

V&V Reference Report

L2 ASCDS Version : 10.8

Observation 22849 - L2 Version 1
Chandra X-Ray Center

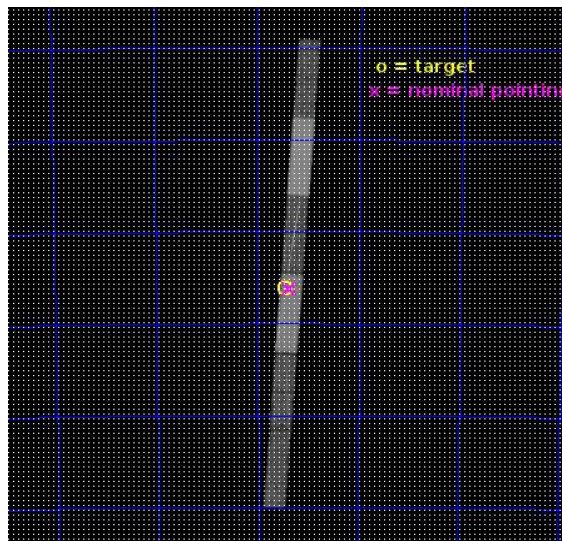
L2 Processing Date : Sep 18 2019

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1 Front

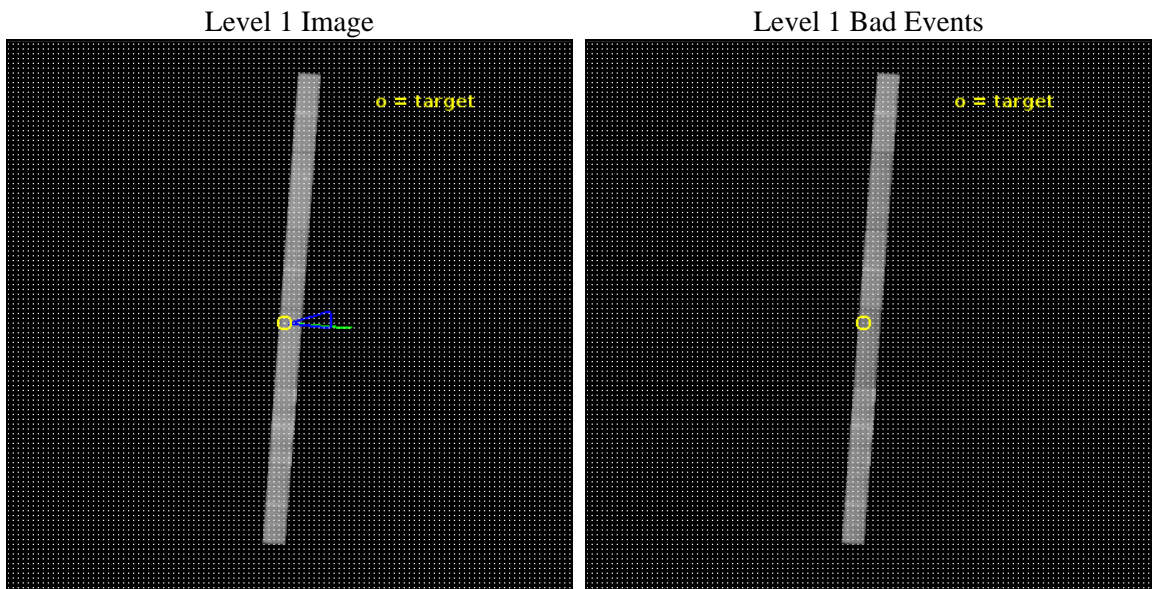
seq_num	503077	Sequence number
obs_id	22849	Observation id
title	CHANDRA CYCLE 20 SPATIAL AND SPECTRAL MONITORING OF SN1987A	Propos
observer	David Burrows	Principal investigator
object	SNR 1987A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.866667	Observer's specified target RA [deg]
dec_targ	-69.26975	Observer's specified target Dec [deg]
ra_nom	83.843801813377	Nominal RA [deg]
dec_nom	-69.27020186494	Nominal Dec [deg]
roll_nom	94.135243735744	Nominal Roll [deg]
revision	1	Processing version of data
ontime	42587.480561256	Sum of GTIs [s]
livetime	41055.728648761	Livetime [s]
ontime4	42587.5216012	Sum of GTIs [s]
ontime5	42587.439521194	Sum of GTIs [s]
ontime6	42587.39848125	Sum of GTIs [s]
ontime7	42587.480561256	Sum of GTIs [s]
ontime8	42587.357441187	Sum of GTIs [s]
ontime9	42587.316401243	Sum of GTIs [s]
l2events	145437	Number of level 2 events



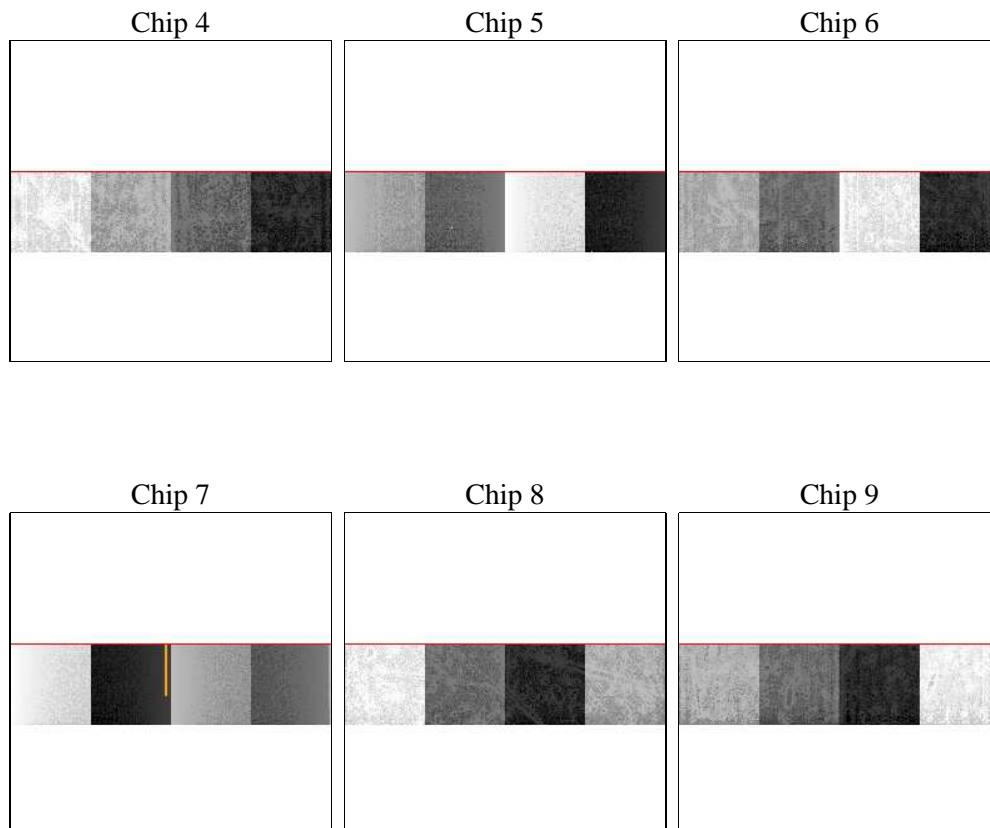
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	42499.591000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	42587.480561256	Sum of GTIs [s]
caldbver	4.8.4.1	 	ontime4	42587.5216012	Sum of GTIs [s]
date	2019-09-18T19:04:29	Date and time of file creation	ontime5	42587.439521194	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	42587.39848125	Sum of GTIs [s]
			ontime7	42587.480561256	Sum of GTIs [s]
			ontime8	42587.357441187	Sum of GTIs [s]
			ontime9	42587.316401243	Sum of GTIs [s]
			l1events	623154	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			z0_pos	(4037.30, 4100.00)	src1a sky pixel position

2.1.4 Events

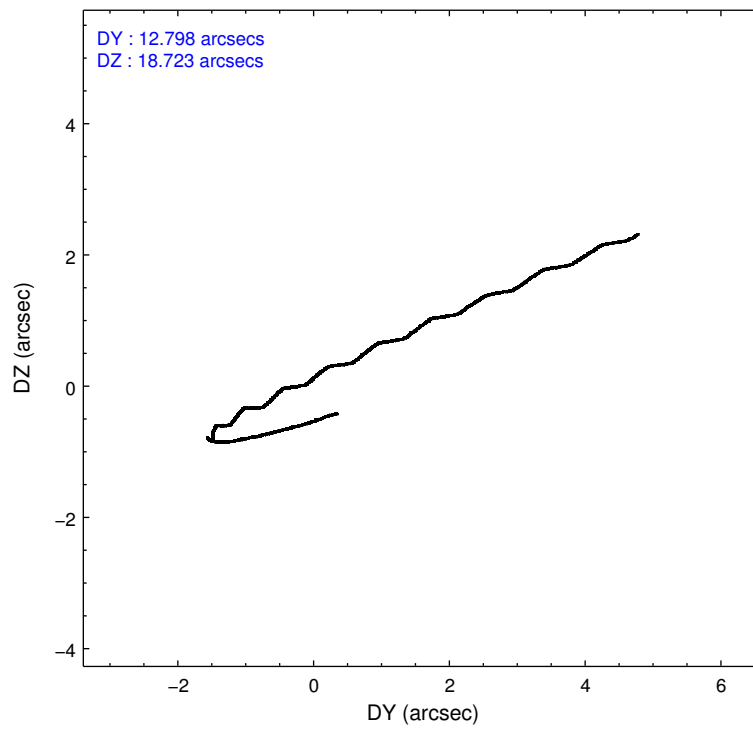
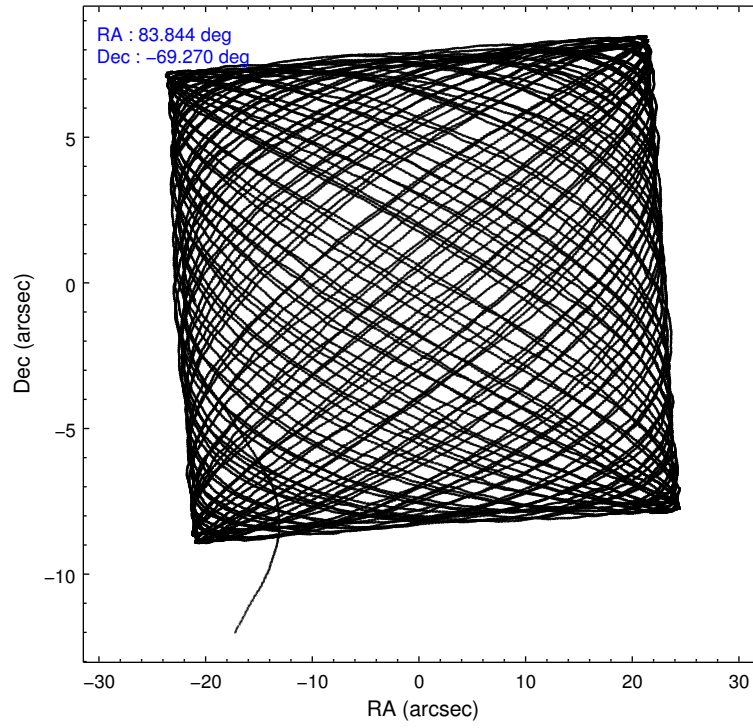
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	107917	118881	92585	98062	121361	84348
rejected events	96835	56978	79751	46403	90484	74451
rejected %	89%	47%	86%	47%	74%	88%

