

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 8993 - L2 Version 2
Chandra X-Ray Center

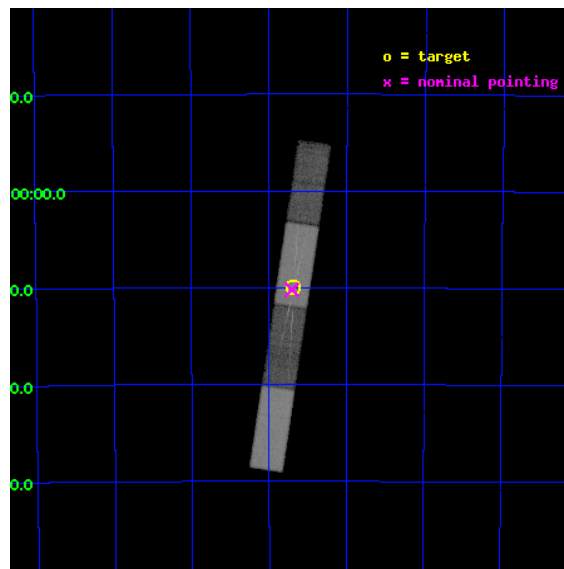
L2 Processing Date : May 18 2012

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

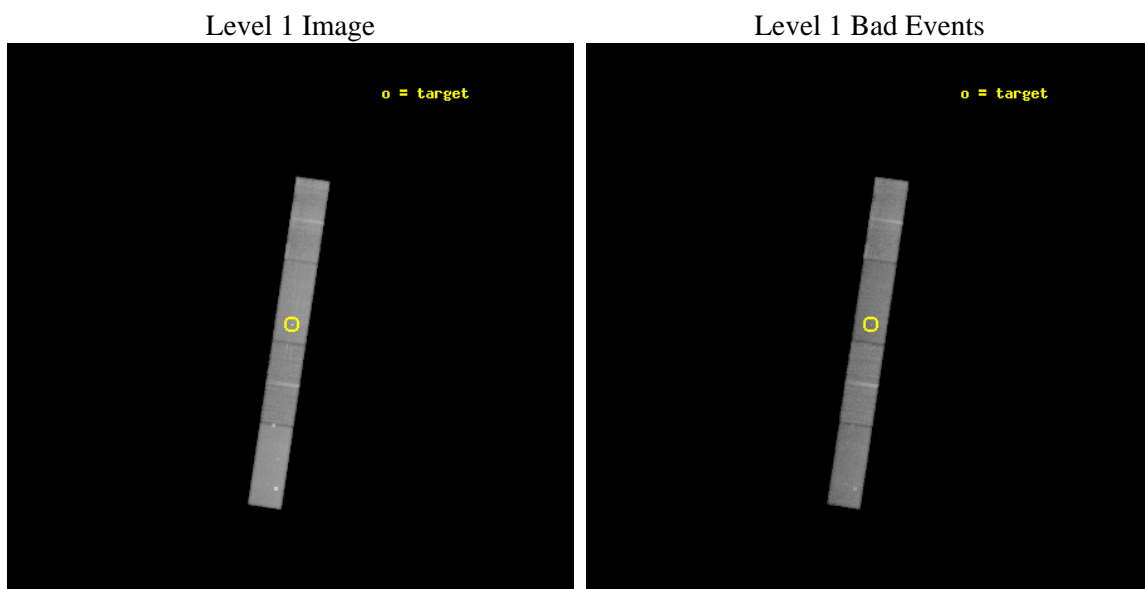
seq_num	400844	Sequence number
obs_id	8993	Observation id
title	Photoionization in the Microquasar Circinus X-1	Proposal title
observer	Dr. Norbert Schulz	Principal investigator
object	Cir X-1	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	230.170833	Observer's specified target RA [deg]
dec_targ	-57.166667	Observer's specified target Dec [deg]
ra_nom	230.17658945127	Nominal RA [deg]
dec_nom	-57.170371868277	Nominal Dec [deg]
roll_nom	278.54217203584	Nominal Roll [deg]
revision	2	Processing version of data
ontime	33719.400309145	Sum of GTIs [s]
livetime	32687.481657437	Livetime [s]
ontime5	33719.400309145	Sum of GTIs [s]
ontime6	33719.400309145	Sum of GTIs [s]
ontime7	33719.400309145	Sum of GTIs [s]
ontime8	33719.400309145	Sum of GTIs [s]
l2events	208032	Number of level 2 events



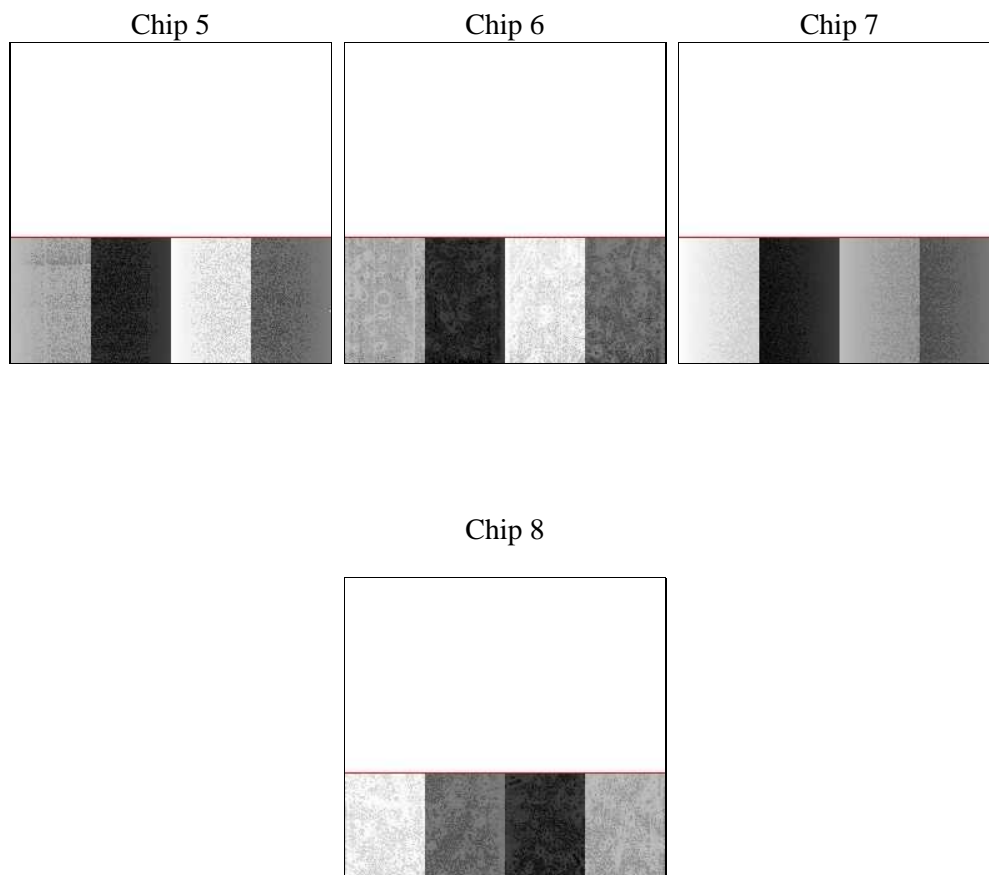
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	33536.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	33719.400309145	Sum of GTIs [s]
caldsver	4.4.9	 	ontime5	33719.400309145	Sum of GTIs [s]
date	2012-05-18T03:57:12	Date and time of file creation	ontime6	33719.400309145	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	33719.400309145	Sum of GTIs [s]
			ontime8	33719.400309145	Sum of GTIs [s]
			l1events	722570	Number of level 1 events

2.1.4 Events

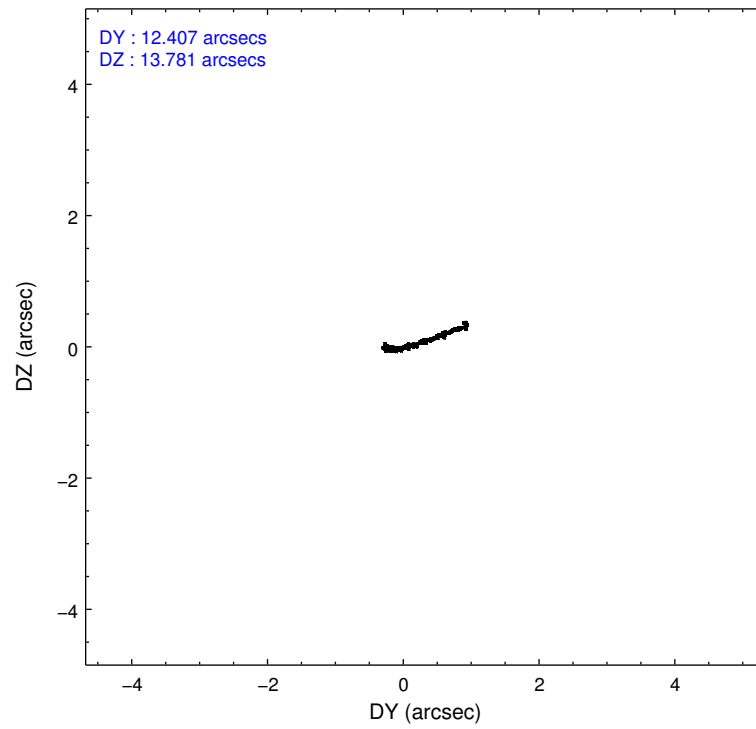
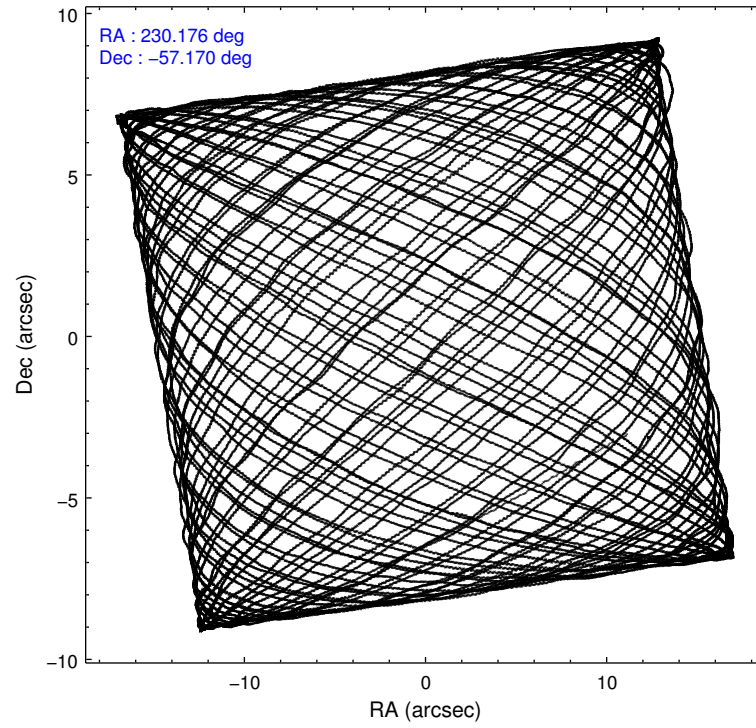
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	210221	141451	188467	182431
rejected events	108429	120790	102598	139804
rejected %	51%	85%	54%	76%

