

V&V Reference Report

L2 ASCDS Version : 10.2.4

Observation 16308 - L2 Version 2
Chandra X-Ray Center

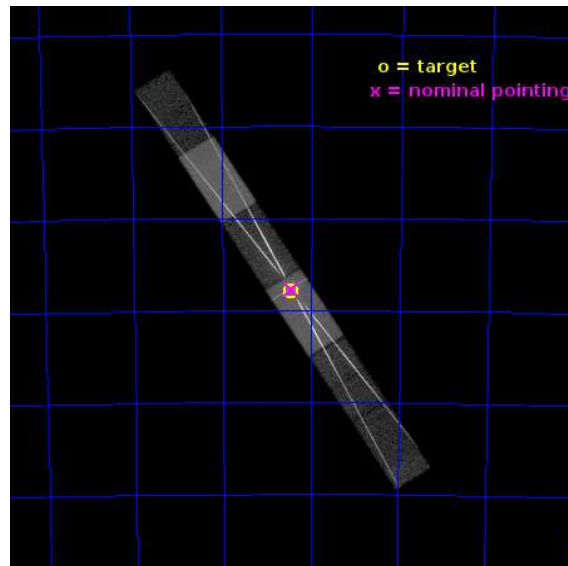
L2 Processing Date : Oct 21 2014

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1 Front

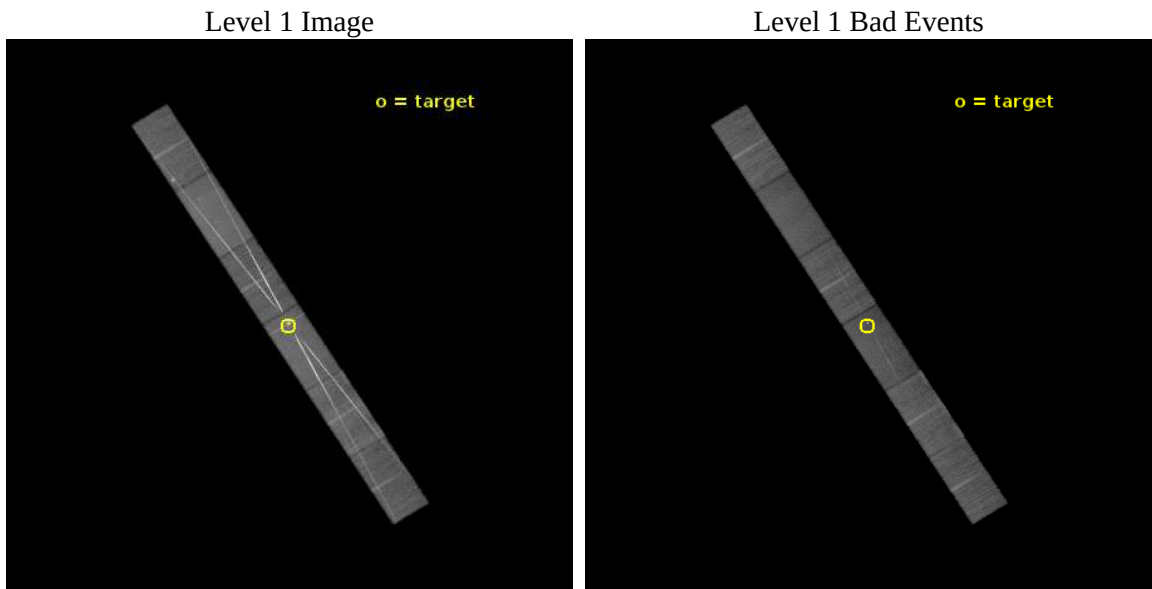
seq_num	901124	Sequence number
obs_id	16308	Observation id
title	HETG Observations of the Extragalactic Z-source LMC X-2	Proposal t
observer	Prof. Claude Canizares	Principal investigator
object	LMC X-2	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	80.116667	Observer's specified target RA [deg]
dec_targ	-71.964806	Observer's specified target Dec [deg]
ra_nom	80.112541746833	Nominal RA [deg]
dec_nom	-71.961964567484	Nominal Dec [deg]
roll_nom	57.701005617476	Nominal Roll [deg]
revision	2	Processing version of data
ontime	40046.899719238	Sum of GTIs [s]
livetime	39102.909480945	Livetime [s]
ontime4	40046.899719238	Sum of GTIs [s]
ontime5	40046.899719238	Sum of GTIs [s]
ontime6	40046.899719238	Sum of GTIs [s]
ontime7	40046.899719238	Sum of GTIs [s]
ontime8	40045.158699095	Sum of GTIs [s]
ontime9	40046.899719238	Sum of GTIs [s]
l2events	680993	Number of level 2 events



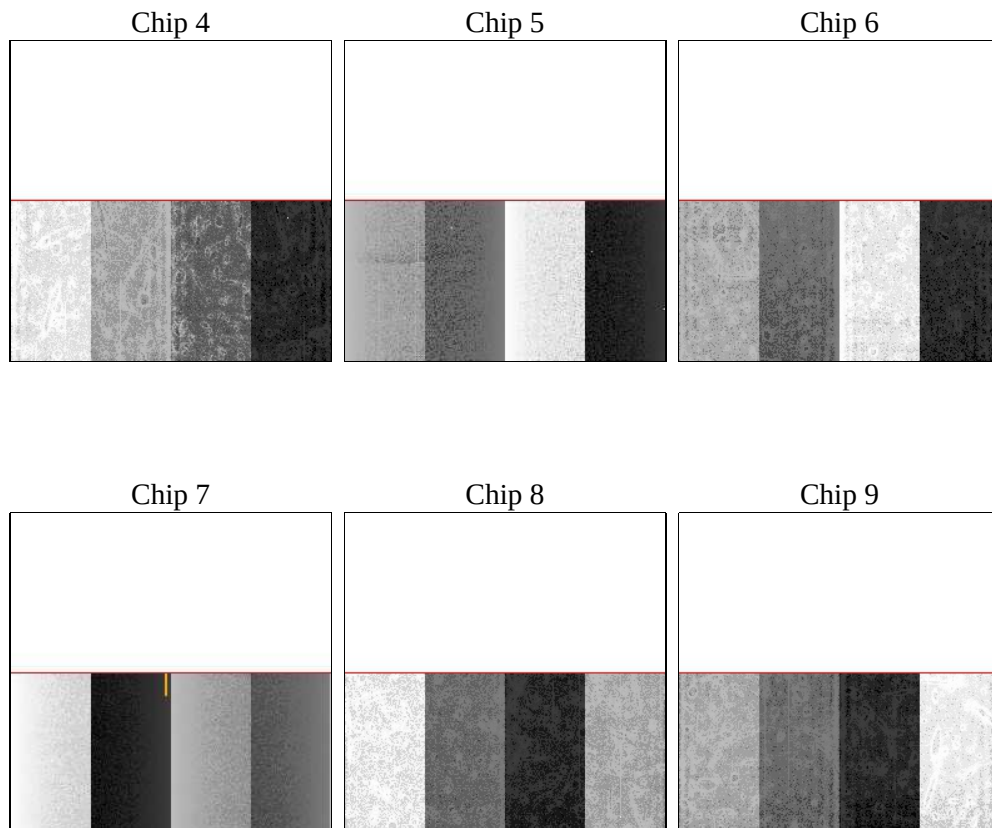
2 OBI

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	10.2.4	Processing system revision	ontime	40046.899719238	Sum of GTIs [s]
caldsver	4.6.3	 	ontime4	40046.899719238	Sum of GTIs [s]
date	2014-10-21T22:27:16	Date and time of file creation	ontime5	40046.899719238	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	40046.899719238	Sum of GTIs [s]
			ontime7	40046.899719238	Sum of GTIs [s]
			ontime8	40045.158699095	Sum of GTIs [s]
			ontime9	40046.899719238	Sum of GTIs [s]
			l1events	1361641	Number of level 1 events
			tgmethod	FINDZO	Method used to create src1a file
			ra_pos	(4085.06 4117.06)	src1a sky pixel position

