

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 4880 - L2 Version 3
Chandra X-Ray Center

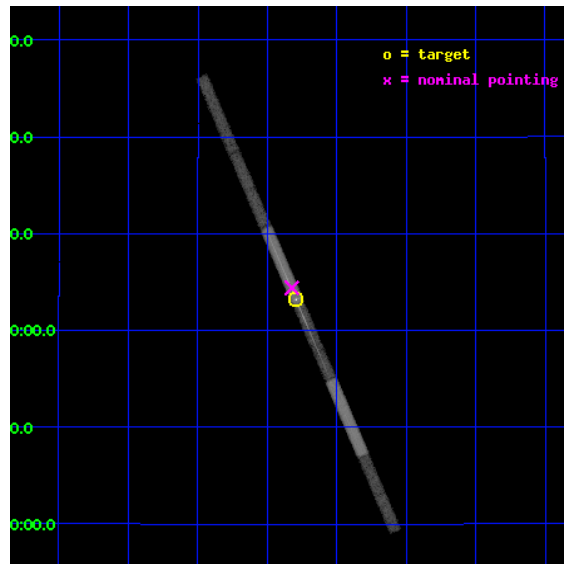
L2 Processing Date : Dec 3 2012

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	LETG Arm	17
A	Summary	19
A.1	Status	19
A.2	Comments	19

1 Front

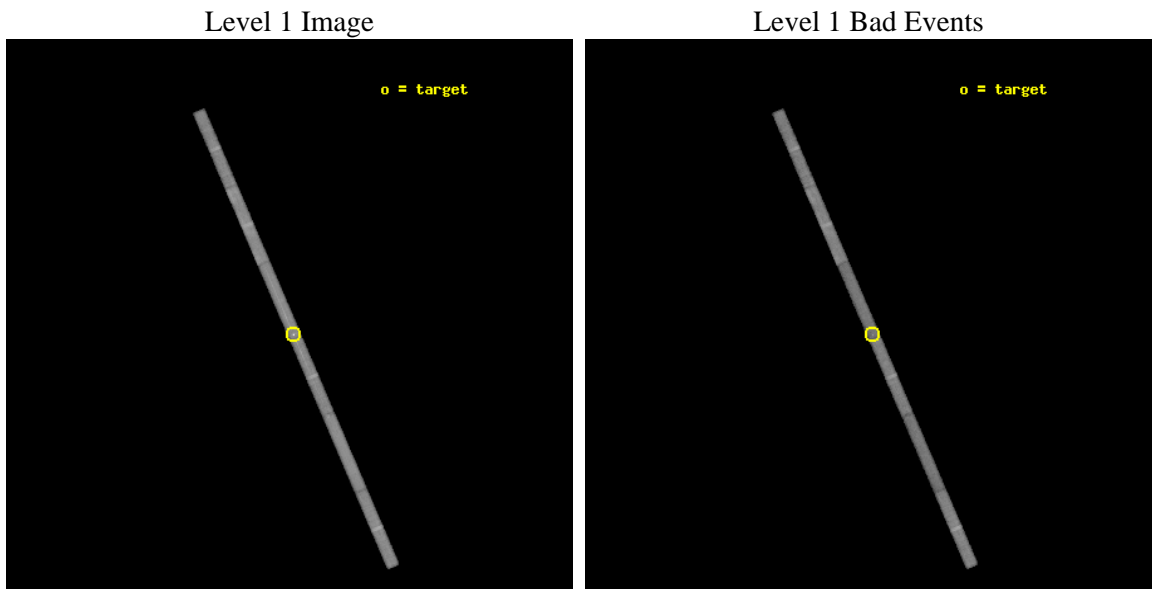
seq_num	700962	Sequence number
obs_id	4880	Observation id
title	Revealing the High Velocity Outflow in PG 1211+143	Proposal title
observer	Dr James Reeves	Principal investigator
object	PG 1211+143	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	183.57375	Observer's specified target RA [deg]
dec_targ	14.053611	Observer's specified target Dec [deg]
ra_nom	183.58080578288	Nominal RA [deg]
dec_nom	14.073493938472	Nominal Dec [deg]
roll_nom	246.61596329534	Nominal Roll [deg]
revision	3	Processing version of data
ontime	45172.358190715	Sum of GTIs [s]
livetime	42670.639551847	Livetime [s]
ontime4	45171.617150694	Sum of GTIs [s]
ontime5	45172.358190715	Sum of GTIs [s]
ontime6	45172.358190715	Sum of GTIs [s]
ontime7	45172.358190715	Sum of GTIs [s]
ontime8	45172.358190715	Sum of GTIs [s]
ontime9	45172.358190715	Sum of GTIs [s]
l2events	88120	Number of level 2 events



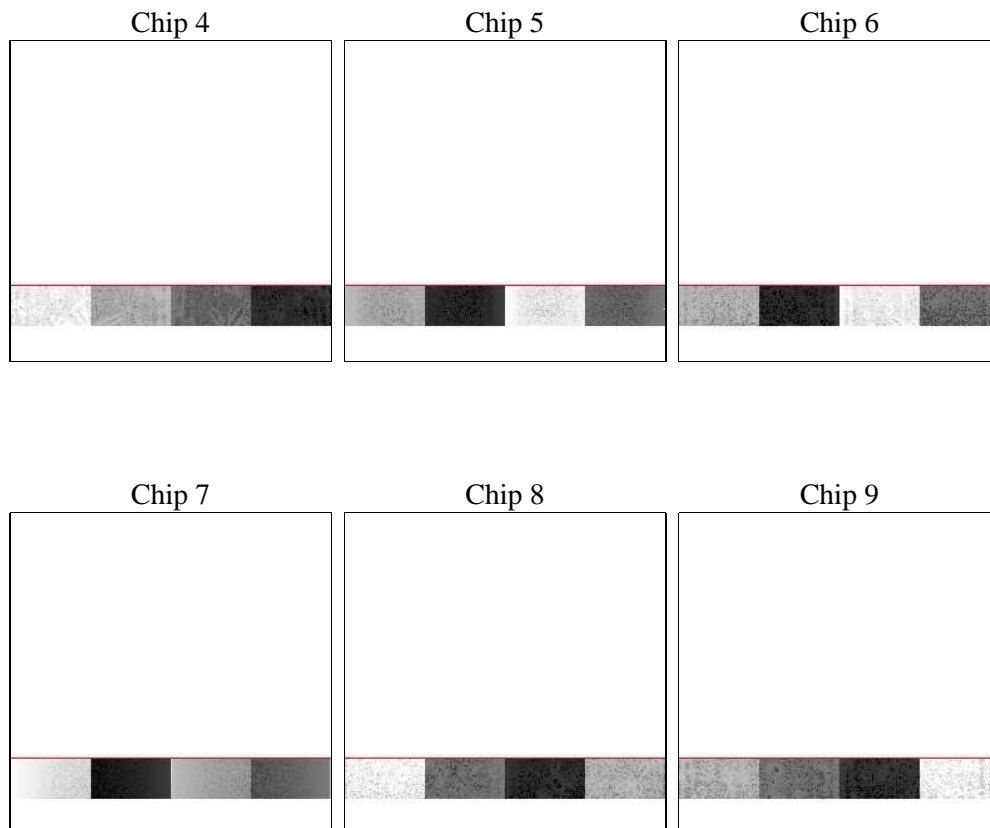
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	45000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	45172.358190715	Sum of GTIs [s]
caldbver	4.5.2	 	ontime4	45171.617150694	Sum of GTIs [s]
date	2012-12-03T06:36:56	Date and time of file creation	ontime5	45172.358190715	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	45172.358190715	Sum of GTIs [s]
			ontime7	45172.358190715	Sum of GTIs [s]
			ontime8	45172.358190715	Sum of GTIs [s]
			ontime9	45172.358190715	Sum of GTIs [s]
			l1events	378963	Number of level 1 events

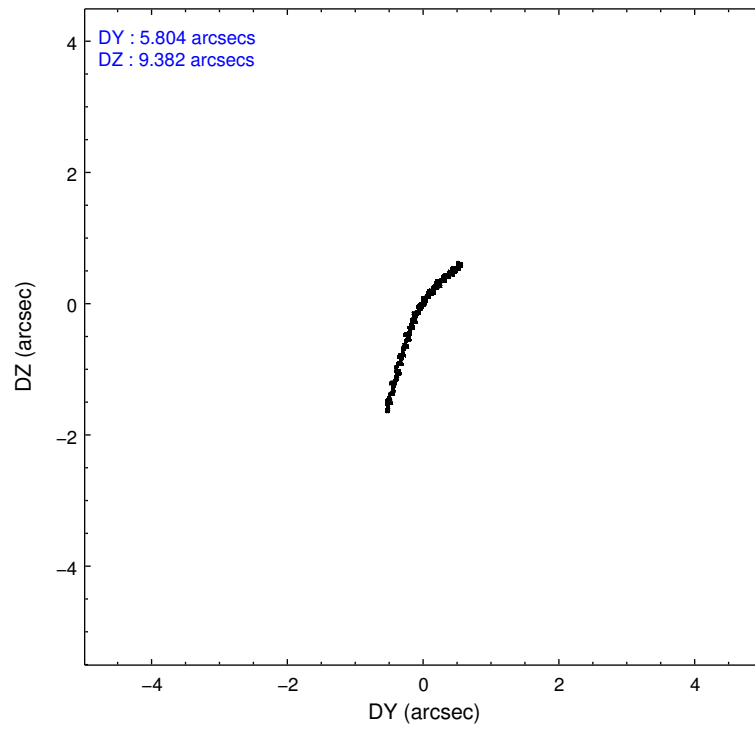
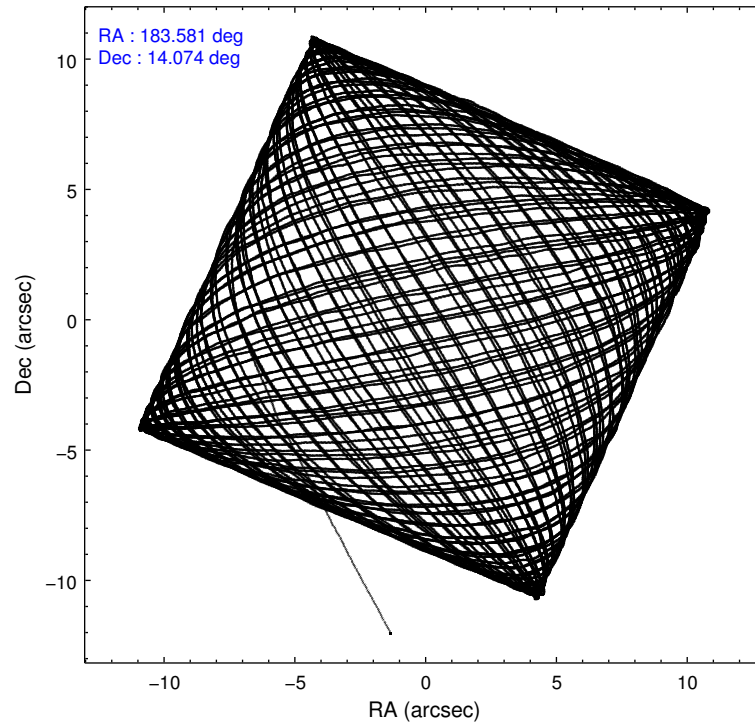
2.1.4 Events

