

V&V Reference Report

L2 ASCDS Version : 8.5.1

Observation 6174 - L2 Version 3
Chandra X-Ray Center

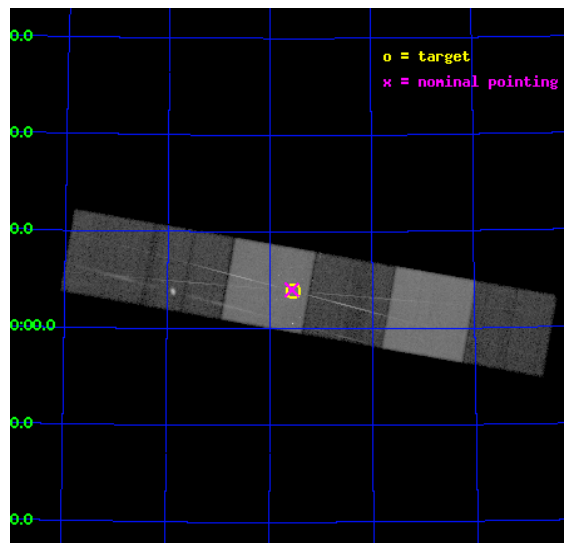
L2 Processing Date : Dec 28 2012

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1 Front

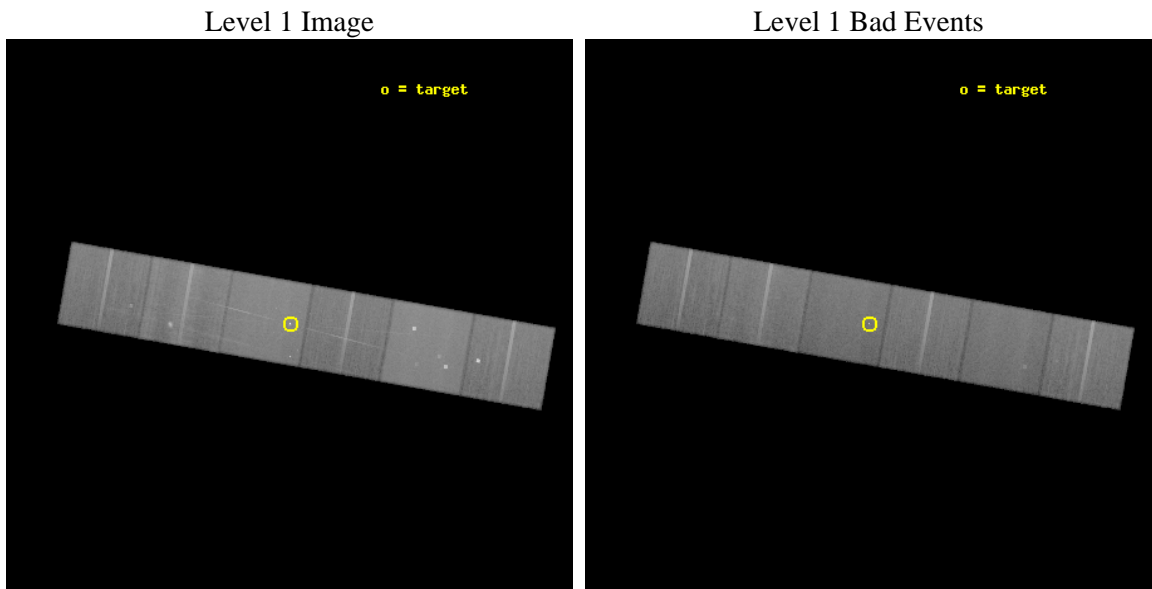
seq_num	701024	Sequence number
obs_id	6174	Observation id
title	Understanding the accretion process in a Low-Luminosity AGN: is M81* a starved black hole?	Proposal title
observer	Prof Claude Canizares	Principal investigator
object	M81*	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	148.888333	Observer's specified target RA [deg]
dec_targ	69.065306	Observer's specified target Dec [deg]
ra_nom	148.89159747759	Nominal RA [deg]
dec_nom	69.067200601728	Nominal Dec [deg]
roll_nom	189.98285273443	Nominal Roll [deg]
revision	3	Processing version of data
ontime	45180.799831688	Sum of GTIs [s]
livetime	44608.693339608	Livetime [s]
ontime4	45180.799831688	Sum of GTIs [s]
ontime5	45180.799831688	Sum of GTIs [s]
ontime6	45180.799831688	Sum of GTIs [s]
ontime7	45180.799831688	Sum of GTIs [s]
ontime8	45180.799831688	Sum of GTIs [s]
ontime9	45180.799831688	Sum of GTIs [s]
l2events	573221	Number of level 2 events



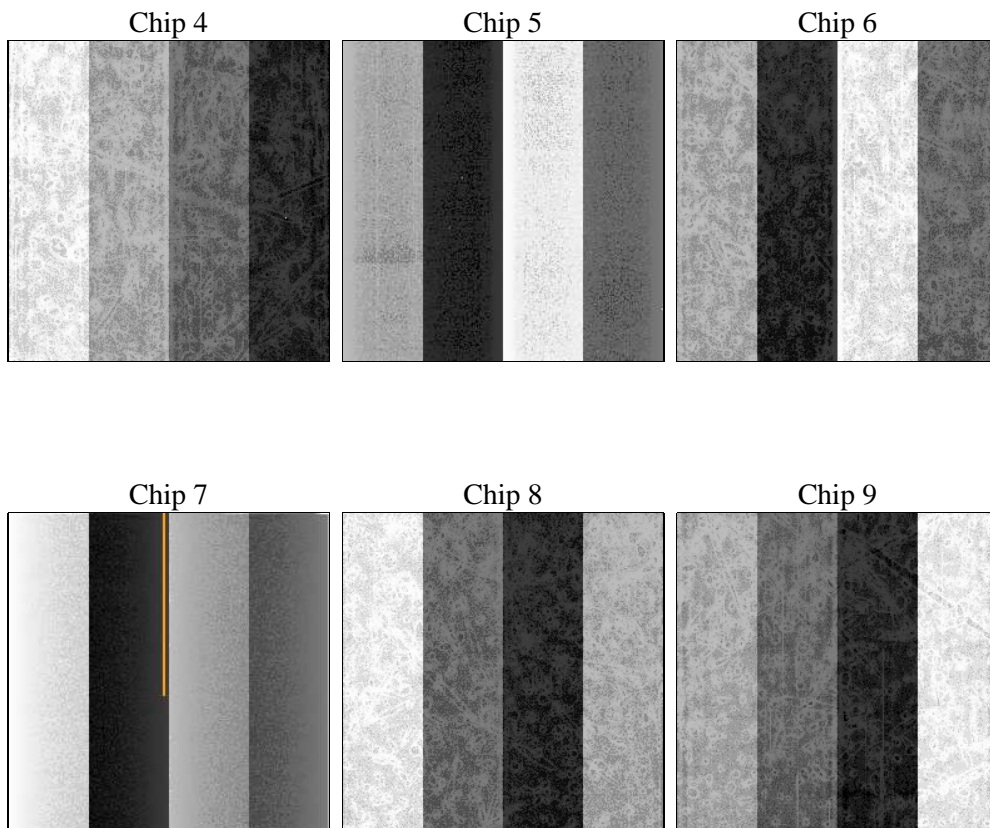
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	45000.000000	[s] Scheduled observation exposure time
ascdsver	8.5.1	Processing system revision	ontime	45180.799831688	Sum of GTIs [s]
caldbver	4.5.5	 	ontime4	45180.799831688	Sum of GTIs [s]
date	2012-12-17T19:31:23	Date and time of file creation	ontime5	45180.799831688	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	45180.799831688	Sum of GTIs [s]
			ontime7	45180.799831688	Sum of GTIs [s]
			ontime8	45180.799831688	Sum of GTIs [s]
			ontime9	45180.799831688	Sum of GTIs [s]
			l1events	2555851	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	391268	524700	354178	486154	449109	350442	grade 0 events	30670	28937	21632	20924	36384	20142
rejected events	338133	288119	307605	281443	347858	306145		7%	5%	6%	4%	8%	5%
rejected %	86%	54%	86%	57%	77%	87%	grade 1 events	470	613	179	562	342	227
								0%	0%	0%	0%	0%	0%
							grade 2 events	8948	72353	9270	43116	22434	8559
								2%	13%	2%	8%	4%	2%
							grade 3 events	4302	9733	4208	18654	10397	4353
								1%	1%	1%	3%	2%	1%
							grade 4 events	4228	8887	4197	19015	9679	4182
								1%	1%	1%	3%	2%	1%
							grade 5 events	15417	38145	16273	45175	21602	17274
								3%	7%	4%	9%	4%	4%
							grade 6 events	6652	124493	8505	108889	25467	8428
								1%	23%	2%	22%	5%	2%
							grade 7 events	320581	241539	289914	229819	322804	287277
								81%	46%	81%	47%	71%	81%

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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	148.949370	148.8915974775917	Subarray requested	NONE	NONE
[deg] Pointing Dec	69.084978	69.06720060172781	Alternating exposures requested	N	N
[deg] Pointing Roll	189.772263	189.9828527344325	[s] Primary exposure time	0.000000	3.2
[s] Window start time (MET)	225604864.184000	225604864.184000			
[s] Window stop time (MET)	225662464.184000	225662464.184000			
[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)	225617359.184000	225615419.66138			
Observation start date	2005-02-24T07:28:15	2005-02-24T06:56:59			
[s] Observation end time (MET)	225662359.184000	225664070.26359			
Observation end date	2005-02-24T19:58:15	2005-02-24T20:27:50			
Read mode	TIMED	TIMED			

