

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 11030 - L2 Version 3
Chandra X-Ray Center

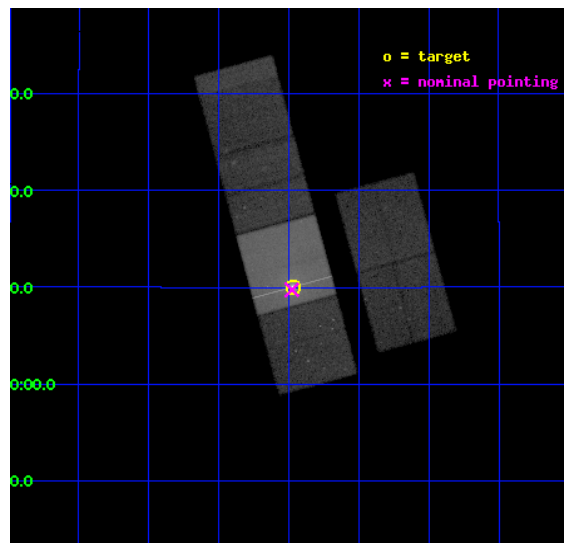
L2 Processing Date : Jun 14 2012

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1 Front

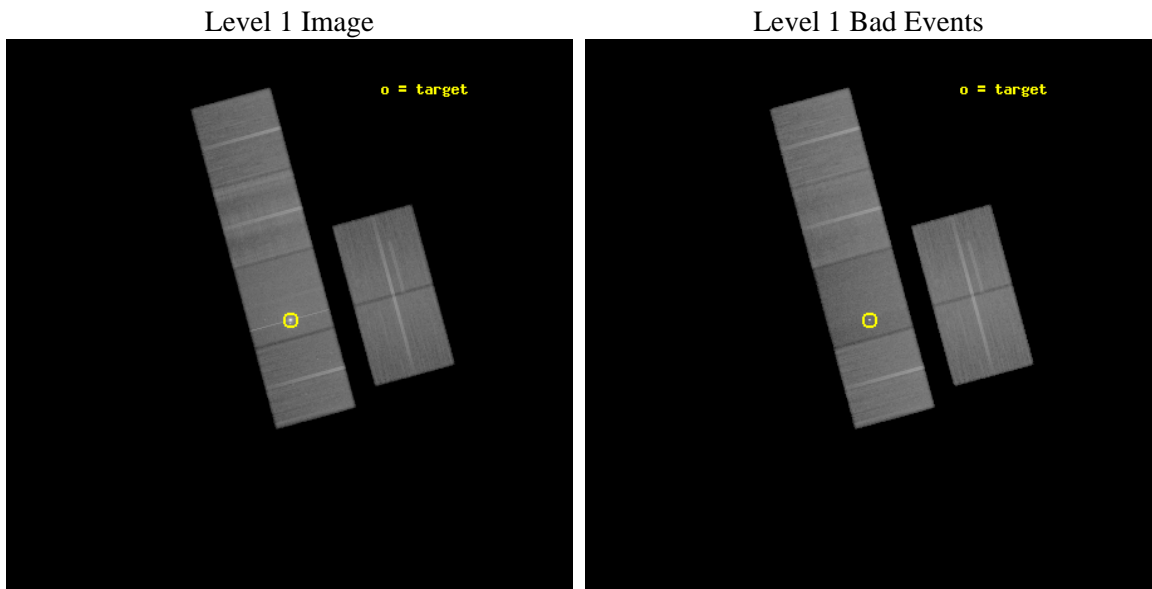
seq_num	300270	Sequence number
obs_id	11030	Observation id
title	Deep X-ray observations of the Globular Cluster M15: A complete census of the interacting binary population	Proposal title
observer	Dr. Andrea Dieball	Principal investigator
object	M15	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	322.492917	Observer's specified target RA [deg]
dec_targ	12.166944	Observer's specified target Dec [deg]
ra_nom	322.4943311805	Nominal RA [deg]
dec_nom	12.162294304476	Nominal Dec [deg]
roll_nom	254.82284537862	Nominal Roll [deg]
revision	3	Processing version of data
ontime	49846.399814367	Sum of GTIs [s]
livetime	49215.214686019	Livetime [s]
ontime2	49839.917743862	Sum of GTIs [s]
ontime3	49846.399814367	Sum of GTIs [s]
ontime6	49846.399814367	Sum of GTIs [s]
ontime7	49846.399814367	Sum of GTIs [s]
ontime8	49843.158804059	Sum of GTIs [s]
ontime9	49846.399814367	Sum of GTIs [s]
l2events	502308	Number of level 2 events



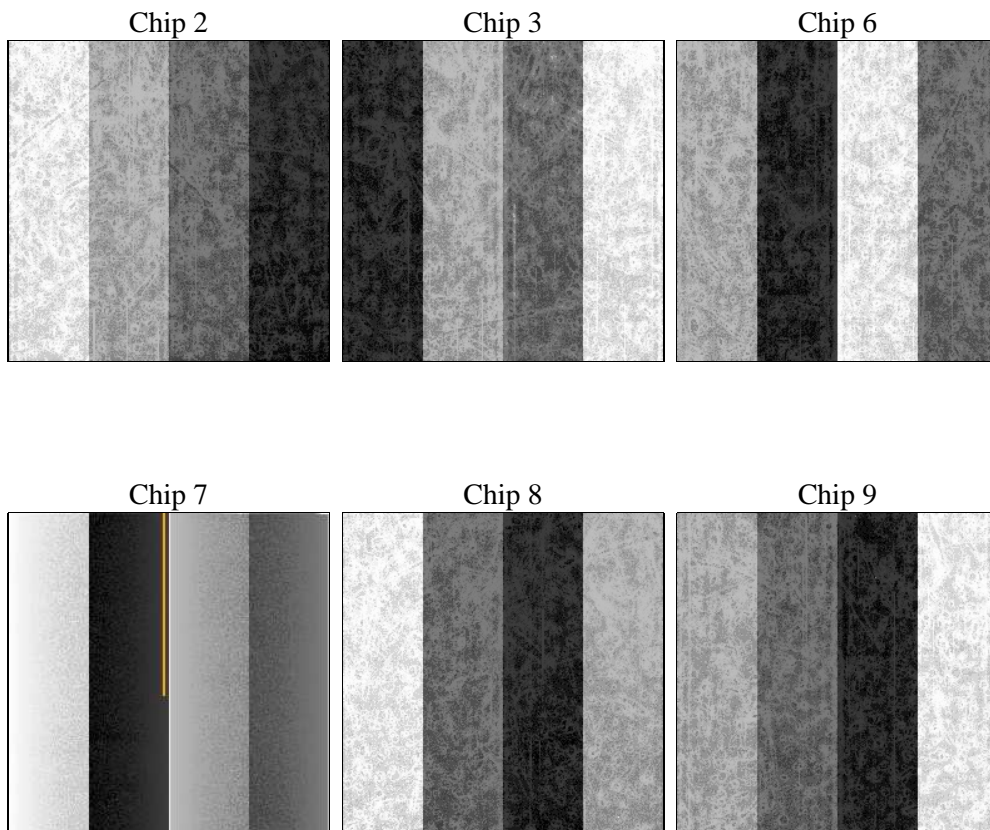
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	49853.059000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	49846.399814367	Sum of GTIs [s]
caldbver	4.4.10	 	ontime2	49839.917743862	Sum of GTIs [s]
date	2012-06-14T00:41:42	Date and time of file creation	ontime3	49846.399814367	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	49846.399814367	Sum of GTIs [s]
			ontime7	49846.399814367	Sum of GTIs [s]
			ontime8	49843.158804059	Sum of GTIs [s]
			ontime9	49846.399814367	Sum of GTIs [s]
			l1events	2942429	Number of level 1 events

