

V&V Reference Report

L2 ASCDS Version : 10

Observation 16316 - L2 Version 2
Chandra X-Ray Center

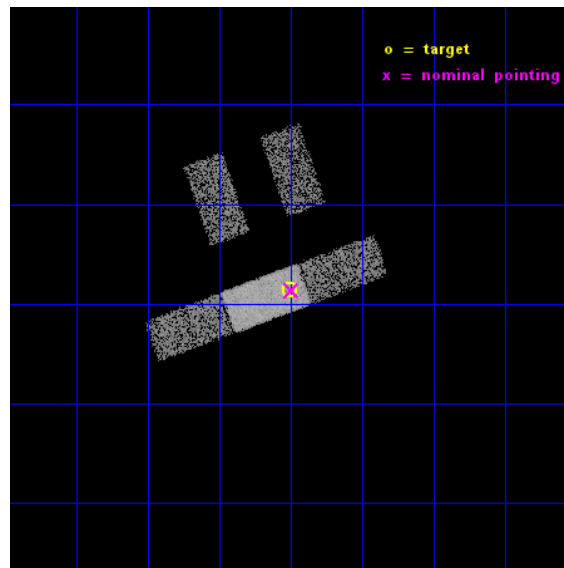
L2 Processing Date : Dec 6 2014

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1 Front

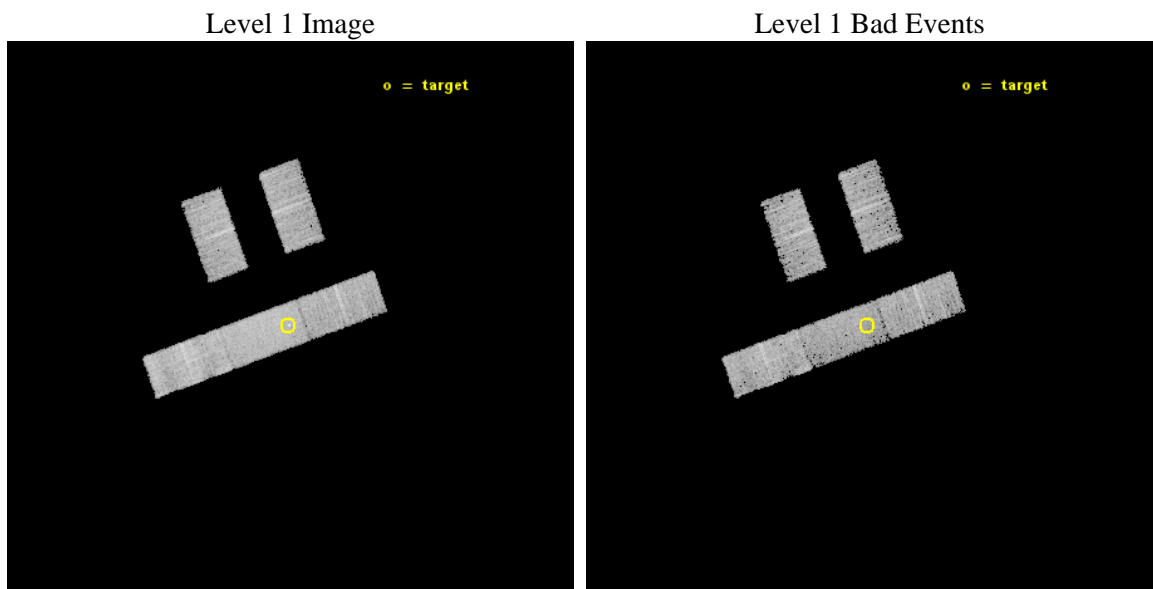
seq_num	702752	Sequence number
obs_id	16316	Observation id
title	ENERGY DEPENDENT X-RAY MICROLENSING AND THE STRUCTURE OF QUASARS	P
observer	Prof. Christopher Kochanek	Principal investigator
object	Q2237+0305	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	340.12625	Observer's specified target RA [deg]
dec_targ	3.358	Observer's specified target Dec [deg]
ra_nom	340.12381801076	Nominal RA [deg]
dec_nom	3.356121116585	Nominal Dec [deg]
roll_nom	160.15675119143	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10065.699929476	Sum of GTIs [s]
livetime	9828.4300648514	Livetime [s]
ontime2	10065.682870209	Sum of GTIs [s]
ontime3	10065.699929476	Sum of GTIs [s]
ontime6	10065.699929476	Sum of GTIs [s]
ontime7	10065.699929476	Sum of GTIs [s]
ontime8	10065.699929476	Sum of GTIs [s]
l2events	25770	Number of level 2 events



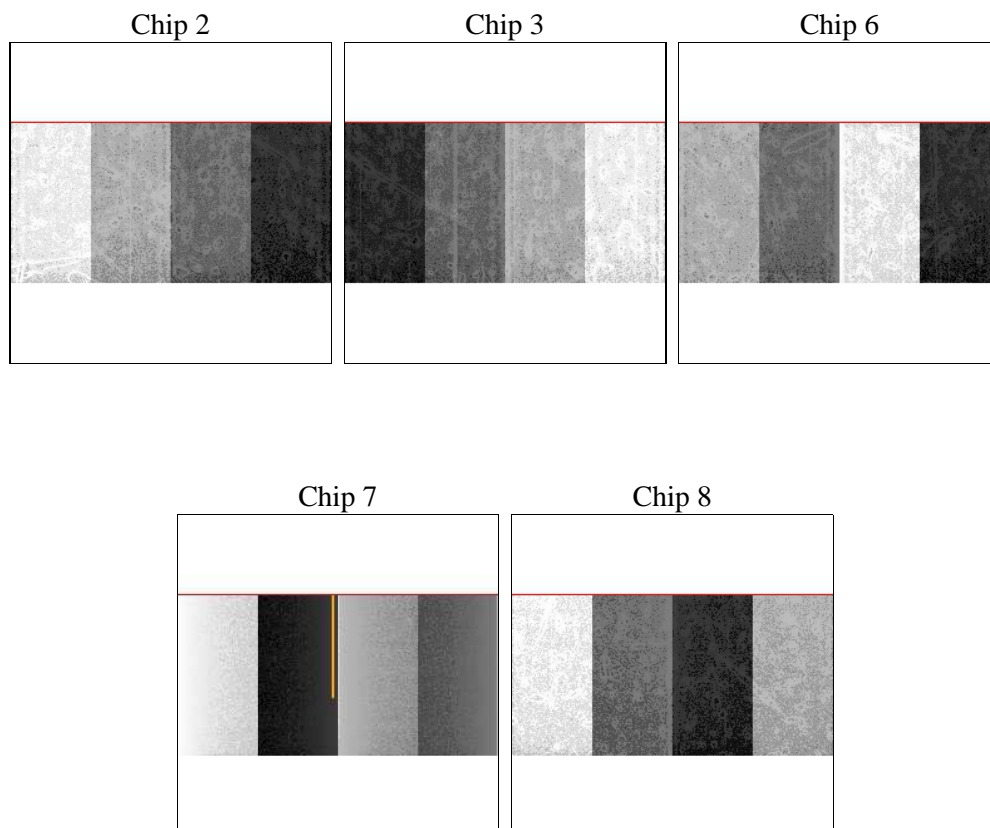
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	10065.699929476	Sum of GTIs [s]
caldsver	4.6.4	 	ontime2	10065.682870209	Sum of GTIs [s]
date	2014-12-06T05:18:29	Date and time of file creation	ontime3	10065.699929476	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	10065.699929476	Sum of GTIs [s]
			ontime7	10065.699929476	Sum of GTIs [s]
			ontime8	10065.699929476	Sum of GTIs [s]
			l1events	145040	Number of level 1 events