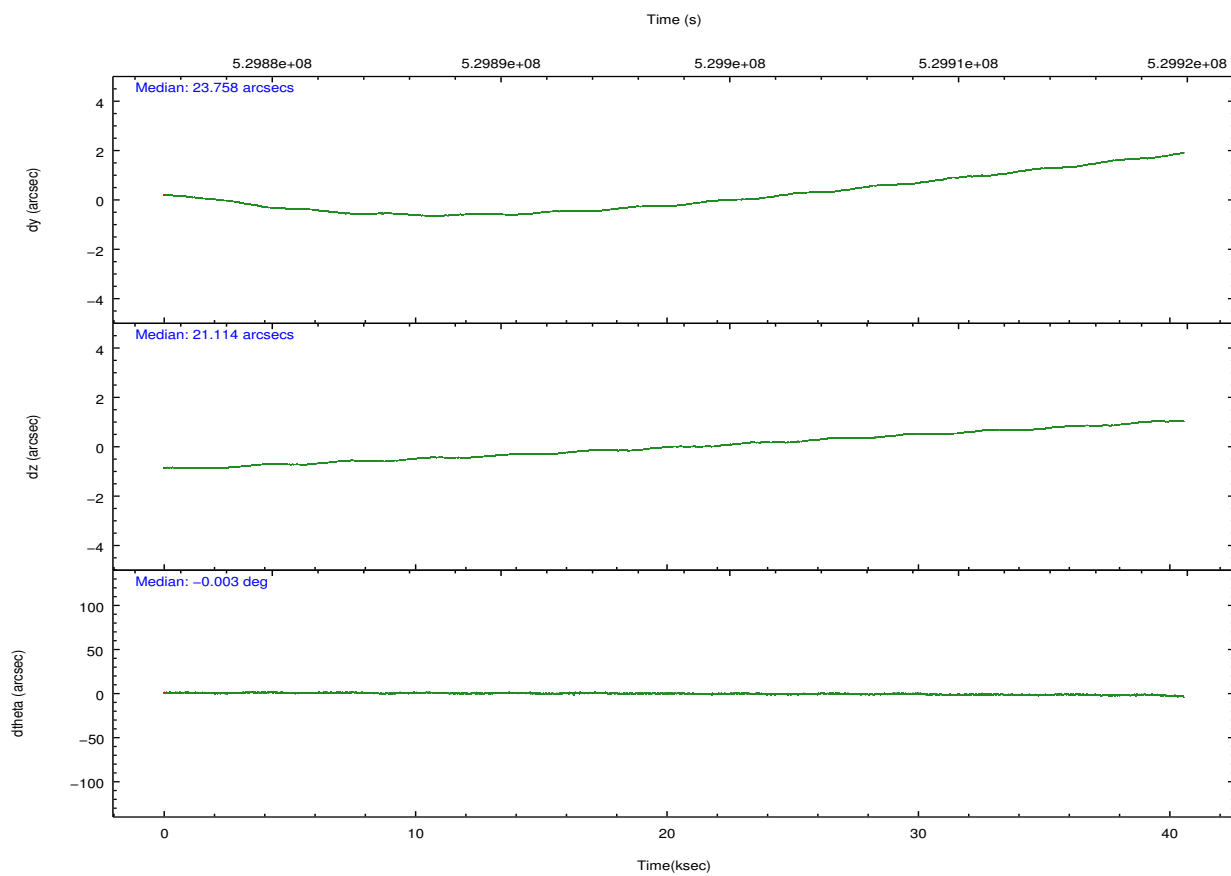
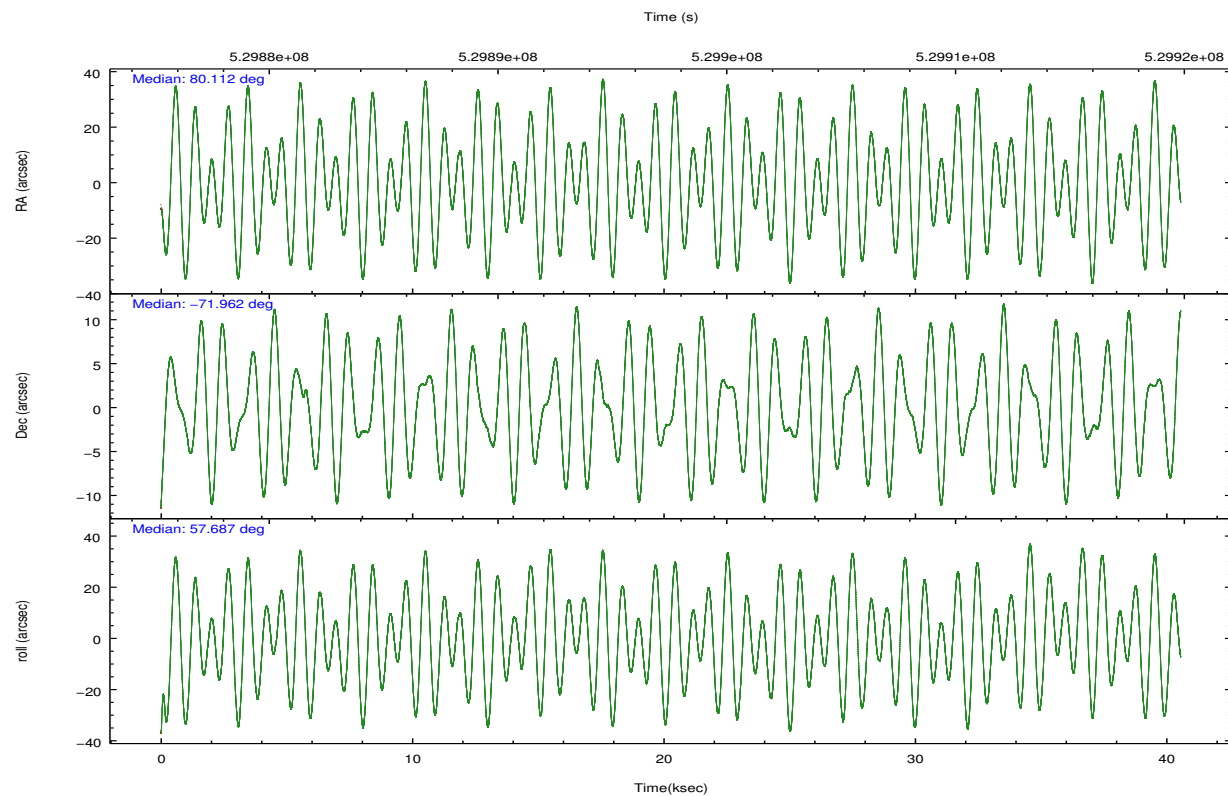
2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	143904	224542	292161	359804	218088	123142	grade 0 events	14897	23018	137255	50526	61976	13437
rejected events	117789	93502	103433	90671	114690	98222		10%	10%	46%	14%	28%	10%
rejected %	81%	41%	35%	25%	52%	79%	grade 1 events	90	369	756	860	259	80
								0%	0%	0%	0%	0%	0%
							grade 2 events	4545	38358	24494	65218	15767	4220
								3%	17%	8%	18%	7%	3%
							grade 3 events	1985	8398	8508	28470	6448	2032
								1%	3%	2%	7%	2%	1%
							grade 4 events	1875	8224	8330	28340	6157	1892
								1%	3%	2%	7%	2%	1%
							grade 5 events	5313	15107	5918	18725	8073	5858
								3%	6%	2%	5%	3%	4%
							grade 6 events	2814	53052	10158	96605	13053	3344
								1%	23%	3%	26%	5%	2%
							grade 7 events	112385	78016	96742	71060	106355	92279
								78%	34%	33%	19%	48%	74%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	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	80.110161	80.11254174683293	CCD I2 on	N	N
[deg] Pointing Dec	-71.989409	-71.96196456748353	CCD I3 on	N	N
[deg] Pointing Roll	57.542119	57.70100561747625	CCD S0 on	O1	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	-183.992523	-183.985022191653	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-6.14	-6.147500391354811	CCD S4 on	Y	Y
[s] Observation start time (MET)	529877829.184000	529876435.76054	CCD S5 on	O2	Y
Observation start date	2014-10-16T20:16:02	2014-10-16T19:53:55	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	529917829.184000	529918491.51288	On-chip summing requested	N	N
Observation end date	2014-10-17T07:22:42	2014-10-17T07:34:51	Subarray requested	CUSTOM	1/2
Read mode	TIMED	TIMED	Subarray start row	1	1
			Subarray row count	512	512
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.7

2.3 Aspect

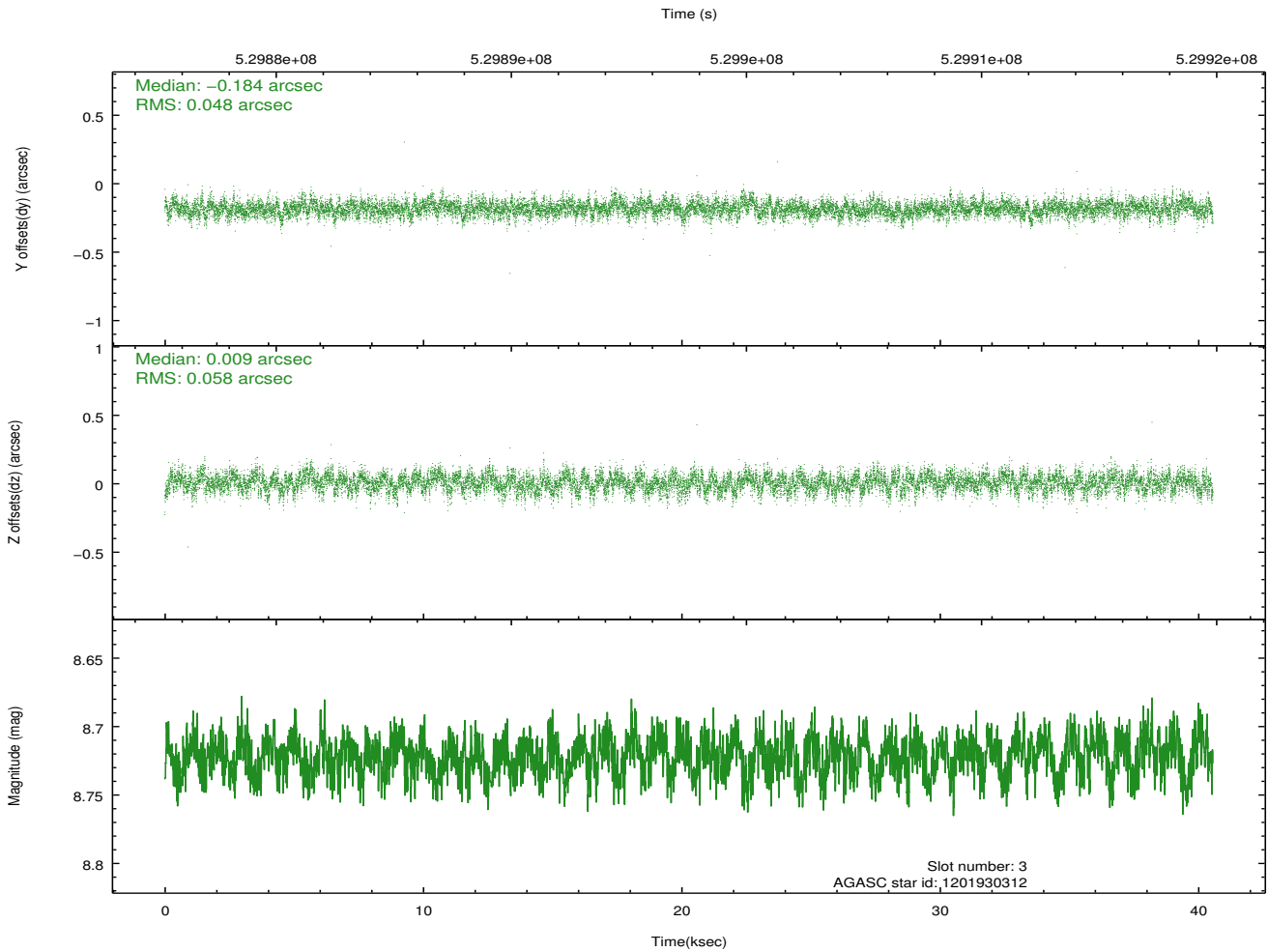
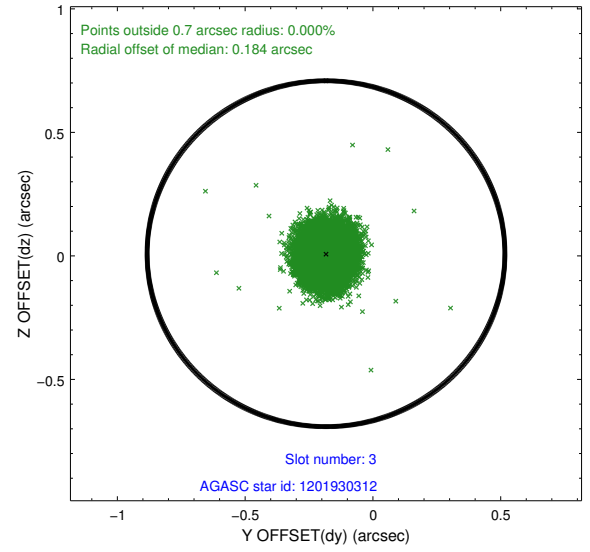
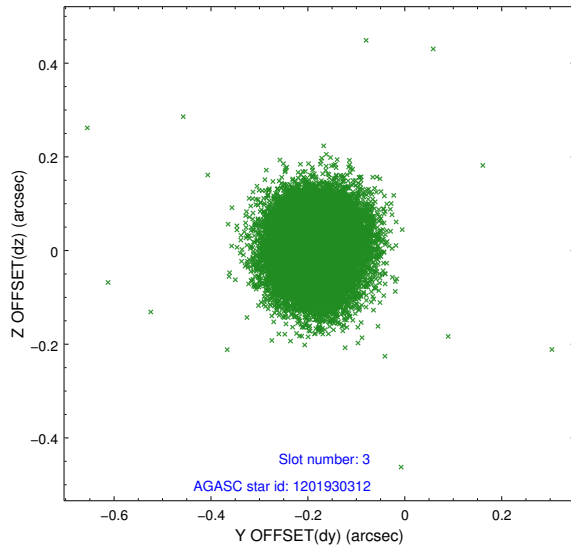


