

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 10860 - L2 Version 2  
Chandra X-Ray Center

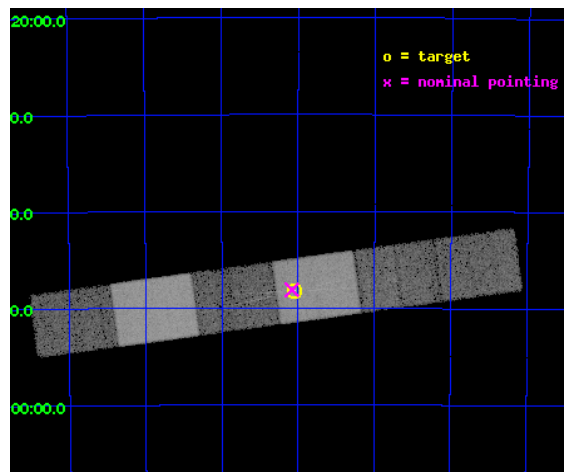
L2 Processing Date : May 31 2012

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# 1 Front

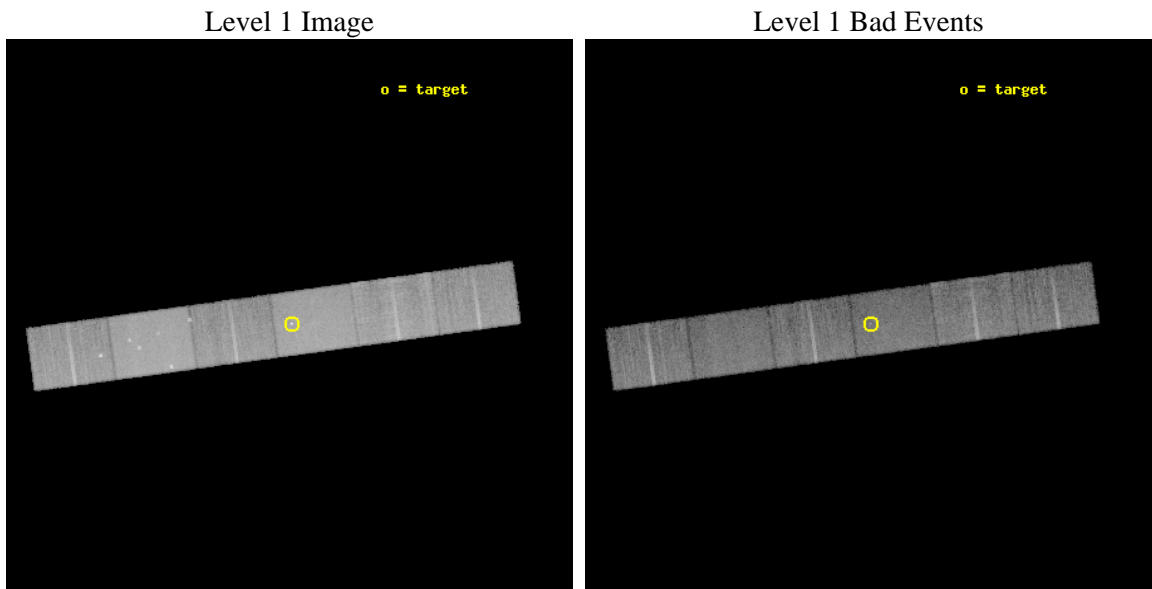
seq_num	300223	Sequence number
obs_id	10860	Observation id
title	The Symbiotic Star SS73 17: What Generates the Hard X-rays?	Propos
observer	Dr. Randall Smith	Principal investigator
object	SS73 17	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	152.762083	Observer's specified target RA [deg]
dec_targ	-57.803861	Observer's specified target Dec [deg]
ra_nom	152.77048321363	Nominal RA [deg]
dec_nom	-57.801932999167	Nominal Dec [deg]
roll_nom	352.16372917653	Nominal Roll [deg]
revision	2	Processing version of data
ontime	13182.5	Sum of GTIs [s]
livetime	12969.591191008	Livetime [s]
ontime4	13182.5	Sum of GTIs [s]
ontime5	13182.5	Sum of GTIs [s]
ontime6	13182.5	Sum of GTIs [s]
ontime7	13182.5	Sum of GTIs [s]
ontime8	13182.5	Sum of GTIs [s]
ontime9	13182.5	Sum of GTIs [s]
l2events	178366	Number of level 2 events



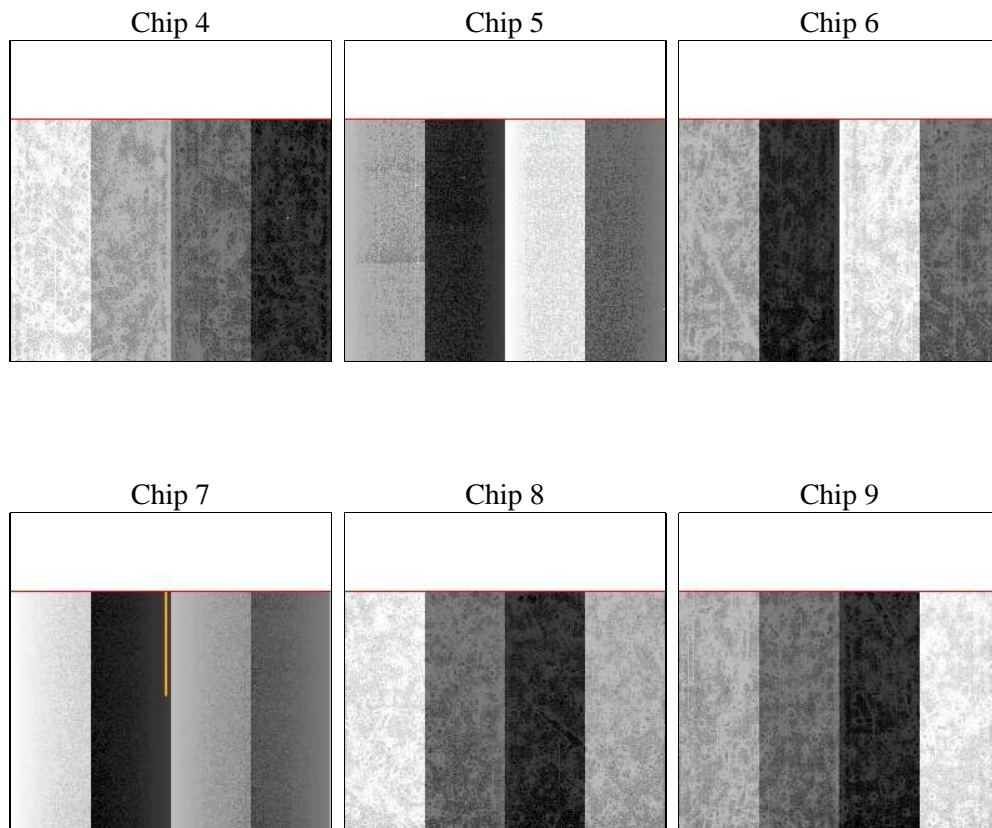
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	13500.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	13182.5	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime4	13182.5	Sum of GTIs [s]
date	2012-05-31T14:50:40	Date and time of file creation	ontime5	13182.5	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	13182.5	Sum of GTIs [s]
			ontime7	13182.5	Sum of GTIs [s]
			ontime8	13182.5	Sum of GTIs [s]
			ontime9	13182.5	Sum of GTIs [s]
			l1events	758902	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	114459	161949	103682	144846	133547	100419	grade 0 events	7226	8362	5101	5540	9399	5333
rejected events	99371	86186	90473	82865	102035	87197		6%	5%	4%	3%	7%	5%
rejected %	86%	53%	87%	57%	76%	86%	grade 1 events	108	387	58	155	91	60
								0%	0%	0%	0%	0%	0%
							grade 2 events	3046	22212	2840	12712	7278	2688
								2%	13%	2%	8%	5%	2%
							grade 3 events	1323	3182	1258	5473	3240	1322
								1%	1%	1%	3%	2%	1%
							grade 4 events	1328	3066	1326	5328	3064	1282
								1%	1%	1%	3%	2%	1%
							grade 5 events	4768	11954	4924	13537	6519	5228
								4%	7%	4%	9%	4%	5%
							grade 6 events	2169	38984	2685	32944	8562	2598
								1%	24%	2%	22%	6%	2%
							grade 7 events	94491	73802	85490	69157	95394	81908
								82%	45%	82%	47%	71%	81%

