

V&V Reference Report

L2 ASCDS Version : 10.6

Observation 20205 - L2 Version 2
Chandra X-Ray Center

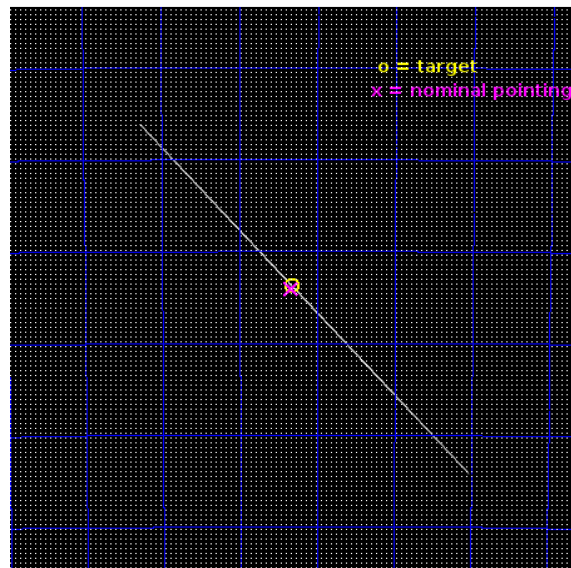
L2 Processing Date : Oct 10 2017

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1 Front

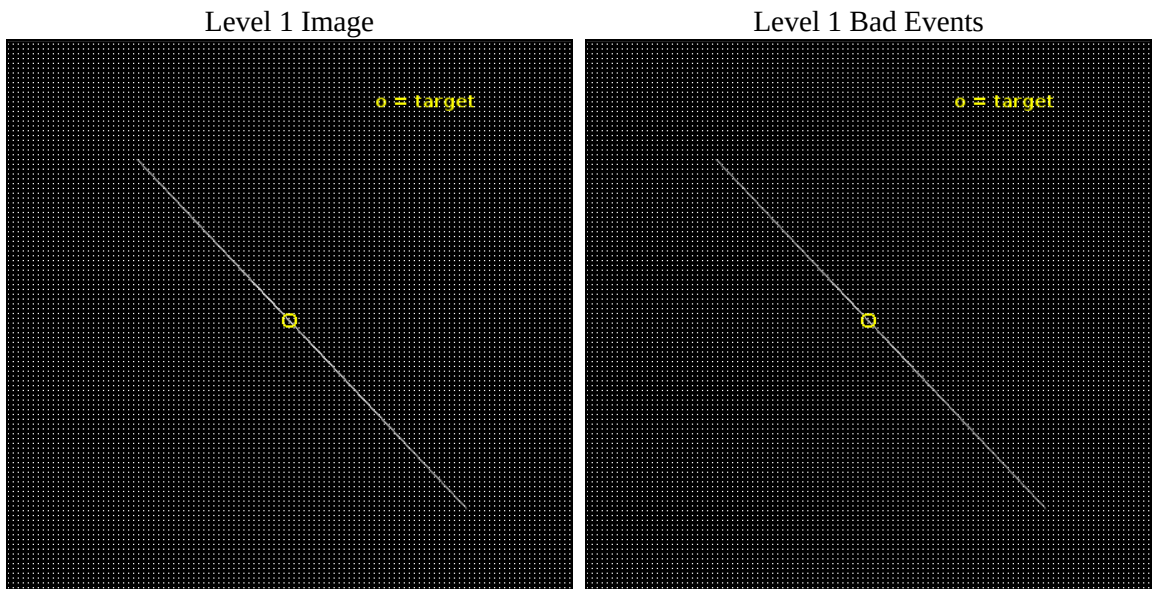
seq_num	401932	Sequence number
obs_id	20205	Observation id
title	An Integrated Approach to Winds, Jets, and State Transitions	Propo
observer	Joseph Neilsen	Principal investigator
object	MAXI J1535-571	Source name
ra_targ	233.832142	Observer's specified target RA [deg]
dec_targ	-57.229884	Observer's specified target Dec [deg]
ra_nom	233.83375906448	Nominal RA [deg]
dec_nom	-57.234876229798	Nominal Dec [deg]
roll_nom	227.82002495537	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10829.629535913	Sum of GTIs [s]
livetime	10787.326295539	Livetime [s]
ontime4	24397.298087955	Sum of GTIs [s]
ontime5	30070.5	Sum of GTIs [s]
ontime6	12255.24351871	Sum of GTIs [s]
ontime7	10829.629535913	Sum of GTIs [s]
ontime8	21977.955400586	Sum of GTIs [s]
ontime9	25160.461788058	Sum of GTIs [s]
l2events	4134765	Number of level 2 events



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.6	Processing system revision	ontime	10829.629535913	Sum of GTIs [s]
caldbver	4.7.6	 	ontime4	24397.298087955	Sum of GTIs [s]
date	2017-10-08T23:19:45	Date and time of file creation	ontime5	30070.5	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	12255.24351871	Sum of GTIs [s]
			ontime7	10829.629535913	Sum of GTIs [s]
			ontime8	21977.955400586	Sum of GTIs [s]
			ontime9	25160.461788058	Sum of GTIs [s]
			l1events	11328643	Number of level 1 events
			tgmethod	MANUAL	Method used to create src1a file
			ra_pos	(4102.50, 4122.40)	src1a sky pixel position

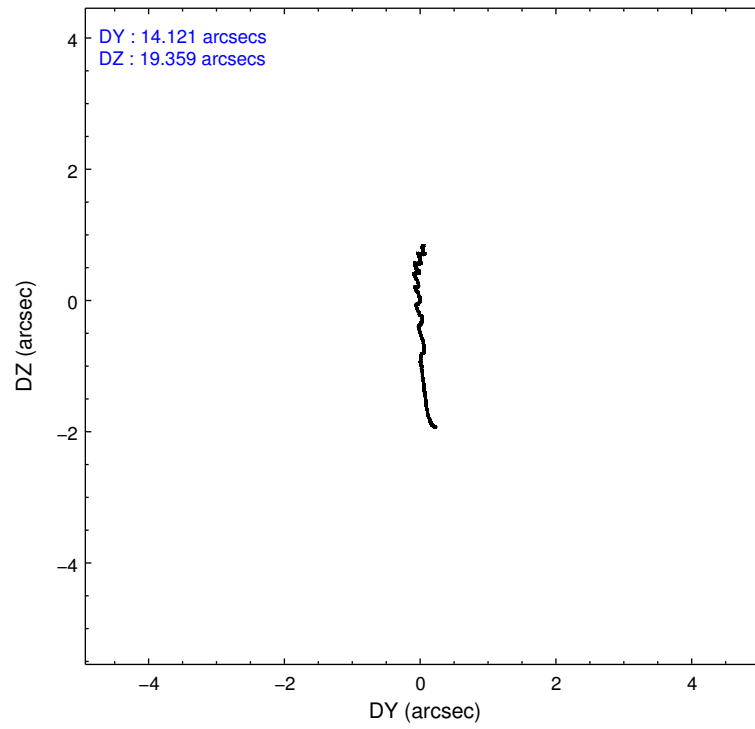
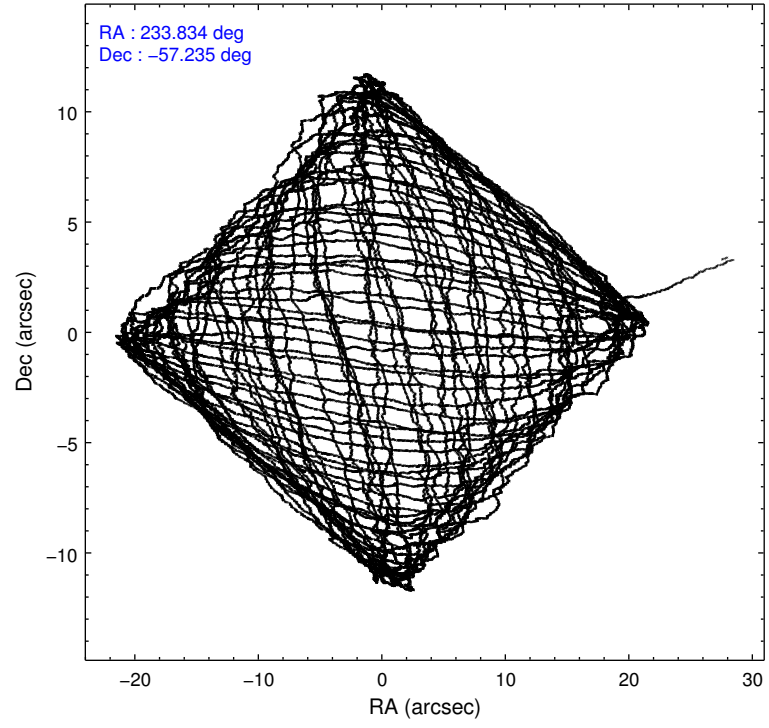
2.1.3 Events