2.1.4 Events

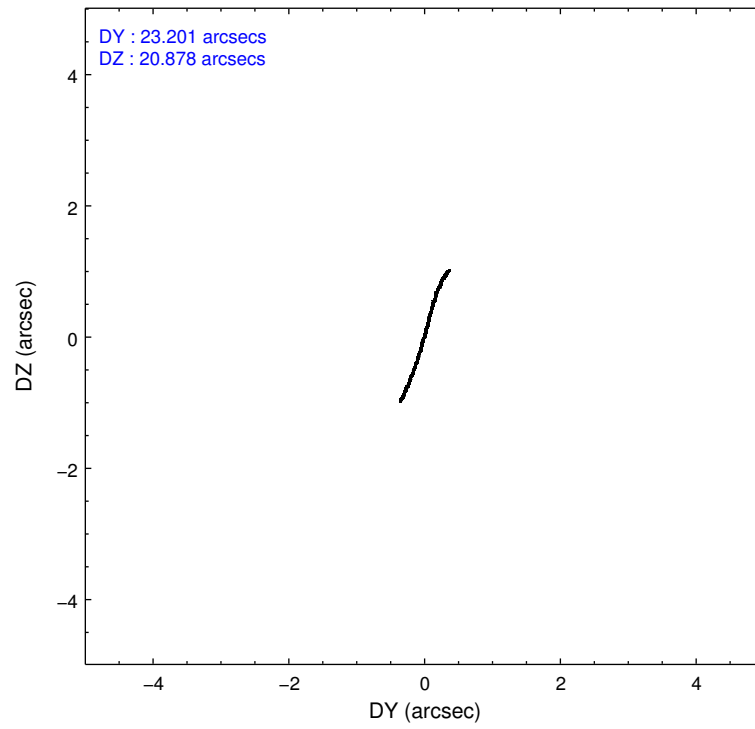
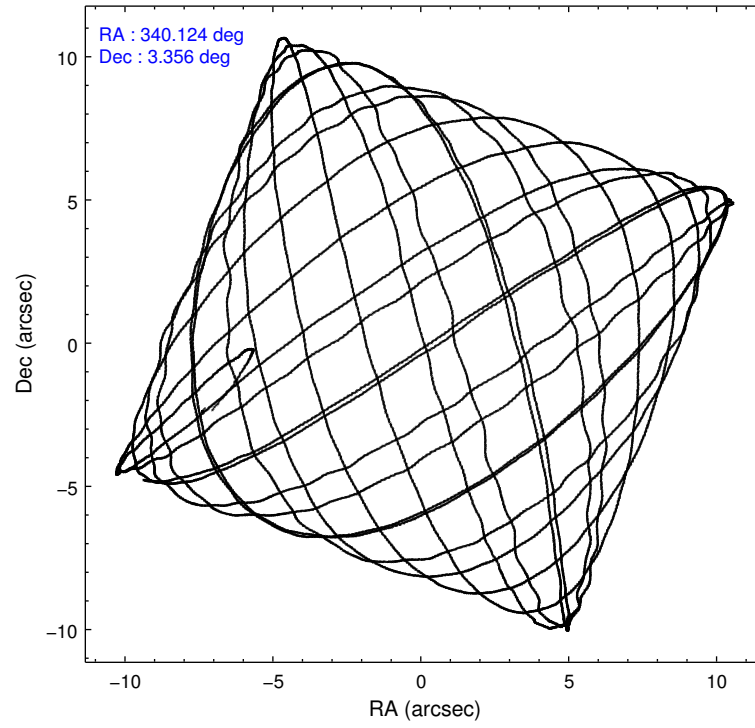
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	24153	25513	25553	34789	35032
rejected events	21298	22624	22361	19178	25941
rejected %	88%	88%	87%	55%	74%