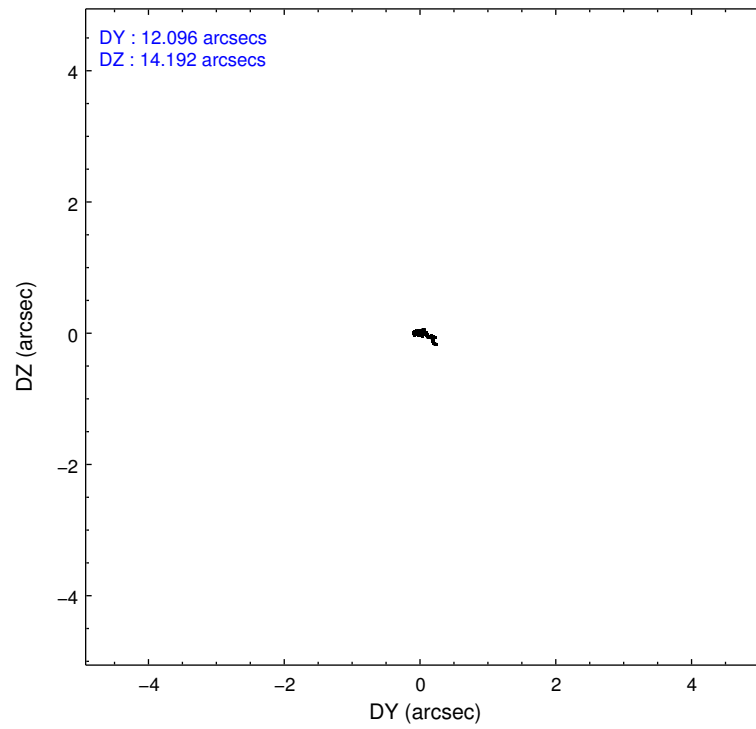
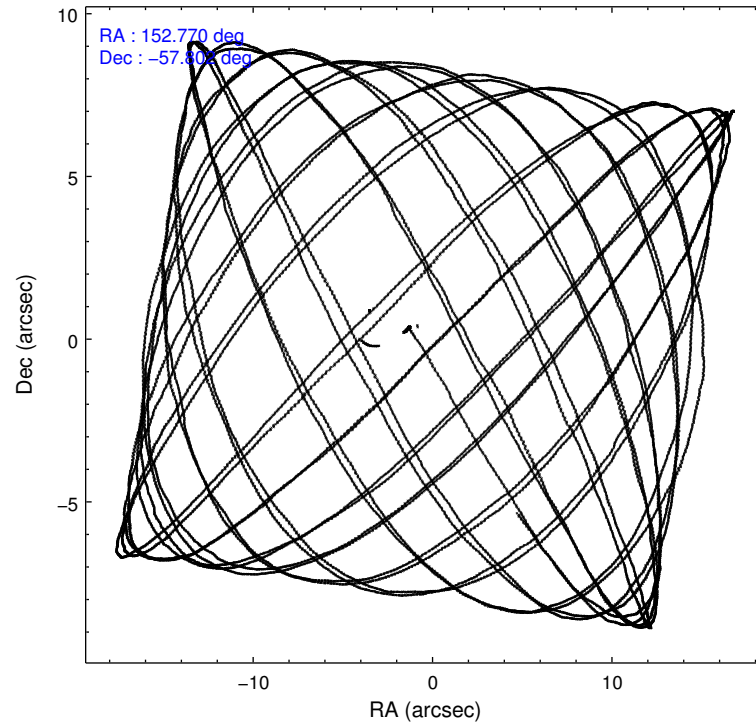


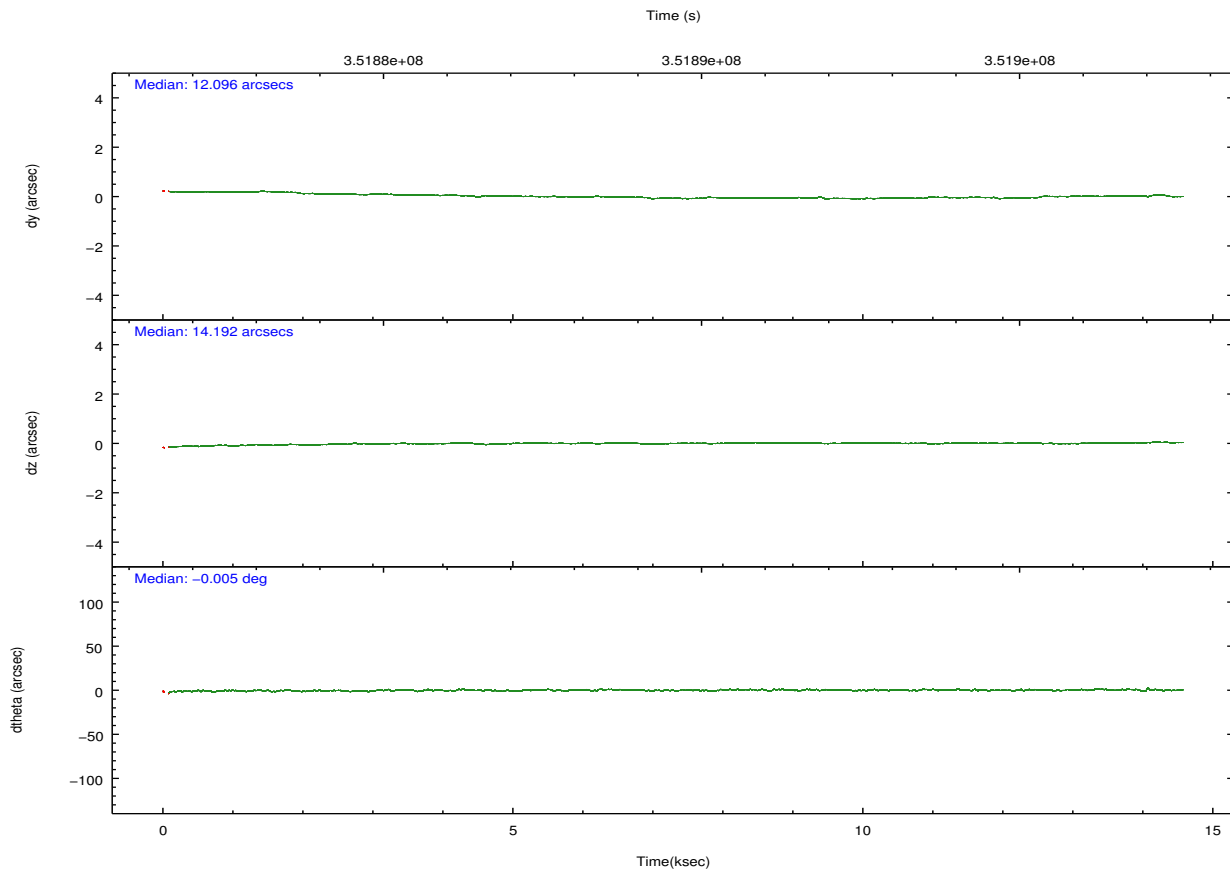
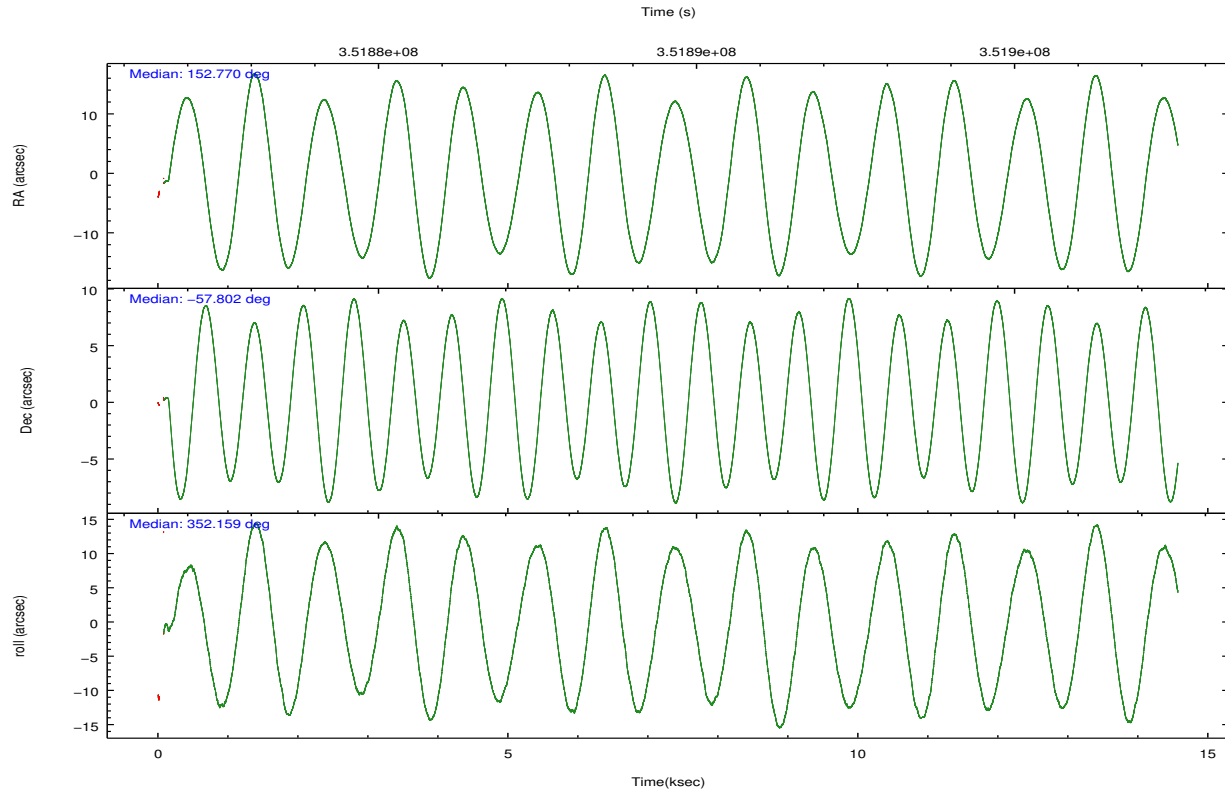
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-456789	ACIS-456789
Grating	HETG	HETG
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	152.723145	152.7704832136302
[deg] Pointing Dec	-57.812551	-57.80193299916687
[deg] Pointing Roll	351.967043	352.1637291765271
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-187.132523	-187.1228876879999
[mm] SIM translation stage offset	-3	-3.009634895007935
[s] Observation start time (MET)	351883345.184000	351881548.98181
Observation start date	2009-02-24T17:21:19	2009-02-24T16:52:28
[s] Observation end time (MET)	351896845.184000	351897523.6076
Observation end date	2009-02-24T21:06:19	2009-02-24T21:18:43
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	N	N
CCD I1 on	N	N
CCD I2 on	N	N
CCD I3 on	N	N
CCD S0 on	O1	Y
CCD S1 on	Y	Y
CCD S2 on	Y	Y
CCD S3 on	Y	Y
CCD S4 on	Y	Y
CCD S5 on	O2	Y
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	CUSTOM	CUSTOM
Subarray start row	1	1
Subarray row count	774	774
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	2.5

