

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 1795 - L2 Version 001
Chandra X-Ray Center

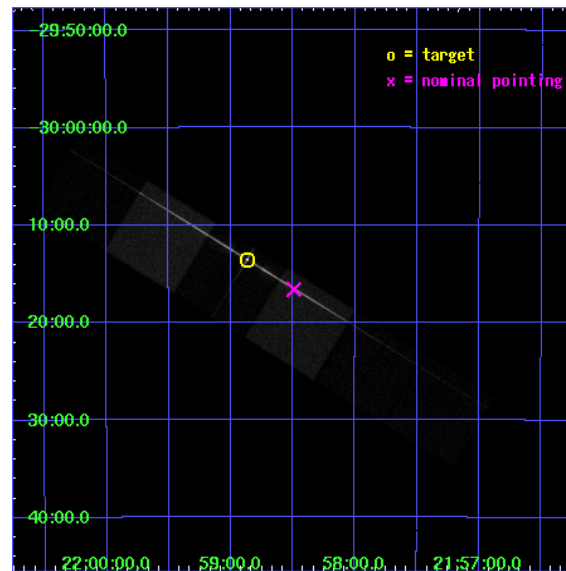
L2 Processing Date : Jun 2 2007

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1 Front

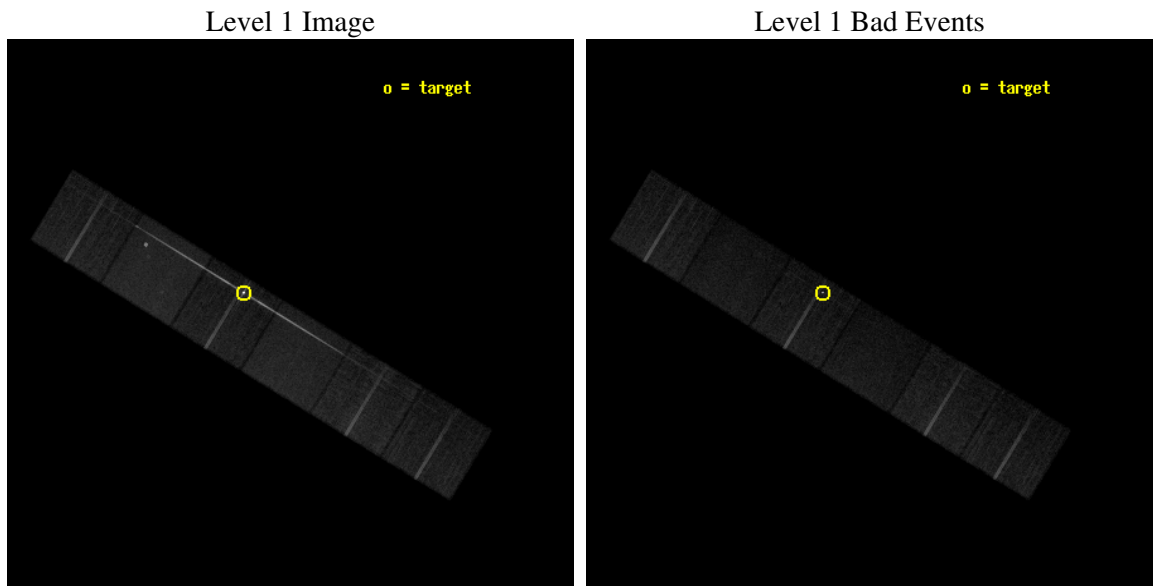
seq_num	390013
obs_id	1795
title	GRATINGS CALIBRATION OBSERVATIONS OF PKS2155-304
observer	Dr. CXC Calibration
object	PKS2155-304
dtcycle	0
cycle	P
ra_targ	329.716667
dec_targ	-30.225556
ra_nom	329.62308396053
dec_nom	-30.276836021556
roll_nom	31.459482514674
revision	3
ontime	19955.200018585
livetime	19702.515260371
ontime4	19955.200018585
ontime5	19955.200018585
ontime6	19955.200018585
ontime7	19955.200018585
ontime8	19955.200018585
ontime9	19955.200018585
l2events	286594



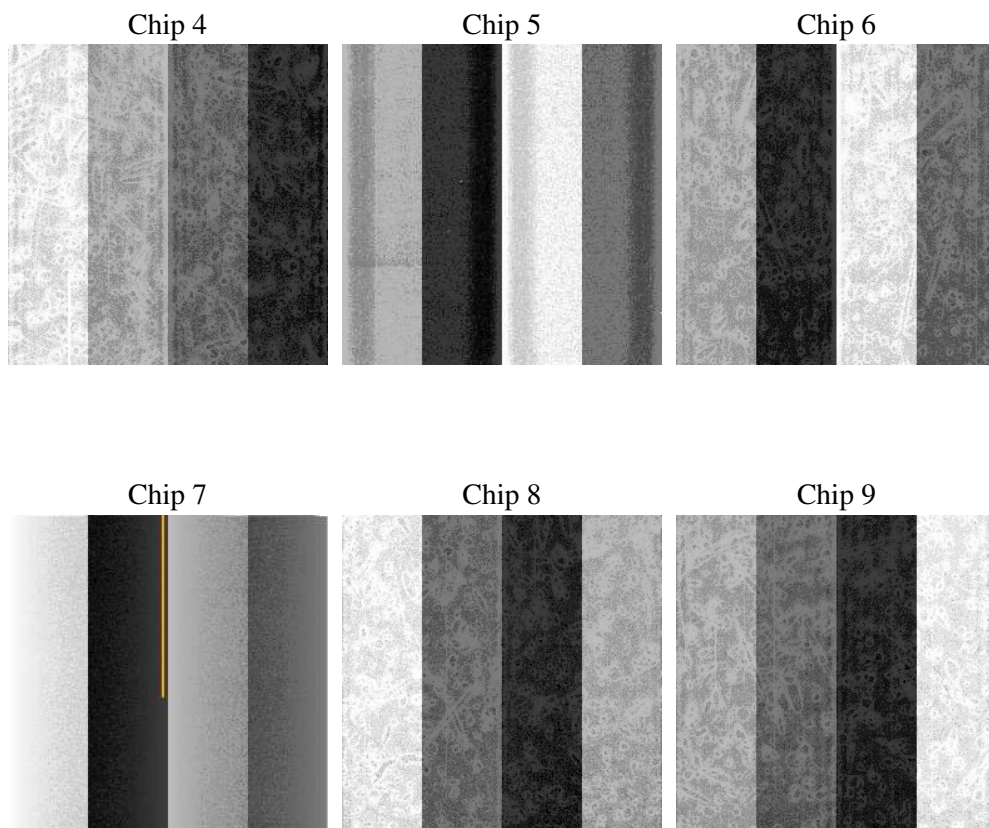
2 OBI

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	2007-06-02T06:48:24
revision	3

sched_exp_time	20000.000000
ontime	19955.200018585
ontime4	19955.200018585
ontime5	19955.200018585
ontime6	19955.200018585
ontime7	19955.200018585
ontime8	19955.200018585
ontime9	19955.200018585
l1events	914874

