

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 19854 - L2 Version 1
Chandra X-Ray Center

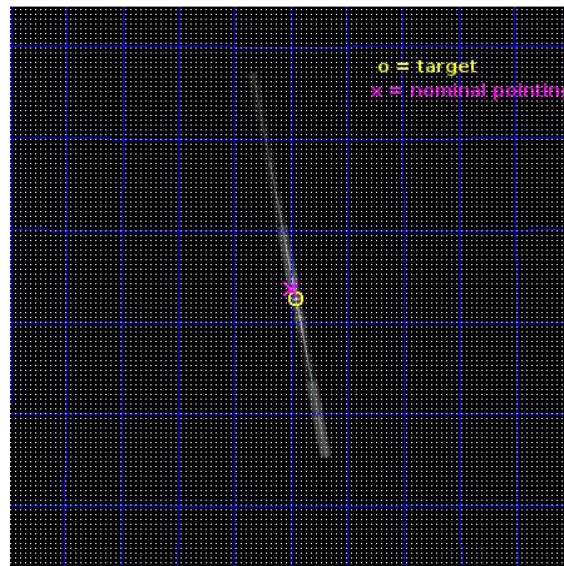
L2 Processing Date : Jun 26 2017

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1 Front

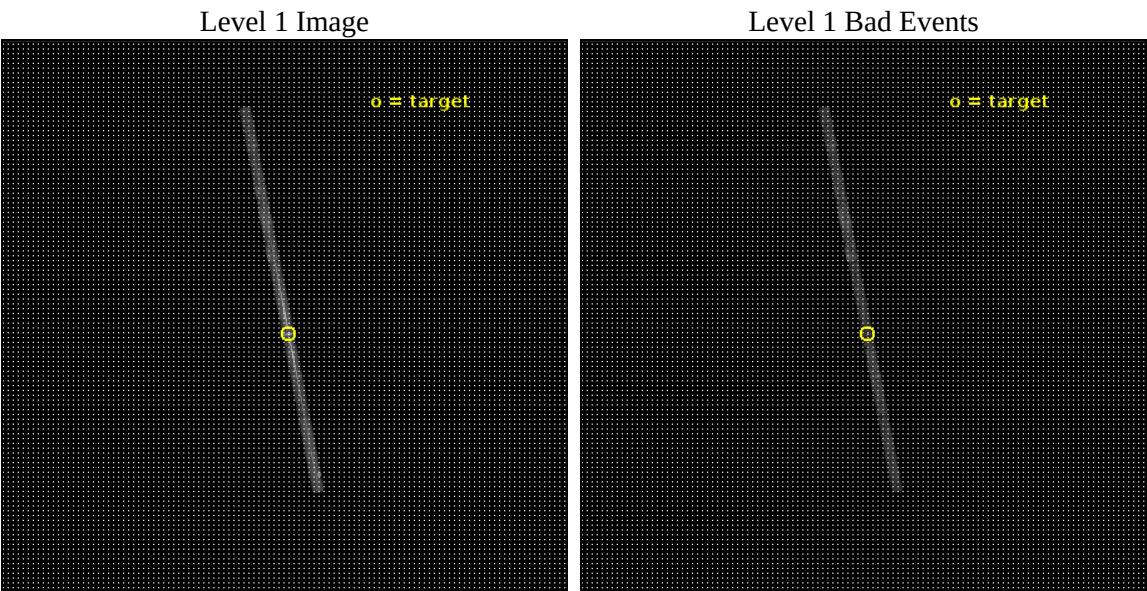
seq_num	790294	Sequence number
obs_id	19854	Observation id
title	AO-18 Calibration Observations of Mkn421	Proposal title
observer	CXC Calibration	Principal investigator
object	MKN421	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	166.113333	Observer's specified target RA [deg]
dec_targ	38.208806	Observer's specified target Dec [deg]
ra_nom	166.12317545099	Nominal RA [deg]
dec_nom	38.227292267293	Nominal Dec [deg]
roll_nom	259.57670232797	Nominal Roll [deg]
revision	1	Processing version of data
ontime	10077.662000418	Sum of GTIs [s]
livetime	9519.5446943382	Livetime [s]
ontime5	10077.620960474	Sum of GTIs [s]
ontime6	10077.579920411	Sum of GTIs [s]
ontime7	10077.662000418	Sum of GTIs [s]
ontime8	10077.538880467	Sum of GTIs [s]
ontime9	10077.497840405	Sum of GTIs [s]
l2events	117654	Number of level 2 events



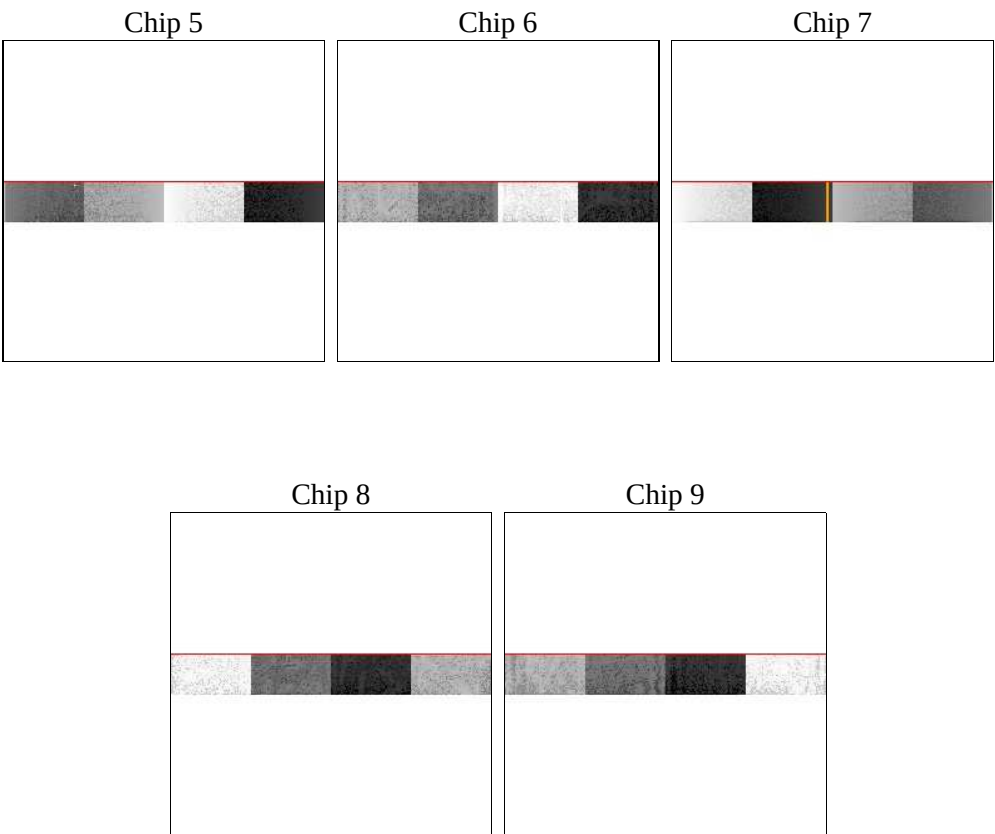
2 OBI

2.1 OBI

2.1.1 Images



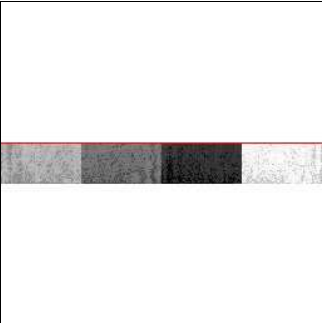
2.1.2 Bias



Chip 8



Chip 9



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	10077.662000418	Sum of GTIs [s]
caldsver	4.7.5	 	ontime5	10077.620960474	Sum of GTIs [s]
date	2017-06-26T17:04:01	Date and time of file creation	ontime6	10077.579920411	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	10077.662000418	Sum of GTIs [s]
			ontime8	10077.538880467	Sum of GTIs [s]
			ontime9	10077.497840405	Sum of GTIs [s]
			l1events	183217	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			zo_pos	(4150.35, 3961.71)	src1a sky pixel position
					src1a sky pixel position via

