

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 14960 - L2 Version 2
Chandra X-Ray Center

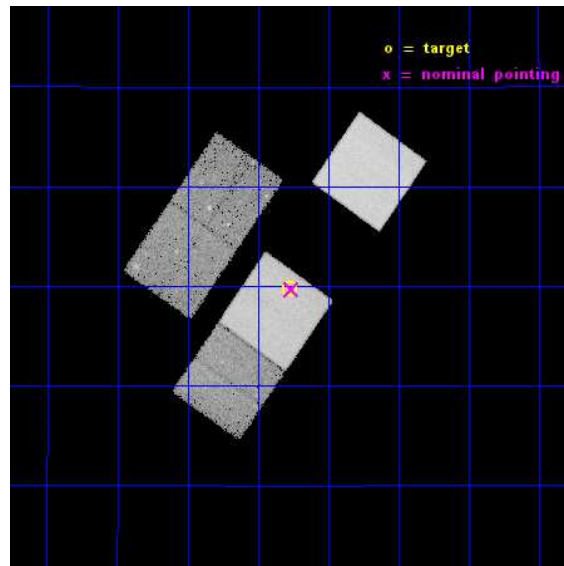
L2 Processing Date : Dec 2 2014

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1 Front

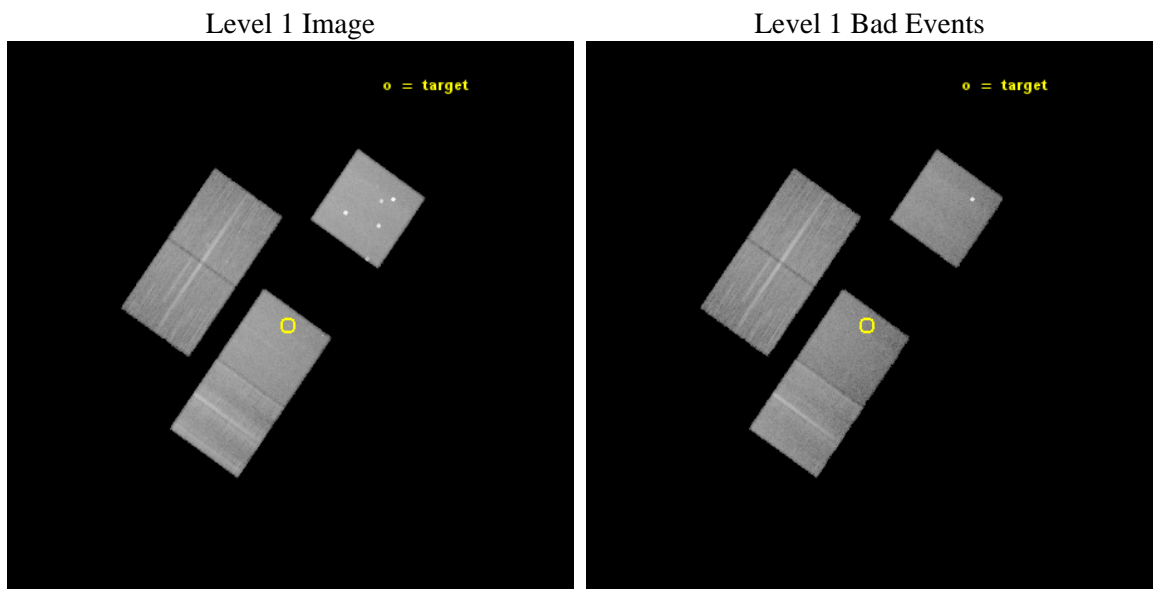
seq_num	702769	Sequence number
obs_id	14960	Observation id
title	Determination of Dark Matter Fractions and M/L in Elliptical Galaxies	Proposal title
observer	Dr. David Pooley	Principal investigator
object	H 1413+117	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	213.943333	Observer's specified target RA [deg]
dec_targ	11.494833	Observer's specified target Dec [deg]
ra_nom	213.94024647056	Nominal RA [deg]
dec_nom	11.494709777064	Nominal Dec [deg]
roll_nom	124.95764187293	Nominal Roll [deg]
revision	2	Processing version of data
ontime	39062.689549744	Sum of GTIs [s]
livetime	38552.306753243	Livetime [s]
ontime2	39062.525389731	Sum of GTIs [s]
ontime3	39062.607469738	Sum of GTIs [s]
ontime5	39062.648509741	Sum of GTIs [s]
ontime7	39062.689549744	Sum of GTIs [s]
ontime8	39062.566429734	Sum of GTIs [s]
l2events	312876	Number of level 2 events



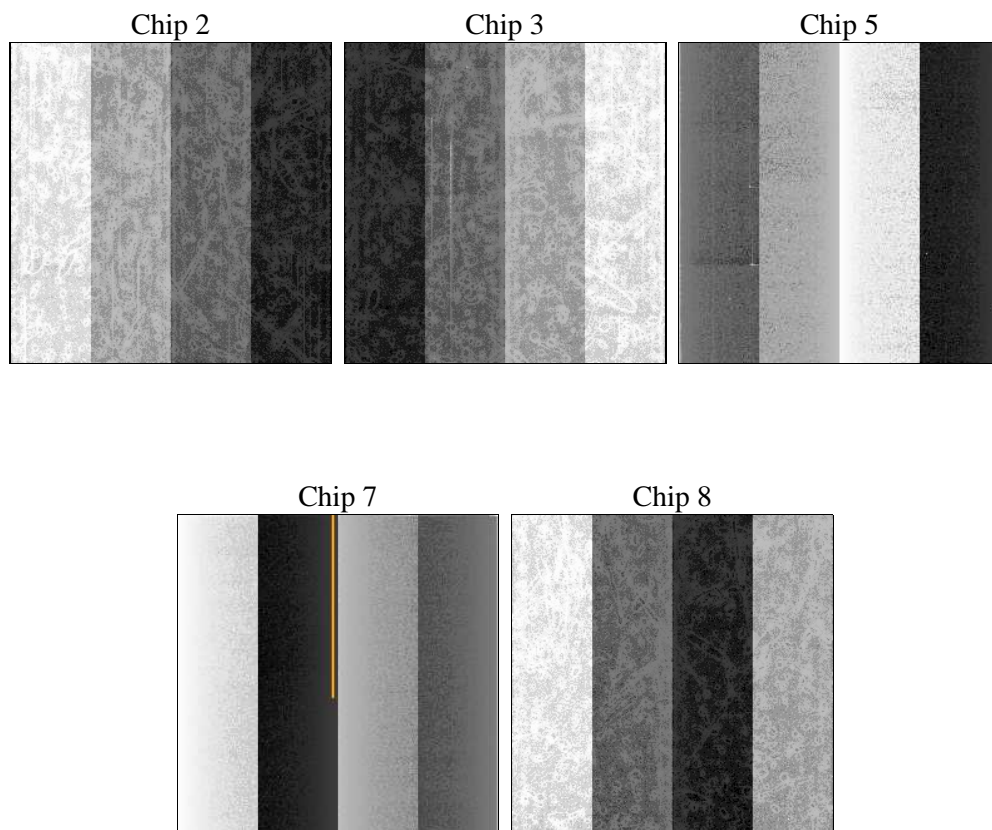
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	39000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	39062.689549744	Sum of GTIs [s]
caldsver	4.6.4	 	ontime2	39062.525389731	Sum of GTIs [s]
date	2014-12-02T12:55:20	Date and time of file creation	ontime3	39062.607469738	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	39062.648509741	Sum of GTIs [s]
			ontime7	39062.689549744	Sum of GTIs [s]
			ontime8	39062.566429734	Sum of GTIs [s]
			l1events	1187470	Number of level 1 events