Slot Statistics

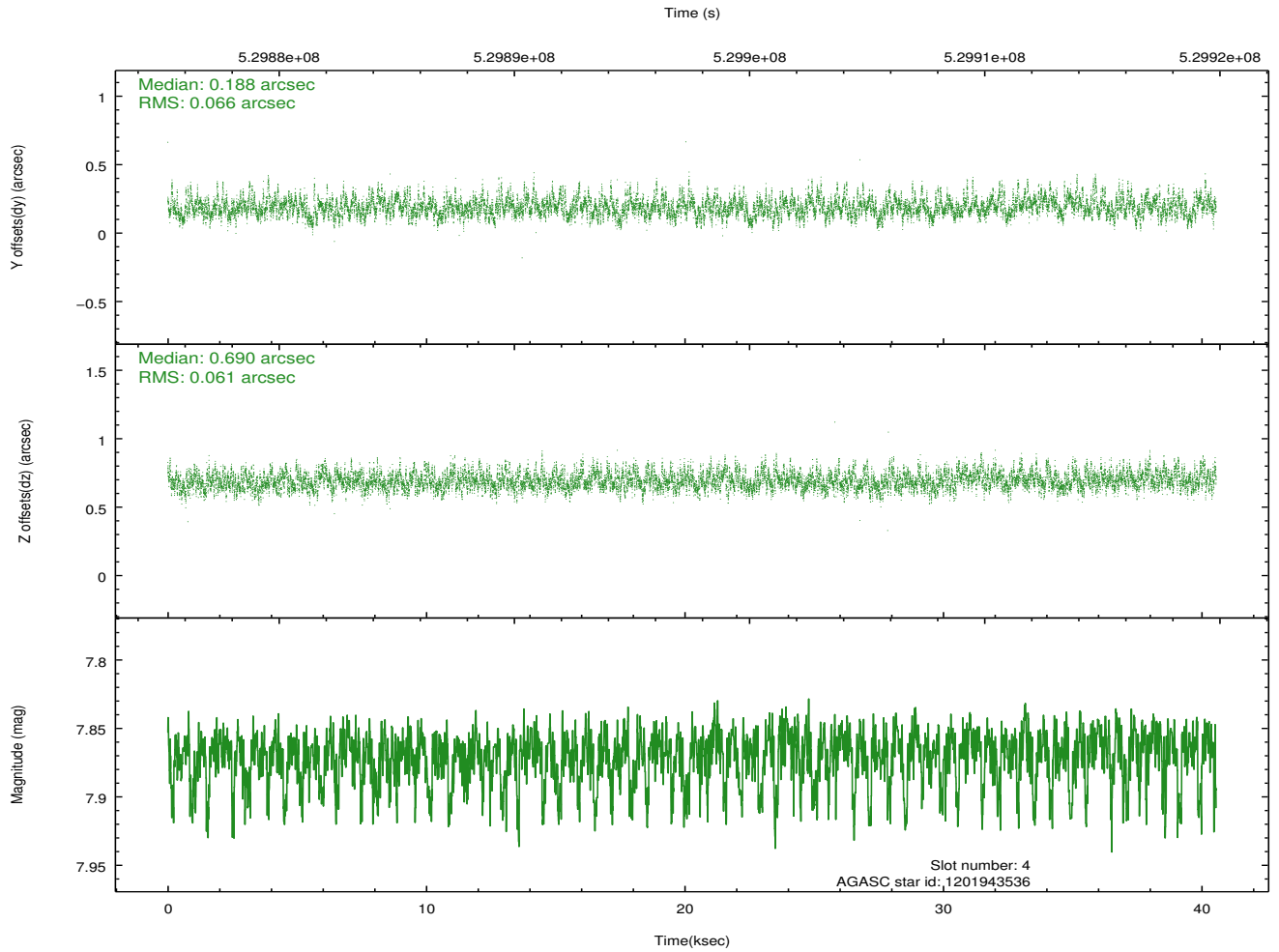
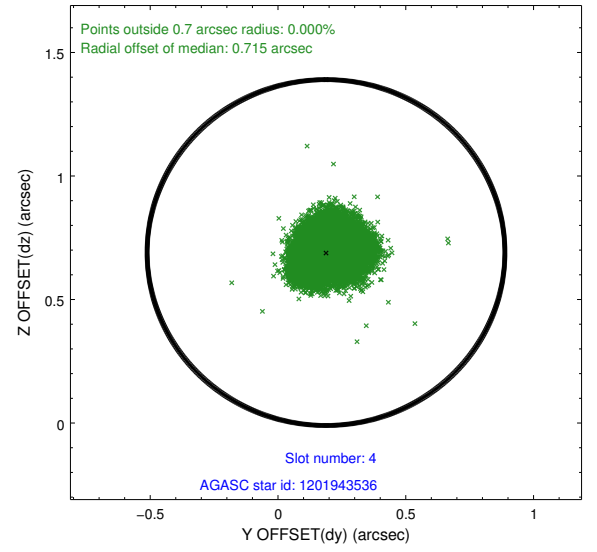
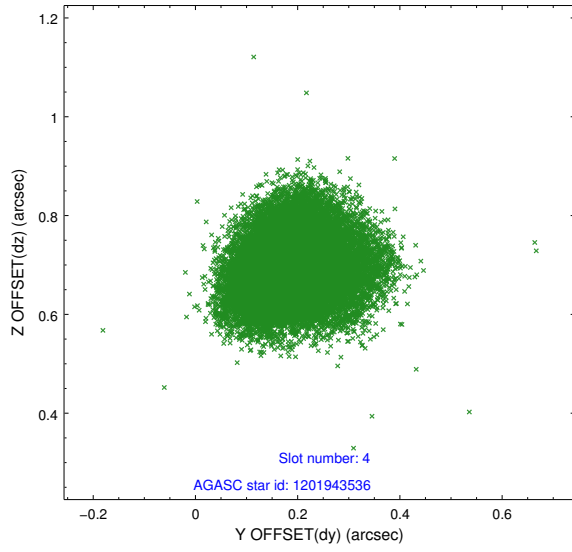
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.00	9894	-0.149	-0.121	0.036	0.077	0.000000	0.000000	-776.92	-1869.49
1	FID	ACIS-S-4	7.08	9894	0.390	0.108	0.038	0.051	0.000000	0.000000	2136.93	39.14
2	FID	ACIS-S-5	7.13	9893	-0.264	0.027	0.029	0.066	0.000000	0.000000	-1829.83	32.79
3	GUIDE	1201930312	8.72	19779	-0.184	0.009	0.079	0.129	78.507699	-72.037488	-1120.55	1395.43
4	GUIDE	1201943536	7.87	19783	0.188	0.690	0.095	0.155	80.686918	-72.338612	-724.11	-1206.96
5	GUIDE	1201947296	7.78	19779	0.356	-0.263	0.086	0.134	80.605426	-71.506504	1769.34	454.96
6	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
7	GUIDE	1201948040	8.31	19786	-0.363	-0.436	0.079	0.129	78.573490	-71.502940	516.87	2408.64

