

V&V Reference Report

L2 ASCDS Version : 7.6.11.1

Observation 1598 - L2 Version 3
Chandra X-Ray Center

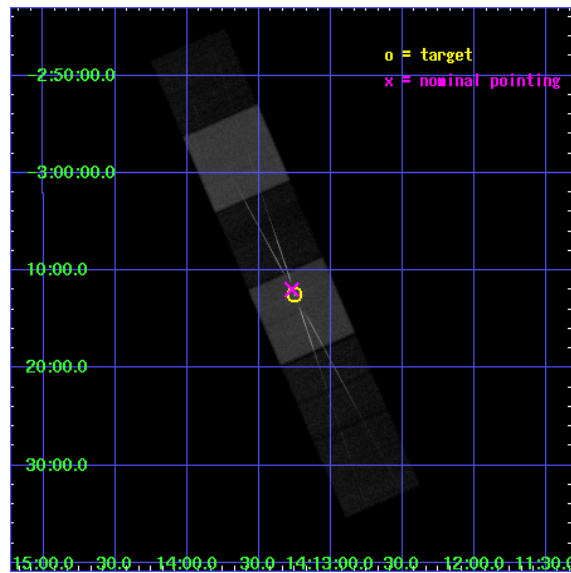
L2 Processing Date : Oct 11 2007

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1 Front

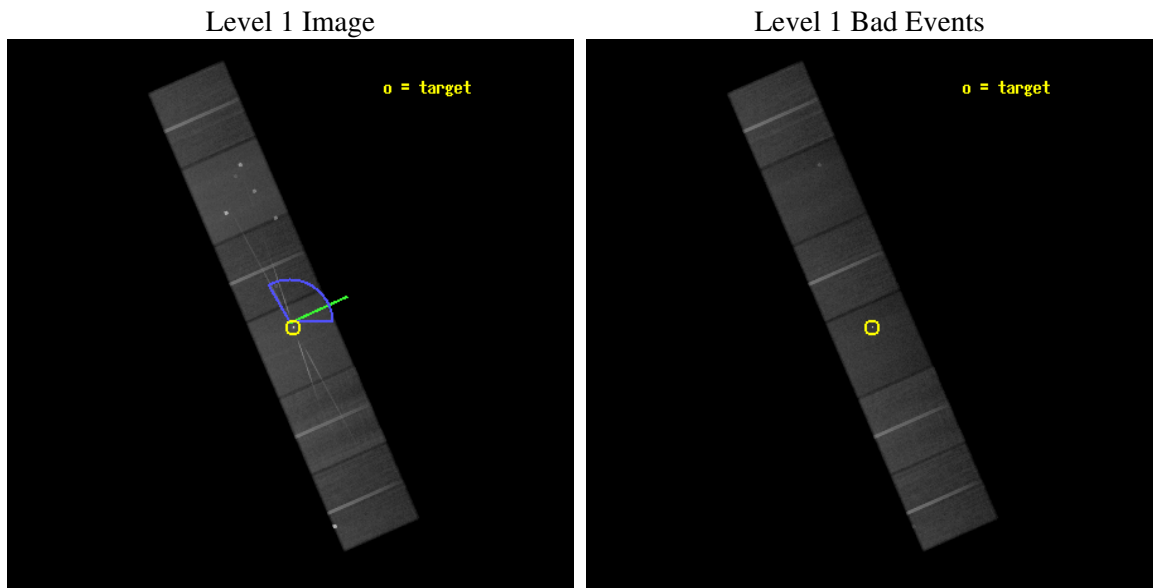
seq_num	700214
obs_id	1598
title	HETG OBSERVATIONS OF SEYFERT GALAXIES AND A QUASAR
observer	Prof. Claude Canizares
object	NGC 5506
dtcycle	0
cycle	P
ra_targ	213.312083
dec_targ	-3.2075
ra_nom	213.31757574891
dec_nom	-3.1993247433647
roll_nom	66.519485545849
revision	3
ontime	90044.759133637
livetime	88904.558175042
ontime4	90041.518173382
ontime5	90044.759133637
ontime6	90044.759123623
ontime7	90044.759133637
ontime8	90041.518123552
ontime9	90041.518173397
l2events	883684



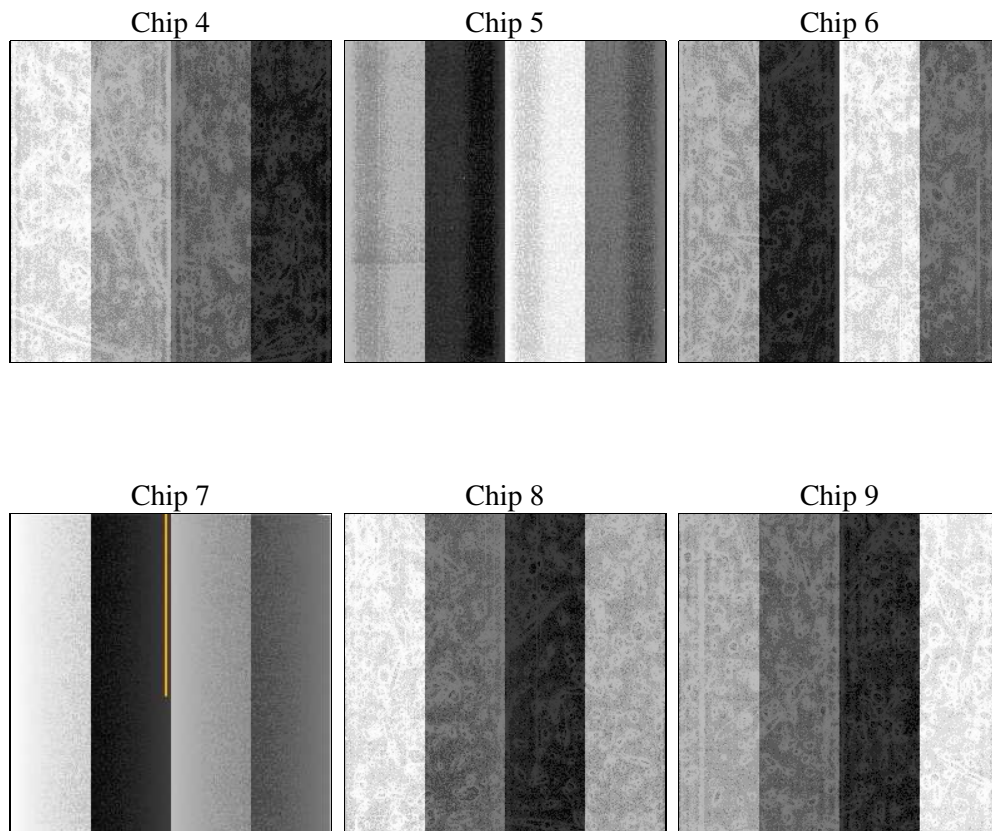
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0
ascdsver	7.6.11.1
caldsver	3.4.1
date	2007-10-10T06:38:33
revision	3

sched_exp_time	90000.000000
ontime	90044.759133637
ontime4	90041.518173382
ontime5	90044.759133637
ontime6	90044.759123623
ontime7	90044.759133637
ontime8	90041.518123552
ontime9	90041.518173397
l1events	4129784

2.1.4 Events

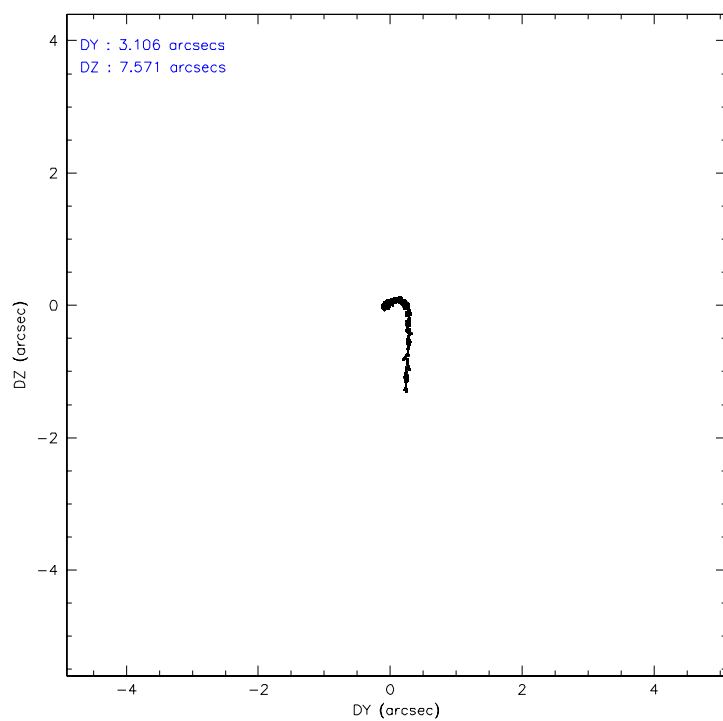
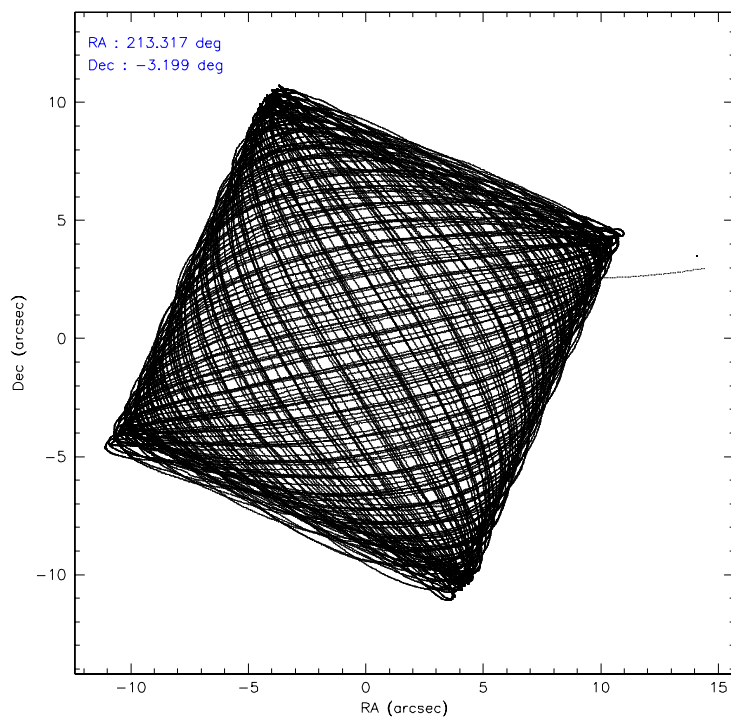
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	626349	820808	592600	793953	711600	584474
rejected events	563067	458753	508184	462057	574585	495601
rejected %	89%	55%	85%	58%	80%	84%

