

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 22011 - L2 Version 1
Chandra X-Ray Center

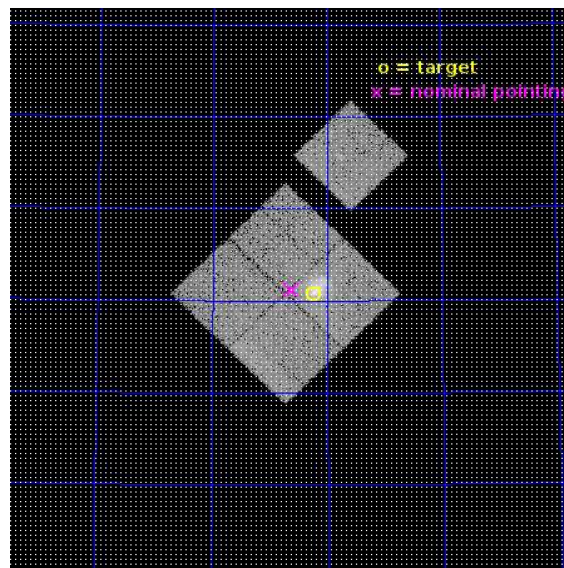
L2 Processing Date : Dec 21 2018

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

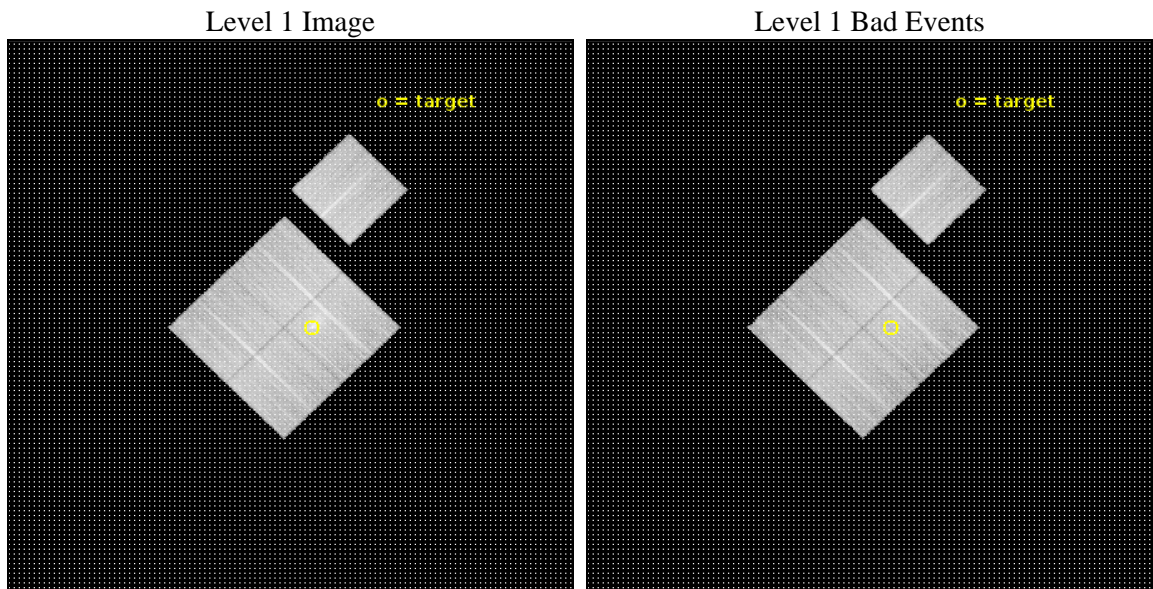
seq_num	801762	Sequence number
obs_id	22011	Observation id
title	Shock structure, the electron-ion equilibration timescale and the disintegrating cool core in A2146	Proposal title
observer	Helen Russell	Principal investigator
object	Abell 2146	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	239.06125	Observer's specified target RA [deg]
dec_targ	66.346917	Observer's specified target Dec [deg]
ra_nom	239.15618265827	Nominal RA [deg]
dec_nom	66.353541002371	Nominal Dec [deg]
roll_nom	45.121739460231	Nominal Roll [deg]
revision	1	Processing version of data
ontime	20069.400154471	Sum of GTIs [s]
livetime	19807.178666576	Livetime [s]
ontime0	20066.259134293	Sum of GTIs [s]
ontime1	20069.400154471	Sum of GTIs [s]
ontime2	20069.400154471	Sum of GTIs [s]
ontime3	20069.400154471	Sum of GTIs [s]
ontime6	20059.977103353	Sum of GTIs [s]
l2events	81517	Number of level 2 events



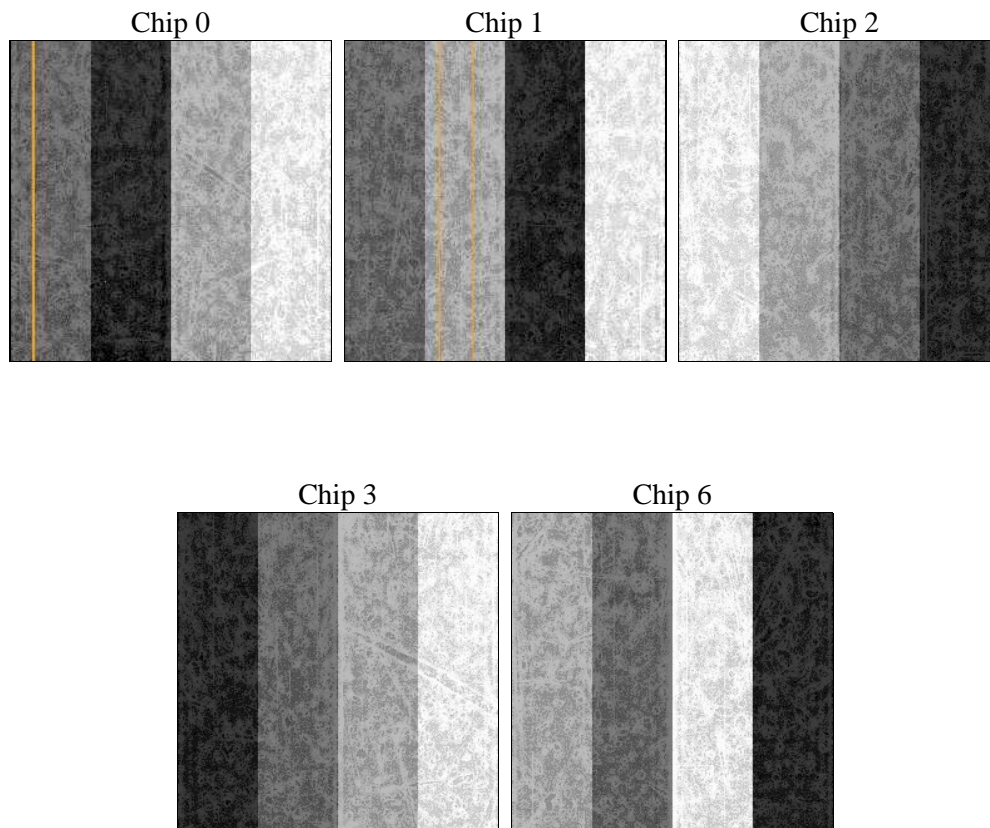
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	20069.400154471	Sum of GTIs [s]
caldbver	4.8.2	 	ontime0	20066.259134293	Sum of GTIs [s]
date	2018-12-21T22:02:58	Date and time of file creation	ontime1	20069.400154471	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	20069.400154471	Sum of GTIs [s]
			ontime3	20069.400154471	Sum of GTIs [s]
			ontime6	20059.977103353	Sum of GTIs [s]
			l1events	750613	Number of level 1 events

