

V&V Reference Report

L2 ASCDS Version : 10.5.4

Observation 19451 - L2 Version 2
Chandra X-Ray Center

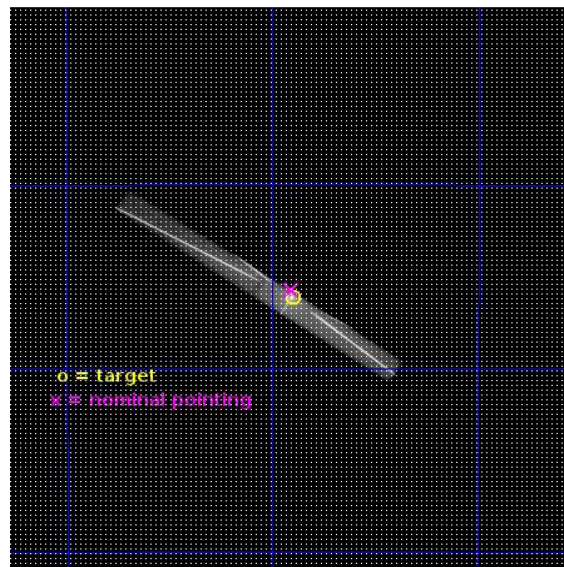
L2 Processing Date : May 26 2017

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

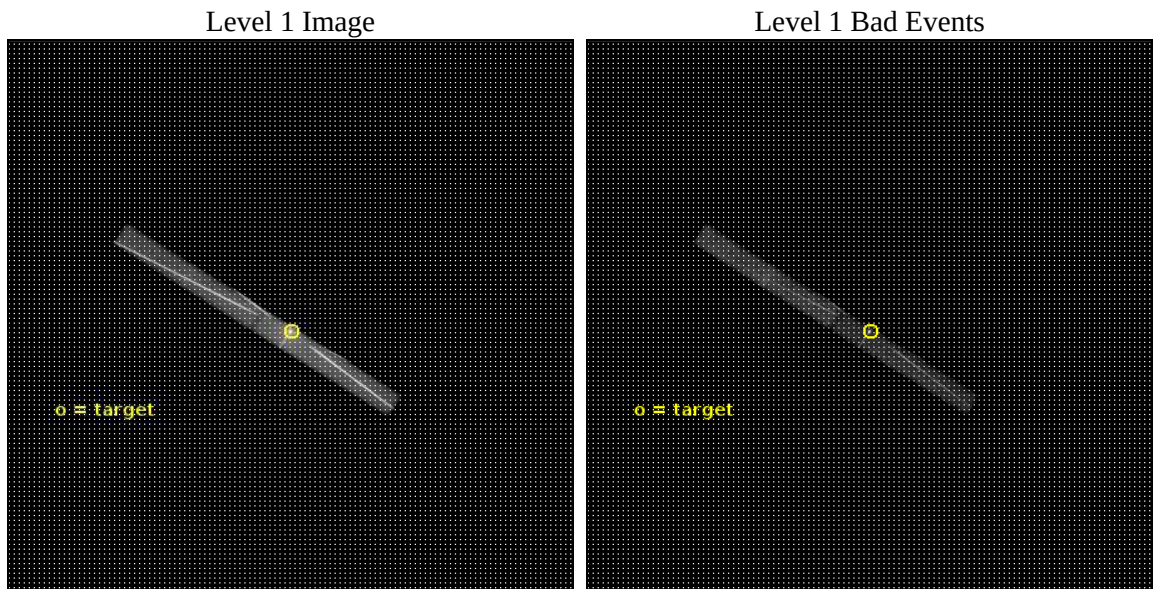
seq_num	901349	Sequence number
obs_id	19451	Observation id
title	THE ATOMIC TO DUST ABUNDANCE RATIO OF SILICON TOWARDS THE GALACTIC BULGE	Proposal title
observer	Norbert Schulz	Principal investigator
object	4U 1705-44	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	257.225	Observer's specified target RA [deg]
dec_targ	-44.102028	Observer's specified target Dec [deg]
ra_nom	257.22702446086	Nominal RA [deg]
dec_nom	-44.095323429442	Nominal Dec [deg]
roll_nom	33.158042388891	Nominal Roll [deg]
revision	2	Processing version of data
ontime	41093.906201243	Sum of GTIs [s]
livetime	37976.772698177	Livetime [s]
ontime6	41093.8651613	Sum of GTIs [s]
ontime7	41093.906201243	Sum of GTIs [s]
l2events	1099102	Number of level 2 events



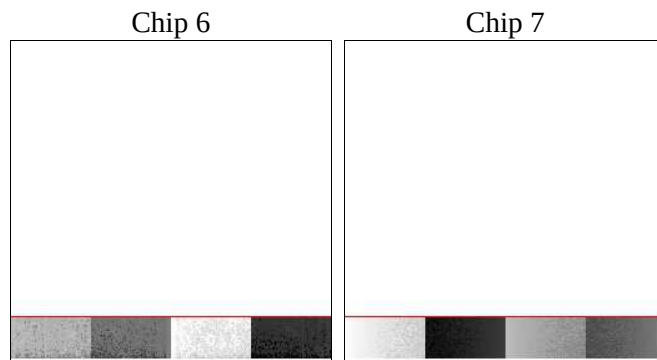
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	41000.000000	[s] Scheduled observation exposure time
ascdsver	10.5.4	Processing system revision	ontime	41093.906201243	Sum of GTIs [s]
caldbver	4.7.4	 	ontime6	41093.8651613	Sum of GTIs [s]
date	2017-05-25T05:43:34	Date and time of file creation	ontime7	41093.906201243	Sum of GTIs [s]
revision	1	Processing version of data	l1events	1234912	Number of level 1 events
			tgmetho	MANUAL	Method used to create src1a file
			zo_pos	(4096.80, 4047.20)	src1a sky pixel position
			zo_pos_tgd	(4096.93, 4046.87)	src1a sky pixel position via tgdetect

2.1.4 Events

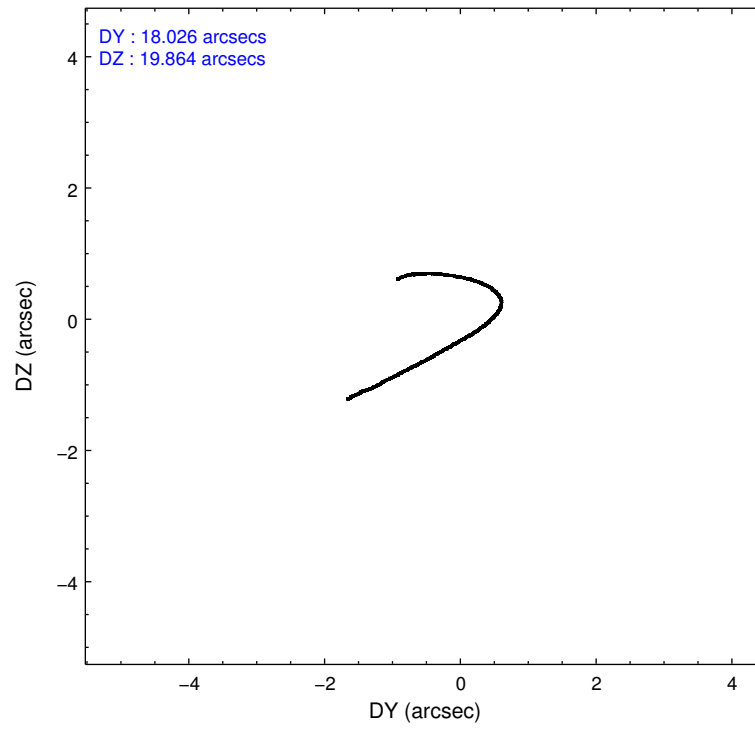
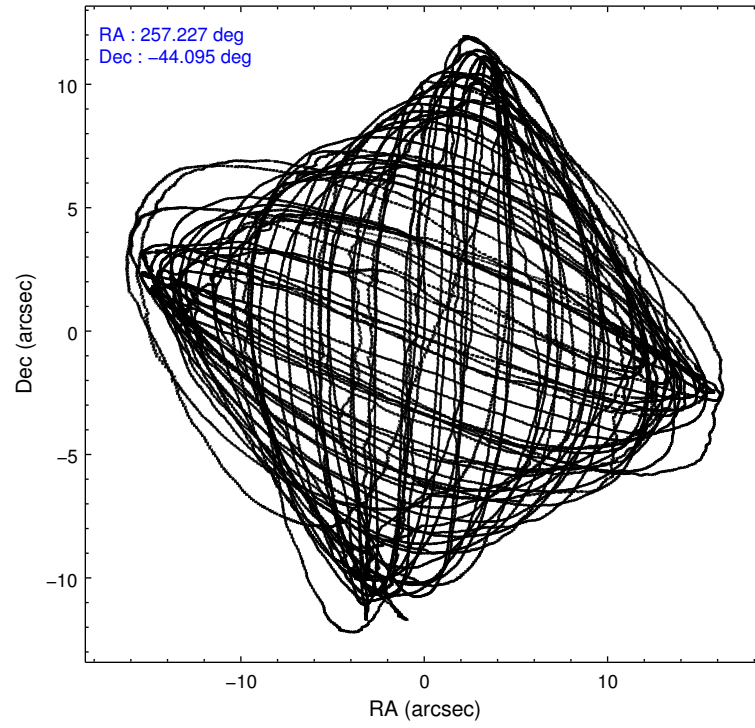
	ccd 6	ccd 7
level 1 events	447882	787030
rejected events	51521	58489
rejected %	11%	7%