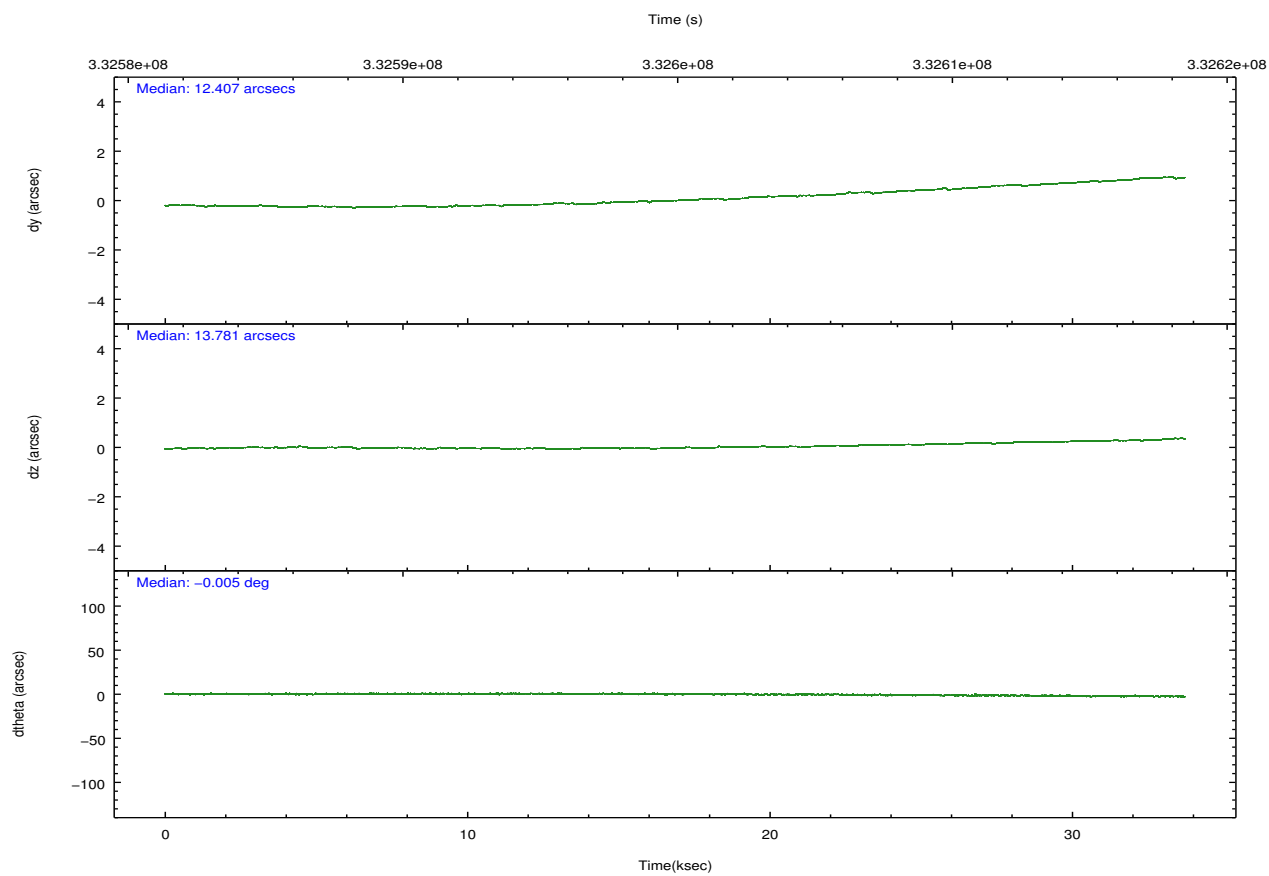
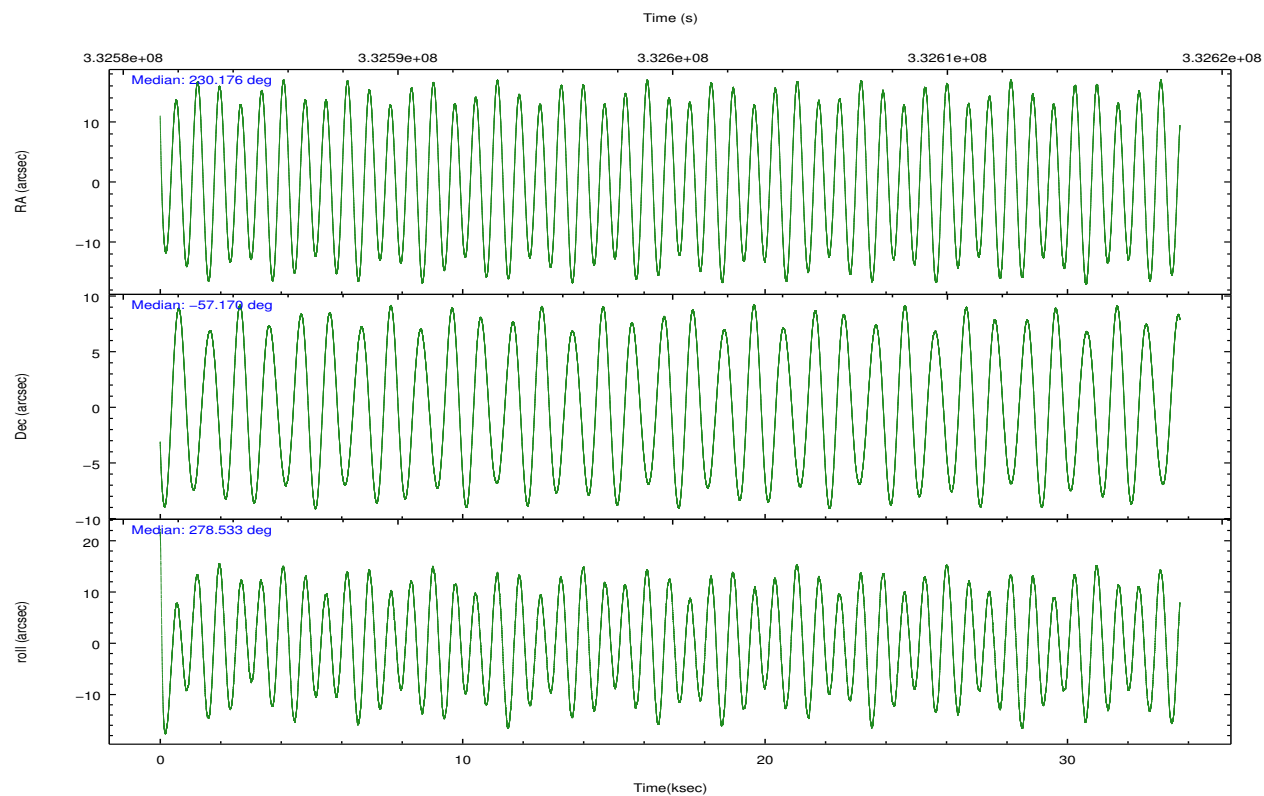
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	16333	8826	8591	12685
	7%	6%	4%	6%
grade 1 events	1521	63	207	95
	0%	0%	0%	0%
grade 2 events	27119	3877	17826	9138
	12%	2%	9%	5%
grade 3 events	5826	2329	8307	4871
	2%	1%	4%	2%
grade 4 events	5573	2203	8220	4511
	2%	1%	4%	2%
grade 5 events	16354	5766	16648	7855
	7%	4%	8%	4%
grade 6 events	47527	3523	43382	11621
	22%	2%	23%	6%
grade 7 events	89968	114864	85286	131655
	42%	81%	45%	72%

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	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	230.144669	230.1765894512703	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-57.149213	-57.17037186827697	Subarray start row	1	1
[deg] Pointing Roll	278.358714	278.5421720358406	Subarray row count	400	400
[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	1.3
[mm] SIM translation stage pos	-182.642523	-182.6373491900168			
[mm] SIM translation stage offset	-7.49	-7.495173392990978			
Phase constraints	Y	Y			
[d] Phase period	16.540100	16.540100			
[d] Phase epoch (MJD)	52017.548980	52017.548980			
Phase start	0.960000	0.960000			
Phase end	0.990000	0.990000			
Phase start error	0.010000	0.010000			
Phase end error	0.010000	0.010000			
[s] Observation start time (MET)	332583222.184000	332582340.37045			
Observation start date	2008-07-16T08:12:37	2008-07-16T07:59:00			
[s] Observation end time (MET)	332616758.184000	332617404.08466			
Observation end date	2008-07-16T17:31:33	2008-07-16T17:43:24			
Read mode	TIMED	TIMED			