2.1.4 Events

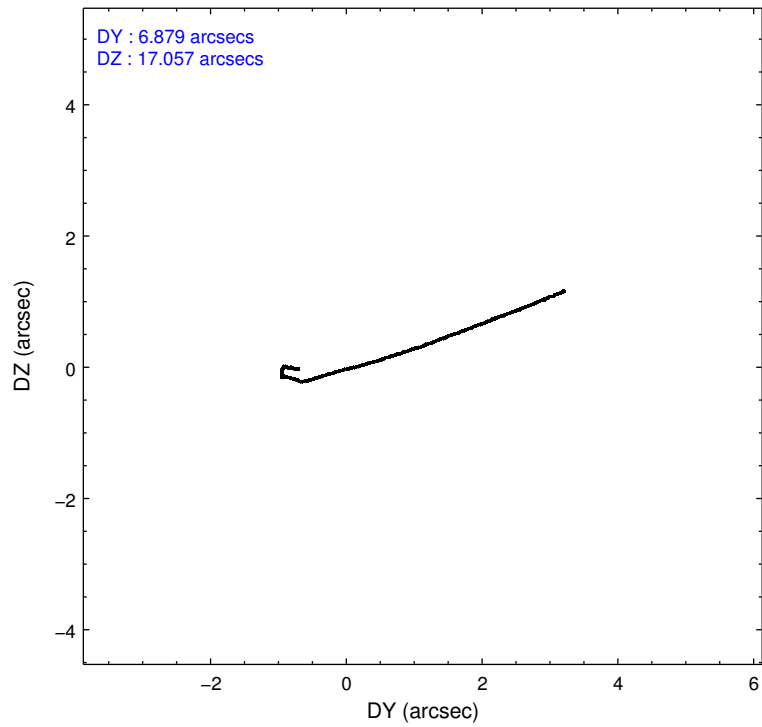
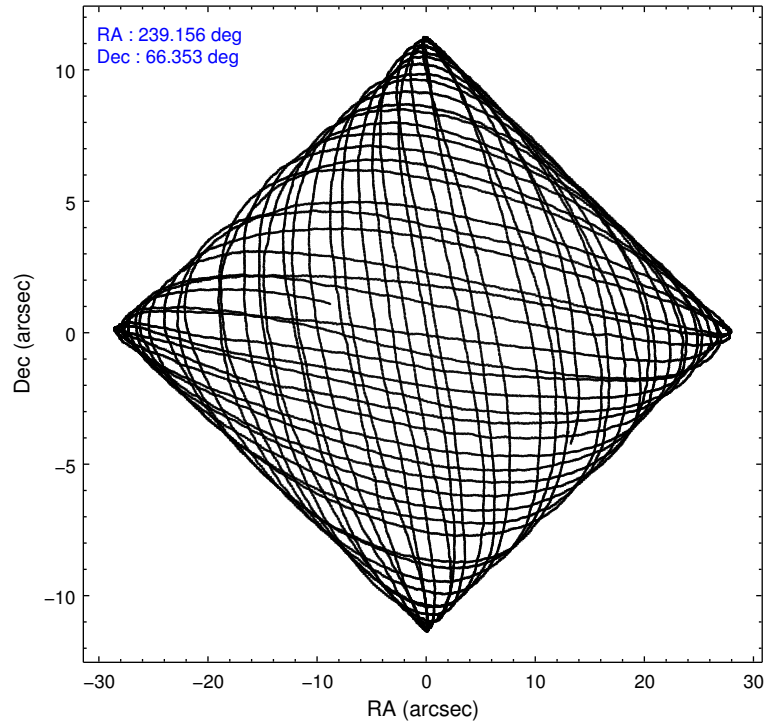
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	137837	141651	156066	158807	156252
rejected events	120842	122707	139476	132908	139130
rejected %	87%	86%	89%	83%	89%

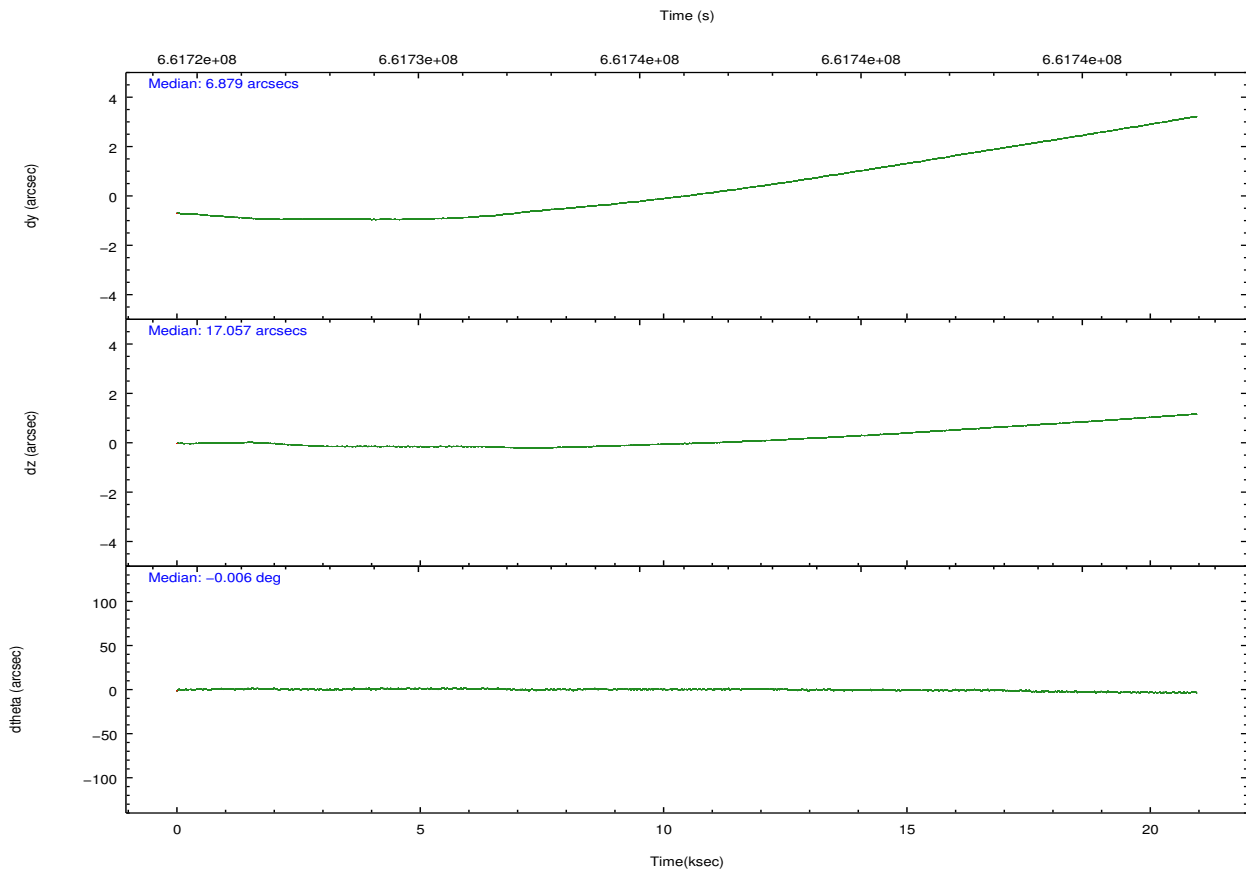
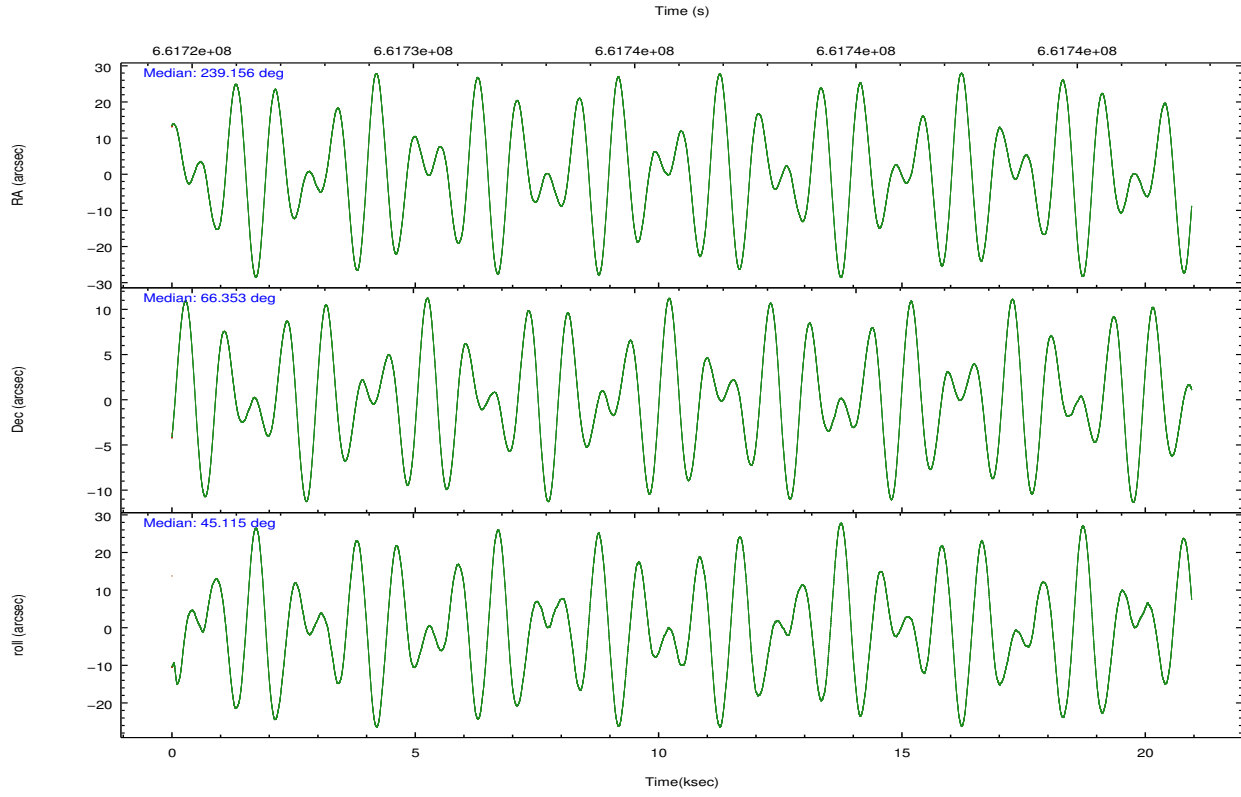
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	5726	6240	5928	13657	5675
	4%	4%	3%	8%	3%
grade 1 events	87	77	91	143	70
	0%	0%	0%	0%	0%
grade 2 events	4398	4883	4159	4490	4081
	3%	3%	2%	2%	2%
grade 3 events	1706	1784	1630	2057	1714
	1%	1%	1%	1%	1%
grade 4 events	1542	1762	1663	1977	1652
	1%	1%	1%	1%	1%
grade 5 events	6534	6958	6112	7456	6742
	4%	4%	3%	4%	4%
grade 6 events	3626	4278	3211	3721	4002
	2%	3%	2%	2%	2%
grade 7 events	114218	115669	133272	125306	132316
	82%	81%	85%	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	239.138793	239.1561826582657	CCD I2 on	Y	Y
[deg] Pointing Dec	66.326830	66.35354100237066	CCD I3 on	Y	Y
[deg] Pointing Roll	44.928973	45.12173946023125	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)	661726566.184000	661725335.79222	CCD S5 on	N	N
Observation start date	2018-12-20T20:54:57	2018-12-20T20:35:35	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	661746566.184000	661747359.45604	On-chip summing requested	N	N
Observation end date	2018-12-21T02:28:17	2018-12-21T02:42:39	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect





