

V&V Reference Report

L2 ASCDS Version : 10.5.1.1

Observation 17791 - L2 Version 1
Chandra X-Ray Center

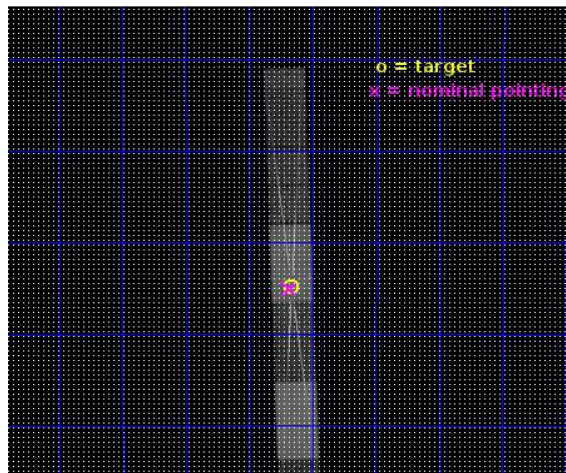
L2 Processing Date : Sep 26 2016

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1 Front

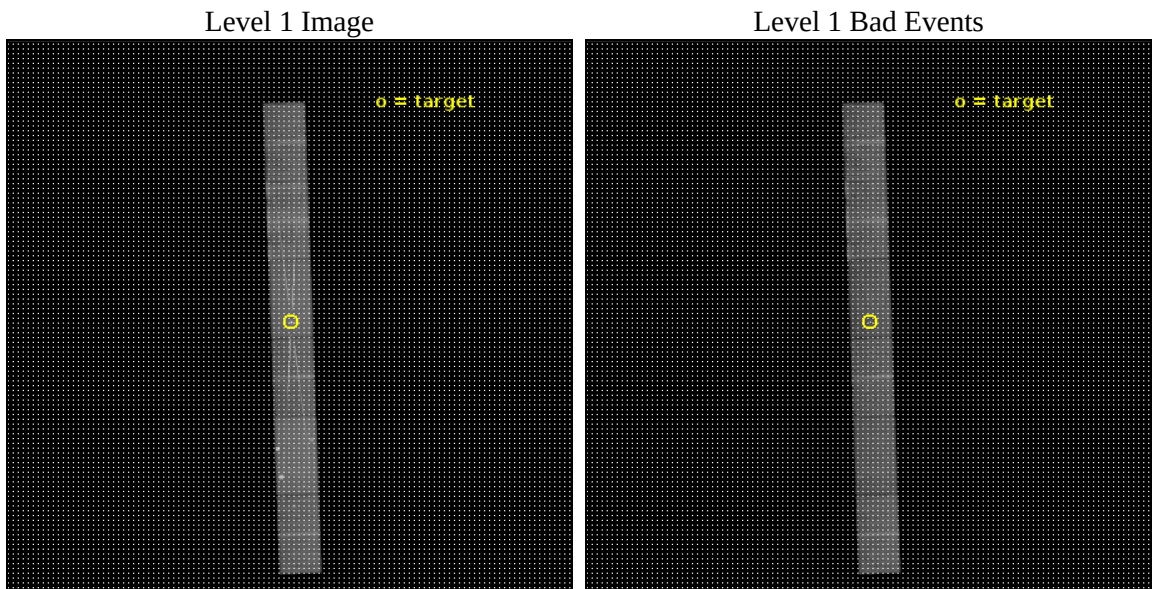
seq_num	401723	Sequence number
obs_id	17791	Observation id
title	An Integrated Approach to Winds, Jets, and State Transitions	Propo
observer	Joseph Neilsen	Principal investigator
object	GRS 1739-278	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	265.666792	Observer's specified target RA [deg]
dec_targ	-27.747969	Observer's specified target Dec [deg]
ra_nom	265.67059249142	Nominal RA [deg]
dec_nom	-27.750844578423	Nominal Dec [deg]
roll_nom	268.02382826387	Nominal Roll [deg]
revision	1	Processing version of data
ontime	30063.599203587	Sum of GTIs [s]
livetime	29393.429021888	Livetime [s]
ontime4	30063.599203587	Sum of GTIs [s]
ontime5	30063.599203587	Sum of GTIs [s]
ontime6	30063.599203587	Sum of GTIs [s]
ontime7	30063.599203587	Sum of GTIs [s]
ontime8	30063.599203587	Sum of GTIs [s]
ontime9	30063.599203587	Sum of GTIs [s]
l2events	254631	Number of level 2 events



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.5.1.1	Processing system revision	ontime	30063.599203587	Sum of GTIs [s]
caldsver	4.7.2	 	ontime4	30063.599203587	Sum of GTIs [s]
date	2016-09-26T03:15:28	Date and time of file creation	ontime5	30063.599203587	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	30063.599203587	Sum of GTIs [s]
			ontime7	30063.599203587	Sum of GTIs [s]
			ontime8	30063.599203587	Sum of GTIs [s]
			ontime9	30063.599203587	Sum of GTIs [s]
			l1events	893268	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			src1a_pos	(4121.02, 4117.00)	src1a sky pixel position

2.1.3 Events

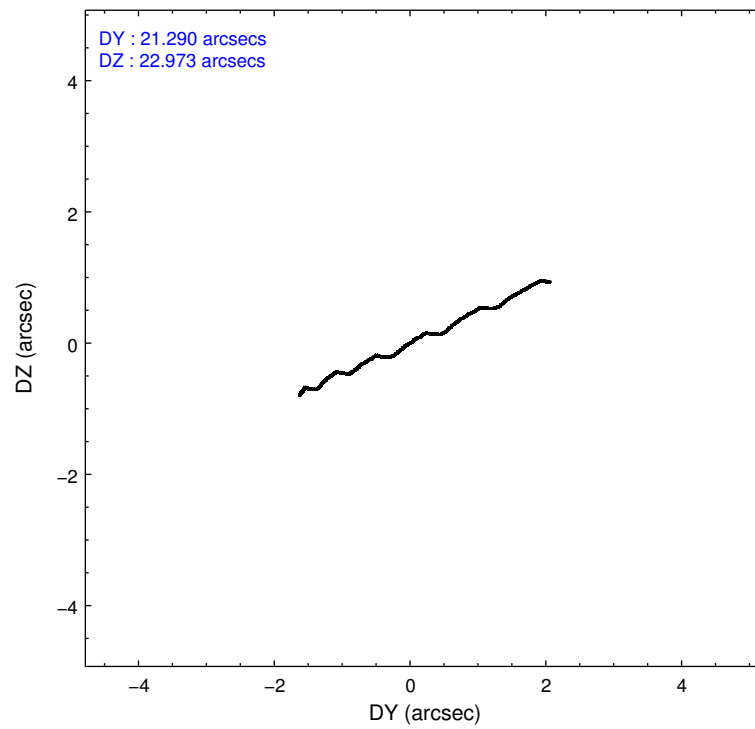
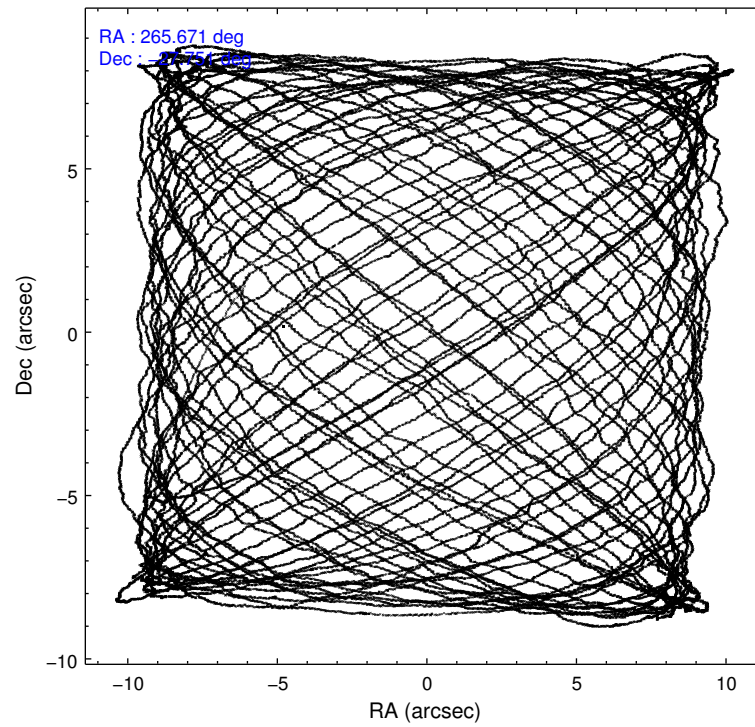
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	123371	191130	132668	184583	151140	110376	grade 0 events	5072	23254	21907	10308	15765	4707
rejected events	107756	86069	94251	85258	105332	95786		4%	12%	16%	5%	10%	4%
rejected %	87%	45%	71%	46%	69%	86%	grade 1 events	67	565	76	362	76	45
								0%	0%	0%	0%	0%	0%
							grade 2 events	4763	32828	7495	26903	10889	3856
								3%	17%	5%	14%	7%	3%
							grade 3 events	1140	2120	2256	6834	4028	1388
								0%	1%	1%	3%	2%	1%
							grade 4 events	1090	2150	2179	6592	3860	1265
								0%	1%	1%	3%	2%	1%
							grade 5 events	3821	9004	4358	11740	6597	4591
								3%	4%	3%	6%	4%	4%
							grade 6 events	3551	44729	4592	48709	11273	3375
								2%	23%	3%	26%	7%	3%
							grade 7 events	103867	76480	89805	73135	98652	91149
								84%	40%	67%	39%	65%	82%

