

V&V Reference Report

L2 ASCDS Version : 10.6.3

Observation 19780 - L2 Version 2
Chandra X-Ray Center

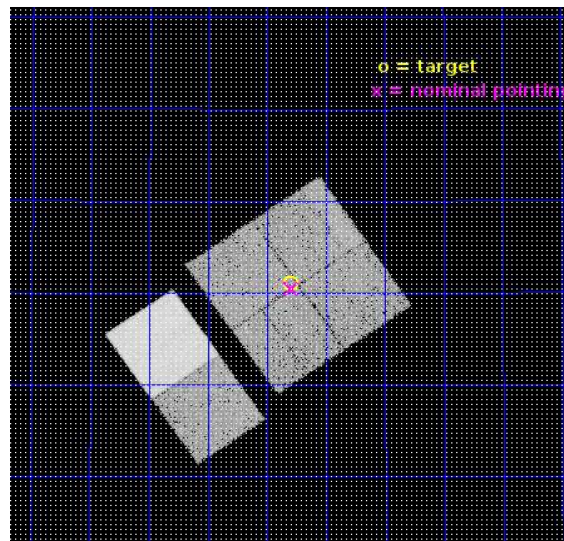
L2 Processing Date : Jul 2 2018

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1 Front

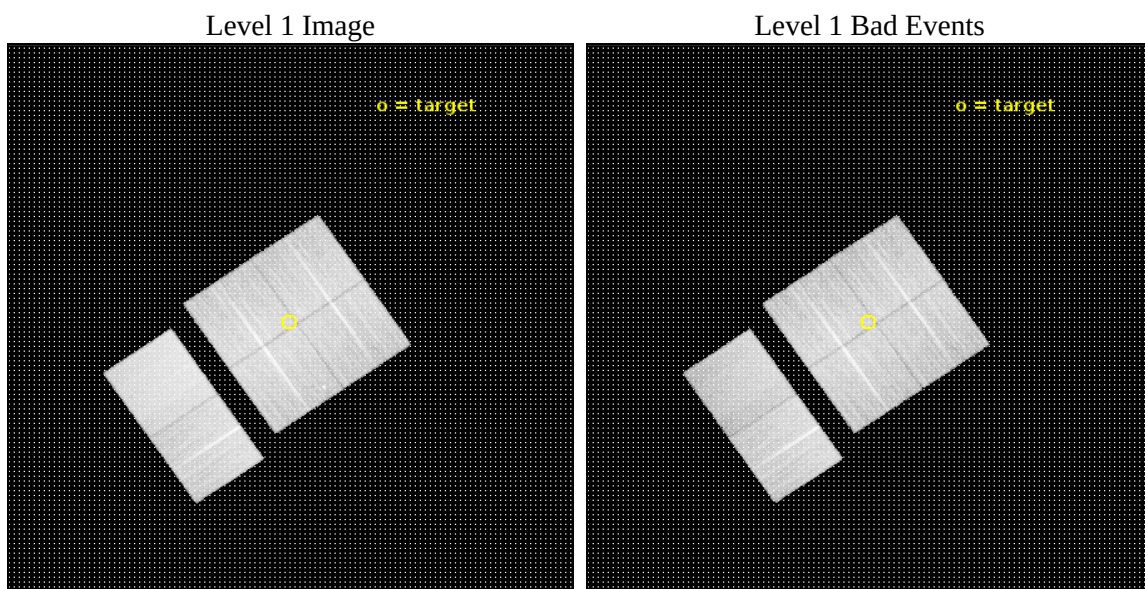
seq_num	901396	Sequence number
obs_id	19780	Observation id
title	An extended moderate-depth contiguous layer of the Chandra Bootes field -- additional pointings	Proposal title
observer	Ralph Kraft	Principal investigator
object	Bootes extended Cy18	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	217.07535	Observer's specified target RA [deg]
dec_targ	34.684739	Observer's specified target Dec [deg]
ra_nom	217.07370476666	Nominal RA [deg]
dec_nom	34.67434774419	Nominal Dec [deg]
roll_nom	235.55337098415	Nominal Roll [deg]
revision	2	Processing version of data
ontime	23452.152251601	Sum of GTIs [s]
livetime	23155.186978601	Livetime [s]
ontime0	23448.78814137	Sum of GTIs [s]
ontime1	23452.070171595	Sum of GTIs [s]
ontime2	23448.870320559	Sum of GTIs [s]
ontime3	23452.152251601	Sum of GTIs [s]
ontime6	23452.234331608	Sum of GTIs [s]
ontime7	23452.193291664	Sum of GTIs [s]
l2events	175167	Number of level 2 events



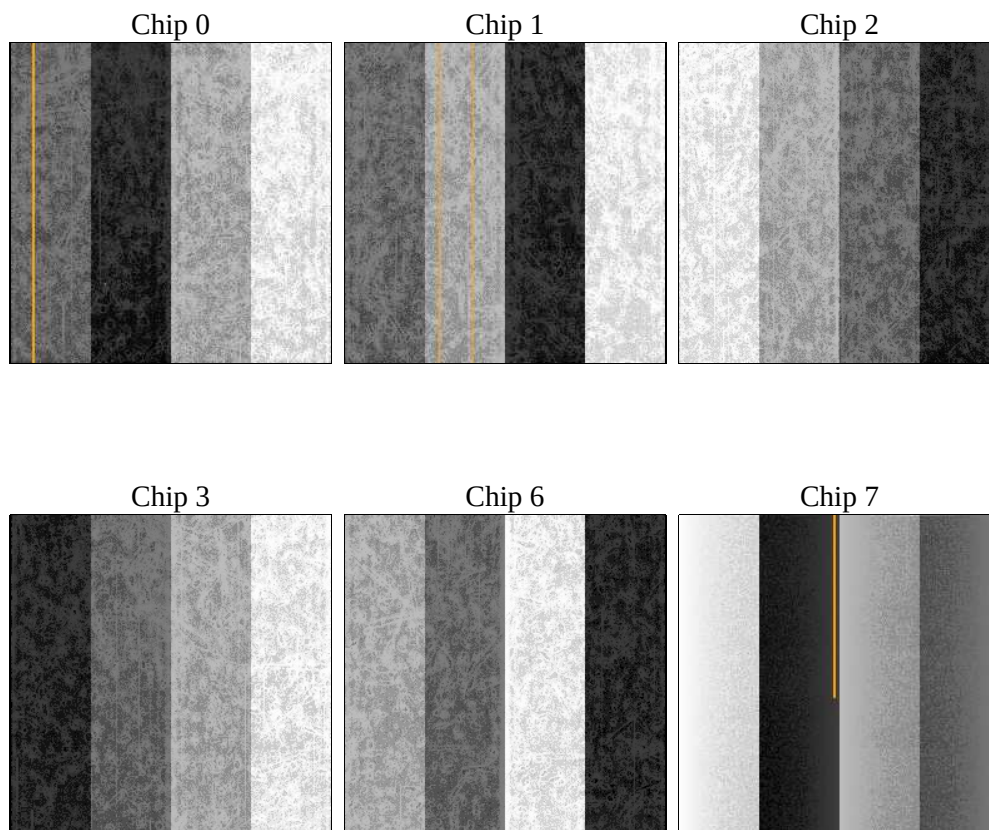
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	23500.000000	[s] Scheduled observation exposure time
ascdsver	10.6.3	Processing system revision	ontime	23452.152251601	Sum of GTIs [s]
caldsver	4.7.8	 	ontime0	23448.78814137	Sum of GTIs [s]
date	2018-07-02T20:06:39	Date and time of file creation	ontime1	23452.070171595	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	23448.870320559	Sum of GTIs [s]
			ontime3	23452.152251601	Sum of GTIs [s]
			ontime6	23452.234331608	Sum of GTIs [s]
			ontime7	23452.193291664	Sum of GTIs [s]
			l1events	1061632	Number of level 1 events

