

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 20560 - L2 Version 1
Chandra X-Ray Center

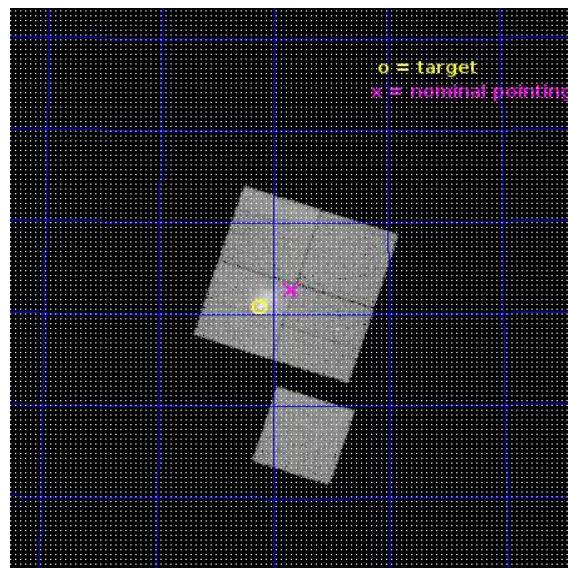
L2 Processing Date : Jun 11 2019

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1 Front

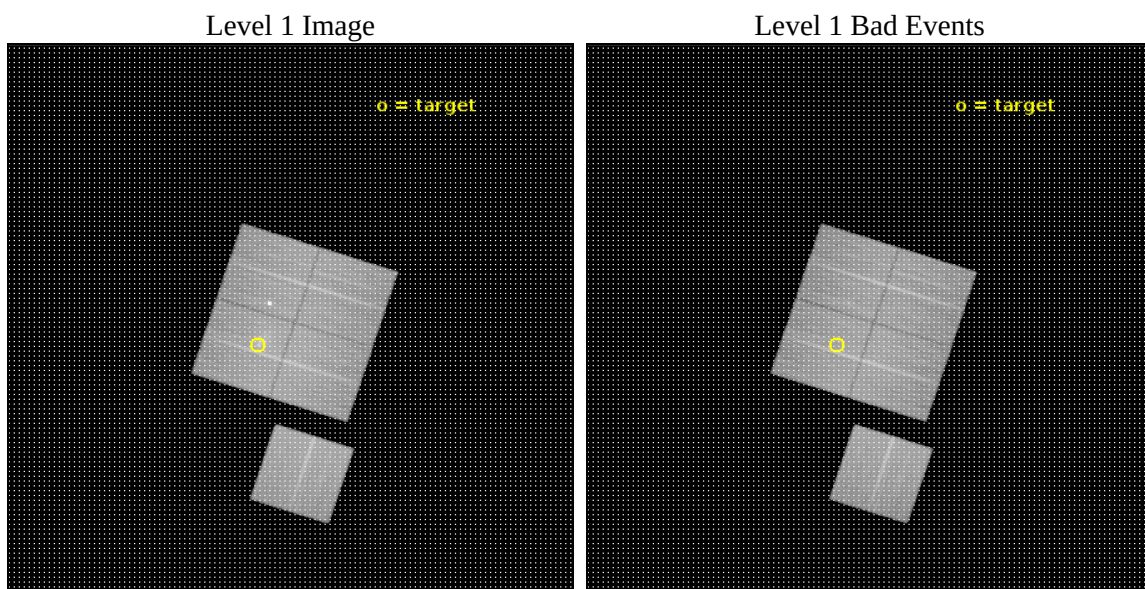
seq_num	801762	Sequence number
obs_id	20560	Observation id
title	Shock structure, the electron-ion equilibration timescale and the disintegrating cool core in A2146	Proposal title
observer	Helen Russell	Principal investigator
object	Abell 2146	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	239.06125	Observer's specified target RA [deg]
dec_targ	66.346917	Observer's specified target Dec [deg]
ra_nom	238.92215302995	Nominal RA [deg]
dec_nom	66.378511224954	Nominal Dec [deg]
roll_nom	198.05014376839	Nominal Roll [deg]
revision	1	Processing version of data
ontime	38055.127690792	Sum of GTIs [s]
livetime	37557.909431734	Livetime [s]
ontime0	38061.286541462	Sum of GTIs [s]
ontime1	38064.468531966	Sum of GTIs [s]
ontime2	38055.086651206	Sum of GTIs [s]
ontime3	38055.127690792	Sum of GTIs [s]
ontime6	38067.527452111	Sum of GTIs [s]
l2events	158968	Number of level 2 events



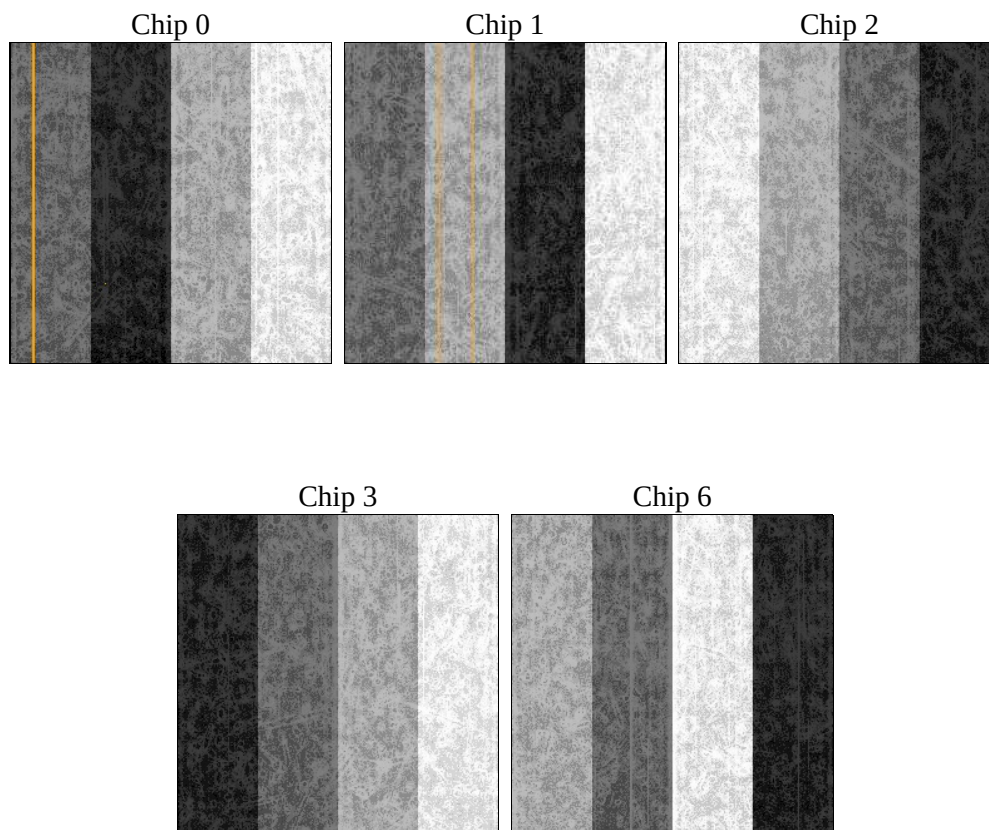
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	38000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	38055.127690792	Sum of GTIs [s]
caldsver	4.8.3	 	ontime0	38061.286541462	Sum of GTIs [s]
date	2019-06-11T13:30:01	Date and time of file creation	ontime1	38064.468531966	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	38055.086651206	Sum of GTIs [s]
			ontime3	38055.127690792	Sum of GTIs [s]
			ontime6	38067.527452111	Sum of GTIs [s]
			l1events	1460091	Number of level 1 events

