

V&V Reference Report

L2 ASCDS Version : 10.5.2

Observation 19718 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Mar 27 2017

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Parameters	4
2.1.3	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

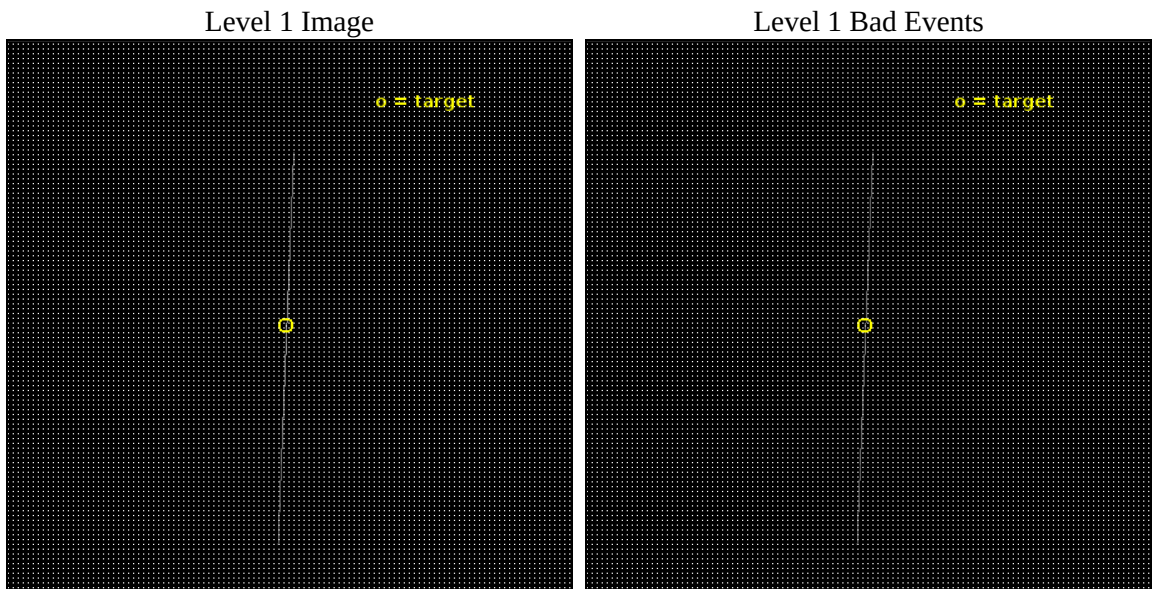
seq_num	401885	Sequence number
obs_id	19718	Observation id
title	A Chandra Legacy for GRS 1915+105	Proposal title
observer	Claude Canizares	Principal investigator
object	GRS 1915+105	Source name
ra_targ	288.798333	Observer's specified target RA [deg]
dec_targ	10.945778	Observer's specified target Dec [deg]
ra_nom	288.79363838257	Nominal RA [deg]
dec_nom	10.949758623323	Nominal Dec [deg]
roll_nom	92.157516834023	Nominal Roll [deg]
revision	1	Processing version of data
ontime	25104.0	Sum of GTIs [s]
livetime	25005.9375	Livetime [s]
ontime5	25104.0	Sum of GTIs [s]
ontime6	25104.0	Sum of GTIs [s]
ontime7	25104.0	Sum of GTIs [s]
ontime8	25104.0	Sum of GTIs [s]
ontime9	25104.0	Sum of GTIs [s]
l2events	2605474	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	25000.000000	[s] Scheduled observation exposure time
ascdsver	10.5.2	Processing system revision	ontime	25104.0	Sum of GTIs [s]
caldsver	4.7.3	 	ontime5	25104.0	Sum of GTIs [s]
date	2017-03-27T17:01:55	Date and time of file creation	ontime6	25104.0	Sum of GTIs [s]
revision	1	Processing version of data	ontime7	25104.0	Sum of GTIs [s]
			ontime8	25104.0	Sum of GTIs [s]
			ontime9	25104.0	Sum of GTIs [s]
			l1events	4876692	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
			zo_pos	(4062.50, 4067.80)	src1a sky pixel position

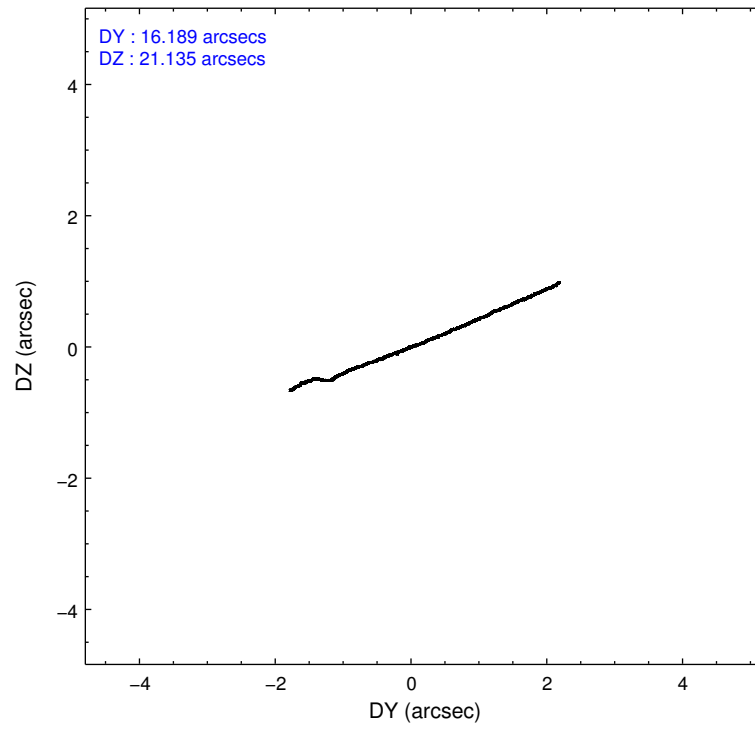
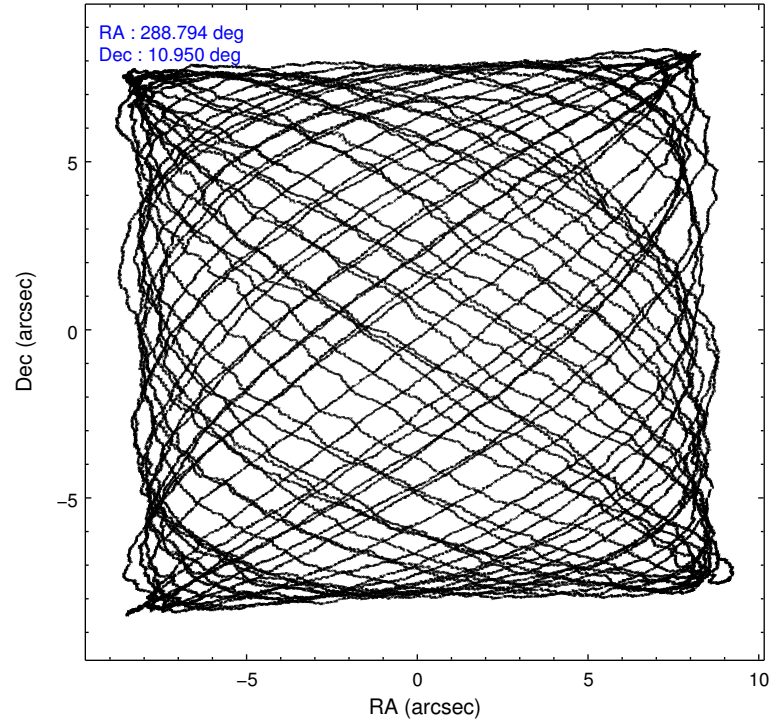
2.1.3 Events