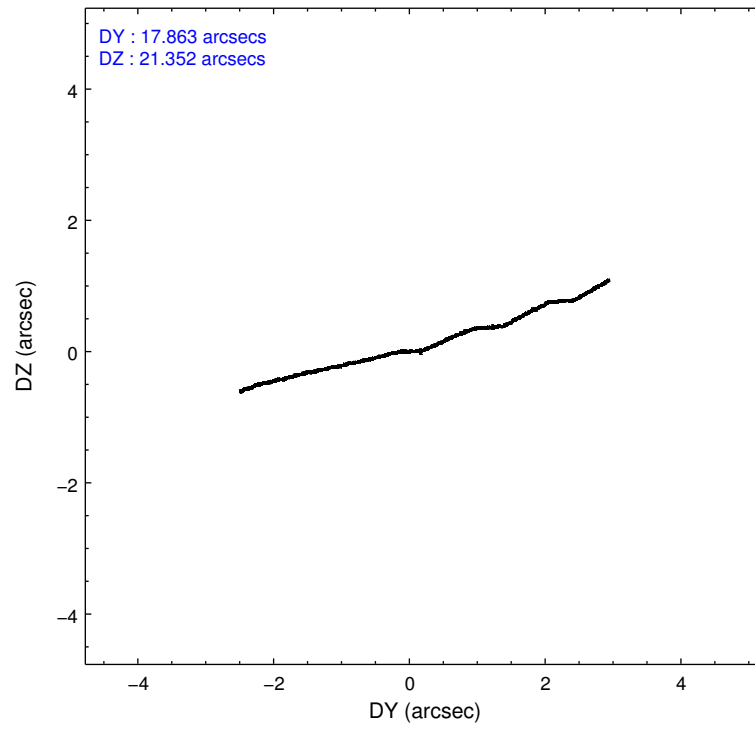
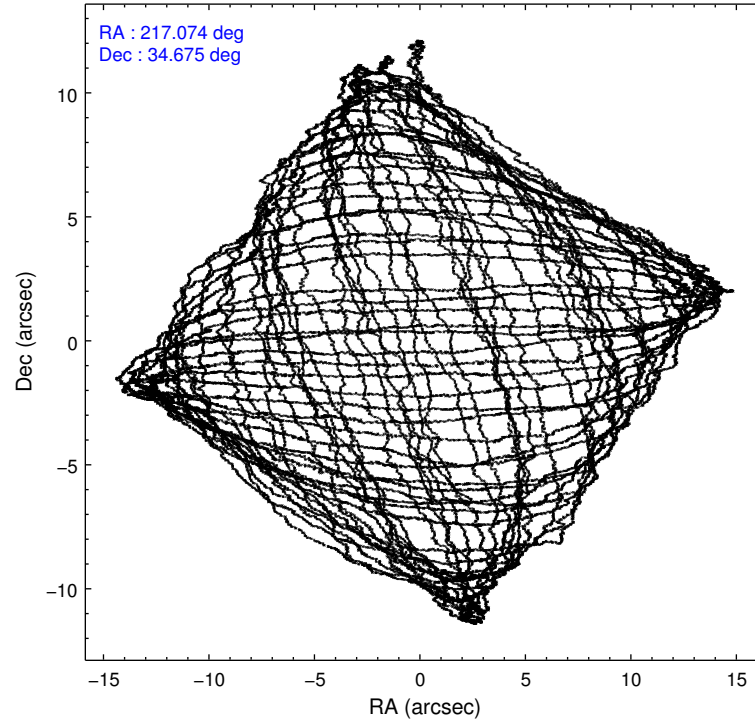
2.1.4 Events

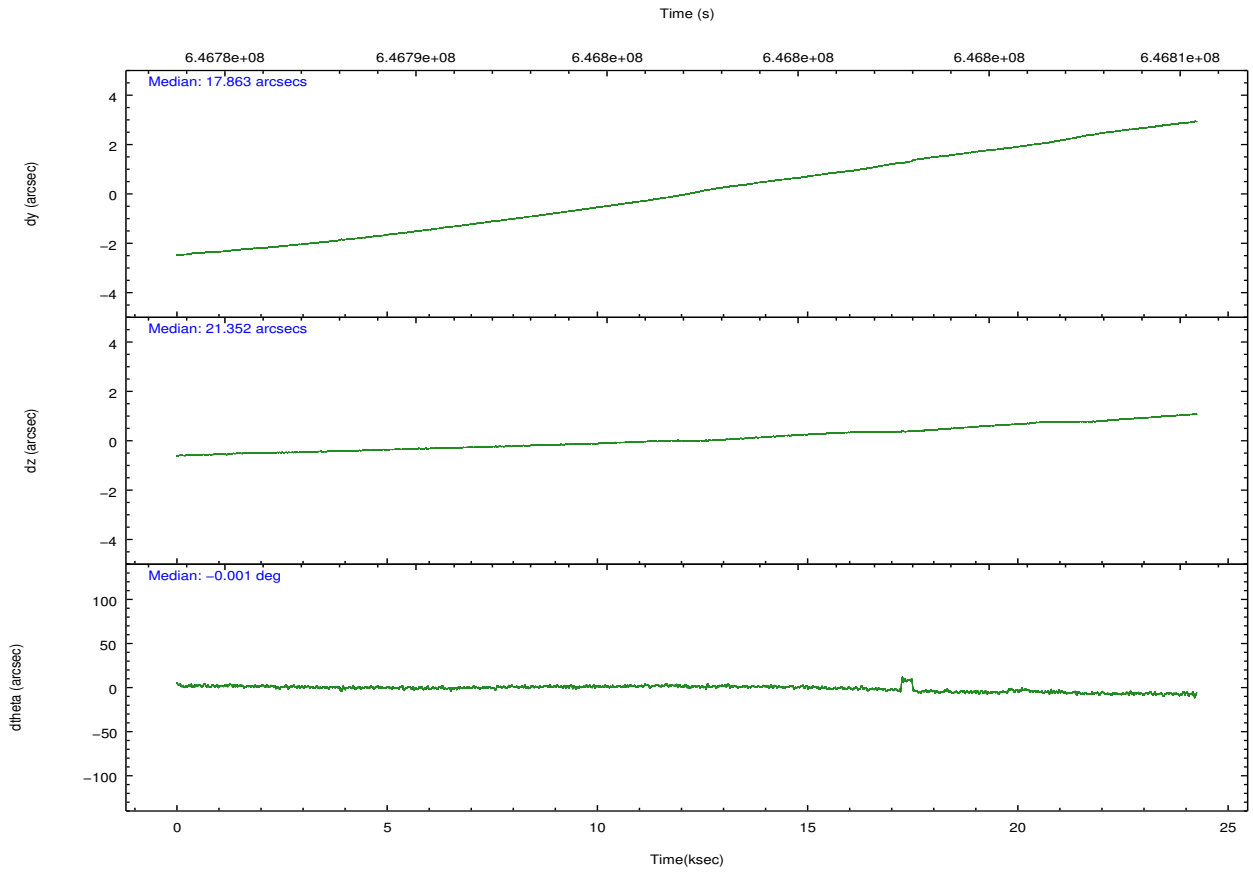
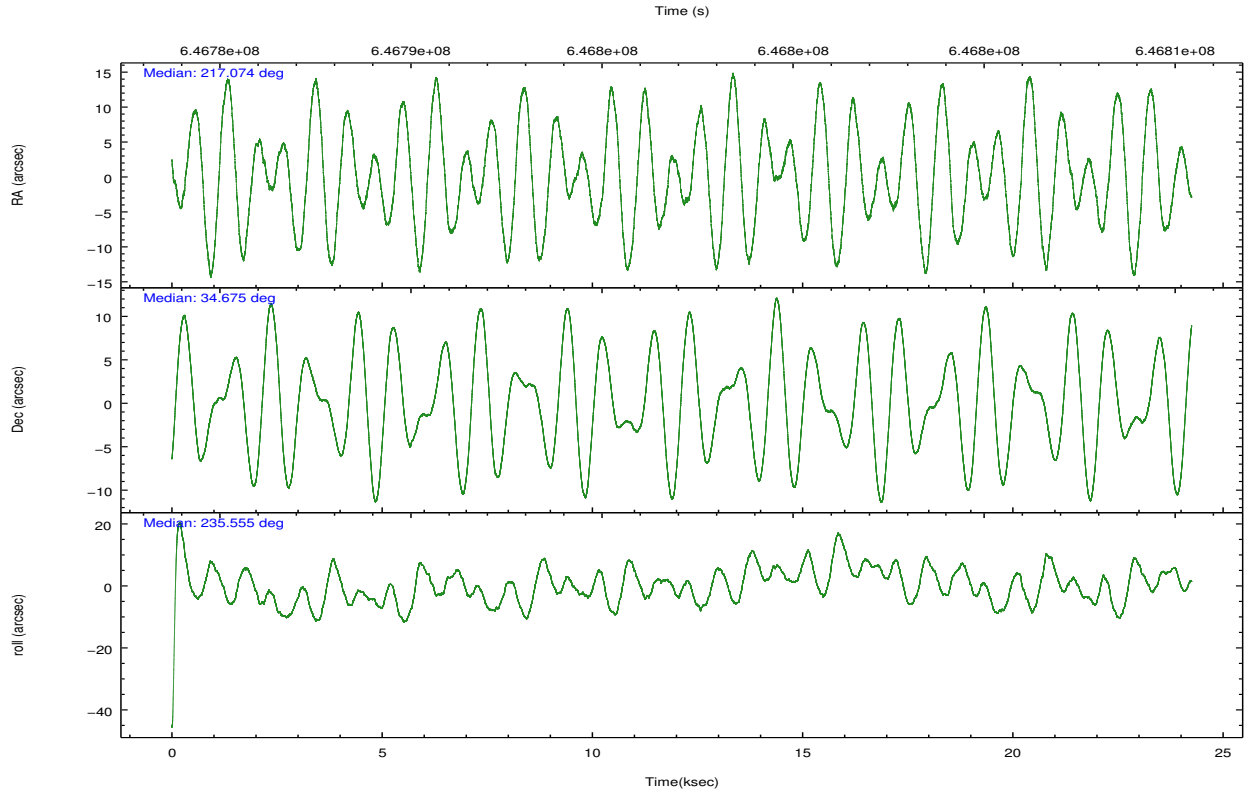
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	156079	162628	171973	170981	180208	219763	grade 0 events	6433	7148	7175	6792	6391	8149
rejected events	137148	141474	152522	152554	160399	123882		4%	4%	4%	3%	3%	3%
rejected %	87%	86%	88%	89%	89%	56%	grade 1 events	94	71	100	91	101	333
								0%	0%	0%	0%	0%	0%
							grade 2 events	4752	5456	4834	4066	4693	20470
								3%	3%	2%	2%	2%	9%
							grade 3 events	2009	1955	1835	1930	1887	7530
								1%	1%	1%	1%	1%	3%
							grade 4 events	1815	1957	1914	1893	1871	7447
								1%	1%	1%	1%	1%	3%
							grade 5 events	7208	7705	6836	7962	8140	21911
								4%	4%	3%	4%	4%	9%
							grade 6 events	3925	4649	3695	3751	4972	52303
								2%	2%	2%	2%	2%	23%
							grade 7 events	129843	133687	145584	144496	152153	101620
								83%	82%	84%	84%	84%	46%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	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	217.076184	217.0737047666594	CCD I2 on	Y	Y
[deg] Pointing Dec	34.701866	34.67434774418981	CCD I3 on	Y	Y
[deg] Pointing Roll	235.343279	235.5533709841538	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	O2	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	646785726.184000	646784480.2369601	CCD S5 on	N	N
Observation start date	2018-06-30T22:40:57	2018-06-30T22:21:20	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	646809226.184000	646810053.98848	On-chip summing requested	N	N
Observation end date	2018-07-01T05:12:37	2018-07-01T05:27:33	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