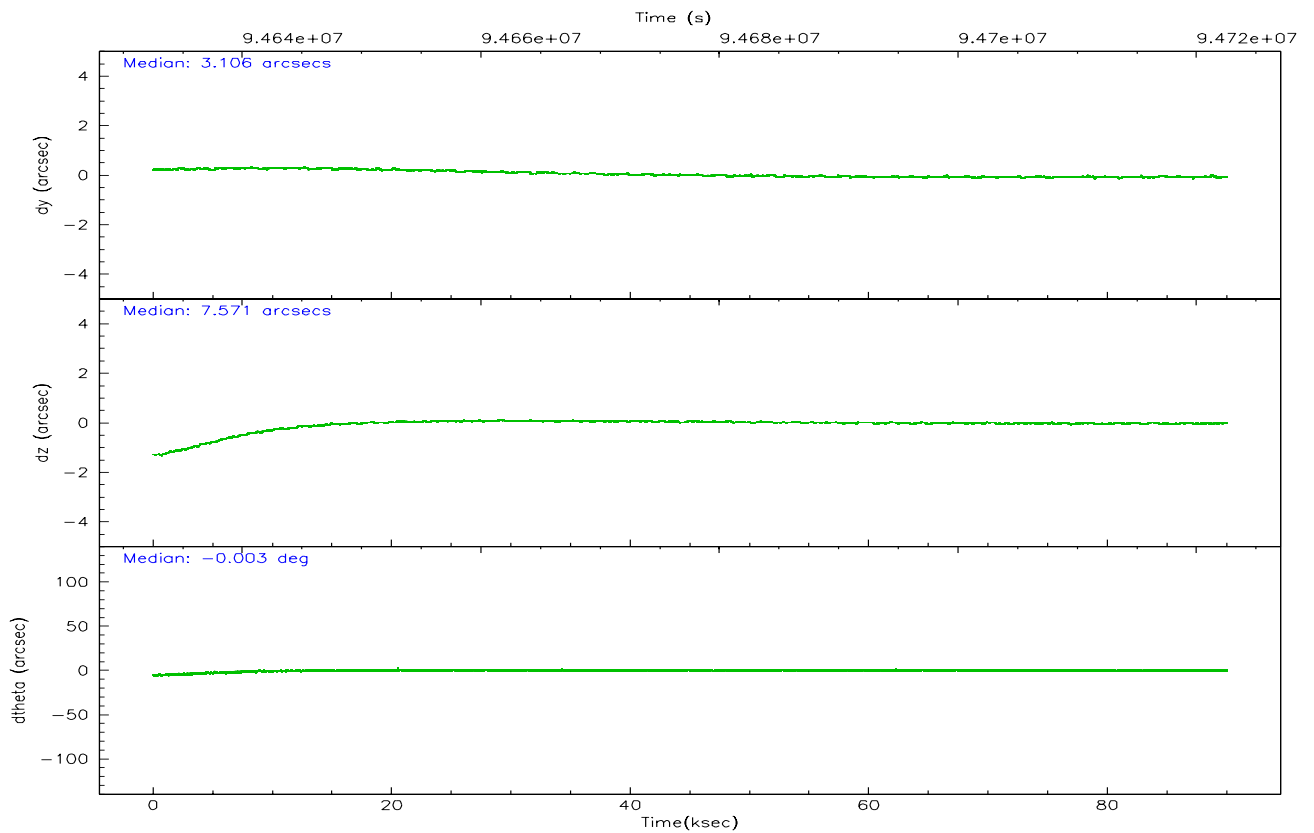
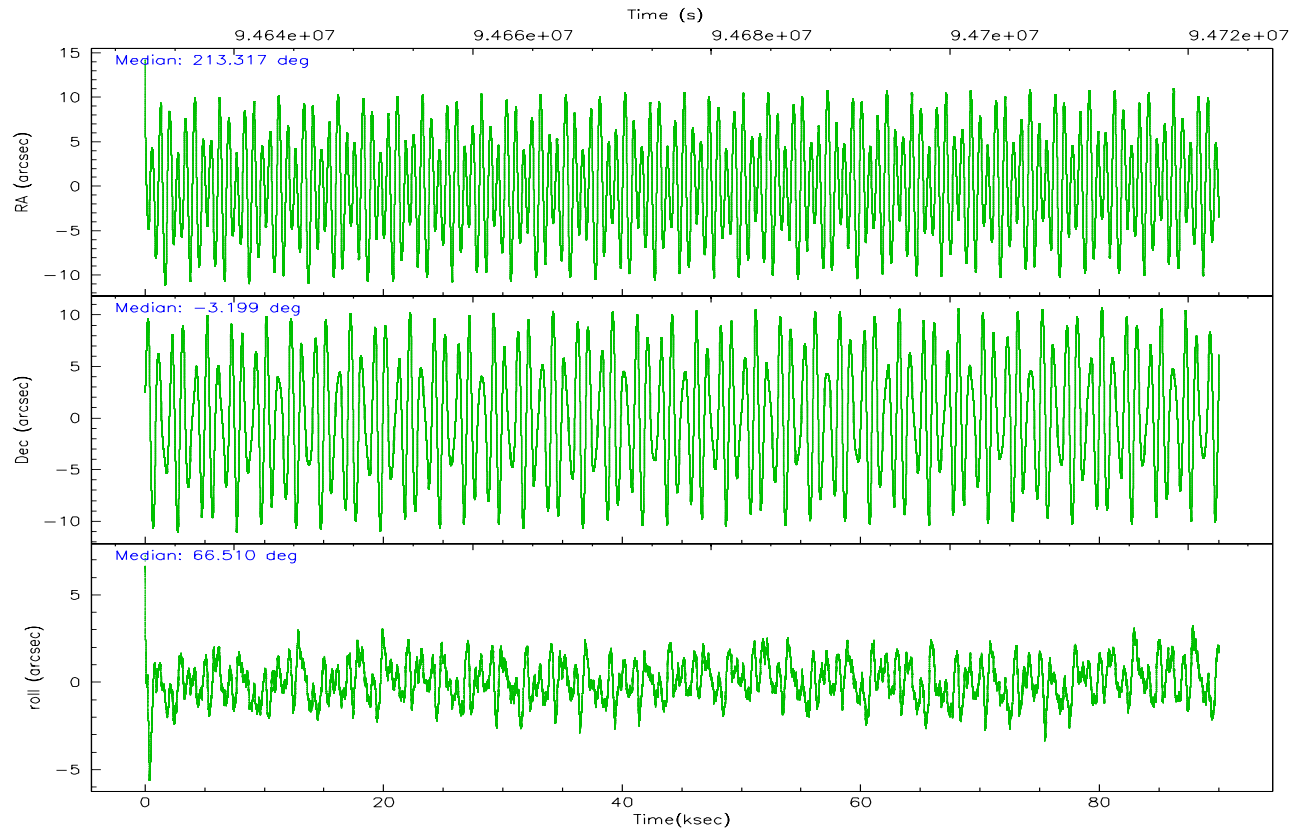
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	37105	71471	55408	47386	59313	64955
	5%	8%	9%	5%	8%	11%
grade 1 events	341	2228	390	1275	440	518
	0%	0%	0%	0%	0%	0%
grade 2 events	18704	113680	19485	77521	33277	16979
	2%	13%	3%	9%	4%	2%
grade 3 events	7126	17286	8615	35628	16229	7796
	1%	2%	1%	4%	2%	1%
grade 4 events	7057	17239	8565	35302	14994	7541
	1%	2%	1%	4%	2%	1%
grade 5 events	19385	57913	22822	69759	28964	23464
	3%	7%	3%	8%	4%	4%
grade 6 events	13984	187668	17356	183347	38081	15942
	2%	22%	2%	23%	5%	2%
grade 7 events	522647	353323	459959	343735	520302	447279
	83%	43%	77%	43%	73%	76%