2.1.4 Events

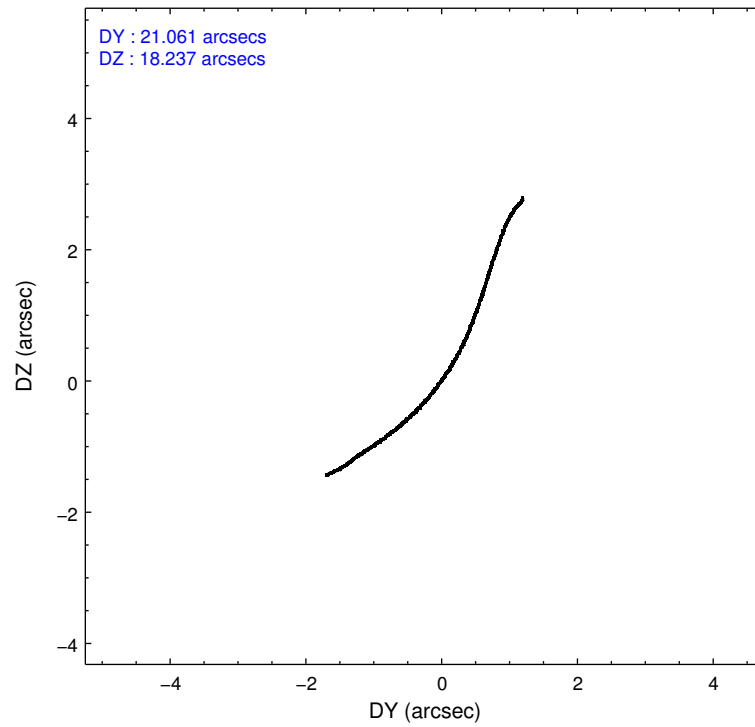
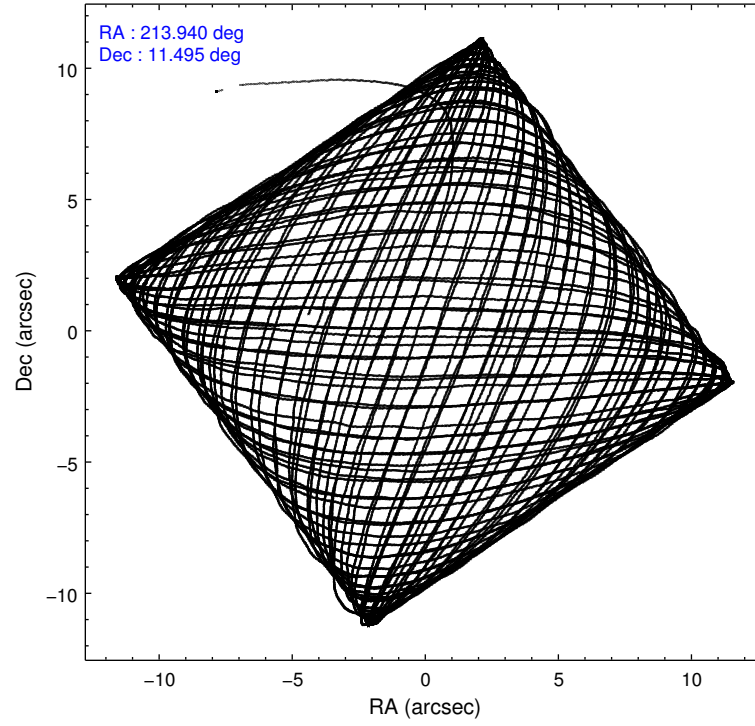
	ccd 2	ccd 3	ccd 5	ccd 7	ccd 8
level 1 events	192579	185315	326010	230632	252934
rejected events	169876	163481	152176	120588	182198
rejected %	88%	88%	46%	52%	72%

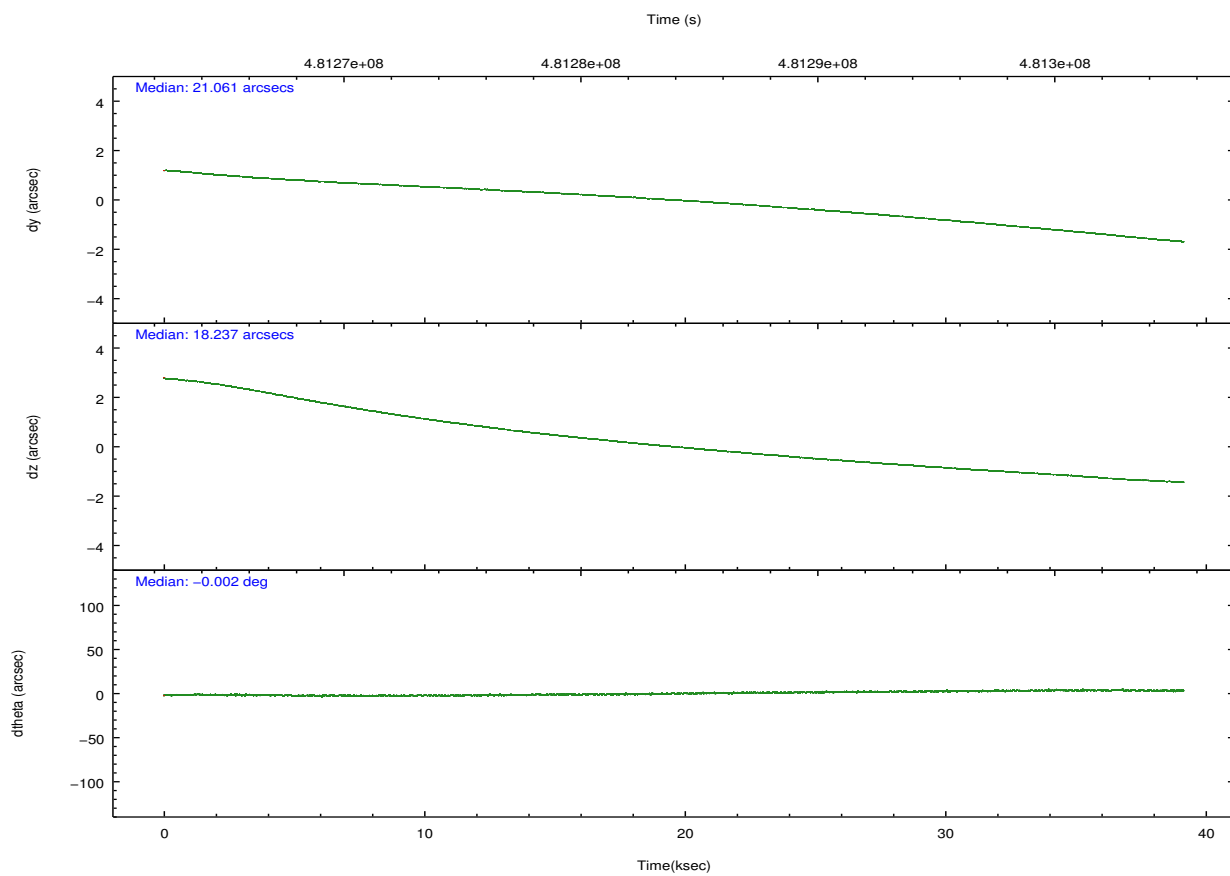
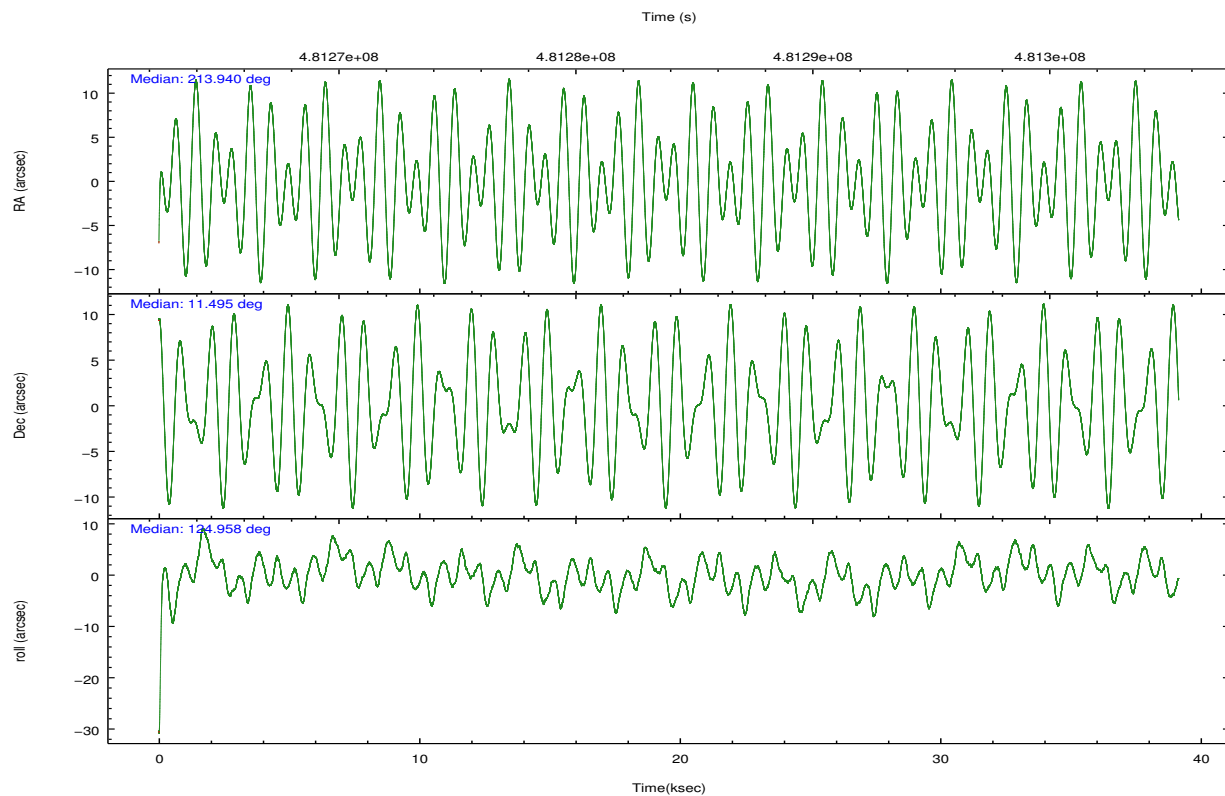
	ccd 2	ccd 3	ccd 5	ccd 7	ccd 8
grade 0 events	8964	8272	32589	11209	19993
	4%	4%	9%	4%	7%
grade 1 events	107	114	625	337	203
	0%	0%	0%	0%	0%
grade 2 events	5445	4698	50257	23339	16881
	2%	2%	15%	10%	6%
grade 3 events	2122	2325	5975	9941	7571
	1%	1%	1%	4%	2%
grade 4 events	2276	2337	5597	9727	7285
	1%	1%	1%	4%	2%
grade 5 events	7027	8815	23430	24393	13313
	3%	4%	7%	10%	5%
grade 6 events	3900	4206	79447	55846	19014
	2%	2%	24%	24%	7%
grade 7 events	162738	154548	128090	95840	168674
	84%	83%	39%	41%	66%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-23578	ACIS-23578	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	213.965686	213.9402464705575	CCD I2 on	O5	Y
[deg] Pointing Dec	11.483464	11.49470977706433	CCD I3 on	O4	Y
[deg] Pointing Roll	124.795962	124.9576418729295	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O3	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O1	N
[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	O2	Y
[s] Observation start time (MET)	481264484.184000	481263231.75429	CCD S5 on	N	N
Observation start date	2013-04-02T04:33:37	2013-04-02T04:13:51	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	481303484.184000	481304310.68151	On-chip summing requested	N	N
Observation end date	2013-04-02T15:23:37	2013-04-02T15:38:30	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



