

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 15040 - L2 Version 4
Chandra X-Ray Center

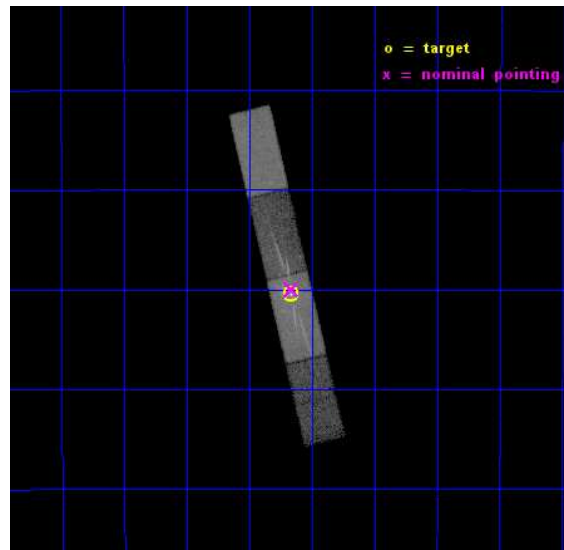
L2 Processing Date : Dec 17 2014

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	Gratings	17
3.1	HEG Arm	17
3.2	MEG Arm	19
A	Summary	21
A.1	Status	21
A.2	Comments	21

1 Front

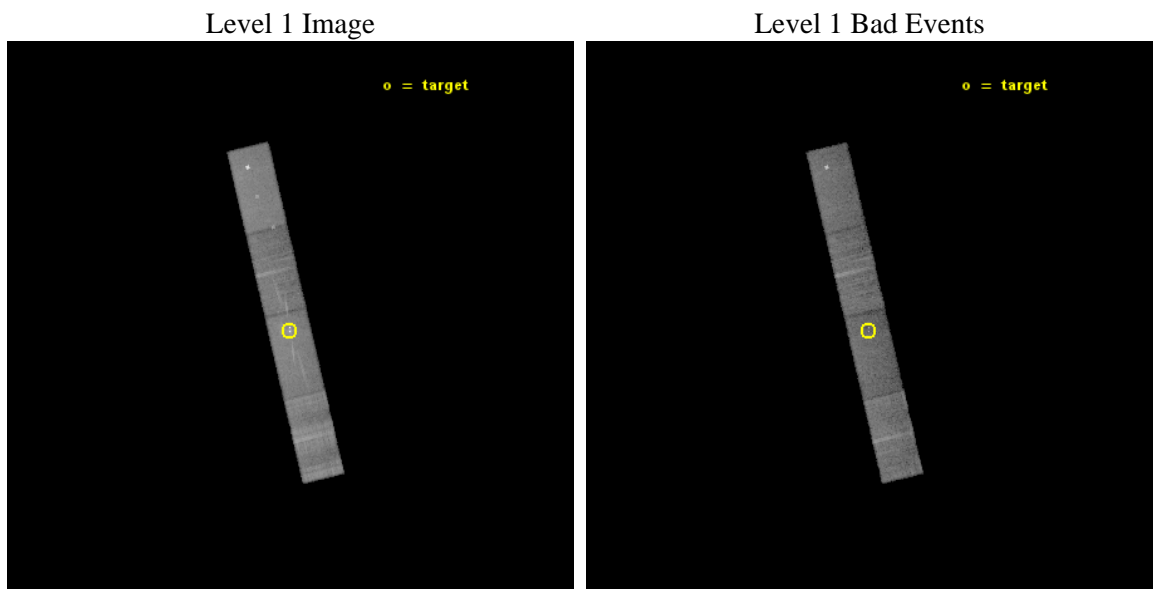
seq_num	702847	Sequence number
obs_id	15040	Observation id
title	Joint Chandra/XMM/EVLA Monitoring of the Gas Cloud G2 as it Encounters Sgr A*	Proposal title
observer	Dr. Daryl Haggard	Principal investigator
object	Sgr A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416837	Observer's specified target RA [deg]
dec_targ	-29.007811	Observer's specified target Dec [deg]
ra_nom	266.41601433916	Nominal RA [deg]
dec_nom	-28.999973507707	Nominal Dec [deg]
roll_nom	76.556230097706	Nominal Roll [deg]
revision	4	Processing version of data
ontime	24360.000362992	Sum of GTIs [s]
livetime	23750.792534483	Livetime [s]
ontime5	24360.000362992	Sum of GTIs [s]
ontime6	24360.000362992	Sum of GTIs [s]
ontime7	24360.000362992	Sum of GTIs [s]
ontime8	24360.000362992	Sum of GTIs [s]
l2events	142290	Number of level 2 events



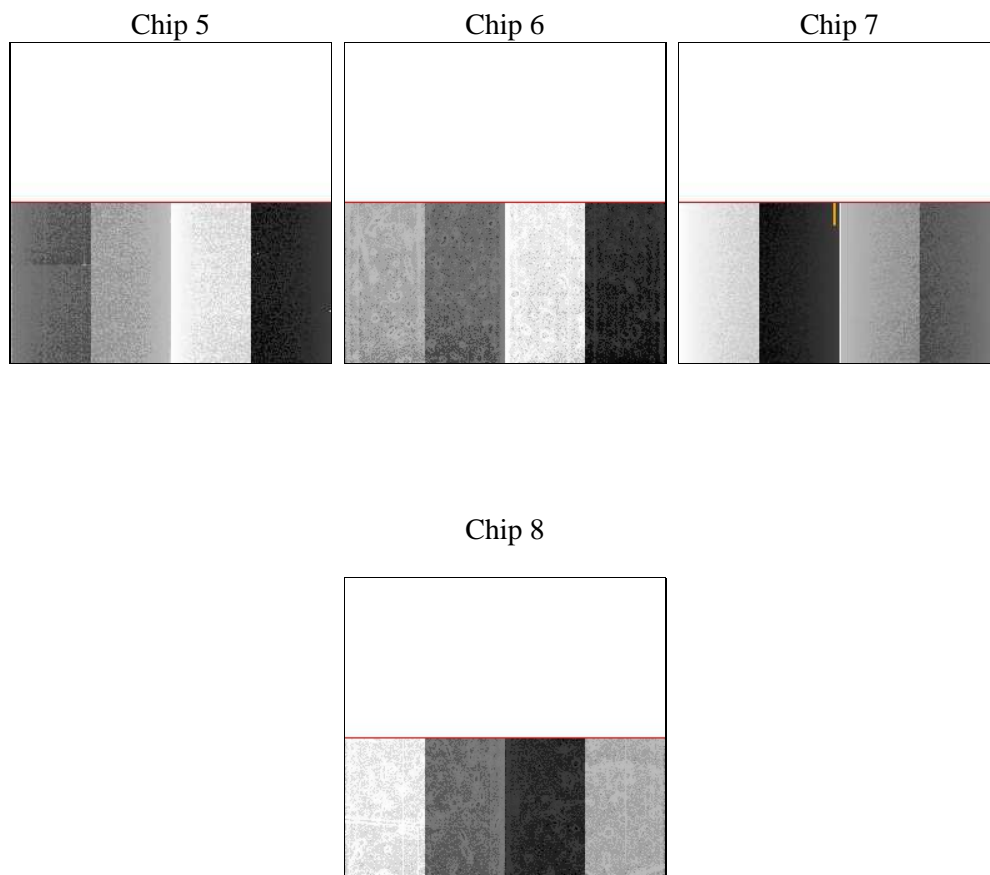
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	2	Obi number	sched_exp_time	24300.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	24360.000362992	Sum of GTIs [s]
caldsver	4.6.4	 	ontime5	24360.000362992	Sum of GTIs [s]
date	2014-12-03T09:07:11	Date and time of file creation	ontime6	24360.000362992	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	24360.000362992	Sum of GTIs [s]
			ontime8	24360.000362992	Sum of GTIs [s]
			l1events	398010	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4092.31, 4039.23)	src1a sky pixel position

2.1.4 Events

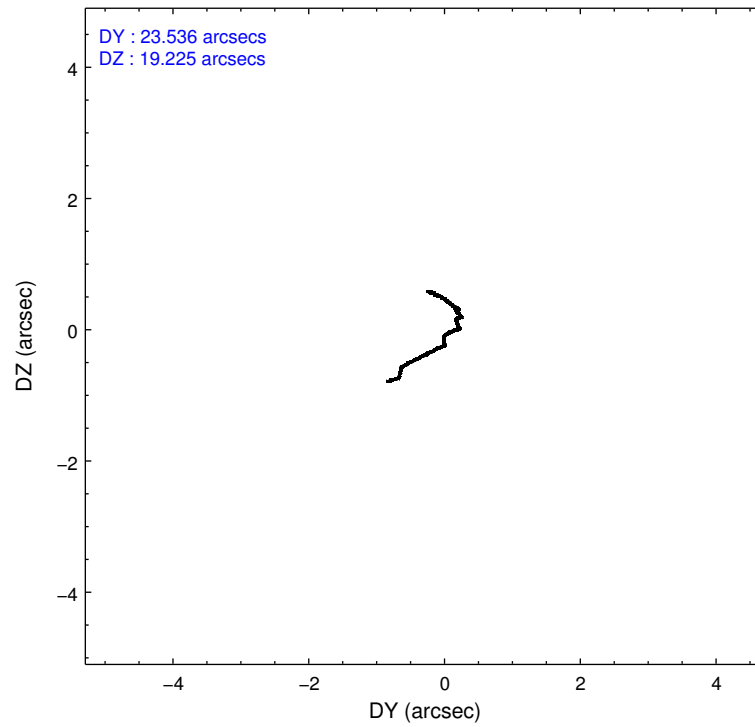
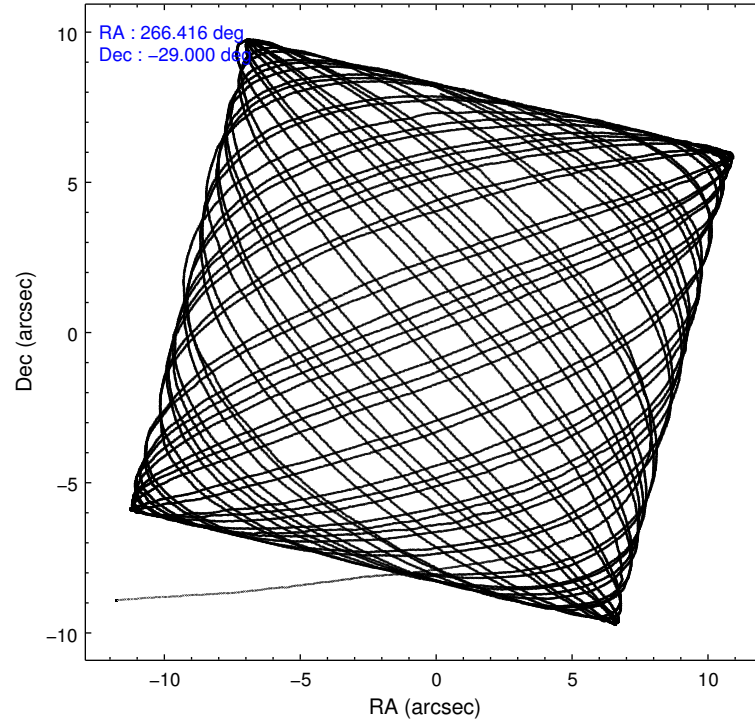
	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	108608	75243	107260	106899
rejected events	52547	54604	42627	61523
rejected %	48%	72%	39%	57%

