

V&V Reference Report

L2 ASCDS Version : 10

Observation 14515 - L2 Version 2
Chandra X-Ray Center

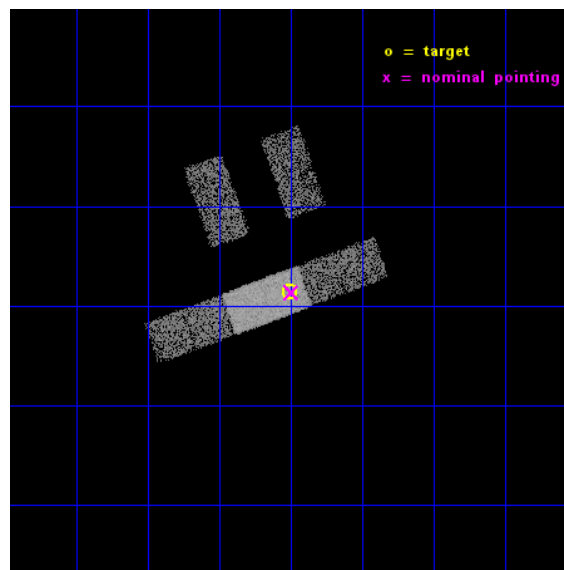
L2 Processing Date : Dec 6 2014

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
A	Summary	17
A.1	Status	17
A.2	Comments	17

1 Front

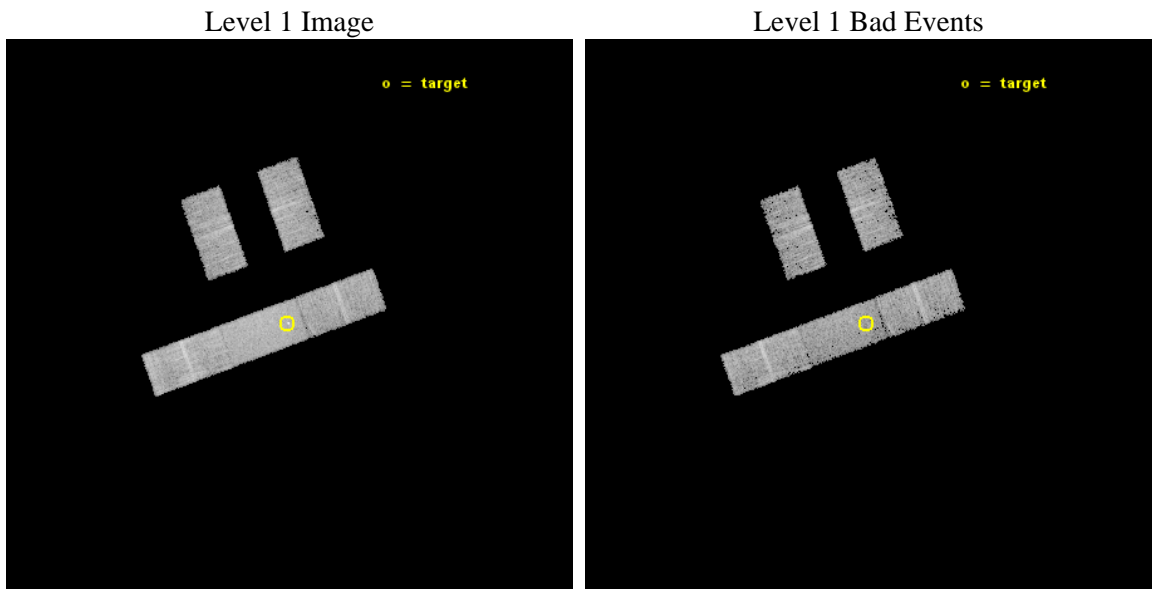
seq_num	702752	Sequence number
obs_id	14515	Observation id
title	ENERGY DEPENDENT X-RAY MICROLENSING AND THE STRUCTURE OF QUASARS	P
observer	Prof. Christopher Kochanek	Principal investigator
object	Q2237+0305	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	340.12625	Observer's specified target RA [deg]
dec_targ	3.358	Observer's specified target Dec [deg]
ra_nom	340.12384779008	Nominal RA [deg]
dec_nom	3.356133543853	Nominal Dec [deg]
roll_nom	160.15677389612	Nominal Roll [deg]
revision	2	Processing version of data
ontime	9965.3999301791	Sum of GTIs [s]
livetime	9730.4943489549	Livetime [s]
ontime2	9965.2556313872	Sum of GTIs [s]
ontime3	9965.3377113938	Sum of GTIs [s]
ontime6	9965.3787513971	Sum of GTIs [s]
ontime7	9965.3999301791	Sum of GTIs [s]
ontime8	9965.2966713905	Sum of GTIs [s]
l2events	25321	Number of level 2 events



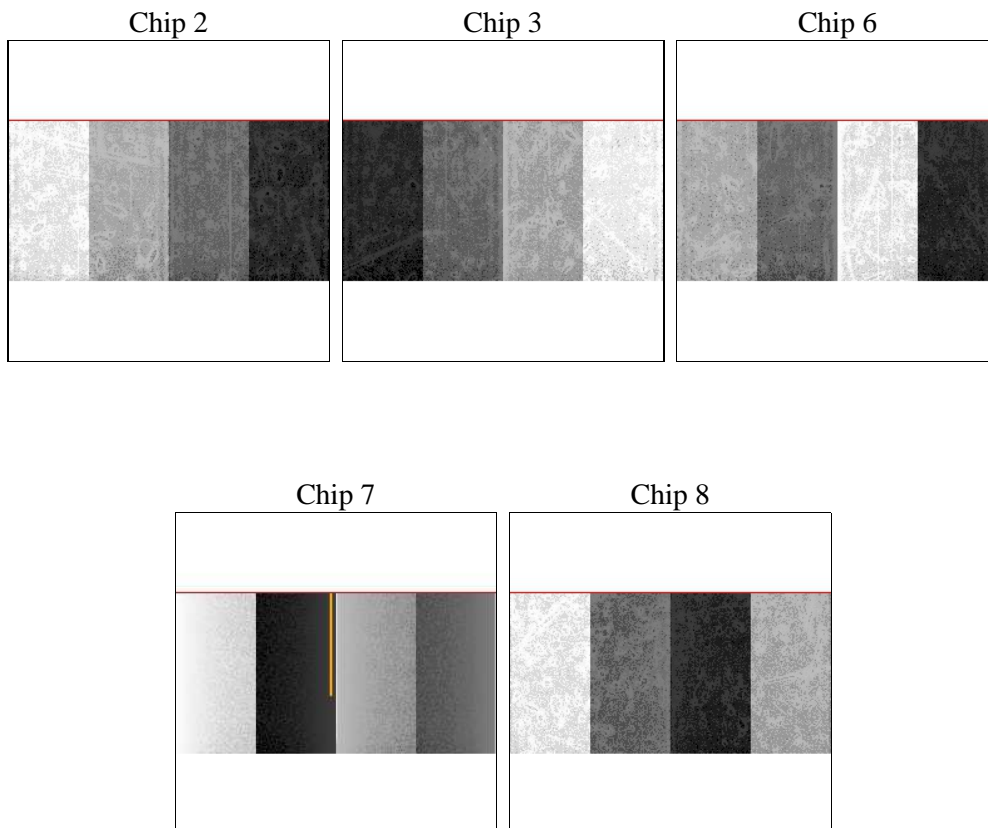
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	9900.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	9965.3999301791	Sum of GTIs [s]
caldbver	4.6.4	 	ontime2	9965.2556313872	Sum of GTIs [s]
date	2014-12-06T07:43:49	Date and time of file creation	ontime3	9965.3377113938	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	9965.3787513971	Sum of GTIs [s]
			ontime7	9965.3999301791	Sum of GTIs [s]
			ontime8	9965.2966713905	Sum of GTIs [s]
			l1events	141560	Number of level 1 events

