

V&V Reference Report

L2 ASCDS Version : 10.5.2

Observation 18148 - L2 Version 1
Chandra X-Ray Center

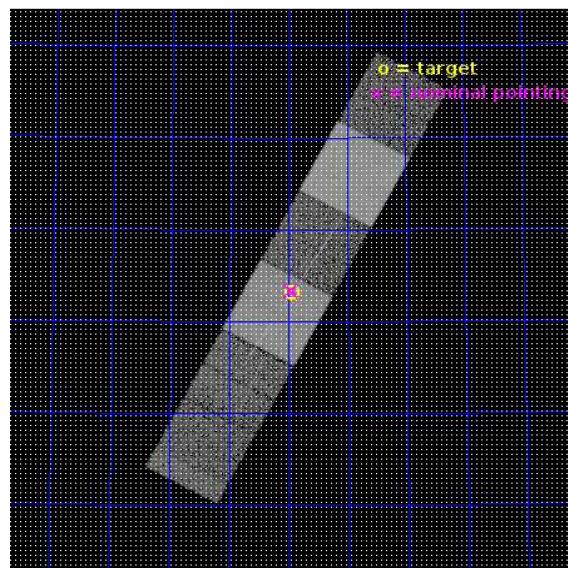
L2 Processing Date : Apr 2 2017

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

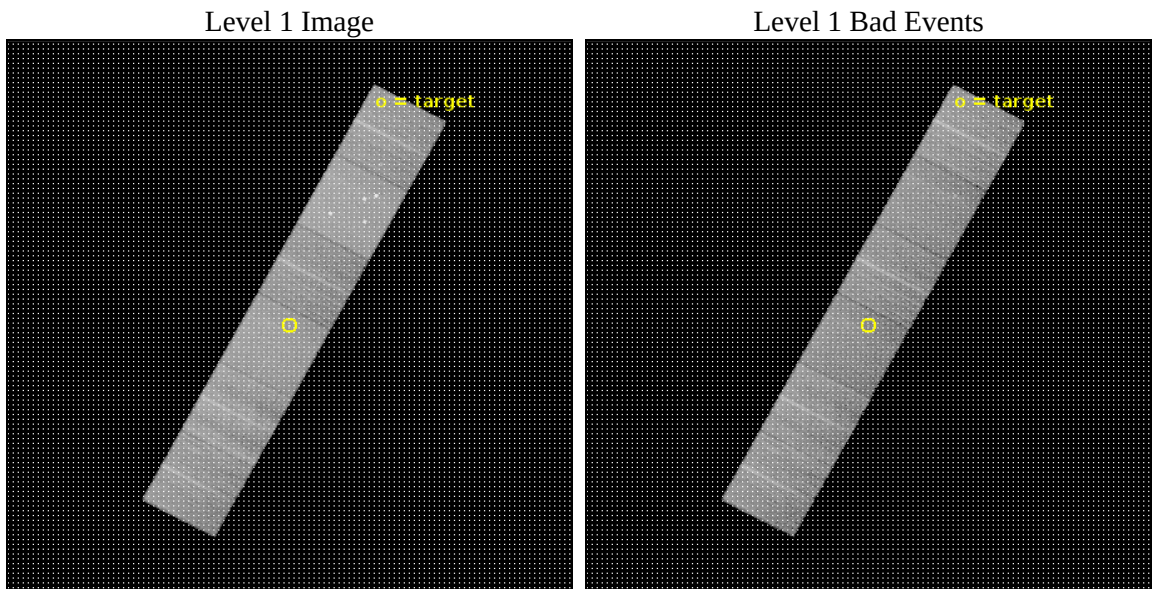
seq_num	703214	Sequence number
obs_id	18148	Observation id
title	Picturing Feedback in Action: from the innermost nuclear region to the Galaxy Scale	Proposal title
observer	Fabrizio Nicastro	Principal investigator
object	Mkn 876	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	243.488333	Observer's specified target RA [deg]
dec_targ	65.719444	Observer's specified target Dec [deg]
ra_nom	243.48852590819	Nominal RA [deg]
dec_nom	65.722516101766	Nominal Dec [deg]
roll_nom	118.15643312053	Nominal Roll [deg]
revision	1	Processing version of data
ontime	17167.123909593	Sum of GTIs [s]
livetime	16949.743449848	Livetime [s]
ontime4	17167.164949536	Sum of GTIs [s]
ontime5	17167.08286953	Sum of GTIs [s]
ontime6	17167.041829586	Sum of GTIs [s]
ontime7	17167.123909593	Sum of GTIs [s]
ontime8	17167.000789523	Sum of GTIs [s]
ontime9	17166.959749579	Sum of GTIs [s]
l2events	206619	Number of level 2 events



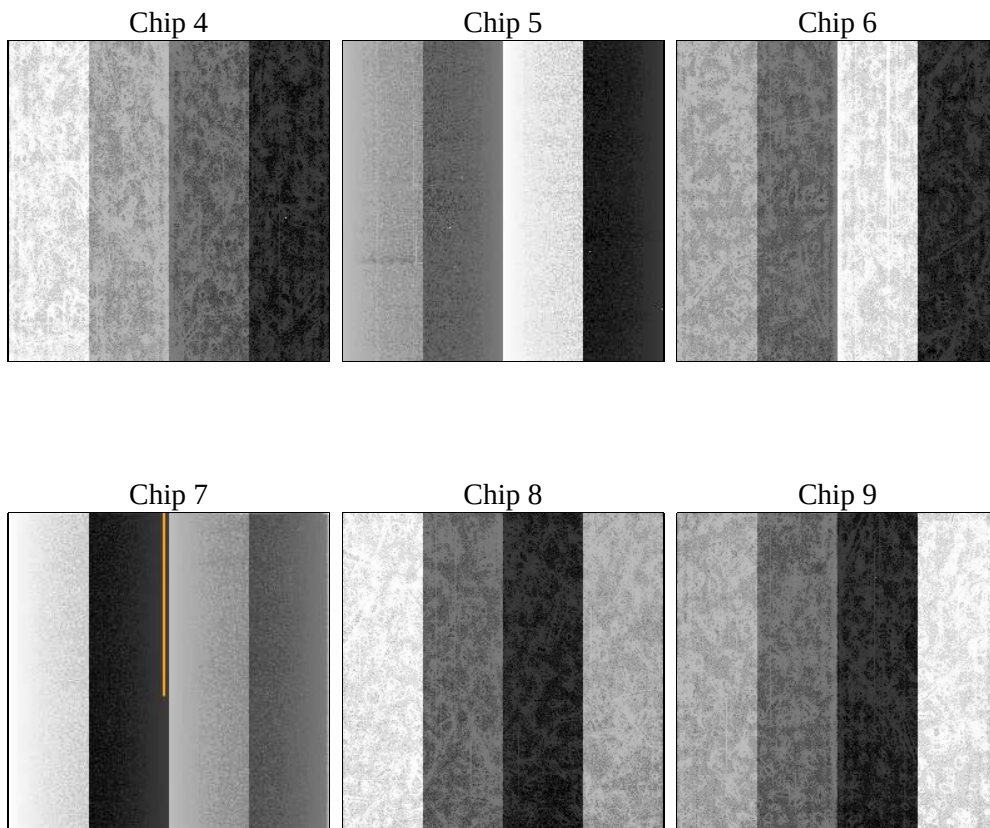
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	3	Obi number	sched_exp_time	17228.443000	[s] Scheduled observation exposure time
ascdsver	10.5.2	Processing system revision	ontime	17167.123909593	Sum of GTIs [s]
caldsver	4.7.3	 	ontime4	17167.164949536	Sum of GTIs [s]
date	2017-04-03T01:04:07	Date and time of file creation	ontime5	17167.08286953	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	17167.041829586	Sum of GTIs [s]
			ontime7	17167.123909593	Sum of GTIs [s]
			ontime8	17167.000789523	Sum of GTIs [s]
			ontime9	17166.959749579	Sum of GTIs [s]
			l1events	900146	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			ra_pos	(4096.22, 4072.51)	src1a sky pixel position

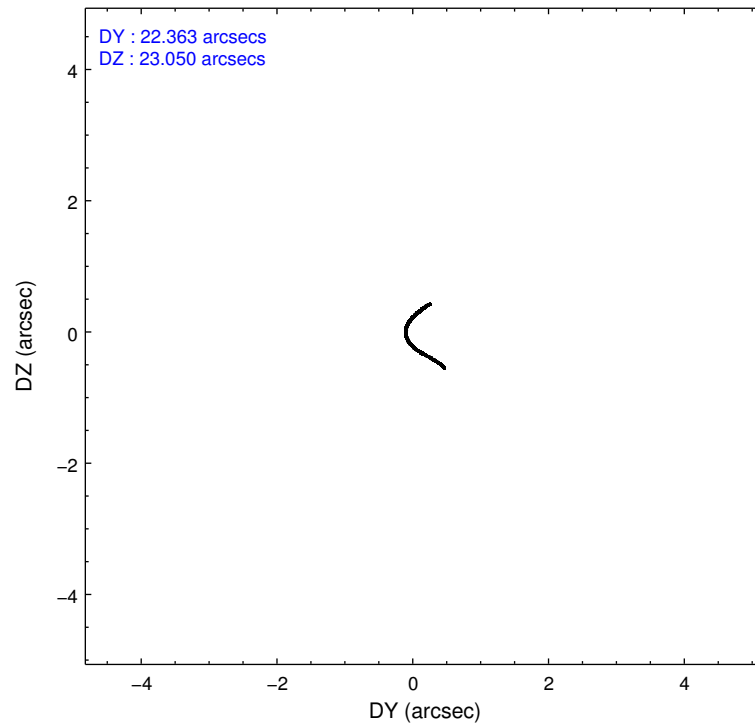
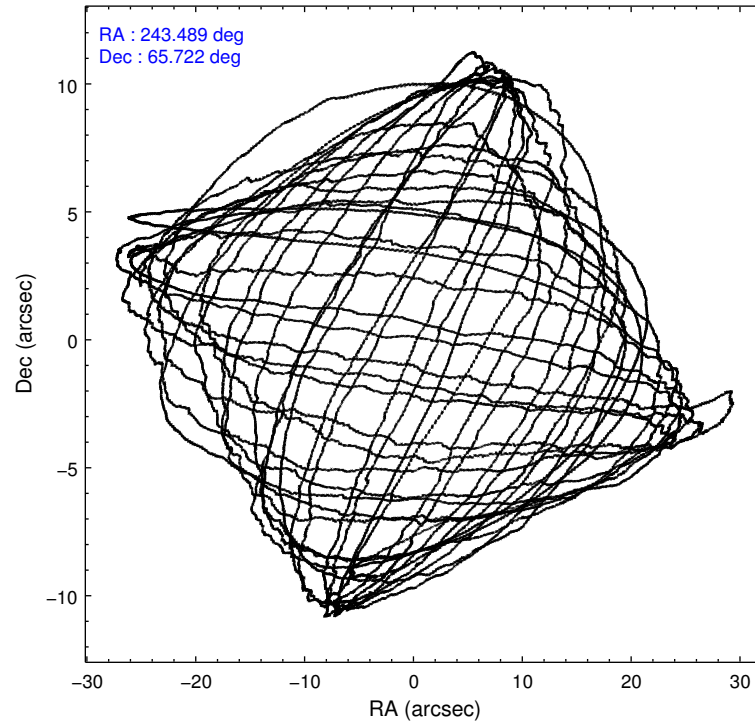
2.1.4 Events

