

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 3806 - L2 Version 4  
Chandra X-Ray Center

L2 Processing Date : Nov 2 2012

## Contents

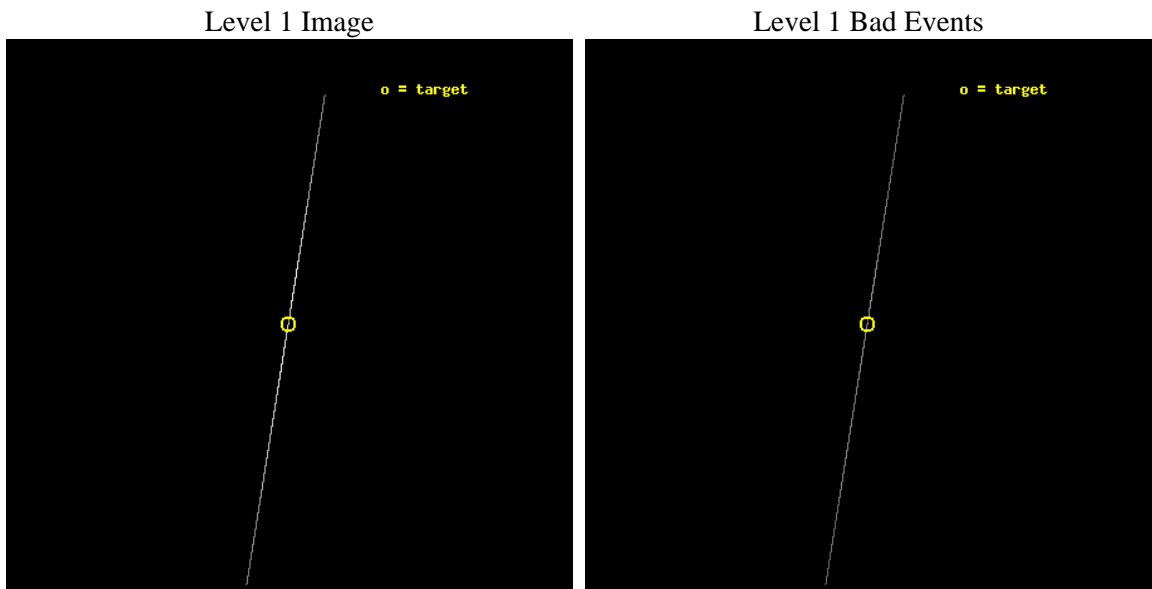
<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Parameters . . . . .	4
2.1.3	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>3</b>	<b>Gratings</b>	<b>17</b>
3.1	HEG Arm . . . . .	17
3.2	MEG Arm . . . . .	19
<b>A</b>	<b>Summary</b>	<b>21</b>
A.1	Status . . . . .	21
A.2	Comments . . . . .	21



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	49418.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	50198.0	Sum of GTIs [s]
caldbver	4.5.2	&#160	ontime4	50198.0	Sum of GTIs [s]
date	2012-11-01T13:34:32	Date and time of file creation	ontime5	50198.0	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	50198.0	Sum of GTIs [s]
			ontime7	50198.0	Sum of GTIs [s]
			ontime8	50198.0	Sum of GTIs [s]
			ontime9	50198.0	Sum of GTIs [s]
			l1events	10783074	Number of level 1 events

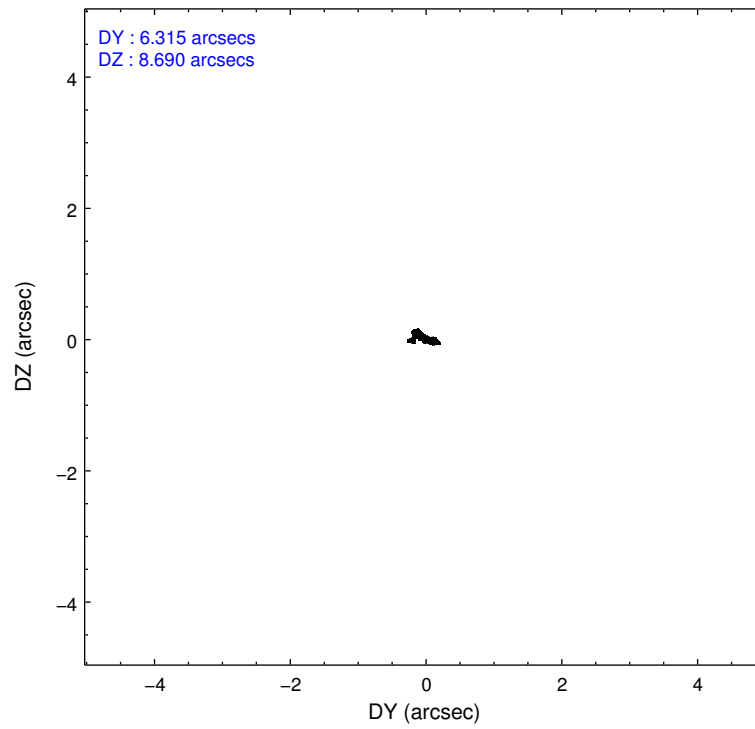
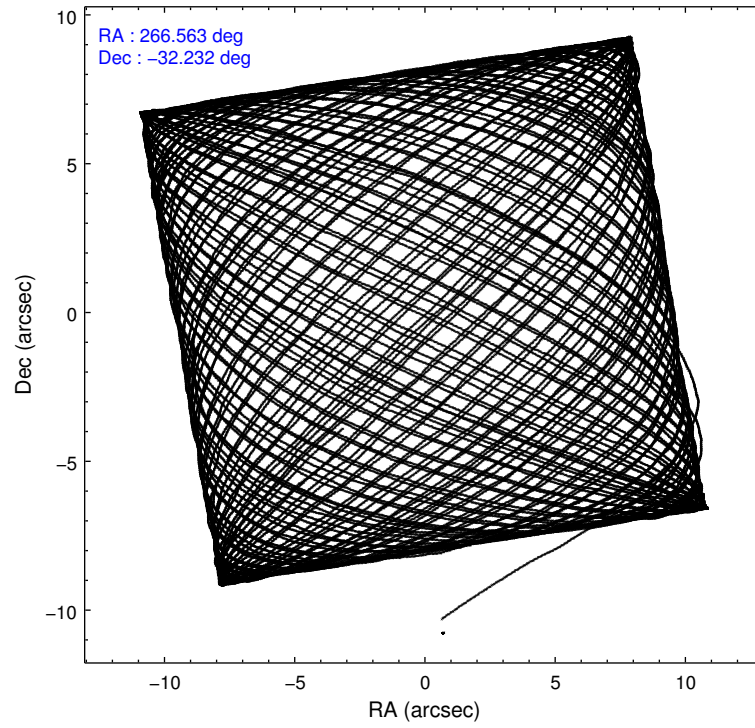
### 2.1.3 Events