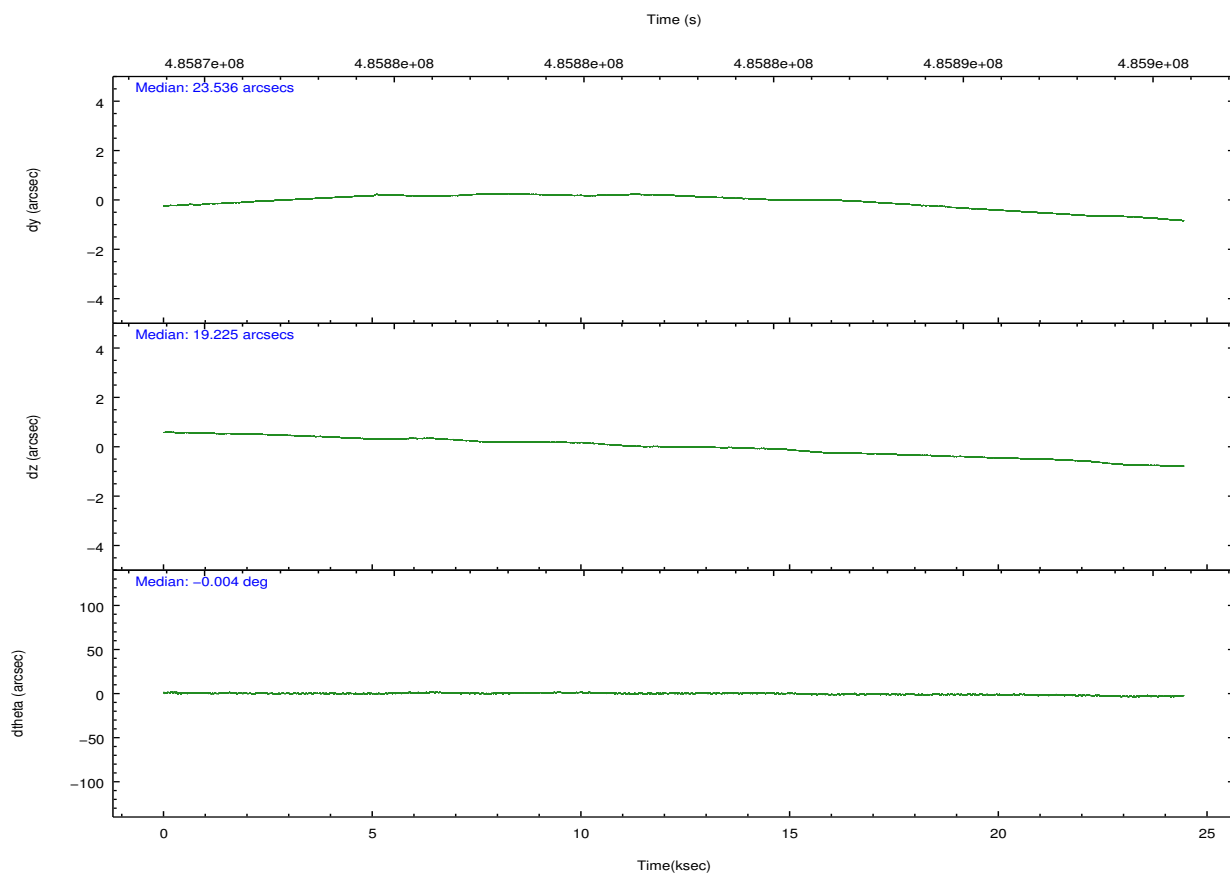
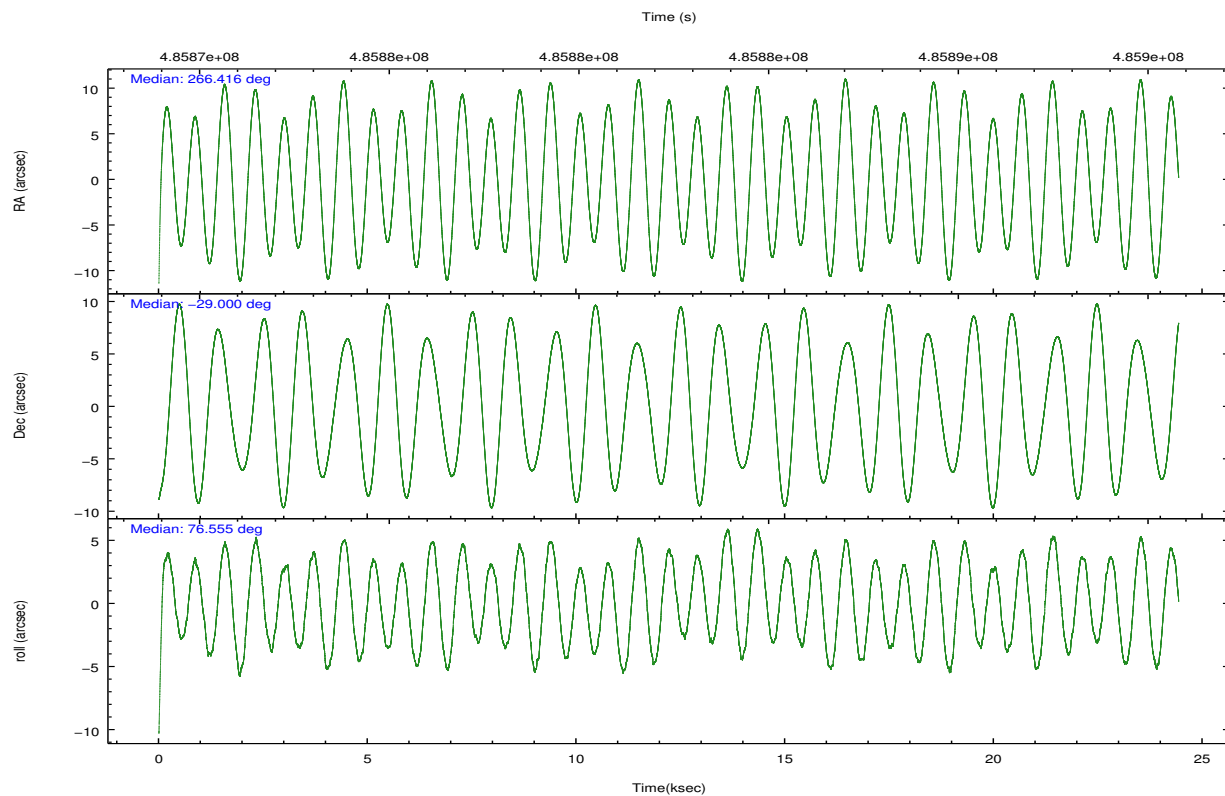
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	6328	10853	8773	15884
	5%	14%	8%	14%
grade 1 events	185	42	121	88
	0%	0%	0%	0%
grade 2 events	18940	3801	14337	7197
	17%	5%	13%	6%
grade 3 events	3163	1608	6325	6725
	2%	2%	5%	6%
grade 4 events	2647	1549	6250	6308
	2%	2%	5%	5%
grade 5 events	9910	2865	8063	4333
	9%	3%	7%	4%
grade 6 events	24986	2830	28951	9264
	23%	3%	26%	8%
grade 7 events	42449	51695	34440	57100
	39%	68%	32%	53%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	266.425326	266.4160143391603	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	-29.026064	-28.99997350770732	Subarray start row	1	1
[deg] Pointing Roll	76.404117	76.55623009770559	Subarray row count	512	512
[s] Window start time (MET)	484531267.184000	484531267.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	486172807.184000	486172807.184000	[s] Primary exposure time	0.000000	1.6
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-183.992523	-183.985022191653			
[mm] SIM translation stage offset	-6.14	-6.147500391354811			
[s] Observation start time (MET)	485870285.184000	485869117.67885			
Observation start date	2013-05-25T11:56:58	2013-05-25T11:38:37			
[s] Observation end time (MET)	485894585.184000	485895050.18025			
Observation end date	2013-05-25T18:41:58	2013-05-25T18:50:50			
Read mode	TIMED	TIMED			