2.1.4 Events

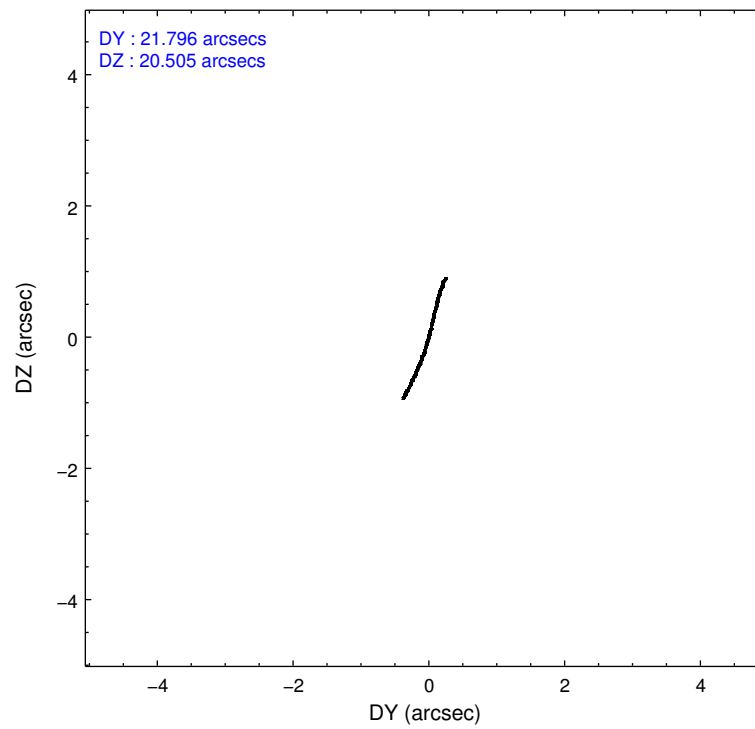
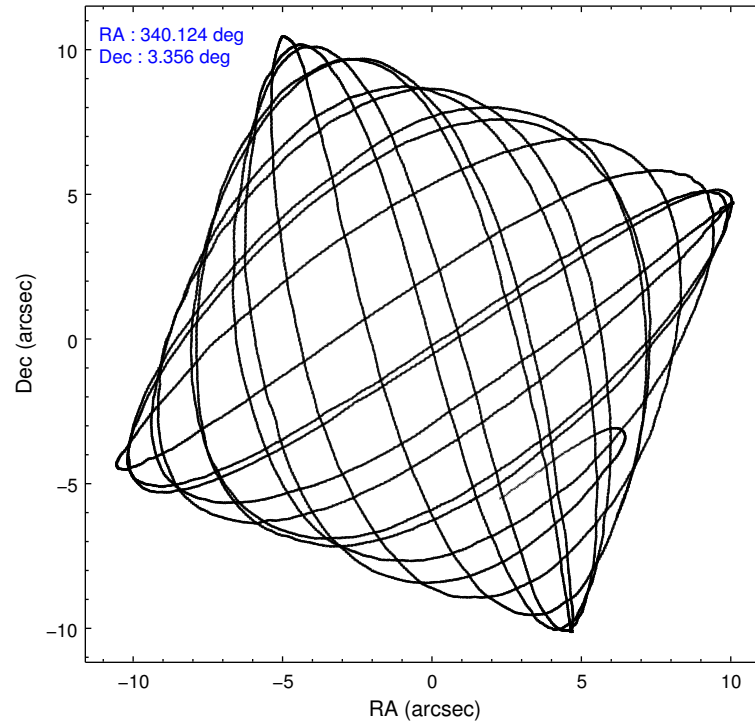
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	24345	23330	25471	33904	34510
rejected events	21533	20524	22411	18545	25300
rejected %	88%	87%	87%	54%	73%

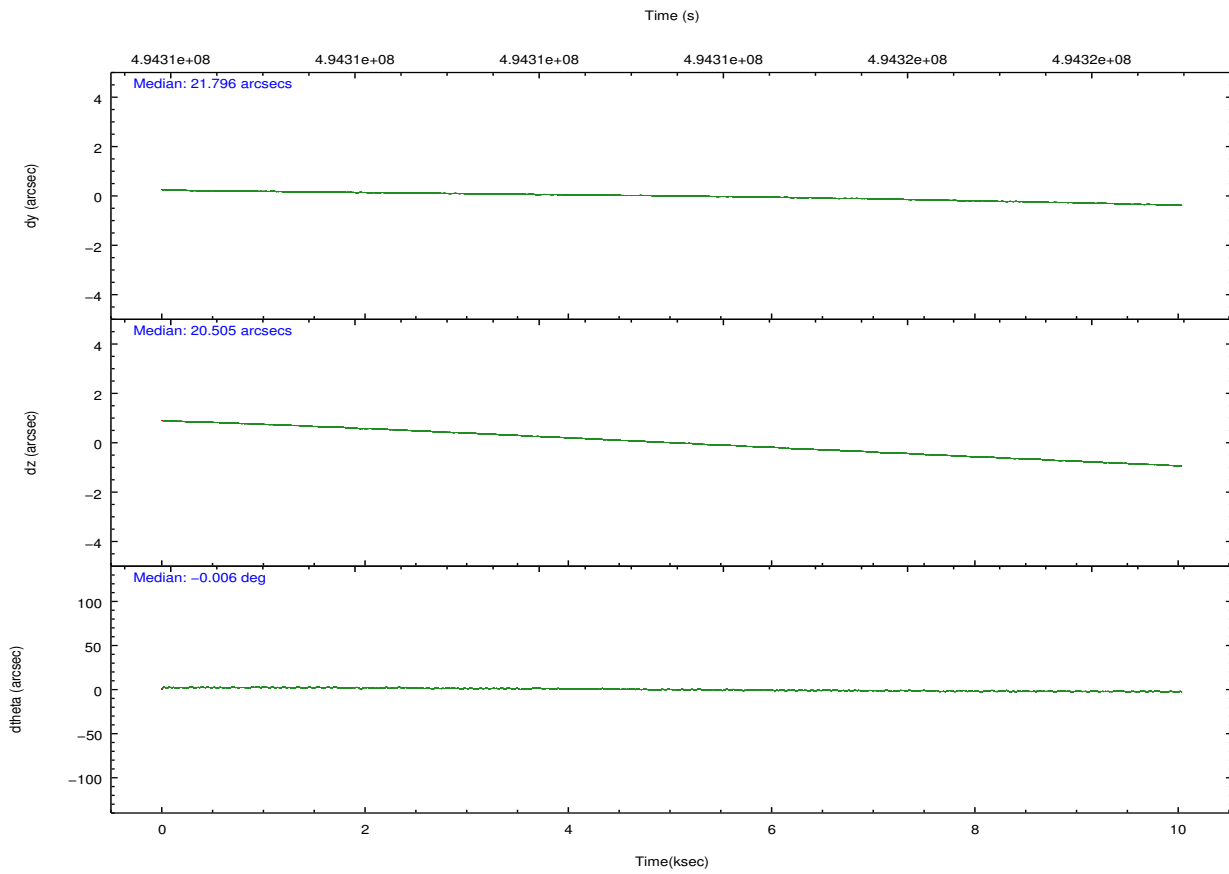
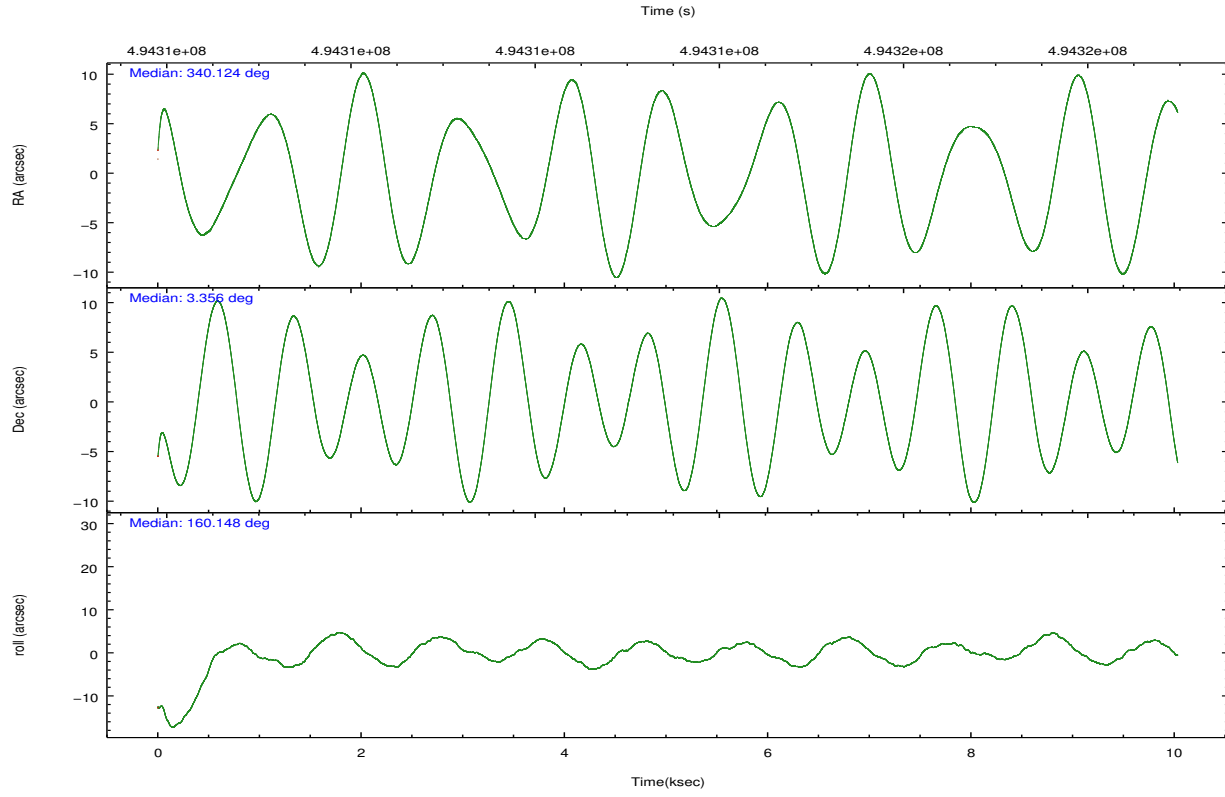
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	960	865	991	1514	2797
	3%	3%	3%	4%	8%
grade 1 events	10	9	10	43	24
	0%	0%	0%	0%	0%
grade 2 events	698	626	658	3146	2075
	2%	2%	2%	9%	6%
grade 3 events	339	325	378	1523	1057
	1%	1%	1%	4%	3%
grade 4 events	322	358	358	1450	1026
	1%	1%	1%	4%	2%
grade 5 events	1045	1267	1333	3657	1964
	4%	5%	5%	10%	5%
grade 6 events	493	633	675	7736	2255
	2%	2%	2%	22%	6%
grade 7 events	20478	19247	21068	14835	23312
	84%	82%	82%	43%	67%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23678	ACIS-23678	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	340.150741	340.1238477900779	CCD I2 on	O4	Y
[deg] Pointing Dec	3.361341	3.356133543852962	CCD I3 on	O3	Y
[deg] Pointing Roll	159.998561	160.1567738961238	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	O1	Y
[mm] SIM translation stage pos	-190.132523	-190.145094680475	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01257209746719923	CCD S4 on	O2	Y
[s] Observation start time (MET)	494308550.184000	494307251.26288	CCD S5 on	N	N
Observation start date	2013-08-31T03:54:43	2013-08-31T03:34:11	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	494318450.184000	494319191.48853	On-chip summing requested	N	N
Observation end date	2013-08-31T06:39:43	2013-08-31T06:53:11	Subarray requested	CUSTOM	1/2
Read mode	TIMED	TIMED	Subarray start row	257	257
			Subarray row count	512	512
			Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.7

