

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 20735 - L2 Version 2
Chandra X-Ray Center

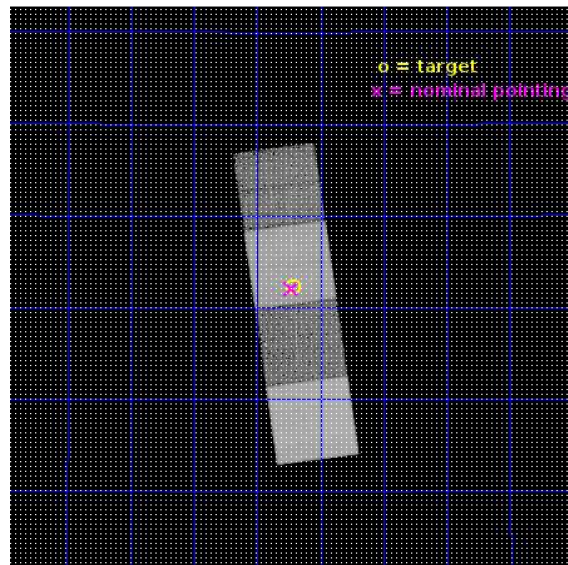
L2 Processing Date : Dec 18 2018

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1 Front

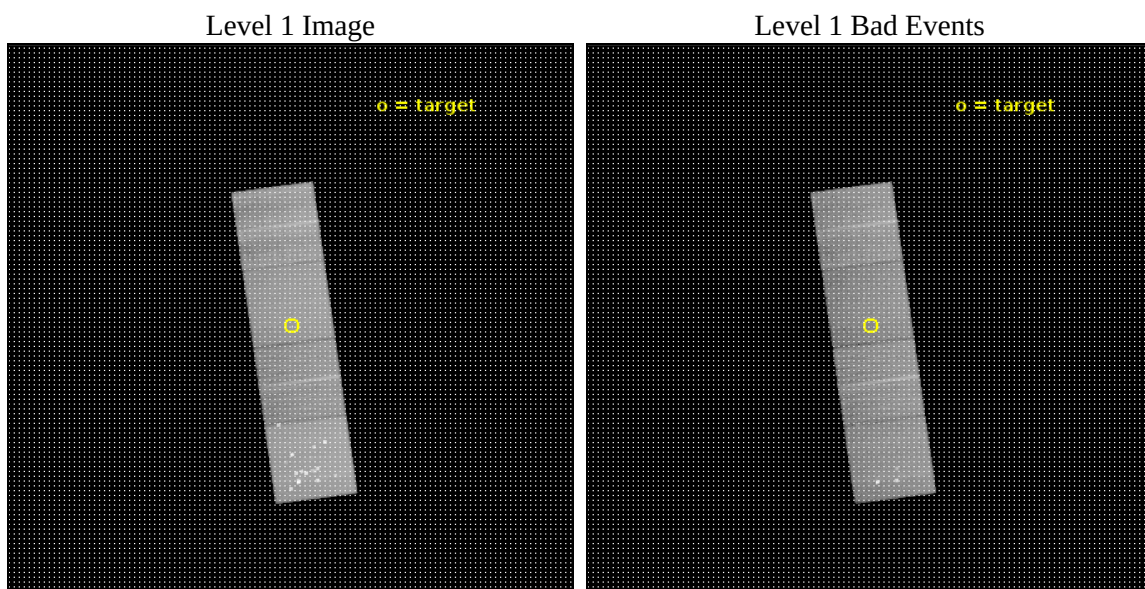
seq_num	201195	Sequence number
obs_id	20735	Observation id
title	X-ray Flares from Young Stars and the Sun: Bridging the Gap with Chandra+NuSTAR	Proposal title
observer	Dr. Claude Canizares	Principal investigator
object	V773 Tau	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	63.55375	Observer's specified target RA [deg]
dec_targ	28.203417	Observer's specified target Dec [deg]
ra_nom	63.55741444871	Nominal RA [deg]
dec_nom	28.200995894246	Nominal Dec [deg]
roll_nom	262.15490761407	Nominal Roll [deg]
revision	2	Processing version of data
ontime	28817.600221753	Sum of GTIs [s]
livetime	28441.077059647	Livetime [s]
ontime5	28817.600221753	Sum of GTIs [s]
ontime6	28817.600221753	Sum of GTIs [s]
ontime7	28817.600221753	Sum of GTIs [s]
ontime8	28814.459121466	Sum of GTIs [s]
l2events	322900	Number of level 2 events



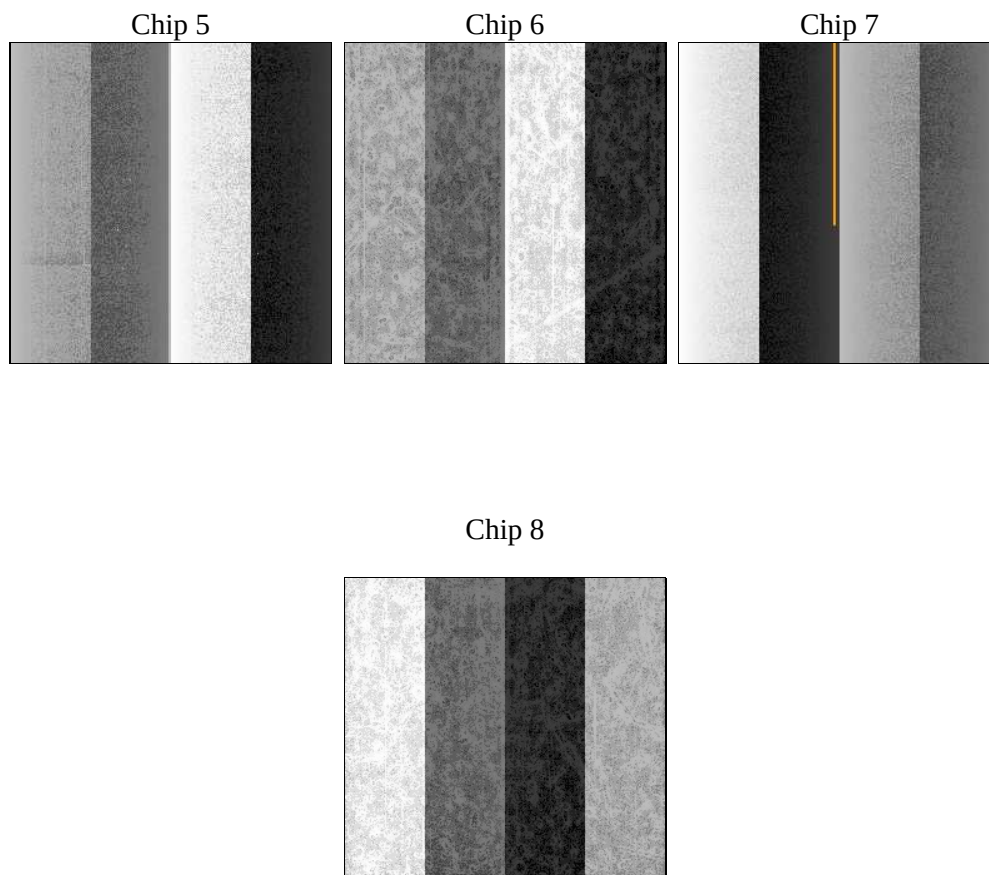
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	28800.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	28817.600221753	Sum of GTIs [s]
caldsver	4.8.2	 	ontime5	28817.600221753	Sum of GTIs [s]
date	2018-12-18T16:42:00	Date and time of file creation	ontime6	28817.600221753	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	28817.600221753	Sum of GTIs [s]
			ontime8	28814.459121466	Sum of GTIs [s]
			l1events	1226588	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4119.01, 4112.99)	src1a sky pixel position

2.1.4 Events

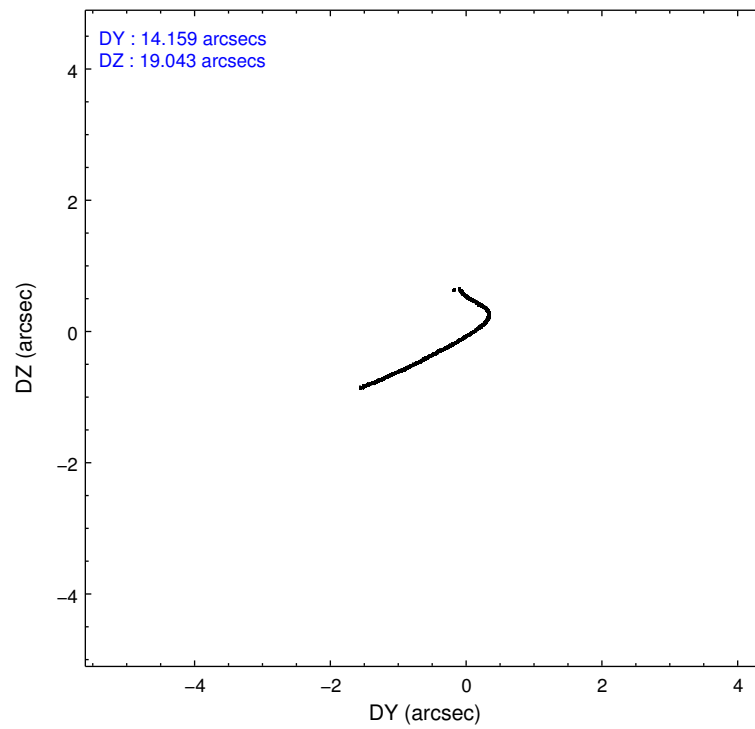
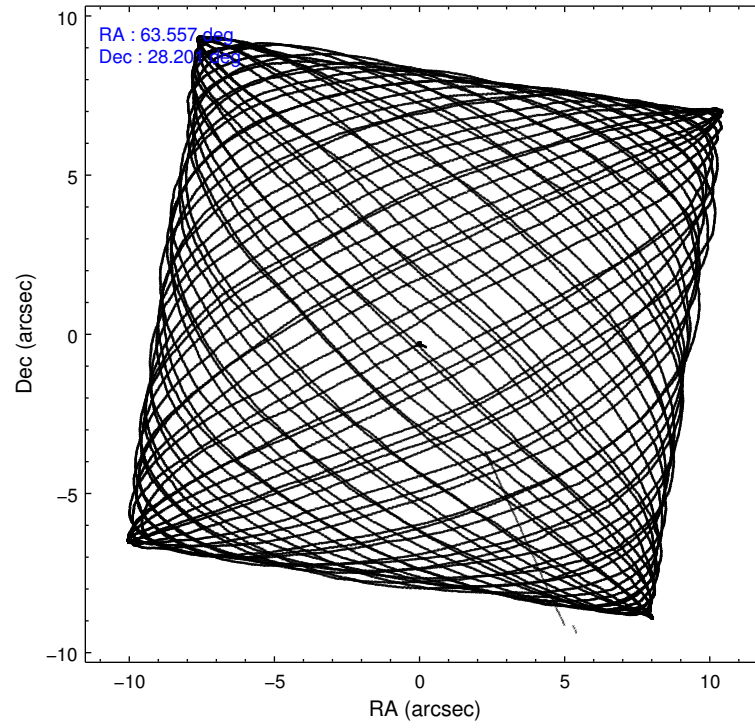
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	427693	224145	284592	290158
rejected events	198208	199030	162713	215233
rejected %	46%	88%	57%	74%

