

V&V Reference Report

L2 ASCDS Version : 8.4.3.1

Observation 8498 - L2 Version 3
Chandra X-Ray Center

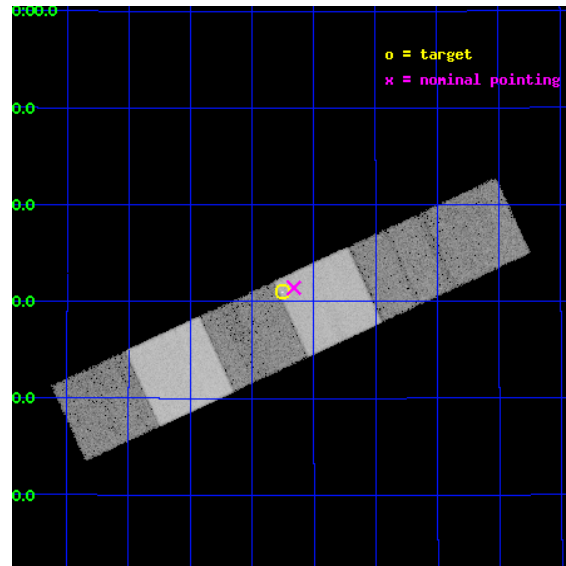
L2 Processing Date : Apr 16 2012

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1 Front

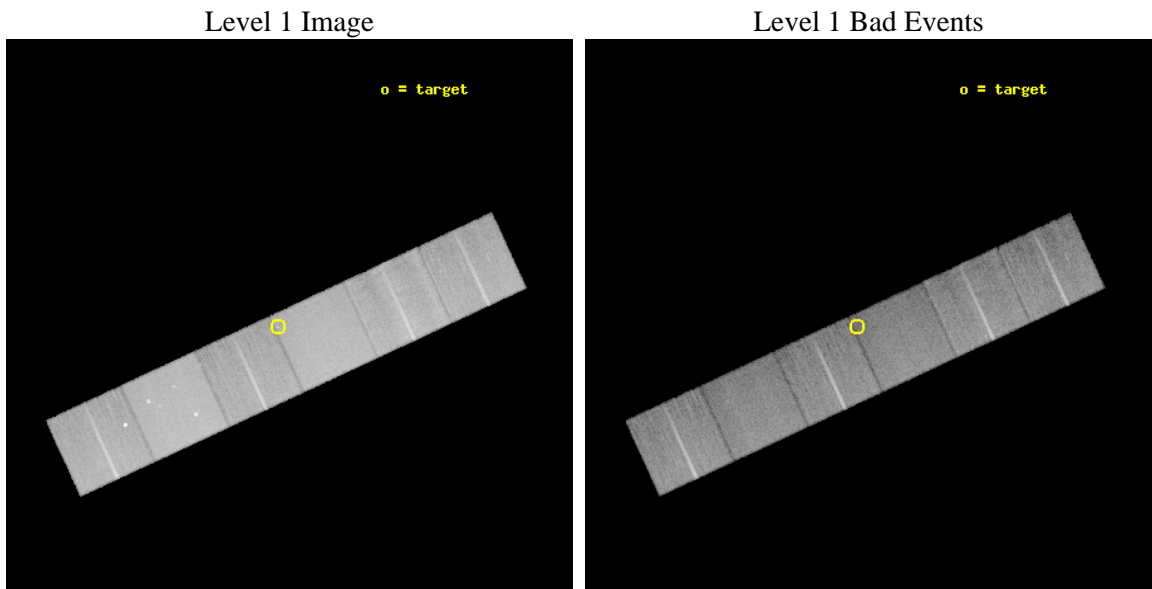
seq_num	200343	Sequence number
obs_id	8498	Observation id
title	The X-ray Spectrum of a Planetary Nebula at High Resolution	Propos
observer	Dr. Joel Kastner	Principal investigator
object	BD +303639	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	293.688333	Observer's specified target RA [deg]
dec_targ	30.516361	Observer's specified target Dec [deg]
ra_nom	293.66555820693	Nominal RA [deg]
dec_nom	30.523714379244	Nominal Dec [deg]
roll_nom	335.16819621098	Nominal Roll [deg]
revision	3	Processing version of data
ontime	20124.799925089	Sum of GTIs [s]
livetime	19869.967590738	Livetime [s]
ontime4	20124.799925089	Sum of GTIs [s]
ontime5	20124.799925089	Sum of GTIs [s]
ontime6	20124.799925089	Sum of GTIs [s]
ontime7	20124.799925089	Sum of GTIs [s]
ontime8	20124.799925089	Sum of GTIs [s]
ontime9	20124.799925089	Sum of GTIs [s]
l2events	291271	Number of level 2 events



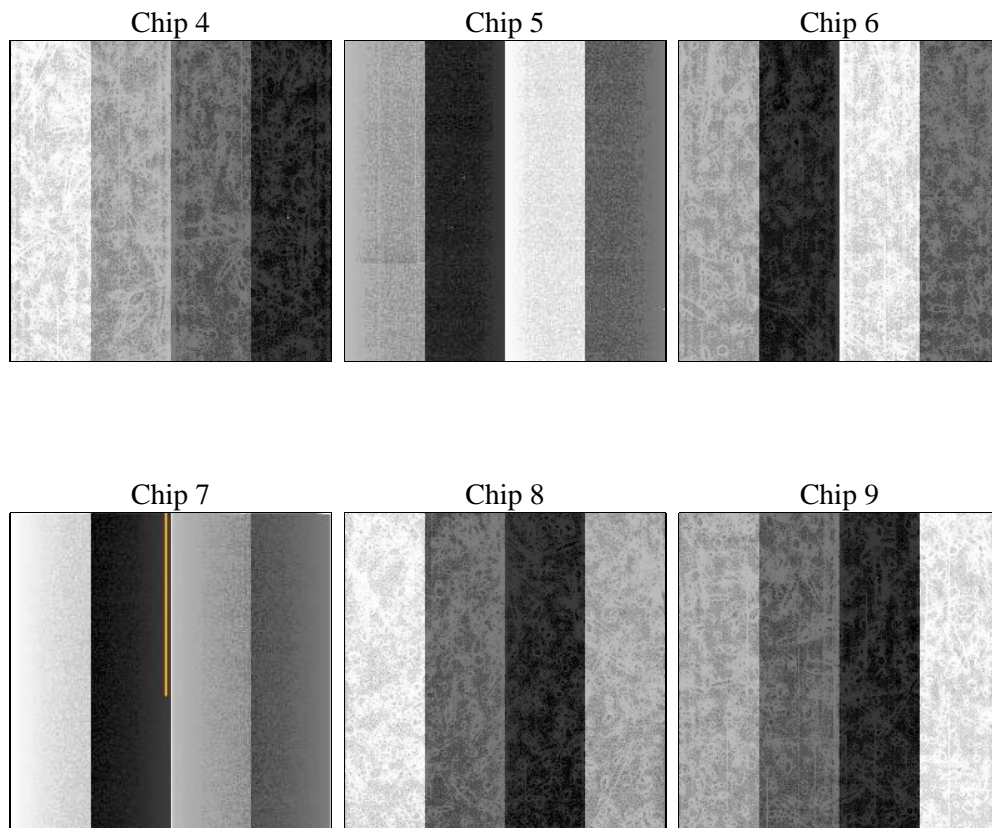
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3.1	Processing system revision	ontime	20124.799925089	Sum of GTIs [s]
caldsver	4.4.9	 	ontime4	20124.799925089	Sum of GTIs [s]
date	2012-04-16T04:33:24	Date and time of file creation	ontime5	20124.799925089	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	20124.799925089	Sum of GTIs [s]
			ontime7	20124.799925089	Sum of GTIs [s]
			ontime8	20124.799925089	Sum of GTIs [s]
			ontime9	20124.799925089	Sum of GTIs [s]
			l1events	1316340	Number of level 1 events

