

V&V Reference Report

L2 ASCDS Version : 8.5

Observation 5285 - L2 Version 3
Chandra X-Ray Center

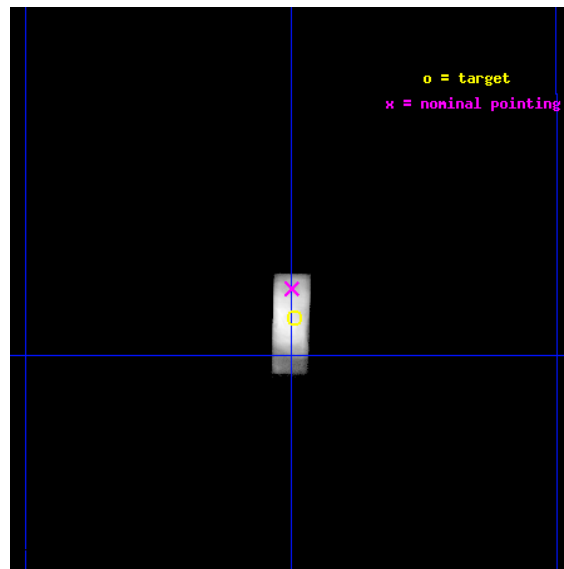
L2 Processing Date : Dec 10 2012

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Parameters	4
2.1.3	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

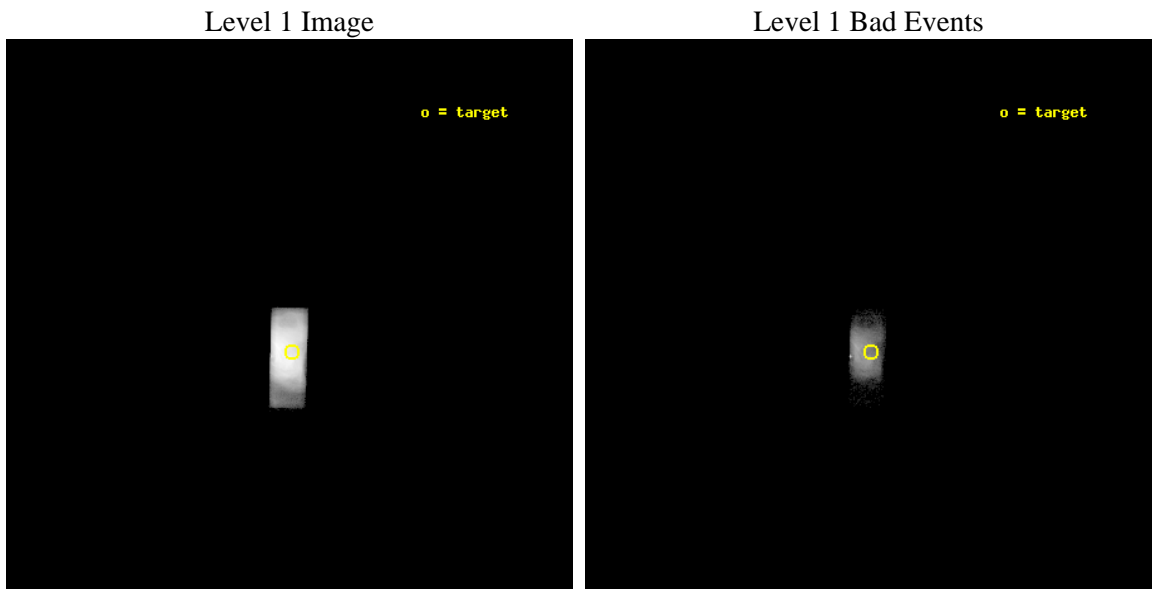
seq_num	500502	Sequence number
obs_id	5285	Observation id
title	Spectroscopic Study of the Dynamic Shock in the Pulsar Wind of the Crab Nebula	Proposal title
observer	Dr Koji Mori	Principal investigator
object	The Crab Nebula	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.623083	Observer's specified target RA [deg]
dec_targ	22.016472	Observer's specified target Dec [deg]
ra_nom	83.624577236314	Nominal RA [deg]
dec_nom	22.028850397644	Nominal Dec [deg]
roll_nom	91.462284368697	Nominal Roll [deg]
revision	3	Processing version of data
ontime	10181.700404584	Sum of GTIs [s]
liveltime	8956.4570765169	Livetime [s]
ontime7	10181.700404584	Sum of GTIs [s]
l2events	2388903	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	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.5	Processing system revision	ontime	10181.700404584	Sum of GTIs [s]
caldbver	4.5.4	 	ontime7	10181.700404584	Sum of GTIs [s]
date	2012-12-10T13:09:39	Date and time of file creation	l1events	2526363	Number of level 1 events
revision	3	Processing version of data			

2.1.3 Events

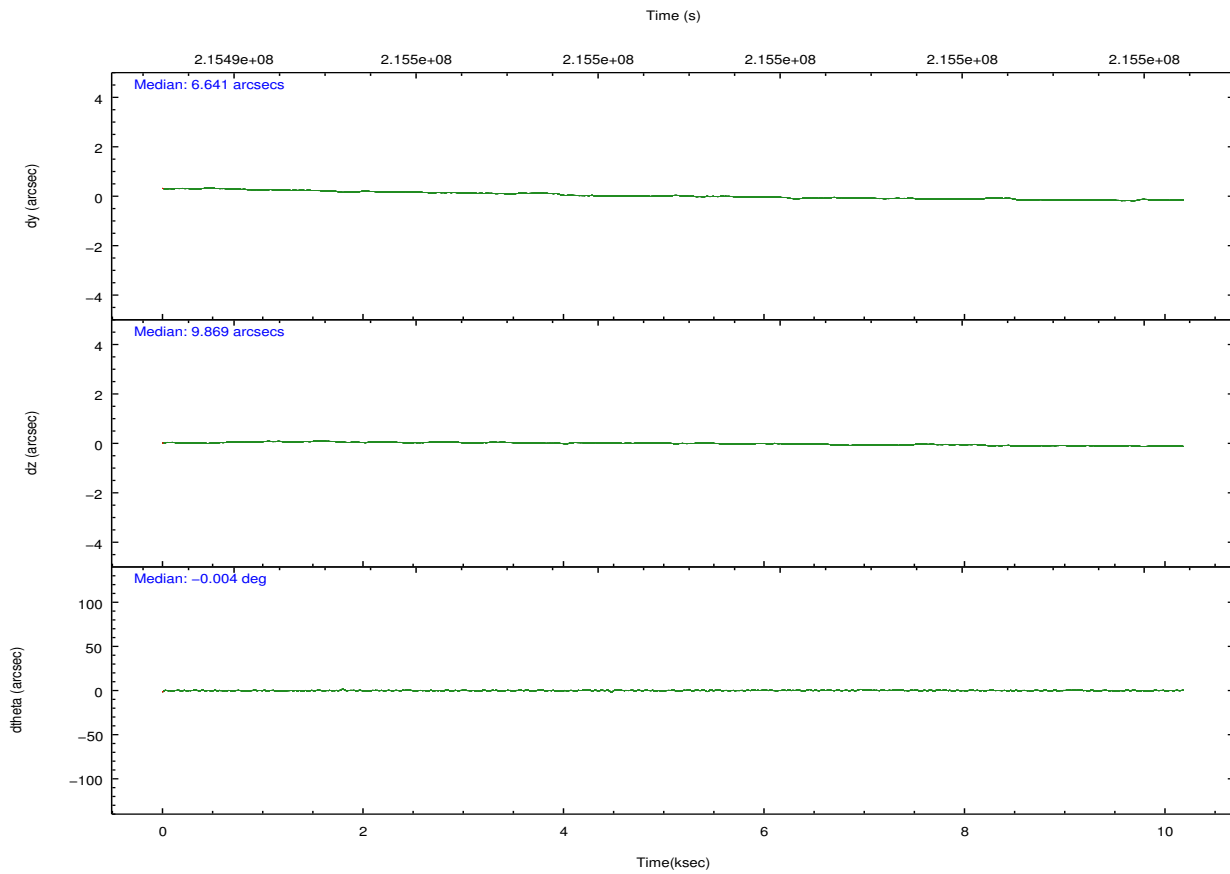
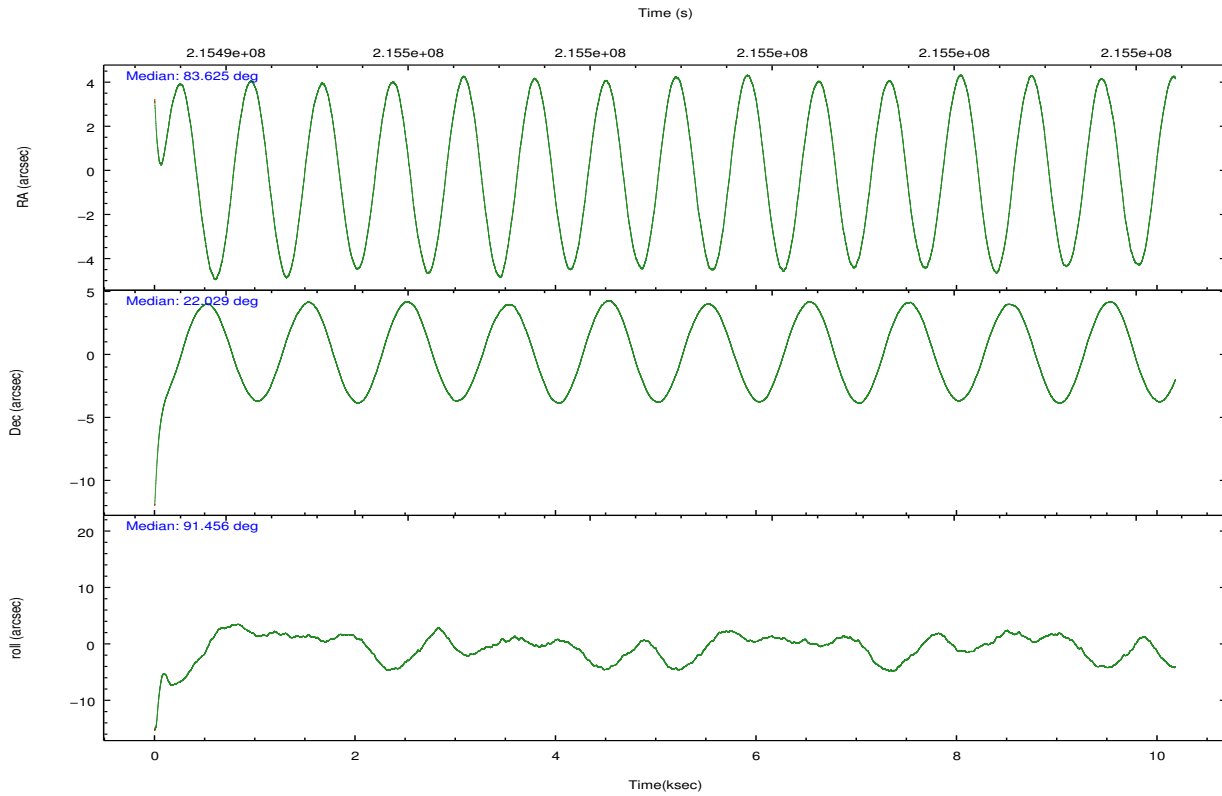
	ccd 7
level 1 events	2526363
rejected events	109957
rejected %	4%