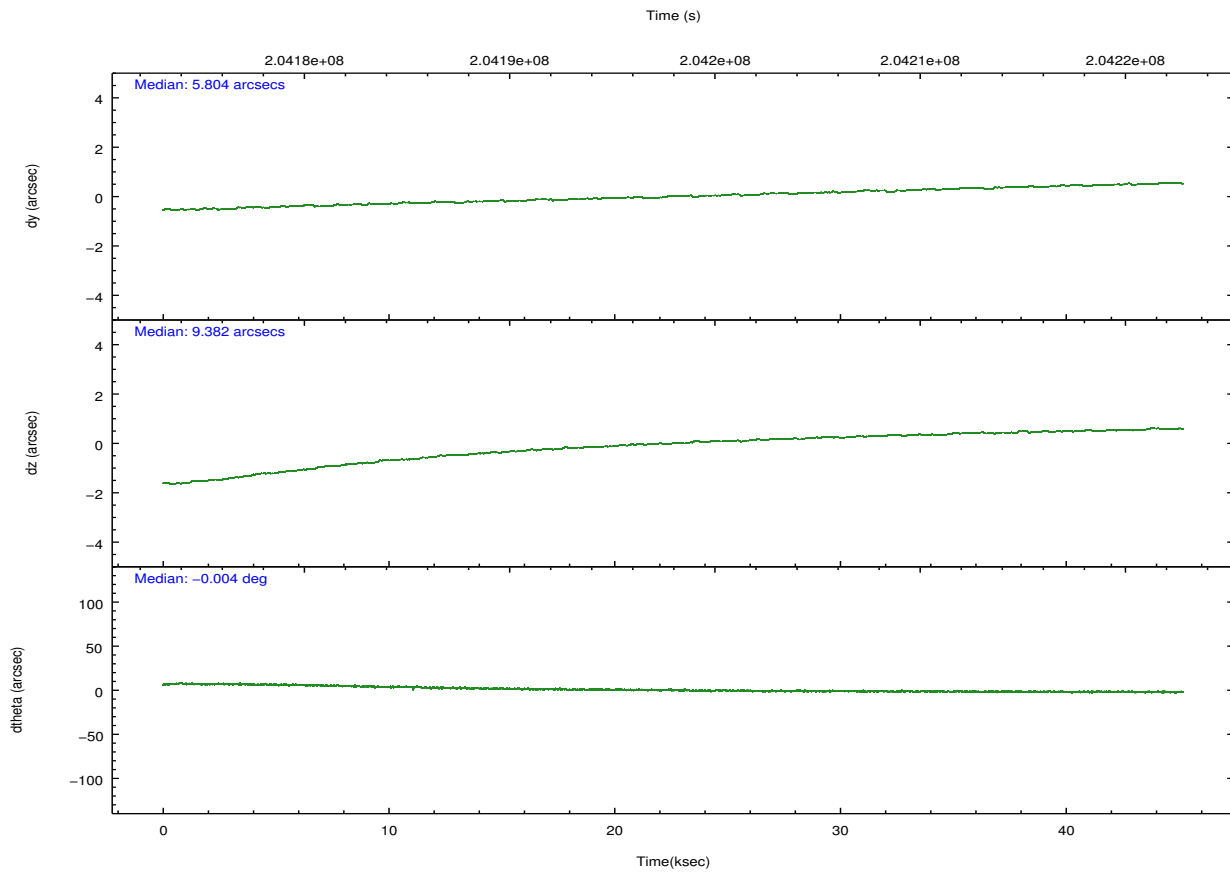
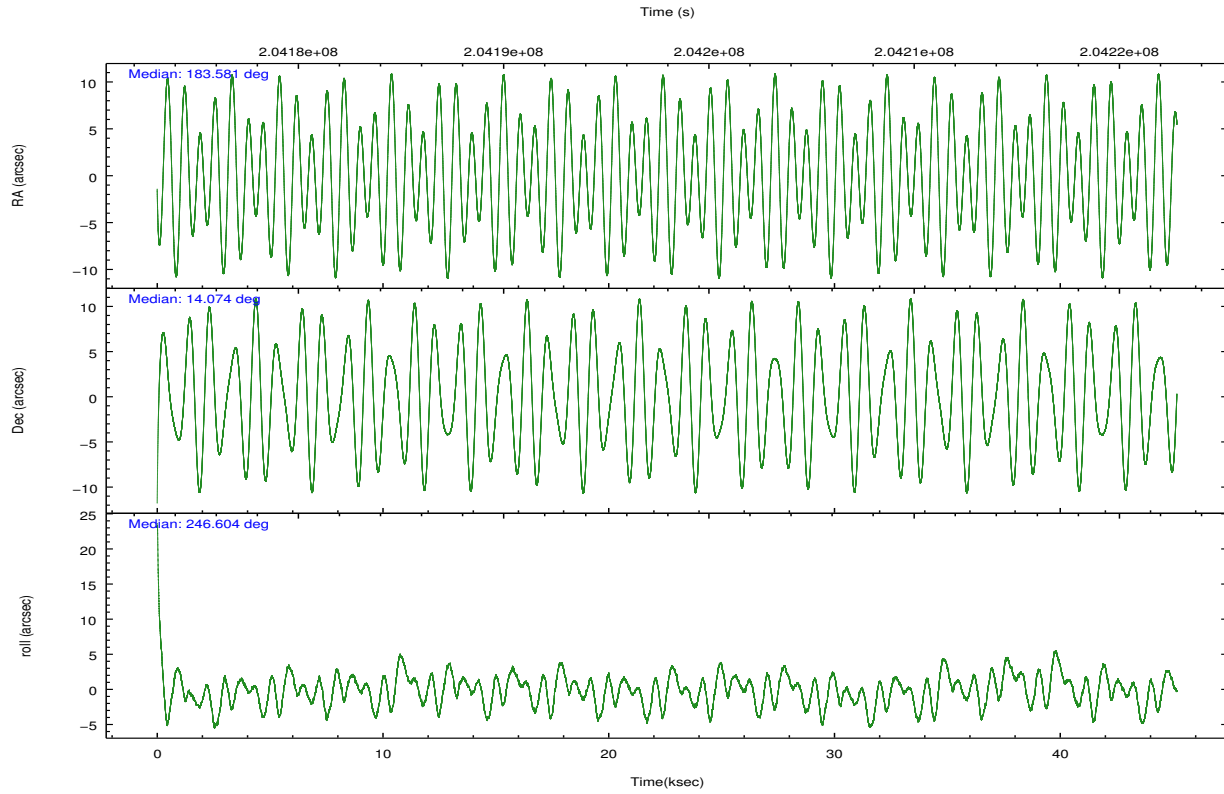
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	62371	63603	57549	69984	74481	50975	grade 0 events	2377	3598	4573	5917	3592	2048
rejected events	55722	32920	48307	33416	60819	44995		3%	5%	7%	8%	4%	4%
rejected %	89%	51%	83%	47%	81%	88%	grade 1 events	14	107	17	84	18	19
								0%	0%	0%	0%	0%	0%
							grade 2 events	1256	8085	1308	8047	2589	980
								2%	12%	2%	11%	3%	1%
							grade 3 events	1013	2442	1117	4237	1689	1026
								1%	3%	1%	6%	2%	2%
							grade 4 events	983	2376	1092	3980	1704	969
								1%	3%	1%	5%	2%	1%
							grade 5 events	1710	5576	1729	5465	2362	1779
								2%	8%	3%	7%	3%	3%
							grade 6 events	1044	14305	1170	14506	4144	972
								1%	22%	2%	20%	5%	1%
							grade 7 events	53974	27114	46543	27748	58383	43182
								86%	42%	80%	39%	78%	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	LETG	LETG	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	183.577192	183.5808057828842	Subarray requested	CUSTOM	1/8
[deg] Pointing Dec	14.100516	14.07349393847167	Subarray start row	113	113
[deg] Pointing Roll	246.460207	246.6159632953382	Subarray row count	128	128
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	0.7
[mm] SIM translation stage pos	-182.132523	-182.1370004450064			
[mm] SIM translation stage offset	-8	-7.995522138001405			
[s] Observation start time (MET)	204175546.184000	204174544.55117			
Observation start date	2004-06-21T03:24:42	2004-06-21T03:09:04			
[s] Observation end time (MET)	204220546.184000	204222226.52828			
Observation end date	2004-06-21T15:54:42	2004-06-21T16:23:46			
Read mode	TIMED	TIMED			