2.3 Aspect





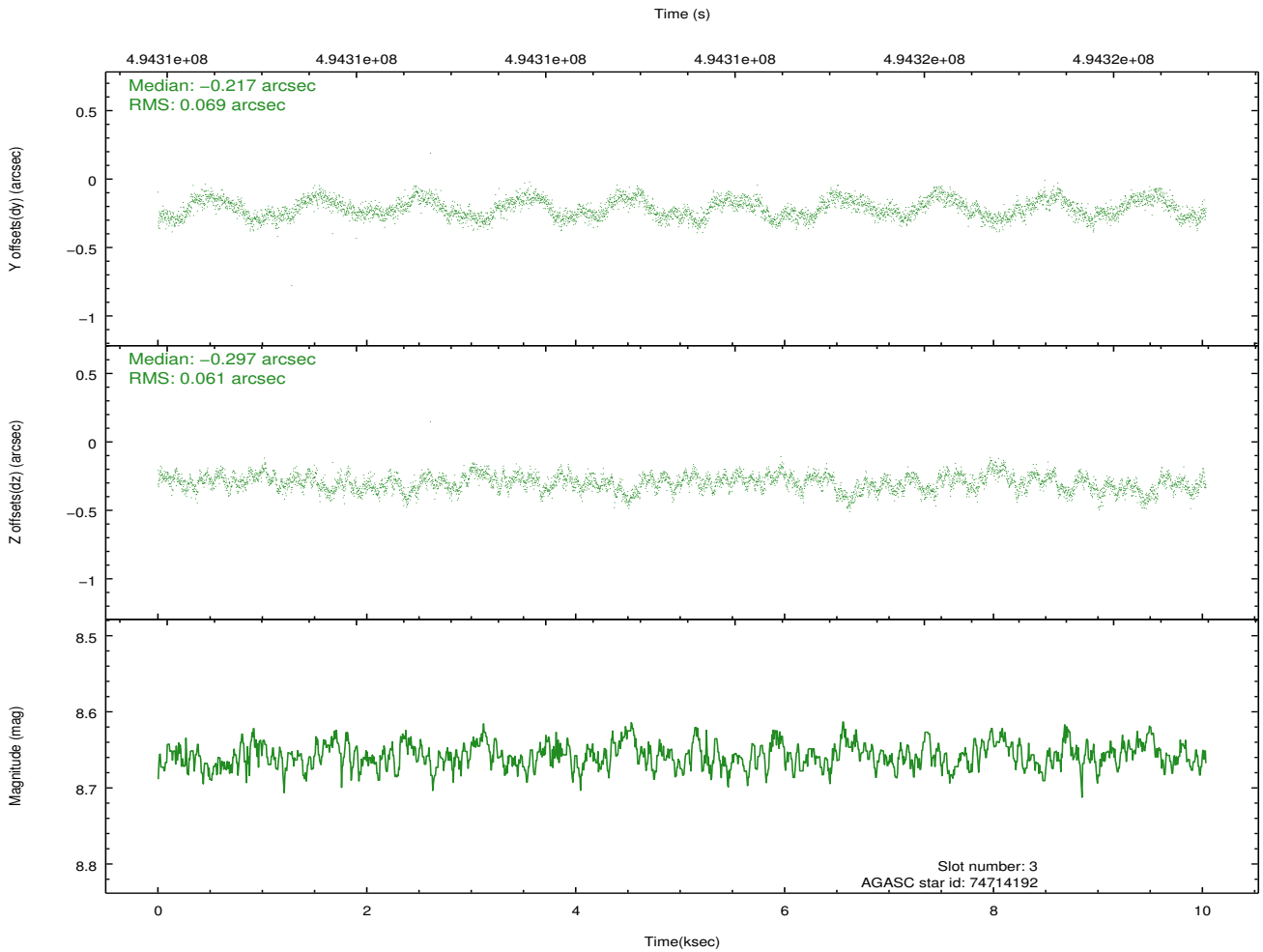
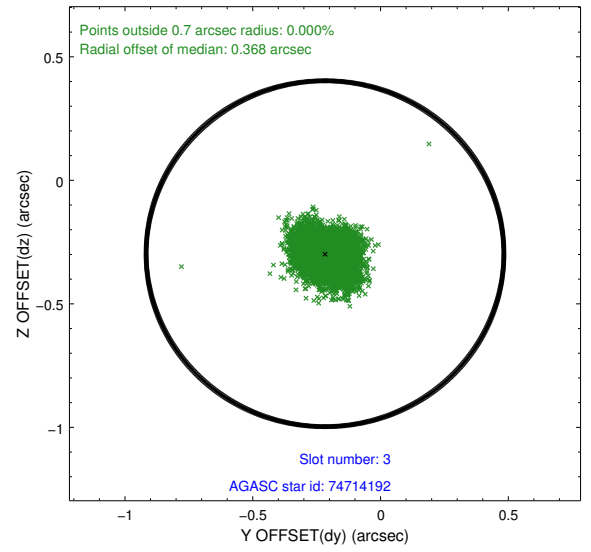
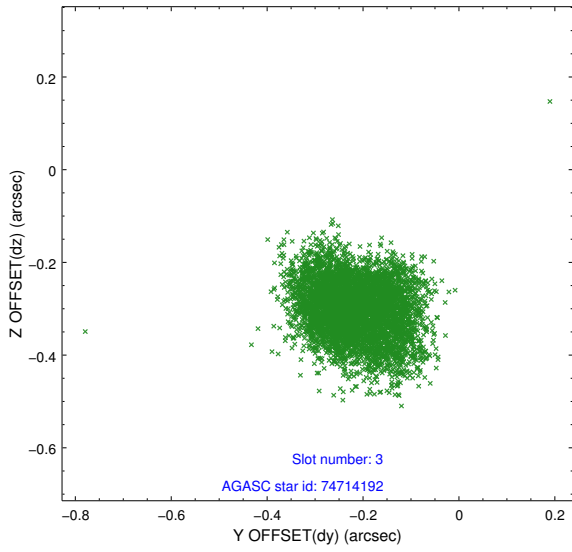
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.01	2446	0.140	-0.048	0.022	0.037	0.000000	0.000000	921.27	-1737.59
1	FID		ACIS-S-2	6.94	2448	-0.103	0.038	0.016	0.036	0.000000	0.000000	-774.59	-1742.63
2	FID		ACIS-S-5	7.05	2448	-0.062	0.017	0.021	0.031	0.000000	0.000000	-1828.34	159.45
3	GUIDE	used	74714192	8.66	4892	-0.217	-0.297	0.098	0.153	339.623837	3.342441	1756.31	711.20
4	GUIDE	used	74715008	7.96	4894	-0.187	-0.120	0.079	0.122	339.956848	3.242441	508.87	640.68
5	GUIDE	used	74842128	8.54	4895	0.249	-0.027	0.100	0.154	340.118134	3.132788	-170.53	813.70
6	GUIDE	used	74854992	8.29	4894	0.114	0.214	0.075	0.119	340.342808	3.603730	-349.24	-1055.31
7	GUIDE	used	74719664	8.34	4891	0.043	0.232	0.099	0.166	339.961529	4.116119	1566.78	-2322.96

