

# V&V Reference Report

## L2 ASCDS Version : 8.1.1

Observation 596 - L2 Version 4

Chandra X-Ray Center

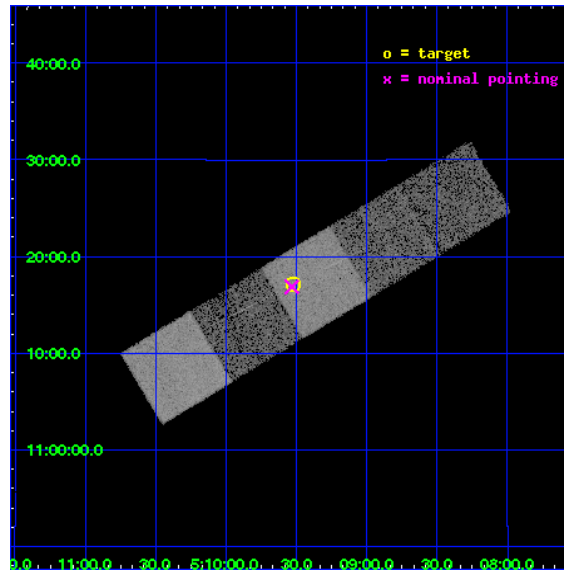
L2 Processing Date : Nov 26 2009

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# 1 Front

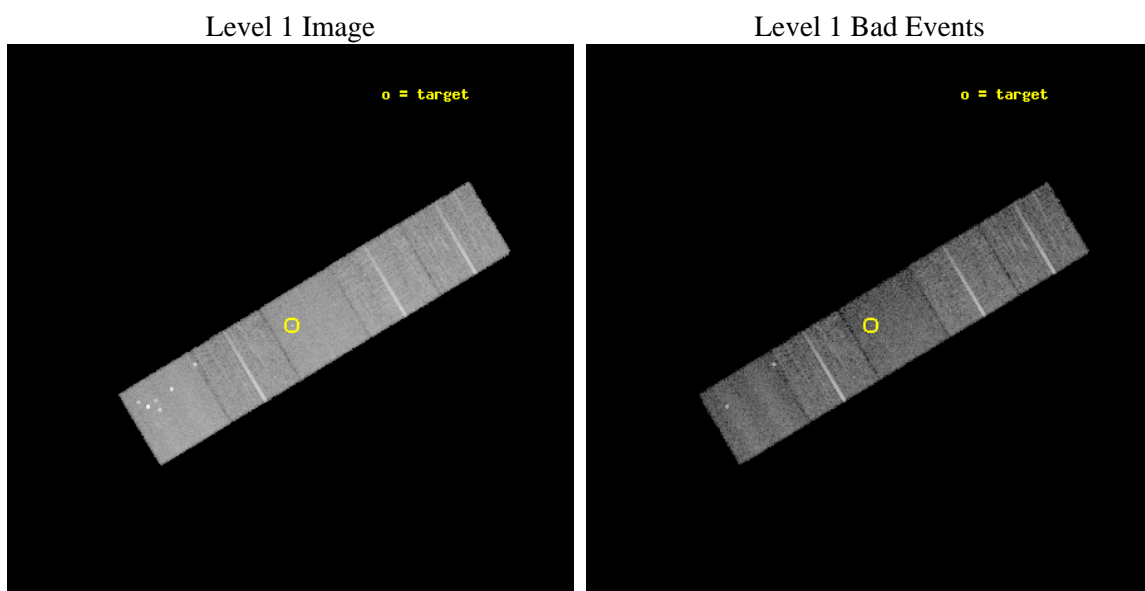
seq_num	500082	Sequence number
obs_id	596	Observation id
title	X-RAY POSITIONS AND AFTERGLOWS OF GAMMA-RAY BURSTS	Proposal title
observer	Dr Luigi Piro	Principal investigator
object	GRB 991216	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	77.38	Observer's specified target RA
dec_targ	11.285	Observer's specified target Dec
ra_nom	77.382974428748	Nominal RA
dec_nom	11.281308466241	Nominal Dec
roll_nom	328.92962499329	Nominal Roll
revision	4	Processing version of data
ontime	9772.2449061275	Sum of GTIs [s]
livetime	9648.5028569866	Livetime [s]
ontime5	9772.2038661242	Sum of GTIs [s]
ontime6	9772.1628261283	Sum of GTIs [s]
ontime7	9772.2449061275	Sum of GTIs [s]
ontime8	9772.121816054	Sum of GTIs [s]
ontime9	9772.0807461292	Sum of GTIs [s]
l2events	93041	Number of level 2 events



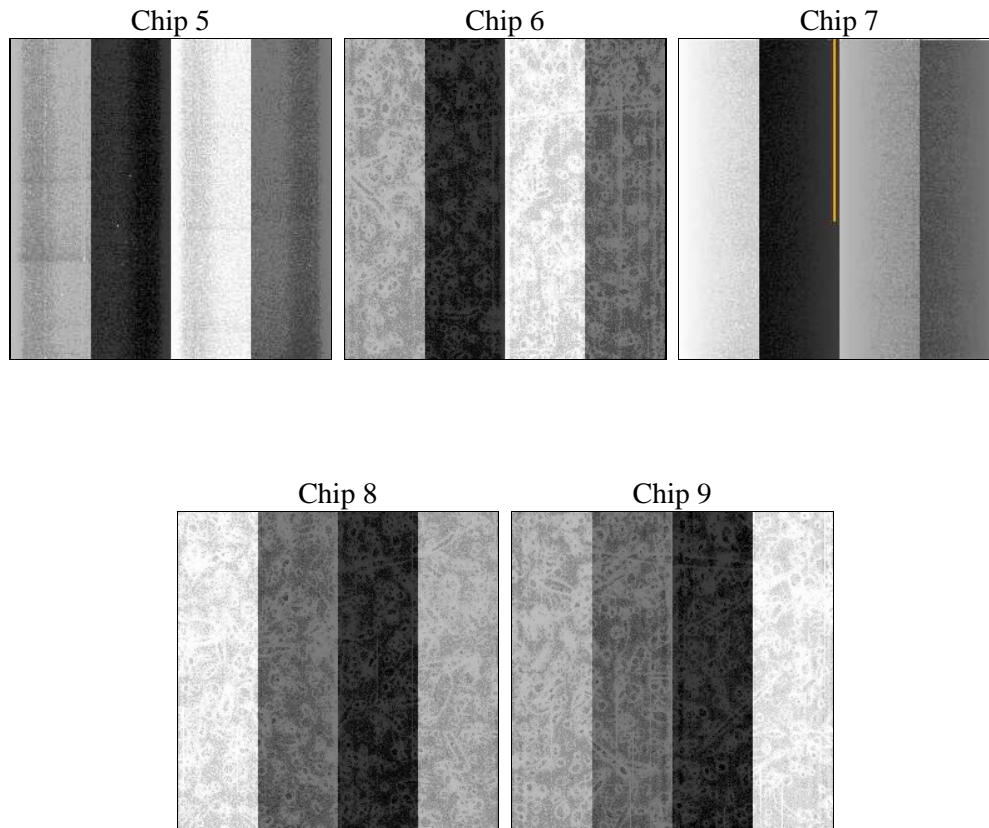
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	Scheduled observation exposure time
ascdsver	8.1.1	ASCDS version number	ontime	9772.2449061275	Sum of GTIs [s]
caldbver	4.1.4	&#160	ontime5	9772.2038661242	Sum of GTIs [s]
date	2009-11-26T07:13:33	Date and time of file creation	ontime6	9772.1628261283	Sum of GTIs [s]
revision	3	Processing version of data	ontime7	9772.2449061275	Sum of GTIs [s]
			ontime8	9772.121816054	Sum of GTIs [s]
			ontime9	9772.0807461292	Sum of GTIs [s]
			l1events	463900	Number of level 1 events

### 2.1.4 Events

	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	106728	83504	88681	102287	82700
rejected events	61067	75363	55095	85736	74703
rejected %	57%	90%	62%	83%	90%

