

V&V Reference Report

L2 ASCDS Version : 7.6.8

Observation 4441 - L2 Version 001
Chandra X-Ray Center

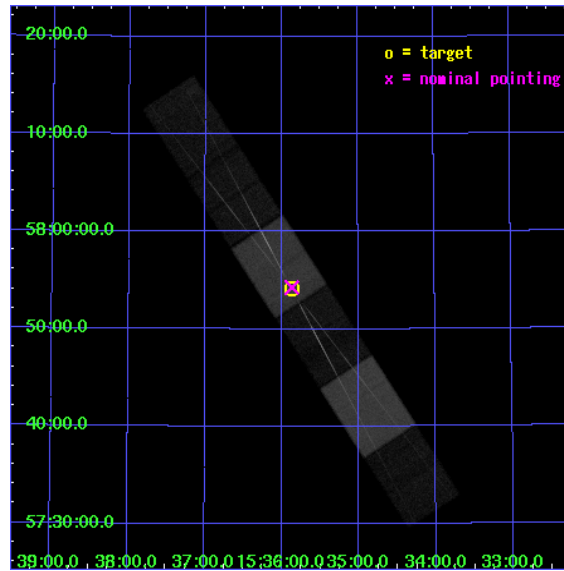
L2 Processing Date : Jul 14 2006

Contents

1	Front	2
2	OBI	3
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
3	Gratings	17
3.1	HEG Arm	17
3.2	MEG Arm	19
A	Summary	21
A.1	Status	21
A.2	Comments	21

1 Front

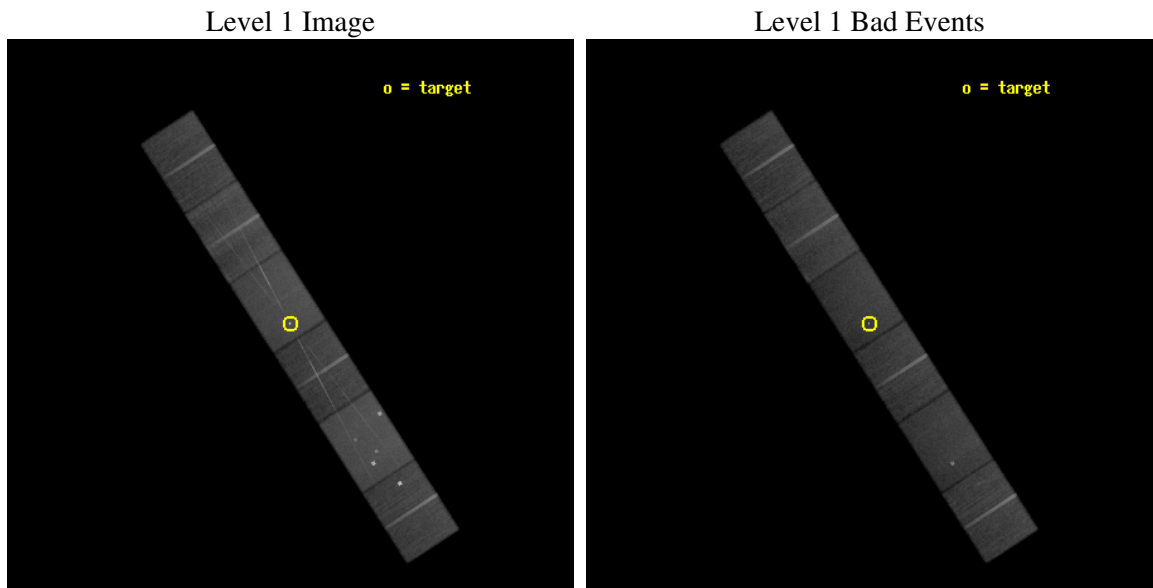
seq_num	700629
obs_id	4441
title	PROBING THE WARM ABSORBER/EMITTER IN THE SEYFERT 1 GALAXY MARKARIAN 290
observer	Prof. Claude Canizares
object	MARKARIAN 290
dtcycle	0
cycle	P
ra_targ	233.967917
dec_targ	57.9025
ra_nom	233.96682517269
dec_nom	57.904658304137
roll_nom	237.15755391115
revision	2
ontime	60905.0
livetime	59921.331423354
ontime4	60905.0
ontime5	60905.0
ontime6	60902.459009826
ontime7	60905.0
ontime8	60902.459009826
ontime9	60905.0
l2events	499289



2 OBI

2.1 OBI

2.1.1 Images

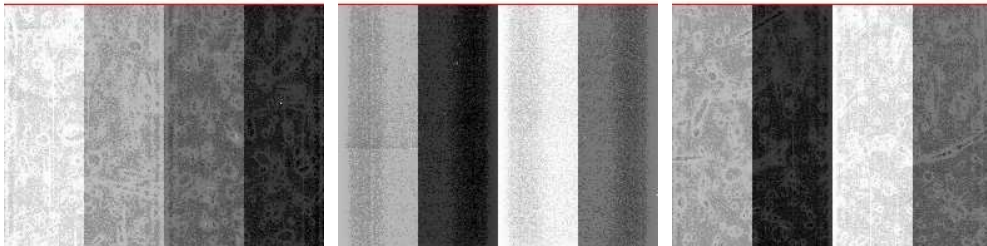


2.1.2 Bias

Chip 4

Chip 5

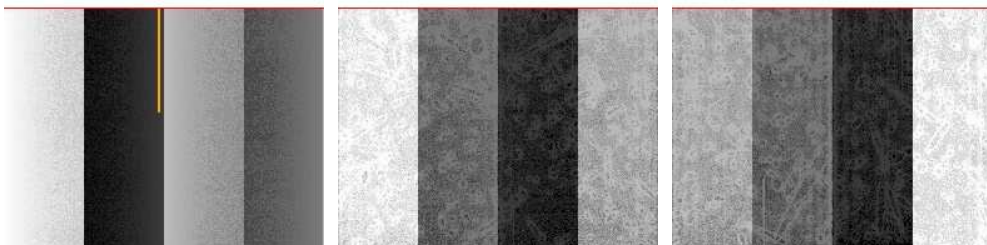
Chip 6



Chip 7

Chip 8

Chip 9



2.1.3 Parameters

obi_num	0
ascdsver	7.6.8
caldsver	3.2.2
date	2006-07-14T10:25:31
revision	2

sched_exp_time	60905.310000
ontime	60910.549805164
ontime4	60910.549785256
ontime5	60910.549805164
ontime6	60908.008795083
ontime7	60910.549805164
ontime8	60908.008814991
ontime9	60910.549805164
l1events	2154322

2.1.4 Events

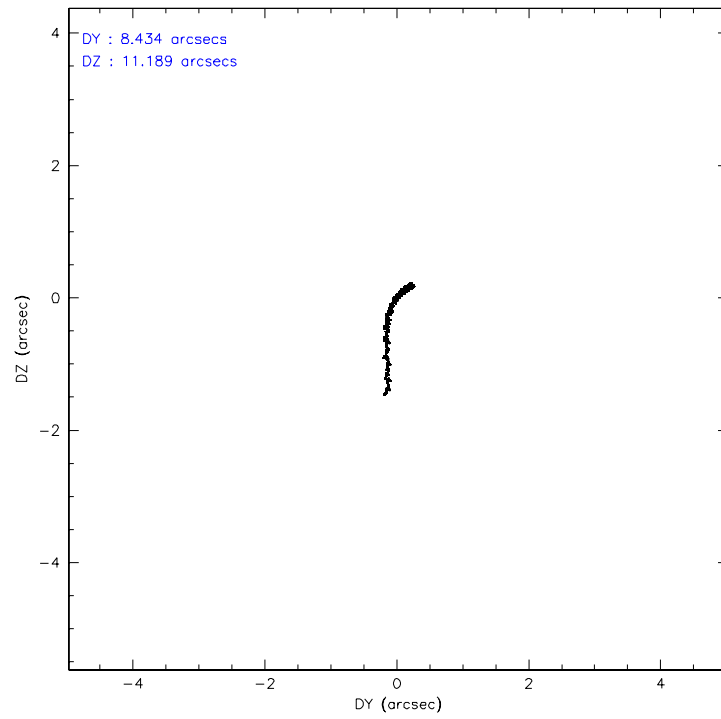
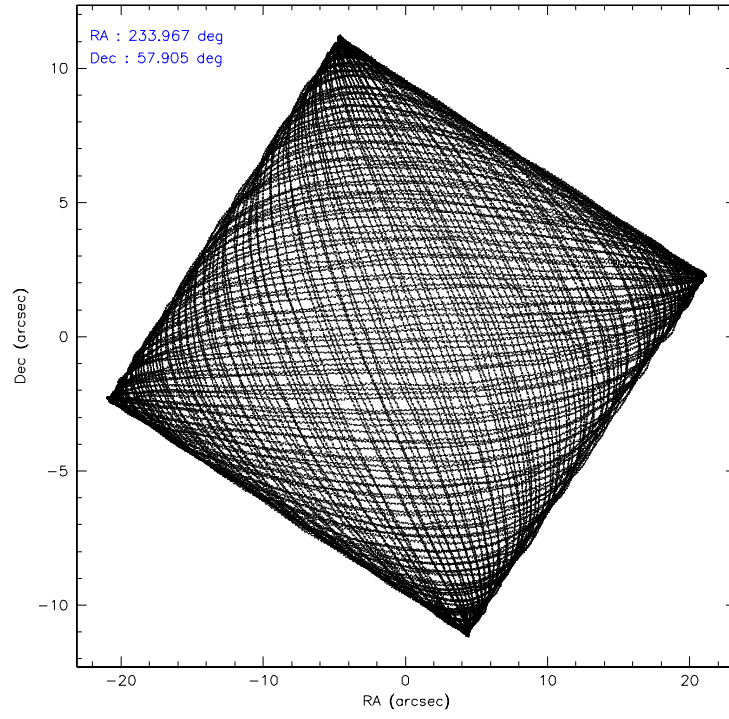
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	340046	440859	304664	410128	372237	286388
rejected events	280275	235545	255489	235319	288522	247797
rejected %	82%	53%	83%	57%	77%	86%