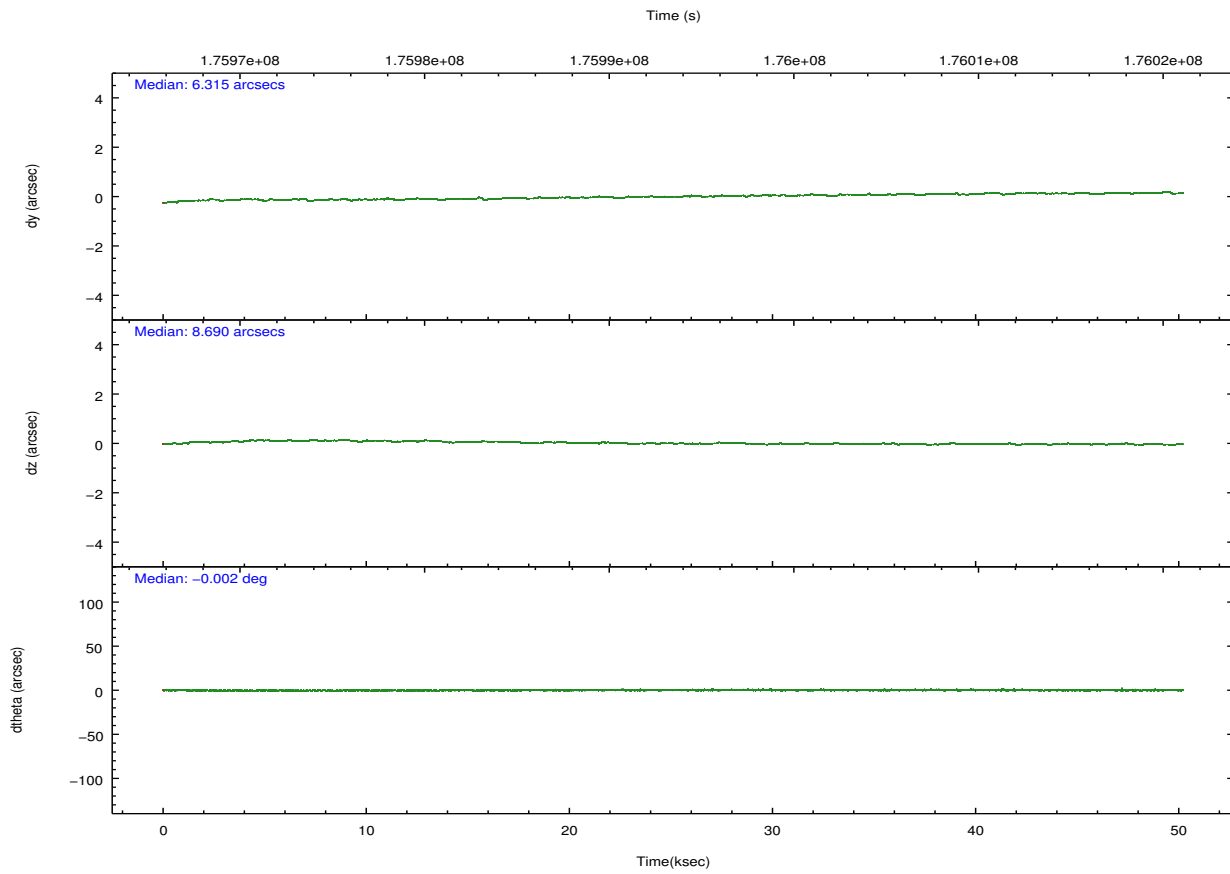
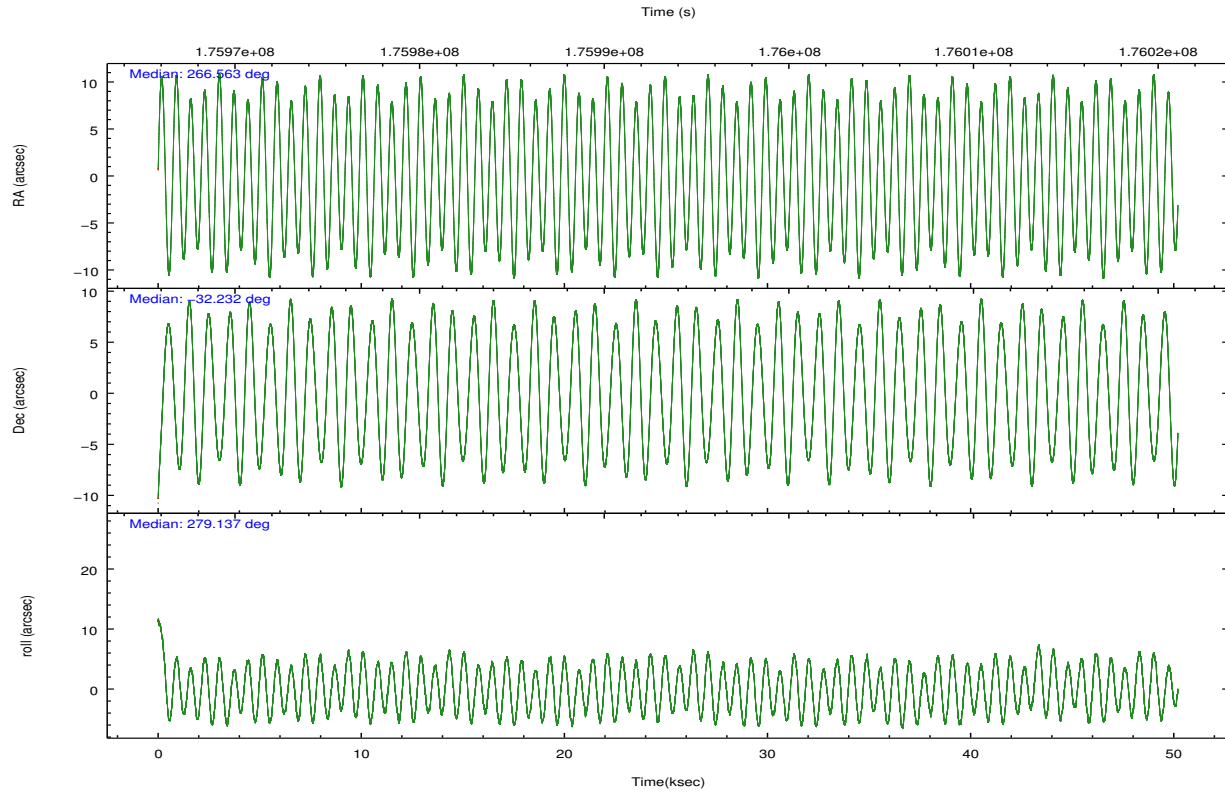
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	166627	818234	3801123	4585294	1197836	213960	grade 0 events	13358	107415	1228709	721516	638399	25281
rejected events	12066	35404	39904	90700	24377	14208		8%	13%	32%	15%	53%	11%
rejected %	7%	4%	1%	1%	2%	6%	grade 1 events	261	384	3488	4335	1962	256
								0%	0%	0%	0%	0%	0%
							grade 2 events	106591	327520	2134035	1311645	390856	134636
								63%	40%	56%	28%	32%	62%
							grade 3 events	7831	34083	65179	412395	38389	7414
								4%	4%	1%	8%	3%	3%
							grade 4 events	7891	33473	65342	407900	38570	8036
								4%	4%	1%	8%	3%	3%
							grade 5 events	11465	31339	30870	75702	20254	13506
								6%	3%	0%	1%	1%	6%
							grade 6 events	19230	284020	273500	1651801	69406	24831
								11%	34%	7%	36%	5%	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_GRADED	CC33_GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	266.542166	266.5628283051292	Subarray requested	NONE	NONE
[deg] Pointing Dec	-32.211410	-32.2323202870632	Alternating exposures requested	N	N
[deg] Pointing Roll	278.977153	279.1448007776496	[s] Primary exposure time	0.000000	0
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-182.632523	-182.6373491900168			
[mm] SIM translation stage offset	-7.5	-7.495173392990978			
[s] Observation start time (MET)	175969139.184000	175967878.89857			
Observation start date	2003-07-30T16:17:55	2003-07-30T15:57:58			
[s] Observation end time (MET)	176018557.184000	176019232.42576			
Observation end date	2003-07-31T06:01:33	2003-07-31T06:13:52			
Read mode	CONTINUOUS	CONTINUOUS			

## 2.3 Aspect



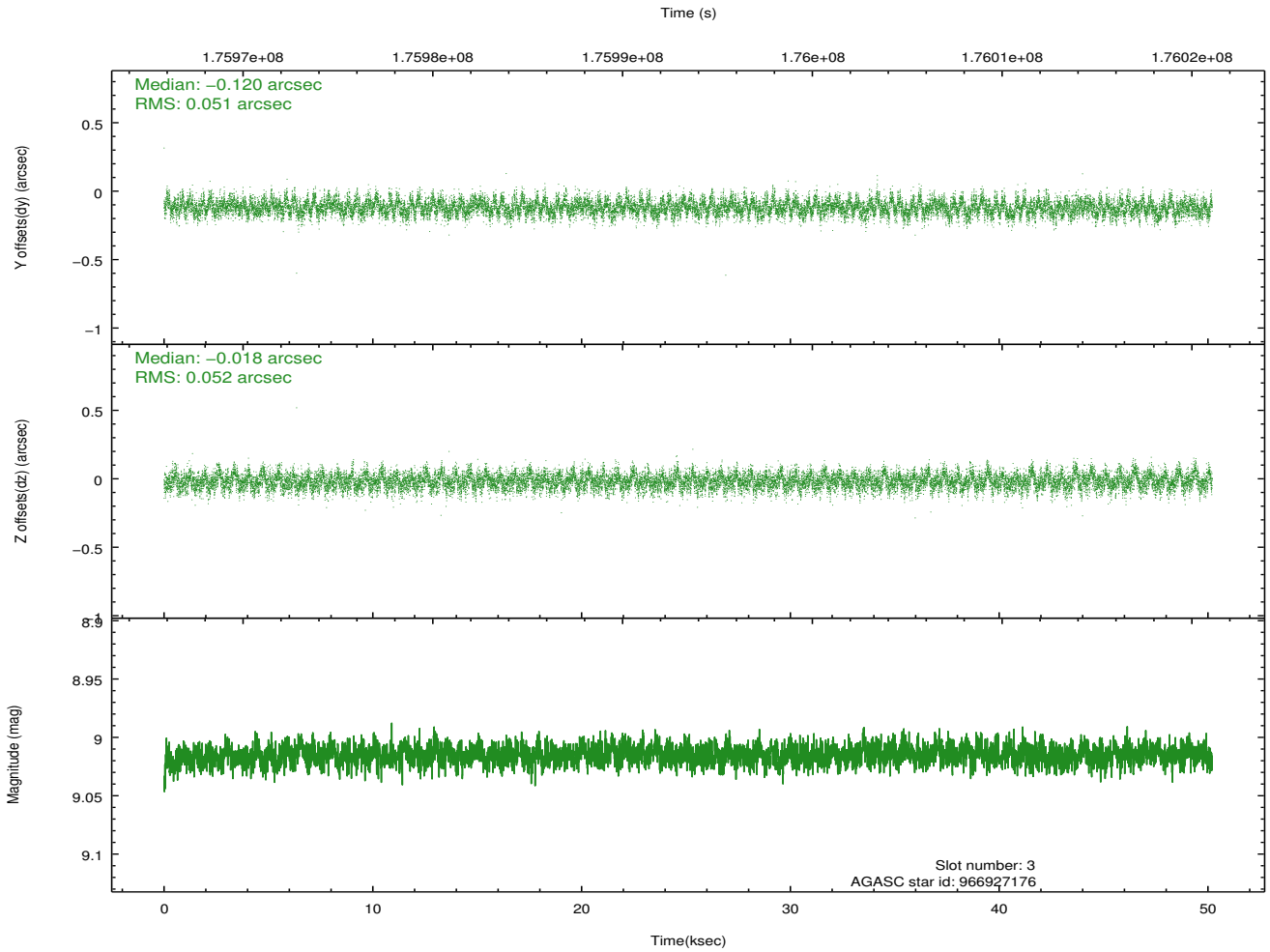
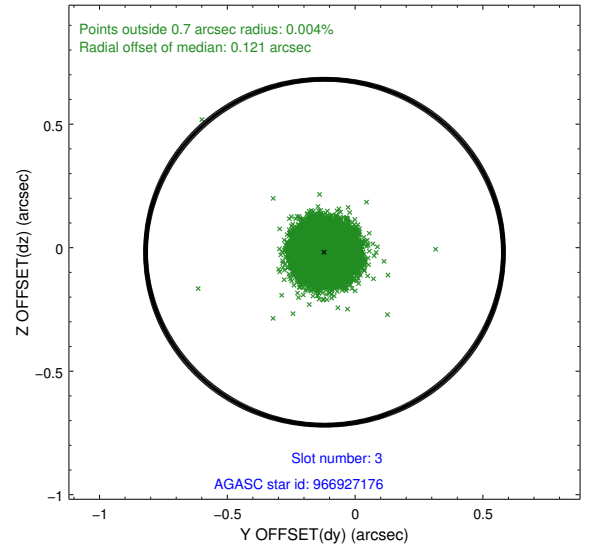
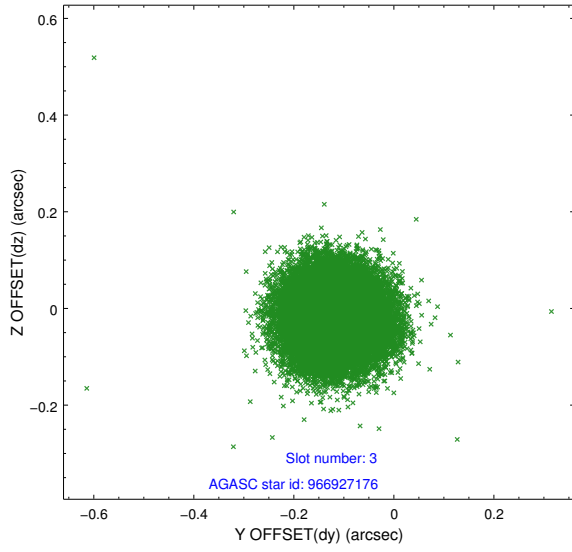


