

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 11974 - L2 Version 3
Chandra X-Ray Center

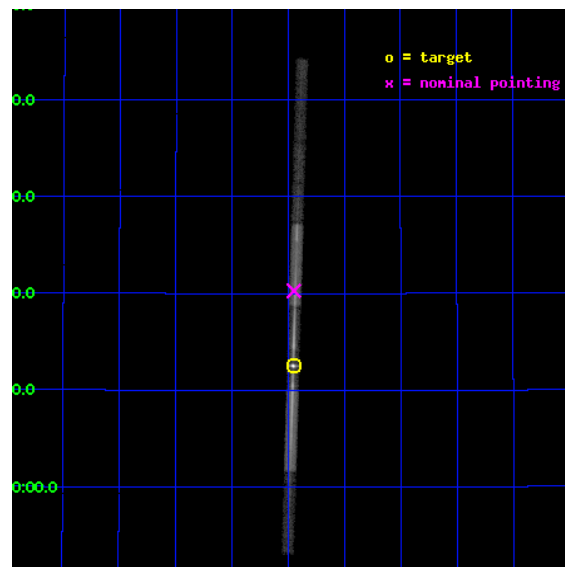
L2 Processing Date : Jul 11 2012

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

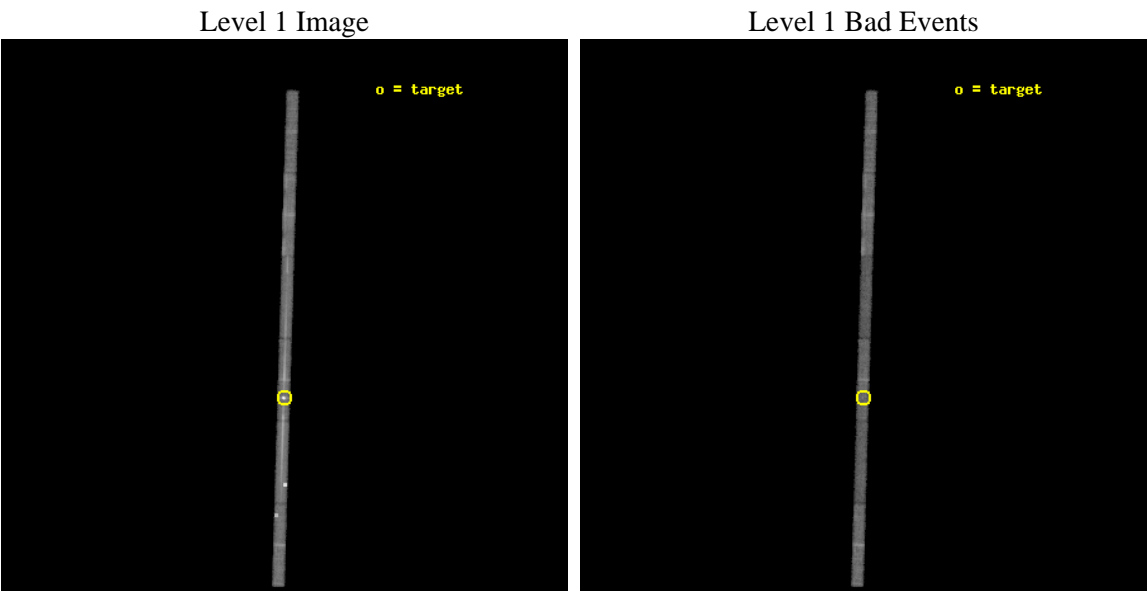
seq_num	790223	Sequence number
obs_id	11974	Observation id
title	AO-11 Calibration Observations of Mkn421	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	MKN421	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	166.113333	Observer's specified target RA [deg]
dec_targ	38.208806	Observer's specified target Dec [deg]
ra_nom	166.11229656615	Nominal RA [deg]
dec_nom	38.338051237649	Nominal Dec [deg]
roll_nom	271.65411998087	Nominal Roll [deg]
revision	3	Processing version of data
ontime	20065.499658227	Sum of GTIs [s]
livetime	18954.2396642	Livetime [s]
ontime4	20065.432434738	Sum of GTIs [s]
ontime5	20065.499658227	Sum of GTIs [s]
ontime6	20065.499658227	Sum of GTIs [s]
ontime7	20065.473474741	Sum of GTIs [s]
ontime8	20065.499658227	Sum of GTIs [s]
ontime9	20065.499658227	Sum of GTIs [s]
l2events	103501	Number of level 2 events



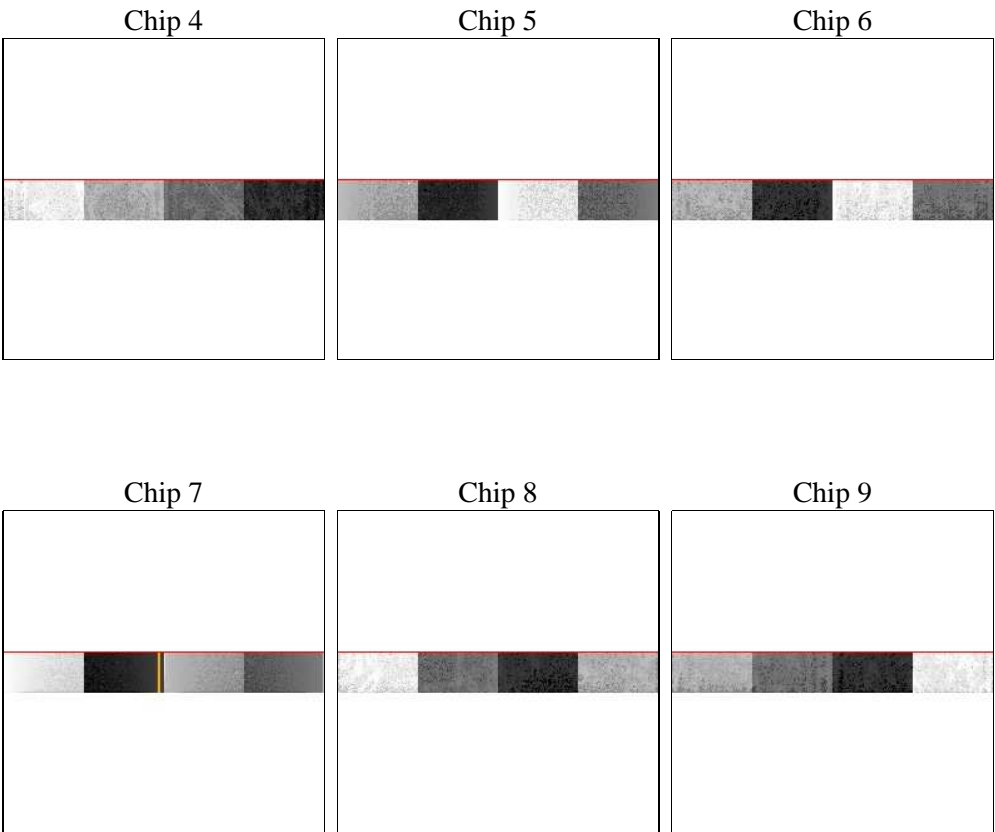
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



Chip 7



Chip 8



Chip 9



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	20065.499658227	Sum of GTIs [s]
caldsver	4.5.0	 	ontime4	20065.432434738	Sum of GTIs [s]
date	2012-06-30T00:31:27	Date and time of file creation	ontime5	20065.499658227	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	20065.499658227	Sum of GTIs [s]
			ontime7	20065.473474741	Sum of GTIs [s]
			ontime8	20065.499658227	Sum of GTIs [s]
			ontime9	20065.499658227	Sum of GTIs [s]
			l1events	281335	Number of level 1 events

