

# V&V Reference Report

## L2 ASCDS Version : 10.5.1.1

Observation 19900 - L2 Version 2  
Chandra X-Ray Center

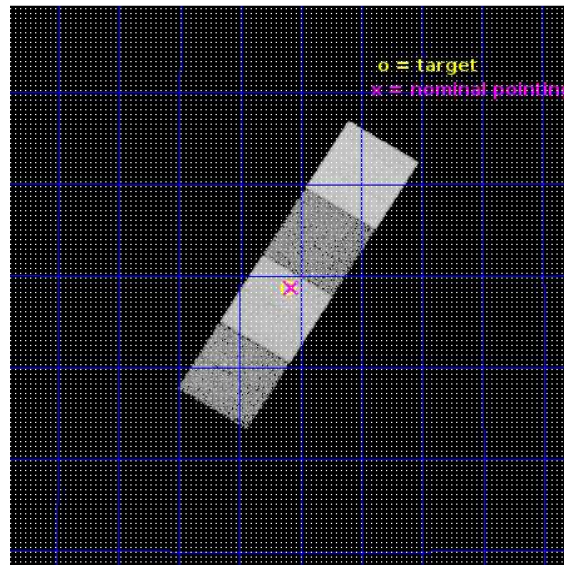
L2 Processing Date : Oct 24 2016

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# 1 Front

seq_num	201048	Sequence number
obs_id	19900	Observation id
title	Using high resolution x-ray spectra to probe accretion, abundances, and coronal activity in the young cluster IC 348	Proposal title
observer	Dr. David Huenemoerder	Principal investigator
object	IC 348	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	56.149167	Observer's specified target RA [deg]
dec_targ	32.145306	Observer's specified target Dec [deg]
ra_nom	56.144022967662	Nominal RA [deg]
dec_nom	32.145766792134	Nominal Dec [deg]
roll_nom	121.63116107076	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20063.200154424	Sum of GTIs [s]
livetime	19801.059674093	Livetime [s]
ontime5	20063.200154424	Sum of GTIs [s]
ontime6	20056.91801393	Sum of GTIs [s]
ontime7	20063.200154424	Sum of GTIs [s]
ontime8	20063.200154424	Sum of GTIs [s]
l2events	207819	Number of level 2 events

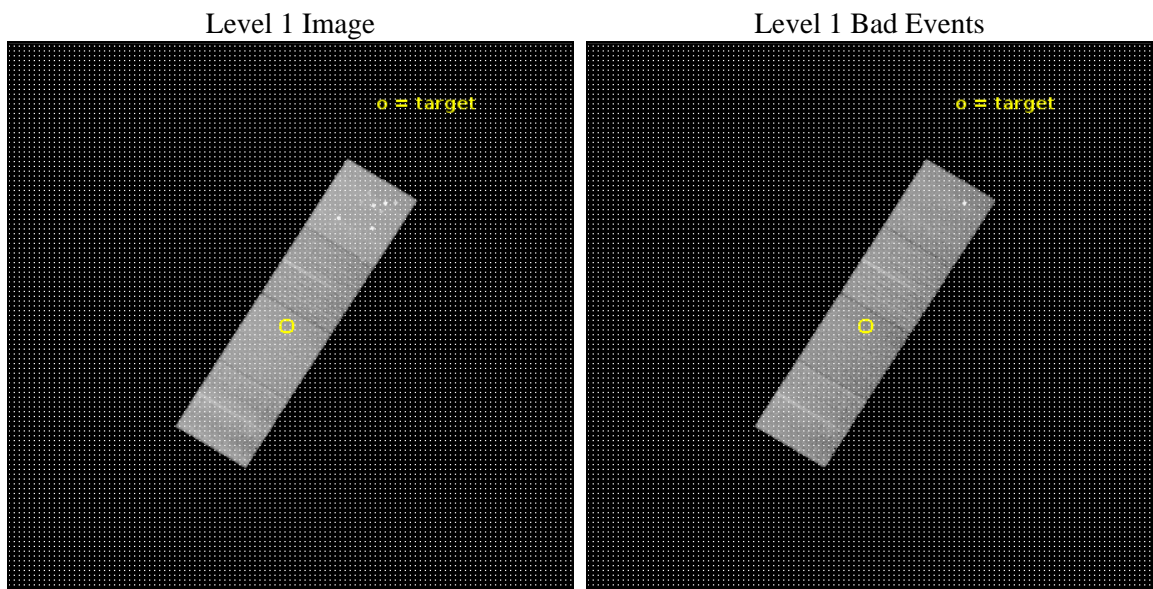




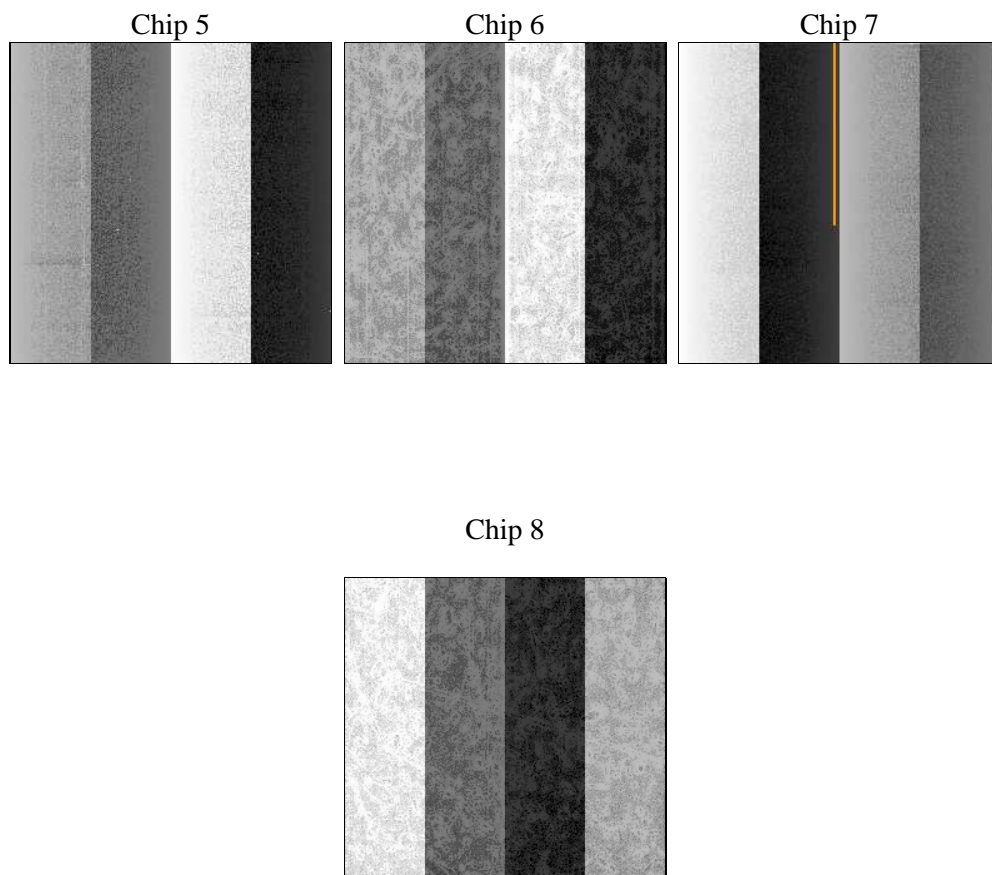
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.5.1.1	Processing system revision	ontime	20063.200154424	Sum of GTIs [s]
caldsver	4.7.2	&#160	ontime5	20063.200154424	Sum of GTIs [s]
date	2016-10-23T03:27:24	Date and time of file creation	ontime6	20056.91801393	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	20063.200154424	Sum of GTIs [s]
			ontime8	20063.200154424	Sum of GTIs [s]
			l1events	758283	Number of level 1 events
			tgmethod	USER	Method used to create src1a file
			zo_pos	(4142.75, 4080.75)	src1a sky pixel position

### 2.1.4 Events

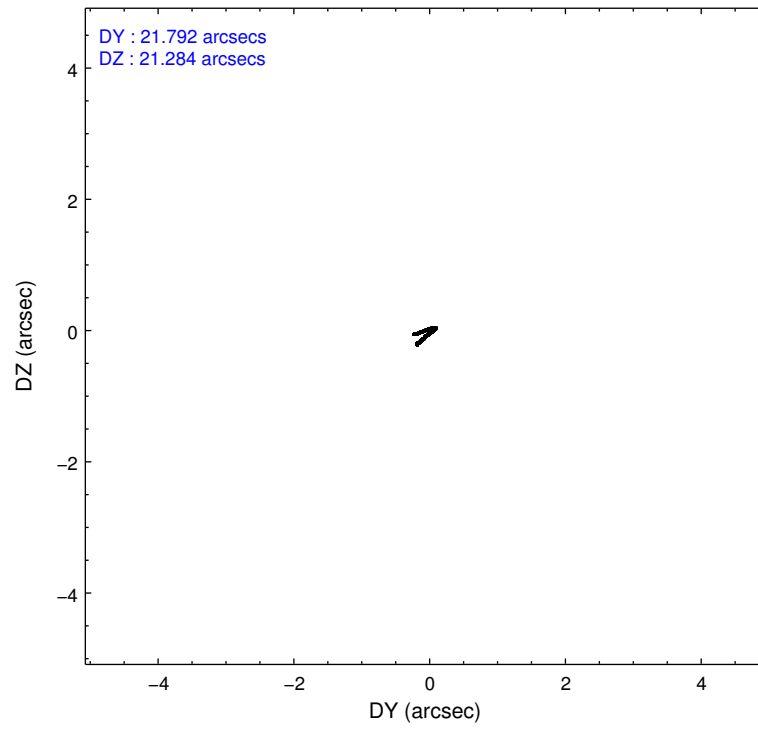
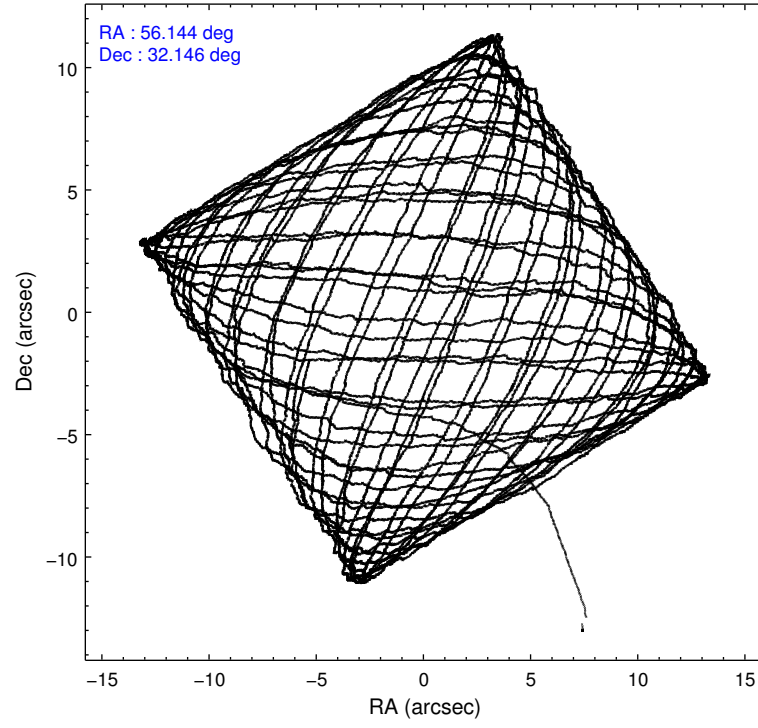
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	248915	145945	182252	181171
rejected events	122621	128895	103331	134823
rejected %	49%	88%	56%	74%

