

V&V Reference Report

L2 ASCDS Version : 10.8

Observation 22563 - L2 Version 2
Chandra X-Ray Center

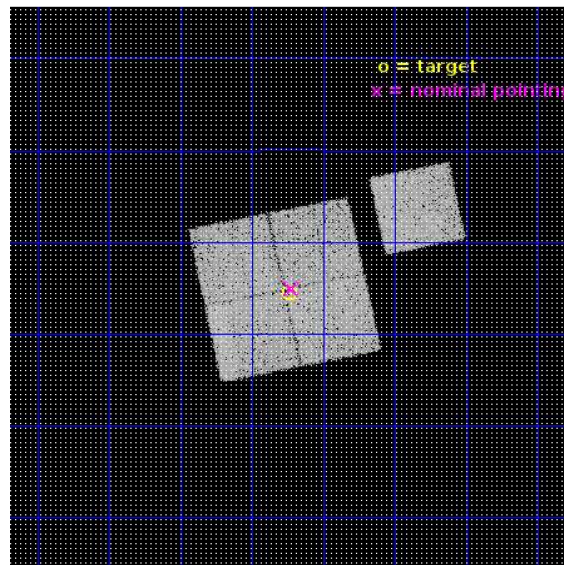
L2 Processing Date : Sep 30 2019

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1 Front

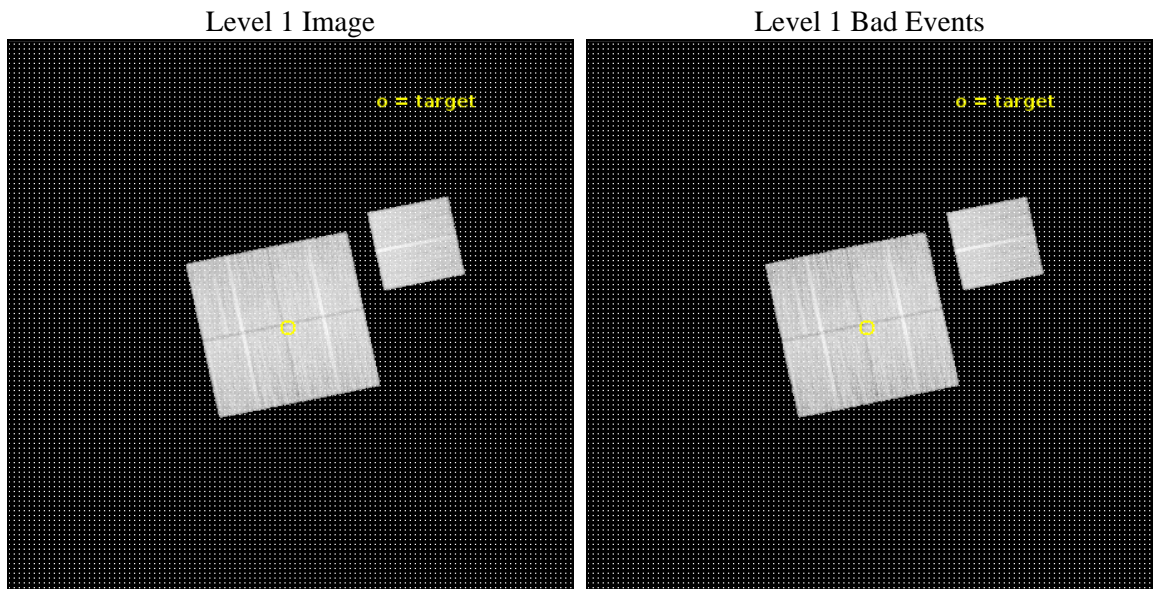
seq_num	703950	Sequence number
obs_id	22563	Observation id
title	Unveiling the AGN population in the highest redshift, mature, massive galaxy cluster	Proposal title
observer	Emil Noordeh	Principal investigator
object	XLSSC 122	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	34.433	Observer's specified target RA [deg]
dec_targ	-3.759	Observer's specified target Dec [deg]
ra_nom	34.430739134578	Nominal RA [deg]
dec_nom	-3.7514650563533	Nominal Dec [deg]
roll_nom	78.208535444938	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20063.200154424	Sum of GTIs [s]
livetime	19801.059674093	Livetime [s]
ontime0	20063.200154424	Sum of GTIs [s]
ontime1	20063.200154424	Sum of GTIs [s]
ontime2	20063.200154424	Sum of GTIs [s]
ontime3	20063.200154424	Sum of GTIs [s]
ontime6	20056.918023944	Sum of GTIs [s]
l2events	72799	Number of level 2 events



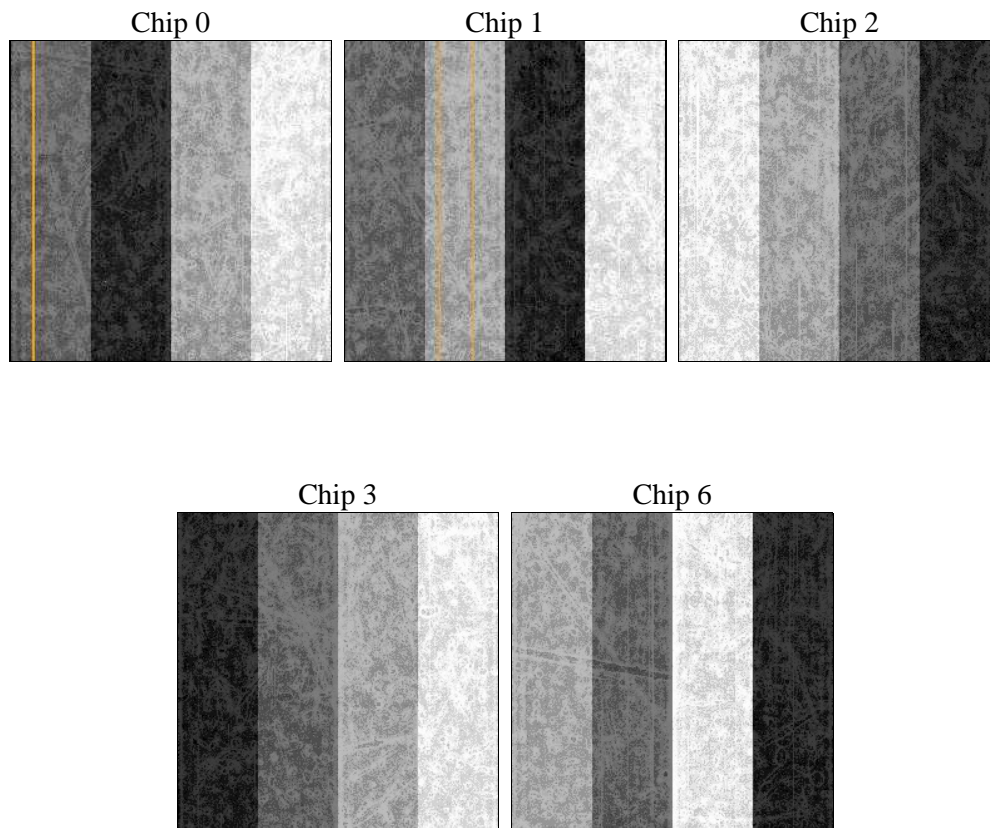
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	19997.358000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	20063.200154424	Sum of GTIs [s]
caldbver	4.8.4.1	 	ontime0	20063.200154424	Sum of GTIs [s]
date	2019-09-30T19:09:54	Date and time of file creation	ontime1	20063.200154424	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	20063.200154424	Sum of GTIs [s]
			ontime3	20063.200154424	Sum of GTIs [s]
			ontime6	20056.918023944	Sum of GTIs [s]
			l1events	742523	Number of level 1 events