2.3 Aspect



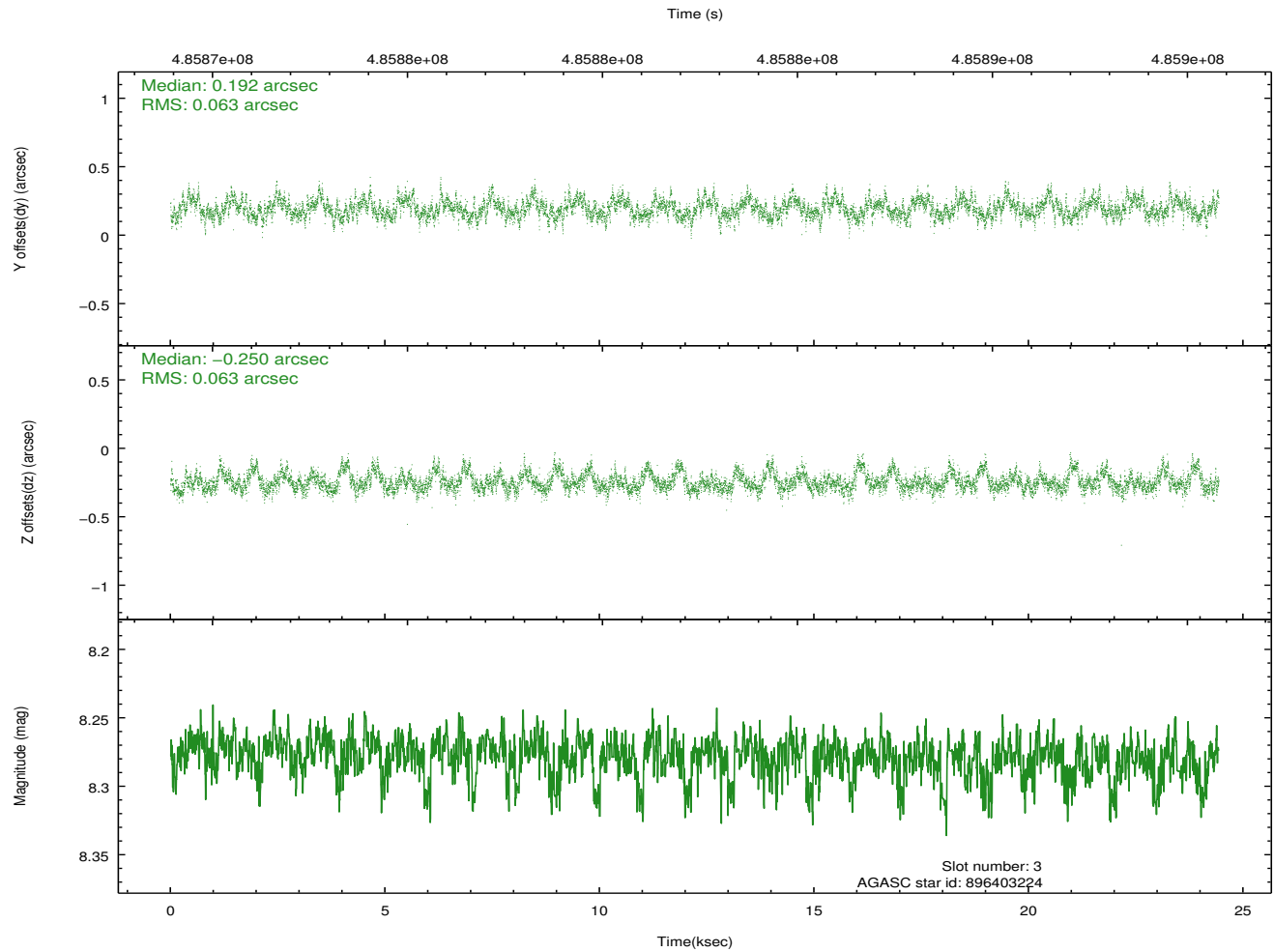
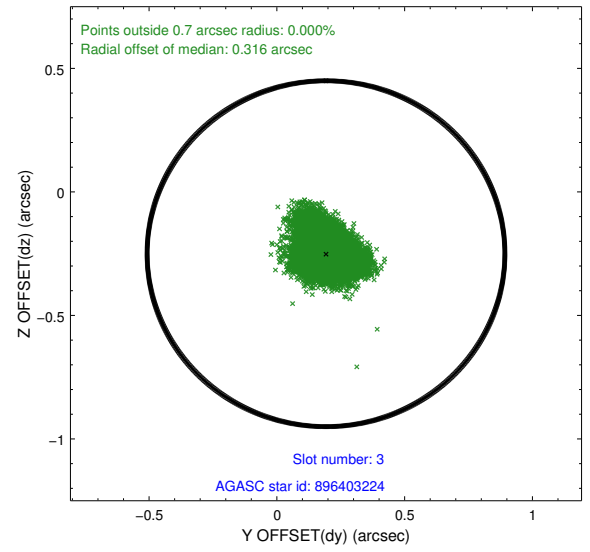
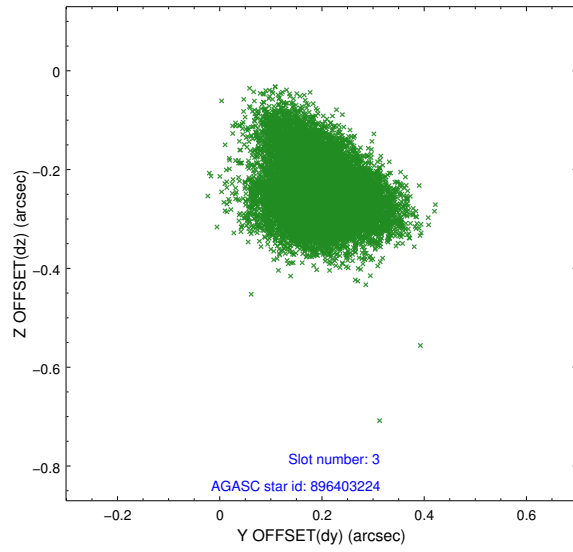


Slot Statistics

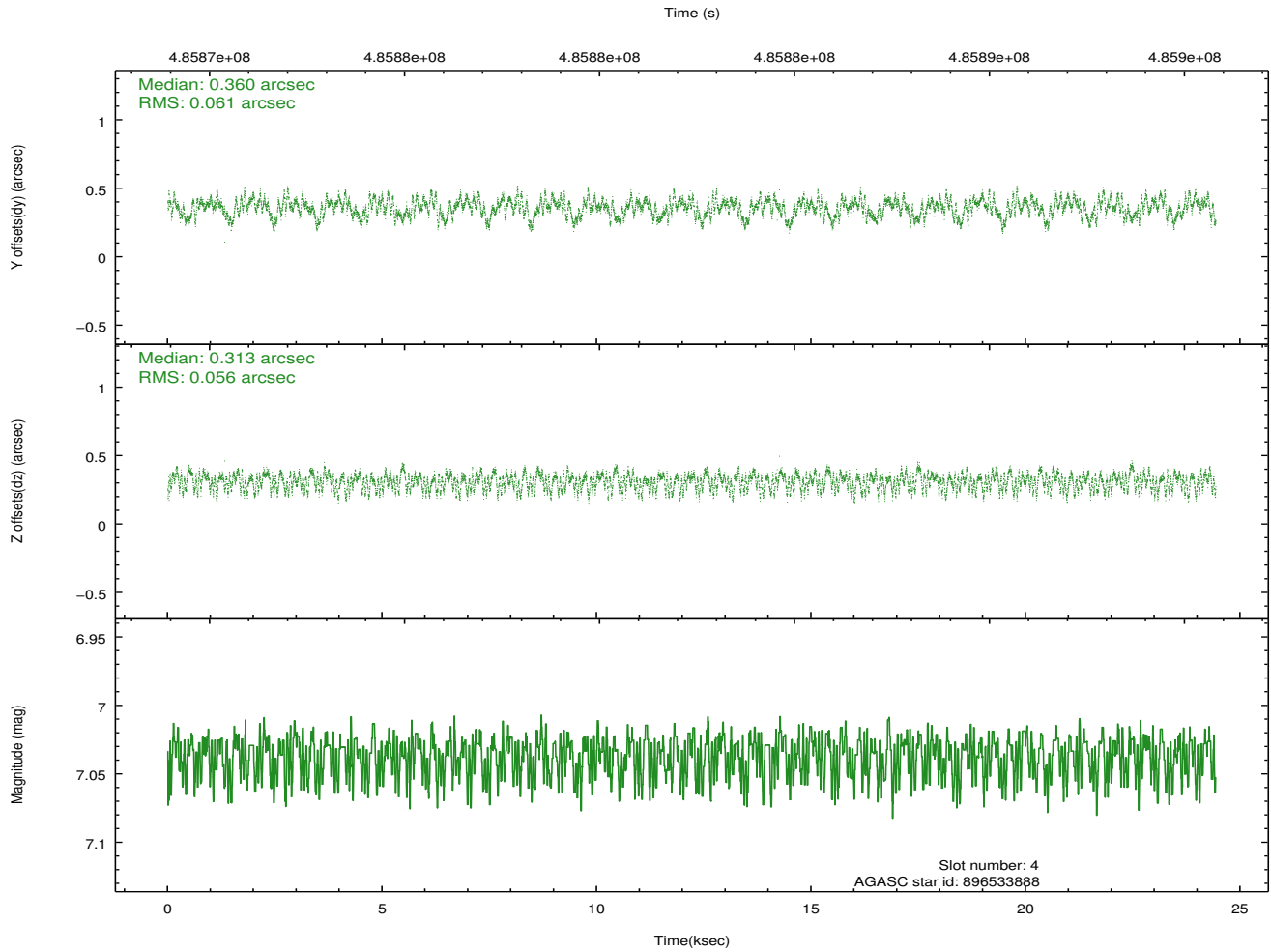
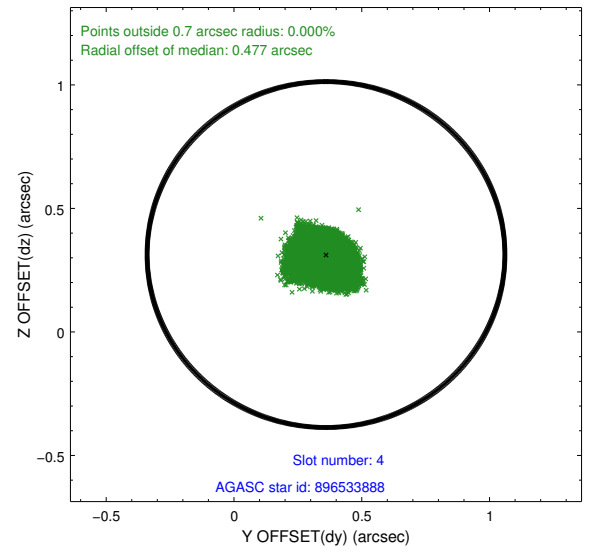
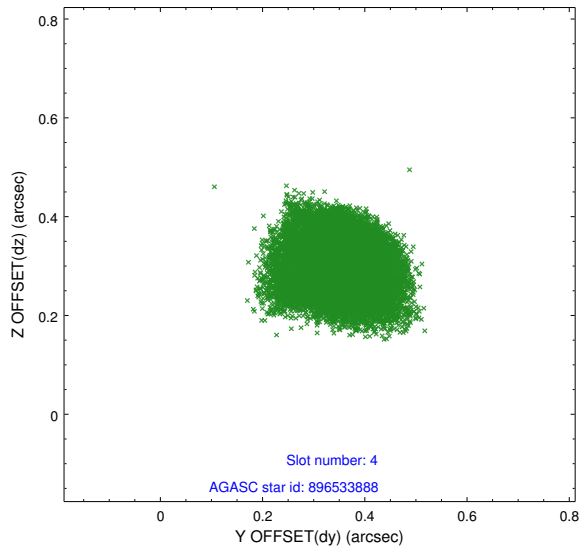
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.86	5959	-0.145	-0.107	0.023	0.050	0.000000	0.000000	-776.37	-1867.49
1	FID		ACIS-S-4	6.94	5959	0.357	0.099	0.016	0.044	0.000000	0.000000	2137.35	41.01
2	FID		ACIS-S-5	6.98	5959	-0.244	0.014	0.022	0.051	0.000000	0.000000	-1829.14	34.76
3	GUIDE	used	896403224	8.28	11917	0.192	-0.250	0.094	0.155	265.612825	-29.438915	-2052.14	2124.25
4	GUIDE	used	896533888	7.04	11918	0.360	0.313	0.090	0.139	266.666434	-29.392757	-1105.88	-1044.98
5	GUIDE	used	896534664	8.20	11919	-0.634	-0.216	0.067	0.107	266.405570	-28.407461	2149.14	584.18
6	GUIDE	used	896541360	7.74	11918	0.433	0.335	0.075	0.121	266.684478	-29.453744	-1305.78	-1151.27
7	GUIDE	used	896538696	6.87	11918	-0.347	-0.183	0.049	0.080	266.298470	-28.325572	2355.95	983.42