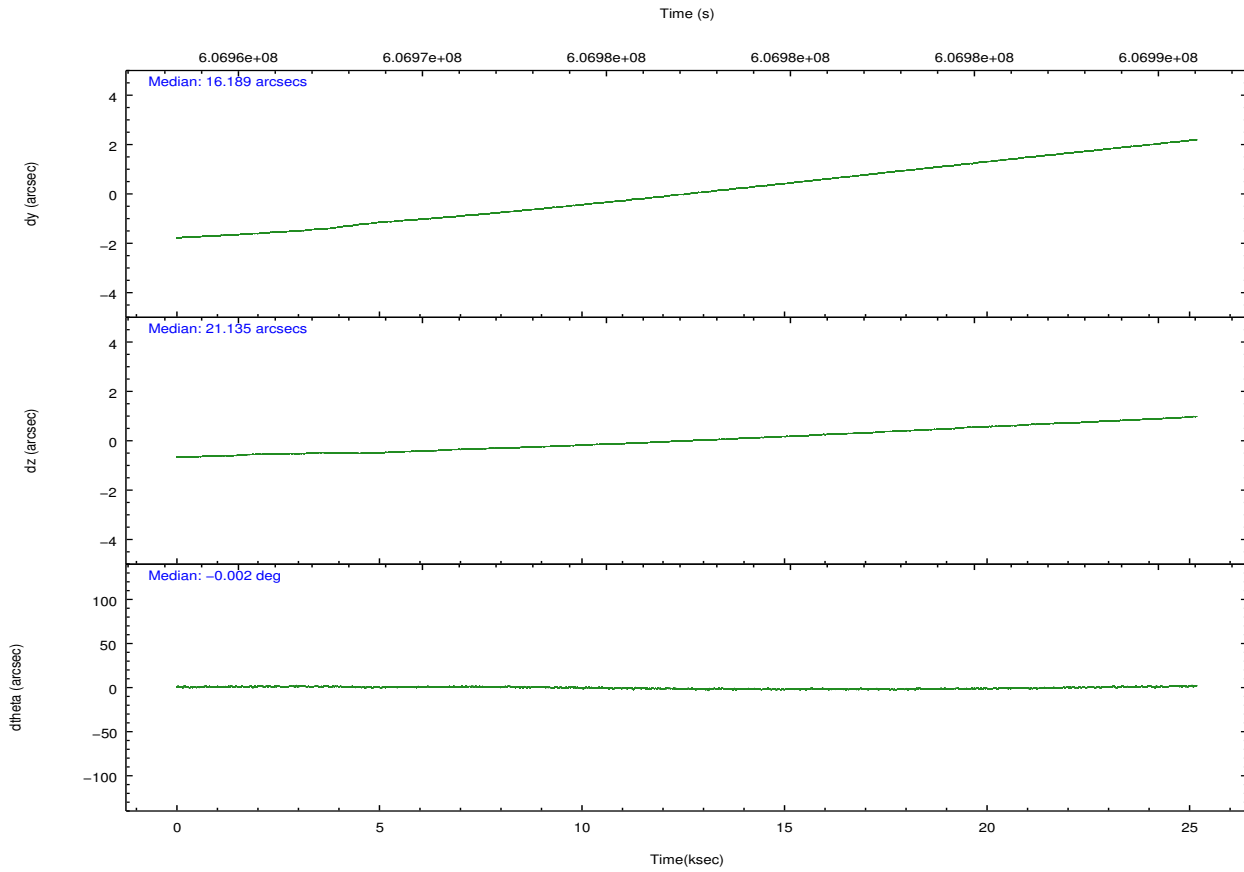
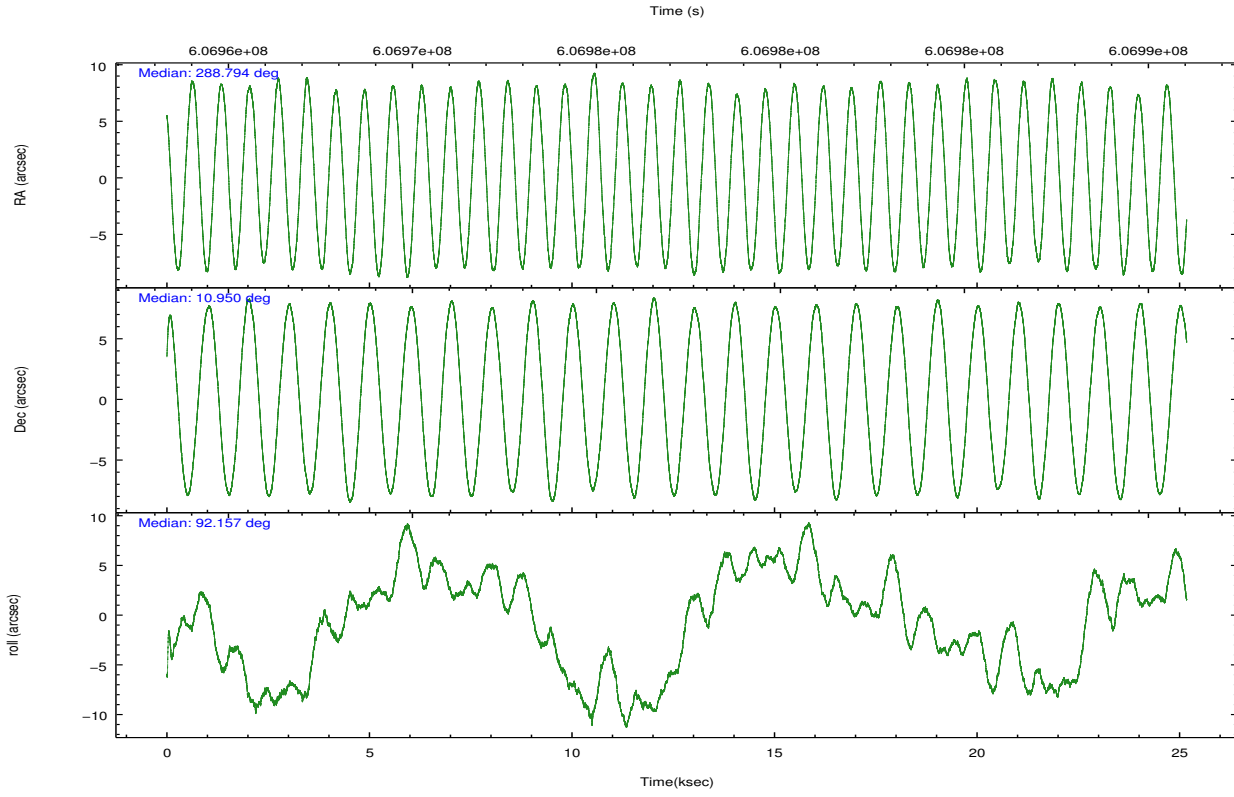
	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	499285	929534	2447792	645227	354854	grade 0 events	41559	8487	110432	25749	4466
rejected events	262931	336330	759563	432341	297571		8%	0%	4%	3%	1%
rejected %	52%	36%	31%	67%	83%	grade 1 events	257	179	5470	332	134
							0%	0%	0%	0%	0%
						grade 2 events	81796	500443	661939	132449	33805
							16%	53%	27%	20%	9%
						grade 3 events	3435	4212	64301	9831	3635
							0%	0%	2%	1%	1%
						grade 4 events	3243	3902	63086	9439	3938
							0%	0%	2%	1%	1%
						grade 5 events	16034	11191	70586	13306	9308
							3%	1%	2%	2%	2%
						grade 6 events	106343	76239	788643	35436	11447
							21%	8%	32%	5%	3%
						grade 7 events	246618	324881	683335	418685	288121
							49%	34%	27%	64%	81%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-56789	ACIS-56789	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	288.808842	288.7936383825692	CCD I2 on	N	N
[deg] Pointing Dec	10.926706	10.94975862332263	CCD I3 on	N	N
[deg] Pointing Roll	91.998008	92.15751683402272	CCD S0 on	N	N
[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	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	606964758.184000	606963947.4517	CCD S5 on	O1	Y
Observation start date	2017-03-27T01:18:09	2017-03-27T01:05:47	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	606989758.184000	606990725.06576	On-chip summing requested	N	N
Observation end date	2017-03-27T08:14:49	2017-03-27T08:32:05	Subarray requested	NONE	NONE
Read mode	CONTINUOUS	CONTINUOUS	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	0

2.3 Aspect



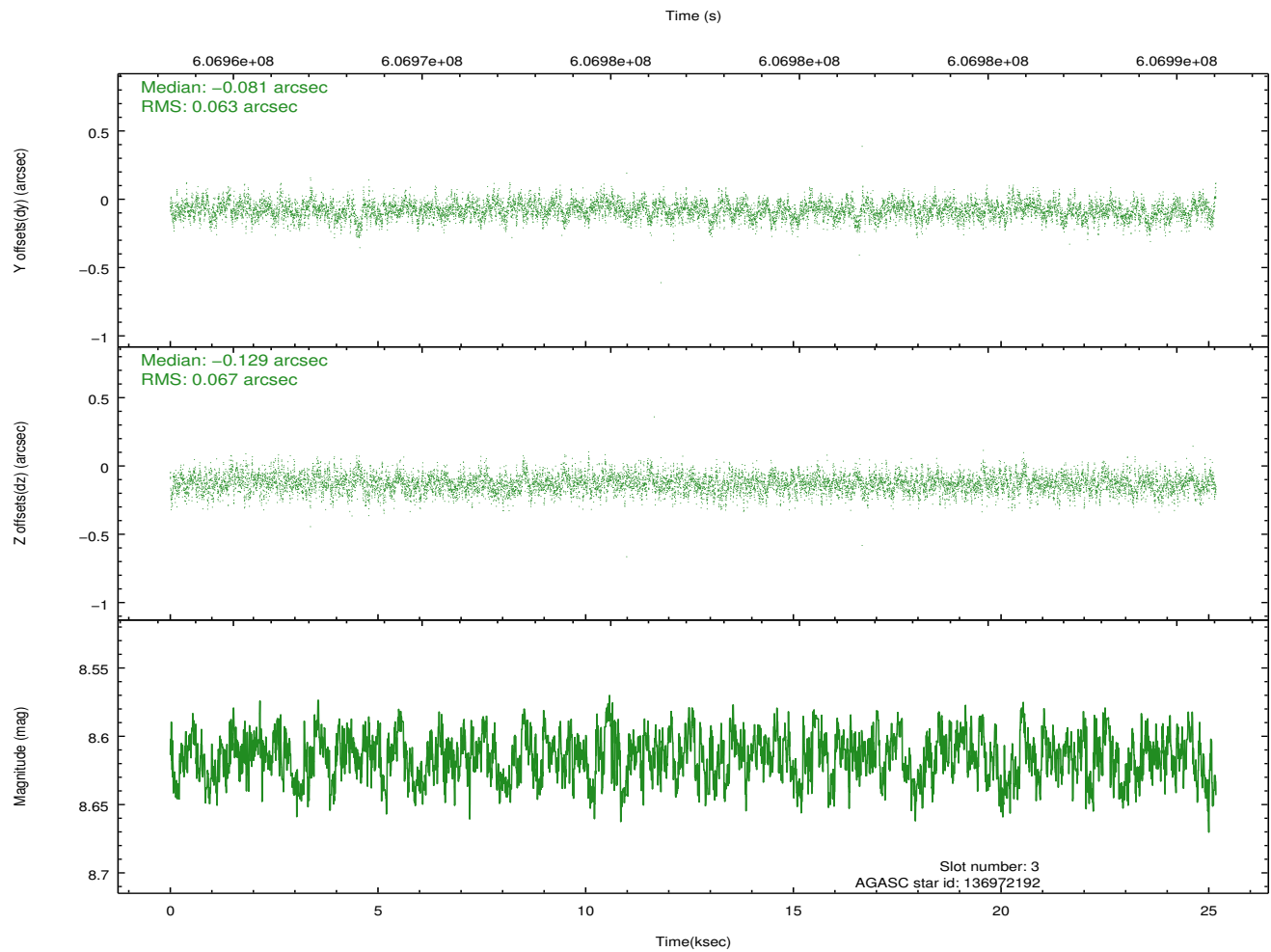
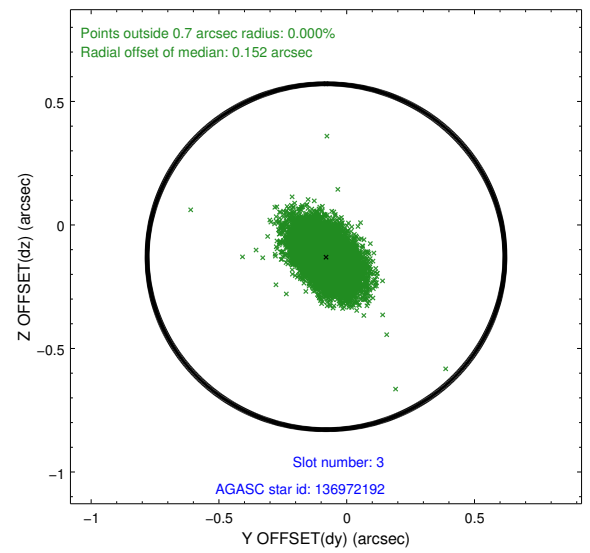
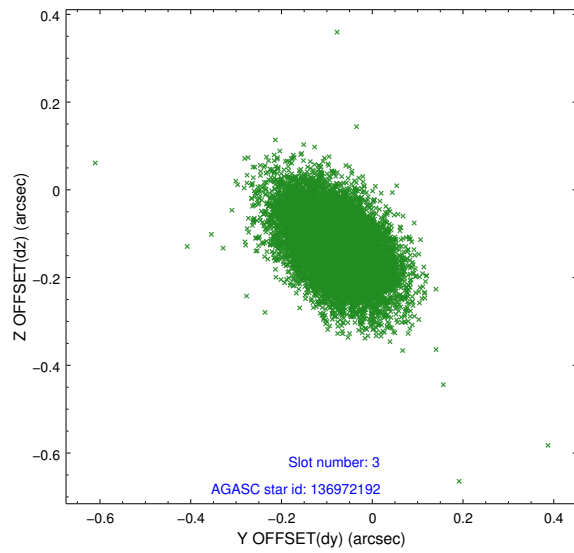