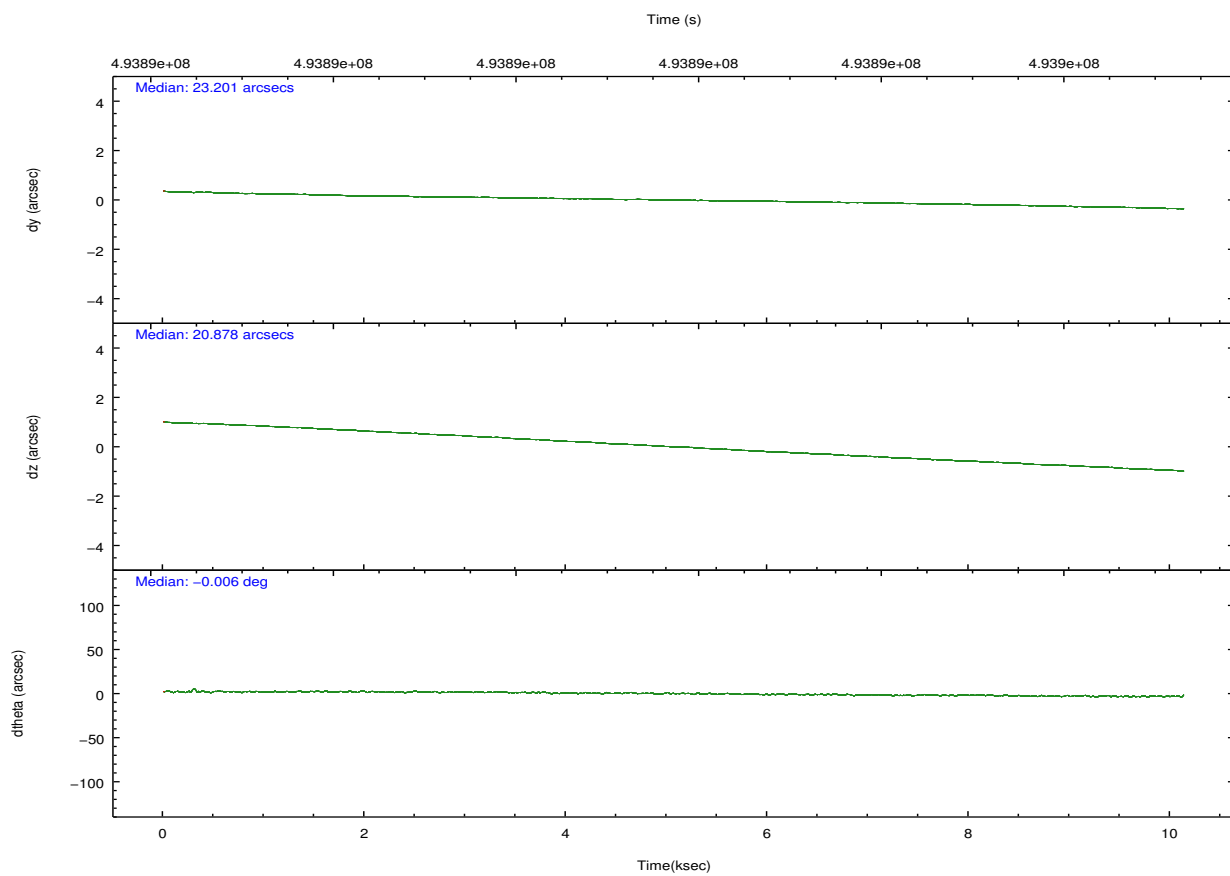
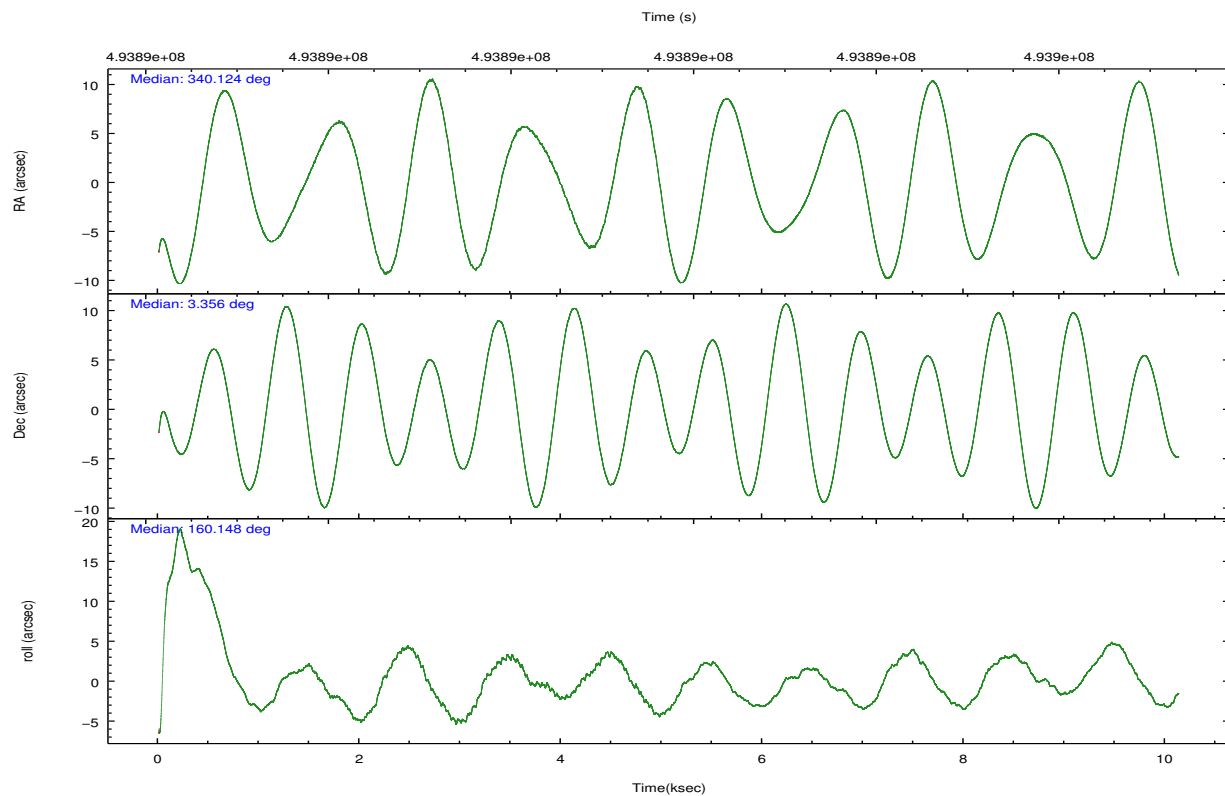
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	939	909	967	1541	2492
	3%	3%	3%	4%	7%
grade 1 events	9	6	10	49	11
	0%	0%	0%	0%	0%
grade 2 events	663	616	721	3238	2196
	2%	2%	2%	9%	6%
grade 3 events	356	396	400	1531	979
	1%	1%	1%	4%	2%
grade 4 events	351	364	378	1473	959
	1%	1%	1%	4%	2%
grade 5 events	1073	1348	1327	3638	1836
	4%	5%	5%	10%	5%
grade 6 events	548	604	726	7830	2469
	2%	2%	2%	22%	7%
grade 7 events	20214	21270	21024	15489	24090
	83%	83%	82%	44%	68%

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	340.1238180107598	CCD I2 on	O4	Y
[deg] Pointing Dec	3.361341	3.356121116584968	CCD I3 on	O3	Y
[deg] Pointing Roll	159.998561	160.1567511914348	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	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	O2	Y
[s] Observation start time (MET)	493886799.184000	493885559.06489	CCD S5 on	N	N
Observation start date	2013-08-26T06:45:32	2013-08-26T06:25:59	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	493896799.184000	493897460.34054	On-chip summing requested	N	N
Observation end date	2013-08-26T09:32:12	2013-08-26T09:44:20	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



