

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 15049 - L2 Version 3
Chandra X-Ray Center

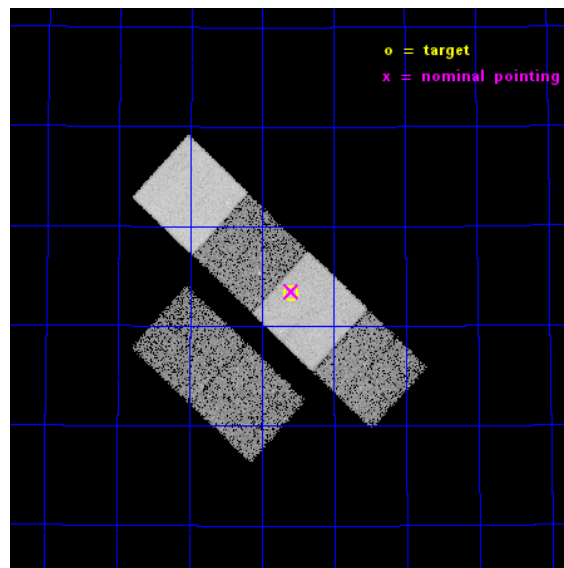
L2 Processing Date : Dec 1 2014

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1 Front

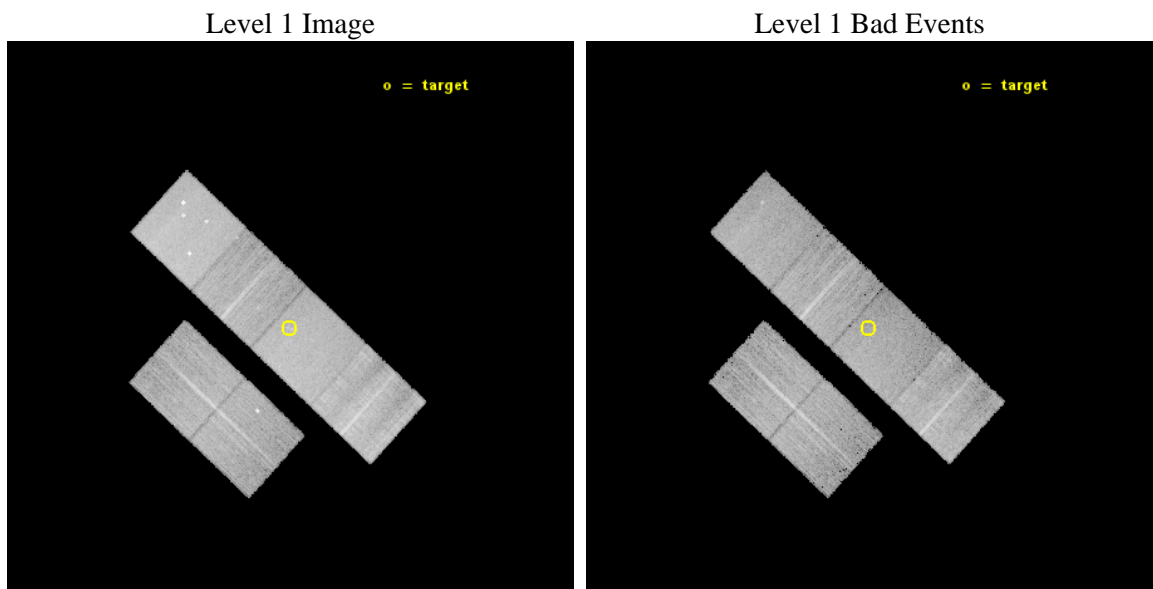
seq_num	702856	Sequence number
obs_id	15049	Observation id
title	C-GOALS: The Chandra-RBGS Survey of a Complete Sample of Major-Merger LIRGs	Proposal title
observer	Professor David Sanders	Principal investigator
object	NGC 6670A/B	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	278.398333	Observer's specified target RA [deg]
dec_targ	59.888889	Observer's specified target Dec [deg]
ra_nom	278.39727788872	Nominal RA [deg]
dec_nom	59.891847183275	Nominal Dec [deg]
roll_nom	42.862801578287	Nominal Roll [deg]
revision	3	Processing version of data
ontime	14959.999944329	Sum of GTIs [s]
livetime	14770.567417204	Livetime [s]
ontime2	14959.999944329	Sum of GTIs [s]
ontime3	14959.999944329	Sum of GTIs [s]
ontime5	14959.999944329	Sum of GTIs [s]
ontime6	14956.75893414	Sum of GTIs [s]
ontime7	14959.999944329	Sum of GTIs [s]
ontime8	14953.517953455	Sum of GTIs [s]
l2events	140577	Number of level 2 events



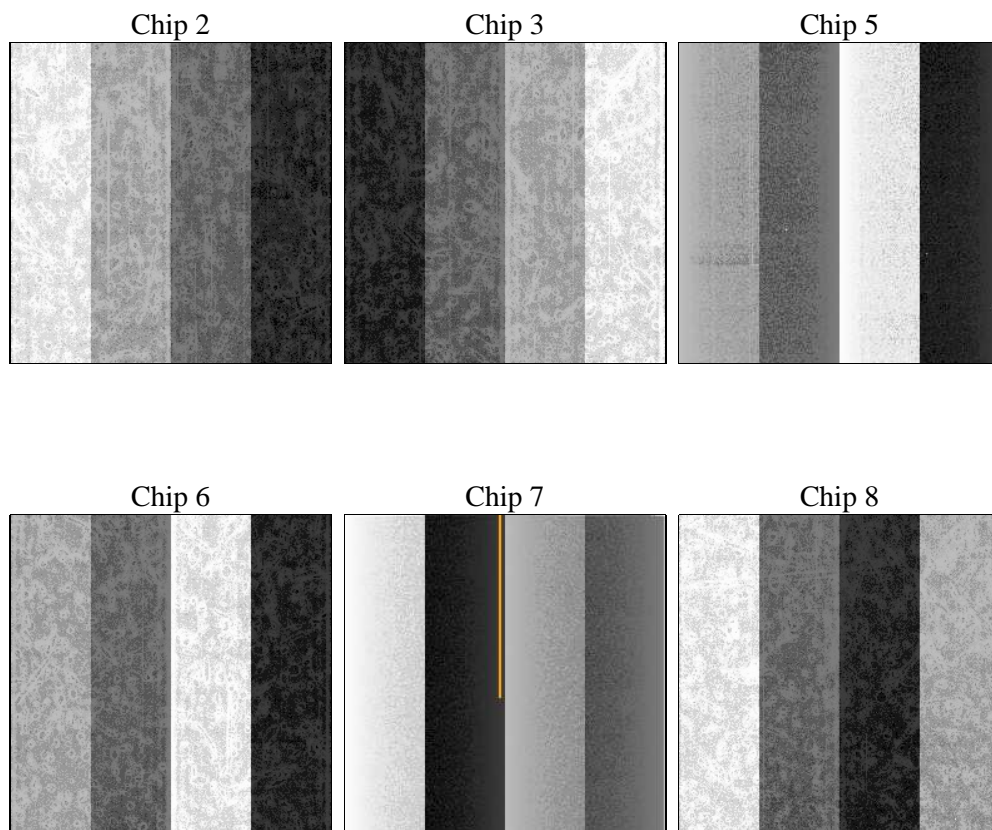
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	14959.999944329	Sum of GTIs [s]
caldsver	4.6.4	 	ontime2	14959.999944329	Sum of GTIs [s]
date	2014-12-01T08:54:14	Date and time of file creation	ontime3	14959.999944329	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	14959.999944329	Sum of GTIs [s]
			ontime6	14956.75893414	Sum of GTIs [s]
			ontime7	14959.999944329	Sum of GTIs [s]
			ontime8	14953.517953455	Sum of GTIs [s]
			l1events	607102	Number of level 1 events