2.3 Aspect



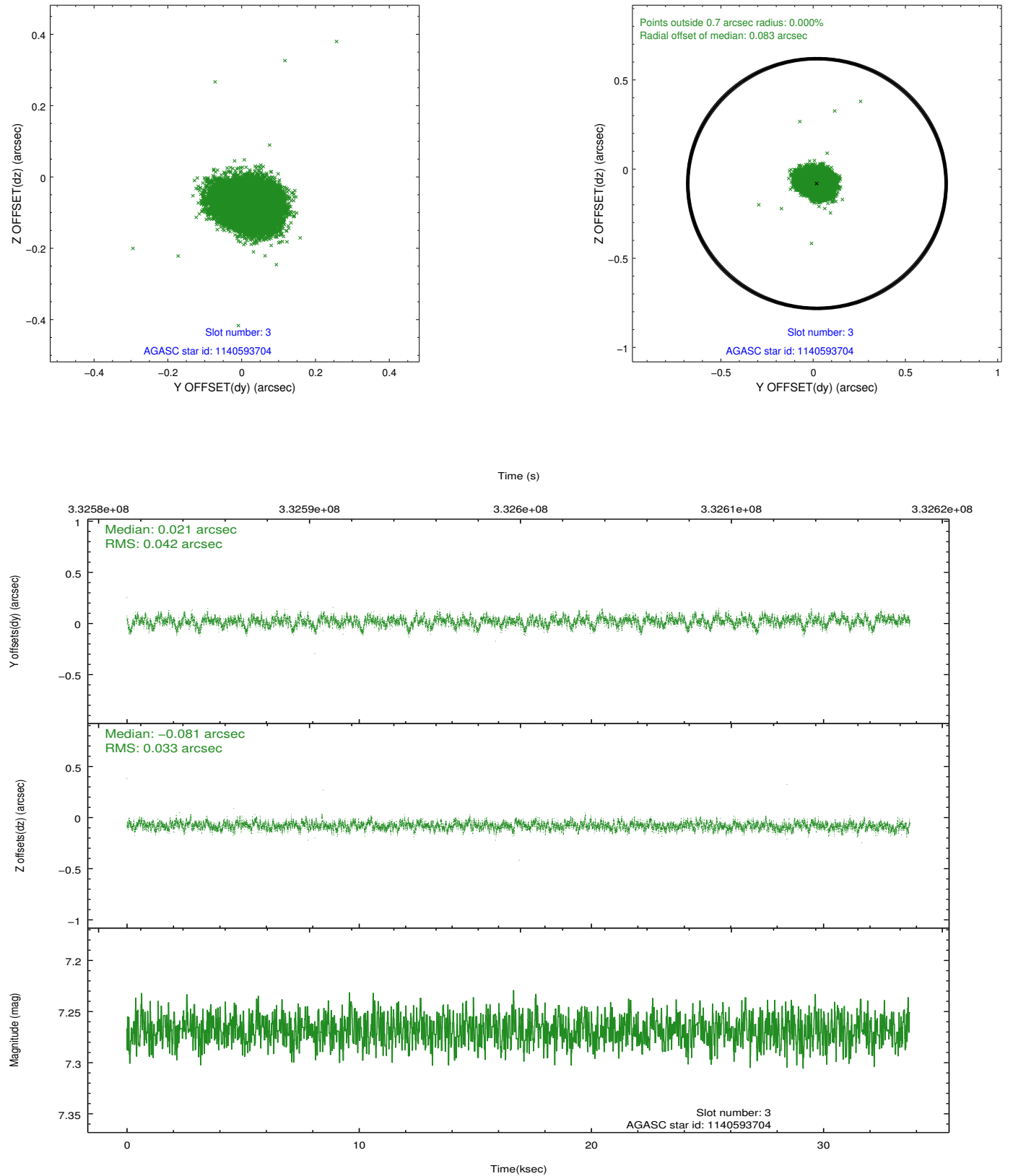


Slot Statistics

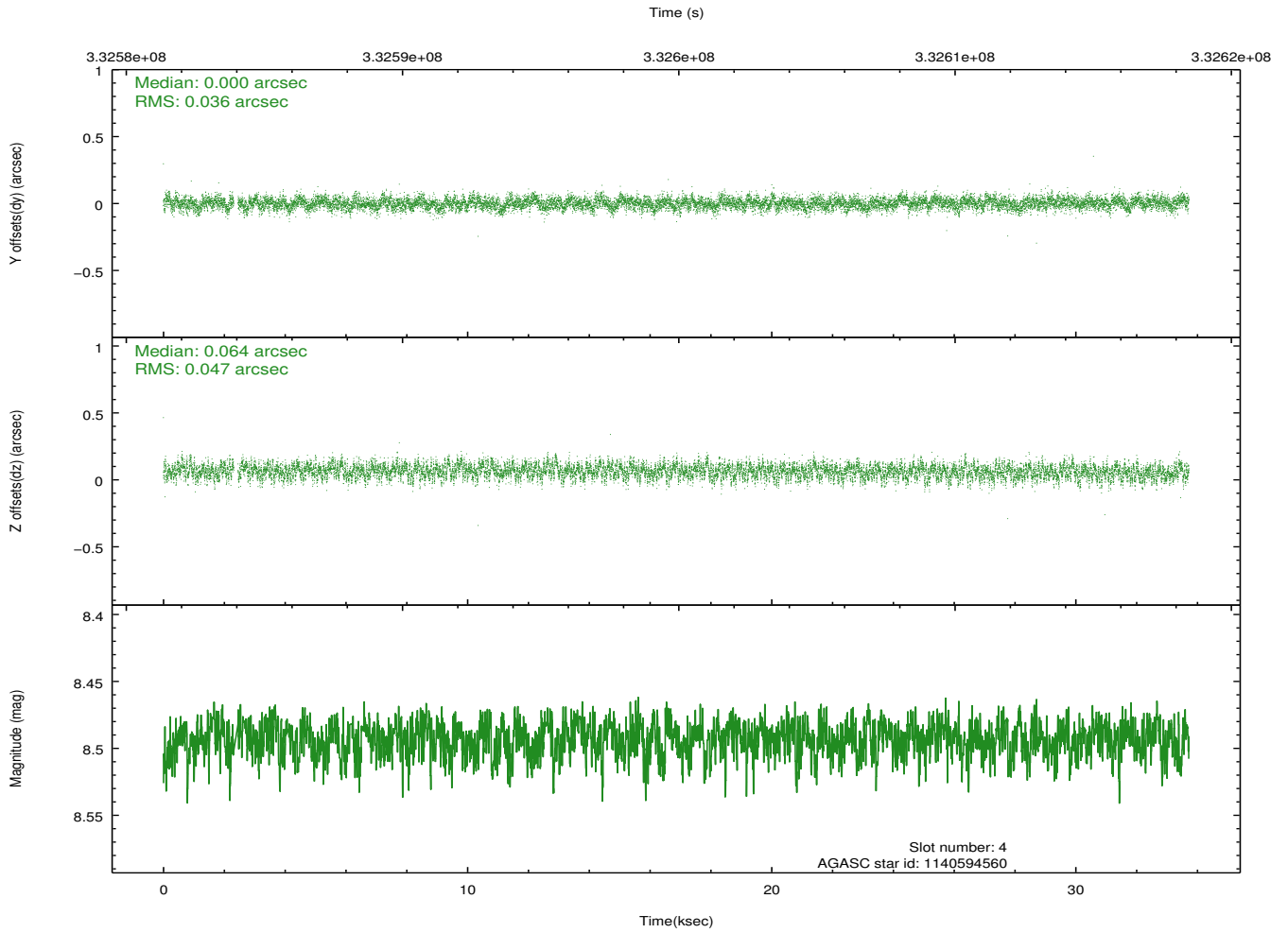
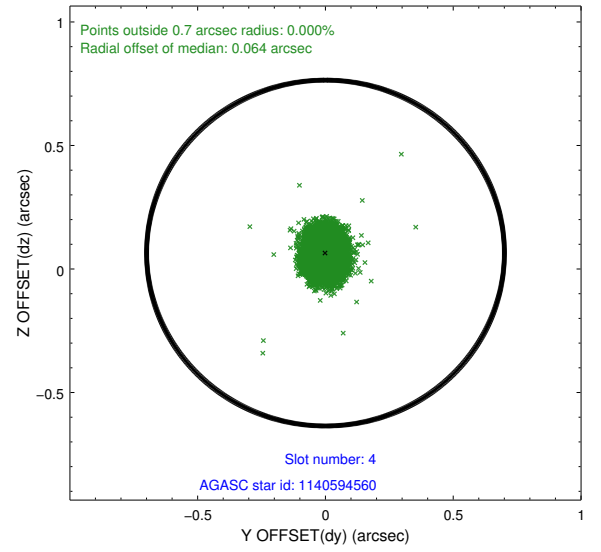
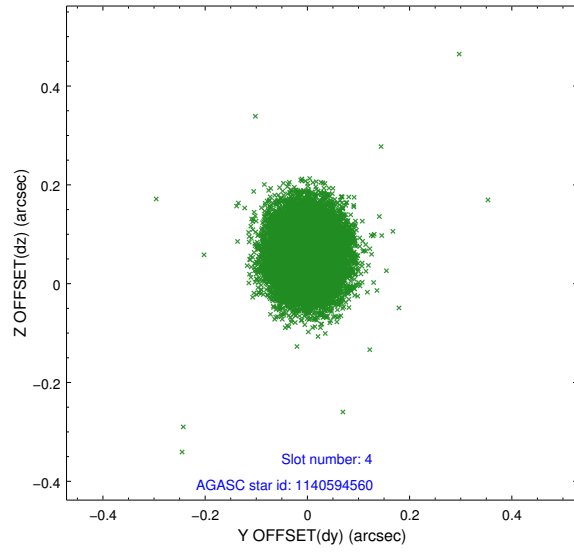
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.96	8225	0.031	0.145	0.012	0.024	0.000000	0.000000	931.15	-1885.10
1	FID	ACIS-S-4	6.94	8224	0.097	-0.111	0.009	0.021	0.000000	0.000000	2148.65	18.71
2	FID	ACIS-S-5	6.98	8226	-0.153	-0.022	0.013	0.042	0.000000	0.000000	-1817.84	12.47
3	GUIDE	1140593704	7.27	16449	0.021	-0.081	0.057	0.093	229.741417	-57.540991	1284.79	-975.75
4	GUIDE	1140594560	8.49	16379	0.000	0.064	0.063	0.102	229.144979	-57.397081	615.63	-2049.82
5	GUIDE	1140723840	8.60	16445	0.086	-0.101	0.066	0.107	230.379592	-56.994965	-481.43	536.45
6	GUIDE	1140726312	8.88	16442	-0.090	0.012	0.076	0.123	231.010622	-56.676215	-1425.02	1940.15
7	GUIDE	1140722800	9.16	16432	-0.016	0.108	0.089	0.143	231.057080	-56.699276	-1328.79	2018.32