2.1.4 Events

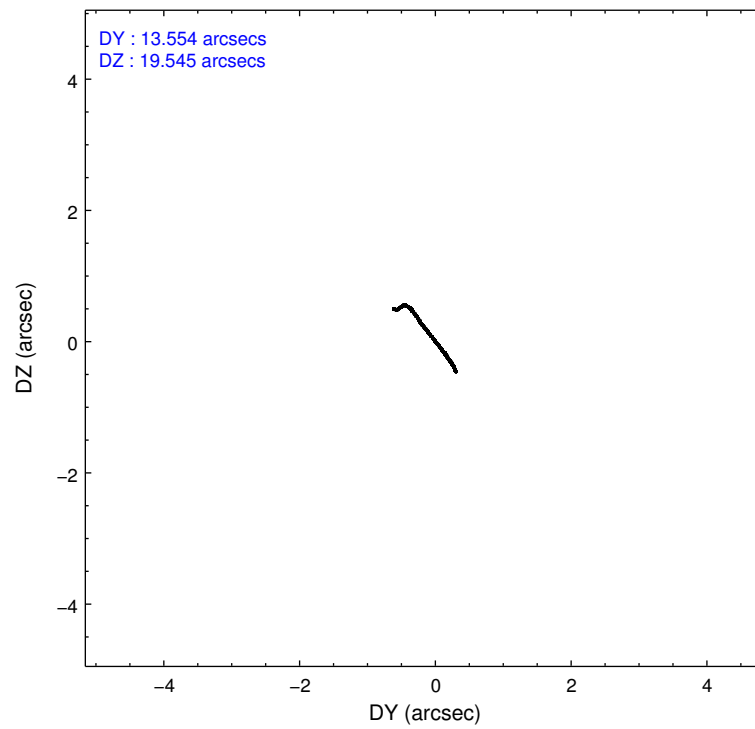
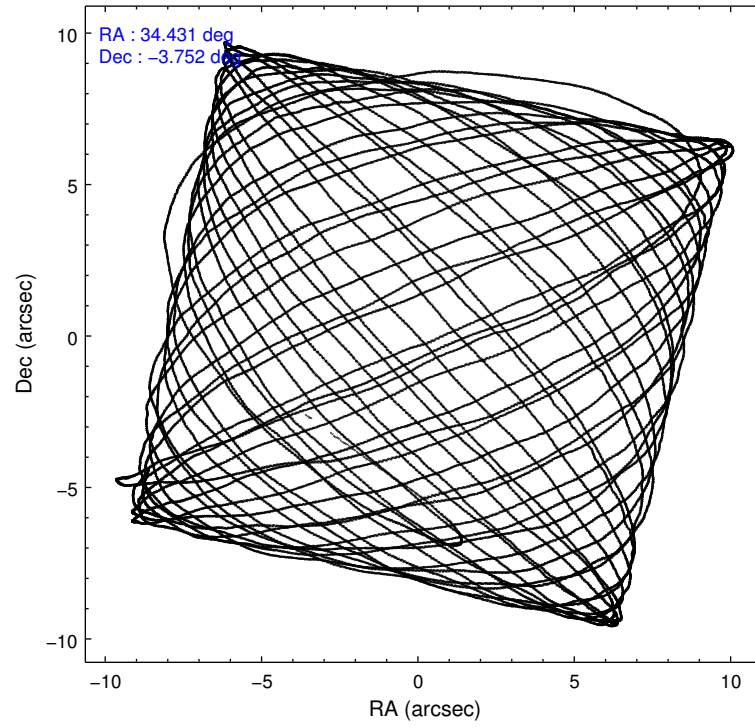
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	139596	142691	153478	151320	155438
rejected events	122377	124099	136979	135013	138032
rejected %	87%	86%	89%	89%	88%