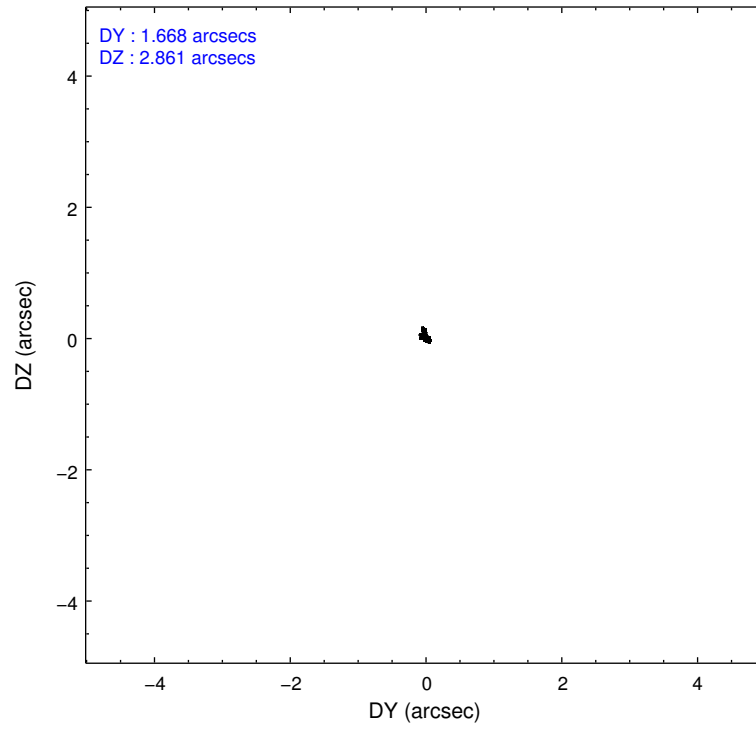
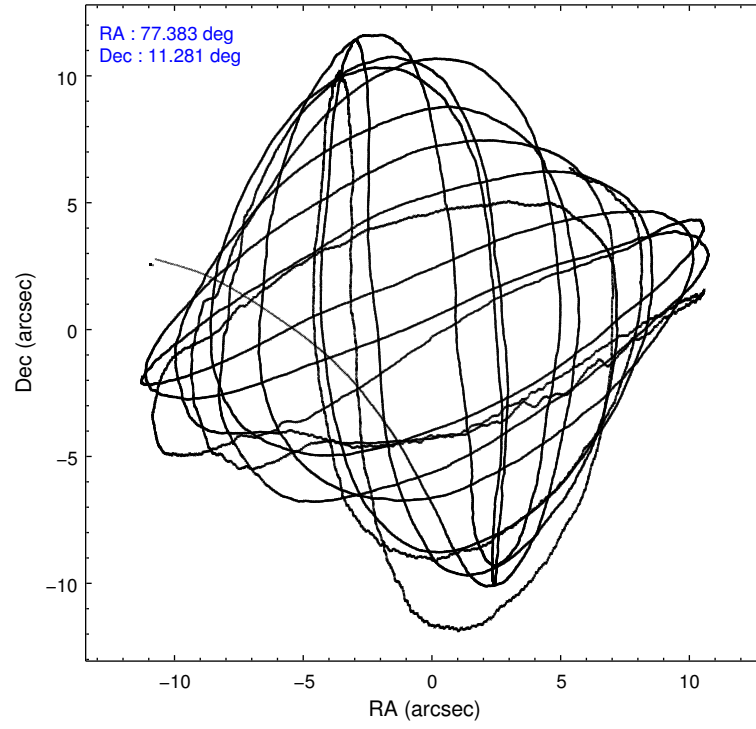
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	7650	1623	1788	3754	1454
	7%	1%	2%	3%	1%
grade 1 events	444	12	55	31	13
	0%	0%	0%	0%	0%
grade 2 events	9092	3193	7185	5367	3253
	8%	3%	8%	5%	3%
grade 3 events	1493	533	1941	1359	536
	1%	0%	2%	1%	0%
grade 4 events	1342	507	1735	1255	502
	1%	0%	1%	1%	0%
grade 5 events	4419	1813	5271	2396	1779
	4%	2%	5%	2%	2%
grade 6 events	26110	2290	20957	4823	2257
	24%	2%	23%	4%	2%
grade 7 events	56178	73533	49749	83302	72906
	52%	88%	56%	81%	88%

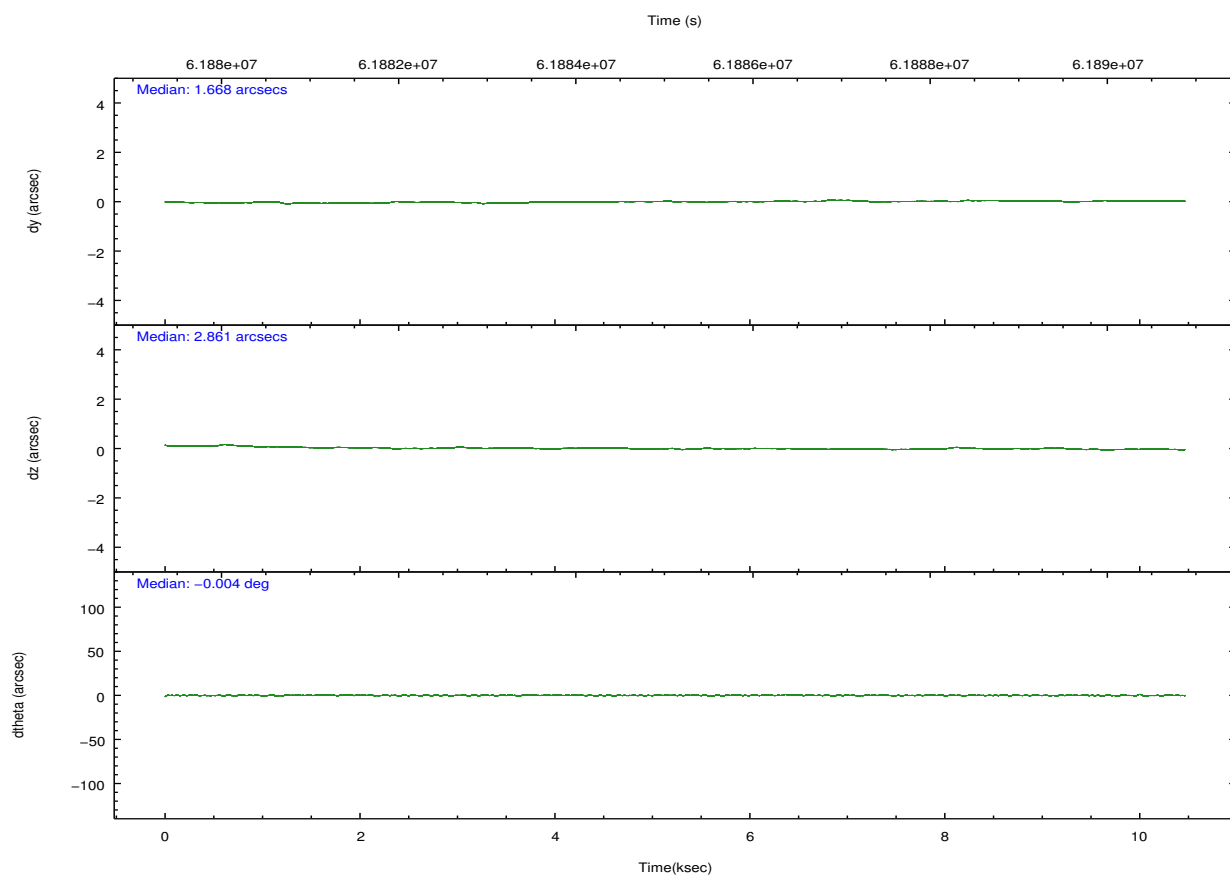
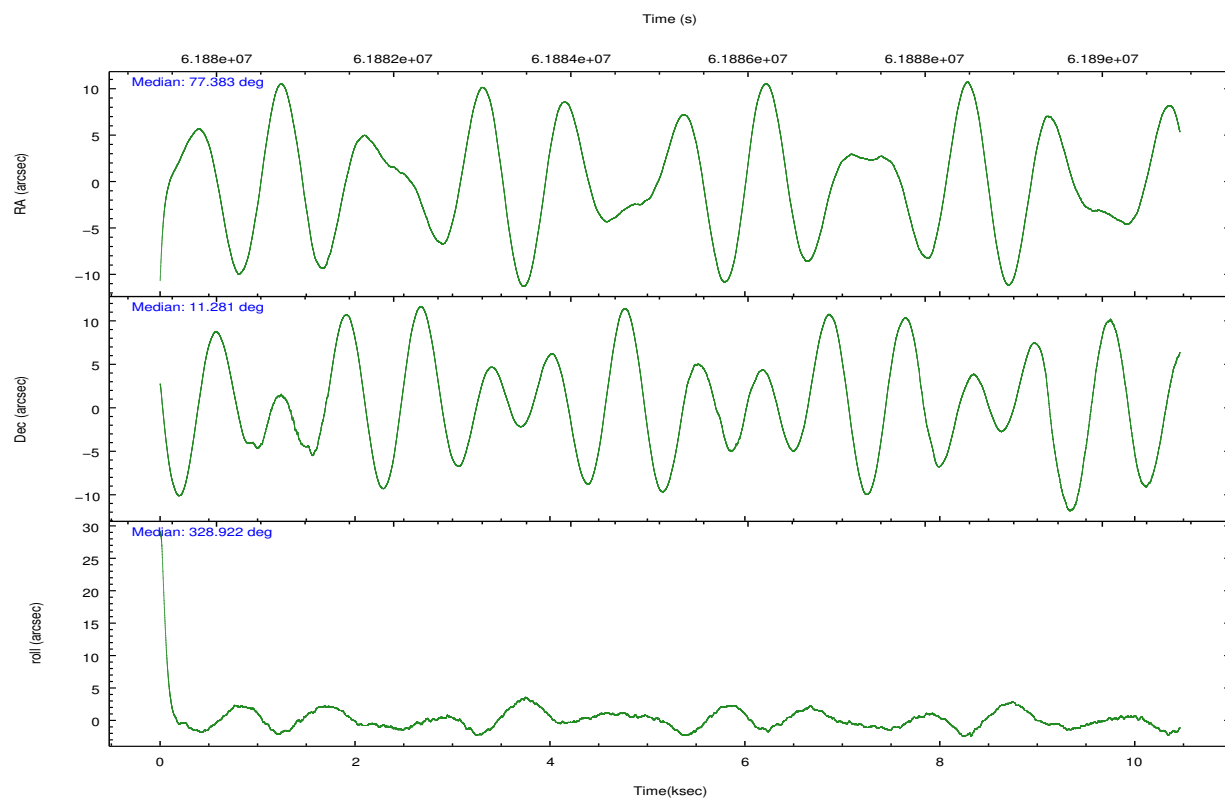


