

V&V Reference Report

L2 ASCDS Version : 10

Observation 14658 - L2 Version 3
Chandra X-Ray Center

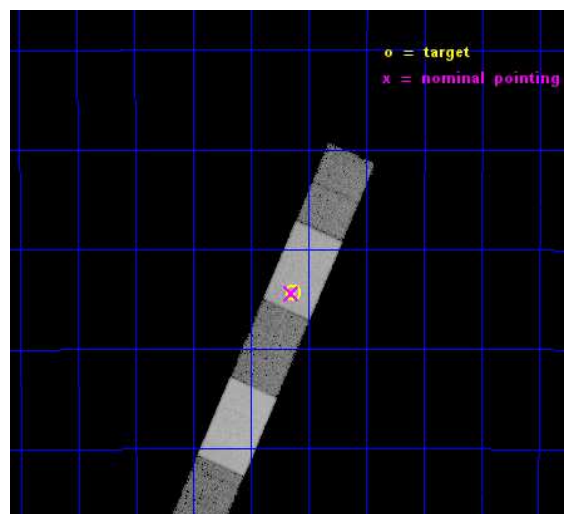
L2 Processing Date : Dec 4 2014

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1 Front

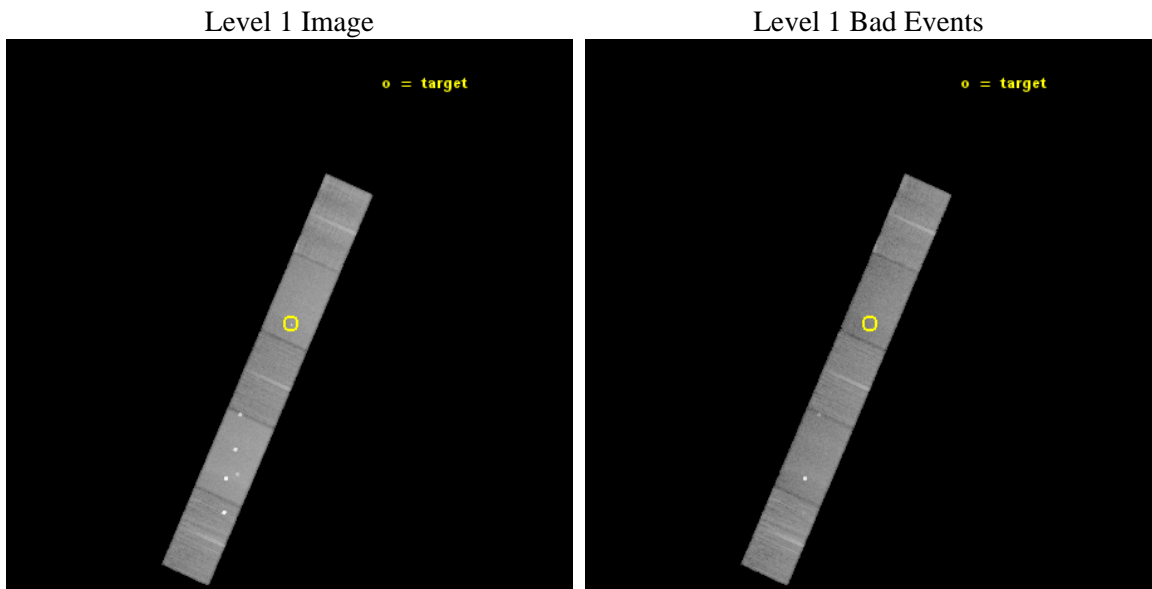
seq_num	401491	Sequence number
obs_id	14658	Observation id
title	The Disk-Wind-Jet Coupling in Black Hole Candidate IGR J17091-3624	
observer	Ashley King	Principal investigator
object	IGR J17091-3624	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	257.283333	Observer's specified target RA [deg]
dec_targ	-36.406667	Observer's specified target Dec [deg]
ra_nom	257.28704512704	Nominal RA [deg]
dec_nom	-36.407134129409	Nominal Dec [deg]
roll_nom	293.63573252987	Nominal Roll [deg]
revision	3	Processing version of data
ontime	40071.575930595	Sum of GTIs [s]
livetime	39265.840875824	Livetime [s]
ontime4	40071.411770582	Sum of GTIs [s]
ontime5	40071.534890592	Sum of GTIs [s]
ontime6	40071.493850589	Sum of GTIs [s]
ontime7	40071.575930595	Sum of GTIs [s]
ontime8	40071.452810585	Sum of GTIs [s]
l2events	199558	Number of level 2 events



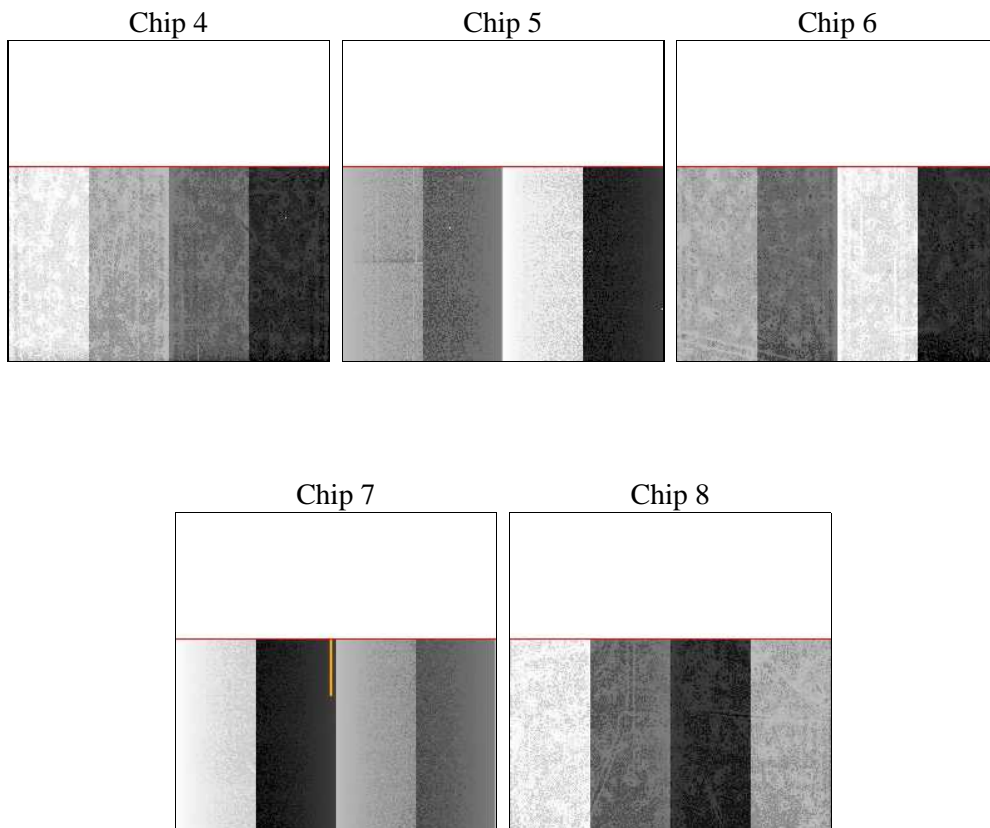
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	40000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	40071.575930595	Sum of GTIs [s]
caldbver	4.6.4	 	ontime4	40071.411770582	Sum of GTIs [s]
date	2014-12-04T17:30:02	Date and time of file creation	ontime5	40071.534890592	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	40071.493850589	Sum of GTIs [s]
			ontime7	40071.575930595	Sum of GTIs [s]
			ontime8	40071.452810585	Sum of GTIs [s]
			l1events	820302	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4127.24, 4096.33)	src1a sky pixel position

2.1.4 Events

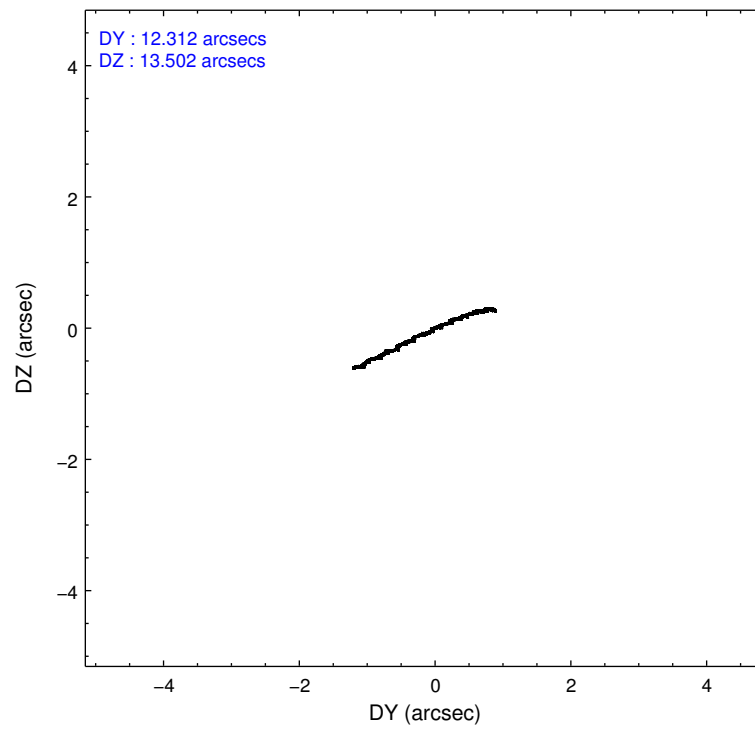
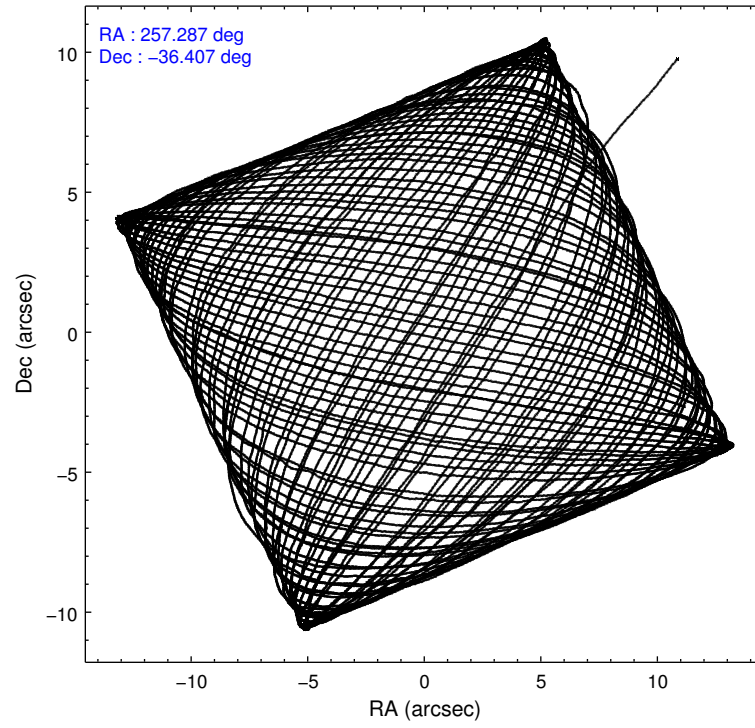
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	146123	225737	123666	163209	161567
rejected events	116123	113465	108180	90602	118646
rejected %	79%	50%	87%	55%	73%