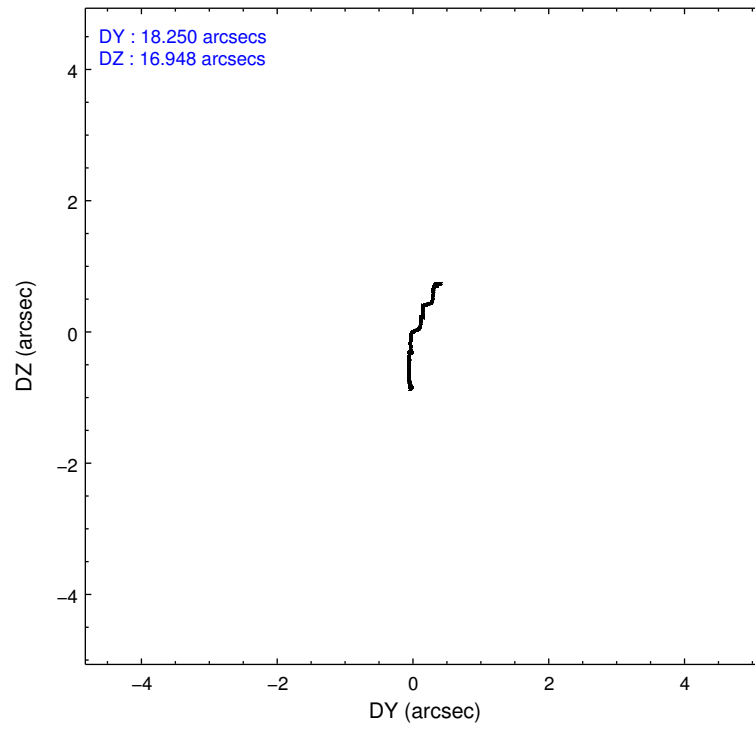
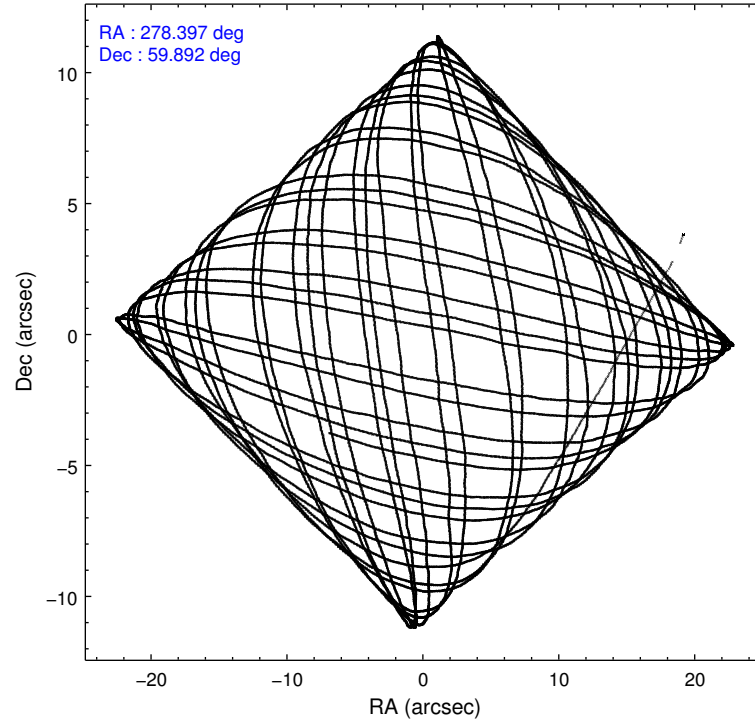
2.1.4 Events

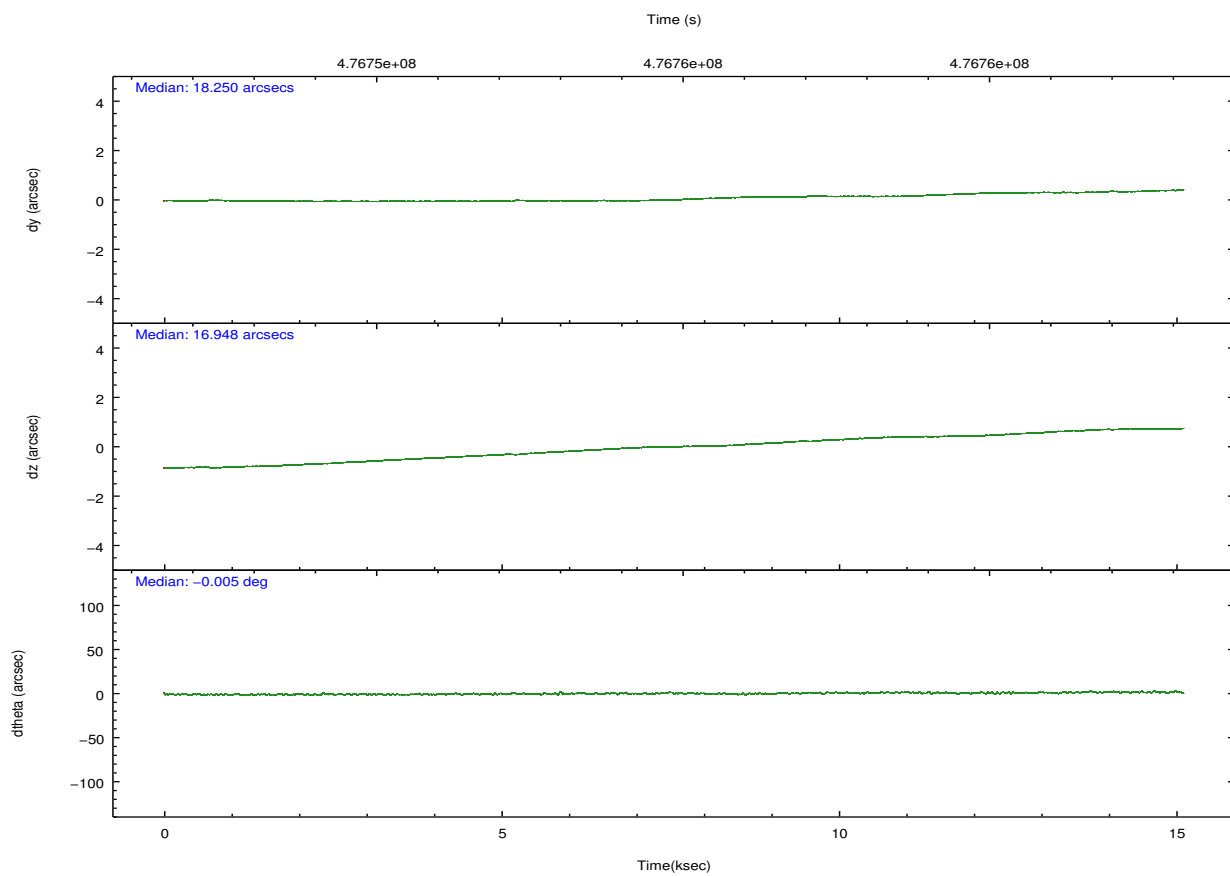
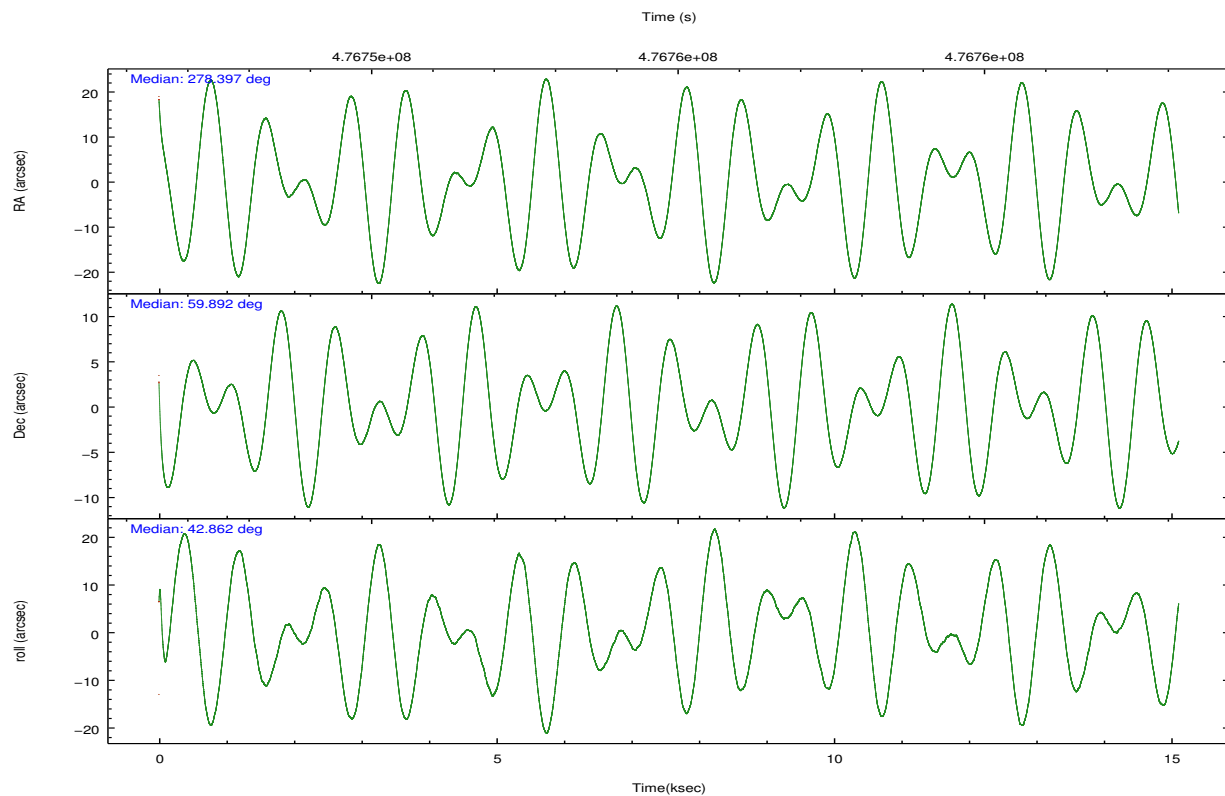
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	83571	78444	135167	83727	110564	115629	grade 0 events	3324	4156	7483	3507	4306	9686
rejected events	74360	68472	69163	73748	62681	82429		3%	5%	5%	4%	3%	8%
rejected %	88%	87%	51%	88%	56%	71%	grade 1 events	50	70	484	50	120	77
								0%	0%	0%	0%	0%	0%
							grade 2 events	2260	1972	19525	2262	9700	7227
								2%	2%	14%	2%	8%	6%
							grade 3 events	928	1006	2054	1012	4035	4062
								1%	1%	1%	1%	3%	3%
							grade 4 events	881	1016	2033	965	4032	3754
								1%	1%	1%	1%	3%	3%
							grade 5 events	3578	4114	9507	4160	11161	6103
								4%	5%	7%	4%	10%	5%
							grade 6 events	1822	1826	34927	2239	25837	8483
								2%	2%	25%	2%	23%	7%
							grade 7 events	70728	64284	59154	69532	51373	76237
								84%	81%	43%	83%	46%	65%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	278.381905	278.3972778887236	CCD I2 on	O2	Y
[deg] Pointing Dec	59.865639	59.8918471832754	CCD I3 on	Y	Y
[deg] Pointing Roll	42.719452	42.86280157828687	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	476747395.184000	476746255.87257	CCD S5 on	N	N
Observation start date	2013-02-08T21:48:48	2013-02-08T21:30:55	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	476762395.184000	476763903.81102	On-chip summing requested	N	N
Observation end date	2013-02-09T01:58:48	2013-02-09T02:25:03	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