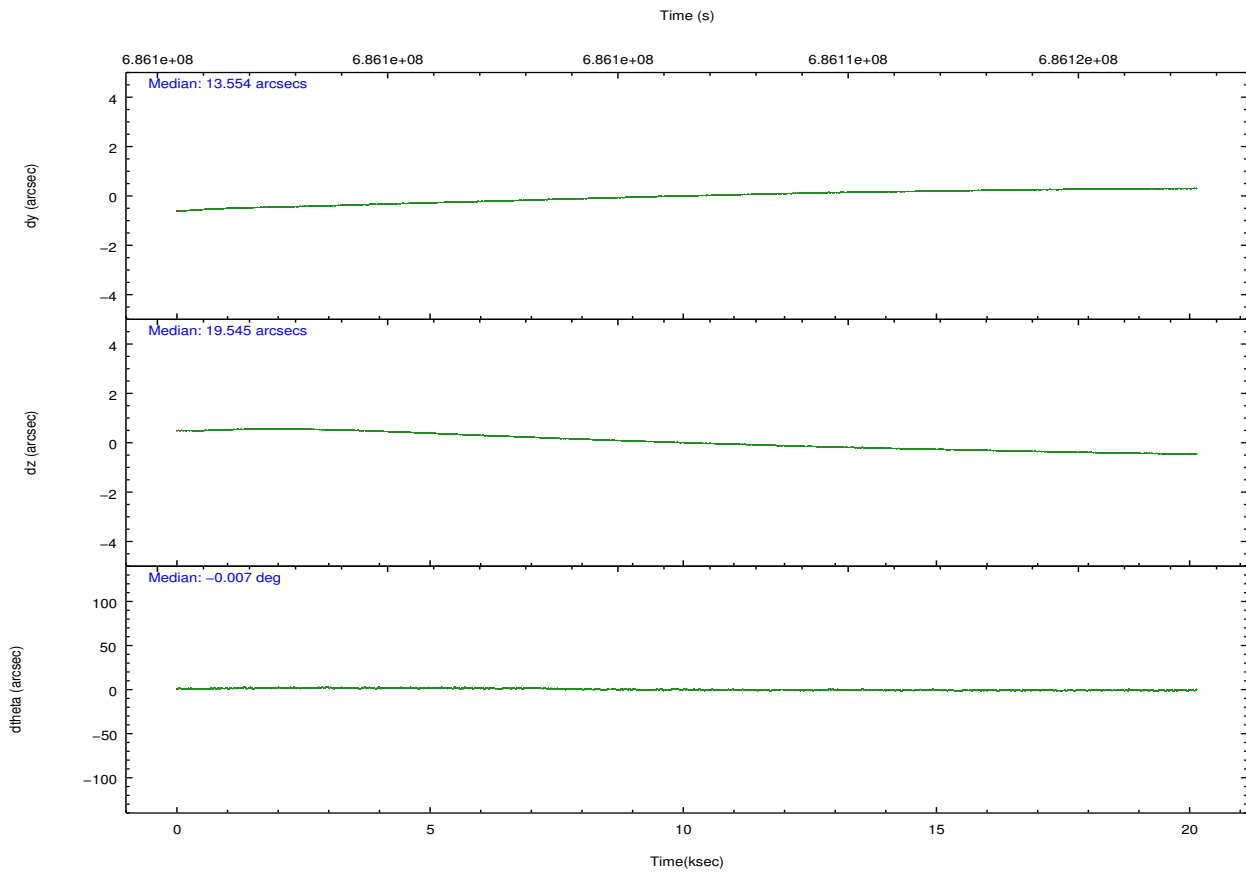
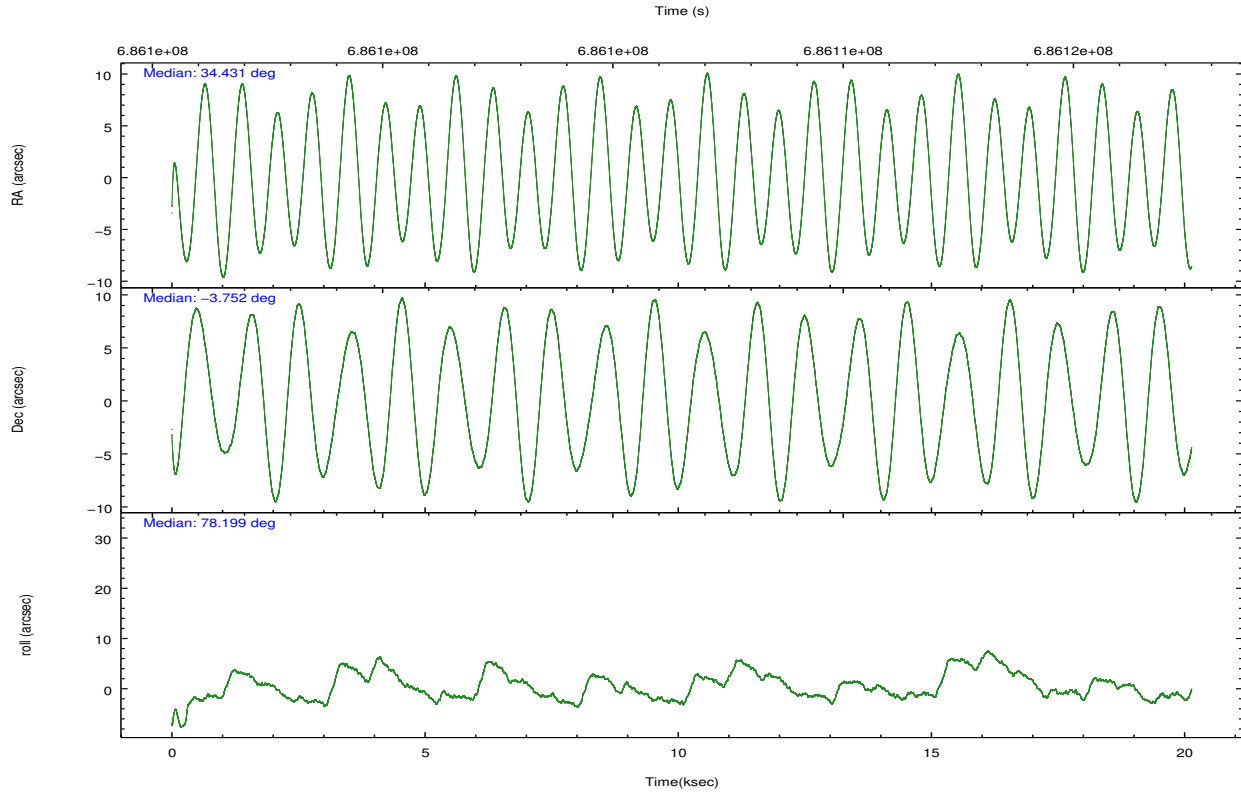
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	5835	6182	5785	5813	5618
	4%	4%	3%	3%	3%
grade 1 events	79	88	89	102	69
	0%	0%	0%	0%	0%
grade 2 events	4369	4833	4134	3700	4092
	3%	3%	2%	2%	2%
grade 3 events	1764	1708	1637	1693	1748
	1%	1%	1%	1%	1%
grade 4 events	1616	1717	1610	1668	1789
	1%	1%	1%	1%	1%
grade 5 events	6829	6905	6051	7270	6982
	4%	4%	3%	4%	4%
grade 6 events	3639	4153	3336	3434	4162
	2%	2%	2%	2%	2%
grade 7 events	115465	117105	130836	127640	130978
	82%	82%	85%	84%	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	34.439494	34.43073913457802	CCD I2 on	Y	Y
[deg] Pointing Dec	-3.777647	-3.751465056353336	CCD I3 on	Y	Y
[deg] Pointing Roll	78.000428	78.20853544493841	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)	686096545.184000	686095339.04015	CCD S5 on	N	N
Observation start date	2019-09-28T22:21:16	2019-09-28T22:02:19	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	686116543.184000	686116997.80395	On-chip summing requested	N	N
Observation end date	2019-09-29T03:54:34	2019-09-29T04:03:17	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect





