

# V&V Reference Report

## L2 ASCDS Version : 10.2.4

Observation 15730 - L2 Version 1  
Chandra X-Ray Center

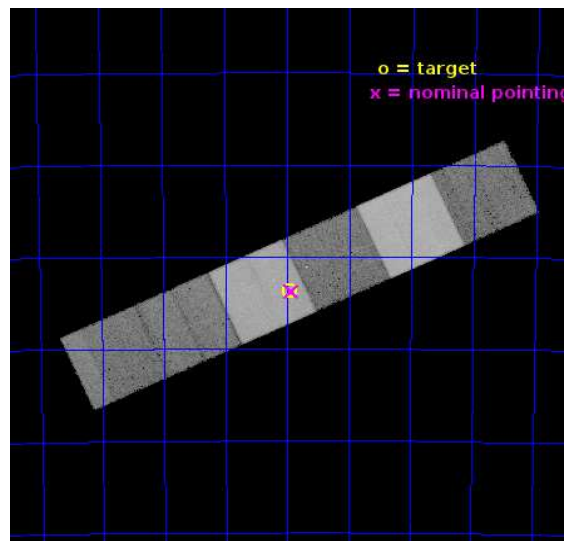
L2 Processing Date : Sep 20 2014

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# 1 Front

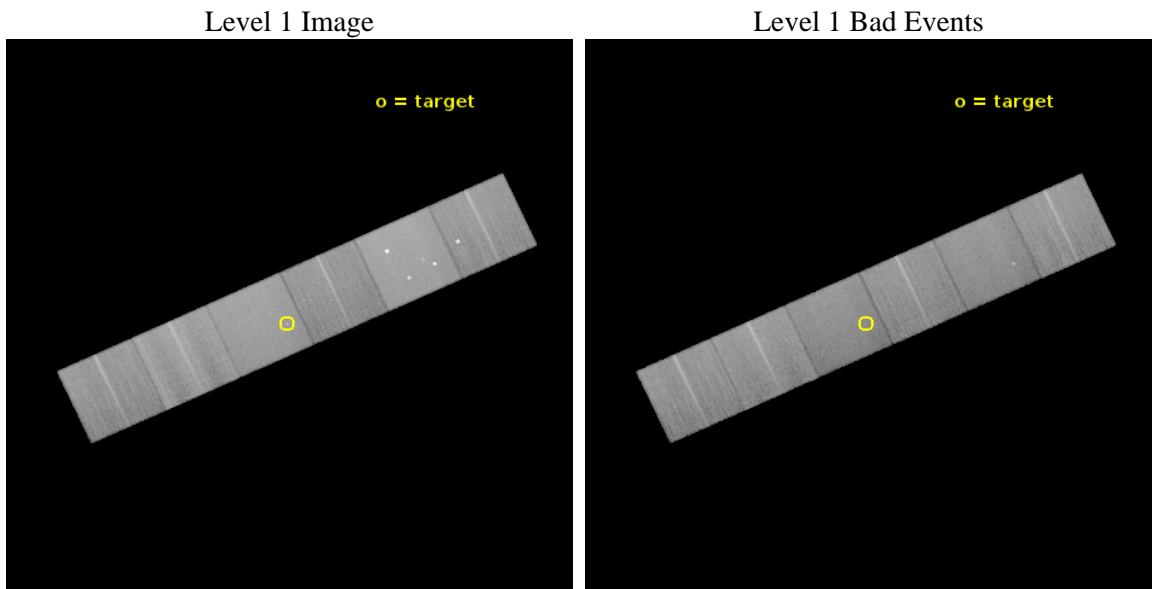
seq_num	200943	Sequence number
obs_id	15730	Observation id
title	Testing the wind-shock paradigm for B-type star X-ray production with theta Carinae (B0.2V)	Proposal title
observer	Dr. Veronique Petit	Principal investigator
object	HD 93030	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	160.739167	Observer's specified target RA [deg]
dec_targ	-64.394444	Observer's specified target Dec [deg]
ra_nom	160.73303178679	Nominal RA [deg]
dec_nom	-64.396082069709	Nominal Dec [deg]
roll_nom	155.15109232398	Nominal Roll [deg]
revision	1	Processing version of data
ontime	51961.599806488	Sum of GTIs [s]
livetime	51303.630742219	Livetime [s]
ontime4	51961.599806488	Sum of GTIs [s]
ontime5	51961.599806488	Sum of GTIs [s]
ontime6	51961.599806488	Sum of GTIs [s]
ontime7	51961.599806488	Sum of GTIs [s]
ontime8	51961.599806488	Sum of GTIs [s]
ontime9	51961.599806488	Sum of GTIs [s]
l2events	459496	Number of level 2 events



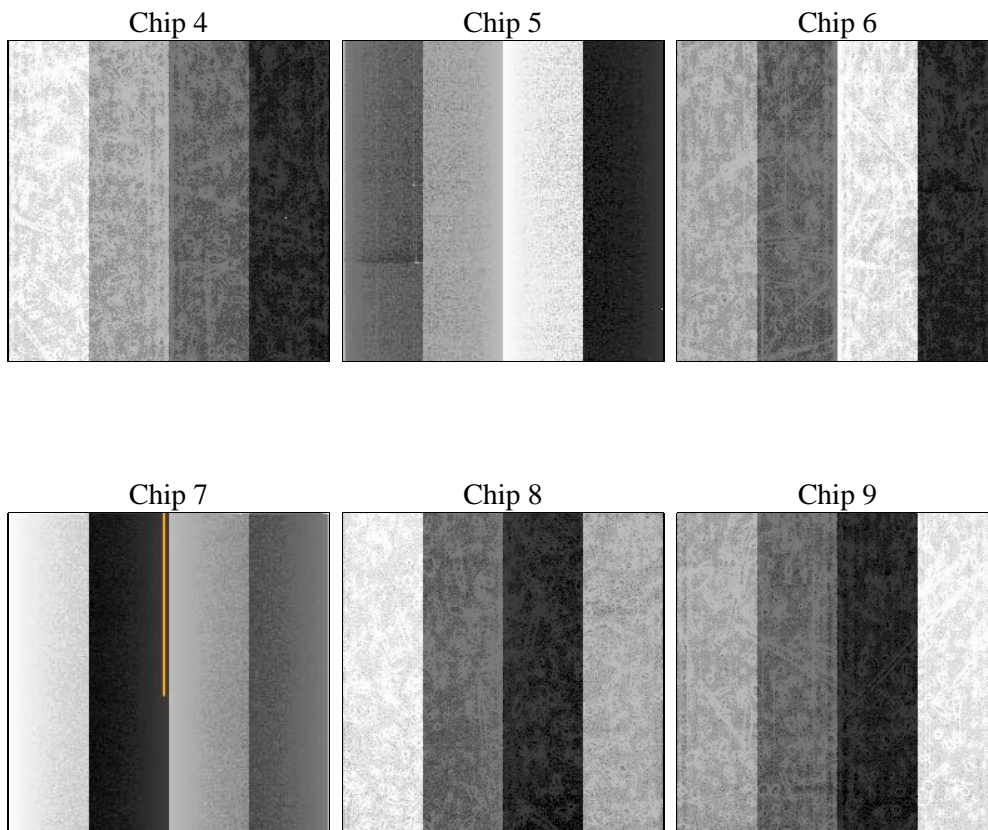
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	52000.000000	[s] Scheduled observation exposure time
ascdsver	10.2.4	Processing system revision	ontime	51961.599806488	Sum of GTIs [s]
caldbver	4.6.3	&#160	ontime4	51961.599806488	Sum of GTIs [s]
date	2014-09-20T13:57:33	Date and time of file creation	ontime5	51961.599806488	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	51961.599806488	Sum of GTIs [s]
			ontime7	51961.599806488	Sum of GTIs [s]
			ontime8	51961.599806488	Sum of GTIs [s]
			ontime9	51961.599806488	Sum of GTIs [s]
			l1events	1968791	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zpc_pos	(4077.13, 4100.24)	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	304173	443810	260417	351662	350896	257833	grade 0 events	21351	32189	10874	13688	27608	11640
rejected events	261705	220682	228674	197816	255184	225171		7%	7%	4%	3%	7%	4%
rejected %	86%	49%	87%	56%	72%	87%	grade 1 events	290	1331	124	450	242	135
								0%	0%	0%	0%	0%	0%
							grade 2 events	8058	64939	7166	31864	22720	7148
								2%	14%	2%	9%	6%	2%
							grade 3 events	3564	7196	3249	13110	10103	3515
								1%	1%	1%	3%	2%	1%
							grade 4 events	3383	7028	3176	12970	9574	3272
								1%	1%	1%	3%	2%	1%
							grade 5 events	13831	31999	13733	36263	19836	15046
								4%	7%	5%	10%	5%	5%
							grade 6 events	6115	111790	7279	82223	25716	7093
								2%	25%	2%	23%	7%	2%
							grade 7 events	247581	187338	214816	161094	235097	209984
								81%	42%	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	160.7330317867923	CCD I2 on	N	N
[deg] Pointing Dec	-64.393226	-64.39608206970905	CCD I3 on	N	N
[deg] Pointing Roll	155.051422	155.1510923239812	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	-187.132523	-187.1254020033014	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-3	-3.007120579706367	CCD S4 on	Y	Y
[s] Observation start time (MET)	527481582.184000	527480122.97742	CCD S5 on	O2	Y
Observation start date	2014-09-19T02:38:35	2014-09-19T02:15:22	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	527533582.184000	527534591.48044	On-chip summing requested	N	N
Observation end date	2014-09-19T17:05:15	2014-09-19T17:23:11	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