2.4 Star Slots

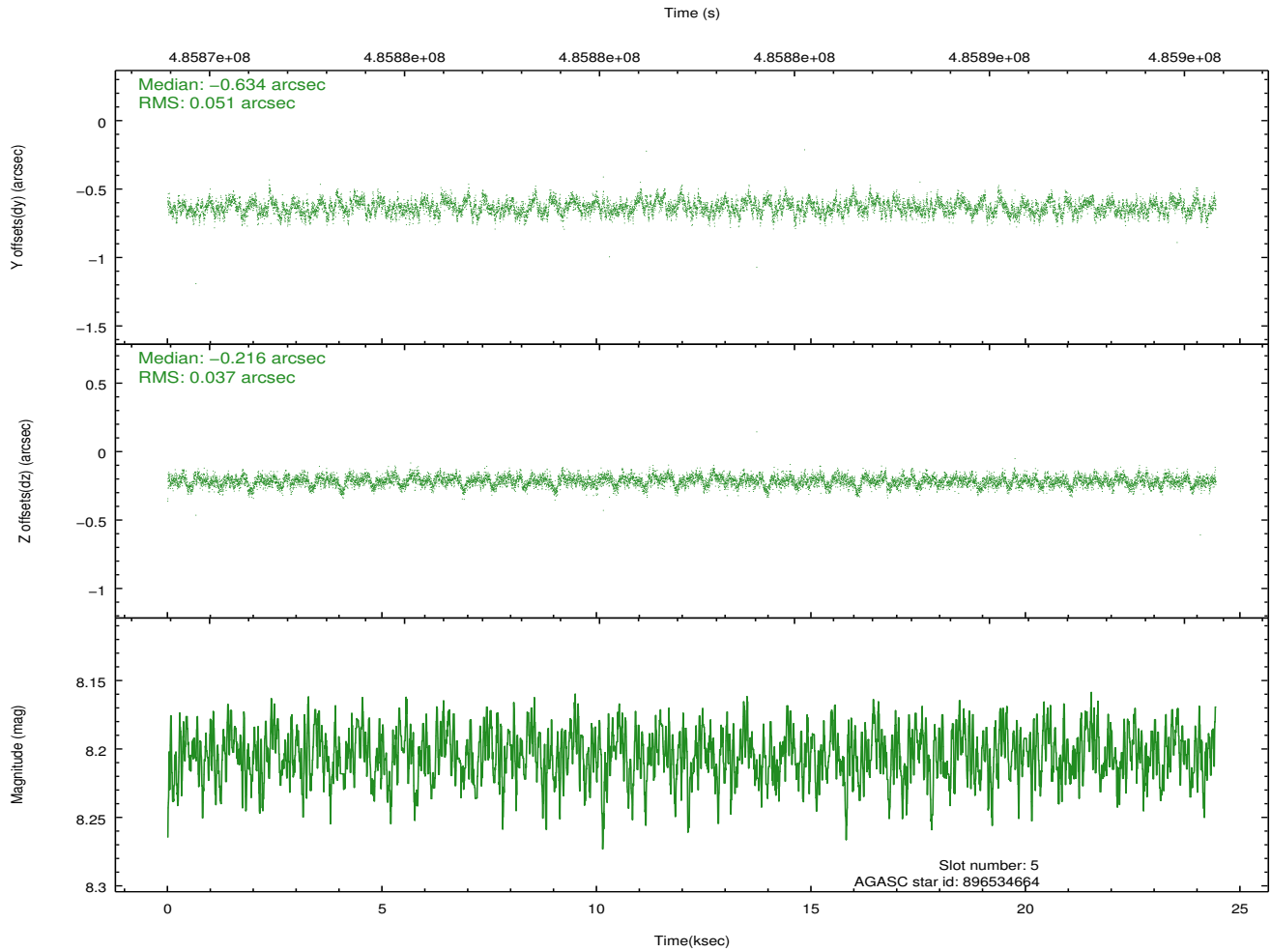
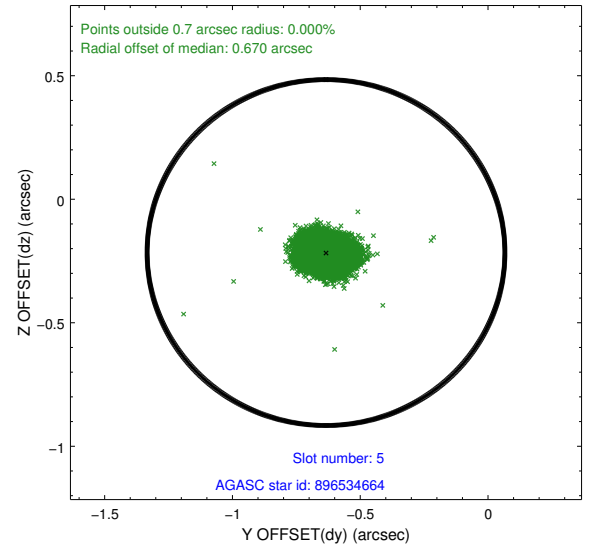
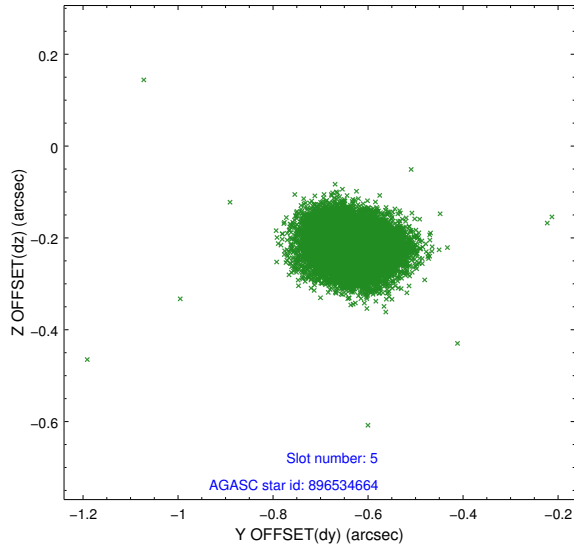
2.4.1 Slot 3



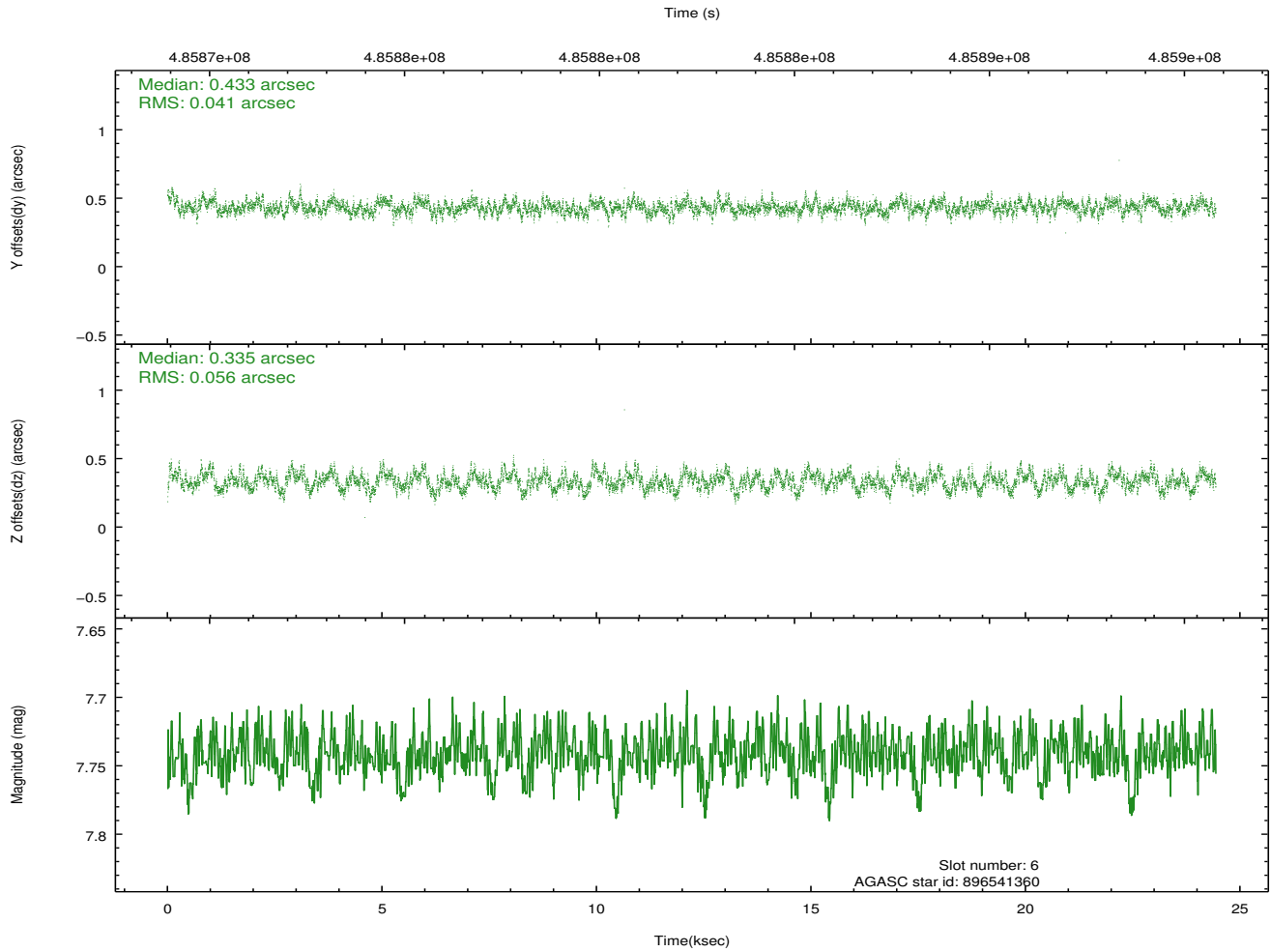
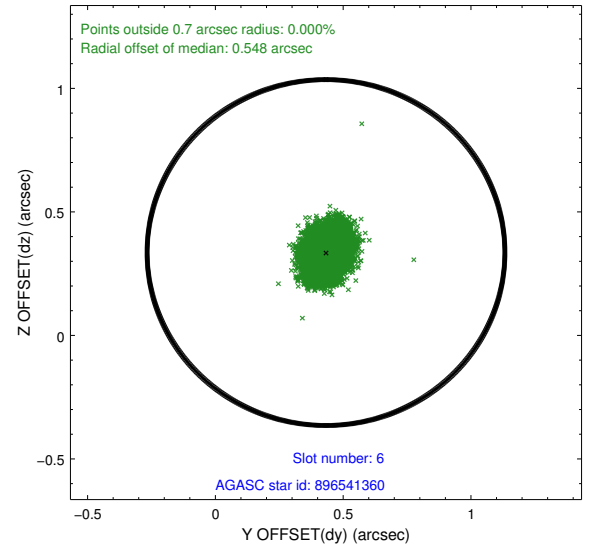
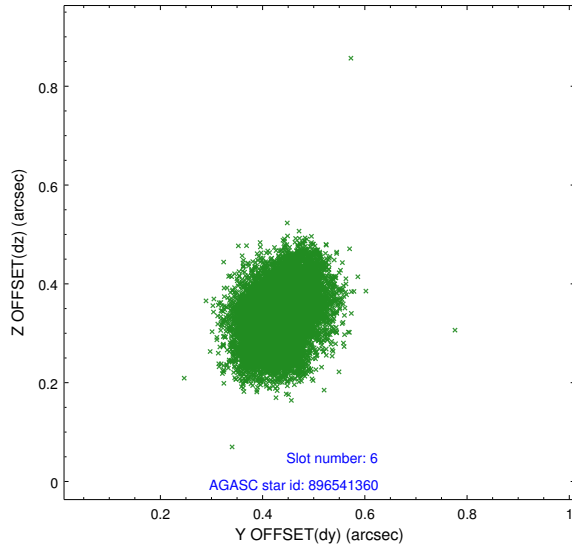
2.4.2 Slot 4