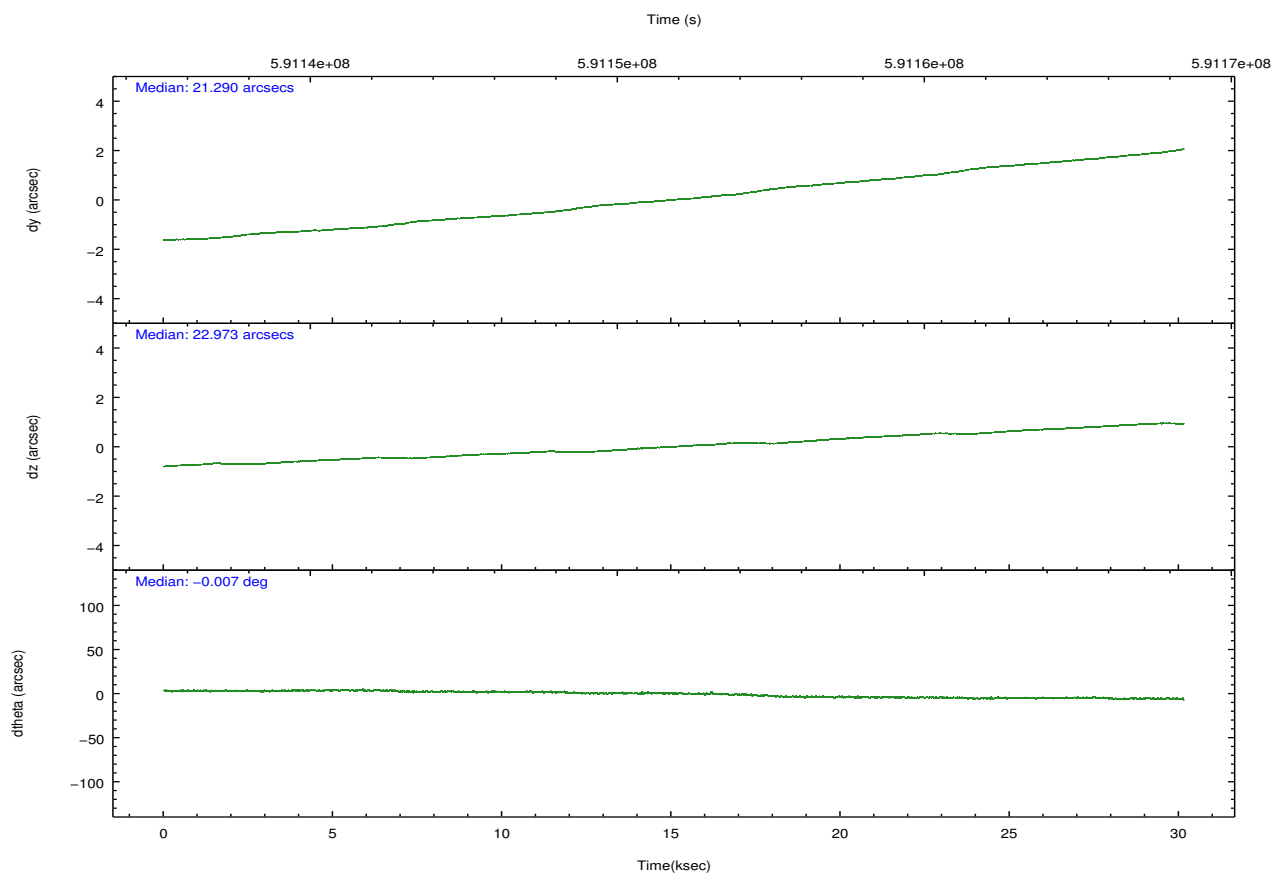
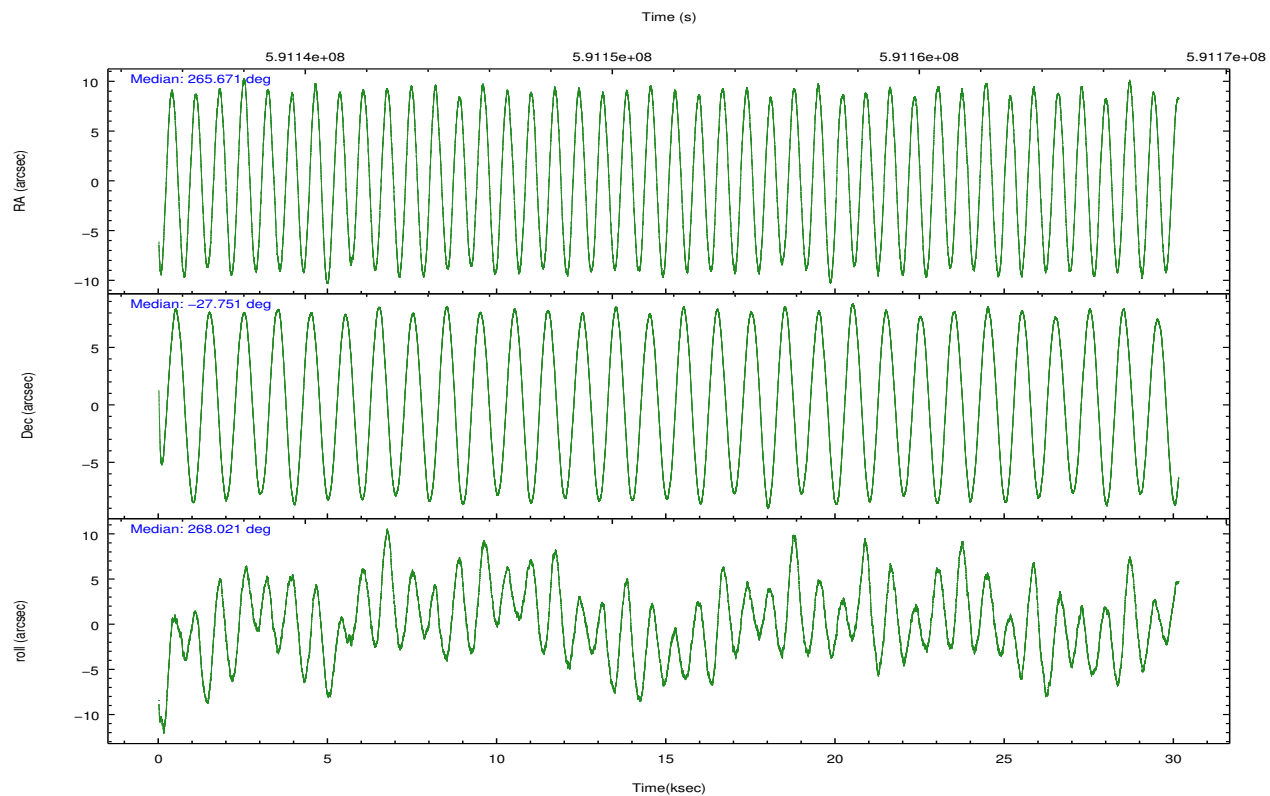
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-456789	ACIS-456789
Grating	HETG	HETG
Data mode	GRADED	GRADED
Observation mode	POINTING	POINTING
[deg] Pointing RA	265.655672	265.6705924914197
[deg] Pointing Dec	-27.726786	-27.75084457842289
[deg] Pointing Roll	267.860257	268.0238282638672
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1425803651734
[mm] SIM translation stage offset	0	0.01005778216563158
[s] Observation start time (MET)	591136927.184000	591135700.76139
Observation start date	2016-09-24T20:40:59	2016-09-24T20:21:40
[s] Observation end time (MET)	591166927.184000	591167741.7507401
Observation end date	2016-09-25T05:00:59	2016-09-25T05:15:41
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	N	N
CCD I1 on	N	N
CCD I2 on	N	N
CCD I3 on	N	N
CCD S0 on	O1	Y
CCD S1 on	Y	Y
CCD S2 on	Y	Y
CCD S3 on	Y	Y
CCD S4 on	Y	Y
CCD S5 on	O2	Y
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	CUSTOM	1/2
Subarray start row	257	257
Subarray row count	512	512
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	1.8

