

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 1015 - L2 Version 001
Chandra X-Ray Center

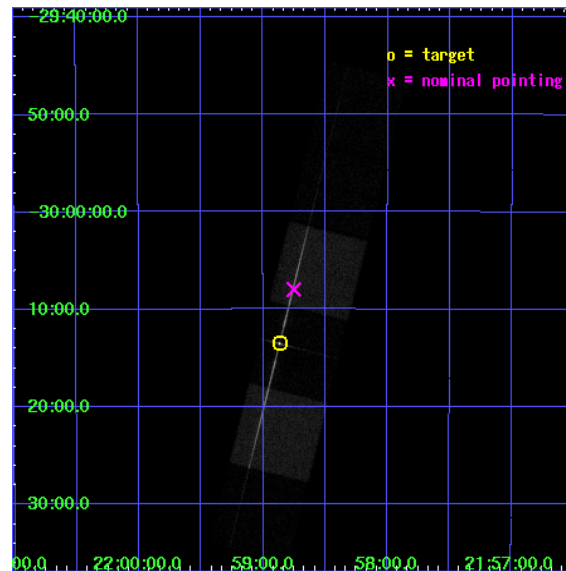
L2 Processing Date : Jun 19 2007

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	LETG Arm	17
A	Summary	19
A.1	Status	19
A.2	Comments	19

1 Front

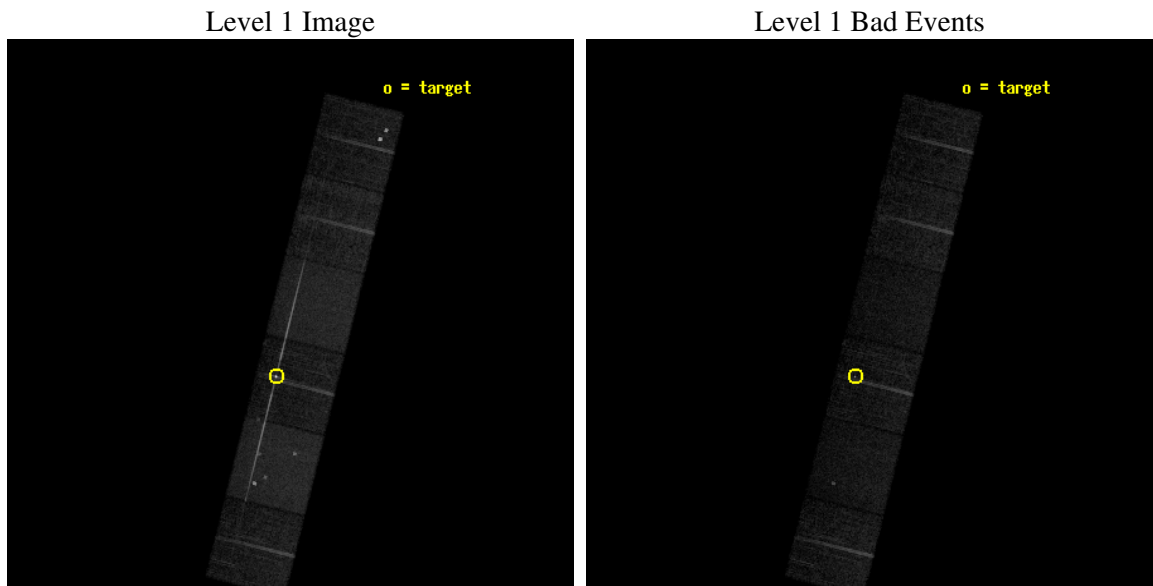
seq_num	390007
obs_id	1015
title	GRATINGS CALIBRATION OBSERVATIONS OF PKS2155-304
observer	Dr. CXC Calibration
object	PKS2155-304
dtcycle	0
cycle	P
ra_targ	329.716667
dec_targ	-30.225556
ra_nom	329.68811869304
dec_nom	-30.132966349057
roll_nom	284.05555655635
revision	2
ontime	9632.0000089705
livetime	9510.0338251628
ontime4	9632.0000089705
ontime5	9632.0000089705
ontime6	9632.0000089705
ontime7	9632.0000089705
ontime8	9632.0000089705
ontime9	9632.0000089705
l2events	145333



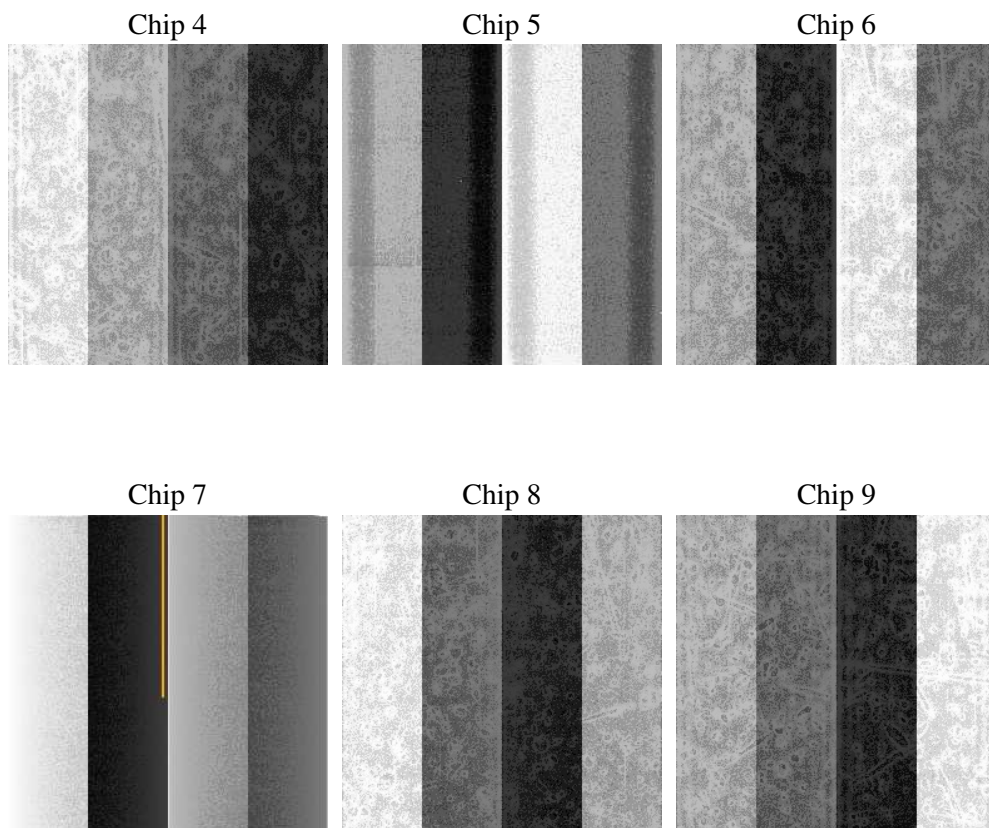
2 OBI

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	2007-06-19T20:10:32
revision	2

sched_exp_time	9680.236000
ontime	9632.0000089705
ontime4	9632.0000089705
ontime5	9632.0000089705
ontime6	9632.0000089705
ontime7	9632.0000089705
ontime8	9632.0000089705
ontime9	9632.0000089705
l1events	457977

