

# V&V Reference Report

## L2 ASCDS Version : 7.6.8

Observation 3568 - L2 Version 001  
Chandra X-Ray Center

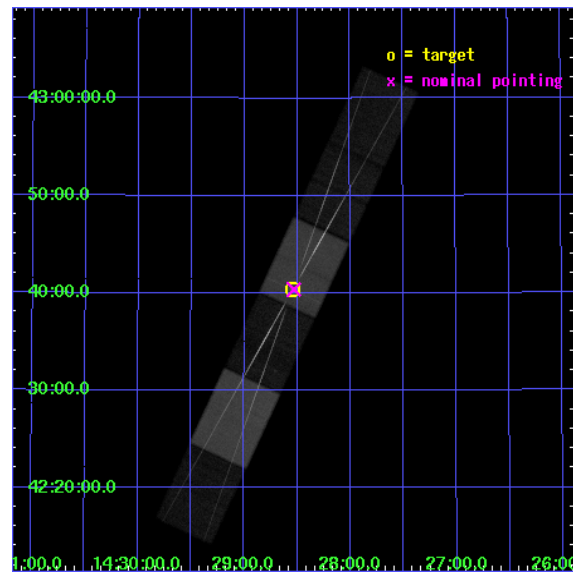
L2 Processing Date : Jul 6 2006

## 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	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	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

# 1 Front

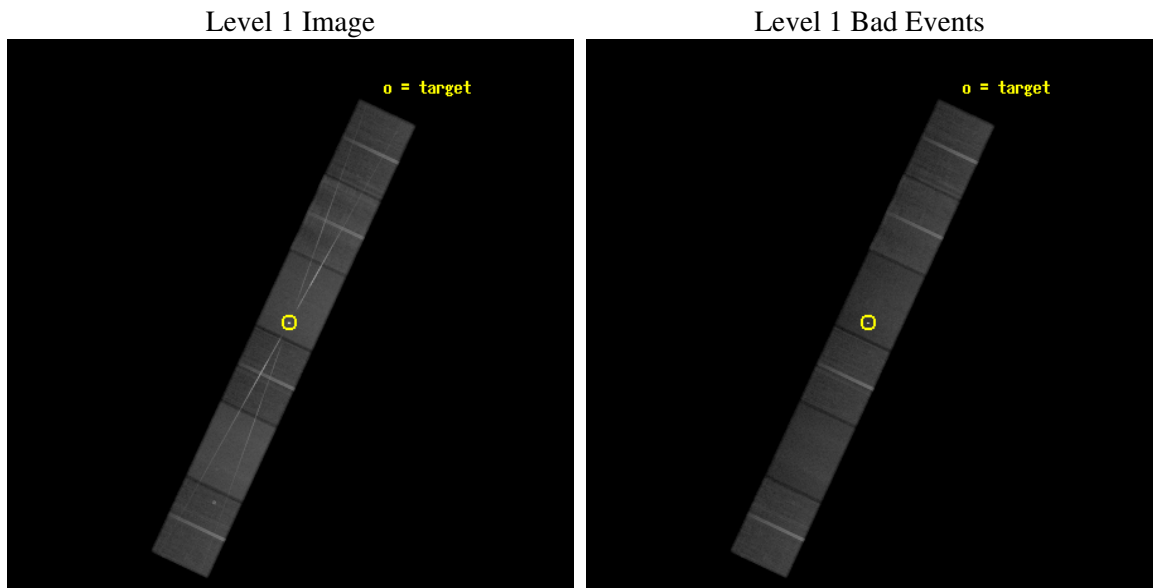
seq_num	700630
obs_id	3568
title	PROBING THE INTERGALACTIC MEDIUM AT LOW REDSHIFT
observer	Prof. Claude Canizares
object	H 1426+428
dtcycle	0
cycle	P
ra_targ	217.135833
dec_targ	42.6725
ra_nom	217.13292555219
dec_nom	42.673155404369
roll_nom	294.97868364883
revision	2
ontime	100999.91798973
livetime	99368.681710766
ontime4	100982.13111836
ontime5	100994.83607918
ontime6	100999.91804957
ontime7	100999.91798973
ontime8	100992.29516882
ontime9	100994.8360891
l2events	934321



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images

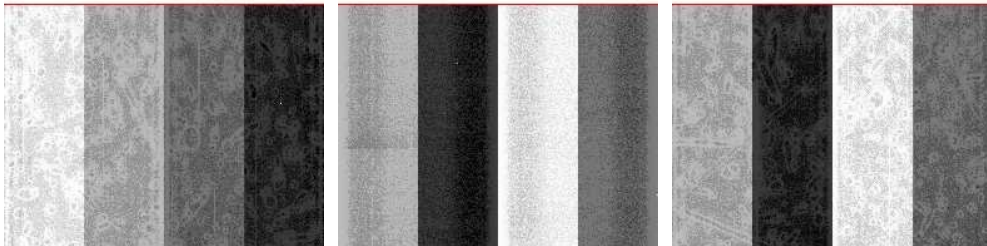


#### 2.1.2 Bias

Chip 4

Chip 5

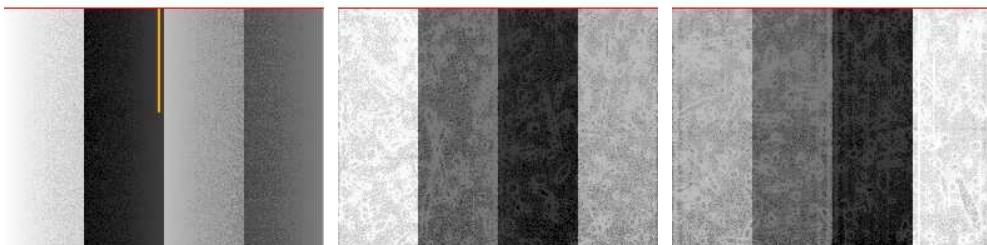
Chip 6



Chip 7

Chip 8

Chip 9



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.8
caldbver	3.2.2
date	2006-07-06T06:48:10
revision	2

sched_exp_time	100861.000000
ontime	101091.48252186
ontime4	101073.69565049
ontime5	101086.40061131
ontime6	101091.4825817
ontime7	101091.48252186
ontime8	101083.85970095
ontime9	101086.40062124
l1events	3699979

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	550965	712813	552997	737797	653244	492163
rejected events	482959	394318	435820	411961	493060	425934
rejected %	87%	55%	78%	55%	75%	86%

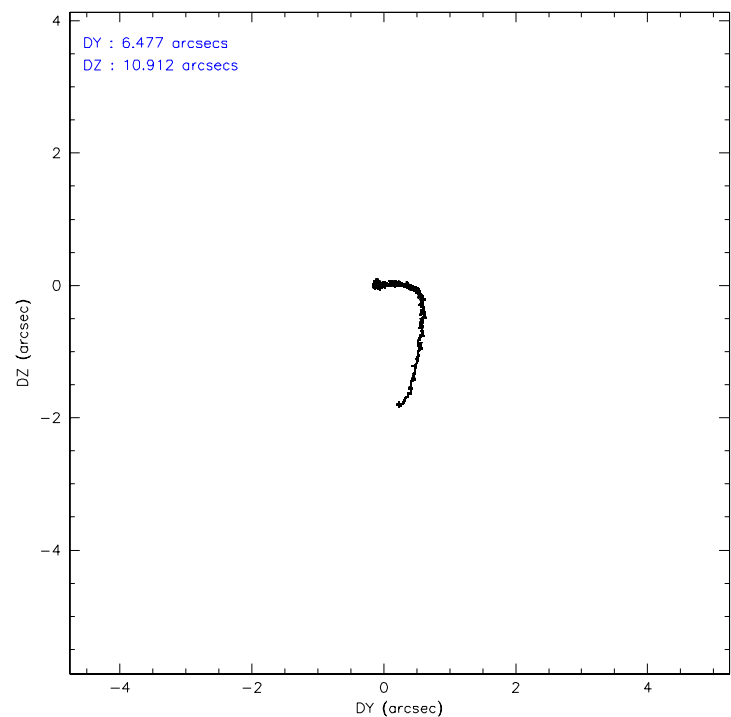
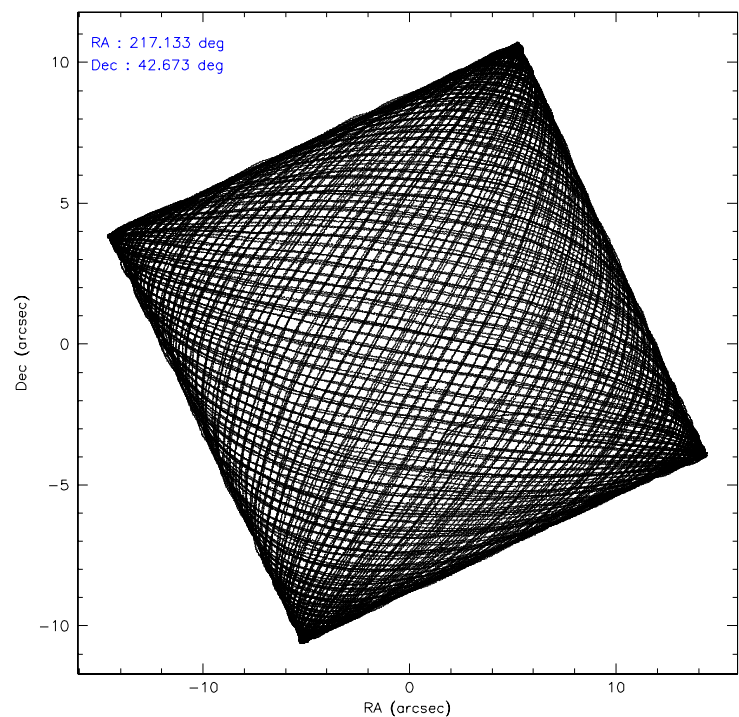
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	32140	20146	69948	29006	66283	29912
	5%	2%	12%	3%	10%	6%
grade 1 events	387	507	375	1091	430	271
	0%	0%	0%	0%	0%	0%
grade 2 events	13375	99923	18353	79268	30695	12021
	2%	14%	3%	10%	4%	2%
grade 3 events	6708	10176	8059	21575	14903	6475
	1%	1%	1%	2%	2%	1%
grade 4 events	6175	9686	7882	21388	14241	6280
	1%	1%	1%	2%	2%	1%
grade 5 events	20349	36018	21723	49216	28385	22973
	3%	5%	3%	6%	4%	4%
grade 6 events	9669	178890	13040	174891	34243	11597
	1%	25%	2%	23%	5%	2%
grade 7 events	462162	357467	413617	361362	464064	402634
	83%	50%	74%	48%	71%	81%