2.3 Aspect



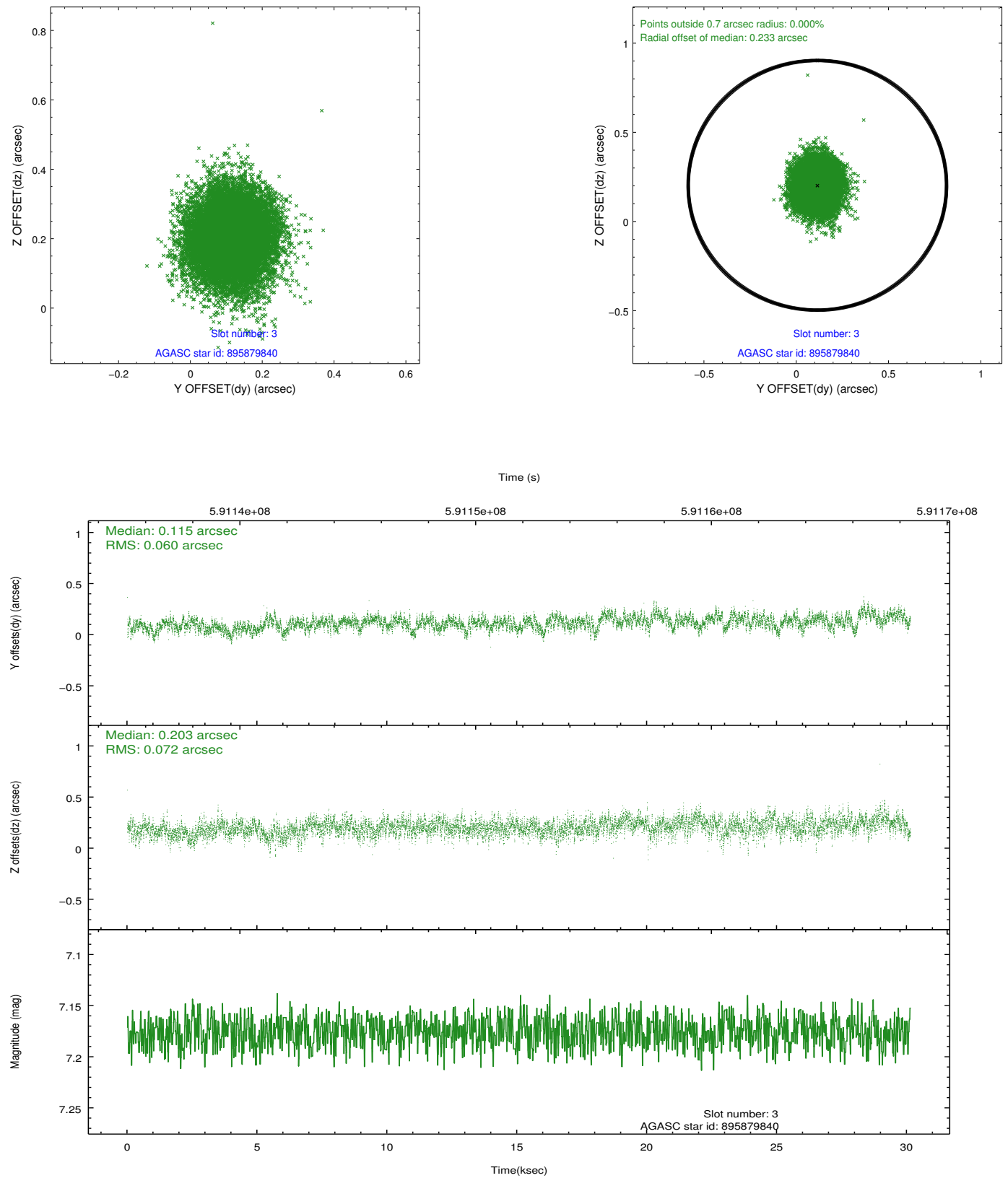


Slot Statistics

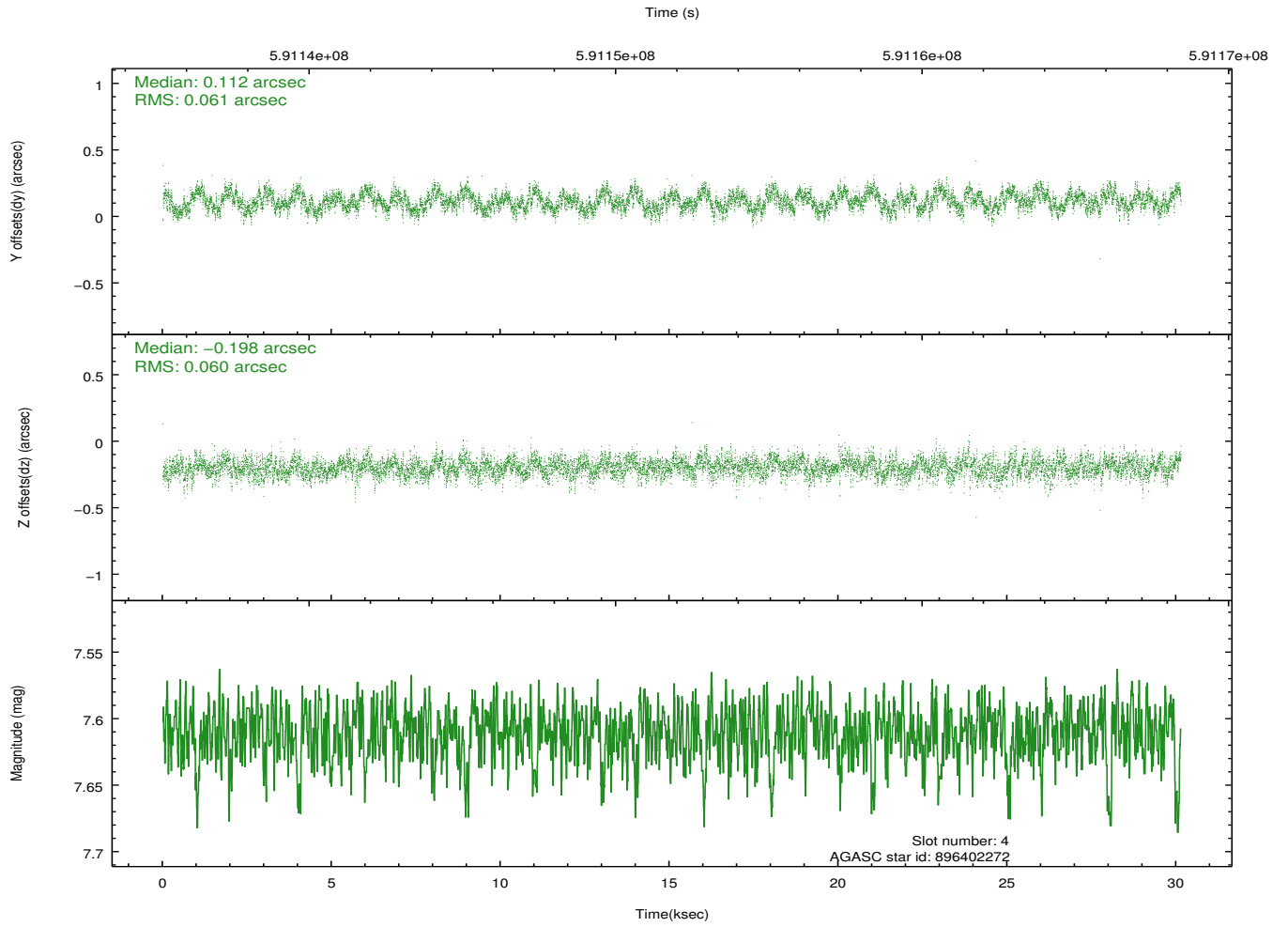
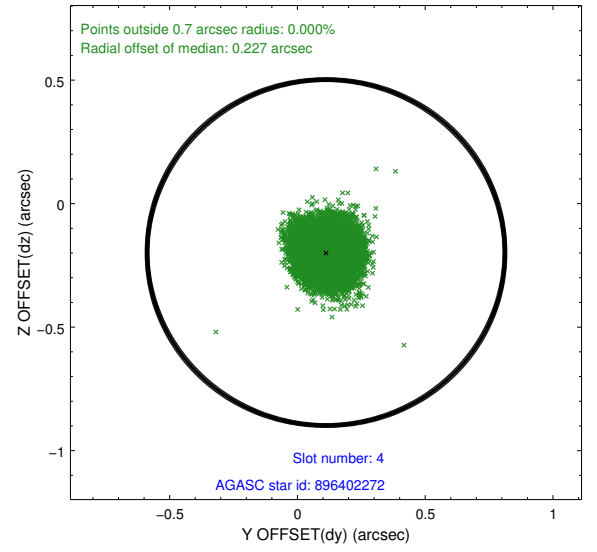
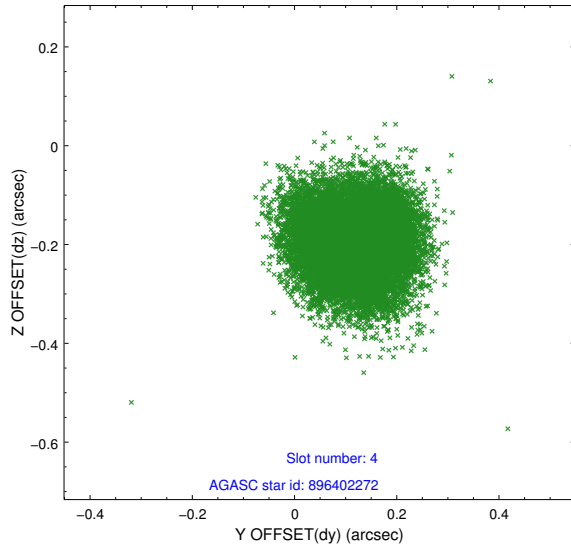
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.04	7351	0.121	-0.050	0.014	0.033	0.000000	0.000000	921.69	-1740.21
1	FID		ACIS-S-5	7.08	7351	-0.315	0.048	0.021	0.043	0.000000	0.000000	-1827.75	157.30
2	FID		ACIS-S-6	7.21	7351	0.167	0.016	0.018	0.056	0.000000	0.000000	387.16	801.37
3	GUIDE	used	895879840	7.18	14701	0.115	0.203	0.100	0.162	265.218397	-27.395778	-1135.44	-1441.21
4	GUIDE	used	896402272	7.61	14700	0.112	-0.198	0.092	0.145	265.637294	-28.313189	2112.09	20.46
5	GUIDE	used	896402656	8.81	14690	0.021	-0.011	0.106	0.178	265.739192	-28.230753	1803.67	332.59
6	GUIDE	used	896538248	8.88	14629	0.047	0.119	0.125	0.199	266.238138	-28.240101	1782.48	1915.47
7	GUIDE	used	896538696	6.80	14700	-0.291	-0.106	0.093	0.153	266.298470	-28.325572	2083.53	2116.53