2.1.4 Events

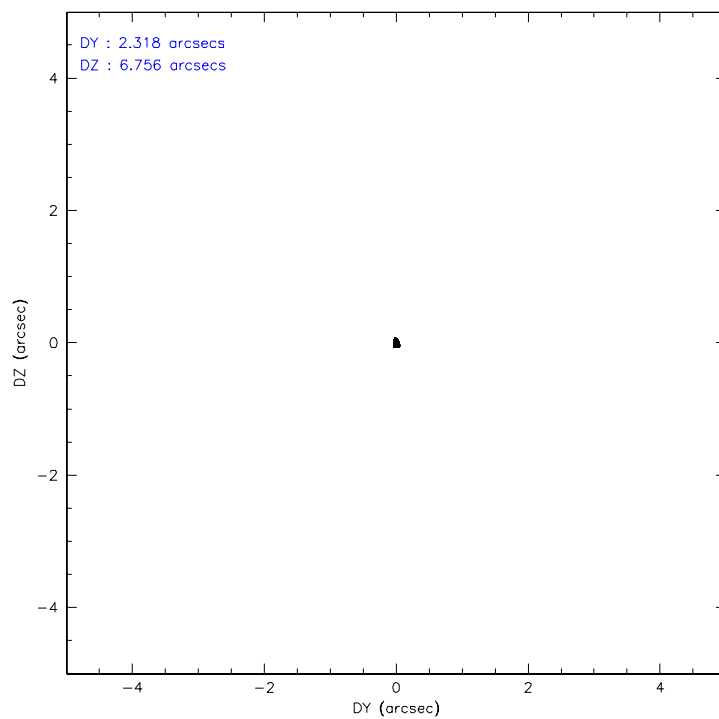
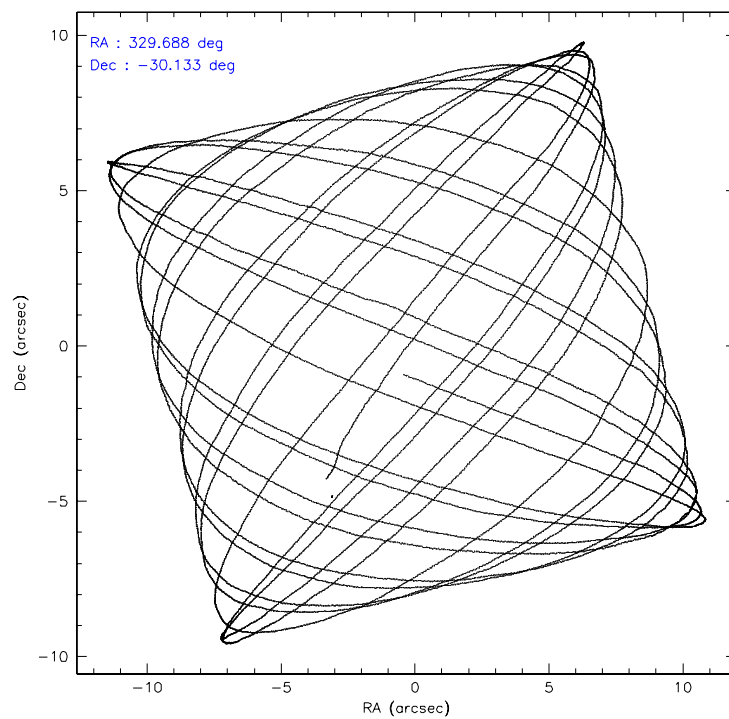
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	58953	97307	80704	89063	69896	62054
rejected events	51895	42518	49647	40501	54996	46751
rejected %	88%	43%	61%	45%	78%	75%

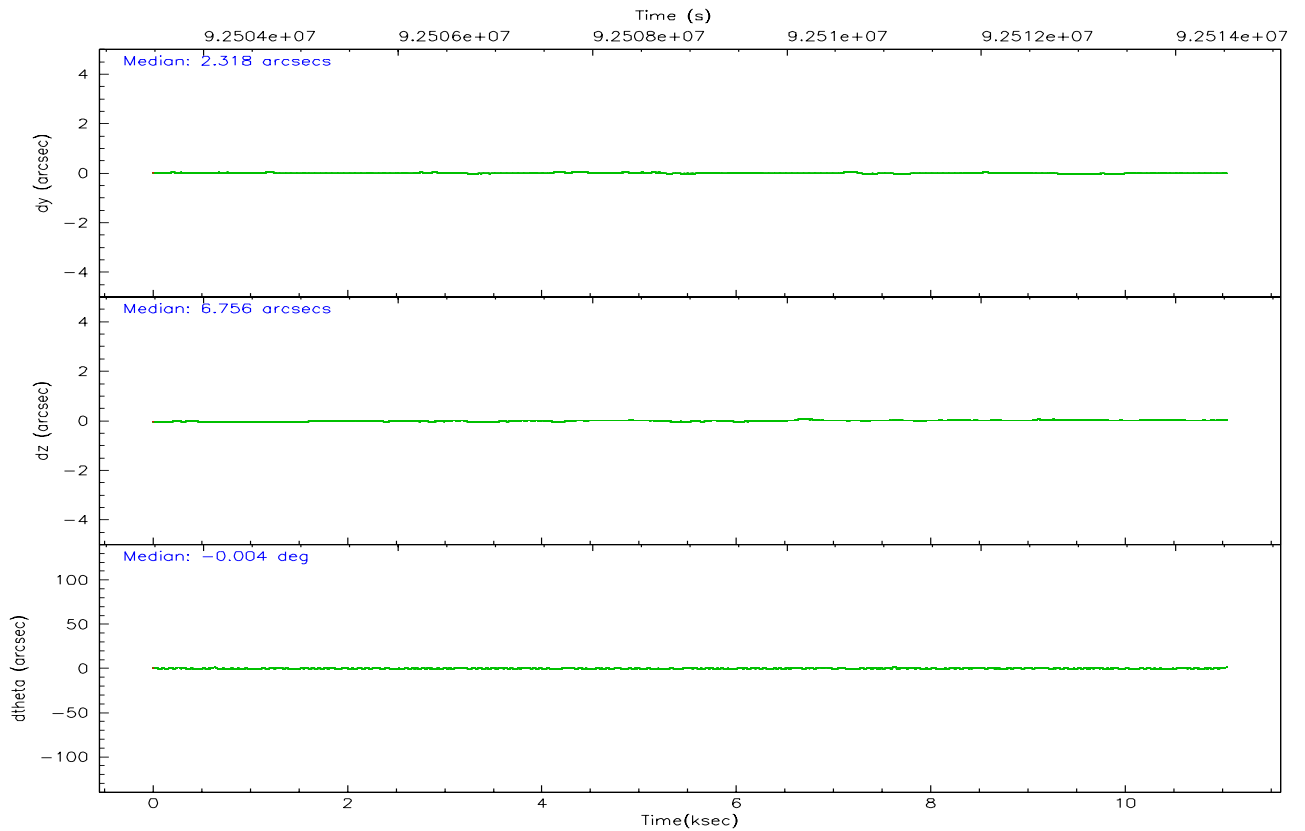
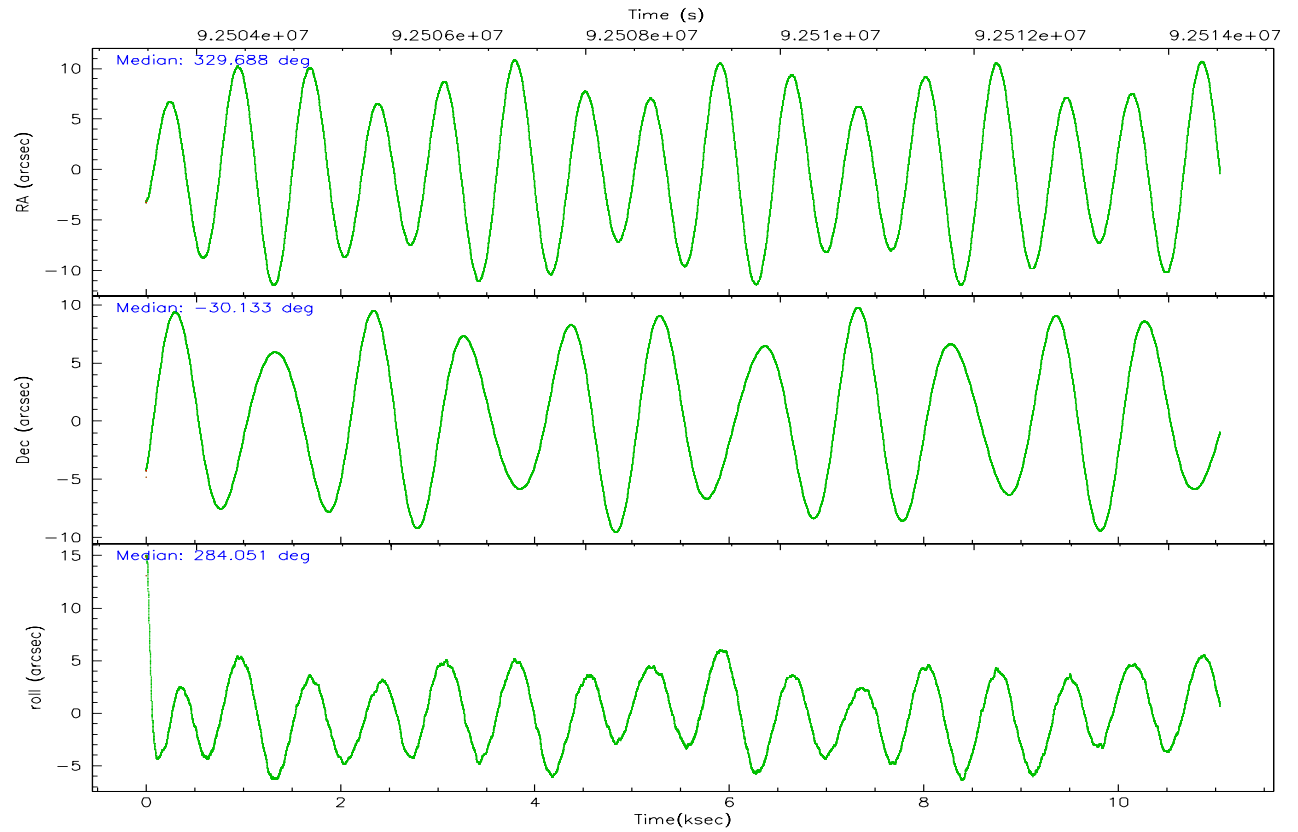
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	3154	12457	23171	8692	5013	5799
	5%	12%	28%	9%	7%	9%
grade 1 events	26	488	566	62	37	40
	0%	0%	0%	0%	0%	0%
grade 2 events	1573	15632	3651	10118	3065	7036
	2%	16%	4%	11%	4%	11%
grade 3 events	652	2868	1332	4555	1543	635
	1%	2%	1%	5%	2%	1%
grade 4 events	612	2967	1318	4677	1445	647
	1%	3%	1%	5%	2%	1%
grade 5 events	1964	6014	2471	6681	2814	2381
	3%	6%	3%	7%	4%	3%
grade 6 events	1071	20902	1610	20562	3839	1198
	1%	21%	1%	23%	5%	1%
grade 7 events	49901	35979	46585	33716	52140	44318
	84%	36%	57%	37%	74%	71%