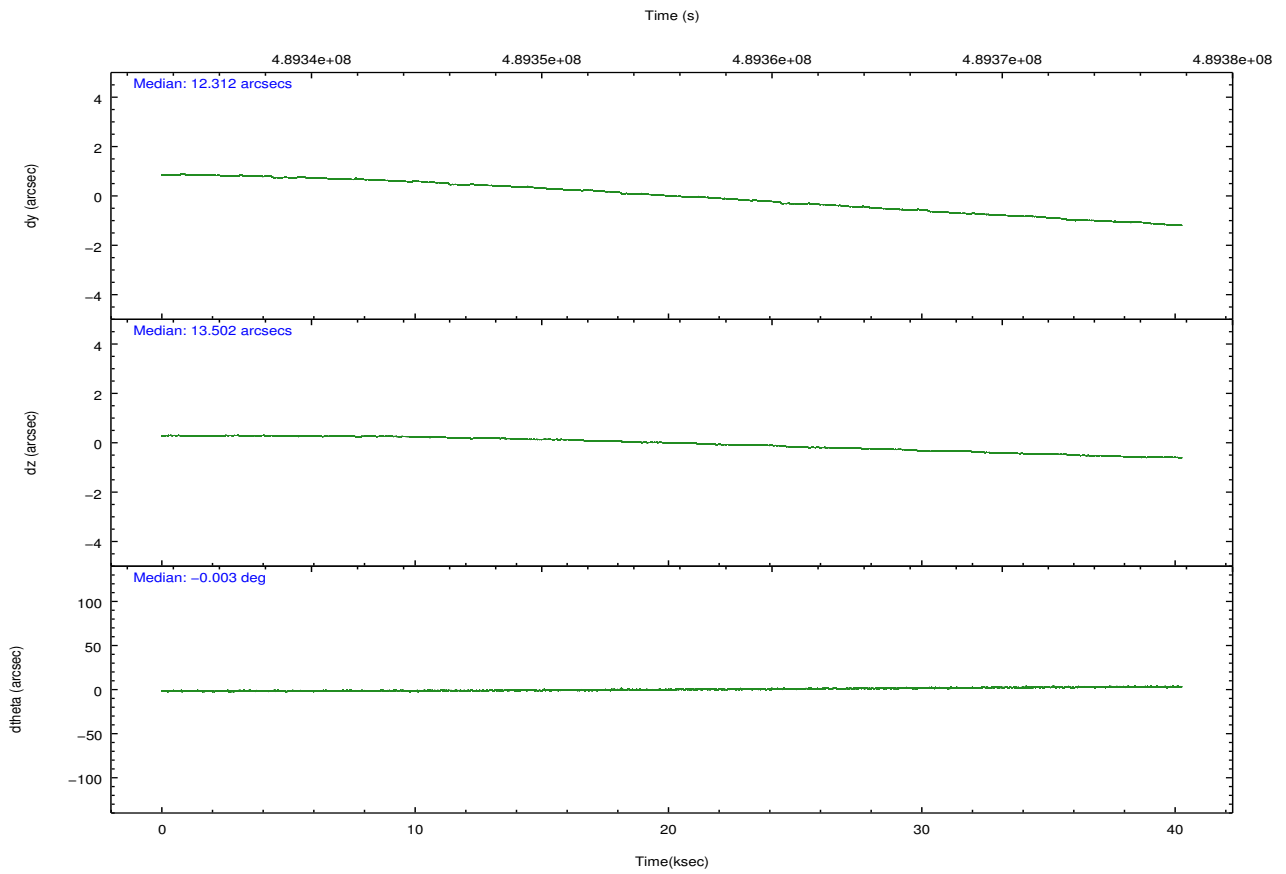
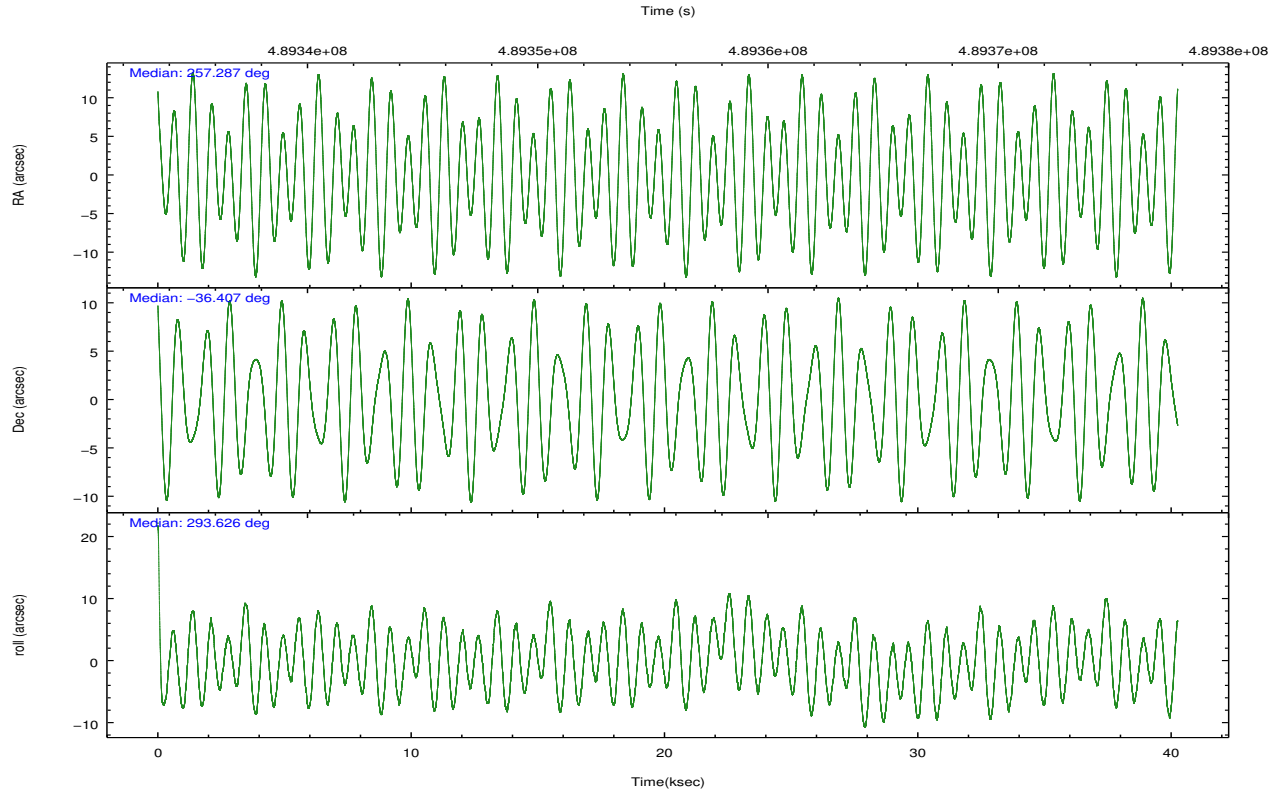
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	20250	18781	5310	6359	11438
	13%	8%	4%	3%	7%
grade 1 events	116	633	61	151	91
	0%	0%	0%	0%	0%
grade 2 events	3592	33739	3448	15058	10285
	2%	14%	2%	9%	6%
grade 3 events	1732	4412	1760	6527	4753
	1%	1%	1%	3%	2%
grade 4 events	1693	3872	1630	6520	4480
	1%	1%	1%	3%	2%
grade 5 events	5629	18847	5985	16583	8827
	3%	8%	4%	10%	5%
grade 6 events	2735	51477	3339	38146	11965
	1%	22%	2%	23%	7%
grade 7 events	110376	93976	102133	73865	109728
	75%	41%	82%	45%	67%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-45678	ACIS-45678	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	257.259425	257.2870451270392	CCD I2 on	N	N
[deg] Pointing Dec	-36.391223	-36.40713412940905	CCD I3 on	N	N
[deg] Pointing Roll	293.462705	293.6357325298727	CCD S0 on	Y	Y
[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	-185.262523	-185.2547514189408	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-4.87	-4.877771164067013	CCD S4 on	Y	Y
[s] Observation start time (MET)	489335778.184000	489334786.87952	CCD S5 on	O1	N
Observation start date	2013-07-04T14:35:11	2013-07-04T14:19:46	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	489375778.184000	489376714.5068	On-chip summing requested	N	N
Observation end date	2013-07-05T01:41:51	2013-07-05T01:58:34	Subarray requested	CUSTOM	CUSTOM
Read mode	TIMED	TIMED	Subarray start row	1	1
			Subarray row count	620	620
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	2