## 2.3 Aspect

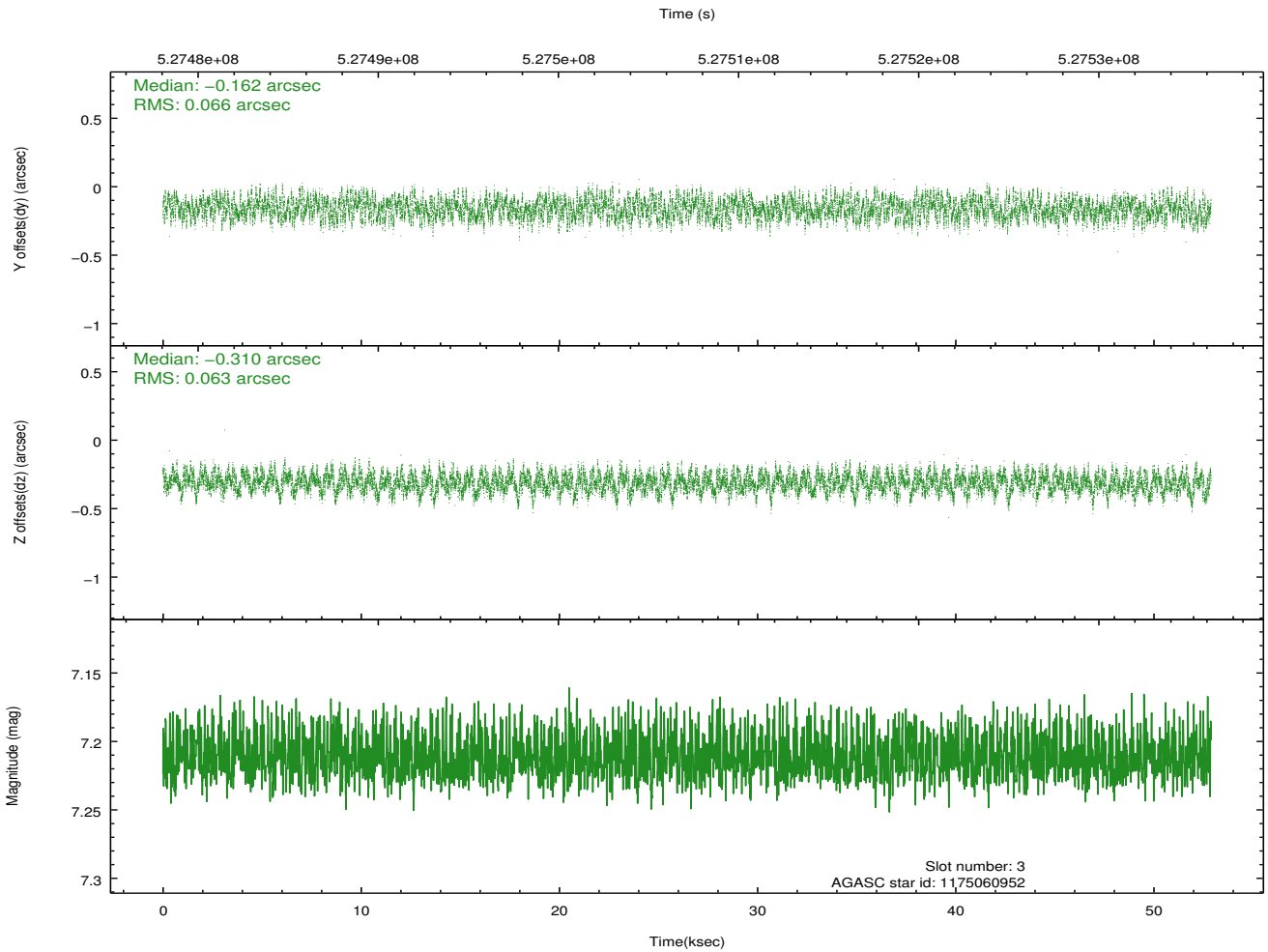
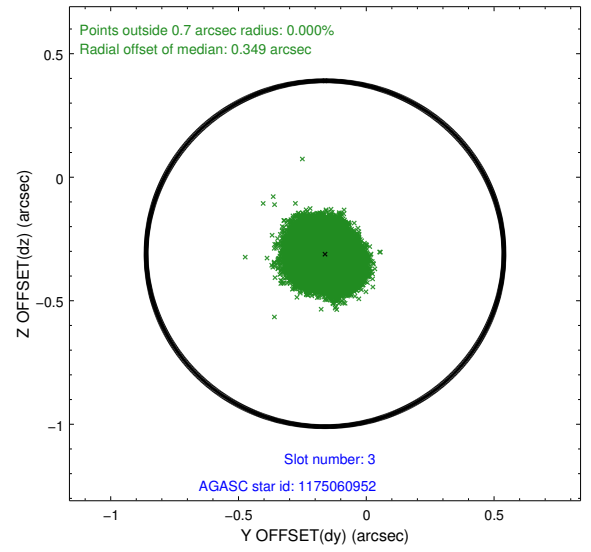
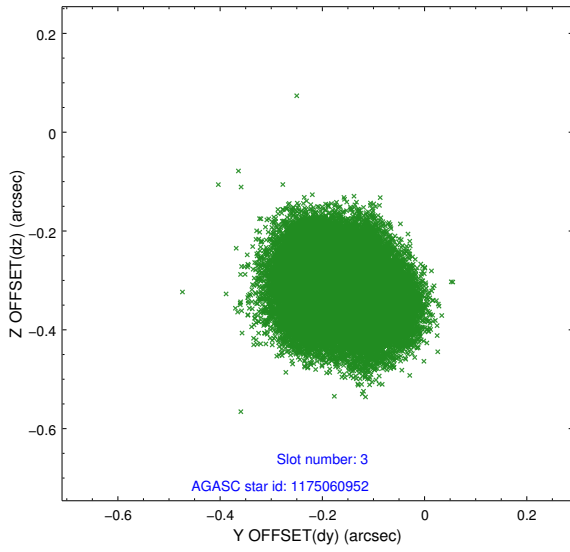


### Slot Statistics

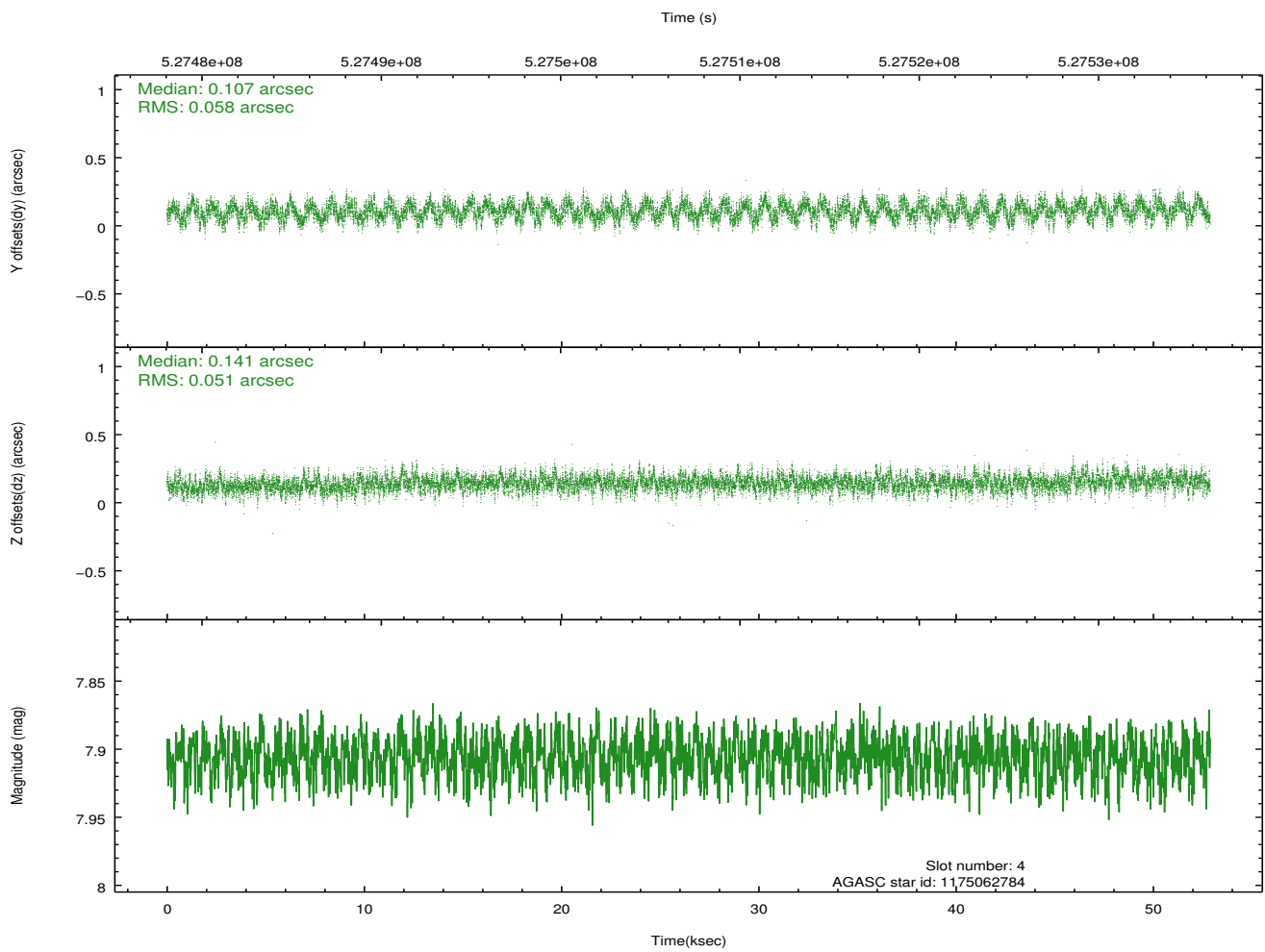
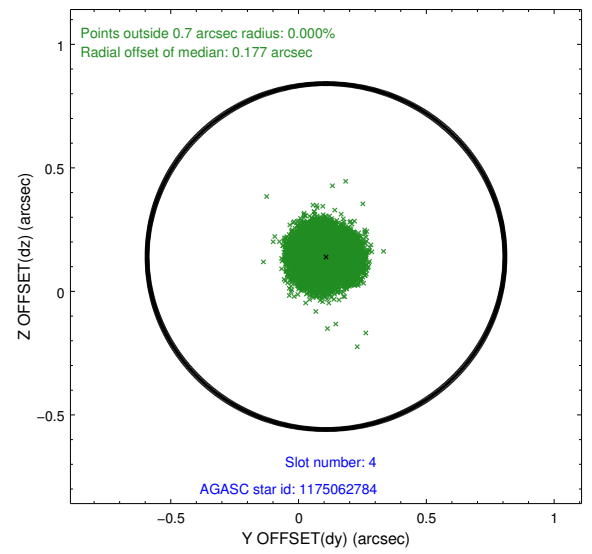
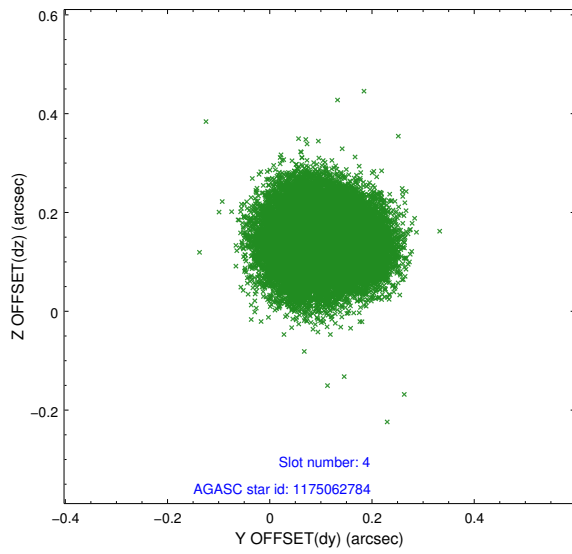
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.03	12899	0.019	0.024	0.010	0.021	0.000000	0.000000	918.17	-1802.92
1	FID	ACIS-S-5	7.06	12900	-0.175	-0.009	0.018	0.037	0.000000	0.000000	-1831.09	94.54
2	FID	ACIS-S-6	7.19	12899	0.133	-0.004	0.015	0.030	0.000000	0.000000	383.78	738.54
3	GUIDE	1175060952	7.21	25799	-0.162	-0.310	0.101	0.151	160.276743	-64.474379	606.40	607.50
4	GUIDE	1175062784	7.90	25794	0.107	0.141	0.083	0.130	161.170427	-63.809772	346.94	-2153.20
5	GUIDE	1175063096	6.86	25798	-0.052	-0.019	0.091	0.145	159.845125	-64.111789	1778.62	-277.90
6	GUIDE	1175065256	7.34	25794	-0.017	0.054	0.057	0.097	160.089650	-64.008701	1592.36	-779.15
7	GUIDE	1175071144	6.99	25799	0.115	0.135	0.091	0.168	161.916283	-64.547174	-1810.88	-214.55

