

V&V Reference Report

L2 ASCDS Version : 10

Observation 14497 - L2 Version 2
Chandra X-Ray Center

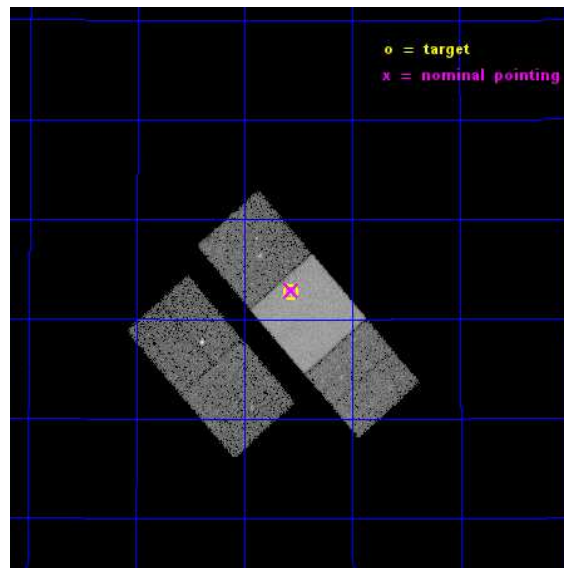
L2 Processing Date : Dec 6 2014

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

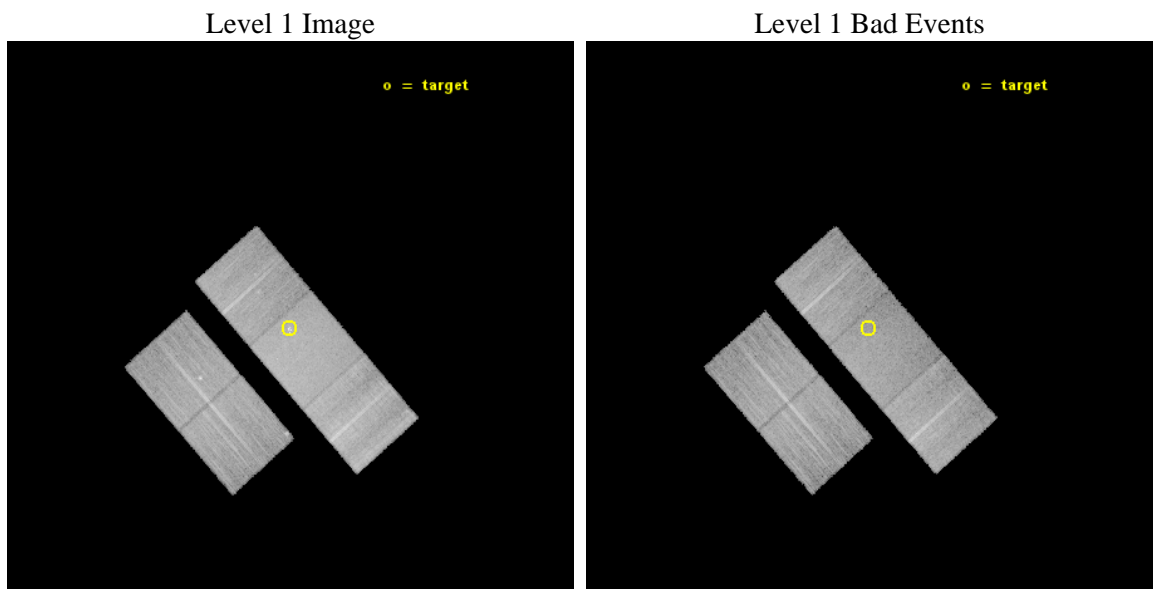
seq_num	702734	Sequence number
obs_id	14497	Observation id
title	ENERGY DEPENDENT X-RAY MICROLENSING AND THE STRUCTURE OF QUASARS	P
observer	Prof. Christopher Kochanek	Principal investigator
object	SDSS1004+4112	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	151.1425	Observer's specified target RA [deg]
dec_targ	41.212222	Observer's specified target Dec [deg]
ra_nom	151.14139010172	Nominal RA [deg]
dec_nom	41.215145002039	Nominal Dec [deg]
roll_nom	48.727790570172	Nominal Roll [deg]
revision	2	Processing version of data
ontime	24449.700188041	Sum of GTIs [s]
livetime	24130.246855477	Livetime [s]
ontime2	24449.700188041	Sum of GTIs [s]
ontime3	24443.418247342	Sum of GTIs [s]
ontime6	24449.700188041	Sum of GTIs [s]
ontime7	24449.700188041	Sum of GTIs [s]
ontime8	24446.559197724	Sum of GTIs [s]
l2events	123122	Number of level 2 events



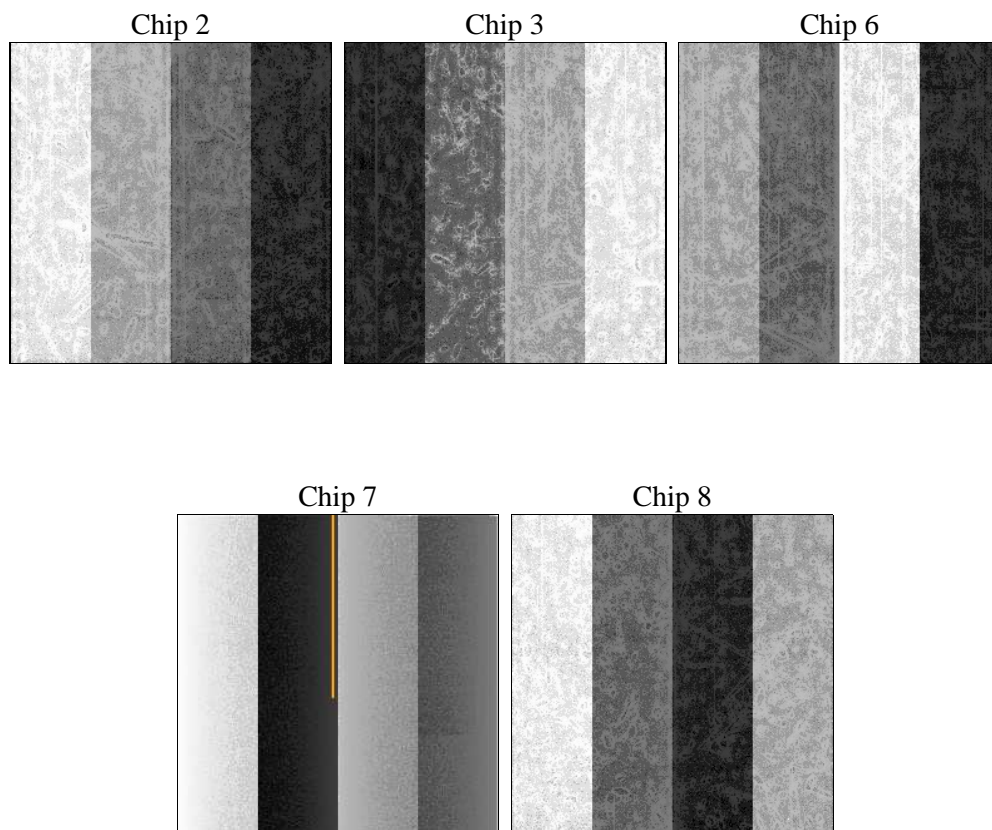
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	24381.012000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	24449.700188041	Sum of GTIs [s]
caldsver	4.6.4	 	ontime2	24449.700188041	Sum of GTIs [s]
date	2014-12-07T00:38:15	Date and time of file creation	ontime3	24443.418247342	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	24449.700188041	Sum of GTIs [s]
			ontime7	24449.700188041	Sum of GTIs [s]
			ontime8	24446.559197724	Sum of GTIs [s]
			l1events	681162	Number of level 1 events

