

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 1797 - L2 Version 001
Chandra X-Ray Center

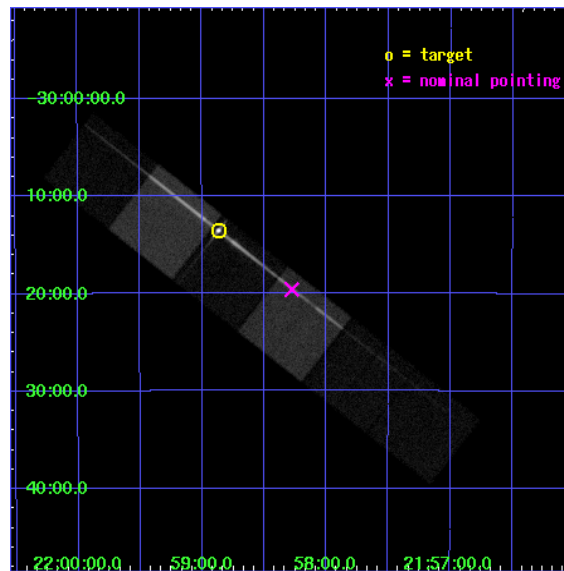
L2 Processing Date : Jun 2 2007

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1 Front

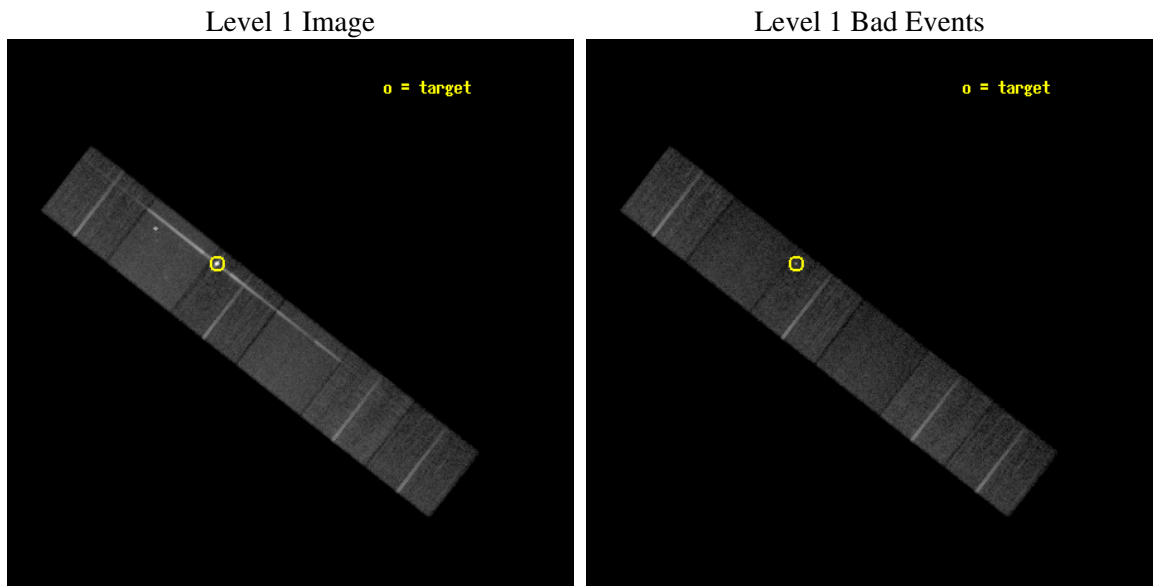
seq_num	390015
obs_id	1797
title	GRATINGS CALIBRATION OBSERVATIONS OF PKS2155-304
observer	Dr. CXC Calibration
object	PKS2155-304
dtcycle	0
cycle	P
ra_targ	329.716667
dec_targ	-30.225556
ra_nom	329.56935034799
dec_nom	-30.326537052476
roll_nom	37.935004173138
revision	3
ontime	19750.318058014
livetime	19500.22763855
ontime4	19743.83607769
ontime5	19750.318058014
ontime6	19750.318058014
ontime7	19750.318058014
ontime8	19750.318058014
ontime9	19750.318058014
l2events	260170



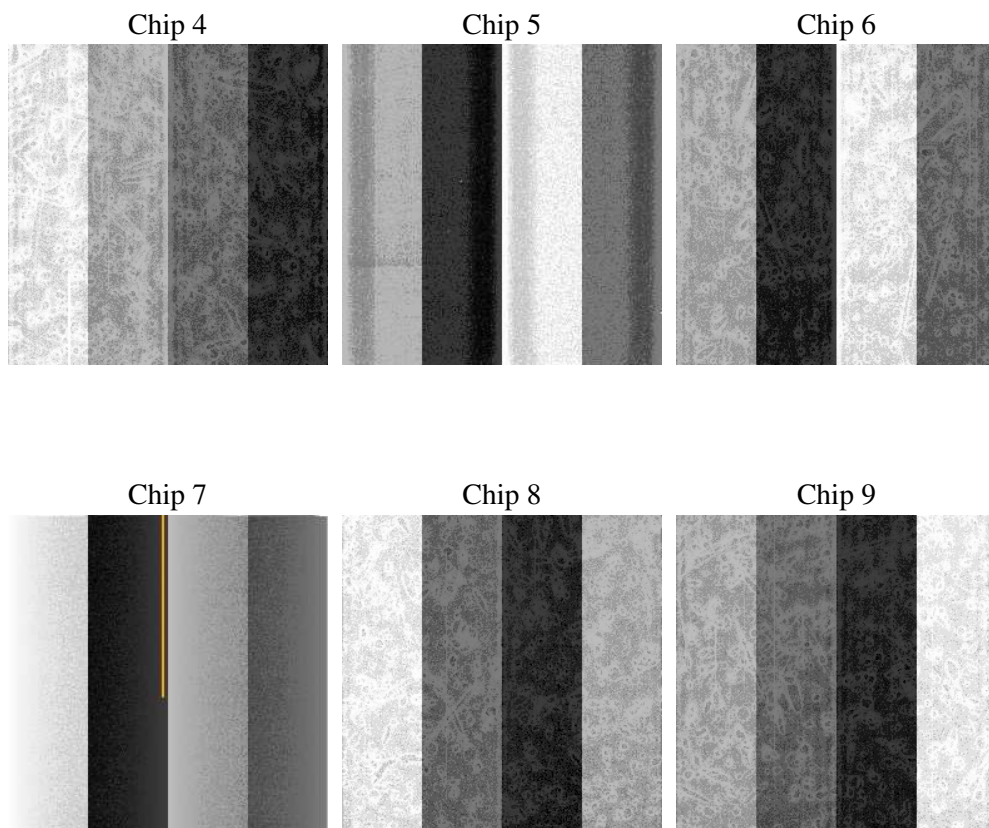
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0
ascdsver	7.6.10
caldsver	3.4.0
date	2007-06-02T07:17:18
revision	3

sched_exp_time	20000.000000
ontime	19750.318058014
ontime4	19743.83607769
ontime5	19750.318058014
ontime6	19750.318058014
ontime7	19750.318058014
ontime8	19750.318058014
ontime9	19750.318058014
l1events	880042

