

V&V Reference Report

L2 ASCDS Version : 10.8

Observation 22265 - L2 Version 1
Chandra X-Ray Center

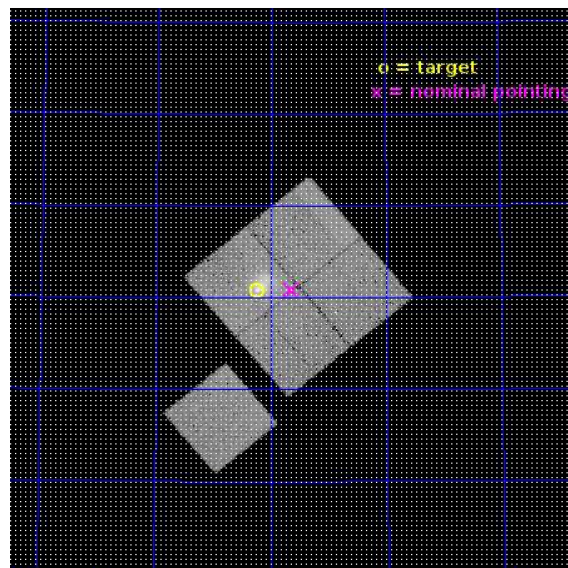
L2 Processing Date : Jul 1 2019

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

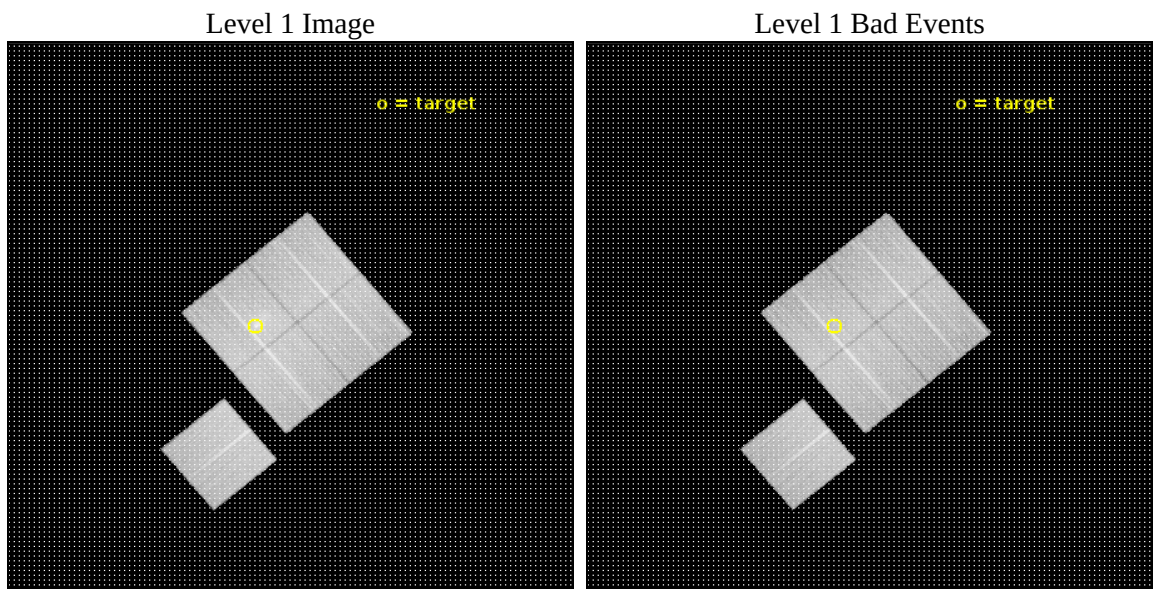
seq_num	801762	Sequence number
obs_id	22265	Observation id
title	Shock structure, the electron-ion equilibration timescale and the disintegrating cool core in A2146	Proposal title
observer	Helen Russell	Principal investigator
object	Abell 2146	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	239.06125	Observer's specified target RA [deg]
dec_targ	66.346917	Observer's specified target Dec [deg]
ra_nom	238.91179279776	Nominal RA [deg]
dec_nom	66.348114922654	Nominal Dec [deg]
roll_nom	230.34558037834	Nominal Roll [deg]
revision	1	Processing version of data
ontime	32711.159221649	Sum of GTIs [s]
livetime	32283.763844813	Livetime [s]
ontime0	32711.159251451	Sum of GTIs [s]
ontime1	32711.159221649	Sum of GTIs [s]
ontime2	32708.018271089	Sum of GTIs [s]
ontime3	32711.159221649	Sum of GTIs [s]
ontime6	32714.300251722	Sum of GTIs [s]
l2events	136404	Number of level 2 events



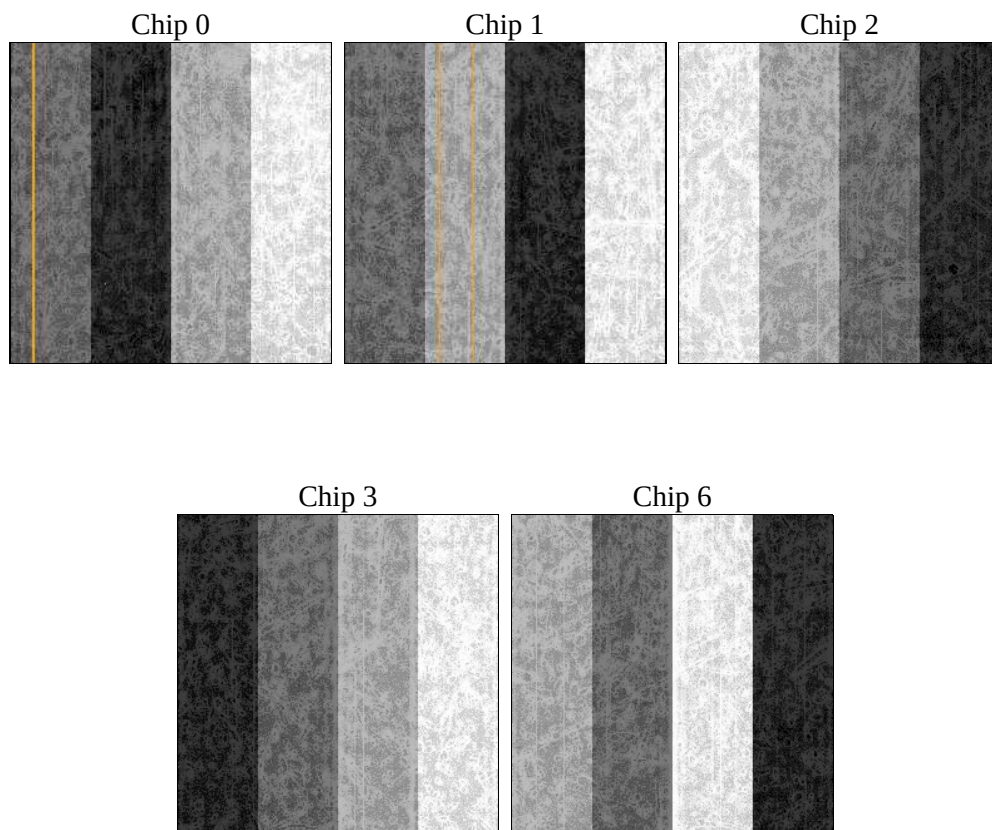
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	32650.409000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	32711.159221649	Sum of GTIs [s]
caldsver	4.8.3	 	ontime0	32711.159251451	Sum of GTIs [s]
date	2019-07-01T14:43:43	Date and time of file creation	ontime1	32711.159221649	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	32708.018271089	Sum of GTIs [s]
			ontime3	32711.159221649	Sum of GTIs [s]
			ontime6	32714.300251722	Sum of GTIs [s]
			l1events	1234335	Number of level 1 events