2.4 Star Slots

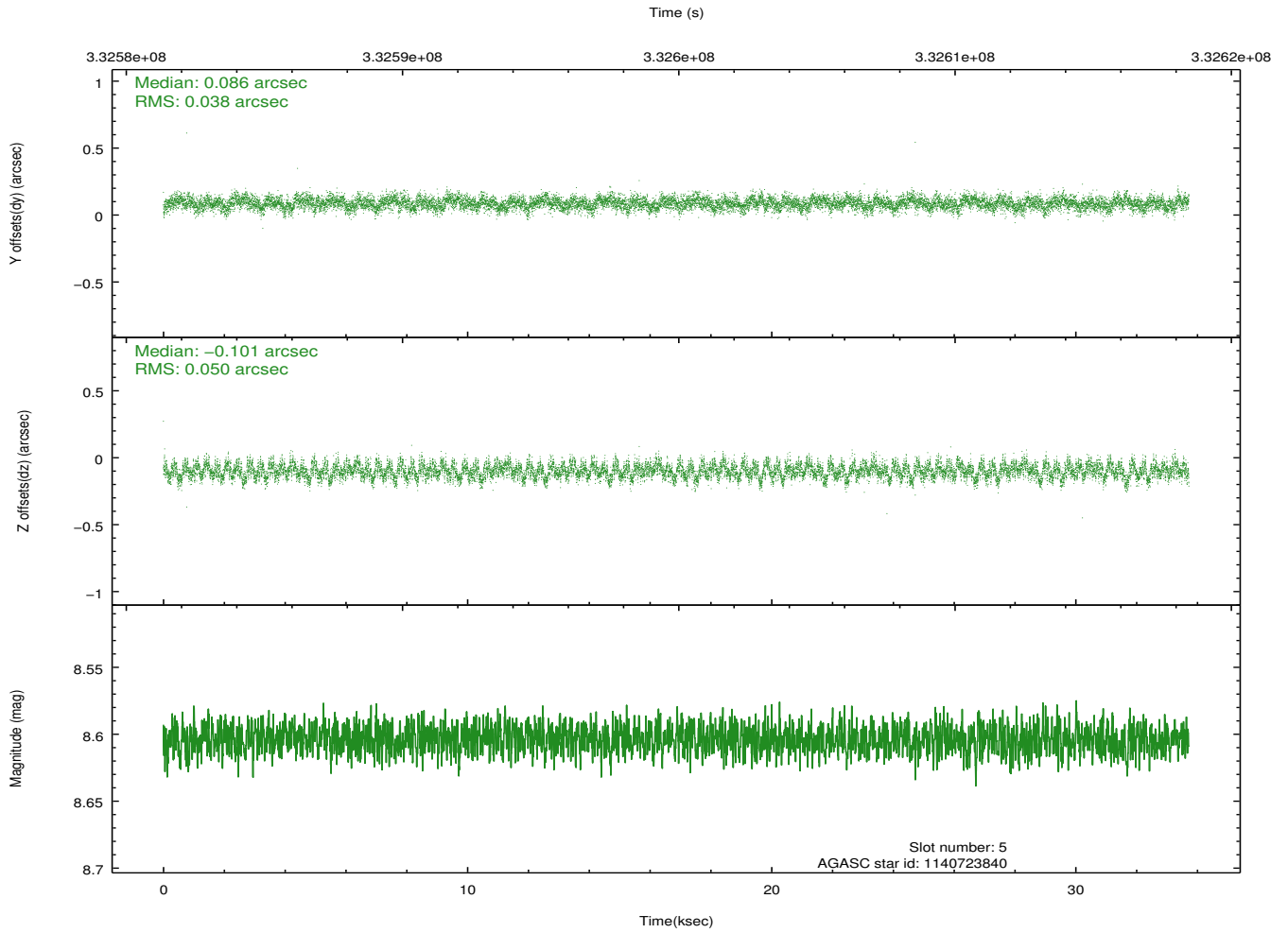
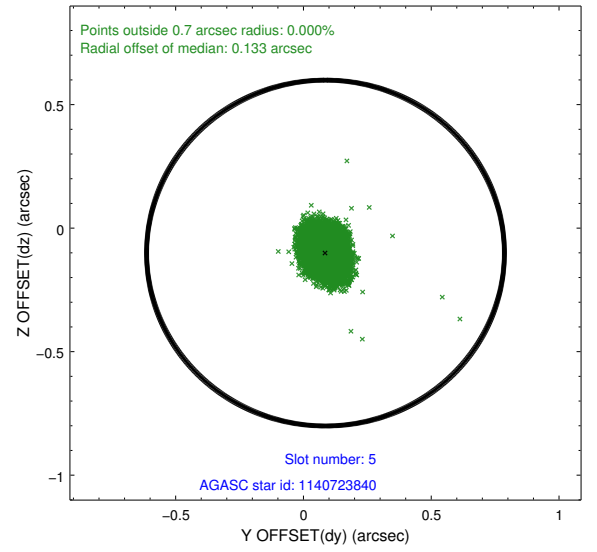
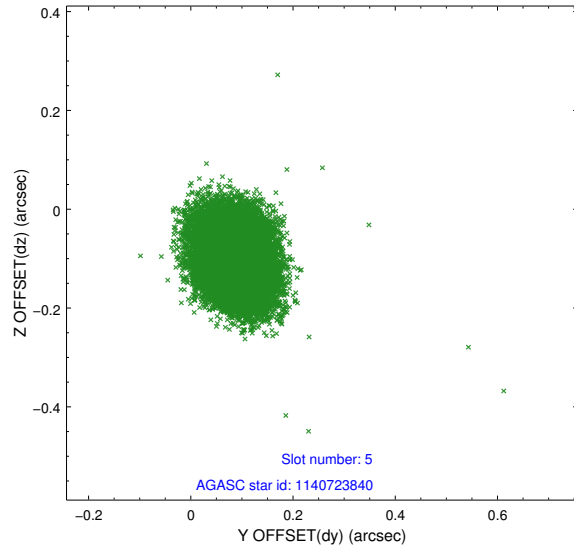
2.4.1 Slot 3