2.4 Star Slots

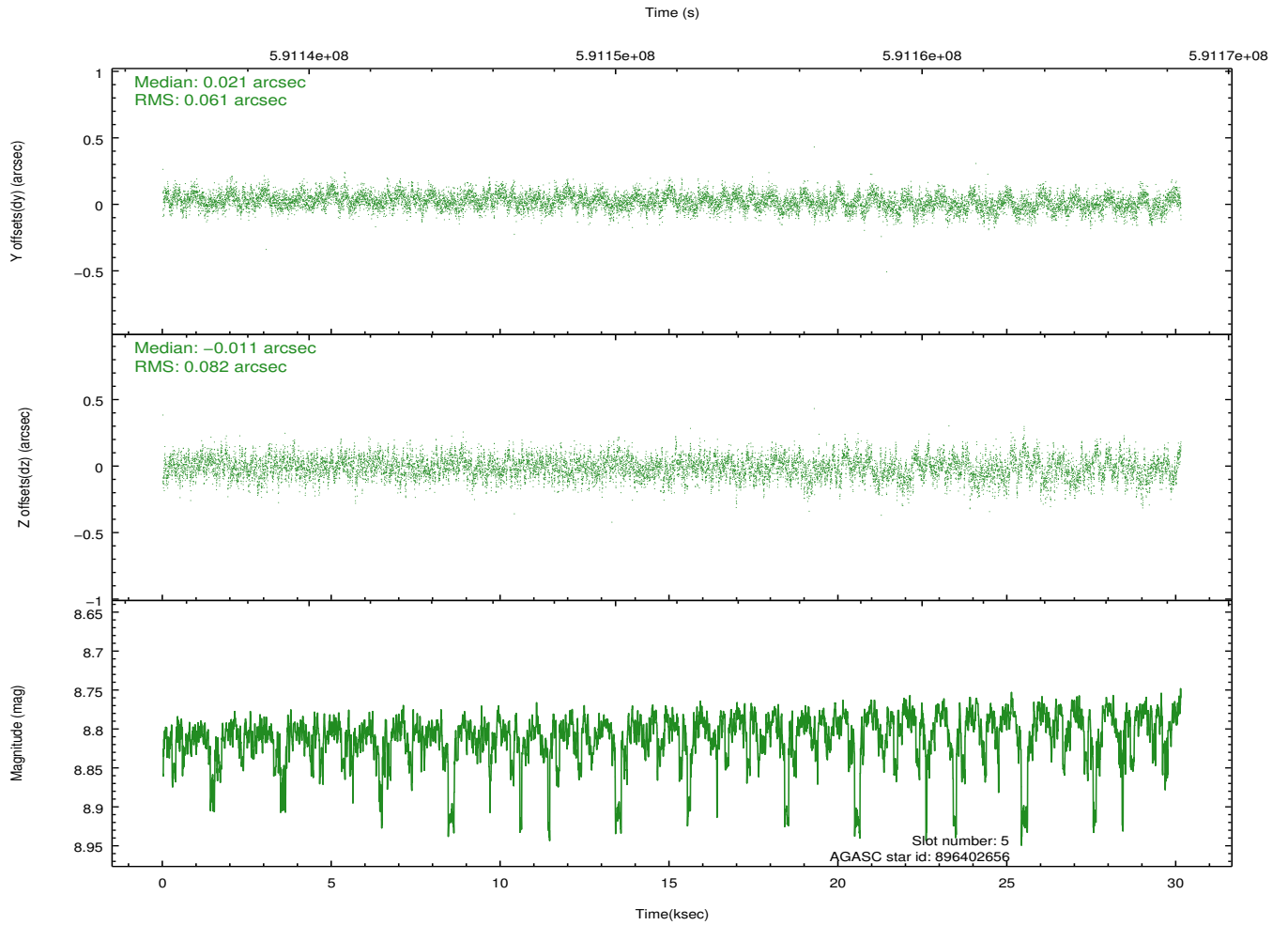
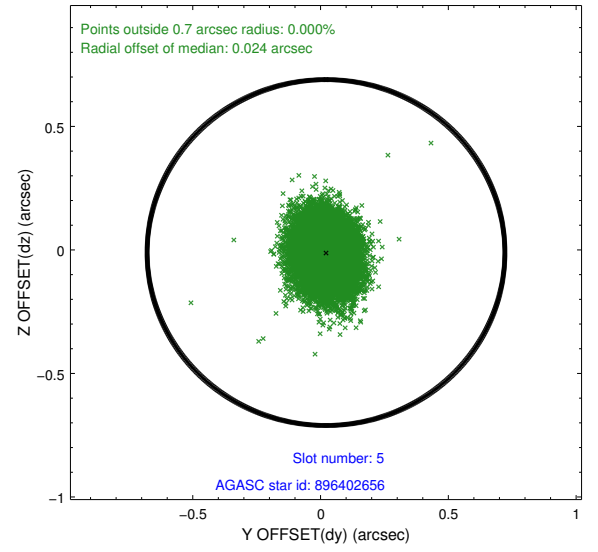
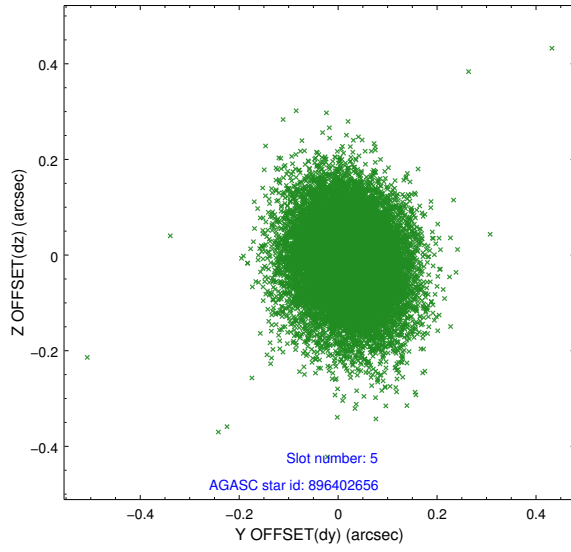
2.4.1 Slot 3



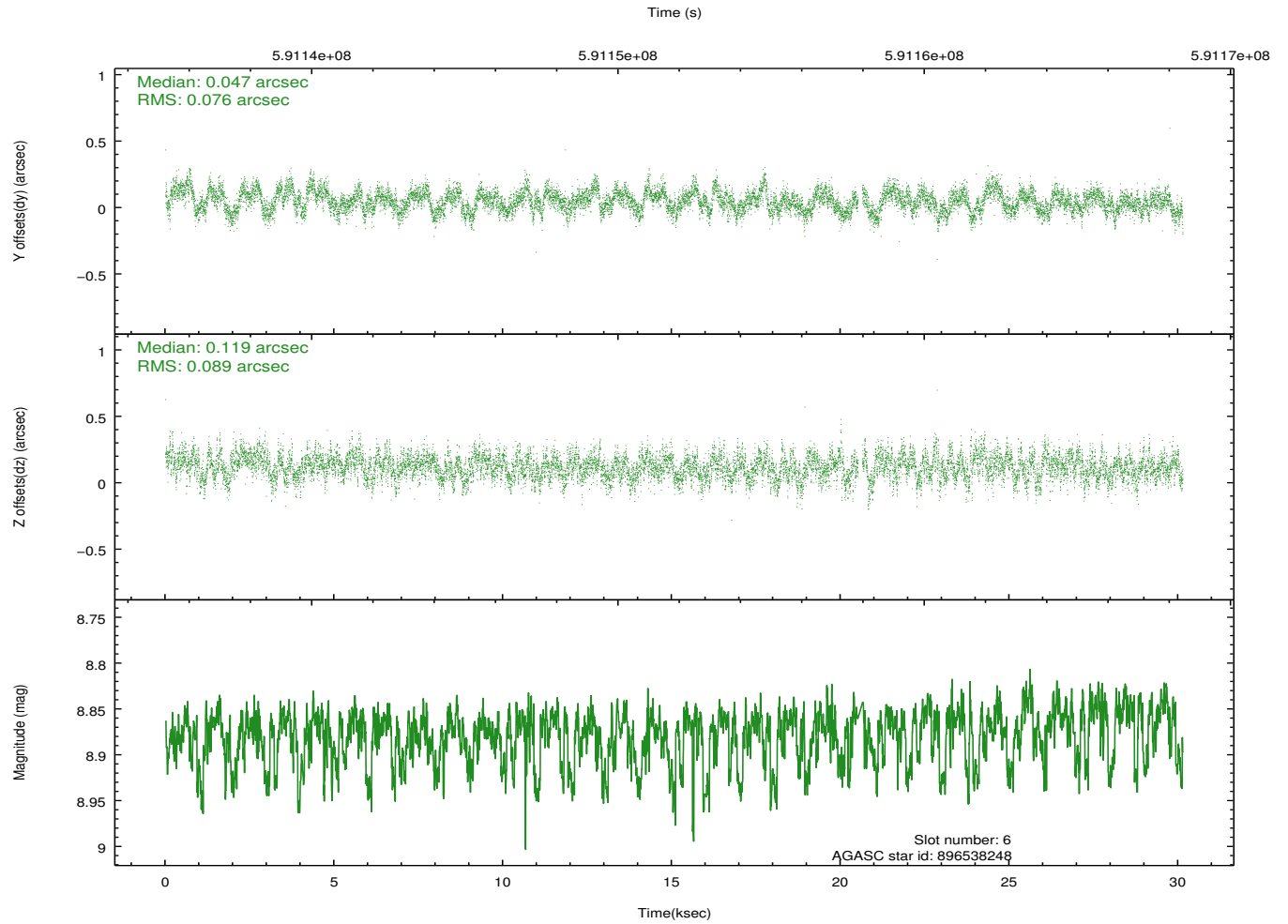
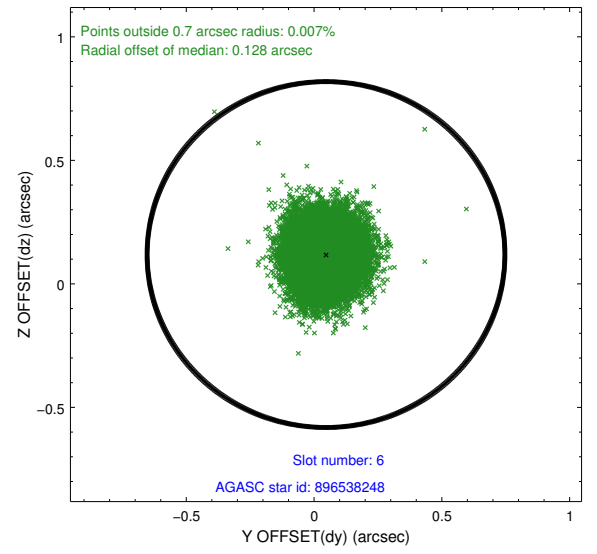
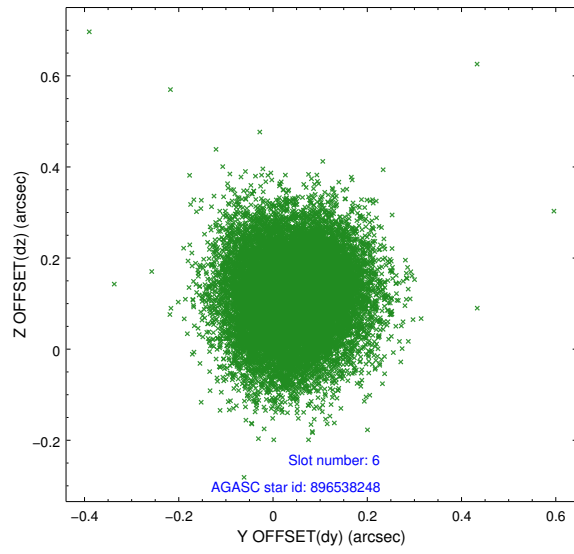
2.4.2 Slot 4