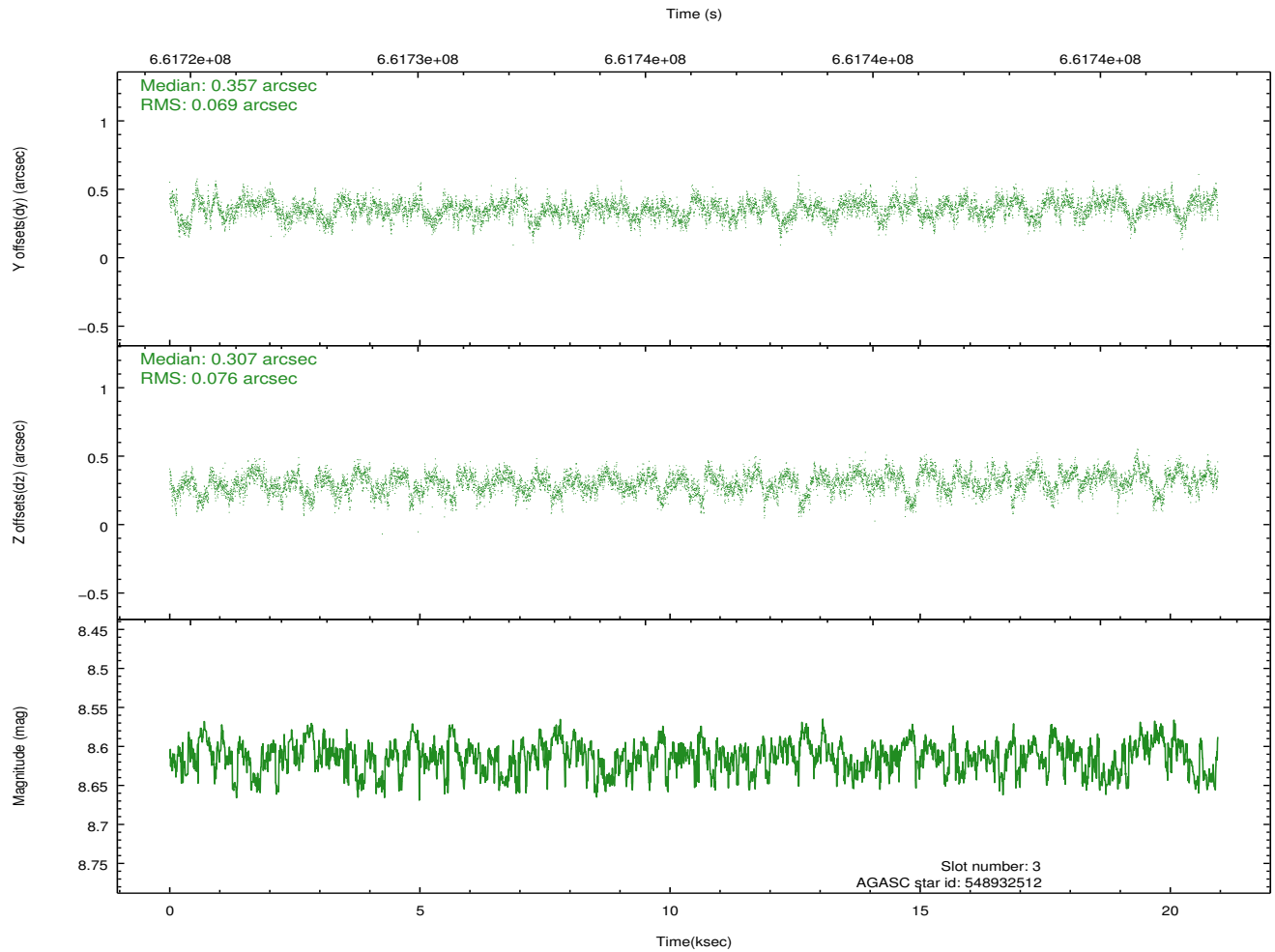
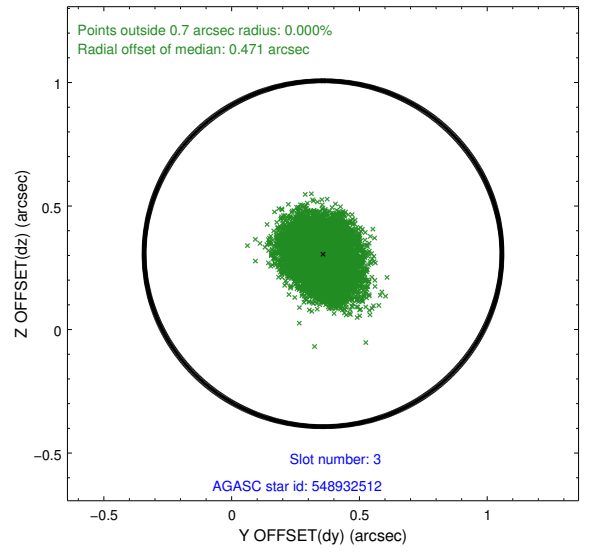
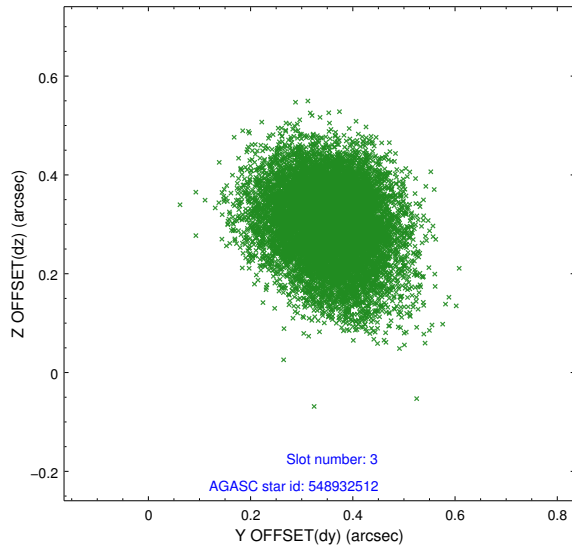
Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.17	5111	1.000	0.119	-0.115	0.020	0.076	0.000000	0.000000	932.55	-840
1	FID		ACIS-I-5	7.13	5108	1.000	-0.423	0.049	0.011	0.022	0.000000	0.000000	-1816.15	1056
2	FID		ACIS-I-6	7.13	5111	1.000	0.212	0.134	0.015	0.058	0.000000	0.000000	397.81	1701
3	GUIDE	used	548932512	8.61	10215	1.000	0.357	0.307	0.110	0.177	239.727627	66.054972	-77.75	-1296
4	GUIDE	used	548933960	8.48	10216	1.000	-0.000	0.088	0.111	0.188	237.671184	66.428675	-1219.93	1768
5	GUIDE	used	548937184	9.86	10200	1.000	-0.311	-0.143	0.199	0.317	238.771821	66.565432	235.85	980
6	GUIDE	used	549850840	9.33	10209	1.000	-0.150	-0.072	0.235	0.362	241.038865	66.468628	2323.66	-1538
7	GUIDE	used	549850848	8.85	10202	1.000	0.102	-0.174	0.187	0.341	241.459219	66.322658	2409.10	-2335