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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	213.320900	213.3175757489101	Subarray requested	NONE	NONE
Pointing Dec	-3.226454	-3.199324743364694	Alternating exposures requested	N	N
Pointing Roll	66.363047	66.51948554584888	Primary exposure time	0.000000	3.2
Roll angle	30.000000	30.000000			
Roll tolerance	60.000000	60.000000			
Roll constraint allows 180D rotation	N	N			
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-190.132523	-190.1400660498719			
SIM translation stage offset (mm)	0	0.00754346686406393			
Observation start time	94632569.184000	94630935.798839			
Observation start date	2000-12-31T06:48:25	2000-12-31T06:22:15			
Observation end time	94722569.184000	94723619.88989			
Observation end date	2001-01-01T07:48:25	2001-01-01T08:06:59			
Read mode	TIMED	TIMED			

2.3 Aspect



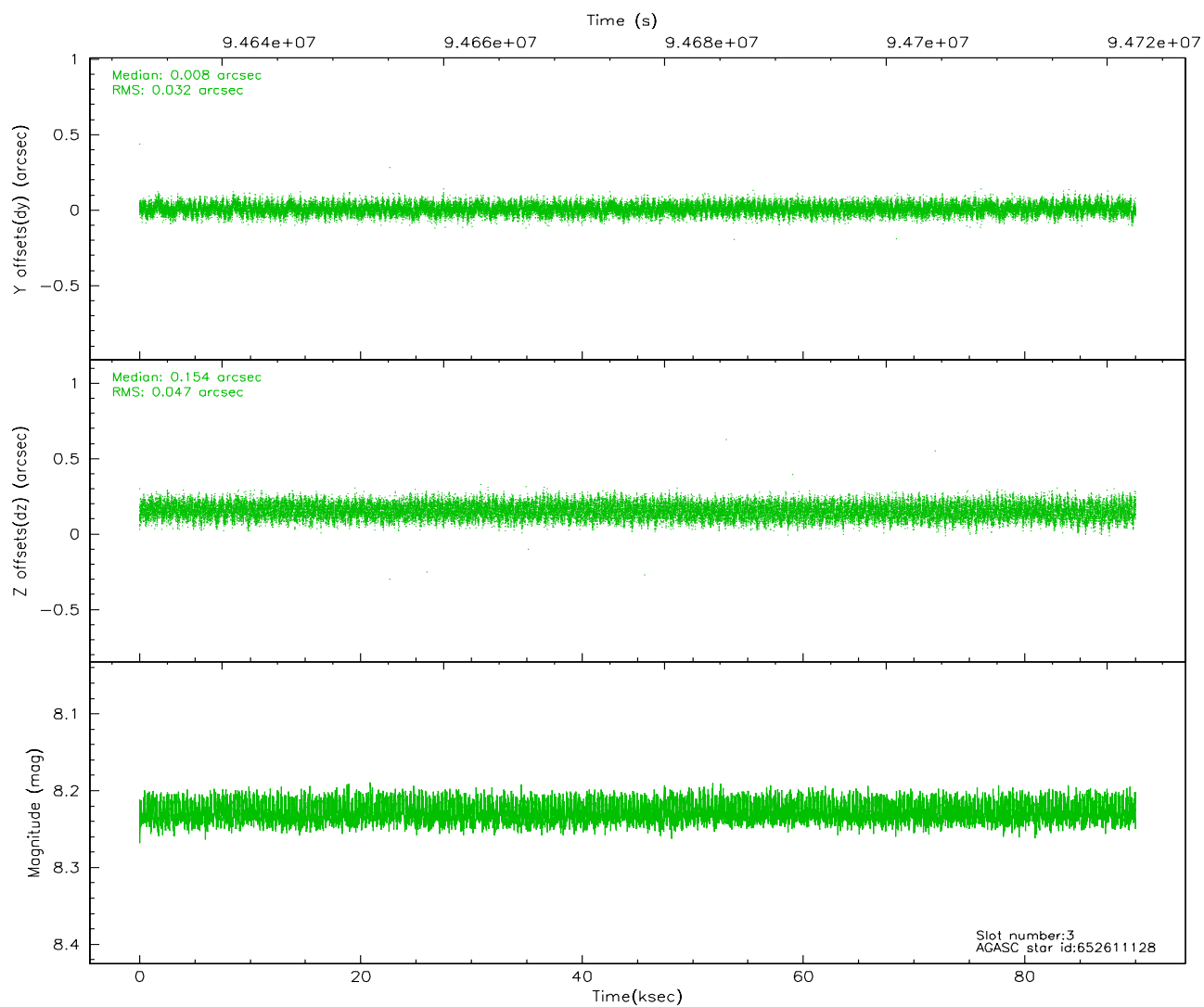
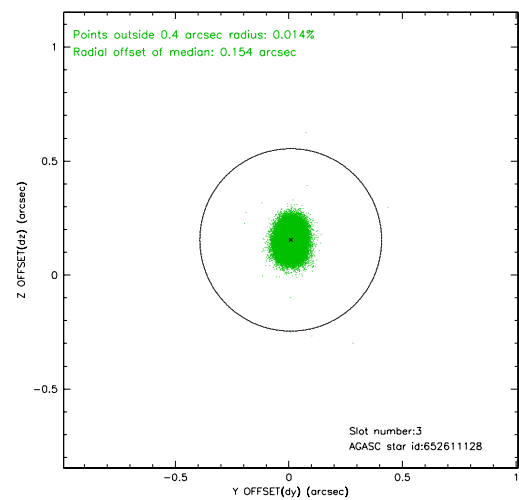
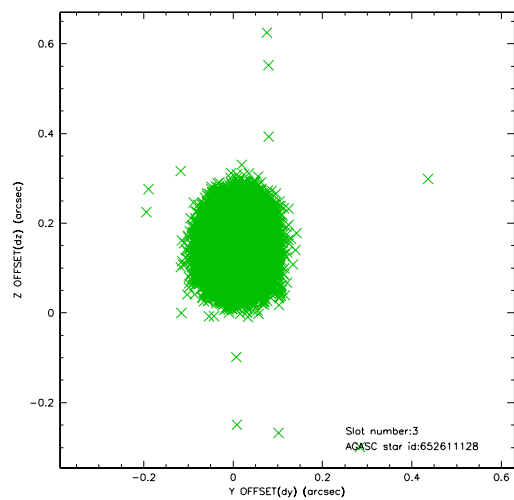


Slot Statistics

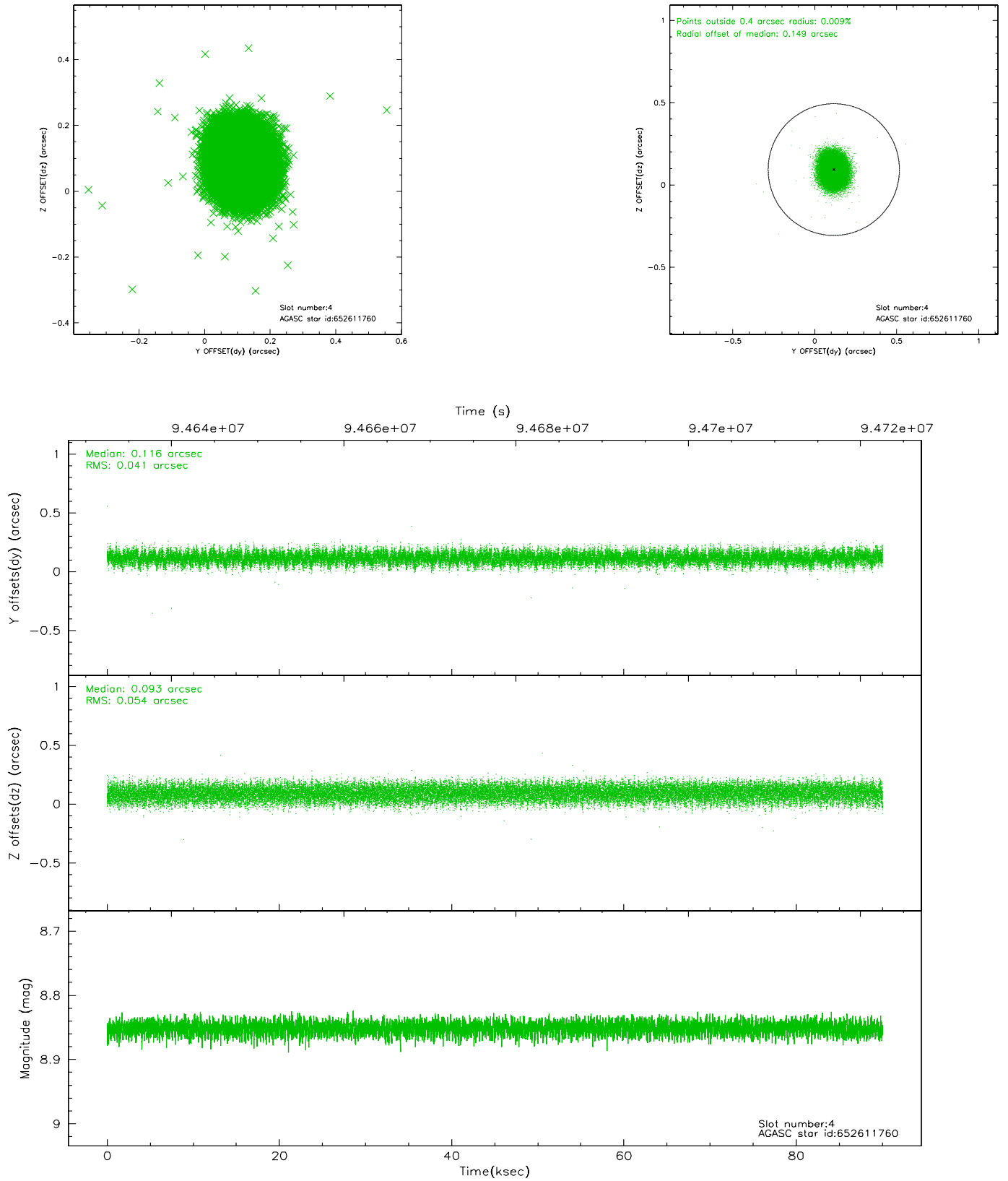
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	21961	0.019	0.031	0.008	0.019	0.000000	0.000000	-755.82	-1728.62
1	FID	ACIS-S-4	7.20	21960	-0.086	-0.017	0.010	0.027	0.000000	0.000000	2157.42	179.85
2	FID	ACIS-S-5	7.24	21961	0.035	-0.005	0.010	0.018	0.000000	0.000000	-1808.72	173.50
3	GUIDE	652611128	8.23	43915	0.008	0.154	0.062	0.098	213.732515	-3.626183	-724.69	-1932.27
4	GUIDE	652611760	8.85	43911	0.116	0.093	0.072	0.115	213.522861	-3.750471	-1436.33	-1421.80
5	GUIDE	652607784	8.53	43909	-0.110	0.039	0.060	0.097	213.646988	-3.161185	685.85	-980.13
6	GUIDE	652608240	9.62	43892	0.024	-0.346	0.112	0.183	212.720785	-3.106340	-469.00	2148.34
7	GUIDE	652609928	9.58	43899	-0.033	0.061	0.126	0.211	214.187387	-2.891315	2354.36	-2371.03