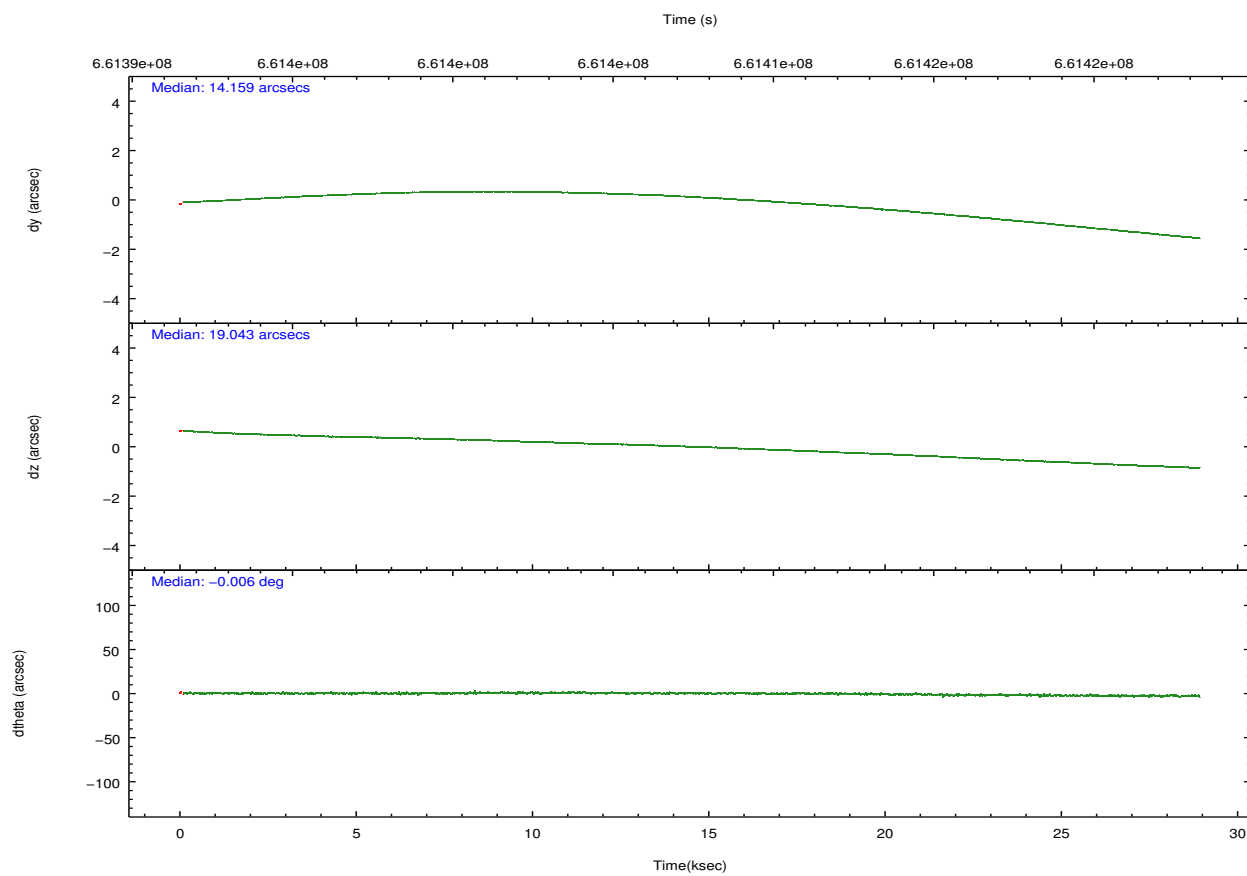
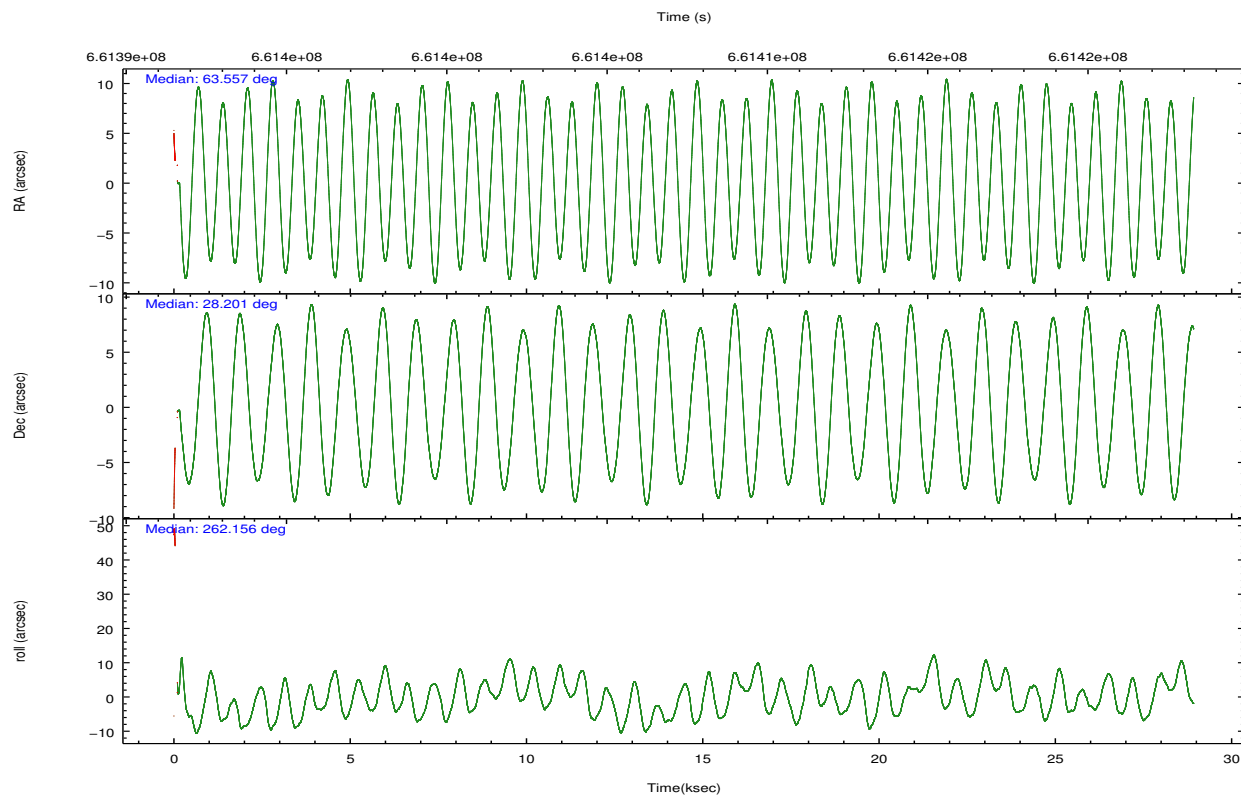
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	60339	8020	10112	21010
	14%	3%	3%	7%
grade 1 events	921	115	428	235
	0%	0%	0%	0%
grade 2 events	61809	6351	25952	18153
	14%	2%	9%	6%
grade 3 events	6676	2260	9466	7897
	1%	1%	3%	2%
grade 4 events	6697	2314	9218	7410
	1%	1%	3%	2%
grade 5 events	24974	9461	27226	15362
	5%	4%	9%	5%
grade 6 events	94289	6204	67348	20583
	22%	2%	23%	7%
grade 7 events	171988	189420	134842	199508
	40%	84%	47%	68%

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	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	63.545307	63.55741444871016	CCD I2 on	N	N
[deg] Pointing Dec	28.226286	28.20099589424552	CCD I3 on	N	N
[deg] Pointing Roll	262.003989	262.1549076140689	CCD S0 on	O1	N
[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	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	661393058.184000	661391569.63482	CCD S5 on	O2	N
Observation start date	2018-12-17T00:16:29	2018-12-16T23:52:49	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	661421858.184000	661422630.21167	On-chip summing requested	N	N
Observation end date	2018-12-17T08:16:29	2018-12-17T08:30:30	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



