

V&V Reference Report

L2 ASCDS Version : 10.8.4

Observation 23300 - L2 Version 1
Chandra X-Ray Center

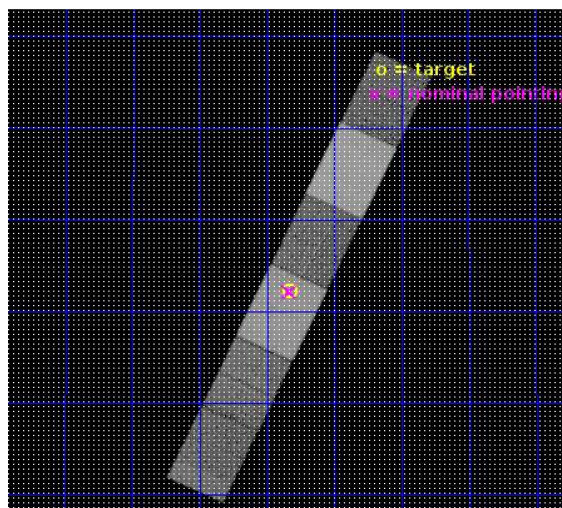
L2 Processing Date : Jul 4 2020

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	HEG Arm	17
3.2	MEG Arm	19
A	Summary	21
A.1	Status	21
A.2	Comments	21

1 Front

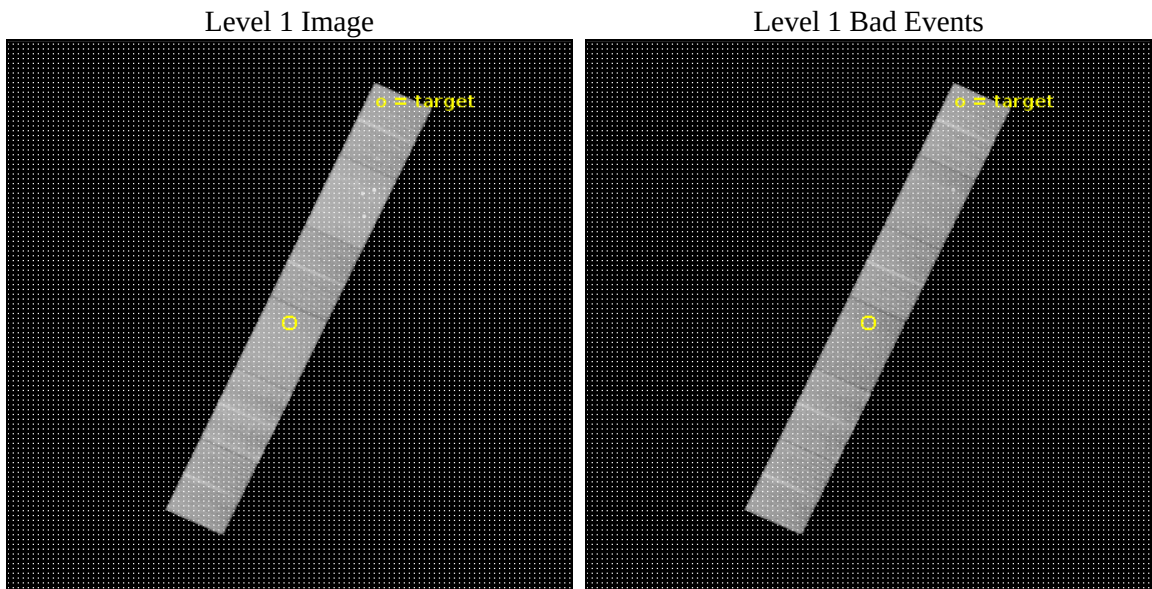
seq_num	704049	Sequence number
obs_id	23300	Observation id
title	INVESTIGATION ON MRK 335 IN AN INTERMEDIATE STATE	Proposal title
observer	Rozenn Boissay-Malaquin	Principal investigator
object	Mrk 335	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	1.581417	Observer's specified target RA [deg]
dec_targ	20.20295	Observer's specified target Dec [deg]
ra_nom	1.58337580688	Nominal RA [deg]
dec_nom	20.2027641478	Nominal Dec [deg]
roll_nom	115.159815617	Nominal Roll [deg]
revision	1	Processing version of data
ontime	30077.105909705	Sum of GTIs [s]
livetime	29591.334561543	Livetime [s]
ontime4	30077.146949649	Sum of GTIs [s]
ontime5	30077.064869642	Sum of GTIs [s]
ontime6	30077.023829699	Sum of GTIs [s]
ontime7	30077.105909705	Sum of GTIs [s]
ontime8	30076.982789636	Sum of GTIs [s]
ontime9	30076.941749692	Sum of GTIs [s]
l2events	312791	Number of level 2 events



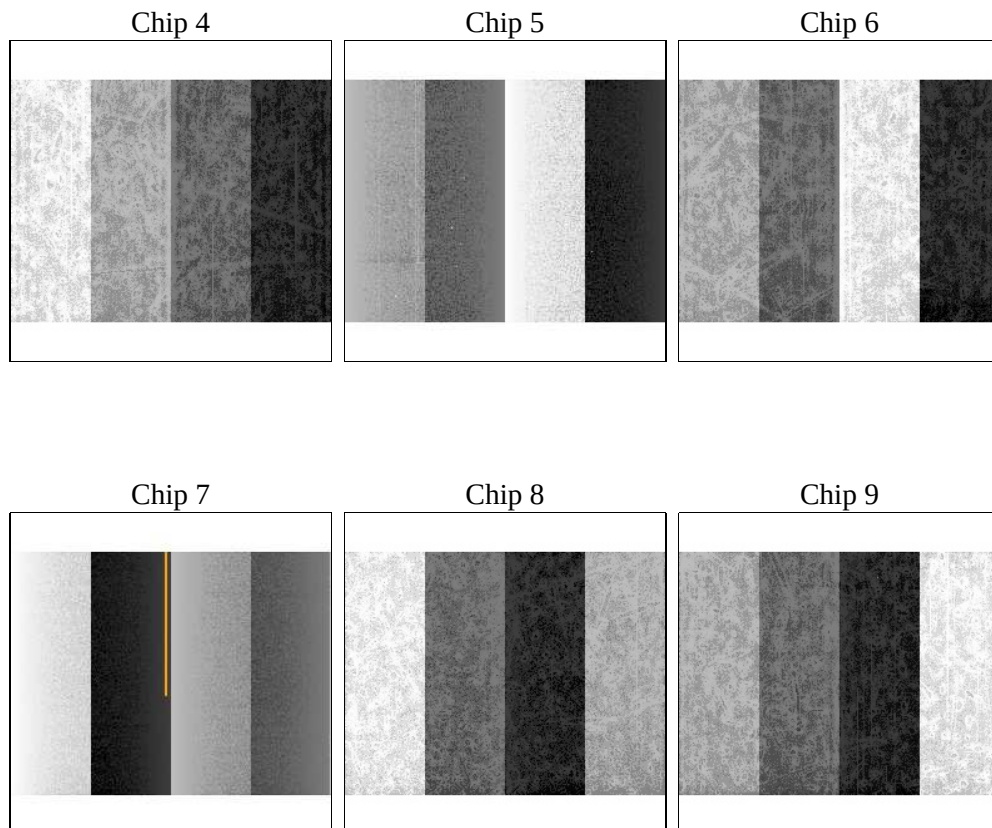
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.8.4	Processing system revision	ontime	30077.105909705	Sum of GTIs [s]
caldsver	4.9.1	 	ontime4	30077.146949649	Sum of GTIs [s]
date	2020-07-04T22:03:30	Date and time of file creation	ontime5	30077.064869642	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	30077.023829699	Sum of GTIs [s]
			ontime7	30077.105909705	Sum of GTIs [s]
			ontime8	30076.982789636	Sum of GTIs [s]
			ontime9	30076.941749692	Sum of GTIs [s]
			l1events	1375636	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			src1a_pos	(4100.56, 4009.88)	src1a sky pixel position

2.1.4 Events

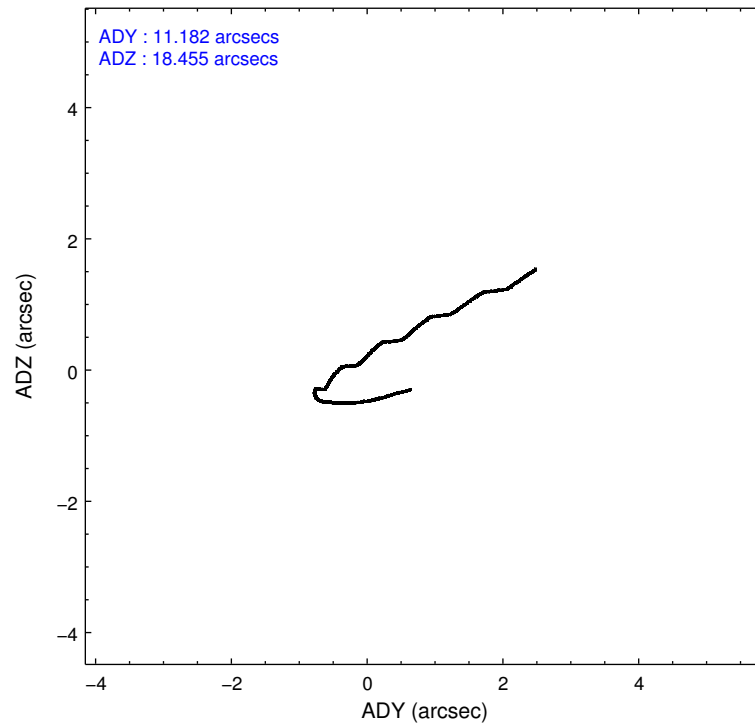
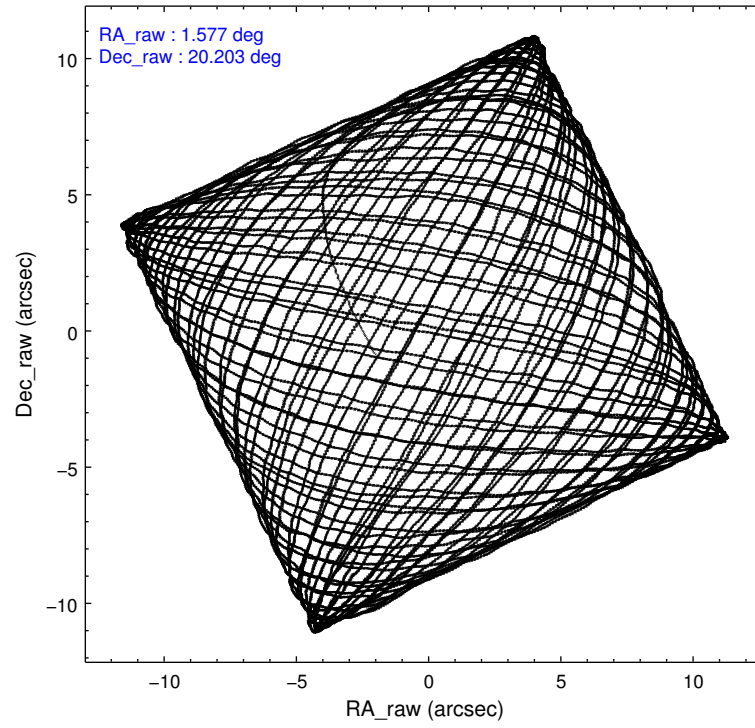
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	215438	301975	191437	237714	238652	190420	grade 0 events	8112	16243	6439	9355	17541	7190
rejected events	193492	154325	170335	132870	177137	168430		3%	5%	3%	3%	7%	3%
rejected %	89%	51%	88%	55%	74%	88%	grade 1 events	144	1950	73	394	157	93
								0%	0%	0%	0%	0%	0%
							grade 2 events	5176	45145	5278	22471	14931	5207
								2%	14%	2%	9%	6%	2%
							grade 3 events	2494	4475	2023	8679	6213	2263
								1%	1%	1%	3%	2%	1%
							grade 4 events	2284	4200	2016	8288	6058	2164
								1%	1%	1%	3%	2%	1%
							grade 5 events	8695	18992	7969	22944	12775	9379
								4%	6%	4%	9%	5%	4%
							grade 6 events	3881	77600	5346	56060	16779	5170
								1%	25%	2%	23%	7%	2%
							grade 7 events	184652	133370	162293	109523	164198	158954
								85%	44%	84%	46%	68%	83%