2.4 Star Slots

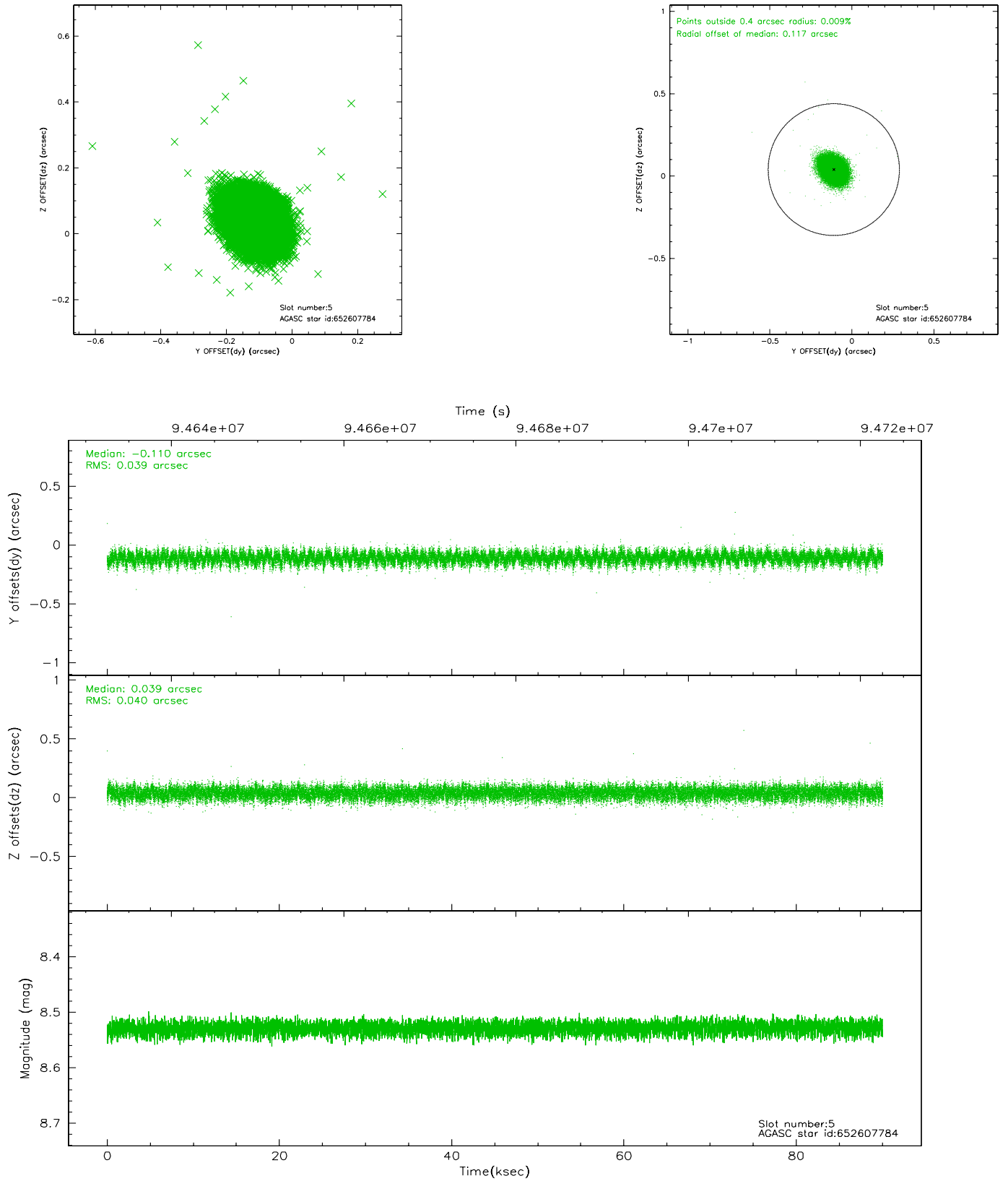
2.4.1 Slot 3



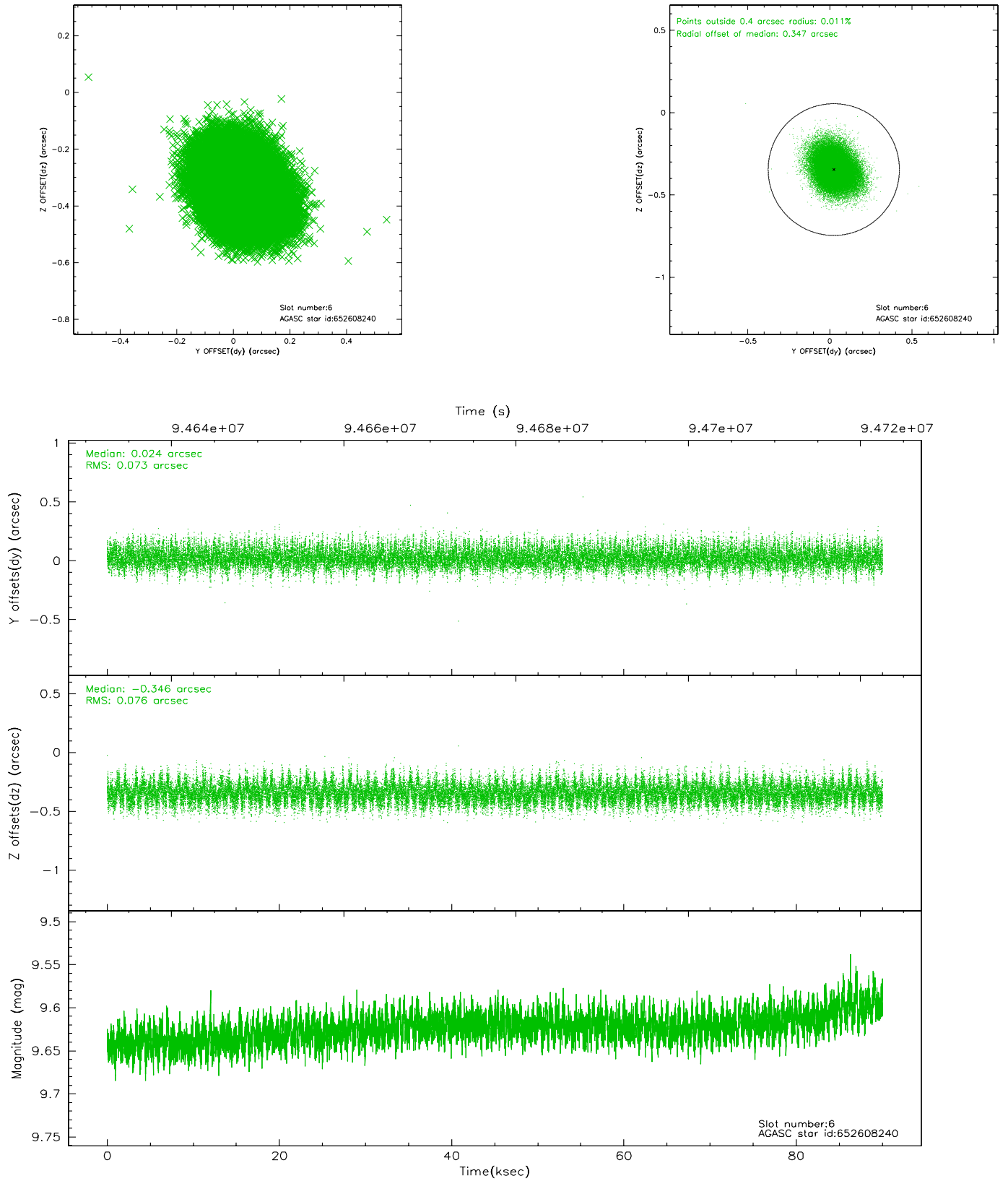
2.4.2 Slot 4



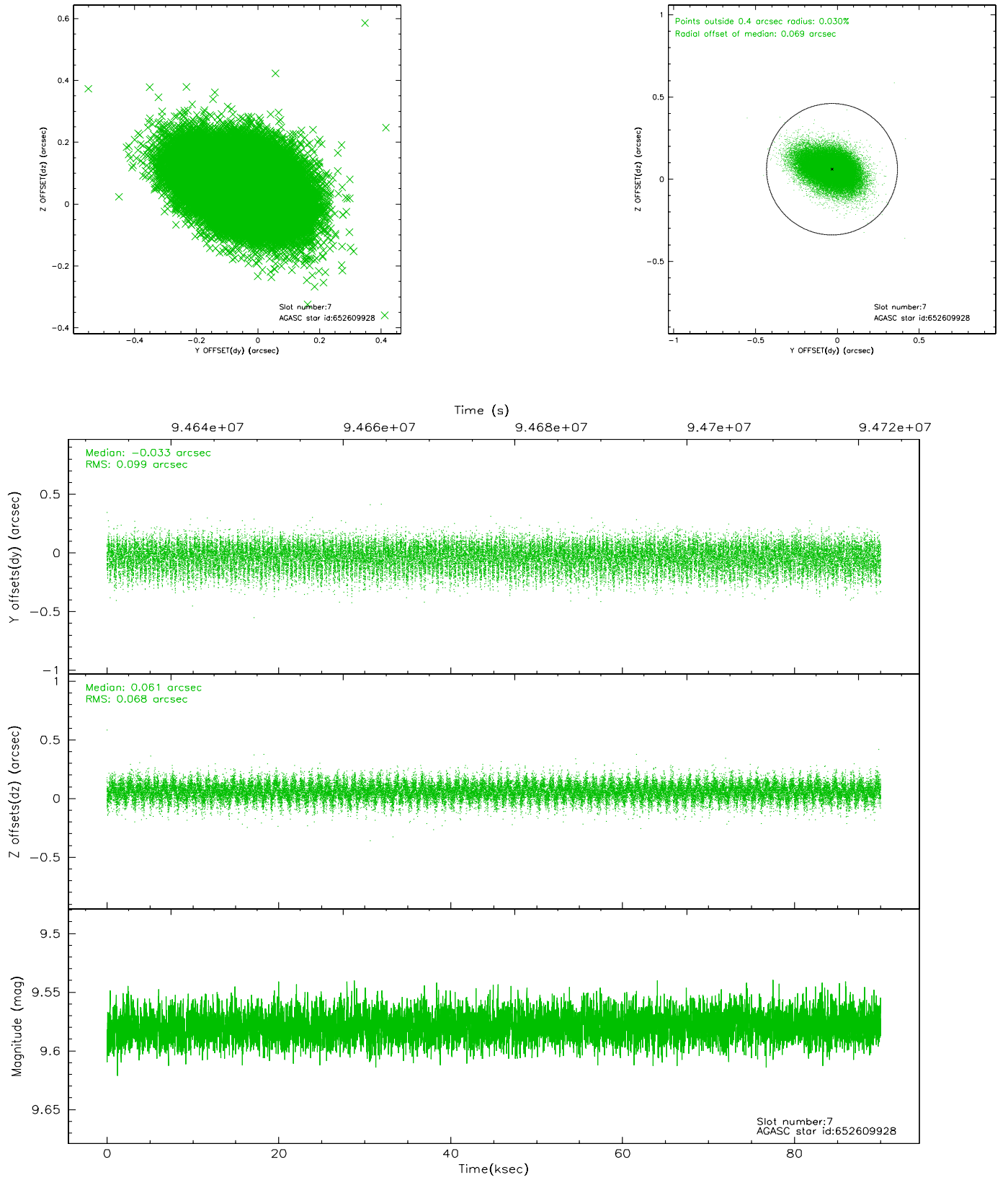
2.4.3 Slot 5



2.4.4 Slot 6

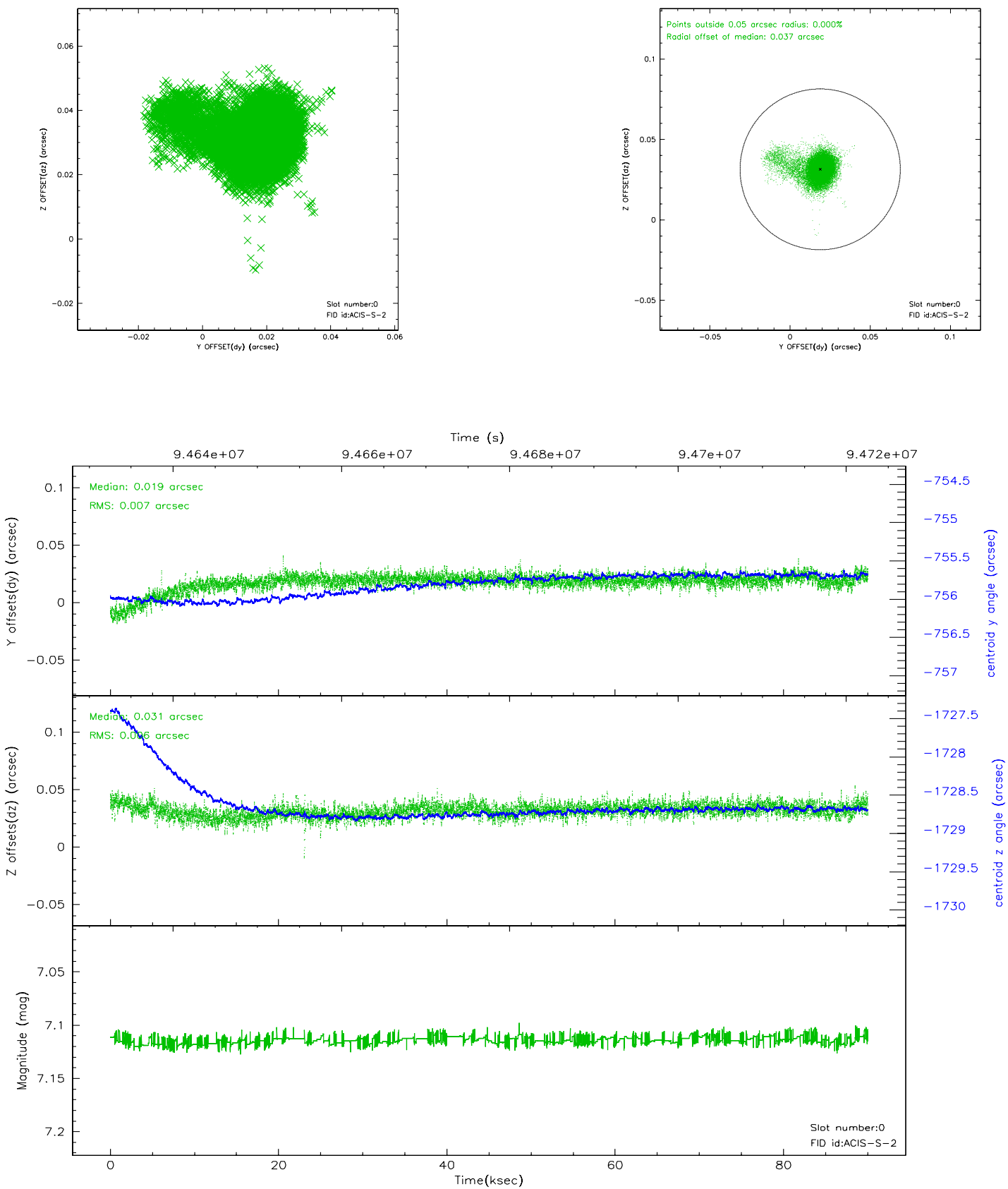