2.1.4 Events

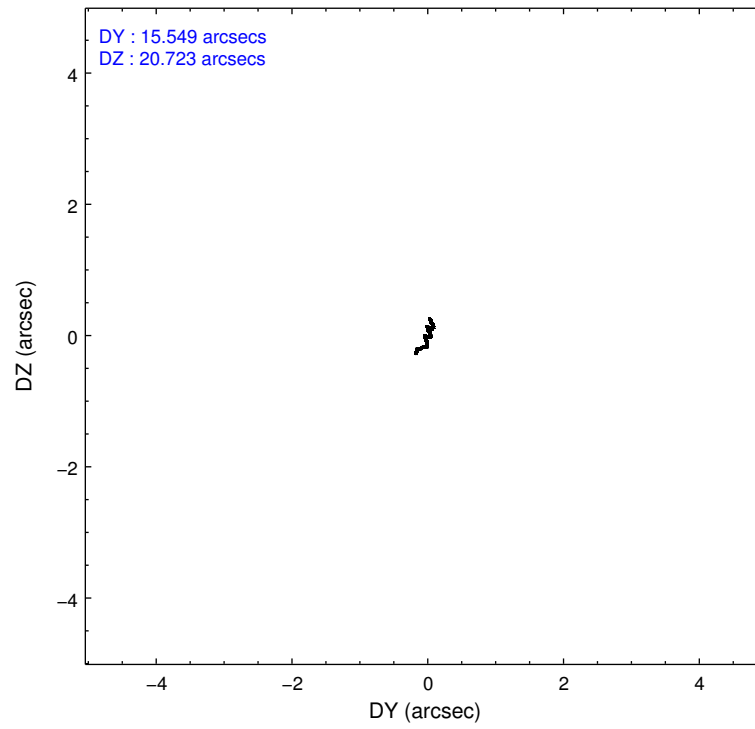
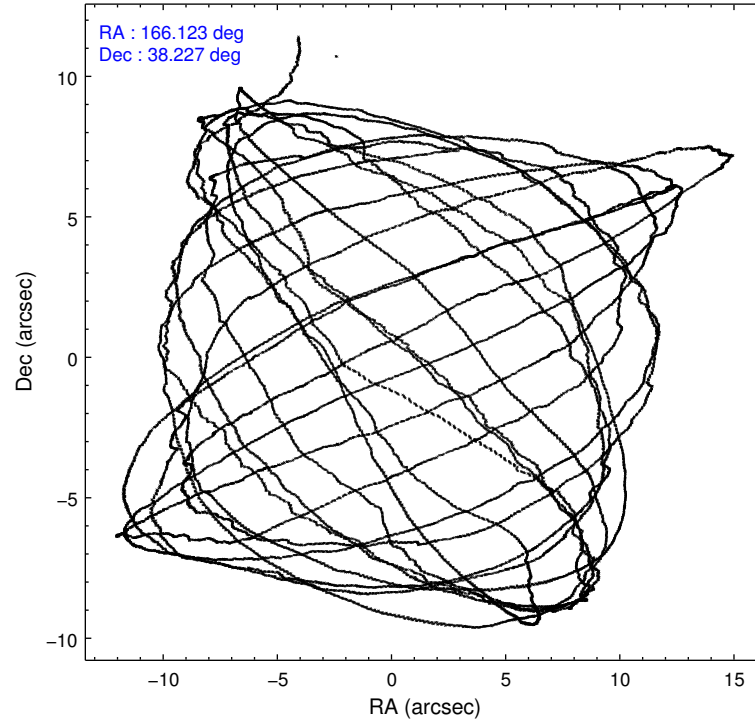
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	22589	44627	84739	19454	11808
rejected events	8024	10231	17240	12711	9613
rejected %	35%	22%	20%	65%	81%

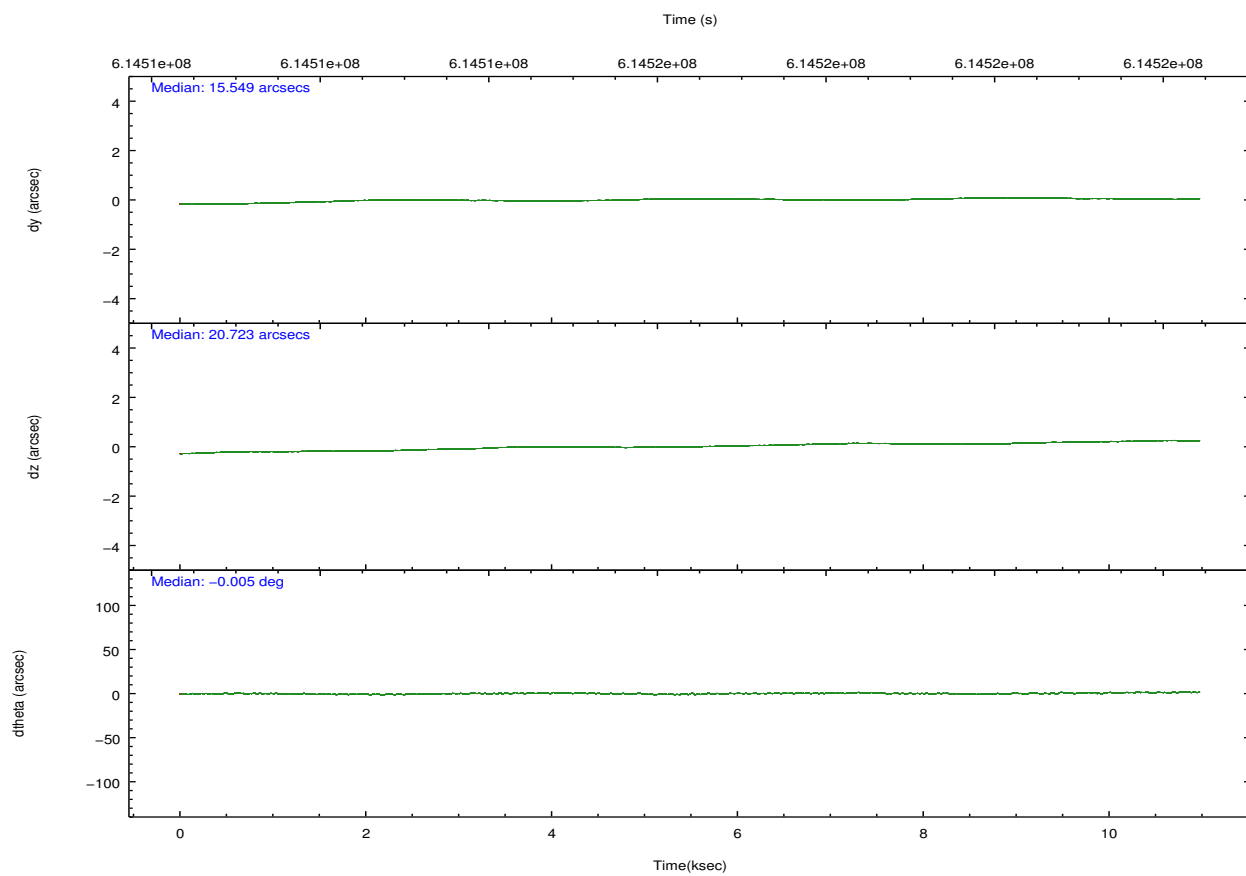
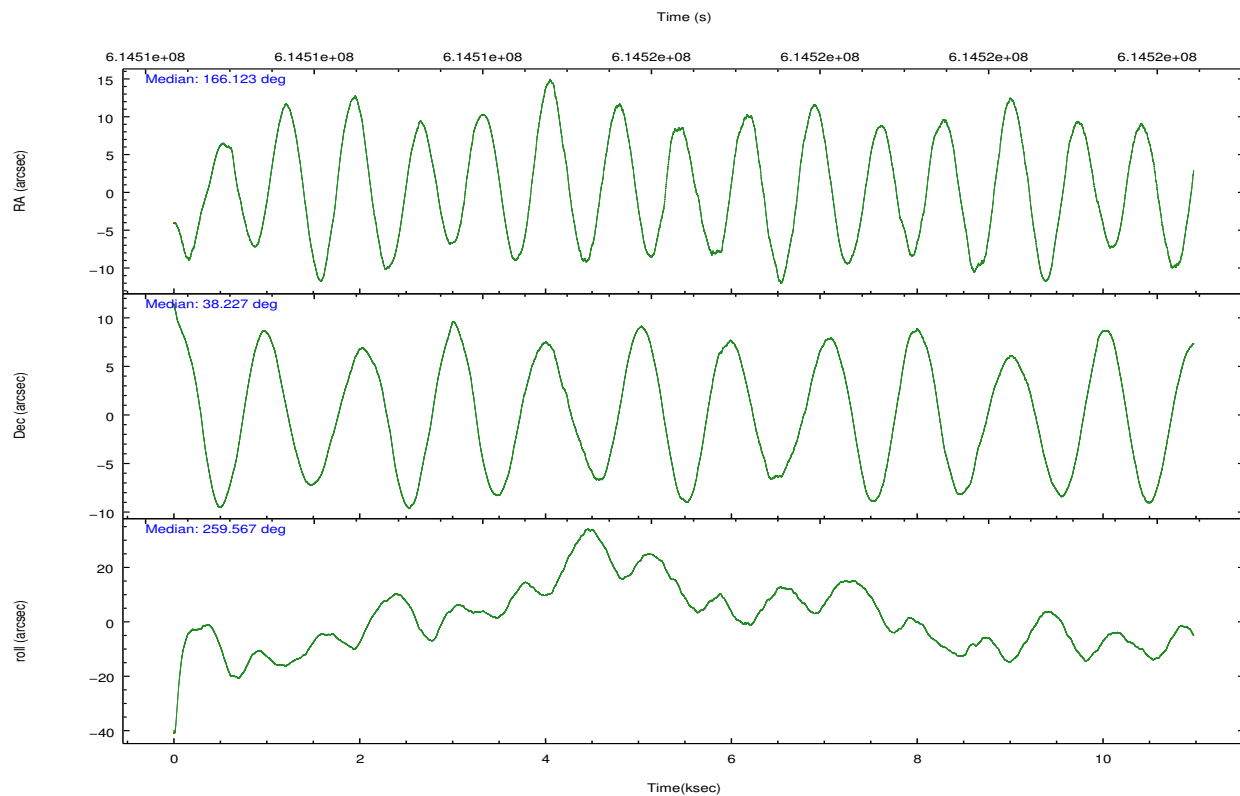
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	5231	27470	18694	3264	1114
	23%	61%	22%	16%	9%
grade 1 events	69	88	700	10	6
	0%	0%	0%	0%	0%
grade 2 events	3579	3582	16566	1064	325
	15%	8%	19%	5%	2%
grade 3 events	776	1233	7489	565	247
	3%	2%	8%	2%	2%
grade 4 events	846	1203	7221	523	253
	3%	2%	8%	2%	2%
grade 5 events	1361	523	4147	695	485
	6%	1%	4%	3%	4%
grade 6 events	4137	917	17532	1327	256
	18%	2%	20%	6%	2%
grade 7 events	6590	9611	12390	12006	9122
	29%	21%	14%	61%	77%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-56789	ACIS-56789	Obspar file type	PREDICTED	ACTUAL
Grating	LETG	LETG	Obspar update status	OVERRIDE	OVERRIDE
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	166.111115	166.1231754509883	Subarray requested	1/8	1/8
[deg] Pointing Dec	38.253020	38.22729226729276	Subarray start row	448	448
[deg] Pointing Roll	259.427595	259.5767023279682	Subarray row count	128	128
[mm] SIM focus pos	-0.68282252473119	-0.68282252473119	Alternating exposures requested	N	N
[mm] SIM defocus	0.001444942264670734	0.001444942264670734	[s] Primary exposure time	0.7	0.7
[mm] SIM translation stage pos	-190.1425803652	-190.1425803652			
[mm] SIM translation stage offset	0.01005726123278805	0.01005726123278805			
[s] Observation start time (MET)	614510354.590417	614510354.590417			
Observation start date	2017-06-22T09:19:14	2017-06-22T09:19:14			
[s] Observation end time (MET)	614522051.891098	614522051.891098			
Observation end date	2017-06-22T12:34:11	2017-06-22T12:34:11			
Read mode	TIMED	TIMED			