	ccd 7
grade 0 events	498290
	19%
grade 1 events	8297
	0%
grade 2 events	626757
	24%
grade 3 events	279864
	11%
grade 4 events	267190
	10%
grade 5 events	35474
	1%
grade 6 events	770630
	30%
grade 7 events	39861
	1%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-7	ACIS-7	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	GRADED	GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	83.640251	83.6245772363141	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	22.005838	22.02885039764418	Subarray start row	127	127
[deg] Pointing Roll	91.299790	91.46228436869724	Subarray row count	101	101
[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	0.3
[mm] SIM translation stage pos	-182.132523	-182.1344861297048			
[mm] SIM translation stage offset	-8	-7.998036453302973			
[s] Observation start time (MET)	215493912.184000	215493059.38039			
Observation start date	2004-10-30T03:24:08	2004-10-30T03:10:59			
[s] Observation end time (MET)	215503912.184000	215505040.60593			
Observation end date	2004-10-30T06:10:48	2004-10-30T06:30:40			
Read mode	TIMED	TIMED			

2.3 Aspect

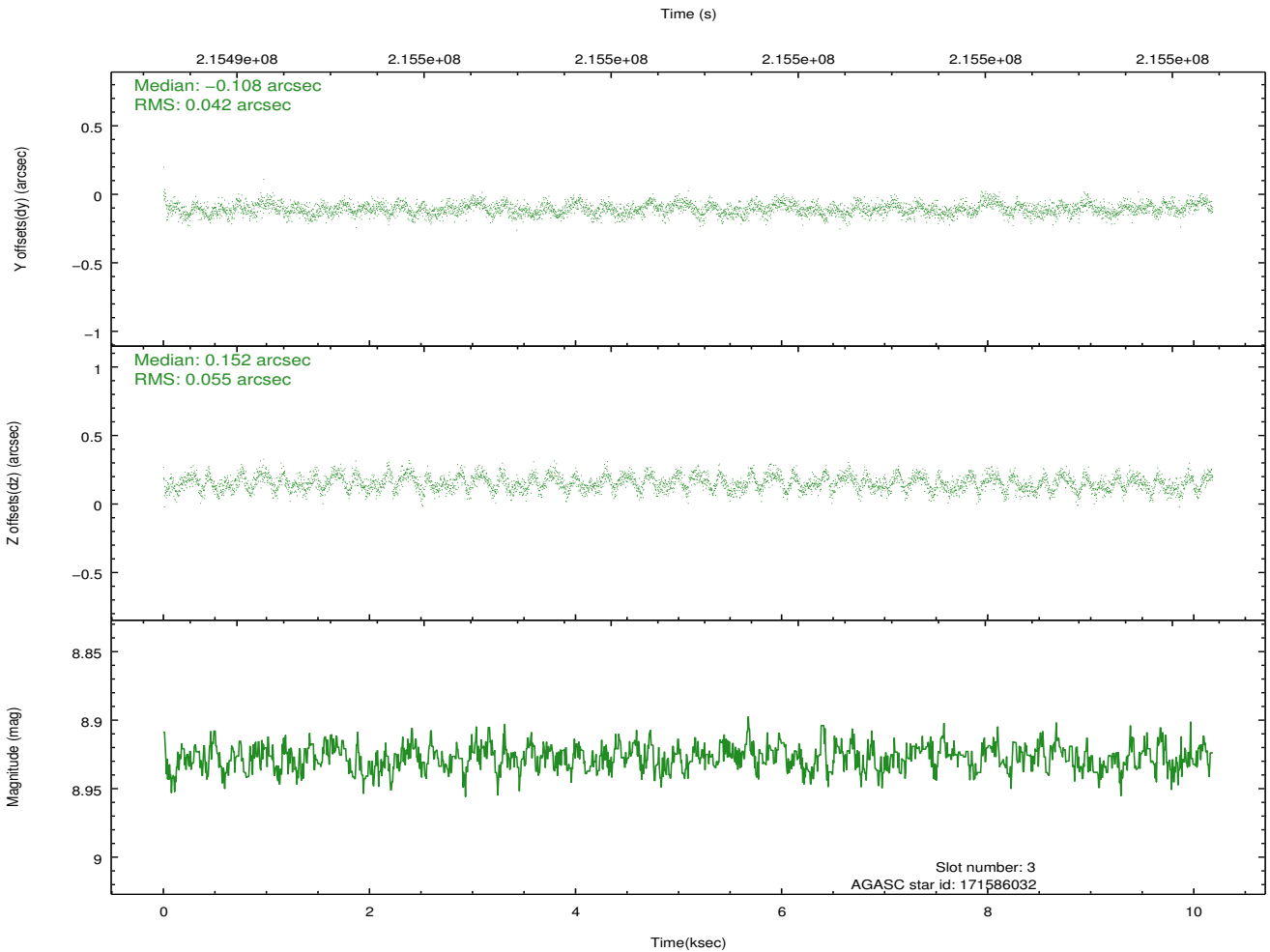
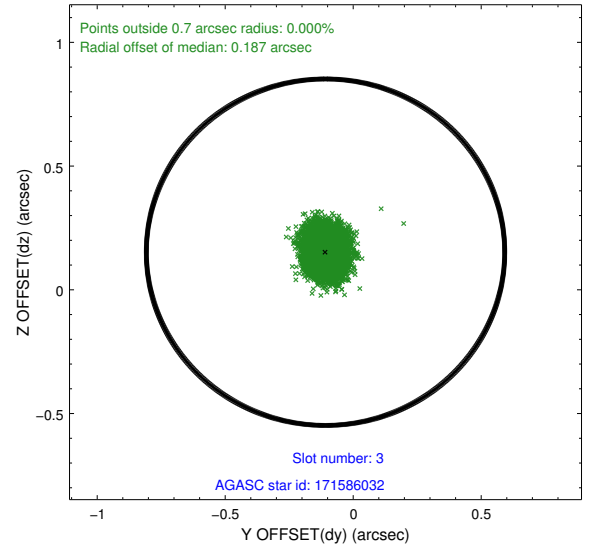
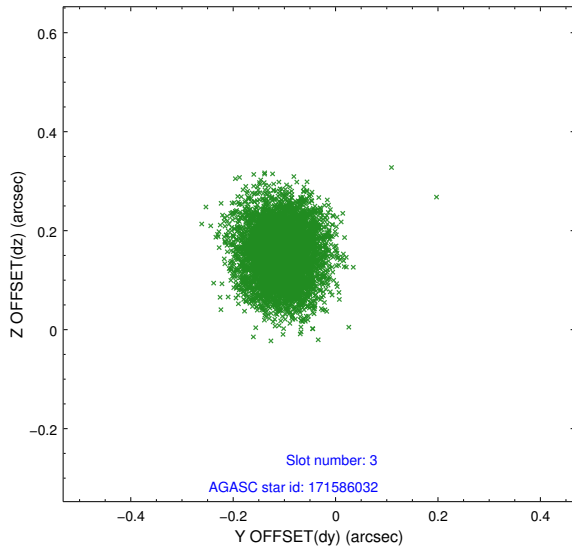