## 2.4 Star Slots

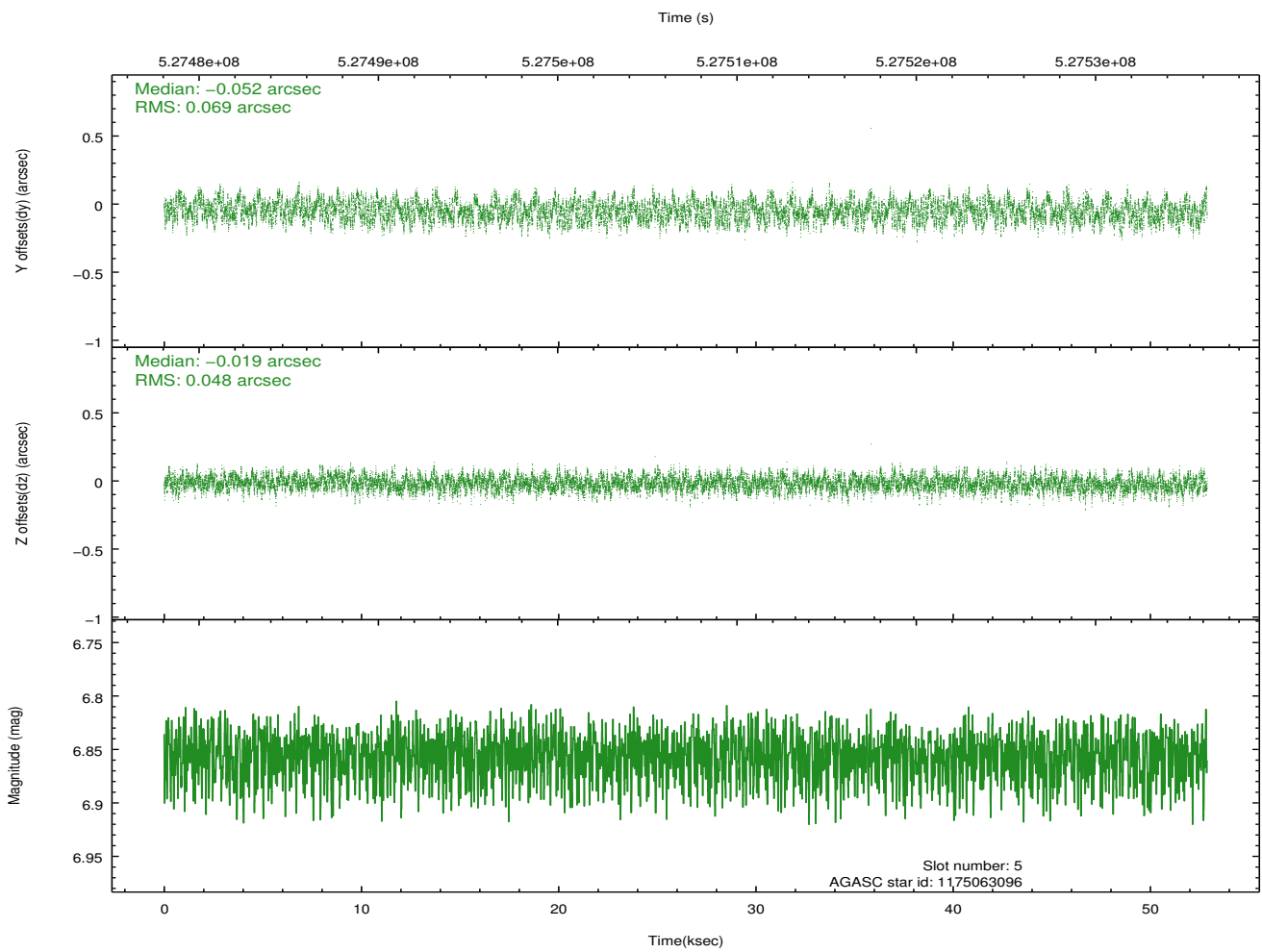
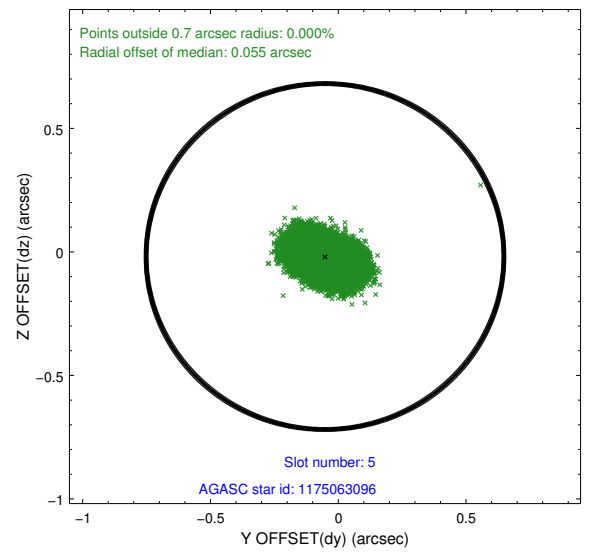
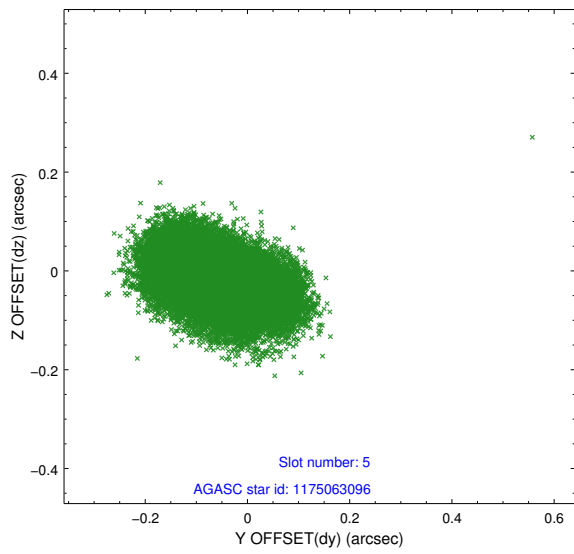
### 2.4.1 Slot 3