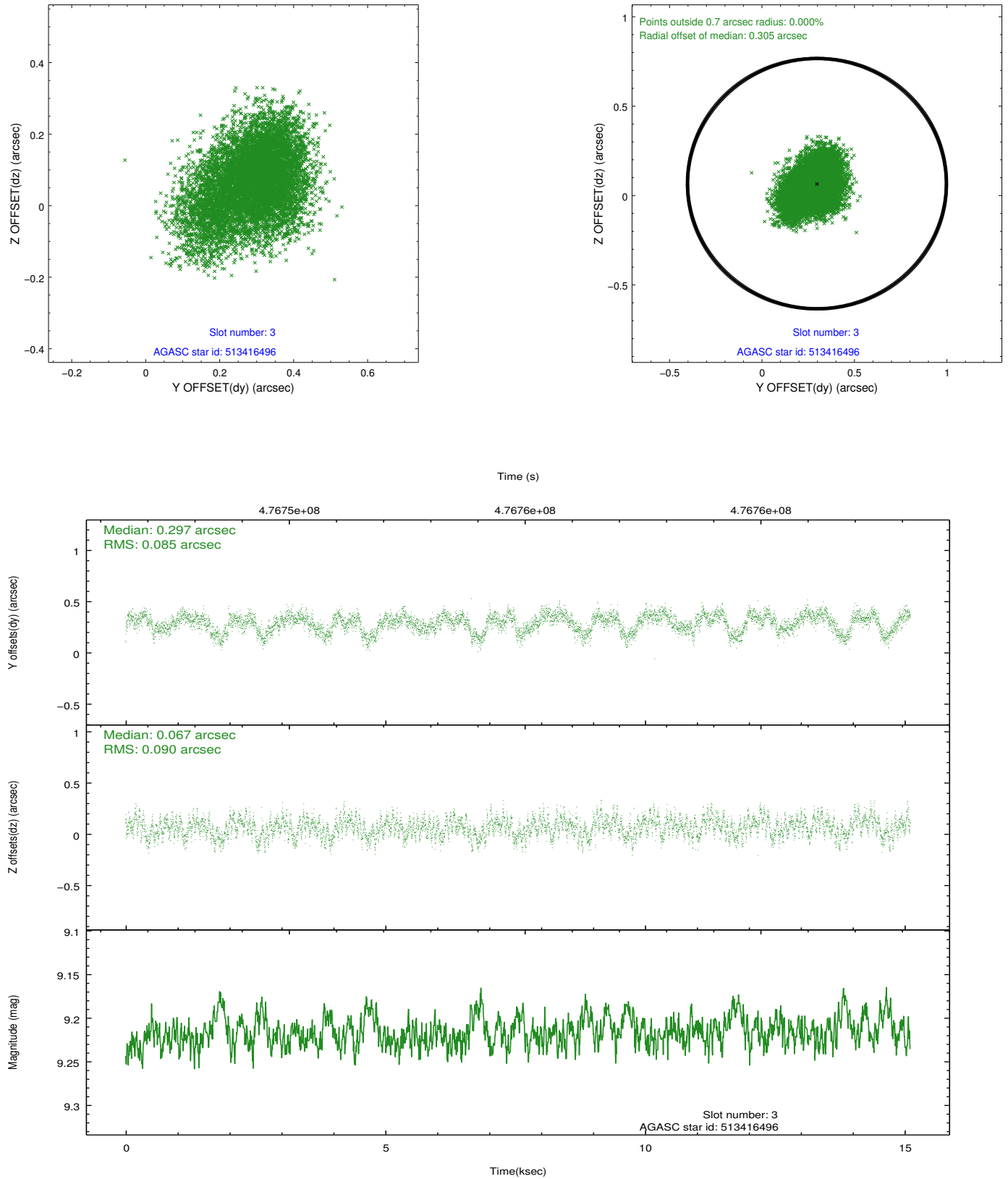


Slot Statistics

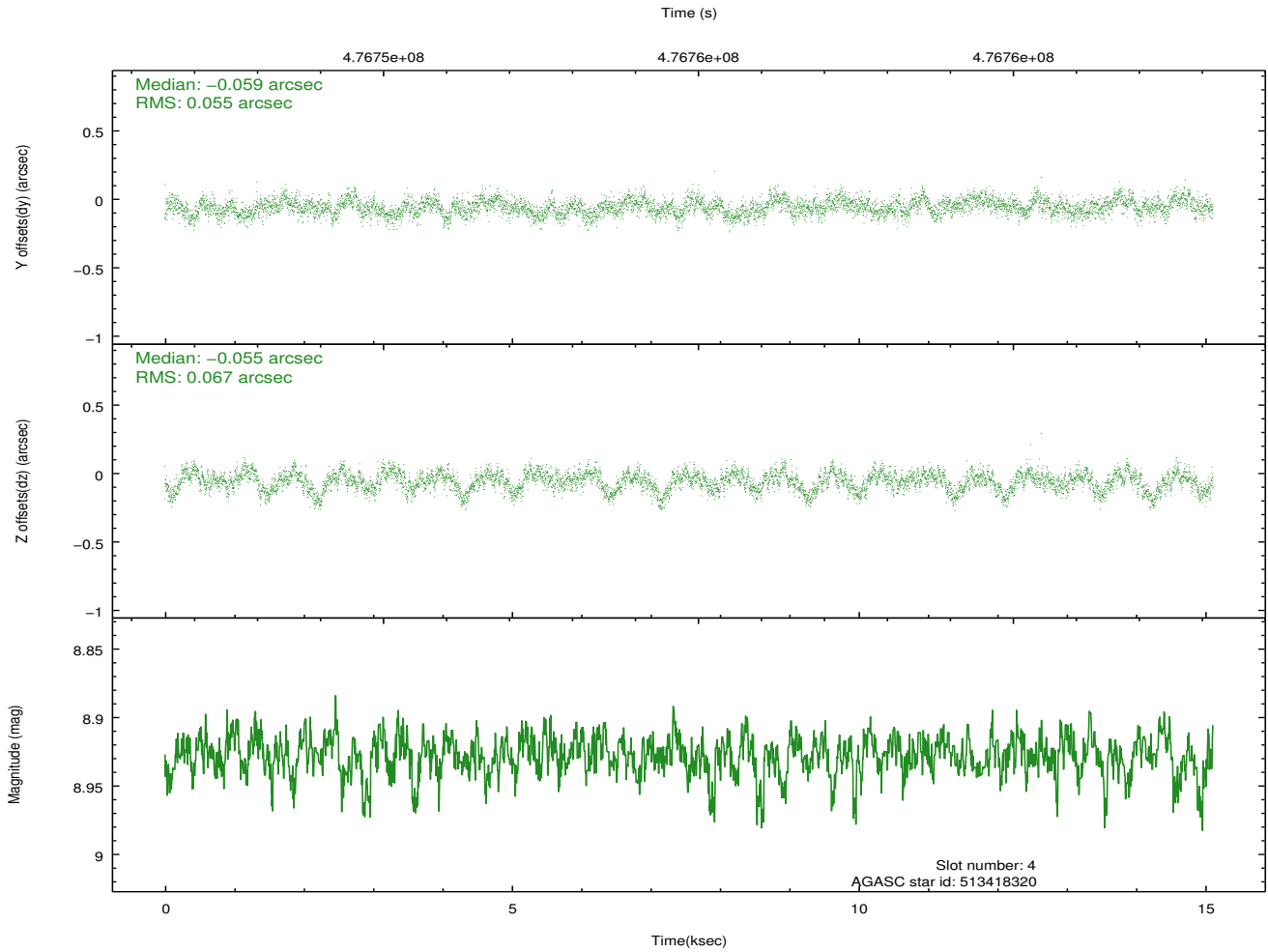
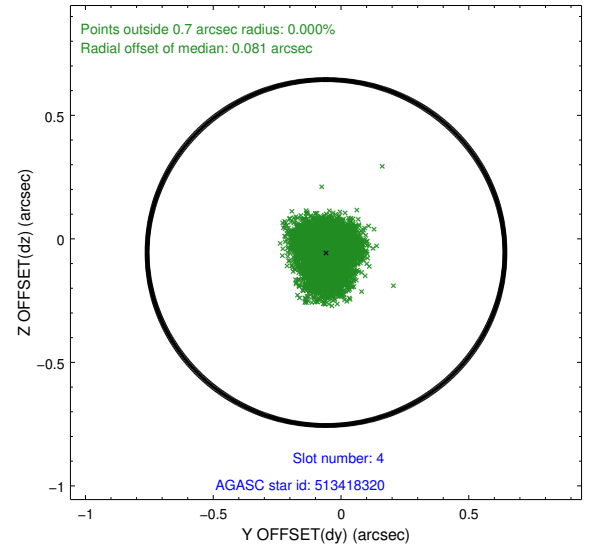
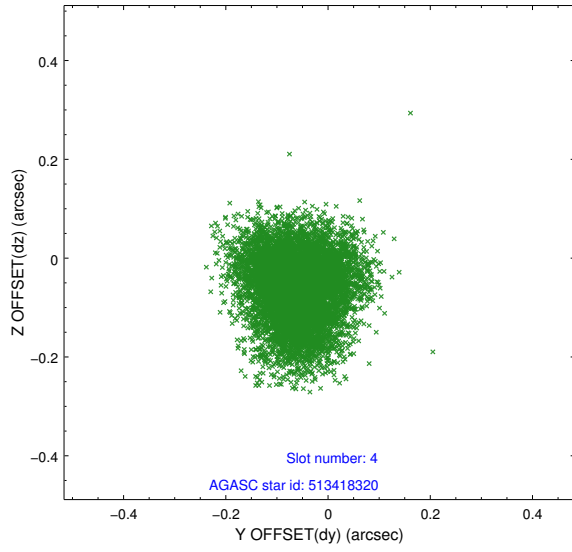
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.15	3686	-0.016	-0.087	0.036	0.072	0.000000	0.000000	924.62	-1734.05
1	FID		ACIS-S-4	7.15	3686	0.108	0.001	0.016	0.024	0.000000	0.000000	2142.31	169.88
2	FID		ACIS-S-6	7.27	3685	-0.116	0.096	0.024	0.055	0.000000	0.000000	390.84	807.66
3	GUIDE	used	513416496	9.22	7370	0.297	0.067	0.132	0.215	278.561421	59.340452	-1039.64	-1611.92
4	GUIDE	used	513418320	8.93	7365	-0.059	-0.055	0.093	0.148	277.411339	59.567798	-2018.73	422.41
5	GUIDE	used	513419672	8.91	7372	0.249	0.013	0.090	0.147	278.251329	59.888562	-116.85	221.19
6	GUIDE	used	513422640	8.03	7371	-0.049	0.189	0.078	0.124	277.976729	59.419970	-1631.94	-673.41
7	GUIDE	used	552483288	8.56	7367	-0.432	-0.203	0.074	0.119	278.891254	60.256084	1623.94	418.16