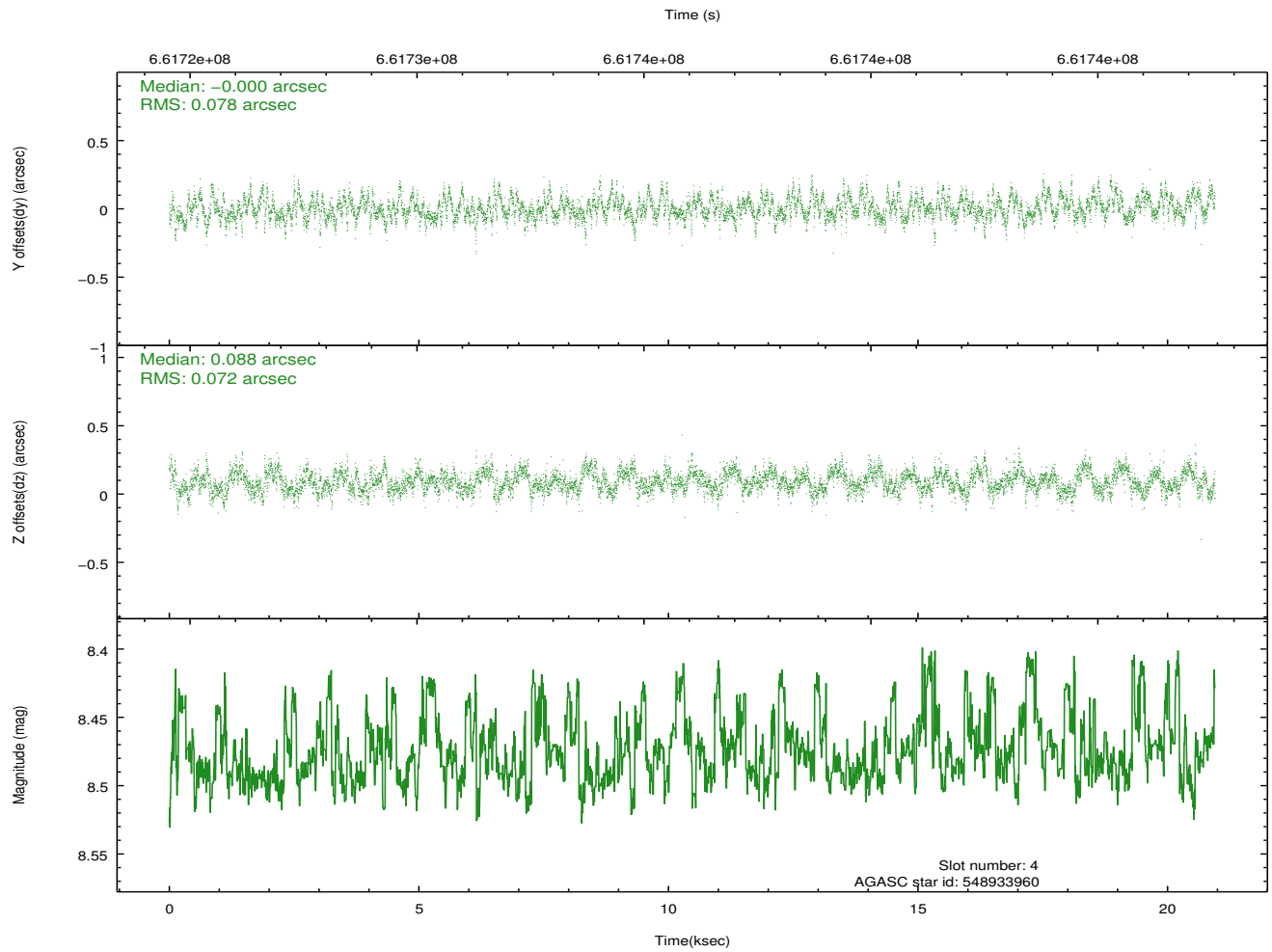
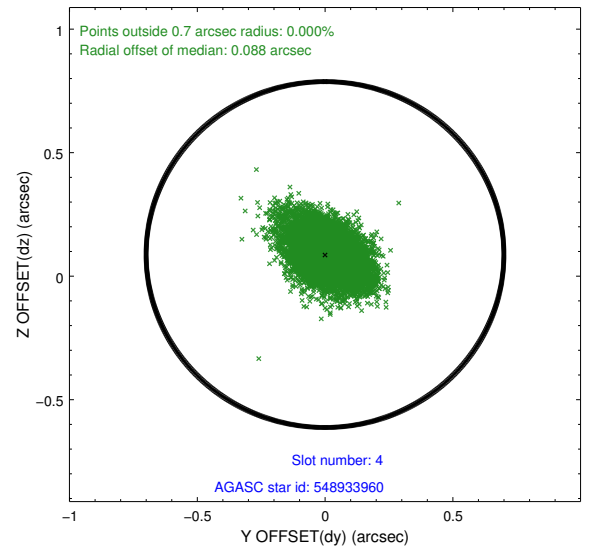
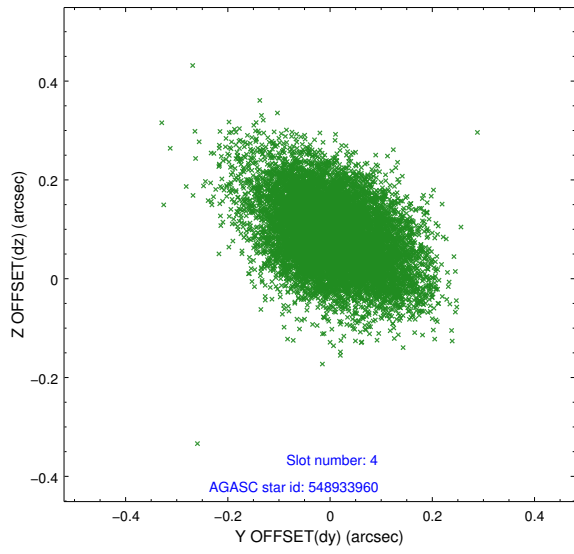
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2.4 Star Slots

