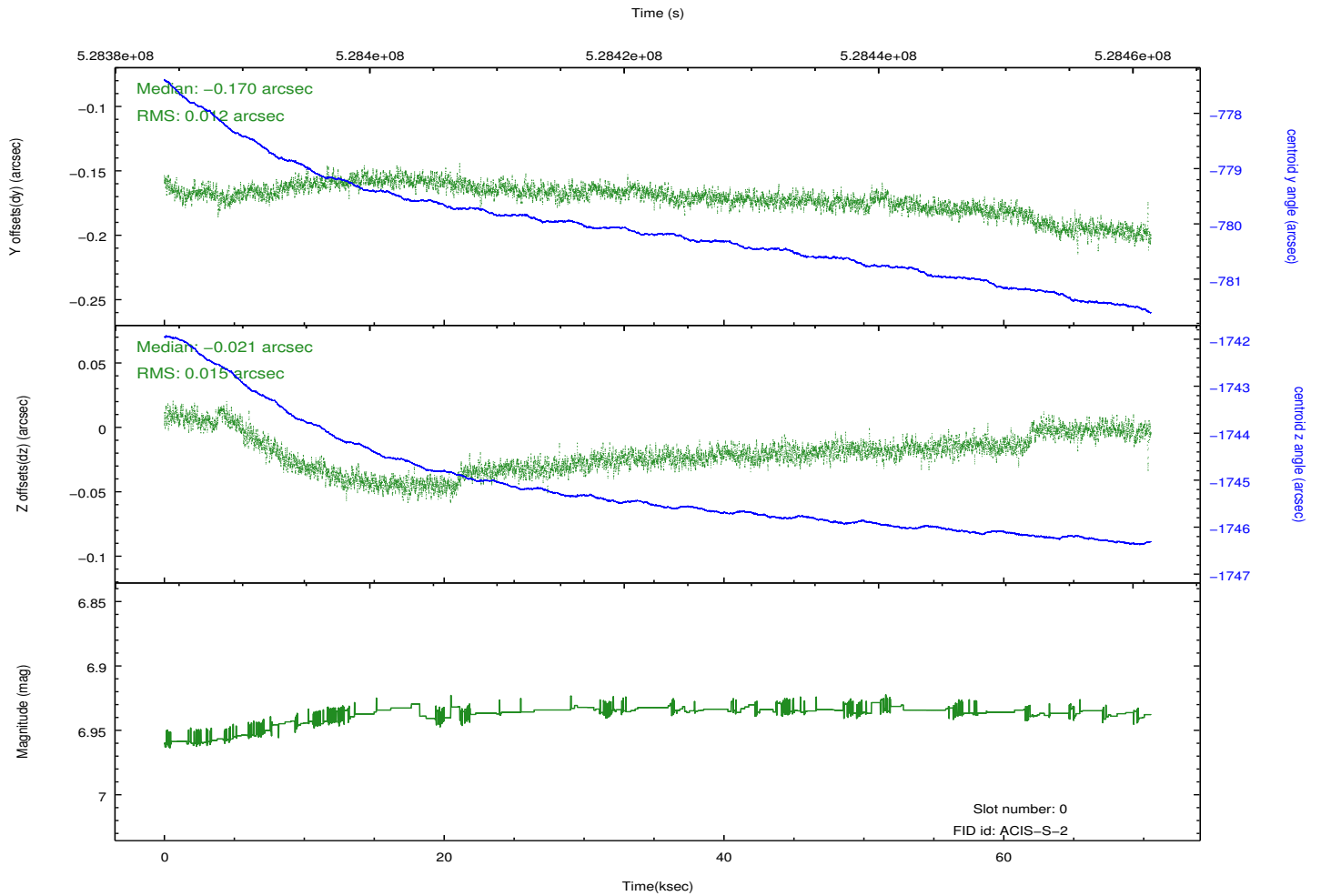
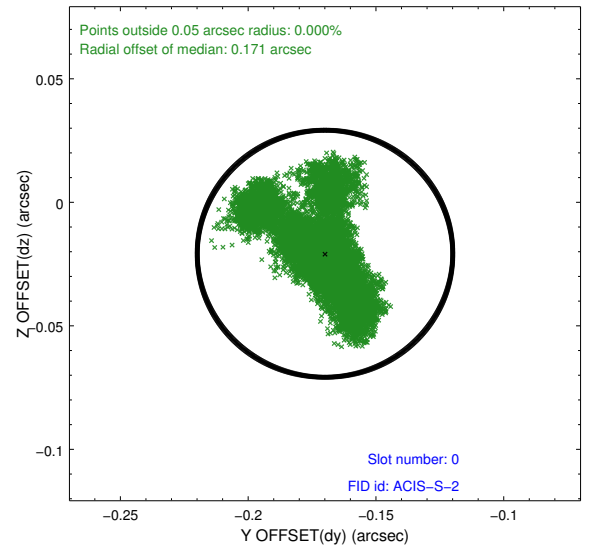
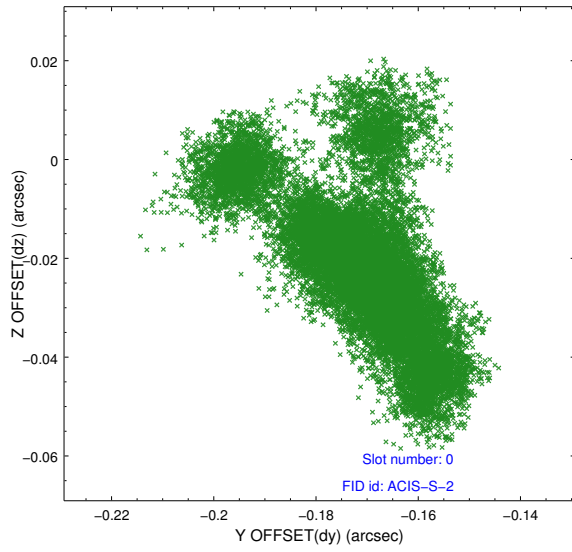