## 2.3 Aspect



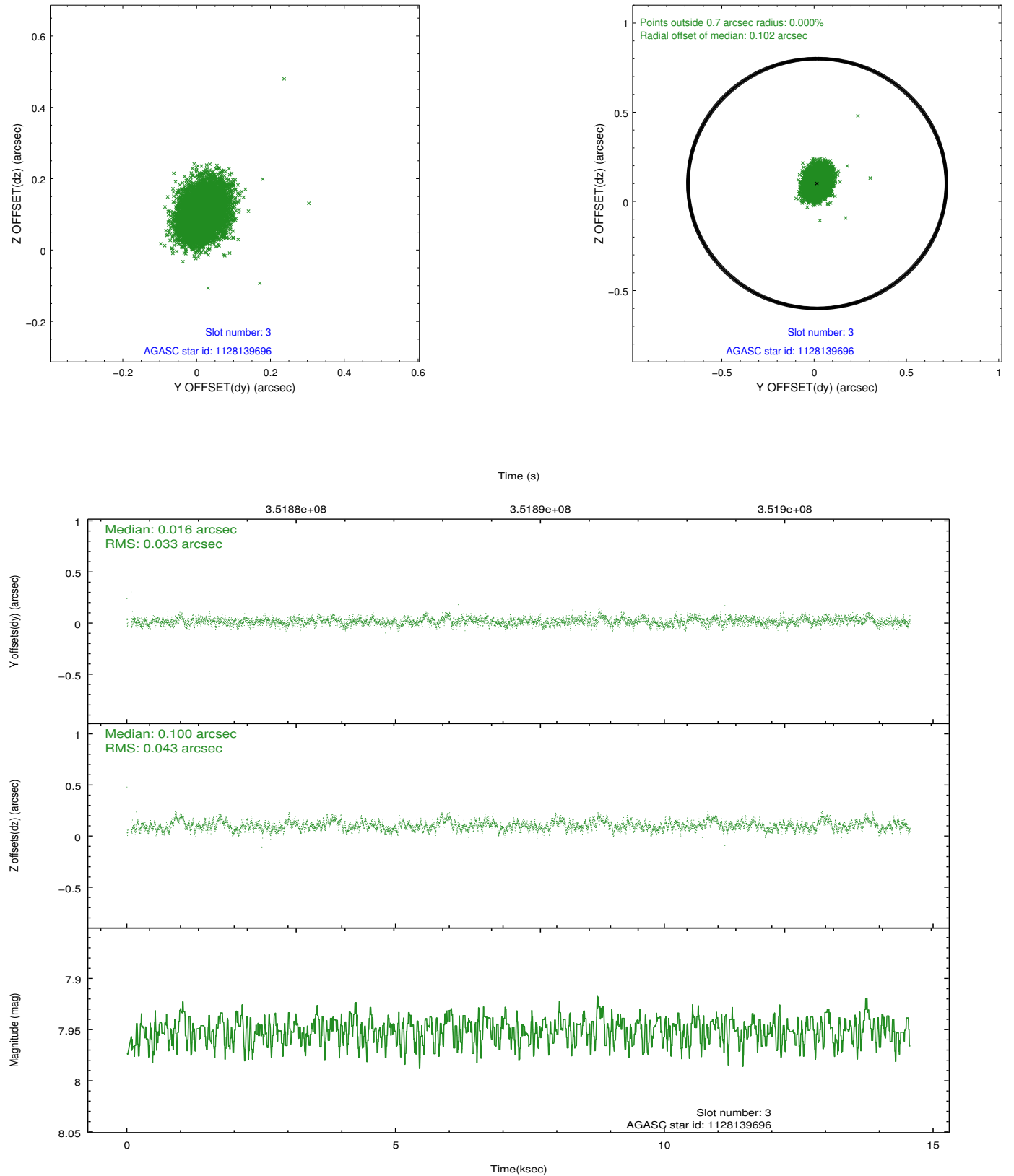


Slot Statistics

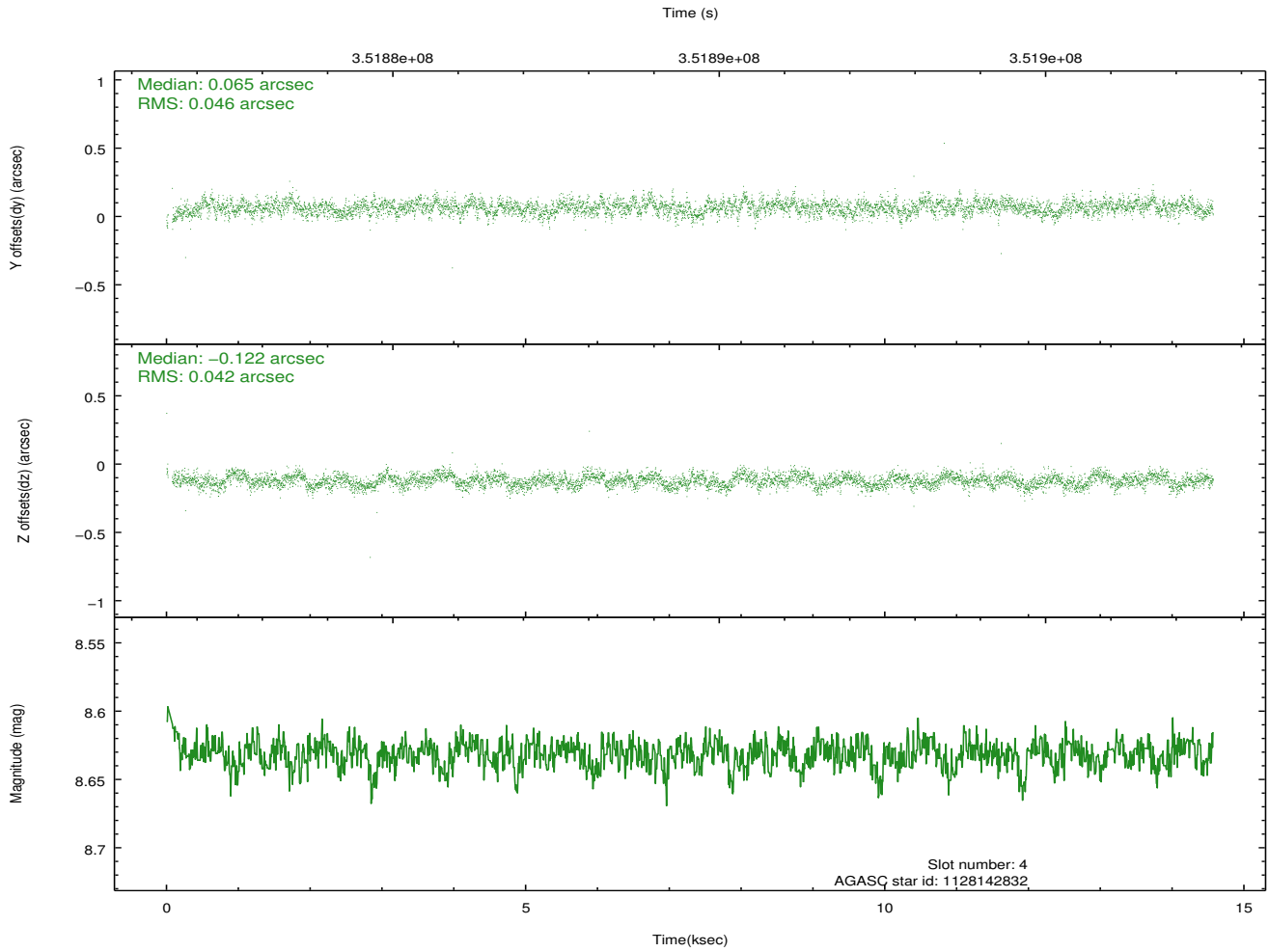
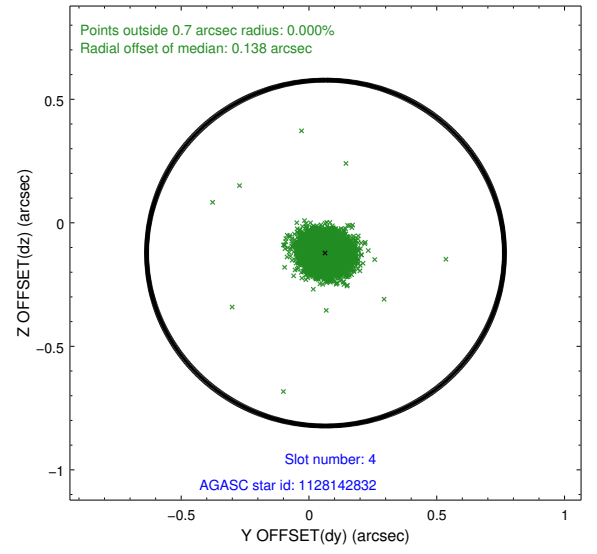
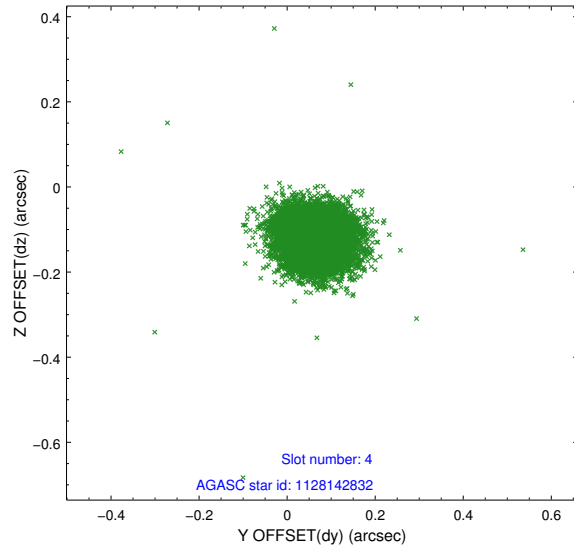
	status	id	mag	n_pts	med_dy	med_dz	drl
	FID	ACIS-S-1	6.94	3540	0.119	-0.017	0.008
	FID	ACIS-S-2	6.87	3539	-0.091	-0.025	0.008
	FID	ACIS-S-5	7.00	3540	-0.051	0.048	0.007
	GUIDE	1128139696	7.95	7077	0.016	0.100	0.057
	GUIDE	1128142832	8.63	7075	0.065	-0.122	0.064
	GUIDE	1128274392	9.34	7064	-0.036	-0.046	0.115
	GUIDE	1128798008	8.57	7077	-0.046	0.069	0.078
0.0000.0000.0000.0000000.0000000.000.00							