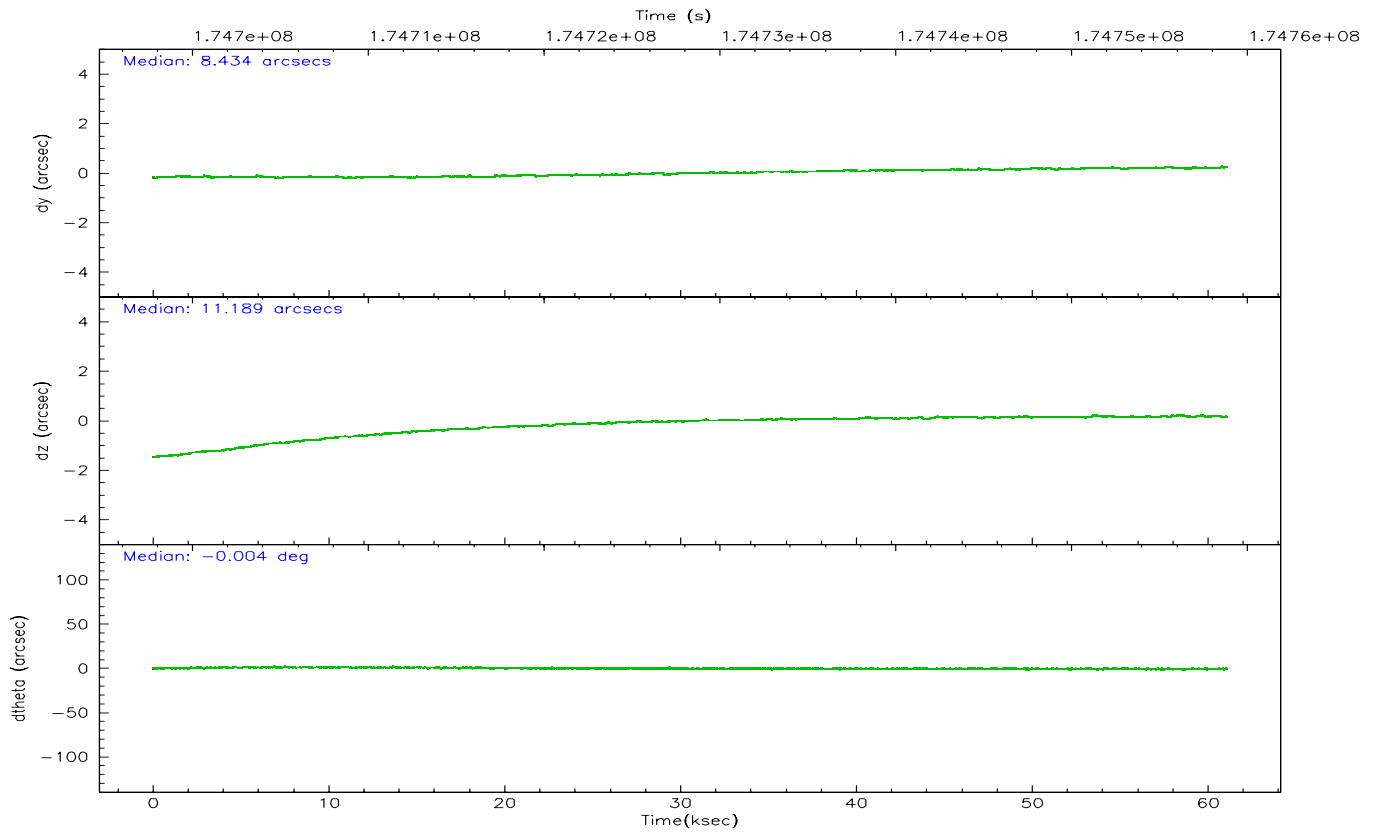
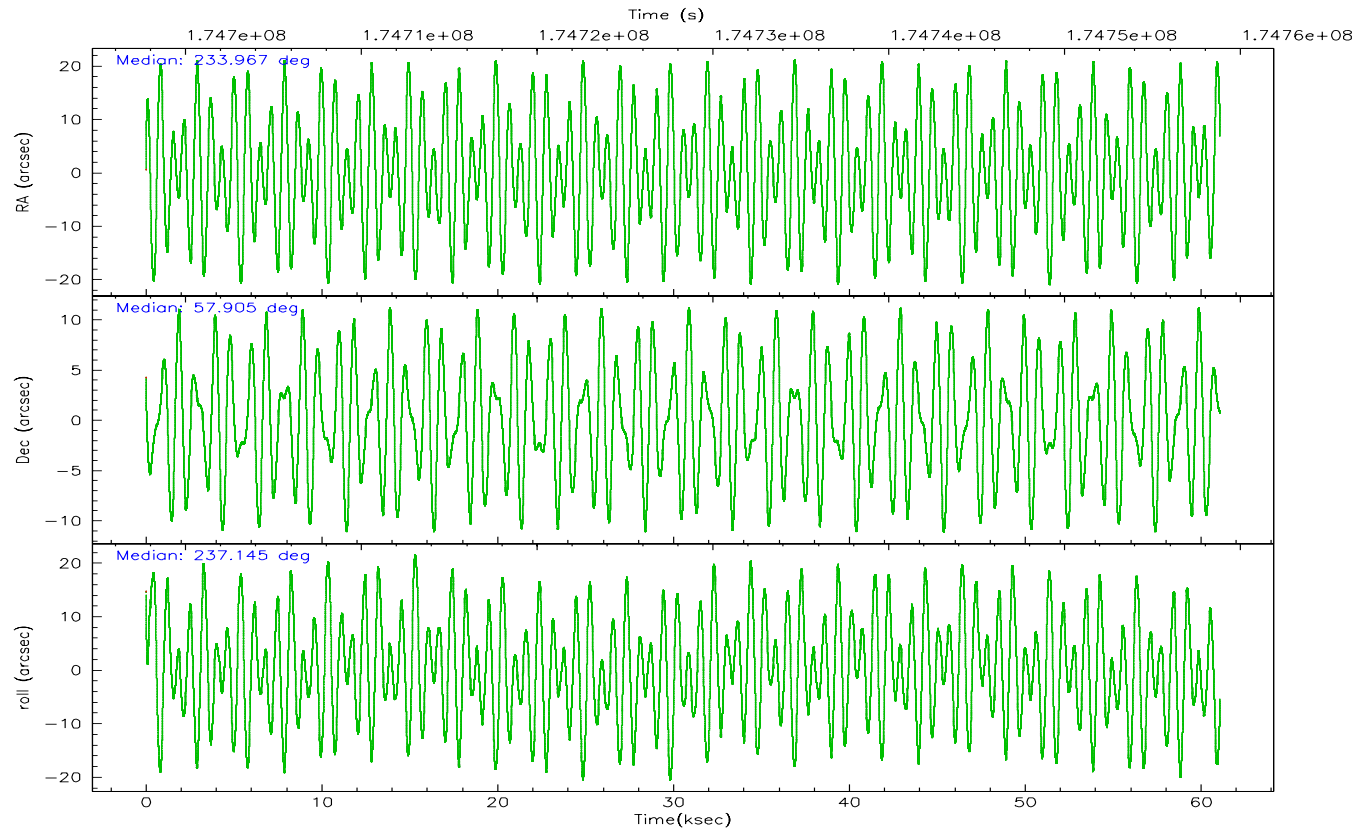
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	38438	29967	24886	14560	30123	16707
	11%	6%	8%	3%	8%	5%
grade 1 events	259	2952	149	508	215	160
	0%	0%	0%	0%	0%	0%
grade 2 events	7817	59772	8697	42780	17029	7247
	2%	13%	2%	10%	4%	2%
grade 3 events	3919	5412	4133	11472	8460	3846
	1%	1%	1%	2%	2%	1%
grade 4 events	3684	5226	3984	11376	8022	3728
	1%	1%	1%	2%	2%	1%
grade 5 events	11903	21637	12665	28642	16401	13326
	3%	4%	4%	6%	4%	4%
grade 6 events	5917	104957	7478	94634	20084	7068
	1%	23%	2%	23%	5%	2%
grade 7 events	268109	210936	242672	206156	271903	234306
	78%	47%	79%	50%	73%	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	233.968636	233.9668251726941	Subarray start row	1	1
Pointing Dec	57.931855	57.90465830413702	Subarray row count	774	774
Pointing Roll	236.999392	237.157553911149	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	174697944.184000	174696932.65689			
Observation start date	2003-07-15T23:11:20	2003-07-15T22:55:32			
Observation end time	174758849.184000	174759163.99704			
Observation end date	2003-07-16T16:06:25	2003-07-16T16:12:43			
Read mode	TIMED	TIMED			