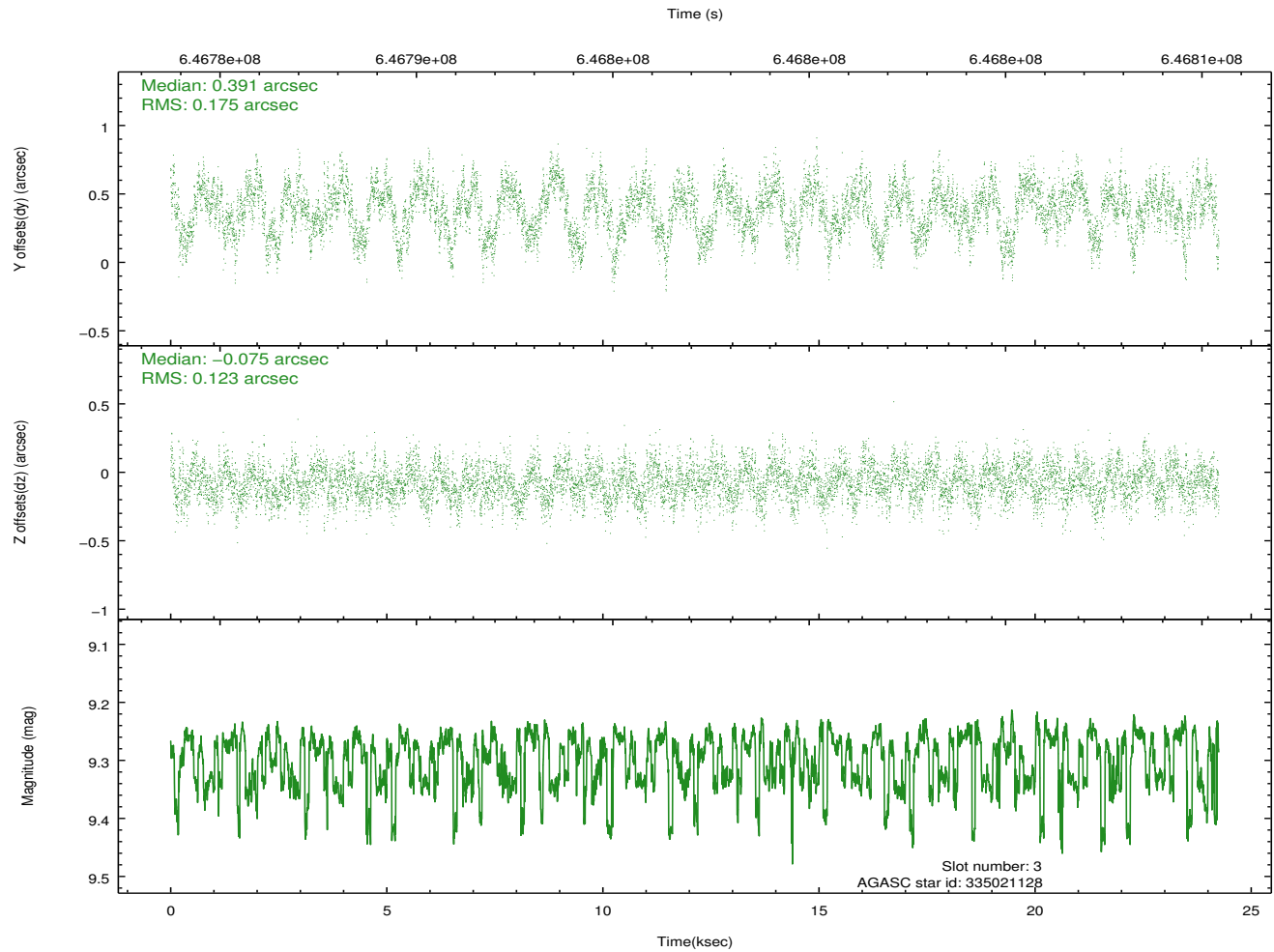
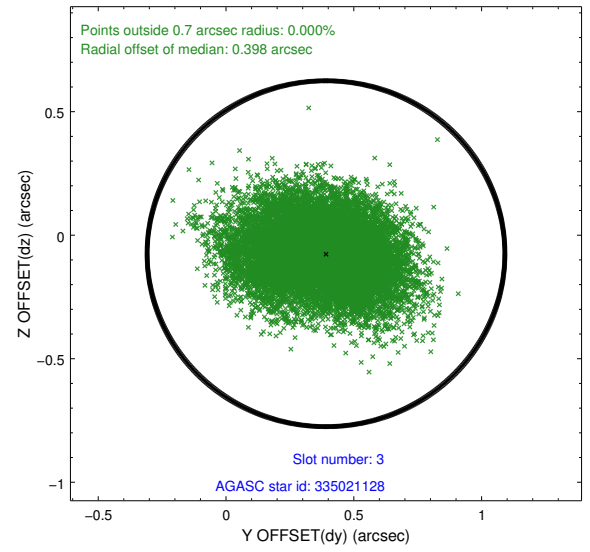
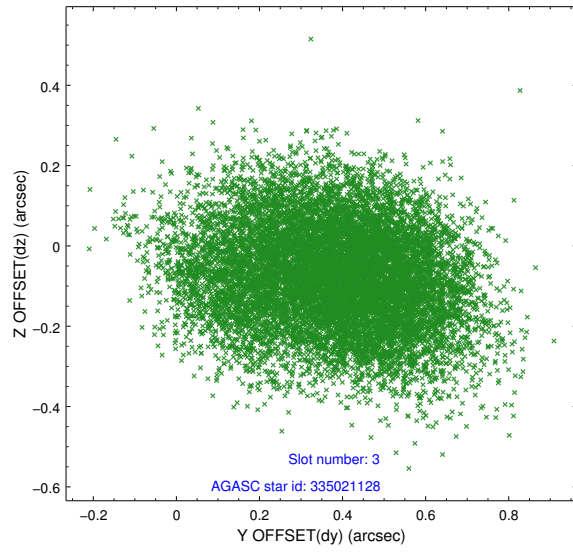