2.3 Aspect





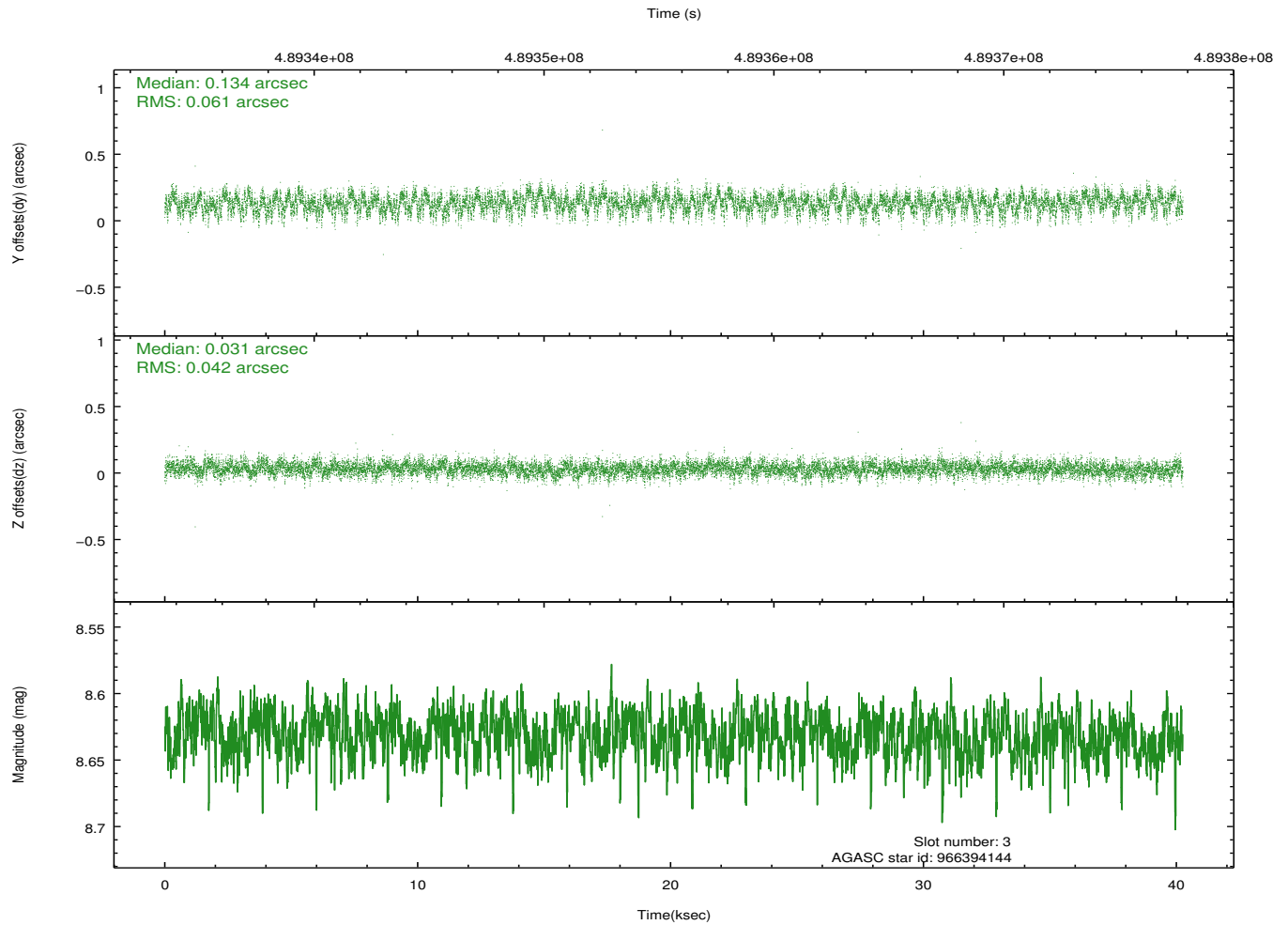
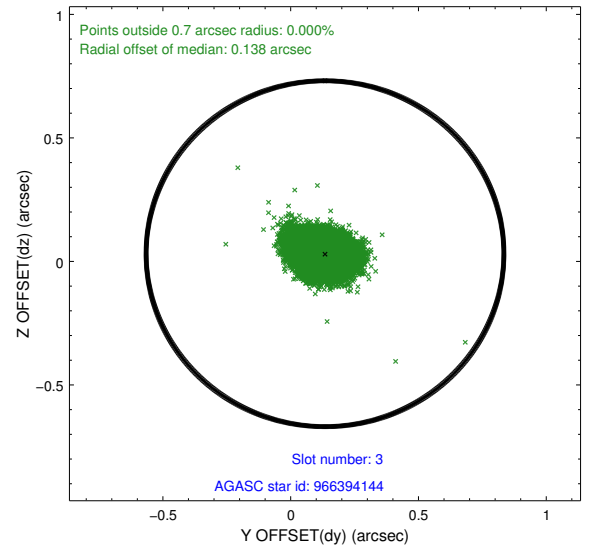
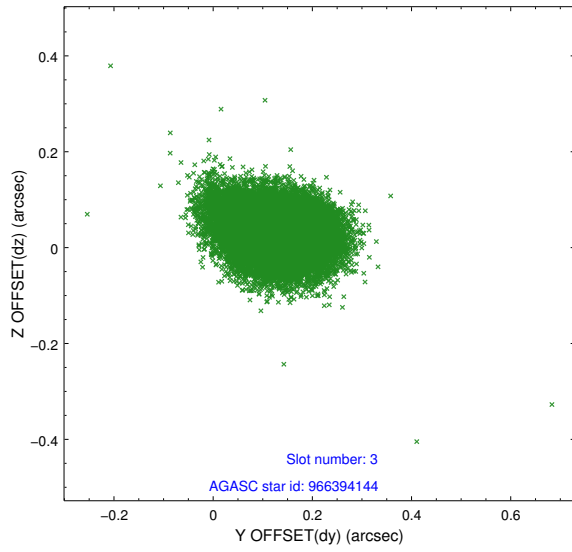
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.04	9819	-0.085	-0.071	0.016	0.030	0.000000	0.000000	-764.93	-1835.43
1	FID		ACIS-S-4	7.12	9818	0.214	0.060	0.009	0.028	0.000000	0.000000	2148.66	73.12
2	FID		ACIS-S-5	7.15	9819	-0.161	0.019	0.012	0.025	0.000000	0.000000	-1817.81	66.81
3	GUIDE	used	966394144	8.63	19633	0.134	0.031	0.078	0.129	256.902901	-37.062041	1810.19	-1901.86
4	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
5	GUIDE	used	966396120	7.85	19637	-0.100	-0.029	0.060	0.098	256.737004	-36.720258	490.97	-1855.84
6	GUIDE	used	966398520	8.32	19632	0.044	0.194	0.061	0.097	256.842646	-35.892866	-2126.23	-401.74
7	GUIDE	used	966402904	8.09	19632	-0.078	-0.196	0.055	0.094	257.709598	-36.005094	-750.56	1754.80

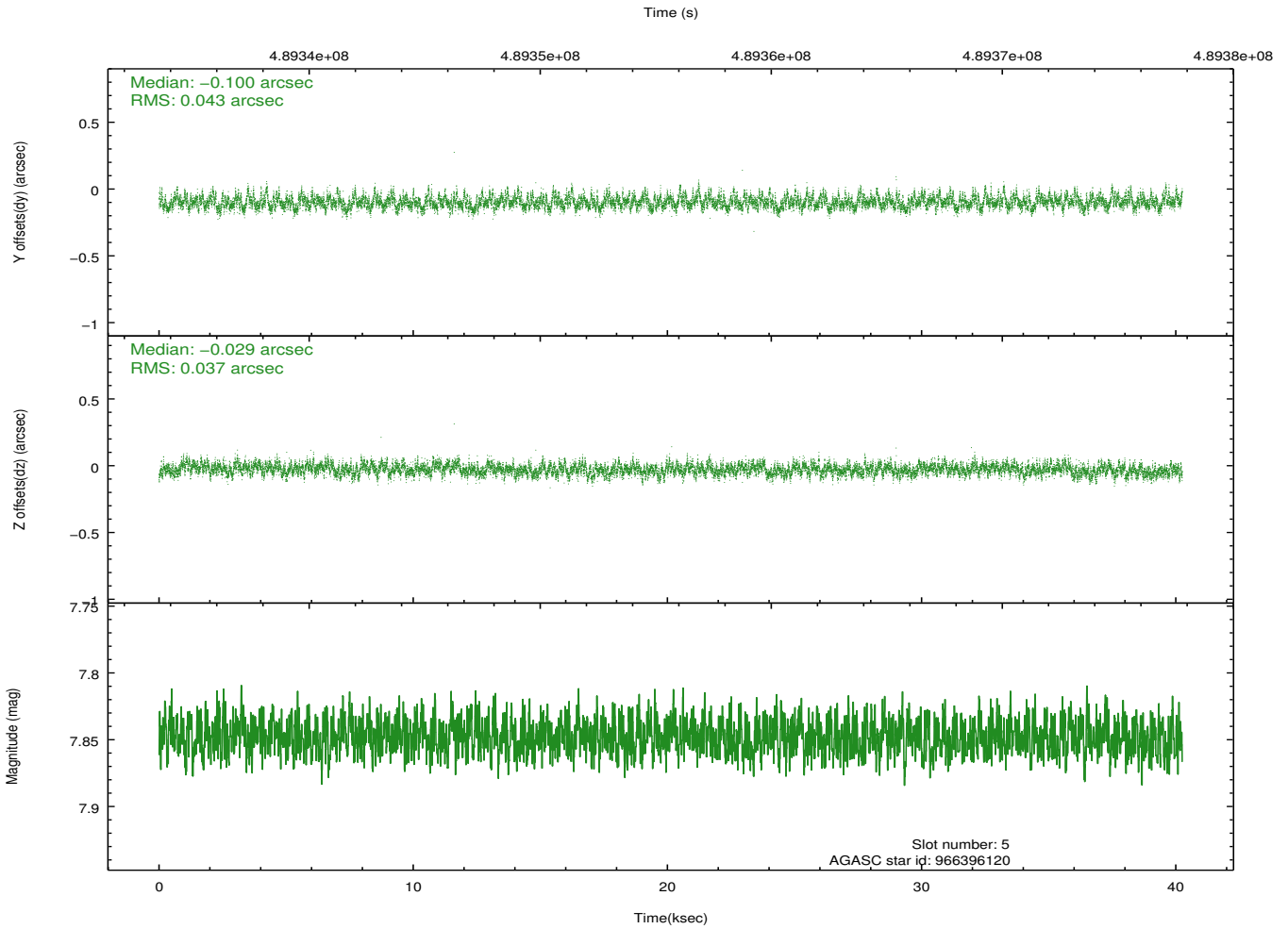
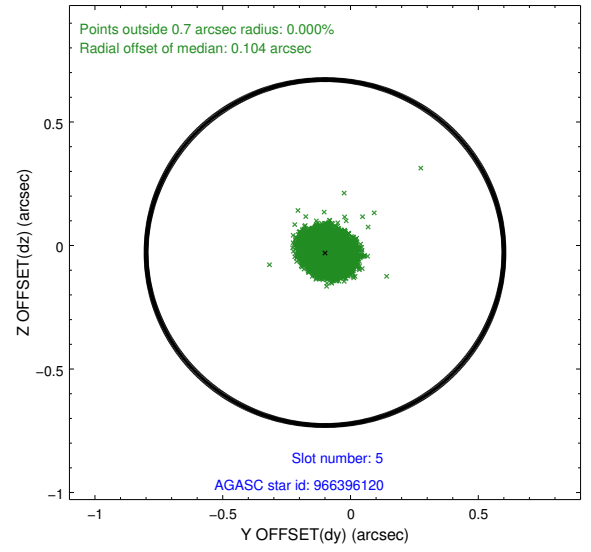
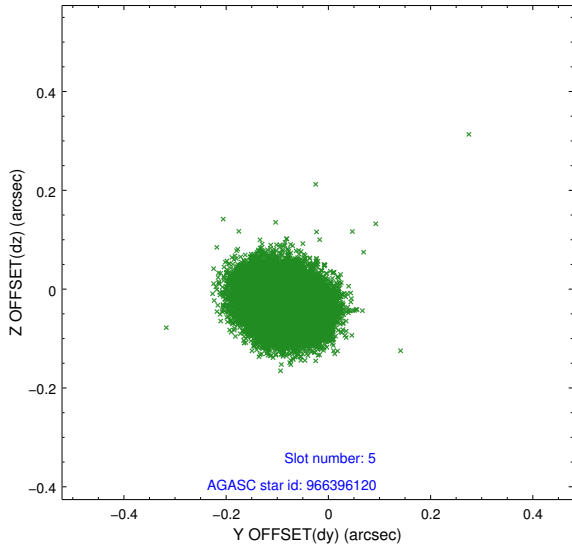
∞