2.3 Aspect



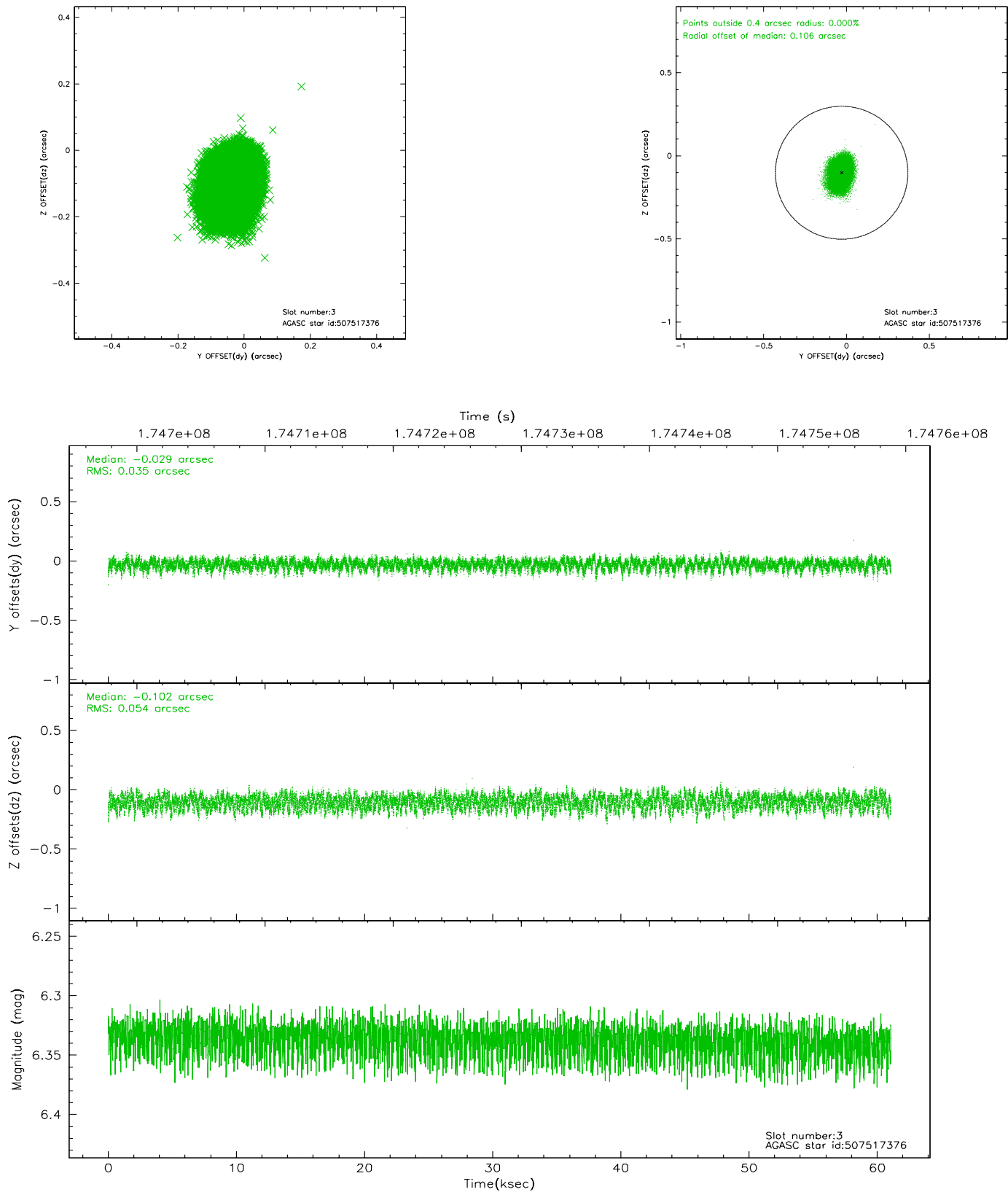


Slot Statistics

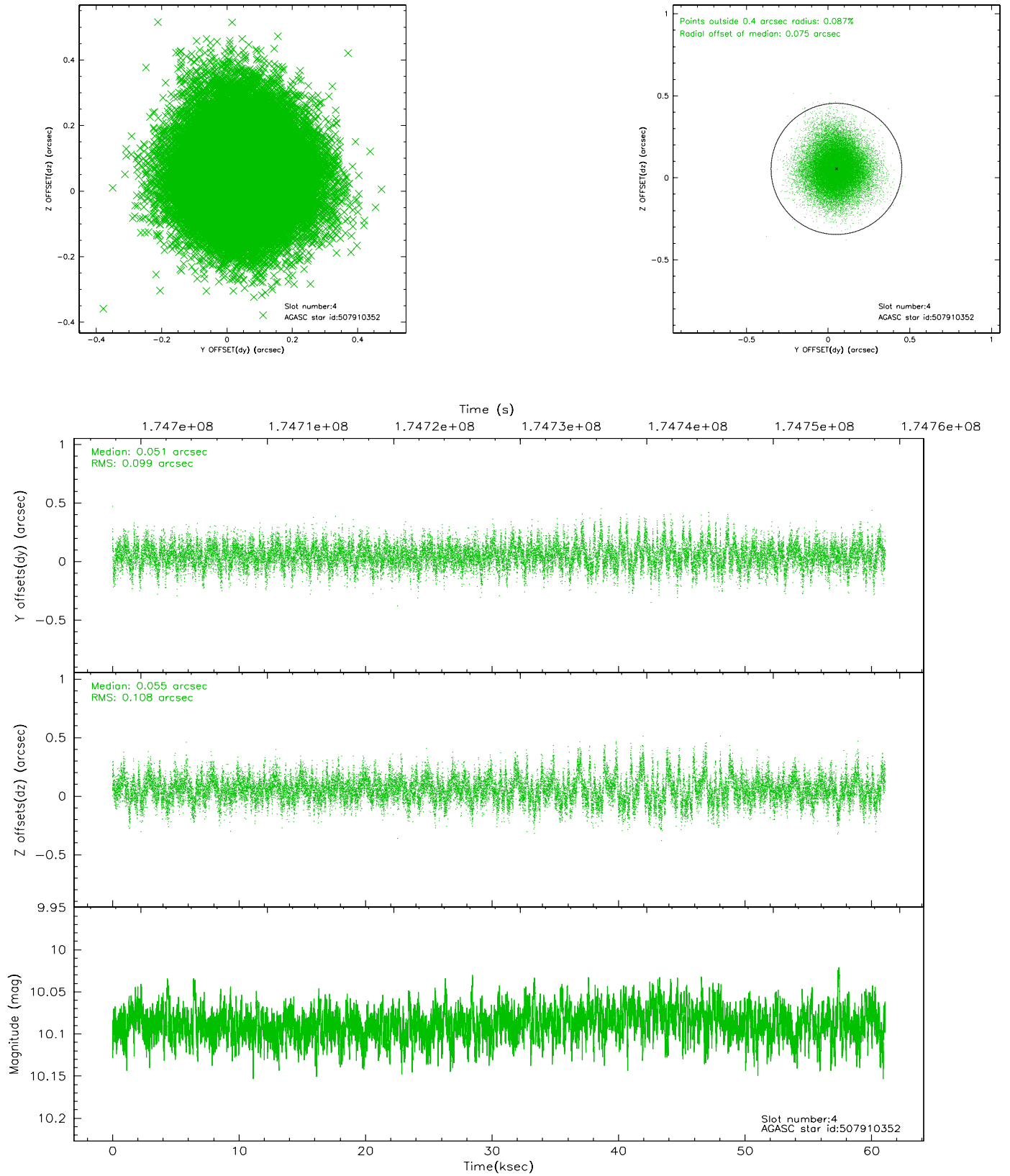
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	14901	-0.028	-0.055	0.010	0.018	0.000000	0.000000	-761.07	-1794.39
1	FID	ACIS-S-4	7.18	14901	0.055	0.028	0.013	0.019	0.000000	0.000000	2152.33	114.19
2	FID	ACIS-S-5	7.23	14900	-0.058	0.035	0.009	0.015	0.000000	0.000000	-1813.98	107.85
3	GUIDE	507517376	6.34	29801	-0.029	-0.102	0.069	0.111	234.727410	57.461777	612.03	2149.31
4	GUIDE	507910352	10.09	29772	0.051	0.055	0.156	0.255	232.620414	57.785943	1828.86	-1897.48
5	GUIDE	507910944	9.11	29789	-0.108	-0.012	0.083	0.130	233.075683	57.963052	825.69	-1497.38
6	GUIDE	507914840	9.61	29786	0.083	-0.029	0.093	0.153	234.138477	57.741300	397.50	647.02
7	GUIDE	507915904	7.82	29794	0.005	0.087	0.070	0.110	234.676266	57.520719	490.13	1949.68

