

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 1799 - L2 Version 001
Chandra X-Ray Center

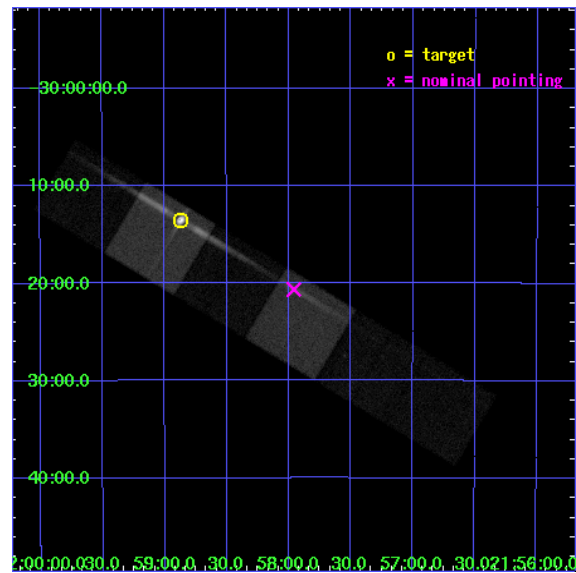
L2 Processing Date : Jun 2 2007

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

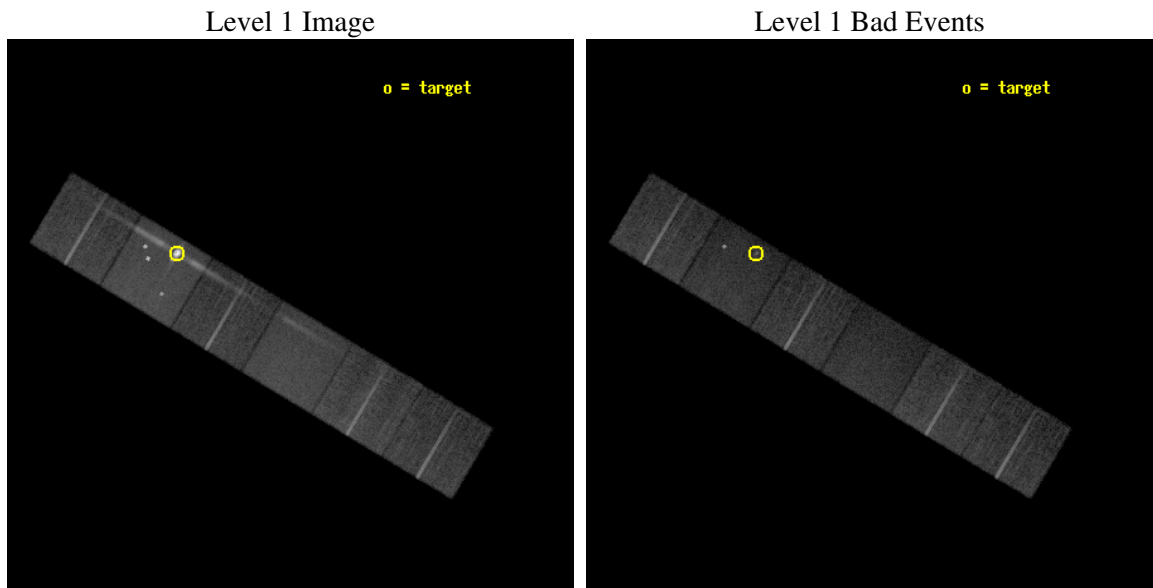
seq_num	390017
obs_id	1799
title	GRATINGS CALIBRATION OBSERVATIONS OF PKS2155-304
observer	Dr. CXC Calibration
object	PKS2155-304
dtcycle	0
cycle	P
ra_targ	329.716667
dec_targ	-30.225556
ra_nom	329.48973967339
dec_nom	-30.344222243671
roll_nom	30.858412559108
revision	3
ontime	20140.800018758
livetime	19885.765081586
ontime4	20140.800018758
ontime5	20140.800018758
ontime6	20140.800018758
ontime7	20140.800018758
ontime8	20140.800018758
ontime9	20140.800018758
l2events	265436



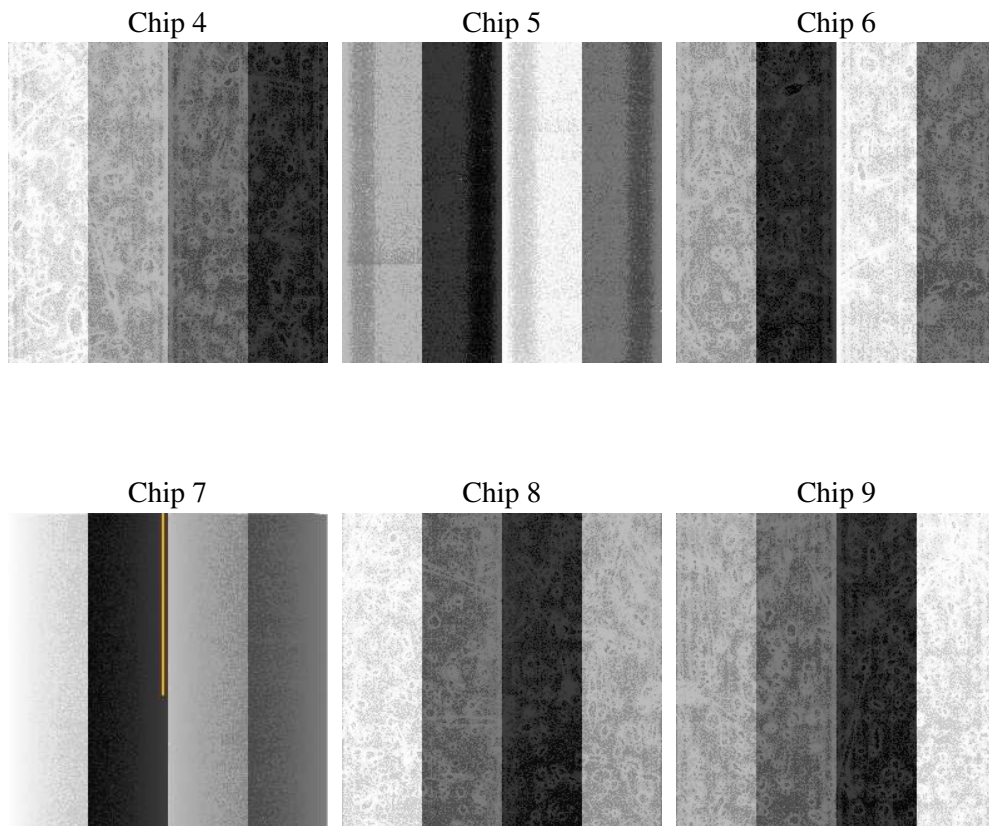
2 OBI

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	2007-06-02T08:14:47
revision	3

sched_exp_time	20000.000000
ontime	20140.800018758
ontime4	20140.800018758
ontime5	20140.800018758
ontime6	20140.800018758
ontime7	20140.800018758
ontime8	20140.800018758
ontime9	20140.800018758
l1events	1119561