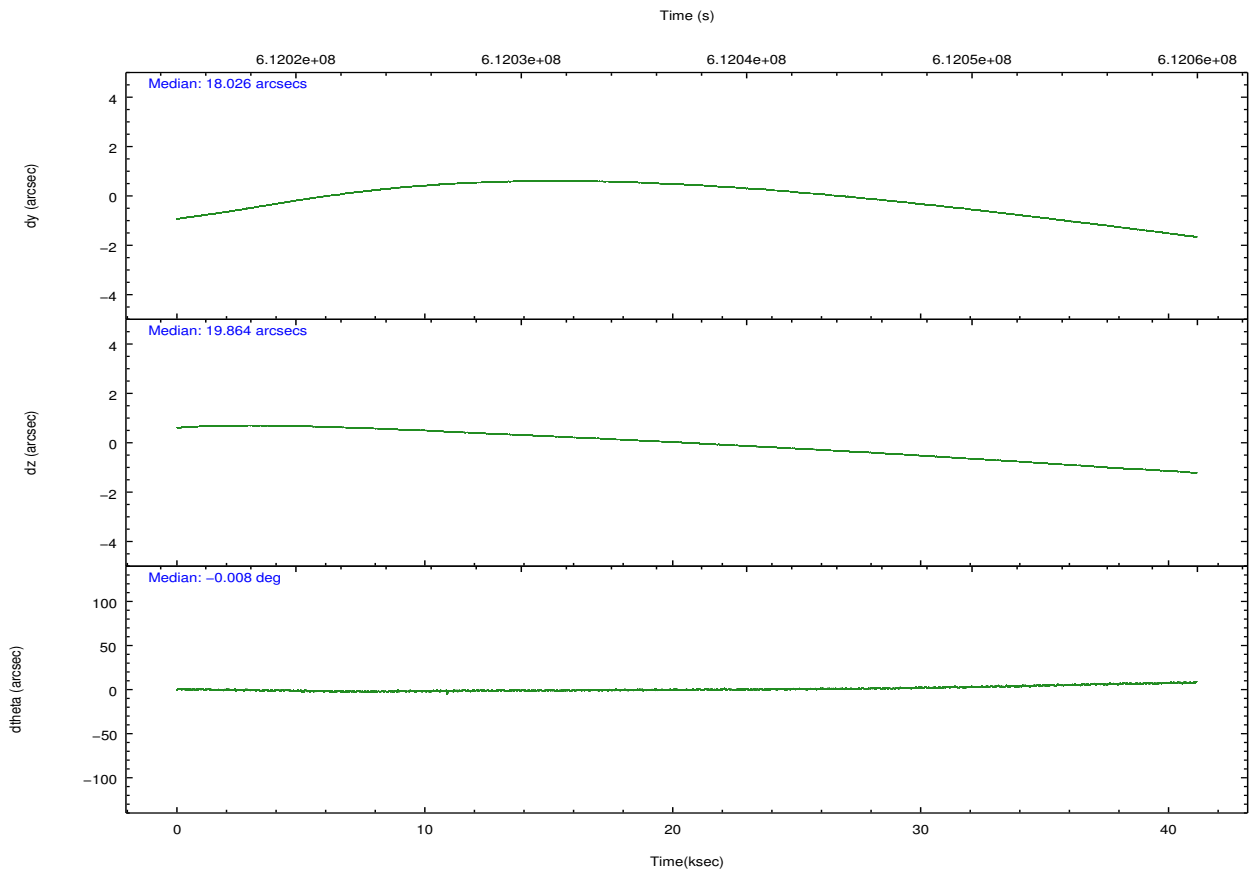
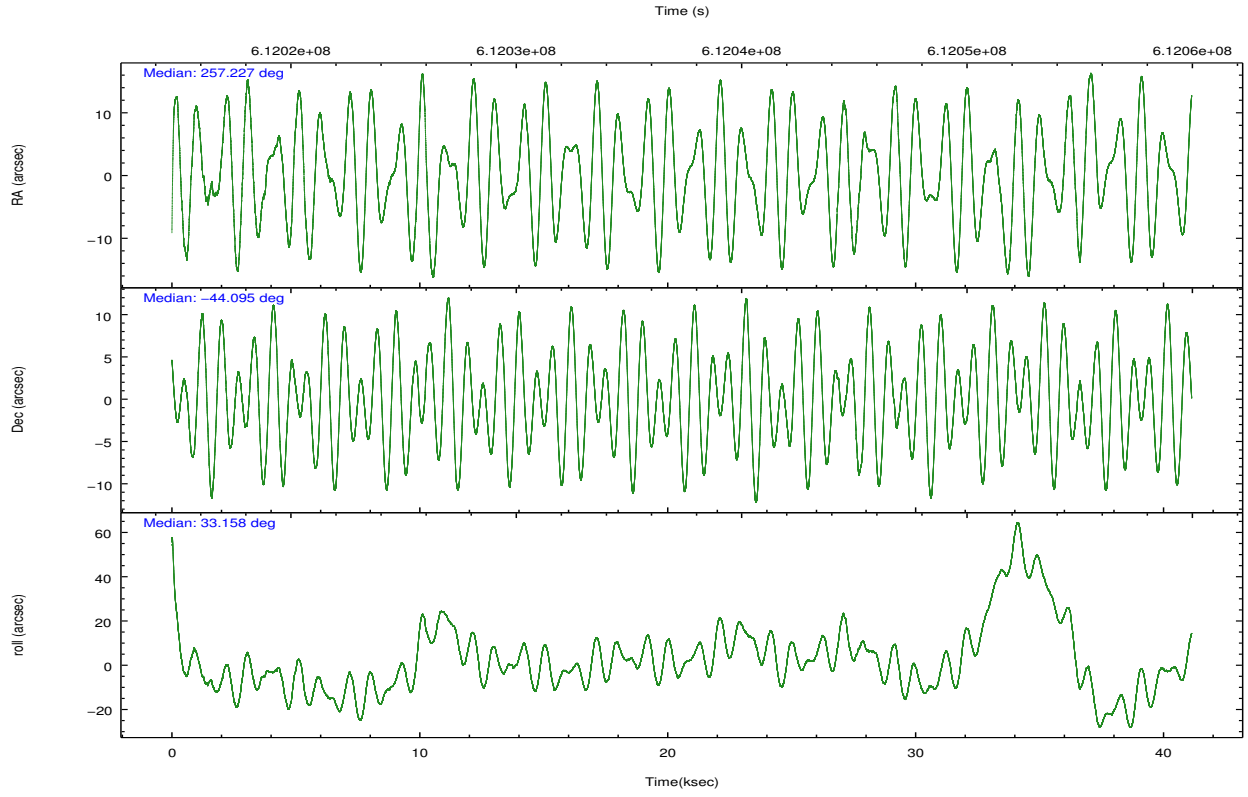
	ccd 6	ccd 7
grade 0 events	266867	131816
	59%	16%
grade 1 events	1356	2530
	0%	0%
grade 2 events	56295	175804
	12%	22%
grade 3 events	20380	79000
	4%	10%
grade 4 events	20318	78833
	4%	10%
grade 5 events	3451	17244
	0%	2%
grade 6 events	32503	263096
	7%	33%
grade 7 events	46712	38707
	10%	4%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-67	ACIS-67	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
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	257.210211	257.2270244608566	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-44.119991	-44.09532342944201	Subarray start row	10	10
[deg] Pointing Roll	32.989706	33.15804238889068	Subarray row count	134	134
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	0.5
[mm] SIM translation stage pos	-178.032523	-178.0336378728605			
[mm] SIM translation stage offset	-12.1	-12.09888471014733			
[s] Observation start time (MET)	612016887.184000	612015827.32021			
Observation start date	2017-05-24T12:40:18	2017-05-24T12:23:47			
[s] Observation end time (MET)	612057887.184000	612058197.7476799			
Observation end date	2017-05-25T00:03:38	2017-05-25T00:09:57			
Read mode	TIMED	TIMED			