Slot Statistics

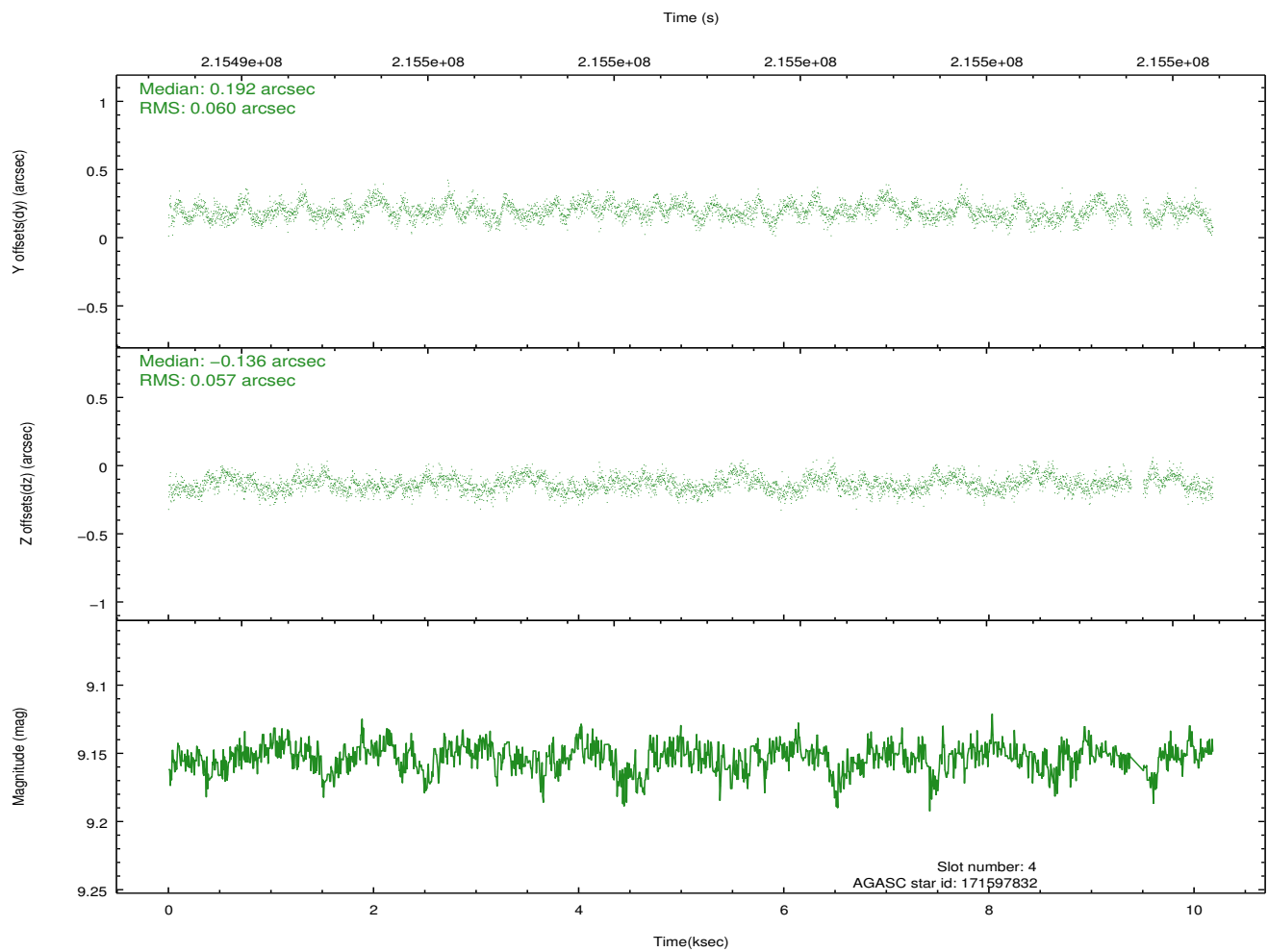
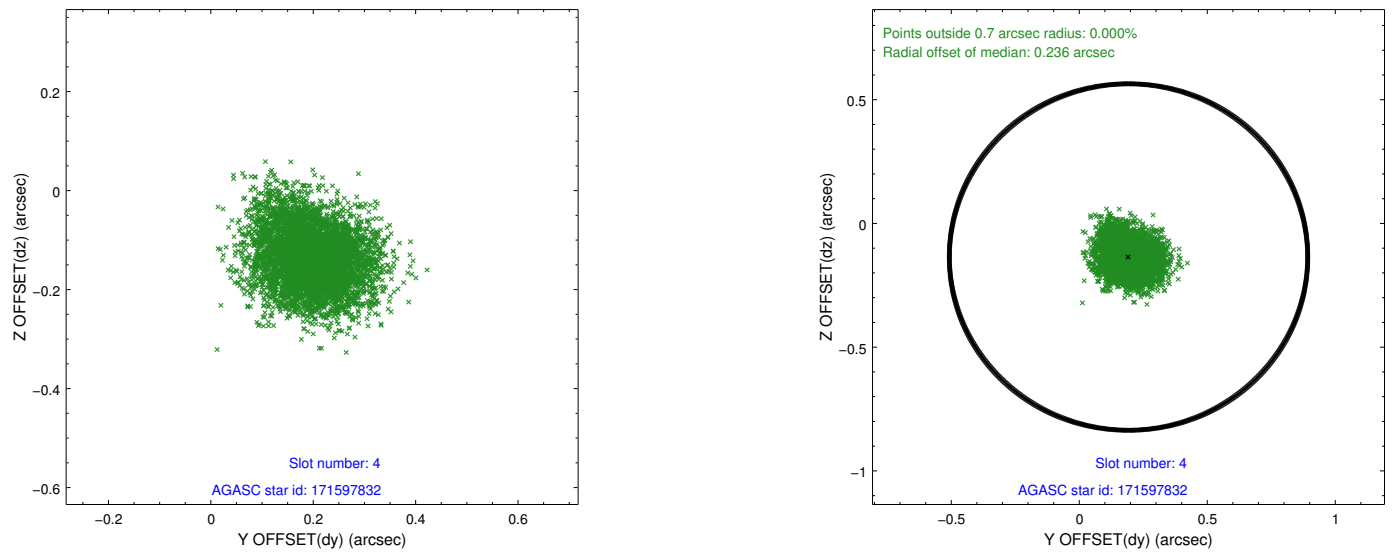
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	2484	-0.083	-0.093	0.010	0.021	0.000000	0.000000	-758.93	-1895.96
1	FID	ACIS-S-4	7.18	2484	0.133	0.065	0.010	0.033	0.000000	0.000000	2154.34	12.07
2	FID	ACIS-S-5	7.22	2483	-0.083	0.036	0.010	0.022	0.000000	0.000000	-1811.10	6.30
3	GUIDE	171586032	8.93	4964	-0.108	0.152	0.074	0.117	83.950197	22.083225	256.57	-1039.67
4	GUIDE	171597832	9.15	4908	0.192	-0.136	0.090	0.144	83.183230	21.366702	-2262.77	1583.56
5	GUIDE	171721904	9.21	4965	-0.078	0.152	0.089	0.148	84.272676	22.116922	356.48	-2117.15
6	GUIDE	243941560	8.32	4967	-0.114	0.080	0.055	0.091	83.733264	22.568598	2018.85	-354.98
7	GUIDE	171600224	9.67	4964	0.106	-0.251	0.111	0.174	82.941815	21.636094	-1271.77	2366.44

2.4 Star Slots

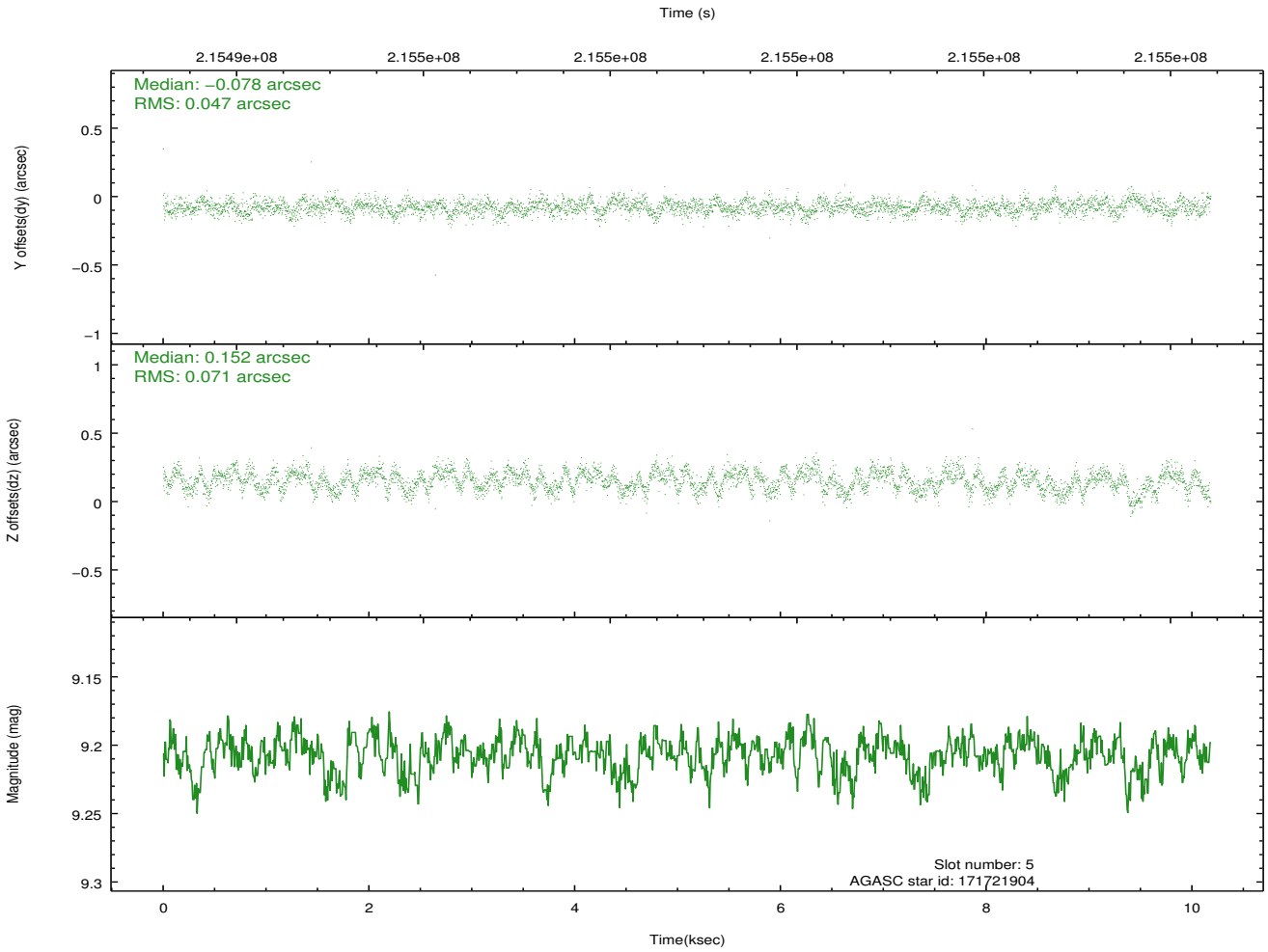
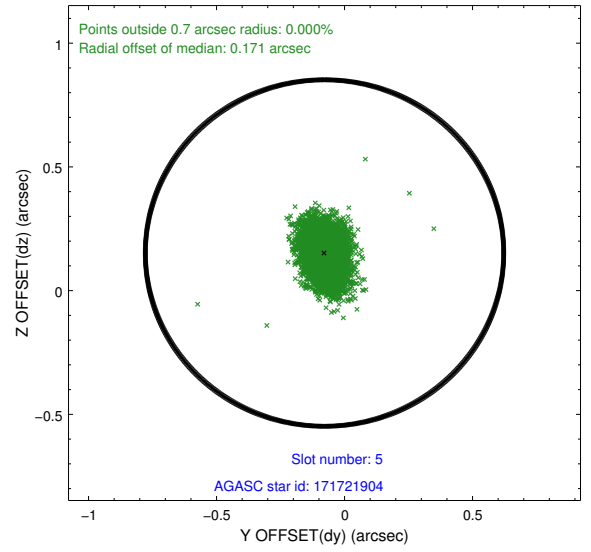
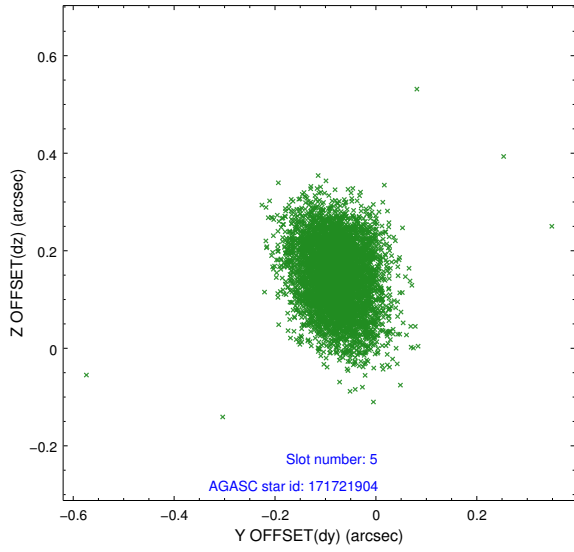
2.4.1 Slot 3



