

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 11088 - L2 Version 3  
Chandra X-Ray Center

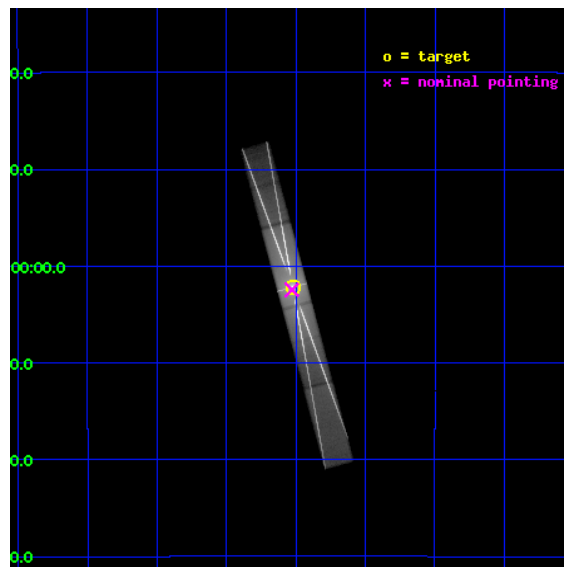
L2 Processing Date : Jul 11 2012

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# 1 Front

seq_num	401123	Sequence number
obs_id	11088	Observation id
title	Determining the Properties of Intervening Gas and Dust along the GX 17+2 Line-of-sight	Proposal title
observer	Dr. Jingen Xiang	Principal investigator
object	GX 17+2	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	274.005833	Observer's specified target RA [deg]
dec_targ	-14.036389	Observer's specified target Dec [deg]
ra_nom	274.00726014187	Nominal RA [deg]
dec_nom	-14.04102105038	Nominal Dec [deg]
roll_nom	254.93901429833	Nominal Roll [deg]
revision	3	Processing version of data
ontime	30059.99970144	Sum of GTIs [s]
livetime	29065.944402863	Livetime [s]
ontime5	30059.99970144	Sum of GTIs [s]
ontime6	30059.99970144	Sum of GTIs [s]
ontime7	30059.99970144	Sum of GTIs [s]
ontime8	30059.99970144	Sum of GTIs [s]
l2events	5129170	Number of level 2 events

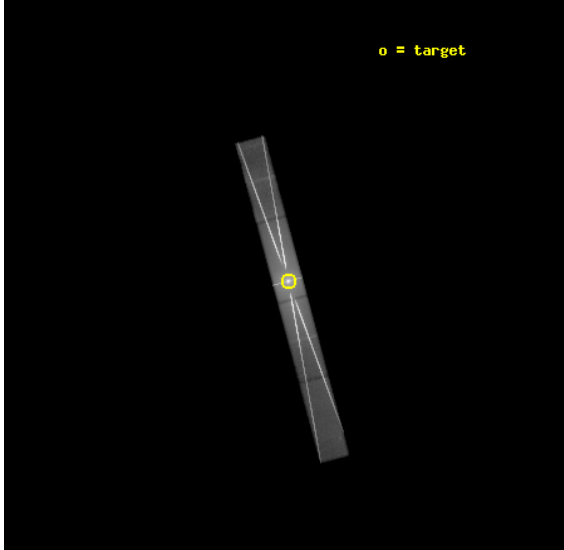


## 2 OBI

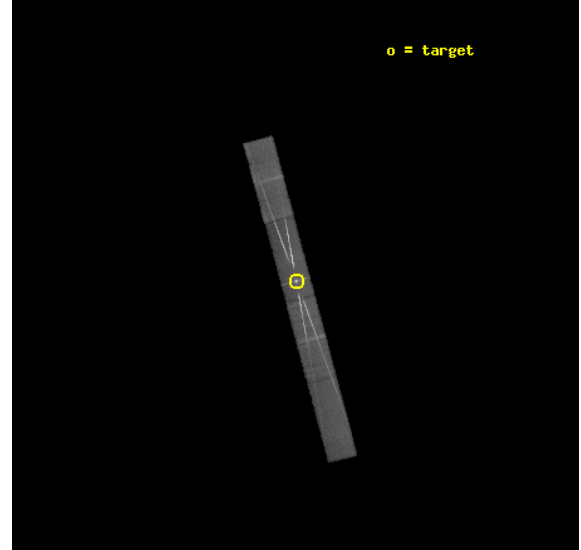
### 2.1 OBI

#### 2.1.1 Images

Level 1 Image



Level 1 Bad Events



### 2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	30059.99970144	Sum of GTIs [s]
caldbver	4.5.0	&#160	ontime5	30059.99970144	Sum of GTIs [s]
date	2012-06-30T17:21:06	Date and time of file creation	ontime6	30059.99970144	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	30059.99970144	Sum of GTIs [s]
			ontime8	30059.99970144	Sum of GTIs [s]
			l1events	5914841	Number of level 1 events

### 2.1.3 Events

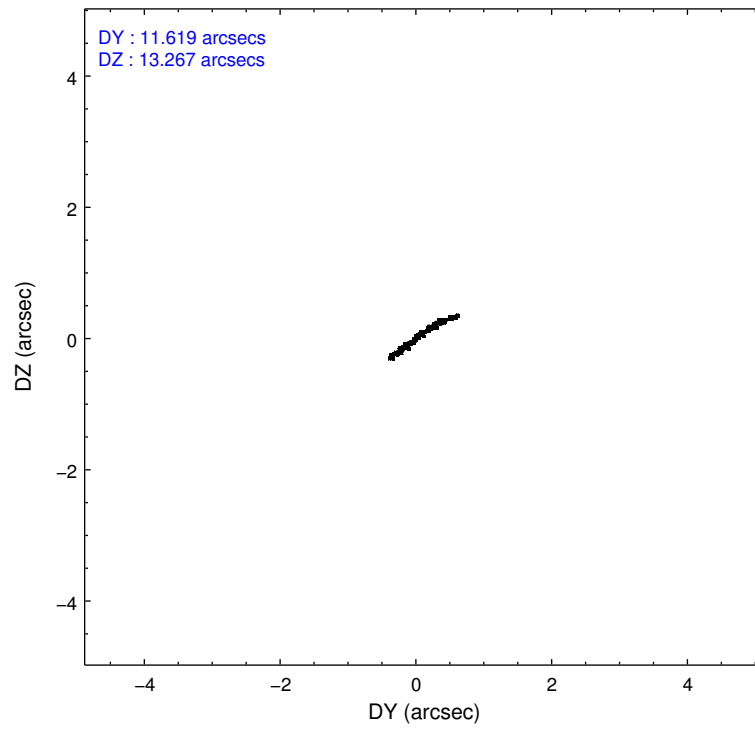
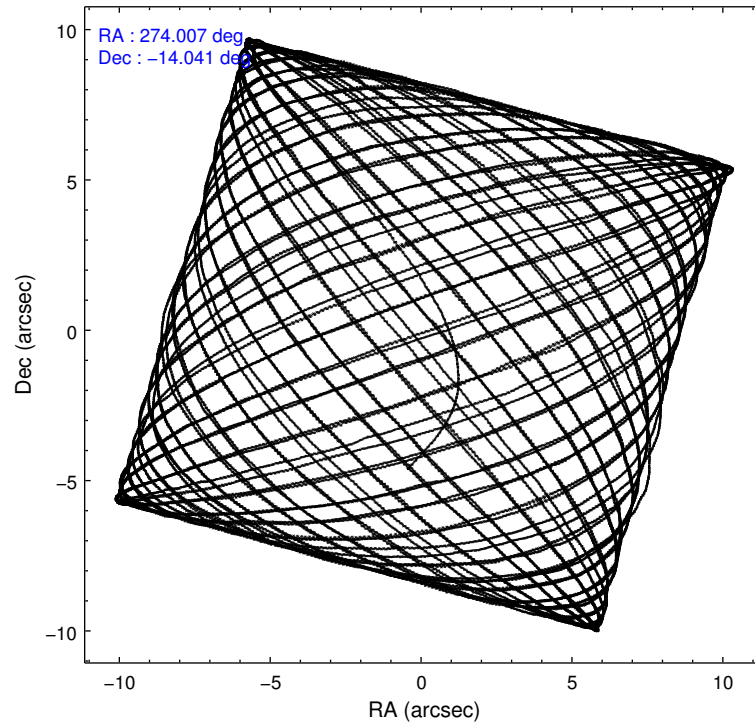
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	307881	2069681	2950118	587161
rejected events	67806	176000	267814	97915
rejected %	22%	8%	9%	16%