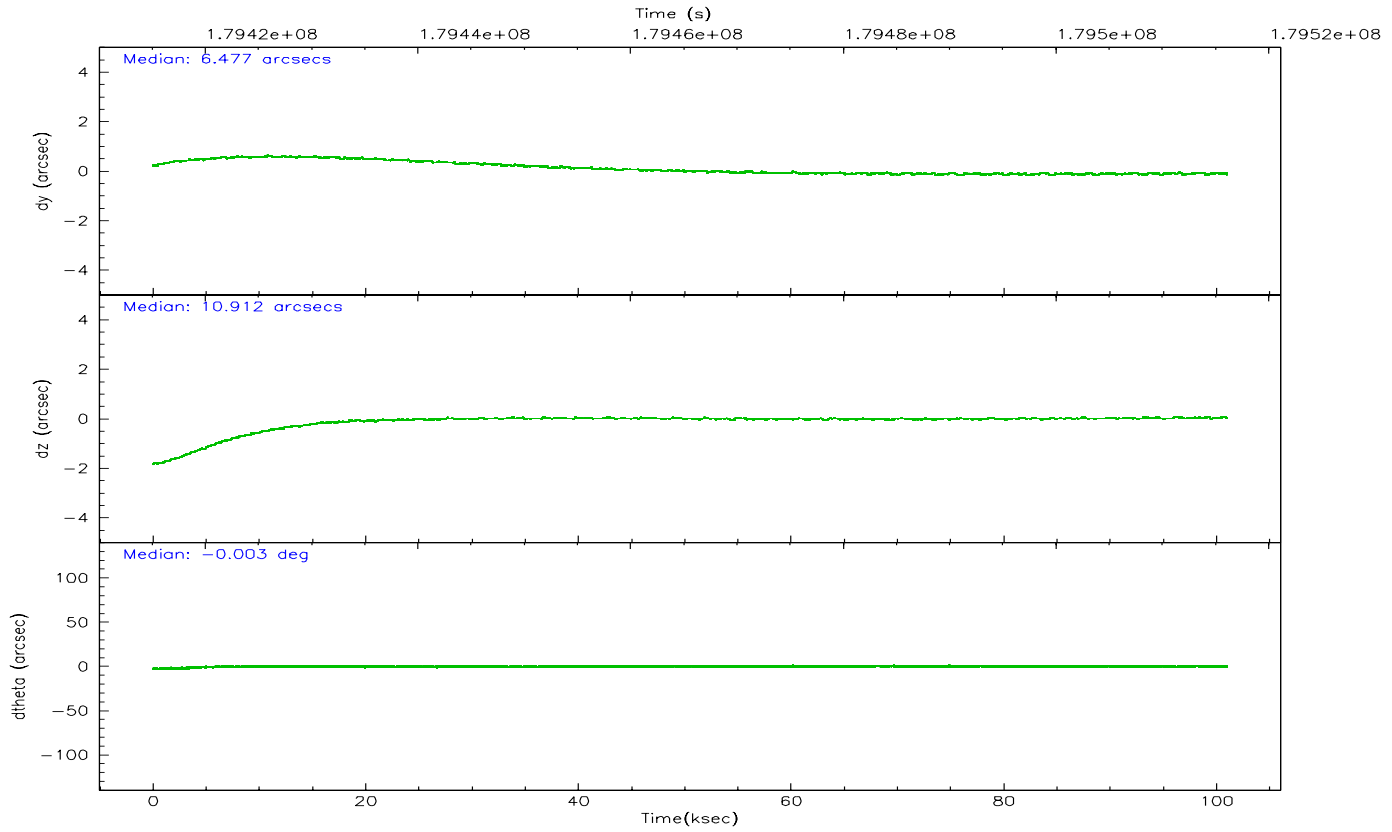
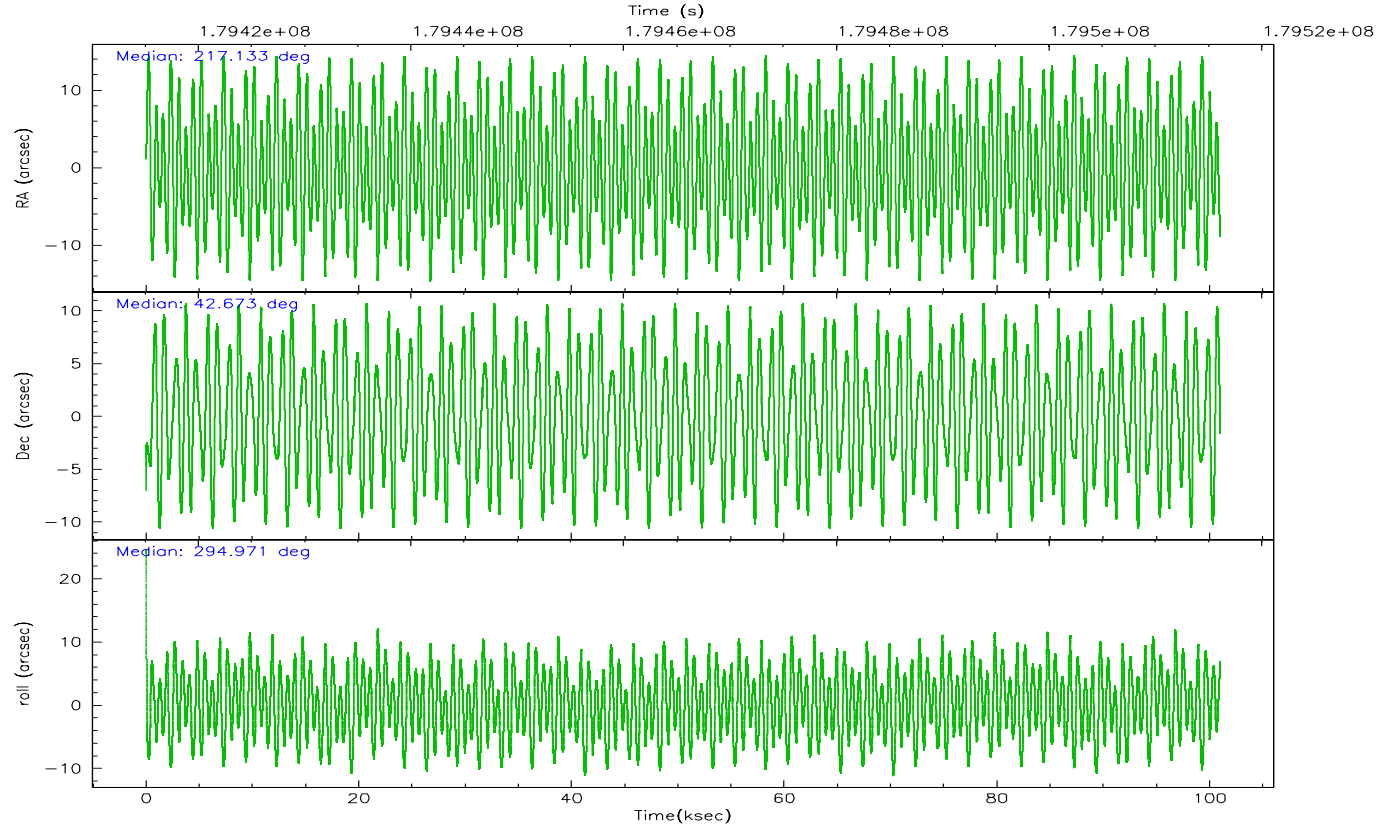