## 2.4.5 Slot 7

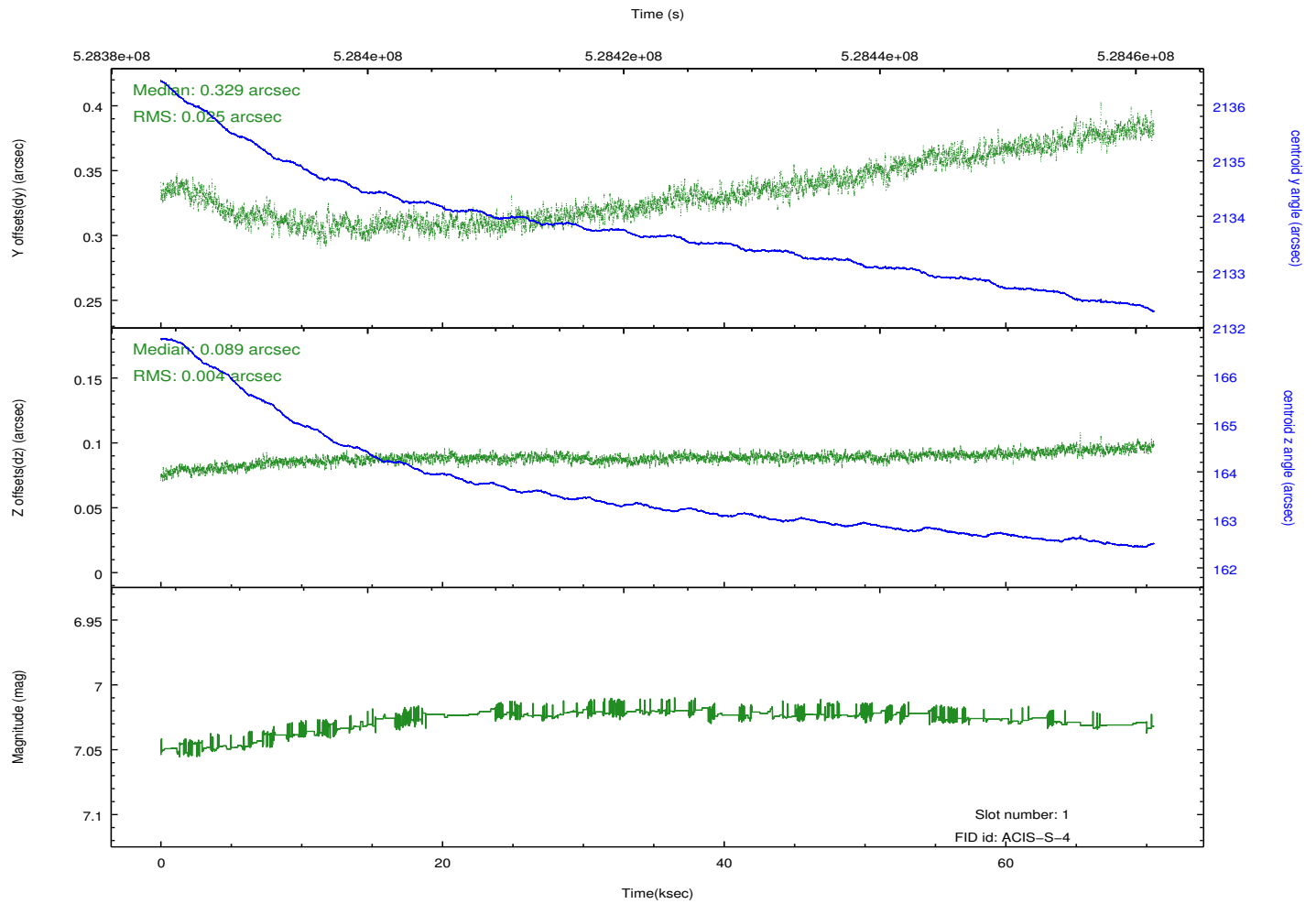
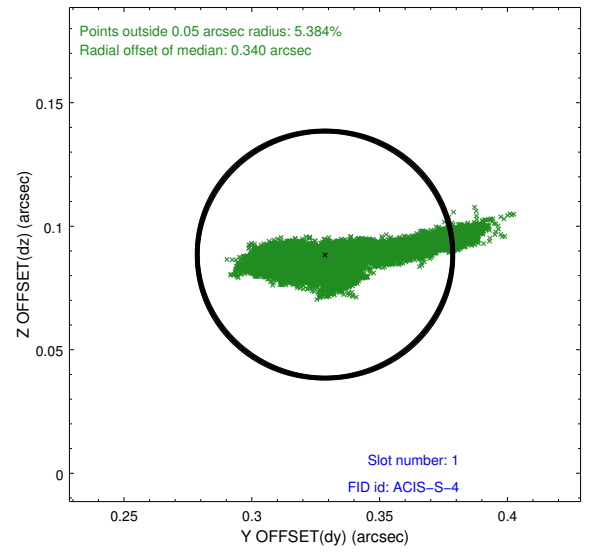
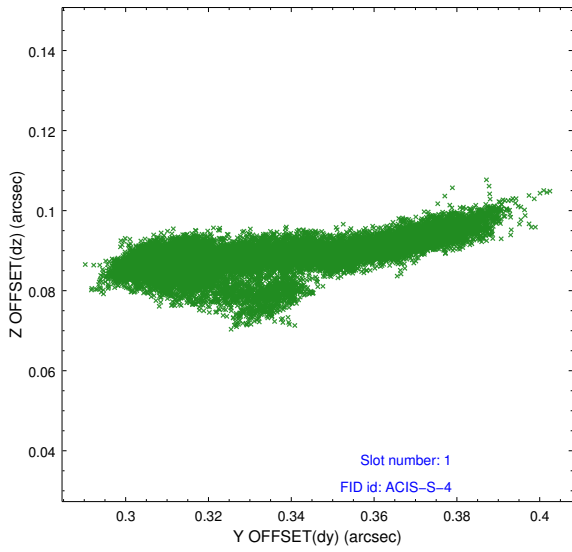


