

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 2745 - L2 Version 4  
Chandra X-Ray Center

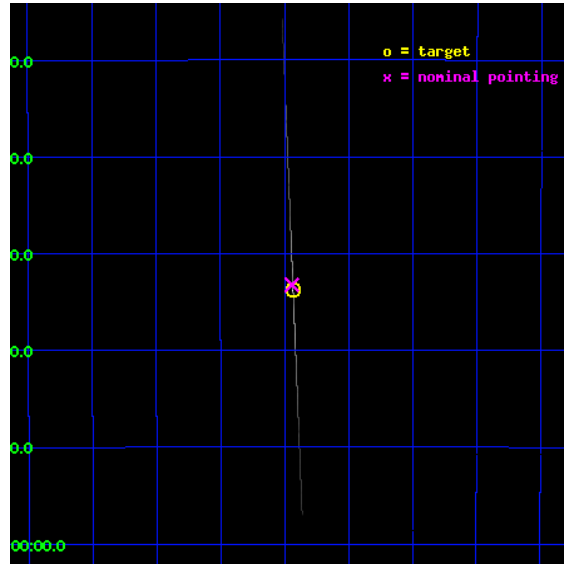
L2 Processing Date : Oct 4 2012

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# 1 Front

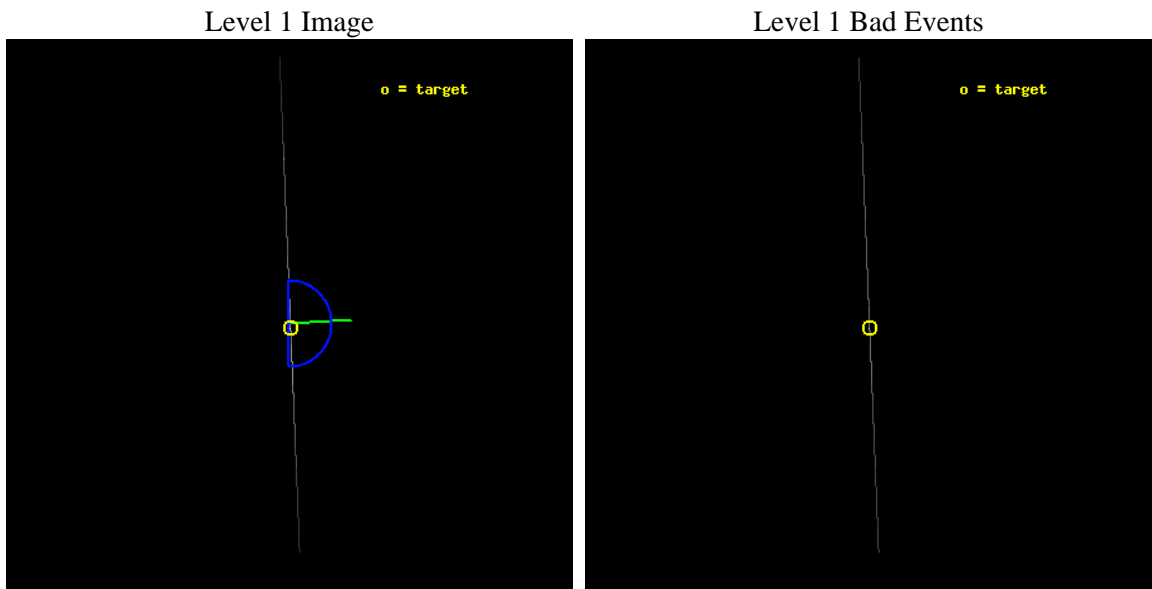
seq_num	400225	Sequence number
obs_id	2745	Observation id
title	WIND ACCRETION IN LOW-MASS X-RAY BINARIES	Proposal title
observer	Dr Duncan Galloway	Principal investigator
object	GX 3+1	Source name
ra_targ	266.983333	Observer's specified target RA [deg]
dec_targ	-26.5635	Observer's specified target Dec [deg]
ra_nom	266.98567250093	Nominal RA [deg]
dec_nom	-26.553982444173	Nominal Dec [deg]
roll_nom	87.63368711854	Nominal Roll [deg]
revision	4	Processing version of data
ontime	8999.8587614894	Sum of GTIs [s]
livetime	8964.7030632023	Livetime [s]
ontime4	7763.9623315632	Sum of GTIs [s]
ontime5	10551.0	Sum of GTIs [s]
ontime6	7019.8138365746	Sum of GTIs [s]
ontime7	8999.8587614894	Sum of GTIs [s]
ontime8	8422.0757154226	Sum of GTIs [s]
ontime9	8594.1665253043	Sum of GTIs [s]
l2events	1612984	Number of level 2 events



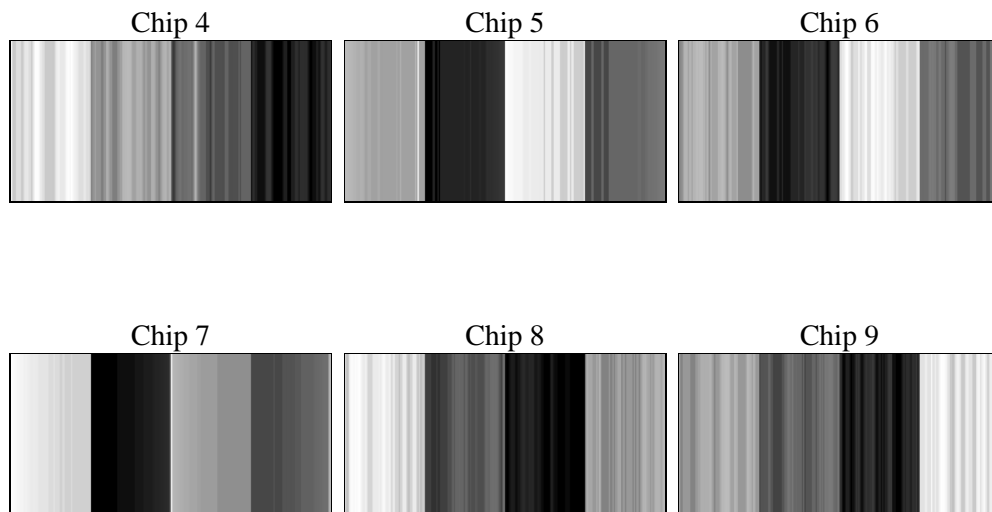
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	9700.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	8999.8587614894	Sum of GTIs [s]
caldsver	4.5.2	&#160	ontime4	7763.9623315632	Sum of GTIs [s]
date	2012-10-04T19:08:30	Date and time of file creation	ontime5	10551.0	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	7019.8138365746	Sum of GTIs [s]
			ontime7	8999.8587614894	Sum of GTIs [s]
			ontime8	8422.0757154226	Sum of GTIs [s]
			ontime9	8594.1665253043	Sum of GTIs [s]
			l1events	1818090	Number of level 1 events

### 2.1.4 Events

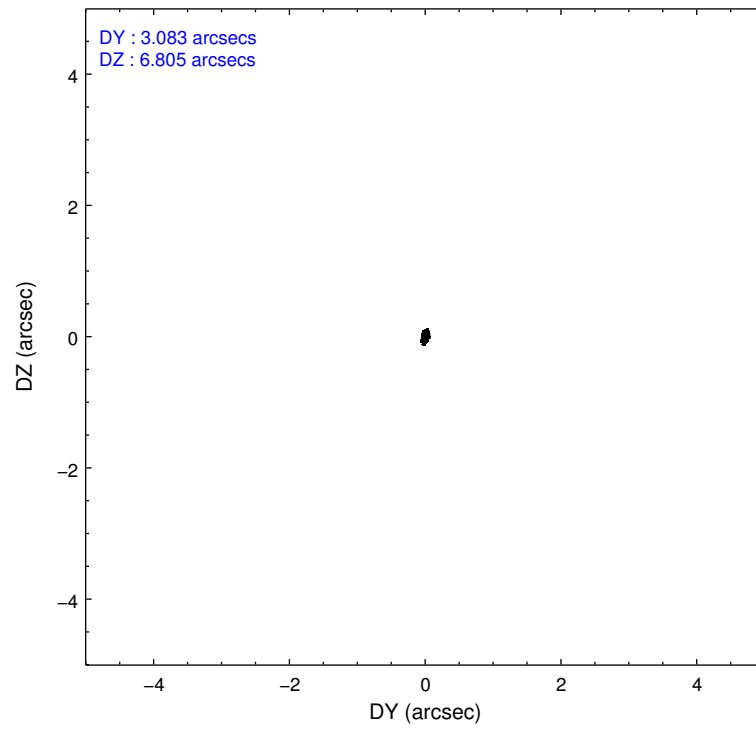
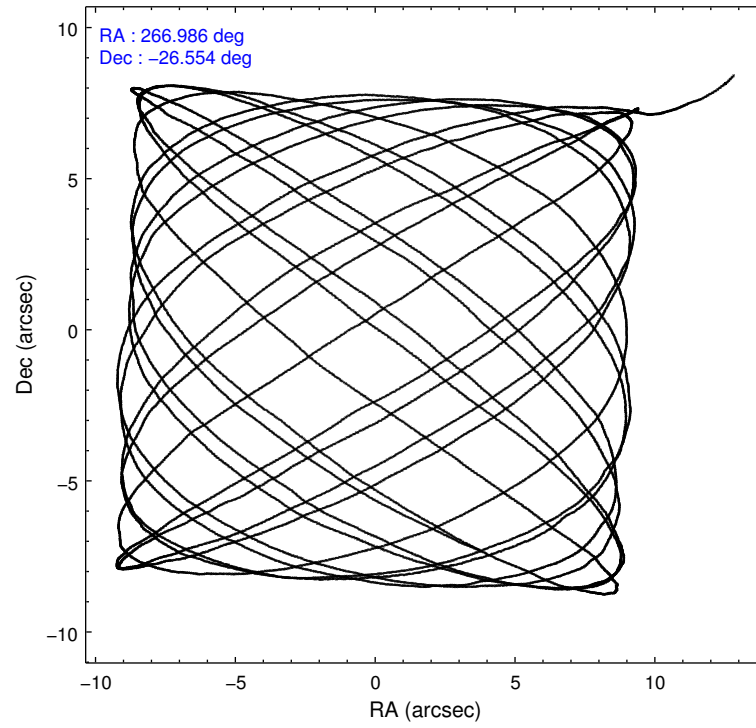
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	22276	123625	305081	1183885	147992	35231	grade 0 events	4073	25302	36566	206565	70133	8666
rejected events	2330	9674	12627	93976	6207	3118		18%	20%	11%	17%	47%	24%
rejected %	10%	7%	4%	7%	4%	8%	grade 1 events	62	96	122	13837	213	65
								0%	0%	0%	1%	0%	0%
							grade 2 events	10904	40280	227149	277113	53195	16784
								48%	32%	74%	23%	35%	47%
							grade 3 events	1403	4835	3034	112091	5214	1637
								6%	3%	0%	9%	3%	4%
							grade 4 events	1446	4765	2945	110039	5053	1685
								6%	3%	0%	9%	3%	4%
							grade 5 events	1753	7059	3419	63286	3487	2458
								7%	5%	1%	5%	2%	6%
							grade 6 events	2635	41288	31846	400954	10697	3936
								11%	33%	10%	33%	7%	11%
							grade 7 events	0	0	0	0	0	0
								0%	0%	0%	0%	0%	0%