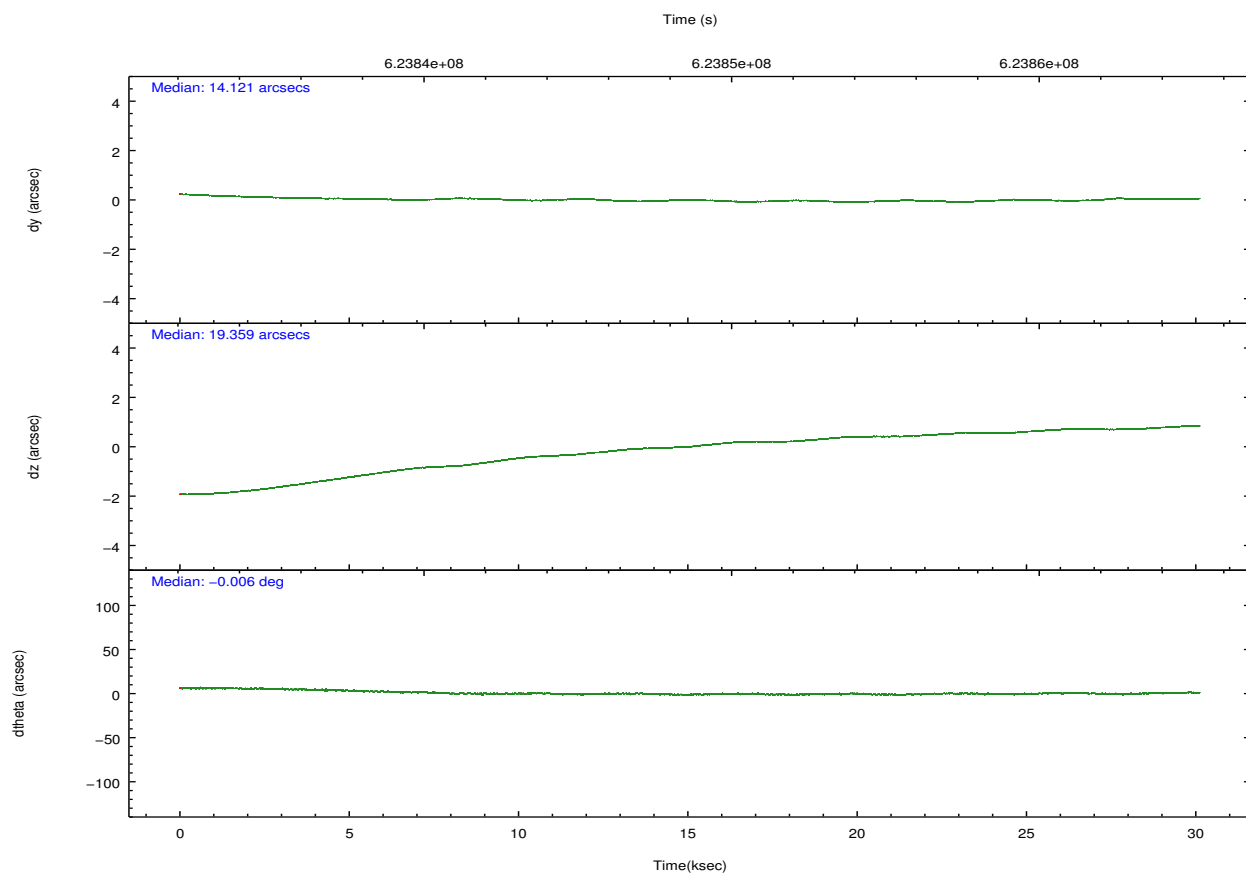
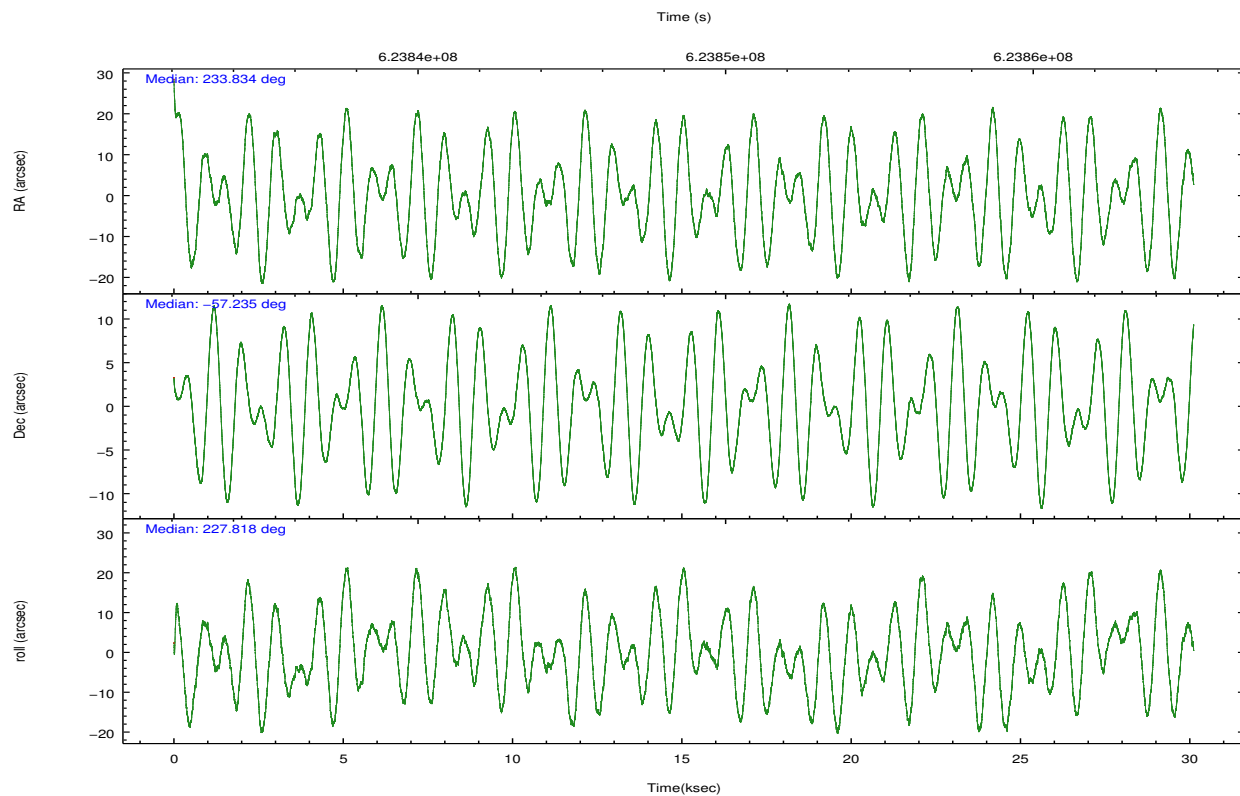
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	545312	1713939	2820570	4307988	1303384	637450	grade 0 events	9388	162421	1344723	478887	490222	48563
rejected events	306840	448178	1191620	1932675	477703	311077		1%	9%	47%	11%	37%	7%
rejected %	56%	26%	42%	44%	36%	48%	grade 1 events	124	567	6874	4948	1662	201
								0%	0%	0%	0%	0%	0%
							grade 2 events	214983	597847	876593	1170954	338219	254819
								39%	34%	31%	27%	25%	39%
							grade 3 events	3951	40965	87787	294166	28535	5965
								0%	2%	3%	6%	2%	0%
							grade 4 events	3930	39731	87865	291409	28357	6189
								0%	2%	3%	6%	2%	0%
							grade 5 events	8017	31962	19098	64917	14147	10257
								1%	1%	0%	1%	1%	1%
							grade 6 events	26136	424962	197043	1523215	58144	32297
								4%	24%	6%	35%	4%	5%
							grade 7 events	278783	415484	200587	479492	344098	279159
								51%	24%	7%	11%	26%	43%

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	CC33_GRADED	CC33_GRADED	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	233.843775	233.8337590644797	CCD I2 on	N	N
[deg] Pointing Dec	-57.207968	-57.23487622979845	CCD I3 on	N	N
[deg] Pointing Roll	227.671829	227.8200249553702	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	-177.532523	-177.5307748125485	CCD S3 on	Y	Y
[mm] SIM translation stage offset	-12.6	-12.60174777045933	CCD S4 on	Y	Y
[s] Observation start time (MET)	623833693.184000	623832475.4225	CCD S5 on	O2	Y
Observation start date	2017-10-08T07:07:04	2017-10-08T06:47:55	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	623863693.184000	623864301.16186	On-chip summing requested	N	N
Observation end date	2017-10-08T15:27:04	2017-10-08T15:38:21	Subarray requested	NONE	NONE
Read mode	CONTINUOUS	CONTINUOUS	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	0

2.3 Aspect



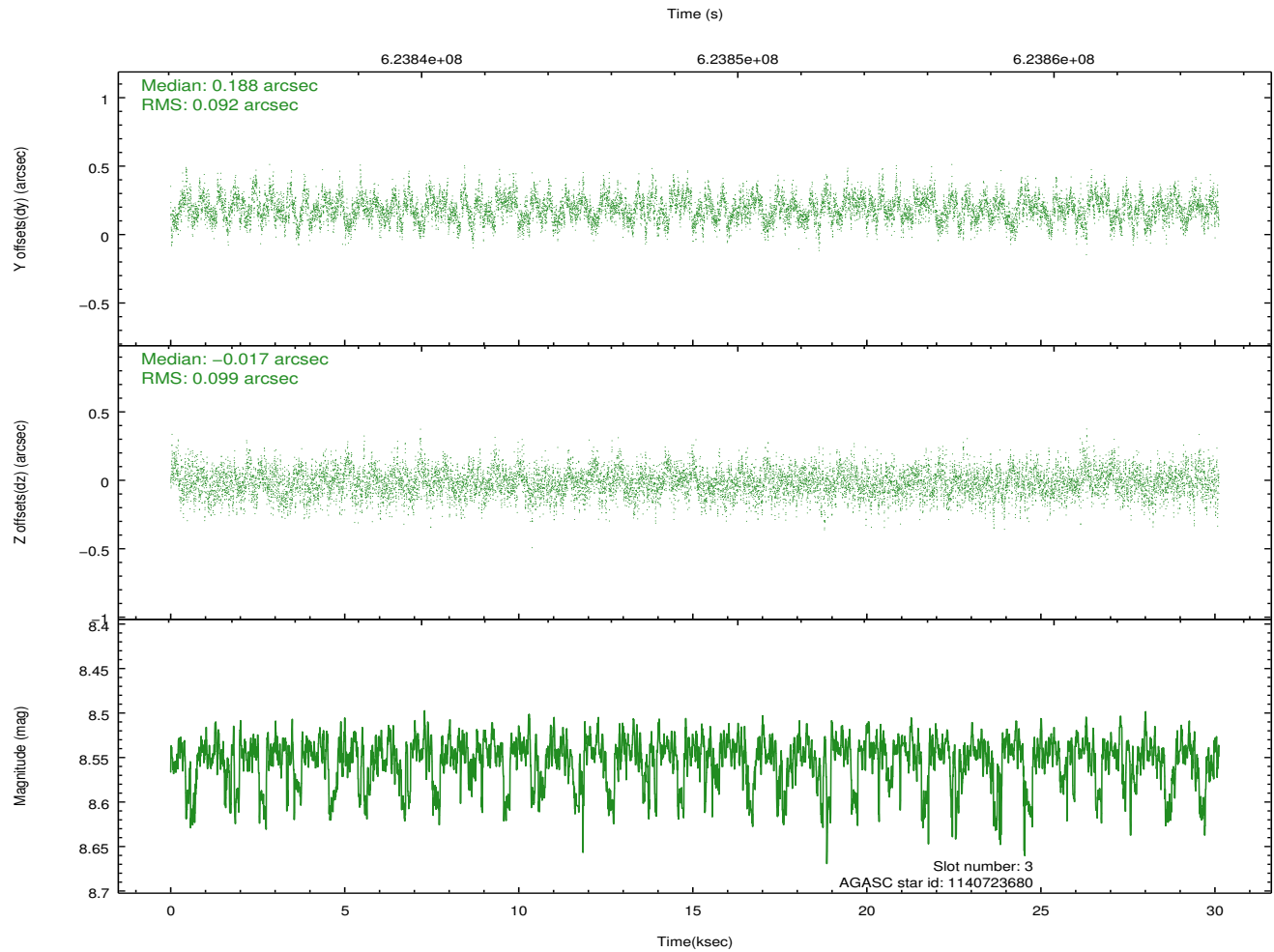
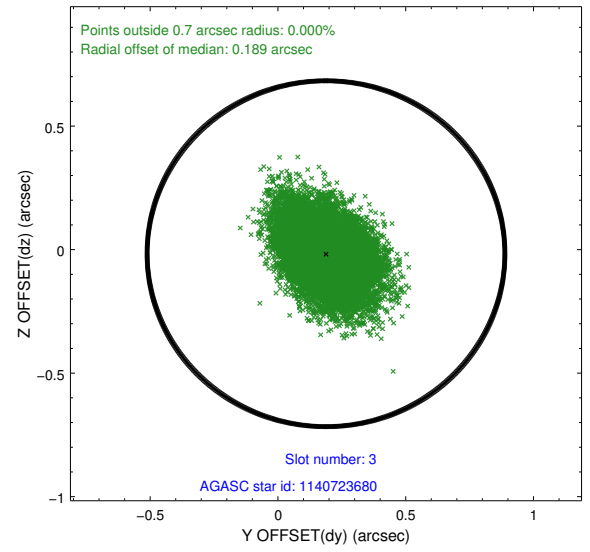
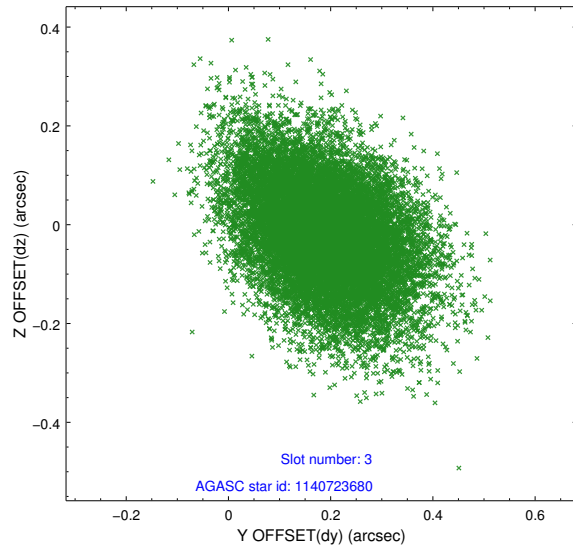


