

V&V Reference Report

L2 ASCDS Version : 10.4.3.1

Observation 16967 - L2 Version 1
Chandra X-Ray Center

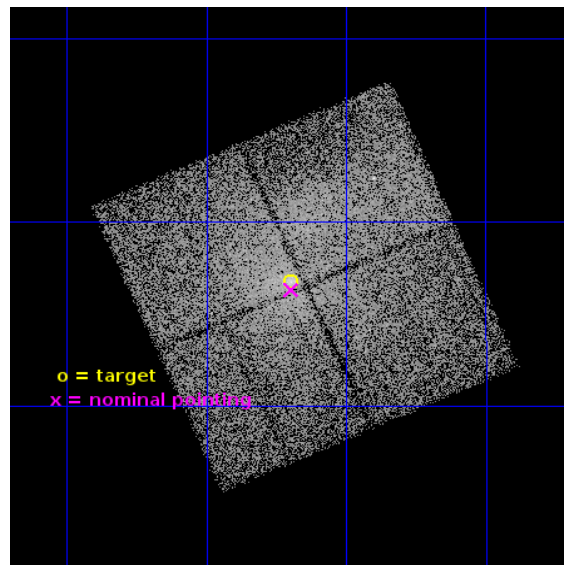
L2 Processing Date : May 2 2016

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

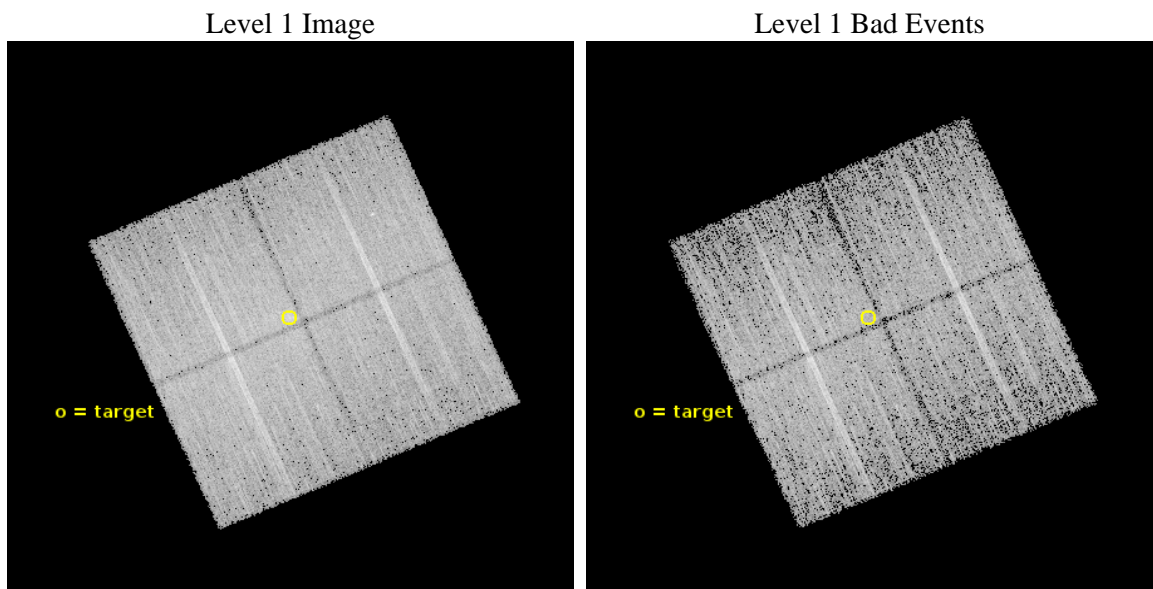
seq_num	601160	Sequence number
obs_id	16967	Observation id
title	AN EFFICIENT SURVEY FOR GLOBULAR CLUSTER BLACK HOLES WITHIN 20 MPC	
observer	Thomas Maccarone	Principal investigator
object	ngc 4406	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	186.549167	Observer's specified target RA [deg]
dec_targ	12.945972	Observer's specified target Dec [deg]
ra_nom	186.54884020814	Nominal RA [deg]
dec_nom	12.938699060878	Nominal Dec [deg]
roll_nom	246.20878515286	Nominal Roll [deg]
revision	1	Processing version of data
ontime	20072.013698936	Sum of GTIs [s]
livetime	19809.758063157	Livetime [s]
ontime0	20068.749588728	Sum of GTIs [s]
ontime1	20071.931618929	Sum of GTIs [s]
ontime2	20068.83165884	Sum of GTIs [s]
ontime3	20072.013698936	Sum of GTIs [s]
l2events	80428	Number of level 2 events



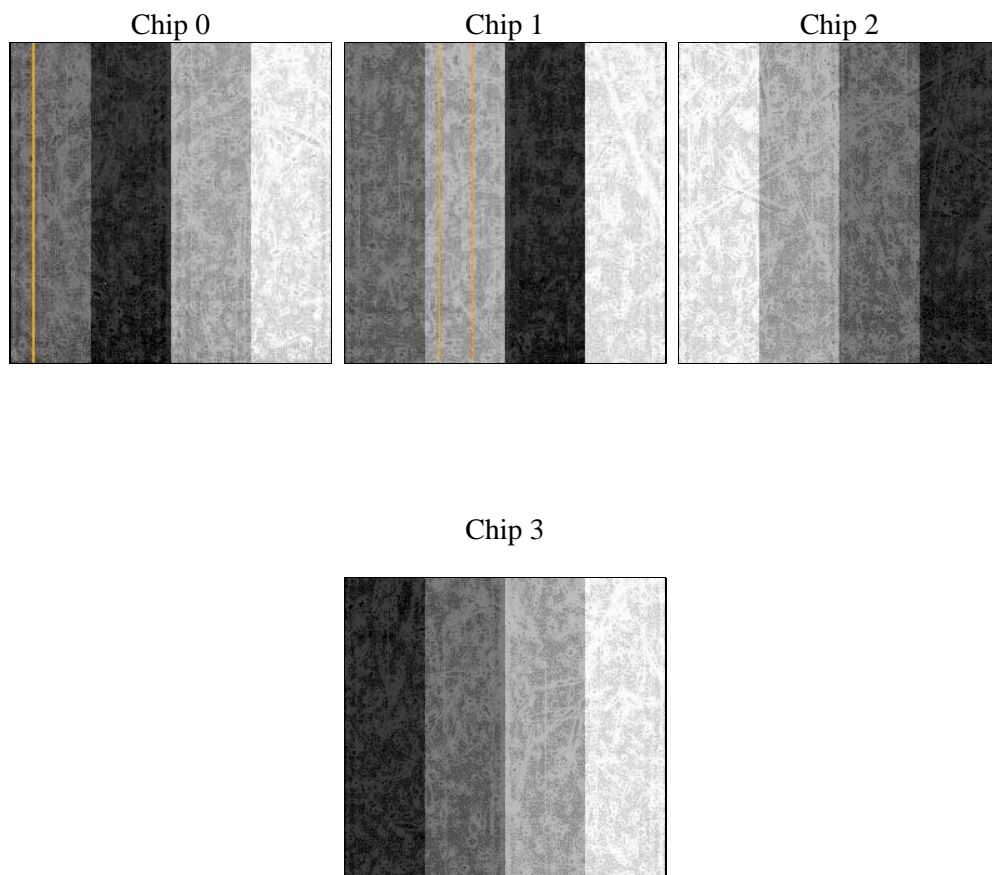
2 OBI

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	10.4.3.1	Processing system revision	ontime	20072.013698936	Sum of GTIs [s]
caldsver	4.7.1	 	ontime0	20068.749588728	Sum of GTIs [s]
date	2016-05-02T18:04:32	Date and time of file creation	ontime1	20071.931618929	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	20068.83165884	Sum of GTIs [s]
			ontime3	20072.013698936	Sum of GTIs [s]
			l1events	503026	Number of level 1 events