2.1.4 Events

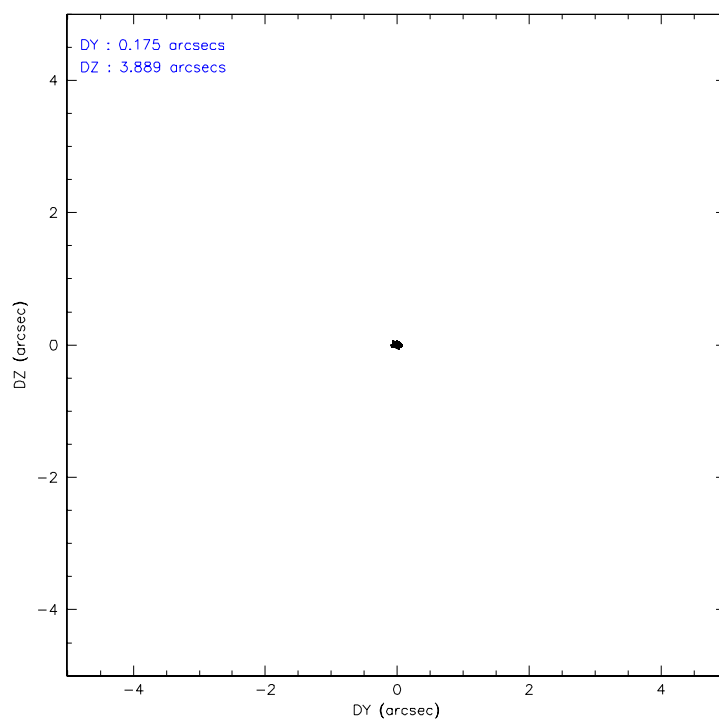
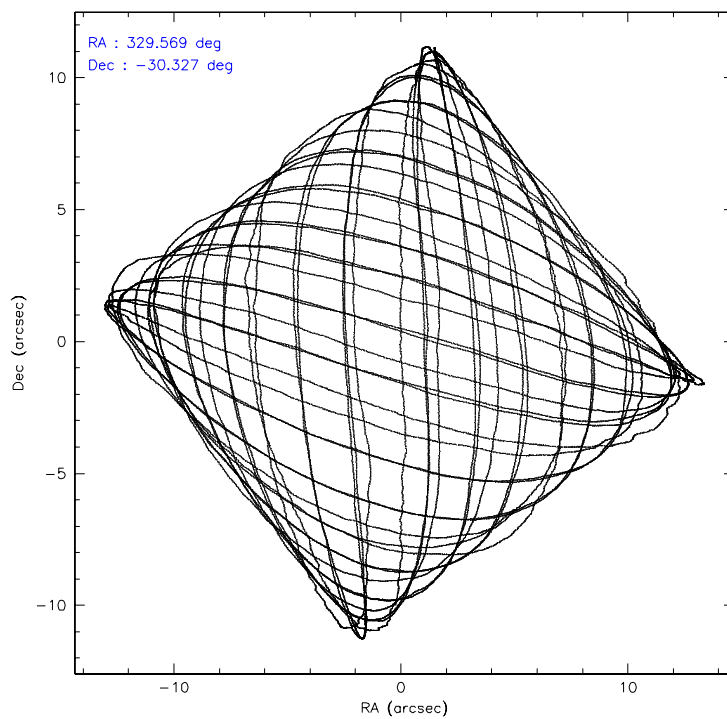
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	126577	185644	165110	148198	144881	109632
rejected events	111991	81246	100969	80306	117003	96649
rejected %	88%	43%	61%	54%	80%	88%

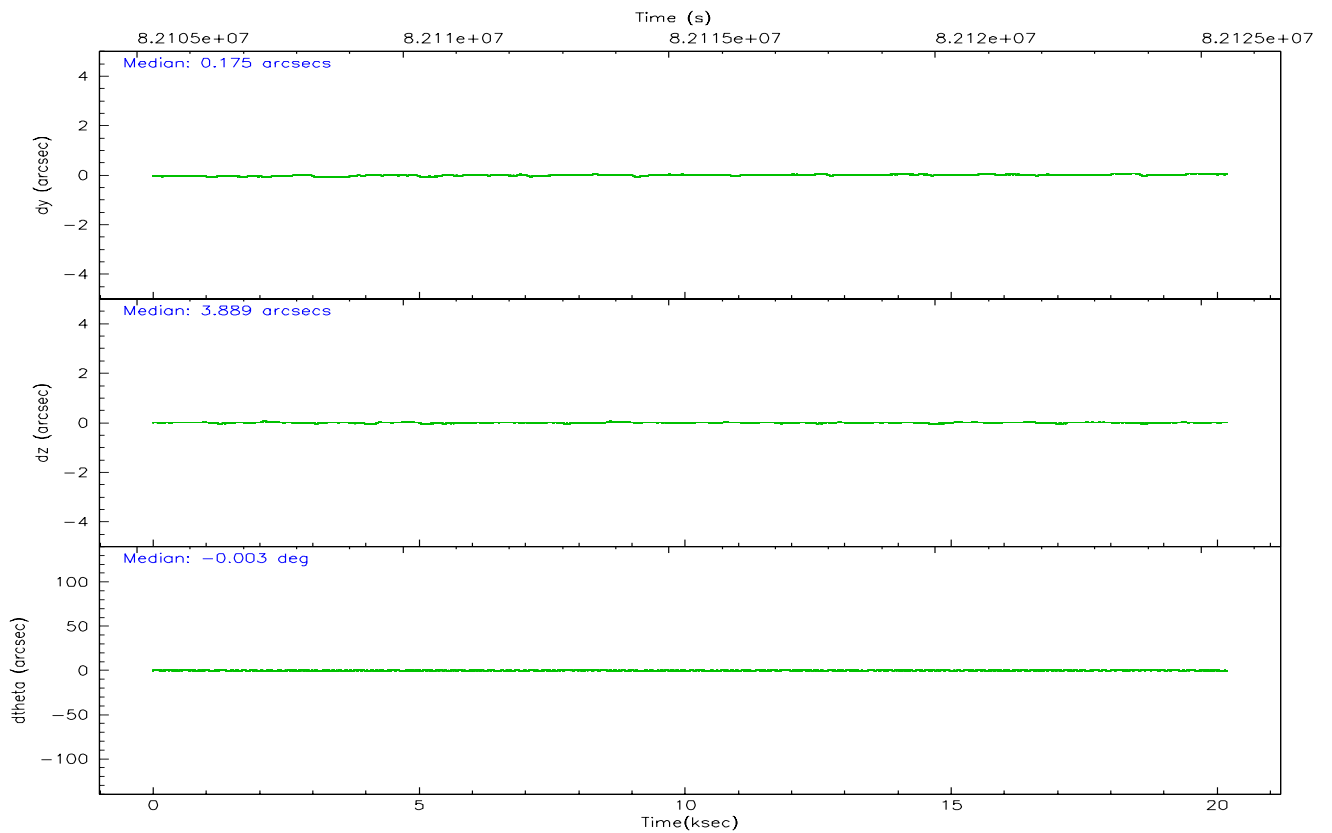
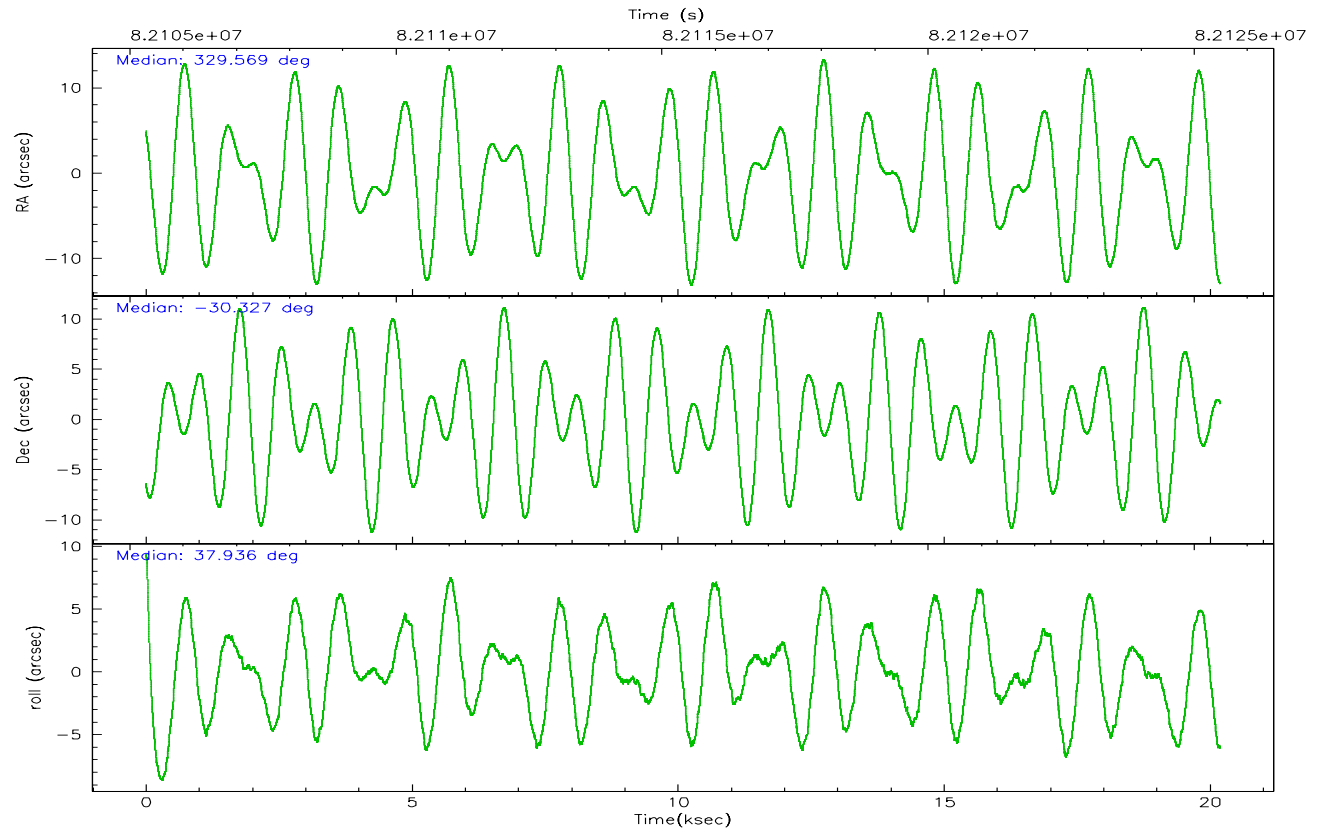
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	6814	23087	48674	11665	9035	5306
	5%	12%	29%	7%	6%	4%
grade 1 events	66	233	414	132	83	54
	0%	0%	0%	0%	0%	0%
grade 2 events	3178	28830	7006	13351	5894	2519
	2%	15%	4%	9%	4%	2%
grade 3 events	1226	6665	2571	6245	3165	1352
	0%	3%	1%	4%	2%	1%
grade 4 events	1172	6385	2567	6156	2767	1263
	0%	3%	1%	4%	1%	1%
grade 5 events	3903	11744	4635	13403	5674	4533
	3%	6%	2%	9%	3%	4%
grade 6 events	2201	39474	3348	30495	7023	2546
	1%	21%	2%	20%	4%	2%
grade 7 events	108017	69226	95895	66751	111240	92059
	85%	37%	58%	45%	76%	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	329.557612	329.5693503479869	Subarray requested	NONE	NONE
Pointing Dec	-30.351966	-30.32653705247604	Alternating exposures requested	N	N
Pointing Roll	37.772453	37.93500417313822	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)	-182.131972	-182.1344861297048			
SIM translation stage offset (mm)	-8.000551	-7.998036453302973			
Observation start time	82105493.184000	82105117.06234699			
Observation start date	2000-08-08T07:03:49	2000-08-08T06:58:37			
Observation end time	82125493.184000	82125626.800612			
Observation end date	2000-08-08T12:37:09	2000-08-08T12:40:26			
Read mode	TIMED	TIMED			

