

V&V Reference Report

L2 ASCDS Version : 10.4.3.1

Observation 18833 - L2 Version 1
Chandra X-Ray Center

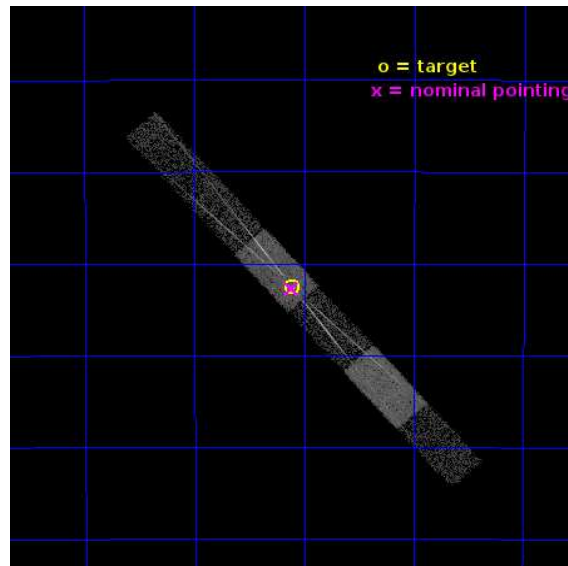
L2 Processing Date : May 2 2016

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1 Front

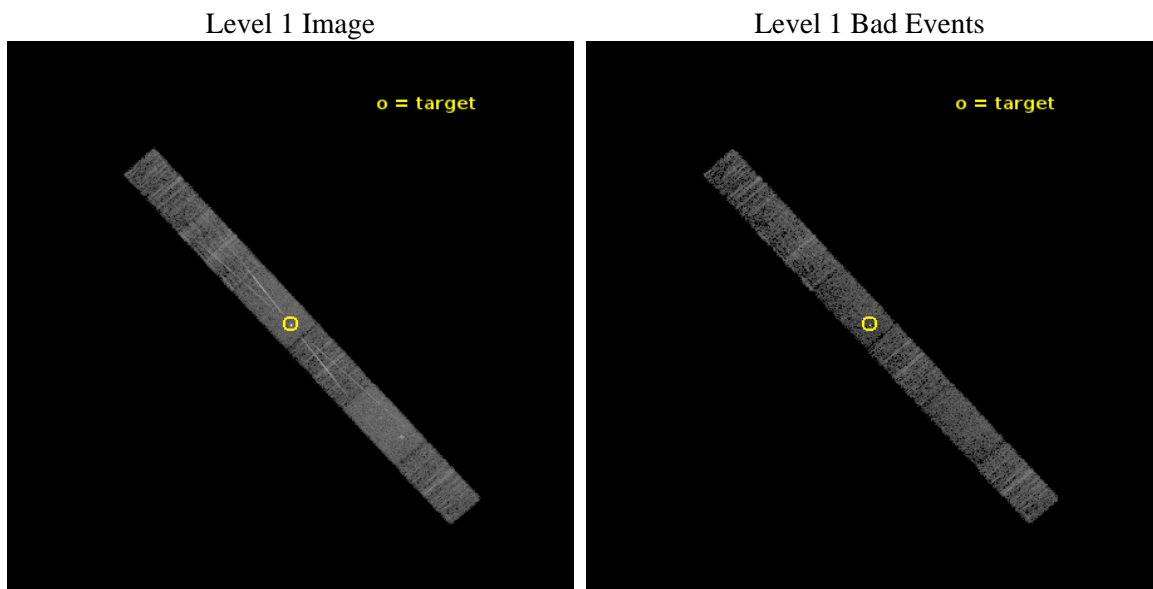
seq_num	401682	Sequence number
obs_id	18833	Observation id
title	The ultracompact binary 4U 0513-40	Proposal title
observer	Claude Canizares	Principal investigator
object	4U 0513-40	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	78.5275	Observer's specified target RA [deg]
dec_targ	-40.043611	Observer's specified target Dec [deg]
ra_nom	78.529393586022	Nominal RA [deg]
dec_nom	-40.04588649302	Nominal Dec [deg]
roll_nom	228.15778768448	Nominal Roll [deg]
revision	1	Processing version of data
ontime	5045.3842624426	Sum of GTIs [s]
livetime	4926.4538701882	Livetime [s]
ontime4	5045.4253023863	Sum of GTIs [s]
ontime5	5045.3432223797	Sum of GTIs [s]
ontime6	5045.302182436	Sum of GTIs [s]
ontime7	5045.3842624426	Sum of GTIs [s]
ontime8	5045.2611423731	Sum of GTIs [s]
ontime9	5045.2201024294	Sum of GTIs [s]
l2events	39844	Number of level 2 events



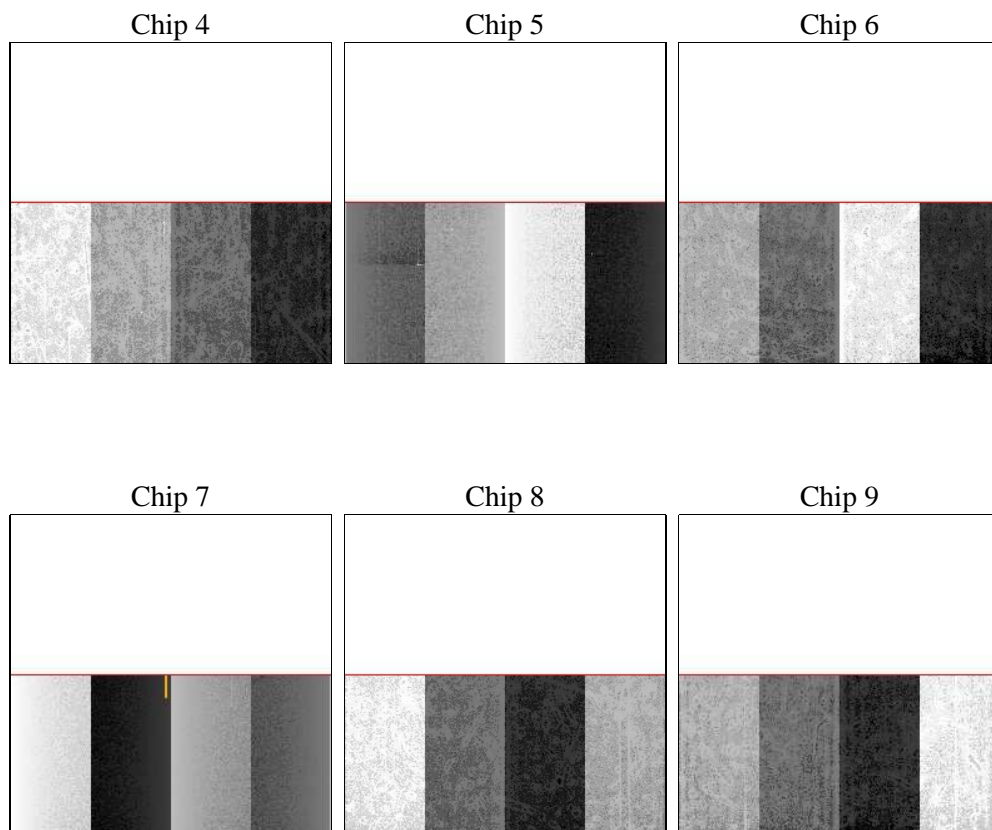
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.4.3.1	Processing system revision	ontime	5045.3842624426	Sum of GTIs [s]
caldsver	4.7.1	 	ontime4	5045.4253023863	Sum of GTIs [s]
date	2016-05-02T17:59:21	Date and time of file creation	ontime5	5045.3432223797	Sum of GTIs [s]
revision	1	Processing version of data	ontime6	5045.302182436	Sum of GTIs [s]
			ontime7	5045.3842624426	Sum of GTIs [s]
			ontime8	5045.2611423731	Sum of GTIs [s]
			ontime9	5045.2201024294	Sum of GTIs [s]
			l1events	130905	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			ra_pos	(4100.41, 4110.76)	src1a sky pixel position

2.1.4 Events

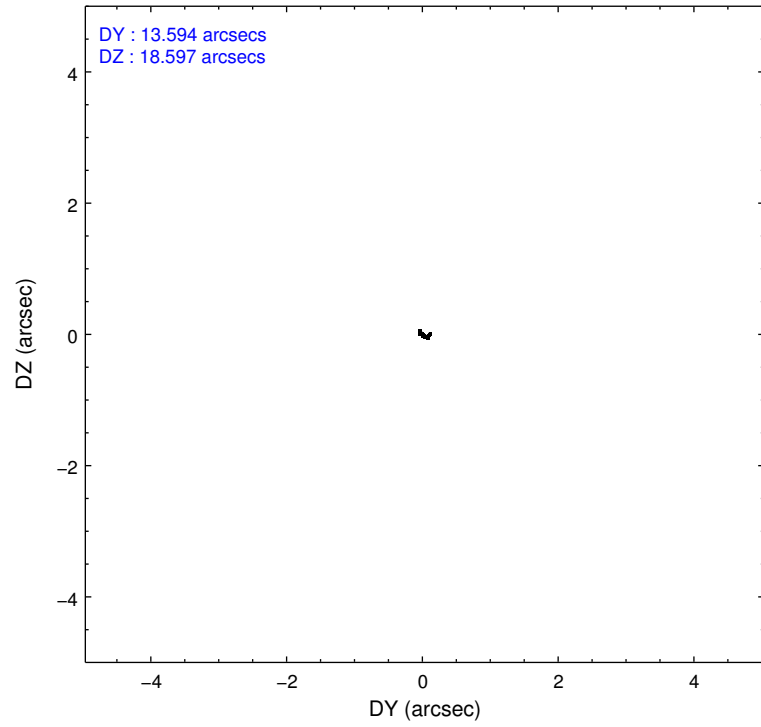
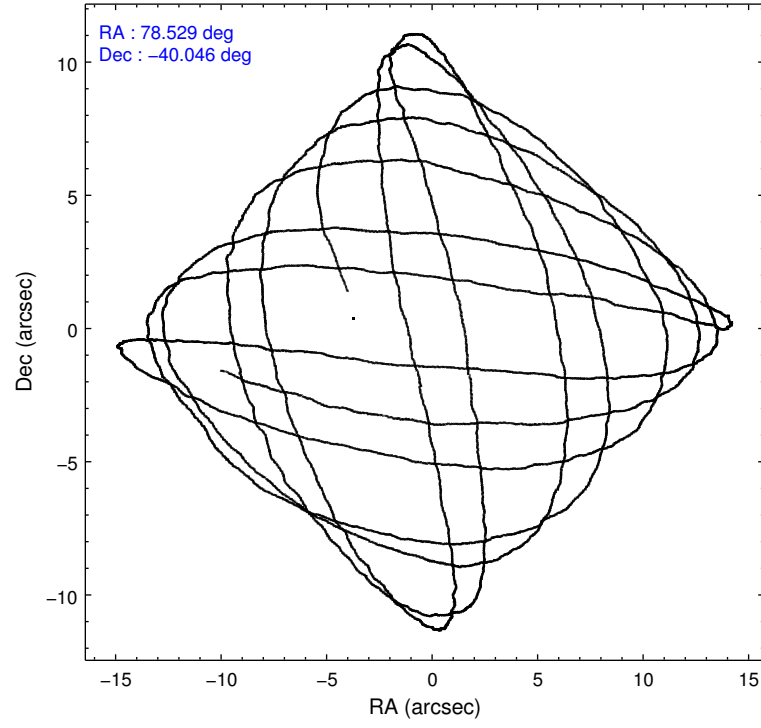
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	18688	26204	19630	27754	23224	15405
rejected events	16234	12825	13992	12562	15809	13128
rejected %	86%	48%	71%	45%	68%	85%