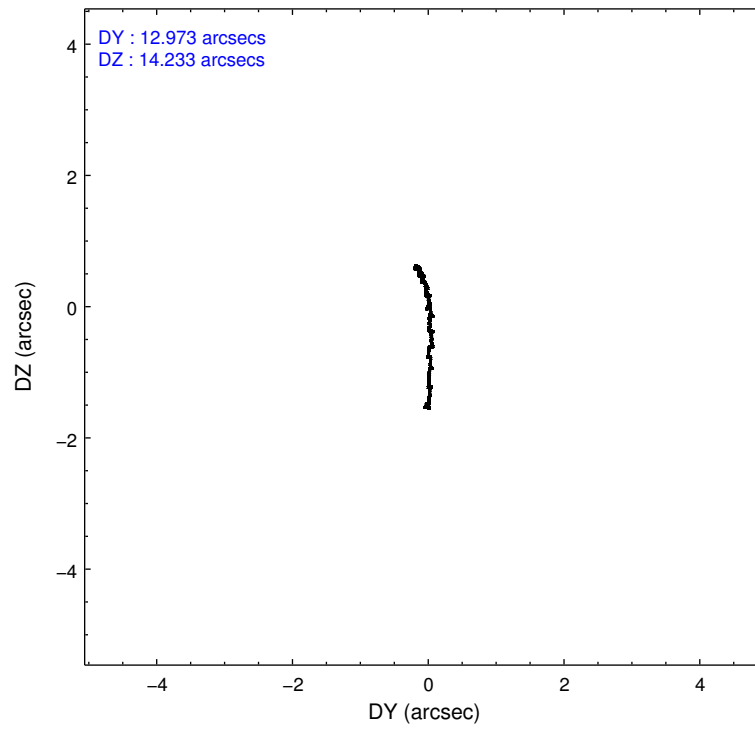
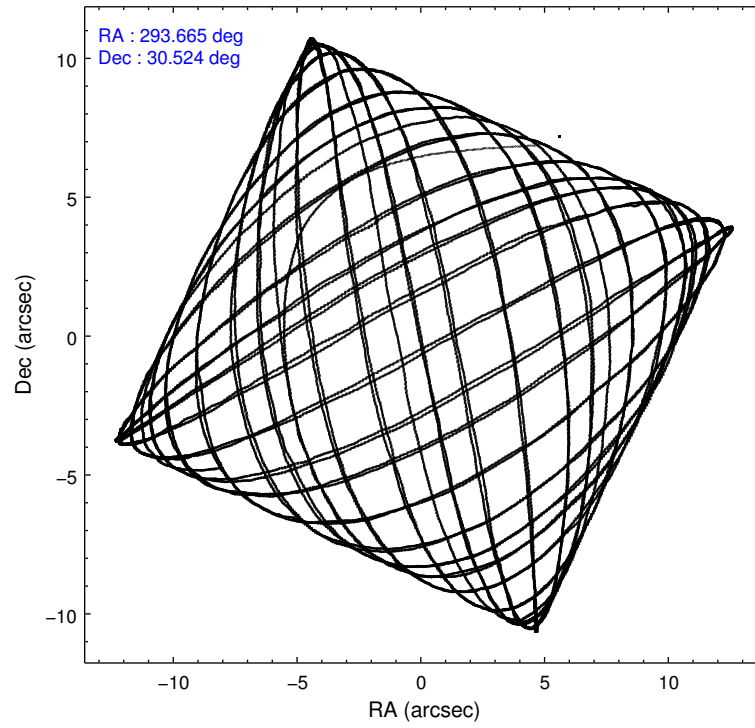
2.1.4 Events

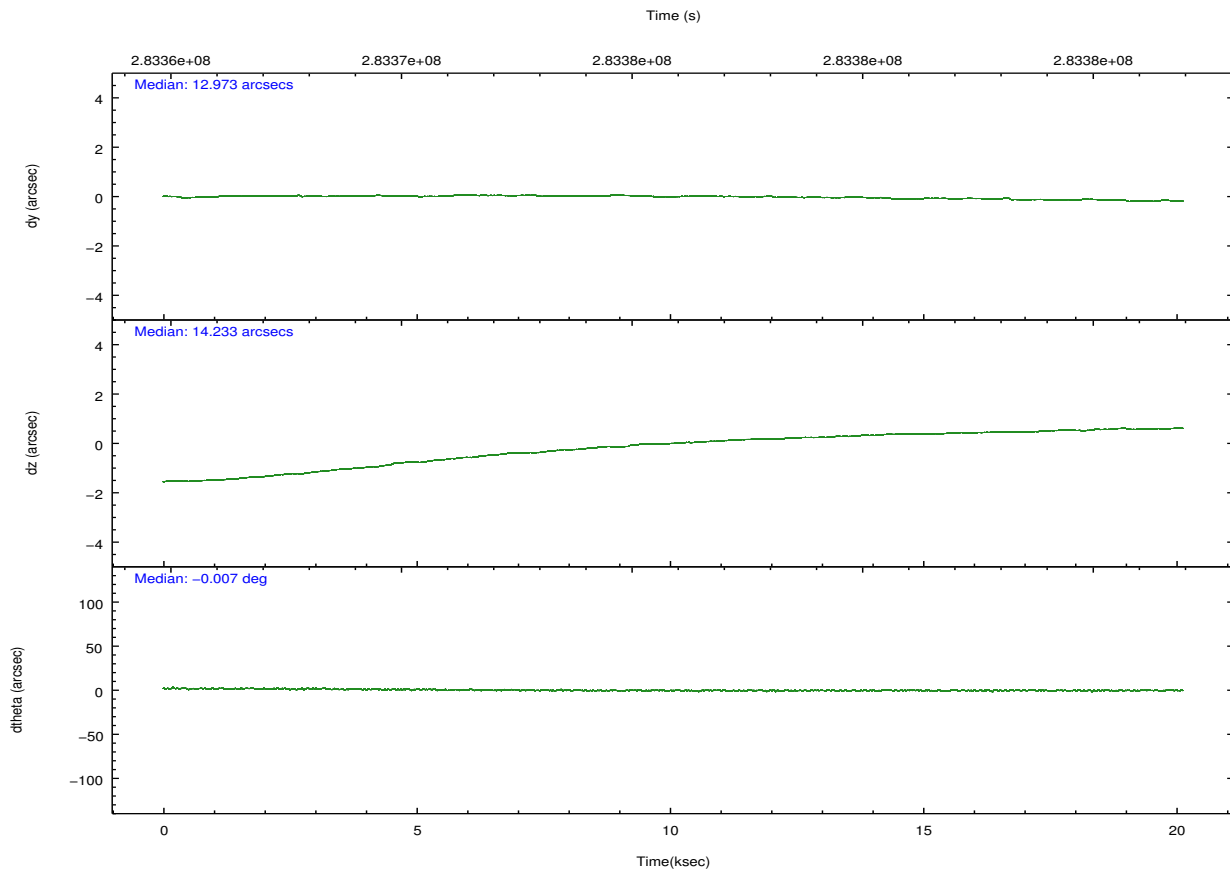
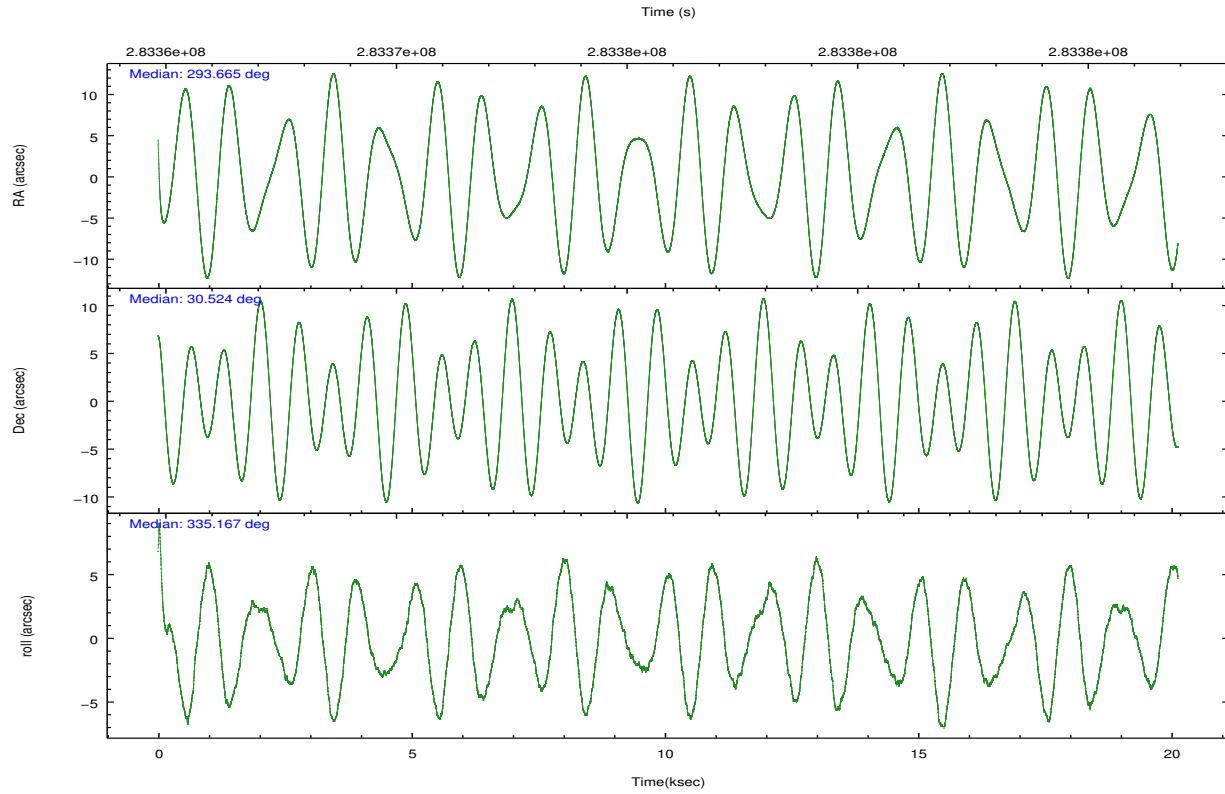
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	205378	273116	184141	246059	225521	182125	grade 0 events	13585	11885	8496	8876	15913	9342
rejected events	179611	149451	162560	144735	174959	160024		6%	4%	4%	3%	7%	5%
rejected %	87%	54%	88%	58%	77%	87%	grade 1 events	229	502	90	251	154	130
								0%	0%	0%	0%	0%	0%
							grade 2 events	4672	37665	4742	20714	11414	4398
								2%	13%	2%	8%	5%	2%
							grade 3 events	2178	4420	2042	8714	5250	2230
								1%	1%	1%	3%	2%	1%
							grade 4 events	2176	4278	2099	8728	4977	2089
								1%	1%	1%	3%	2%	1%
							grade 5 events	8150	19645	8452	22954	11110	9198
								3%	7%	4%	9%	4%	5%
							grade 6 events	3393	66560	4377	55121	13313	4221
								1%	24%	2%	22%	5%	2%
							grade 7 events	170995	128161	153843	120701	163390	150517
								83%	46%	83%	49%	72%	82%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	LETG	LETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	293.634004	293.6655582069314	CCD I2 on	N	N
[deg] Pointing Dec	30.520895	30.52371437924405	CCD I3 on	N	N
[deg] Pointing Roll	335.027591	335.1681962109836	CCD S0 on	O2	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-182.132523	-182.1370004450064	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-8	-7.995522138001405	CCD S4 on	Y	Y
[s] Observation start time (MET)	283365941.184000	283364746.95016	CCD S5 on	O1	Y
Observation start date	2006-12-24T16:44:36	2006-12-24T16:25:46	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	283385941.184000	283386870.03871	On-chip summing requested	N	N
Observation end date	2006-12-24T22:17:56	2006-12-24T22:34:30	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