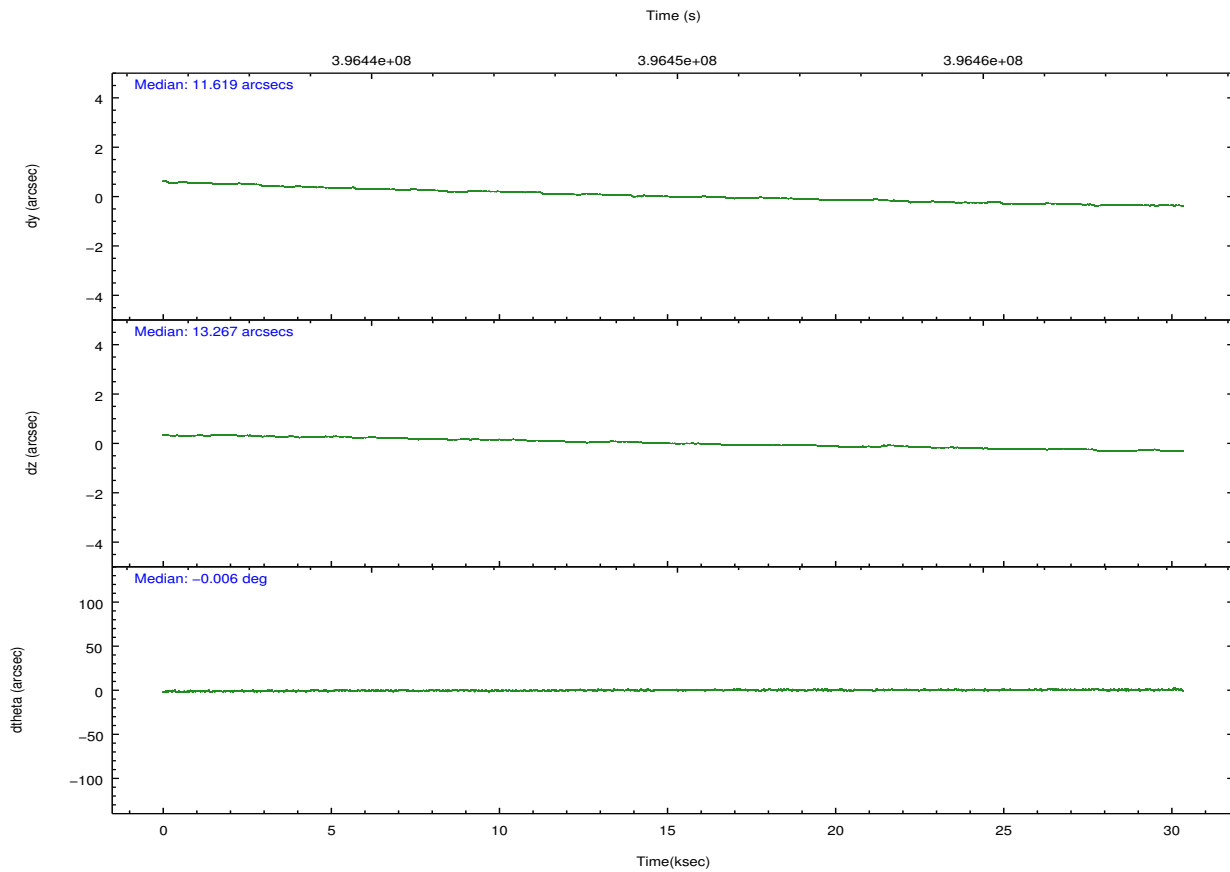
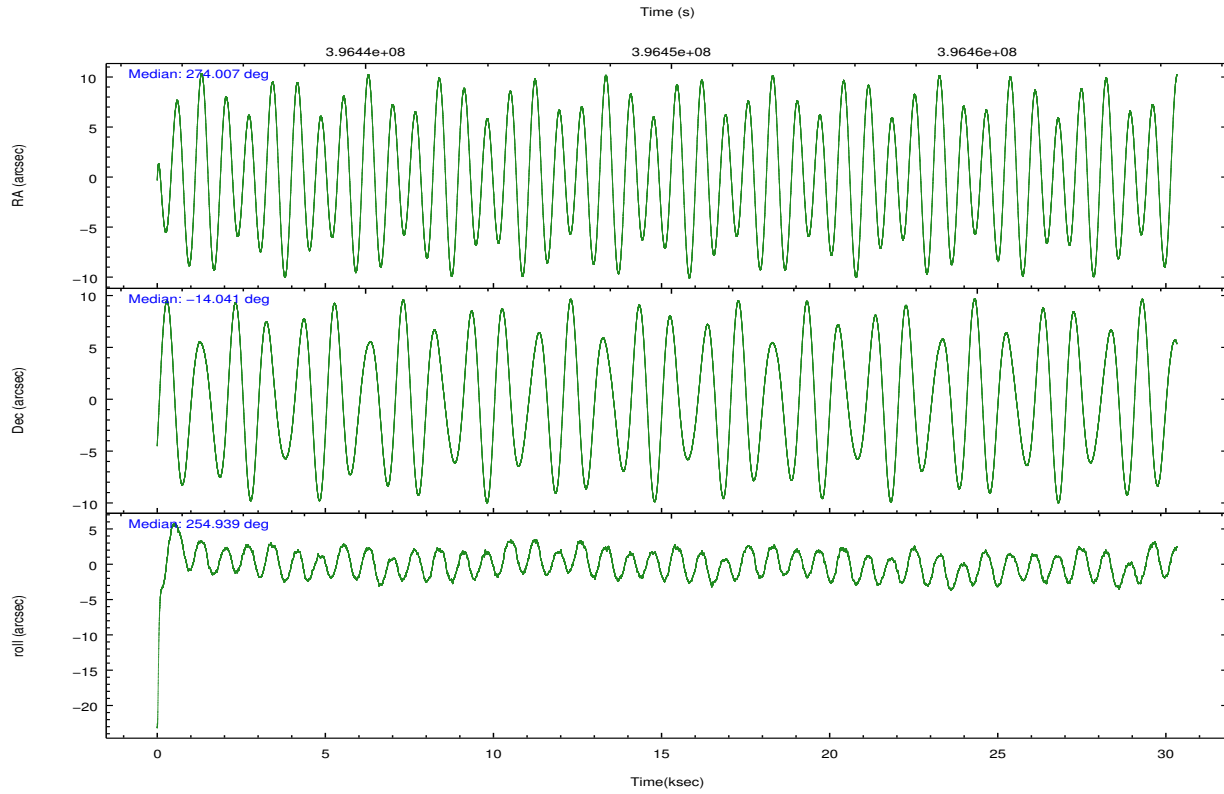
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	49663	1314271	446522	360838
	16%	63%	15%	61%
grade 1 events	290	36689	13364	2656
	0%	1%	0%	0%
grade 2 events	82448	268871	689325	61081
	26%	12%	23%	10%
grade 3 events	17307	94632	256441	21199
	5%	4%	8%	3%
grade 4 events	17164	92885	254773	20851
	5%	4%	8%	3%
grade 5 events	9601	34946	77177	6608
	3%	1%	2%	1%
grade 6 events	73510	123171	1035457	25328
	23%	5%	35%	4%
grade 7 events	57898	104216	177059	88600
	18%	5%	6%	15%

## 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	GRADED	GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	273.999628	274.0072601418714	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-14.014712	-14.04102105038019	Subarray start row	1	1
[deg] Pointing Roll	254.780546	254.9390142983313	Subarray row count	360	360
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	1.2
[mm] SIM translation stage pos	-182.132523	-182.1344861297048			
[mm] SIM translation stage offset	-8	-7.998036453302973			
[s] Observation start time (MET)	396435018.184000	396433190.06356			
Observation start date	2010-07-25T08:49:12	2010-07-25T08:19:50			
[s] Observation end time (MET)	396465018.184000	396466044.39024			
Observation end date	2010-07-25T17:09:12	2010-07-25T17:27:24			
Read mode	TIMED	TIMED			

## 2.3 Aspect



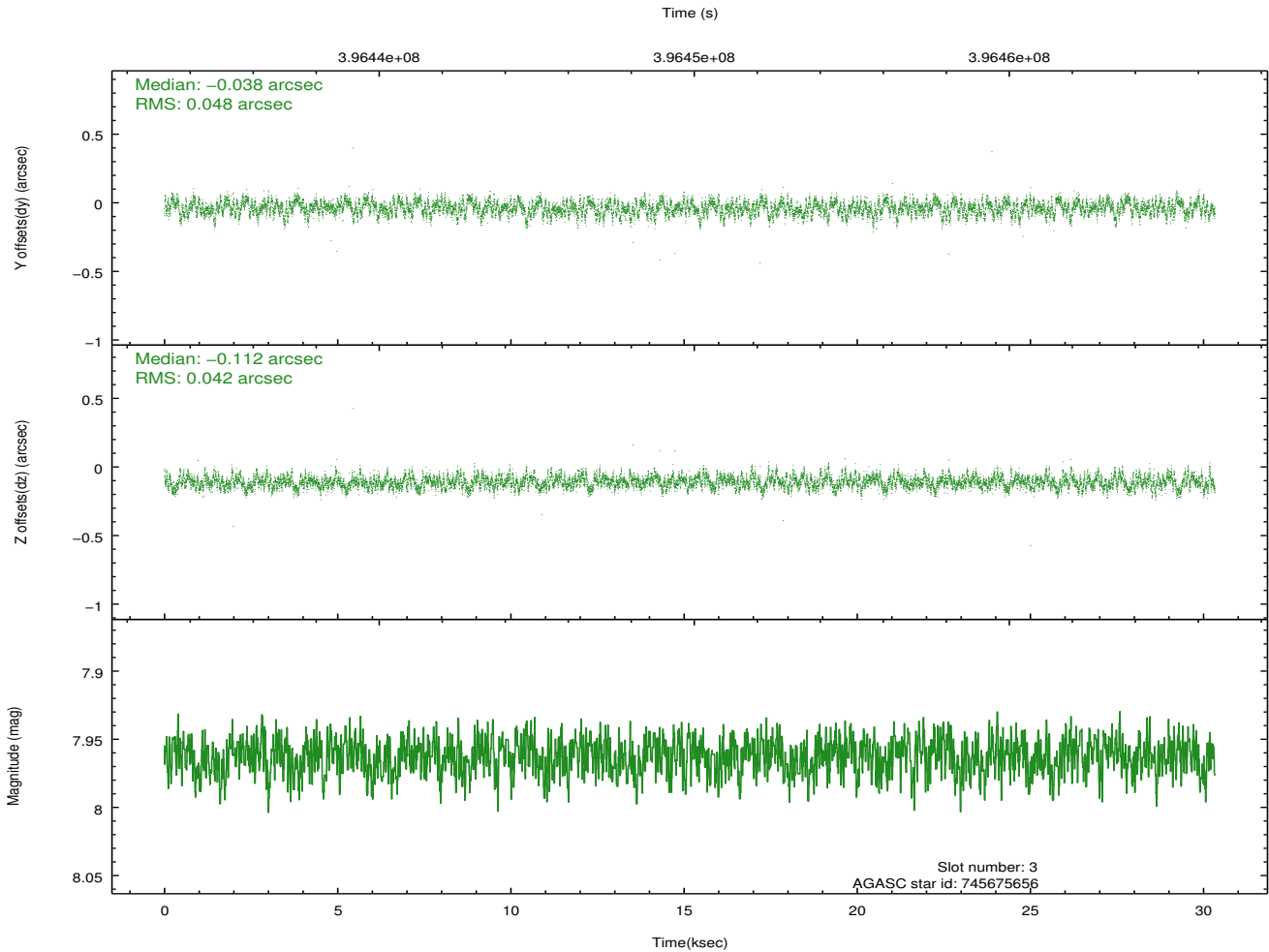
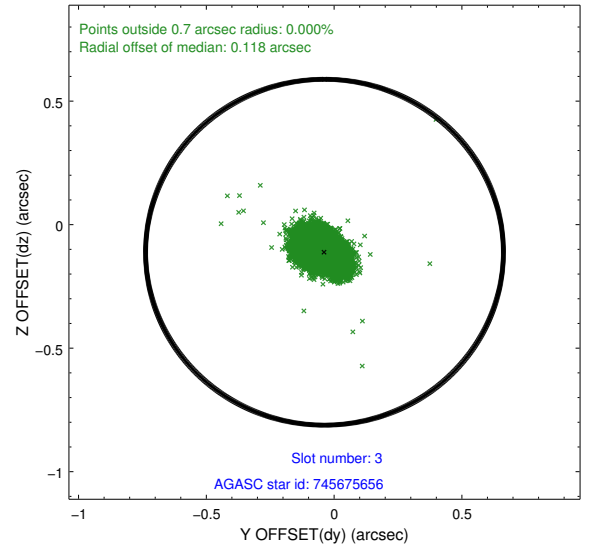
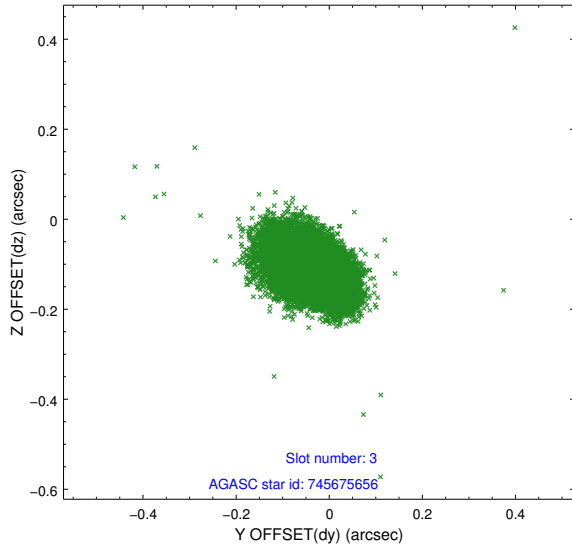