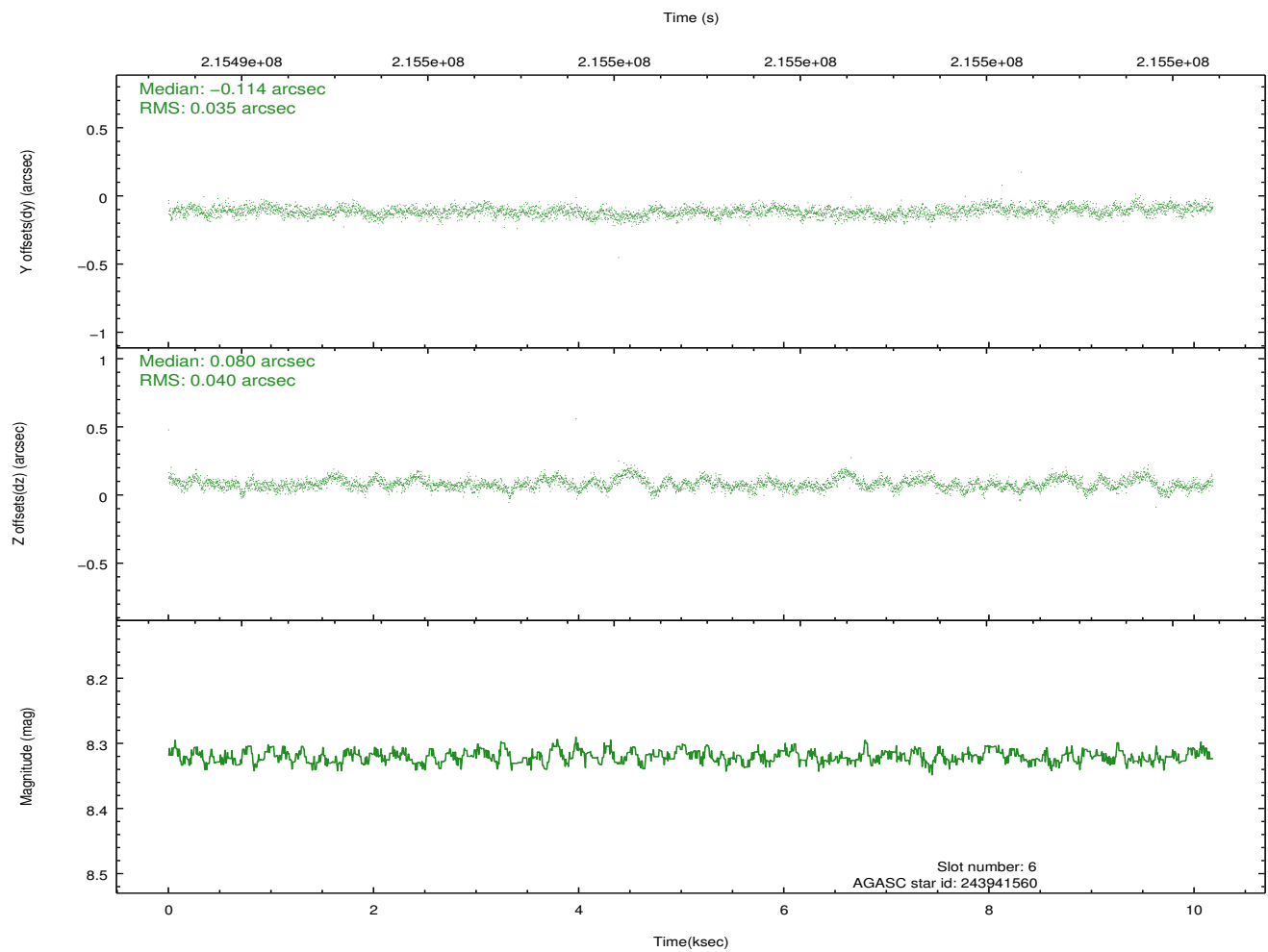
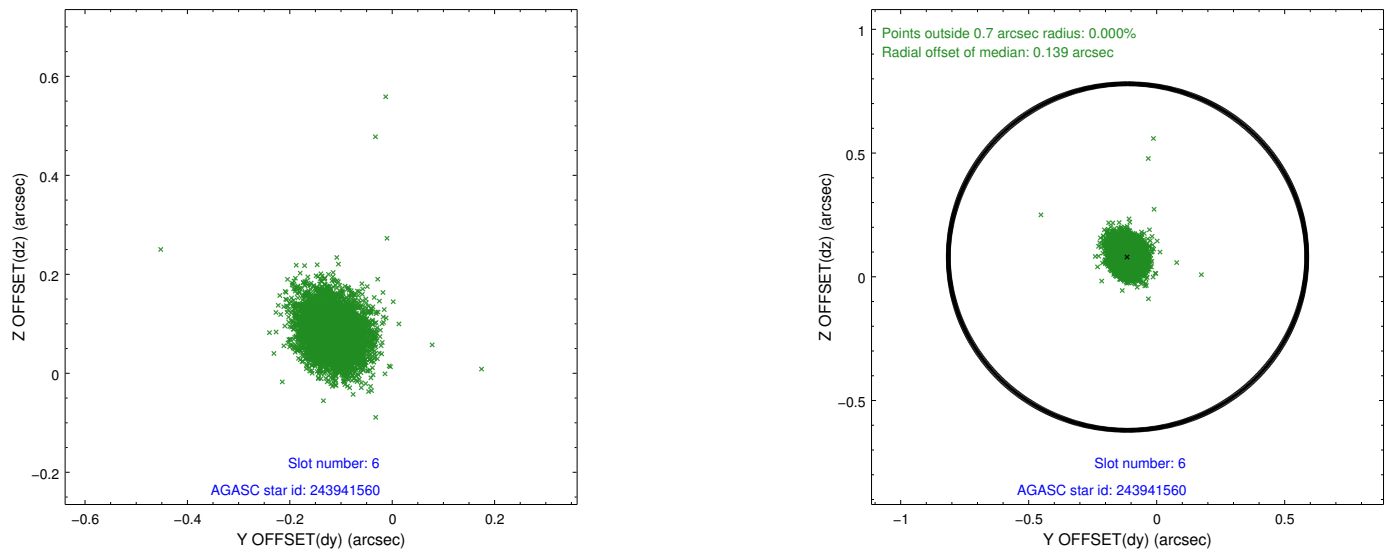
2.4.2 Slot 4



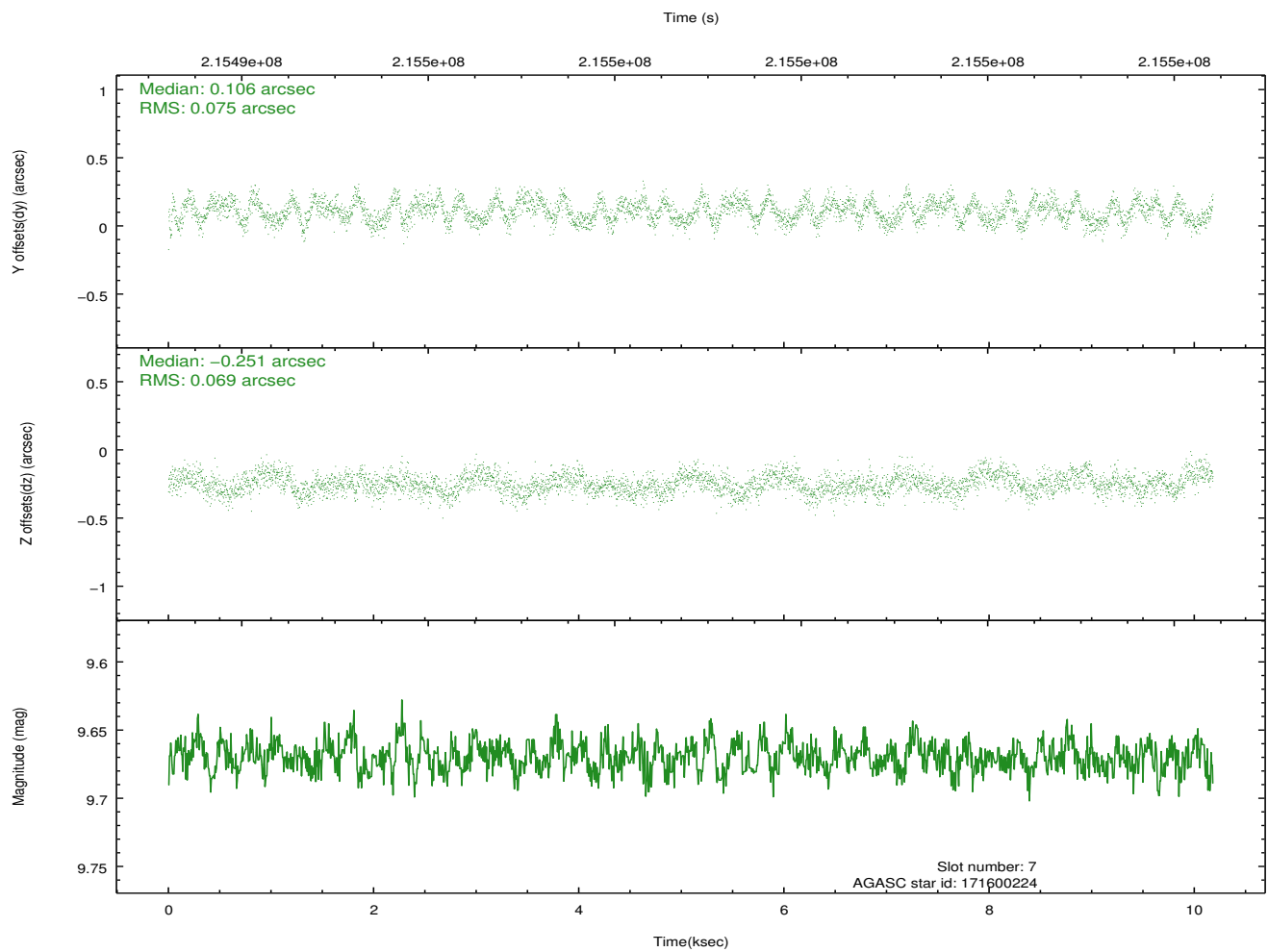
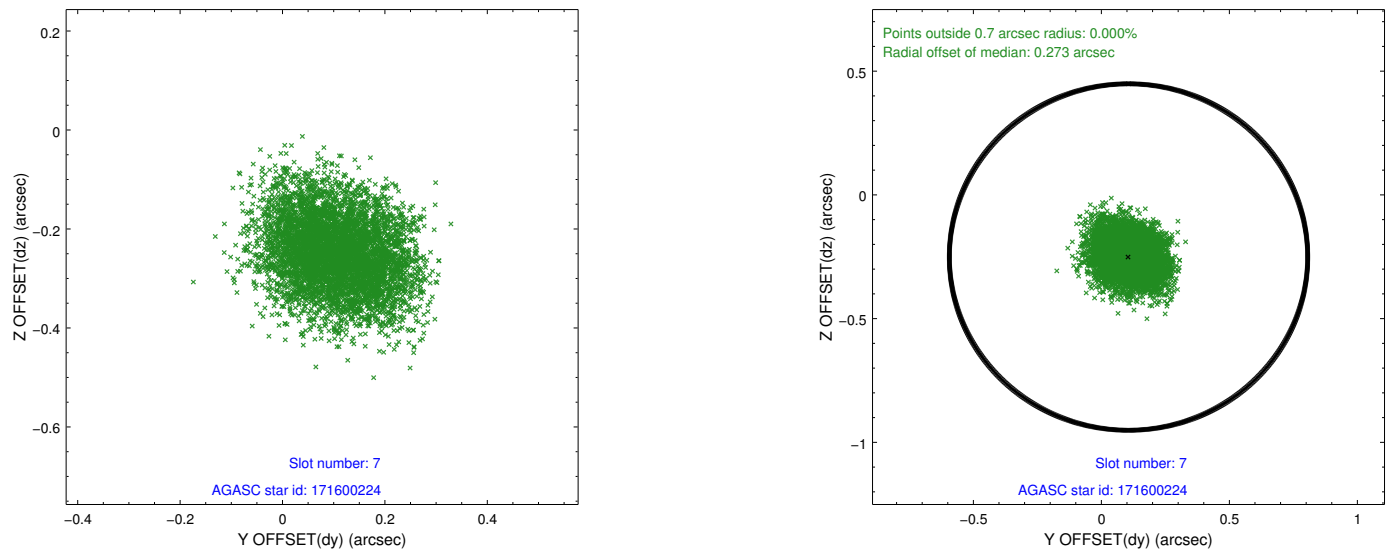
2.4.3 Slot 5