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	On-chip summing requested	N	N
Observation mode	POINTING	POINTING	Subarray requested	CUSTOM	CUSTOM
Pointing RA	217.102309	217.132925552195	Subarray start row	1	1
Pointing Dec	42.688462	42.67315540436873	Subarray row count	774	774
Pointing Roll	294.842804	294.9786836488291	Alternating exposures requested	N	N
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Primary exposure time	0.000000	2.5
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	179415232.184000	179414105.85844			
Observation start date	2003-09-08T13:32:48	2003-09-08T13:15:05			
Observation end time	179516093.184000	179516592.53783			
Observation end date	2003-09-09T17:33:49	2003-09-09T17:43:12			
Read mode	TIMED	TIMED			

2.3 Aspect



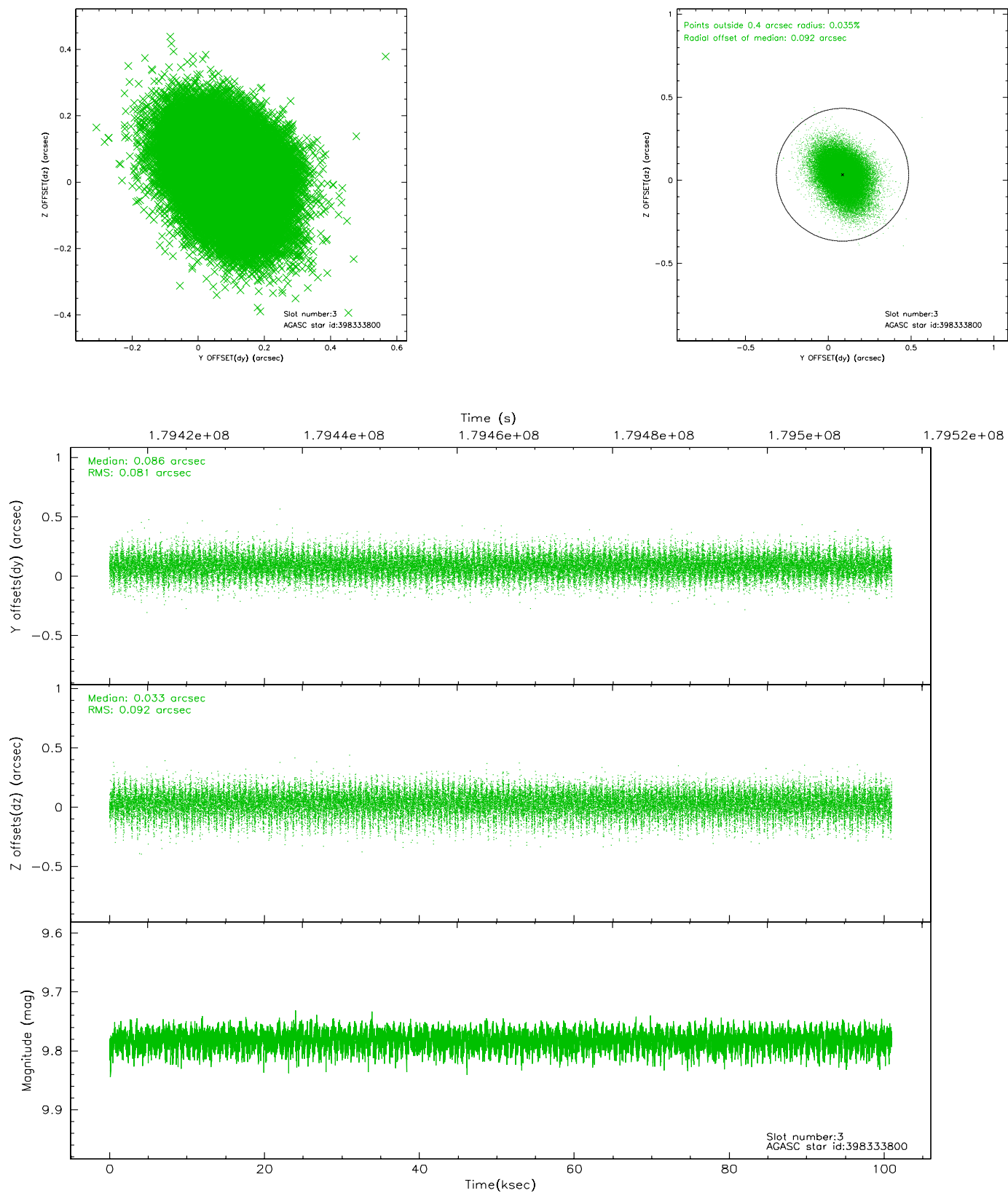


### Slot Statistics

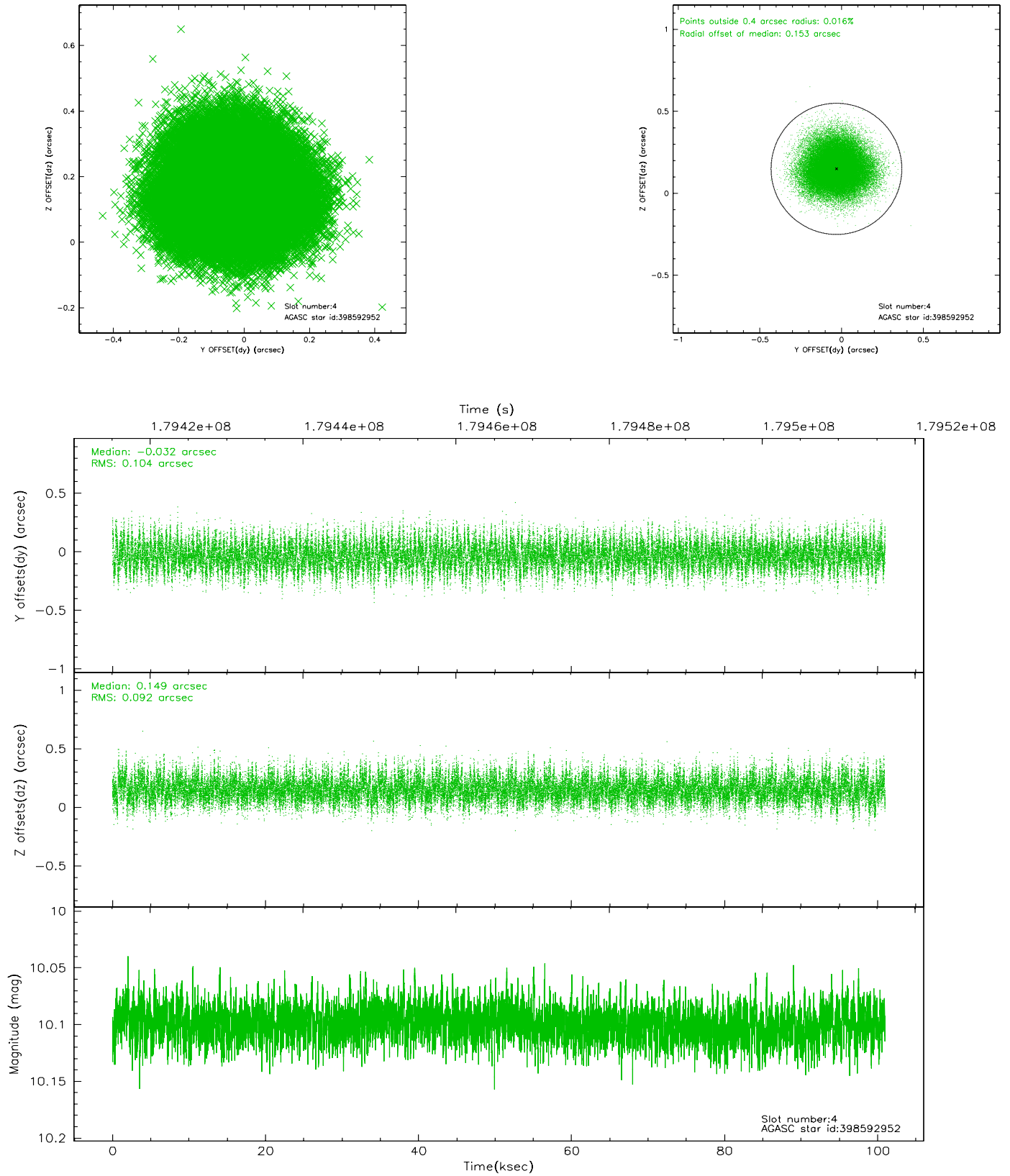
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	24623	-0.040	-0.059	0.008	0.017	0.000000	0.000000	-759.20	-1794.18
1	FID	ACIS-S-4	7.19	24621	0.033	0.035	0.005	0.012	0.000000	0.000000	2154.22	114.45
2	FID	ACIS-S-5	7.23	24623	-0.024	0.033	0.008	0.018	0.000000	0.000000	-1812.11	108.06
3	GUIDE	398333800	9.78	49217	0.086	0.033	0.128	0.217	216.924026	41.953431	2200.99	-1544.69
4	GUIDE	398592952	10.10	49218	-0.032	0.149	0.149	0.239	216.343106	43.029643	-1961.87	-1293.23
5	GUIDE	398723464	9.06	49229	0.013	-0.202	0.086	0.138	217.255519	42.514001	740.75	105.04
6	GUIDE	398725424	8.77	49237	0.007	0.058	0.063	0.102	217.673023	42.542871	1107.11	1156.04
7	GUIDE	398723456	9.37	49225	-0.066	-0.038	0.120	0.194	217.640217	43.368629	-1634.91	2308.14