2.3 Aspect



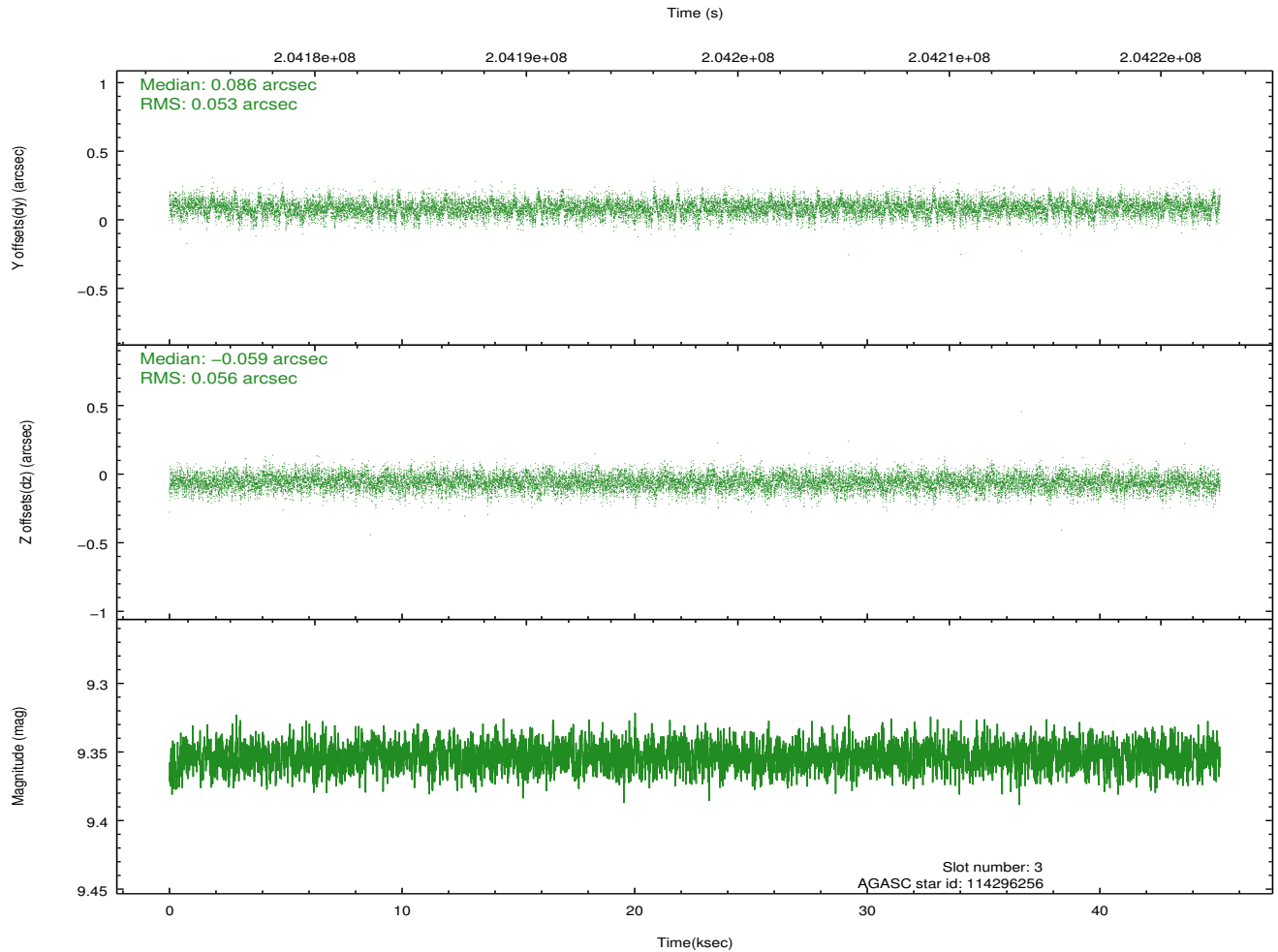
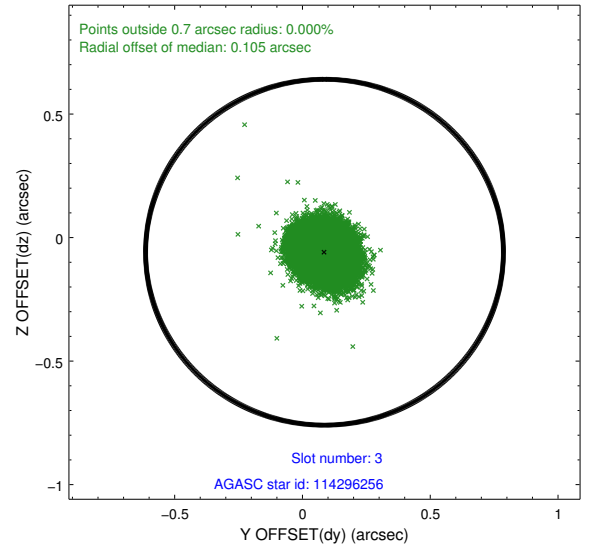
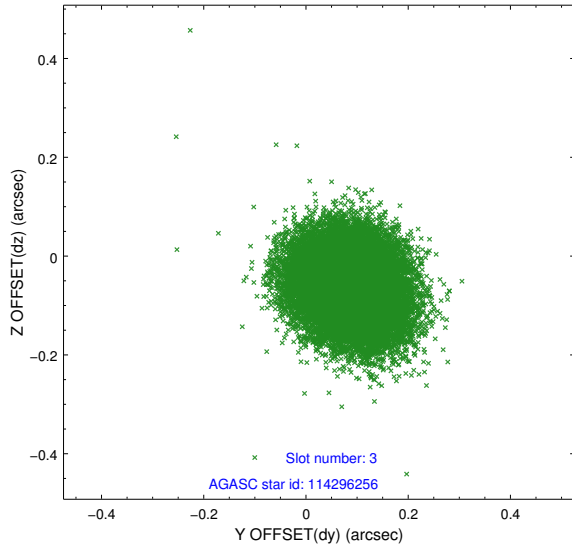