2.3 Aspect



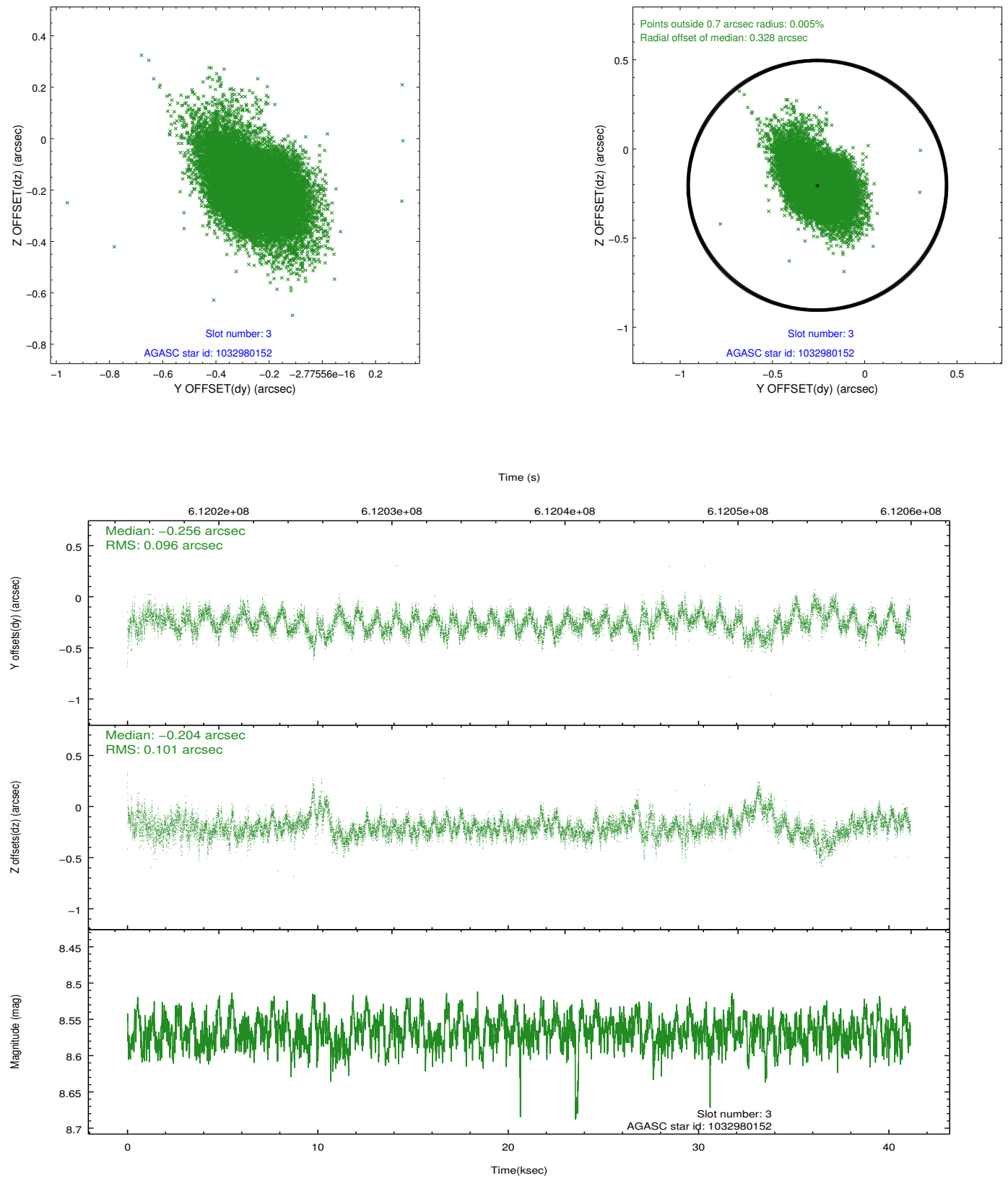


Slot Statistics

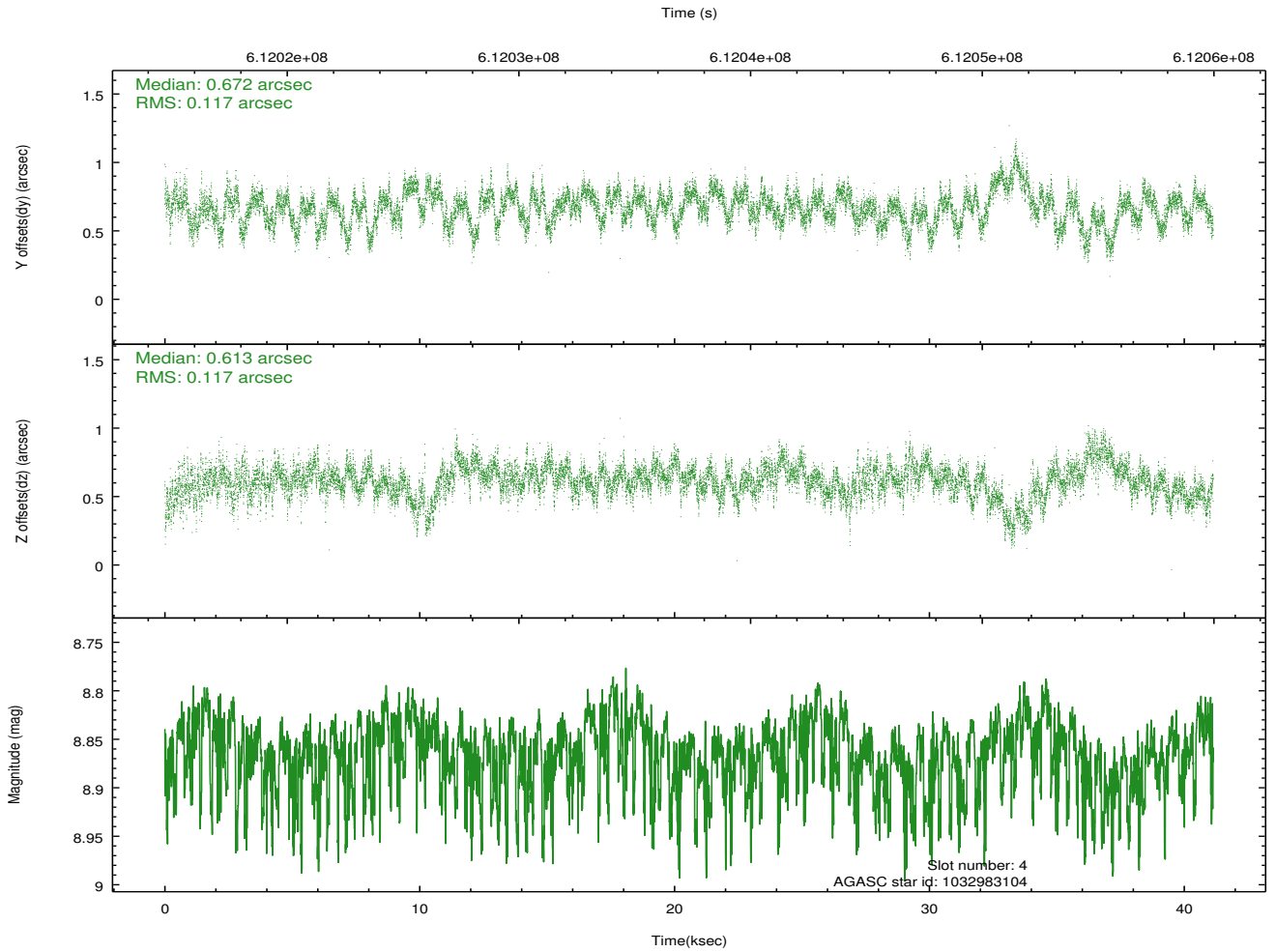
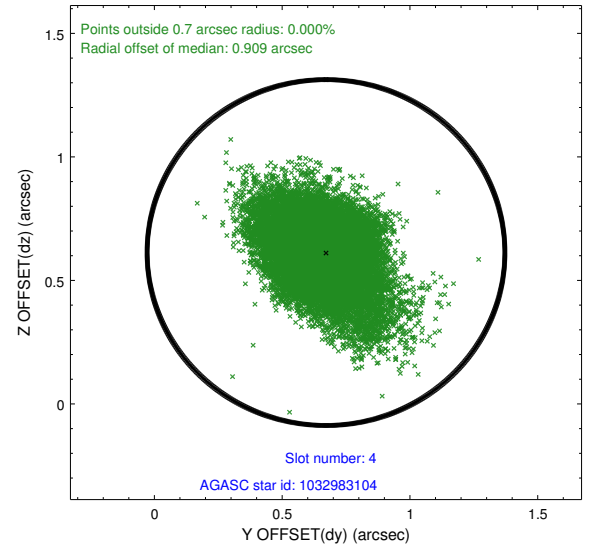
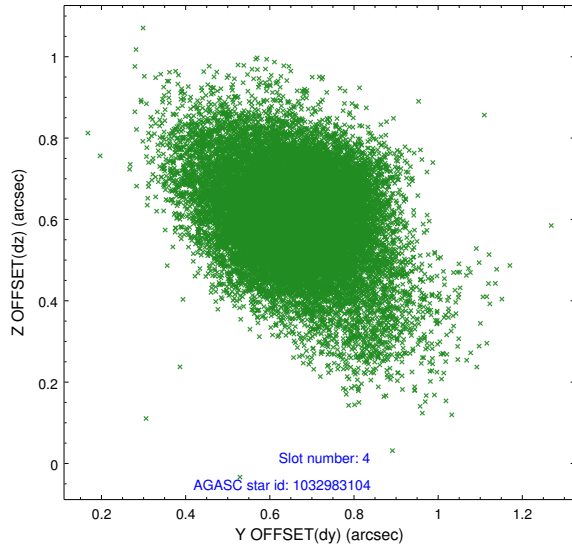
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.96	10032	-0.480	-0.306	0.018	0.026	0.000000	0.000000	-770.39	-1990.68
1	FID		ACIS-S-4	7.02	10032	0.405	0.338	0.012	0.019	0.000000	0.000000	2143.66	-81.45
2	FID		ACIS-S-6	7.29	10032	0.049	-0.028	0.017	0.025	0.000000	0.000000	391.99	555.50
3	GUIDE	used	1032980152	8.57	20055	-0.256	-0.204	0.139	0.256	257.470572	-43.265322	2246.64	2207.62
4	GUIDE	used	1032983104	8.86	20047	0.672	0.613	0.167	0.305	256.914293	-44.699956	-1772.25	-1339.59
5	GUIDE	used	1033000208	7.76	20062	0.340	0.084	0.119	0.229	256.502750	-44.372681	-2026.23	221.76
6	GUIDE	used	1033109664	7.87	20061	-0.472	-0.194	0.101	0.188	257.645718	-43.523560	2119.83	1179.04
7	GUIDE	used	1032979296	8.73	20048	-0.278	-0.300	0.116	0.201	257.257446	-43.353483	1606.17	2247.01

2.4 Star Slots

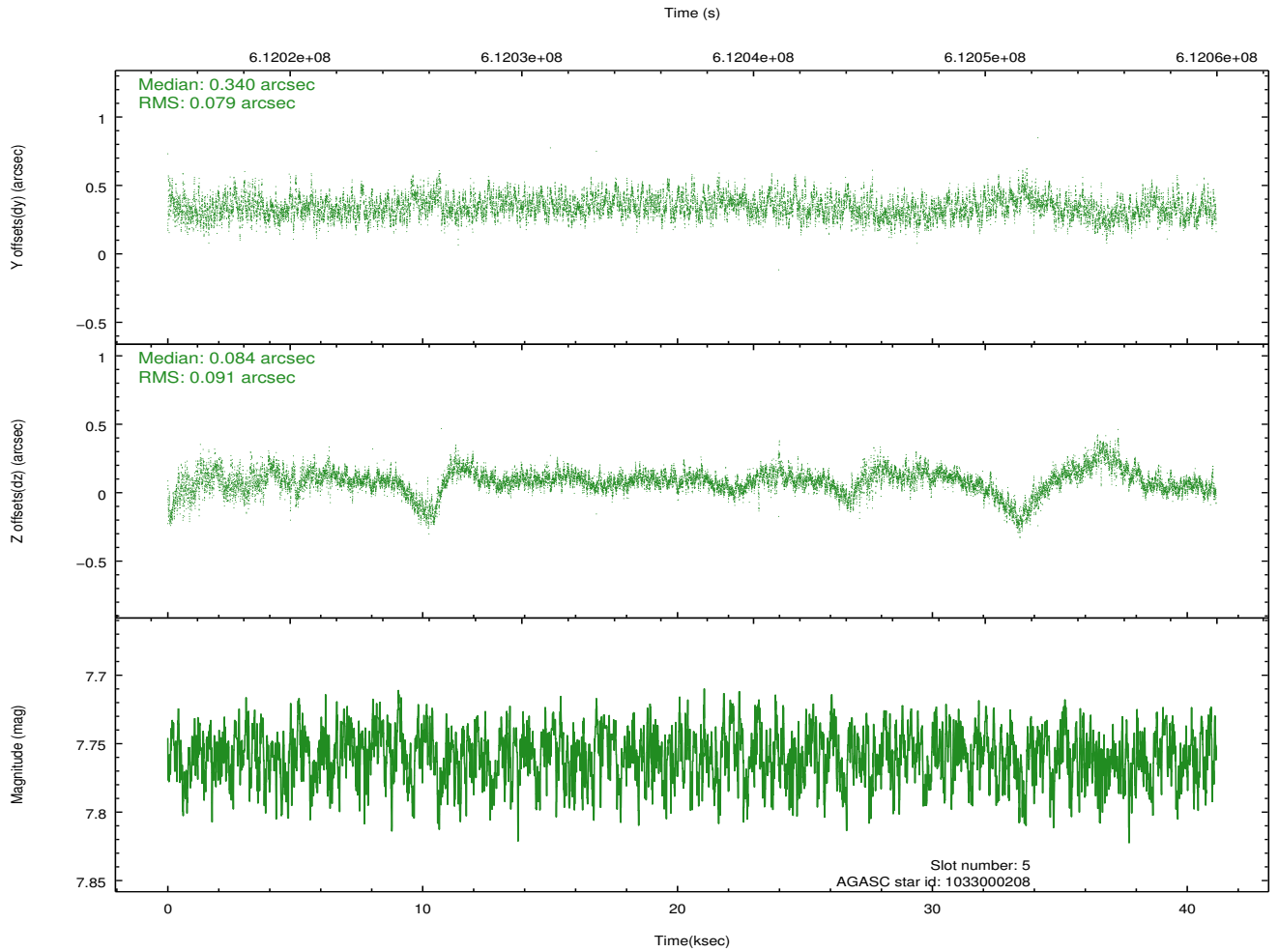
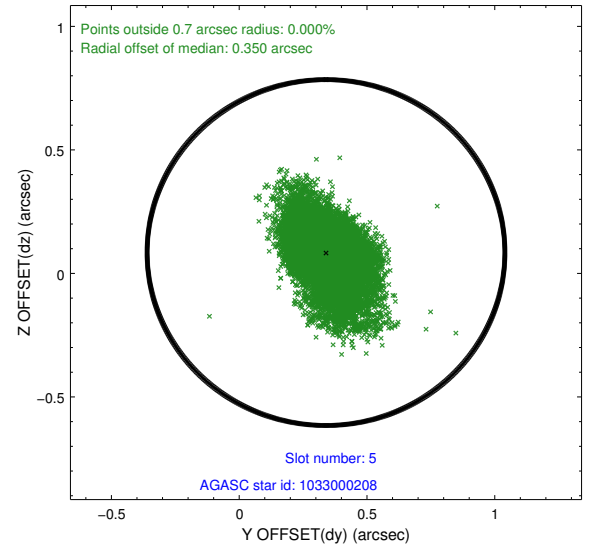
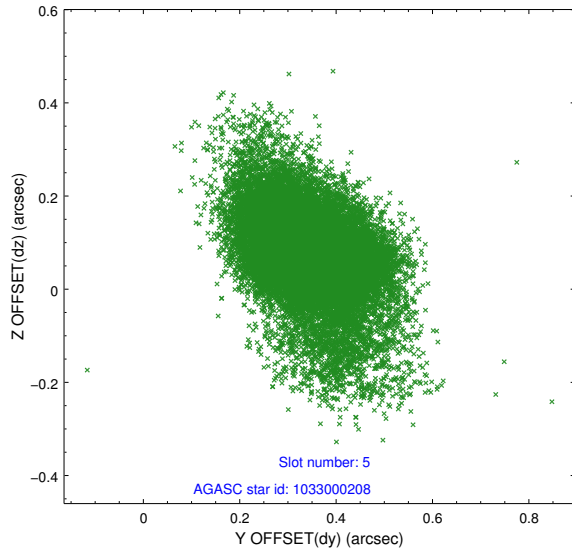
2.4.1 Slot 3