2.1.4 Events

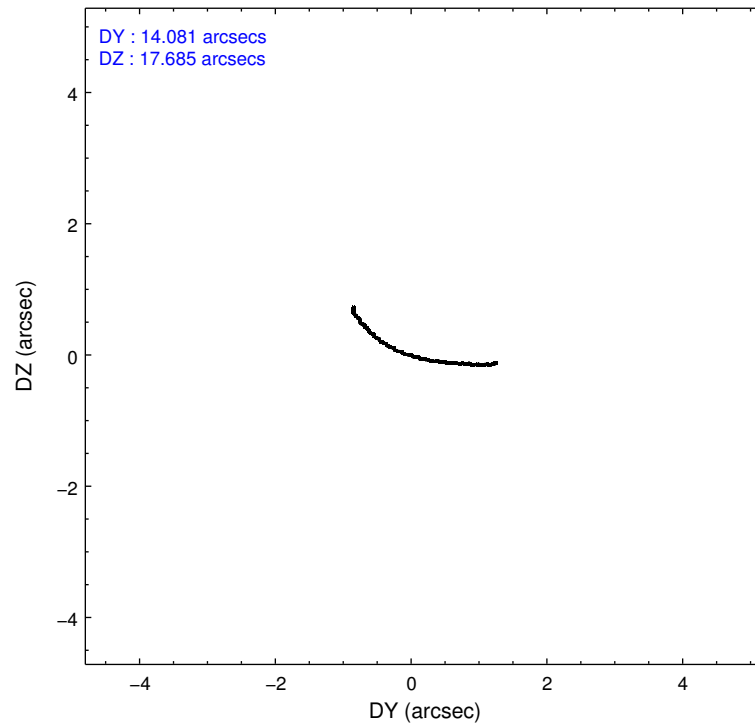
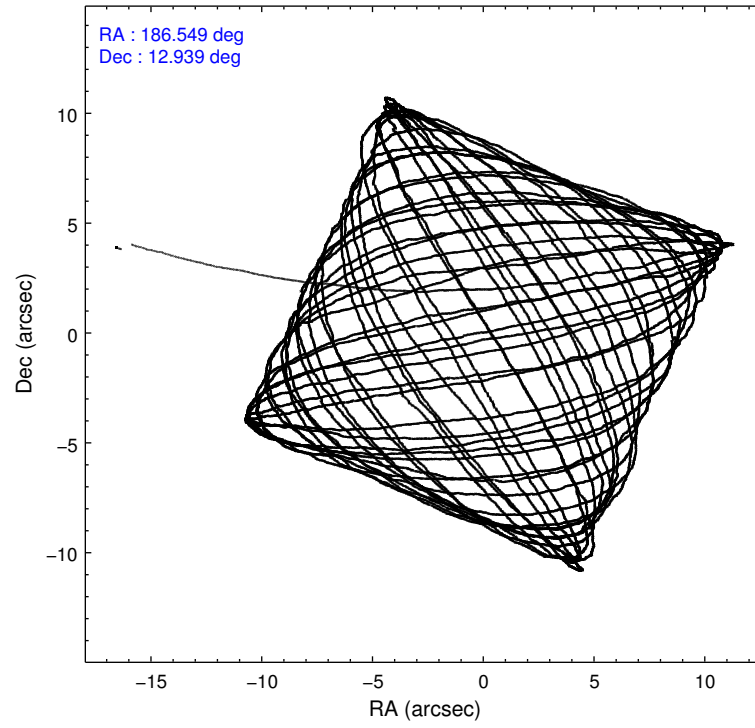
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	116738	124140	132478	129670
rejected events	96476	97738	111525	105394
rejected %	82%	78%	84%	81%

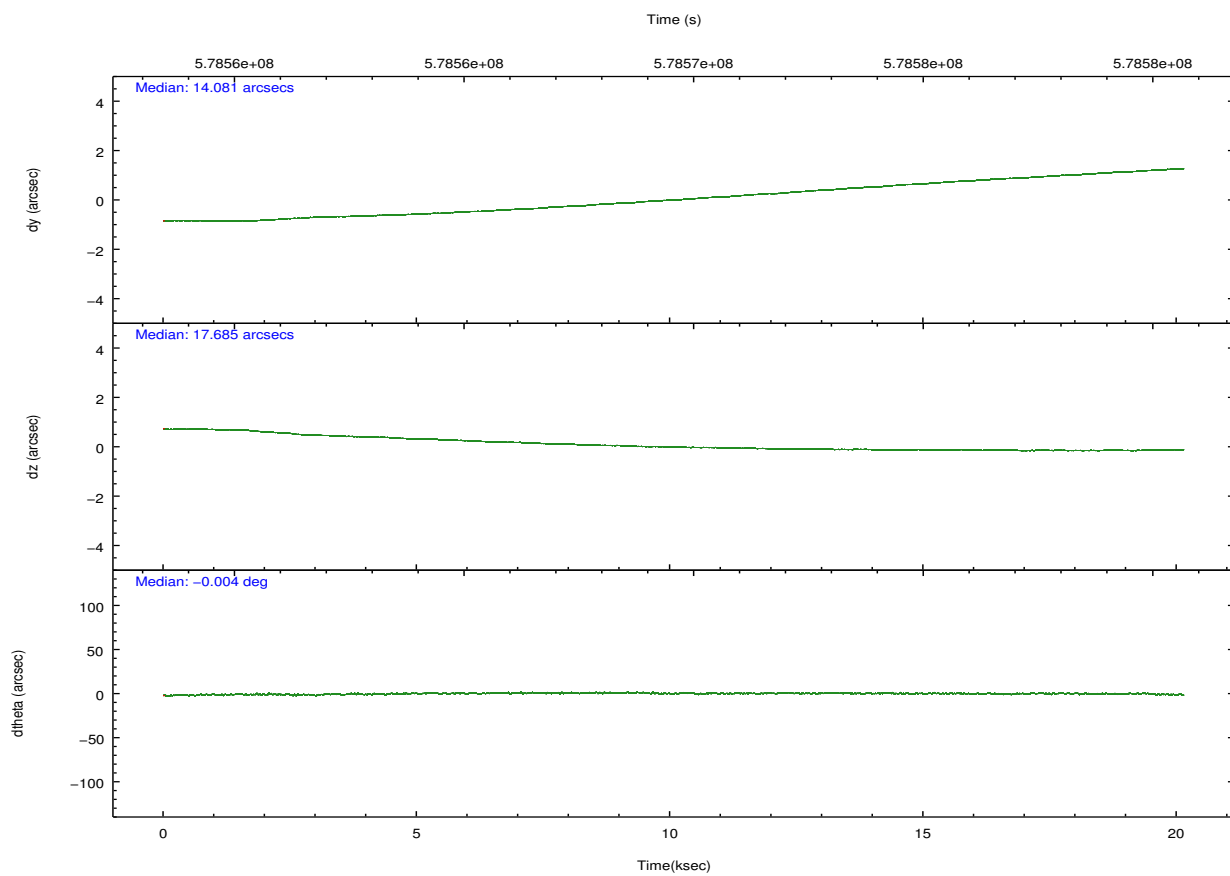
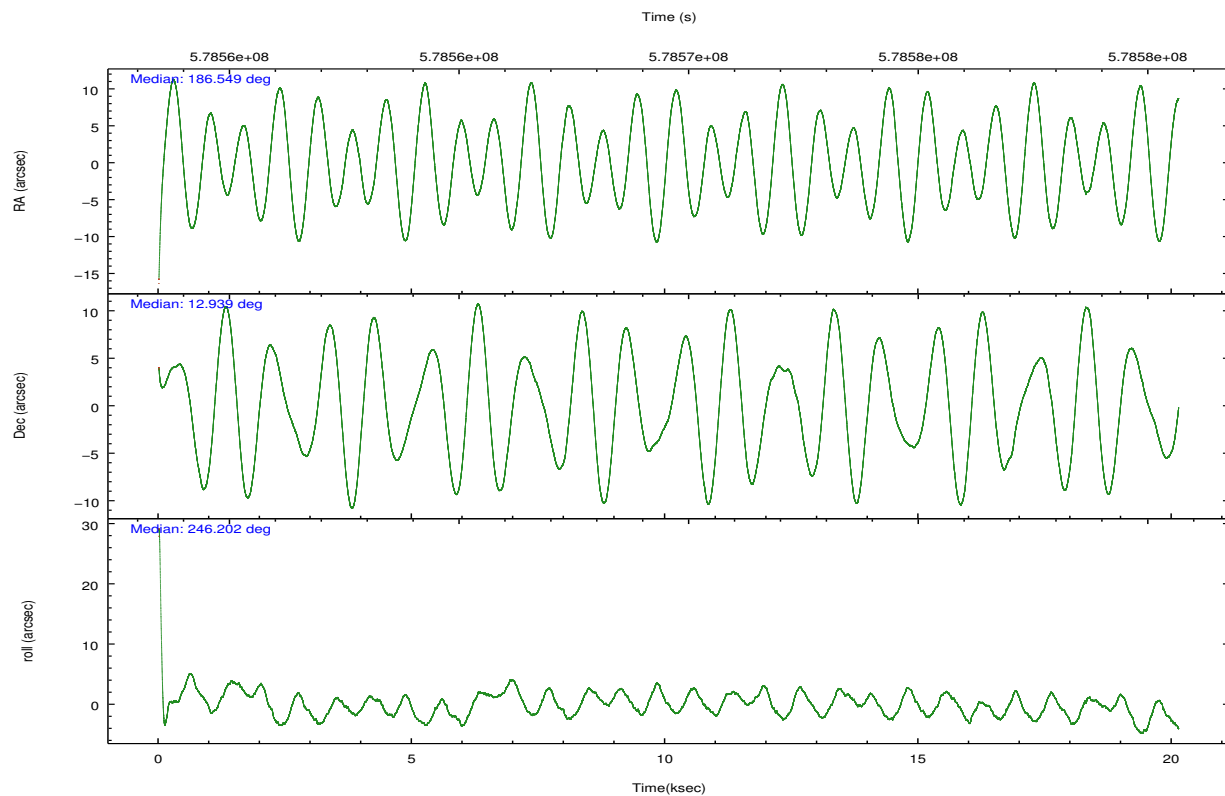
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	10066	14597	10809	14239
	8%	11%	8%	10%
grade 1 events	94	94	111	97
	0%	0%	0%	0%
grade 2 events	4108	4800	4108	3815
	3%	3%	3%	2%
grade 3 events	1619	1718	1578	1689
	1%	1%	1%	1%
grade 4 events	1496	1736	1609	1625
	1%	1%	1%	1%
grade 5 events	5457	5689	5265	6337
	4%	4%	3%	4%
grade 6 events	2978	3556	2853	2913
	2%	2%	2%	2%
grade 7 events	90920	91950	106145	98955
	77%	74%	80%	76%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	186.545658	186.5488402081397	Subarray requested	NONE	NONE
[deg] Pointing Dec	12.966131	12.93869906087833	Alternating exposures requested	N	N
[deg] Pointing Roll	246.000789	246.2087851528649	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-233.592463	-233.5874344608287			
[mm] SIM translation stage offset	0	-0.005018542100998502			
[s] Observation start time (MET)	578559637.184000	578558295.0648			
Observation start date	2016-05-02T06:59:29	2016-05-02T06:38:15			
[s] Observation end time (MET)	578579637.184000	578580075.29105			
Observation end date	2016-05-02T12:32:49	2016-05-02T12:41:15			
Read mode	TIMED	TIMED			