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-56789	ACIS-56789	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
Pointing RA	77.354867	77.38297442874848	Subarray requested	NONE	NONE
Pointing Dec	11.281959	11.28130846624084	Alternating exposures requested	N	N
Pointing Roll	328.778466	328.9296249932924	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-187.132523	-187.1254020033014			
SIM translation stage offset (mm)	-3	-3.007120579706367			
Observation start time	61880351.184000	61879083.392169			
Observation start date	1999-12-18T04:58:07	1999-12-18T04:38:03			
Observation end time	61890351.184000	61891062.567603			
Observation end date	1999-12-18T07:44:47	1999-12-18T07:57:42			
Read mode	TIMED	TIMED			

## 2.3 Aspect



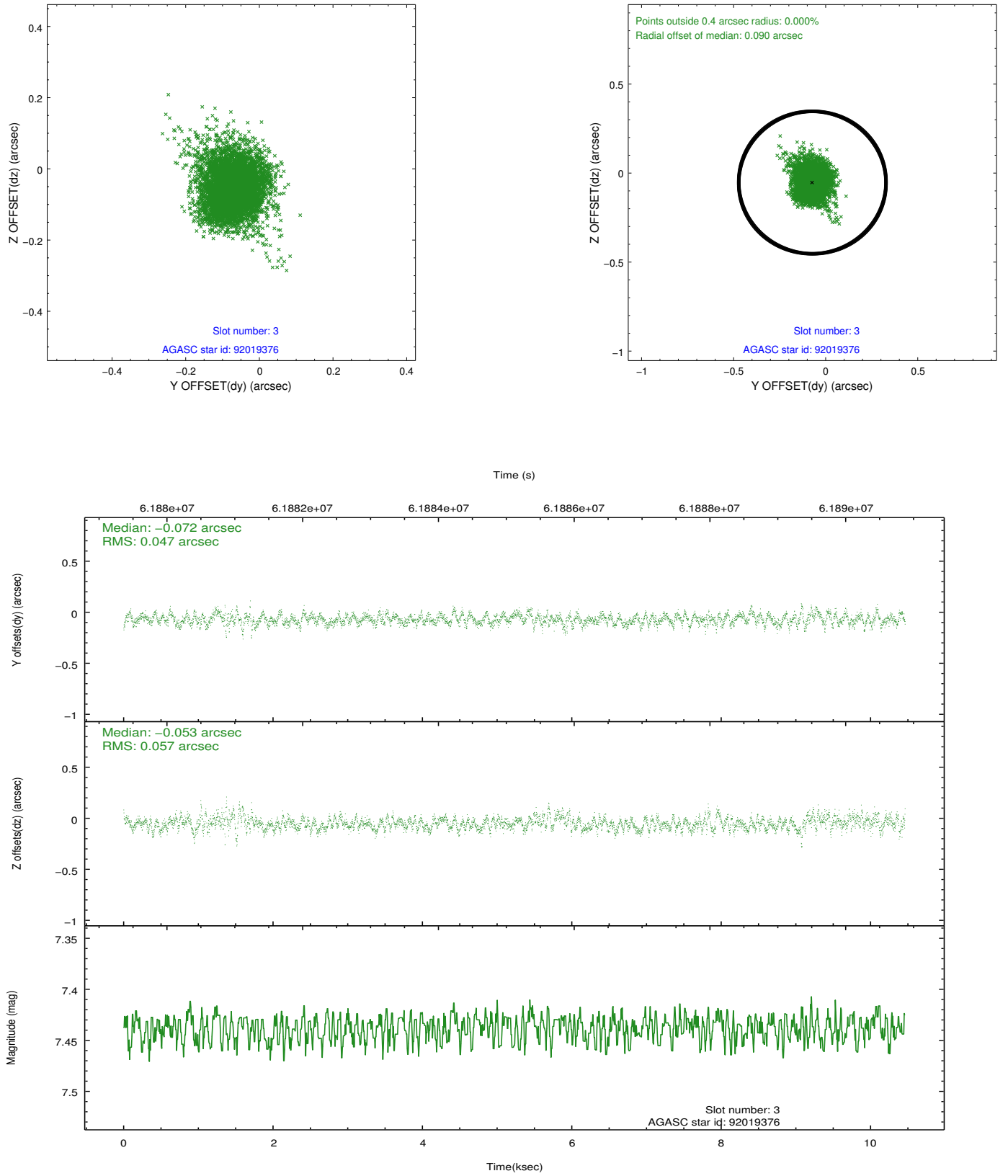


Slot Statistics

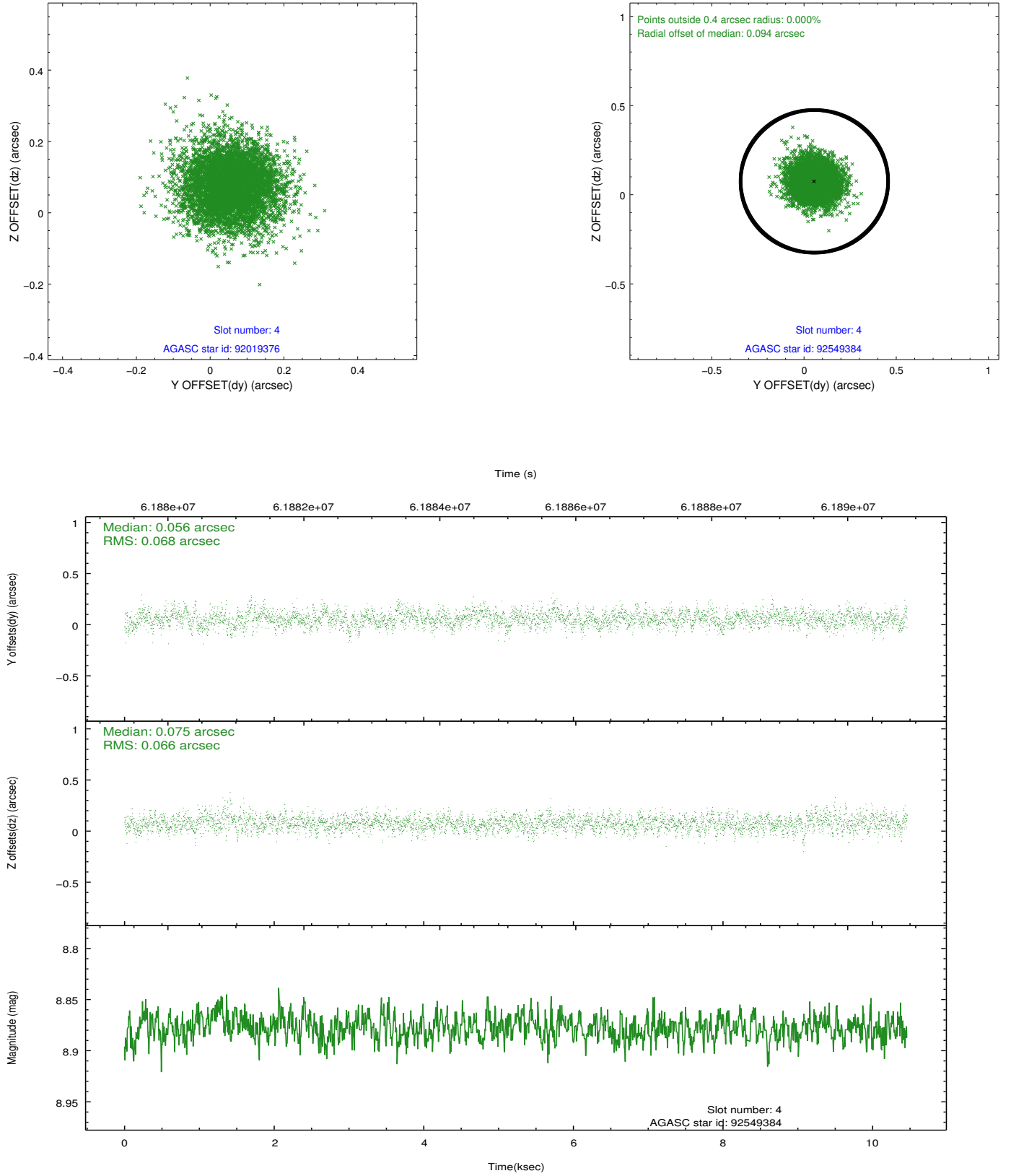
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.12	5104	-0.071	-0.086	0.004	0.008	0.000000	0.000000	-754.12	-1786.10
1	FID	ACIS-S-4	7.21	5102	0.053	0.016	0.005	0.008	0.000000	0.000000	2159.19	122.31
2	FID	ACIS-S-6	7.40	5103	-0.009	0.078	0.006	0.009	0.000000	0.000000	408.13	759.95
3	GUIDE	92019376	7.44	5103	-0.072	-0.053	0.076	0.127	76.942504	10.895064	-524.42	-1946.13
4	GUIDE	92549384	8.88	5102	0.056	0.075	0.100	0.164	78.084953	11.362930	2051.21	1587.58
5	GUIDE	92020336	9.74	5099	-0.048	0.011	0.149	0.248	77.407041	10.503107	1612.64	-2301.70
6	GUIDE	92554704	9.77	5102	-0.011	-0.106	0.151	0.249	77.361422	12.002692	-1324.63	2229.97
7	GUIDE	92547560	9.78	5101	0.074	0.070	0.138	0.229	78.024969	11.517258	1581.16	1952.59