Slot Statistics

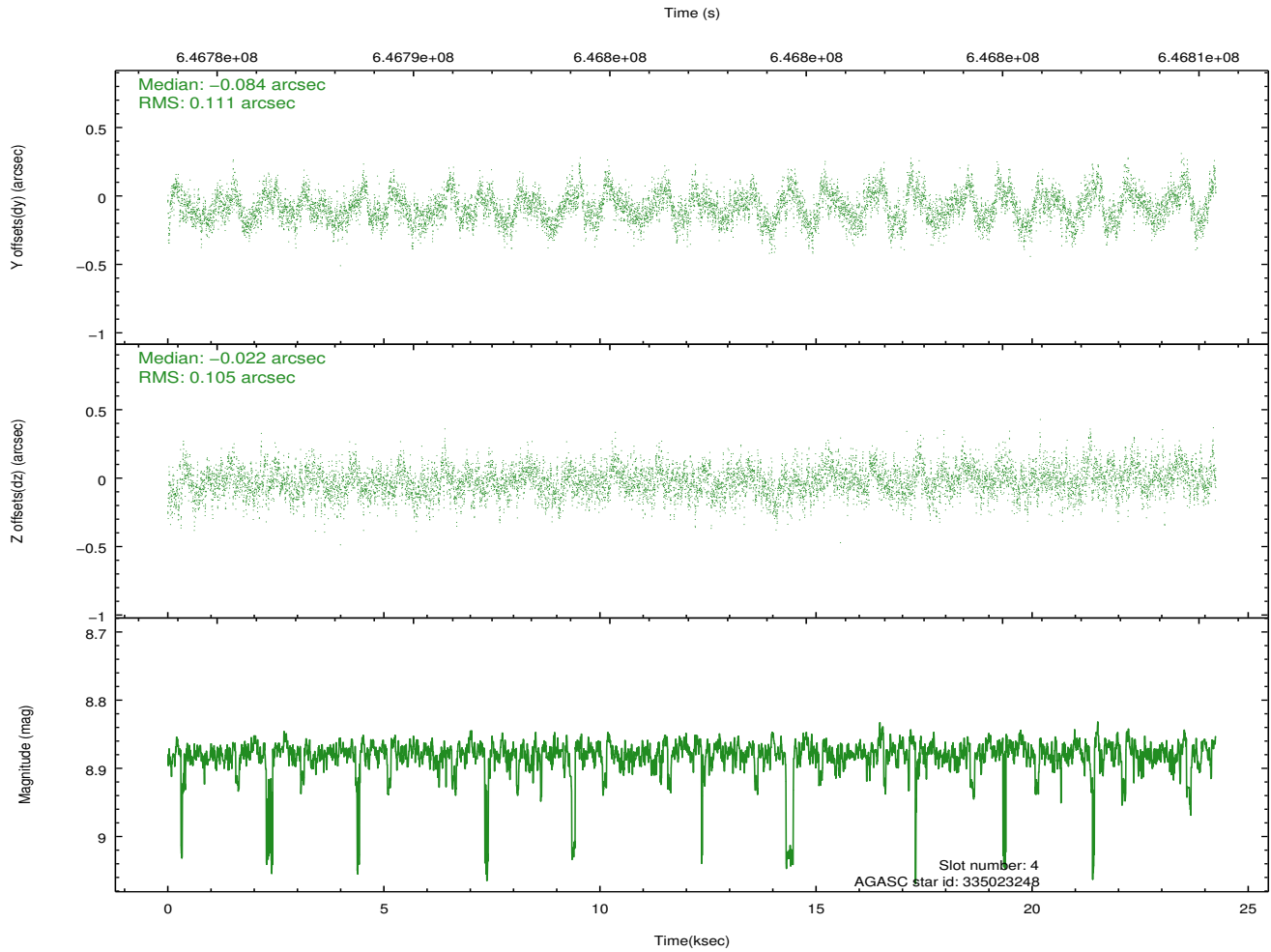
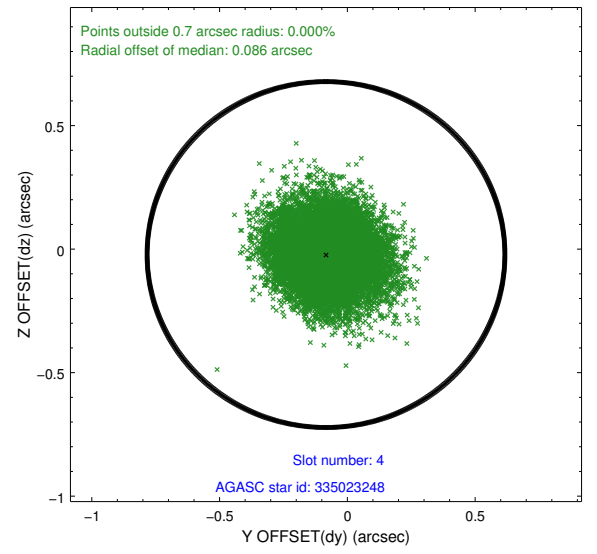
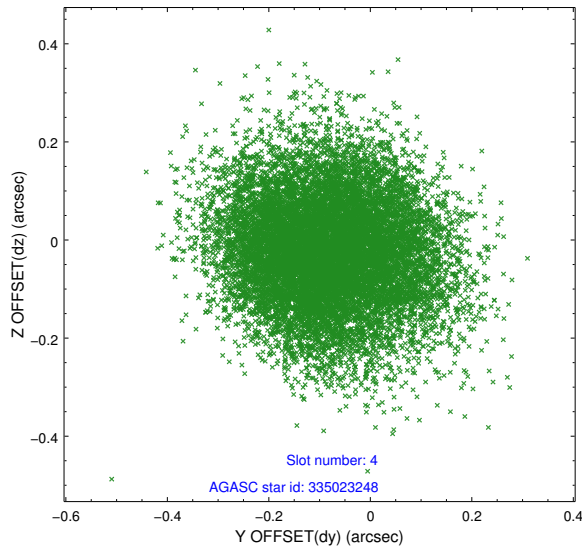
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.18	5914	1.000	-0.054	-0.097	0.037	0.061	0.000000	0.000000	921.39	-845
1	FID		ACIS-I-2	7.09	5916	1.000	-0.346	-0.155	0.038	0.051	0.000000	0.000000	-772.92	-851
2	FID		ACIS-I-4	7.11	5914	1.000	0.308	0.303	0.038	0.065	0.000000	0.000000	2141.58	1054
3	GUIDE	used	335021128	9.29	11807	1.000	0.391	-0.075	0.229	0.365	216.159551	34.422539	2366.43	-1675
4	GUIDE	used	335023248	8.88	11824	1.000	-0.084	-0.022	0.165	0.260	217.634832	34.944512	-1659.39	856
5	GUIDE	used	335028696	9.19	11818	1.000	-0.285	-0.254	0.210	0.353	217.260519	33.844112	2227.16	2208
6	GUIDE	used	335030384	8.80	11825	1.000	-0.070	-0.005	0.146	0.247	216.806407	34.722197	393.41	-698
7	GUIDE	used	335417968	9.35	11813	1.000	0.040	0.356	0.182	0.311	217.358149	35.055285	-1519.27	-40