2.4 Star Slots

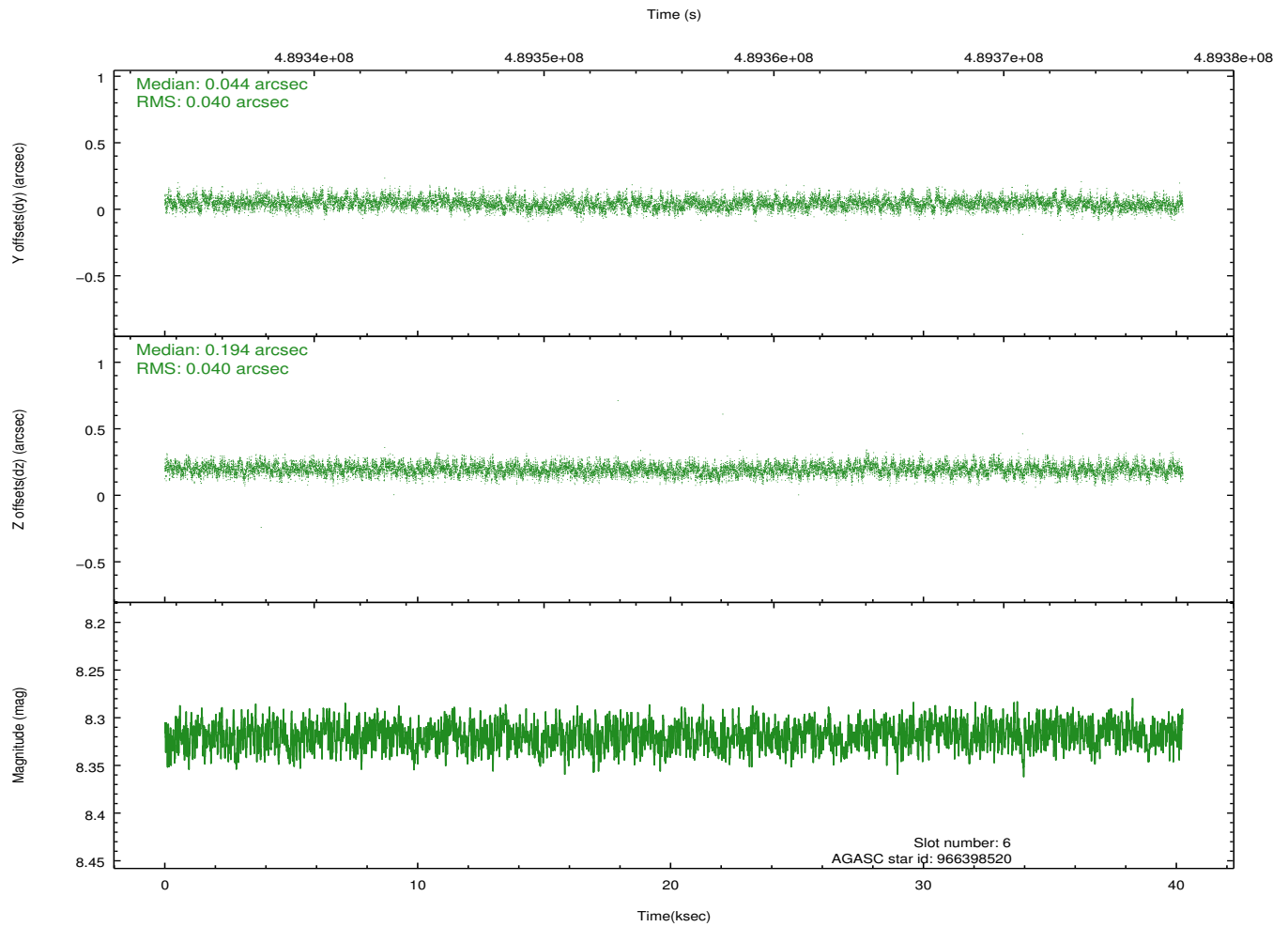
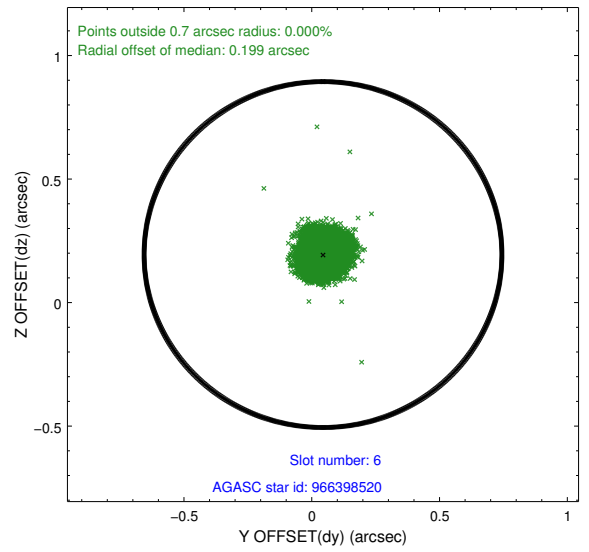
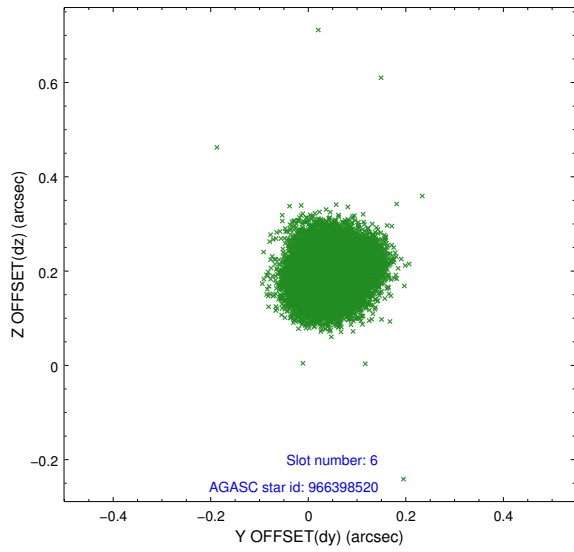
2.4.1 Slot 3



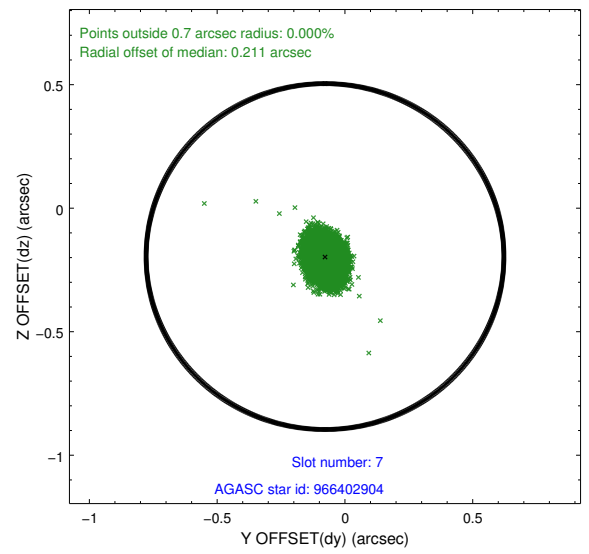
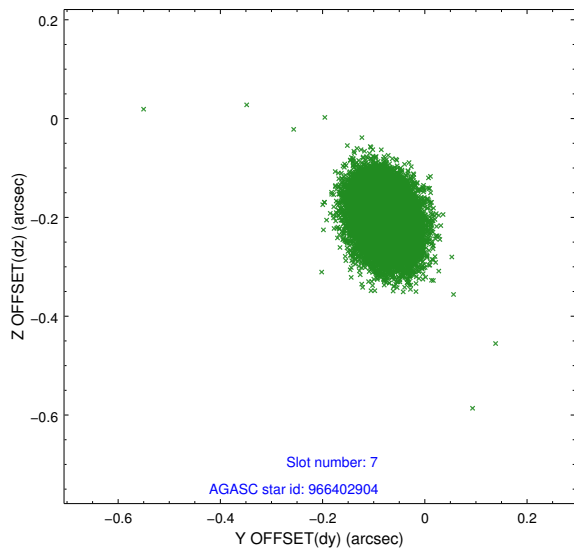
2.4.2 Slot 5