2.3 Aspect



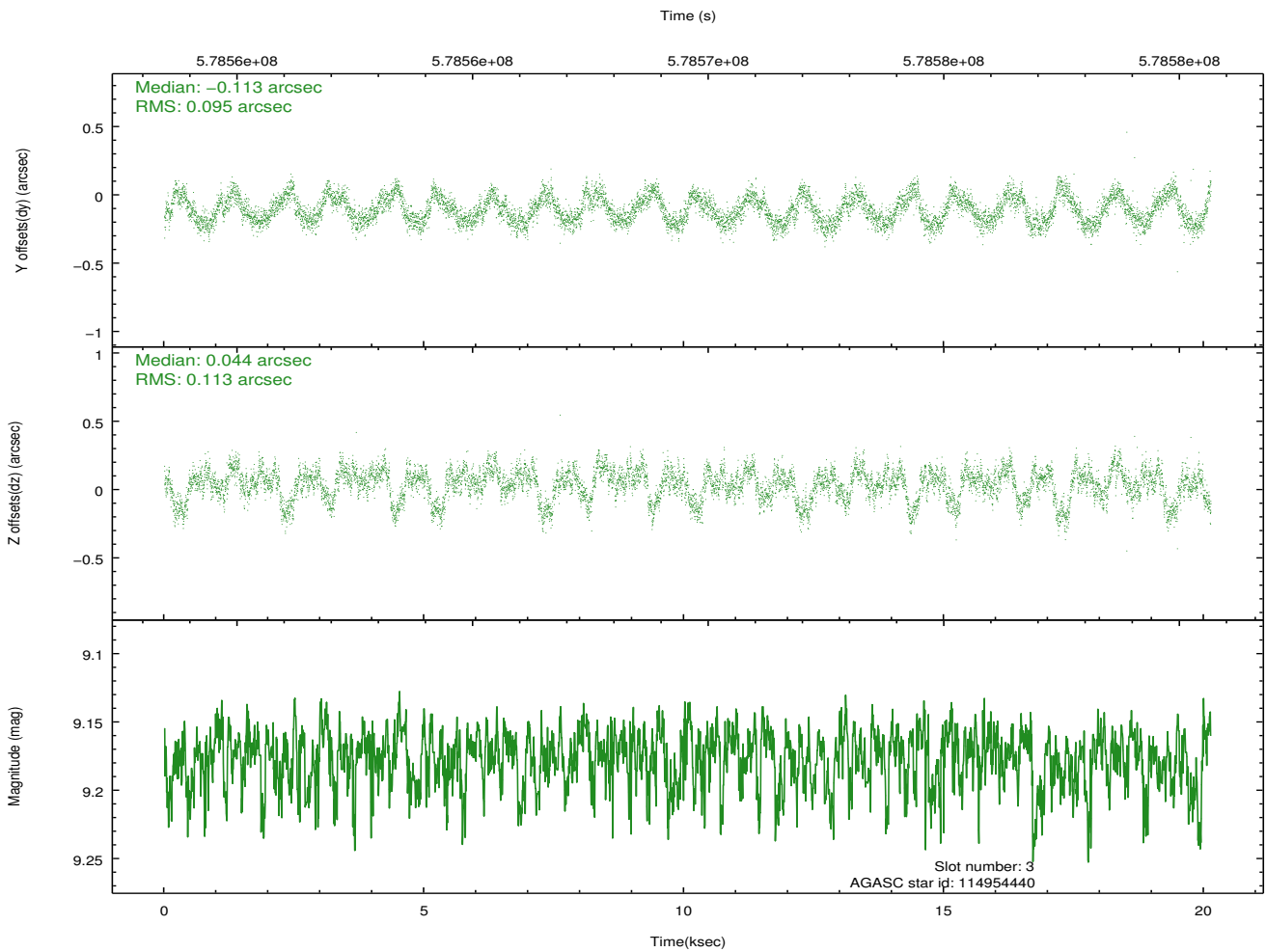
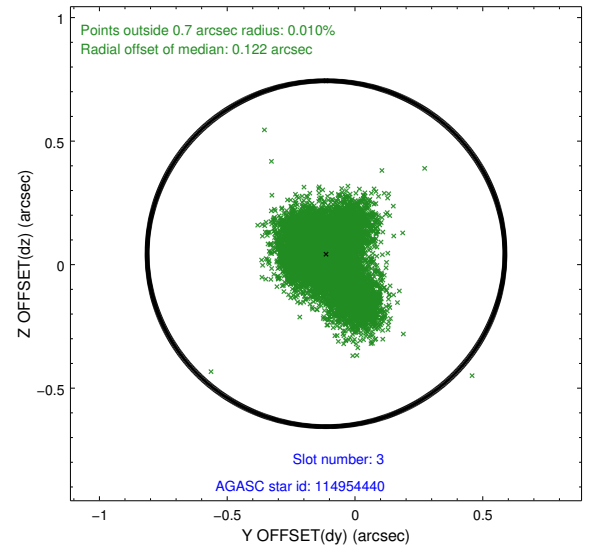
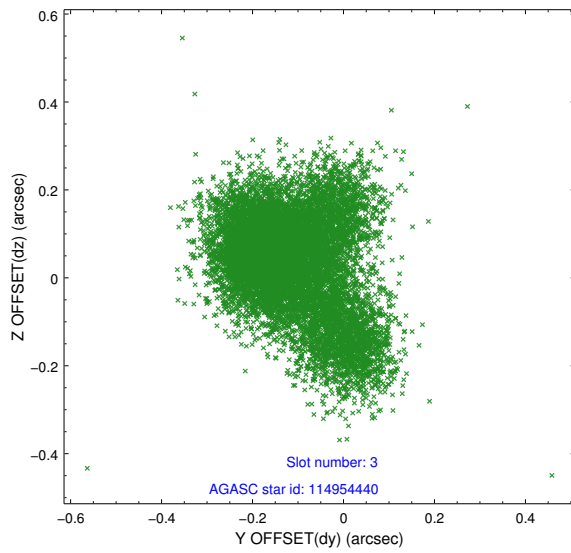