2.1.4 Events

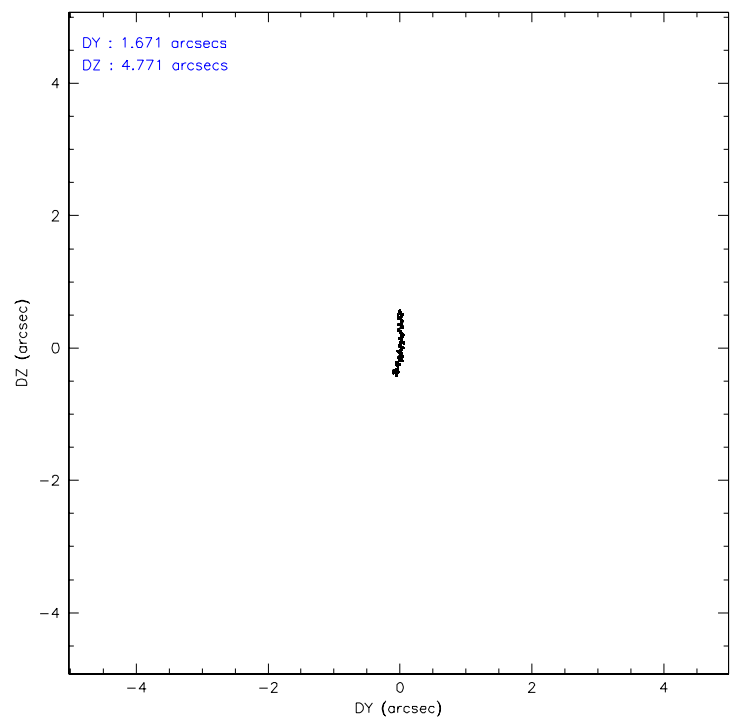
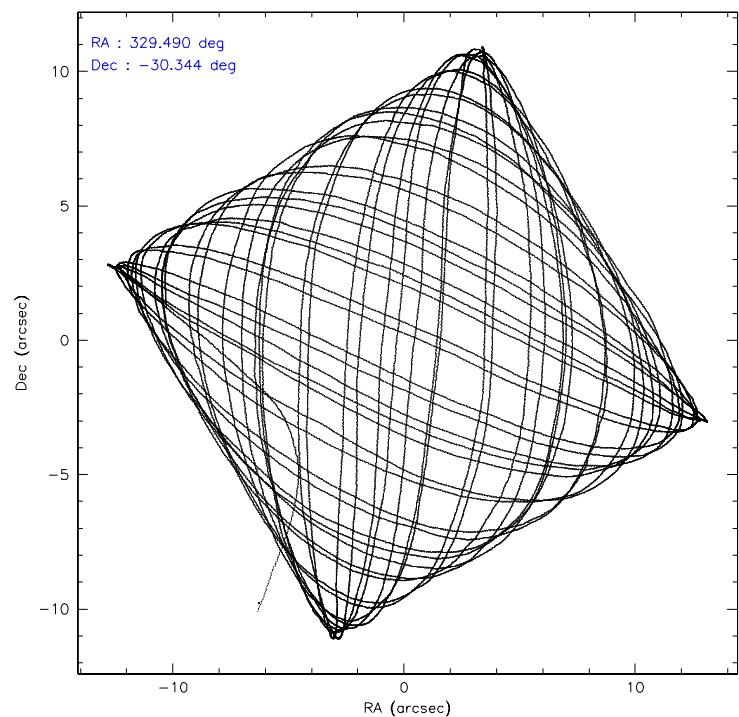
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	155387	292107	150945	202449	175845	142828
rejected events	139009	137469	131301	132617	147798	129378
rejected %	89%	47%	86%	65%	84%	90%

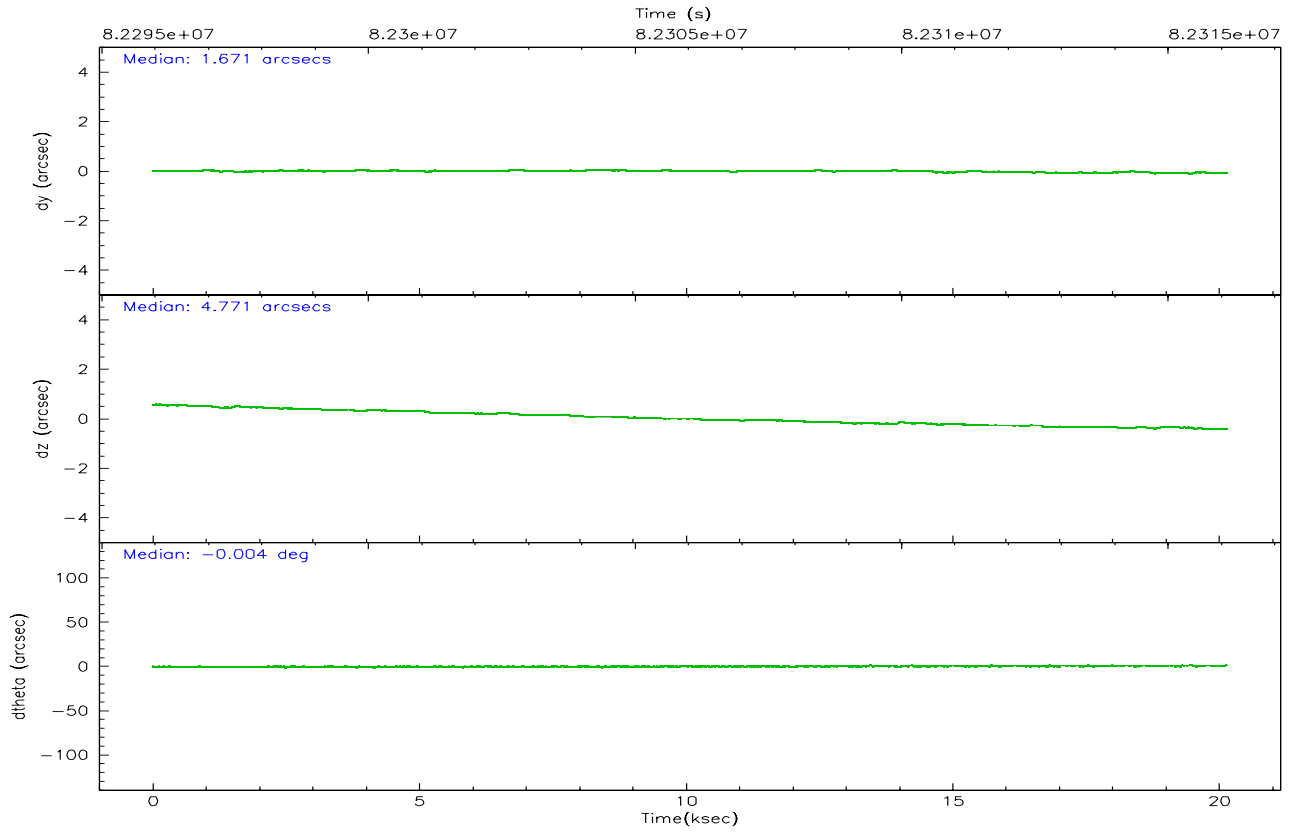
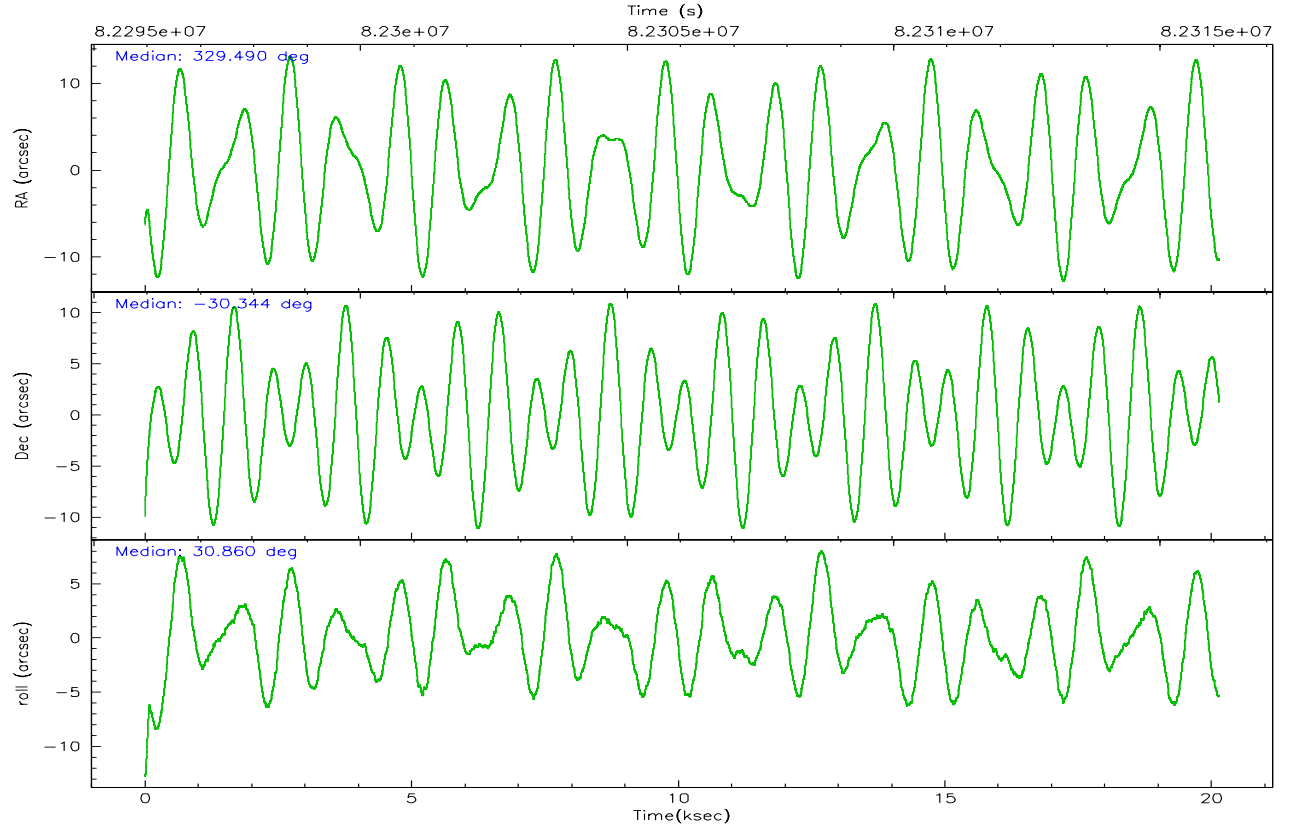
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	20563	62639	25717	21567	23480	19075
	13%	21%	17%	10%	13%	13%
grade 1 events	144	586	146	172	154	106
	0%	0%	0%	0%	0%	0%
grade 2 events	7179	55022	7583	23854	10468	7037
	4%	18%	5%	11%	5%	4%
grade 3 events	2599	13309	3004	11018	4777	2849
	1%	4%	1%	5%	2%	1%
grade 4 events	2488	12702	3045	11000	4596	2846
	1%	4%	2%	5%	2%	1%
grade 5 events	4114	14561	4818	14368	6055	5054
	2%	4%	3%	7%	3%	3%
grade 6 events	5104	56179	6733	49437	10928	6153
	3%	19%	4%	24%	6%	4%
grade 7 events	113196	77109	99899	71033	115387	99708
	72%	26%	66%	35%	65%	69%