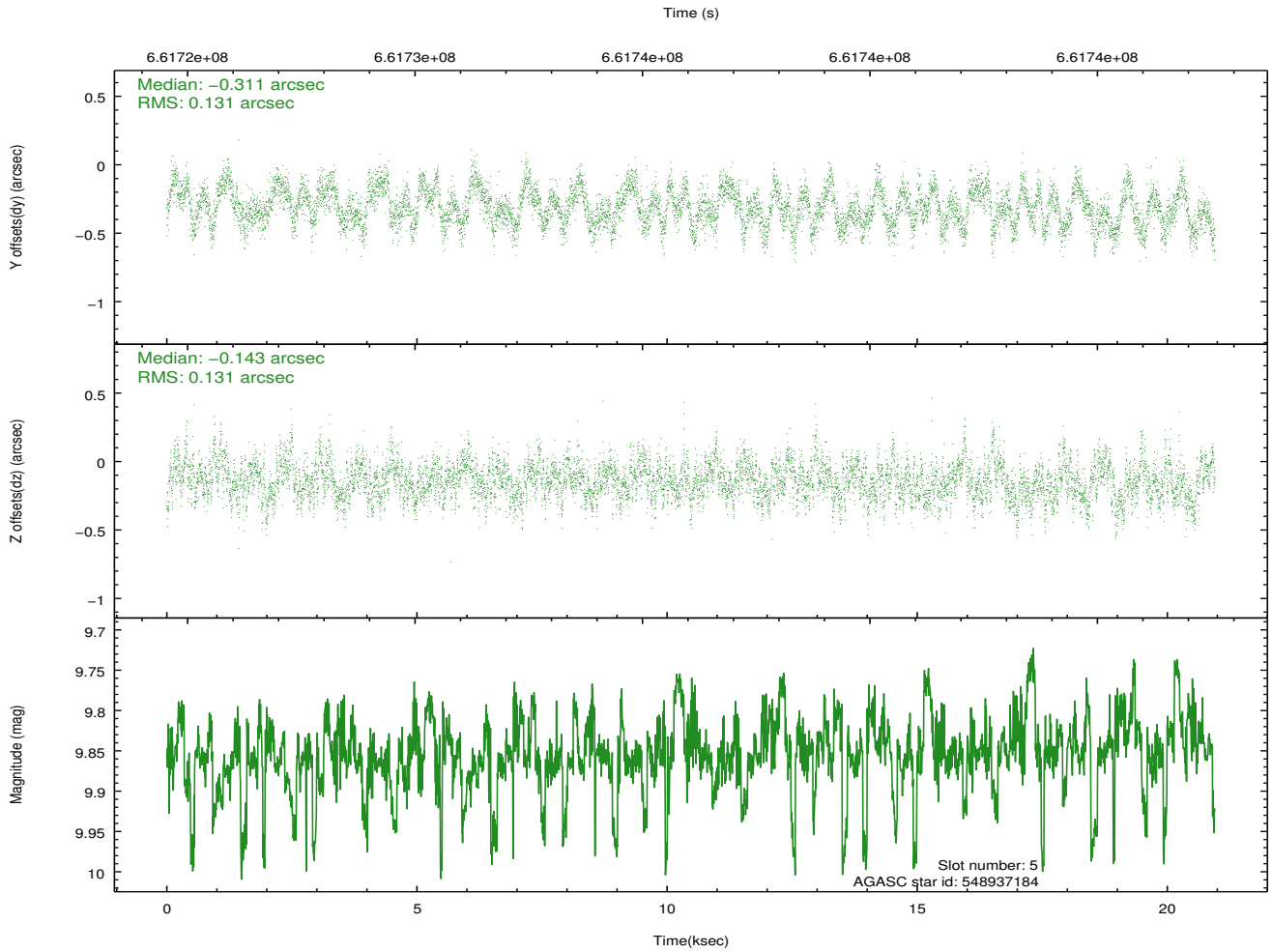
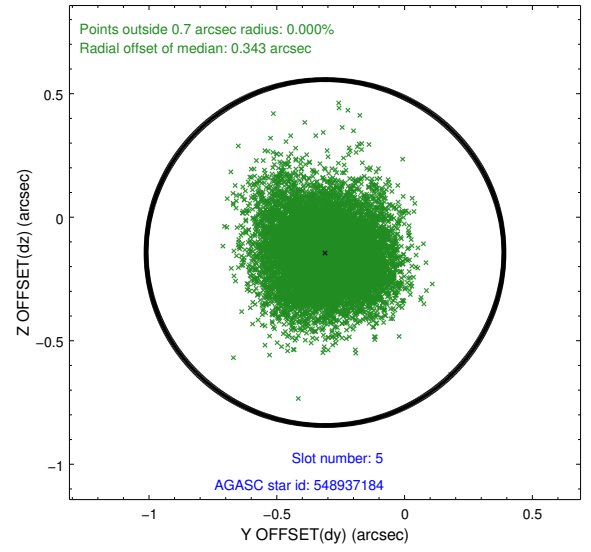
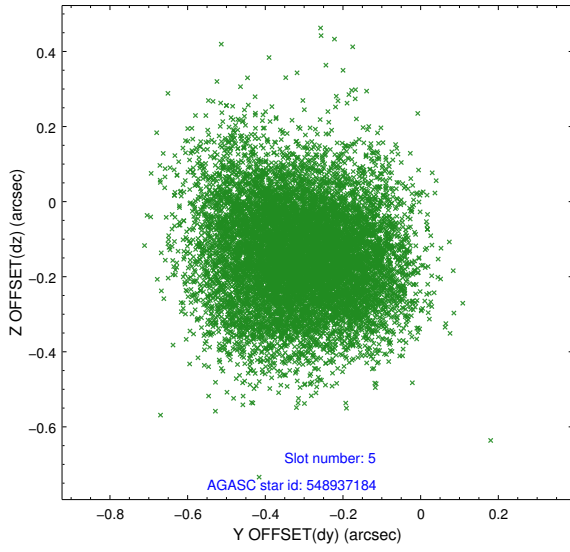
2.4.1 Slot 3



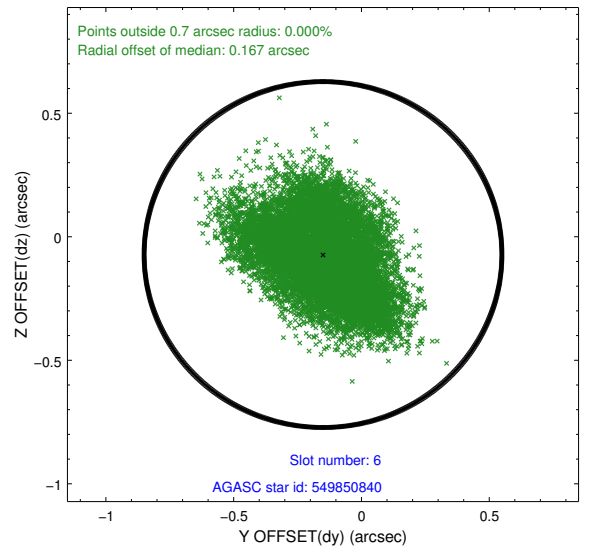
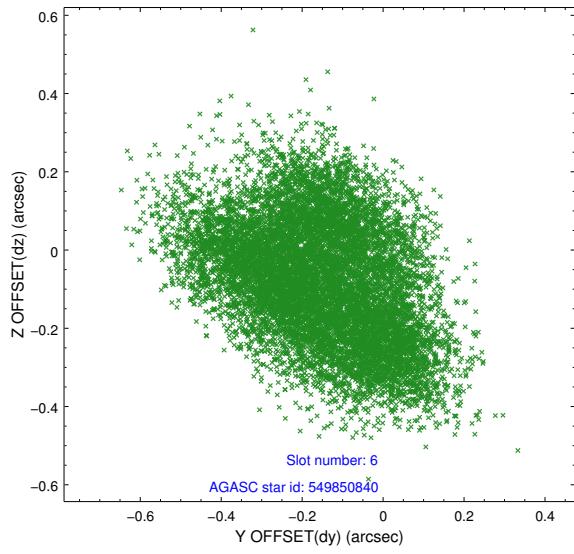
2.4.2 Slot 4