Slot Statistics

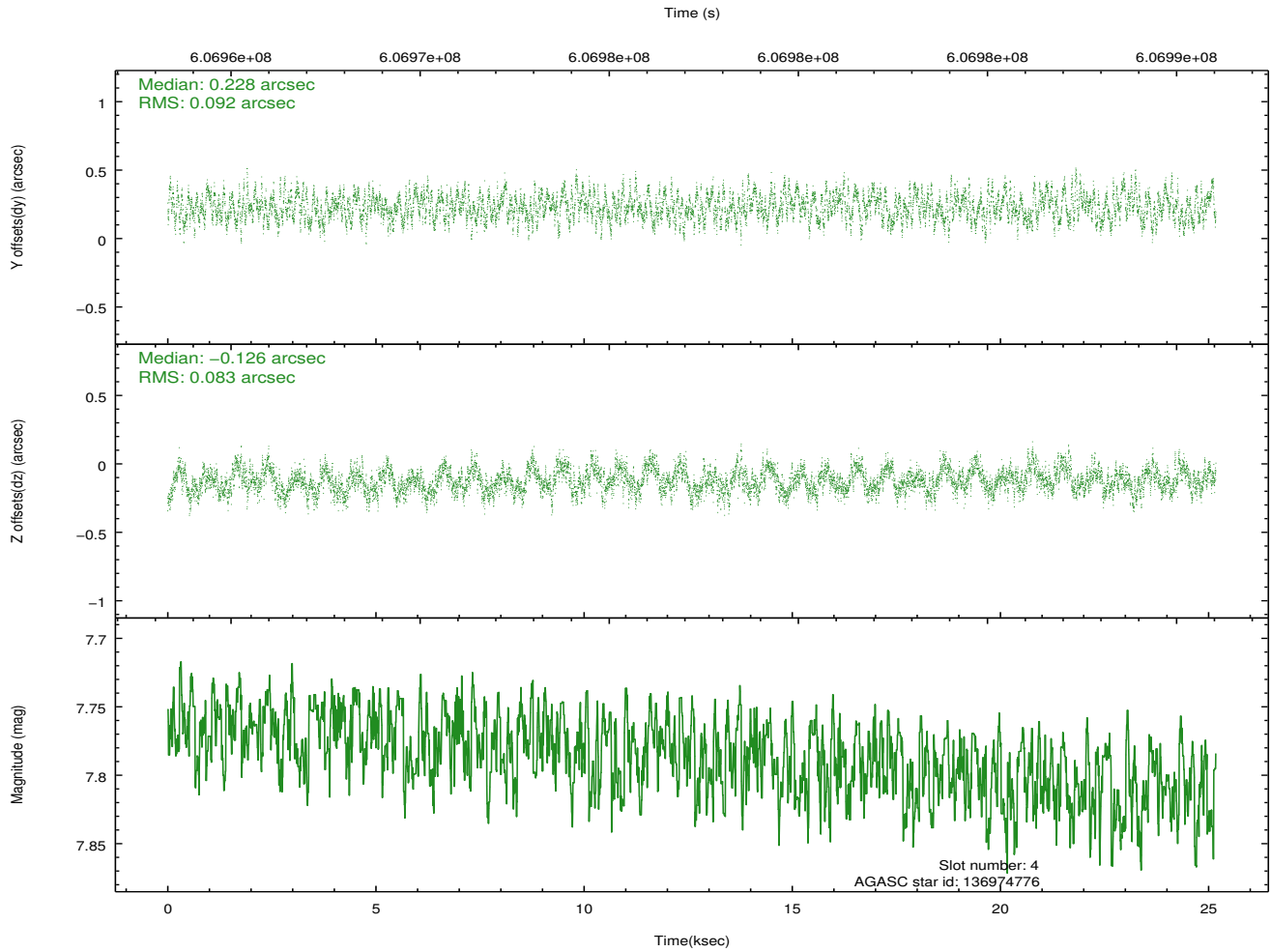
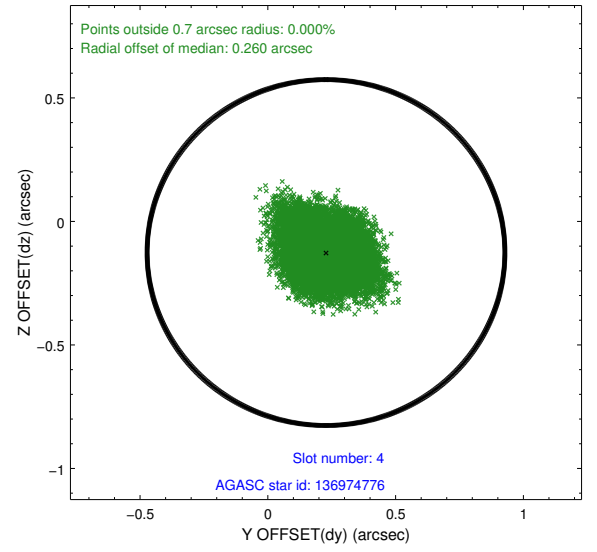
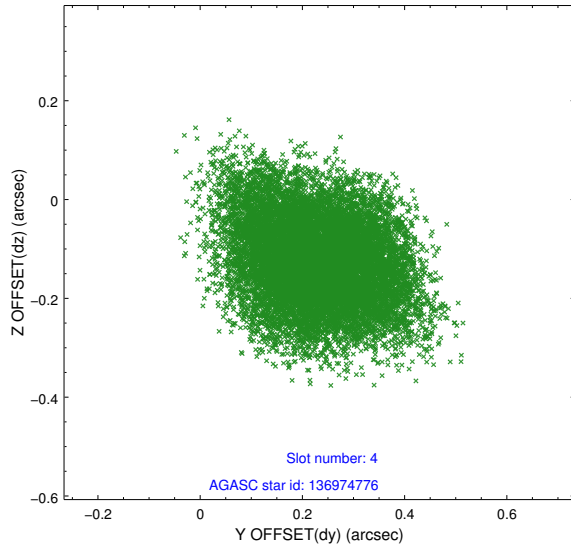
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.96	6140	-0.276	-0.179	0.013	0.043	0.000000	0.000000	-769.60	-1742.84
1	FID		ACIS-S-4	7.07	6141	0.310	0.160	0.013	0.020	0.000000	0.000000	2144.28	165.76
2	FID		ACIS-S-6	7.20	6139	-0.060	0.032	0.021	0.028	0.000000	0.000000	392.84	803.22
3	GUIDE	used	136972192	8.61	12272	-0.081	-0.129	0.095	0.162	288.510925	10.645719	-973.80	1088.67
4	GUIDE	used	136974776	7.79	12278	0.228	-0.126	0.134	0.209	288.742109	10.409402	-1852.78	301.17
5	GUIDE	used	137108368	9.18	12268	0.486	0.692	0.183	0.320	289.421925	10.352056	-2140.76	-2097.08
6	GUIDE	used	137497048	7.96	12281	-0.186	0.062	0.118	0.196	288.896055	11.554718	2245.34	-389.27
7	GUIDE	used	137498872	7.05	12280	-0.464	-0.493	0.106	0.172	288.350862	11.344926	1561.53	1562.47