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	329.474464	329.4897396733929	Subarray requested	NONE	NONE
Pointing Dec	-30.368225	-30.34422224367142	Alternating exposures requested	N	N
Pointing Roll	30.694074	30.85841255910779	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	82296105.184000	82294186.519398			
Observation start date	2000-08-10T12:00:41	2000-08-10T11:29:46			
Observation end time	82316105.184000	82316295.770224			
Observation end date	2000-08-10T17:34:01	2000-08-10T17:38:15			
Read mode	TIMED	TIMED			

2.3 Aspect



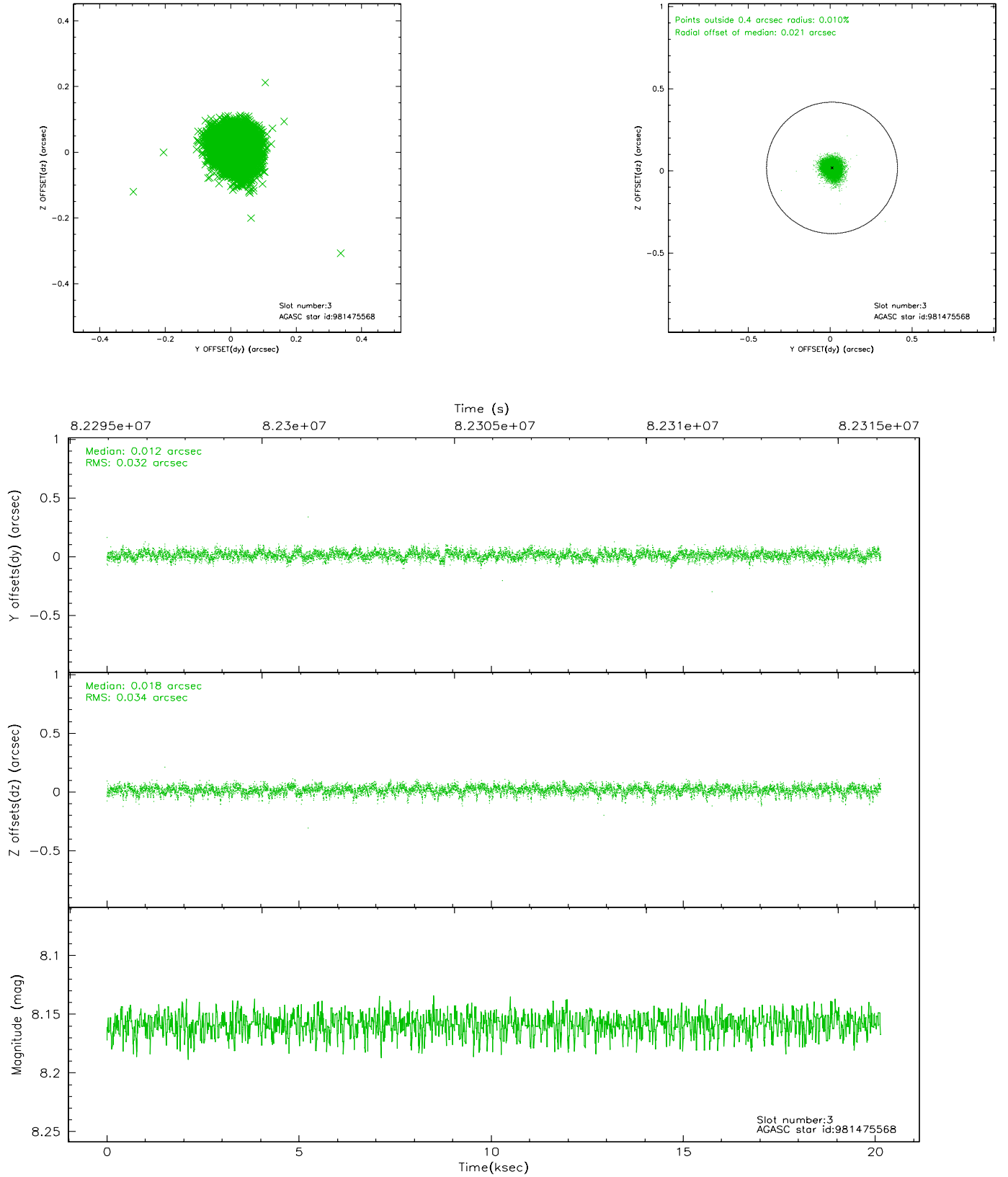


Slot Statistics

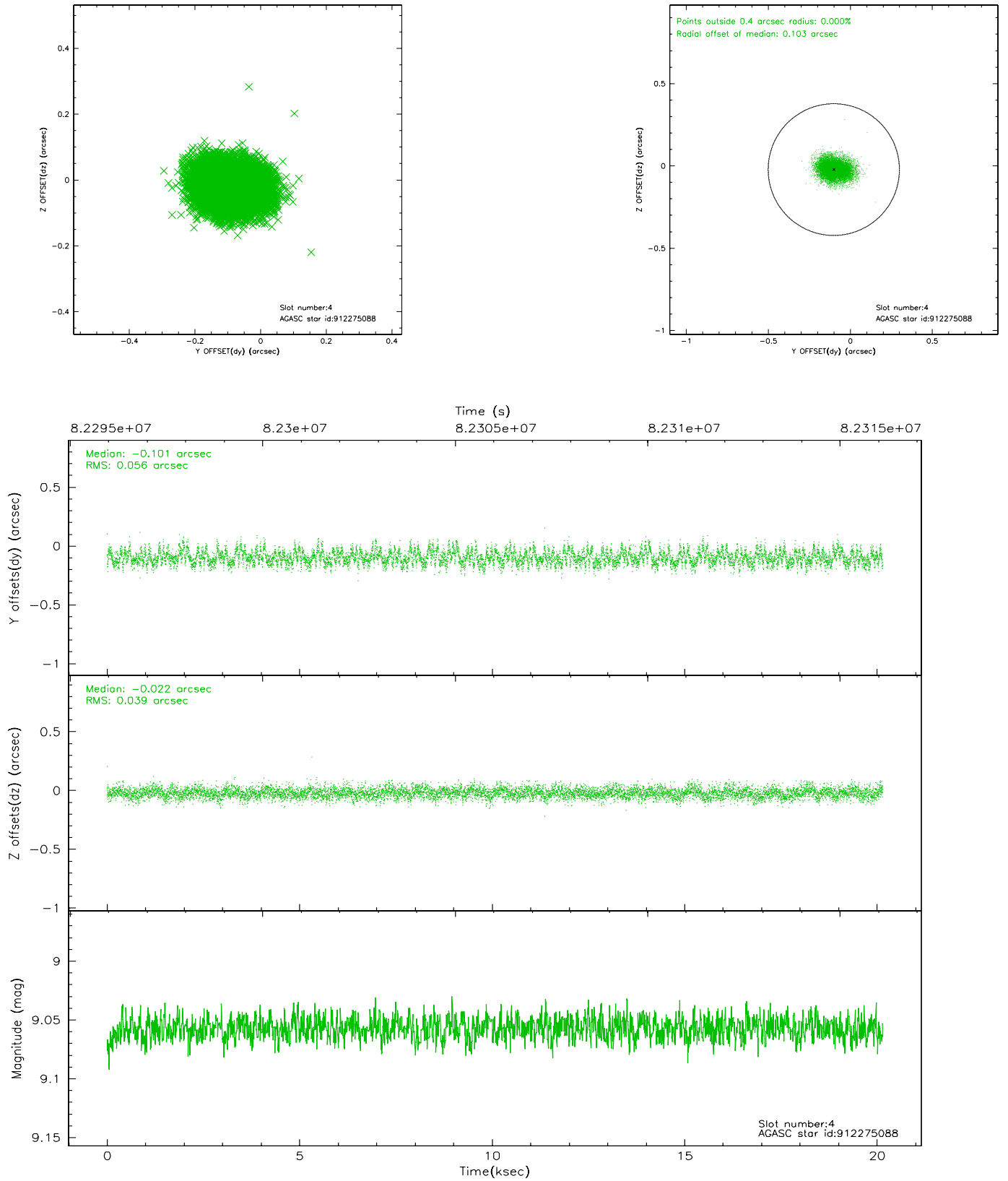
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	4912	-0.052	-0.029	0.006	0.011	0.000000	0.000000	-753.75	-1890.70
1	FID	ACIS-S-4	7.19	4913	0.022	0.037	0.006	0.011	0.000000	0.000000	2159.52	17.61
2	FID	ACIS-S-6	7.42	4913	0.002	-0.000	0.007	0.012	0.000000	0.000000	408.53	655.18
3	GUIDE	981475568	8.16	9826	0.012	0.018	0.049	0.081	328.999408	-30.923402	-2283.51	-971.18
4	GUIDE	912275088	9.06	9823	-0.101	-0.022	0.072	0.117	329.619228	-29.738698	1545.45	1718.62
5	GUIDE	981468288	9.20	9821	0.086	-0.005	0.093	0.143	328.608359	-30.257017	-2116.67	1711.49
6	GUIDE	981478152	9.41	9821	-0.024	0.018	0.084	0.138	329.415589	-30.057192	413.47	1057.81
7	GUIDE	981468128	9.35	9820	0.026	-0.005	0.079	0.128	329.756350	-30.158334	1139.62	202.17