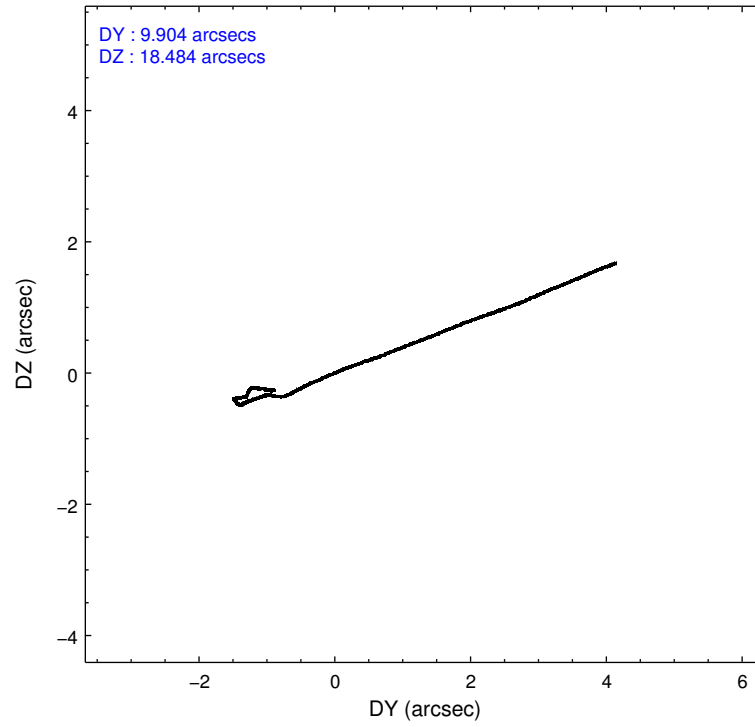
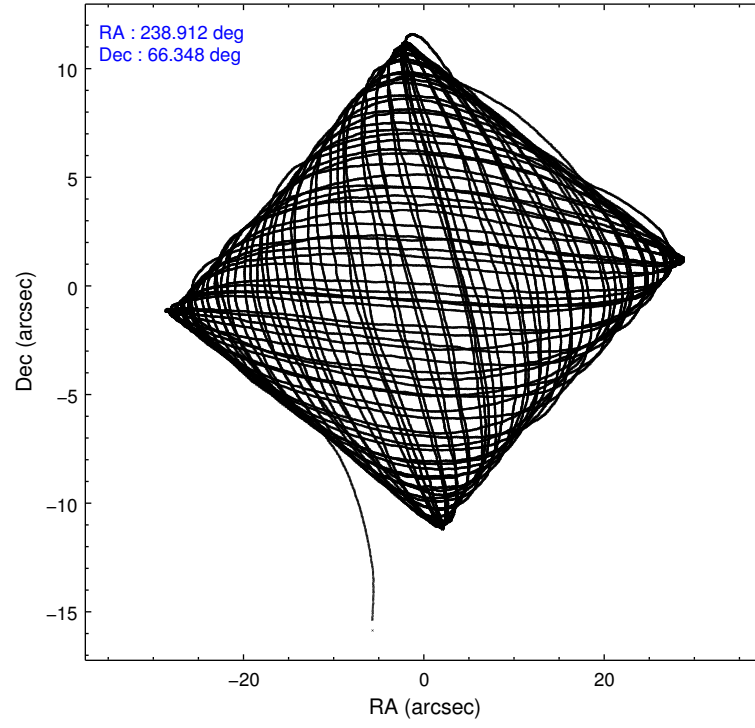
2.1.4 Events

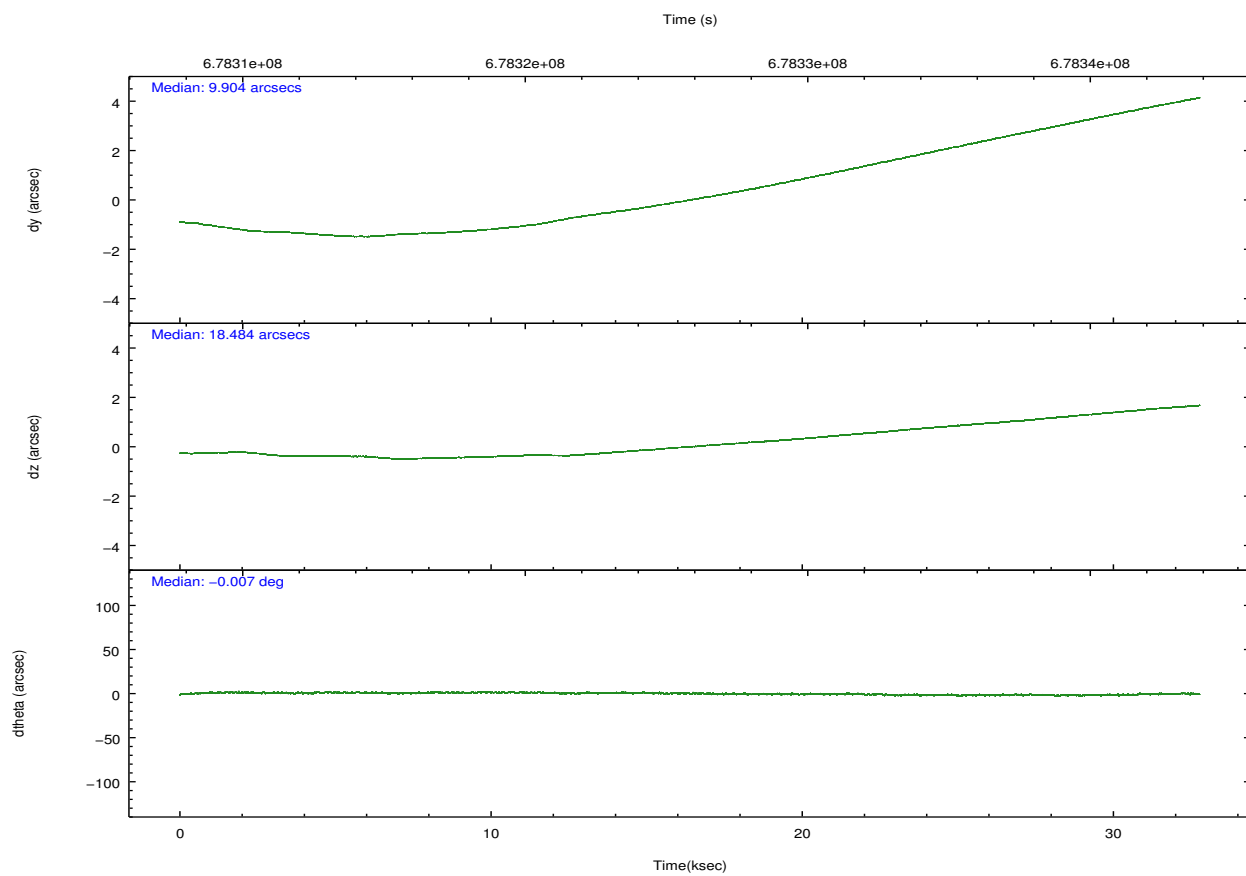
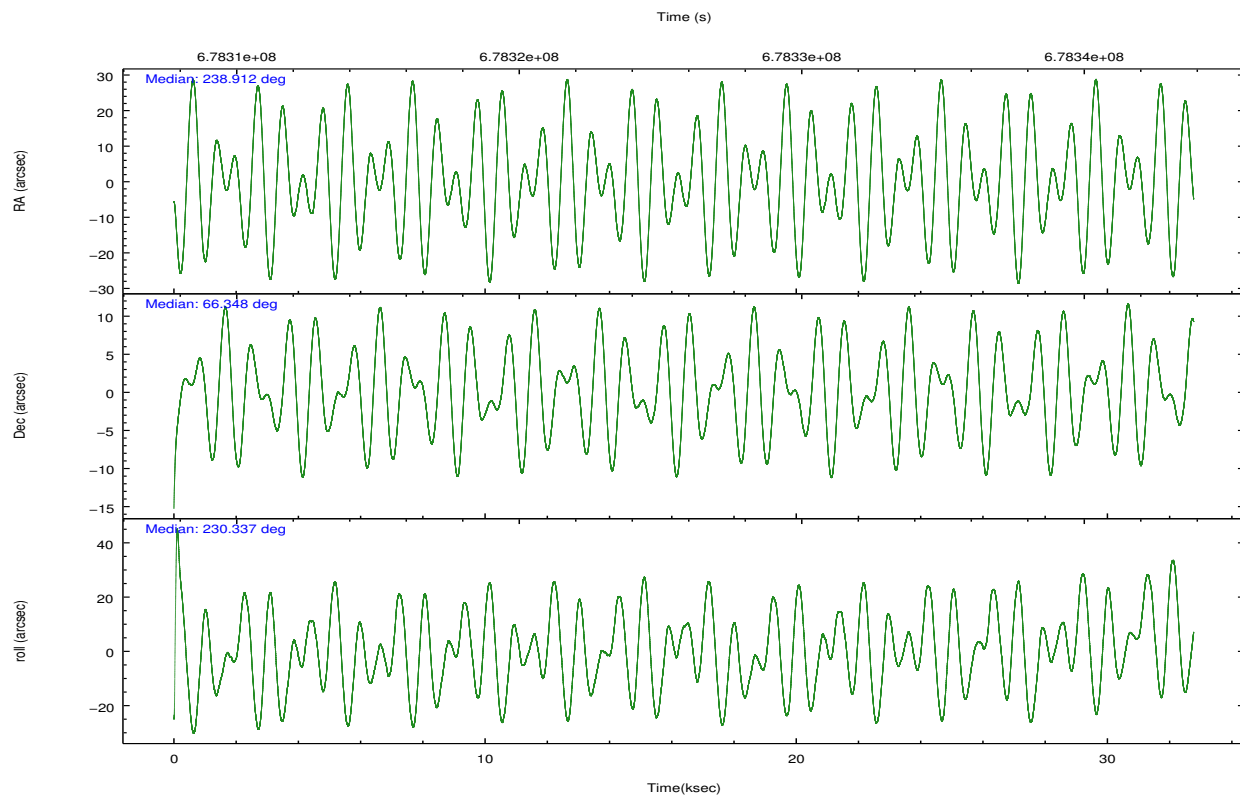
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	227399	241592	253454	259239	252651	grade 0 events	10153	11146	9772	21961	9206
rejected events	198167	209216	225901	216998	224416		4%	4%	3%	8%	3%
rejected %	87%	86%	89%	83%	88%	grade 1 events	135	144	134	210	147
							0%	0%	0%	0%	0%
						grade 2 events	7492	8272	6956	7703	6748
							3%	3%	2%	2%	2%
						grade 3 events	2919	2983	2611	3280	2658
							1%	1%	1%	1%	1%
						grade 4 events	2737	2900	2743	3183	2770
							1%	1%	1%	1%	1%
						grade 5 events	10710	11265	10461	12224	11382
							4%	4%	4%	4%	4%
						grade 6 events	5934	7085	5477	6122	6857
							2%	2%	2%	2%	2%
						grade 7 events	187319	197797	215300	204556	212883
							82%	81%	84%	78%	84%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	238.923103	238.9117927977589	CCD I2 on	Y	Y
[deg] Pointing Dec	66.375325	66.34811492265354	CCD I3 on	Y	Y
[deg] Pointing Roll	230.126551	230.3455803783423	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	678309563.184000	678308291.08446	CCD S5 on	N	N
Observation start date	2019-06-30T19:18:14	2019-06-30T18:58:11	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	678342213.184000	678343064.21155	On-chip summing requested	N	N
Observation end date	2019-07-01T04:22:24	2019-07-01T04:37:44	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