## 2.5 FID Slots

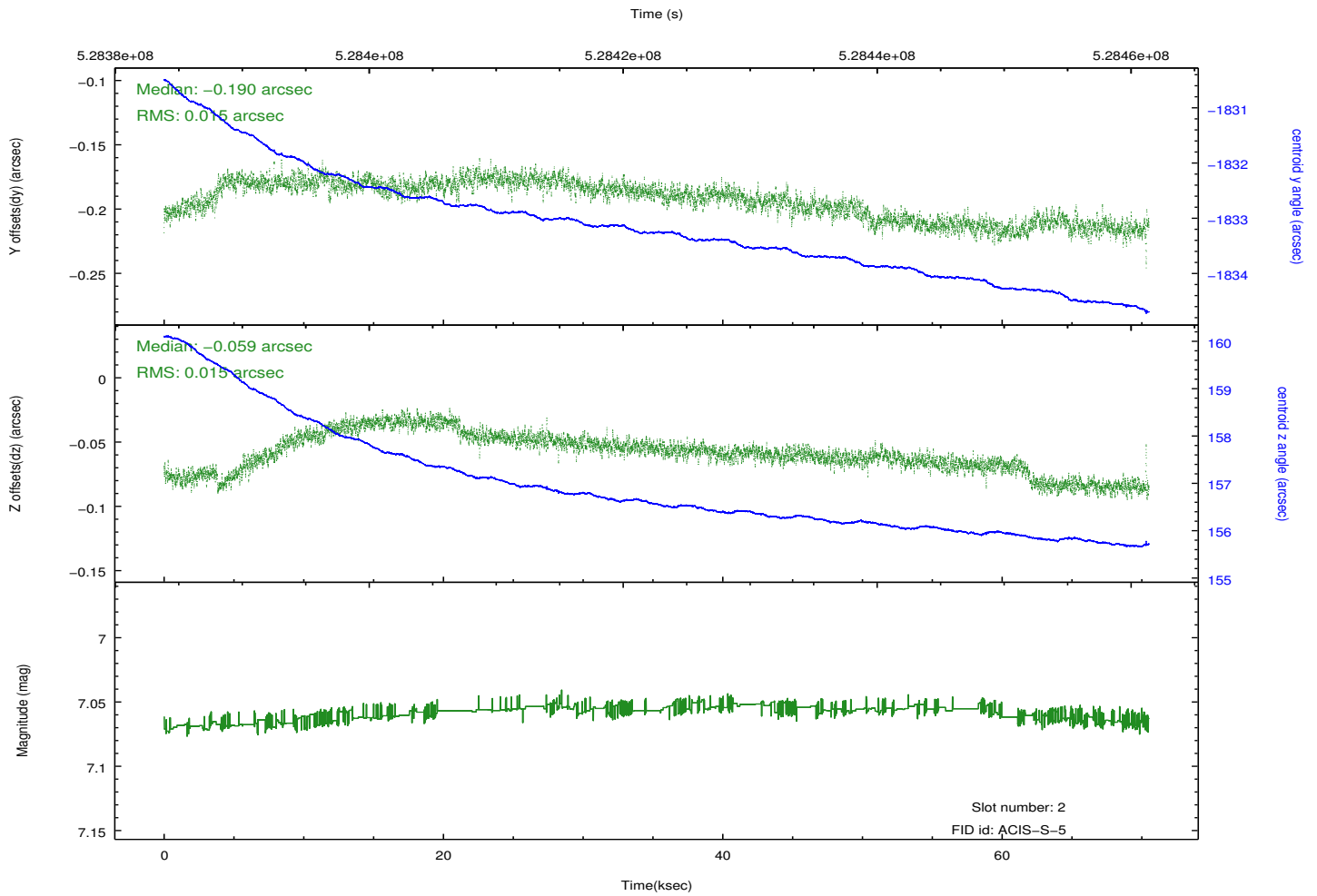
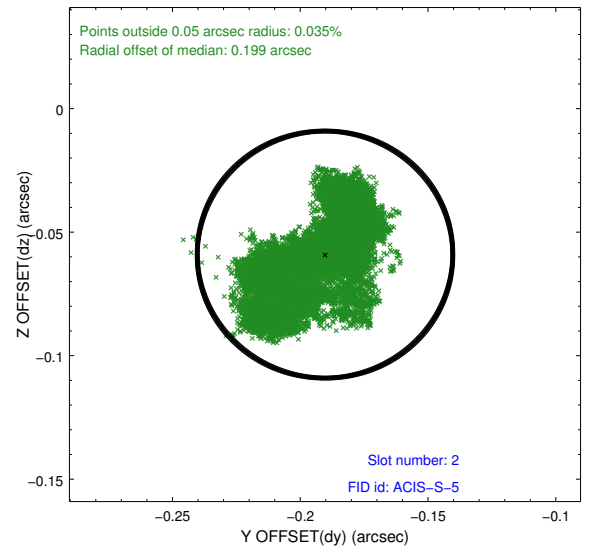
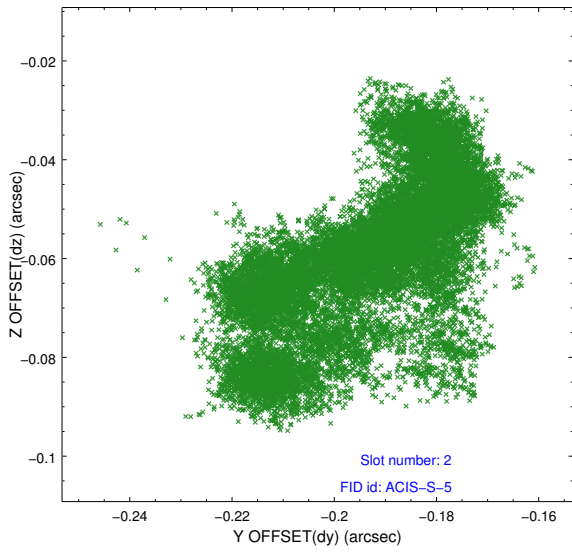
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