### Slot Statistics

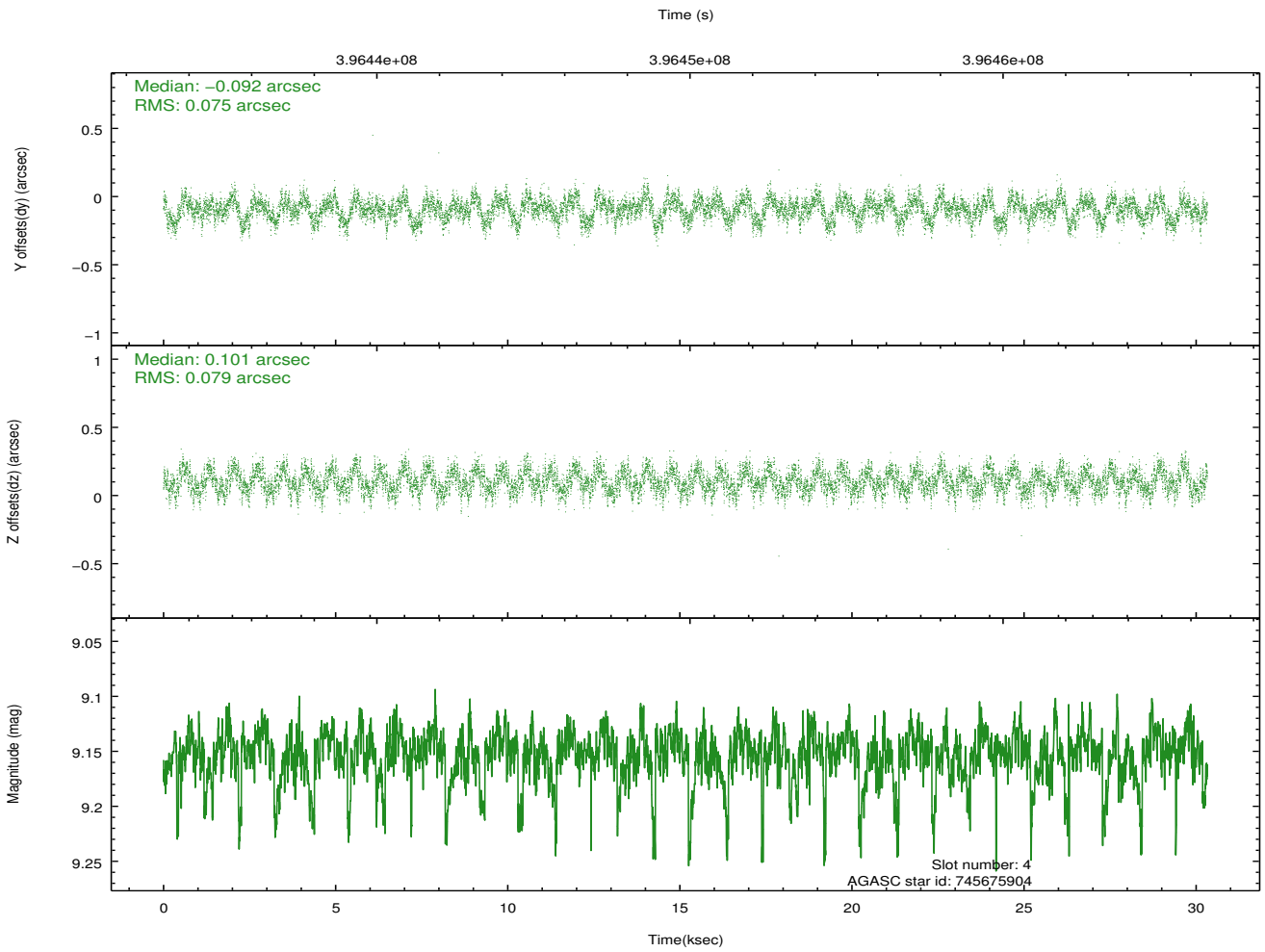
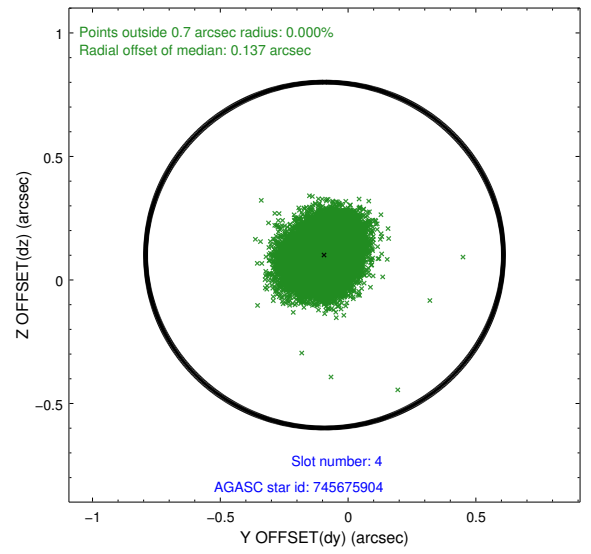
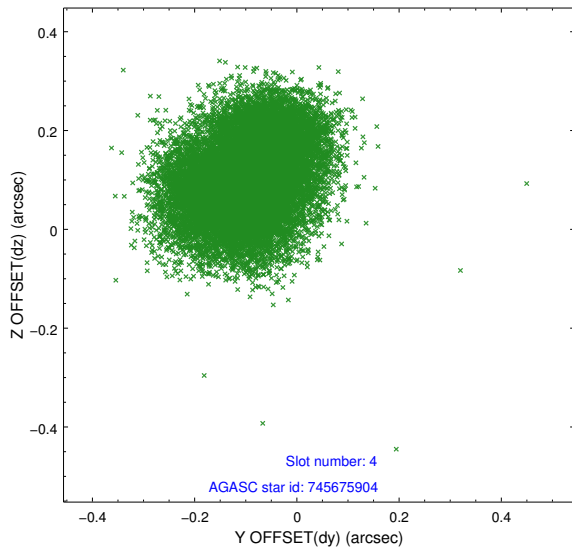
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.99	7398	0.061	0.195	0.010	0.017	0.000000	0.000000	932.15	-1894.81
1	FID	ACIS-S-2	6.91	7398	-0.171	-0.123	0.015	0.028	0.000000	0.000000	-763.94	-1899.78
2	FID	ACIS-S-6	7.20	7397	0.089	-0.070	0.011	0.019	0.000000	0.000000	397.79	646.15
3	GUIDE	745675656	7.96	14791	-0.038	-0.112	0.067	0.112	274.656383	-13.977352	-729.02	2179.41
4	GUIDE	745675904	9.15	14766	-0.092	0.101	0.119	0.180	274.379684	-14.452468	1173.80	1692.83
5	GUIDE	745680576	8.69	14786	0.118	-0.094	0.066	0.107	274.063292	-14.644899	2131.18	809.72
6	GUIDE	745678840	9.19	14757	0.097	0.013	0.109	0.167	274.156904	-14.659171	2095.36	1137.91
7	GUIDE	745674432	7.18	14796	-0.078	0.094	0.064	0.106	274.729377	-13.541343	-2311.06	2018.58

## 2.4 Star Slots

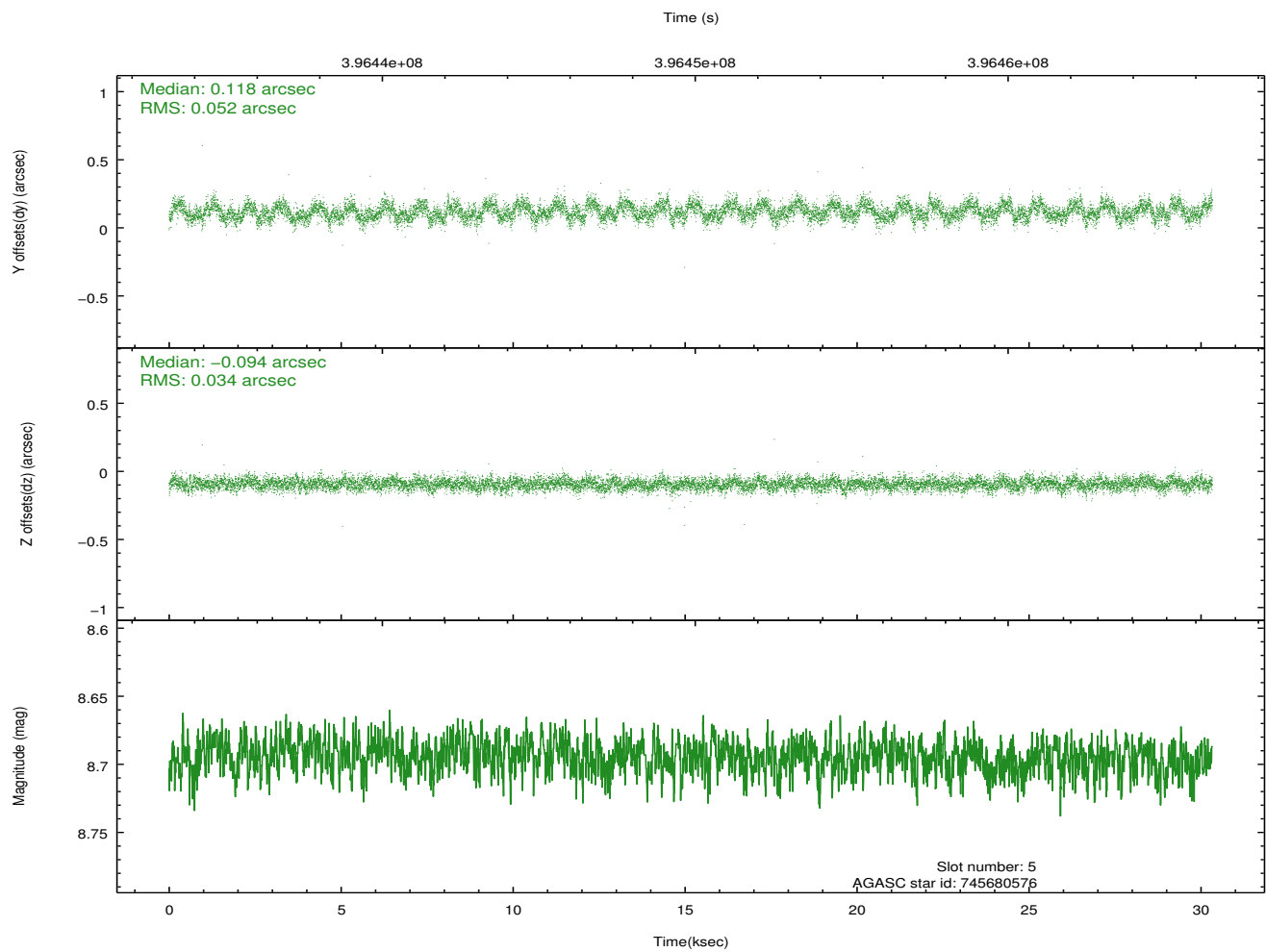
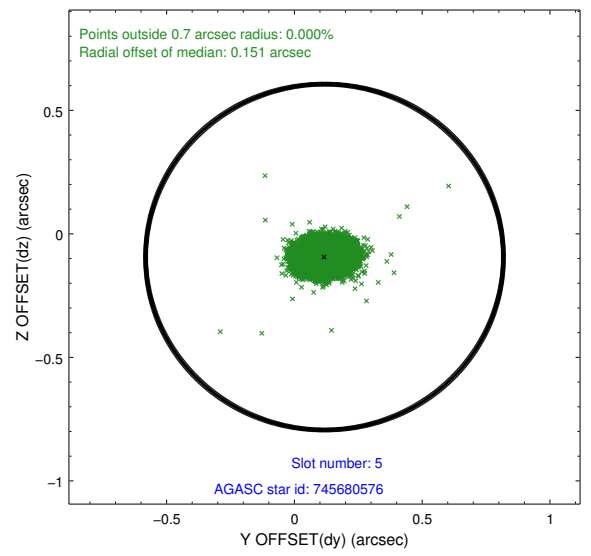
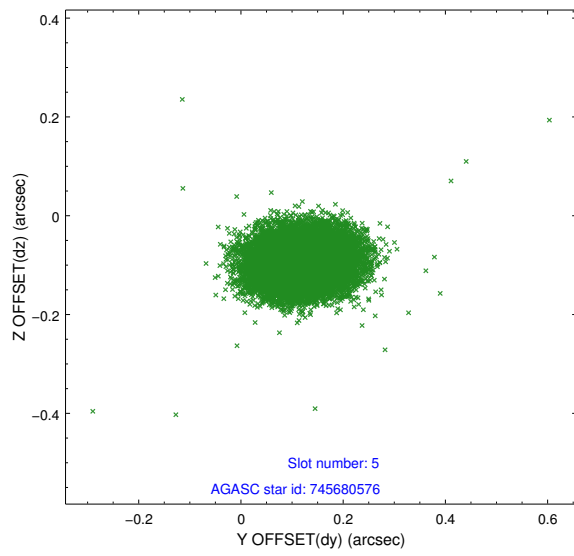
### 2.4.1 Slot 3