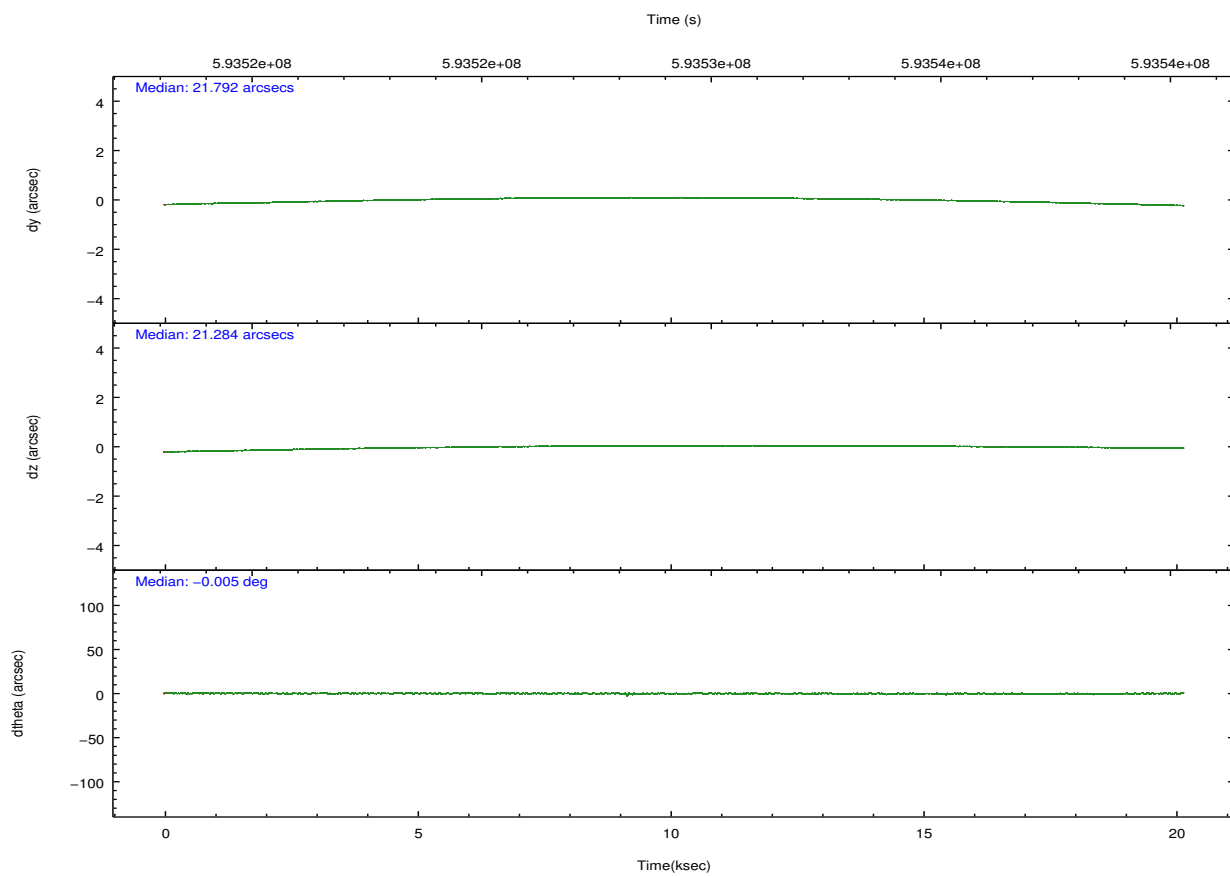
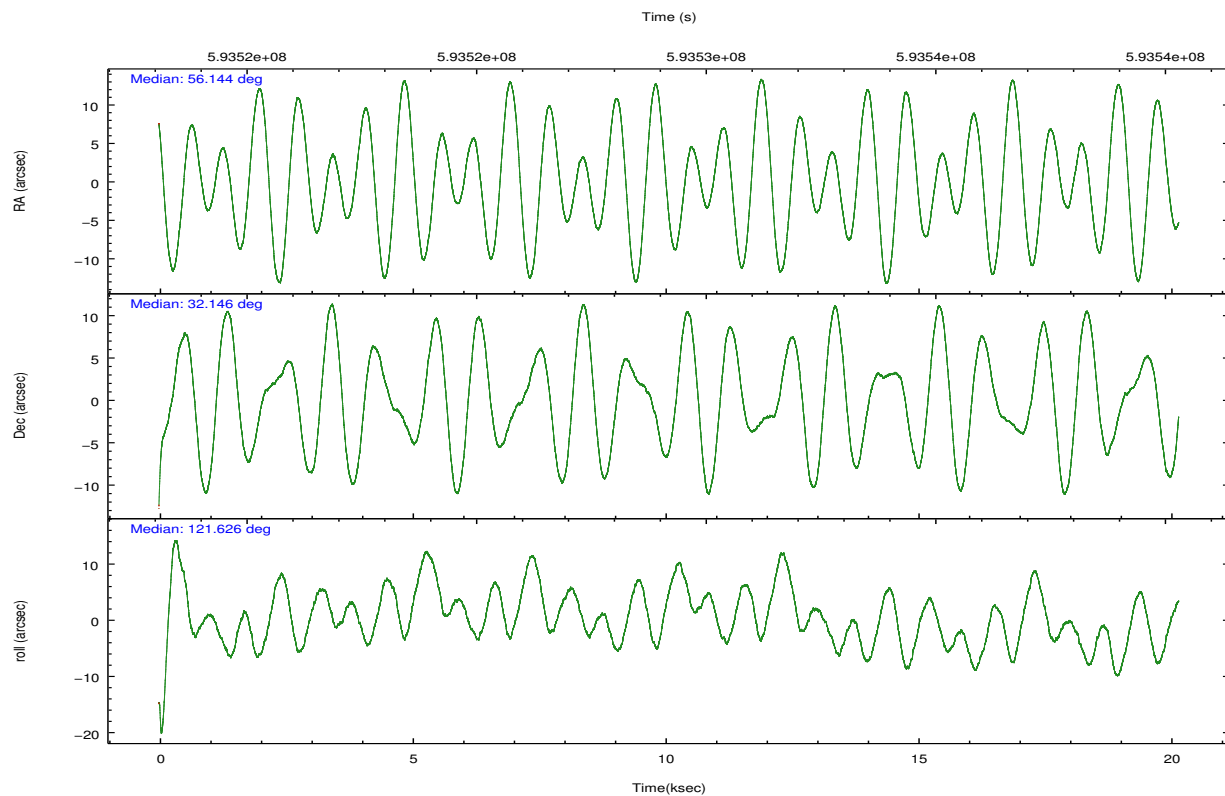
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	26522	6026	6631	12970
	10%	4%	3%	7%
grade 1 events	533	55	225	120
	0%	0%	0%	0%
grade 2 events	34249	3902	16814	11653
	13%	2%	9%	6%
grade 3 events	3345	1618	5982	4622
	1%	1%	3%	2%
grade 4 events	2993	1614	5904	4389
	1%	1%	3%	2%
grade 5 events	14734	6302	17116	9671
	5%	4%	9%	5%
grade 6 events	59207	3890	43609	12727
	23%	2%	23%	7%
grade 7 events	107332	122538	85971	125019
	43%	83%	47%	69%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	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	56.172767	56.14402296766232	CCD I2 on	N	N
[deg] Pointing Dec	32.133066	32.14576679213351	CCD I3 on	N	N
[deg] Pointing Roll	121.459238	121.6311610707641	CCD S0 on	O1	N
[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	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	593519239.184000	593518205.77372	CCD S5 on	O2	N
Observation start date	2016-10-22T10:26:11	2016-10-22T10:10:05	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	593539239.184000	593540065.94998	On-chip summing requested	N	N
Observation end date	2016-10-22T15:59:31	2016-10-22T16:14:25	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