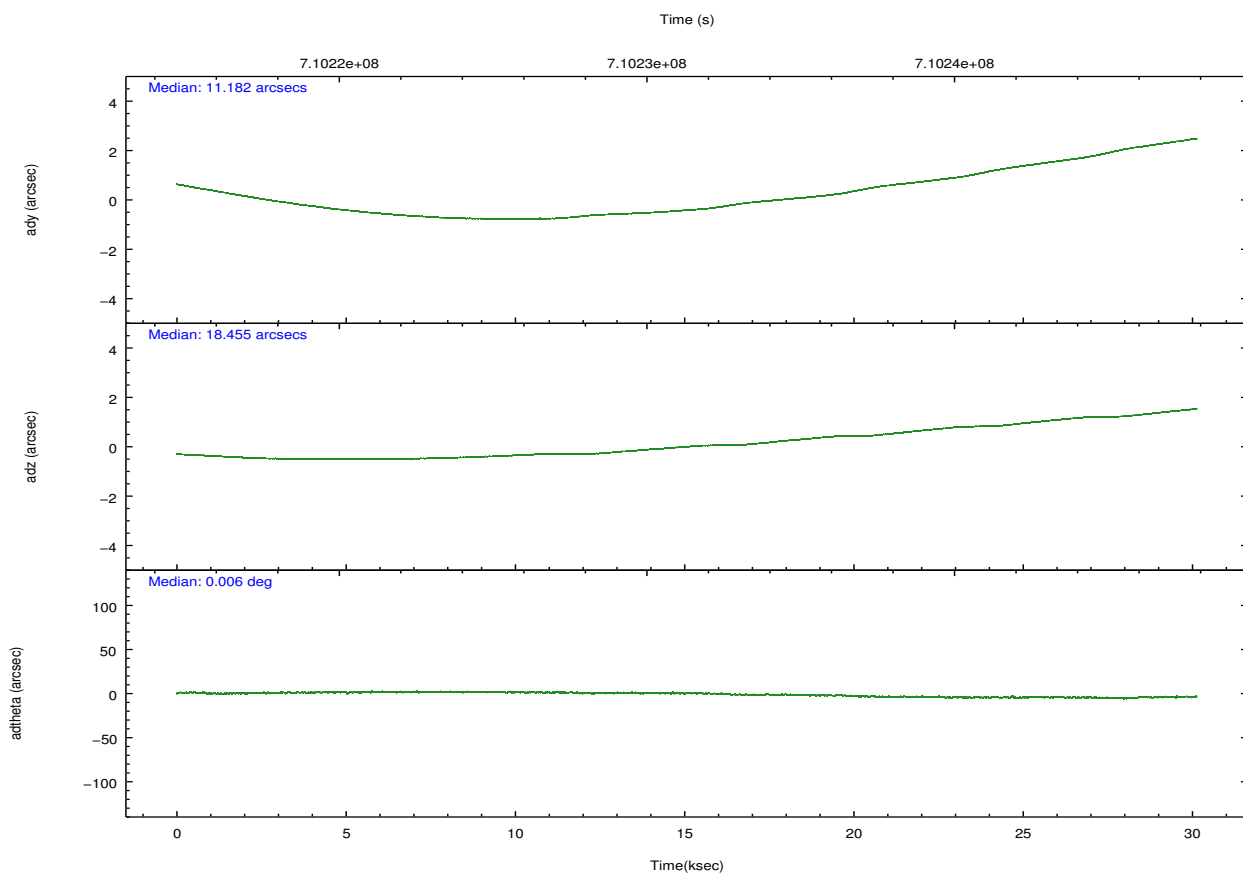
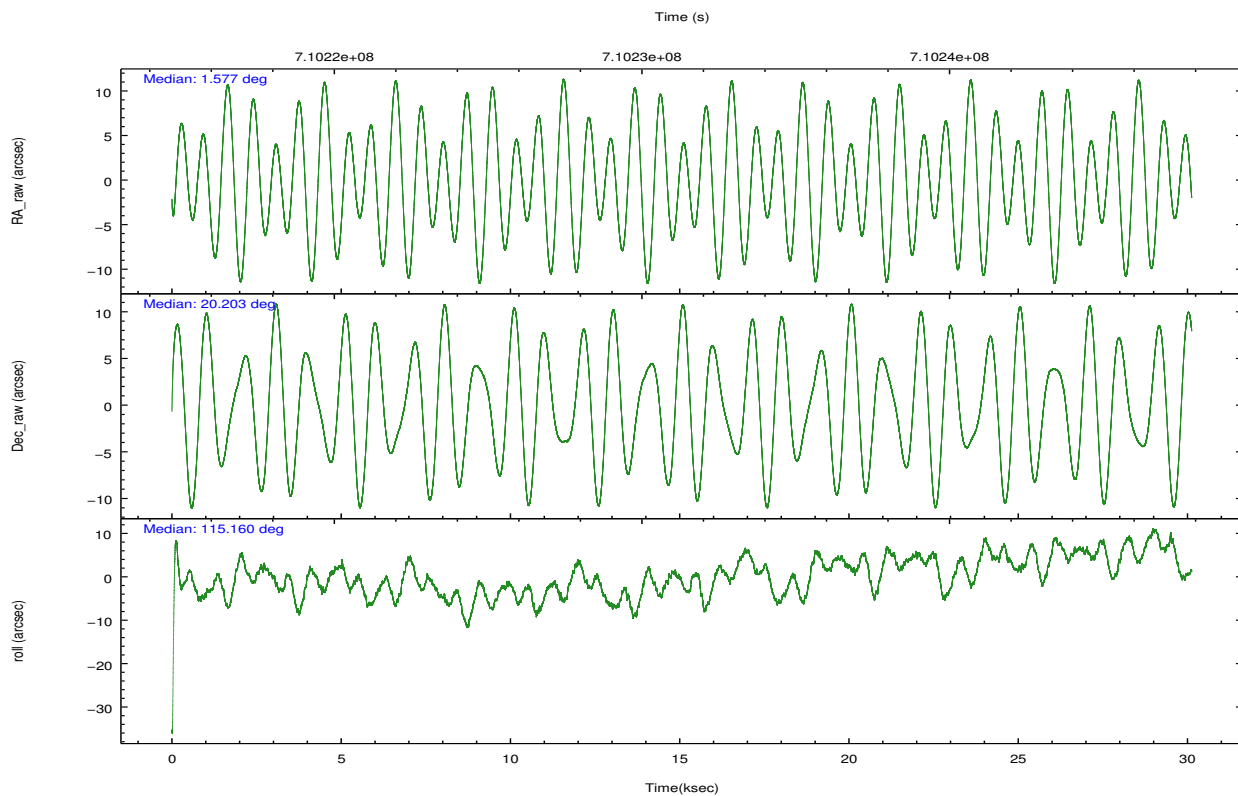
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-456789	ACIS-456789
Grating	HETG	HETG
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	1.600680	1.58337580688
[deg] Pointing Dec	20.188161	20.2027641478
[deg] Pointing Roll	114.993351	115.159815617
[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)	710216337.184000	710215280.49823
Observation start date	2020-07-04T02:17:48	2020-07-04T02:01:20
[s] Observation end time (MET)	710246337.184000	710247152.3626699
Observation end date	2020-07-04T10:37:48	2020-07-04T10:52:32
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar version number	8	8
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	CUSTOM
Subarray start row	125	125
Subarray row count	774	774
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	2.5