## 2.4 Star Slots

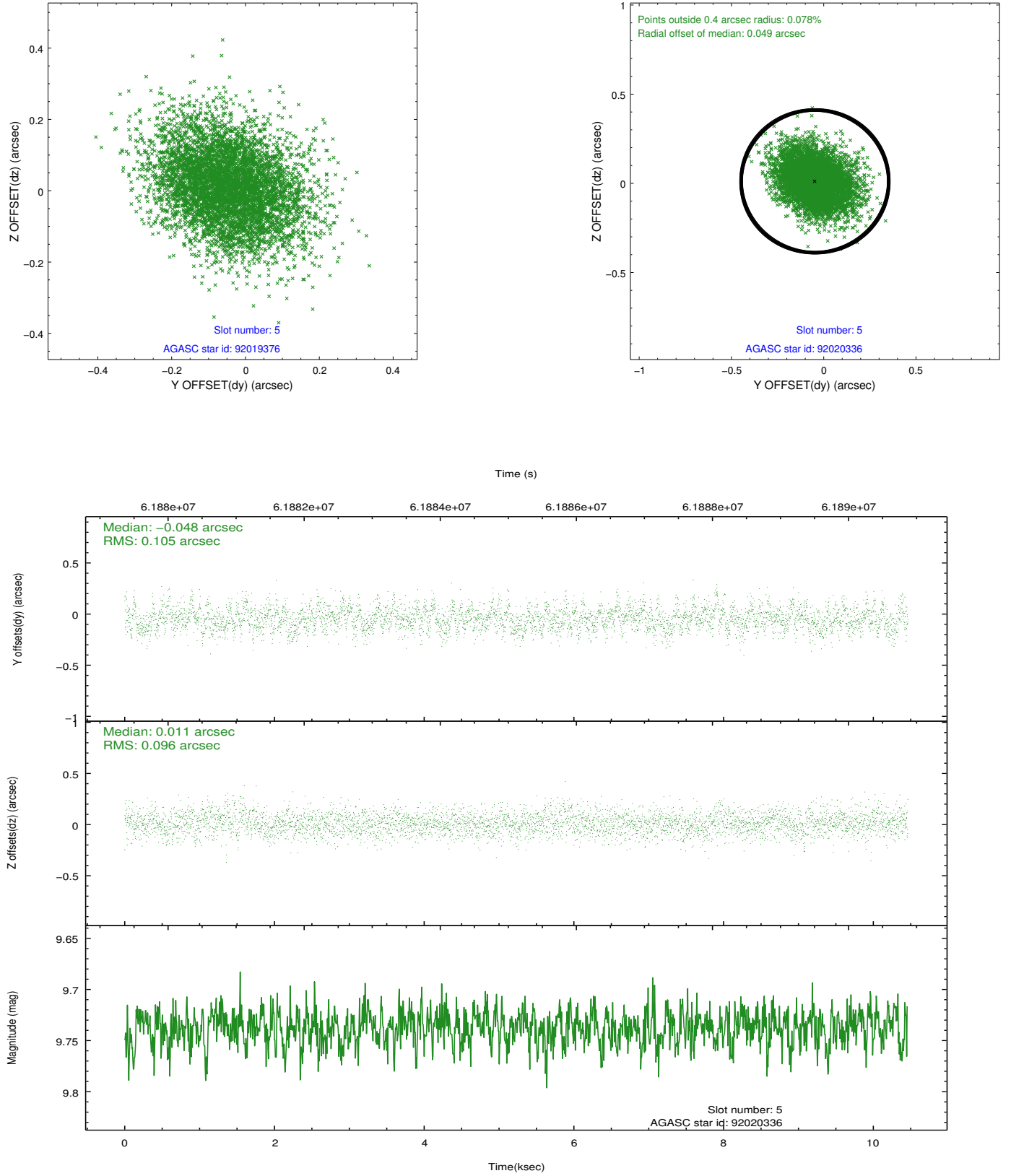
### 2.4.1 Slot 3



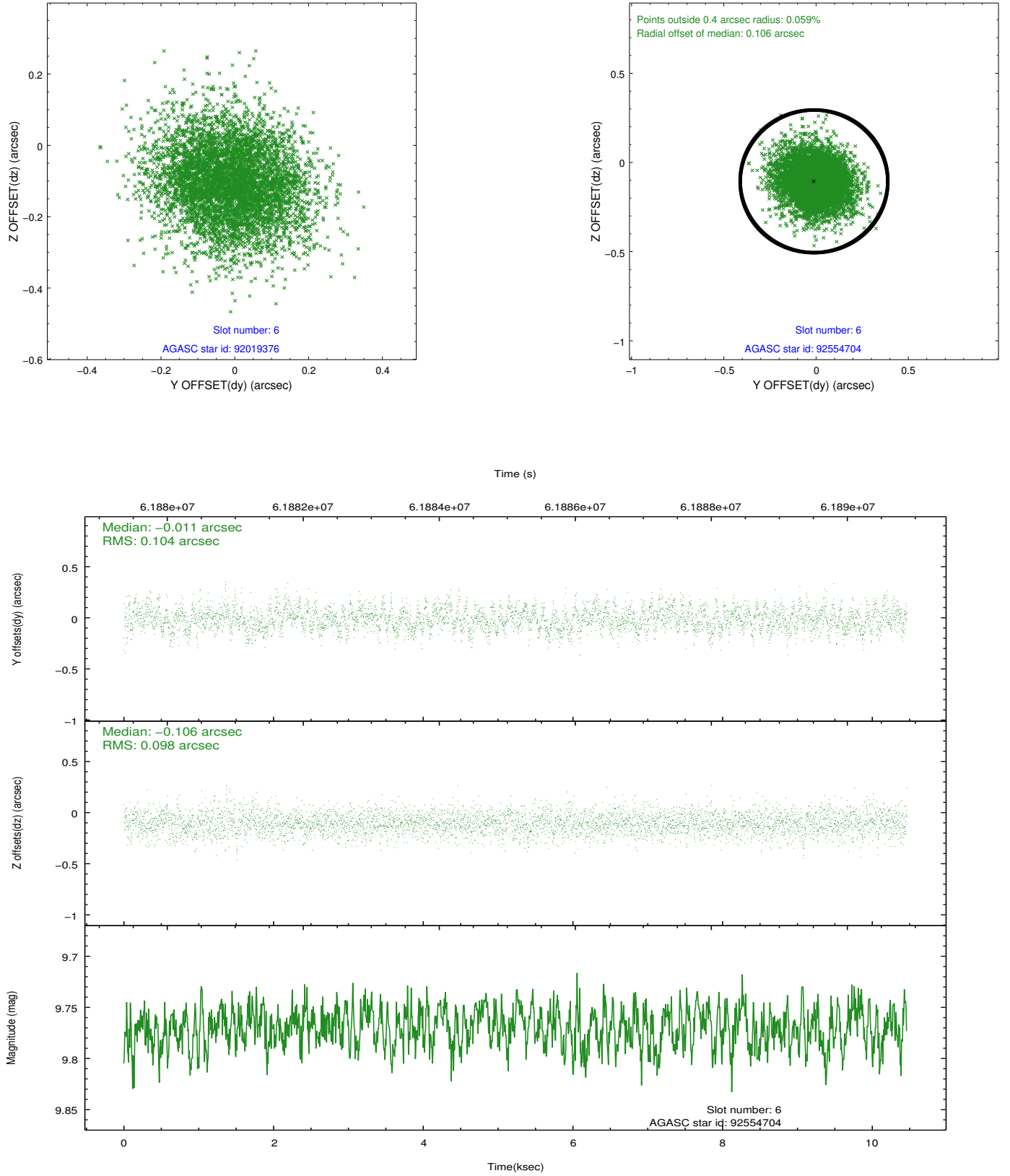
## 2.4.2 Slot 4



### 2.4.3 Slot 5

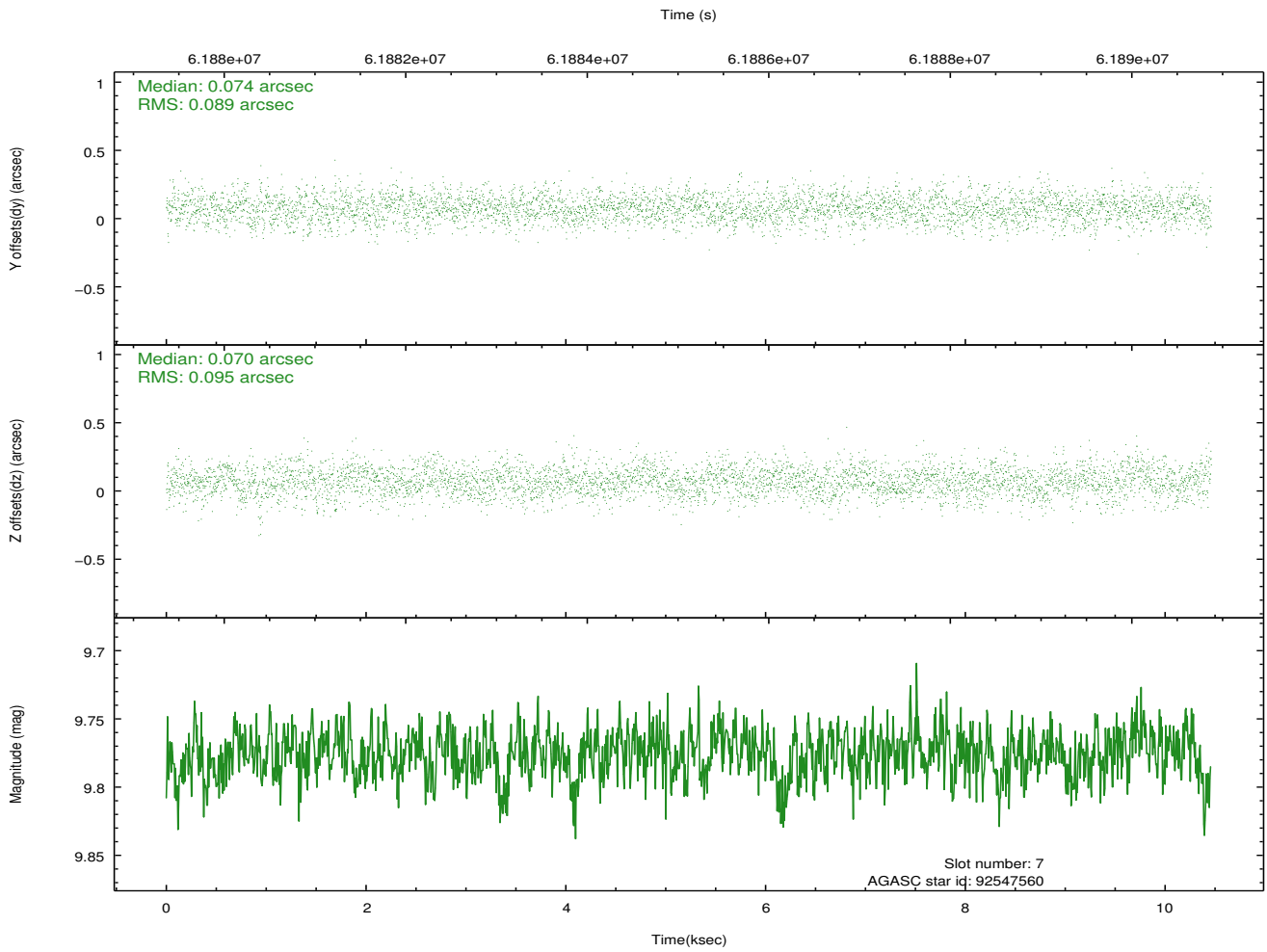
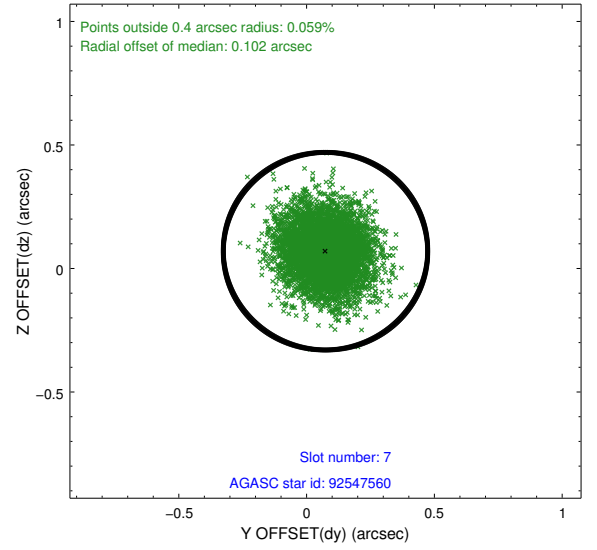
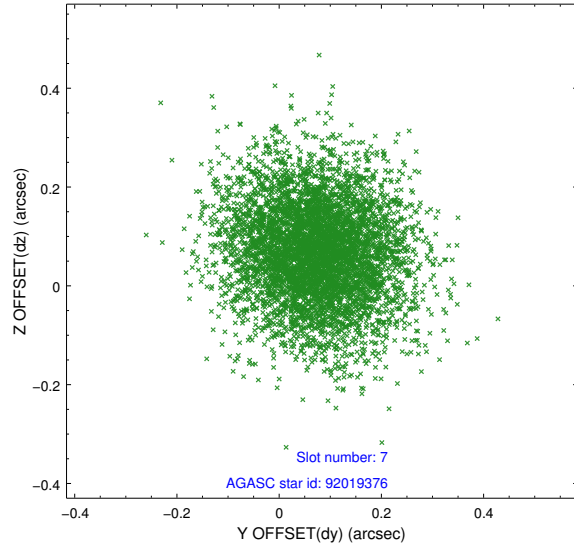