## 2.4 Star Slots

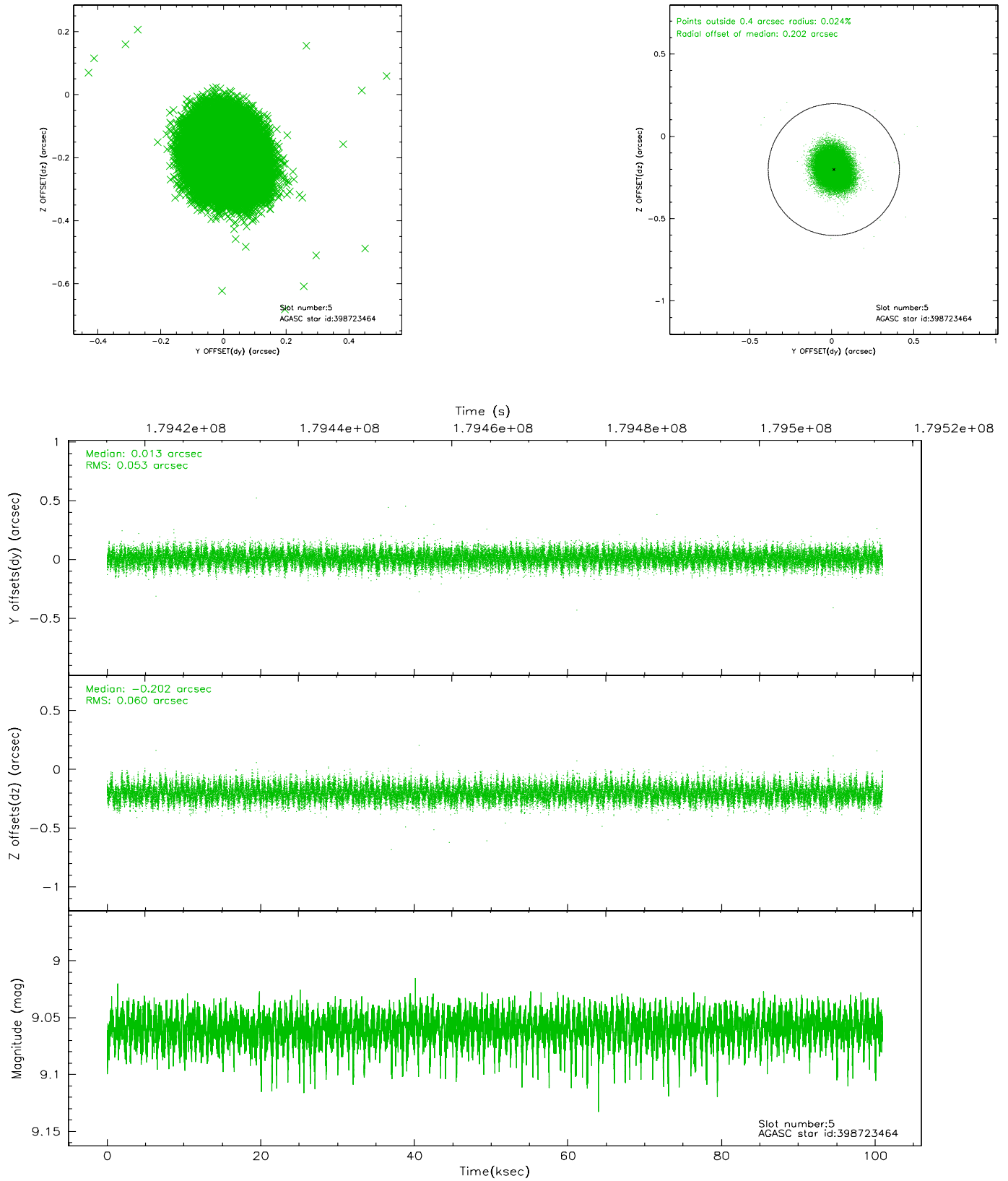
### 2.4.1 Slot 3



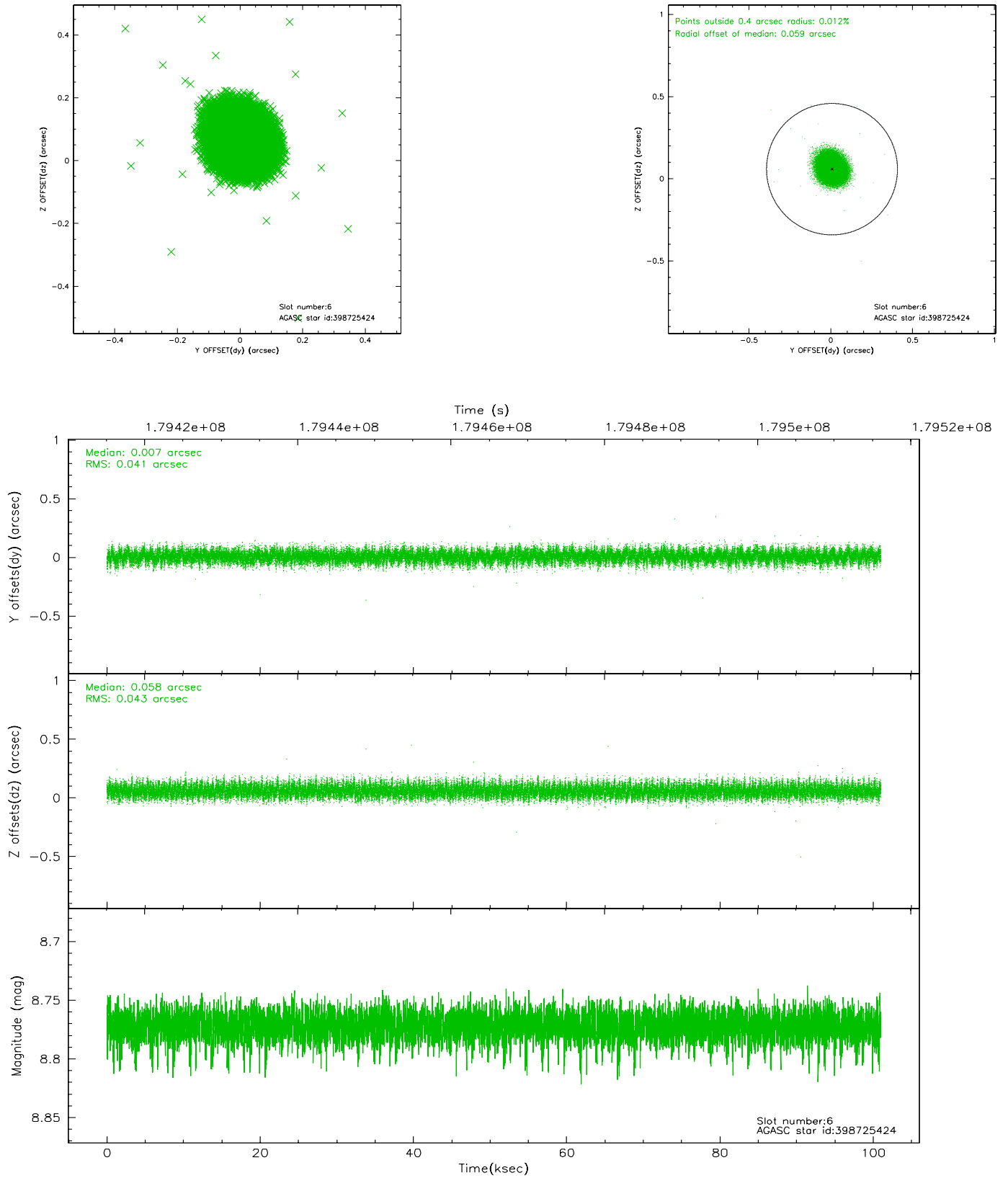
## 2.4.2 Slot 4



### 2.4.3 Slot 5

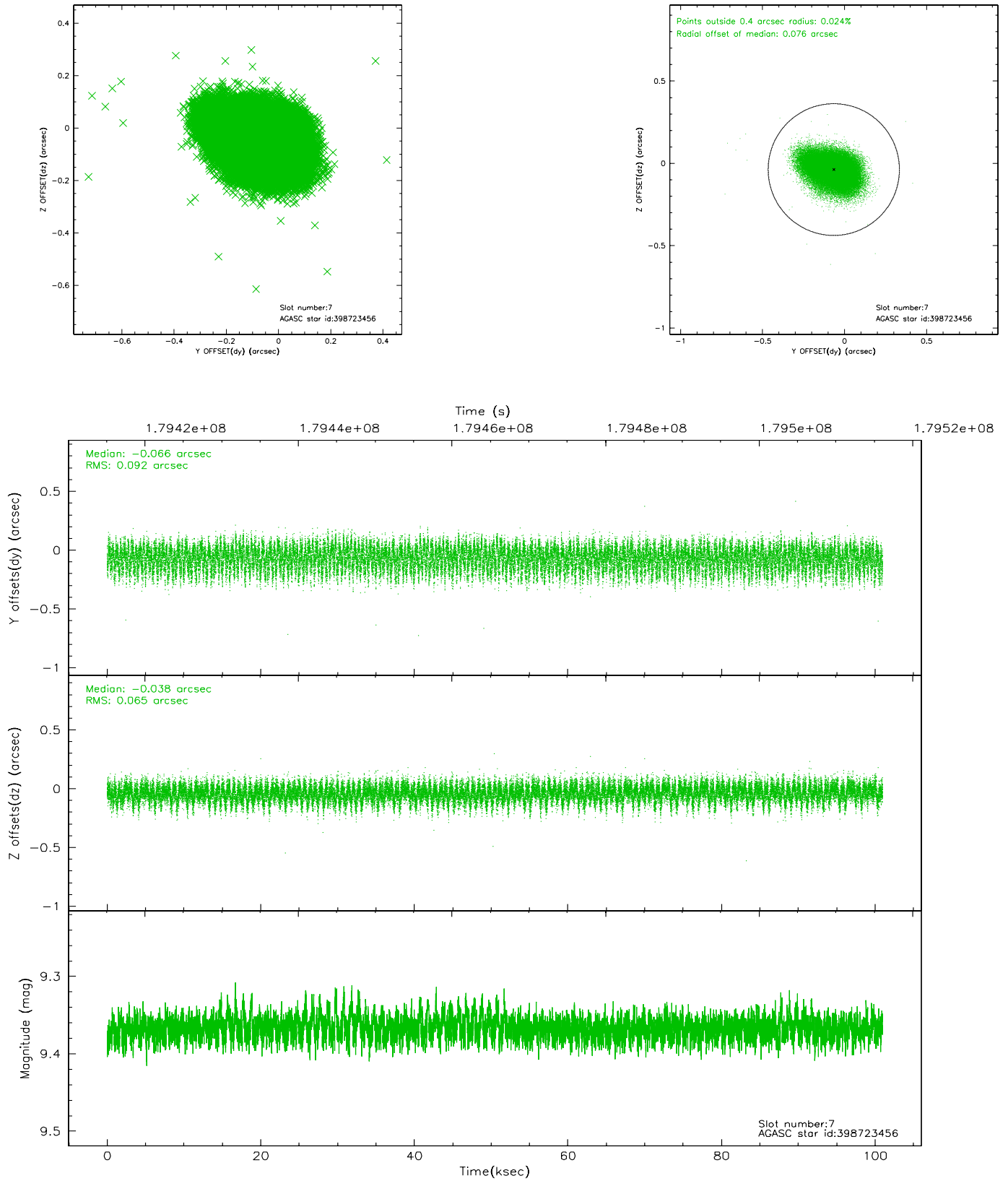


## 2.4.4 Slot 6



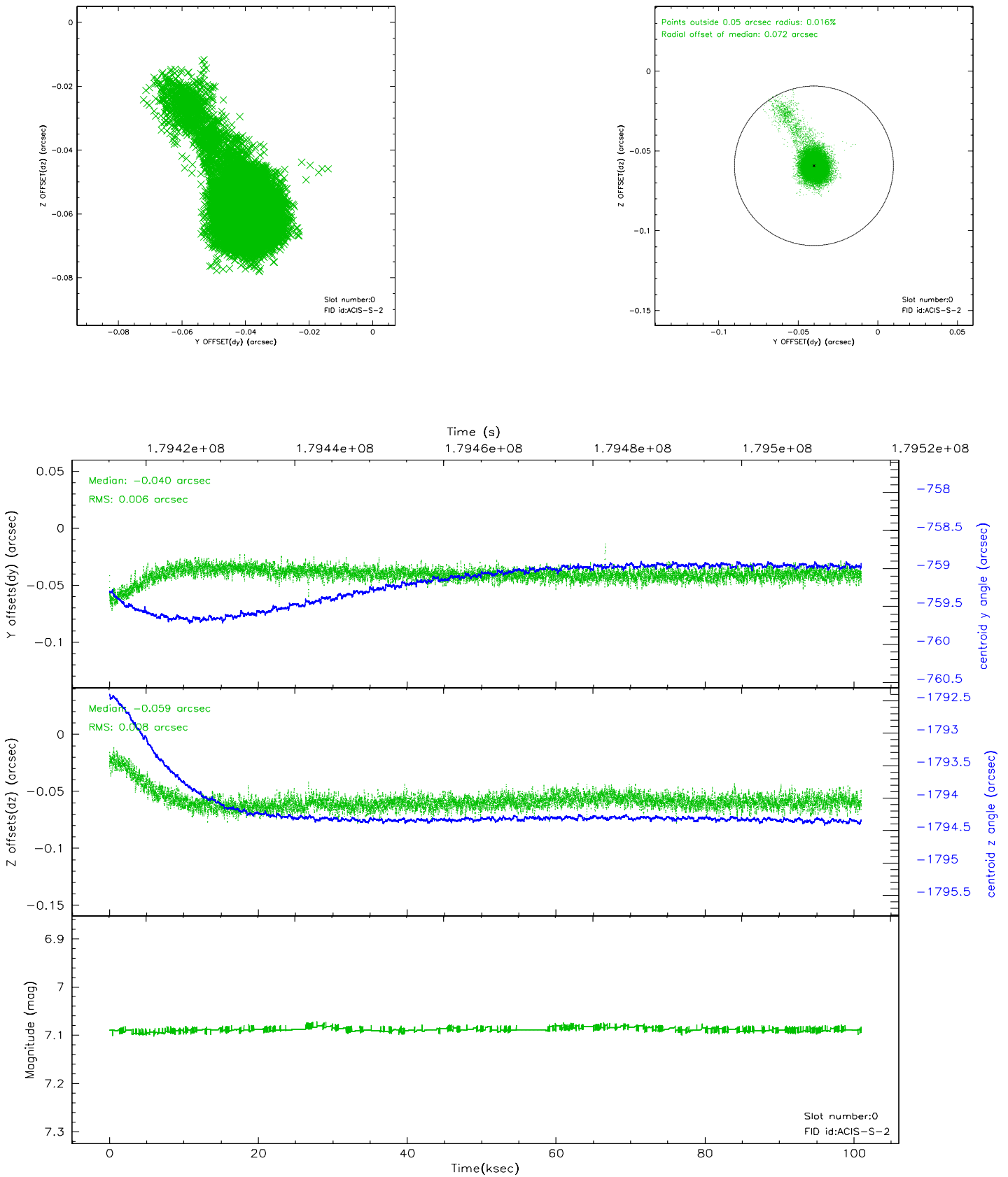