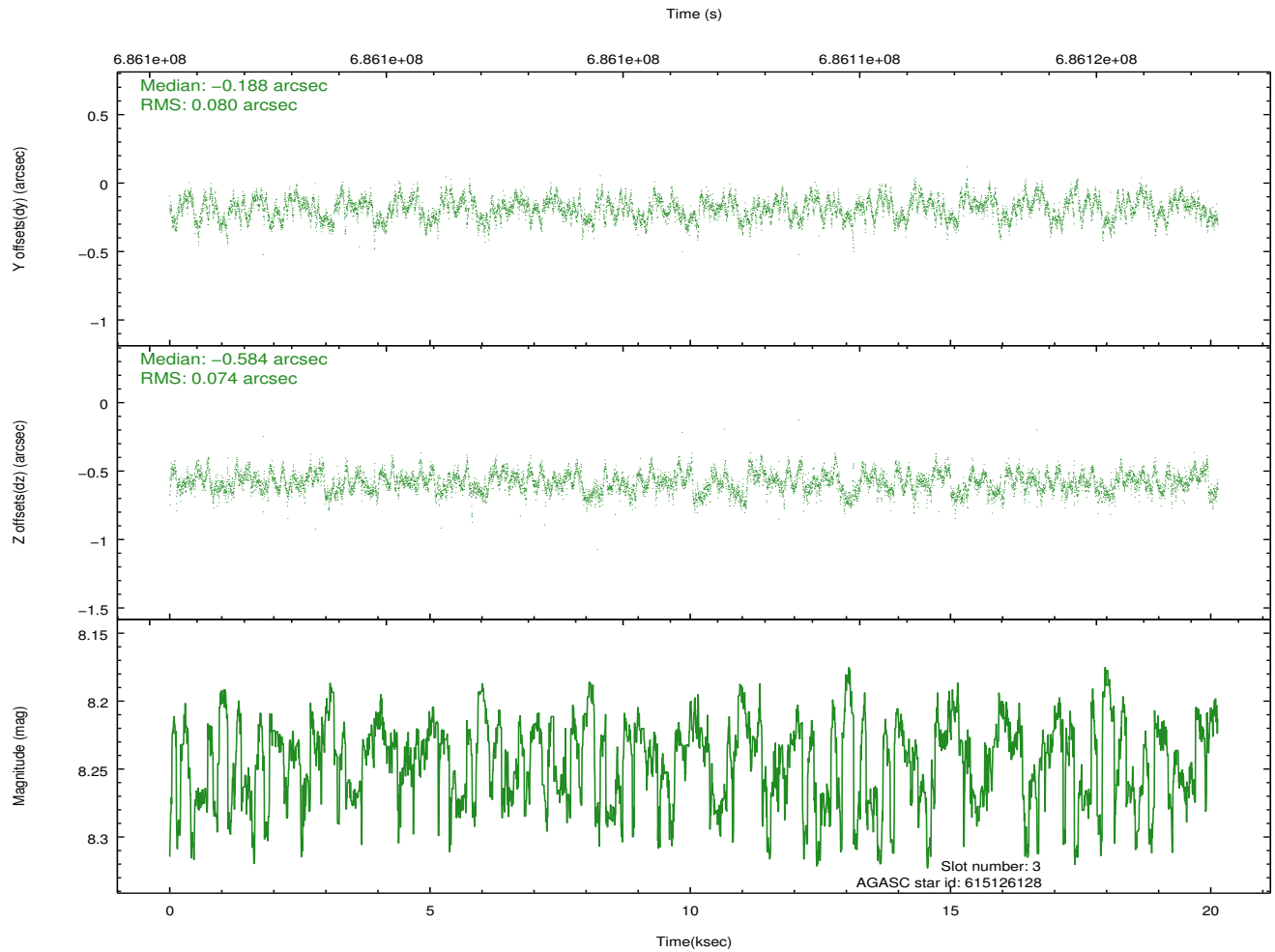
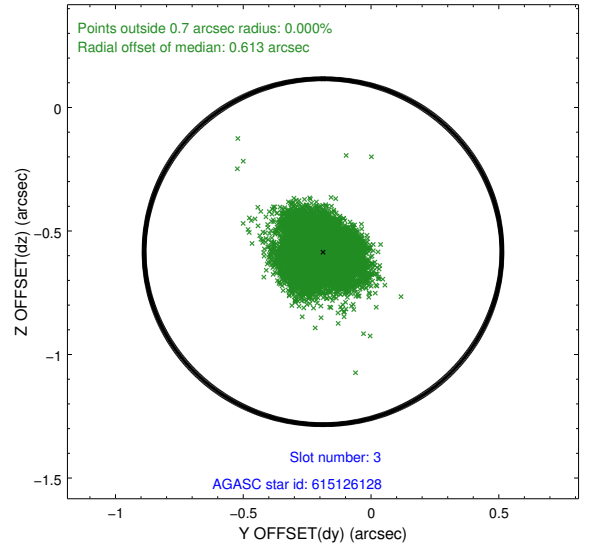
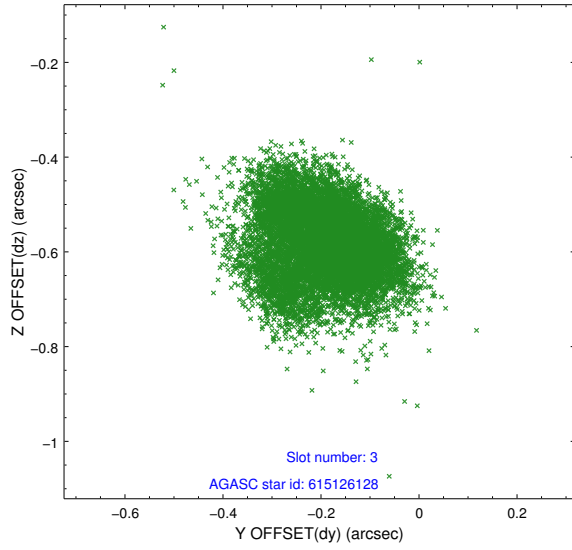
Slot Statistics

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	7.20	4913	1.000	0.081	-0.056	0.022	0.035	0.000000	0.000000	926.16	-843
1	FID		ACIS-I-5	7.20	4913	1.000	-0.459	0.008	0.013	0.019	0.000000	0.000000	-1822.57	1053
2	FID		ACIS-I-6	7.20	4913	1.000	0.287	0.121	0.019	0.026	0.000000	0.000000	391.46	1698
3	GUIDE	used	615126128	8.24	9820	1.000	-0.188	-0.584	0.118	0.183	34.026050	-3.868420	-628.01	1384
4	GUIDE	used	615129592	8.84	9748	1.000	0.091	0.293	0.166	0.275	34.607456	-4.334536	-1834.81	-1006
5	GUIDE	used	615129680	9.01	9816	1.000	0.104	0.367	0.158	0.251	34.462822	-4.356201	-2018.54	-513
6	GUIDE	used	615129992	8.40	9822	1.000	-0.136	-0.382	0.128	0.214	33.989595	-4.095121	-1453.69	1339
7	GUIDE	used	615130056	6.96	9824	1.000	0.101	0.310	0.246	0.342	34.919909	-4.345572	-1640.15	-2111