Slot Statistics

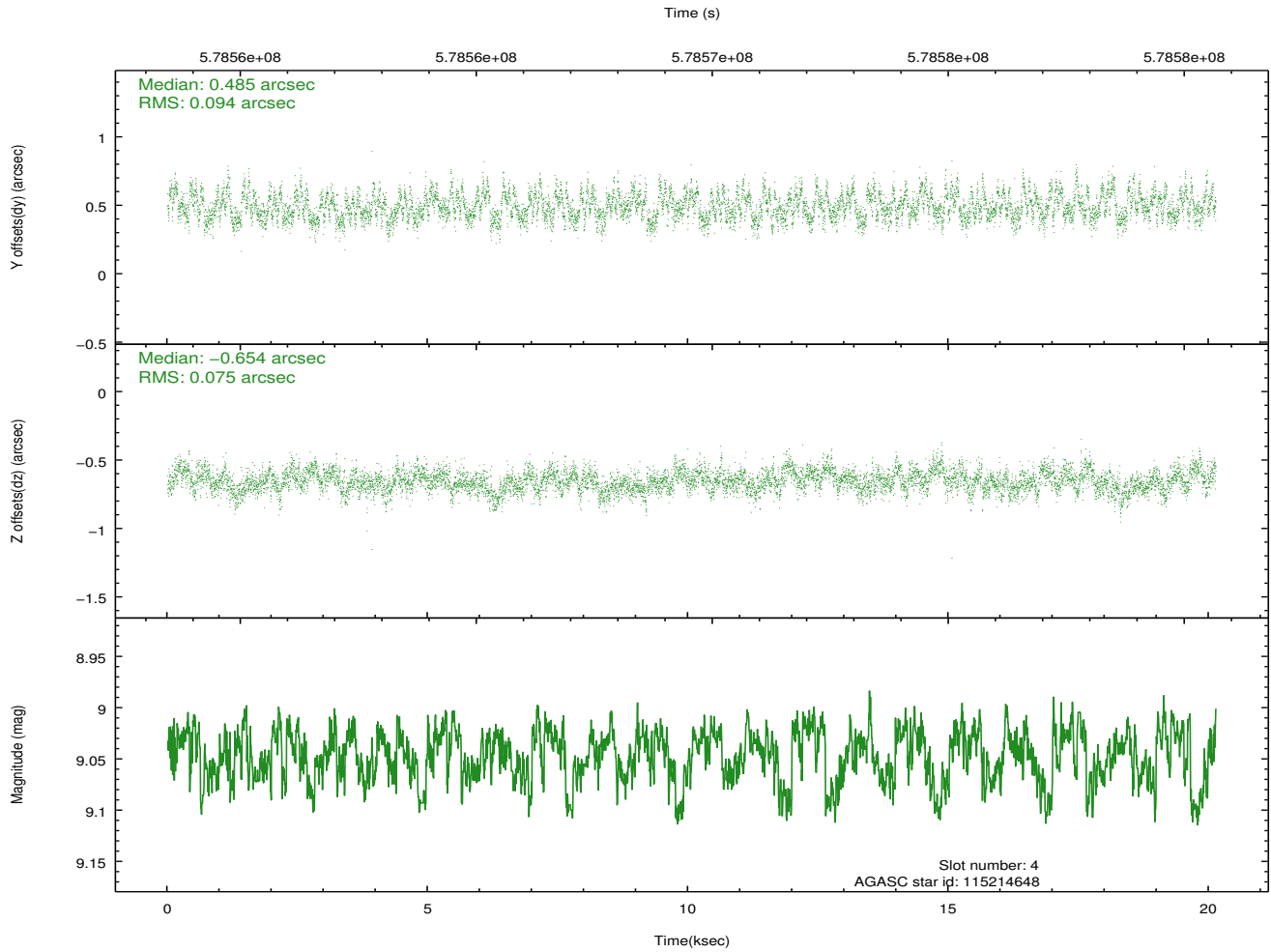
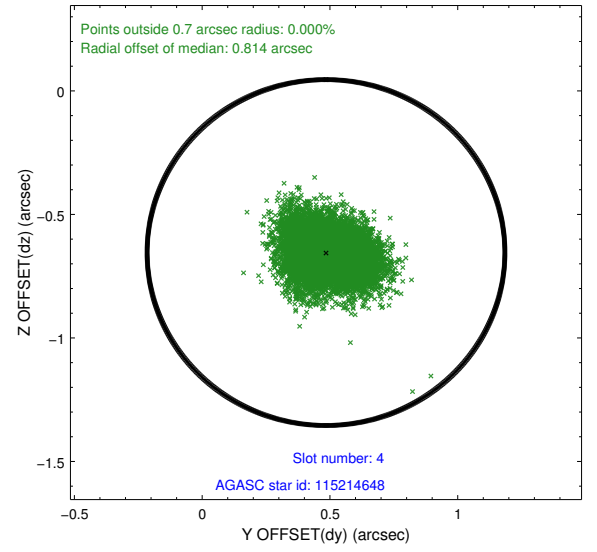
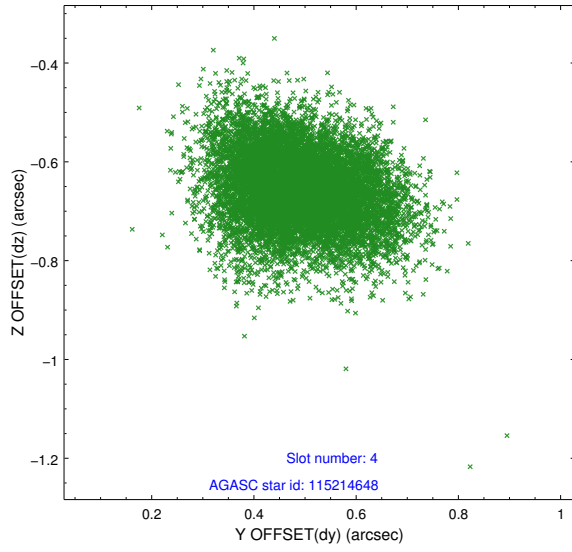
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.25	4911	0.080	-0.031	0.014	0.030	0.000000	0.000000	925.44	-841.47
1	FID		ACIS-I-5	7.25	4911	-0.319	0.053	0.013	0.021	0.000000	0.000000	-1823.03	1055.91
2	FID		ACIS-I-6	7.25	4911	0.150	0.047	0.015	0.024	0.000000	0.000000	390.77	1700.69
3	GUIDE	used	114954440	9.18	9813	-0.113	0.044	0.152	0.265	186.915066	12.219118	1926.97	2282.77
4	GUIDE	used	115214648	9.05	9810	0.485	-0.654	0.127	0.207	185.771147	12.685188	2027.91	-2075.72
5	GUIDE	used	115347480	9.51	9813	-0.083	0.336	0.218	0.307	186.668576	13.310410	-1307.03	-110.90
6	GUIDE	used	115348424	9.48	9808	-0.270	0.236	0.164	0.266	187.199498	13.087929	-1335.74	1915.14
7	GUIDE	used	114957008	8.22	9819	-0.032	0.065	0.117	0.182	186.894794	12.099160	2351.17	2391.73