2.4 Star Slots

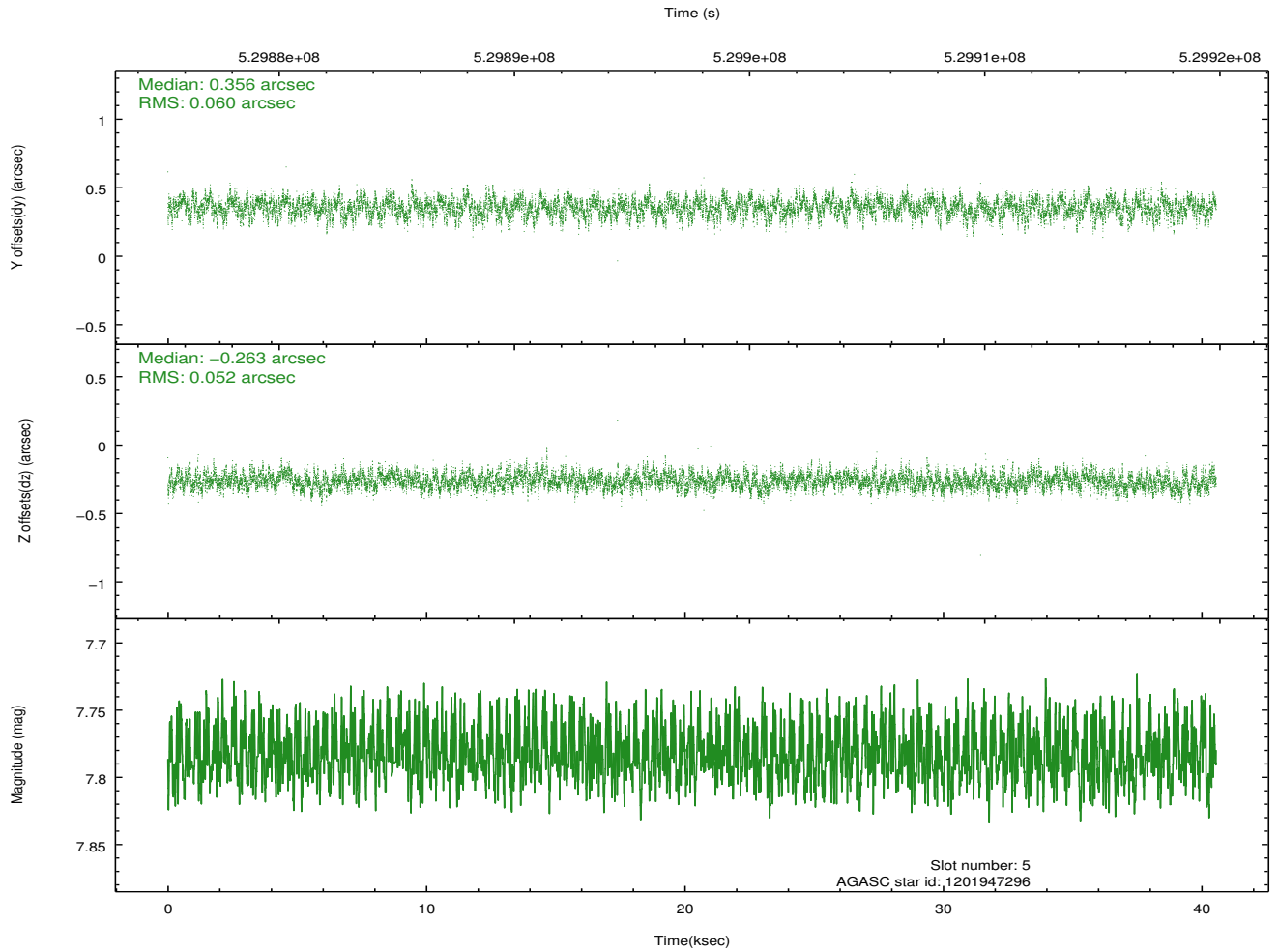
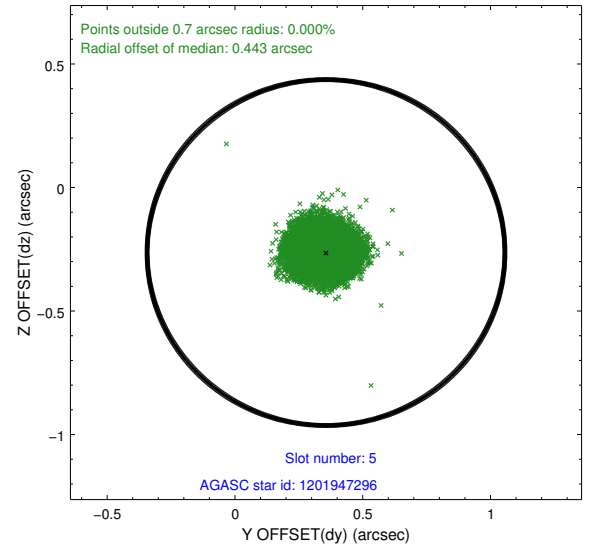
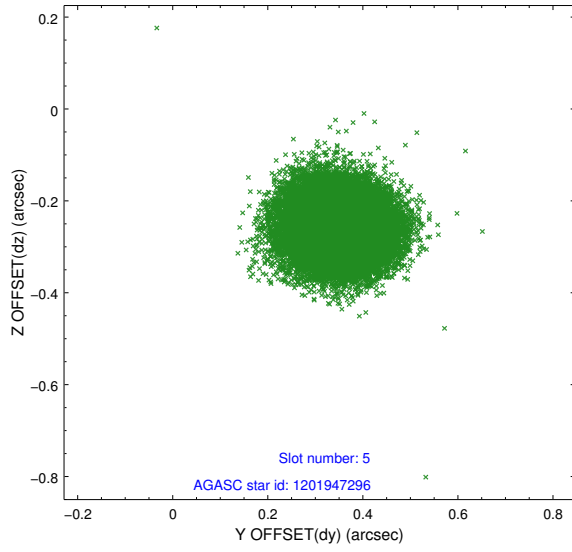
2.4.1 Slot 3



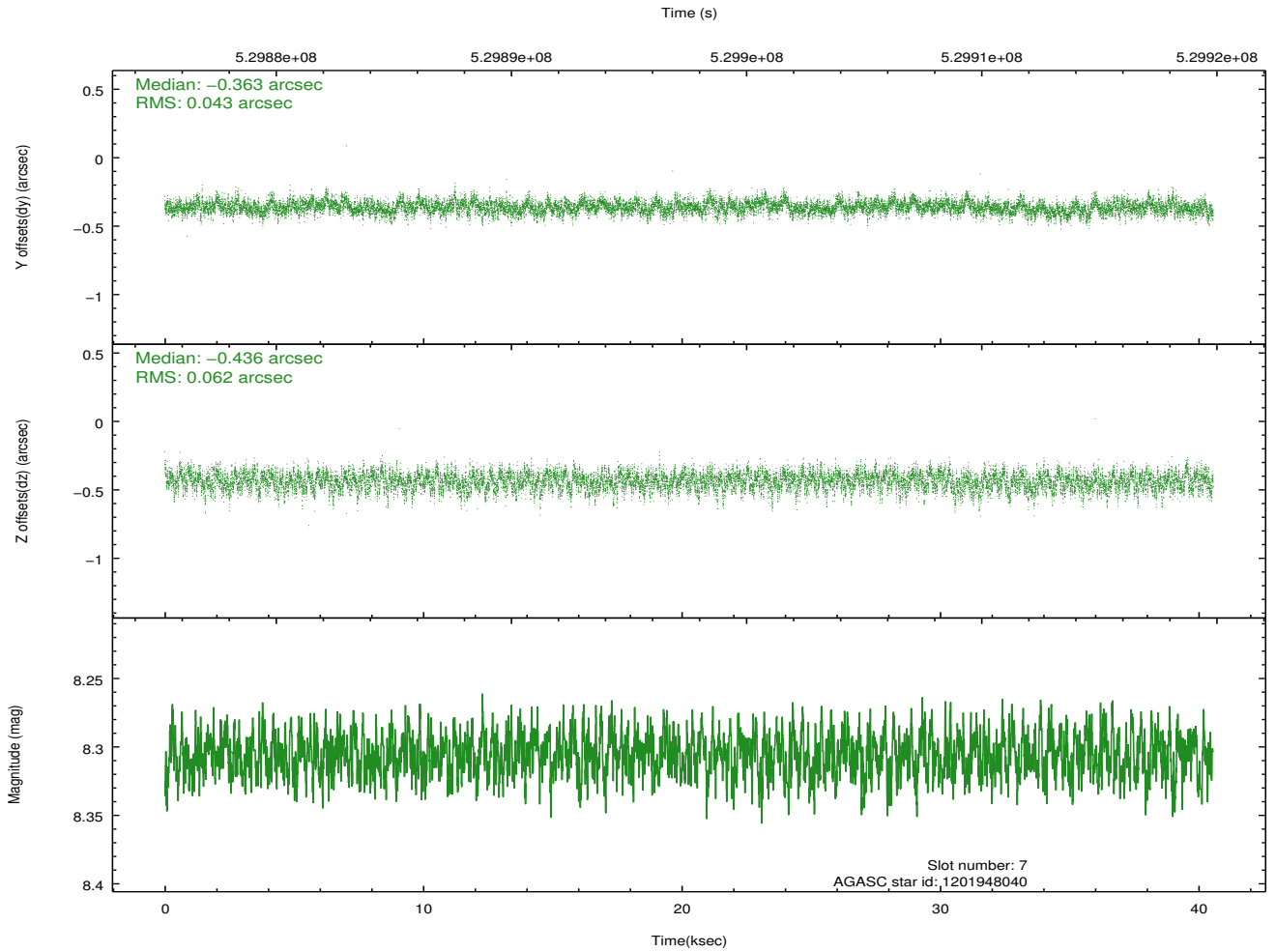
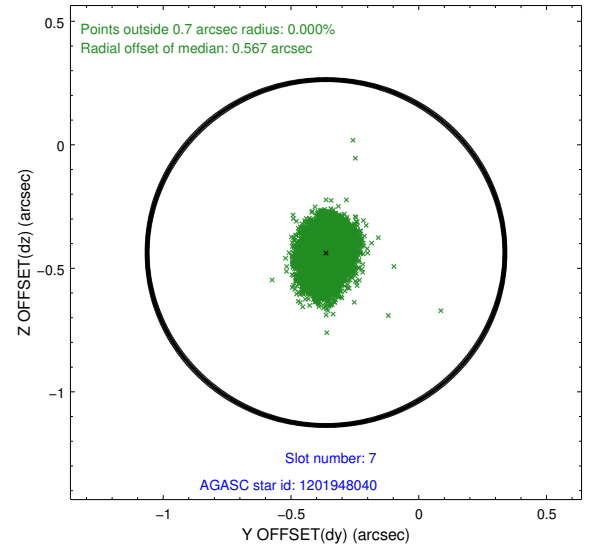
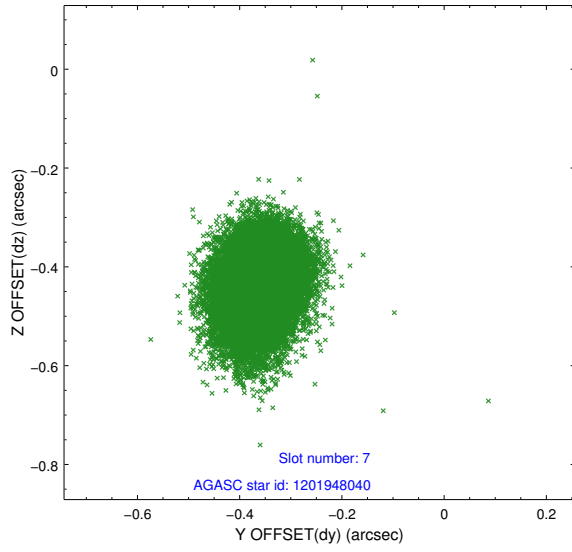
2.4.2 Slot 4