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	329.665916	329.6881186930446	Subarray requested	NONE	NONE
Pointing Dec	-30.113488	-30.13296634905662	Alternating exposures requested	N	N
Pointing Roll	283.887765	284.0555565563465	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)	-184.132523	-184.1258238485404			
SIM translation stage offset (mm)	-6	-6.006698734467449			
Observation start time	92504851.184000	92503305.29245999			
Observation start date	2000-12-06T15:46:27	2000-12-06T15:21:45			
Observation end time	92514531.184000	92514845.7679			
Observation end date	2000-12-06T18:27:47	2000-12-06T18:34:05			
Read mode	TIMED	TIMED			

2.3 Aspect



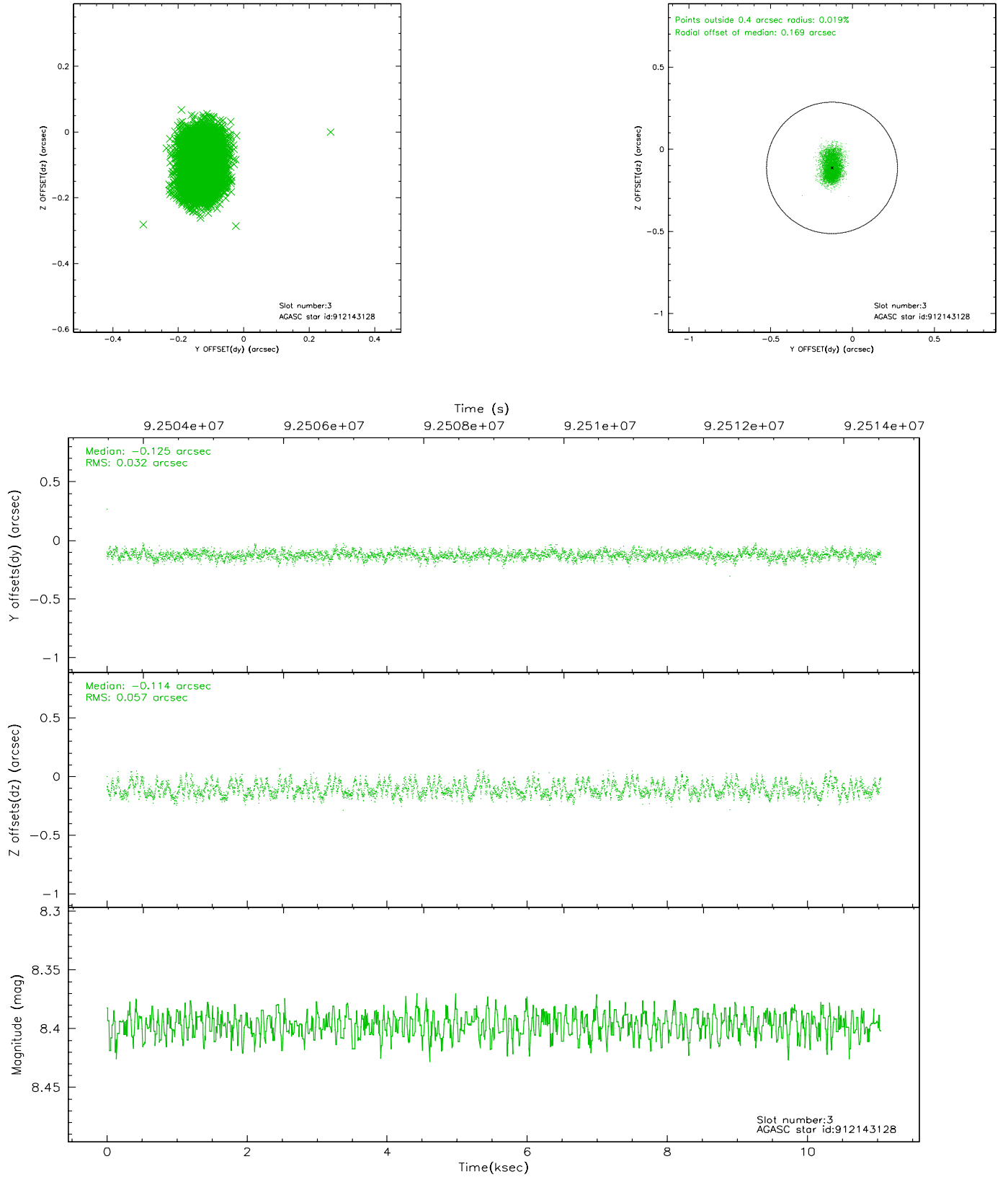


Slot Statistics

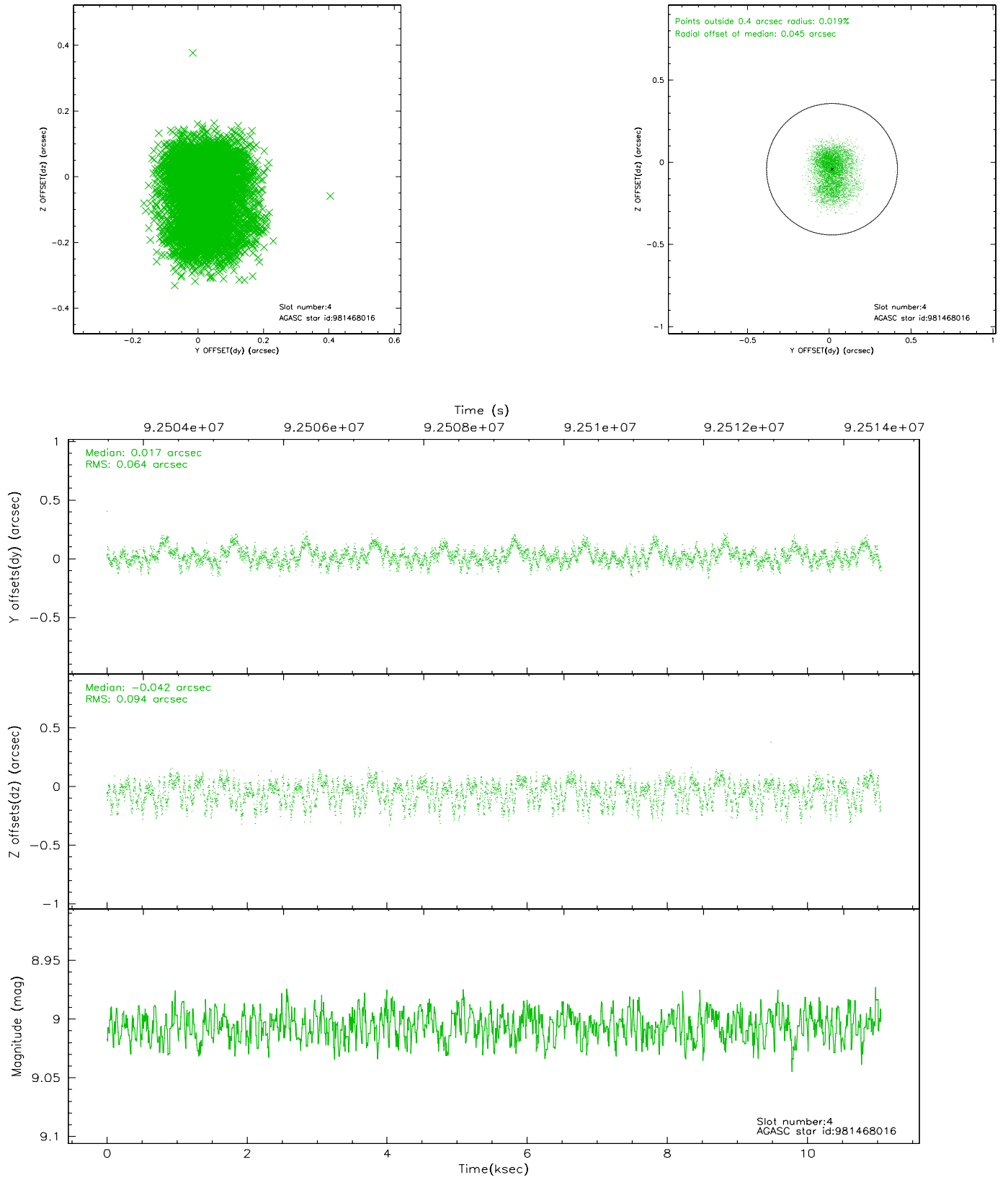
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	2696	-0.059	-0.023	0.006	0.011	0.000000	0.000000	-754.57	-1851.75
1	FID	ACIS-S-4	7.19	2696	-0.049	0.034	0.005	0.009	0.000000	0.000000	2158.50	56.27
2	FID	ACIS-S-5	7.23	2696	0.076	-0.004	0.006	0.010	0.000000	0.000000	-1806.69	50.41
3	GUIDE	912143128	8.40	5392	-0.125	-0.114	0.070	0.113	328.924992	-29.706140	-1970.74	-1898.47
4	GUIDE	981468016	9.01	5392	0.017	-0.042	0.123	0.197	328.842457	-30.034984	-880.03	-2425.51
5	GUIDE	912275088	9.05	5389	-0.009	0.028	0.073	0.115	329.619228	-29.738698	-1343.46	182.35
6	GUIDE	981478152	9.41	5391	0.043	0.137	0.074	0.122	329.415589	-30.057192	-381.76	-707.91
7	GUIDE	981468128	9.36	5390	0.069	-0.001	0.080	0.129	329.756350	-30.158334	225.93	235.09