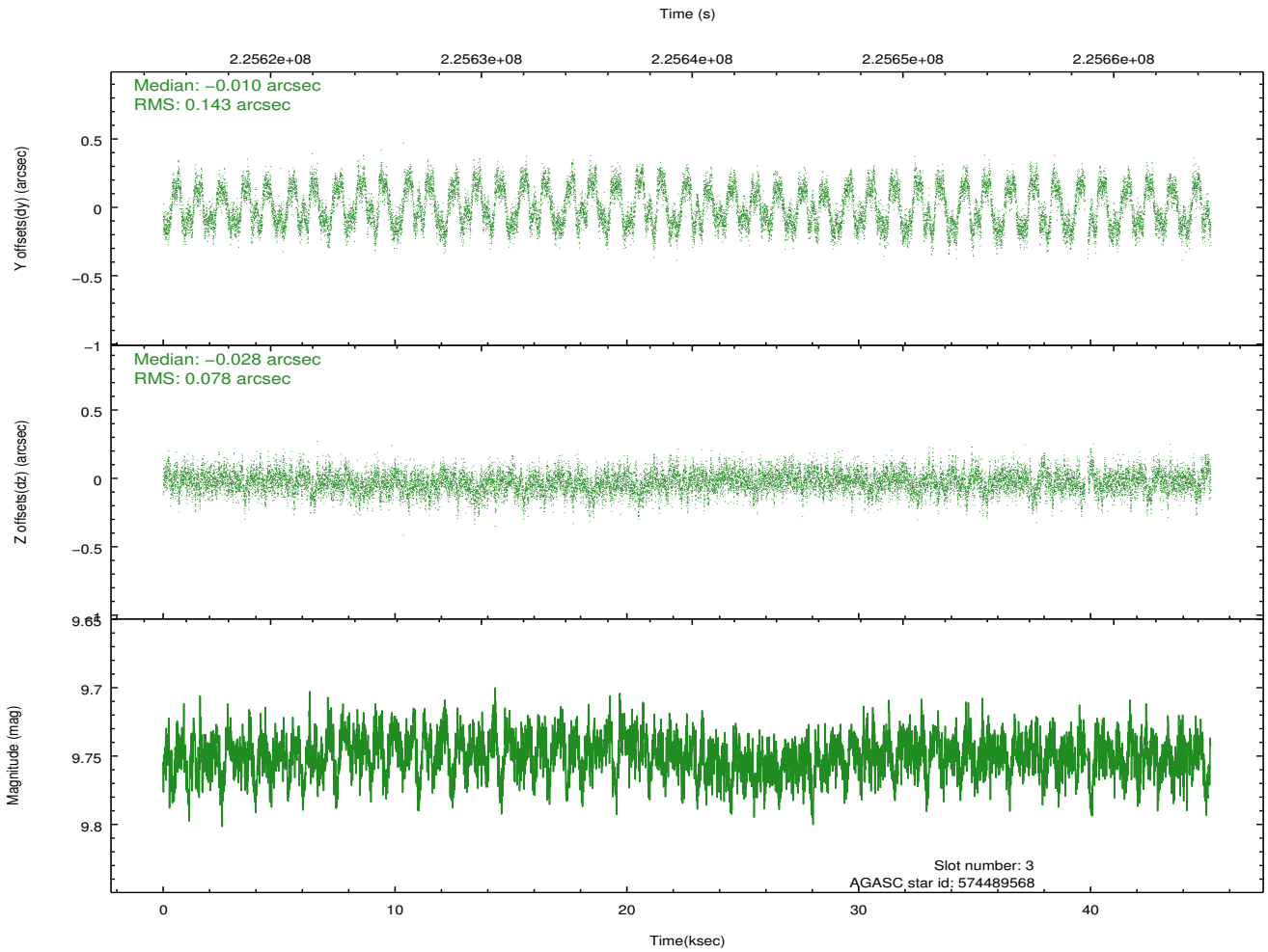
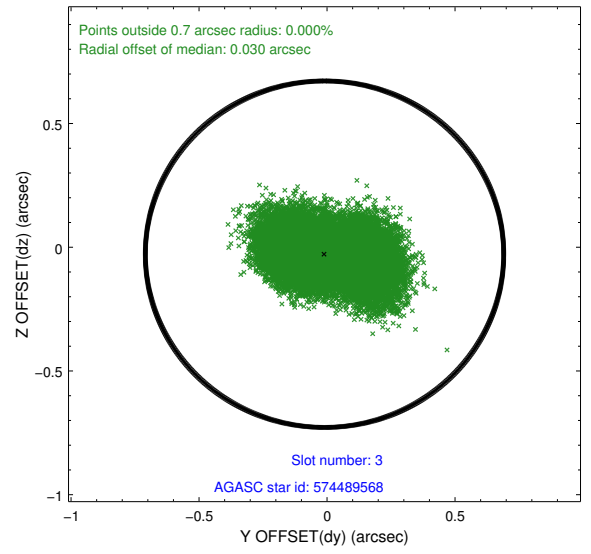
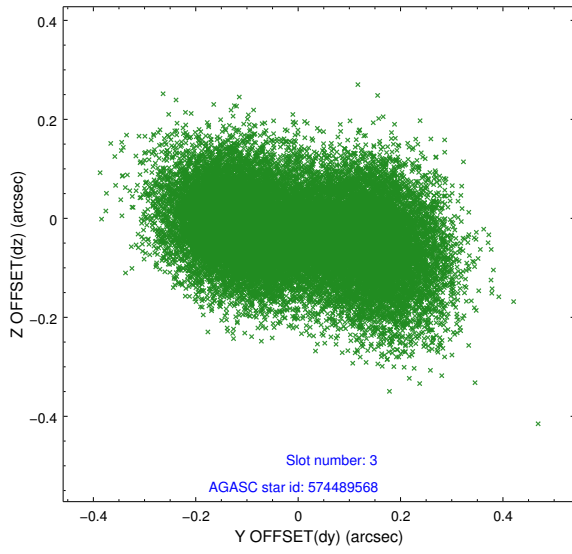
2.3 Aspect

Slot Statistics

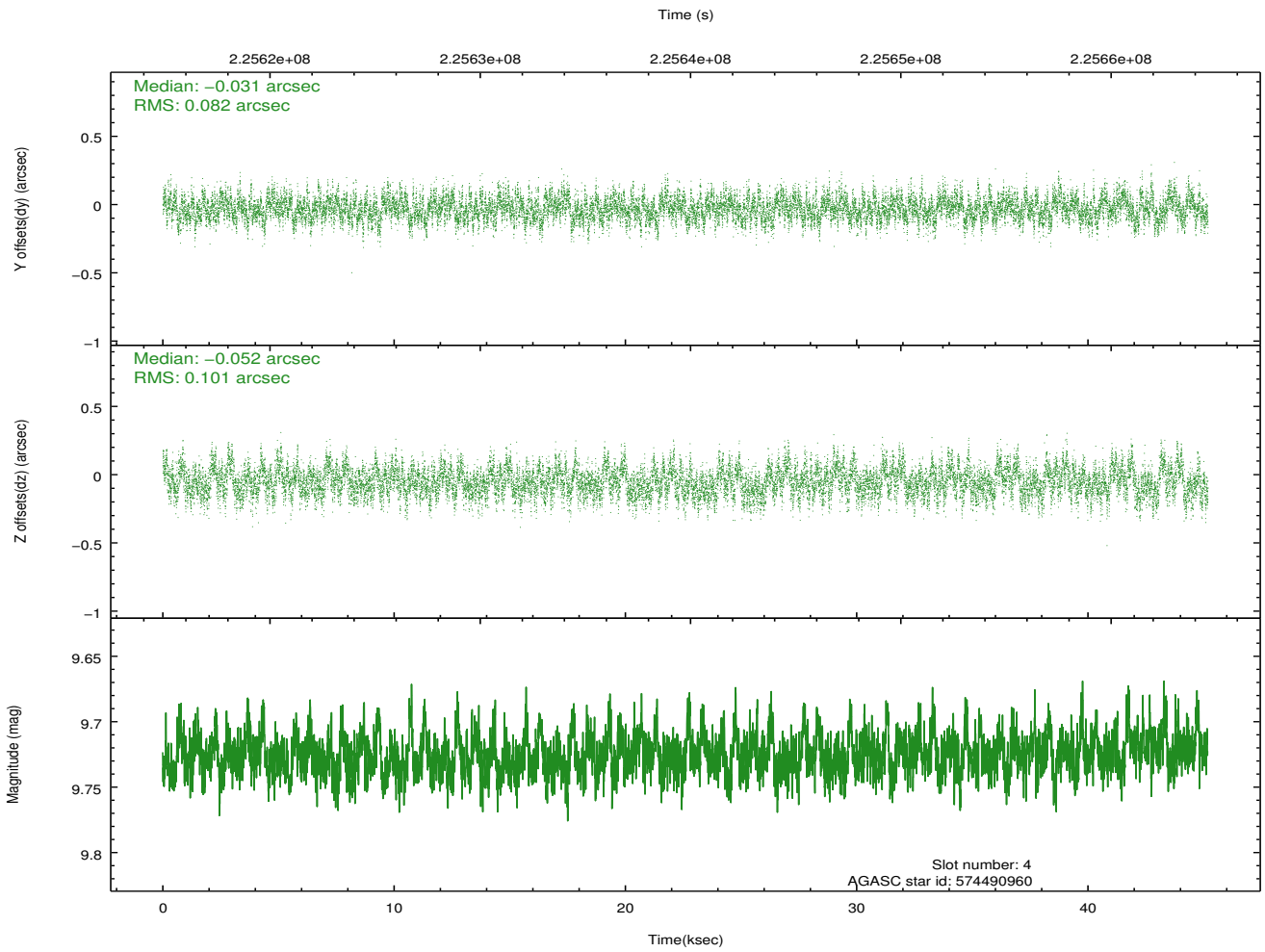
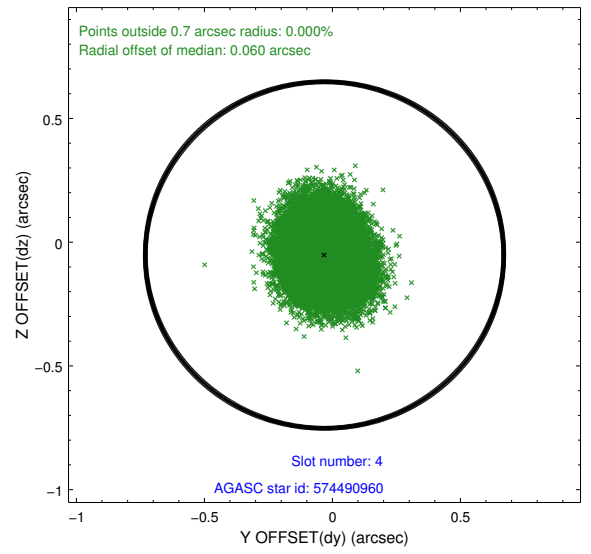
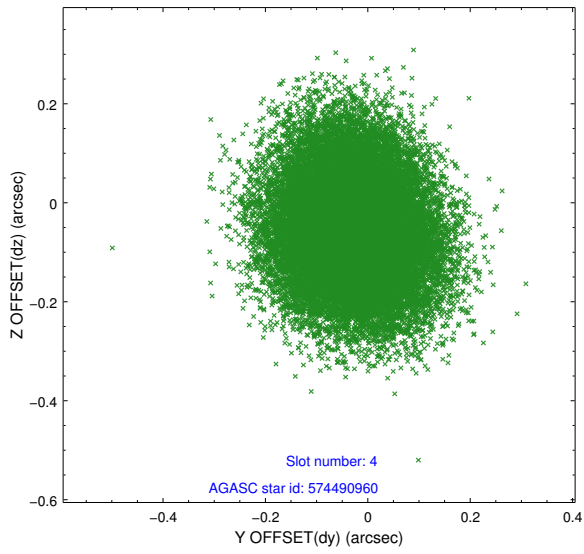
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	11021	-0.053	-0.050	0.014	0.022	0.000000	0.000000	-759.04	-1730.43
1	FID	ACIS-S-4	7.21	11019	0.104	0.039	0.013	0.026	0.000000	0.000000	2154.39	178.16
2	FID	ACIS-S-5	7.23	11020	-0.081	0.019	0.012	0.023	0.000000	0.000000	-1811.92	171.79
3	GUIDE	574489568	9.75	21957	-0.010	-0.028	0.177	0.269	147.223974	69.438157	1929.02	-1653.08
4	GUIDE	574490960	9.73	22019	-0.031	-0.052	0.139	0.220	148.185918	69.658768	590.56	-2203.43
5	GUIDE	574491280	9.33	22031	0.016	-0.032	0.126	0.201	148.611567	69.450135	198.44	-1368.63
6	GUIDE	574497600	10.43	21941	0.073	0.077	0.240	0.366	147.824120	68.451903	1850.79	1980.62
7	GUIDE	574496360	9.47	22023	-0.080	0.020	0.131	0.215	150.806604	68.529829	-2078.80	2348.41