2.4.3 Slot 5

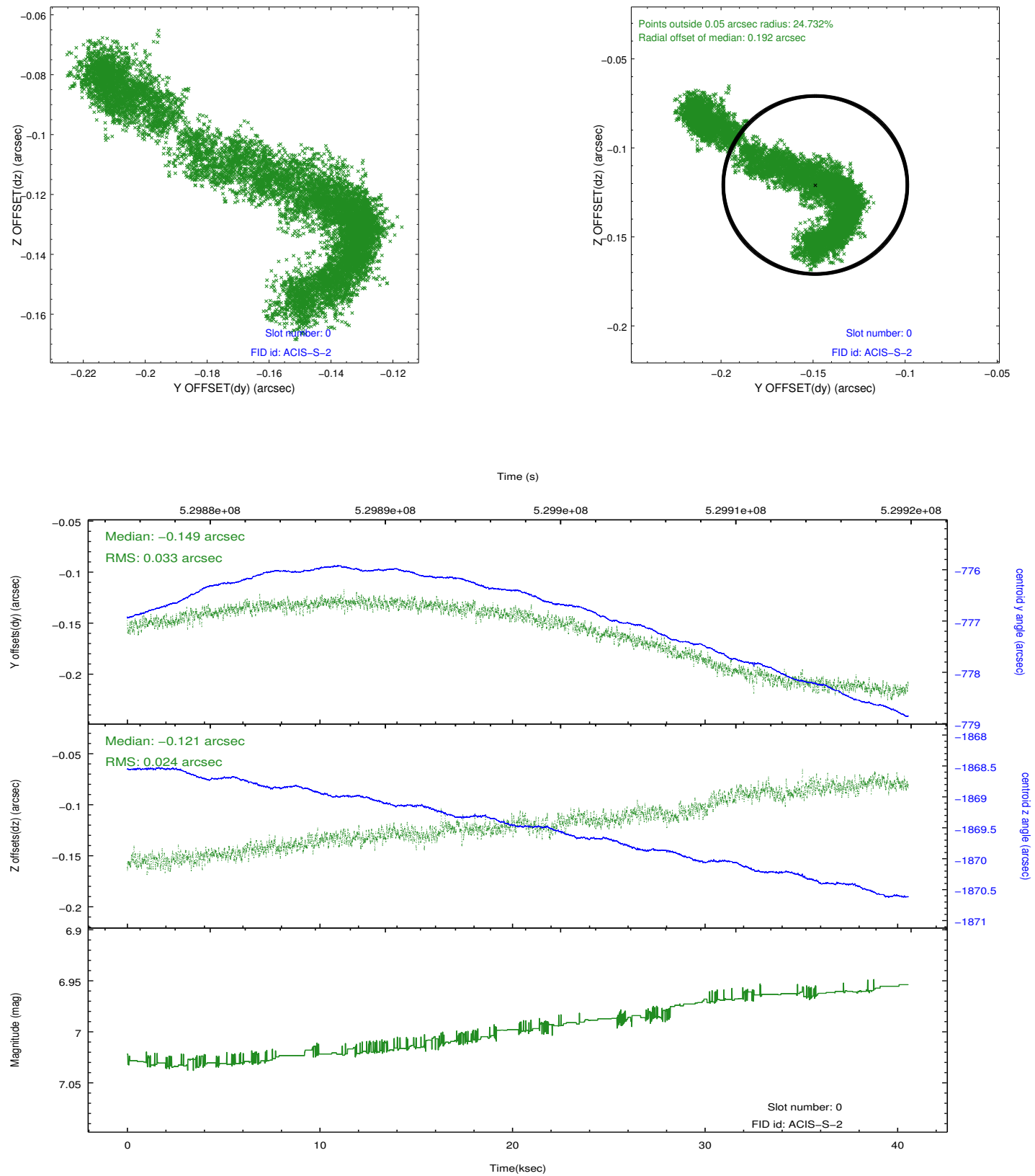


2.4.4 Slot 7

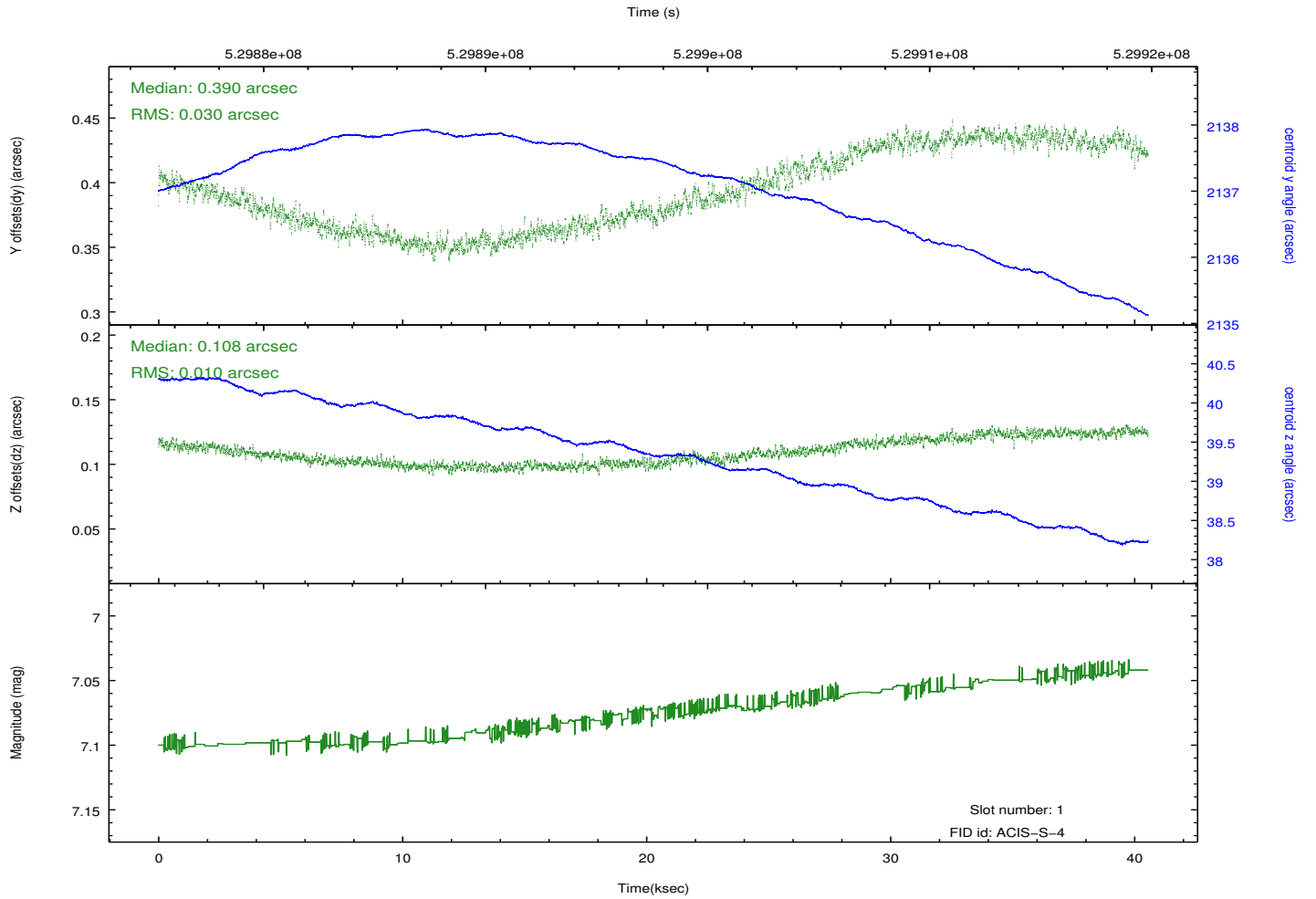
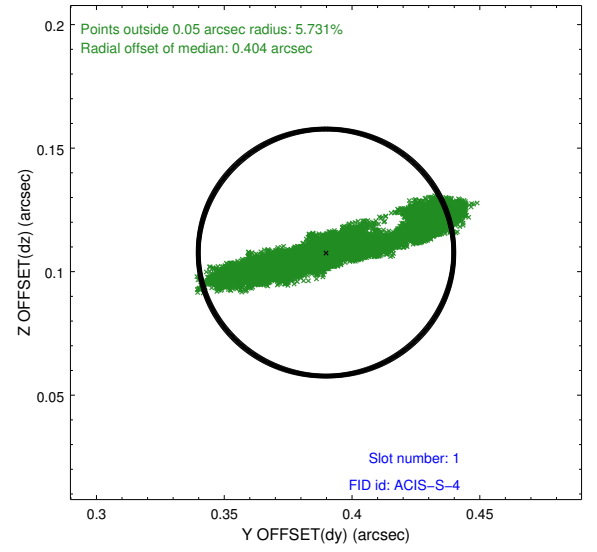
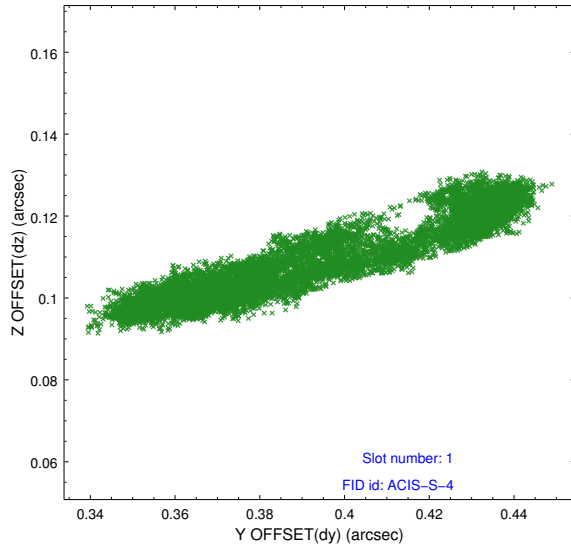