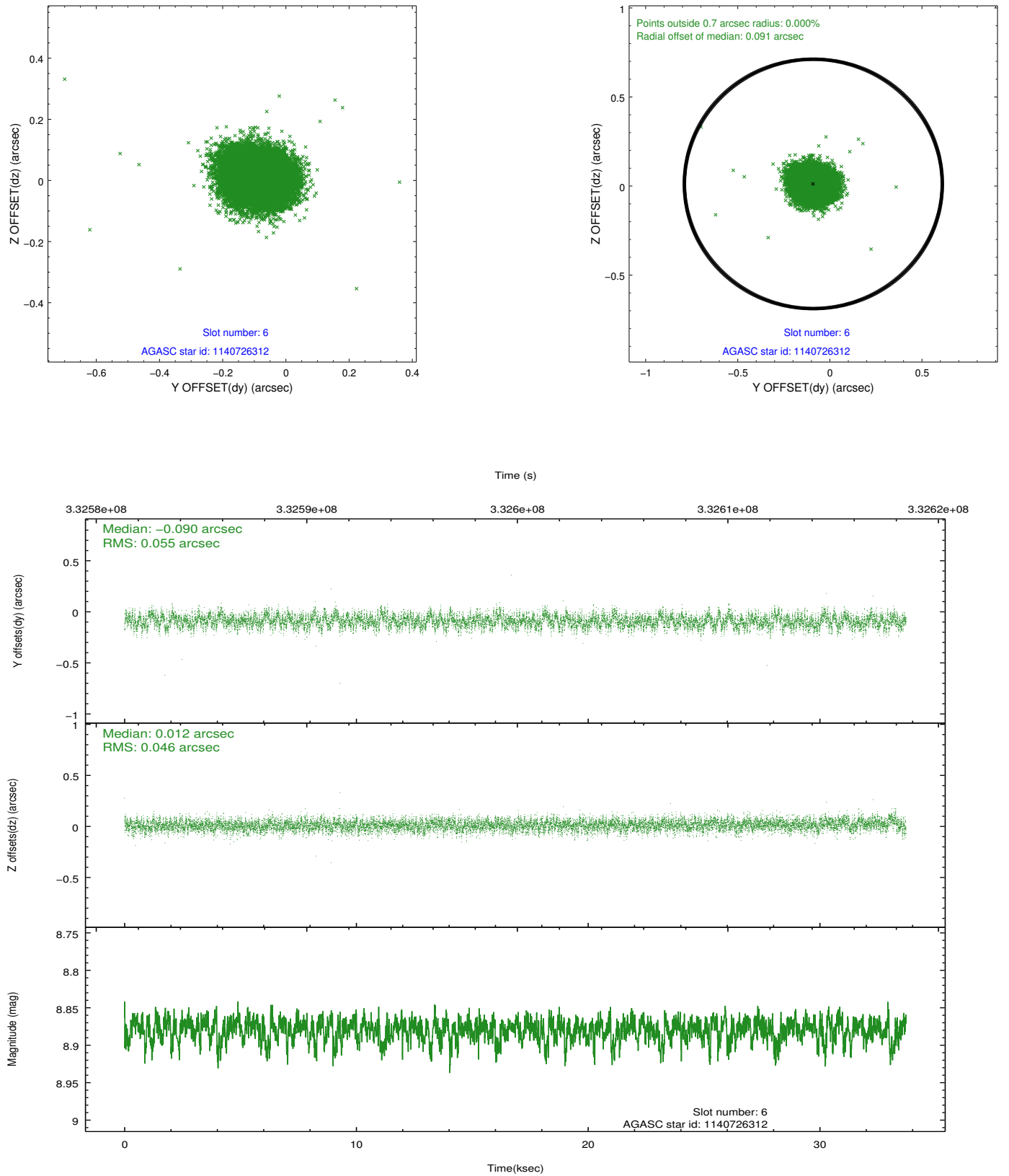
2.4.2 Slot 4



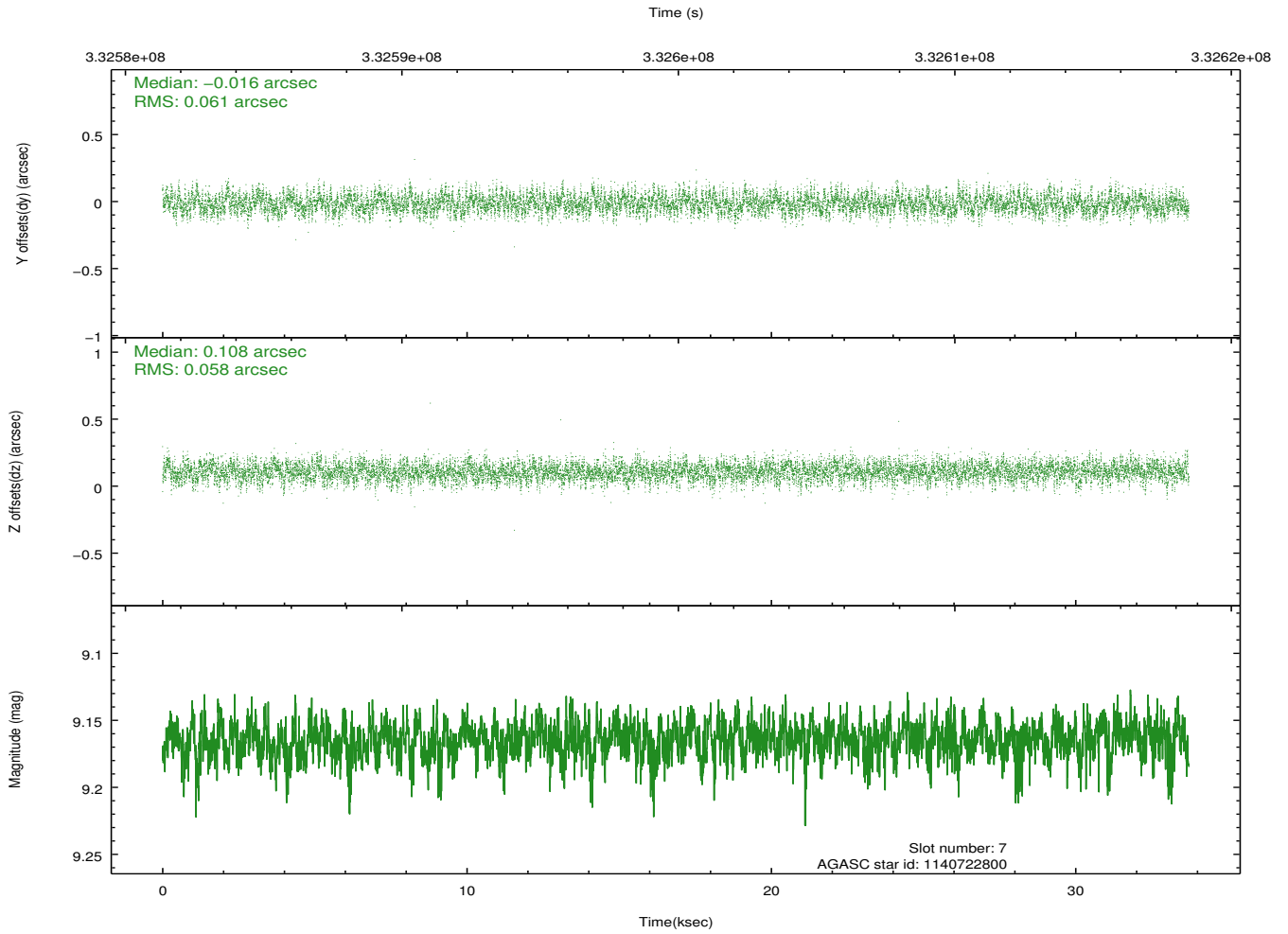
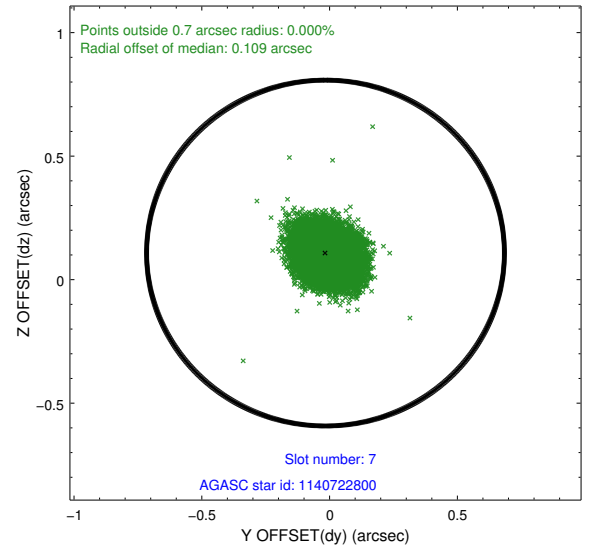
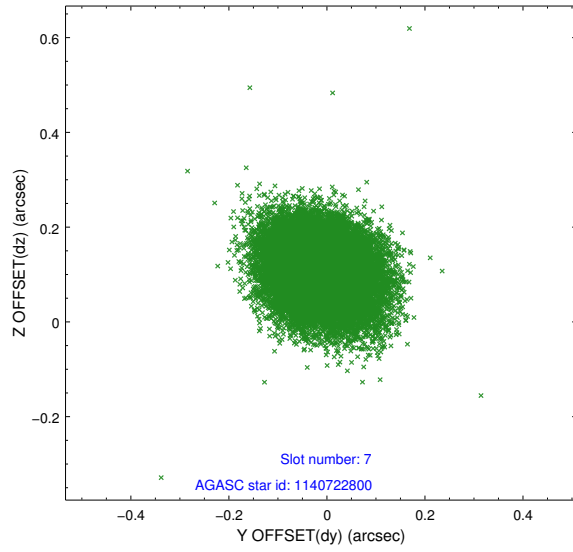
2.4.3 Slot 5