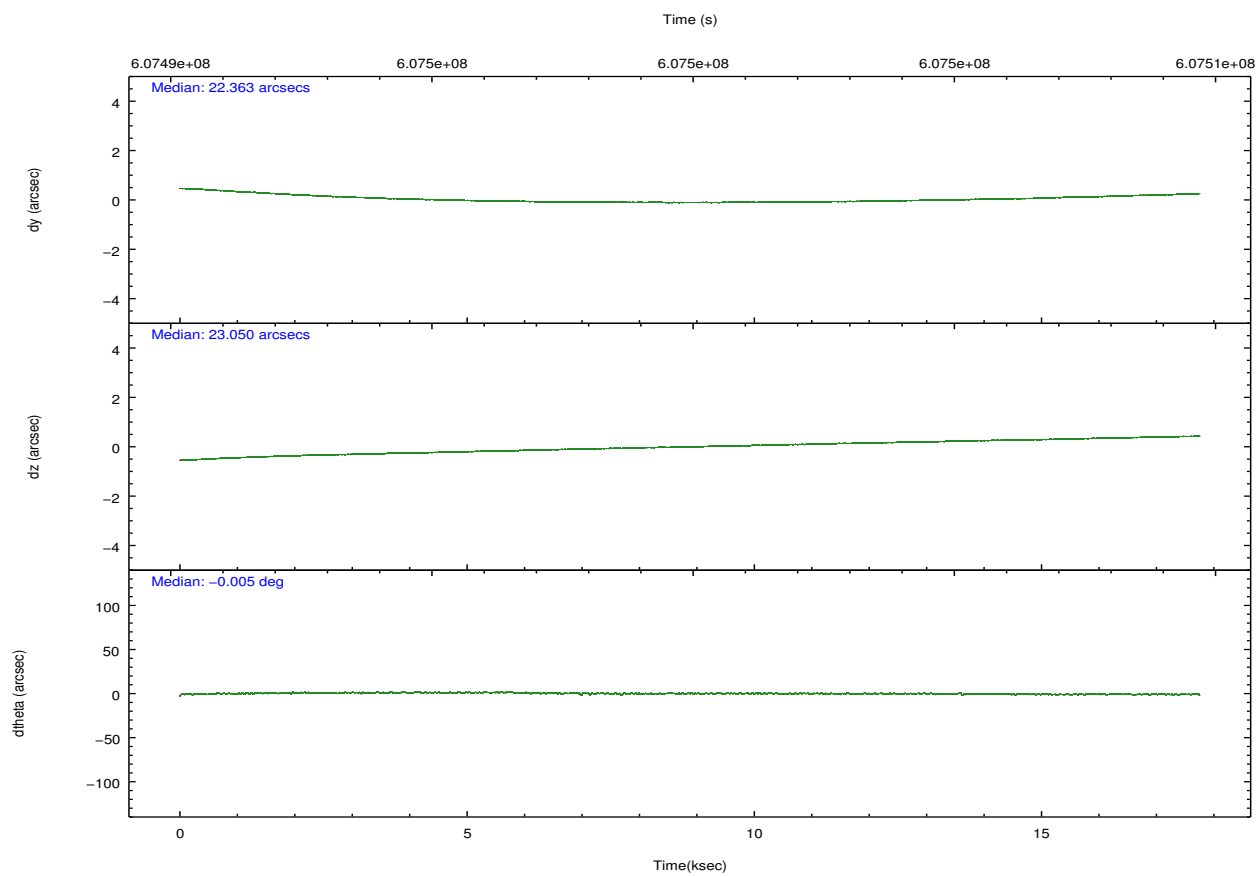
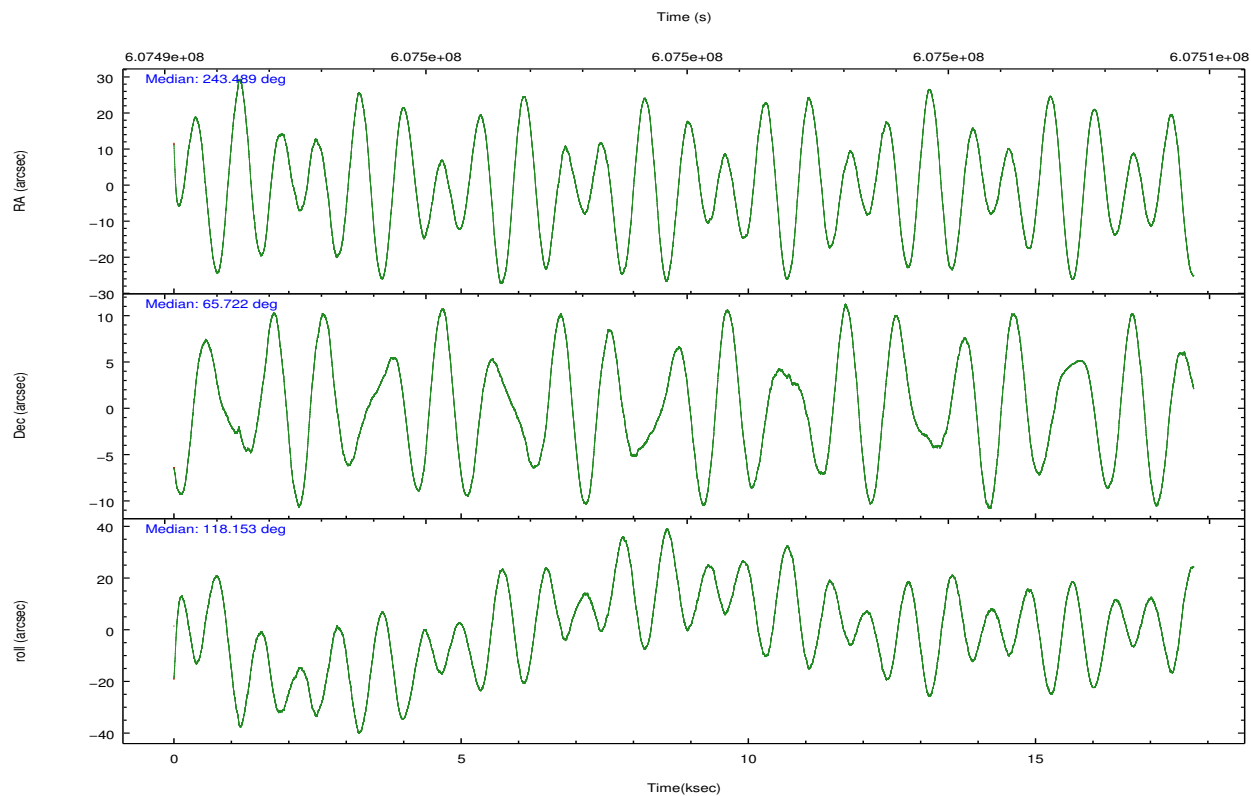
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	142176	198958	120892	157140	157562	123418	grade 0 events	5617	14448	5366	6262	12074	5251
rejected events	127225	97925	105893	87717	115091	108369		3%	7%	4%	3%	7%	4%
rejected %	89%	49%	87%	55%	73%	87%	grade 1 events	147	701	65	208	119	79
								0%	0%	0%	0%	0%	0%
							grade 2 events	3564	30467	3396	15038	10340	3371
								2%	15%	2%	9%	6%	2%
							grade 3 events	1528	2837	1417	5528	4415	1542
								1%	1%	1%	3%	2%	1%
							grade 4 events	1576	2803	1382	5308	4124	1506
								1%	1%	1%	3%	2%	1%
							grade 5 events	5995	12823	5514	15191	8649	6280
								4%	6%	4%	9%	5%	5%
							grade 6 events	2668	50485	3441	37299	11519	3383
								1%	25%	2%	23%	7%	2%
							grade 7 events	121081	84394	100311	72306	106322	102006
								85%	42%	82%	46%	67%	82%

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	HETG	HETG	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	243.545669	243.4885259081902	CCD I2 on	N	N
[deg] Pointing Dec	65.708333	65.72251610176625	CCD I3 on	N	N
[deg] Pointing Roll	117.947741	118.1564331205294	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)	607491595.184000	607490391.58223	CCD S5 on	Y	Y
Observation start date	2017-04-02T03:38:46	2017-04-02T03:19:51	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	607508824.184000	607509039.92081	On-chip summing requested	N	N
Observation end date	2017-04-02T08:25:55	2017-04-02T08:30:39	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