2.3 Aspect



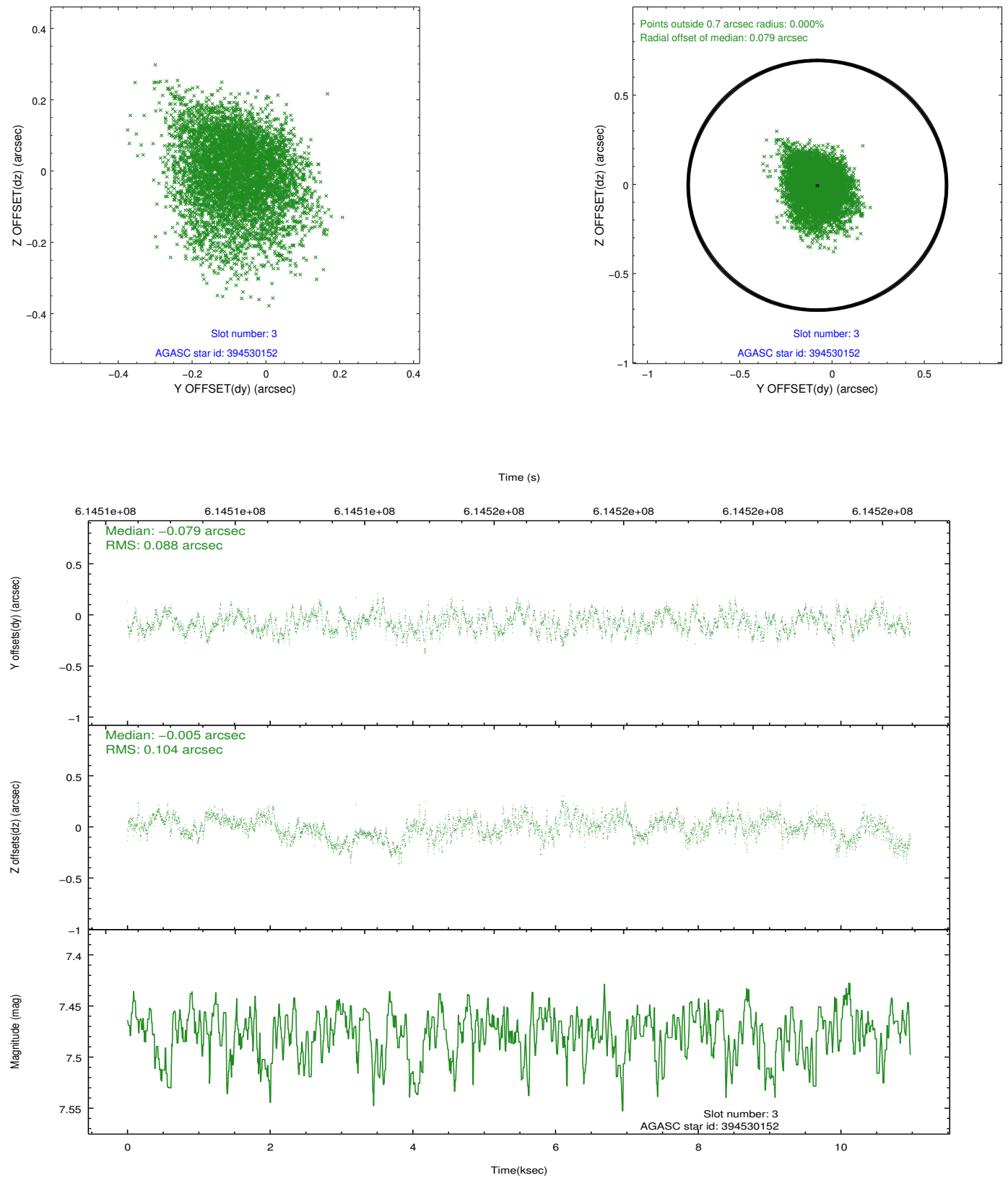


Slot Statistics

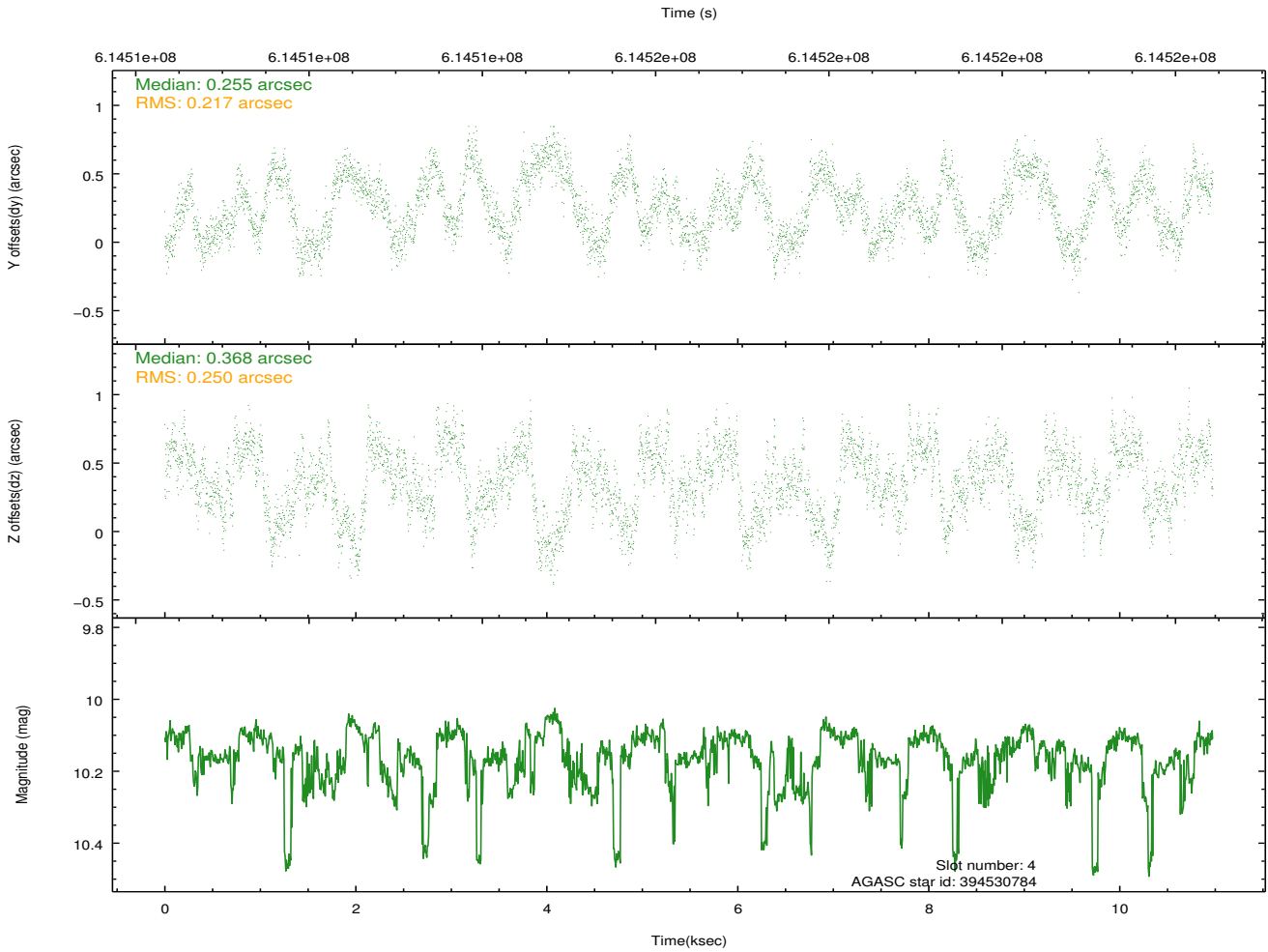
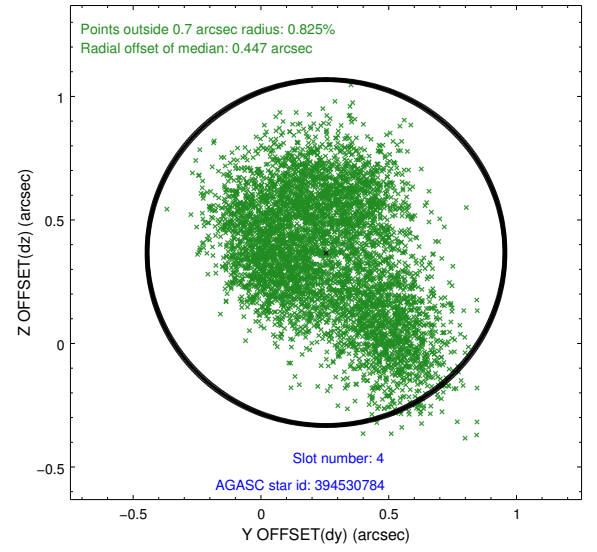
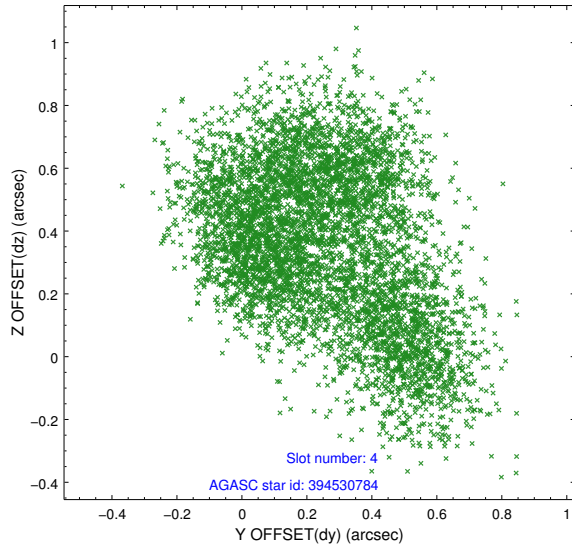
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.02	2678	-0.229	-0.066	0.008	0.013	0.000000	0.000000	-768.72	-1742.29
1	FID		ACIS-S-4	7.14	2678	0.475	0.128	0.007	0.014	0.000000	0.000000	2145.01	165.94
2	FID		ACIS-S-5	7.13	2677	-0.278	-0.054	0.007	0.013	0.000000	0.000000	-1821.05	159.90
3	GUIDE	used	394530152	7.48	5355	-0.079	-0.005	0.144	0.235	166.075805	38.868252	-2158.78	-503.39