2.4 Star Slots

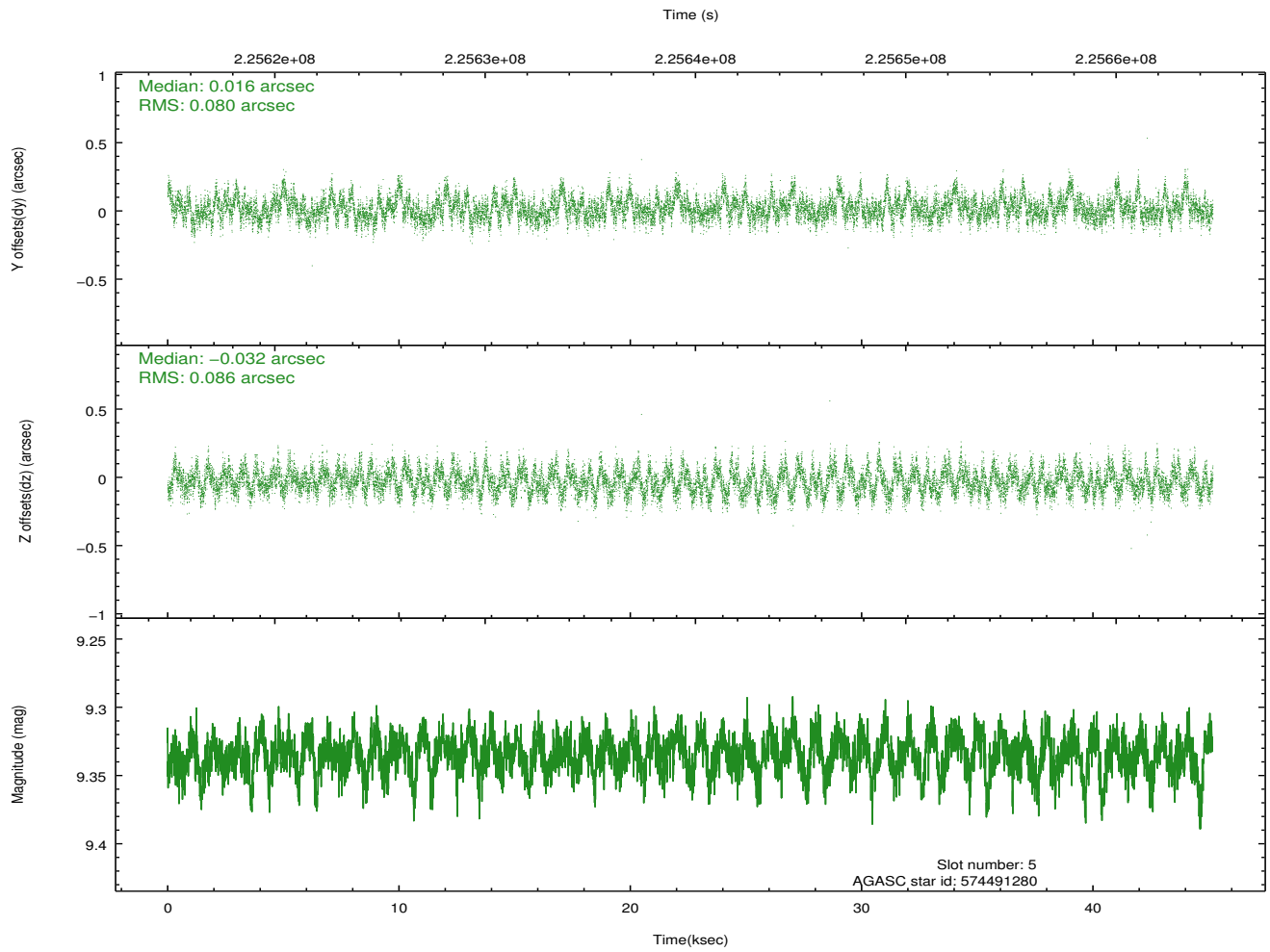
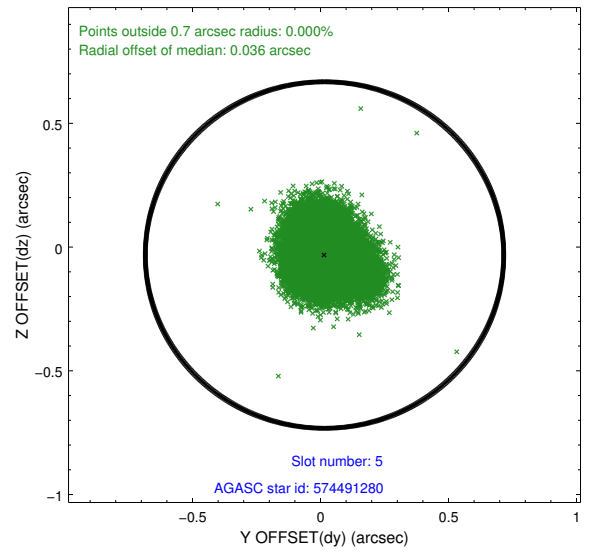
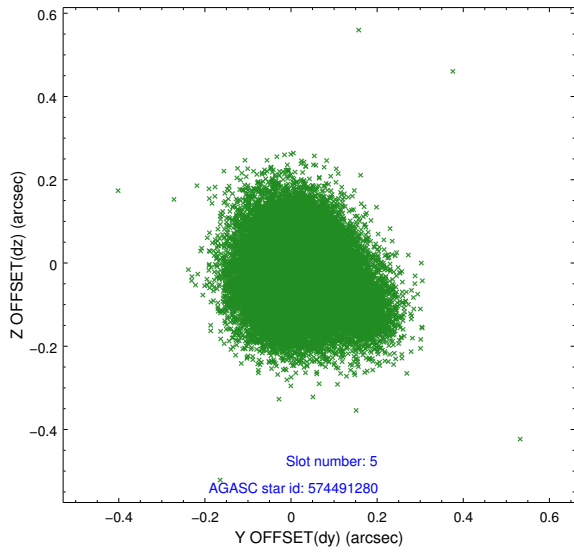
2.4.1 Slot 3