2.1.4 Events

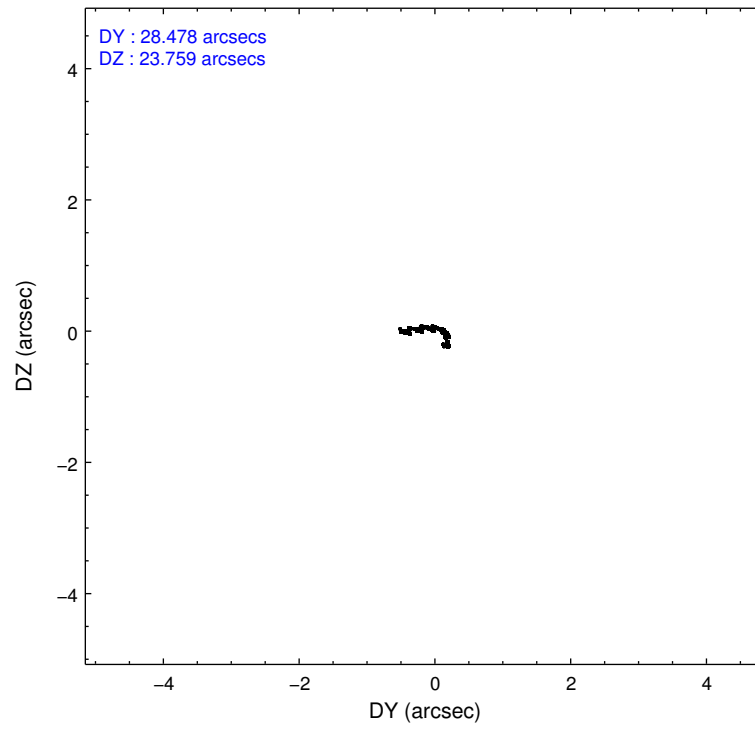
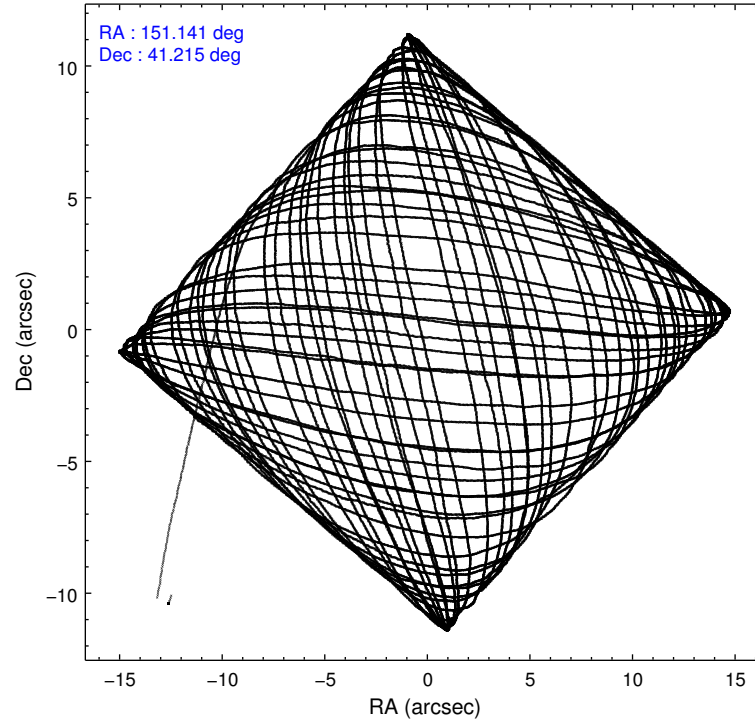
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	114743	118133	118571	163560	166155
rejected events	100760	104550	103332	91130	117698
rejected %	87%	88%	87%	55%	70%

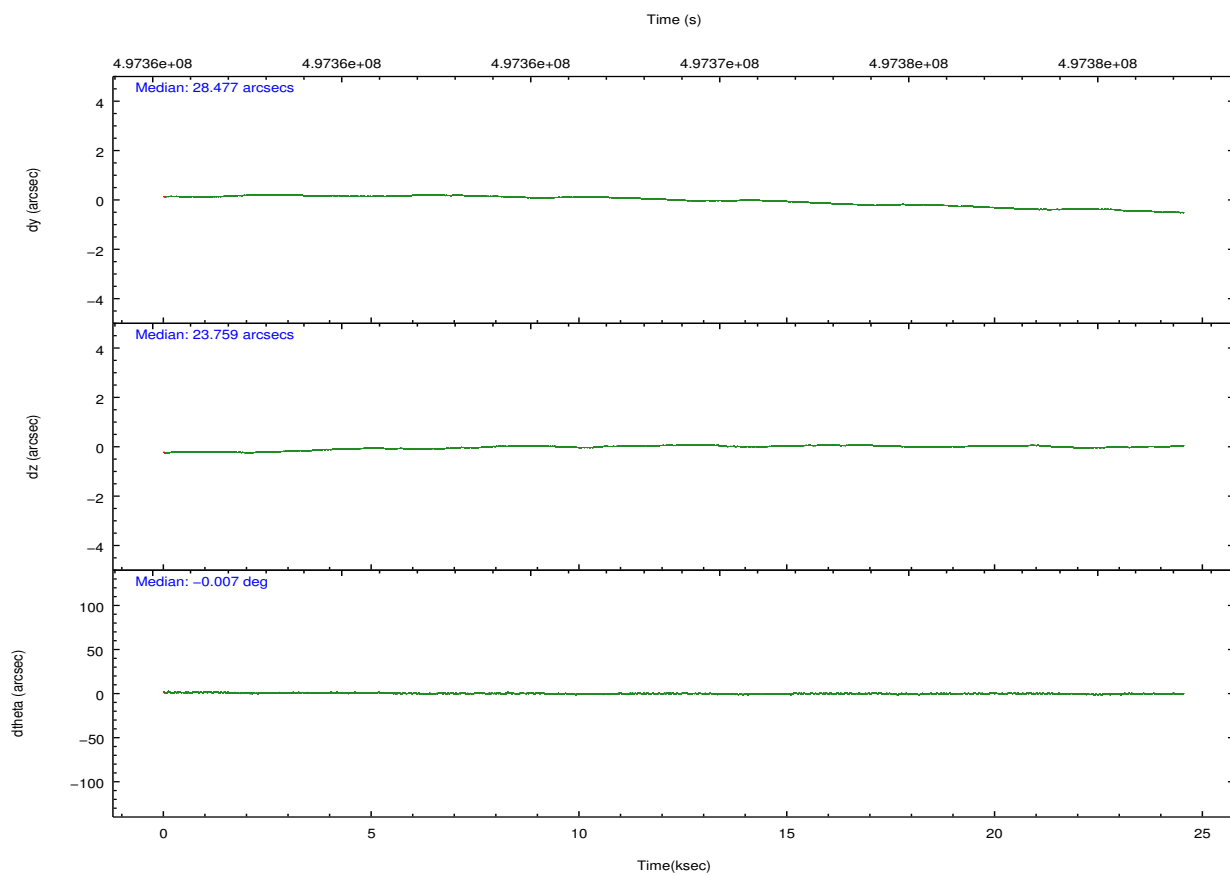
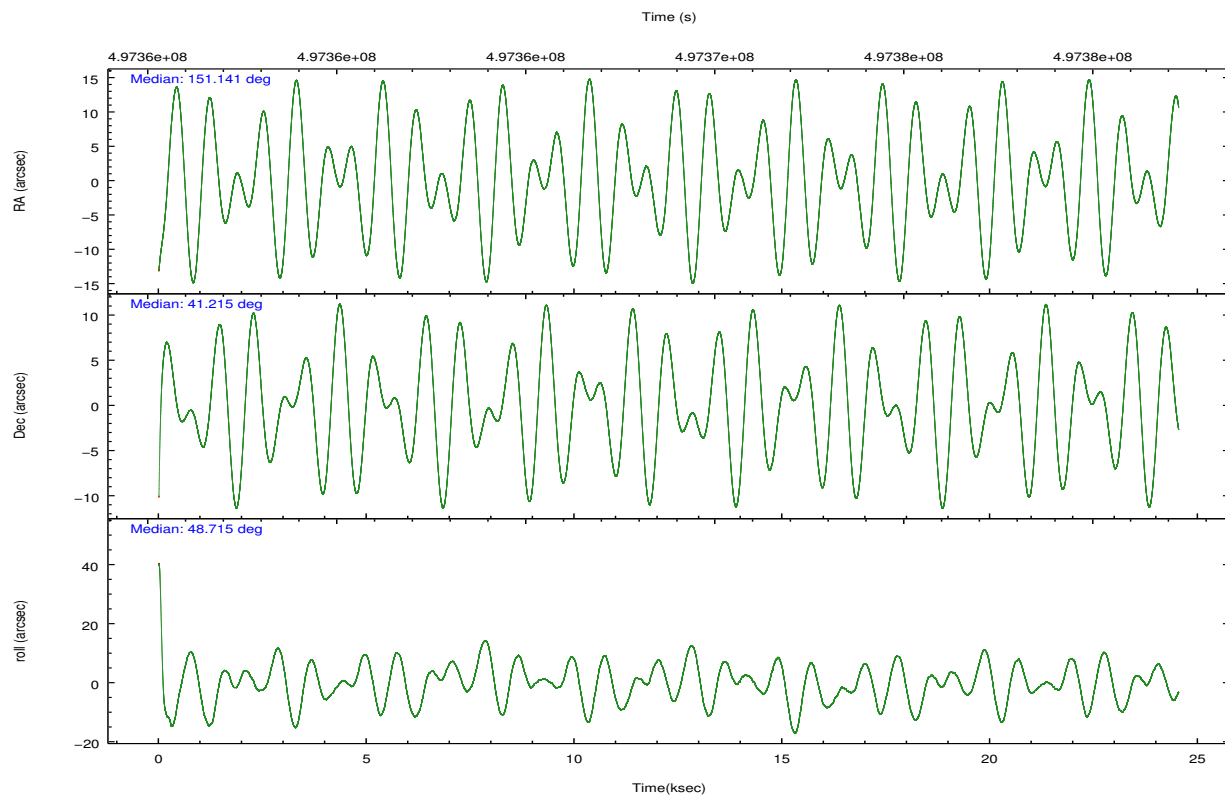
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	5255	4962	5426	6754	14526
	4%	4%	4%	4%	8%
grade 1 events	59	94	57	204	134
	0%	0%	0%	0%	0%
grade 2 events	3380	3106	3437	14801	10576
	2%	2%	2%	9%	6%
grade 3 events	1364	1420	1533	6413	5528
	1%	1%	1%	3%	3%
grade 4 events	1377	1344	1511	6056	5170
	1%	1%	1%	3%	3%
grade 5 events	5124	6352	6334	16858	9221
	4%	5%	5%	10%	5%
grade 6 events	2610	2752	3334	38413	12660
	2%	2%	2%	23%	7%
grade 7 events	95574	98103	96939	74061	108340
	83%	83%	81%	45%	65%