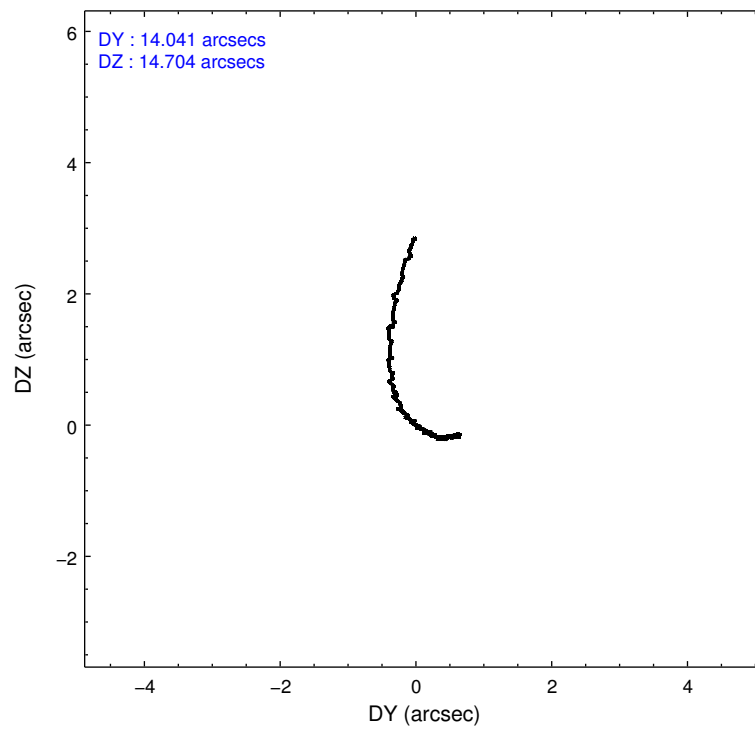
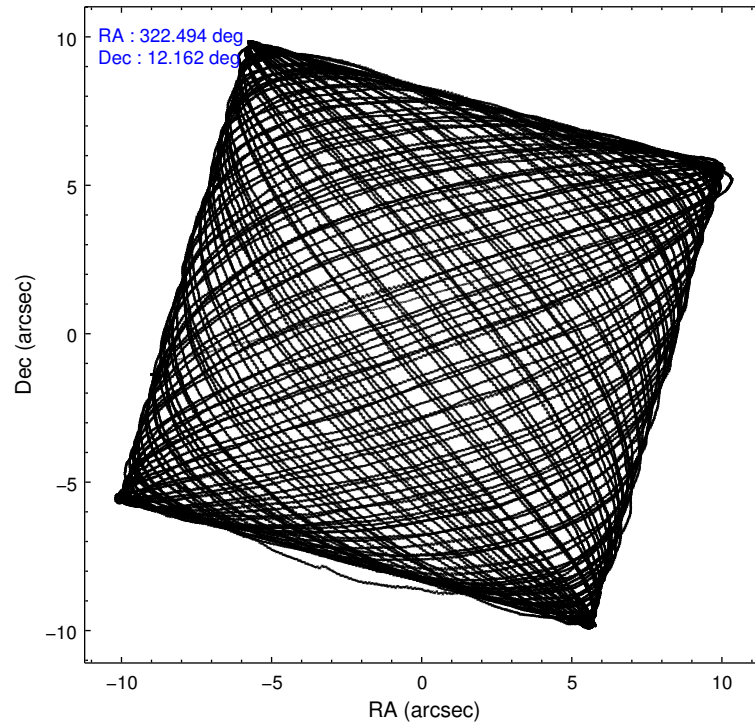
2.1.4 Events

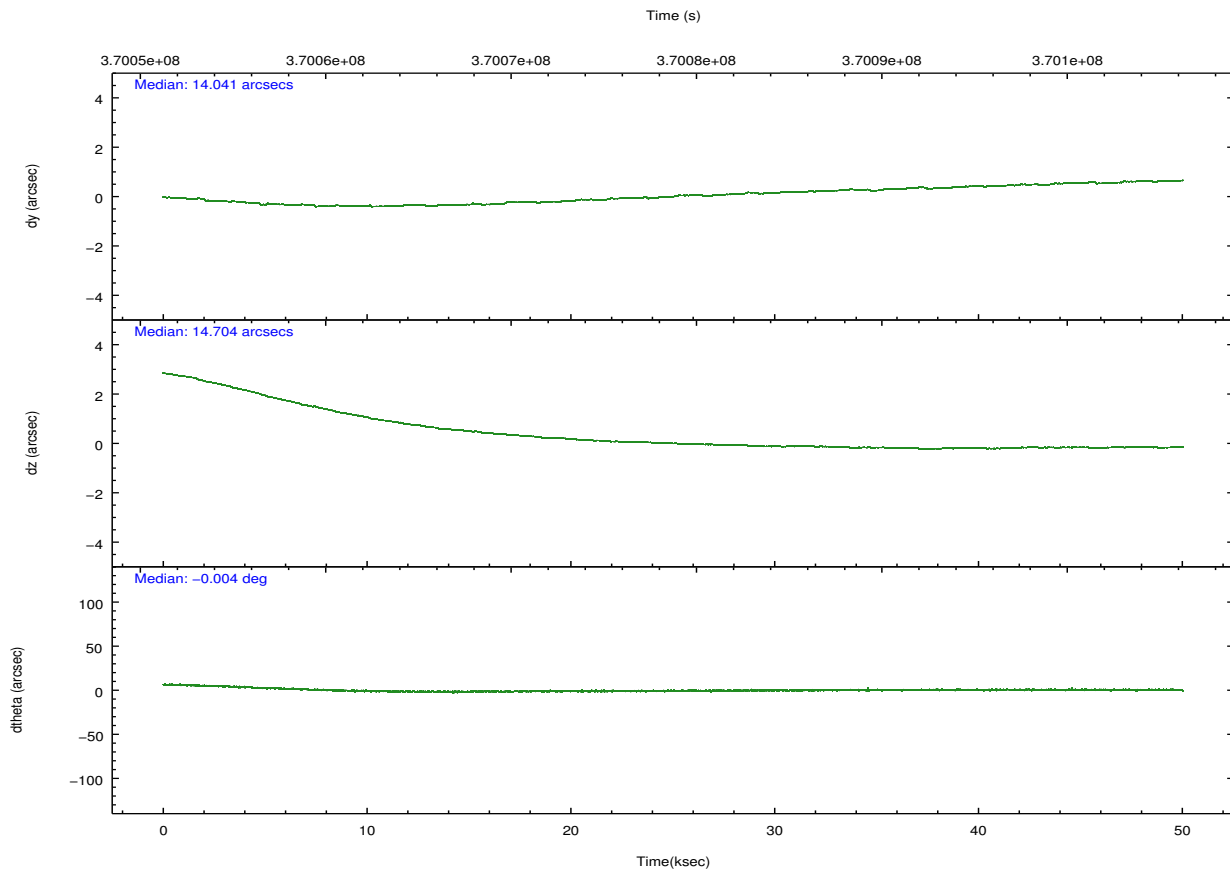
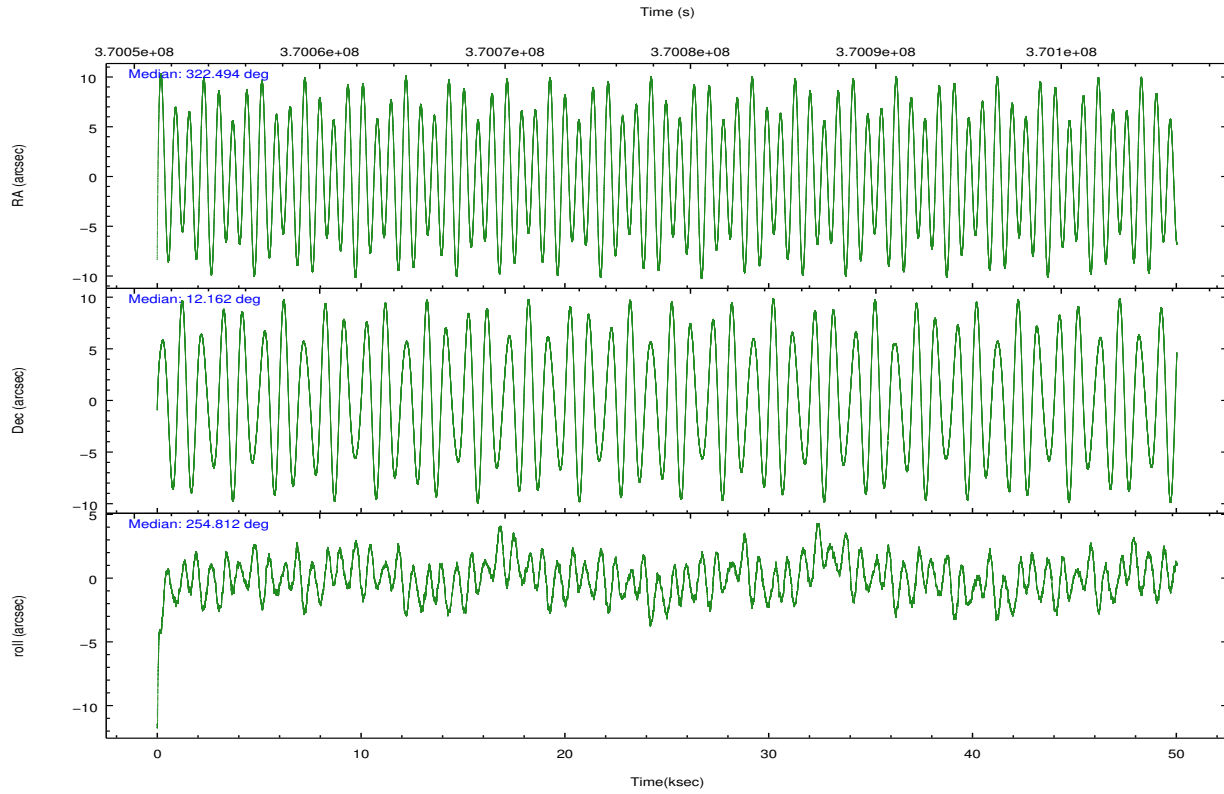
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8	ccd 9		ccd 2	ccd 3	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	447199	431358	451661	589605	560872	461734	grade 0 events	15659	14820	19178	37883	41523	18993
rejected events	404335	389900	401240	287471	419652	411211		3%	3%	4%	6%	7%	4%
rejected %	90%	90%	88%	48%	74%	89%	grade 1 events	235	265	289	1645	501	309
								0%	0%	0%	0%	0%	0%
							grade 2 events	10444	9240	11007	65616	32946	10947
								2%	2%	2%	11%	5%	2%
							grade 3 events	4558	4660	5076	28880	15242	5340
								1%	1%	1%	4%	2%	1%
							grade 4 events	4577	4634	5109	28619	13950	4976
								1%	1%	1%	4%	2%	1%
							grade 5 events	14408	18396	18112	56110	26670	20749
								3%	4%	4%	9%	4%	4%
							grade 6 events	7869	8357	10332	142927	38437	10579
								1%	1%	2%	24%	6%	2%
							grade 7 events	389449	370986	382558	227925	391603	389841
								87%	86%	84%	38%	69%	84%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-236789	ACIS-236789	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	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	322.486798	322.4943311805043	CCD I2 on	O4	Y
[deg] Pointing Dec	12.188632	12.16229430447571	CCD I3 on	O3	Y
[deg] Pointing Roll	254.667813	254.8228453786183	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O2	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	O1	Y
[s] Observation start time (MET)	370053905.184000	370052679.16379	CCD S5 on	O5	Y
Observation start date	2009-09-23T00:43:59	2009-09-23T00:24:39	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	370103759.184000	370104461.14139	On-chip summing requested	N	N
Observation end date	2009-09-23T14:34:53	2009-09-23T14:47:41	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



