

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 2323 - L2 Version 001
Chandra X-Ray Center

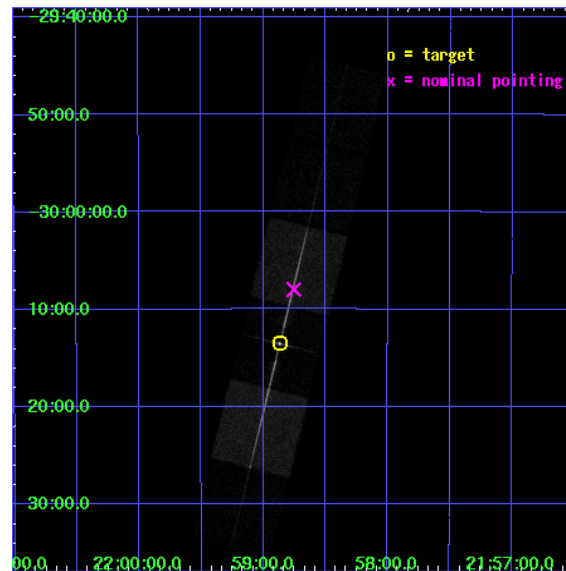
L2 Processing Date : Jun 19 2007

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1 Front

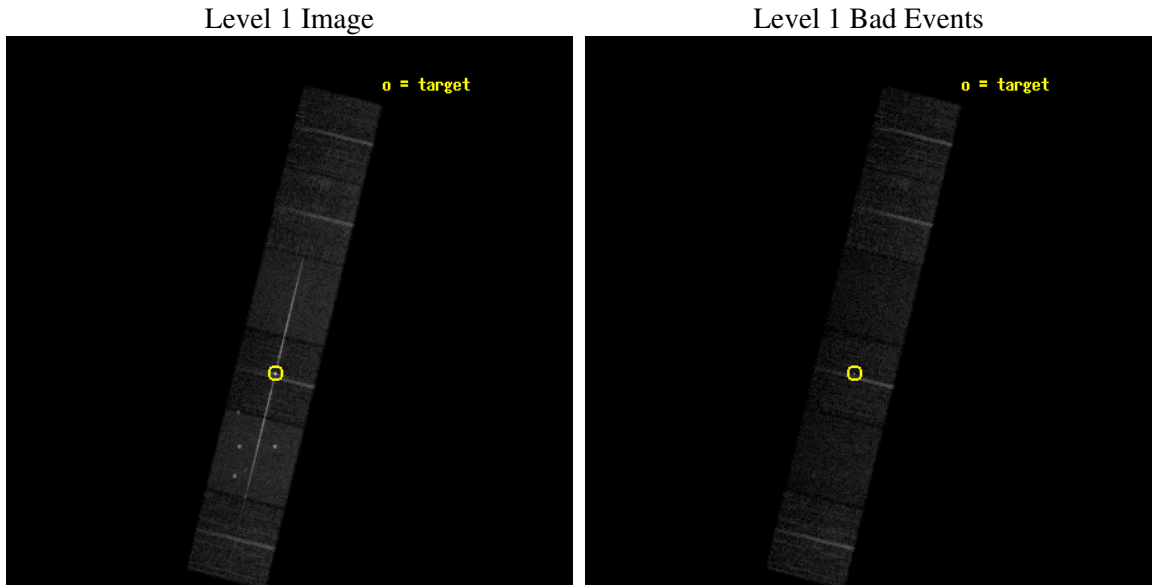
seq_num	390020
obs_id	2323
title	GRATINGS CALIBRATION OBSERVATIONS OF PKS2155-304
observer	Dr. CXC Calibration
object	PKS2155-304
dtcycle	0
cycle	P
ra_targ	329.716667
dec_targ	-30.225556
ra_nom	329.68863641666
dec_nom	-30.132863517045
roll_nom	283.77074811948
revision	2
ontime	9091.2000084668
livetime	8976.0817598962
ontime4	9091.2000084668
ontime5	9091.2000084668
ontime6	9091.2000084668
ontime7	9091.2000084668
ontime8	9091.2000084668
ontime9	9091.2000084668
l2events	127202



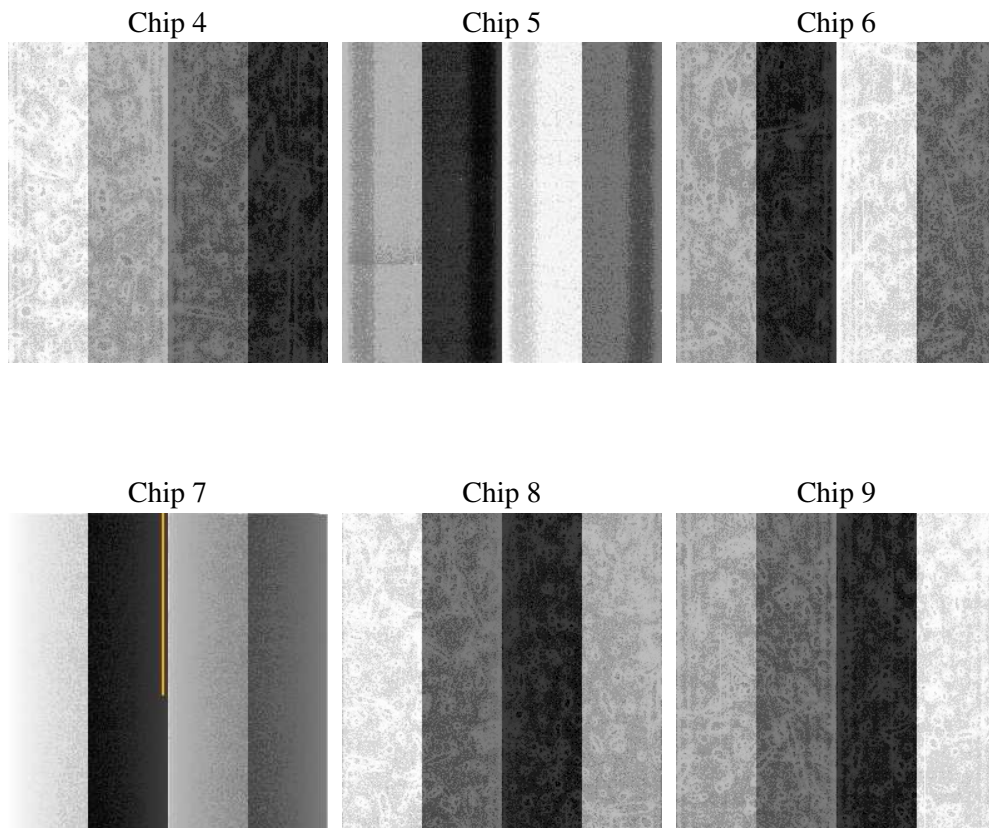
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0
ascdsver	7.6.10
caldbver	3.4.0
date	2007-06-19T20:10:26
revision	2

sched_exp_time	9000.000000
ontime	9091.2000084668
ontime4	9091.2000084668
ontime5	9091.2000084668
ontime6	9091.2000084668
ontime7	9091.2000084668
ontime8	9091.2000084668
ontime9	9091.2000084668
l1events	424411