2.4 Star Slots

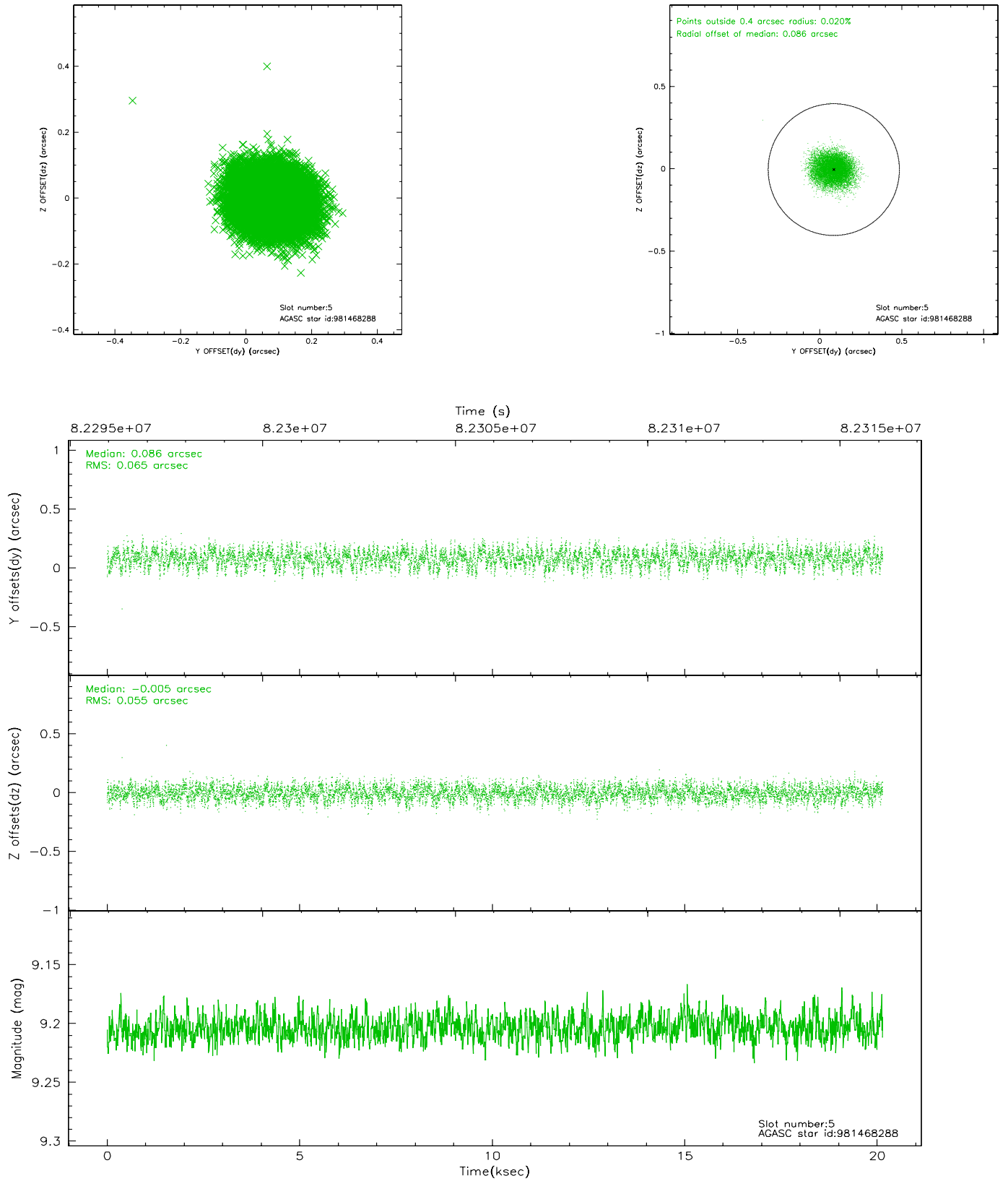
2.4.1 Slot 3



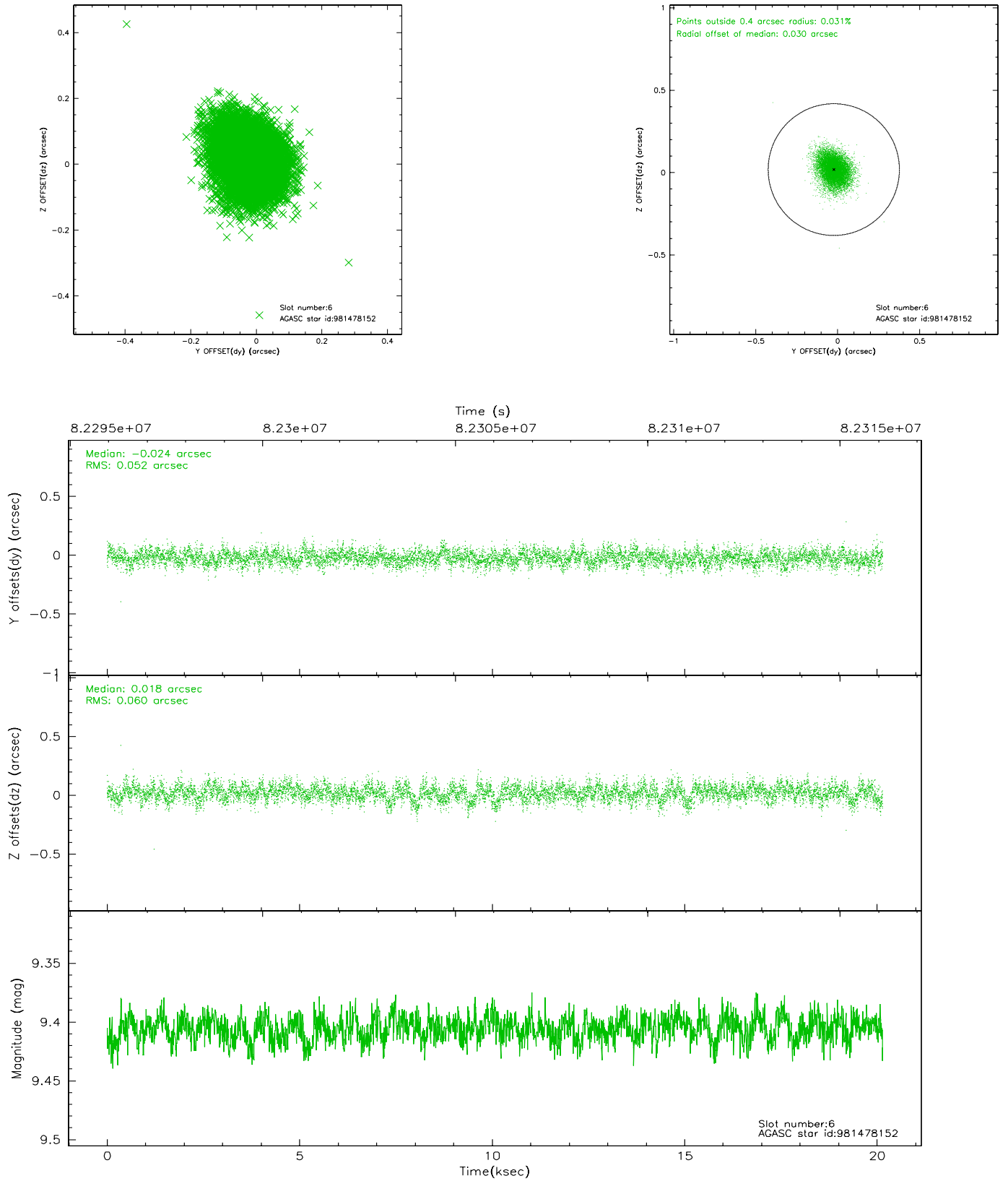
2.4.2 Slot 4



