

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 5500 - L2 Version 4  
Chandra X-Ray Center

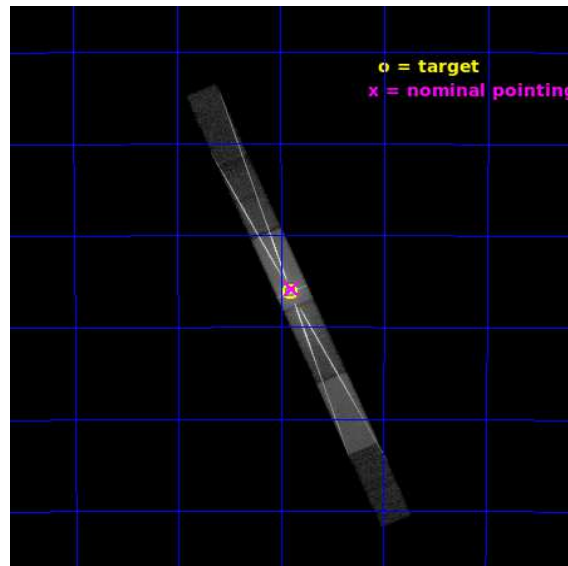
L2 Processing Date : Oct 11 2020

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# 1 Front

seq_num	400430	Sequence number
obs_id	5500	Observation id
title	Follow-up Chandra observation of 4U 1705-44	Proposal title
observer	Dr. Tiziana Di Salvo	Principal investigator
object	4U 1705-44	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	257.226958	Observer's specified target RA [deg]
dec_targ	-44.102042	Observer's specified target Dec [deg]
ra_nom	257.22270650787	Nominal RA [deg]
dec_nom	-44.096762213585	Nominal Dec [deg]
roll_nom	246.45351304153	Nominal Roll [deg]
revision	4	Processing version of data
ontime	27249.600116044	Sum of GTIs [s]
livetime	26473.546995546	Livetime [s]
ontime4	27249.600116044	Sum of GTIs [s]
ontime5	27249.600116044	Sum of GTIs [s]
ontime6	27249.600116044	Sum of GTIs [s]
ontime7	27249.600116044	Sum of GTIs [s]
ontime8	27249.600116044	Sum of GTIs [s]
ontime9	27249.600116044	Sum of GTIs [s]
l2events	986624	Number of level 2 events

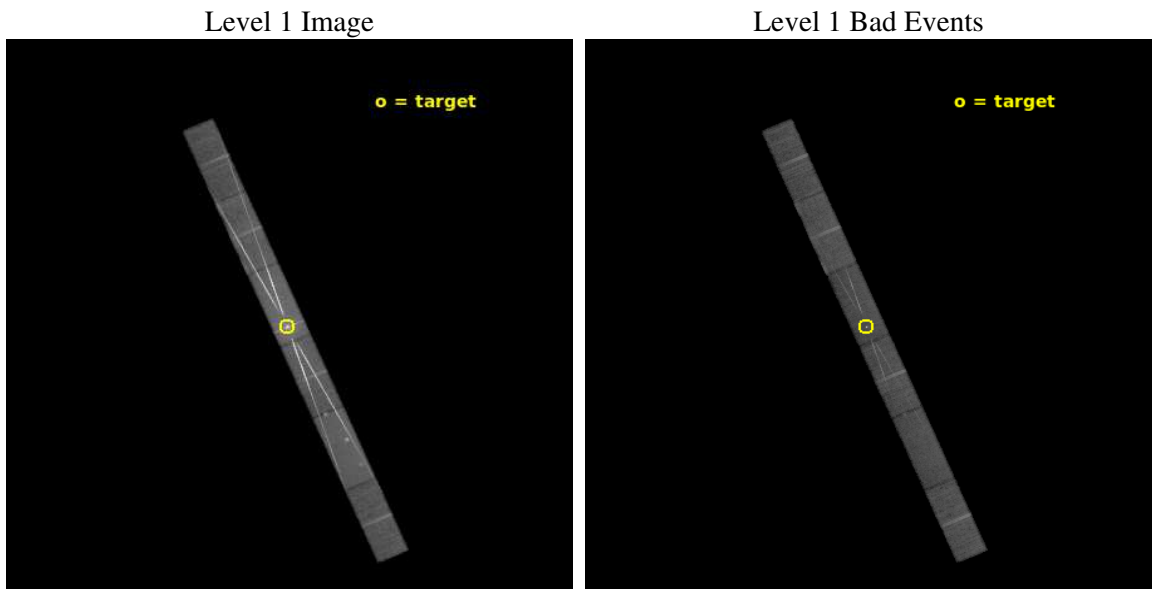




## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

obi_num	1	Obi number	sched_exp_time	27066.881000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	27249.600116044	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime4	27249.600116044	Sum of GTIs [s]
date	2020-10-11T04:19:05	Date and time of file creation	ontime5	27249.600116044	Sum of GTIs [s]
revision	4	Processing version of data	ontime6	27249.600116044	Sum of GTIs [s]
			ontime7	27249.600116044	Sum of GTIs [s]
			ontime8	27249.600116044	Sum of GTIs [s]
			ontime9	27249.600116044	Sum of GTIs [s]
			l1events	1569122	Number of level 1 events
			tgmetho	FINDZO	Method used to create src1a file
			ra_pos	(4073.74, 4057.47)	Grade 0 sky pixel position

### 2.1.3 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	104028	188671	426658	540023	211759	97983
rejected events	89903	76431	90213	88000	96773	77155
rejected %	86%	40%	21%	16%	45%	78%

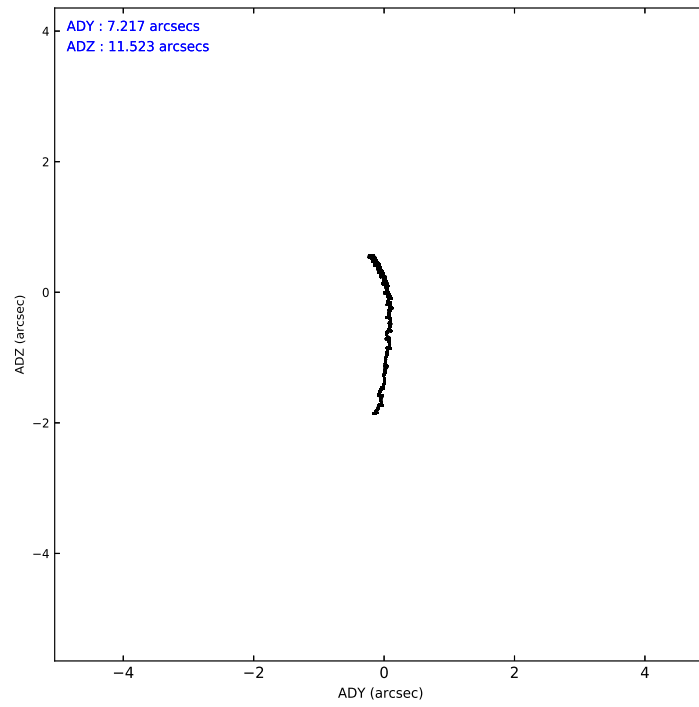
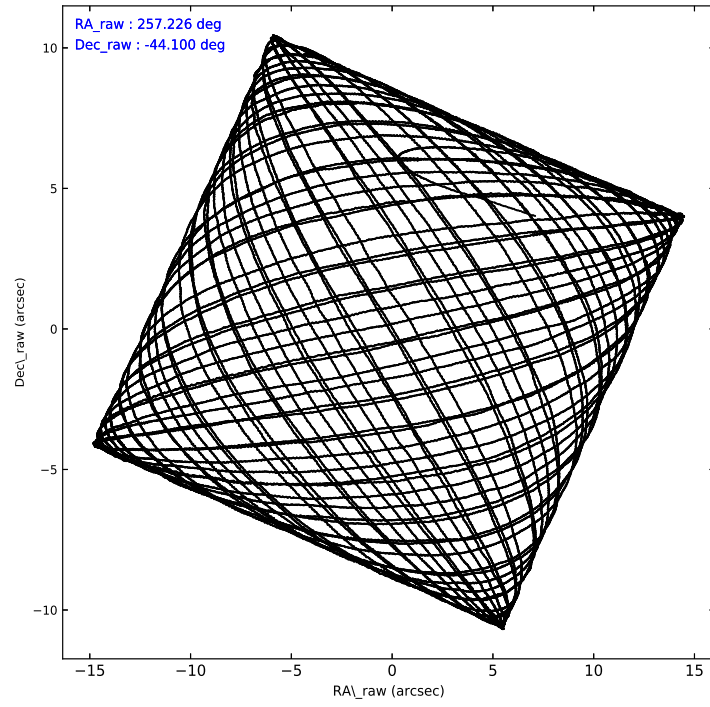
  