Slot Statistics

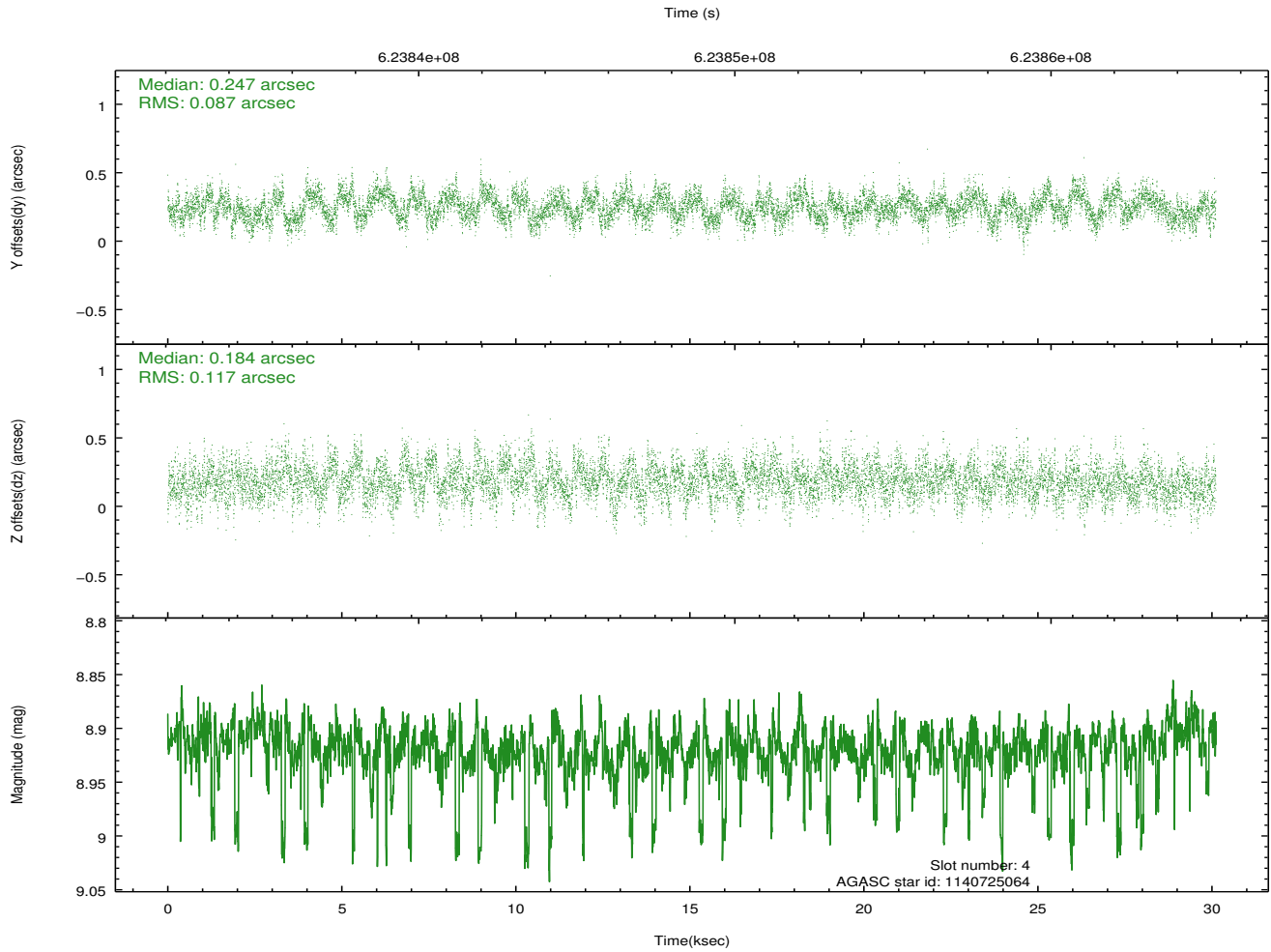
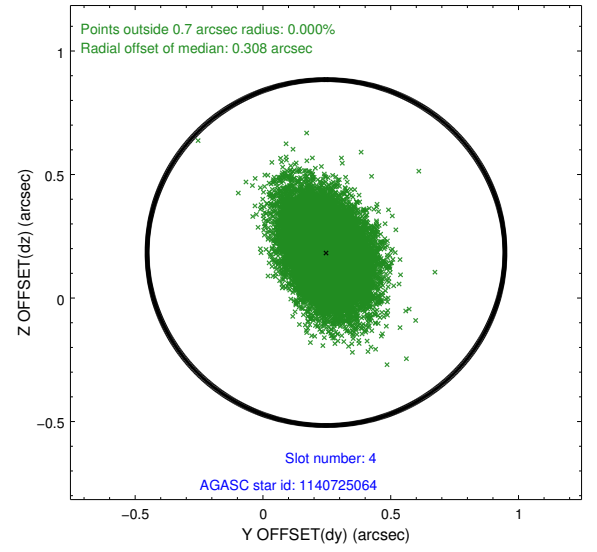
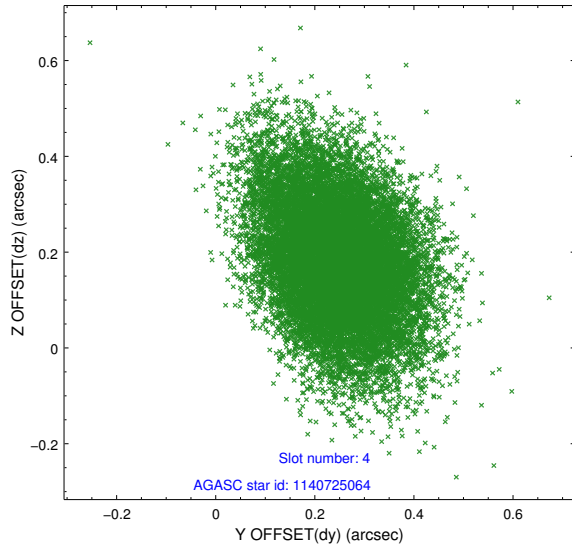
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.13	7346	0.033	-0.078	0.016	0.025	0.000000	0.000000	929.96	-1995.70
1	FID		ACIS-S-4	7.09	7346	0.331	0.043	0.017	0.026	0.000000	0.000000	2147.68	-91.54
2	FID		ACIS-S-5	7.17	7346	-0.388	0.046	0.015	0.039	0.000000	0.000000	-1819.27	-97.92
3	GUIDE	used	1140723680	8.55	14684	0.188	-0.017	0.143	0.239	232.754853	-57.486193	2172.39	-871.62
4	GUIDE	used	1140725064	8.92	14681	0.247	0.184	0.152	0.256	233.128603	-56.809070	-105.52	-2003.44
5	GUIDE	used	1140852176	8.27	14677	-0.077	0.269	0.138	0.233	234.112484	-57.014325	-868.66	-79.00
6	GUIDE	used	1140855848	8.67	14687	-0.301	-0.174	0.139	0.233	233.945443	-57.738351	1281.40	1430.38
7	GUIDE	used	1140721512	9.08	14665	-0.071	-0.261	0.165	0.274	233.264718	-57.789171	2299.01	590.81