2.3 Aspect



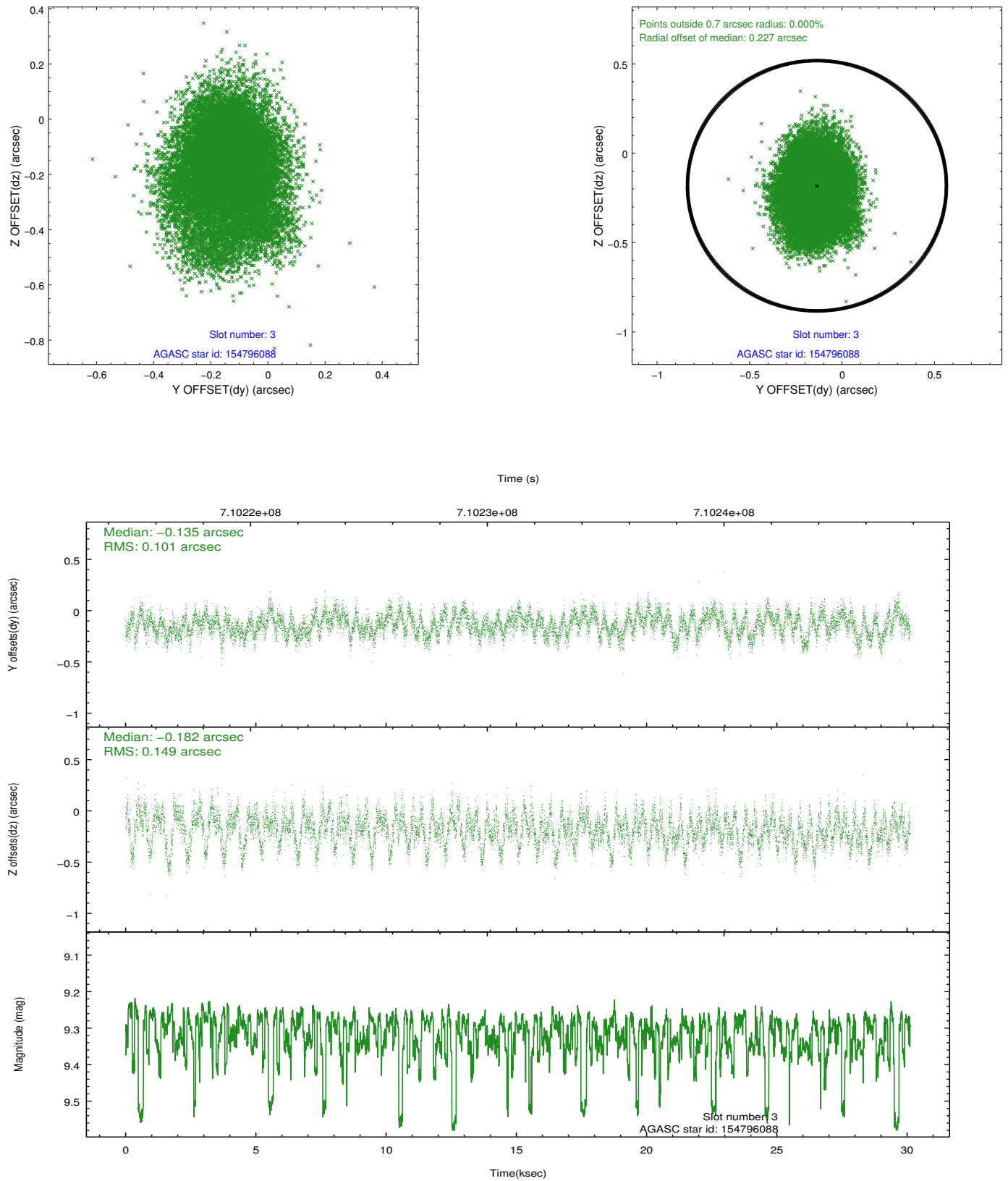


Slot Statistics

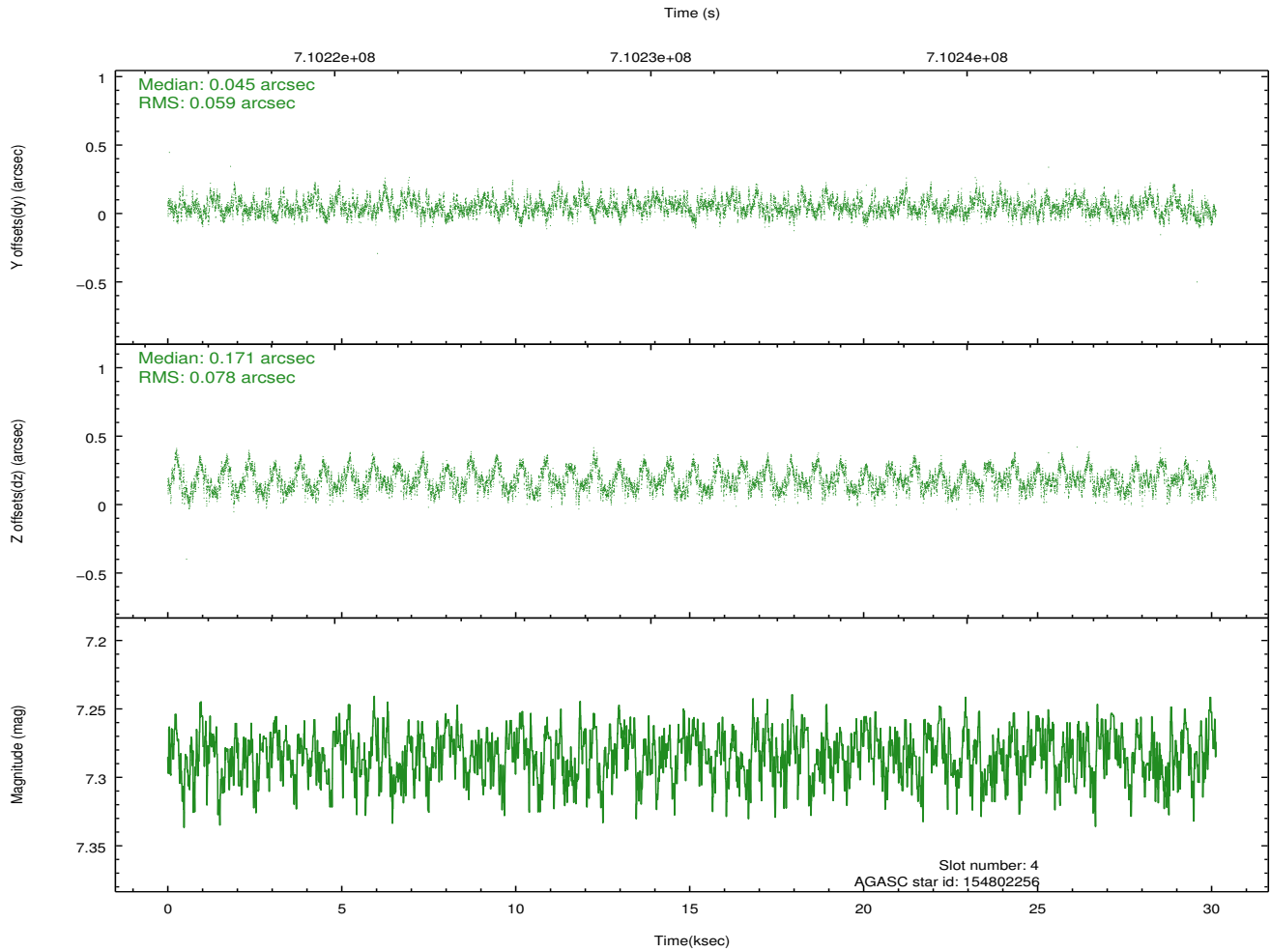
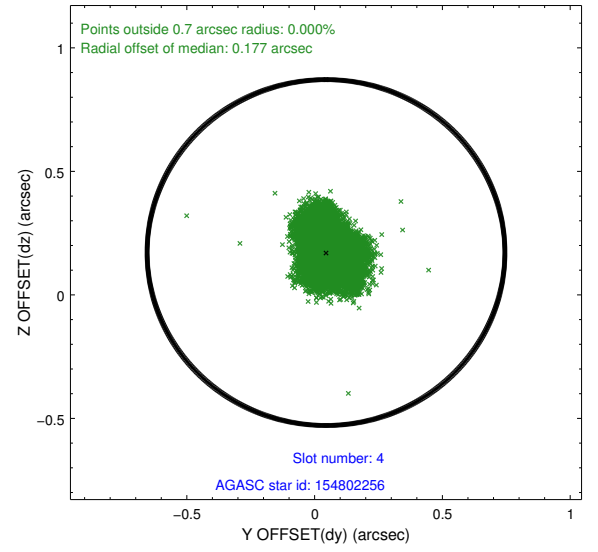
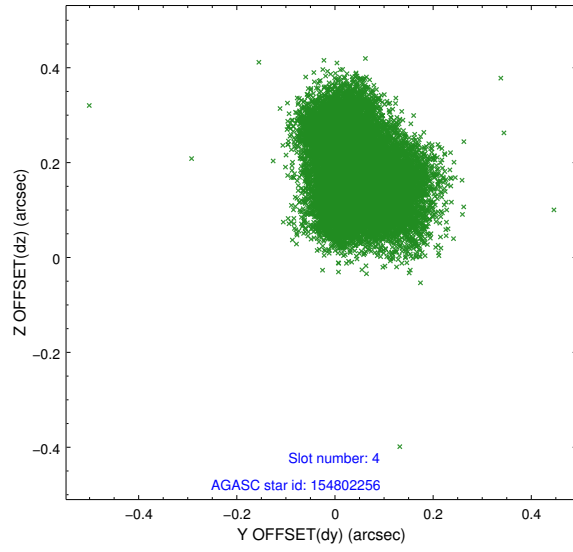
id	status	used	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		7.08	7348	1.000	0.176	-0.100	0.021	0.040	0.000000	0.000000	-764.44	-1740
1	FID		7.22	7348	1.000	0.130	-0.058	0.012	0.033	0.000000	0.000000	2149.08	167
2	FID		7.20	7348	1.000	-0.339	0.165	0.018	0.035	0.000000	0.000000	-1817.39	162
3	GUIDE	used	9.31	14665	1.000	-0.135	-0.182	0.194	0.314	1.327954	19.982770	-279.61	1149
4	GUIDE	used	7.28	14694	1.000	0.045	0.171	0.107	0.163	2.267963	19.924686	-1808.99	-1647
5	GUIDE	used	9.06	14679	1.000	0.235	0.167	0.156	0.257	2.130274	20.267286	-494.94	-1741
6	GUIDE	used	8.08	14620	1.000	-0.082	-0.053	0.118	0.192	1.710987	20.559760	1056.08	-901
7	GUIDE	used	7.53	14690	1.000	-0.065	-0.110	0.105	0.178	1.810289	20.555714	901.67	-1199