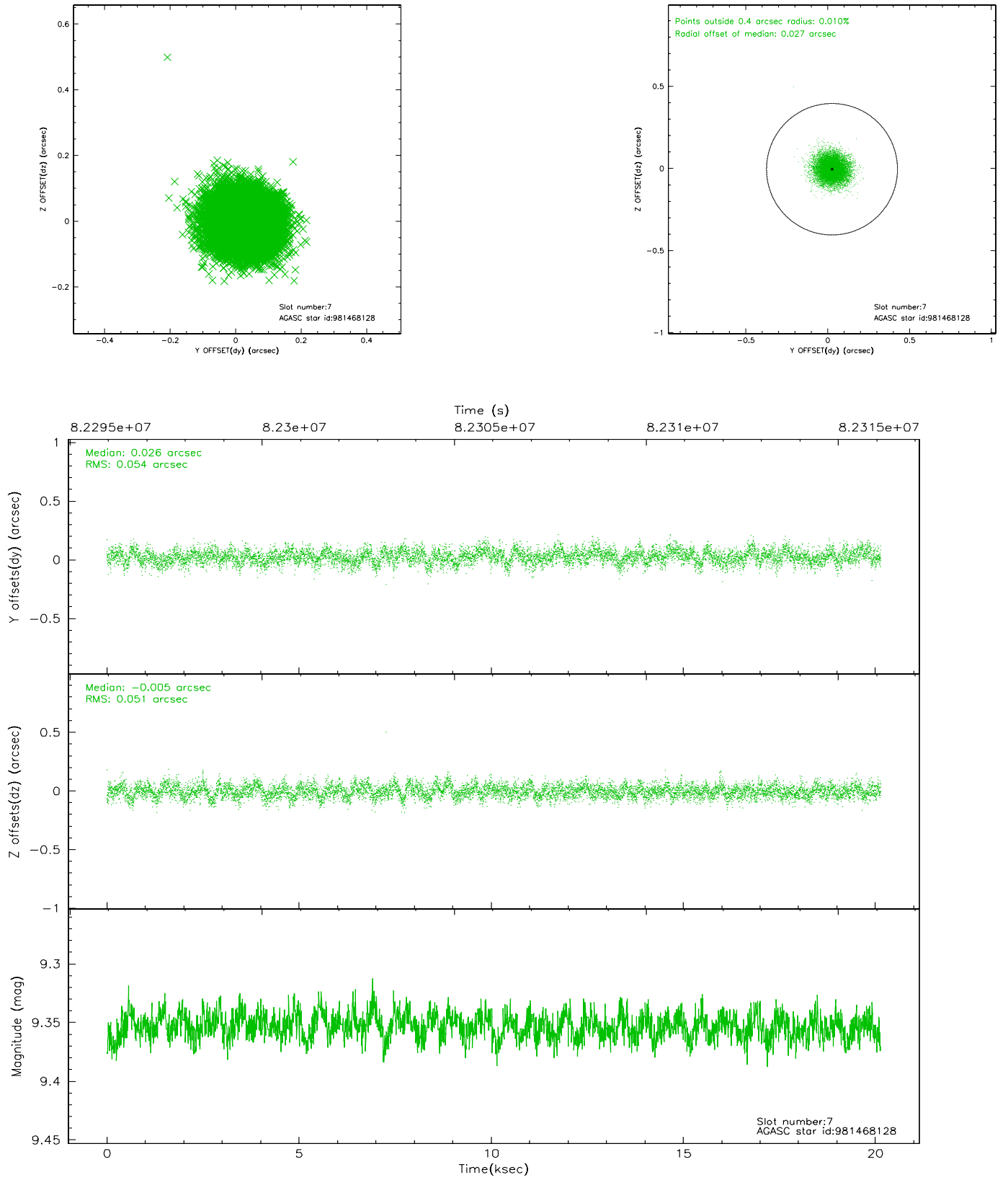
2.4.3 Slot 5



2.4.4 Slot 6

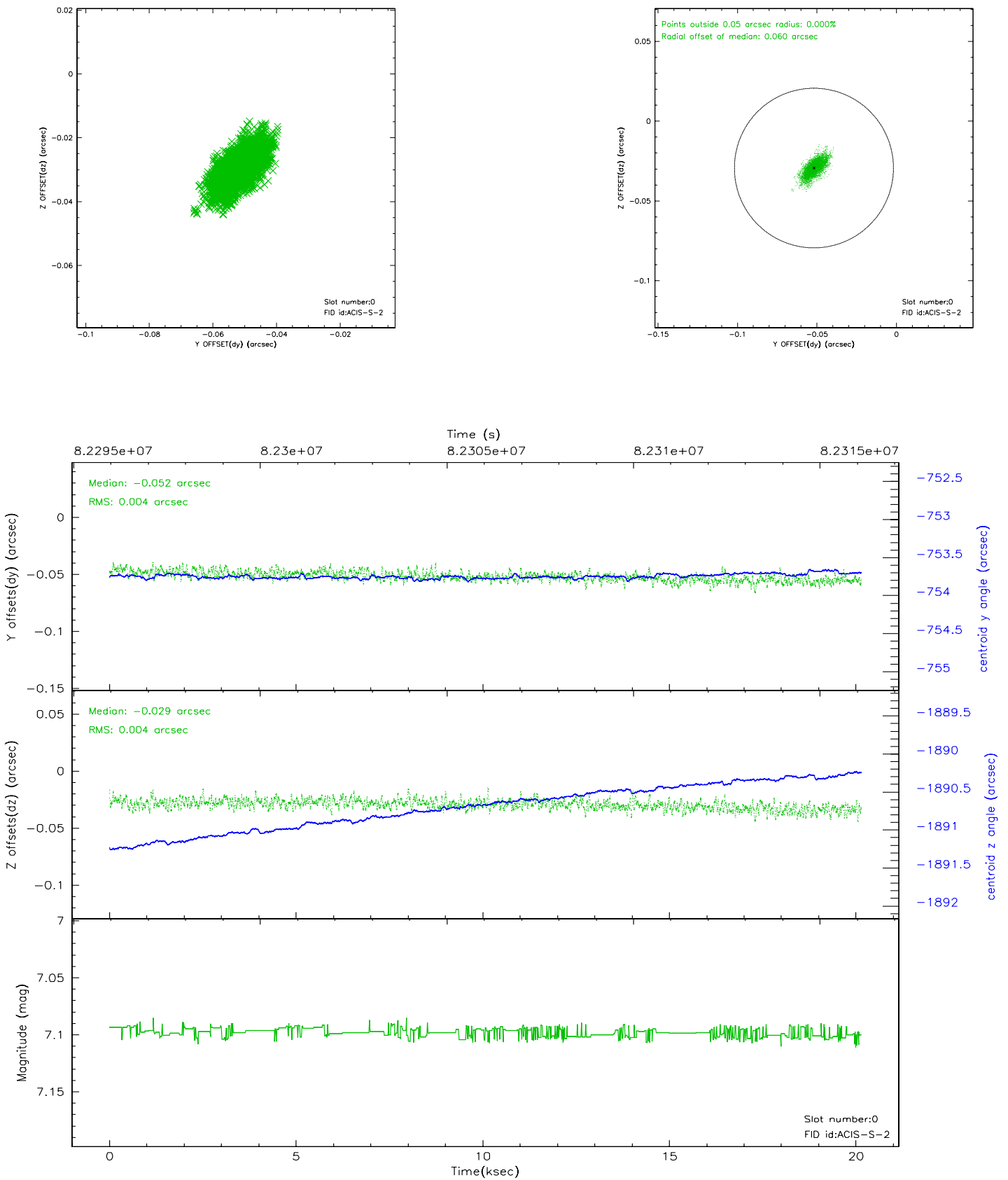


2.4.5 Slot 7