2.4 Star Slots

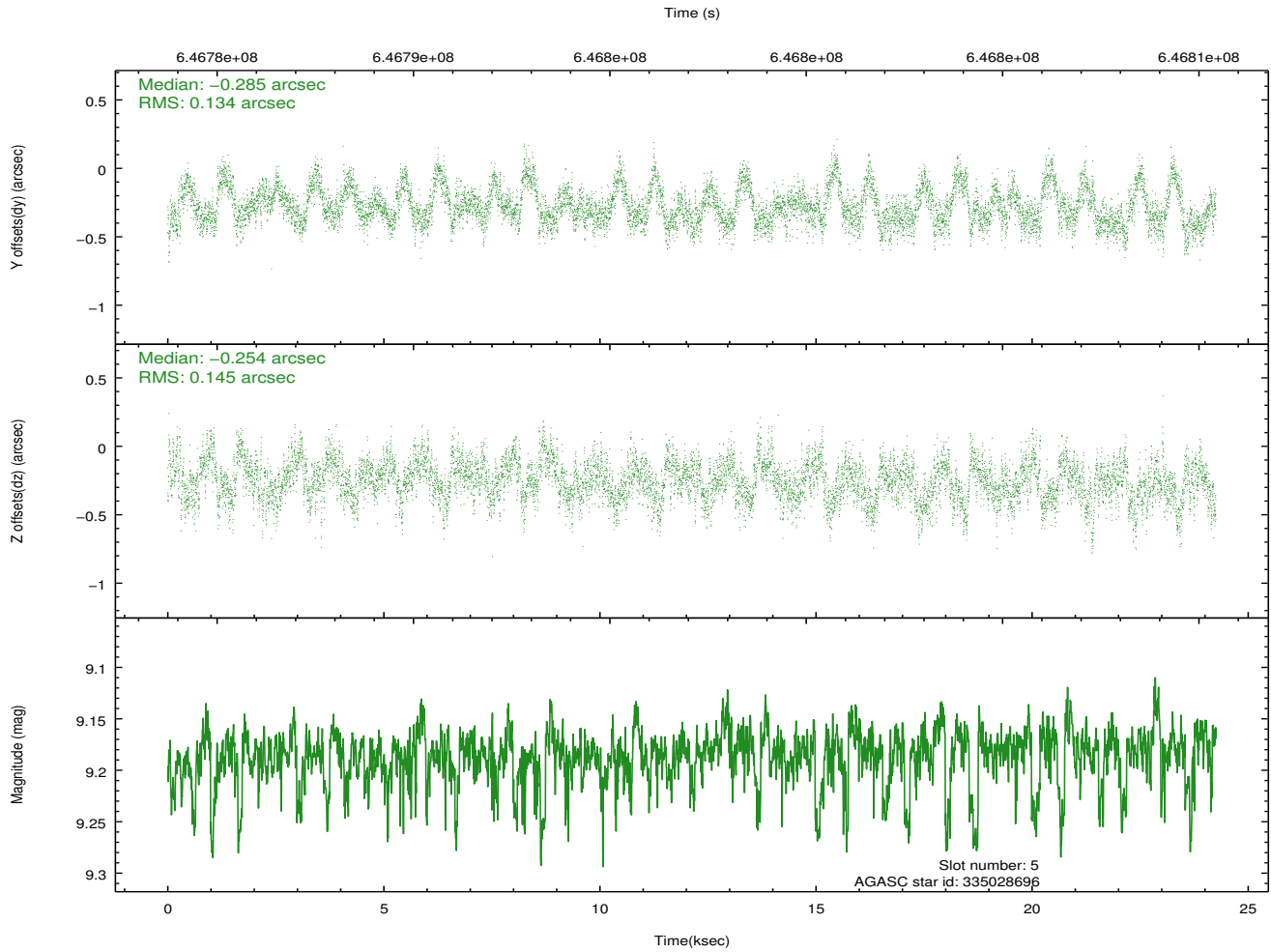
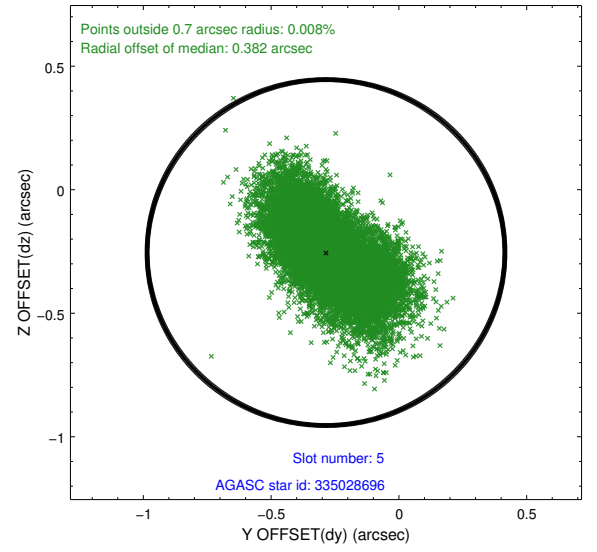
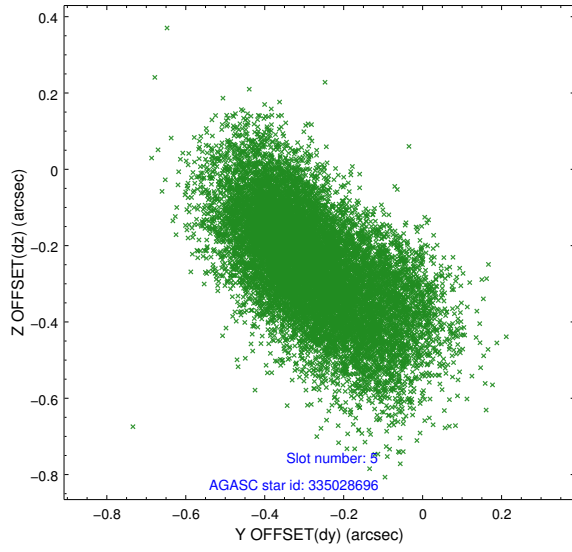
2.4.1 Slot 3



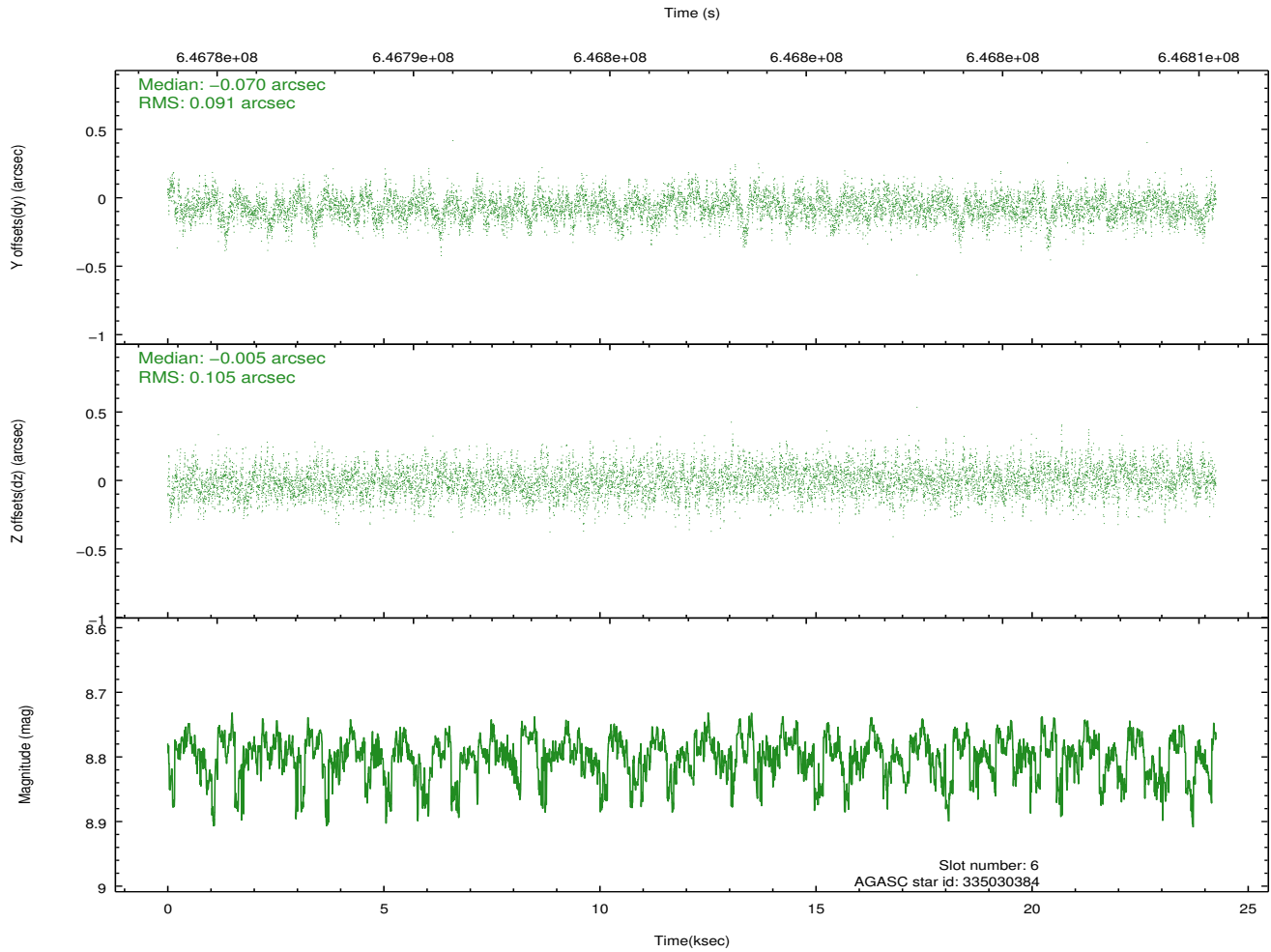
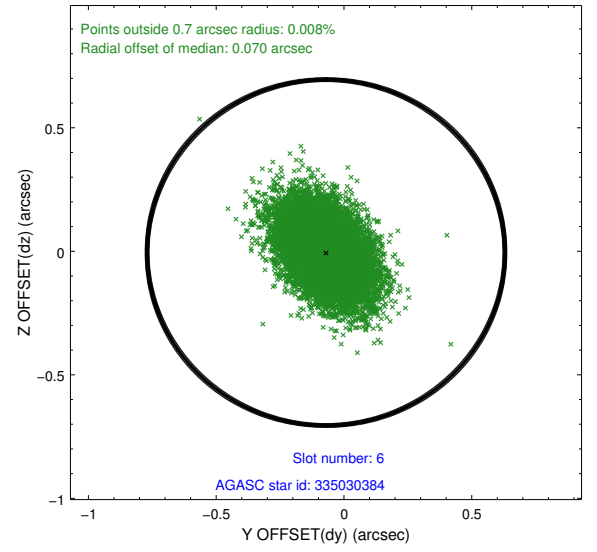
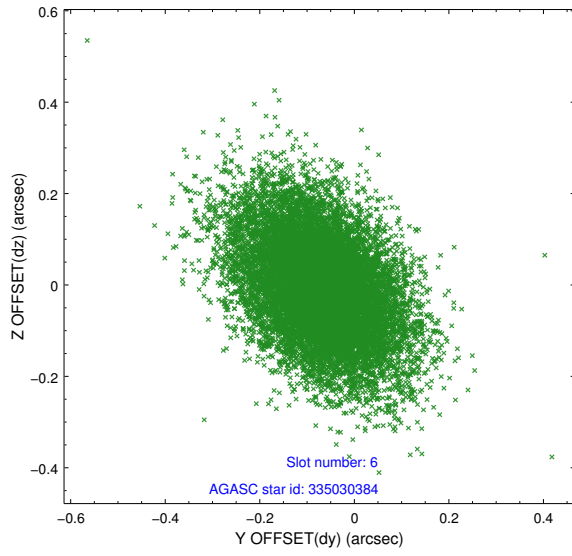
2.4.2 Slot 4