2.4 Star Slots

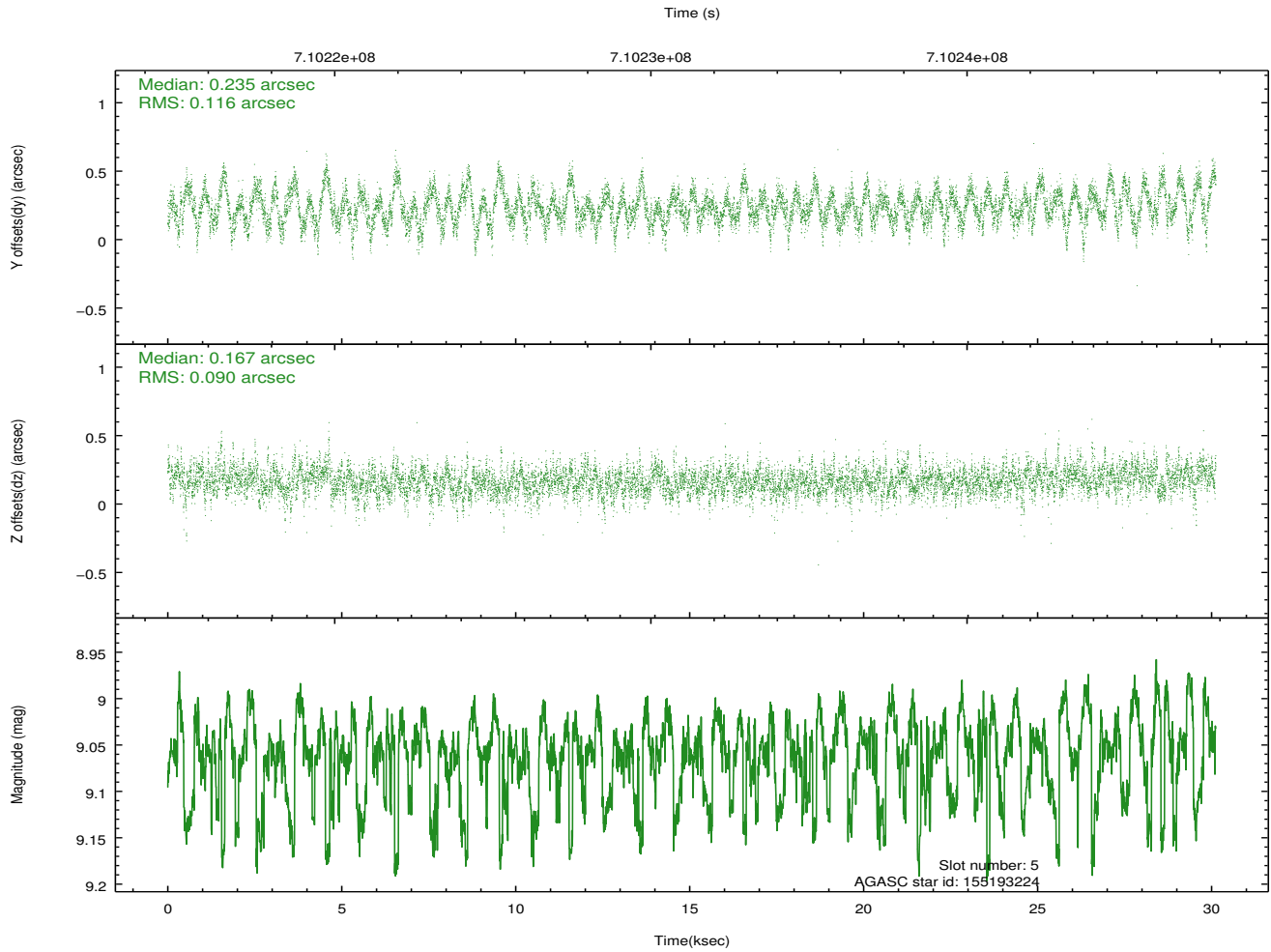
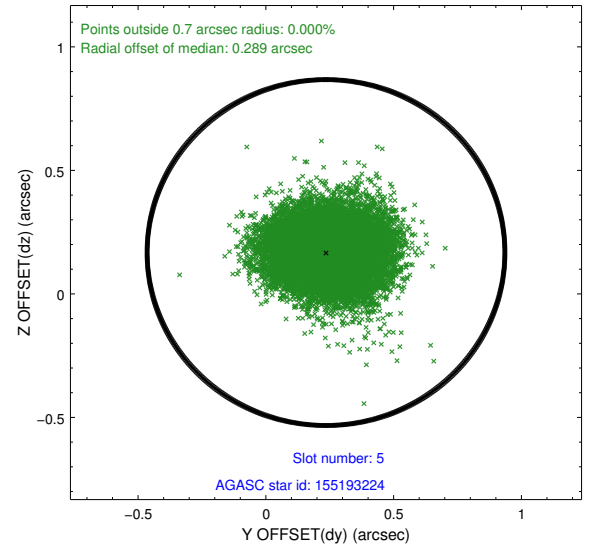
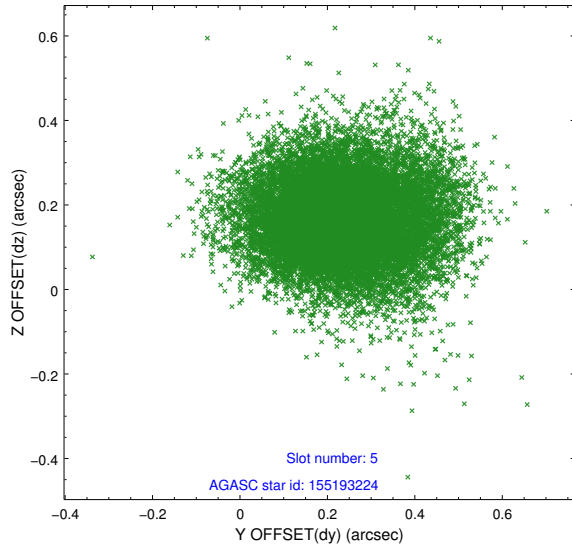
2.4.1 Slot 3



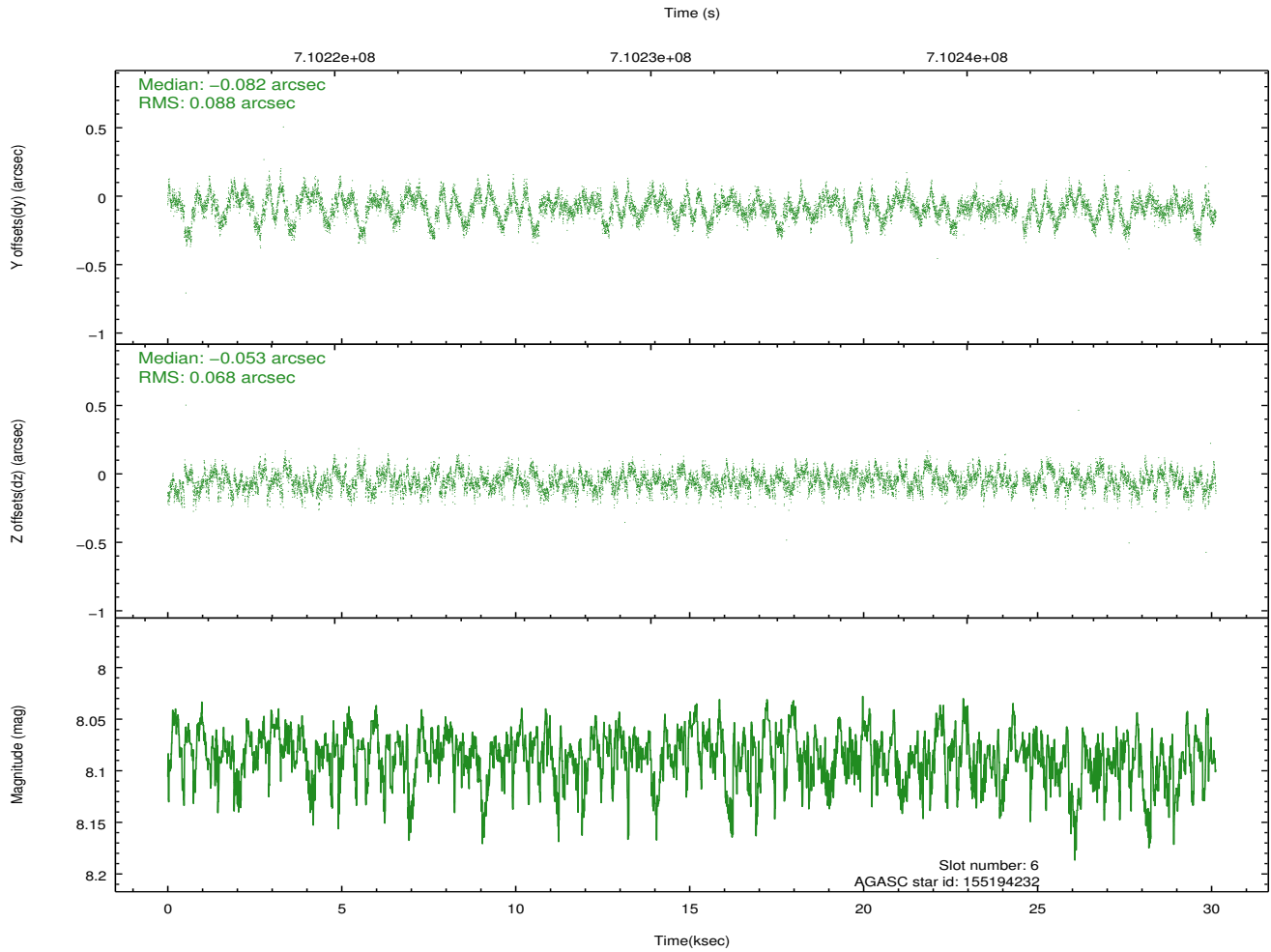
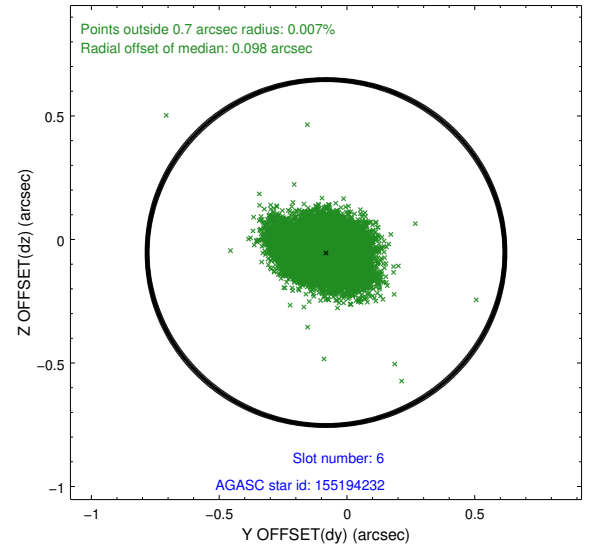
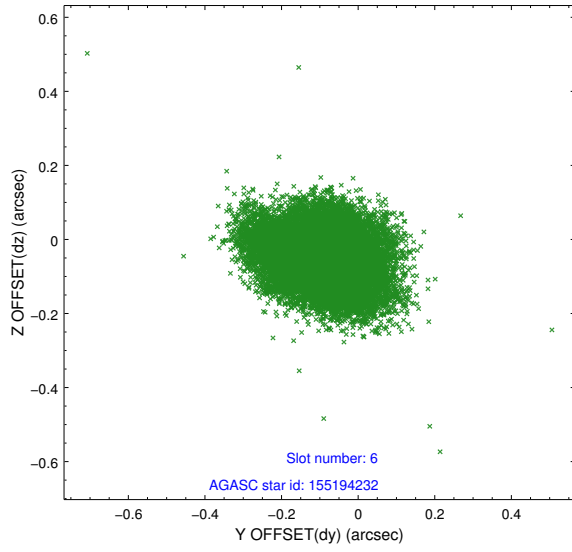
2.4.2 Slot 4