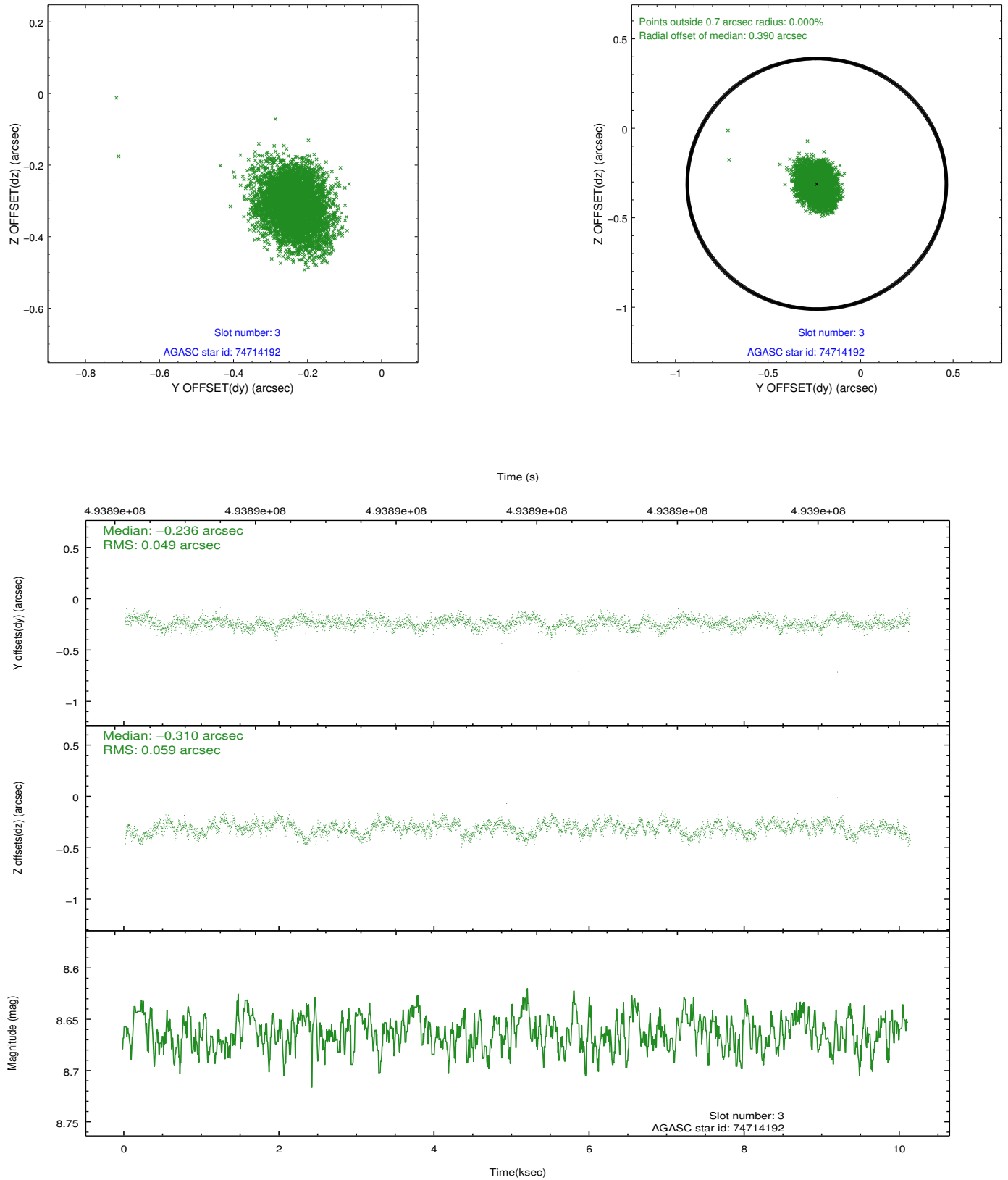


Slot Statistics

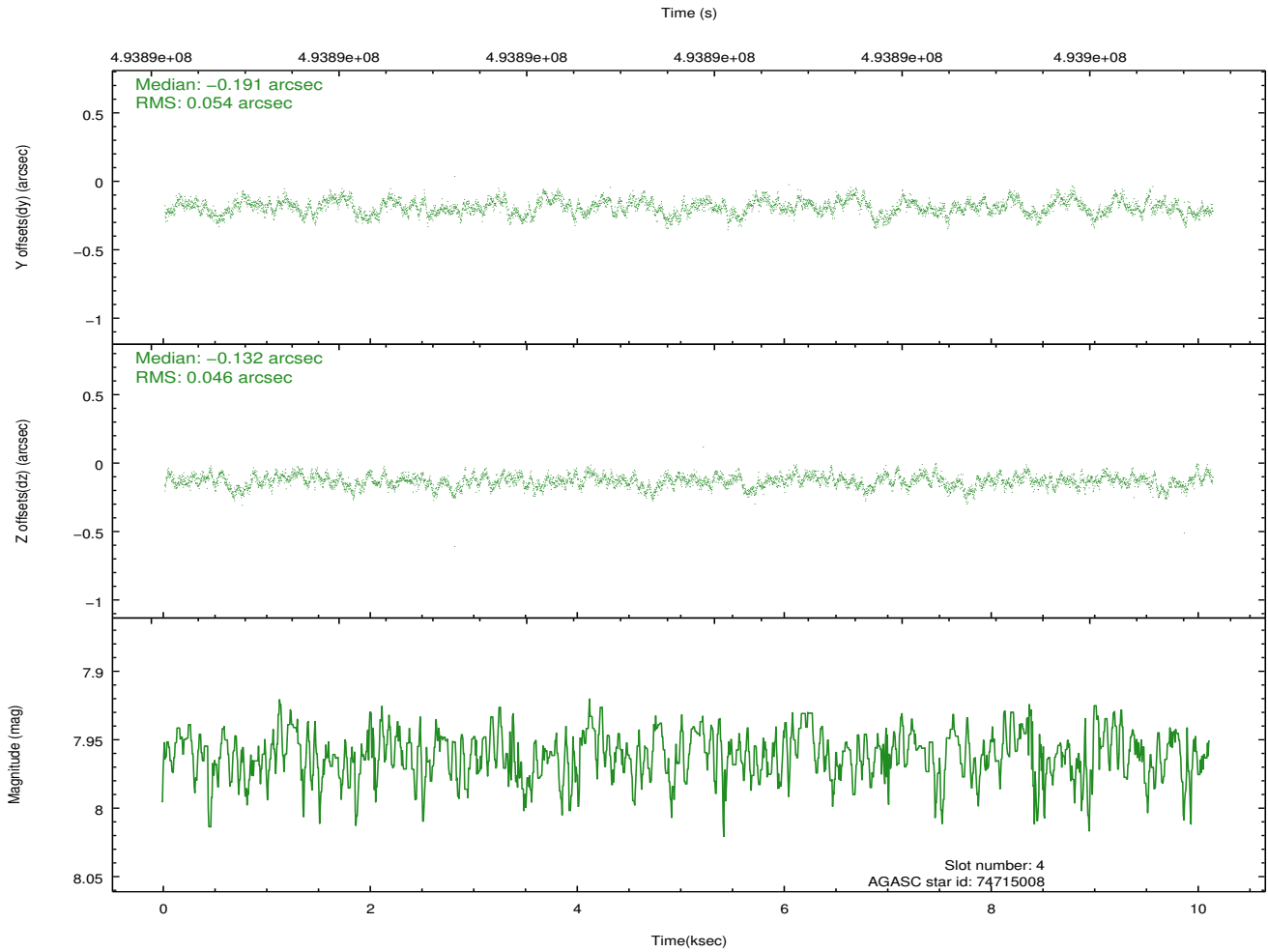
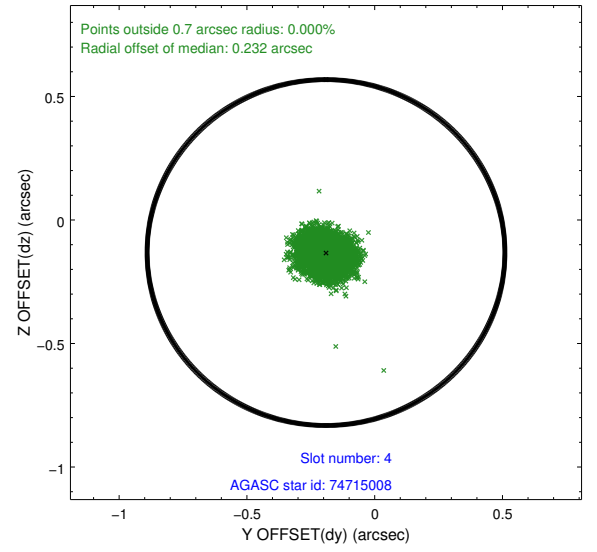
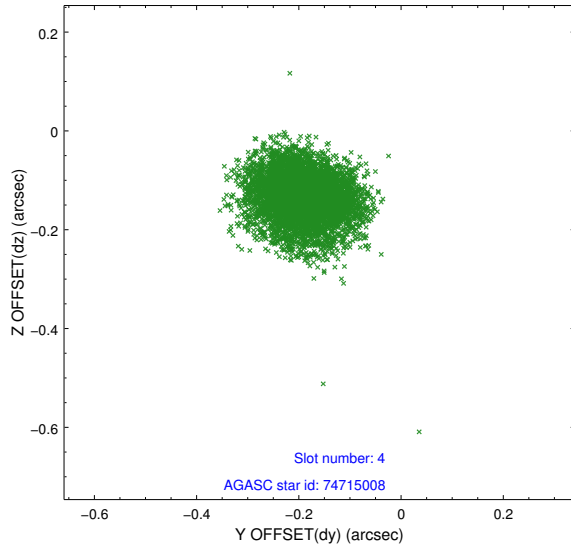
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.02	2471	0.174	-0.072	0.014	0.027	0.000000	0.000000	919.86	-1738.06
1	FID		ACIS-S-2	6.94	2470	-0.103	0.036	0.011	0.020	0.000000	0.000000	-776.04	-1743.08
2	FID		ACIS-S-5	7.05	2470	-0.097	0.038	0.017	0.026	0.000000	0.000000	-1829.84	159.02
3	GUIDE	used	74714192	8.66	4938	-0.236	-0.310	0.081	0.131	339.623837	3.342441	1756.21	711.10
4	GUIDE	used	74715008	7.96	4941	-0.191	-0.132	0.076	0.120	339.956848	3.242441	508.78	640.58
5	GUIDE	used	74842128	8.54	4939	0.262	-0.045	0.078	0.123	340.118134	3.132788	-170.60	813.60
6	GUIDE	used	74854992	8.29	4938	0.133	0.234	0.070	0.114	340.342808	3.603730	-349.31	-1055.37
7	GUIDE	used	74719664	8.34	4938	0.031	0.254	0.097	0.164	339.961529	4.116119	1566.69	-2323.03