2.4.4 Slot 6

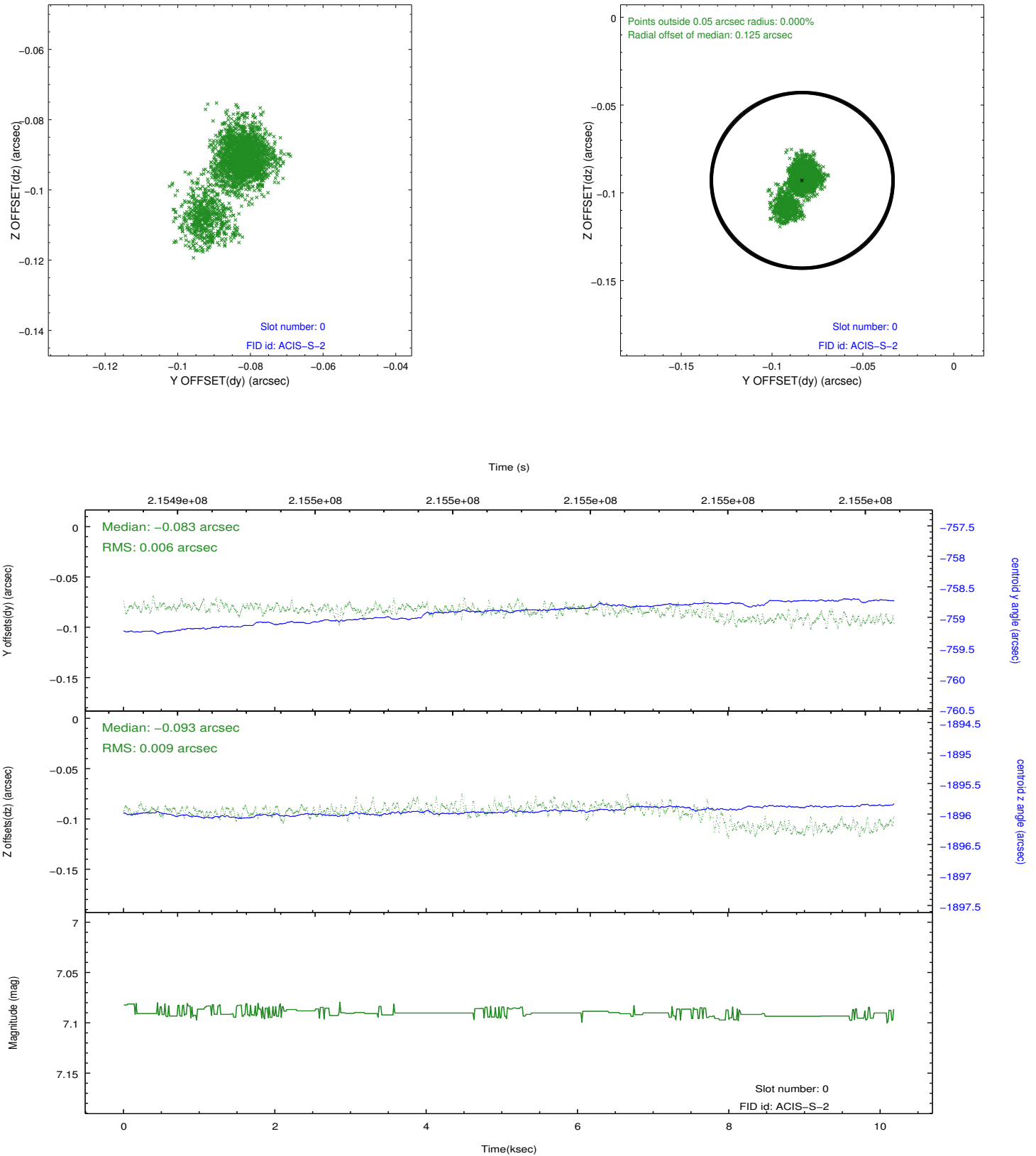


2.4.5 Slot 7

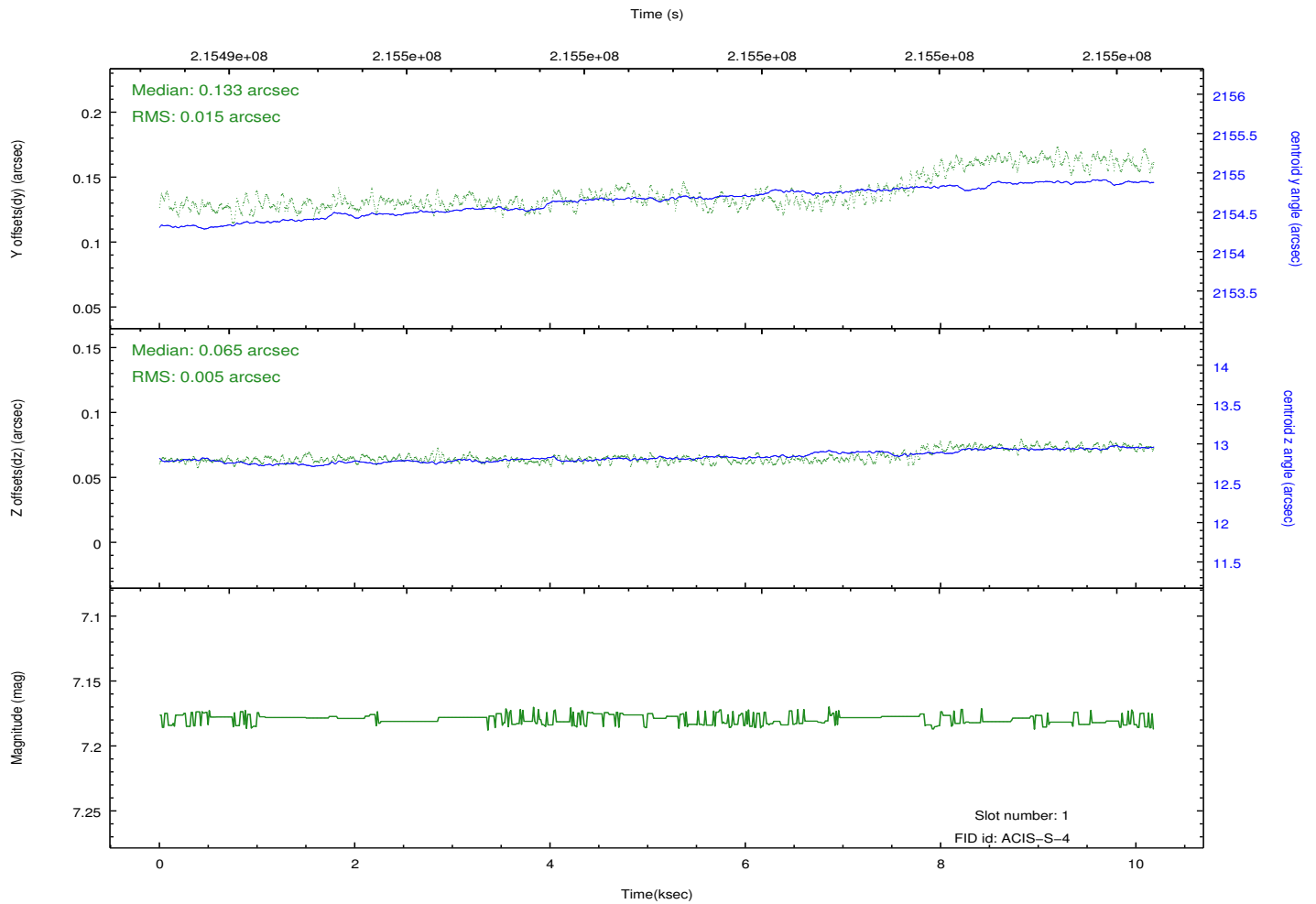
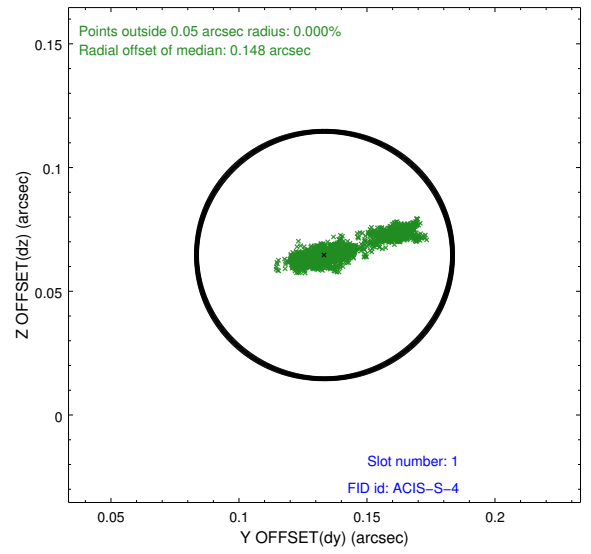
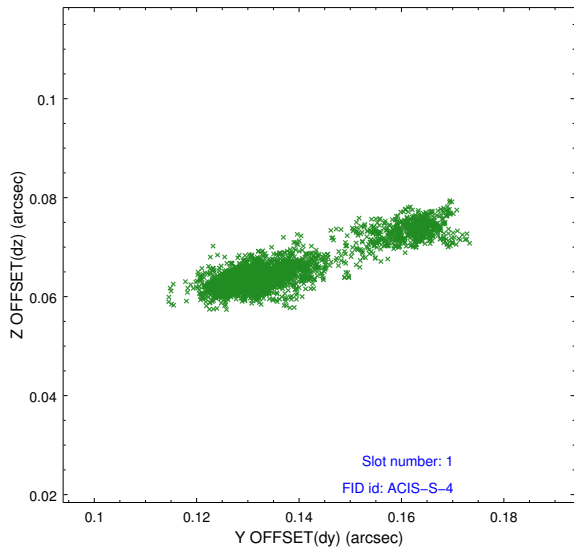