2.1.4 Events

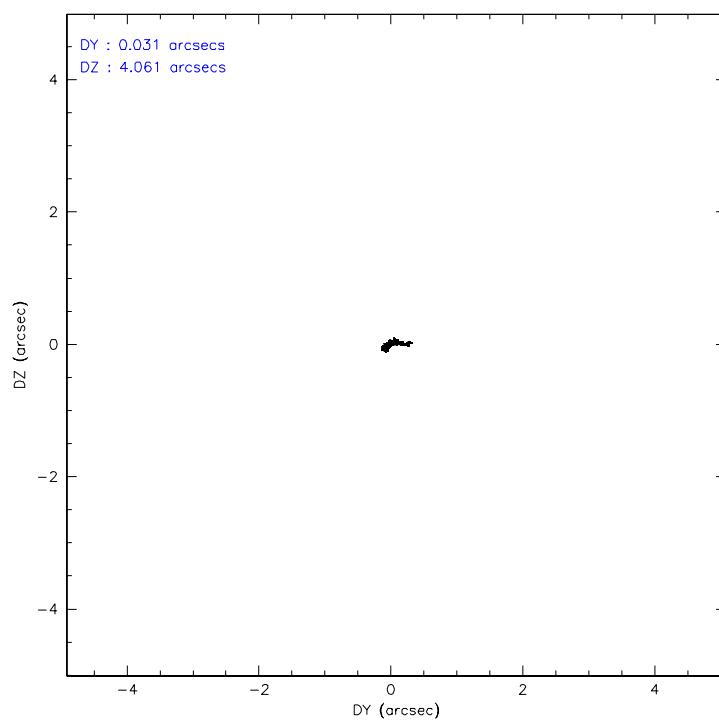
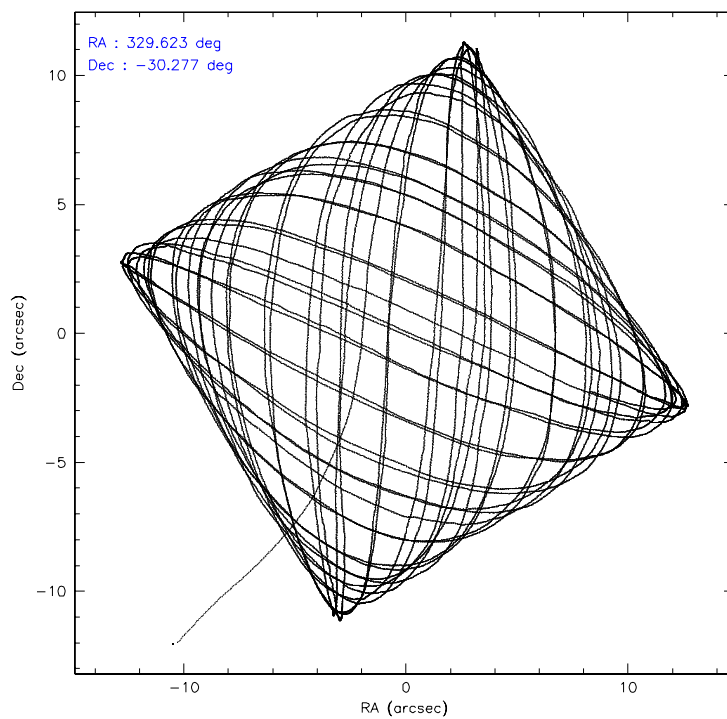
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	126850	175622	189113	165005	144465	113819
rejected events	112570	82076	104986	80448	115468	100053
rejected %	88%	46%	55%	48%	79%	87%

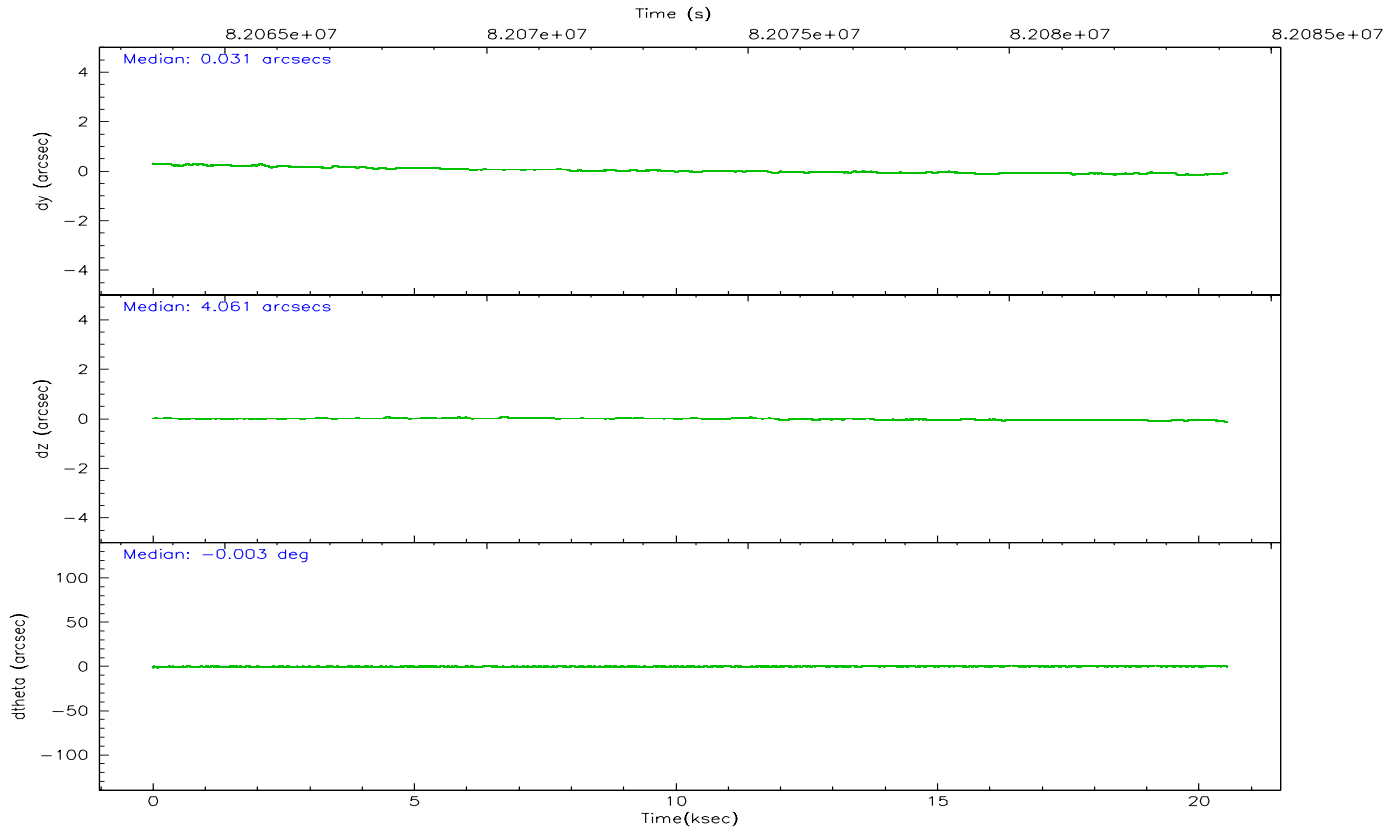
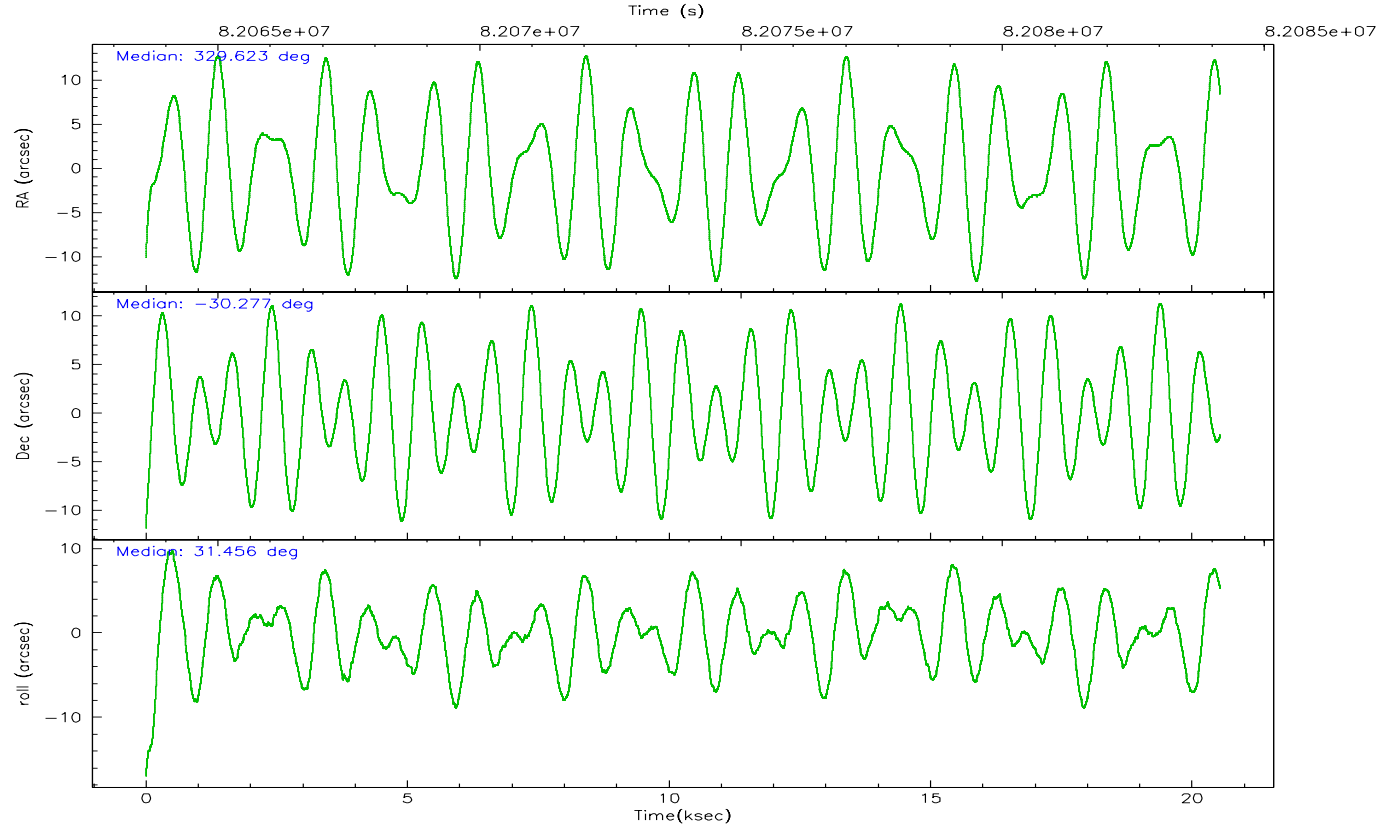
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	6433	20634	62670	15728	10119	5904
	5%	11%	33%	9%	7%	5%
grade 1 events	53	211	1989	153	85	48
	0%	0%	1%	0%	0%	0%
grade 2 events	3130	25732	9922	18352	5967	2661
	2%	14%	5%	11%	4%	2%
grade 3 events	1272	5232	3725	8516	3074	1351
	1%	2%	1%	5%	2%	1%
grade 4 events	1230	5078	3559	8413	2832	1377
	0%	2%	1%	5%	1%	1%
grade 5 events	3800	11760	5447	13574	5850	4616
	2%	6%	2%	8%	4%	4%
grade 6 events	2216	36882	4268	33559	7009	2475
	1%	21%	2%	20%	4%	2%
grade 7 events	108716	70093	97533	66710	109529	95387
	85%	39%	51%	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	329.608077	329.6230839605297	Subarray requested	NONE	NONE
Pointing Dec	-30.300974	-30.27683602155614	Alternating exposures requested	N	N
Pointing Roll	31.295283	31.45948251467441	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	82064164.184000	82062939.84827501			
Observation start date	2000-08-07T19:35:00	2000-08-07T19:15:39			
Observation end time	82084164.184000	82084453.06157701			
Observation end date	2000-08-08T01:08:20	2000-08-08T01:14:13			
Read mode	TIMED	TIMED			