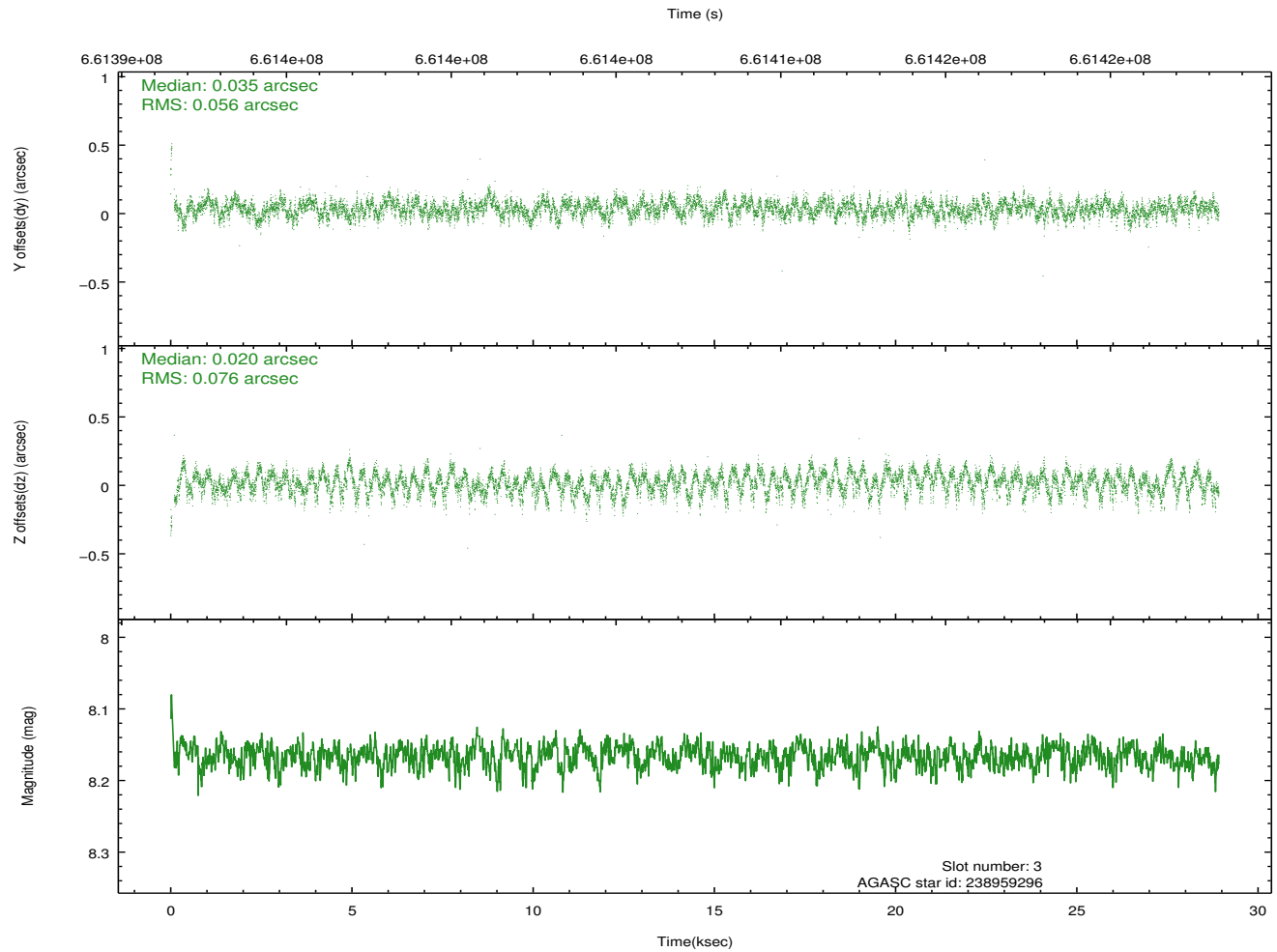
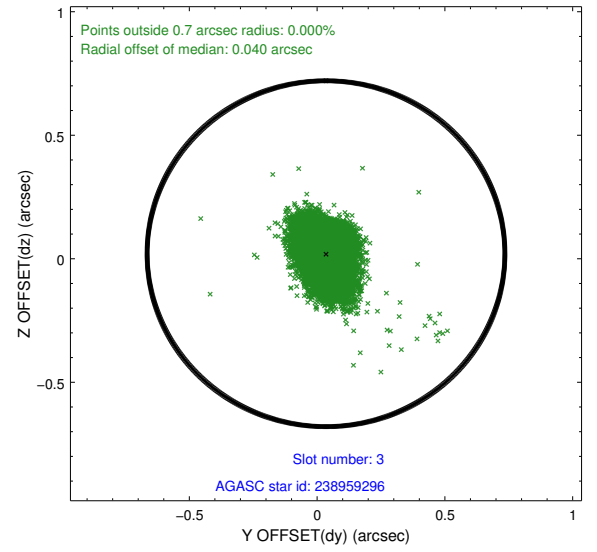
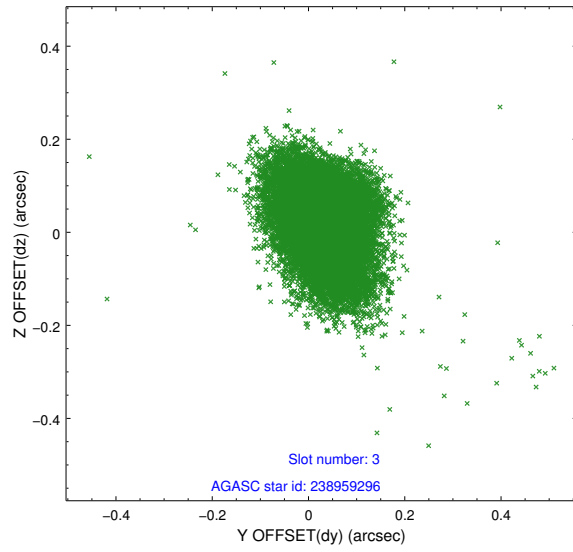


Slot Statistics

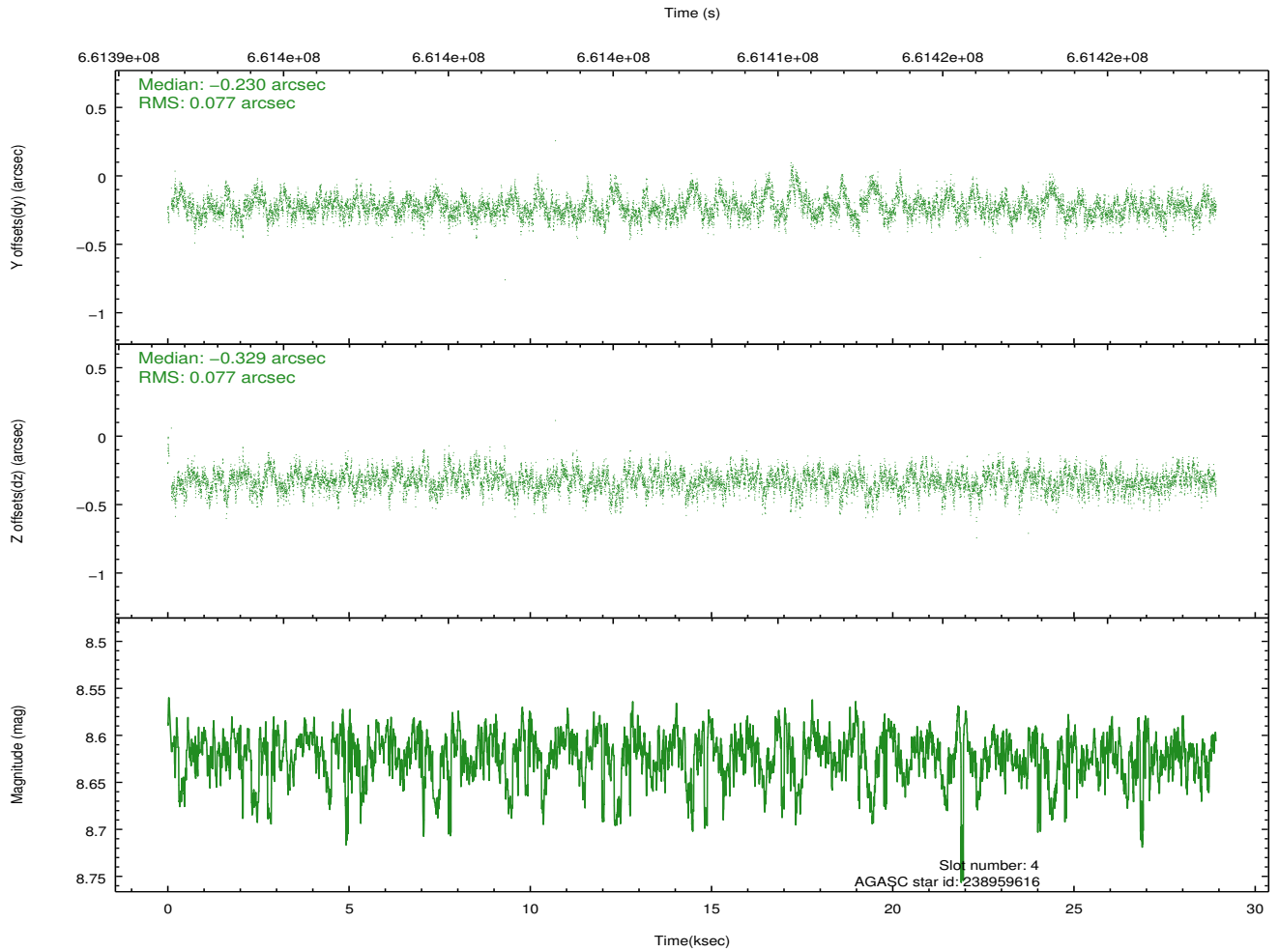
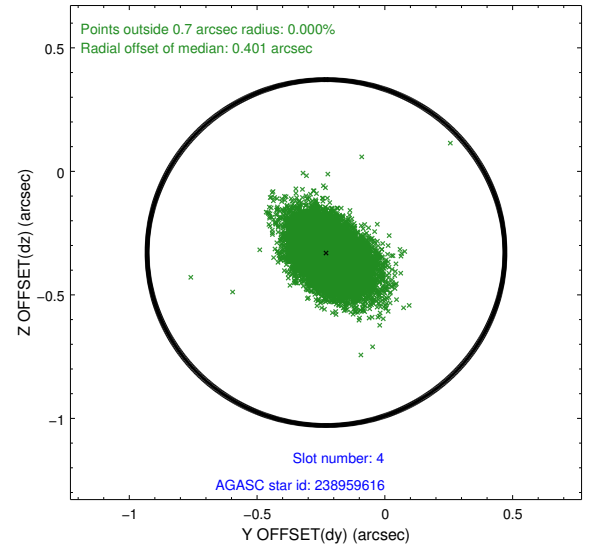
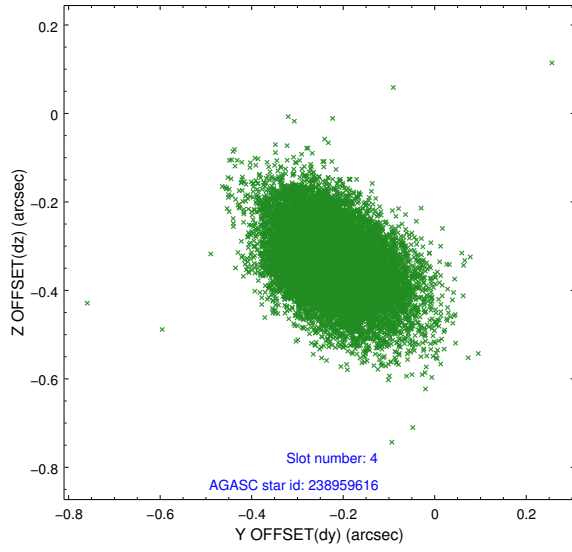
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.18	7038	1.000	-0.154	-0.098	0.022	0.036	0.000000	0.000000	929.01	-1736
1	FID		ACIS-S-4	7.20	7040	1.000	0.325	0.131	0.018	0.035	0.000000	0.000000	2146.92	168
2	FID		ACIS-S-6	7.33	7040	1.000	-0.197	-0.020	0.010	0.018	0.000000	0.000000	394.98	805
3	GUIDE	used	238959296	8.17	14073	1.000	0.035	0.020	0.098	0.162	63.264622	28.040280	786.91	-789
4	GUIDE	used	238959616	8.62	14068	1.000	-0.230	-0.329	0.112	0.193	63.631917	27.959756	912.61	407
5	GUIDE	used	239475552	8.63	14070	1.000	-0.215	0.205	0.129	0.206	63.591874	28.708120	-1737.63	-94
6	GUIDE	used	239476904	9.34	14048	1.000	0.415	0.097	0.240	0.398	63.088920	28.435074	-545.16	-1534
7	MONITOR	unused		0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0