### Slot Statistics

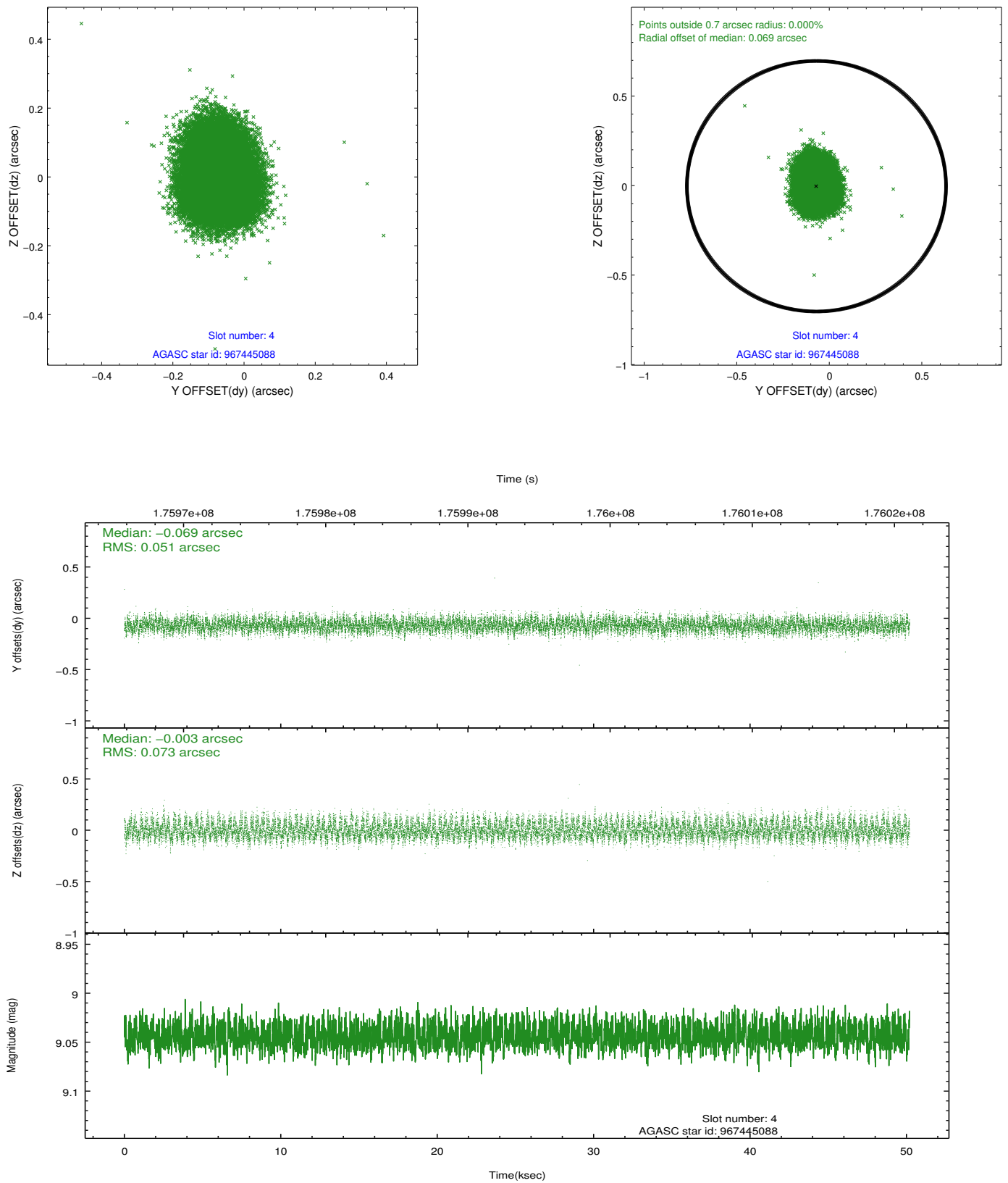
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	12243	-0.076	-0.126	0.007	0.012	0.000000	0.000000	-758.64	-1884.44
1	FID	ACIS-S-4	7.18	12244	0.099	0.070	0.006	0.012	0.000000	0.000000	2154.88	24.14
2	FID	ACIS-S-5	7.22	12244	-0.054	0.064	0.007	0.013	0.000000	0.000000	-1811.43	17.90
3	GUIDE	966927176	9.02	24478	-0.120	-0.018	0.079	0.125	265.946853	-31.673679	-2191.50	-1500.48
4	GUIDE	967445088	9.04	24484	-0.069	-0.003	0.096	0.150	265.761342	-32.072953	-855.12	-2276.25
5	GUIDE	967445480	9.52	24474	0.089	-0.021	0.133	0.214	265.952488	-32.551519	935.61	-1959.08
6	GUIDE	967446352	7.75	24485	0.135	0.099	0.064	0.101	267.069988	-32.671157	1888.67	1321.44
7	GUIDE	967451816	9.29	24467	-0.036	-0.065	0.103	0.158	267.266669	-31.901374	-749.52	2360.23