2.4.5 Slot 7

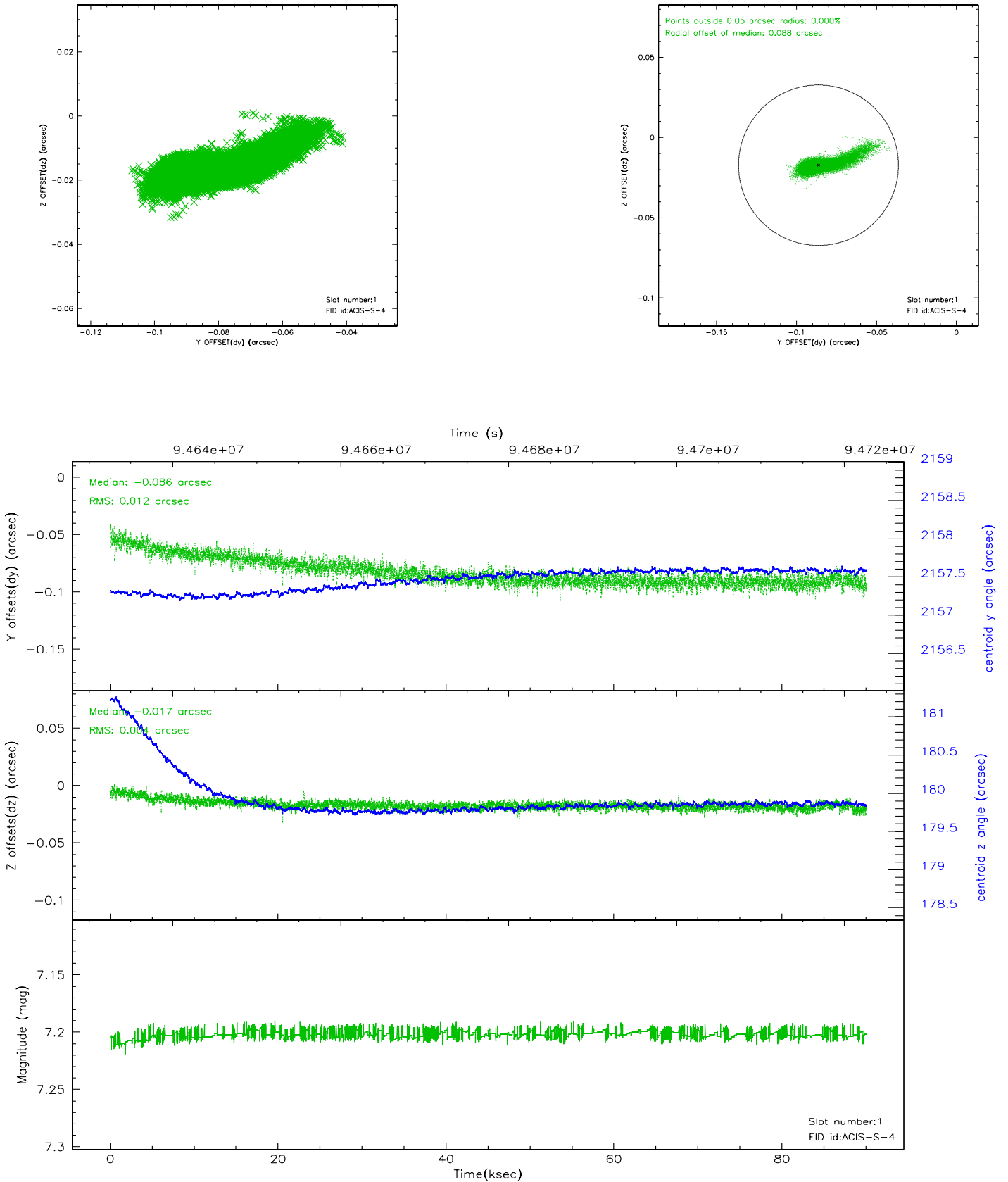


2.5 FID Slots

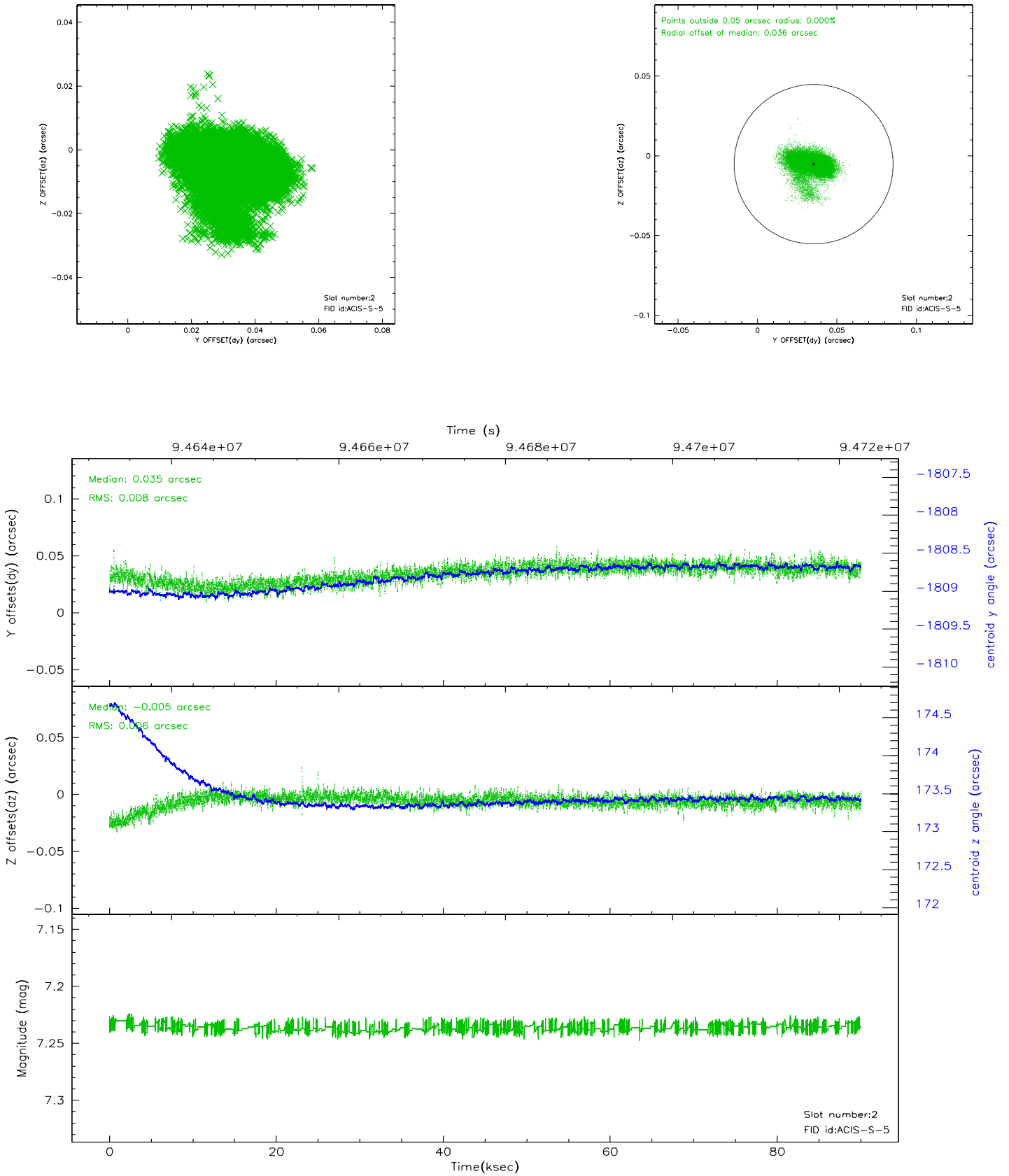
2.5.1 Slot 0



2.5.2 Slot 1

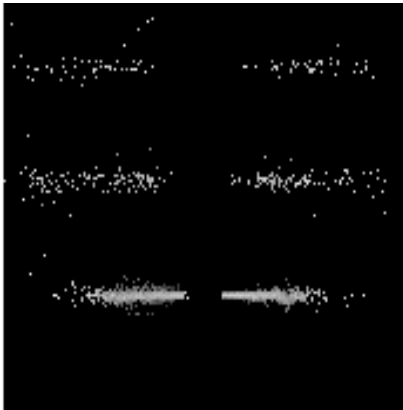


2.5.3 Slot 2

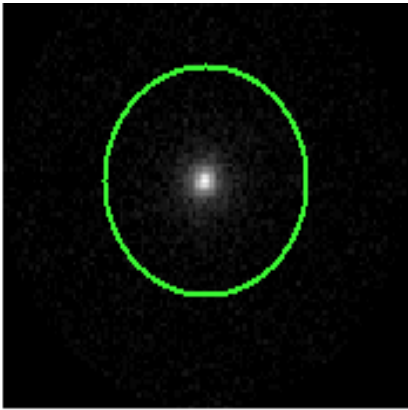