2.3 Aspect



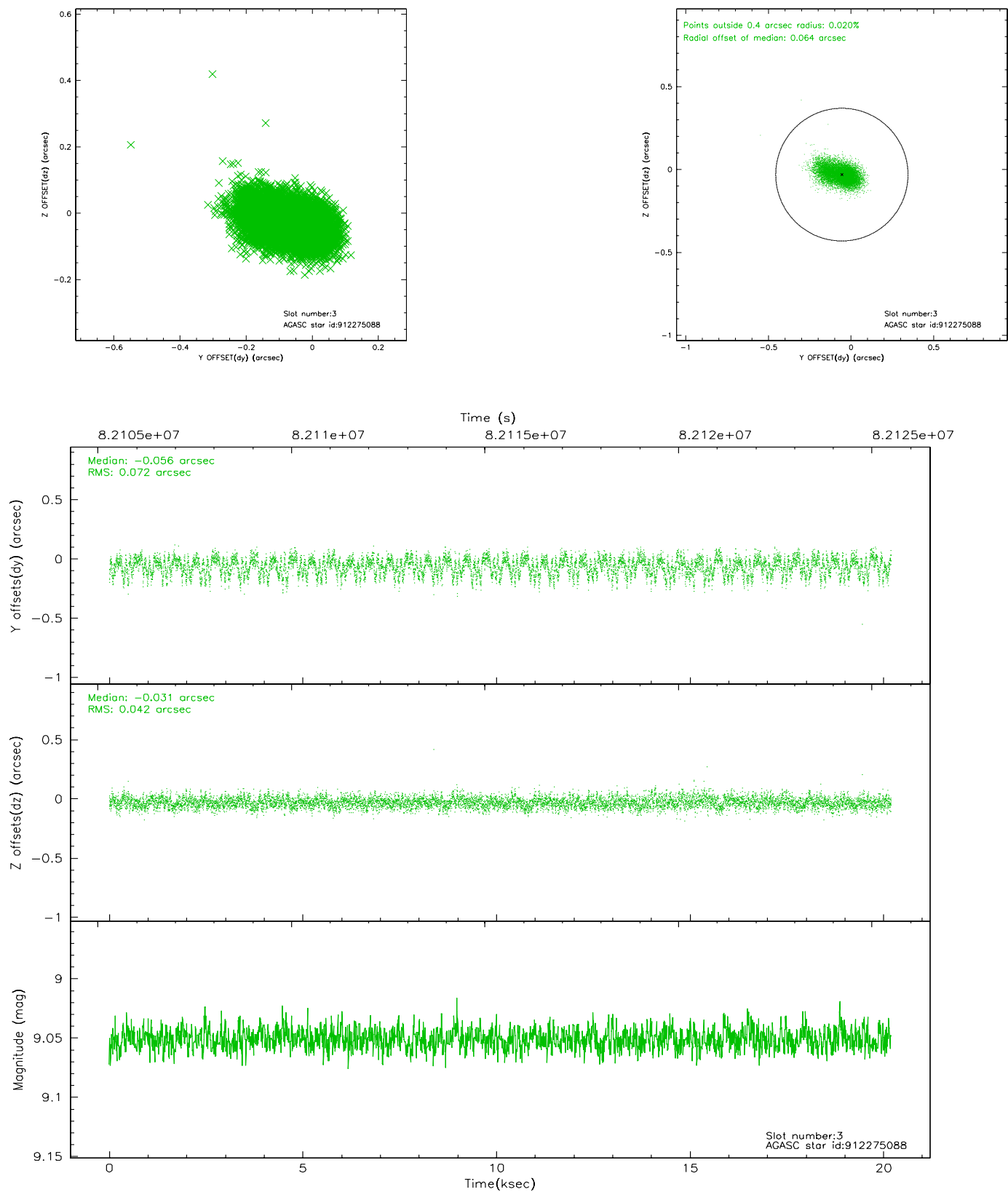


Slot Statistics

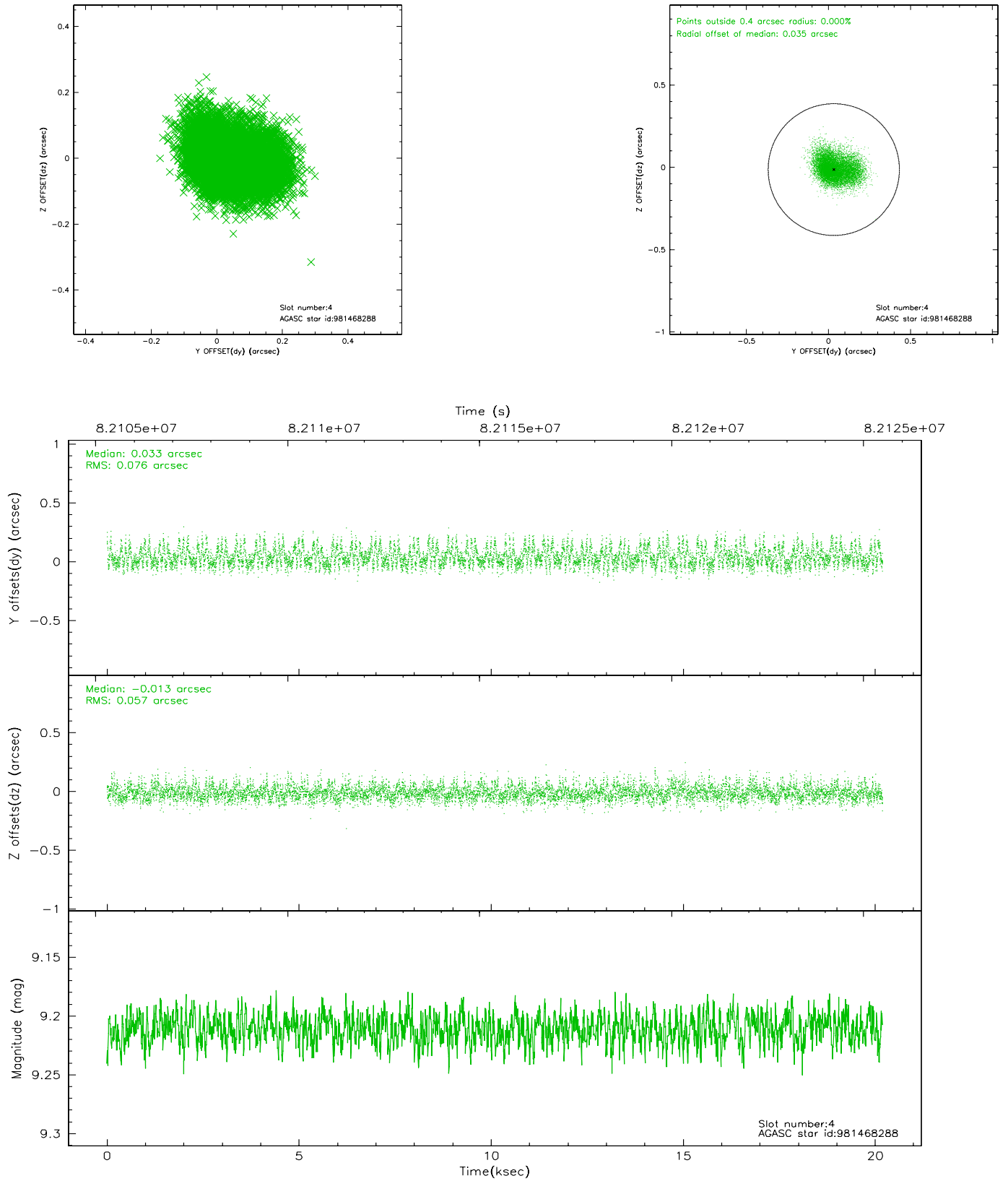
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	4922	-0.043	-0.087	0.007	0.011	0.000000	0.000000	-752.24	-1889.81
1	FID	ACIS-S-4	7.18	4922	0.035	0.044	0.005	0.009	0.000000	0.000000	2161.07	18.52
2	FID	ACIS-S-5	7.22	4922	-0.023	0.051	0.006	0.011	0.000000	0.000000	-1804.79	12.48
3	GUIDE	912275088	9.05	9842	-0.056	-0.031	0.087	0.149	329.619228	-29.738698	1504.67	1627.50
4	GUIDE	981468288	9.21	9845	0.033	-0.013	0.100	0.166	328.608359	-30.257017	-2131.09	2069.03
5	GUIDE	981478152	9.40	9844	-0.035	0.041	0.078	0.125	329.415589	-30.057192	299.96	1110.33
6	GUIDE	981468128	9.36	9841	0.048	-0.020	0.071	0.115	329.756350	-30.158334	915.86	172.14
7	GUIDE	981469488	9.60	9843	0.010	0.020	0.084	0.137	329.261199	-30.045155	-54.05	1438.38