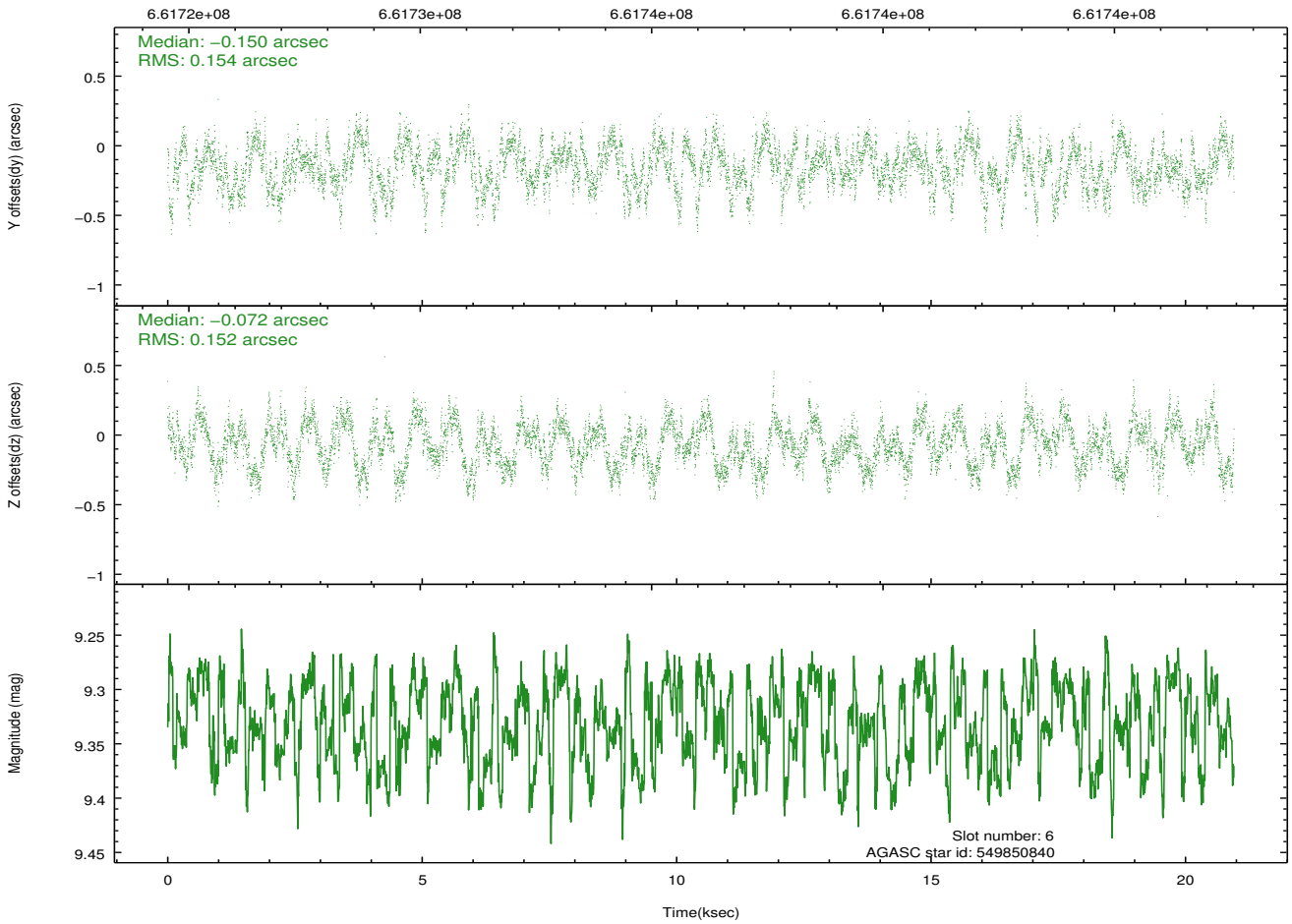
2.4.3 Slot 5



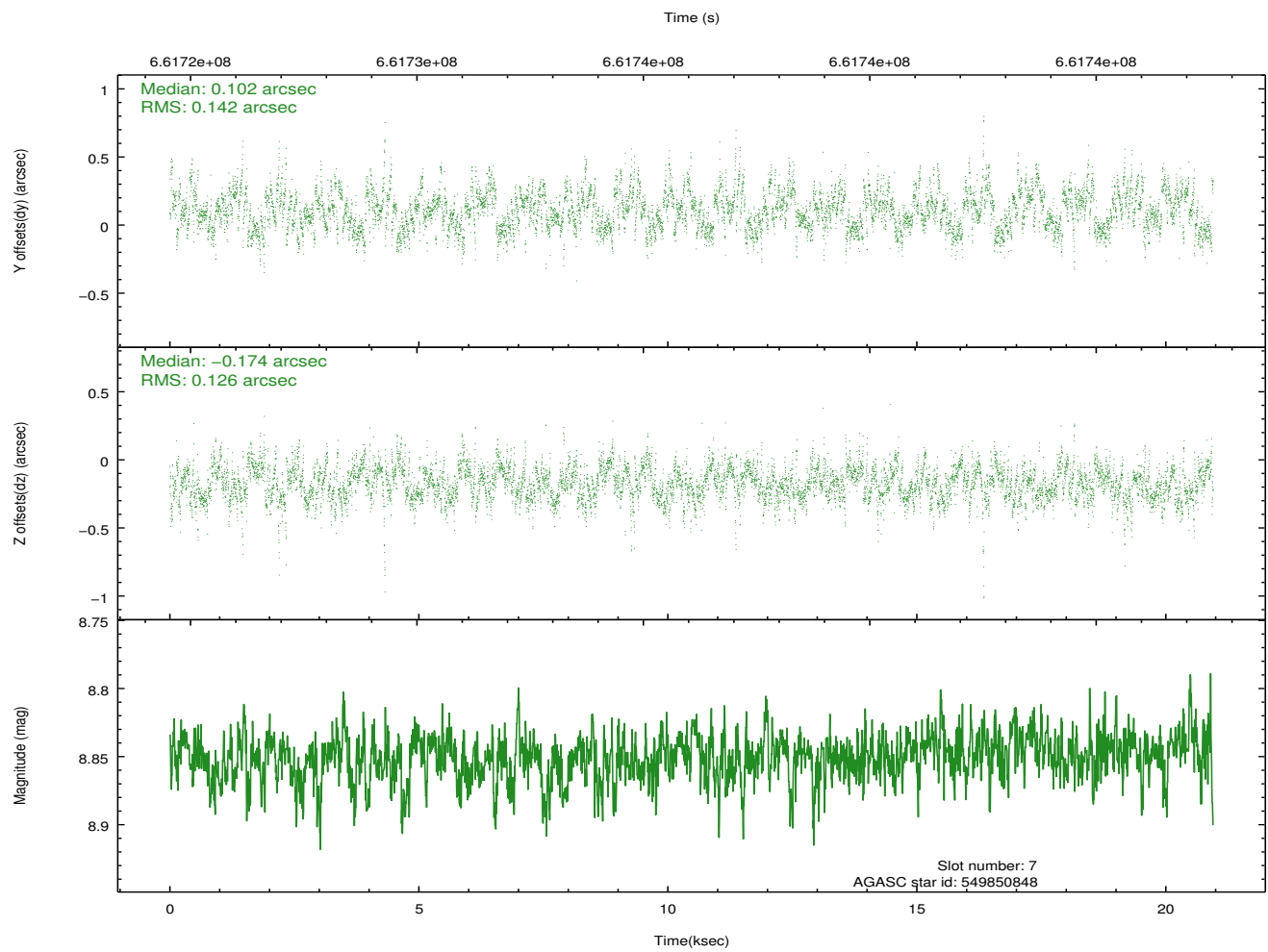
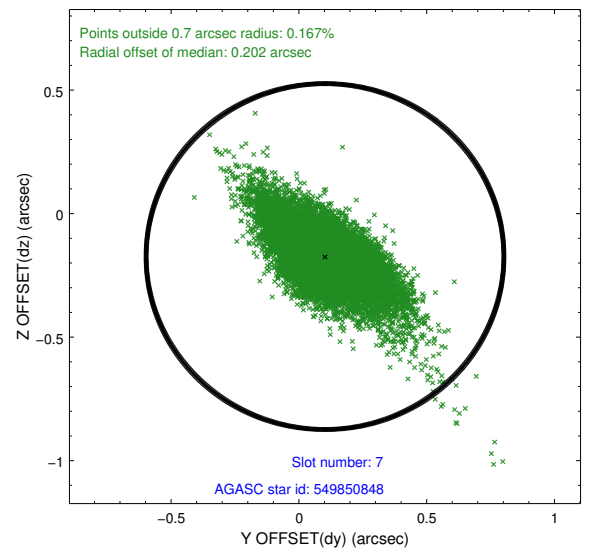
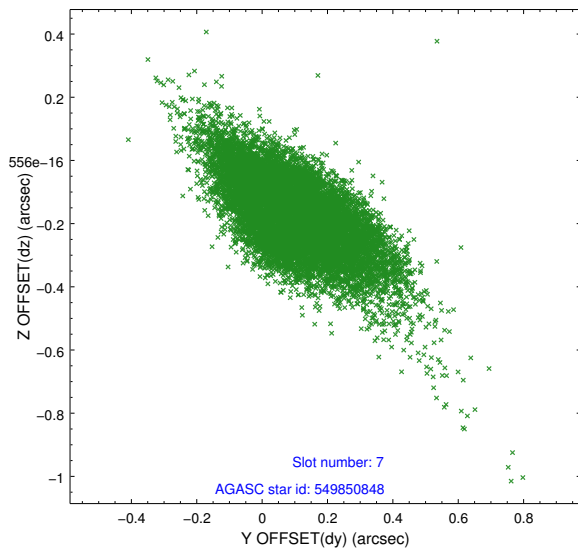
2.4.4 Slot 6



Time (s)