## 2.4 Star Slots

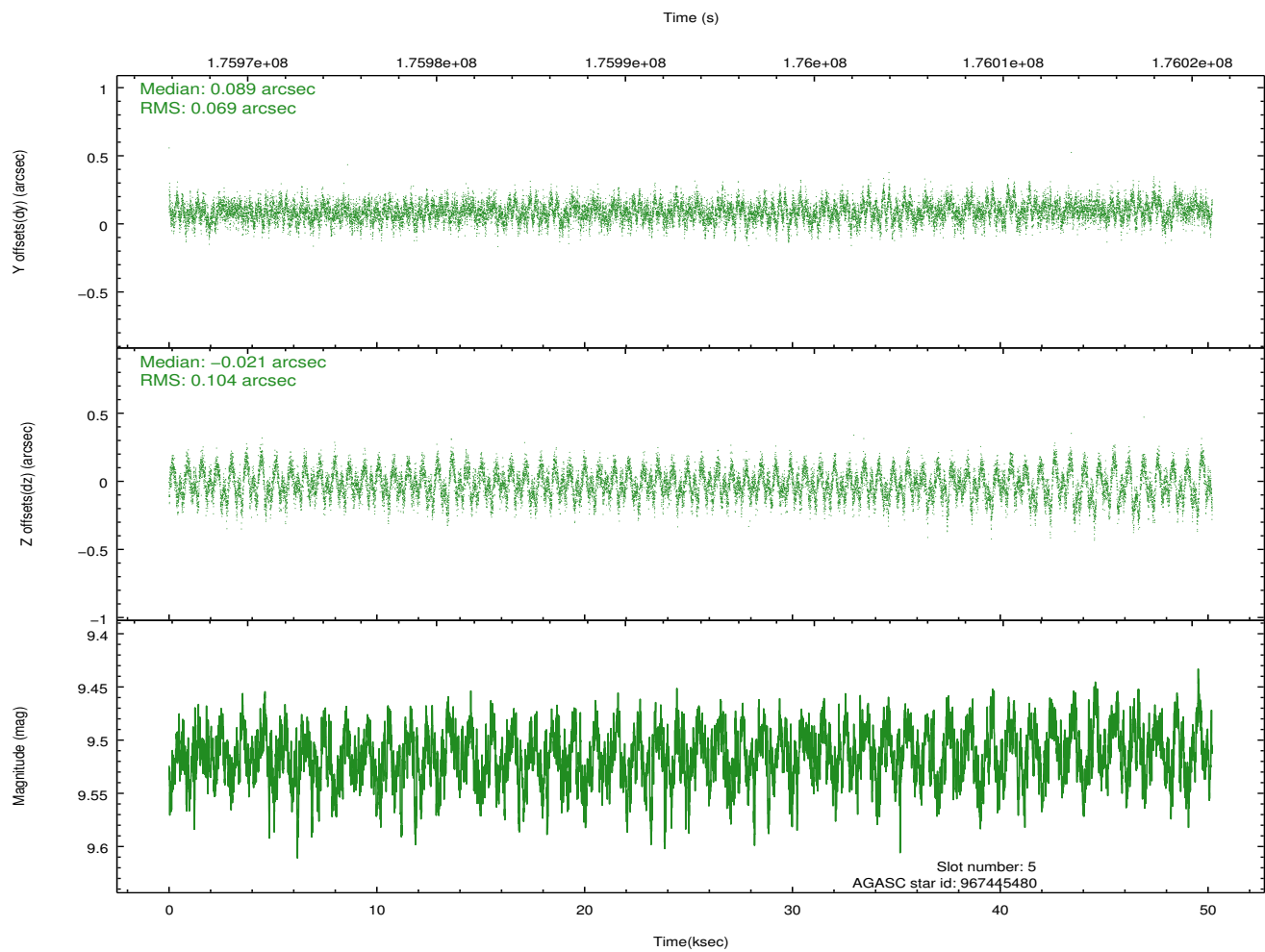
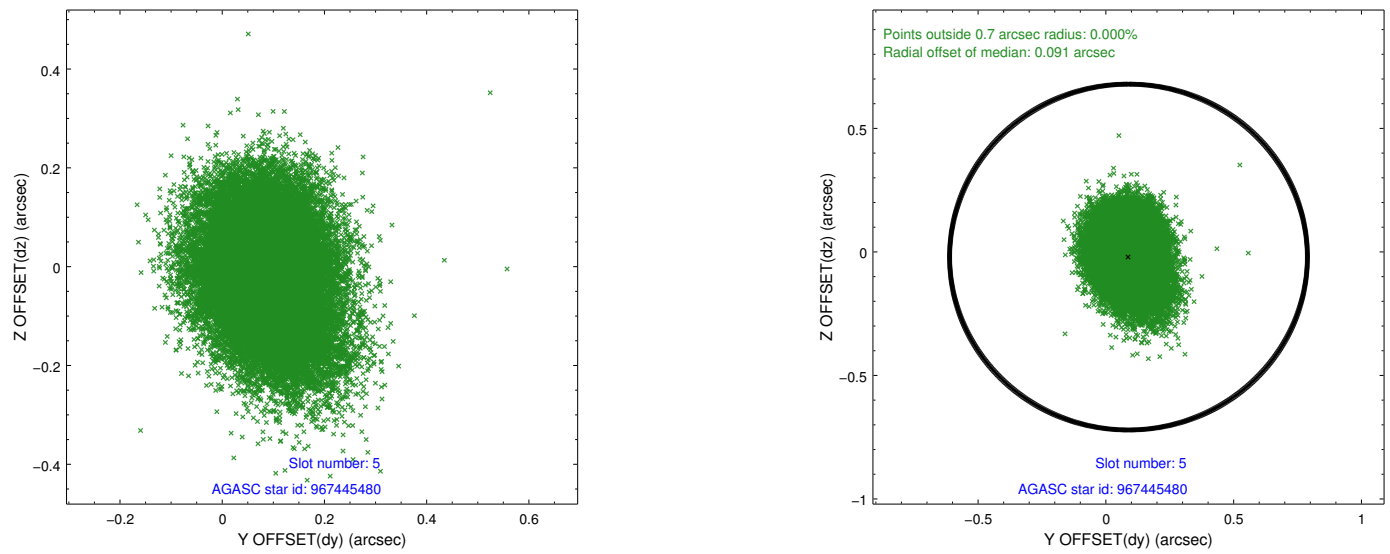
### 2.4.1 Slot 3



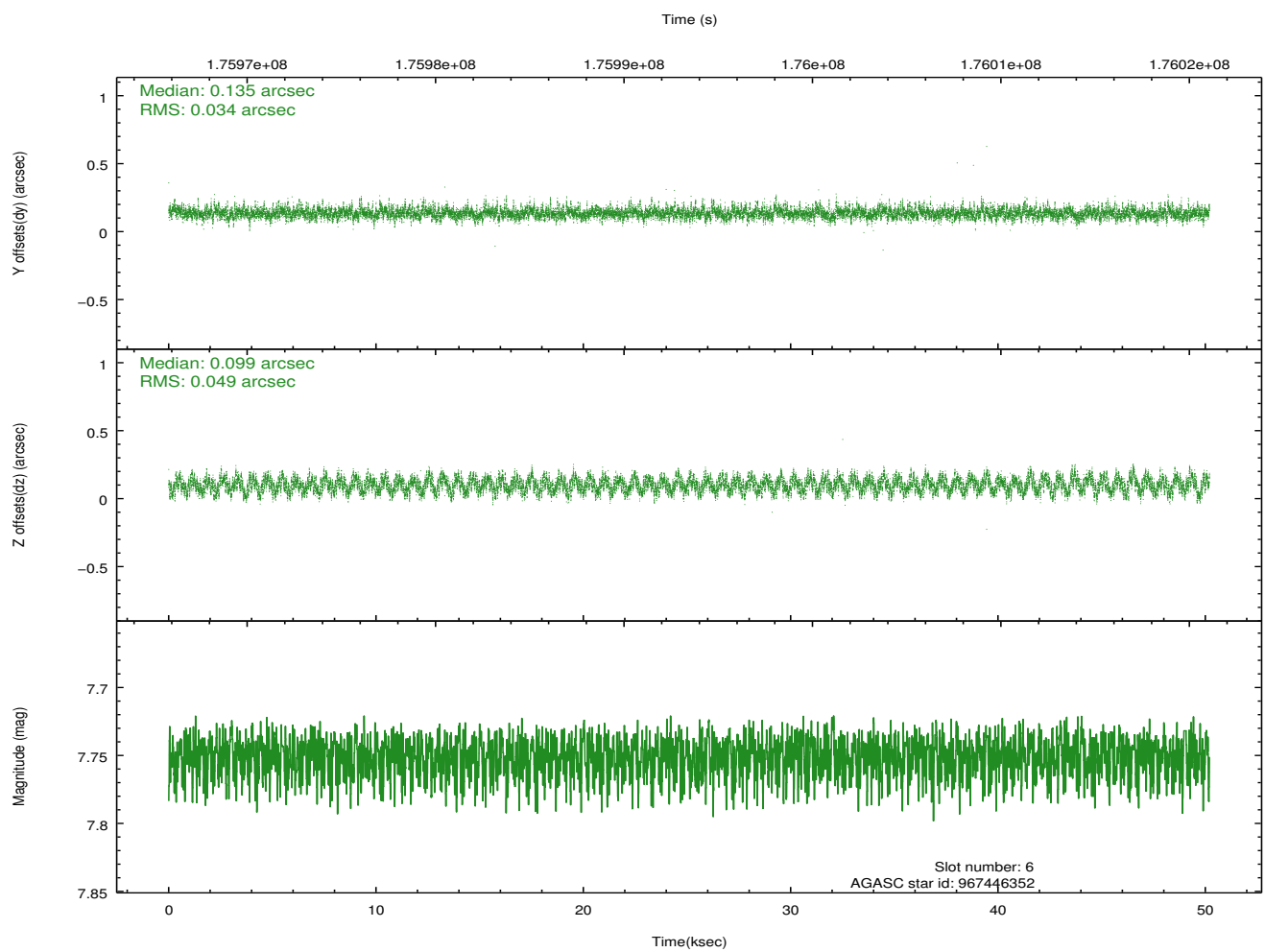
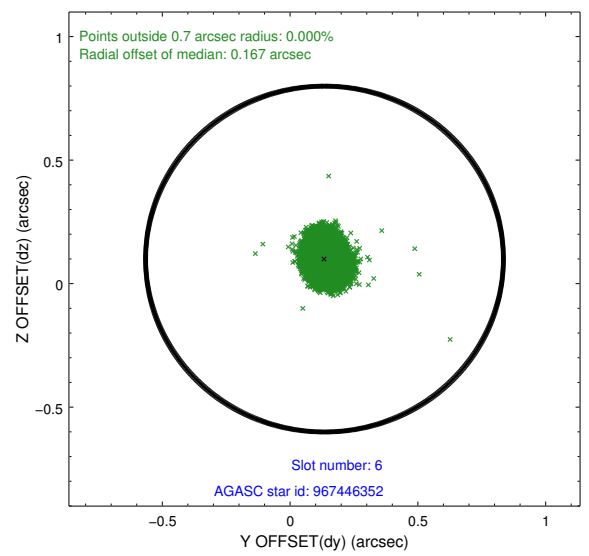
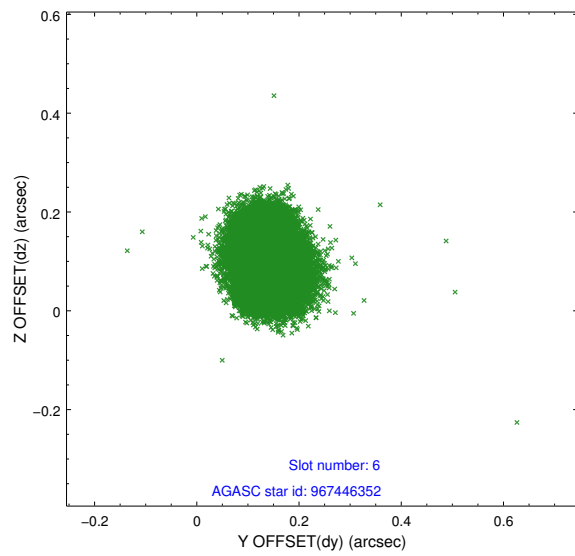
## 2.4.2 Slot 4