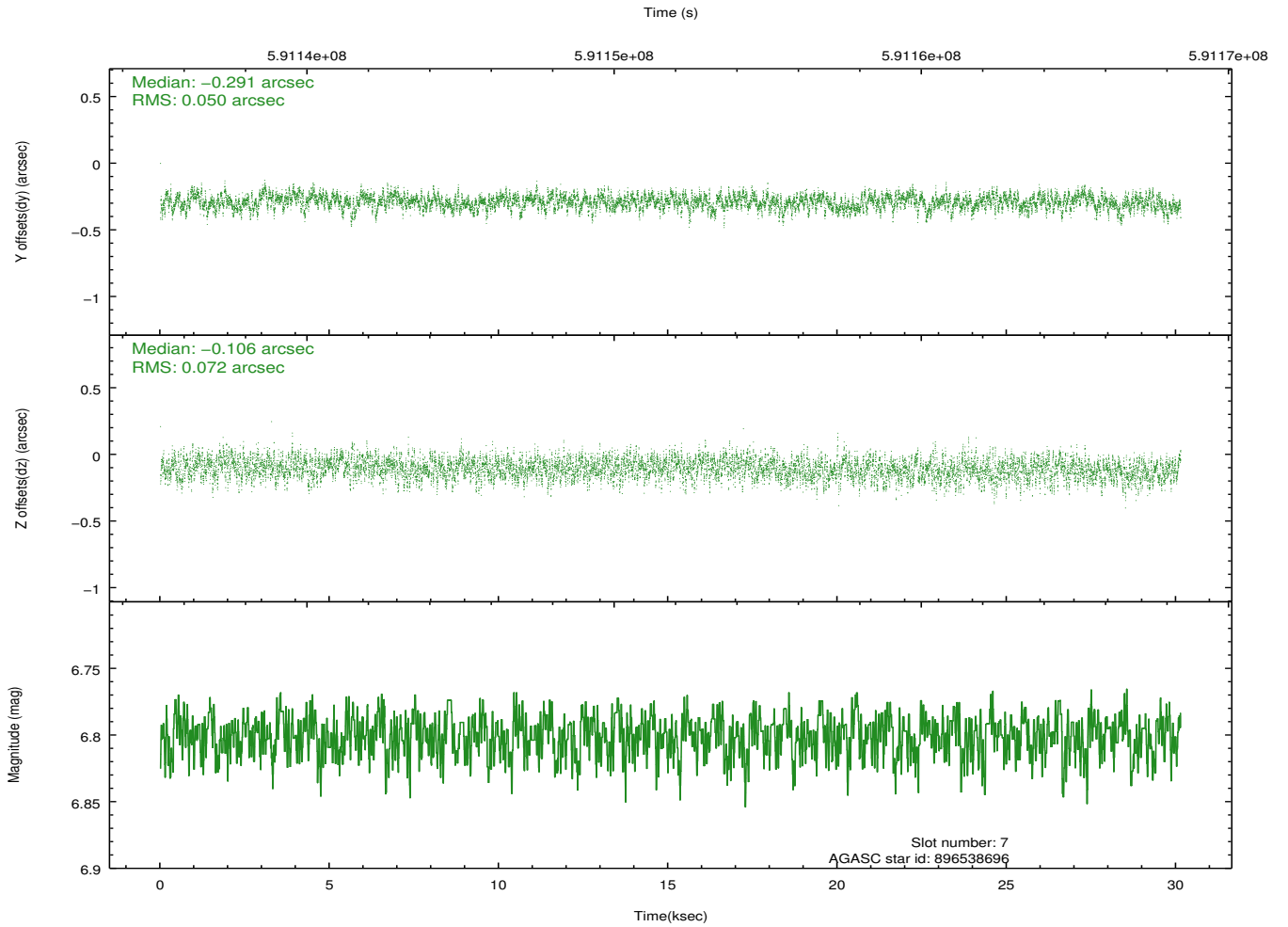
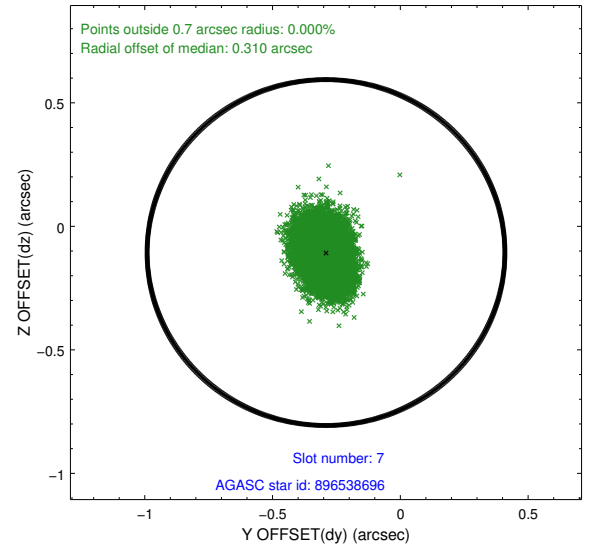
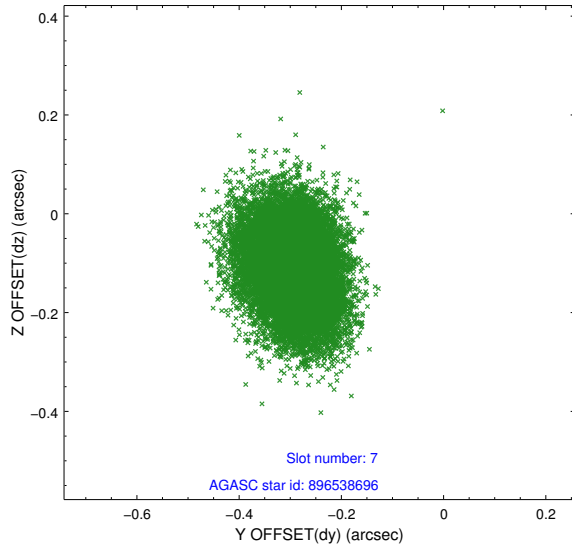
2.4.3 Slot 5