## 2.4.4 Slot 6



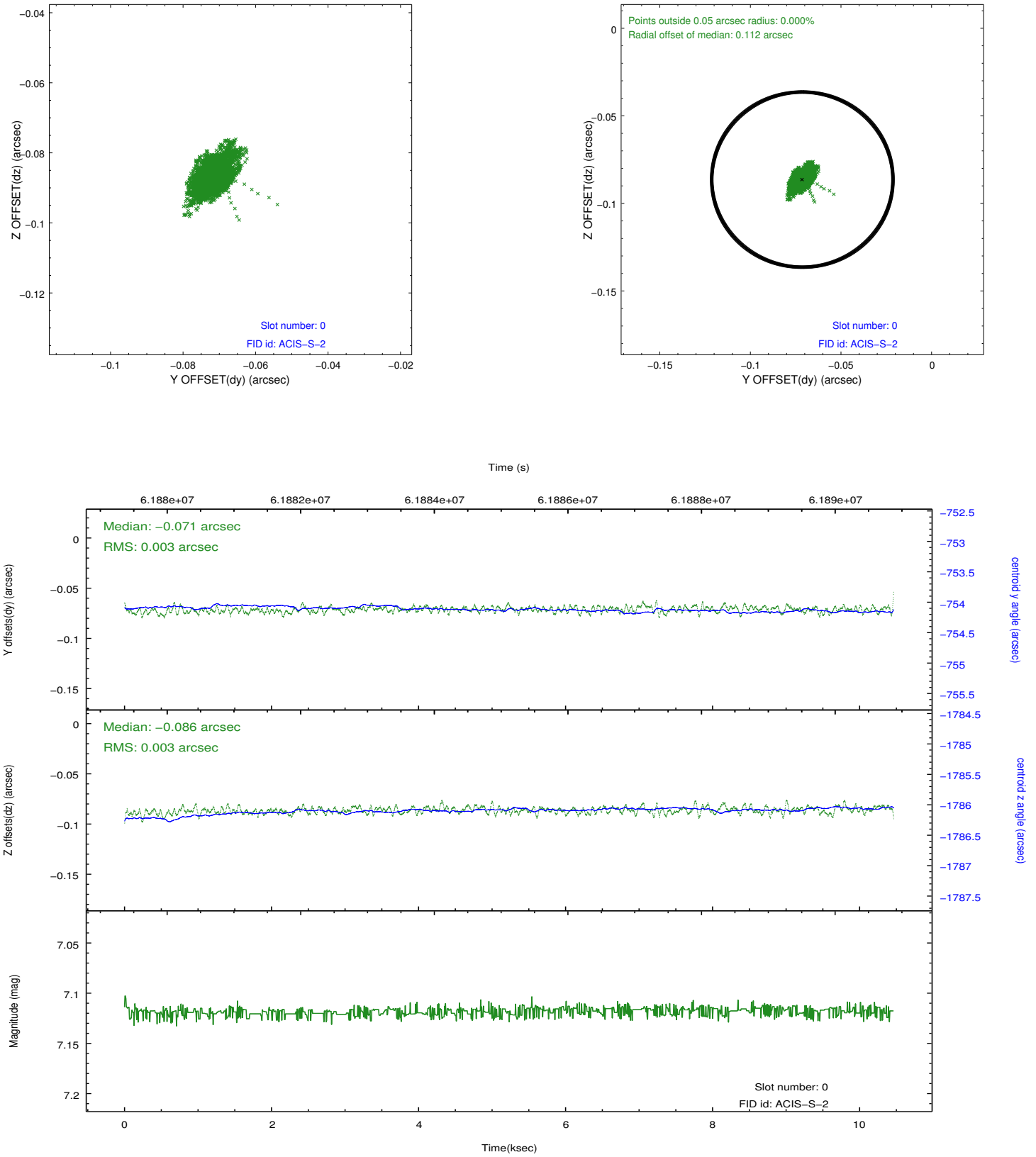


## 2.4.5 Slot 7

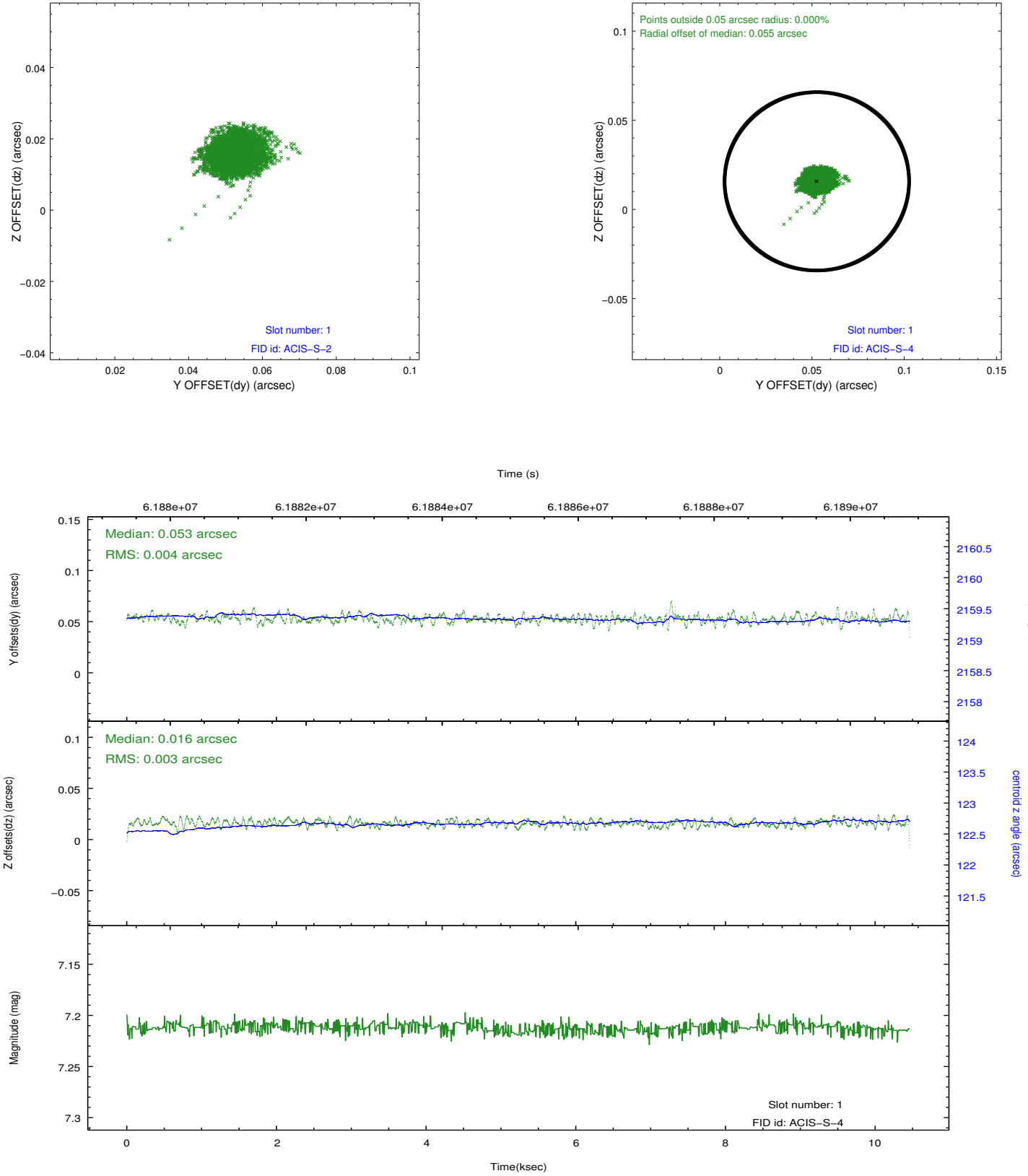


## 2.5 FID Slots

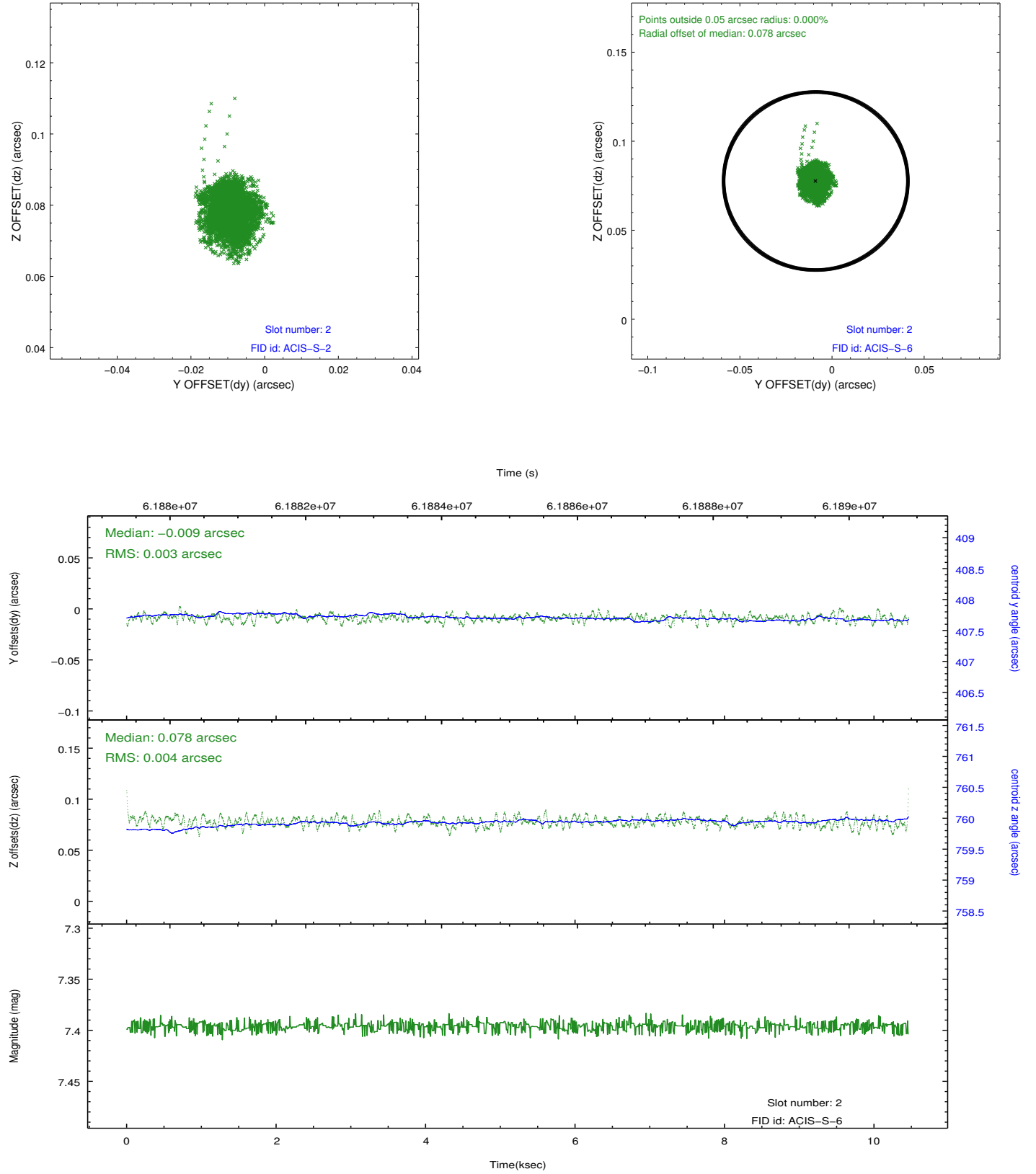
### 2.5.1 Slot 0



## 2.5.2 Slot 1

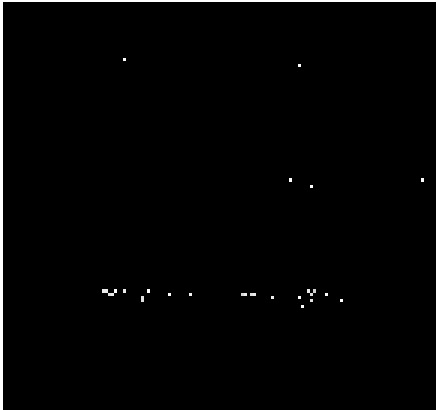