## 2.4 Star Slots

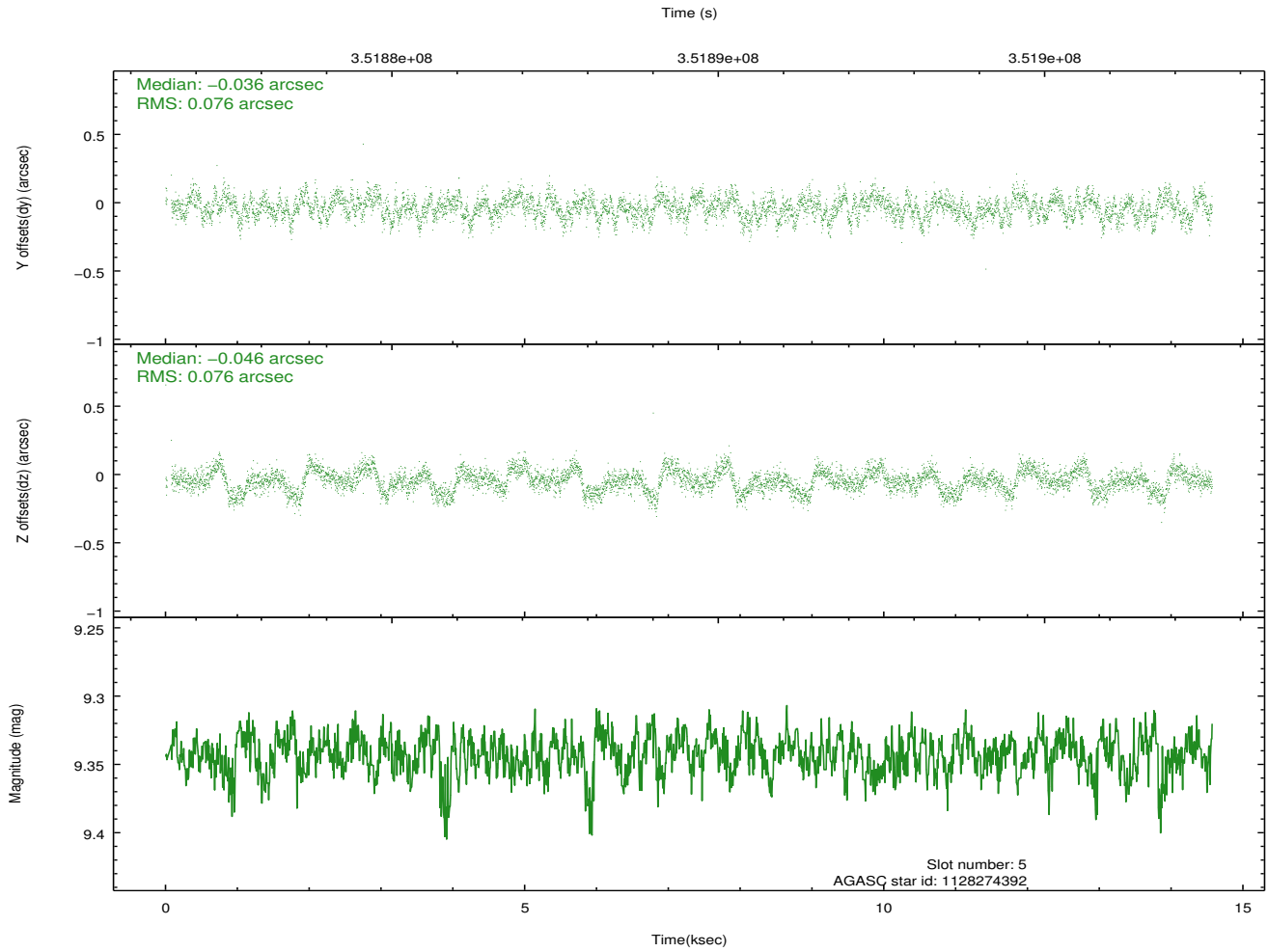
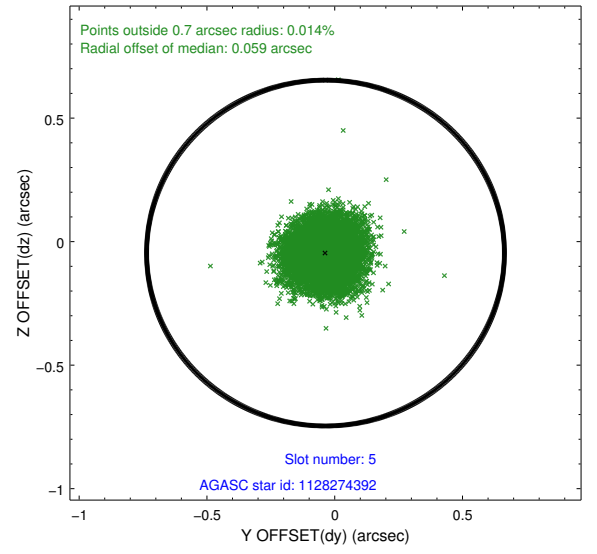
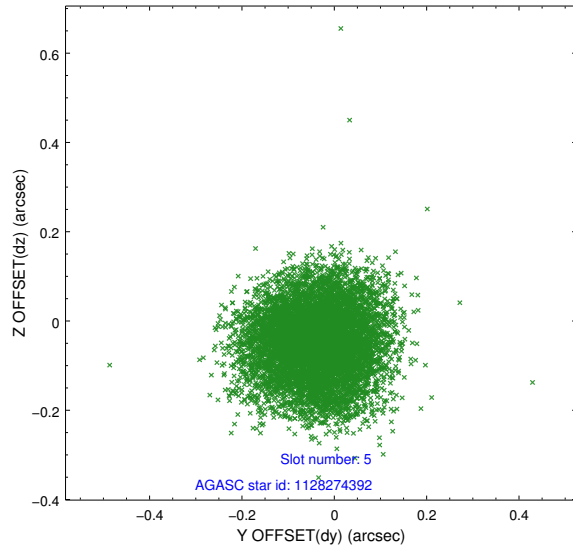
### 2.4.1 Slot 3