2.4 Star Slots

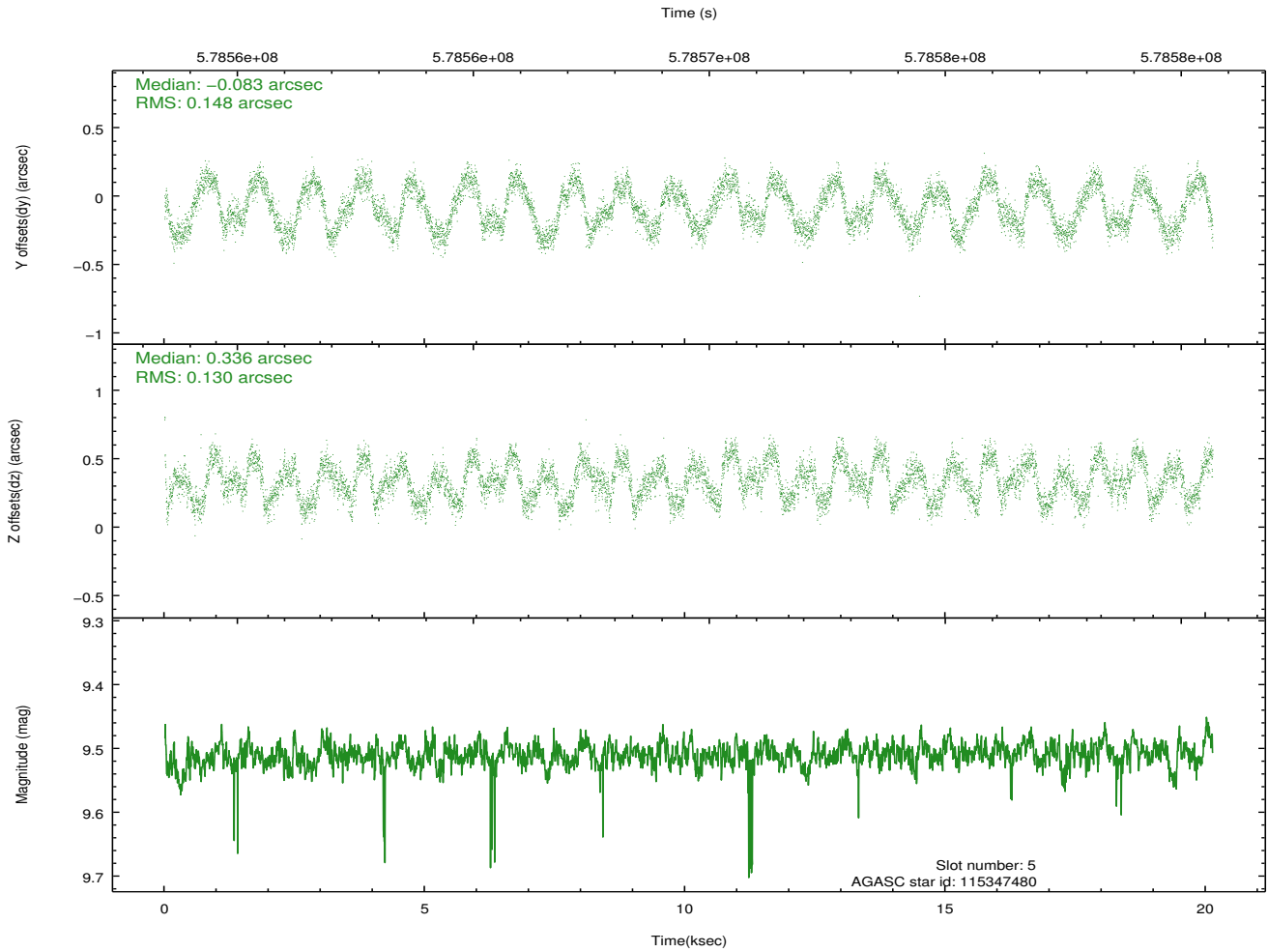
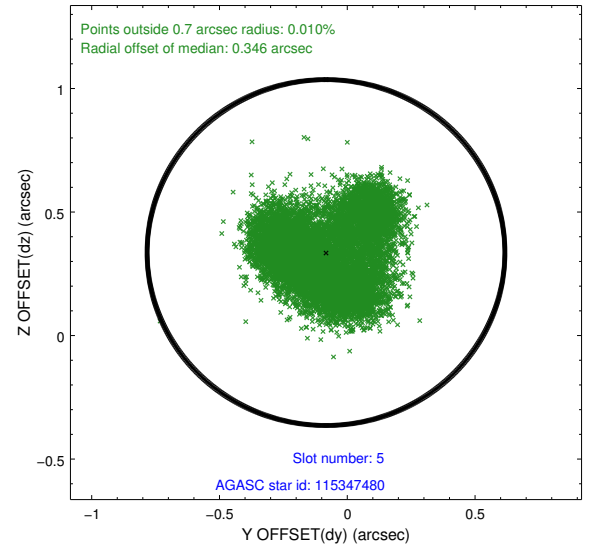
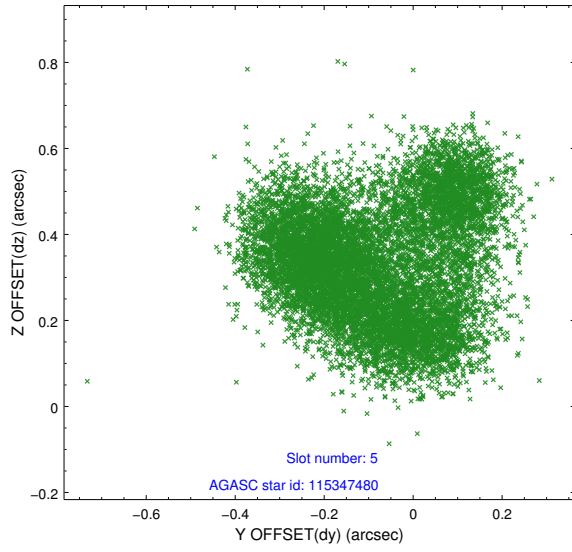
2.4.1 Slot 3