4	GUIDE	used	394530784	10.15	5336	0.255	0.368	0.352	0.560	165.569172	38.418674	-309.74	-1611.98
5	GUIDE	used	394533848	8.70	5354	0.061	-0.025	0.120	0.212	166.382906	38.276007	-223.17	734.02
6	GUIDE	used	394543960	9.74	5350	0.047	-0.302	0.194	0.318	165.802757	37.787371	1807.82	-554.31
7	GUIDE	used	394546712	6.58	5353	-0.283	-0.021	0.140	0.217	166.451462	38.394357	-677.35	849.49

2.4 Star Slots

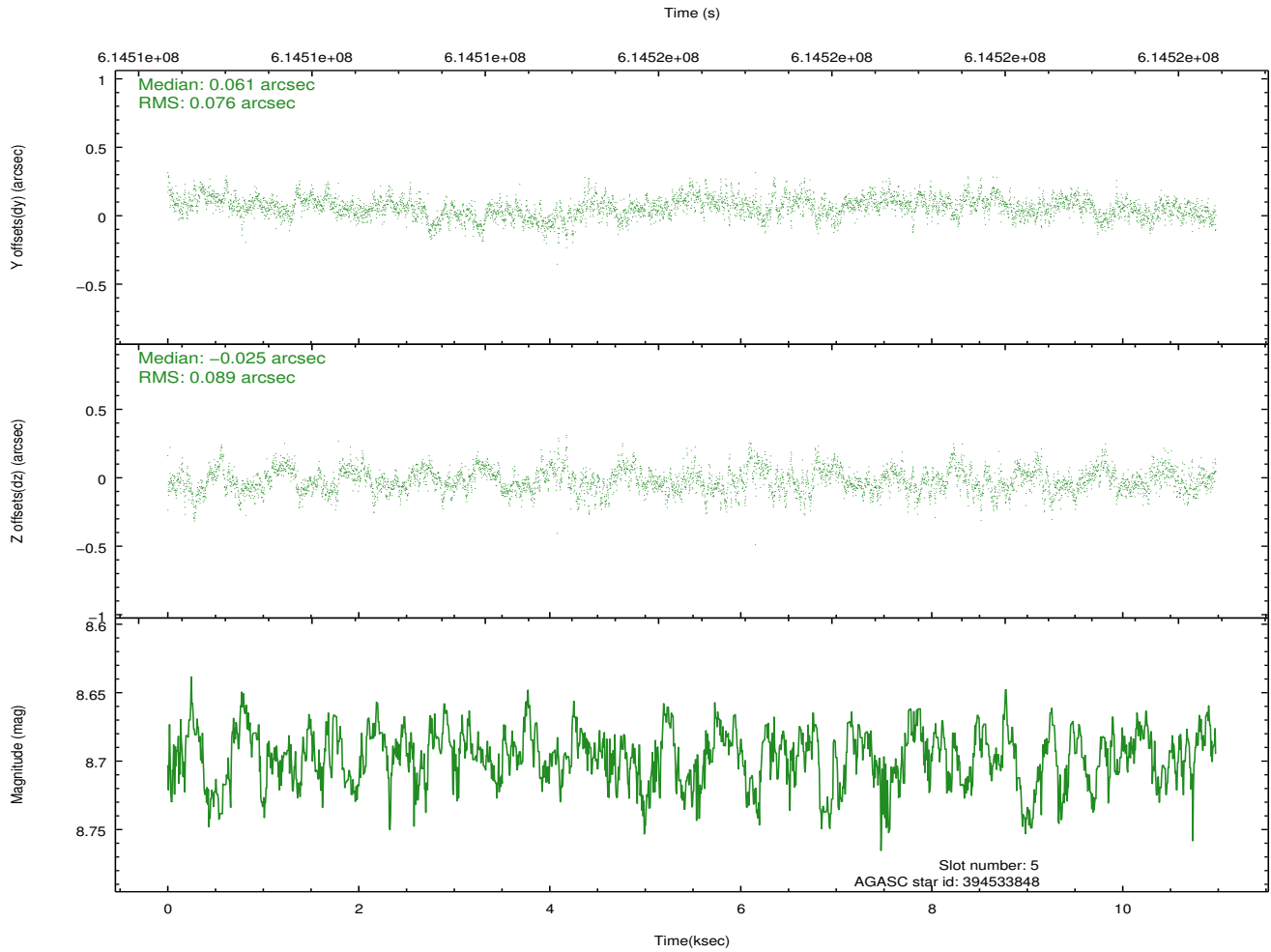
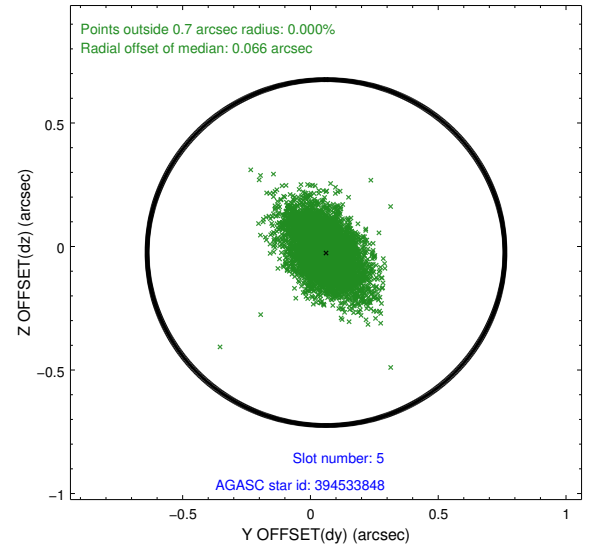
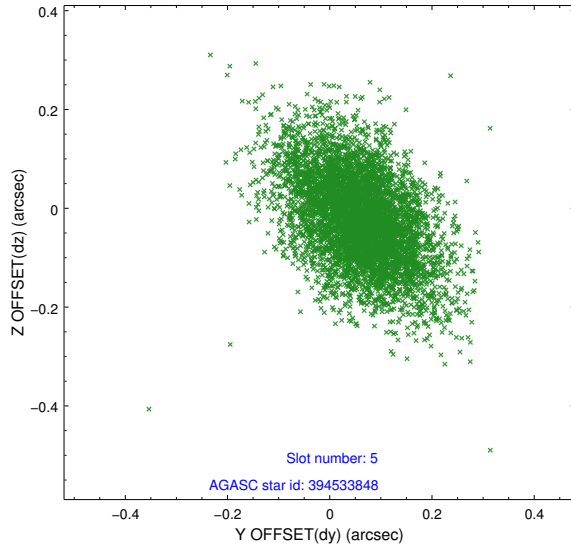
2.4.1 Slot 3