2.5 FID Slots

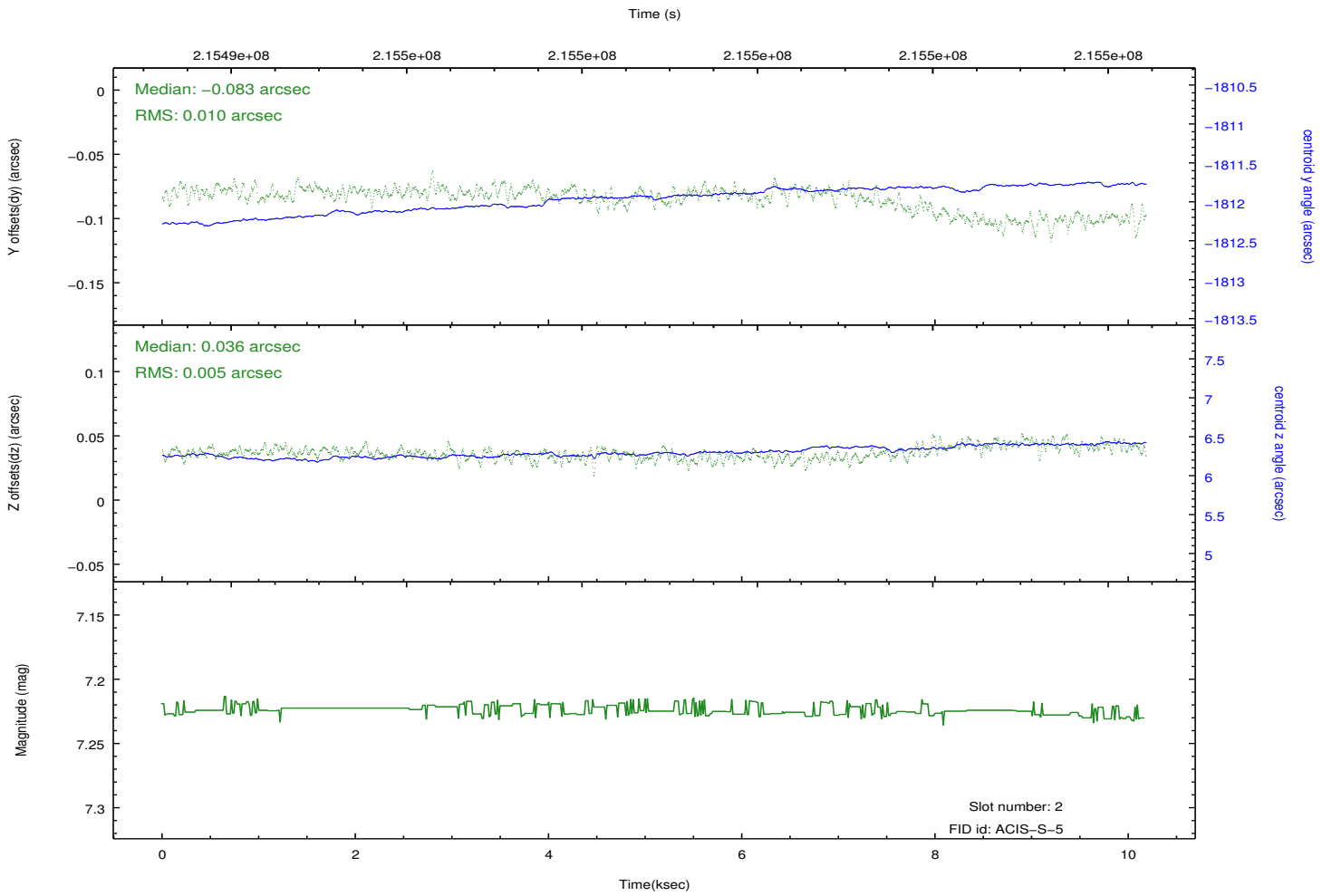
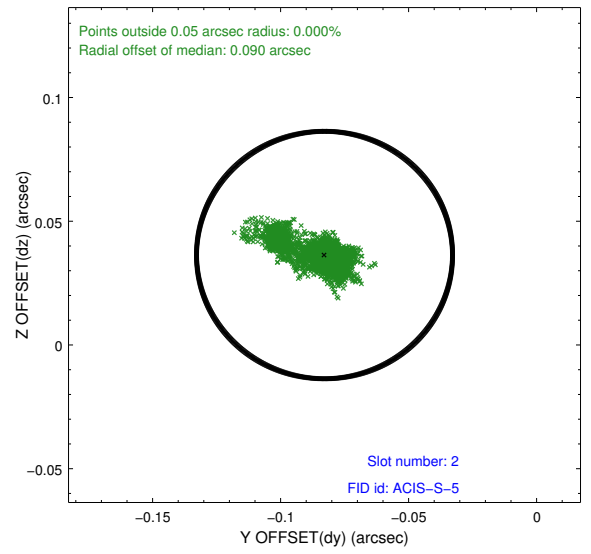
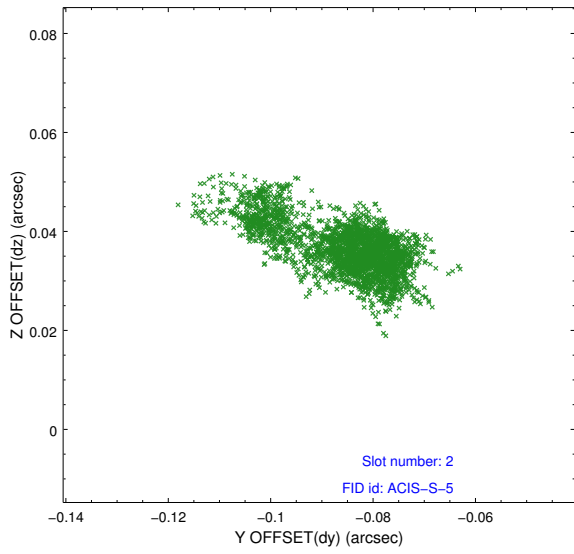
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