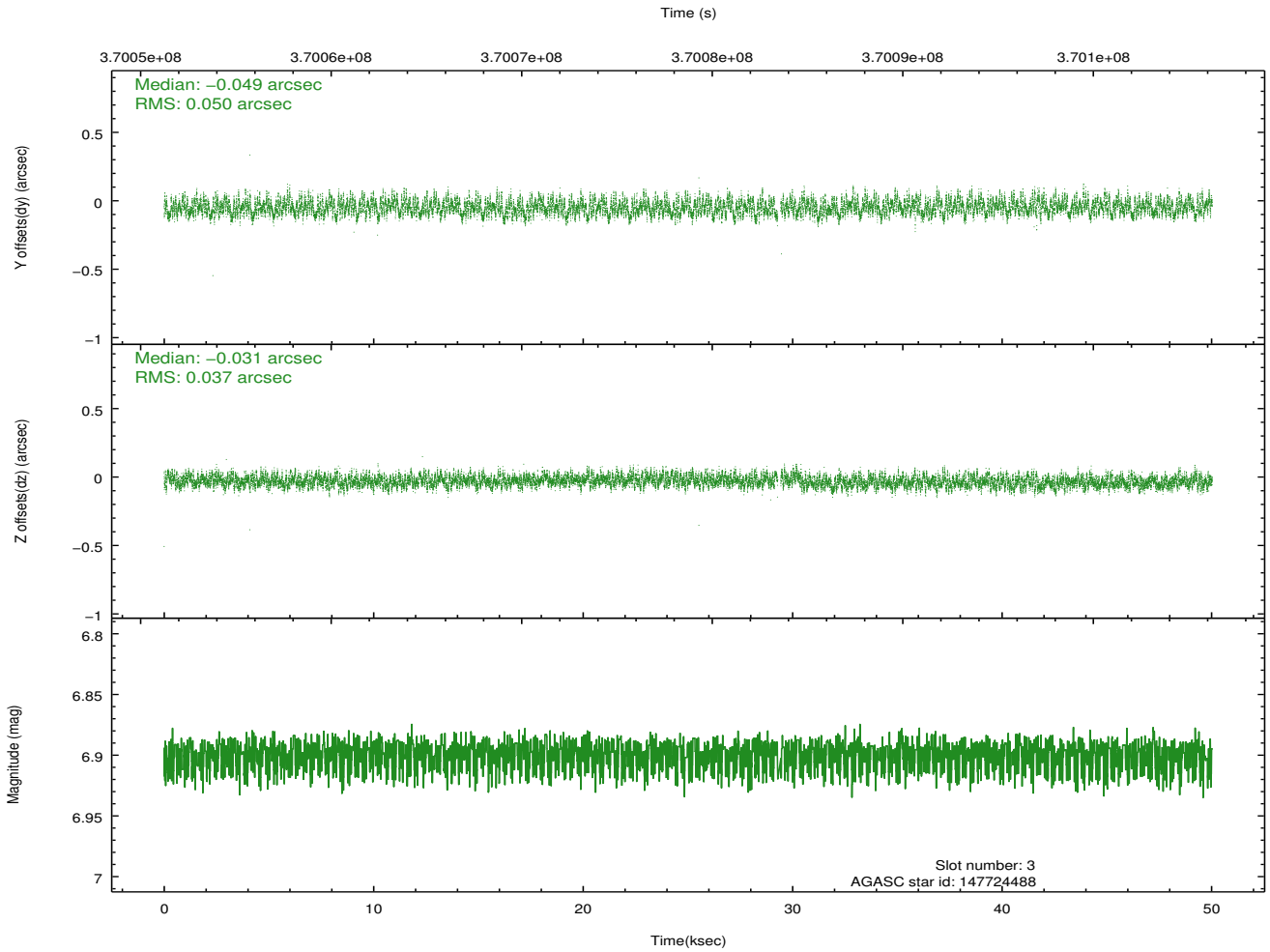
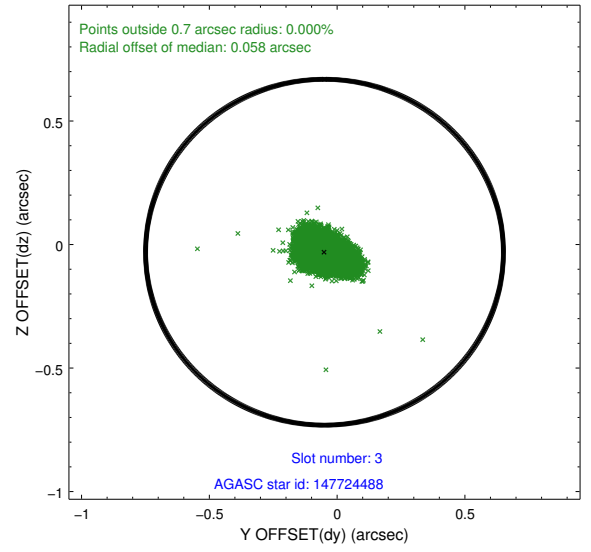
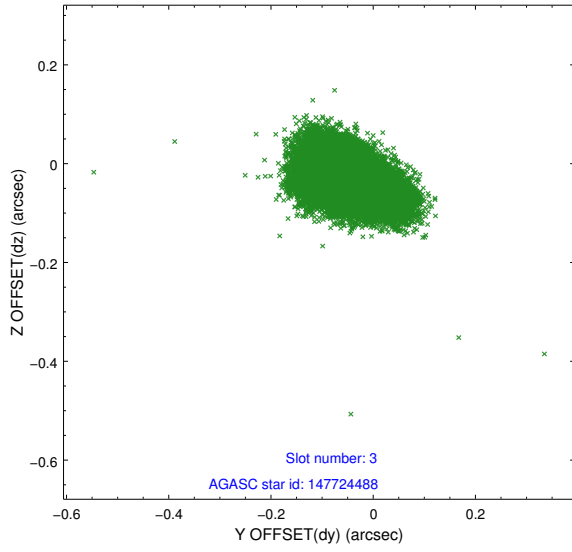