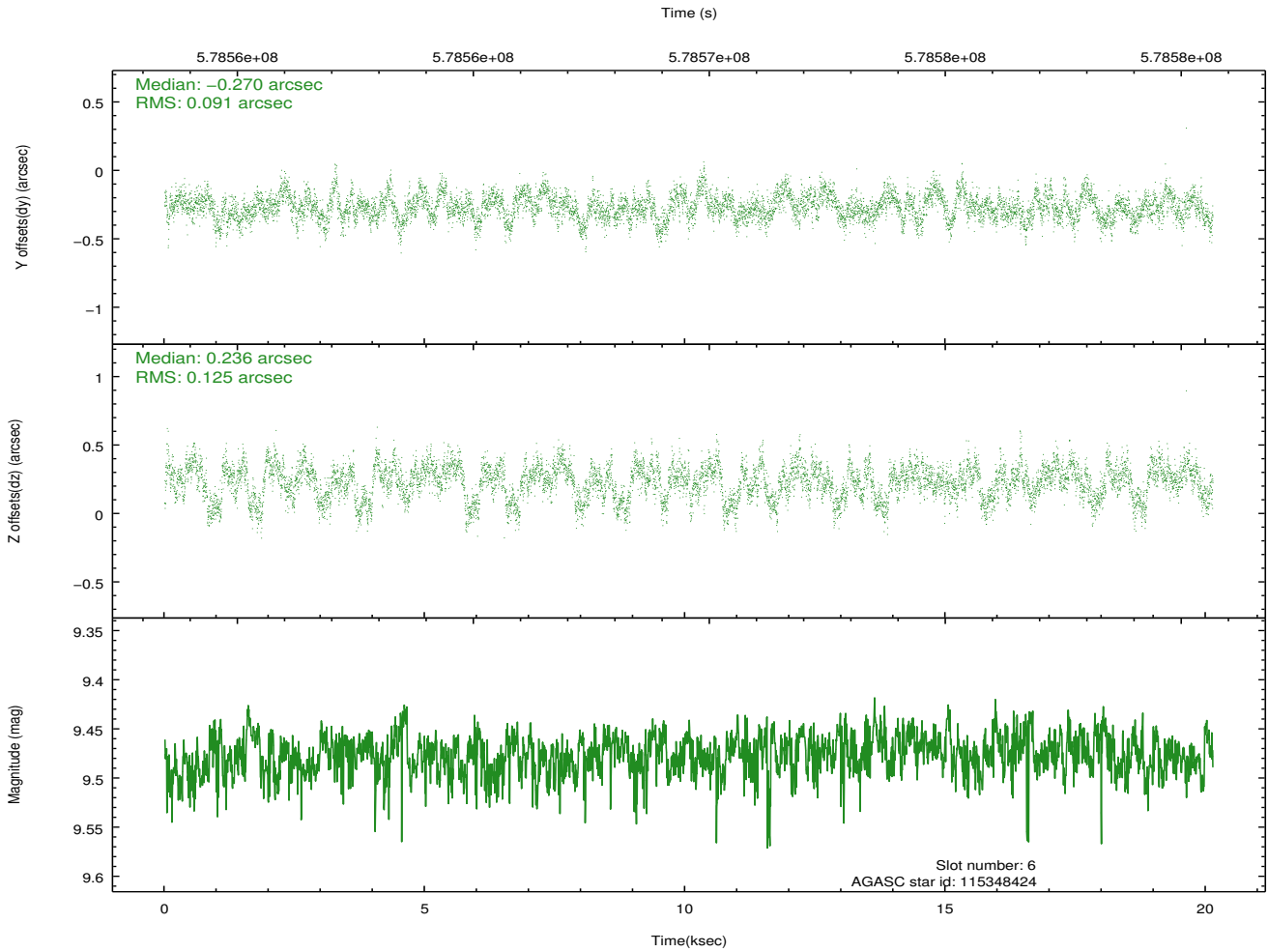
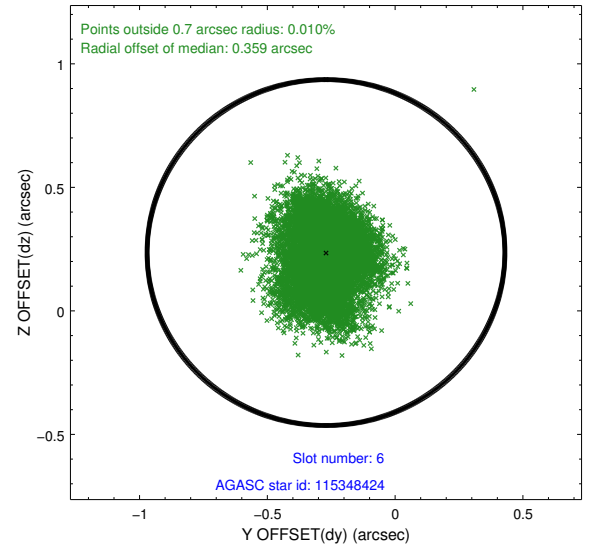
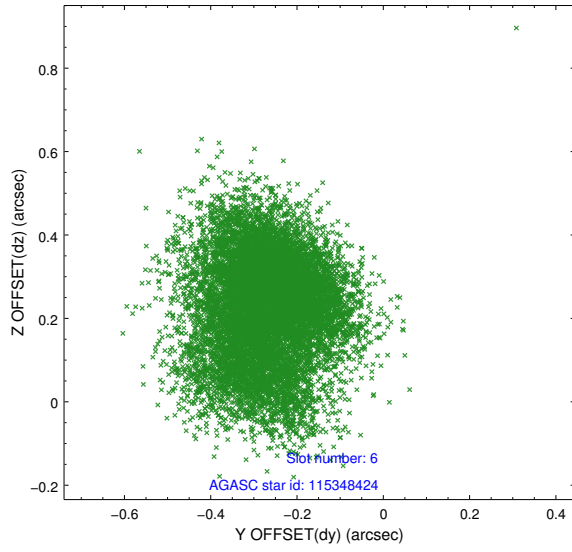
2.4.2 Slot 4



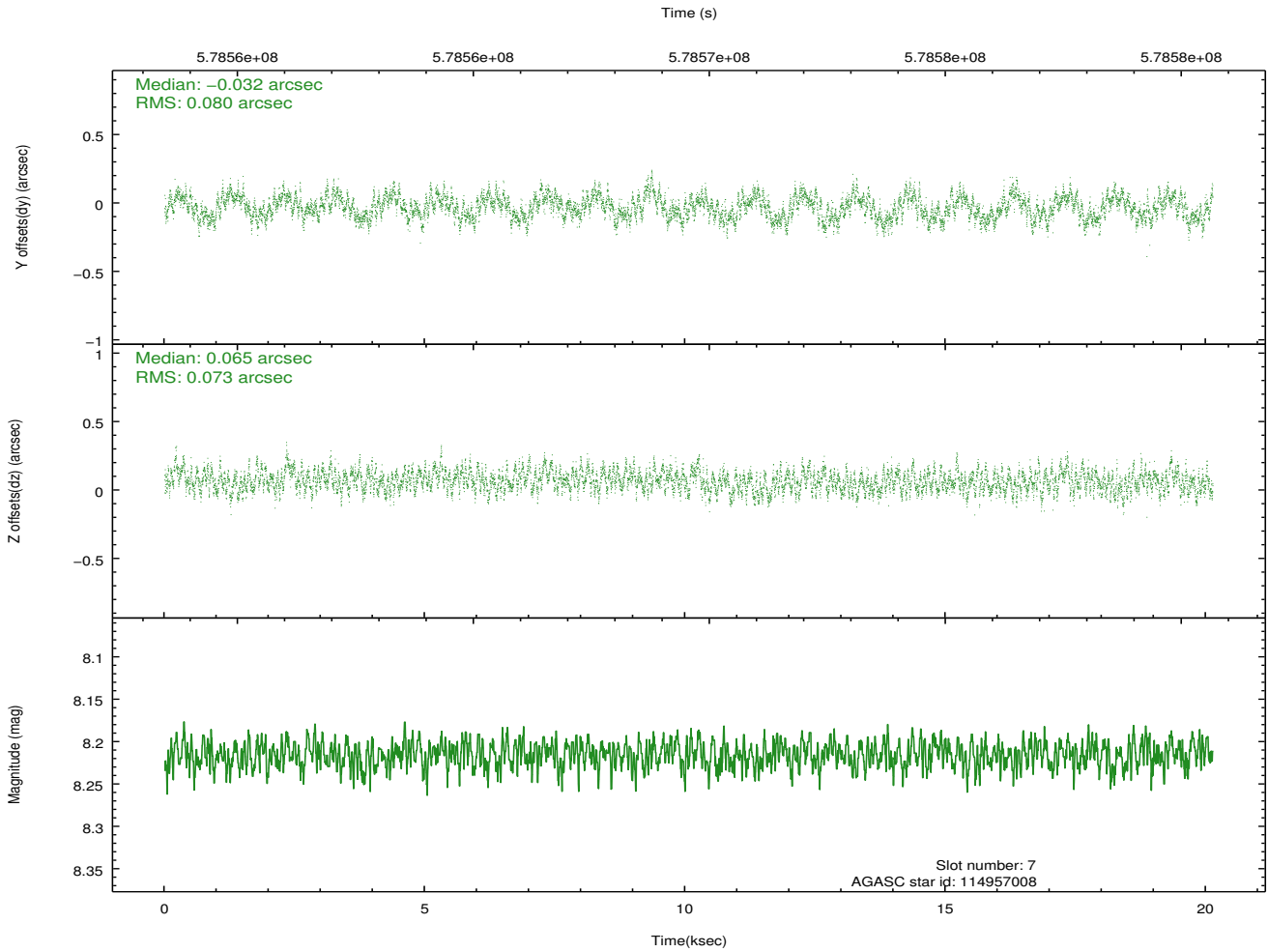
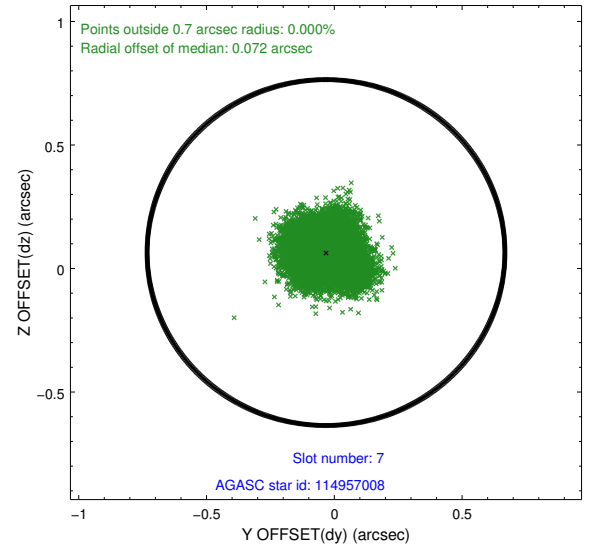
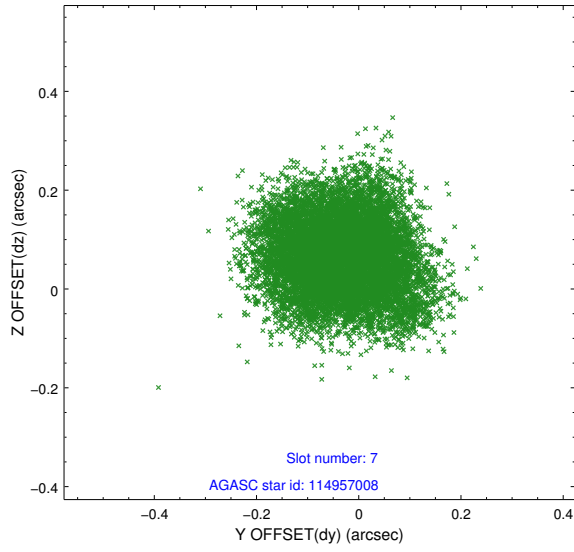
2.4.3 Slot 5