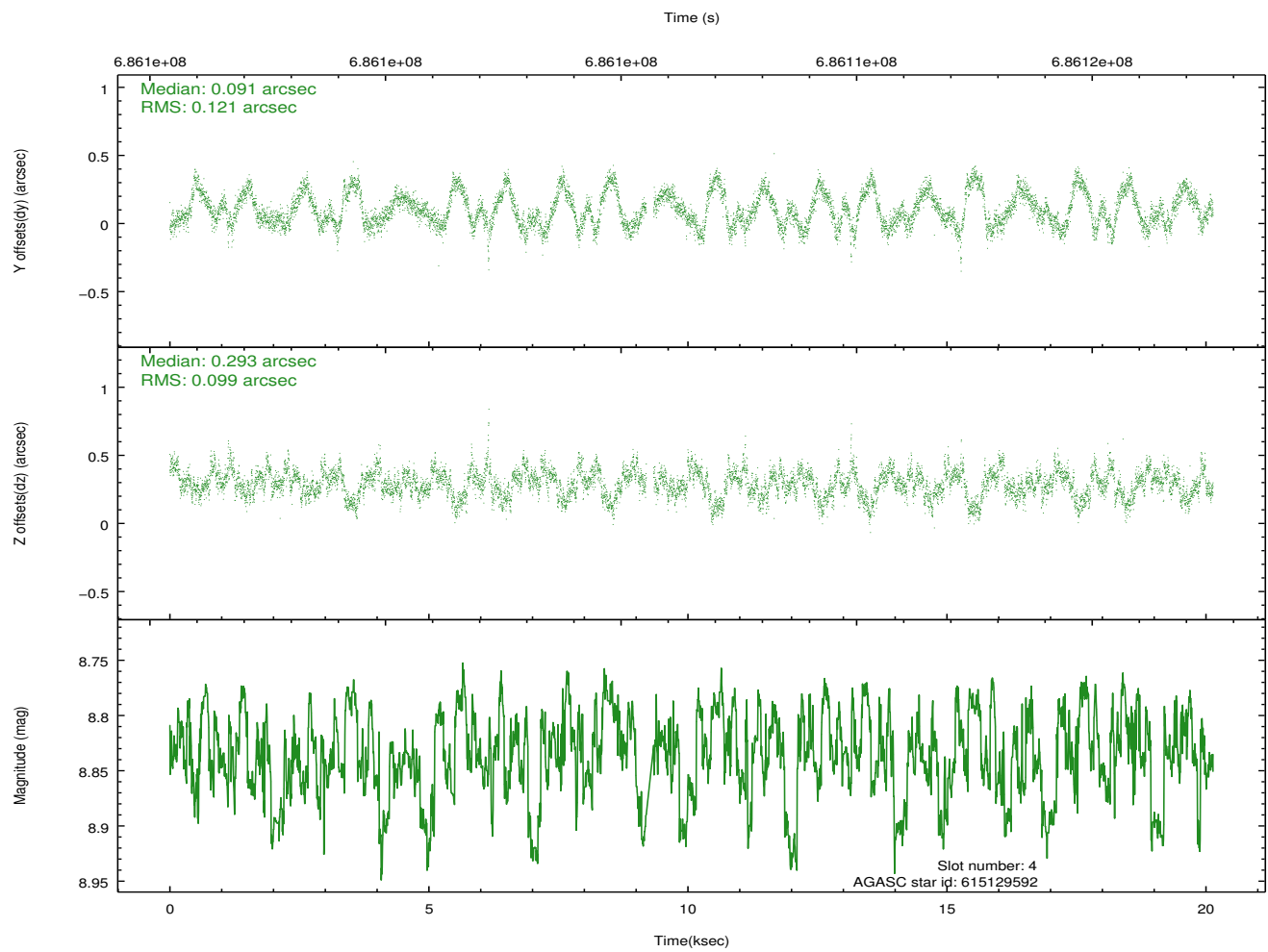
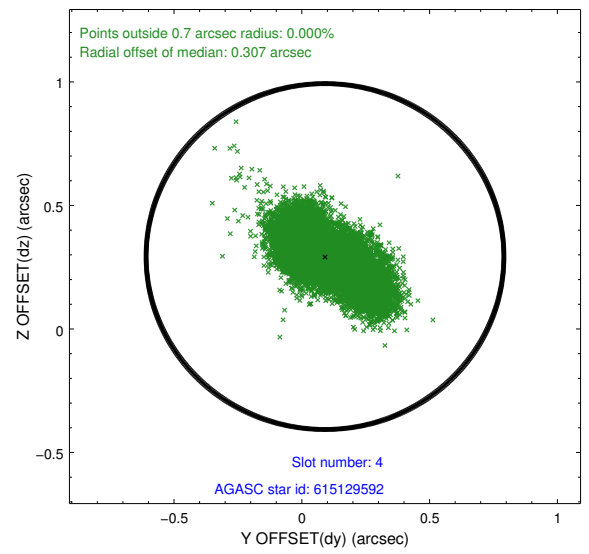
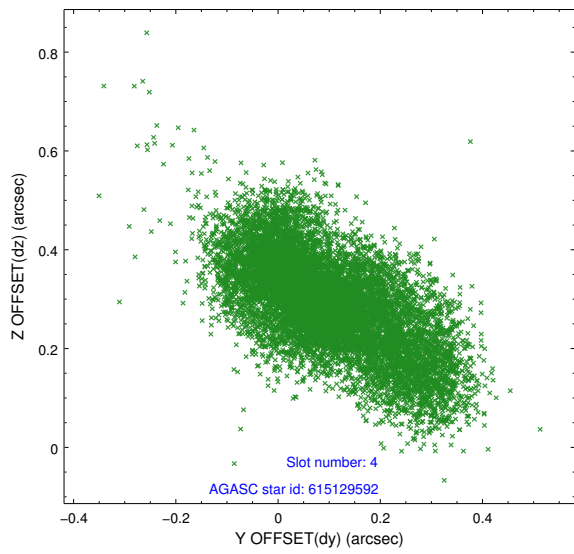
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2.4 Star Slots

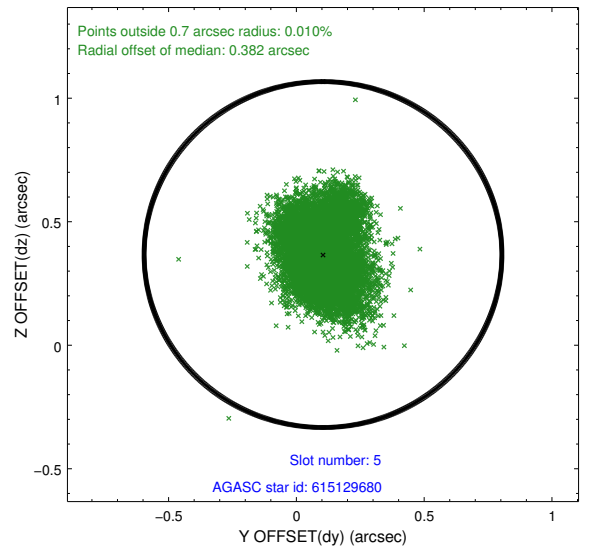
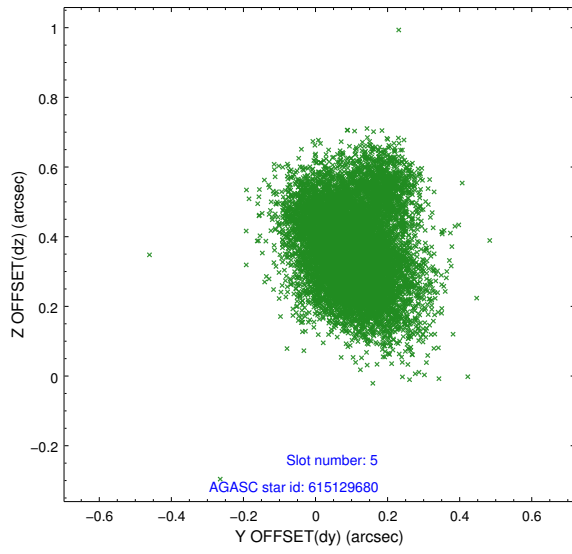
2.4.1 Slot 3