2.3 Aspect



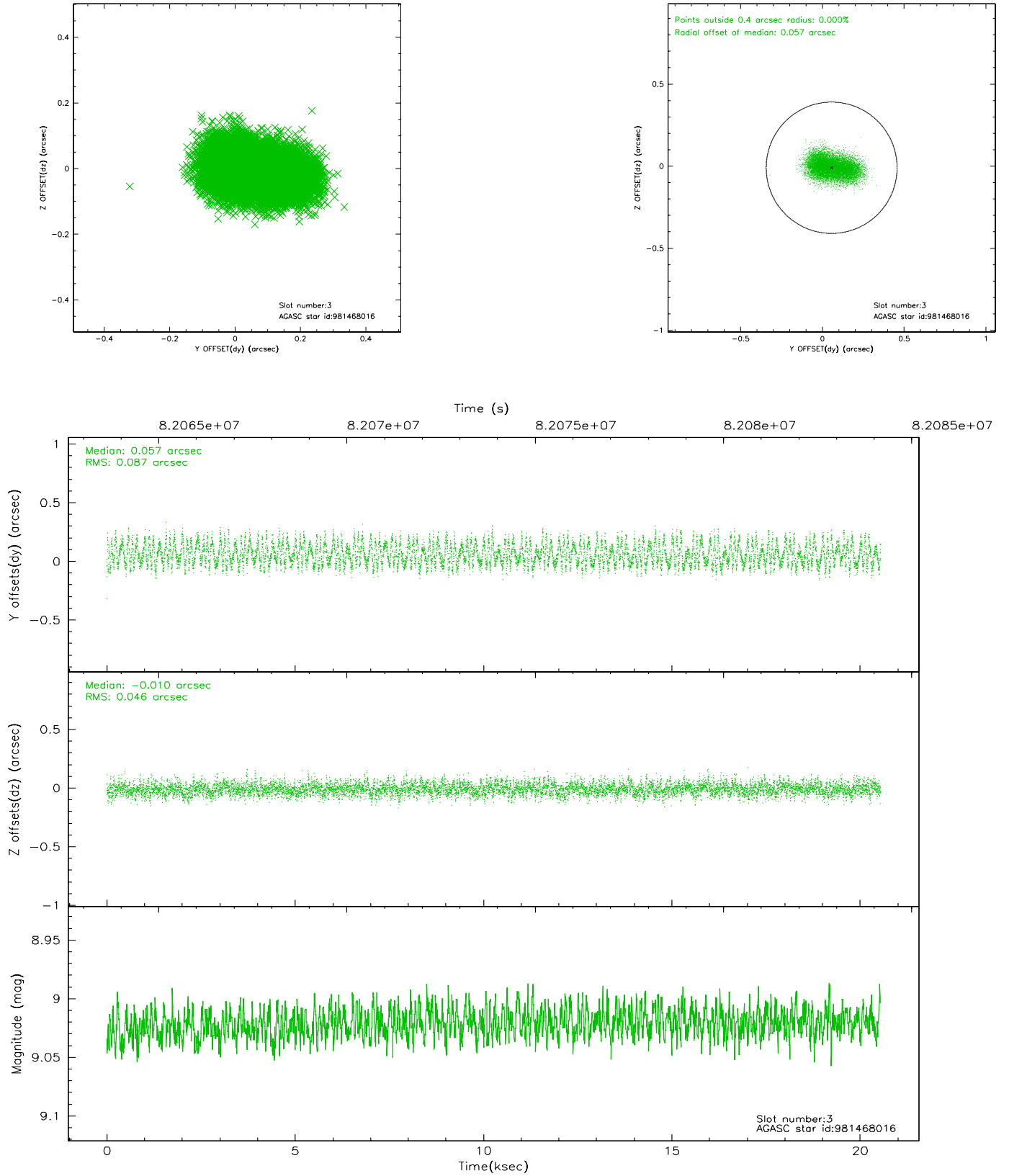


Slot Statistics

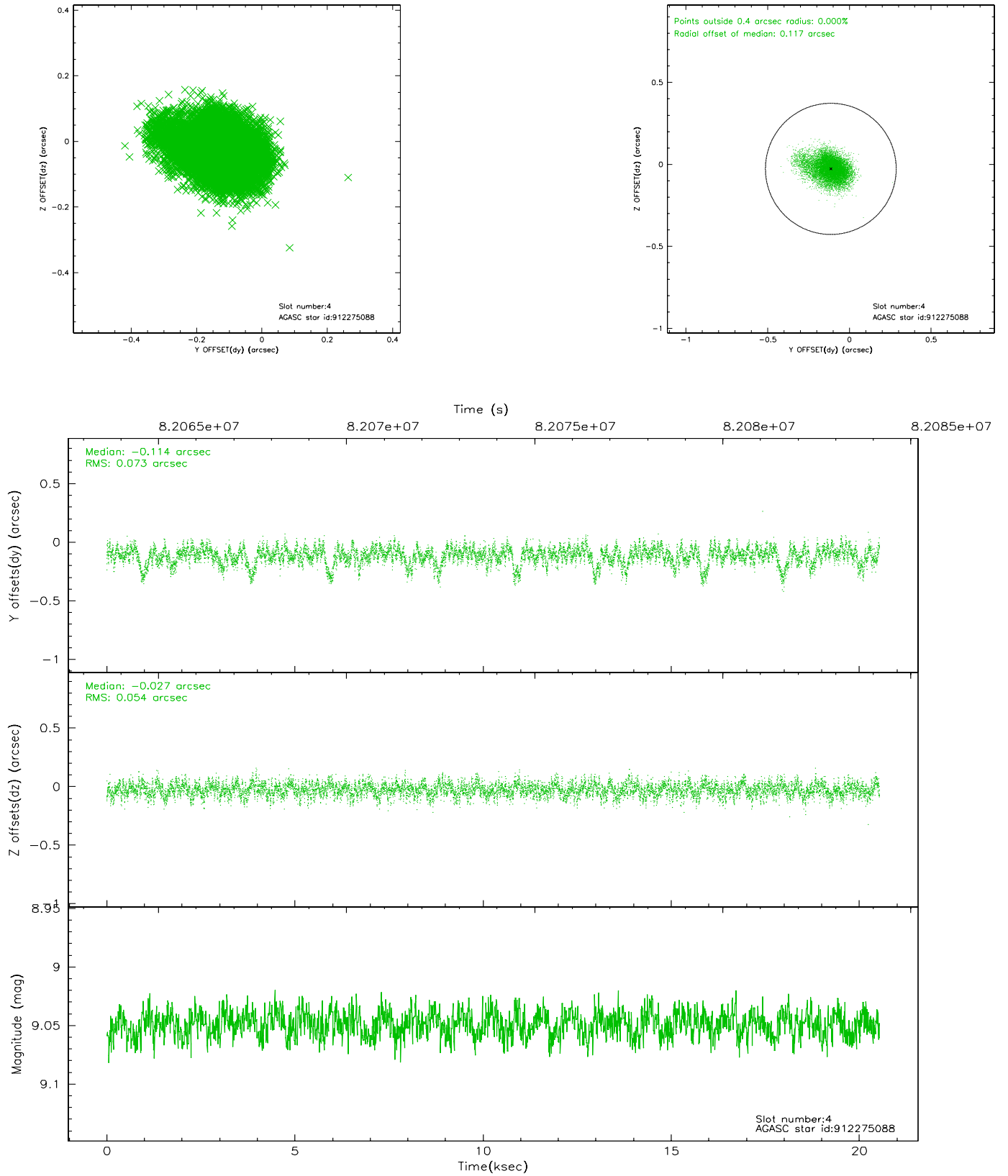
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	5009	-0.046	-0.079	0.008	0.012	0.000000	0.000000	-752.12	-1889.97
1	FID	ACIS-S-4	7.18	5009	0.037	0.043	0.006	0.010	0.000000	0.000000	2161.19	18.36
2	FID	ACIS-S-5	7.22	5010	-0.022	0.043	0.008	0.012	0.000000	0.000000	-1804.68	12.30
3	GUIDE	981468016	9.02	10018	0.057	-0.010	0.107	0.165	328.842457	-30.034984	-1546.04	2052.03
4	GUIDE	912275088	9.05	10013	-0.114	-0.027	0.093	0.166	329.619228	-29.738698	1080.67	1713.07
5	GUIDE	981478152	9.40	10012	0.040	0.071	0.087	0.142	329.415589	-30.057192	-57.04	1062.53
6	GUIDE	981468128	9.36	10013	0.034	-0.043	0.085	0.145	329.756350	-30.158334	660.75	200.12
7	GUIDE	981469488	9.60	10018	-0.018	0.008	0.087	0.140	329.261199	-30.045155	-446.42	1348.30