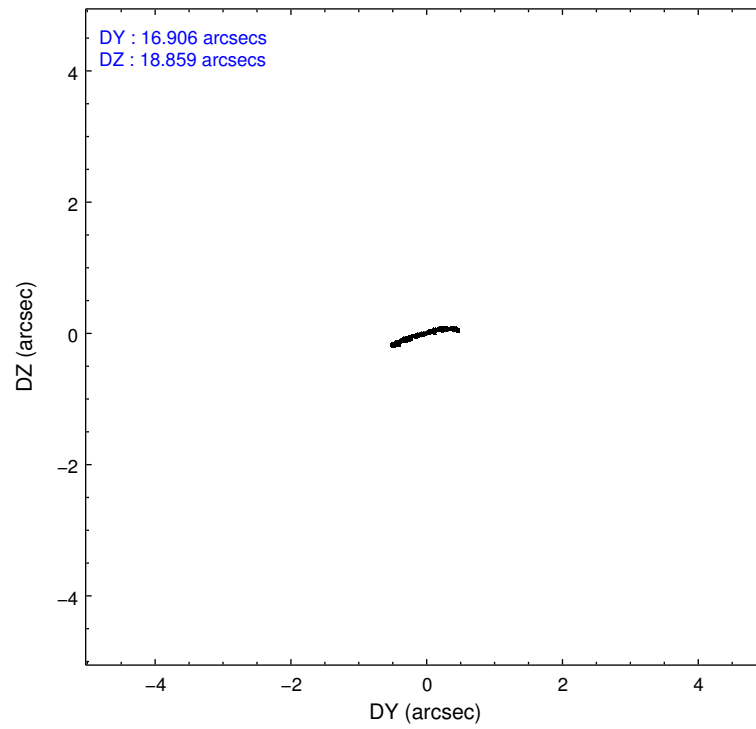
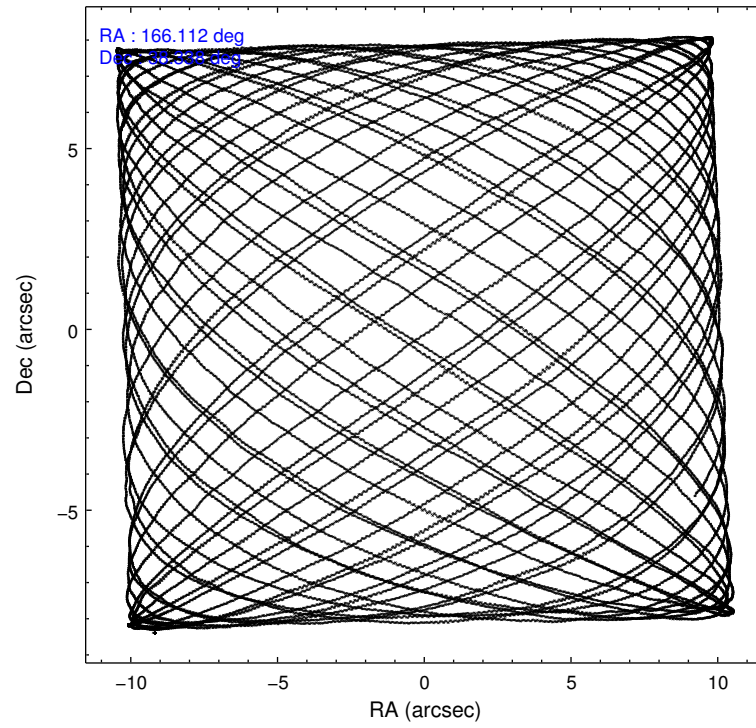
2.1.4 Events

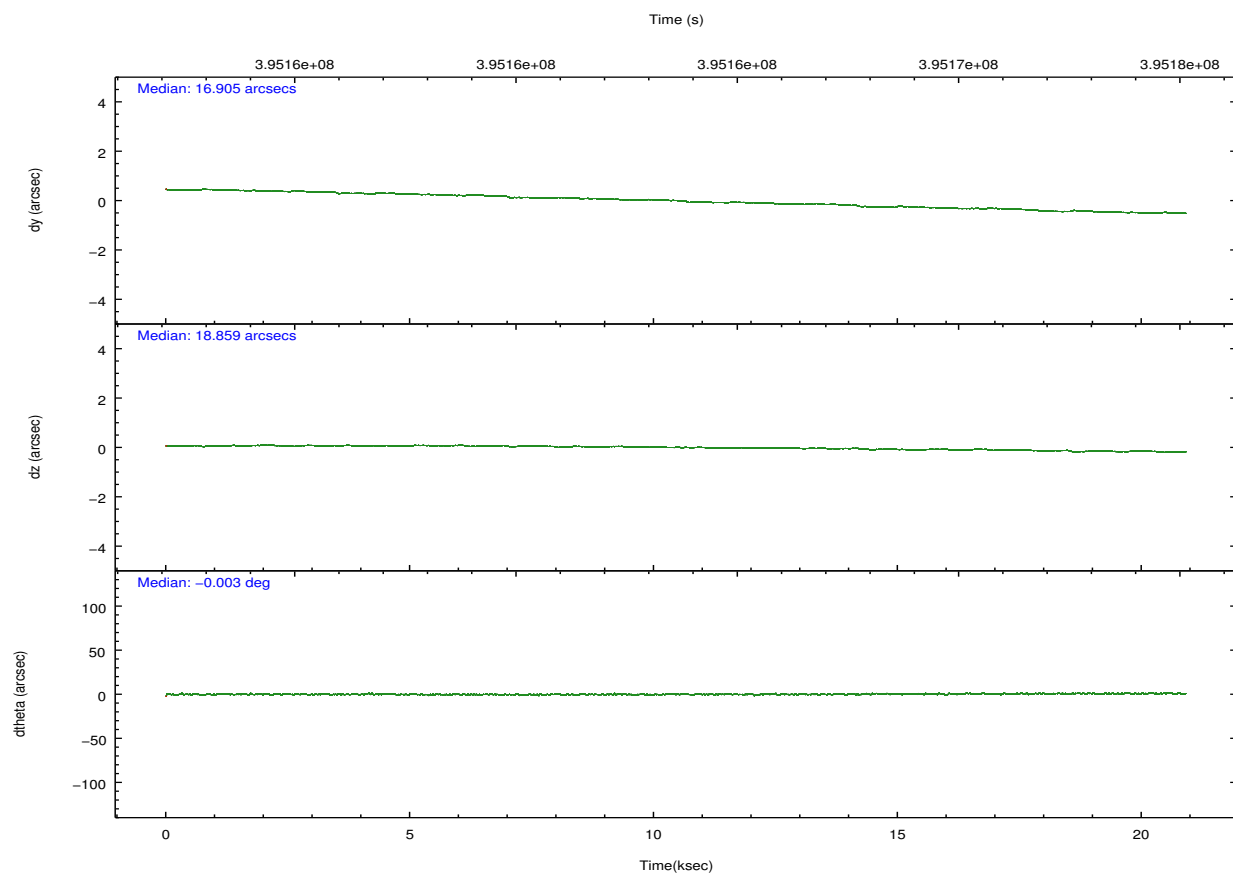
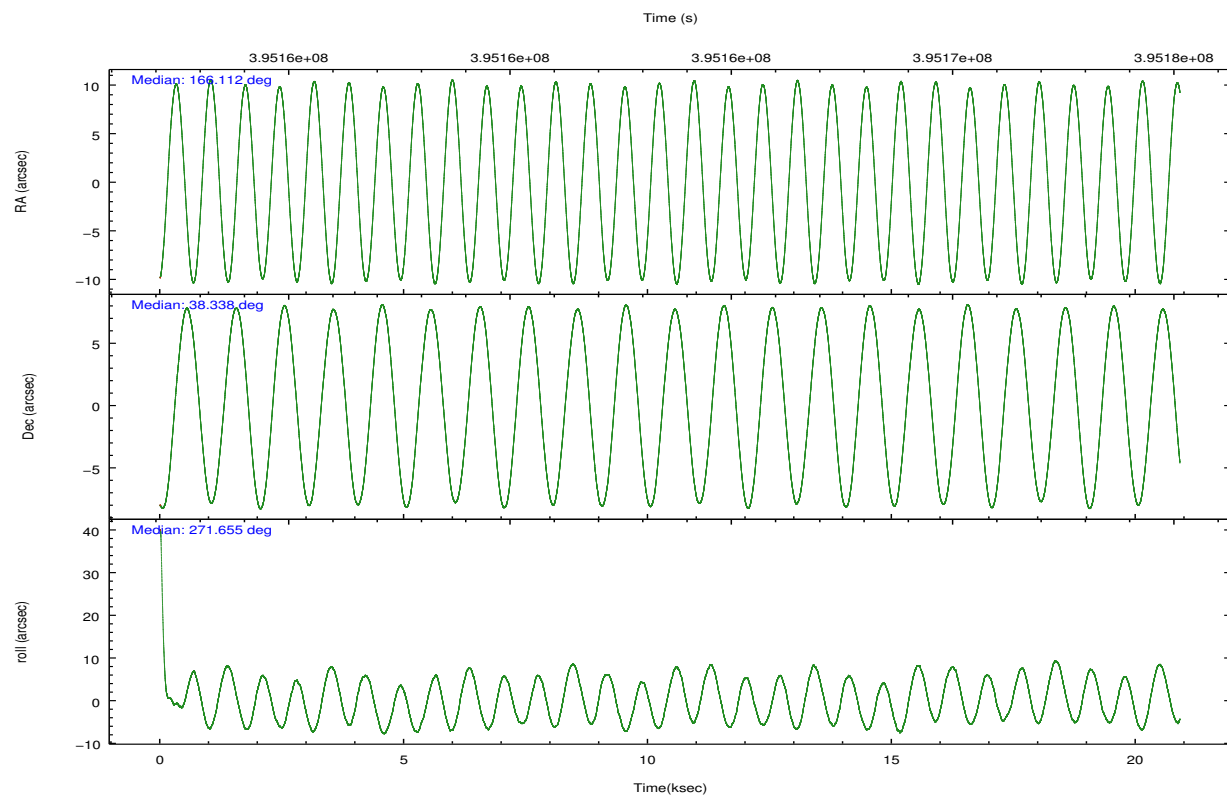
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	39253	75127	66846	35030	39458	25621	grade 0 events	8816	30552	36032	5494	2691	1104
rejected events	28046	15974	22765	14525	30453	22439		22%	40%	53%	15%	6%	4%
rejected %	71%	21%	34%	41%	77%	87%	grade 1 events	48	115	106	34	16	15
								0%	0%	0%	0%	0%	0%
							grade 2 events	812	13979	4053	4472	1756	564
								2%	18%	6%	12%	4%	2%
							grade 3 events	531	2734	1445	2186	972	528
								1%	3%	2%	6%	2%	2%
							grade 4 events	511	2899	1405	2143	933	473
								1%	3%	2%	6%	2%	1%
							grade 5 events	986	3048	1015	2845	1359	1046
								2%	4%	1%	8%	3%	4%
							grade 6 events	537	8990	1147	6210	2672	513
								1%	11%	1%	17%	6%	2%
							grade 7 events	27012	12810	21643	11646	29059	21378
								68%	17%	32%	33%	73%	83%