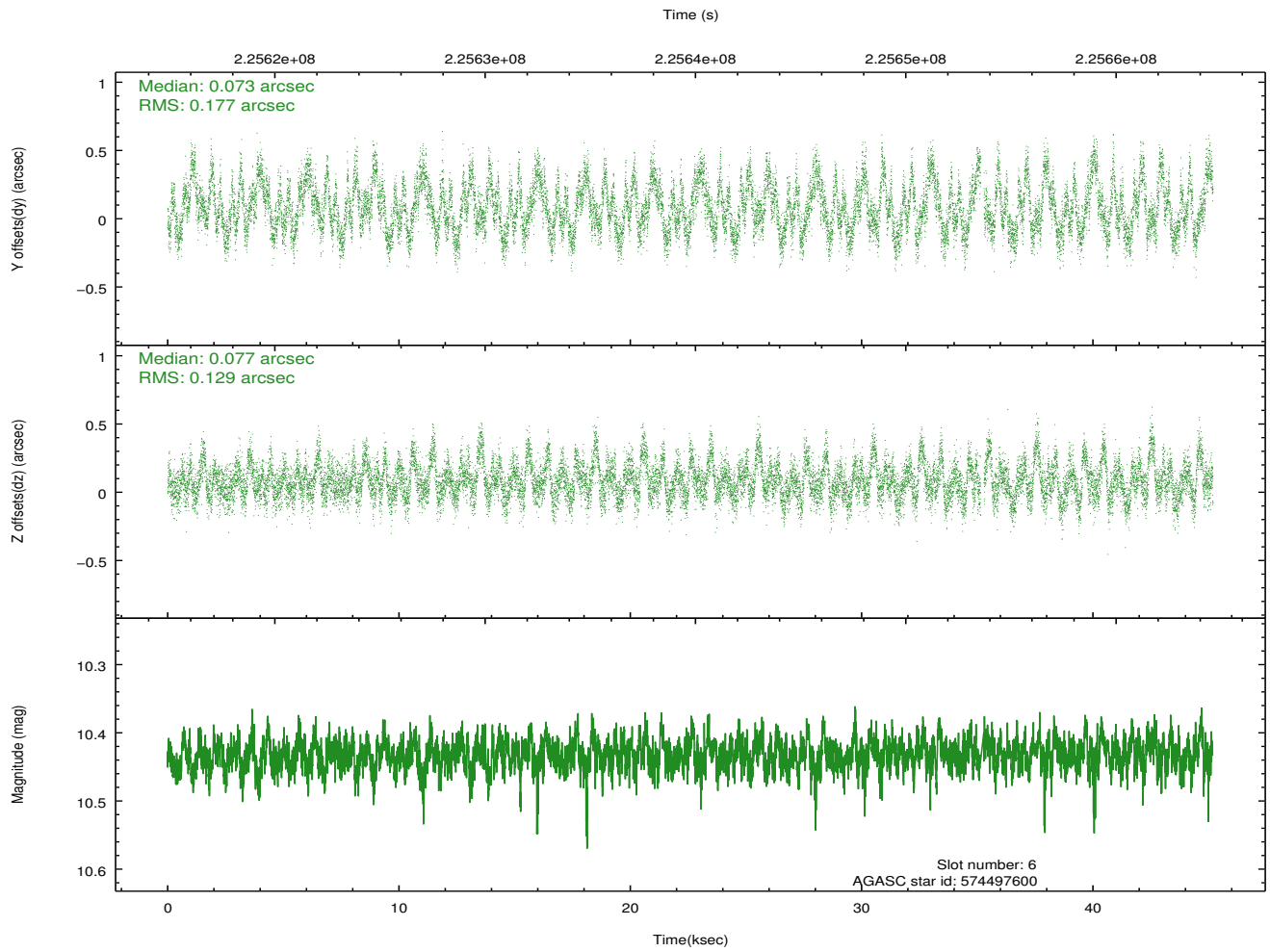
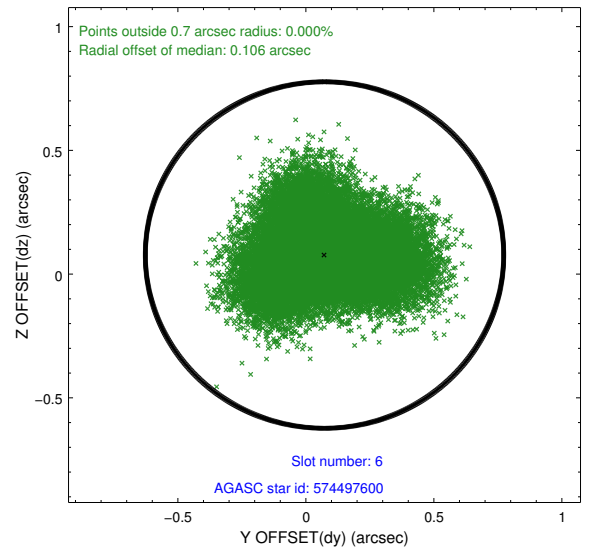
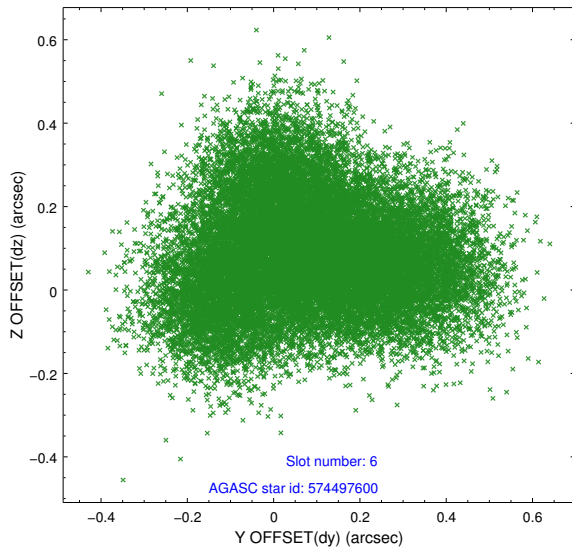
2.4.2 Slot 4



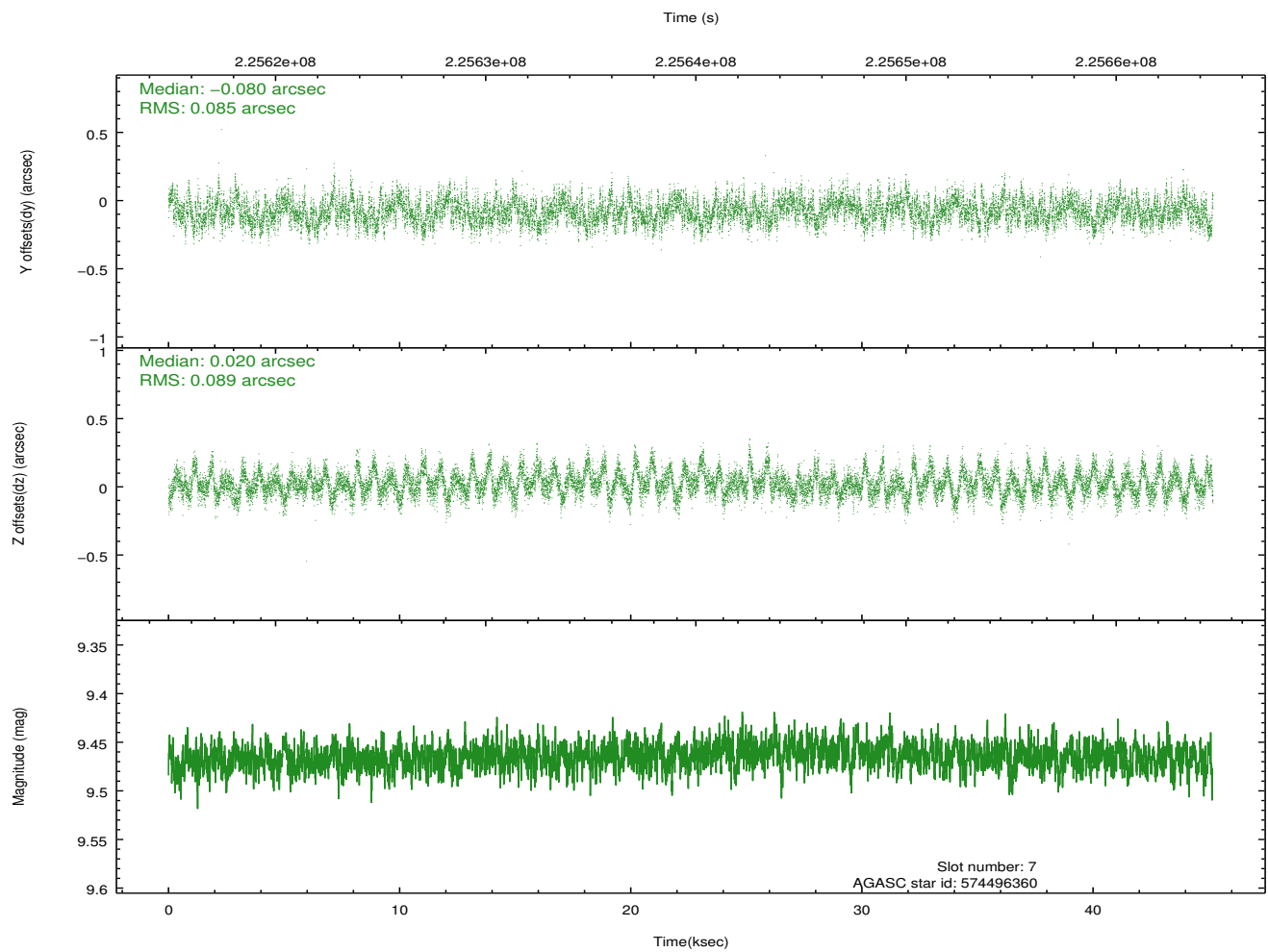
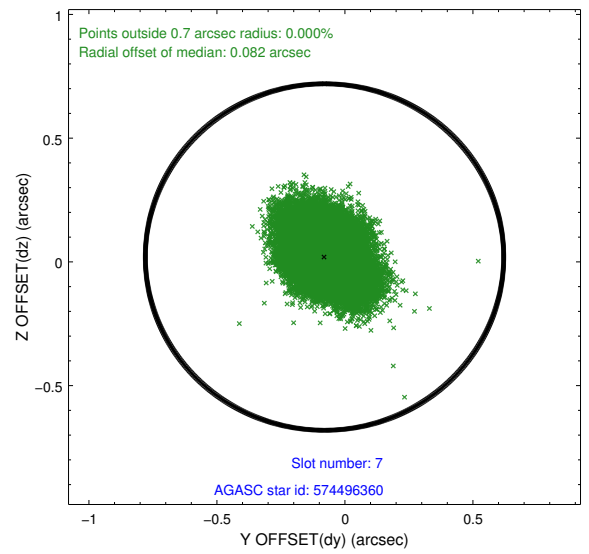
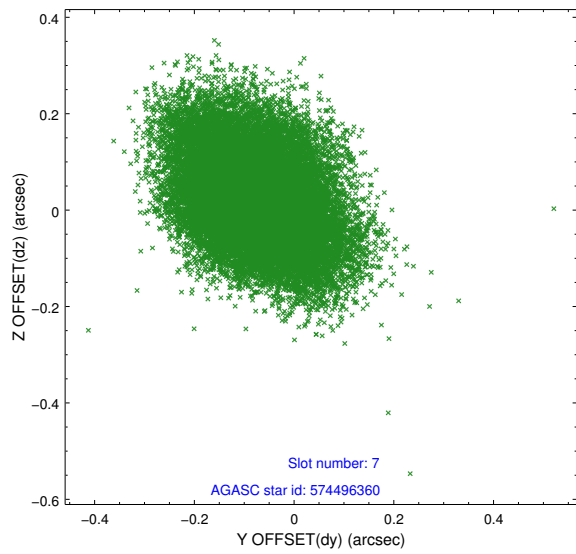
2.4.3 Slot 5