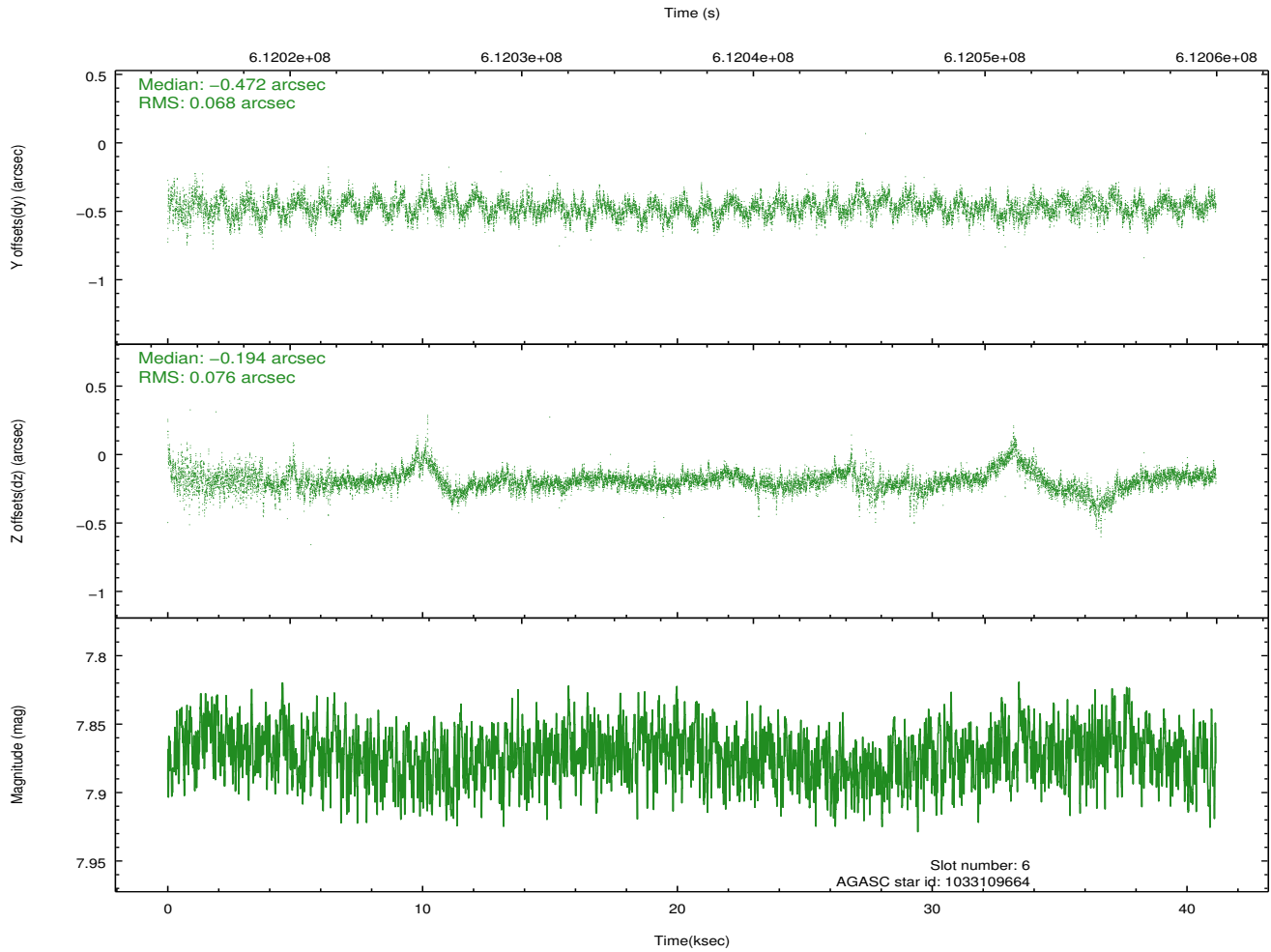
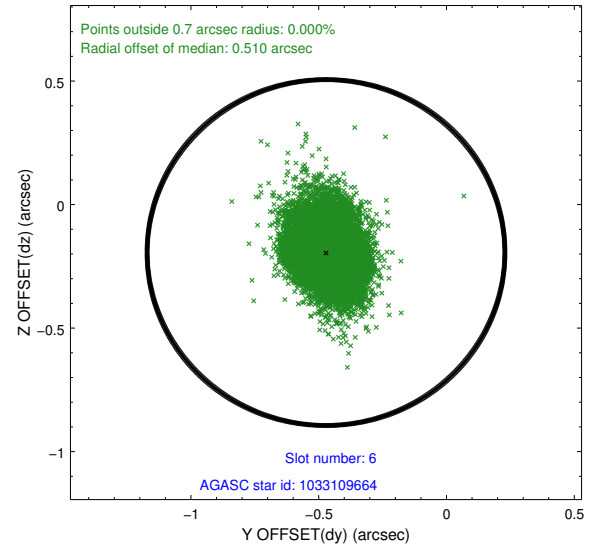
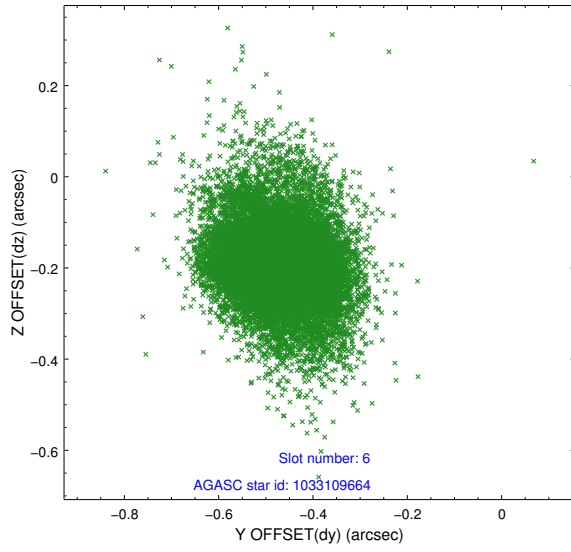
2.4.2 Slot 4