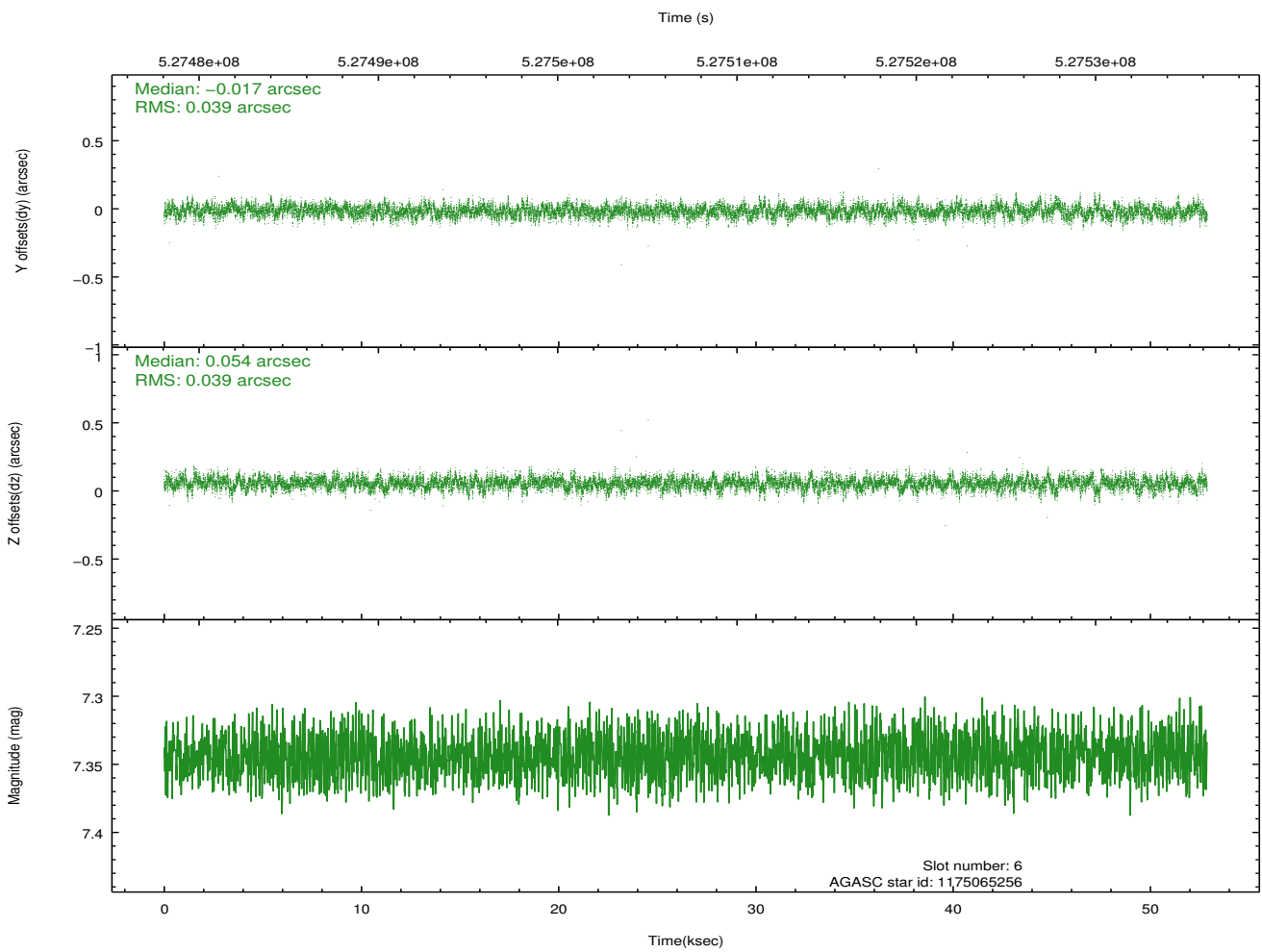
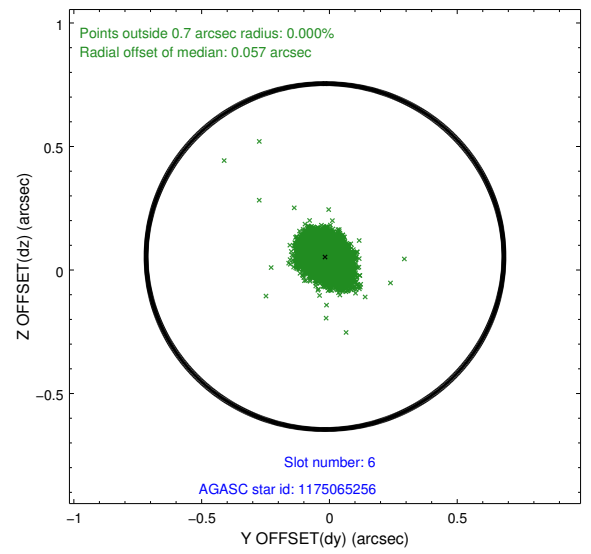
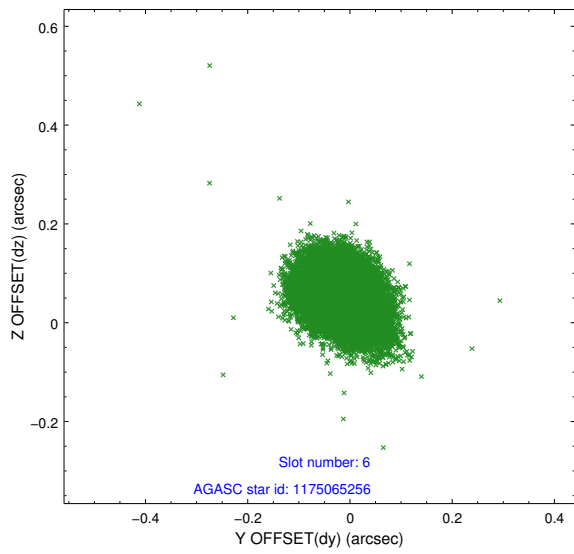
## 2.4.2 Slot 4



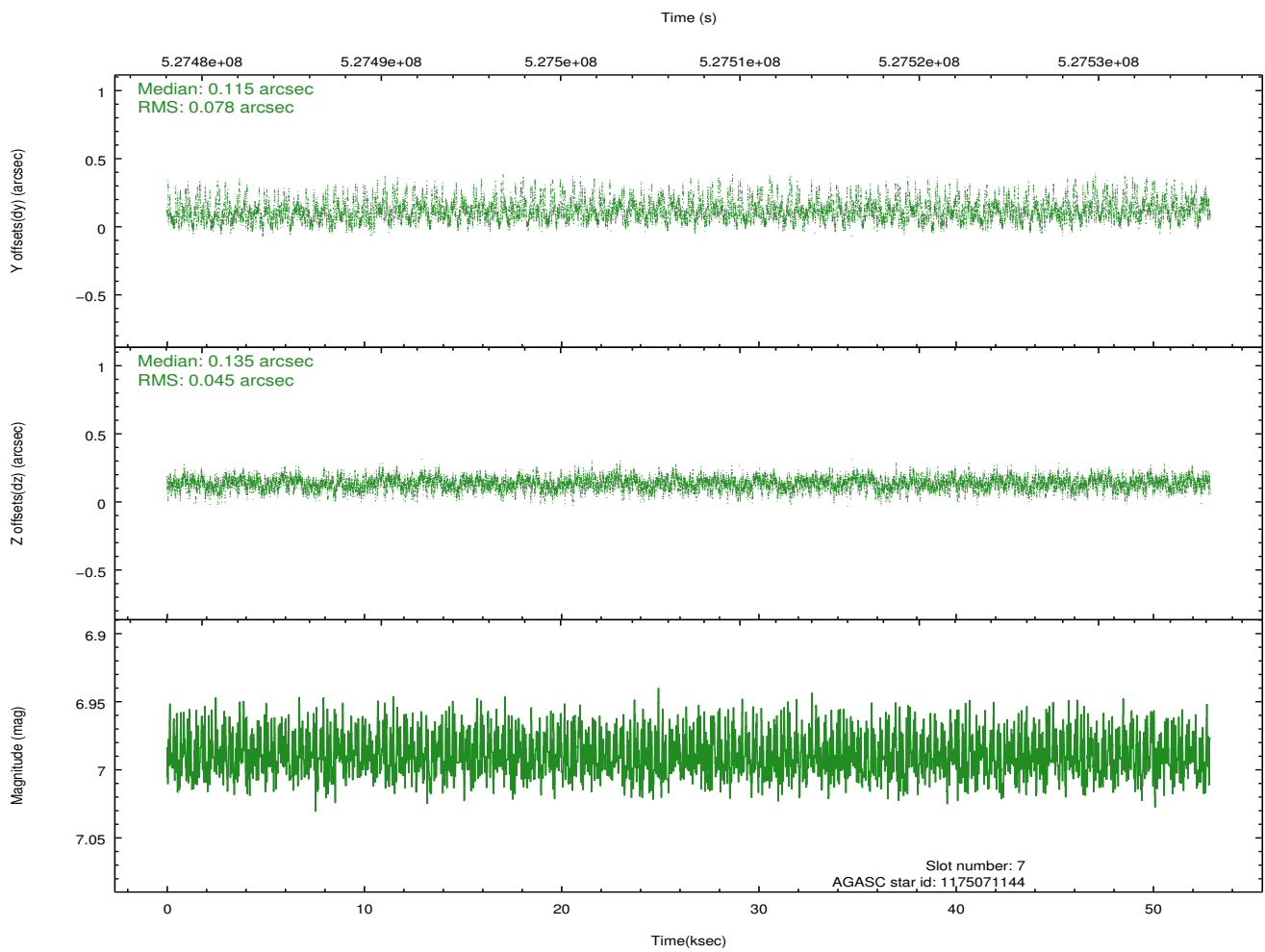
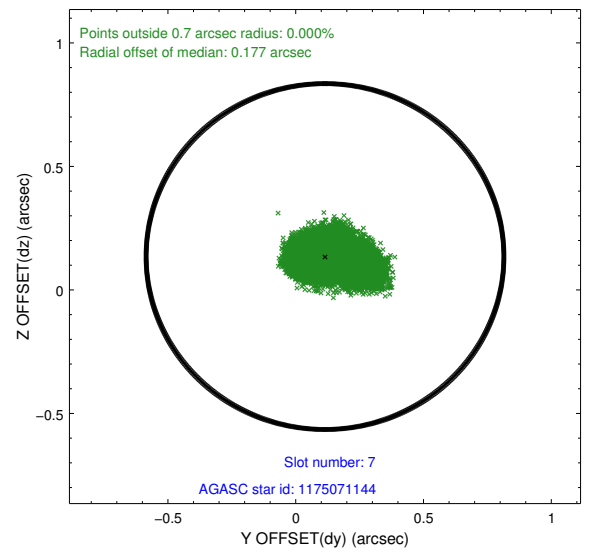
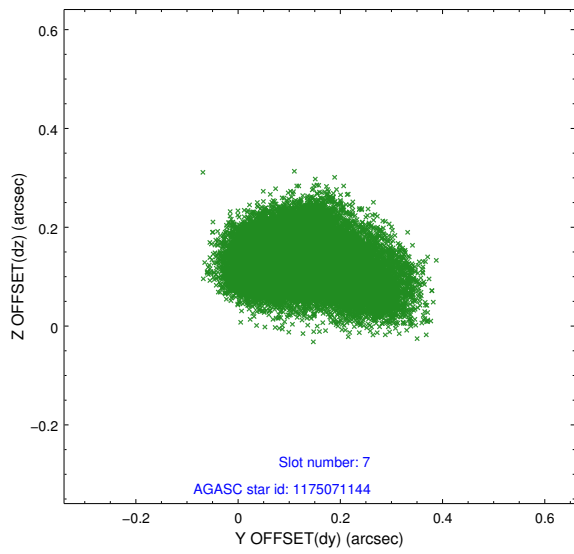
### 2.4.3 Slot 5



