

V&V Reference Report

L2 ASCDS Version : 10.8

Observation 22110 - L2 Version 2
Chandra X-Ray Center

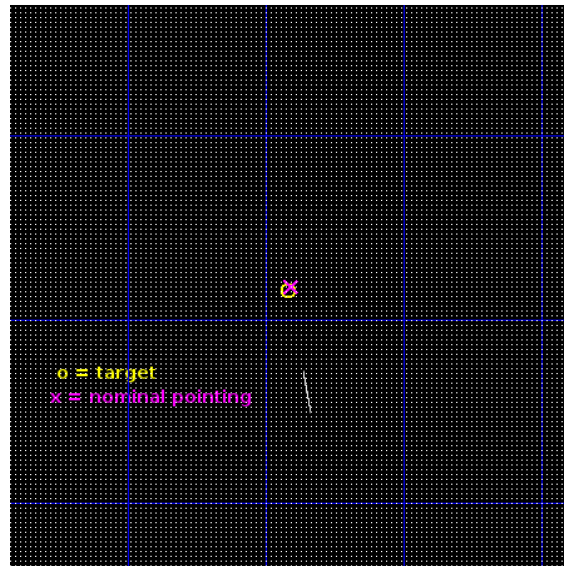
L2 Processing Date : Jun 21 2019

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1 Front

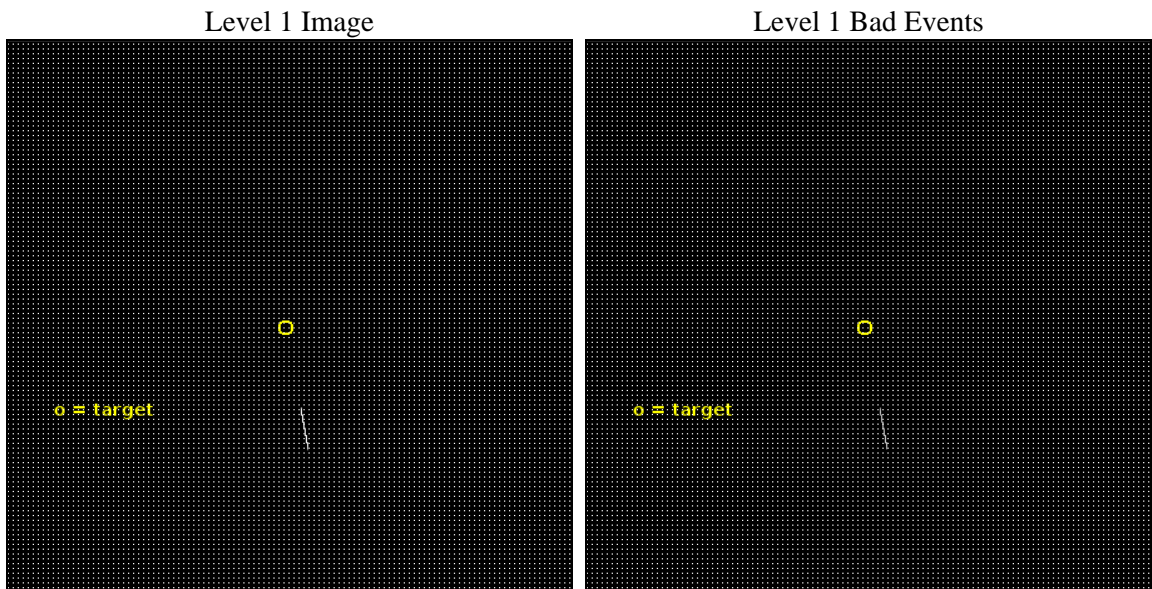
seq_num	402119	Sequence number
obs_id	22110	Observation id
title	Probing the disc-jet coupling in the neutron star binary Sco X-1	P
observer	Sara Motta	Principal investigator
object	Sco X-1	Source name
ra_targ	244.979583	Observer's specified target RA [deg]
dec_targ	-15.640278	Observer's specified target Dec [deg]
ra_nom	244.97658118871	Nominal RA [deg]
dec_nom	-15.636951464041	Nominal Dec [deg]
roll_nom	80.05594252077	Nominal Roll [deg]
revision	2	Processing version of data
ontime	473.0	Sum of GTIs [s]
livetime	471.15234375	Livetime [s]
ontime5	473.0	Sum of GTIs [s]
ontime6	473.0	Sum of GTIs [s]
ontime7	473.0	Sum of GTIs [s]
ontime8	473.0	Sum of GTIs [s]
l2events	9945	Number of level 2 events



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0	Obi number			
ascdsver	10.8	Processing system revision	sched_exp_time	25500.000000	[s] Scheduled observation exposure time
caldbver	4.8.3	 	ontime	473.0	Sum of GTIs [s]
date	2019-06-20T19:55:07	Date and time of file creation	ontime5	473.0	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	473.0	Sum of GTIs [s]
			ontime7	473.0	Sum of GTIs [s]
			ontime8	473.0	Sum of GTIs [s]
			l1events	11820	Number of level 1 events
			tgmethod	DEADRECKONING	Method used to create src1a file
			zo_pos	(4076.31, 4072.07)	src1a skv pixel position

2.1.3 Events

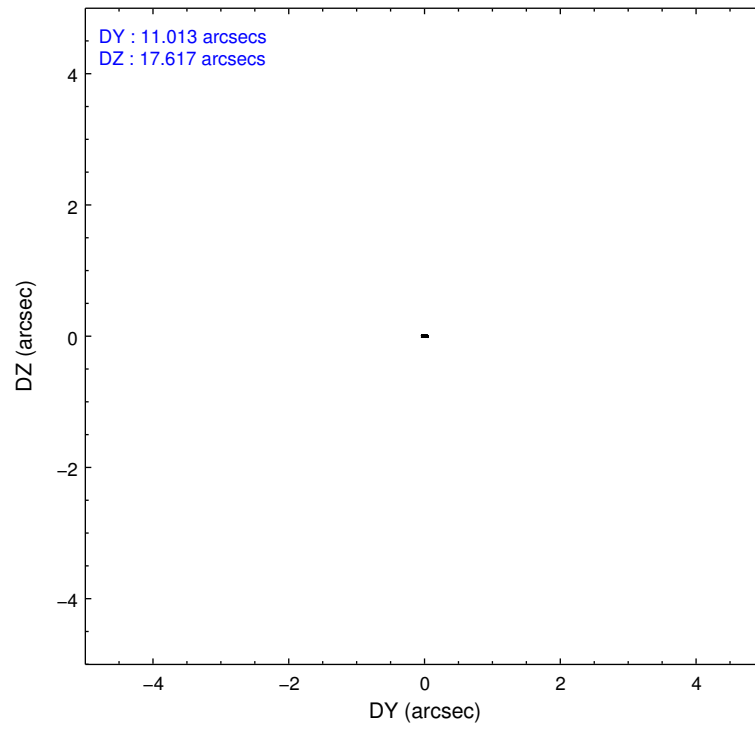
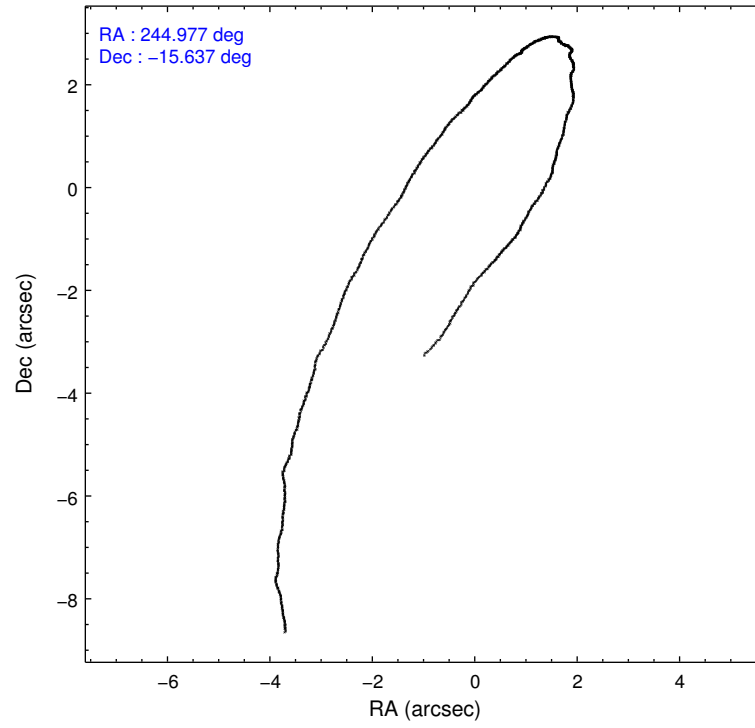
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	0	0	11820	0
rejected events	0	0	1839	0
rejected %	0%	0%	15%	0%