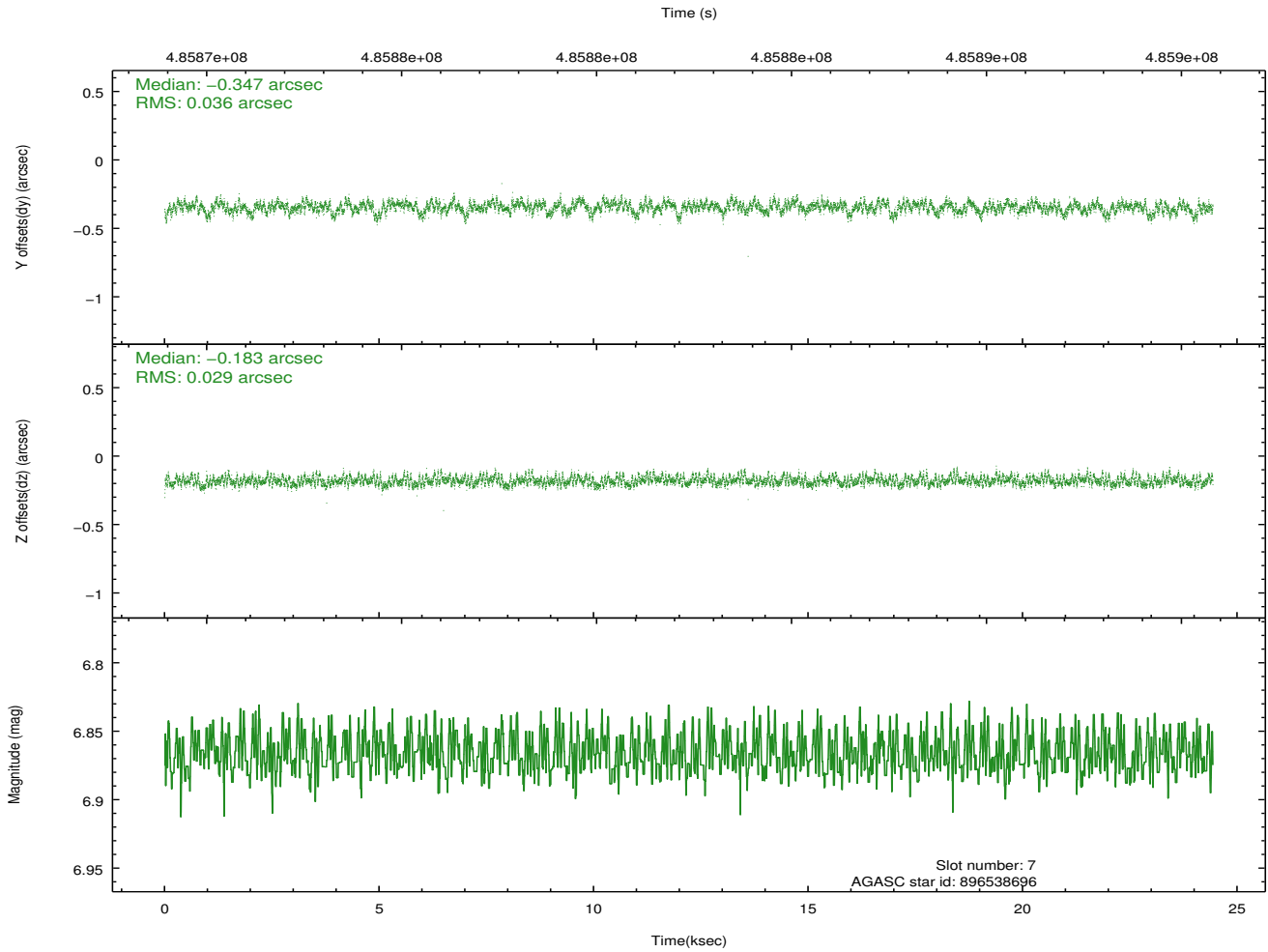
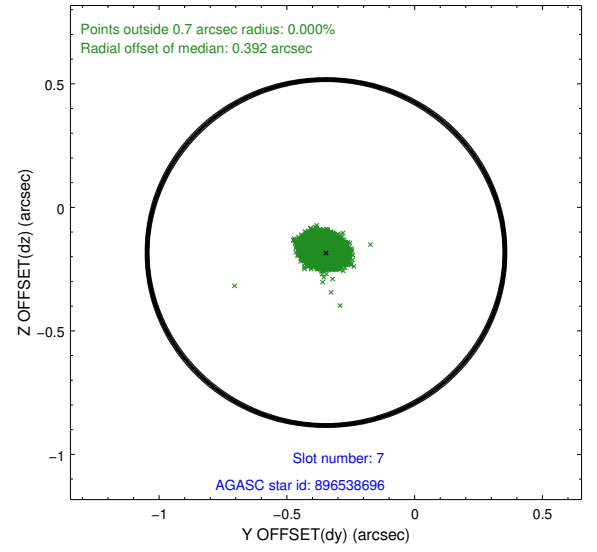
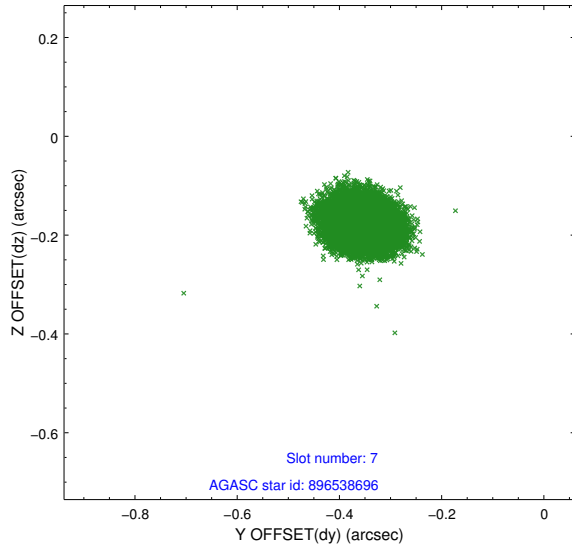
2.4.3 Slot 5