2.4 Star Slots

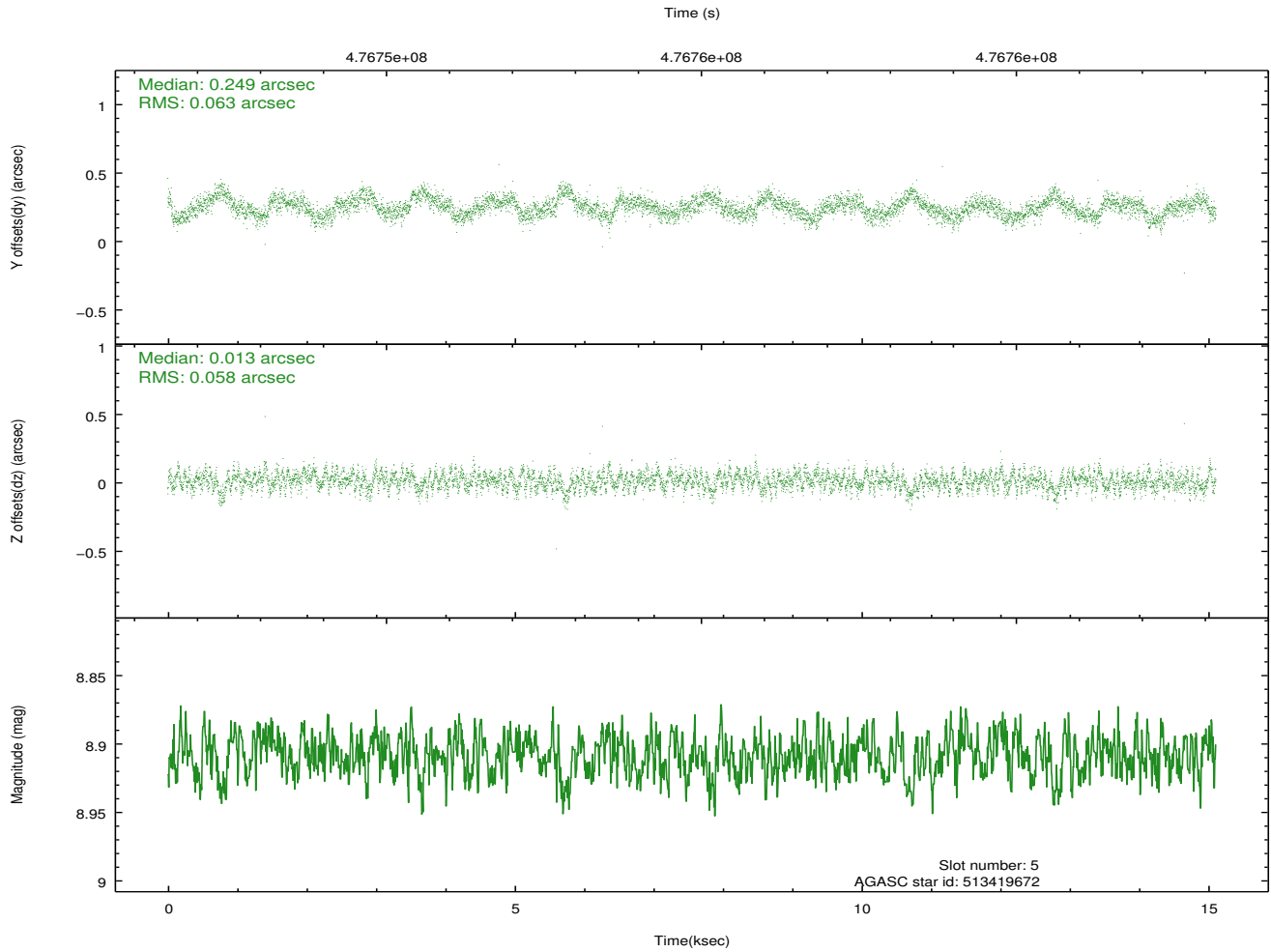
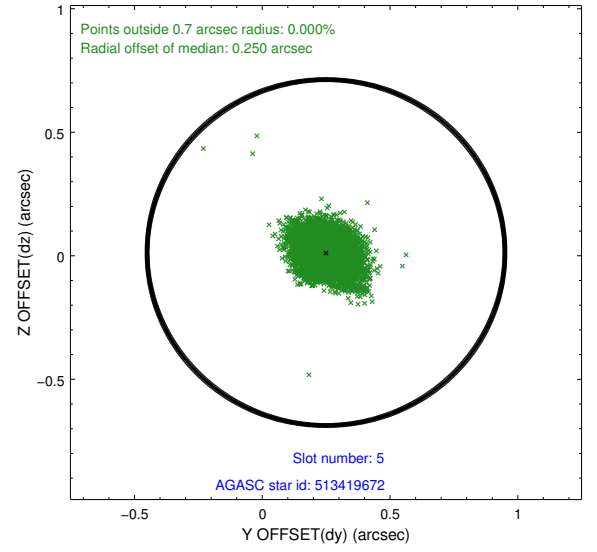
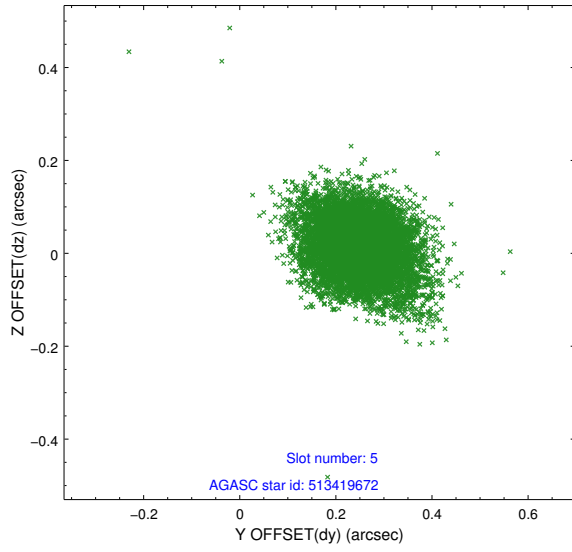
2.4.1 Slot 3