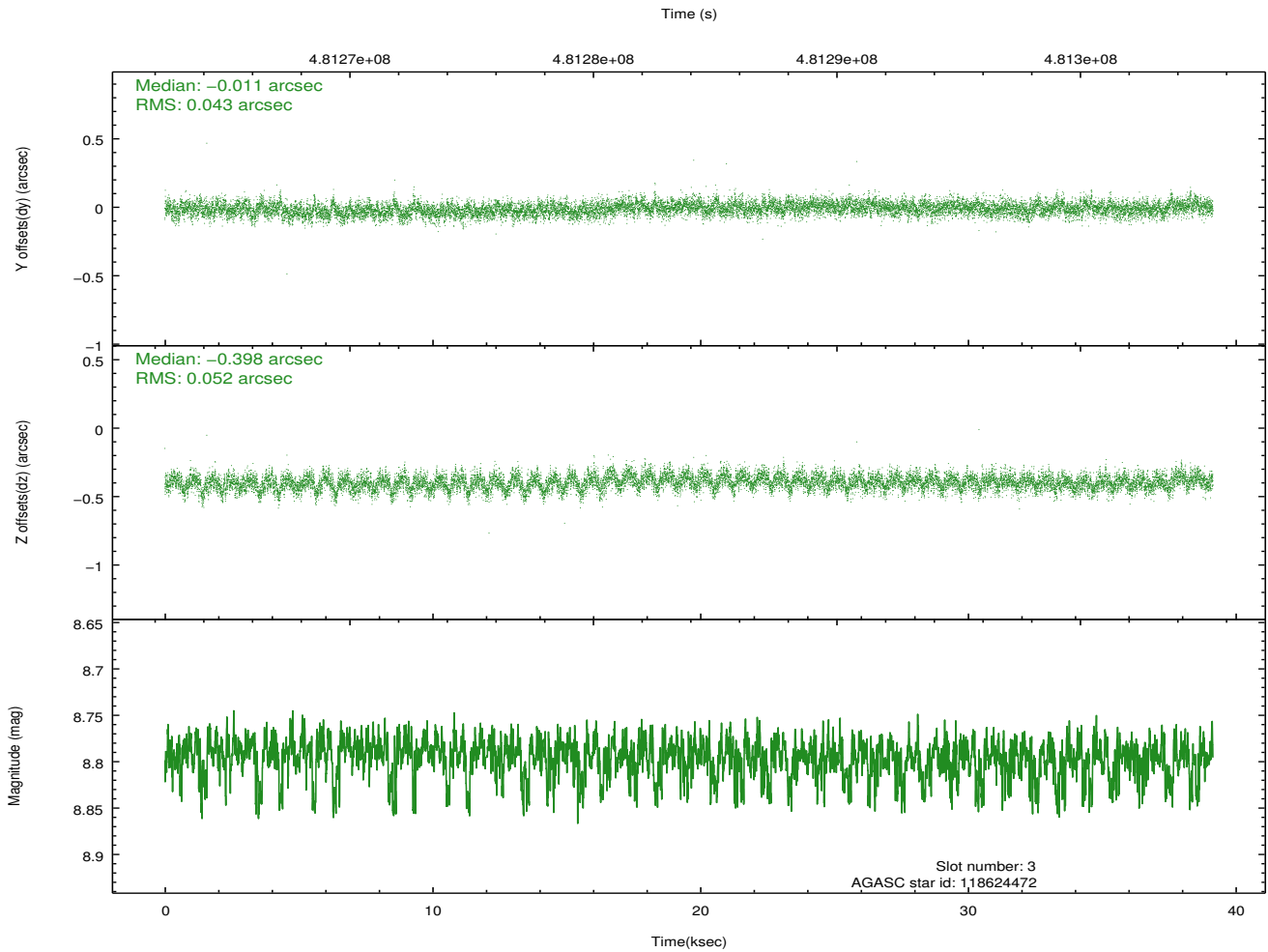
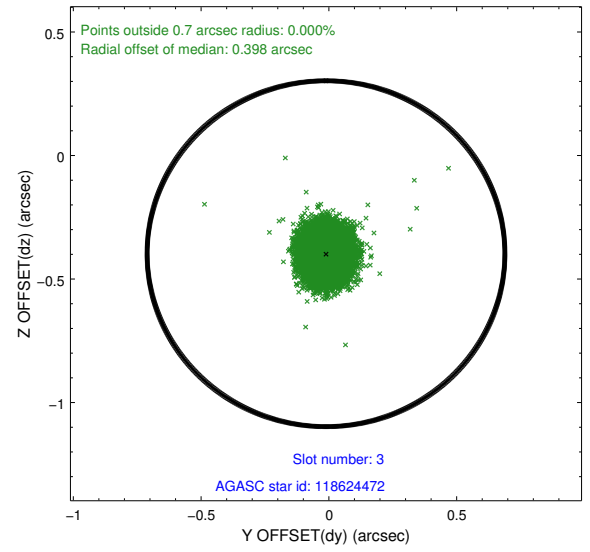
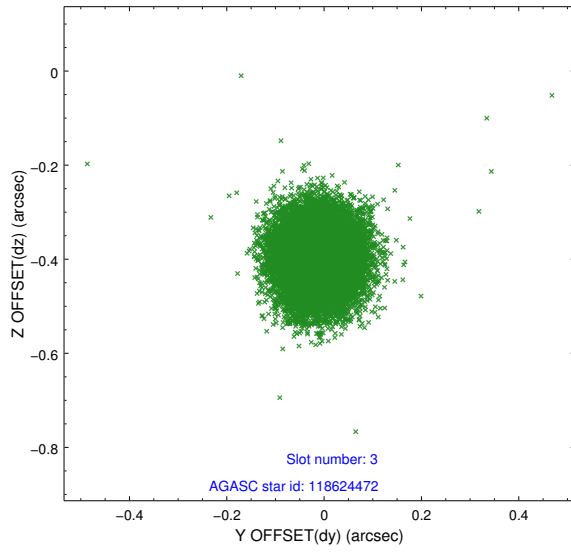