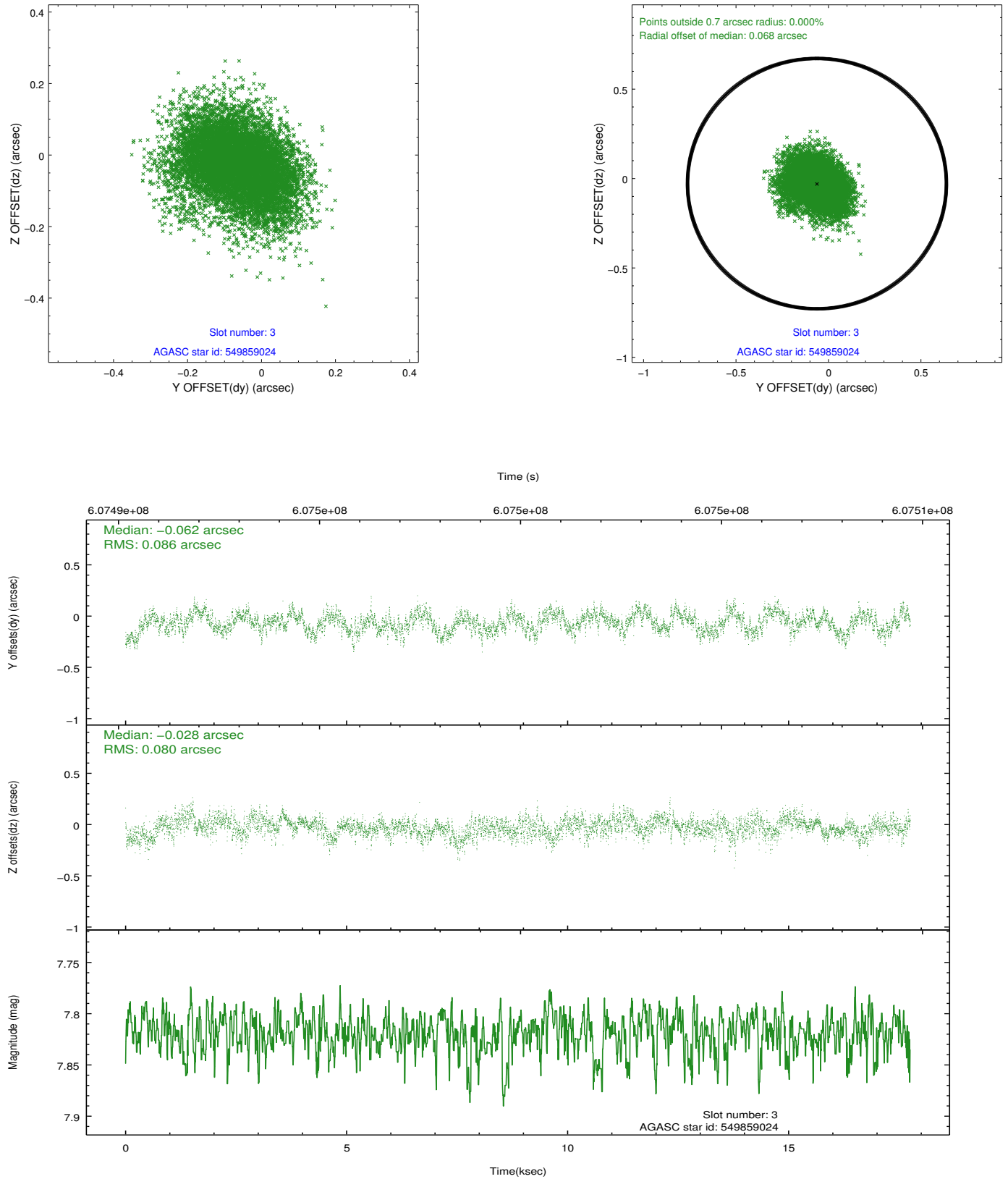


Slot Statistics

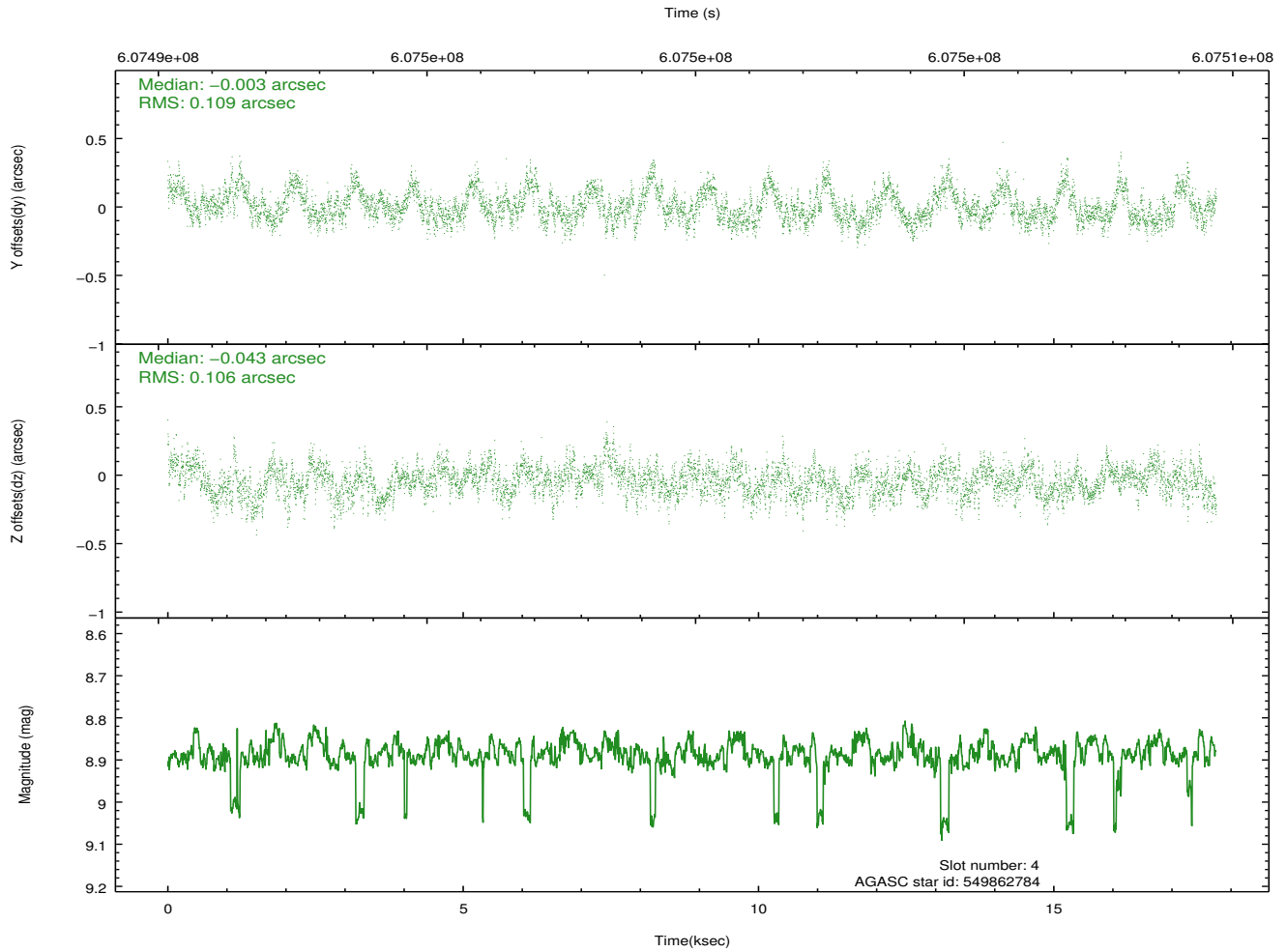
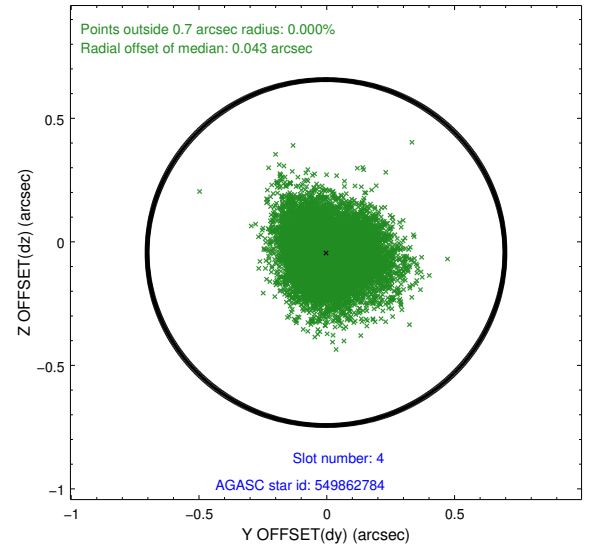
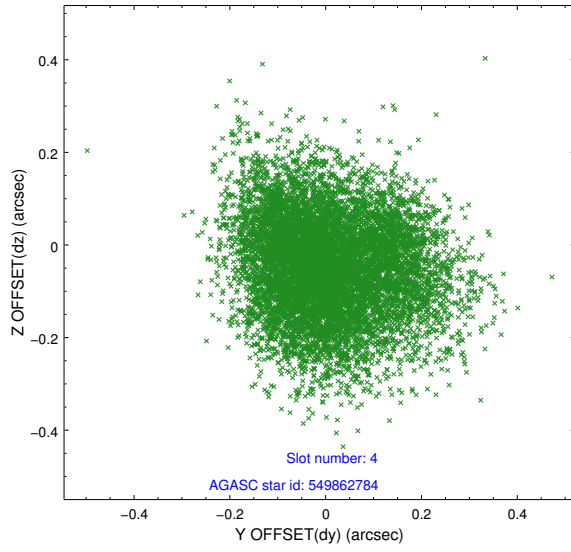
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.03	4330	-0.237	-0.153	0.016	0.023	0.000000	0.000000	-775.79	-1744.80
1	FID		ACIS-S-4	7.13	4331	0.559	0.154	0.011	0.018	0.000000	0.000000	2138.15	163.79
2	FID		ACIS-S-5	7.14	4329	-0.356	0.006	0.014	0.021	0.000000	0.000000	-1828.48	157.53
3	GUIDE	used	549859024	7.82	8659	-0.062	-0.028	0.126	0.205	243.777882	65.072262	-2186.30	761.76
4	GUIDE	used	549862784	8.89	8657	-0.003	-0.043	0.163	0.258	243.335157	66.115006	1437.58	-414.25
5	GUIDE	used	549863464	7.51	8659	-0.191	-0.064	0.126	0.207	243.630740	66.376841	2068.74	-1236.03
6	GUIDE	used	549864952	8.92	8647	0.286	0.188	0.162	0.269	244.861755	65.614211	-1197.13	-1578.52
7	GUIDE	used	549864184	9.05	8648	-0.035	-0.040	0.189	0.303	243.727034	65.246202	-1597.54	538.18