2.4 Star Slots

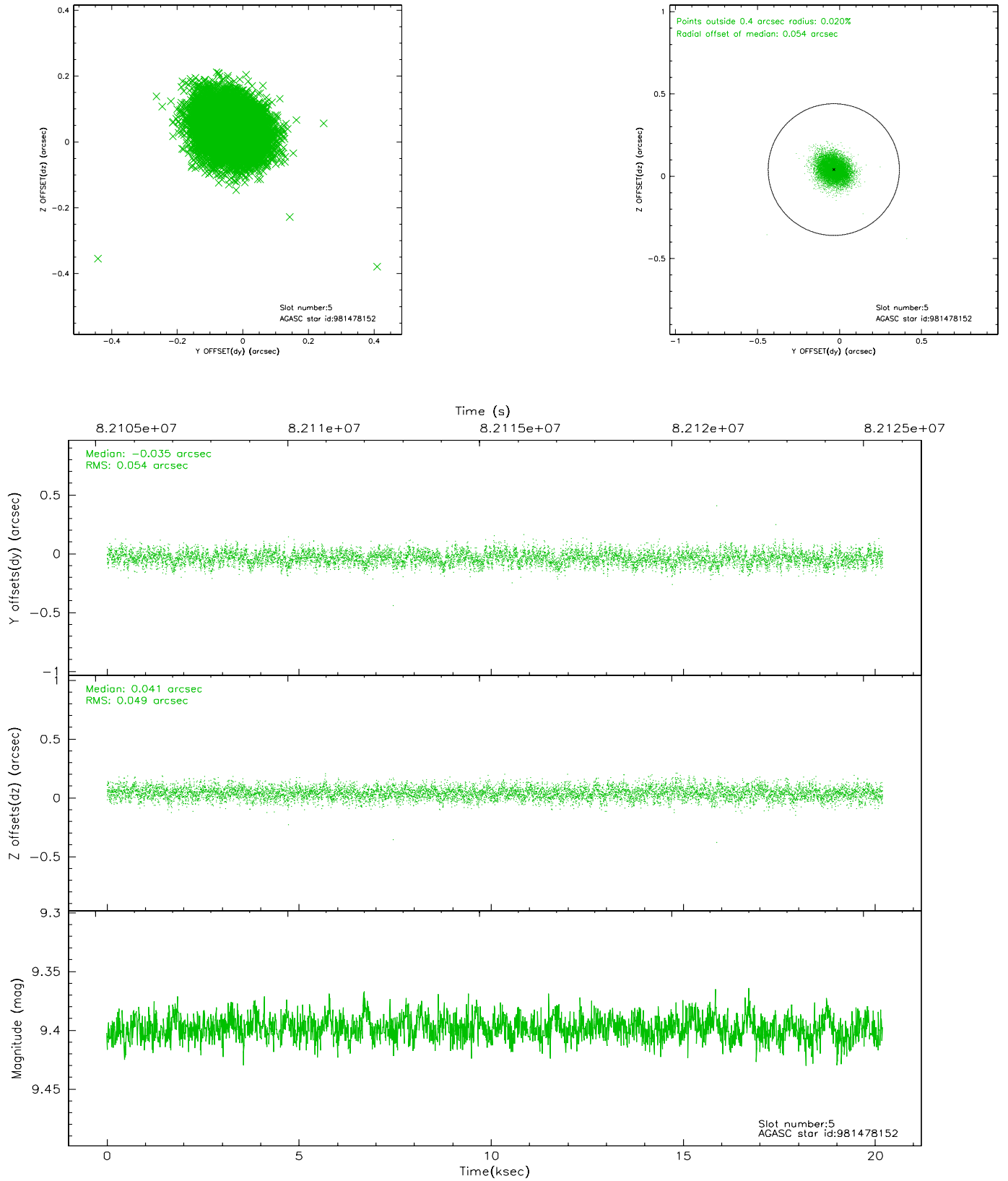
2.4.1 Slot 3



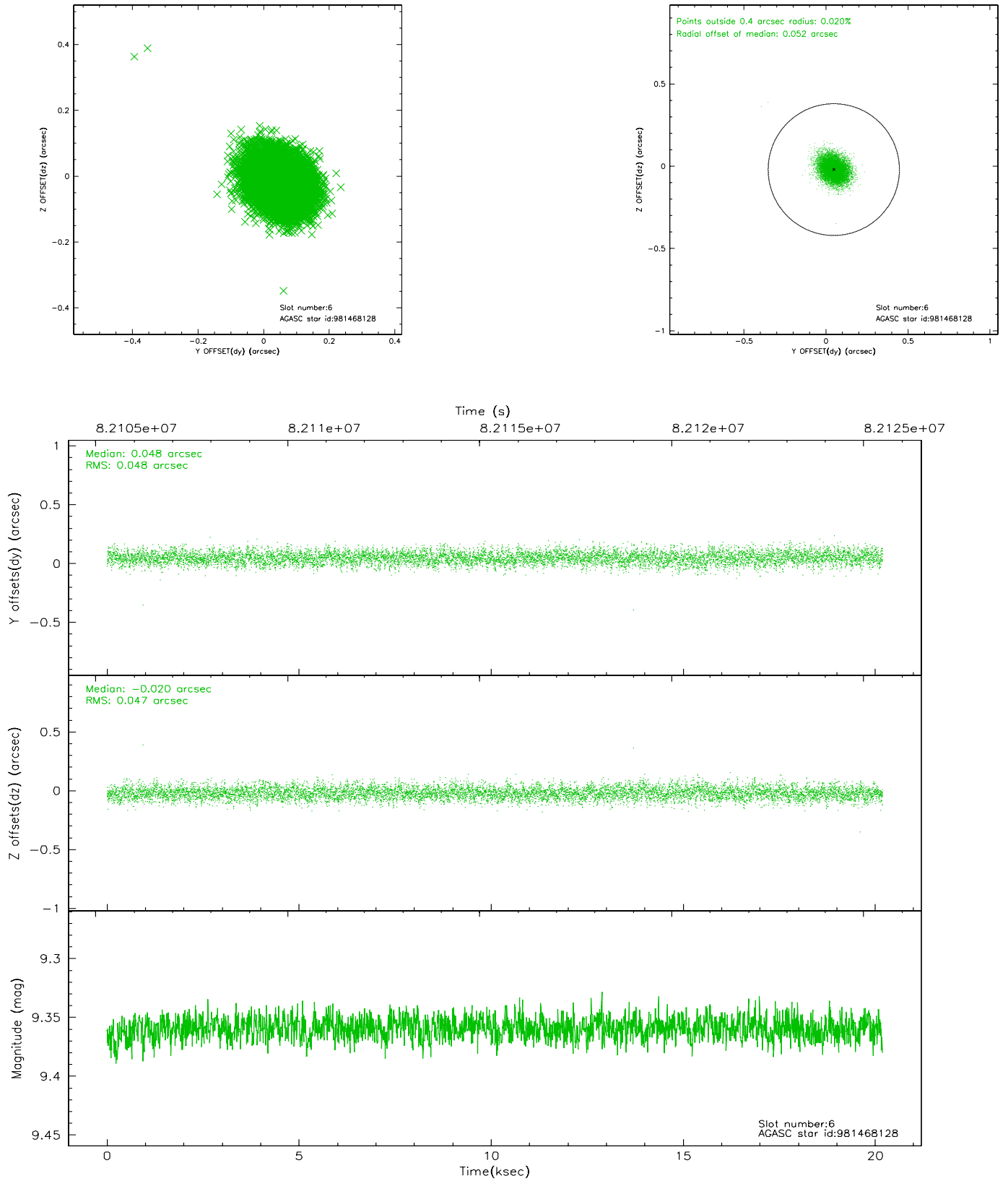
2.4.2 Slot 4



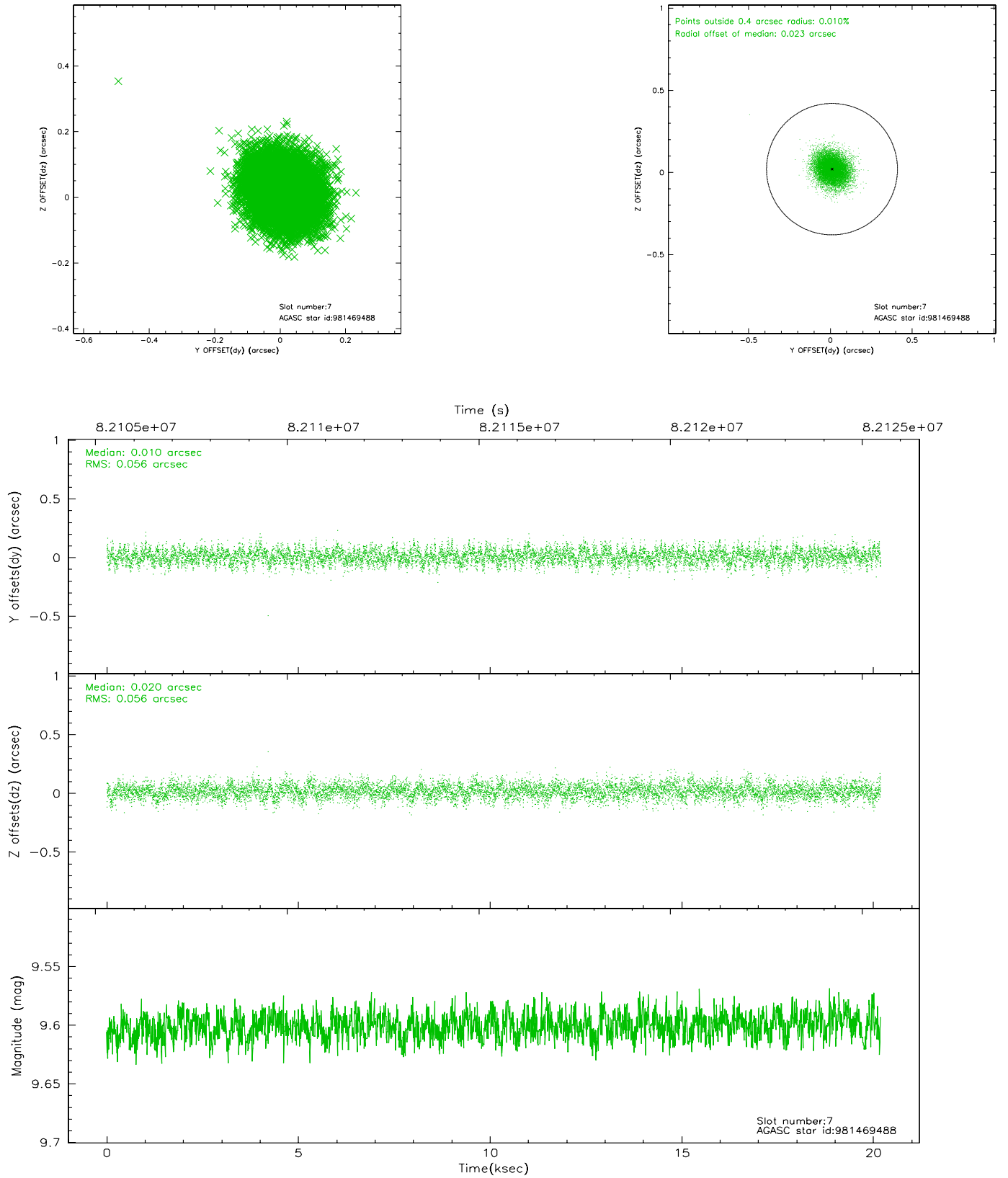