2.4.4 Slot 6

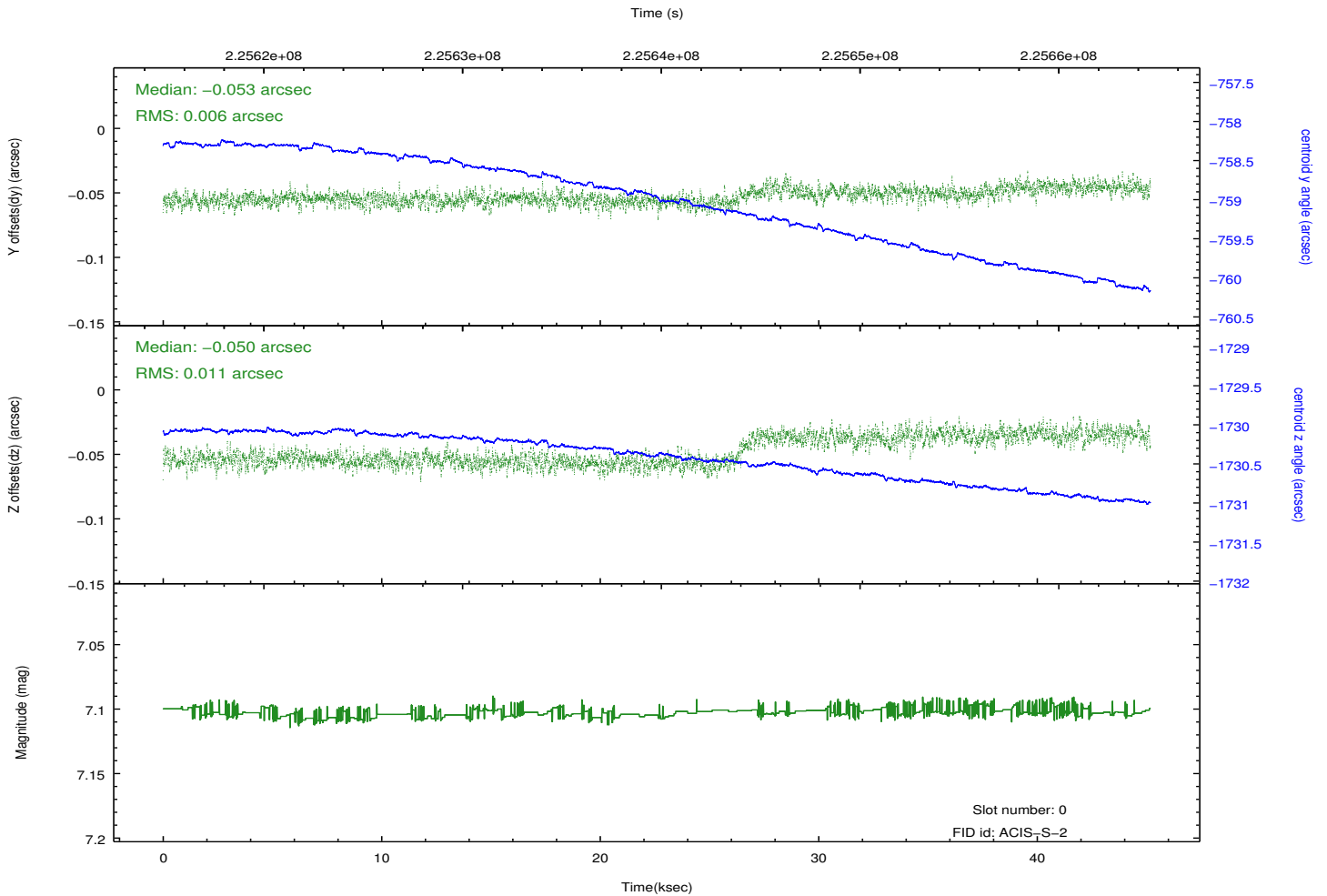
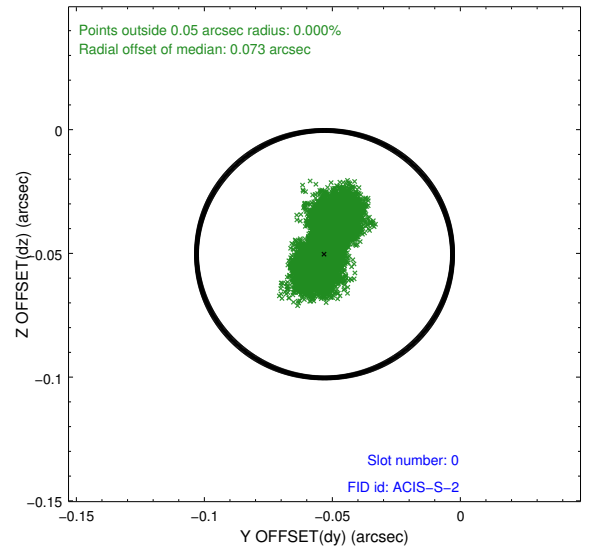
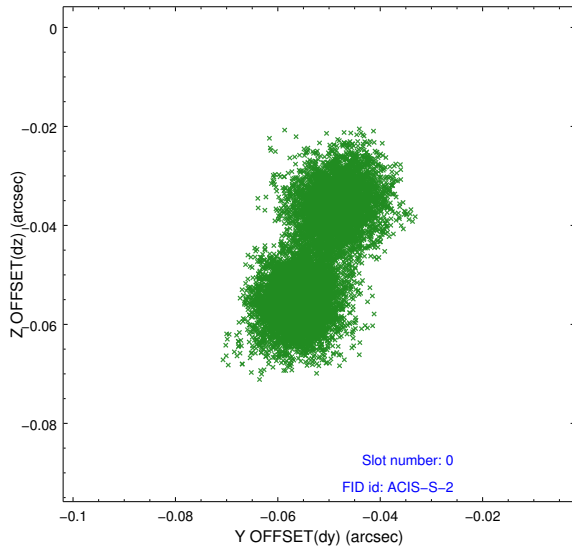


2.4.5 Slot 7

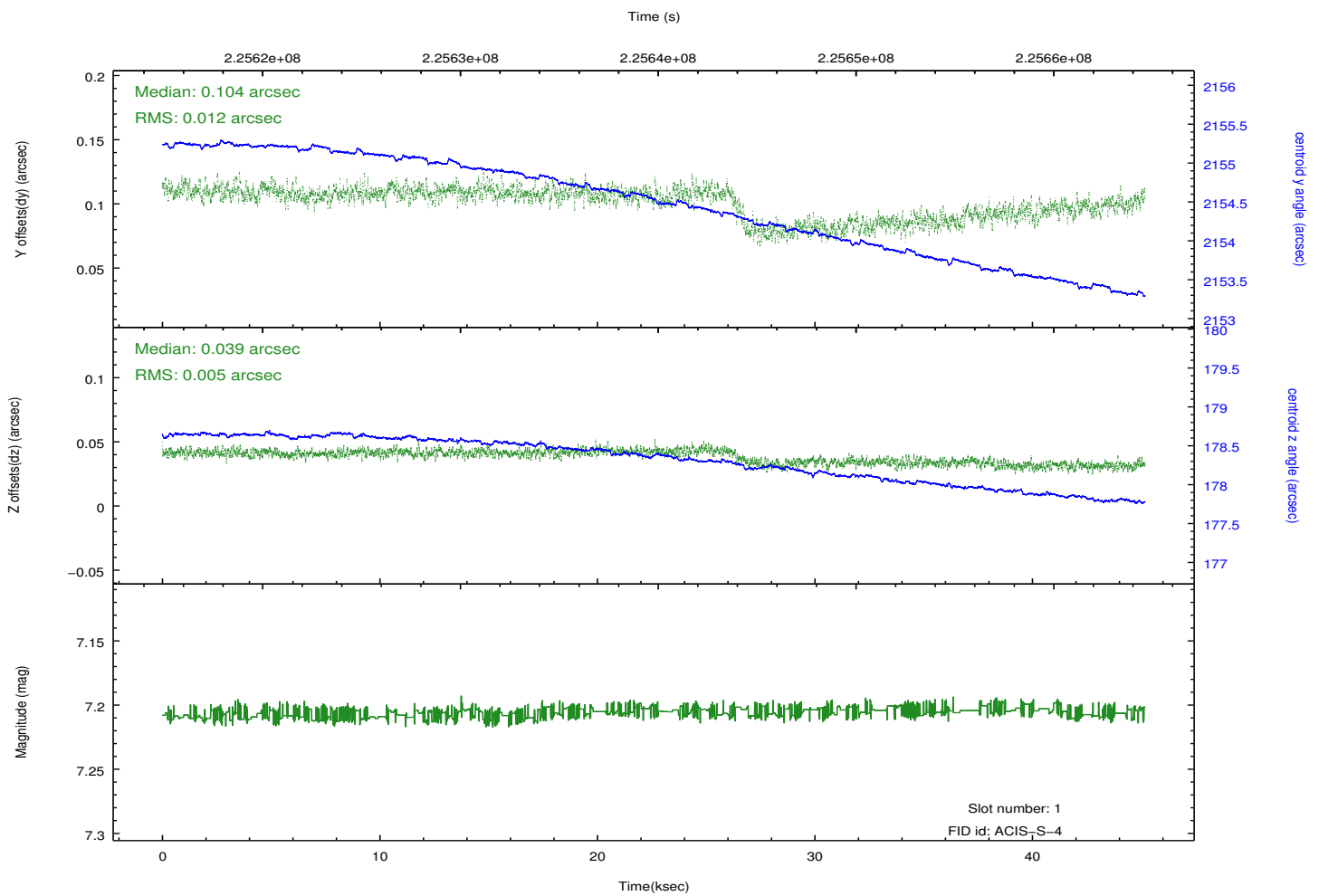
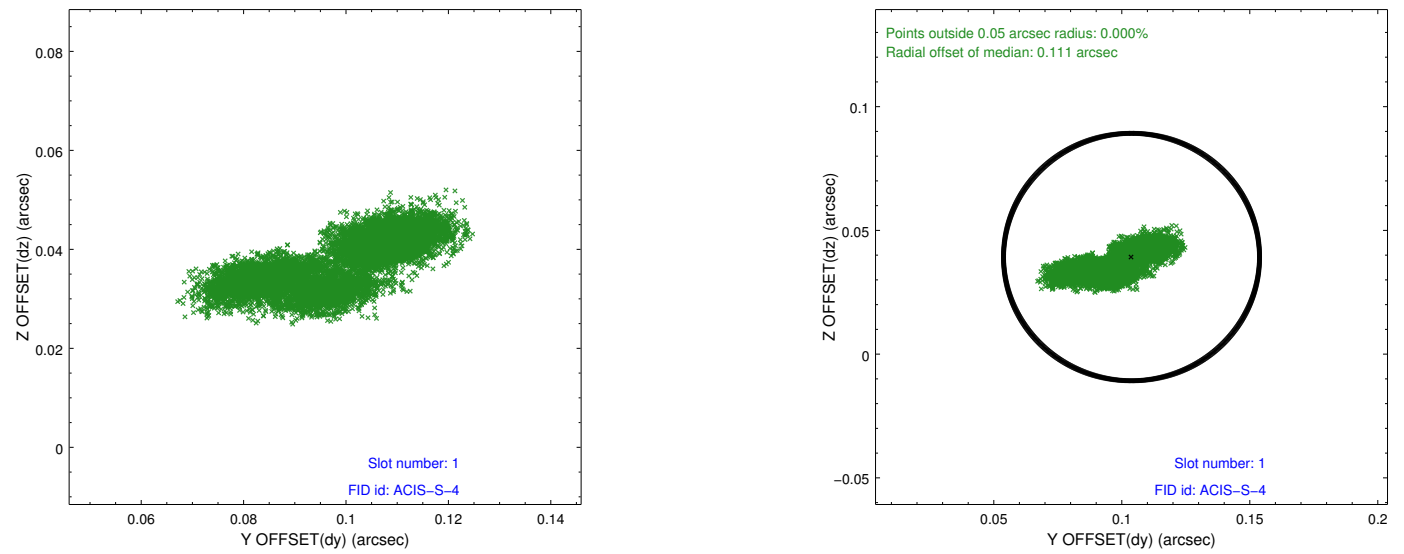