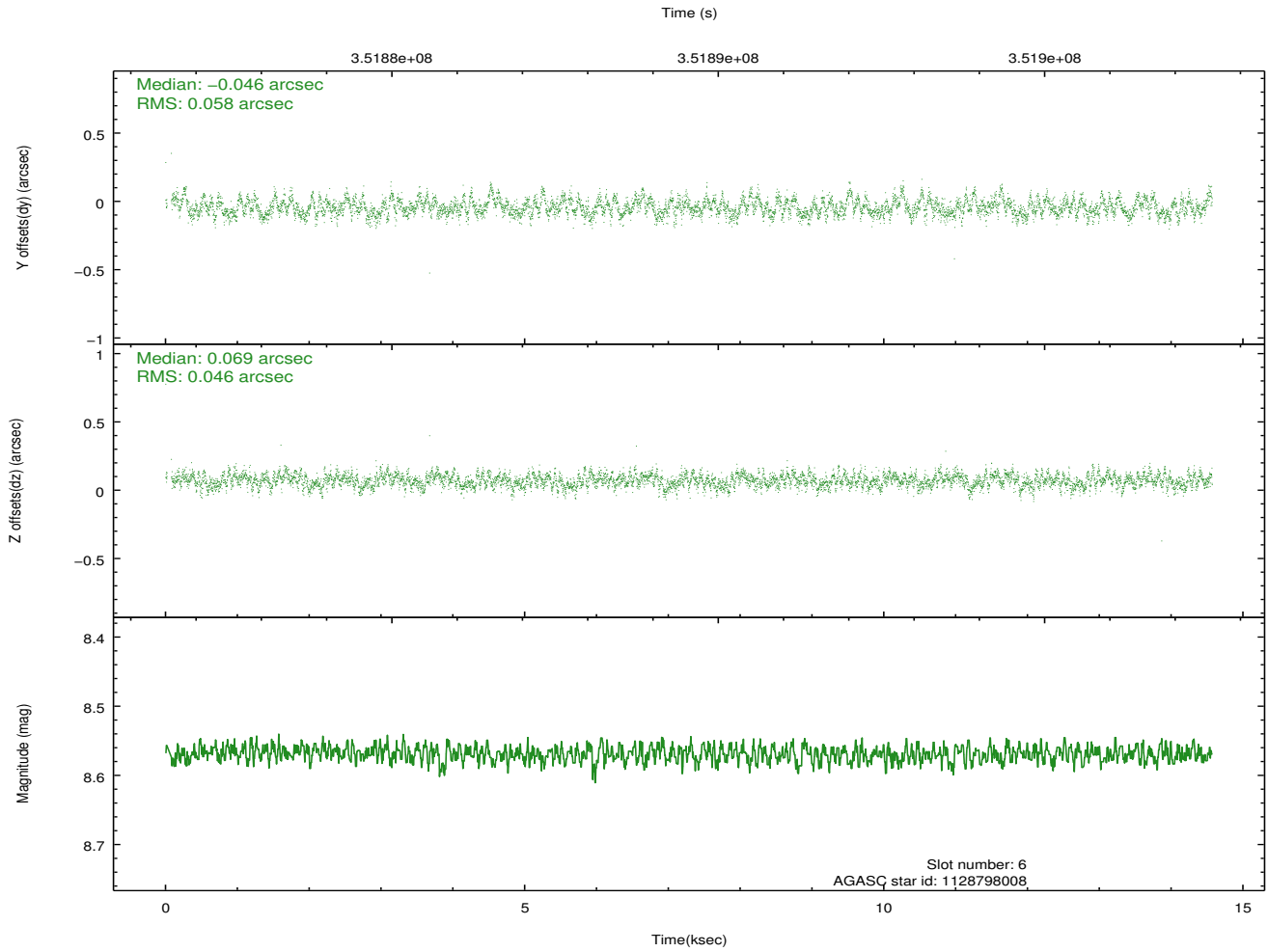
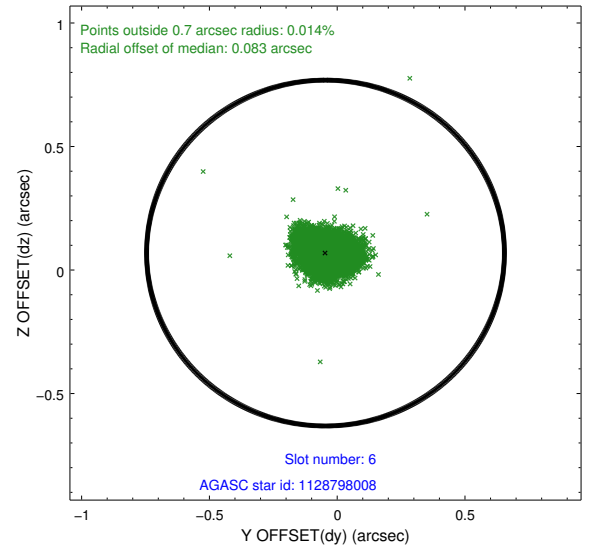
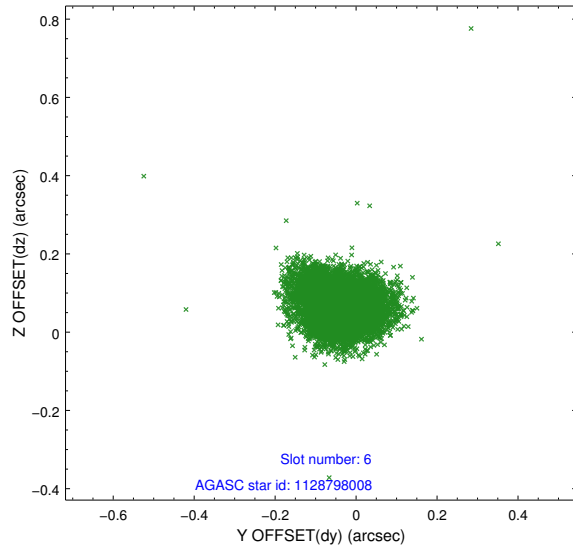
## 2.4.2 Slot 4