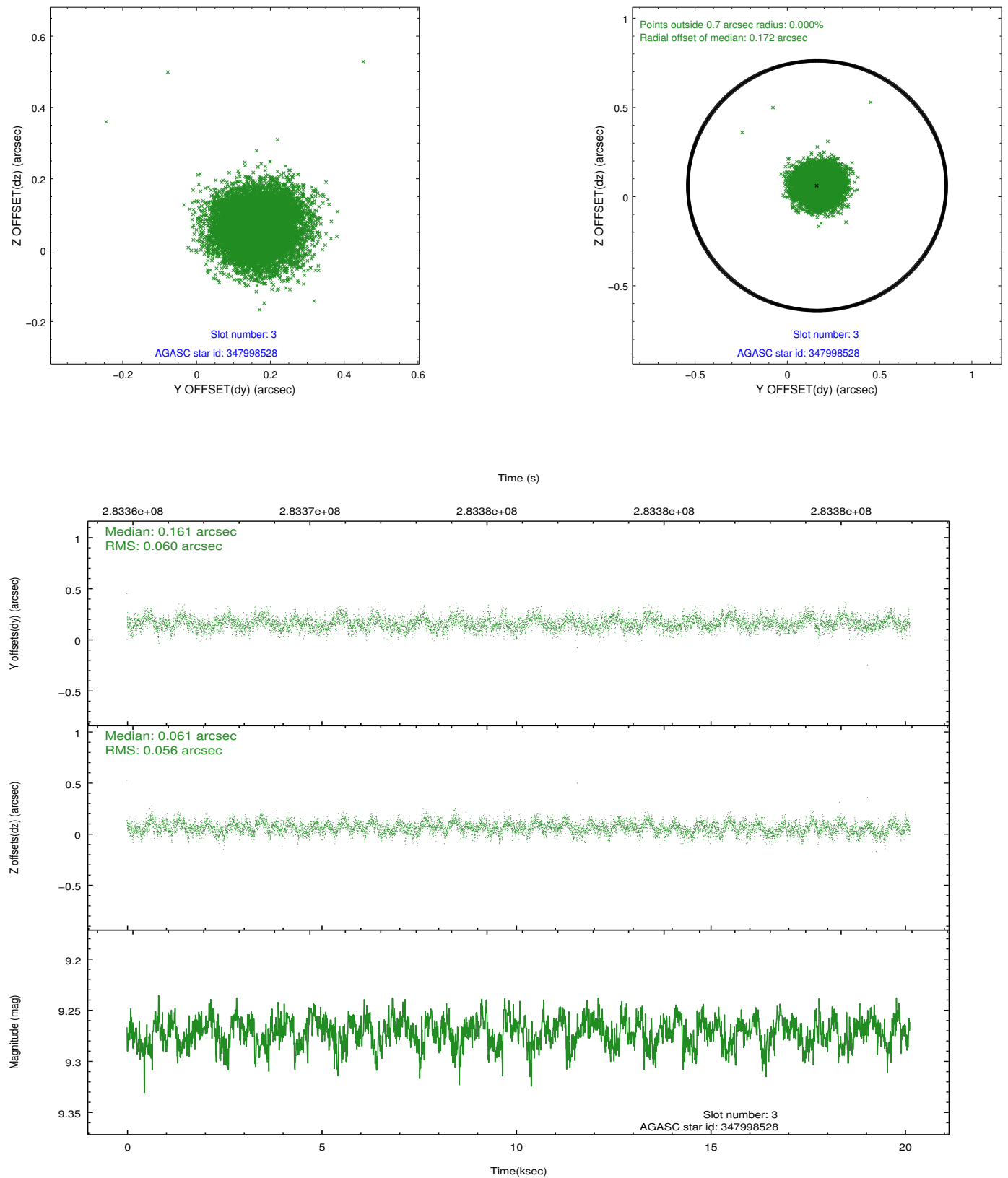


Slot Statistics

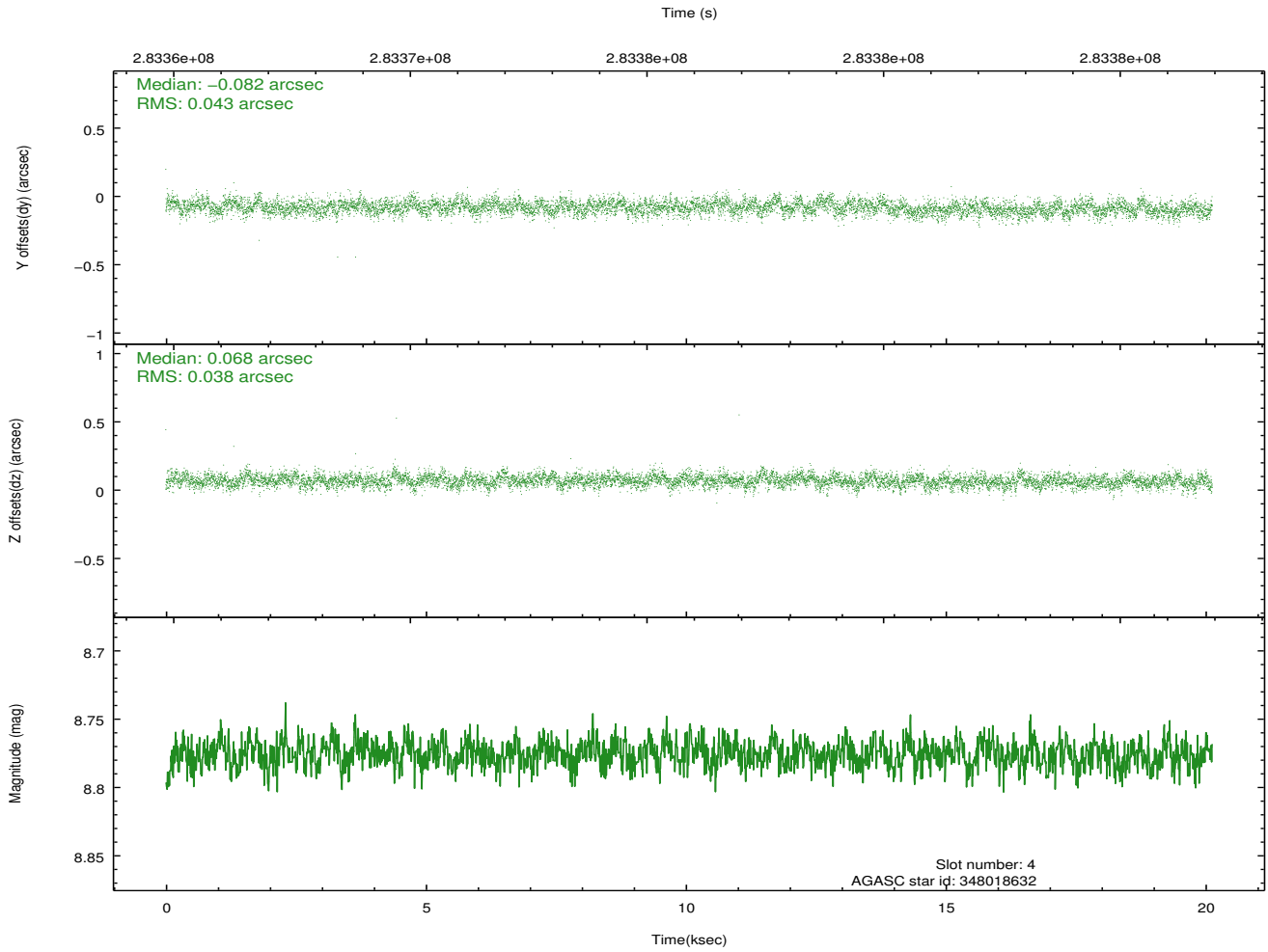
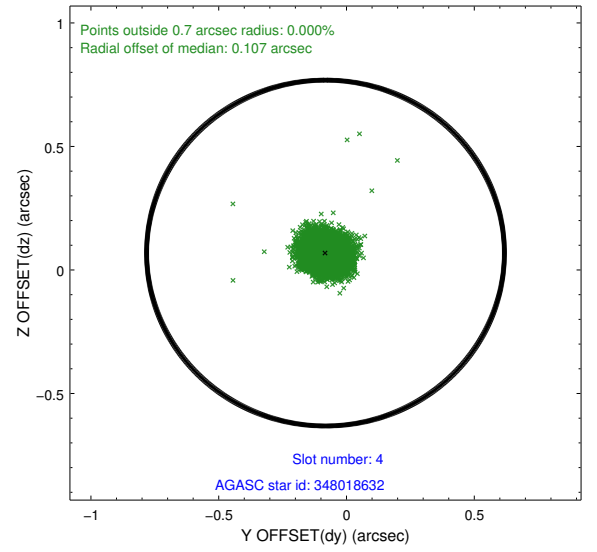
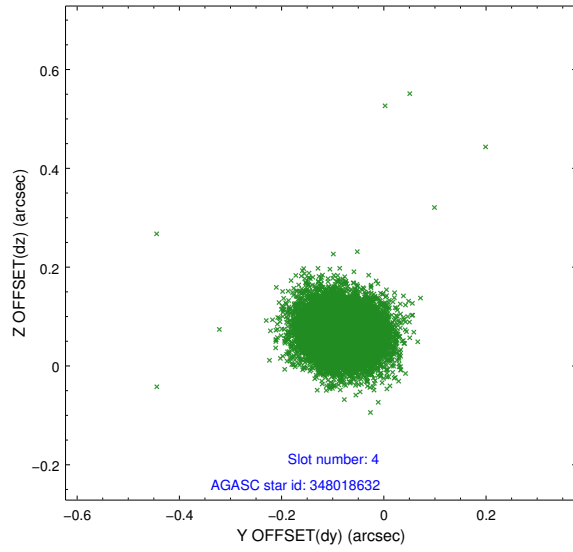
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.18	4909	0.066	0.057	0.025	0.032	0.000000	0.000000	930.86	-1895.65
1	FID	ACIS-S-5	7.22	4909	-0.167	0.051	0.011	0.021	0.000000	0.000000	-1818.30	1.61
2	FID	ACIS-S-6	7.40	4909	0.079	-0.096	0.032	0.046	0.000000	0.000000	396.18	645.67
3	GUIDE	347998528	9.27	9814	0.161	0.061	0.088	0.141	294.052060	30.163784	1721.72	-613.57
4	GUIDE	348018632	8.78	9815	-0.082	0.068	0.060	0.098	293.088798	30.882026	-2077.29	471.26
5	GUIDE	348027440	8.14	9818	0.123	-0.200	0.066	0.105	294.217472	30.325018	1939.44	130.58
6	GUIDE	348029112	6.92	9821	-0.153	0.035	0.062	0.108	293.228734	31.236085	-2218.62	1809.72
7	GUIDE	348001560	9.30	9807	-0.054	0.032	0.096	0.151	294.166467	30.754885	1135.93	1463.08