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	166.093585	166.1122965661476	CCD I2 on	N	N
[deg] Pointing Dec	38.361119	38.33805123764895	CCD I3 on	N	N
[deg] Pointing Roll	271.509084	271.6541199808698	CCD S0 on	O1	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	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	395154069.184000	395152970.63564	CCD S5 on	Y	Y
Observation start date	2010-07-10T13:00:03	2010-07-10T12:42:50	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	395174069.184000	395174295.24923	On-chip summing requested	N	N
Observation end date	2010-07-10T18:33:23	2010-07-10T18:38:15	Subarray requested	CUSTOM	1/8
Read mode	TIMED	TIMED	Subarray start row	448	448
			Subarray row count	128	128
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	0.7

2.3 Aspect



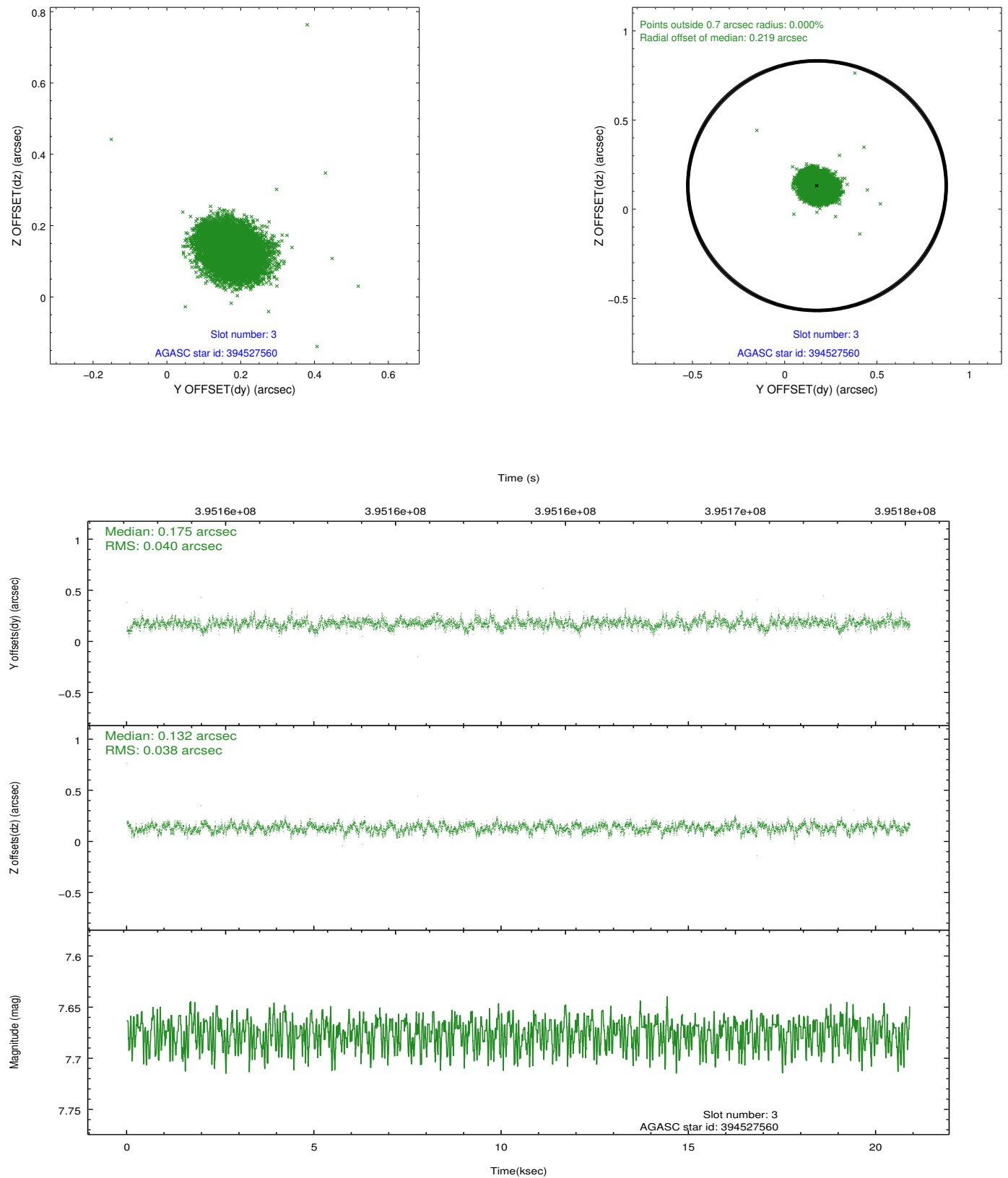


Slot Statistics

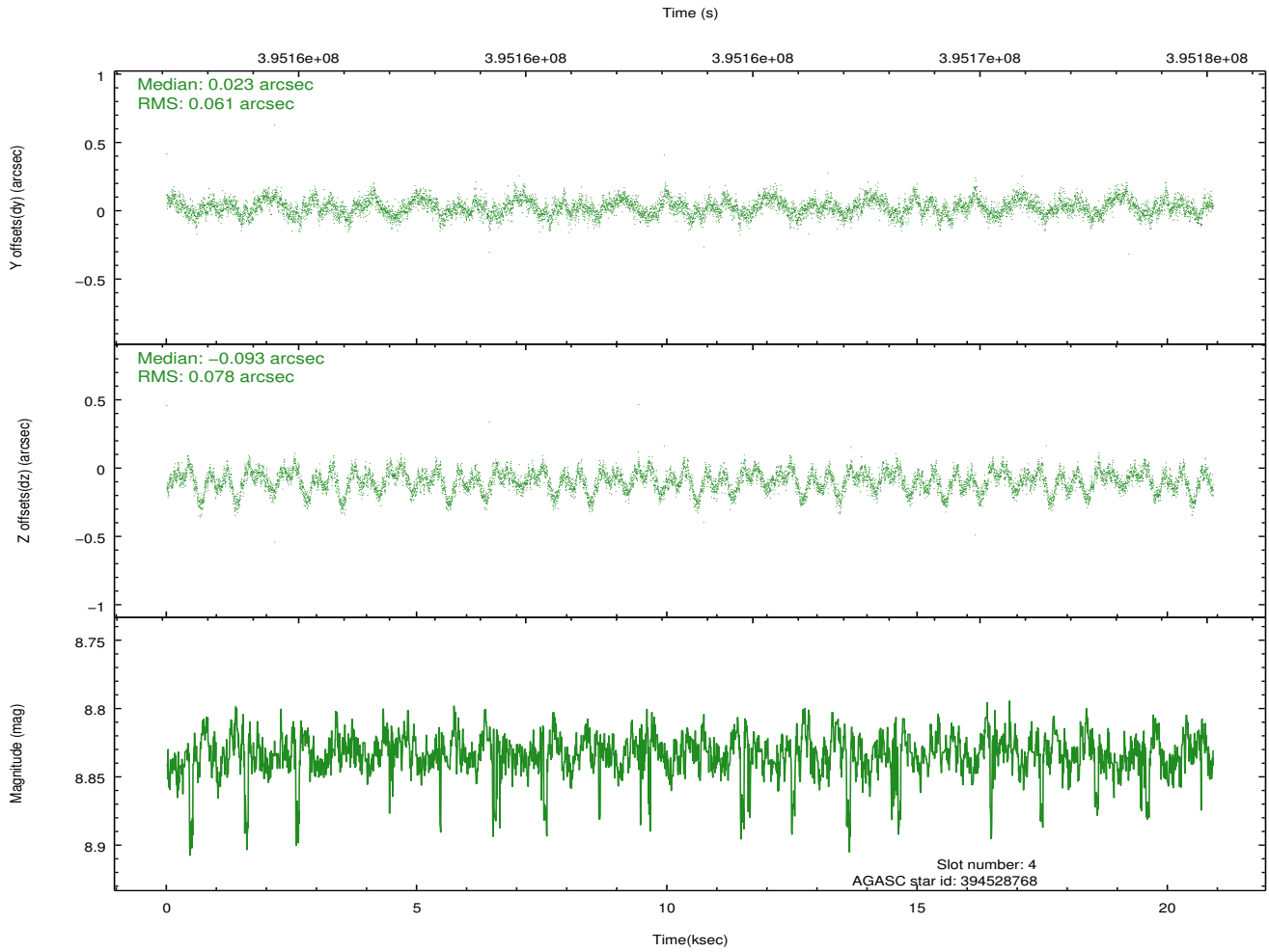
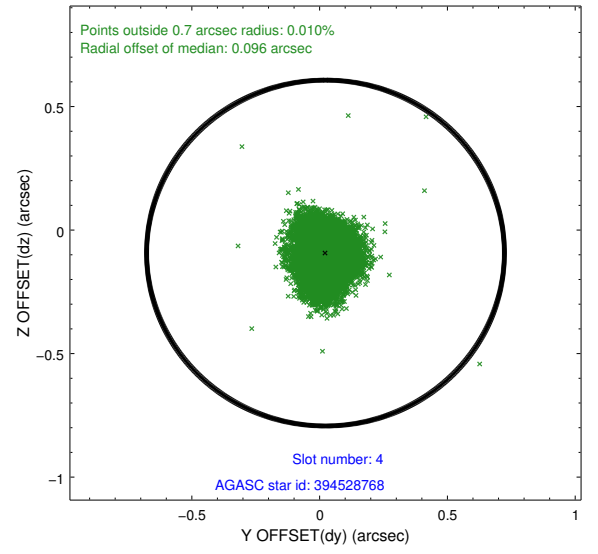
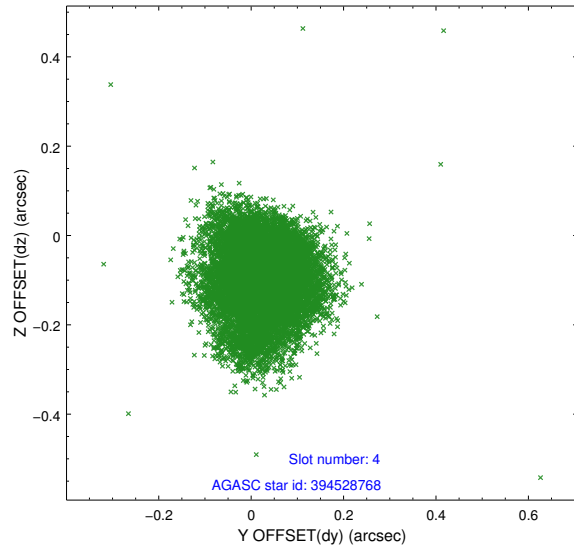
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	6.95	5100	0.089	0.032	0.007	0.011	0.000000	0.000000	926.14	-1735.96
1	FID	ACIS-S-2	6.87	5099	-0.164	-0.054	0.007	0.013	0.000000	0.000000	-769.92	-1740.71
2	FID	ACIS-S-4	6.95	5099	0.049	0.028	0.006	0.011	0.000000	0.000000	2143.34	167.97
3	GUIDE	394527560	7.67	10199	0.175	0.132	0.058	0.096	165.970713	38.960939	-2167.43	-286.66
4	GUIDE	394528768	8.83	10188	0.023	-0.093	0.106	0.166	166.180365	38.952248	-2120.80	298.87
5	GUIDE	394533848	8.71	10151	-0.076	0.415	0.067	0.107	166.382906	38.276007	325.86	806.45
6	GUIDE	394546712	6.61	10200	-0.163	0.248	0.081	0.129	166.451462	38.394357	-94.65	1012.30
7	GUIDE	394546720	6.40	10197	0.039	-0.691	0.086	0.143	166.130115	38.241361	434.01	91.47