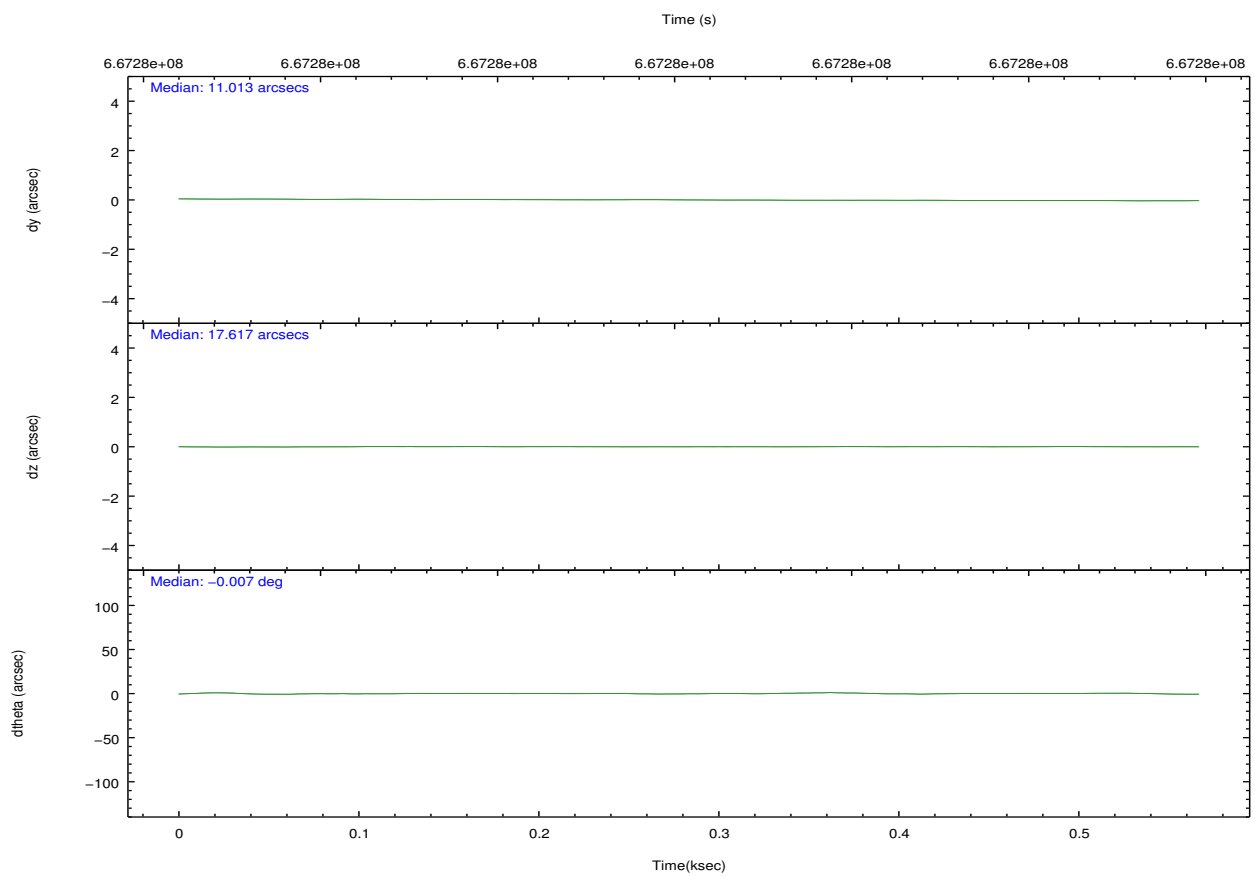
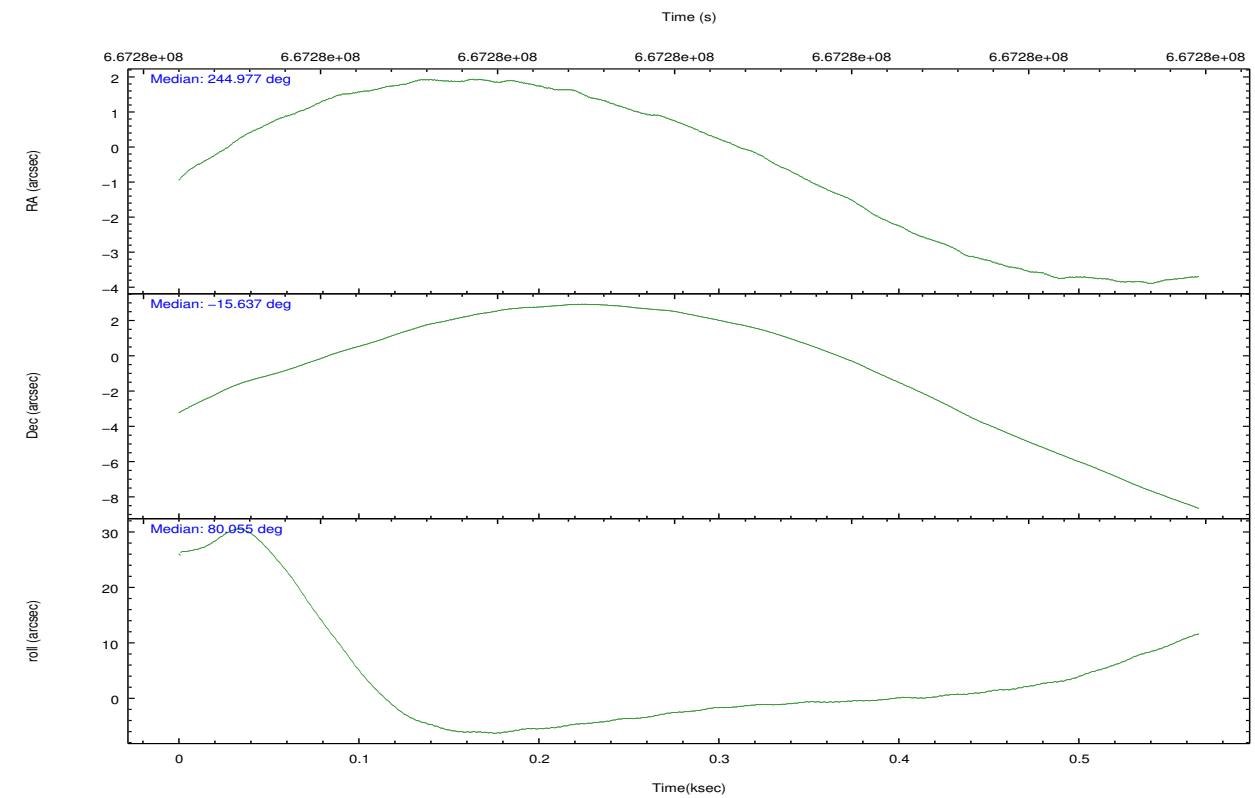
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	0	0	1524	0
	0%	0%	12%	0%
grade 1 events	0	0	5	0
	0%	0%	0%	0%
grade 2 events	0	0	3458	0
	0%	0%	29%	0%
grade 3 events	0	0	829	0
	0%	0%	7%	0%
grade 4 events	0	0	749	0
	0%	0%	6%	0%
grade 5 events	0	0	168	0
	0%	0%	1%	0%
grade 6 events	0	0	3594	0
	0%	0%	30%	0%
grade 7 events	0	0	1493	0
	0%	0%	12%	0%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	CC33_GRADED	CC33_GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	244.986507	244.9765811887078	Subarray requested	NONE	NONE
[deg] Pointing Dec	-15.663689	-15.63695146404086	Alternating exposures requested	N	N
[deg] Pointing Roll	79.901869	80.05594252076982	[s] Primary exposure time	0.000000	0
[s] Window start time (MET)	667094529.184000	667094529.184000			
[s] Window stop time (MET)	667461669.184000	667461669.184000			
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-175.932523	-175.9417275419626			
[mm] SIM translation stage offset	-14.2	-14.19079504104525			
[s] Observation start time (MET)	667275911.184000	667275328.79865			
Observation start date	2019-02-23T02:24:02	2019-02-23T02:15:28			
[s] Observation end time (MET)	667301411.184000	667276085.7612			
Observation end date	2019-02-23T09:29:02	2019-02-23T02:28:05			
Read mode	CONTINUOUS	CONTINUOUS			