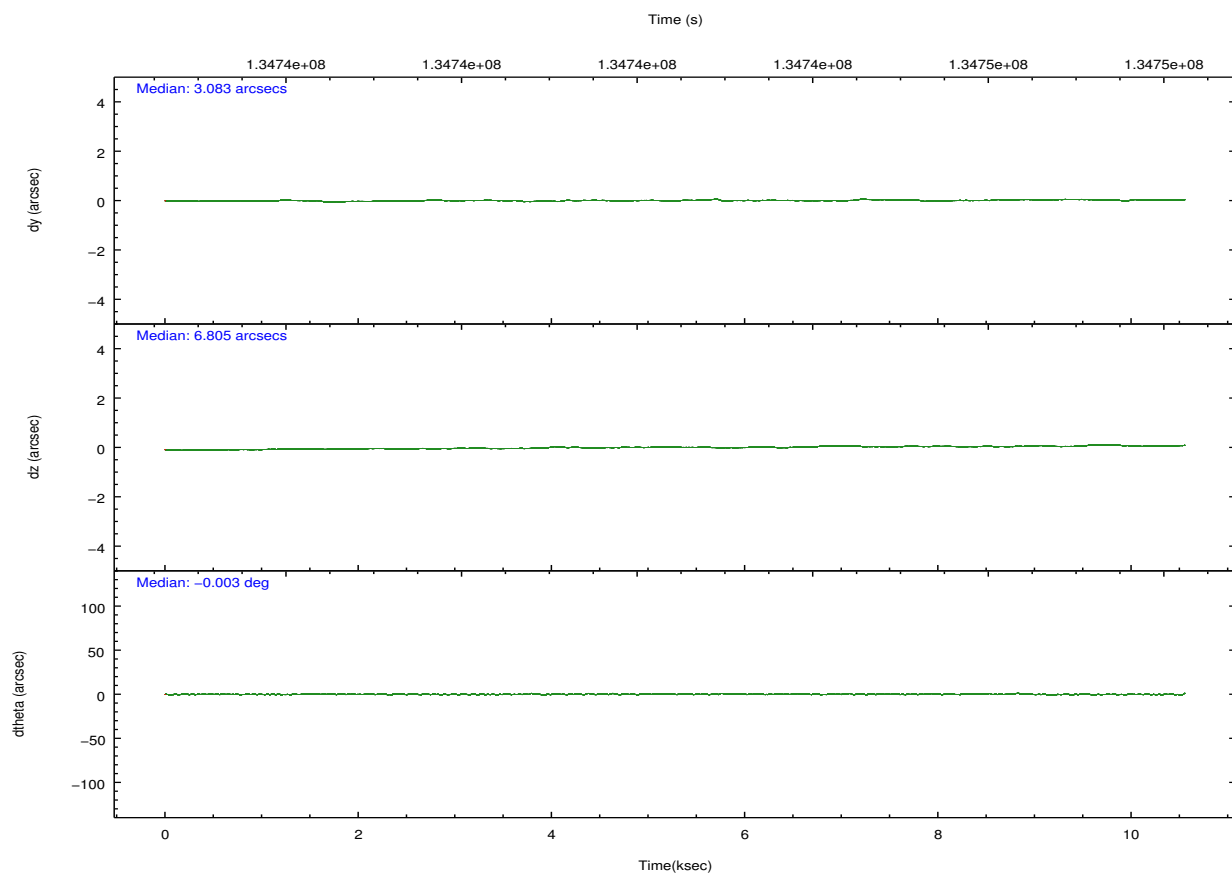
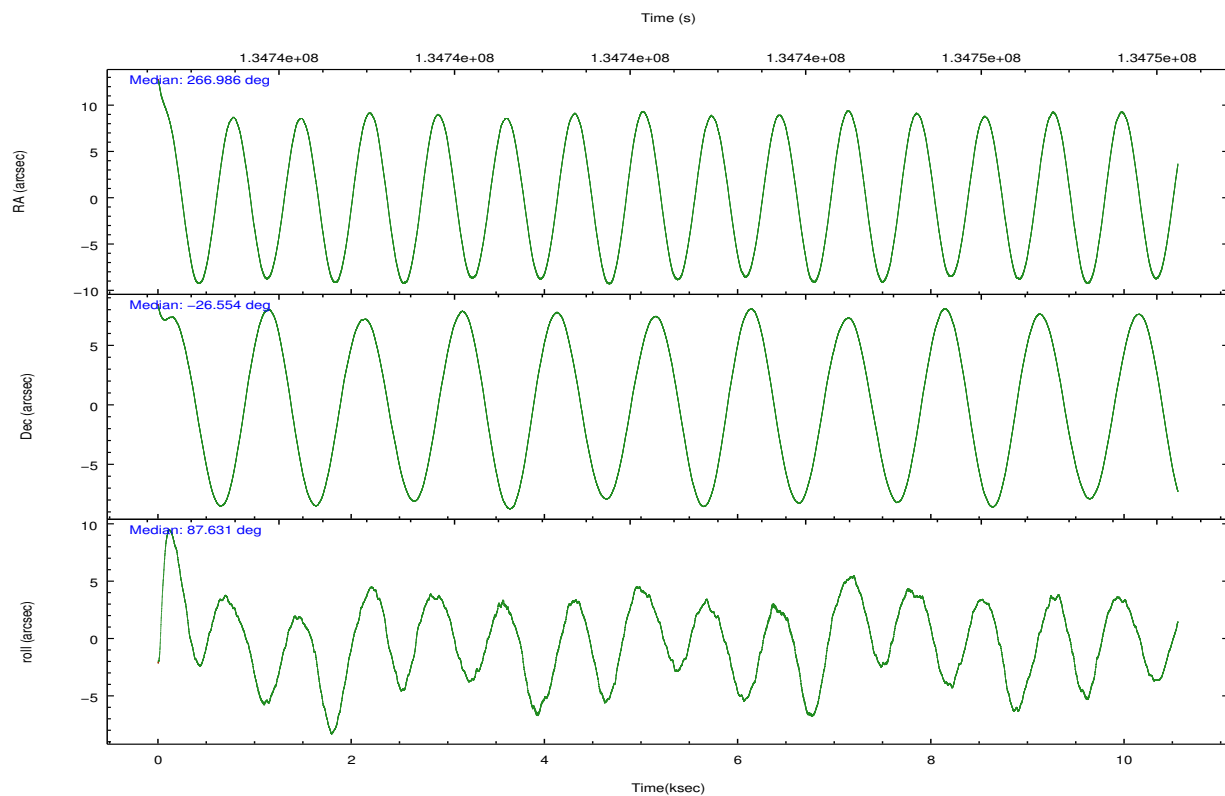


## 2.2 Compared Parameters

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	CC33_FAINT	CC33_FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	267.000148	266.9856725009338	Subarray requested	NONE	NONE
[deg] Pointing Dec	-26.578010	-26.55398244417252	Alternating exposures requested	N	N
[deg] Pointing Roll	87.483543	87.63368711854041	[s] Primary exposure time	0.000000	0
[deg] Roll angle	90.000000	90.000000			
[deg] Roll tolerance	90.000000	90.000000			
Roll constraint allows 180D rotation	N	N			
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-184.272523	-184.2666255054277			
[mm] SIM translation stage offset	-5.86	-5.865897077580087			
[s] Observation start time (MET)	134738011.184000	134736714.56789			
Observation start date	2002-04-09T11:12:27	2002-04-09T10:51:54			
[s] Observation end time (MET)	134747711.184000	134748878.75588			
Observation end date	2002-04-09T13:54:07	2002-04-09T14:14:38			
Read mode	CONTINUOUS	CONTINUOUS			