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	151.134763	151.1413901017189	CCD I2 on	O4	Y
[deg] Pointing Dec	41.188242	41.21514500203852	CCD I3 on	O3	Y
[deg] Pointing Roll	48.575507	48.72779057017222	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)	497356683.184000	497355600.91685	CCD S5 on	N	N
Observation start date	2013-10-05T10:36:56	2013-10-05T10:20:00	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	497381064.184000	497381288.95576	On-chip summing requested	N	N
Observation end date	2013-10-05T17:23:17	2013-10-05T17:28:08	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



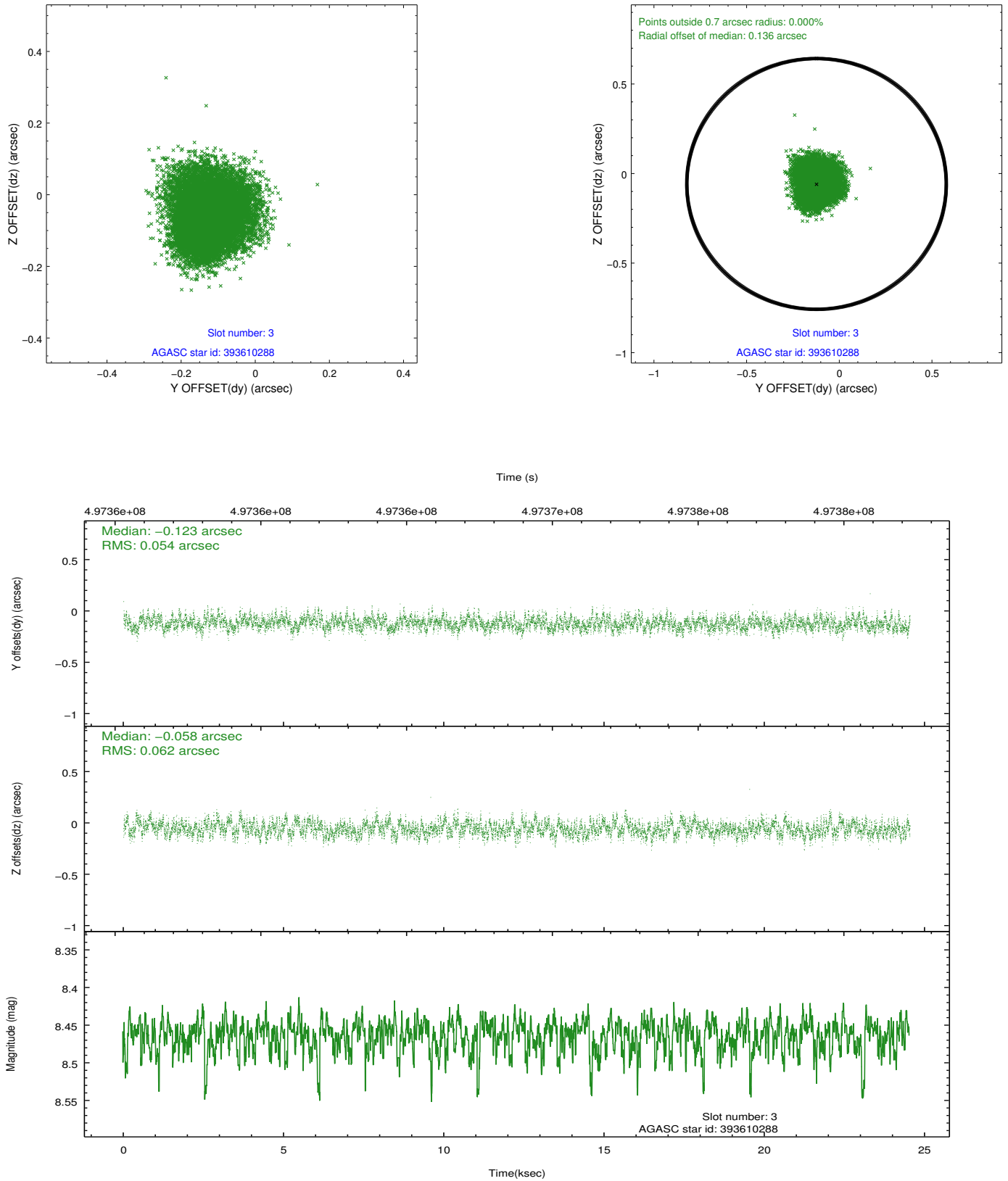


Slot Statistics

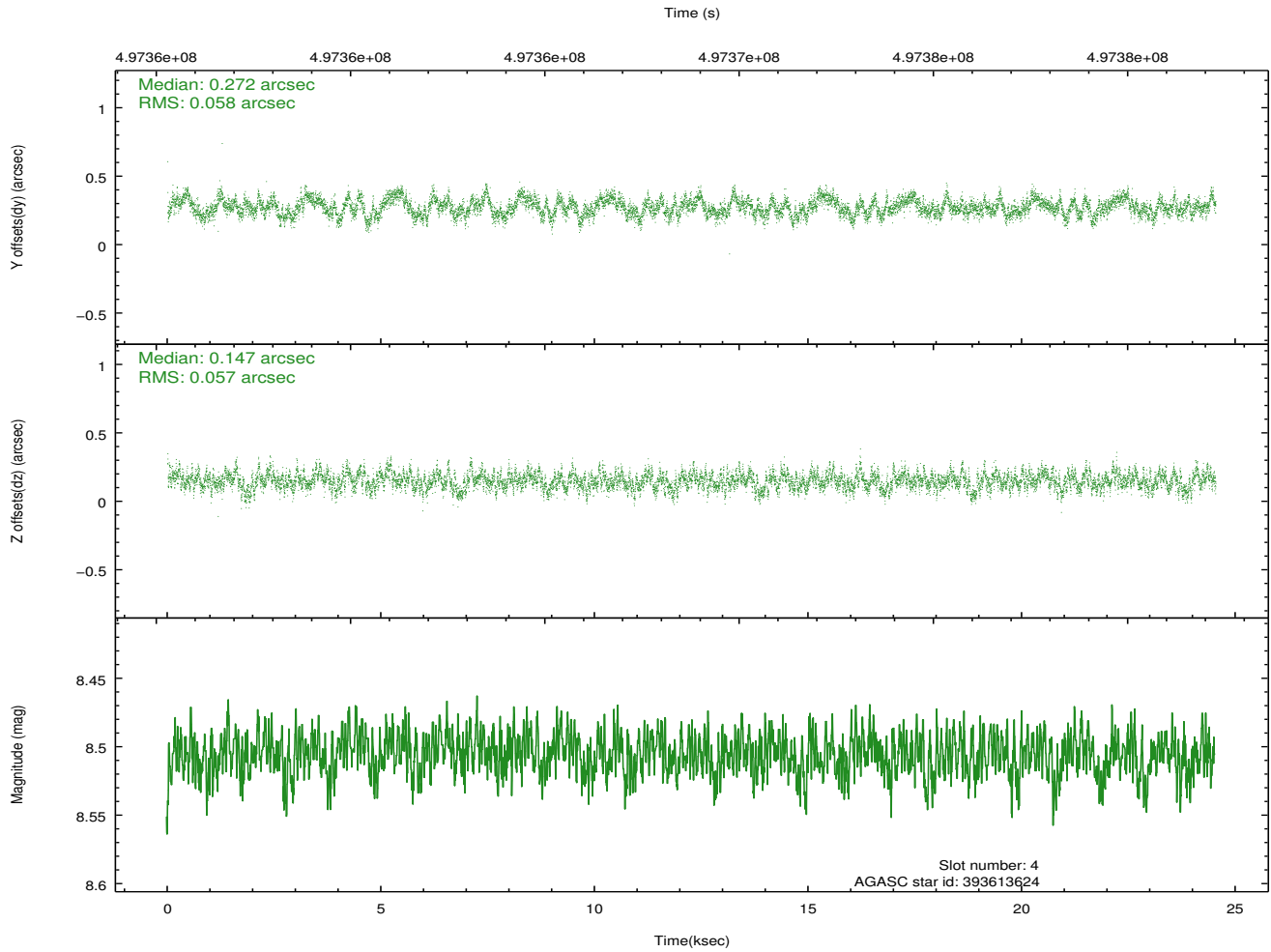
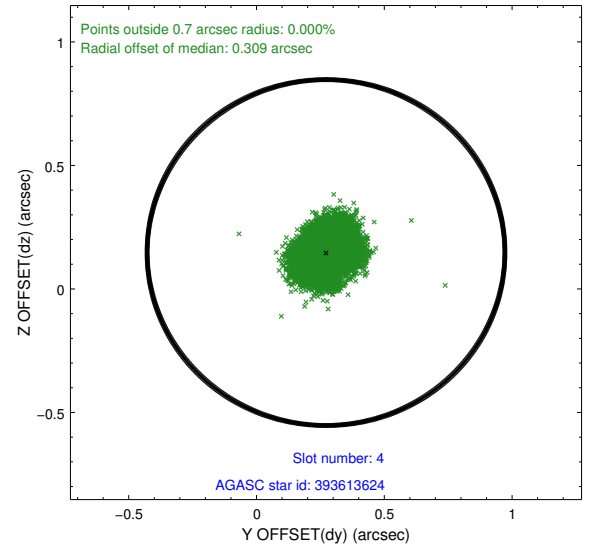
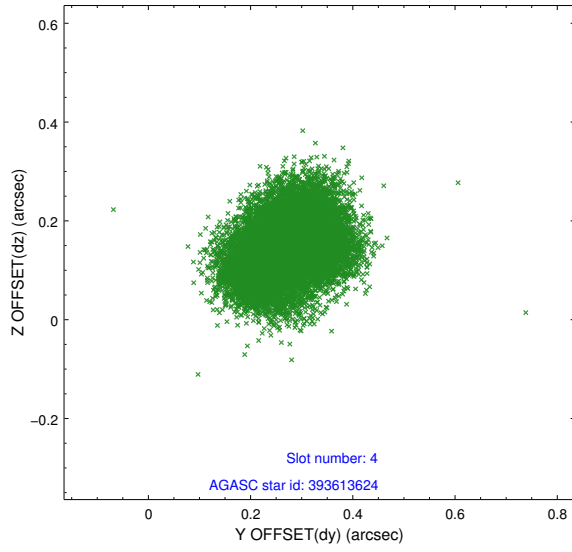
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.02	5985	0.000	0.025	0.007	0.011	0.000000	0.000000	914.31	-1740.88
1	FID		ACIS-S-4	7.01	5985	0.306	-0.013	0.009	0.019	0.000000	0.000000	2132.04	163.14
2	FID		ACIS-S-5	7.04	5985	-0.332	0.000	0.008	0.016	0.000000	0.000000	-1834.79	156.79
3	GUIDE	used	393610288	8.46	11915	-0.123	-0.058	0.088	0.139	151.538899	41.090404	462.51	-1052.24
4	GUIDE	used	393613624	8.51	11968	0.272	0.147	0.089	0.138	151.136661	40.665270	-1407.54	-1249.45
5	GUIDE	used	393616408	9.04	11914	-0.064	-0.235	0.124	0.199	150.713966	41.346840	-322.51	1232.27
6	GUIDE	used	393616688	8.99	11951	-0.170	0.406	0.119	0.184	151.530834	40.712712	-566.35	-1940.70
7	GUIDE	used	392695480	8.86	11966	0.072	-0.265	0.108	0.184	149.916110	41.131503	-2322.46	2357.34