2.4 Star Slots

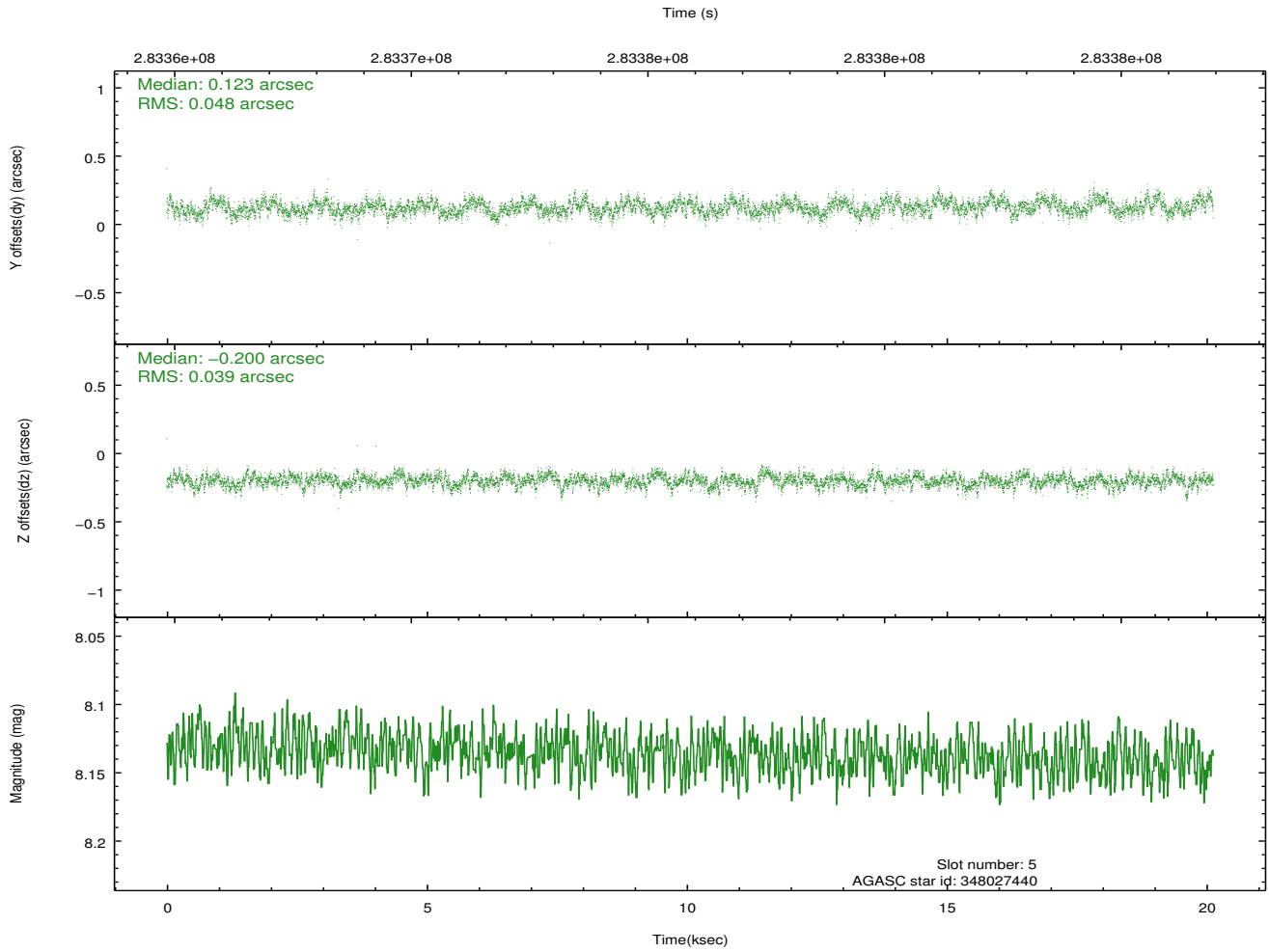
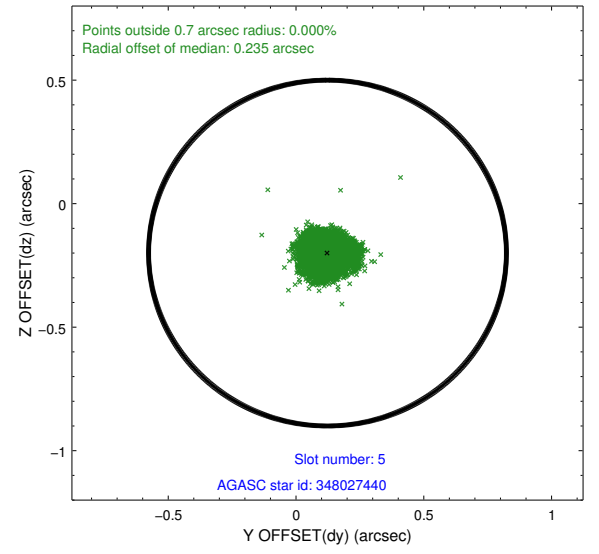
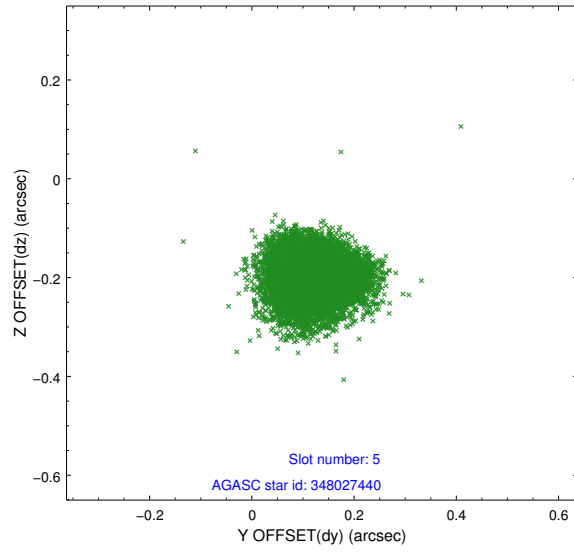
2.4.1 Slot 3