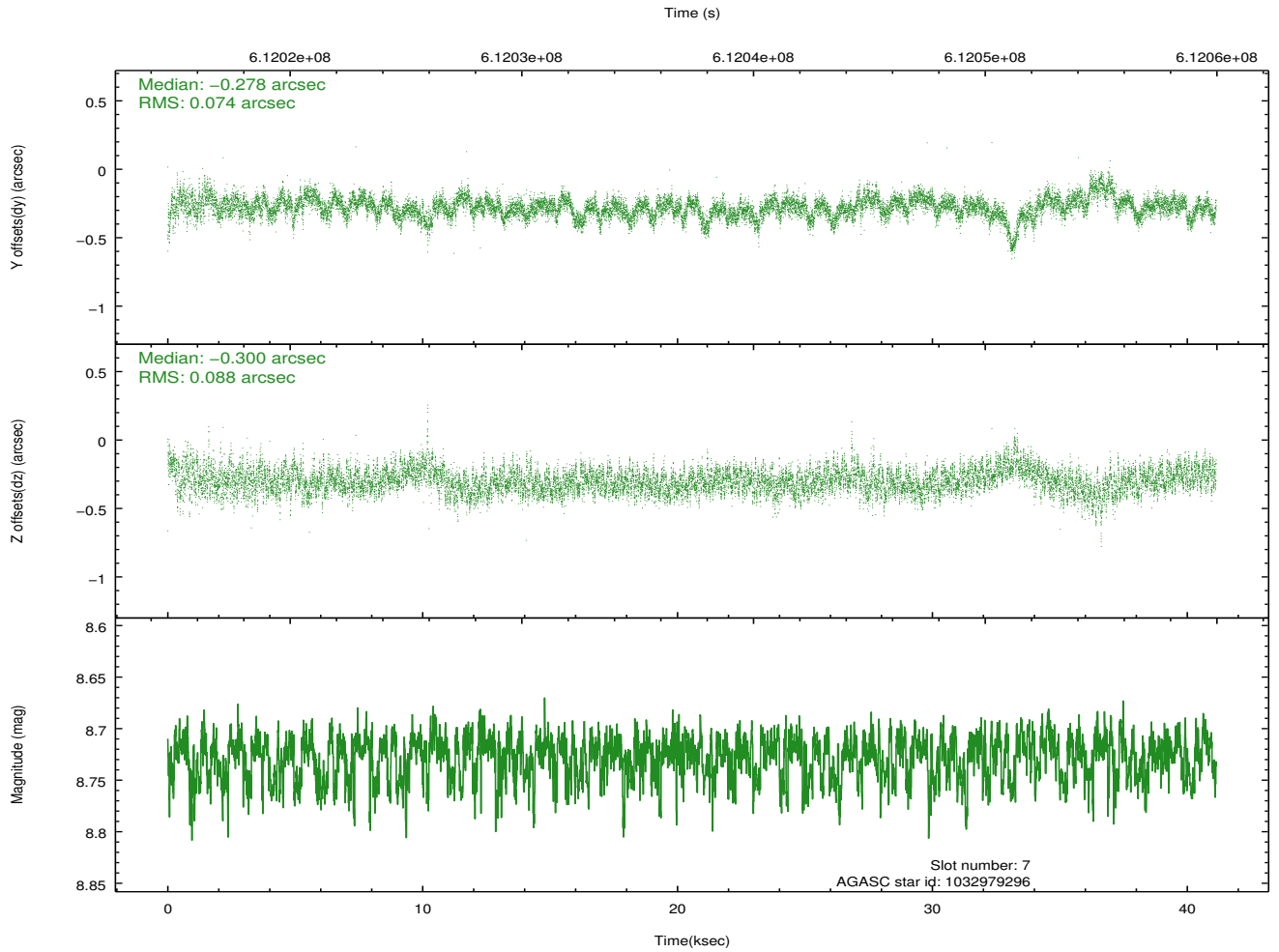
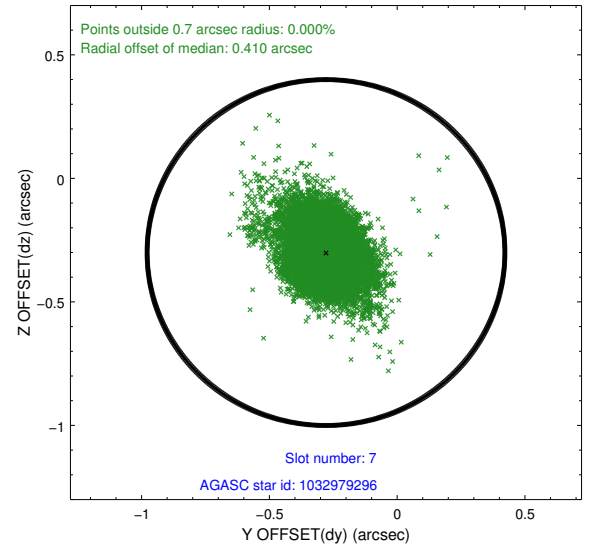
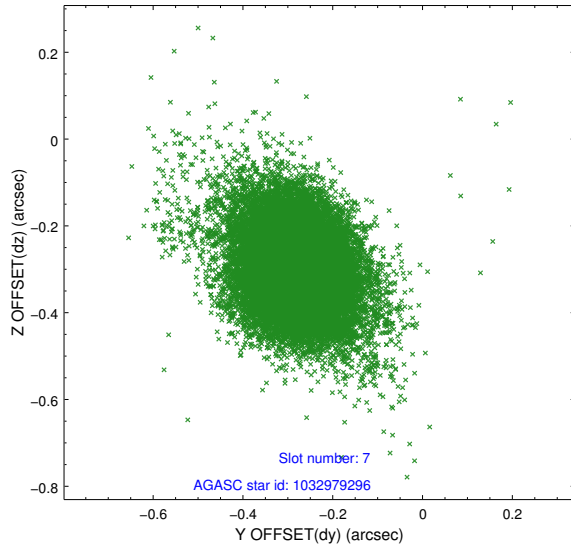
2.4.3 Slot 5