2.1.4 Events

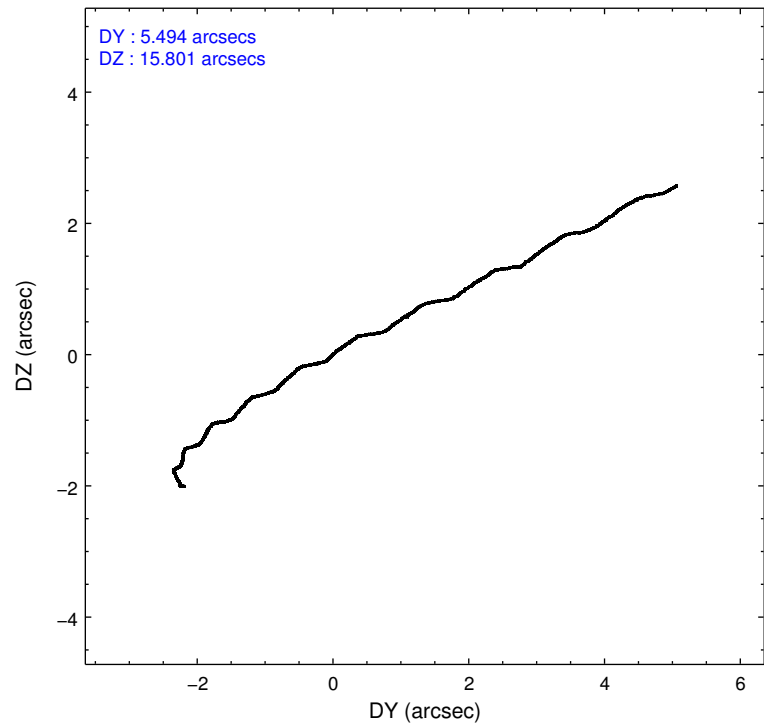
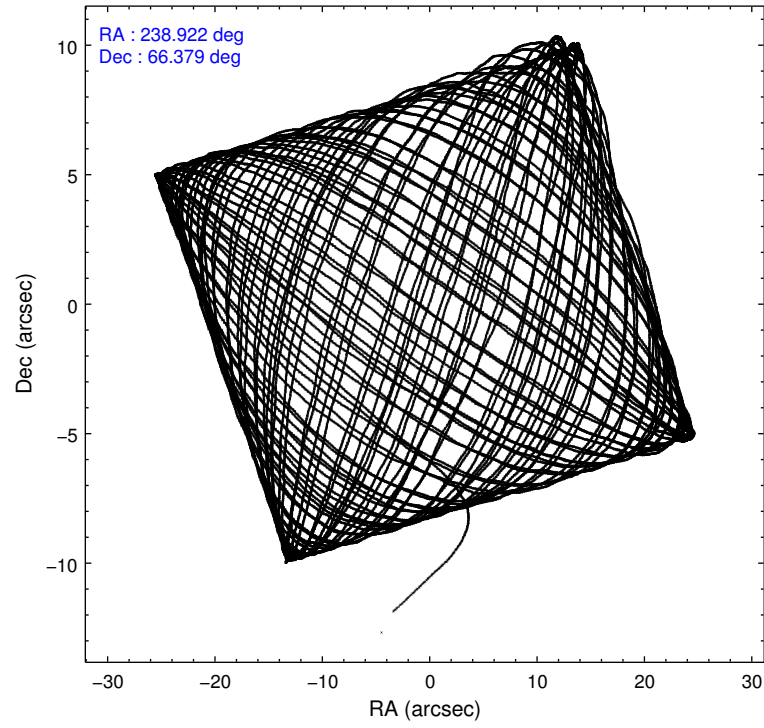
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	273303	286263	297947	304994	297584
rejected events	239659	235397	264835	255739	264371
rejected %	87%	82%	88%	83%	88%

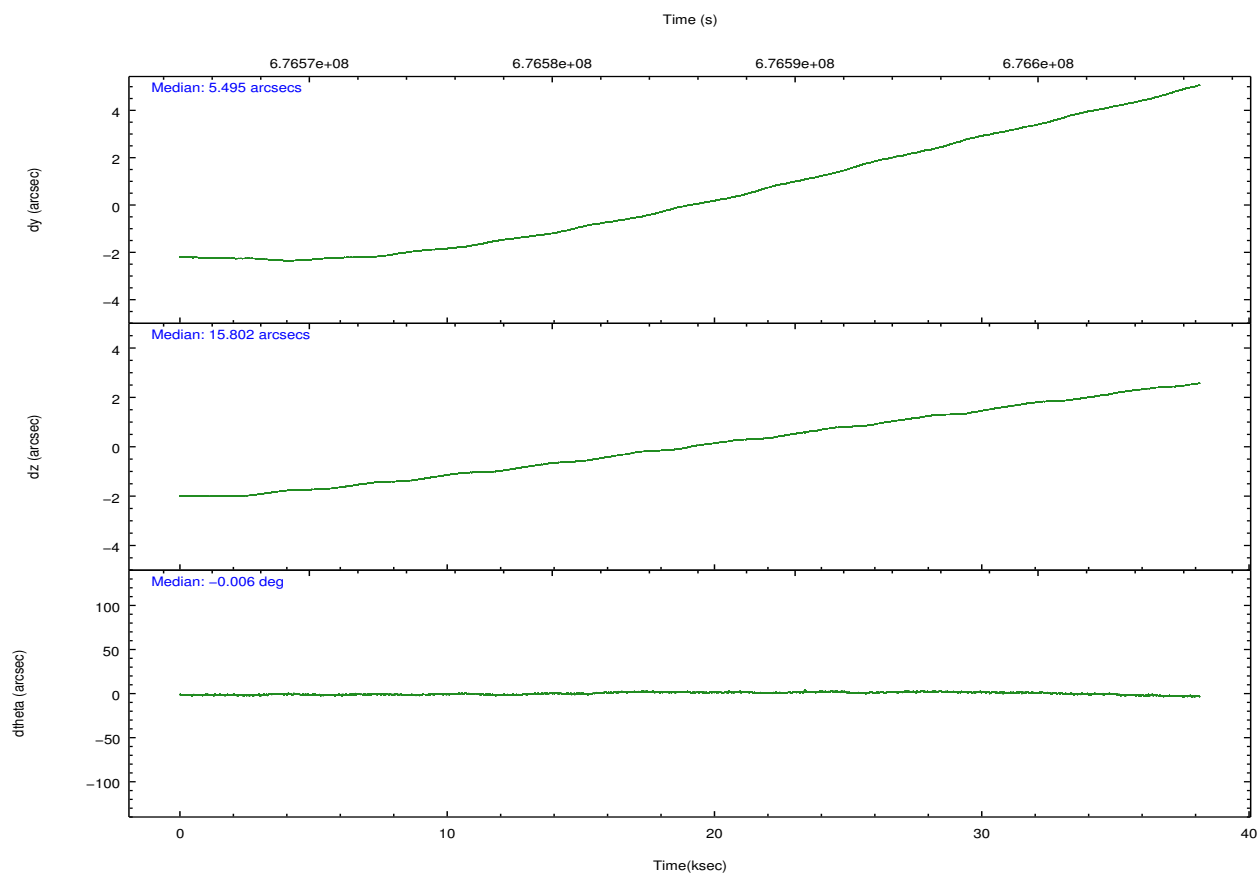
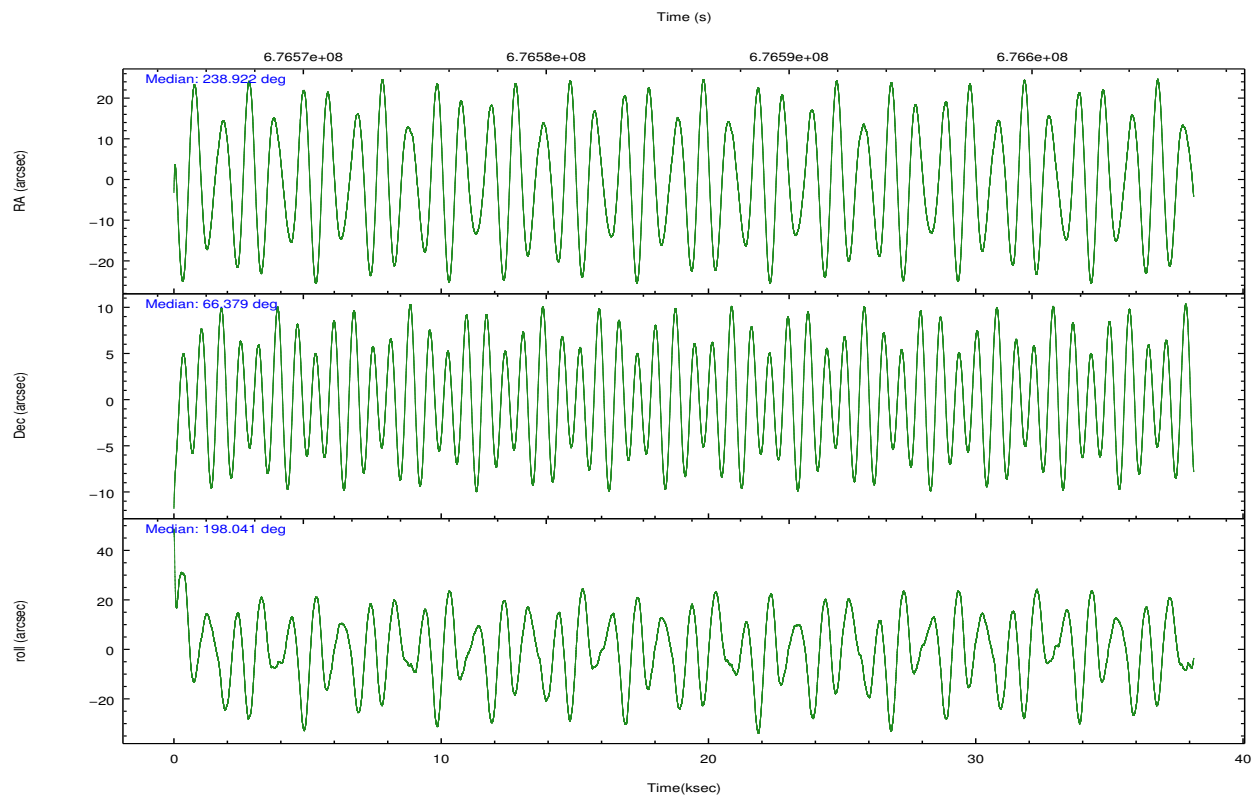
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	11419	12279	11651	25378	10834
	4%	4%	3%	8%	3%
grade 1 events	201	155	204	289	159
	0%	0%	0%	0%	0%
grade 2 events	8672	23346	8419	9069	7874
	3%	8%	2%	2%	2%
grade 3 events	3285	3453	3223	3768	3348
	1%	1%	1%	1%	1%
grade 4 events	3195	3334	3223	3827	3301
	1%	1%	1%	1%	1%
grade 5 events	13030	13434	12291	14508	13575
	4%	4%	4%	4%	4%
grade 6 events	7076	8457	6597	7217	7857
	2%	2%	2%	2%	2%
grade 7 events	226425	221805	252339	240938	250636
	82%	77%	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	238.968071	238.9221530299452	CCD I2 on	Y	Y
[deg] Pointing Dec	66.399094	66.37851122495412	CCD I3 on	Y	Y
[deg] Pointing Roll	197.799372	198.0501437683863	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)	676566763.184000	676565722.81738	CCD S5 on	N	N
Observation start date	2019-06-10T15:11:34	2019-06-10T14:55:22	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	676604763.184000	676605552.78227	On-chip summing requested	N	N
Observation end date	2019-06-11T01:44:54	2019-06-11T01:59:12	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