## 2.4.5 Slot 7

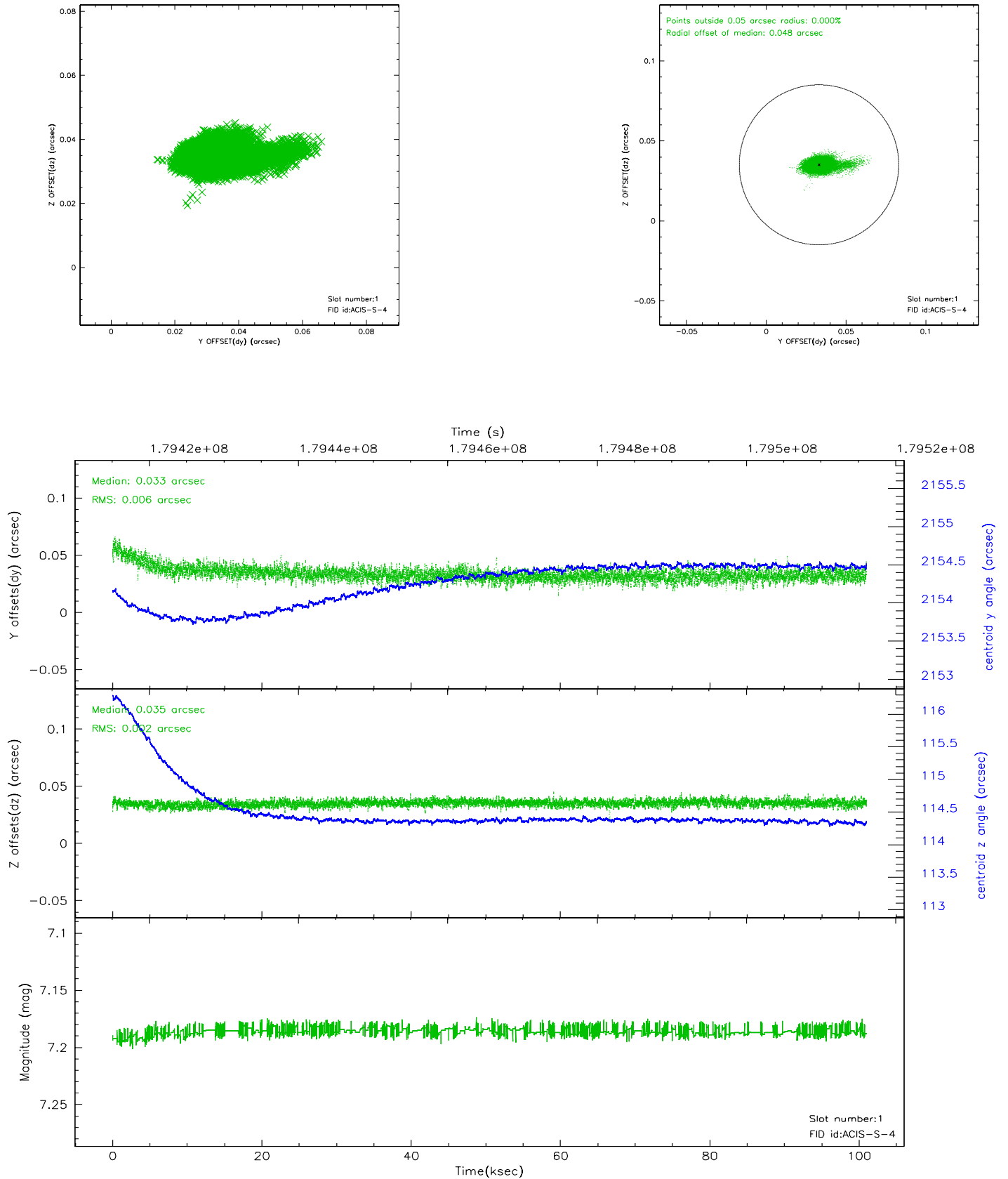


## 2.5 FID Slots

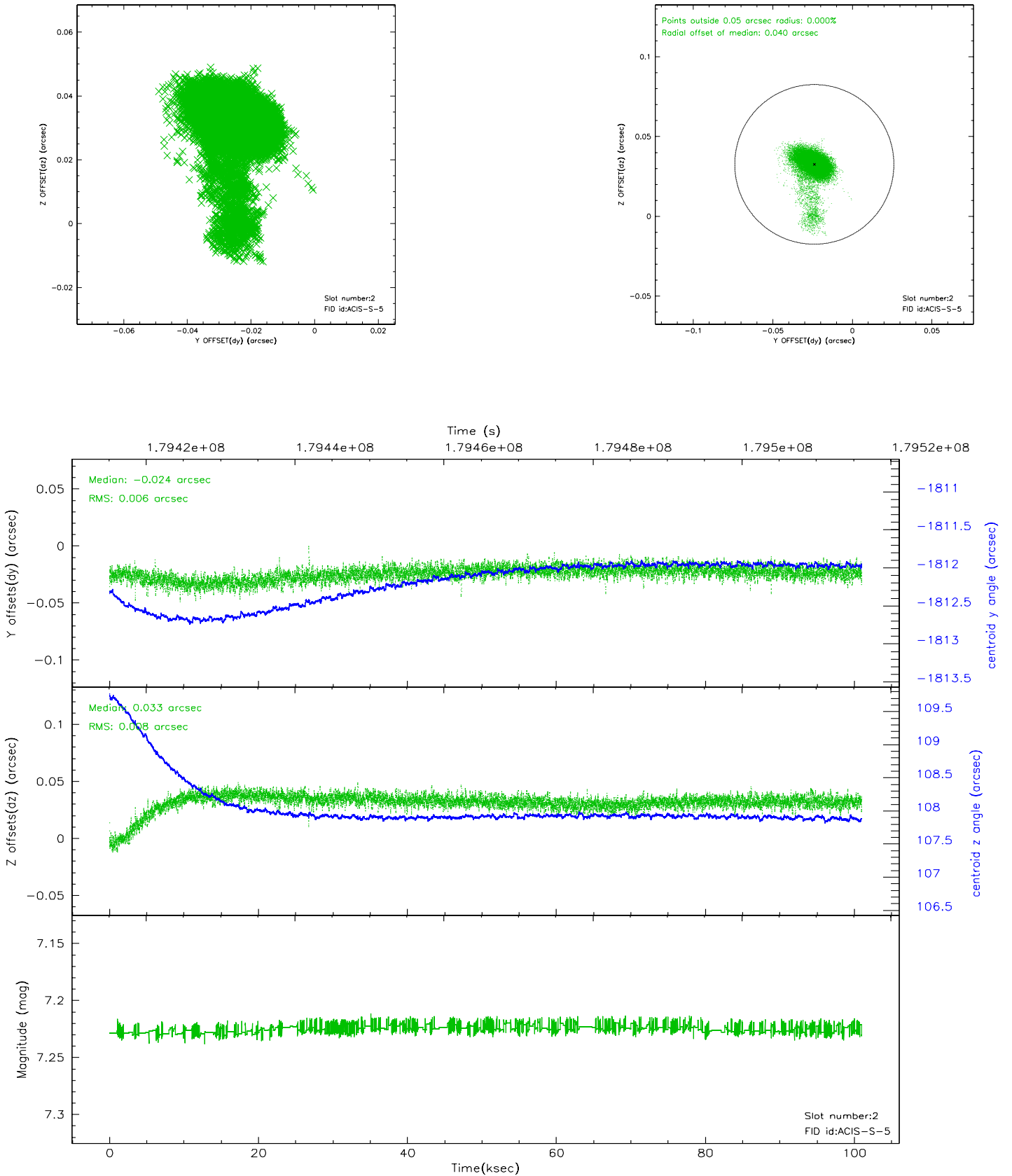
### 2.5.1 Slot 0



## 2.5.2 Slot 1

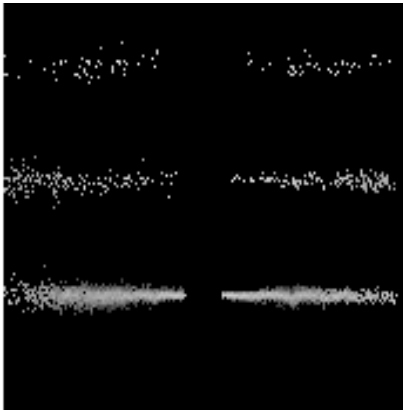


### 2.5.3 Slot 2

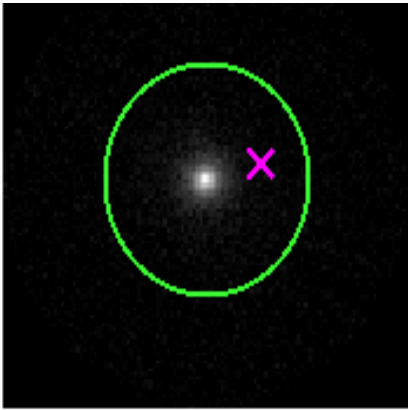