2.4 Star Slots

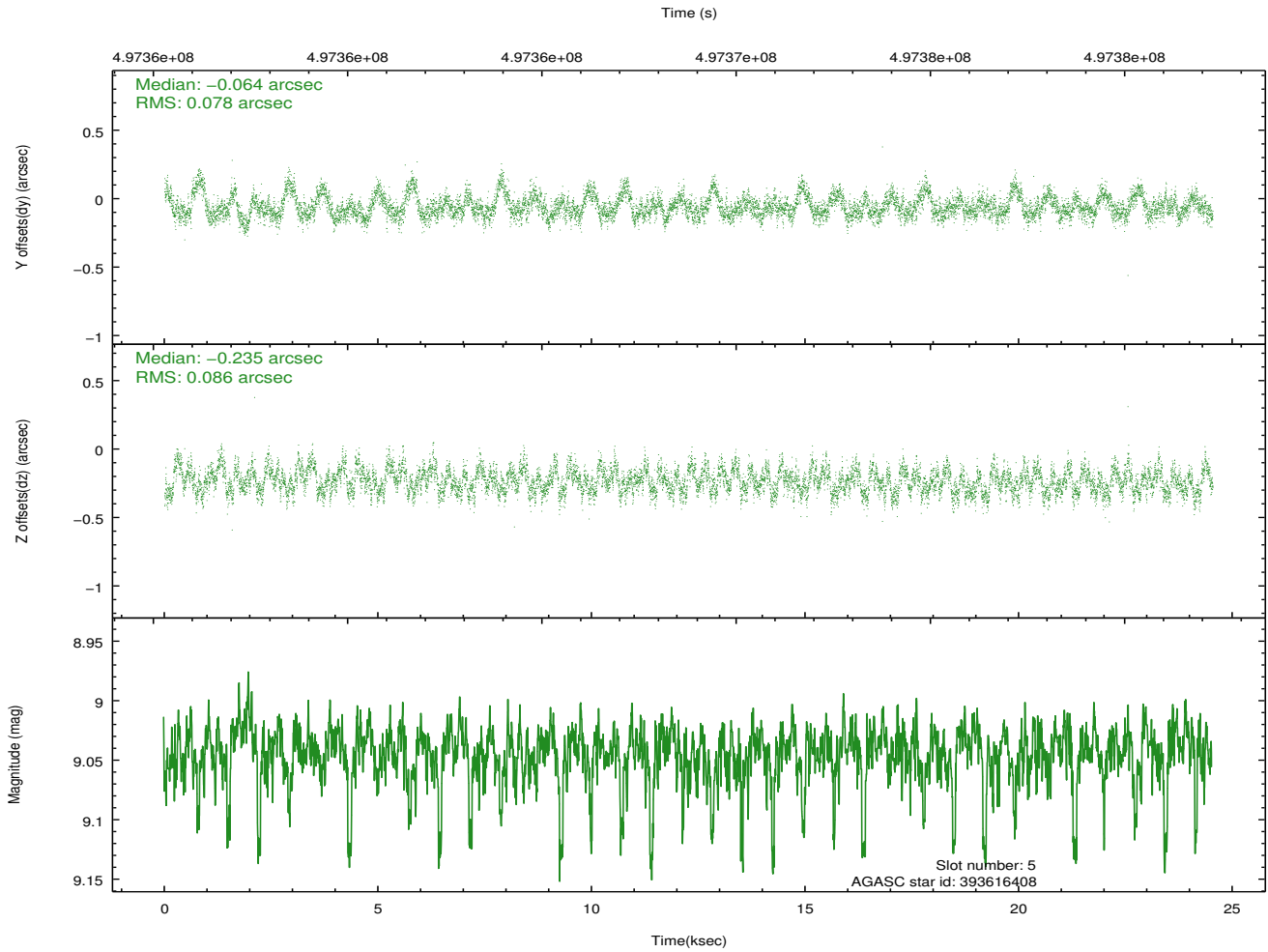
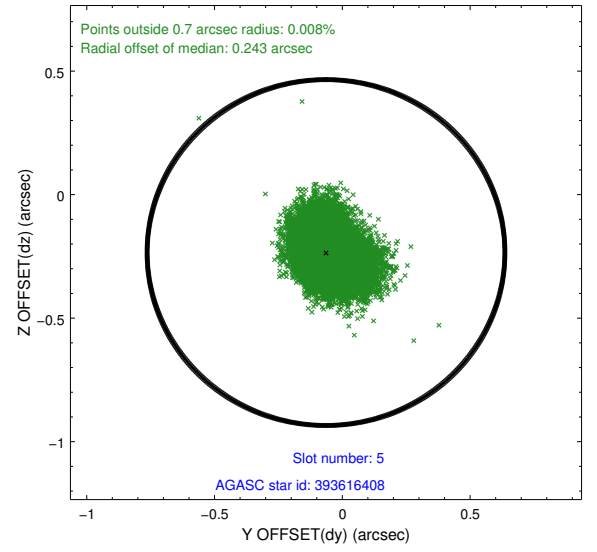
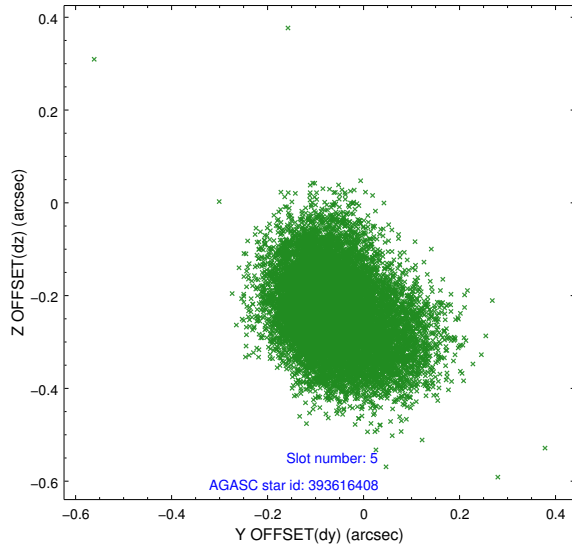
2.4.1 Slot 3