2.4 Star Slots

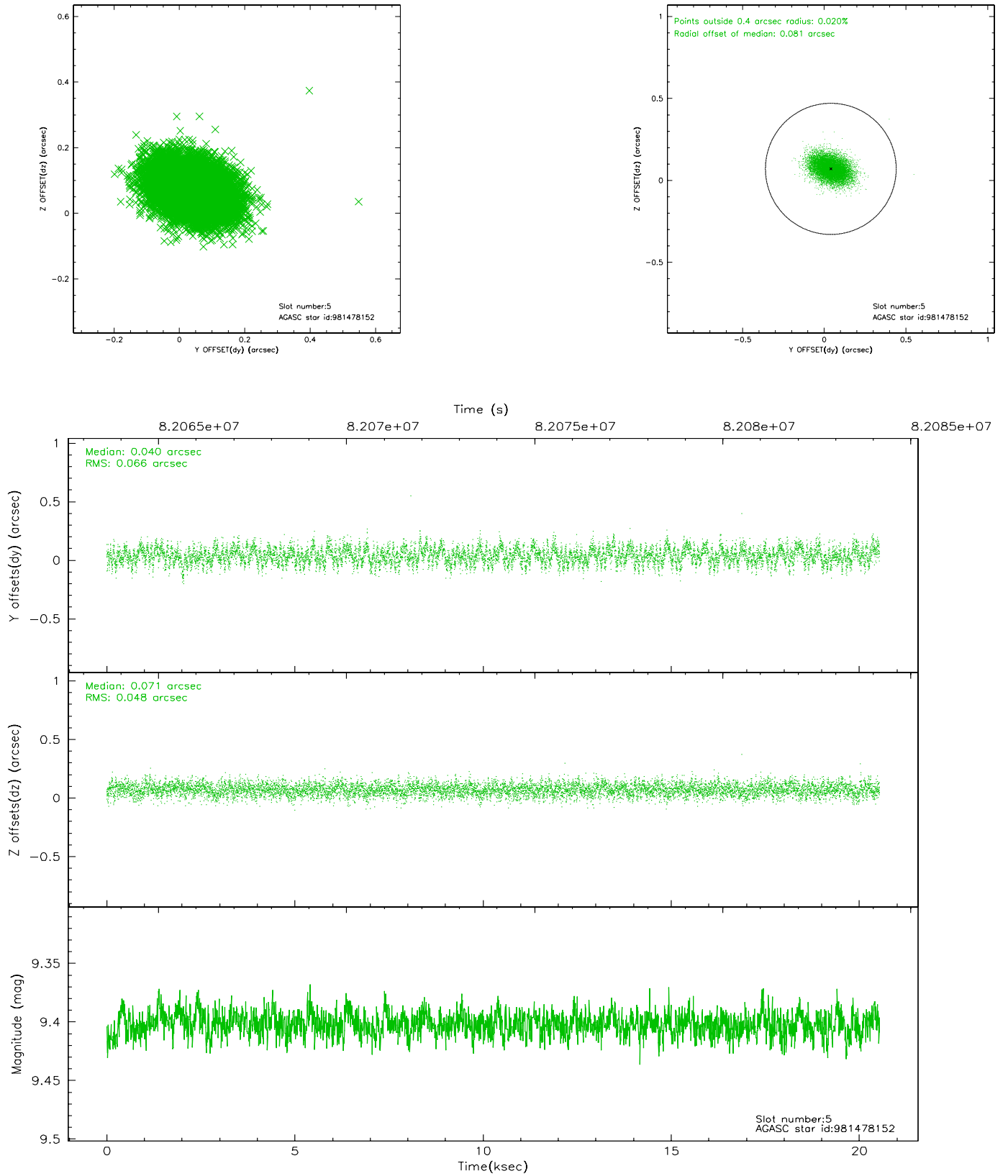
2.4.1 Slot 3



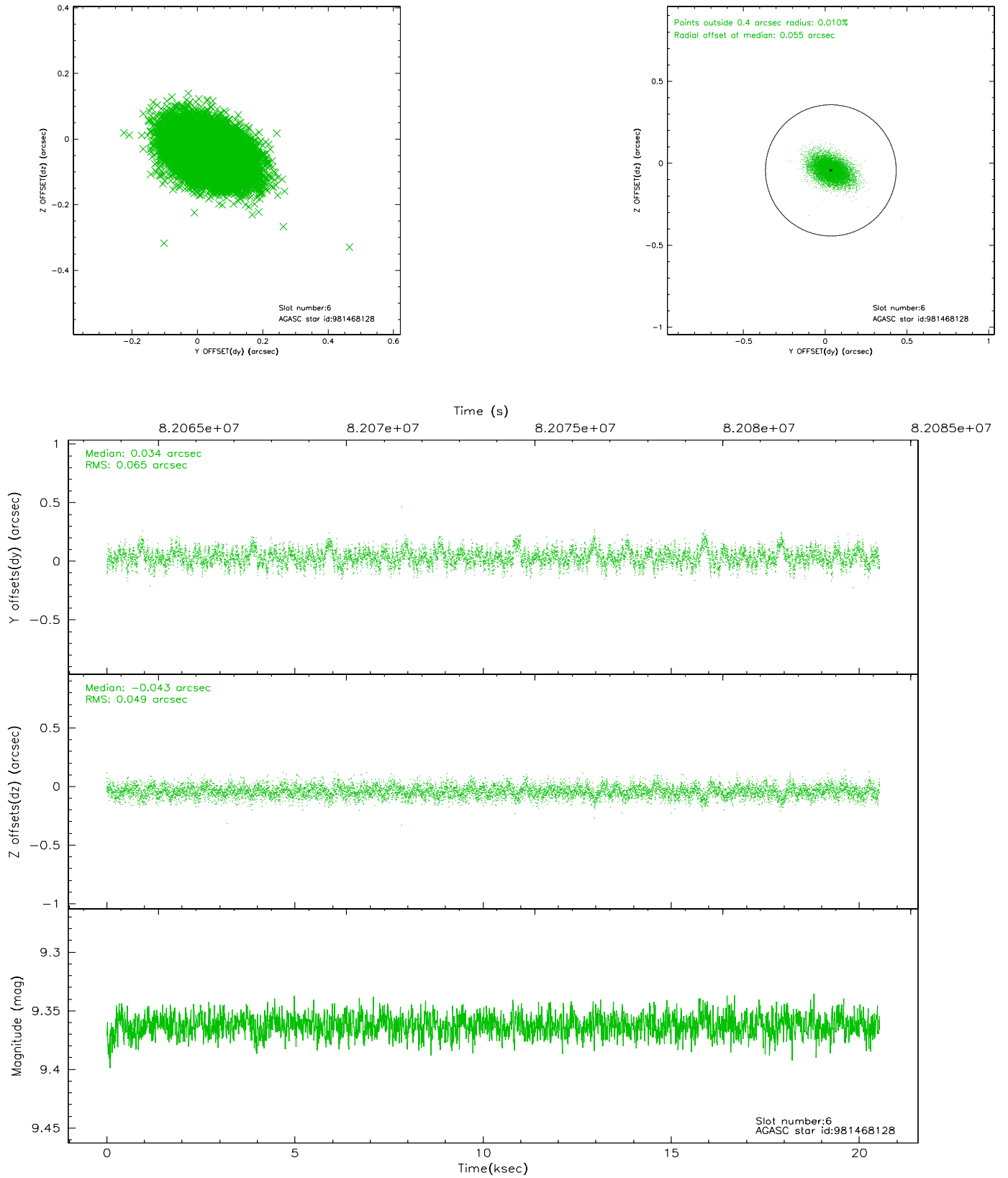
2.4.2 Slot 4



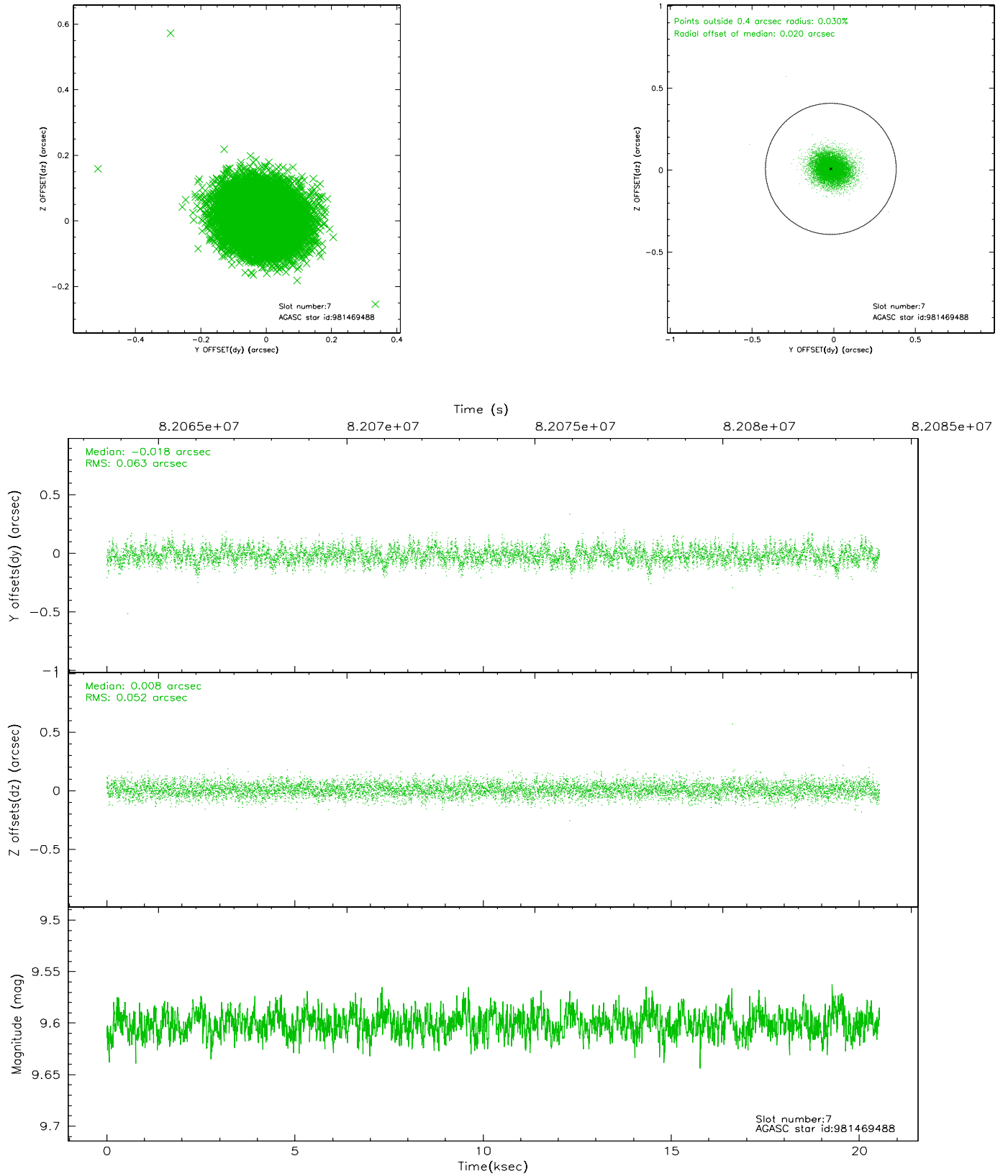