2.4 Star Slots

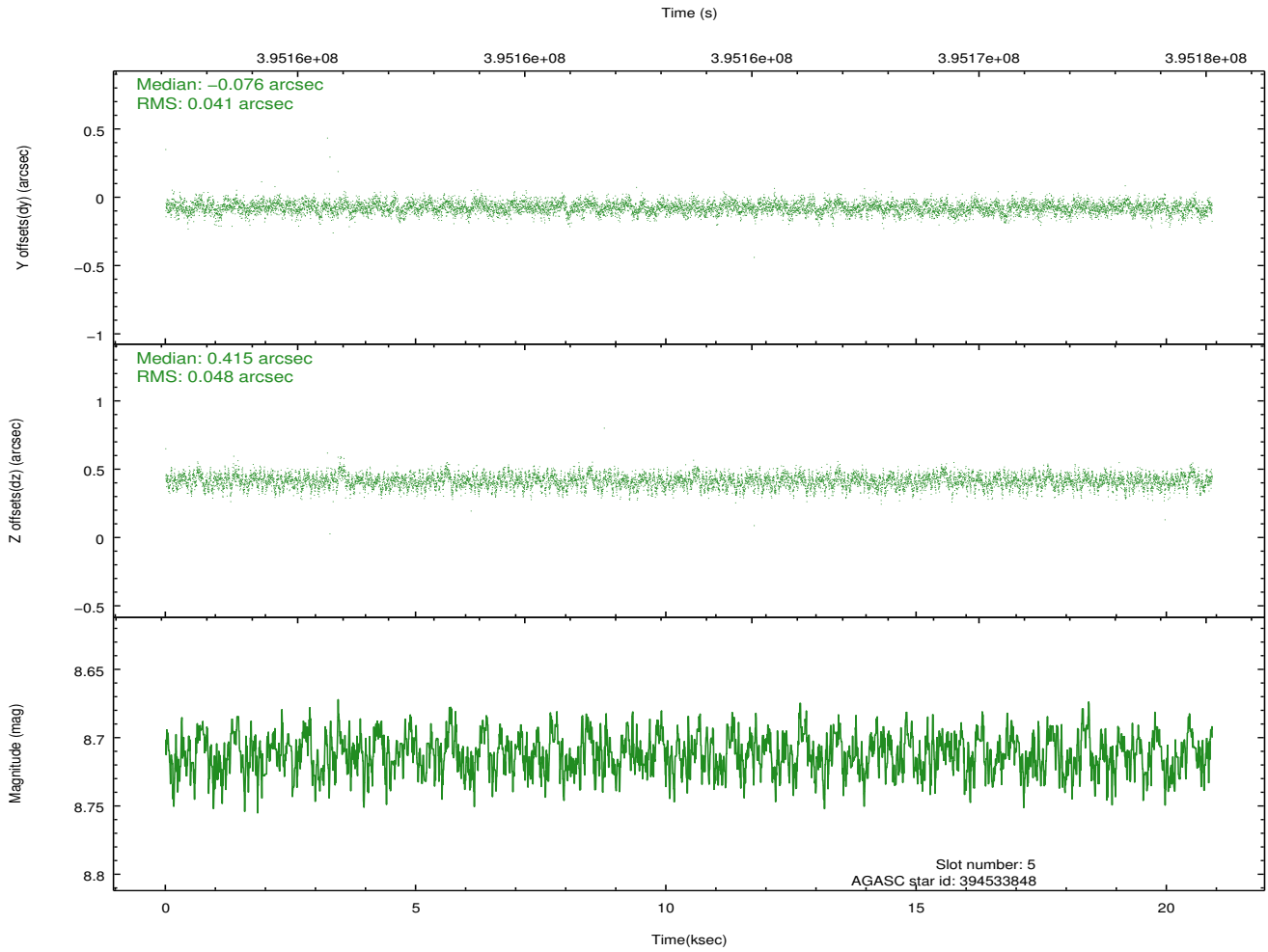
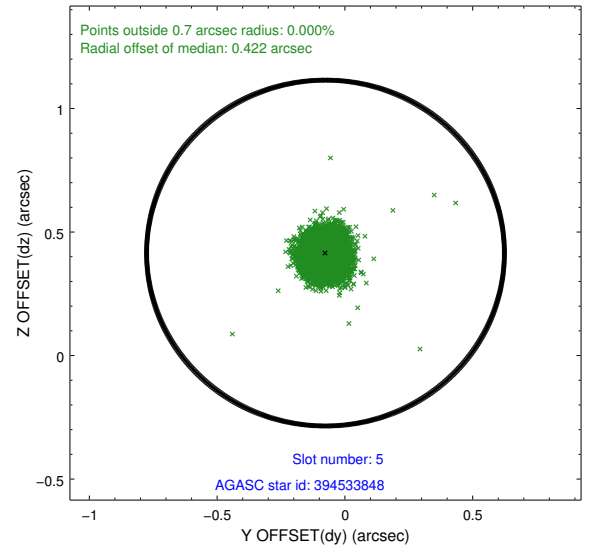
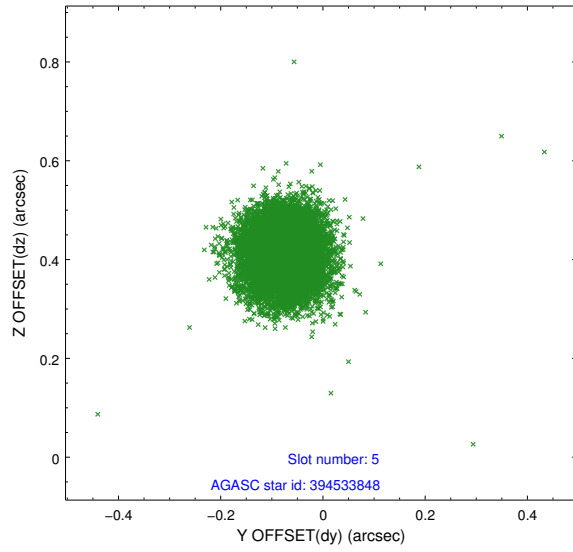
2.4.1 Slot 3