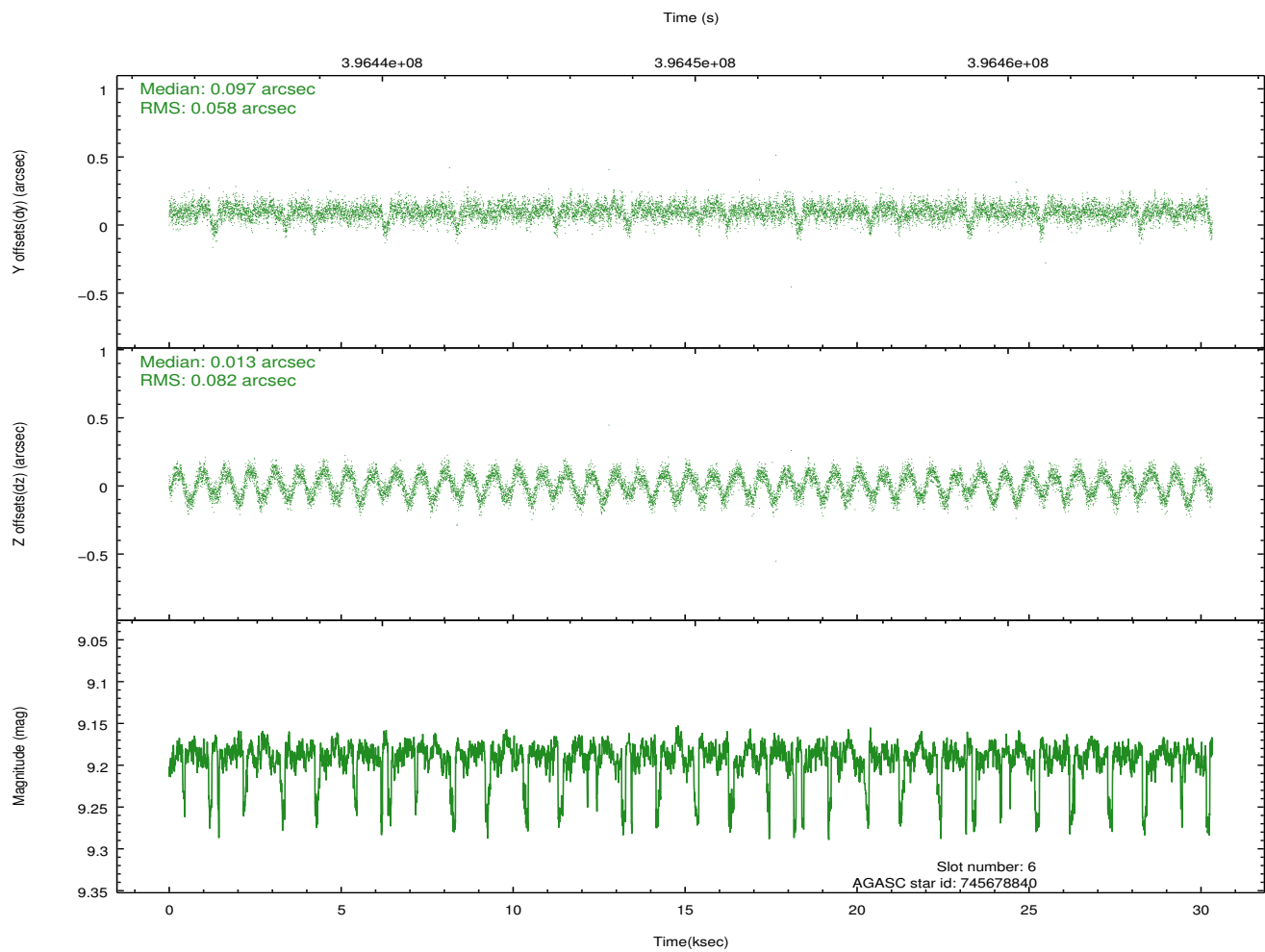
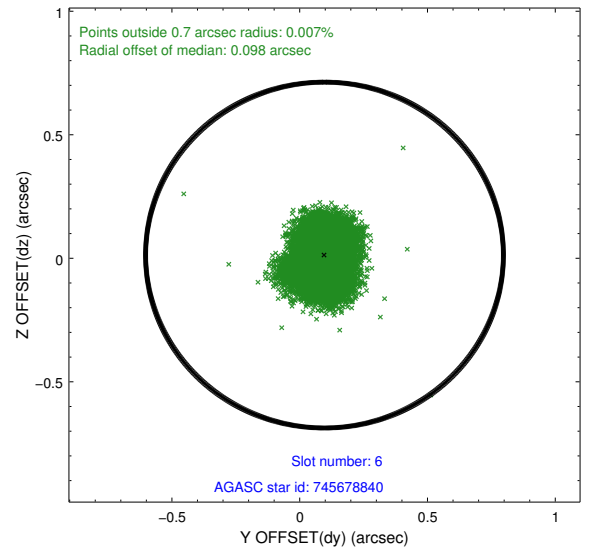
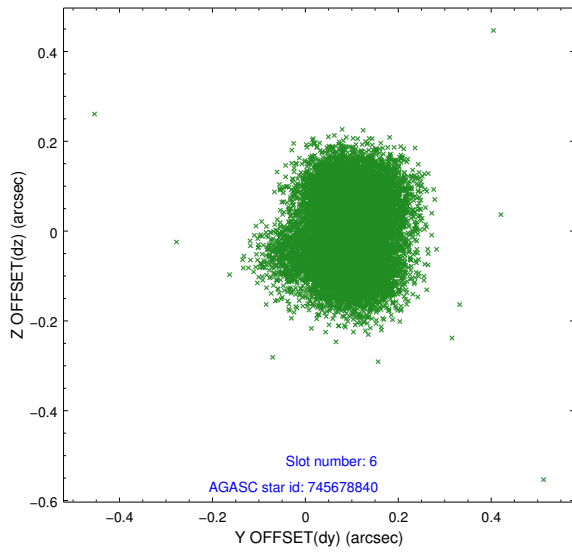
### 2.4.2 Slot 4



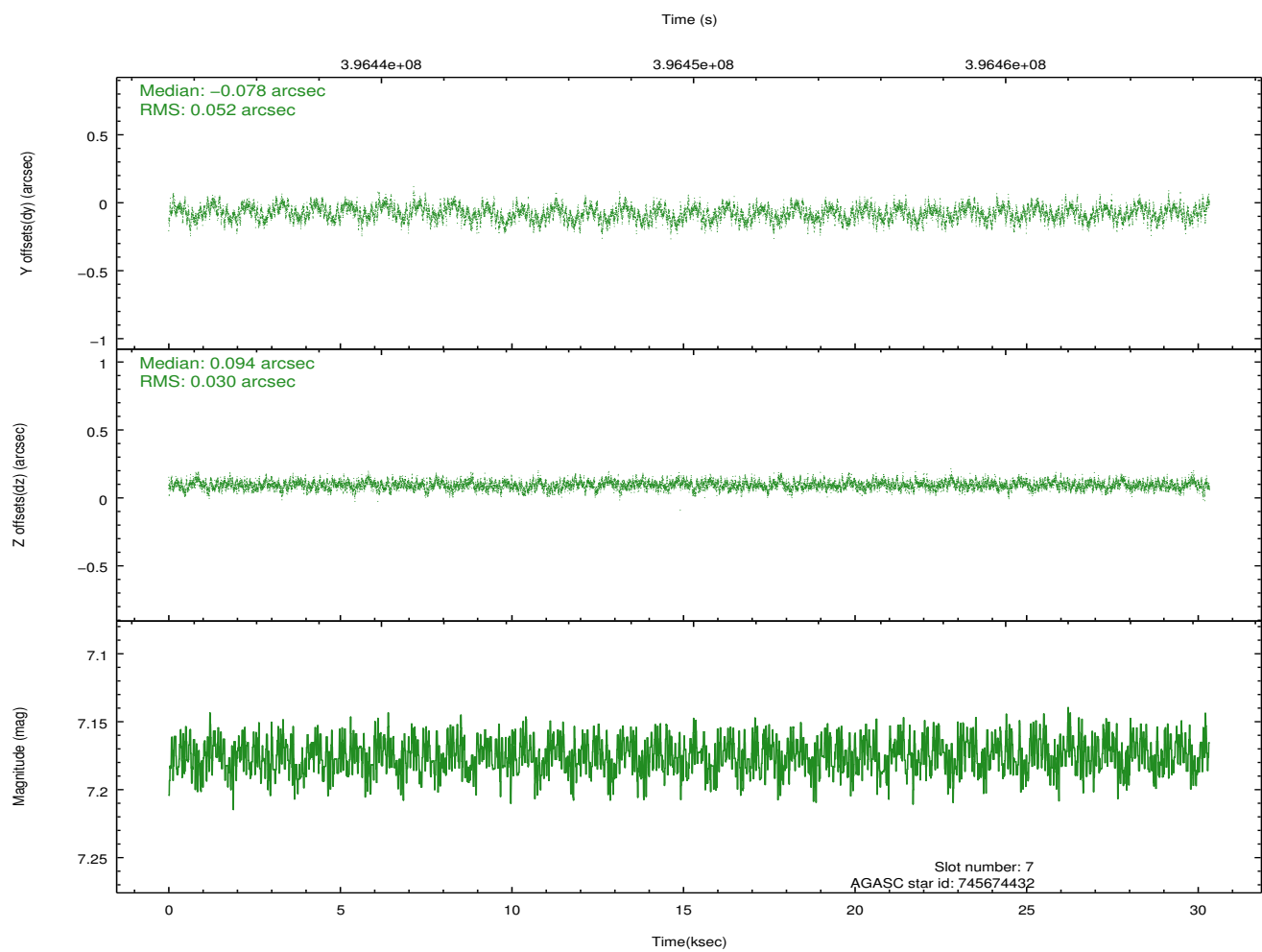
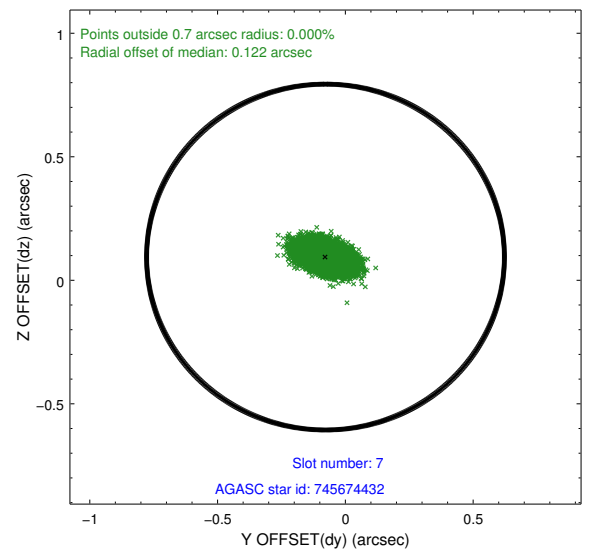
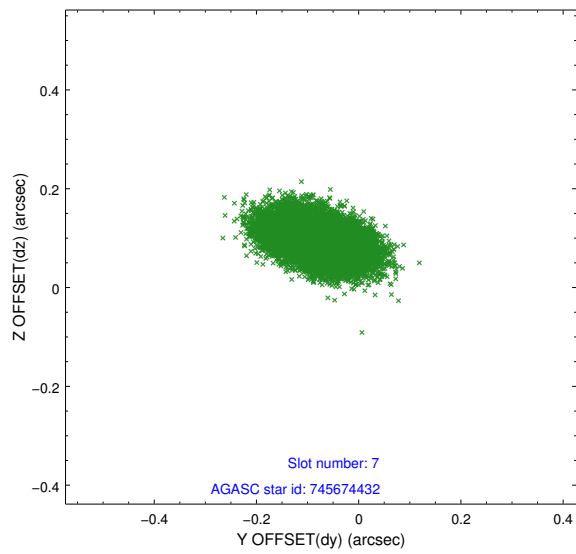
### 2.4.3 Slot 5