2.5 FID Slots

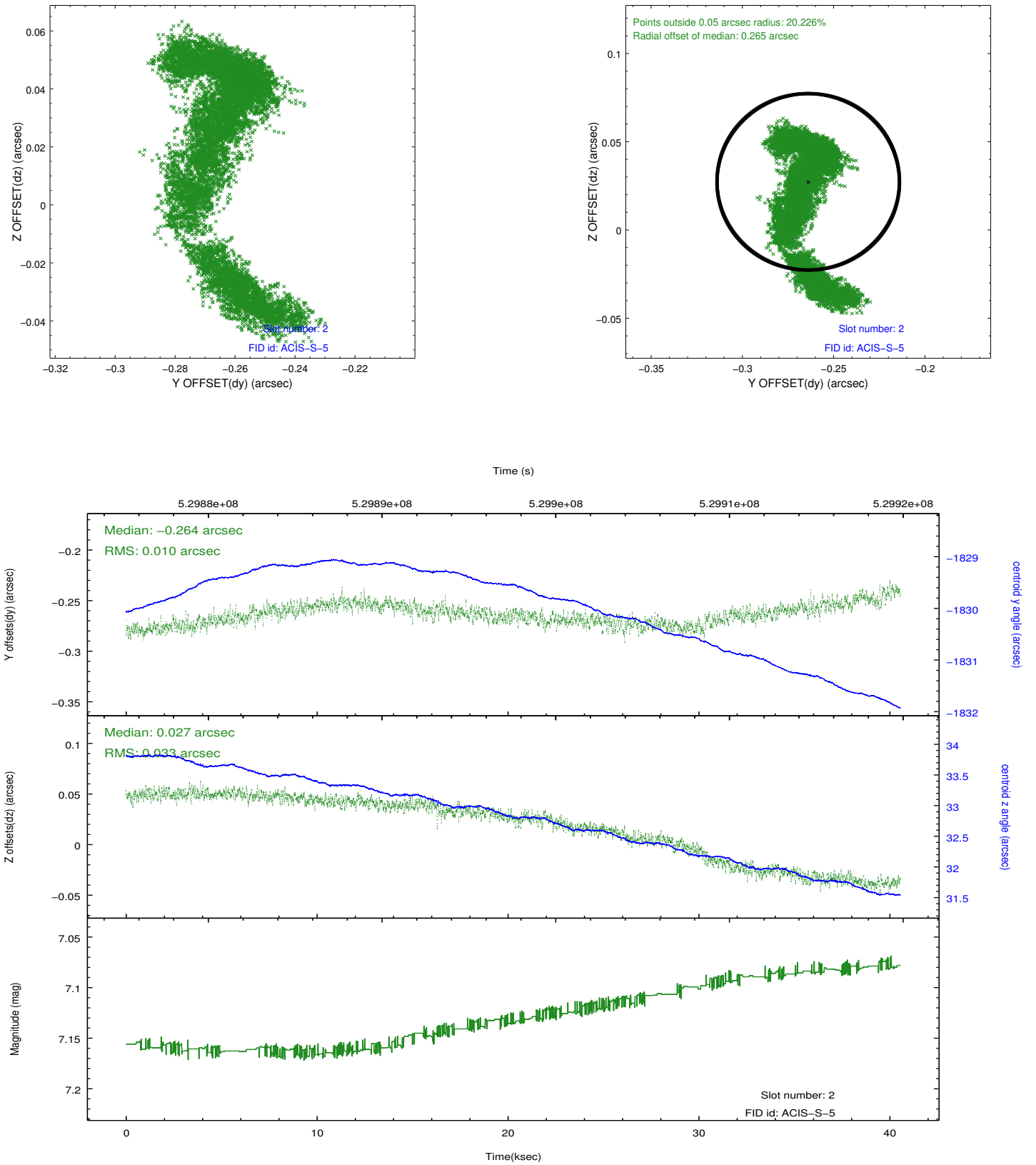
2.5.1 Slot 0



2.5.2 Slot 1

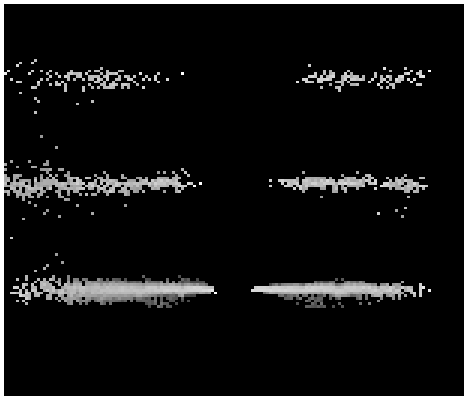


2.5.3 Slot 2

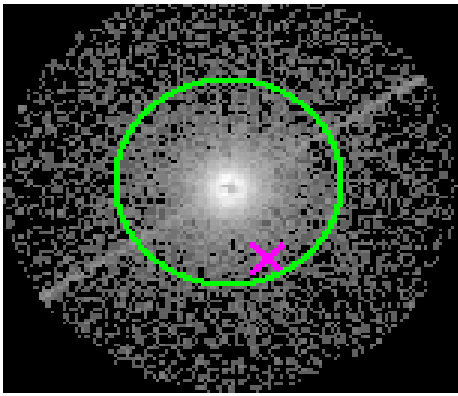


3 Gratings

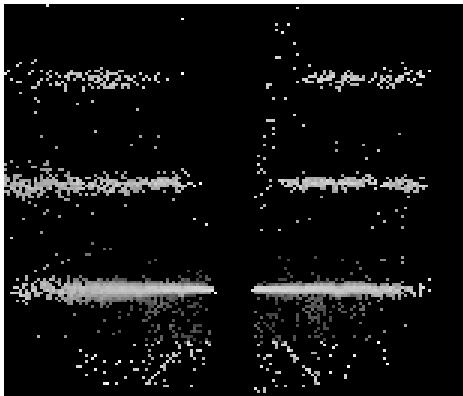
3.1 HEG Arm



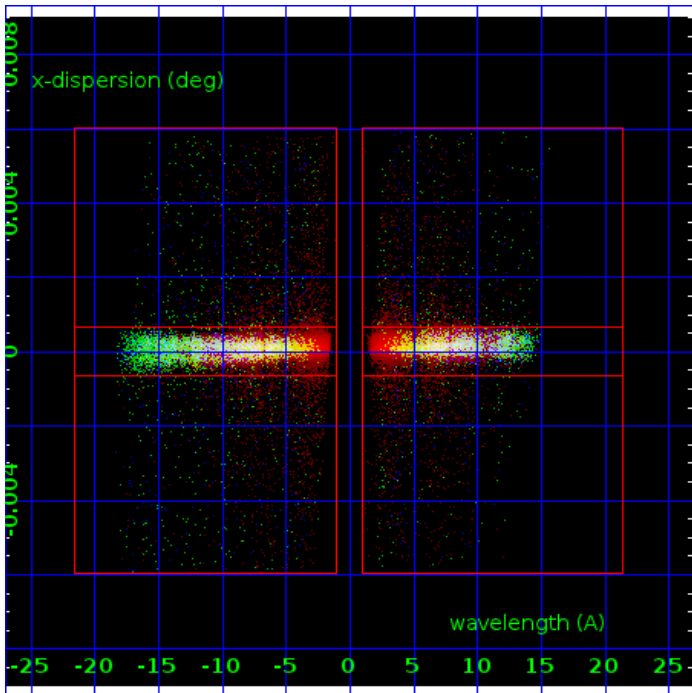
HEG Order Sort 123



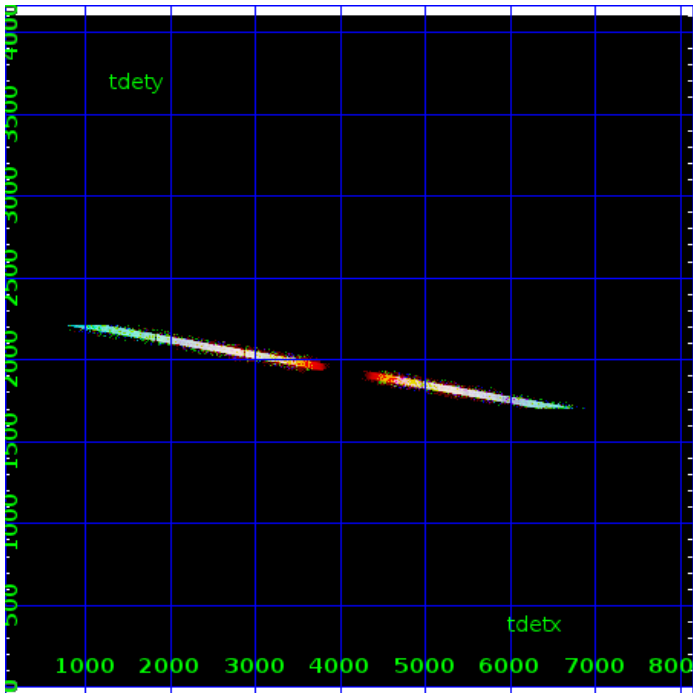