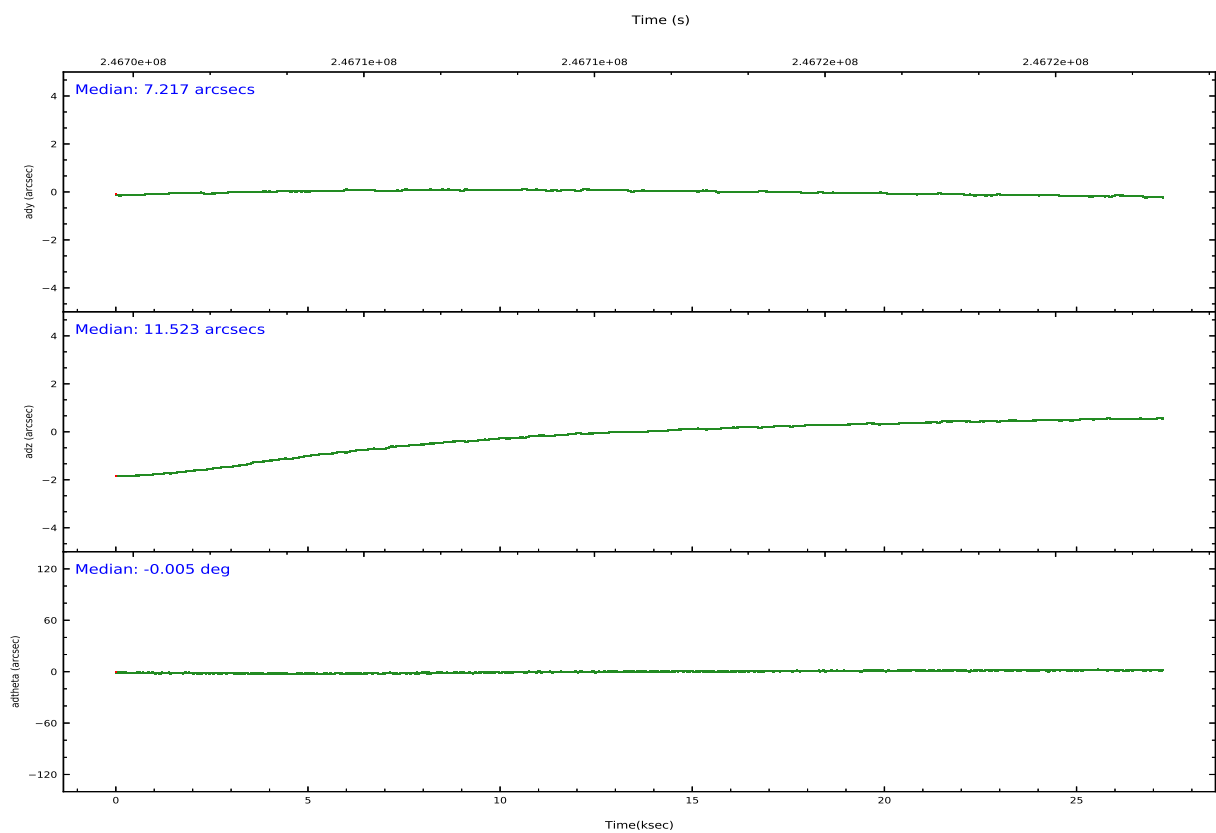
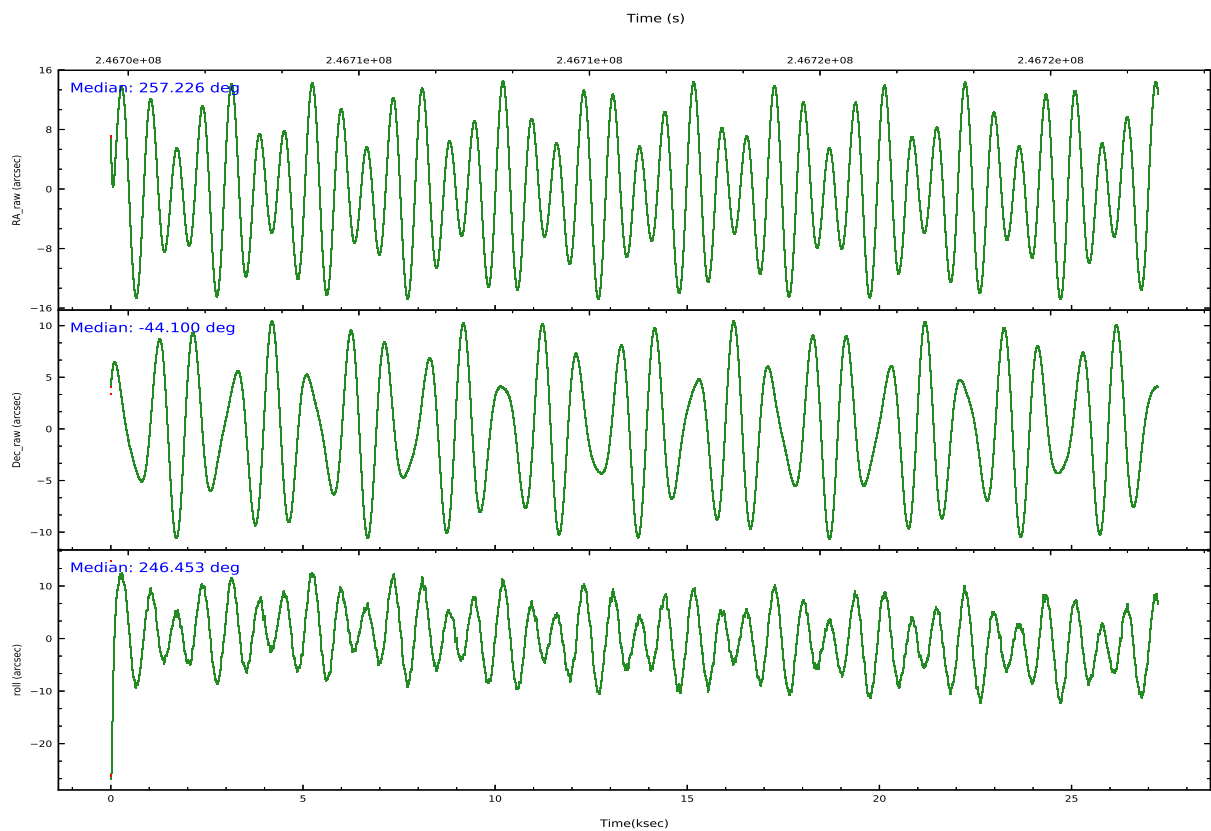
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	5983	24420	244792	76574	77857	11715
	5%	12%	57%	14%	36%	11%
grade 1 events	32	344	1935	1050	291	40
	0%	0%	0%	0%	0%	0%
grade 2 events	3523	33822	44689	118084	16116	3563
	3%	17%	10%	21%	7%	3%
grade 3 events	1421	6917	15331	44645	6135	1698
	1%	3%	3%	8%	2%	1%
grade 4 events	1283	6966	14908	44782	6048	1655
	1%	3%	3%	8%	2%	1%
grade 5 events	3136	8148	5304	14985	4887	3745
	3%	4%	1%	2%	2%	3%
grade 6 events	2284	42604	18428	171094	10053	2567
	2%	22%	4%	31%	4%	2%
grade 7 events	86366	65450	81271	68809	90372	73000
	83%	34%	19%	12%	42%	74%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-456789	ACIS-456789	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	257.220881	257.22270650787	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-44.073004	-44.096762213585	Subarray start row	1	1
[deg] Pointing Roll	246.290890	246.45351304153	Subarray row count	400	400
[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	1.4
[mm] SIM translation stage pos	-182.642523	-182.6398635053184			
[mm] SIM translation stage offset	-7.49	-7.49265907768941			
[s] Observation start time (MET)	246699731.184000	246698477.01218			
Observation start date	2005-10-26T07:41:07	2005-10-26T07:21:17			
[s] Observation end time (MET)	246726798.184000	246727009.93849			
Observation end date	2005-10-26T15:12:14	2005-10-26T15:16:49			
Read mode	TIMED	TIMED			

## 2.3 Aspect



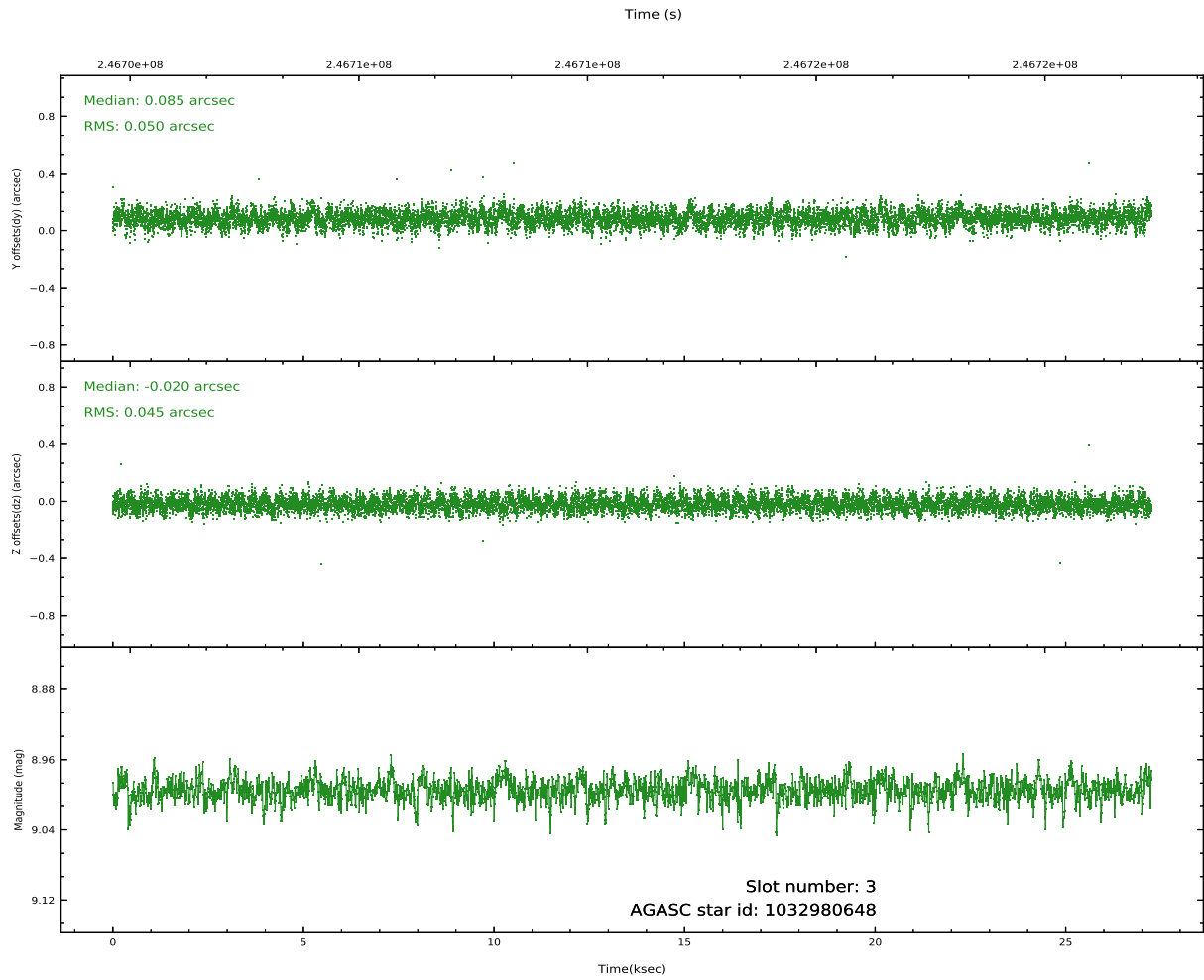
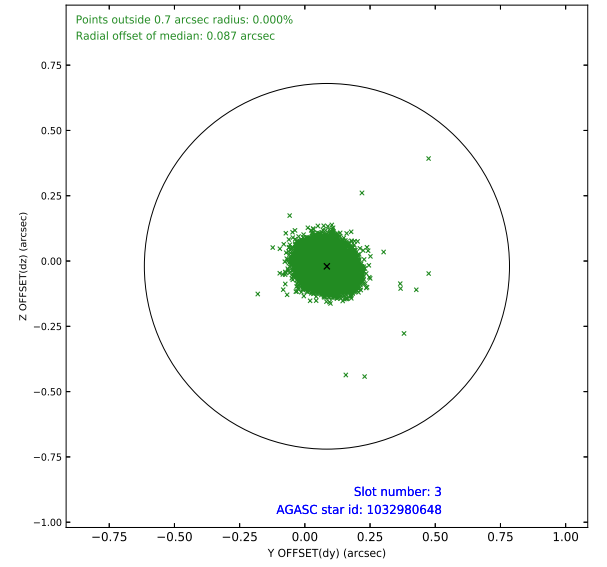
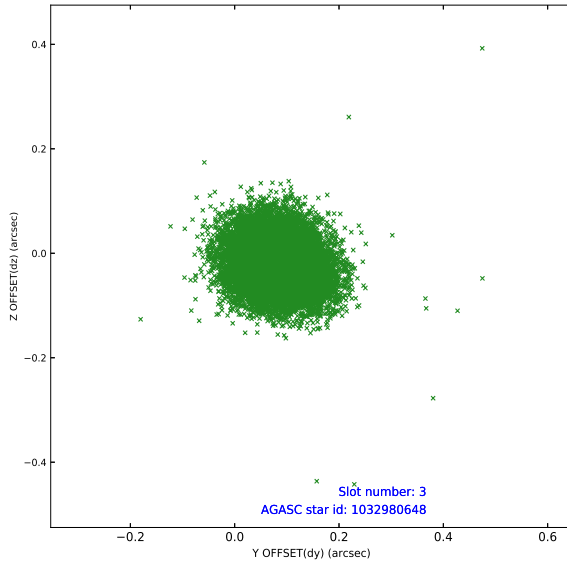