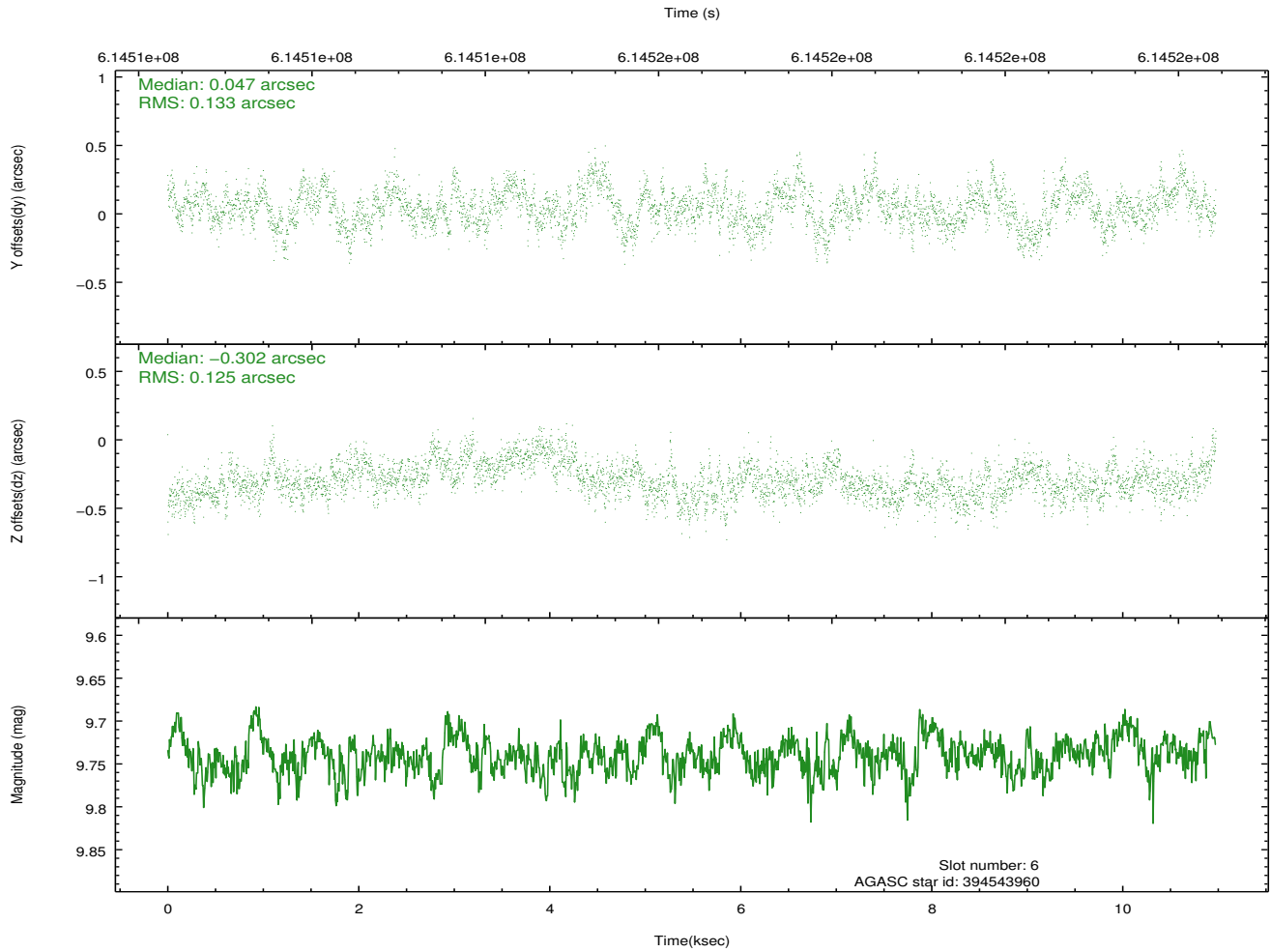
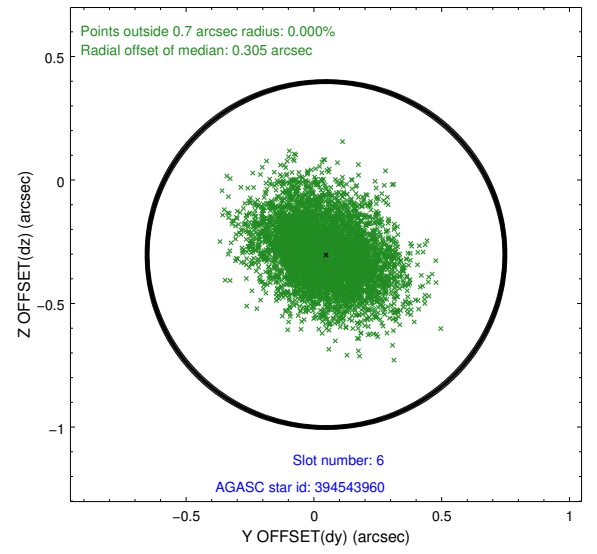
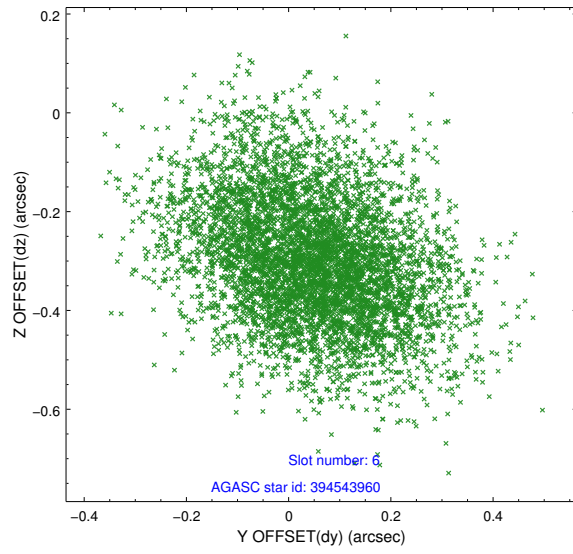
2.4.2 Slot 4