2.1.4 Events

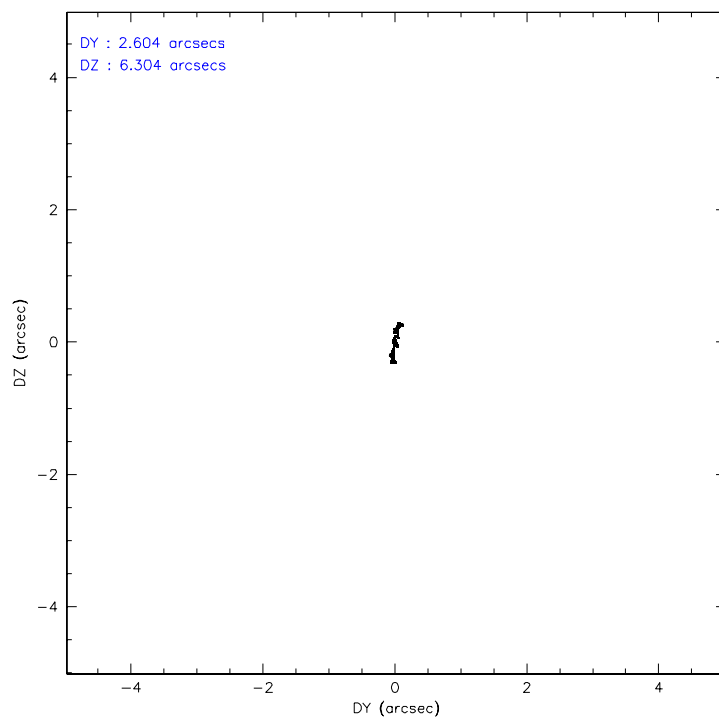
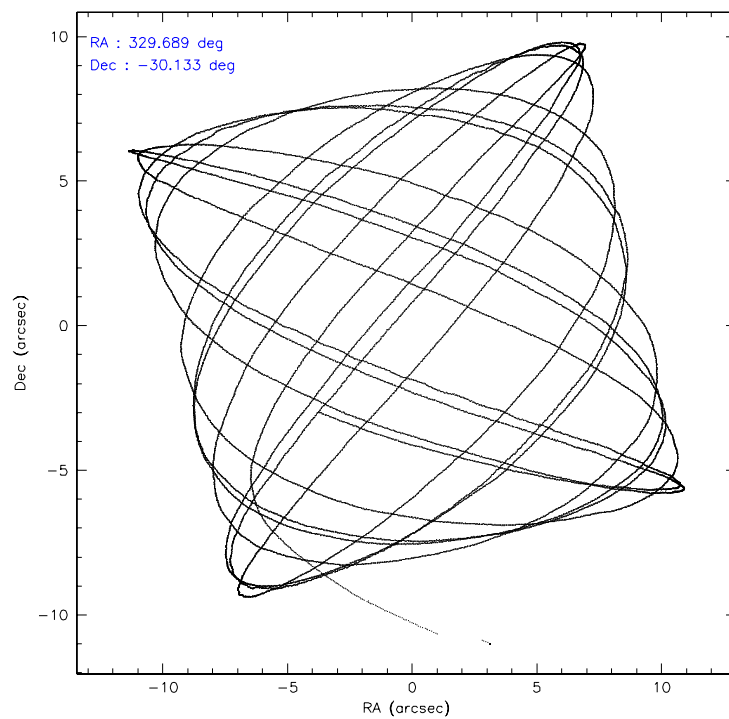
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	59818	87355	77917	79060	67244	53017
rejected events	53064	39739	47781	39117	53406	46730
rejected %	88%	45%	61%	49%	79%	88%

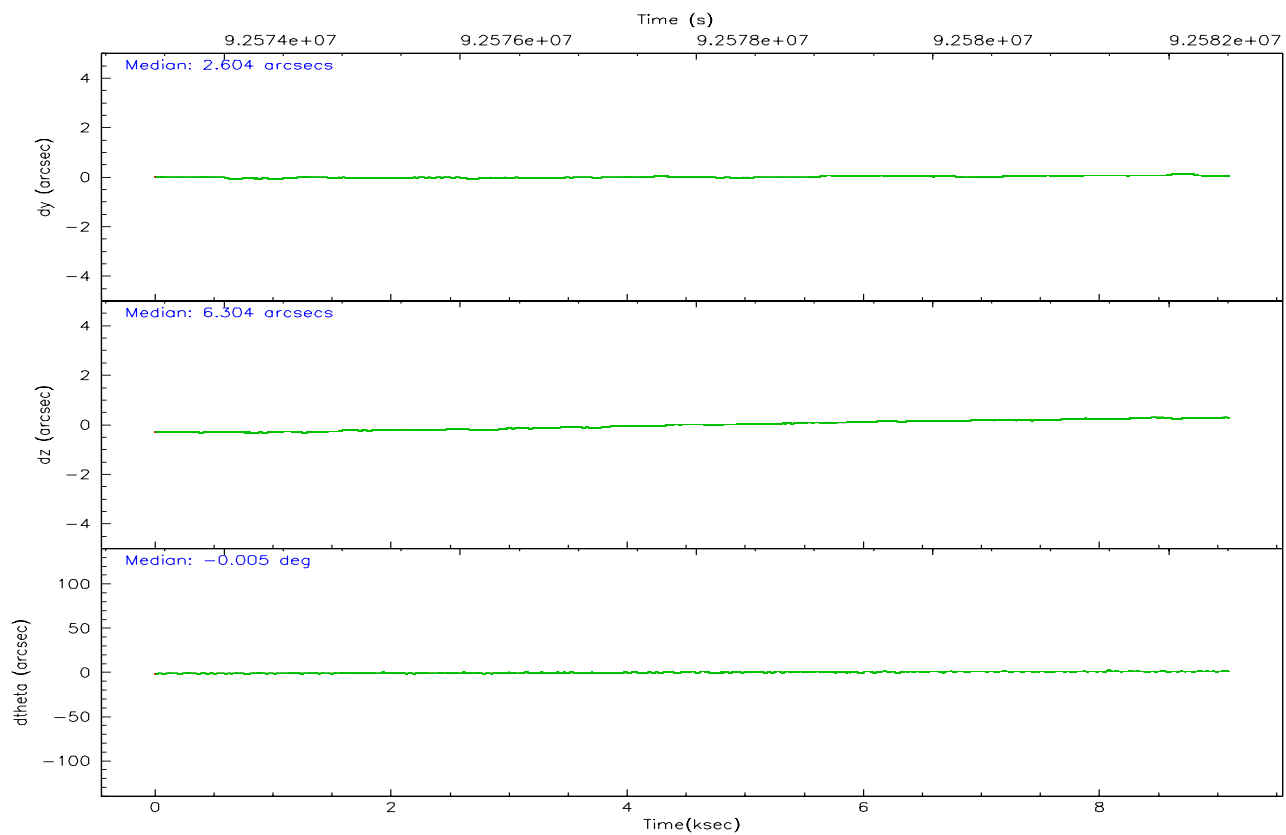
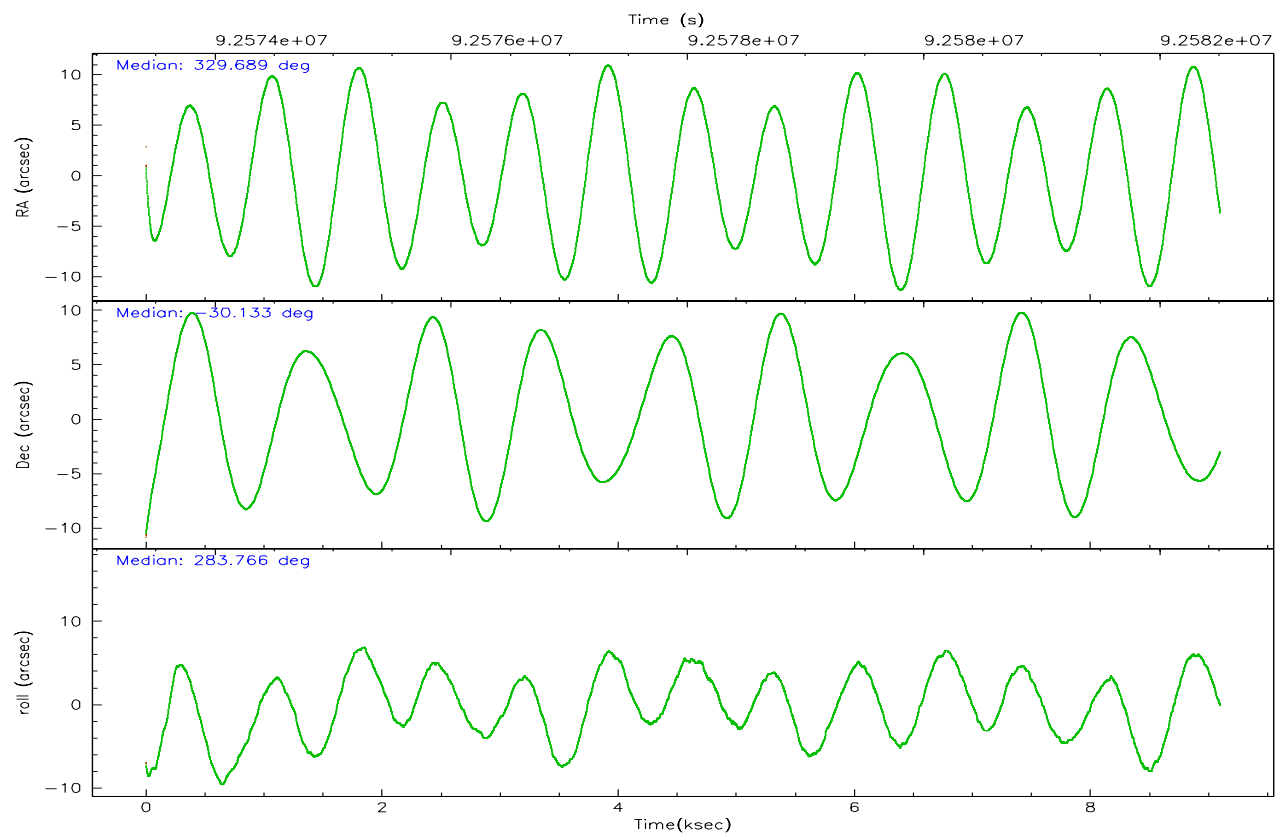
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	3029	12896	22795	7694	4683	2715
	5%	14%	29%	9%	6%	5%
grade 1 events	24	210	635	68	33	30
	0%	0%	0%	0%	0%	0%
grade 2 events	1500	12231	3474	8583	2938	1288
	2%	14%	4%	10%	4%	2%
grade 3 events	641	2458	1293	3951	1397	613
	1%	2%	1%	4%	2%	1%
grade 4 events	553	2333	1306	3915	1327	568
	0%	2%	1%	4%	1%	1%
grade 5 events	1878	5594	2401	6522	2806	2294
	3%	6%	3%	8%	4%	4%
grade 6 events	1091	18117	1542	16168	3580	1171
	1%	20%	1%	20%	5%	2%
grade 7 events	51102	33516	44471	32159	50480	44338
	85%	38%	57%	40%	75%	83%