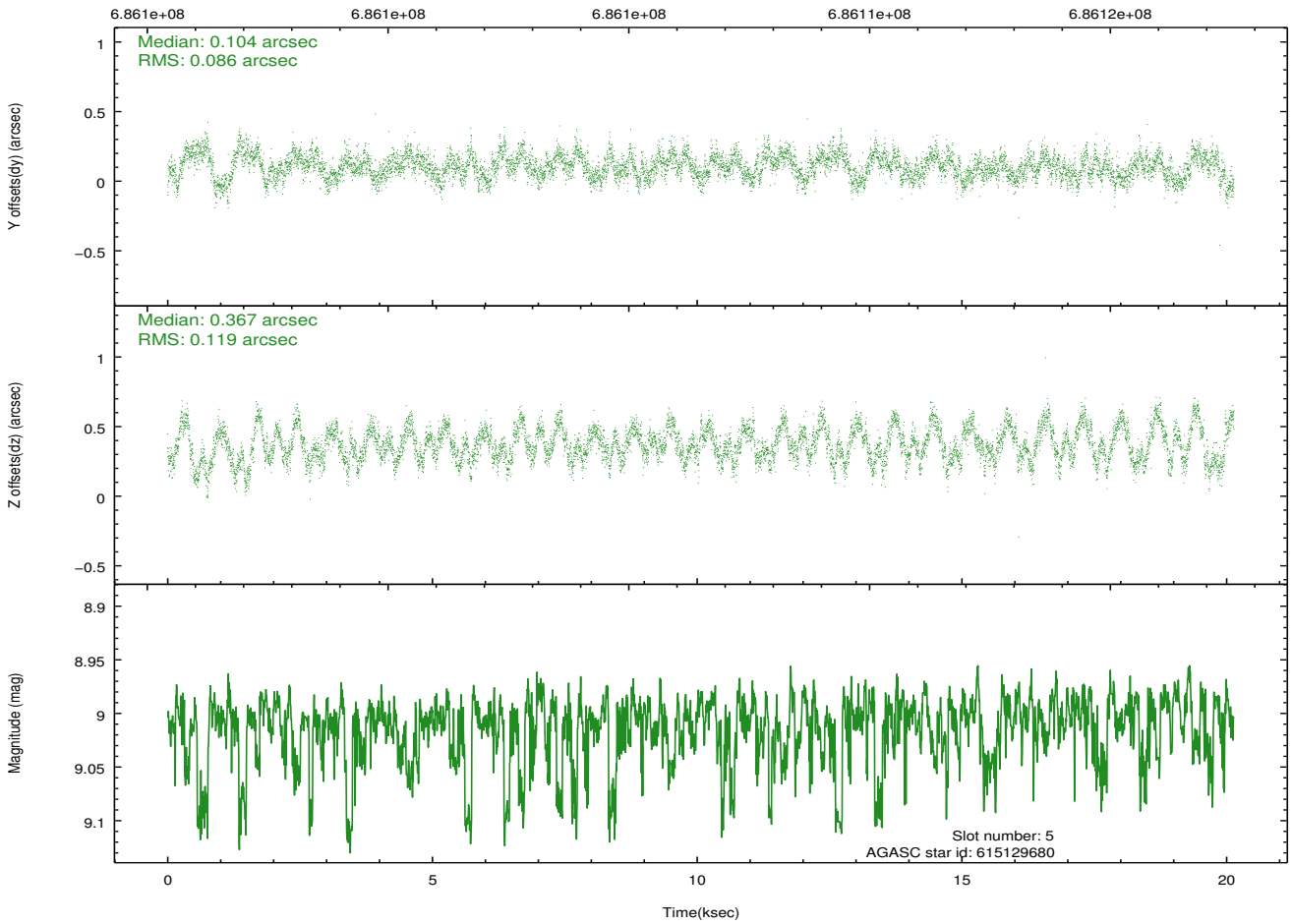
2.4.2 Slot 4



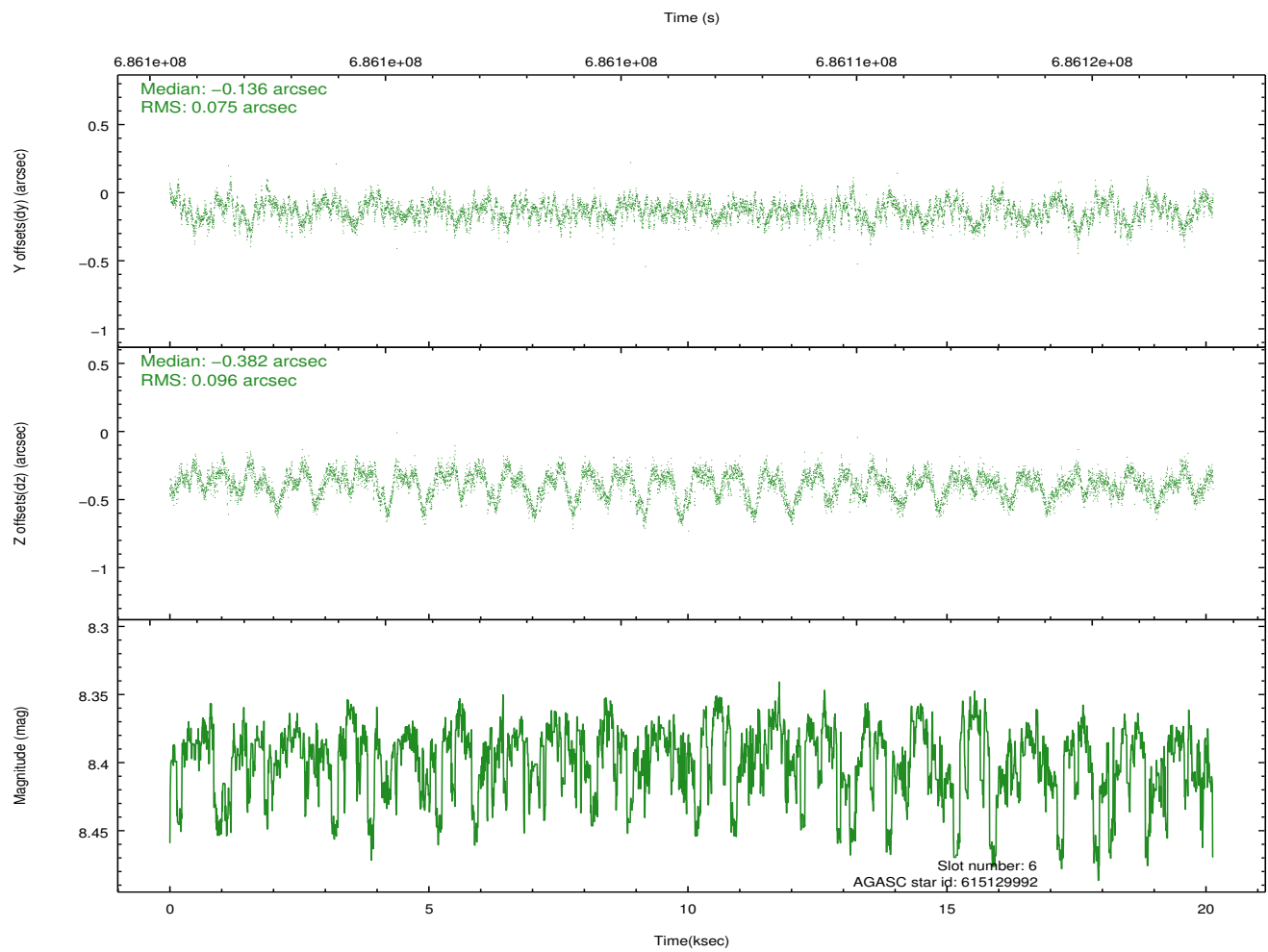
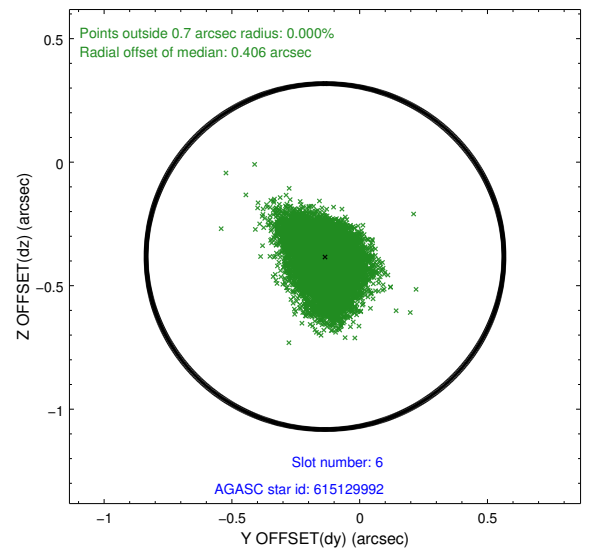
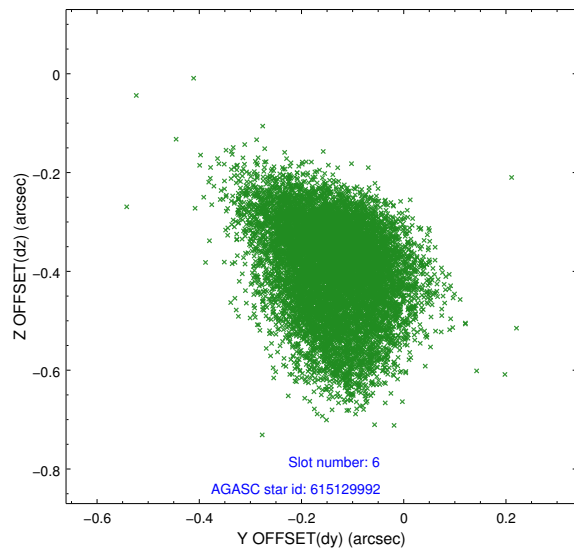
2.4.3 Slot 5