2.4 Star Slots

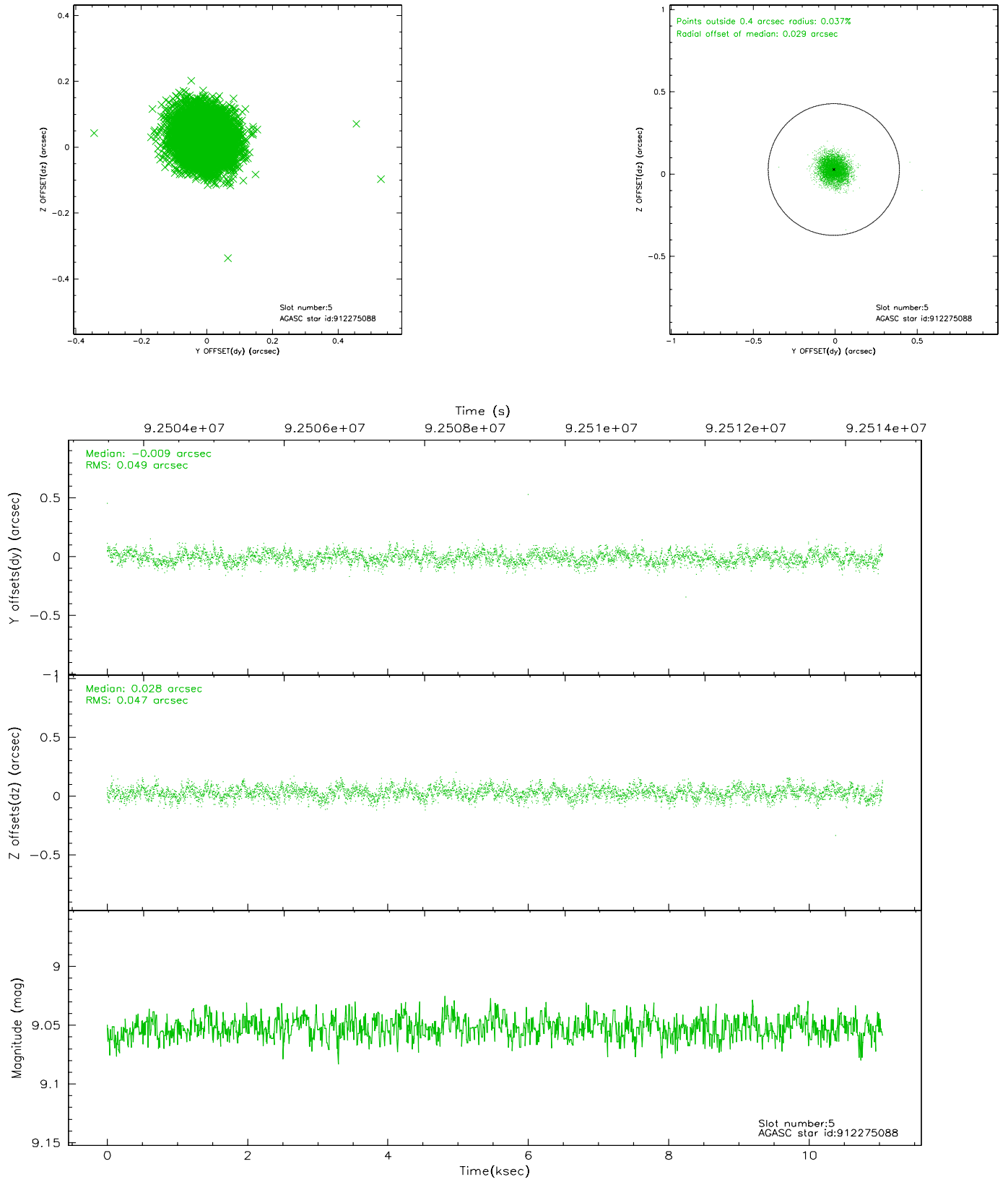
2.4.1 Slot 3



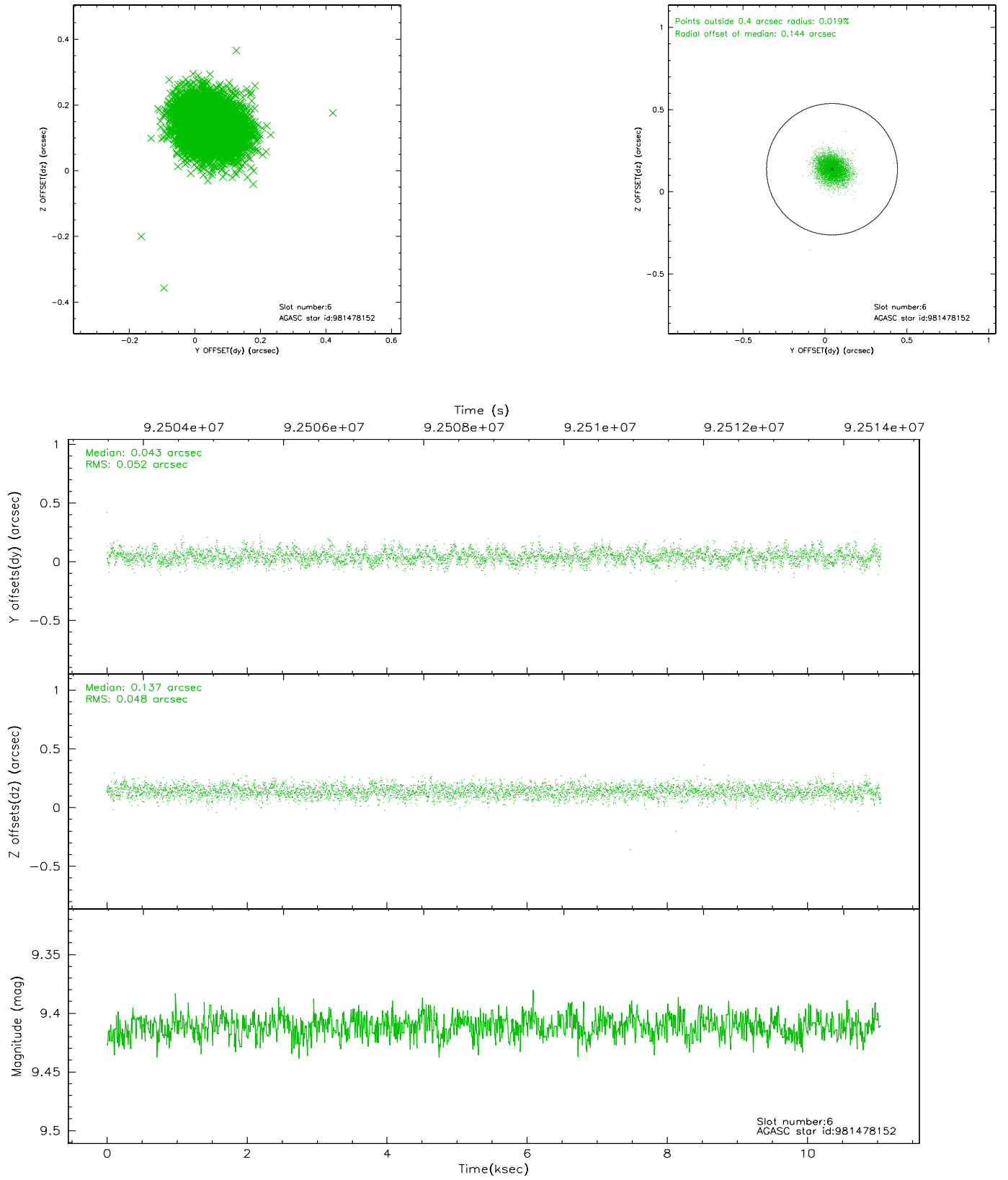
2.4.2 Slot 4



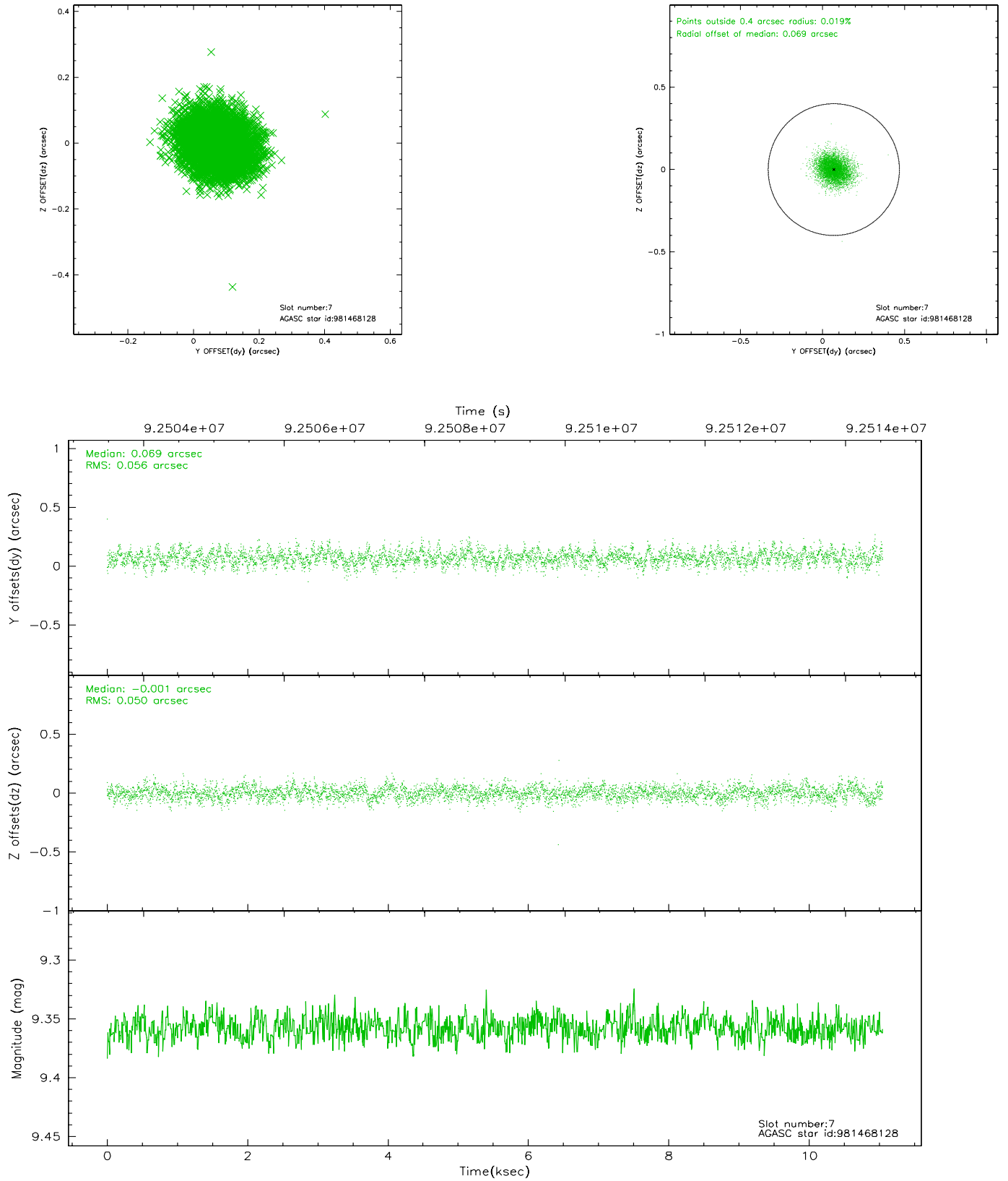
2.4.3 Slot 5



2.4.4 Slot 6

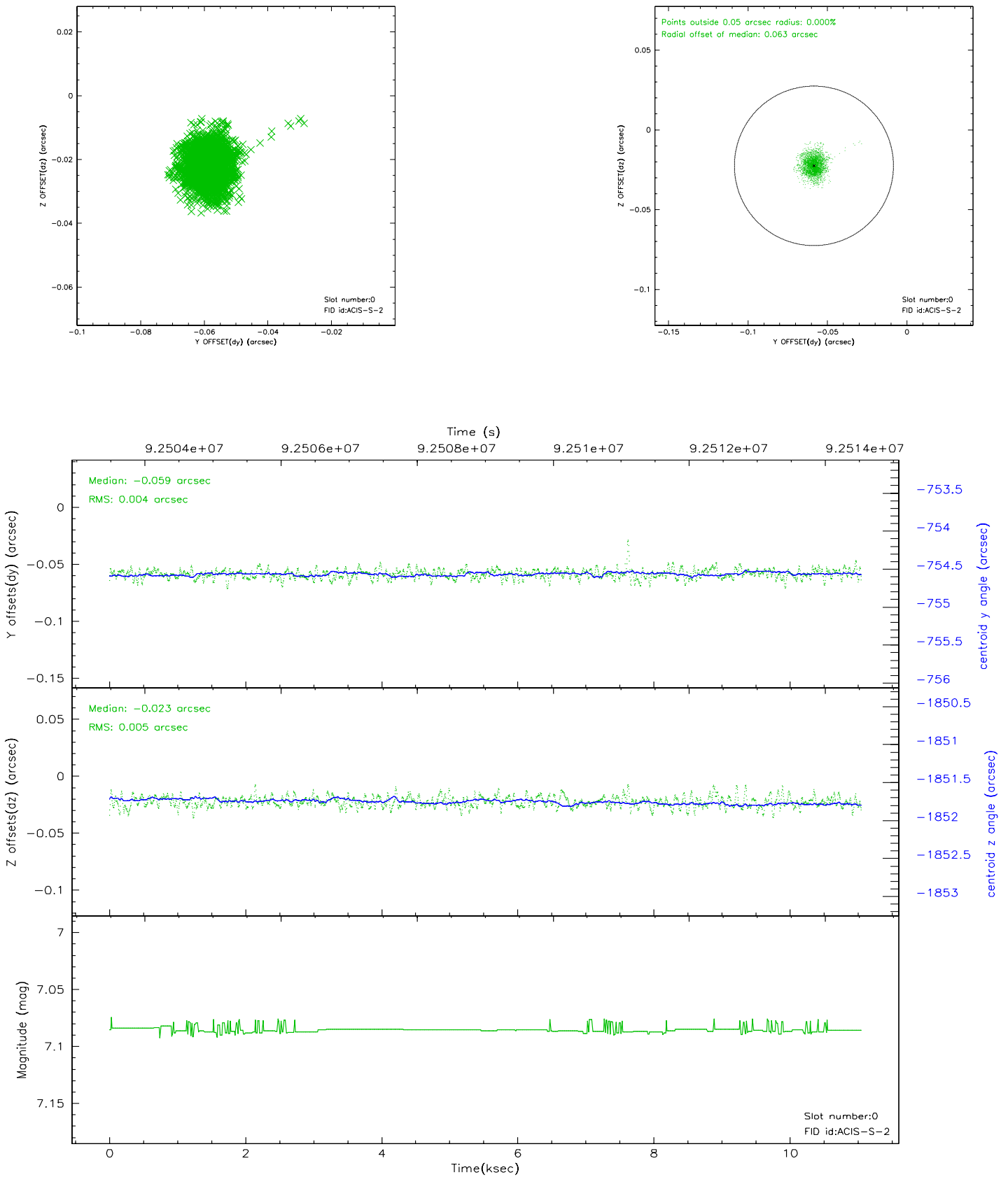


2.4.5 Slot 7