Slot Statistics

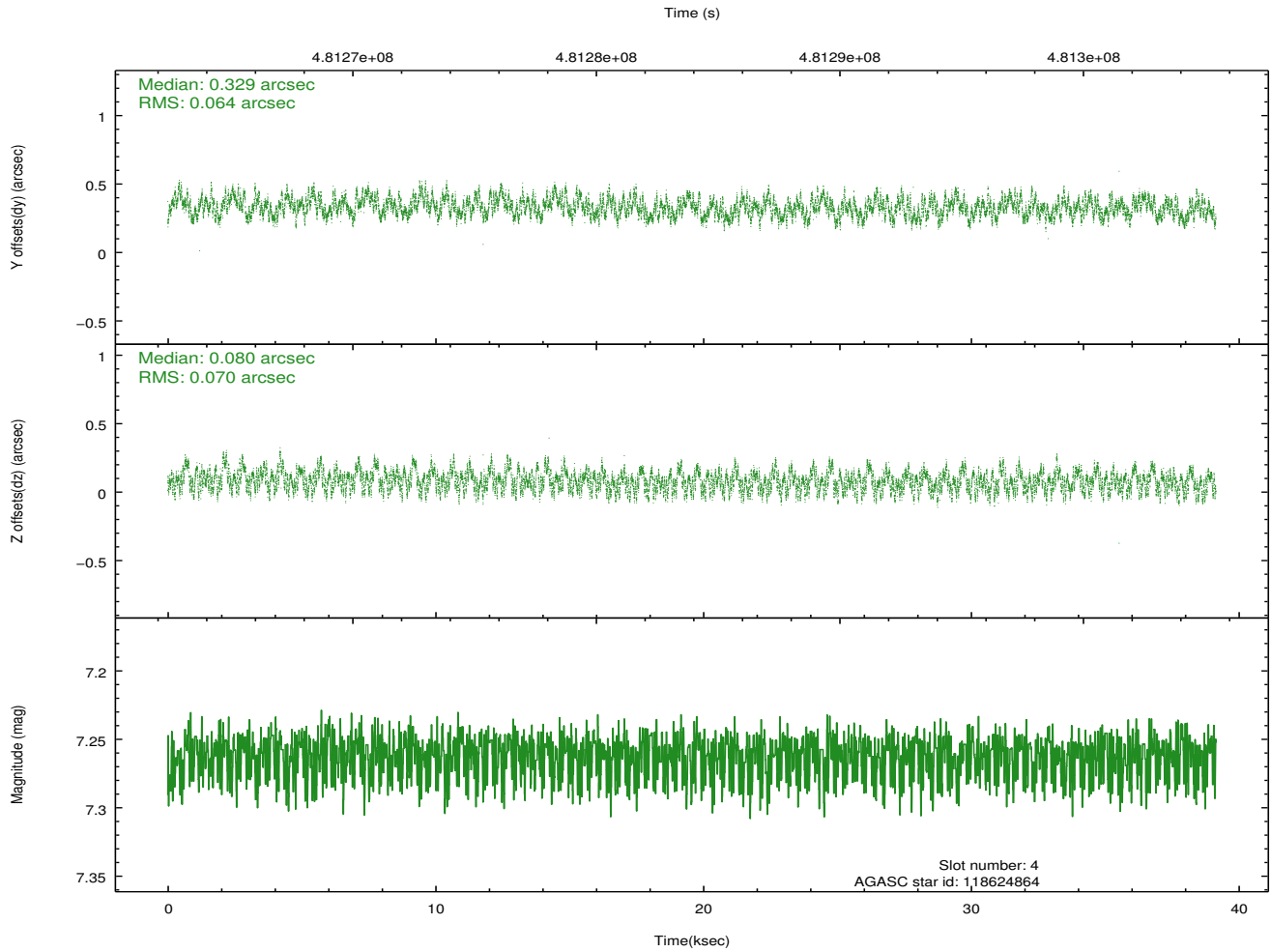
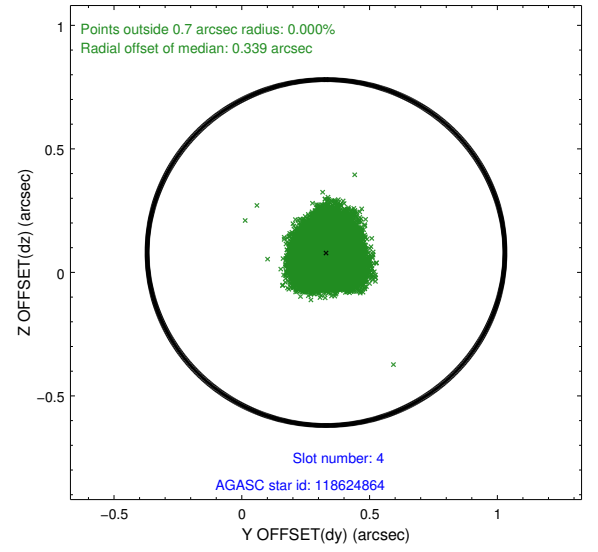
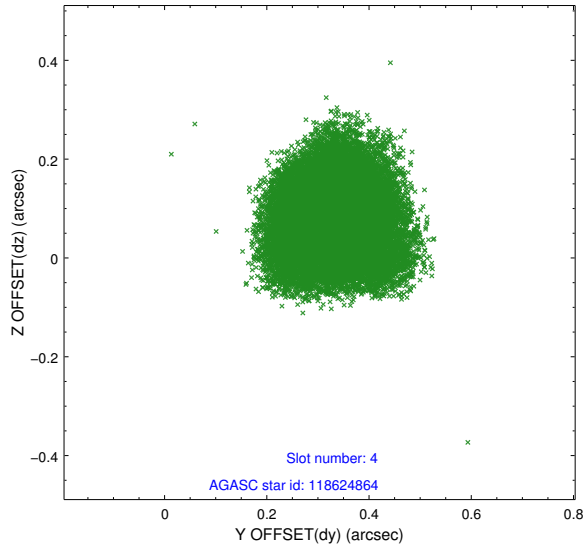
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	6.97	9549	-0.141	-0.087	0.009	0.019	0.000000	0.000000	-774.28	-1740.02
1	FID		ACIS-S-4	7.06	9548	0.178	0.072	0.009	0.017	0.000000	0.000000	2139.37	168.51
2	FID		ACIS-S-6	7.20	9549	-0.064	0.023	0.011	0.024	0.000000	0.000000	387.89	805.94
3	GUIDE	used	118624472	8.79	19044	-0.011	-0.398	0.072	0.116	213.211383	11.620451	1925.96	1901.17
4	GUIDE	used	118624864	7.26	19092	0.329	0.080	0.104	0.157	214.403642	11.335239	-1318.69	-964.55
5	GUIDE	used	118626032	9.67	19079	0.292	-0.188	0.218	0.307	214.111327	10.931412	-1925.02	712.46
6	GUIDE	used	118626824	9.28	18959	-0.005	0.063	0.135	0.228	213.749334	12.111955	2292.77	-665.53
7	GUIDE	used	118628136	8.81	19059	-0.621	0.448	0.137	0.202	213.887181	11.834140	1194.12	-492.49