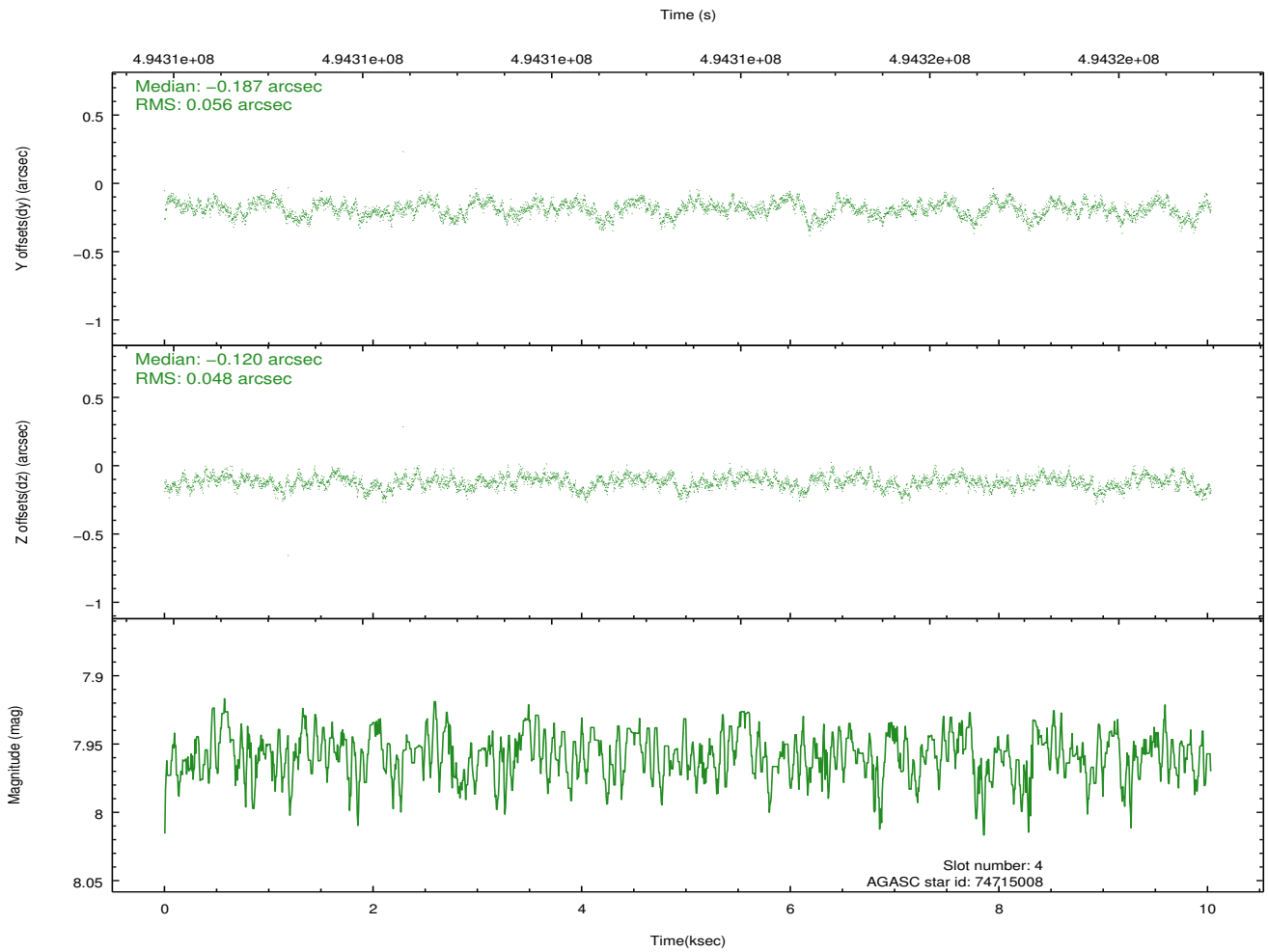
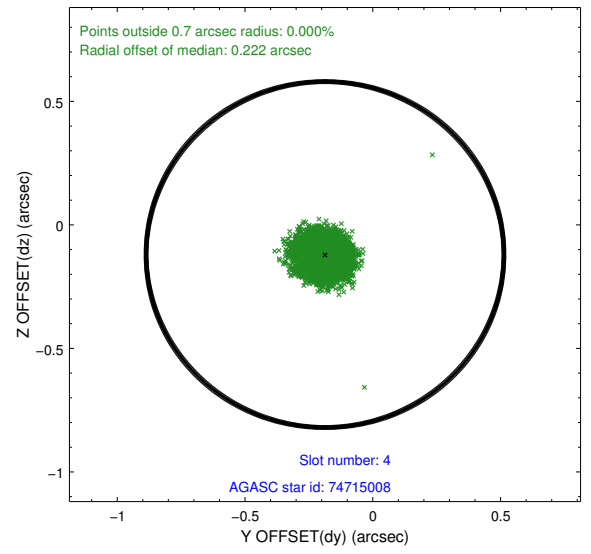
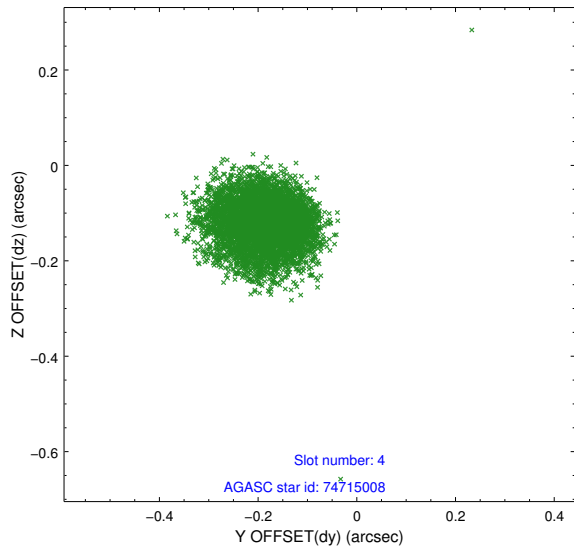
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2.4 Star Slots