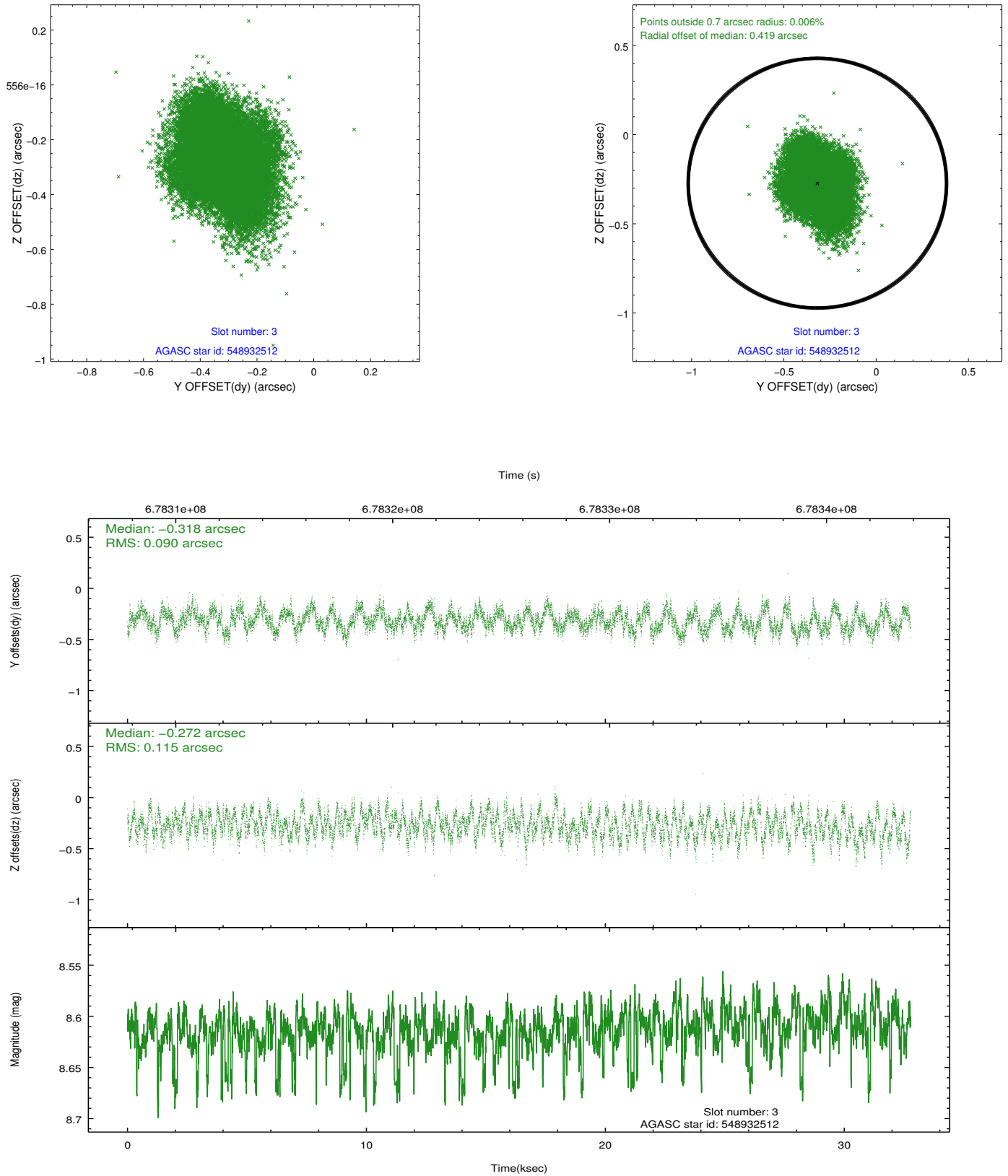


Slot Statistics

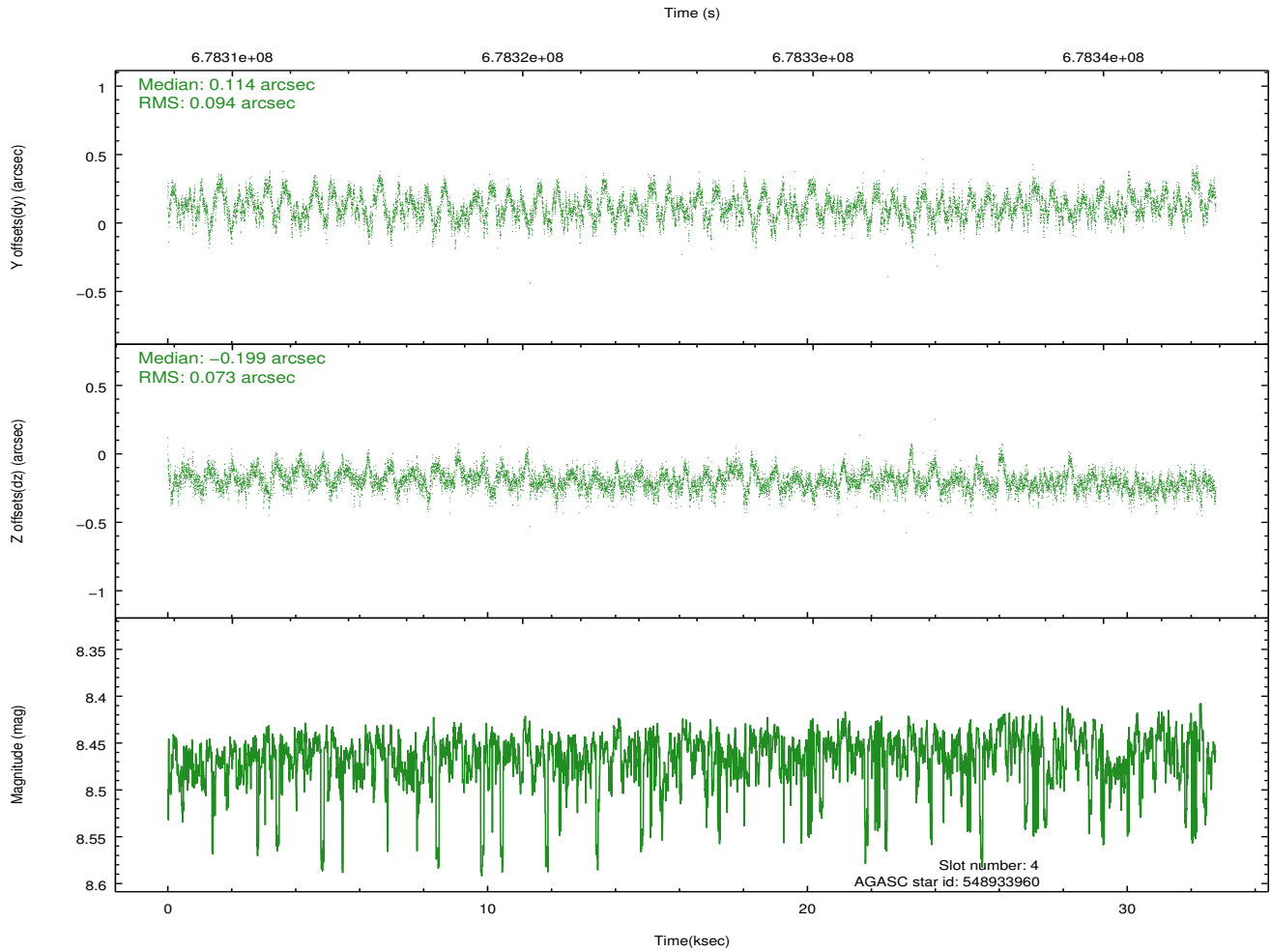
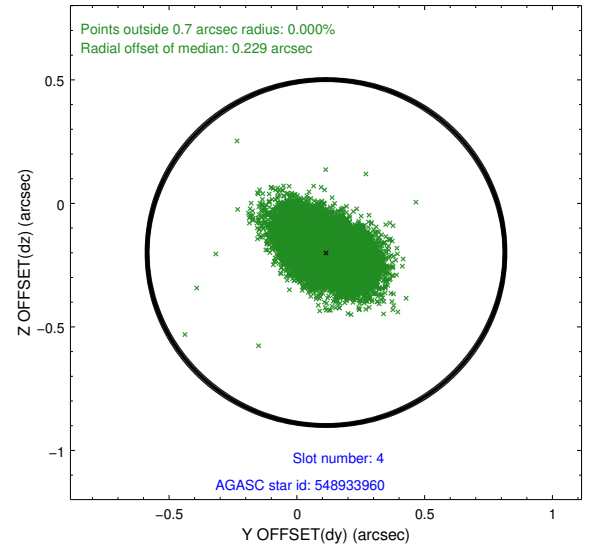
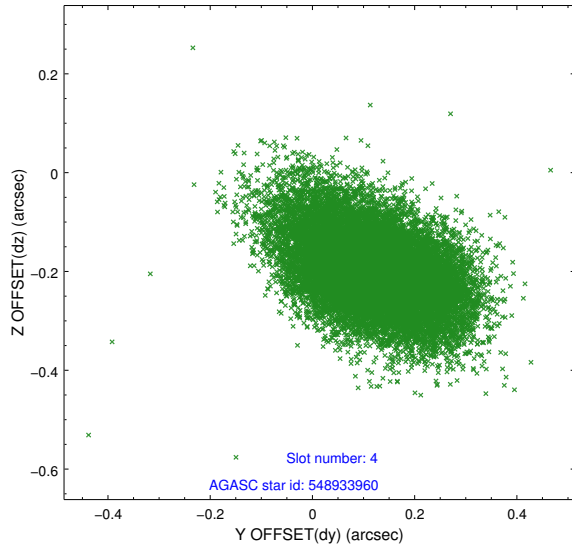
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.21	7994	1.000	0.103	-0.064	0.022	0.037	0.000000	0.000000	929.34	-842
1	FID		ACIS-I-5	7.17	7994	1.000	-0.440	0.036	0.016	0.039	0.000000	0.000000	-1819.44	1054
2	FID		ACIS-I-6	7.18	7992	1.000	0.247	0.095	0.018	0.054	0.000000	0.000000	394.77	1699
3	GUIDE	used	548932512	8.61	15969	1.000	-0.318	-0.272	0.159	0.243	239.727627	66.054972	125.15	1636
4	GUIDE	used	548933960	8.46	15985	1.000	0.114	-0.199	0.125	0.208	237.671184	66.428675	995.99	-1516
5	GUIDE	used	548937184	9.82	15925	1.000	0.280	0.147	0.253	0.397	238.771821	66.565432	-385.81	-604
6	GUIDE	used	548939872	10.23	15419	0.994	-0.053	0.306	0.334	0.514	238.964867	66.978384	-1703.47	-1345
7	GUIDE	used	549850840	9.27	15966	1.000	-0.026	0.017	0.217	0.353	241.038865	66.468628	-2246.49	2086

