

V&V Reference Report

L2 ASCDS Version : 10.0.1

Observation 14492 - L2 Version 2
Chandra X-Ray Center

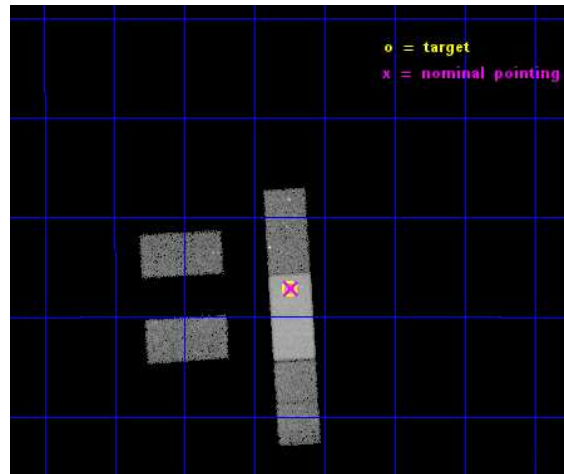
L2 Processing Date : Dec 6 2014

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1 Front

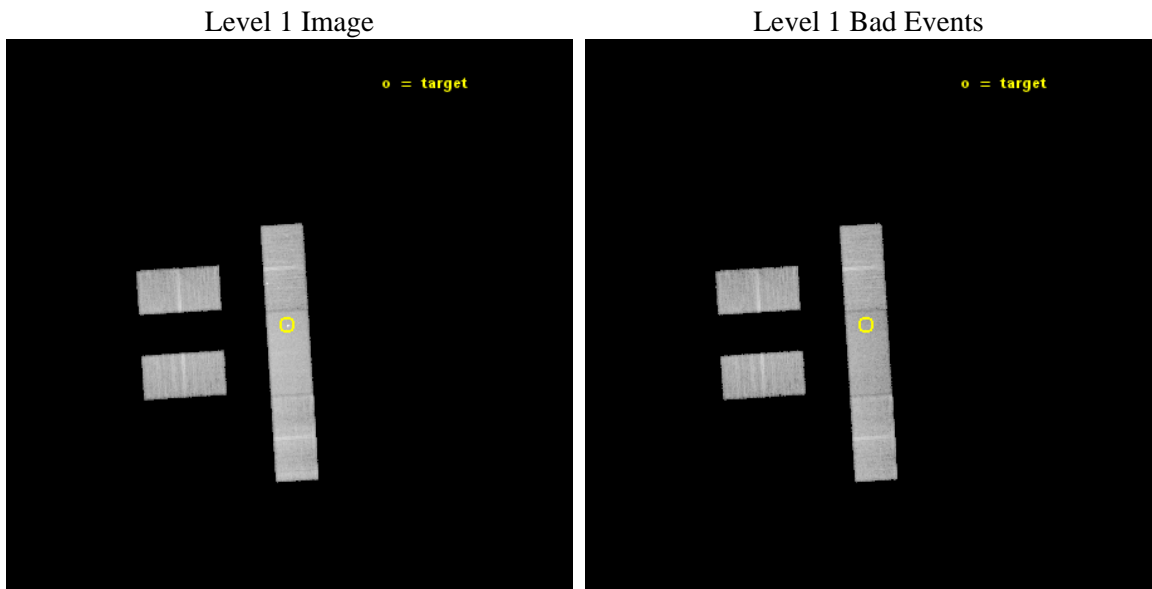
seq_num	702729	Sequence number
obs_id	14492	Observation id
title	ENERGY DEPENDENT X-RAY MICROLENSING AND THE STRUCTURE OF QUASARS	P
observer	Prof. Christopher Kochanek	Principal investigator
object	HE0435-1223	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	69.562083	Observer's specified target RA [deg]
dec_targ	-12.287333	Observer's specified target Dec [deg]
ra_nom	69.559581746898	Nominal RA [deg]
dec_nom	-12.285535413759	Nominal Dec [deg]
roll_nom	86.359816931149	Nominal Roll [deg]
revision	2	Processing version of data
ontime	36389.840863466	Sum of GTIs [s]
livetime	35532.055247377	Livetime [s]
ontime2	36389.676703453	Sum of GTIs [s]
ontime3	36389.75878346	Sum of GTIs [s]
ontime6	36388.05880326	Sum of GTIs [s]
ontime7	36389.840863466	Sum of GTIs [s]
ontime8	36387.976693273	Sum of GTIs [s]
l2events	94702	Number of level 2 events



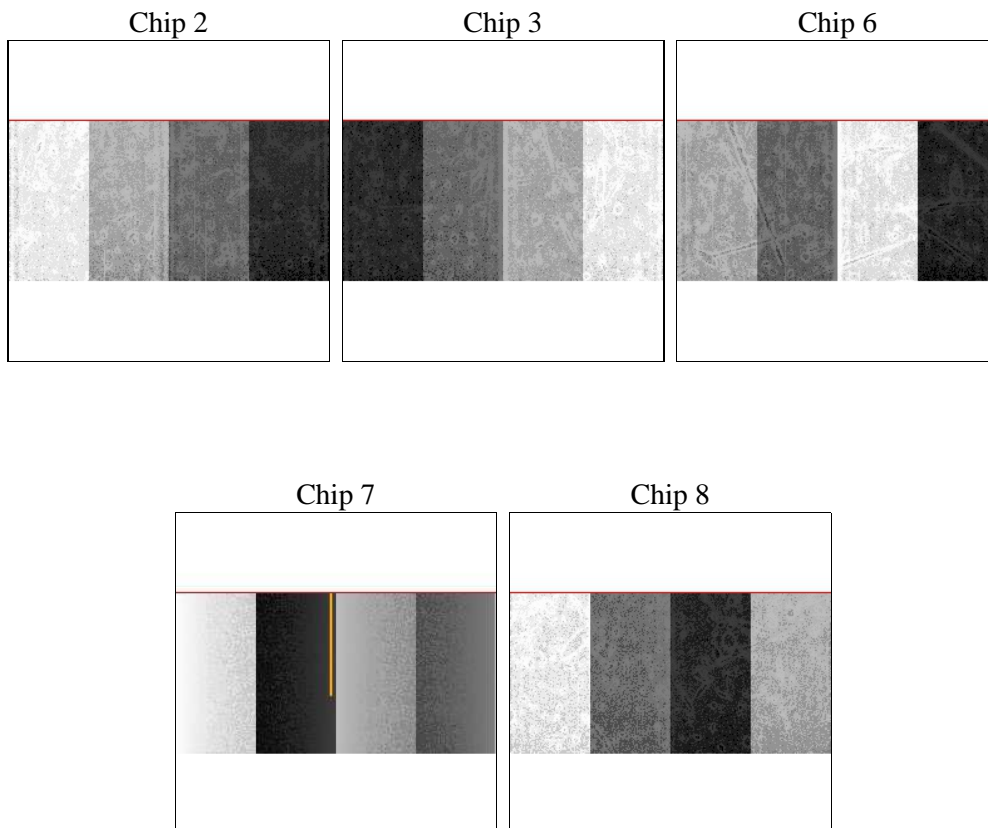
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	36327.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	36389.840863466	Sum of GTIs [s]
caldbver	4.6.4	 	ontime2	36389.676703453	Sum of GTIs [s]
date	2014-12-06T22:50:31	Date and time of file creation	ontime3	36389.75878346	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	36388.05880326	Sum of GTIs [s]
			ontime7	36389.840863466	Sum of GTIs [s]
			ontime8	36387.976693273	Sum of GTIs [s]
			l1events	528625	Number of level 1 events