Slot Statistics

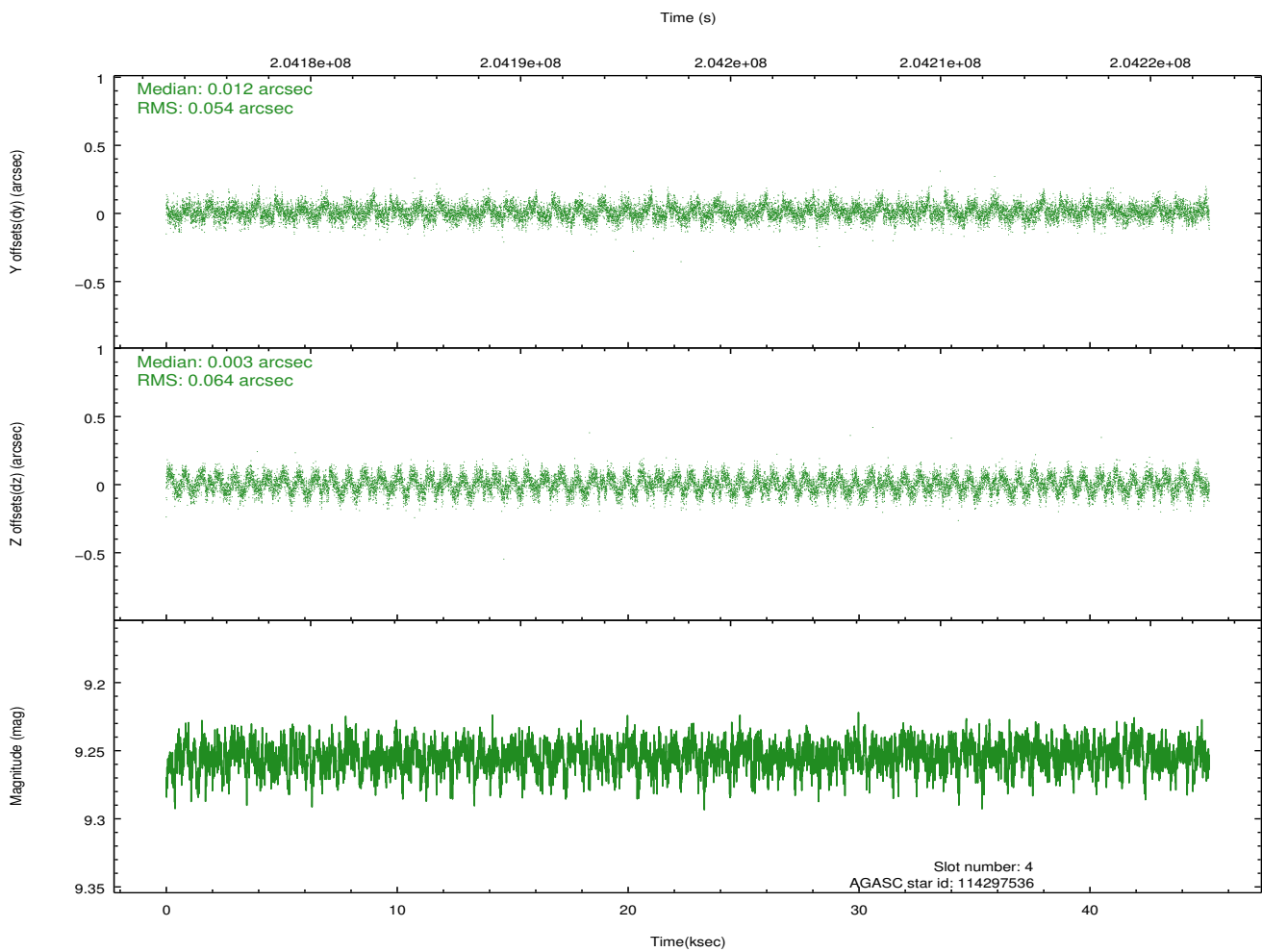
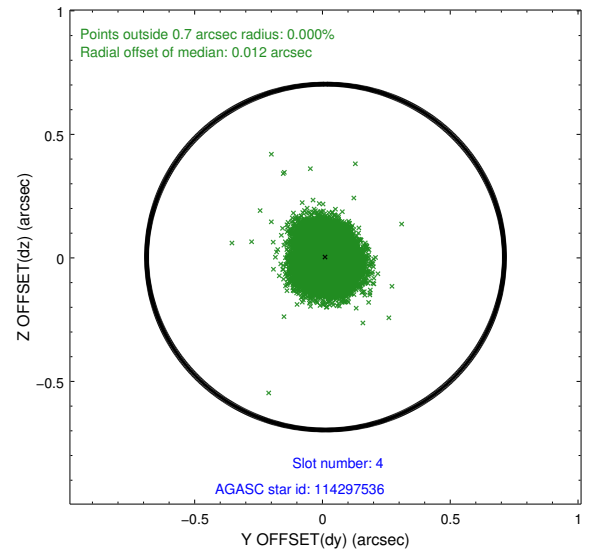
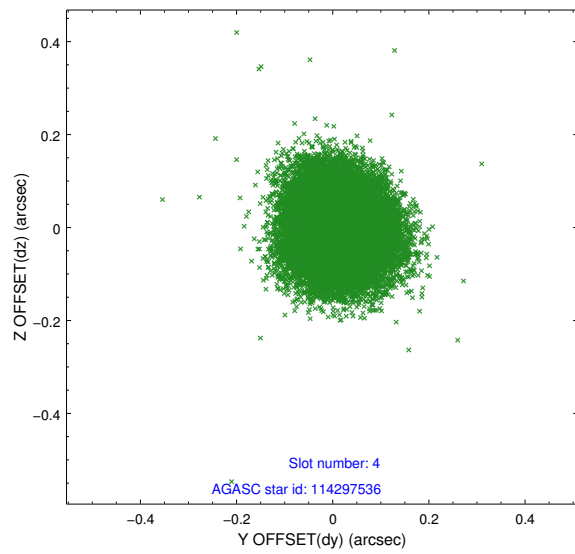
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-4	7.17	11016	0.111	0.043	0.014	0.034	0.000000	0.000000	2155.50	13.52
1	FID	ACIS-S-5	7.23	11017	-0.145	0.031	0.010	0.021	0.000000	0.000000	-1810.95	7.03
2	FID	ACIS-S-6	7.41	11017	0.006	-0.060	0.011	0.019	0.000000	0.000000	403.67	650.65
3	GUIDE	114296256	9.35	22019	0.086	-0.059	0.082	0.133	182.985406	14.017213	1098.87	-1775.80
4	GUIDE	114297536	9.25	22015	0.012	0.003	0.089	0.140	183.757120	14.264956	-793.38	339.05
5	GUIDE	114301168	9.23	21945	0.087	-0.100	0.082	0.135	182.996668	14.071189	904.84	-1816.98
6	GUIDE	114303096	9.30	22010	-0.013	-0.098	0.099	0.166	183.214020	14.515722	-865.02	-1758.00
7	GUIDE	115218912	8.30	22030	-0.169	0.247	0.082	0.133	184.400783	14.442830	-2281.27	2137.83

2.4 Star Slots

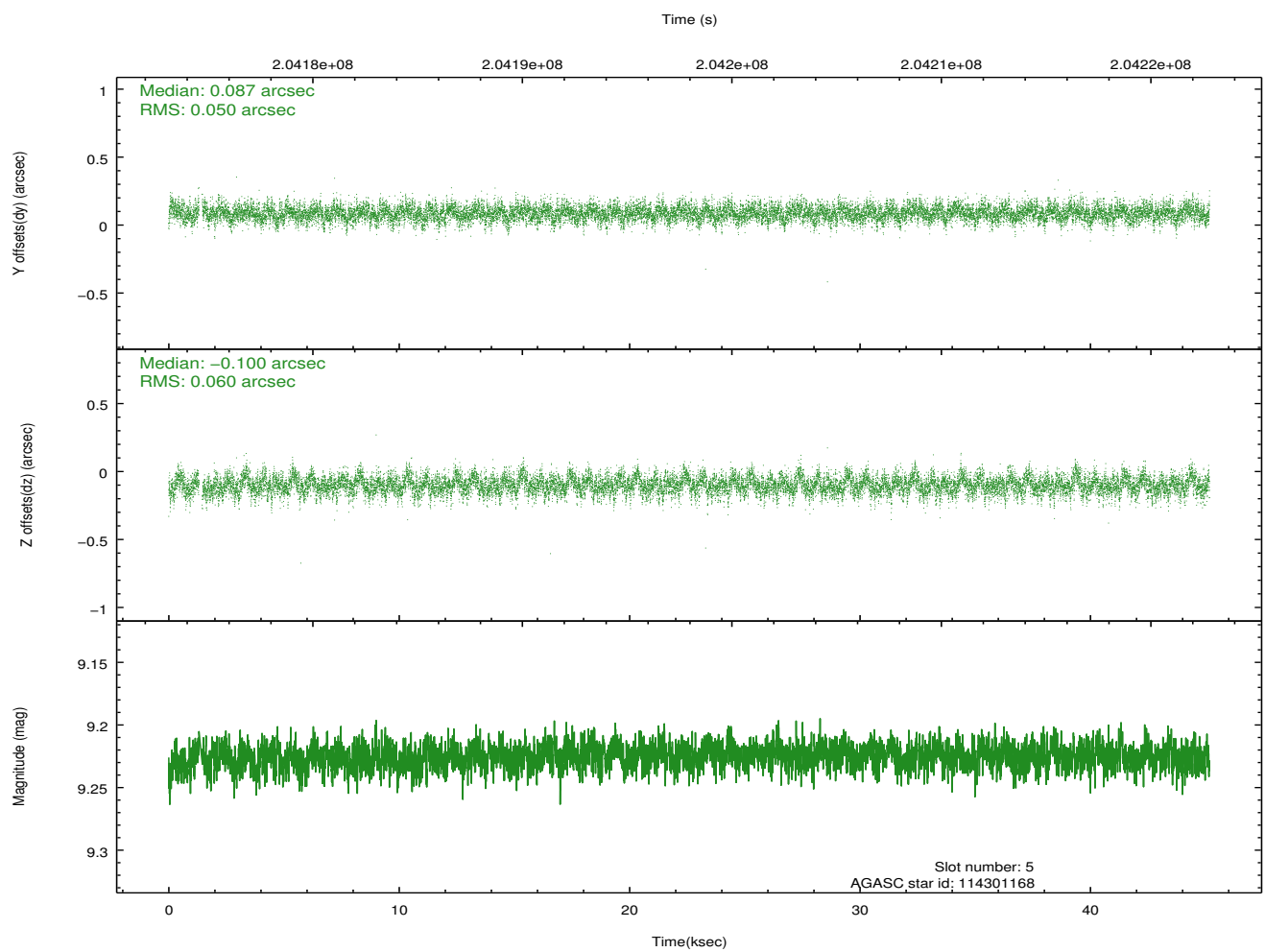
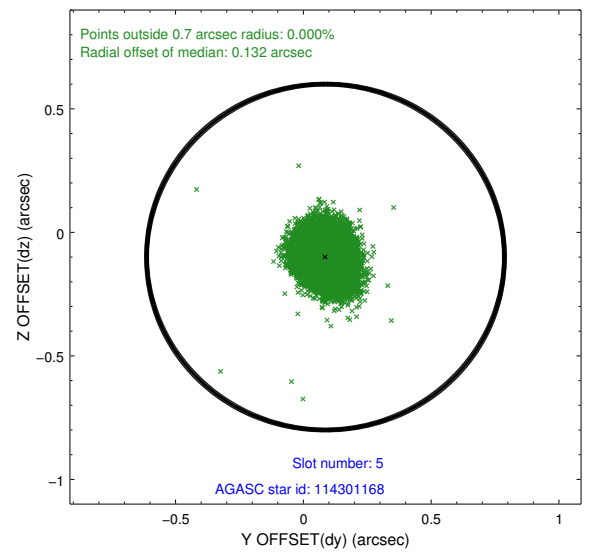
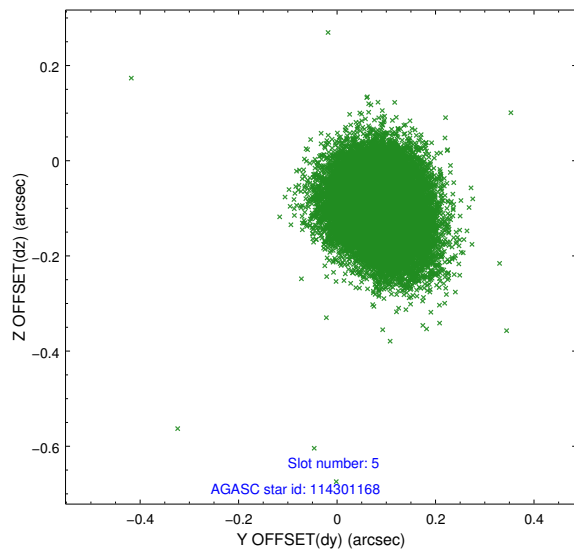
2.4.1 Slot 3