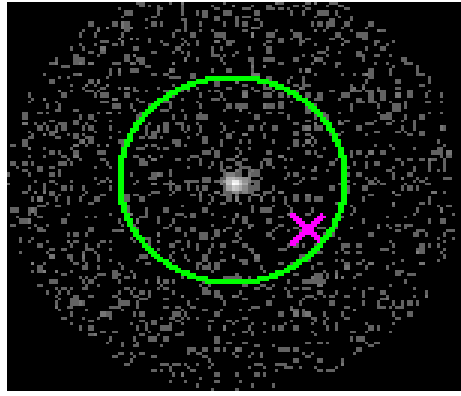


### 3 Gratings

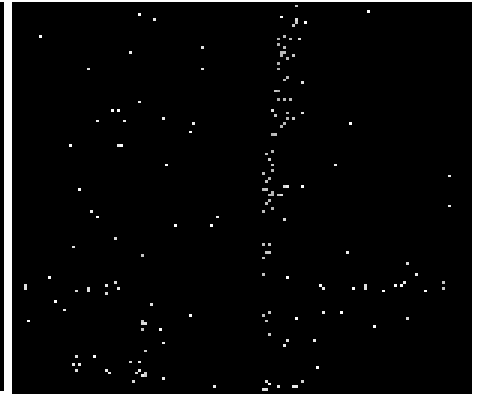
#### 3.1 HEG Arm



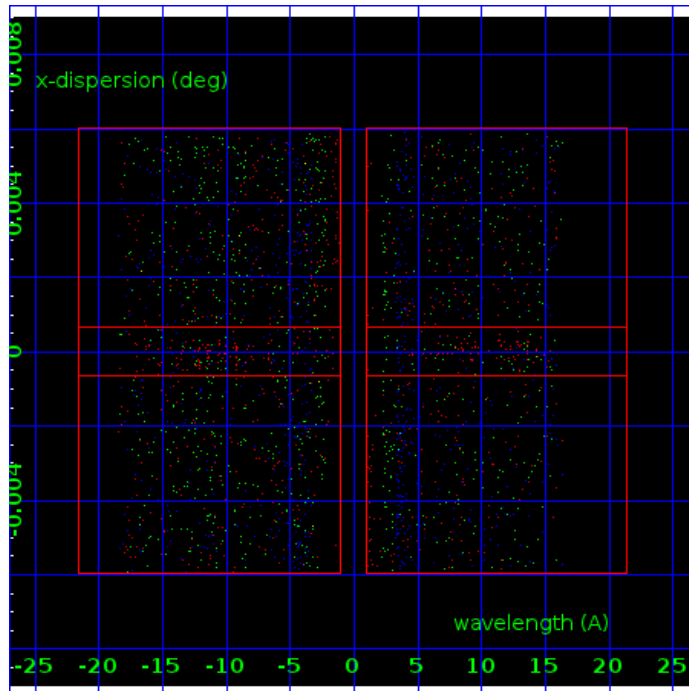
HEG Order Sort 123