3 Gratings

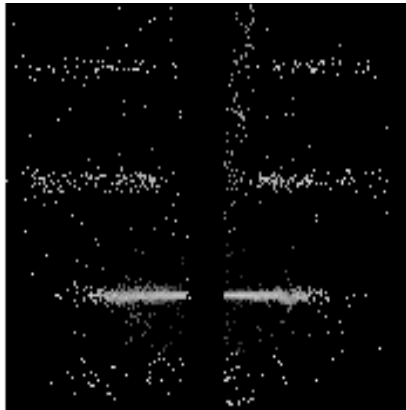
3.1 HEG Arm



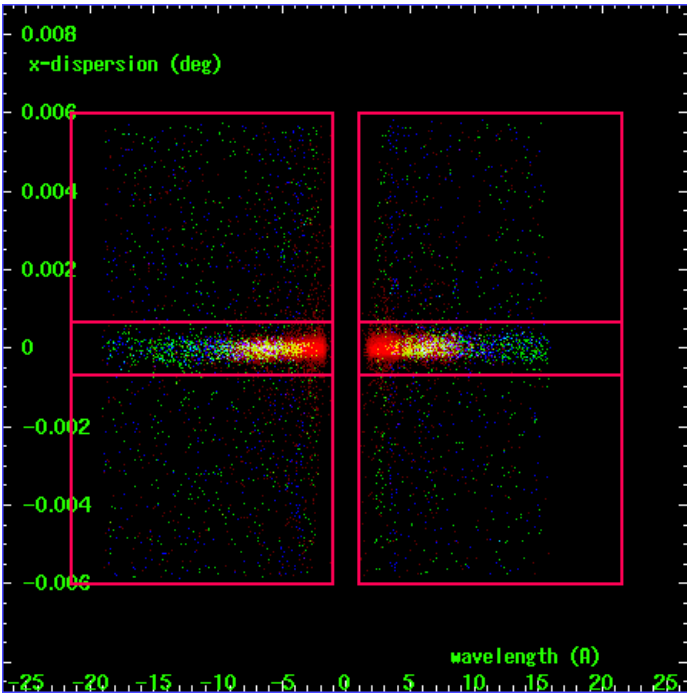
HEG Order Sort 123



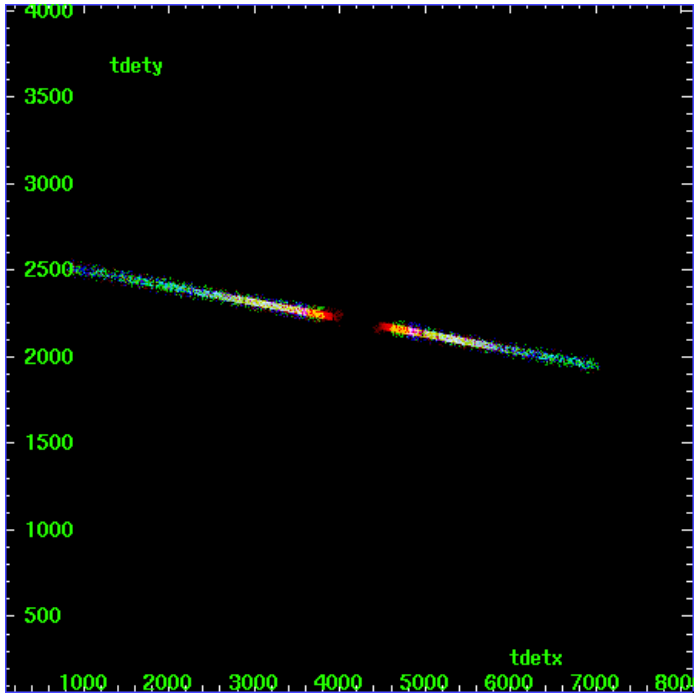
HEG Zero Order



HEG Order Sort ALL