2.4 Star Slots

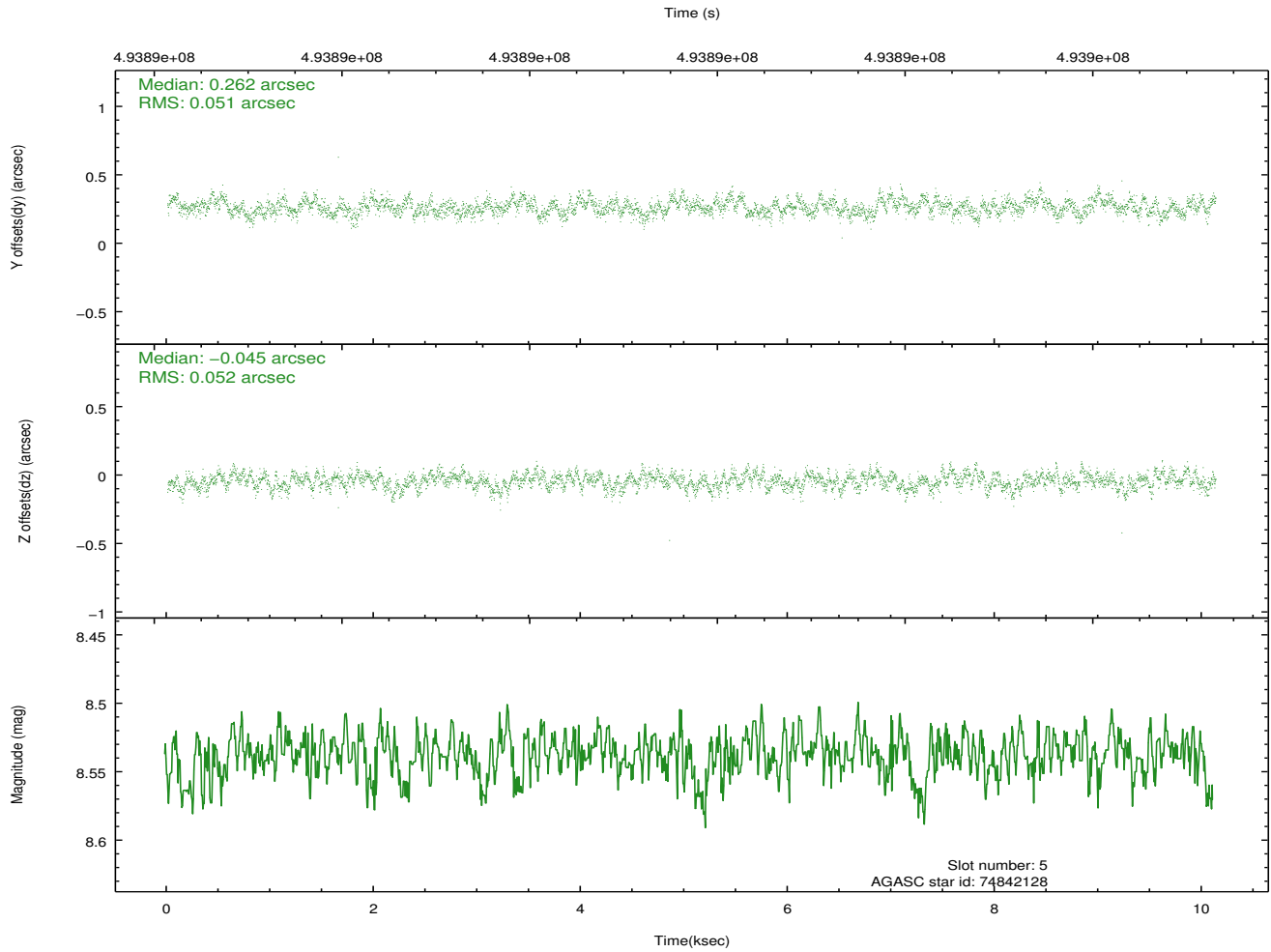
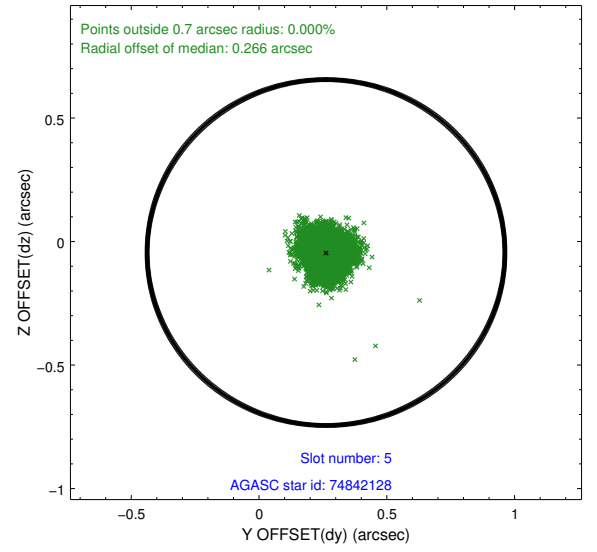
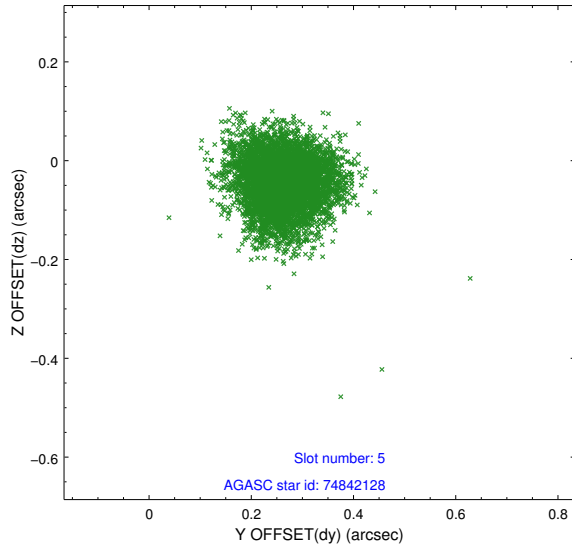
2.4.1 Slot 3