Slot Statistics

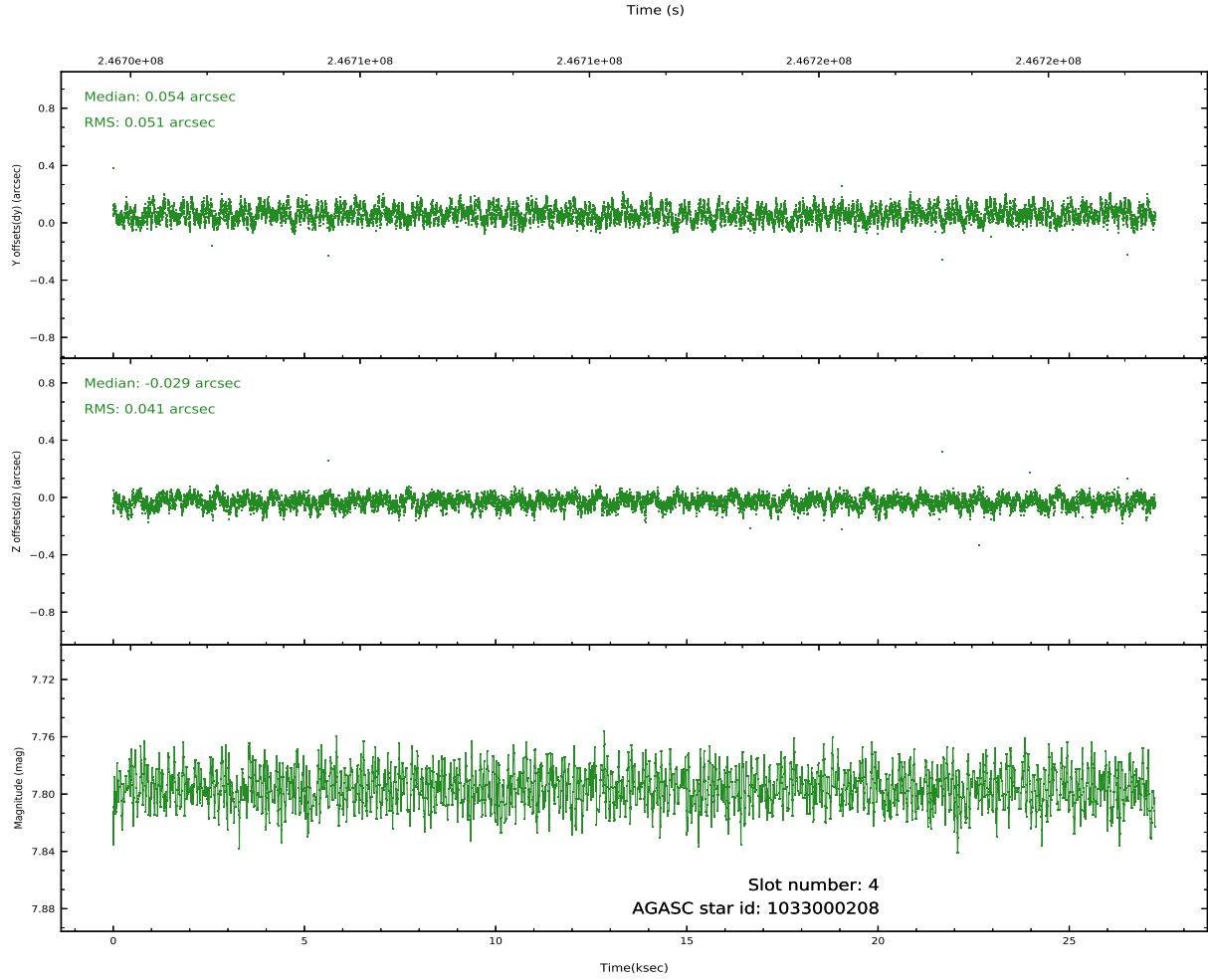
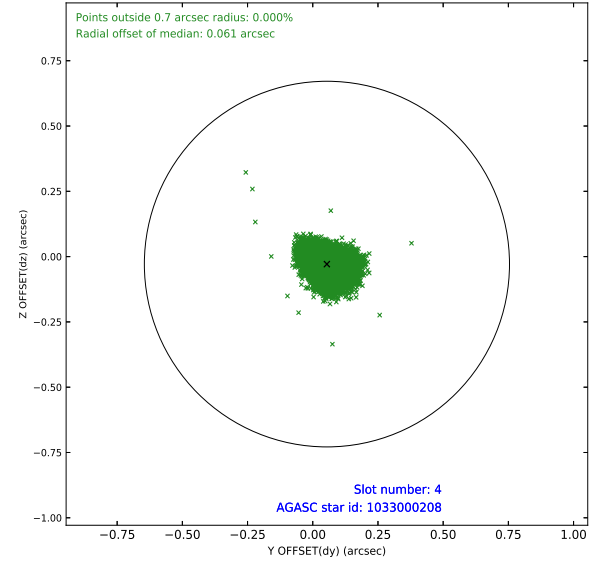
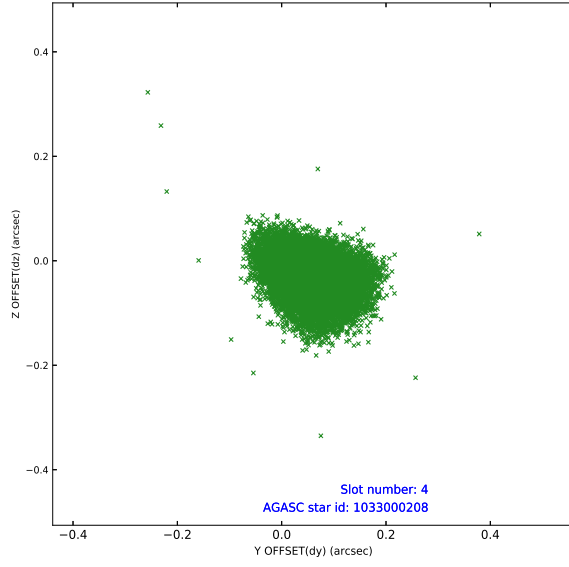
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.18	6648	1.000	0.005	0.040	0.017	0.025	0.000000	0.000000	936.63	-1882
1	FID		ACIS-S-4	7.18	6647	1.000	0.118	-0.027	0.014	0.022	0.000000	0.000000	2154.19	21
2	FID		ACIS-S-5	7.22	6647	1.000	-0.150	-0.001	0.009	0.014	0.000000	0.000000	-1812.28	15
3	GUIDE	used	1032980648	8.99	13278	1.000	0.085	-0.020	0.072	0.114	256.588109	-44.440758	1872.39	-954
4	GUIDE	used	1033000208	7.80	13292	1.000	0.054	-0.029	0.070	0.109	256.502750	-44.372681	1738.86	-1254
5	GUIDE	used	1033110048	8.17	13290	1.000	-0.180	0.150	0.058	0.094	258.190525	-43.756216	-2044.22	1855
6	GUIDE	used	1032983104	8.94	13283	1.000	0.160	-0.067	0.071	0.116	256.914293	-44.699956	2383.85	190
7	GUIDE	used	1033109664	7.88	13293	1.000	-0.123	-0.035	0.058	0.095	257.645718	-43.523560	-2253.68	221

## 2.4 Star Slots

### 2.4.1 Slot 3

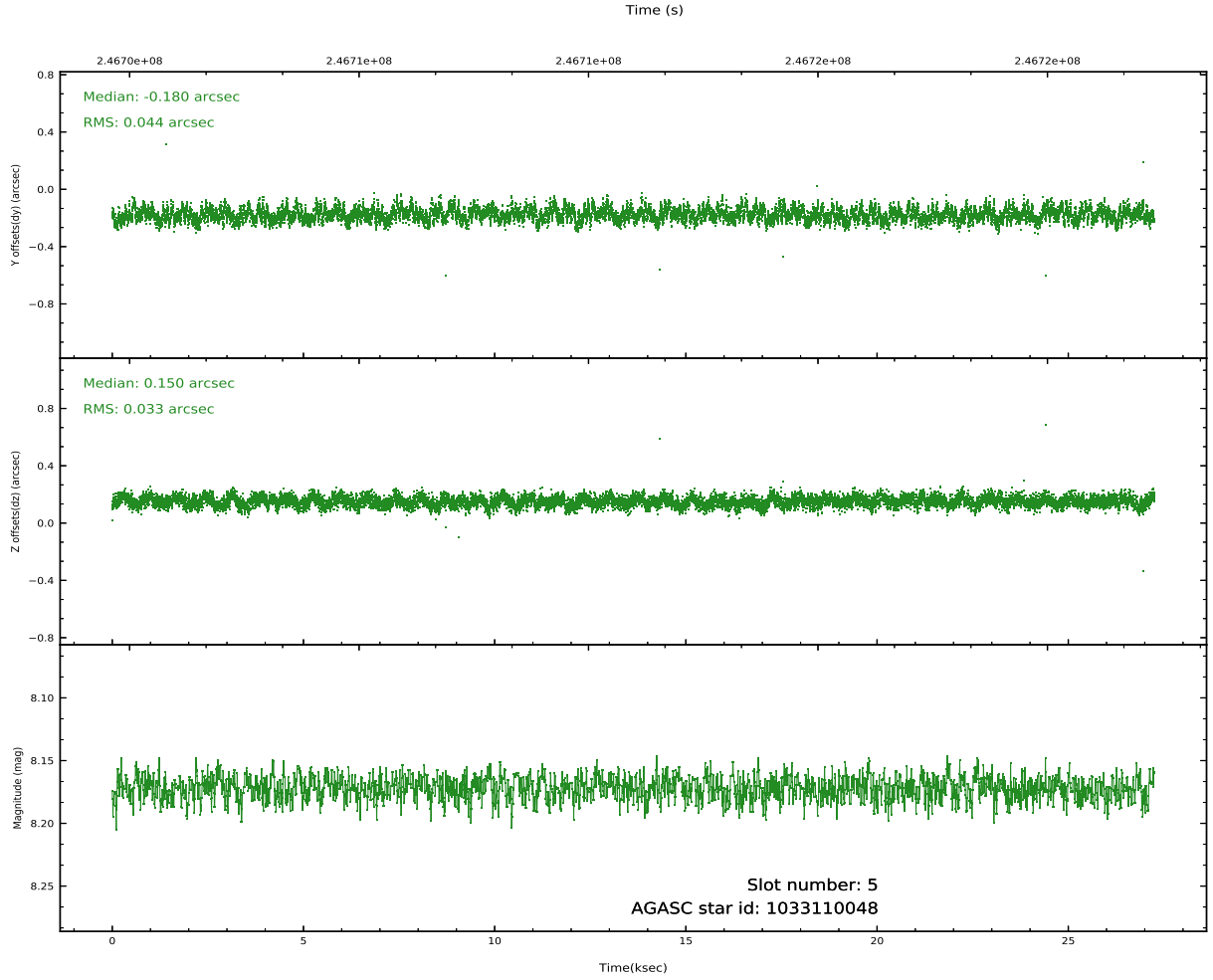
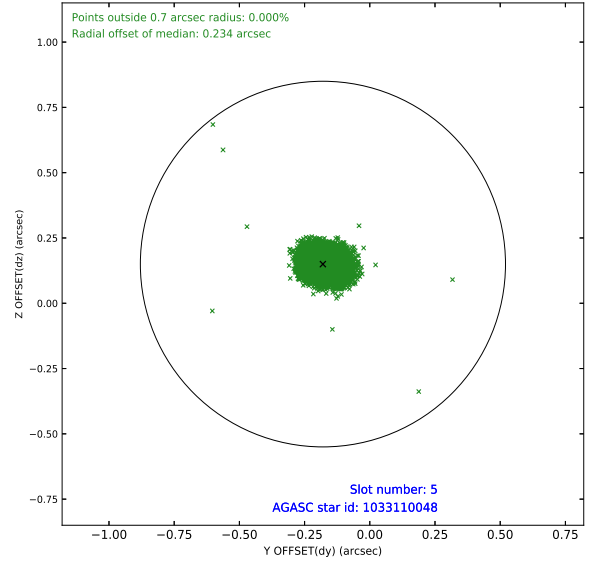
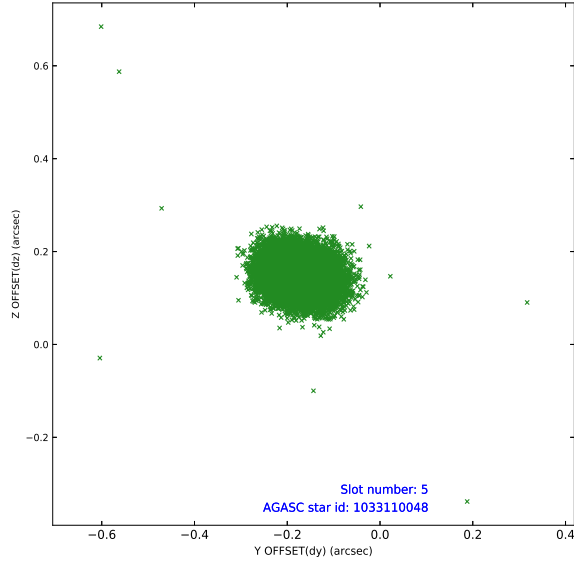