2.1.4 Events

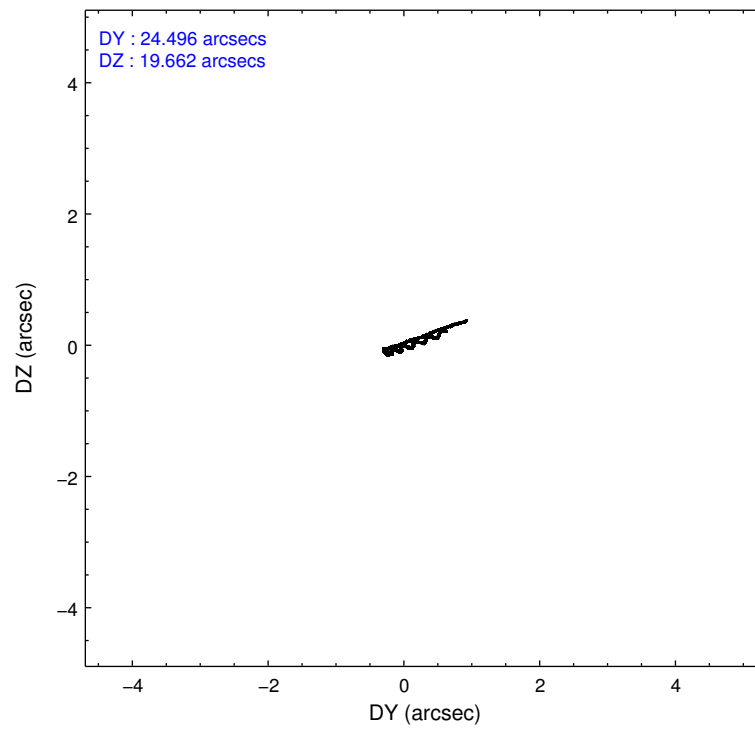
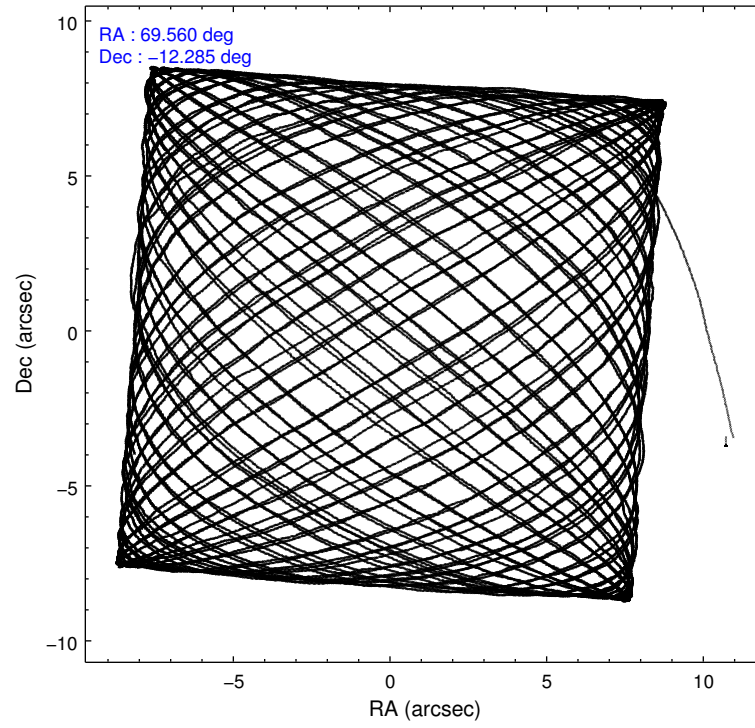
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	88301	90786	97602	126201	125735
rejected events	78033	80452	85246	69104	94328
rejected %	88%	88%	87%	54%	75%

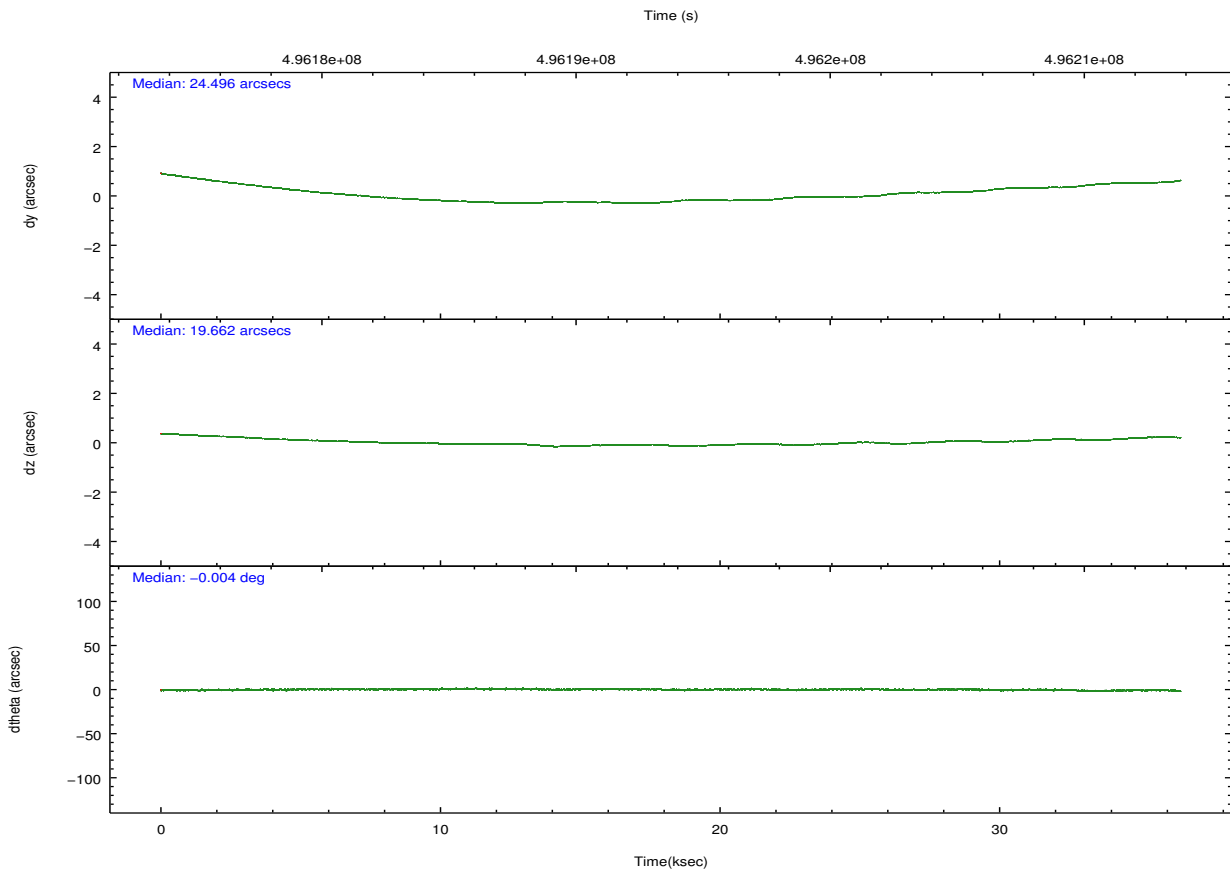
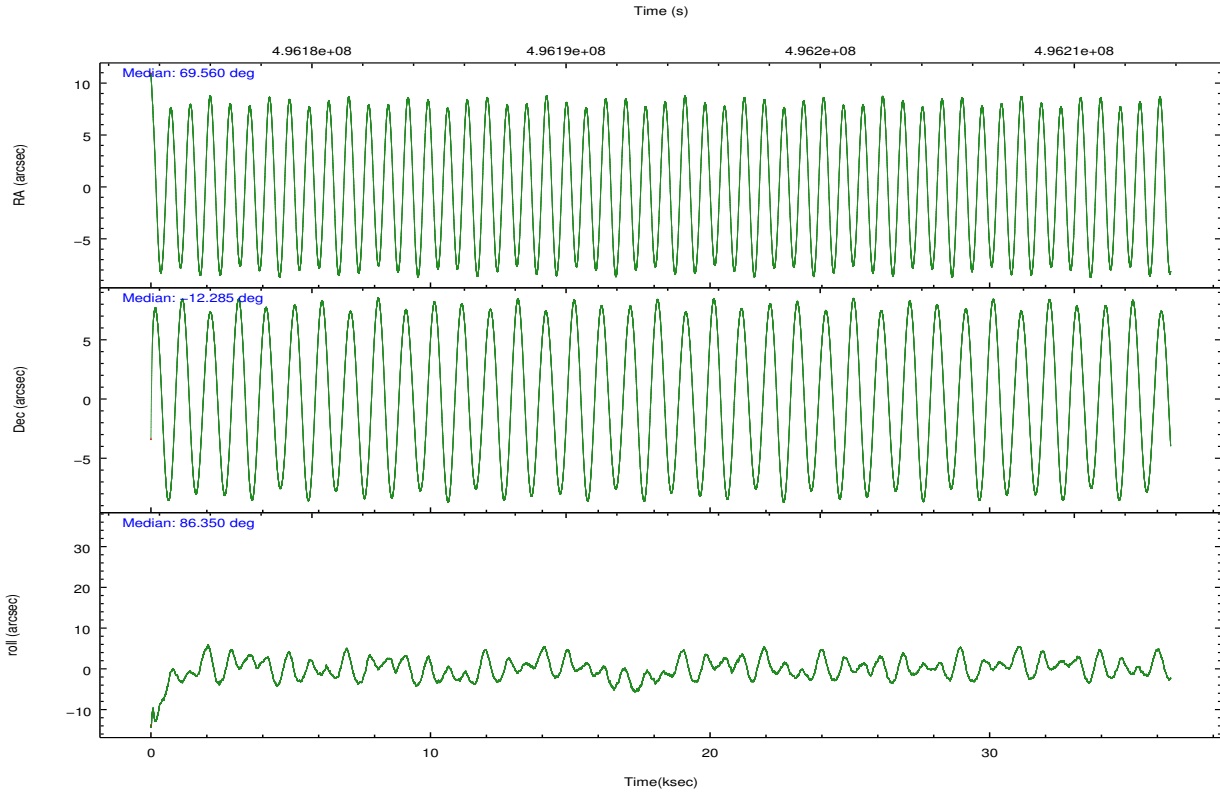
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	3295	3389	4304	5649	8579
	3%	3%	4%	4%	6%
grade 1 events	36	34	41	145	67
	0%	0%	0%	0%	0%
grade 2 events	2486	2280	2590	11748	7574
	2%	2%	2%	9%	6%
grade 3 events	1246	1278	1469	5655	3272
	1%	1%	1%	4%	2%
grade 4 events	1207	1267	1415	5505	3017
	1%	1%	1%	4%	2%
grade 5 events	3690	4874	4844	13055	6890
	4%	5%	4%	10%	5%
grade 6 events	2034	2120	2580	28544	8970
	2%	2%	2%	22%	7%
grade 7 events	74307	75544	80359	55900	87366
	84%	83%	82%	44%	69%