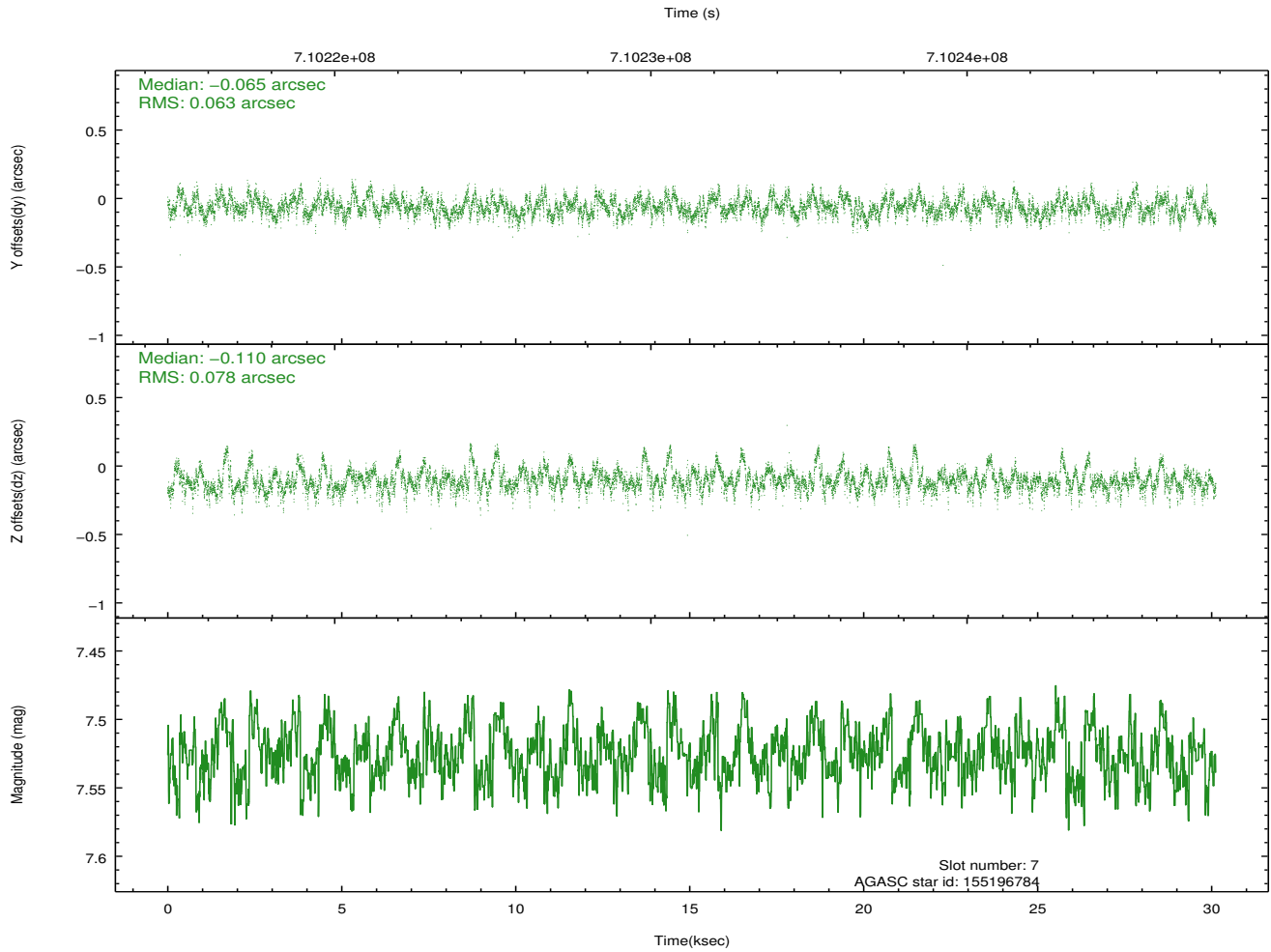
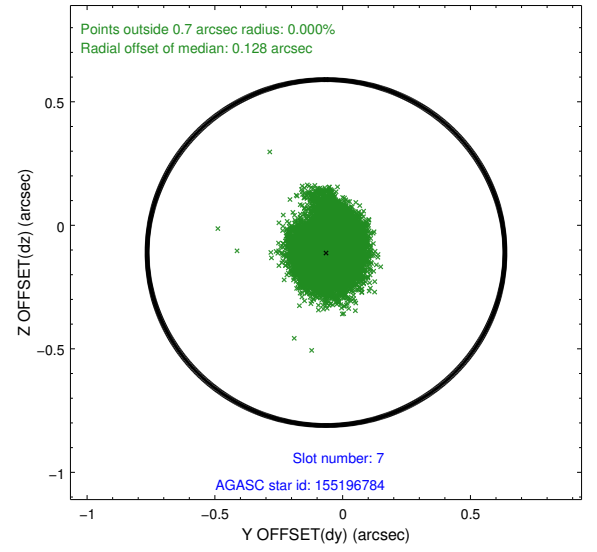
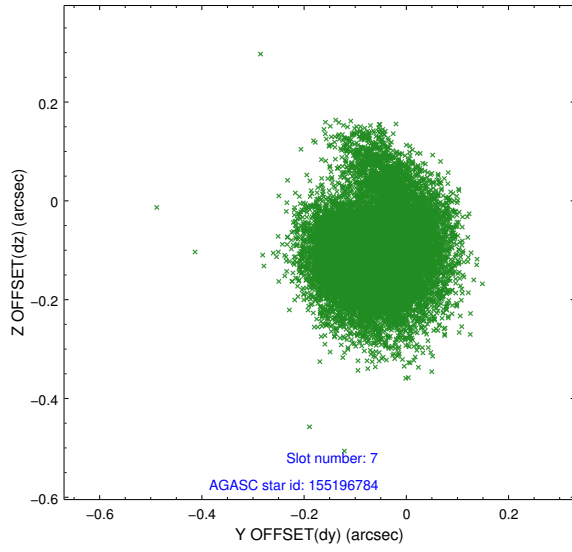
2.4.3 Slot 5