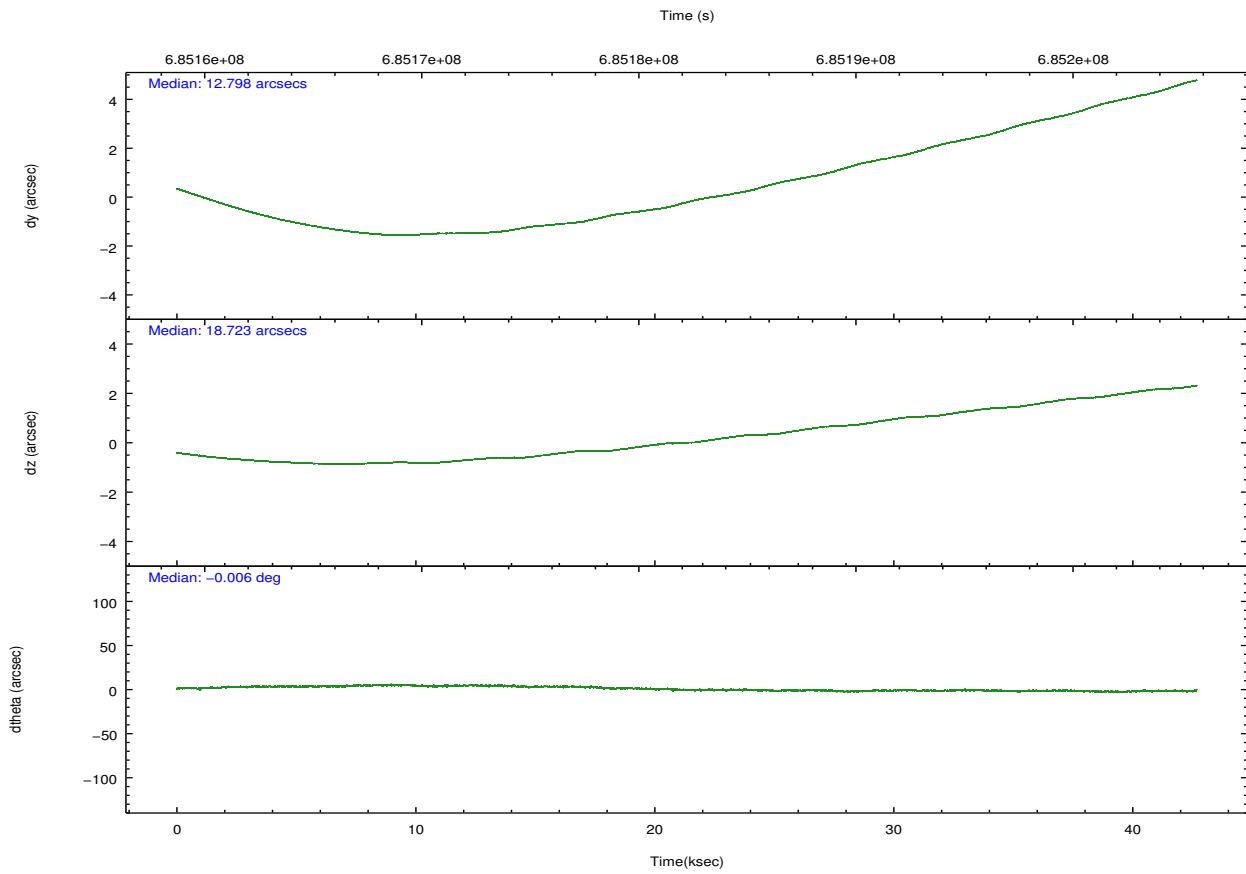
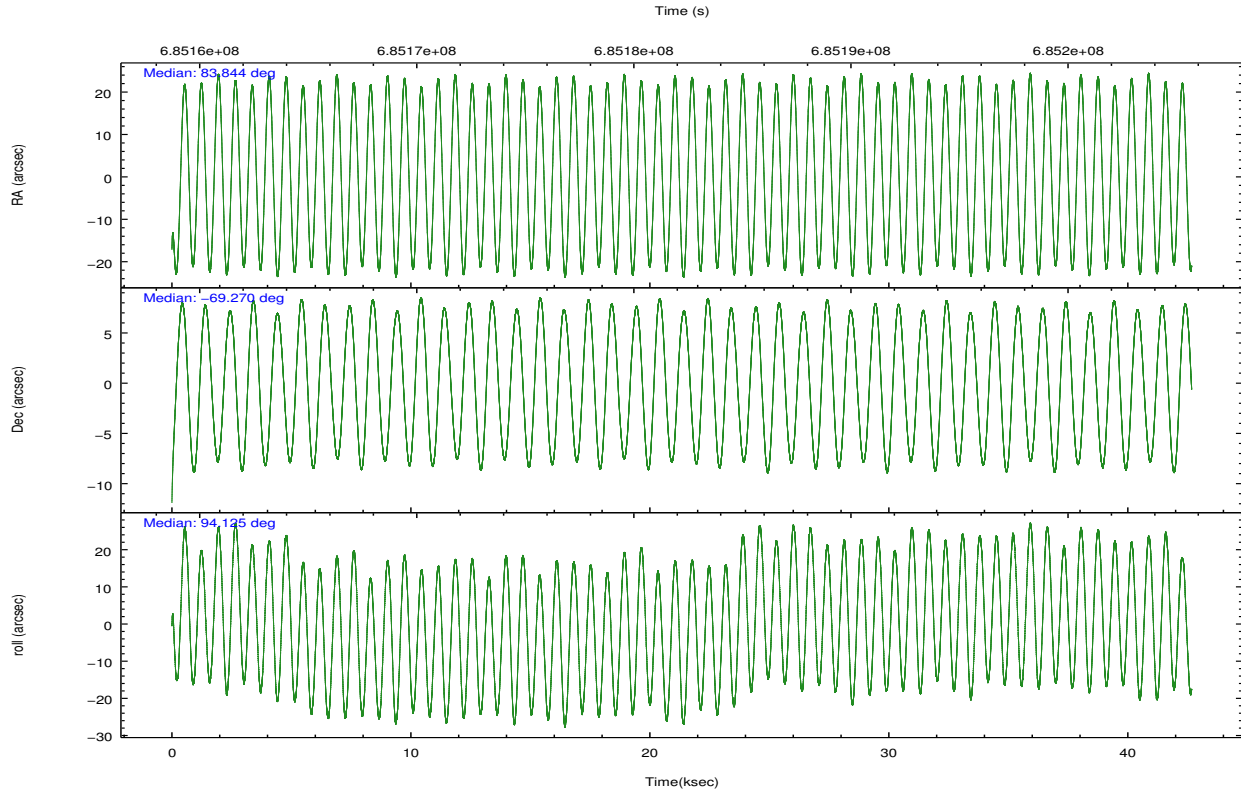
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	3651	6070	5514	6401	8142	3124
	3%	5%	5%	6%	6%	3%
grade 1 events	60	385	40	202	65	43
	0%	0%	0%	0%	0%	0%
grade 2 events	2553	19181	2448	11511	7200	1900
	2%	16%	2%	11%	5%	2%
grade 3 events	1570	2972	1420	5437	3287	1459
	1%	2%	1%	5%	2%	1%
grade 4 events	1393	2893	1417	5318	3095	1365
	1%	2%	1%	5%	2%	1%
grade 5 events	3417	9267	3116	9709	5023	3428
	3%	7%	3%	9%	4%	4%
grade 6 events	1915	30791	2037	23000	9153	2049
	1%	25%	2%	23%	7%	2%
grade 7 events	93358	47322	76593	36484	85396	70980
	86%	39%	82%	37%	70%	84%

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	83.888222	83.84380181337728	CCD I2 on	N	N
[deg] Pointing Dec	-69.292717	-69.27020186493965	CCD I3 on	N	N
[deg] Pointing Roll	94.020162	94.1352437357443	CCD S0 on	O1	Y
[deg] Roll angle	84.000000	84.000000	CCD S1 on	Y	Y
[deg] Roll tolerance	12.000000	12.000000	CCD S2 on	Y	Y
Roll constraint allows 180D rotation	N	N	CCD S3 on	Y	Y
[s] Window start time (MET)	684547269.184000	684547269.184000	CCD S4 on	Y	Y
[s] Window stop time (MET)	686620869.184000	686620869.184000	CCD S5 on	O2	Y
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Number of optional ACIS chips dropped	0	0
[mm] SIM defocus	0	0.001444936568705701	On-chip summing requested	N	N
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	Subarray requested	CUSTOM	1/4
[mm] SIM translation stage offset	0	0.00754346686406393	Subarray start row	351	351
[s] Observation start time (MET)	685161050.184000	685159957.80881	Subarray row count	256	256
Observation start date	2019-09-18T02:29:41	2019-09-18T02:12:37	Alternating exposures requested	N	N
[s] Observation end time (MET)	685203550.184000	685204417.69902	[s] Primary exposure time	0.000000	1.1
Observation end date	2019-09-18T14:18:01	2019-09-18T14:33:37			
Read mode	TIMED	TIMED			