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	69.572349	69.55958174689849	CCD I2 on	O4	Y
[deg] Pointing Dec	-12.309878	-12.2855354137585	CCD I3 on	O3	Y
[deg] Pointing Roll	86.205912	86.35981693114873	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)	496175636.184000	496174640.43981	CCD S5 on	N	N
Observation start date	2013-09-21T18:32:49	2013-09-21T18:17:20	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	496211963.184000	496212726.87939	On-chip summing requested	N	N
Observation end date	2013-09-22T04:38:16	2013-09-22T04:52:06	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





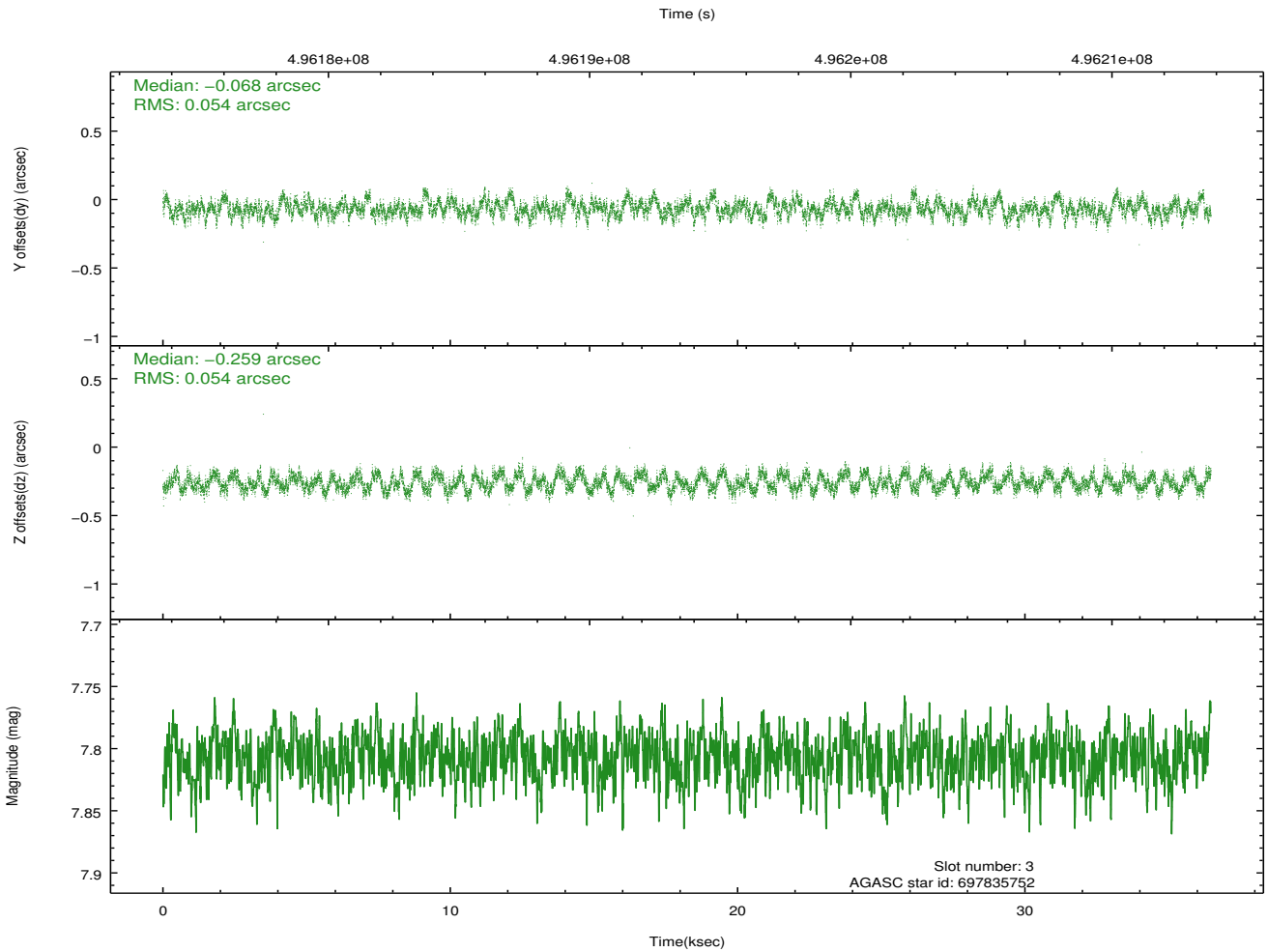
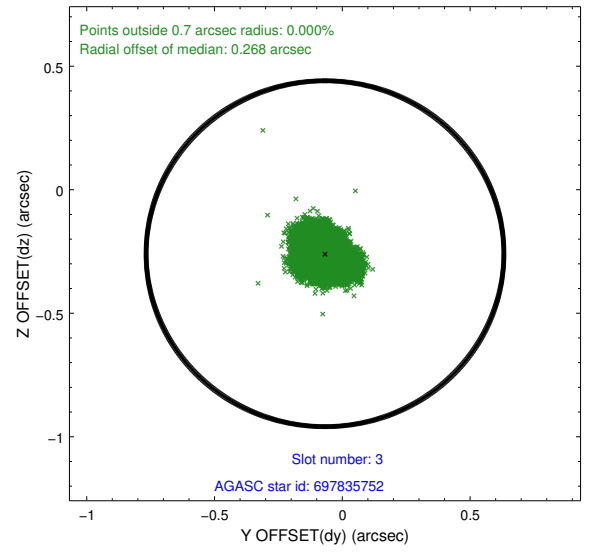
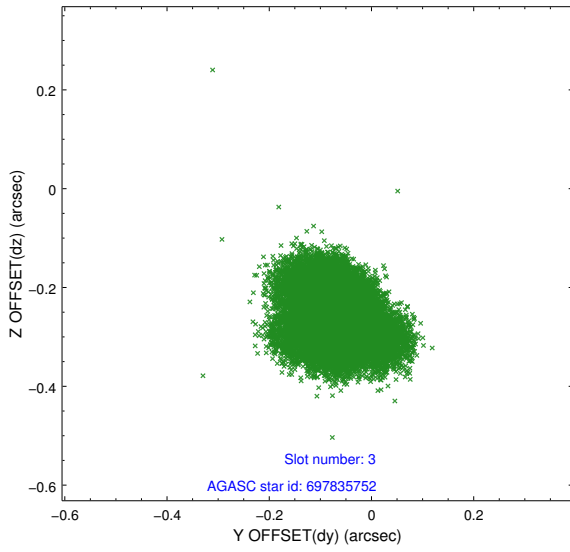
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-2	7.04	8897	-0.192	-0.050	0.016	0.026	0.000000	0.000000	-778.01	-1741.19
1	FID		ACIS-S-4	7.13	8897	0.391	0.106	0.006	0.011	0.000000	0.000000	2135.84	167.41
2	FID		ACIS-S-5	7.15	8897	-0.230	-0.047	0.016	0.029	0.000000	0.000000	-1830.84	160.96
3	GUIDE	used	697835752	7.81	17794	-0.068	-0.259	0.083	0.127	69.312835	-12.164170	462.67	945.17
4	GUIDE	used	697835968	9.05	17674	-0.004	0.121	0.122	0.201	70.113917	-11.772123	2056.55	-1776.32
5	GUIDE	used	698220616	7.52	17793	0.050	0.021	0.073	0.119	69.313891	-12.560296	-959.84	846.30
6	GUIDE	used	698221568	8.61	17739	0.374	0.463	0.093	0.147	69.849031	-12.529974	-726.33	-1021.41
7	GUIDE	used	697833384	9.03	17719	-0.347	-0.342	0.111	0.185	69.085079	-11.610863	2395.28	1881.07