2.4 Star Slots

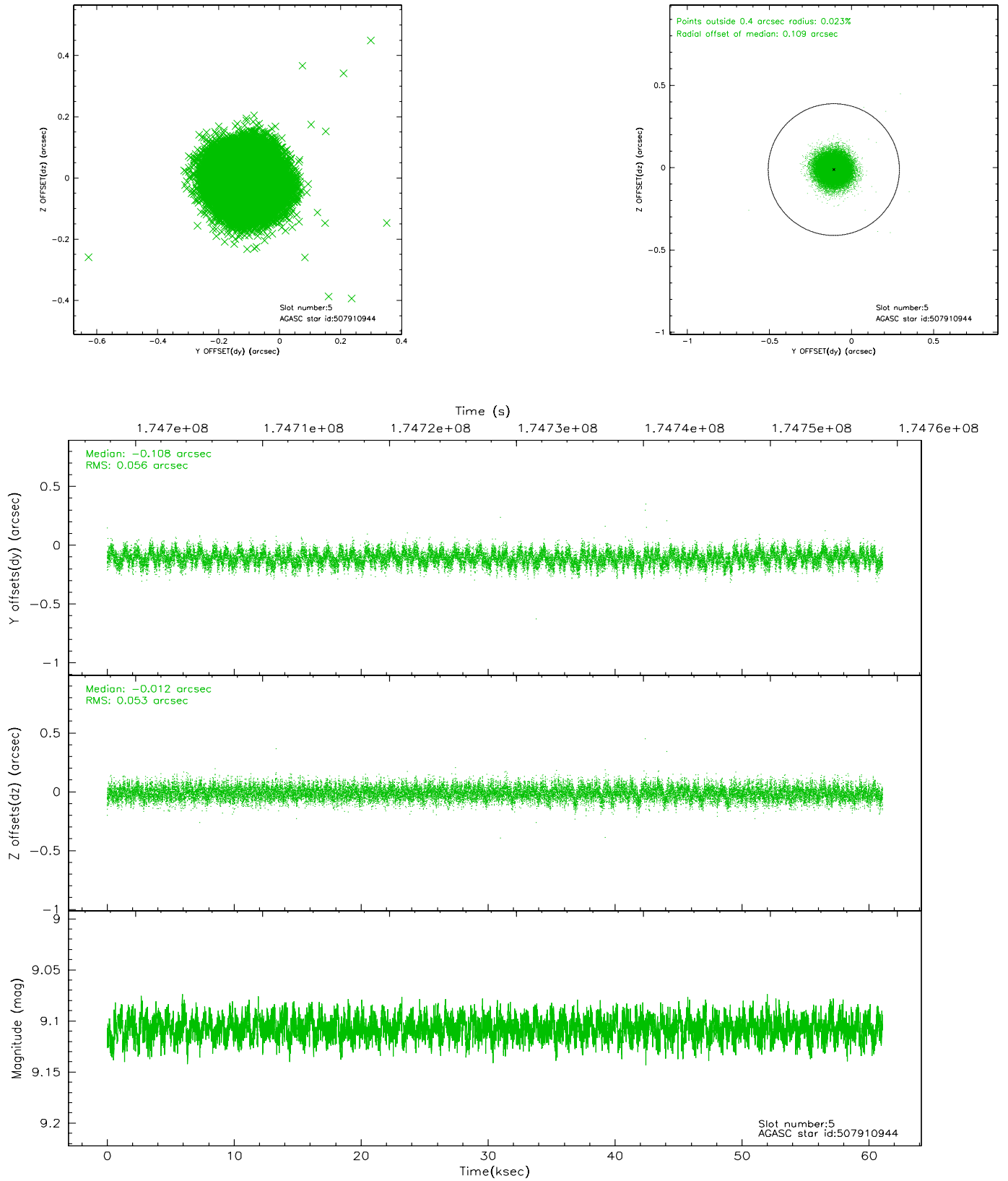
2.4.1 Slot 3



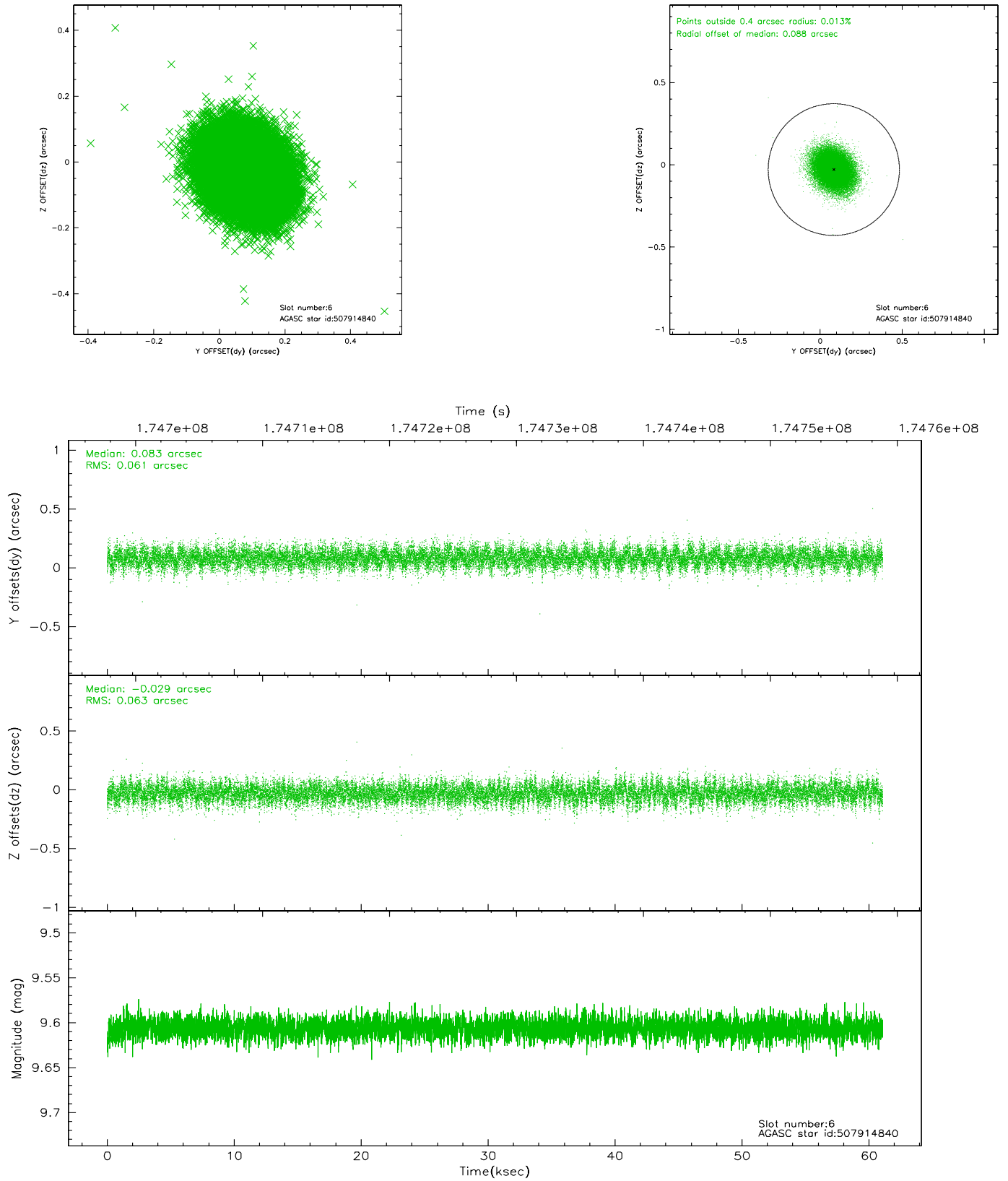
2.4.2 Slot 4



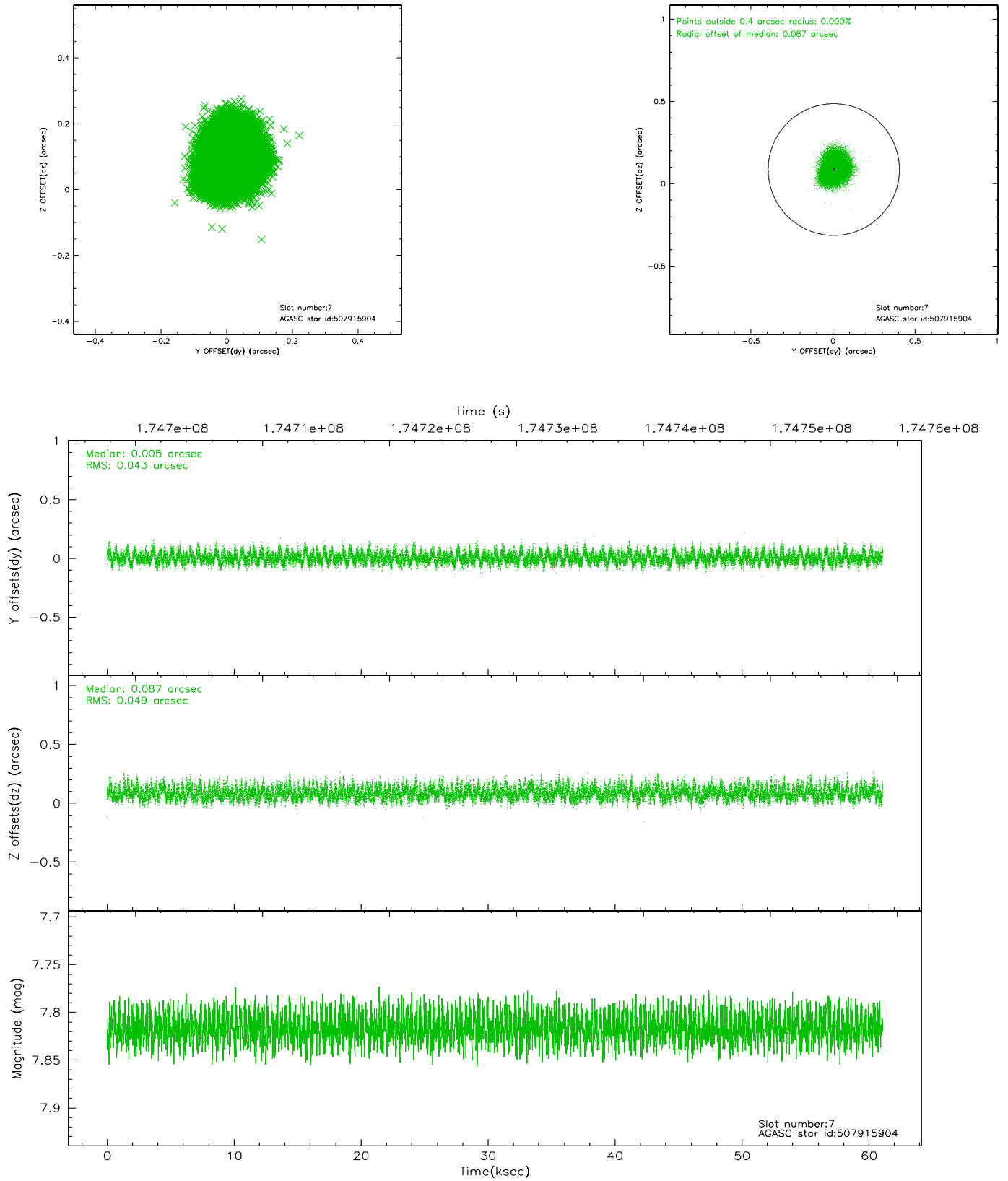