2.4.4 Slot 6

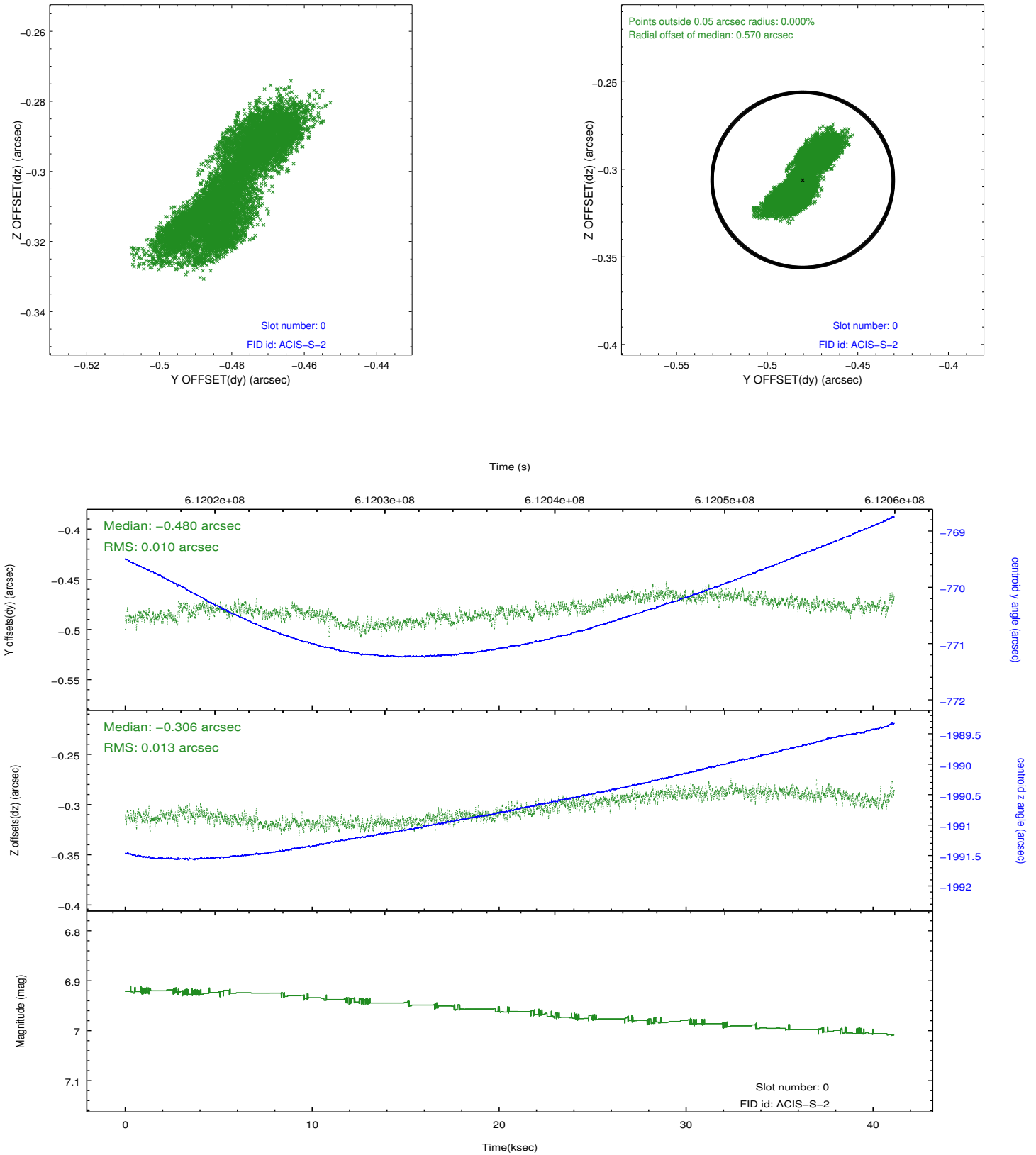


2.4.5 Slot 7

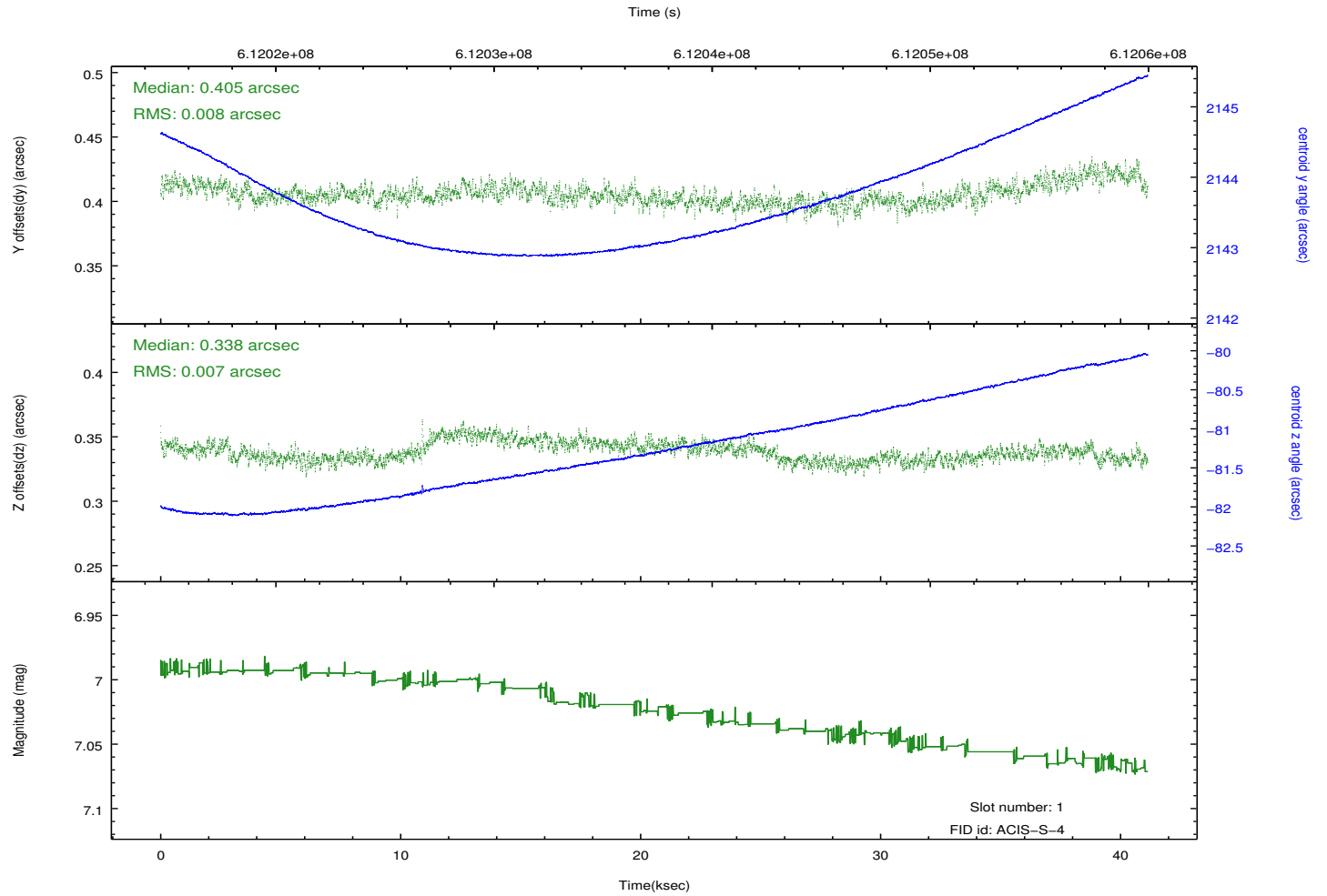
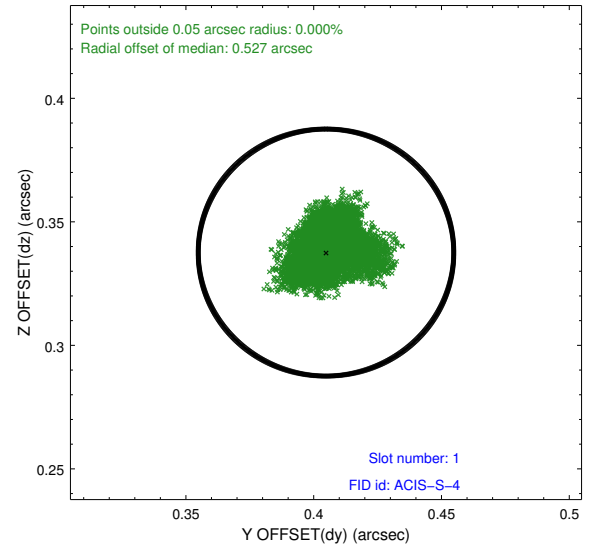
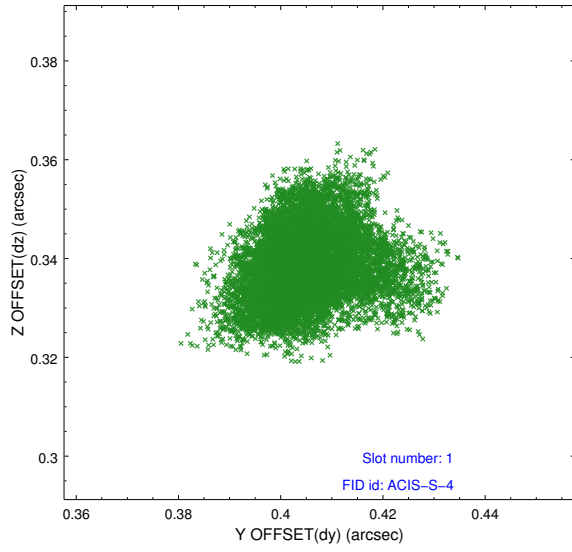