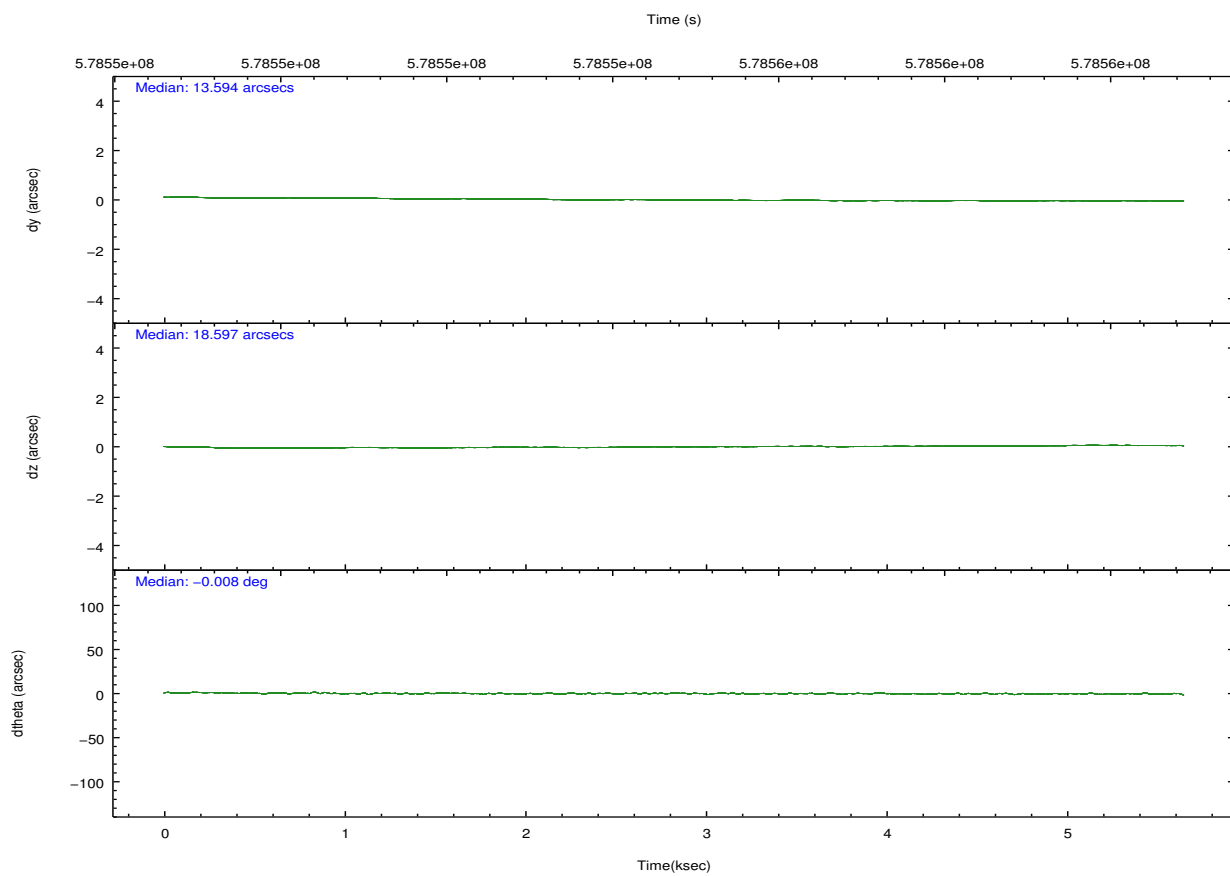
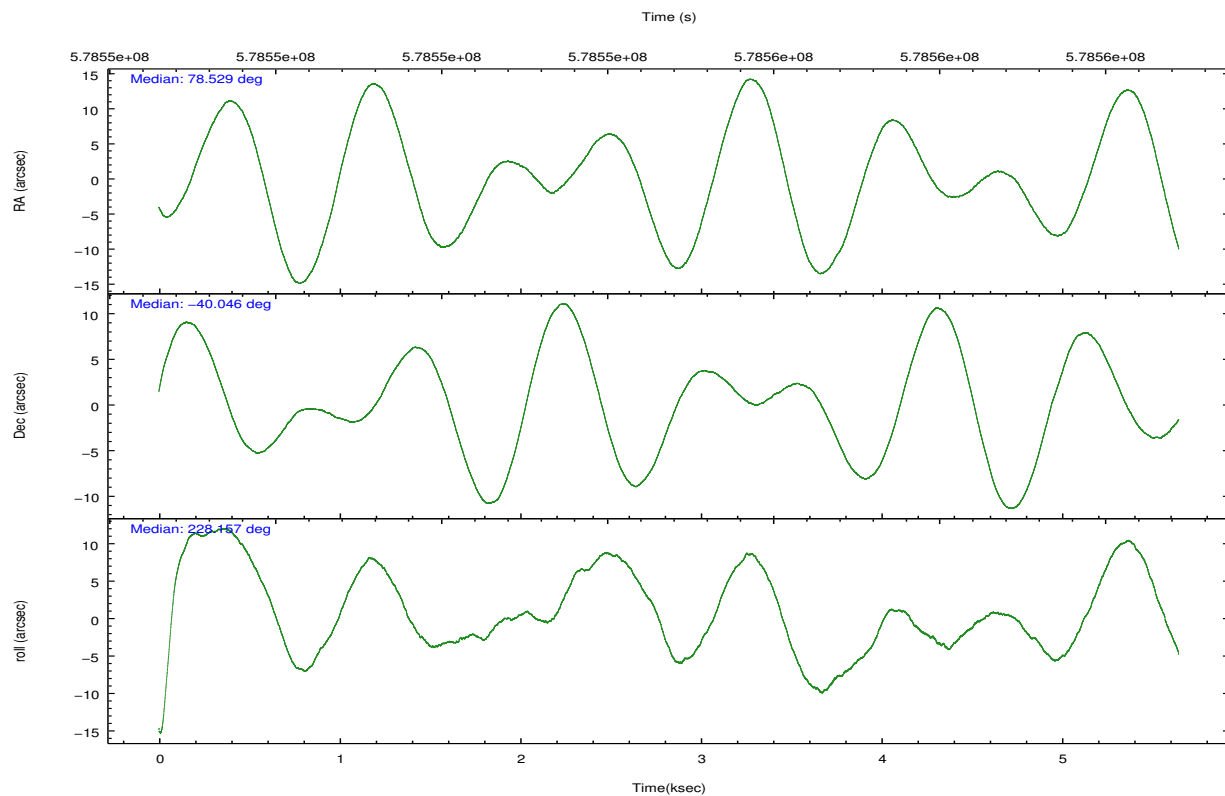
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	983	1694	3447	1932	2866	878
	5%	6%	17%	6%	12%	5%
grade 1 events	11	60	14	83	22	6
	0%	0%	0%	0%	0%	0%
grade 2 events	599	3859	880	3282	1624	502
	3%	14%	4%	11%	6%	3%
grade 3 events	233	716	363	1532	641	230
	1%	2%	1%	5%	2%	1%
grade 4 events	246	697	388	1476	589	246
	1%	2%	1%	5%	2%	1%
grade 5 events	732	2080	806	2487	1108	798
	3%	7%	4%	8%	4%	5%
grade 6 events	393	6421	560	6976	1695	422
	2%	24%	2%	25%	7%	2%
grade 7 events	15491	10677	13172	9986	14679	12323
	82%	40%	67%	35%	63%	79%

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	78.536188	78.52939358602167	CCD I2 on	N	N
[deg] Pointing Dec	-40.019027	-40.04588649301991	CCD I3 on	N	N
[deg] Pointing Roll	228.005596	228.1577876844823	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)	578552195.184000	578550988.35189	CCD S5 on	O2	Y
Observation start date	2016-05-02T04:55:27	2016-05-02T04:36:28	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	578557195.184000	578558295.0648	On-chip summing requested	N	N
Observation end date	2016-05-02T06:18:47	2016-05-02T06:38:15	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