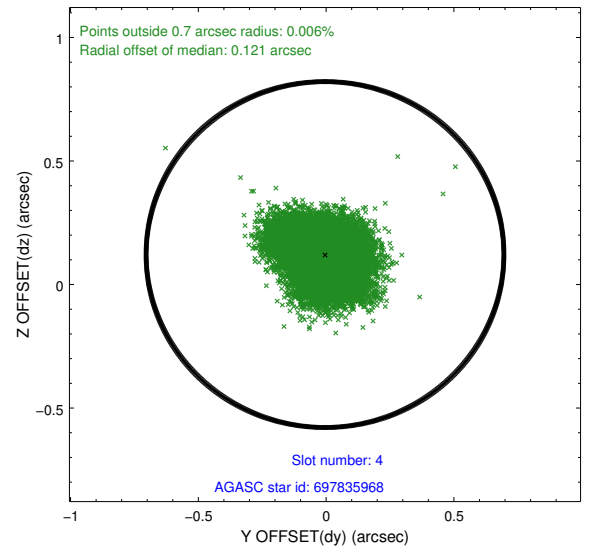
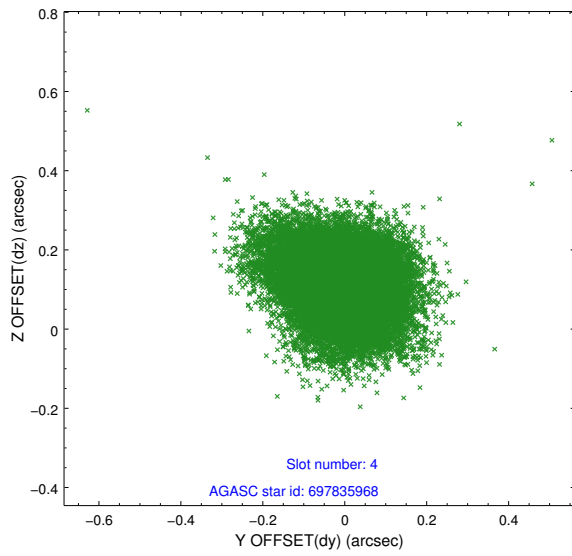
∞