## 2.4.4 Slot 6

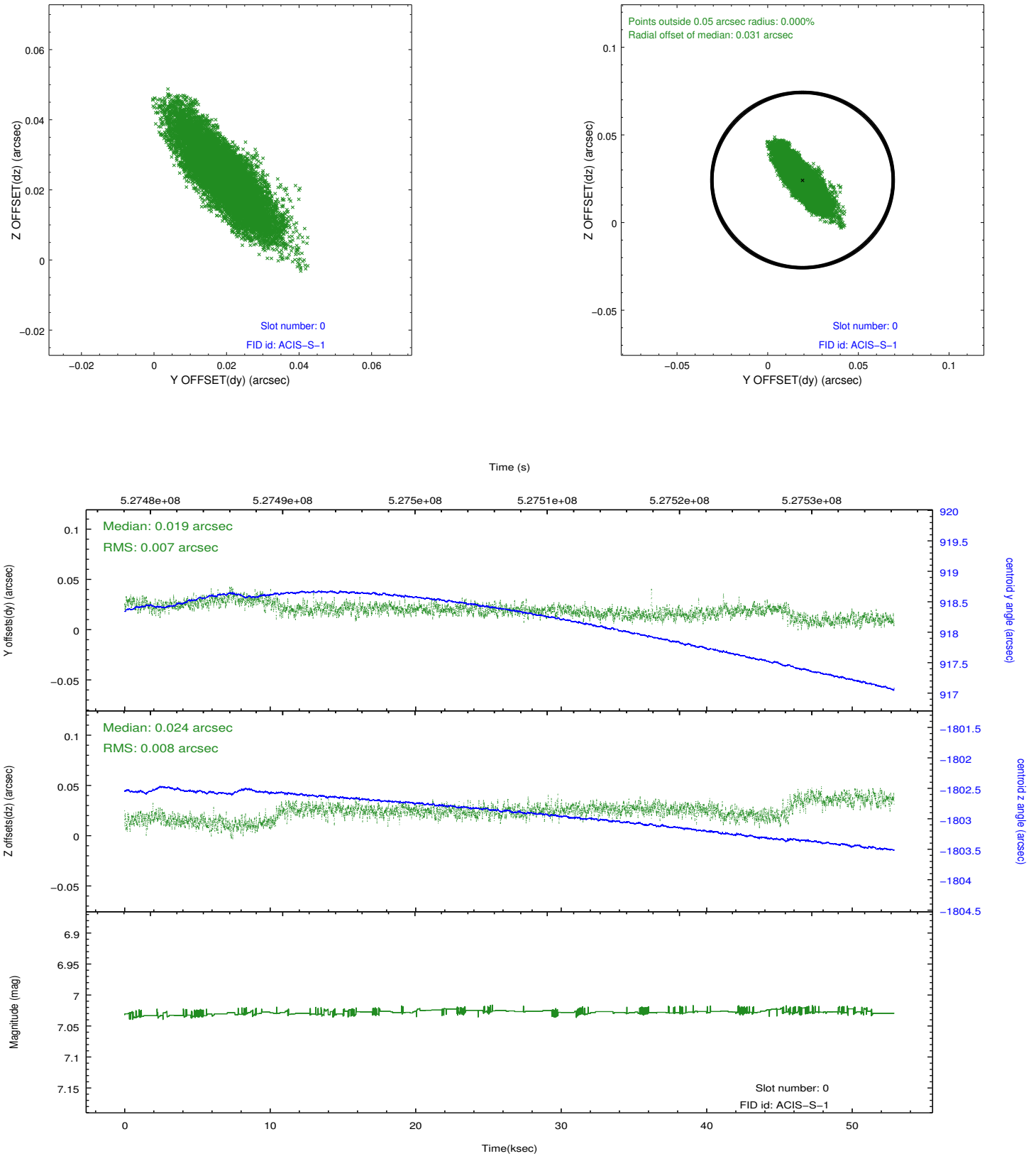


## 2.4.5 Slot 7

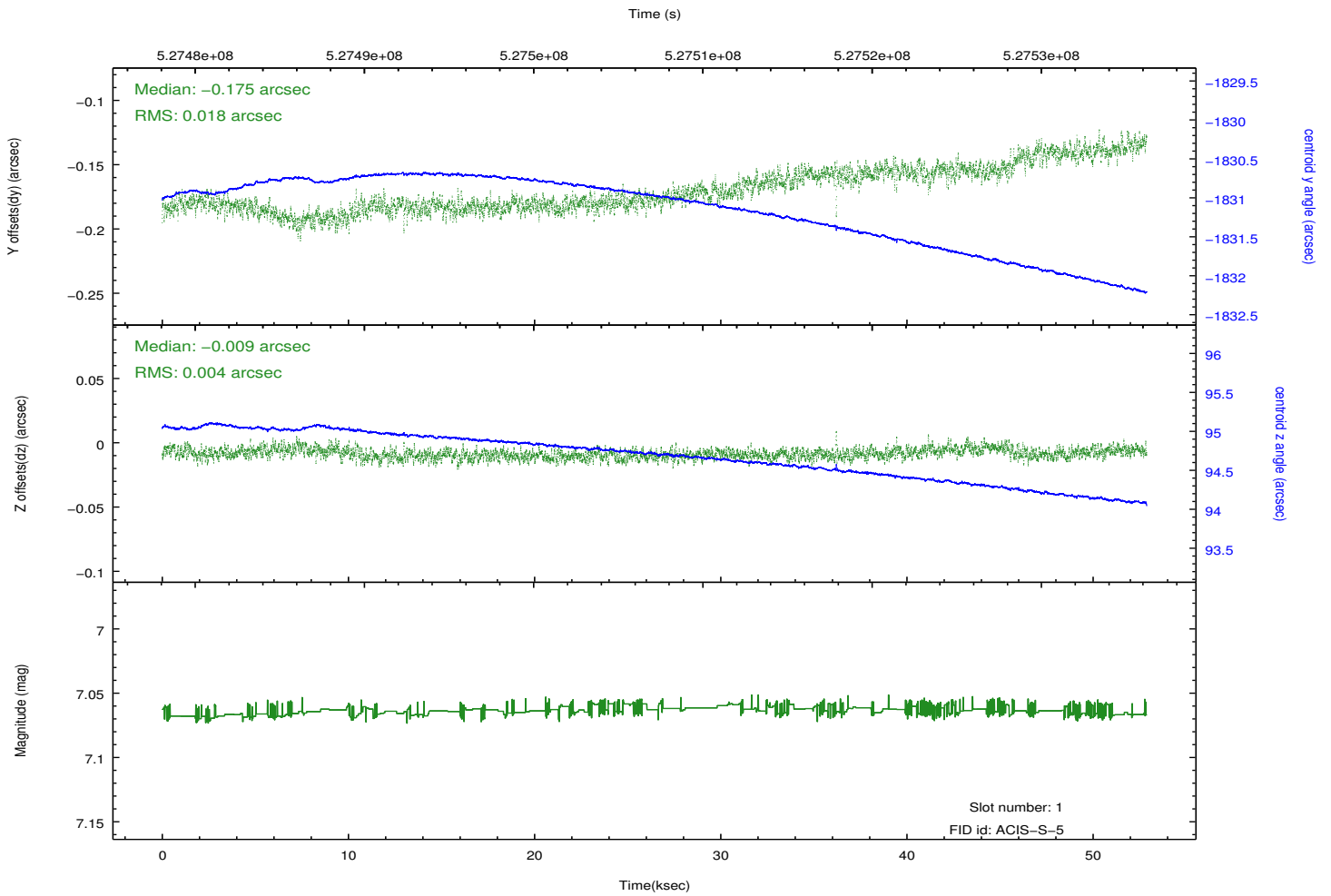
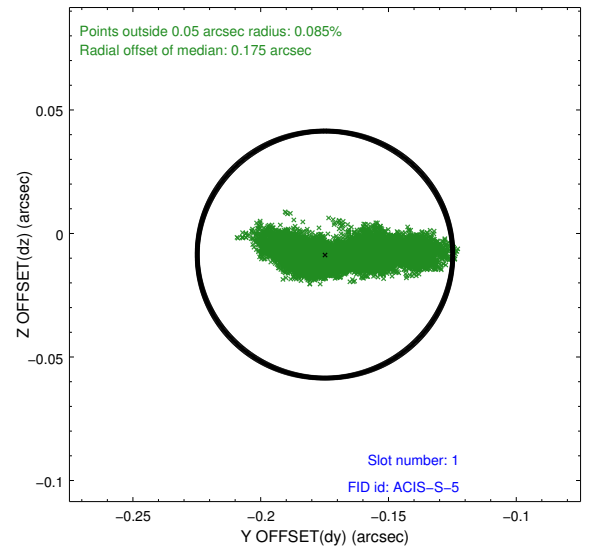
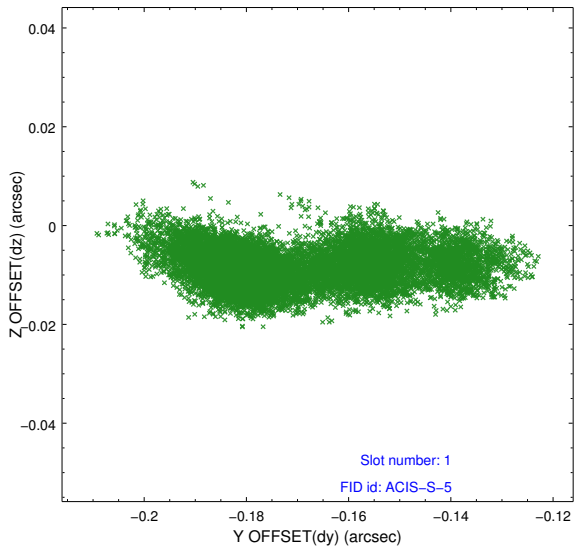