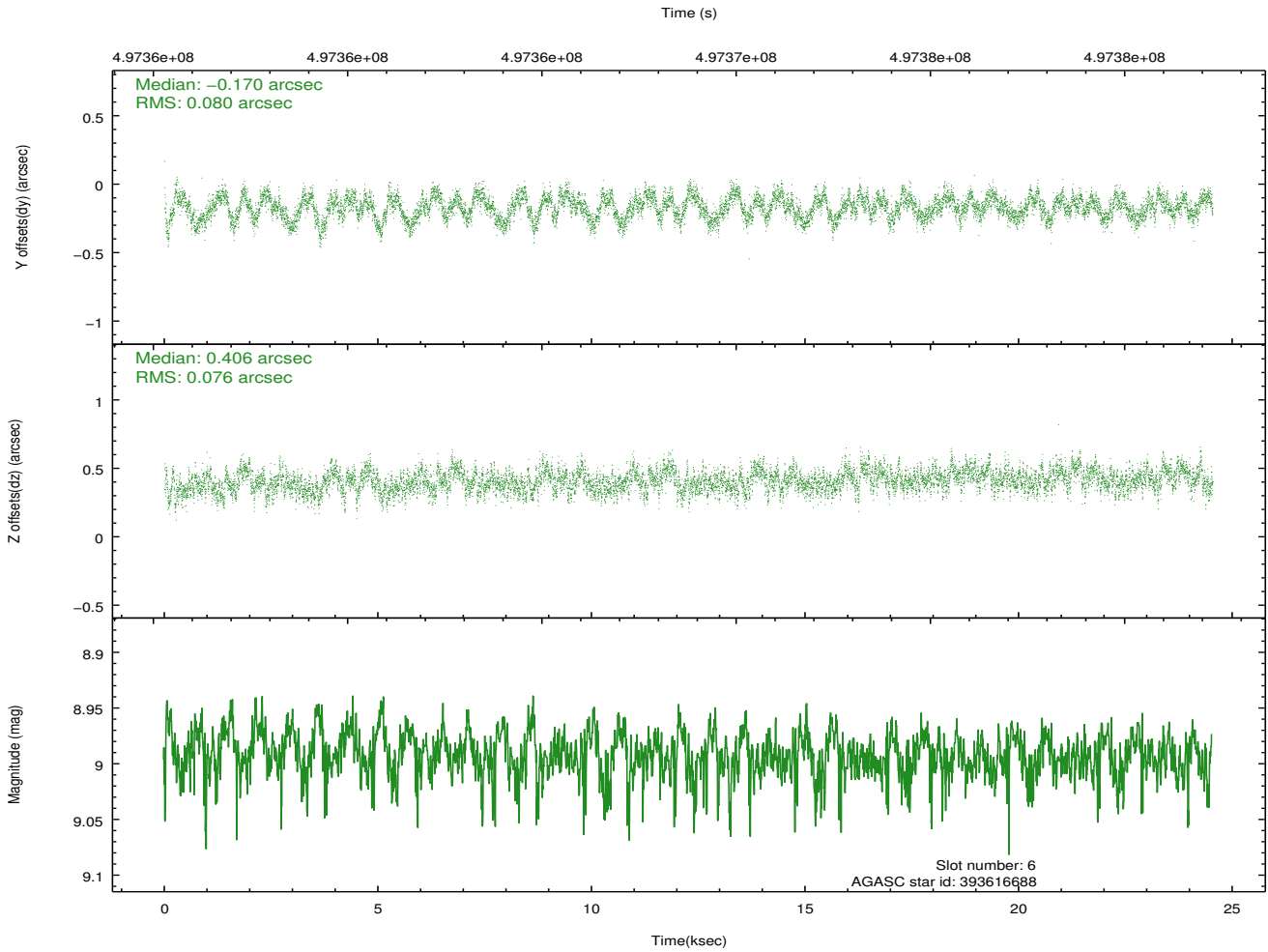
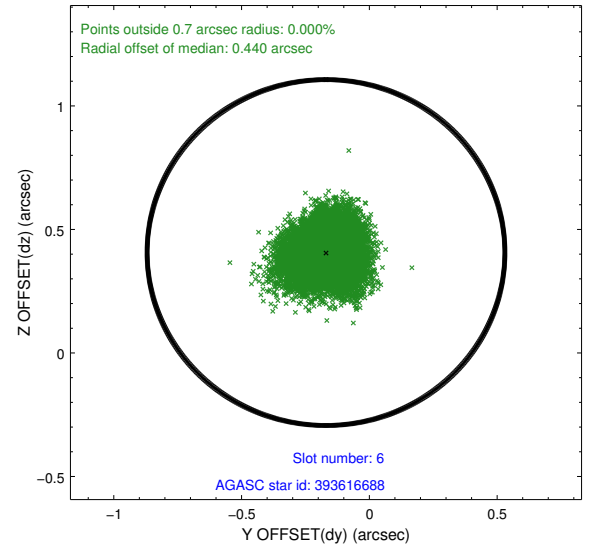
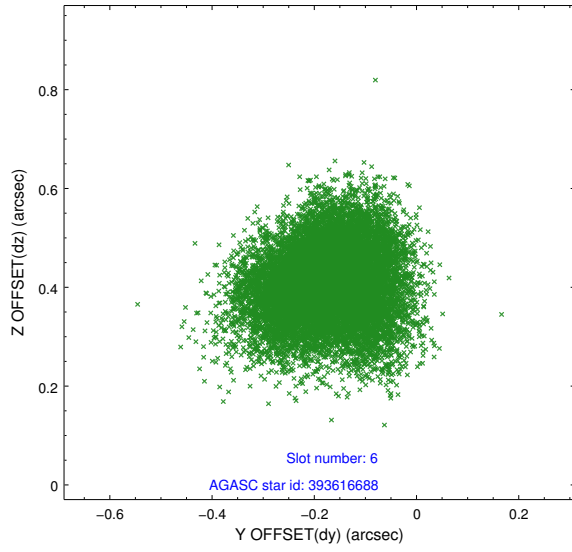
2.4.2 Slot 4