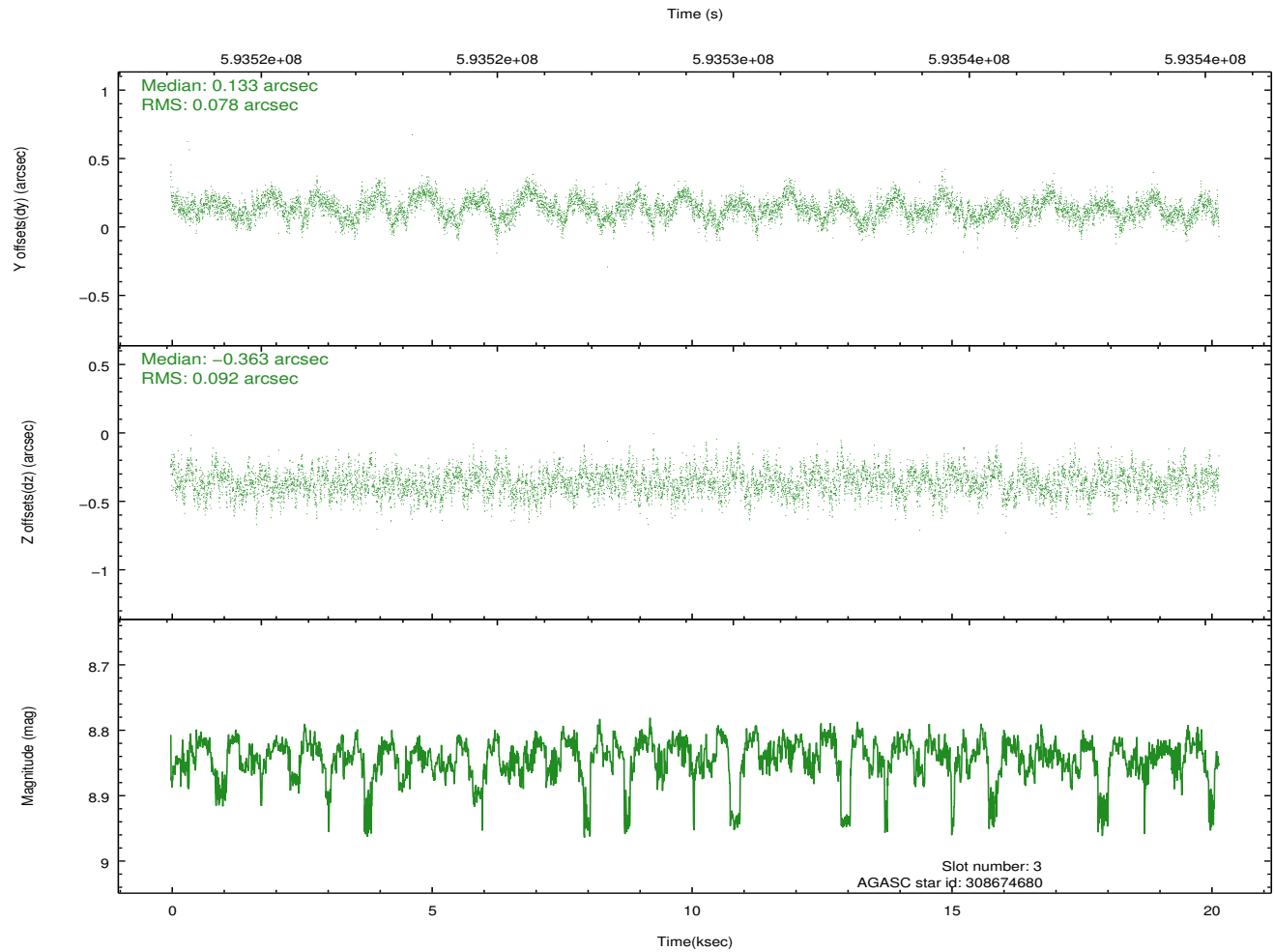
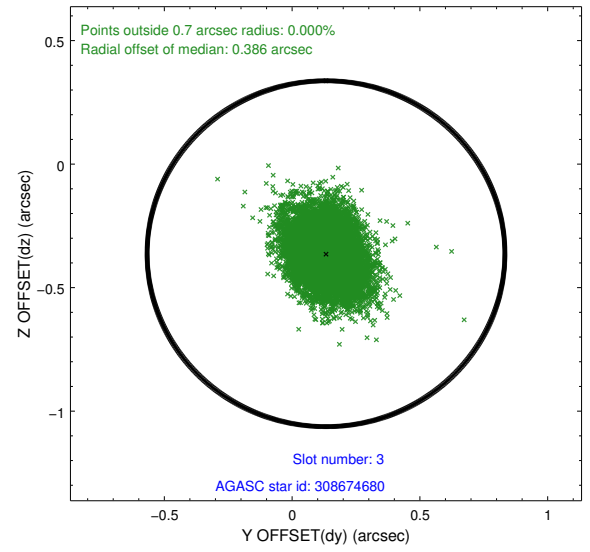
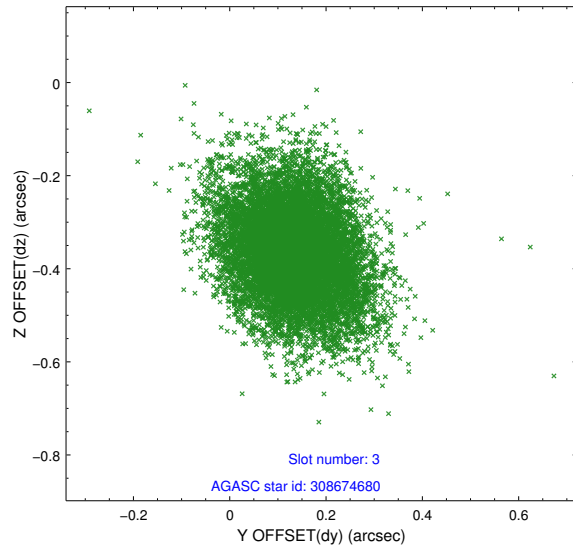


### Slot Statistics

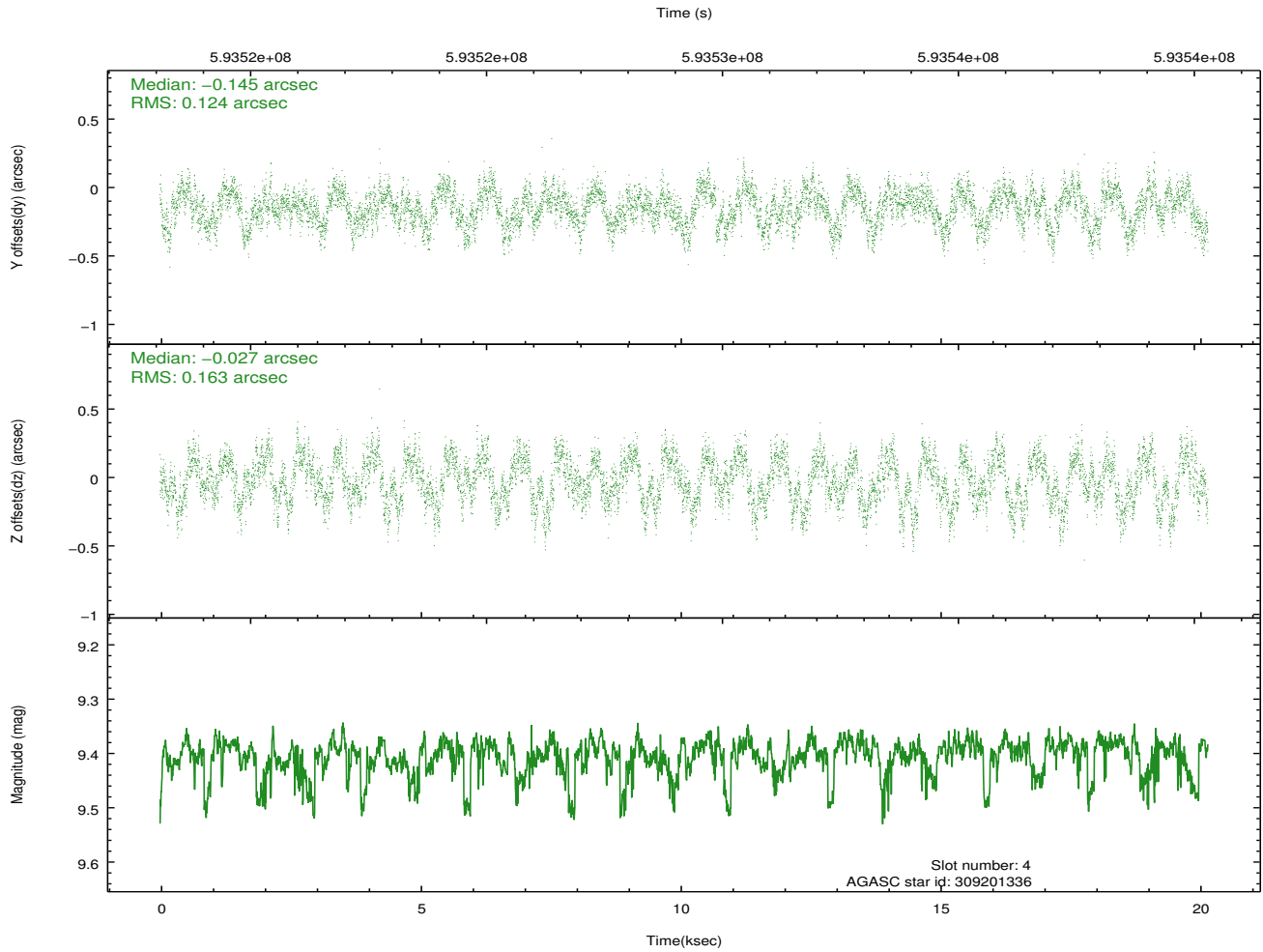
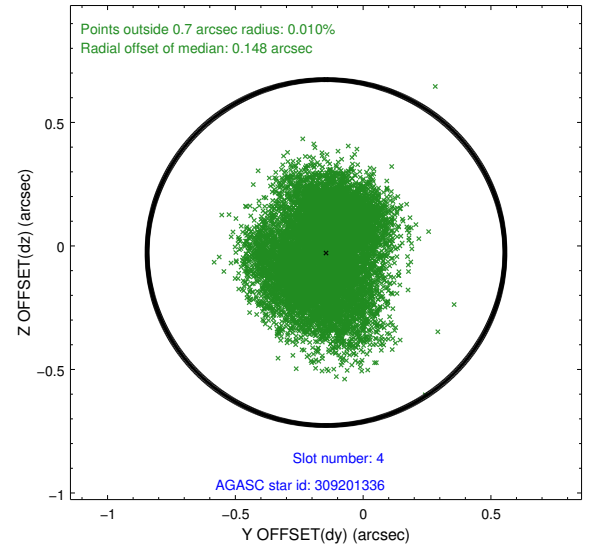
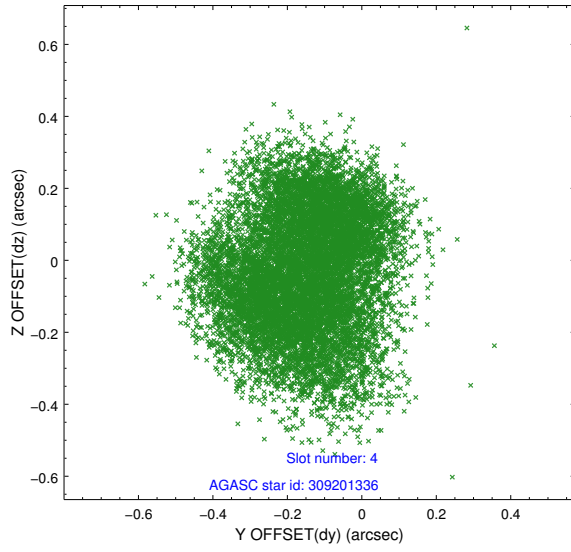
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.10	4919	-0.235	-0.149	0.008	0.013	0.000000	0.000000	-775.13	-1742.92
1	FID		ACIS-S-4	7.22	4919	0.527	0.153	0.006	0.012	0.000000	0.000000	2138.79	165.72
2	FID		ACIS-S-5	7.22	4919	-0.324	0.005	0.008	0.013	0.000000	0.000000	-1827.86	159.39
3	GUIDE	used	308674680	8.84	9825	0.133	-0.363	0.127	0.212	55.747345	31.652644	-792.09	2011.76
4	GUIDE	used	309201336	9.40	9825	-0.145	-0.027	0.224	0.333	55.980135	32.629910	1830.97	-435.28
5	GUIDE	used	309205288	9.14	9831	-0.060	-0.024	0.178	0.283	55.920876	32.625581	1911.88	-273.94
6	GUIDE	used	309332904	7.53	9837	-0.085	0.158	0.096	0.159	56.362777	32.287653	174.44	-783.87
7	GUIDE	used	309336160	7.08	9835	0.172	0.256	0.121	0.201	56.670296	32.290187	-304.08	-1588.41