2.3 Aspect



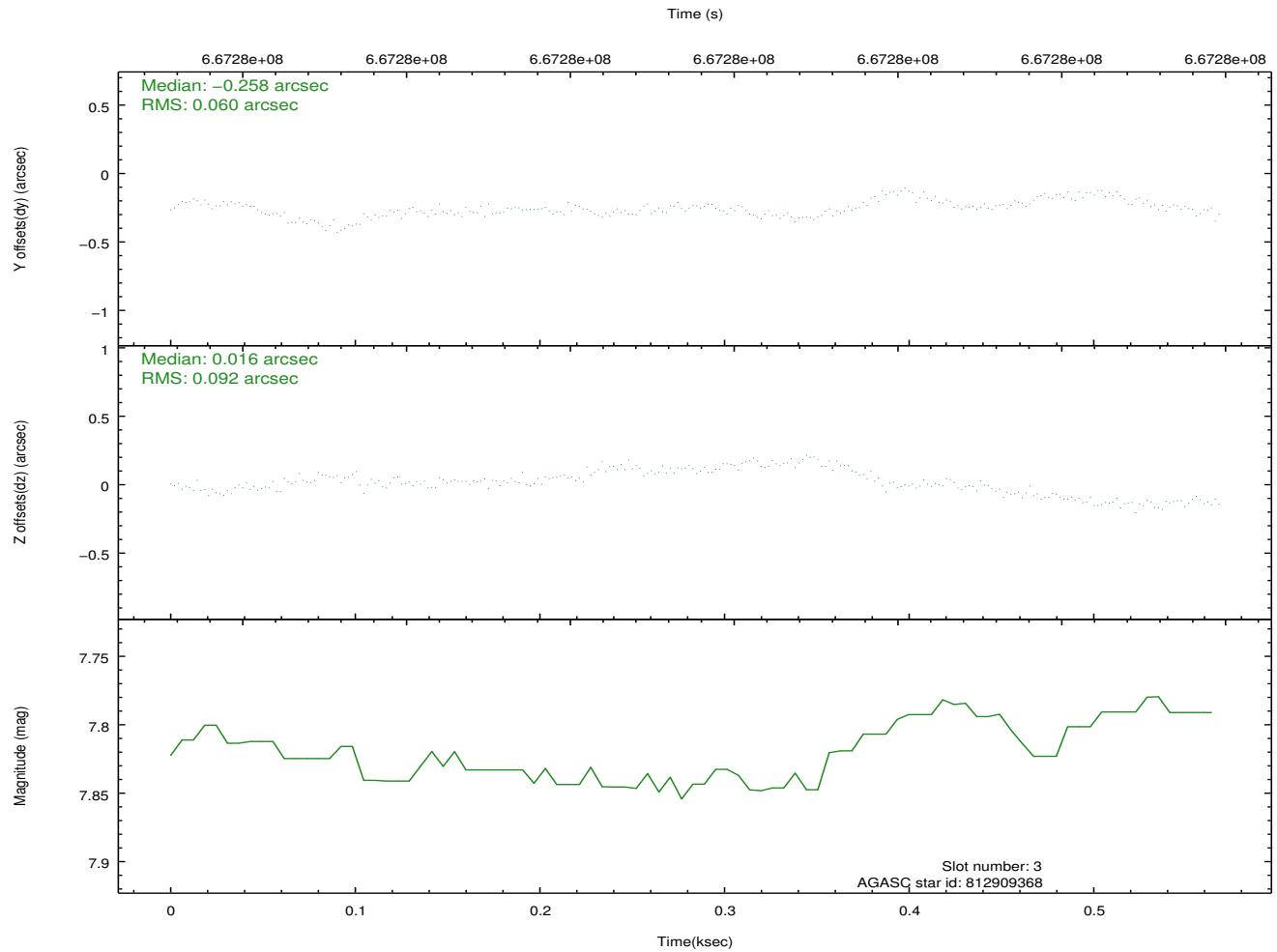
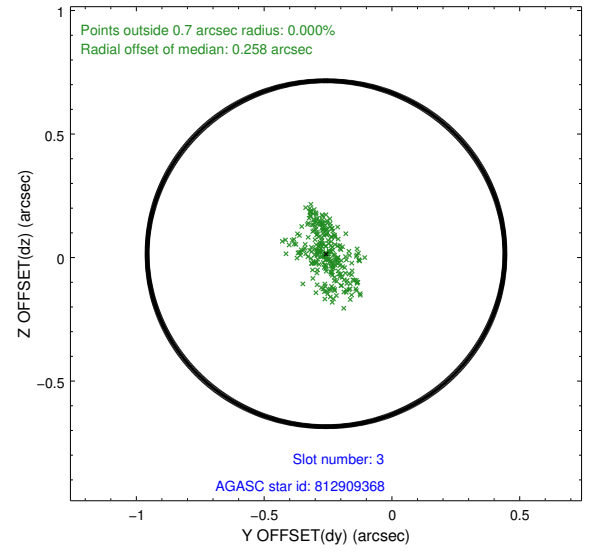
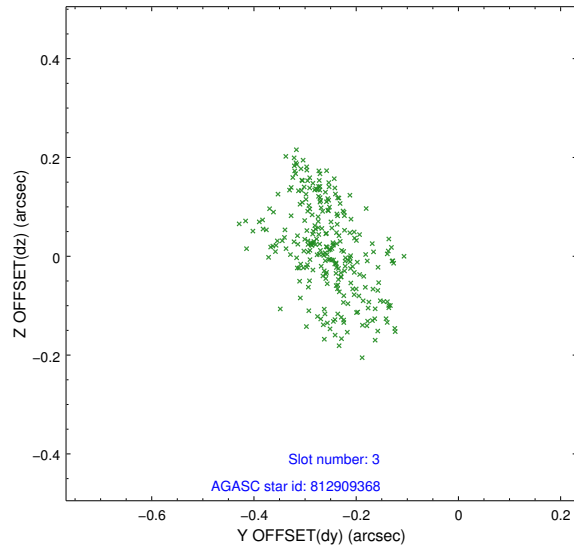


Slot Statistics

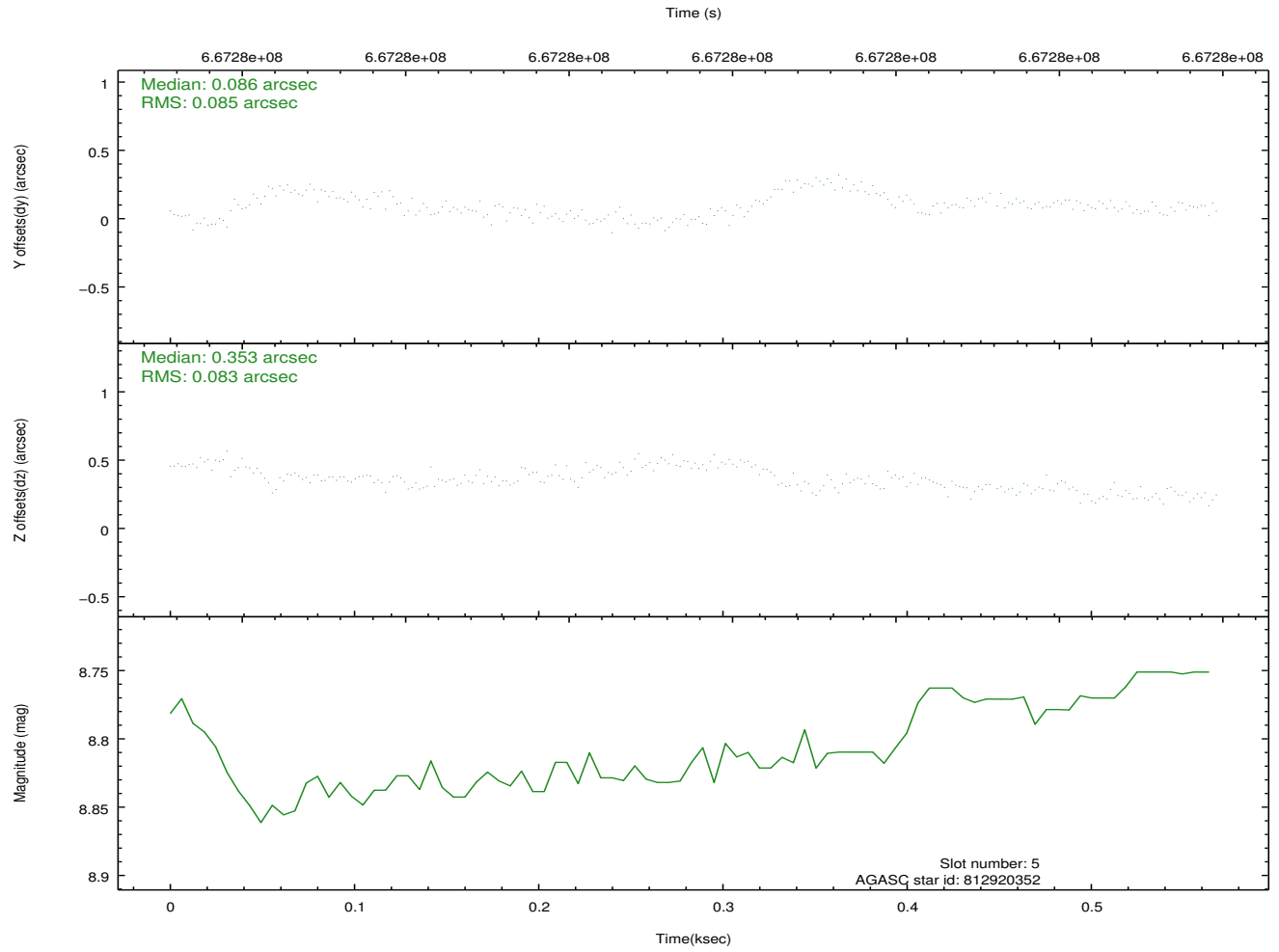
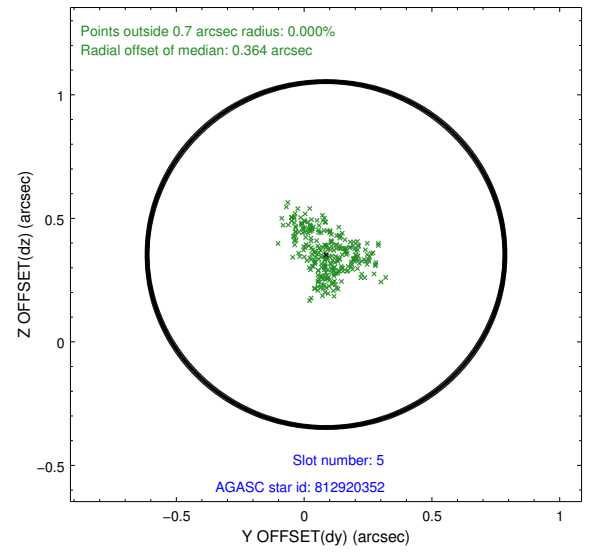
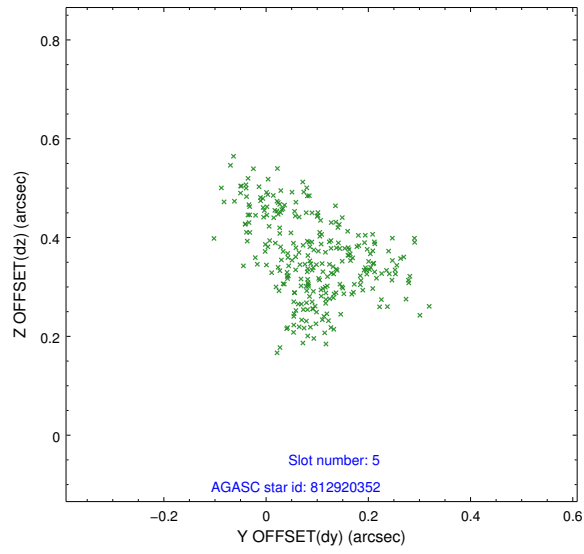
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.13	139	1.000	-0.388	-0.607	0.006	0.010	0.000000	0.000000	-763.07	-2031
1	FID		ACIS-S-4	7.18	139	1.000	0.757	0.349	0.005	0.012	0.000000	0.000000	2145.83	-136
2	FID		ACIS-S-5	7.28	139	1.000	-0.399	0.265	0.006	0.010	0.000000	0.000000	-1800.79	-129
3	GUIDE	used	812909368	7.82	278	1.000	-0.258	0.016	0.127	0.184	244.337230	-15.327996	787.10	2430
4	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
5	GUIDE	used	812920352	8.81	277	1.000	0.086	0.353	0.131	0.199	244.854466	-15.546040	335.77	534
6	GUIDE	used	812914616	9.70	277	1.000	-0.319	-0.519	0.217	0.384	244.358365	-15.447124	379.36	2283
7	GUIDE	used	812918440	9.67	277	1.000	0.485	0.126	0.179	0.288	244.304408	-16.215909	-2376.72	1980