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	LETG	LETG	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	329.666565	329.6886364166577	Subarray requested	NONE	NONE
Pointing Dec	-30.113269	-30.13286351704516	Alternating exposures requested	N	N
Pointing Roll	283.603058	283.7707481194789	Primary exposure time	0.000000	3.2
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	92573516.184000	92572474.8576			
Observation start date	2000-12-07T10:50:52	2000-12-07T10:34:34			
Observation end time	92582516.184000	92582649.52048901			
Observation end date	2000-12-07T13:20:52	2000-12-07T13:24:09			
Read mode	TIMED	TIMED			

2.3 Aspect



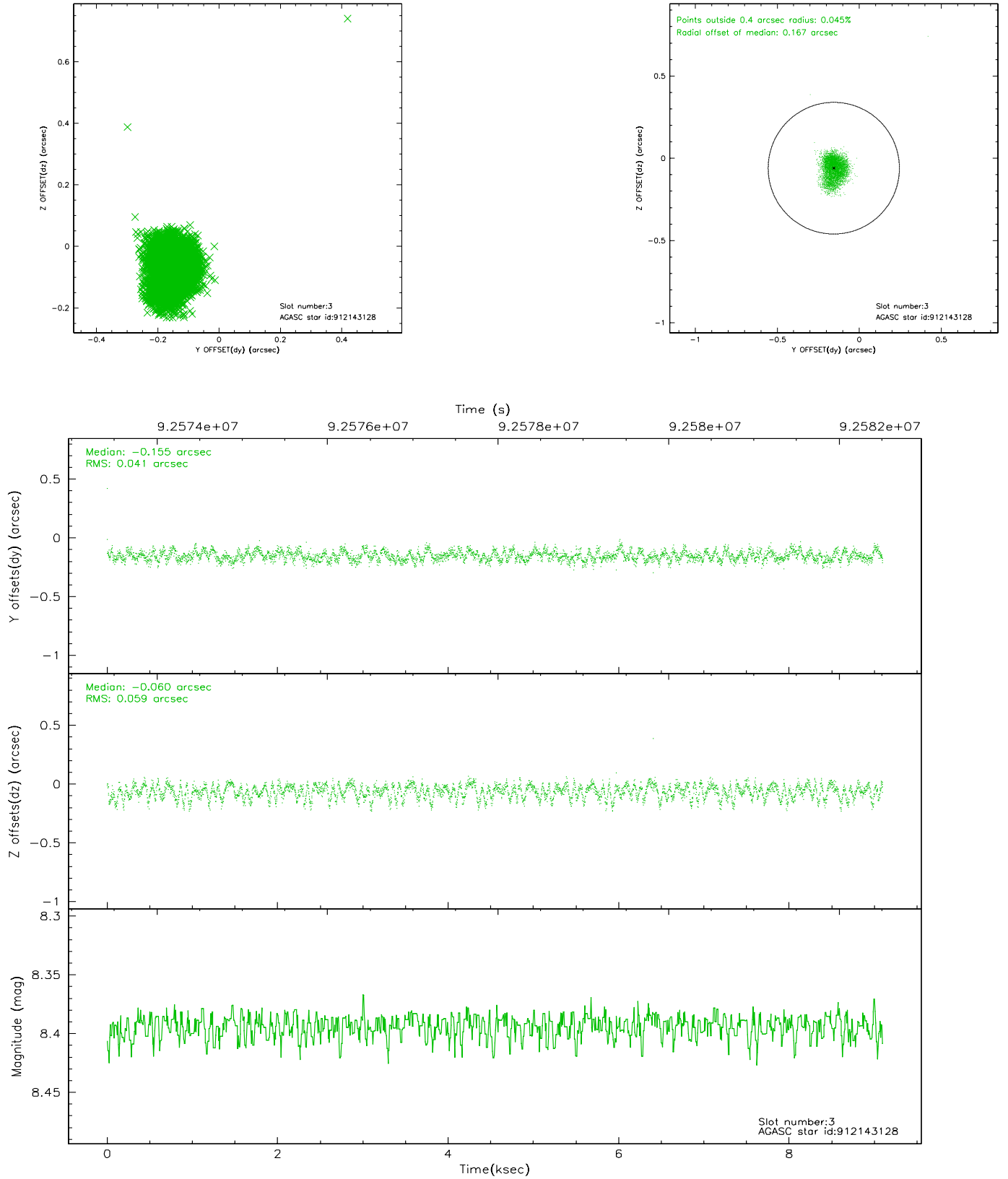


Slot Statistics

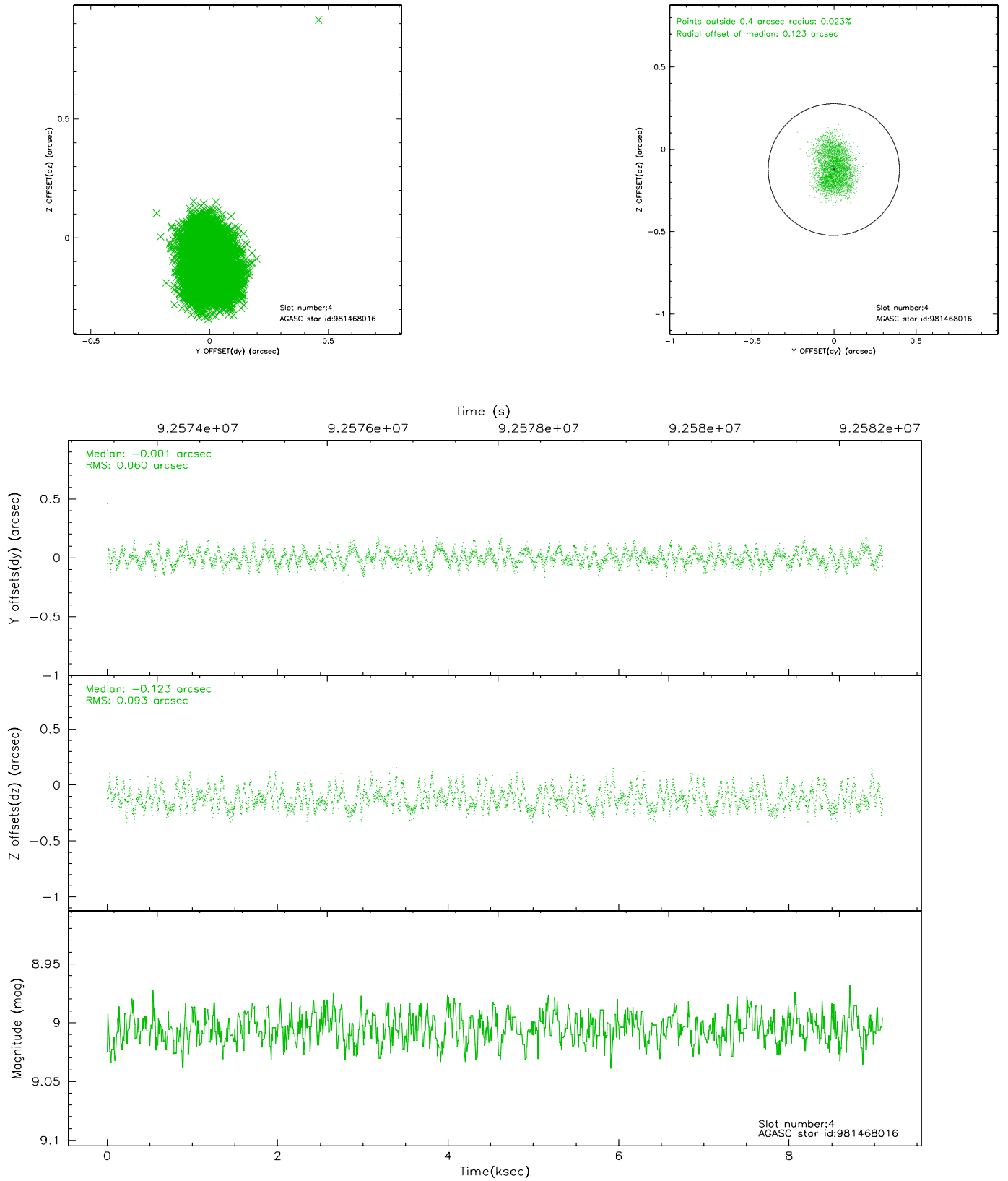
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.12	2220	-0.022	0.022	0.007	0.011	0.000000	0.000000	-755.25	-1727.42
1	FID	ACIS-S-4	7.20	2220	-0.052	0.005	0.005	0.009	0.000000	0.000000	2157.71	180.46
2	FID	ACIS-S-5	7.23	2220	0.043	-0.018	0.006	0.011	0.000000	0.000000	-1807.27	174.75
3	GUIDE	912143128	8.39	4438	-0.155	-0.060	0.075	0.119	328.924992	-29.706140	-1963.38	-1911.62
4	GUIDE	981468016	9.00	4437	-0.001	-0.123	0.118	0.183	328.842457	-30.034984	-870.13	-2433.40
5	GUIDE	912275088	9.05	4437	-0.005	0.017	0.067	0.109	329.619228	-29.738698	-1346.48	172.14
6	GUIDE	981478152	9.41	4436	0.067	0.119	0.074	0.120	329.415589	-30.057192	-380.35	-713.21
7	GUIDE	981469488	9.60	4369	0.091	0.048	0.088	0.140	329.261199	-30.045155	-534.12	-1171.45