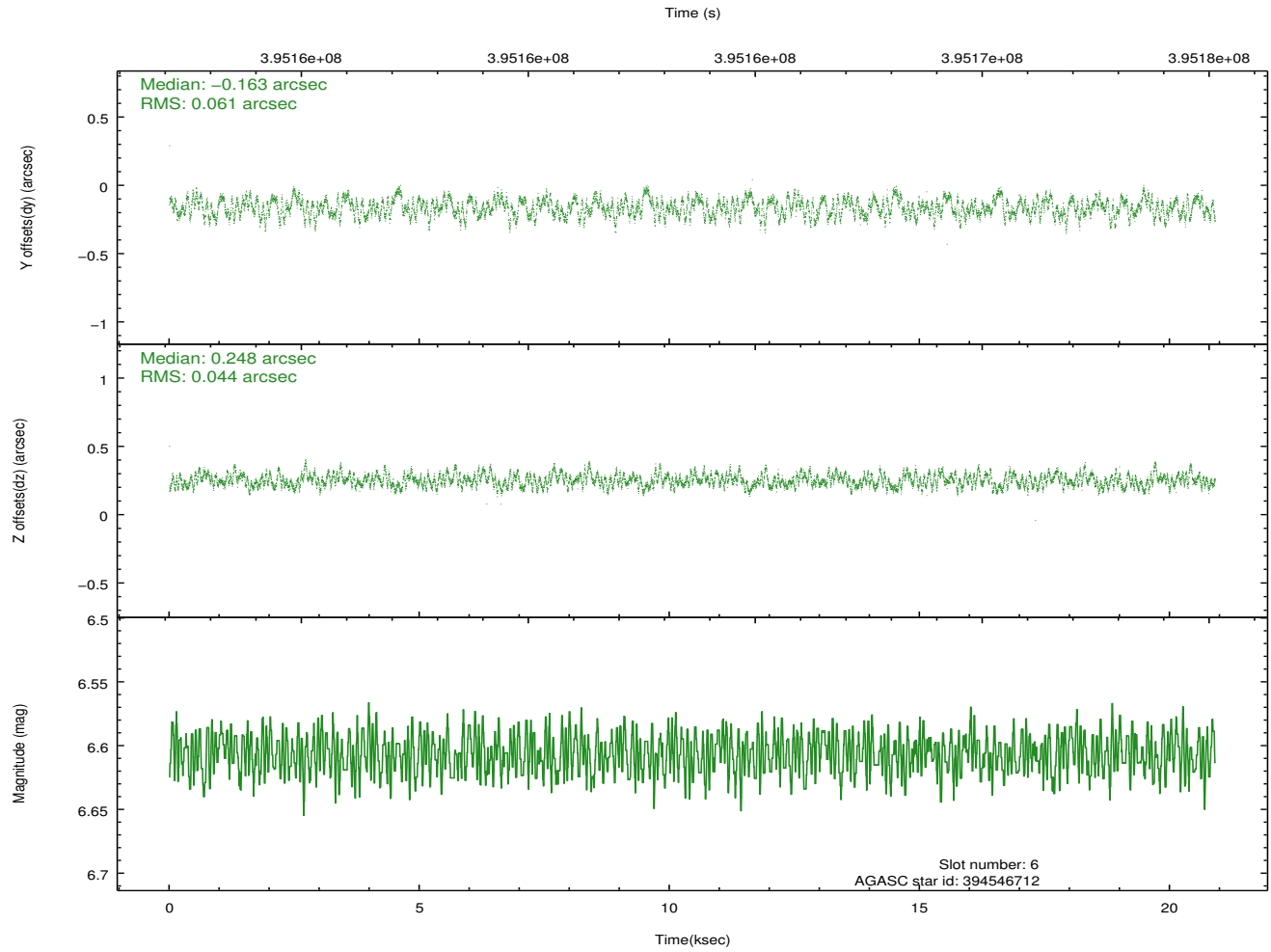
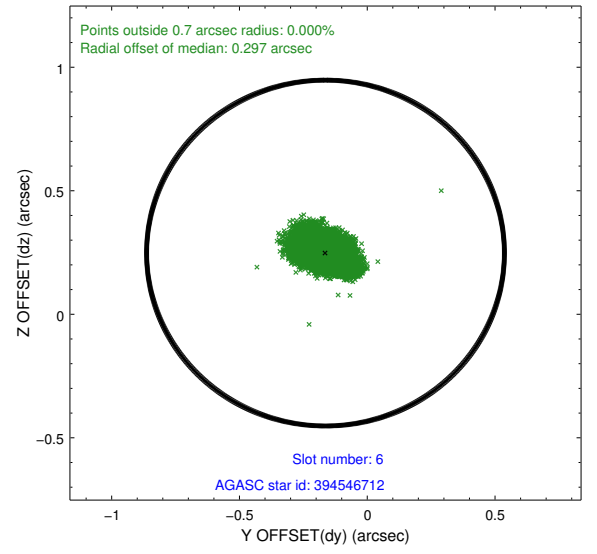
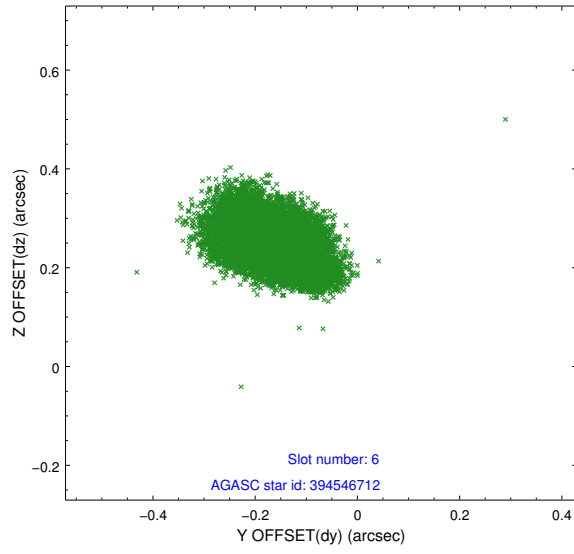
2.4.2 Slot 4