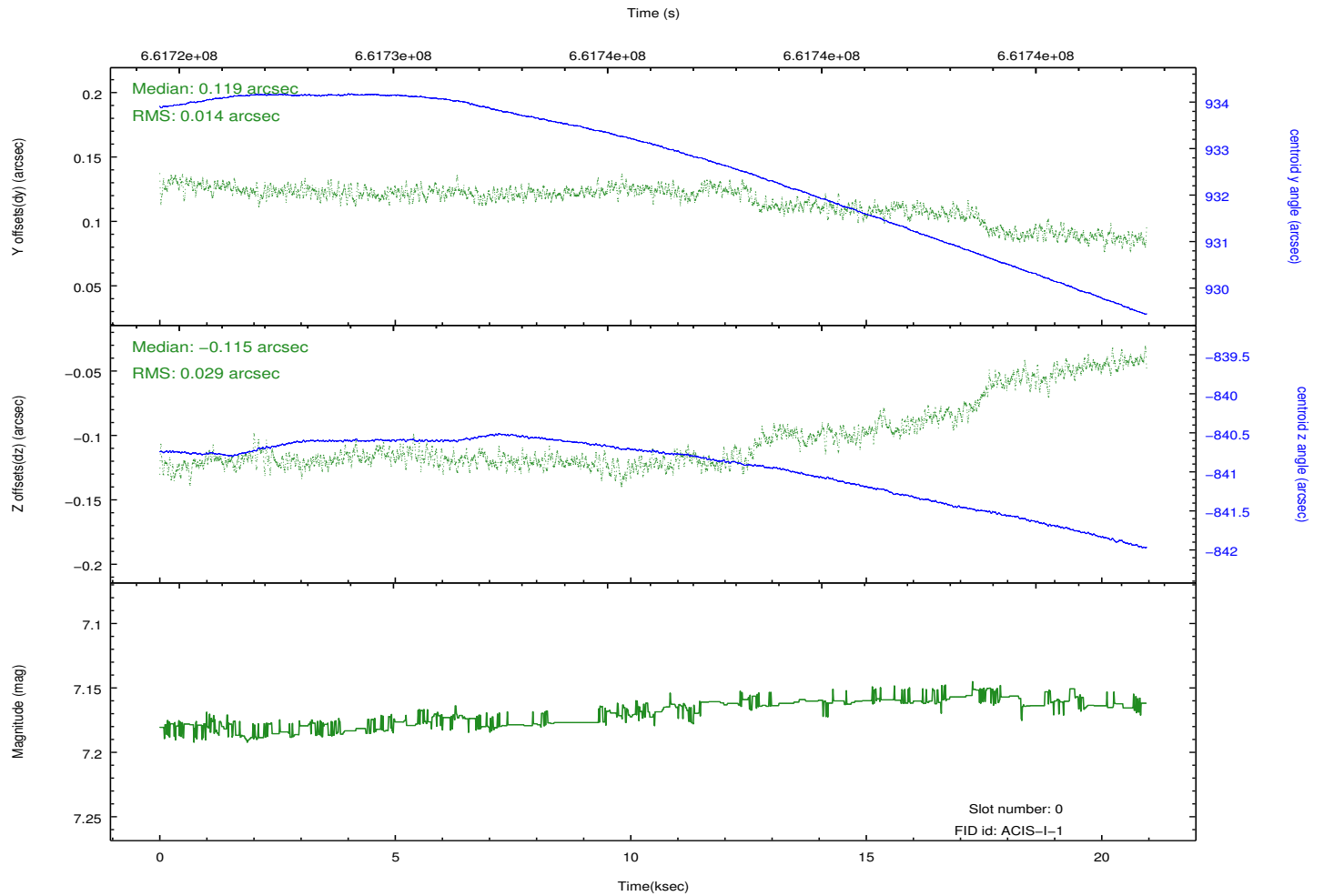
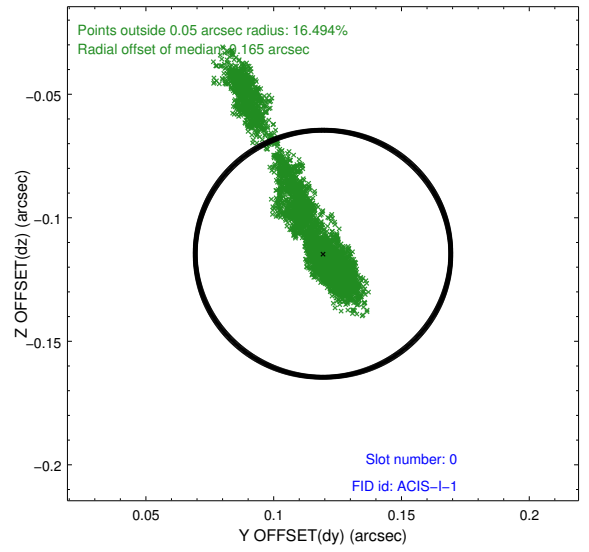
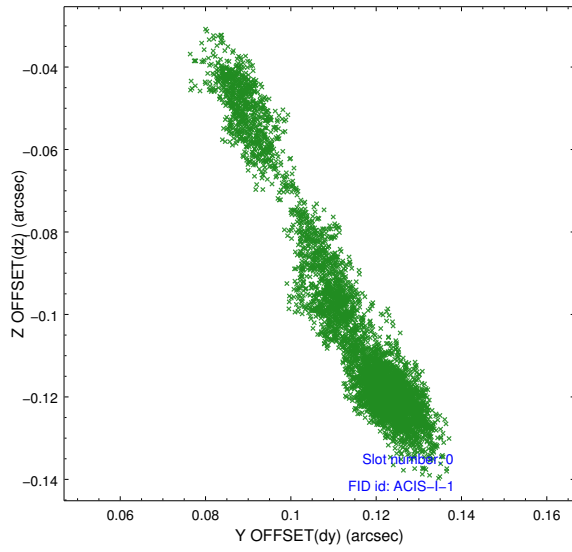


2.4.5 Slot 7

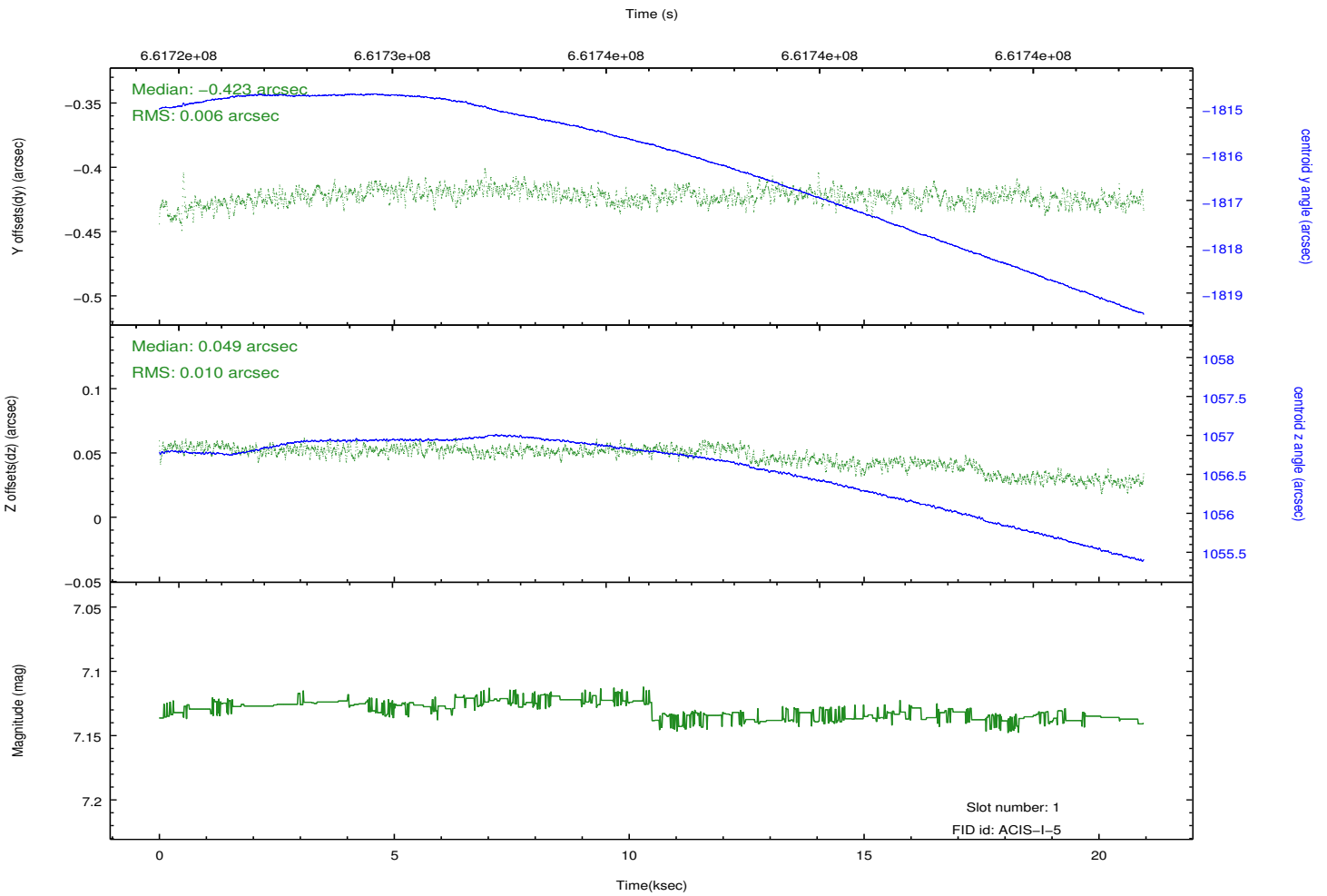
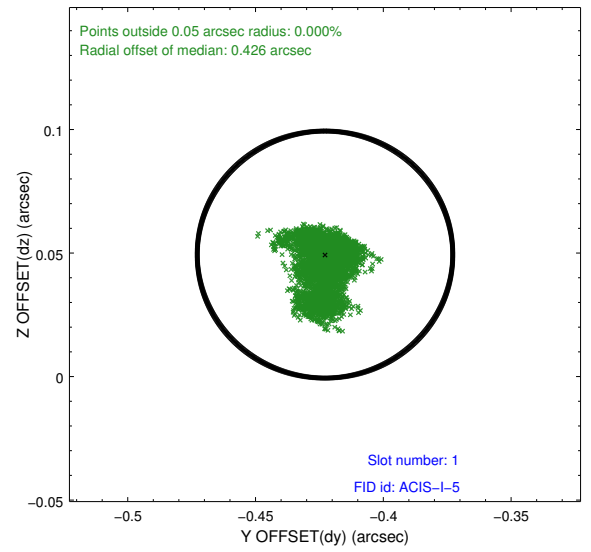
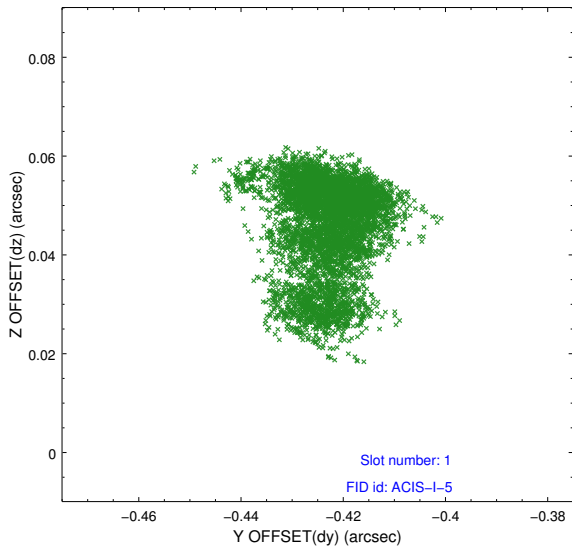