## 2.4 Star Slots

### 2.4.1 Slot 3

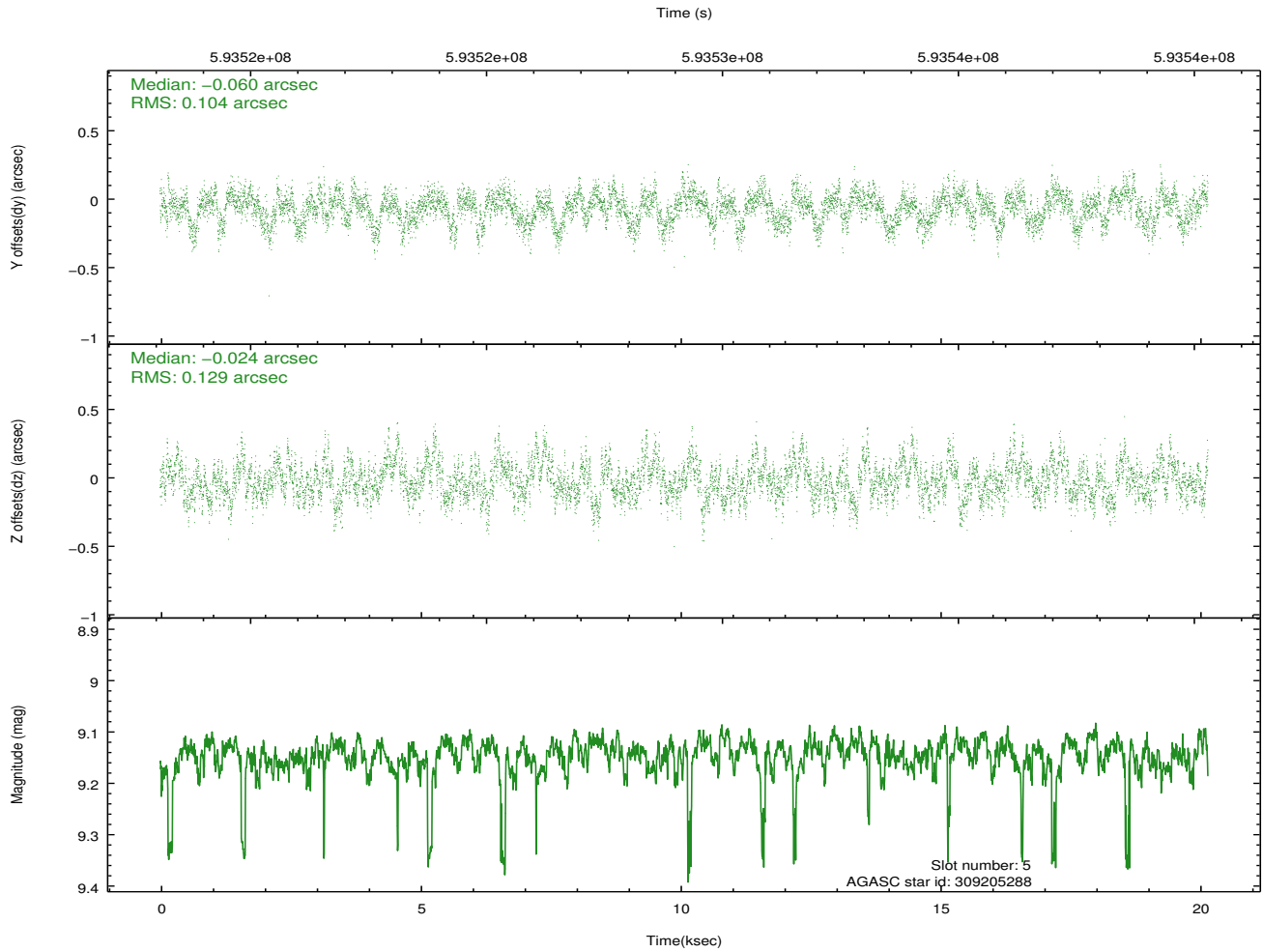
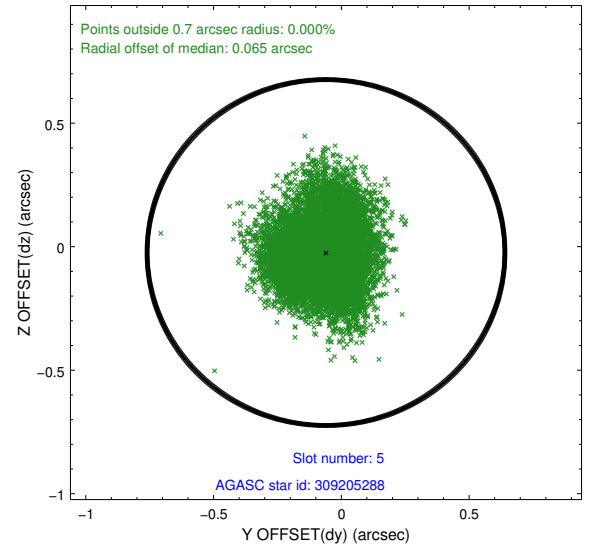
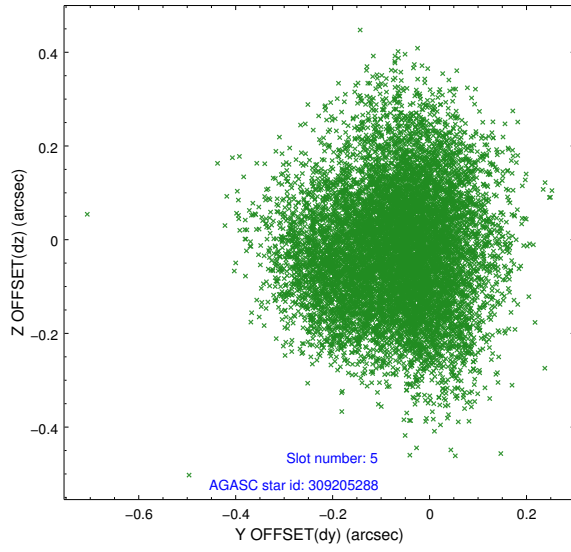


## 2.4.2 Slot 4

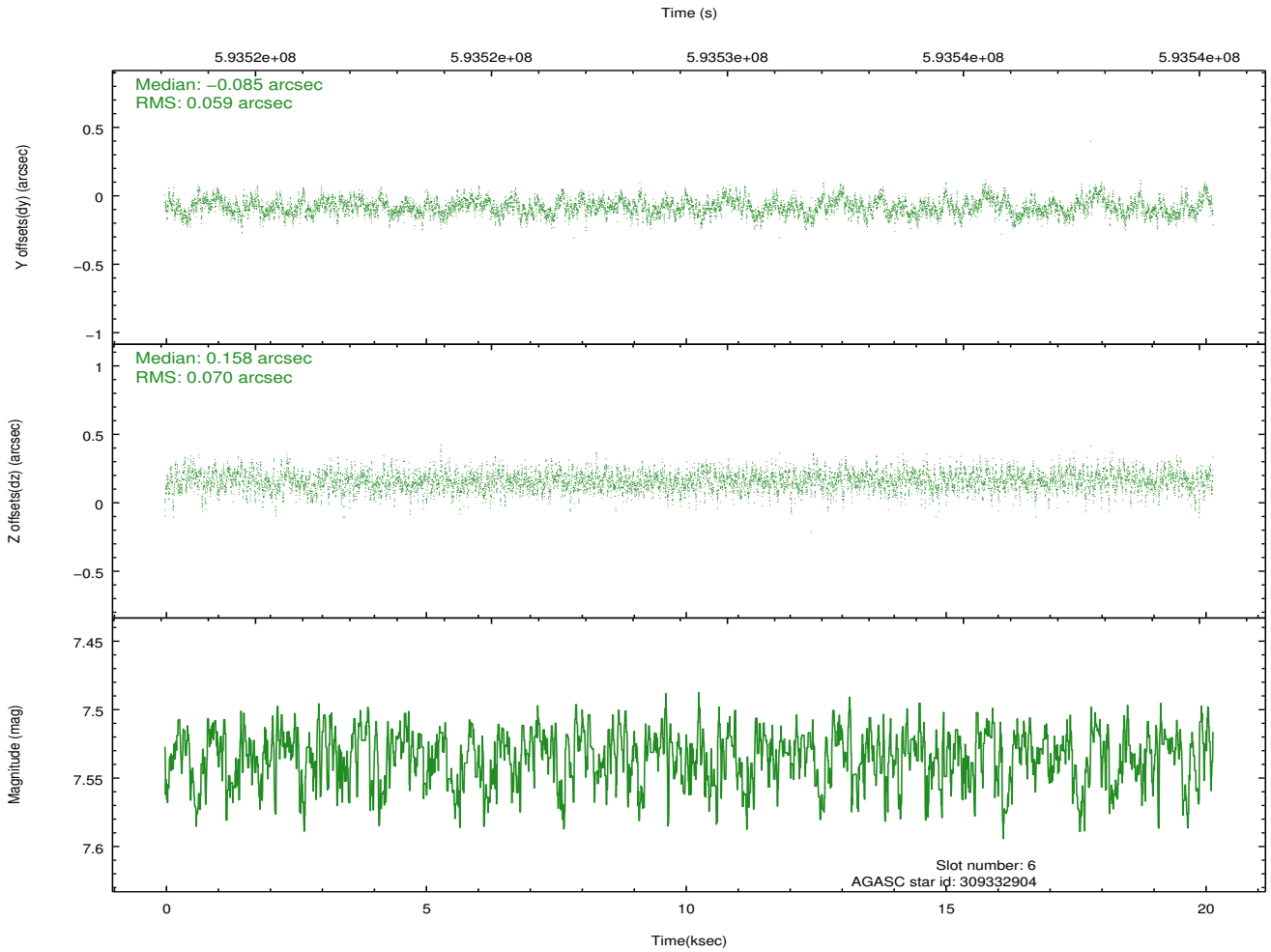
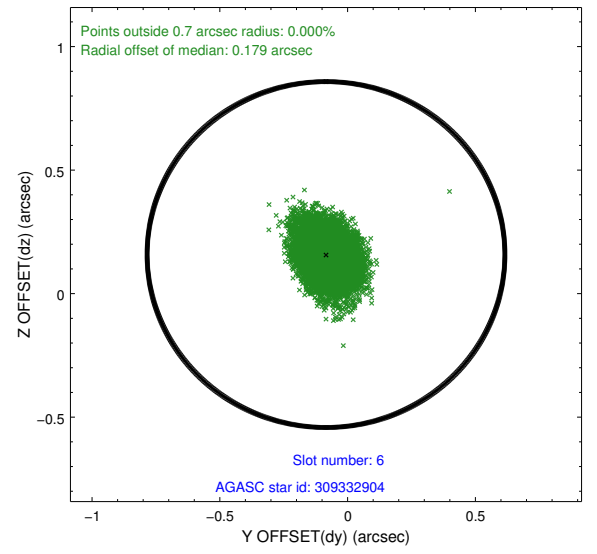
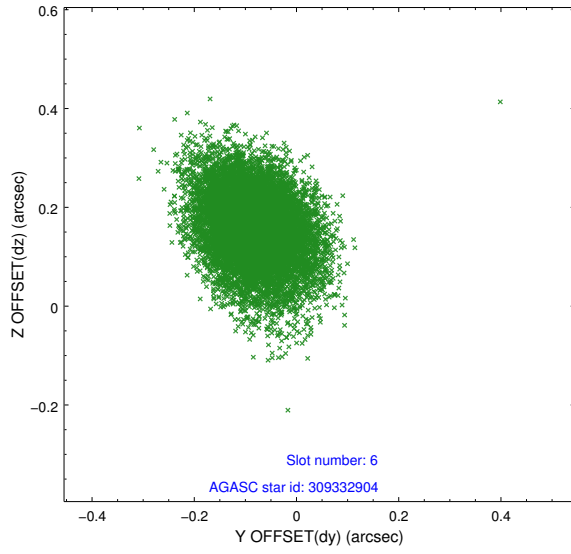