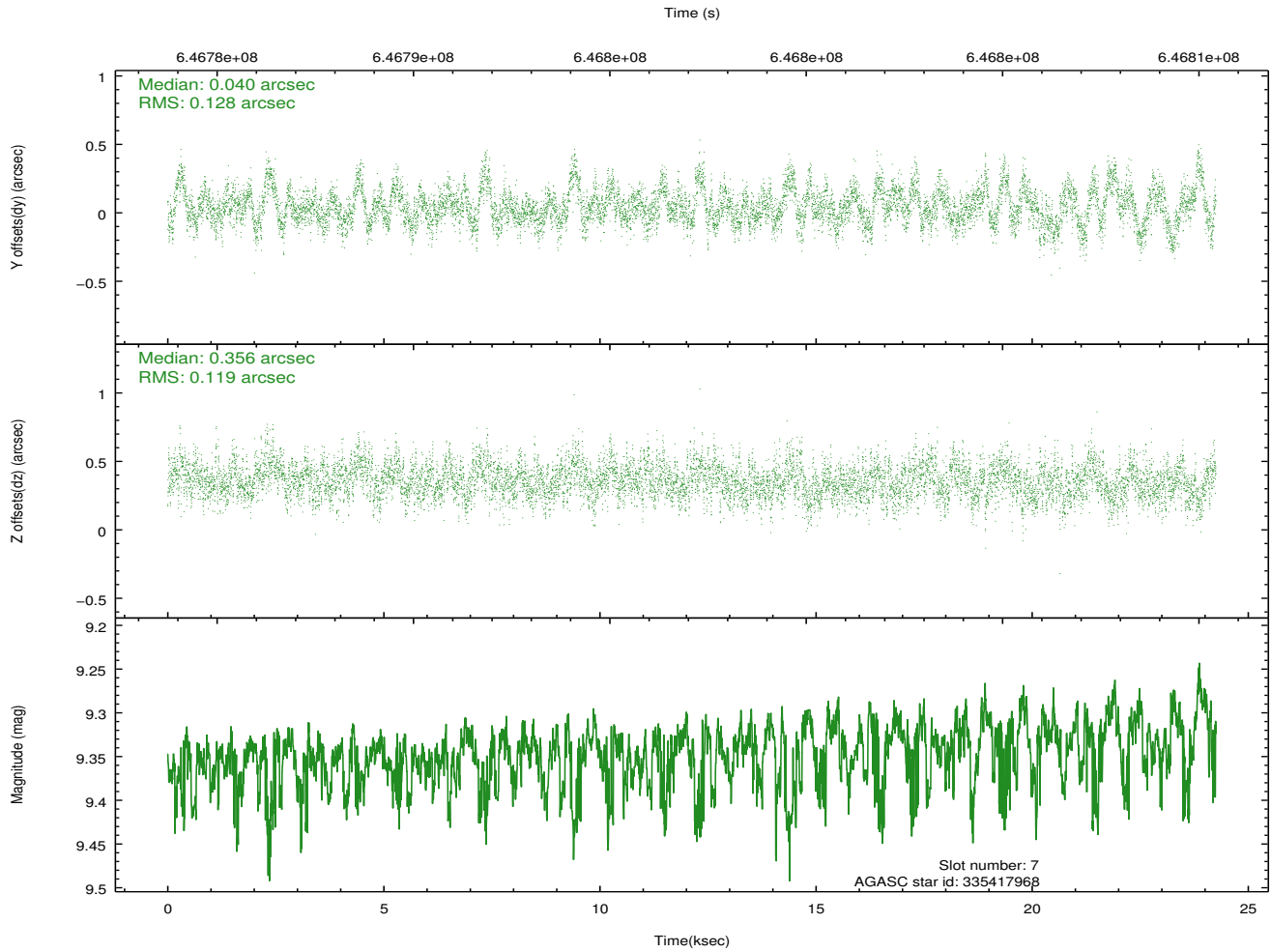
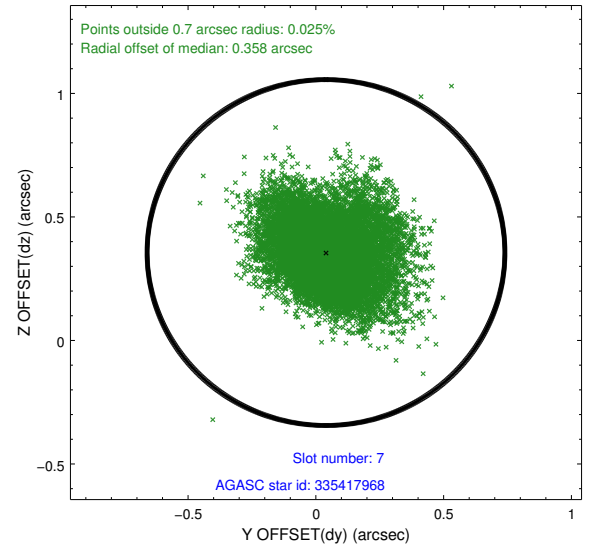
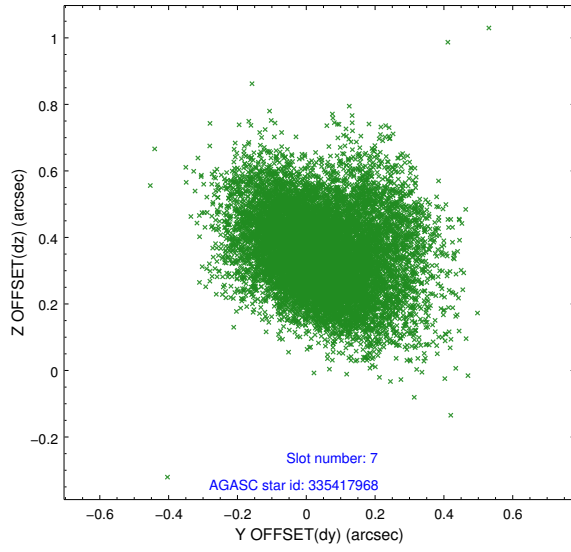
2.4.3 Slot 5