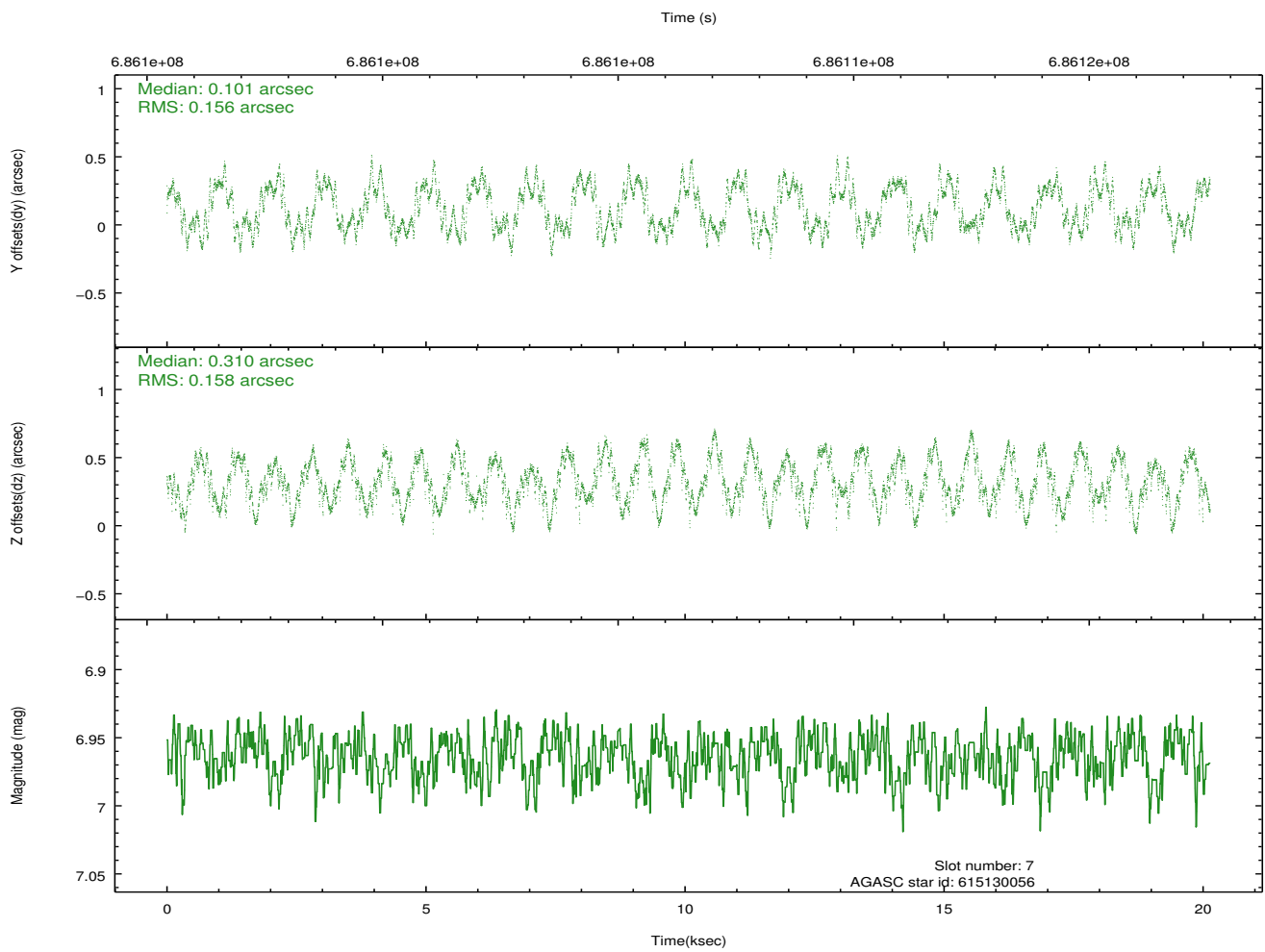
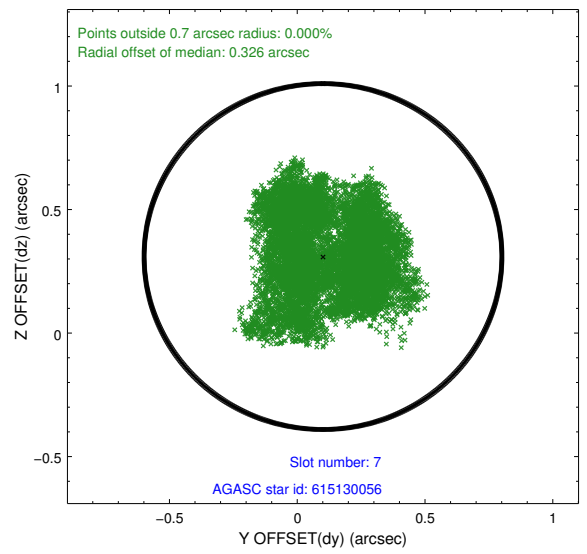
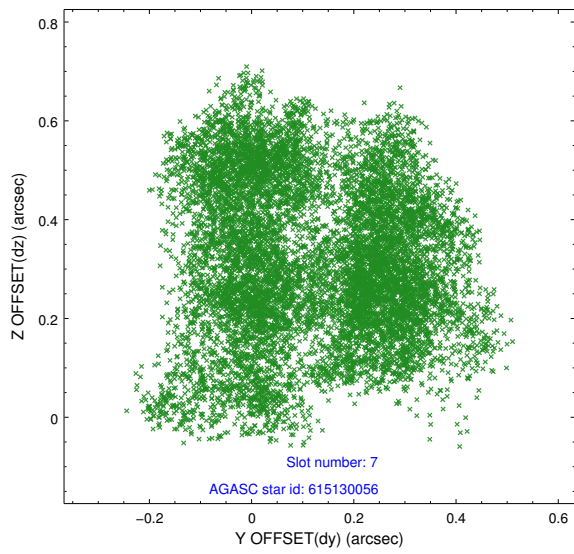
Time (s)