2.4.4 Slot 6

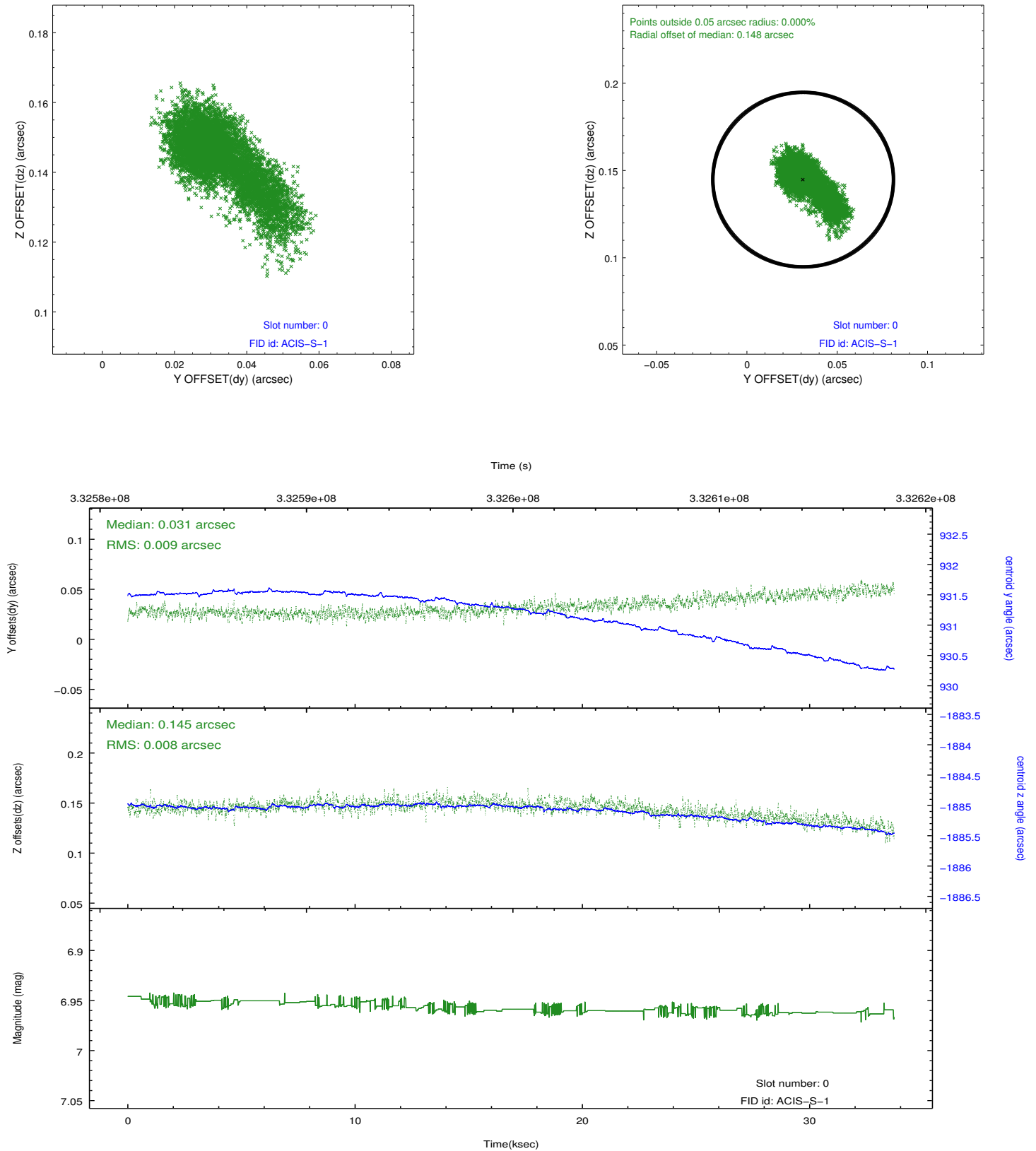


2.4.5 Slot 7

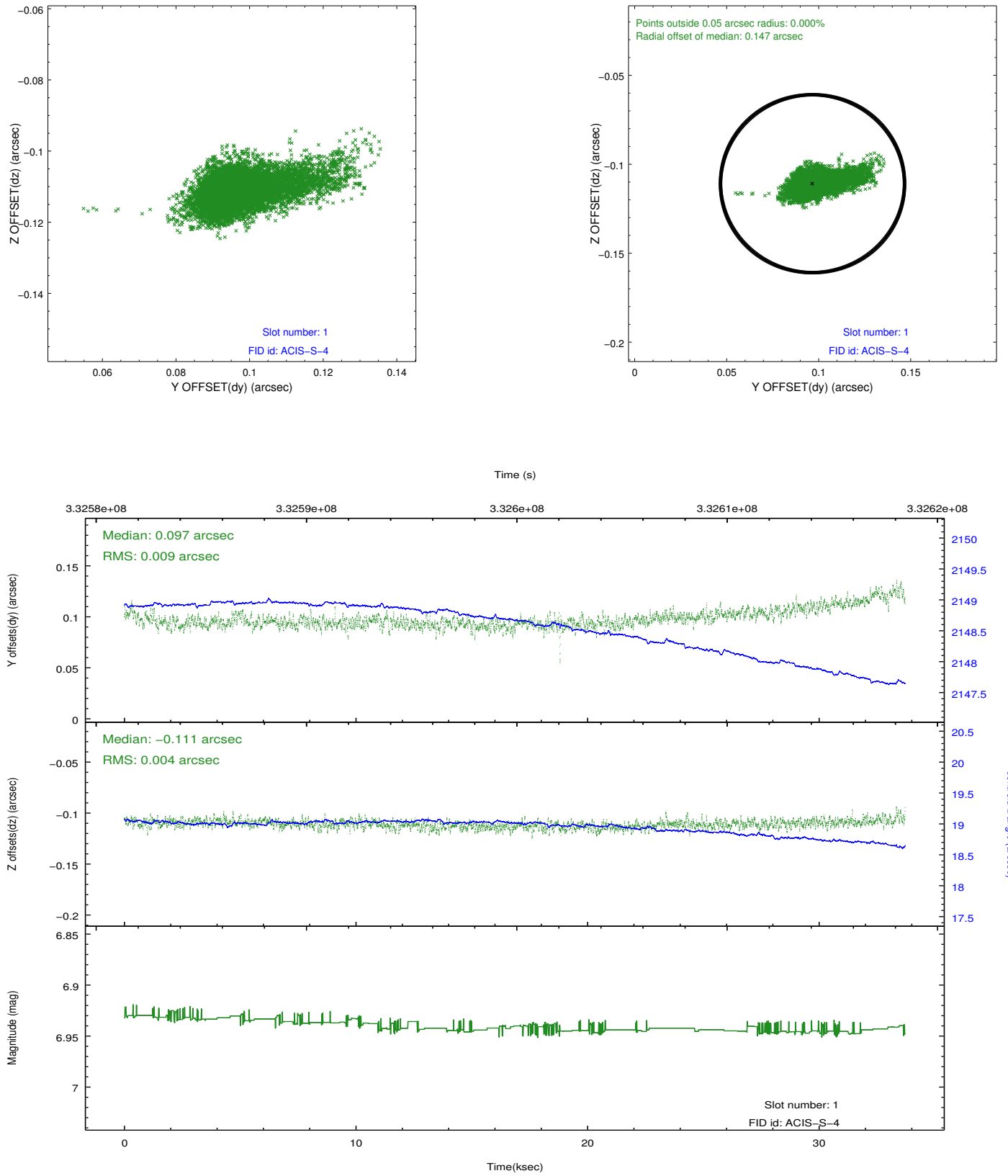


2.5 FID Slots

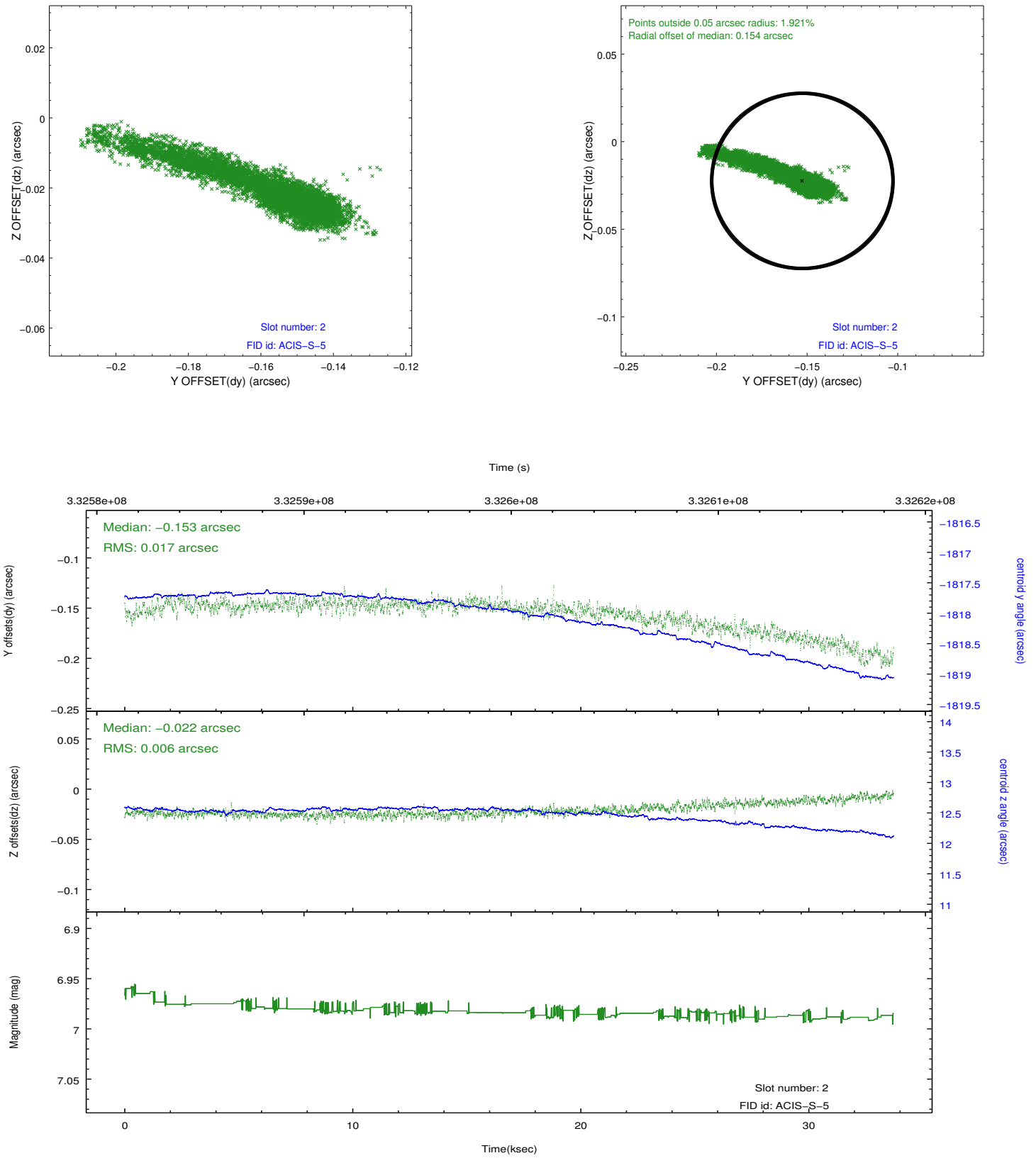
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