2.4.3 Slot 5



2.4.4 Slot 6

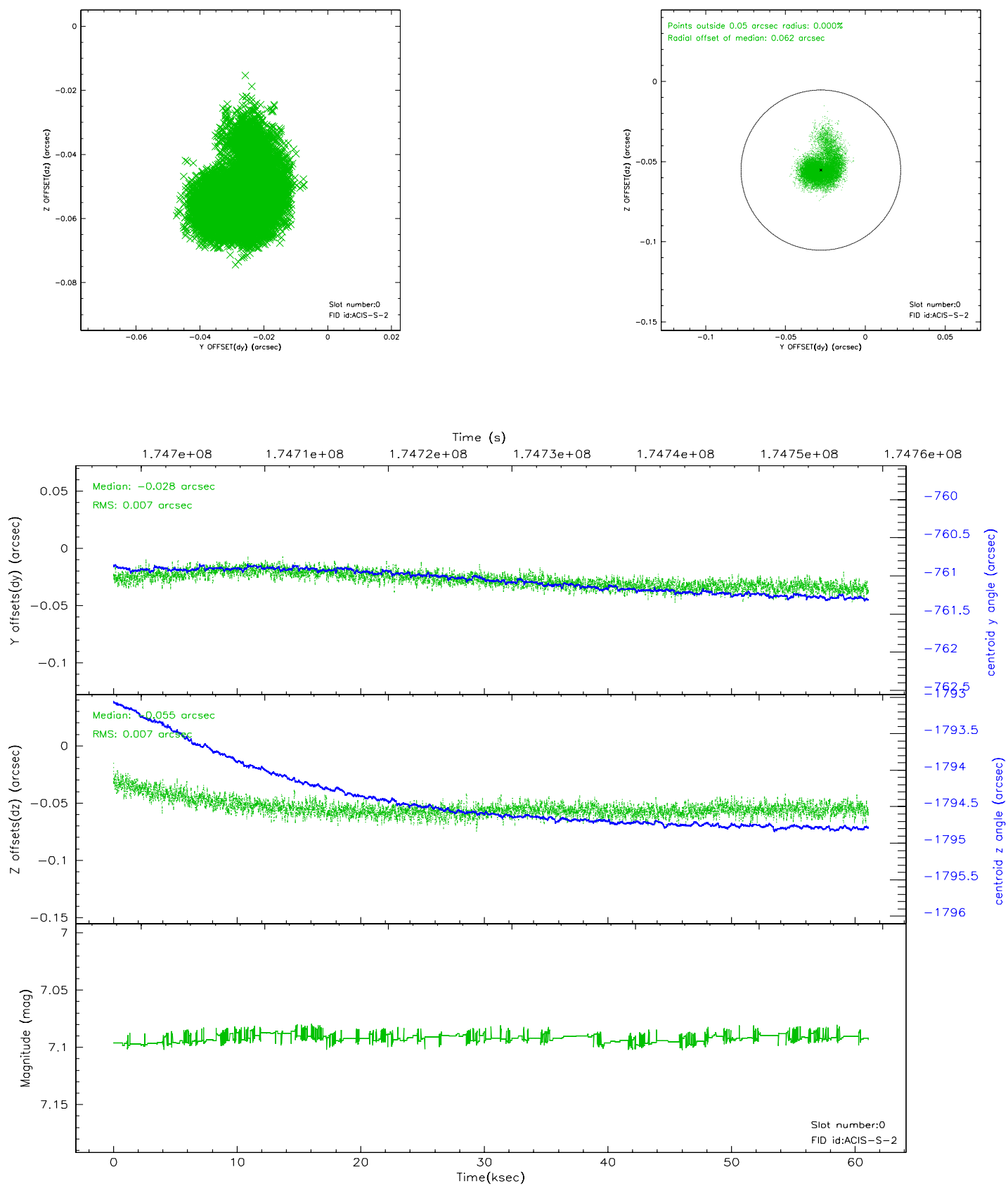


2.4.5 Slot 7

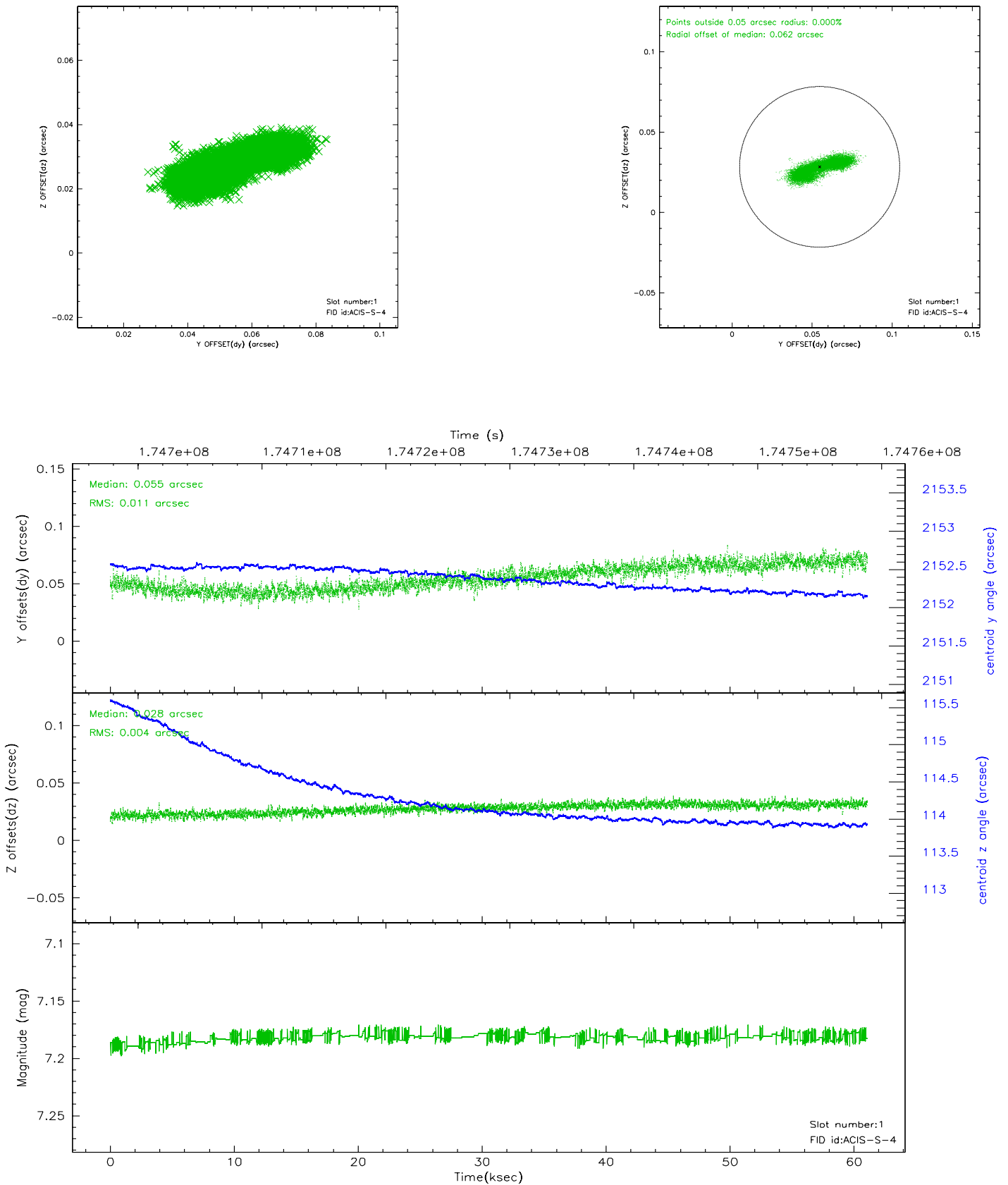