## 2.4.2 Slot 4

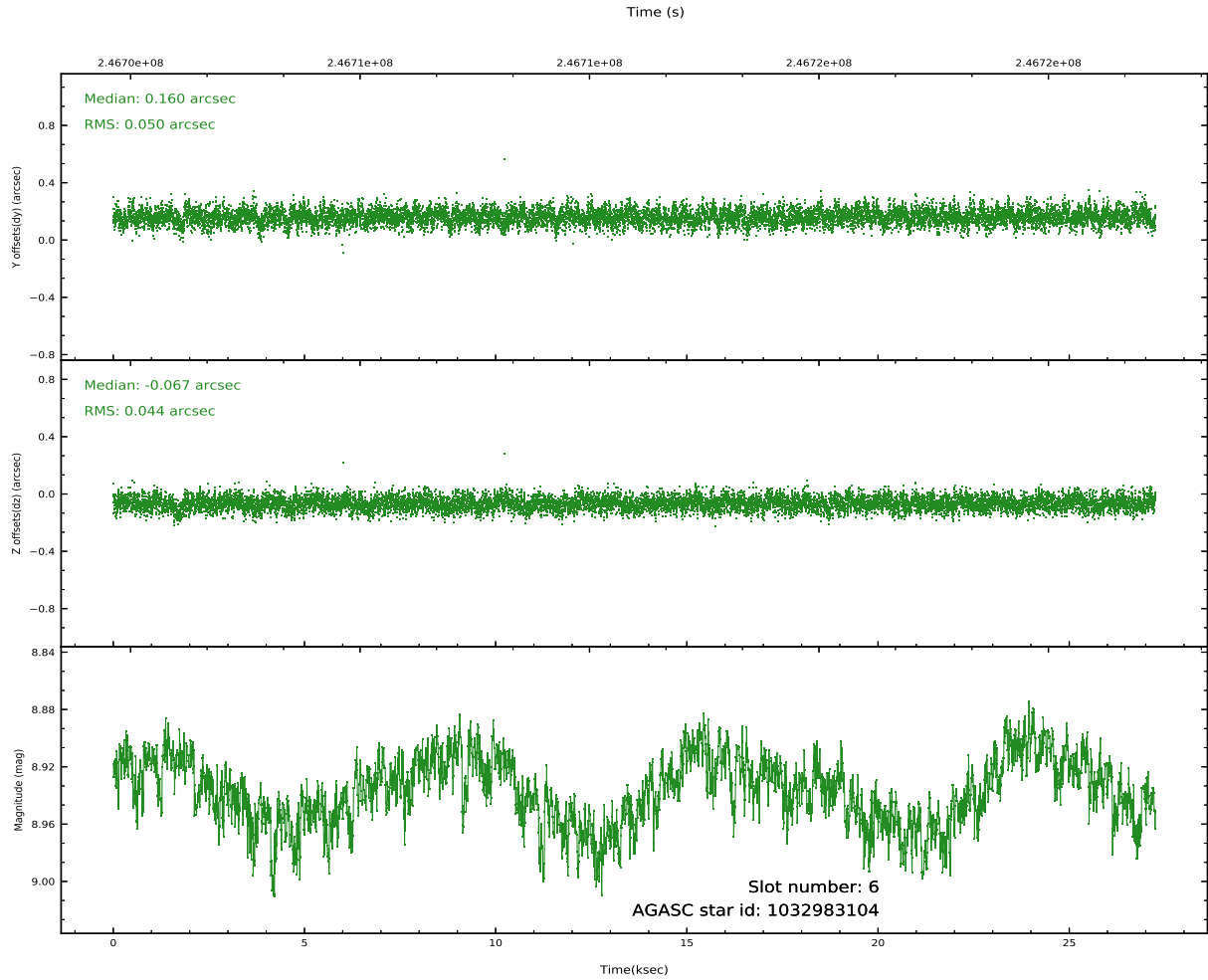
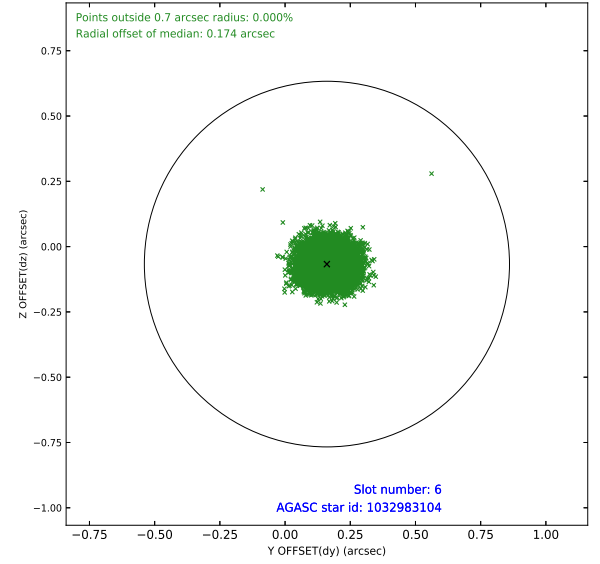
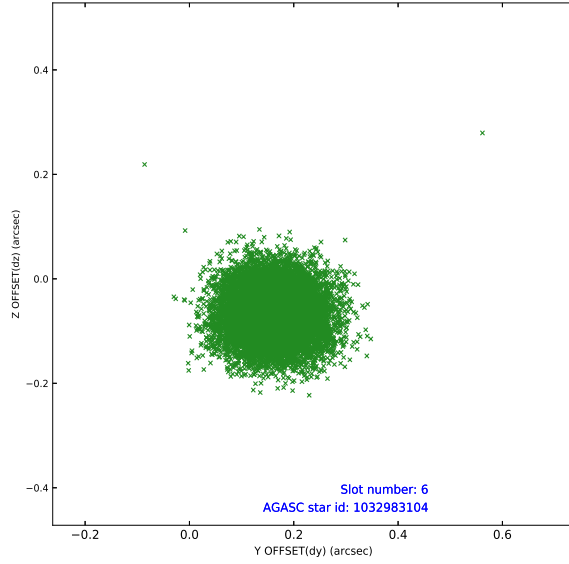