2.4 Star Slots

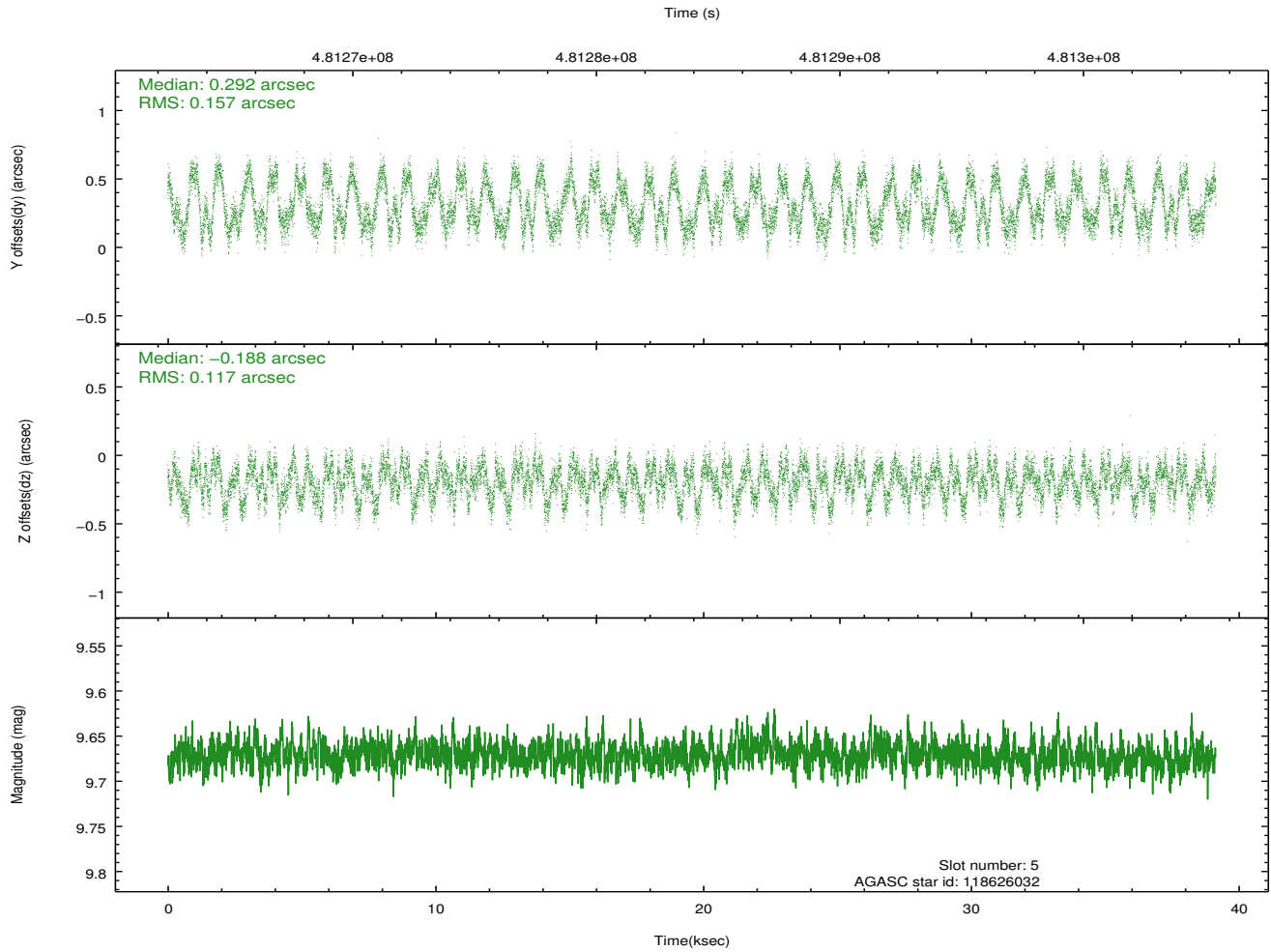
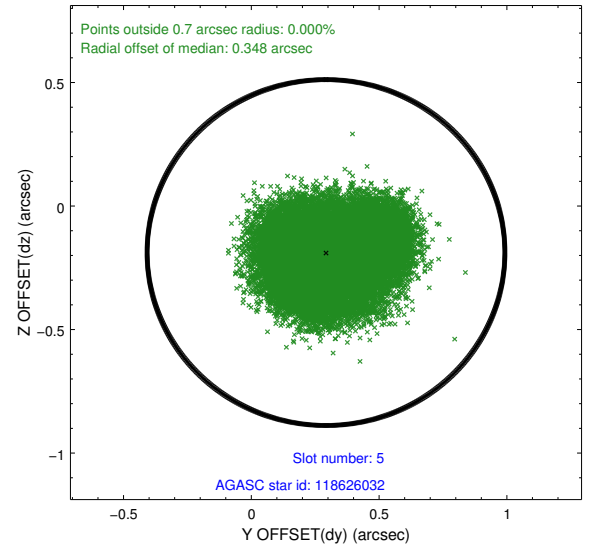
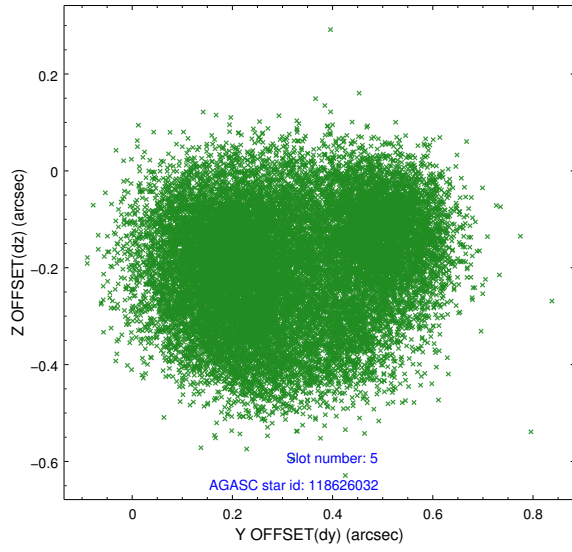
2.4.1 Slot 3