2.5 FID Slots

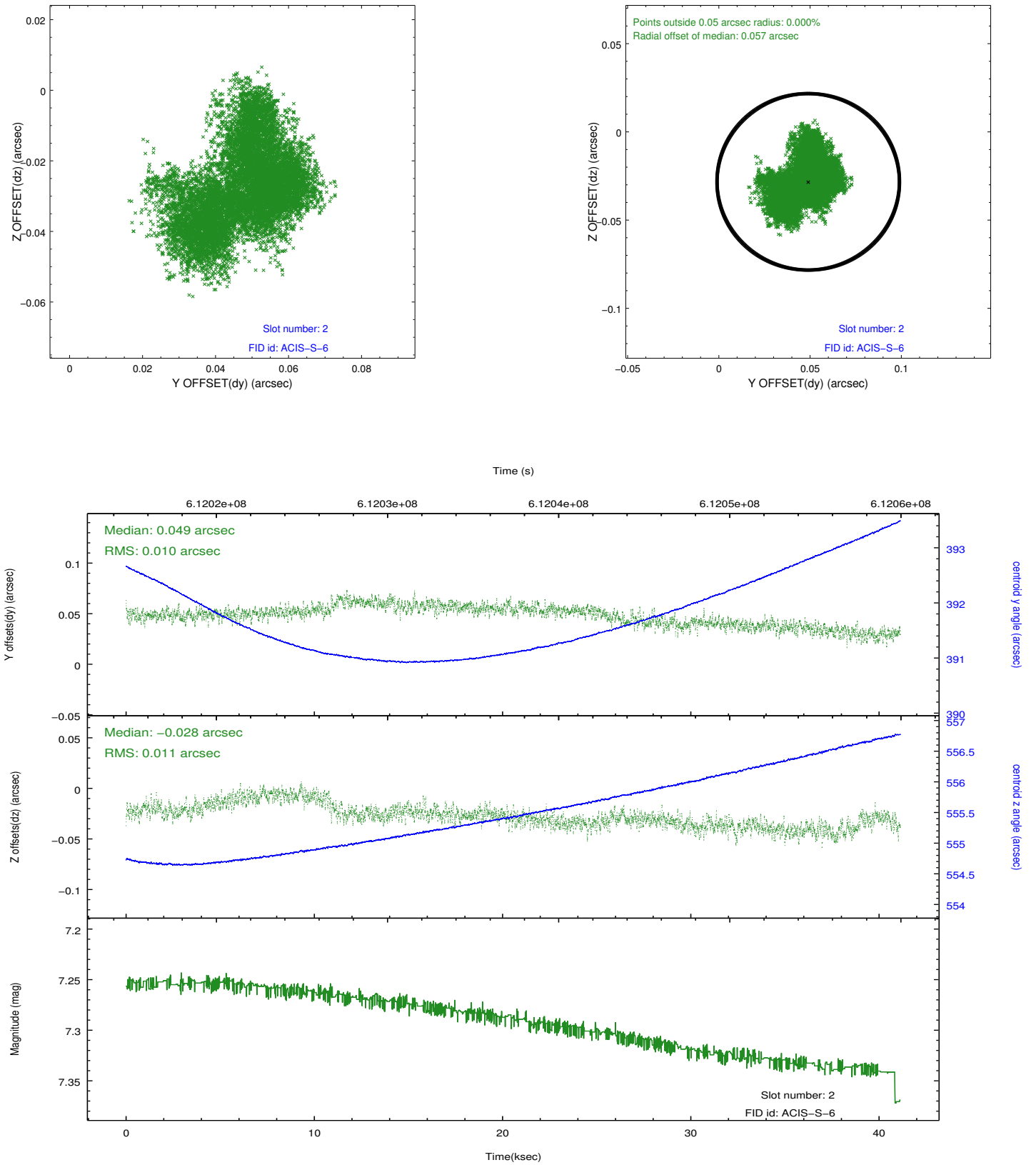
2.5.1 Slot 0



2.5.2 Slot 1

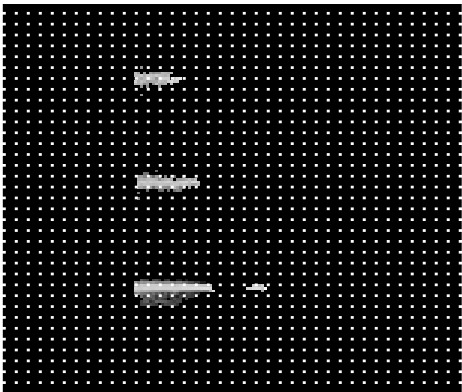


2.5.3 Slot 2

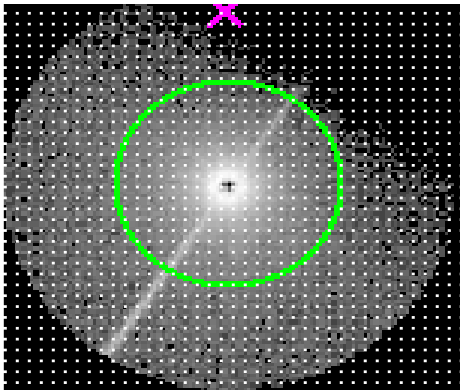


3 Gratings

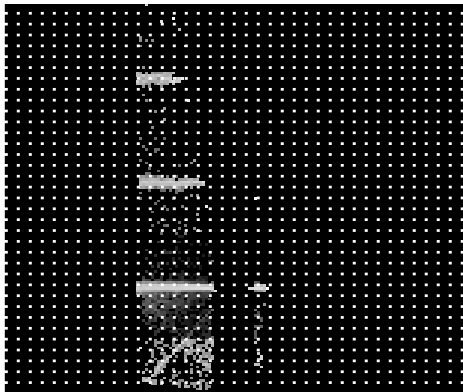
3.1 HEG Arm



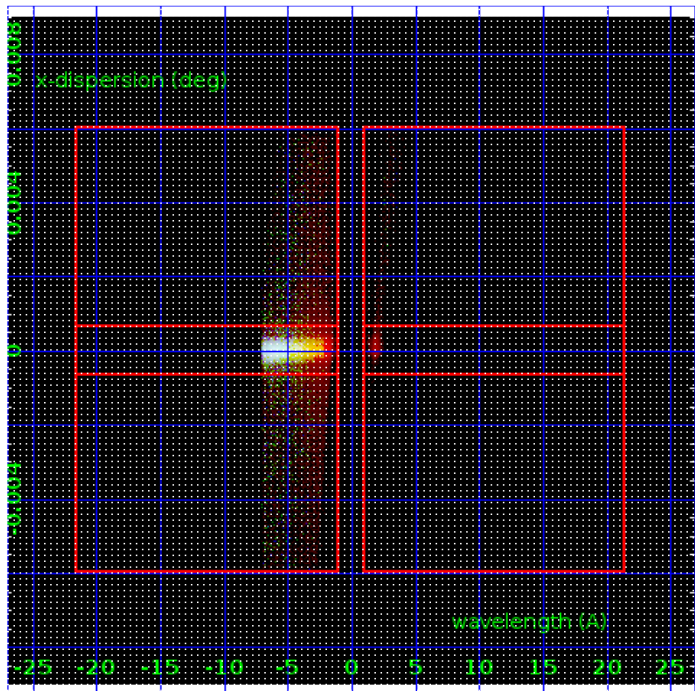
HEG Order Sort 123



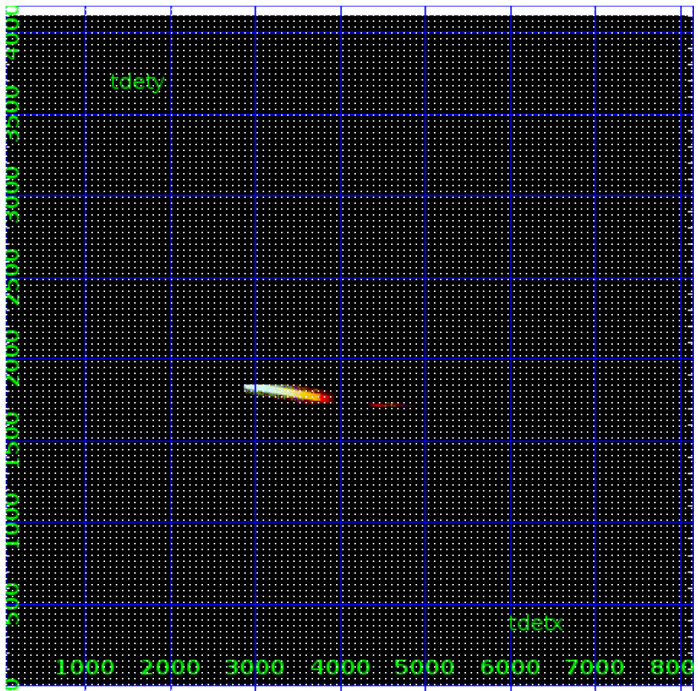
HEG Zero Order



HEG Order Sort ALL

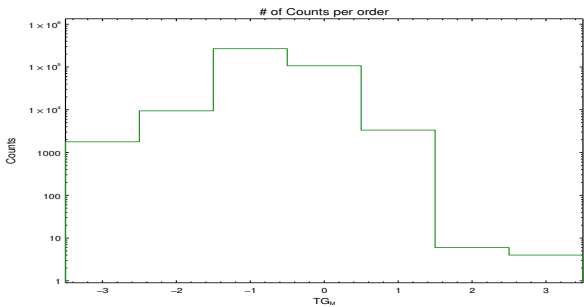


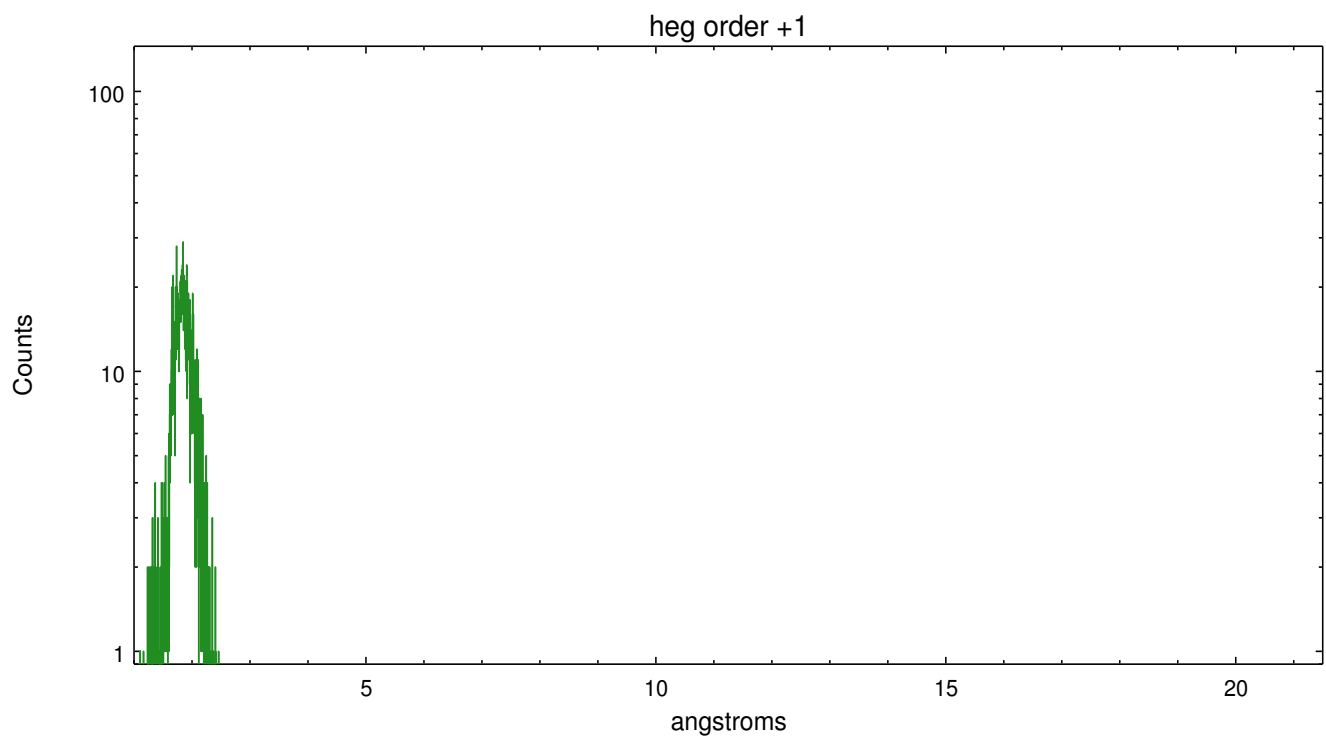
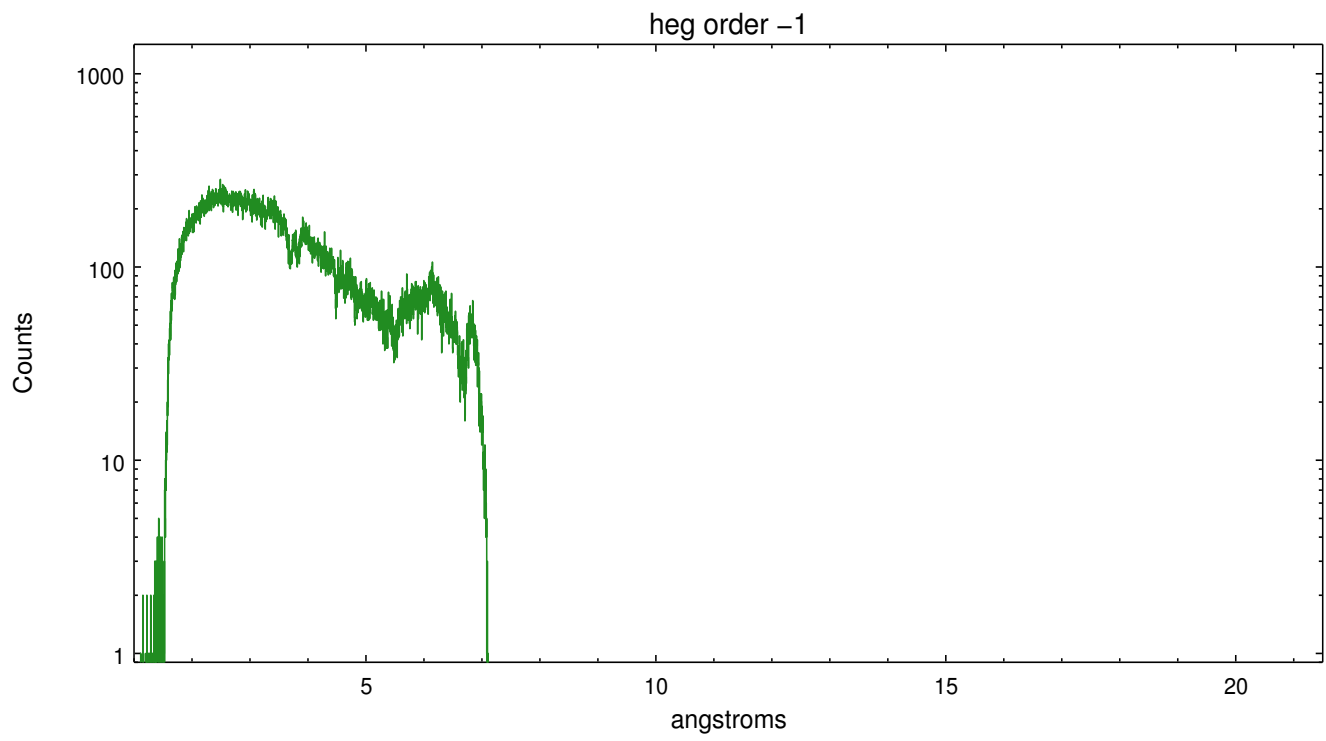
Spot Image HEG



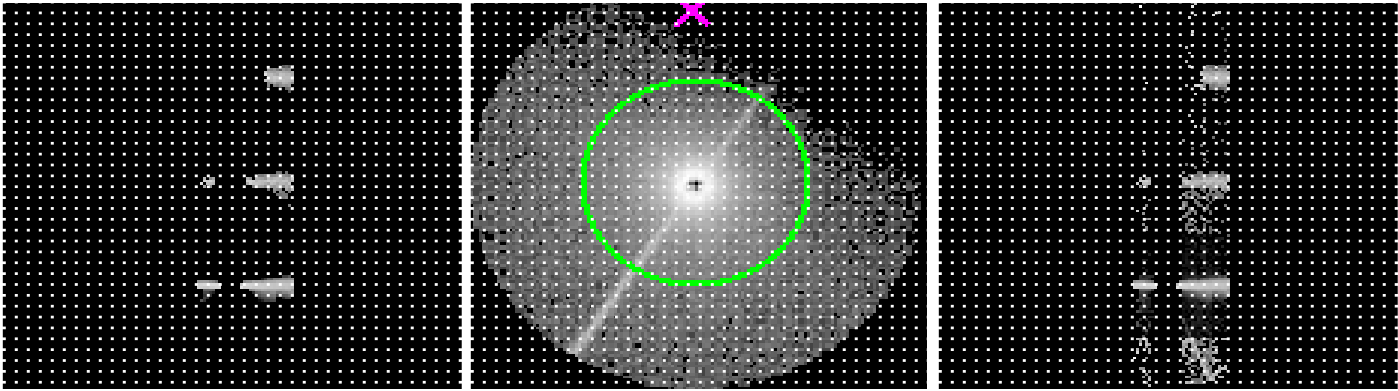
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1782	9429	267691	106582	3342	6	4