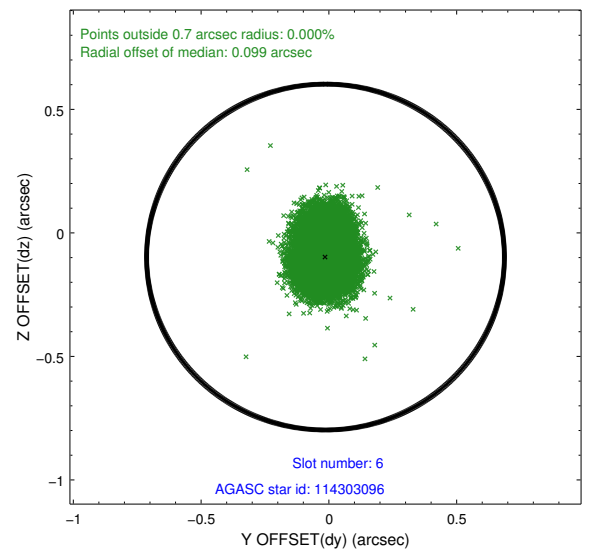
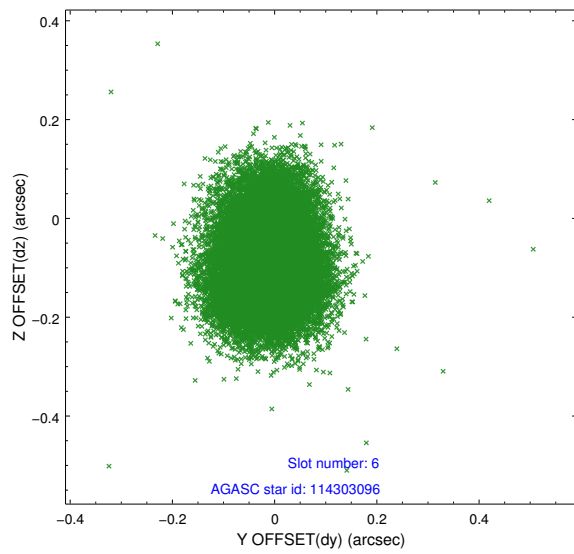
2.4.2 Slot 4



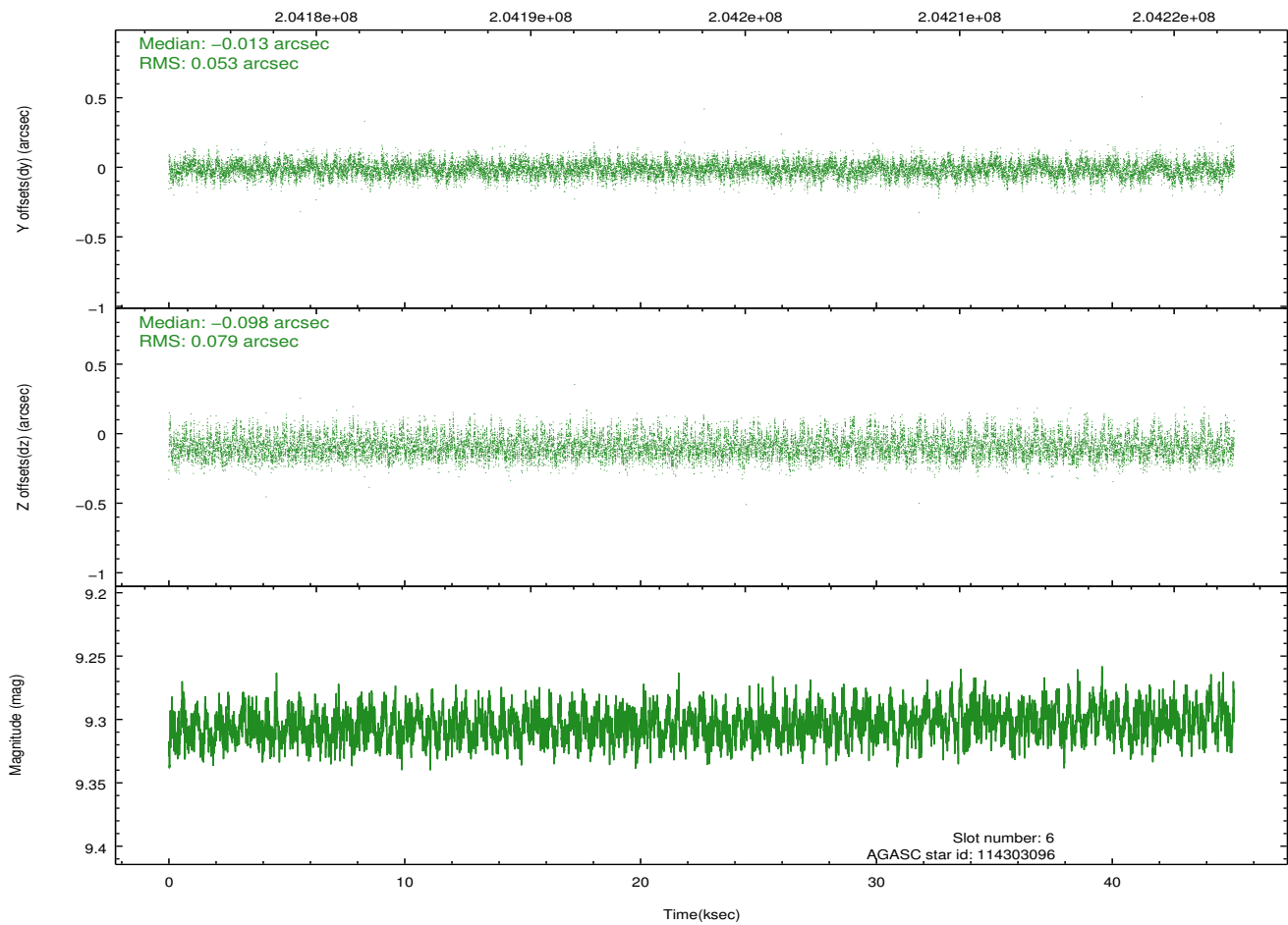
2.4.3 Slot 5



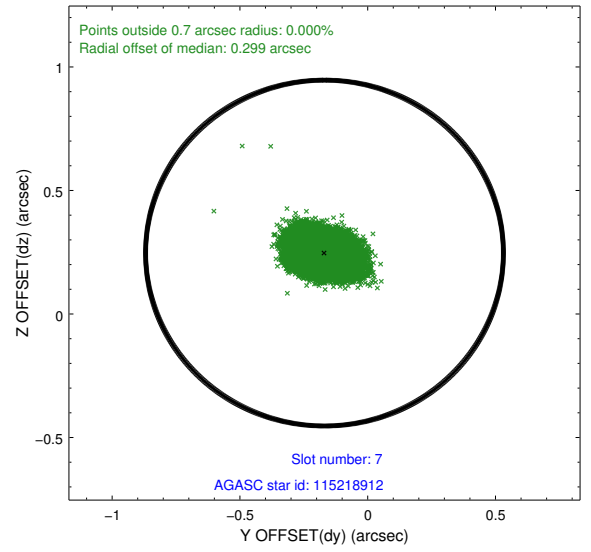
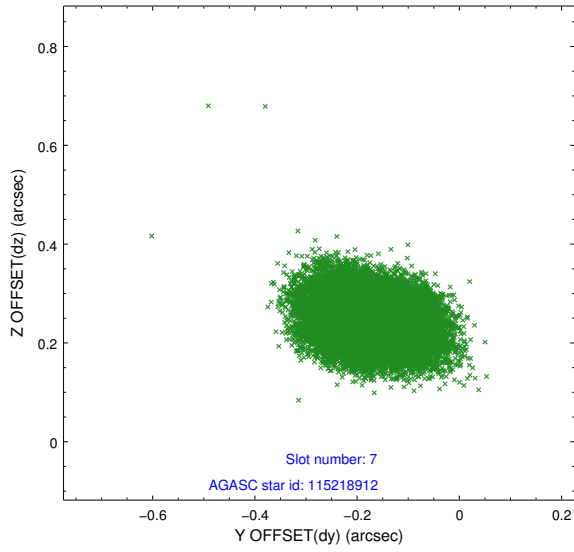
2.4.4 Slot 6