2.4.3 Slot 5



2.4.4 Slot 6

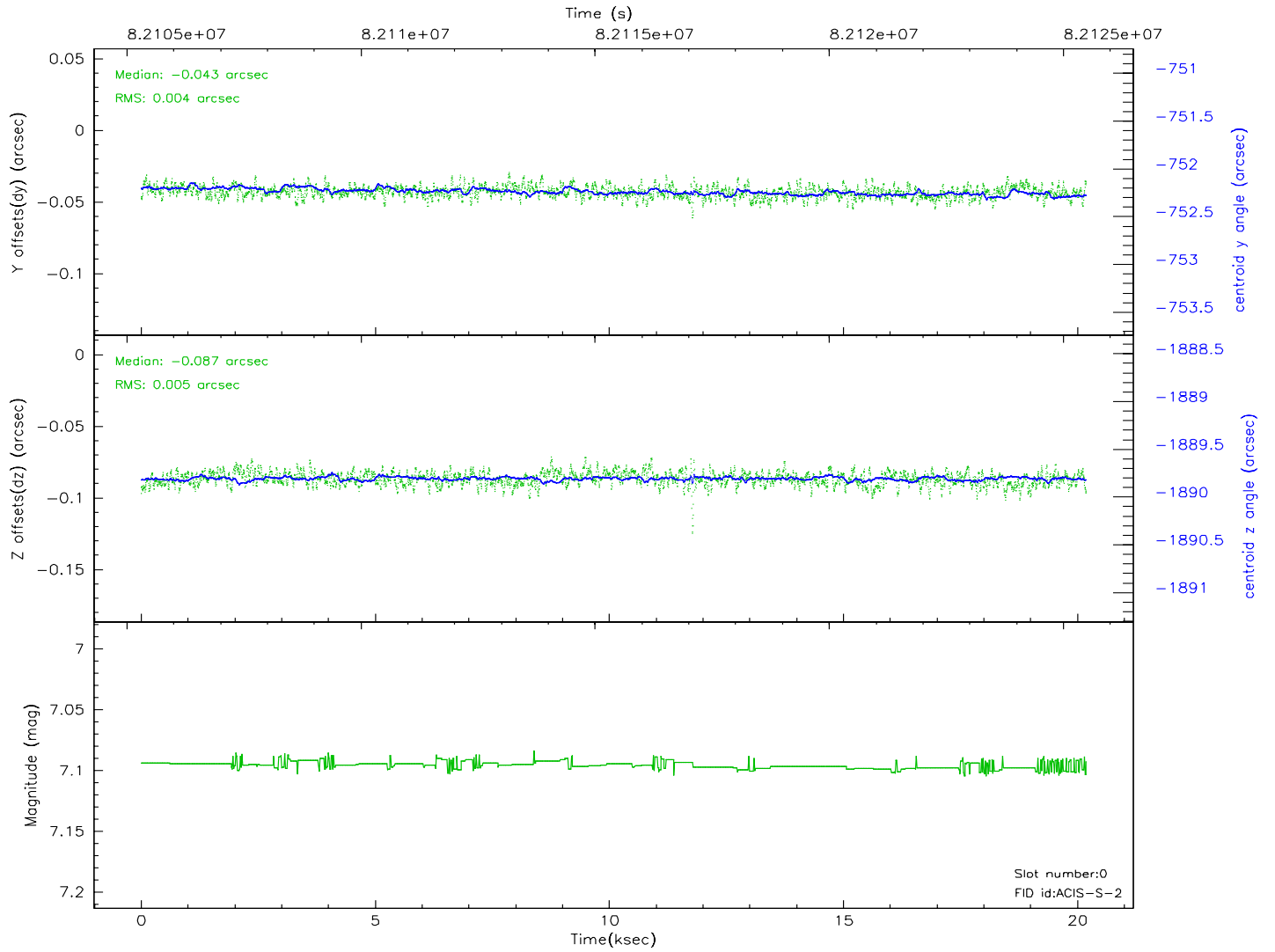
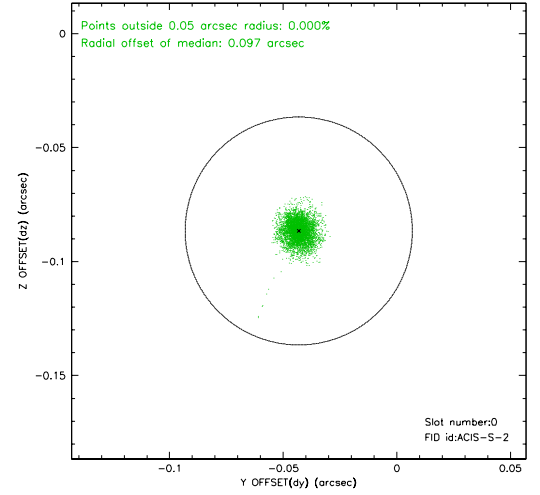
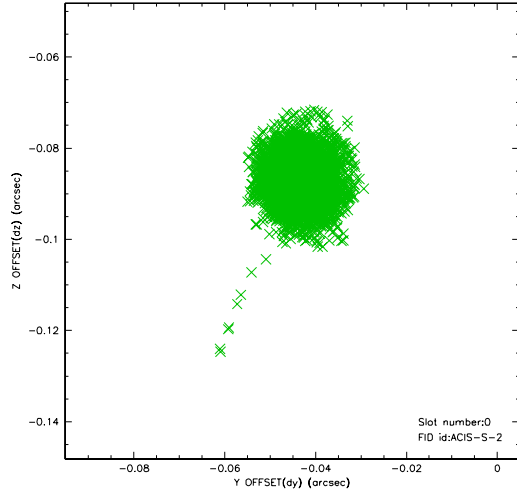