2.3 Aspect





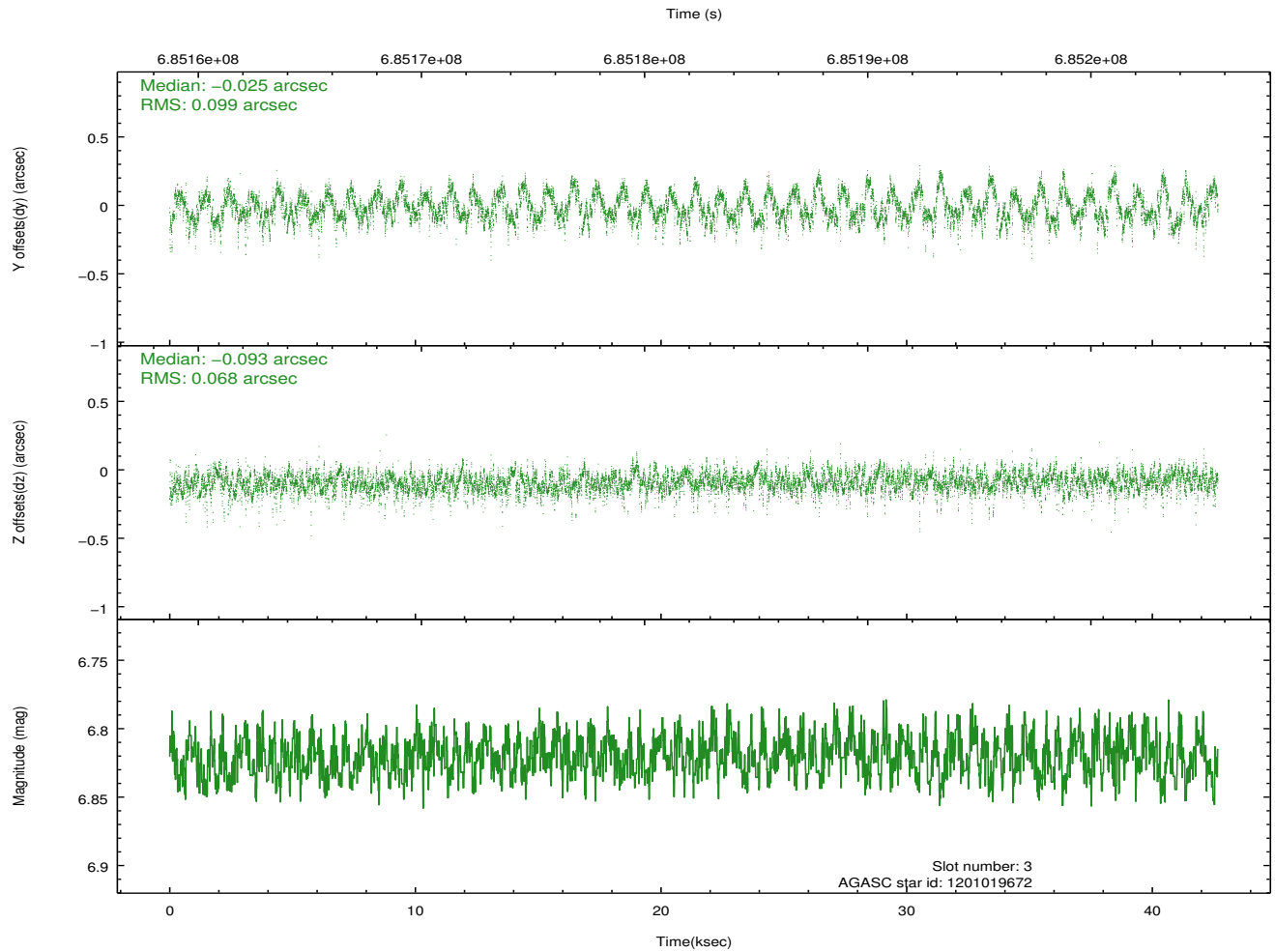
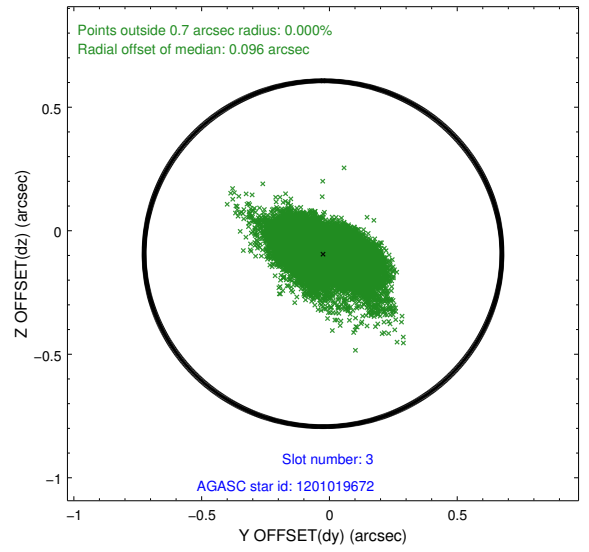
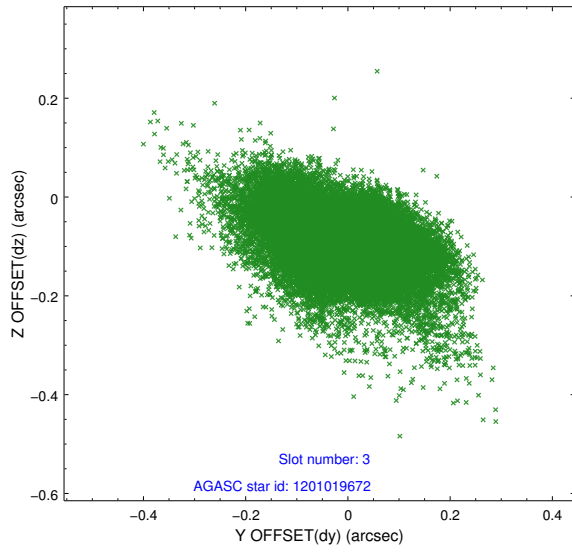
Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-2	7.08	10406	1.000	-0.245	-0.208	0.042	0.077	0.000000	0.000000	-766.52	-1740
1	FID		ACIS-S-4	7.21	10408	1.000	0.735	0.174	0.058	0.085	0.000000	0.000000	2147.70	168
2	FID		ACIS-S-5	7.18	10408	1.000	-0.509	0.041	0.036	0.051	0.000000	0.000000	-1819.67	161
3	GUIDE	used	1201019672	6.82	20816	1.000	-0.025	-0.093	0.125	0.210	85.312192	-68.770187	1725.46	-1981
4	GUIDE	used	1201020040	8.56	20803	1.000	-0.112	0.183	0.151	0.260	85.379163	-68.879396	1325.85	-2031
5	GUIDE	used	1201406184	7.90	20739	1.000	-0.216	0.188	0.133	0.231	82.503234	-69.975517	-2351.73	1876
6	GUIDE	used	1201406992	9.24	20785	1.000	0.236	0.023	0.309	0.452	83.682859	-69.471866	-625.34	304
7	GUIDE	used	1201410616	9.28	20781	1.000	0.108	-0.307	0.165	0.283	82.516808	-69.784406	-1664.91	1826

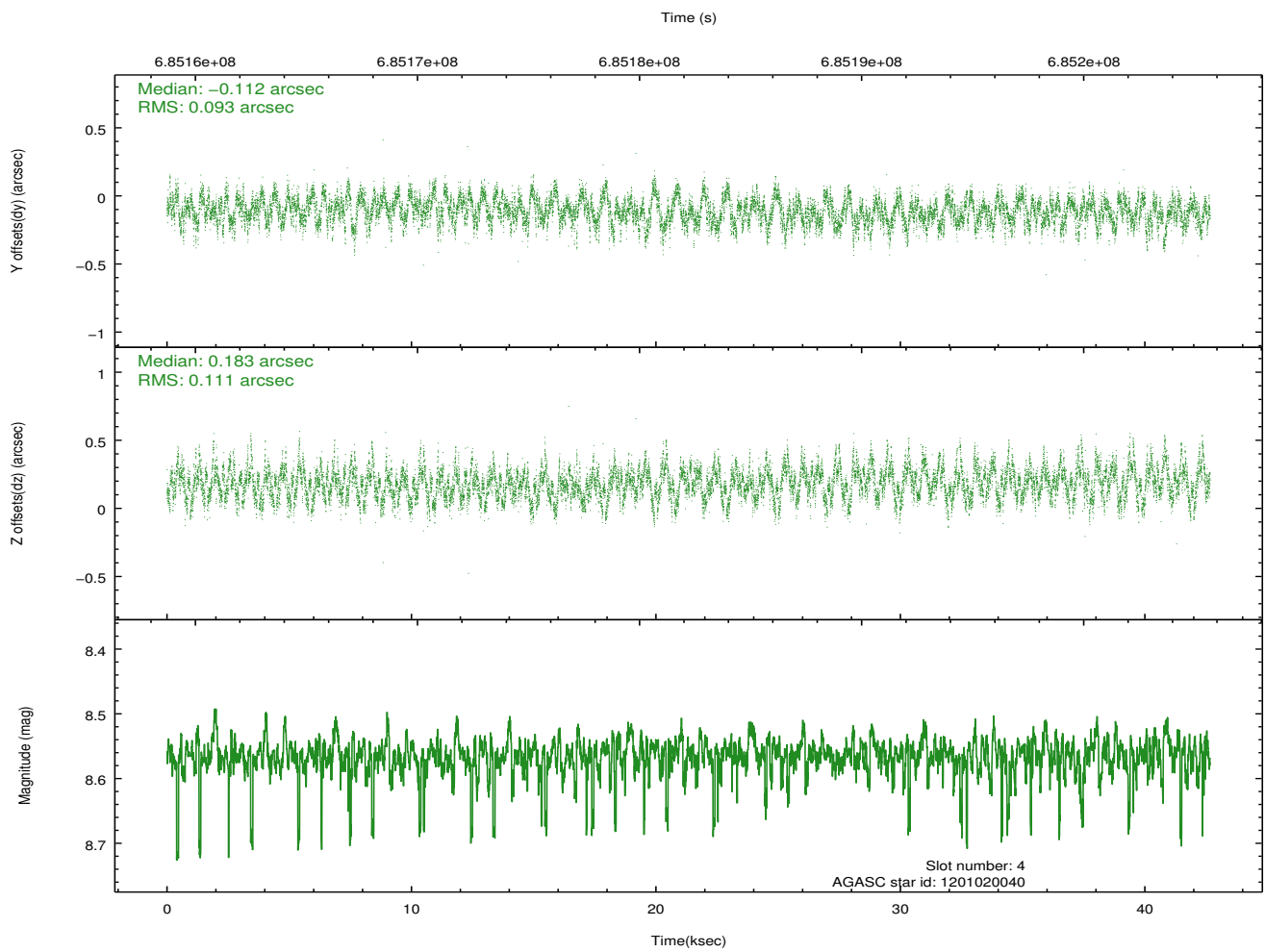
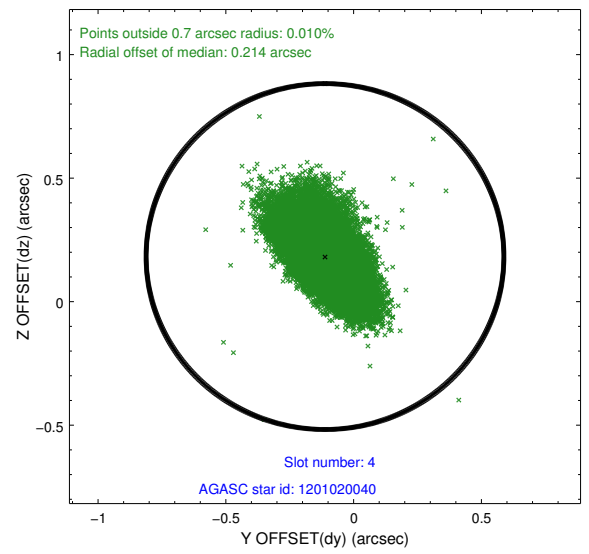
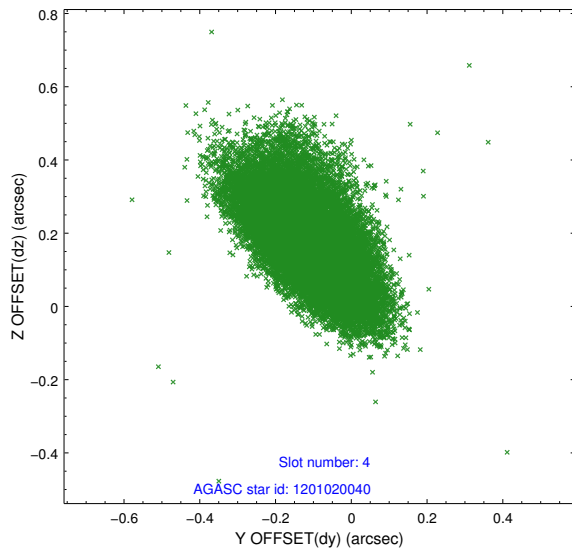
∞