2.4 Star Slots

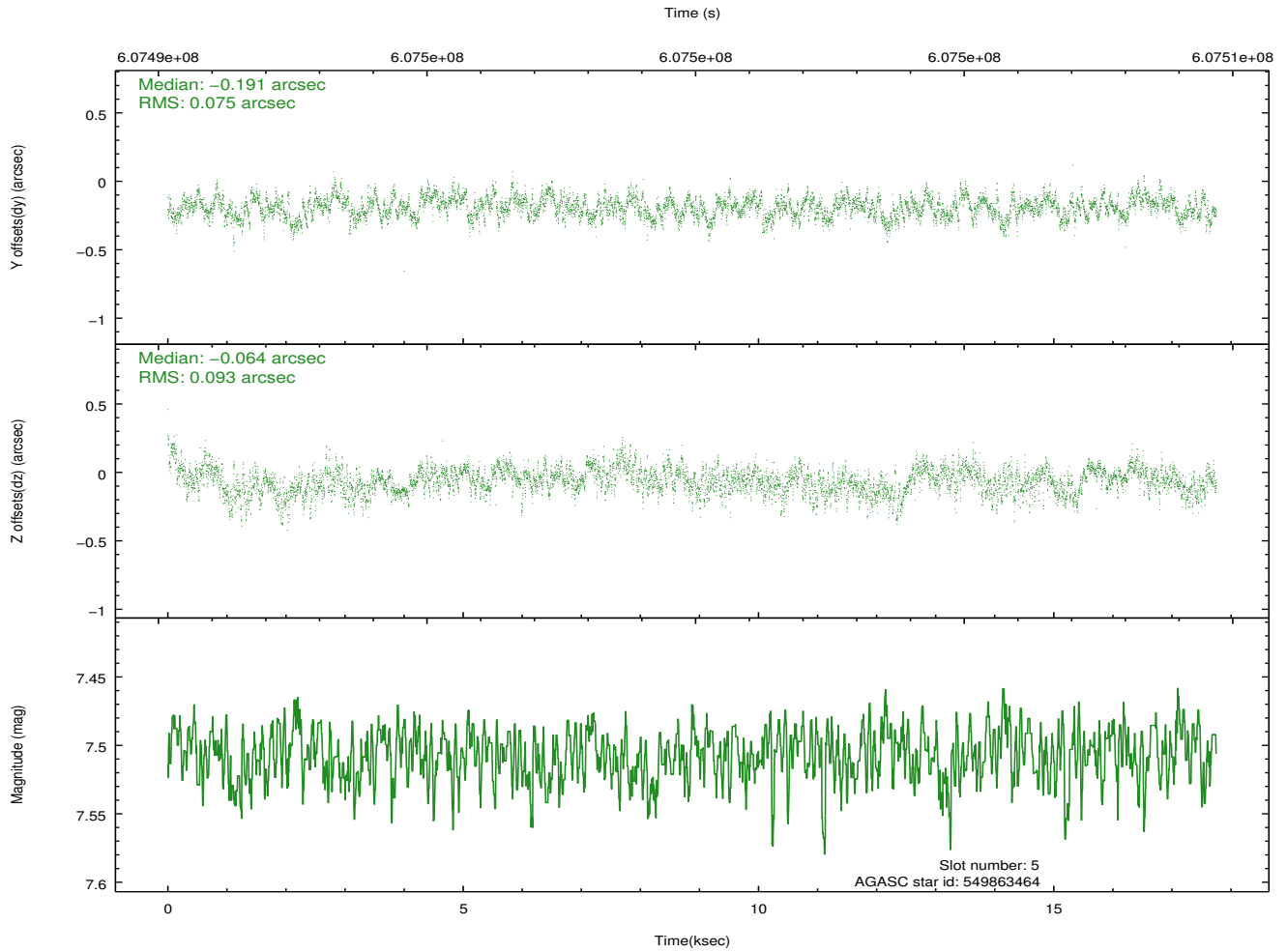
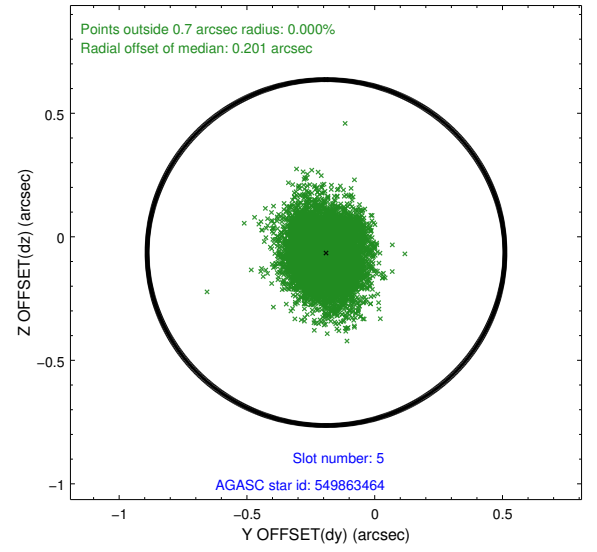
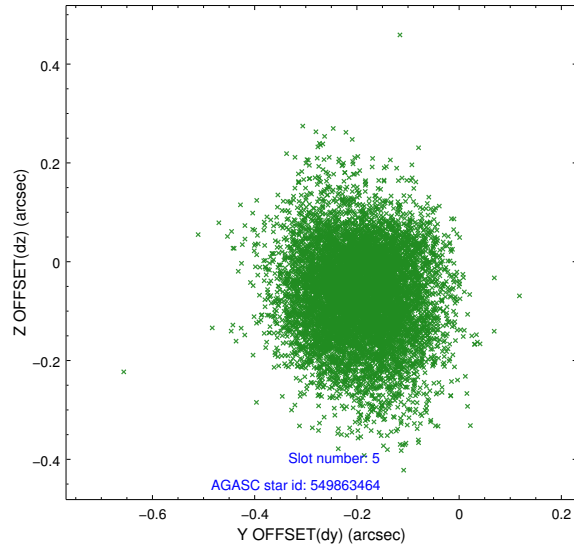
2.4.1 Slot 3



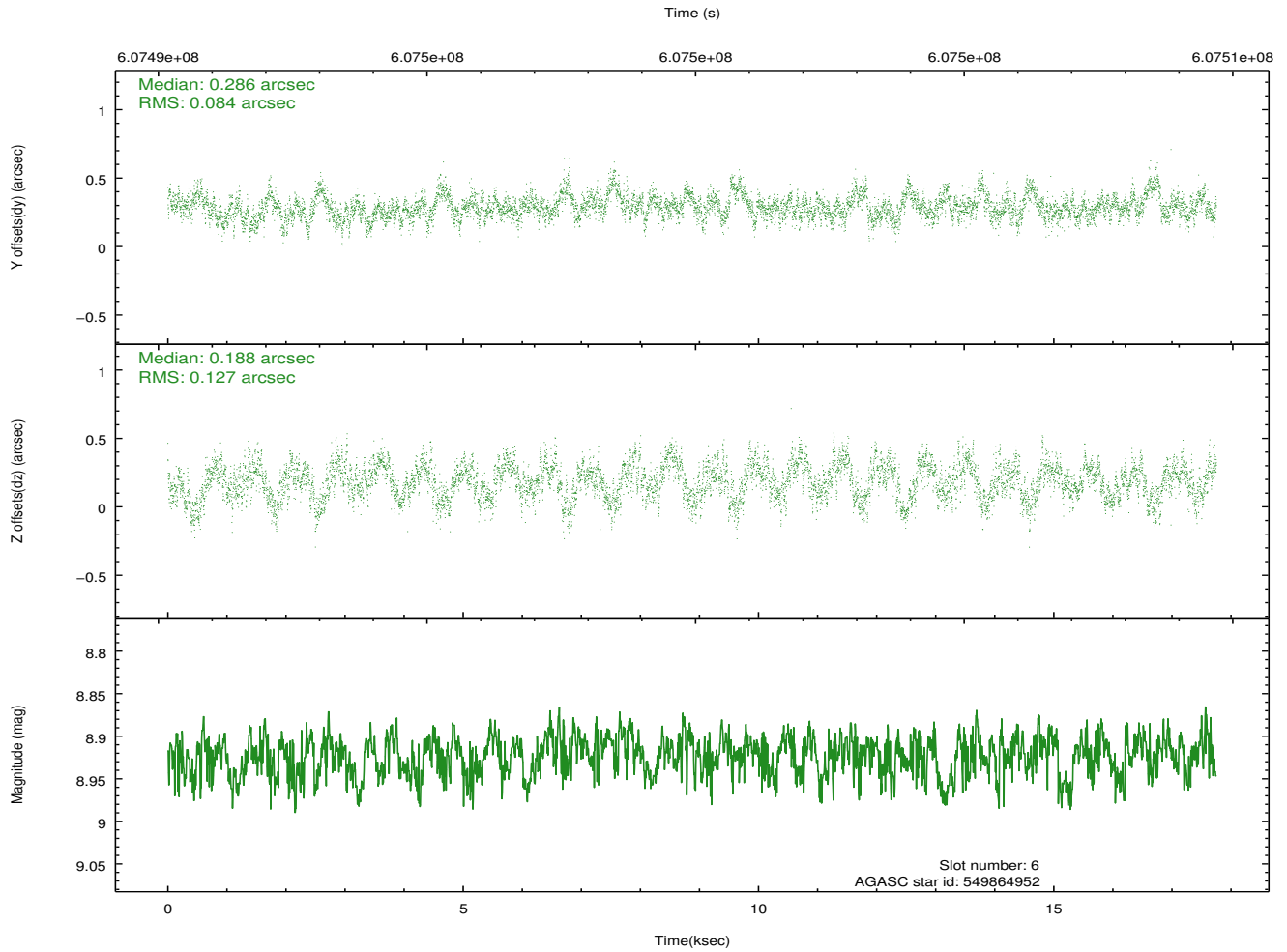
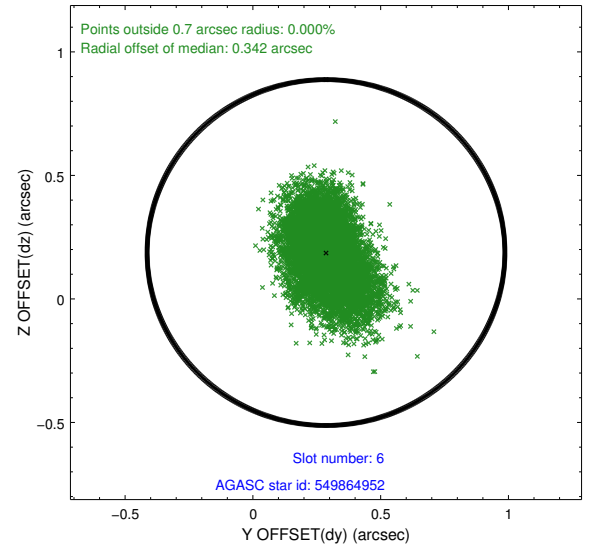
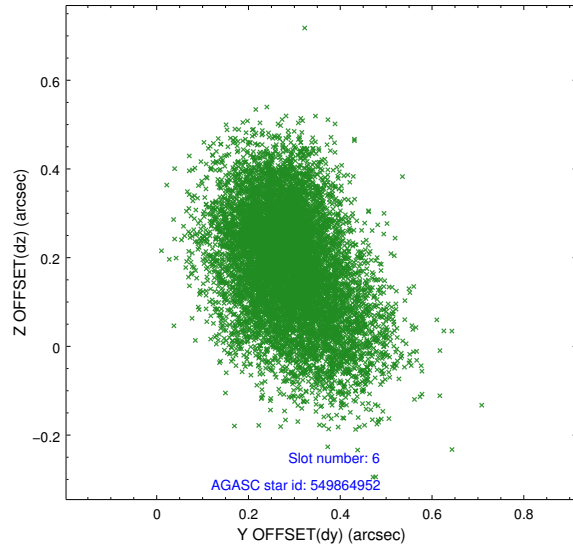
2.4.2 Slot 4