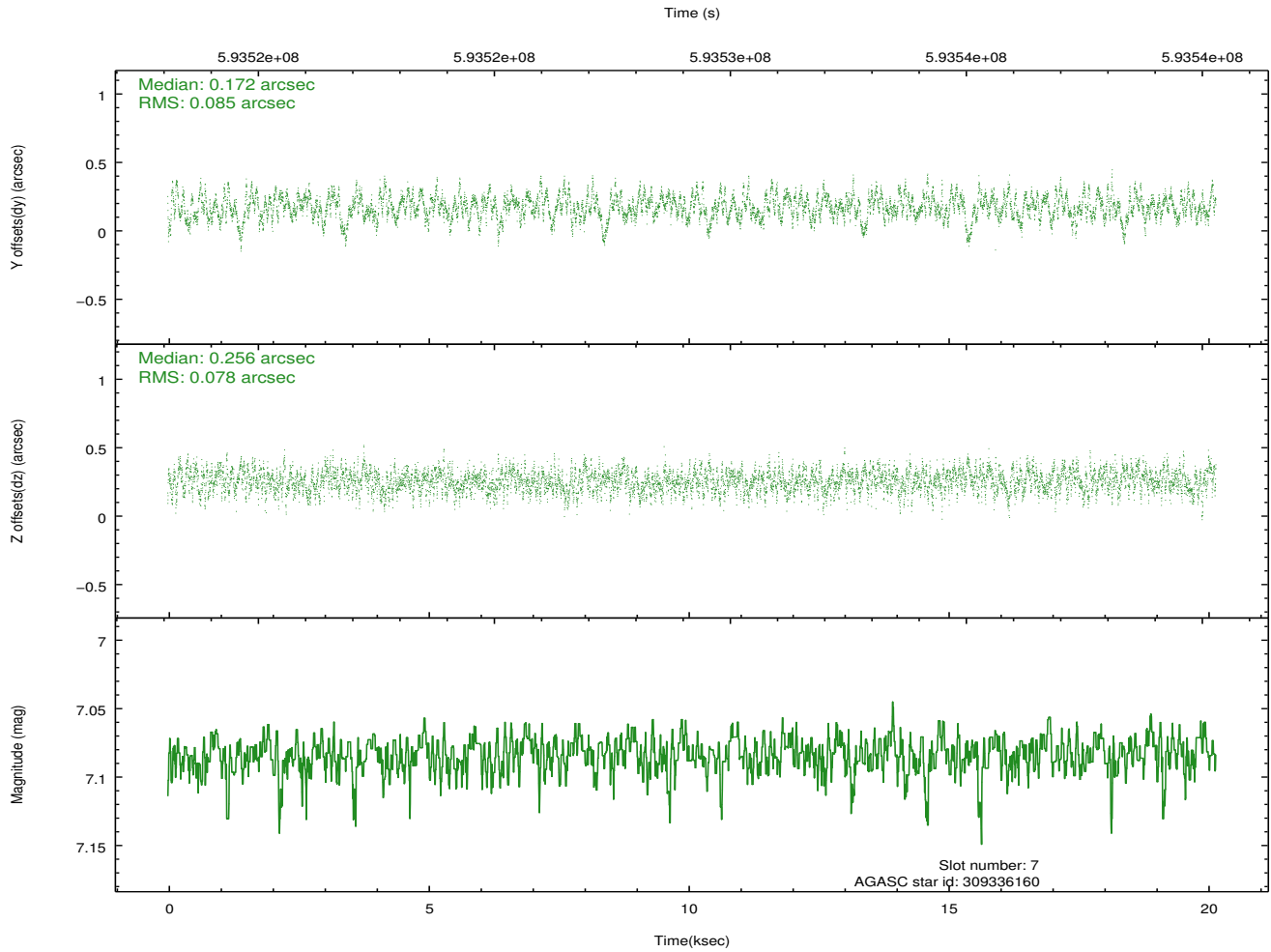
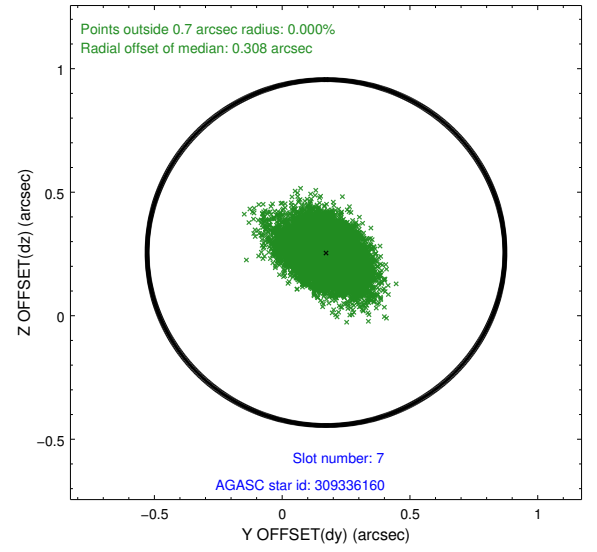
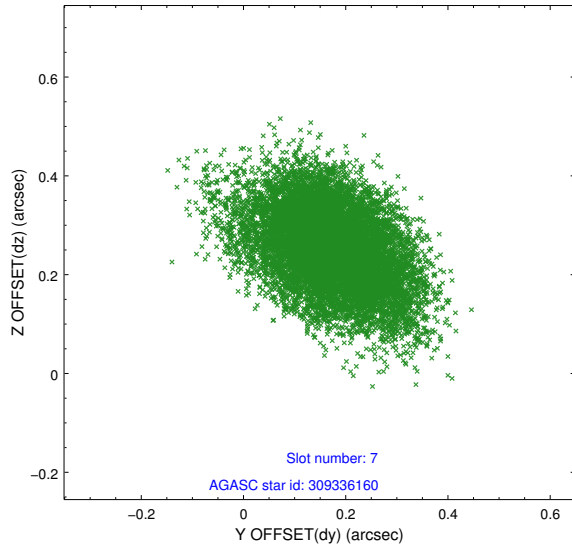
### 2.4.3 Slot 5