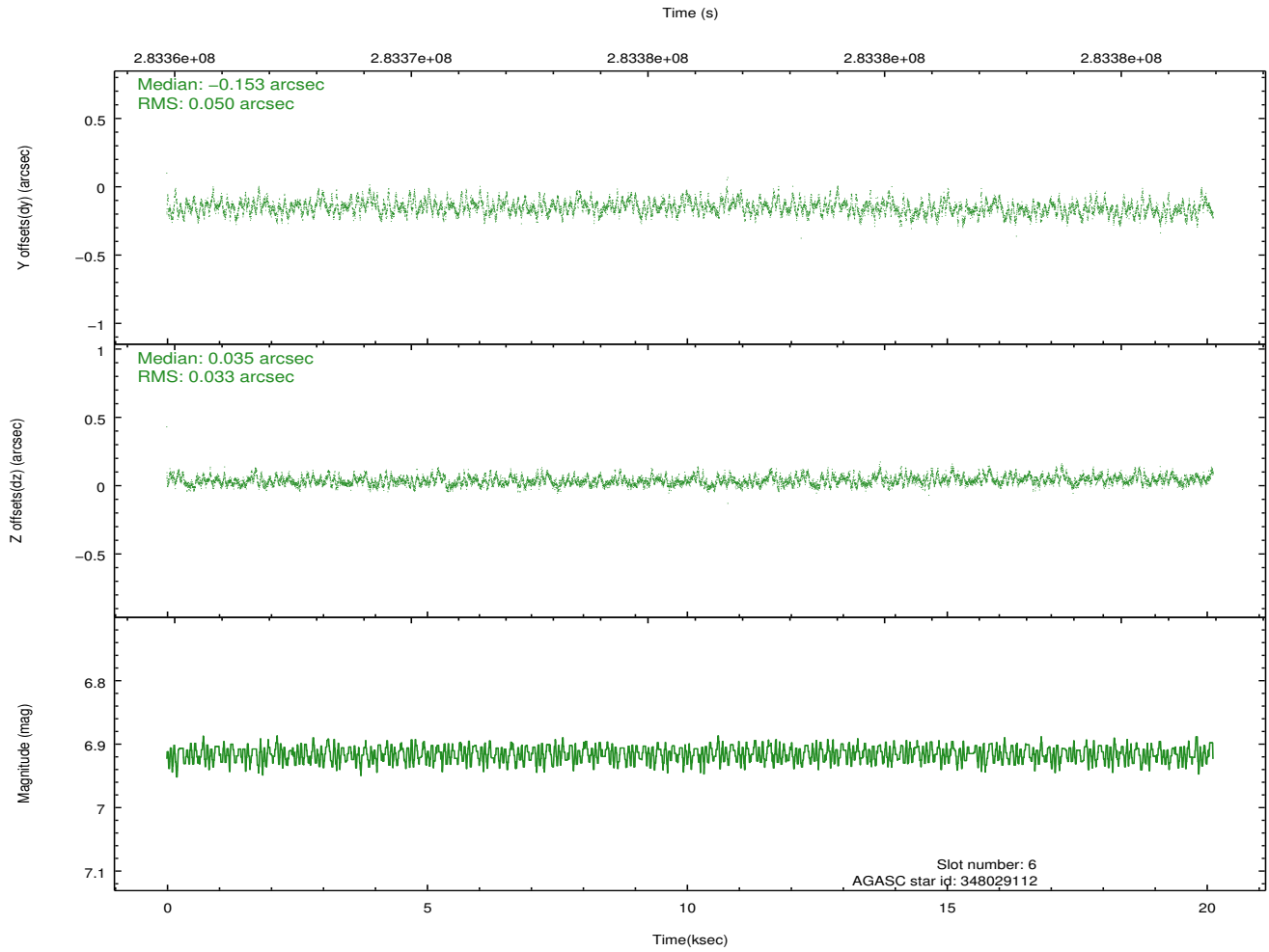
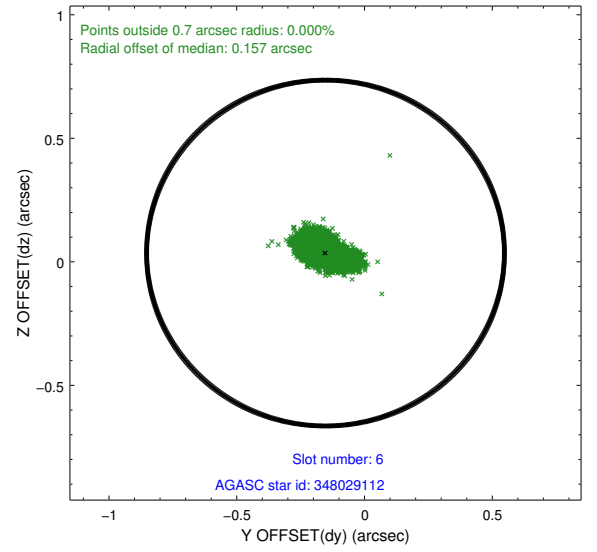
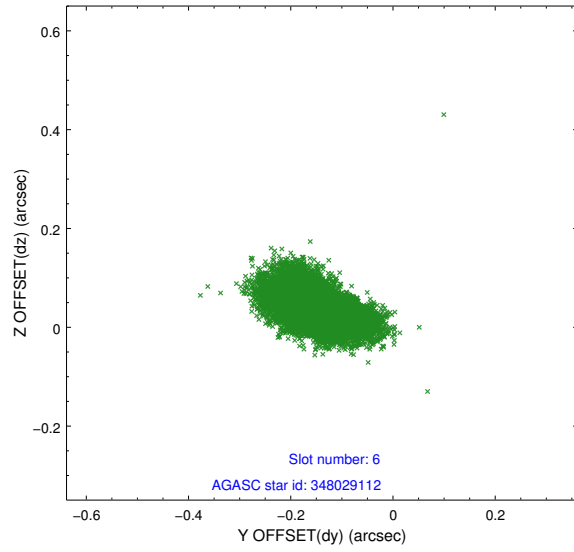
2.4.2 Slot 4