## 2.5 FID Slots

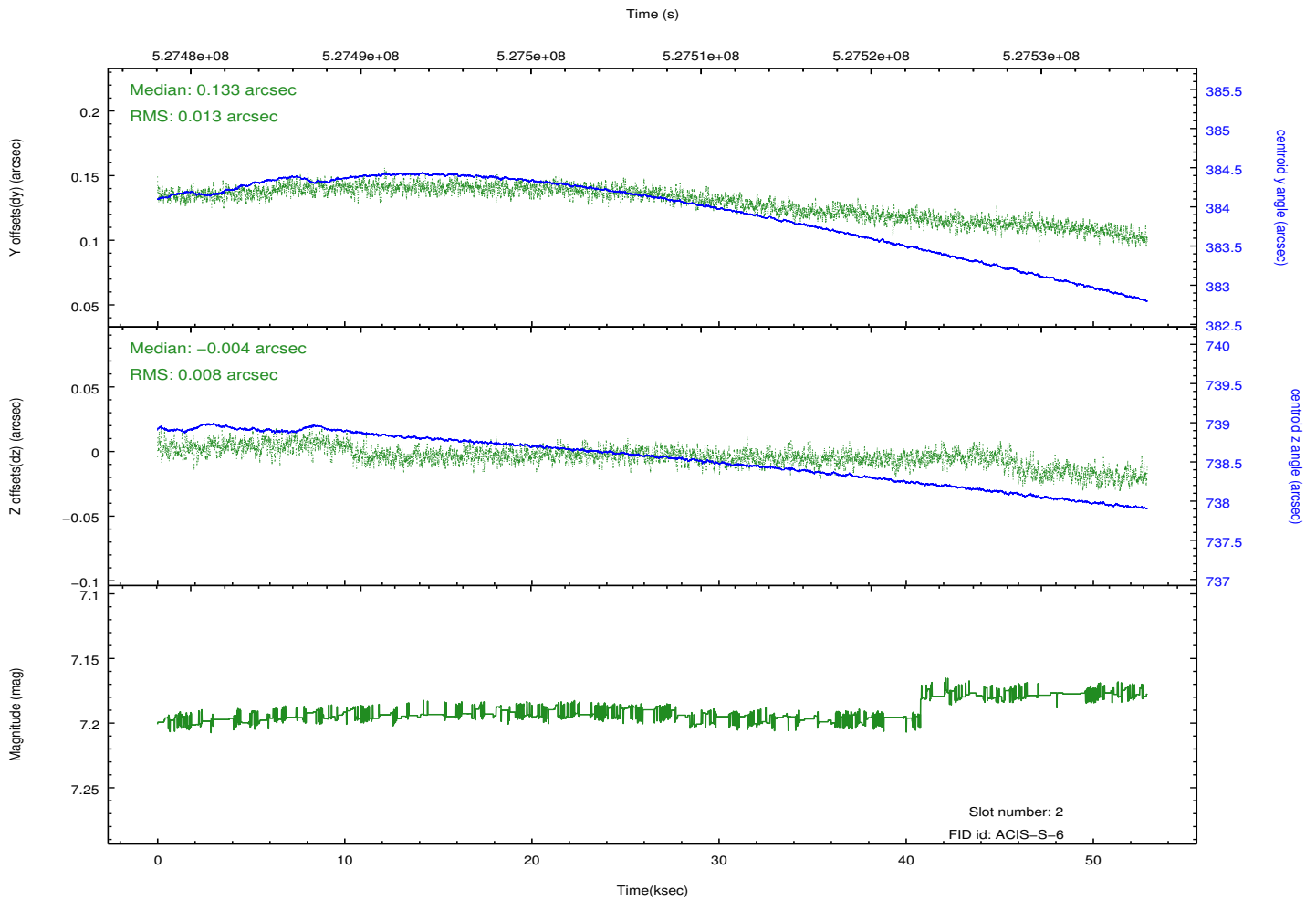
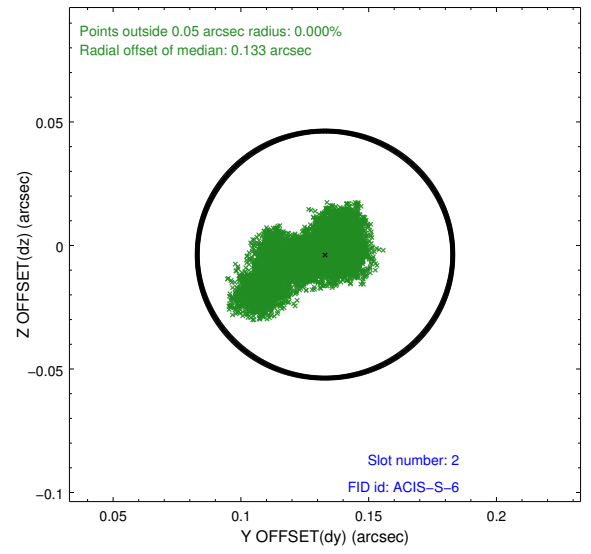
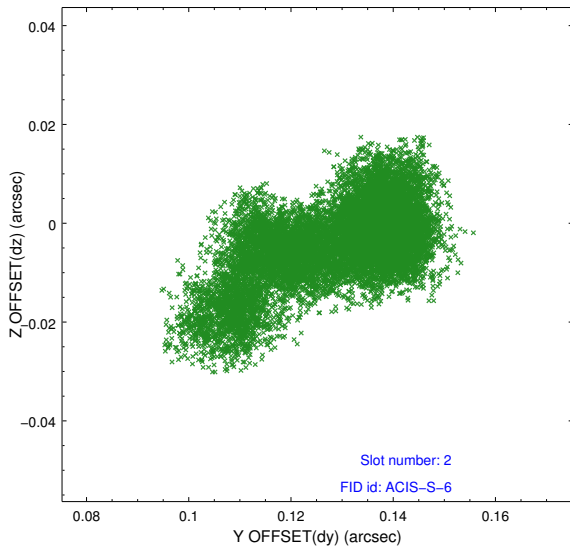
### 2.5.1 Slot 0