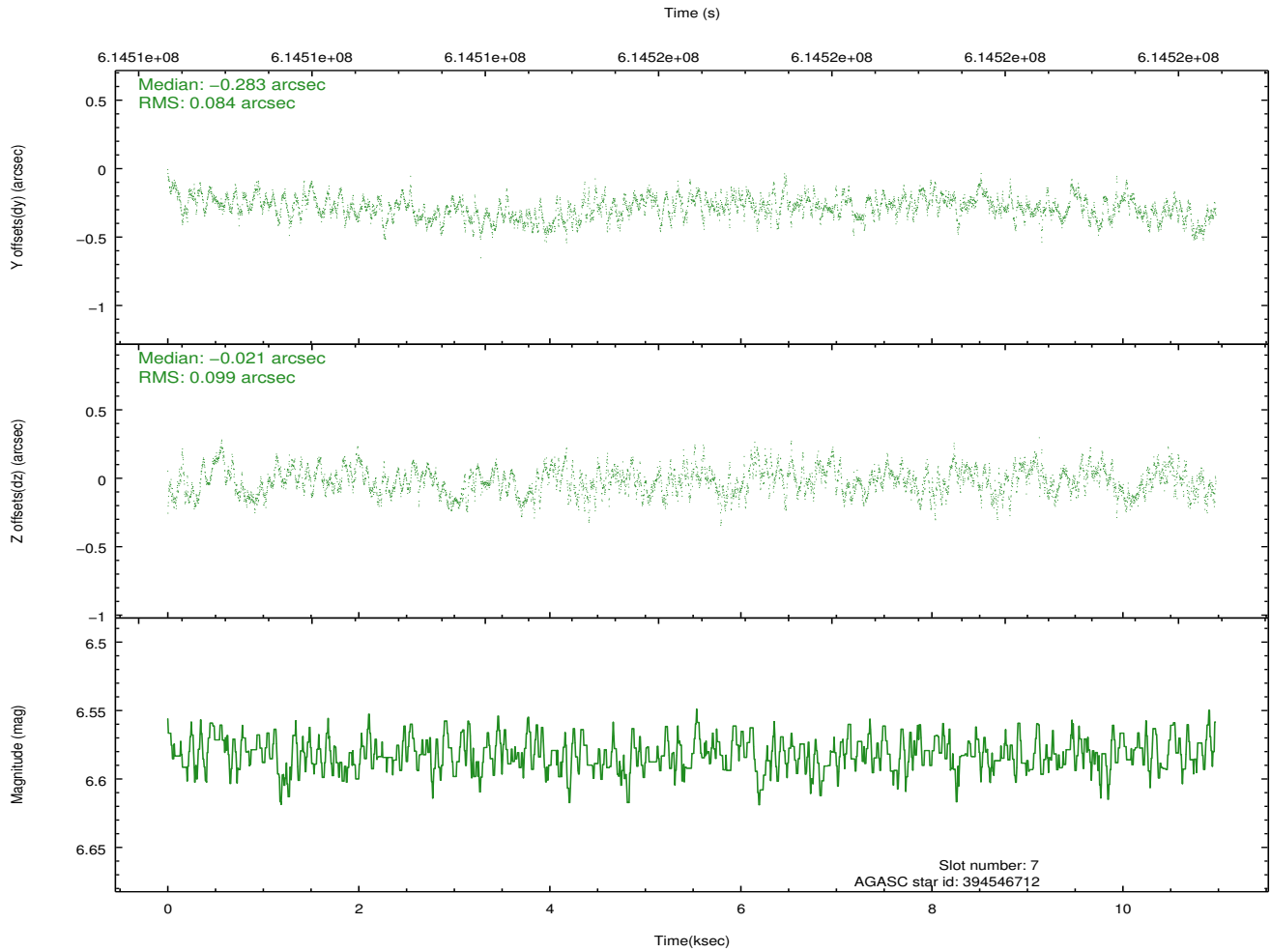
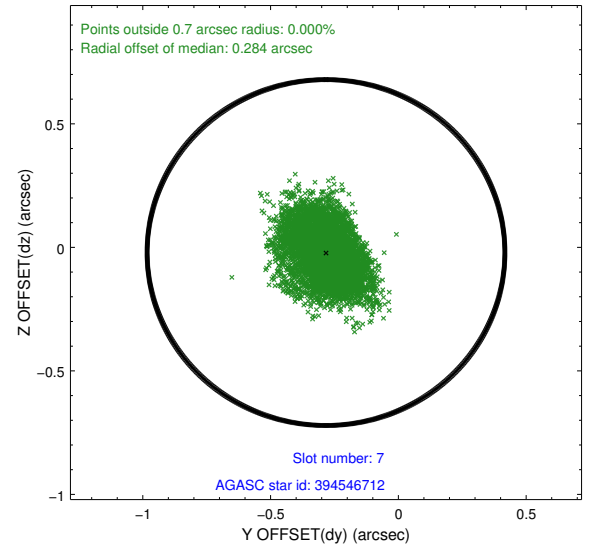
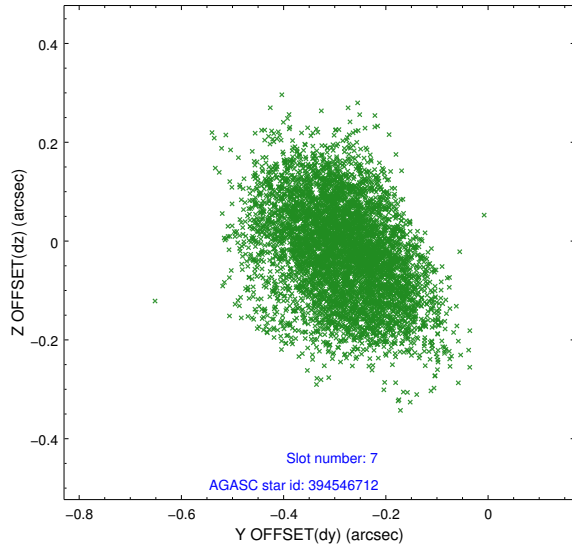
2.4.3 Slot 5