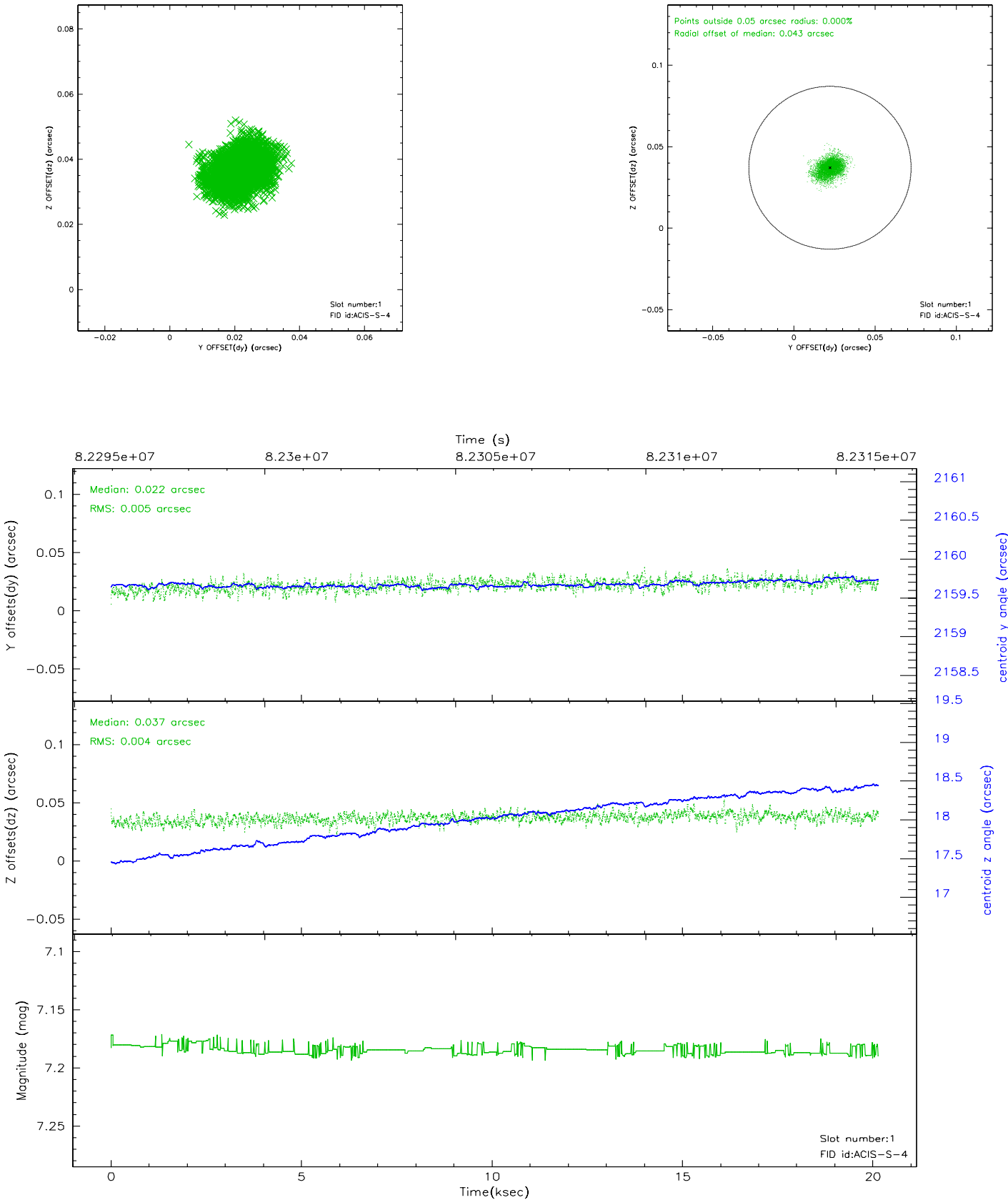


2.5 FID Slots

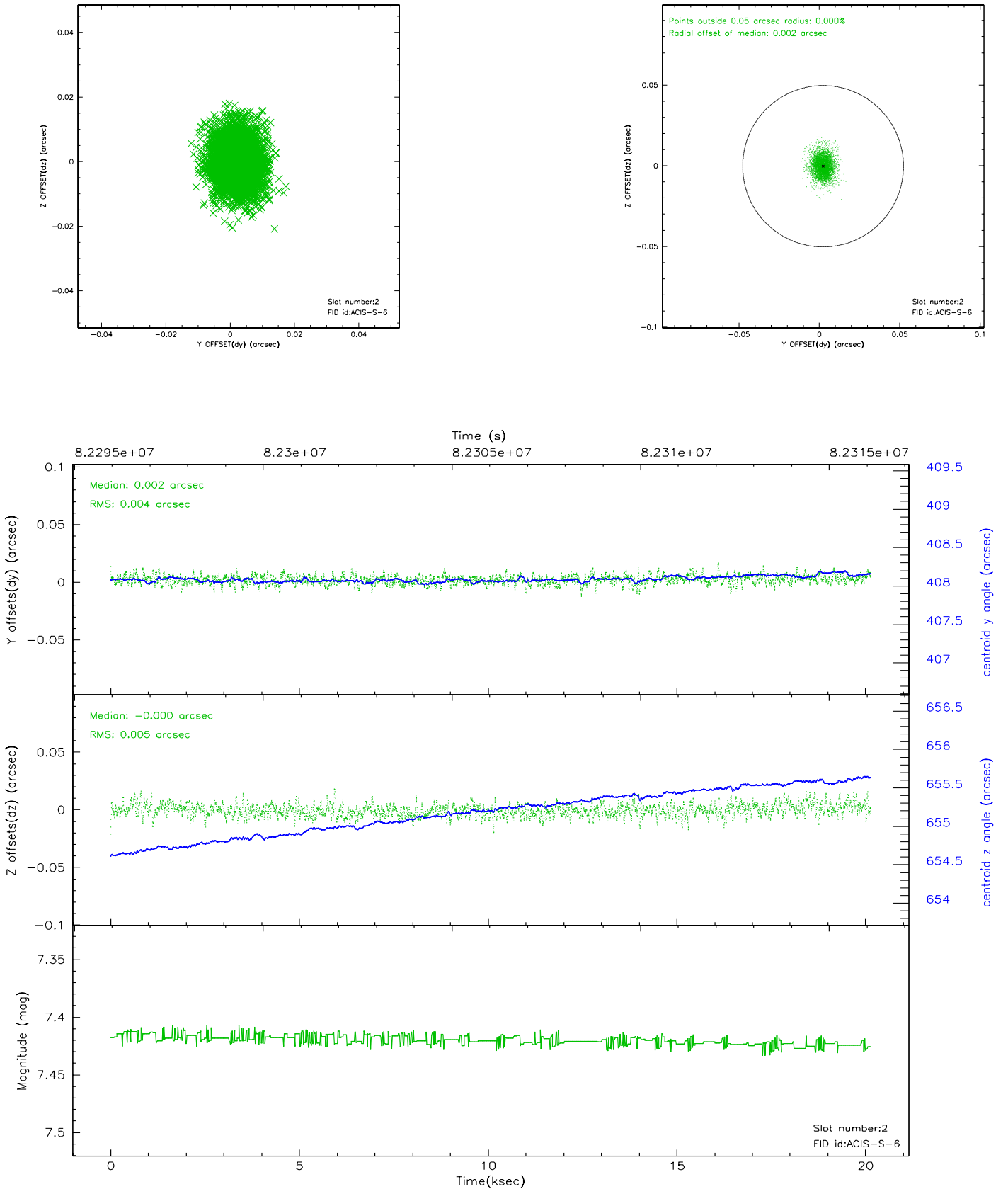
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