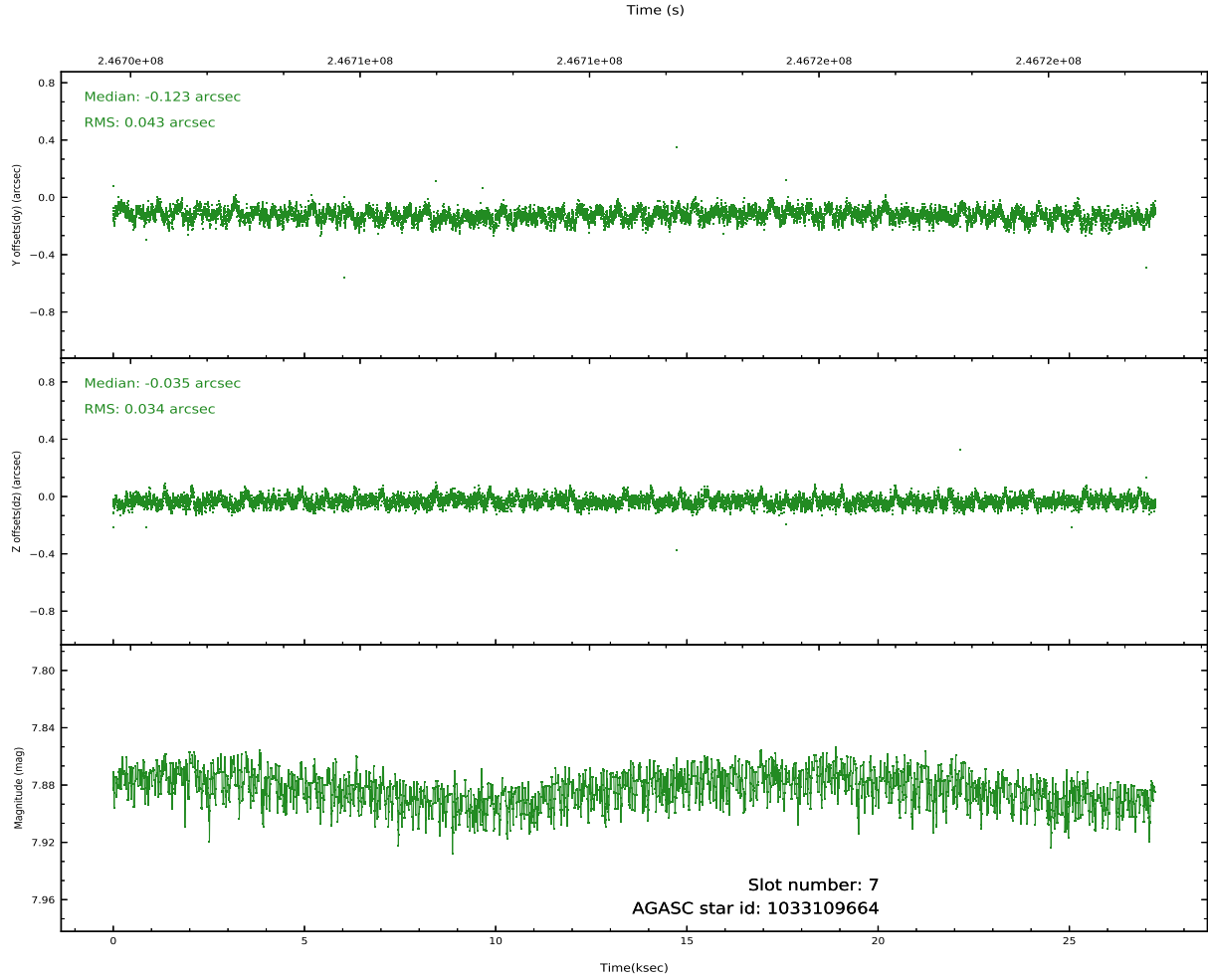
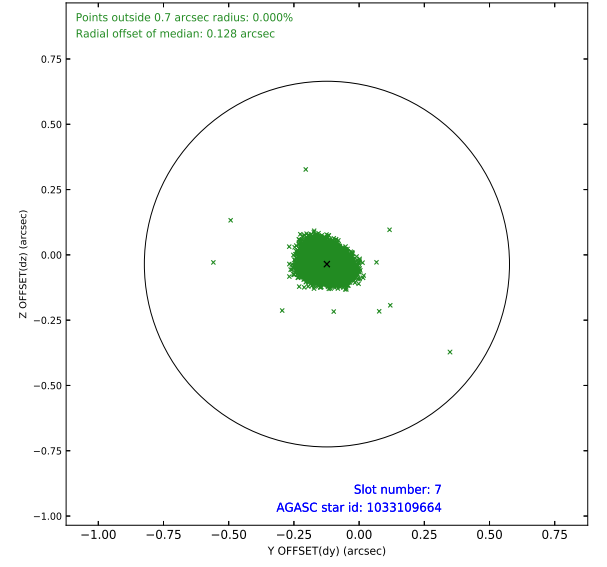
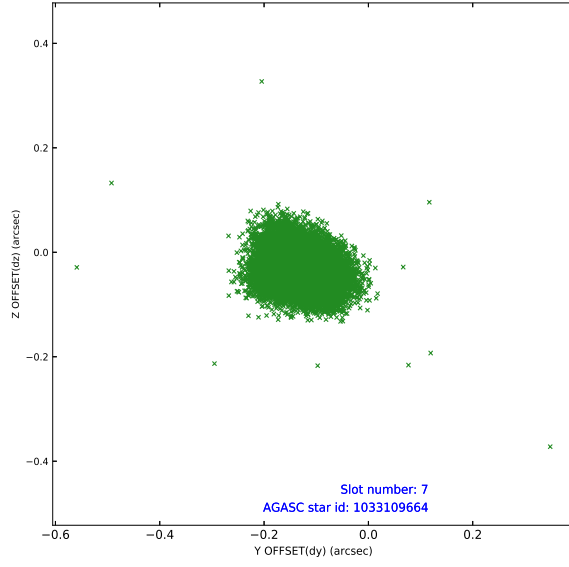
### 2.4.3 Slot 5



## 2.4.4 Slot 6

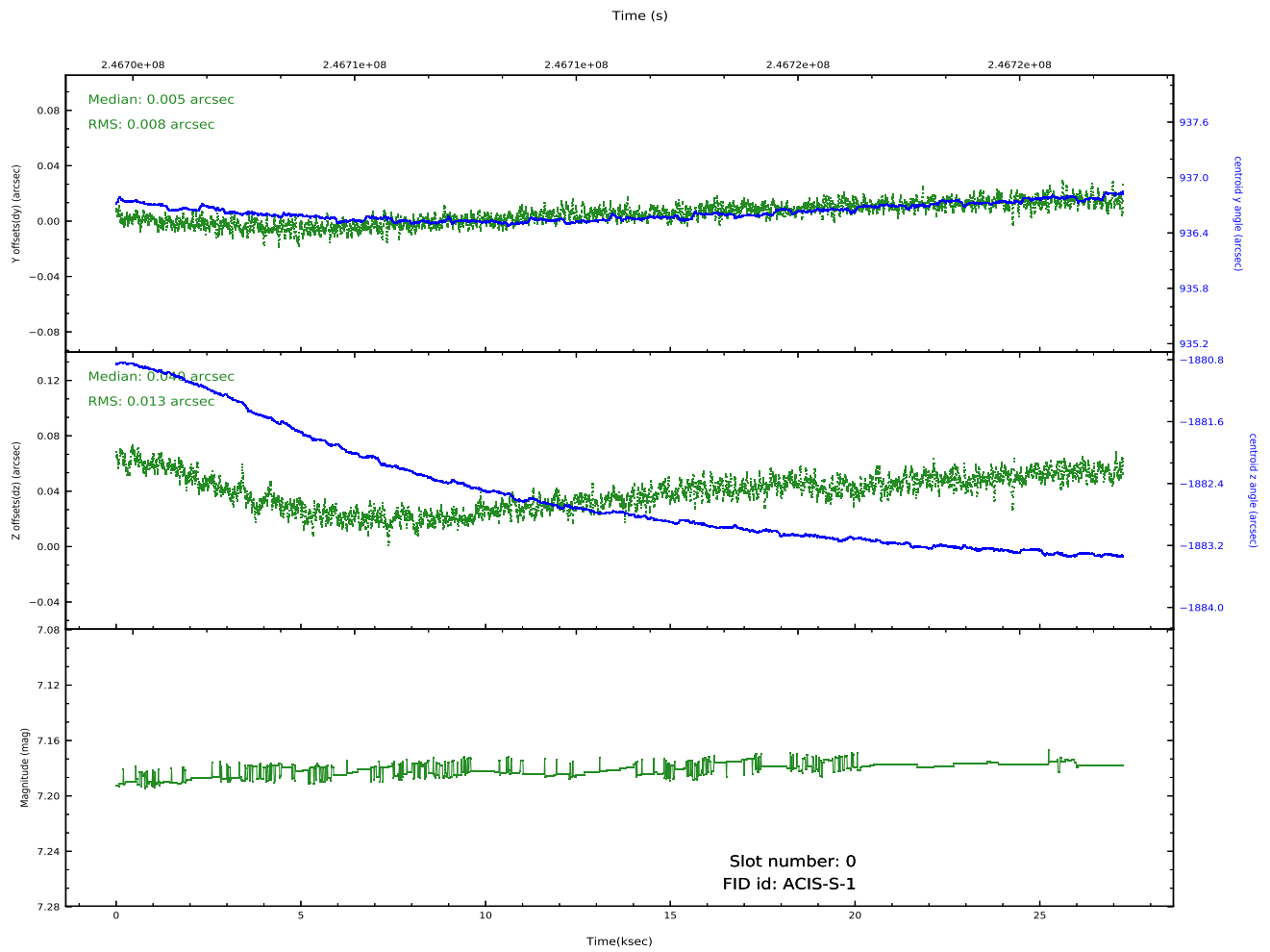
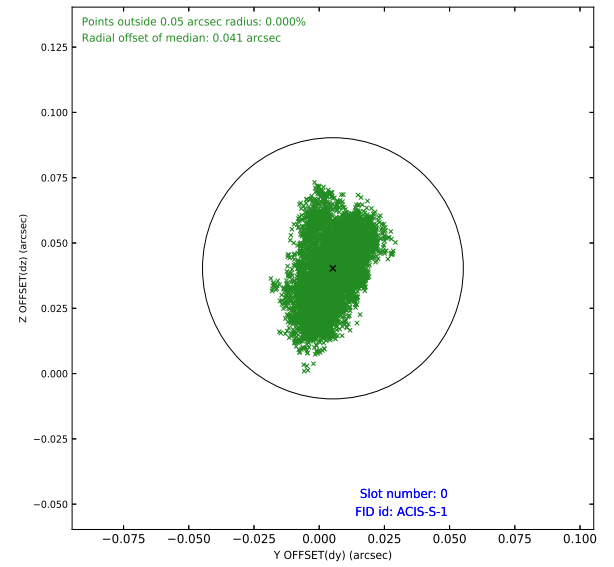
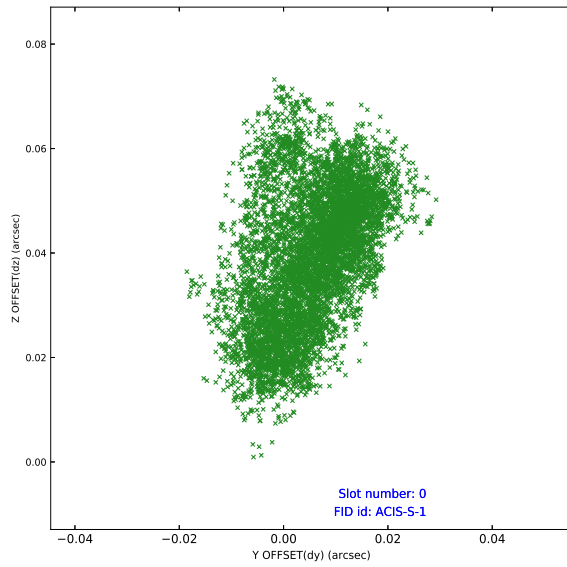