## 2.3 Aspect



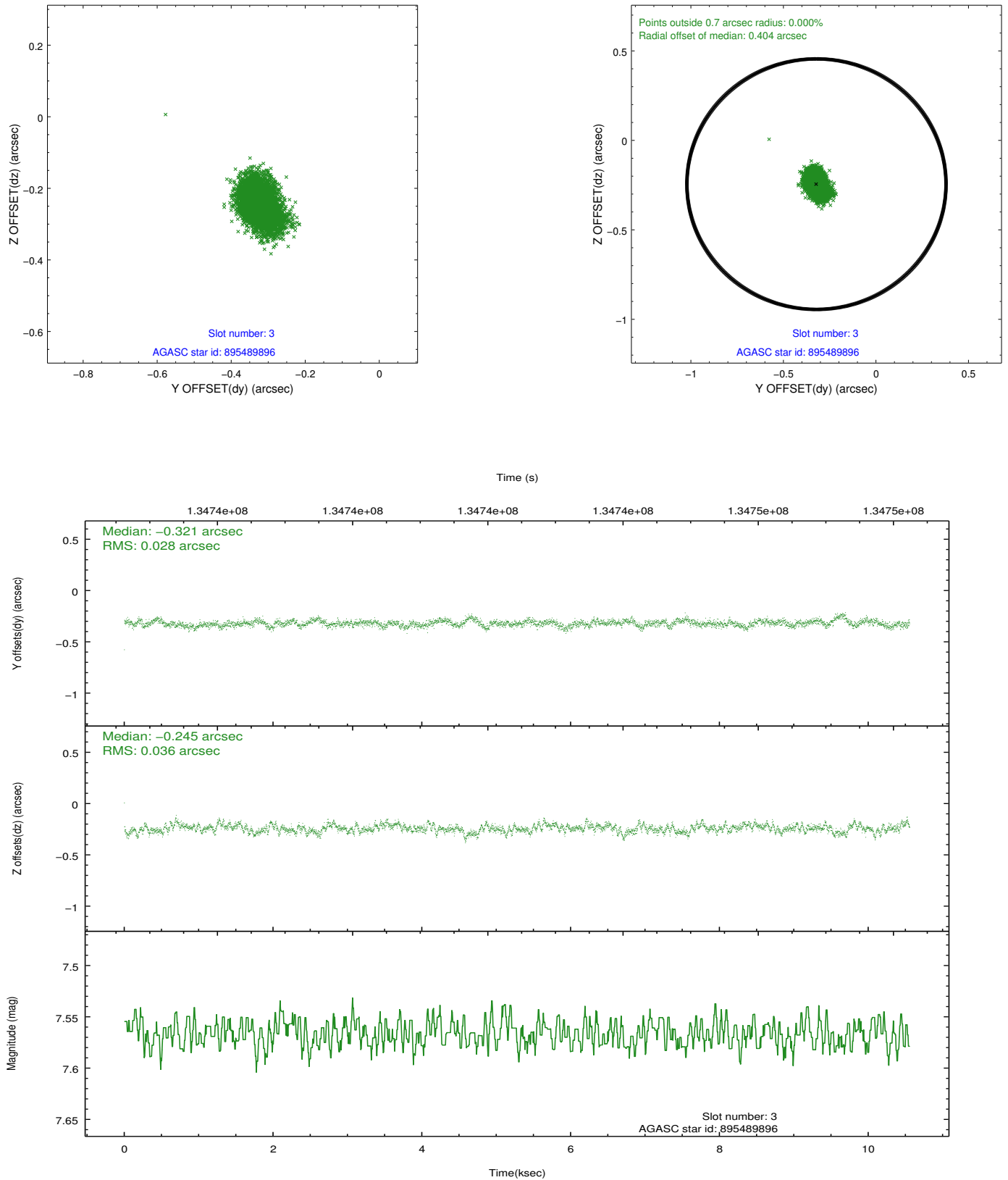


### Slot Statistics

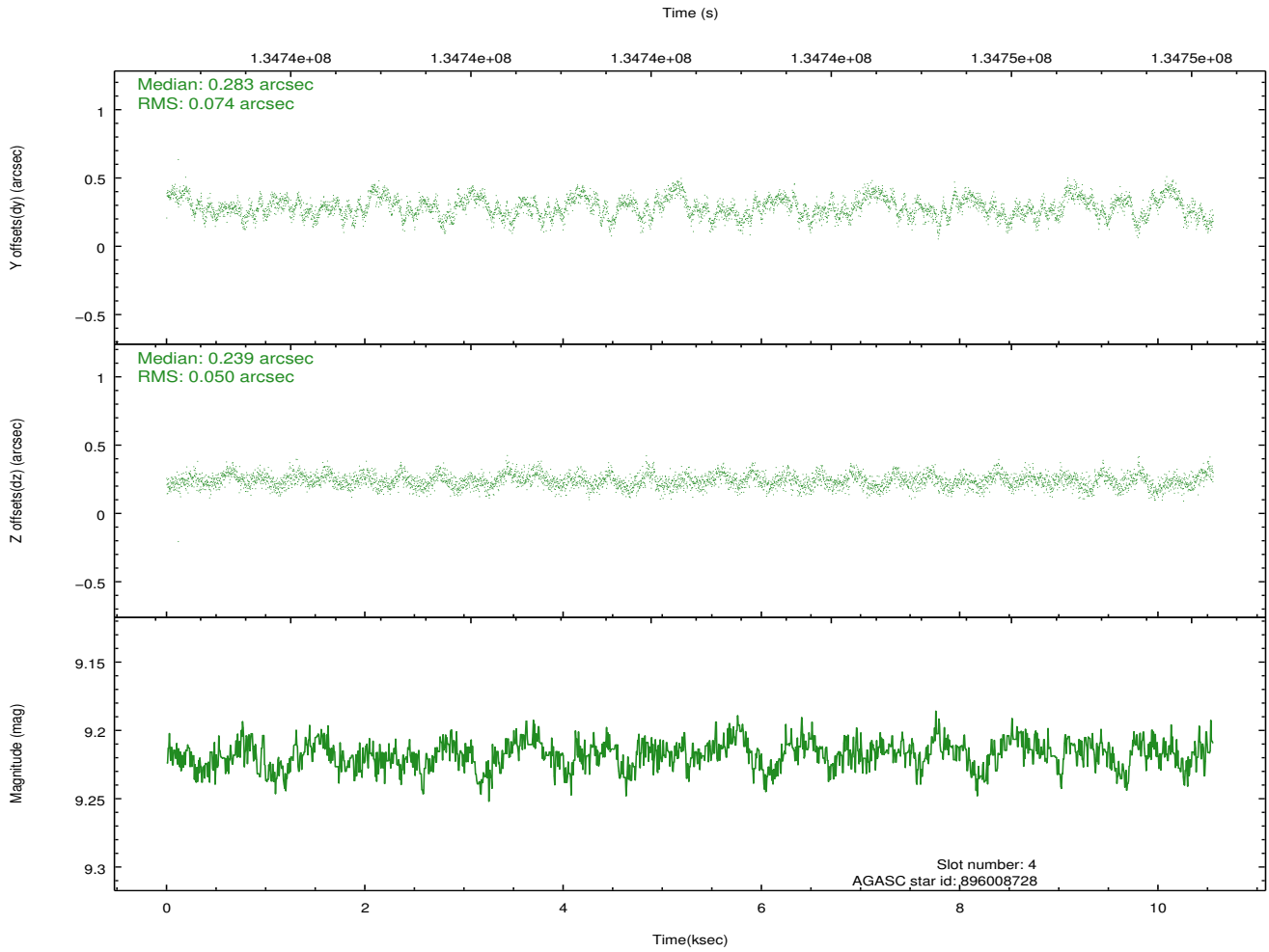
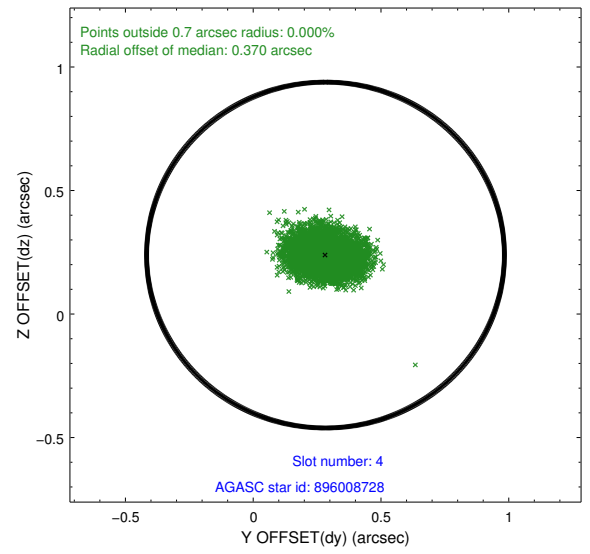
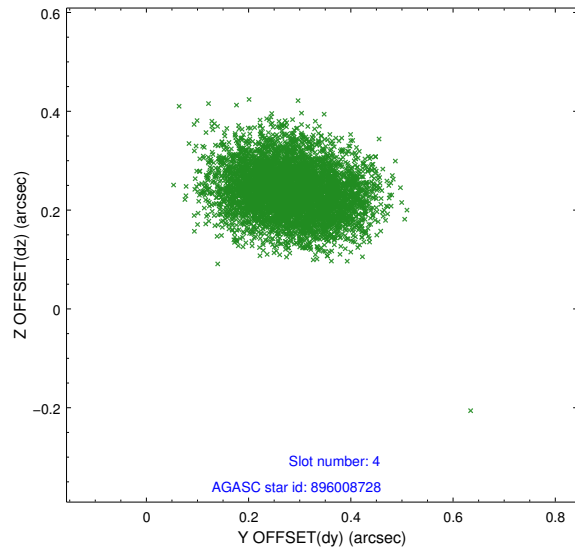
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	2575	-0.029	-0.117	0.007	0.011	0.000000	0.000000	-755.37	-1848.98
1	FID	ACIS-S-4	7.19	2575	-0.015	0.045	0.006	0.010	0.000000	0.000000	2157.72	59.06
2	FID	ACIS-S-5	7.24	2574	0.013	0.080	0.006	0.011	0.000000	0.000000	-1807.51	53.38
3	GUIDE	895489896	7.57	5149	-0.321	-0.245	0.047	0.081	266.605795	-26.200300	1299.47	1331.63
4	GUIDE	896008728	9.22	5150	0.283	0.239	0.096	0.153	267.399580	-27.194977	-2164.95	-1375.46
5	GUIDE	896014680	8.77	5149	0.285	-0.137	0.088	0.139	266.460330	-27.216583	-2377.18	1624.61
6	GUIDE	895487032	9.50	5135	-0.119	0.122	0.104	0.164	267.405172	-25.982039	2197.68	-1215.26
7	GUIDE	895486072	10.16	5144	-0.132	0.022	0.167	0.266	267.061120	-25.933414	2326.51	-95.84