Slot Statistics

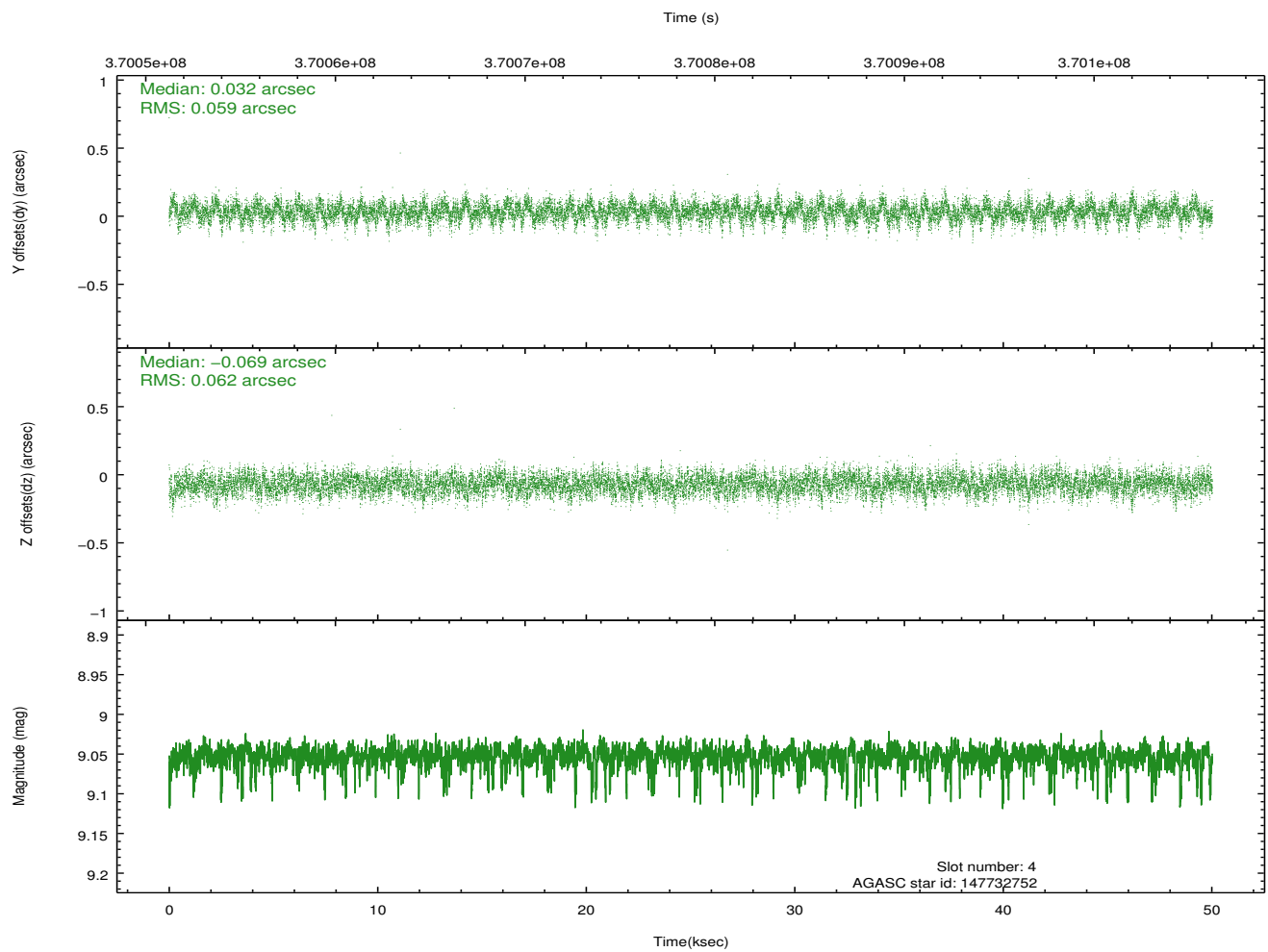
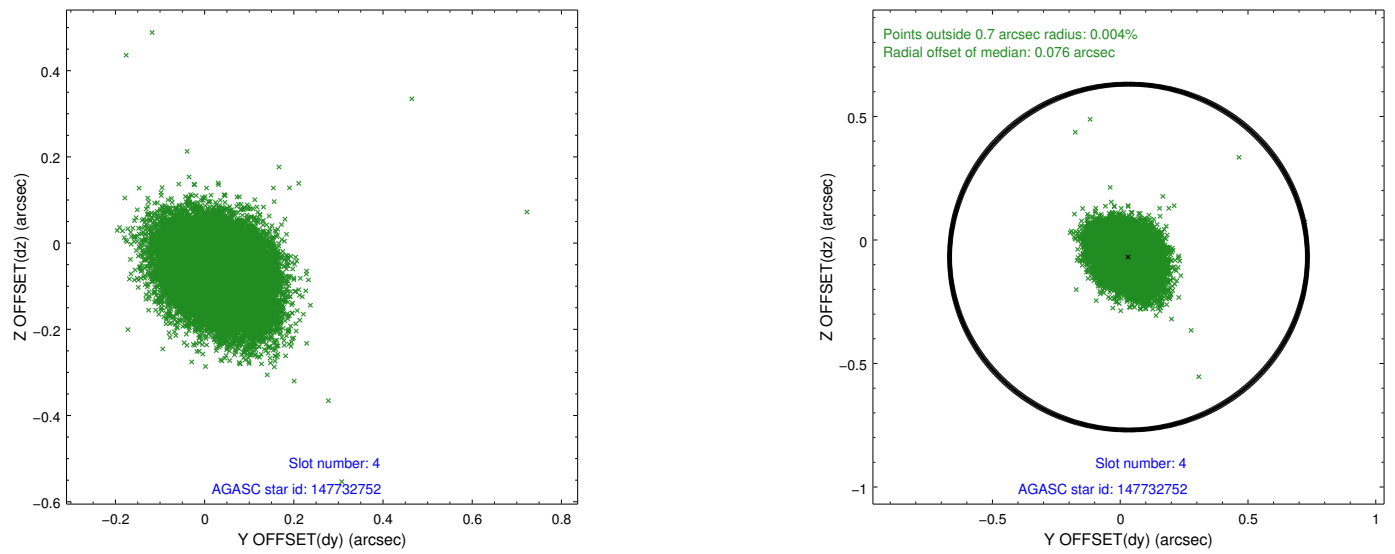
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.91	12204	-0.067	-0.027	0.015	0.034	0.000000	0.000000	-767.09	-1736.50
1	FID	ACIS-S-4	7.00	12204	0.188	0.040	0.011	0.018	0.000000	0.000000	2146.44	172.09
2	FID	ACIS-S-5	7.02	12204	-0.157	-0.004	0.017	0.032	0.000000	0.000000	-1820.06	165.67
3	GUIDE	147724488	6.90	24335	-0.049	-0.031	0.066	0.108	323.246427	12.539602	-1928.14	2239.66
4	GUIDE	147732752	9.05	24379	0.032	-0.069	0.090	0.149	321.797195	11.999048	1298.15	-2161.63
5	GUIDE	147735328	8.65	24399	-0.097	0.020	0.077	0.124	321.823462	12.214663	524.70	-2276.10
6	GUIDE	147735992	6.98	24404	0.117	0.058	0.058	0.090	322.299566	11.952911	993.44	-410.50
7	GUIDE	147722152	7.54	24402	-0.003	0.023	0.065	0.102	322.735072	12.555367	-1504.11	492.18