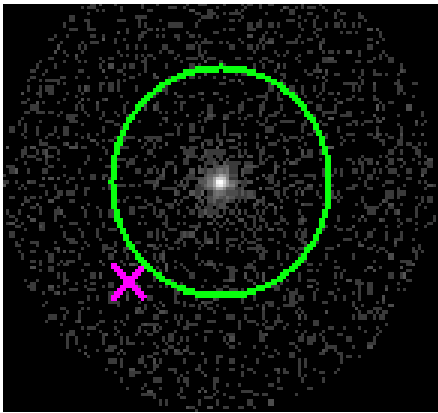


3 Gratings

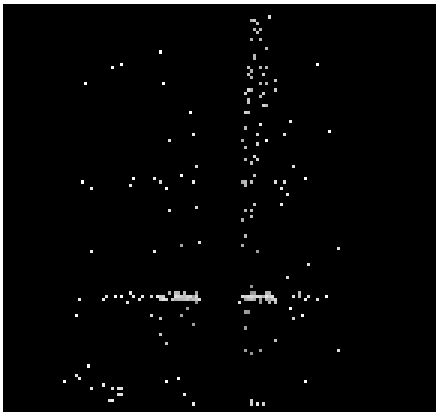
3.1 HEG Arm



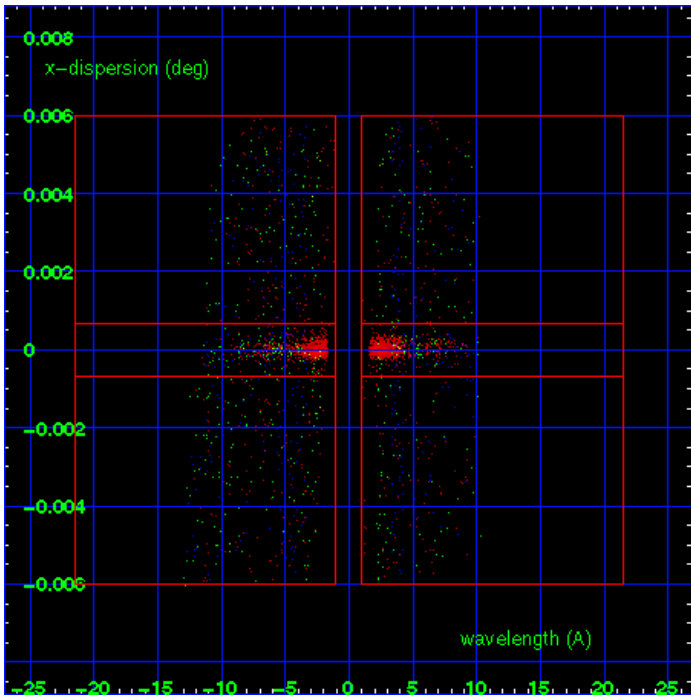
HEG Order Sort 123



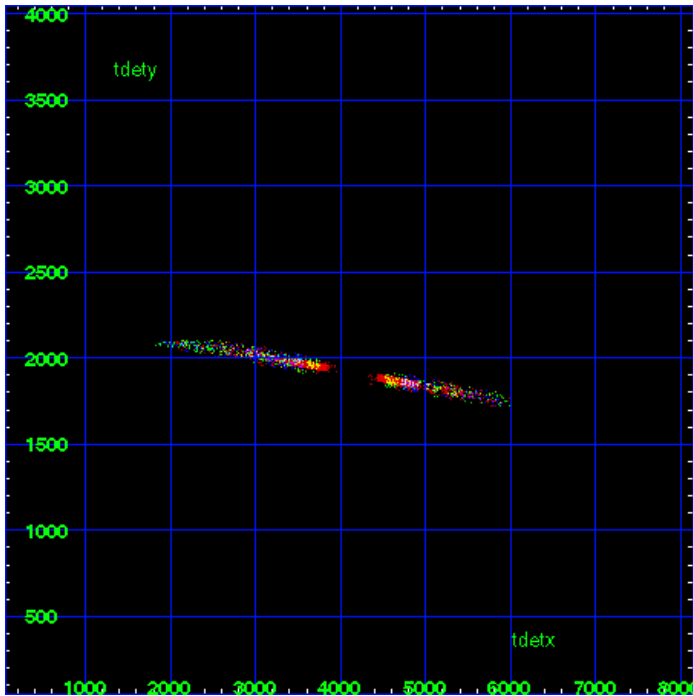
HEG Zero Order



HEG Order Sort ALL

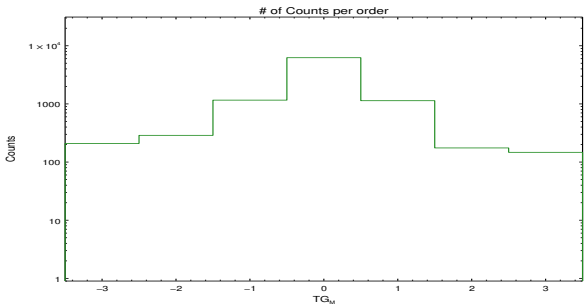


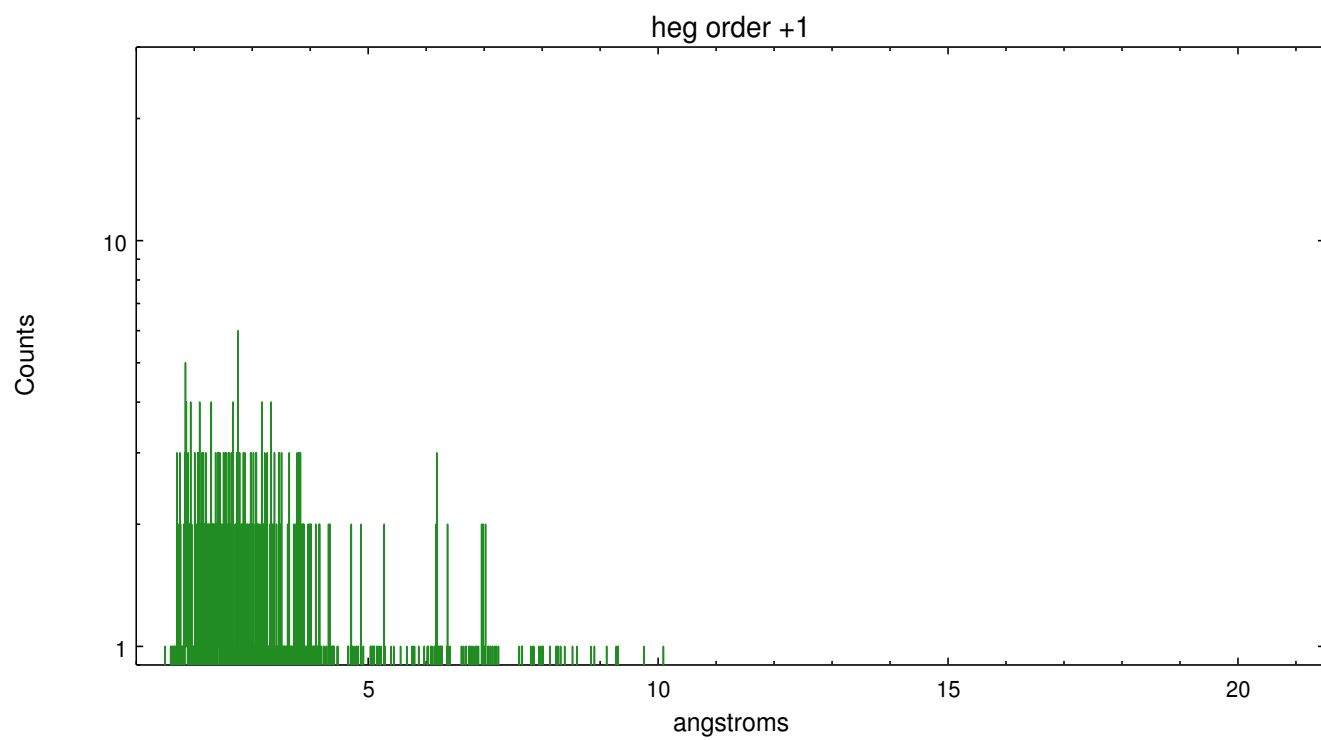
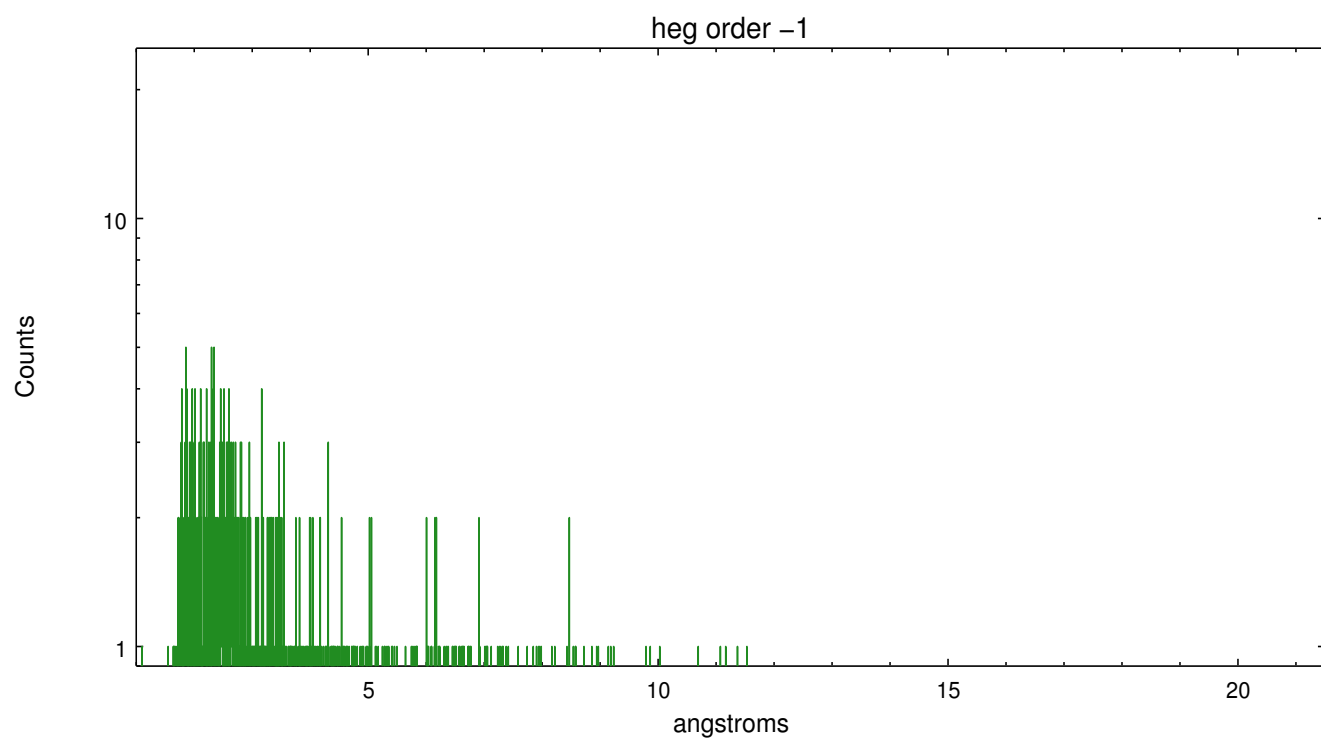
Spot Image HEG



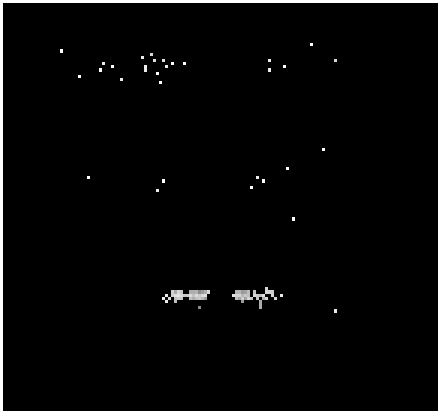
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	209	288	1161	6232	1136	175	147