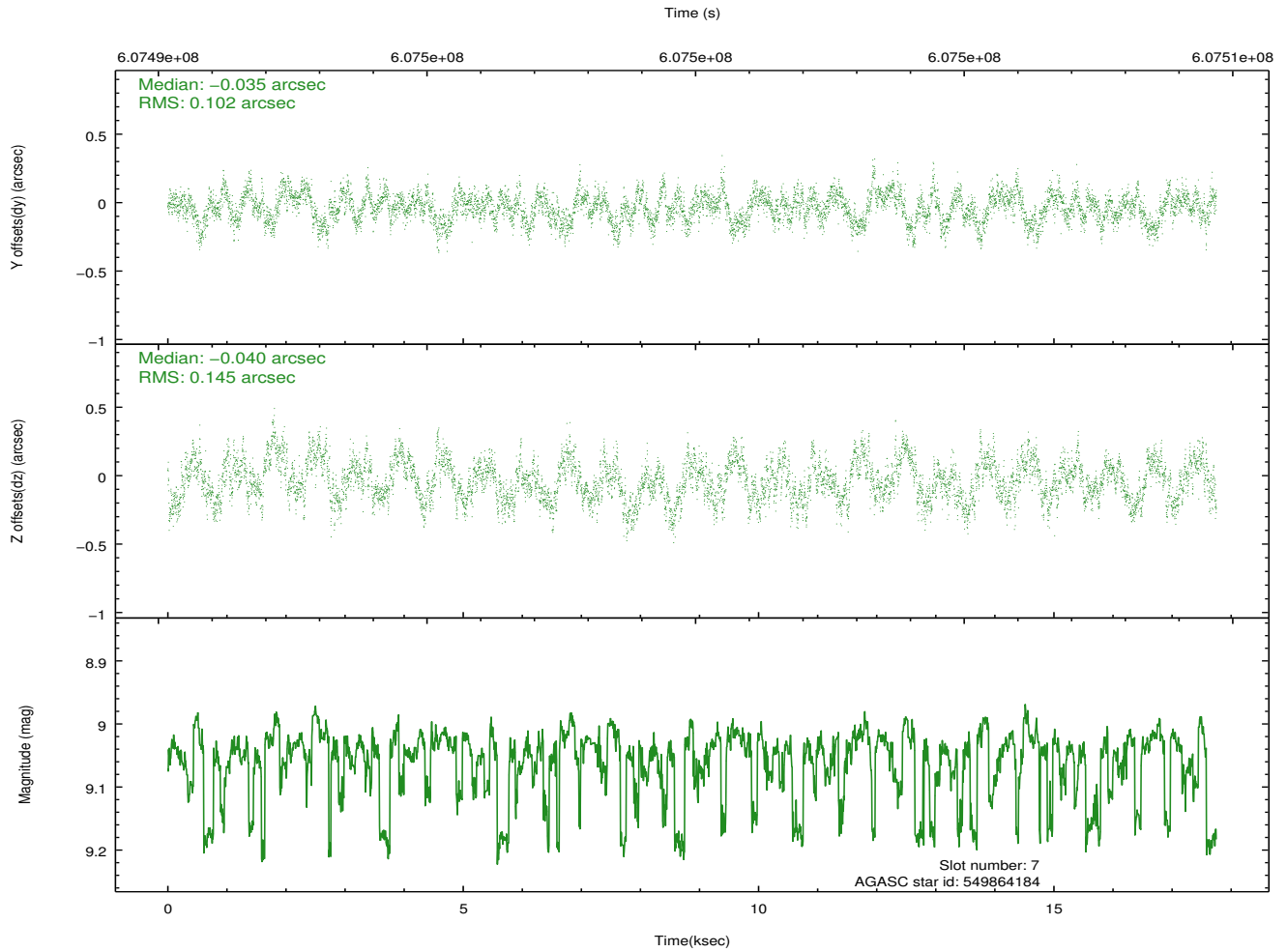
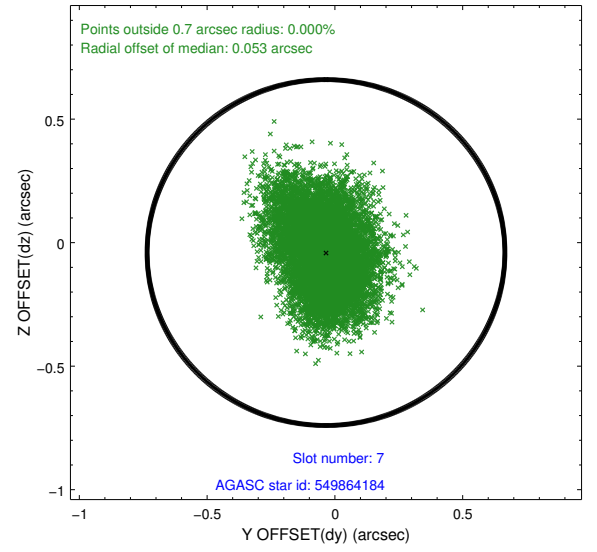
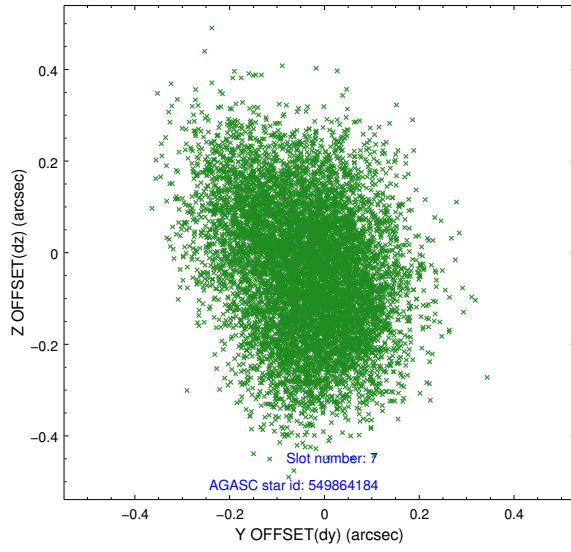
2.4.3 Slot 5