2.4.4 Slot 6

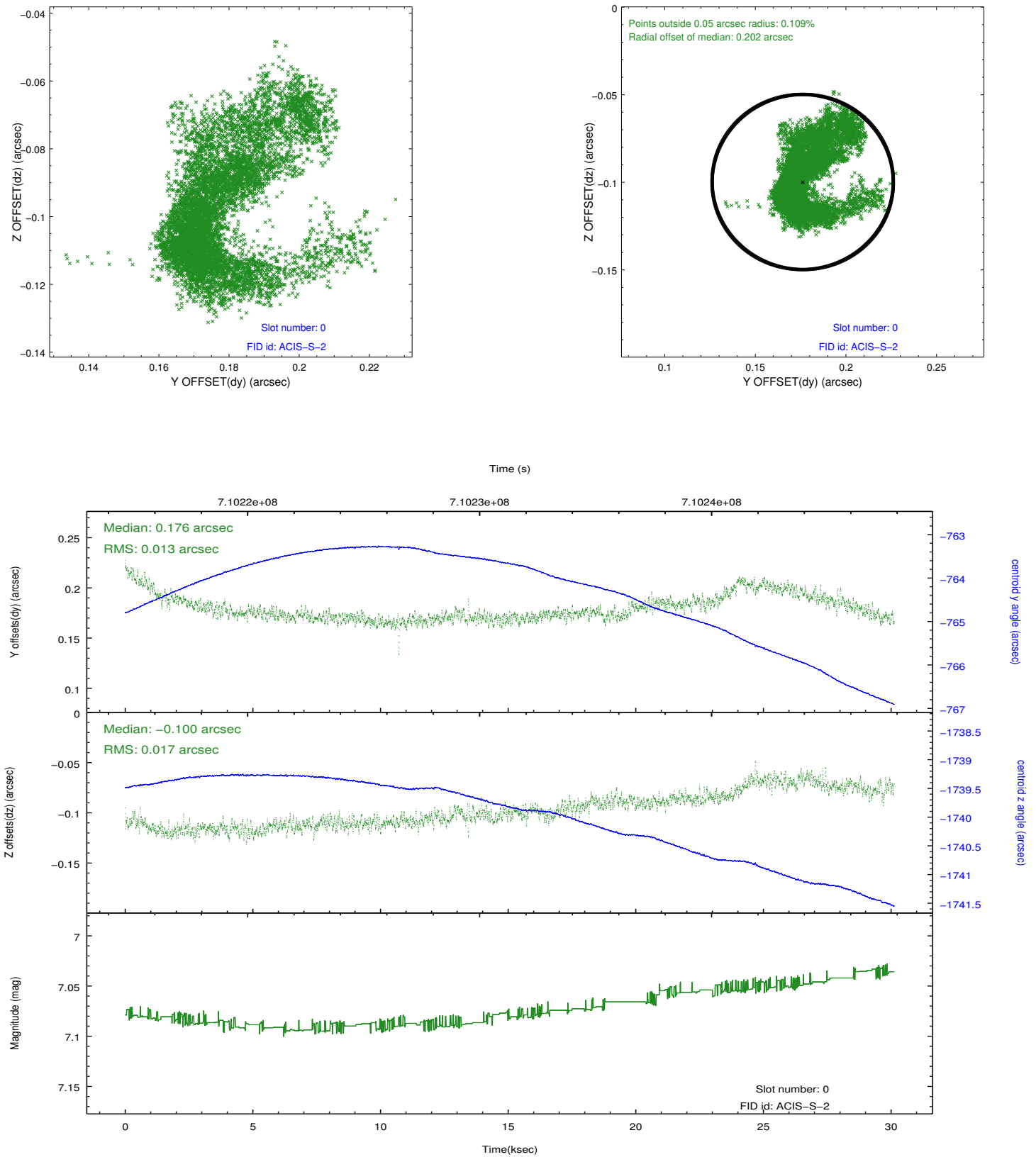


2.4.5 Slot 7

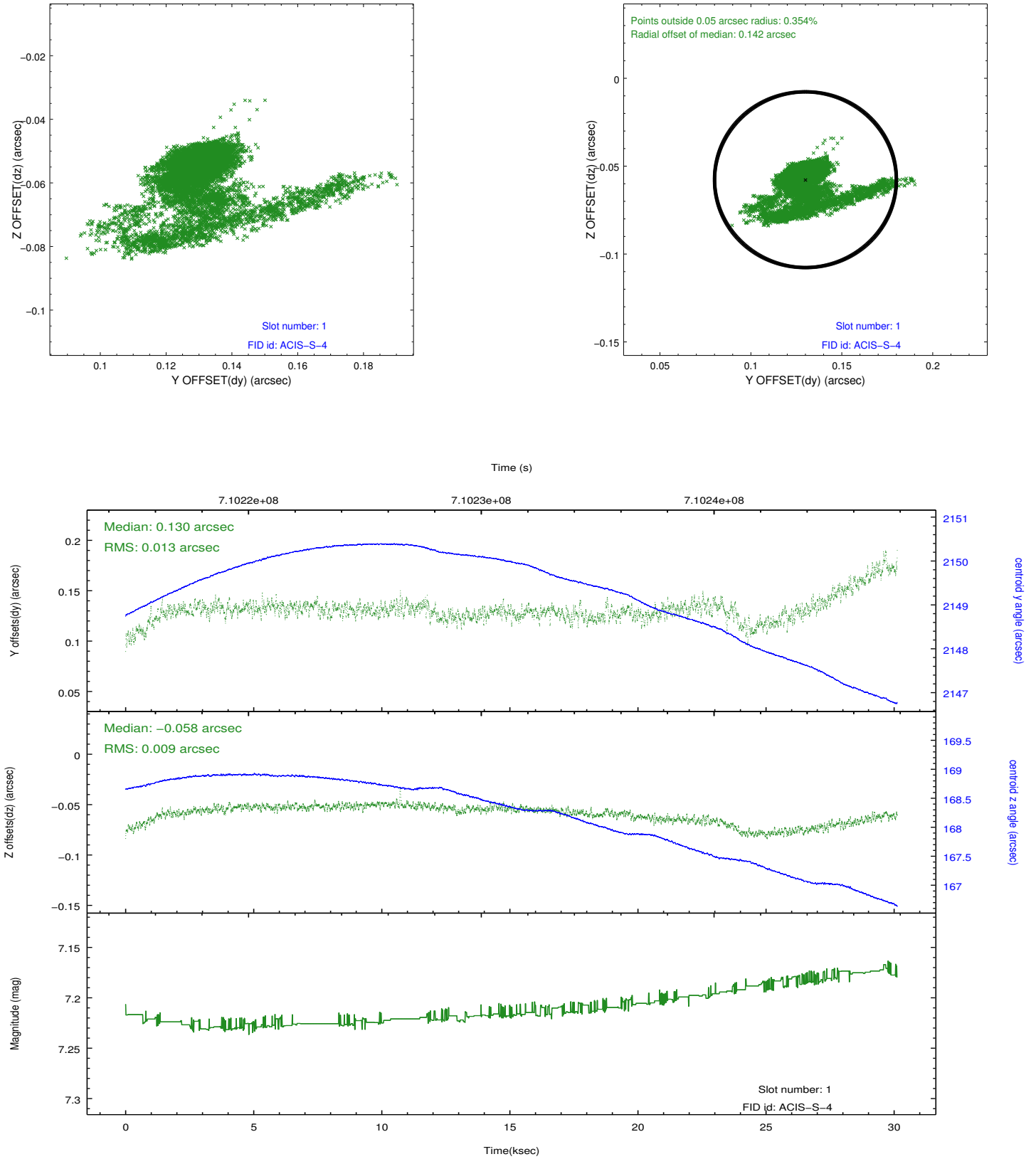


2.5 FID Slots

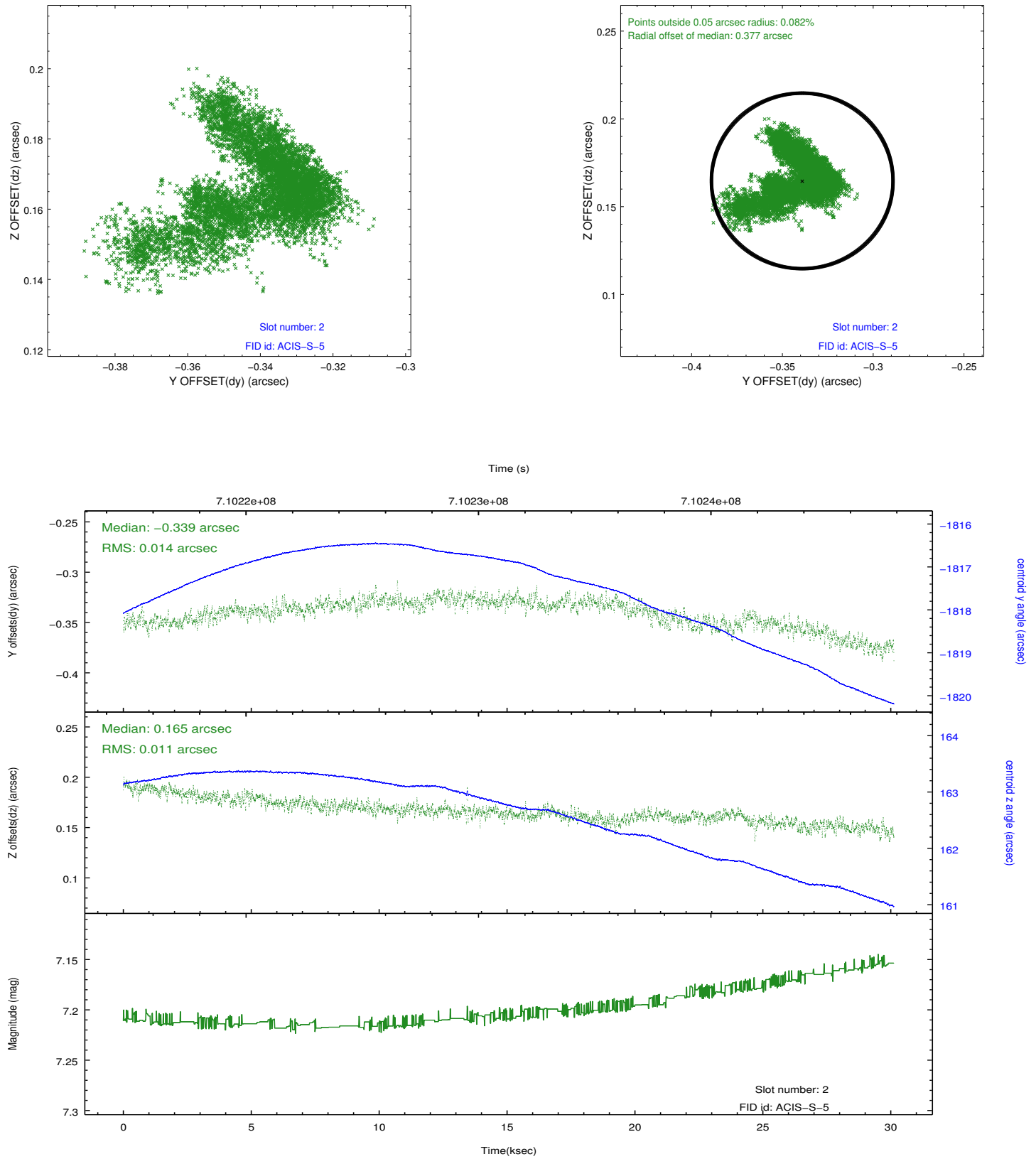
2.5.1 Slot 0



2.5.2 Slot 1

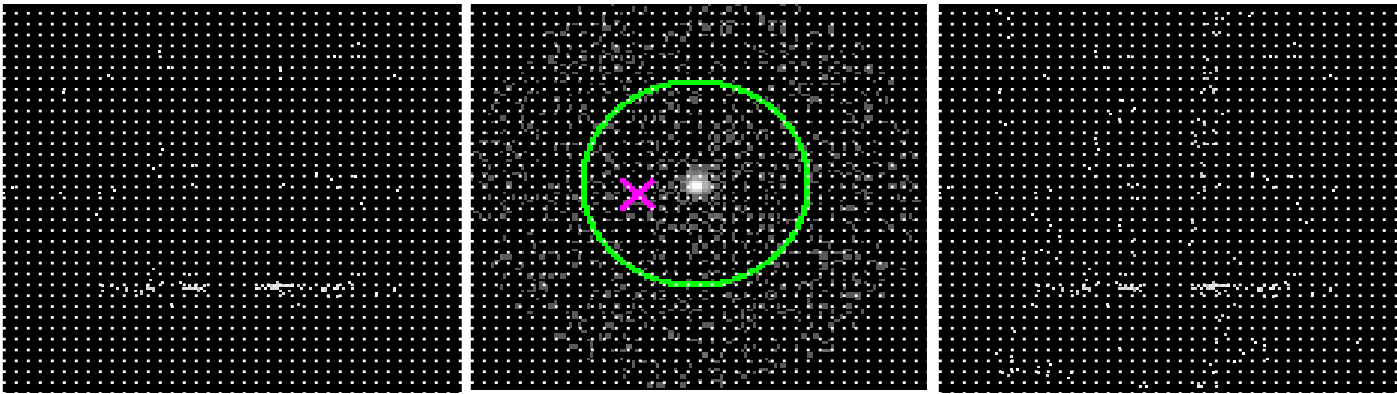


2.5.3 Slot 2



3 Gratings

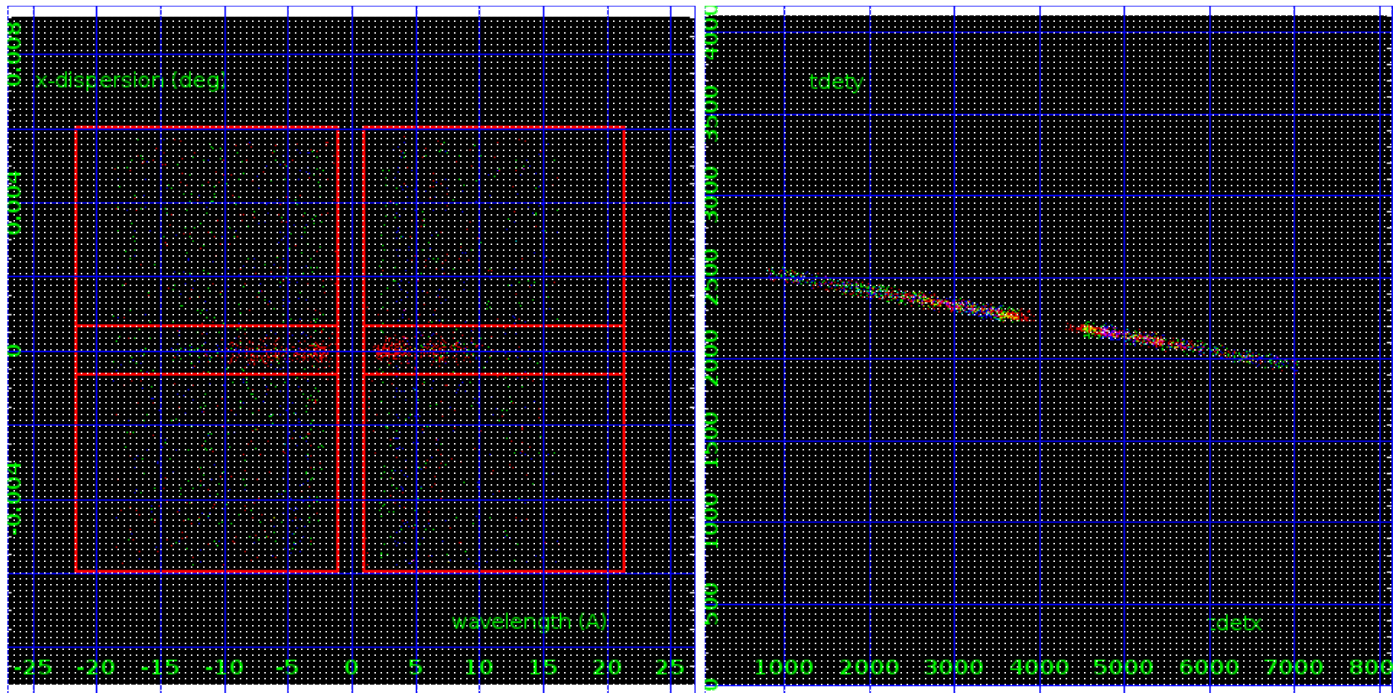