### 2.4.3 Slot 5



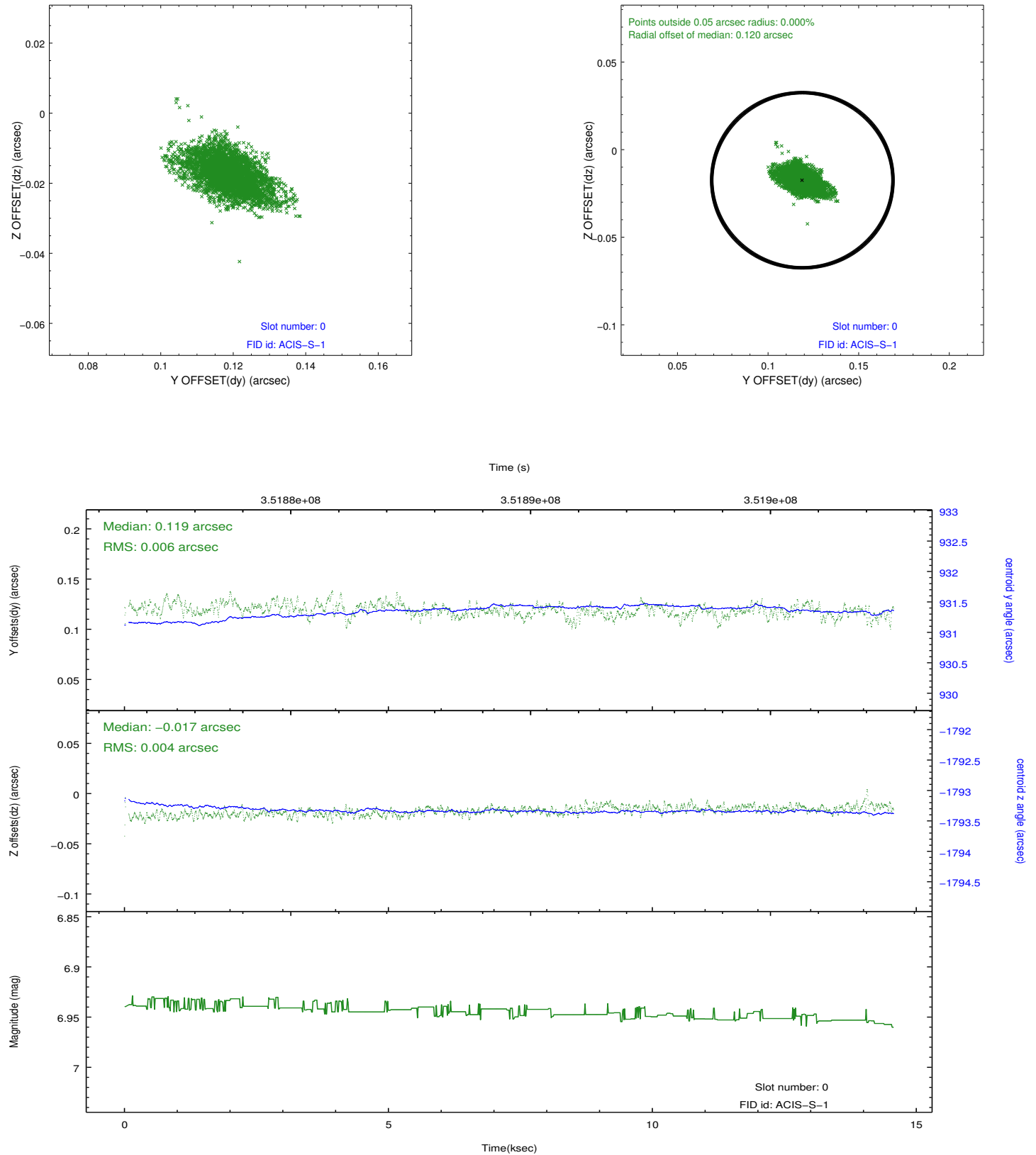
## 2.4.4 Slot 6



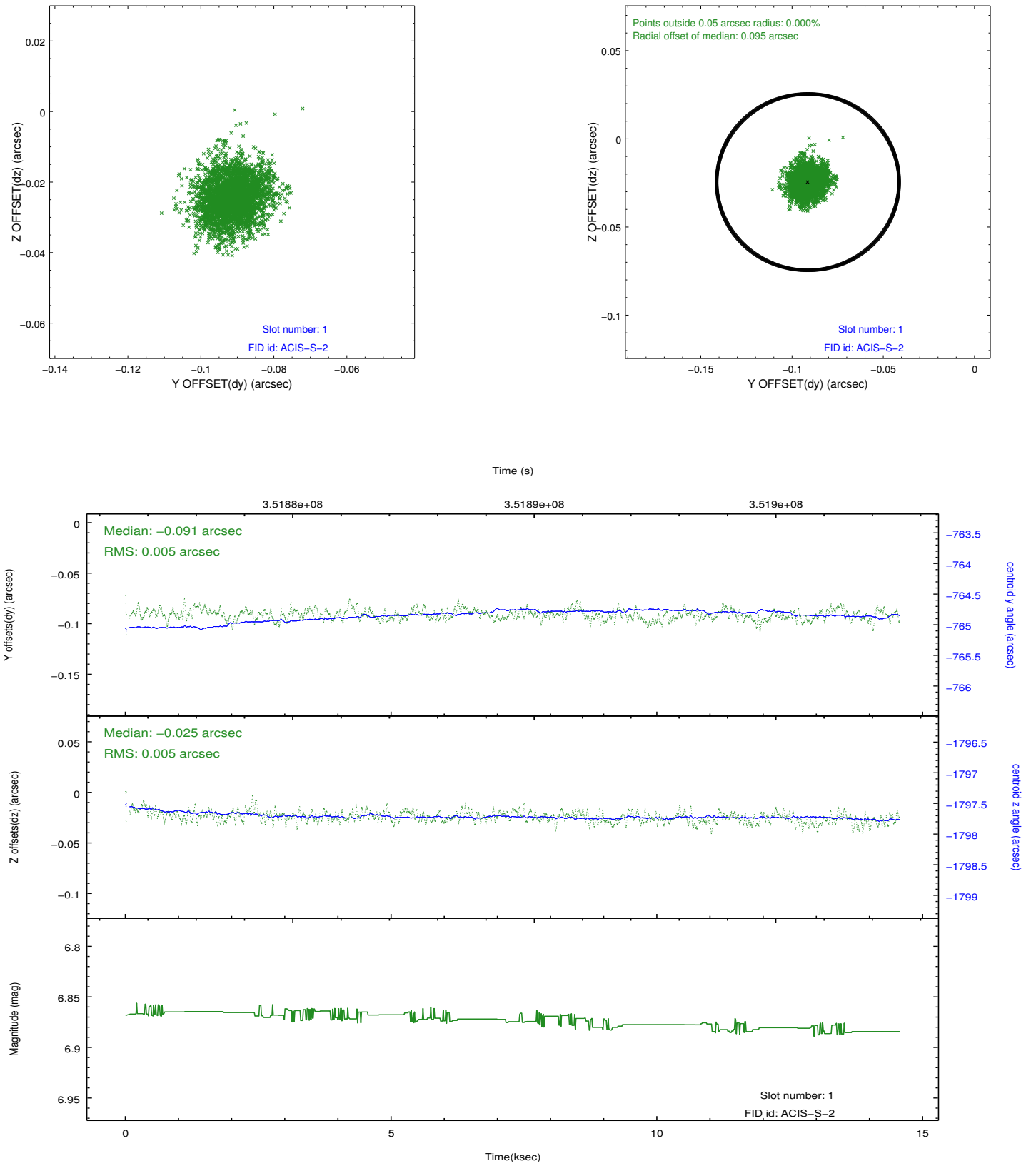


## 2.5 FID Slots

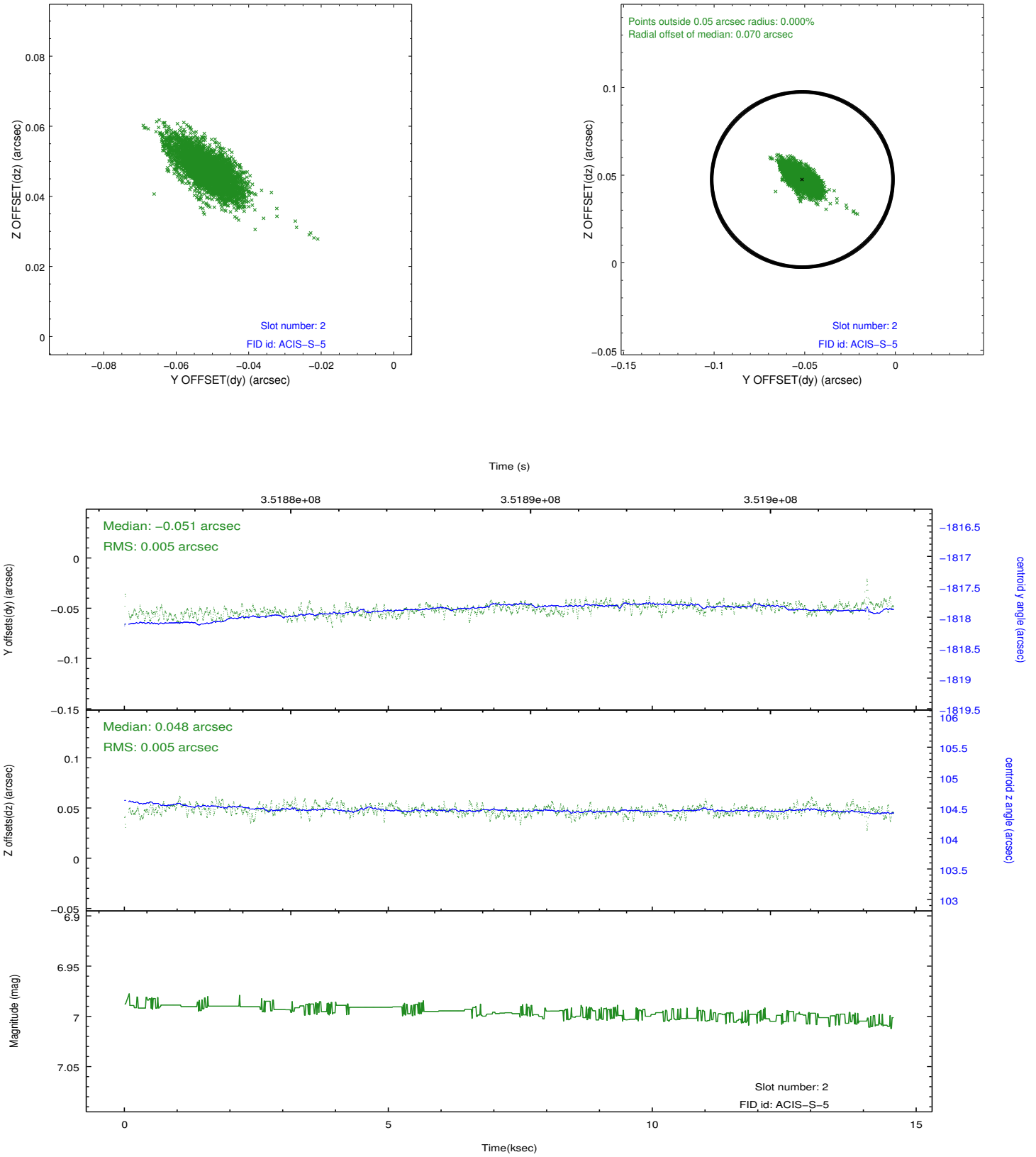
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