2.4 Star Slots

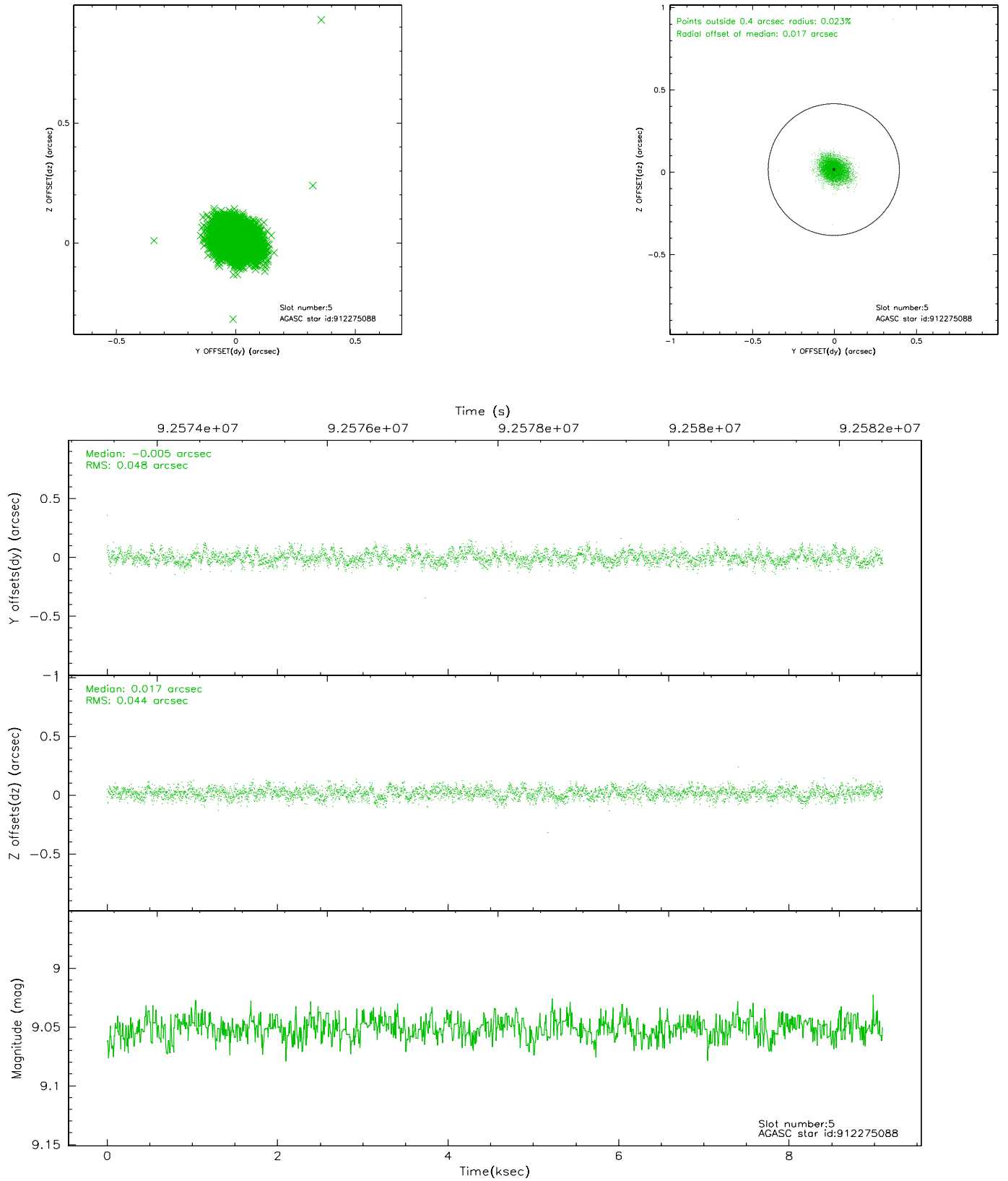
2.4.1 Slot 3



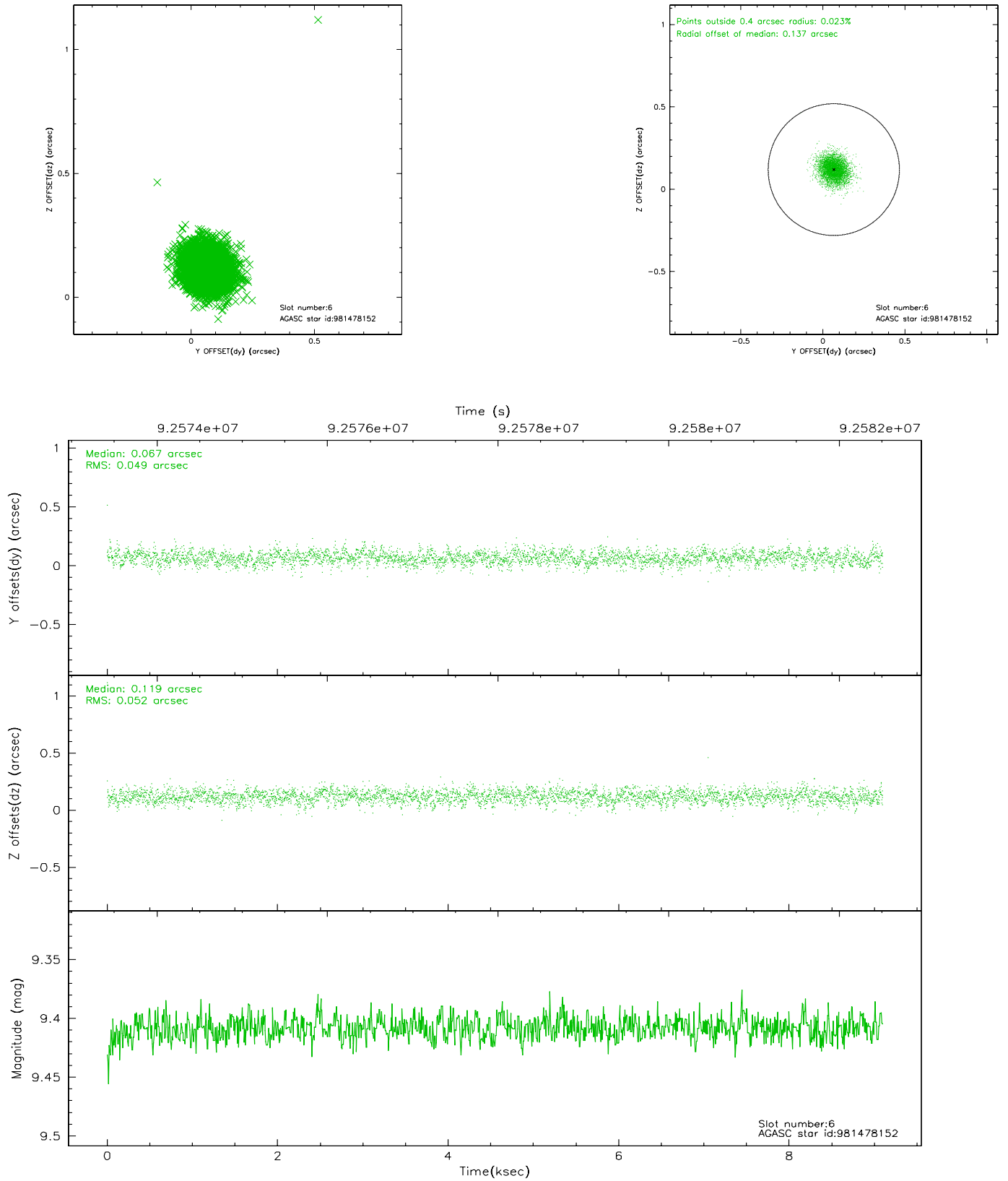
2.4.2 Slot 4



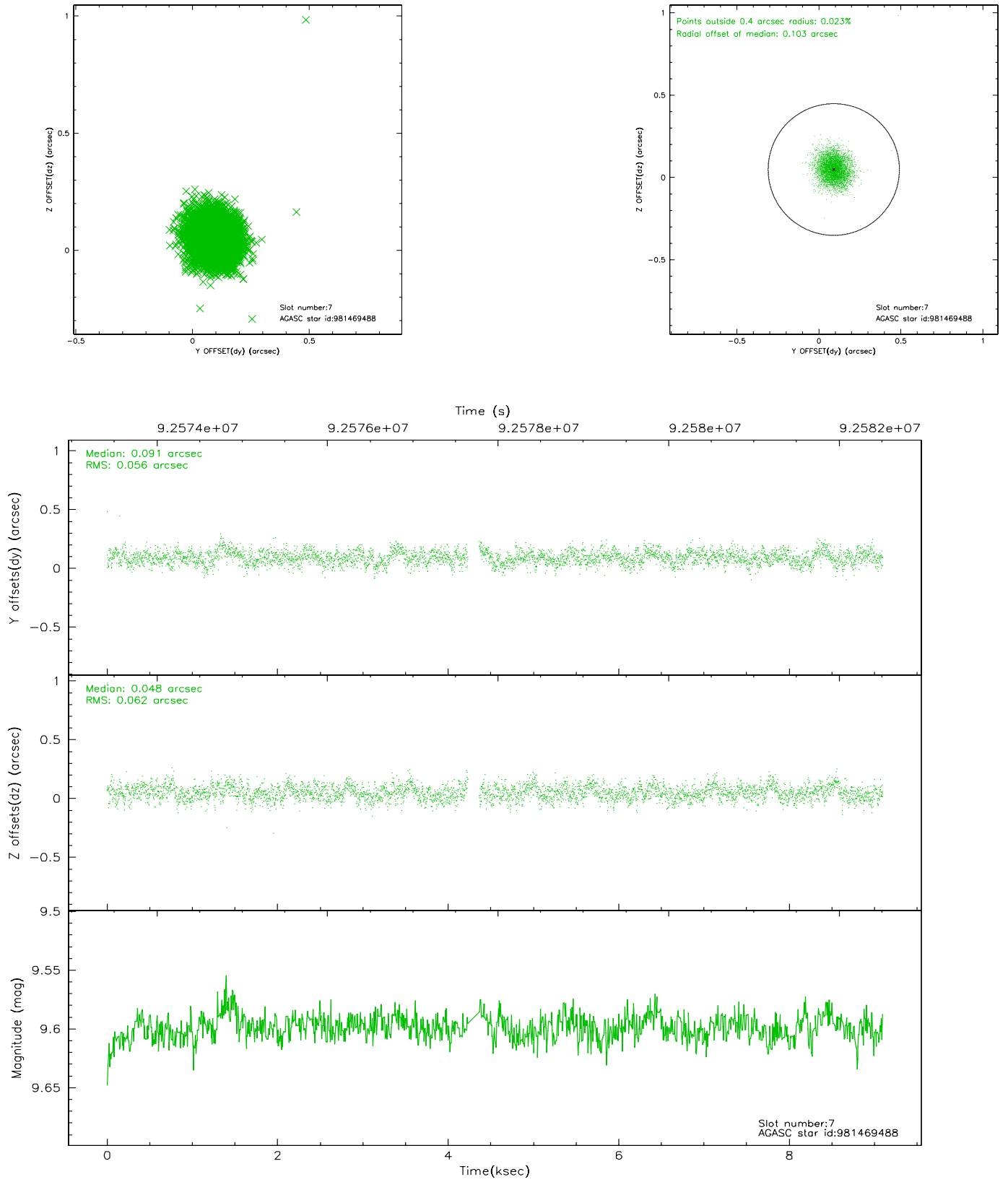
2.4.3 Slot 5



2.4.4 Slot 6

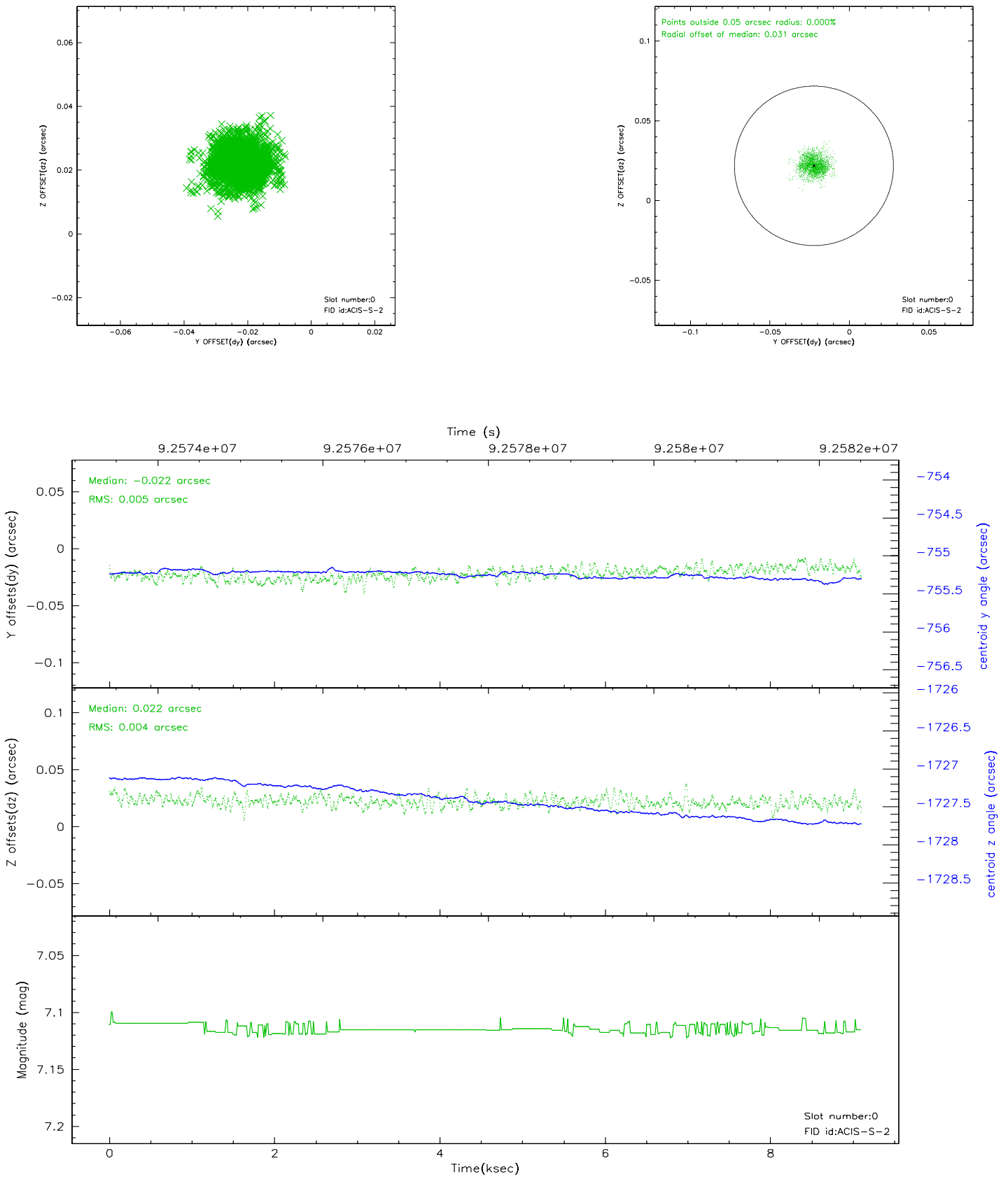


2.4.5 Slot 7

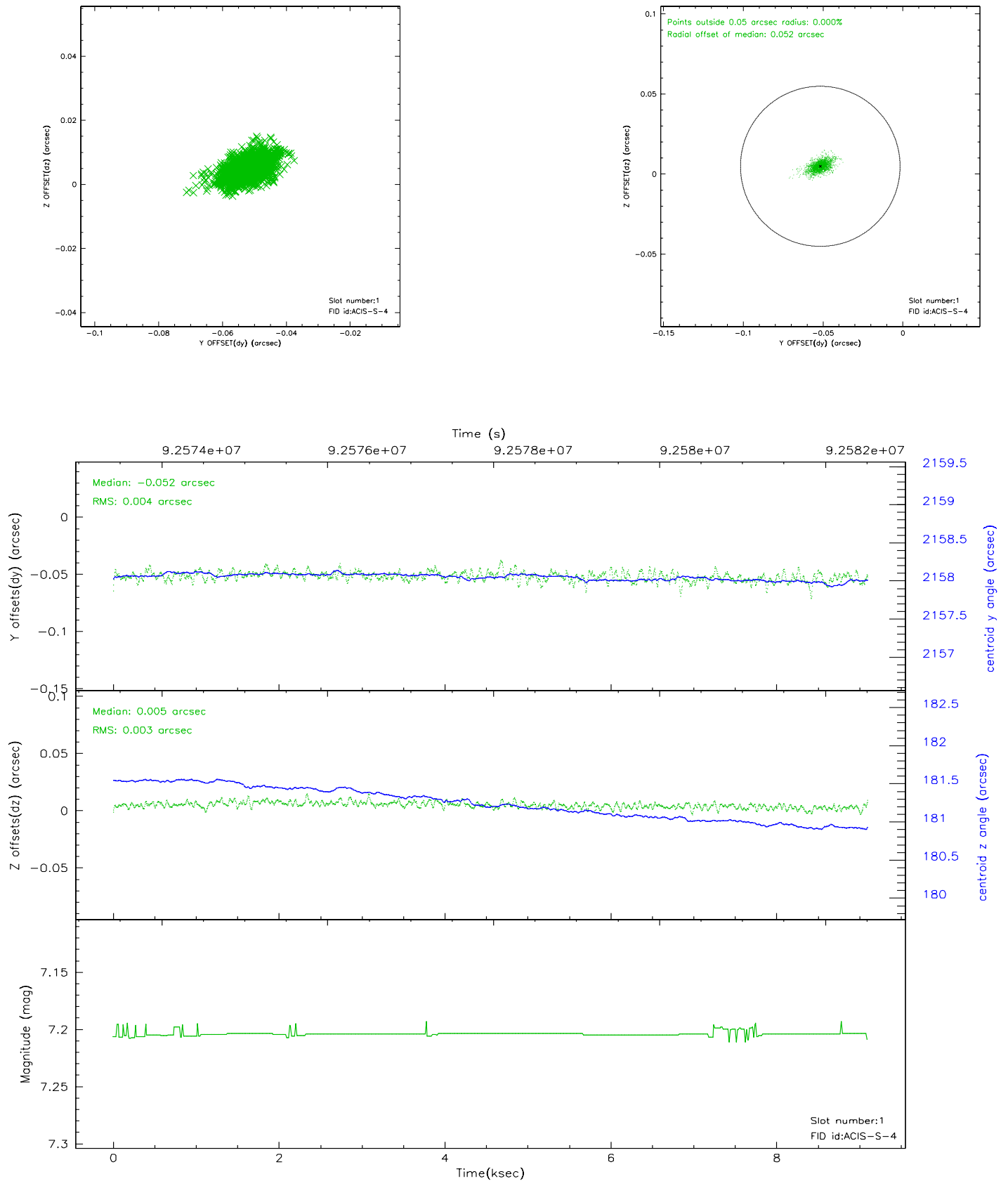


2.5 FID Slots

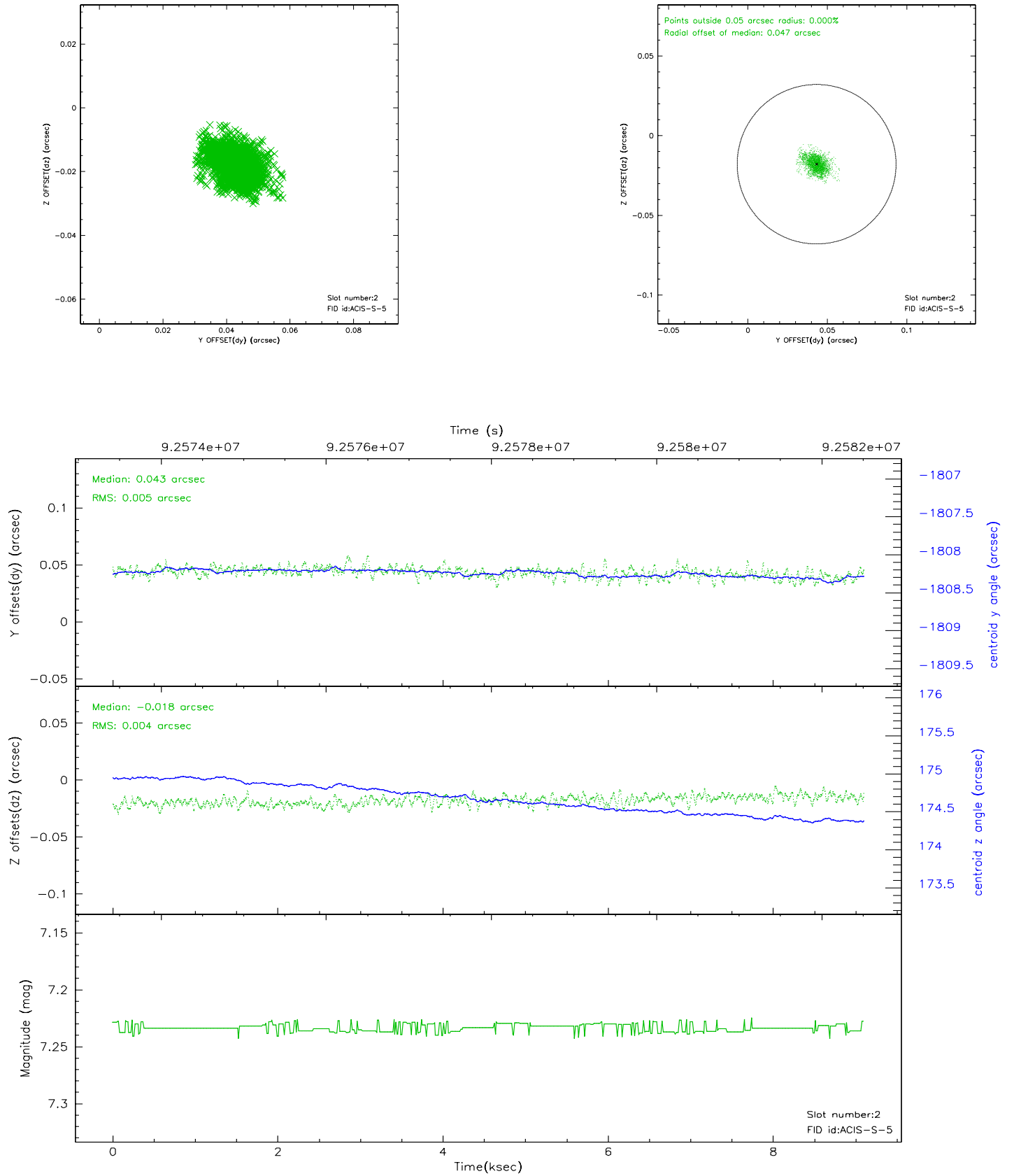
2.5.1 Slot 0



2.5.2 Slot 1