2.4.4 Slot 6

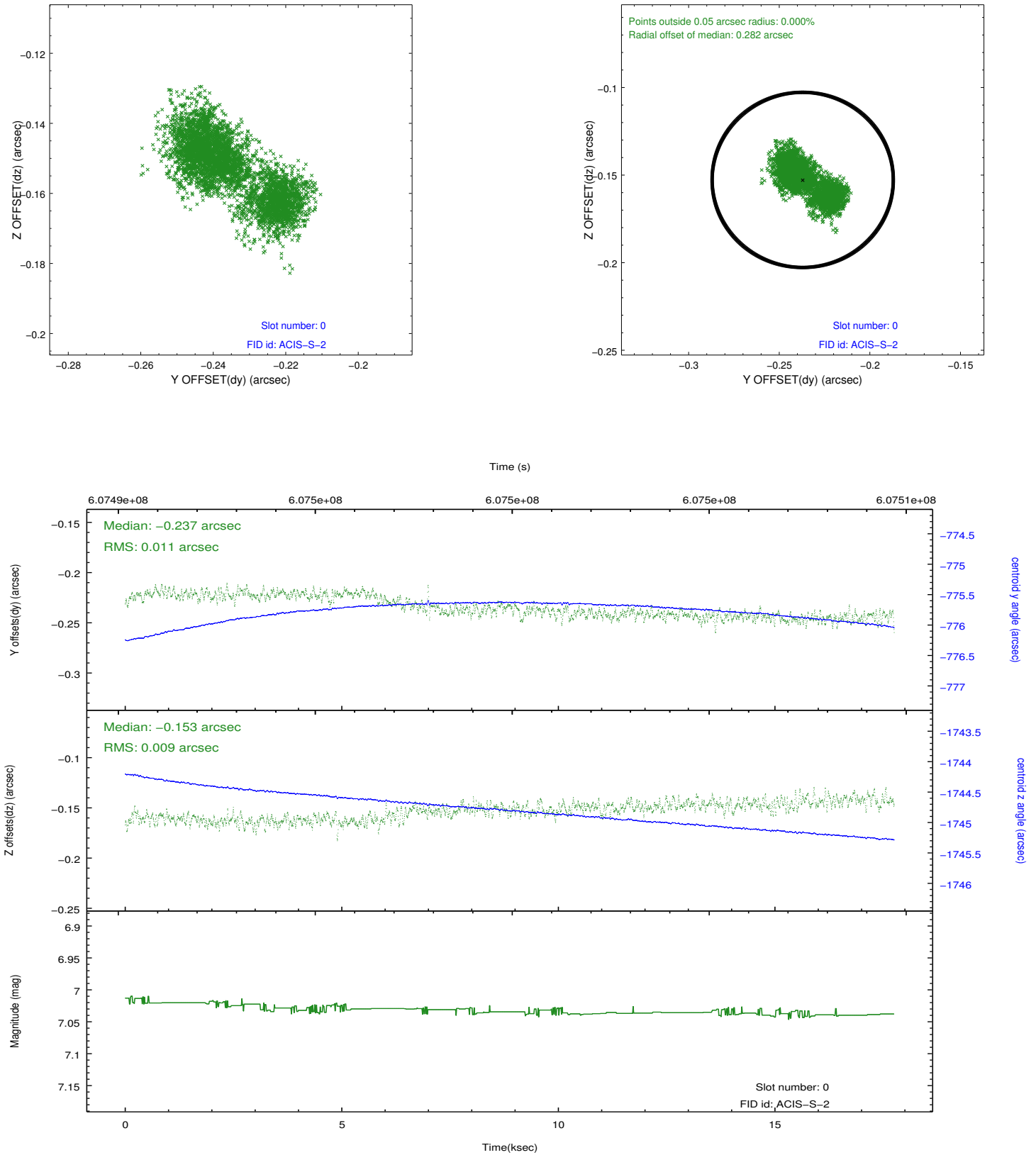


2.4.5 Slot 7

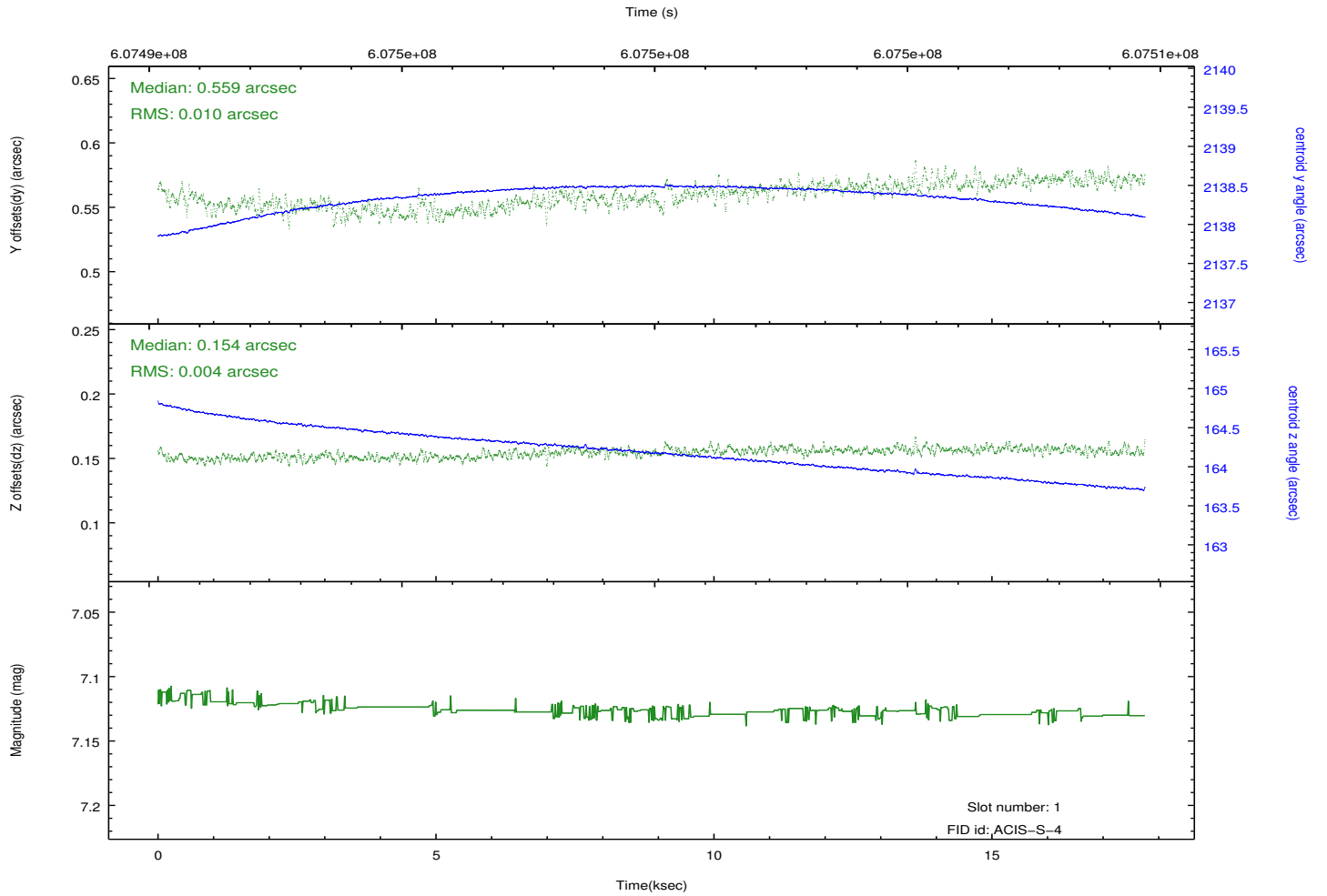
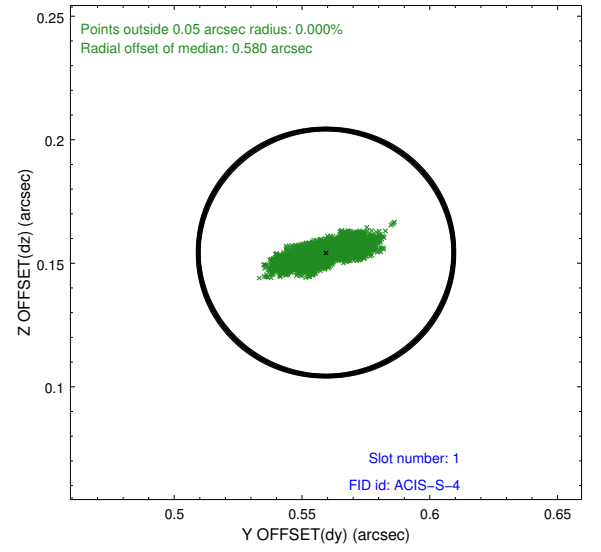
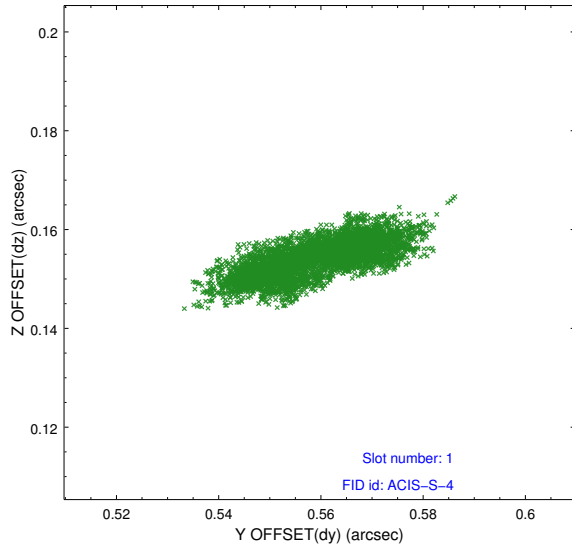