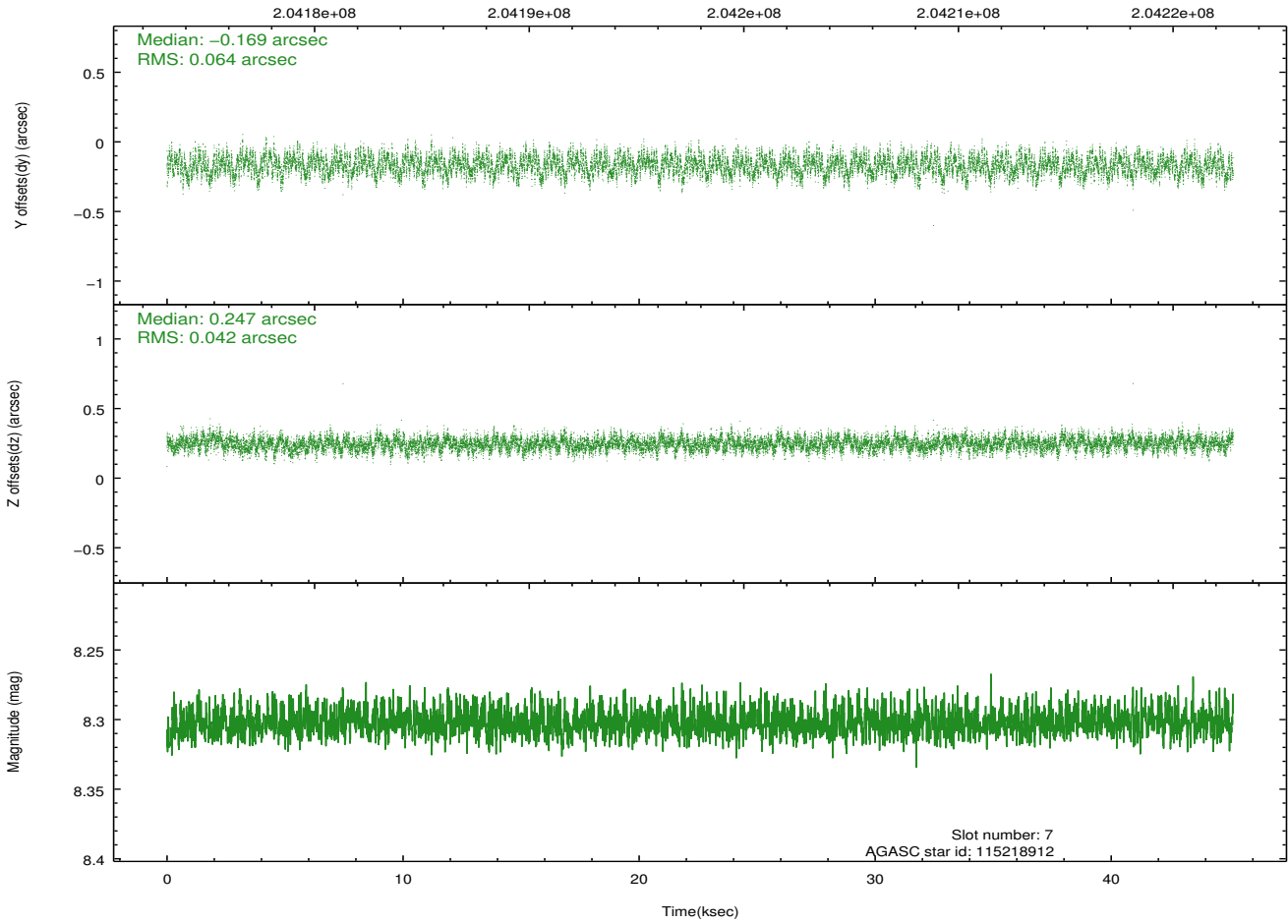
Time (s)



2.4.5 Slot 7

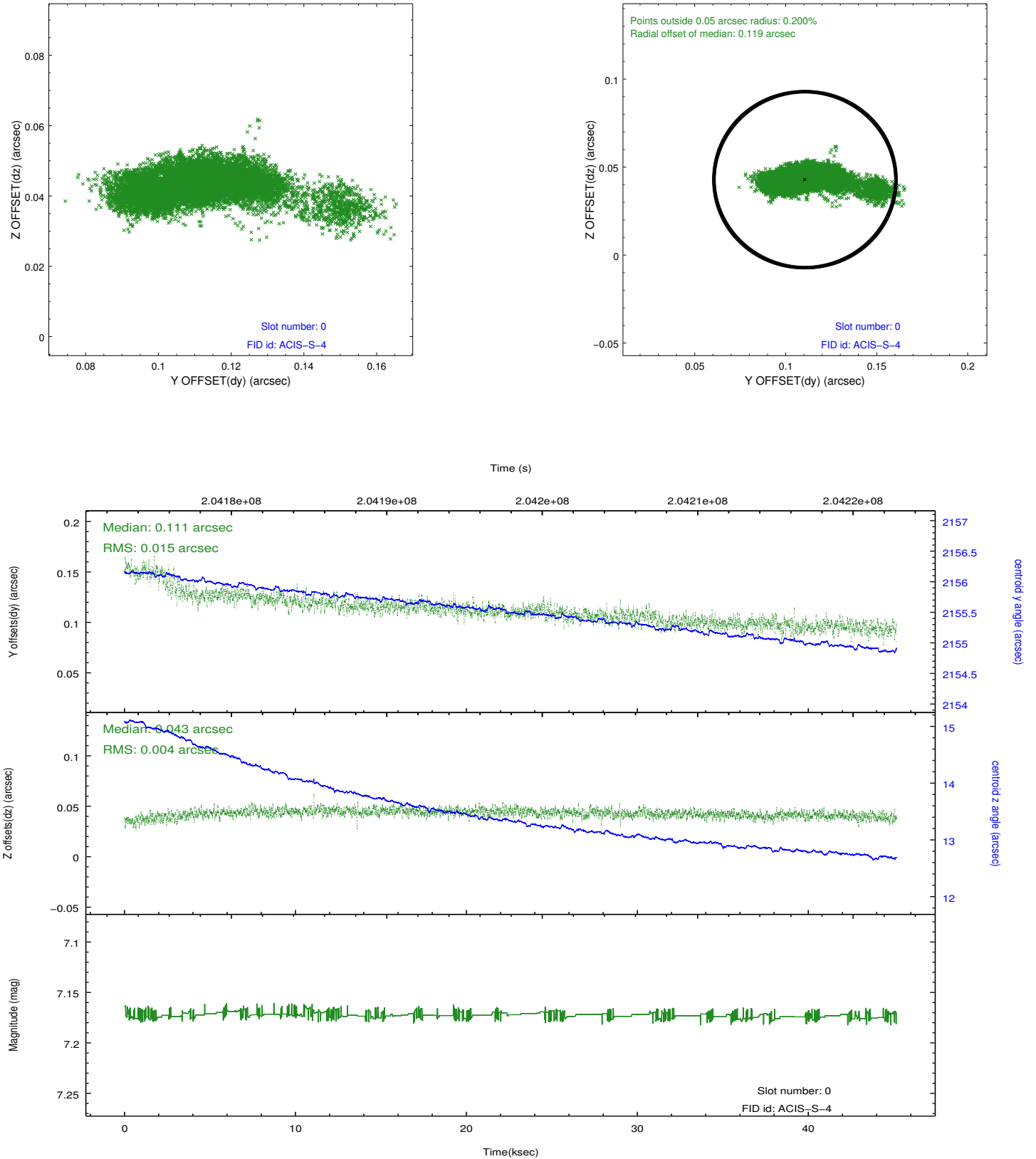


Time (s)