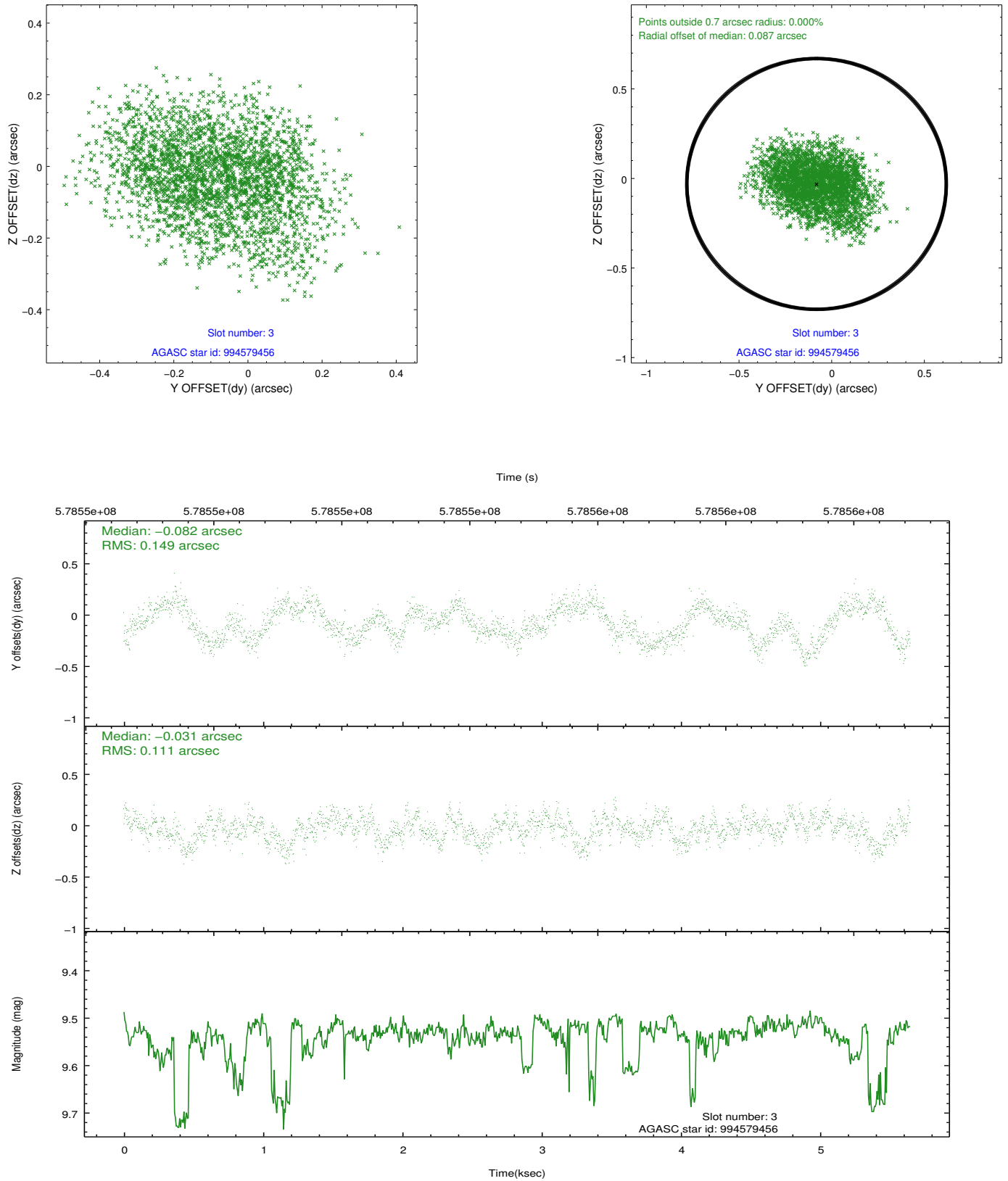


Slot Statistics

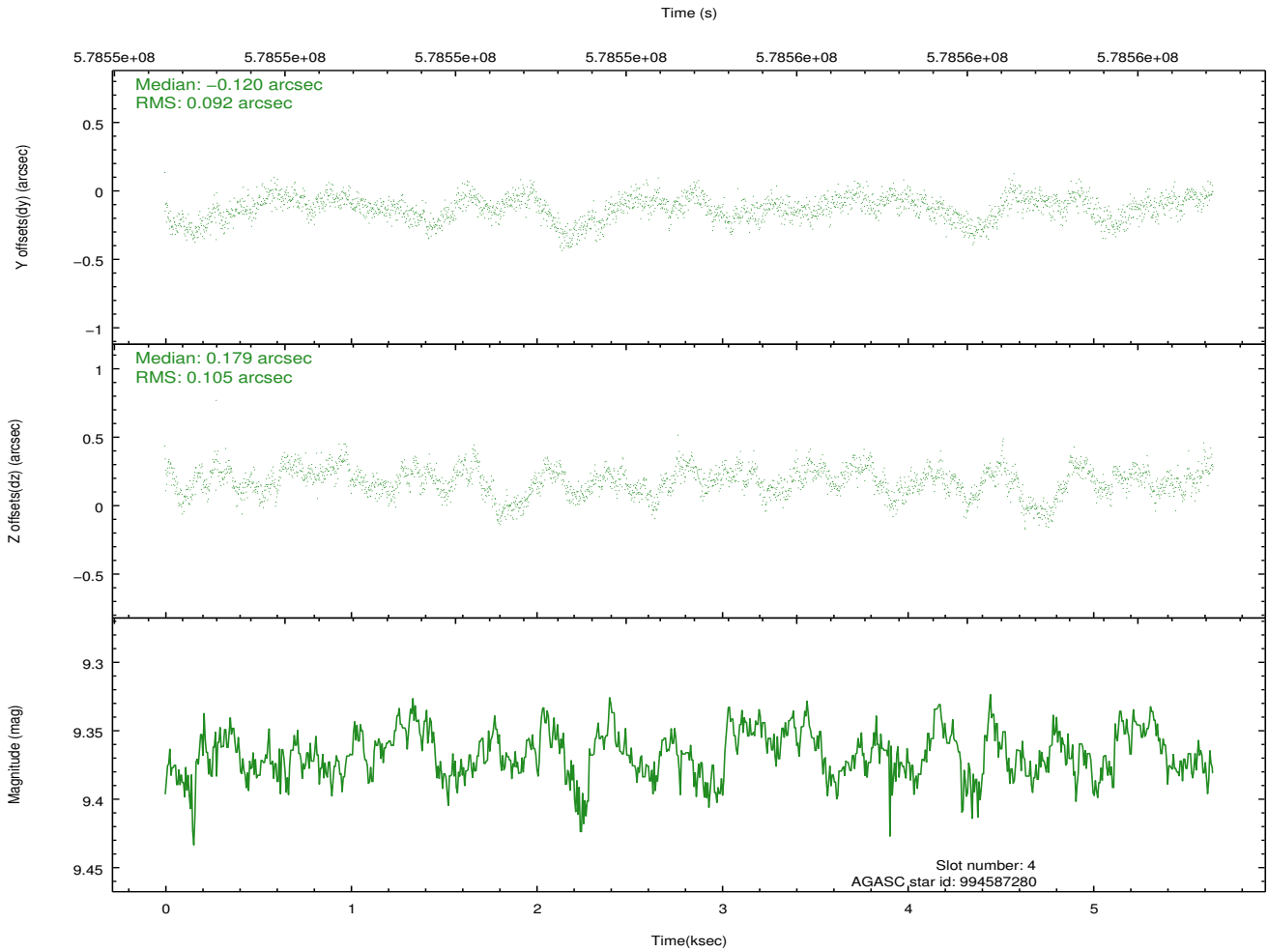
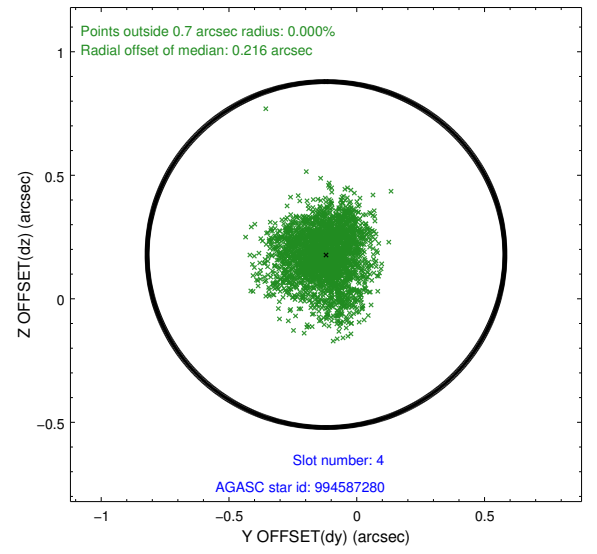
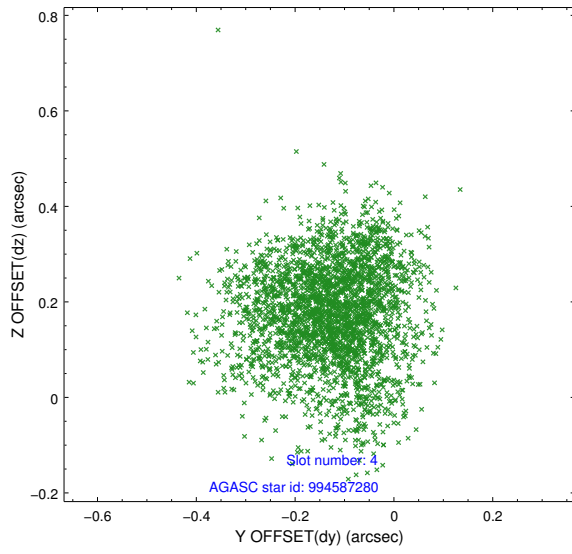
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.20	1378	0.123	-0.016	0.007	0.012	0.000000	0.000000	930.16	-1862.38
1	FID		ACIS-S-5	7.23	1378	-0.287	0.066	0.007	0.013	0.000000	0.000000	-1818.76	33.92
2	FID		ACIS-S-6	7.41	1378	0.143	-0.039	0.007	0.011	0.000000	0.000000	394.45	679.09
3	GUIDE	used	994579456	9.53	2752	-0.082	-0.031	0.202	0.318	79.112909	-39.629861	-2106.21	254.81
4	GUIDE	used	994587280	9.37	2749	-0.120	0.179	0.152	0.242	78.857559	-39.654304	-1570.70	-214.92
5	GUIDE	used	994975584	9.46	2755	0.292	-0.212	0.219	0.407	77.424754	-40.007717	2034.99	-2292.18
6	GUIDE	used	994975984	9.40	2751	-0.096	0.069	0.183	0.291	78.288216	-40.065810	584.41	-394.92
7	GUIDE	used	994979816	8.81	2754	0.023	-0.016	0.111	0.187	78.007515	-40.348161	1854.72	-282.08