2.5 FID Slots

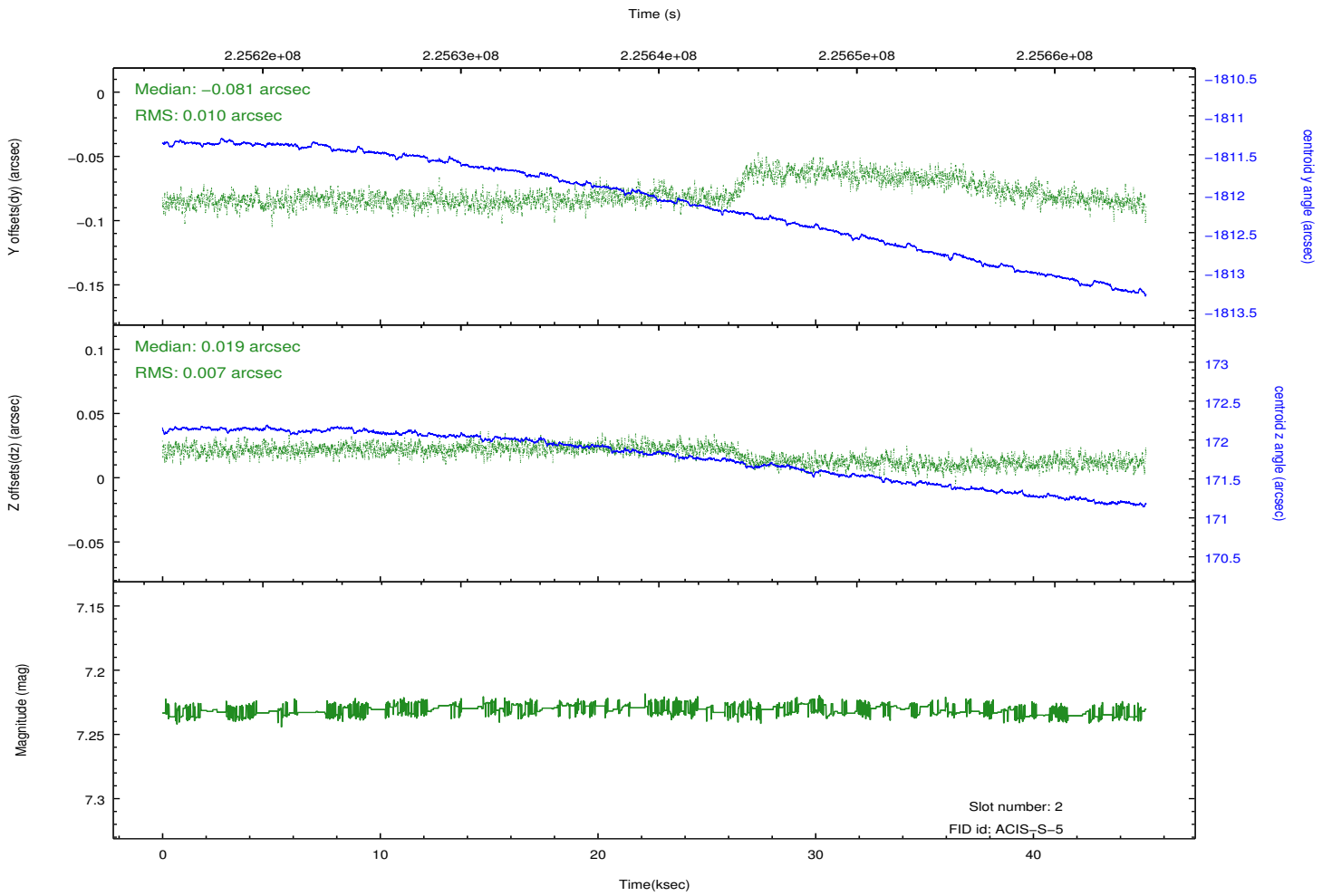
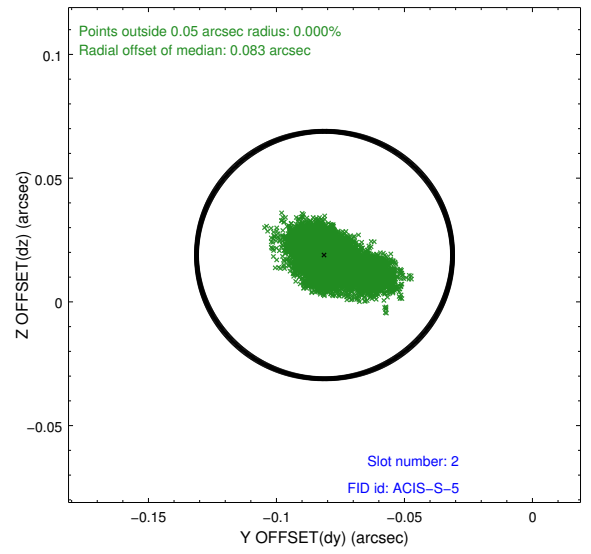
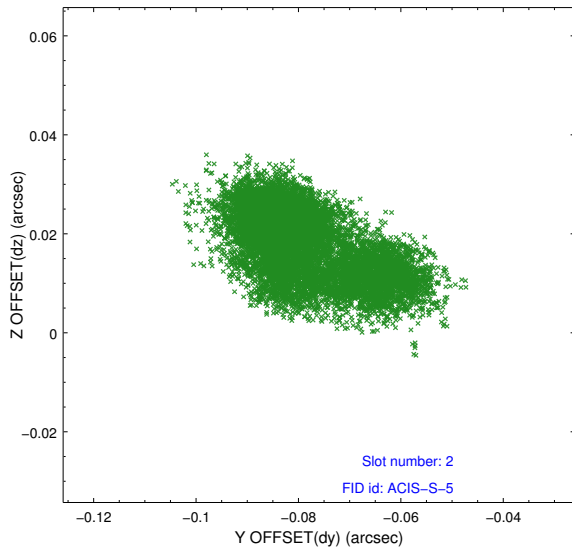
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