2.4 Star Slots

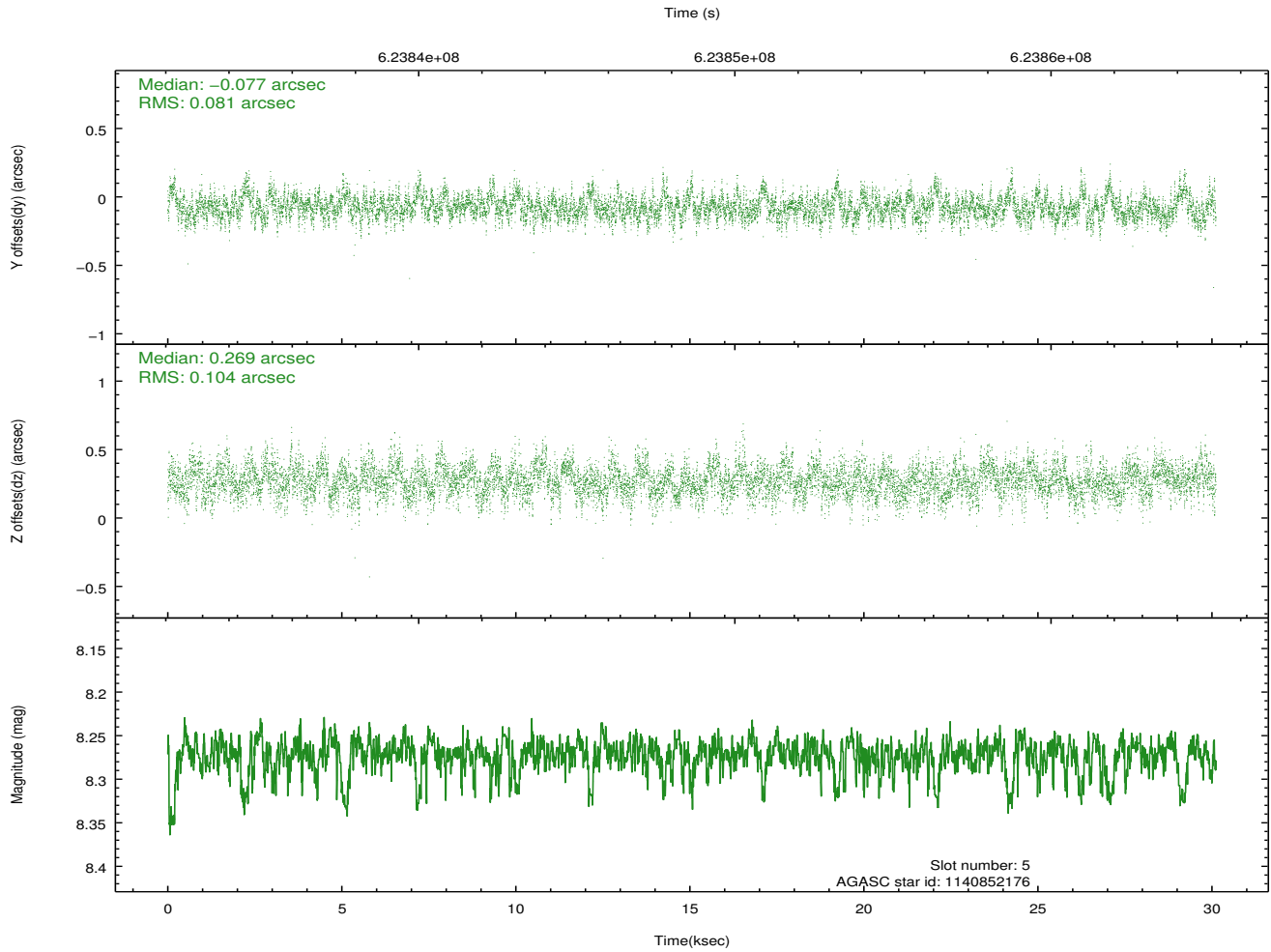
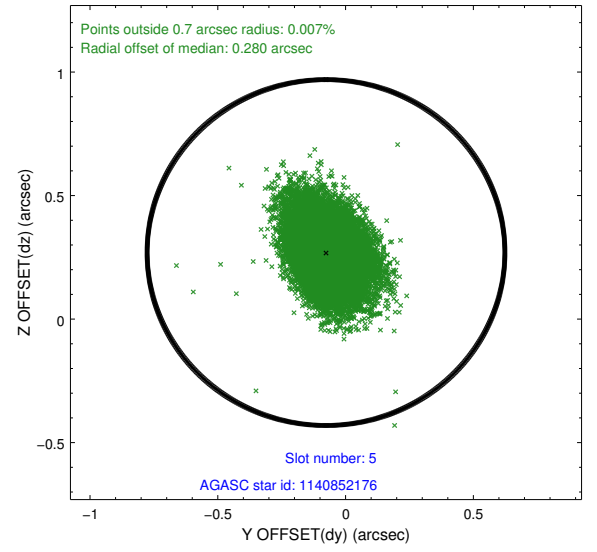
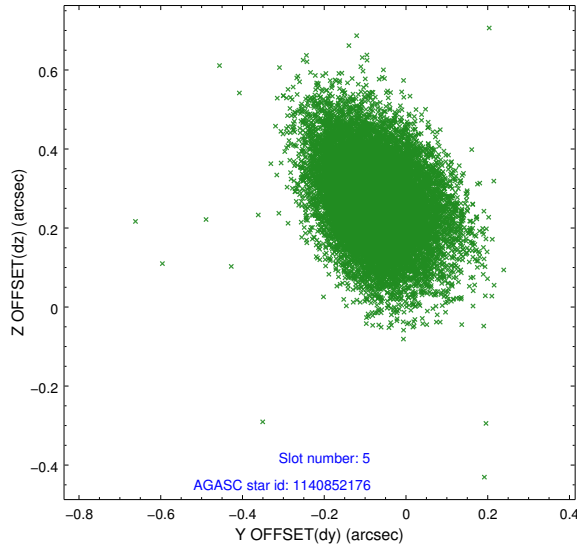
2.4.1 Slot 3



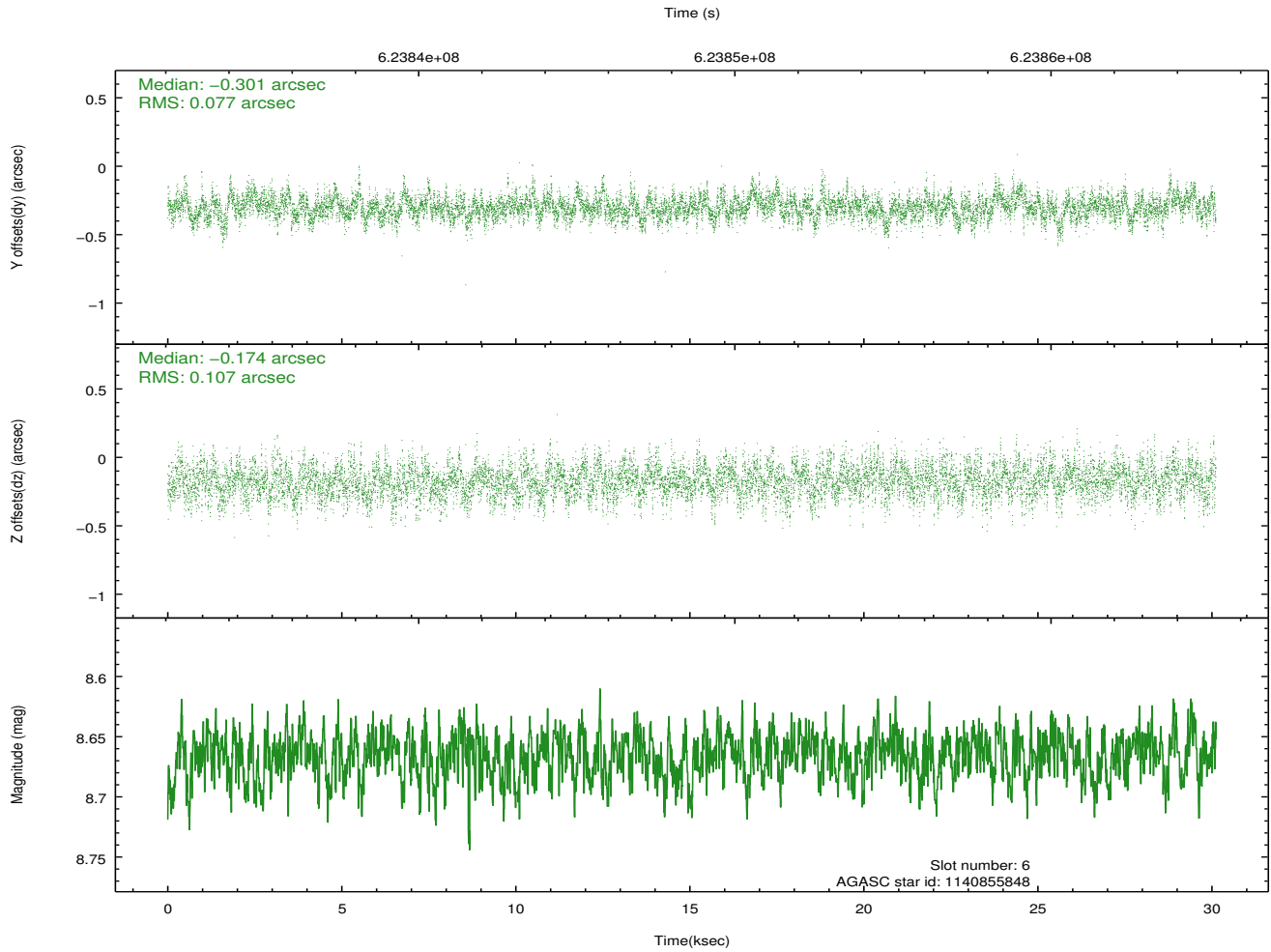
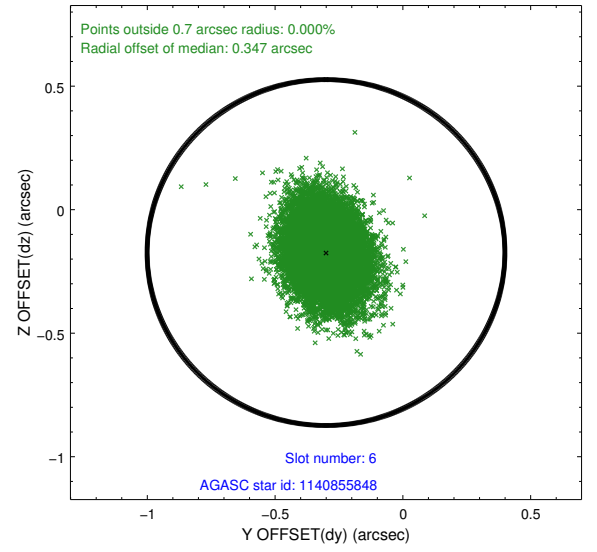
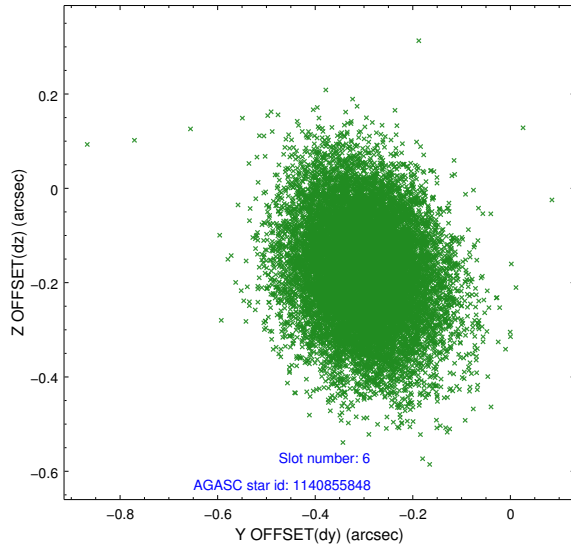
2.4.2 Slot 4