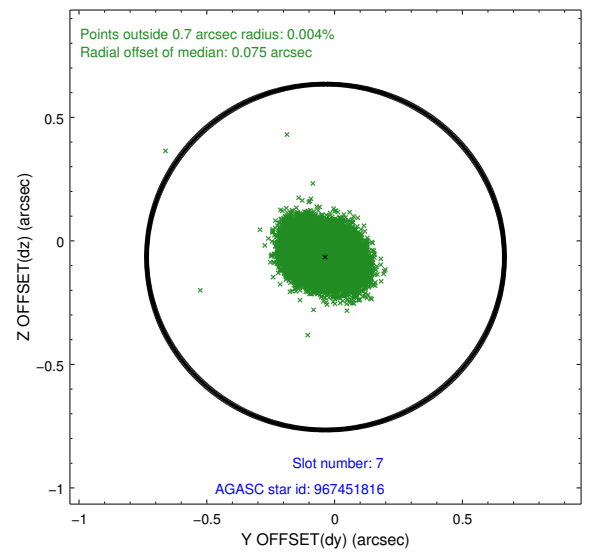
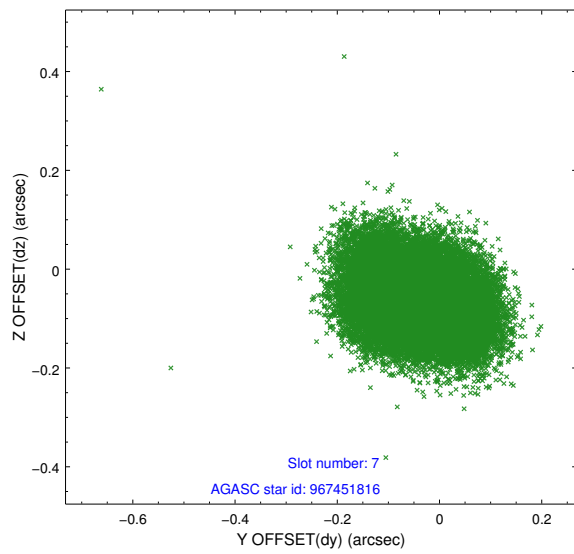
### 2.4.3 Slot 5



## 2.4.4 Slot 6



## 2.4.5 Slot 7

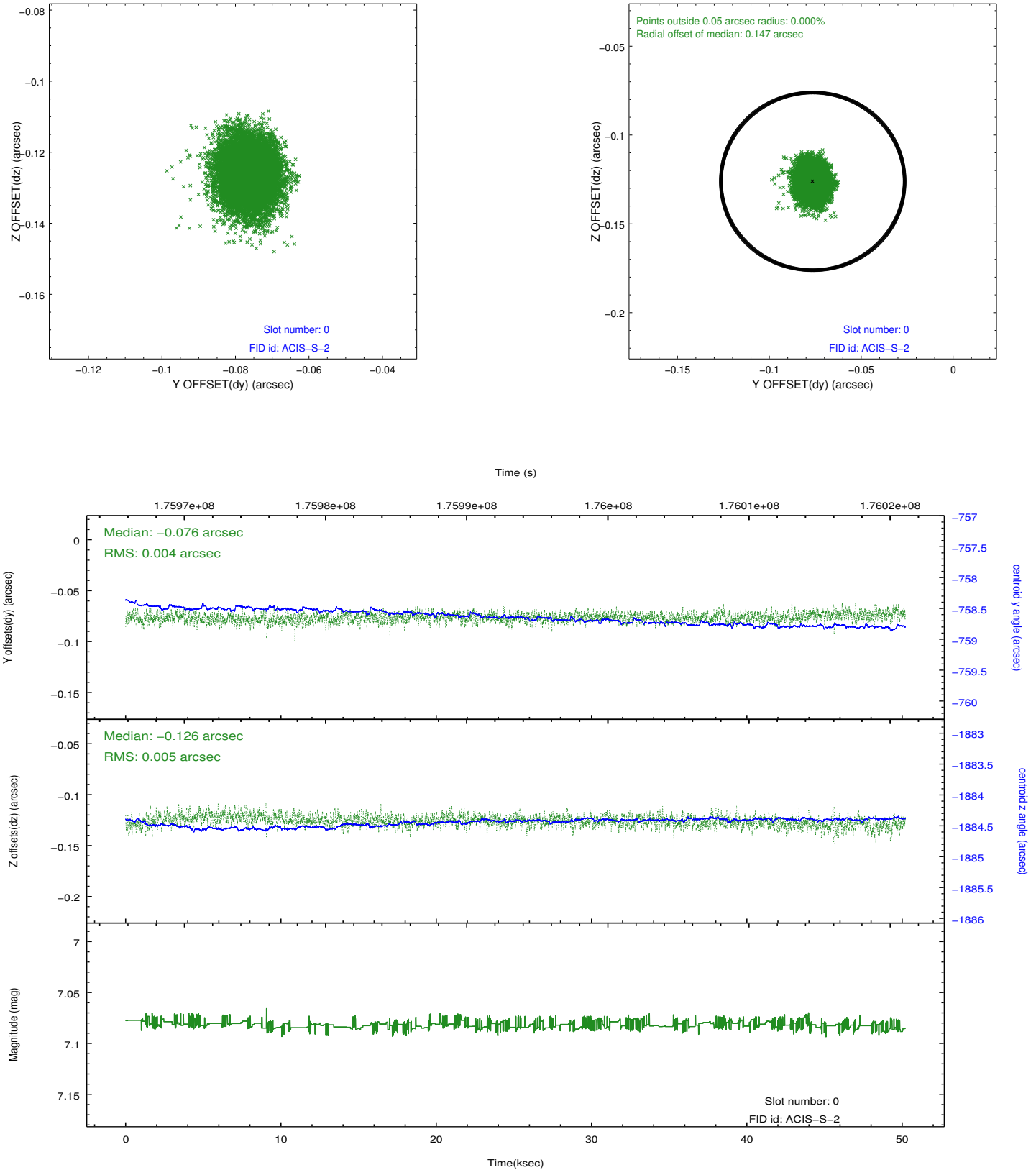


Time (s)