2.4.3 Slot 5



2.4.4 Slot 6

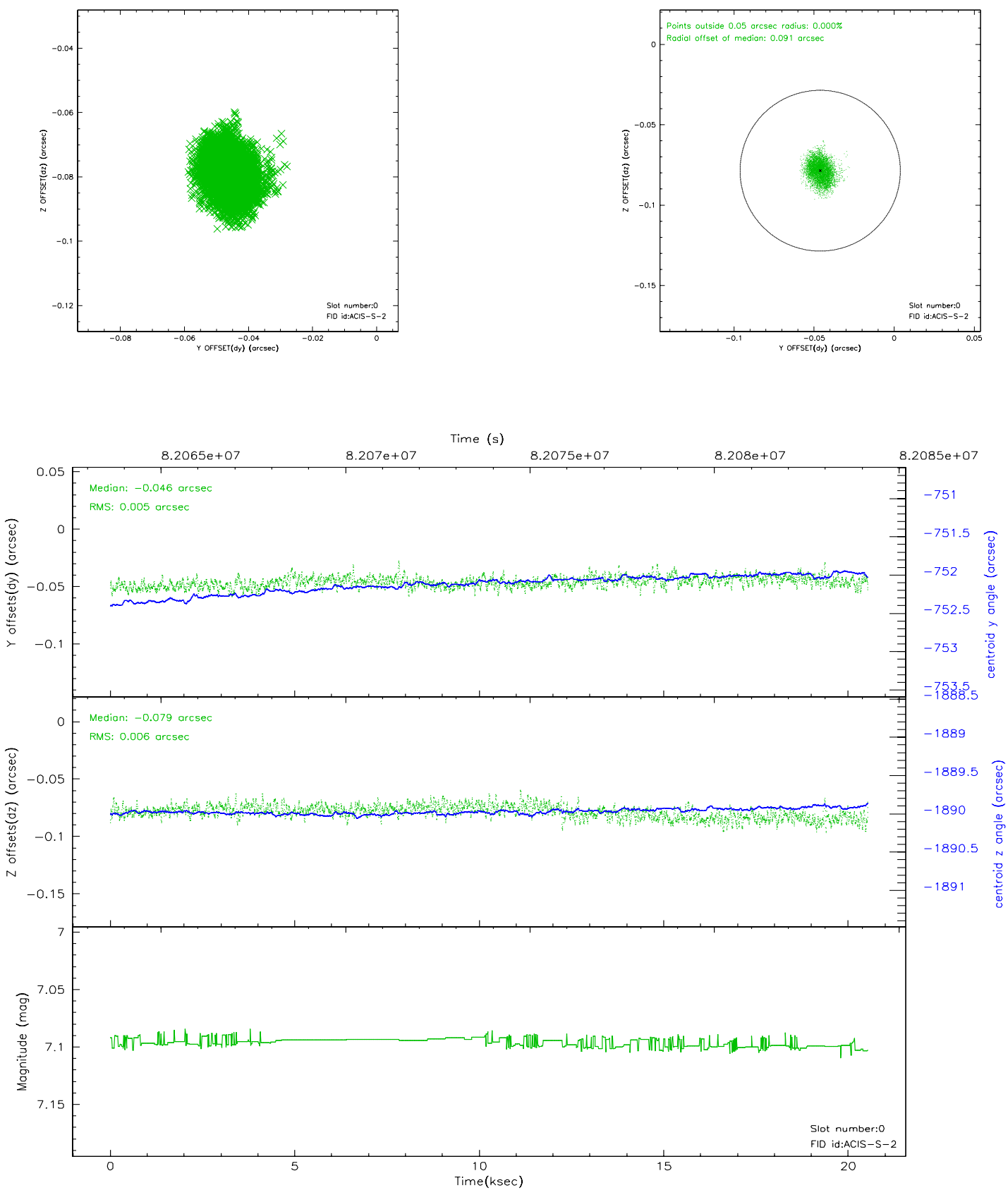


2.4.5 Slot 7

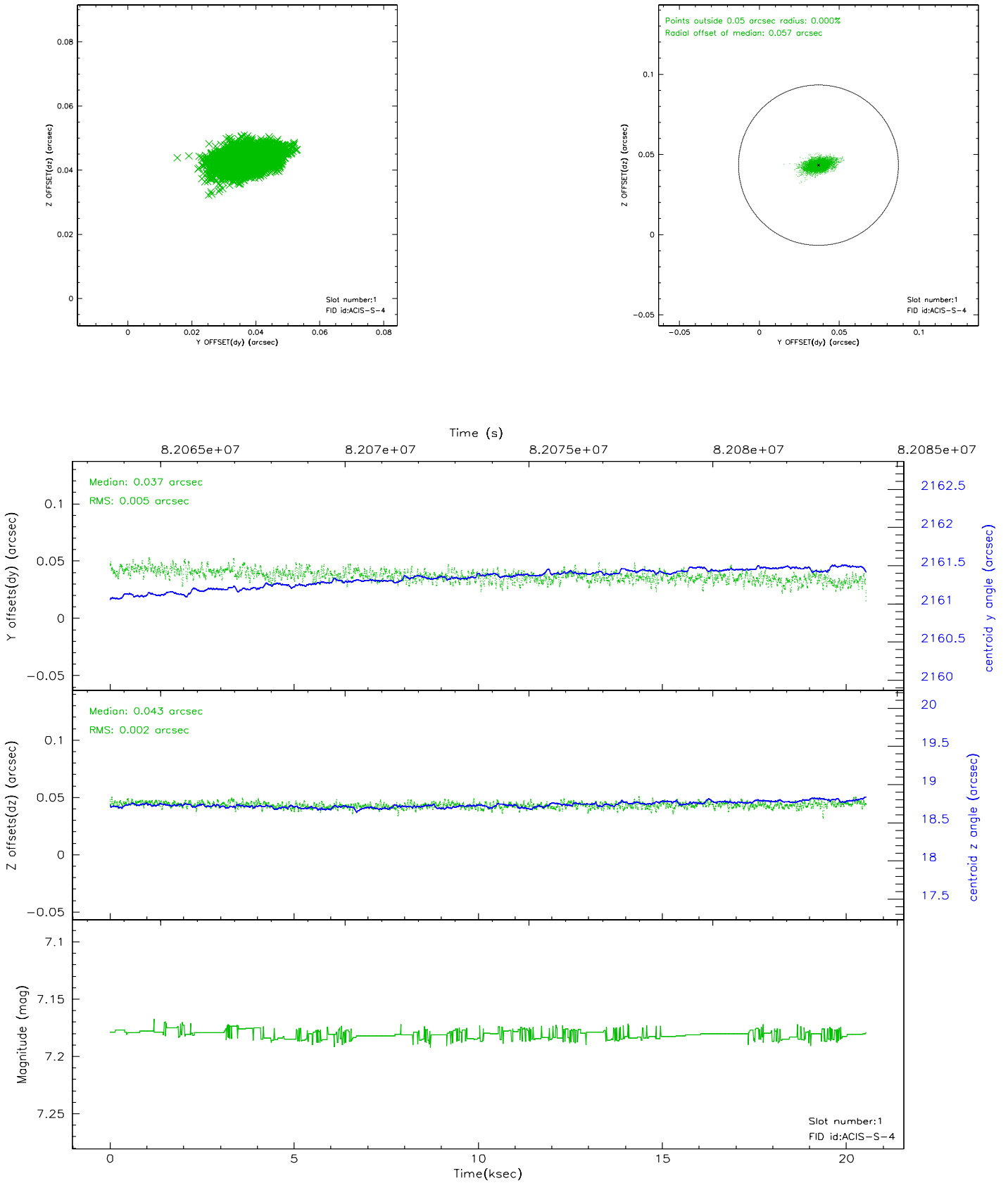