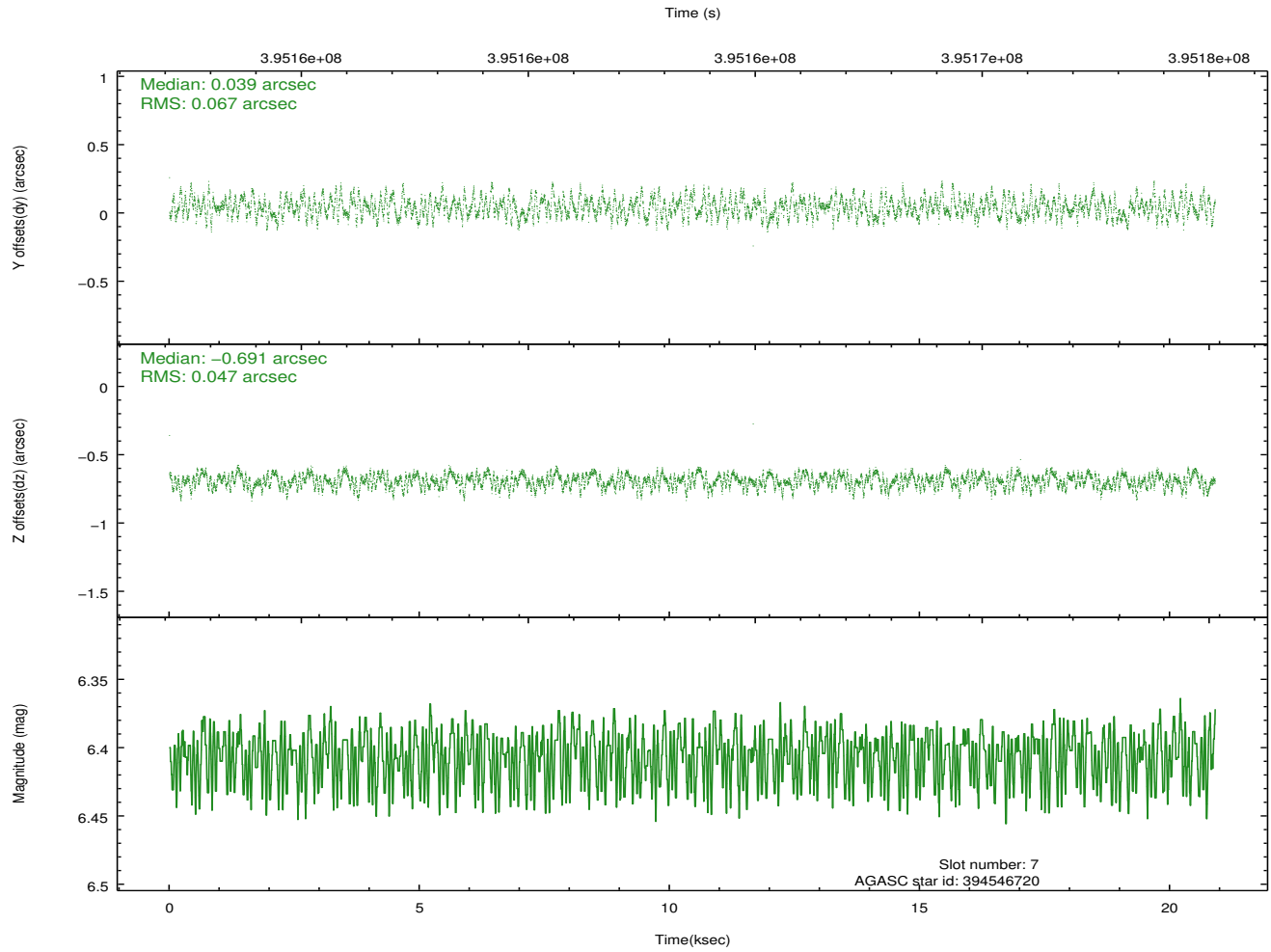
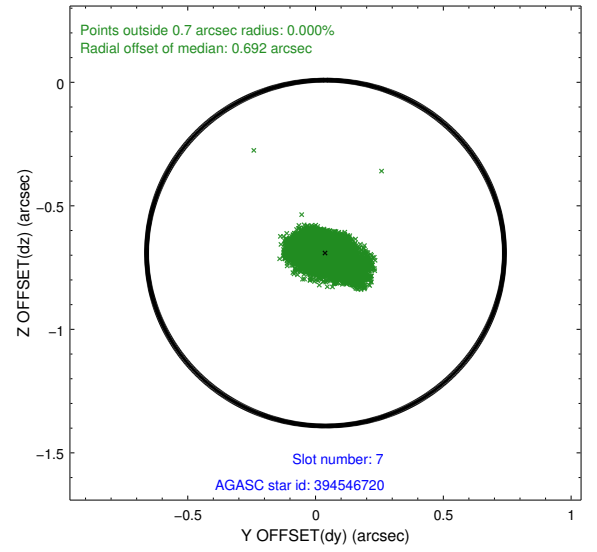
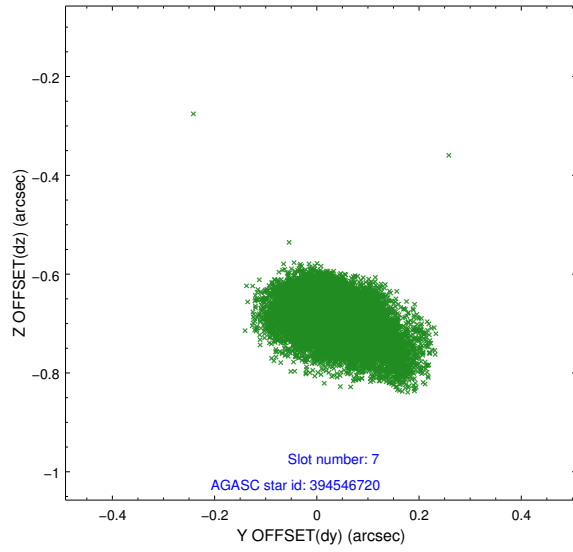
2.4.3 Slot 5