HEG Zero Order



HEG Order Sort ALL

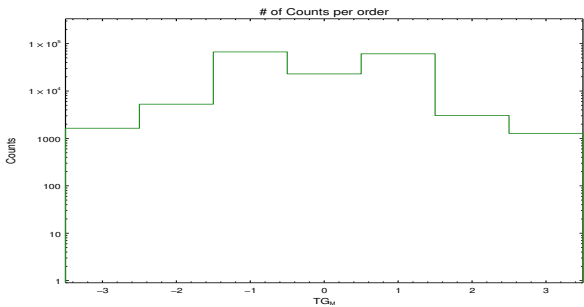


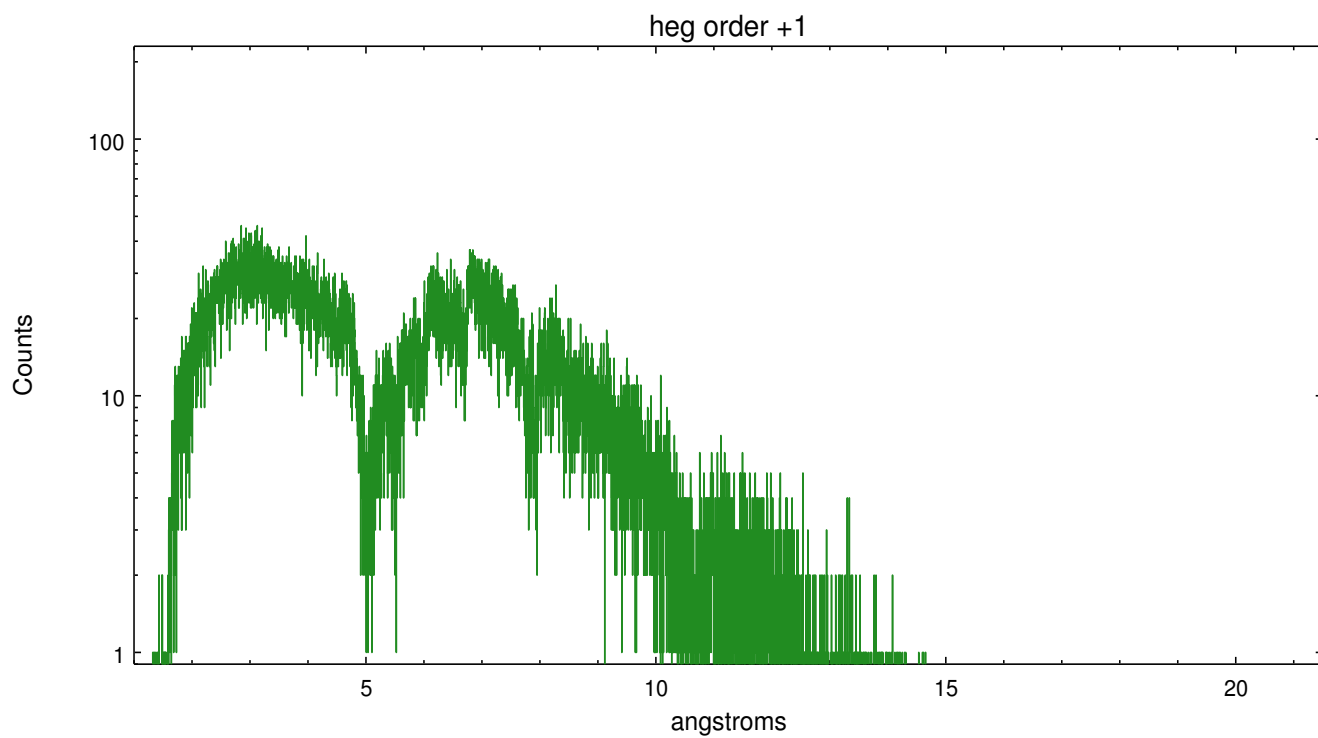
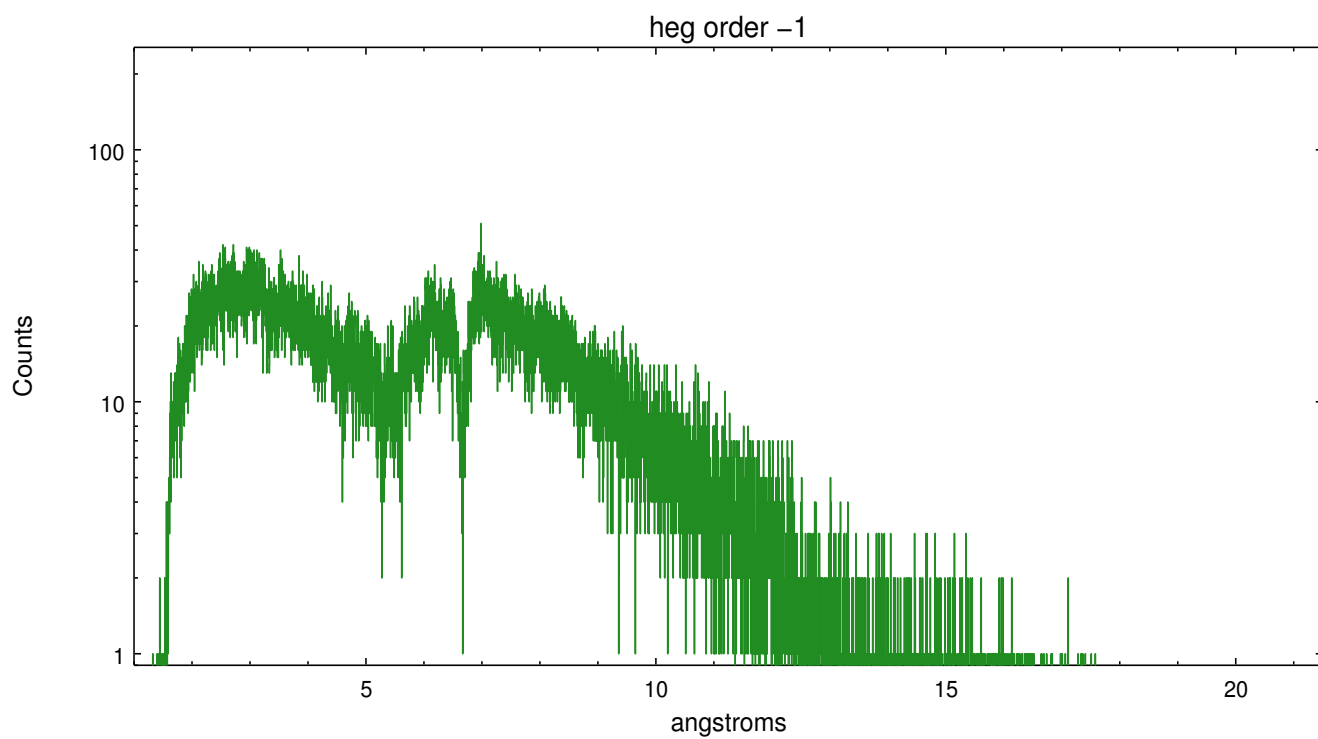
Spot Image HEG



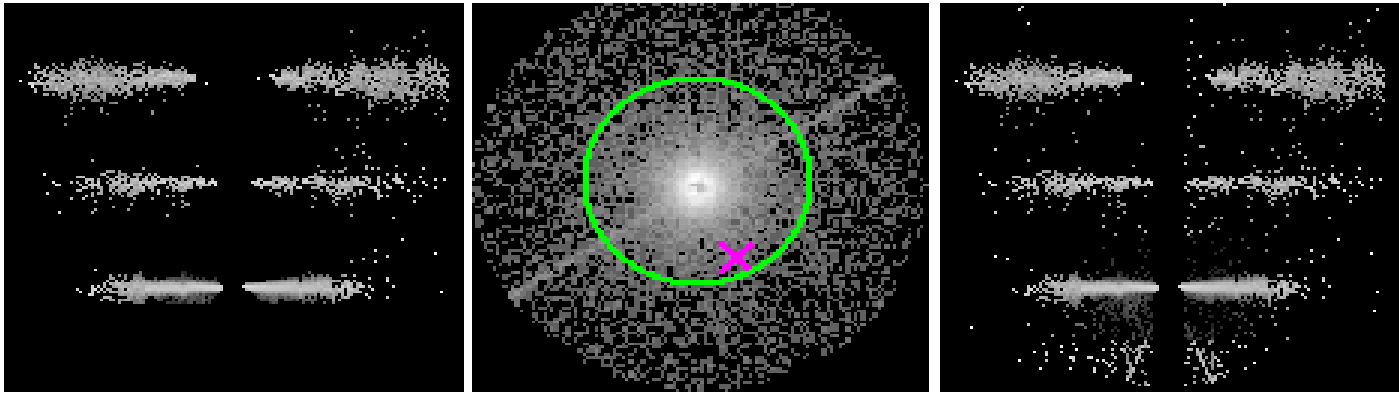
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1639	5276	66883	23001	61061	3046	1278