2.4 Star Slots

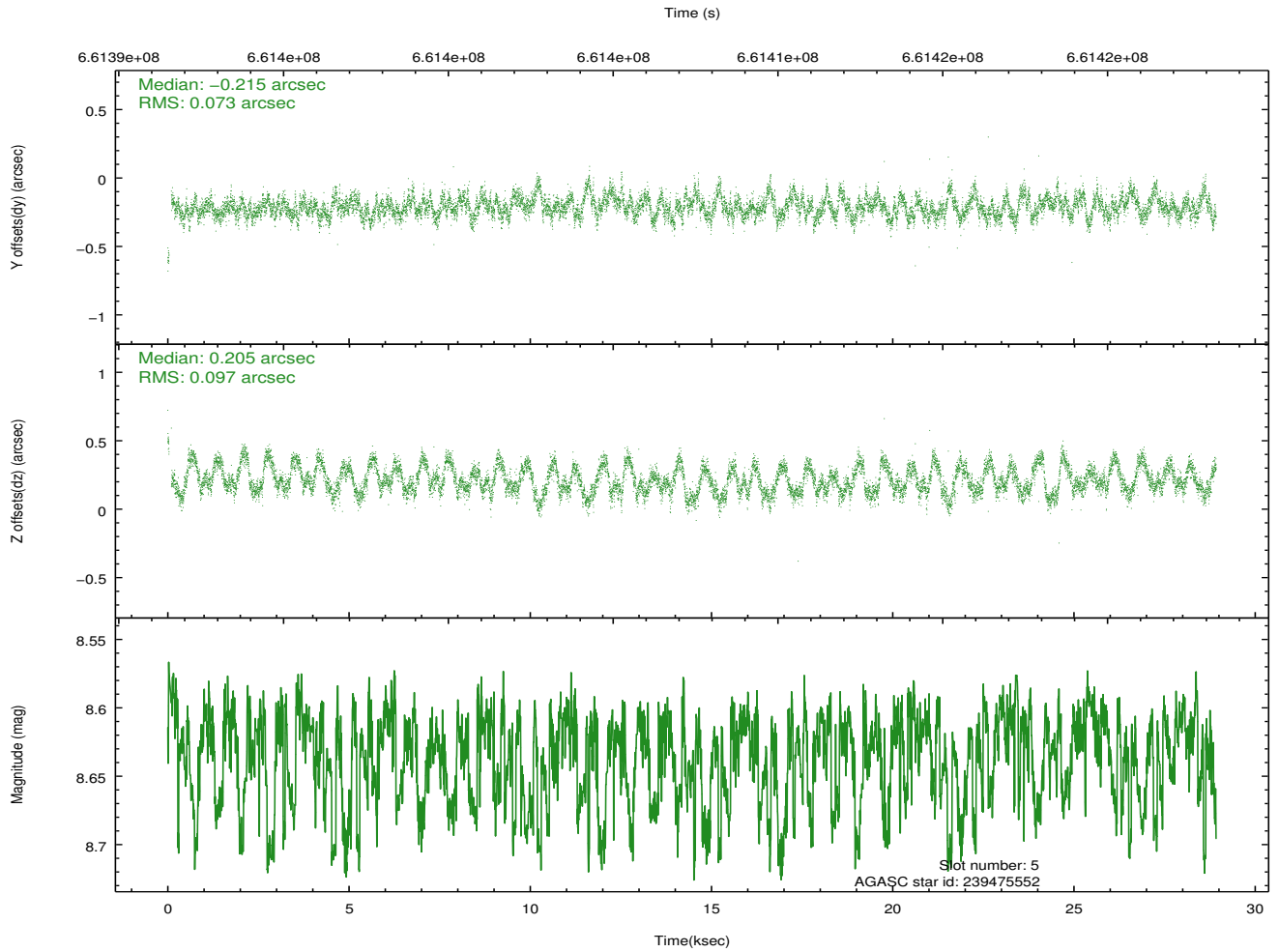
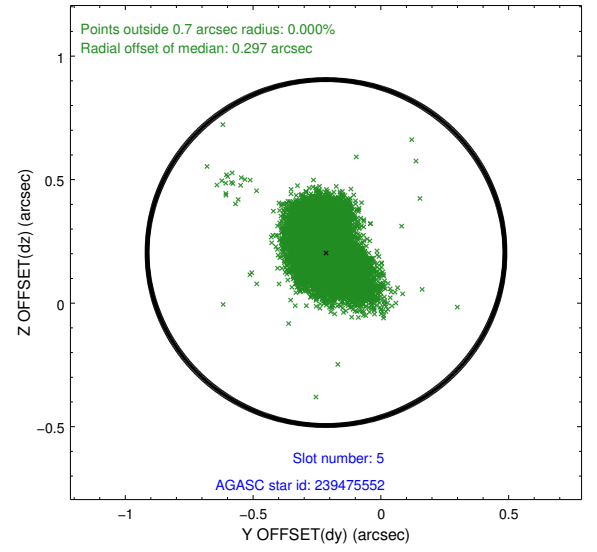
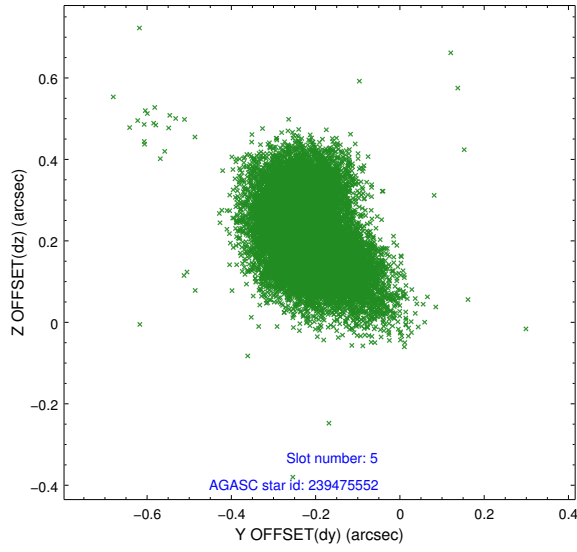
2.4.1 Slot 3



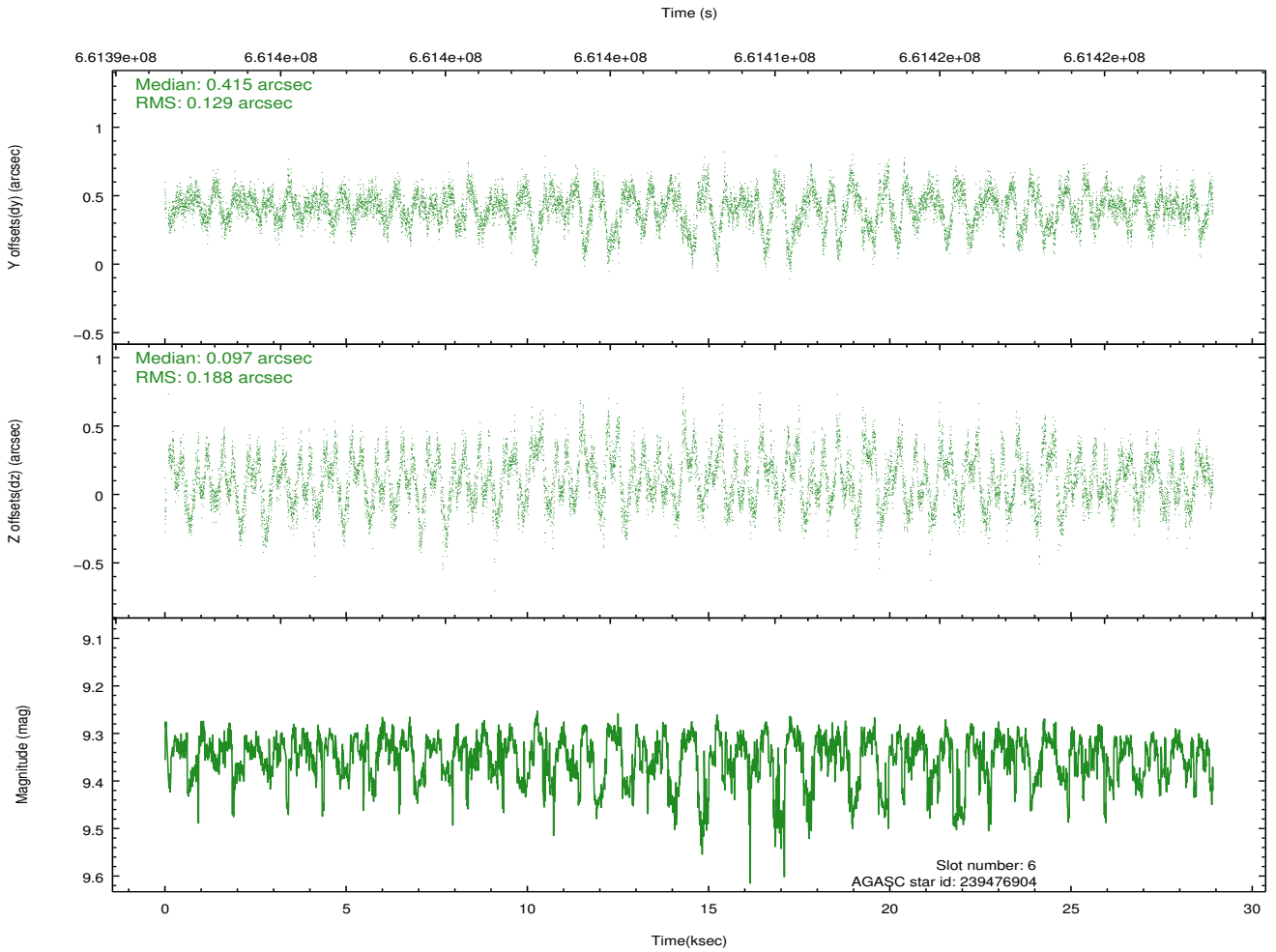
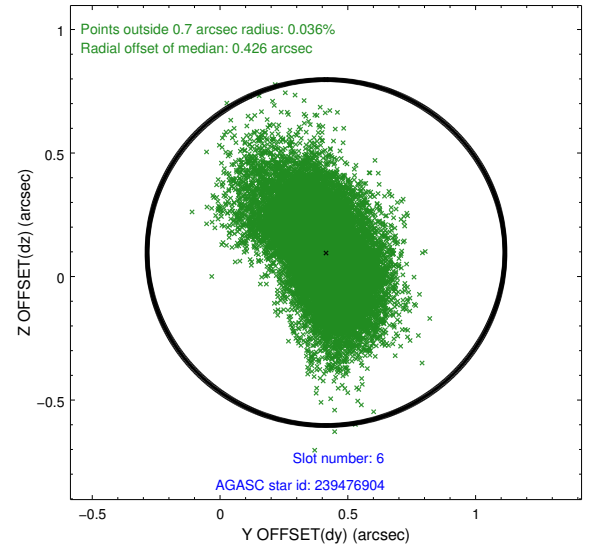
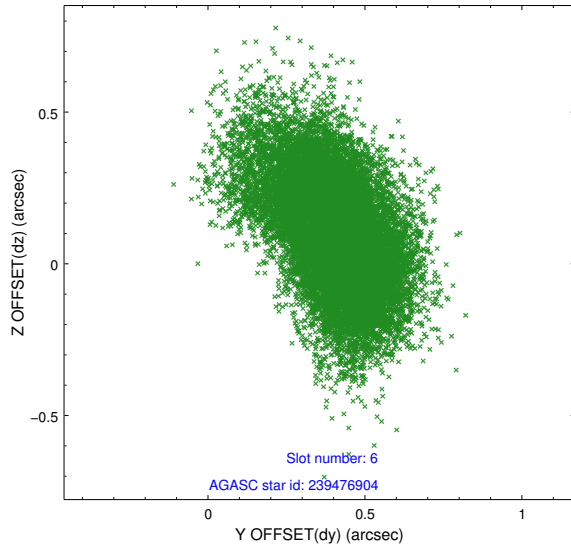
2.4.2 Slot 4