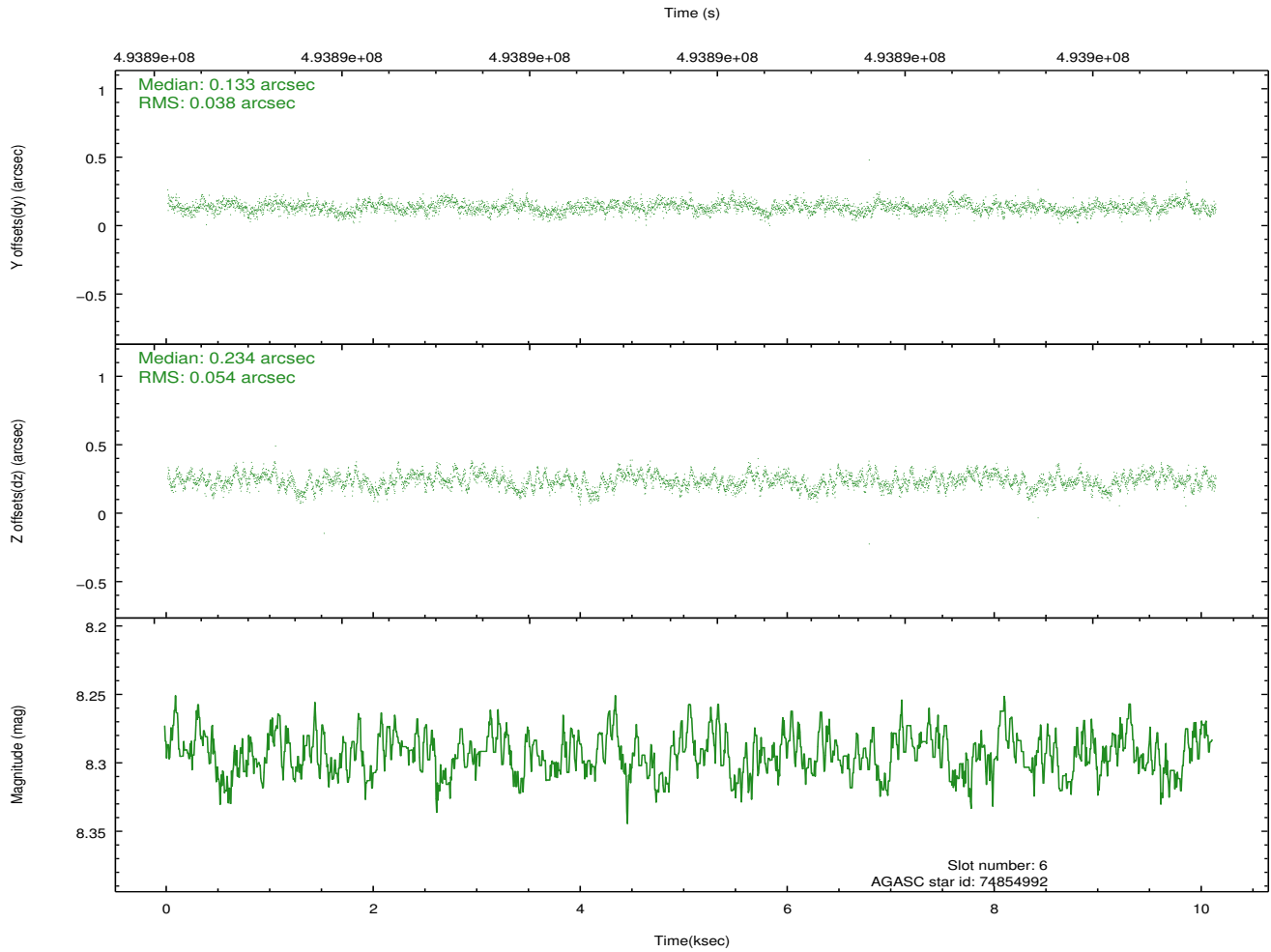
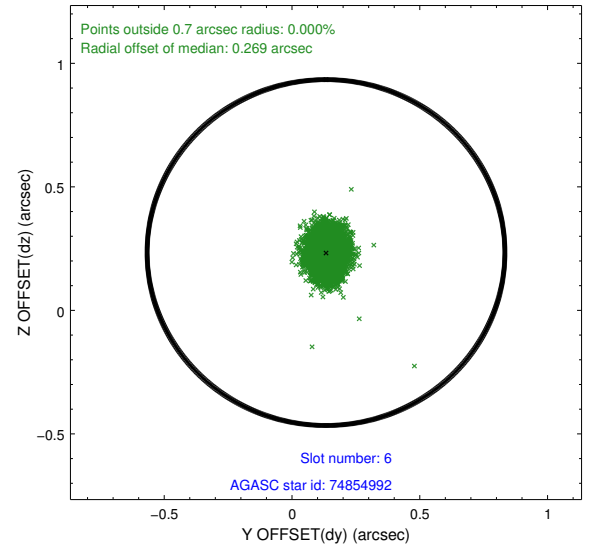
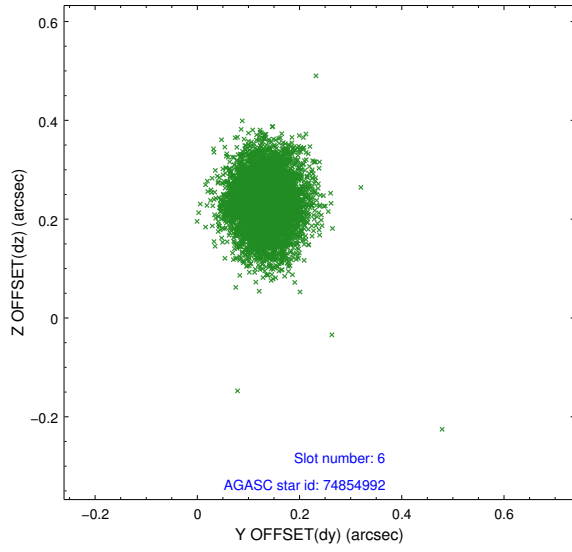
2.4.2 Slot 4