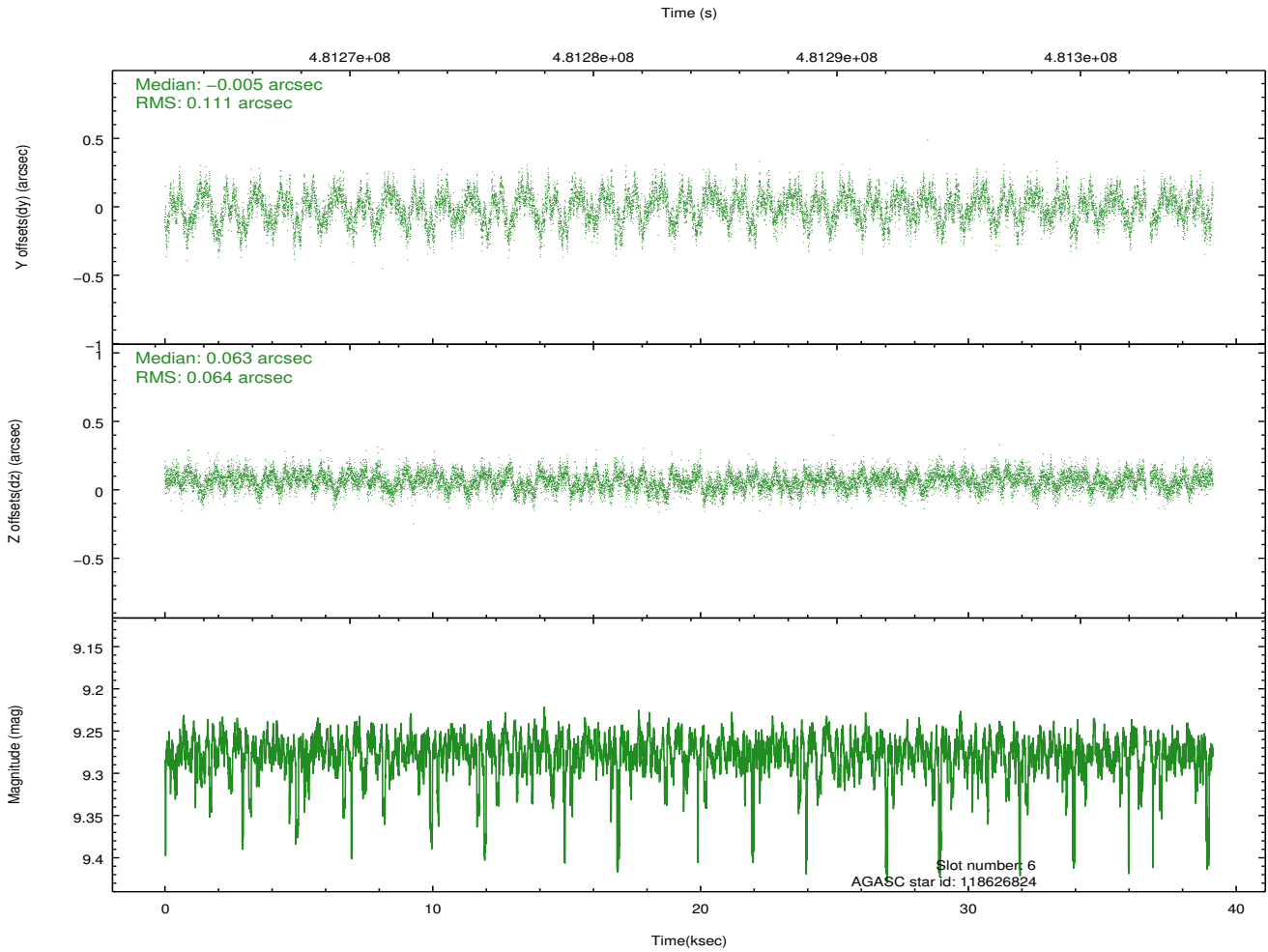
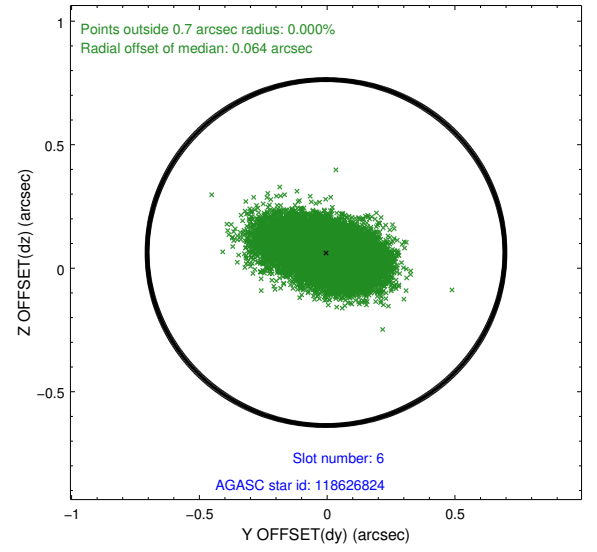
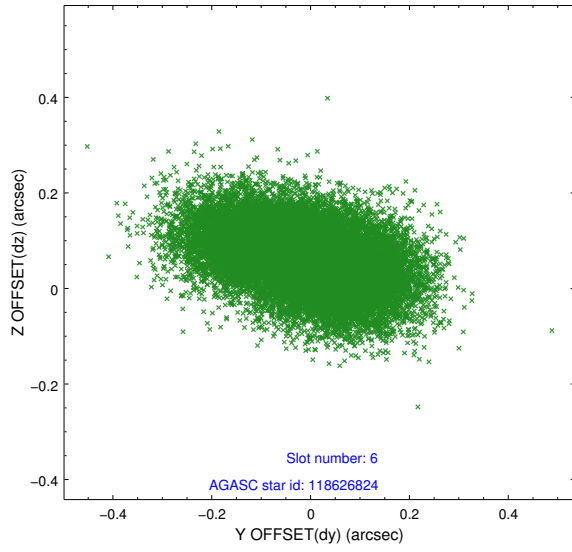
2.4.2 Slot 4



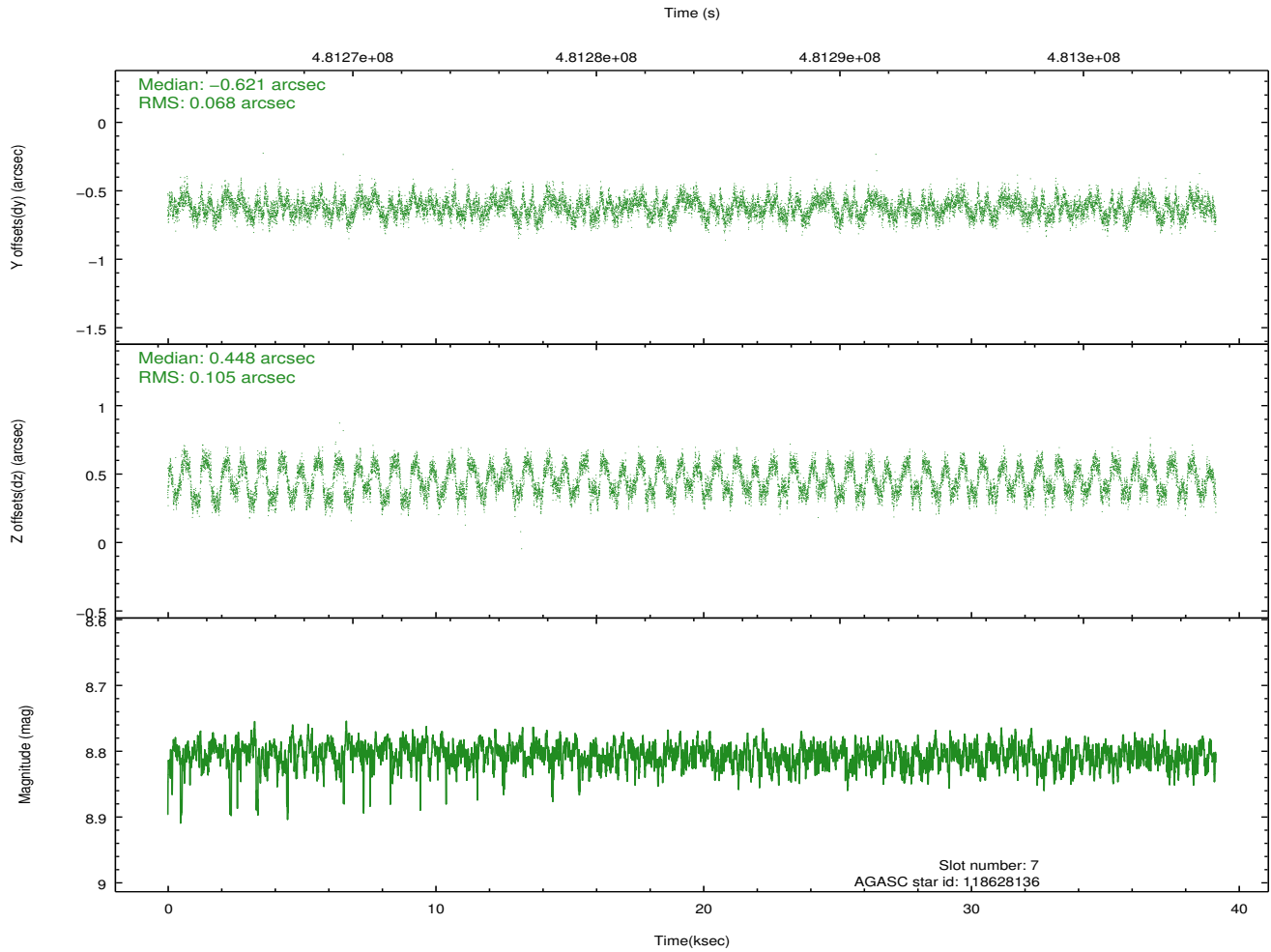
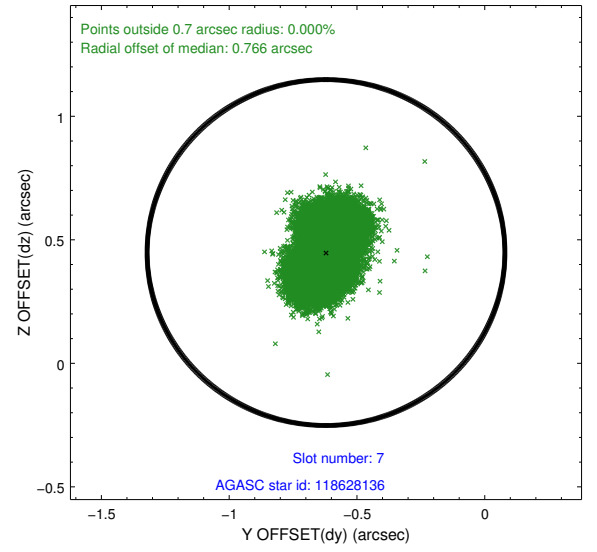
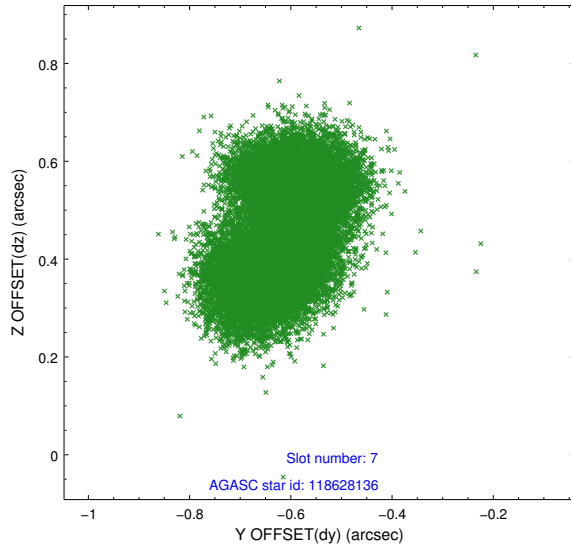
2.4.3 Slot 5