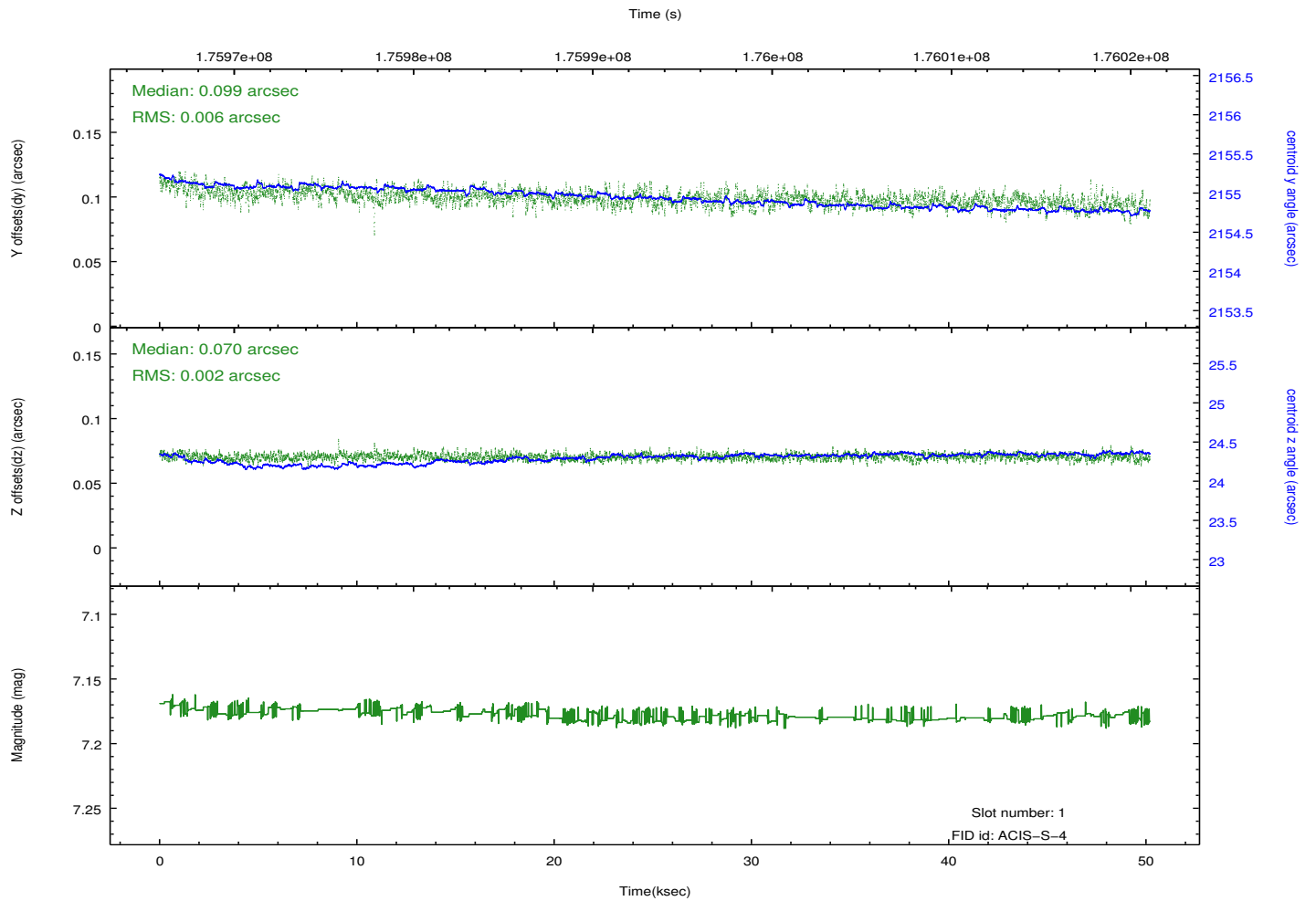
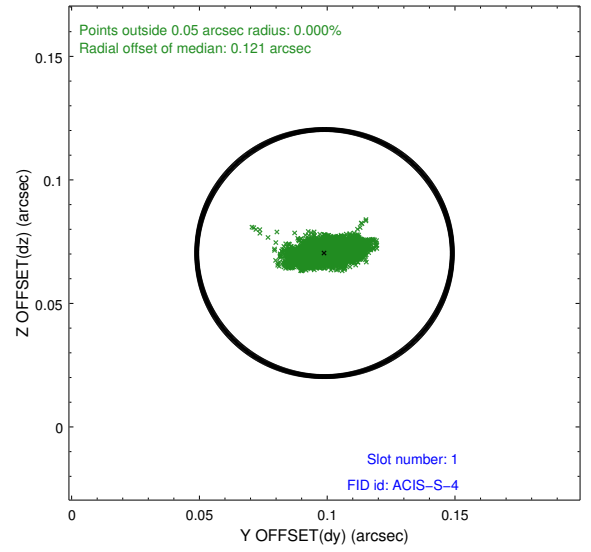
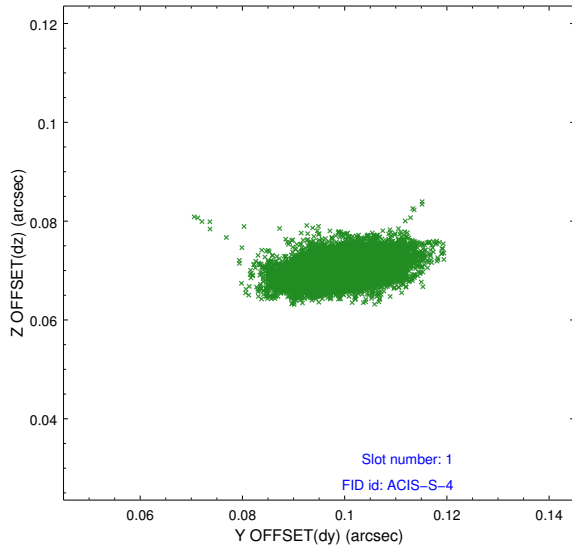