2.4.4 Slot 6

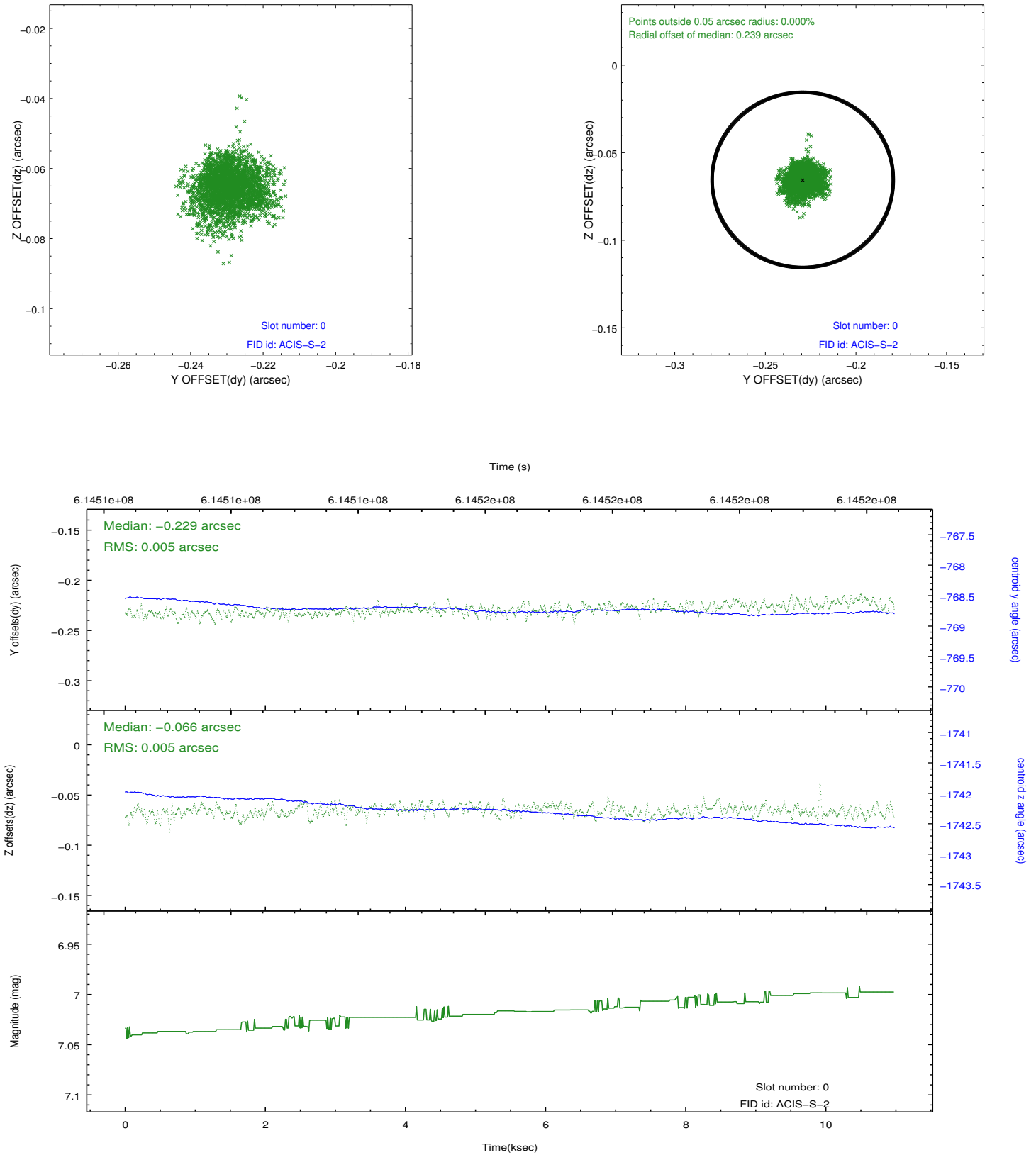


2.4.5 Slot 7

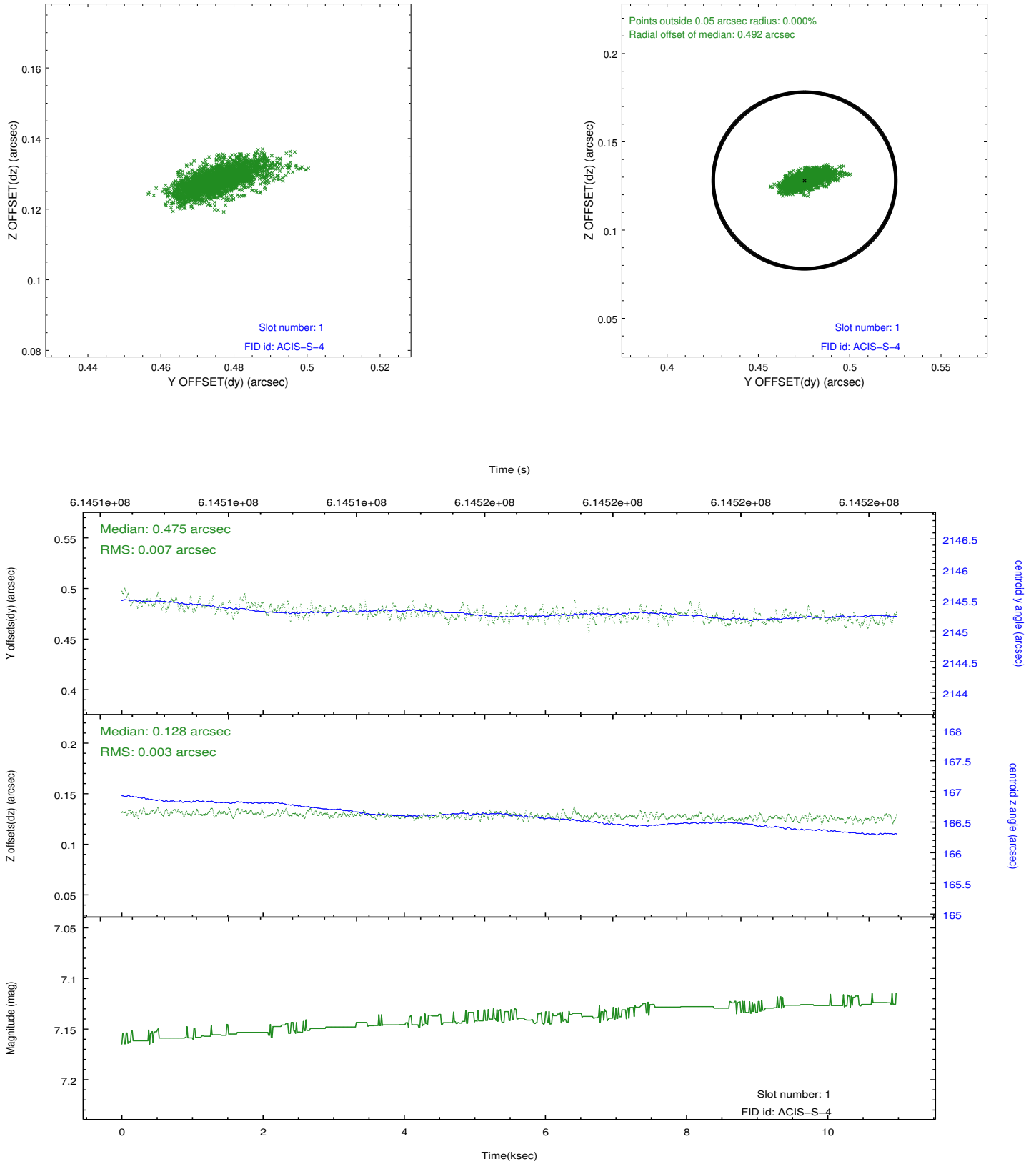


2.5 FID Slots

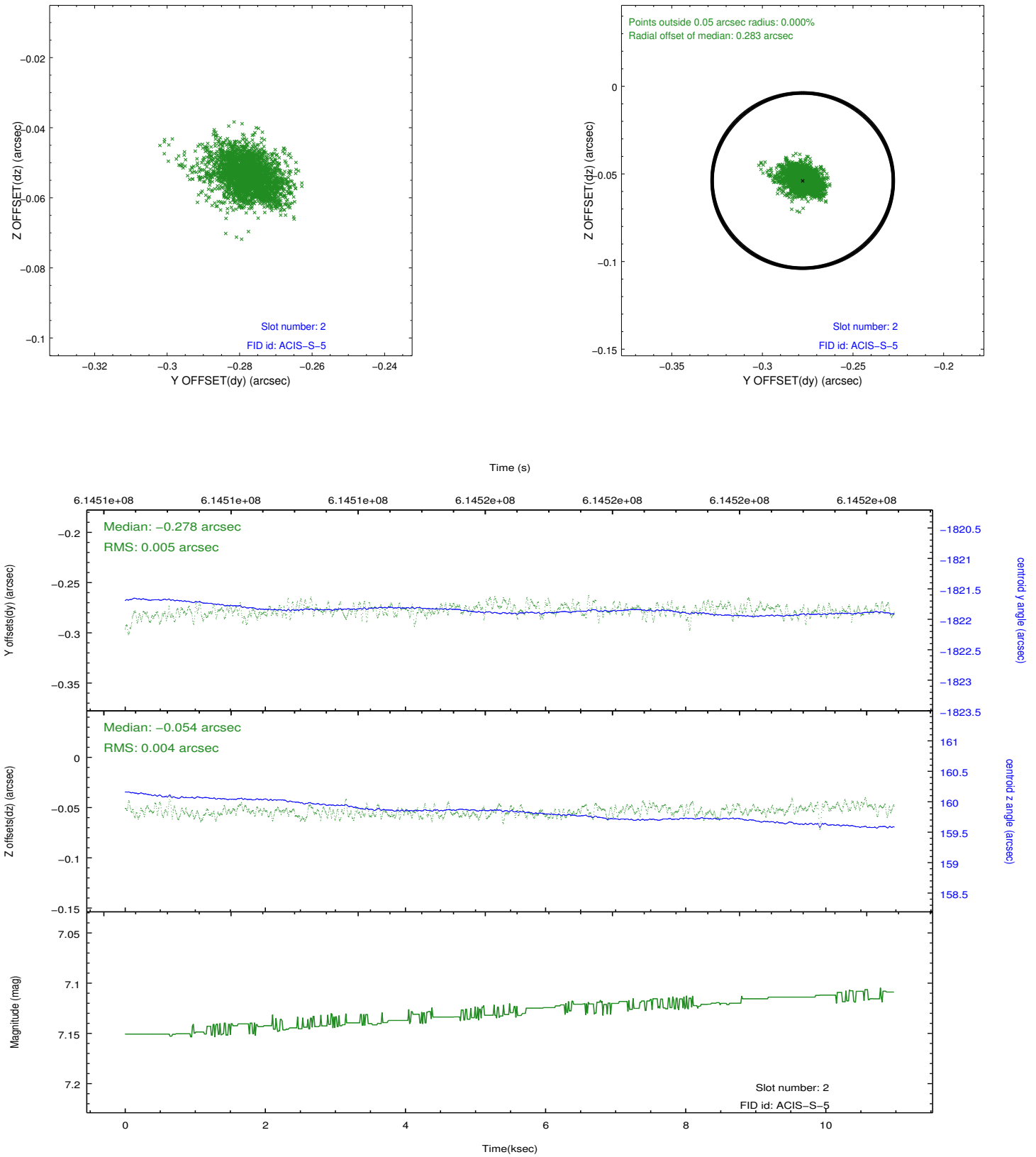
2.5.1 Slot 0



2.5.2 Slot 1

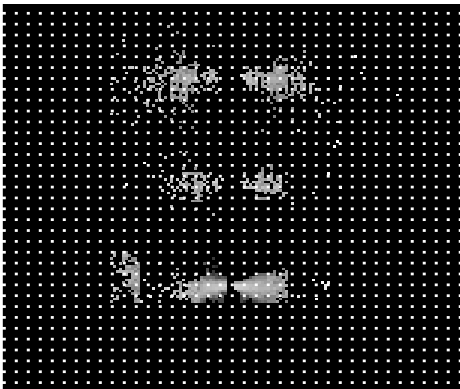


2.5.3 Slot 2

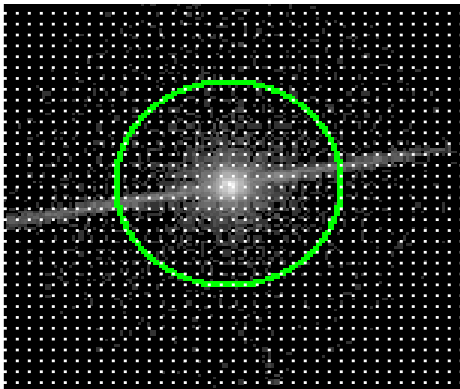


3 Gratings

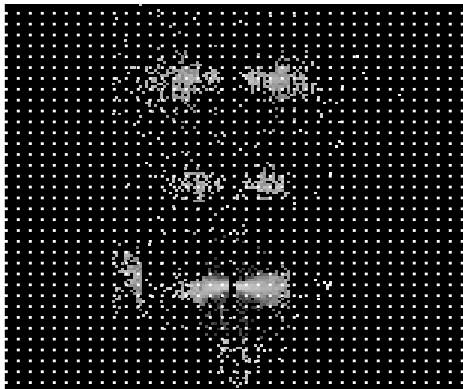
3.1 LETG Arm



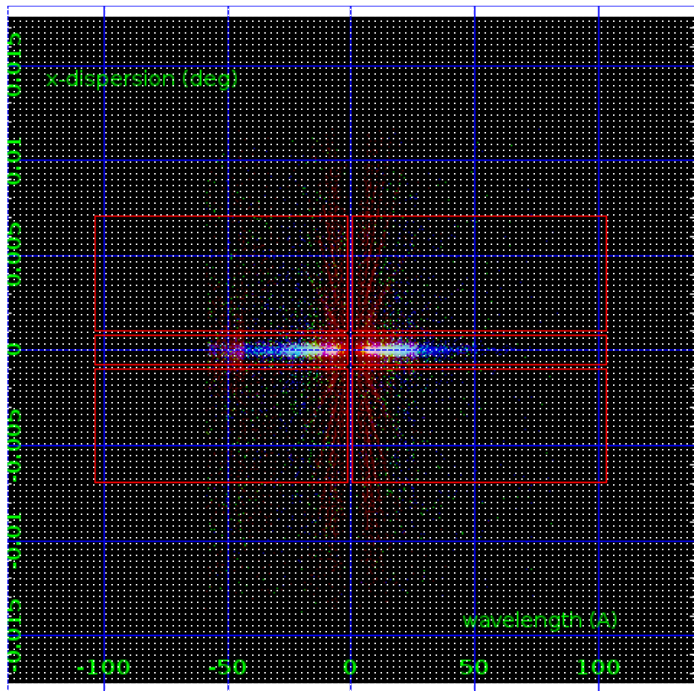
LETG Order Sort 123



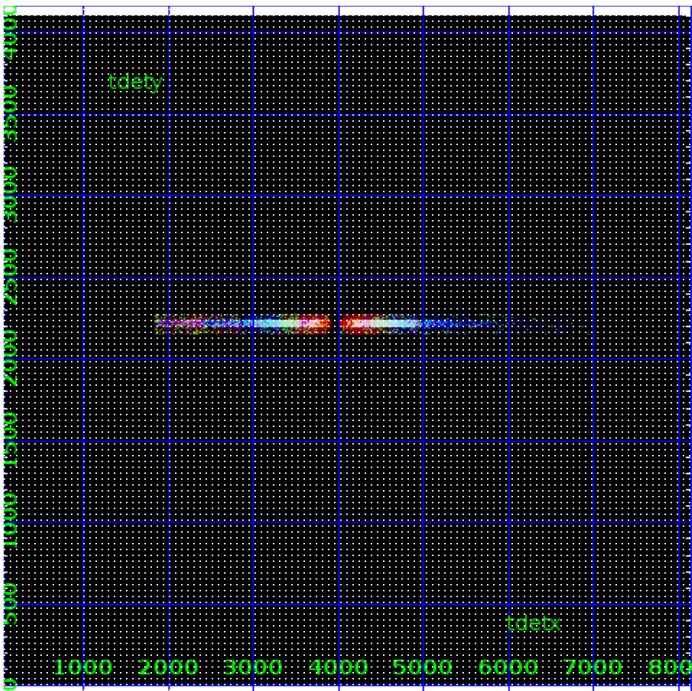