2.4 Star Slots

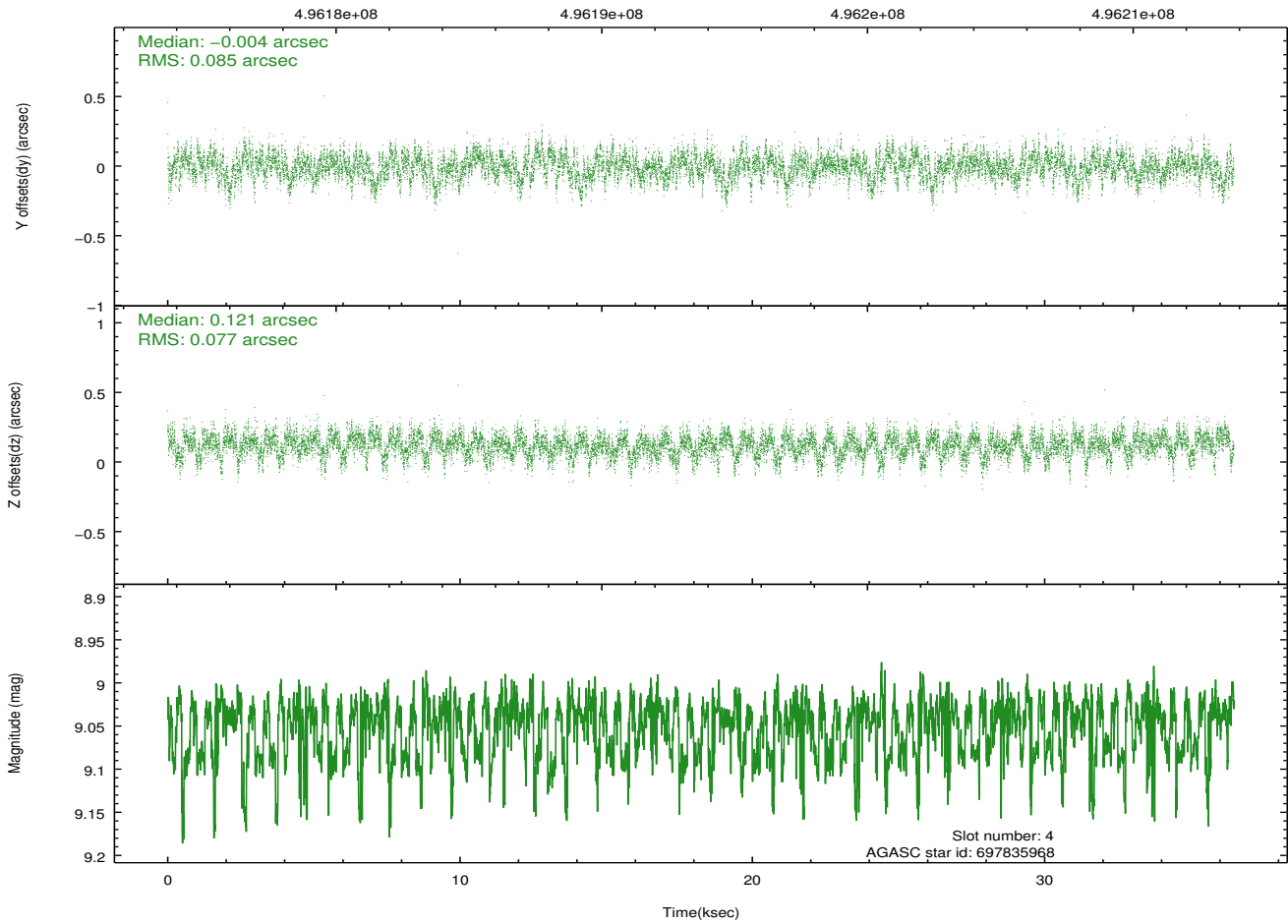
2.4.1 Slot 3



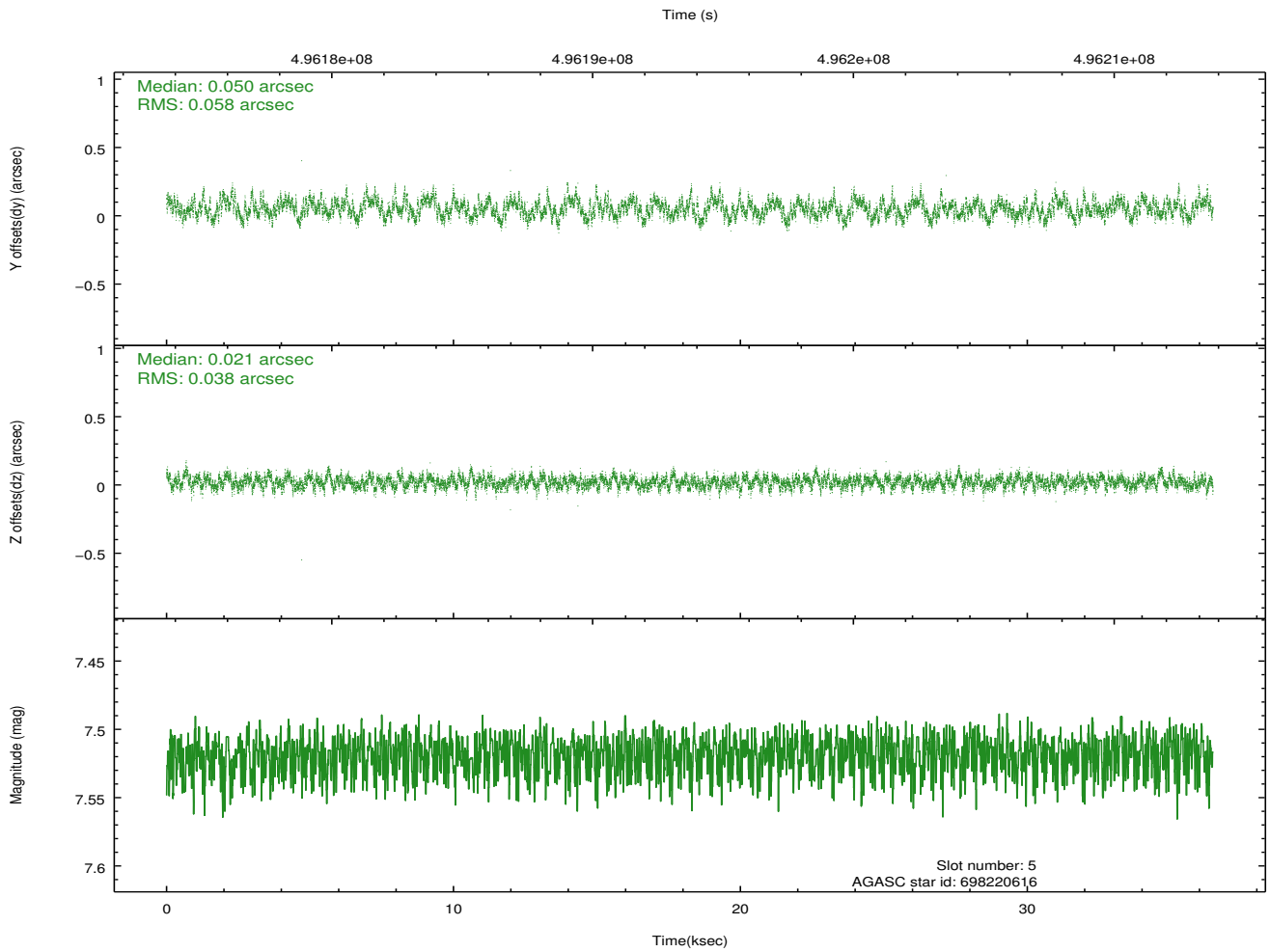
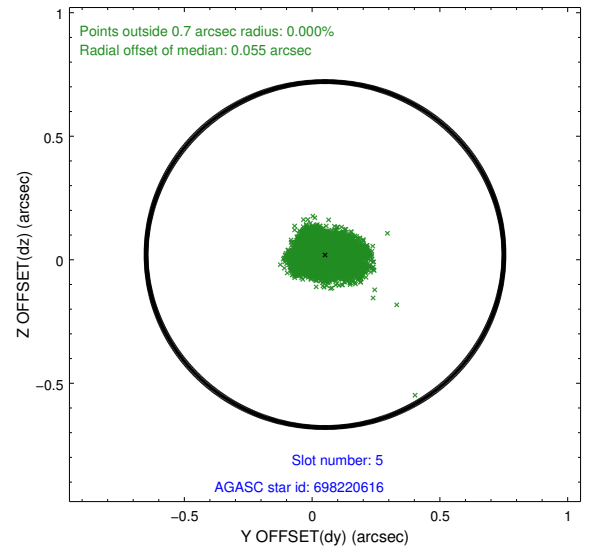
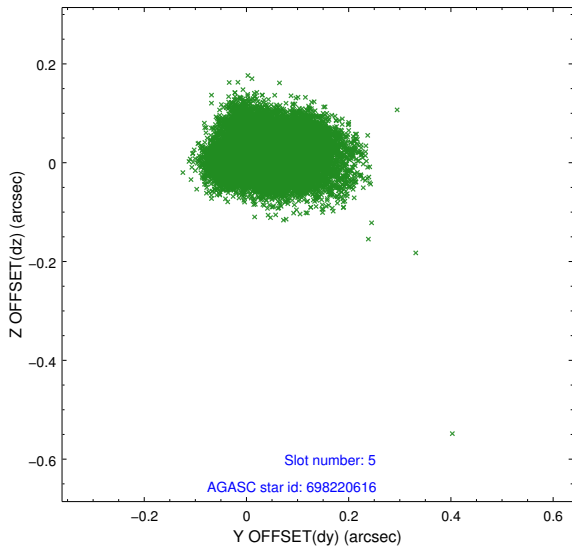
2.4.2 Slot 4



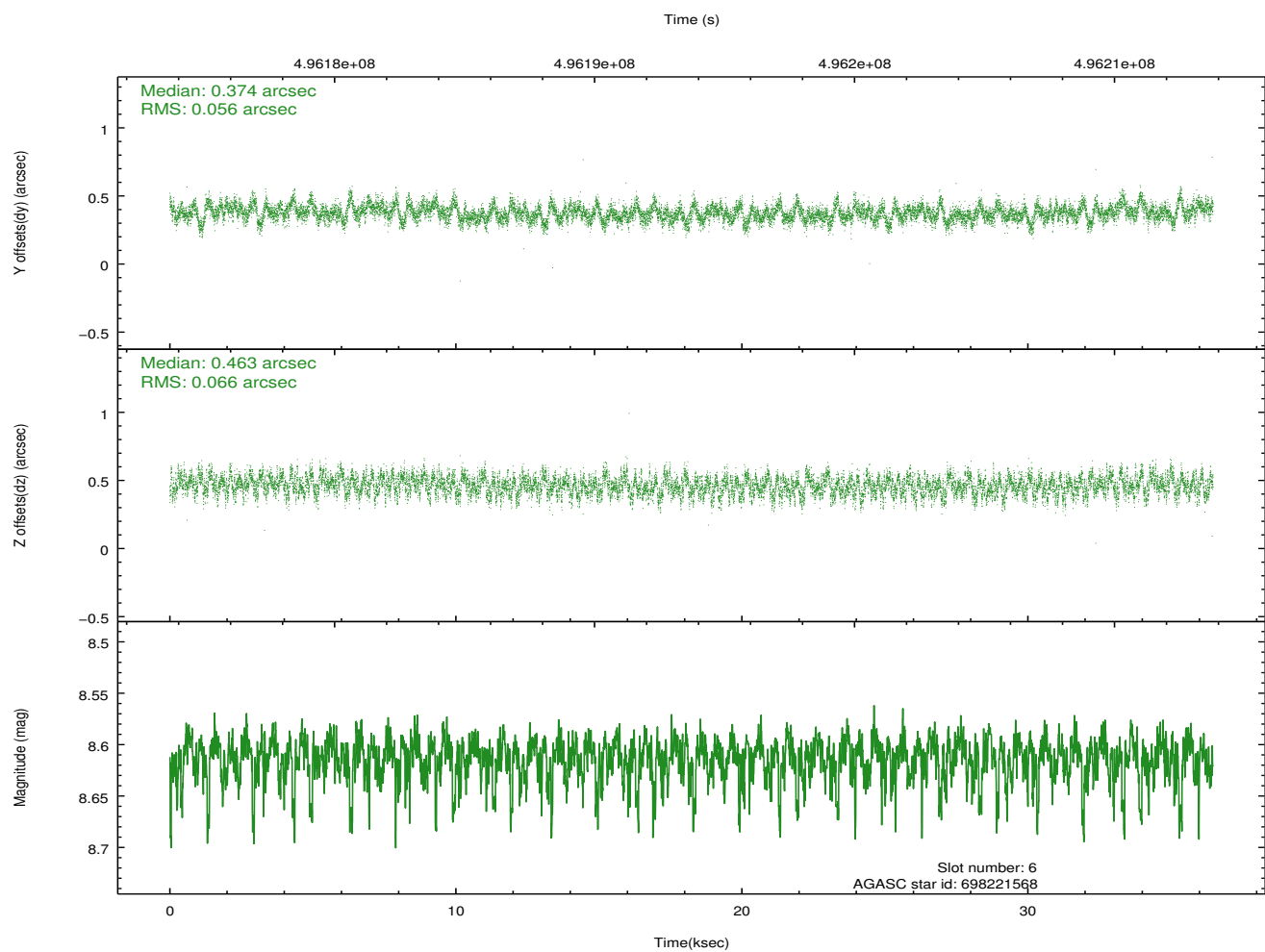
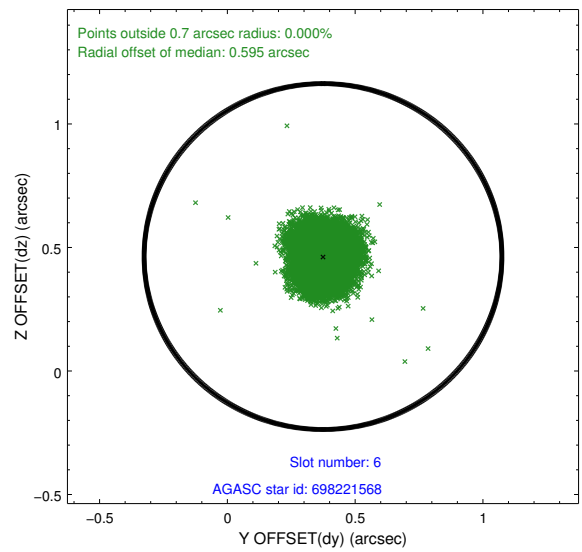
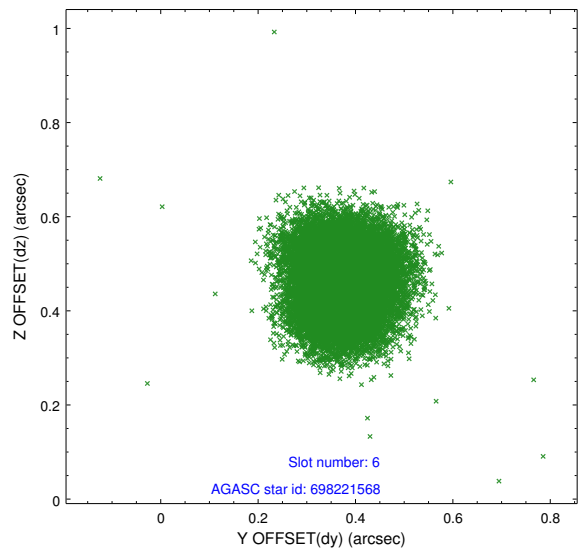
Time (s)