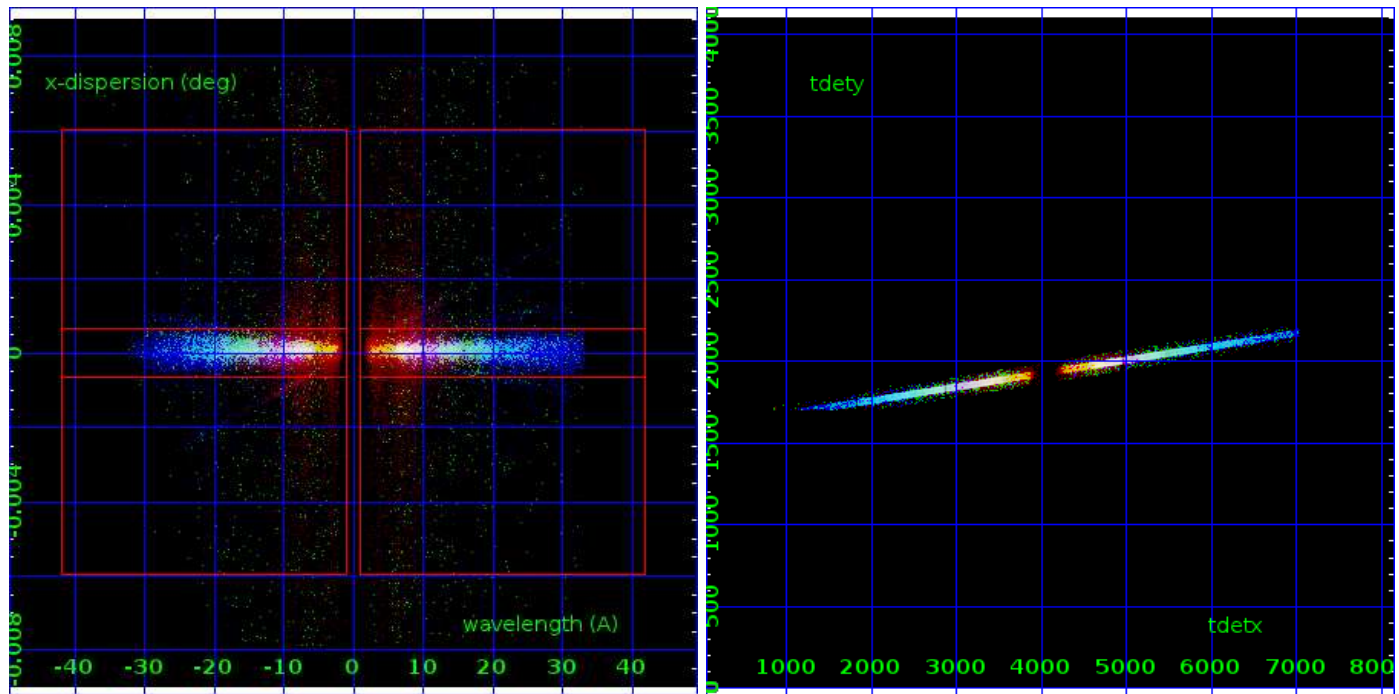
3.2 MEG Arm



MEG Order Sort 123

MEG Zero Order

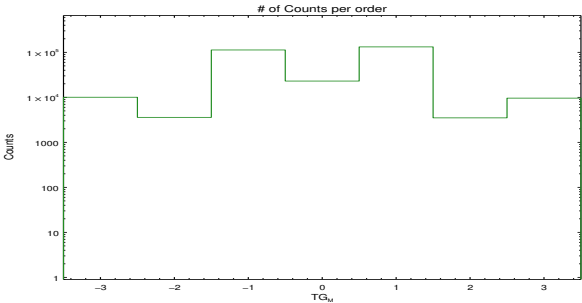
MEG Order Sort ALL

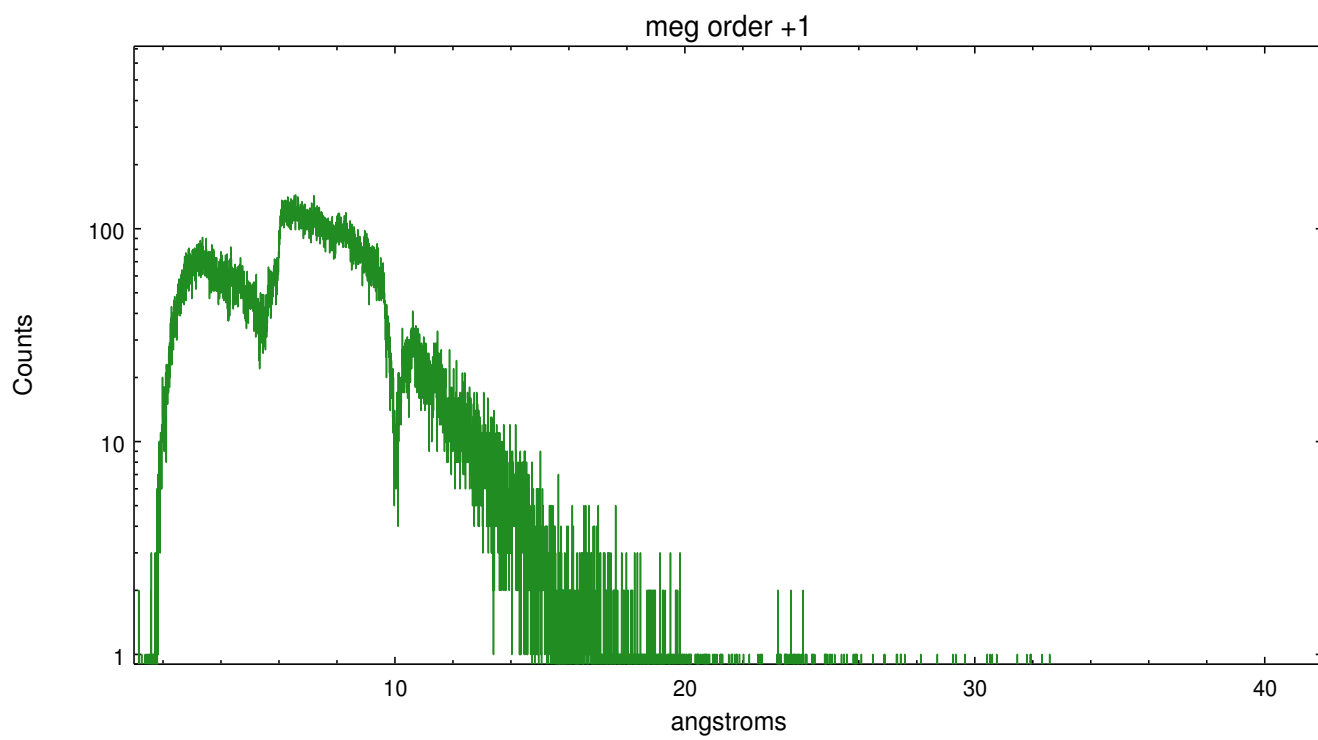
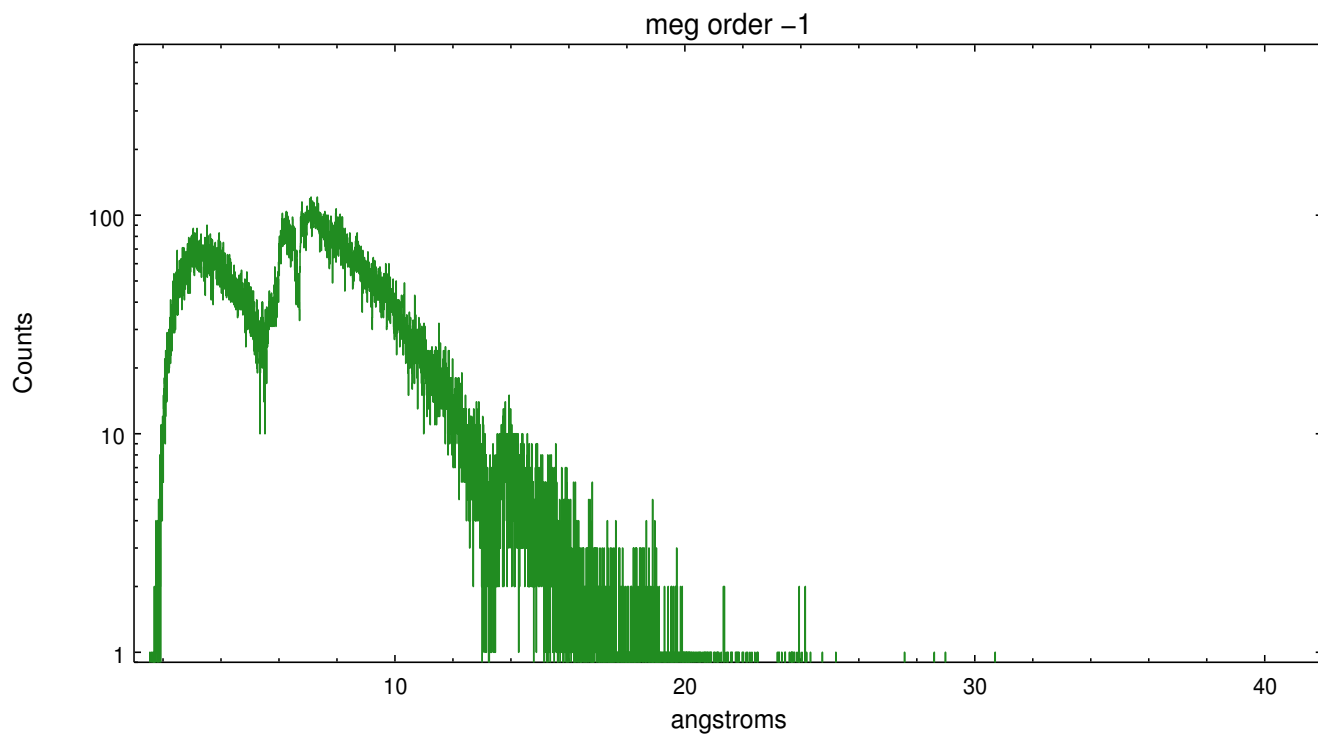


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	10048	3588	112918	23001	132192	3501	9601





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2014.10.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	40.046899719238

A.2 Comments

Comments for Obi 0

Fid in slot 1 radial offset > 0.400000 arcsec
(this was ignored in the aspect solution)

warning: spectra are visible faintly in the bad-events image, and
suggest that there may be pileup in the dispersed orders.