LETG Zero Order



LETG Order Sort ALL

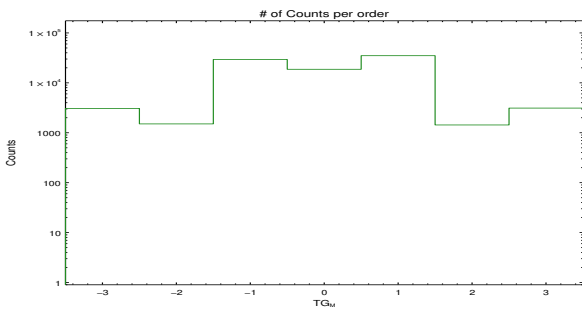


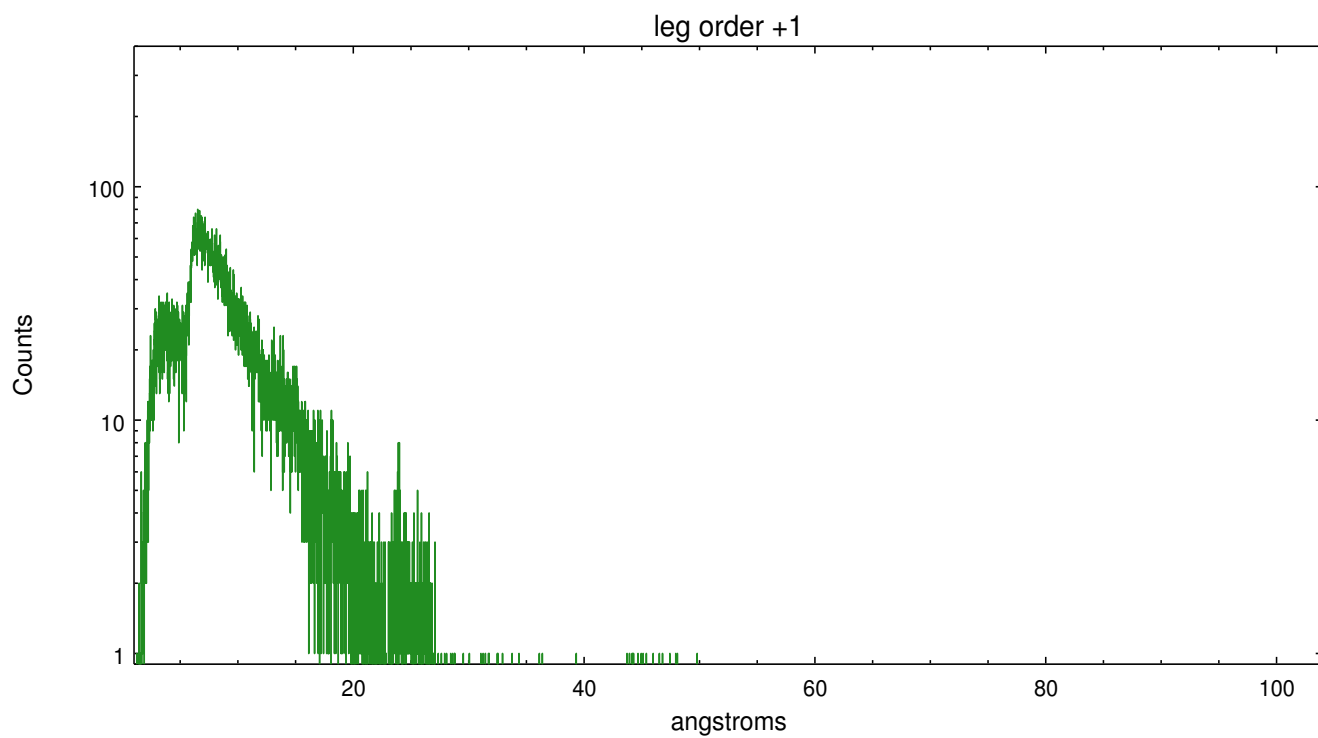
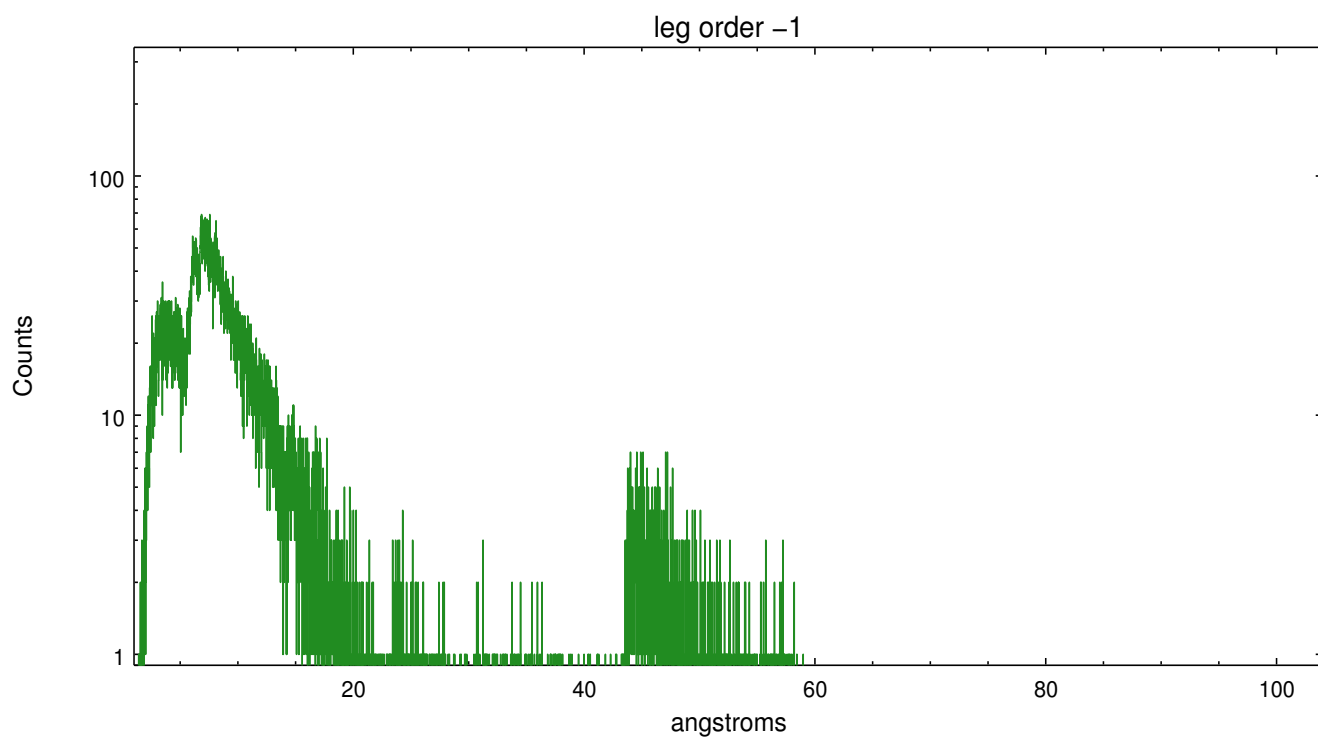
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3072	1505	29338	18675	35010	1433	3119





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2017.06.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.077662000418

A.2 Comments

Comments for Obi 0

Star in slot 4 has an RMS deviation > 0.200000 arcsec