2.4 Star Slots

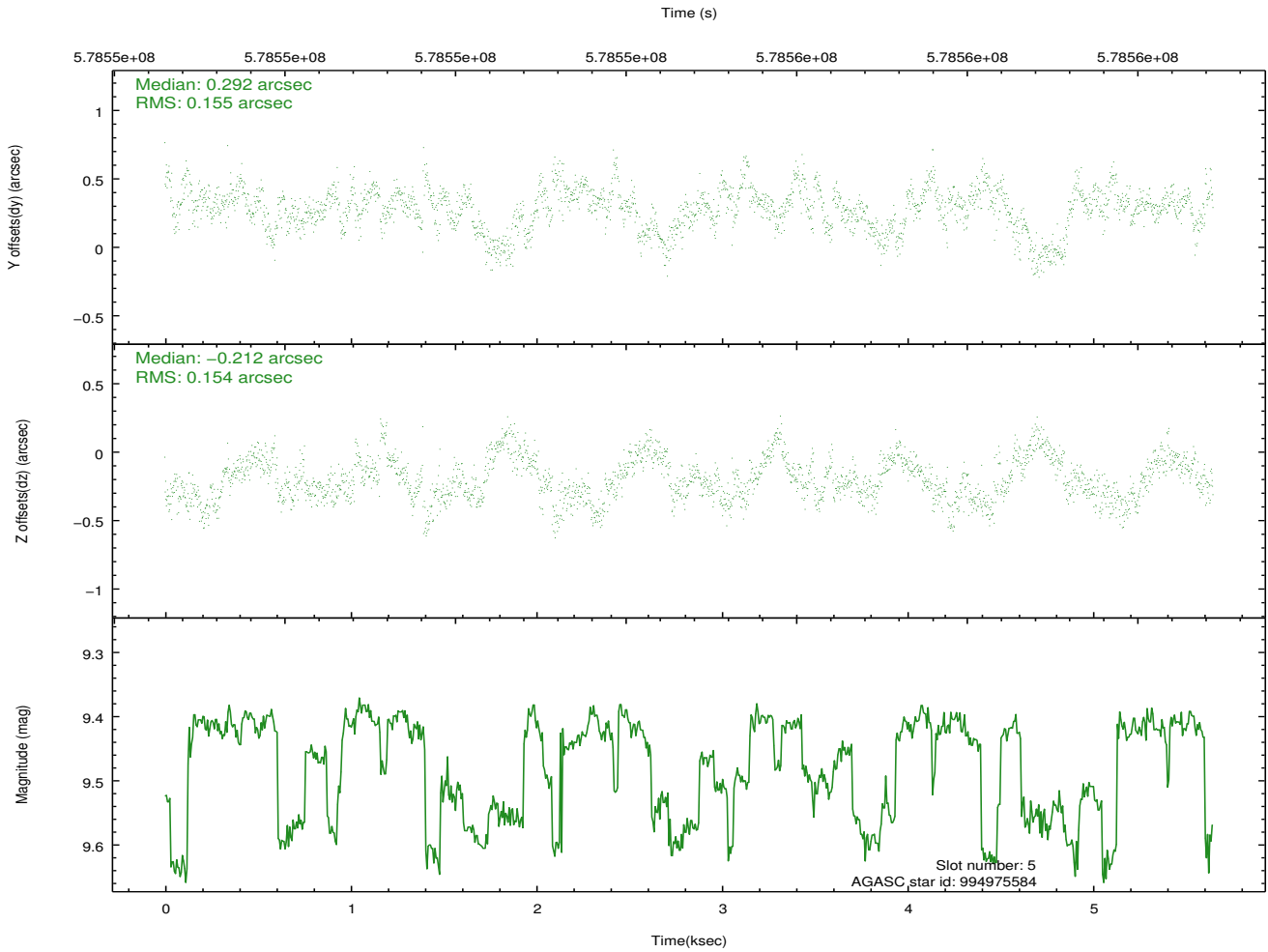
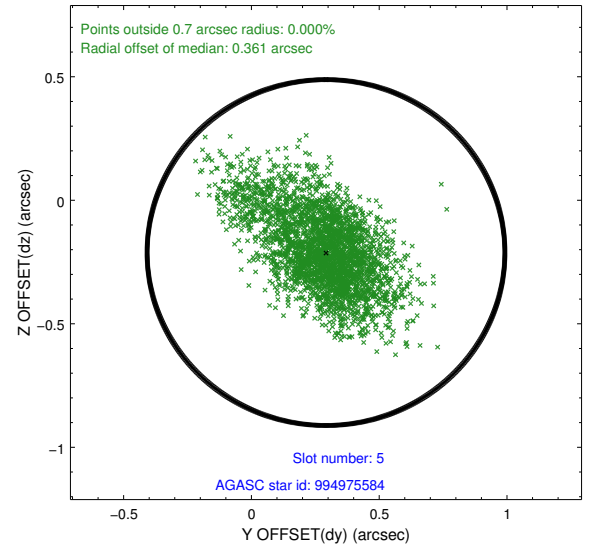
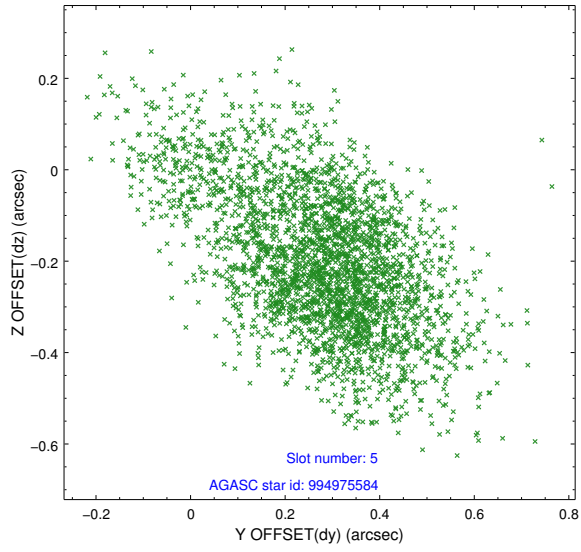
2.4.1 Slot 3



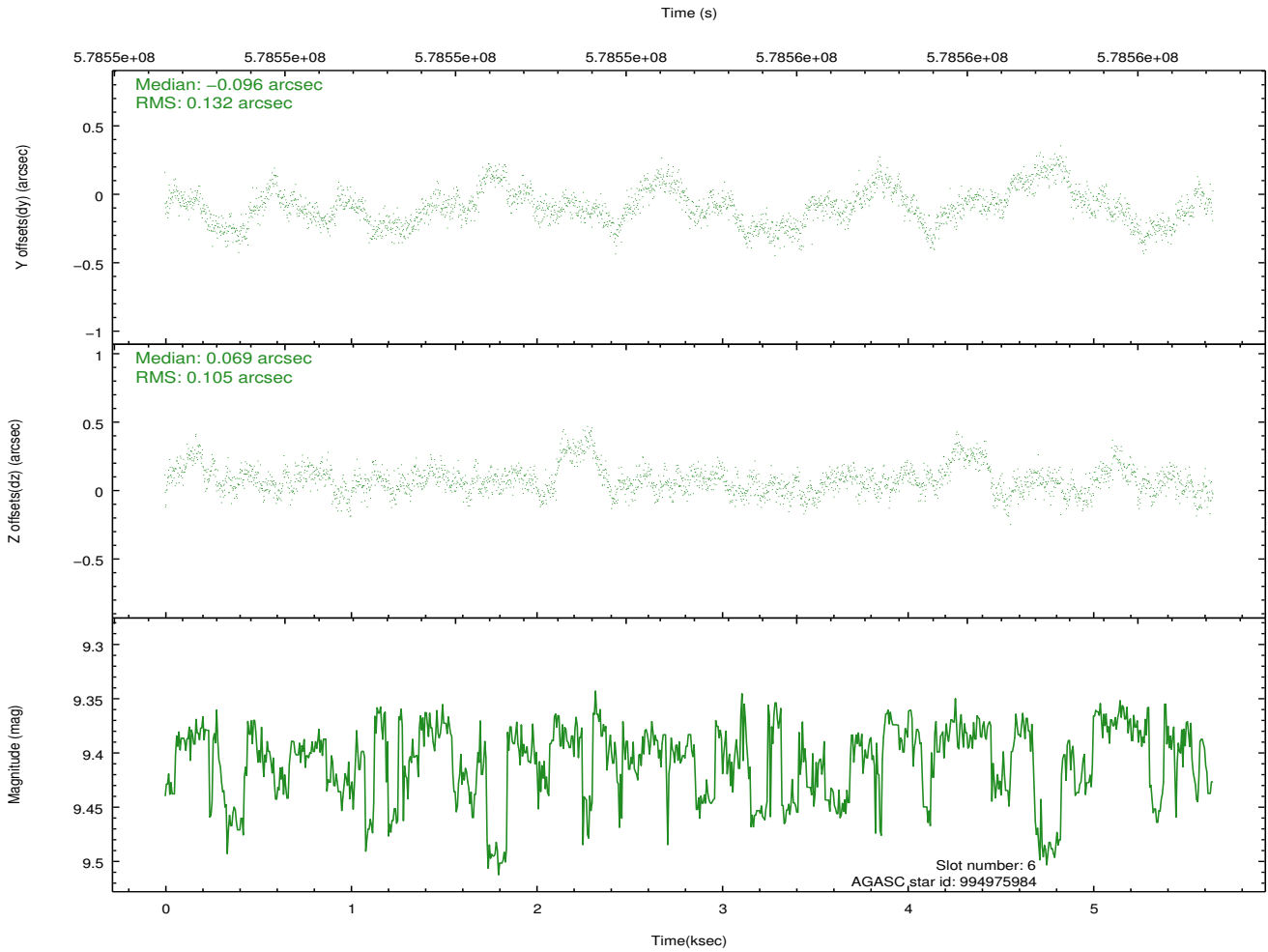
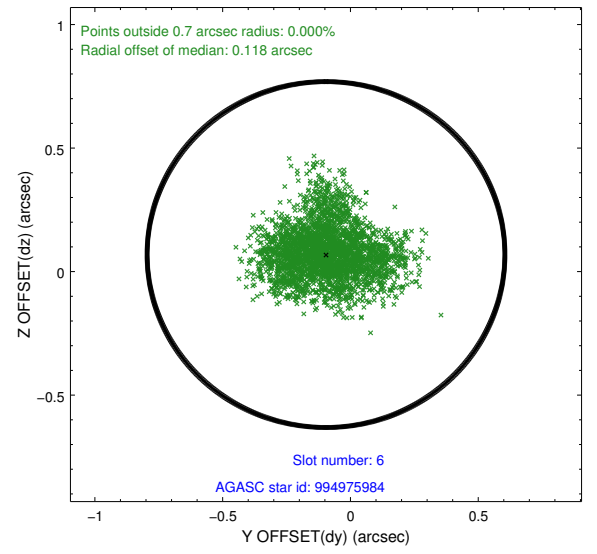
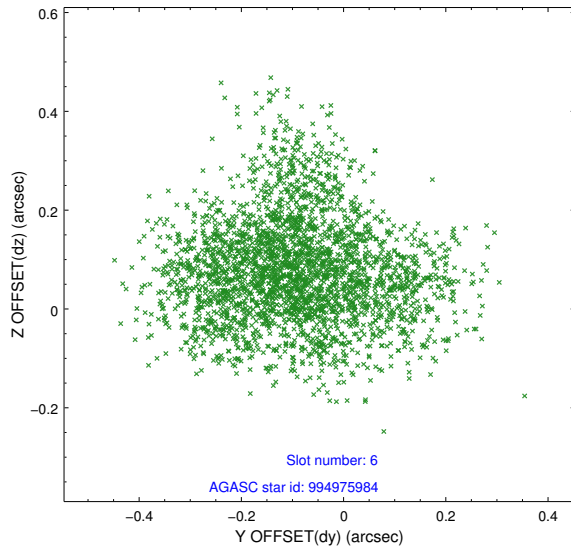
2.4.2 Slot 4