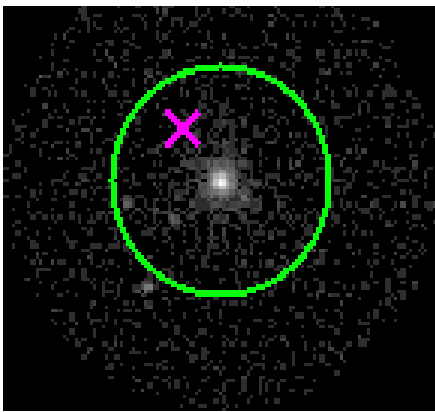


3 Gratings

3.1 HEG Arm



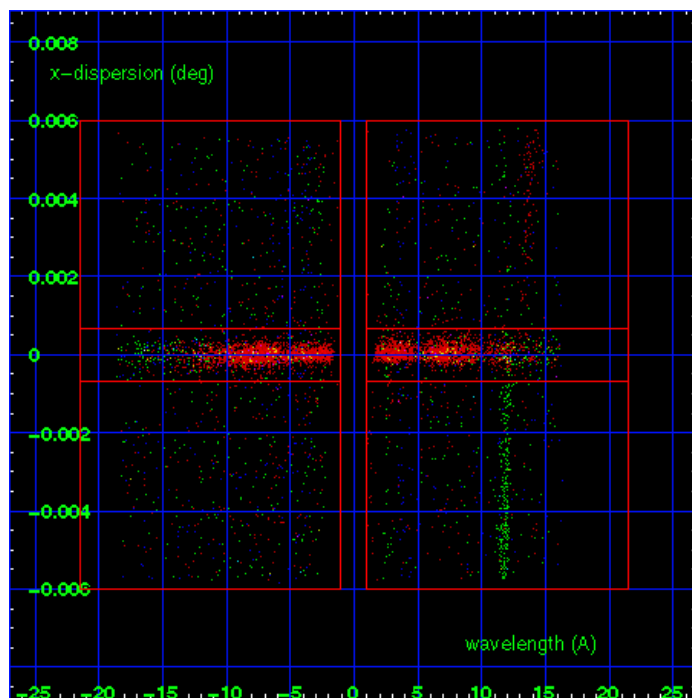
HEG Order Sort 123



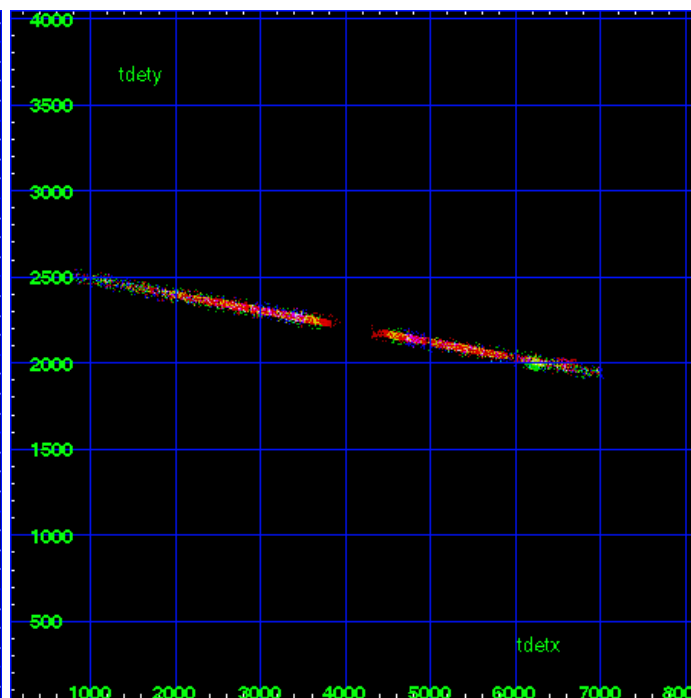
HEG Zero Order



HEG Order Sort ALL

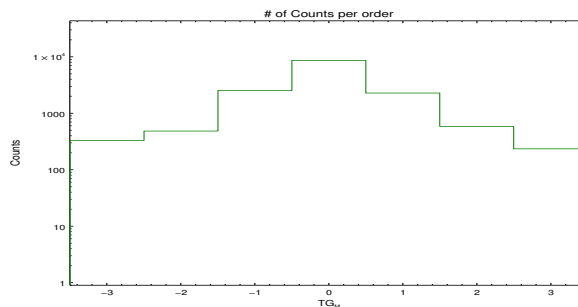


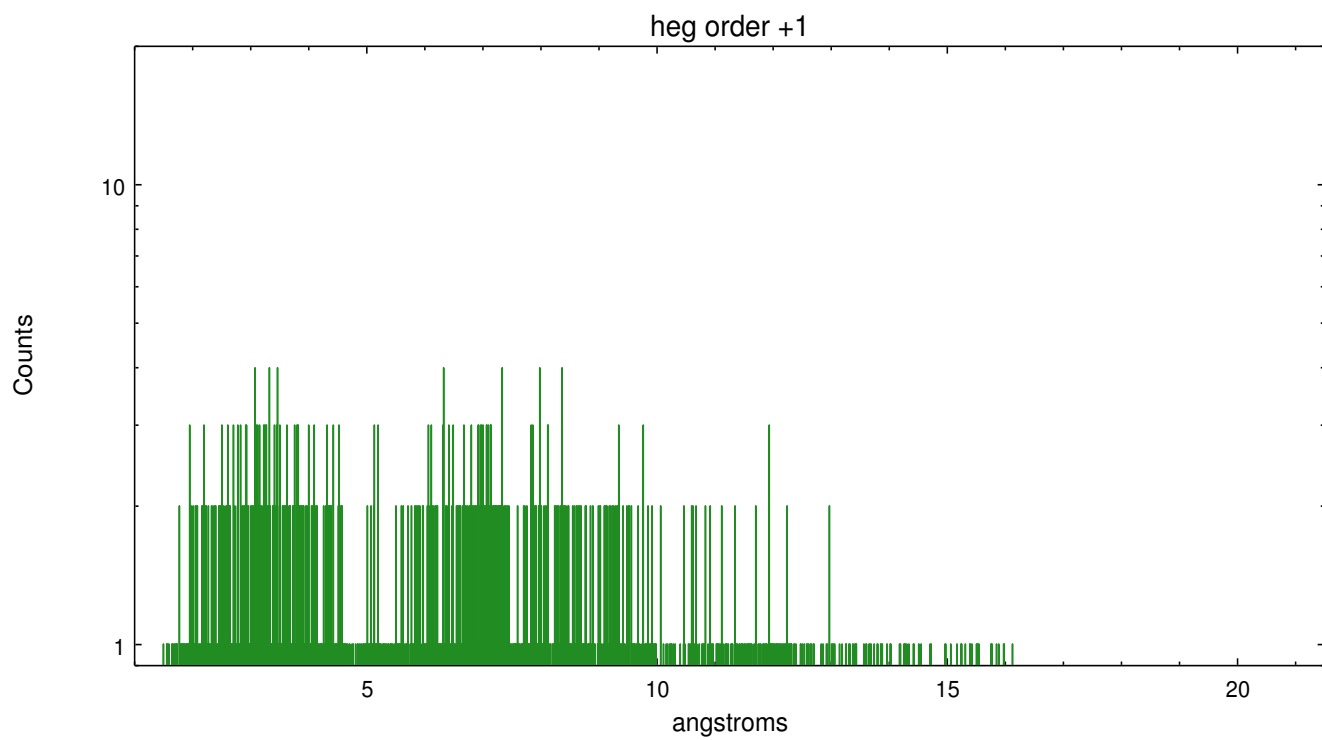
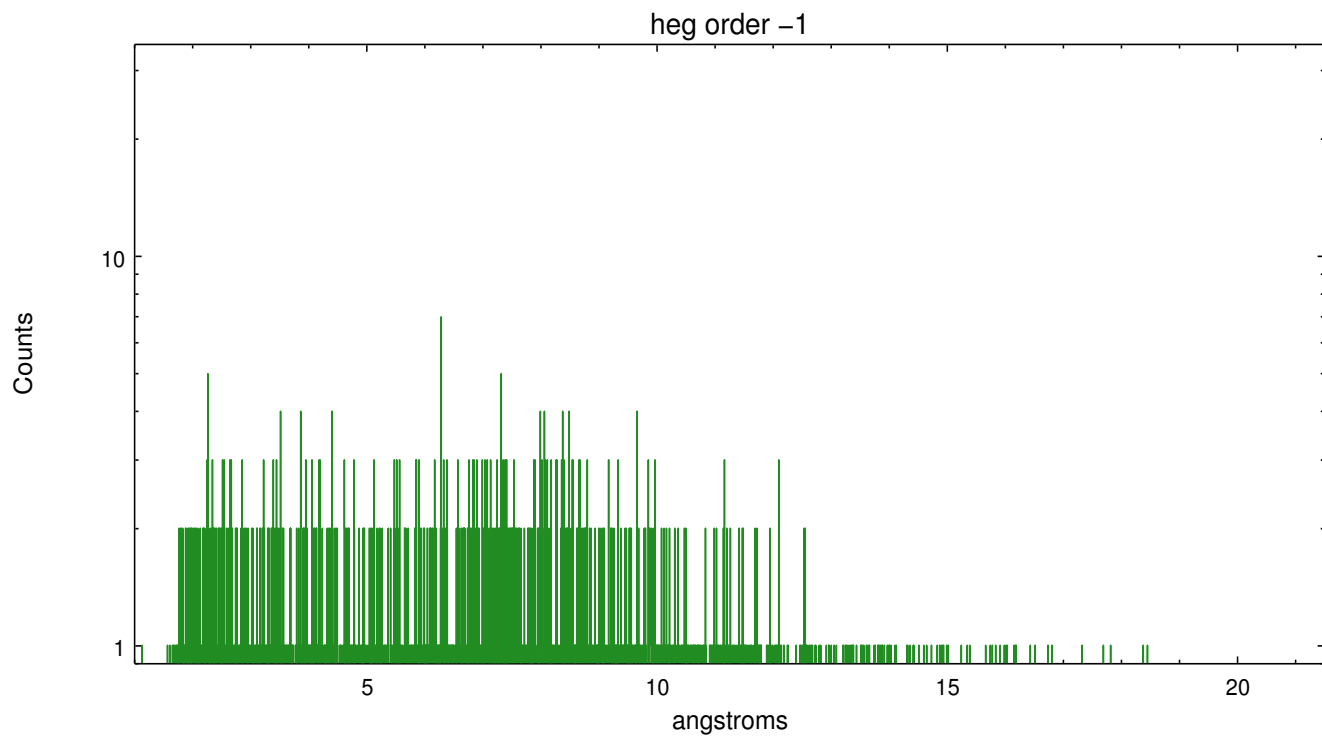
Spot Image HEG



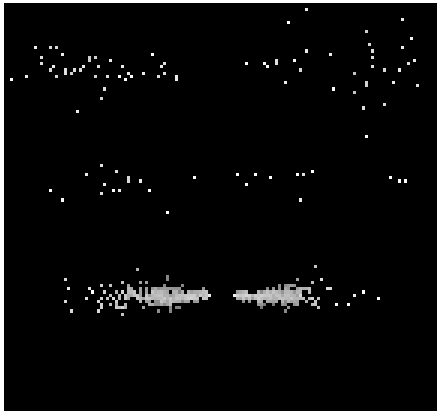
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	331	485	2550	8679	2293	587	235