### 2.5.3 Slot 2

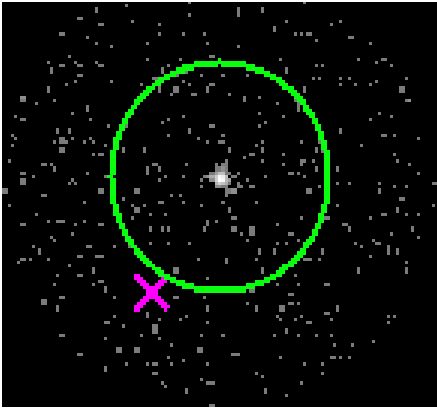


# 3 Gratings

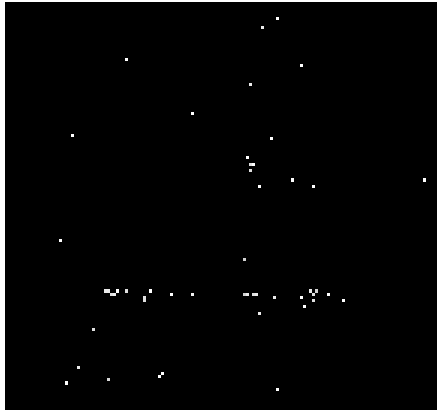
## 3.1 HEG Arm



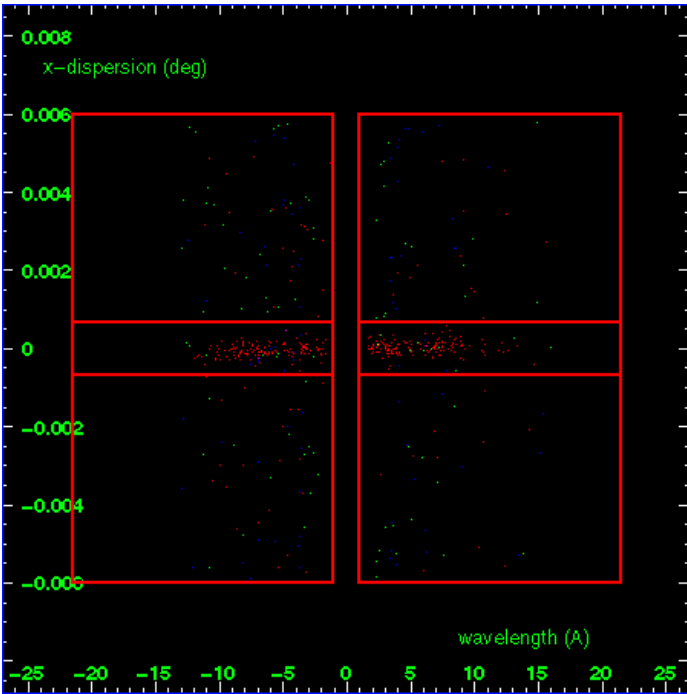
HEG Order Sort 123



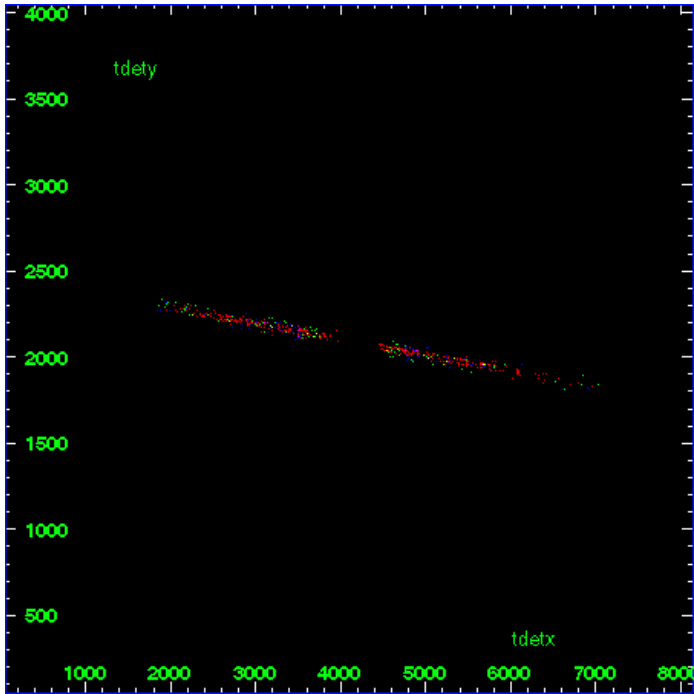