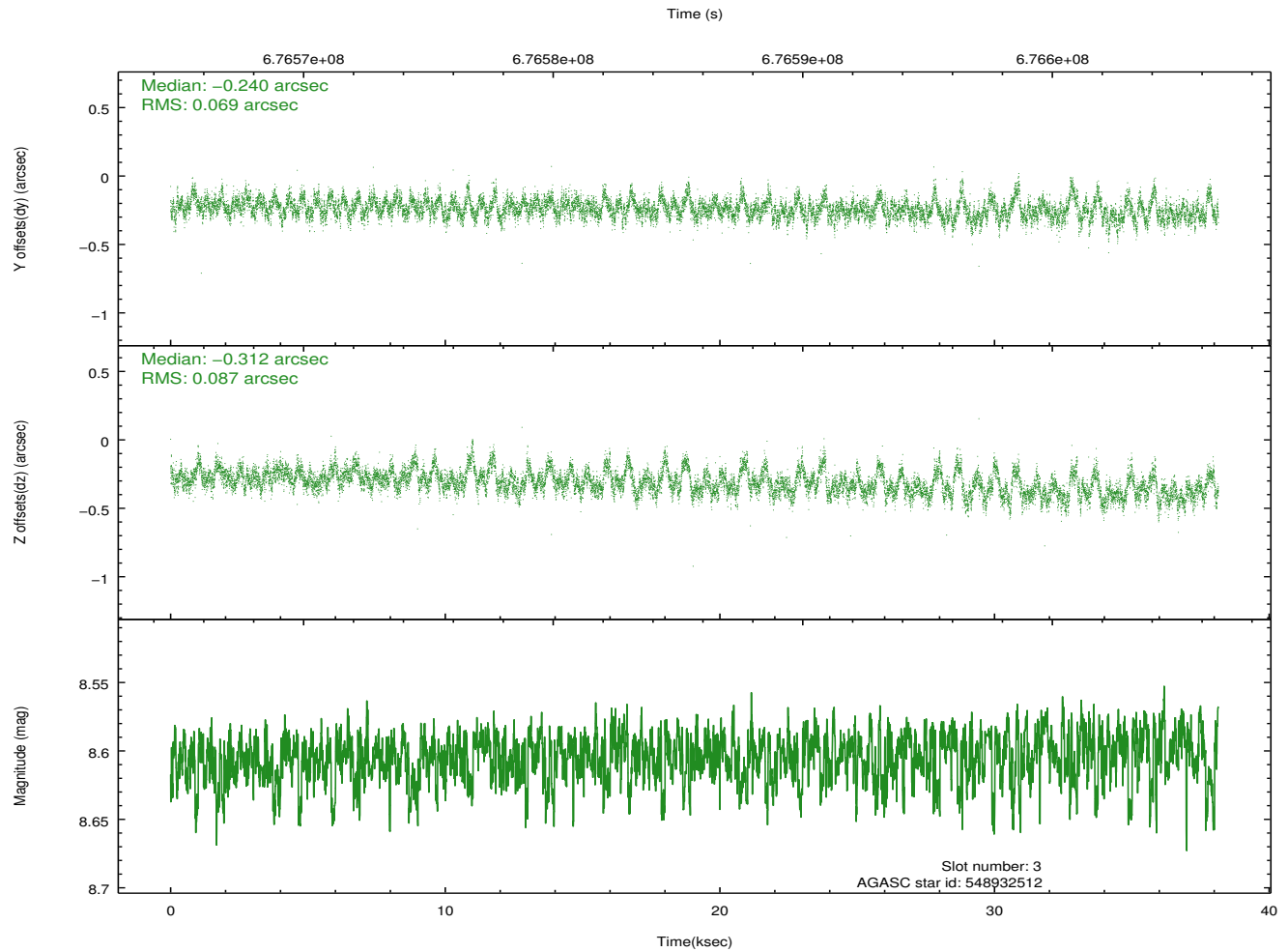
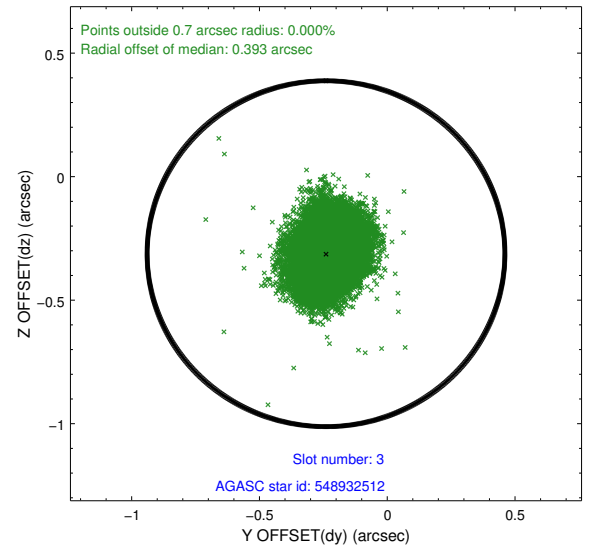
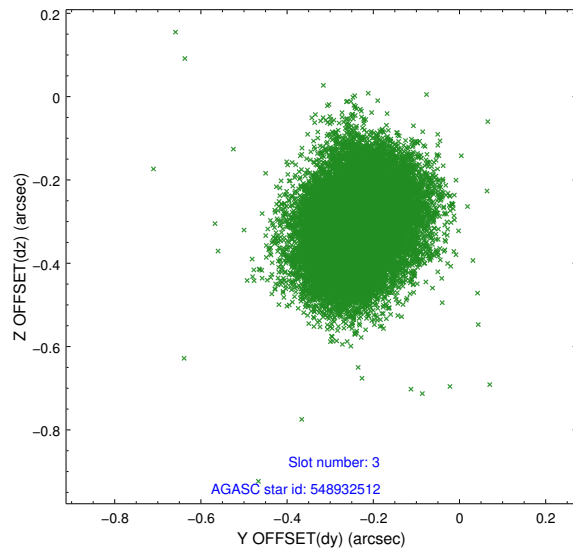