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

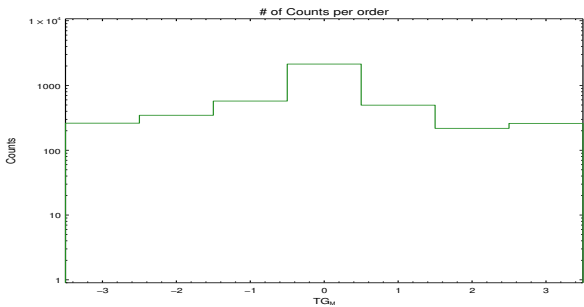
HEG Order Sort ALL

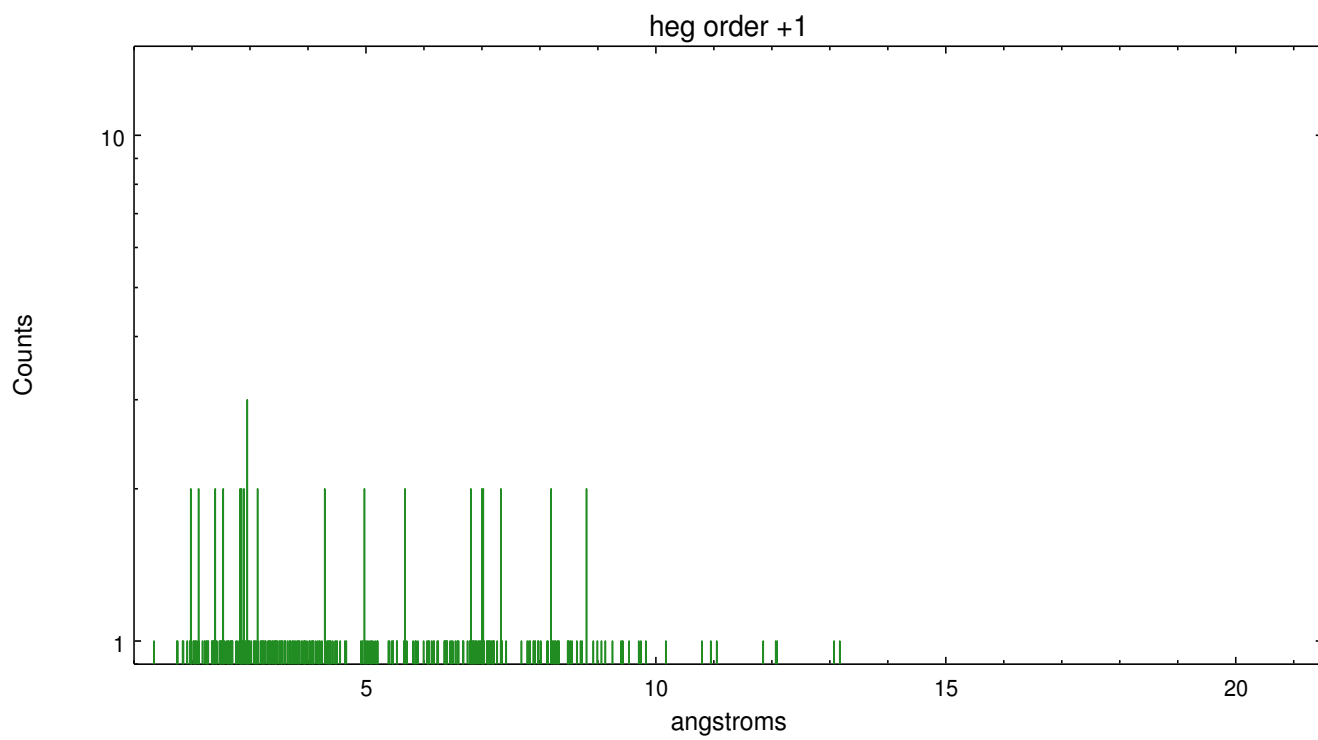
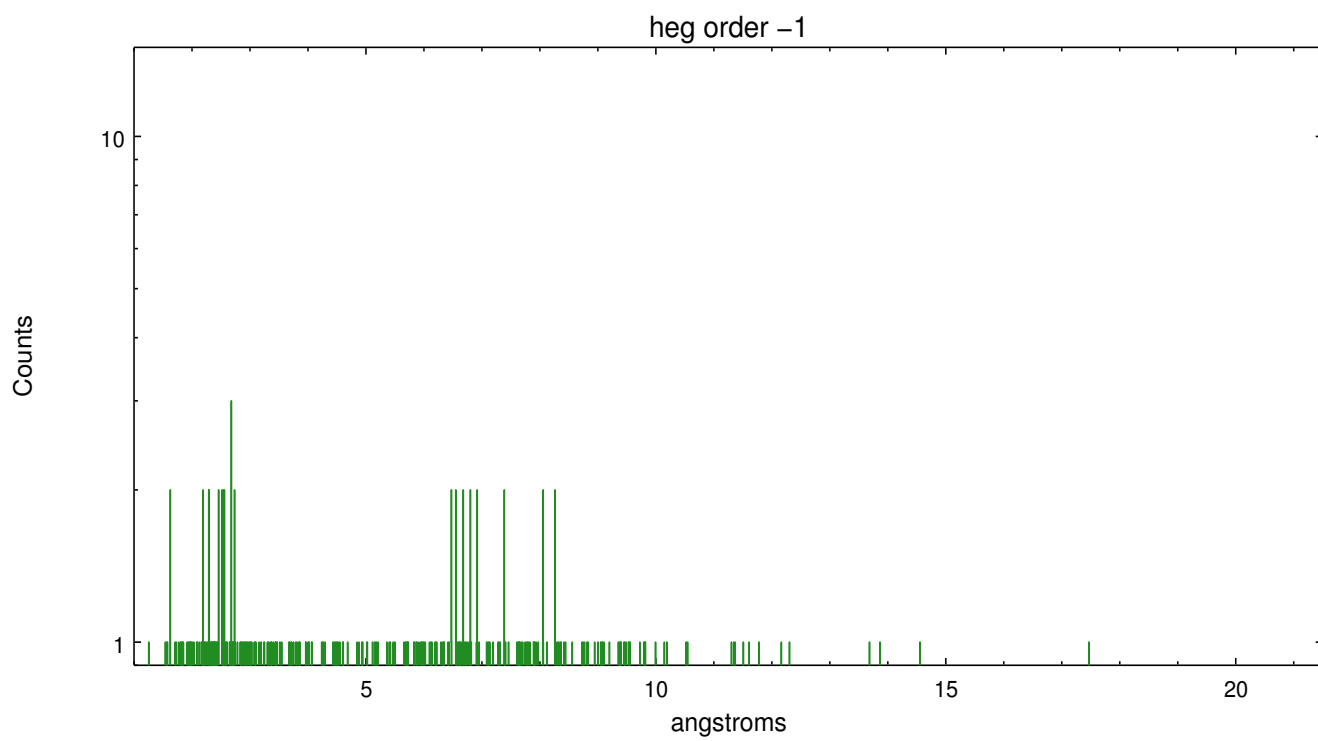


Spot Image HEG

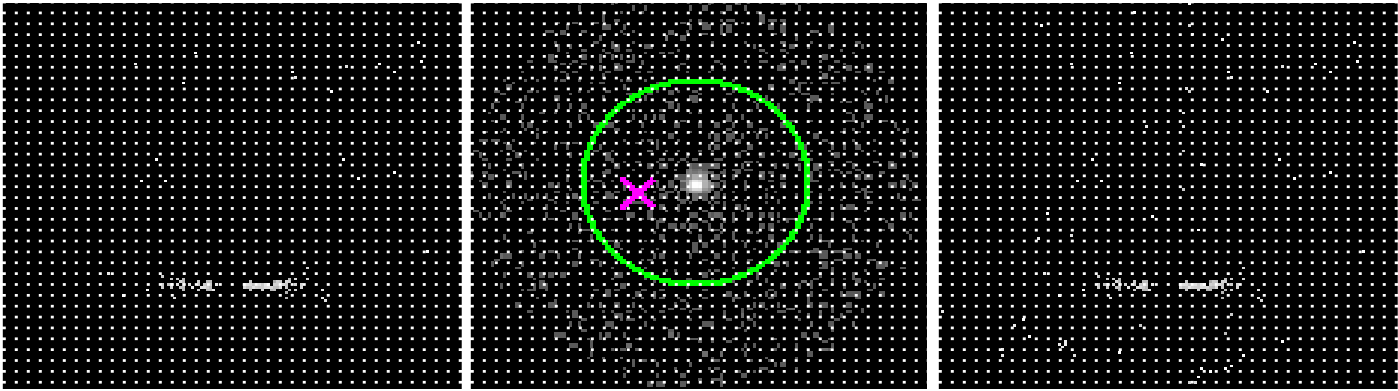
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	262	347	575	2142	497	218	260