2.4 Star Slots

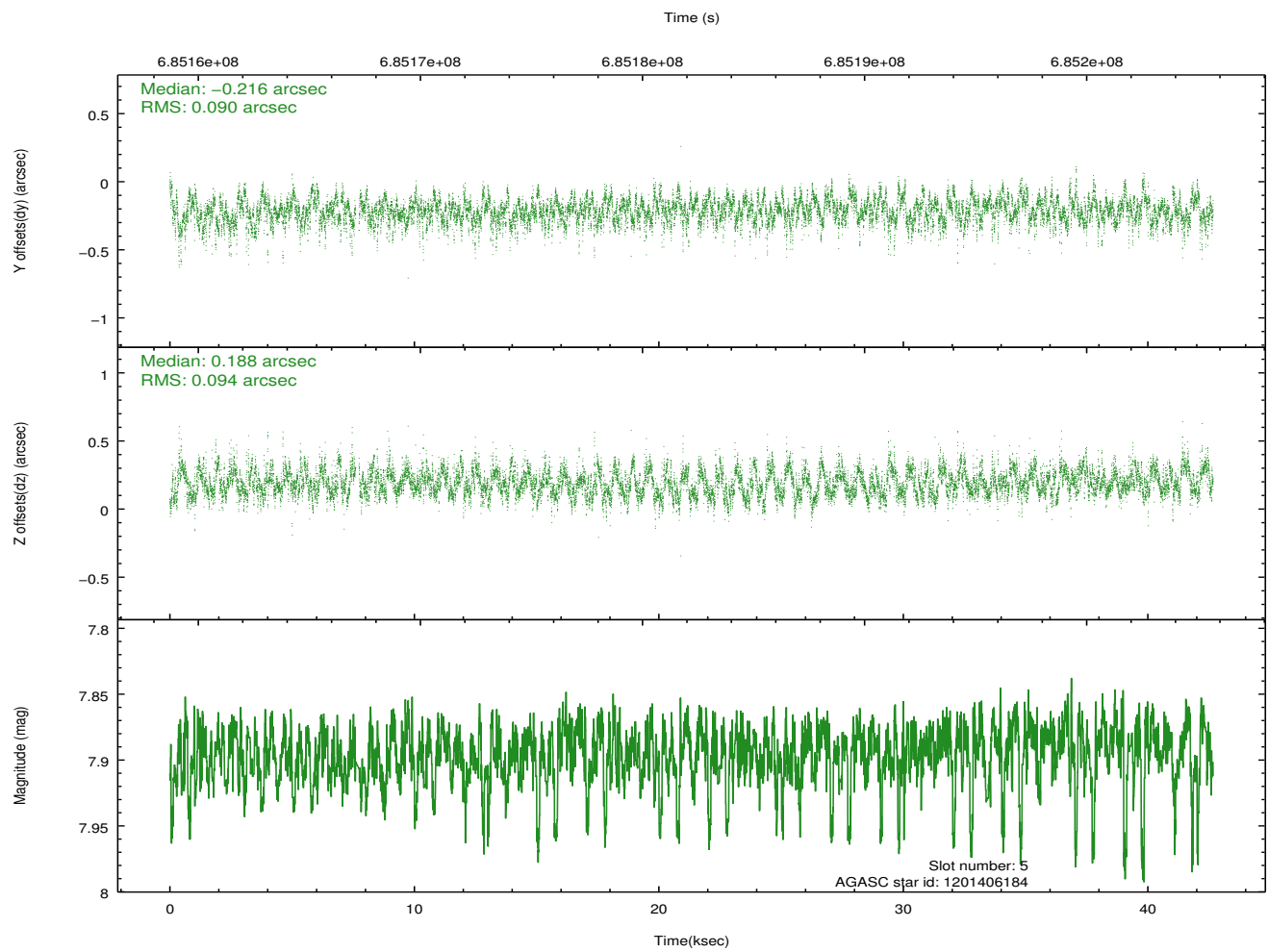
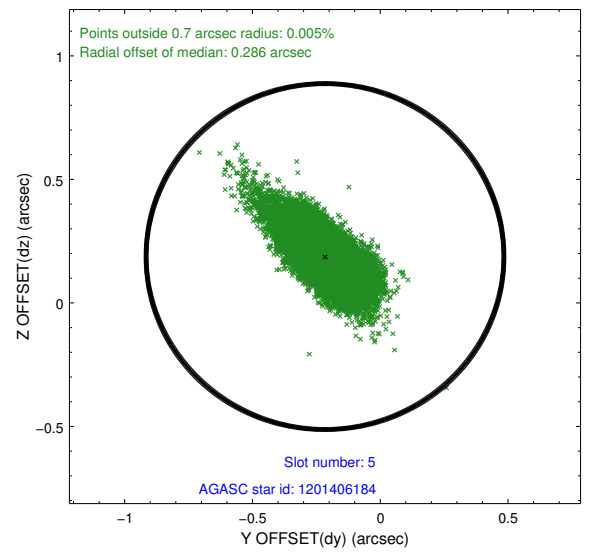
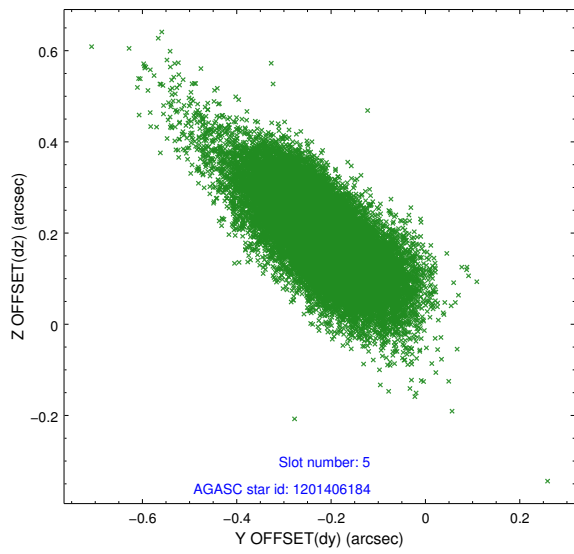
2.4.1 Slot 3