2.4.4 Slot 6

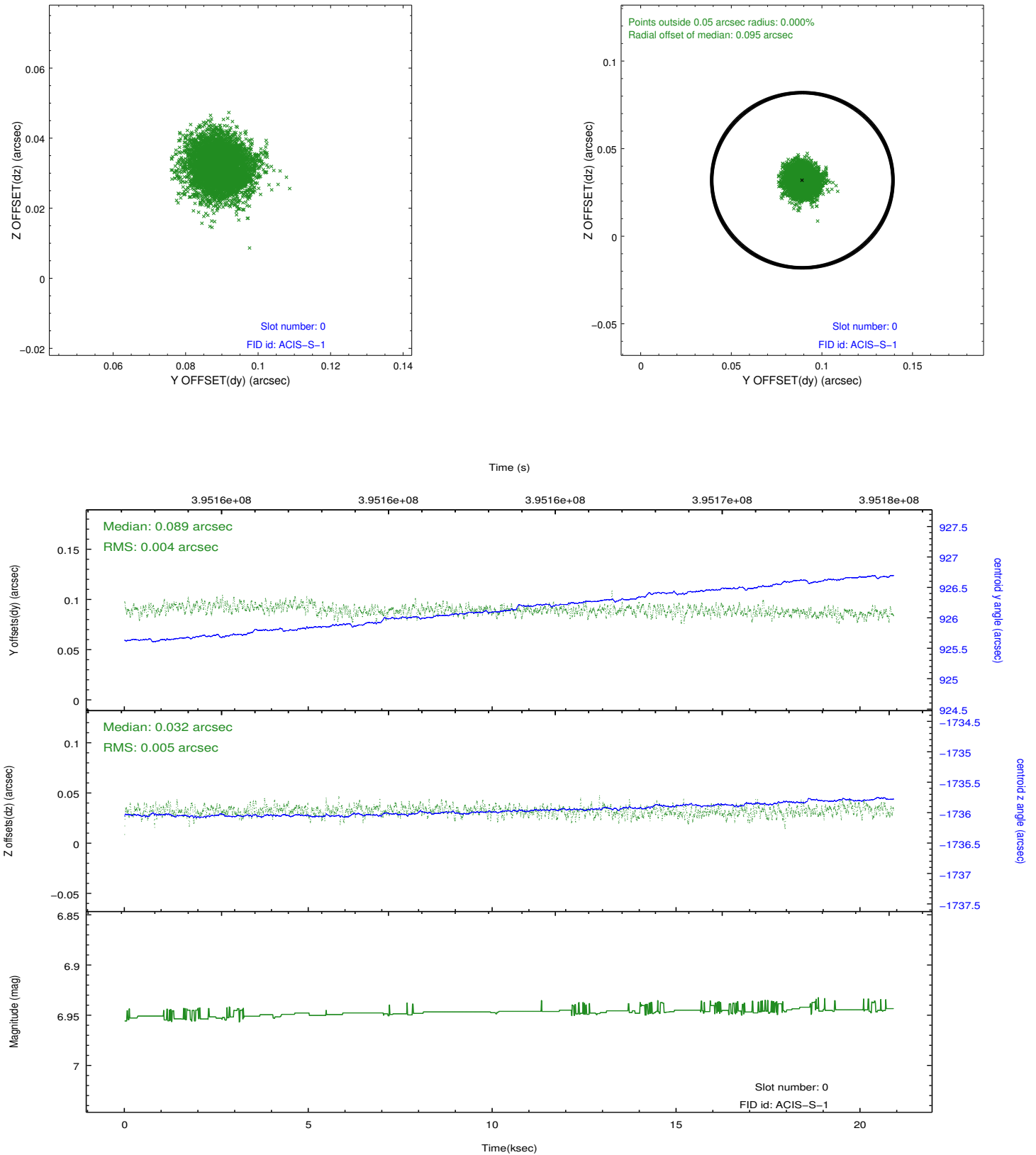


2.4.5 Slot 7

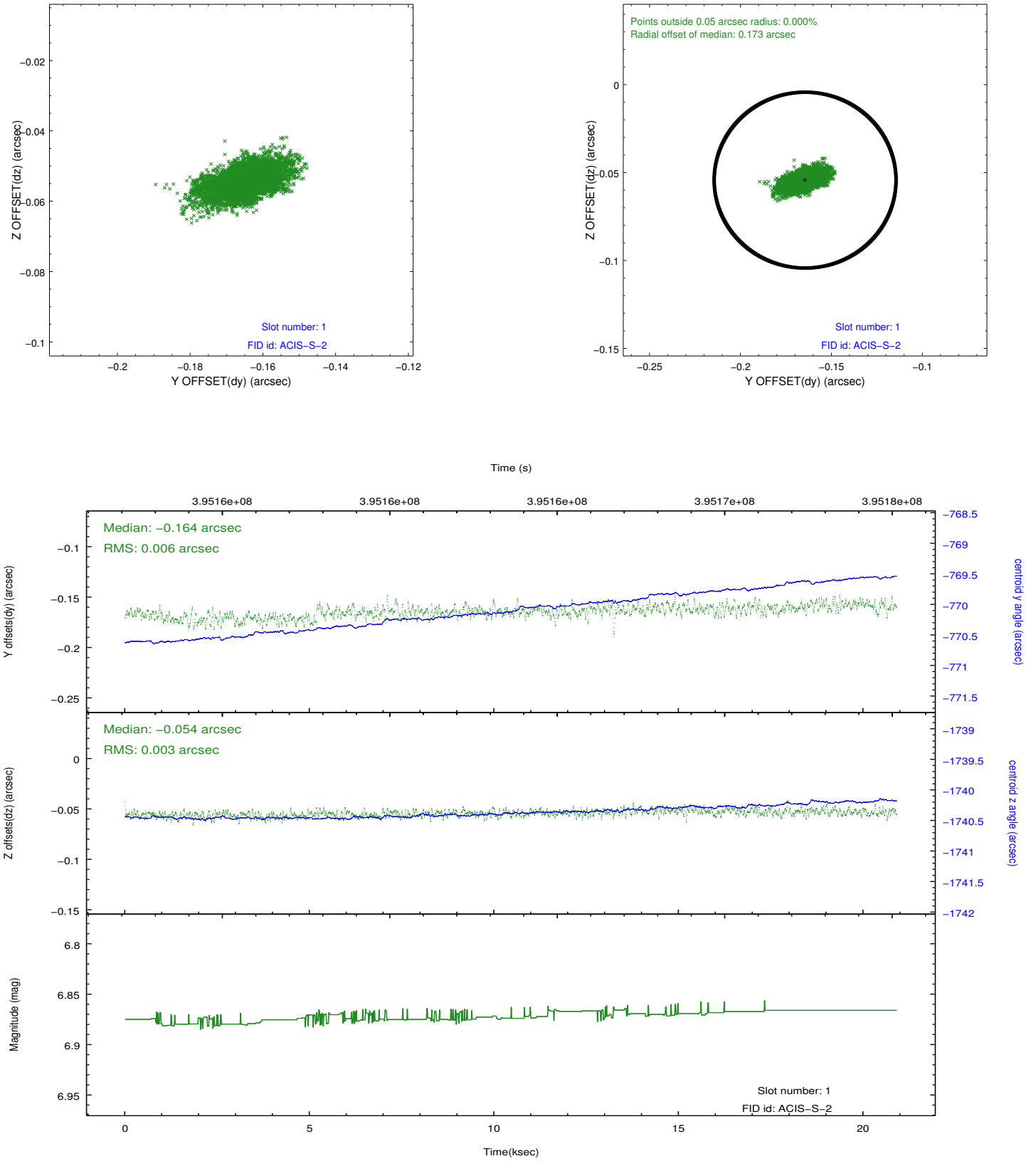


2.5 FID Slots

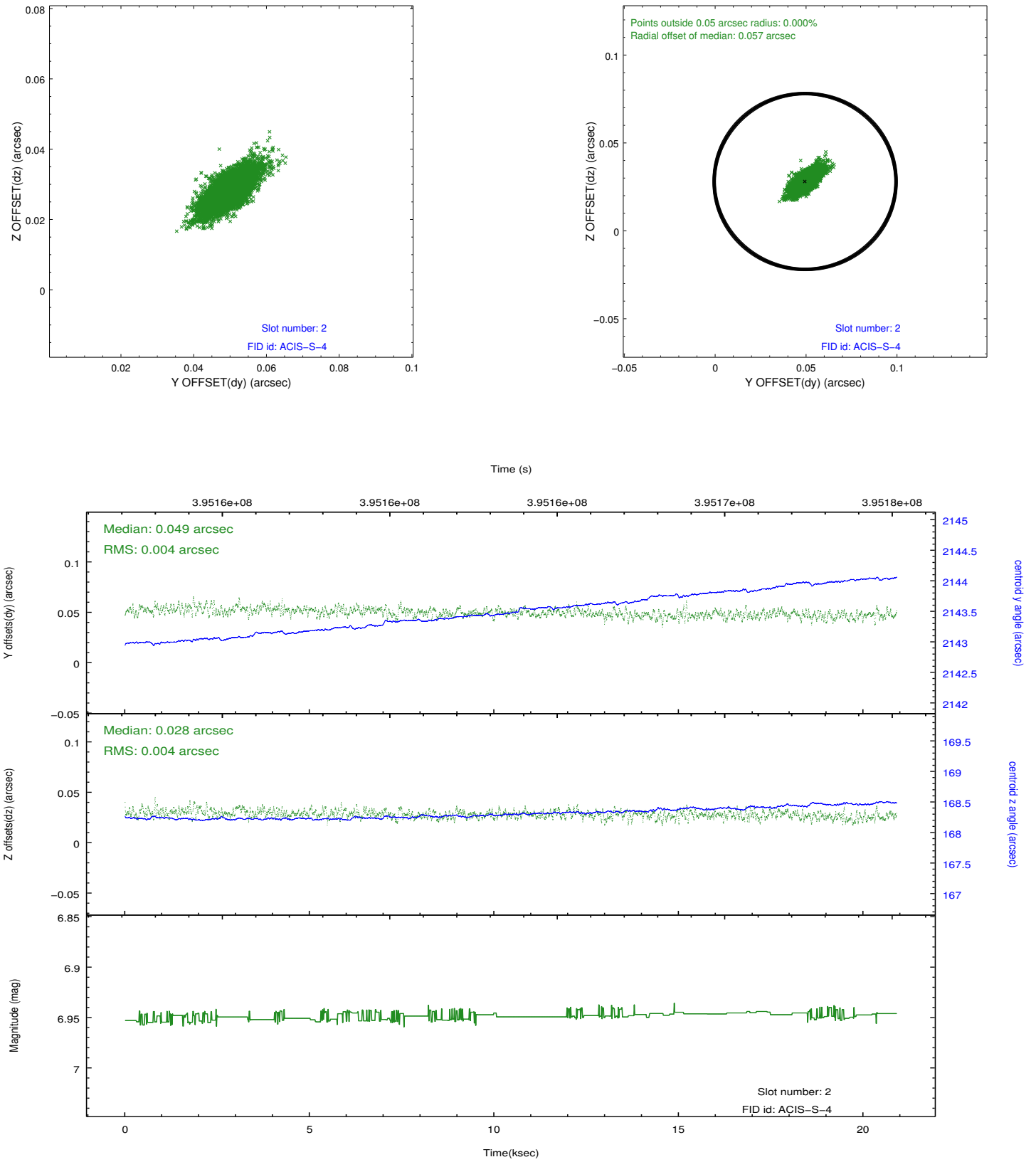
2.5.1 Slot 0



2.5.2 Slot 1

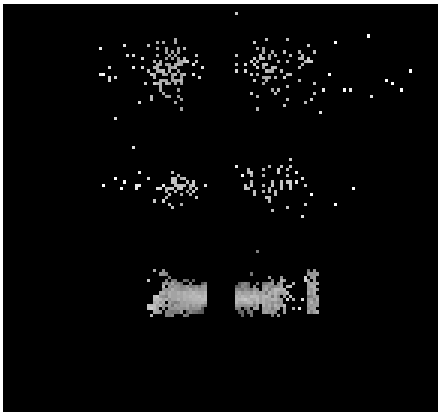


2.5.3 Slot 2

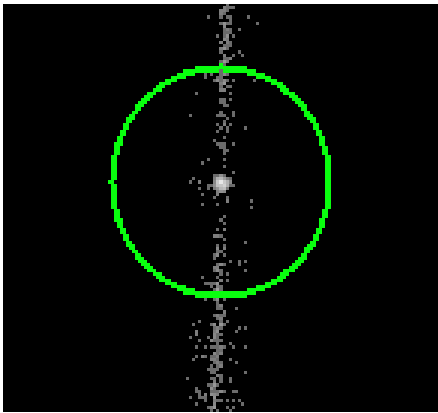


3 Gratings

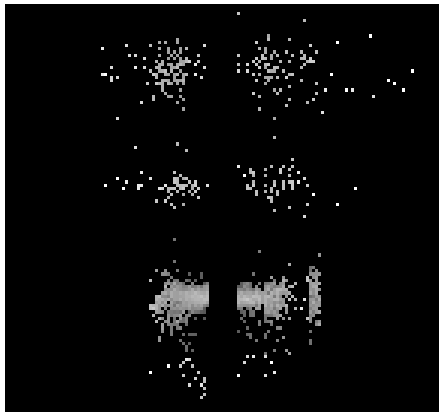
3.1 LETG Arm



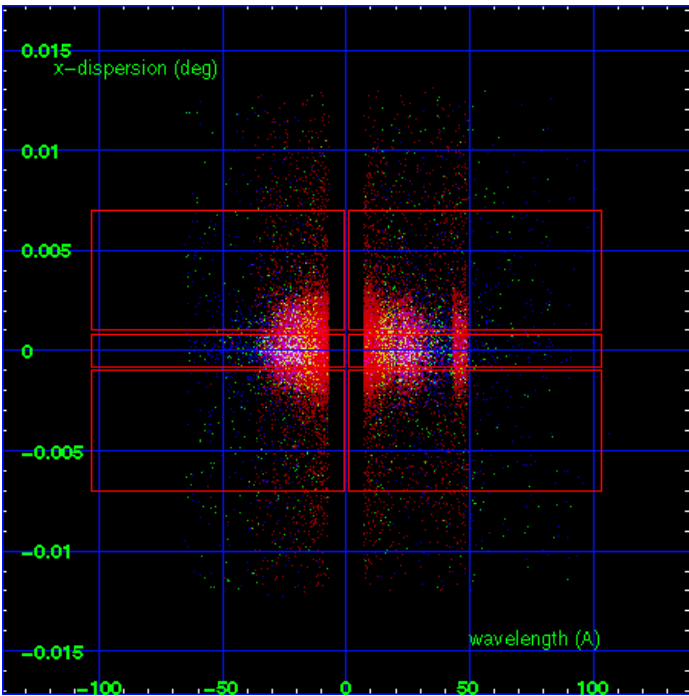
LETG Order Sort 123