## 2.4.4 Slot 6

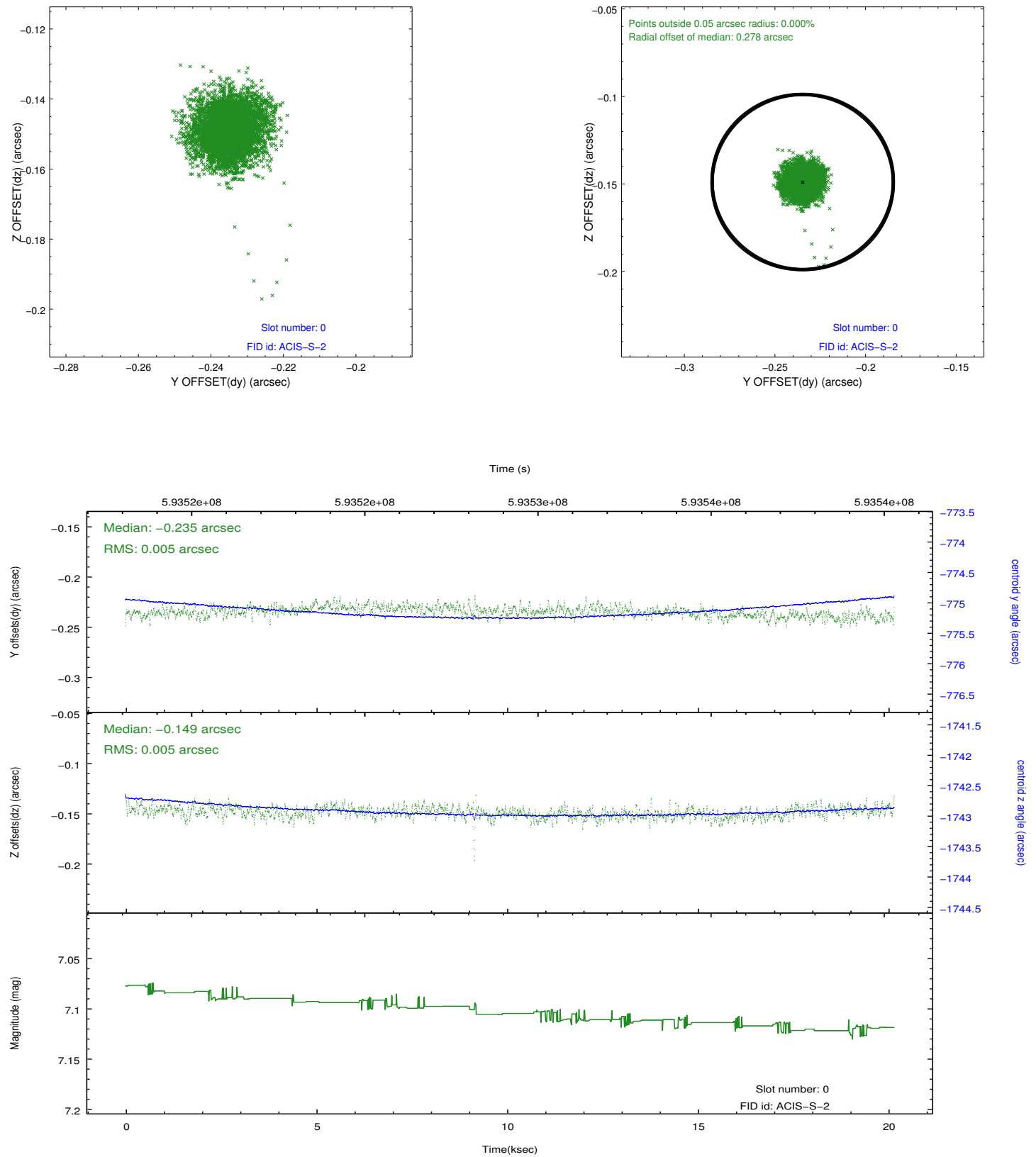


## 2.4.5 Slot 7

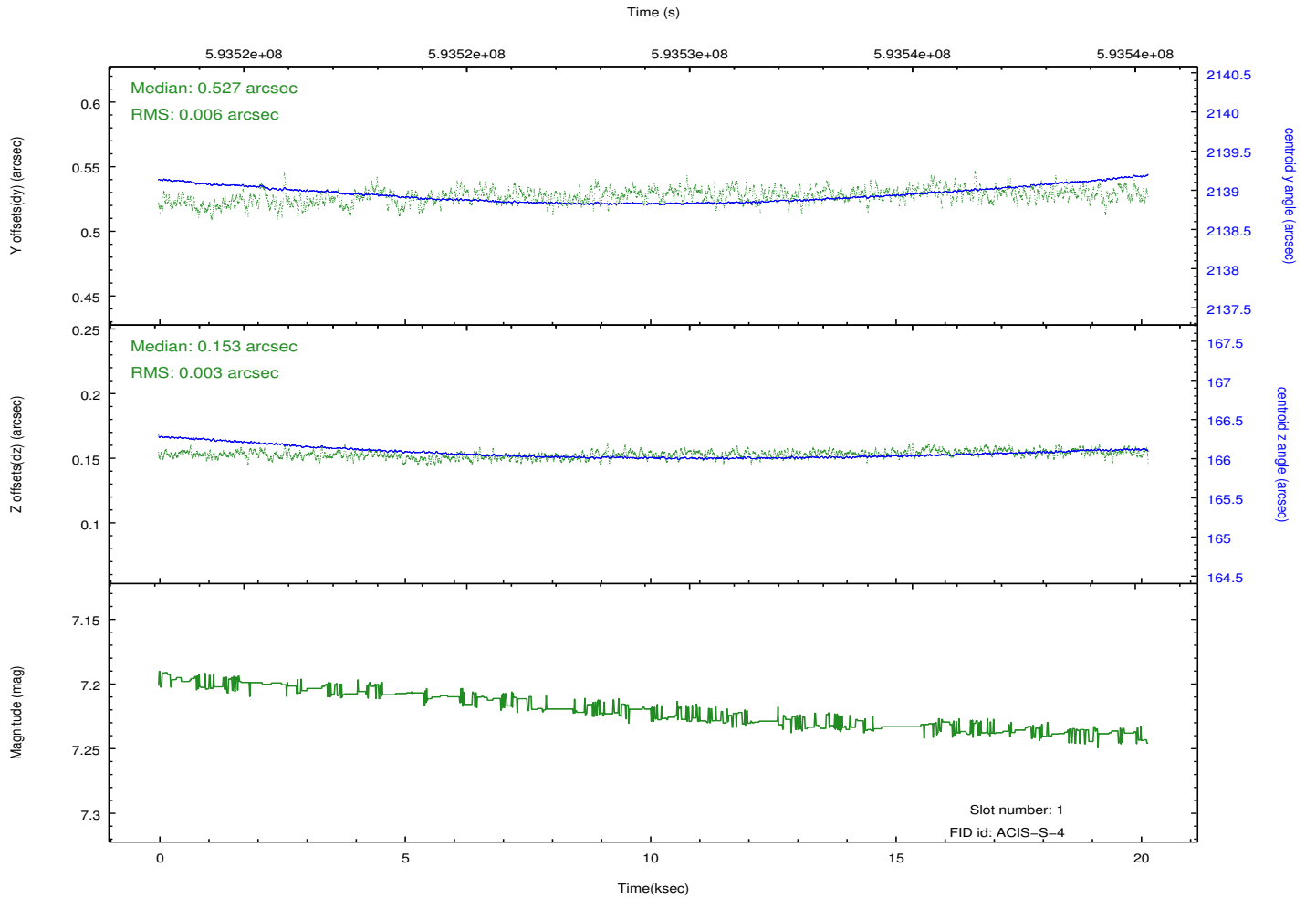
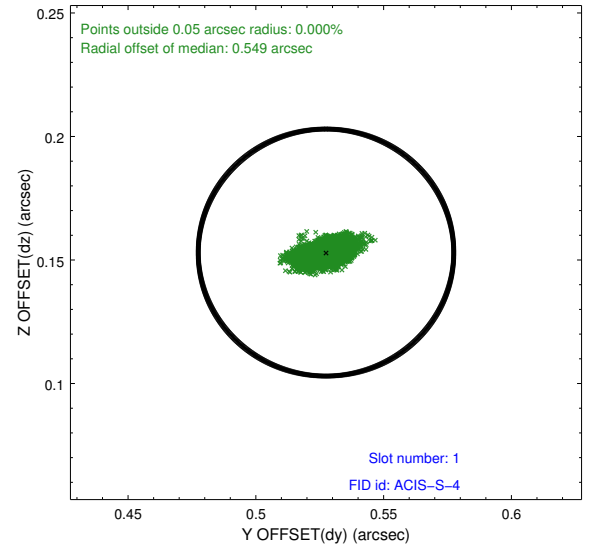
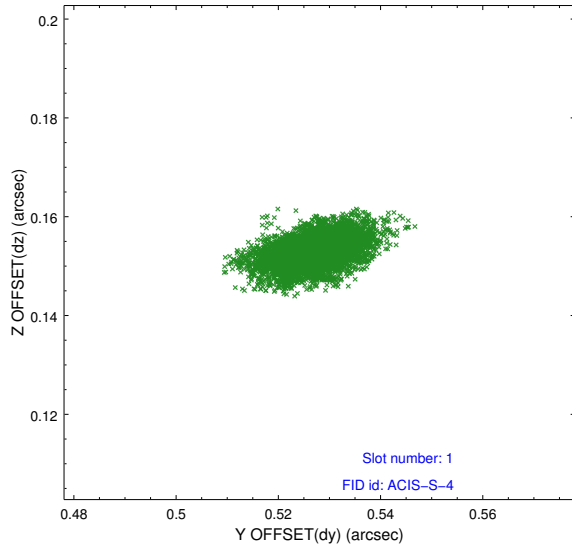