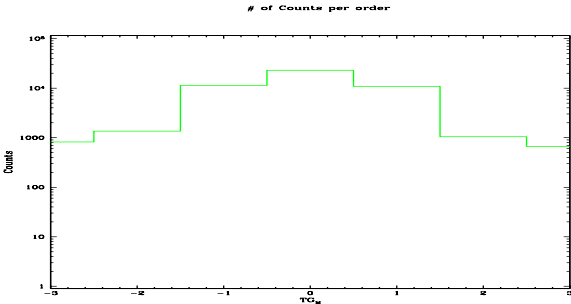


Spot Image HEG

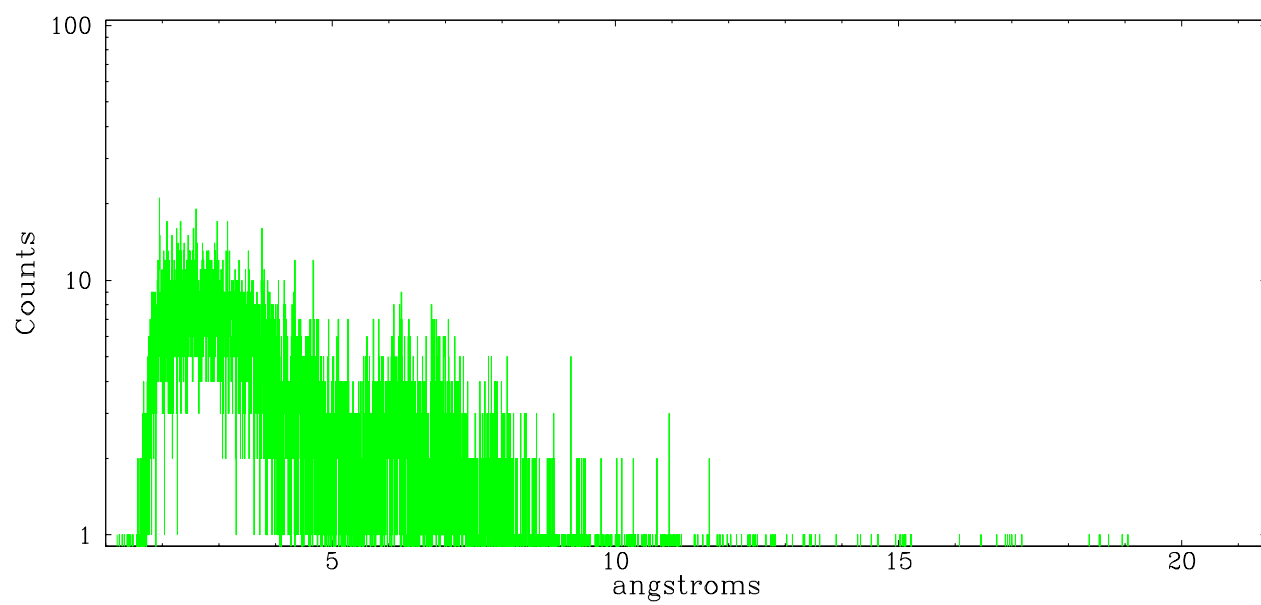


Full Detector HEG

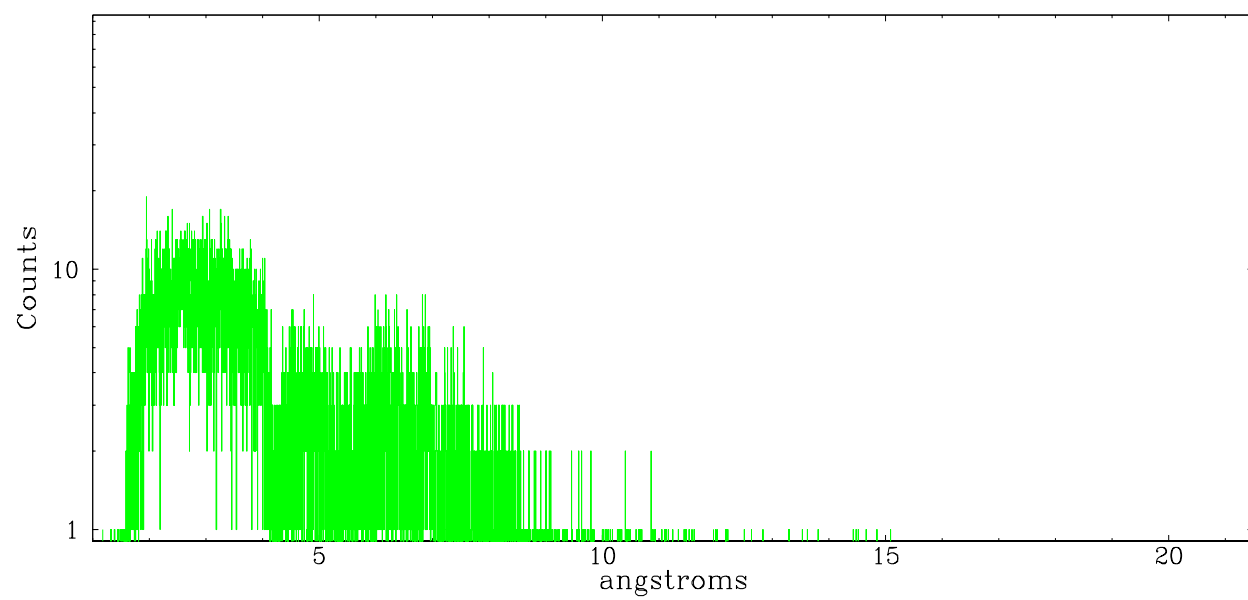
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	823	1356	11323	22915	10824	1043	667