2.4 Star Slots

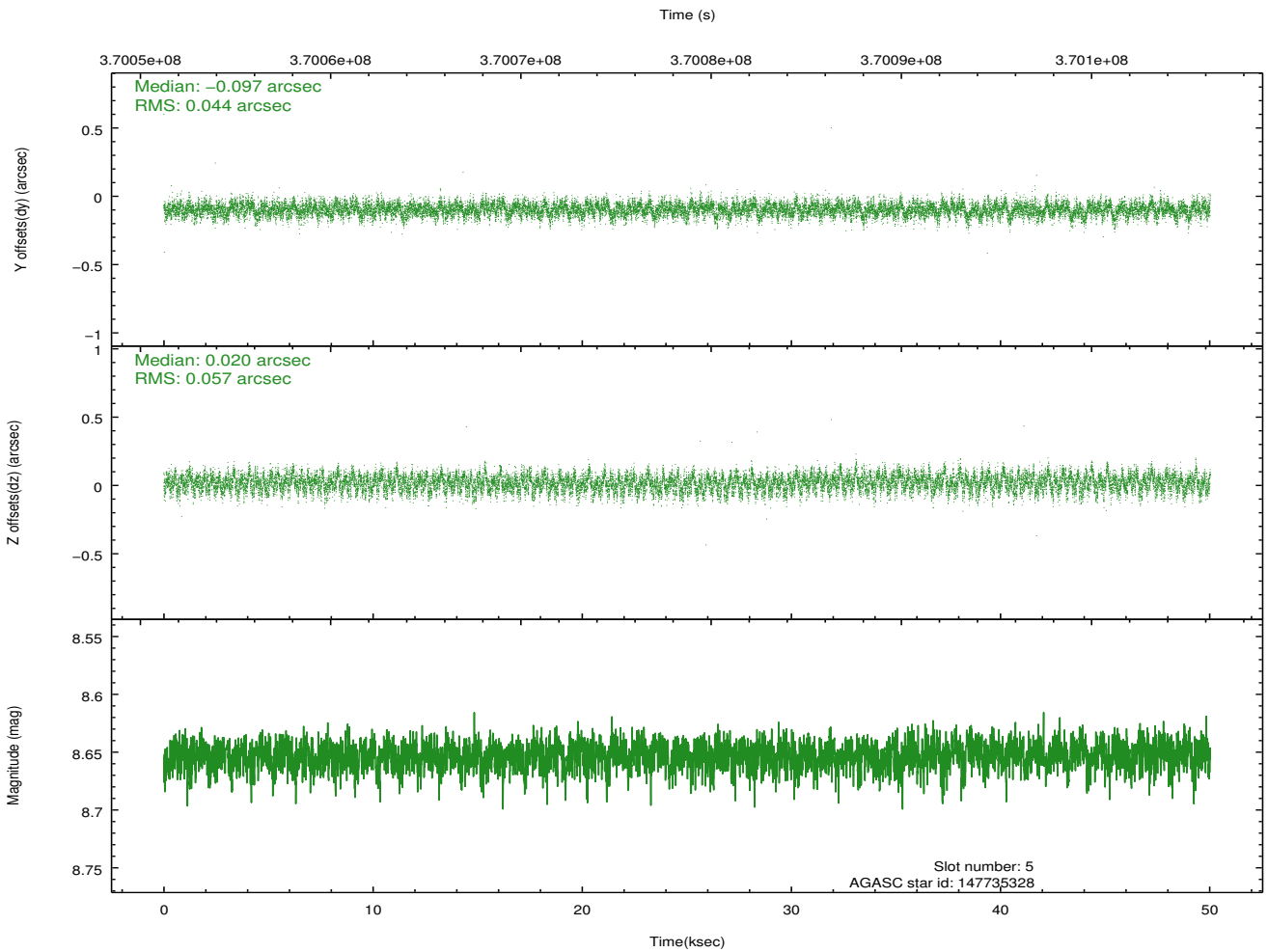
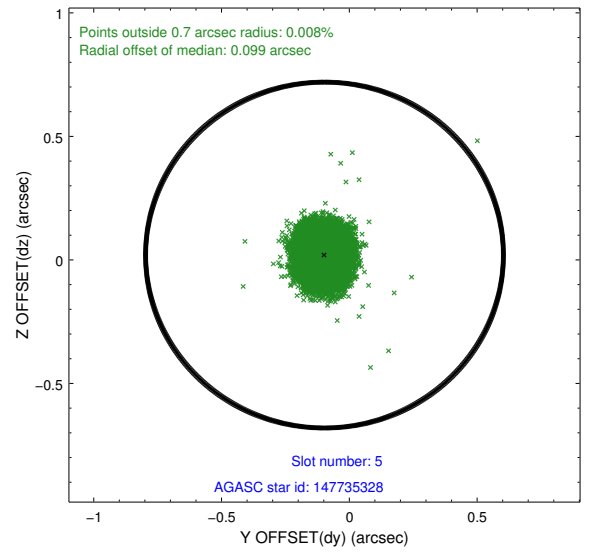
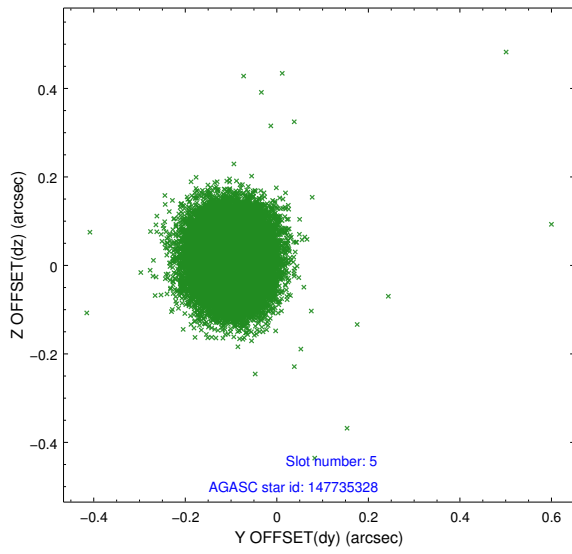
2.4.1 Slot 3