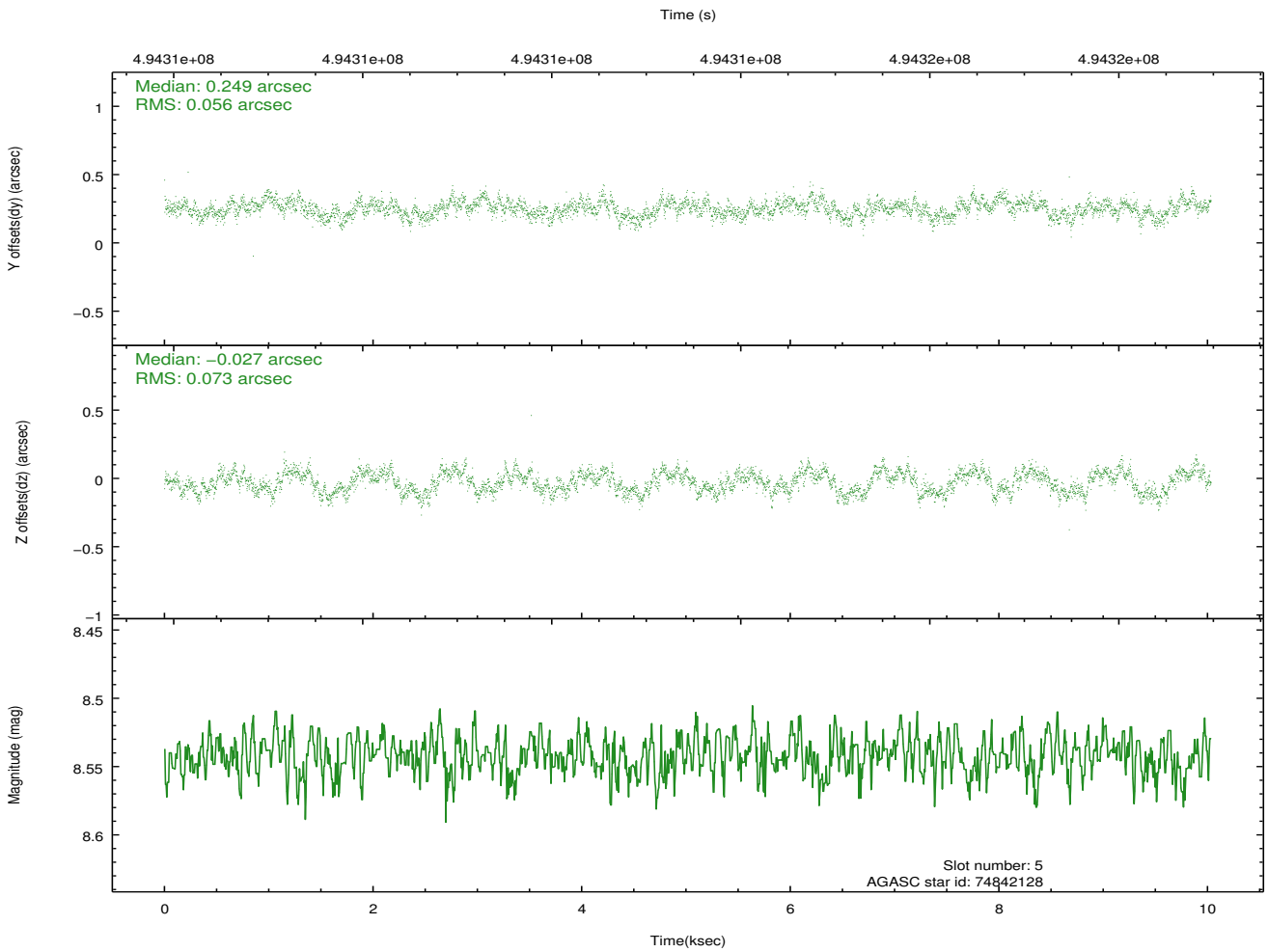
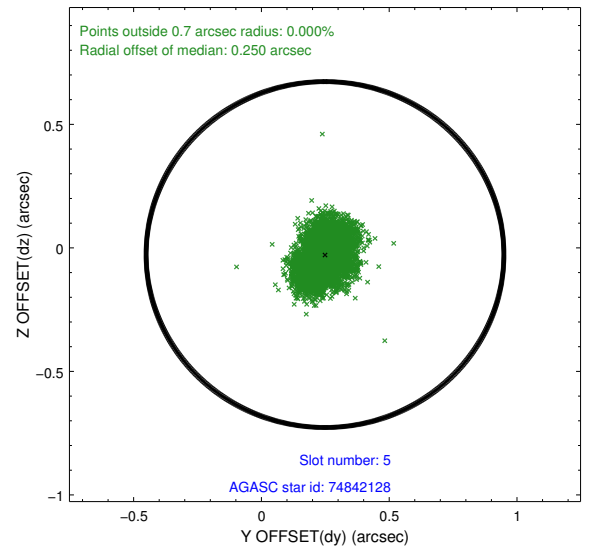
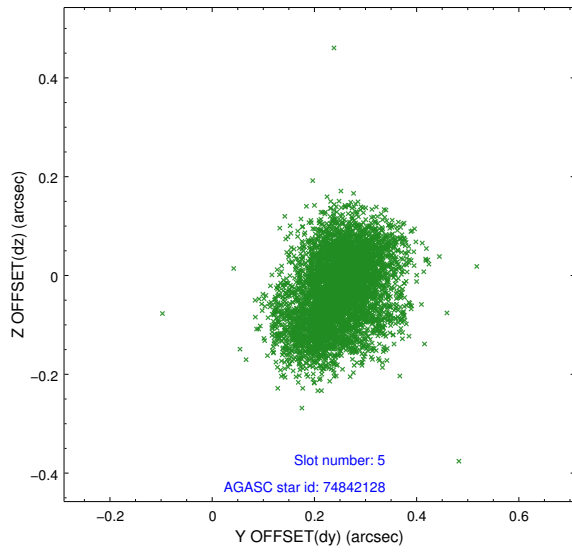
2.4.1 Slot 3



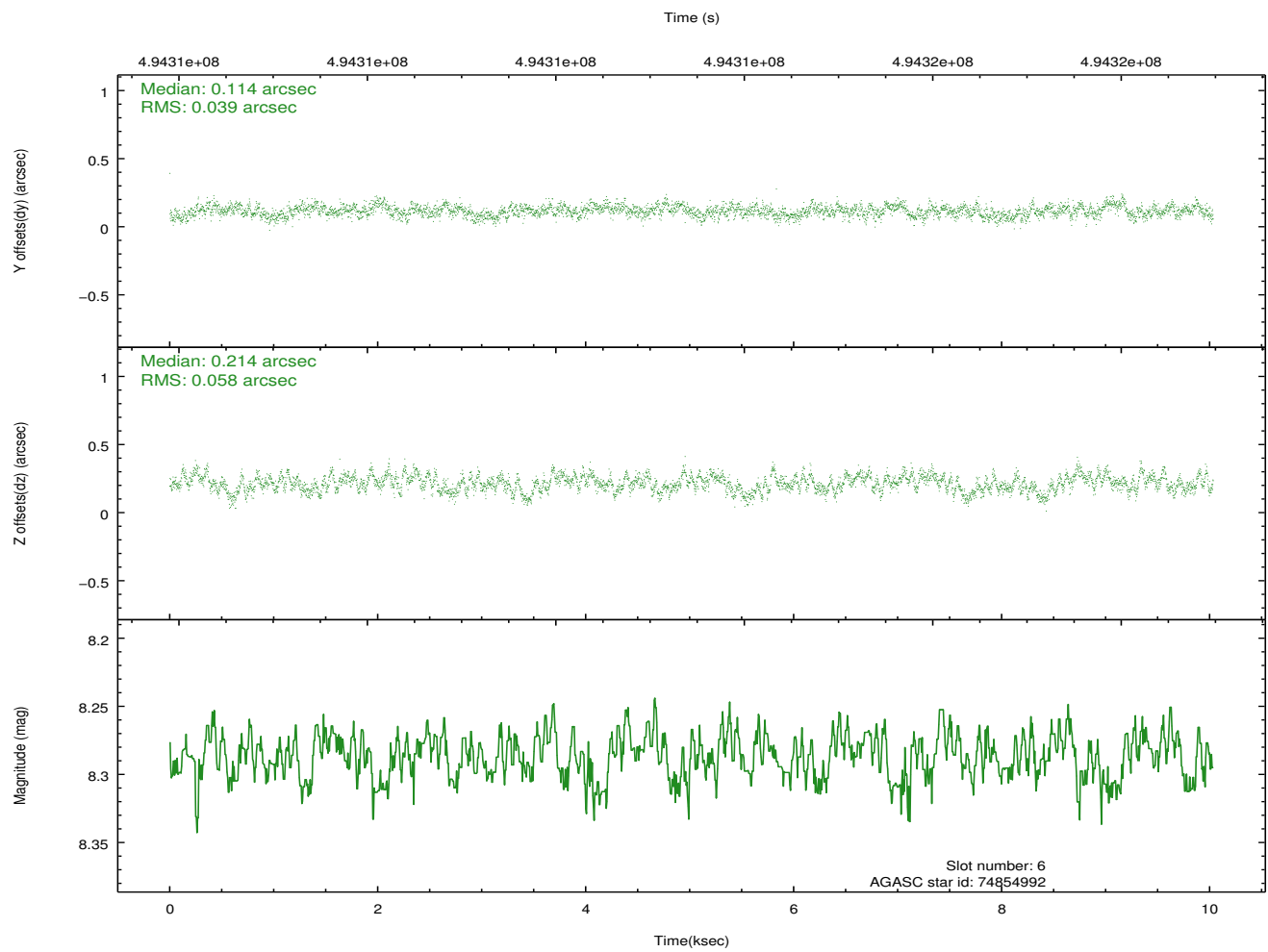
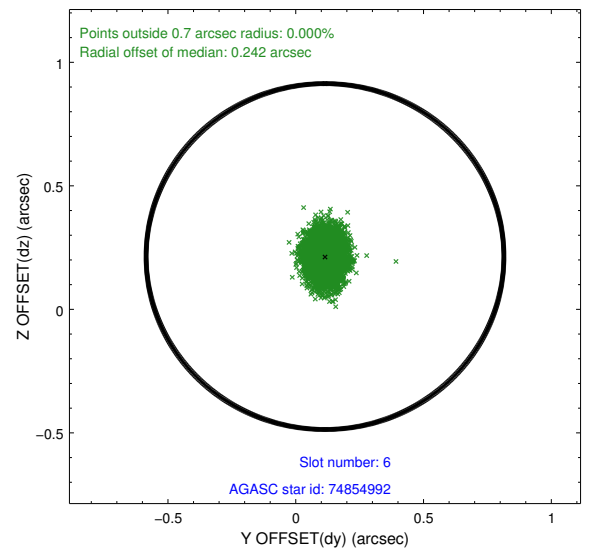
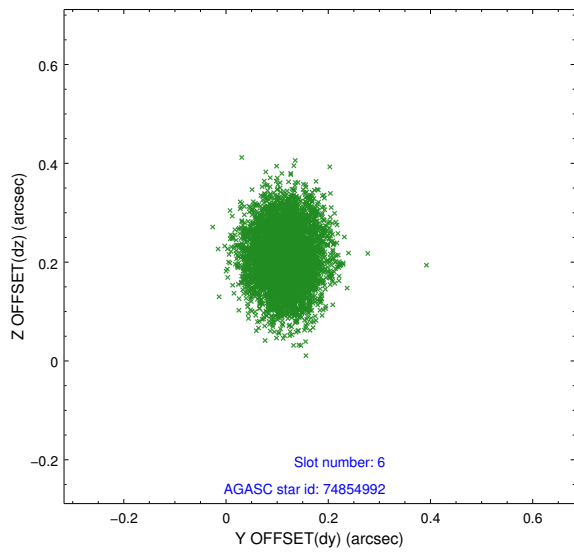
2.4.2 Slot 4