2.5 FID Slots

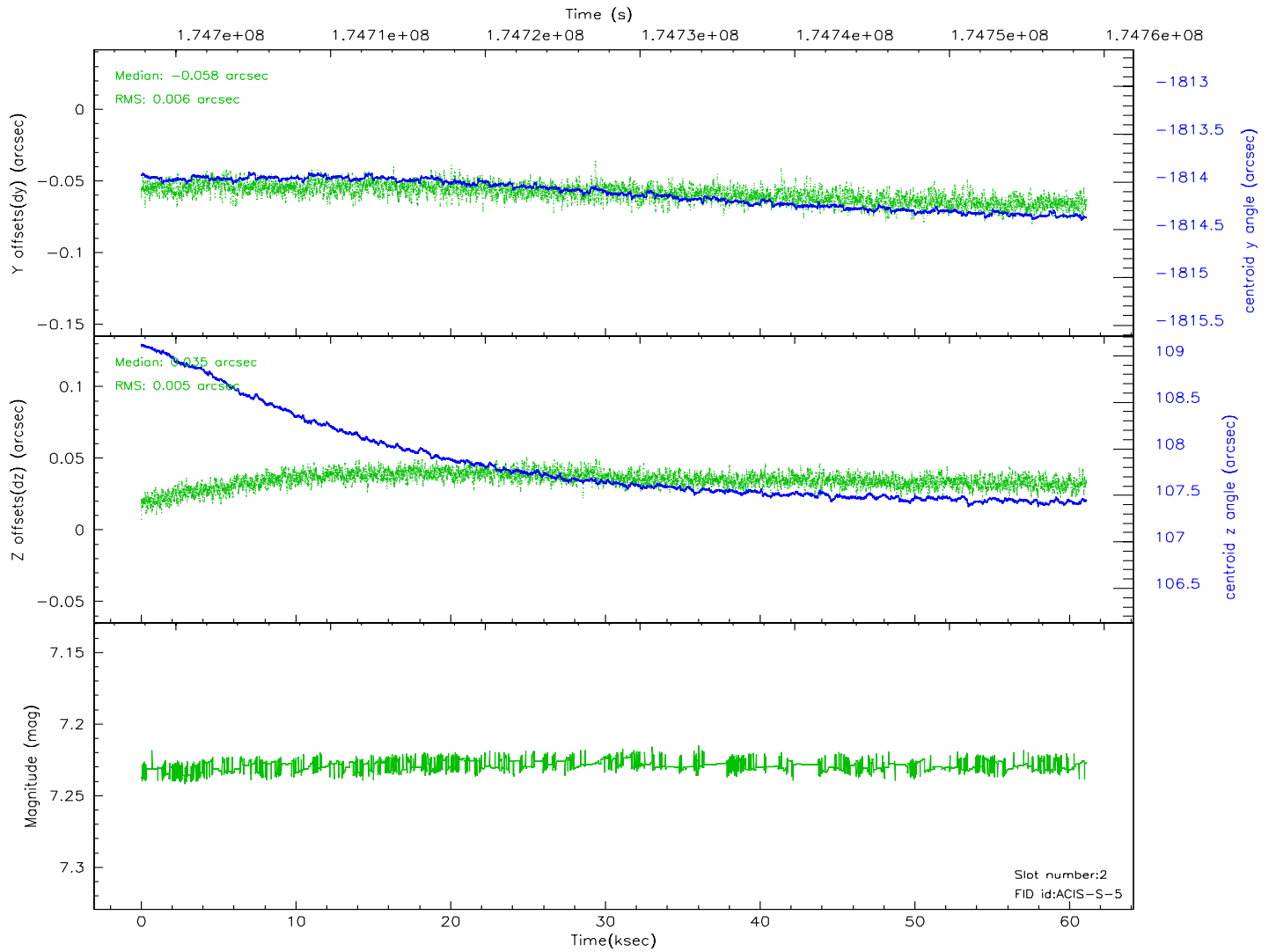
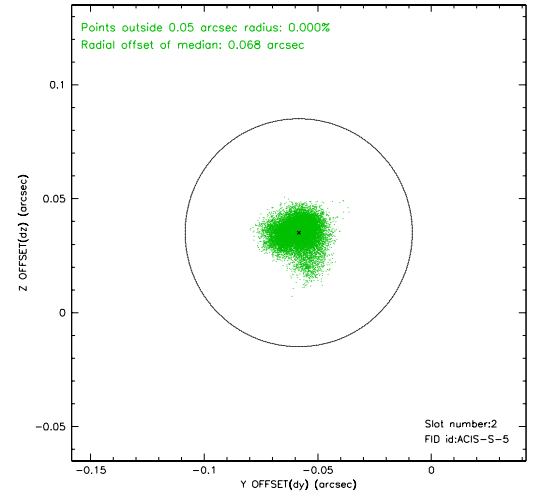
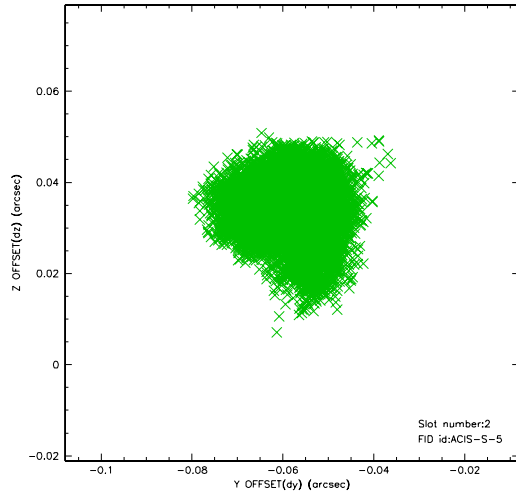
2.5.1 Slot 0