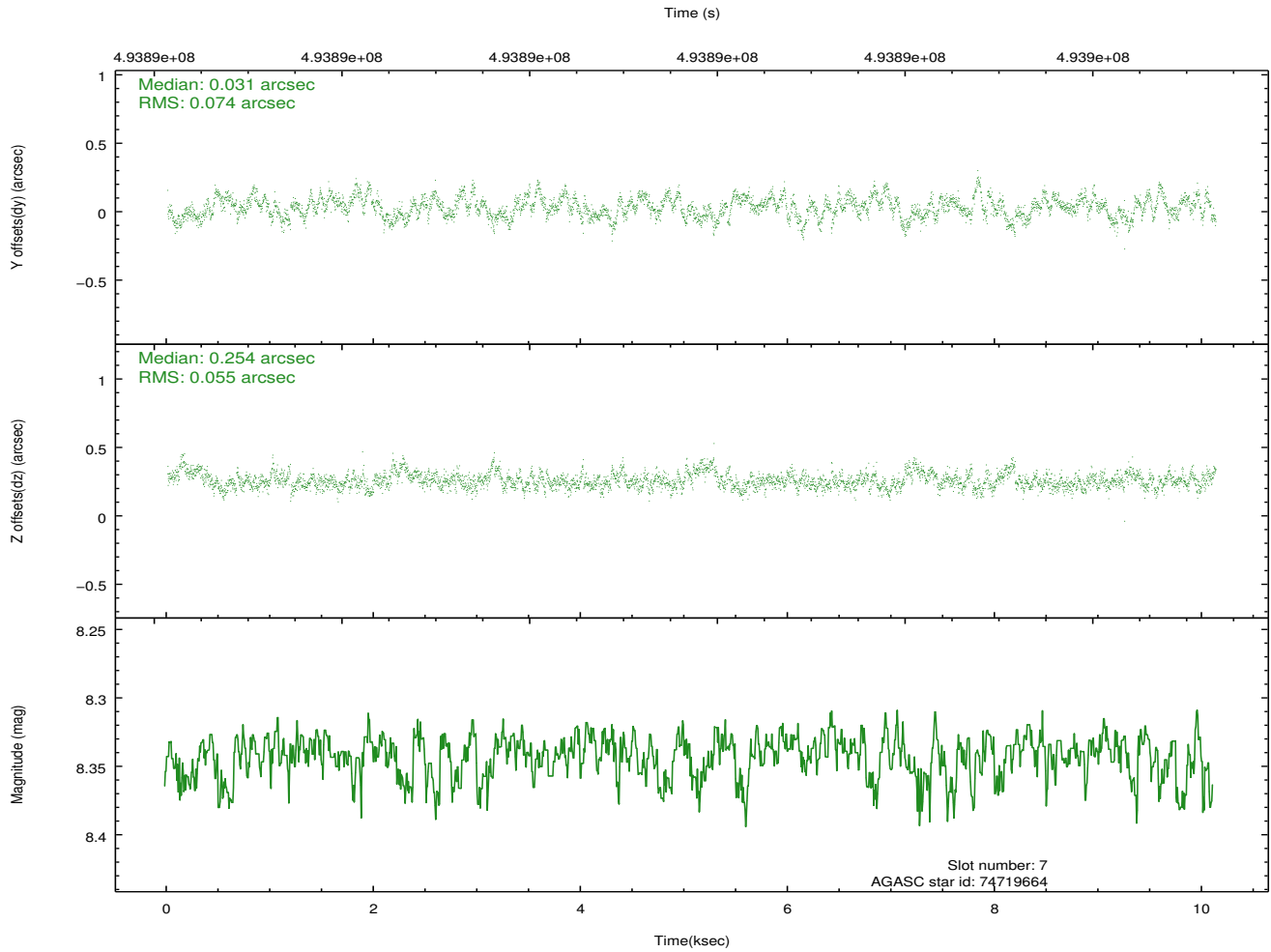
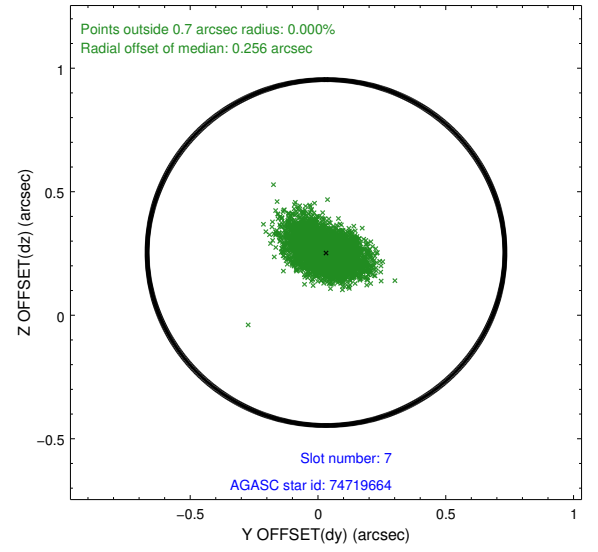
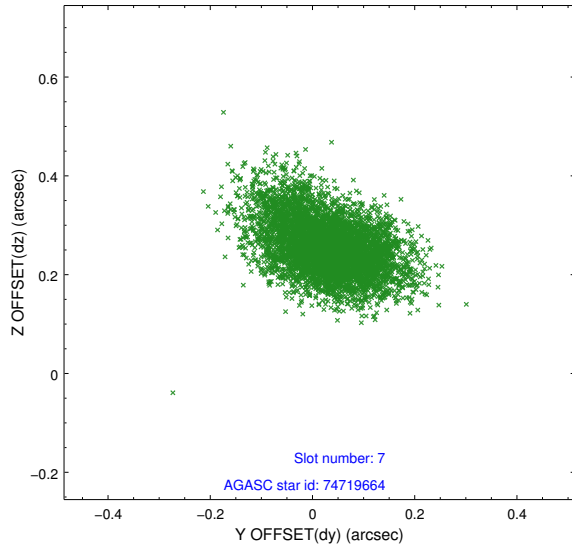
2.4.3 Slot 5