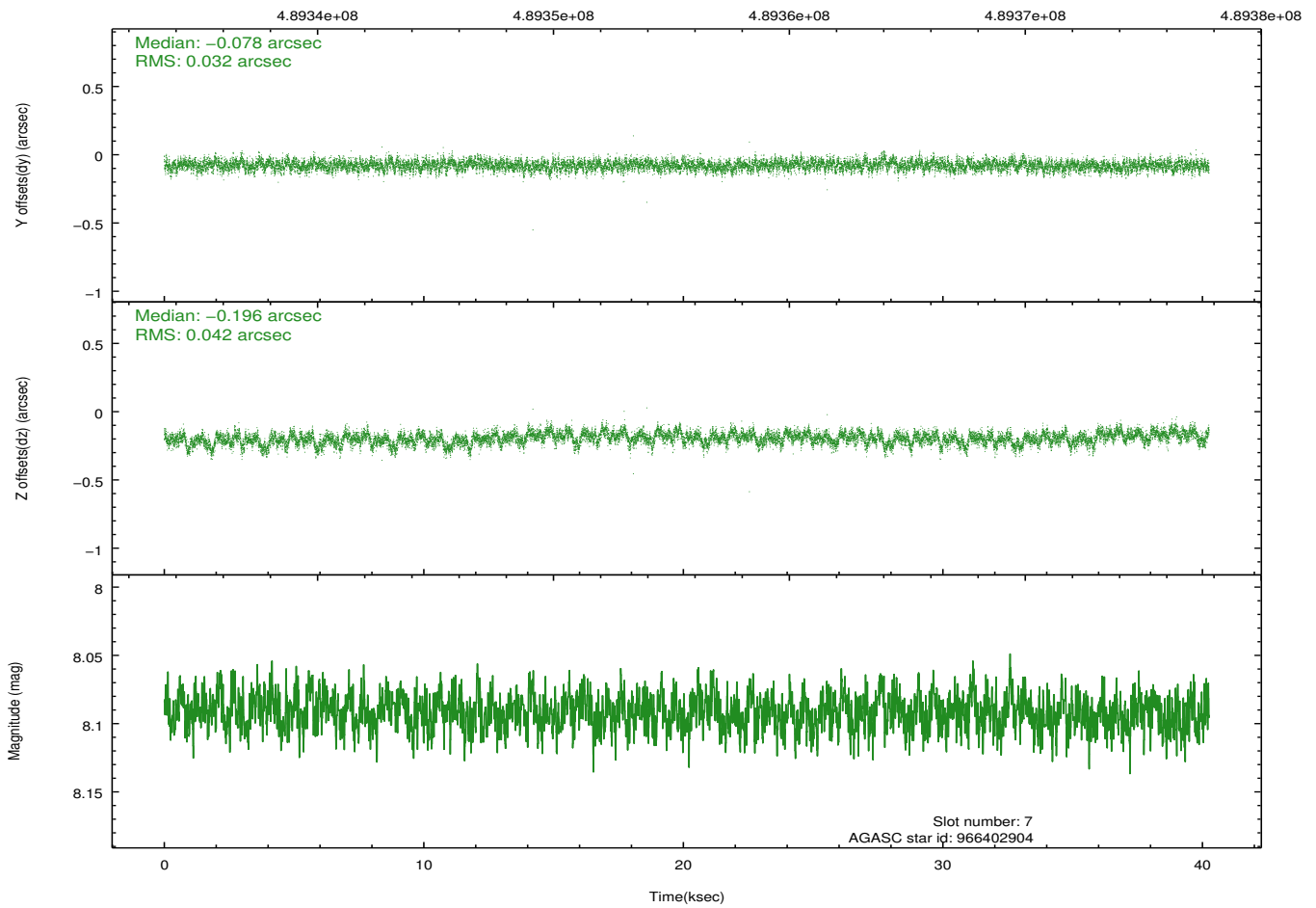
2.4.3 Slot 6



2.4.4 Slot 7

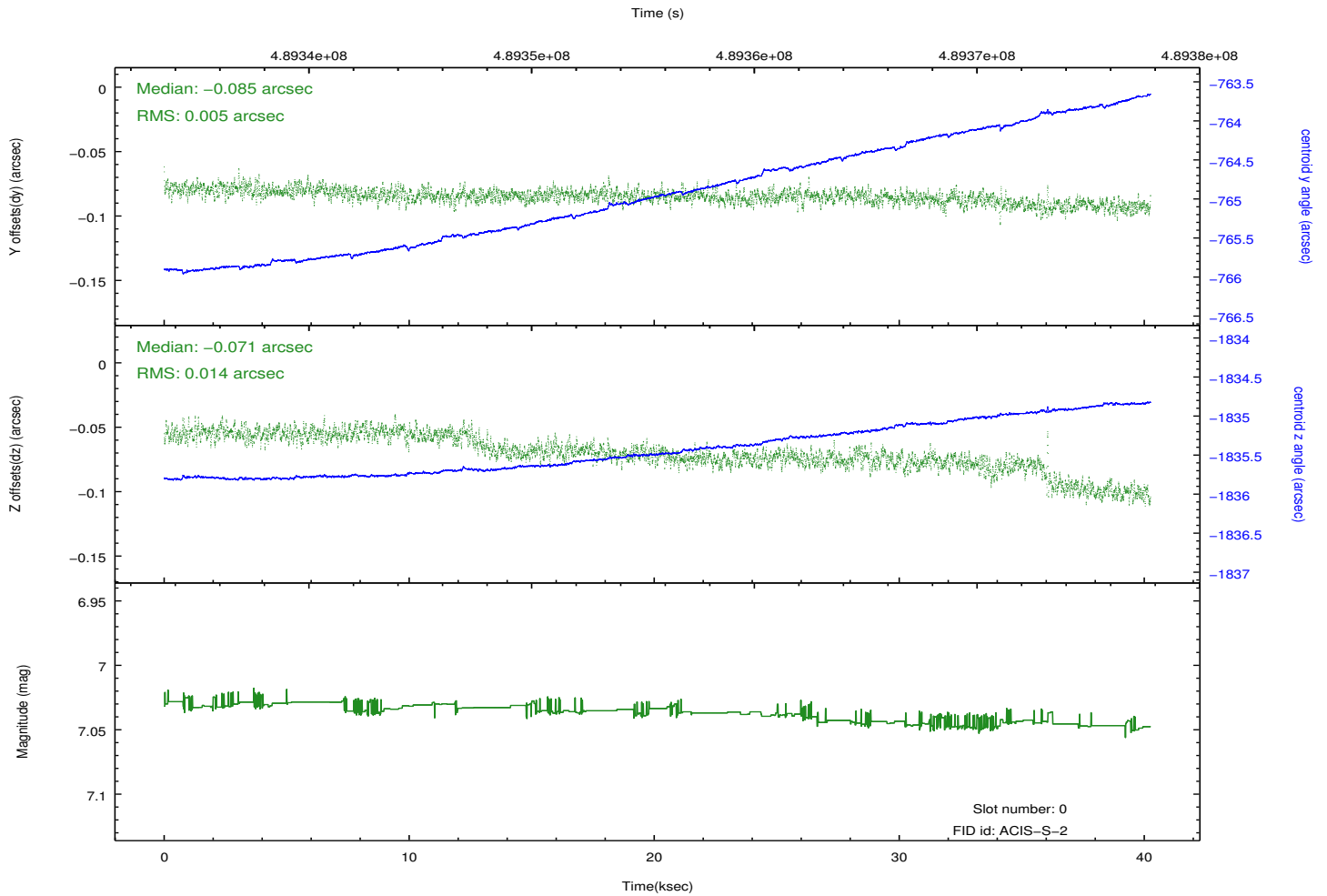
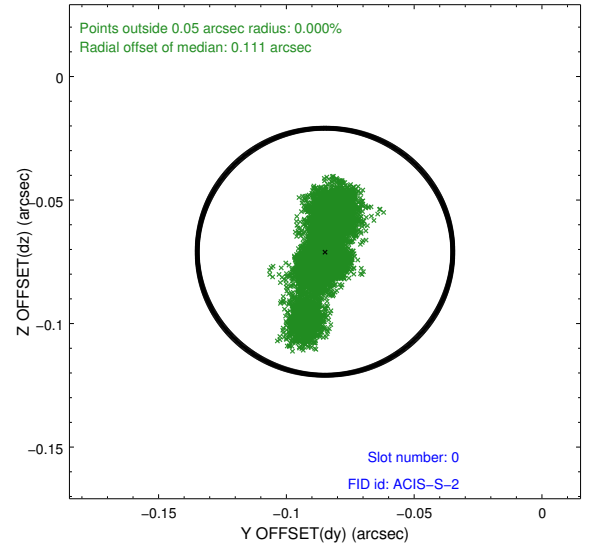
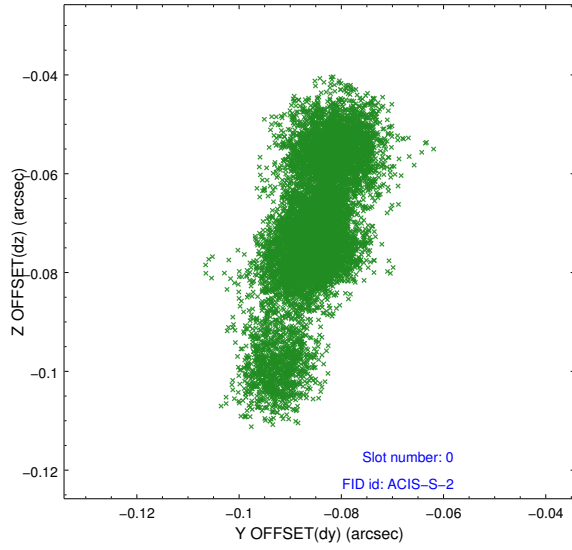


Time (s)