2.4.3 Slot 5

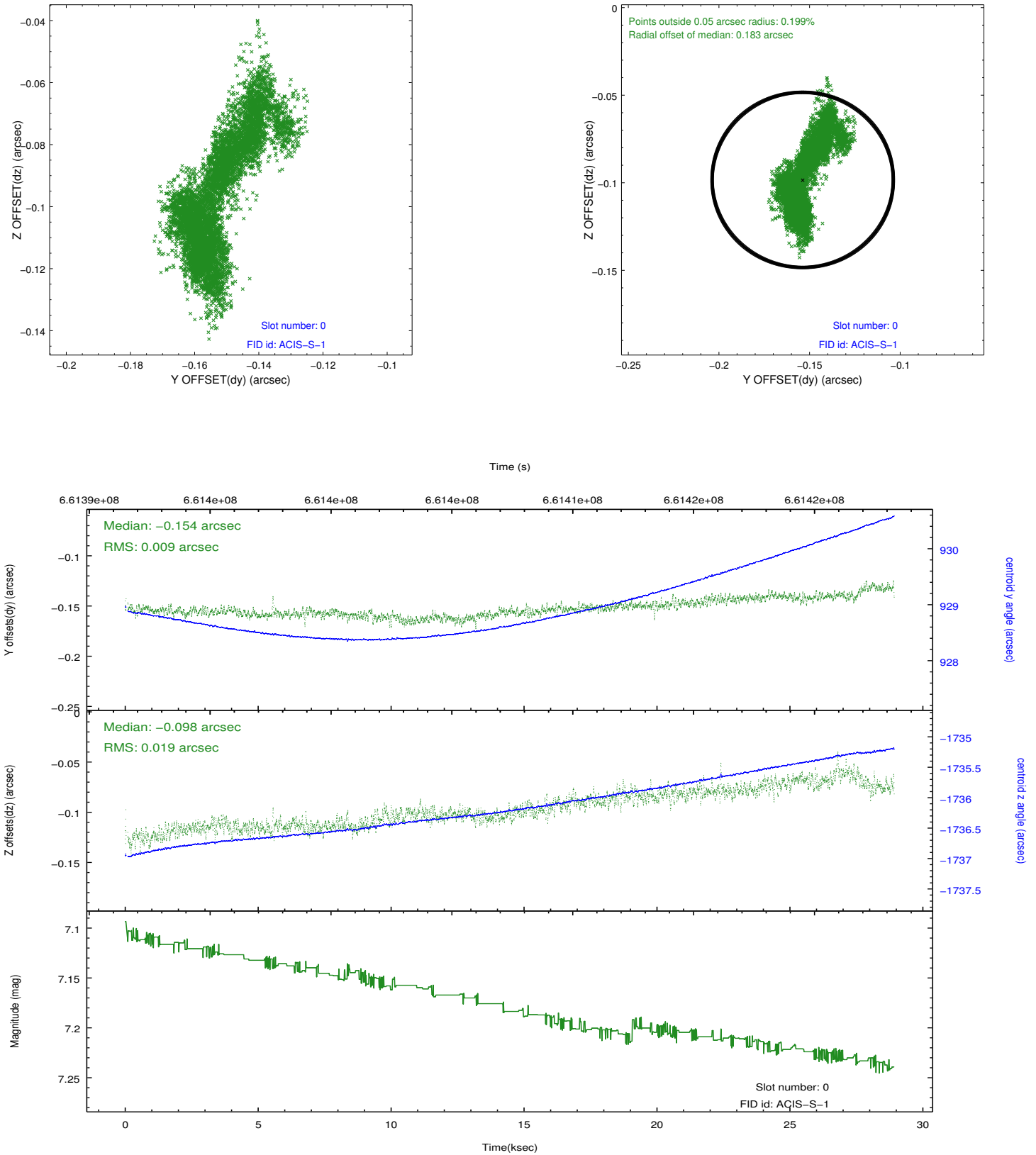


2.4.4 Slot 6

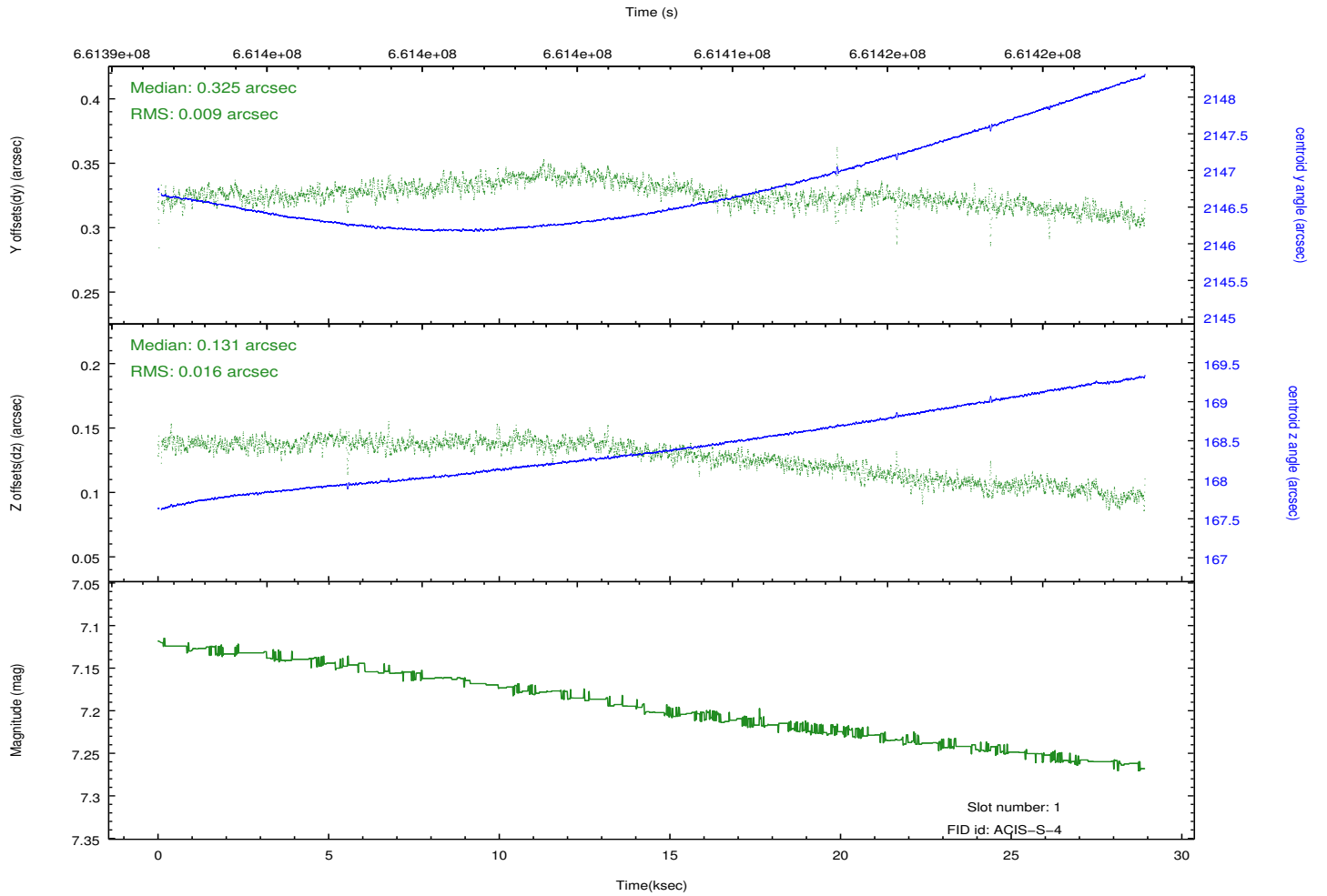
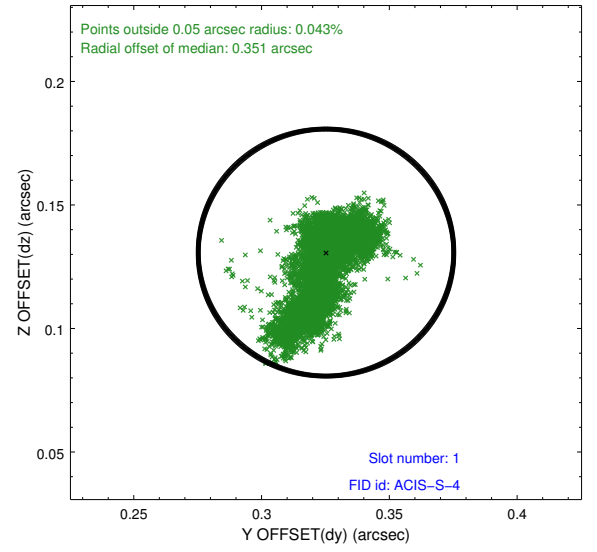
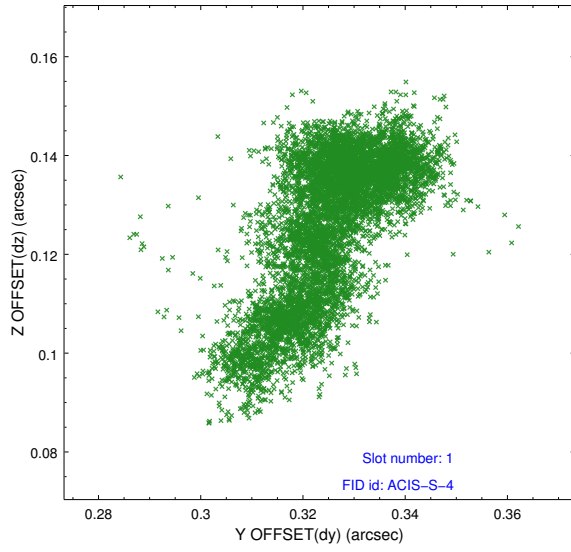