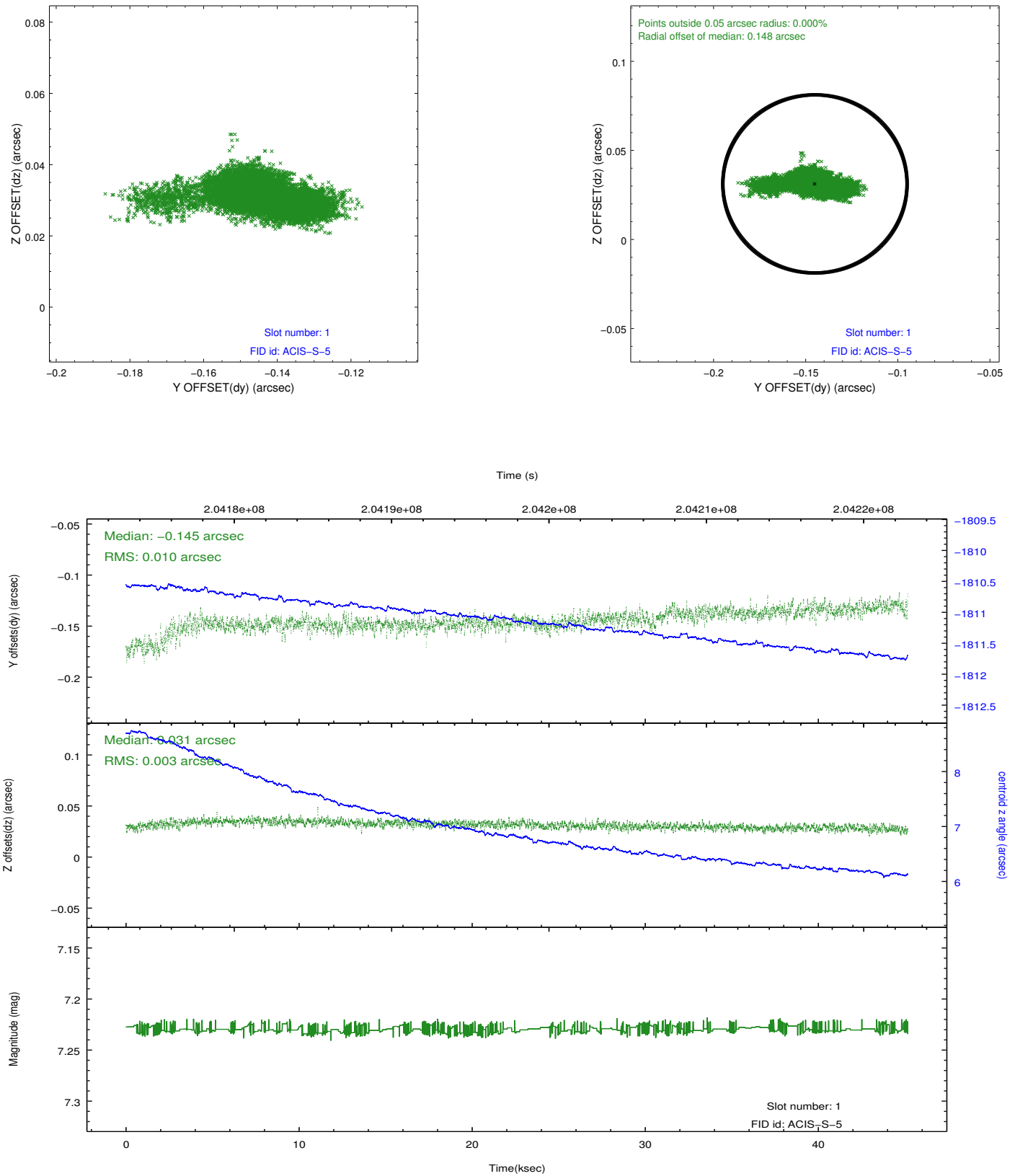


2.5 FID Slots

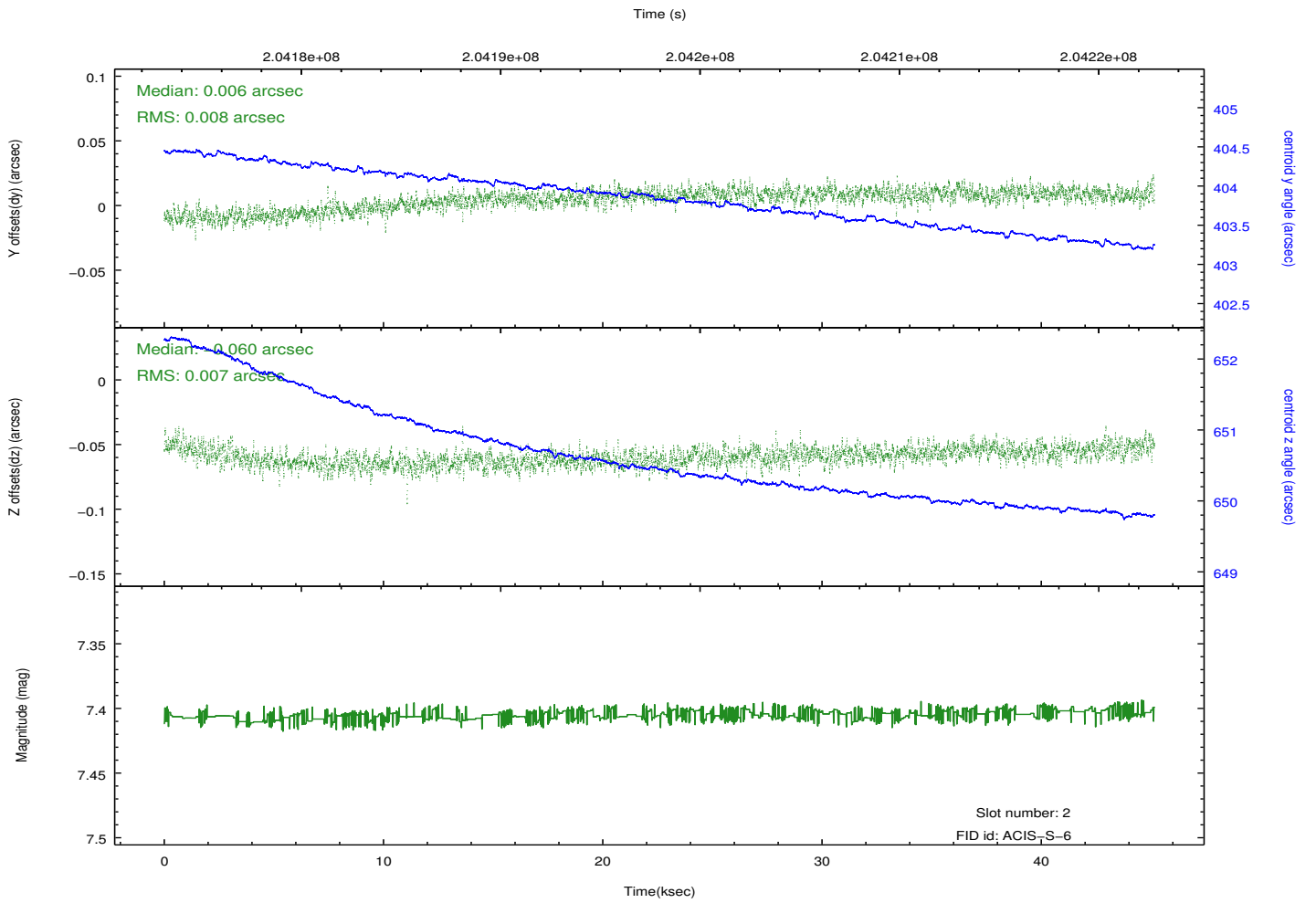
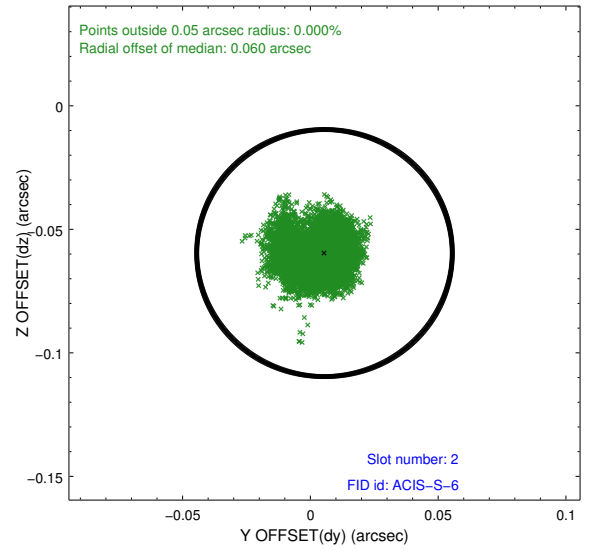
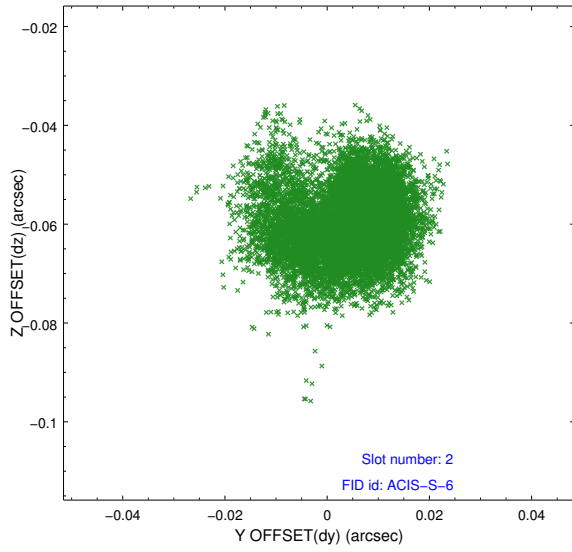
2.5.1 Slot 0