## 2.4 Star Slots

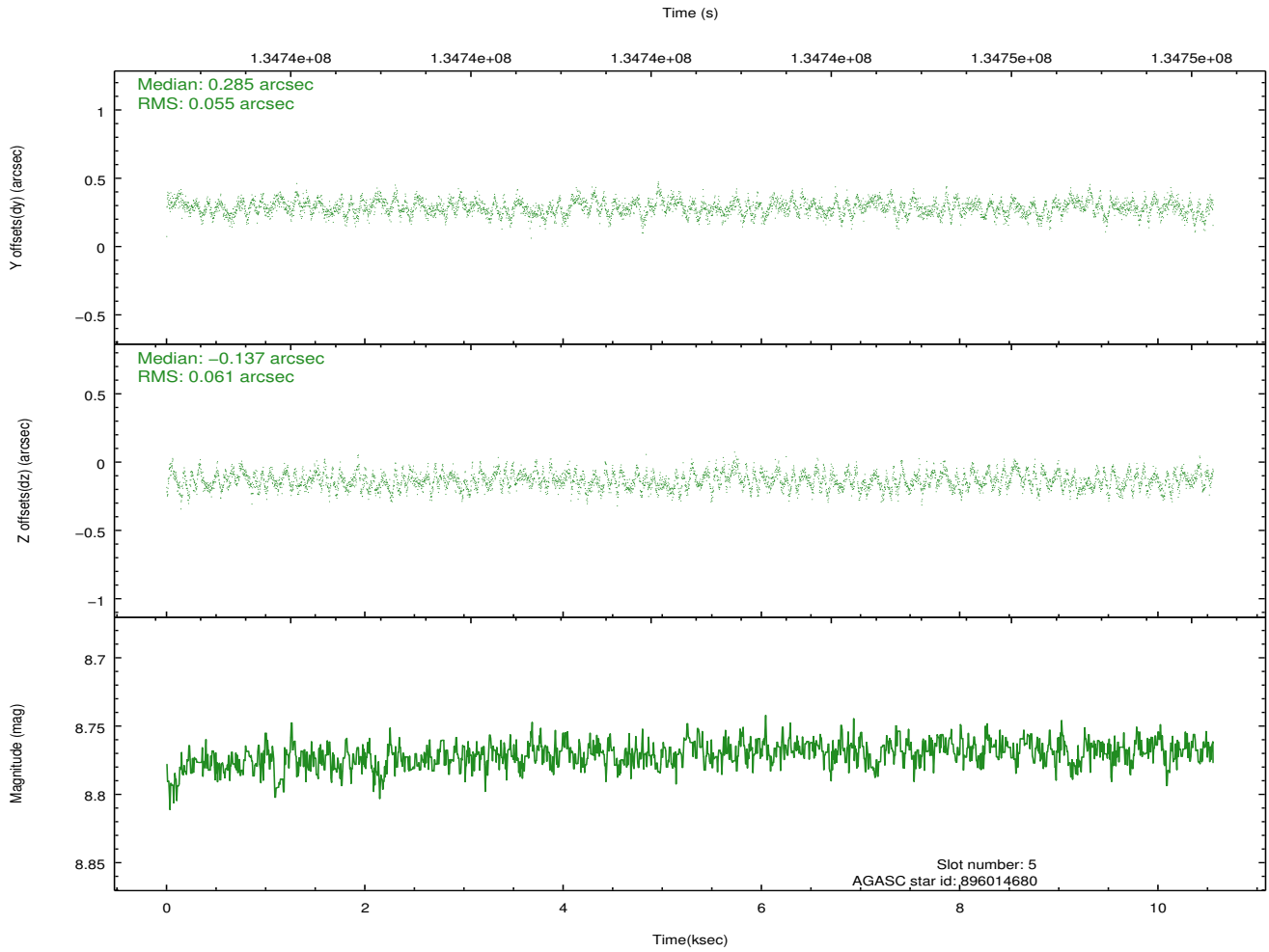
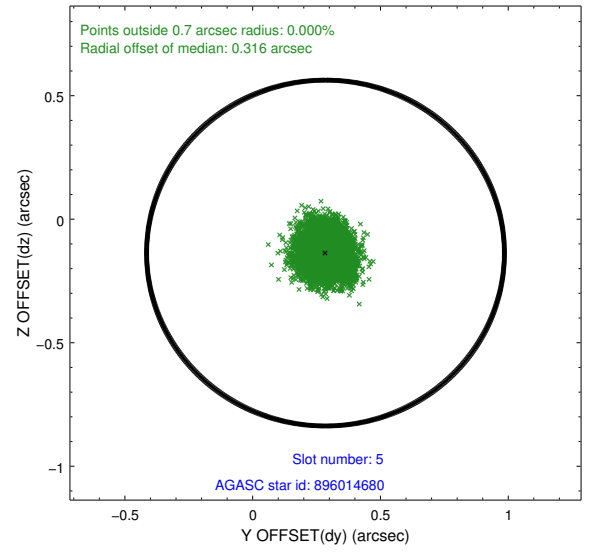
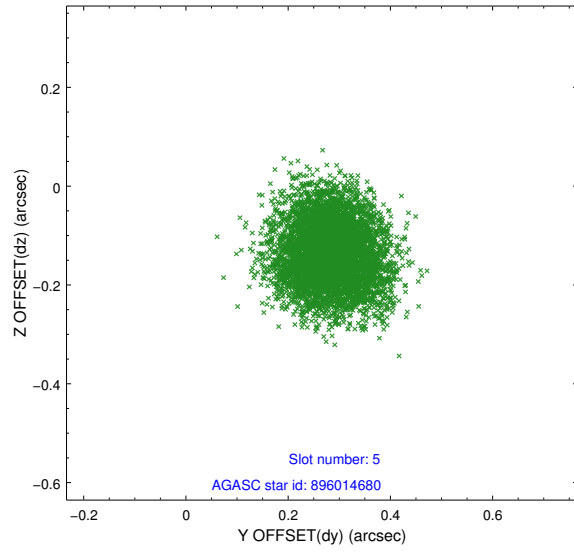
### 2.4.1 Slot 3