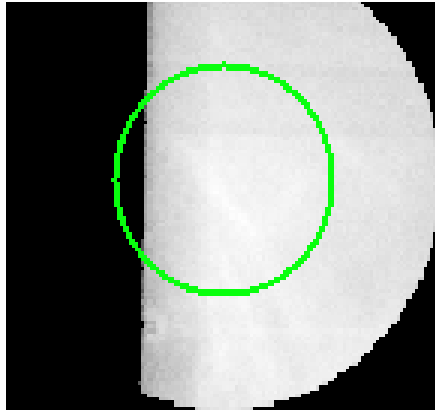


3 Gratings

3.1 HEG Arm



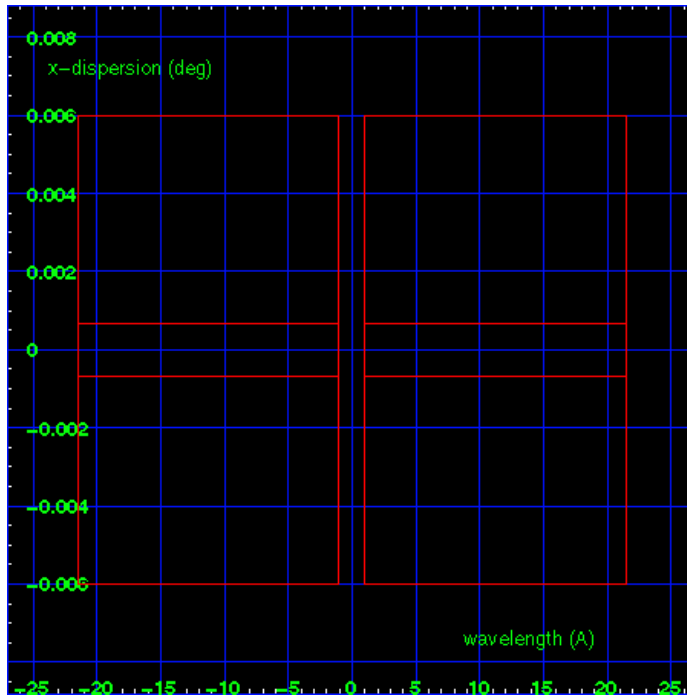
HEG Order Sort 123



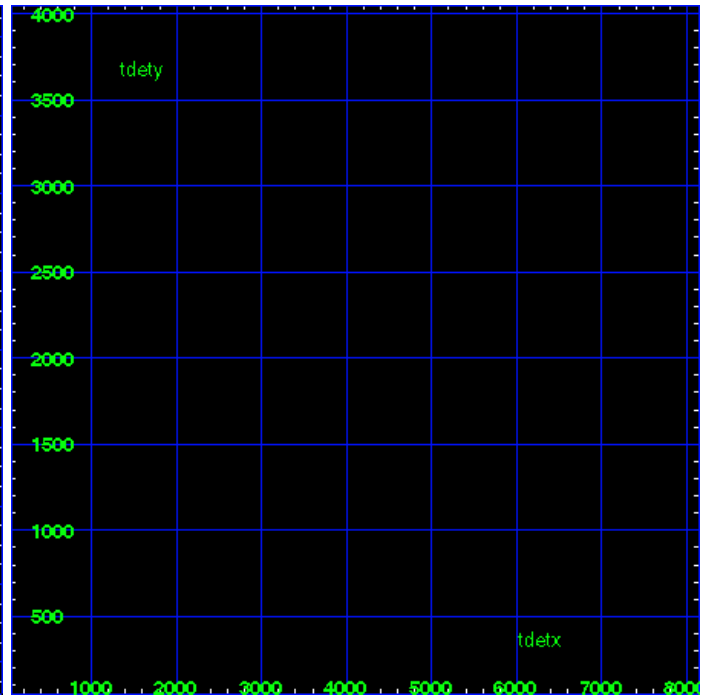
HEG Zero Order



HEG Order Sort ALL

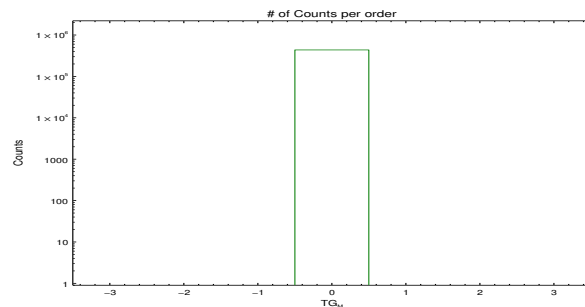


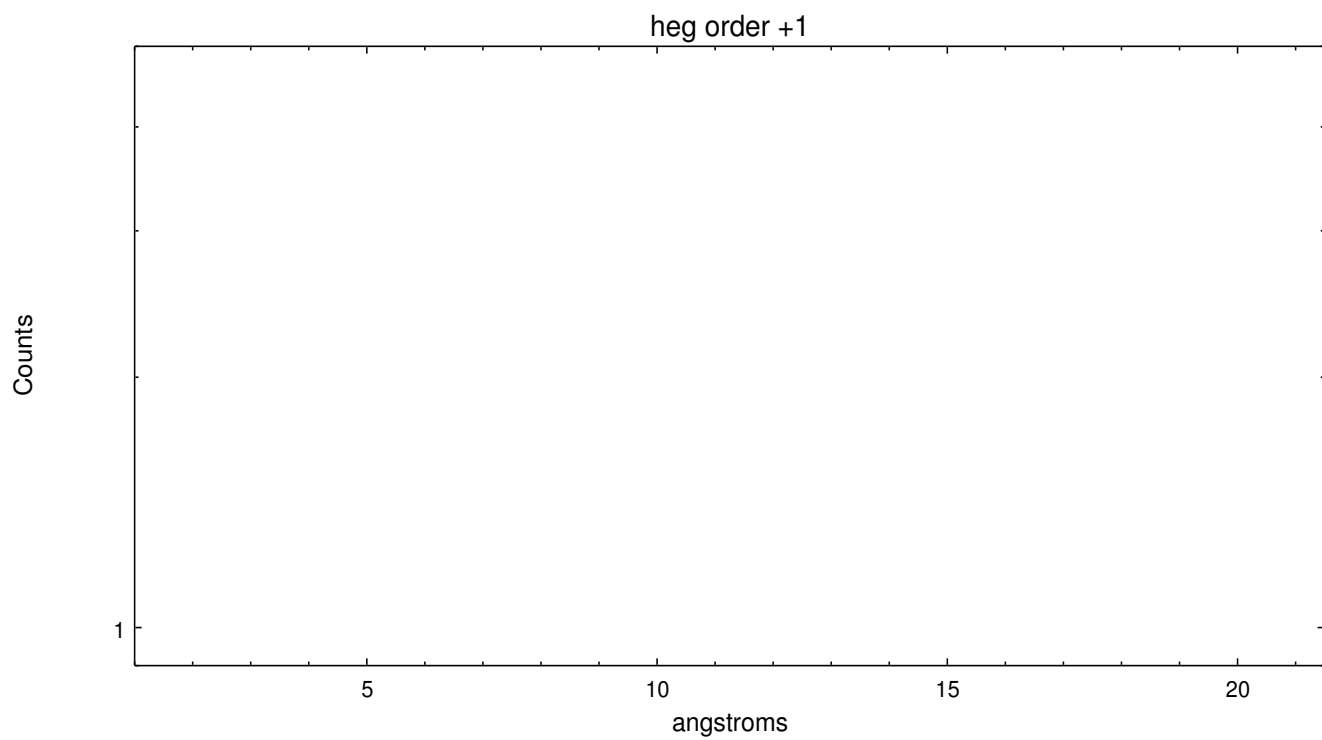
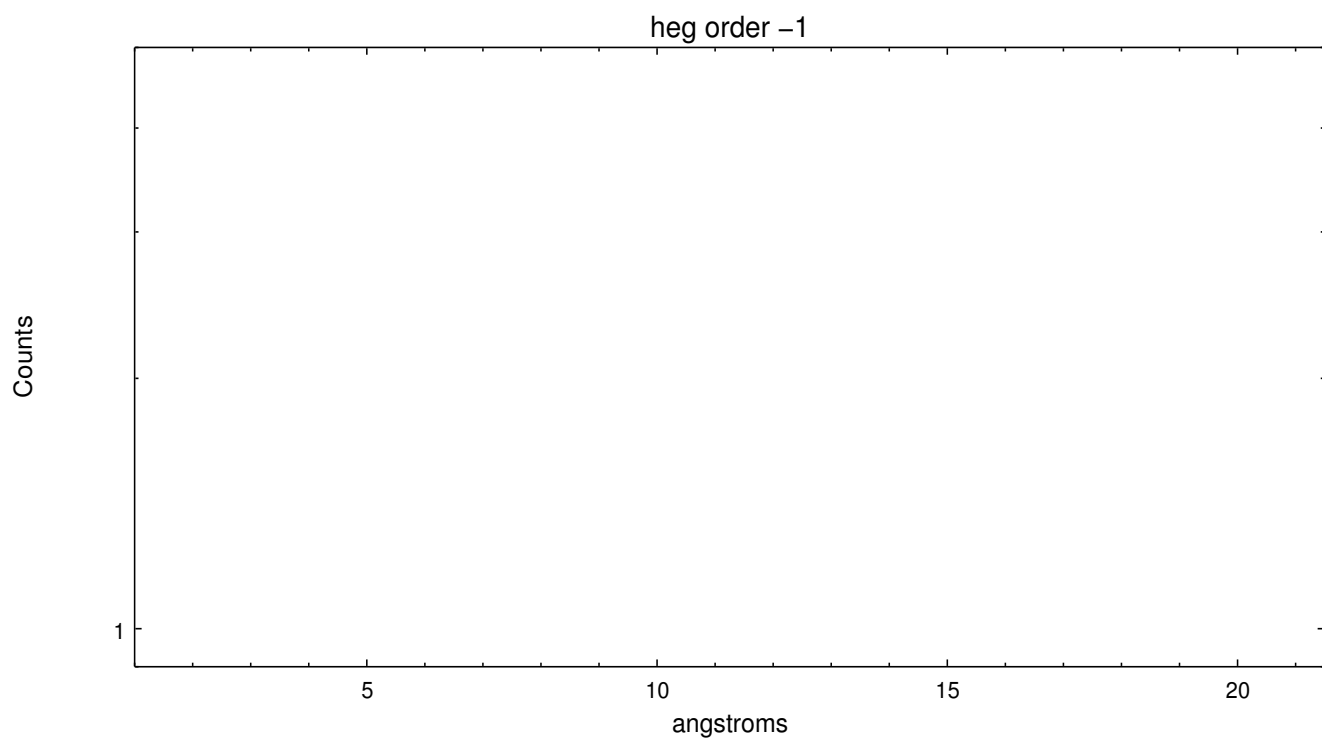
Spot Image HEG



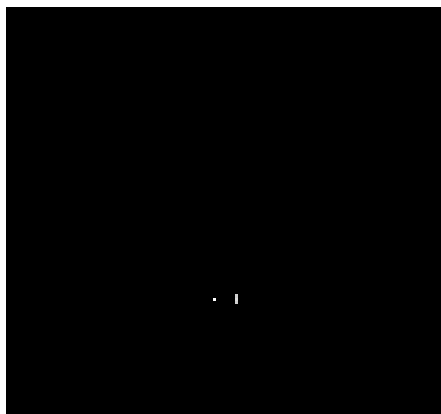
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	0	0	0	440871	0	0	0