2.4 Star Slots

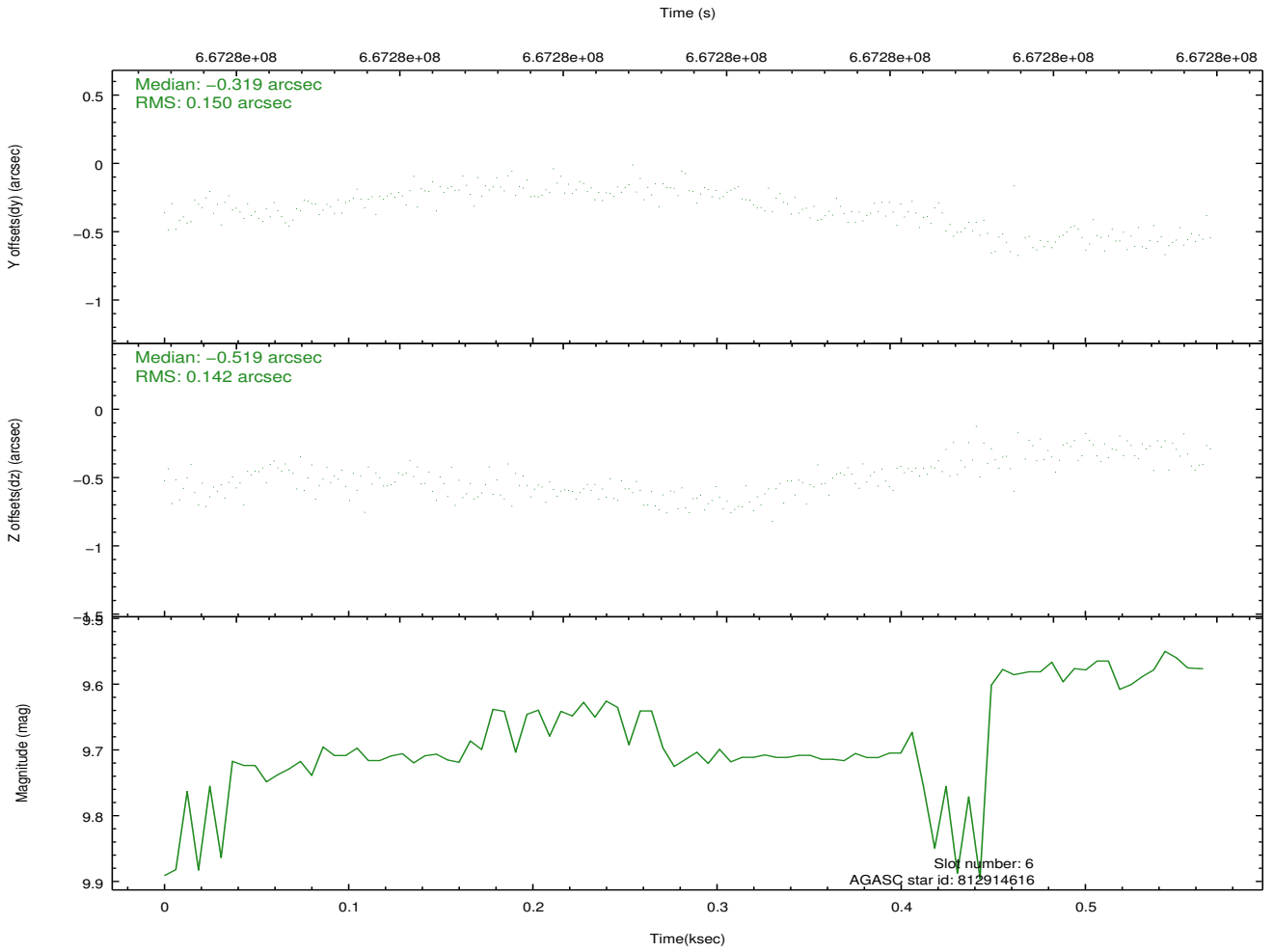
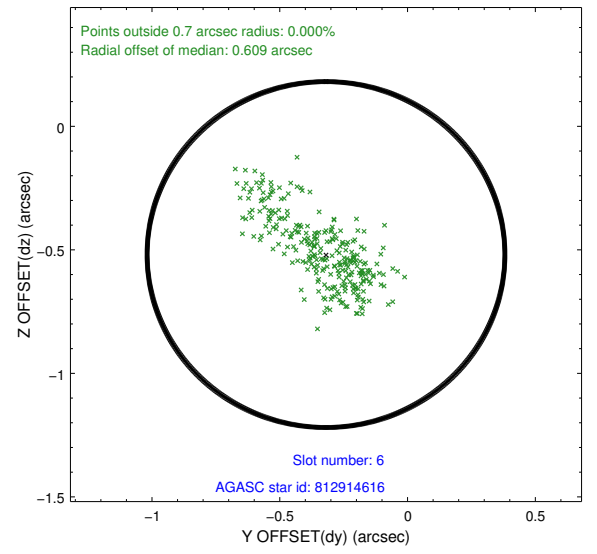
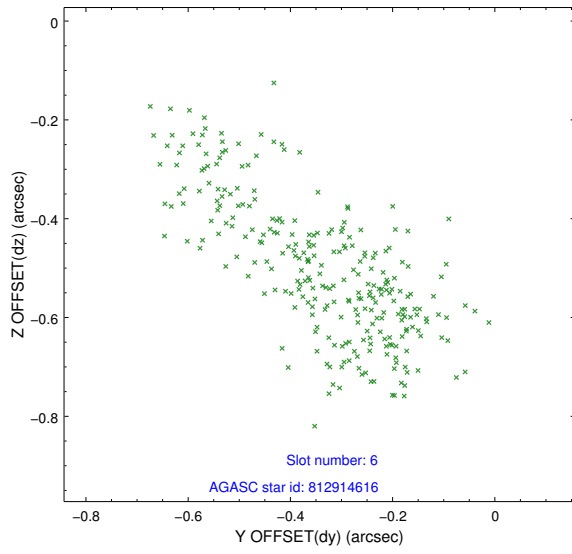
2.4.1 Slot 3



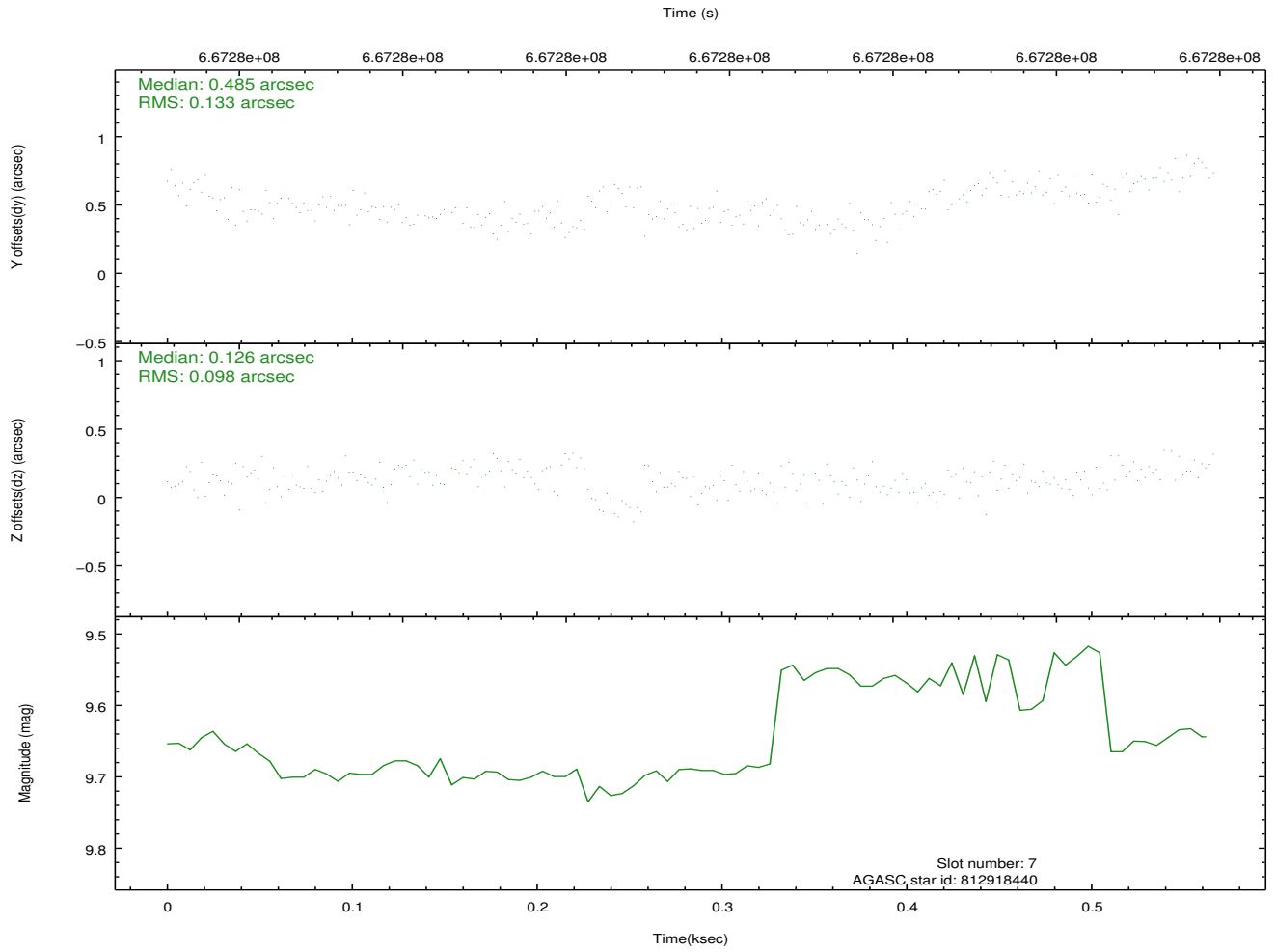
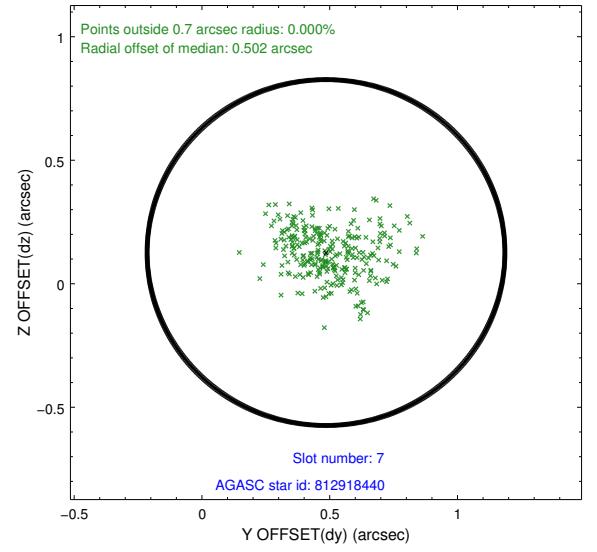
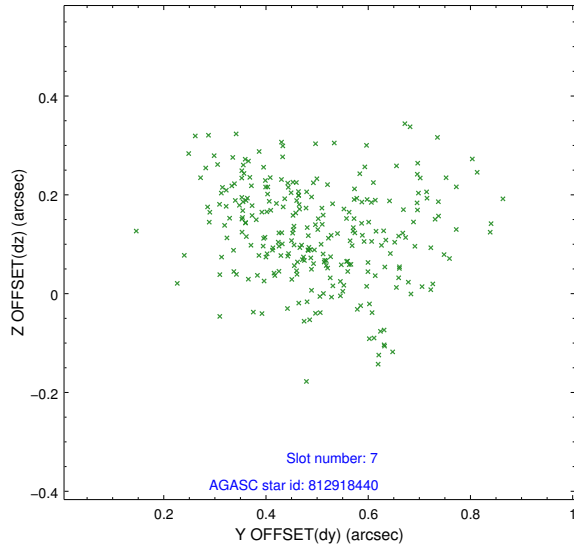
2.4.2 Slot 5