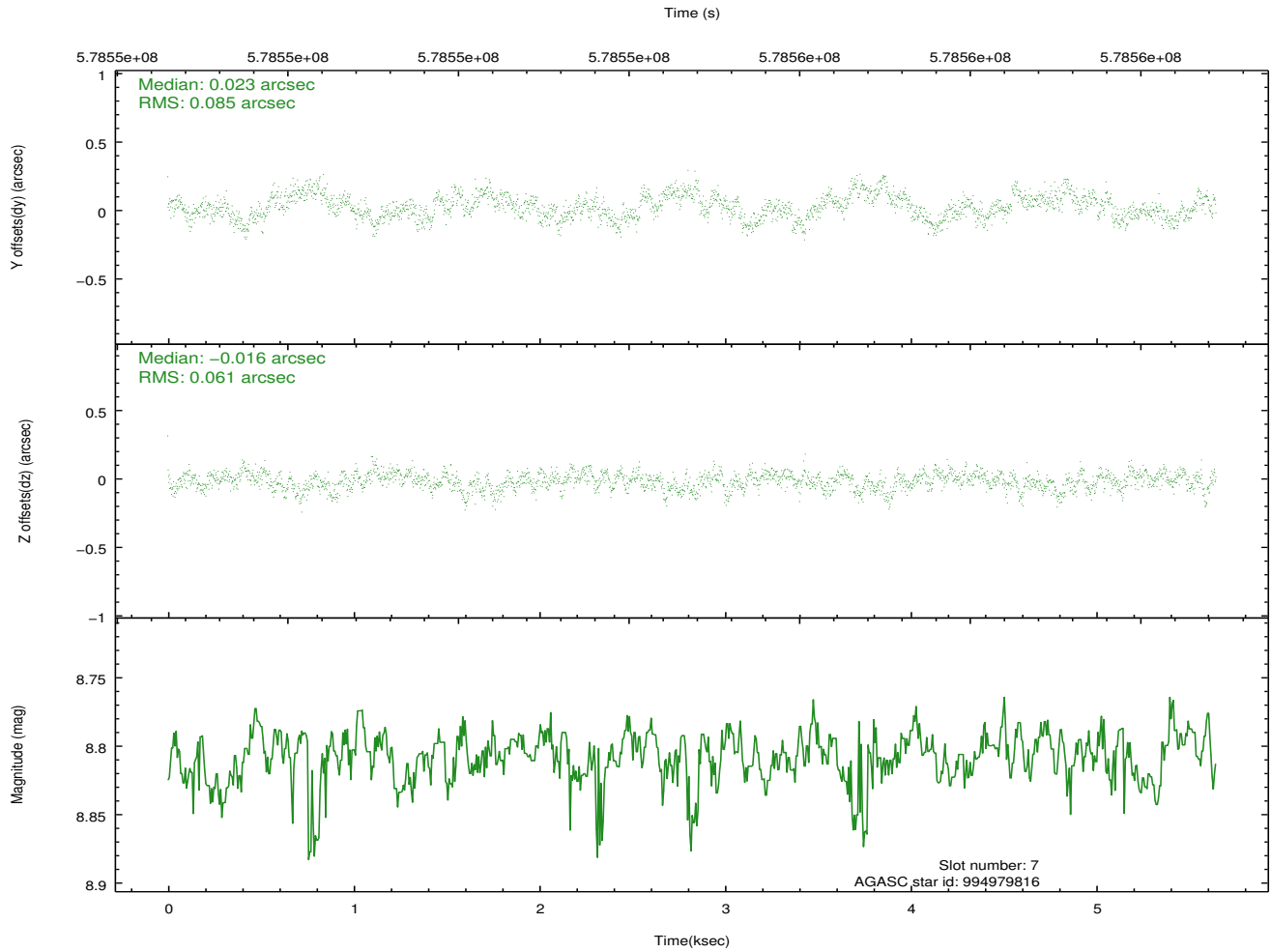
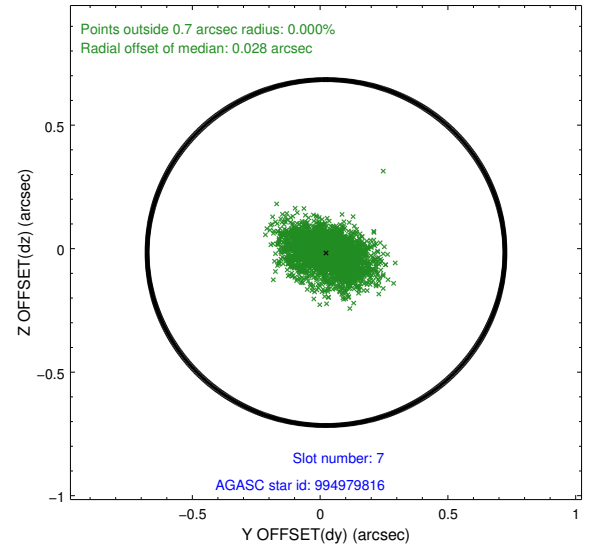
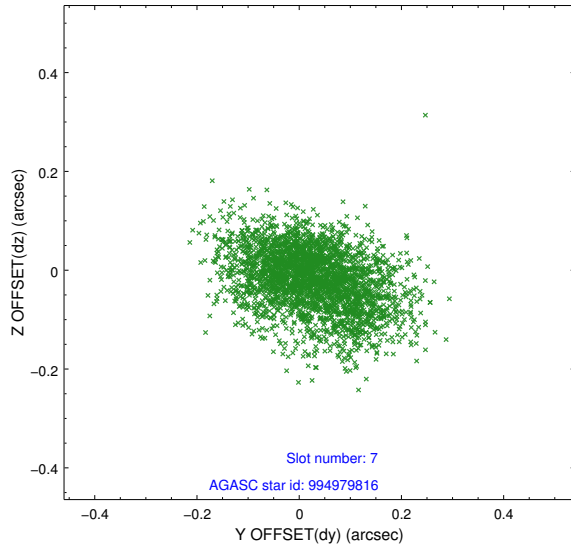
2.4.3 Slot 5



2.4.4 Slot 6

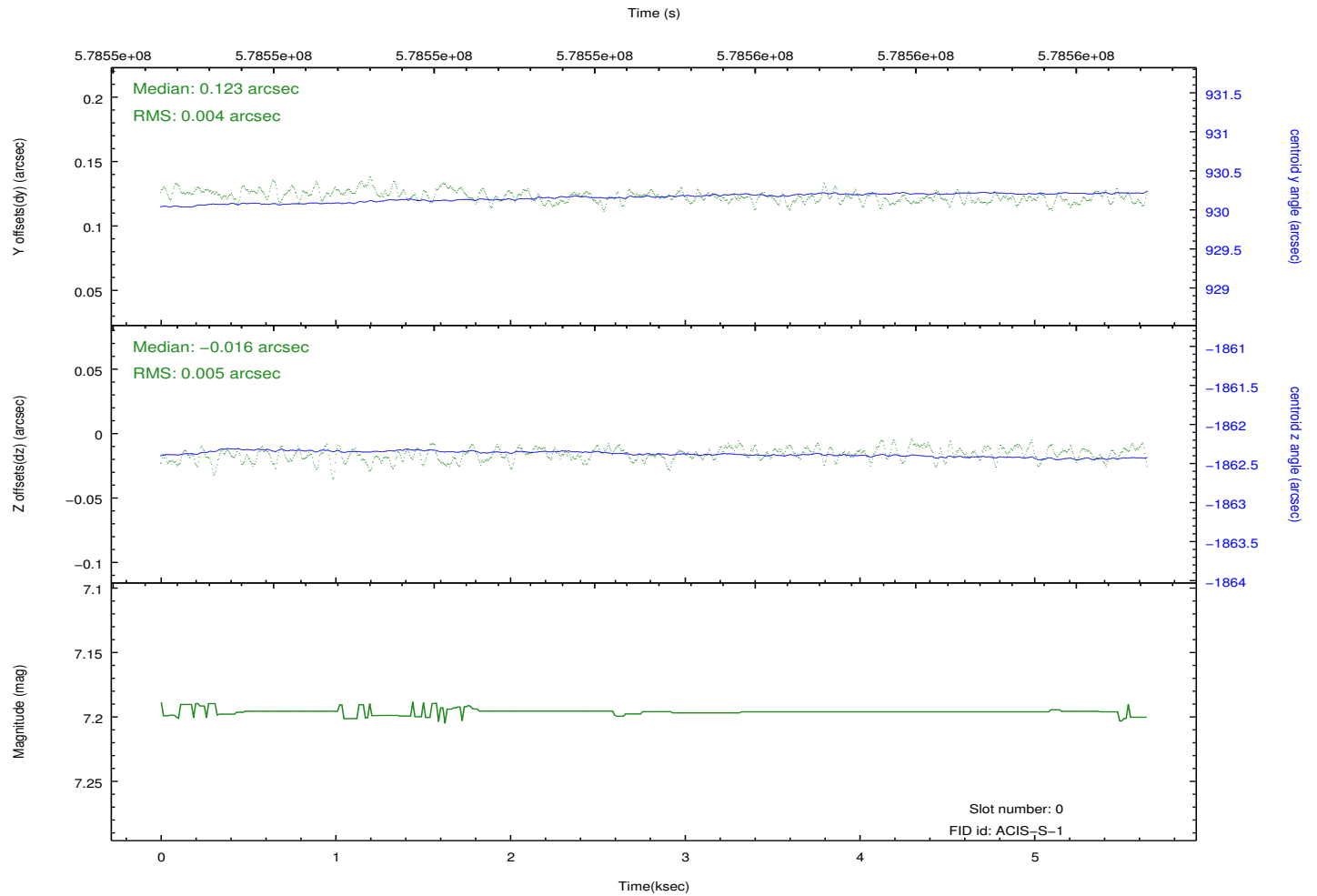
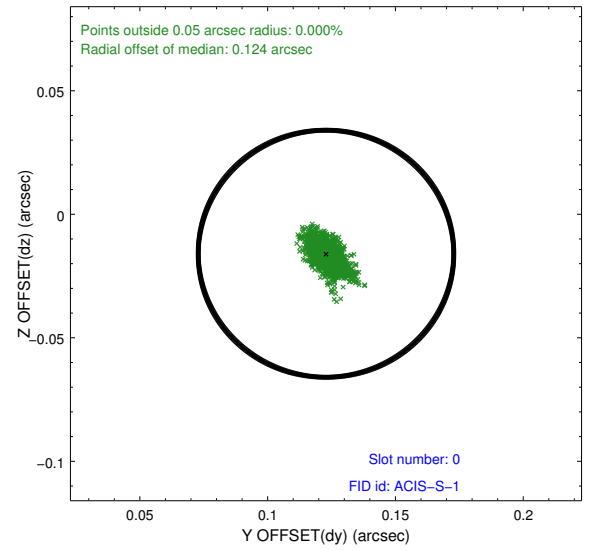
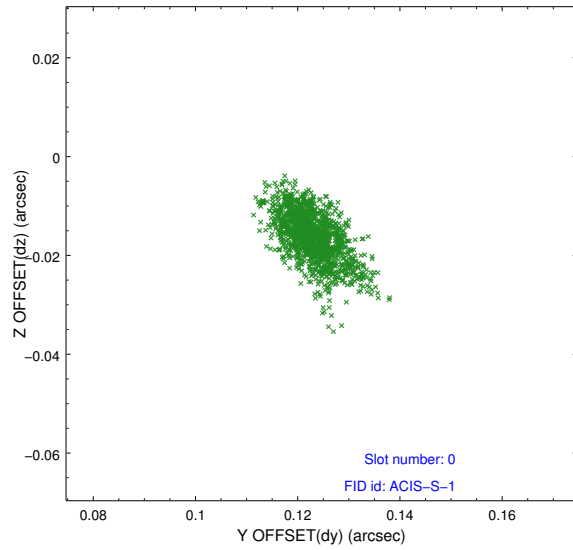