## 2.4.4 Slot 6

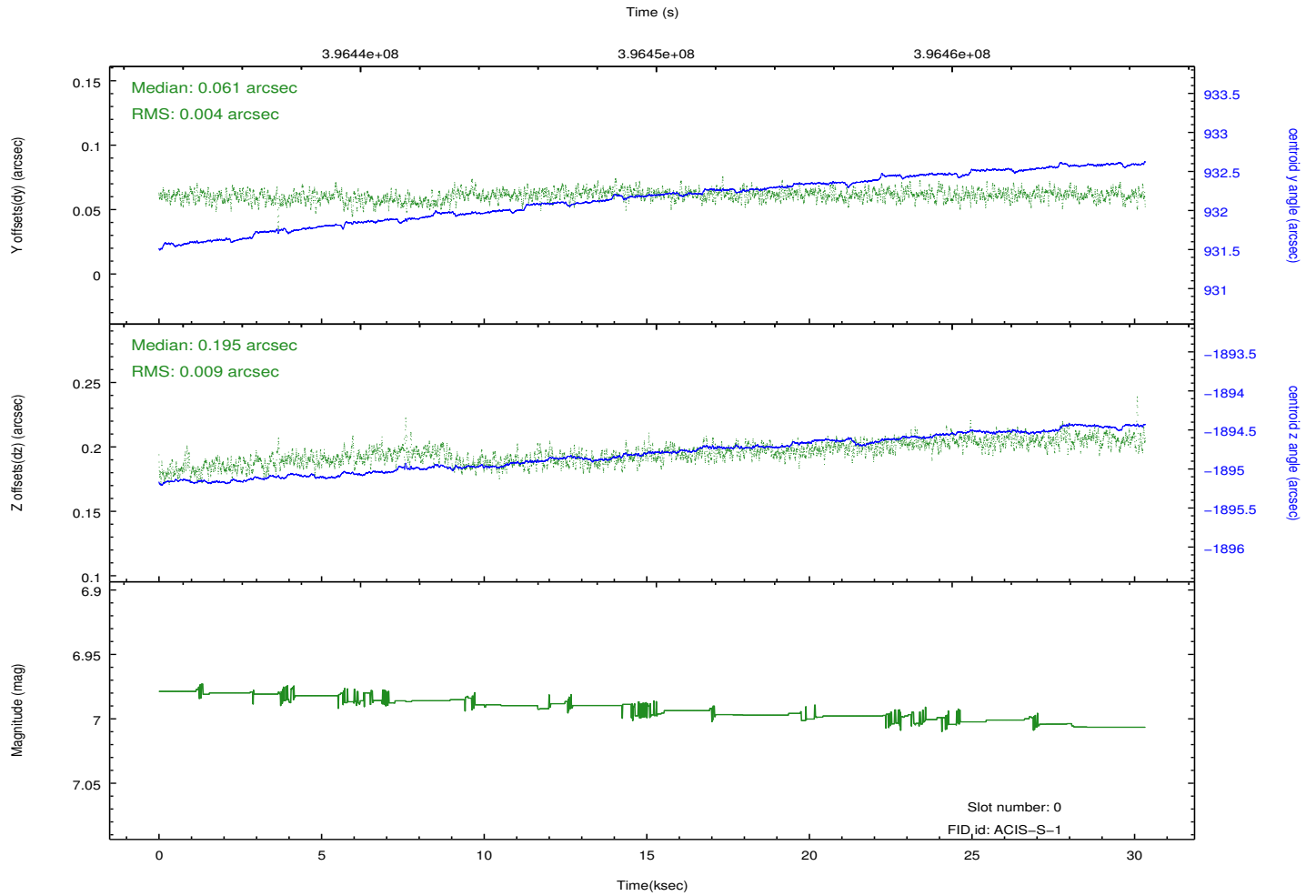
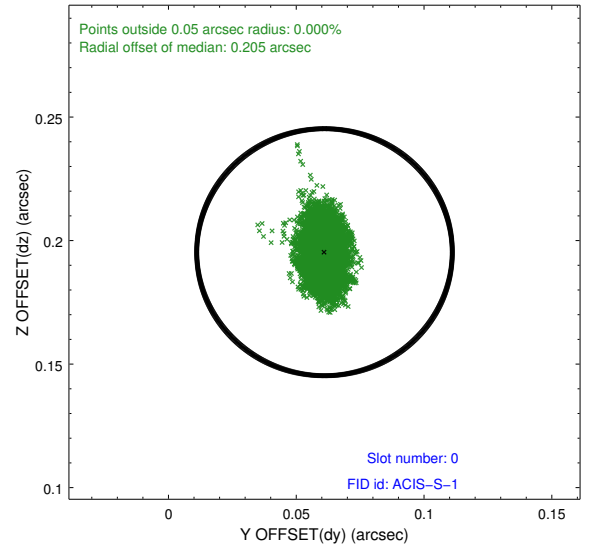
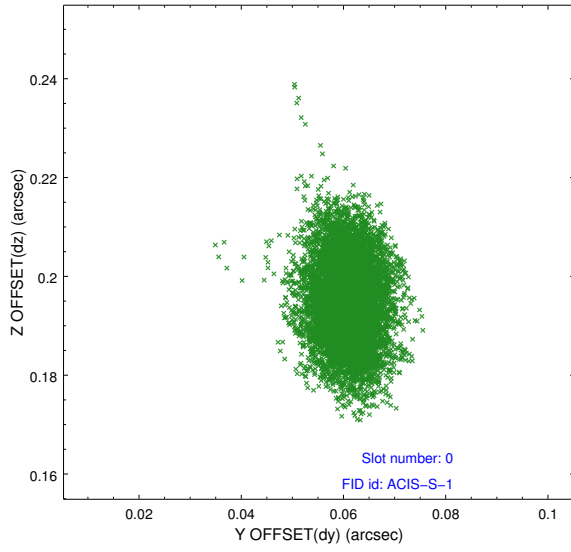