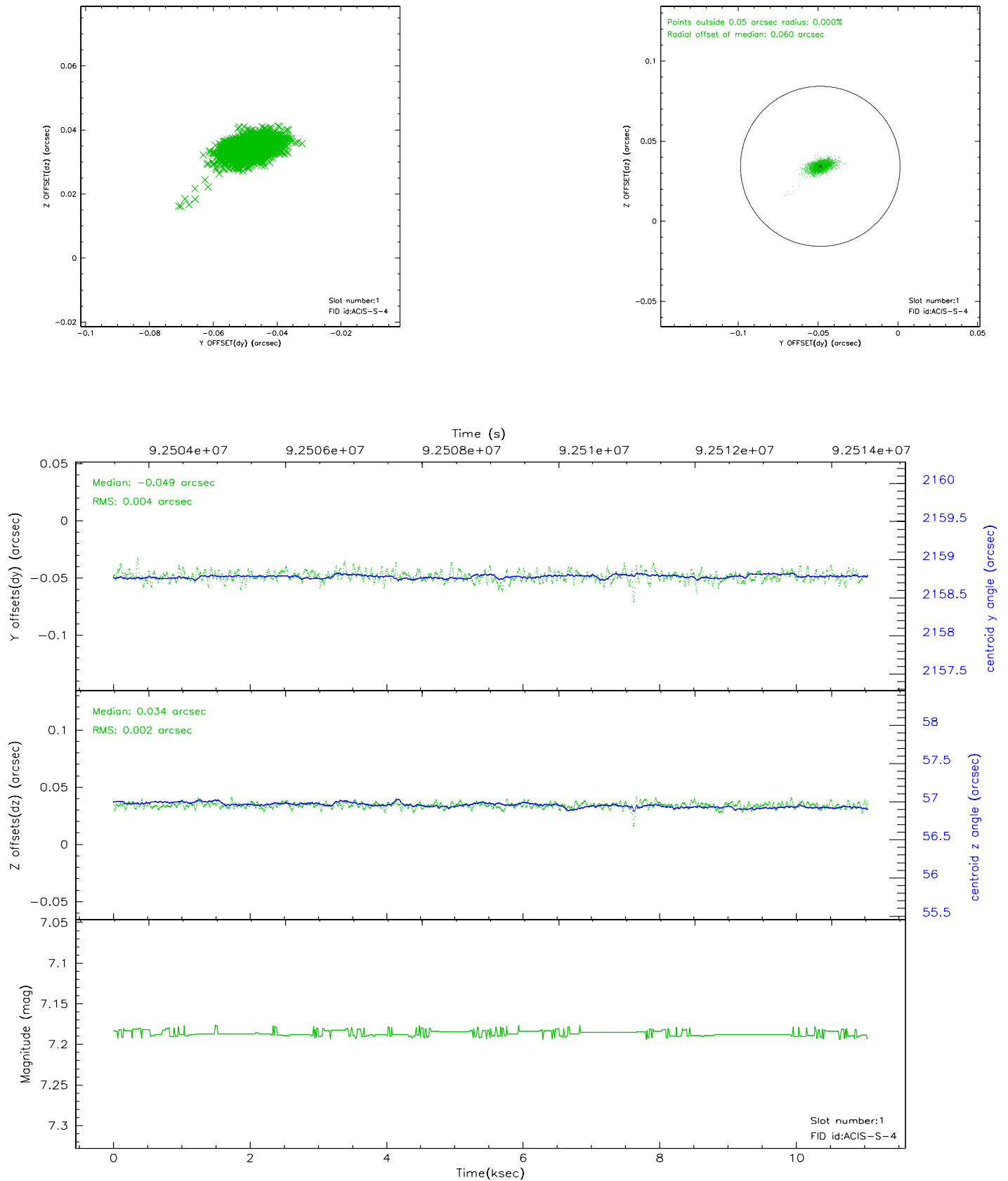


2.5 FID Slots

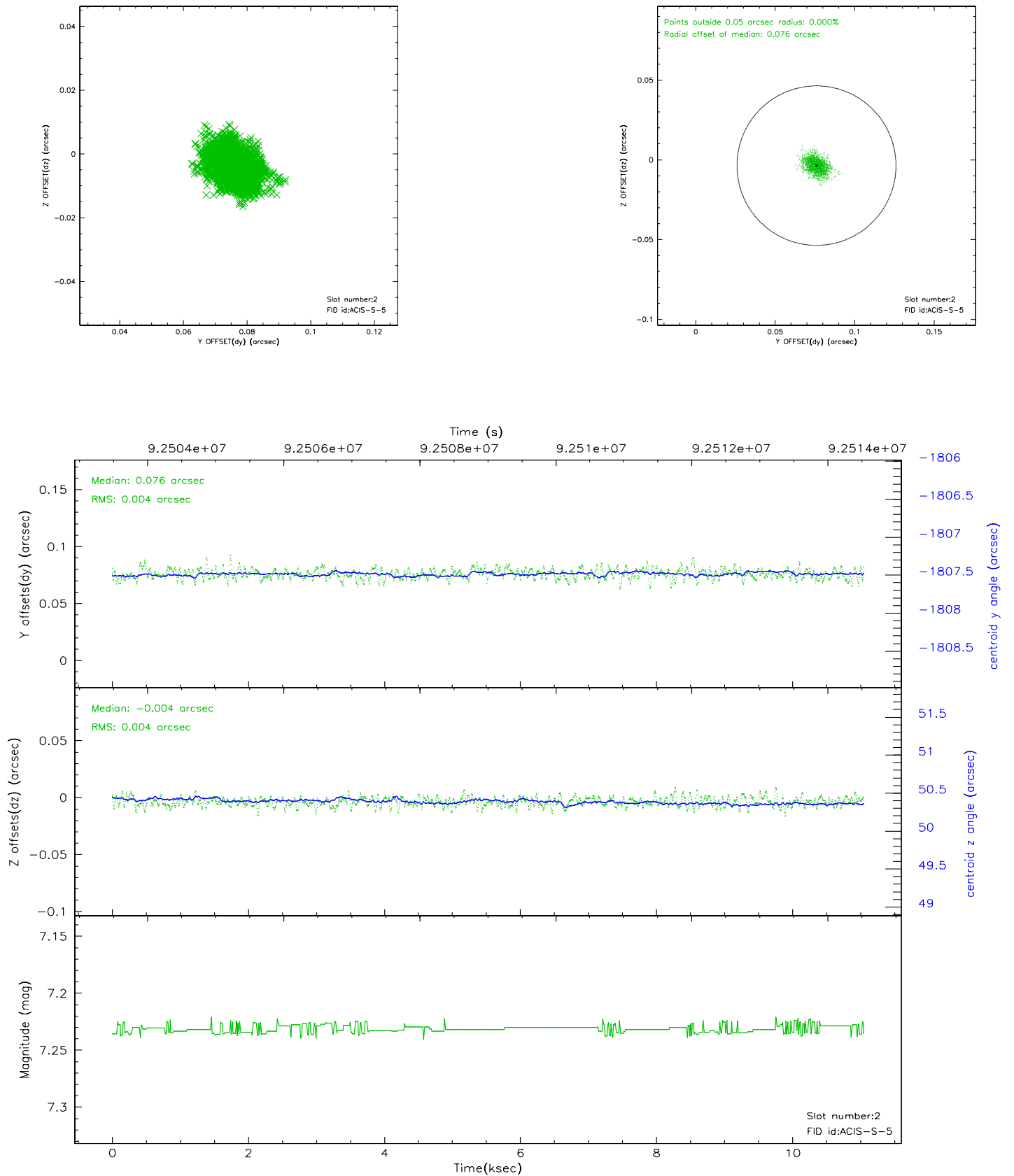
2.5.1 Slot 0



2.5.2 Slot 1

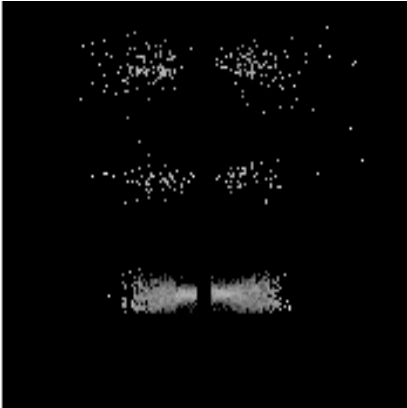


2.5.3 Slot 2

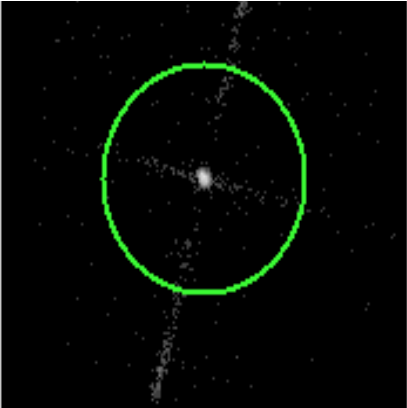


3 Gratings

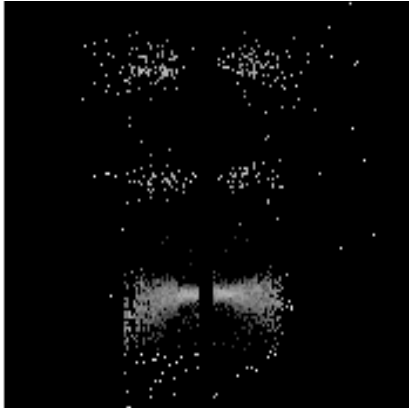
3.1 LETG Arm