2.5 FID Slots

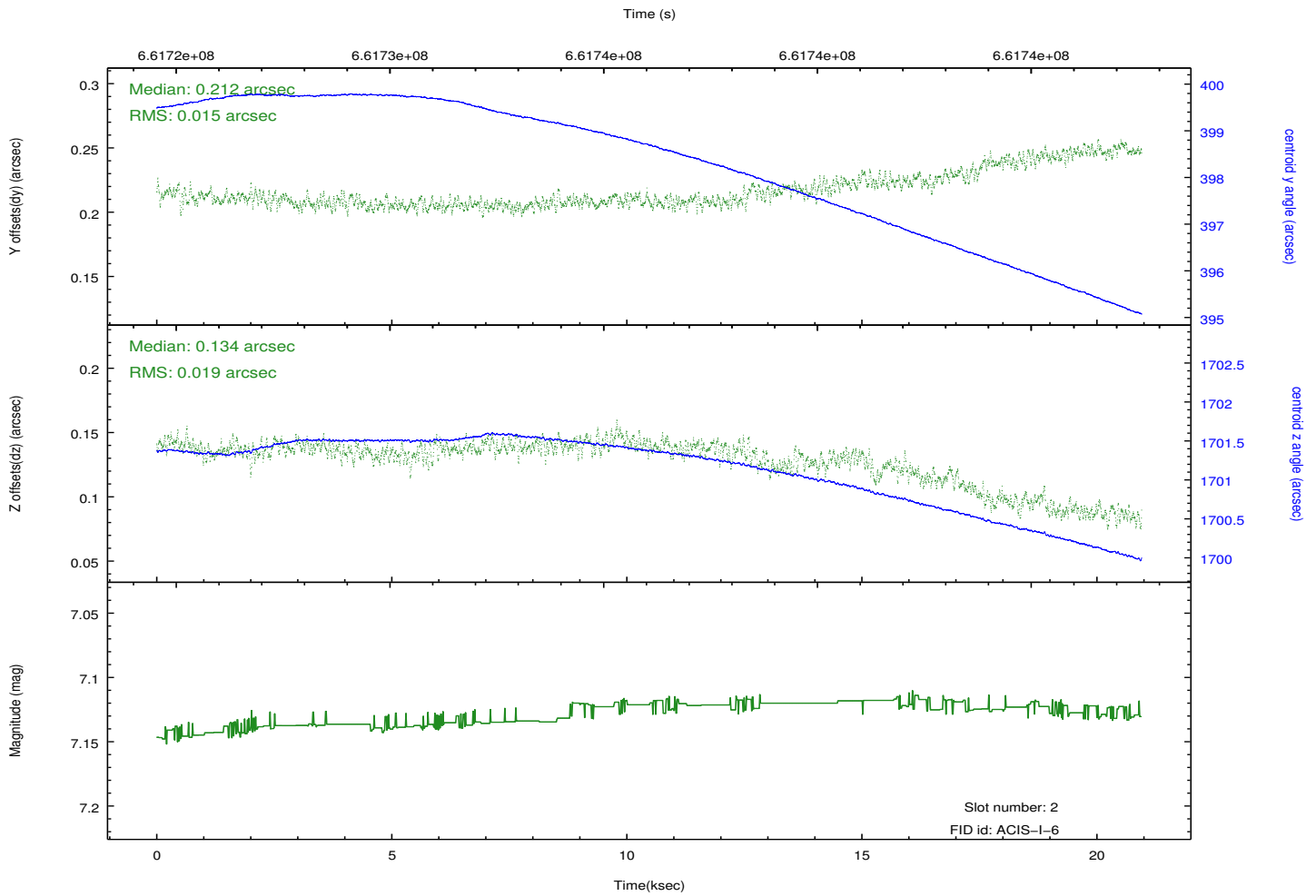
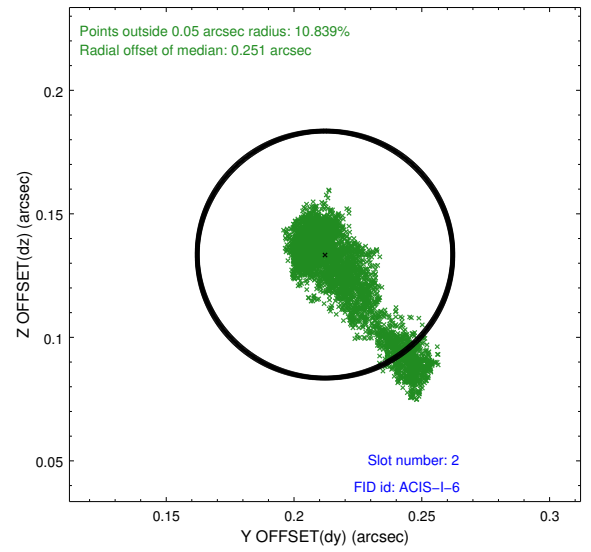
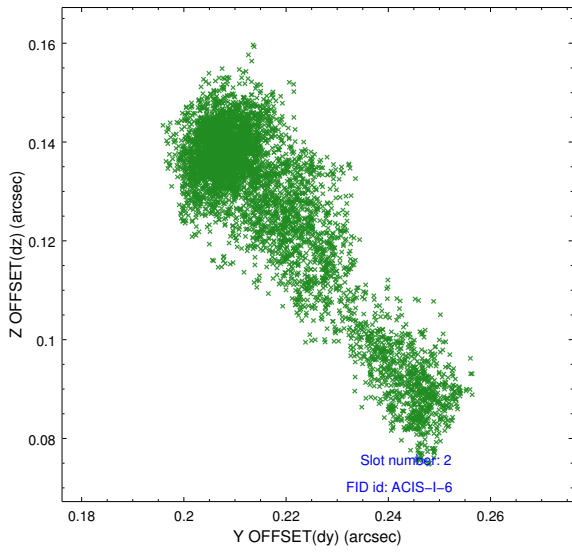
2.5.1 Slot 0



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)	2018.12.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.069400154471

A.2 Comments