2.4.4 Slot 6

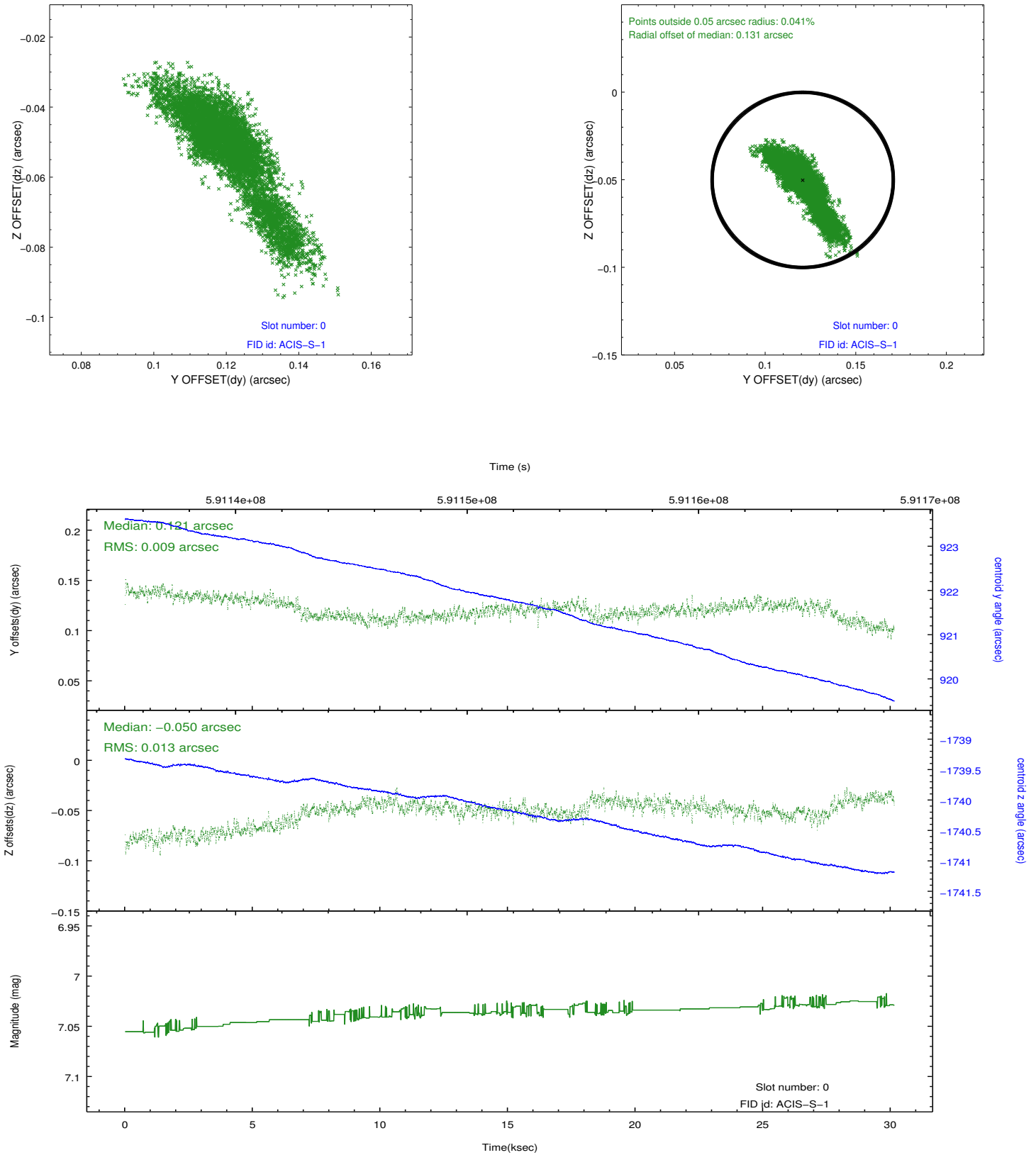


2.4.5 Slot 7

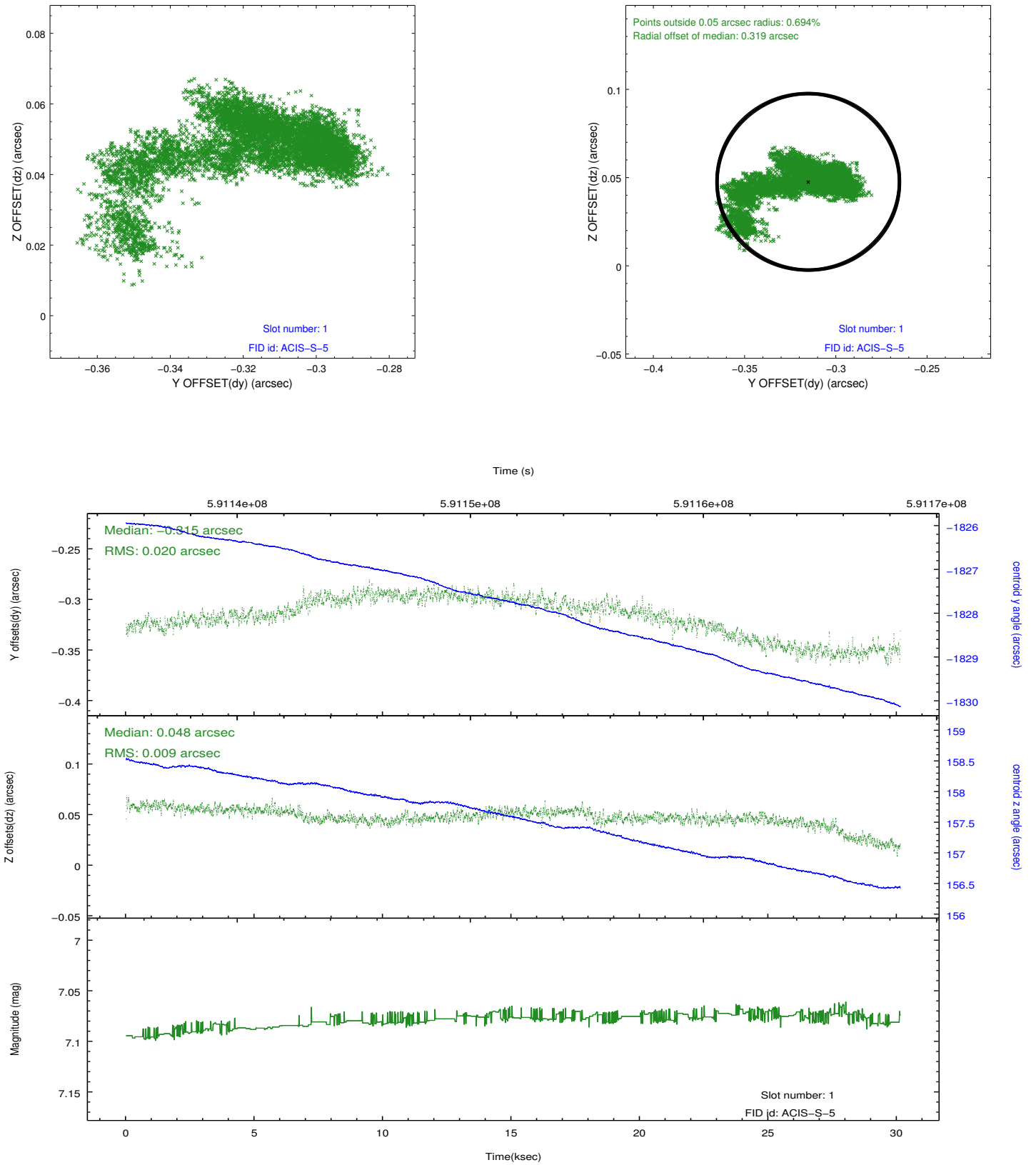


2.5 FID Slots

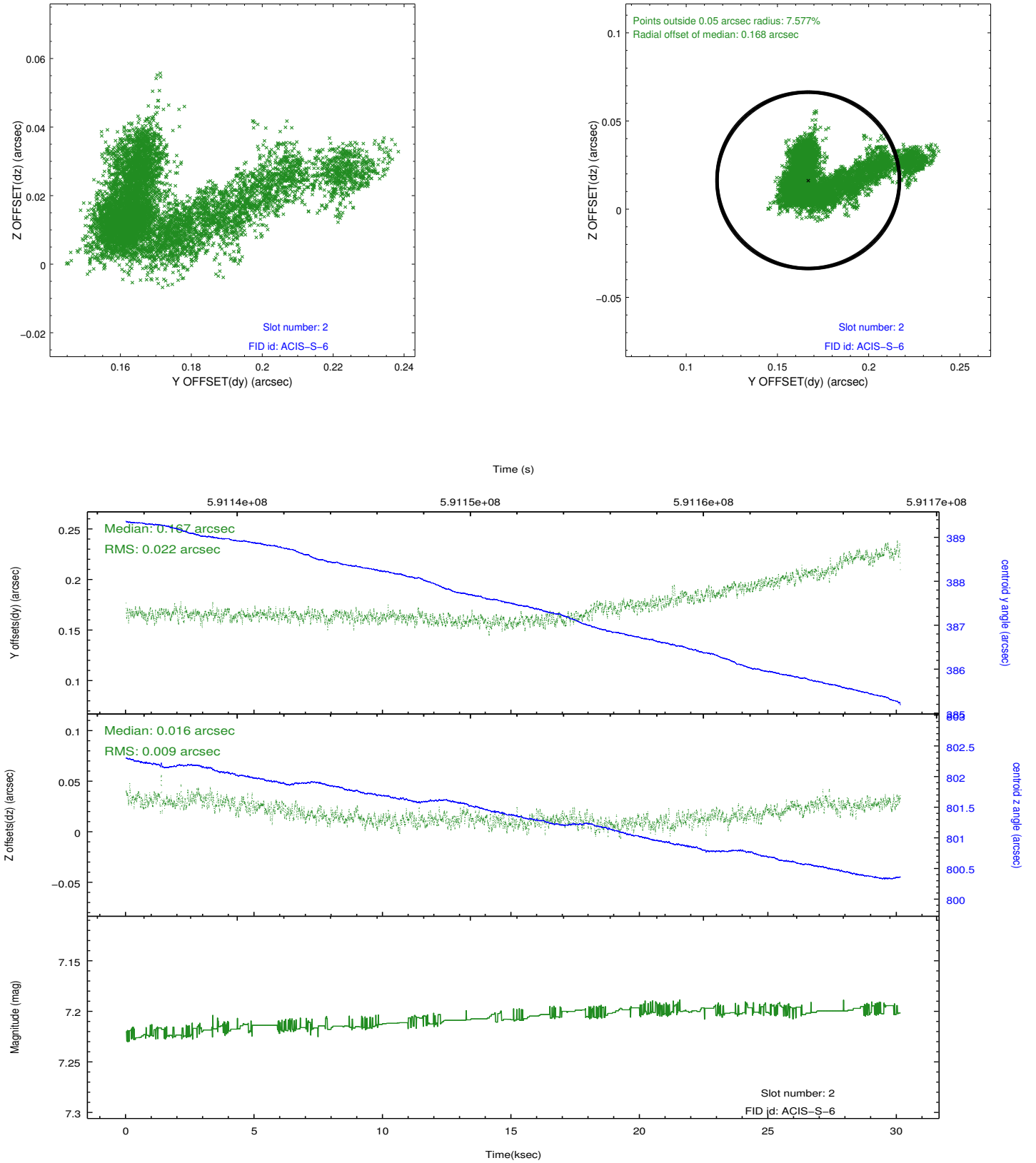
2.5.1 Slot 0



2.5.2 Slot 1

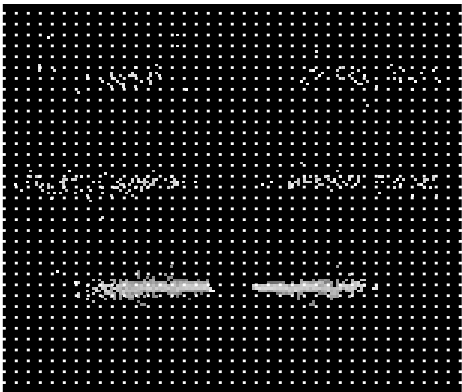


2.5.3 Slot 2

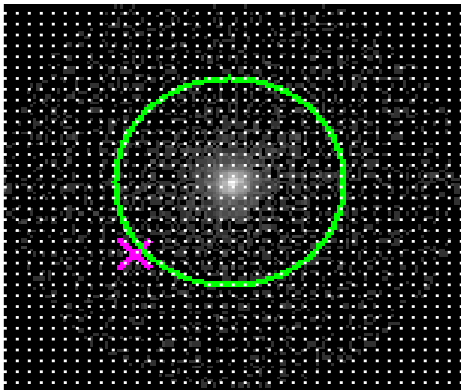


3 Gratings

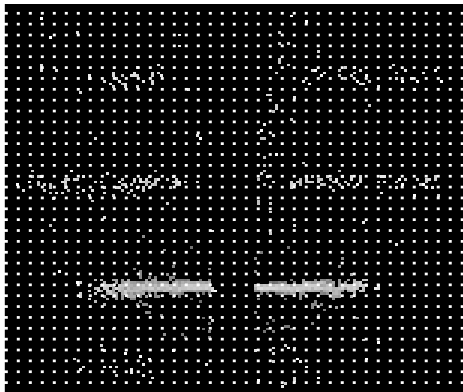
3.1 HEG Arm



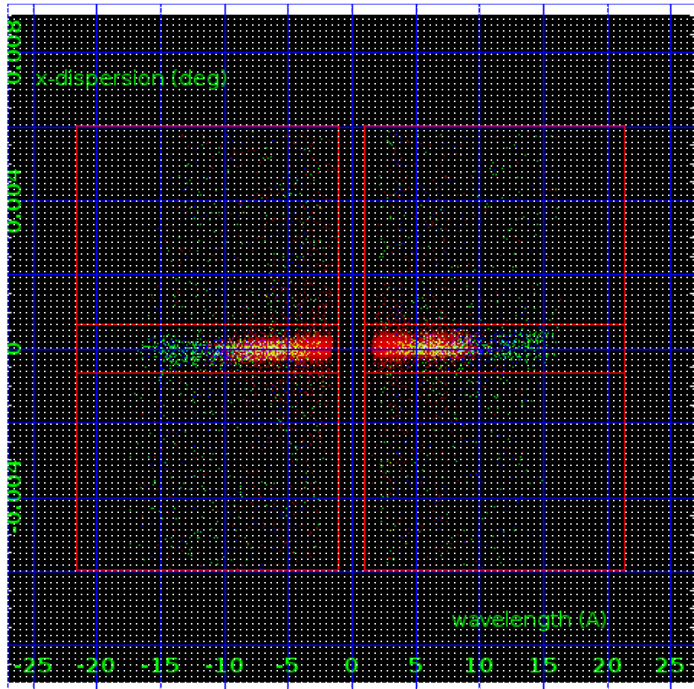