# 3 Gratings

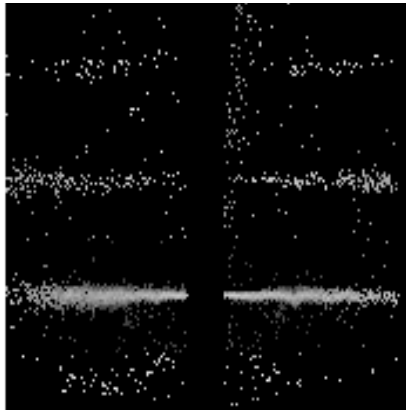
## 3.1 HEG Arm



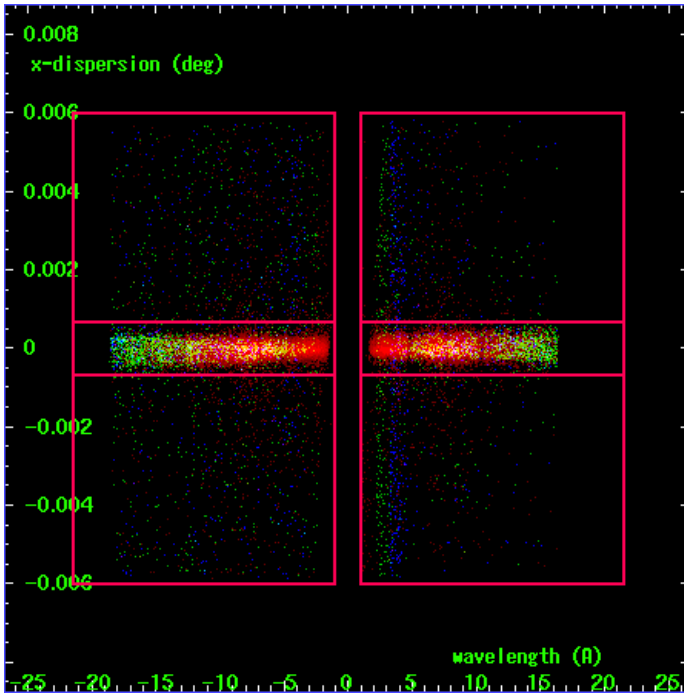
HEG Order Sort 123



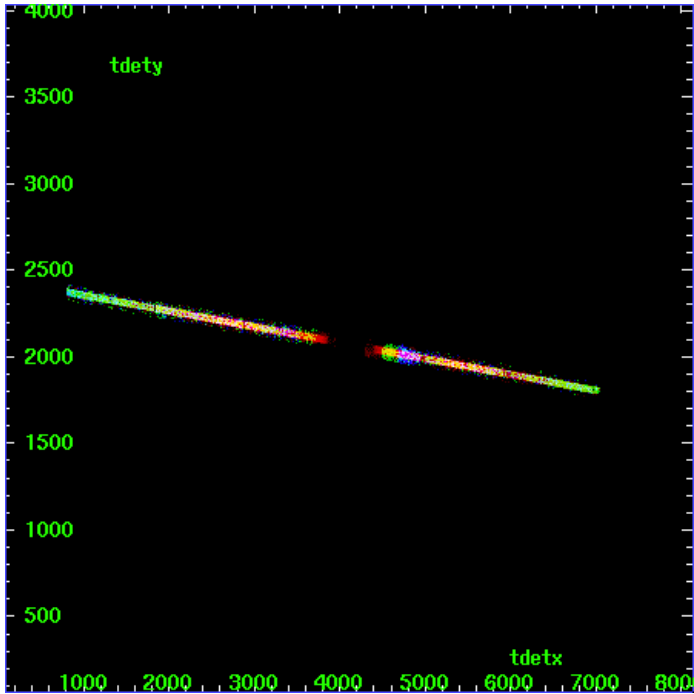
HEG Zero Order



HEG Order Sort ALL