Slot Statistics

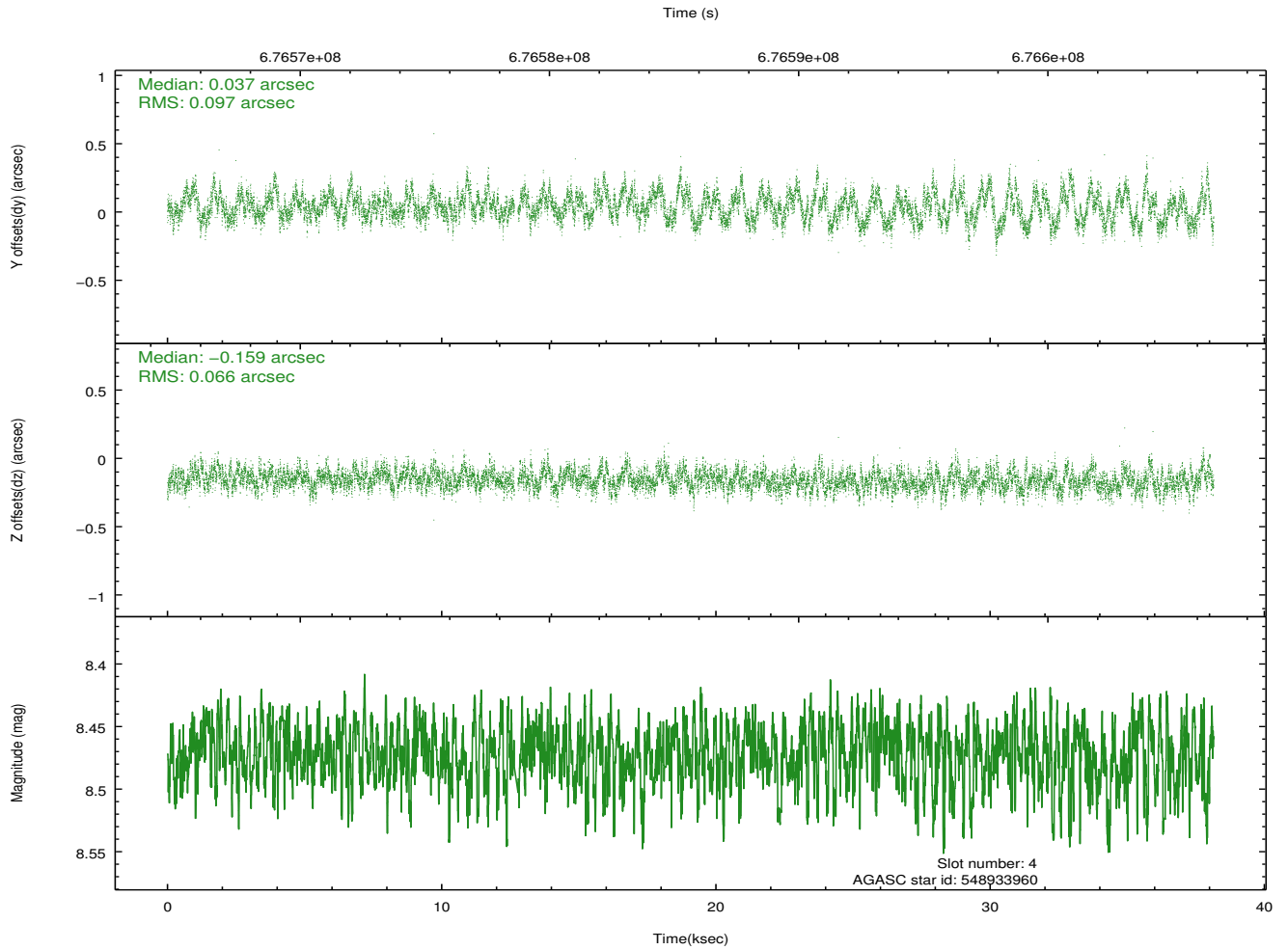
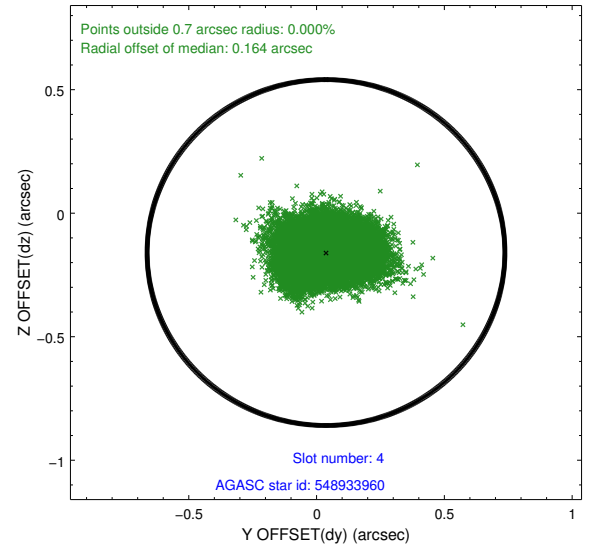
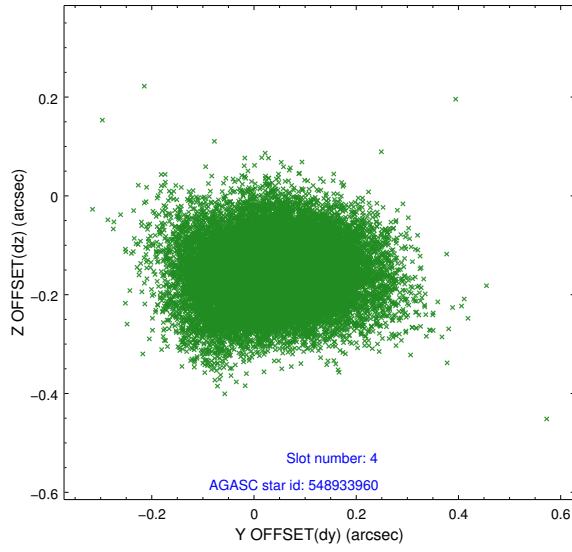
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.14	9306	1.000	0.103	-0.091	0.040	0.068	0.000000	0.000000	933.95	-839
1	FID		ACIS-I-5	7.10	9305	1.000	-0.417	0.042	0.024	0.045	0.000000	0.000000	-1814.81	1057
2	FID		ACIS-I-6	7.10	9306	1.000	0.212	0.121	0.041	0.066	0.000000	0.000000	399.38	1702
3	GUIDE	used	548932512	8.60	18593	1.000	-0.240	-0.312	0.118	0.191	239.727627	66.054972	-680.43	1511
4	GUIDE	used	548933960	8.47	18535	1.000	0.037	-0.159	0.125	0.203	237.671184	66.428675	1739.99	-688
5	GUIDE	used	548937184	9.86	18568	1.000	-0.097	0.085	0.270	0.483	238.771821	66.565432	84.61	-656
6	GUIDE	used	548939872	10.28	18535	1.000	0.196	0.101	0.331	0.526	238.964867	66.978384	-632.53	-1986
7	GUIDE	used	549849072	9.12	18589	1.000	0.084	0.275	0.150	0.241	240.420863	66.802816	-2412.28	-776