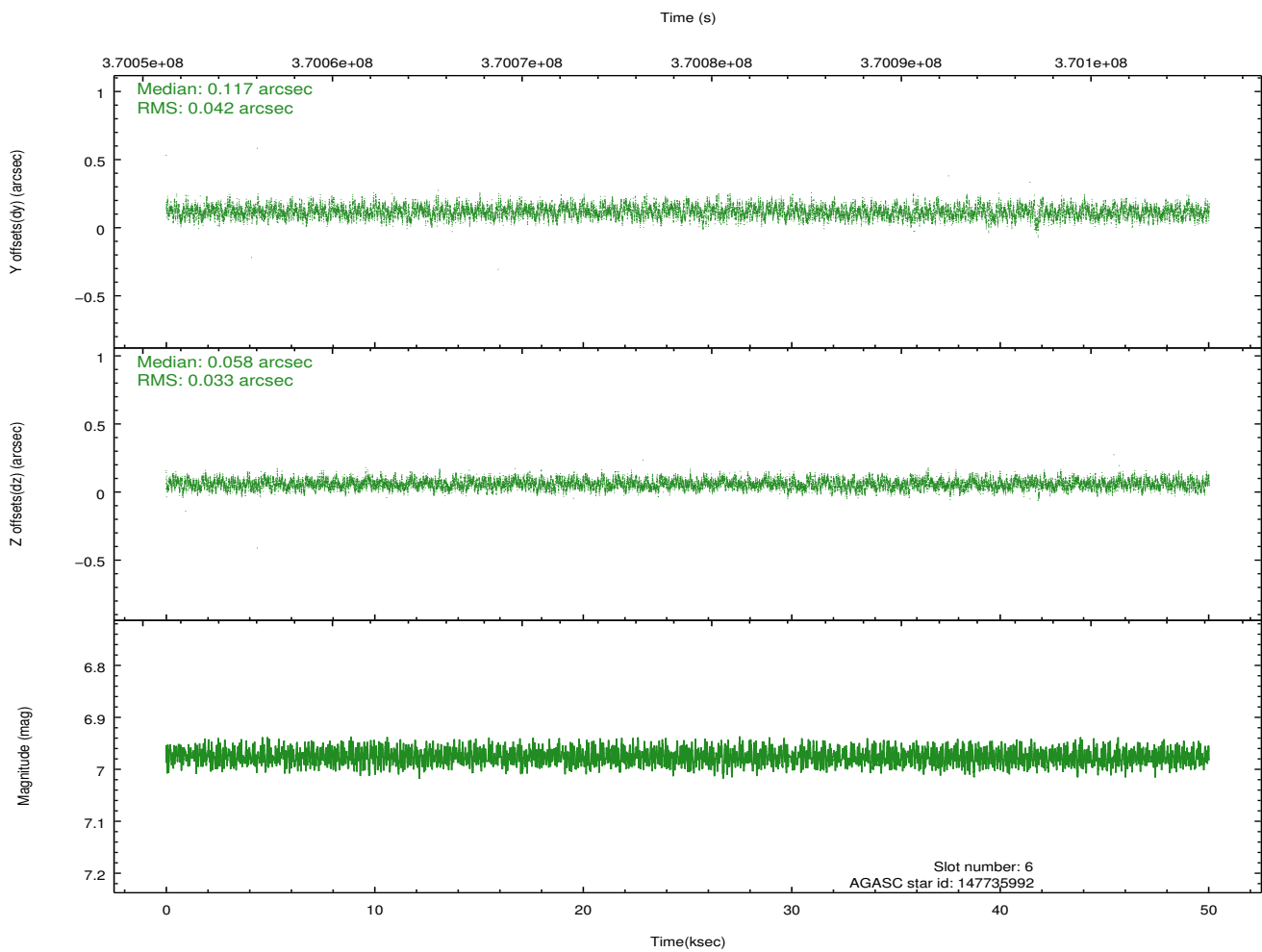
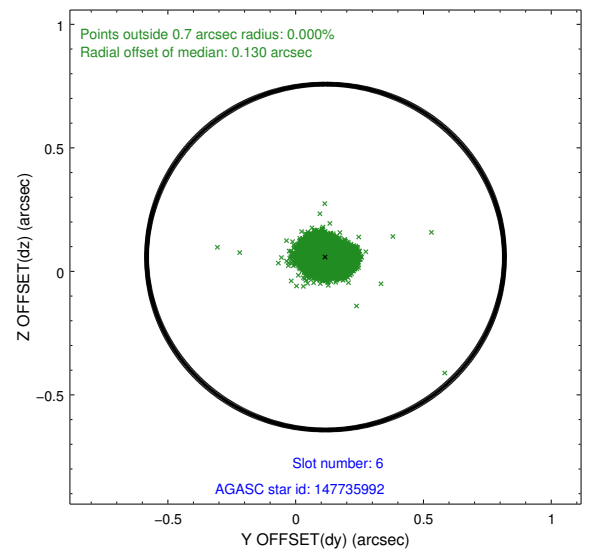
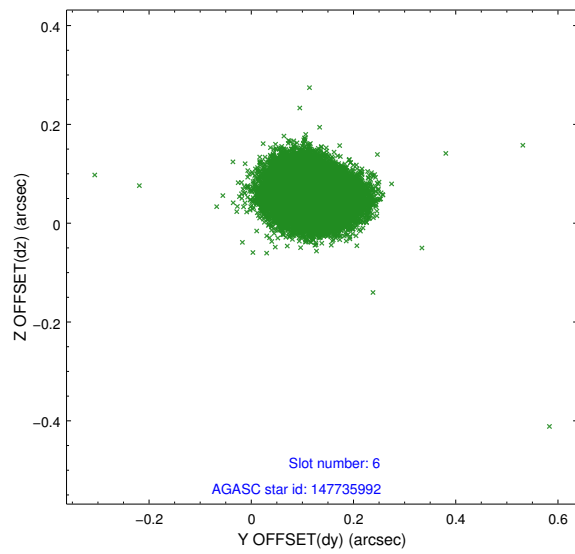
2.4.2 Slot 4



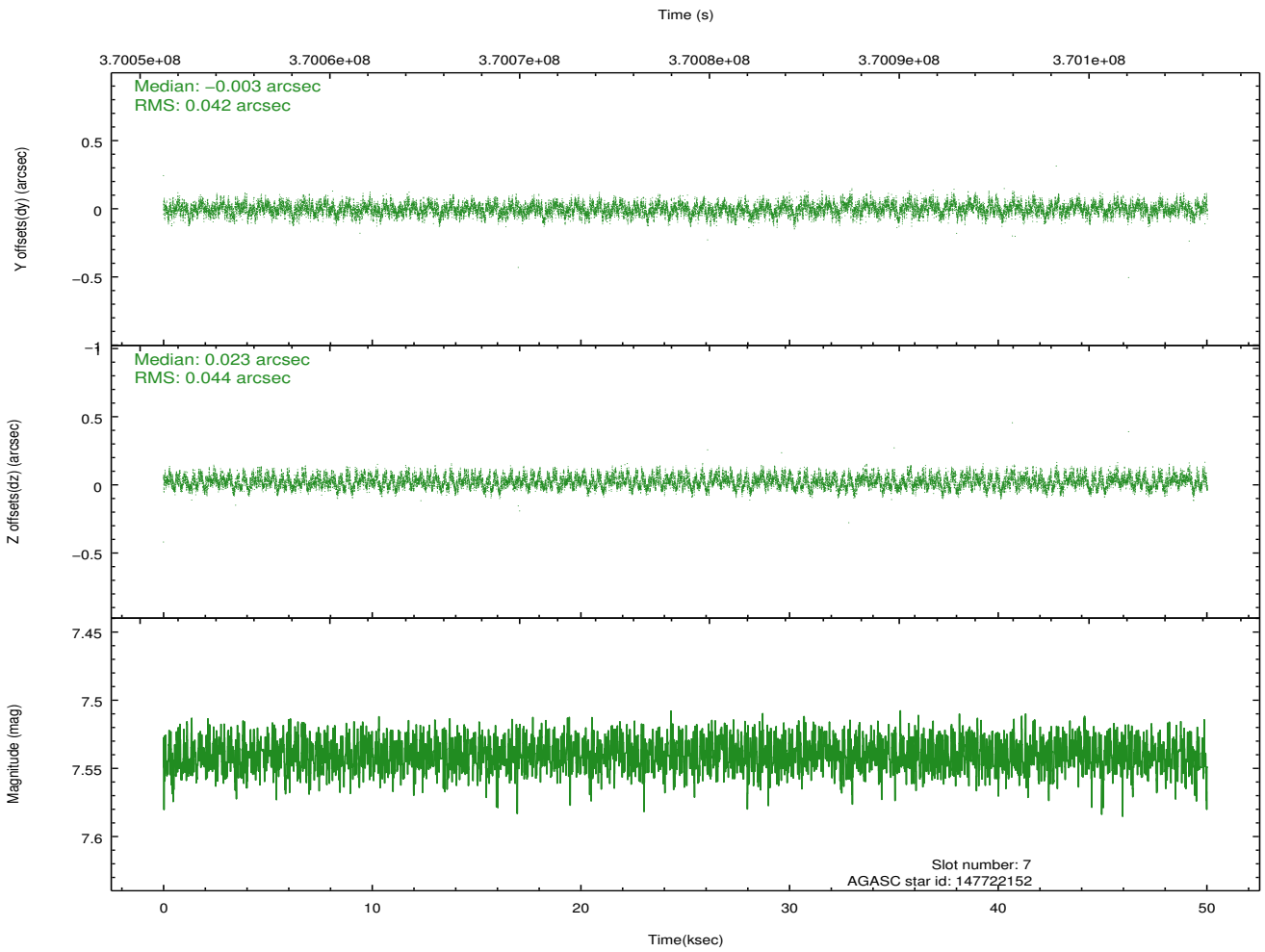
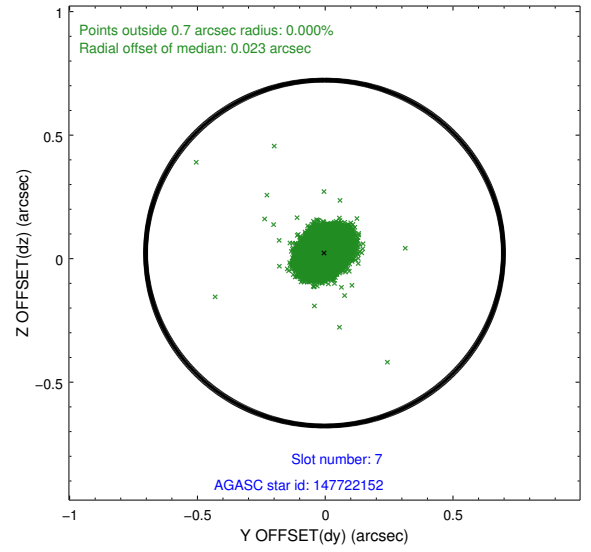
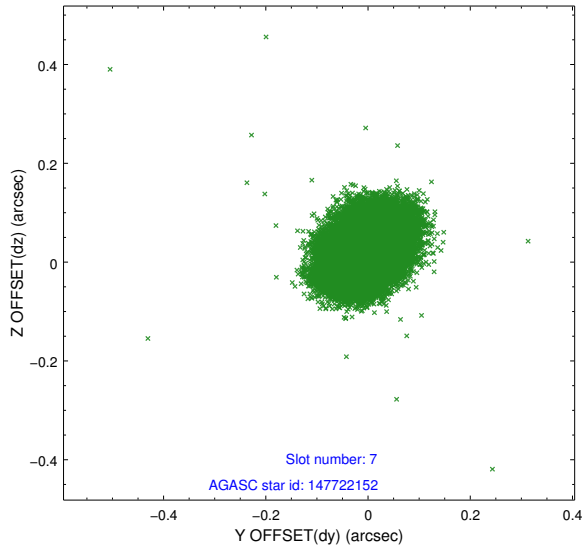
2.4.3 Slot 5