2.4.5 Slot 7

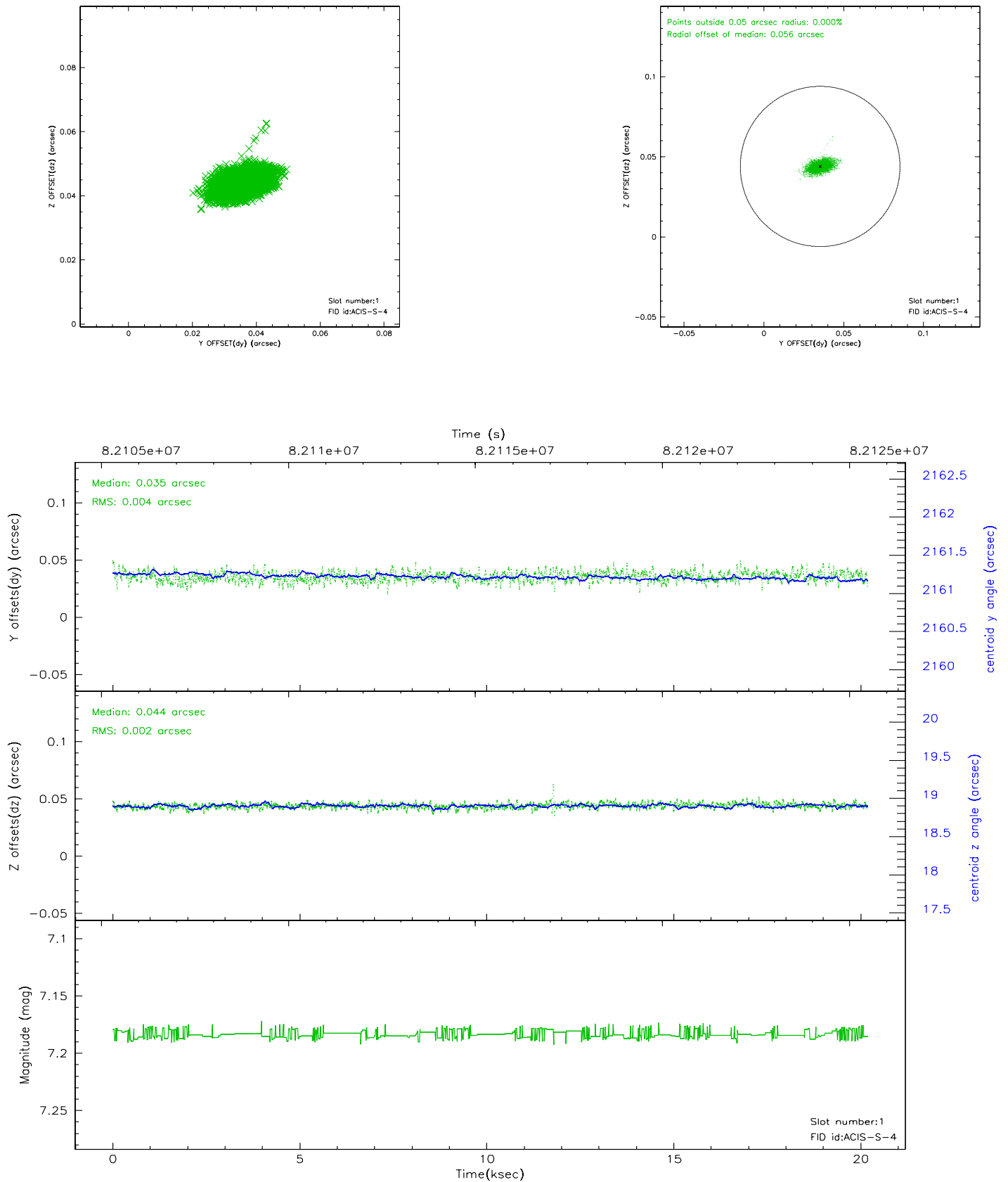


2.5 FID Slots

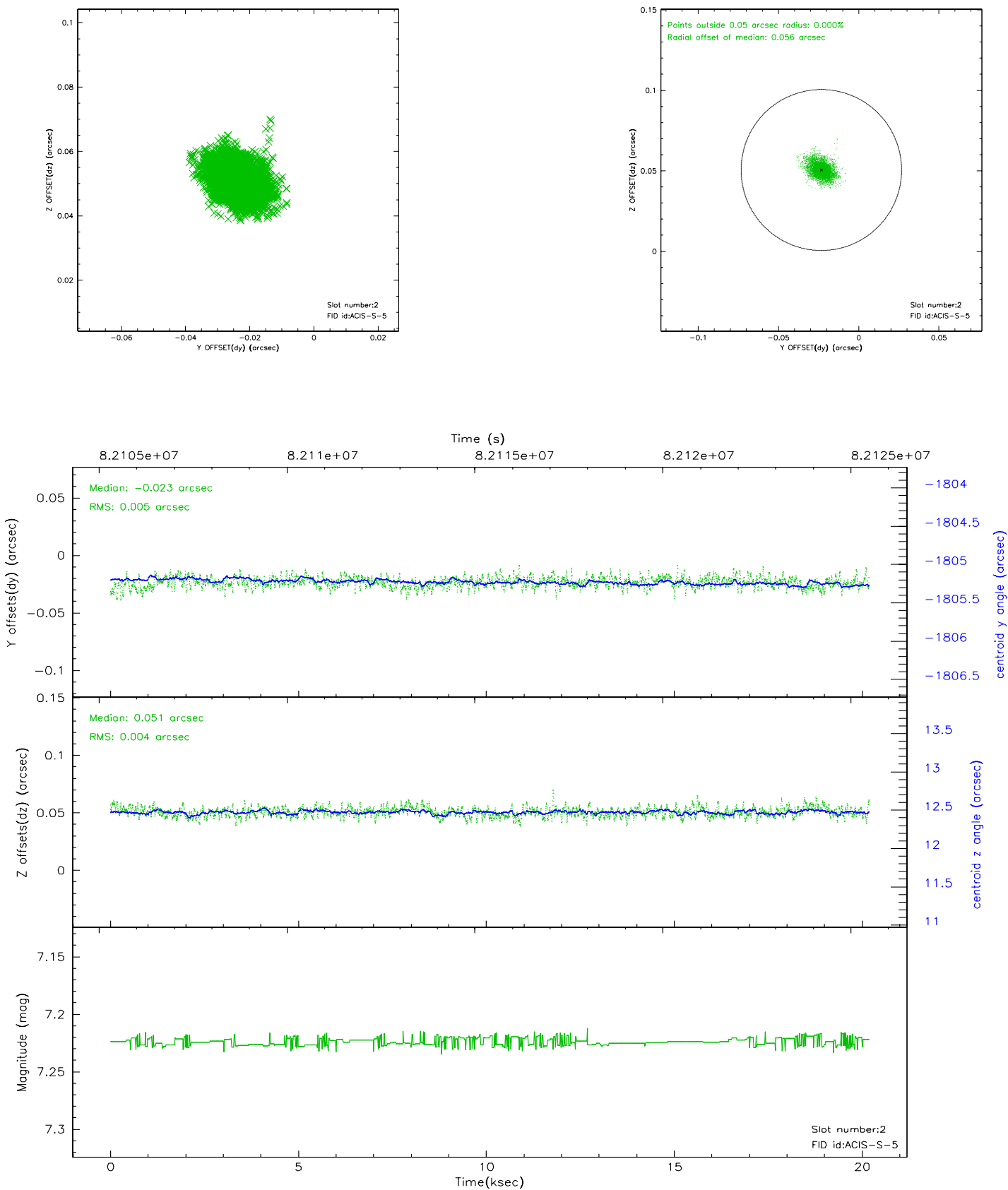
2.5.1 Slot 0



2.5.2 Slot 1

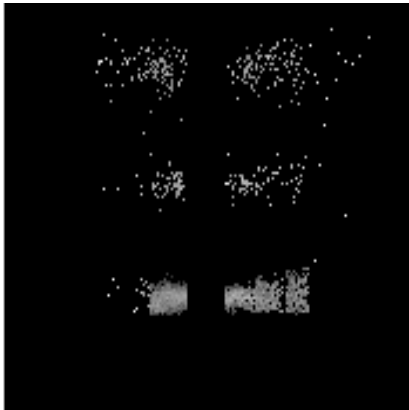


2.5.3 Slot 2

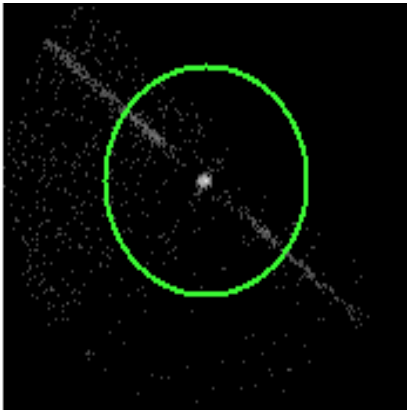


3 Gratings

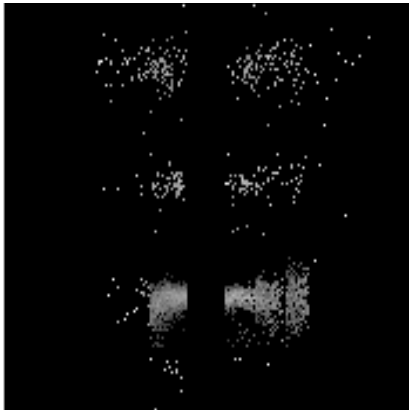
3.1 LETG Arm



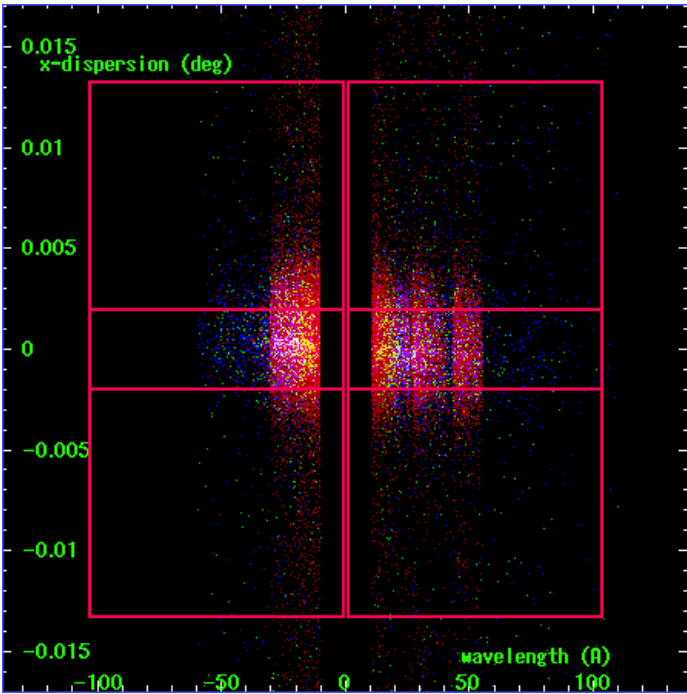
LETG Order Sort 123



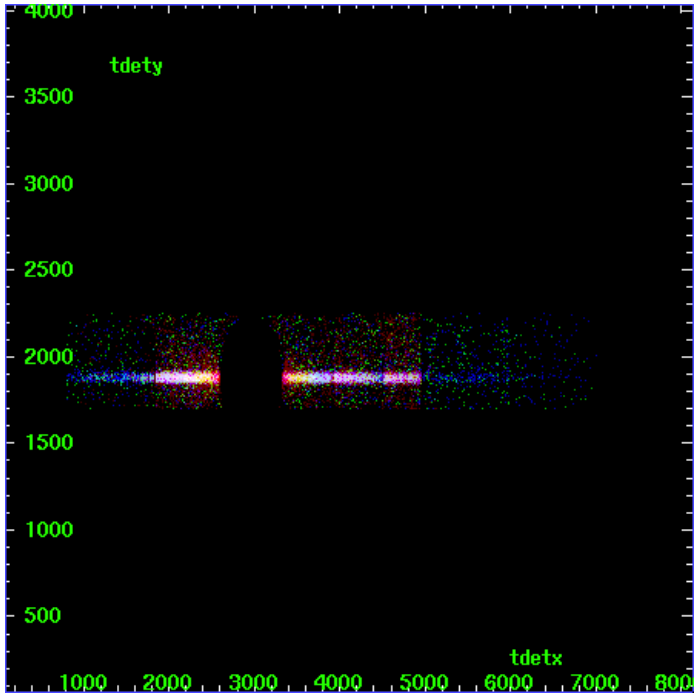
LETG Zero Order



LETG Order Sort ALL