HEG Zero Order



HEG Order Sort ALL

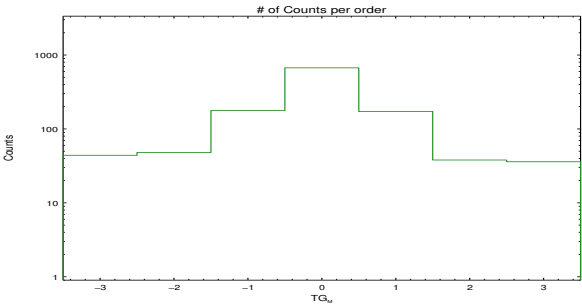


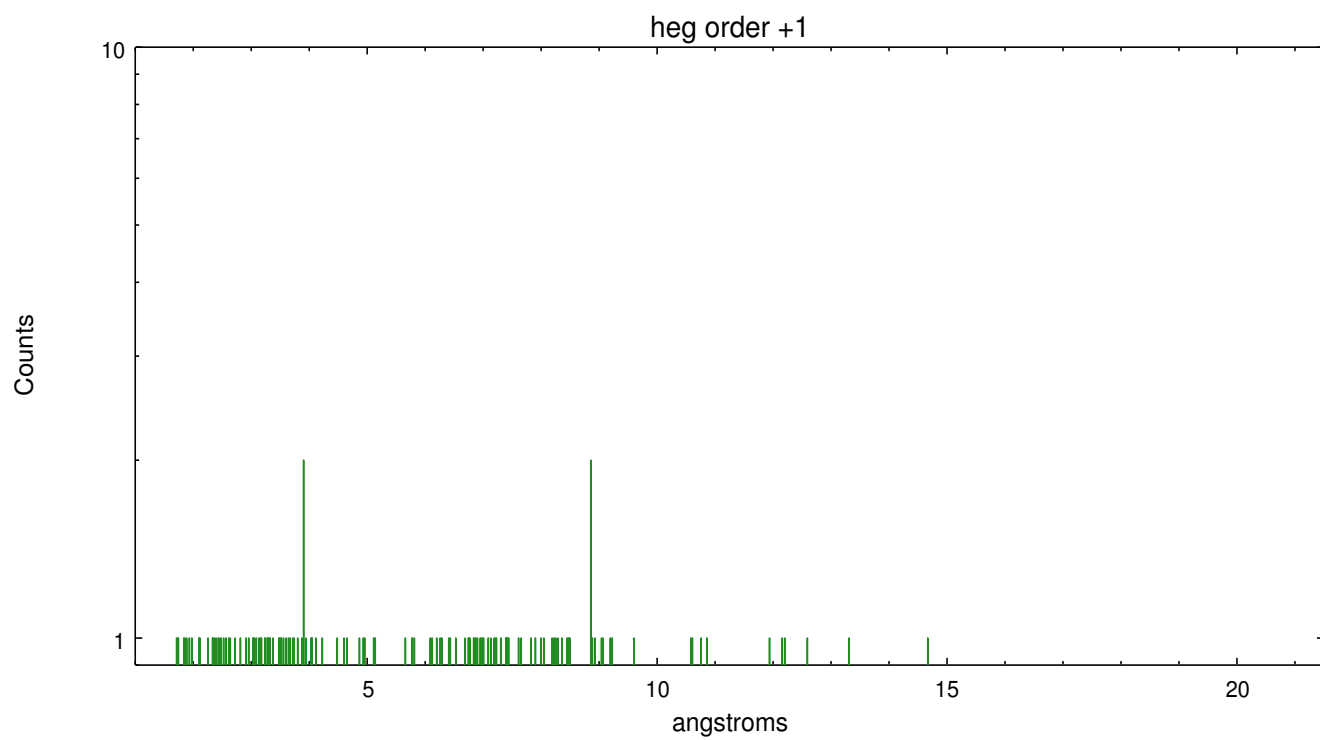
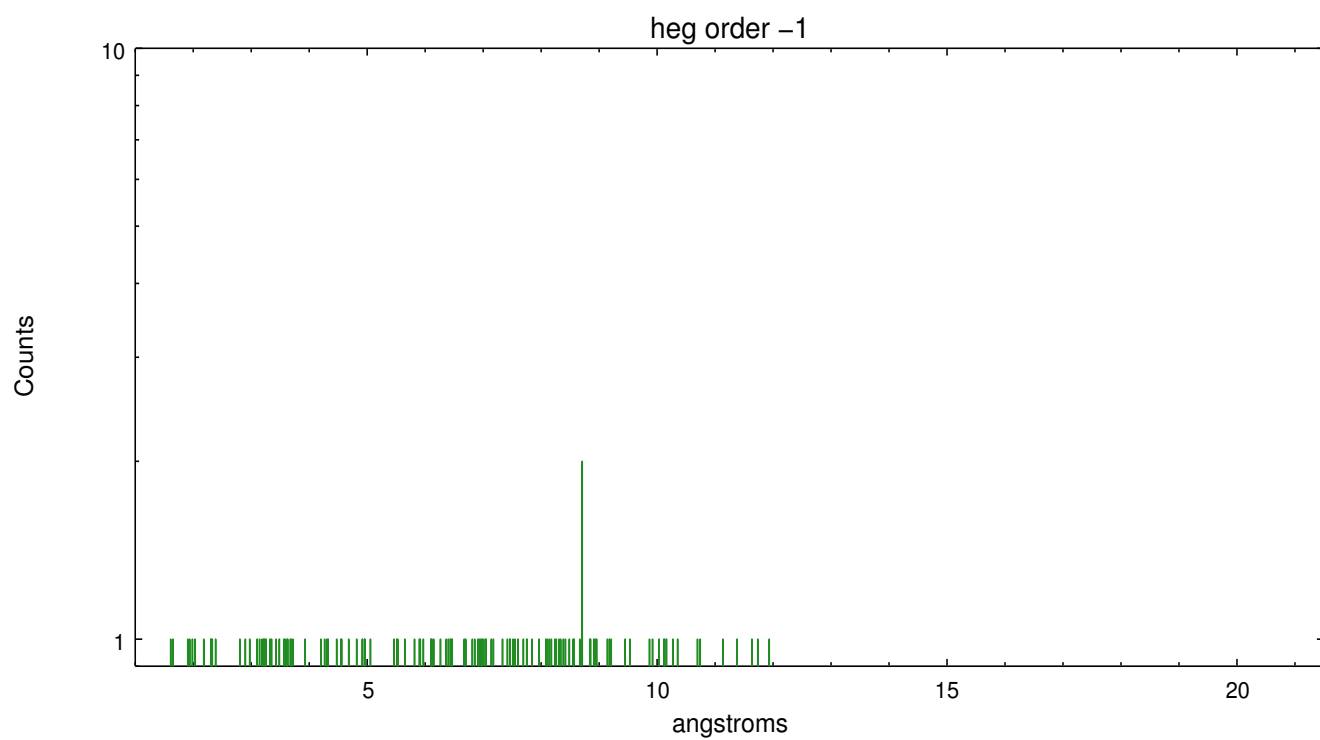
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	44	48	177	671	172	38	36