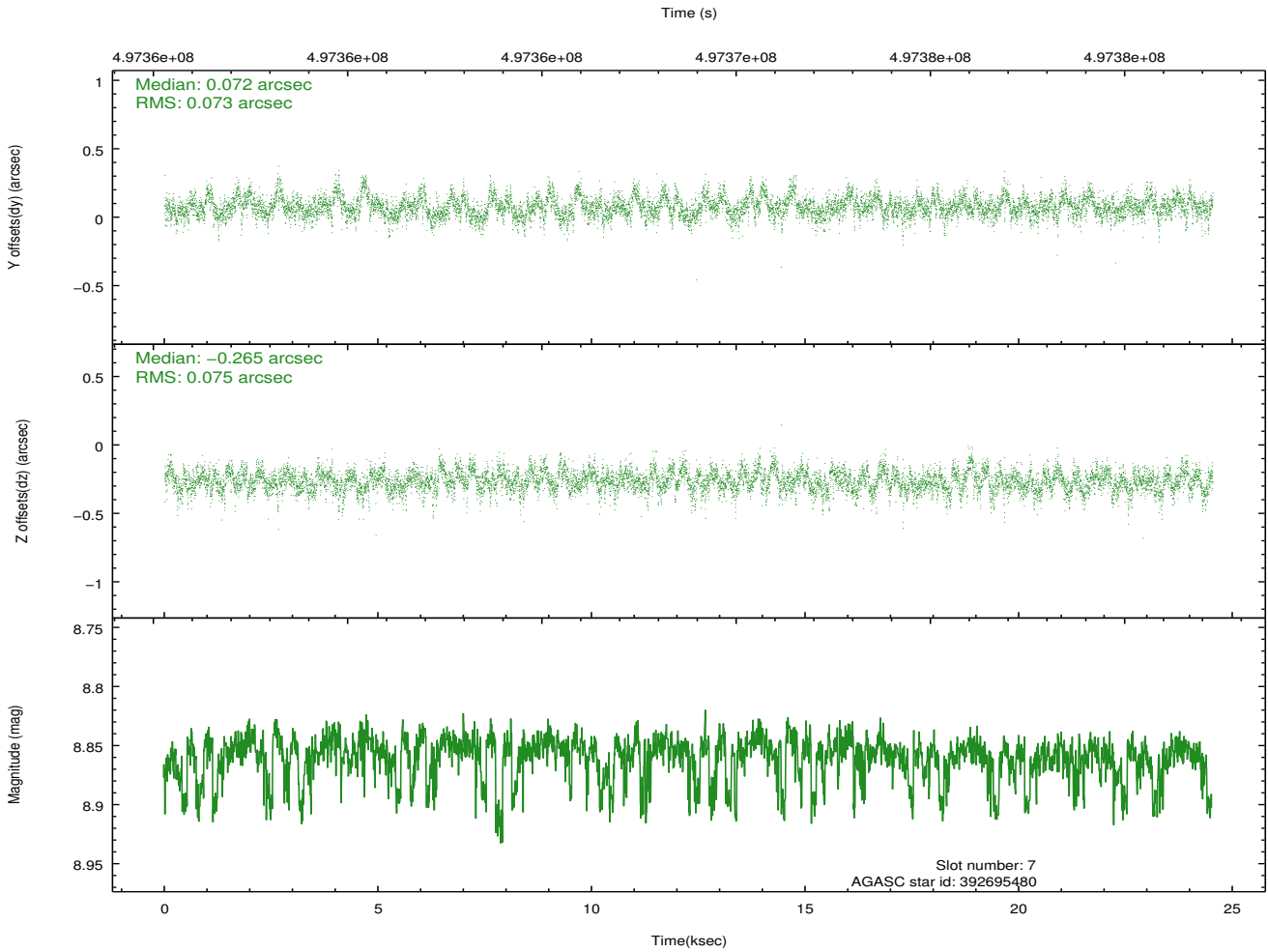
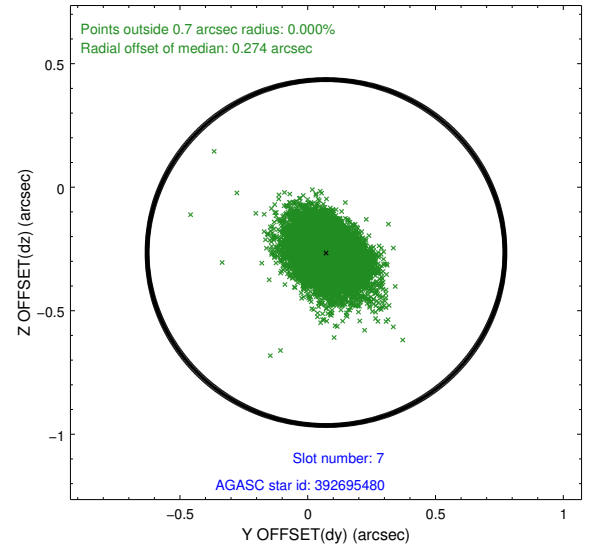
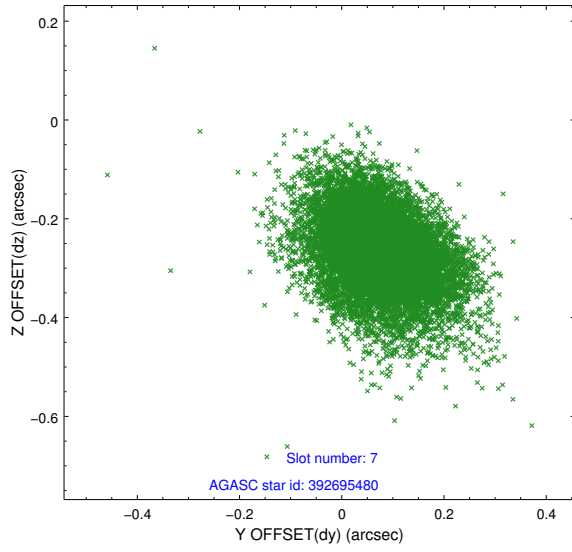
2.4.3 Slot 5