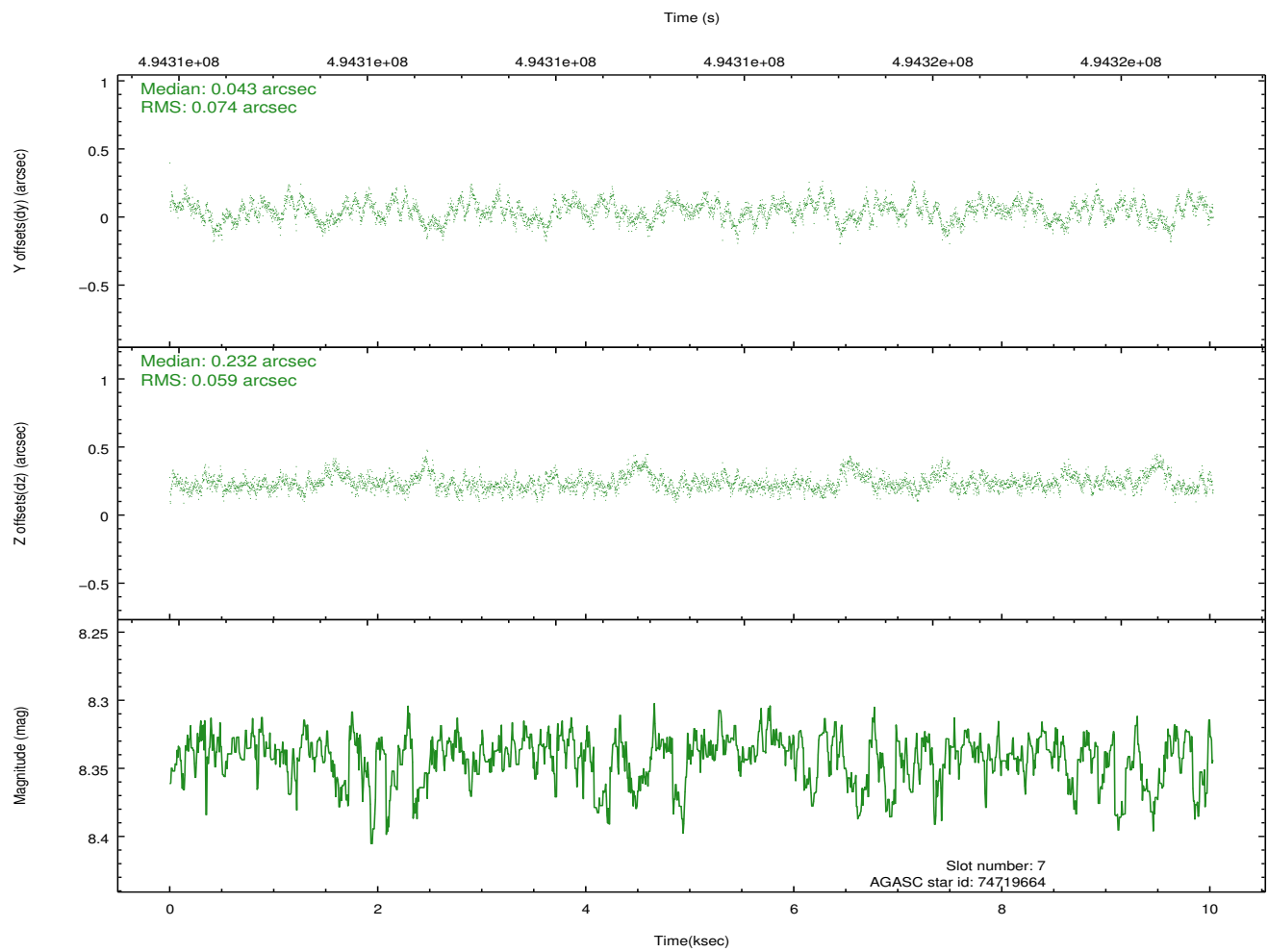
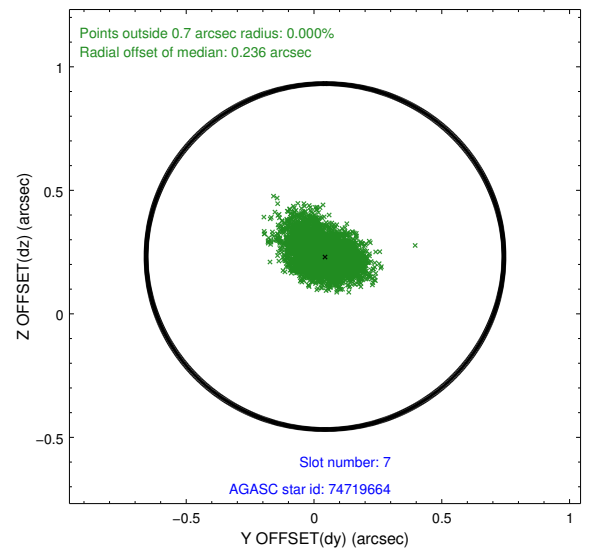
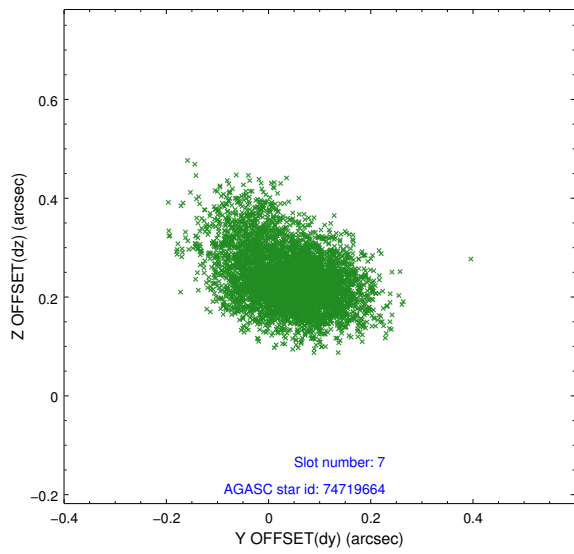
2.4.3 Slot 5