2.4 Star Slots

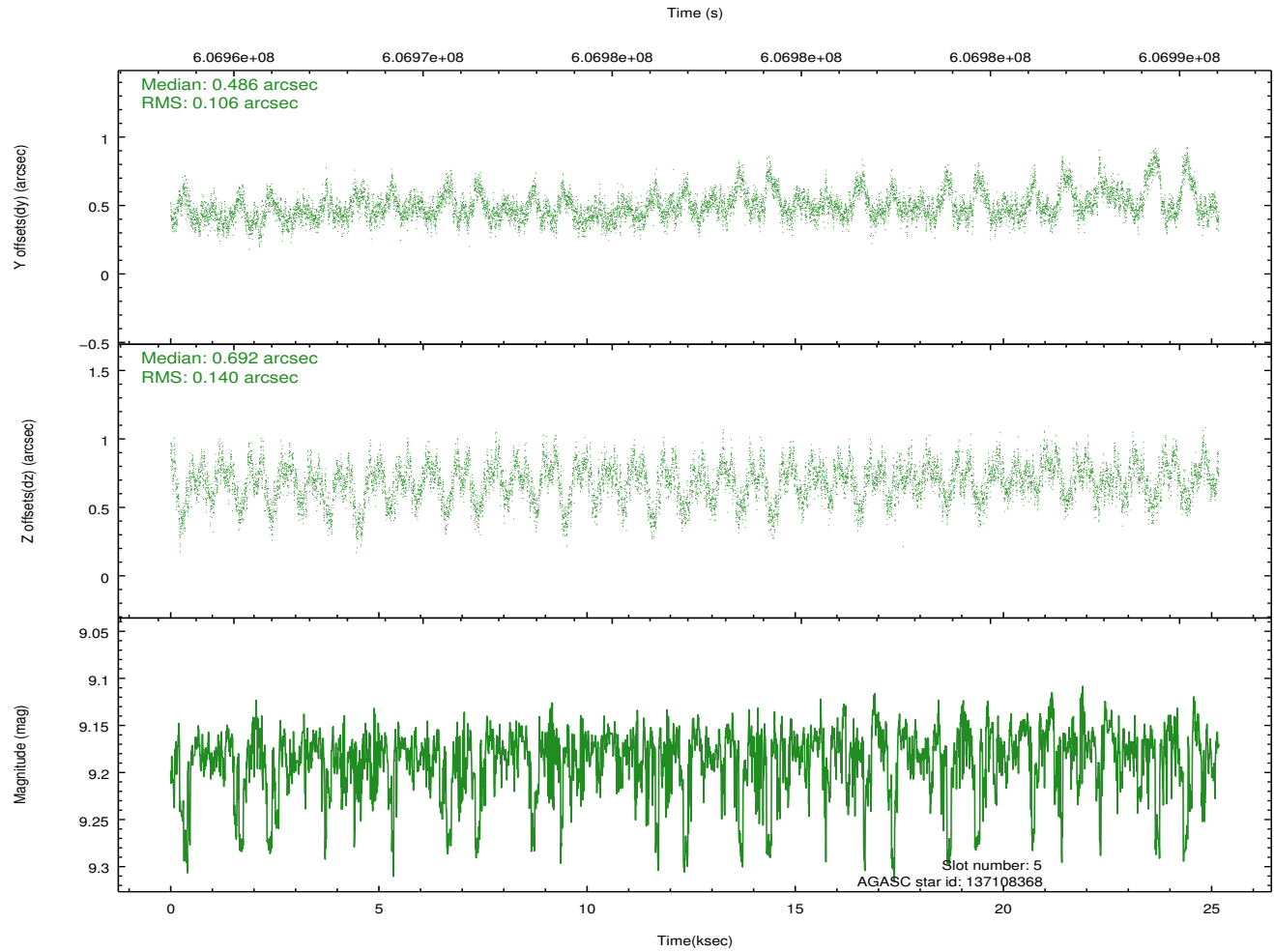
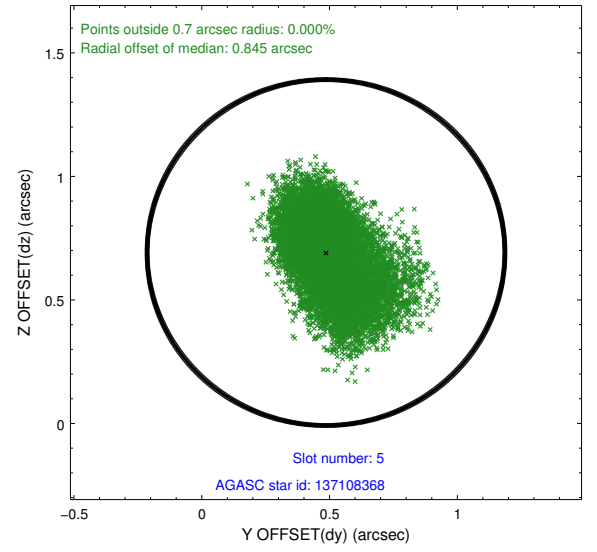
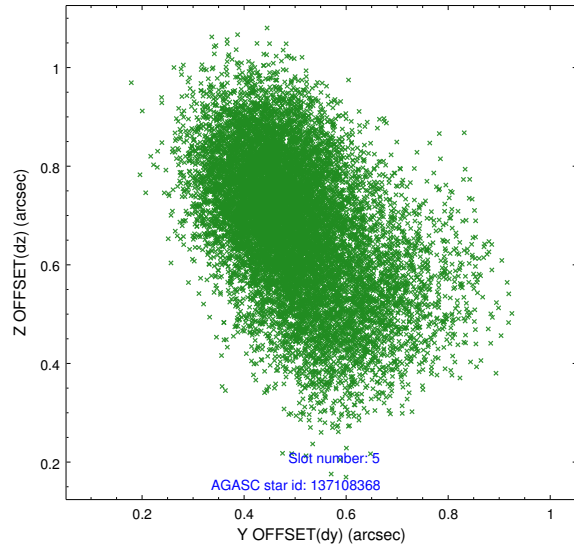
2.4.1 Slot 3



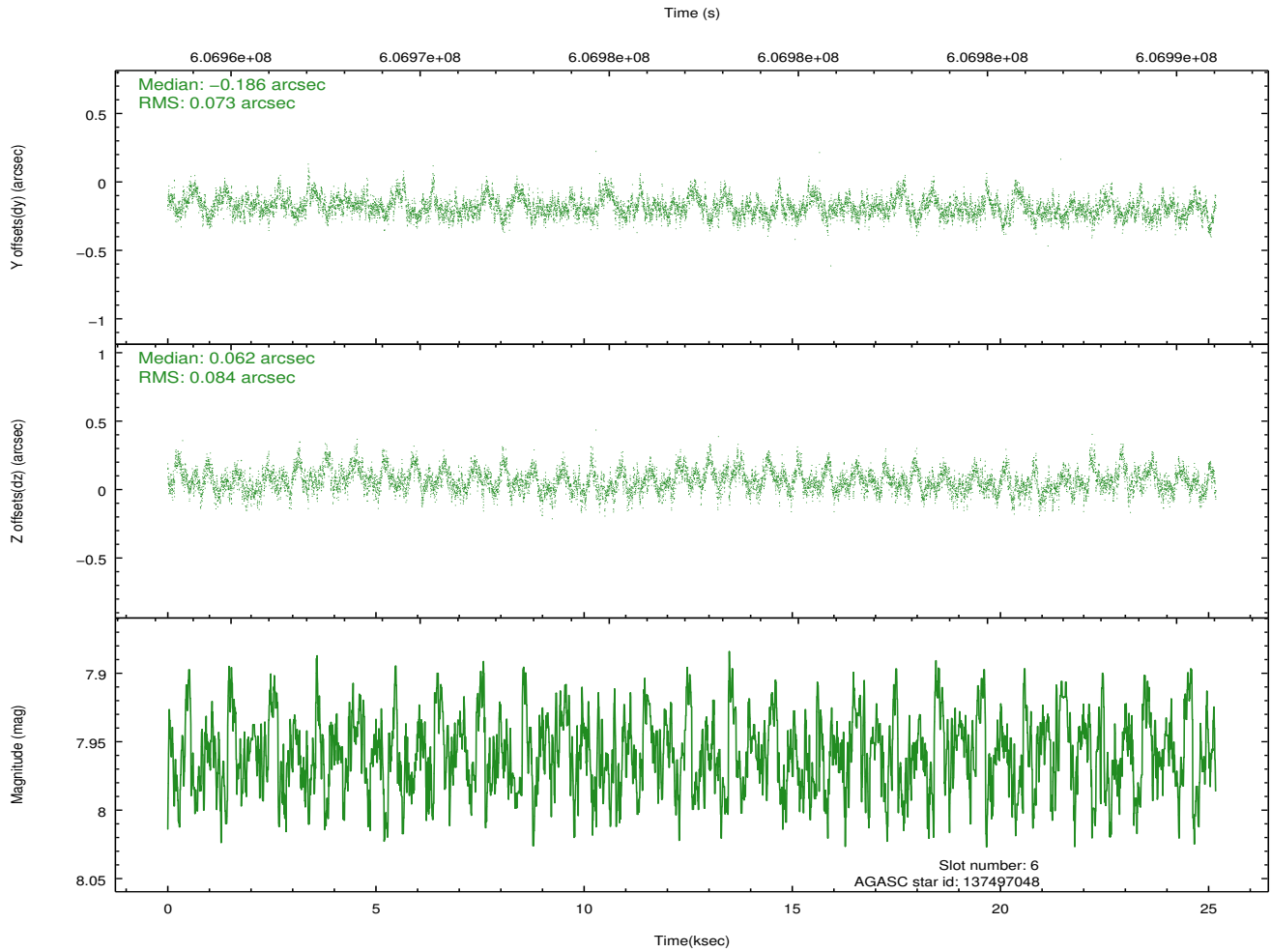
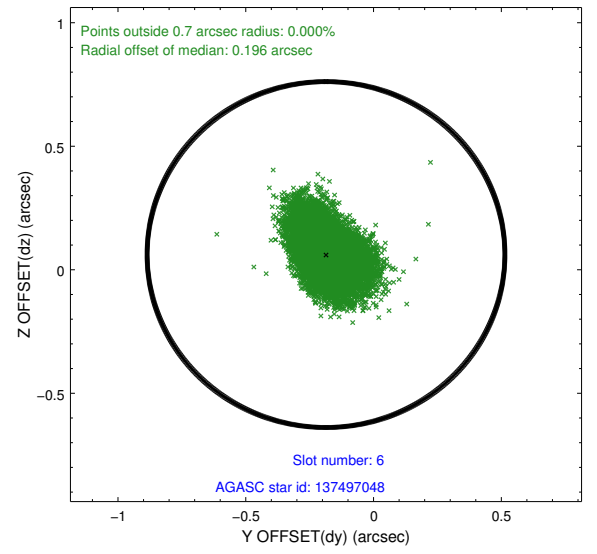
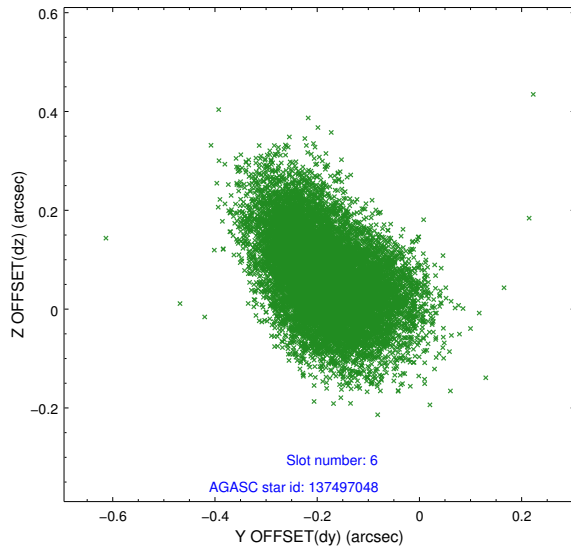
2.4.2 Slot 4