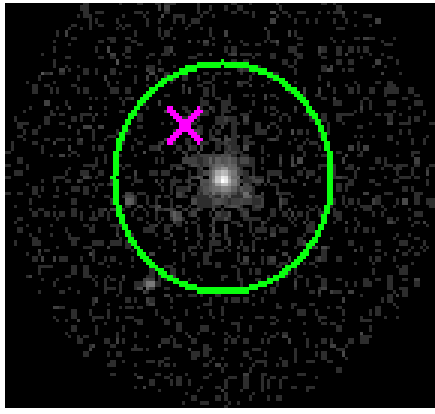




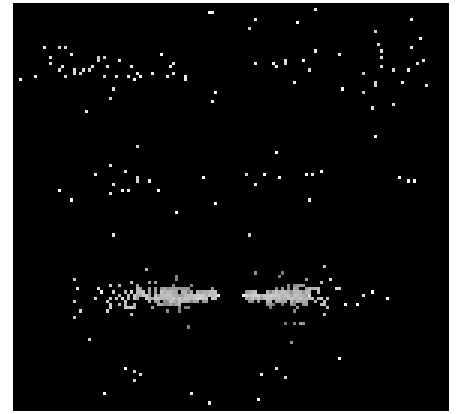
3.2 MEG Arm



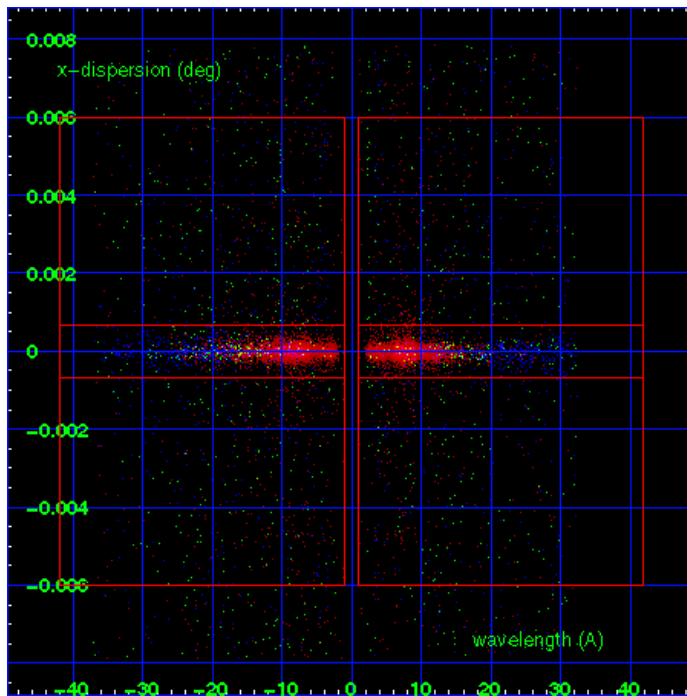
MEG Order Sort 123



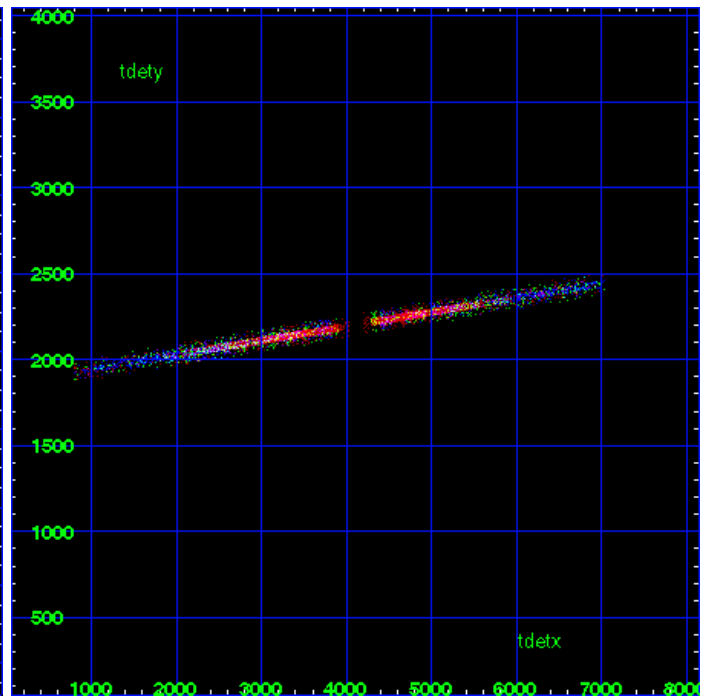
MEG Zero Order



MEG Order Sort ALL

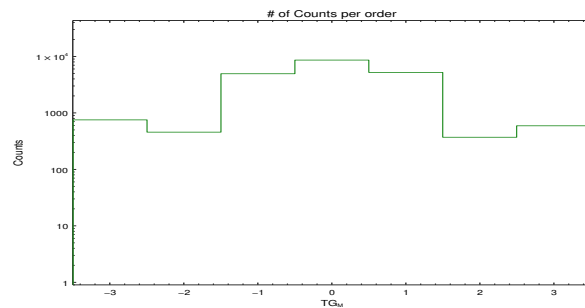


Spot Image MEG

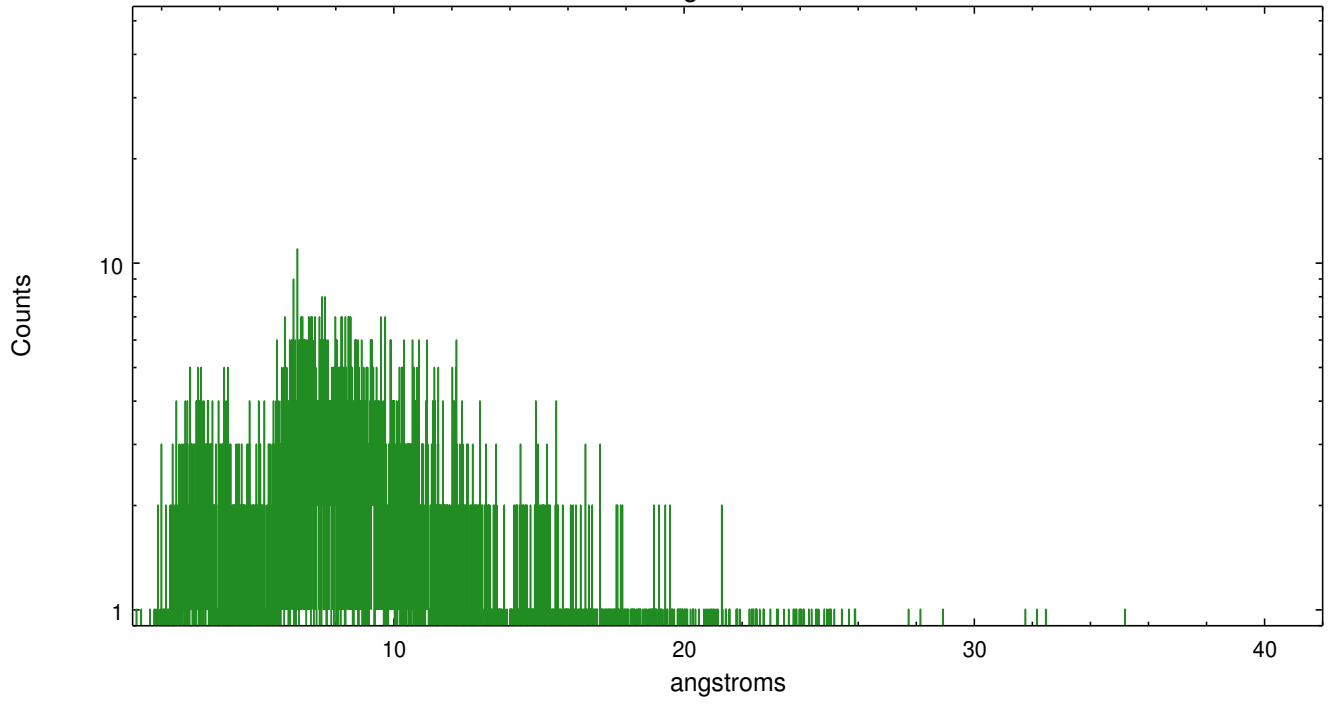


Full Detector MEG

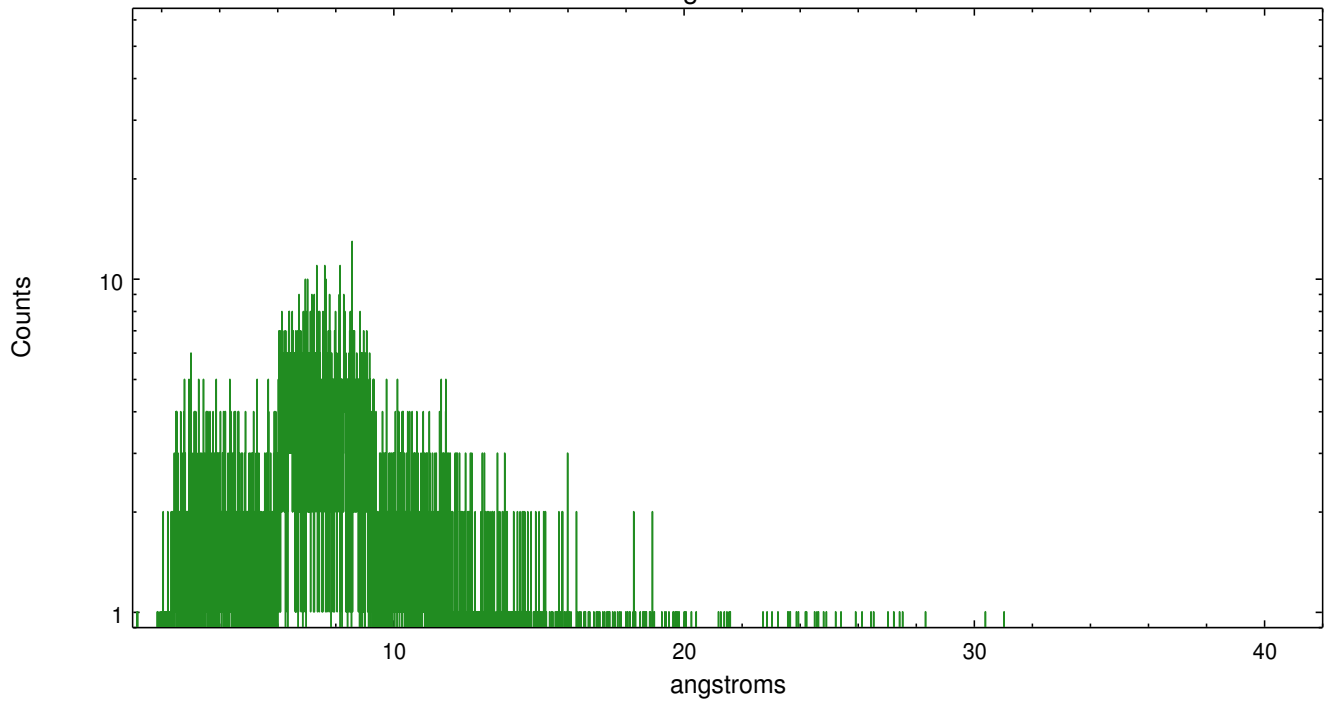
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	755	457	4971	8679	5247	371	593



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2013.01.23
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	45.18079

A.2 Comments

Multiple sources as well as a few dispersed spectra from these sources. This extraction is of M81*, the brightest source.

===

Warning: bright off-axis source on chip S4 (RX J0957.9+6903) near heg + arm

at 15A. Because this bright source is off axis, it is spatially large compared to the spectrum of the target, and its dispersed spectrum is also extended in the spatial direction. Possible contamination of the primary spectrum from the spectrum of this off-axis source is expected. Another bright X-ray source lies on the dispersed spectrum of RX J0957.9+6903 on S3. If the investigator extracts dispersed spectral data from the serendipitous source on S3, care must be taken to separate the data from that of RX J0957.9+6903. Order sorting in the software will accomplish most of this.