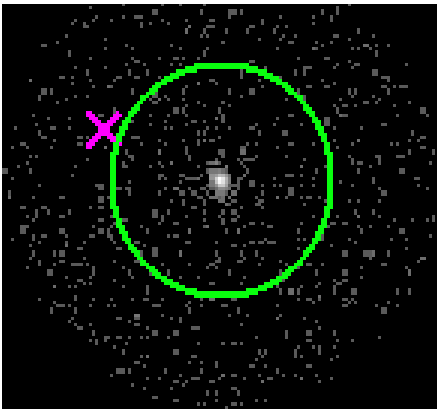


# 3 Gratings

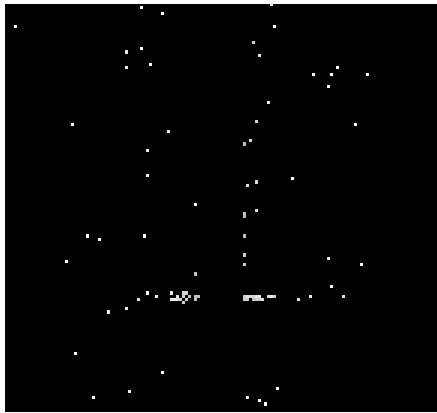
## 3.1 HEG Arm



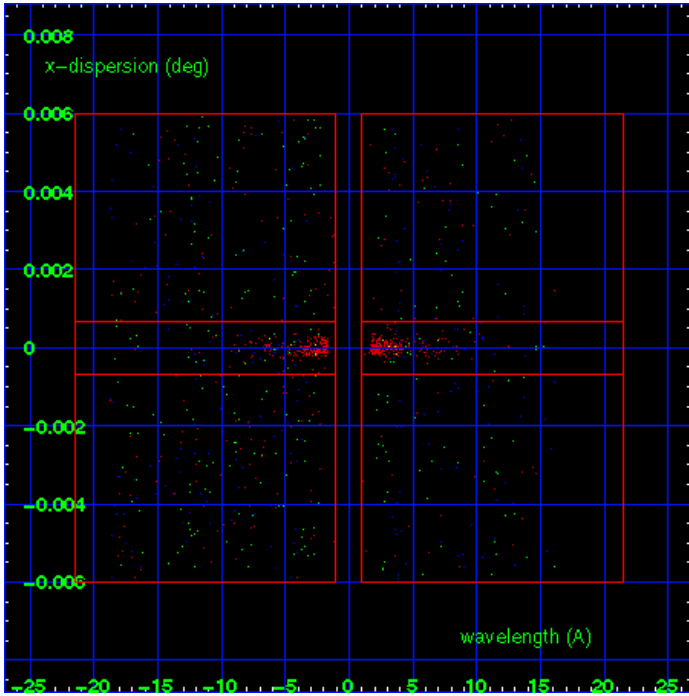
HEG Order Sort 123



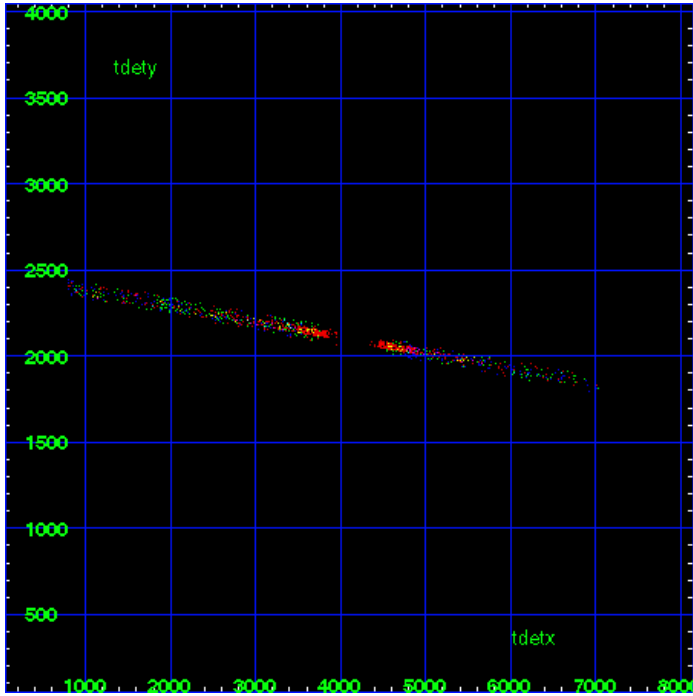
HEG Zero Order



HEG Order Sort ALL

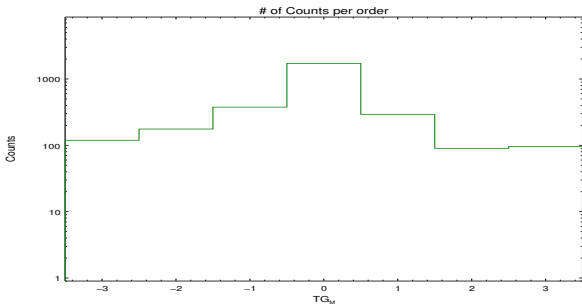


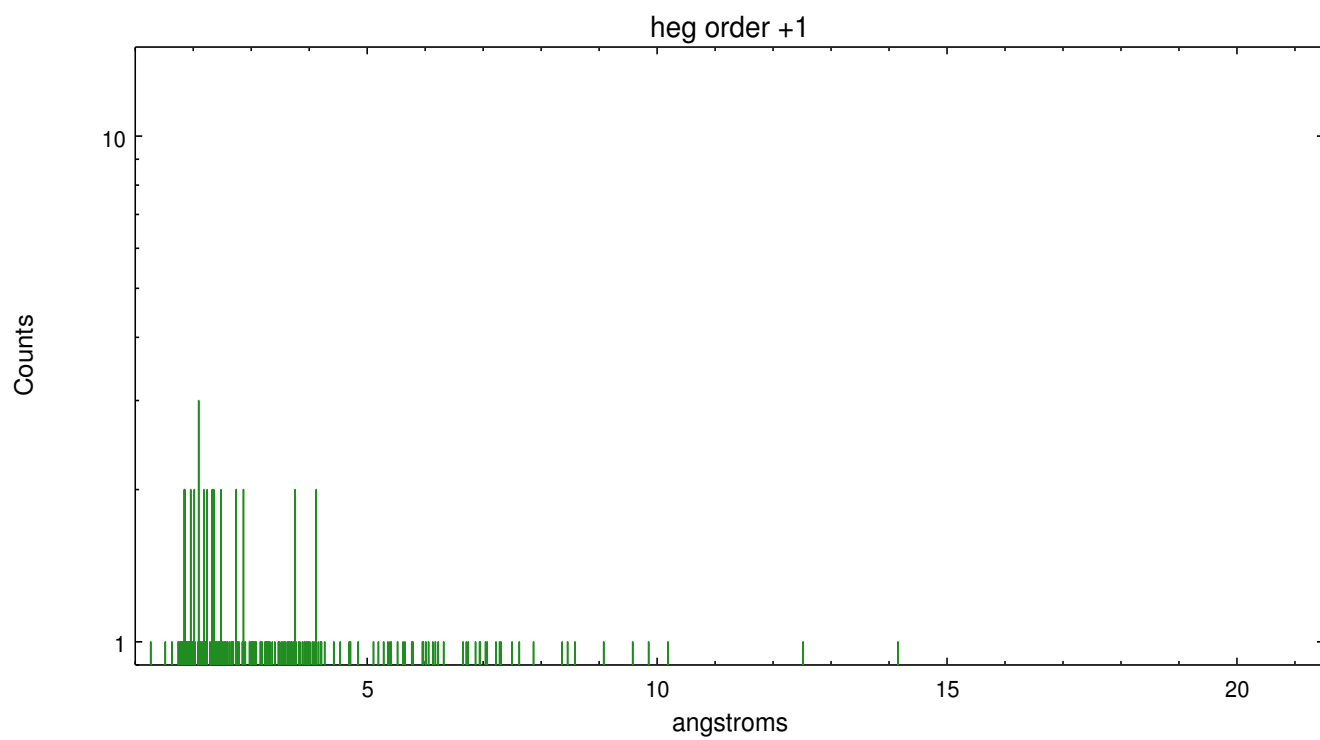
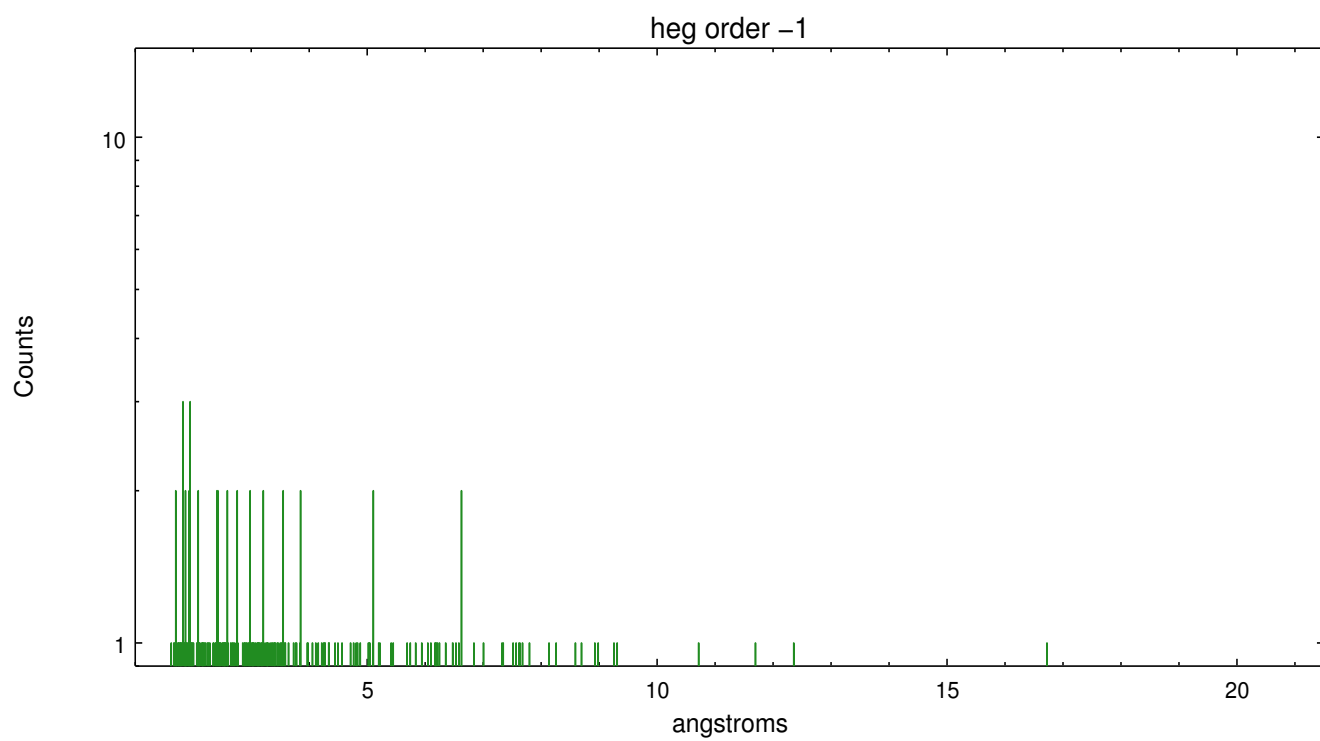
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	119	176	376	1716	293	90	96