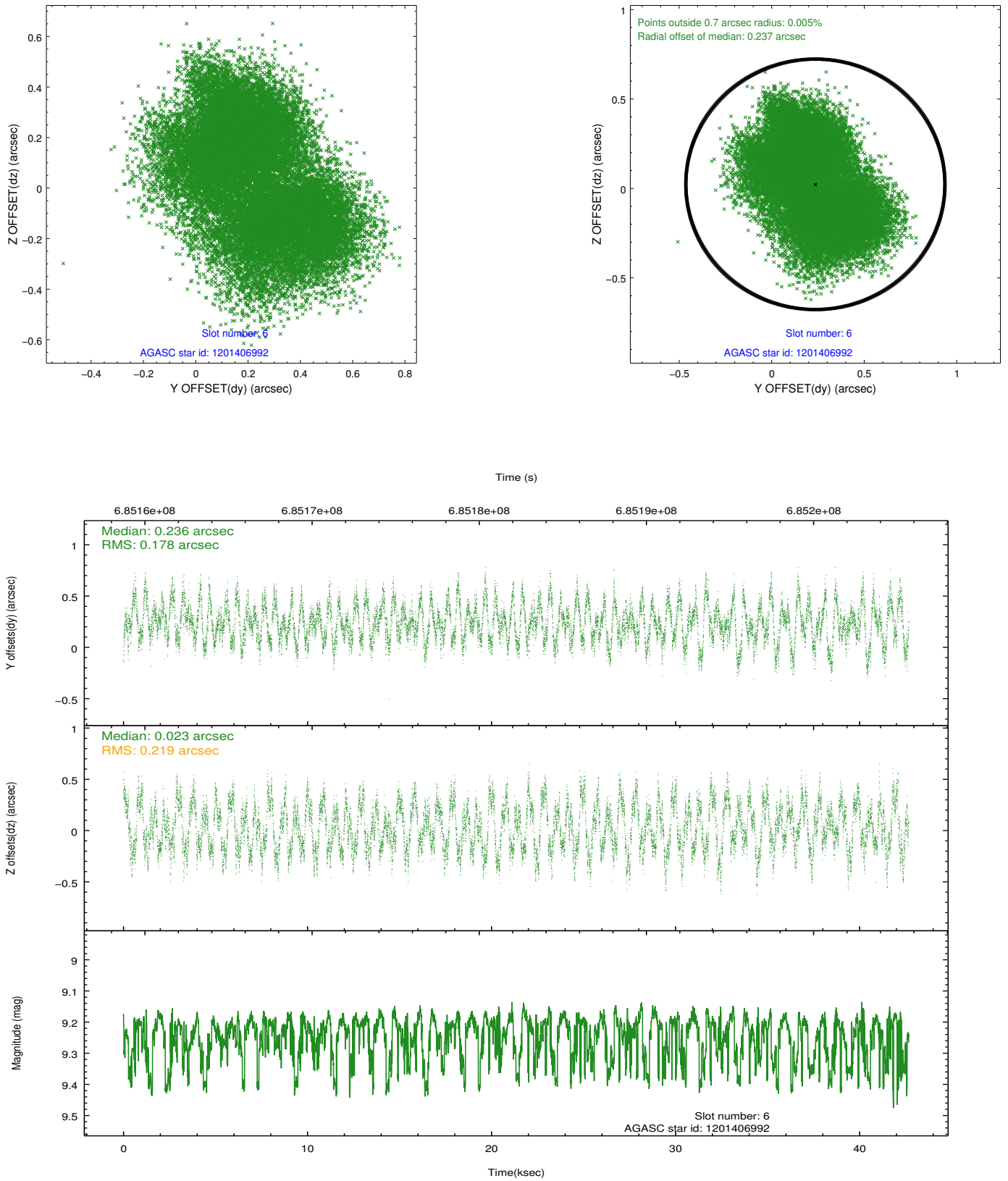
2.4.2 Slot 4



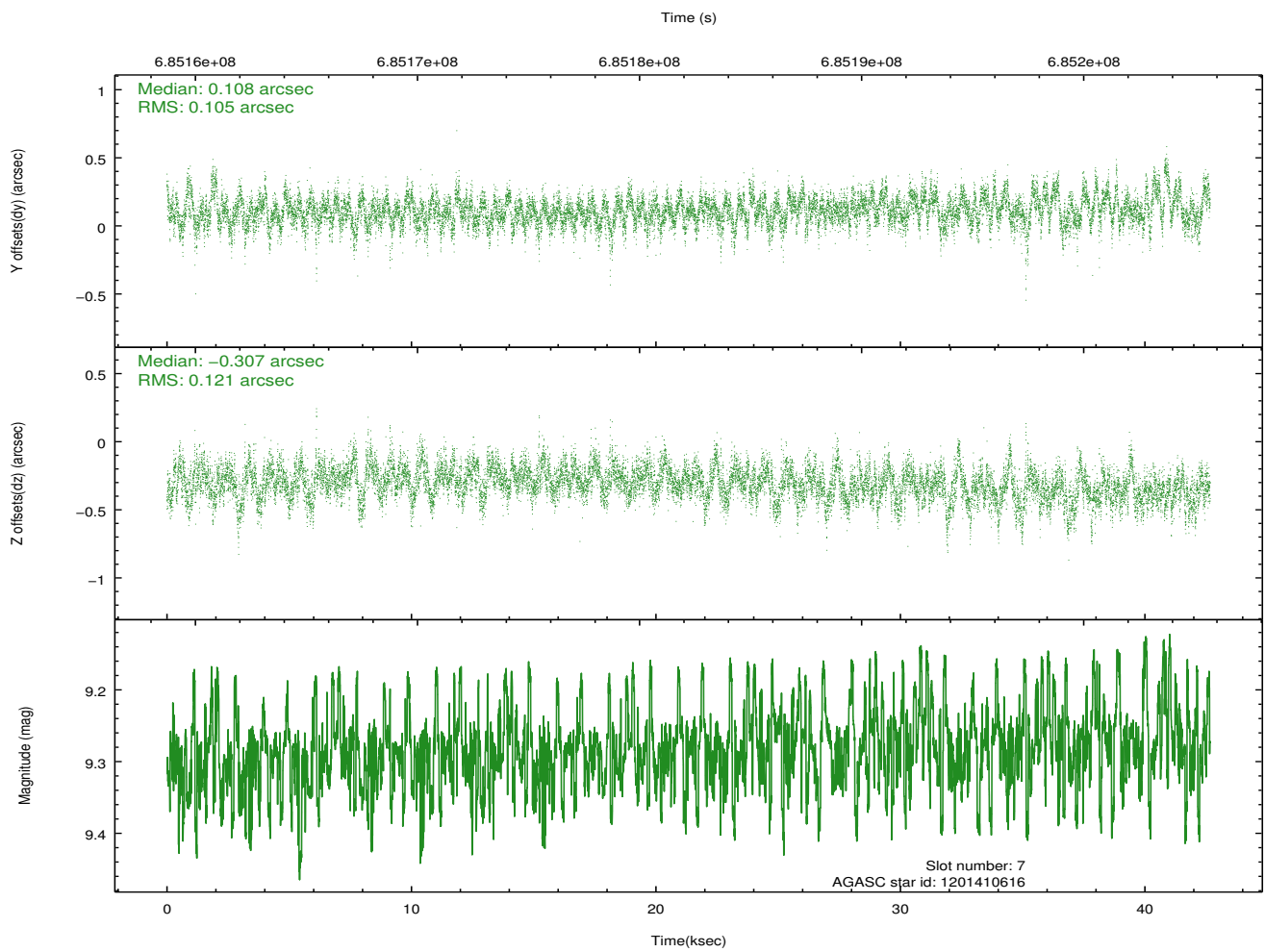
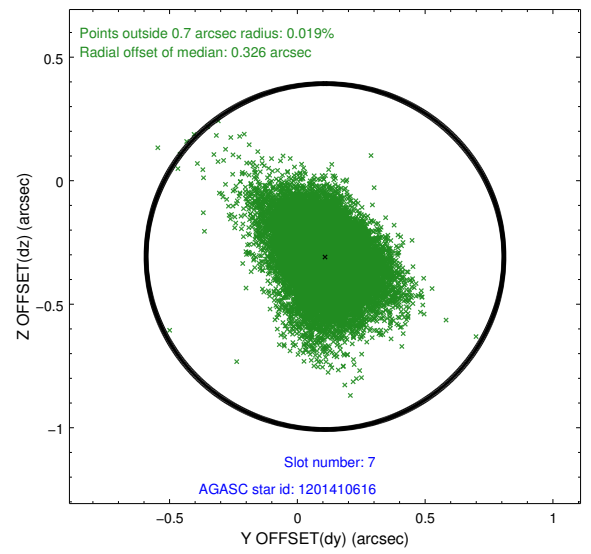
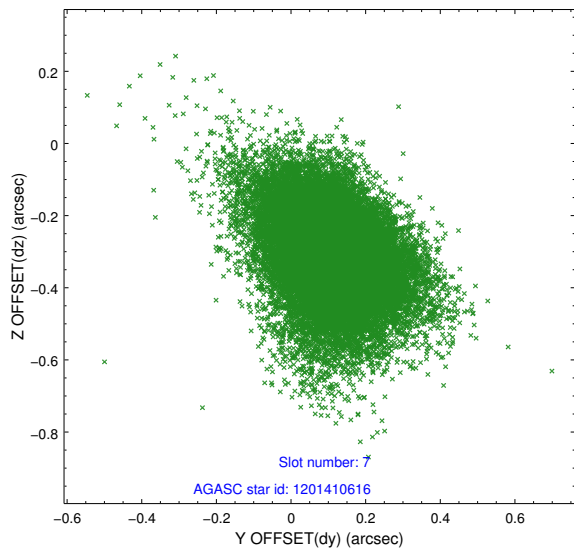
2.4.3 Slot 5



2.4.4 Slot 6

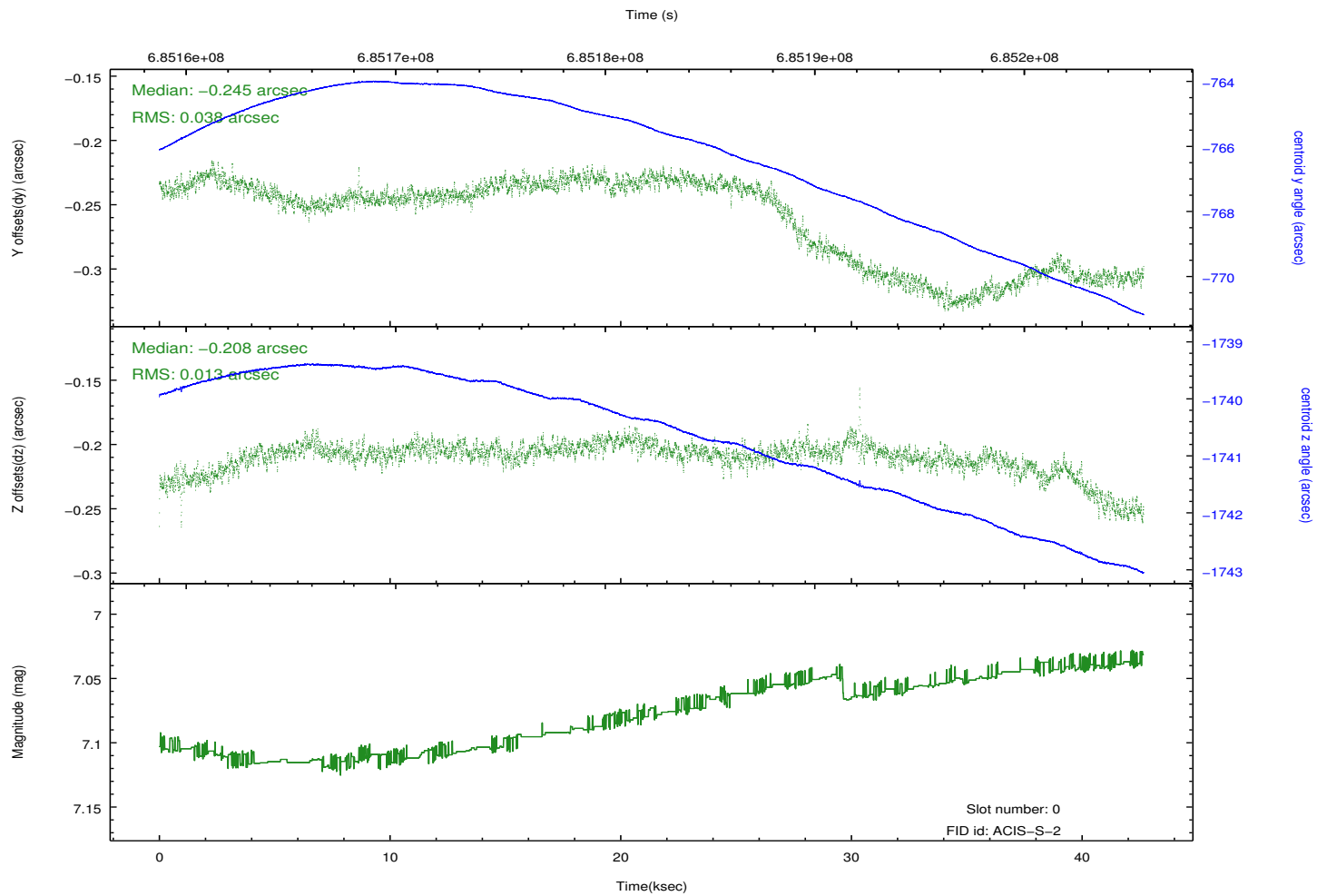
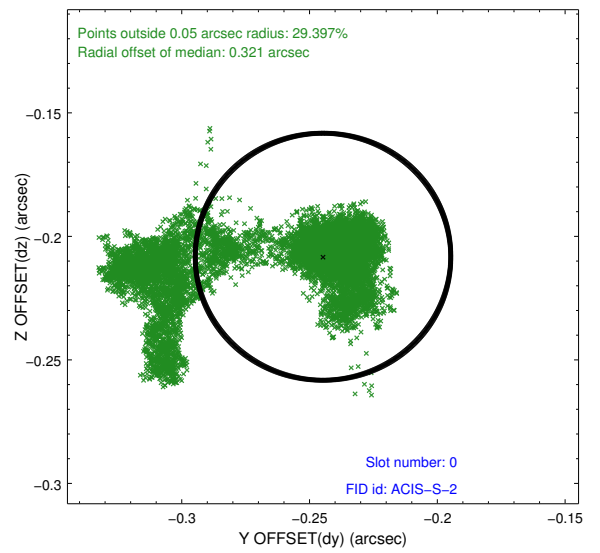
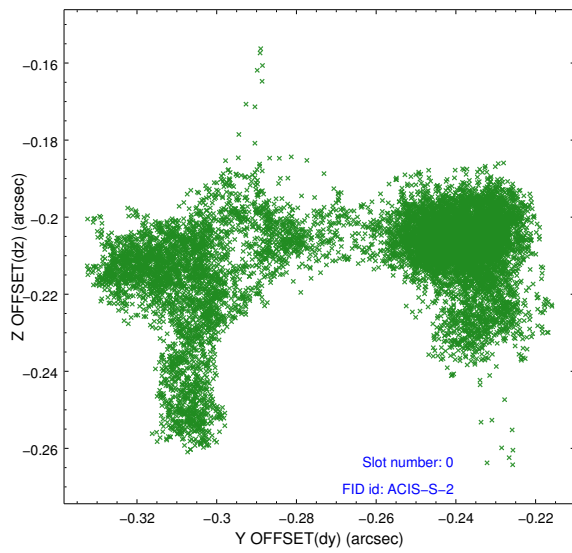