2.5.2 Slot 1

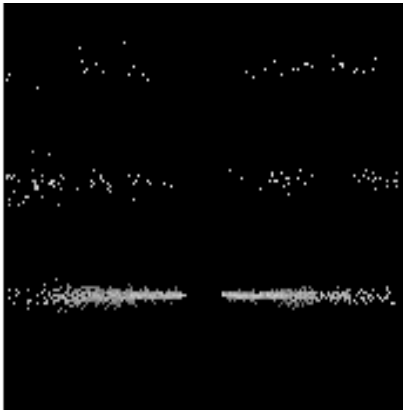


2.5.3 Slot 2

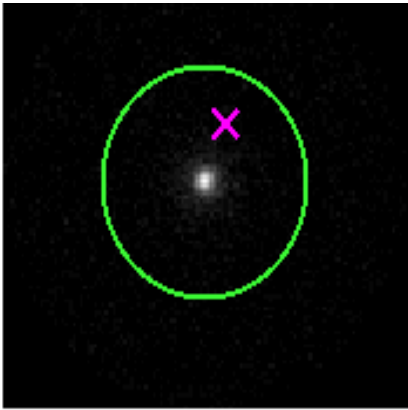


3 Gratings

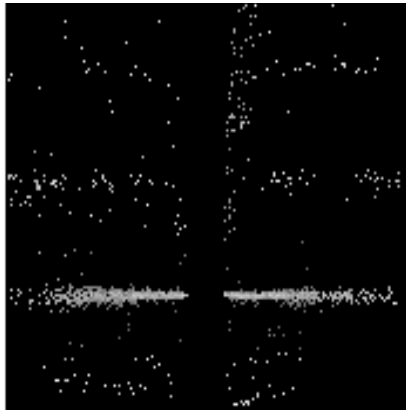
3.1 HEG Arm



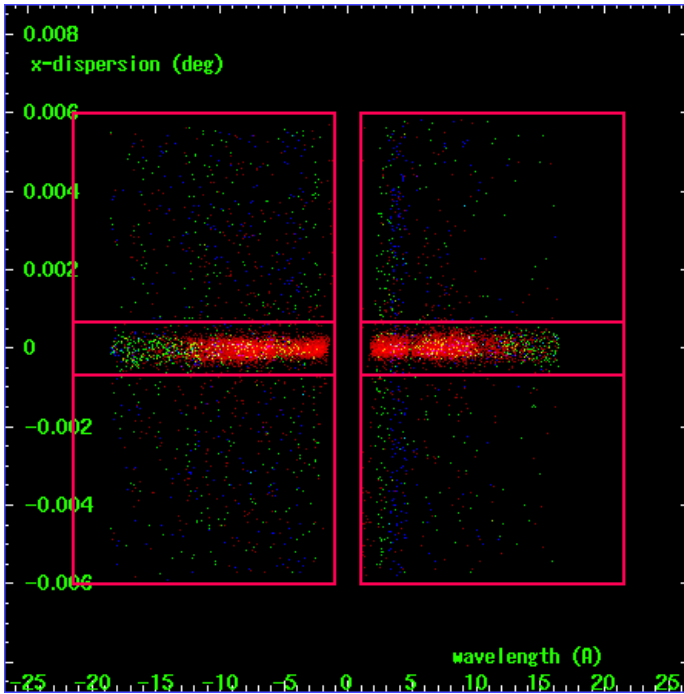
HEG Order Sort 123



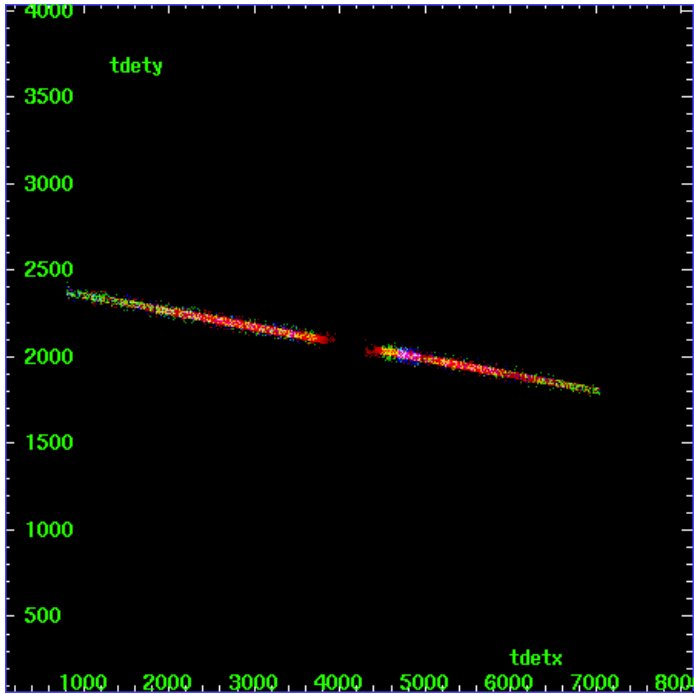
HEG Zero Order



HEG Order Sort ALL

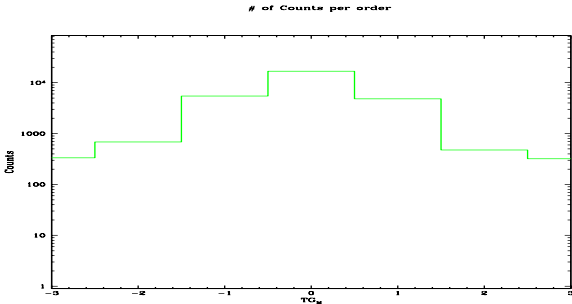


Spot Image HEG

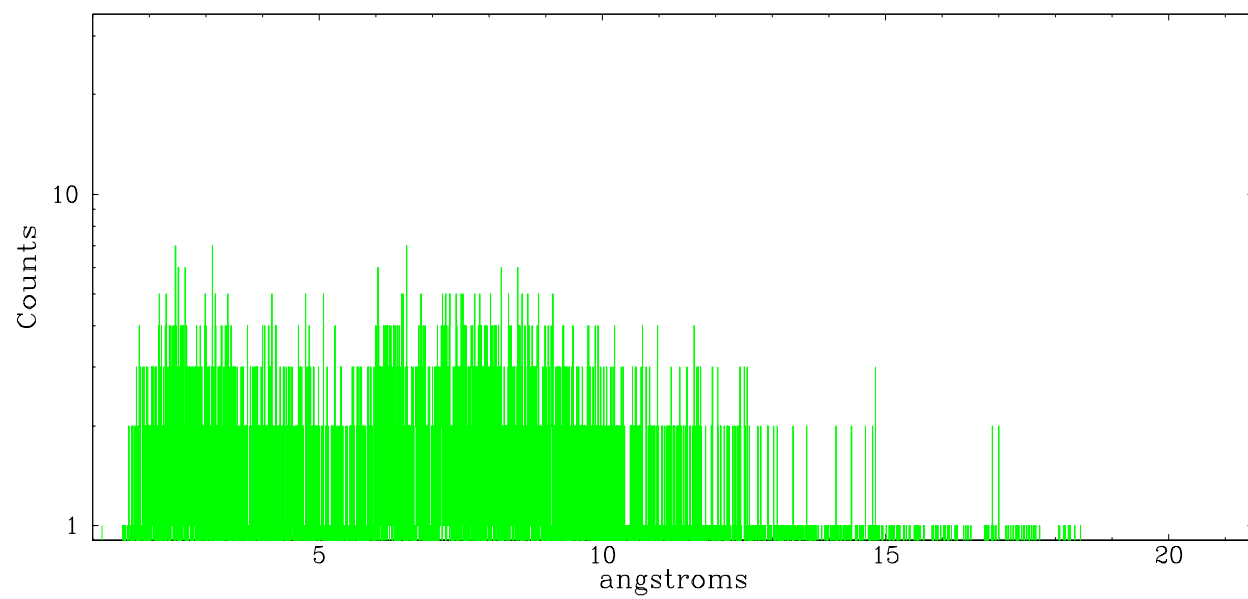


Full Detector HEG

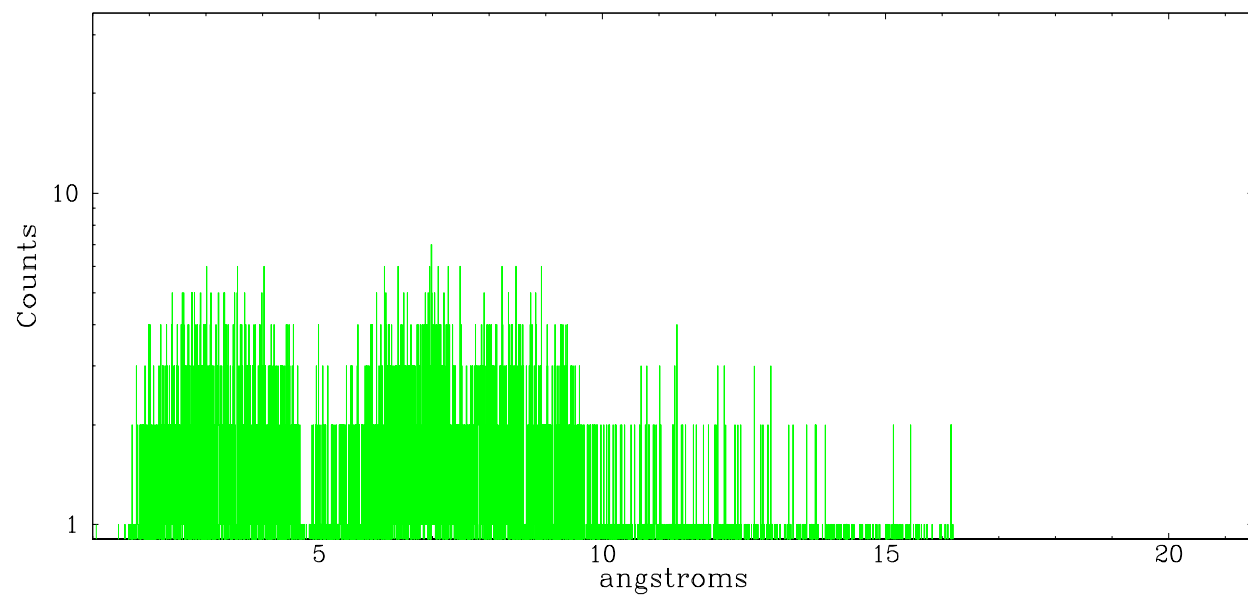
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	333	687	5488	16794	4836	476	321