2.4.3 Slot 6

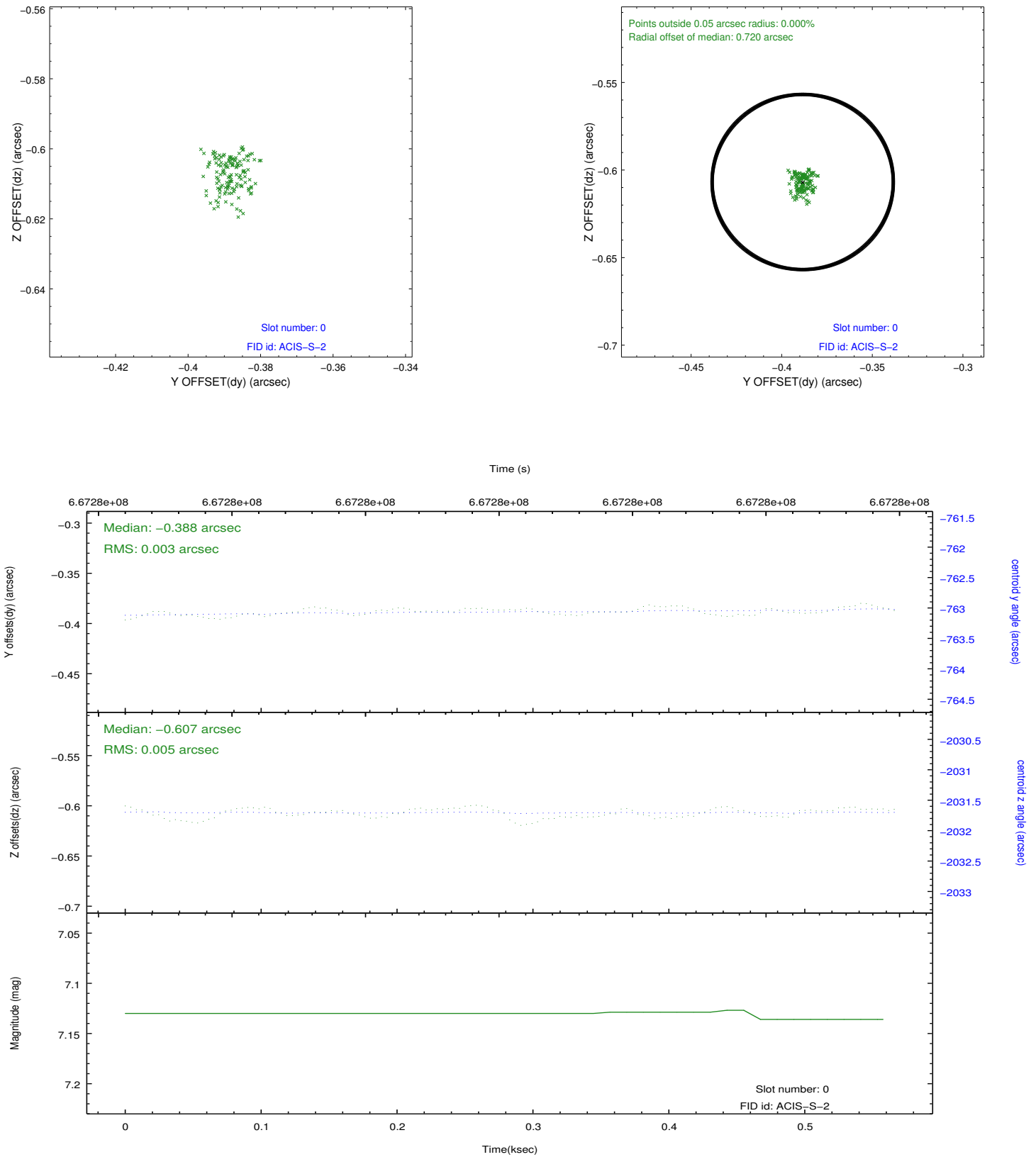


2.4.4 Slot 7

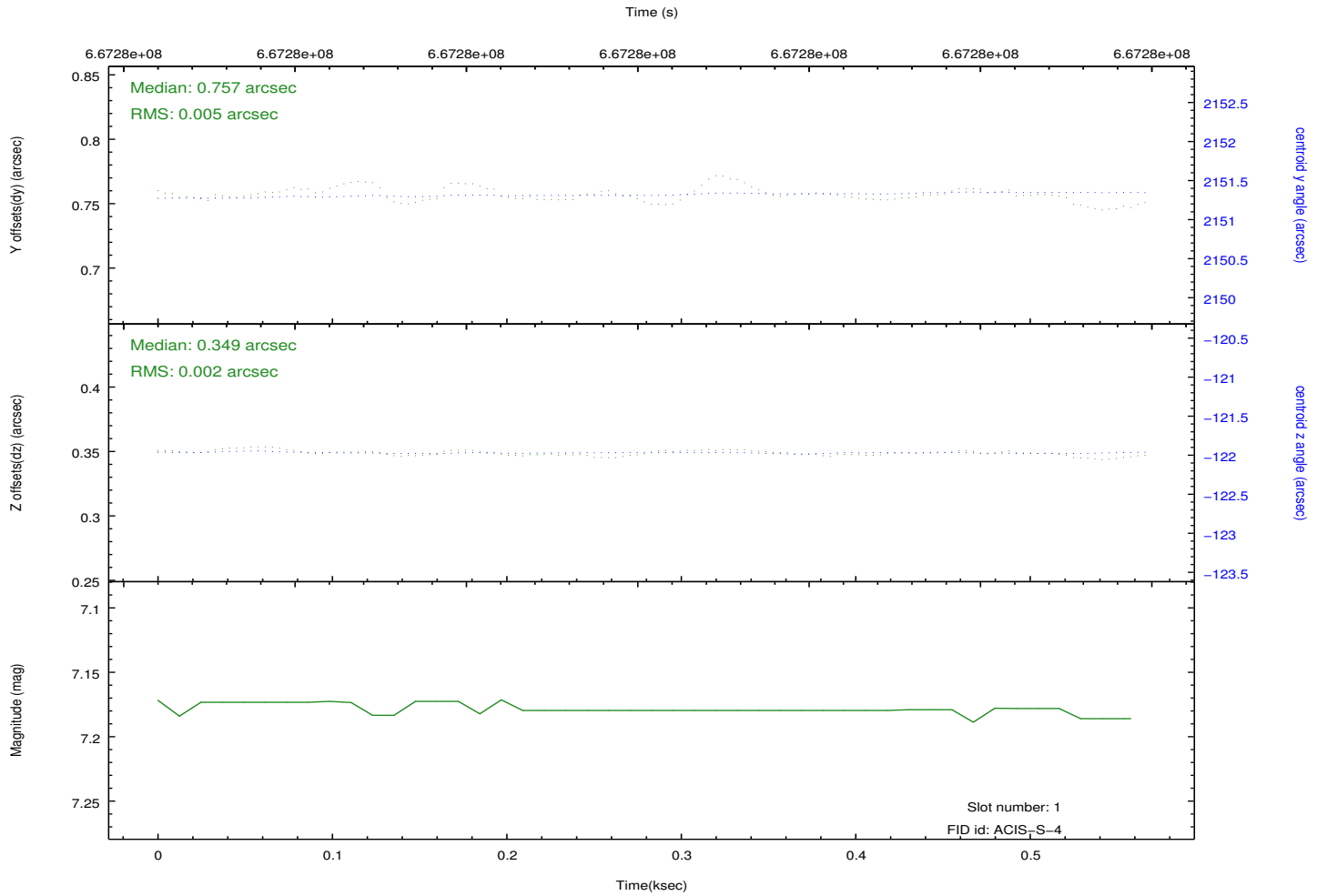
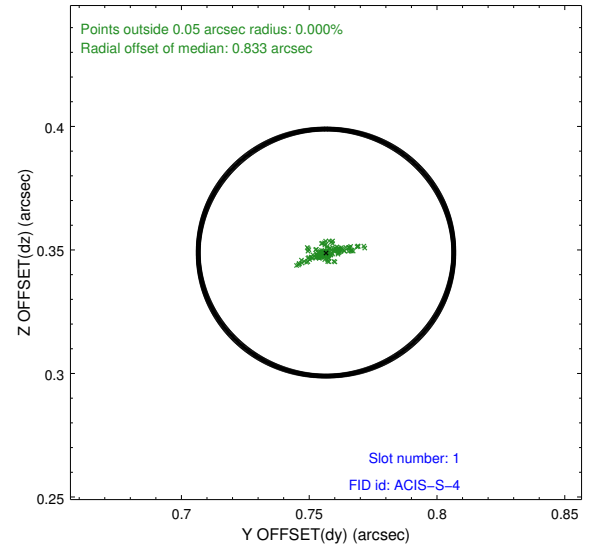
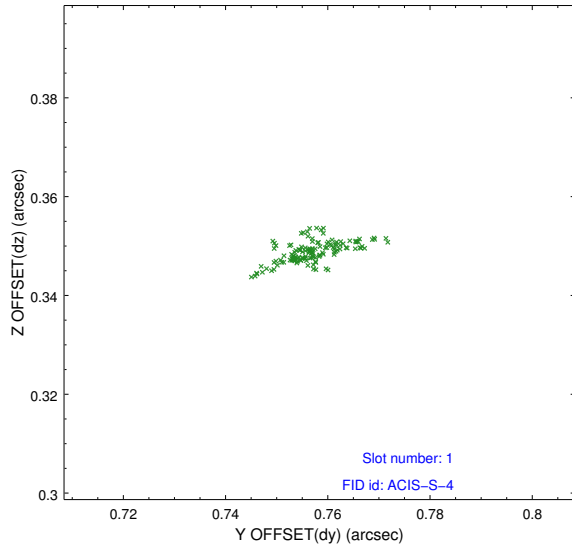