2.4.4 Slot 6

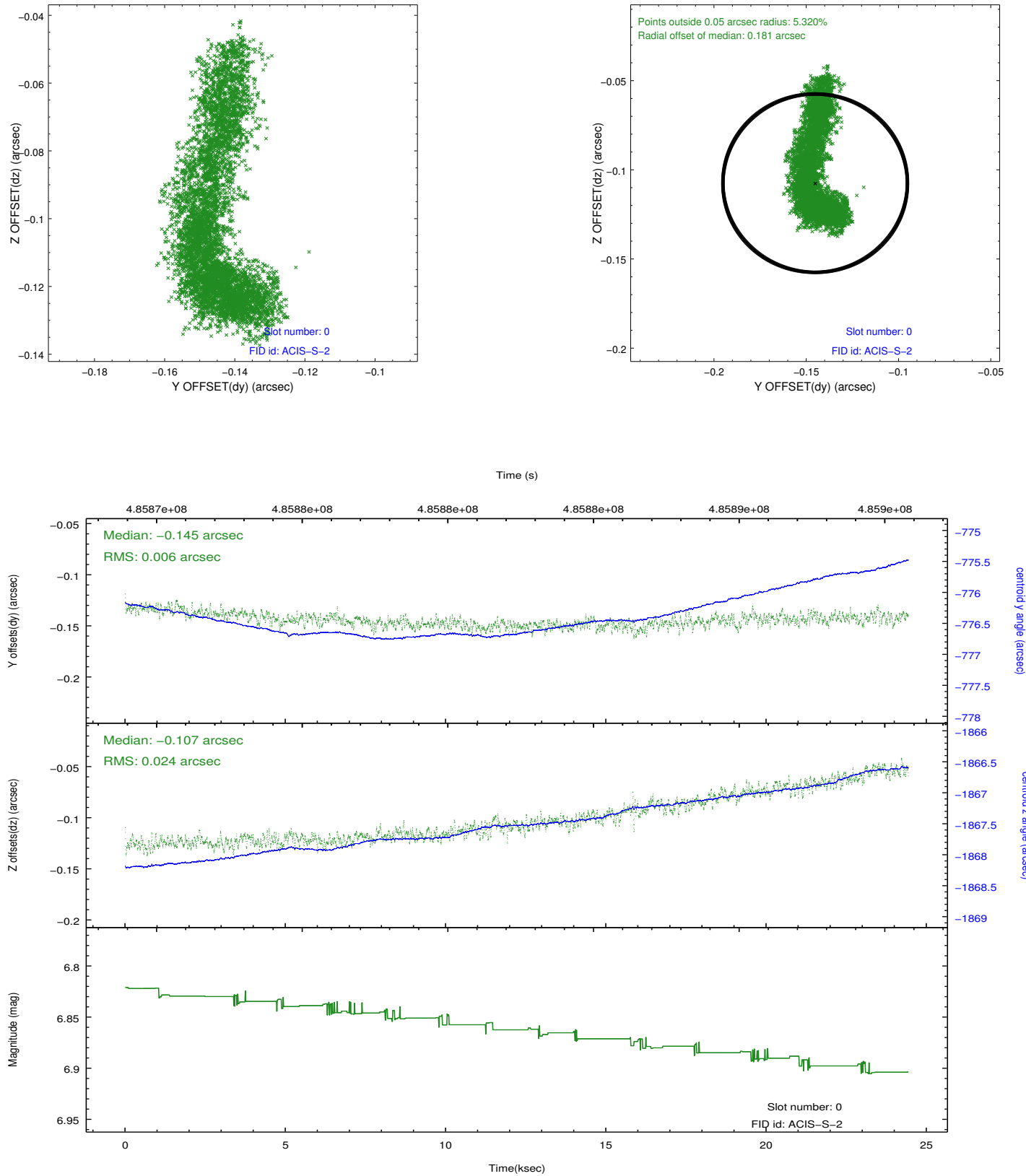


2.4.5 Slot 7

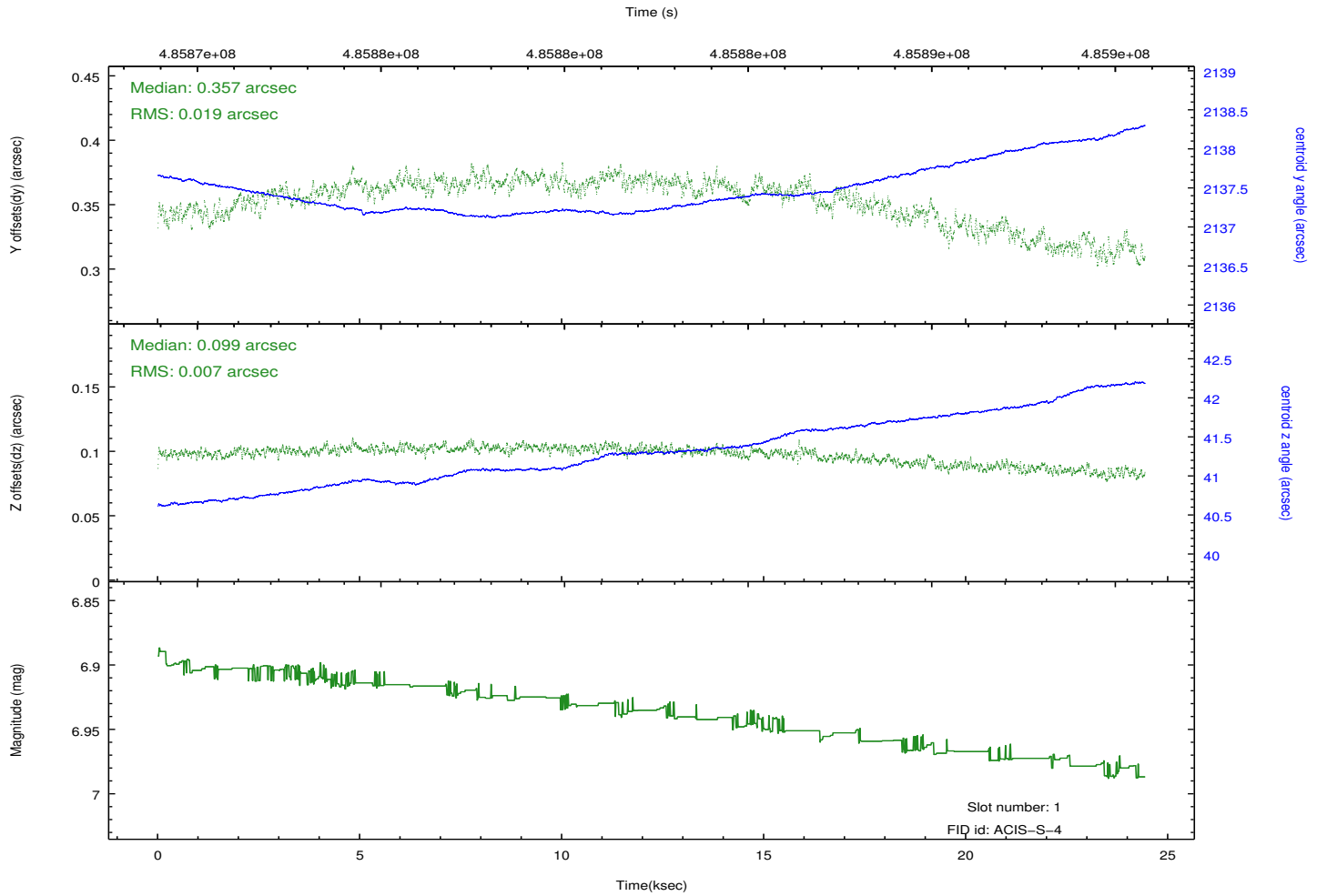
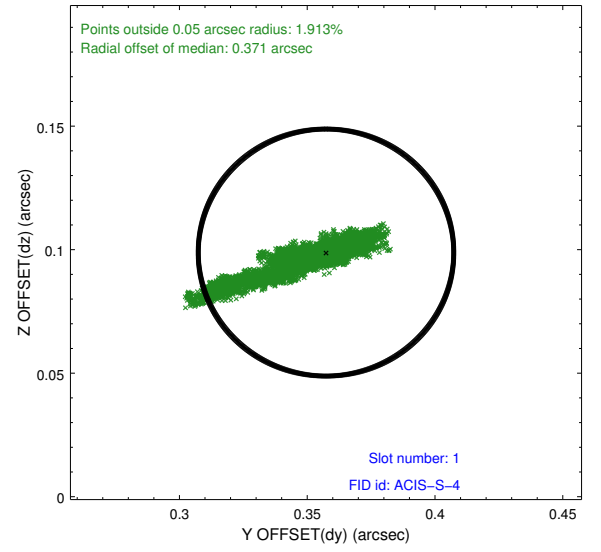
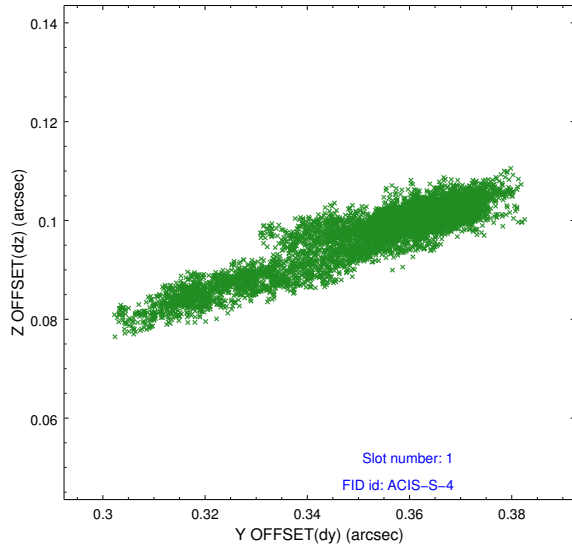