HEG Order Sort 123



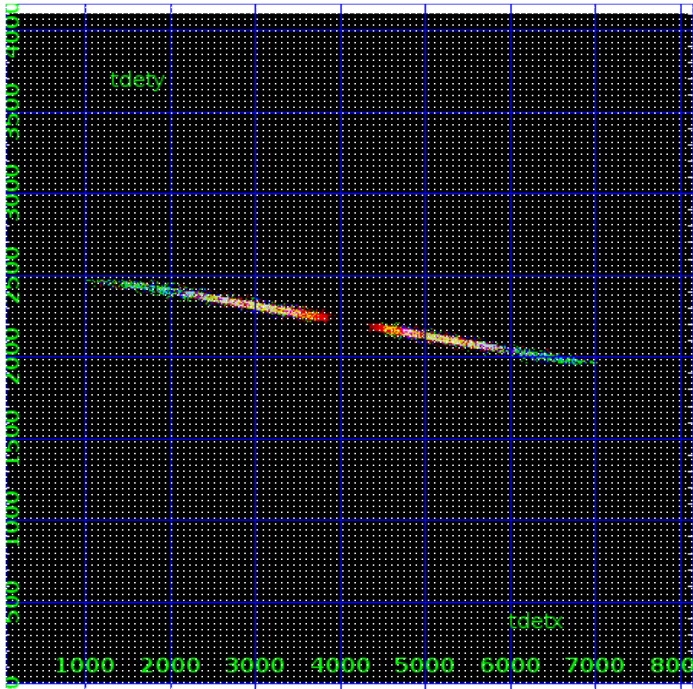
HEG Zero Order



HEG Order Sort ALL

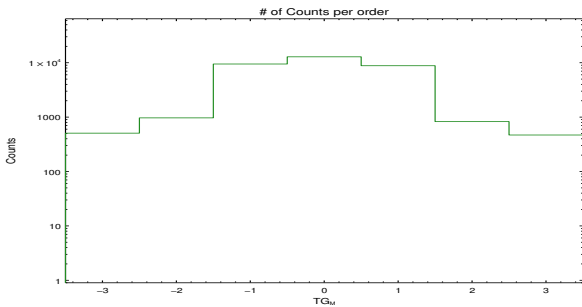


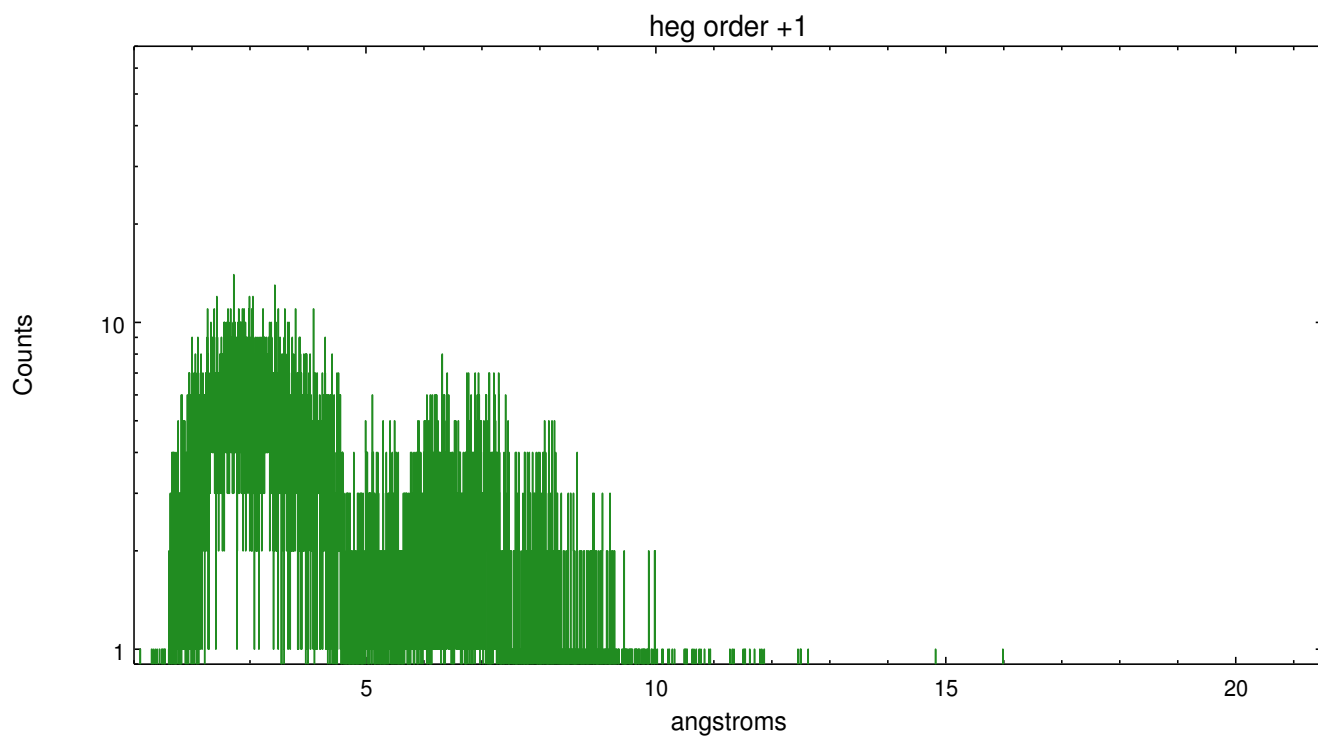
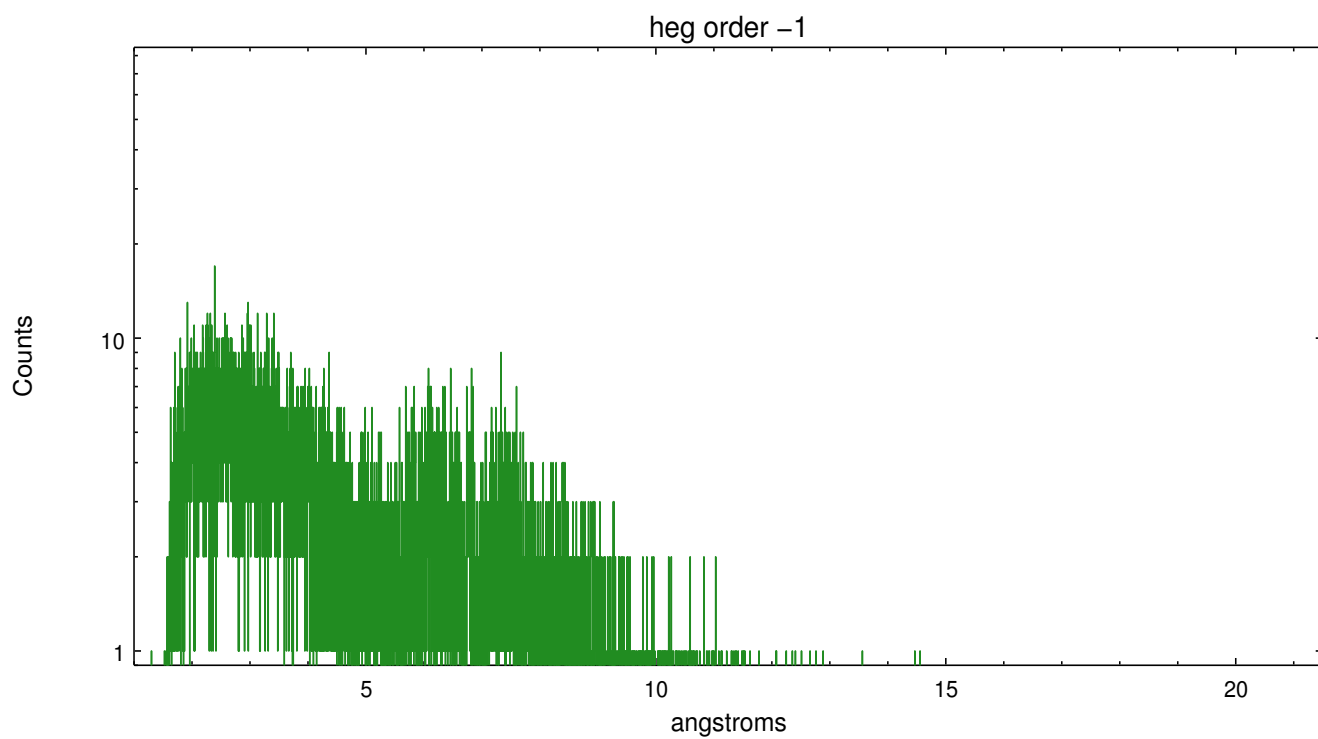
Spot Image HEG



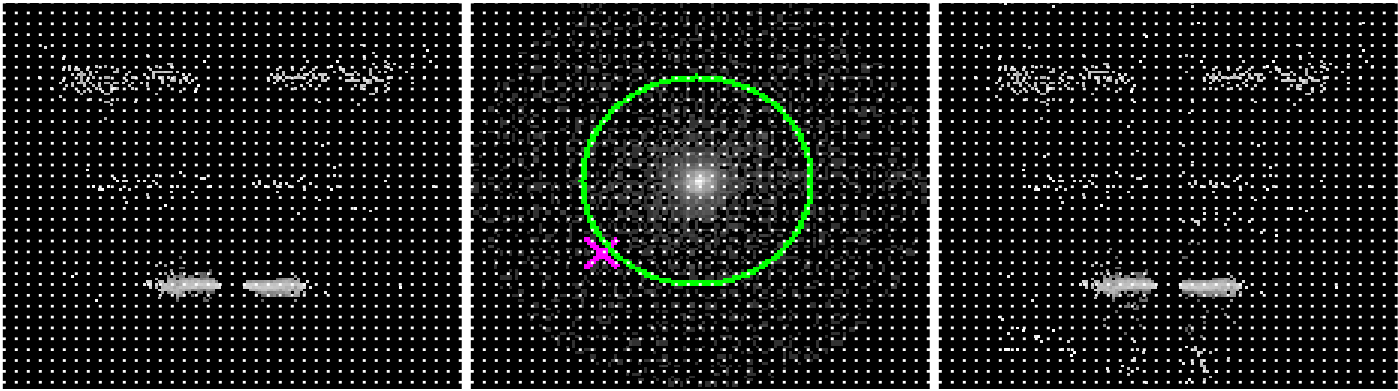
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	507	969	9474	12849	8814	827	469