2.4.5 Slot 7

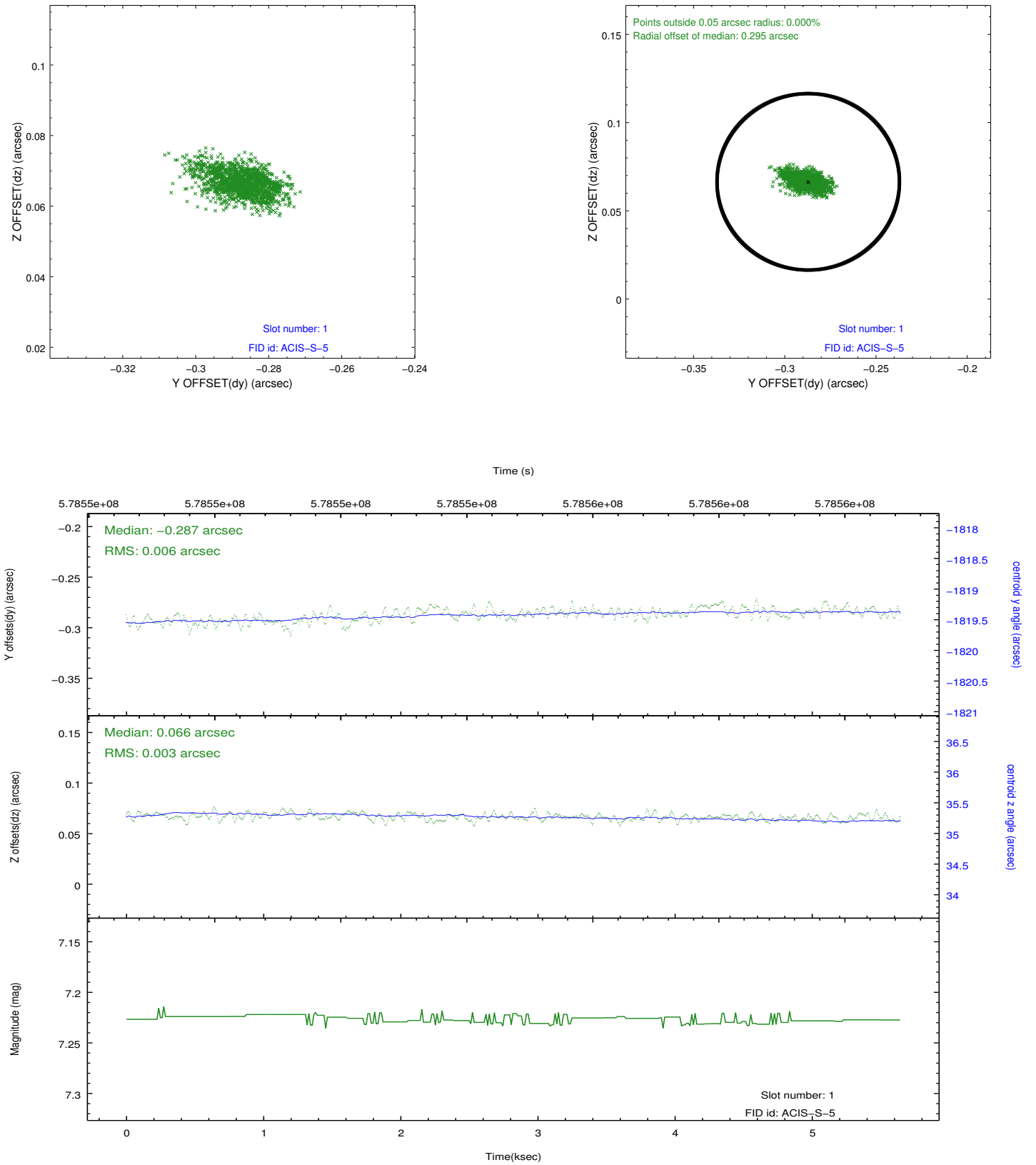


2.5 FID Slots

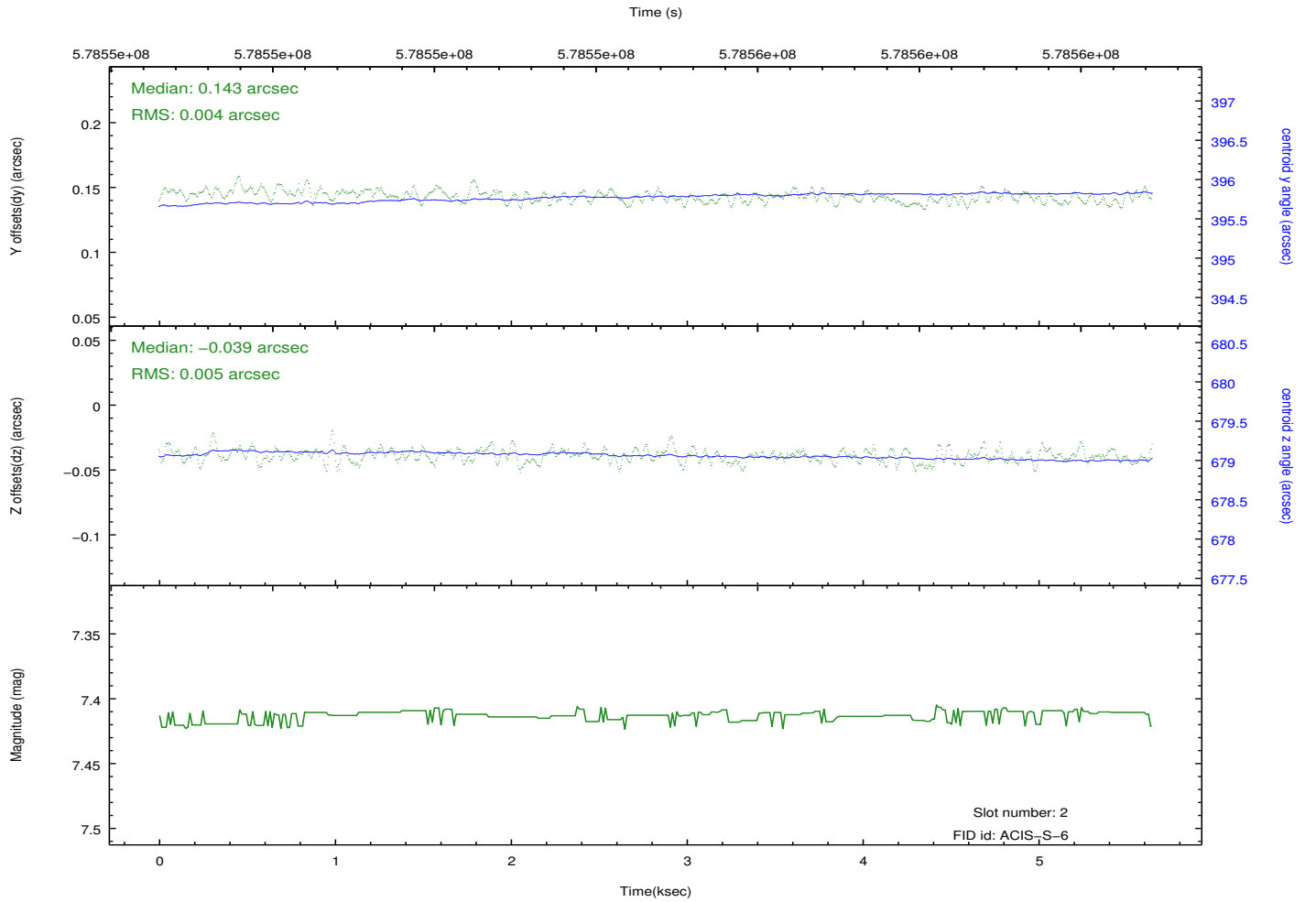
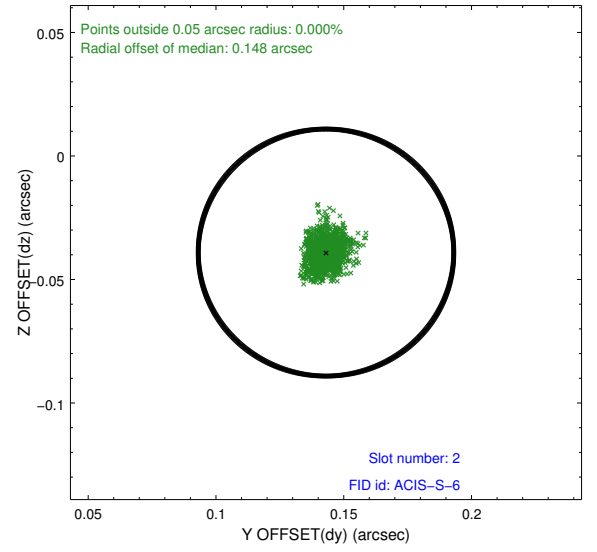
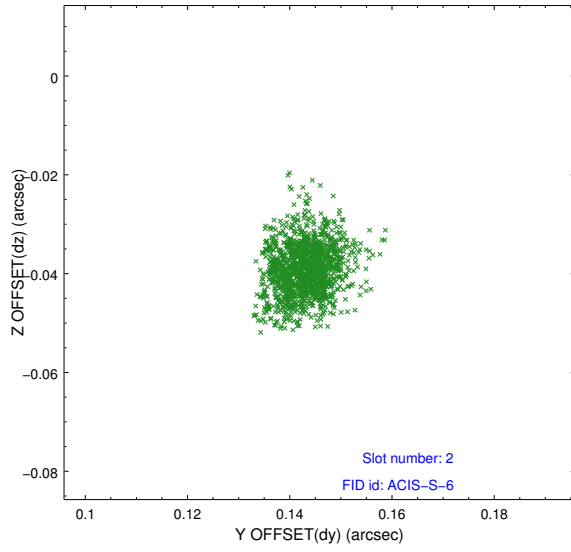
2.5.1 Slot 0