## 2.4.5 Slot 7

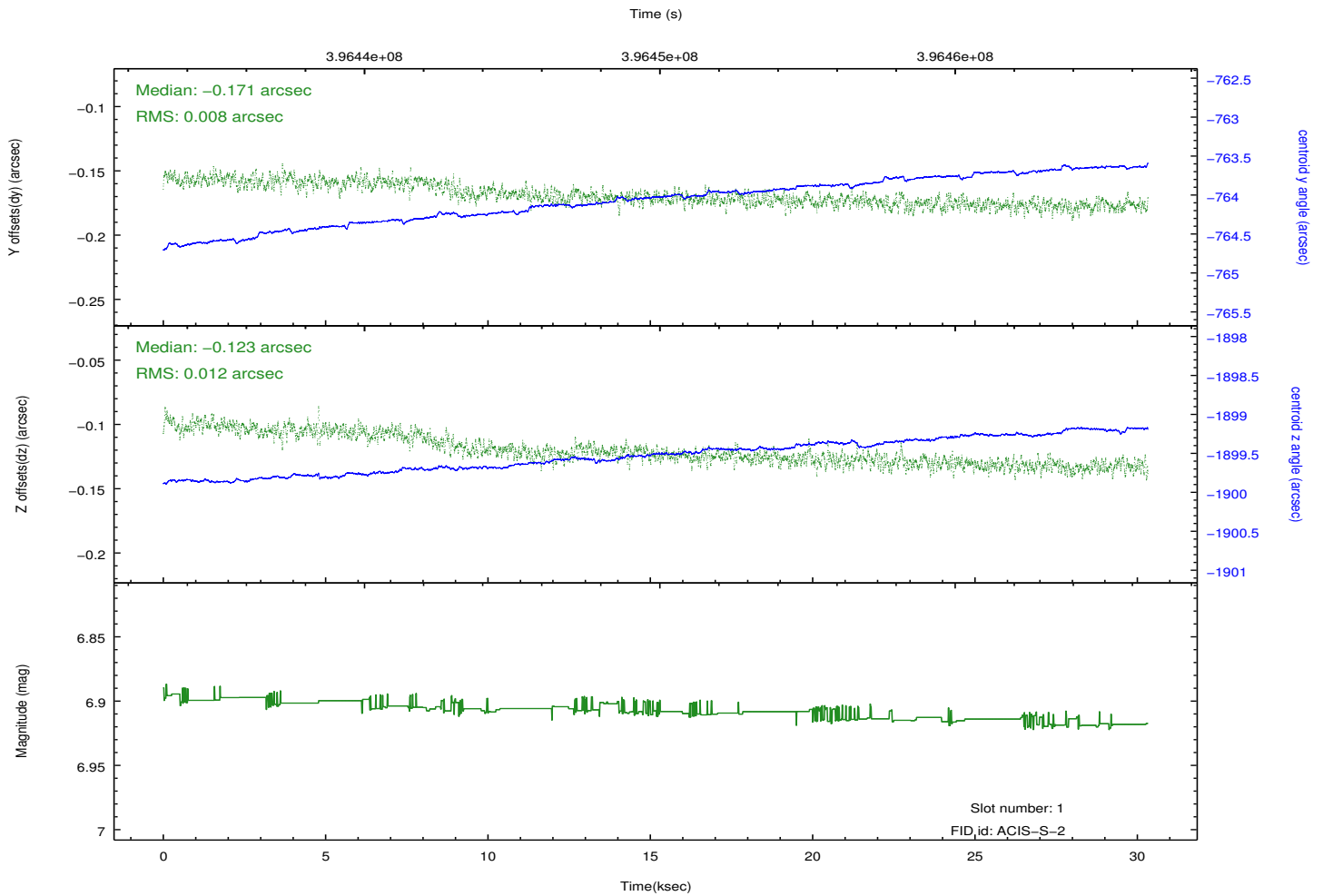
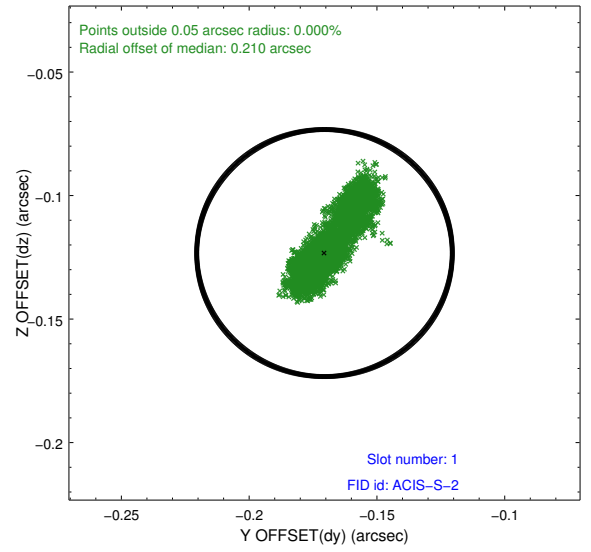
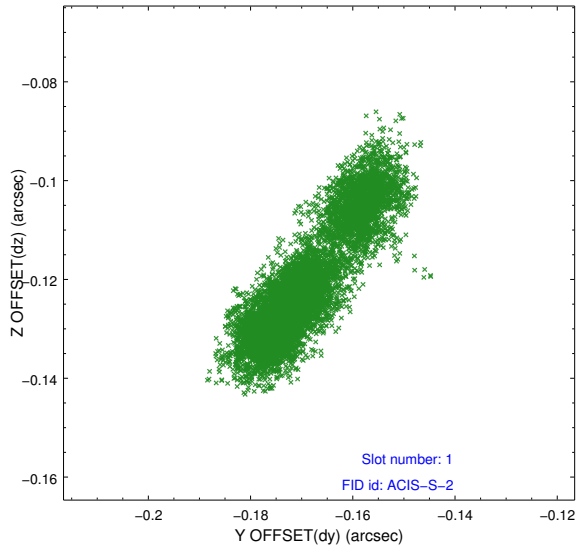


## 2.5 FID Slots

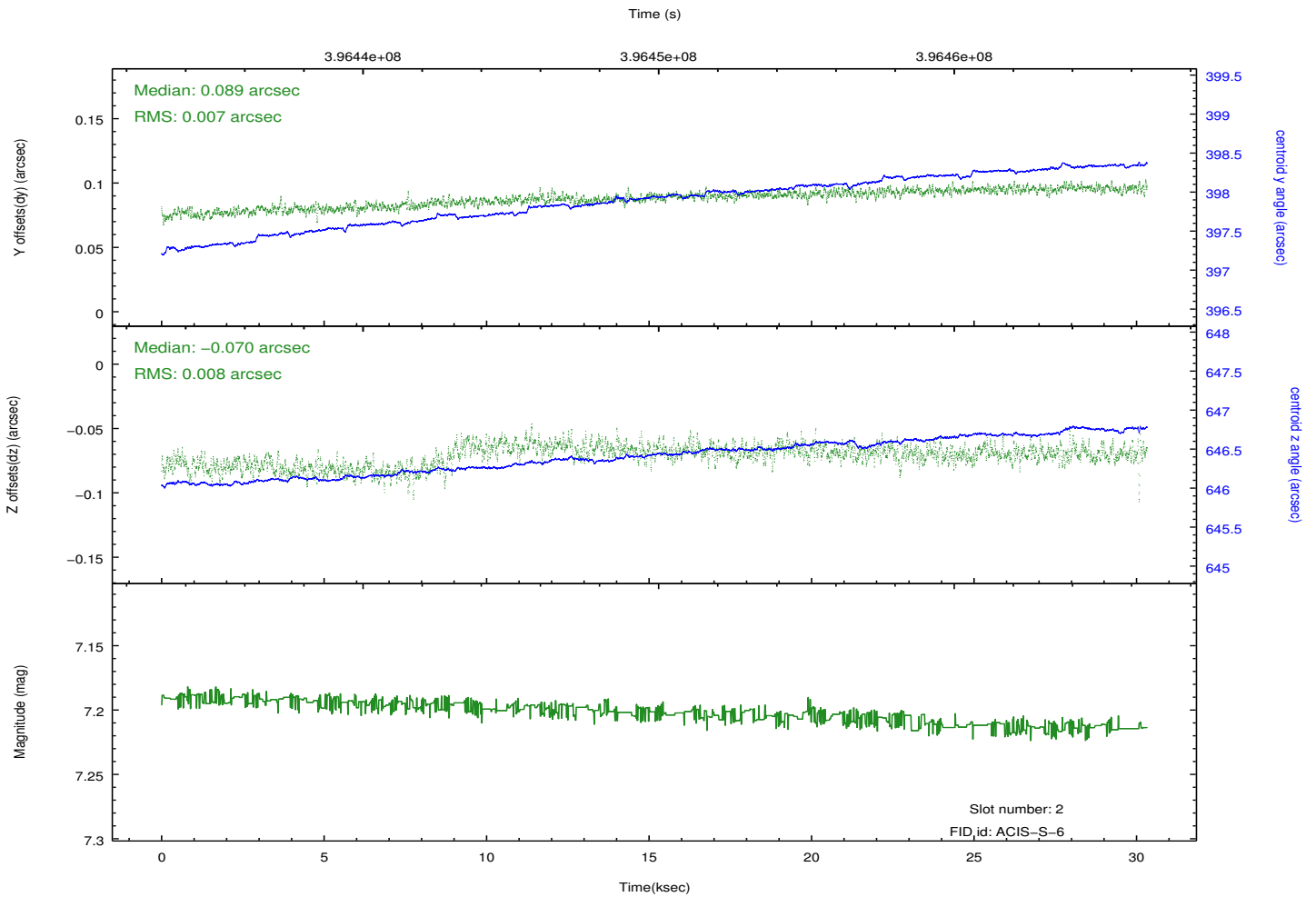
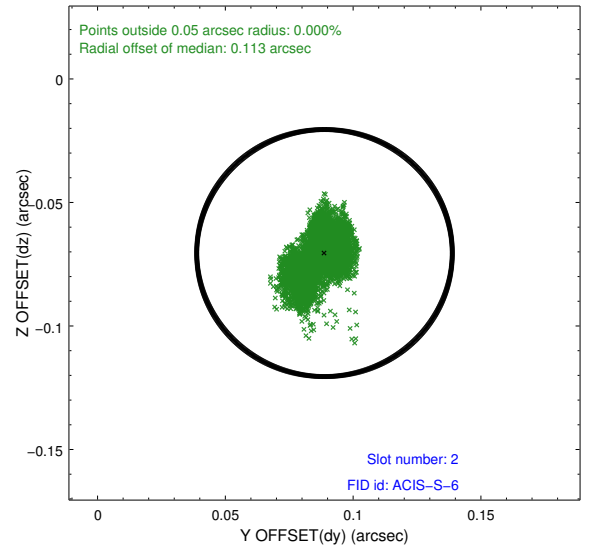
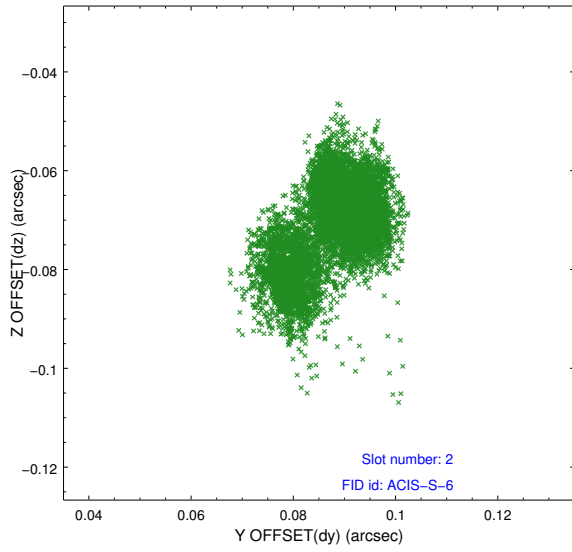
### 2.5.1 Slot 0