2.5 FID Slots

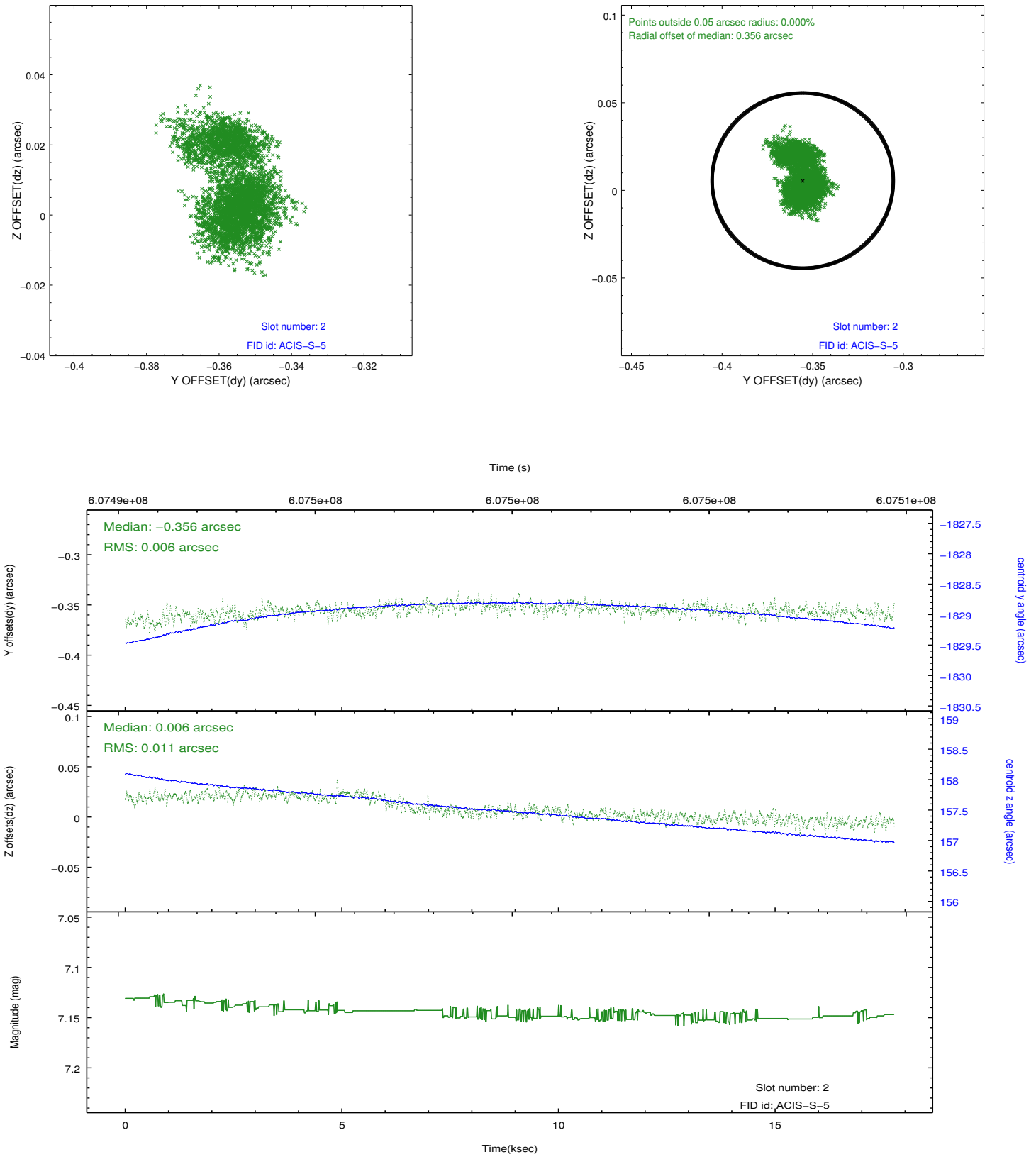
2.5.1 Slot 0



2.5.2 Slot 1

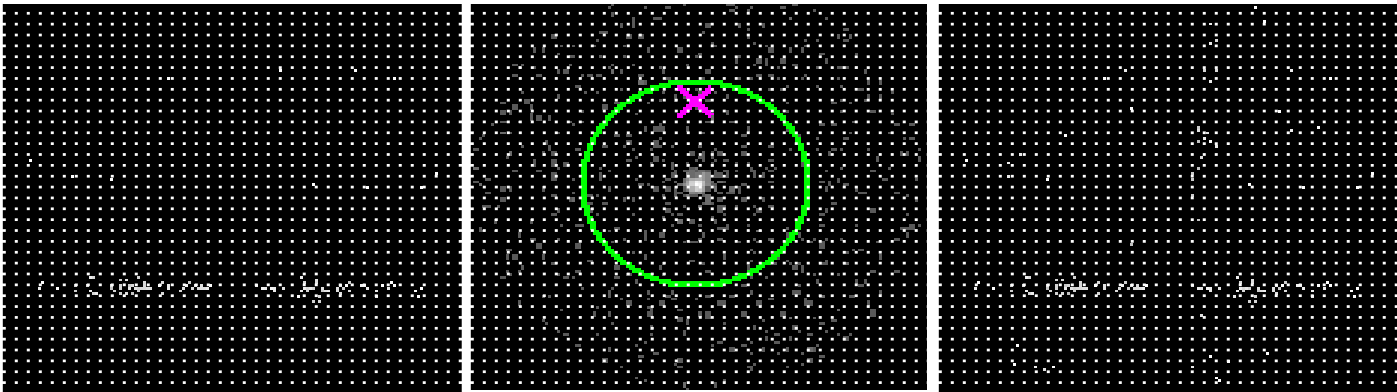


2.5.3 Slot 2



3 Gratings

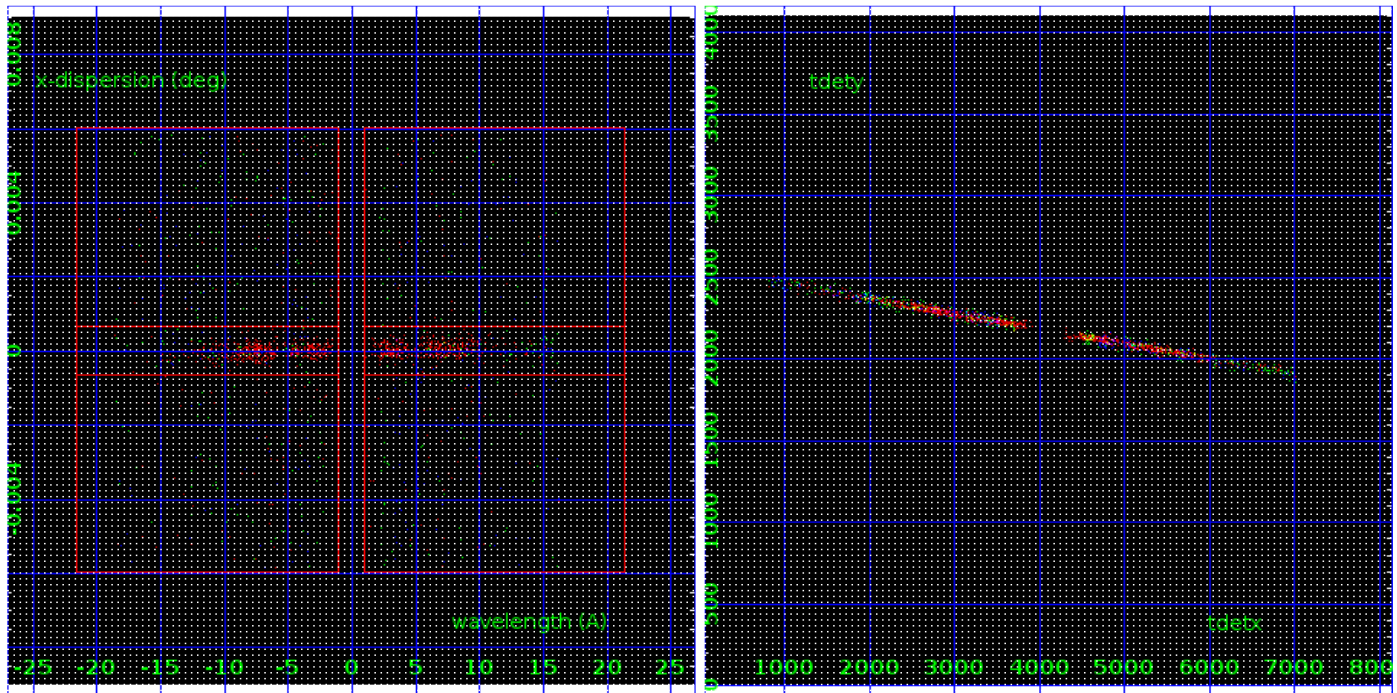
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

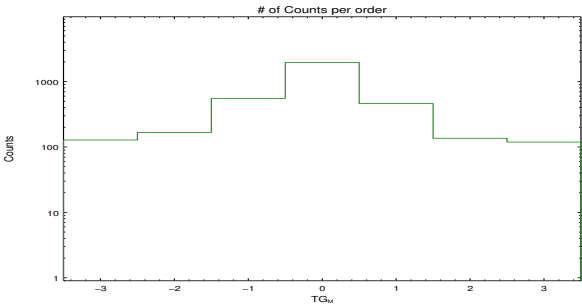
HEG Order Sort ALL

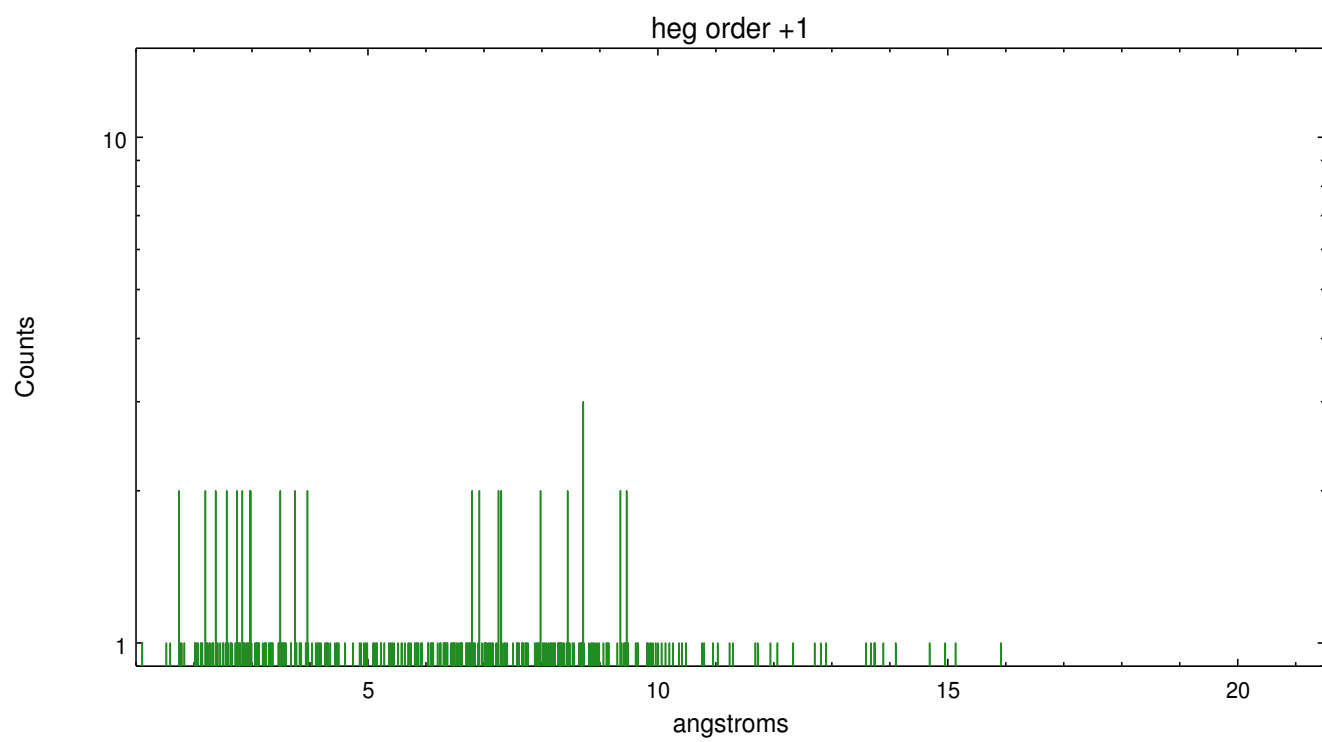
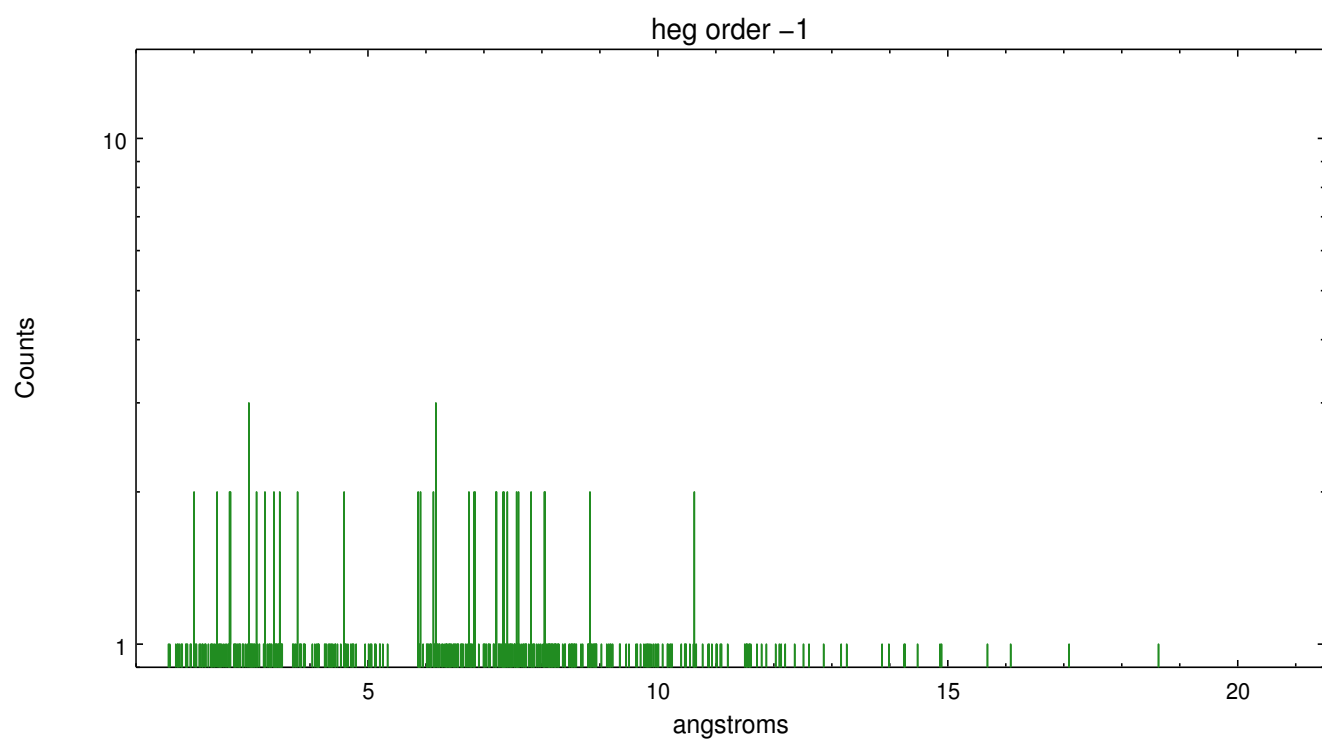


Spot Image HEG

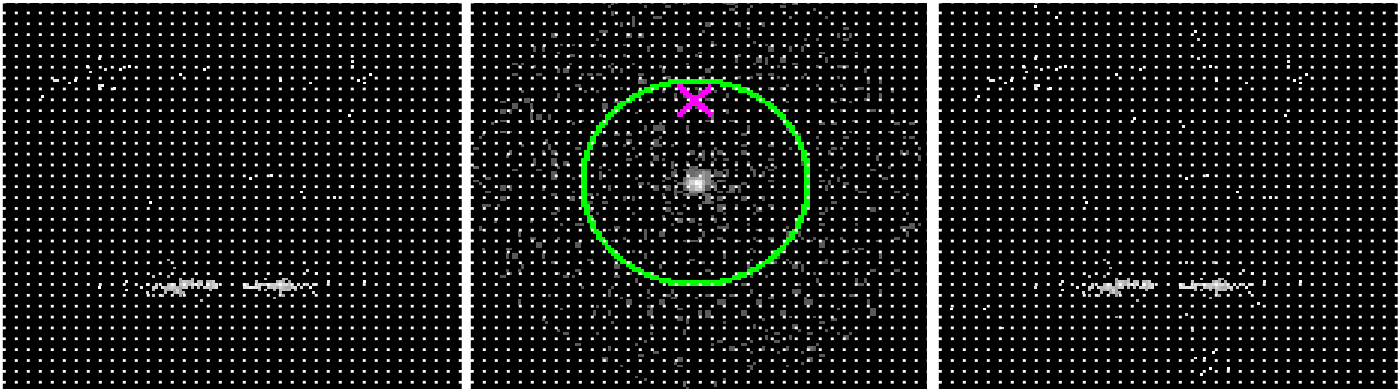
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	128	167	554	1960	461	136	119