2.5.2 Slot 1

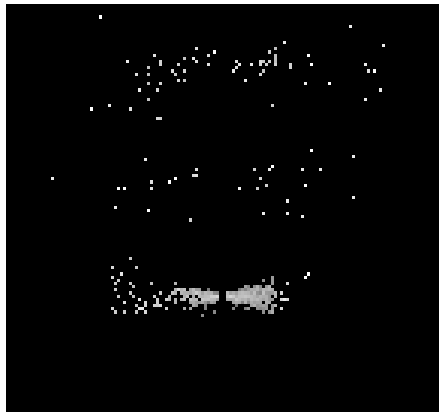


2.5.3 Slot 2

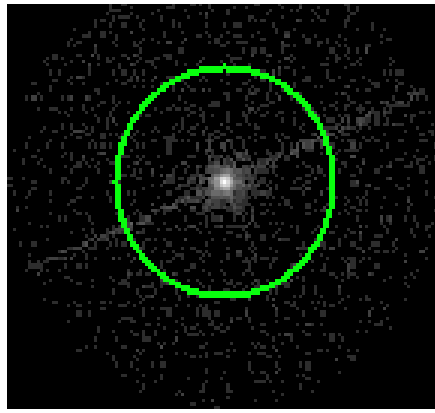


3 Gratings

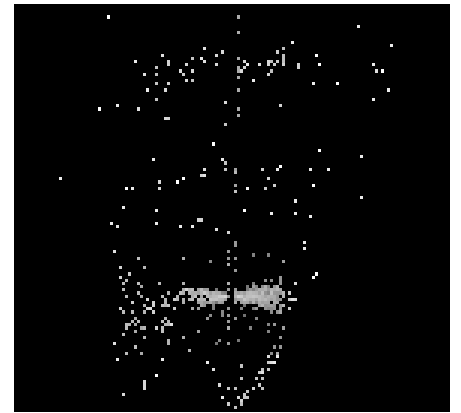
3.1 LETG Arm



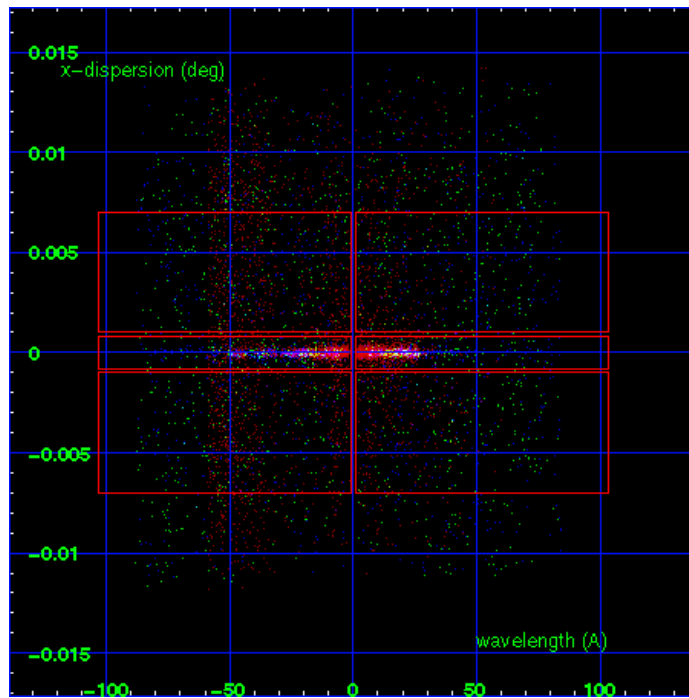
LETG Order Sort 123



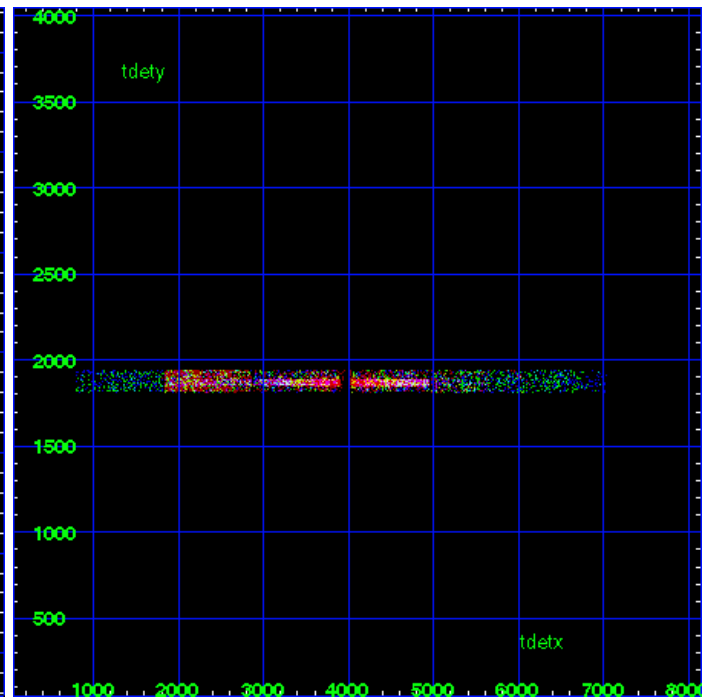
LETG Zero Order



LETG Order Sort ALL

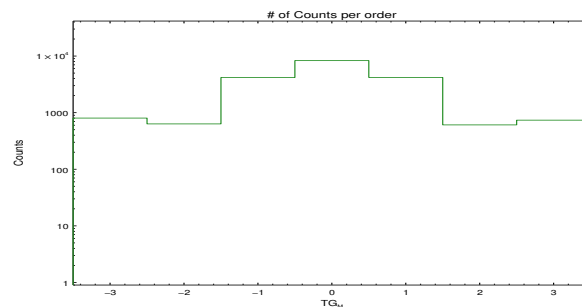


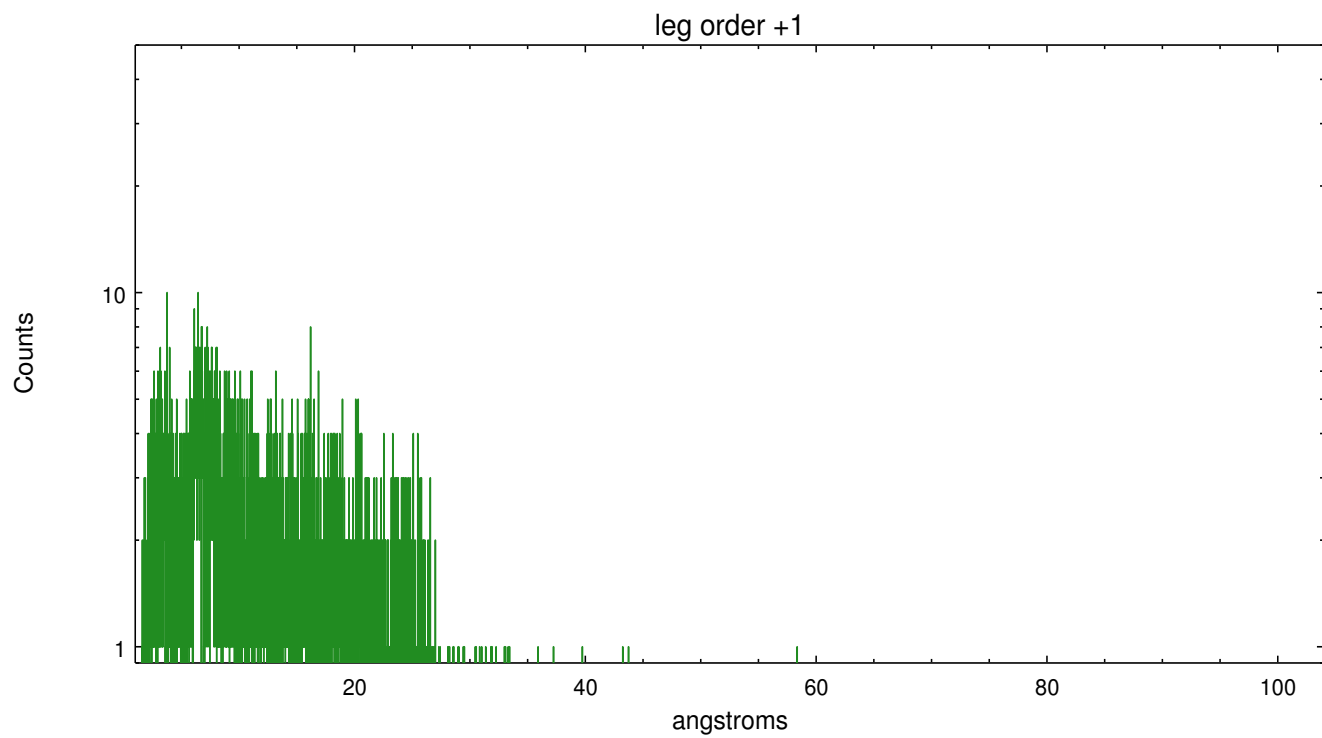
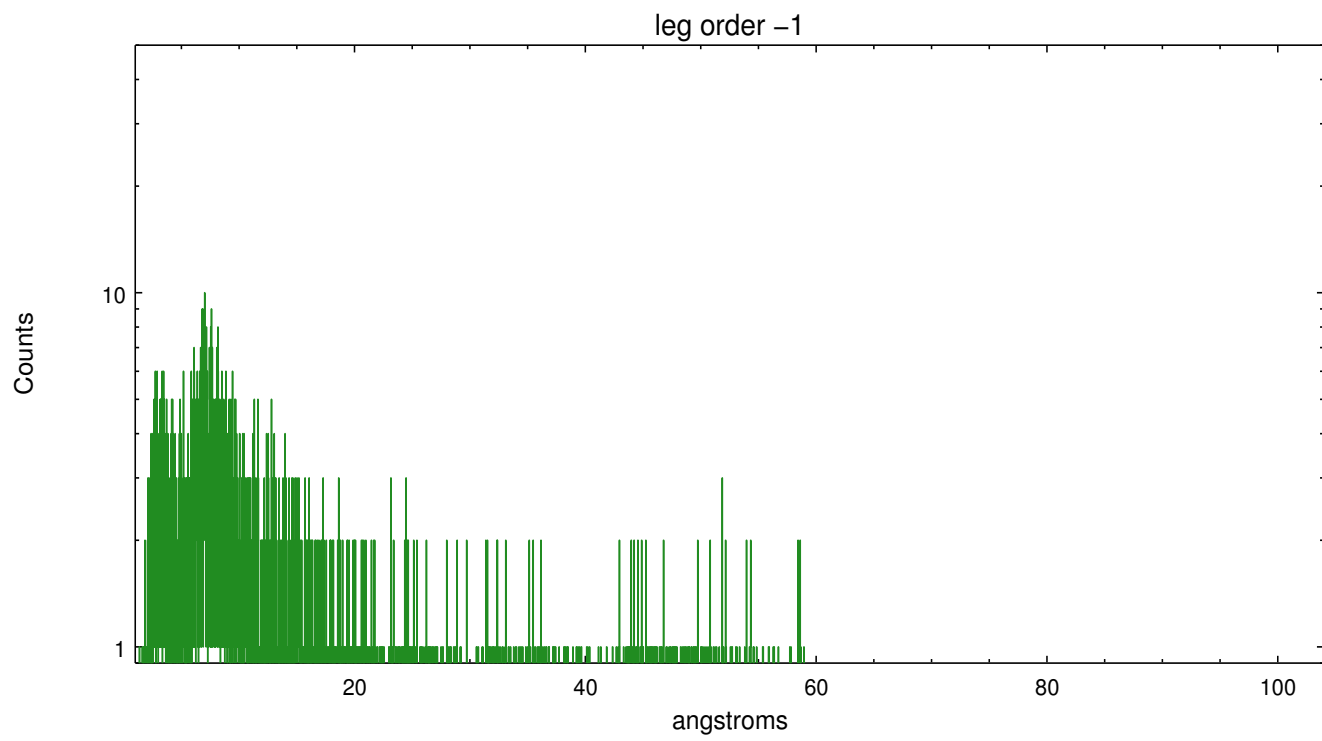
Spot Image LETG



Full Detector LETG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	802	633	4178	8311	4189	608	737





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2013.01.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	45.172

A.2 Comments

Gain and CTI correction are not well calibrated on CCD_ID 5 (ACIS-S1). Default order sorting can clip some regions, particularly longward of 30A (first order). User-specified custom processing parameters may be required in `tg_resolve_events` (`osipfile=None`, `osort_lo`, `osort_hi ~0.5`) though this can allow more zeroth order background at short wavelengths.