2.4 Star Slots

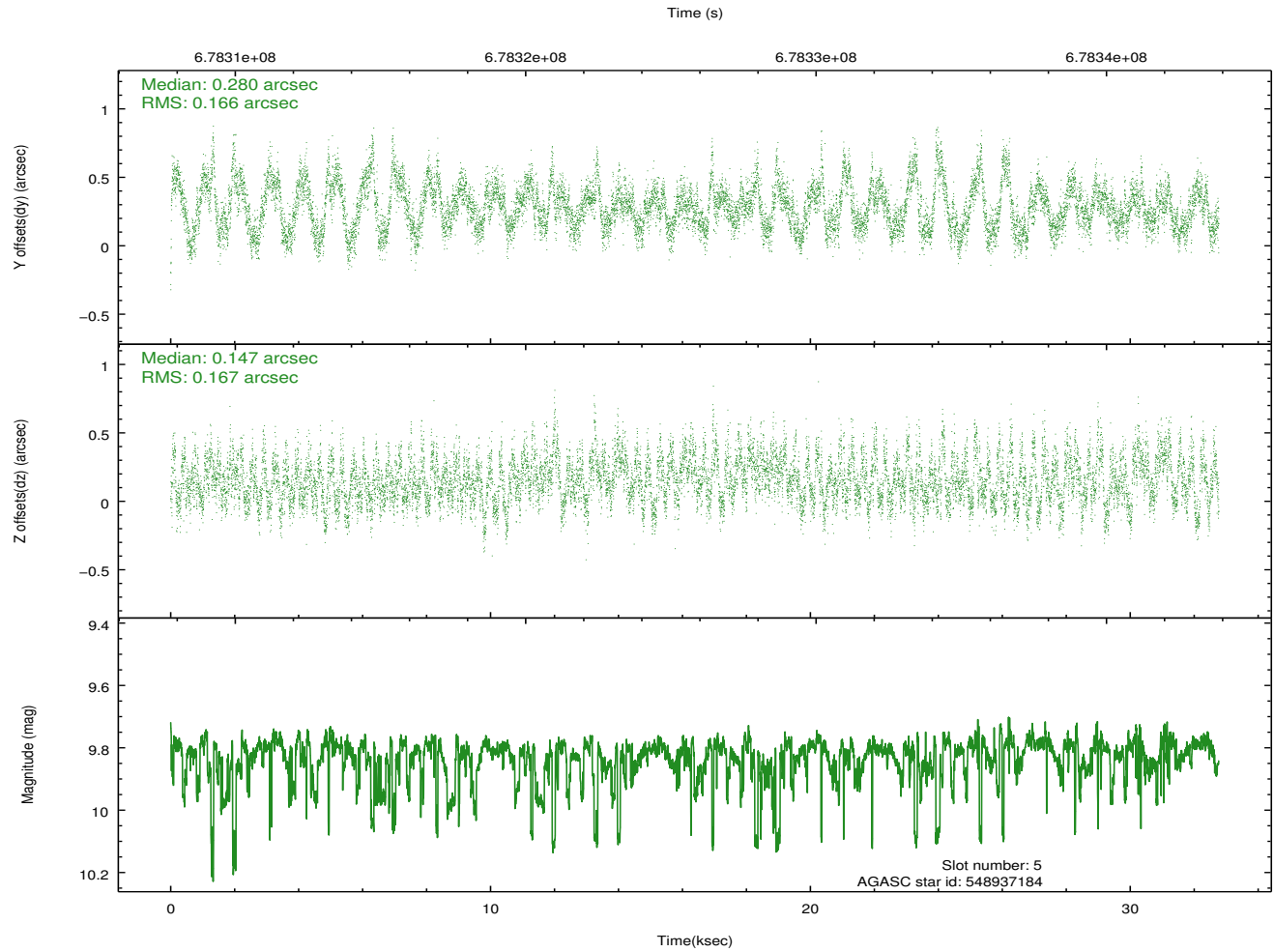
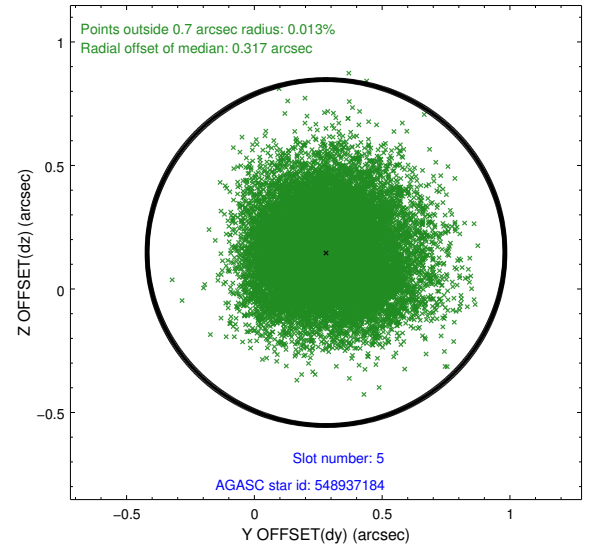
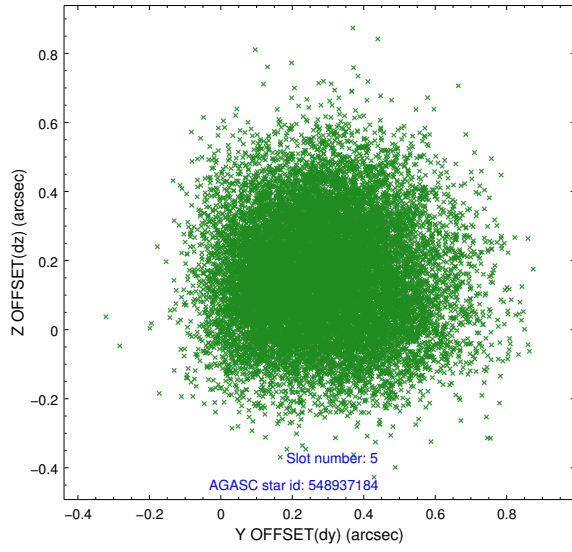
2.4.1 Slot 3