2.4.5 Slot 7

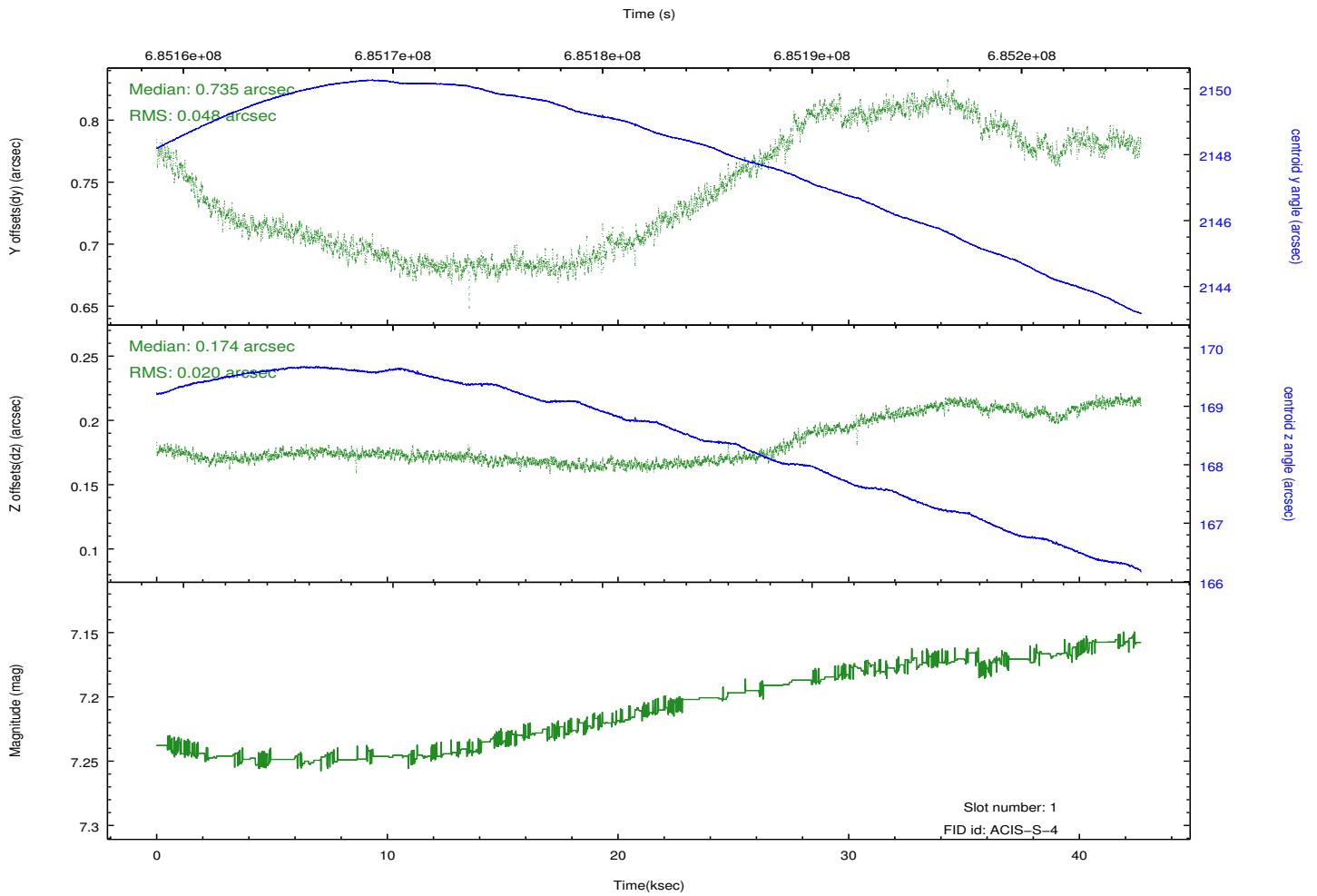
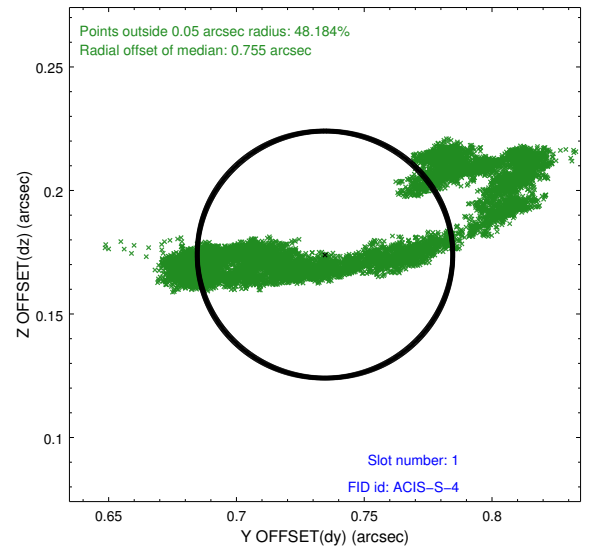
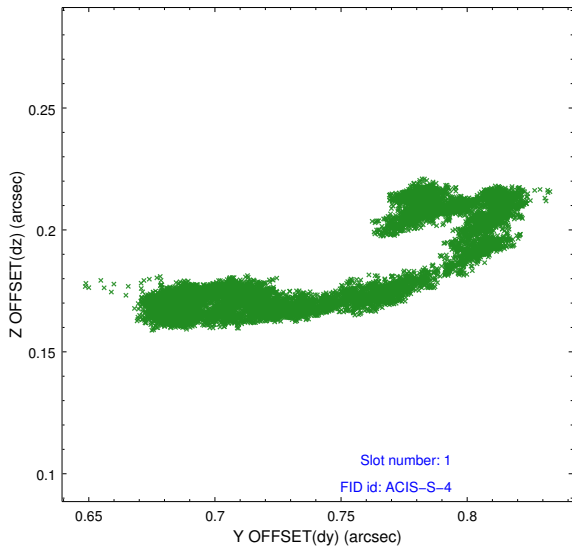


2.5 FID Slots

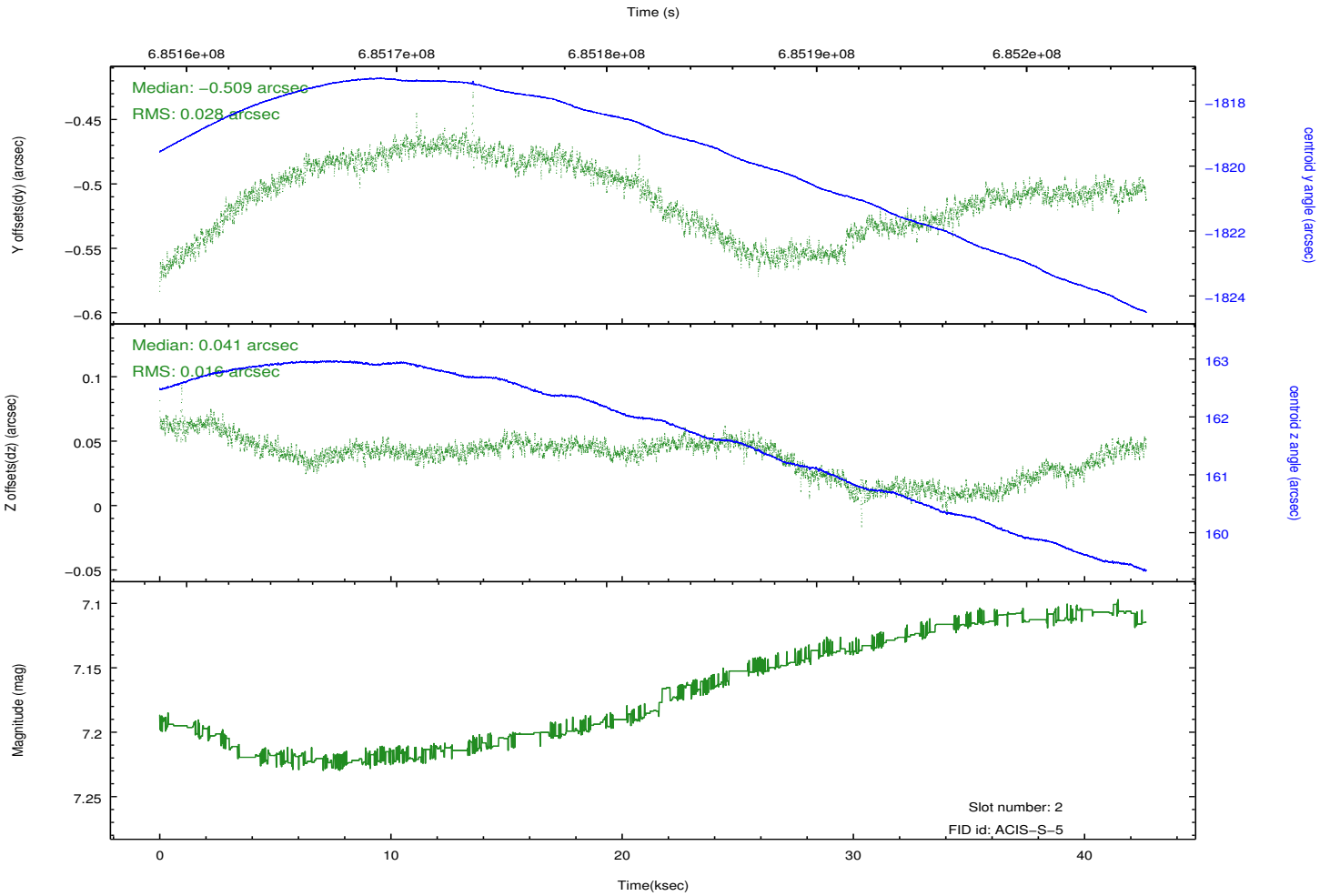
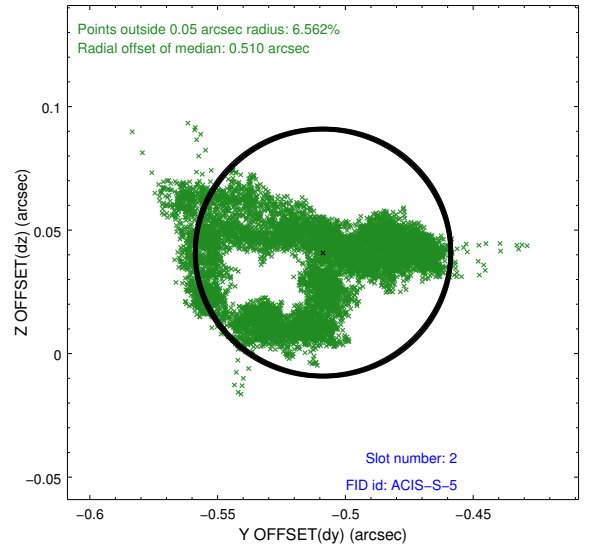
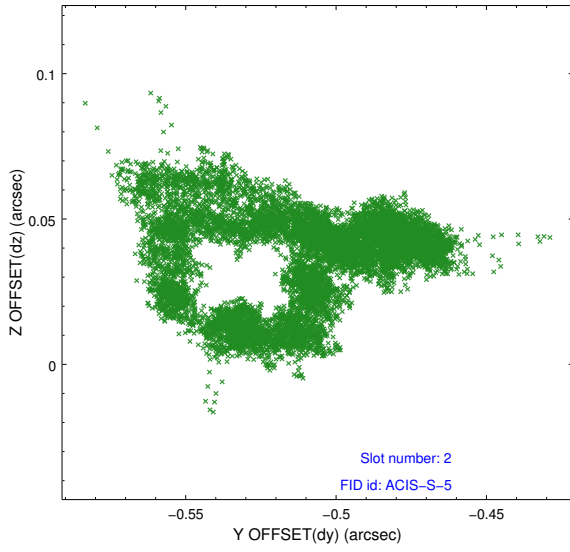
2.5.1 Slot 0