## 2.5 FID Slots

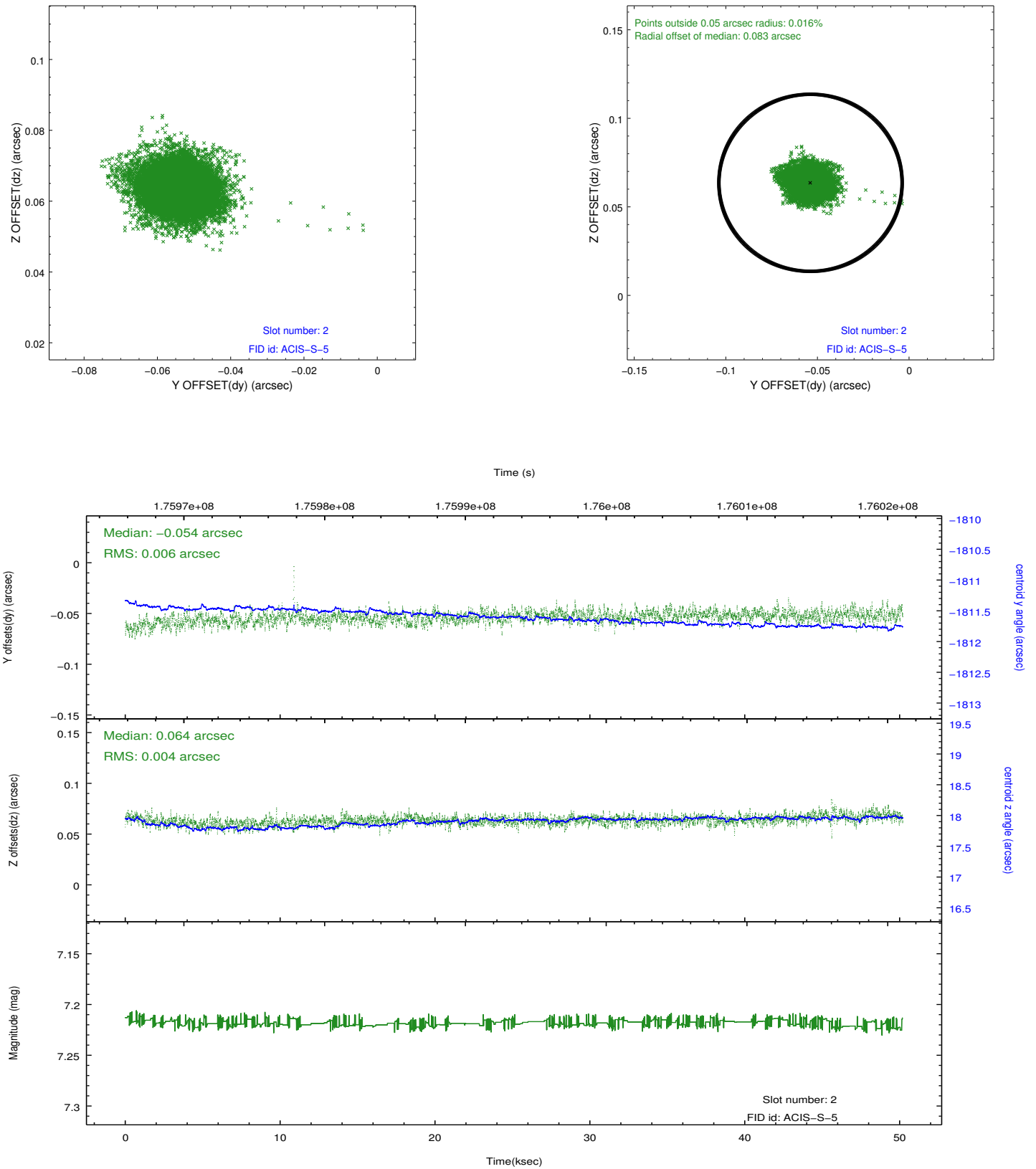
### 2.5.1 Slot 0



## 2.5.2 Slot 1

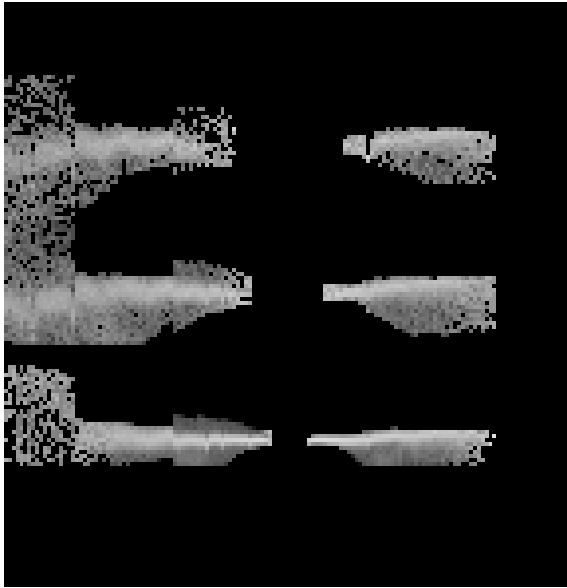


### 2.5.3 Slot 2



# 3 Gratings

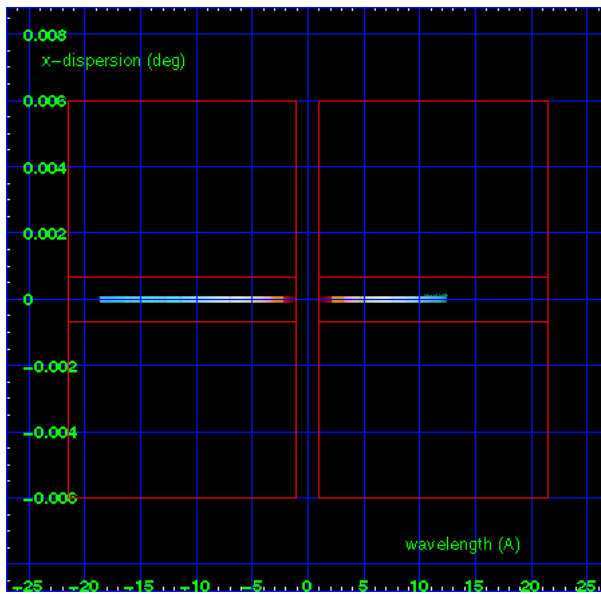
## 3.1 HEG Arm



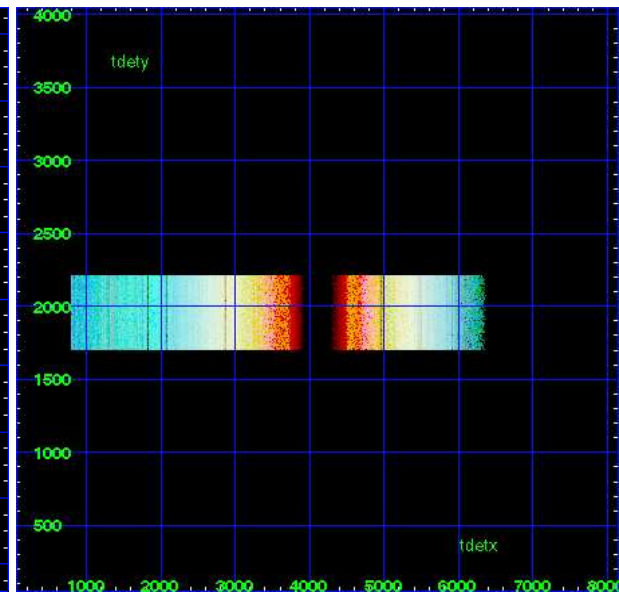
HEG Order Sort 123



HEG Order Sort ALL

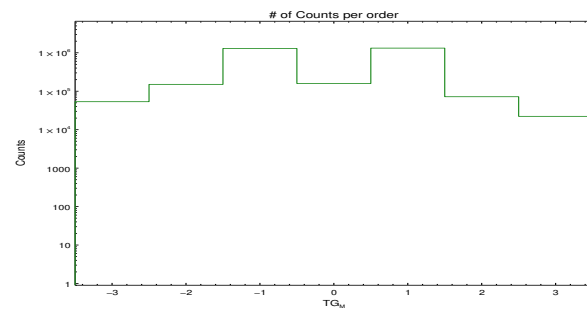


Spot Image HEG

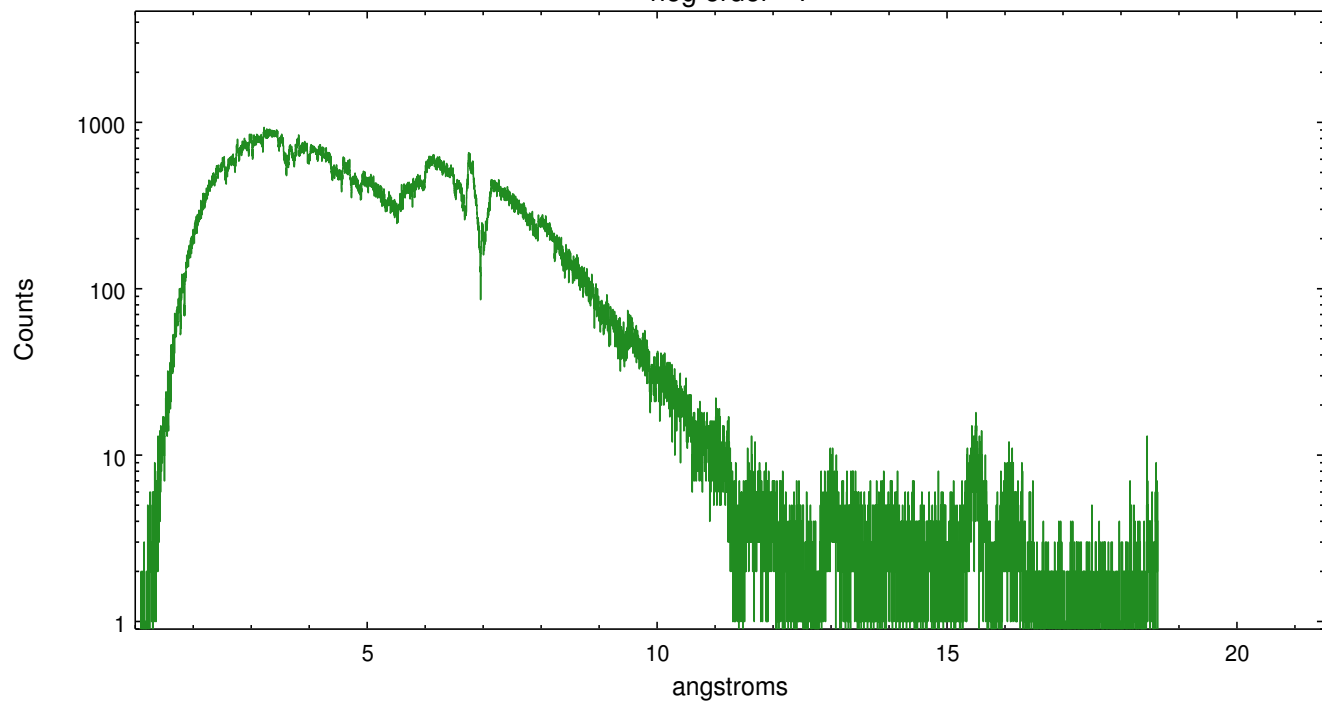


Full Detector HEG

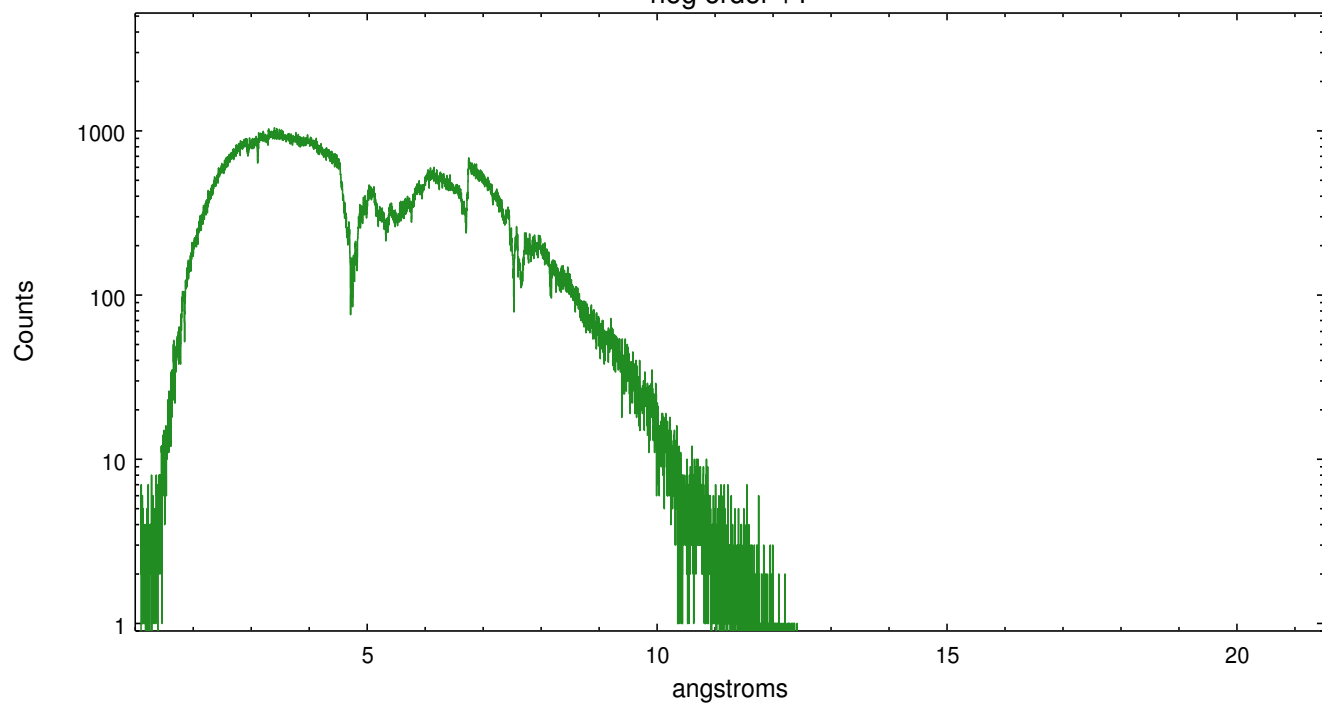
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	53479	150644	1293947	158814	1321315	71995	22196