2.5 FID Slots

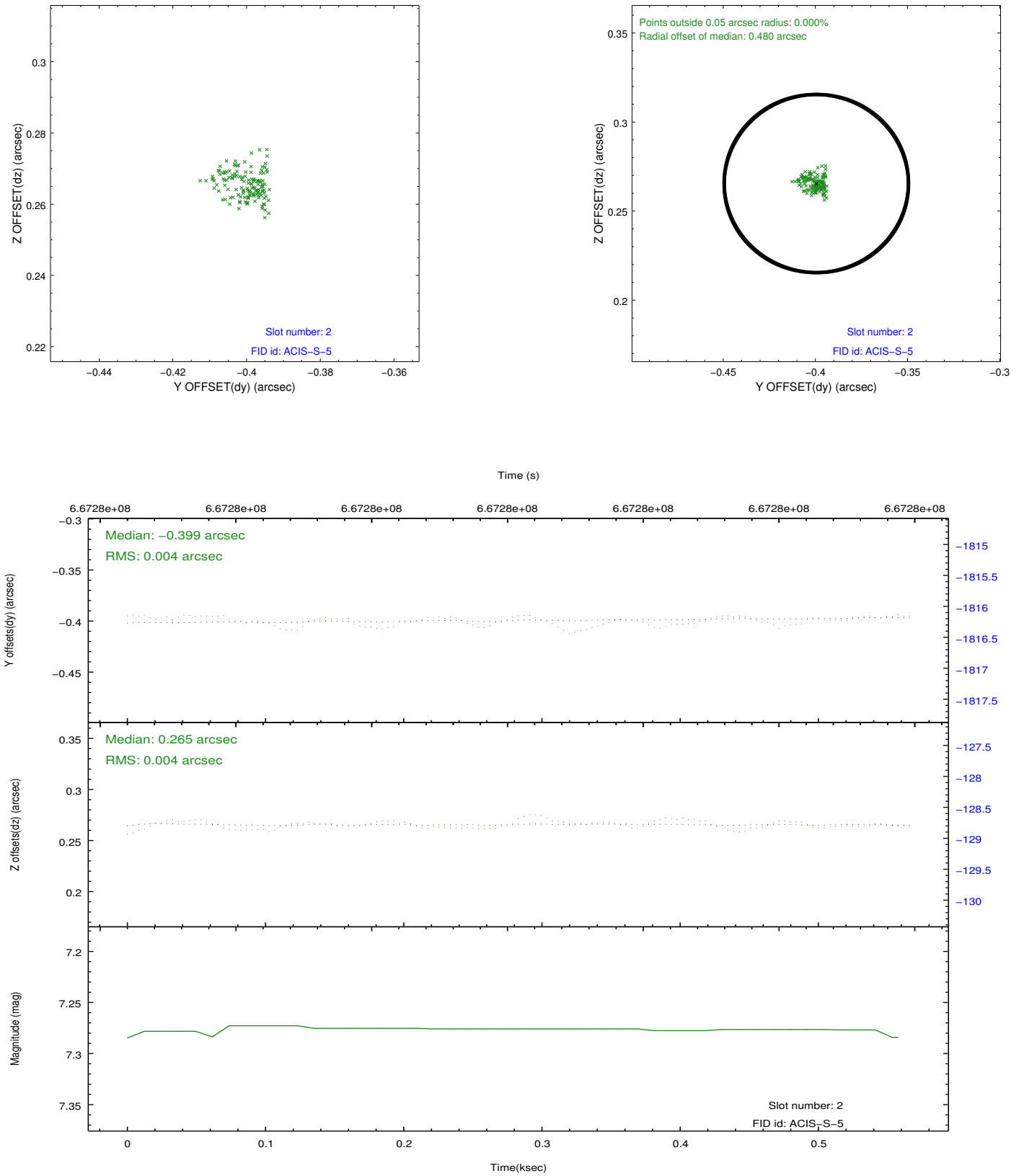
2.5.1 Slot 0



2.5.2 Slot 1

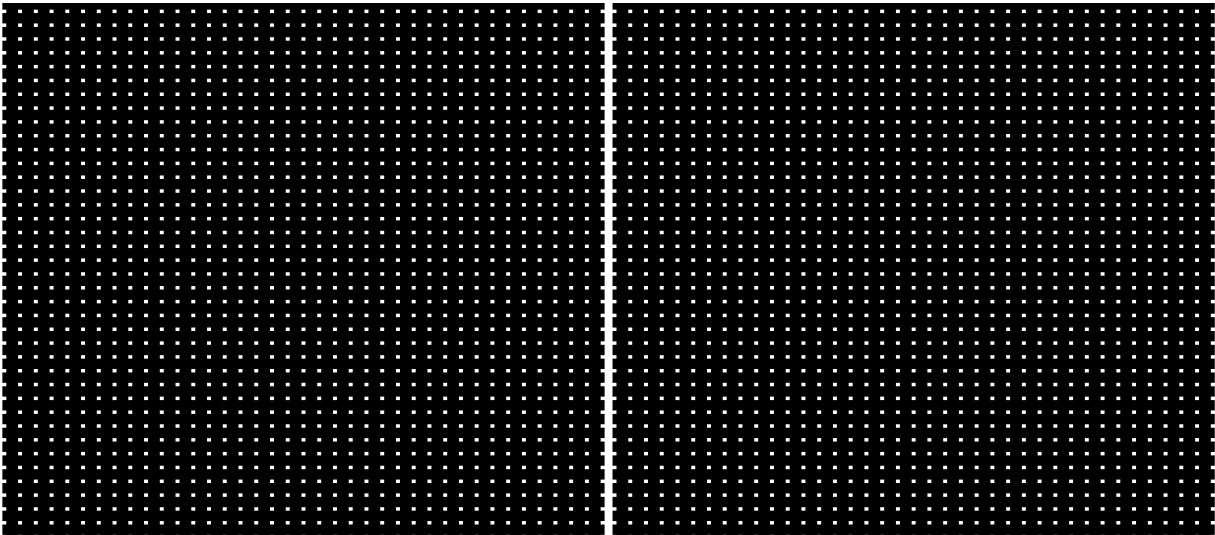


2.5.3 Slot 2



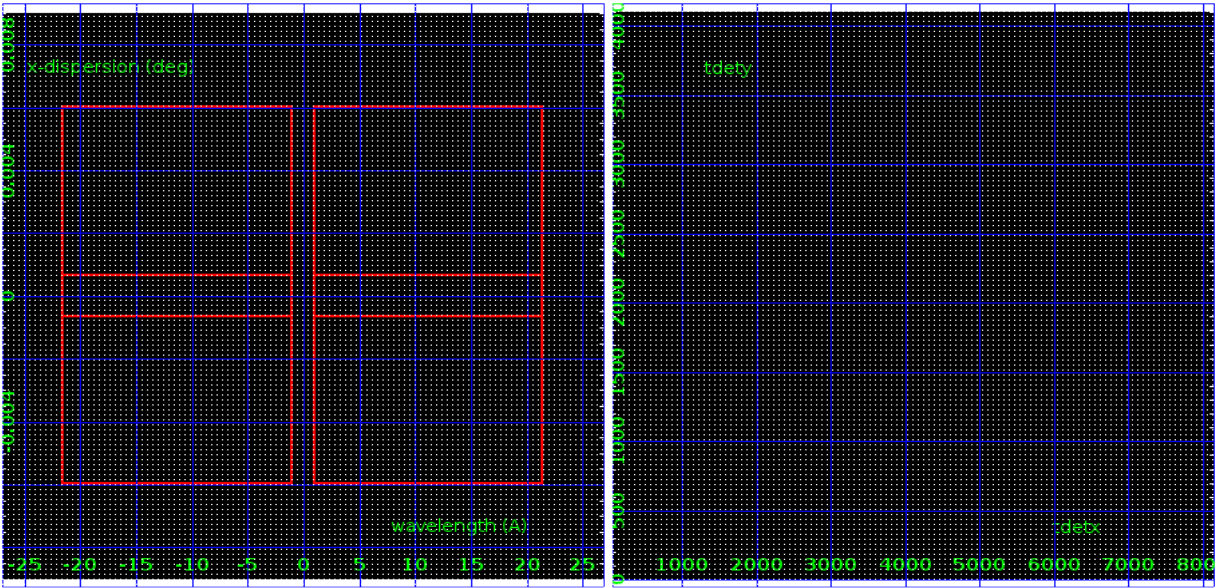