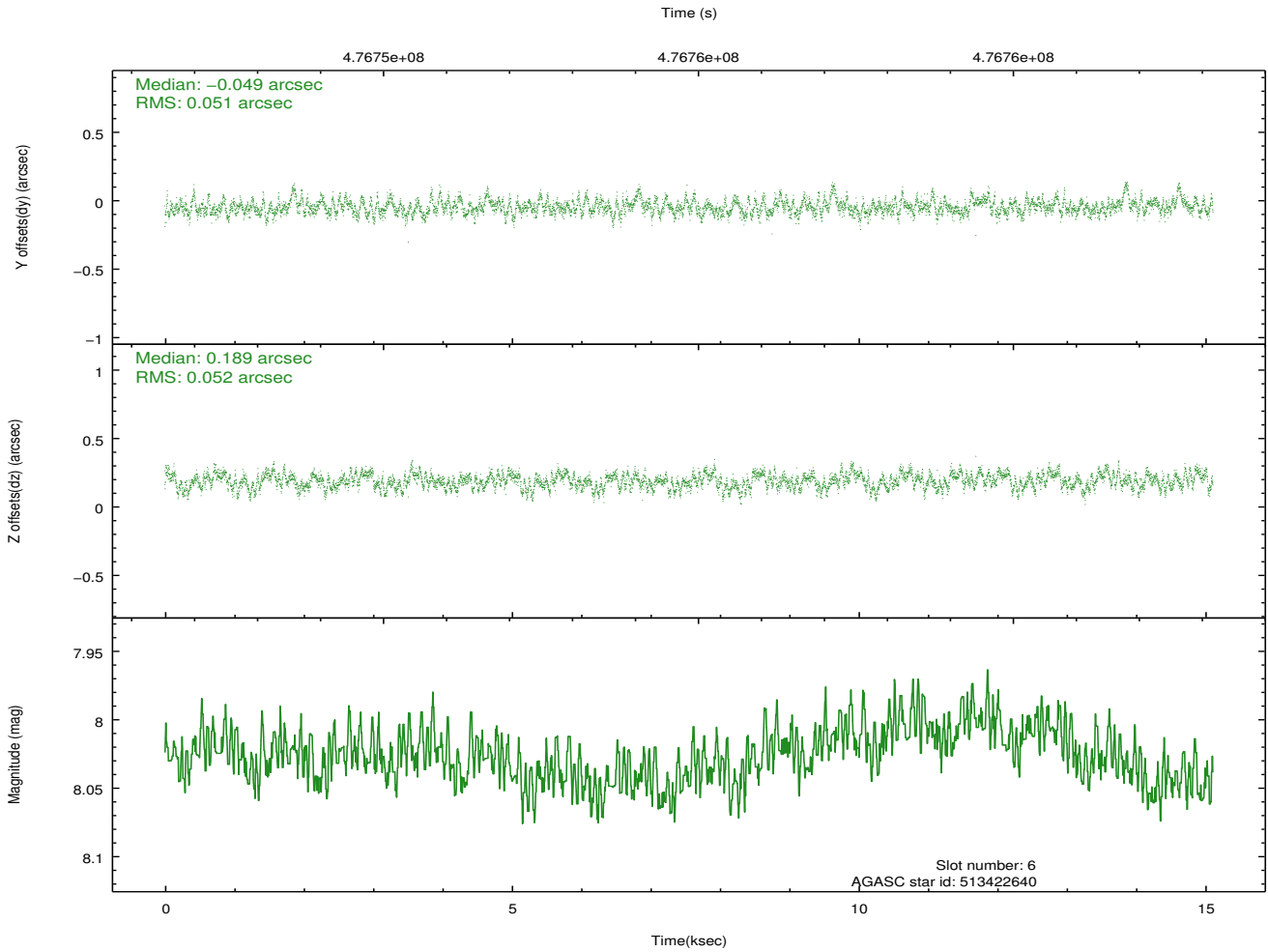
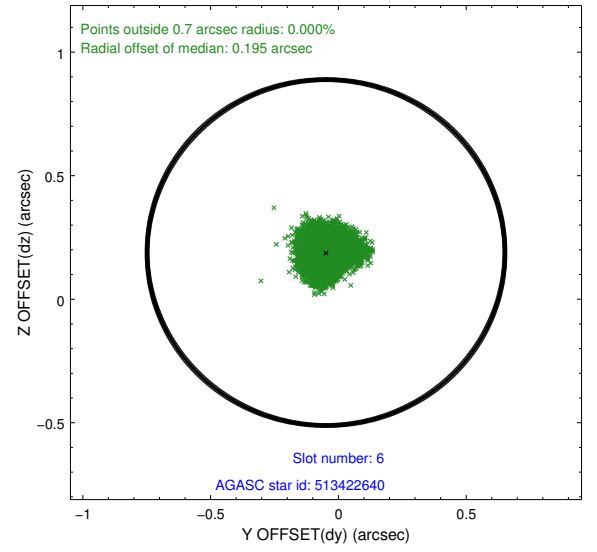
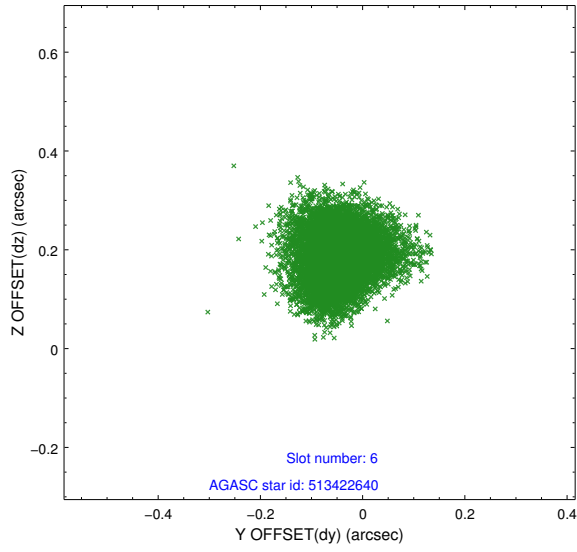
2.4.2 Slot 4