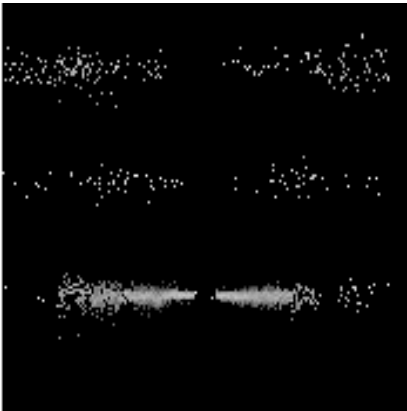
neg order -1



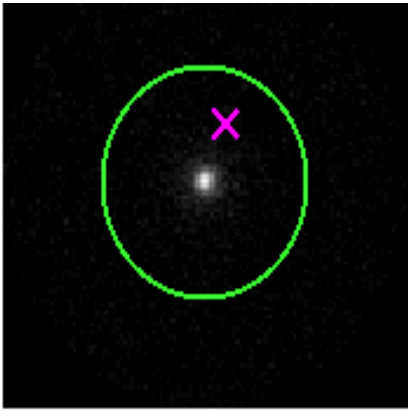
neg order +1



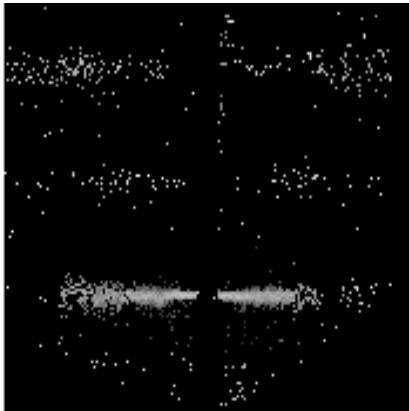
3.2 MEG Arm



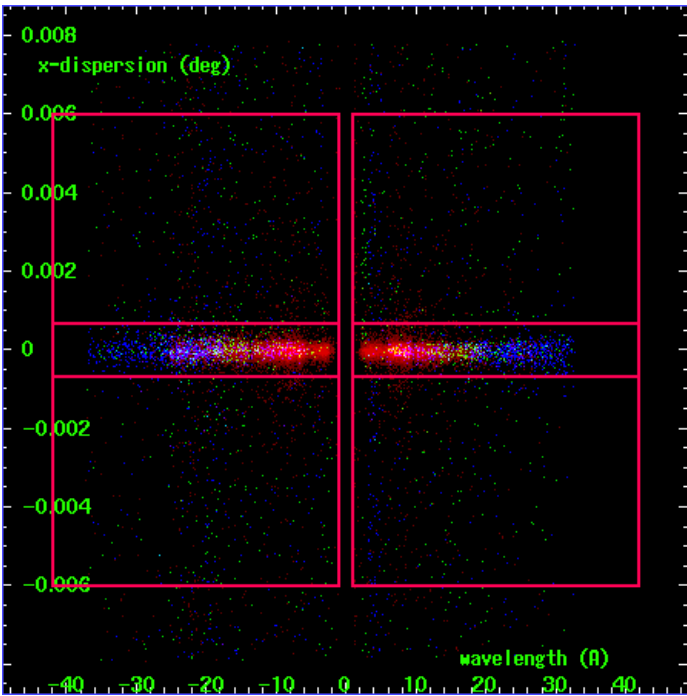
MEG Order Sort 123



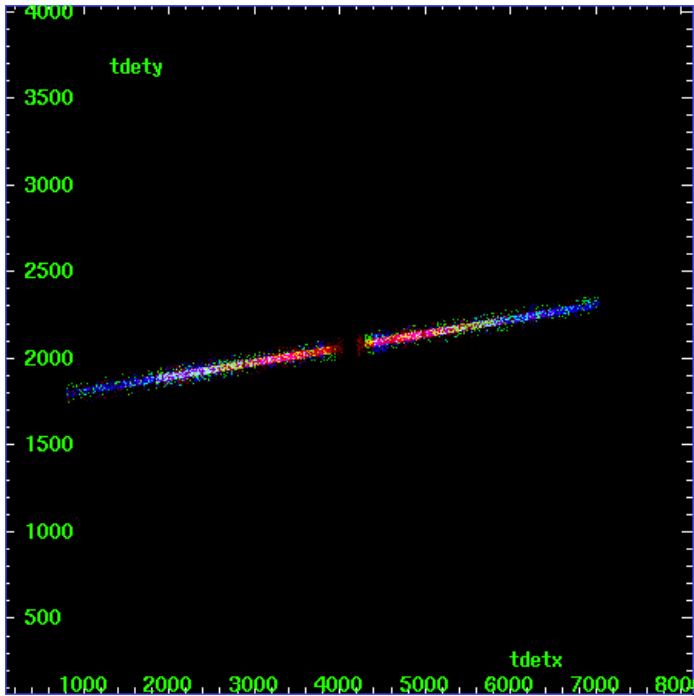
MEG Zero Order



MEG Order Sort ALL

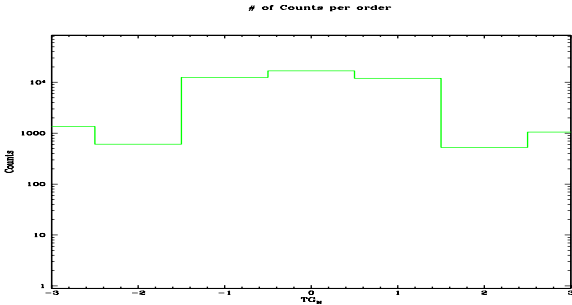


Spot Image MEG

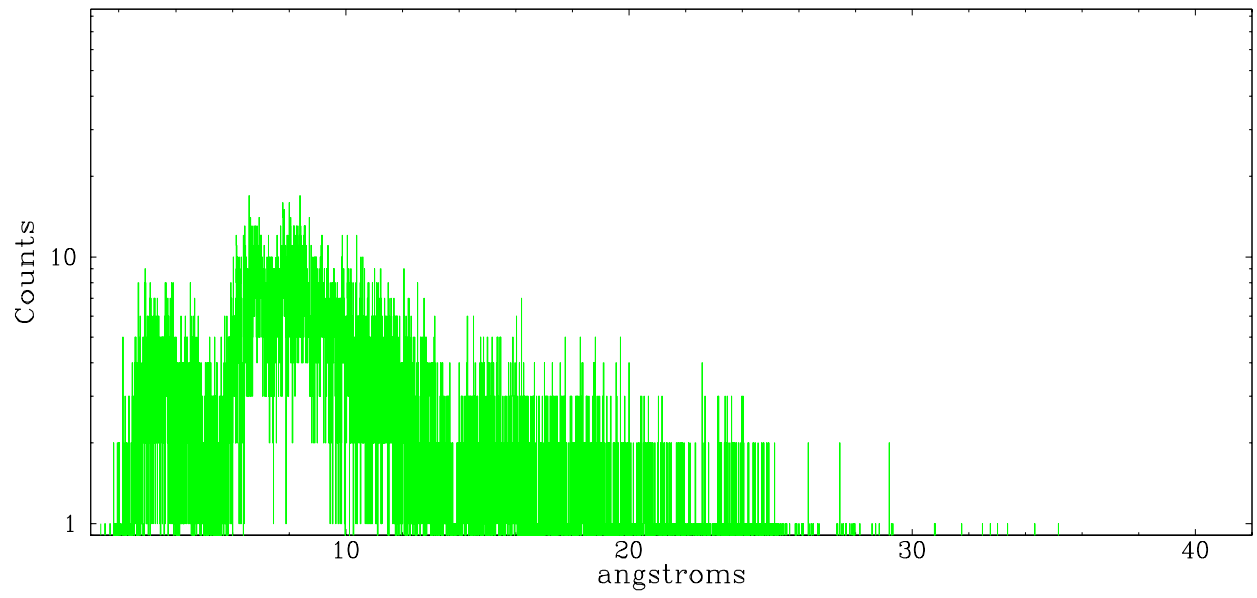


Full Detector MEG

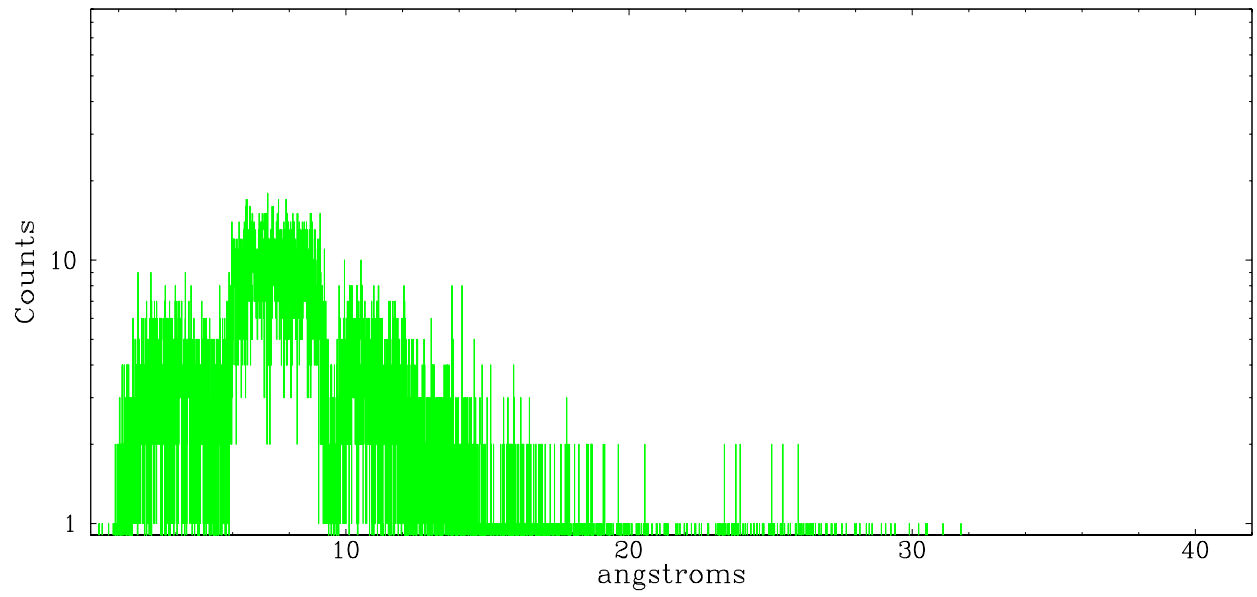
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1354	606	12540	16794	11986	525	1057



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.07.14
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	60.907

A.2 Comments