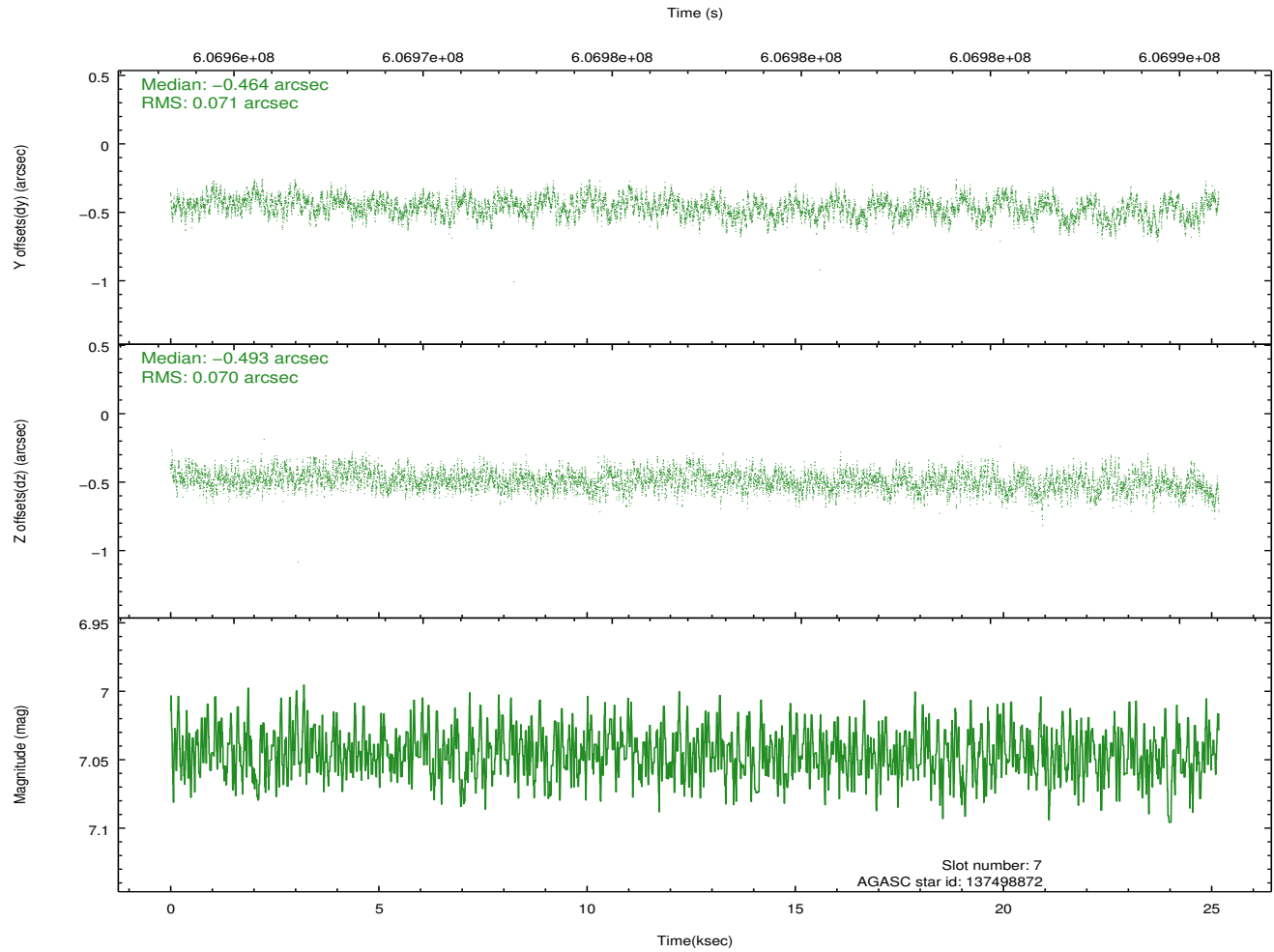
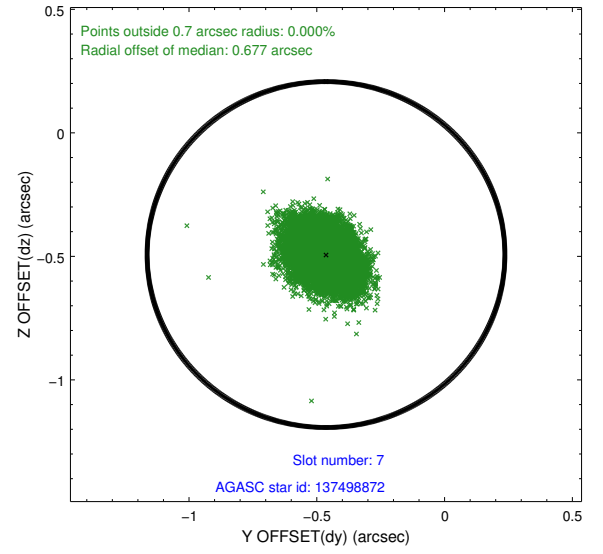
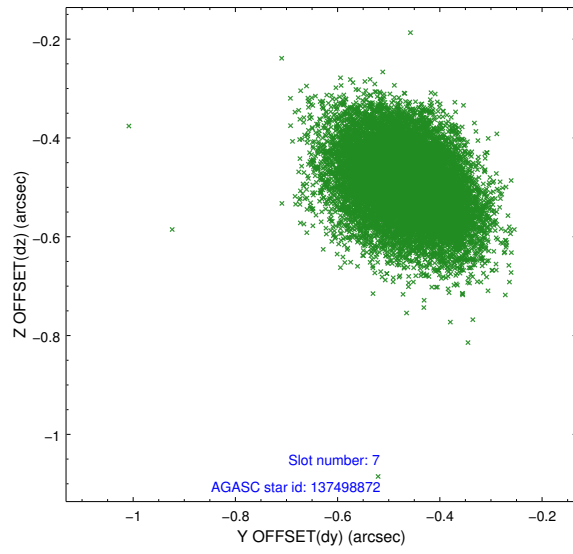
2.4.3 Slot 5