2.5.2 Slot 1

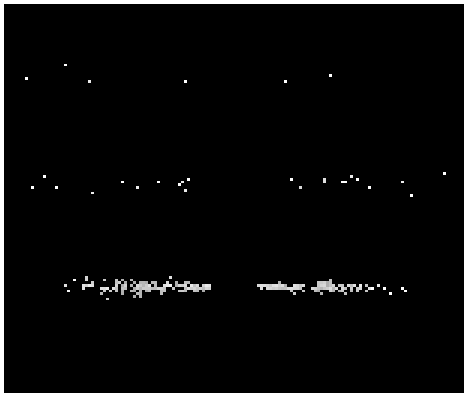


2.5.3 Slot 2

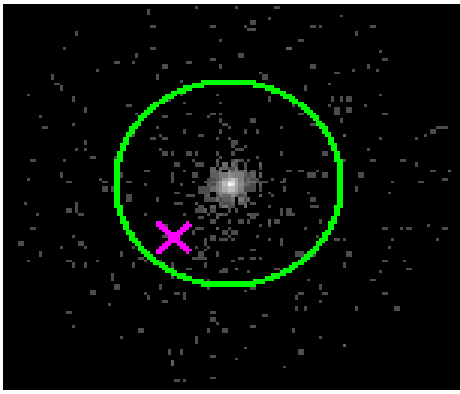


3 Gratings

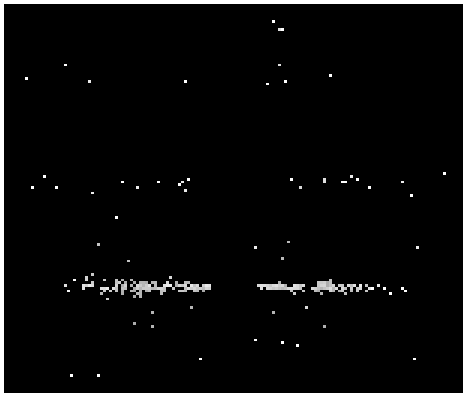
3.1 HEG Arm



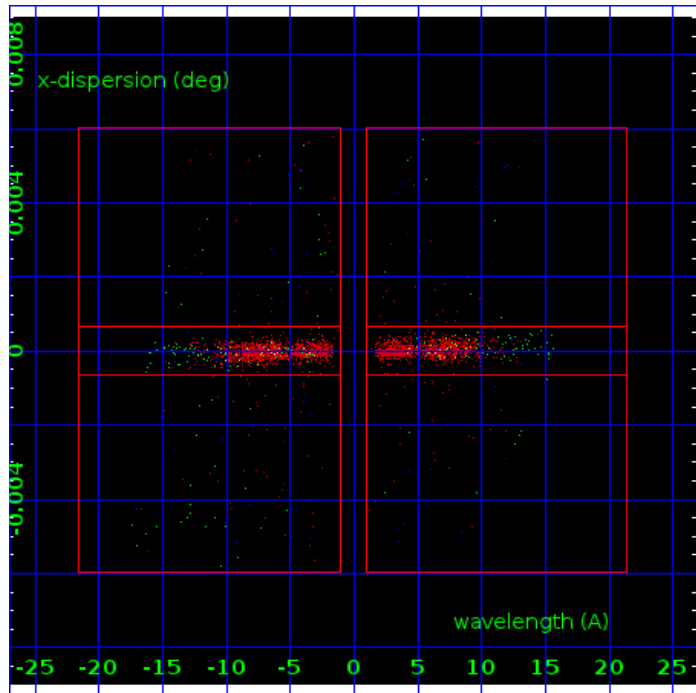
HEG Order Sort 123



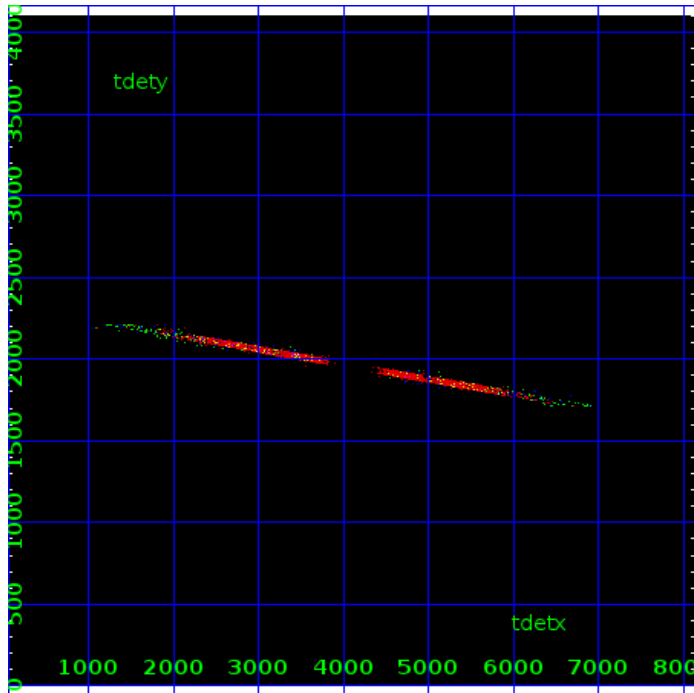
HEG Zero Order



HEG Order Sort ALL

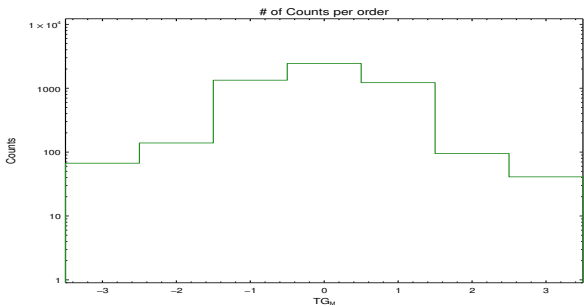


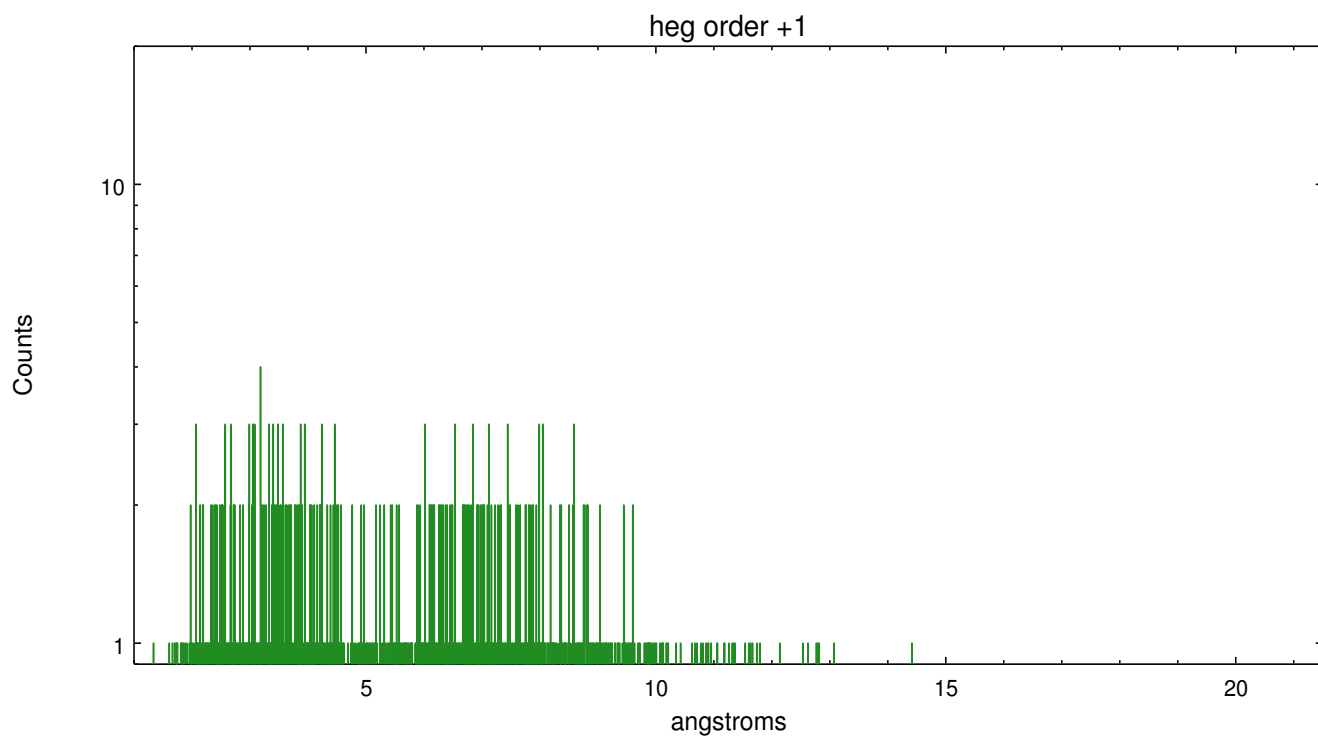
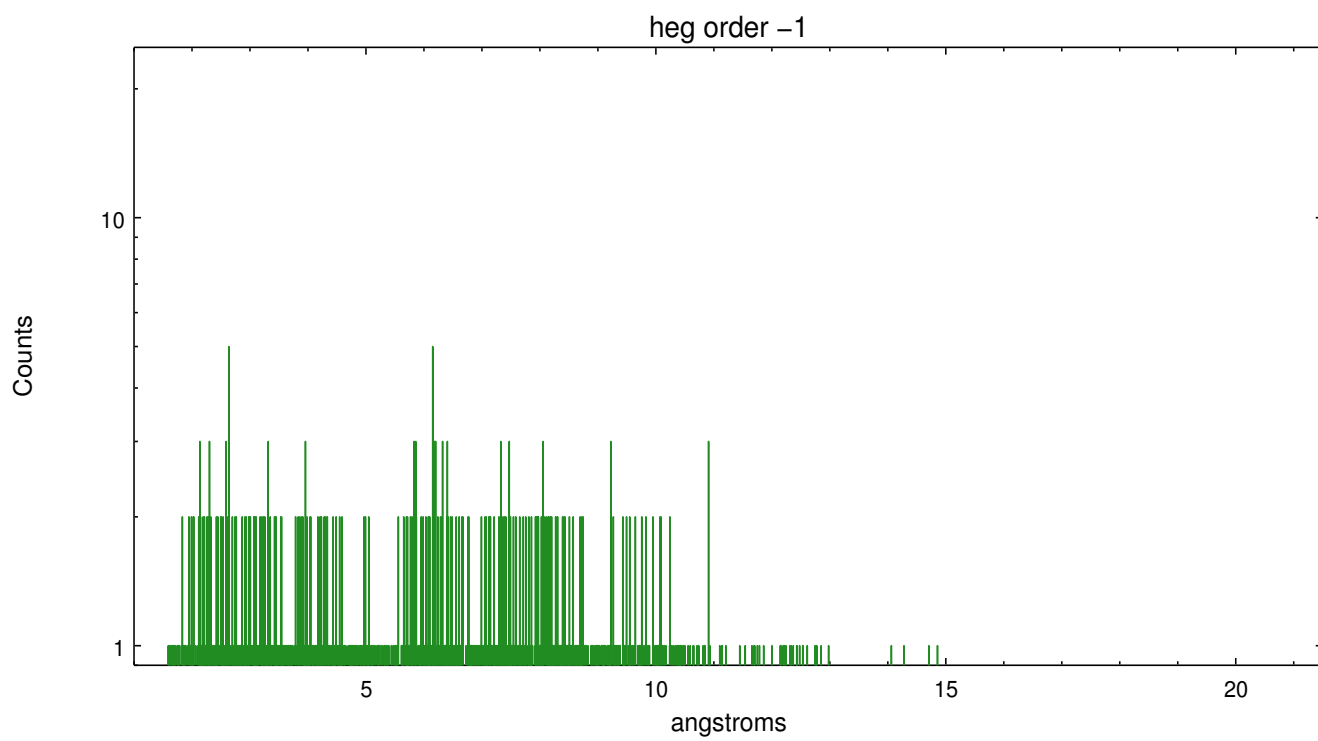
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	67	139	1335	2443	1222	95	41