2.4.4 Slot 6

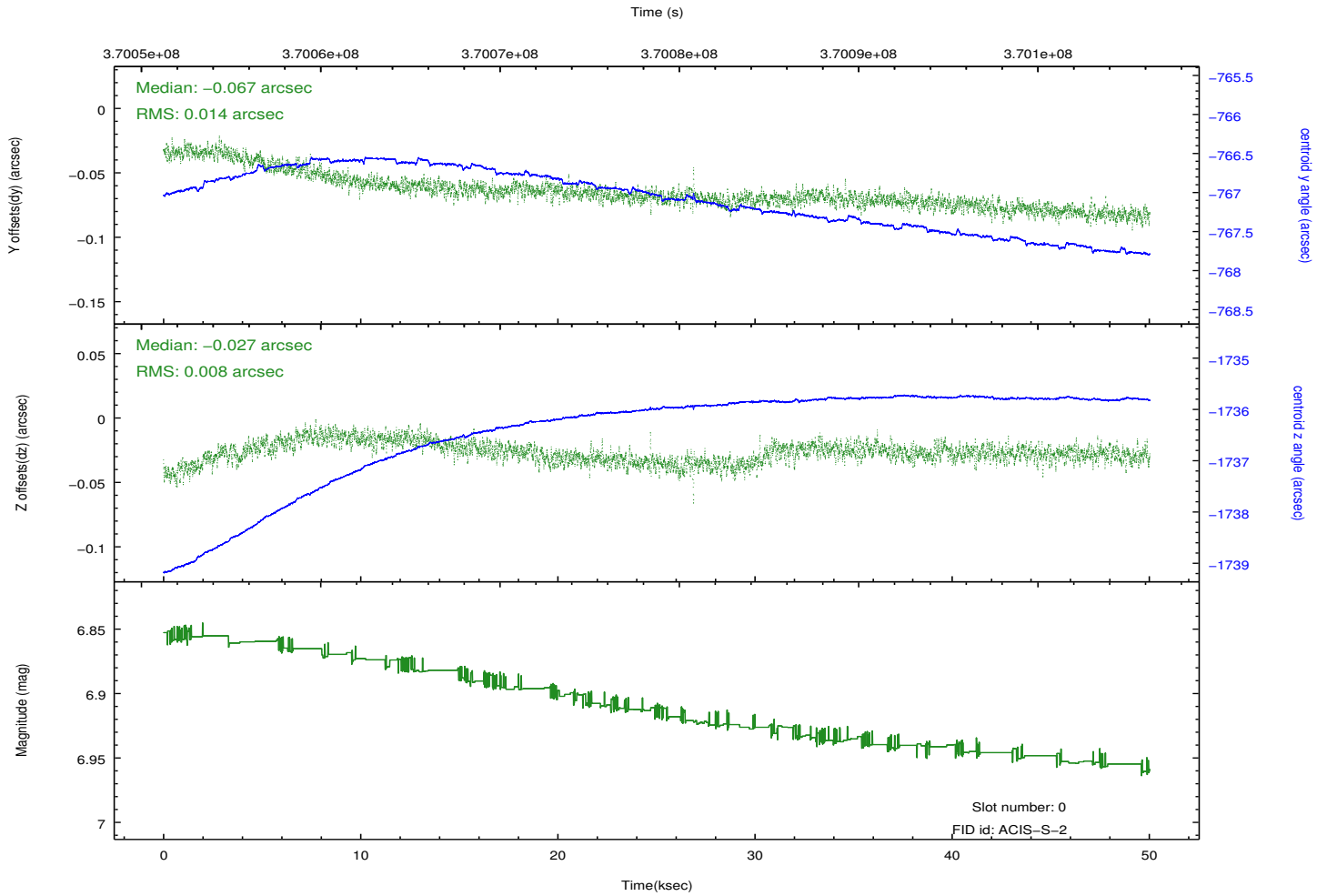
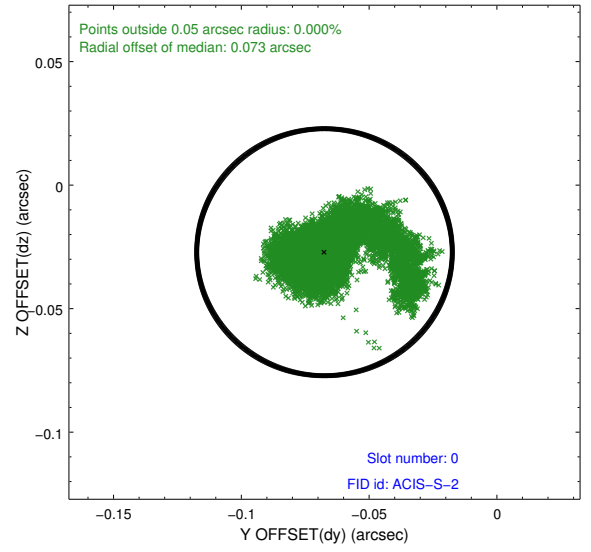
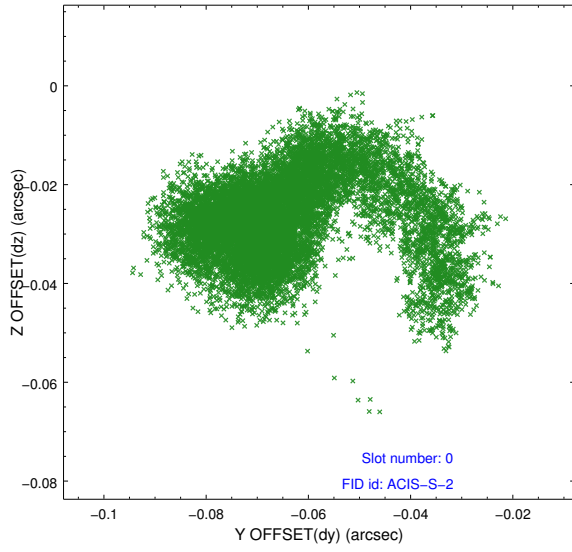