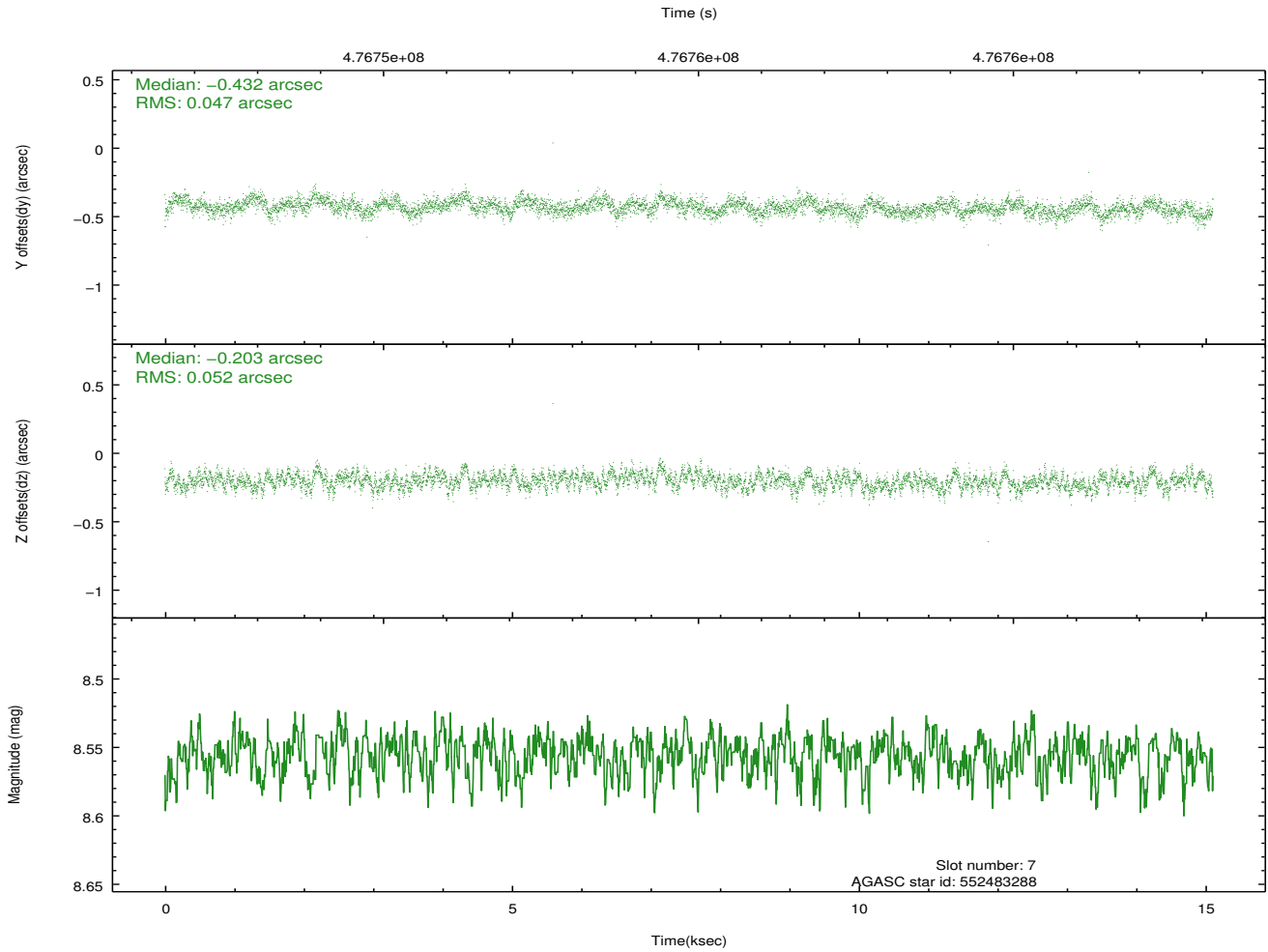
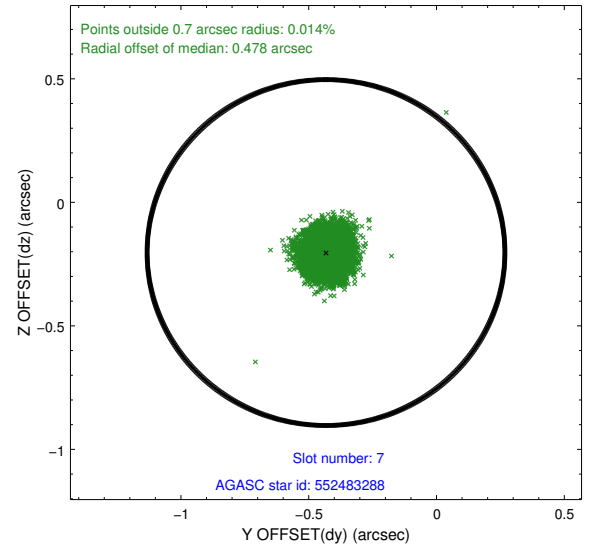
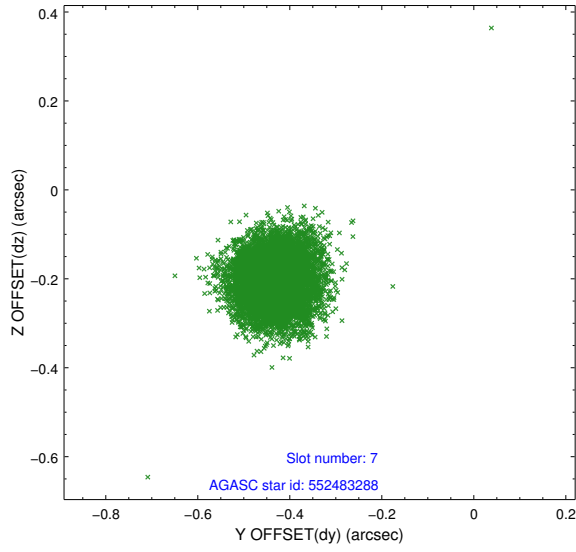
2.4.3 Slot 5