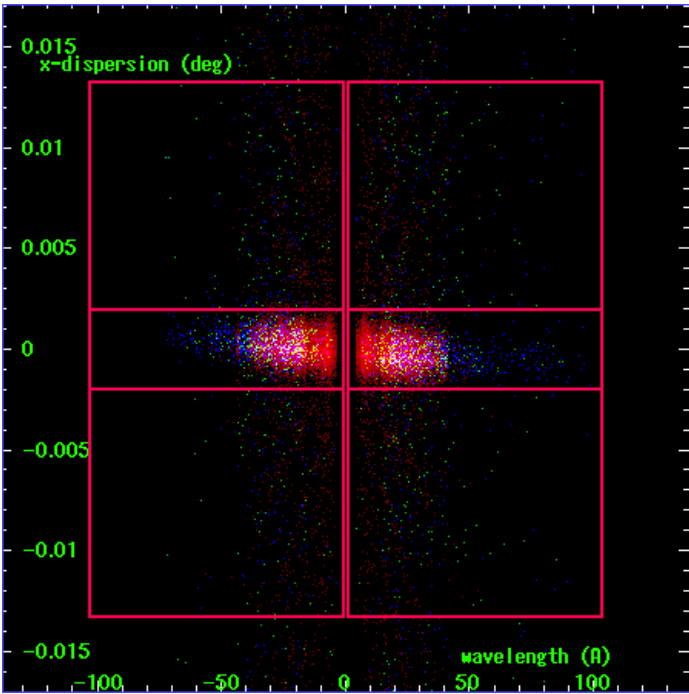
LETG Order Sort 123



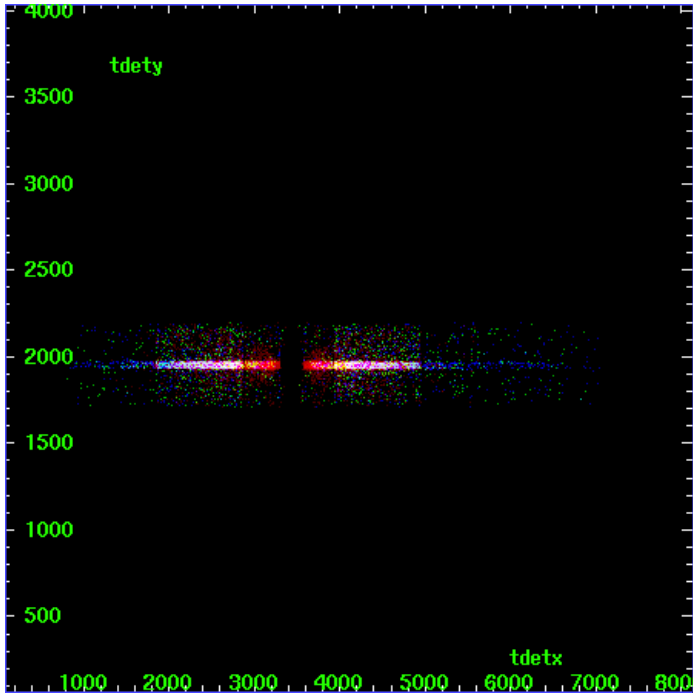
LETG Zero Order



LETG Order Sort ALL

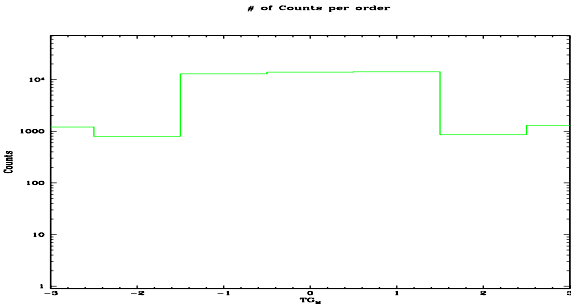


Spot Image LETG

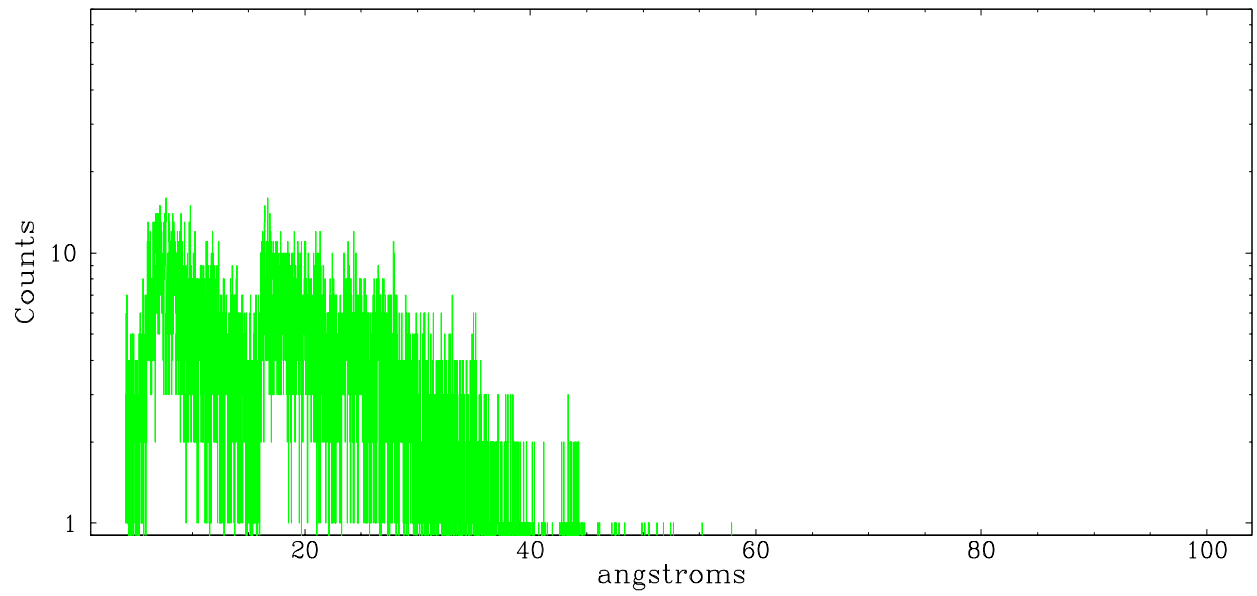


Full Detector LETG