2.4.4 Slot 6

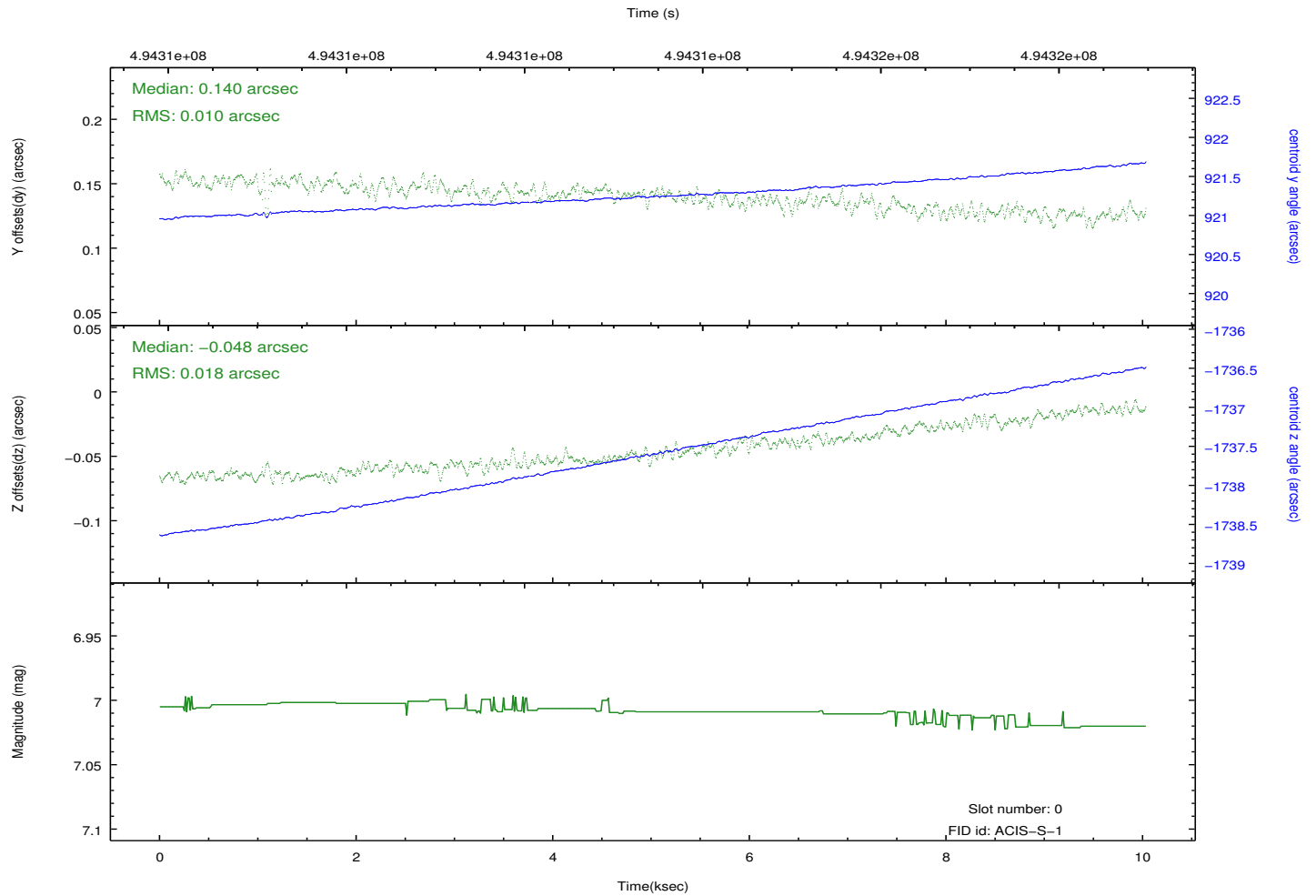
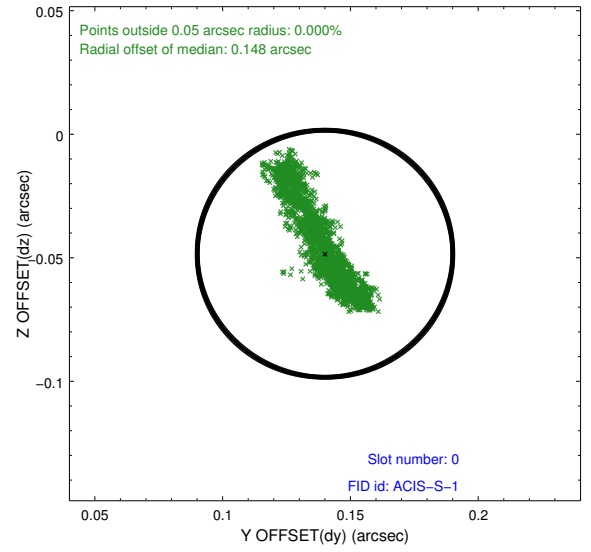
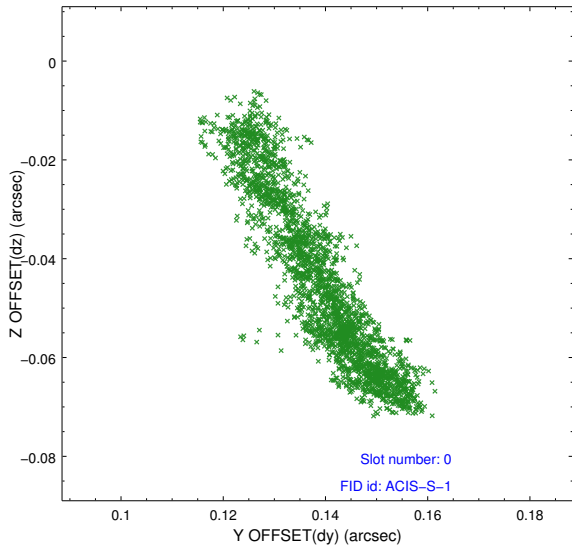


2.4.5 Slot 7

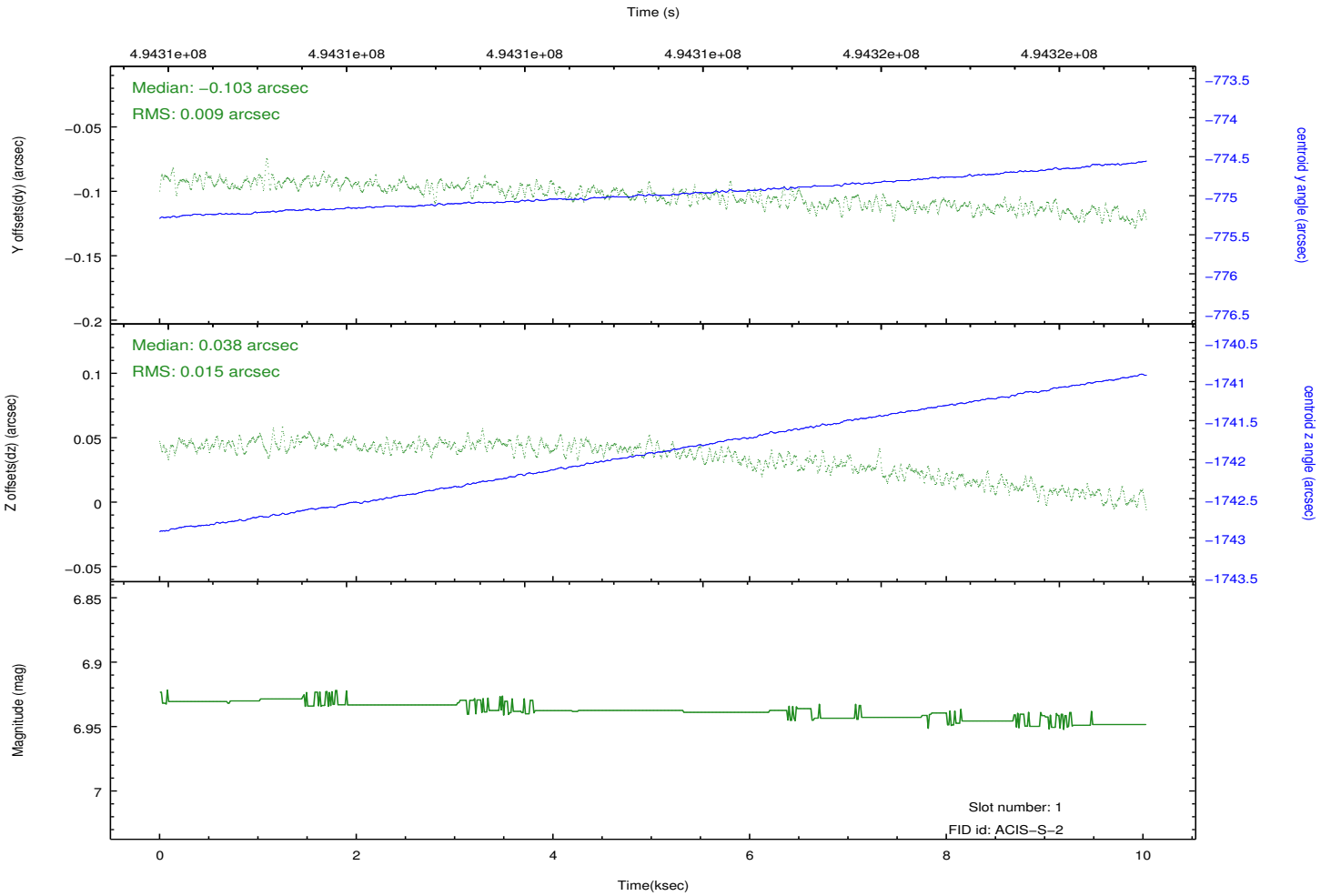
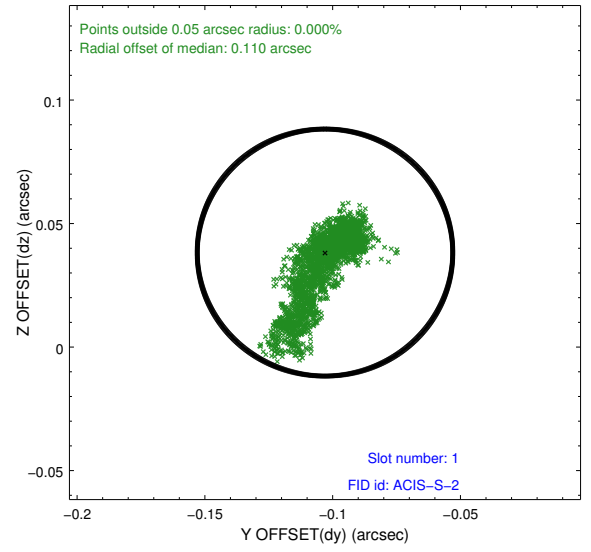
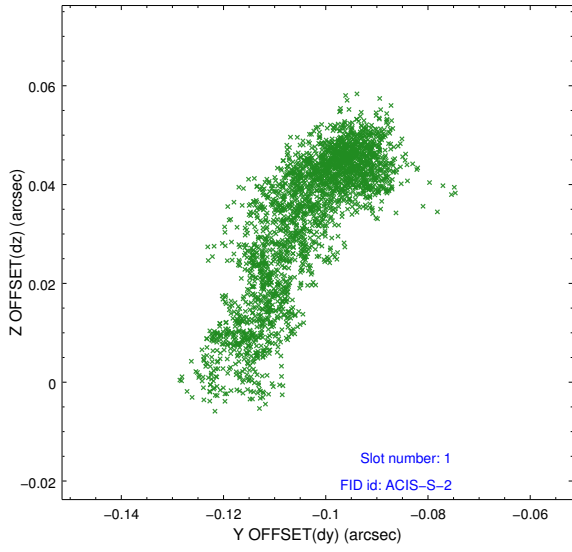