2.5.2 Slot 1

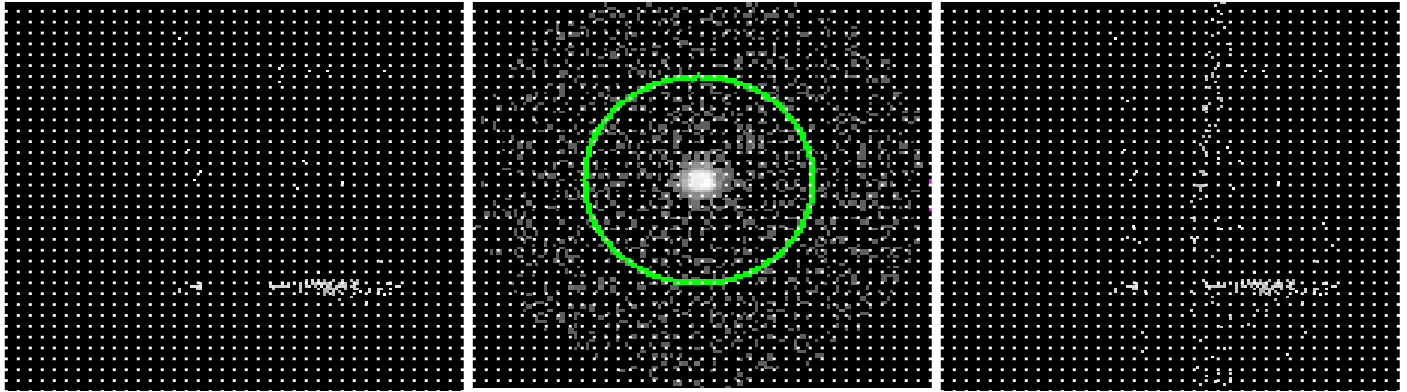


2.5.3 Slot 2



3 Gratings

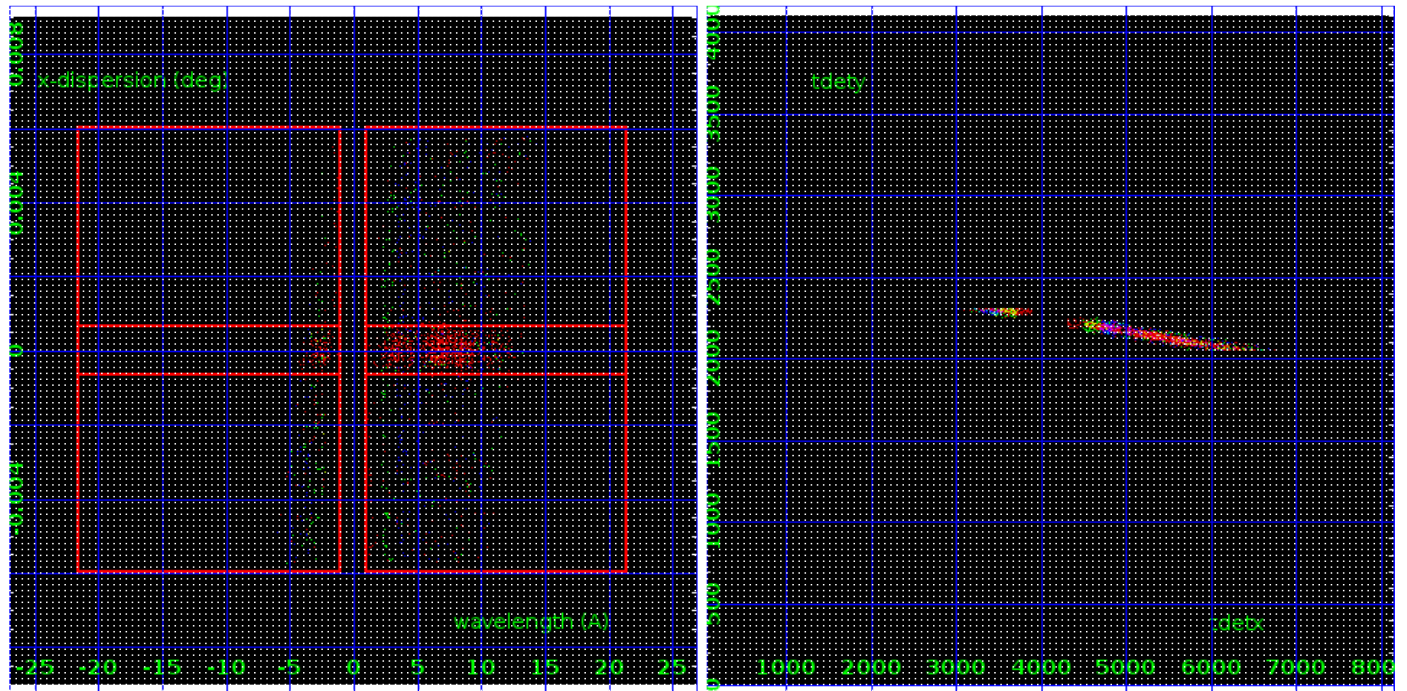
3.1 HEG Arm



HEG Order Sort 123

HEG Zero Order

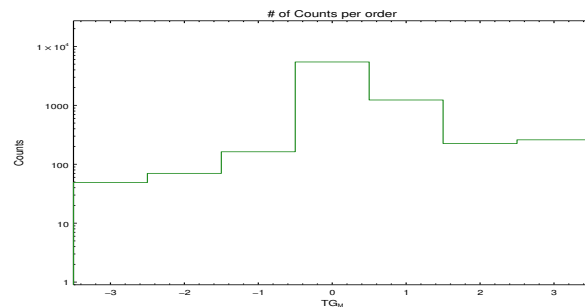
HEG Order Sort ALL

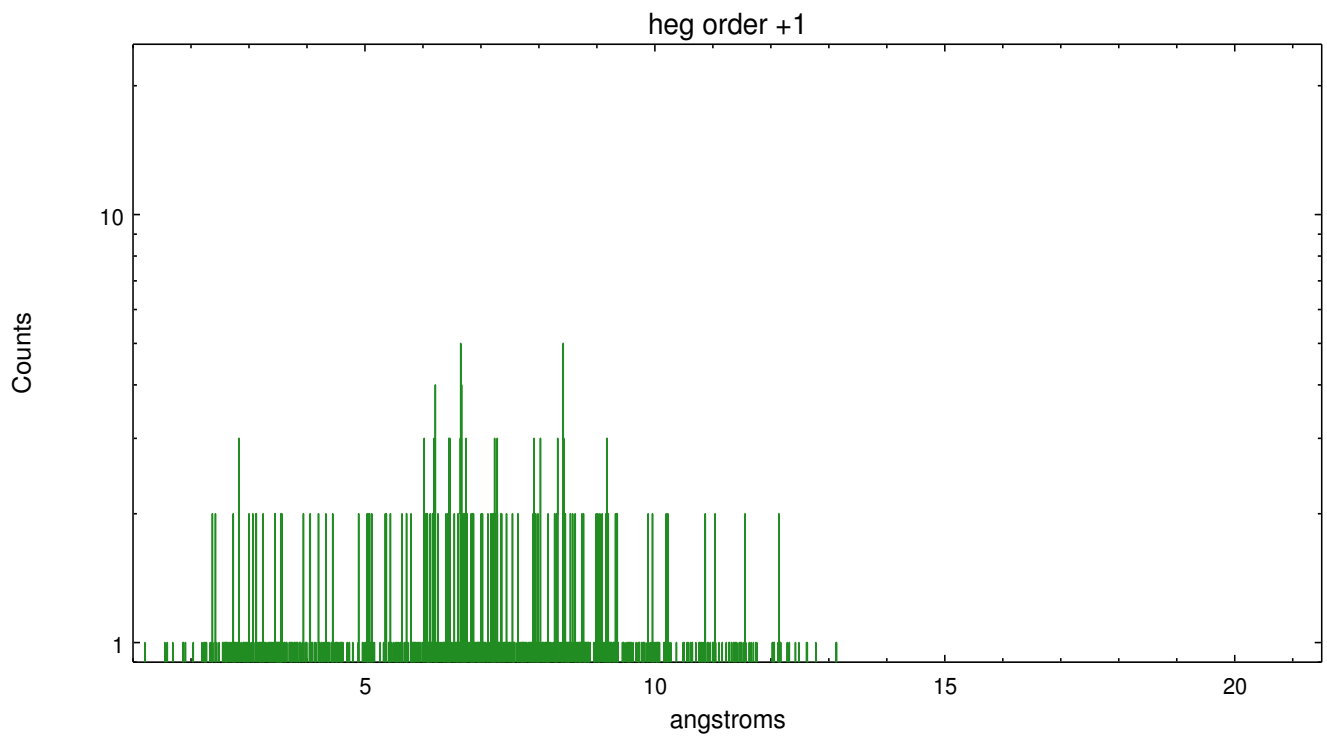
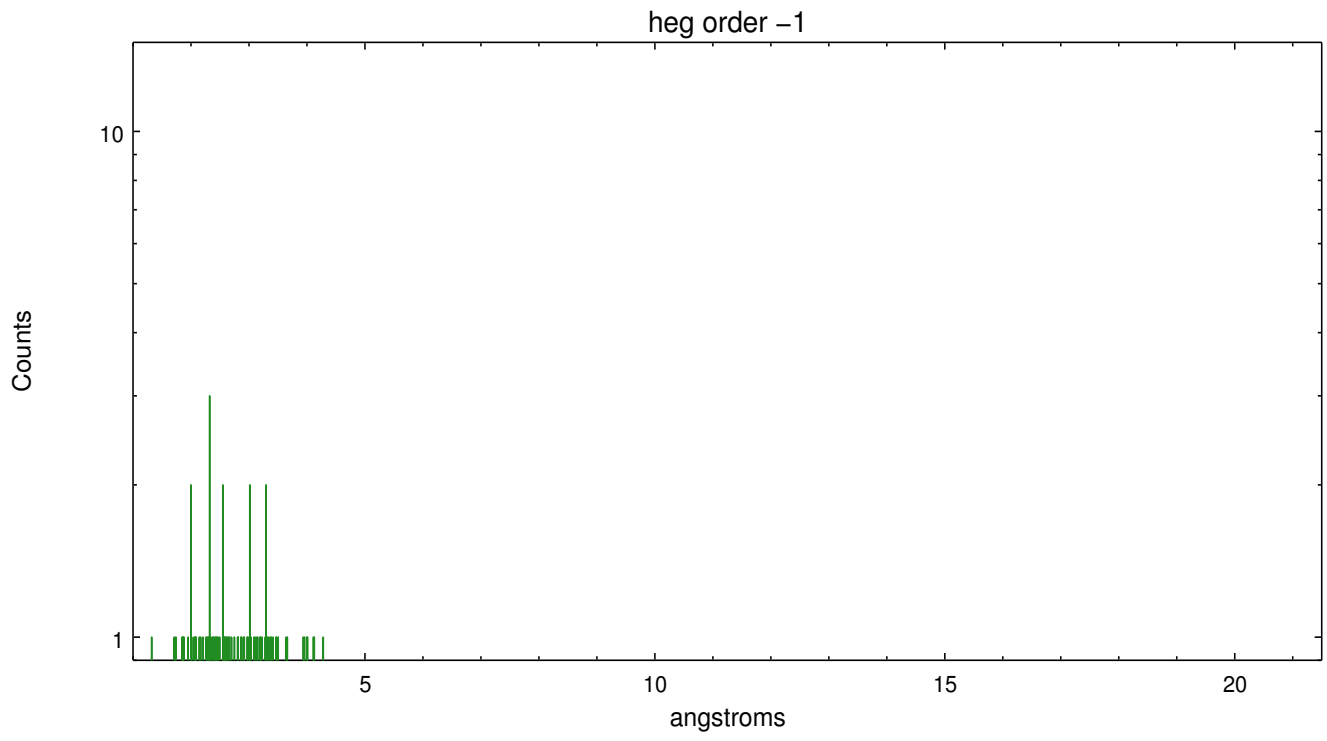