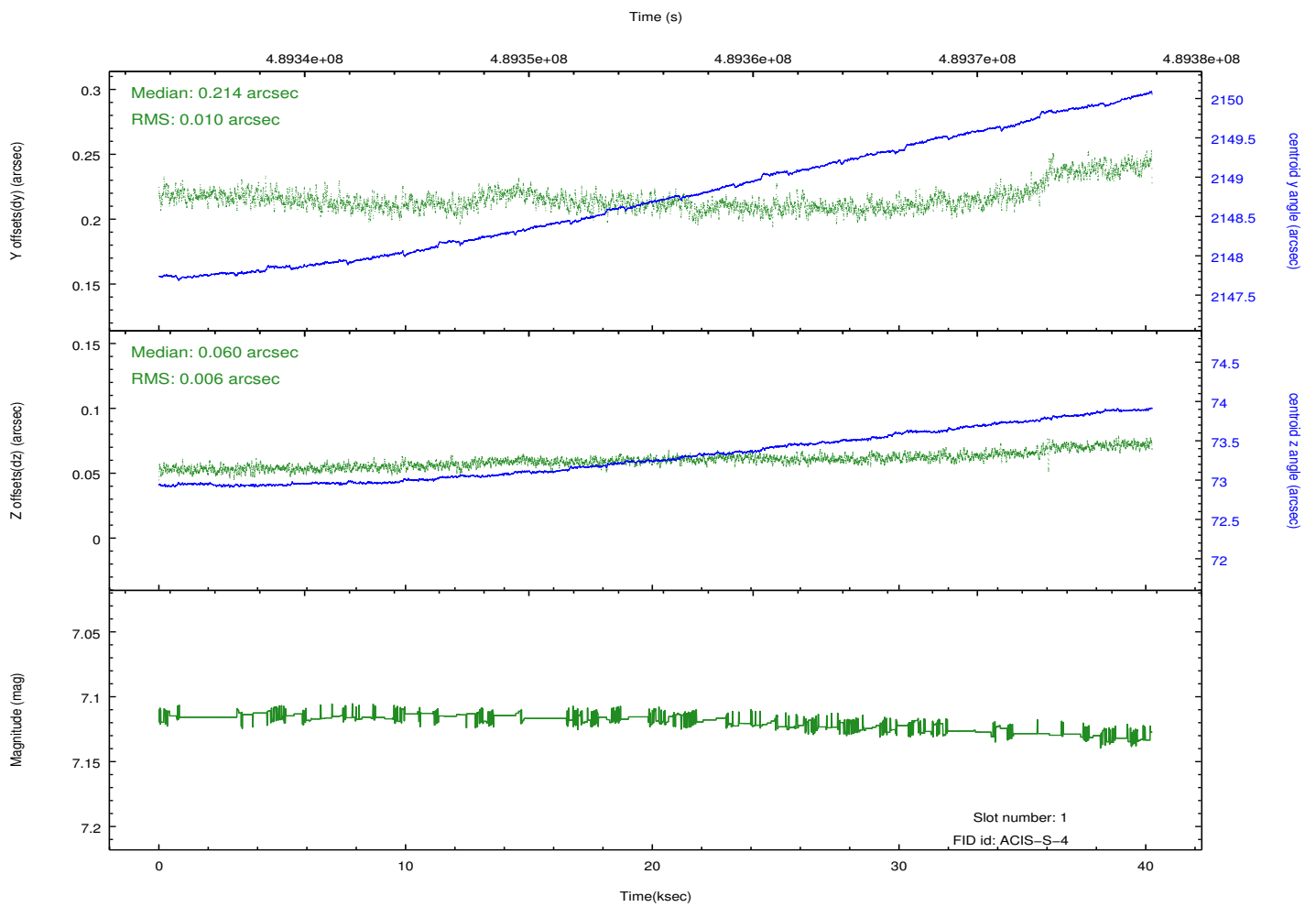
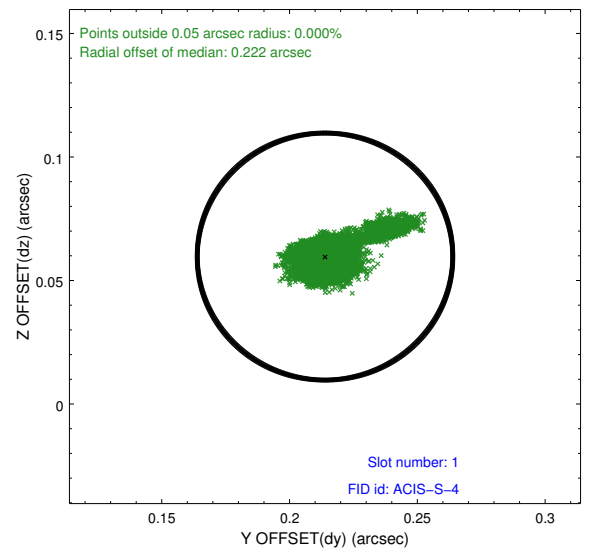
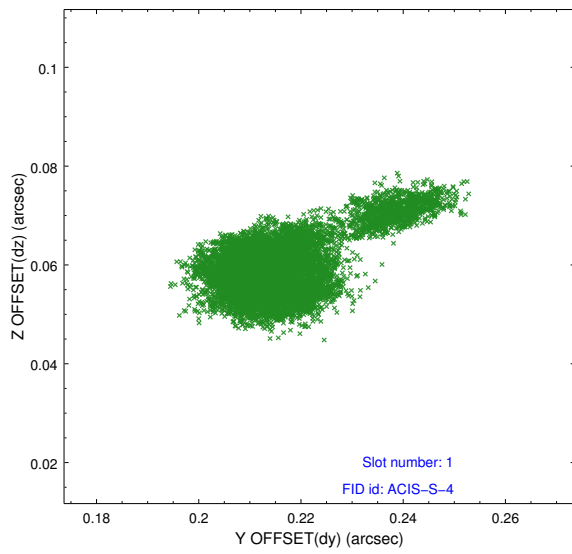


2.5 FID Slots

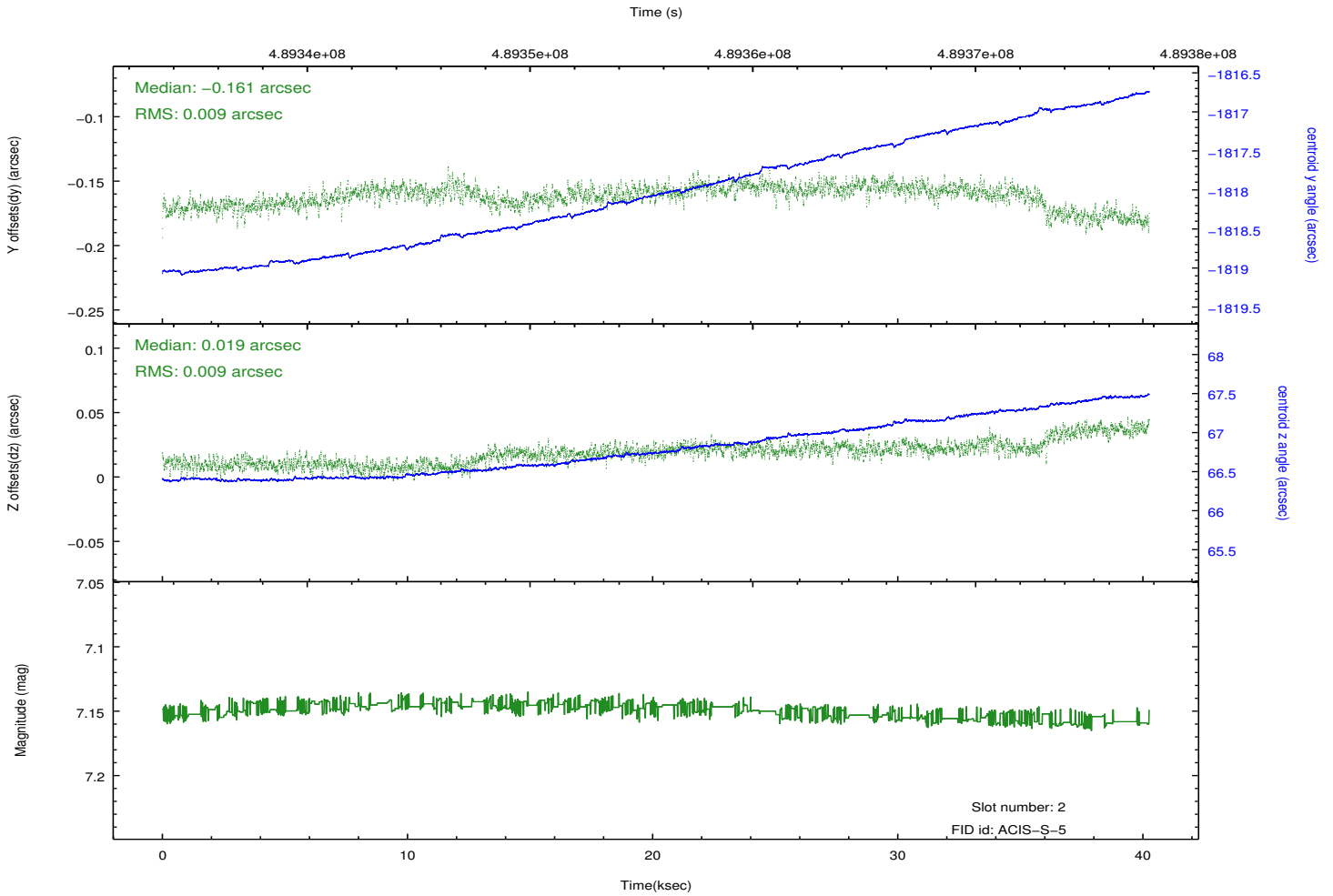
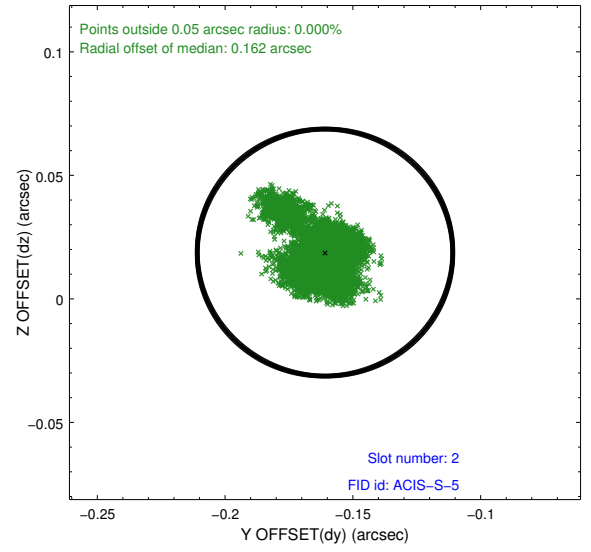
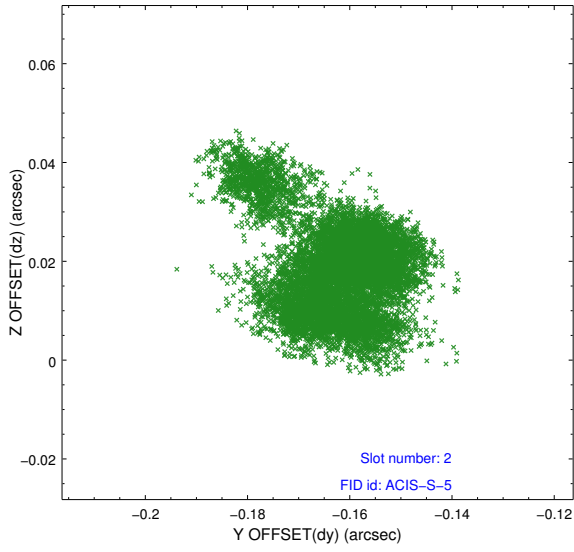
2.5.1 Slot 0