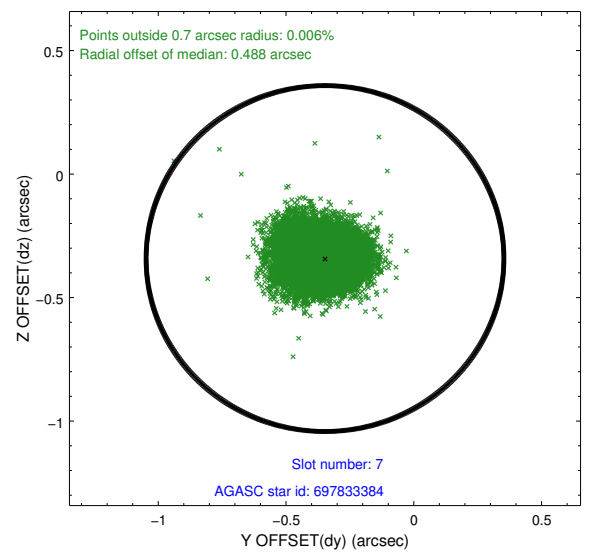
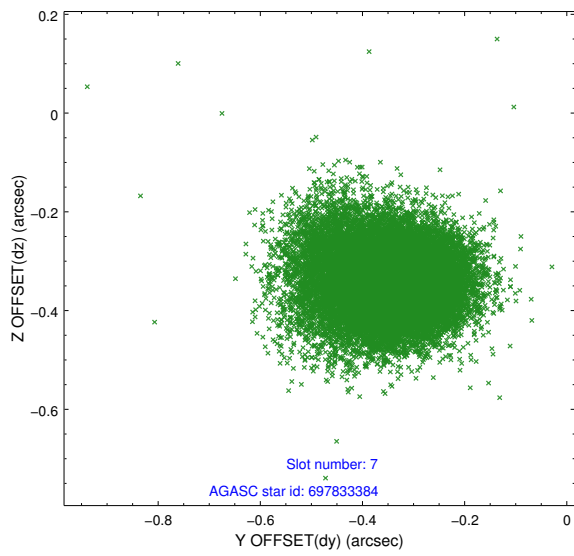
2.4.3 Slot 5