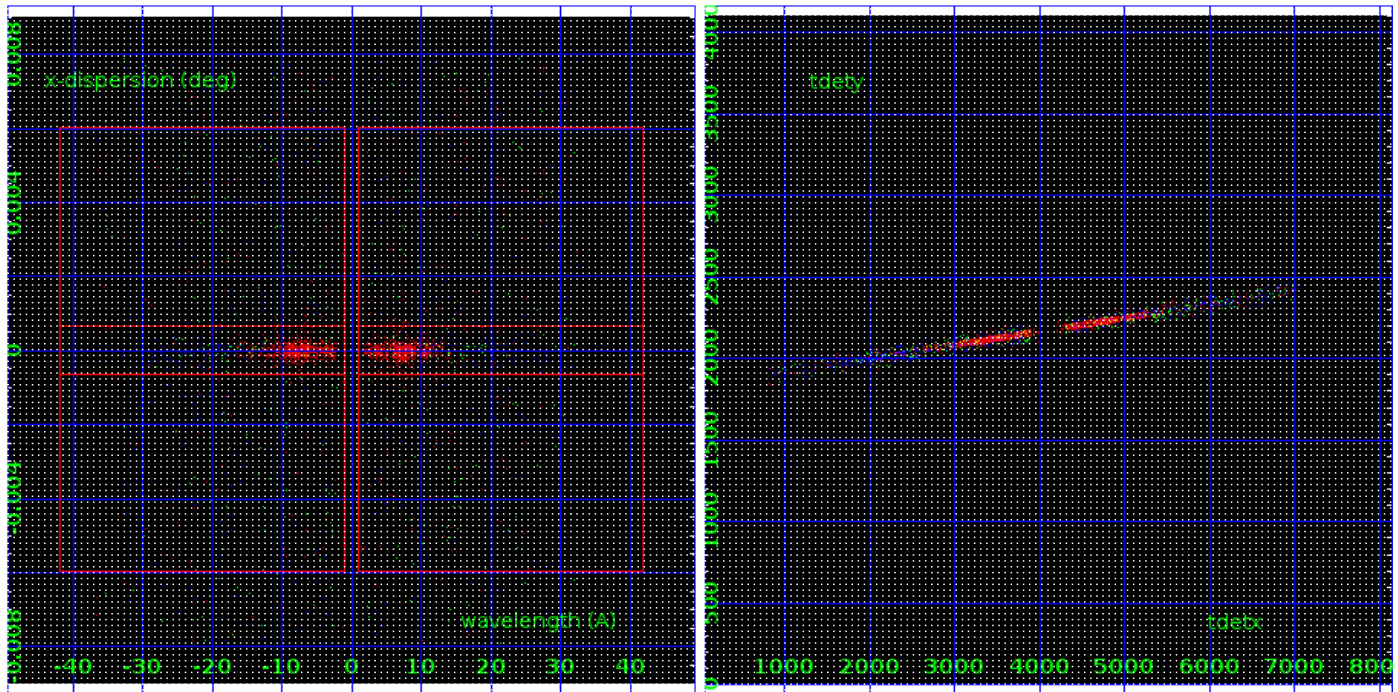
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

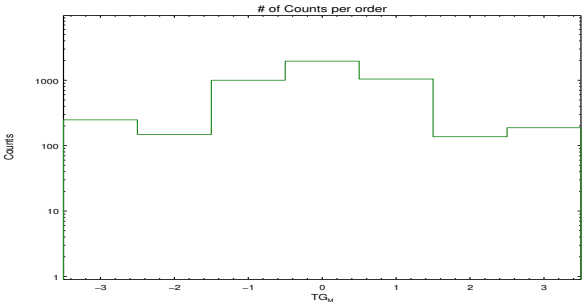
MEG Order Sort ALL

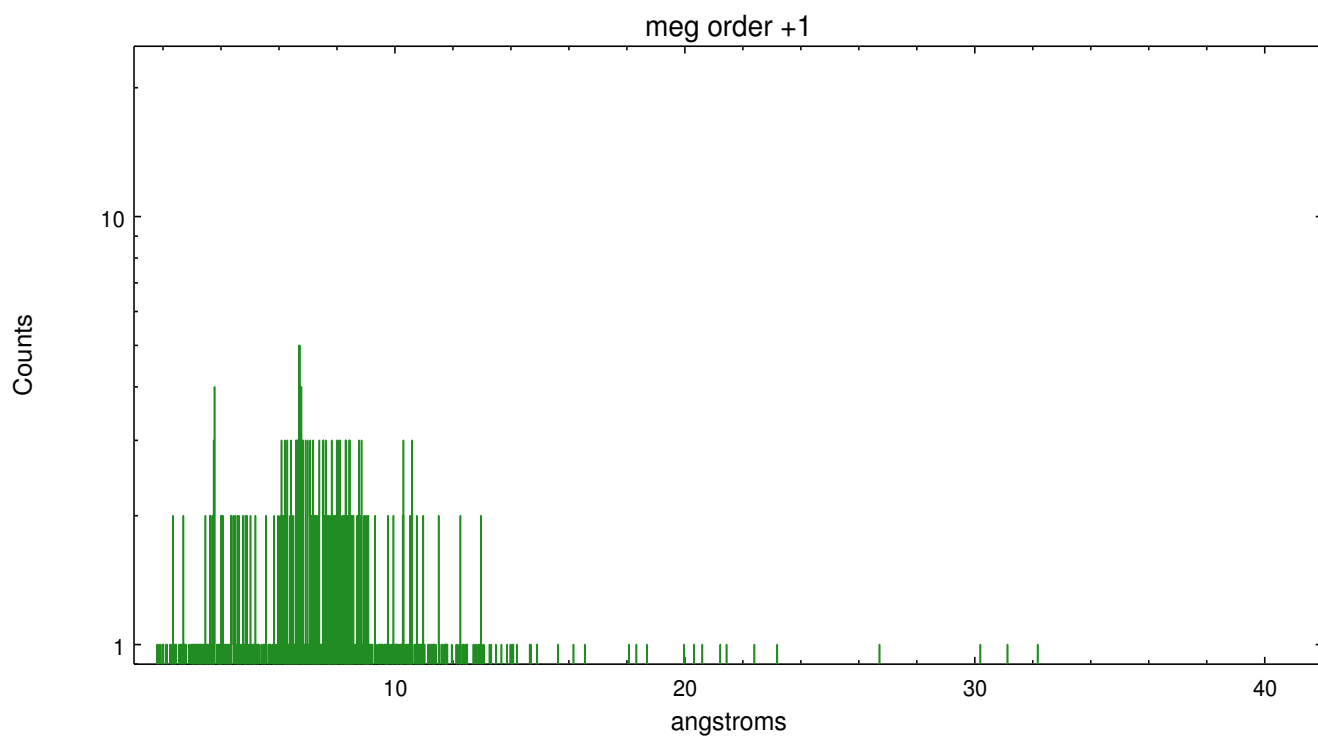
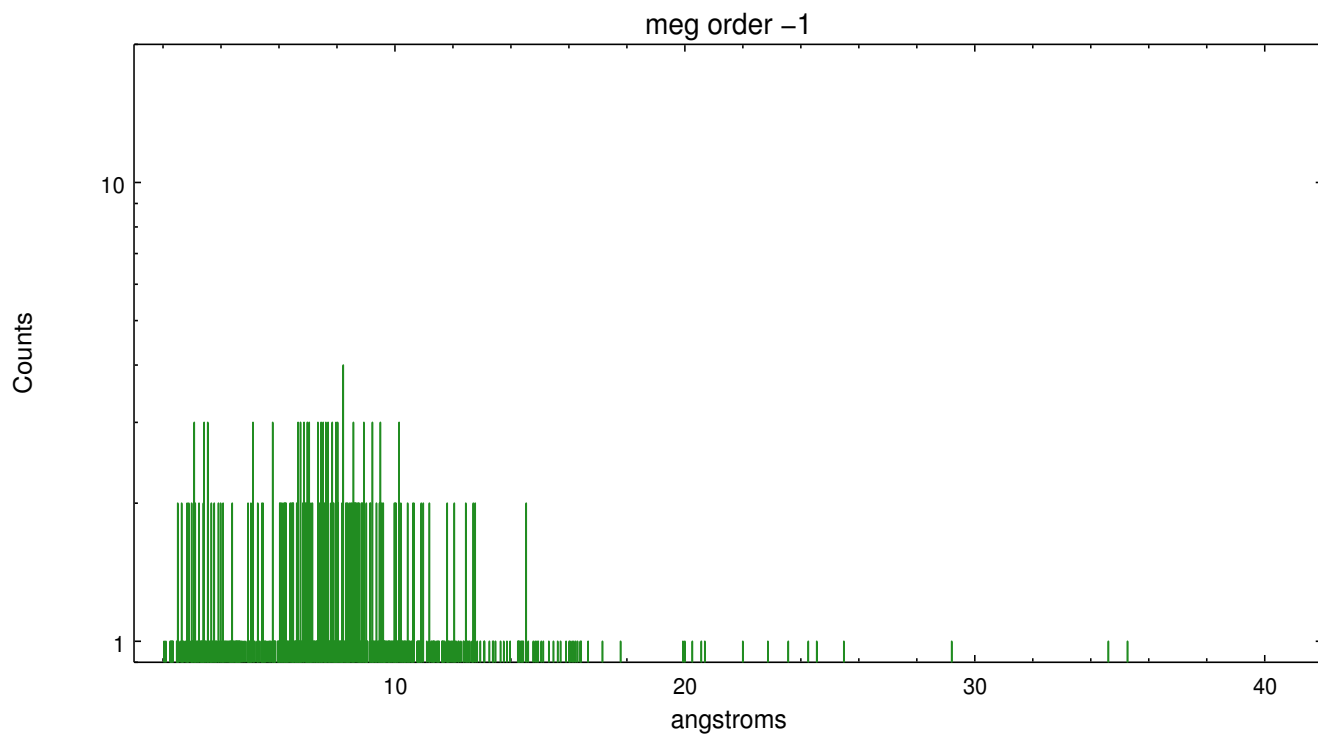


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	248	148	1000	1960	1043	137	188





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2017.04.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	17.167123909593

A.2 Comments