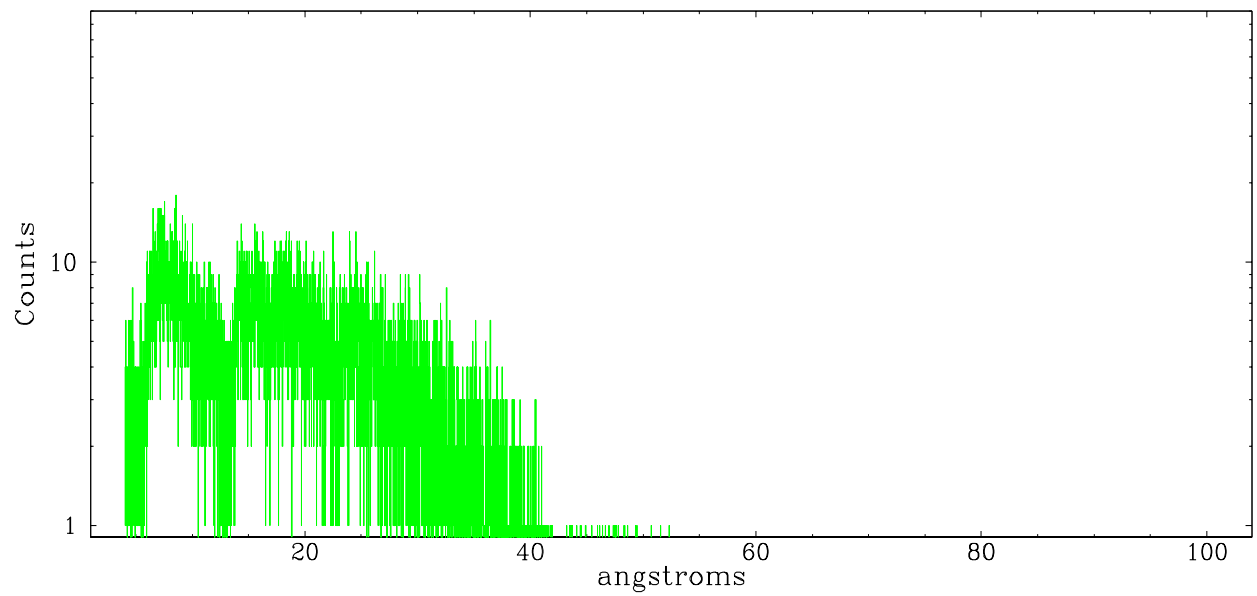
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1209	797	12862	13861	14157	858	1299



leg order -1



leg order $+1$



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	9.635

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.