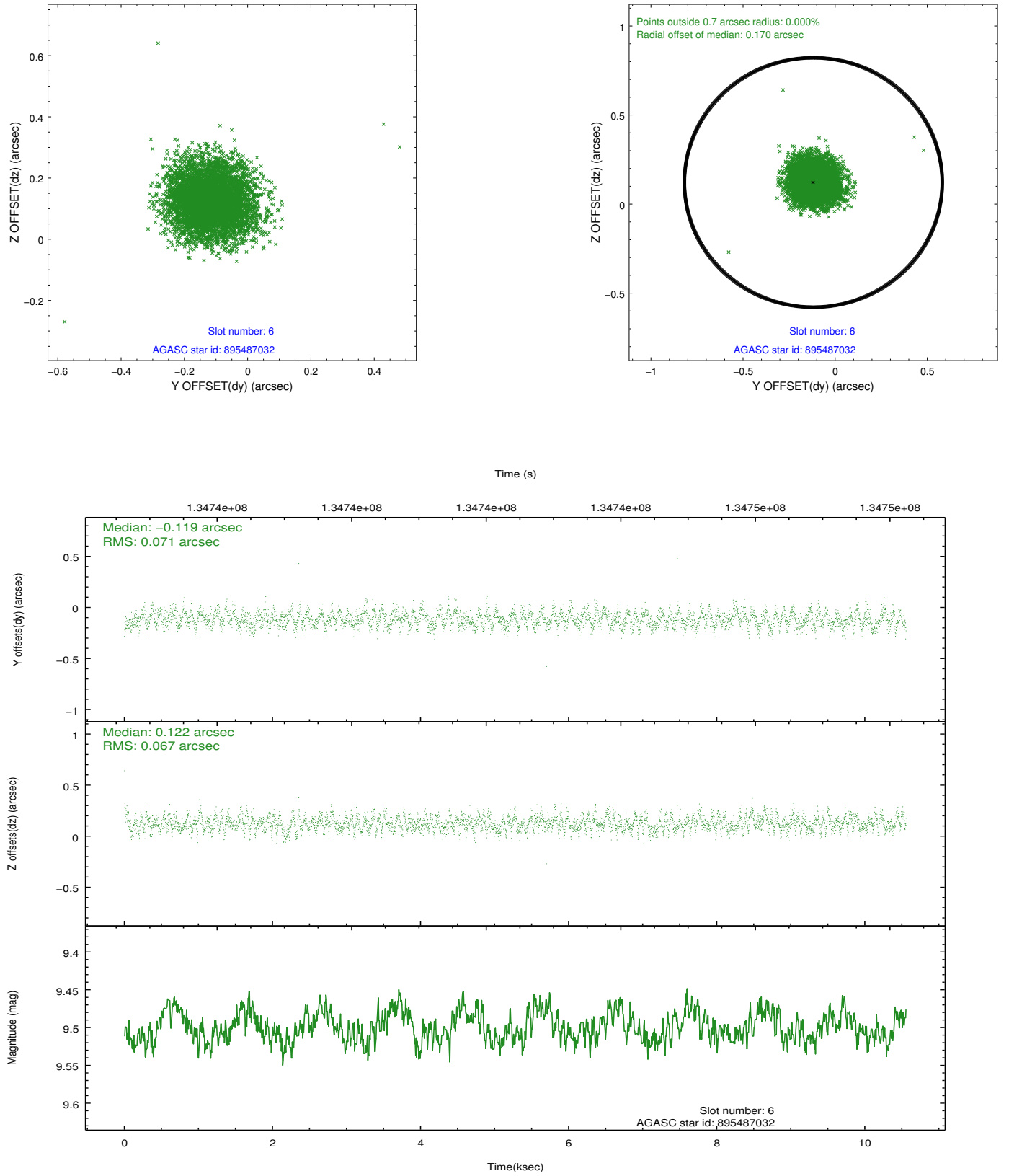
## 2.4.2 Slot 4



### 2.4.3 Slot 5

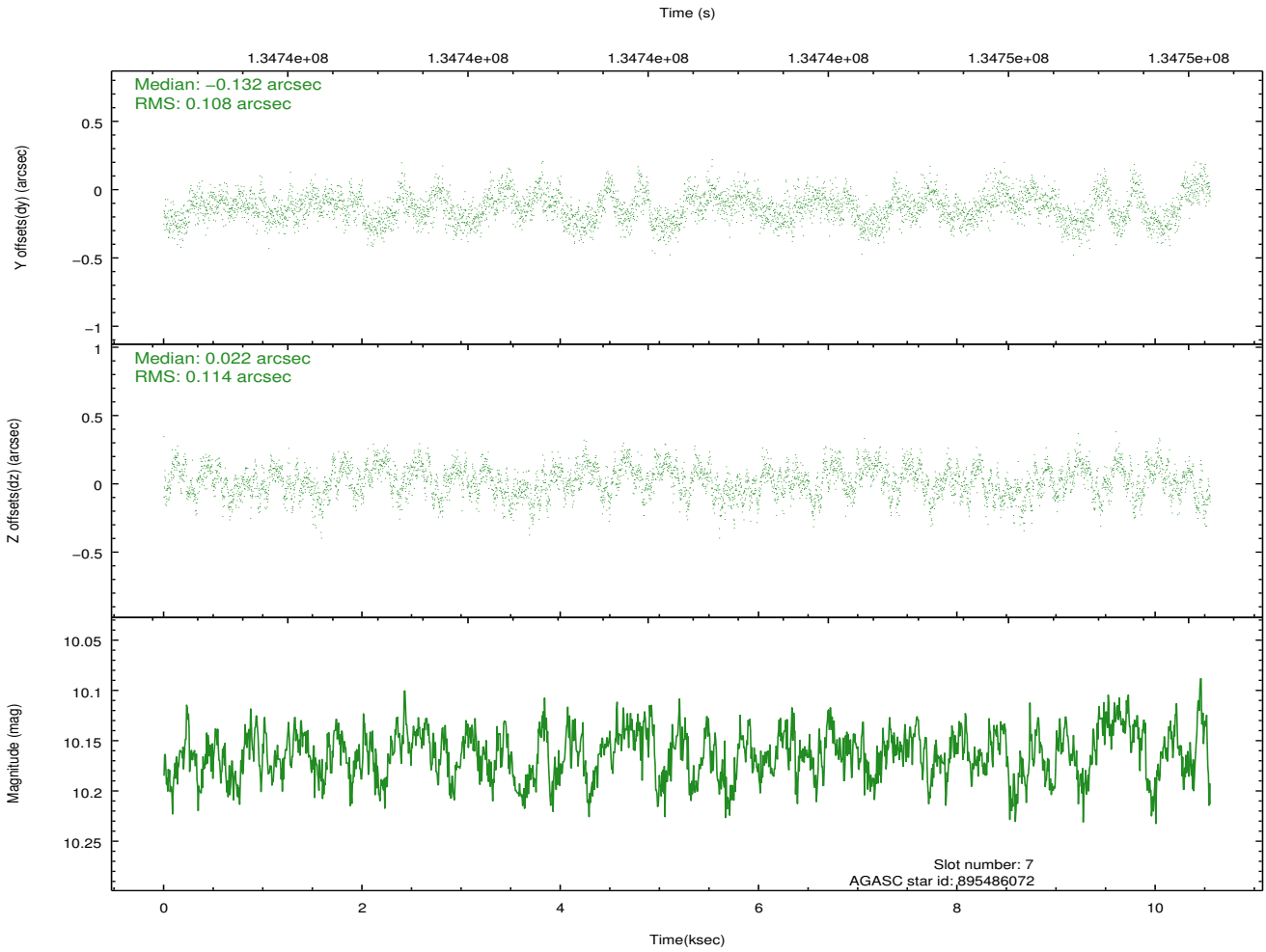
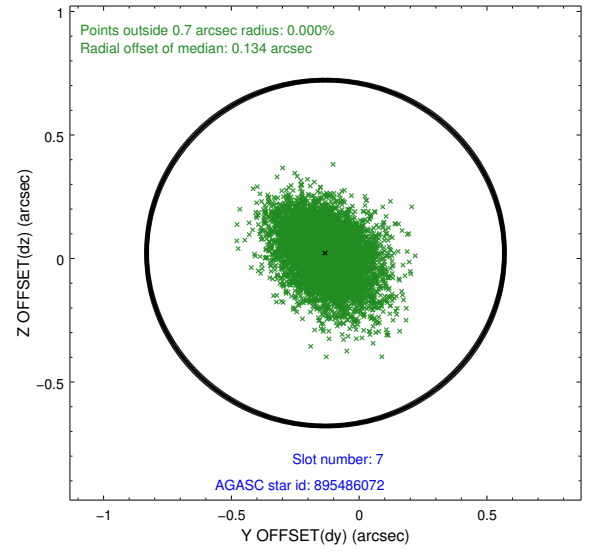
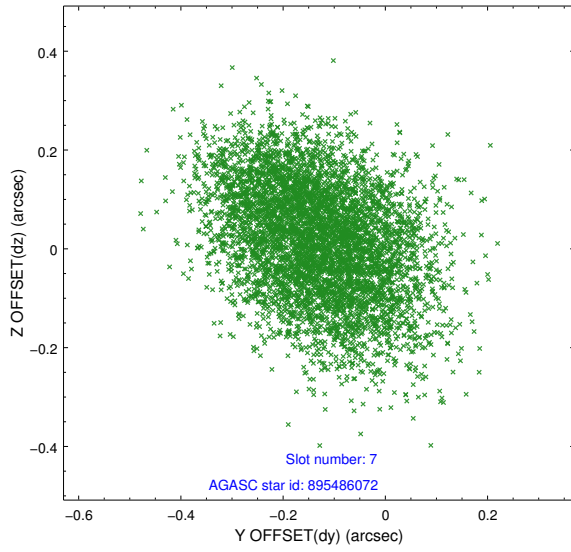