2.4.4 Slot 6

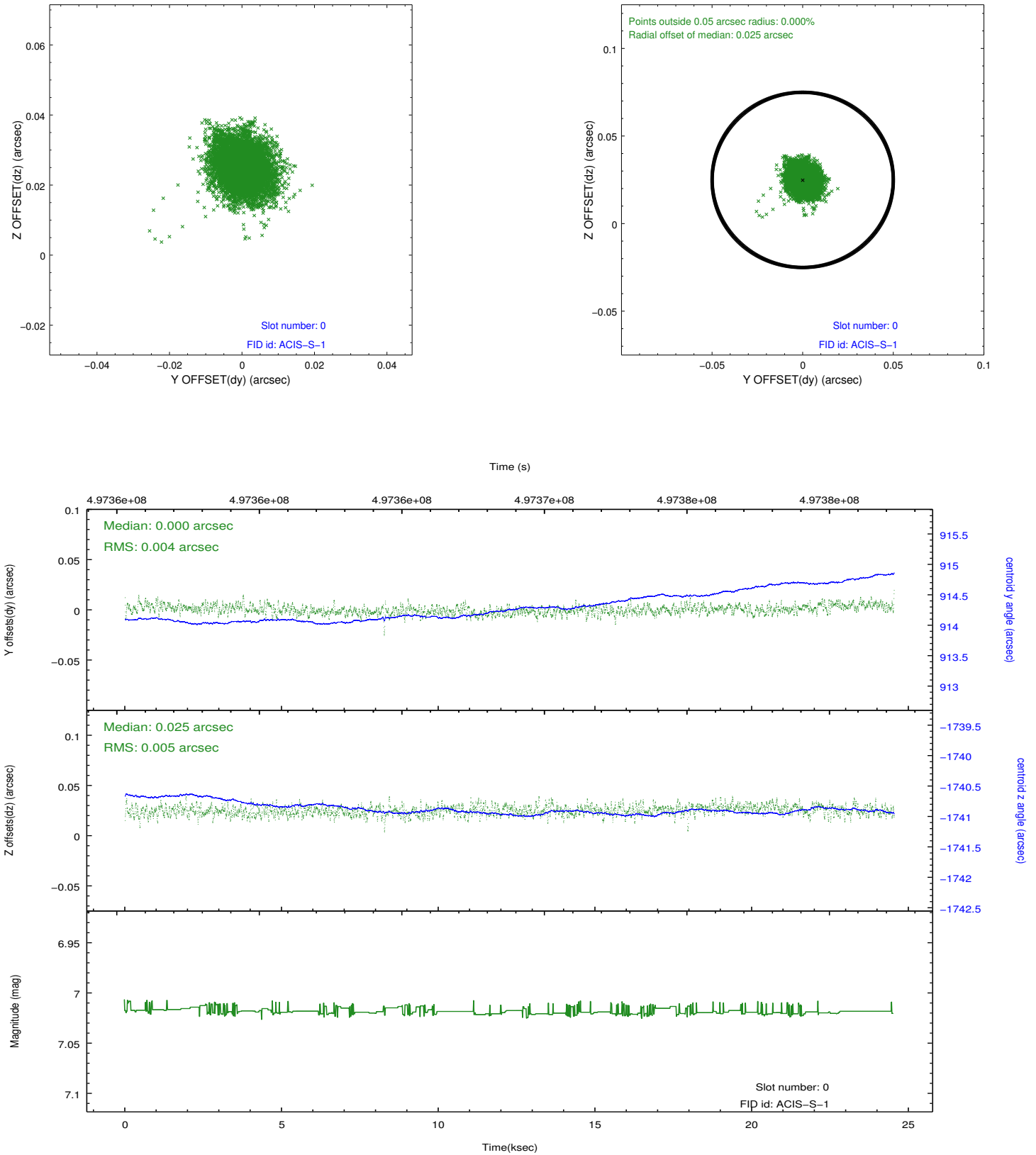


2.4.5 Slot 7

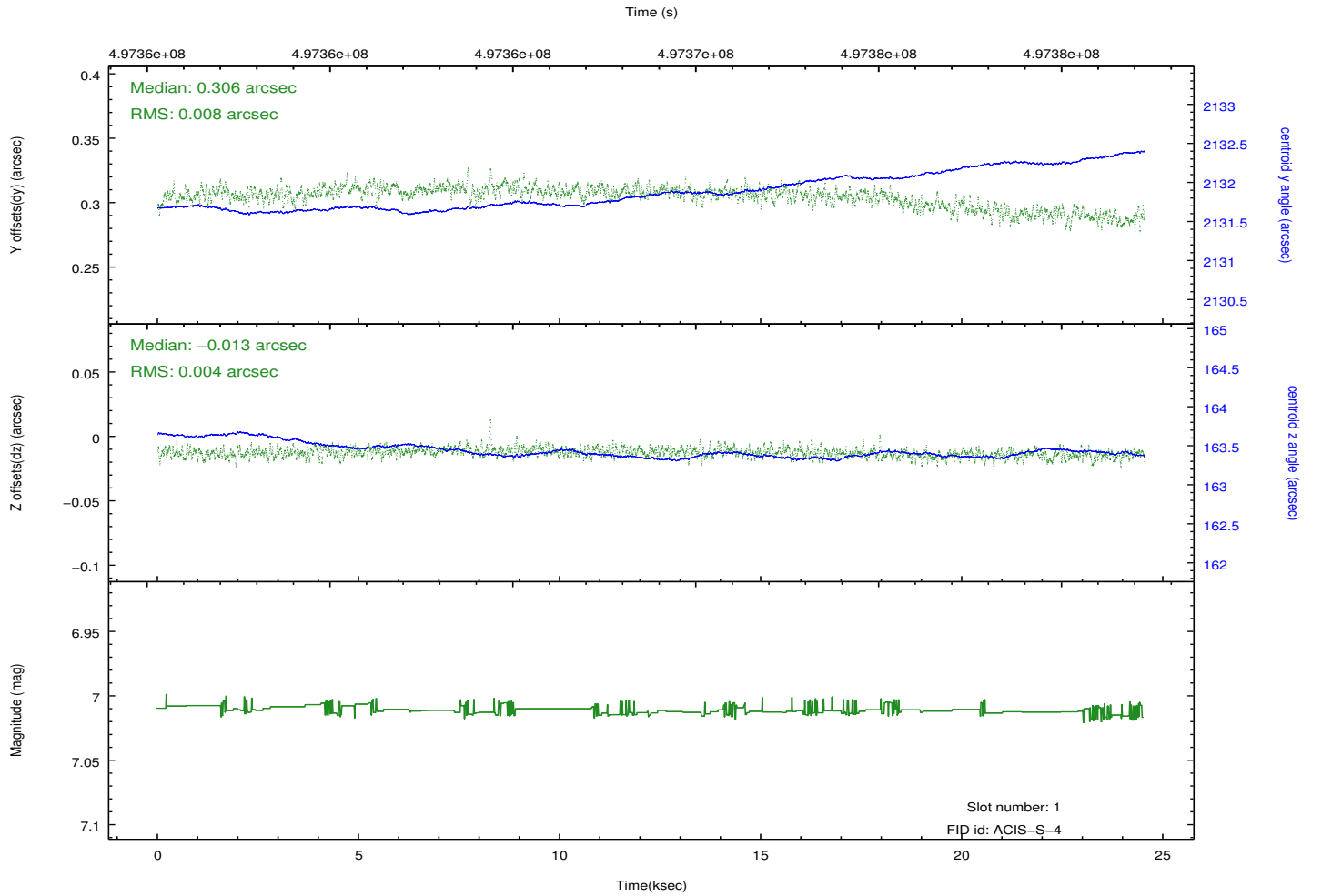
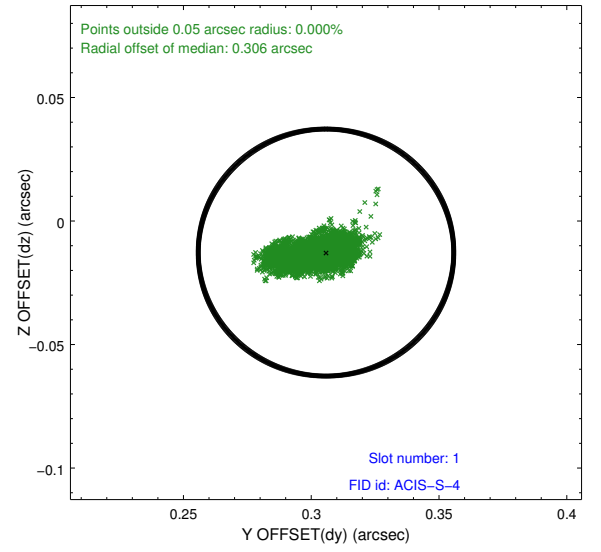
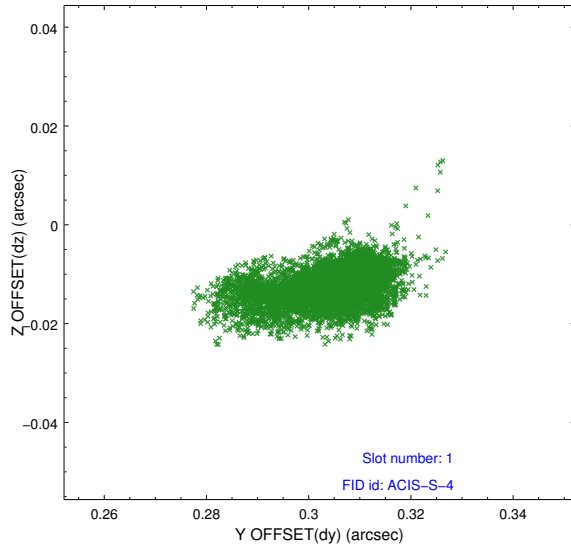


2.5 FID Slots

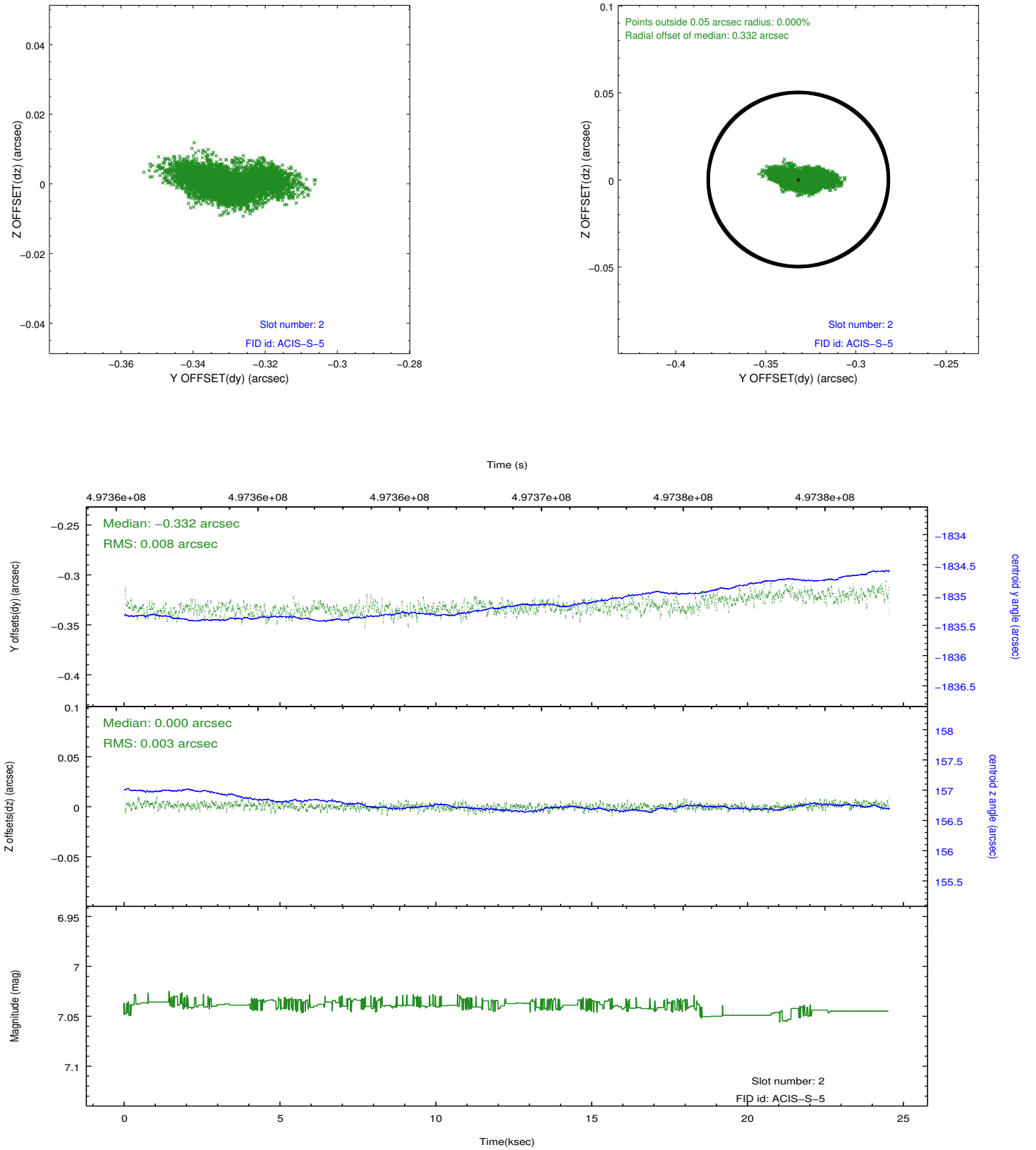
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2014.12.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	24.449700188041

A.2 Comments

Joint proposal with HST.

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.