2.4 Star Slots

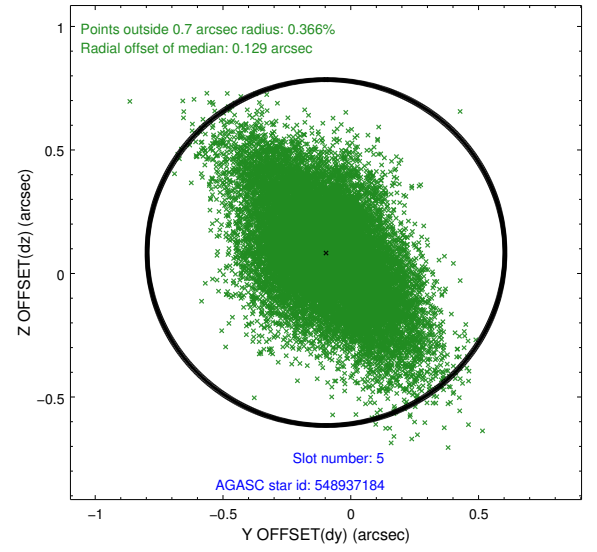
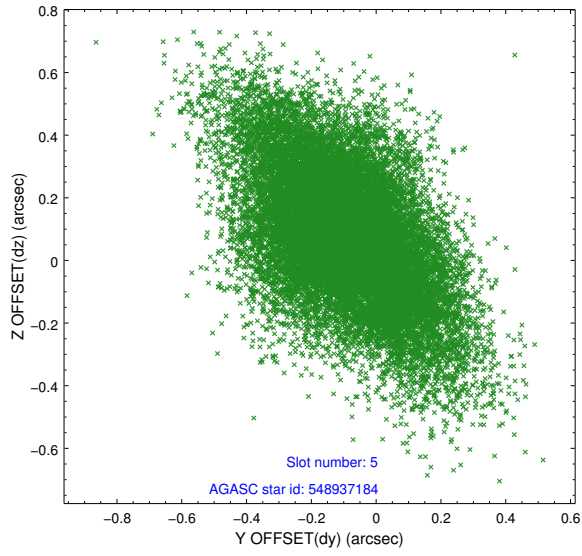
2.4.1 Slot 3