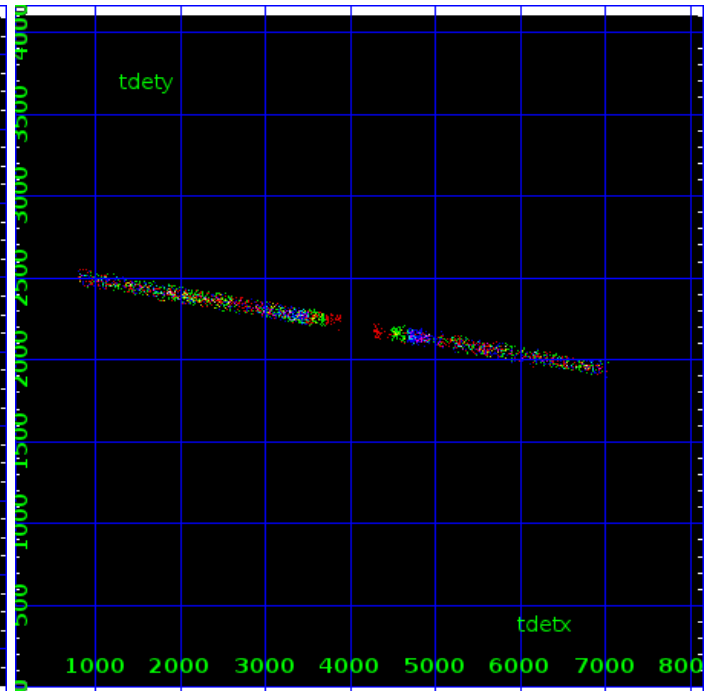
HEG Zero Order



HEG Order Sort ALL

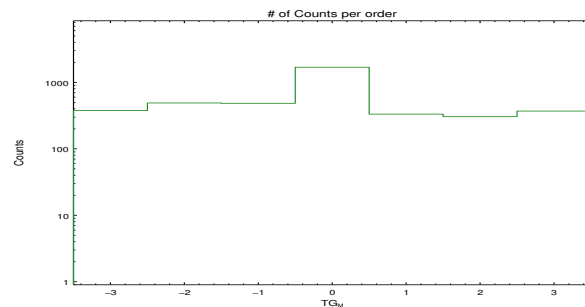


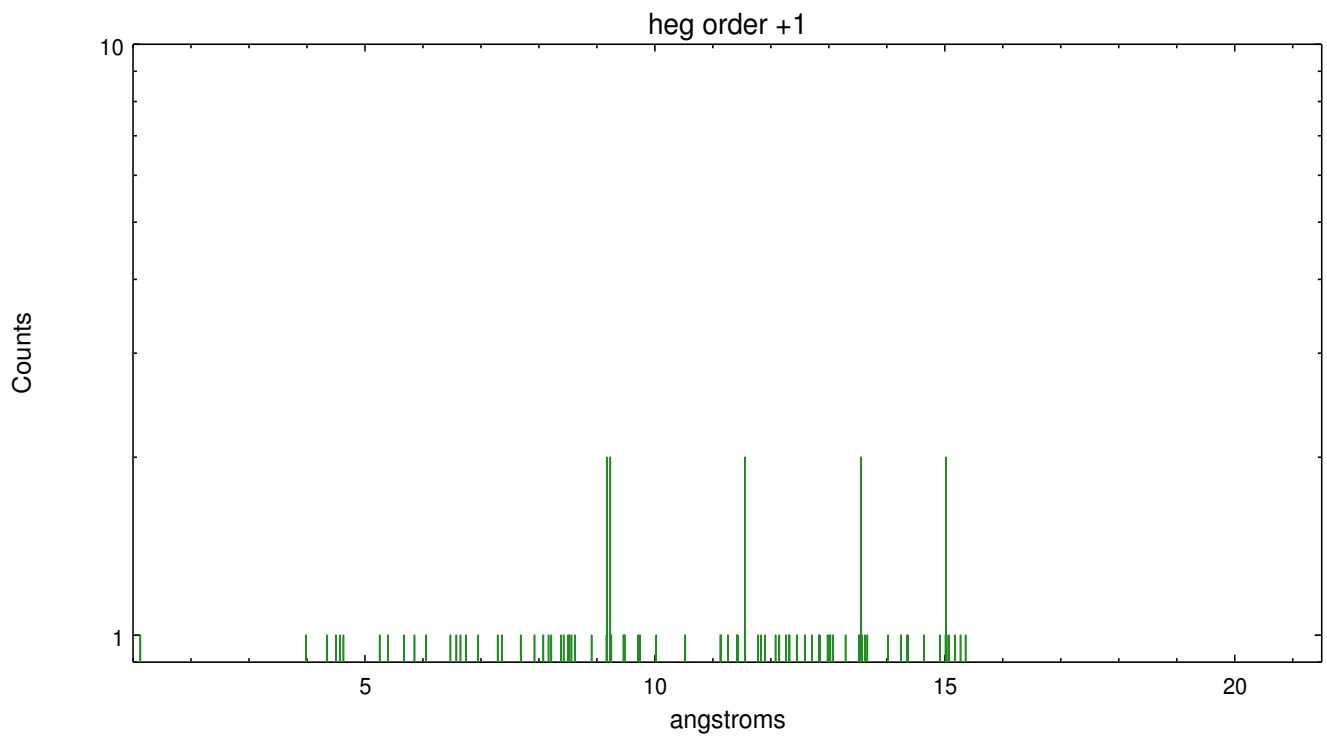