2.4.4 Slot 6

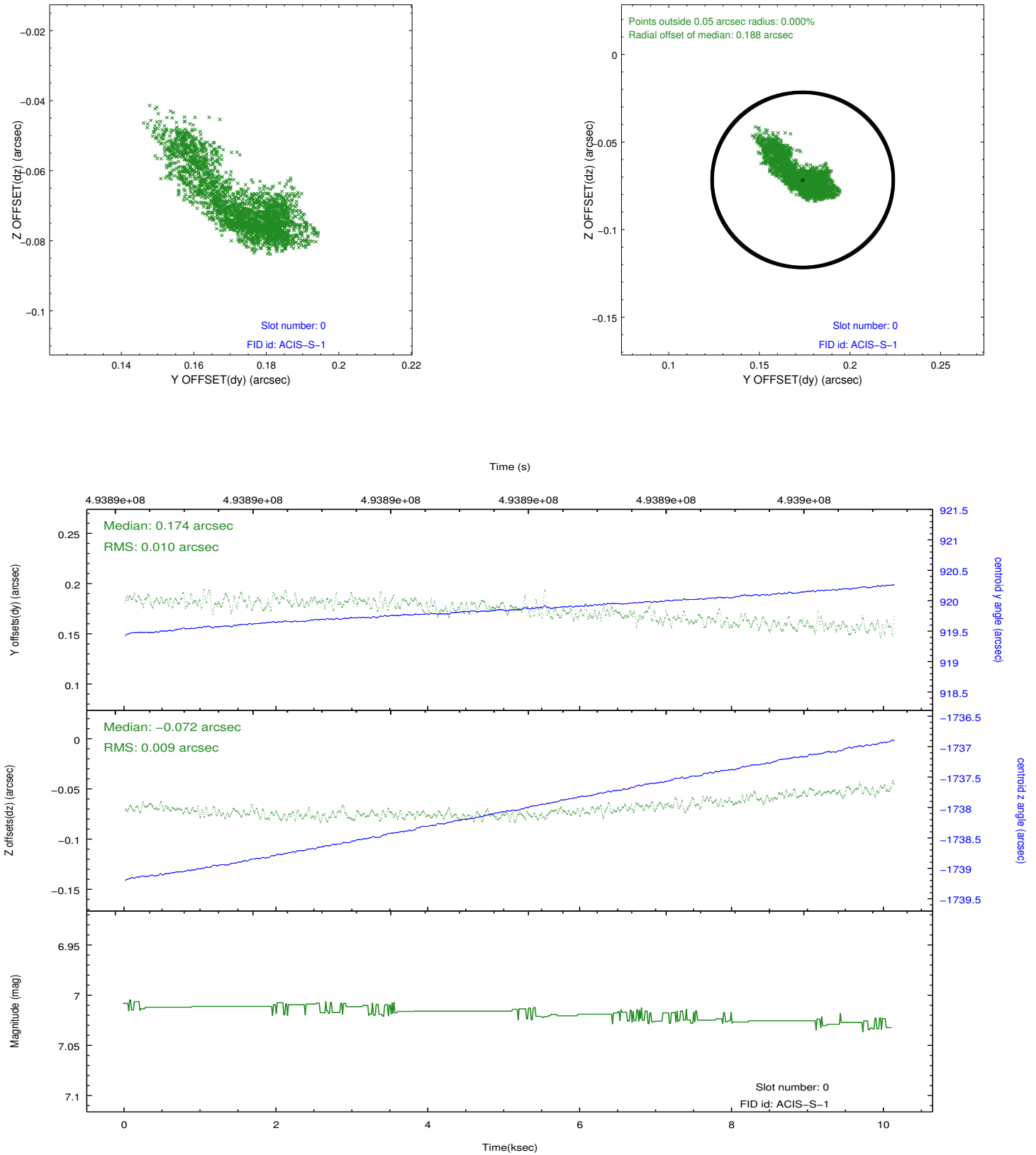


2.4.5 Slot 7

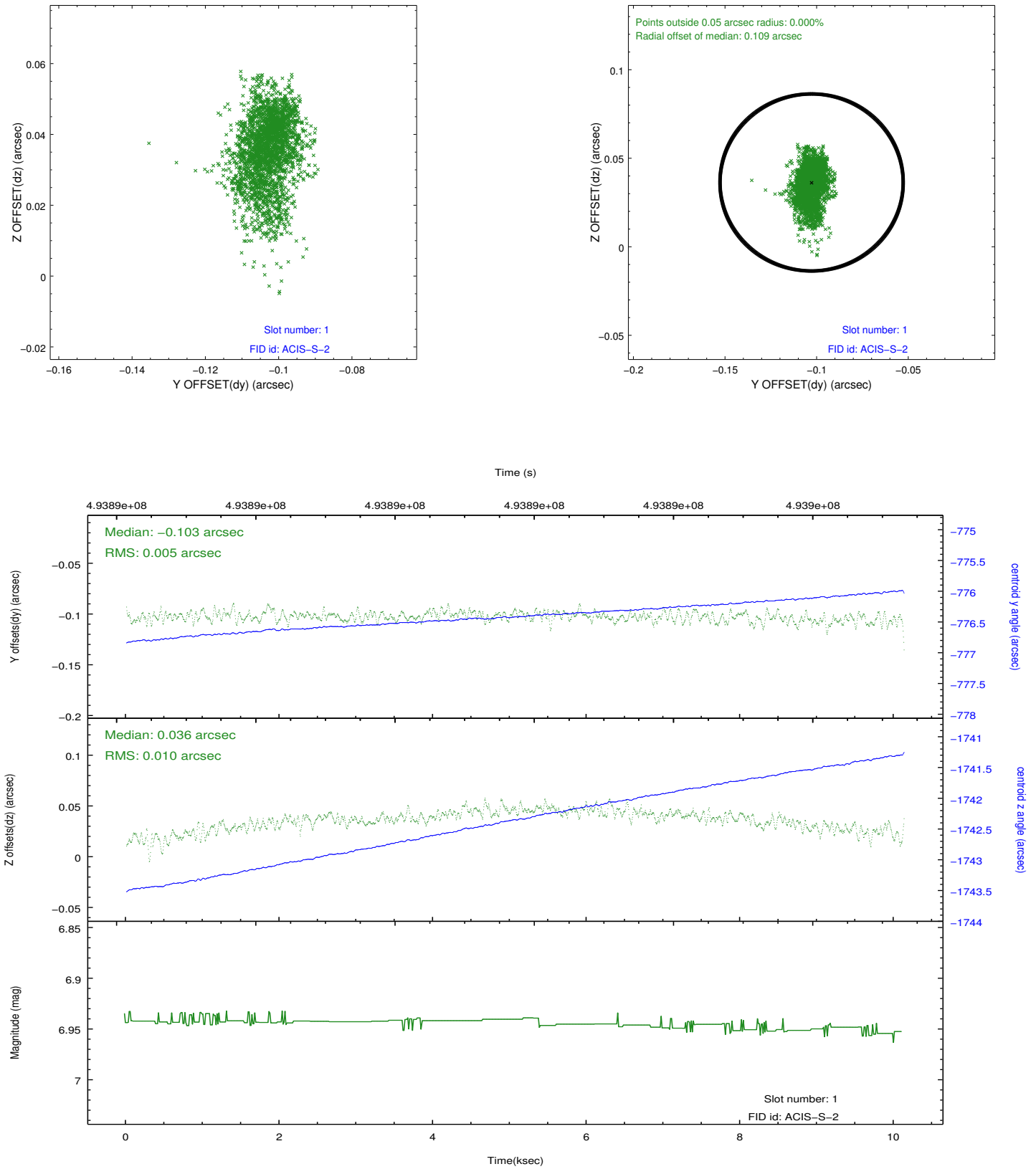


2.5 FID Slots

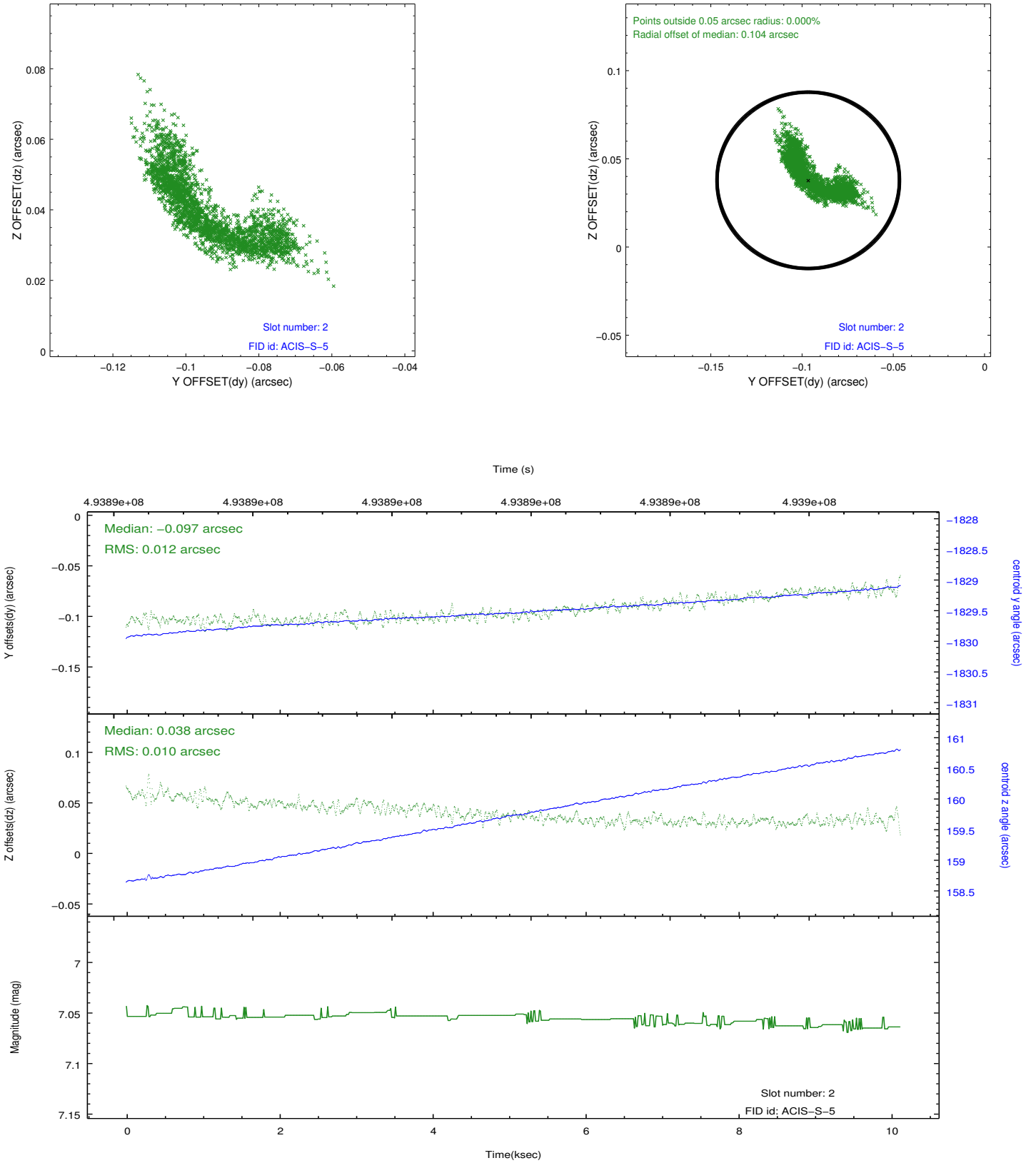
2.5.1 Slot 0



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	10.065699929476

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.