2.4.4 Slot 6

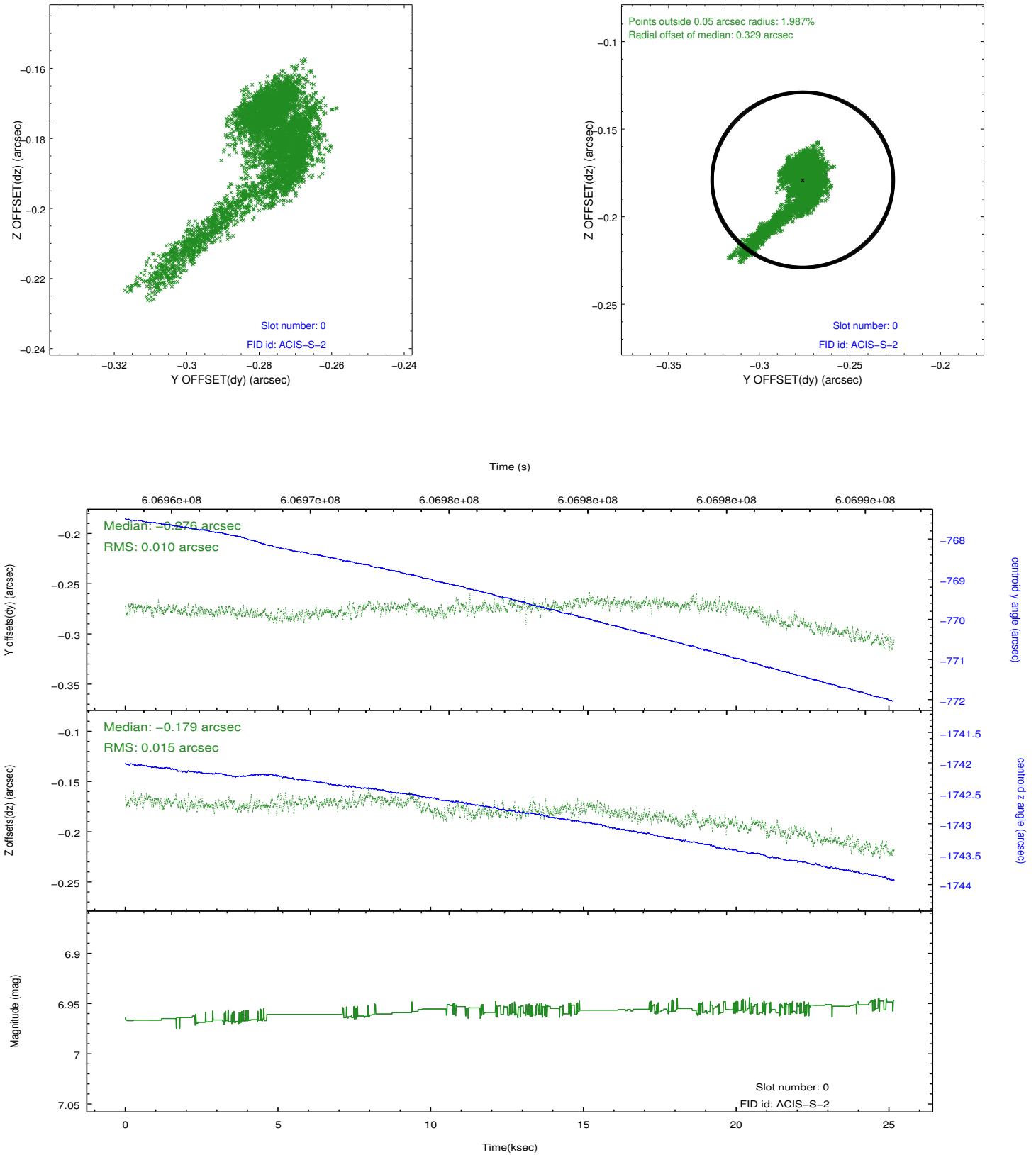


2.4.5 Slot 7

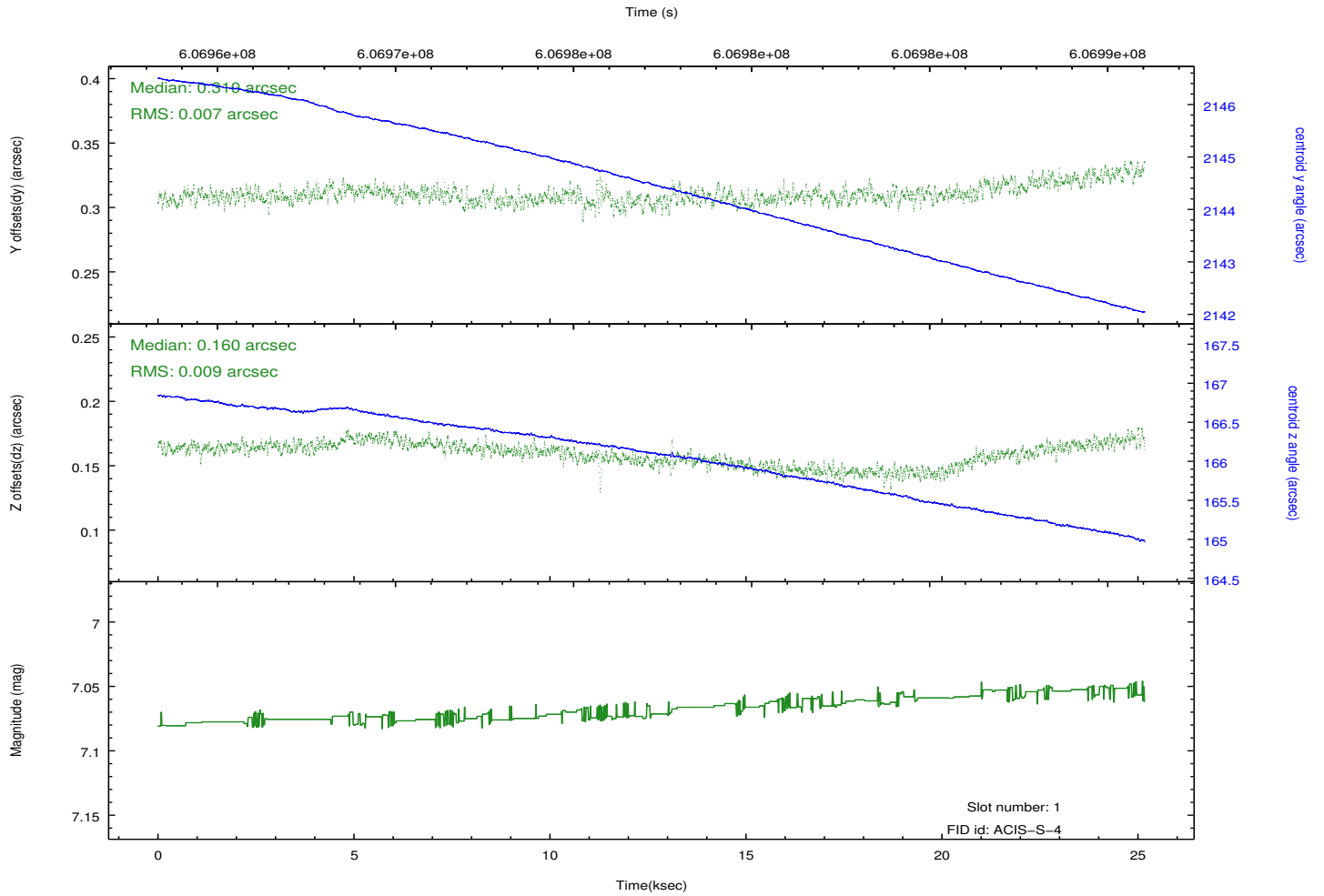
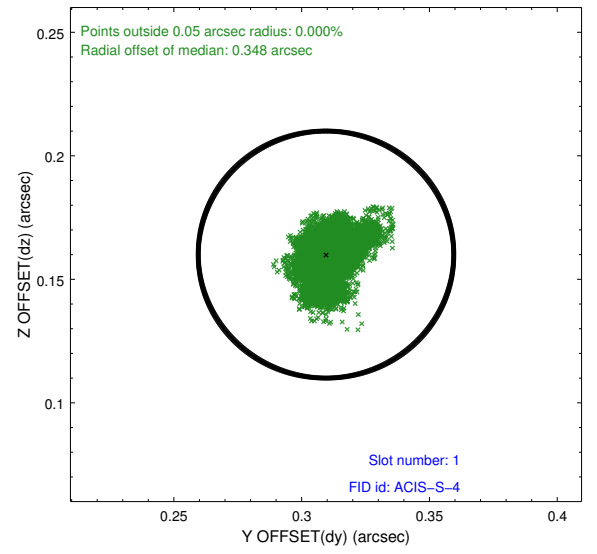
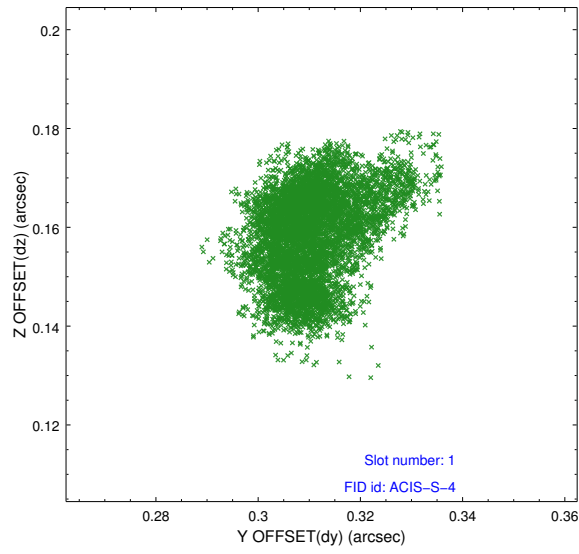