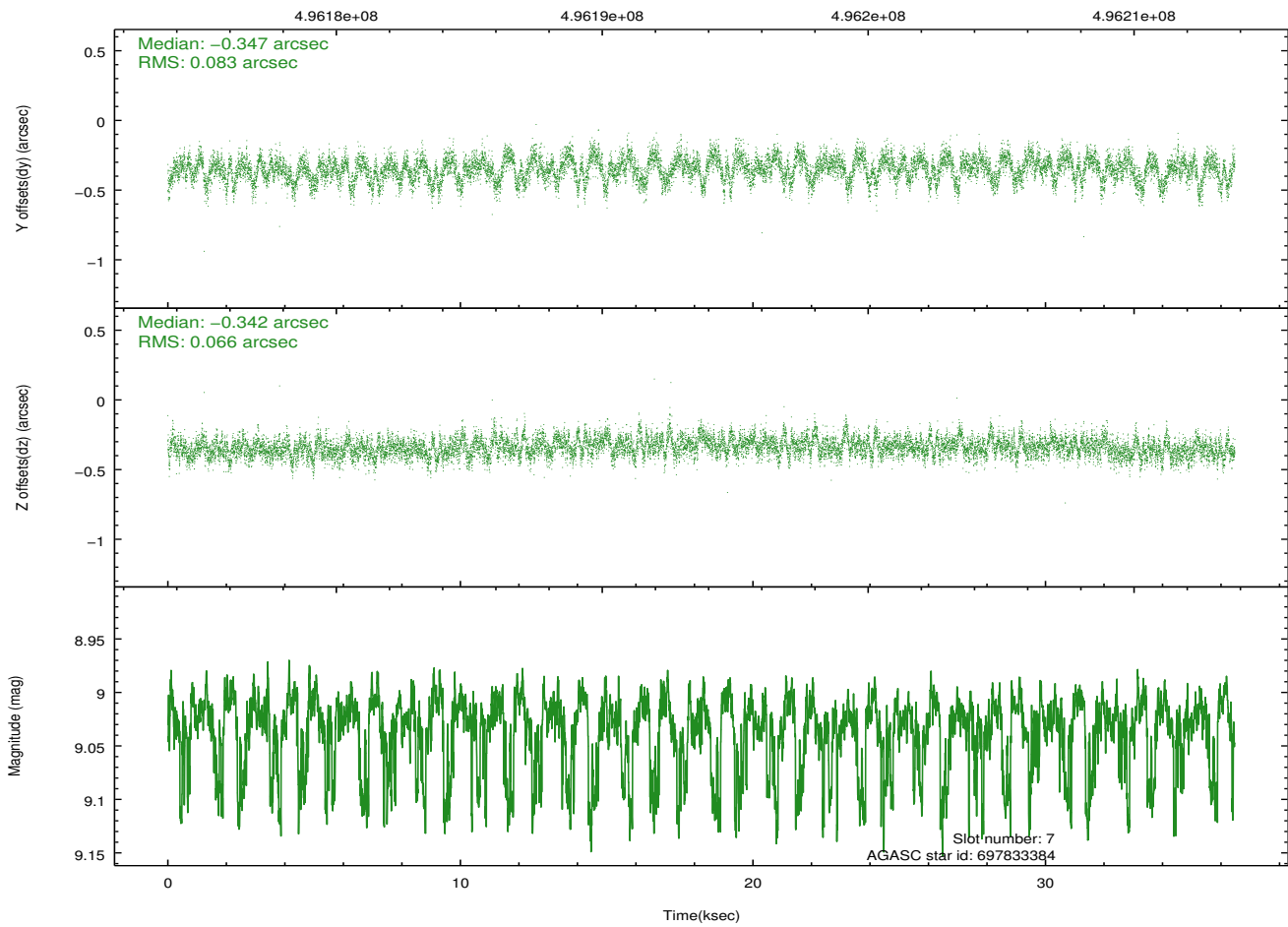
2.4.4 Slot 6



2.4.5 Slot 7

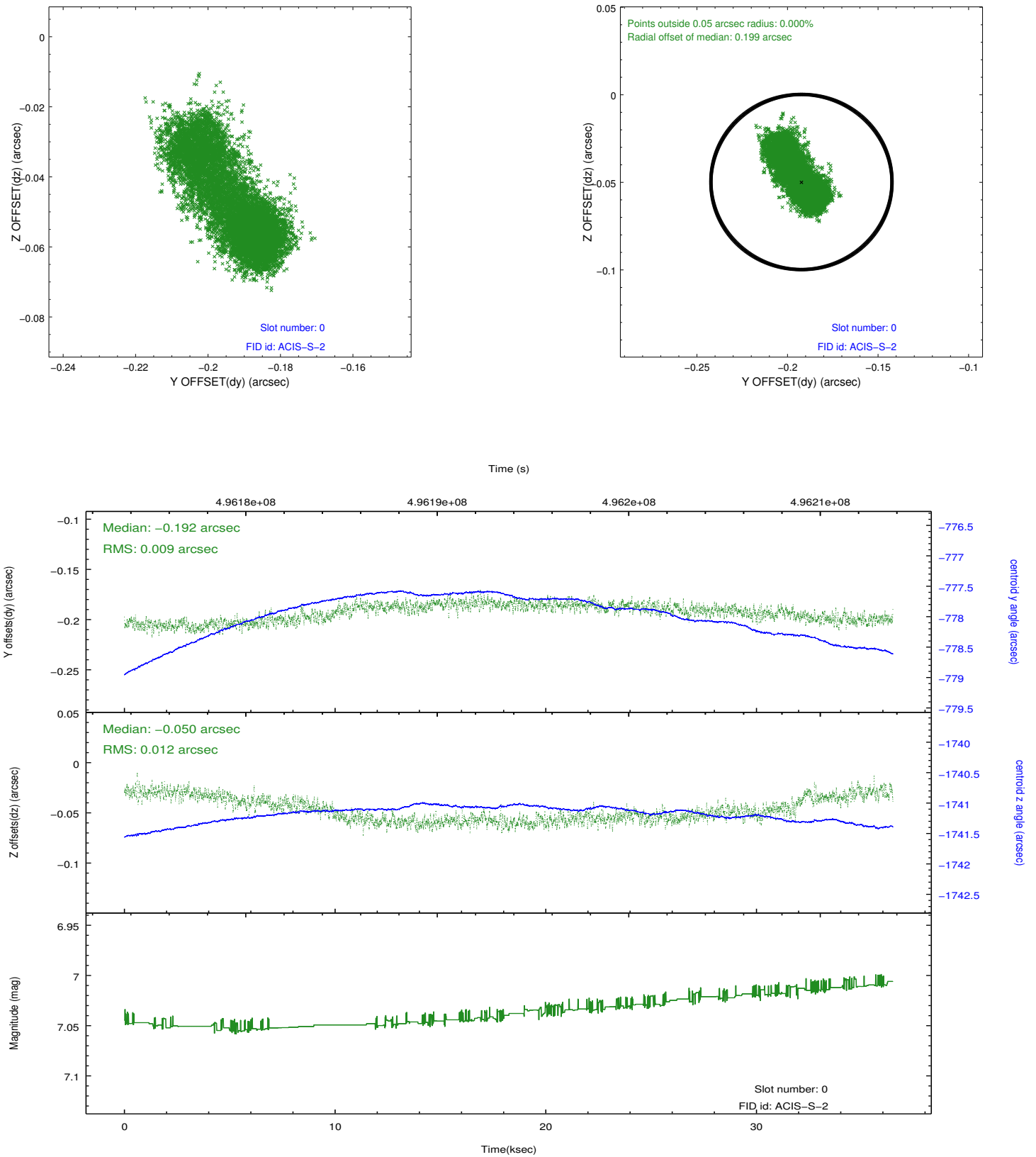


Time (s)

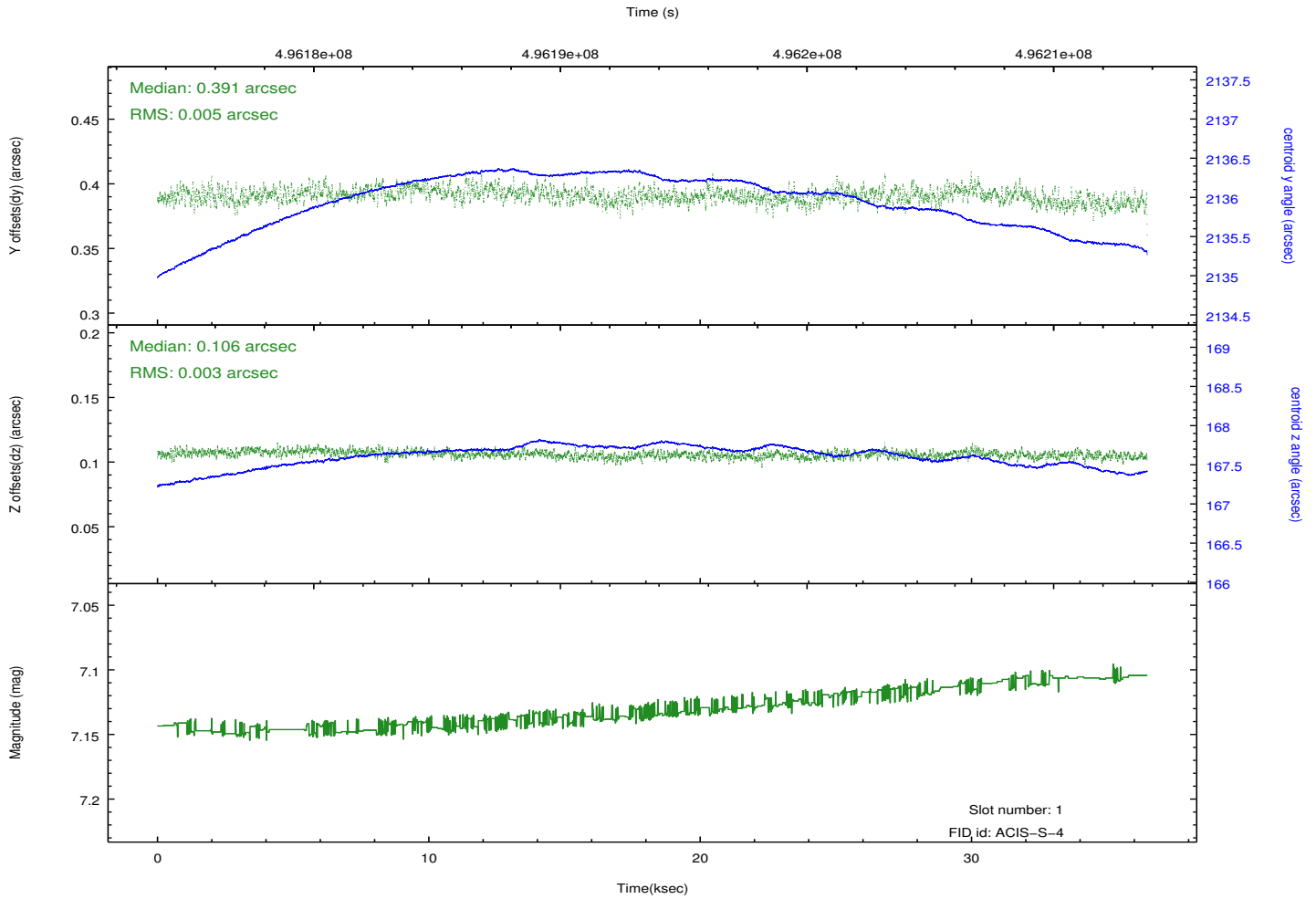
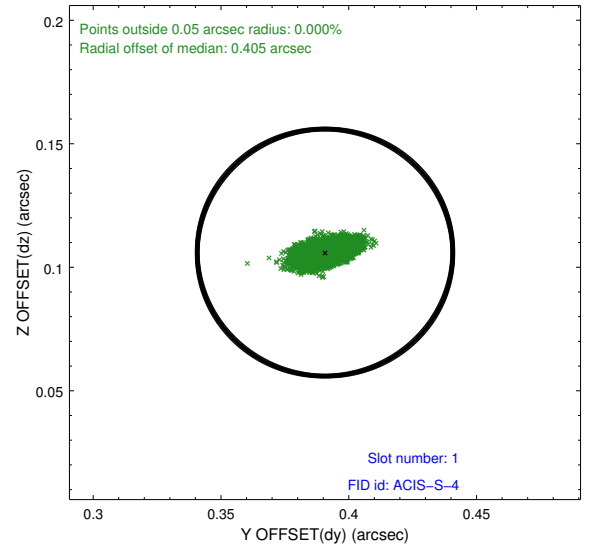
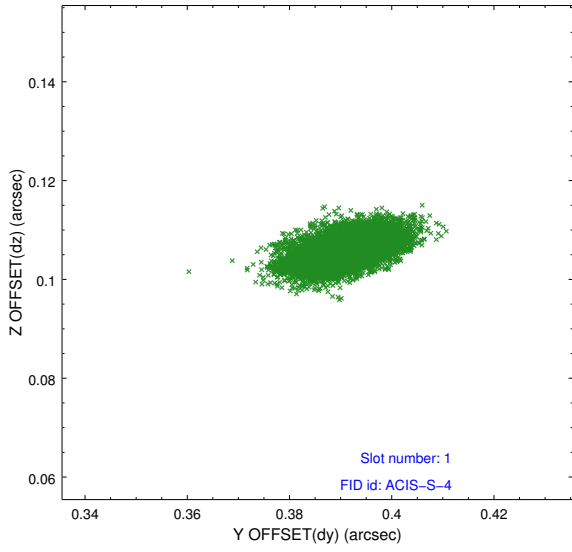