2.5.2 Slot 1

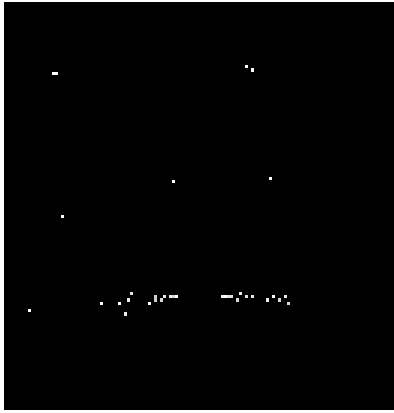


2.5.3 Slot 2

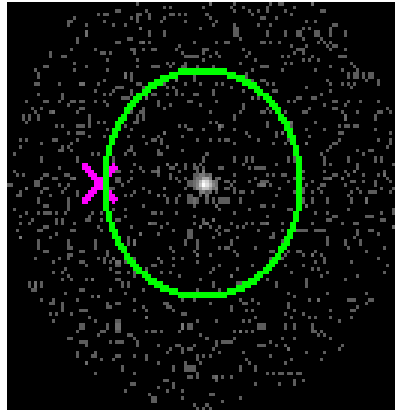


3 Gratings

3.1 HEG Arm



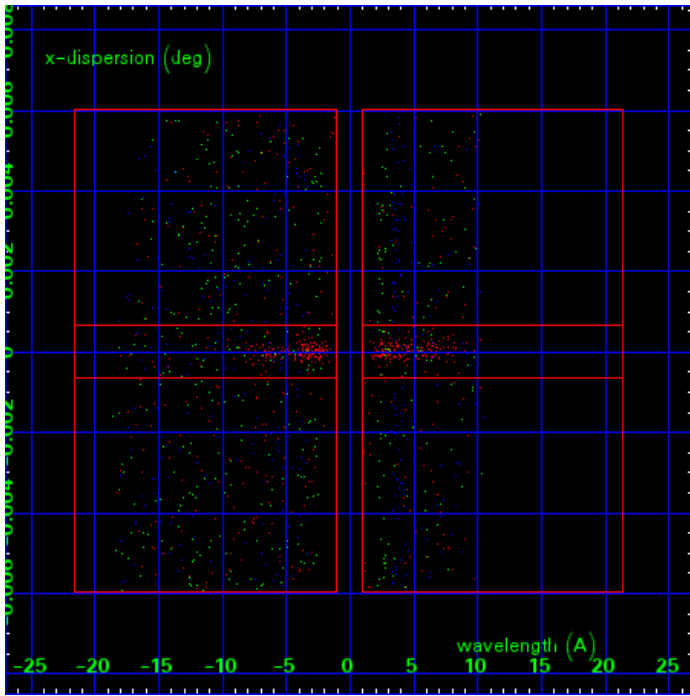
HEG Order Sort 123



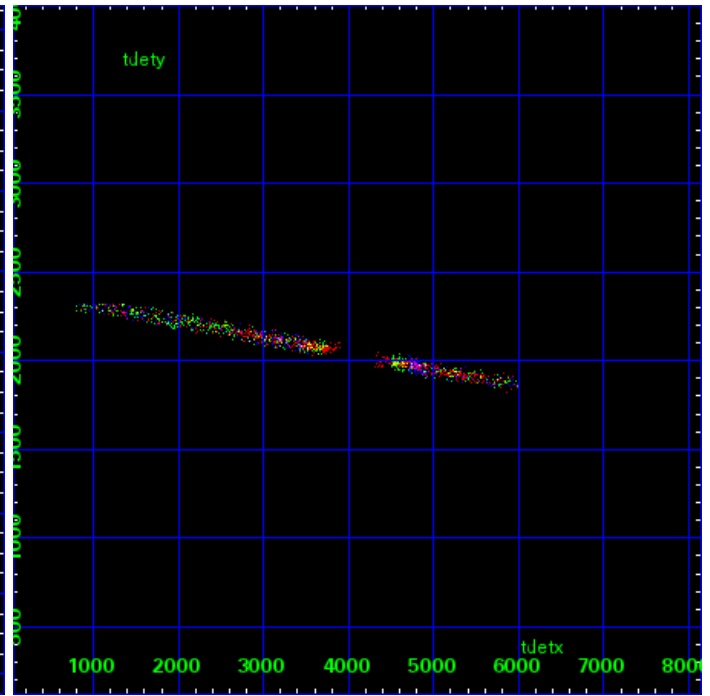
HEG Zero Order



HEG Order Sort ALL

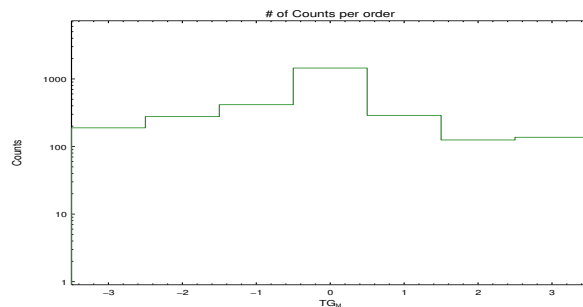


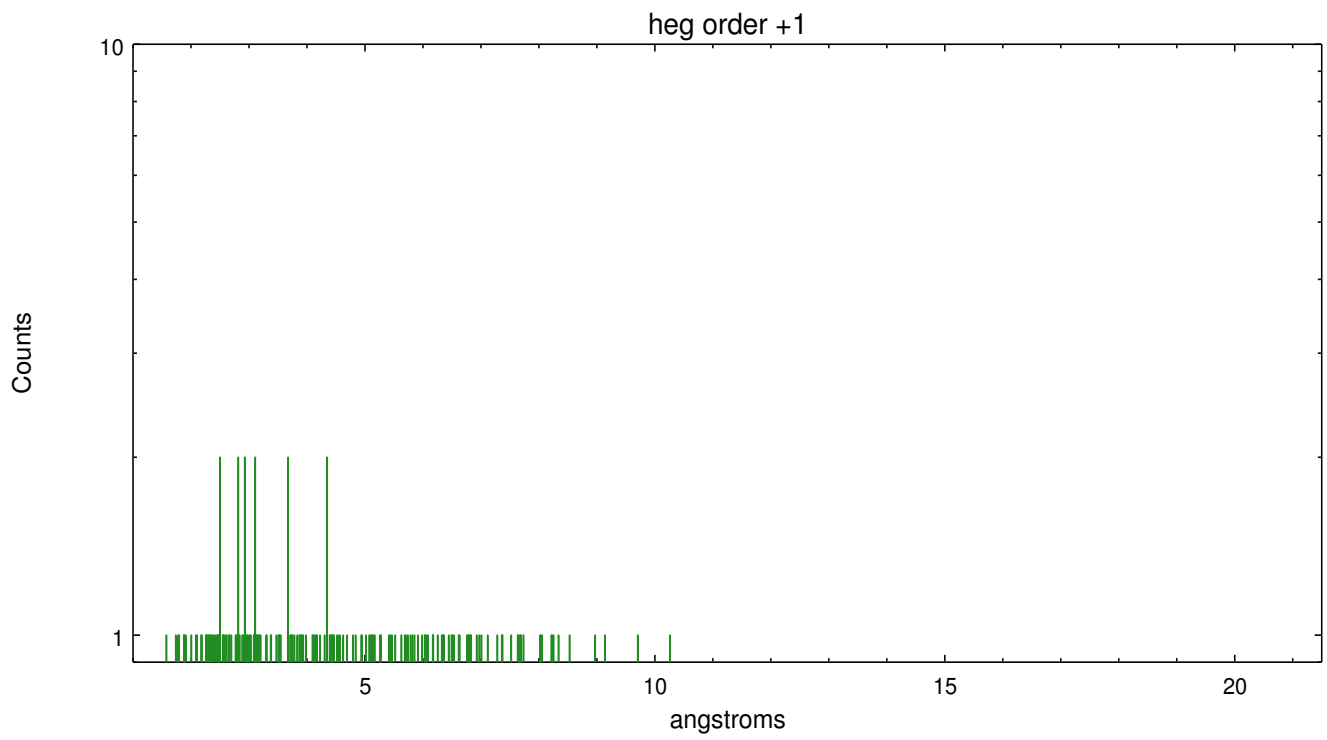
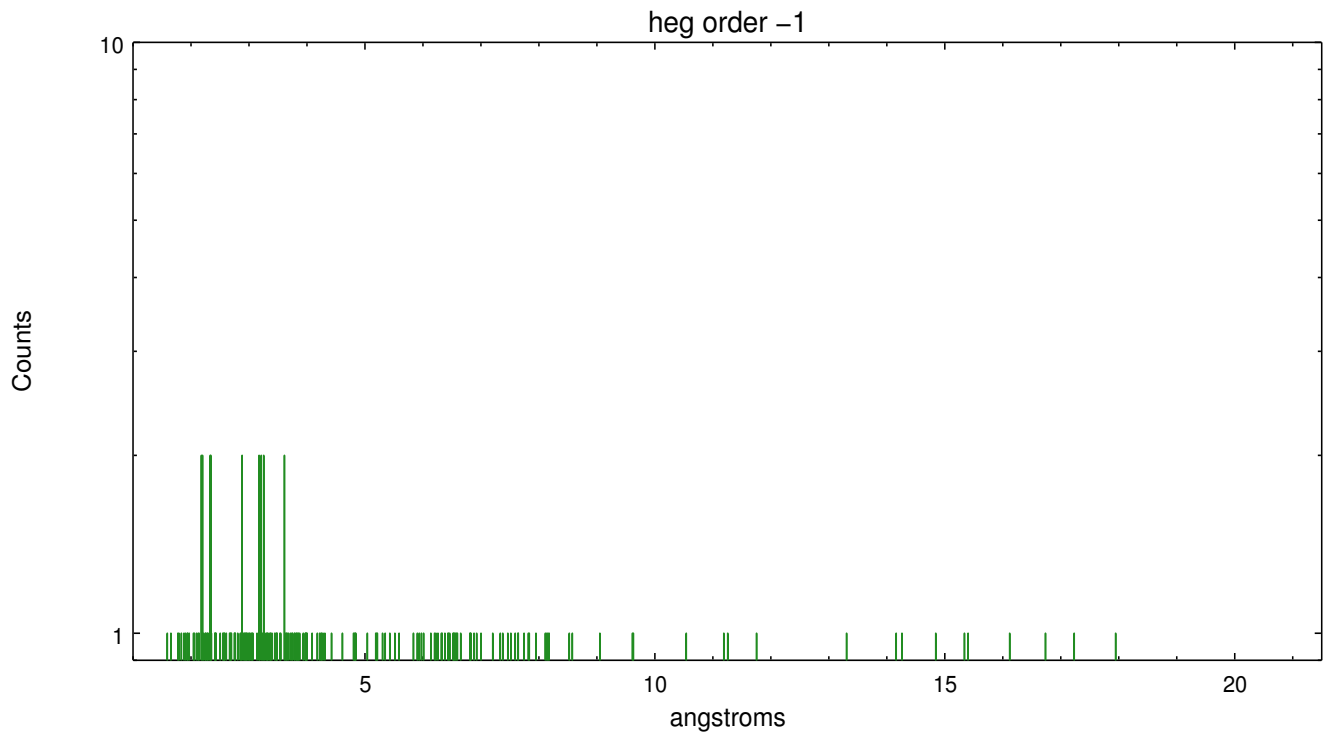
Spot Image HEG



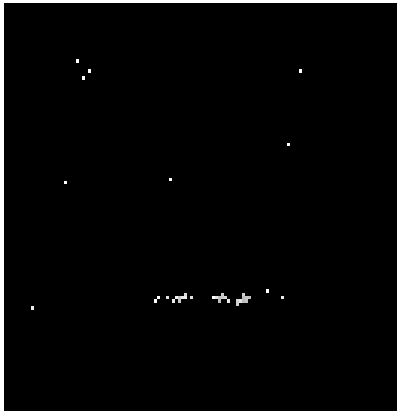
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	189	277	416	1450	289	125	137