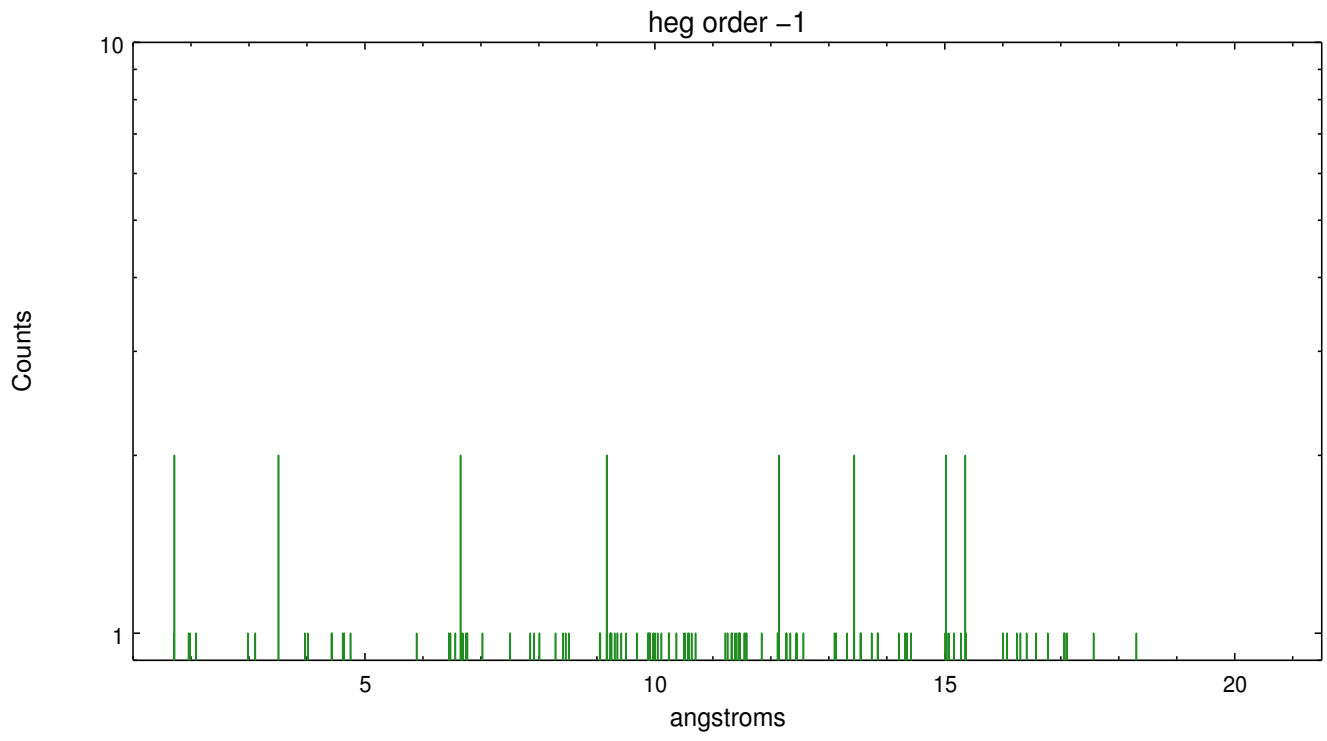
Spot Image HEG



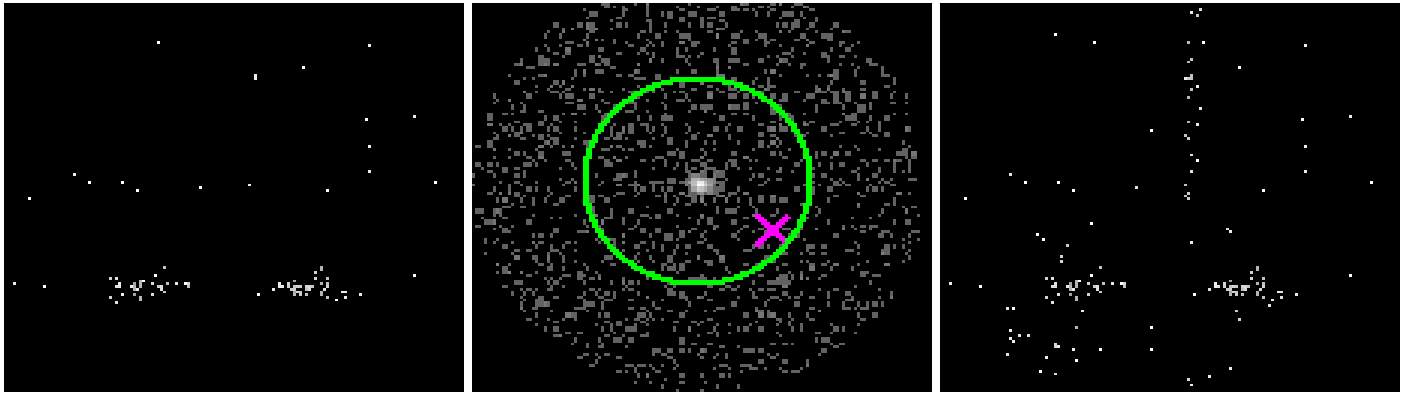
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	377	490	484	1690	333	305	370