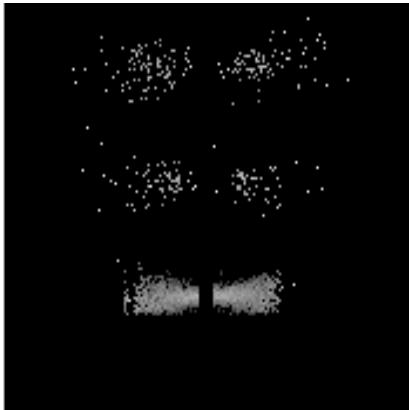


2.5.3 Slot 2

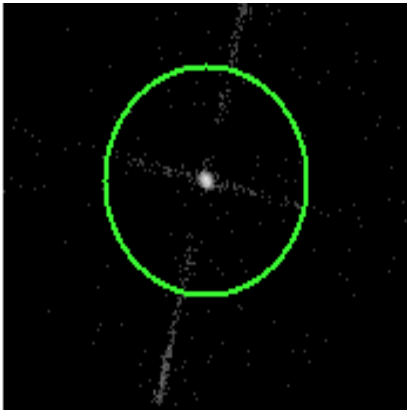


3 Gratings

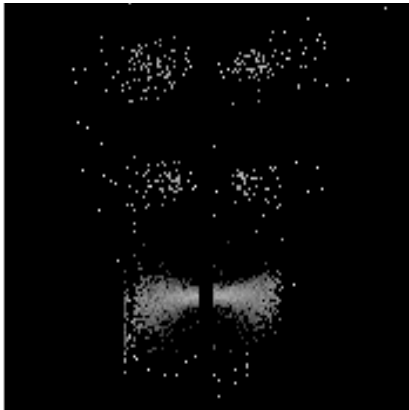
3.1 LETG Arm



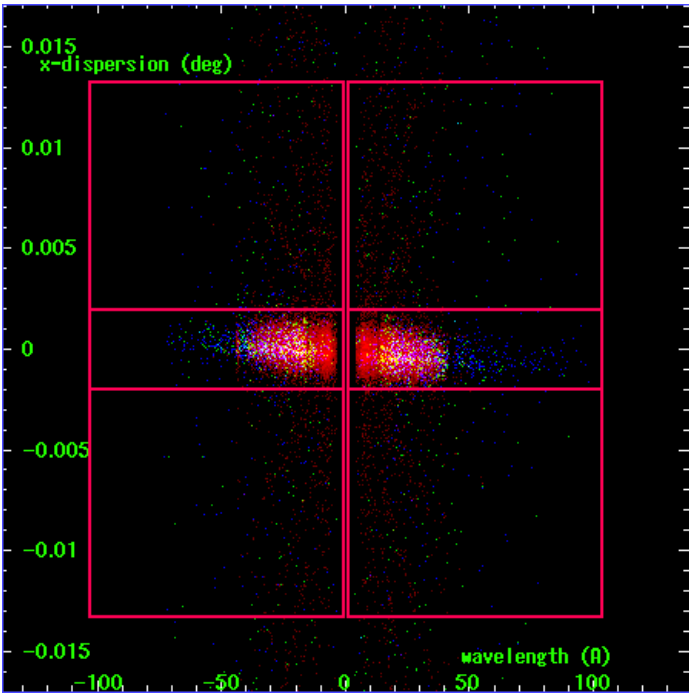
LETG Order Sort 123



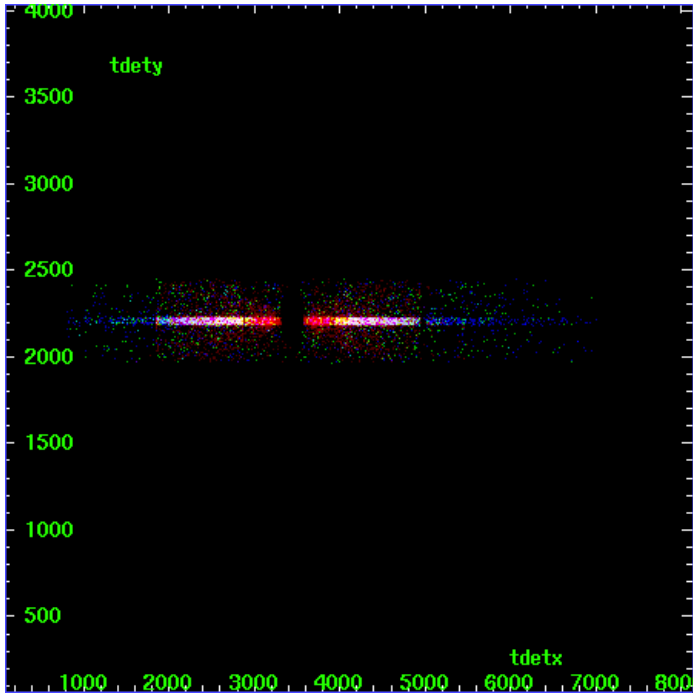
LETG Zero Order



LETG Order Sort ALL

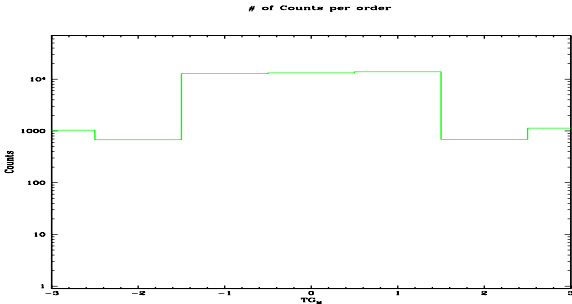