2.4.5 Slot 7

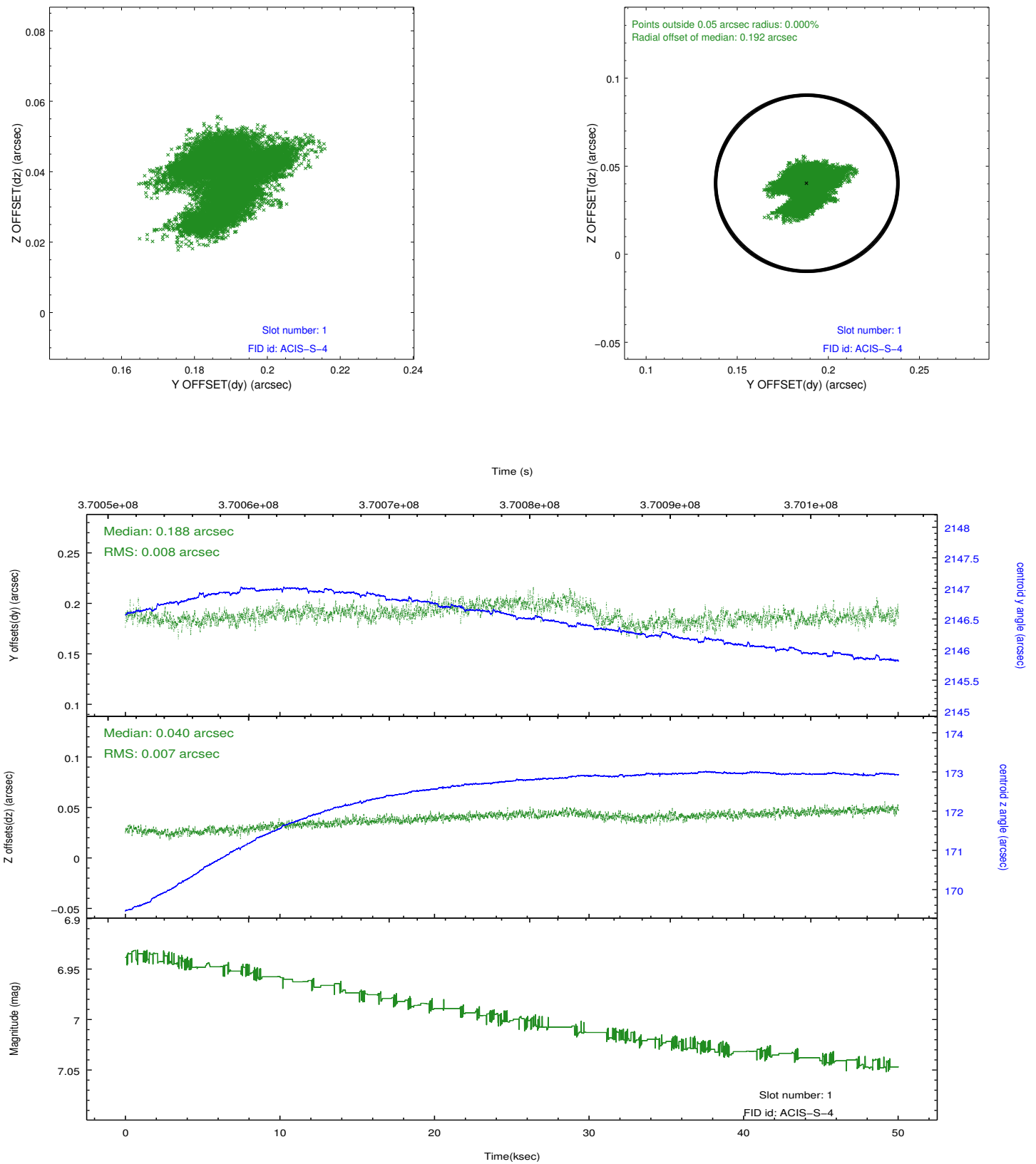


2.5 FID Slots

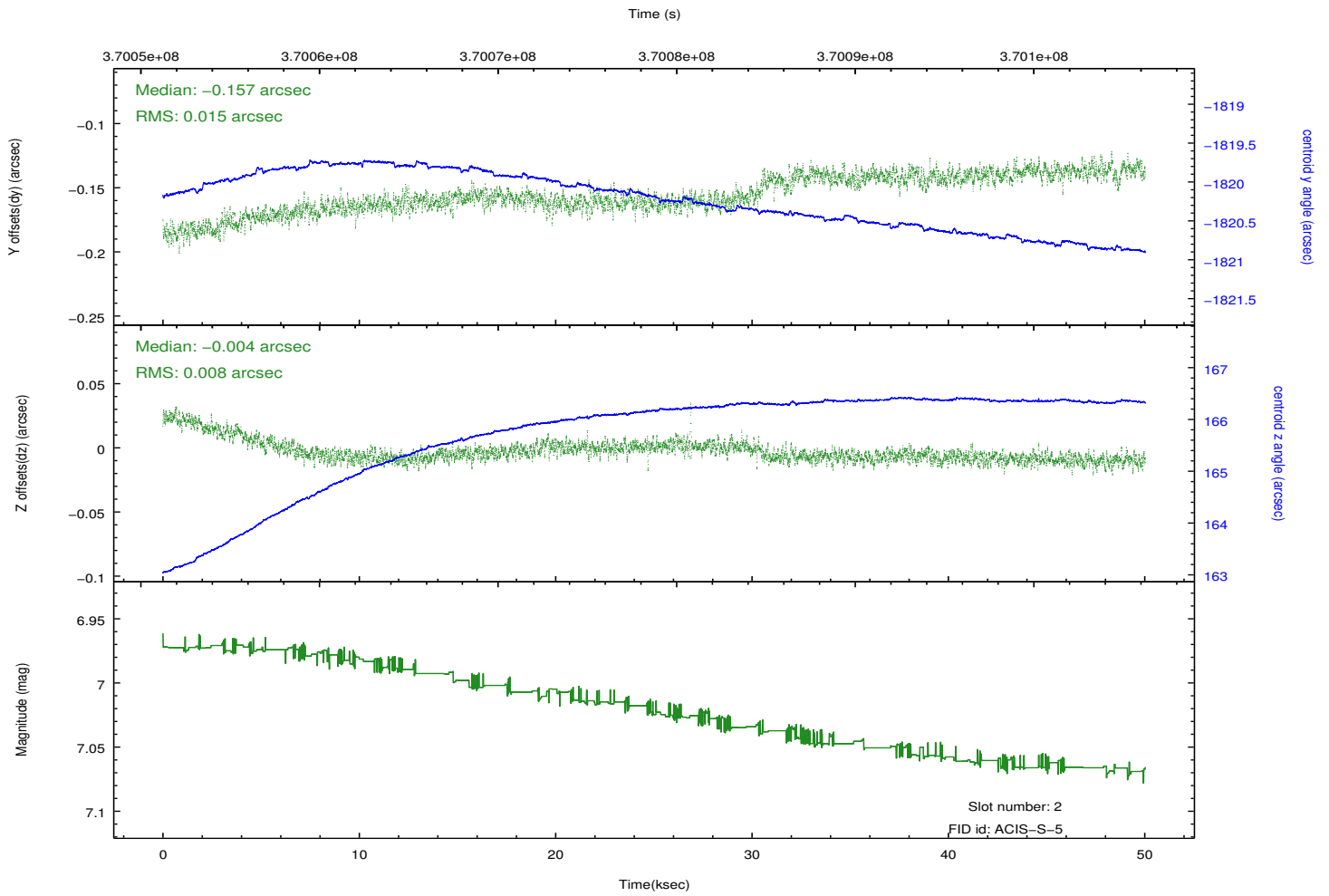
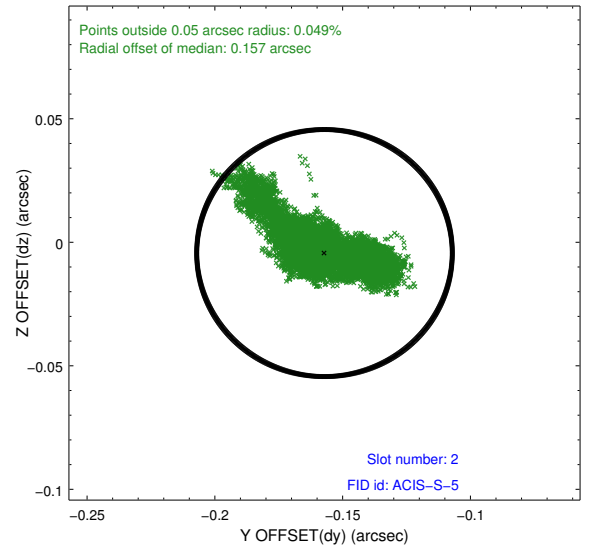
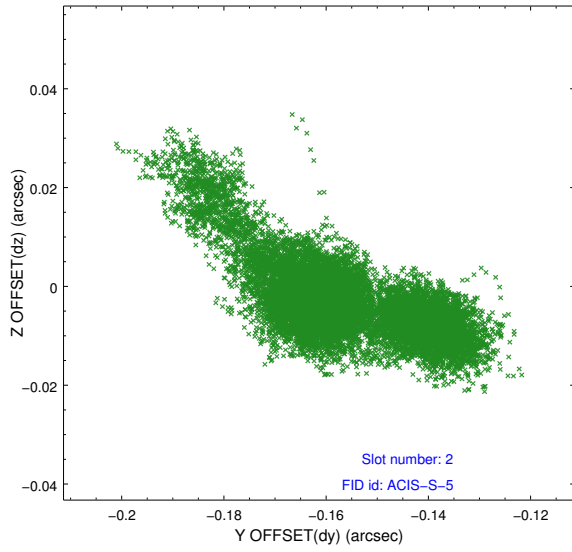
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.06.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	49.846399814367

A.2 Comments

A spatial region of the original bias map for CCD = 6 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~ 20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 6 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:
(322.53326, 12.04189), (322.53432, 12.04572), (322.48083, 12.05986), (322.47978, 12.05603)