2.5 FID Slots

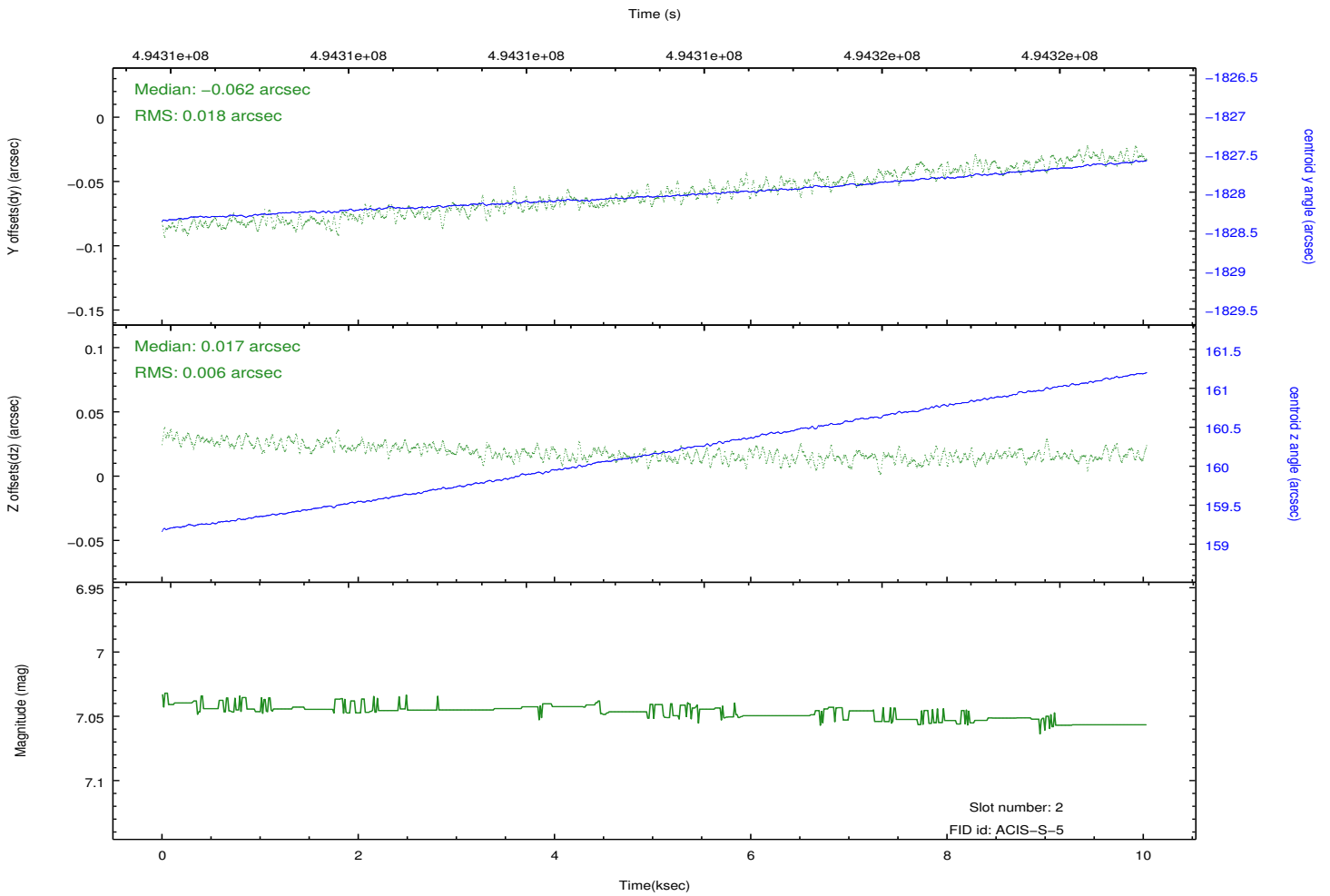
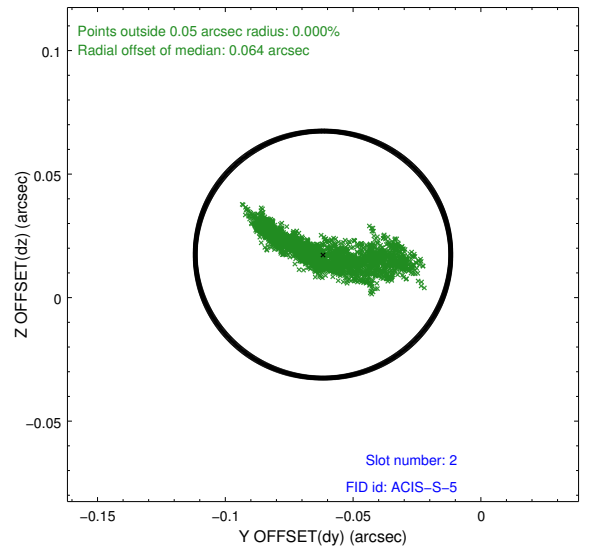
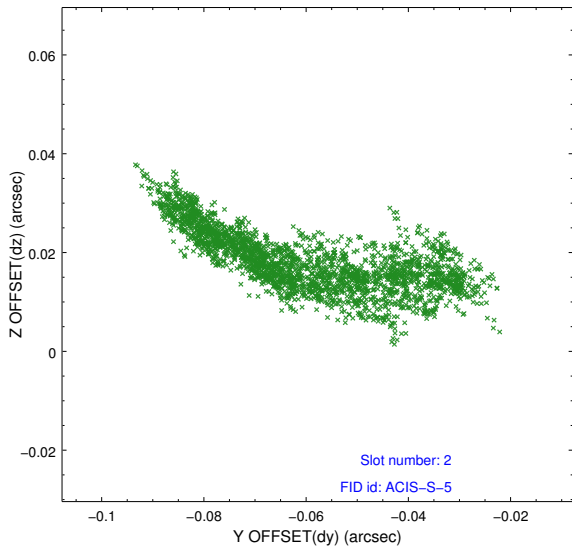
2.5.1 Slot 0



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)	2014.12.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.9653999301791

A.2 Comments

Joint Proposal with HST. Monitor constraint met.

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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.