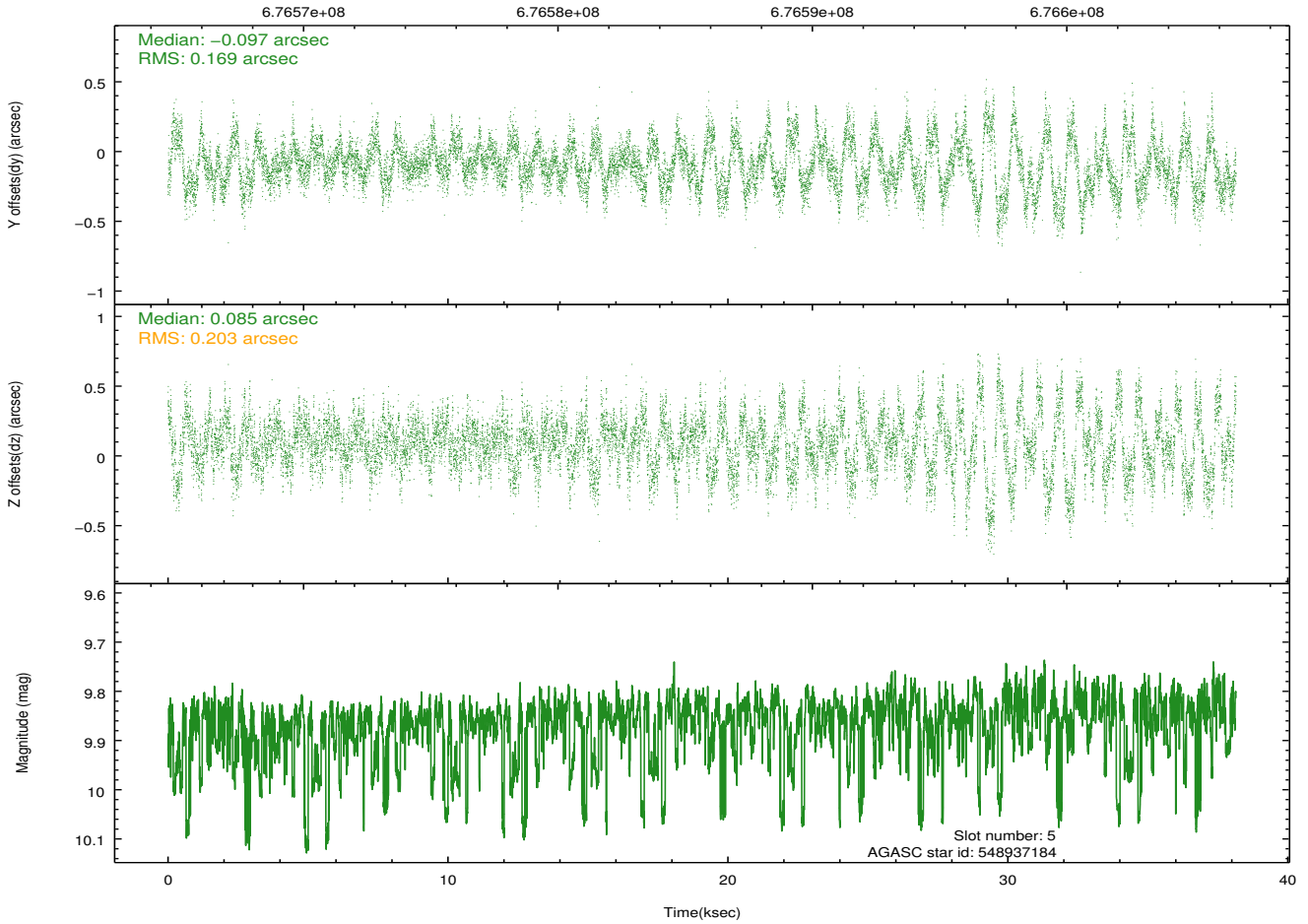
2.4.2 Slot 4



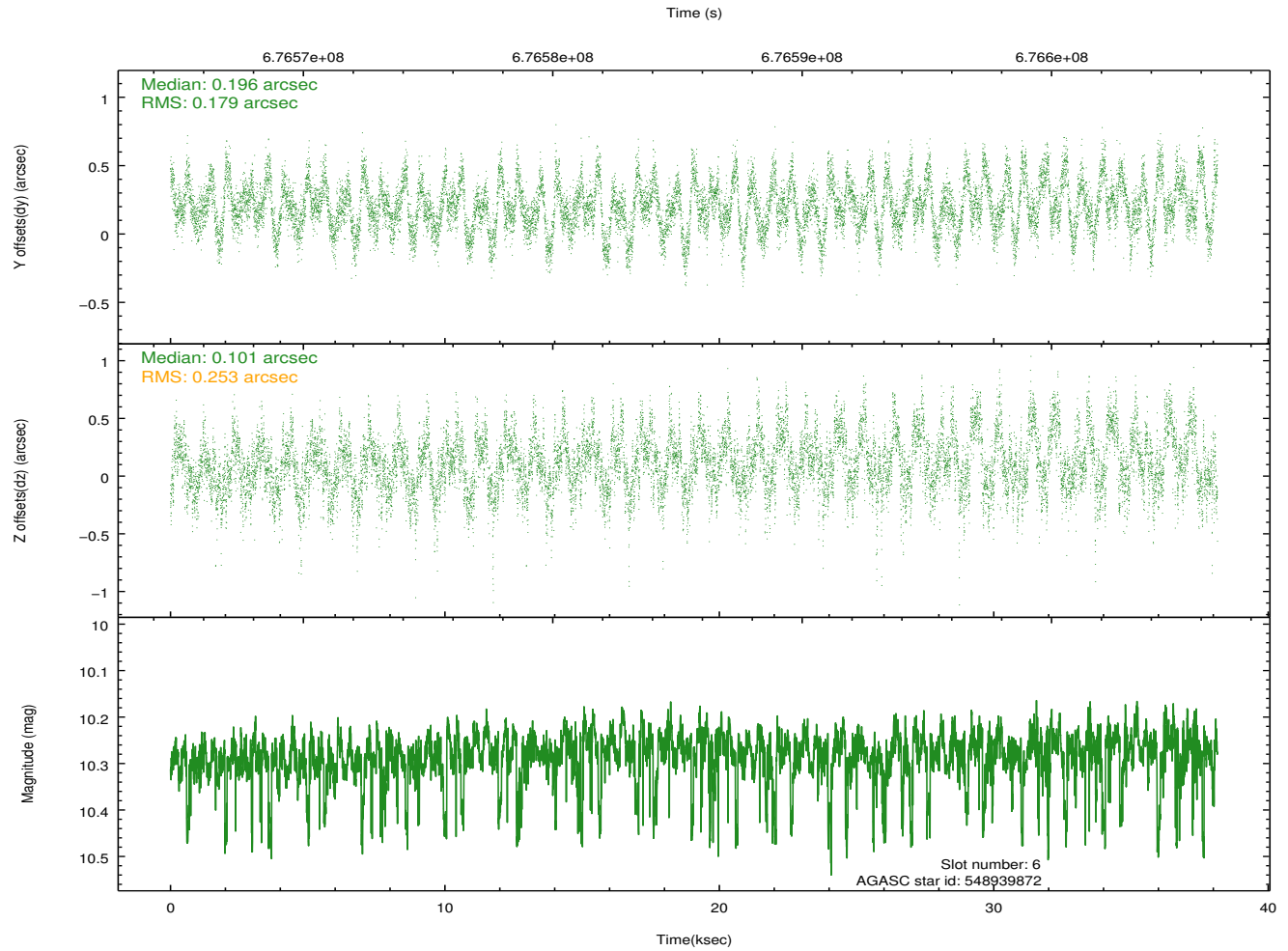
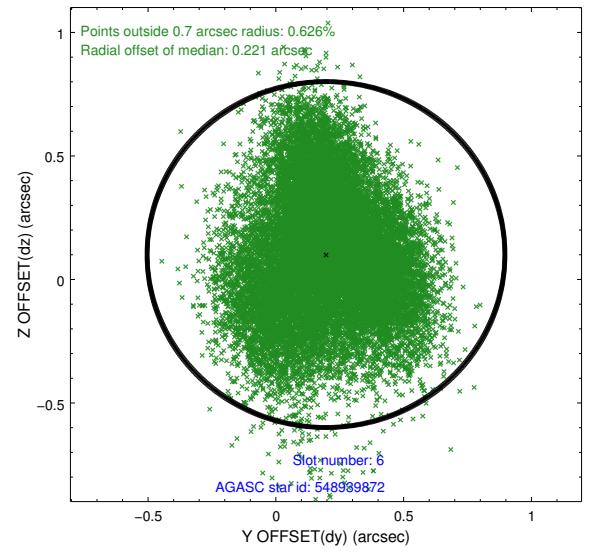
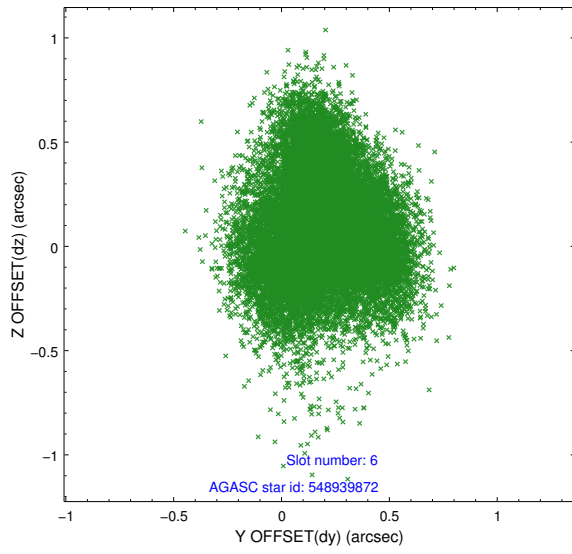