2.5 FID Slots

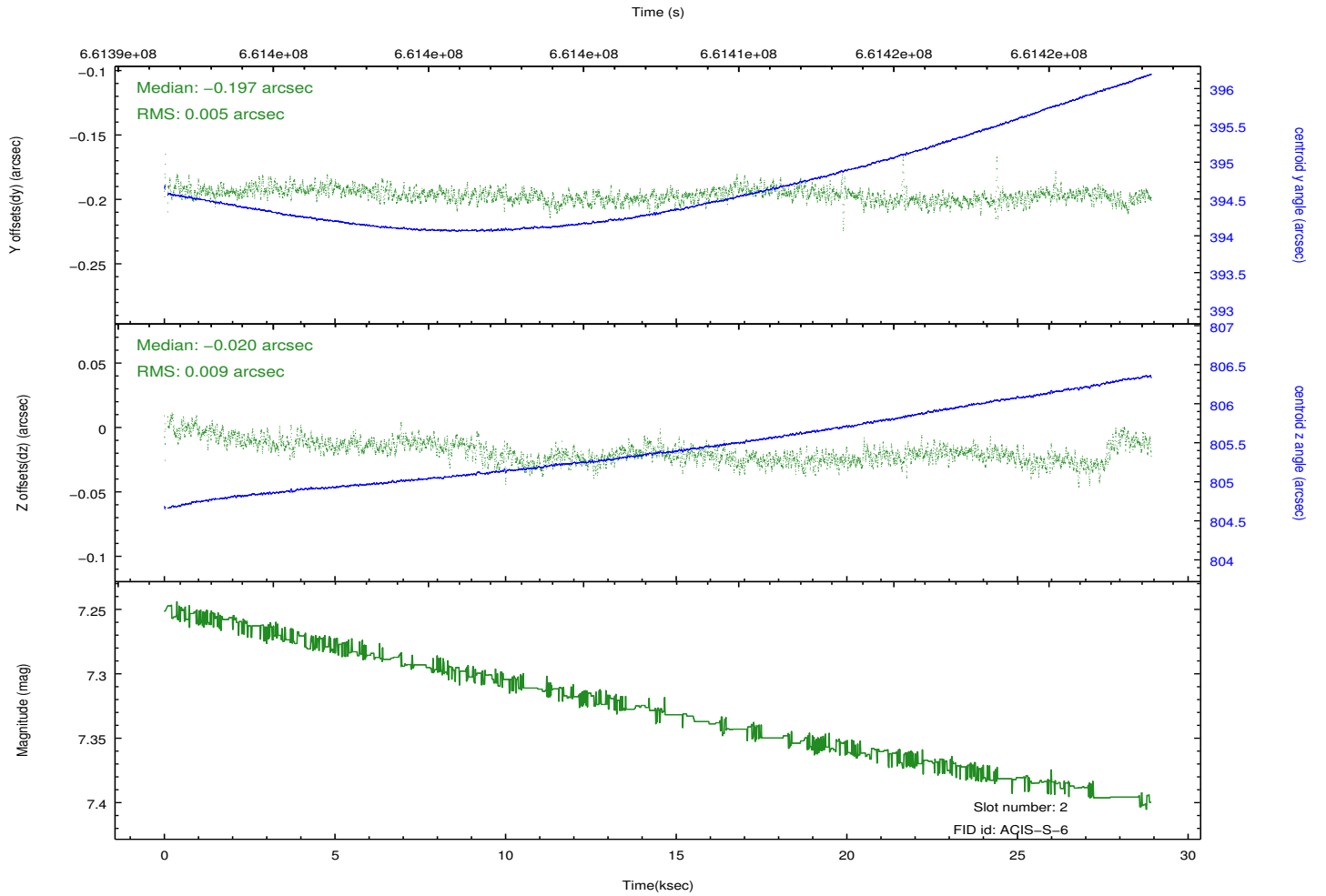
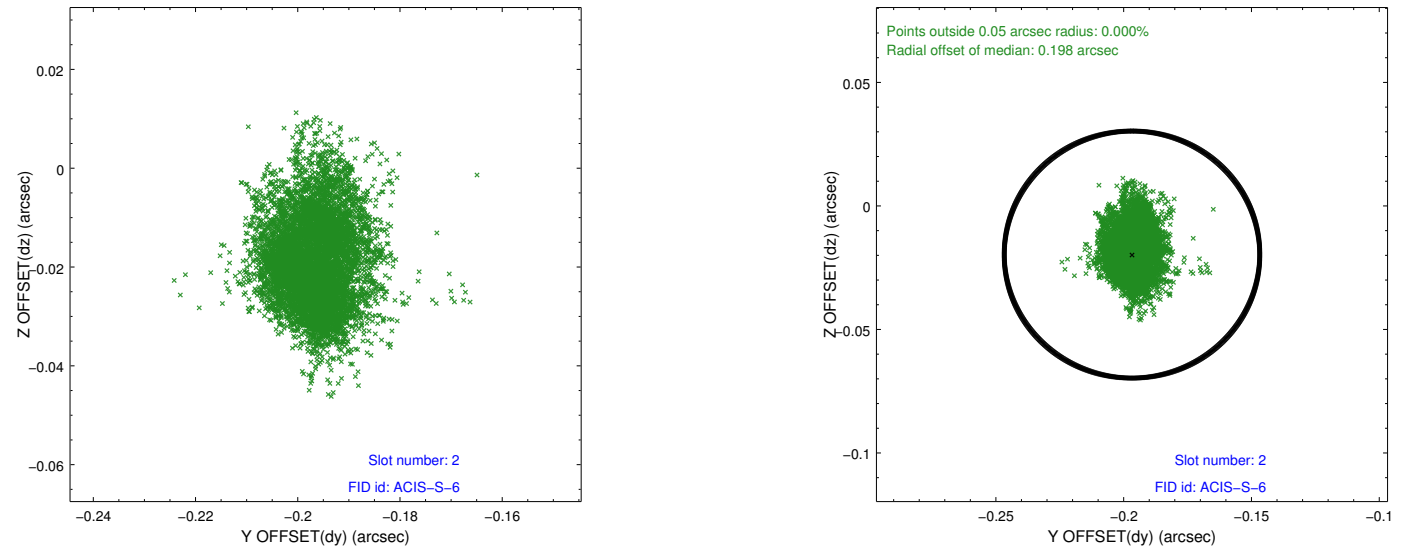
2.5.1 Slot 0