## 2.4.5 Slot 7

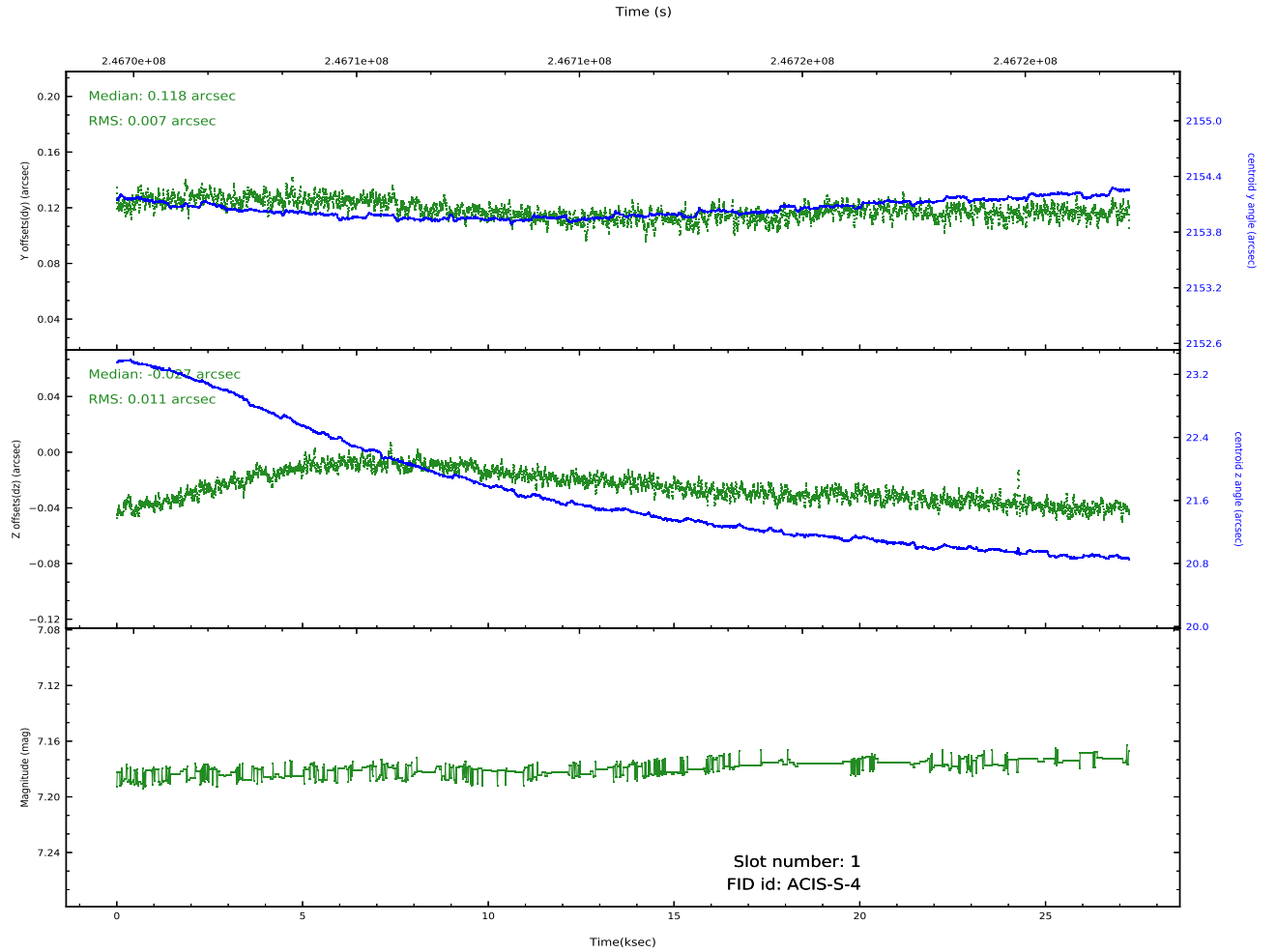
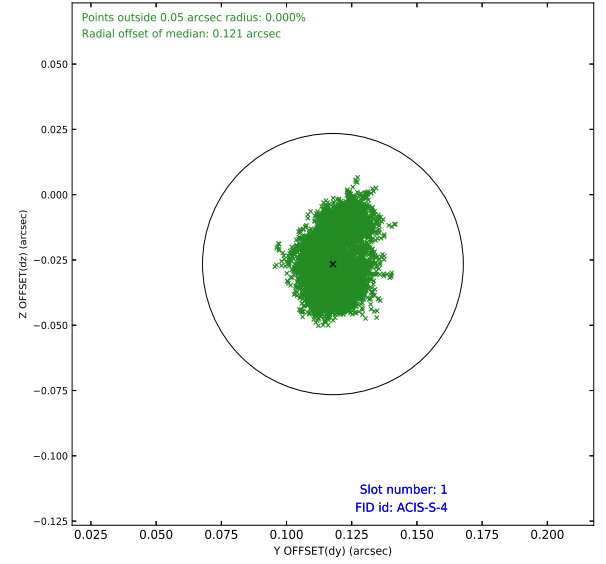
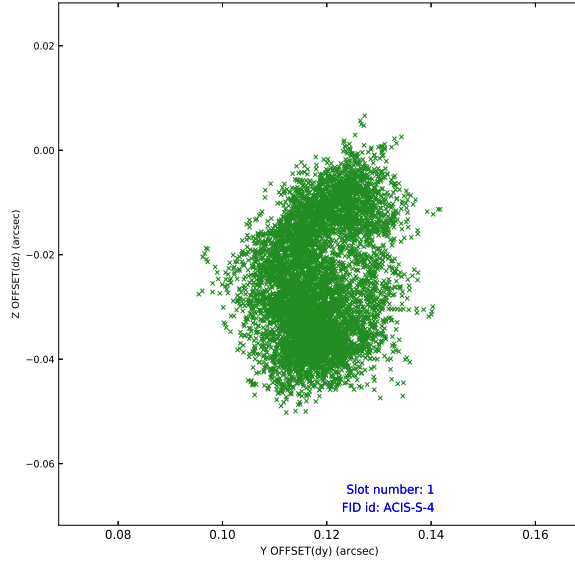


## 2.5 FID Slots

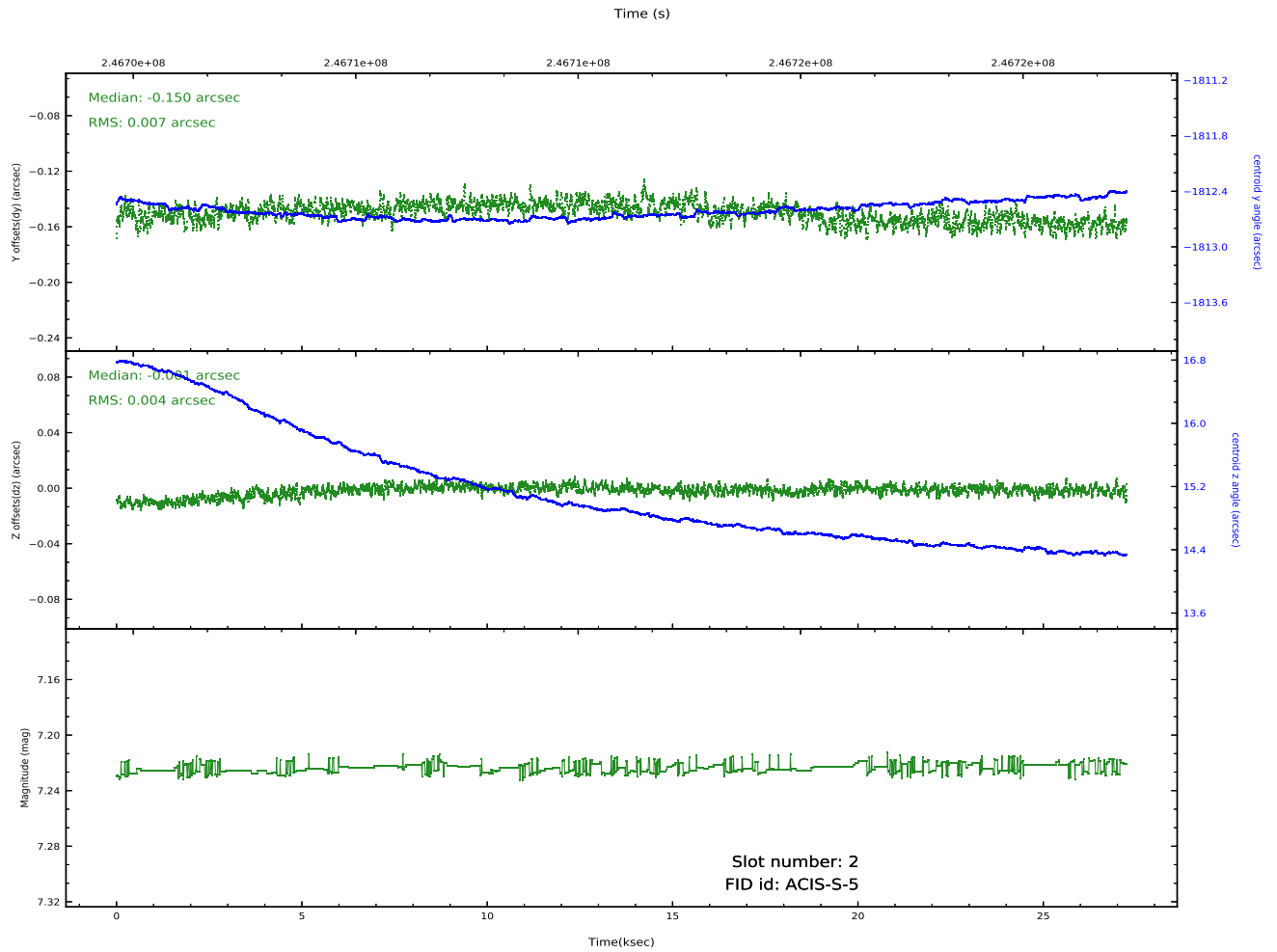
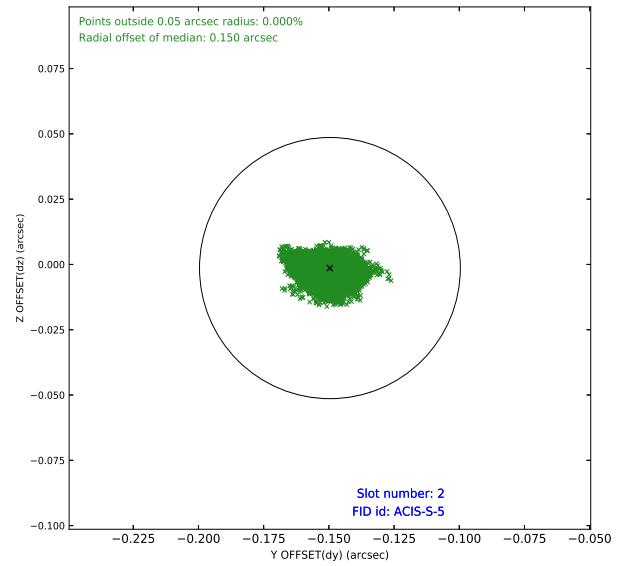
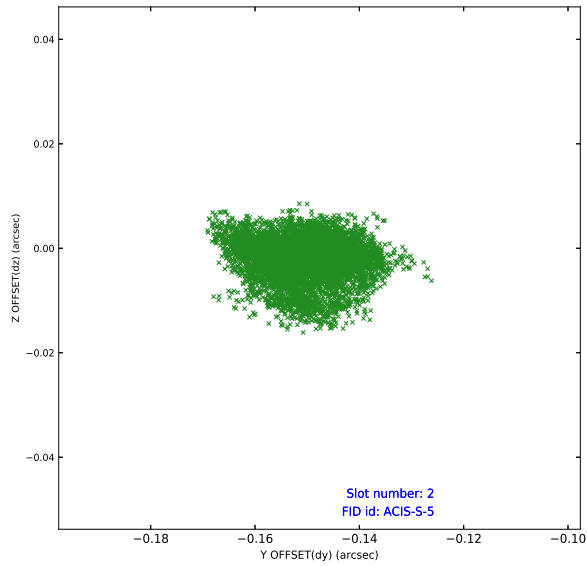
### 2.5.1 Slot 0