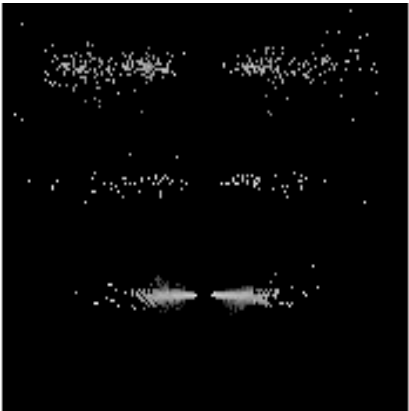
heg order -1



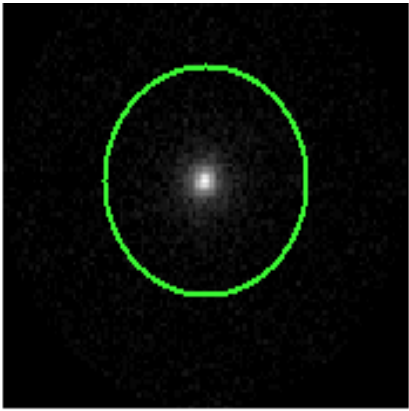
heg order +1



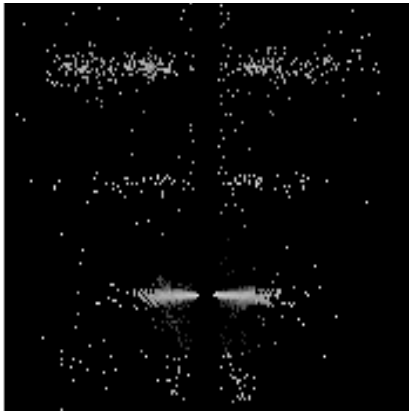
3.2 MEG Arm



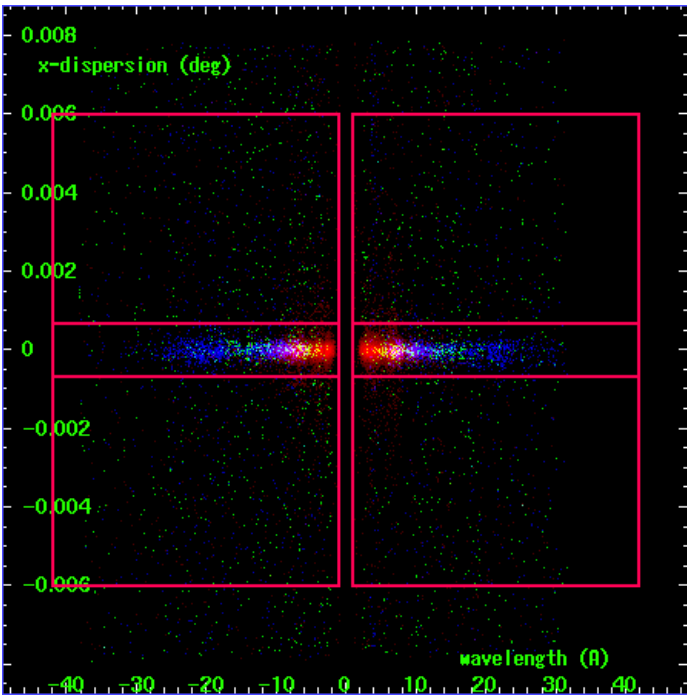
MEG Order Sort 123



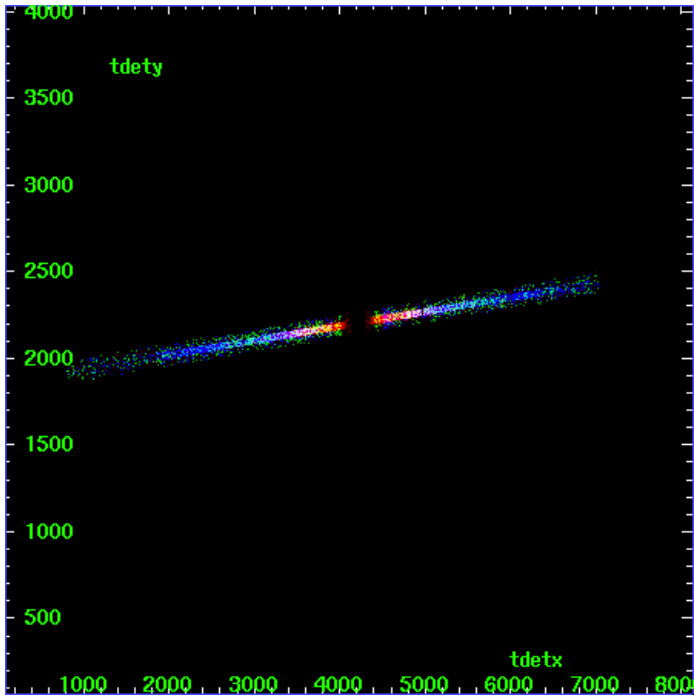
MEG Zero Order



MEG Order Sort ALL

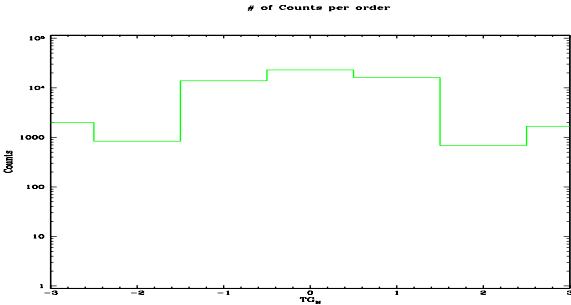


Spot Image MEG

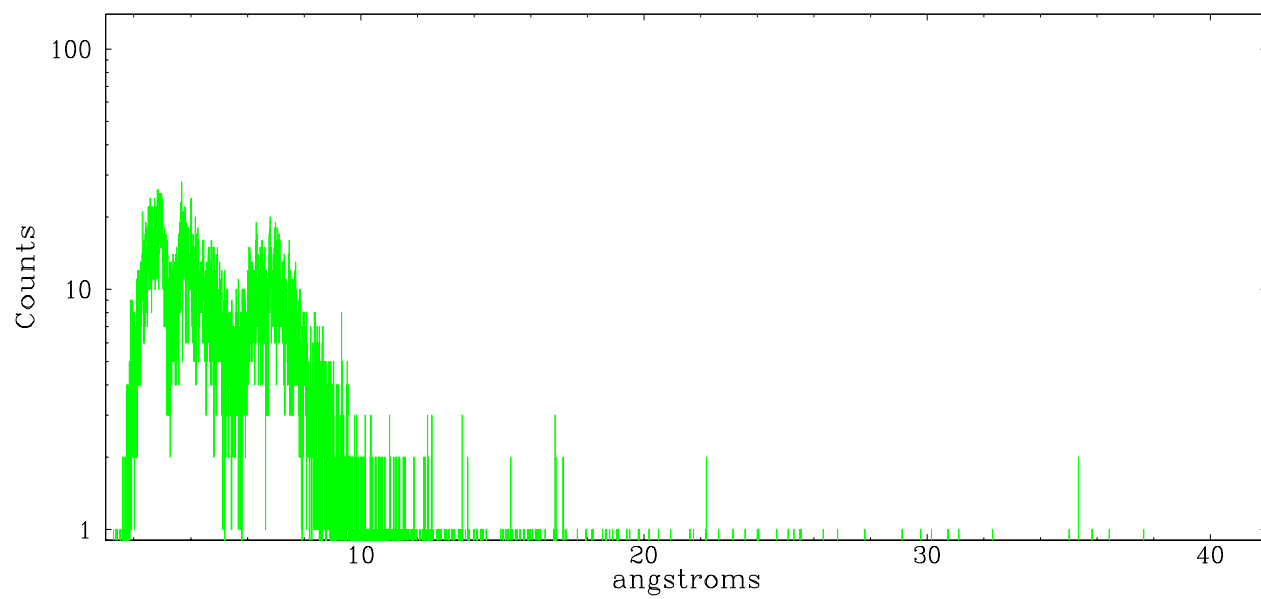


Full Detector MEG

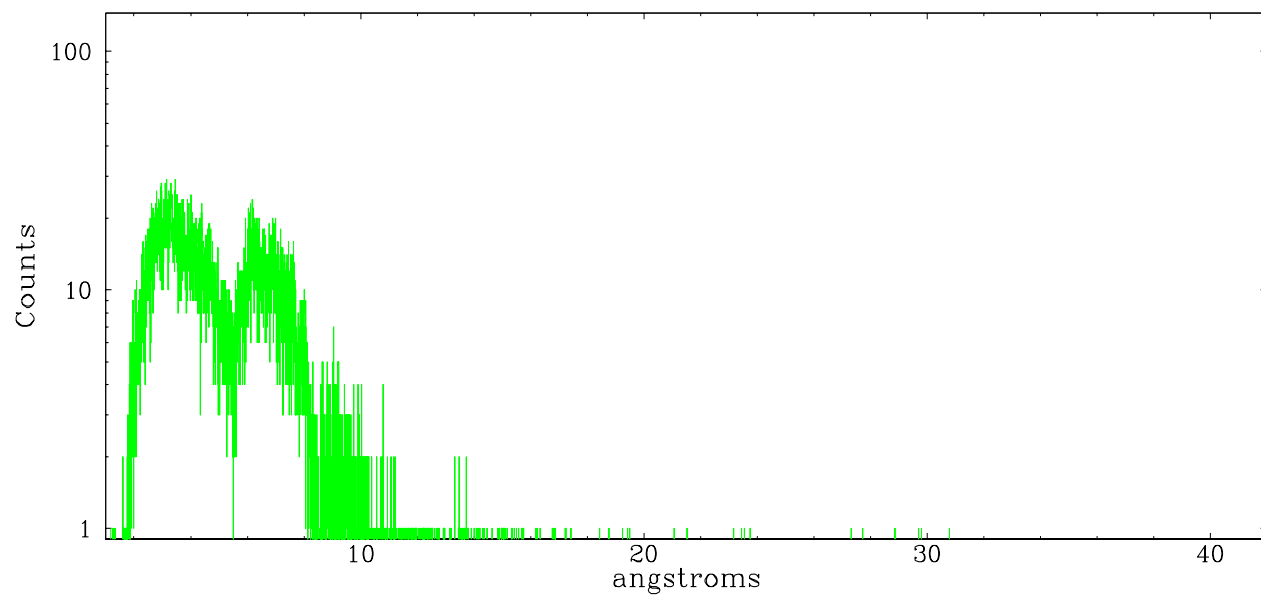
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1981	833	13858	22915	16108	681	1674



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.10.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	90.044

A.2 Comments

Roll constraint met.=====

The bias map for CCD_ID = 9 suffered from anomalously high bias values in an 'exacto-knife'-shaped area of the bias file. Pixels in the event data that have been bias-corrected by one of the affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD_ID=9 was recreated to remove this anomaly and the data were reprocessed.