2.5.2 Slot 1

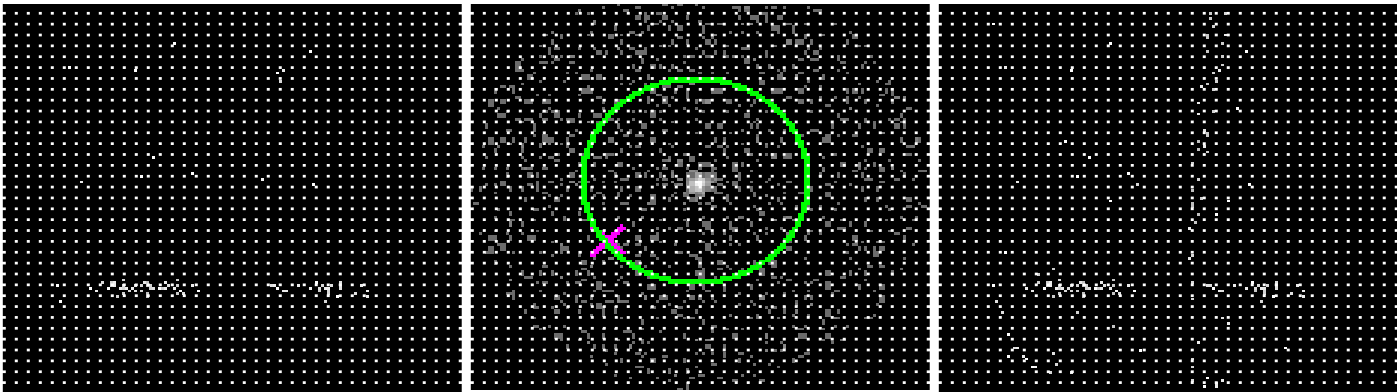


2.5.3 Slot 2



3 Gratings

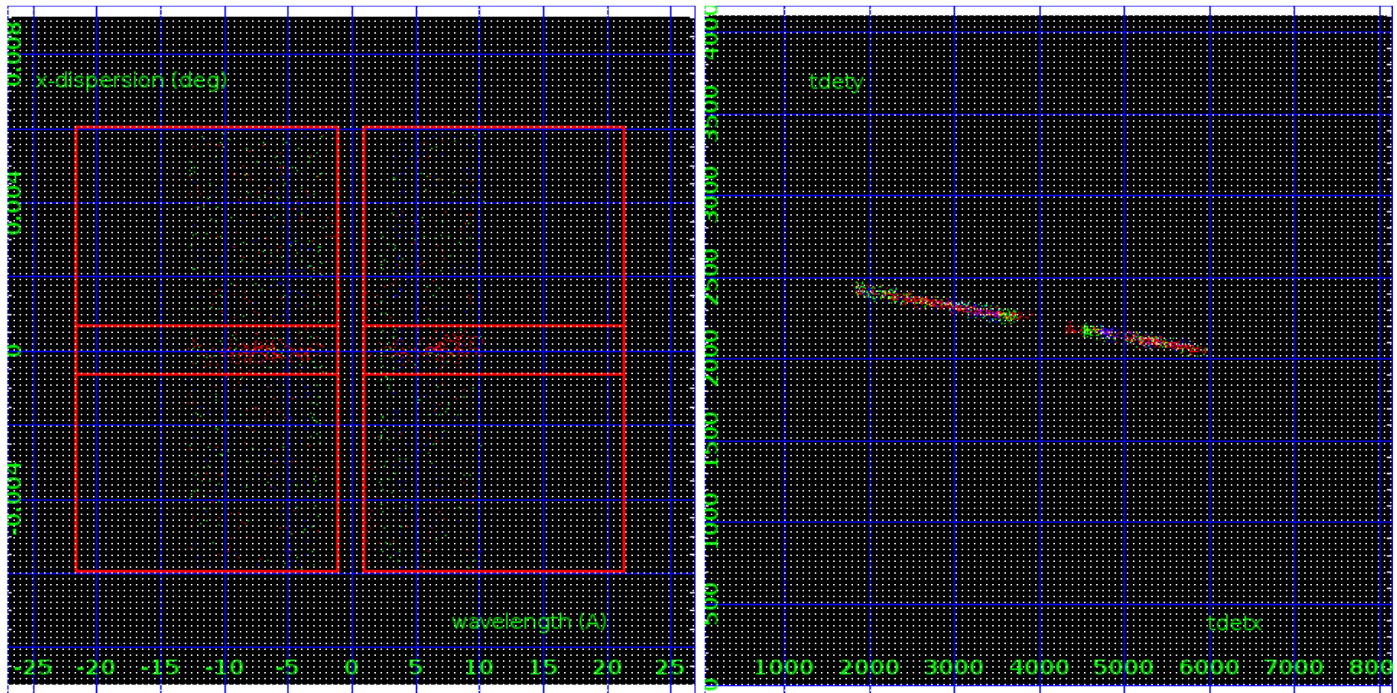
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

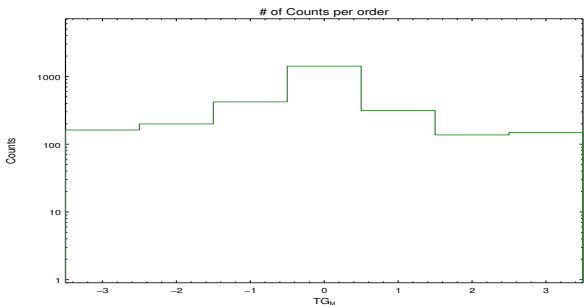
HEG Order Sort ALL

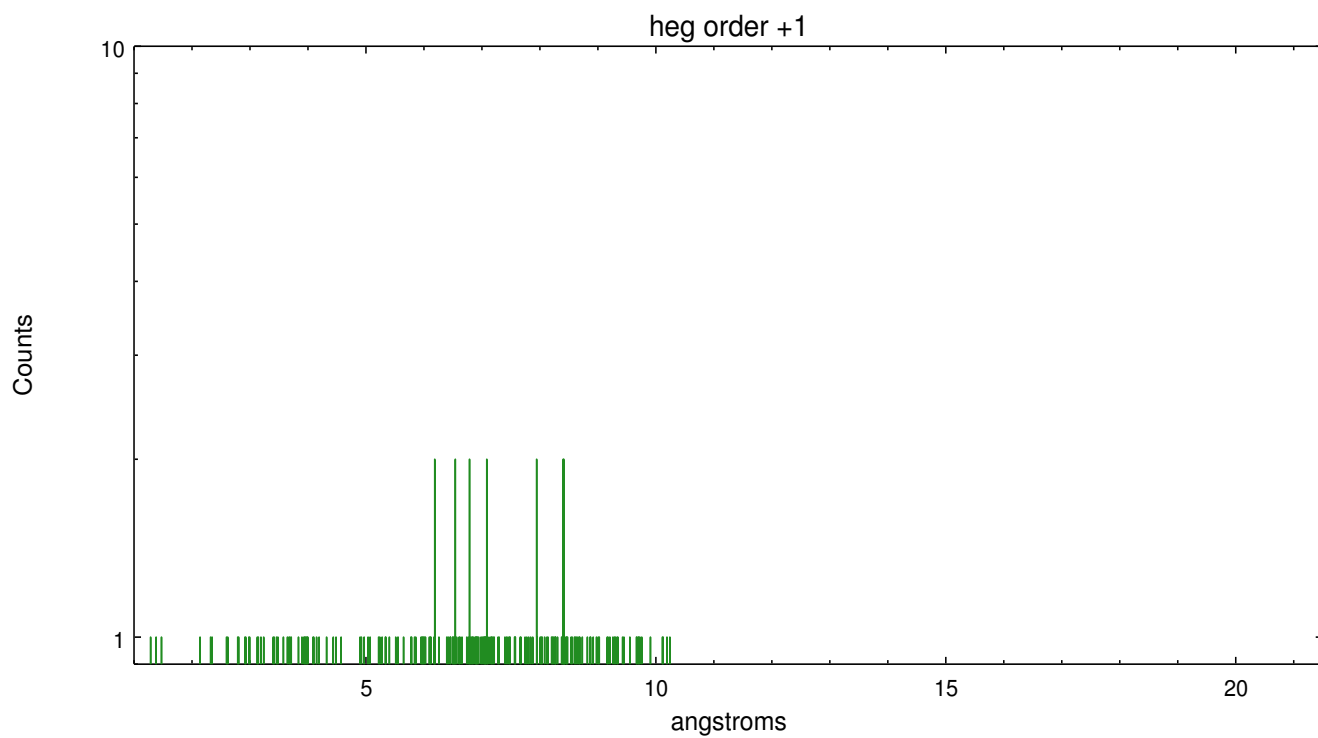
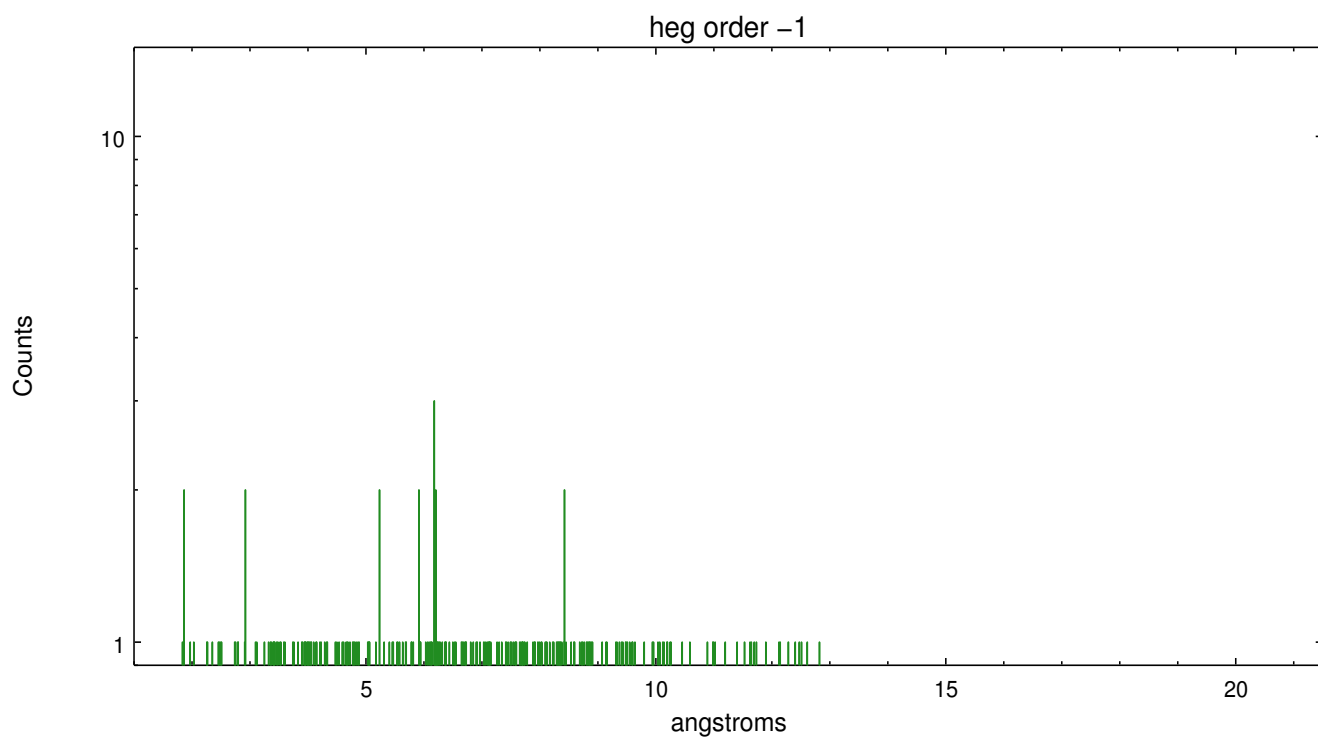


Spot Image HEG

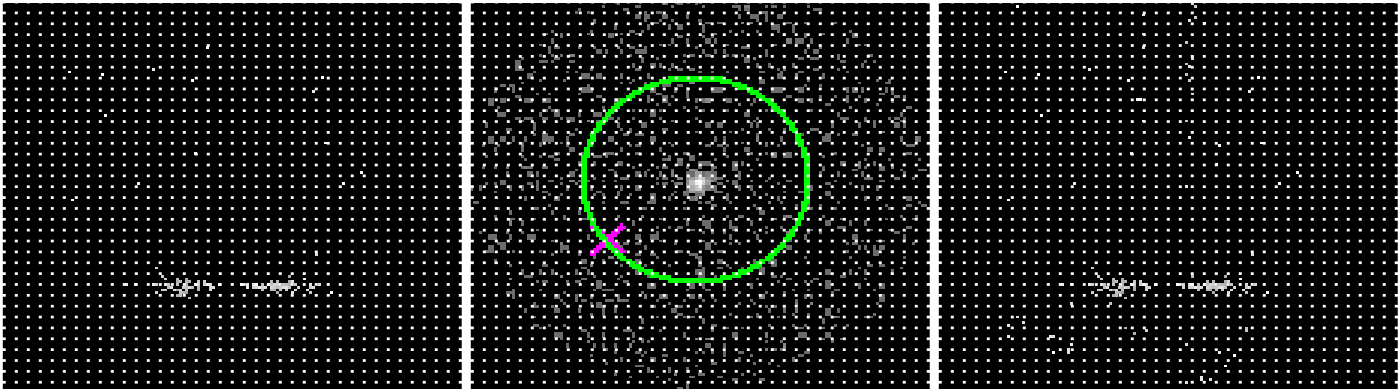
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	162	199	421	1419	314	137	149