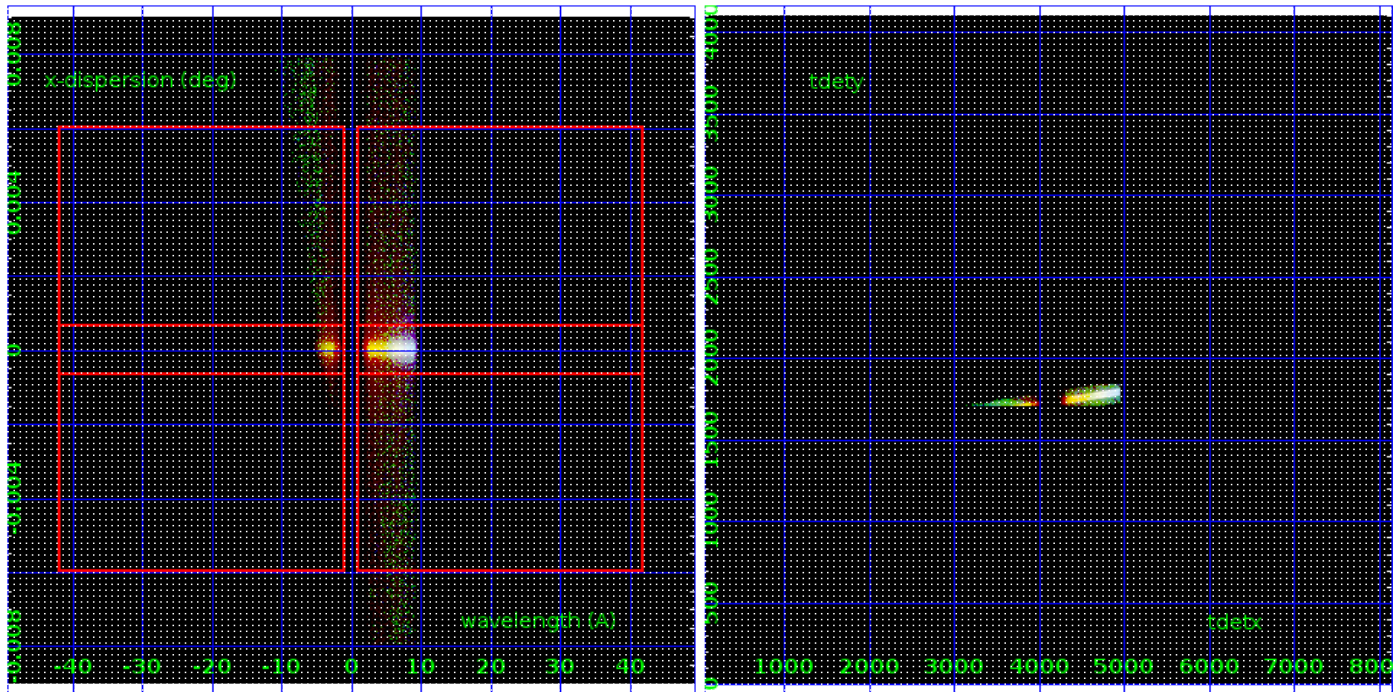
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

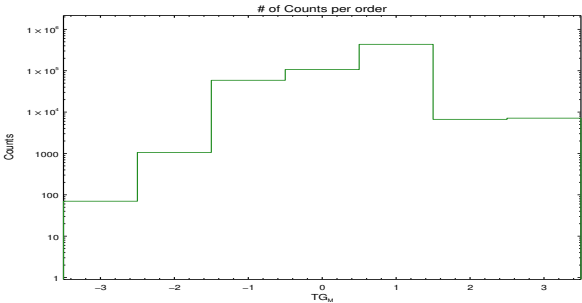
MEG Order Sort ALL

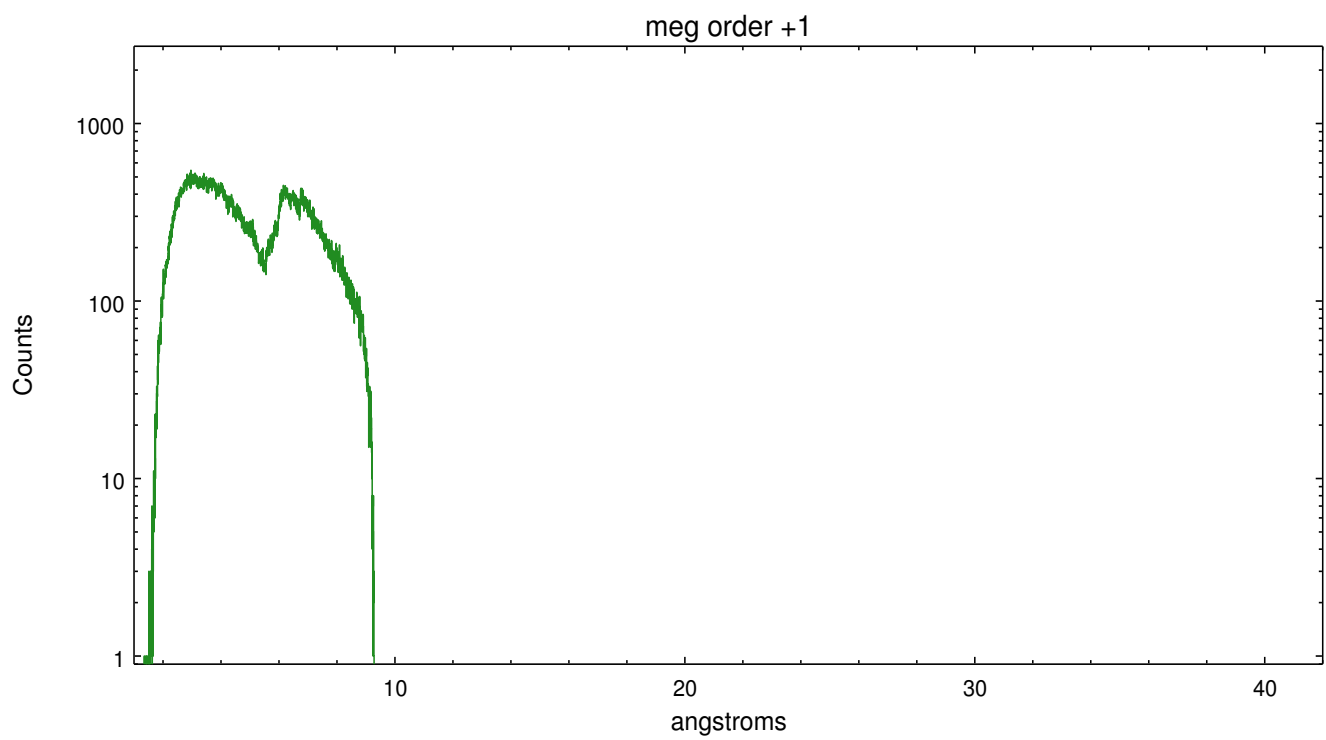
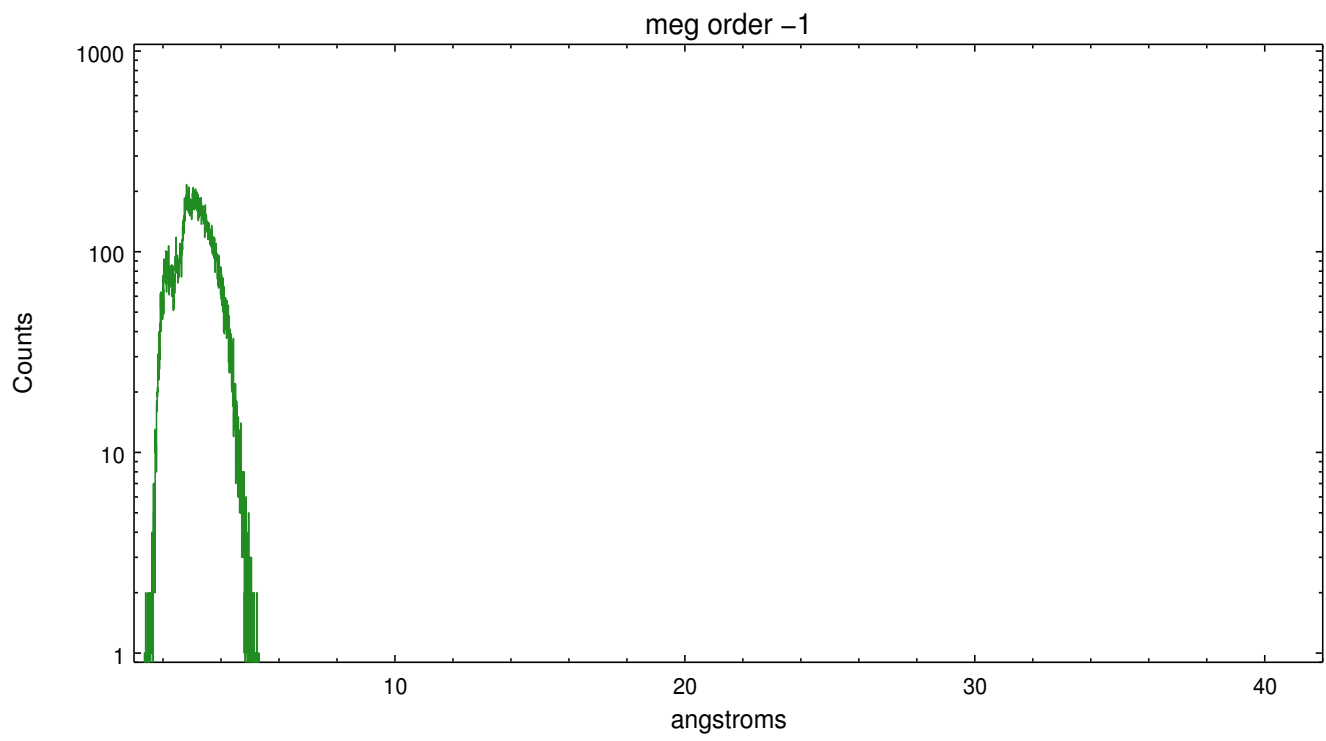


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	70	1059	58717	106582	434472	6669	7131





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2017.05.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	41.093906201243

A.2 Comments

Comments for Obi 0

Fid in slot 0 radial offset > 0.550000 arcsec

(acceptable, as per aspect review)

Note: used manually determined source position for grating extractions, since automatic methods erred with a saturated source close to the array edge.