2.4.4 Slot 6

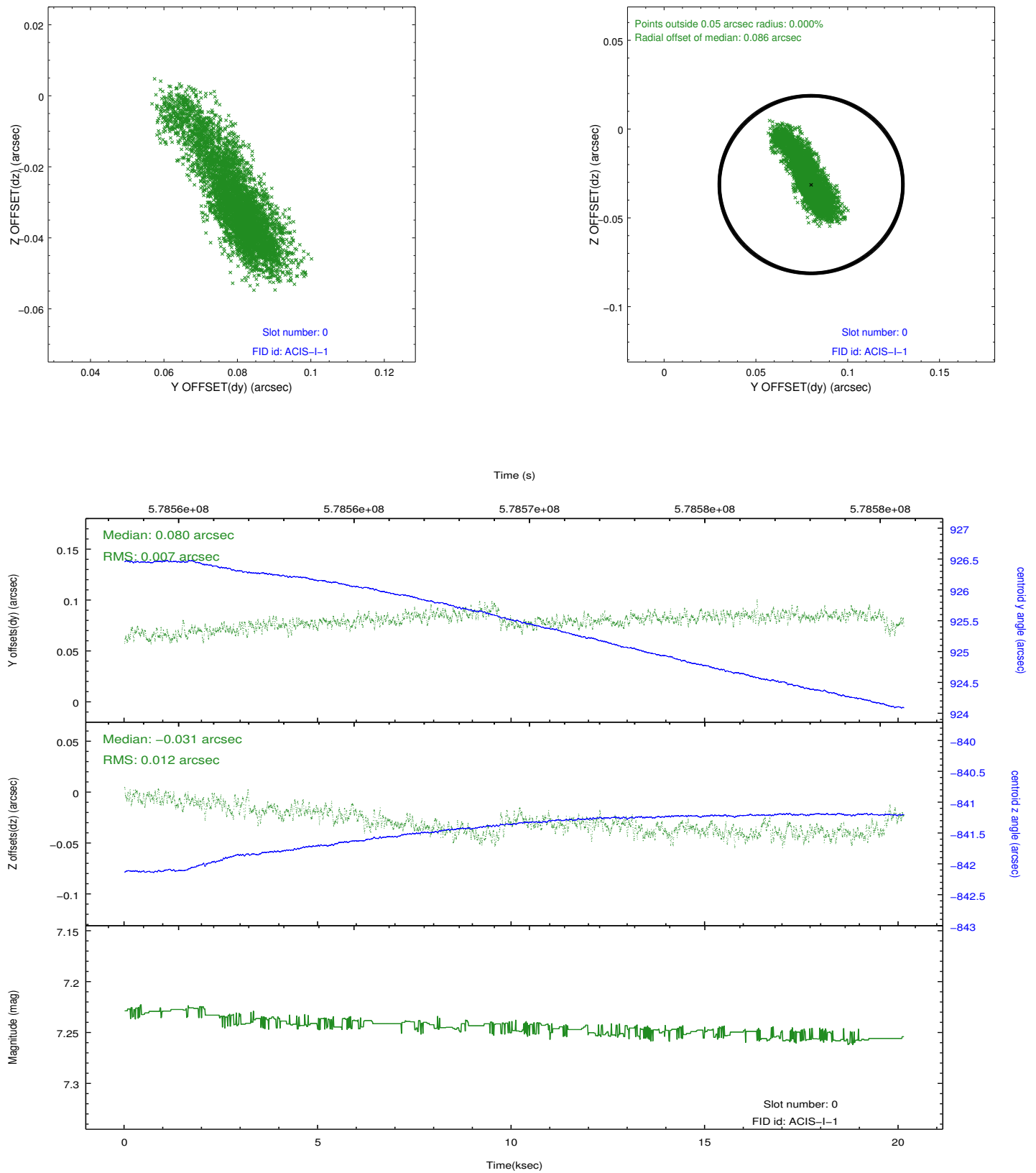


2.4.5 Slot 7

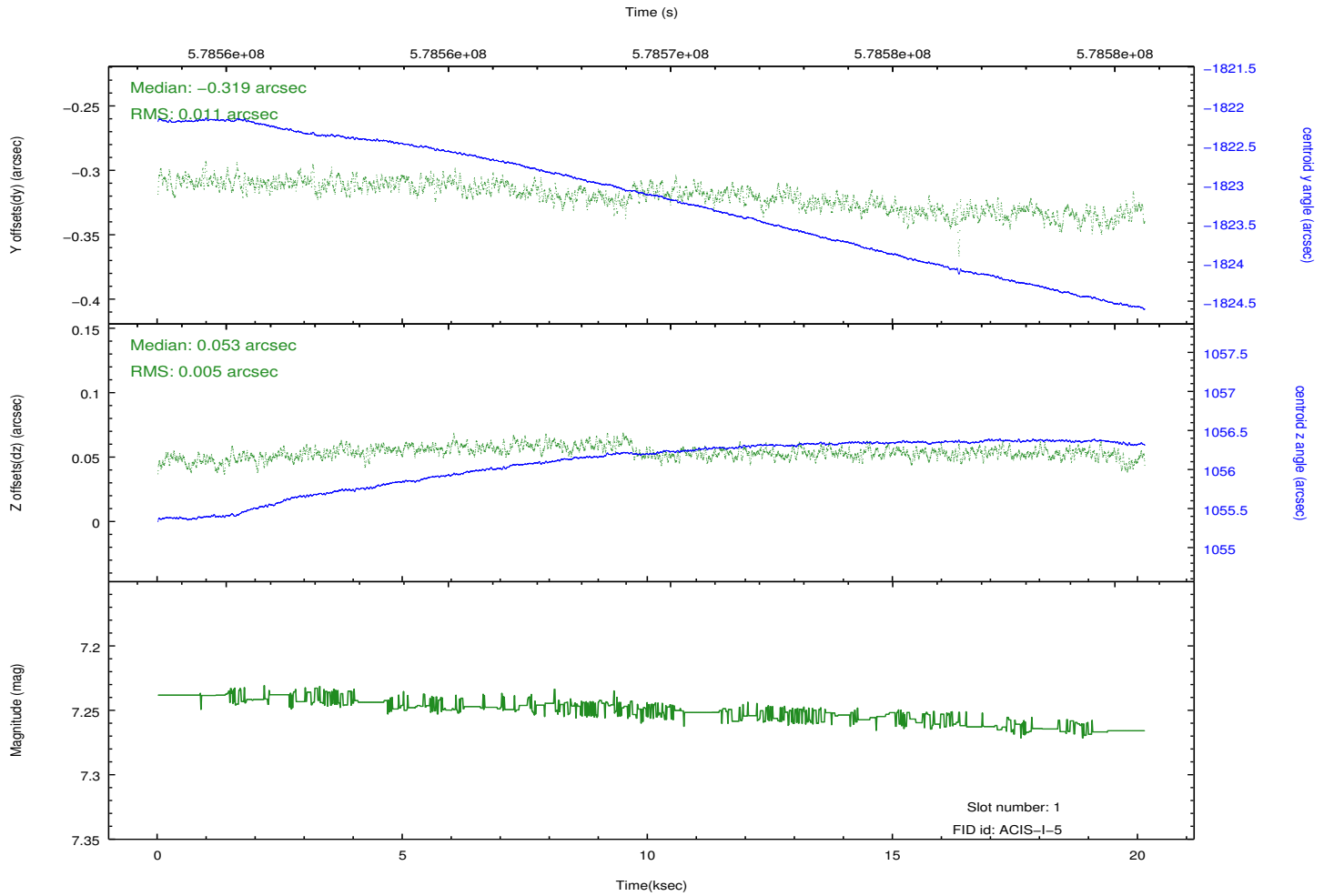
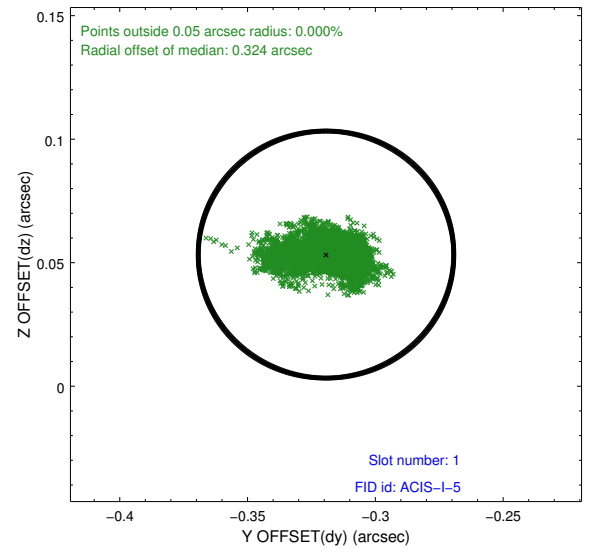
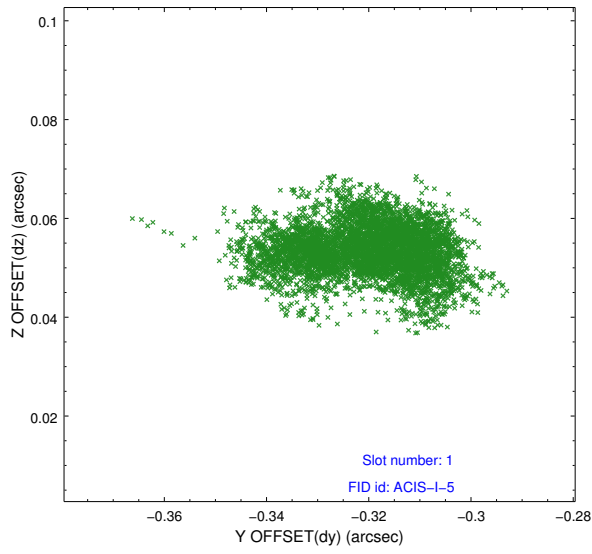


2.5 FID Slots