## 2.5 FID Slots

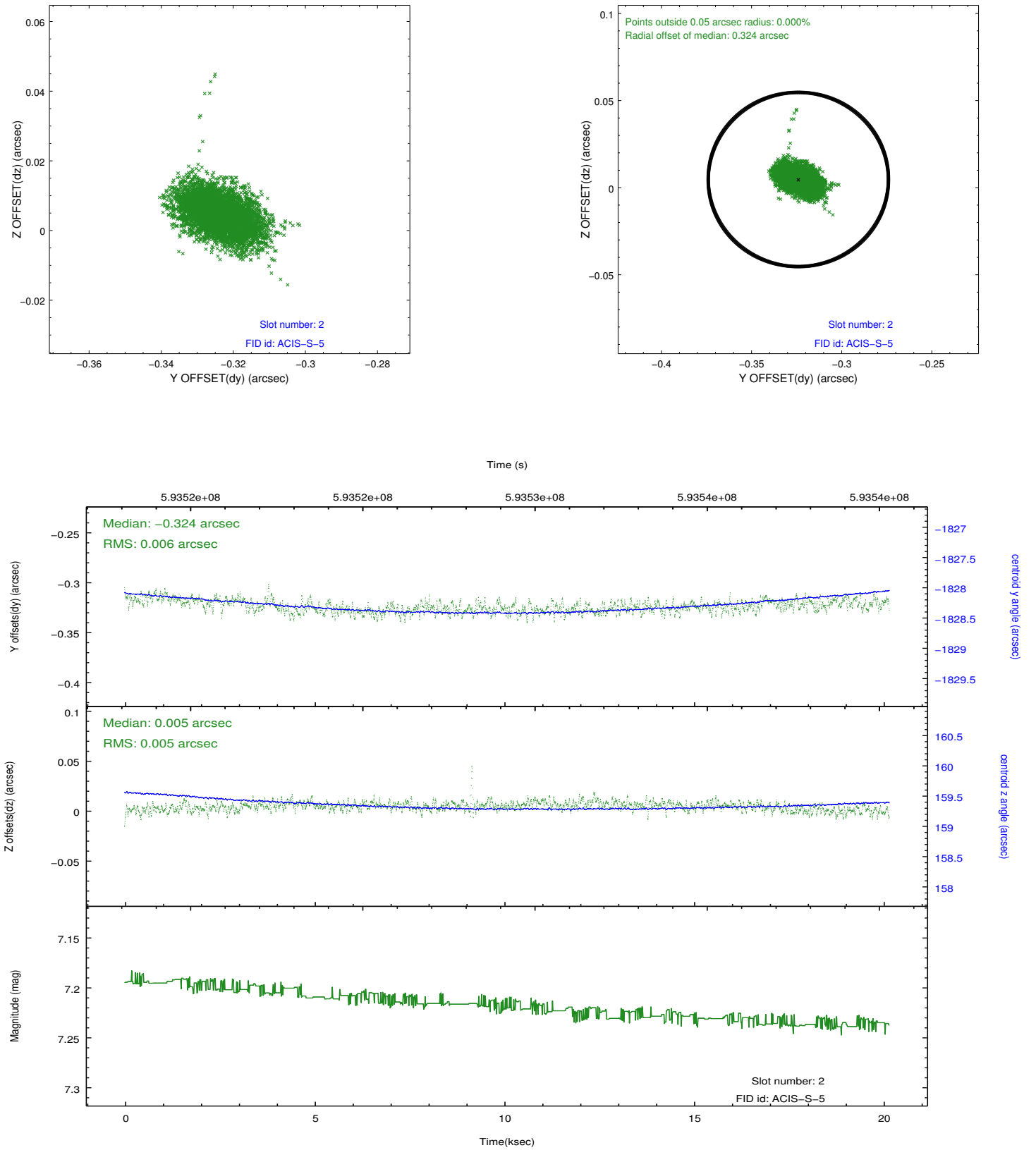
### 2.5.1 Slot 0



## 2.5.2 Slot 1

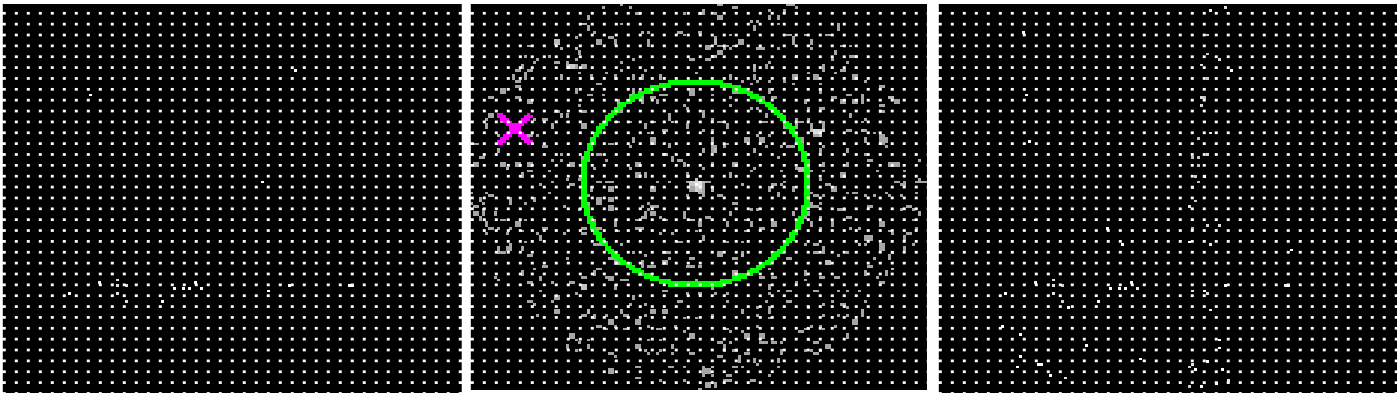


### 2.5.3 Slot 2



# 3 Gratings

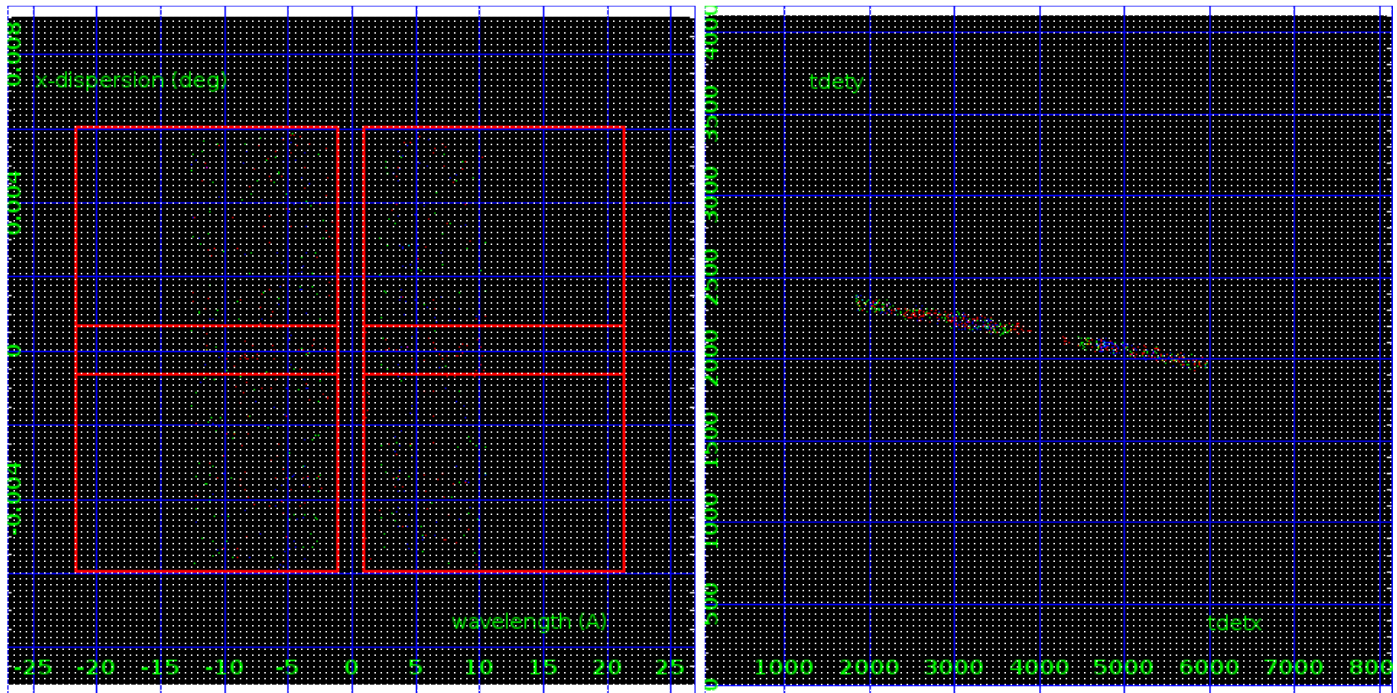
## 3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

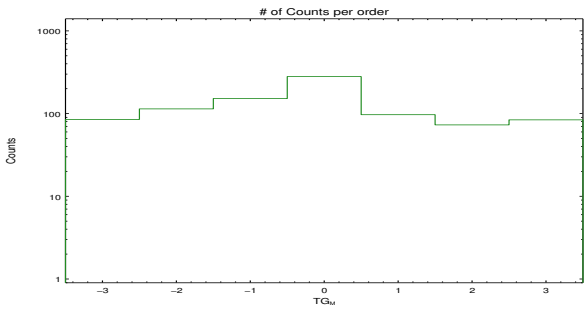
HEG Order Sort ALL

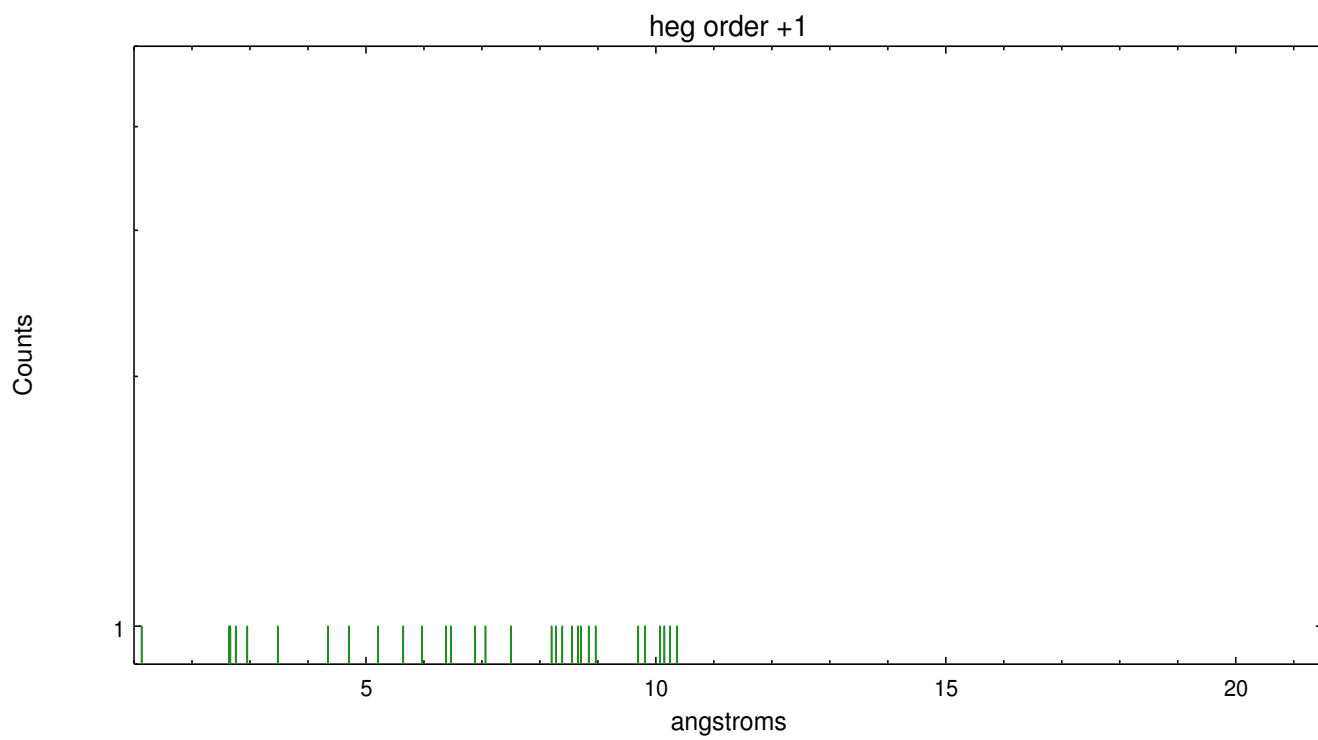
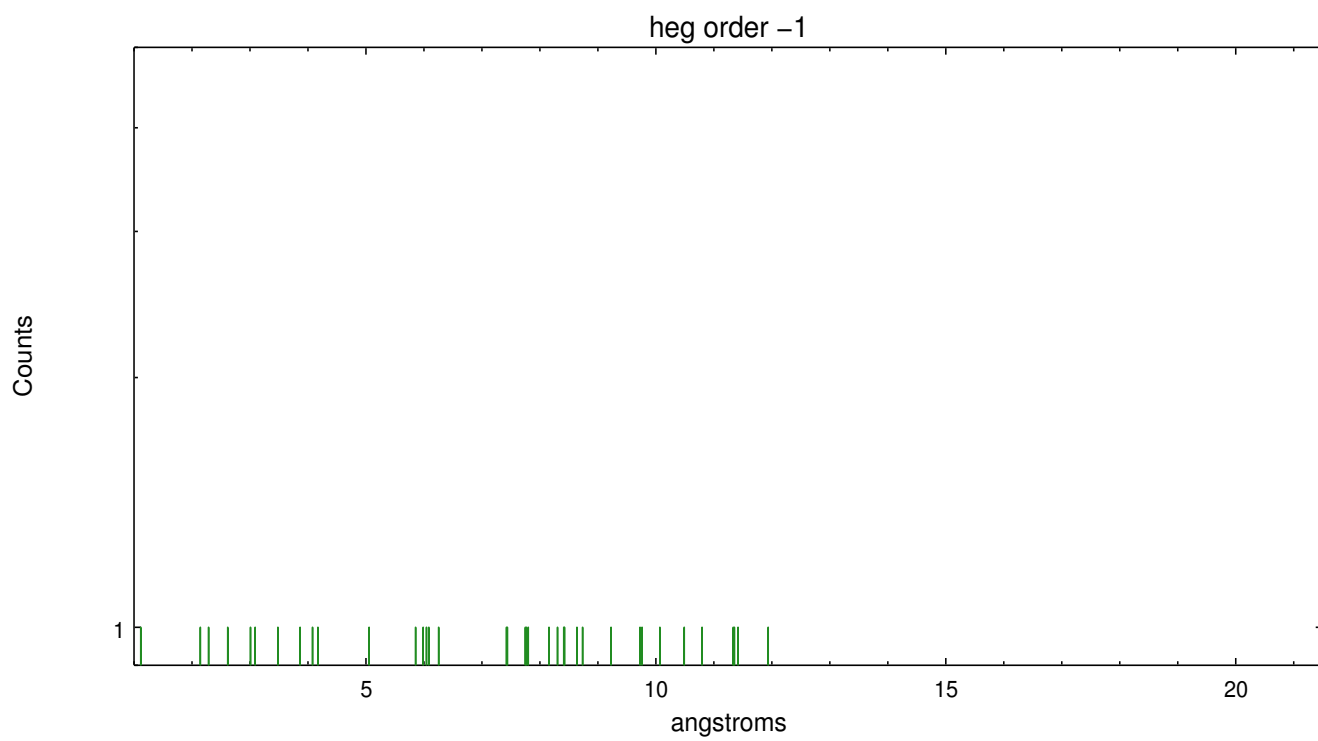


Spot Image HEG

Full Detector HEG

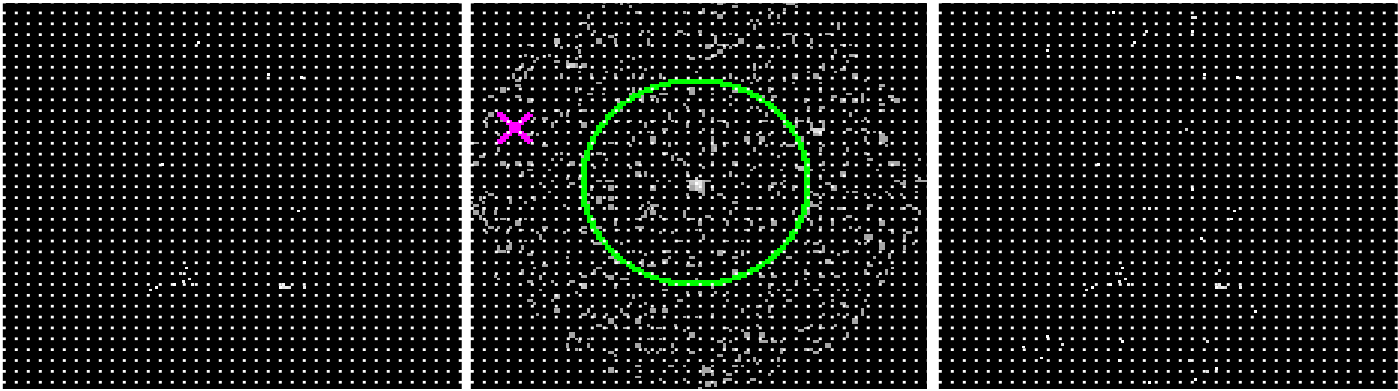
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	85	114	152	280	97	73	84