2.5 FID Slots

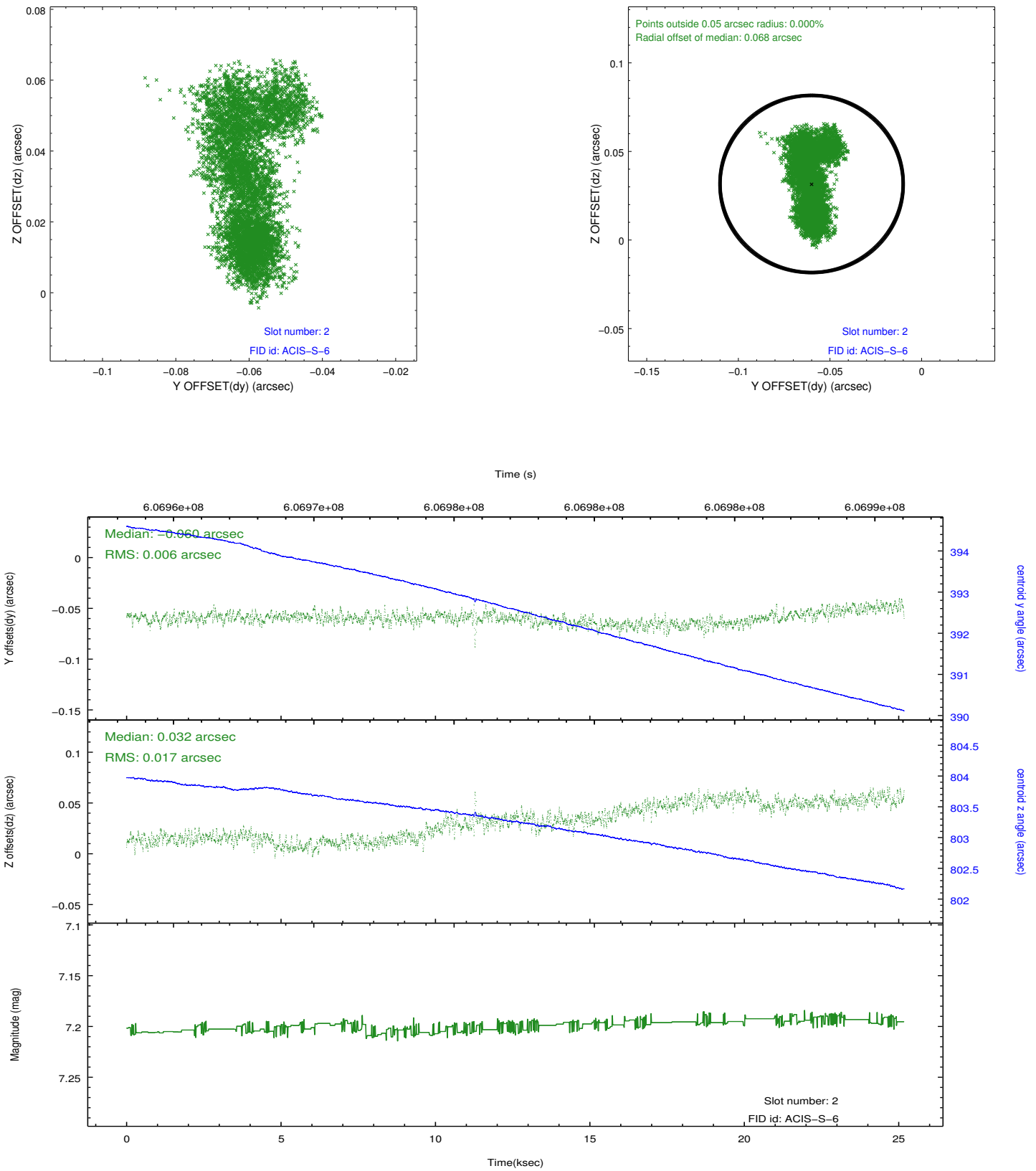
2.5.1 Slot 0



2.5.2 Slot 1

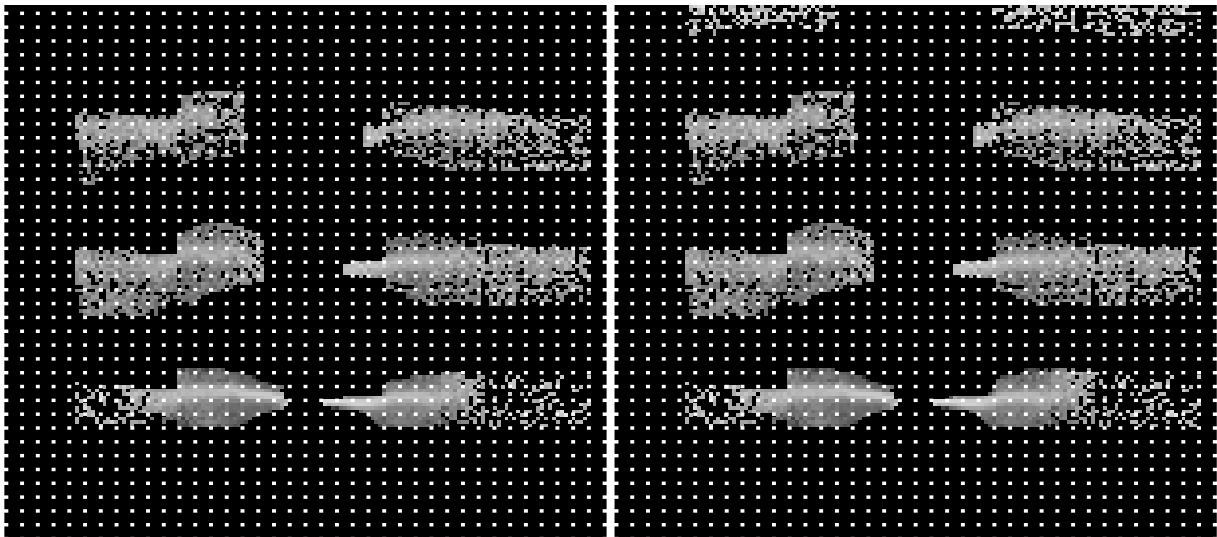


2.5.3 Slot 2



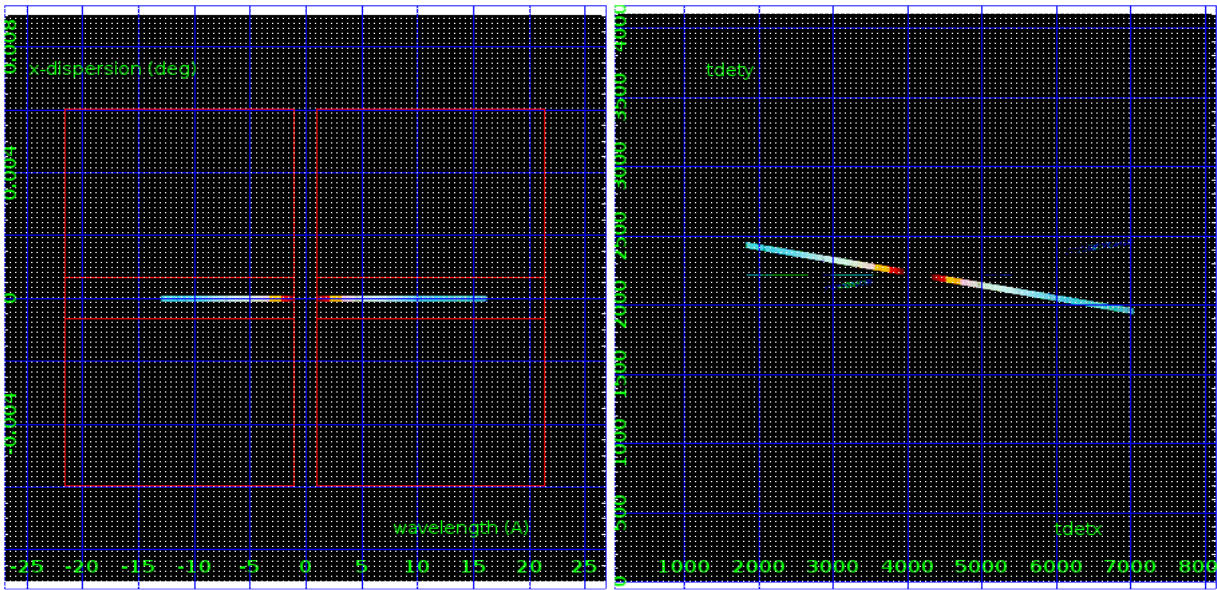
3 Gratings

3.1 HEG Arm



HEG Order Sort 123

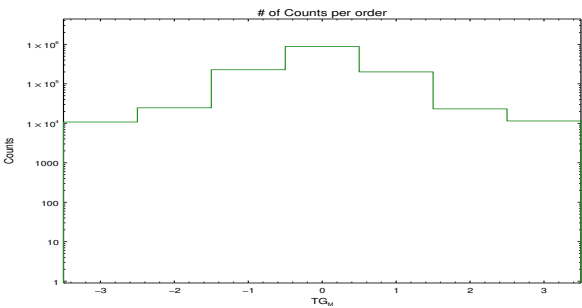
HEG Order Sort ALL

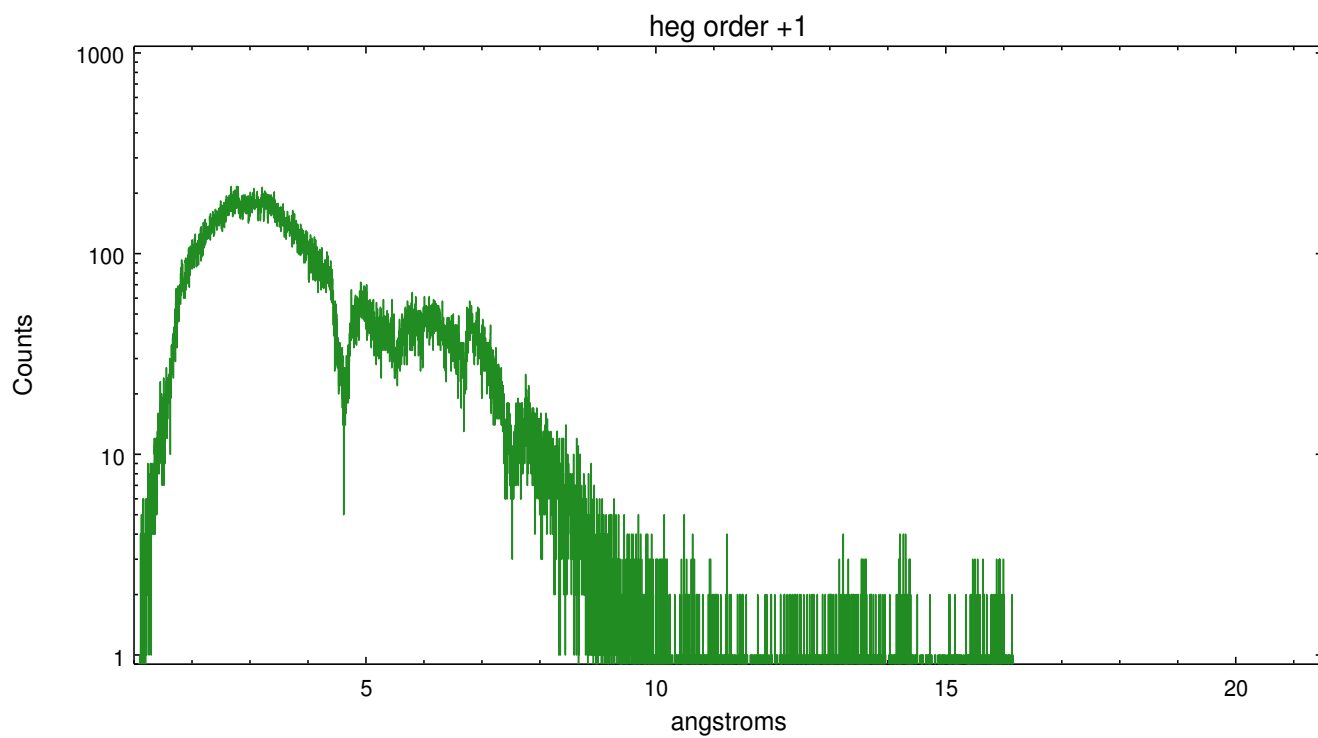
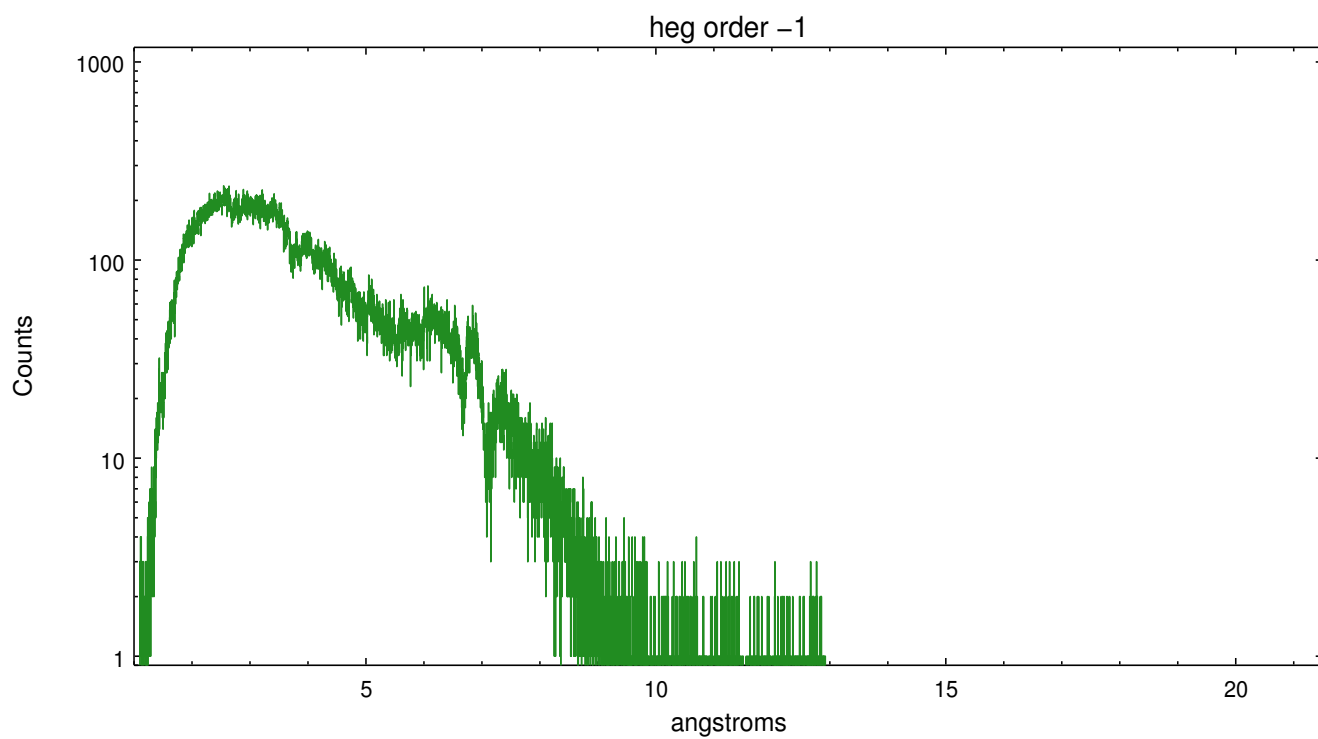


Spot Image HEG

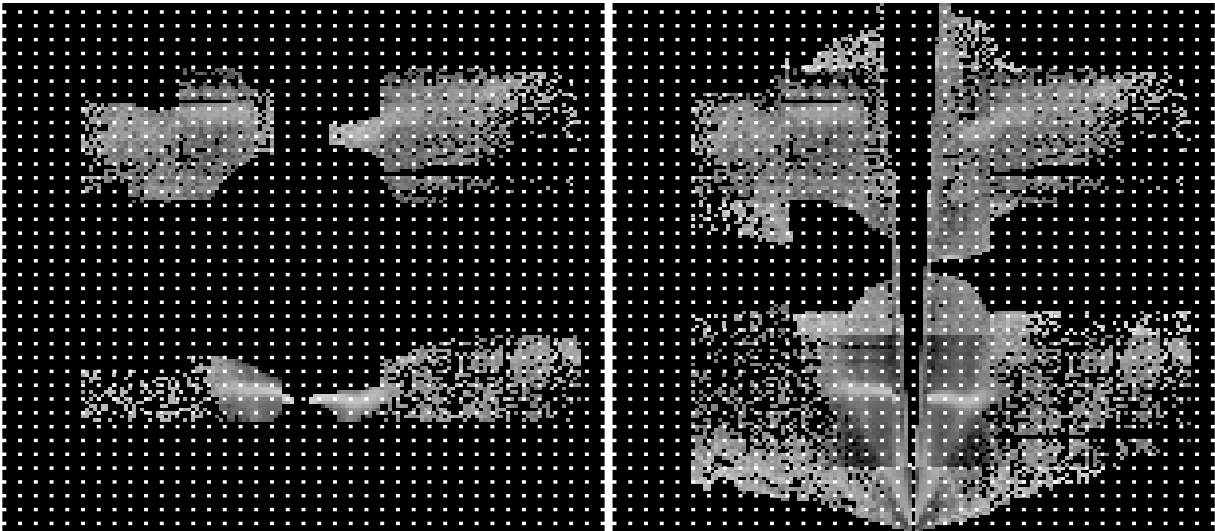
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	10761	24693	227524	877934	200449	23180	11452