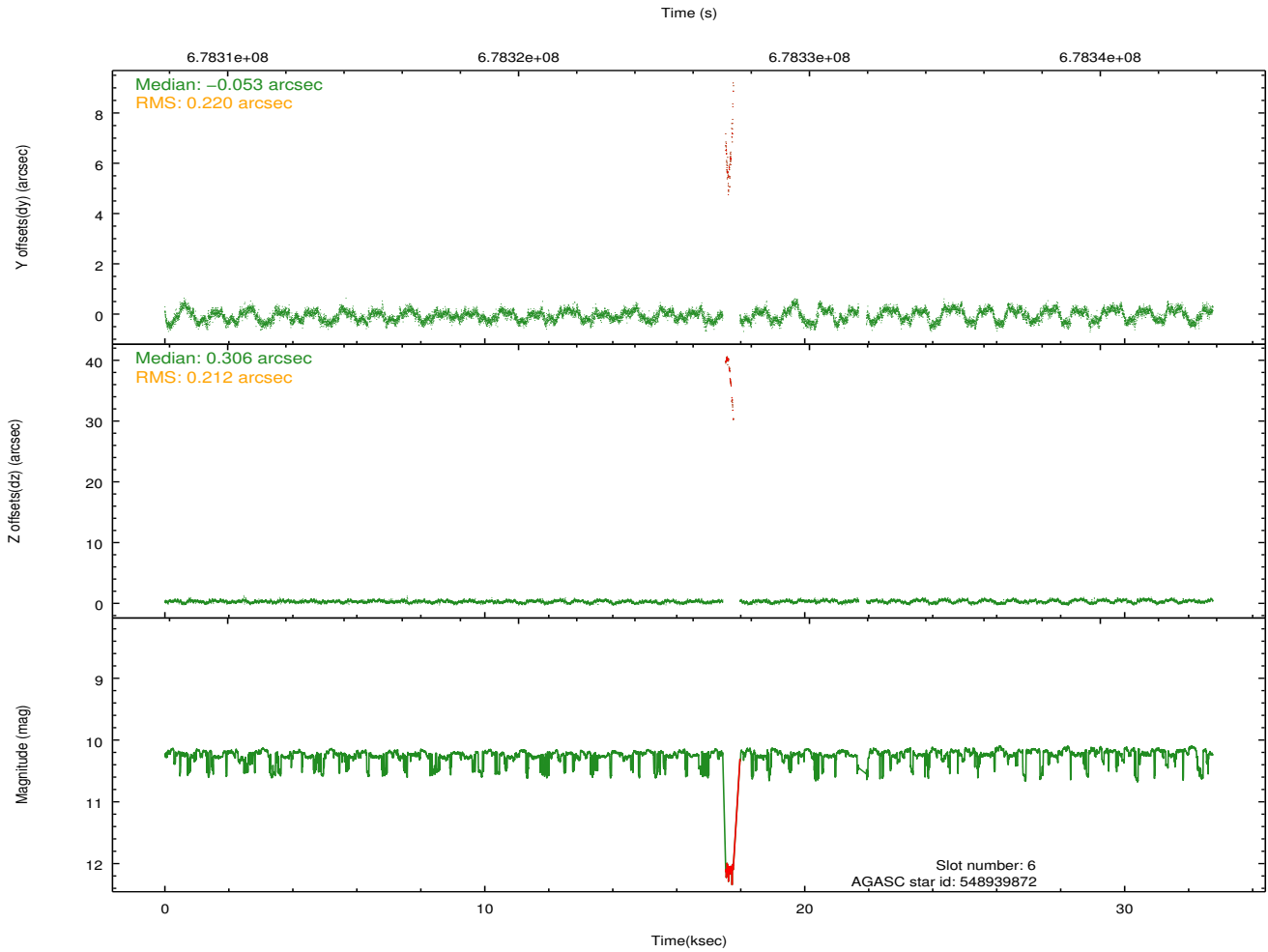
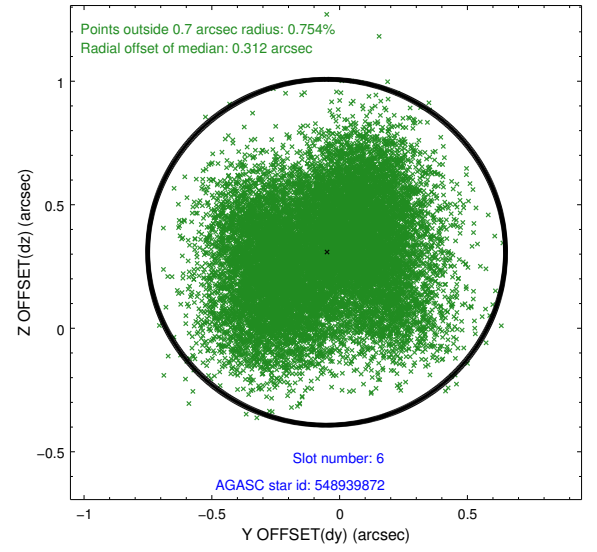
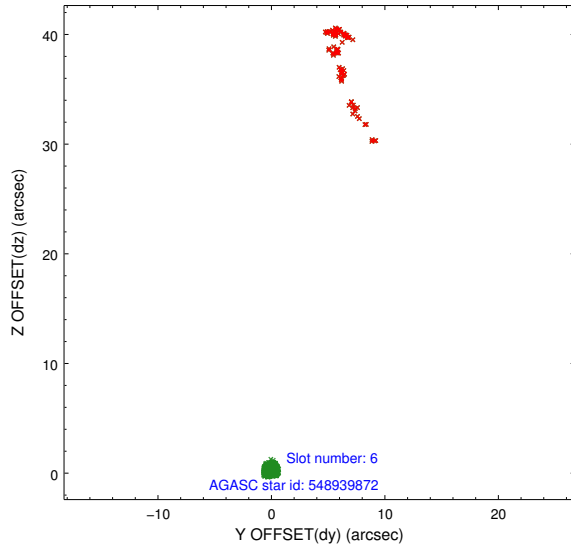
2.4.2 Slot 4