## 2.4.4 Slot 6



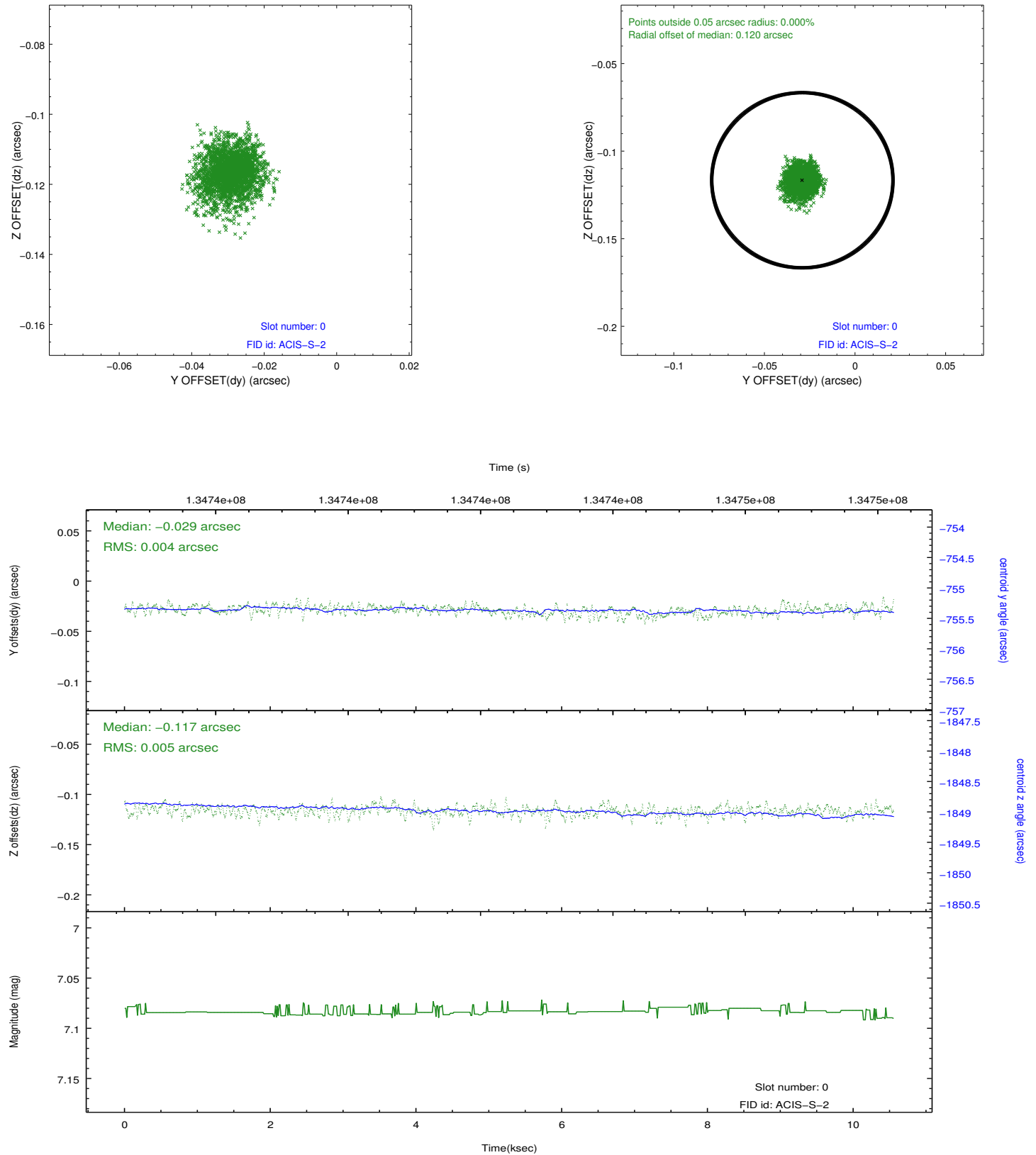


## 2.4.5 Slot 7

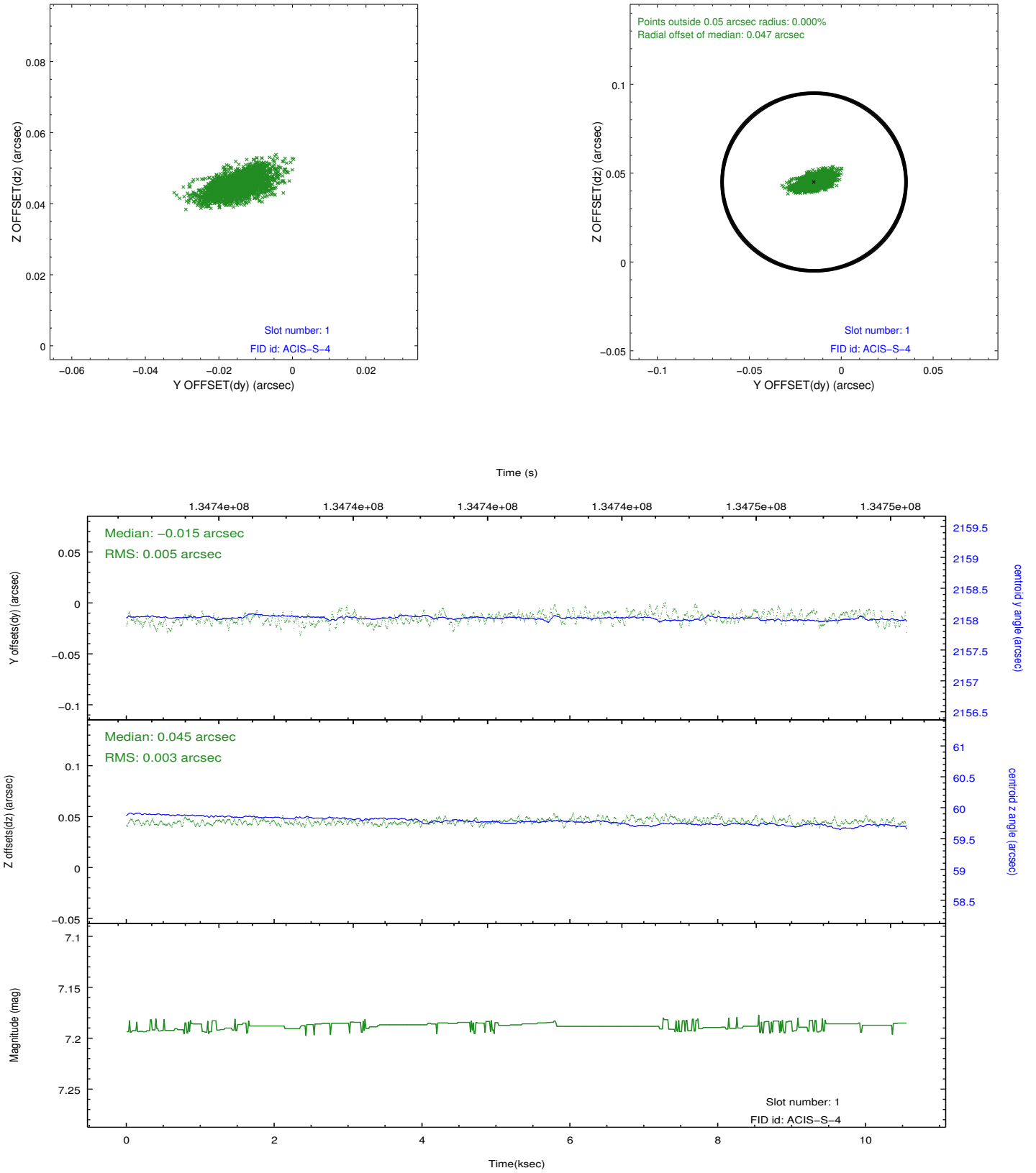


## 2.5 FID Slots

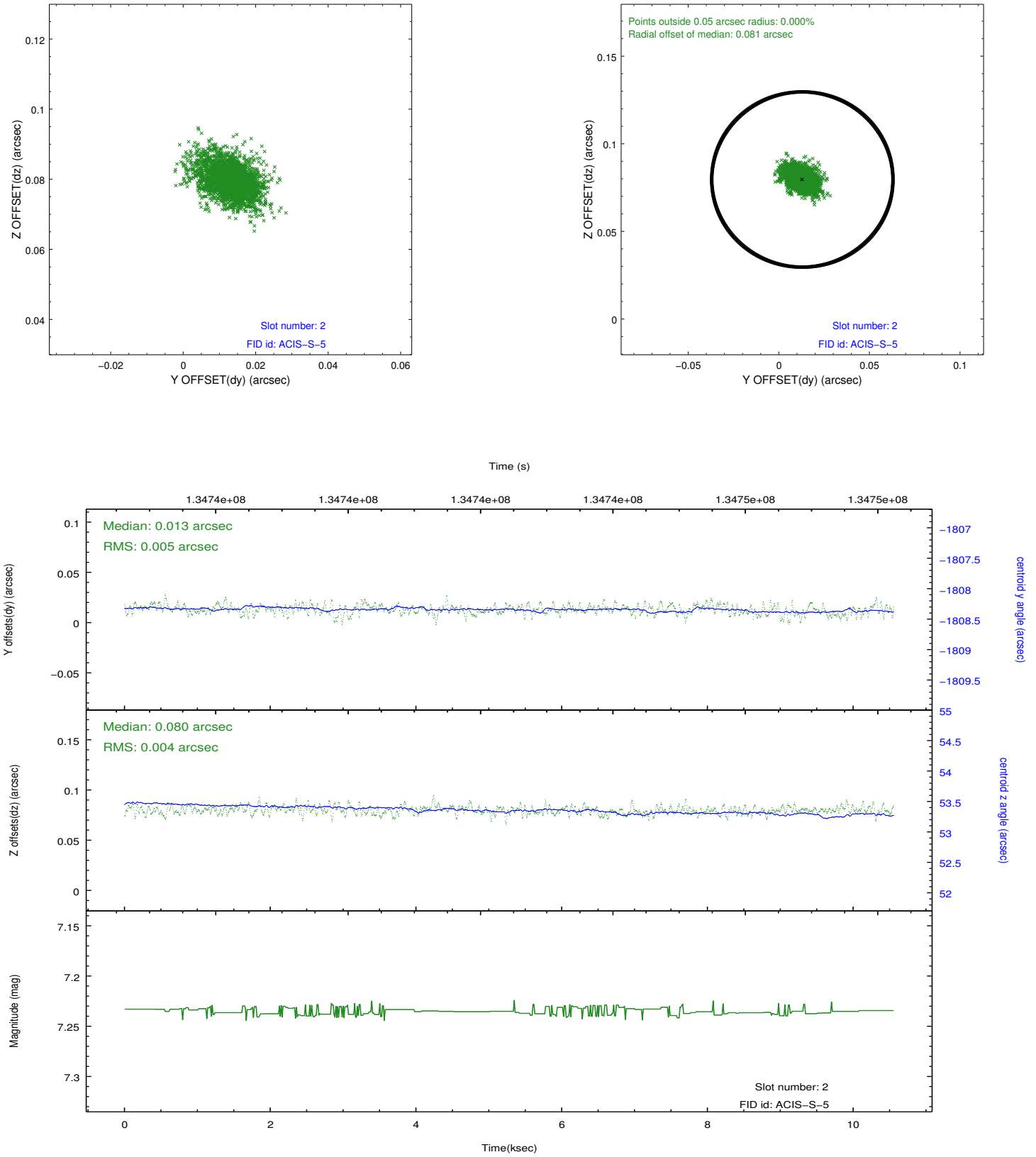
### 2.5.1 Slot 0



## 2.5.2 Slot 1

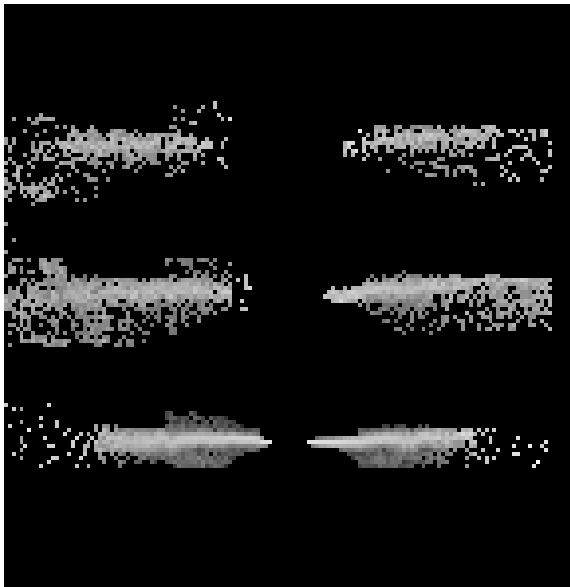


### 2.5.3 Slot 2

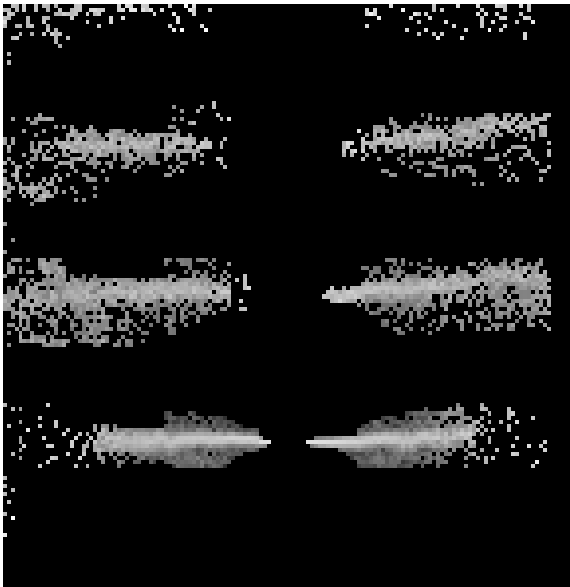


# 3 Gratings

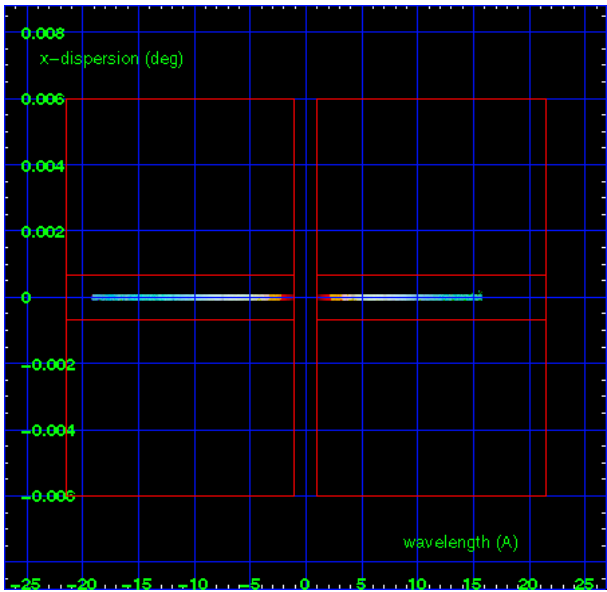