2.4.4 Slot 6

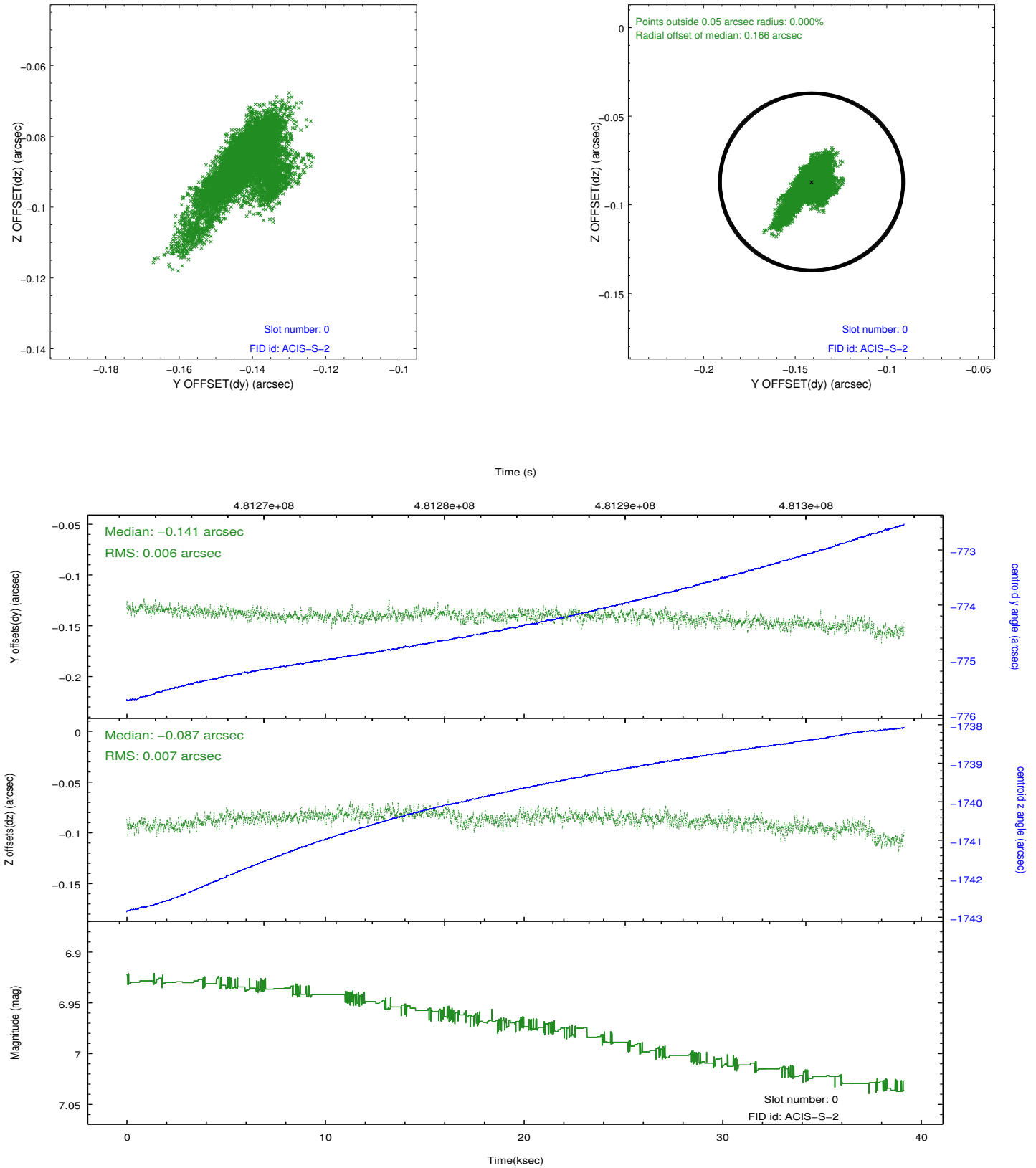


2.4.5 Slot 7

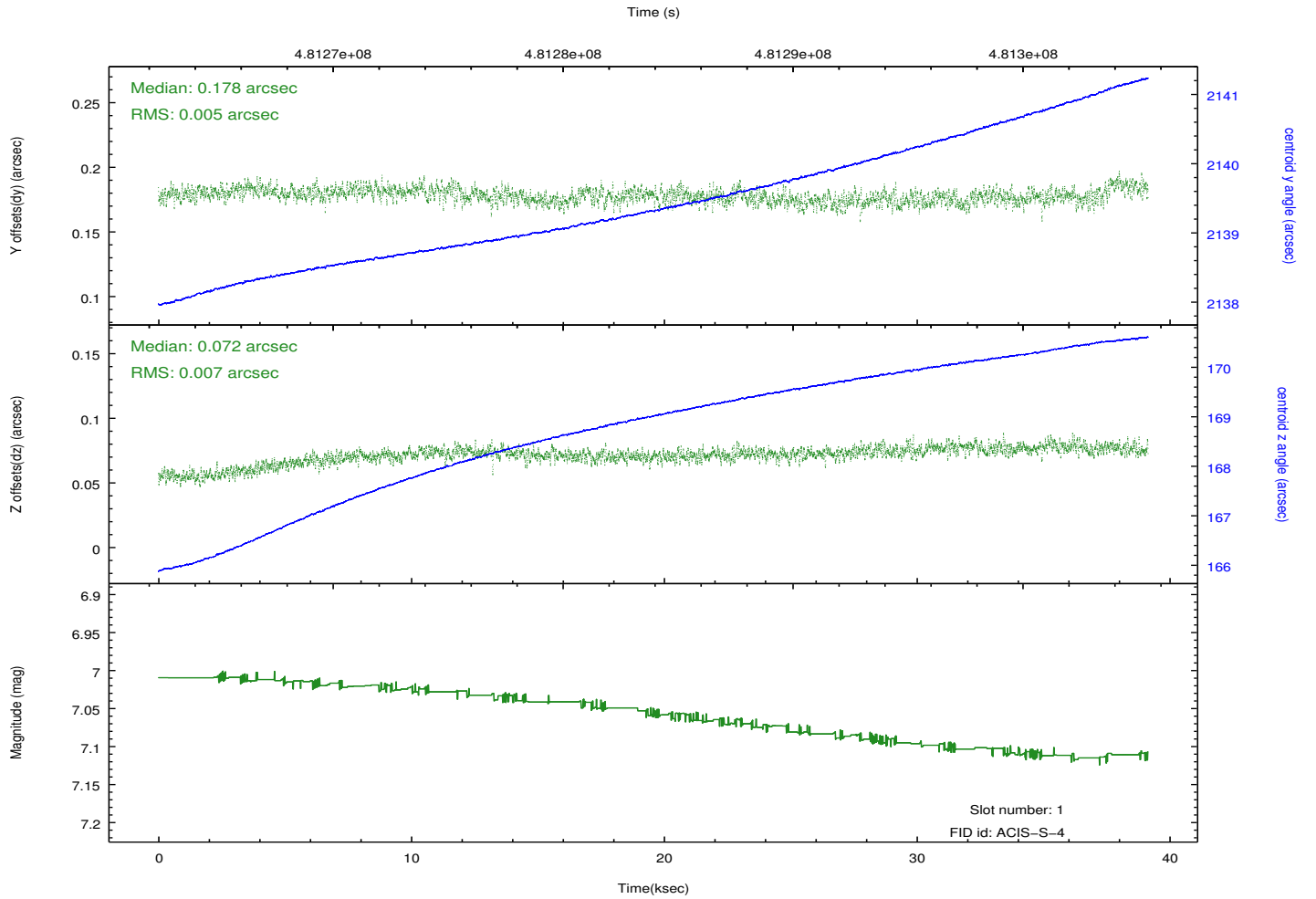
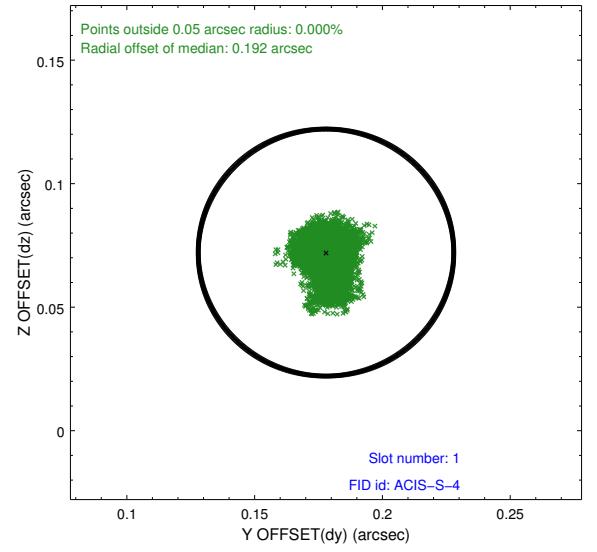
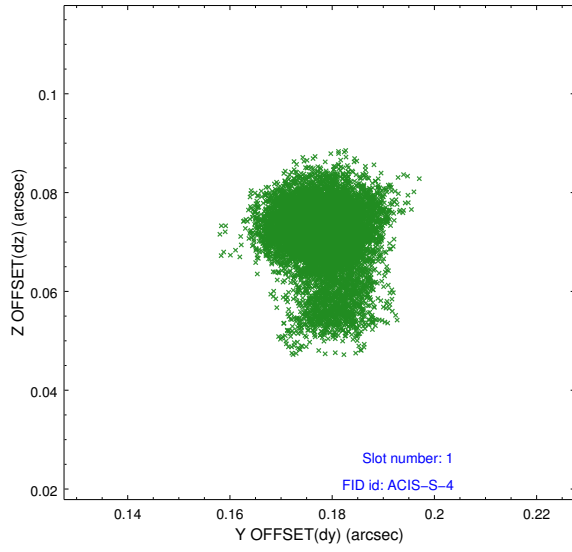


2.5 FID Slots

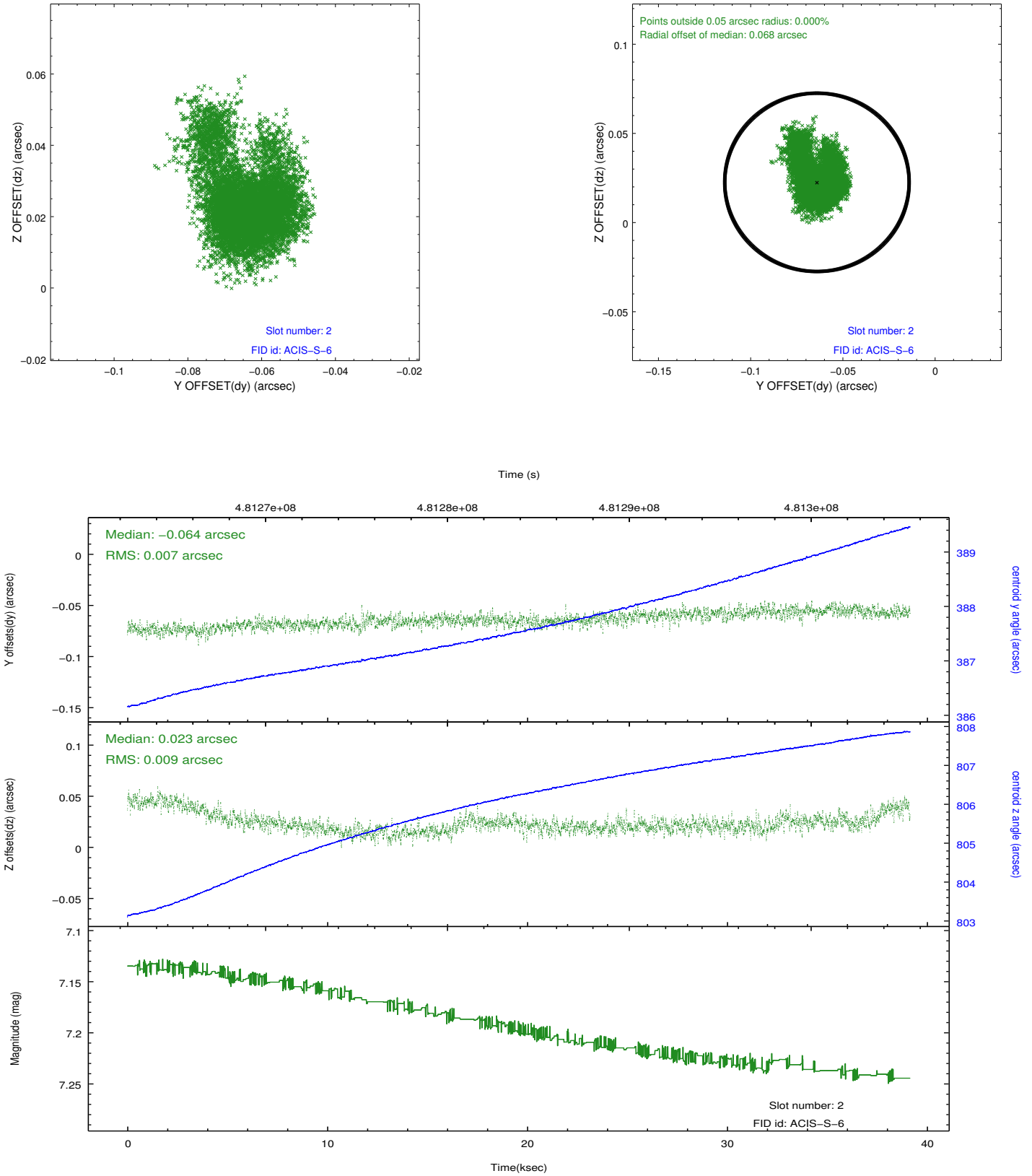
2.5.1 Slot 0



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)	2014.12.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	39.062689549744

A.2 Comments

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.