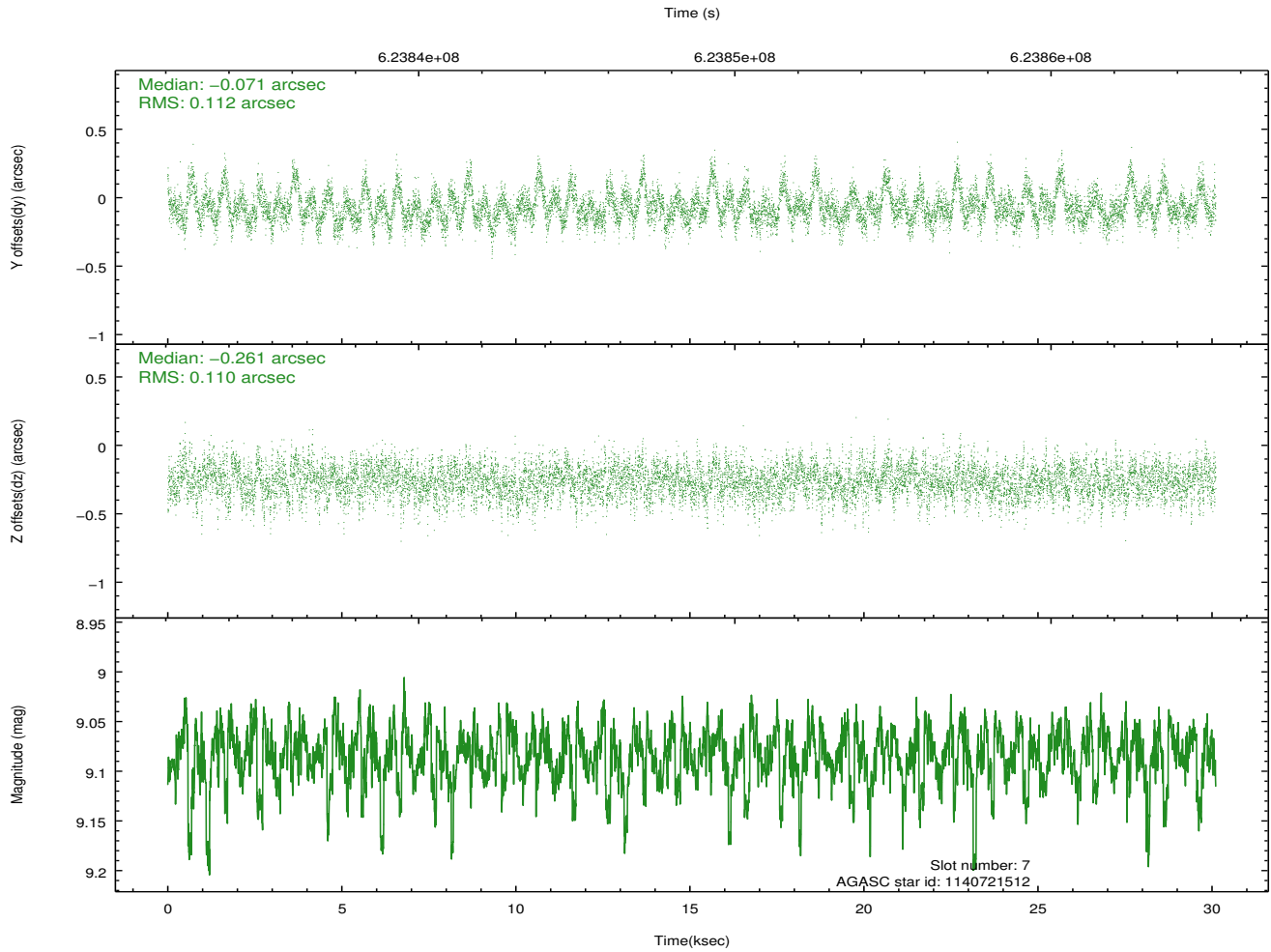
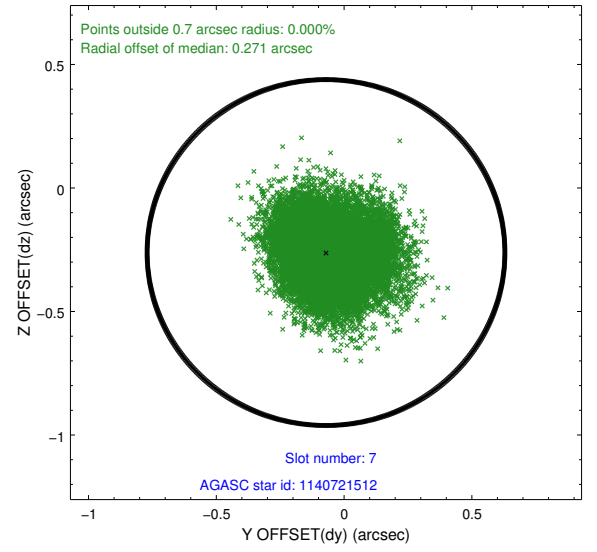
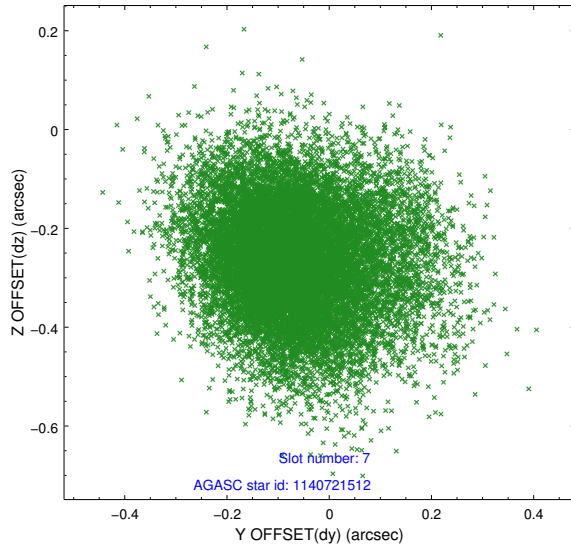
2.4.3 Slot 5