2.4.4 Slot 6

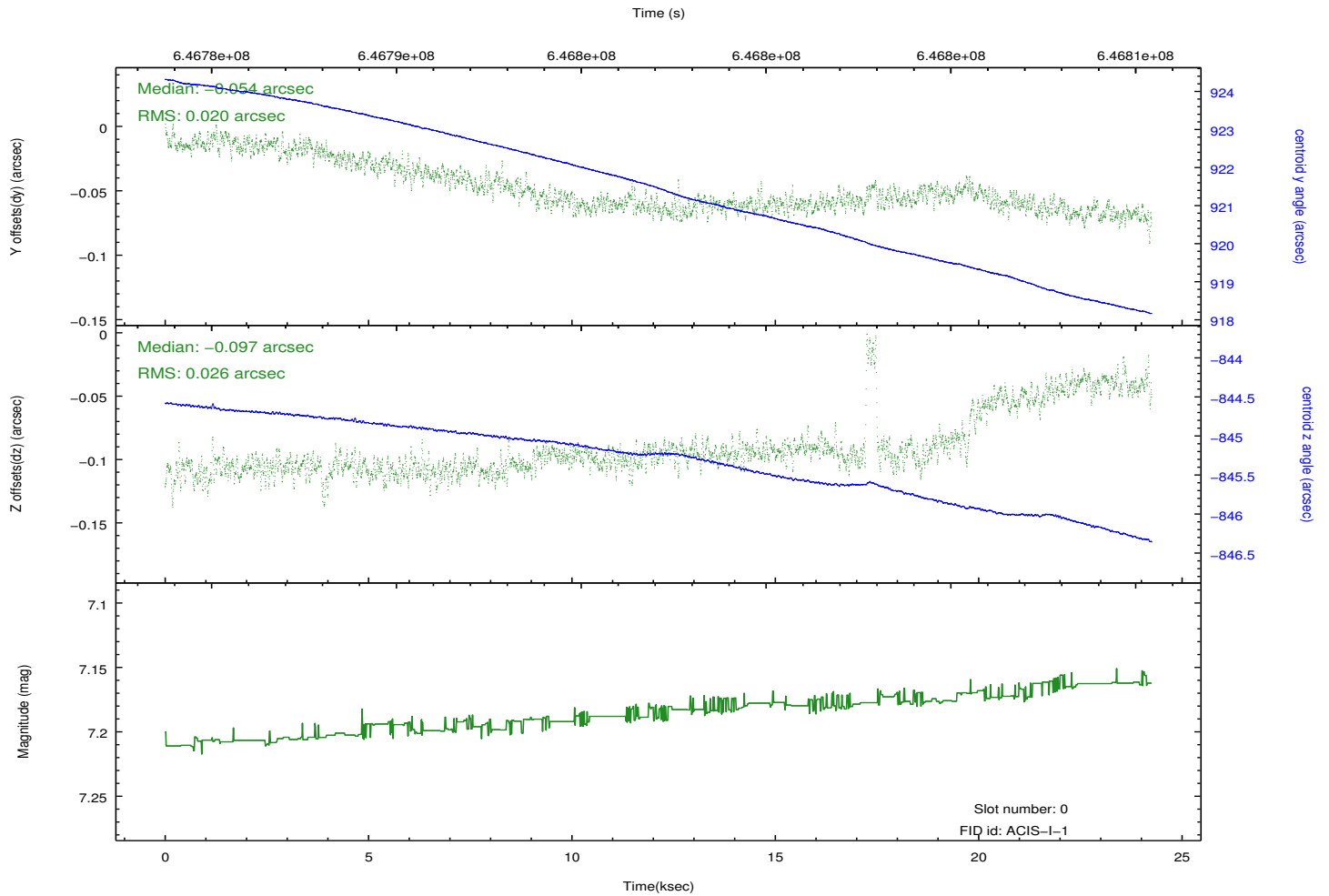
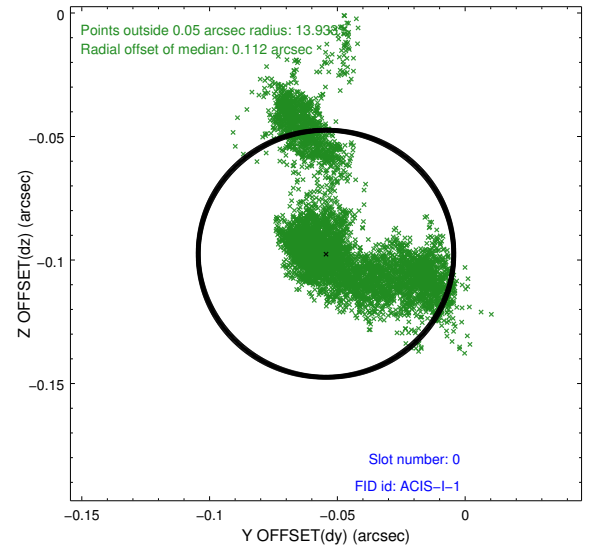
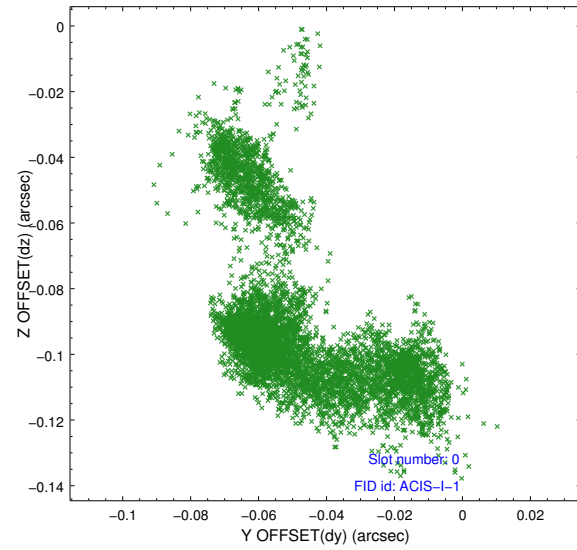