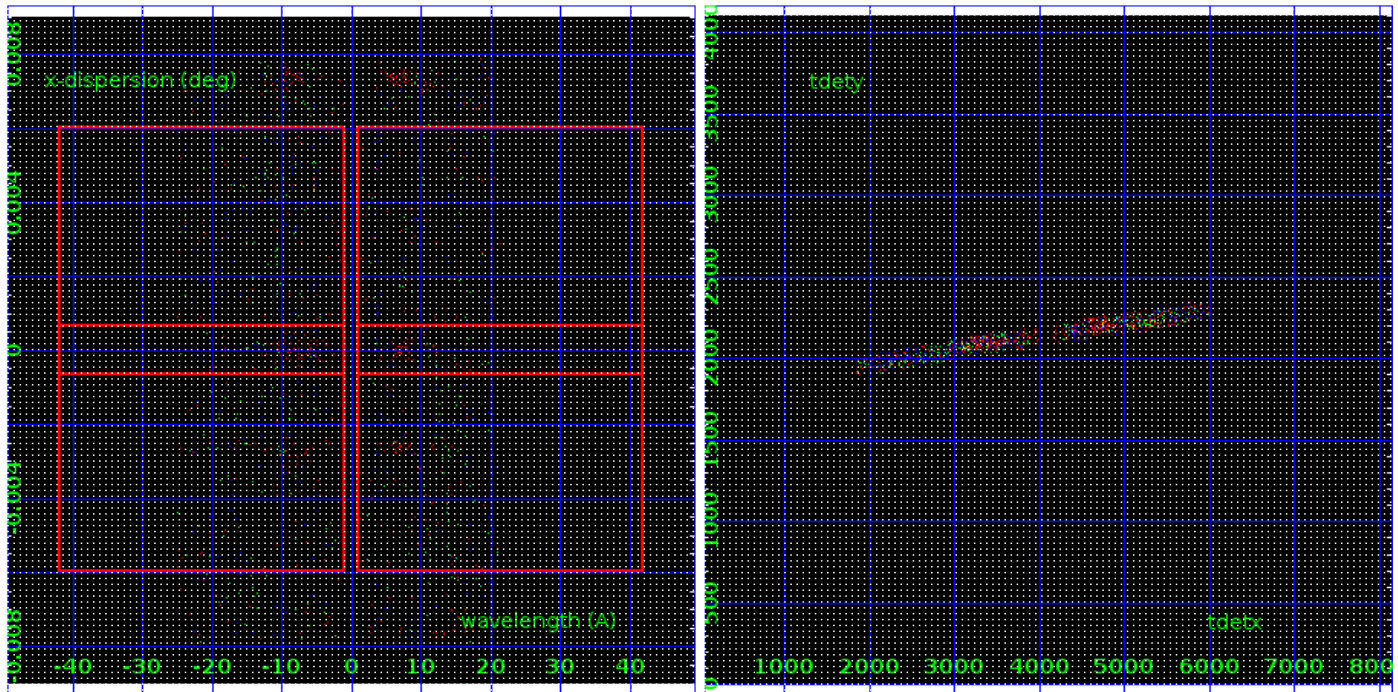
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

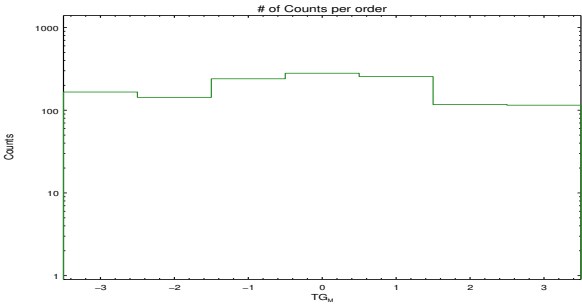
MEG Order Sort ALL

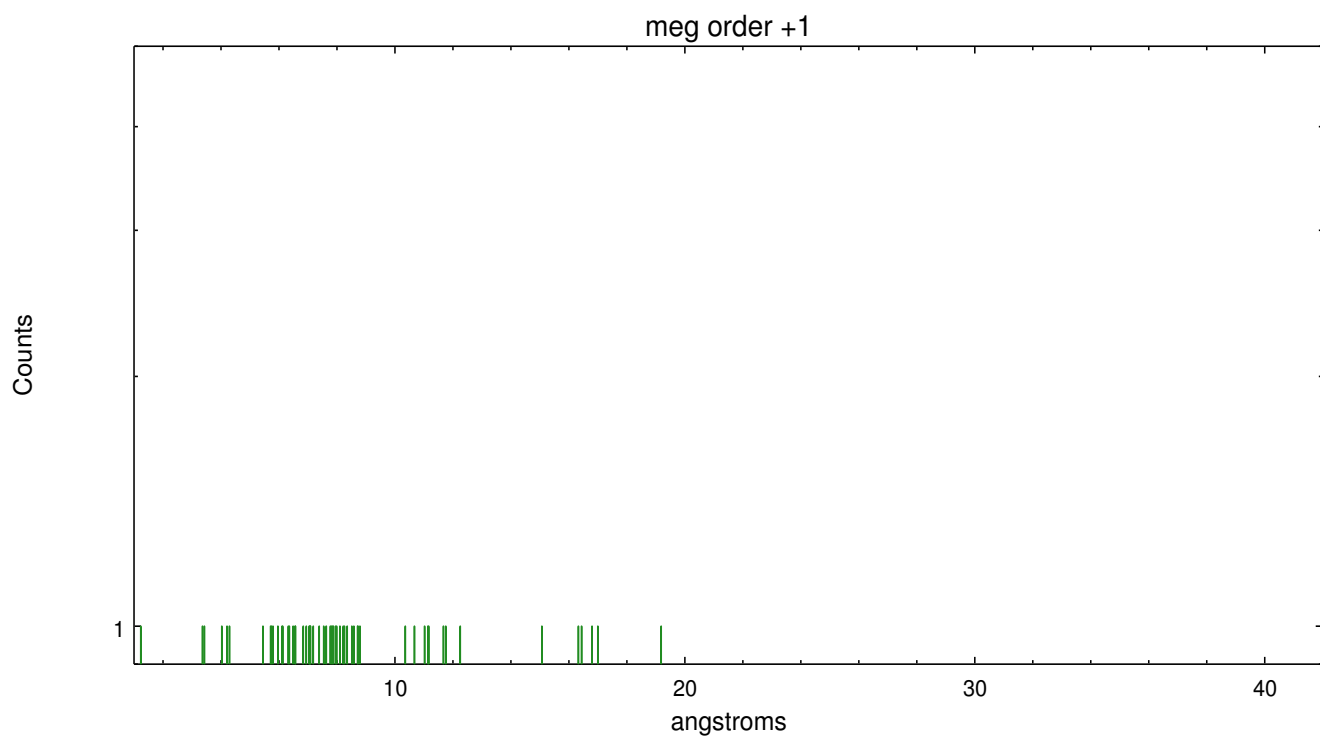
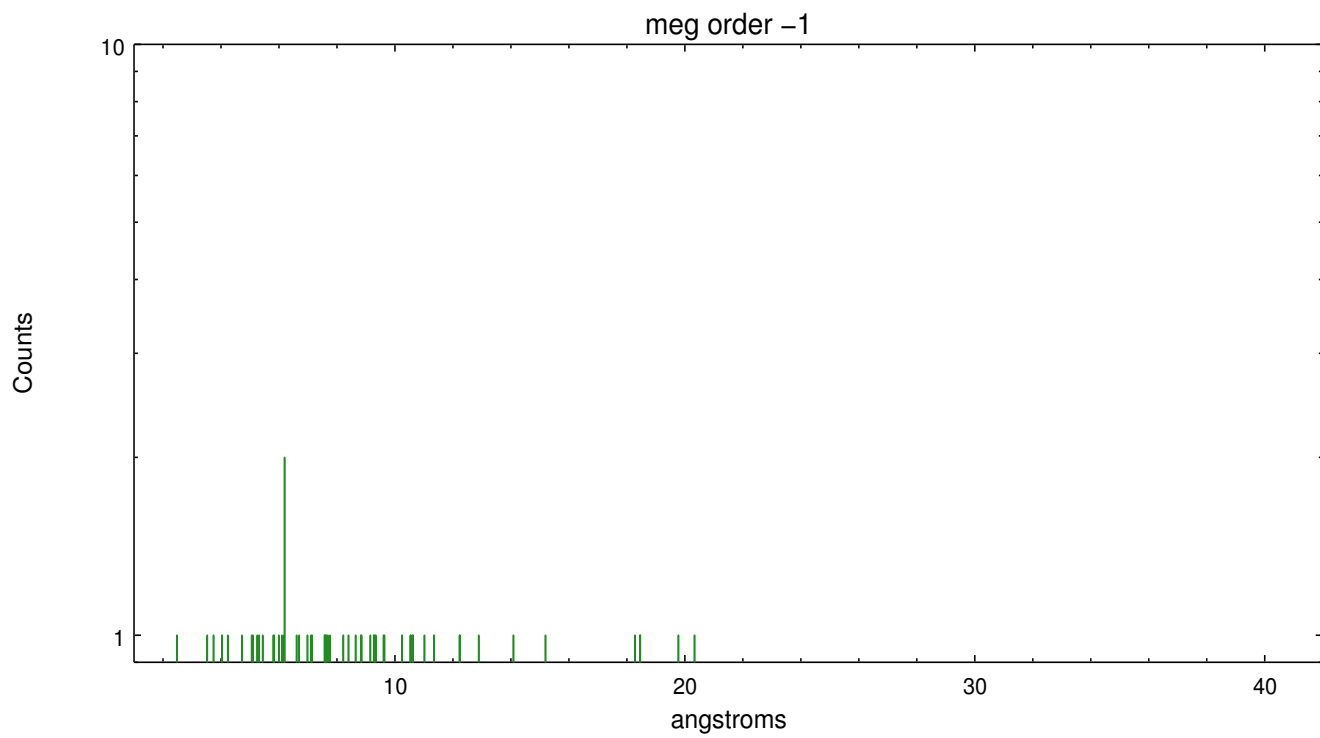


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	166	143	240	280	255	117	115





# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2016.10.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.063200154424

## A.2 Comments

Note: for consistency with other observations in this sequence, the spectrum was extracted centered on V914 Per, (ra,dec) = (56.136, 32.143)[deg]

Note: crowded field; custom processing and assessment of source confusion will be required.