2.4.4 Slot 6

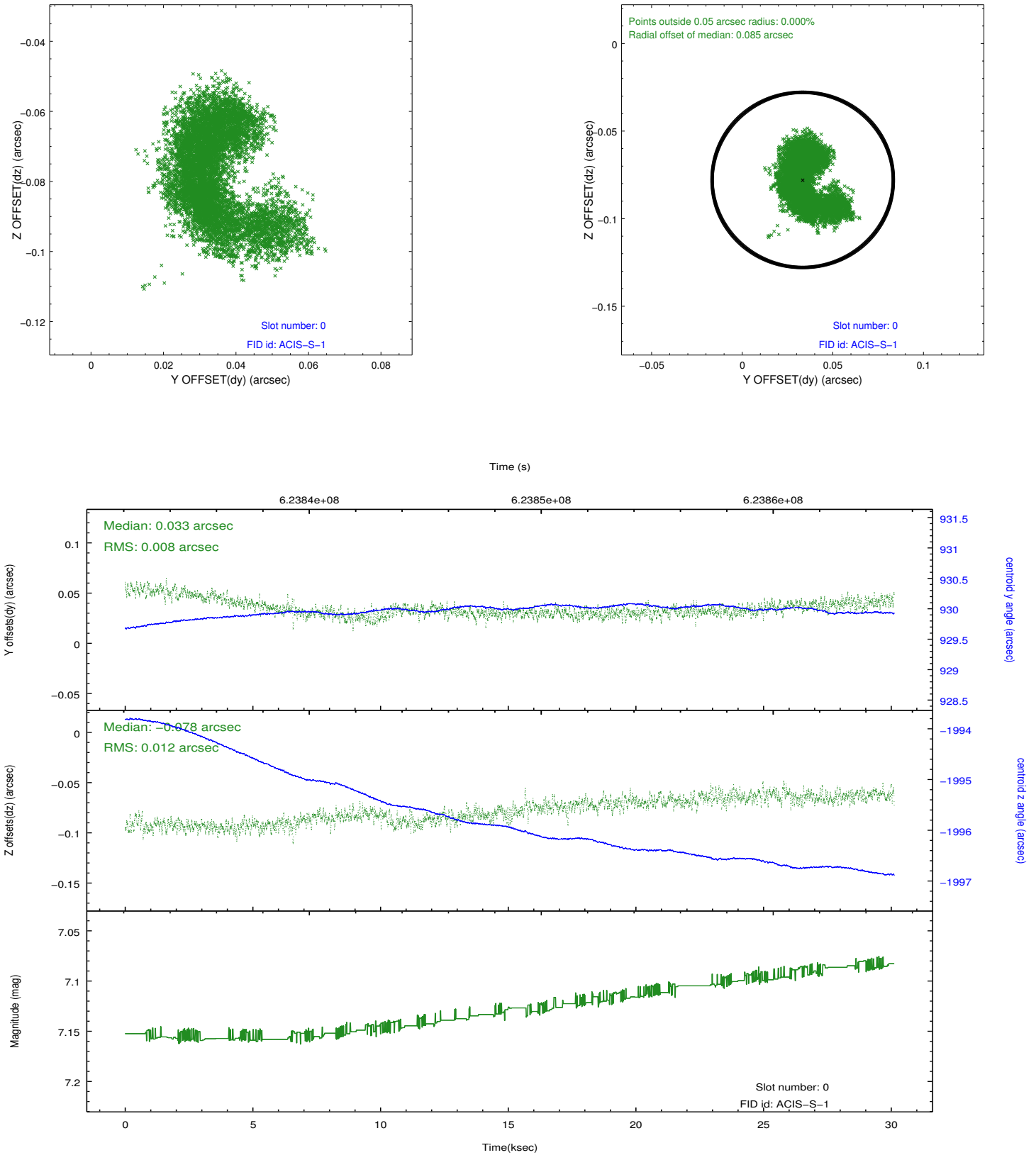


2.4.5 Slot 7

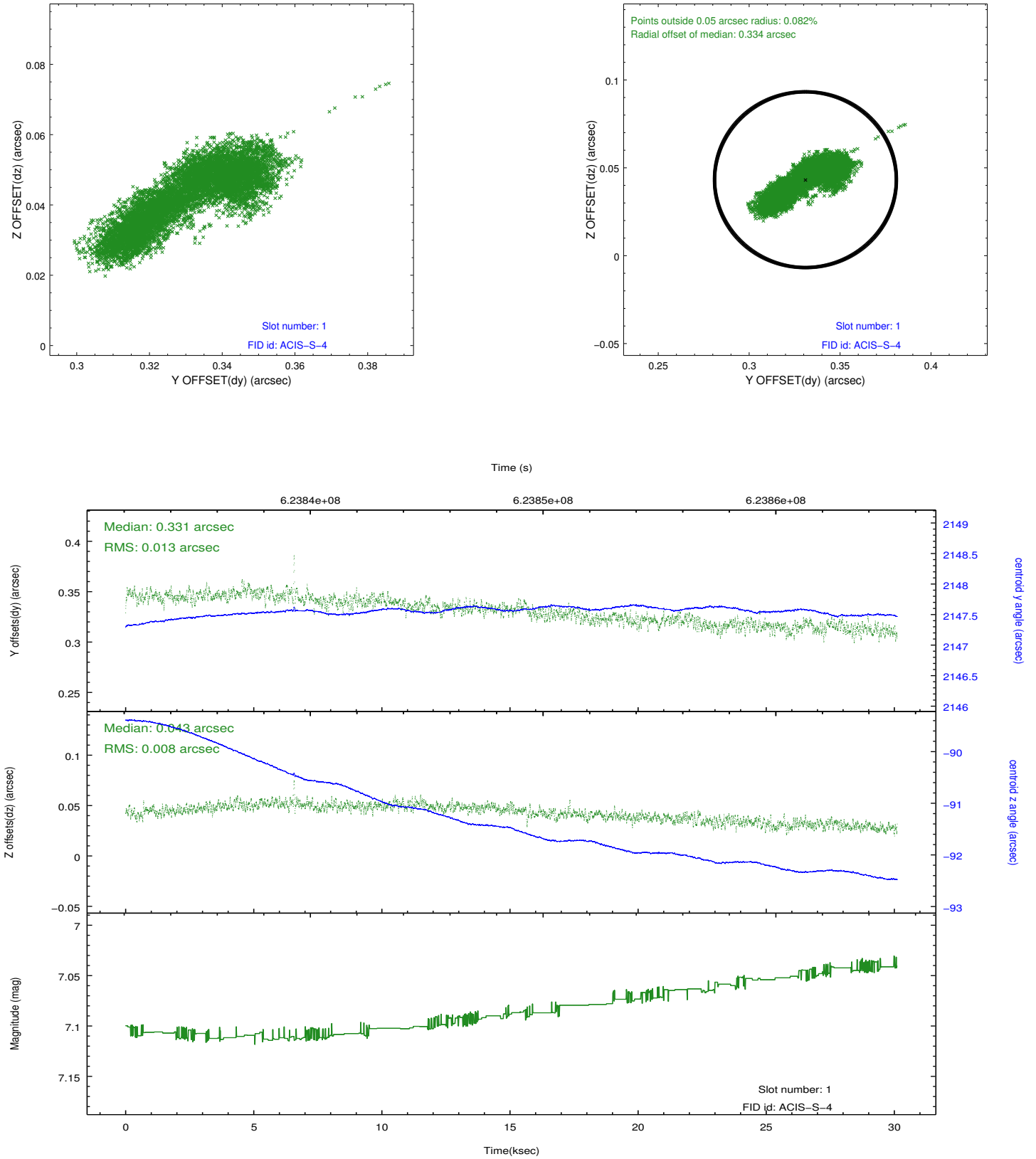


2.5 FID Slots

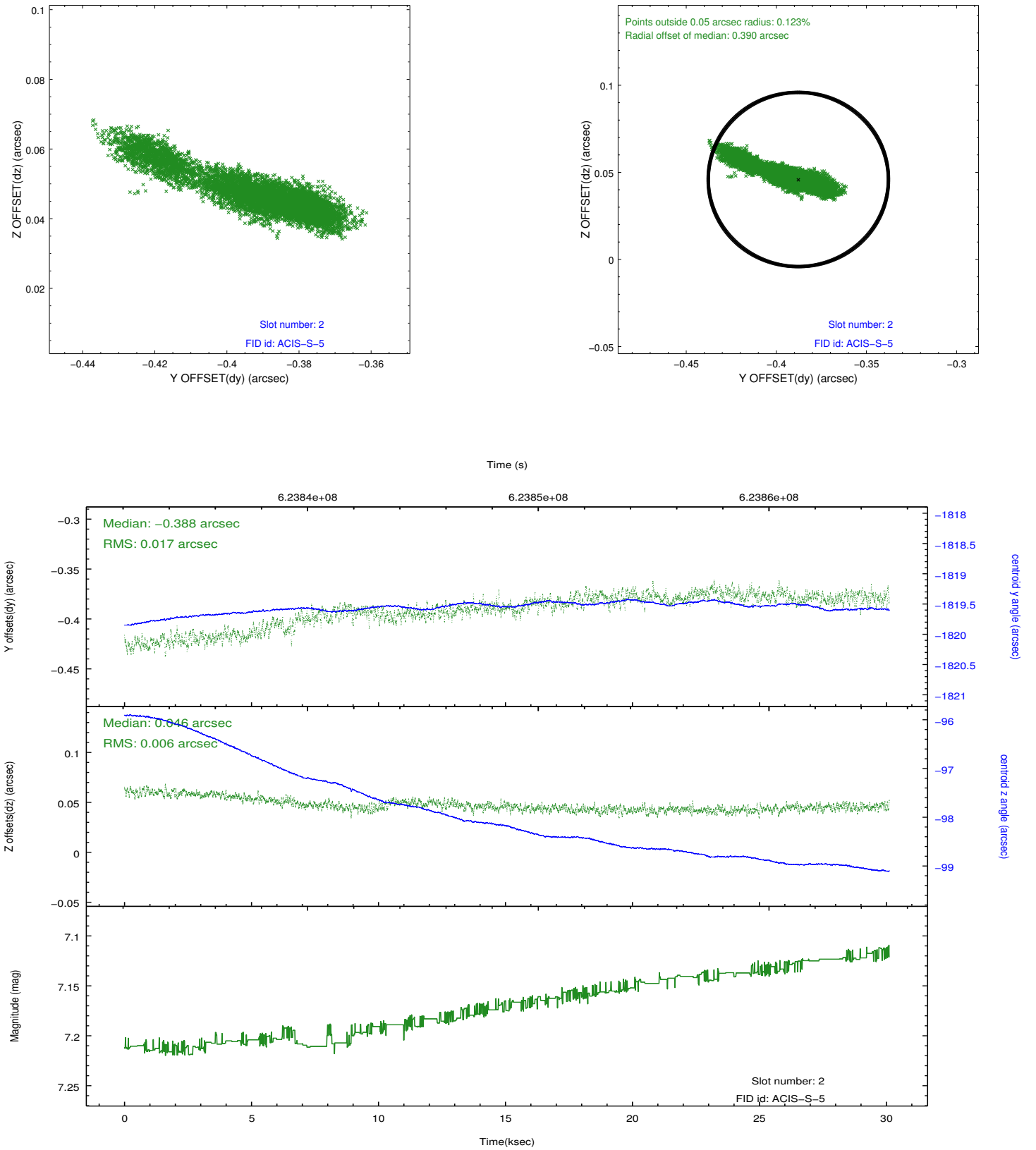
2.5.1 Slot 0



2.5.2 Slot 1

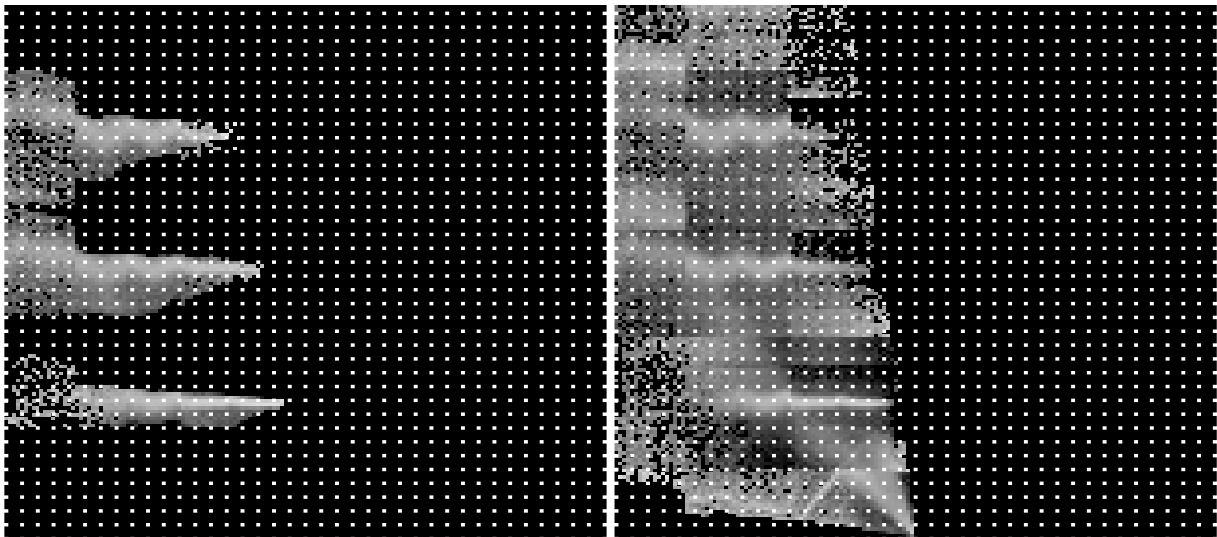


2.5.3 Slot 2



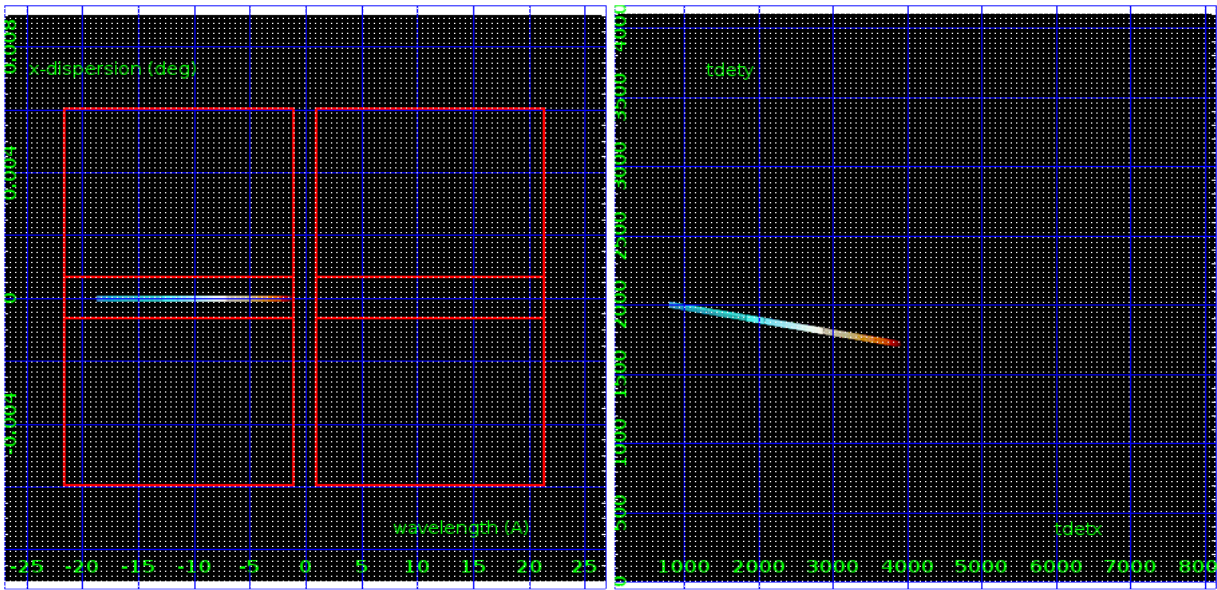
3 Gratings