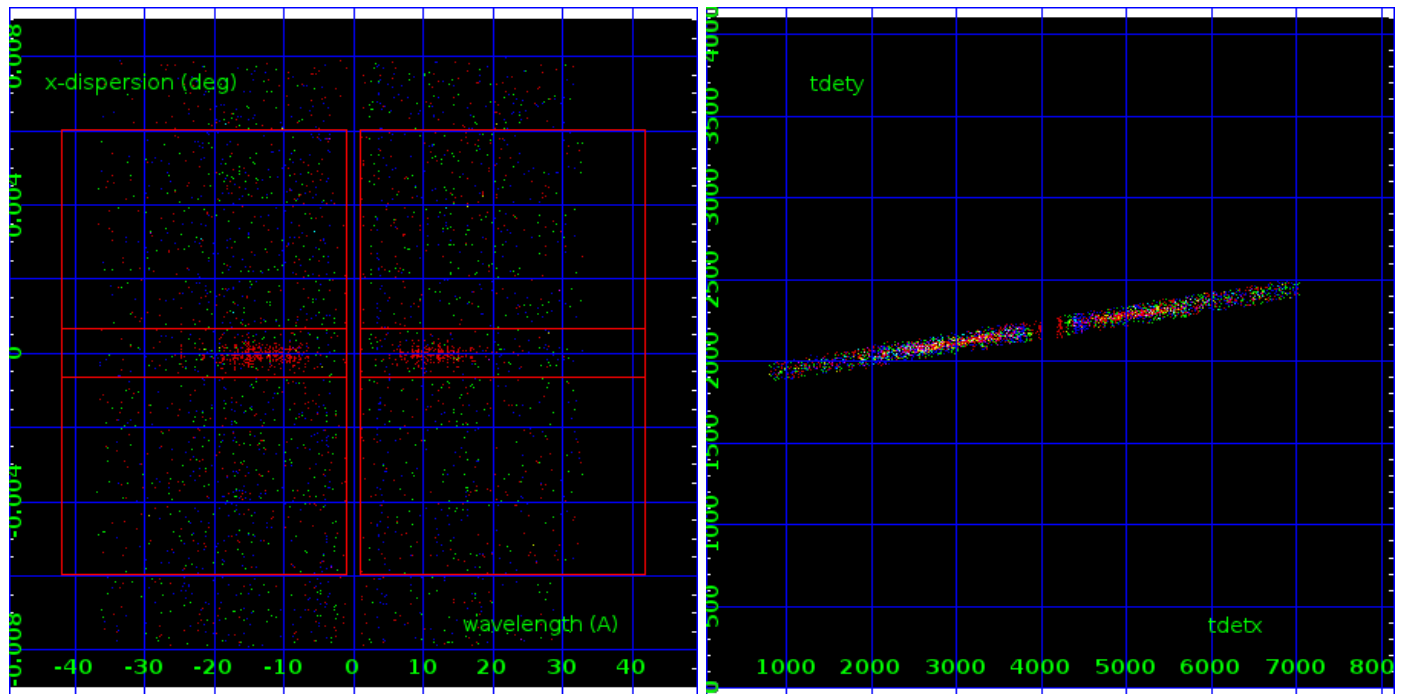
### 3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