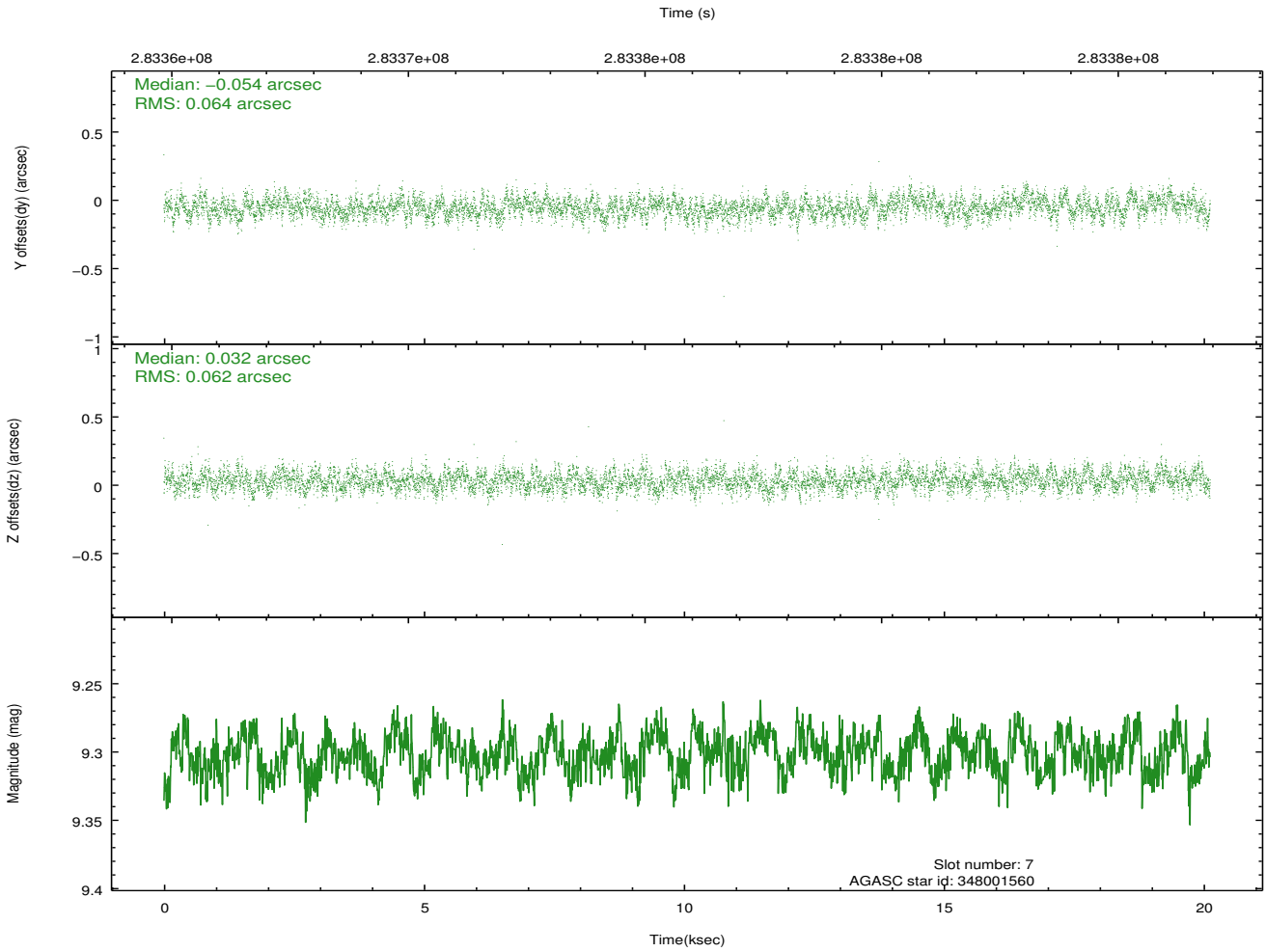
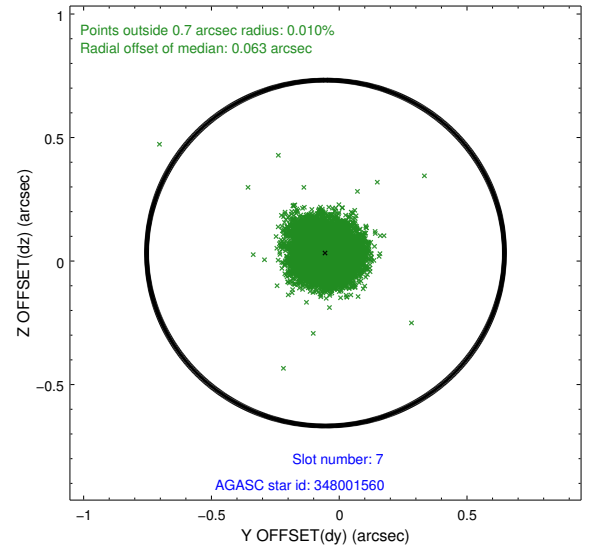
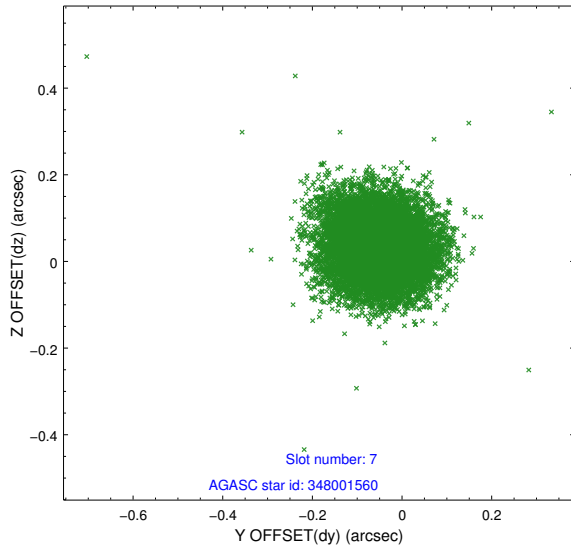
2.4.3 Slot 5