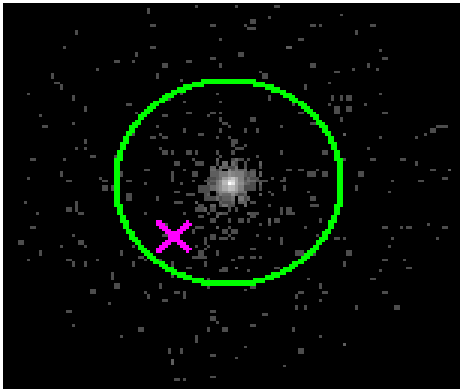




3.2 MEG Arm



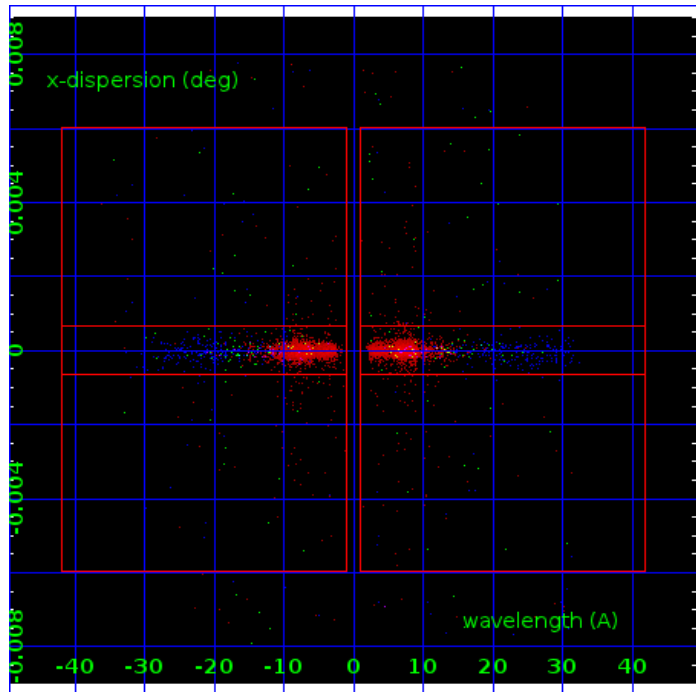
MEG Order Sort 123



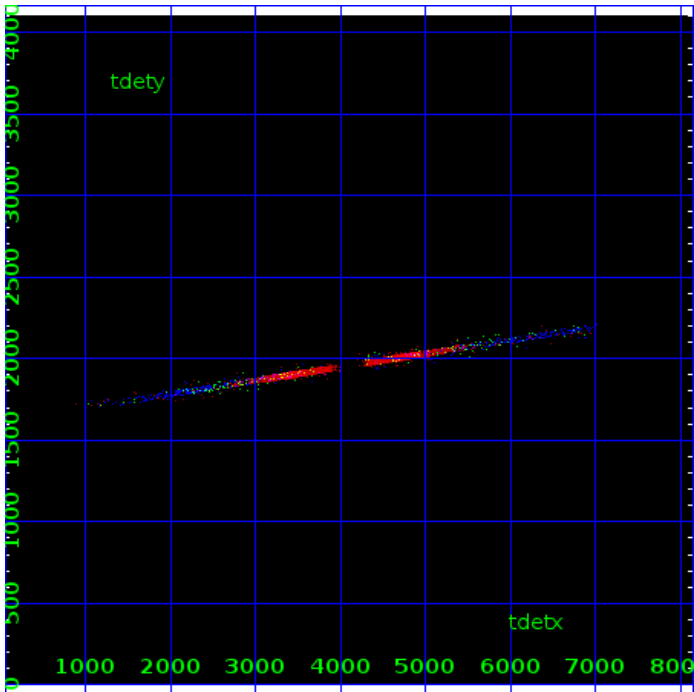
MEG Zero Order



MEG Order Sort ALL

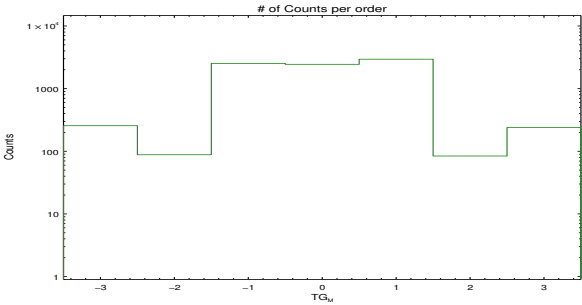


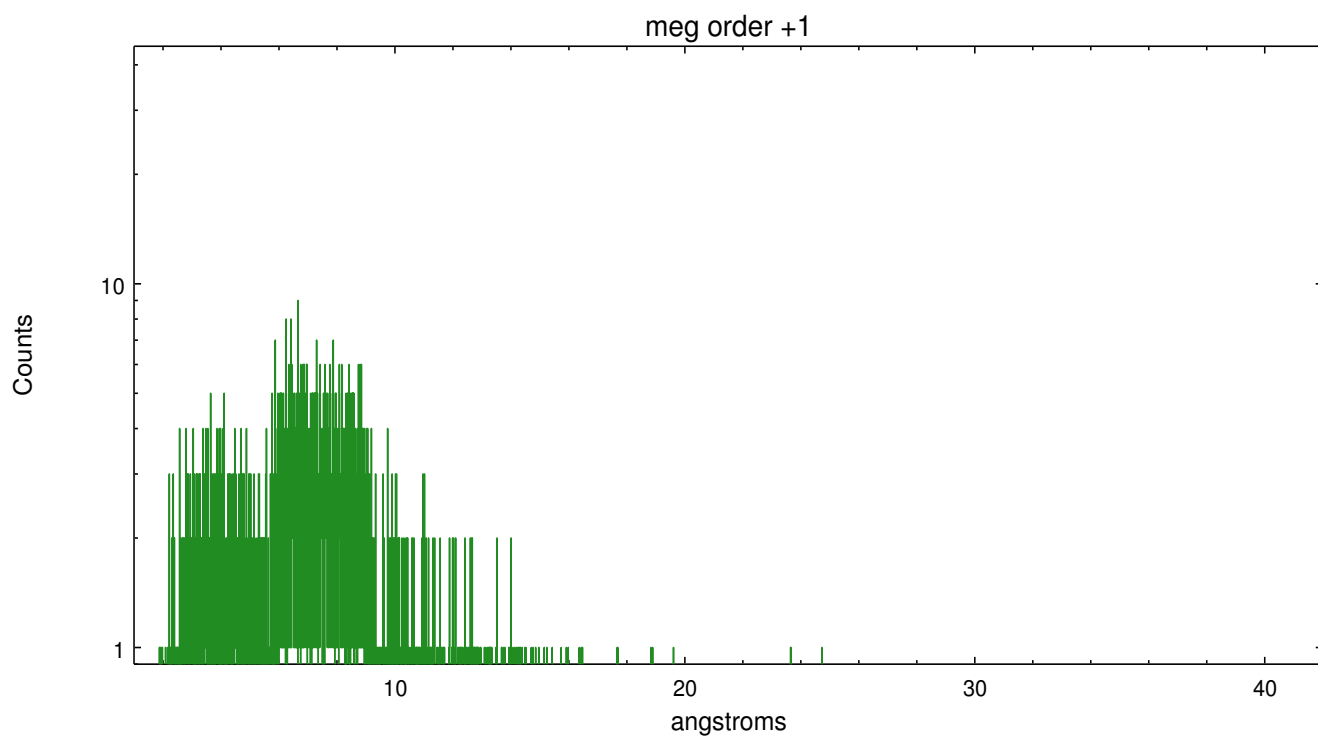
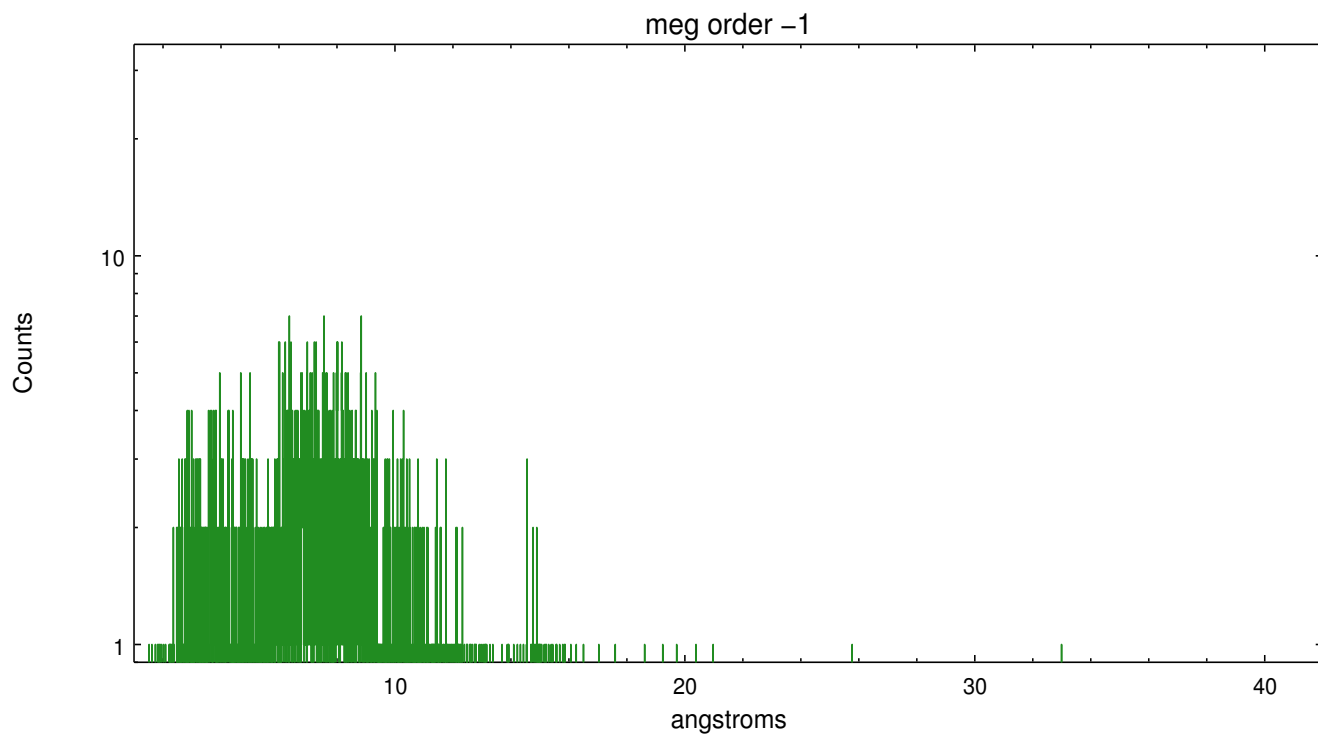
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	256	88	2524	2443	2949	84	239





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2016.05.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.0453842624426

A.2 Comments