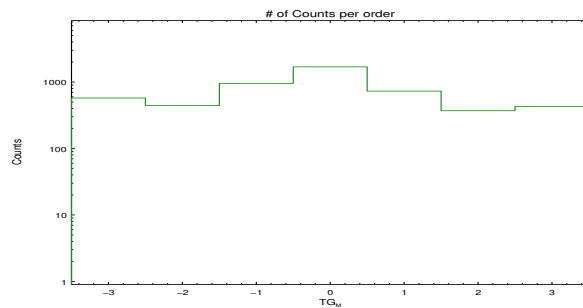
MEG Order Sort ALL

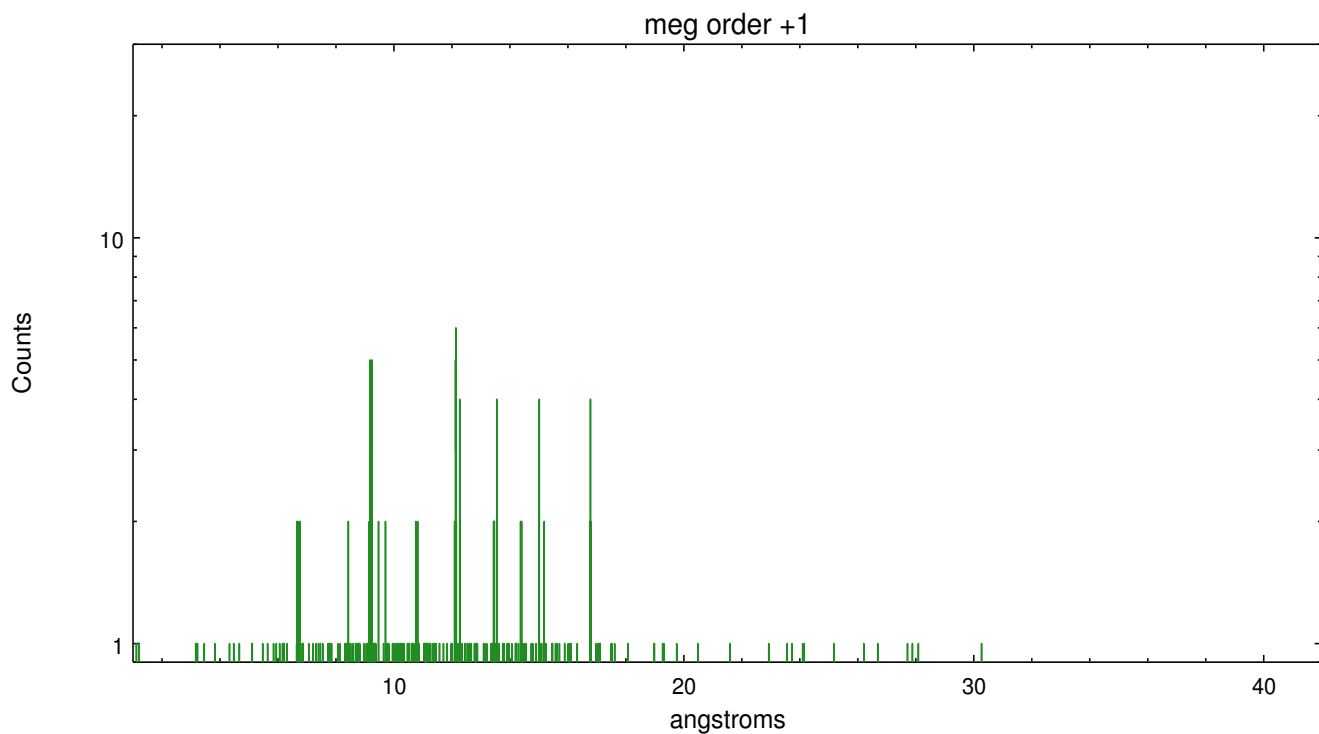
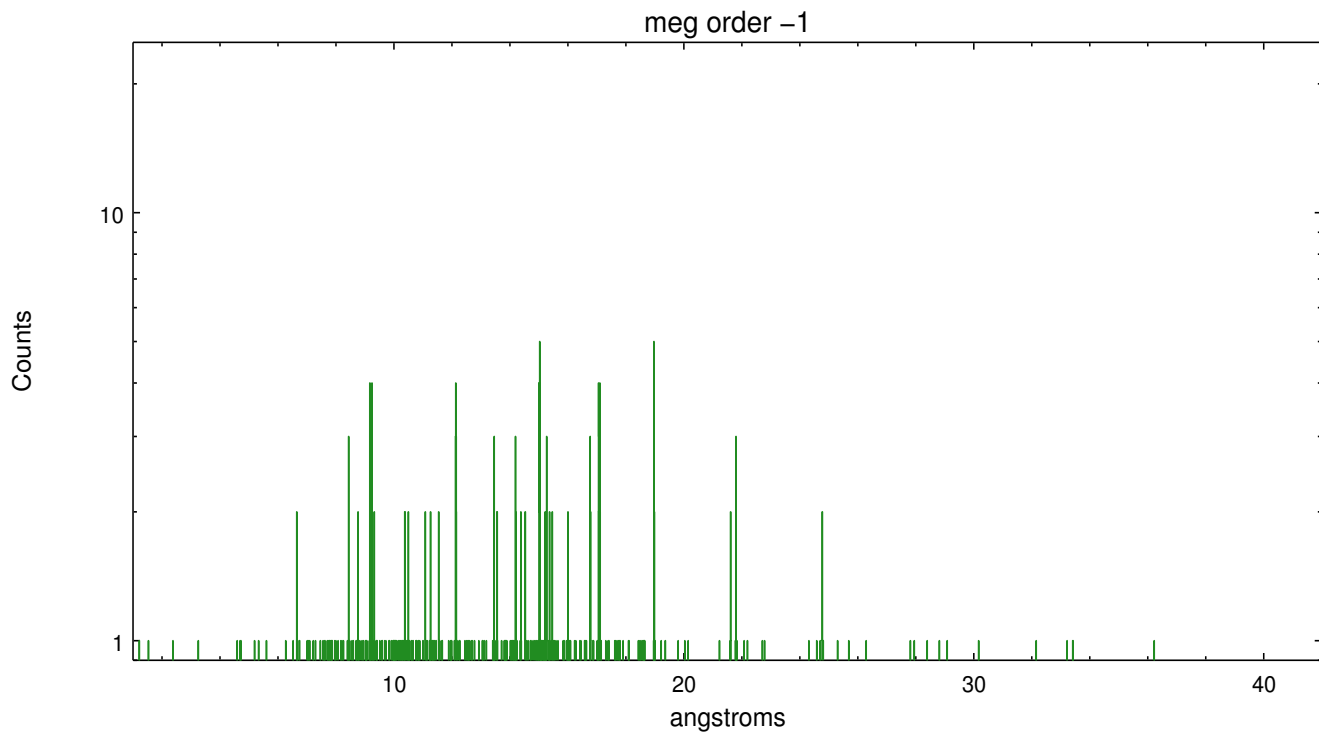


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	575	445	954	1690	730	370	430





## A Summary

### A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2014.10.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	69.958399739444

### A.2 Comments