heg order -1



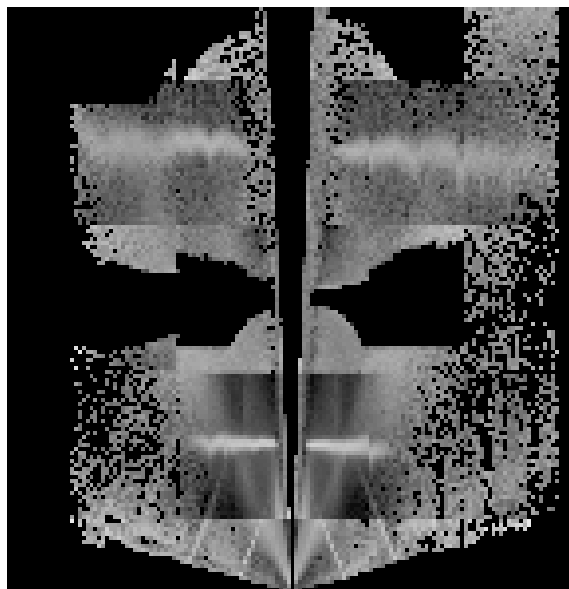
heg order +1



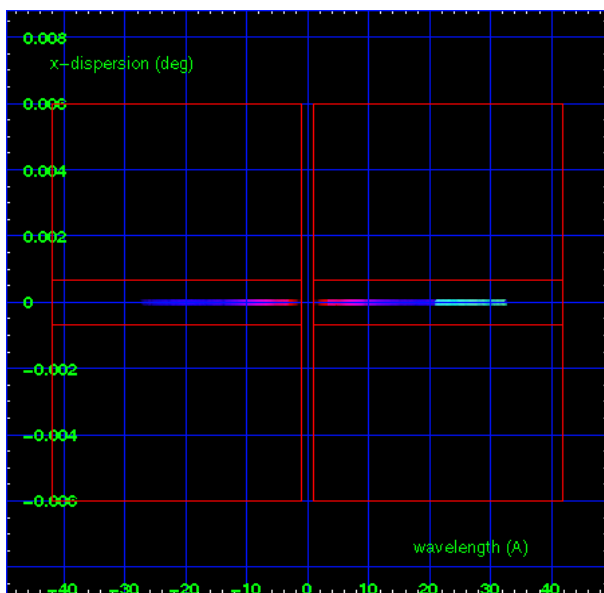
## 3.2 MEG Arm



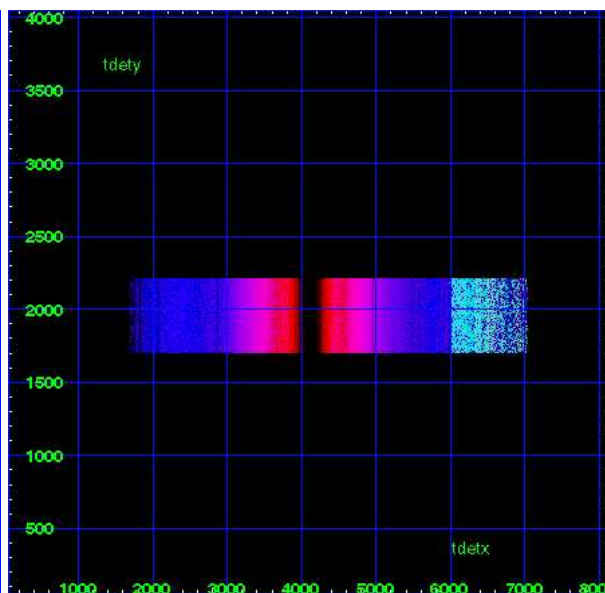
MEG Order Sort 123



MEG Order Sort ALL

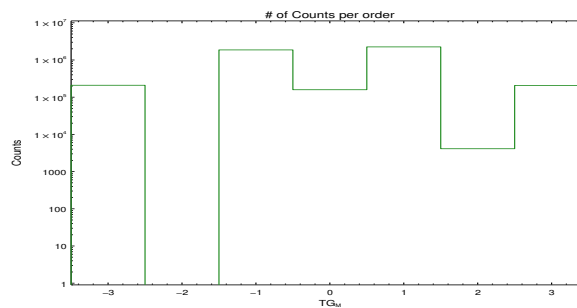


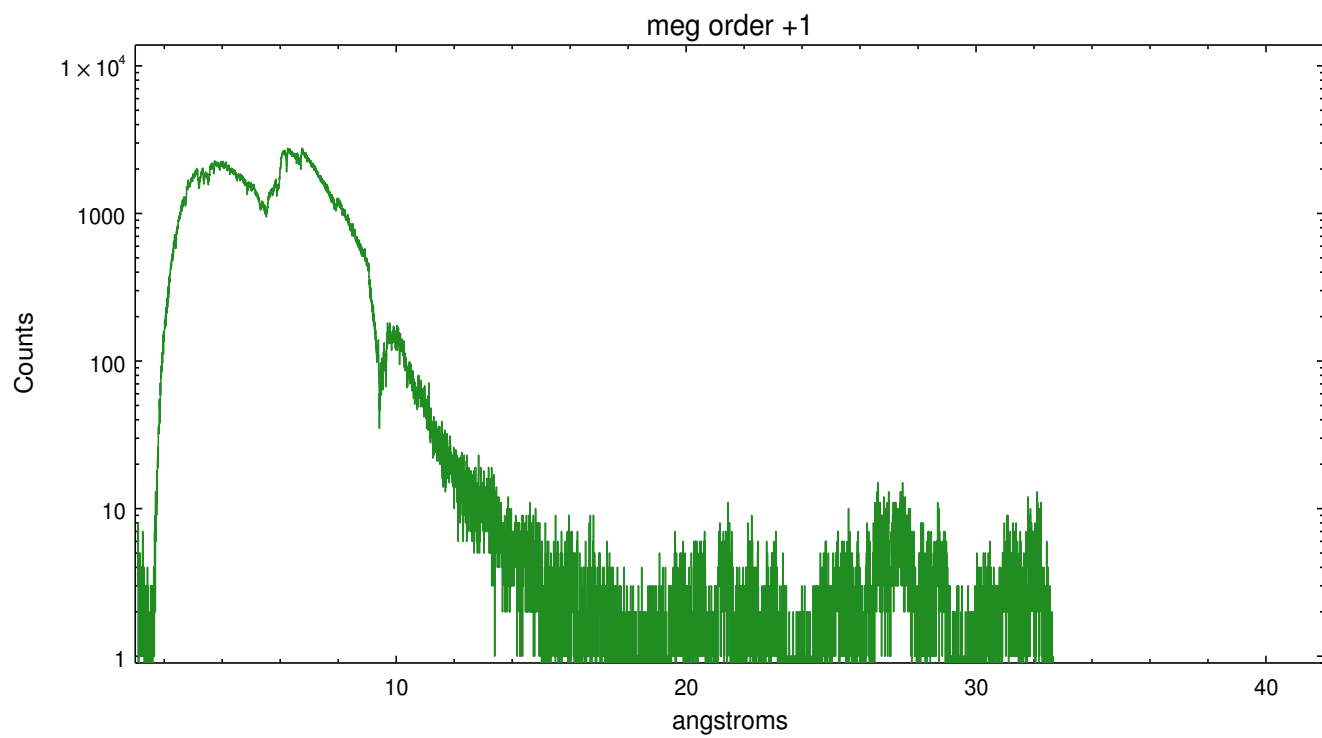
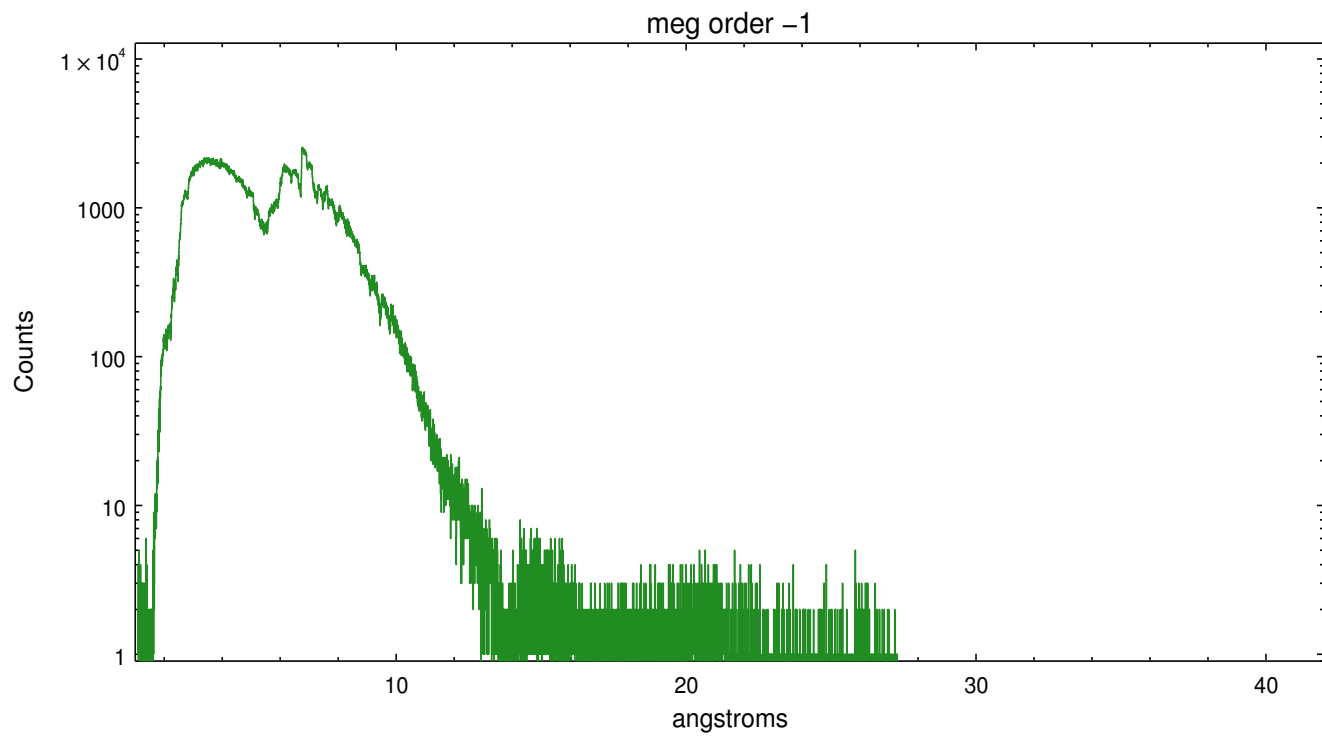
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	209172	0	1867120	158814	2250994	4119	206710





# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.12.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	50.2

## A.2 Comments