3.1 HEG Arm



HEG Order Sort 123

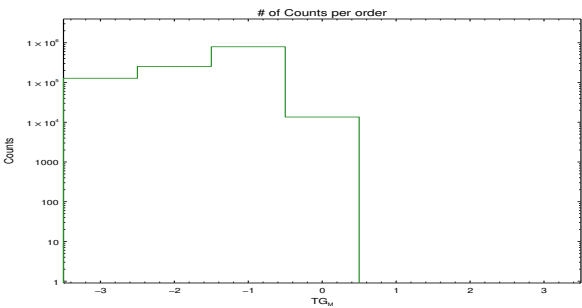
HEG Order Sort ALL

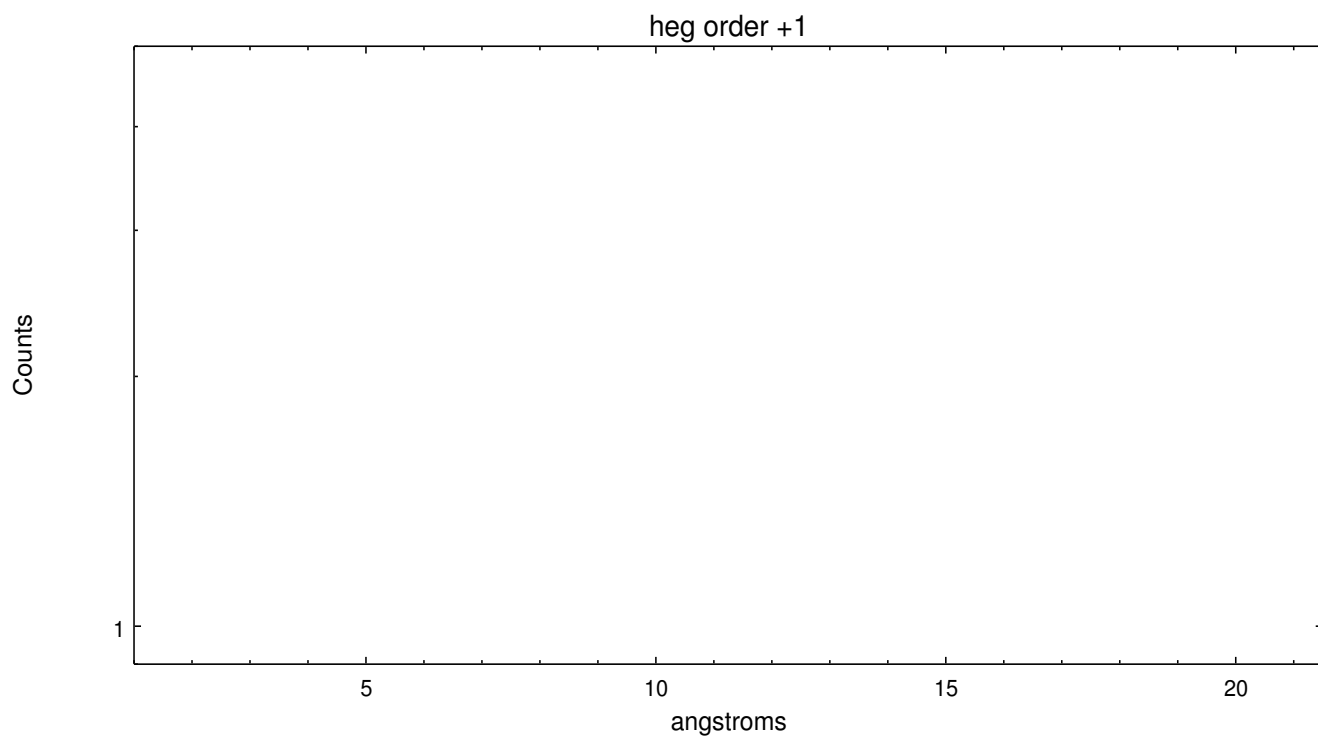
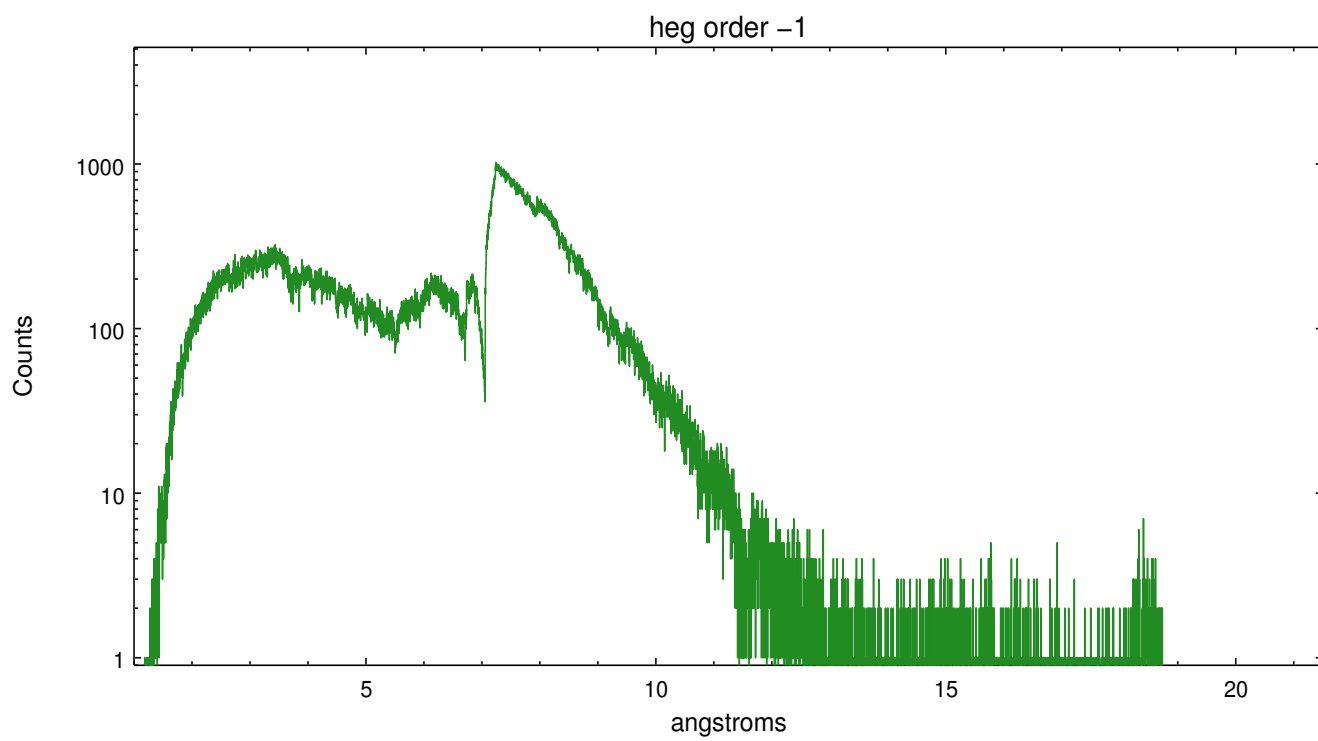


Spot Image HEG

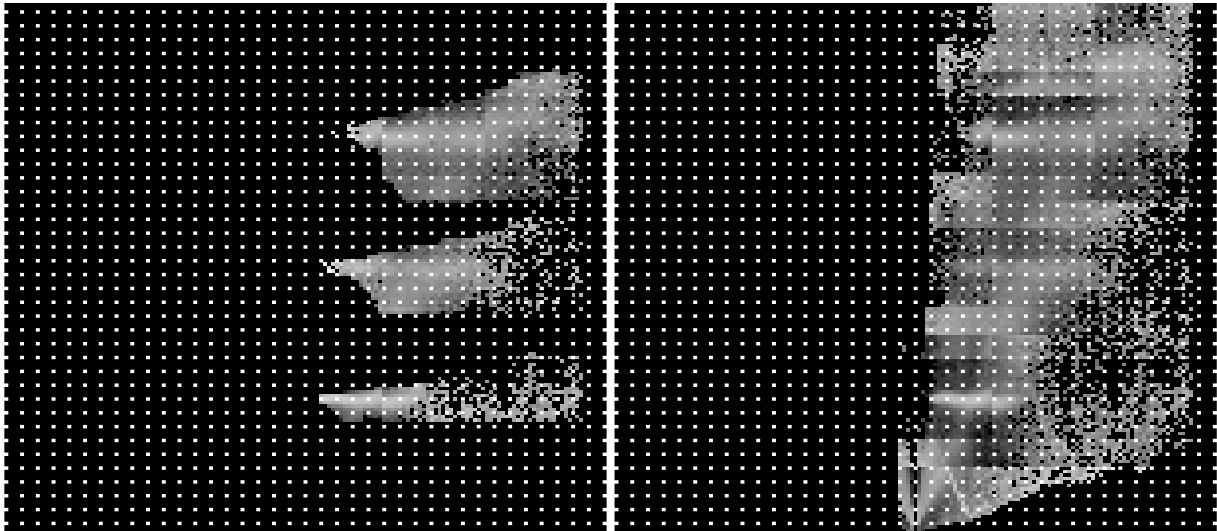
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	127783	254029	792646	13515	0	0	0