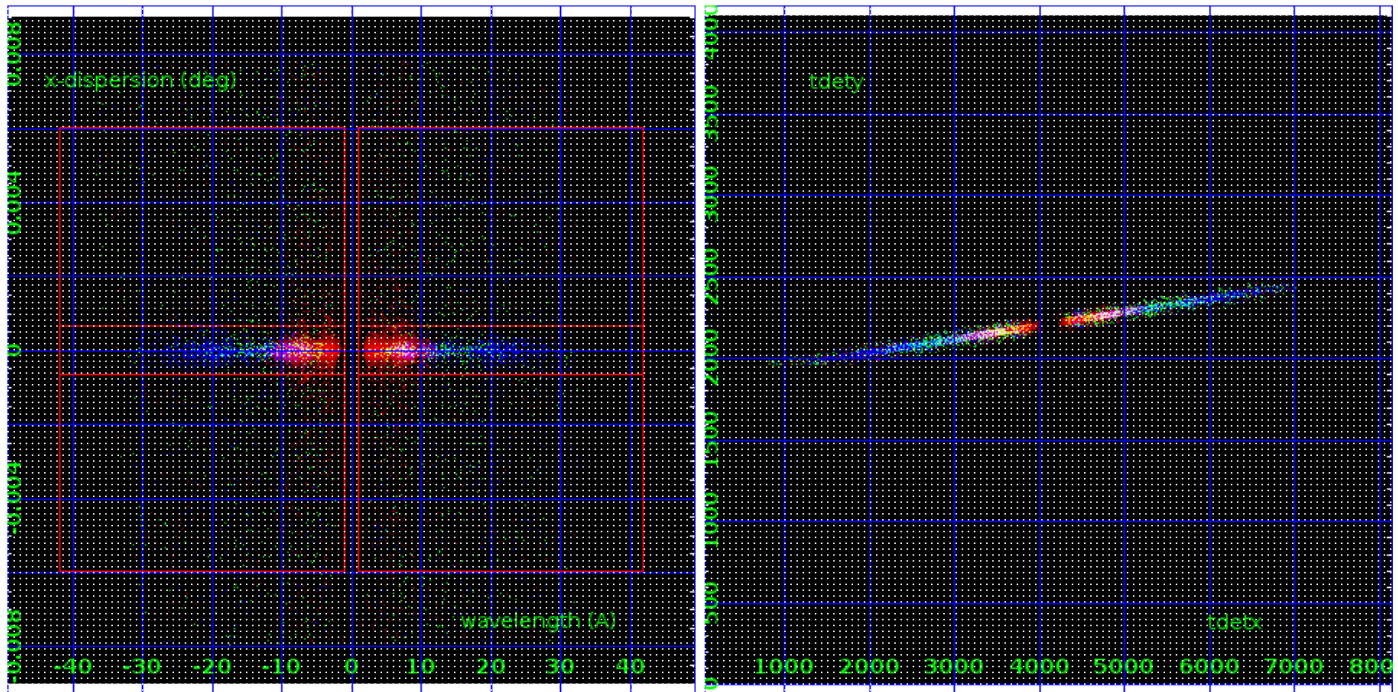
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

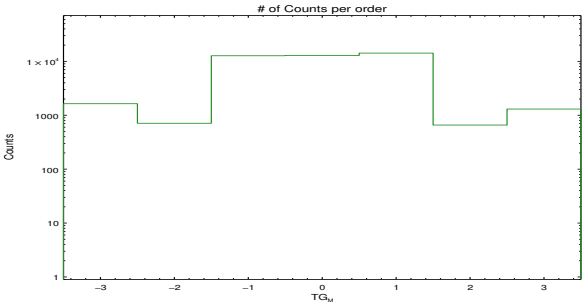
MEG Order Sort ALL

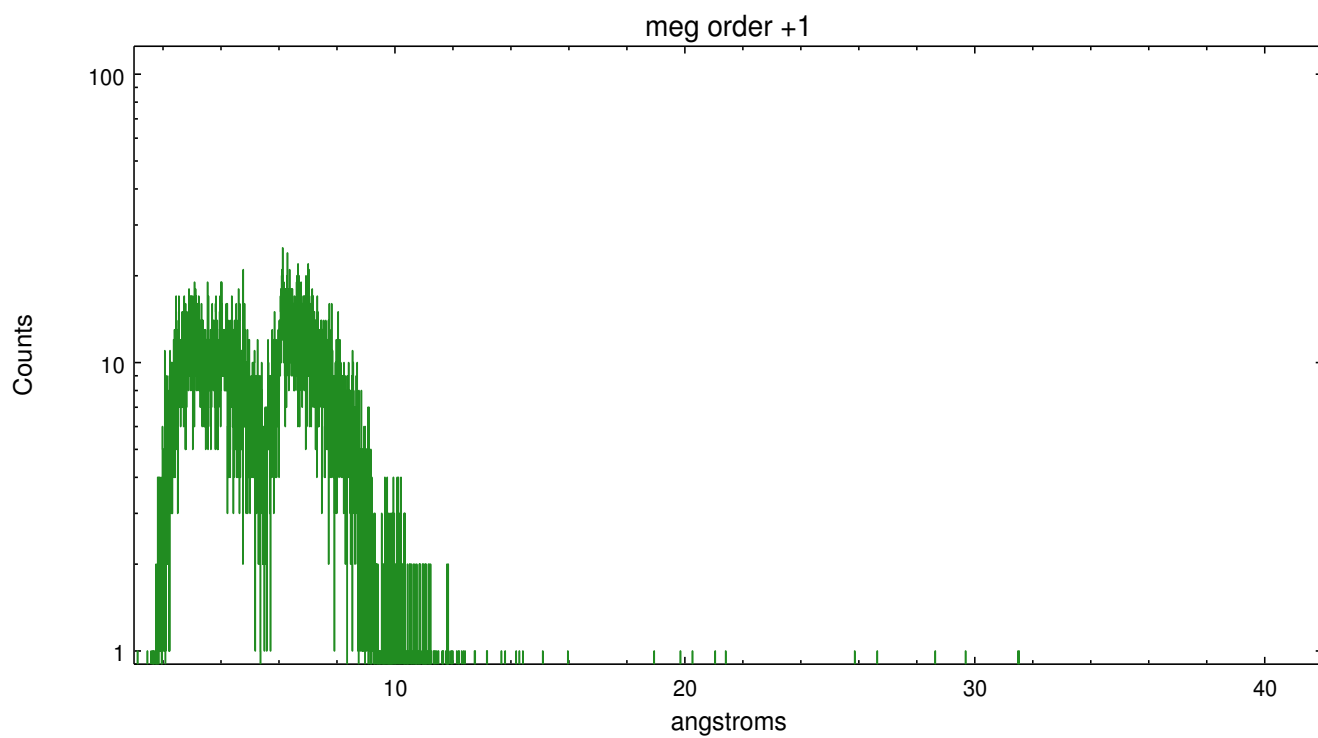
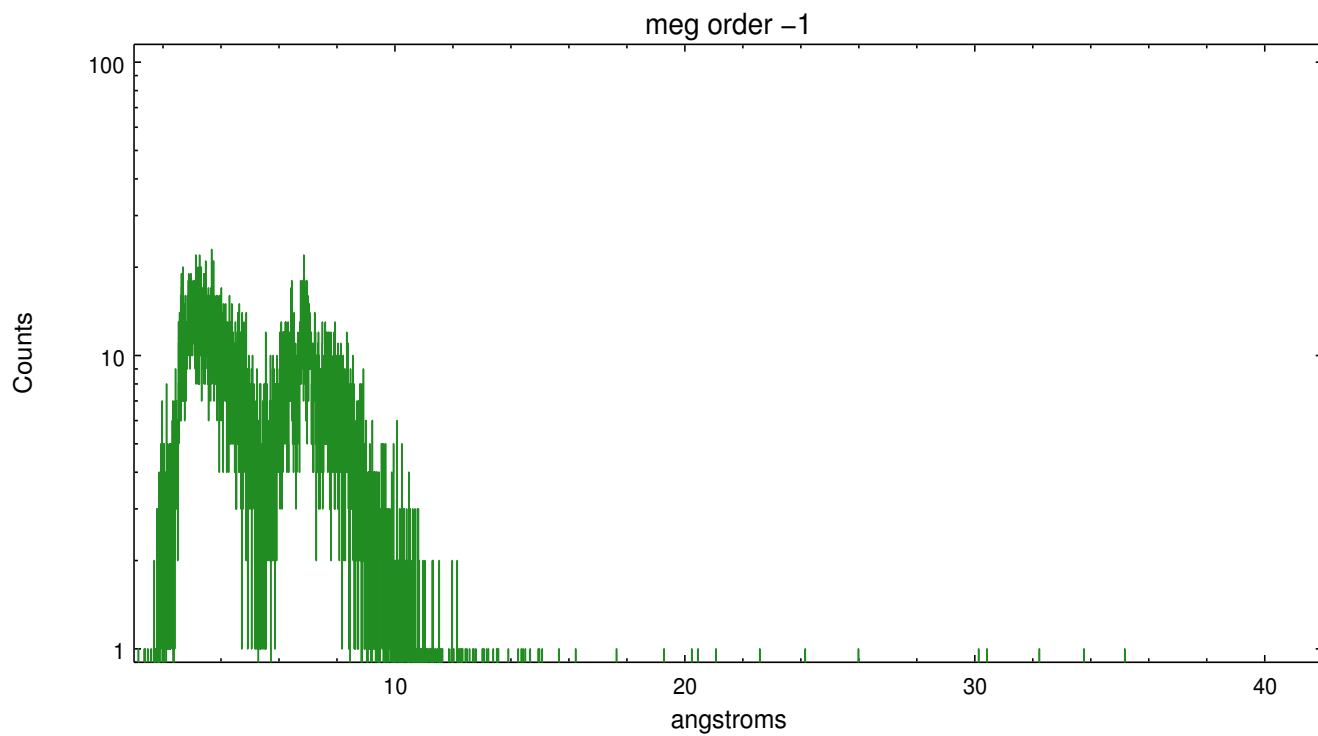


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1638	710	12707	12849	14231	658	1304





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2016.09.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.063599203587

A.2 Comments

Zeroth order piled up. The zeroth order sky position was determined using a software tool developed by CXC called findzero, which is available in CIAO as part of the tgdetect2 tool. The tool calculates the point of intersection of the readout streak on the ACIS CCD and the meg or leg dispersed spectral arm, rather than using a centroid position of the source. The findzero results are more accurate than source centroid in this case.