## 2.5.2 Slot 1

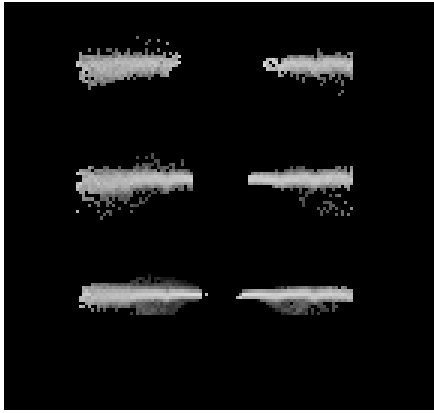


### 2.5.3 Slot 2

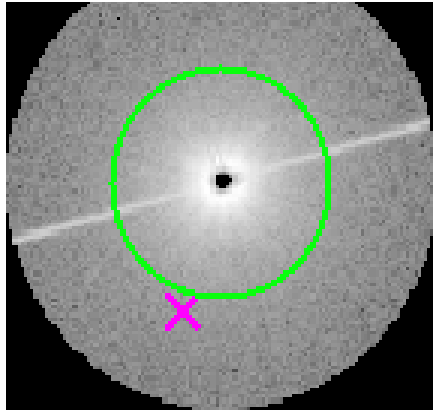


### 3 Gratings

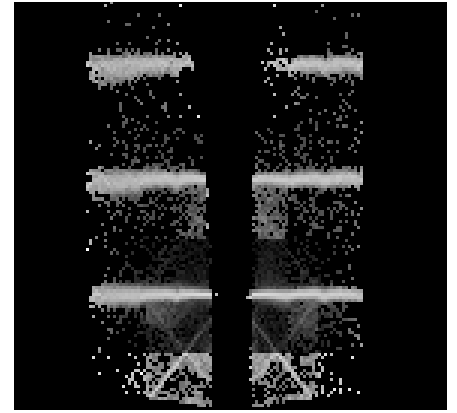
#### 3.1 HEG Arm



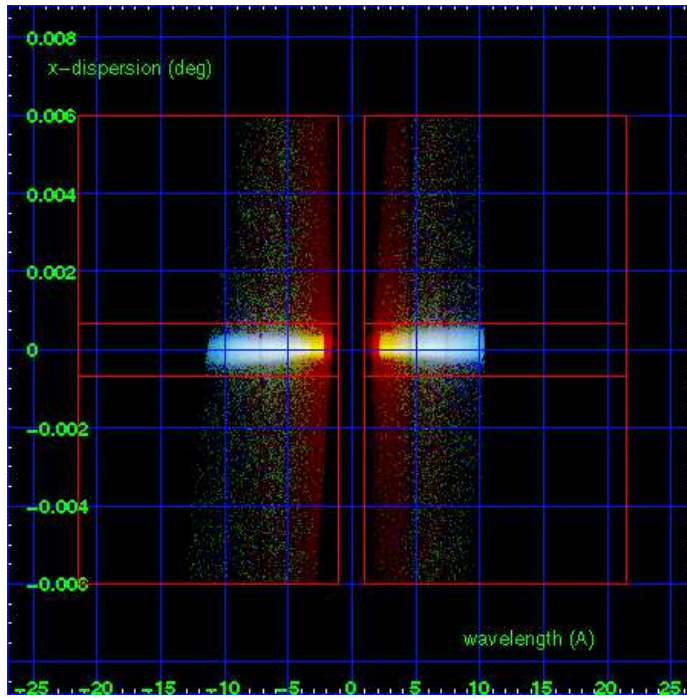
HEG Order Sort 123



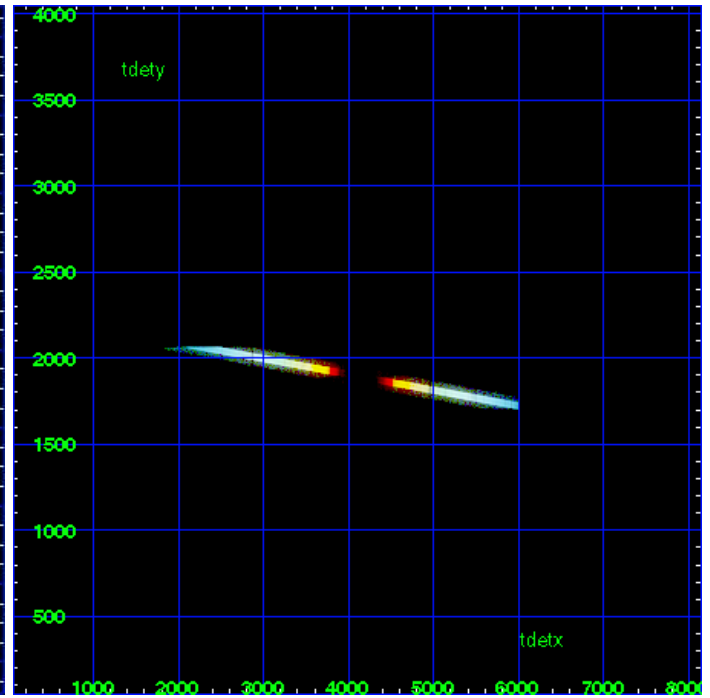
HEG Zero Order



HEG Order Sort ALL

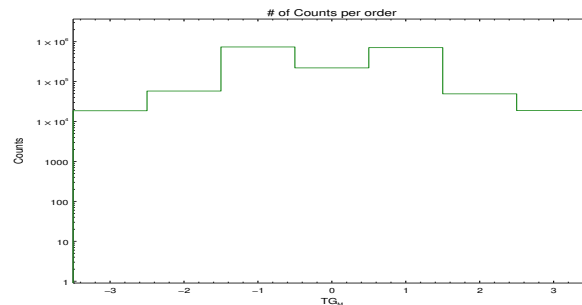


Spot Image HEG

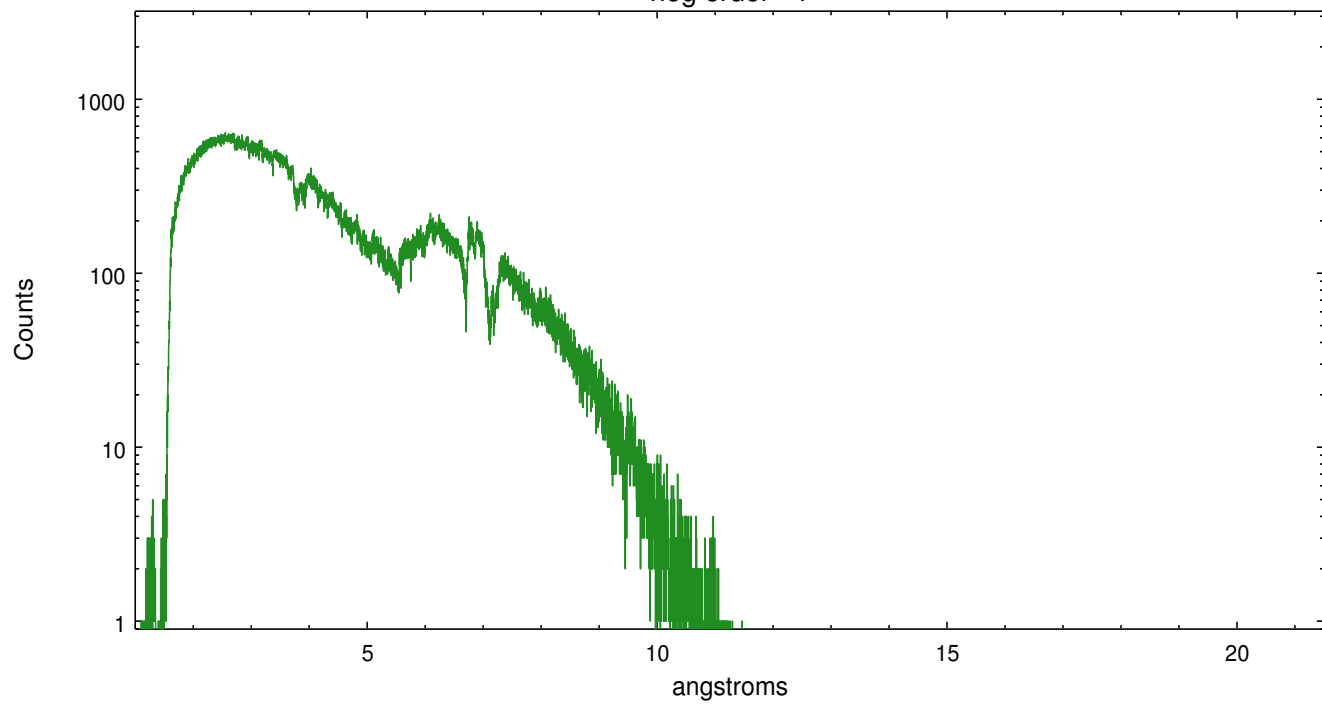


Full Detector HEG

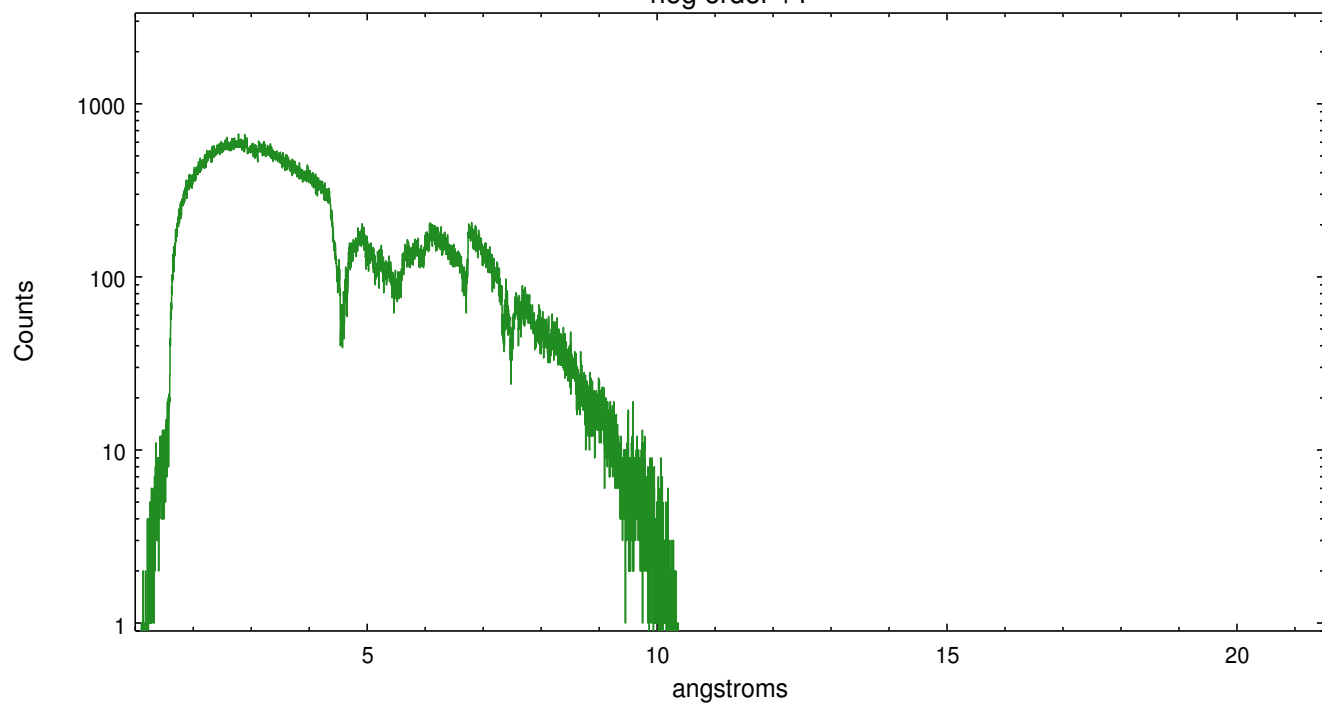
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	18614	58012	737440	220480	709209	49327	18786