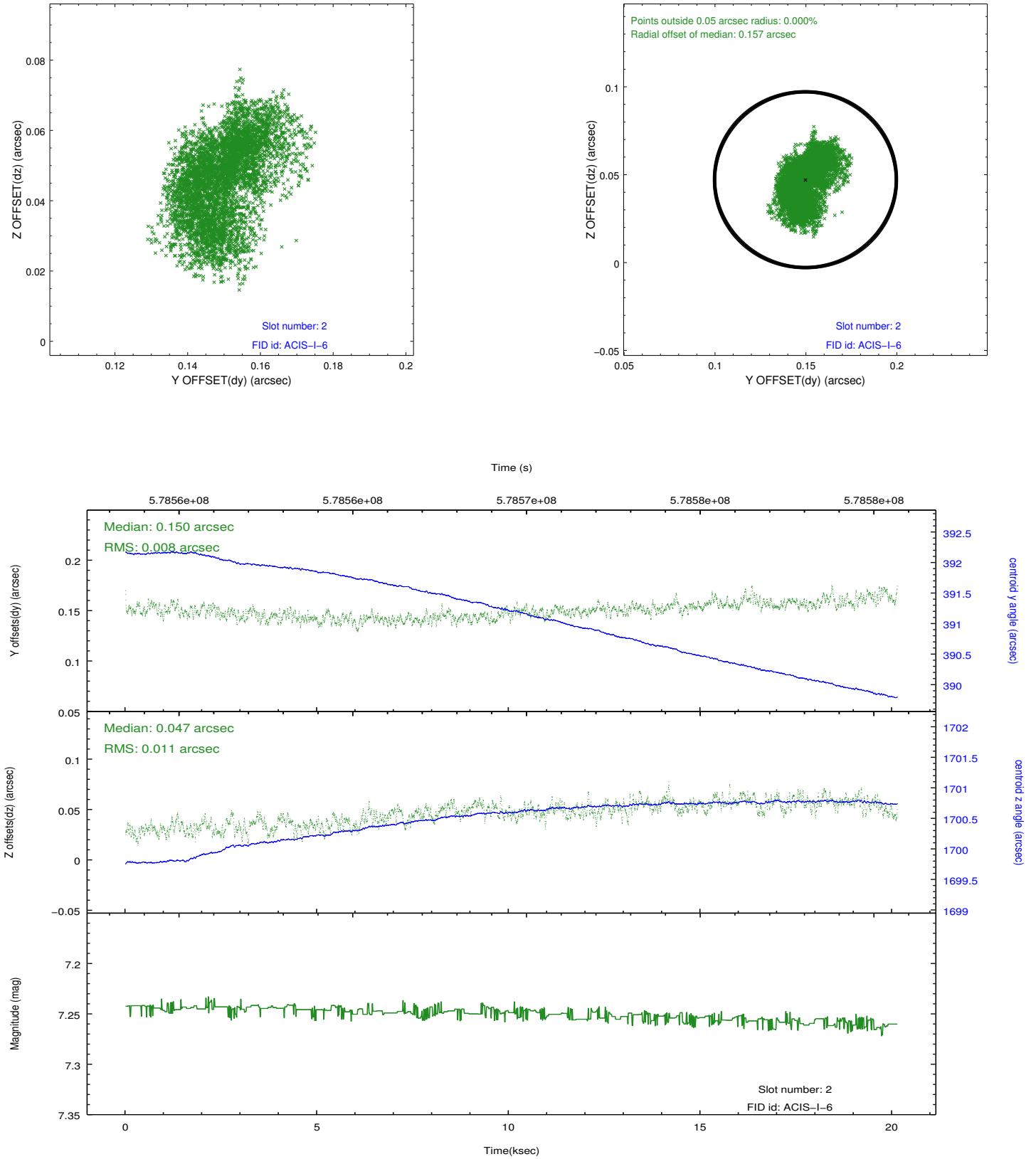
2.5.1 Slot 0



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)	2016.05.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.072013698936

A.2 Comments