2.4.5 Slot 7

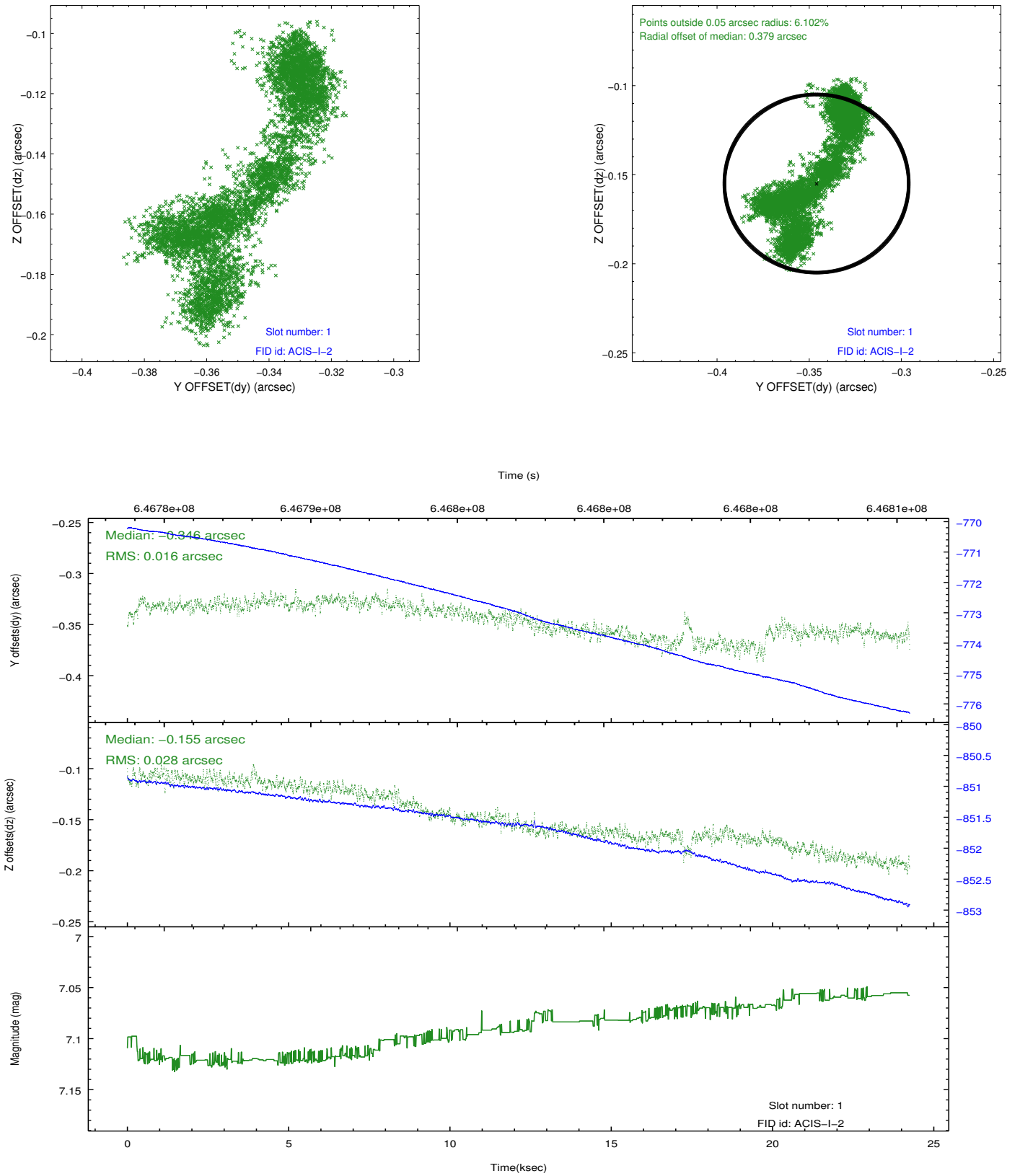


2.5 FID Slots

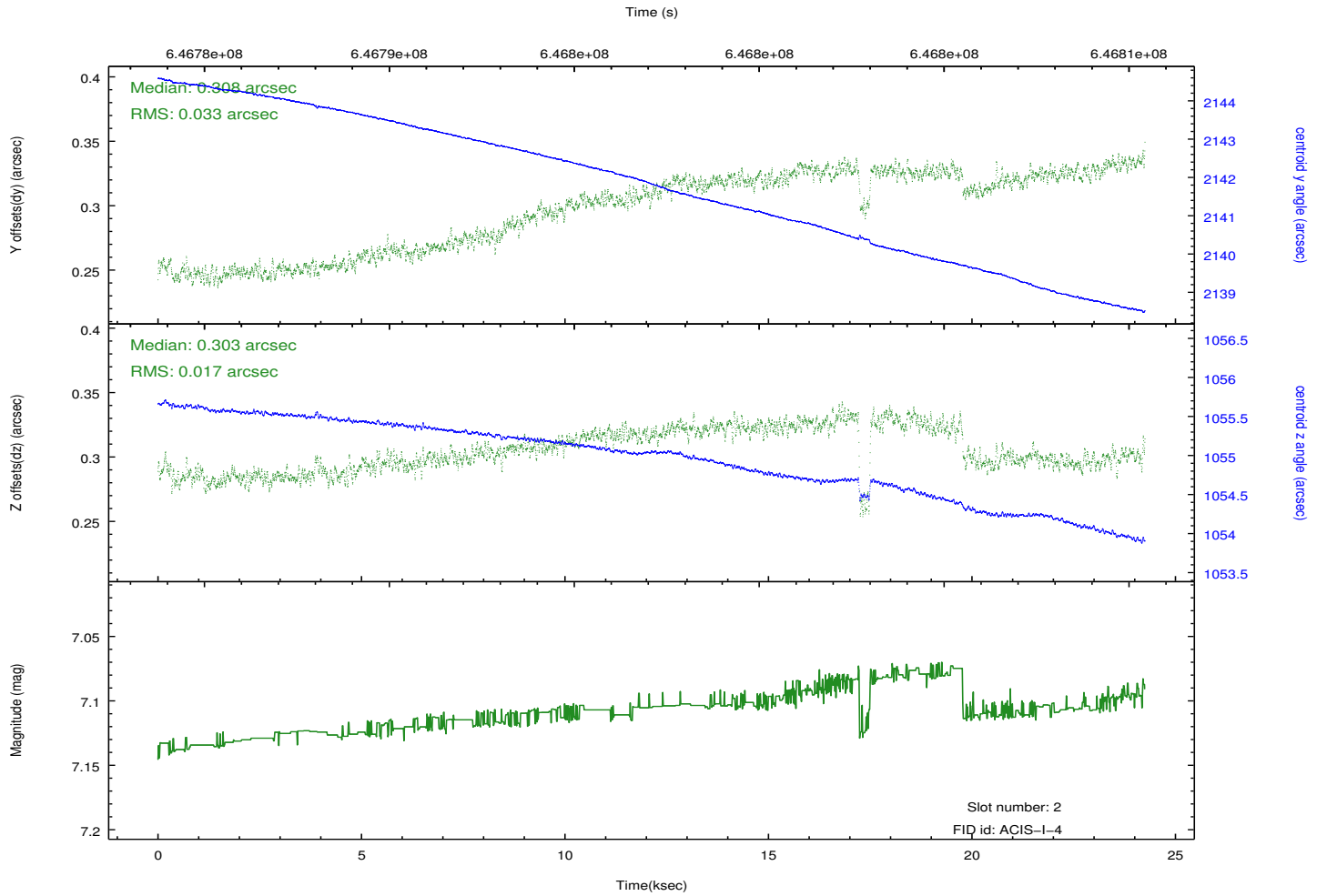
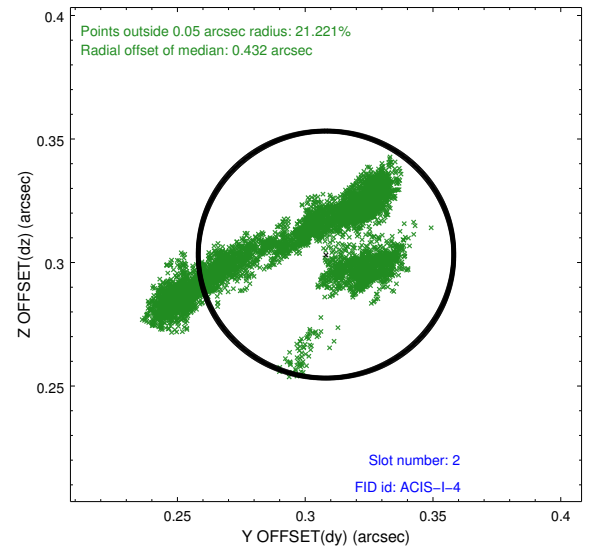
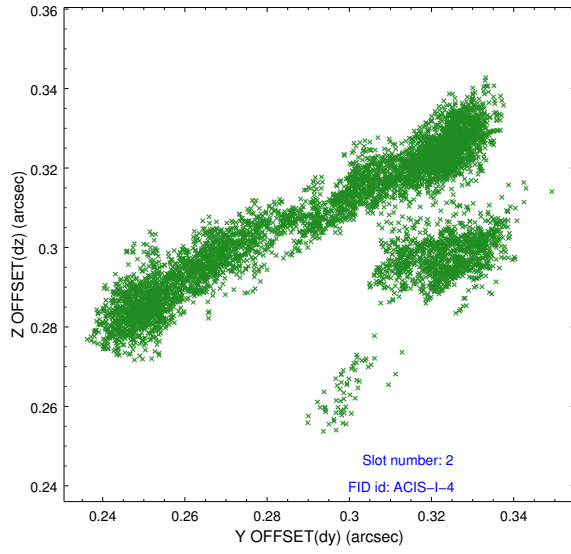
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2018.07.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	23.452152251601

A.2 Comments

Special processing steps were take to manually improve the proper-motion corrected positions of four of the guide stars used in this observation (stars with AGASC ids [see below for details]. Each had an incomplete record of the proper motion in the star catalog (AGASC 1.6) and had no proper motion corrections applied automatically by the aspect pipeline. The positions were fixed manually using the available data in AGASC 1.6 to ensure high quality absolute astrometry, and the corrected positions are now reasonable compared to the observed star positions.

```
agasc_id 335021128 slot 3
set ra_corr to 216.159139688
set pos_eci to '-0.666001717221 -0.48671057834 0.565291540349'
==
agasc_id 335023248 slot 4
set dec_corr to 34.9445842717
set pos_eci to '-0.6491407305 -0.500534635733 0.572783895058'
==
agasc_id 335028696 slot 5
set ra_corr to 217.260055406
set pos_eci to '-0.661035947761 -0.502846533425 0.556935220281'
==
agasc_id 335417968 slot 7
set ra_corr to 217.358004169
set pos_eci to '-0.650670648028 -0.496719995847 0.574366567203'
```