## 2.5.2 Slot 1

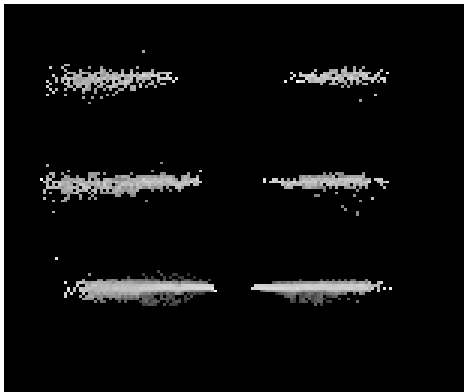


## 2.5.3 Slot 2

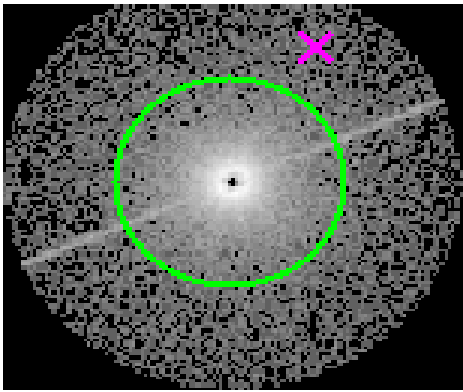


# 3 Gratings

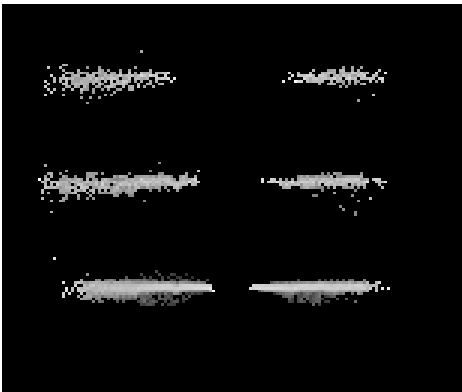
## 3.1 HEG Arm



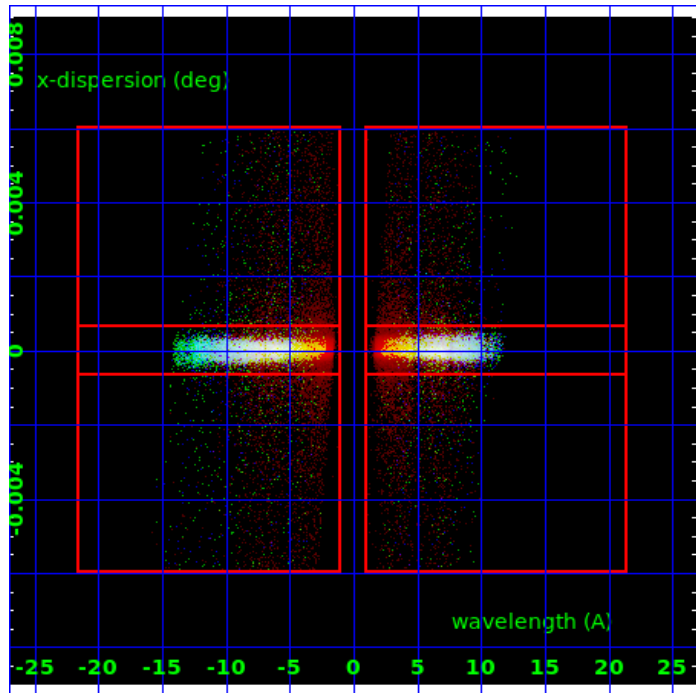
HEG Order Sort 123



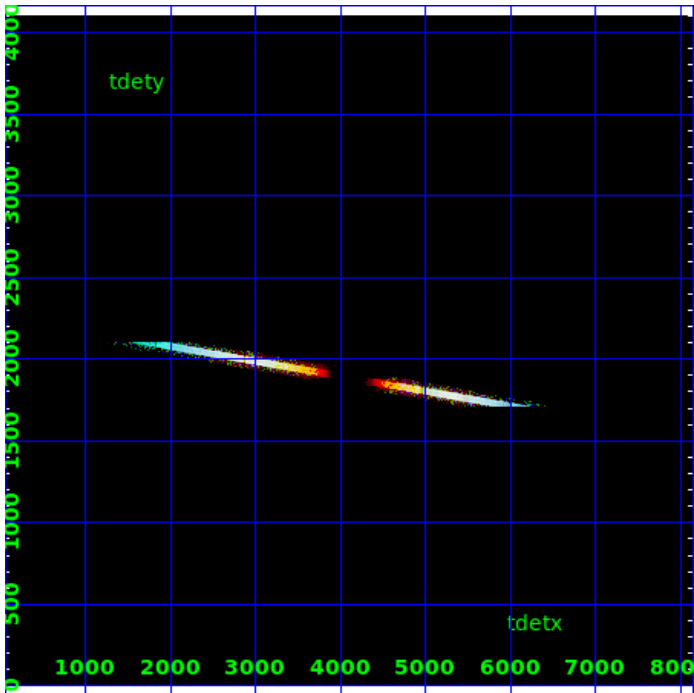
HEG Zero Order



HEG Order Sort ALL

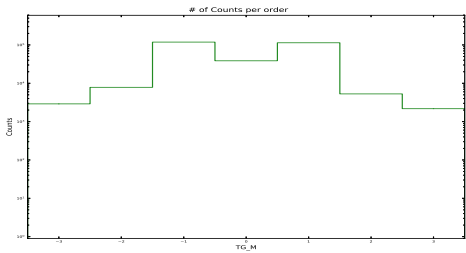


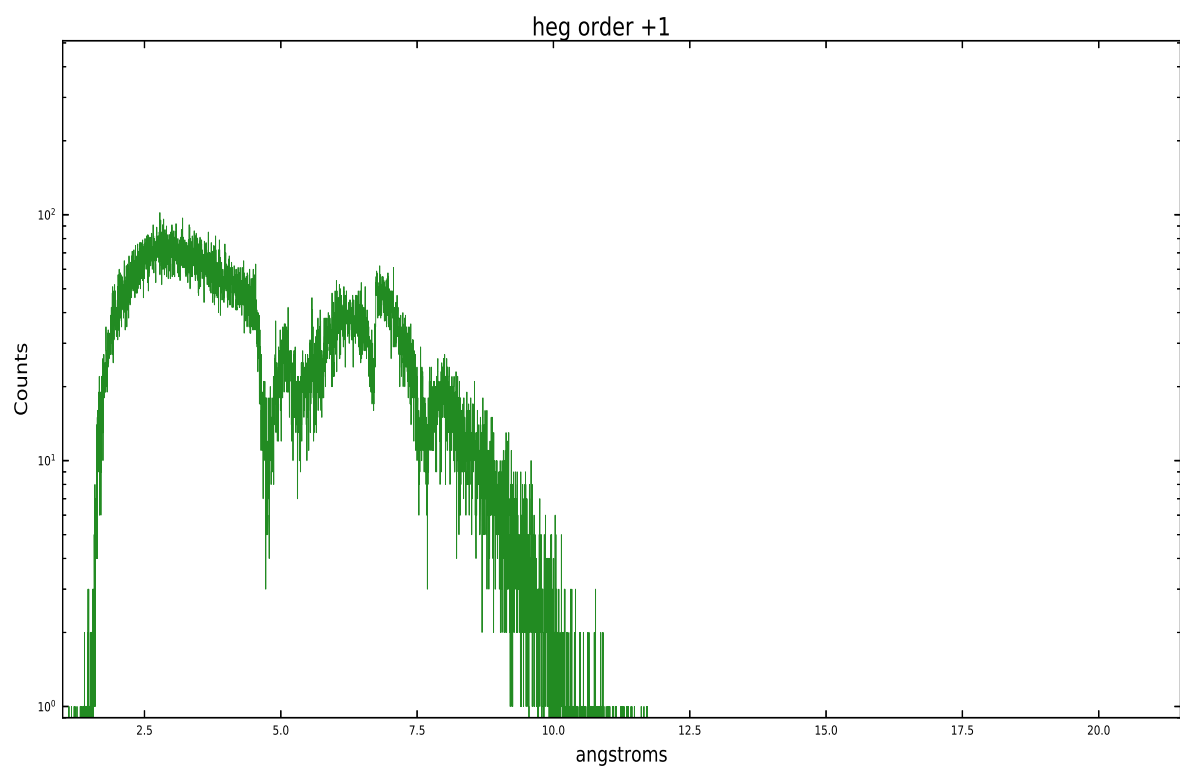
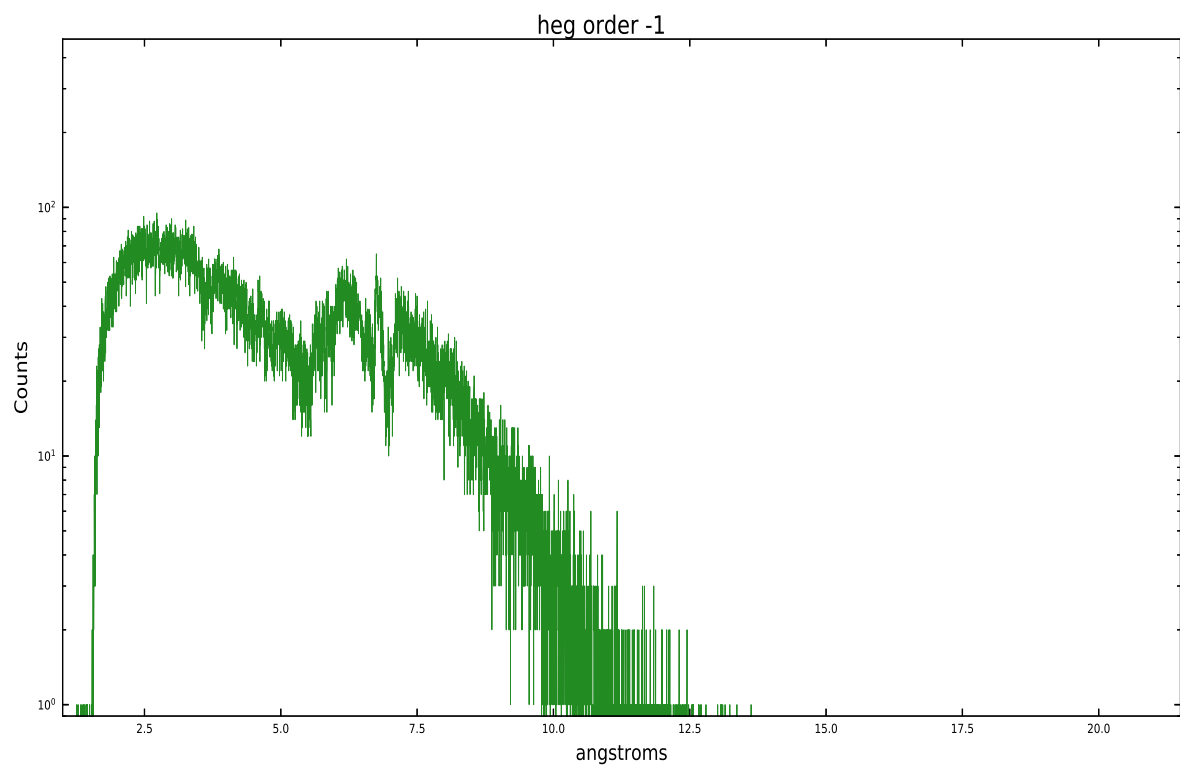
Spot Image HEG