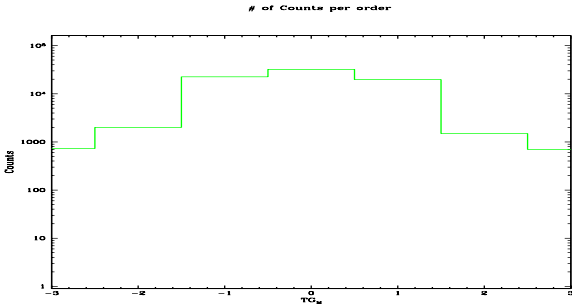


Spot Image HEG

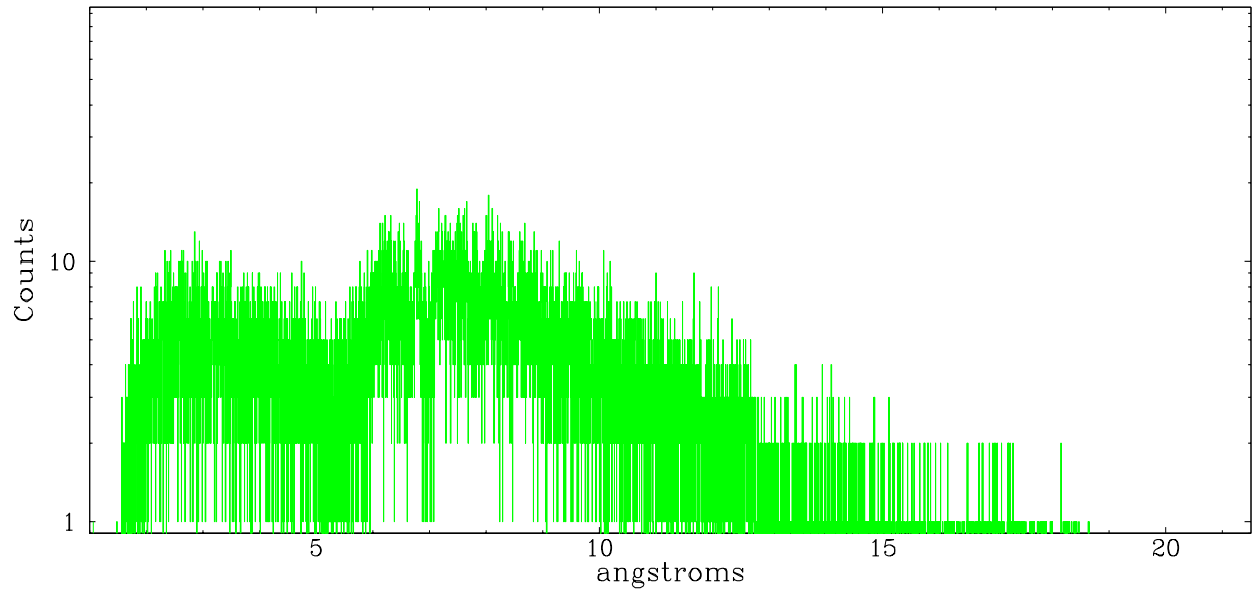


Full Detector HEG

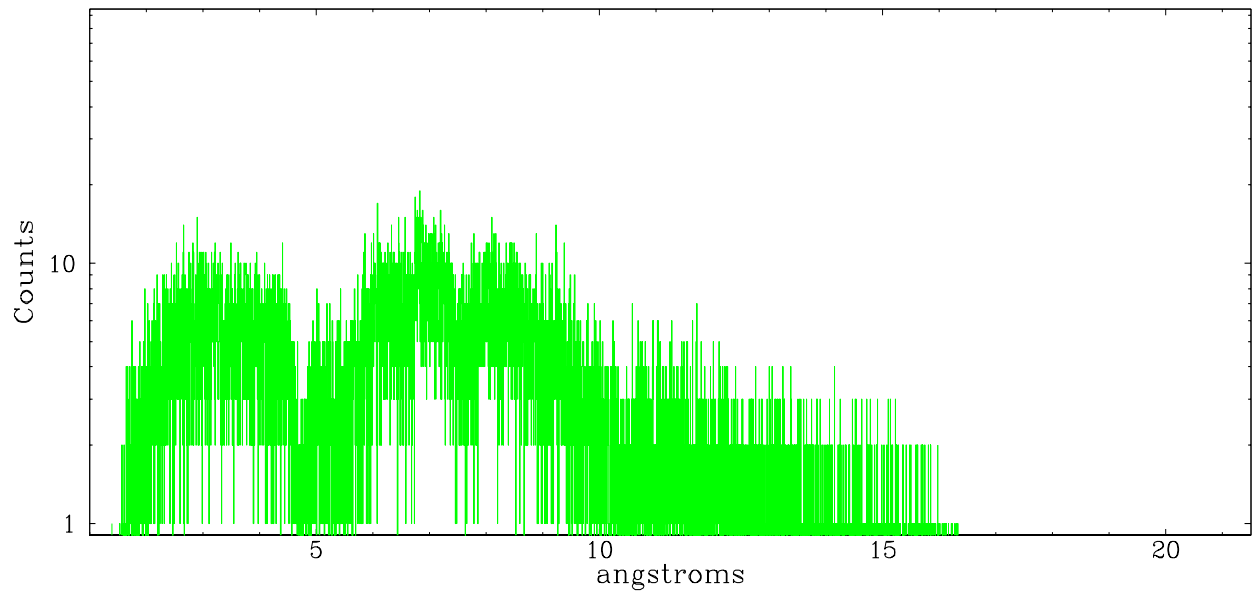
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	733	2006	22429	32185	19740	1485	697