2.5 FID Slots

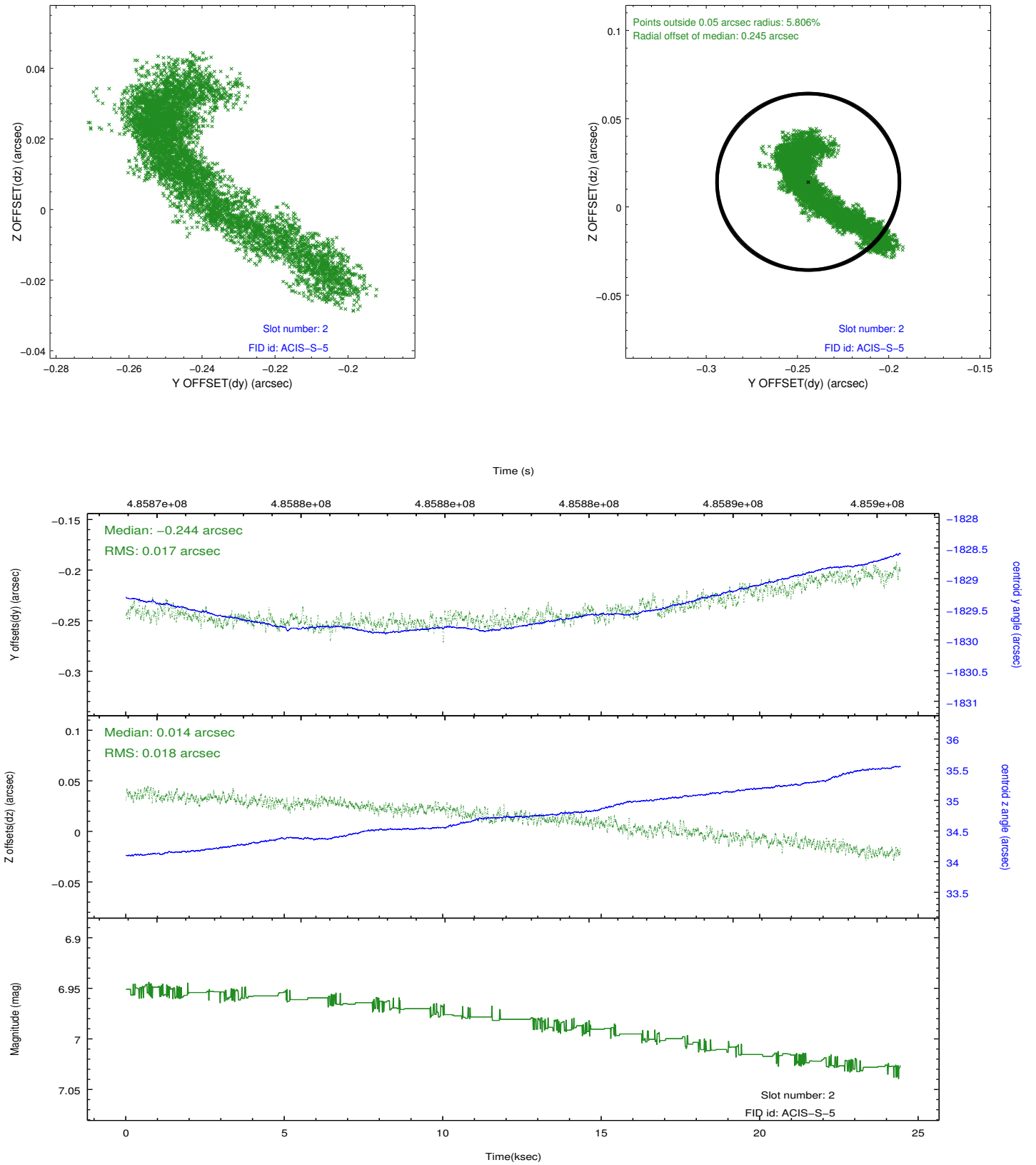
2.5.1 Slot 0



2.5.2 Slot 1

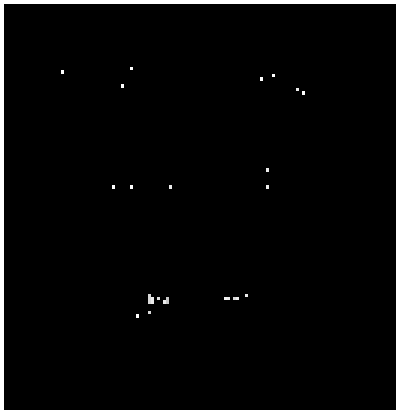


2.5.3 Slot 2

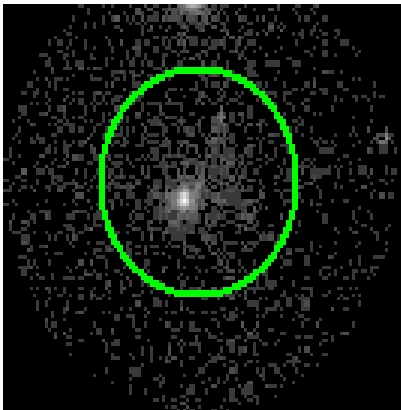


3 Gratings

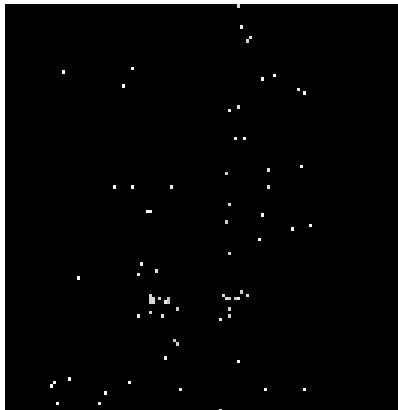
3.1 HEG Arm



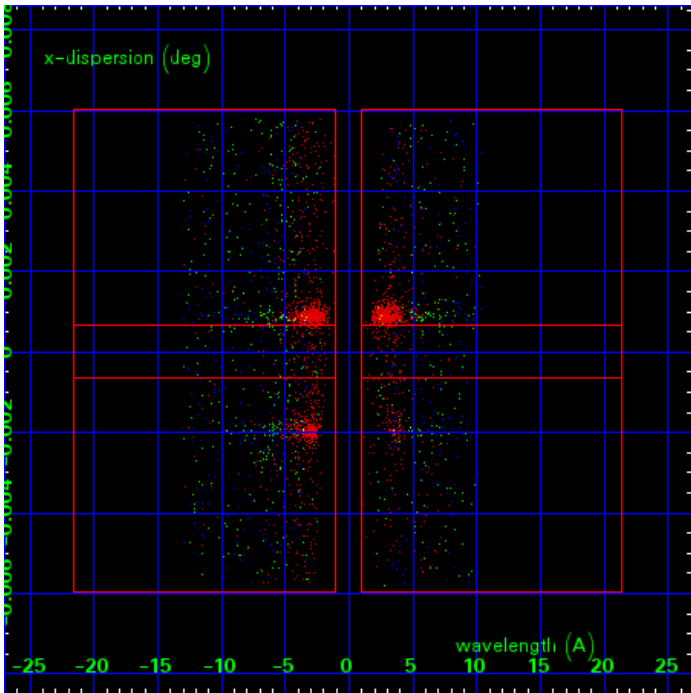
HEG Order Sort 123



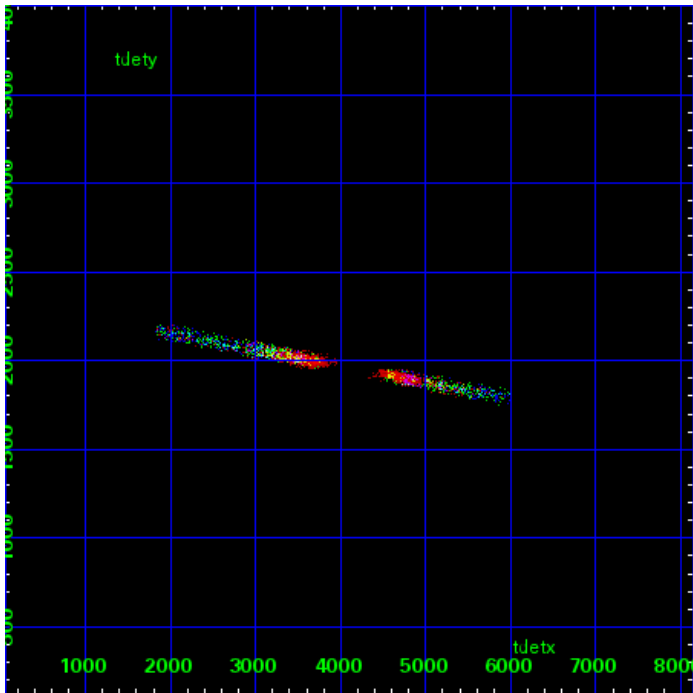
HEG Zero Order



HEG Order Sort ALL

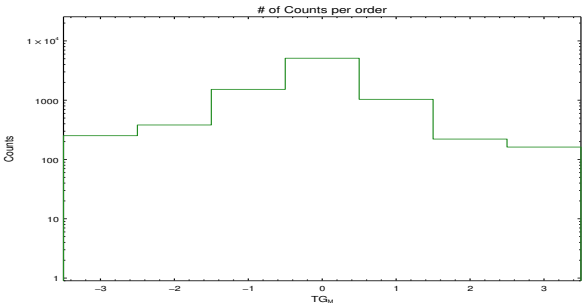


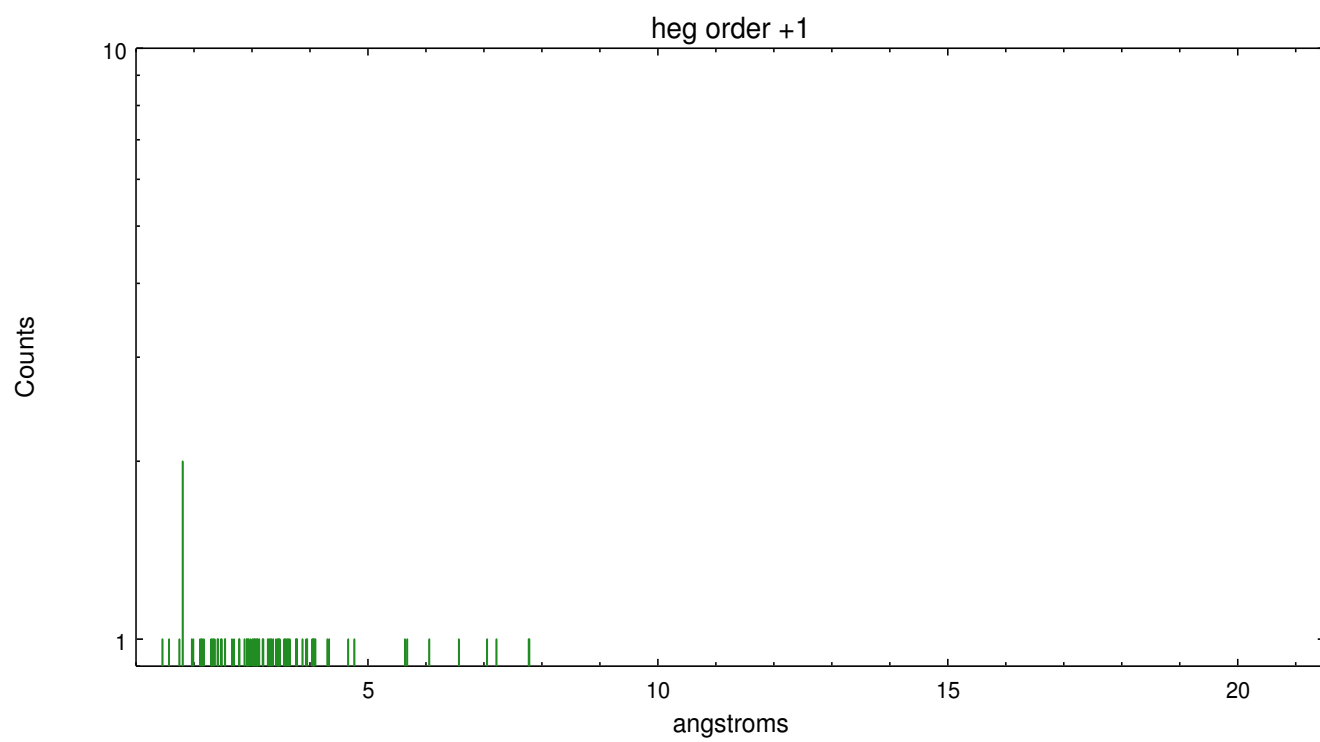
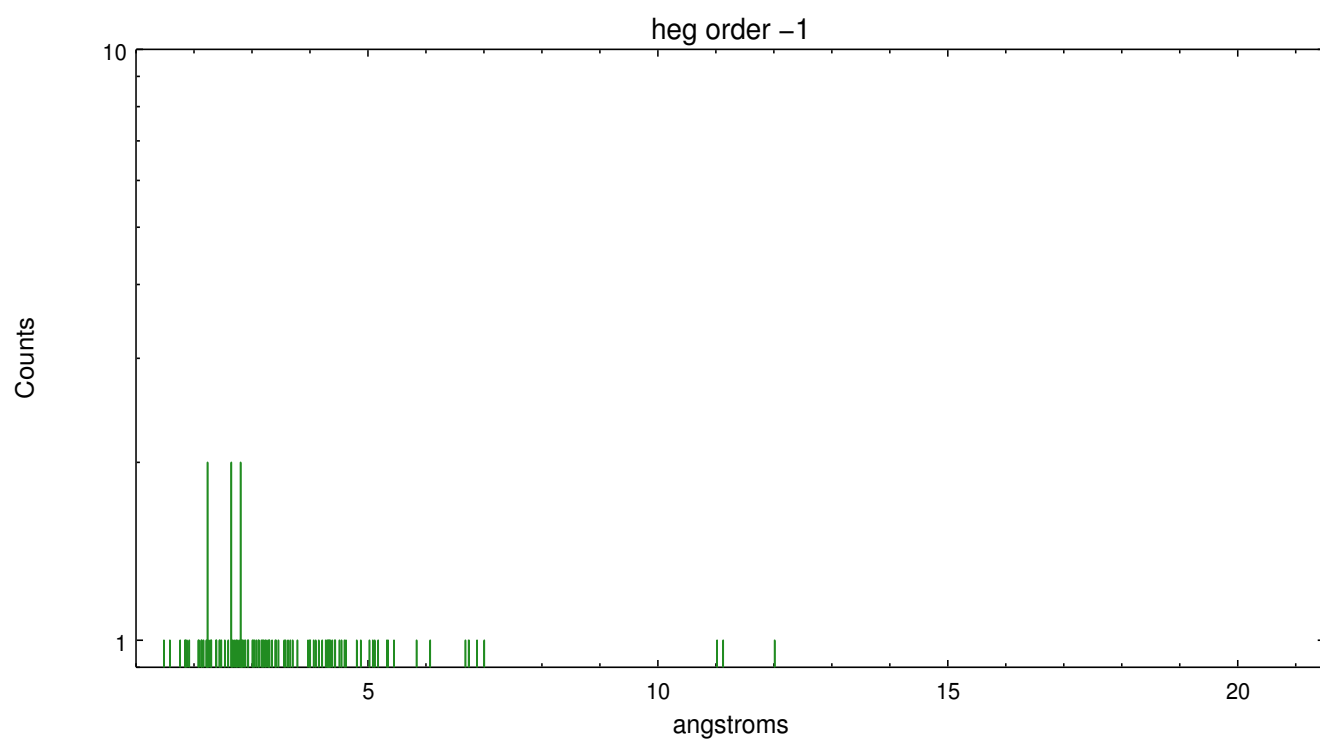
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	252	382	1523	5103	1034	221	162