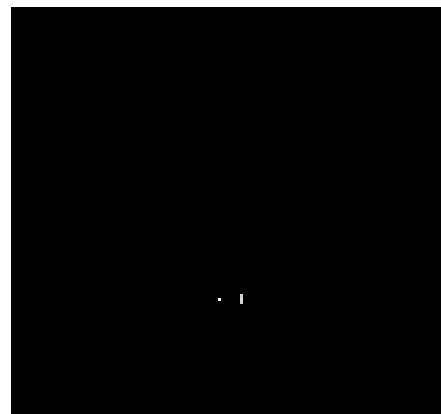
3.2 MEG Arm



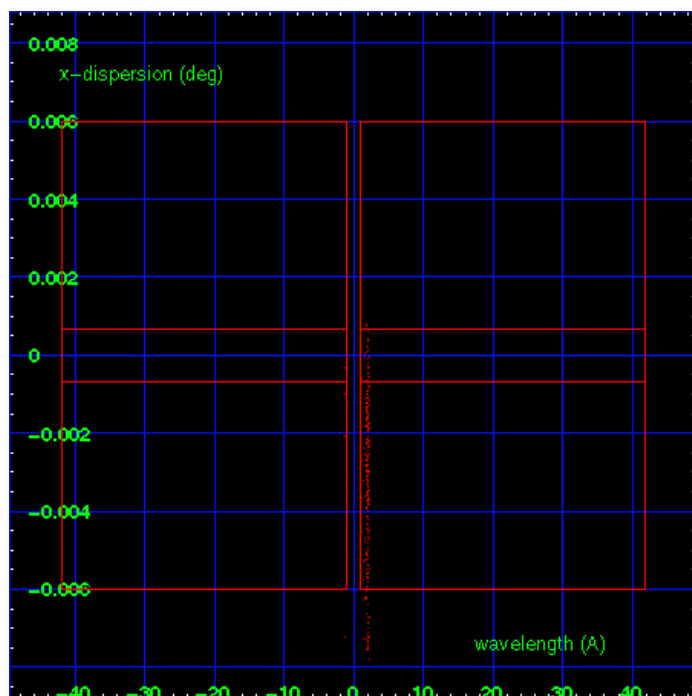
MEG Order Sort 123



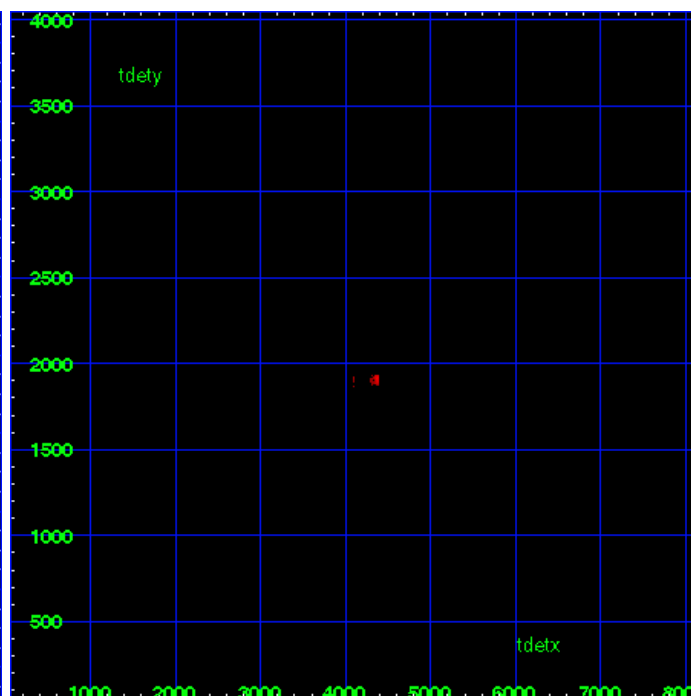
MEG Zero Order



MEG Order Sort ALL

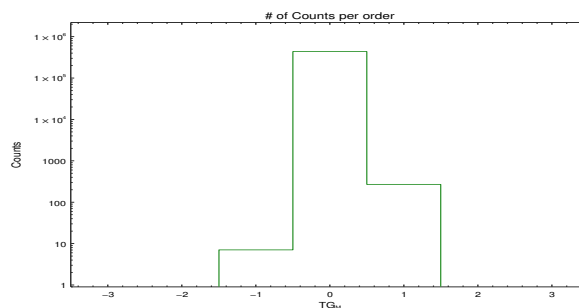


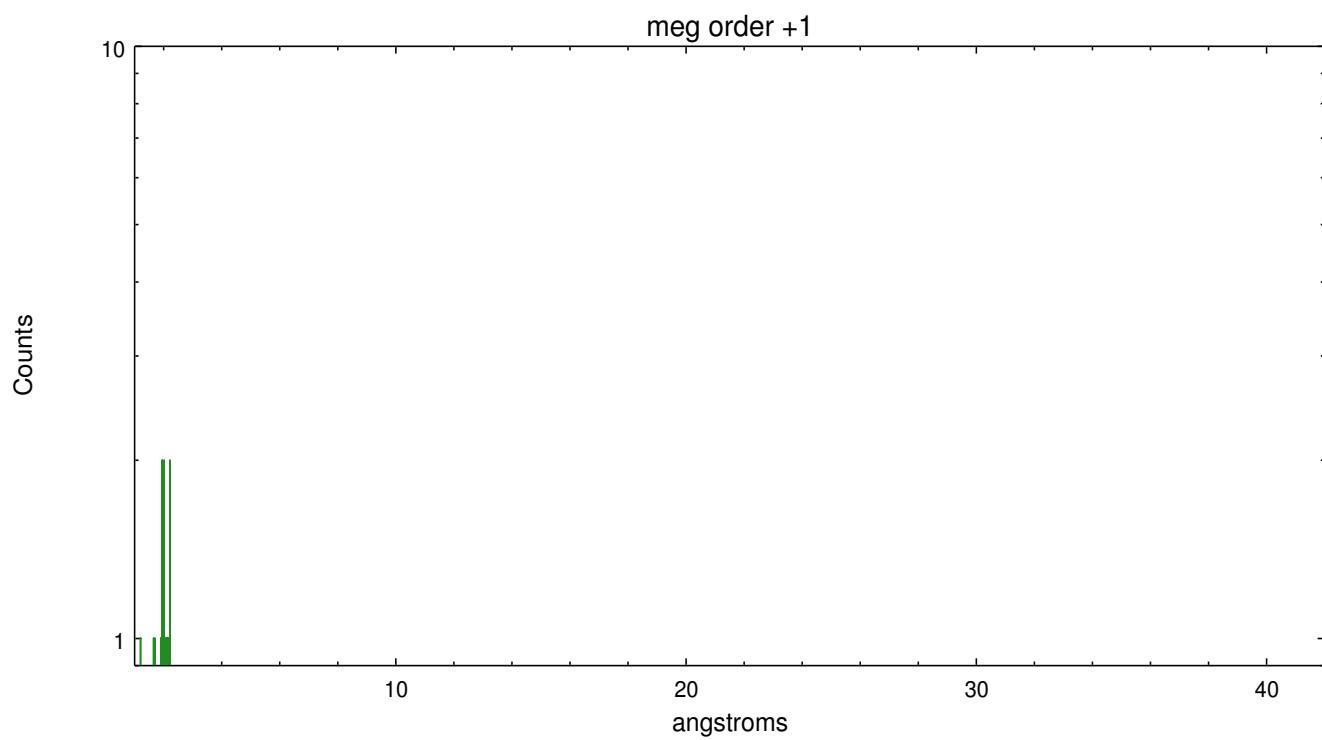
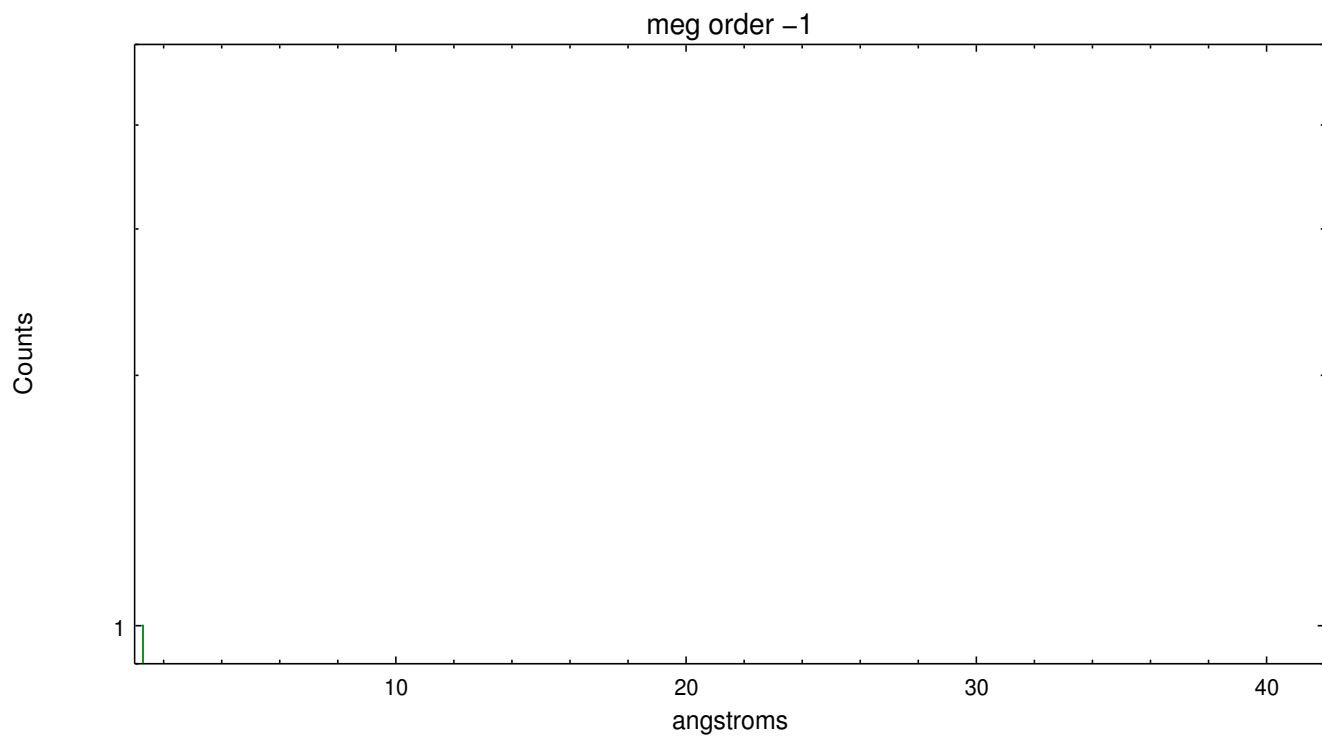
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	0	0	7	440871	269	0	0





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2013.01.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.181

A.2 Comments

HETG is inserted as a filter; there is very little useful gratings information in the observation. The zeroth order position used in the grating extraction is NOT at the position of the pulsar, but is near a bright emission knot or filament to the NW. If the dispersed grating spectrum is to be analyzed, it should be re-extracted using the exact position of the pulsar as the zeroth order position. The dispersed spectrum only contains data for the meg +1 order between 1-2 A.