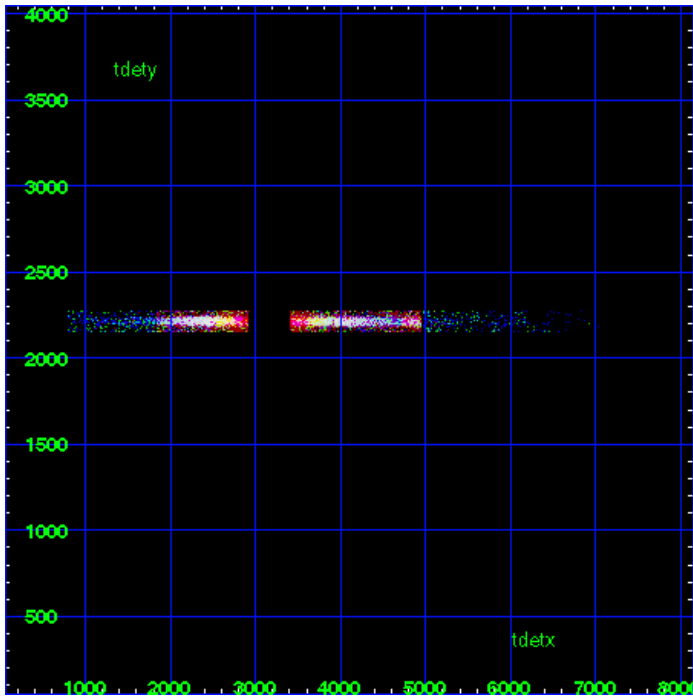
LETG Zero Order



LETG Order Sort ALL

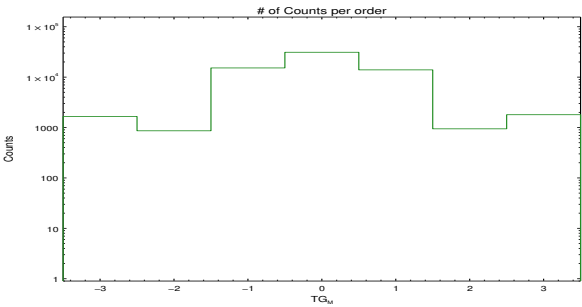


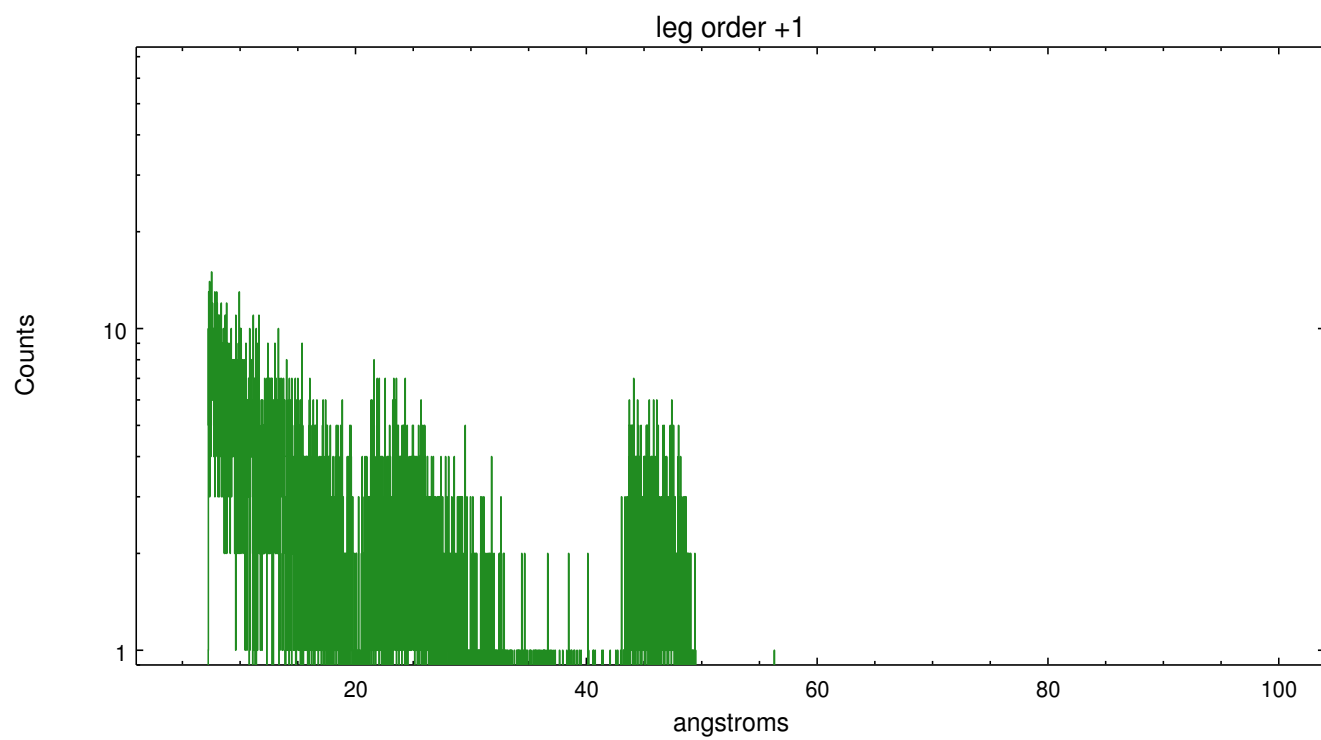
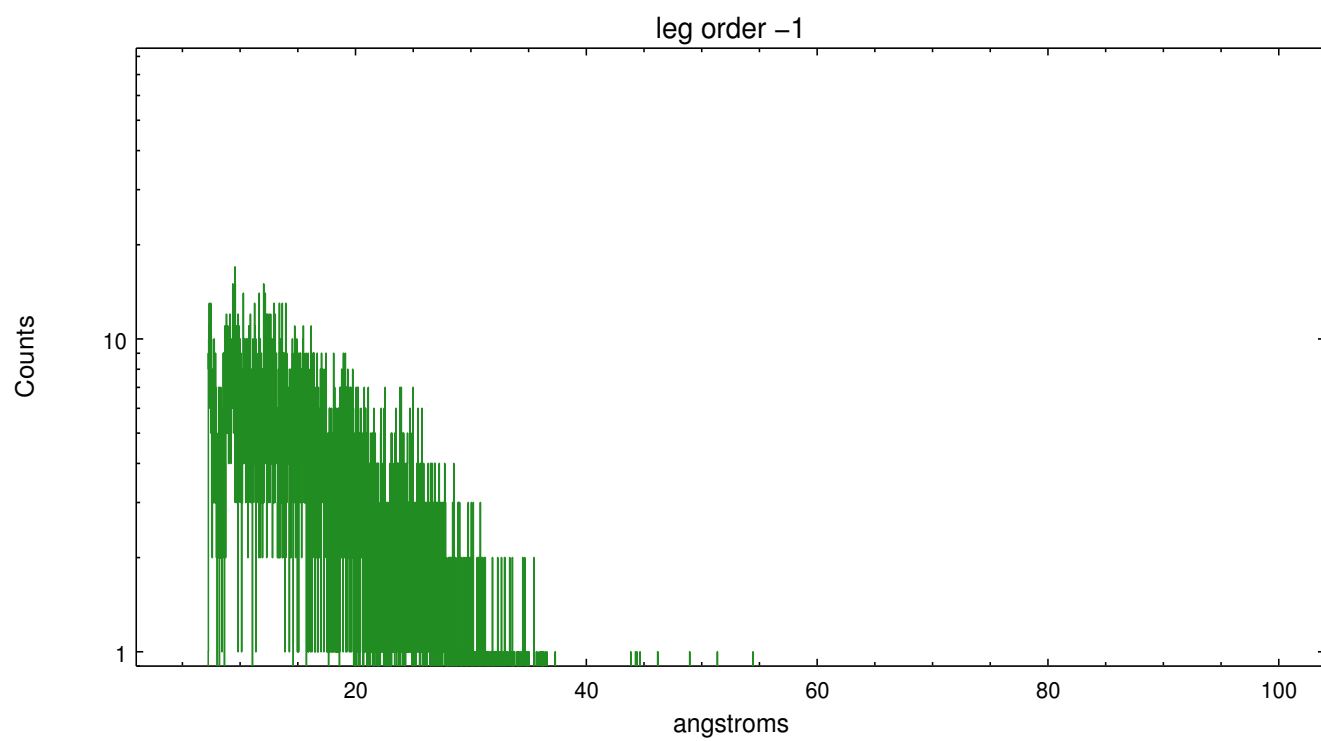
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1656	862	15221	31130	13936	943	1797





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.07.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.065499658227

A.2 Comments