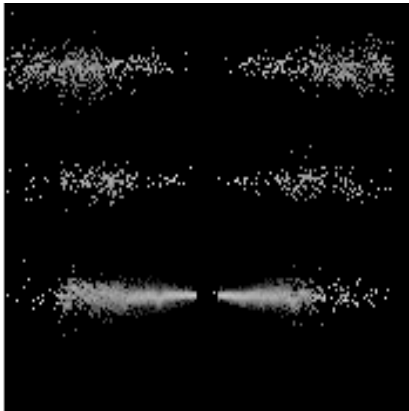
heg order -1



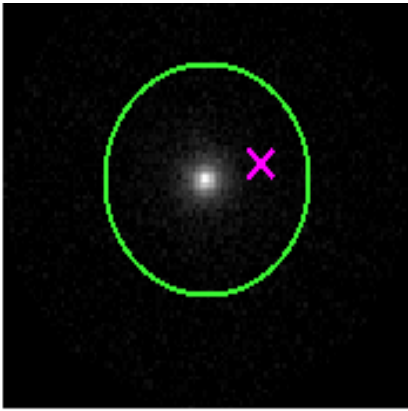
heg order +1



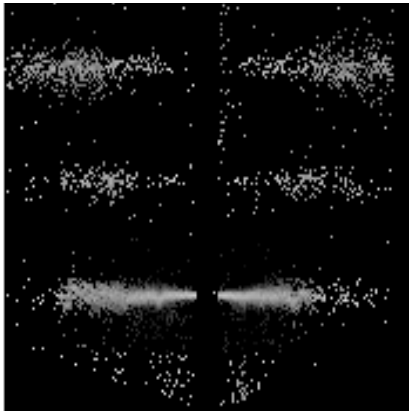
3.2 MEG Arm



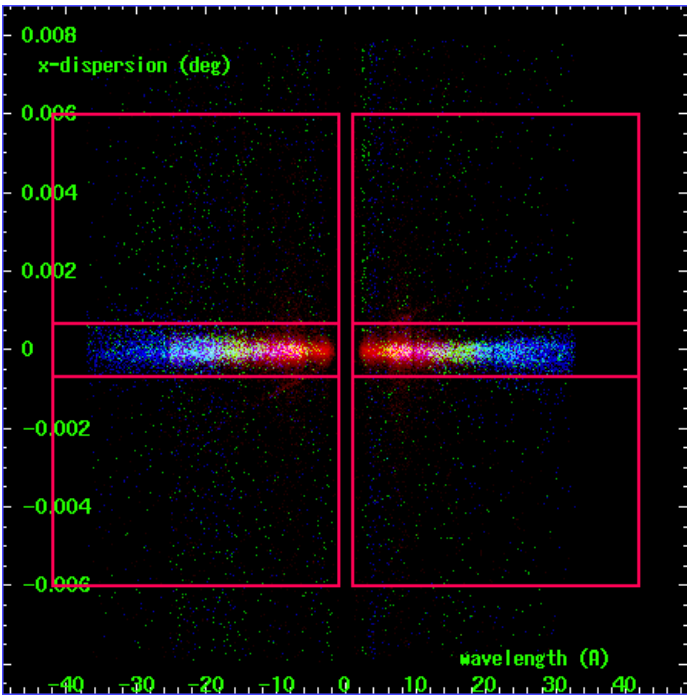
MEG Order Sort 123



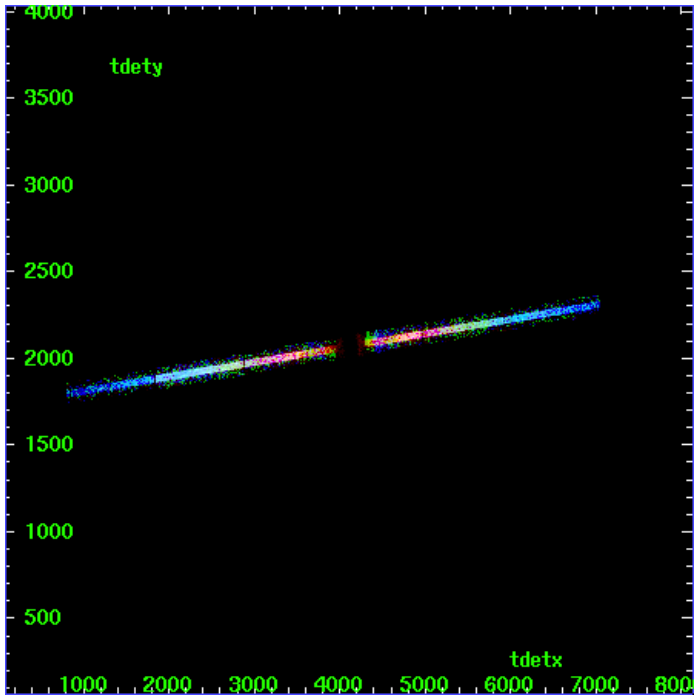
MEG Zero Order



MEG Order Sort ALL

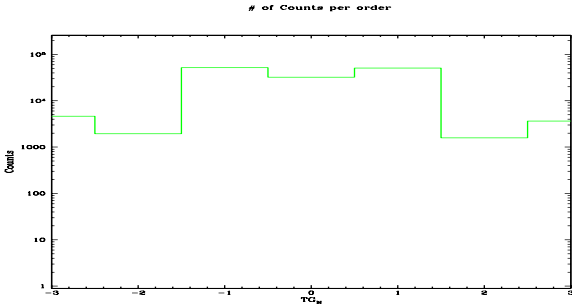


Spot Image MEG

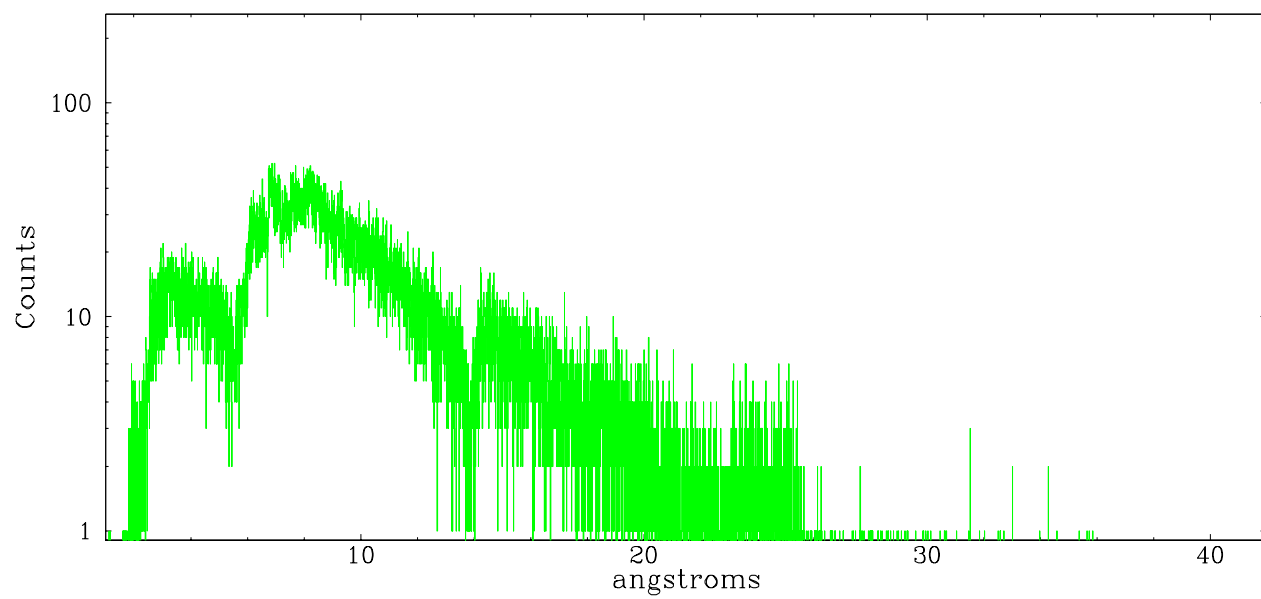


Full Detector MEG

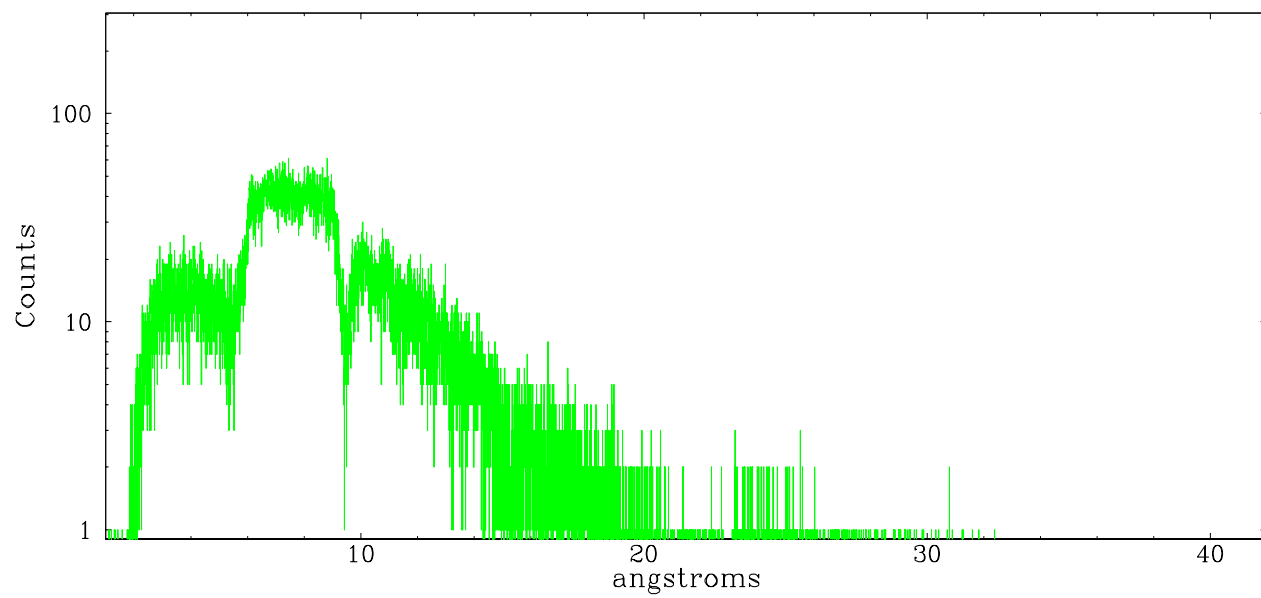
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	4626	1930	51649	32185	50789	1581	3635



meg order -1



meg order +1





## A Summary

### A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2006.07.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	100.999

### A.2 Comments