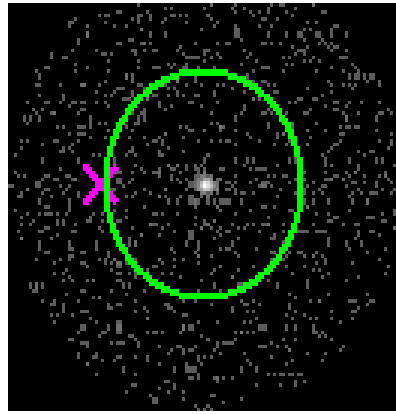




3.2 MEG Arm



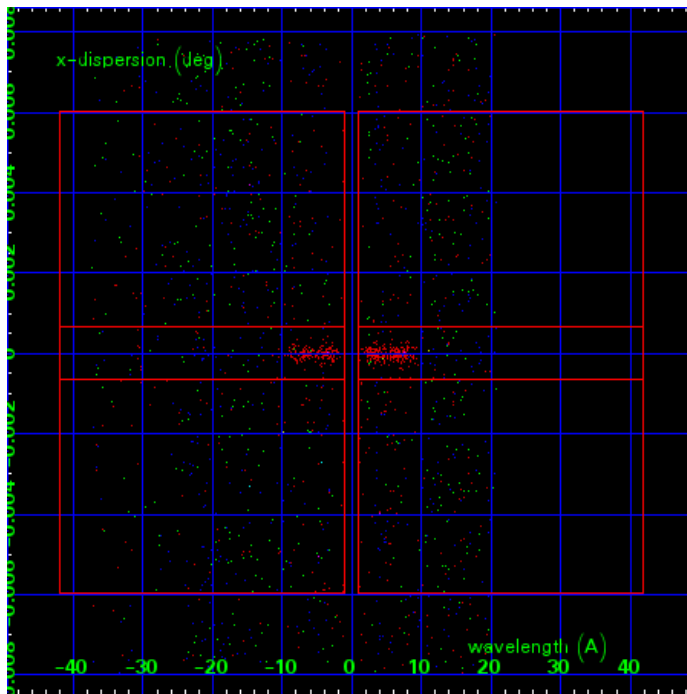
MEG Order Sort 123



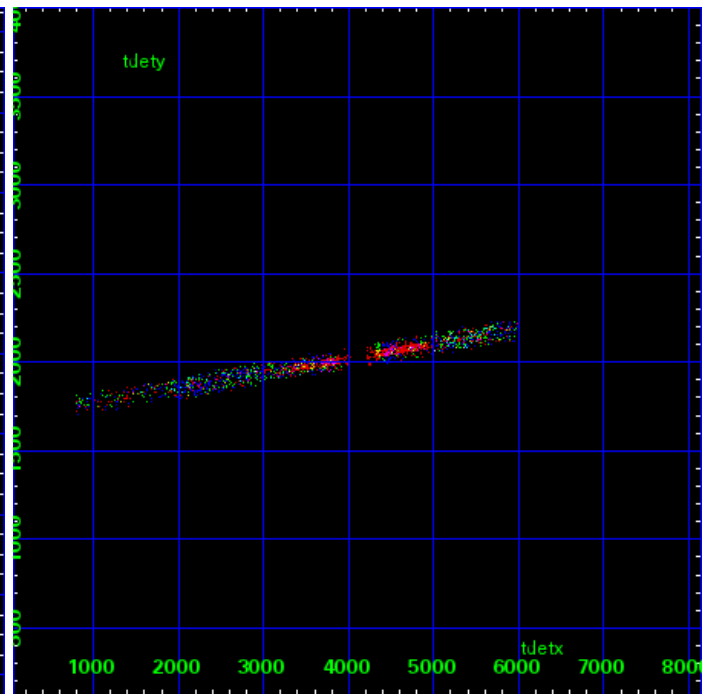
MEG Zero Order



MEG Order Sort ALL

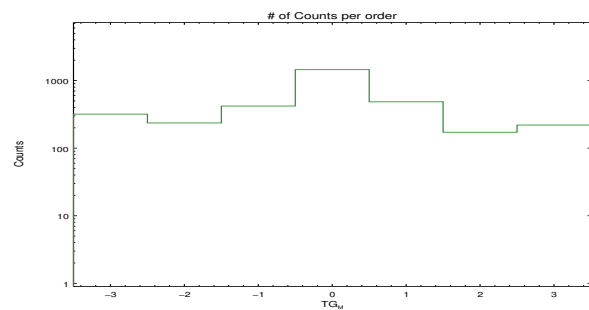


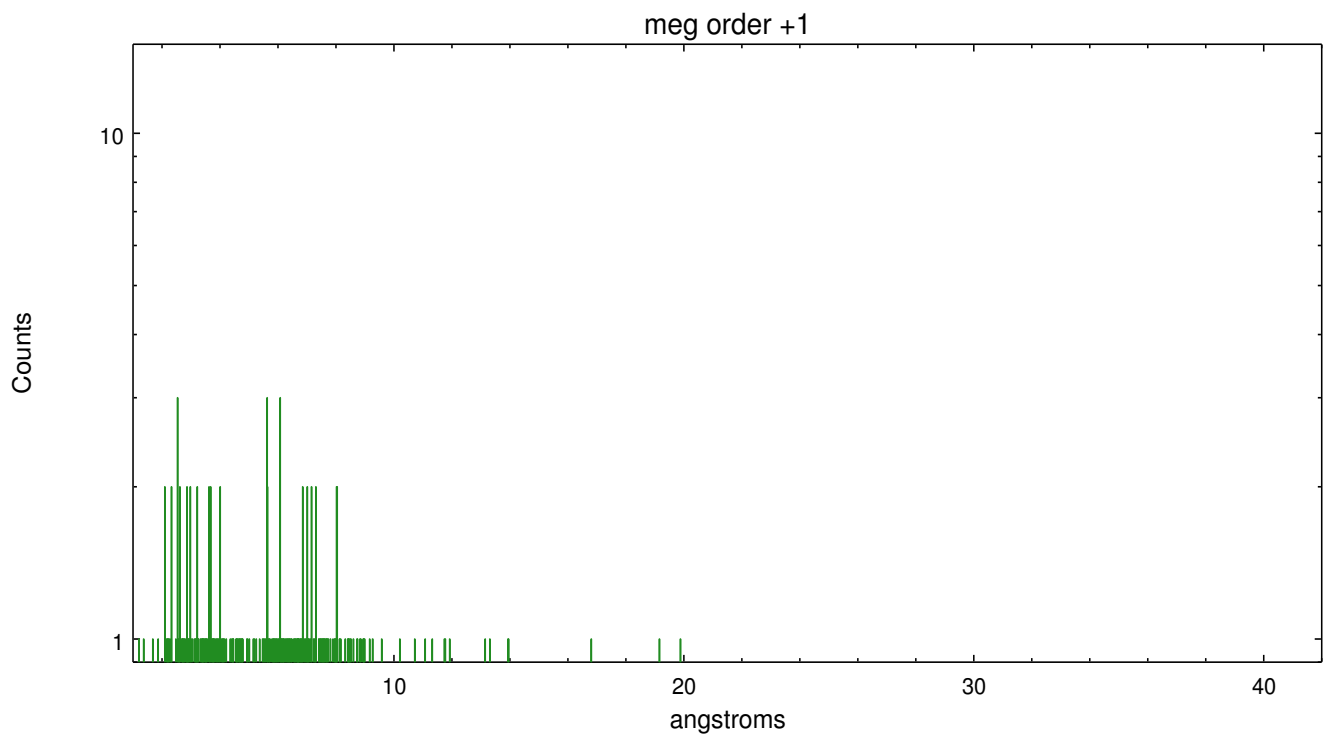
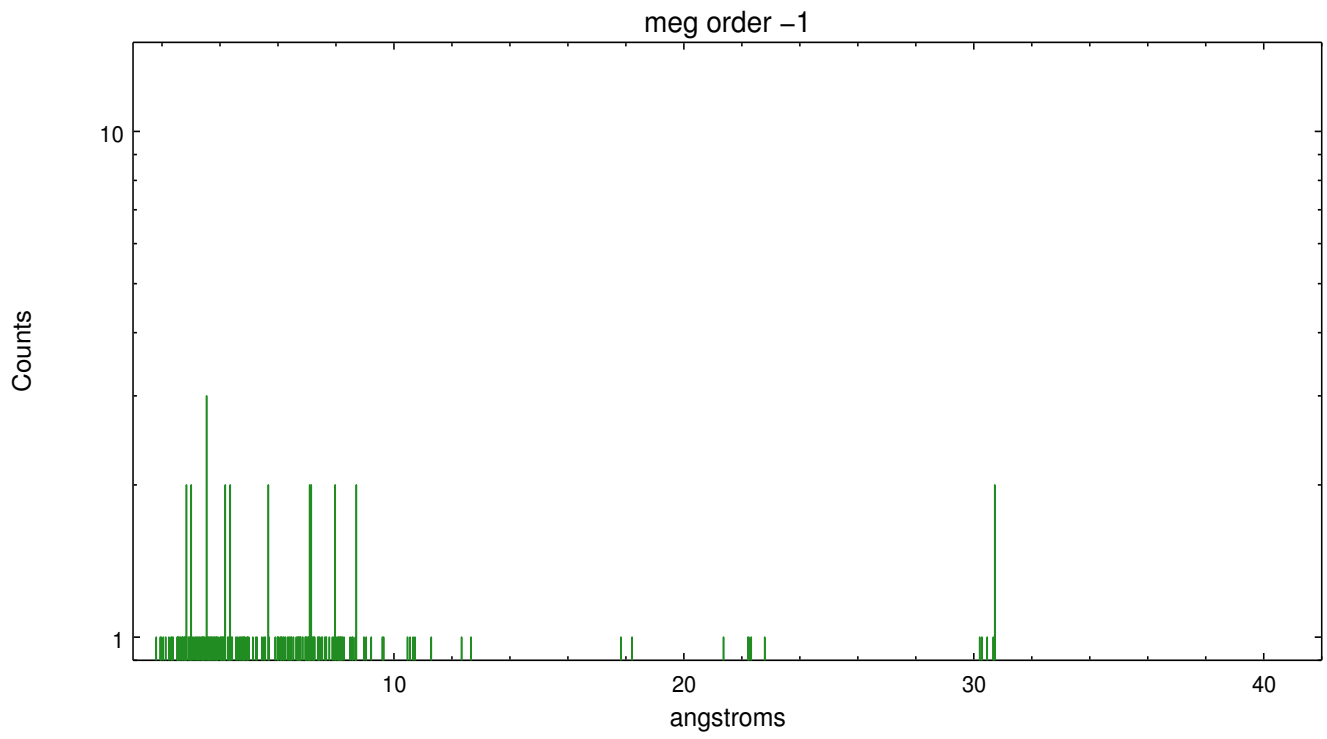
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	319	236	420	1450	485	172	220





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.05.01
V&V Edition	2
V&V Disposition and Status	OK
V&V Charge Time	40.071575930595

A.2 Comments

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.

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These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.