2.5 FID Slots

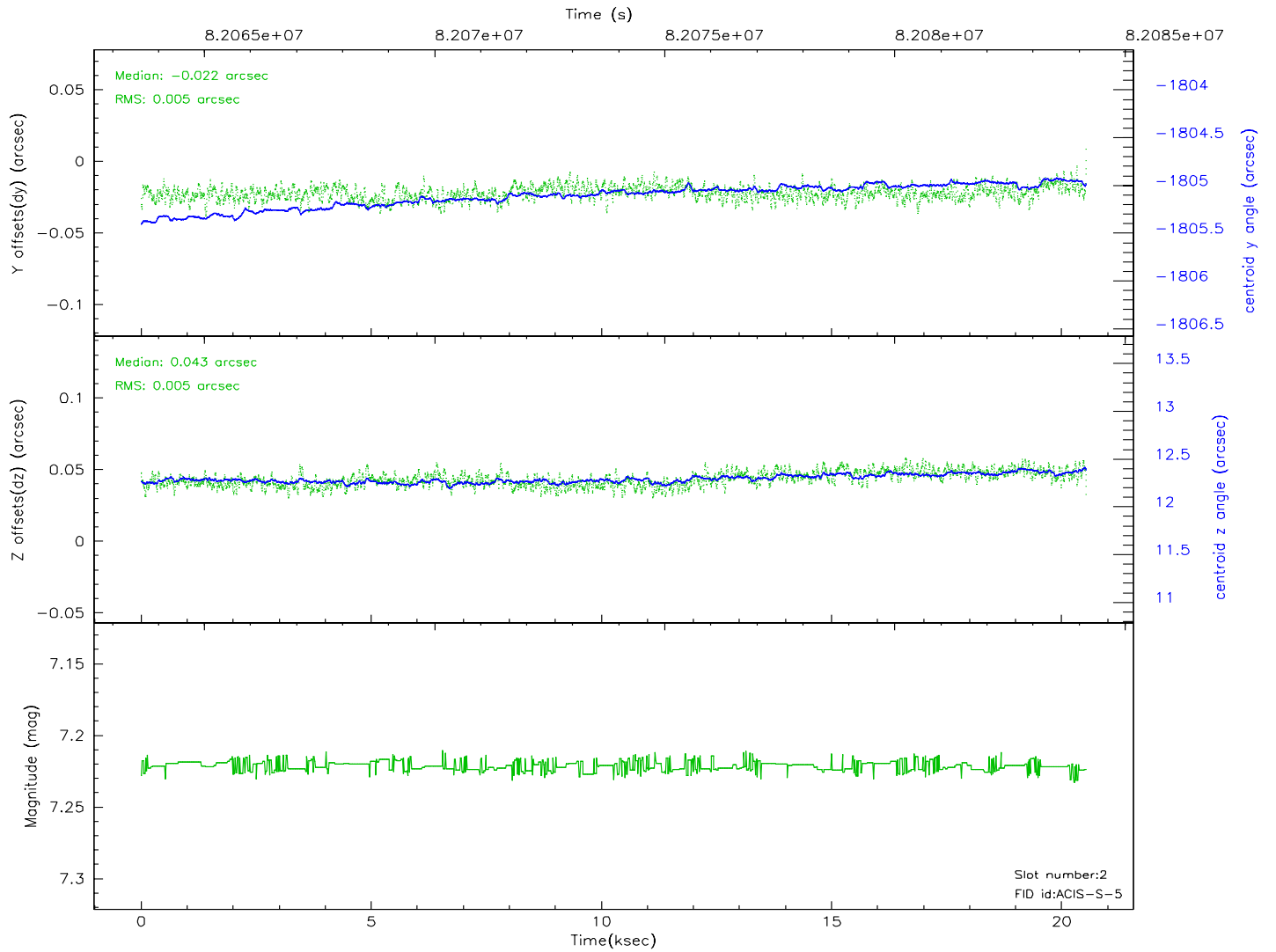
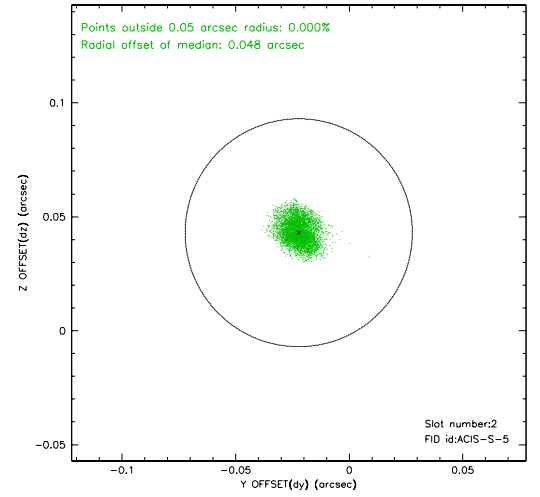
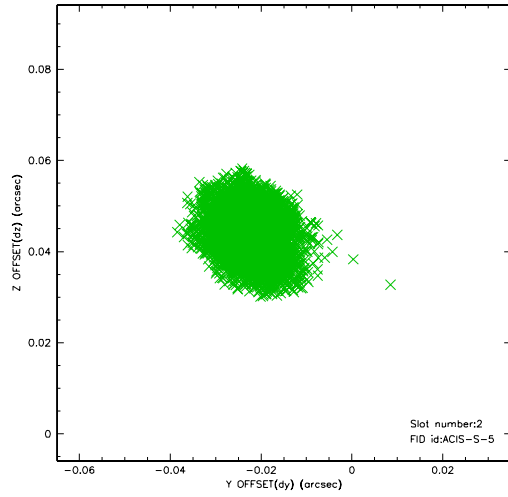
2.5.1 Slot 0