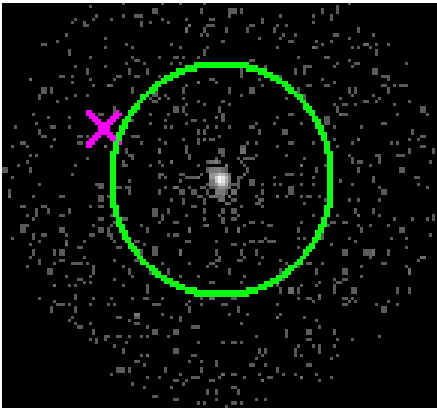




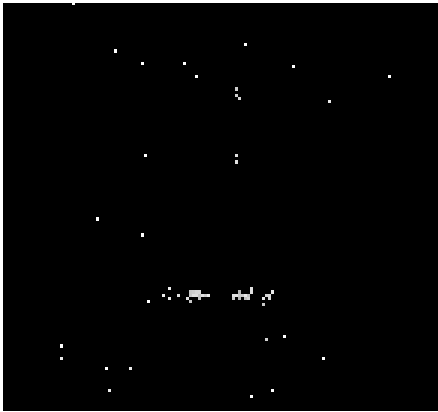
3.2 MEG Arm



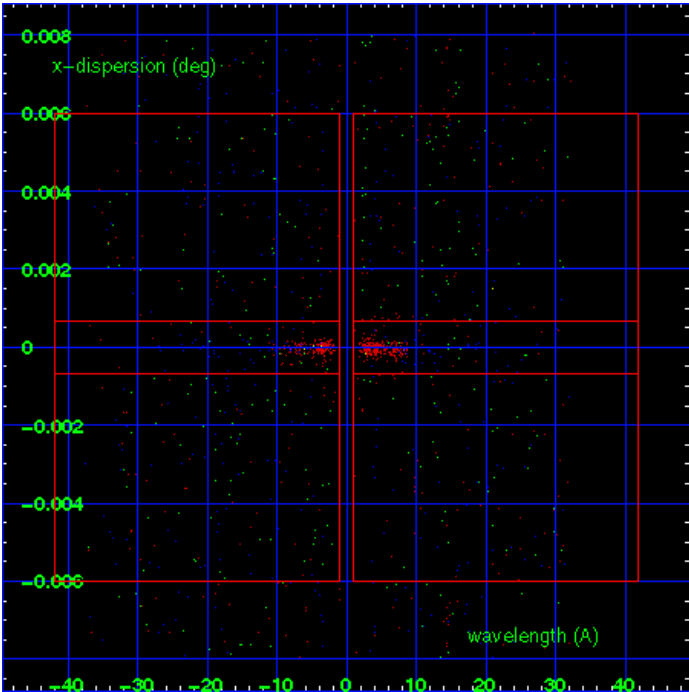
MEG Order Sort 123



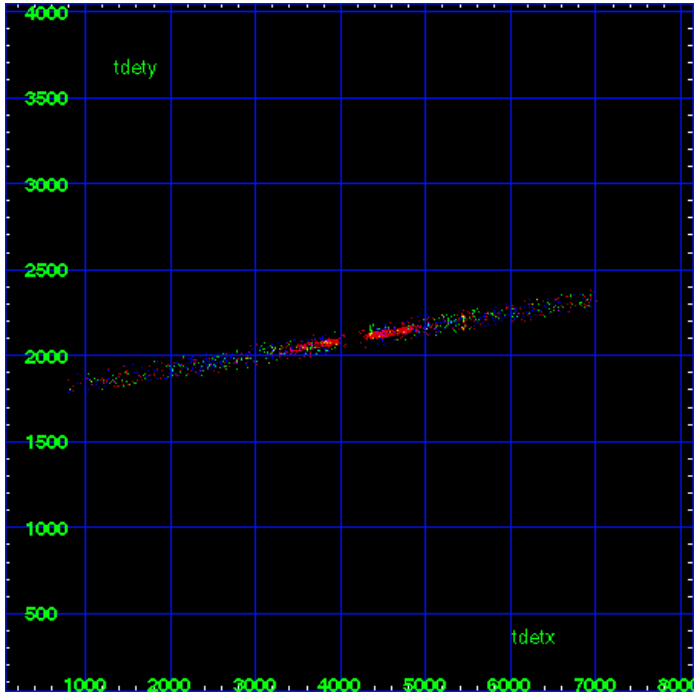
MEG Zero Order



MEG Order Sort ALL

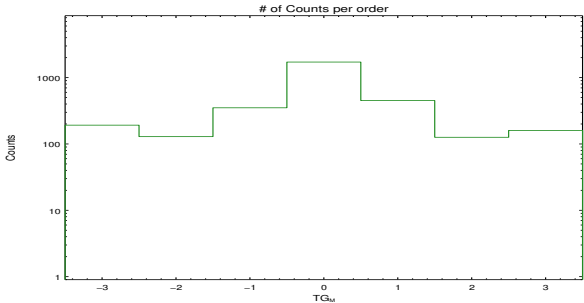


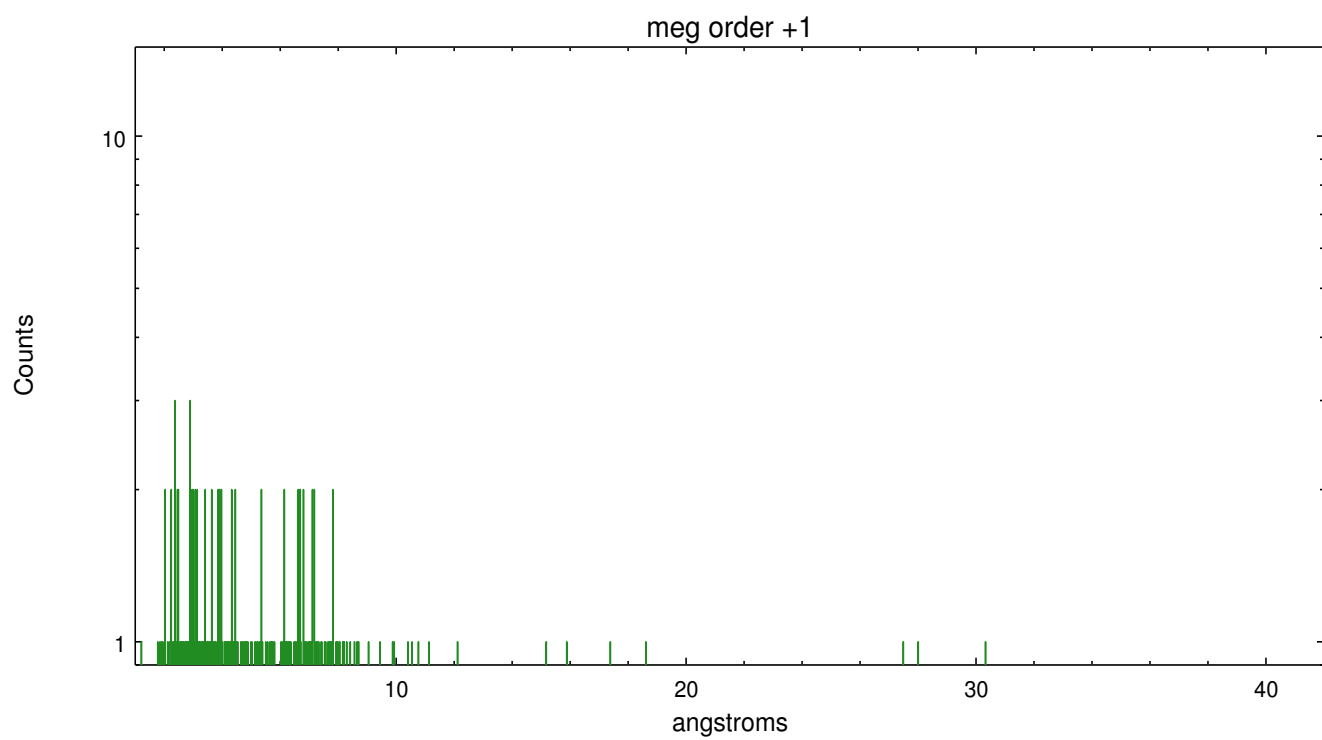
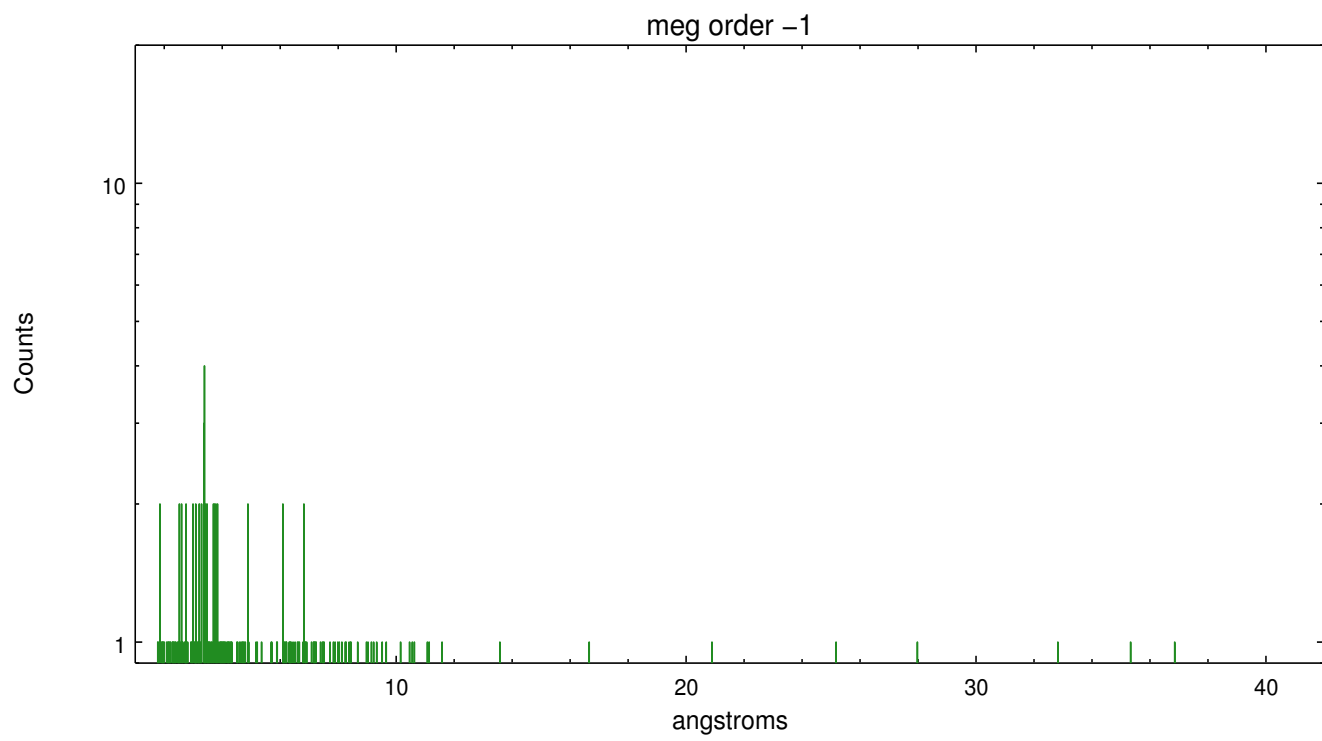
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	192	129	351	1716	451	126	160





## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.06.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	13.1825

### A.2 Comments

Optical photometry of target in guide star slot 7.