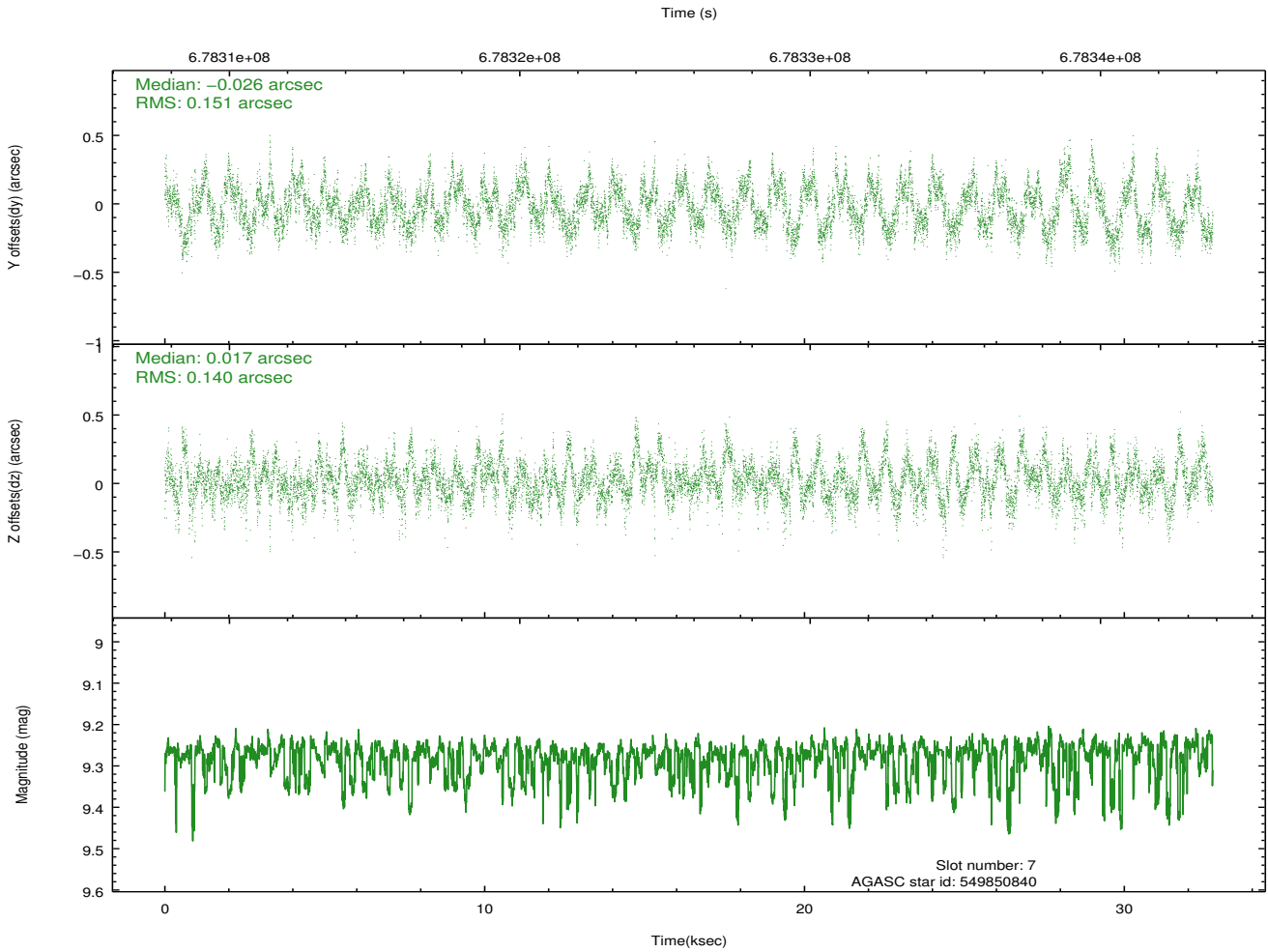
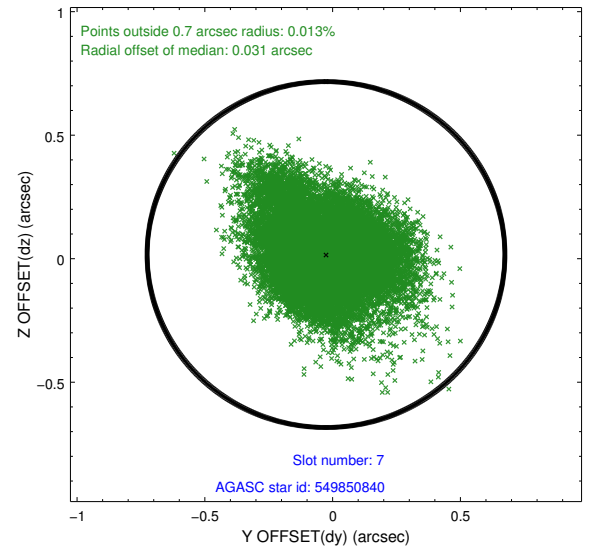
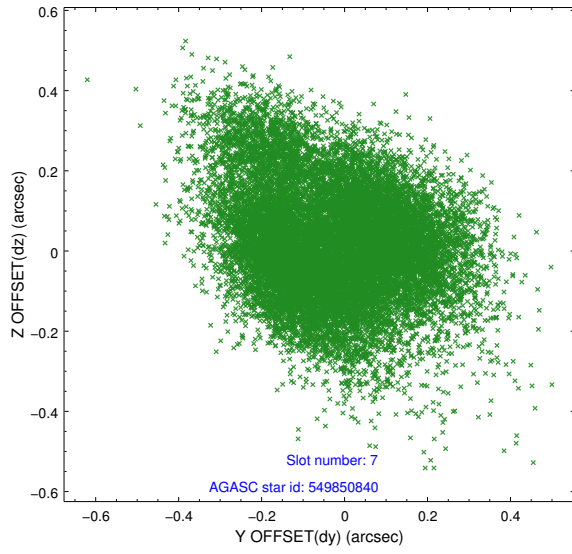
2.4.3 Slot 5