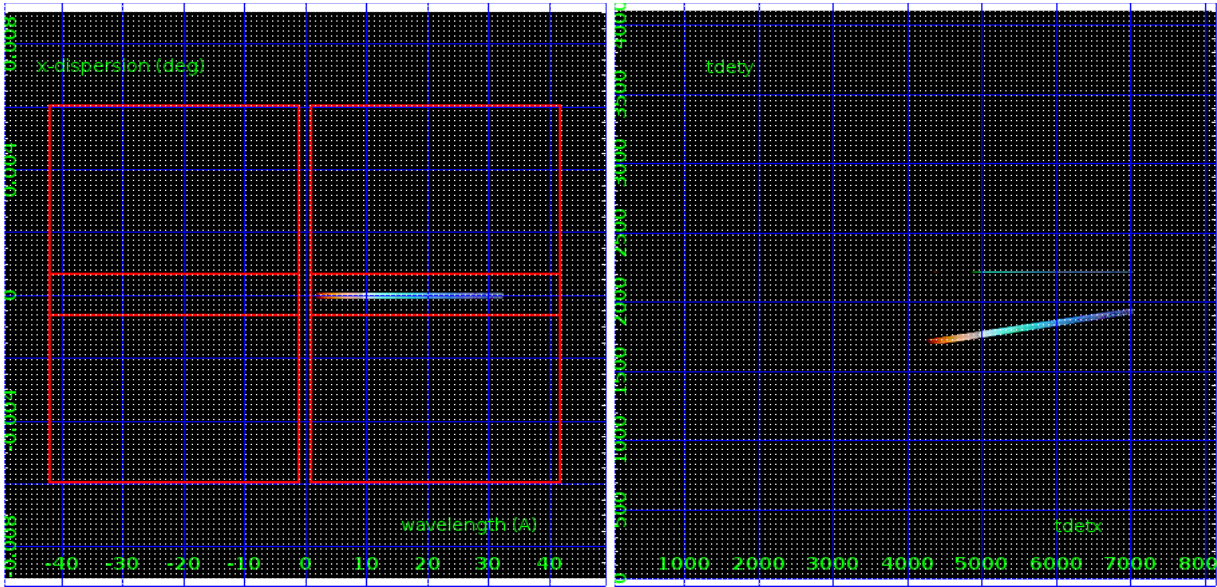


3.2 MEG Arm



MEG Order Sort 123

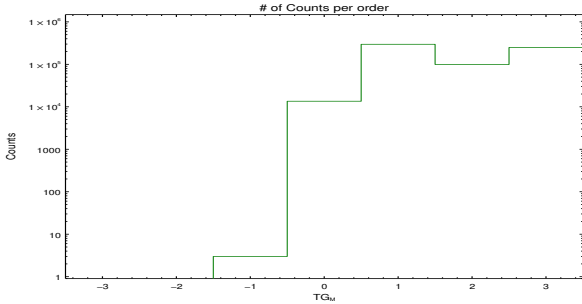
MEG Order Sort ALL

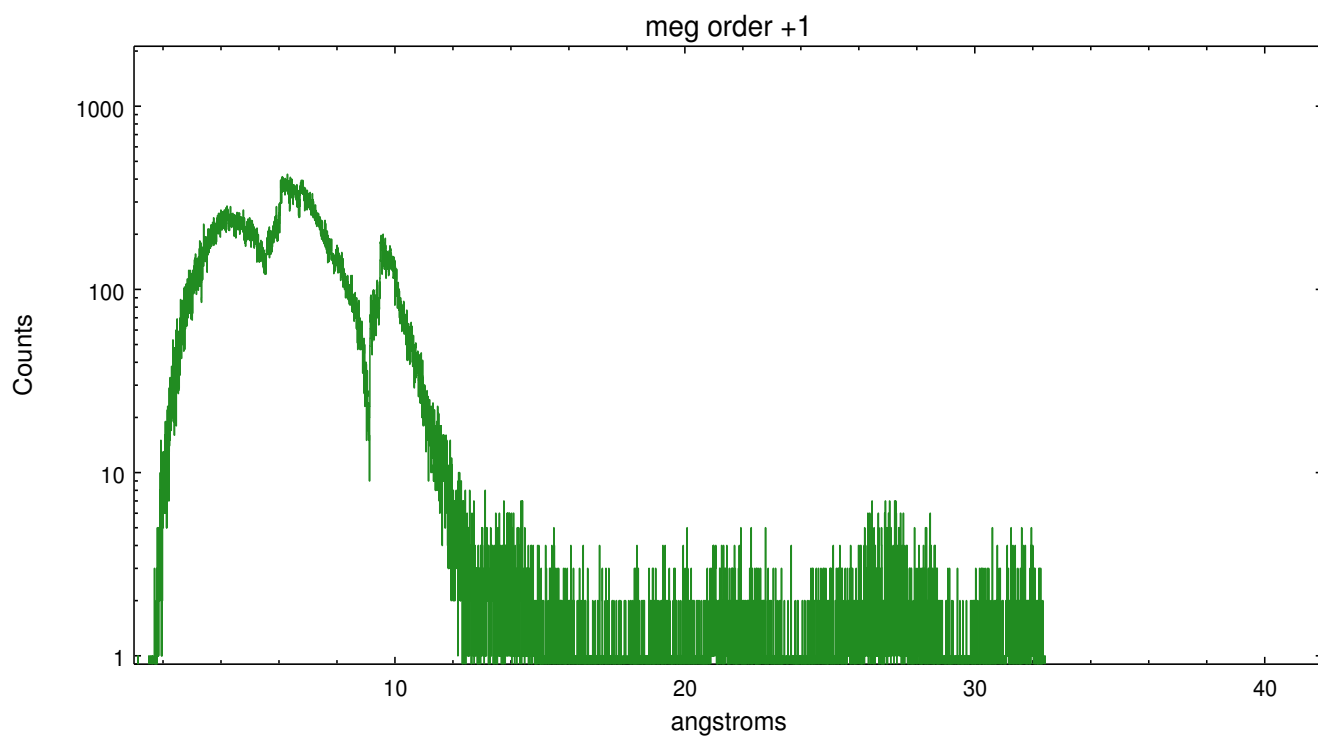
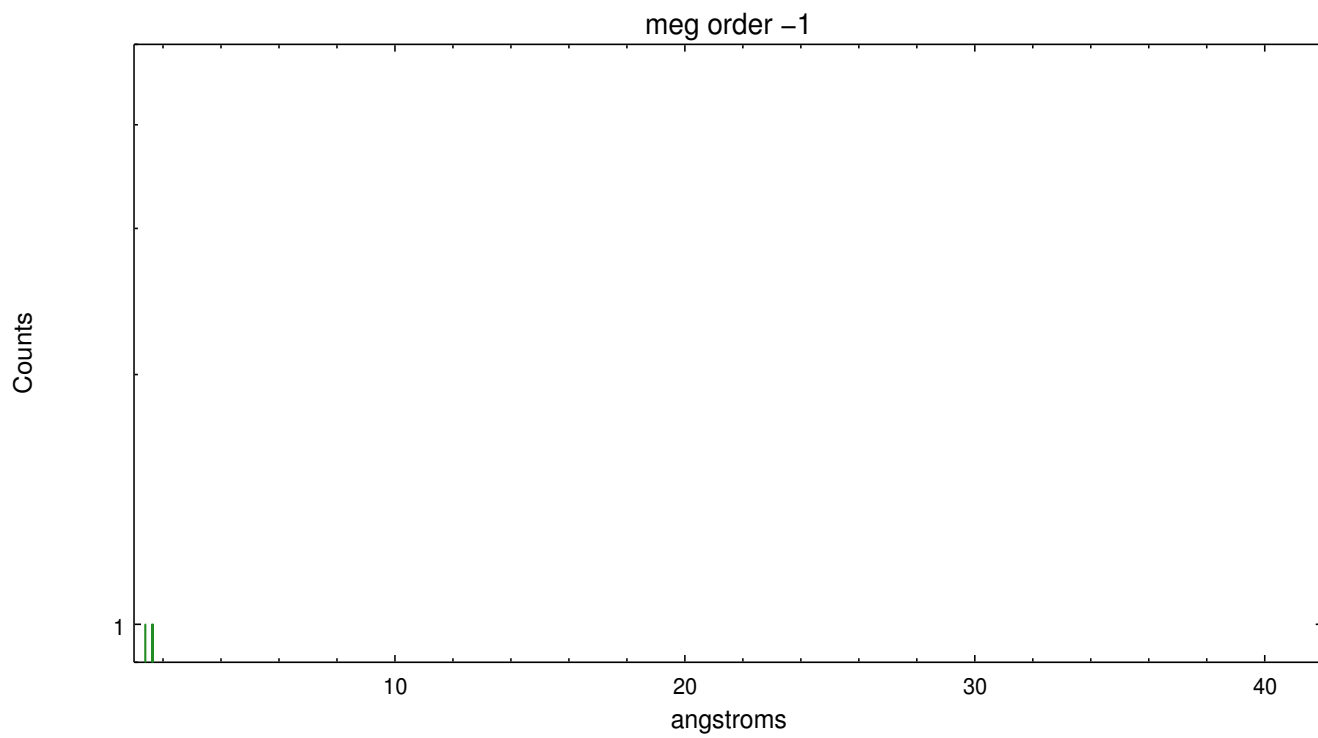


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	0	0	3	13515	296136	99403	249011





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2017.10.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.07

A.2 Comments

Due to saturation, ONTIMEn varies greatly with CCD. Used CCD5 for the Charge Time.

Used manually determined zeroth order position.

Detector offset places two arms off the array, so data are primarily comprised of HEG negating and MEG positive orders.

Charge time:

Variation in Chips > 15% threshold.

Low Chip 7, ONTIME=10829.629536 seconds

High Chip 5, ONTIME=30070.500000 seconds

Chip 8, ONTIME=21977.955401 seconds is less than 80% of scheduled time=30000.000000 seconds

Chip 7, ONTIME=10829.629536 seconds is less than 80% of scheduled time=30000.000000 seconds

Chip 6, ONTIME=12255.243519 seconds is less than 80% of scheduled time=30000.000000 seconds

ONTIME of 10829.629535913 seconds is less than 85% of expected scheduled time of 30000 seconds