3 Gratings

3.1 HEG Arm



HEG Order Sort 123

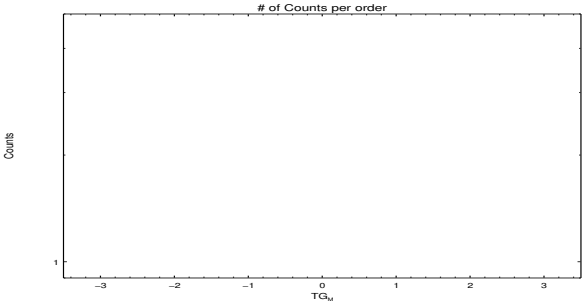
HEG Order Sort ALL

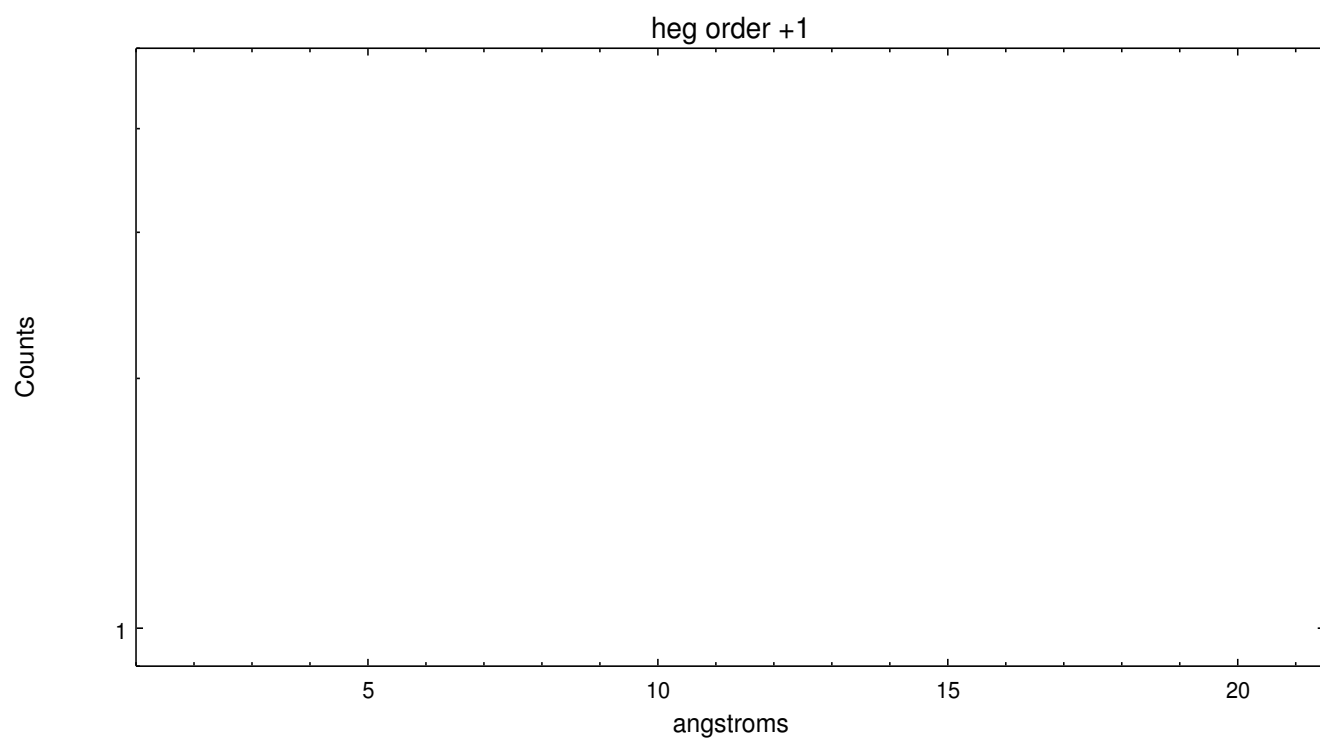
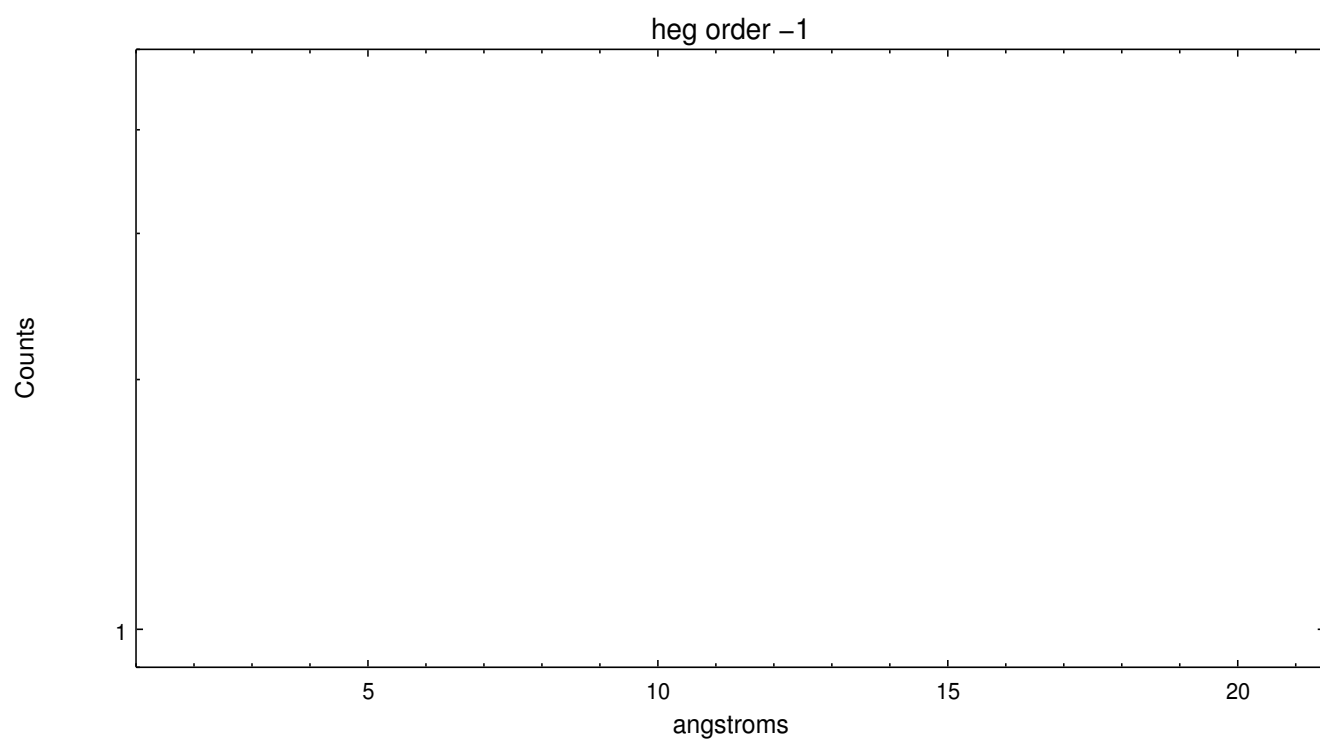