Spot Image HEG

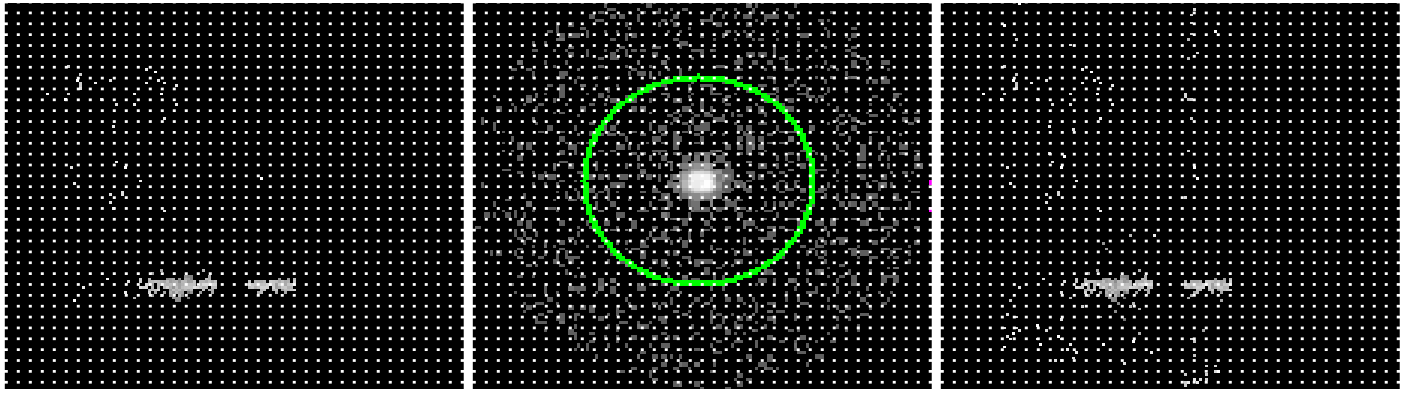
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	49	70	163	5450	1233	225	260





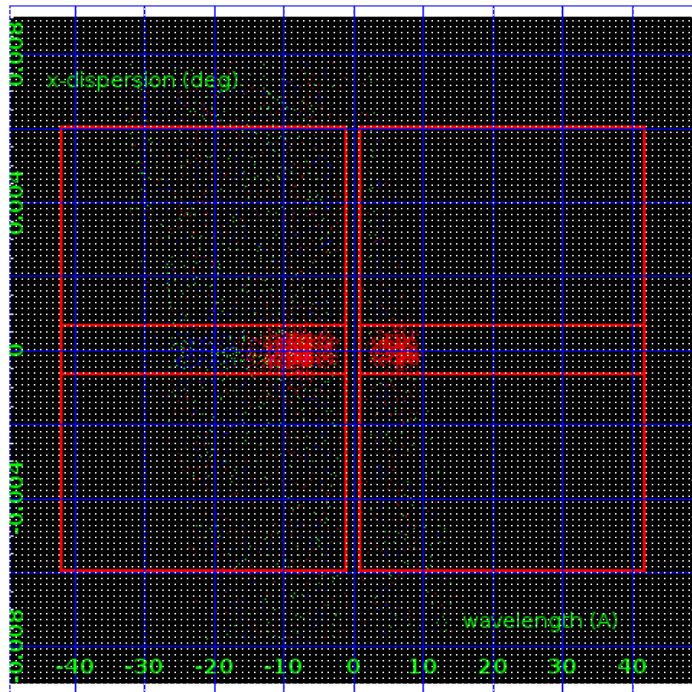
3.2 MEG Arm



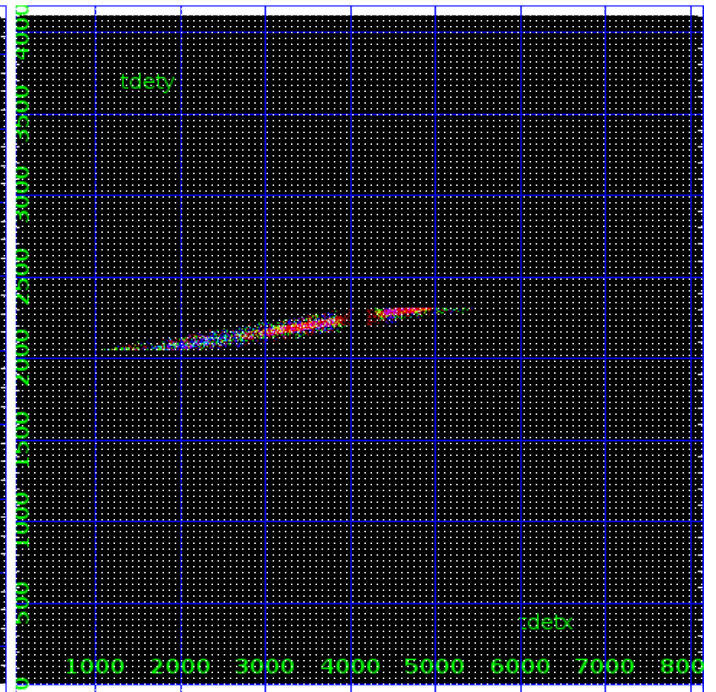
MEG Order Sort 123

MEG Zero Order

MEG Order Sort ALL

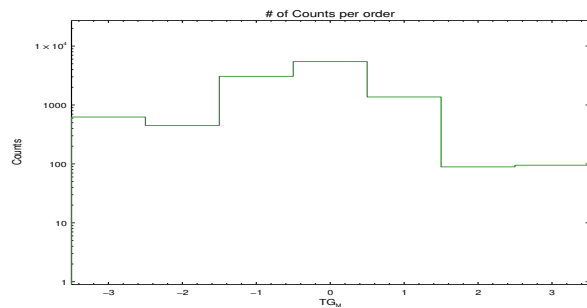


Spot Image MEG

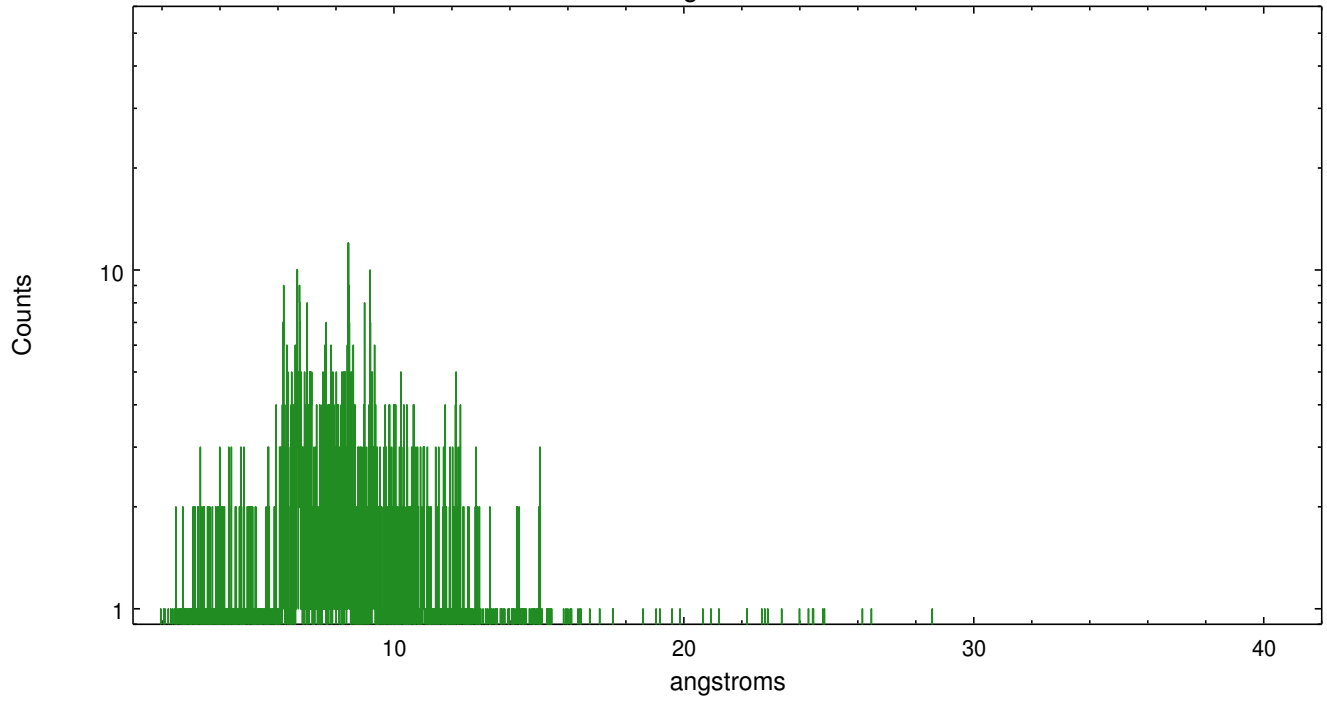


Full Detector MEG

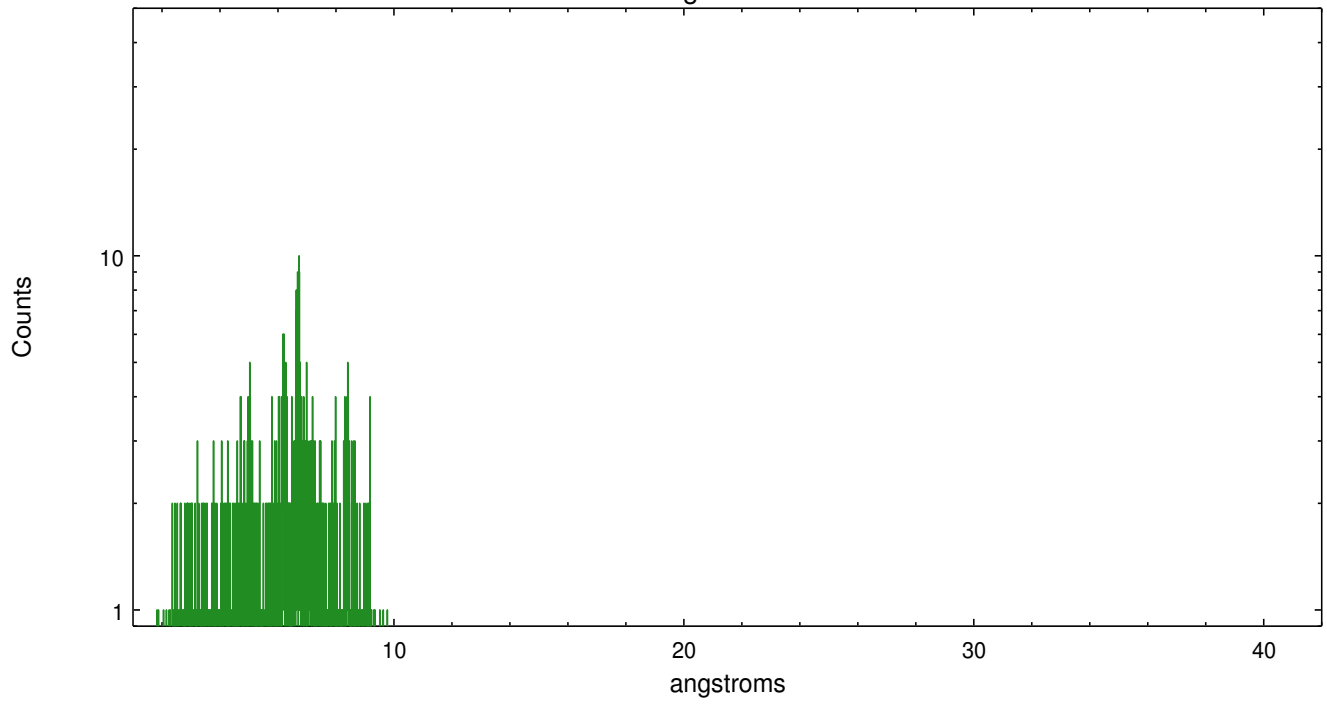
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	625	450	3065	5450	1368	89	95



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2019.09.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	42.587480561256

A.2 Comments

Comments for Obi 0

Star in slot 6 has an RMS deviation > 0.200000 arcsec