2.4.4 Slot 6

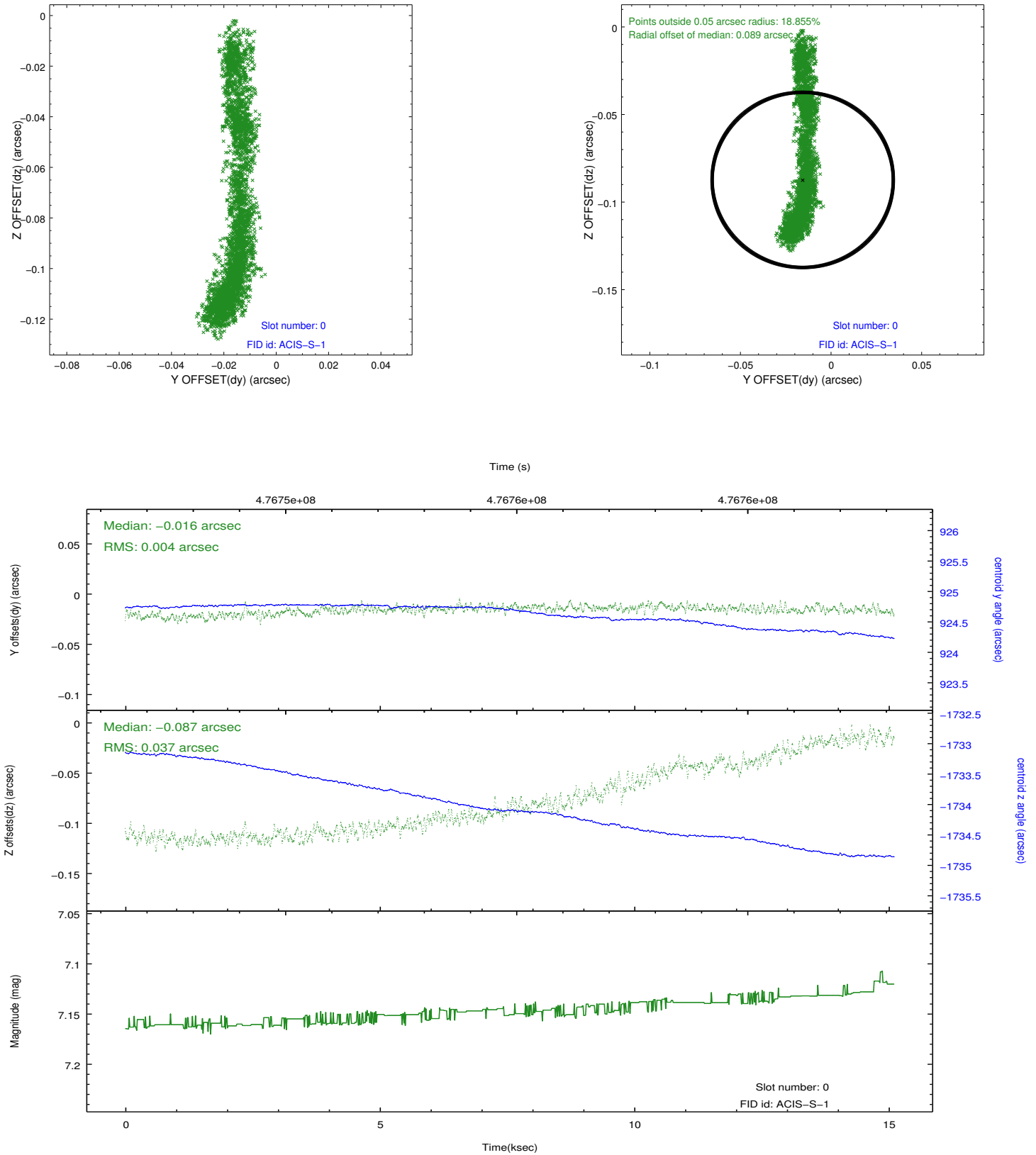


2.4.5 Slot 7

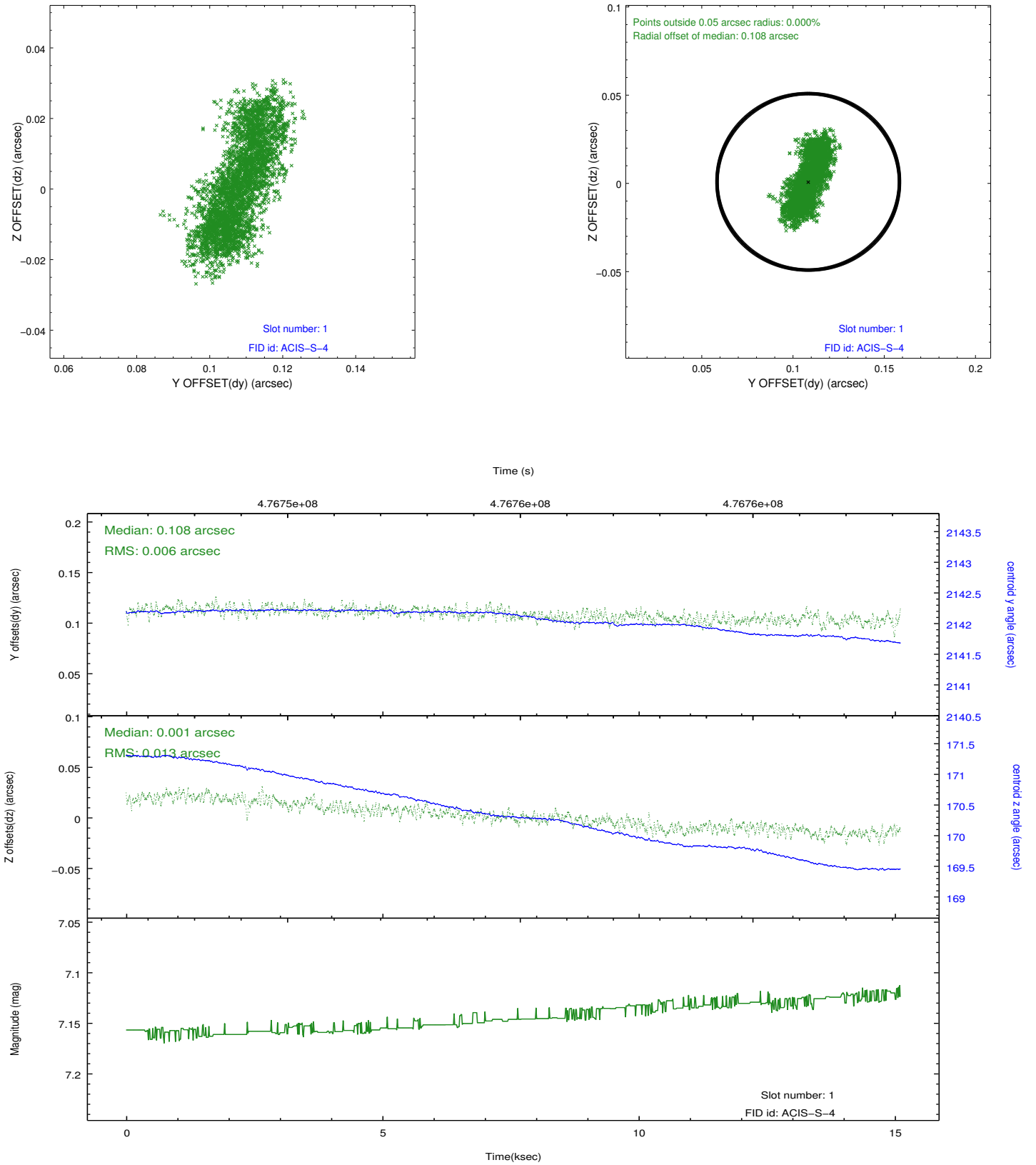


2.5 FID Slots

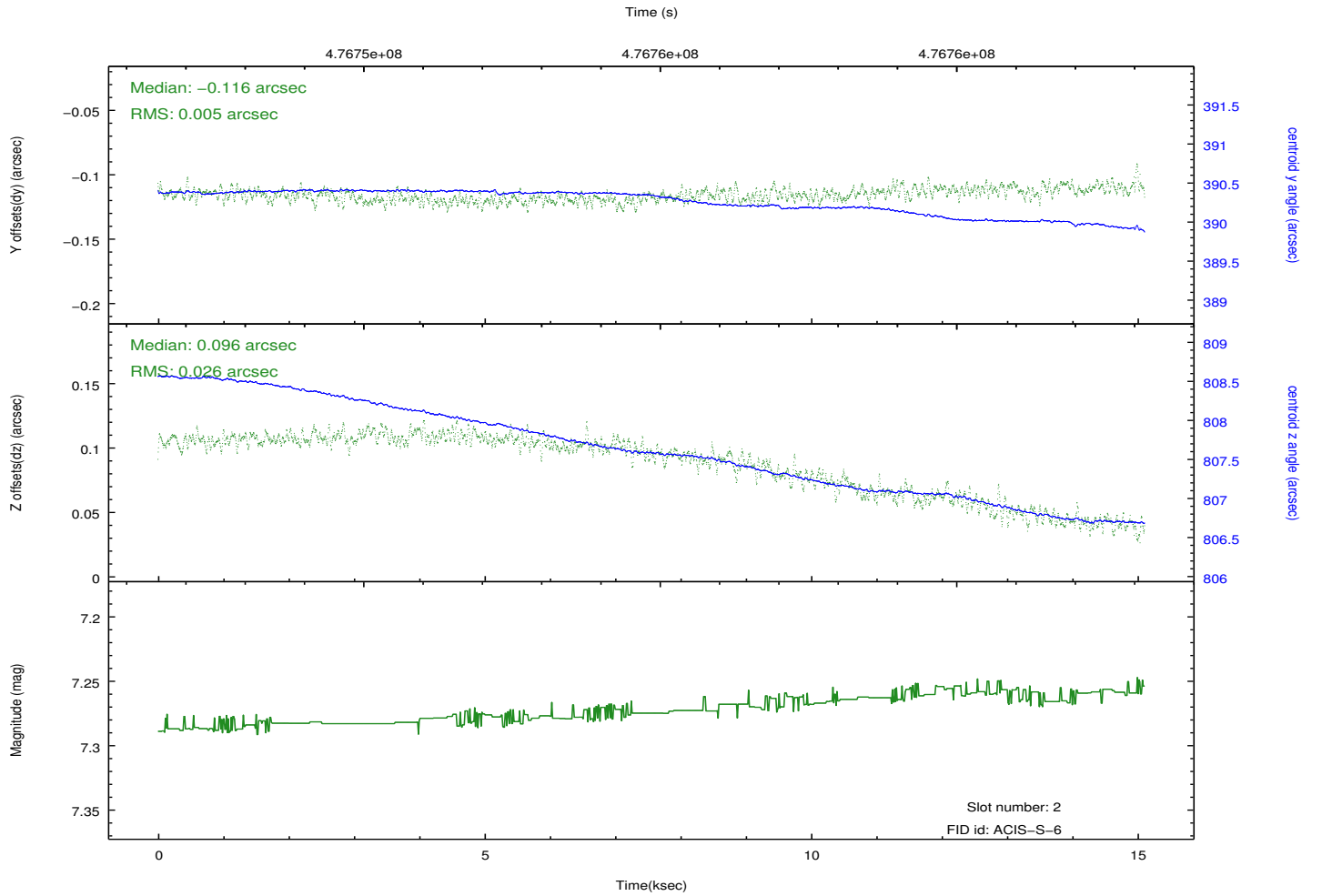
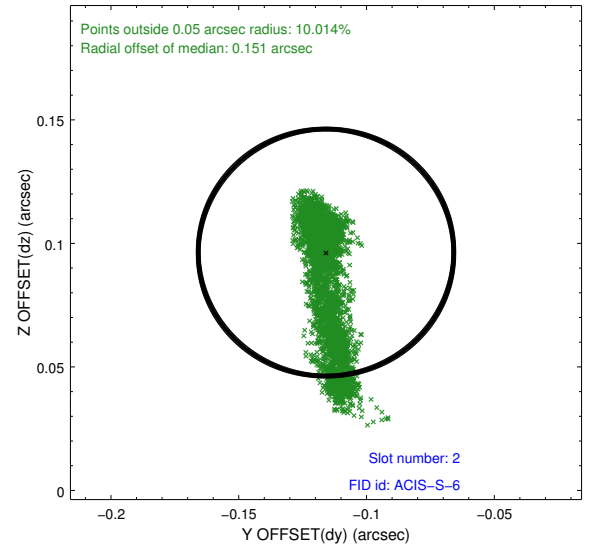
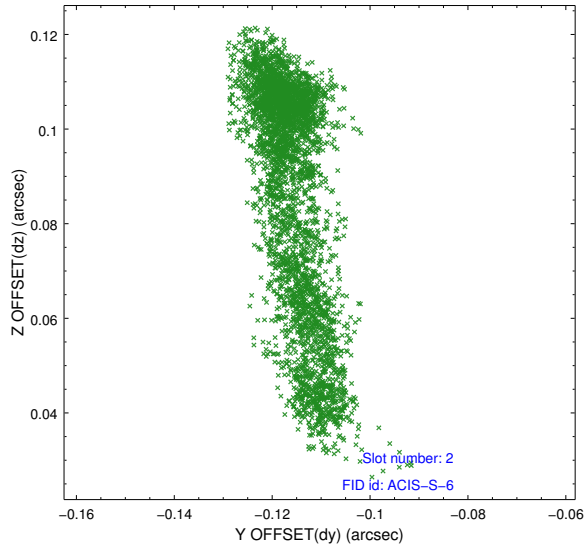
2.5.1 Slot 0



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)	2014.12.19
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.959999944329

A.2 Comments

A spatial region of the original bias map for CCD = 2 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 = 2 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:
(278.80210,59.88001), (278.78848,59.88743), (278.74184,59.86595), (278.75826,59.85983)

=====

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.