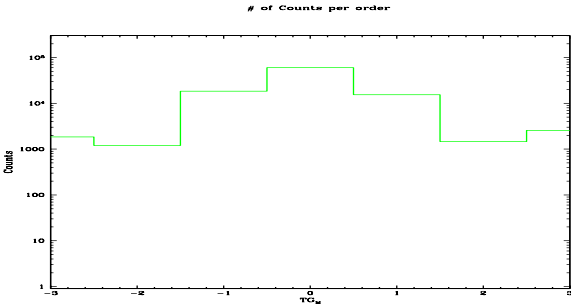


Spot Image LETG

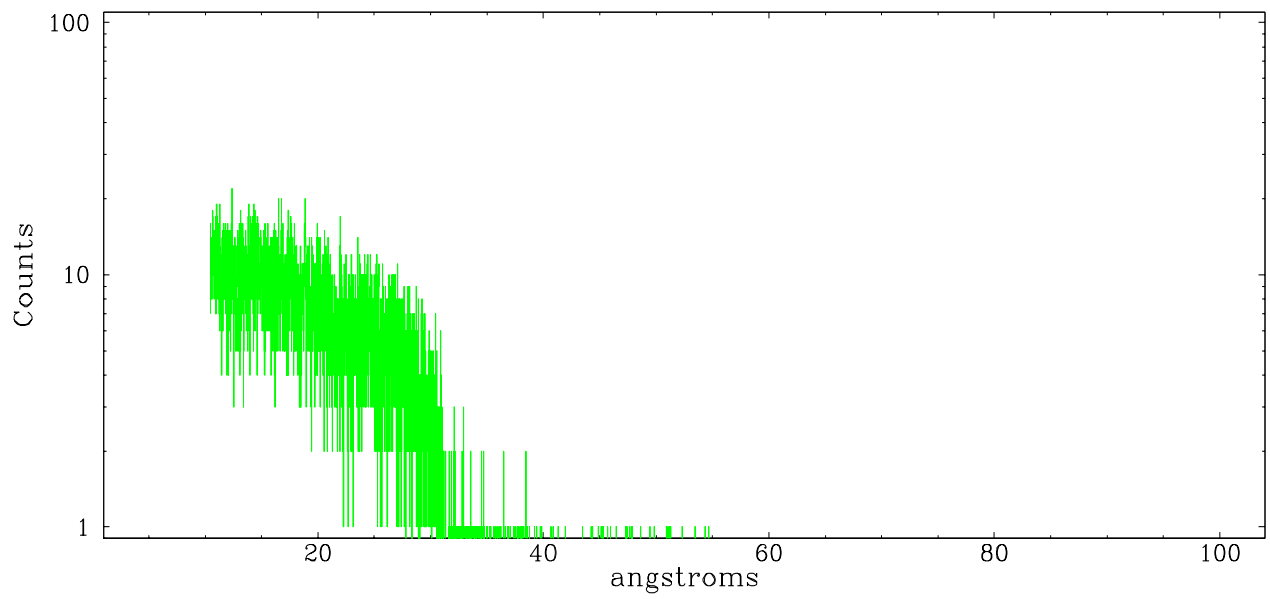


Full Detector LETG

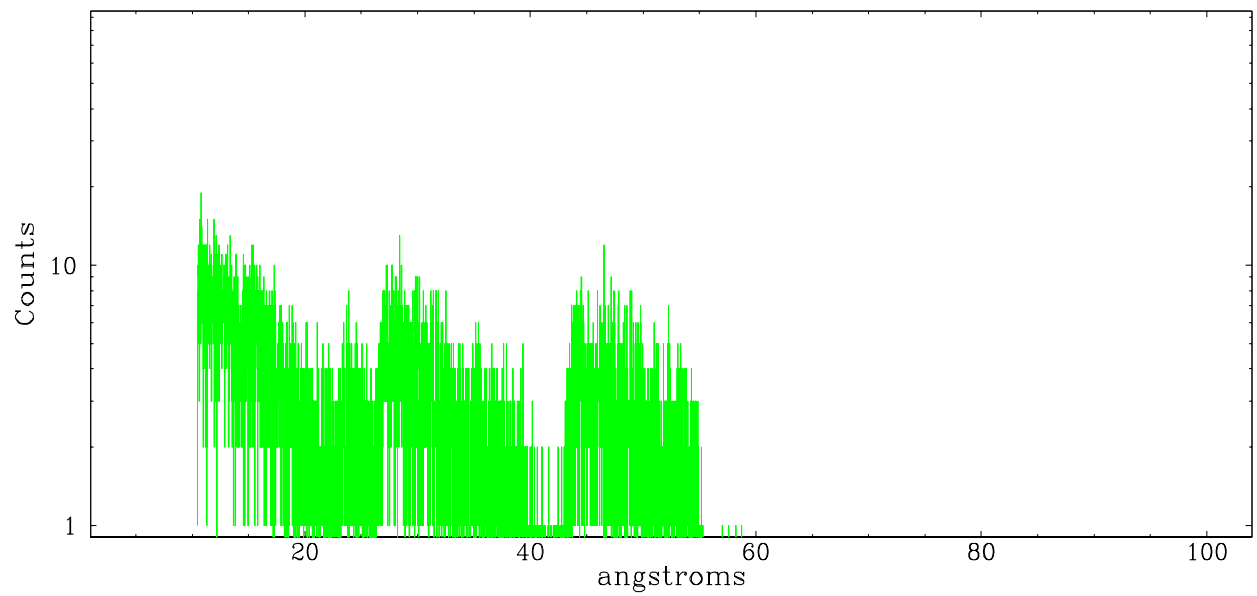
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1855	1197	18494	60116	15352	1464	2564



leg order -1



leg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.06.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.753

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.