## 2.5.2 Slot 1

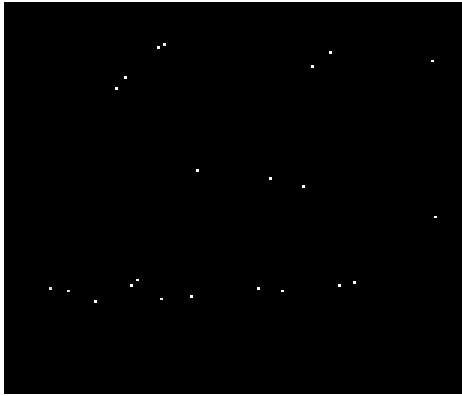


### 2.5.3 Slot 2

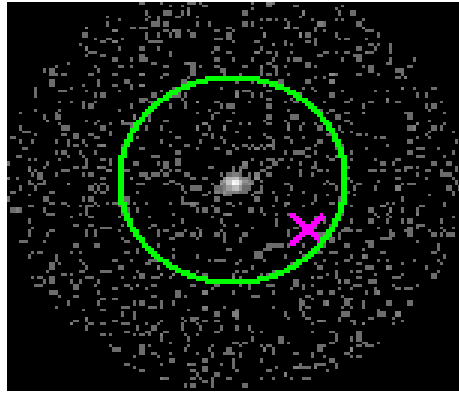


### 3 Gratings

#### 3.1 HEG Arm



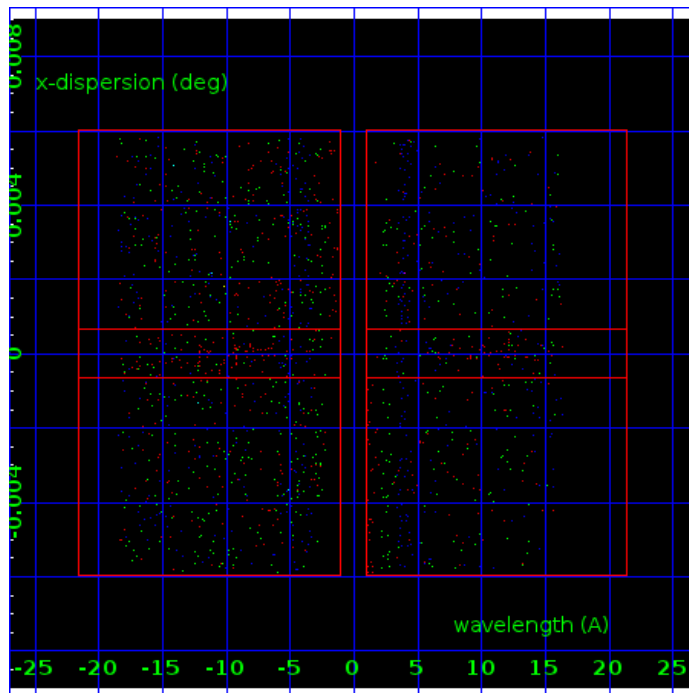
HEG Order Sort 123



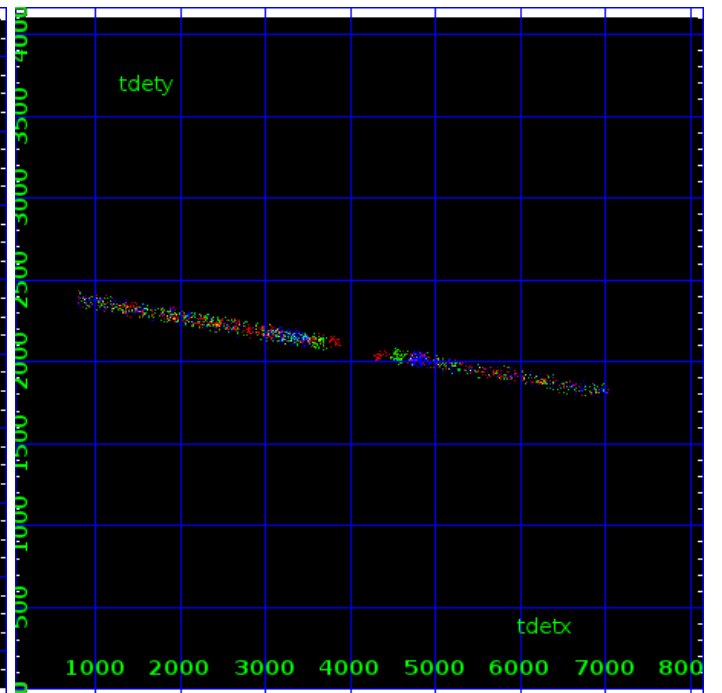
HEG Zero Order



HEG Order Sort ALL

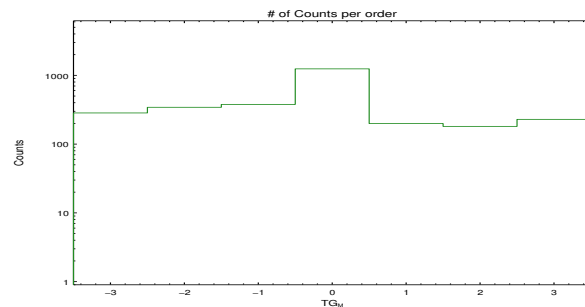


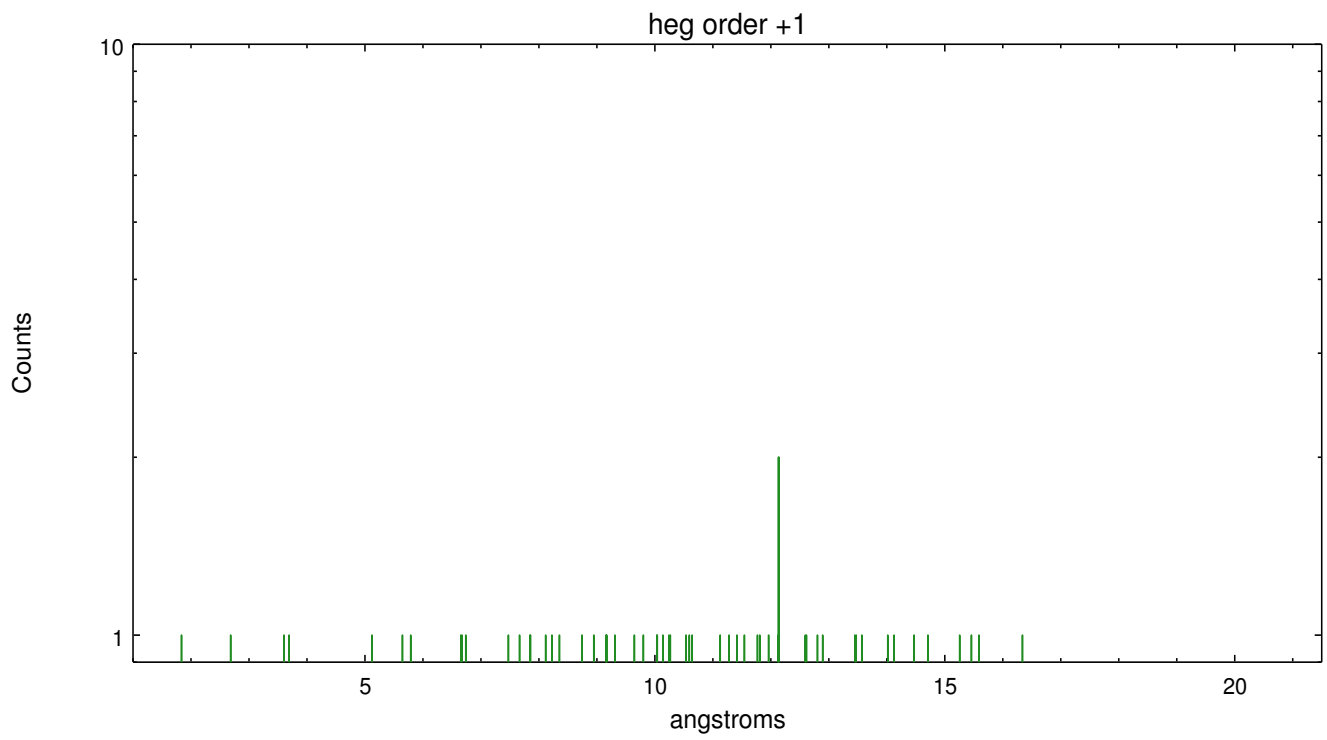
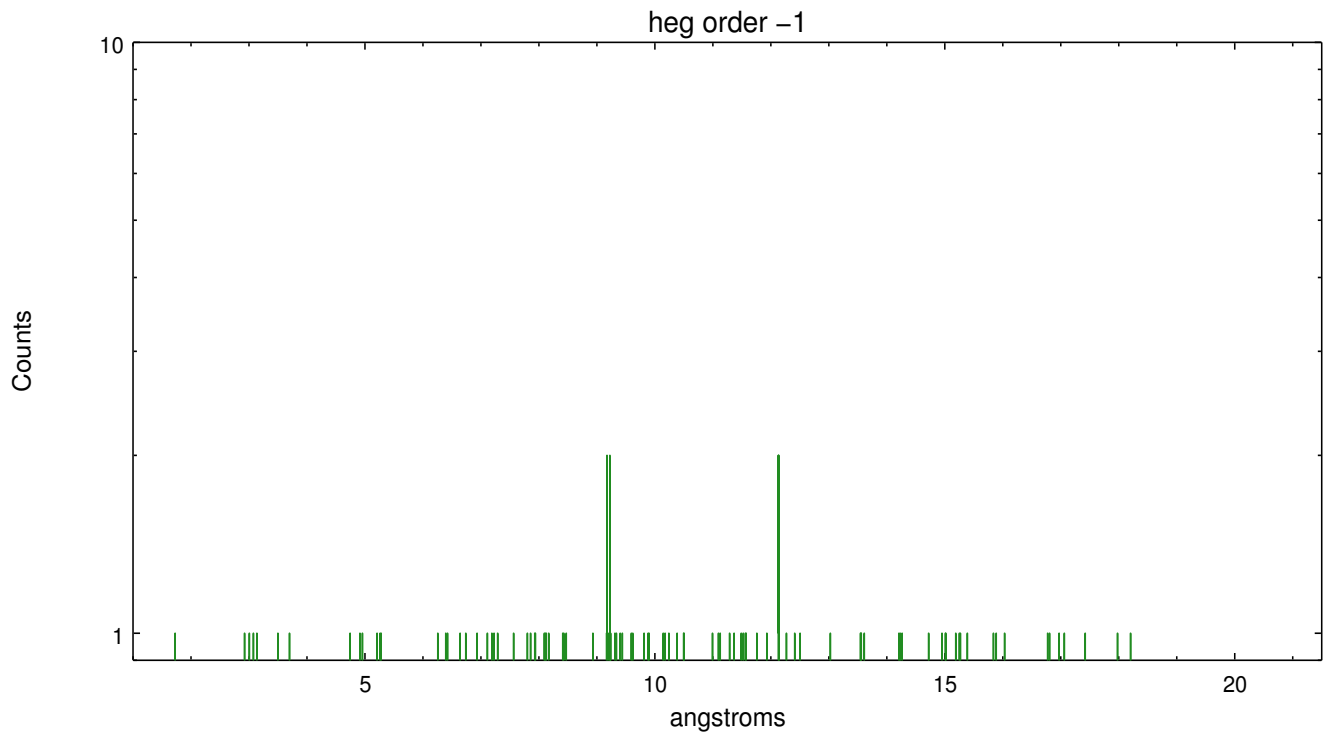
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	284	343	378	1243	199	181	229