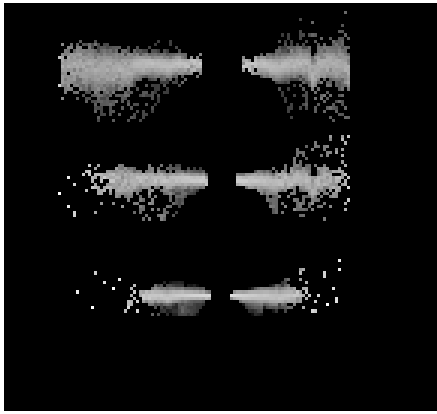
heg order -1



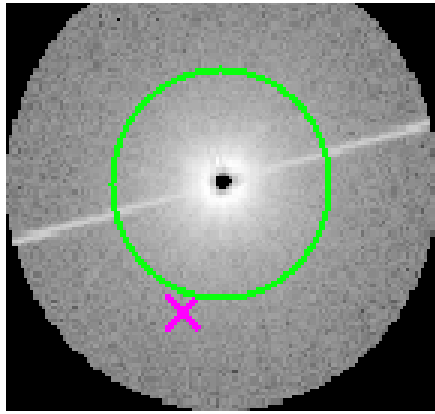
heg order +1



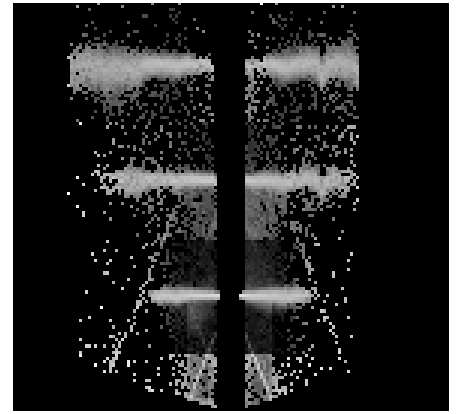
### 3.2 MEG Arm



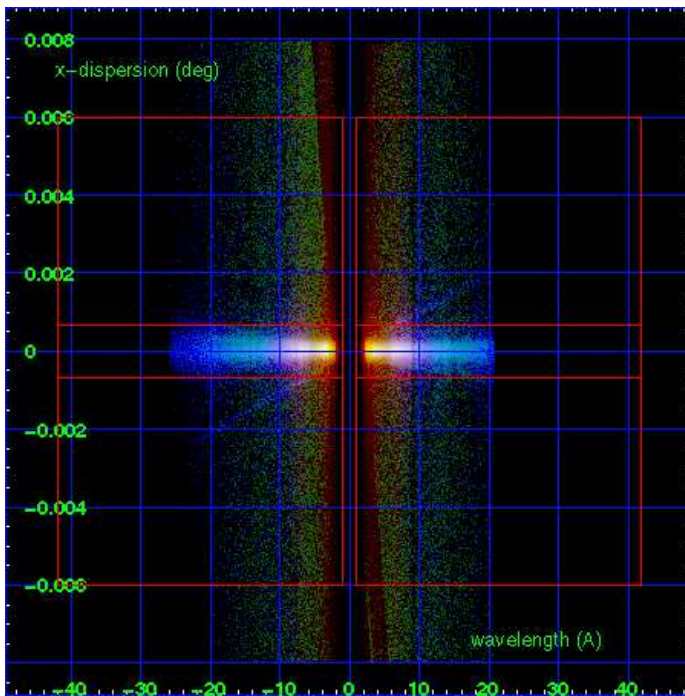
MEG Order Sort 123



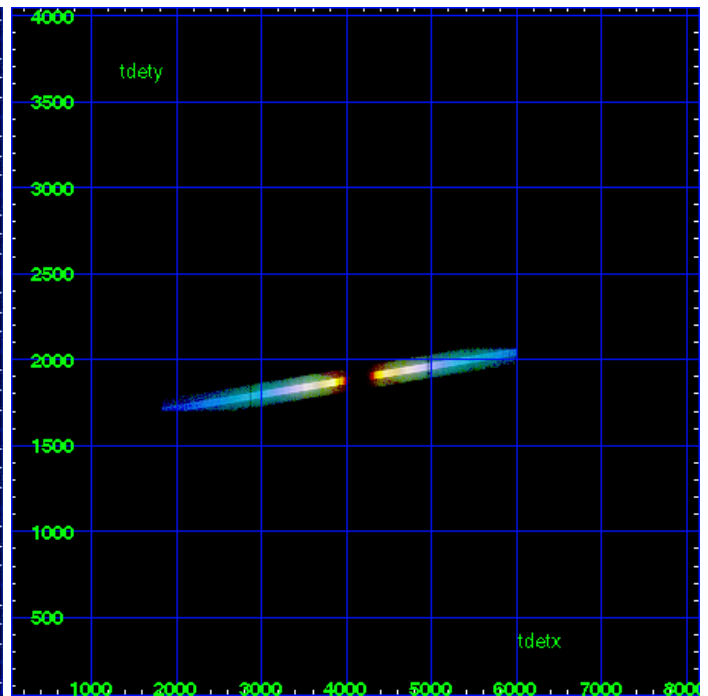
MEG Zero Order



MEG Order Sort ALL

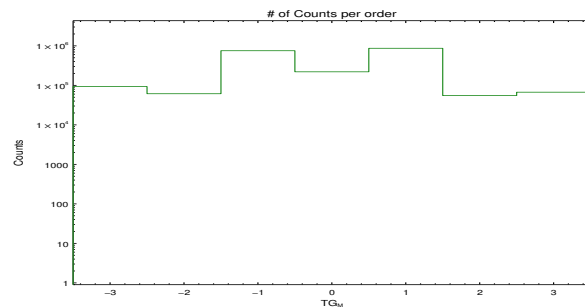


Spot Image MEG

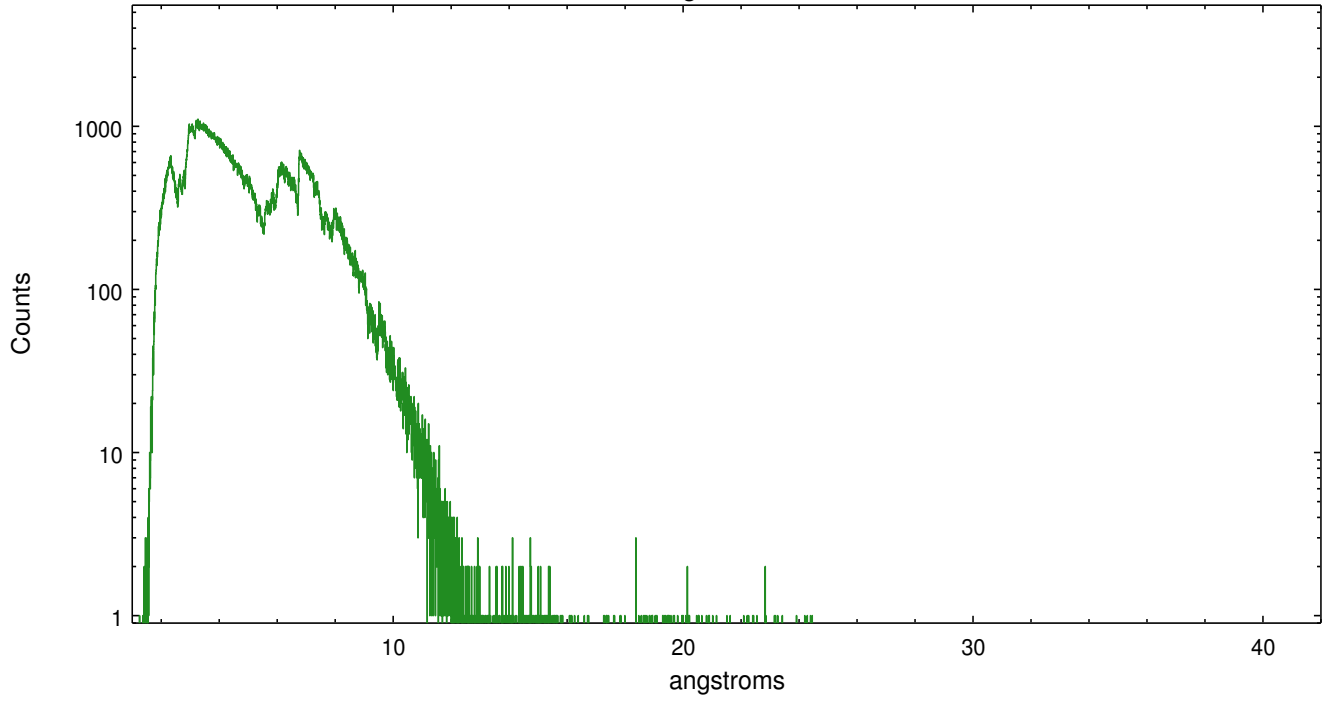


Full Detector MEG

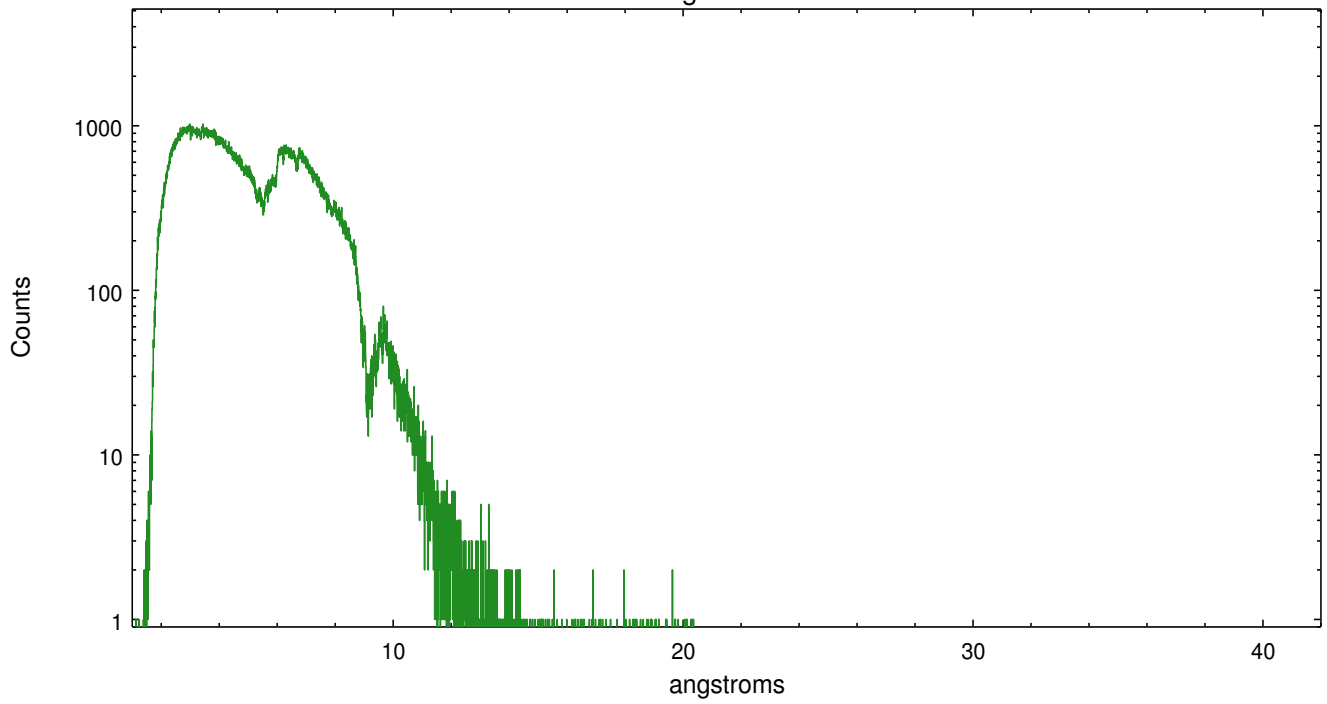
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	93178	61468	754110	220480	867568	55068	67104



meg order -1



meg order +1



# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.07.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.05999970144

## A.2 Comments

WARNING: grating spectra are visible in the 'level 1 bad-events' image, meaning that the grating spectra may have CCD pileup (and unreliable fluxes).

Note: zeroth order position manually determined.