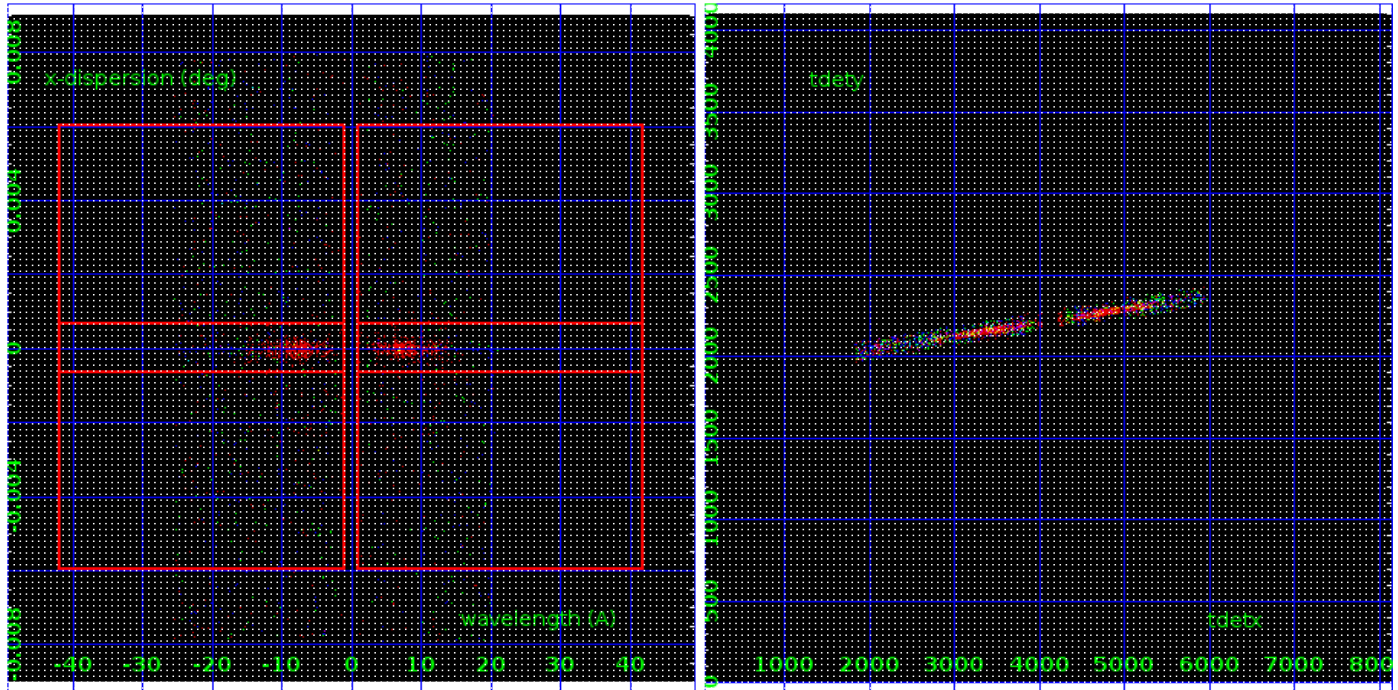
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

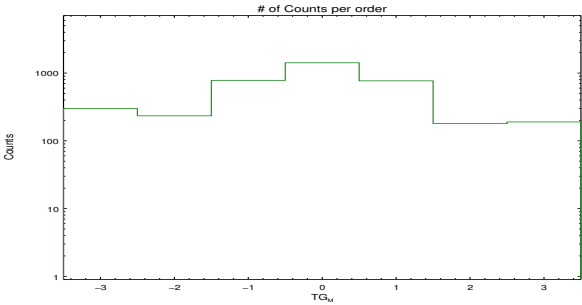
MEG Order Sort ALL

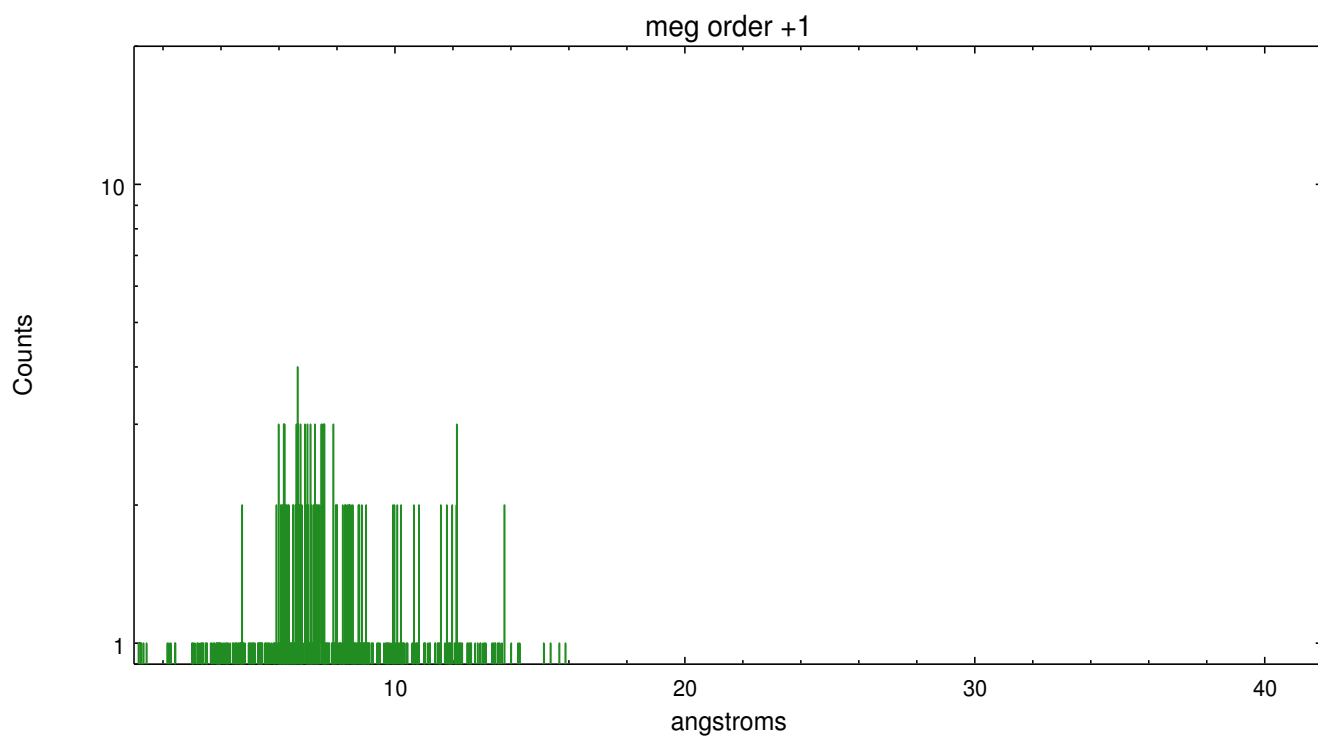
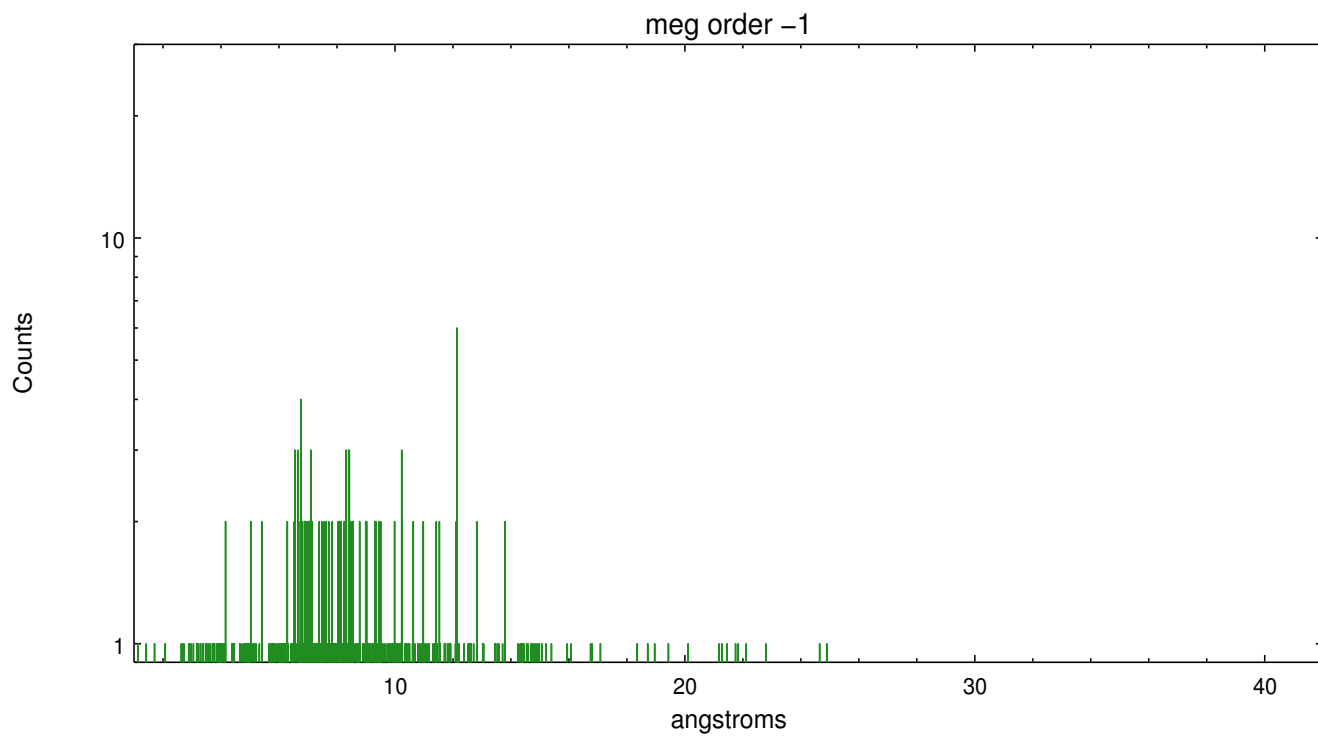


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	300	234	781	1419	768	180	190





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2018.12.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	28.817600221753

A.2 Comments

To compensate for a few bad pixels not marked as bad that were not removed in the Level 2 processing, a custom bad pixel file with additional bad pixels at (chipx, chipy) = (232:234,322:339) in S1 was added in this processing. As a result, the user will NOT find a relatively bright square of pixels on the S1 chip for level 2 data caused by the application of the dither algorithm to the bad pixels in question, as opposed to previous processing(s).