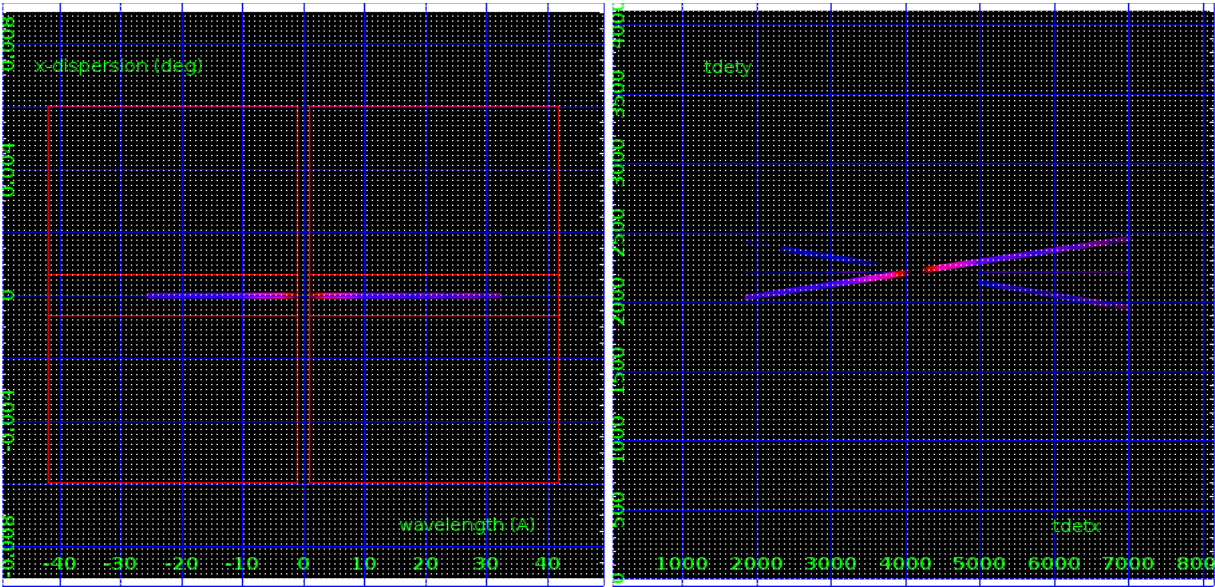


3.2 MEG Arm



MEG Order Sort 123

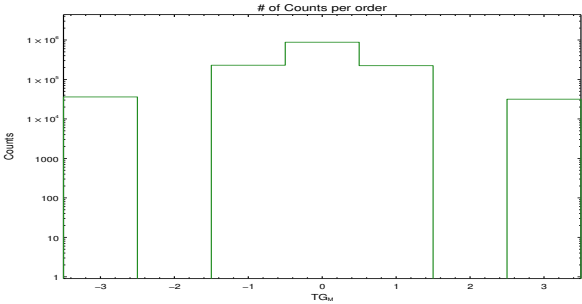
MEG Order Sort ALL

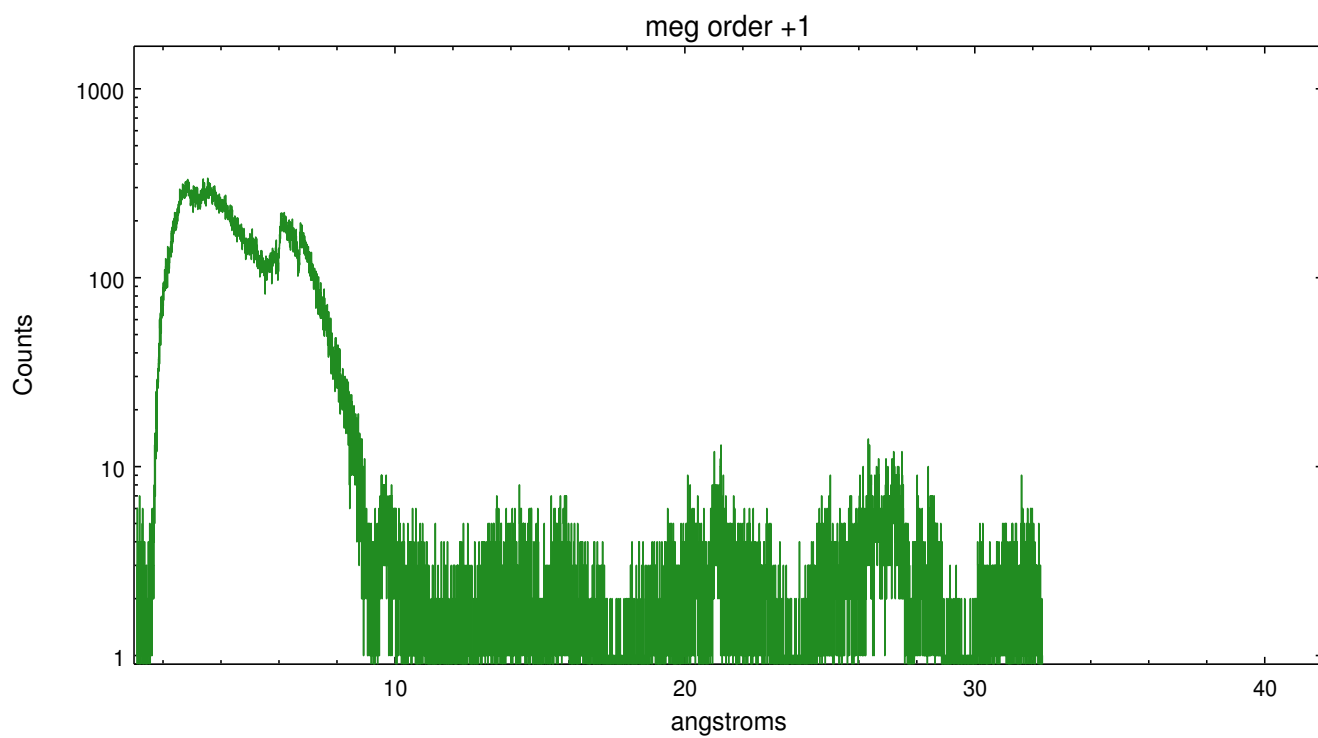
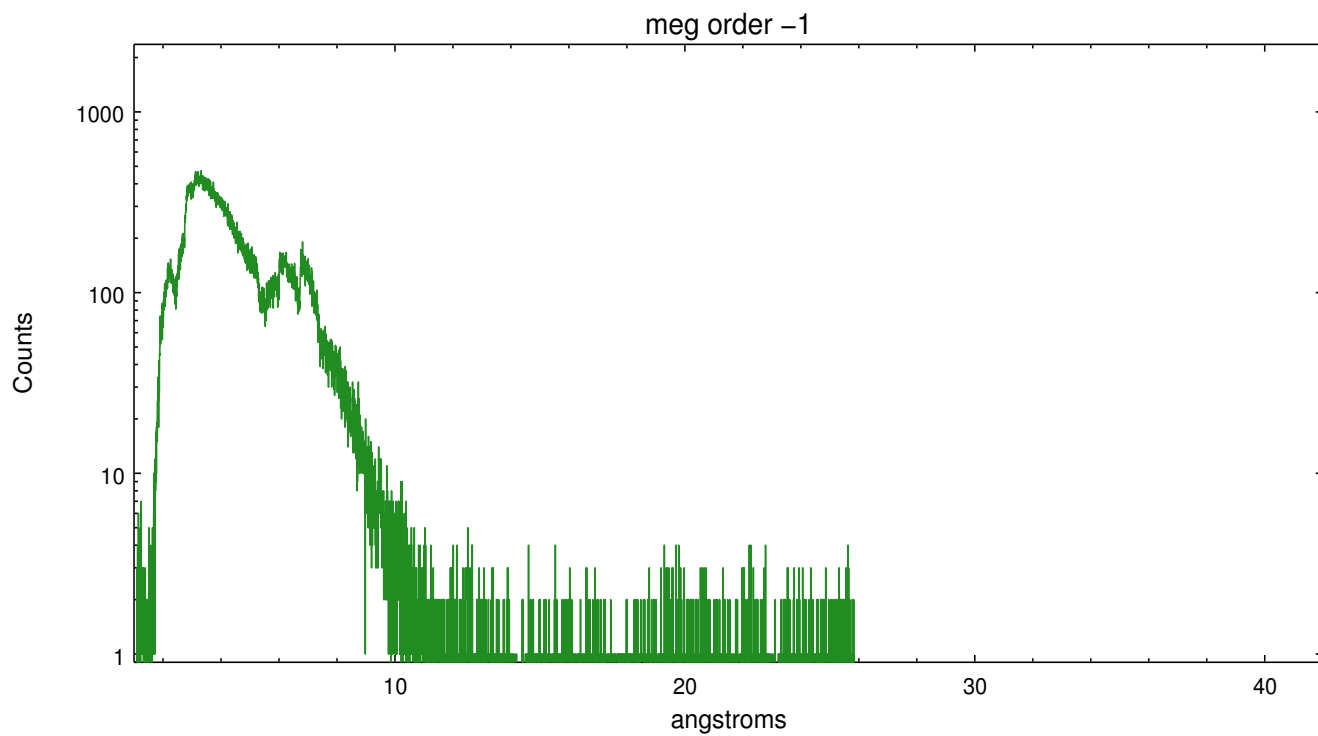


Spot Image MEG

Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	36074	0	229504	877934	223488	0	31644





A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2017.03.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.104

A.2 Comments