Spot Image HEG

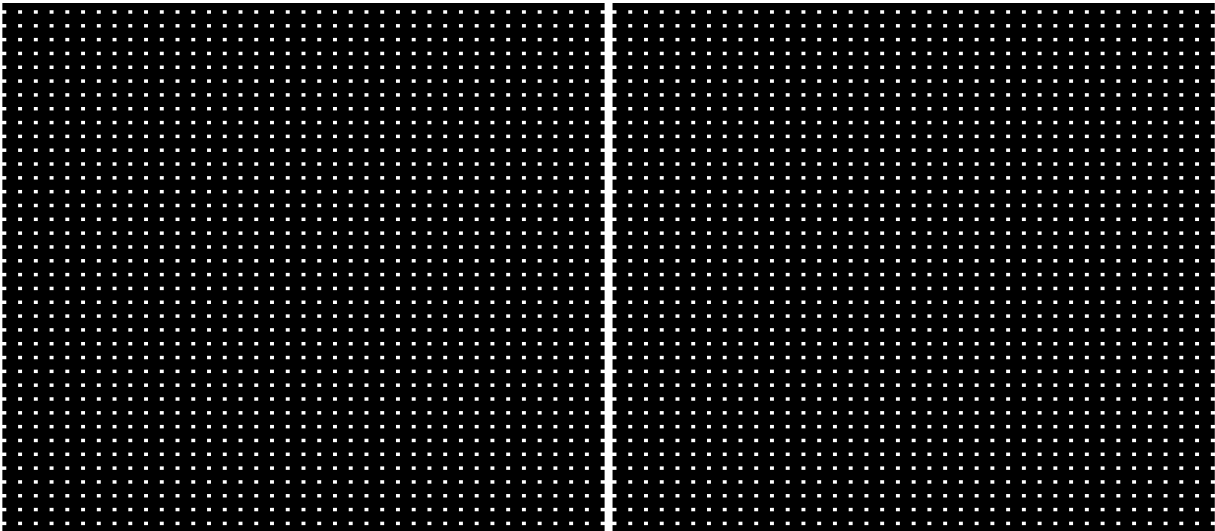
Full Detector HEG

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



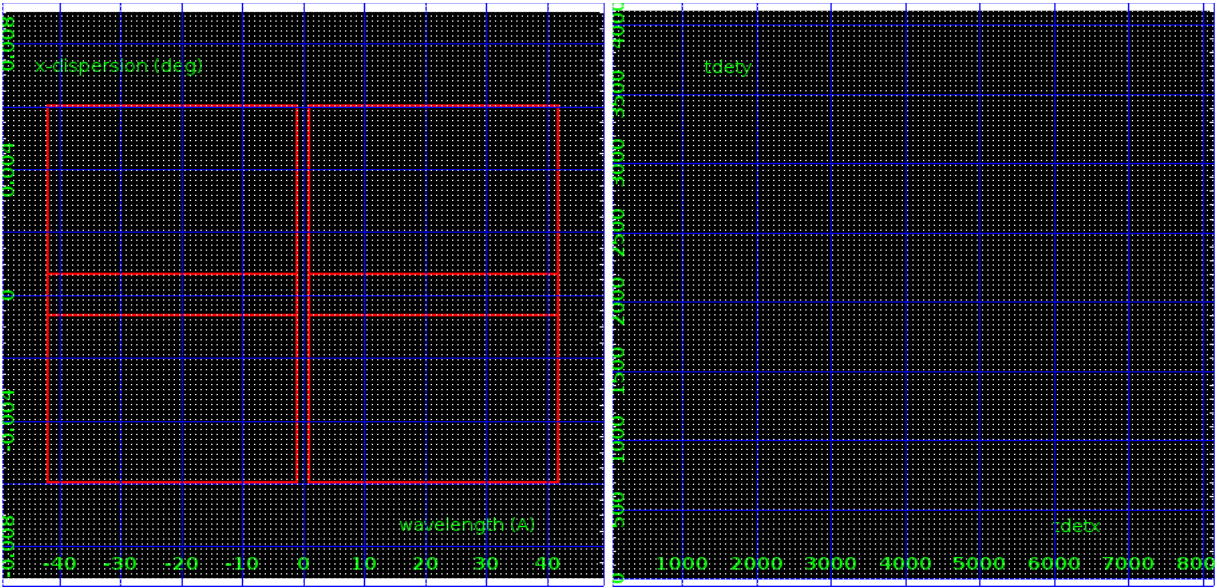


3.2 MEG Arm



MEG Order Sort 123

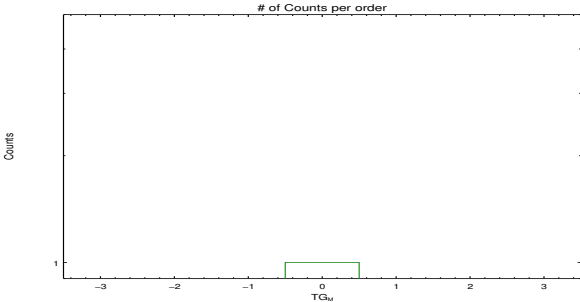
MEG Order Sort ALL

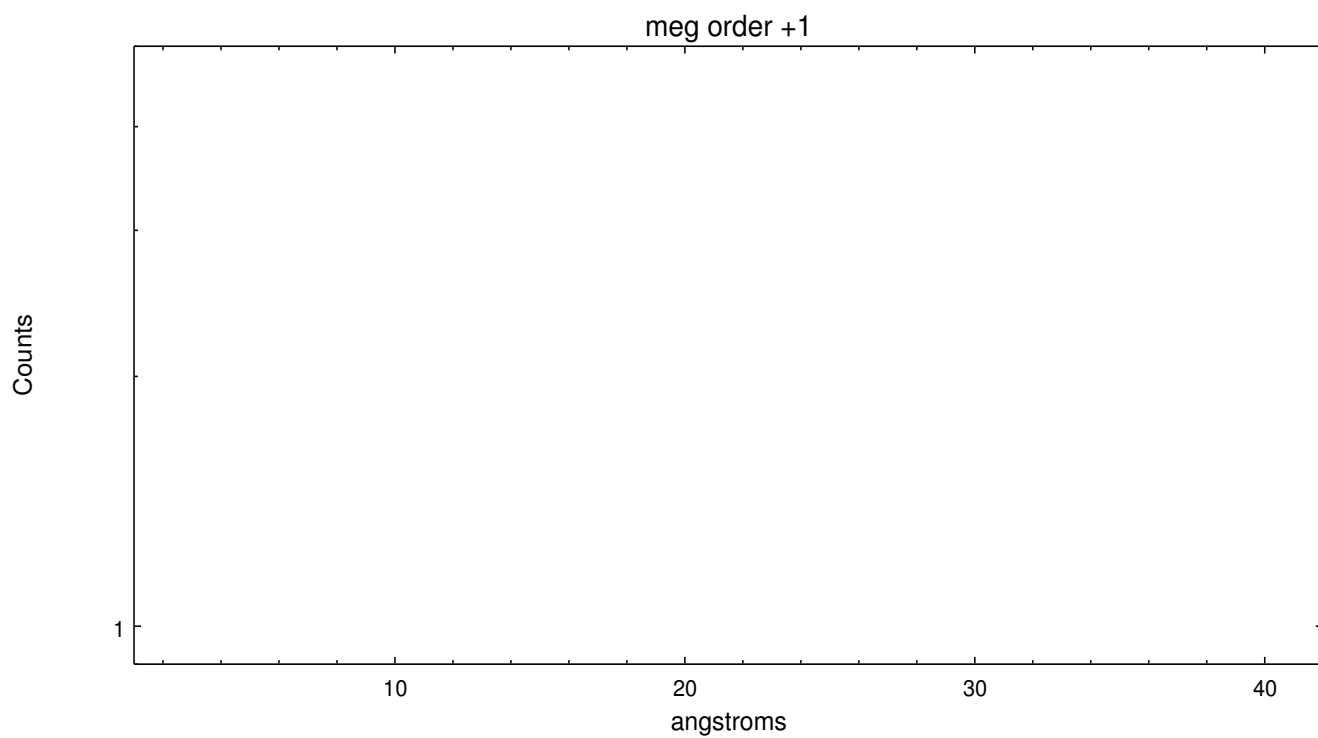
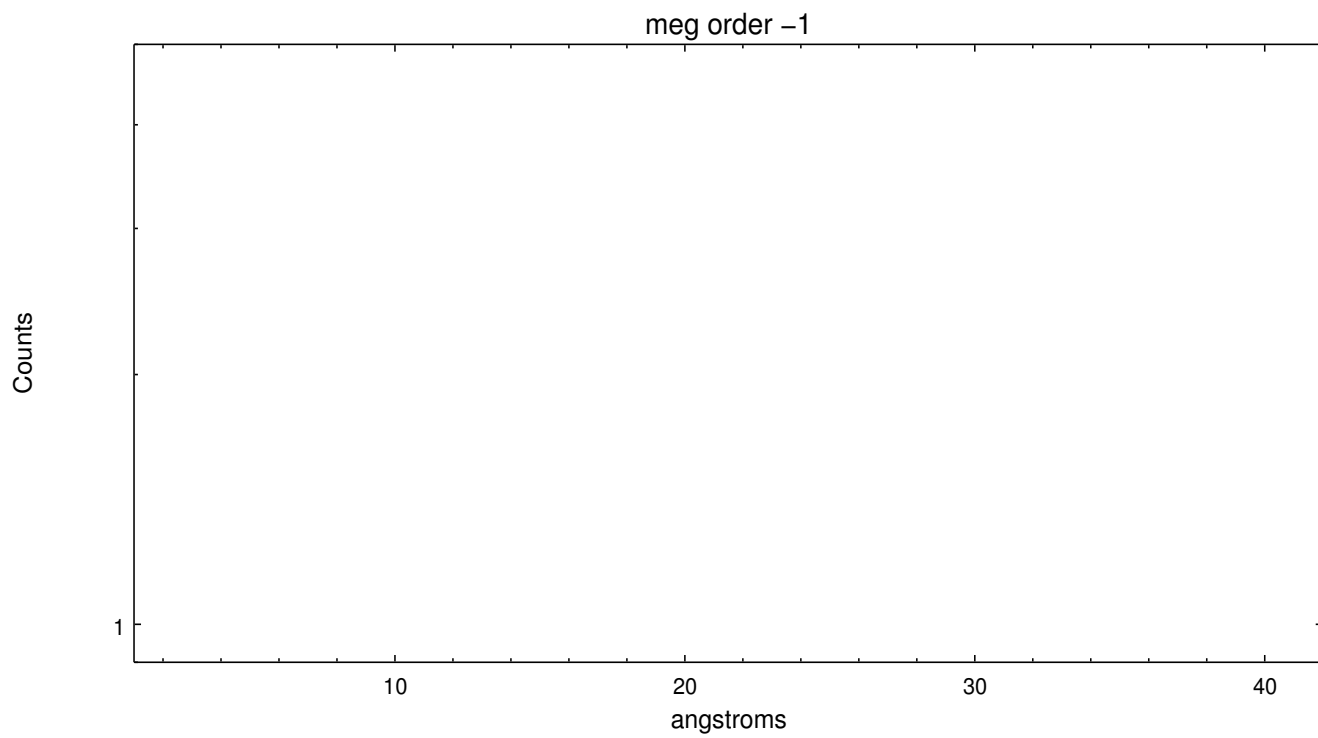


Spot Image MEG

Full Detector MEG

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





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2019.06.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	0.473

A.2 Comments

This is the short segment in the wrong mode, restarted as 22139. No useful science data. About 10000 events, all on S3 (no useful dispersed events, given zeroth order offset).

Charge time:

ONTIME of 473 seconds is less than 85% of expected scheduled time of 25500 seconds

=====

The guide star in slot 4 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this guide star from the solution.