## 3.1 HEG Arm



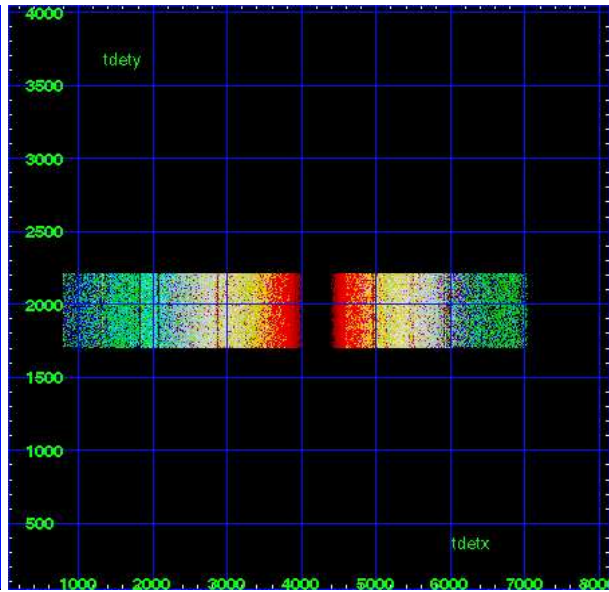
HEG Order Sort 123



HEG Order Sort ALL

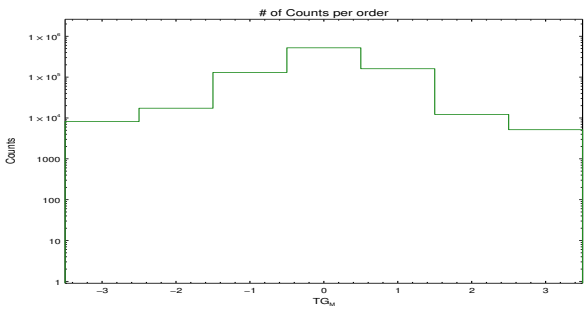


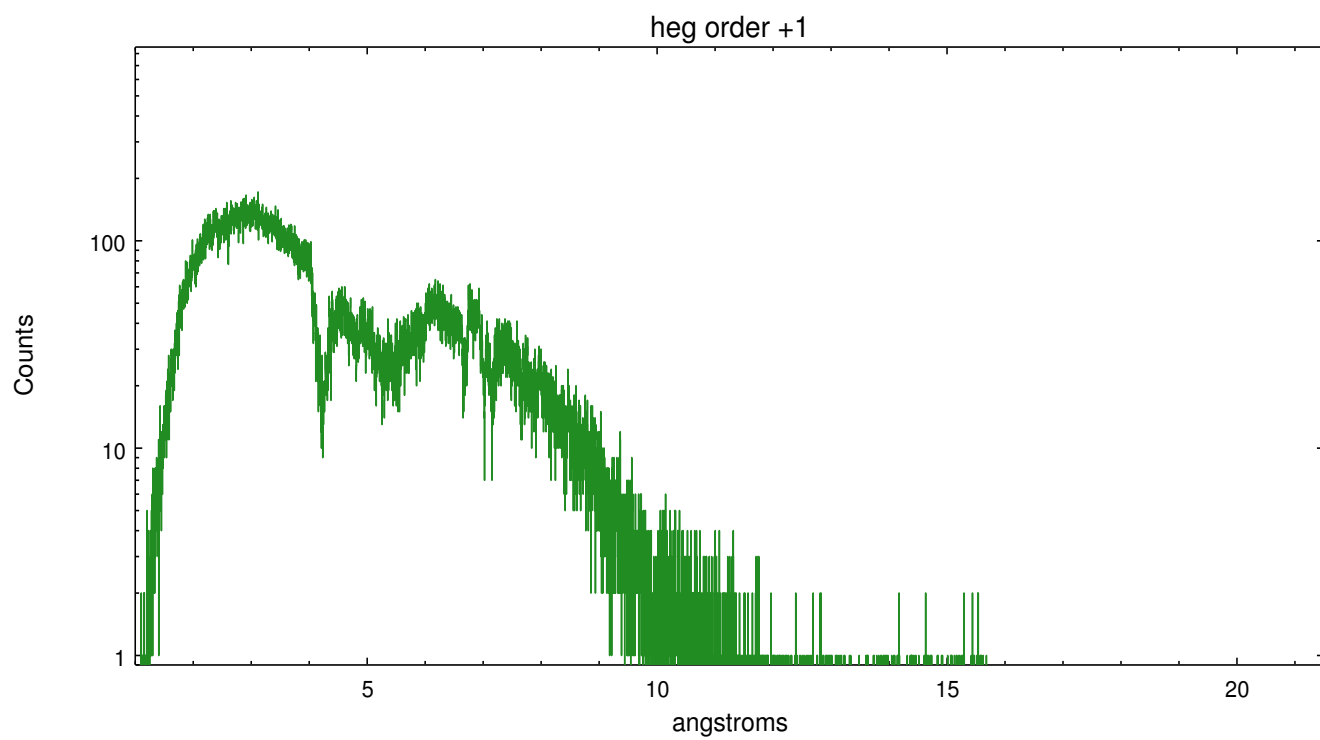
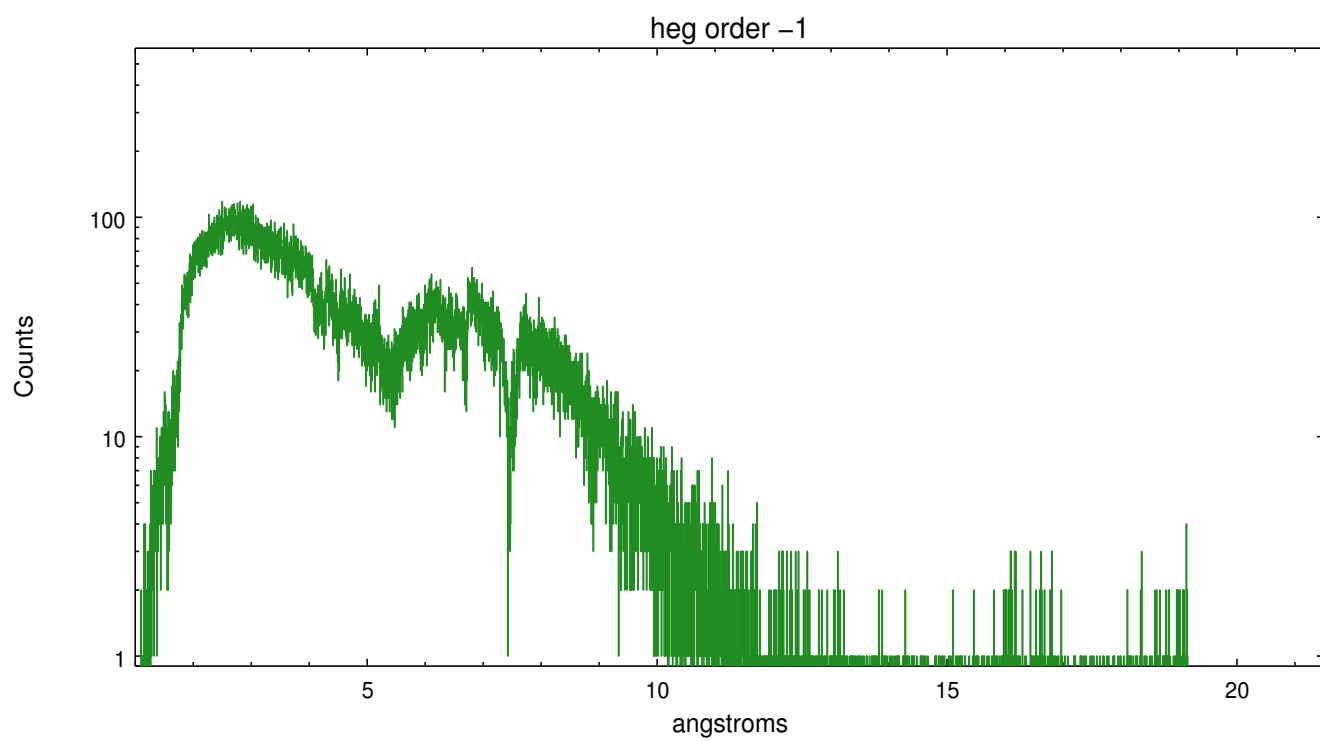
Spot Image HEG



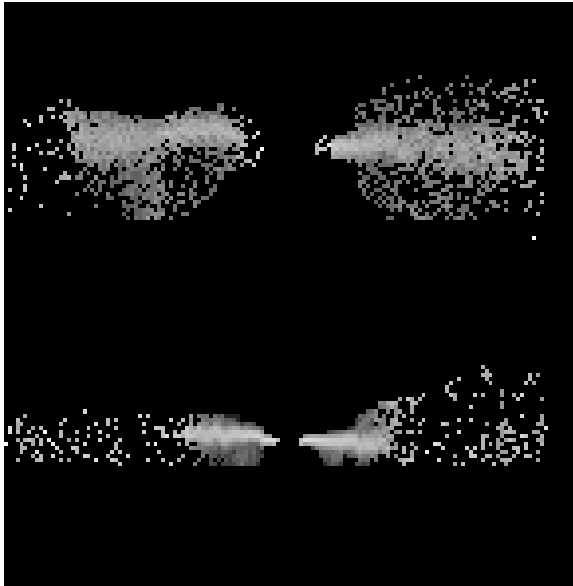
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	8167	17330	130226	522273	160639	12209	5171