2.5 FID Slots

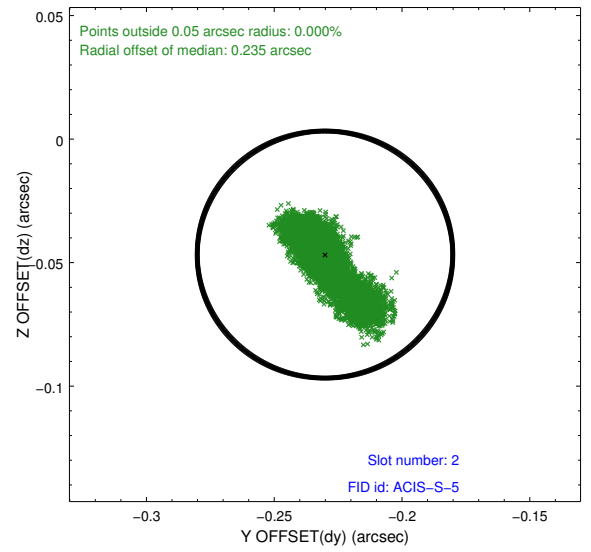
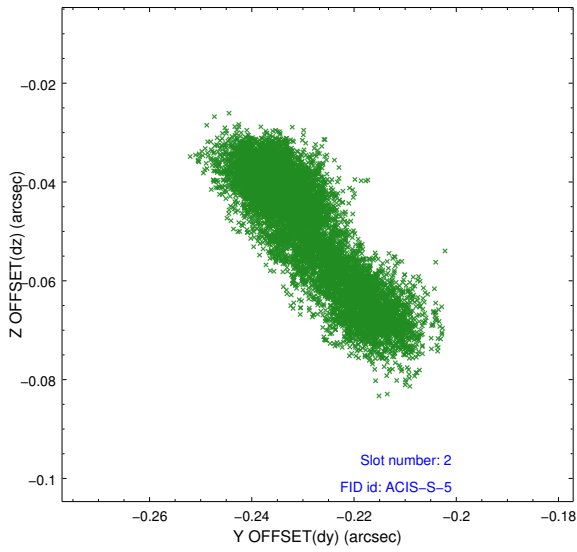
2.5.1 Slot 0



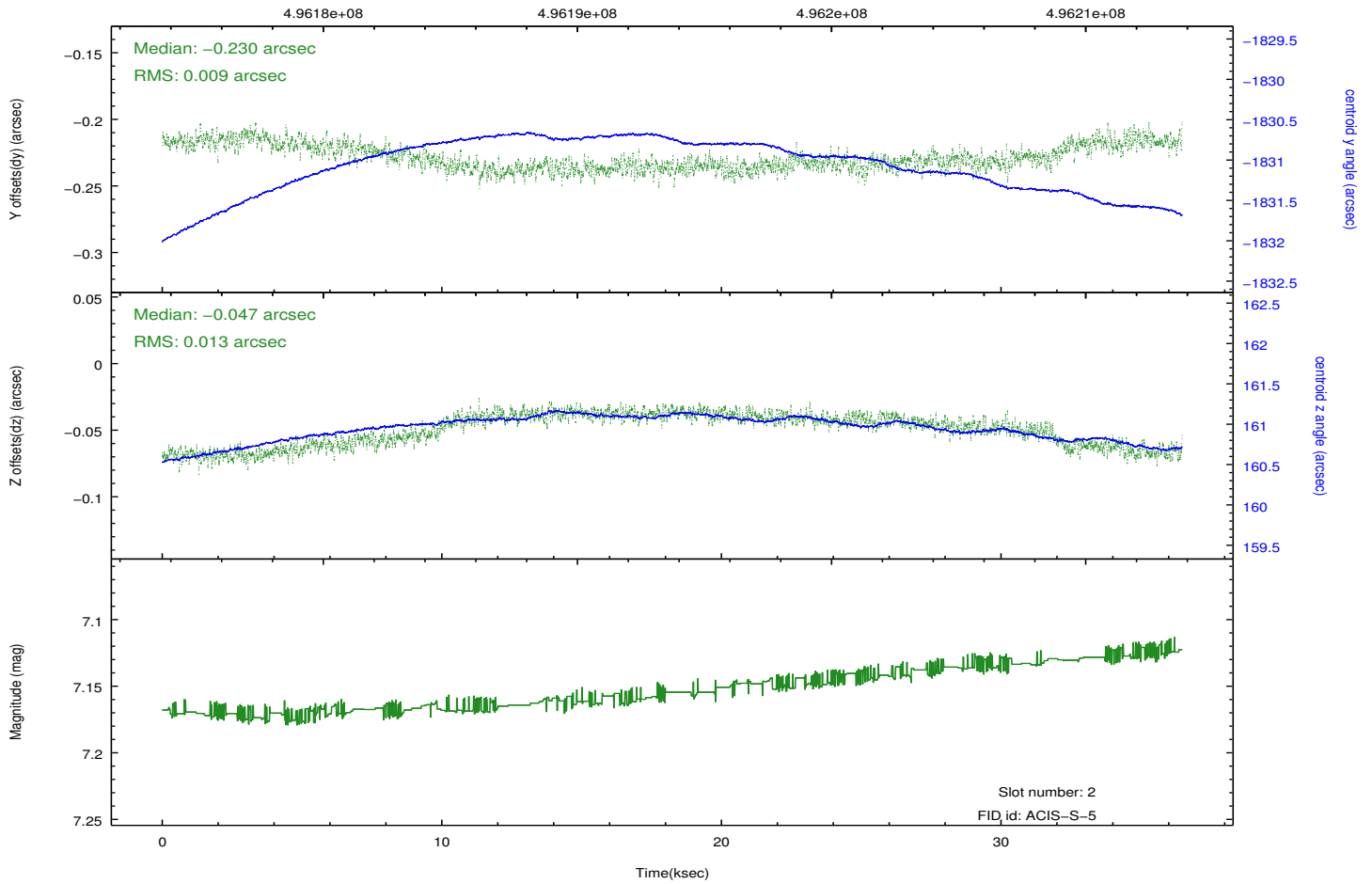
2.5.2 Slot 1



2.5.3 Slot 2



Time (s)



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	36.389840863466

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.