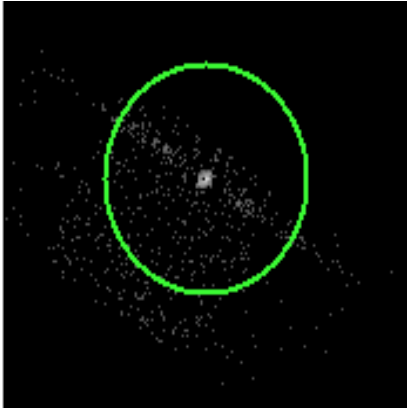


3 Gratings

3.1 LETG Arm



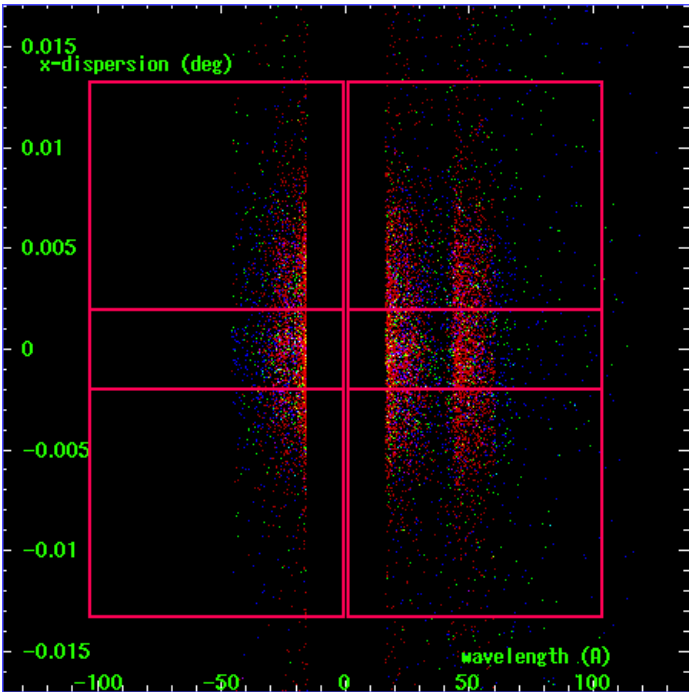
LETG Order Sort 123



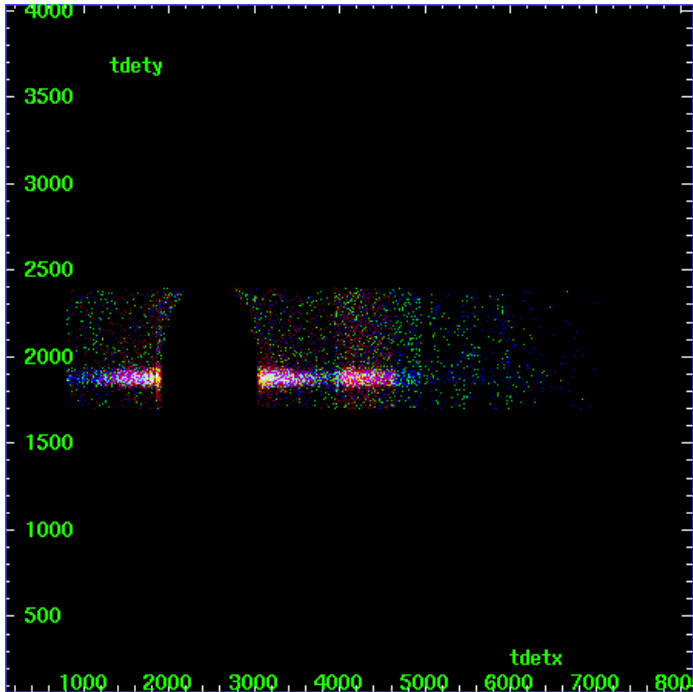
LETG Zero Order



LETG Order Sort ALL

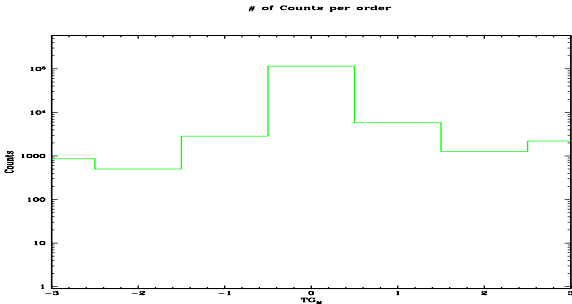


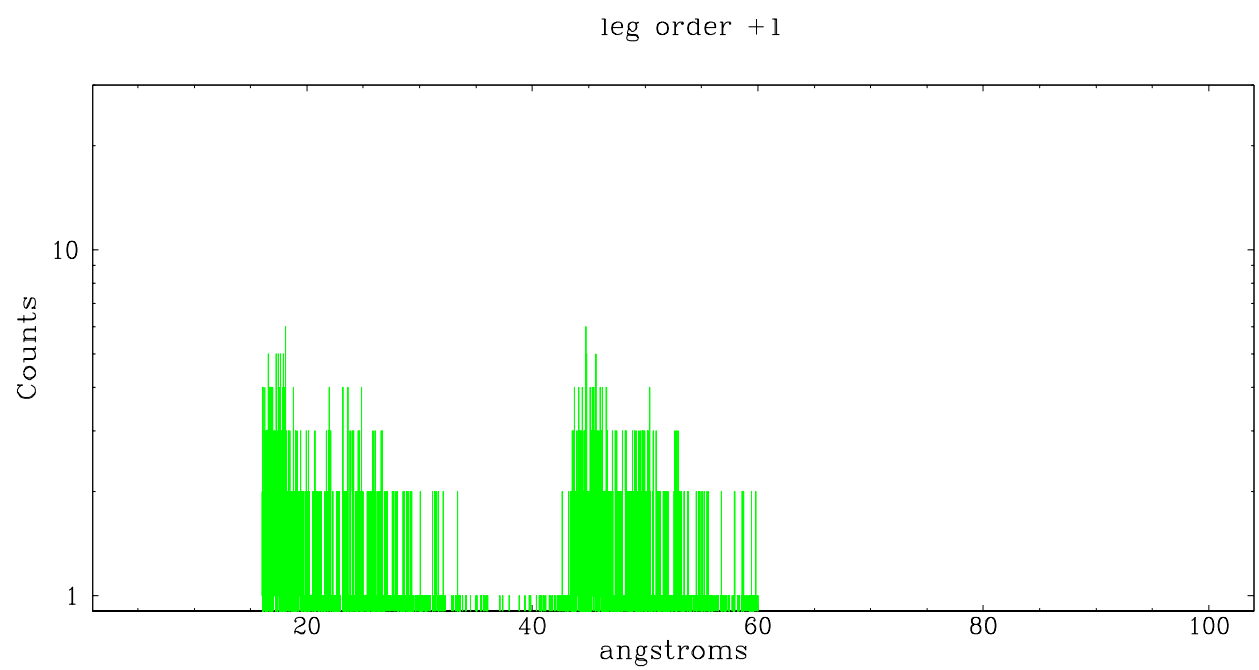
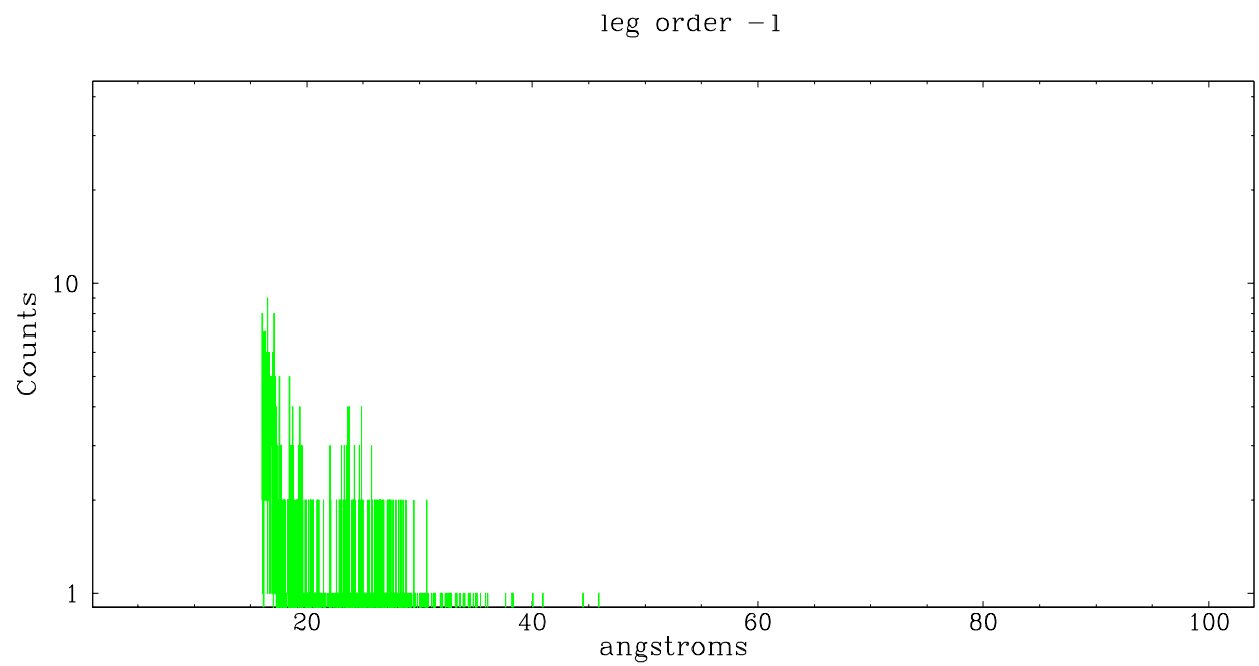
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	861	501	2838	115774	5810	1266	2210





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.06.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.14

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. There is a spike in the count rate during the first 1.5 ksec of this observation, presumably due to a high radiation environment.