2.5.2 Slot 1

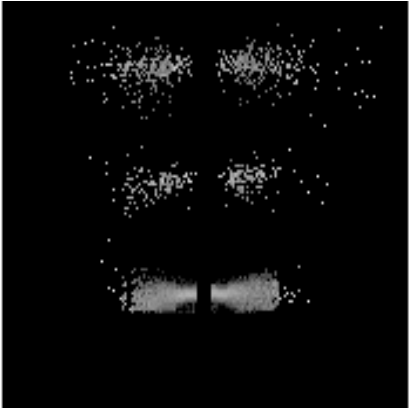


2.5.3 Slot 2

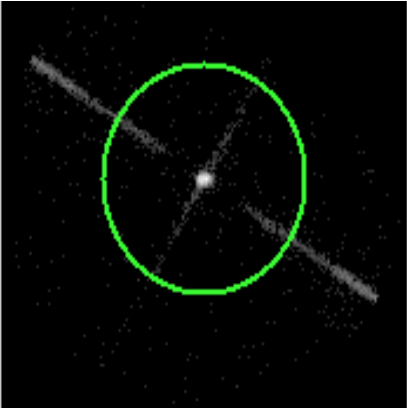


3 Gratings

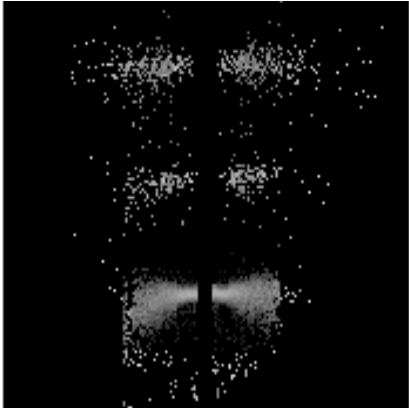
3.1 LETG Arm



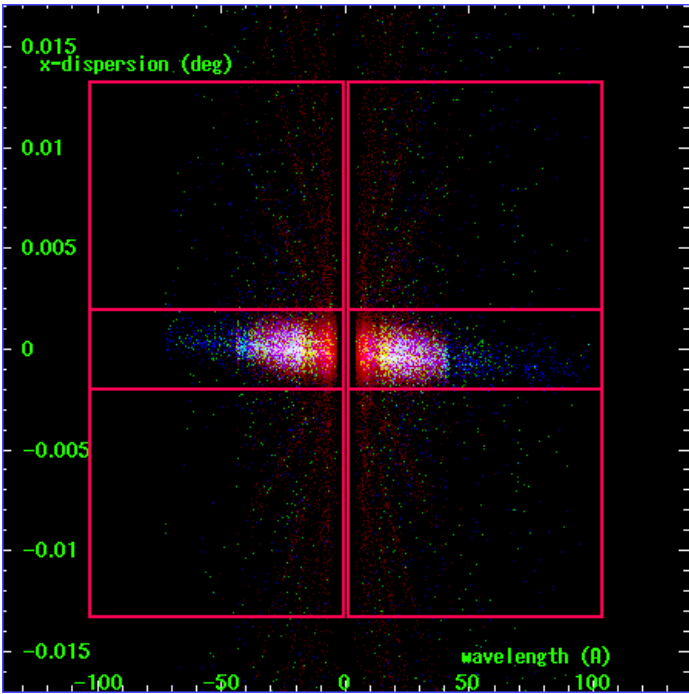
LETG Order Sort 123



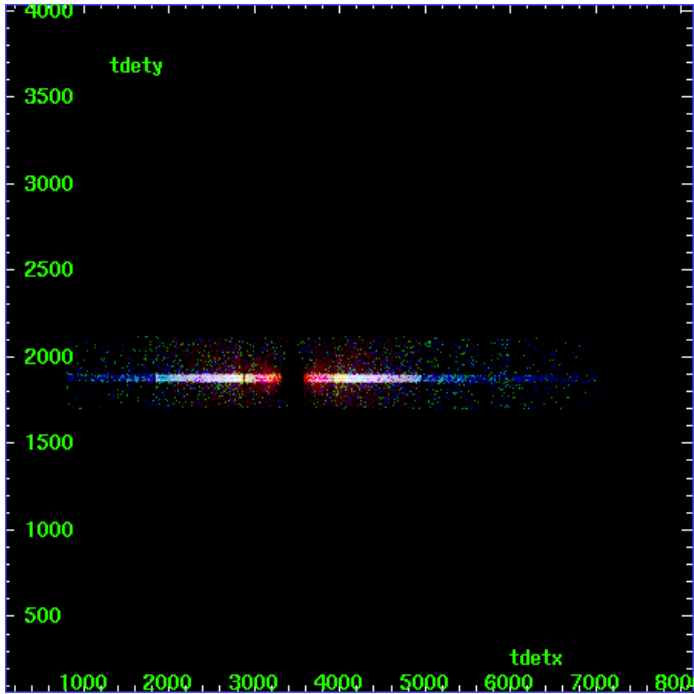
LETG Zero Order



LETG Order Sort ALL

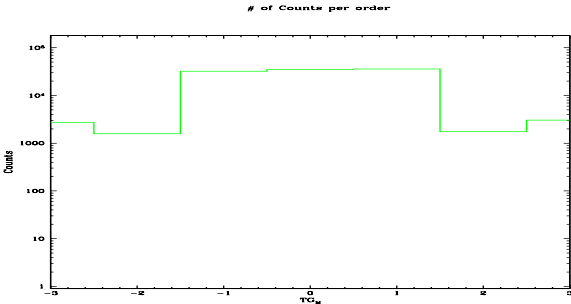


Spot Image LETG

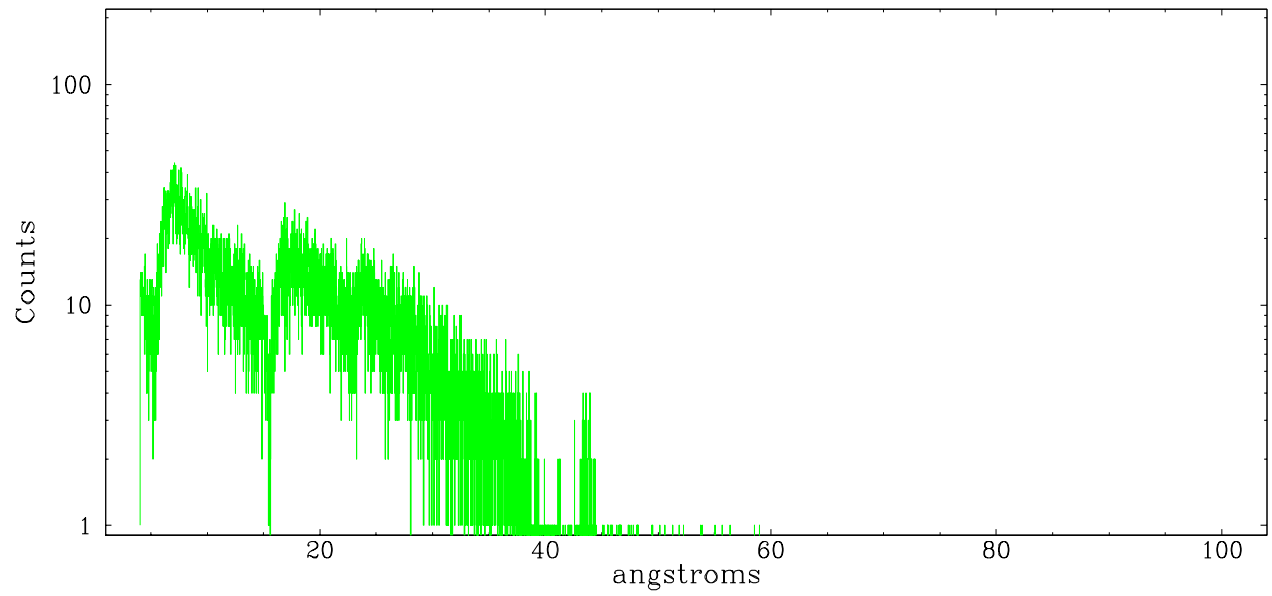


Full Detector LETG

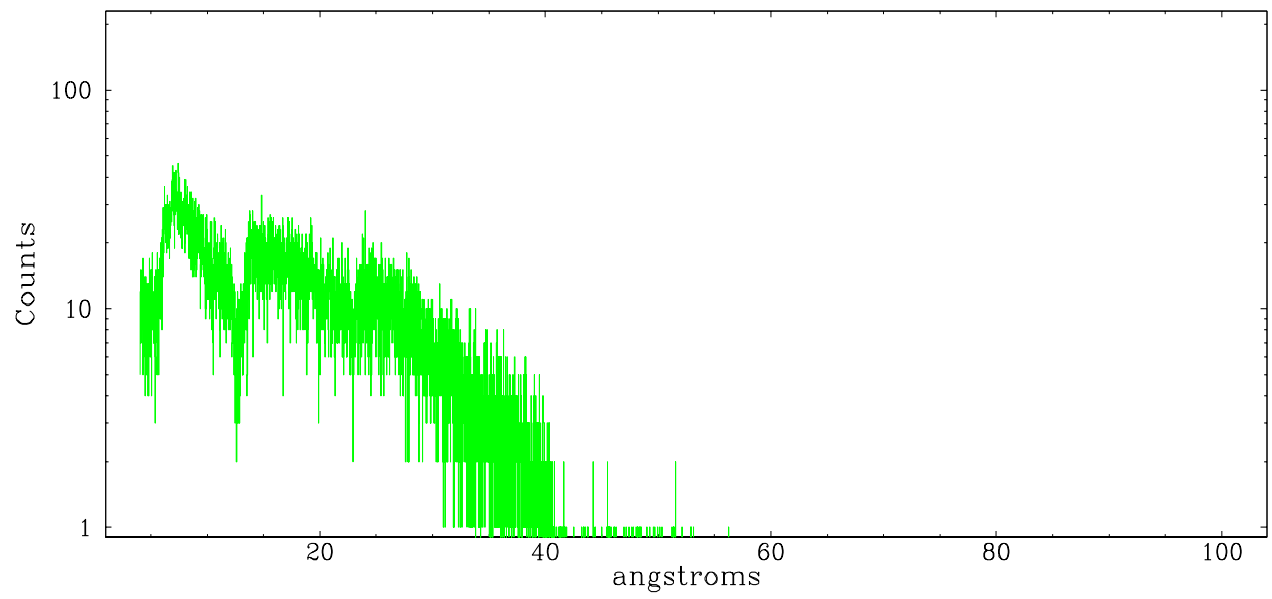
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2699	1582	32305	35003	35836	1740	3056



leg order -1



leg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.06.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.955

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.