2.4.3 Slot 5



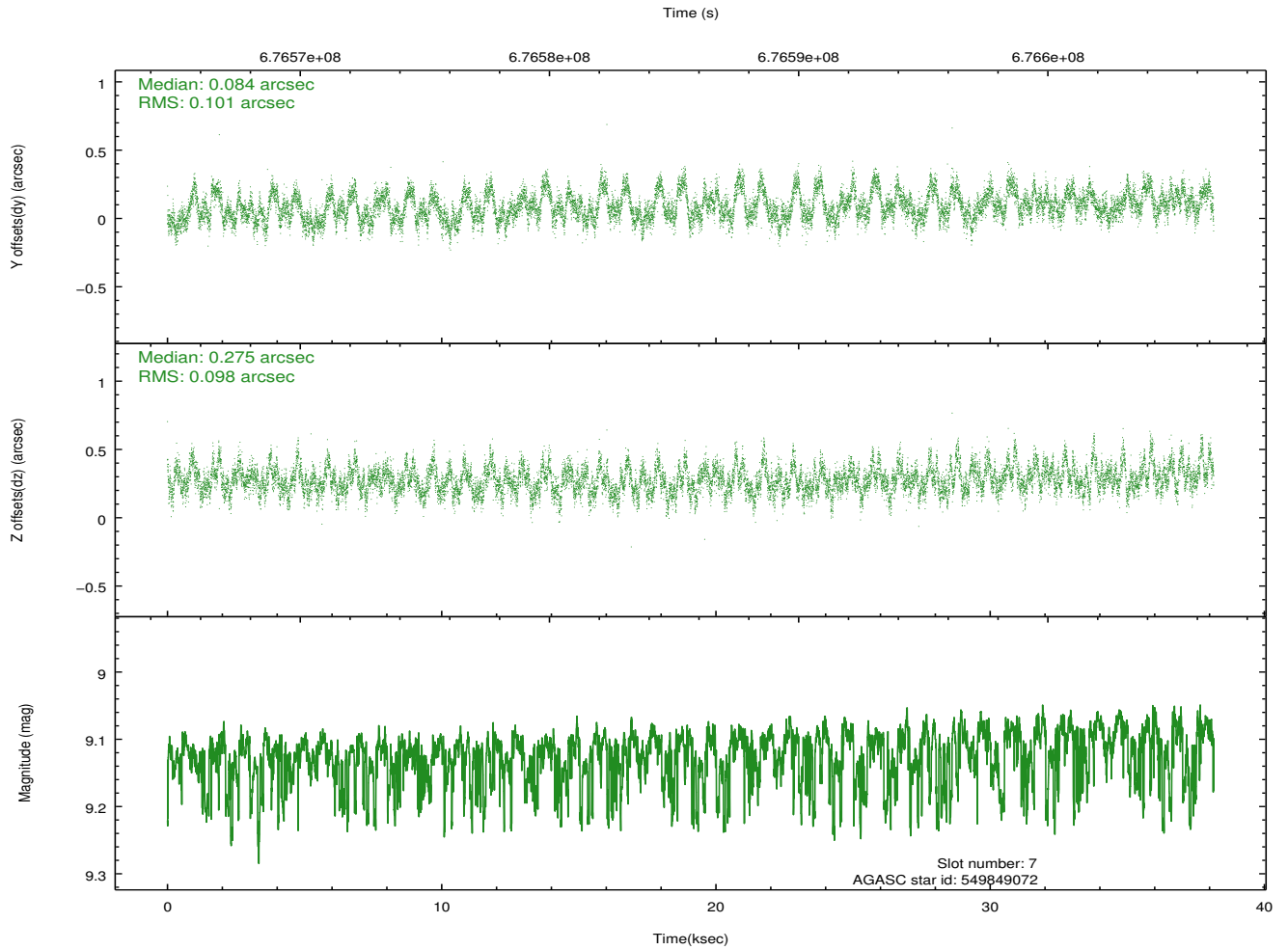
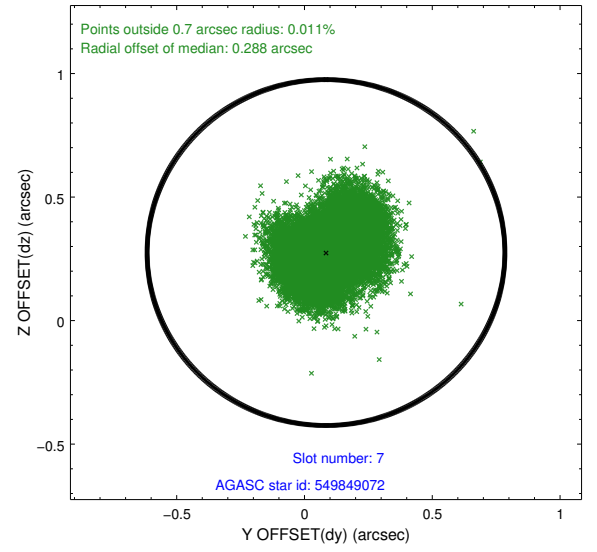
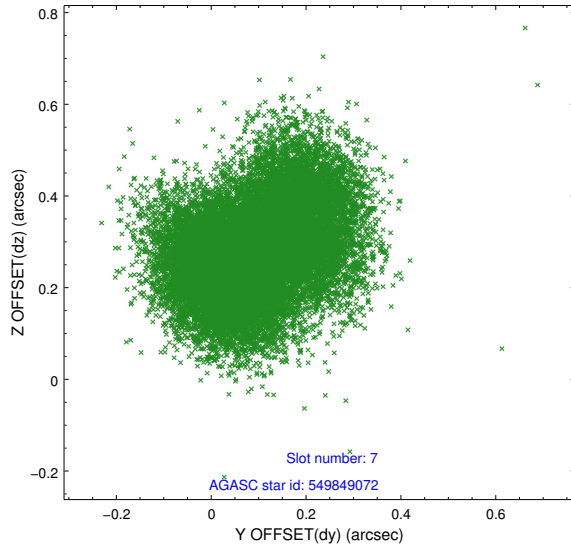
Time (s)