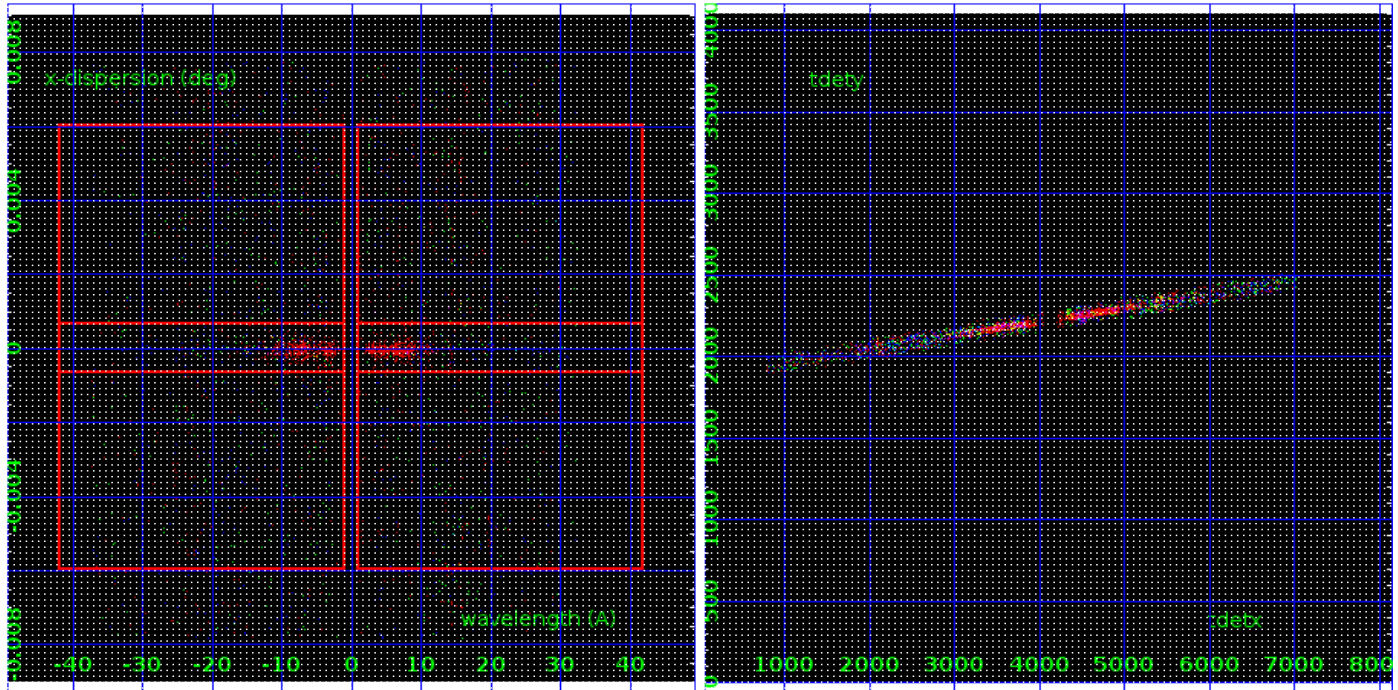
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

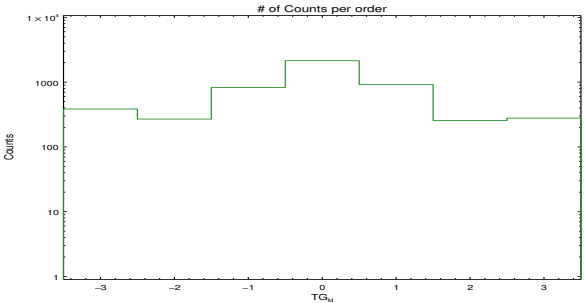
MEG Order Sort ALL

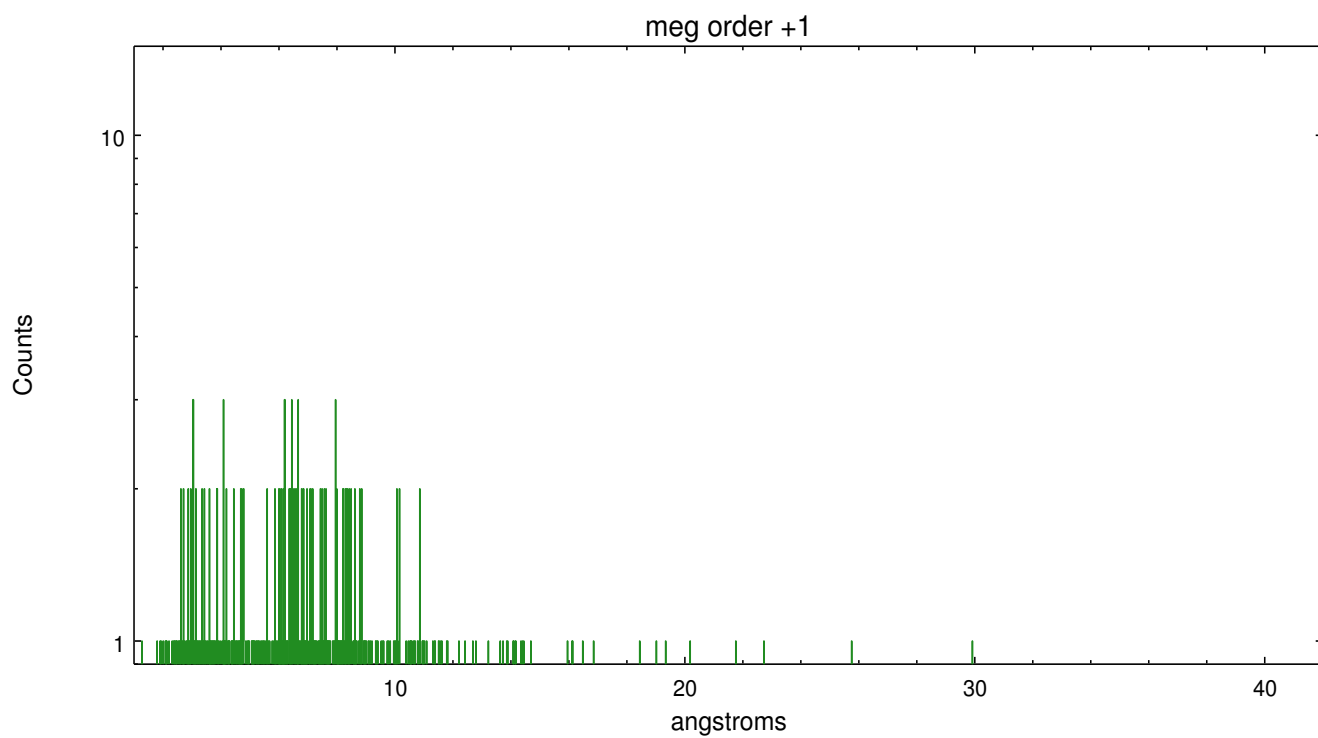
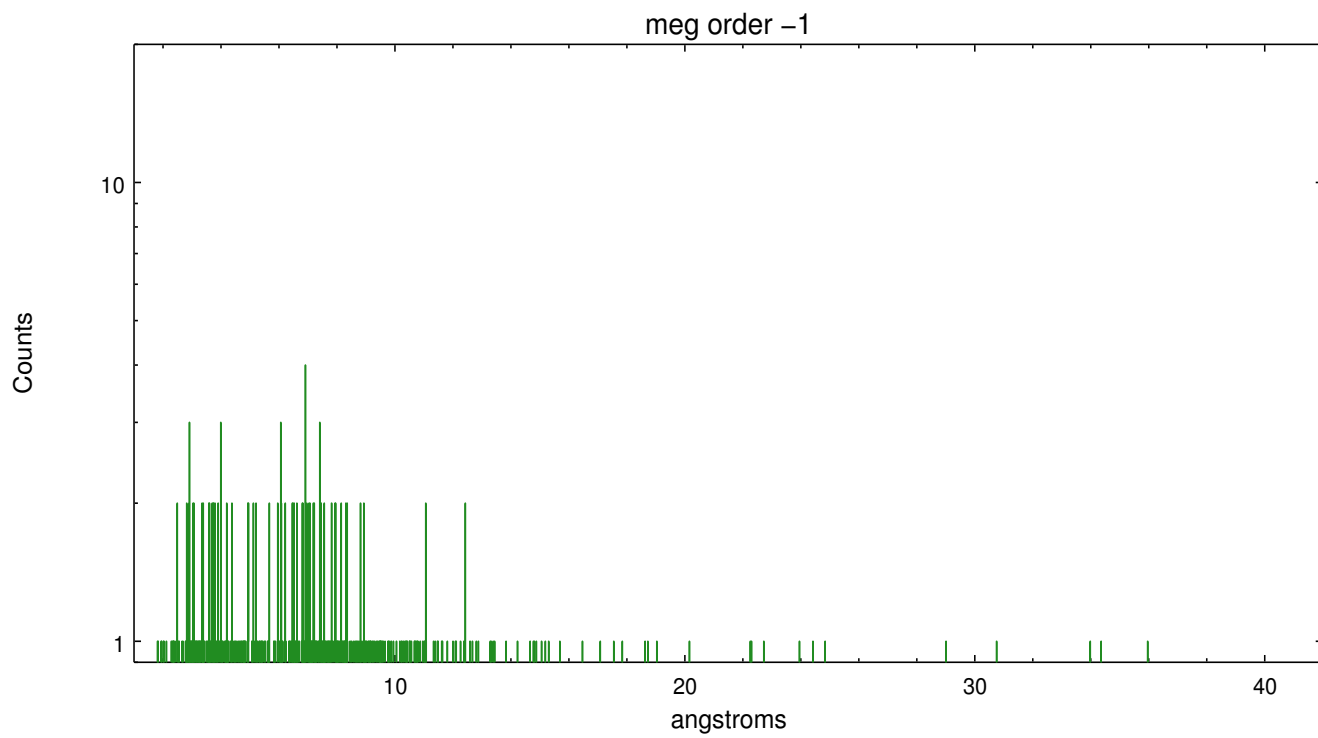


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	385	269	827	2142	915	256	278





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2020.07.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.077105909705

A.2 Comments