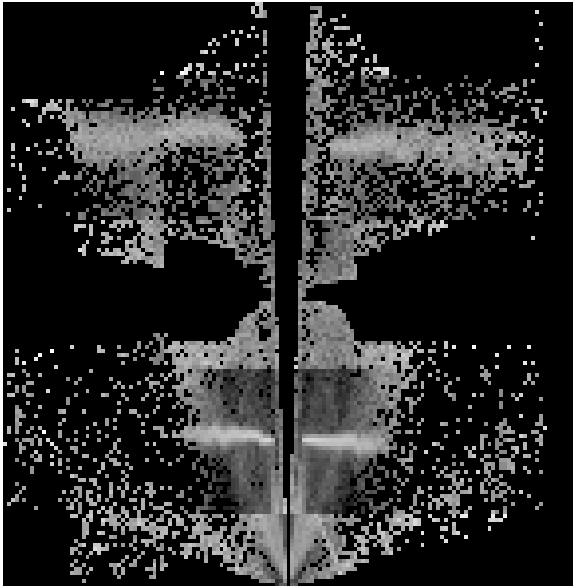




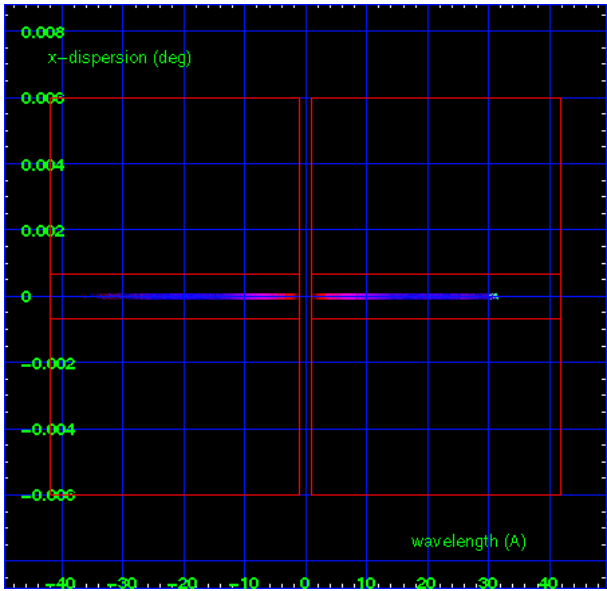
3.2 MEG Arm



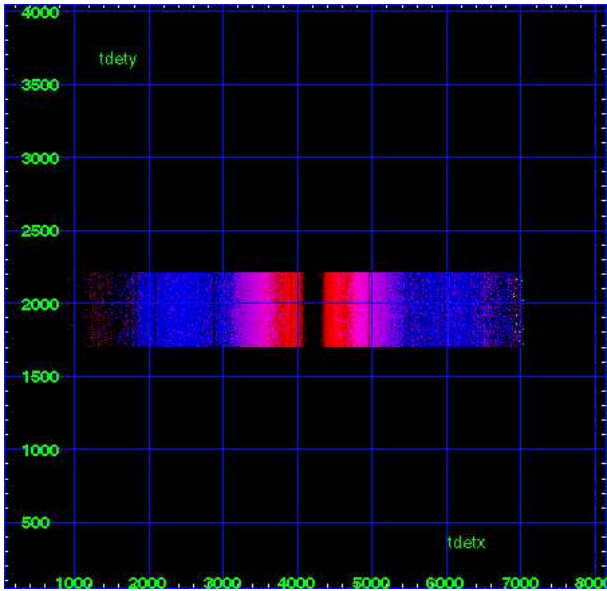
MEG Order Sort 123



MEG Order Sort ALL

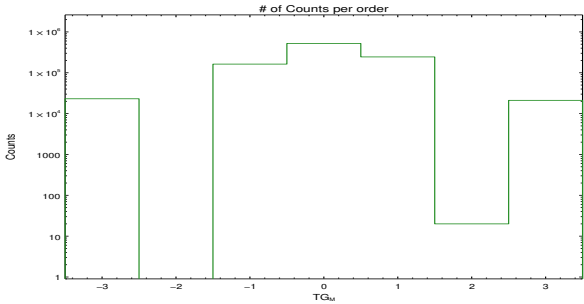


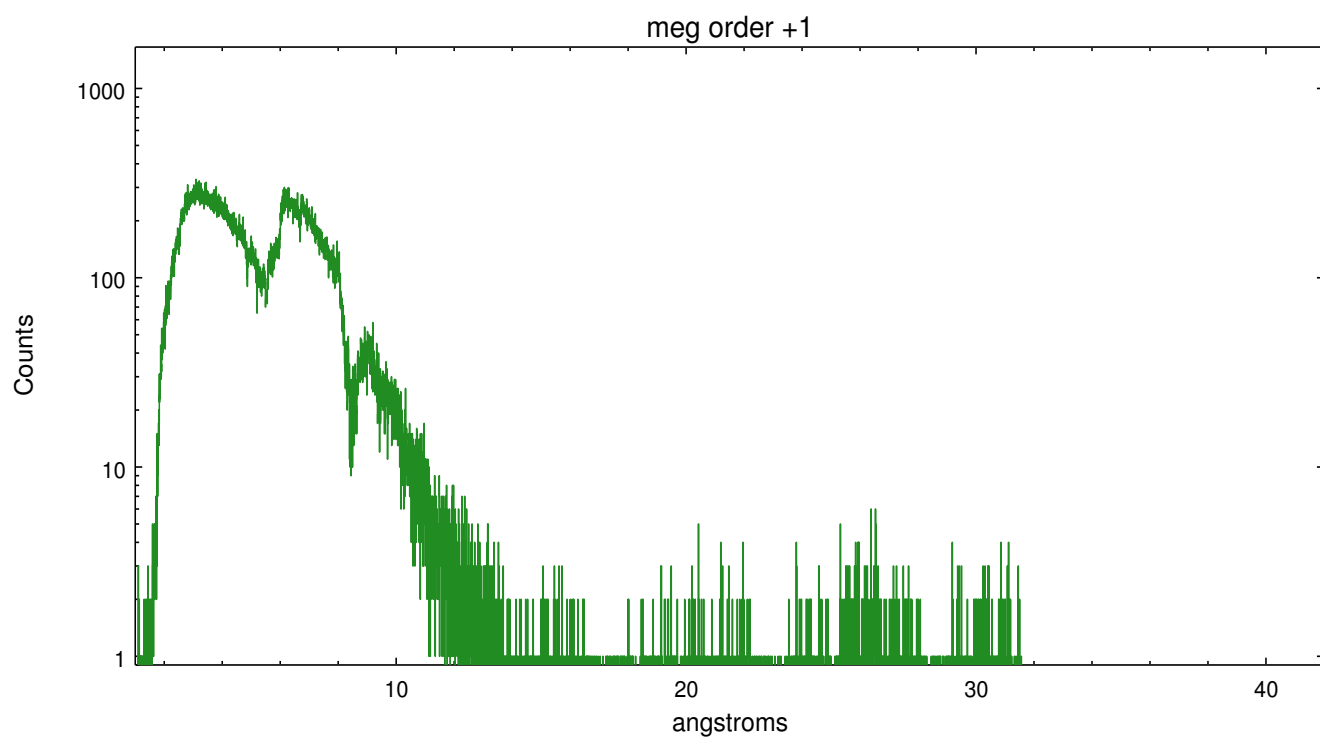
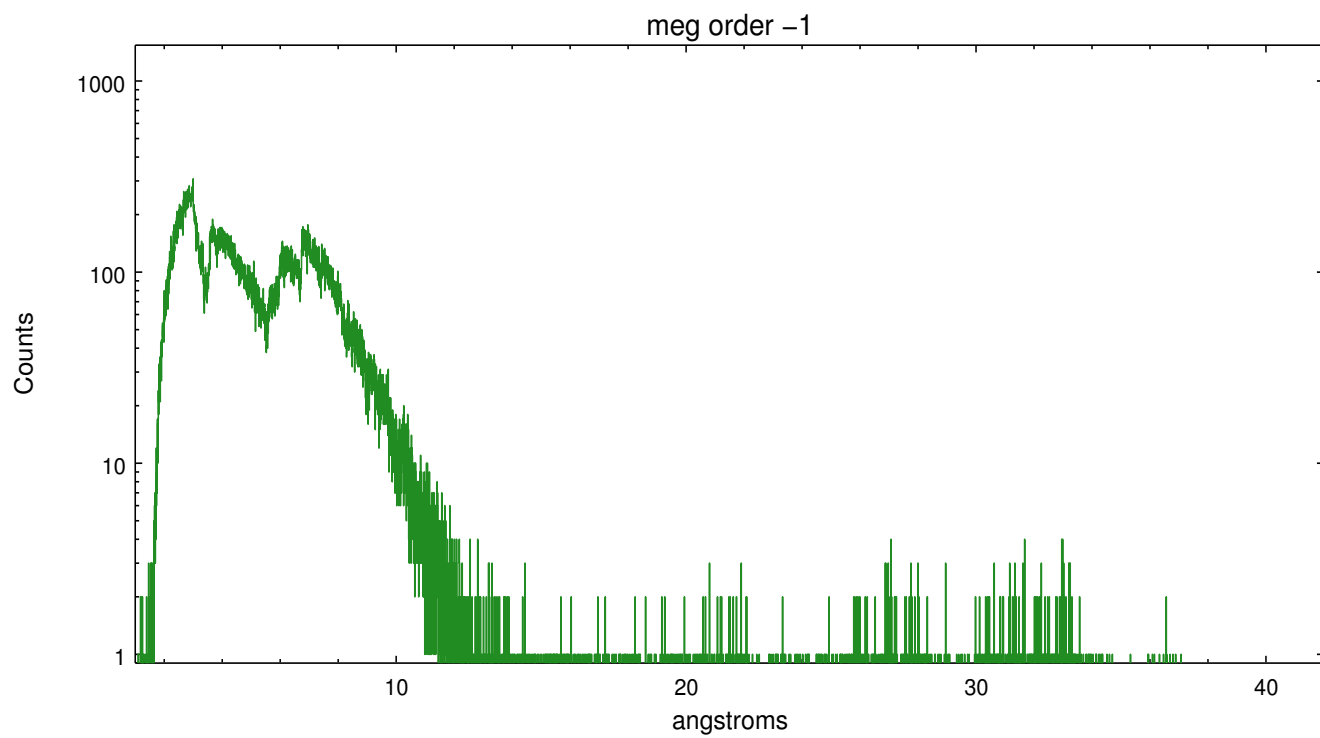
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	23097	0	162900	522273	244370	20	21114







# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.10.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.55

## A.2 Comments

Charge time:

New charge time is less than existing charge time used in previously distributed version

NEW CHARGE TIME = 8.999859 ks, 1 Obis

EXISTING CHARGE TIME = 10.550000 ks, 1 Obis.

Used 10.55 ks, which is effective exposure time for ccd\_id 5; bright sources can cause telemetry saturation; the exposure duration was as planned.