2.4.4 Slot 6

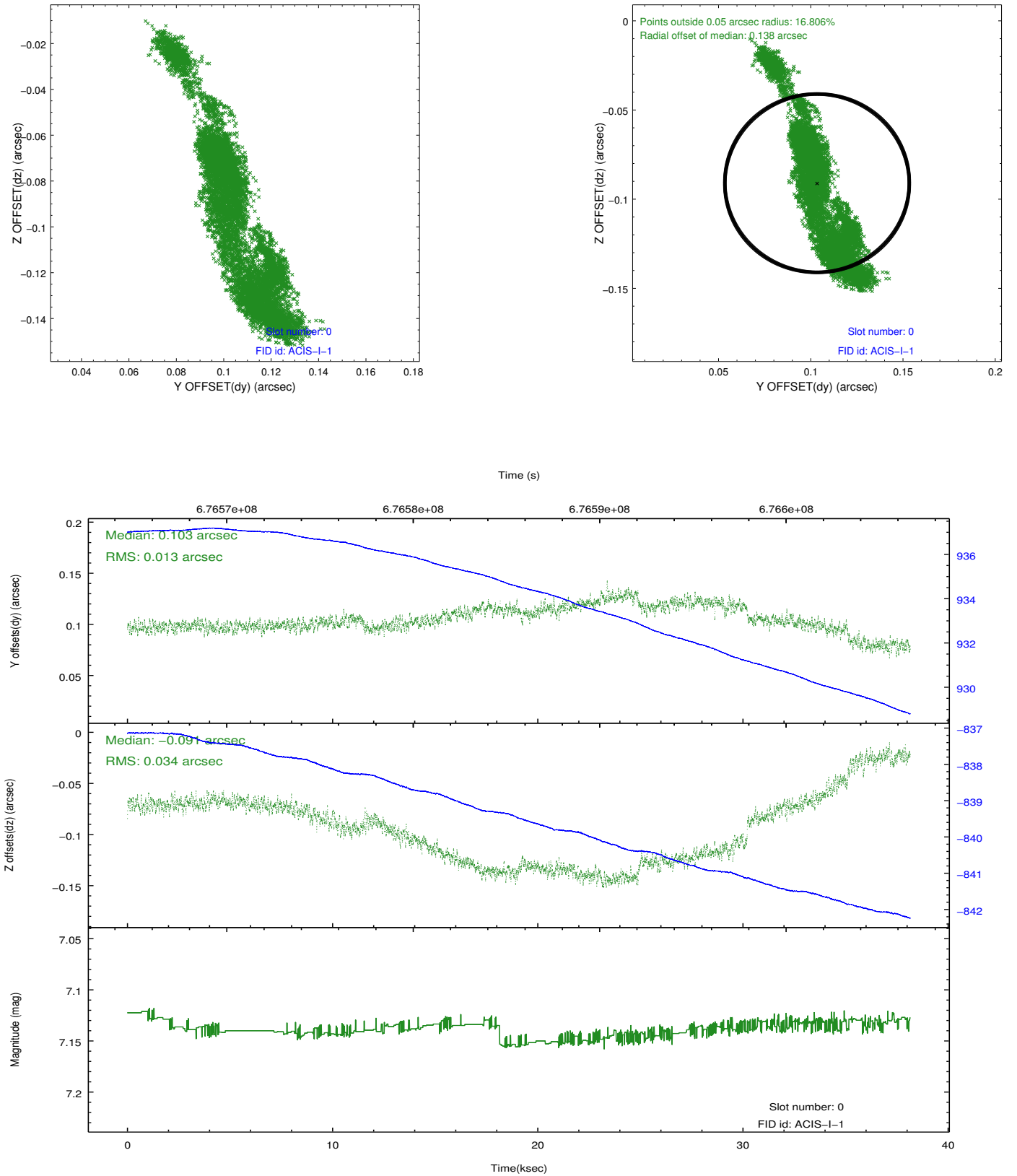


2.4.5 Slot 7

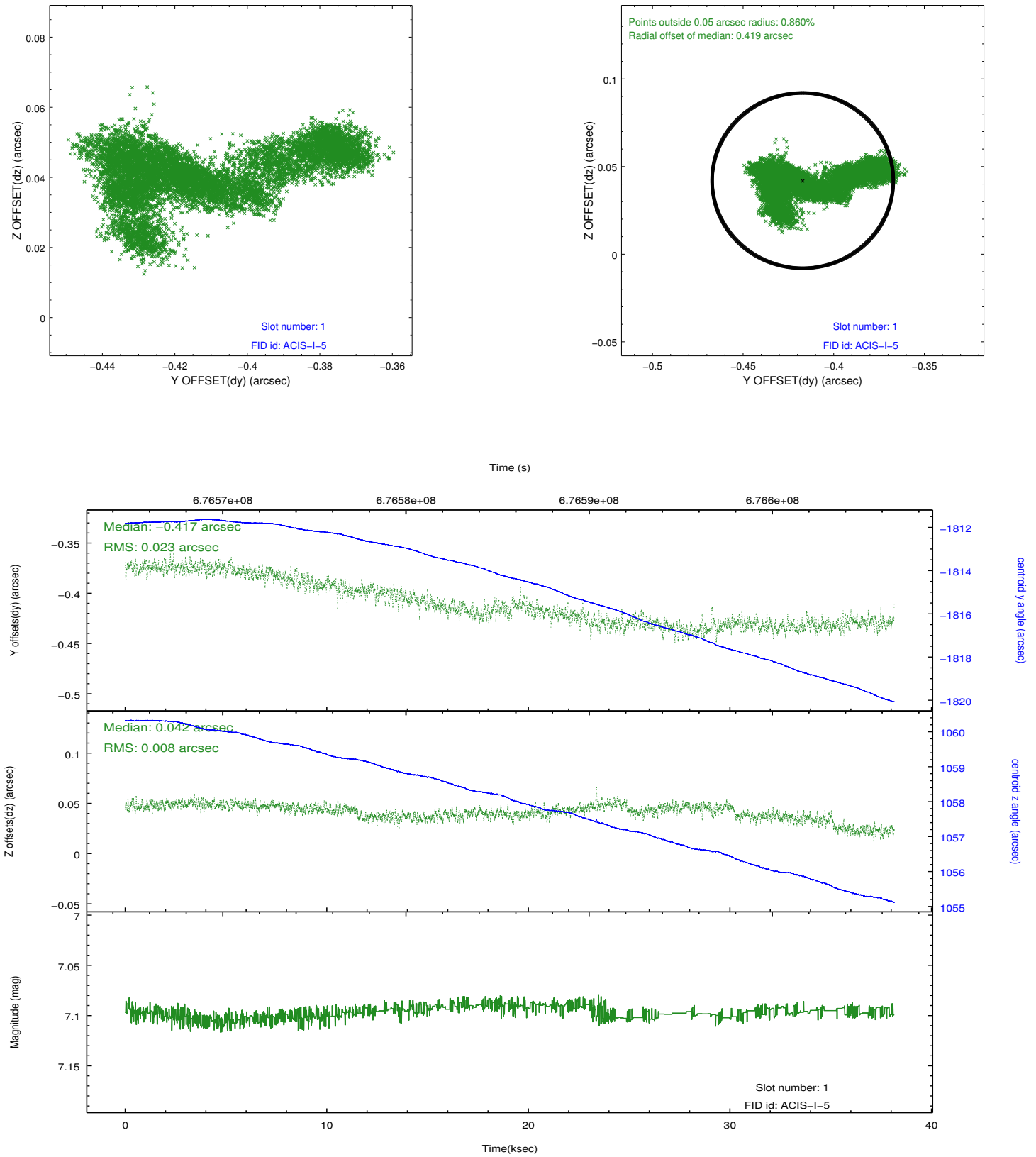


2.5 FID Slots

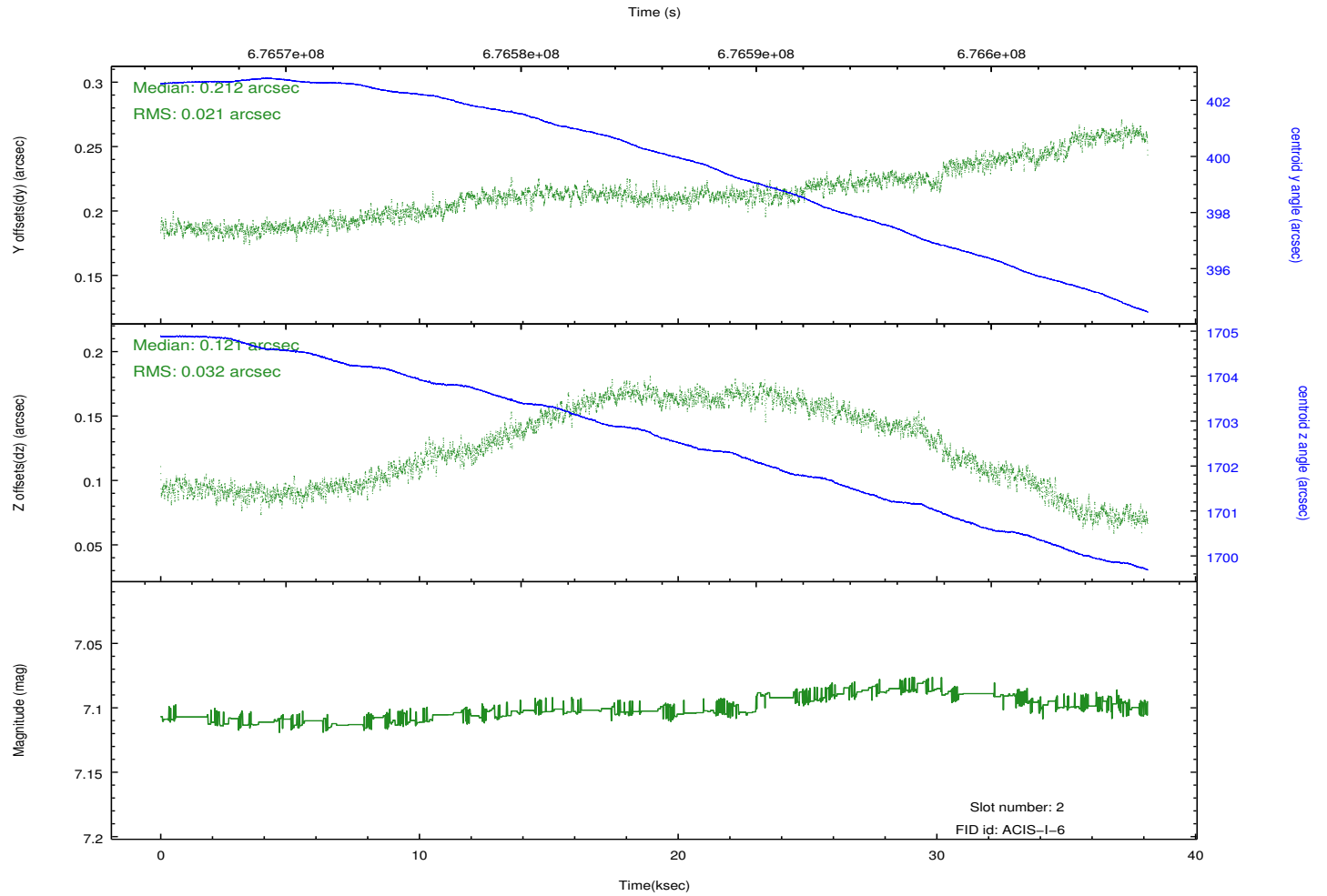
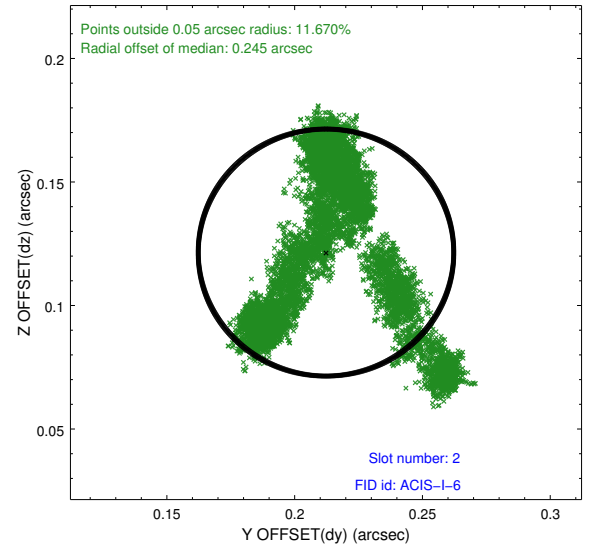
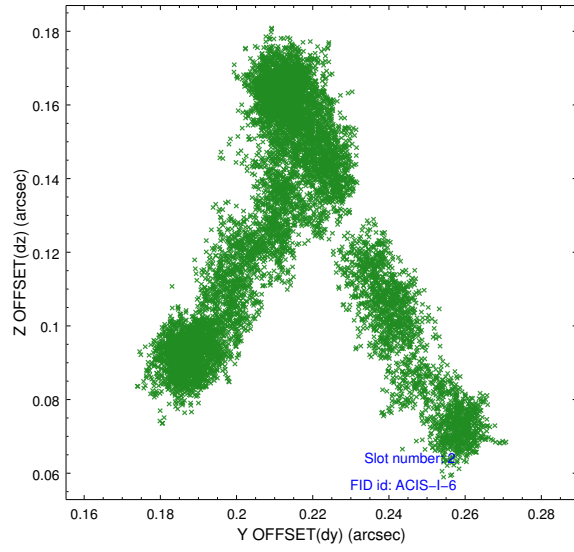
2.5.1 Slot 0



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)	2019.06.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	38.055127690792

A.2 Comments