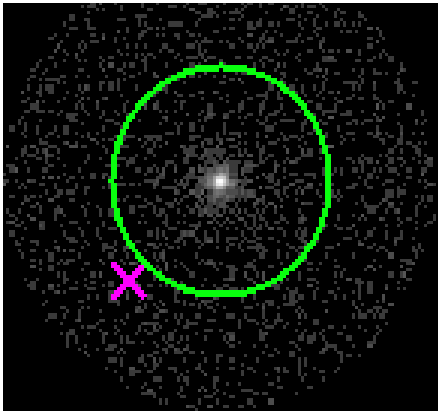




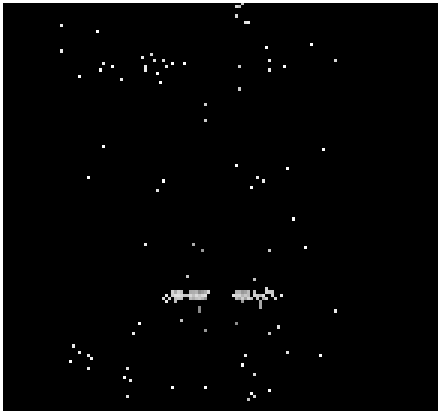
3.2 MEG Arm



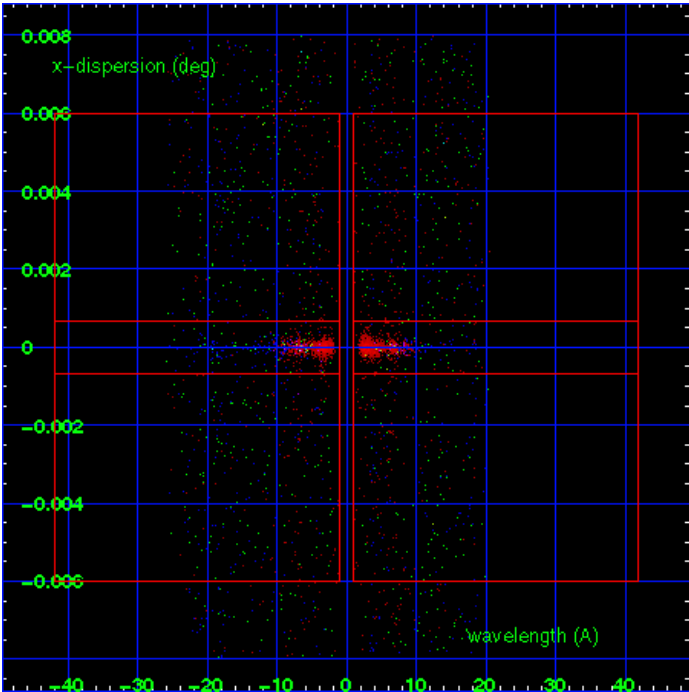
MEG Order Sort 123



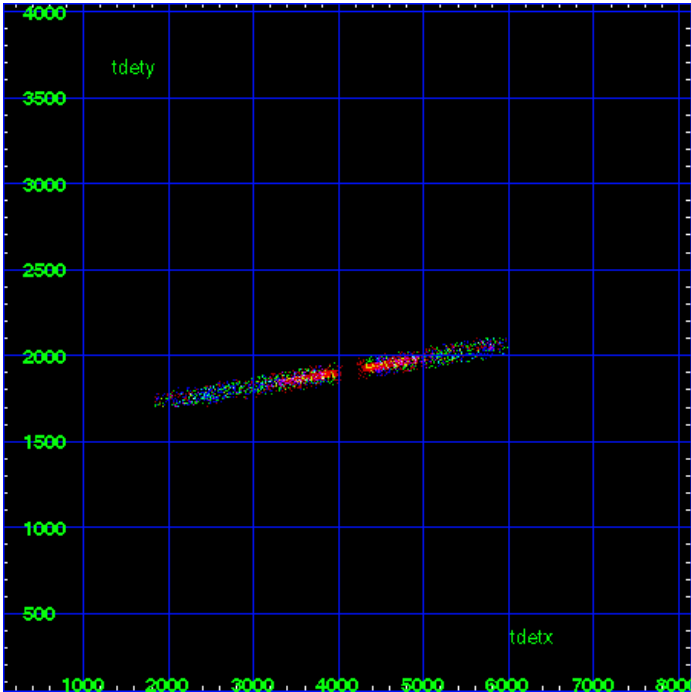
MEG Zero Order



MEG Order Sort ALL

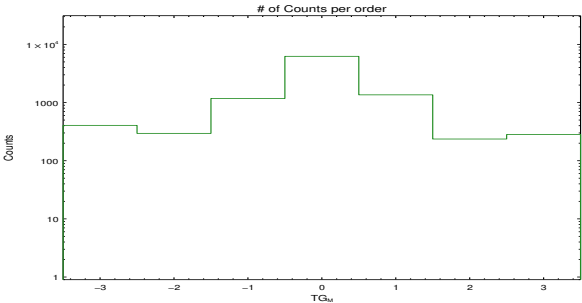


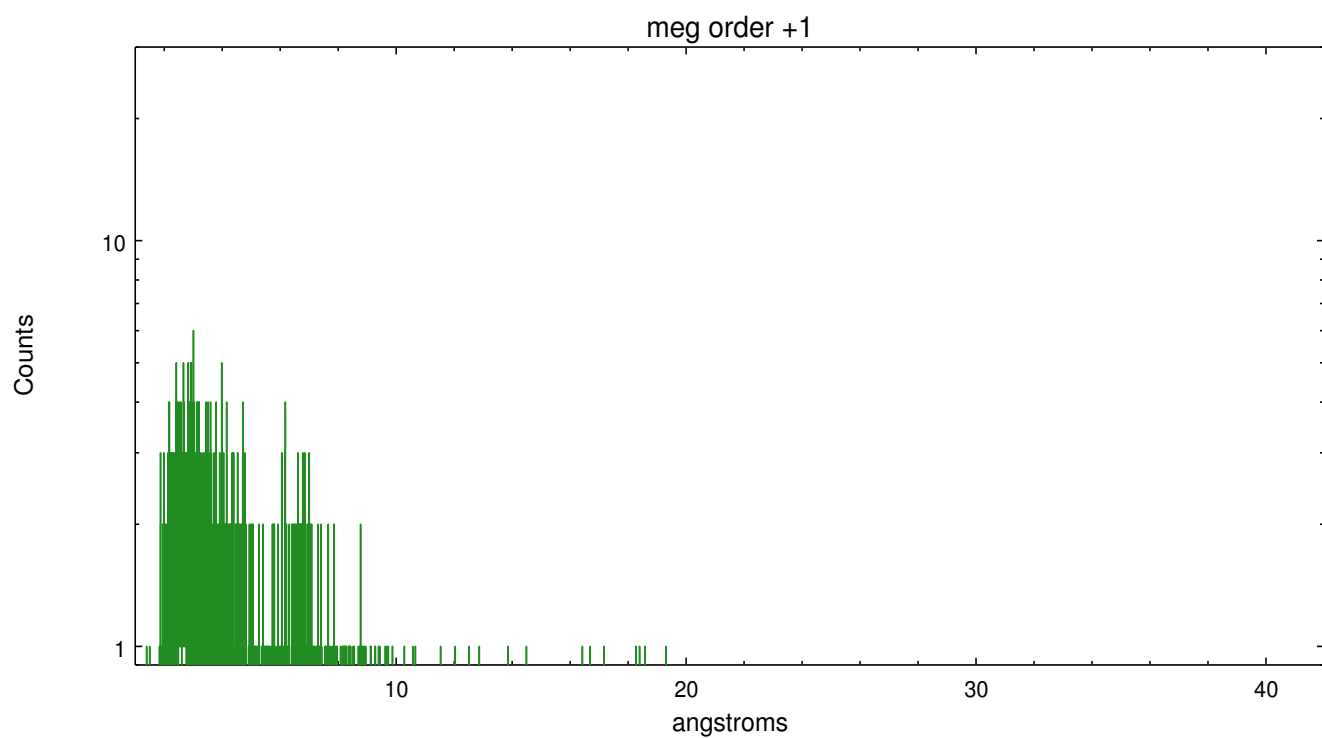
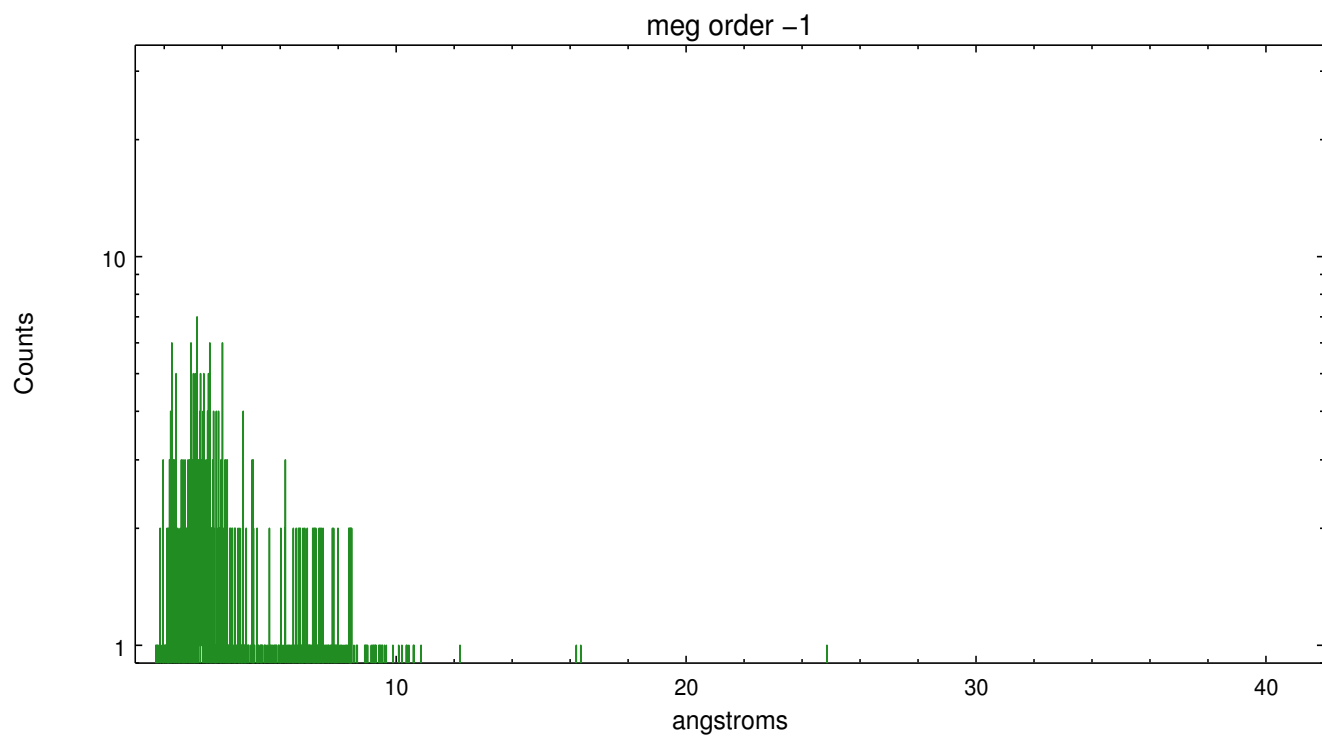
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	405	295	1175	6232	1357	236	282





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	33.7194003

A.2 Comments

Phase constraint met.