2.4.4 Slot 6

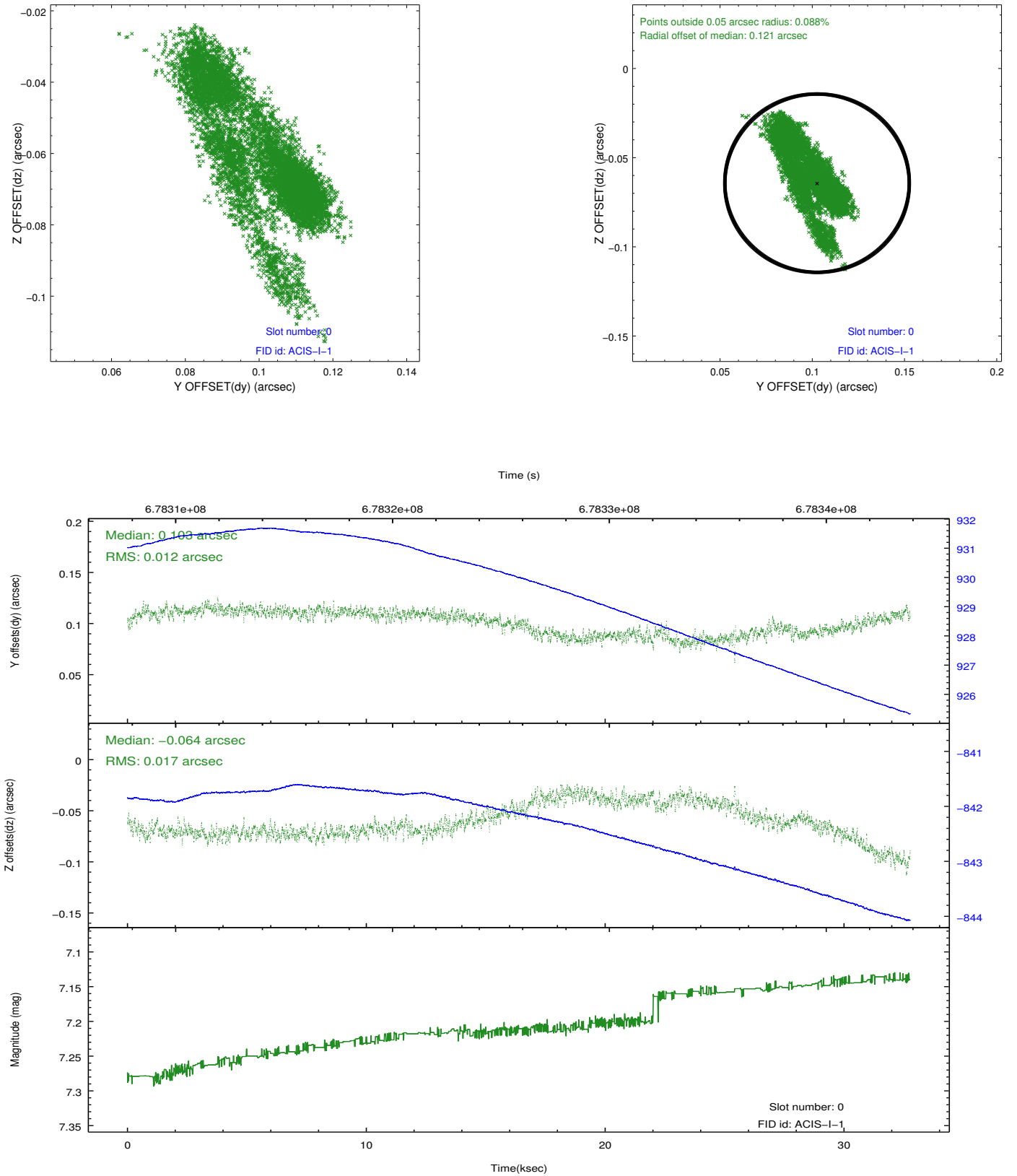


2.4.5 Slot 7

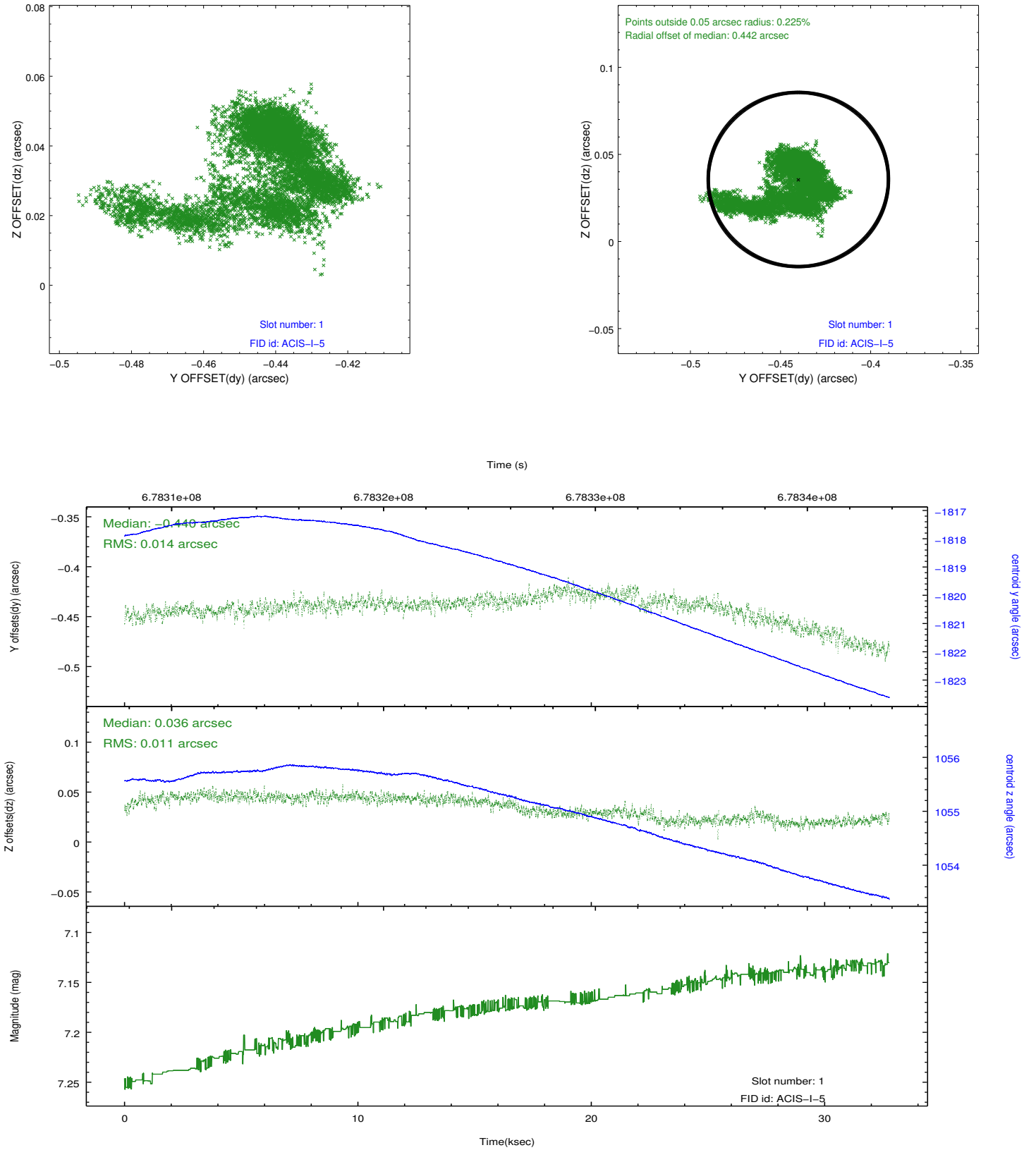


2.5 FID Slots

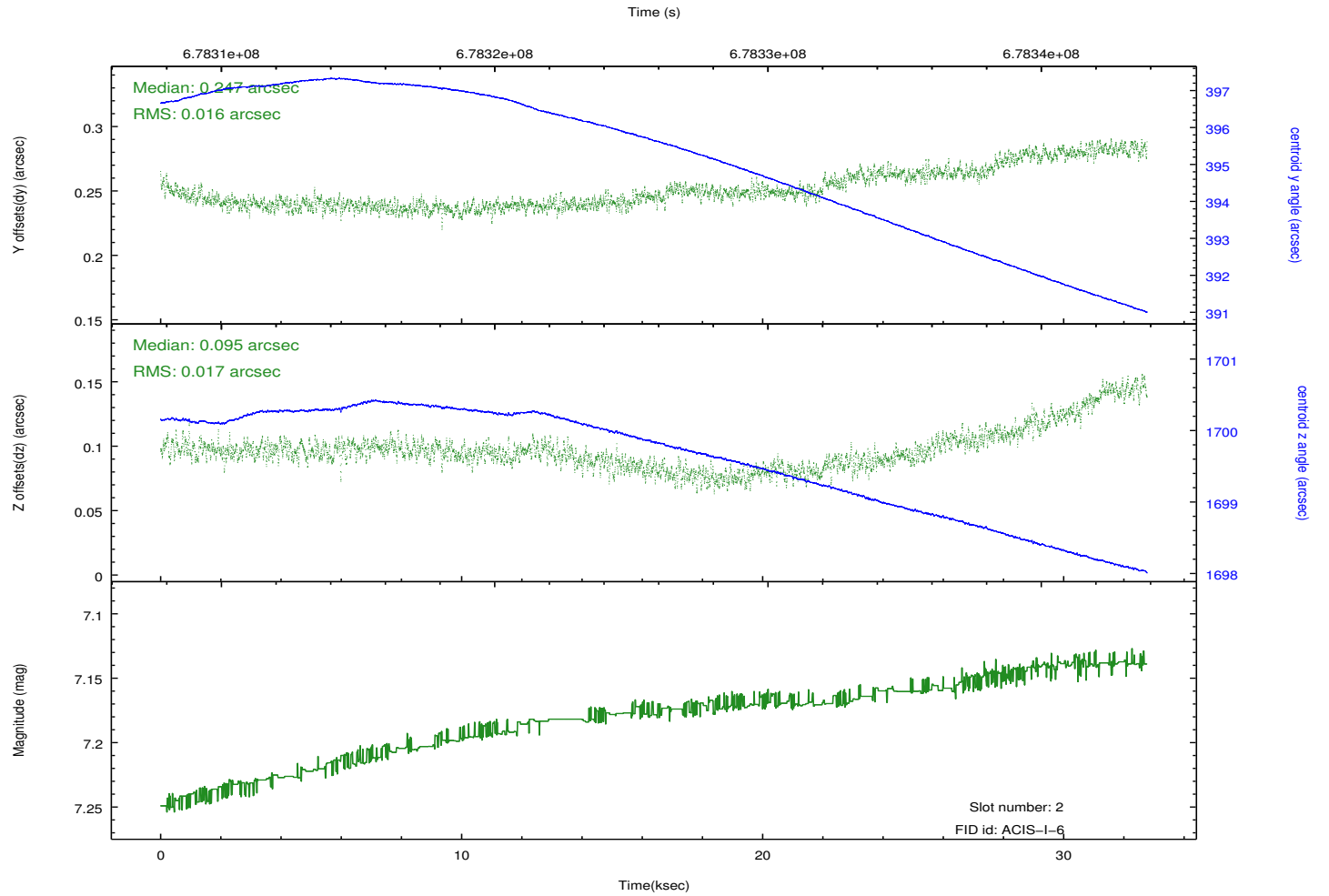
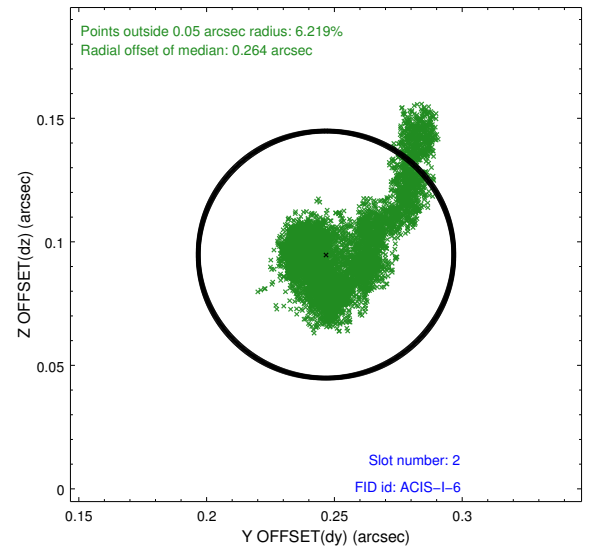
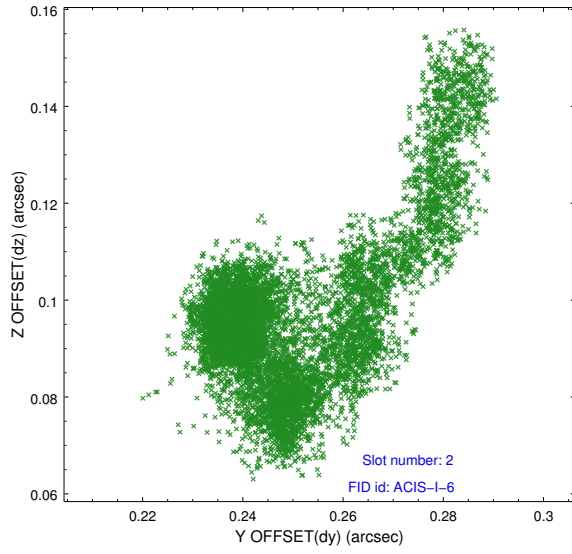
2.5.1 Slot 0



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)	2019.07.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	32.711159221649

A.2 Comments