Full Detector HEG

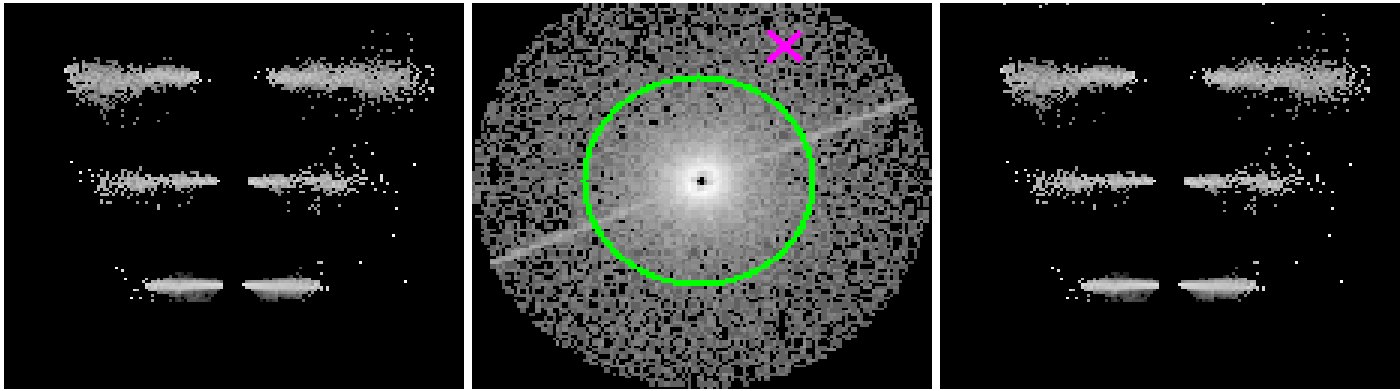
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2904	7838	118610	38602	113938	5286	2174







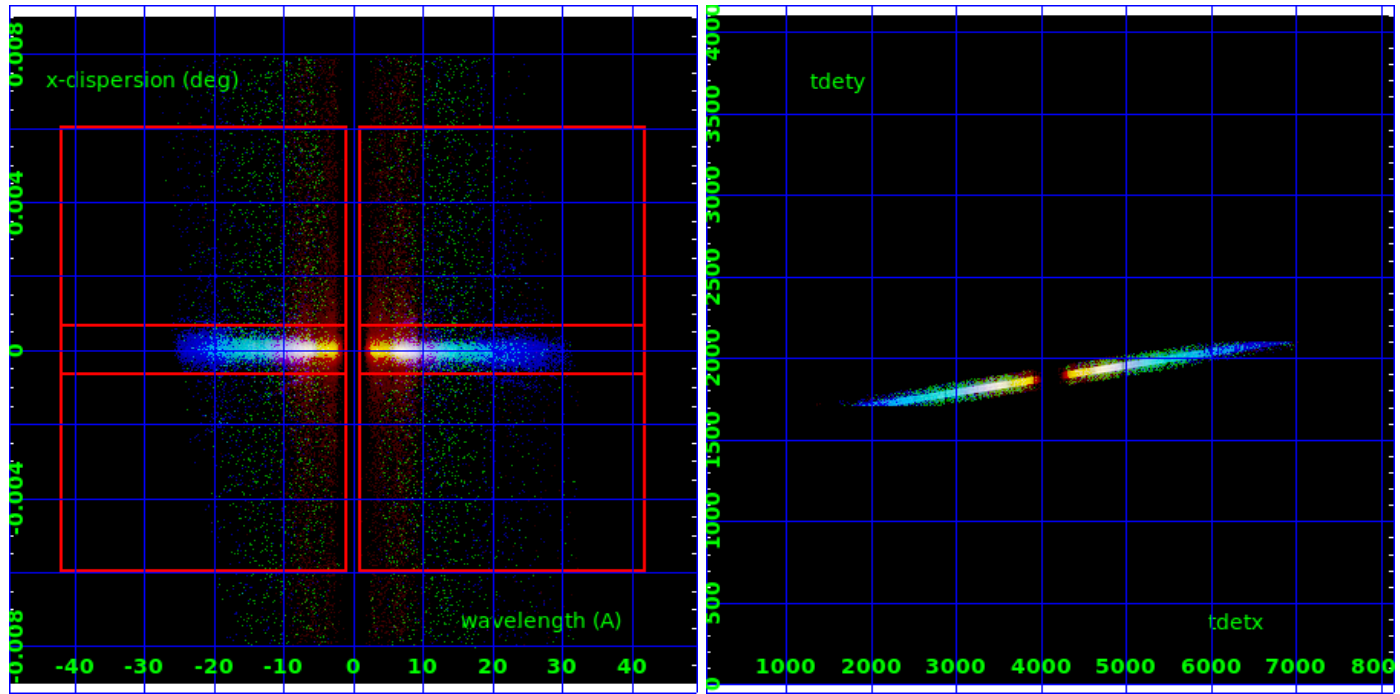
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

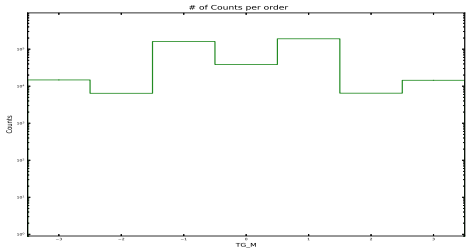
MEG Order Sort ALL

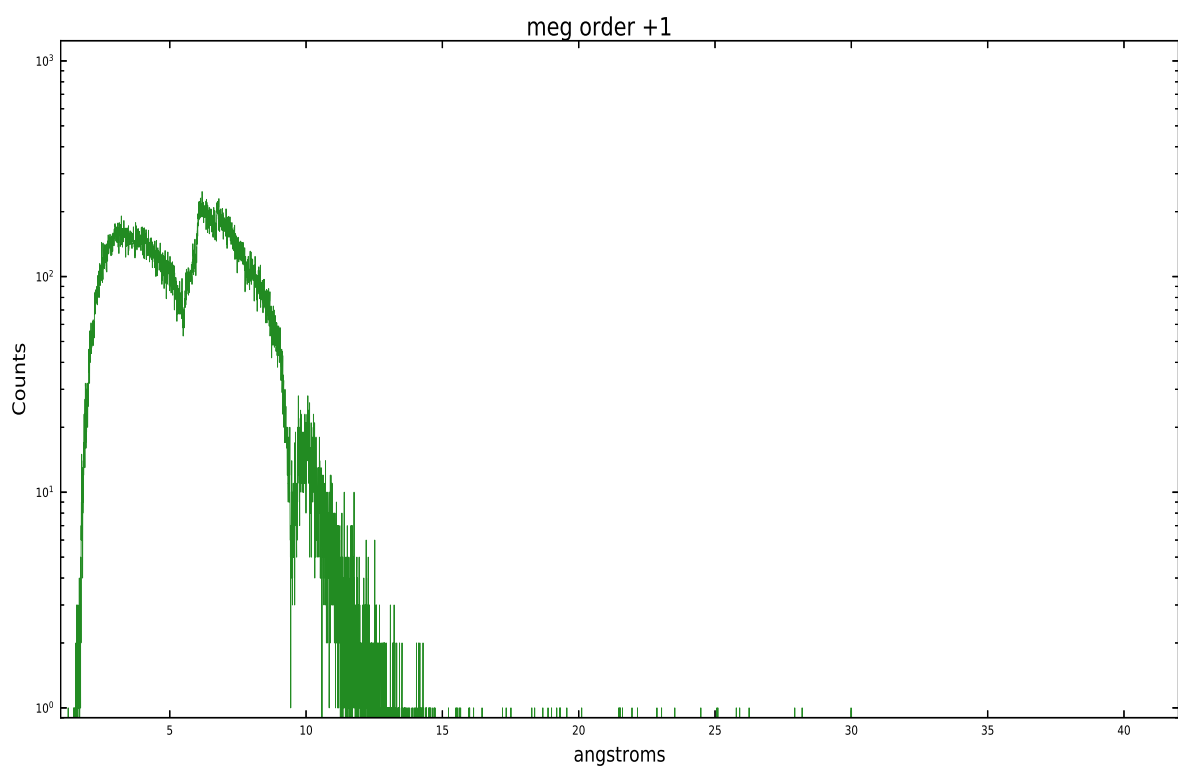
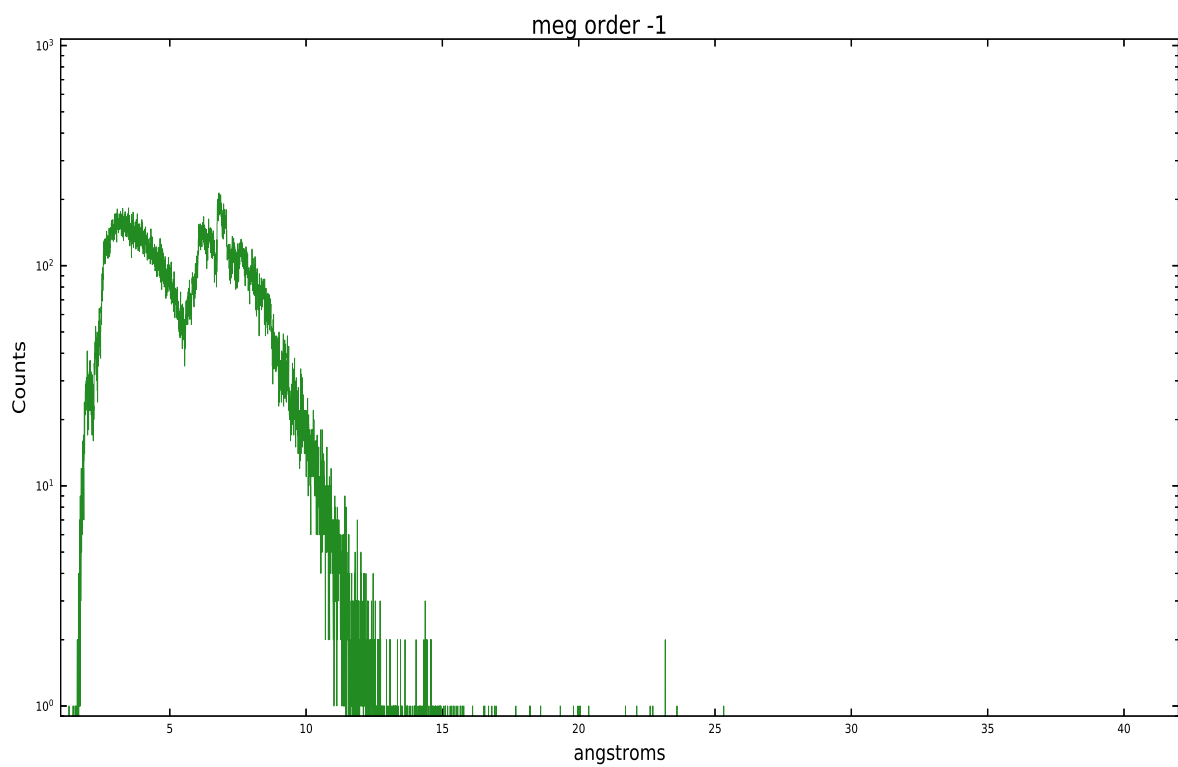


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	14774	6432	160649	38602	190875	6477	14449





## A Summary

### A.1 Status

V&V Scientist	Melania Nynka
V&V Date (YYYY-MM-DD)	2020.10.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	27.2496

### A.2 Comments