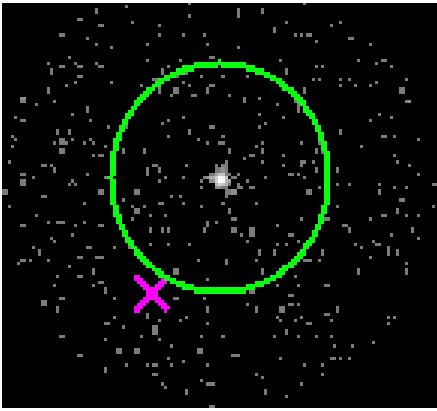




3.2 MEG Arm



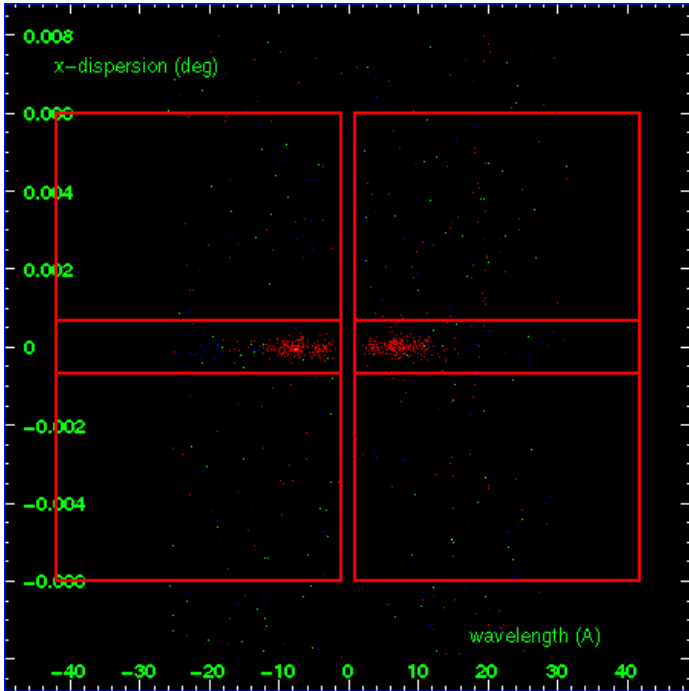
MEG Order Sort 123



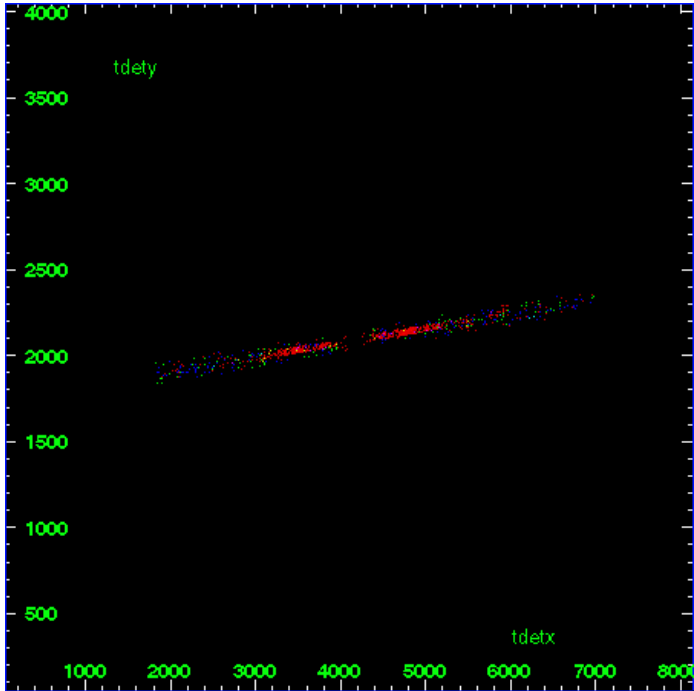
MEG Zero Order



MEG Order Sort ALL

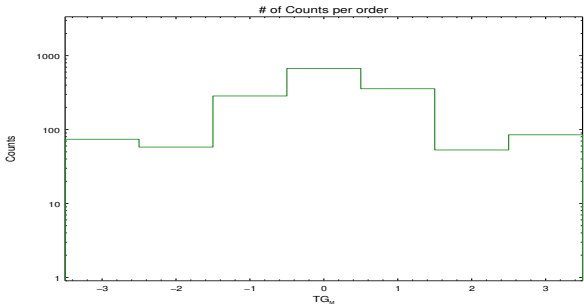


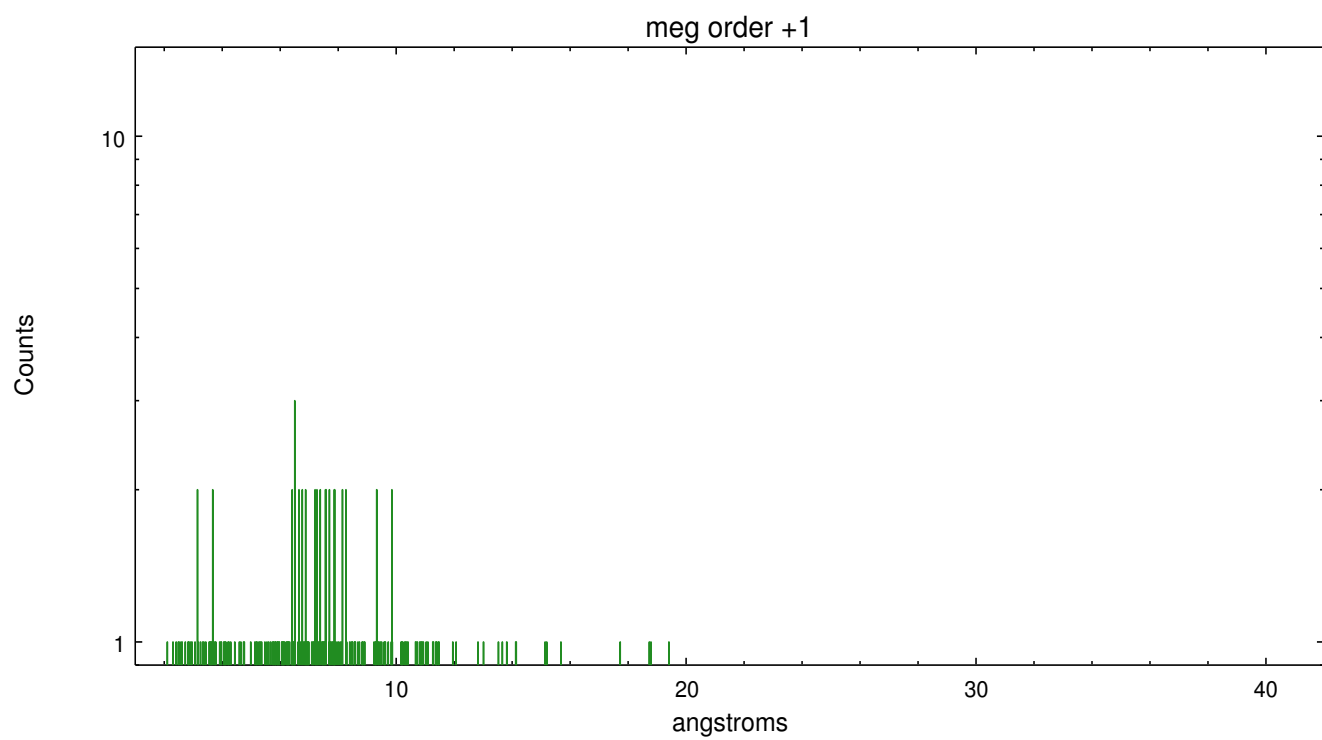
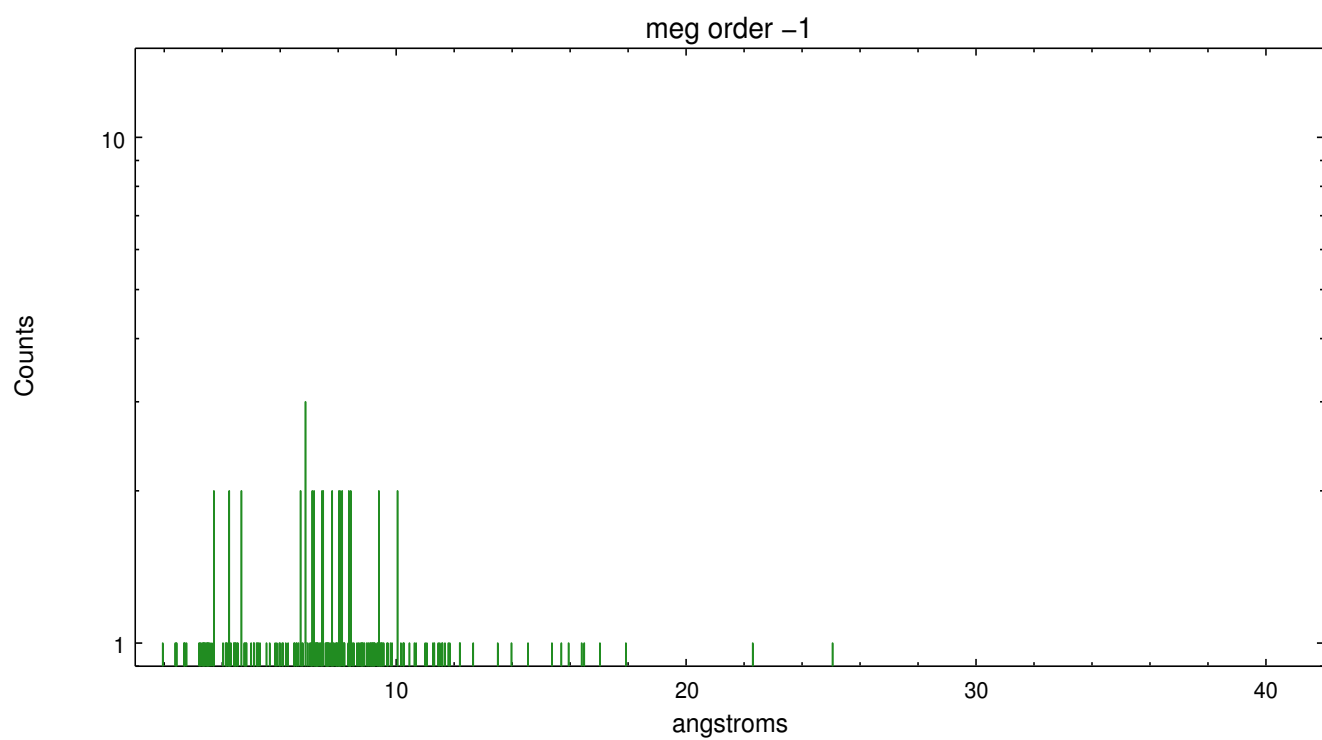
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	74	58	285	671	357	53	85







## A Summary

### A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2009.12.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.772

### A.2 Comments