2.4.4 Slot 6

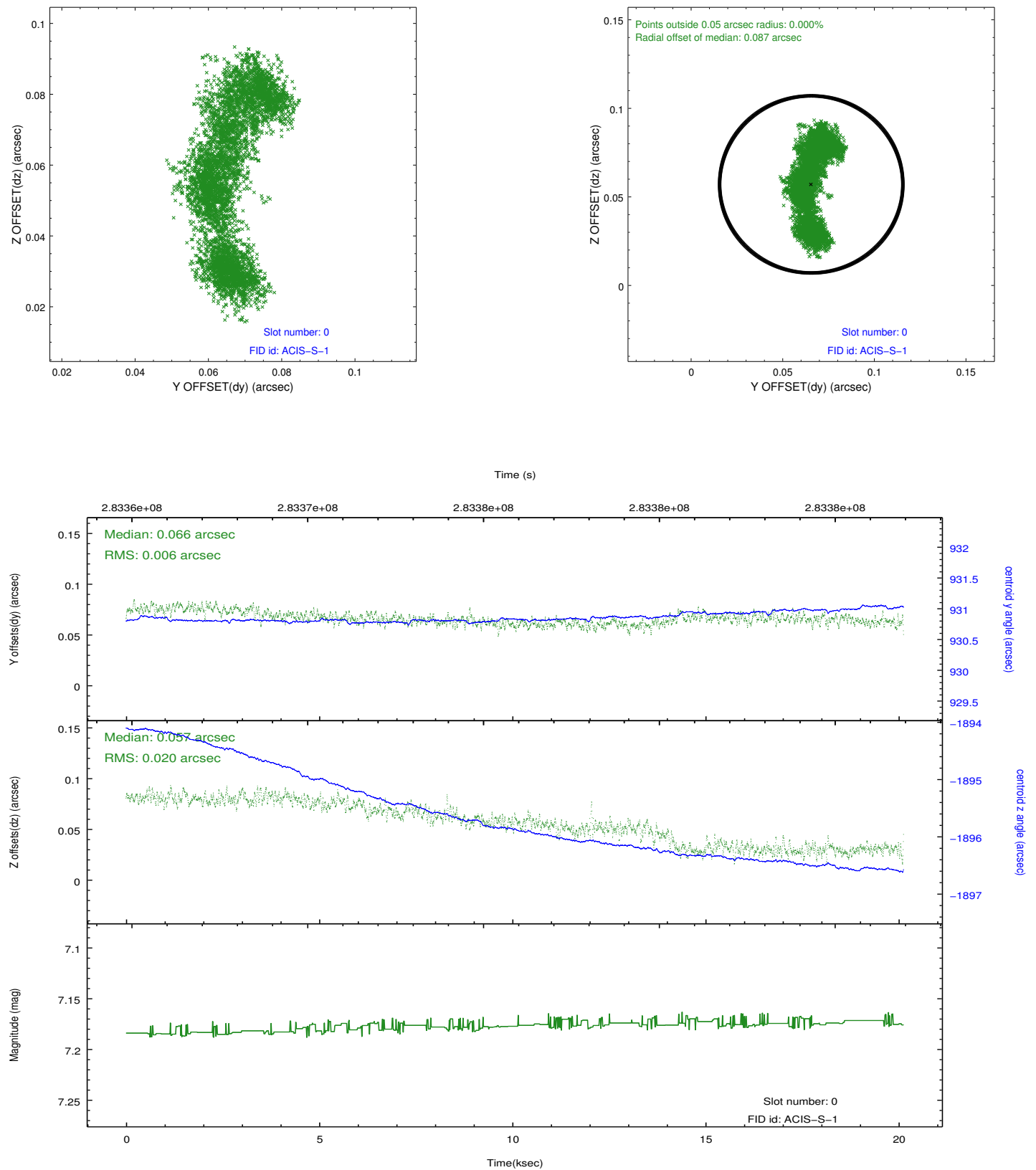


2.4.5 Slot 7

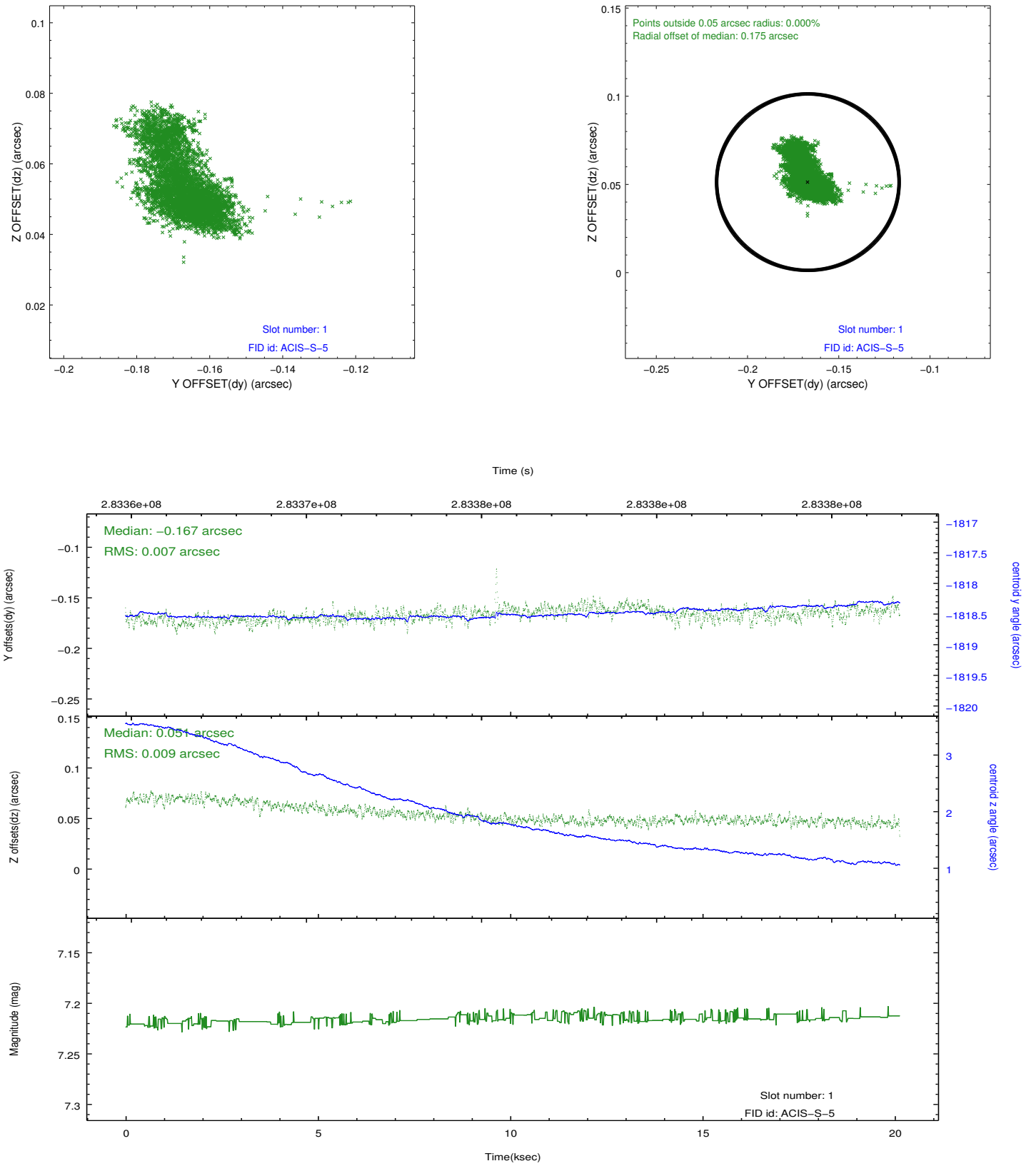


2.5 FID Slots

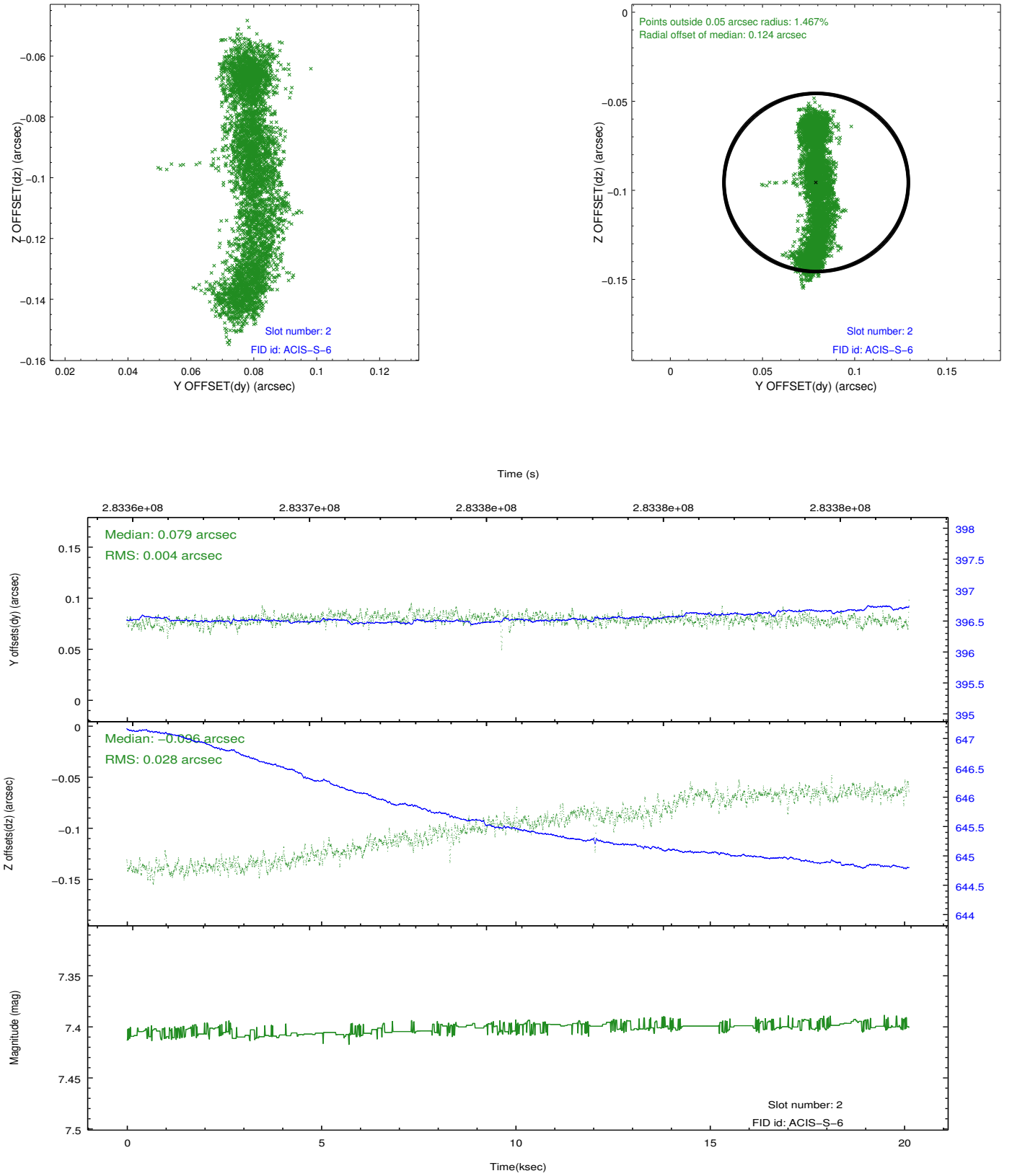
2.5.1 Slot 0



2.5.2 Slot 1

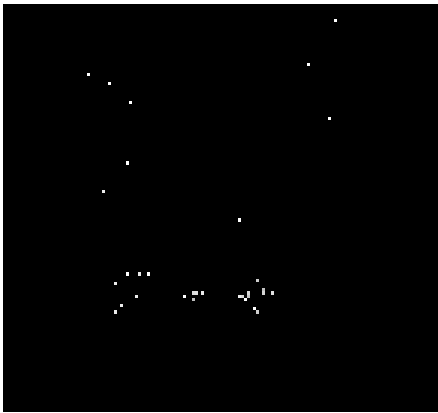


2.5.3 Slot 2

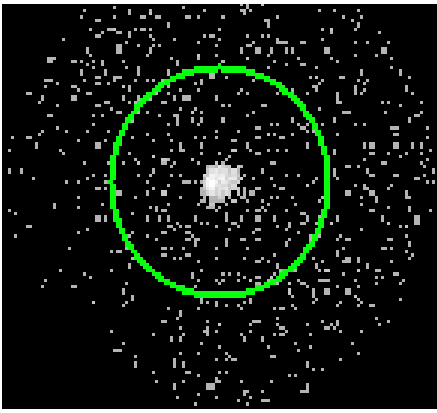


3 Gratings

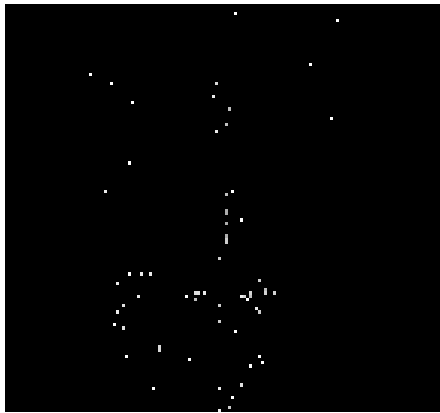
3.1 LETG Arm



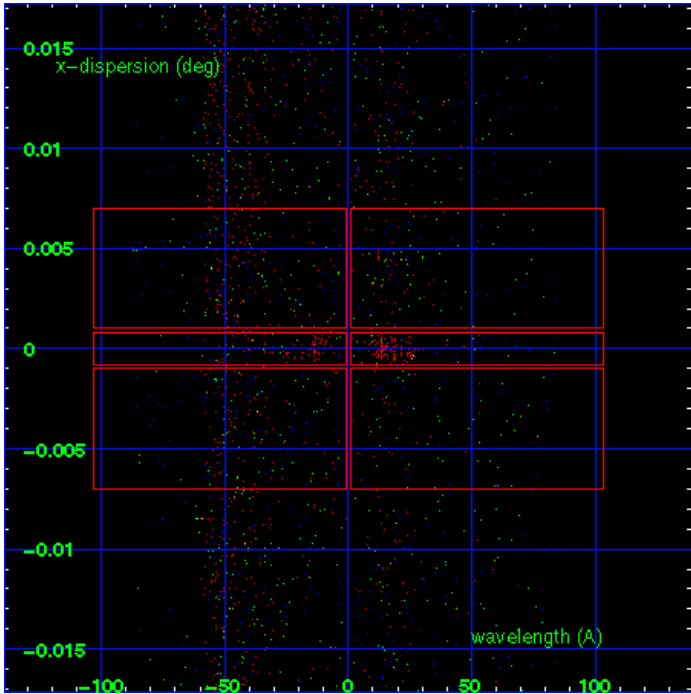
LETG Order Sort 123



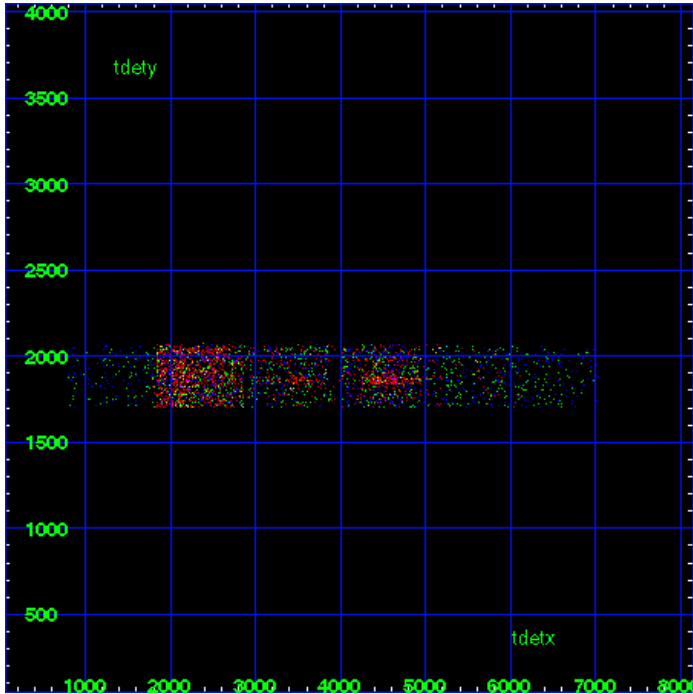
LETG Zero Order



LETG Order Sort ALL

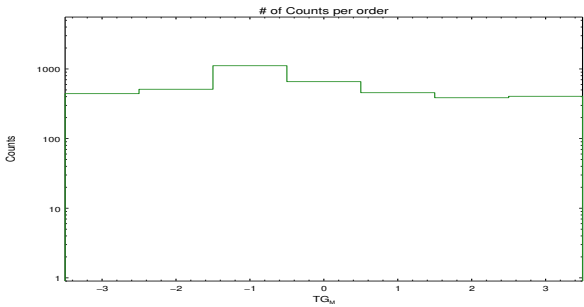


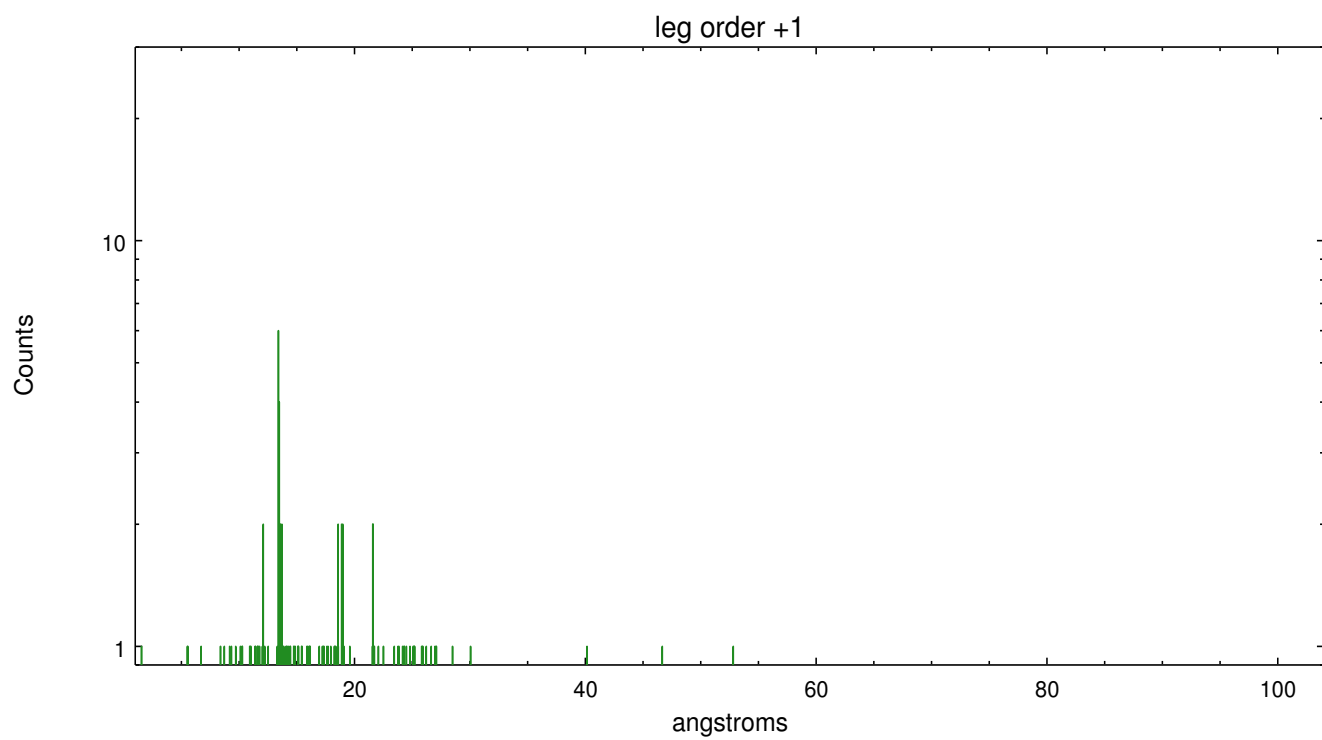
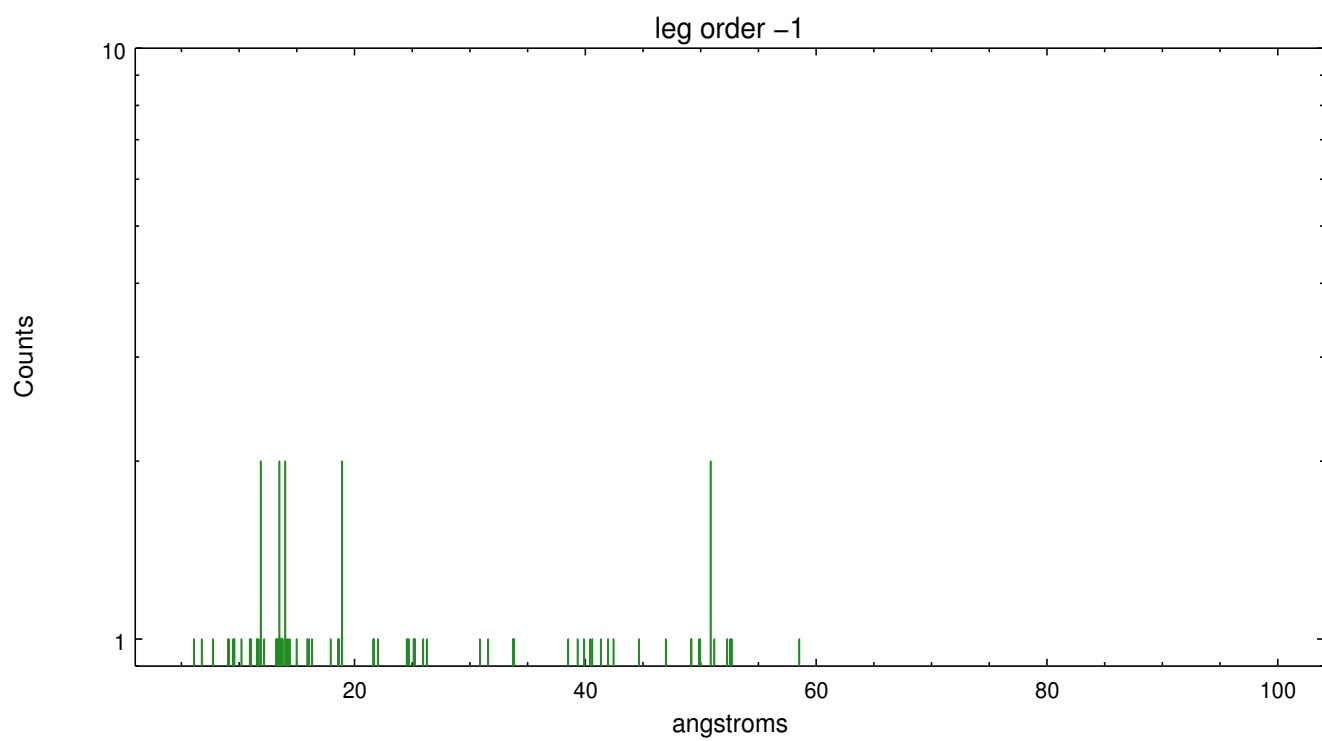
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	442	511	1113	657	456	386	405





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.04.20
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.1247999

A.2 Comments

Gain and CTI correction are not well calibrated on CCD_ID 5 (ACIS-S1). Default order sorting can clip some regions, particularly longward of 30A (first order). User-specified custom processing parameters may be required in `tg_resolve_events` (`osipfile=None`, `osort_lo`, `osort_hi ~0.5`) though this can allow more zeroth order background at short wavelengths. Extended source may require custom extraction parameters. Note: there are no grating rmfs (line profiles) for extended sources; line shapes will represent the source morphology.