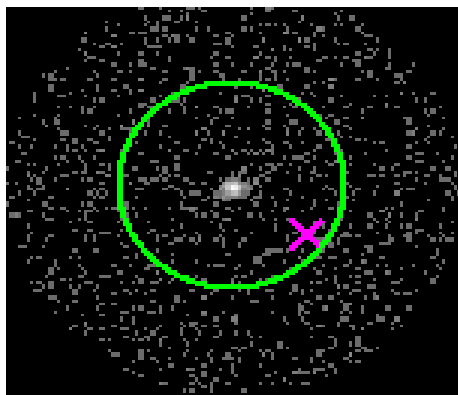




### 3.2 MEG Arm



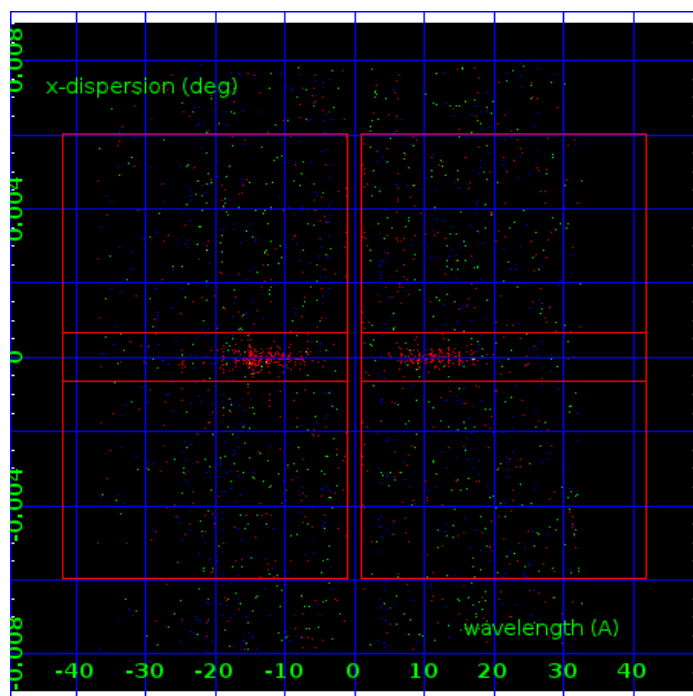
MEG Order Sort 123



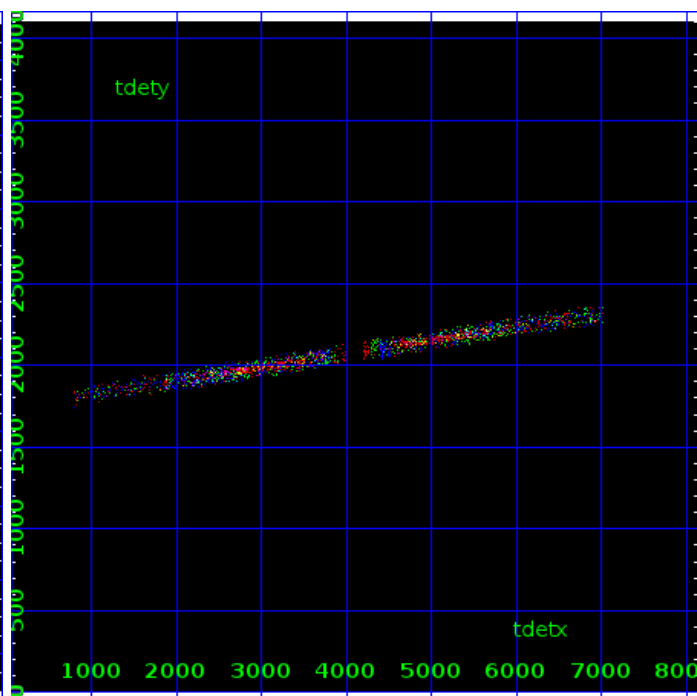
MEG Zero Order



MEG Order Sort ALL

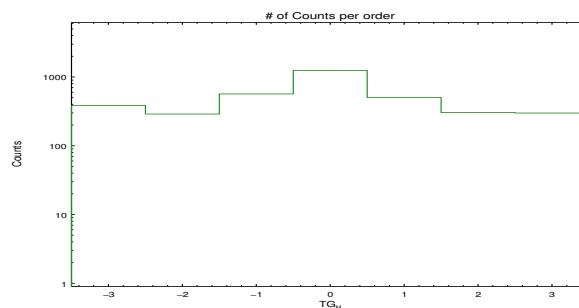


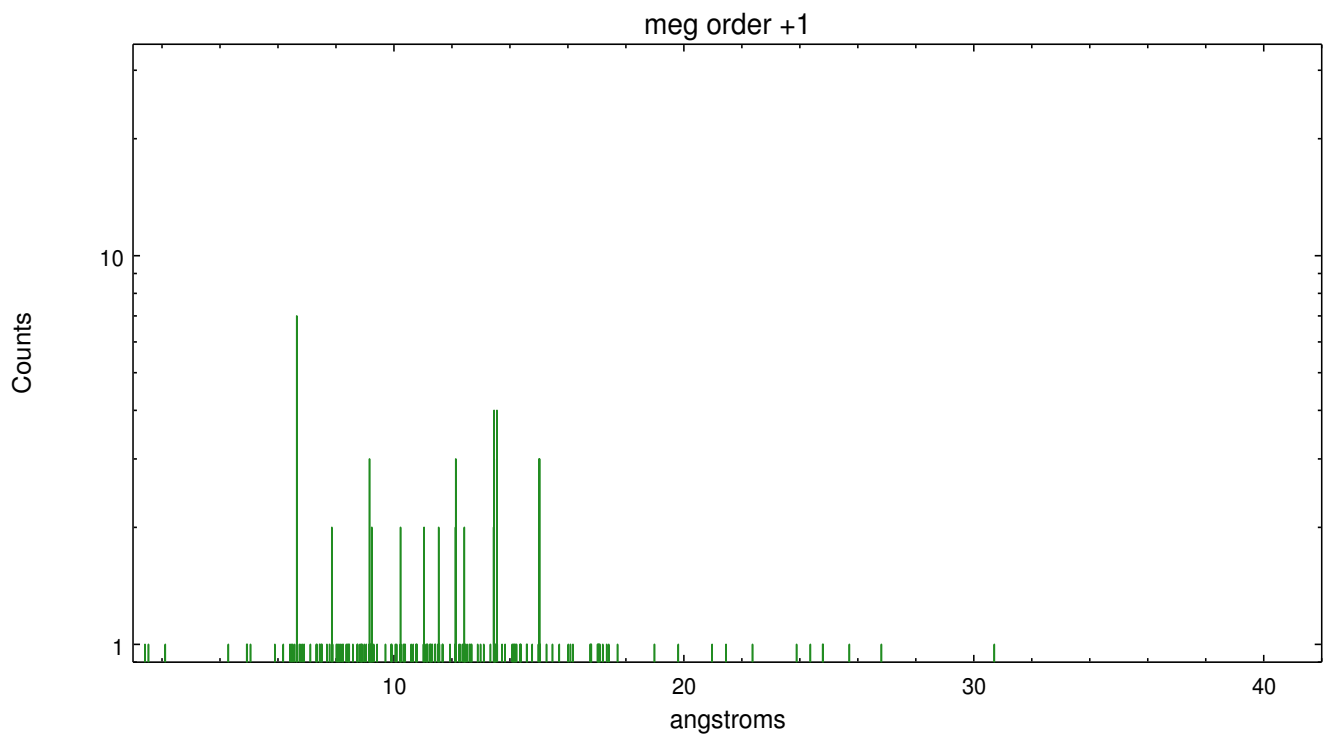
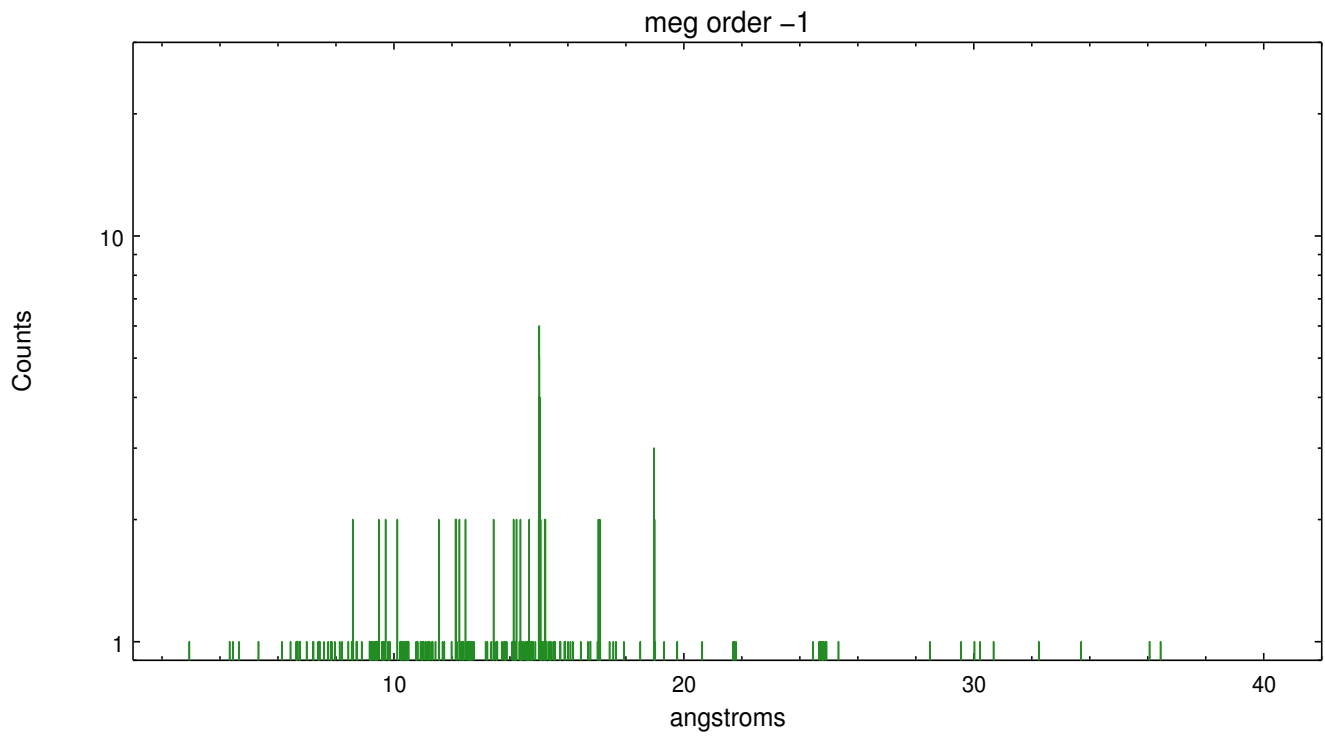
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	384	289	567	1243	502	304	299





# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2014.09.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	51.961599806488

## A.2 Comments