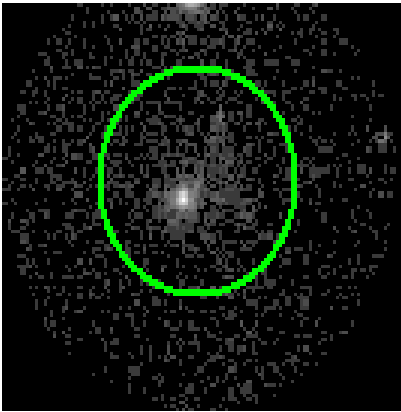




3.2 MEG Arm



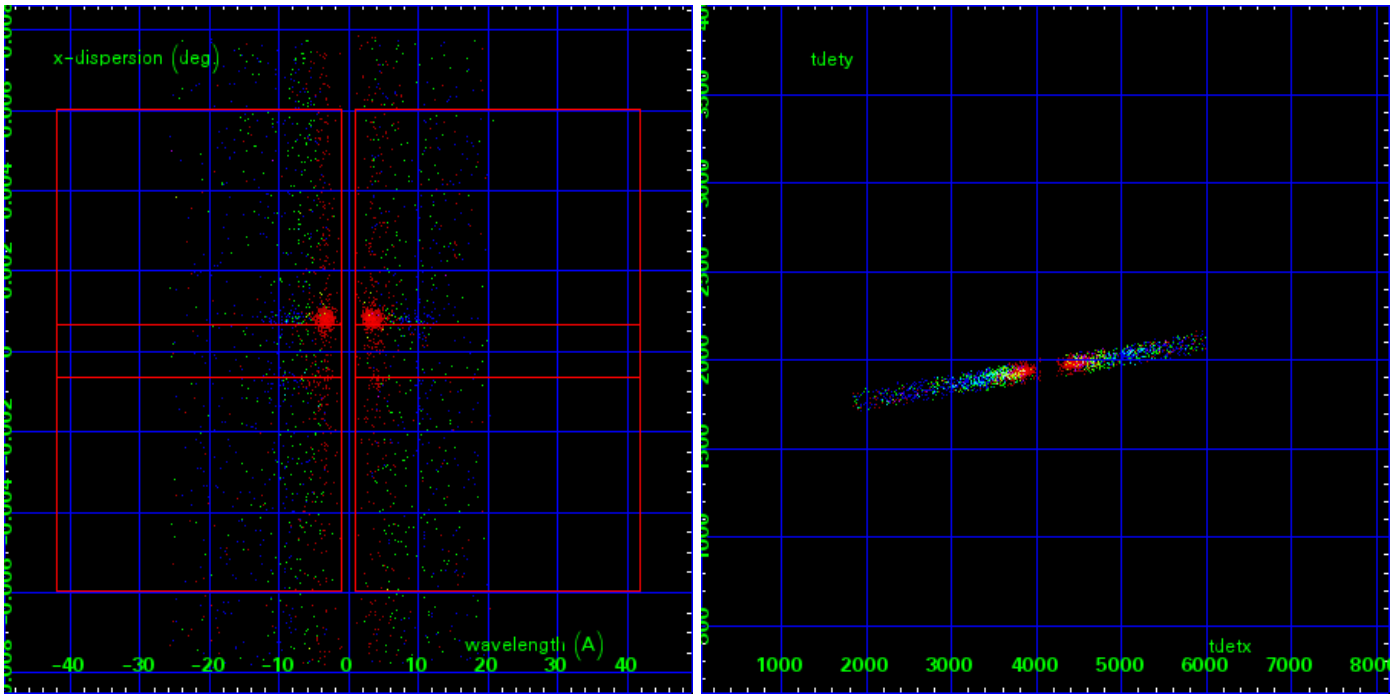
MEG Order Sort 123



MEG Zero Order



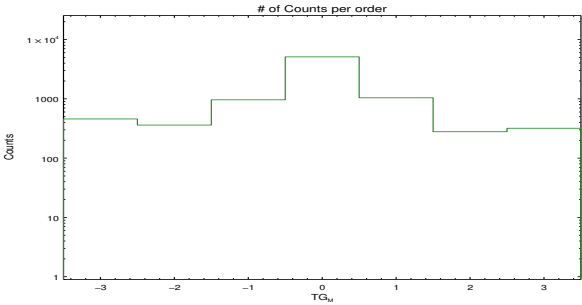
MEG Order Sort ALL

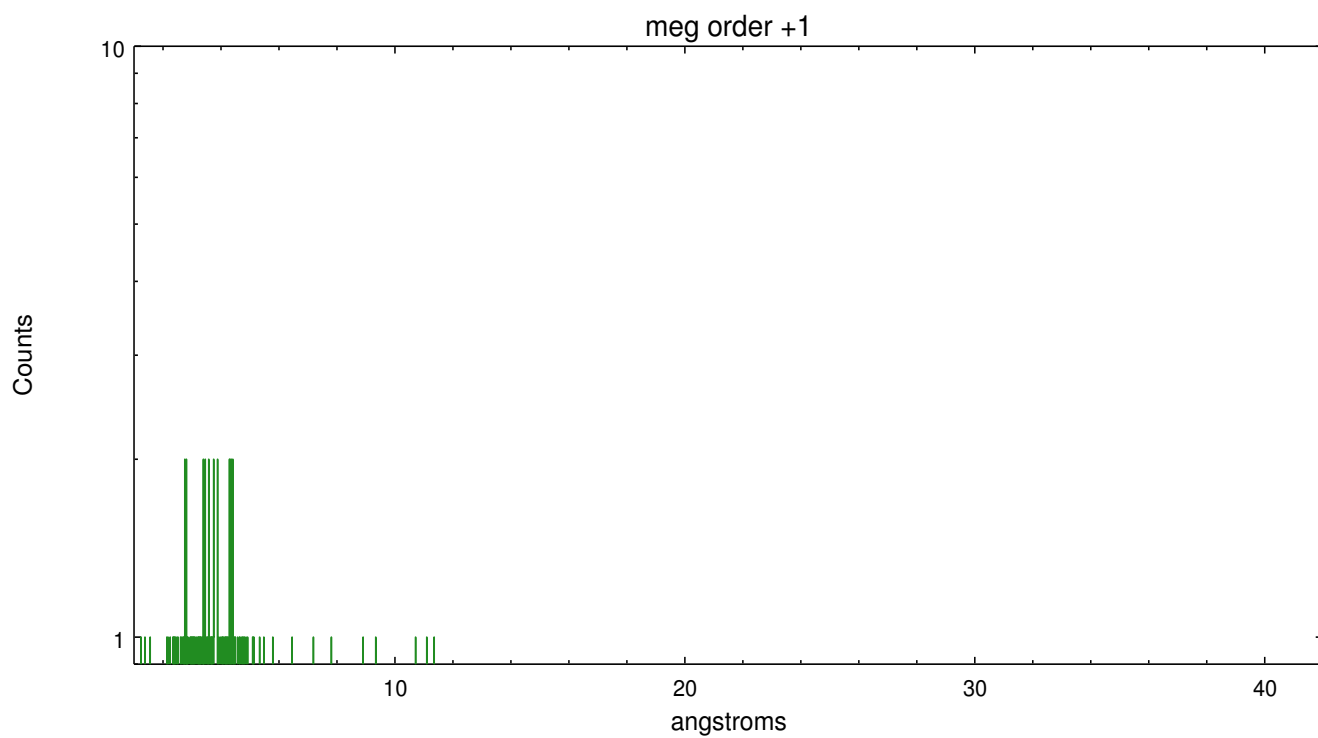
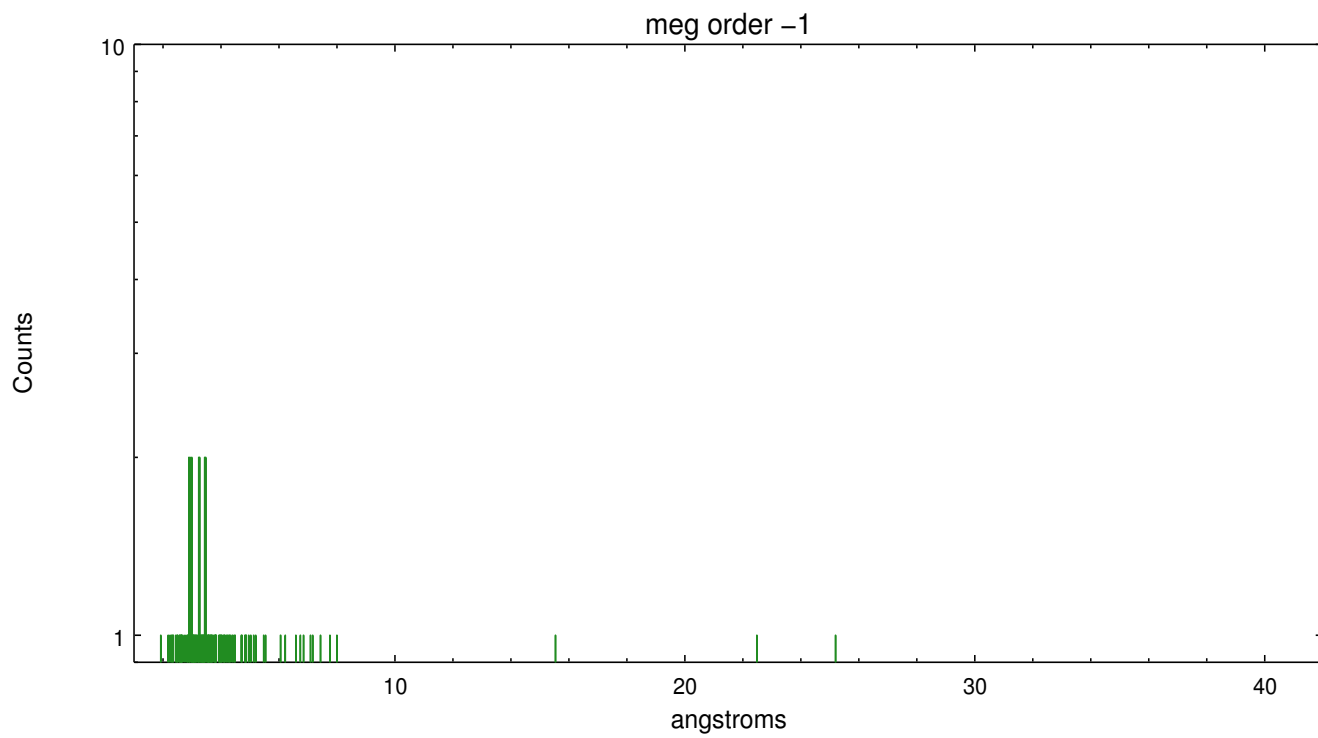


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	458	361	963	5103	1042	279	319





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2015.01.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	24.360000362992

A.2 Comments

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.
===

Note: spatially complex region with multiple point sources and extended emission. The spectral extraction was centered on the nominal Sgr A* coordinates: (RA, DEC) = (266.41667, -29.00780)[deg]