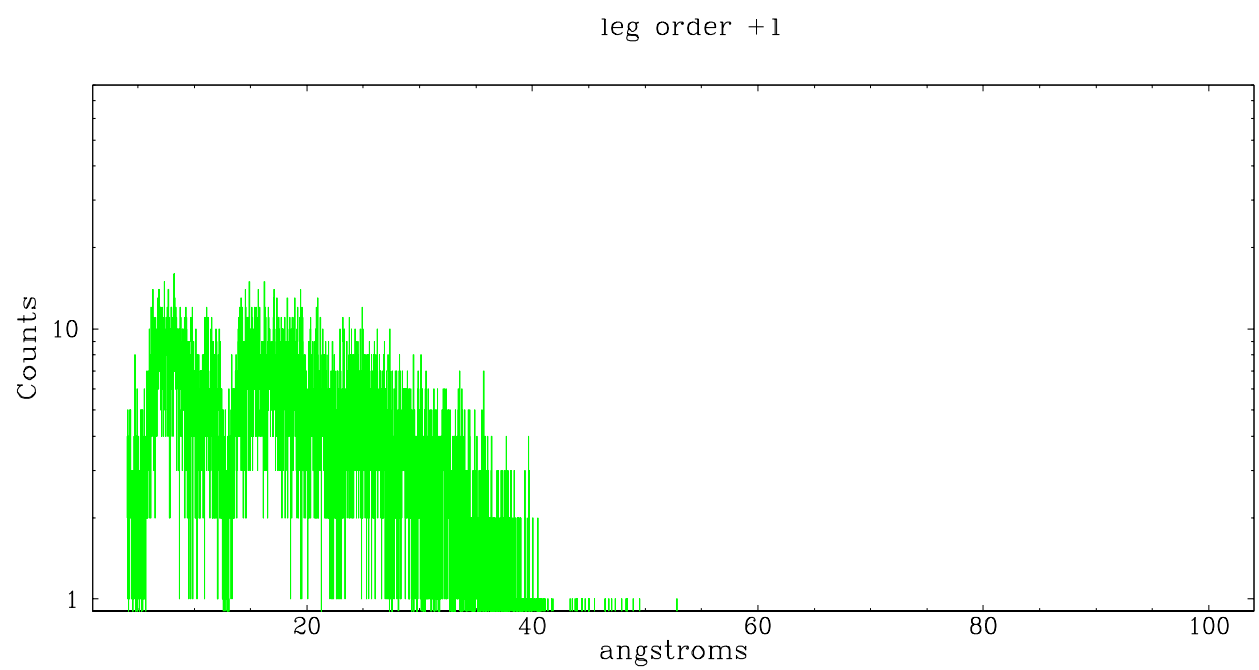
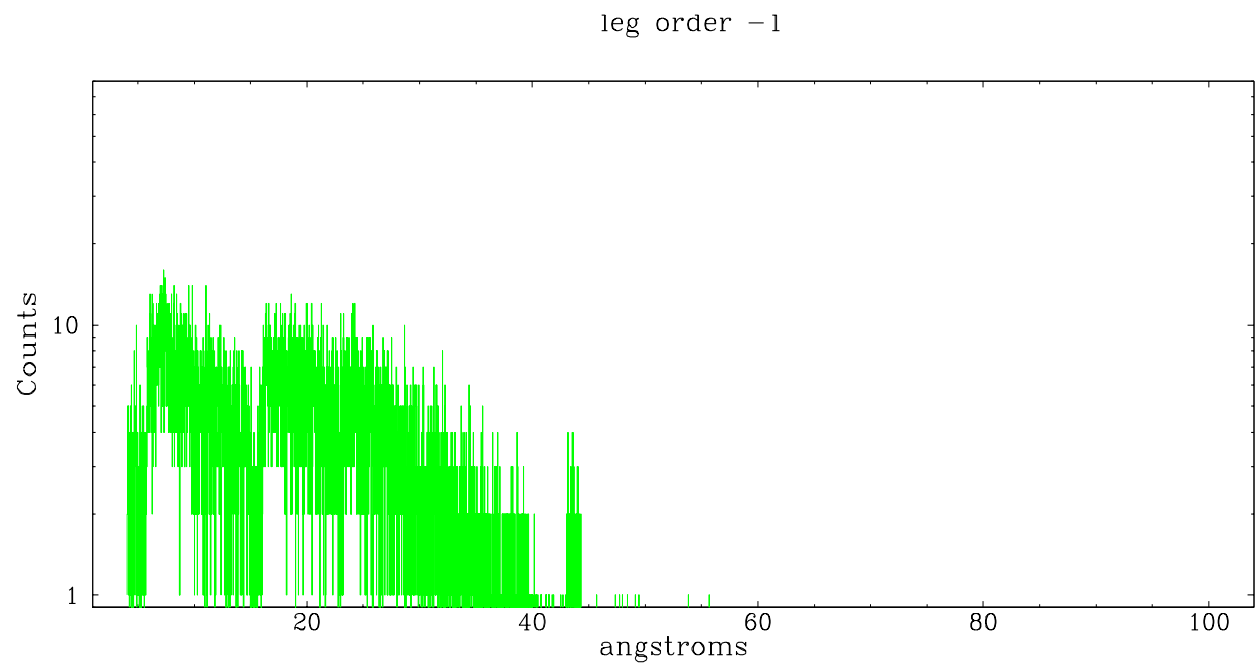
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1033	676	12826	13260	13882	691	1130





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.07.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.091

A.2 Comments

Off-axis source gratings observation. WARNING: there are no standard ciao tools for analysis of grating spectra from extended sources. The shape of an emission 'line' will be the shape of the zero order spatial structure convolved with the instrumental LSF. Grating extractions can be used, but need to be combined with custom spatial-spectral analysis, since wavelength is multi-valued at any particular diffraction angle. WARNING: The user will need to deconvolve the PSF of the off-axis source to get an accurate determination of the zeroth order position, then use software tools such as CIAO to specify the coordinates of the zeroth order before running the tools to resolve the dispersed events. The spectral data supplied in this processing are only energy-calibrated for the results of tgdetect, which uses the source-detection tool celldetect.