2.4.4 Slot 6

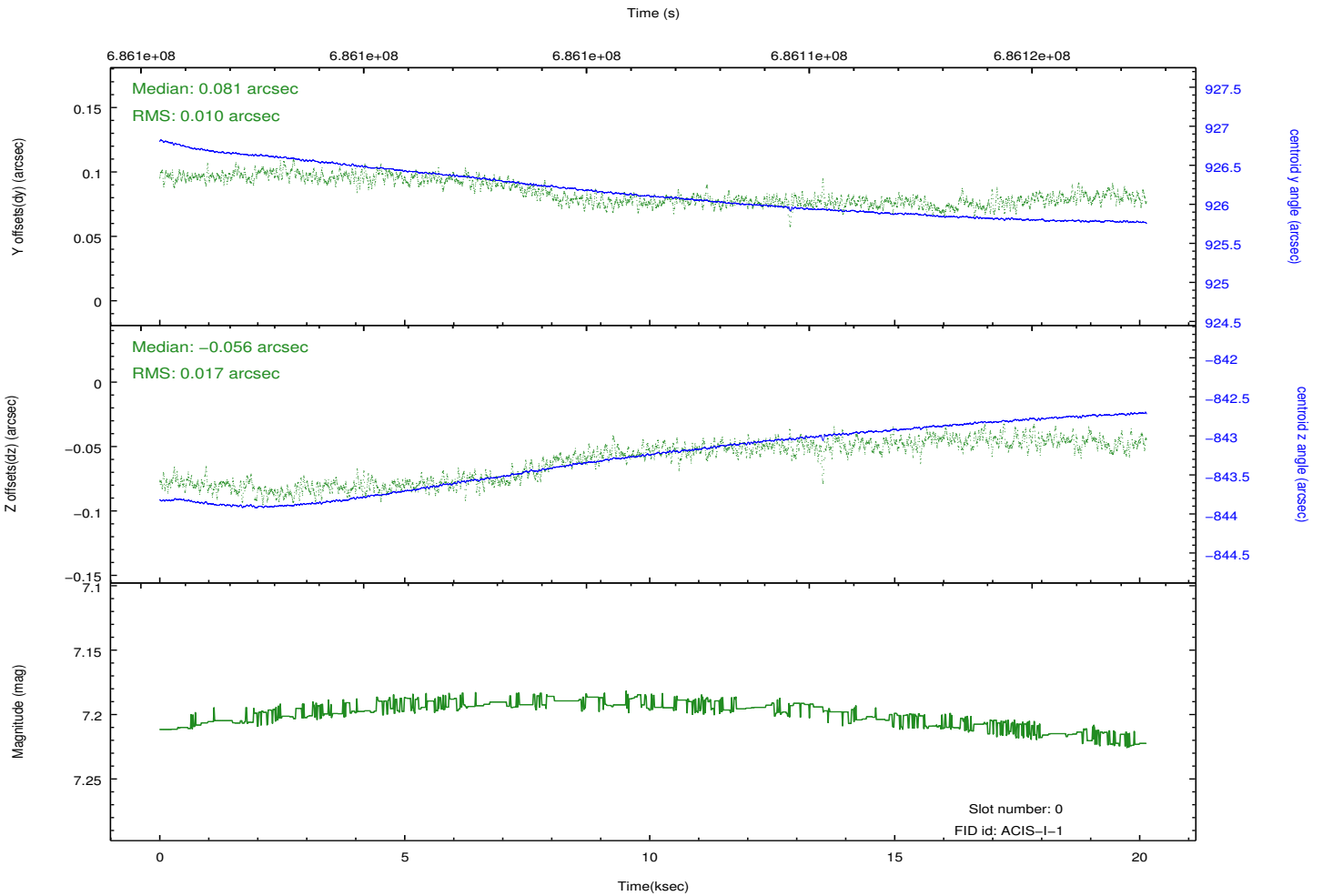
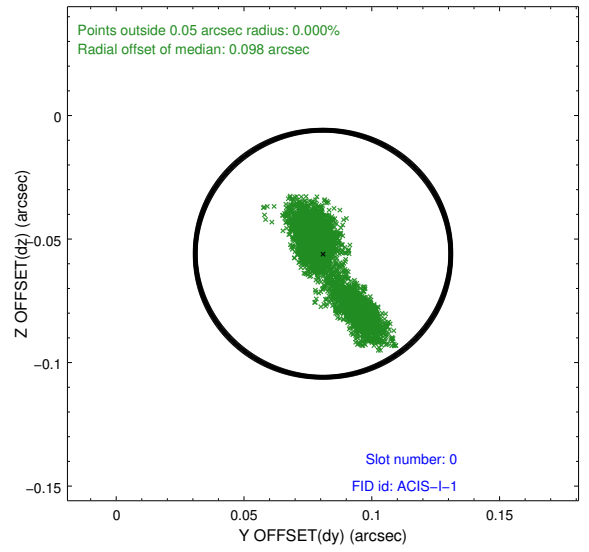
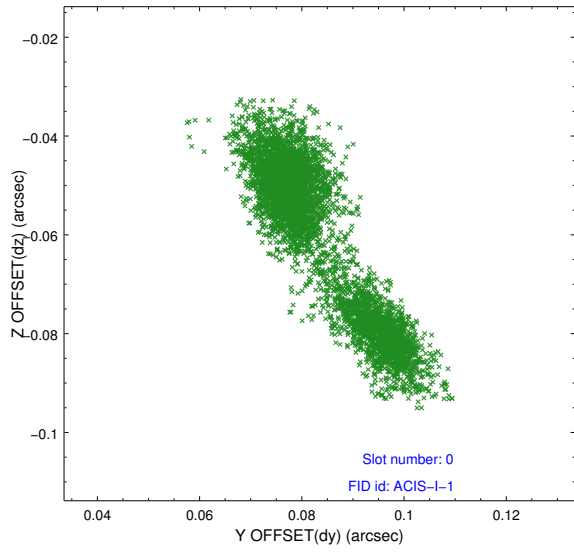


2.4.5 Slot 7

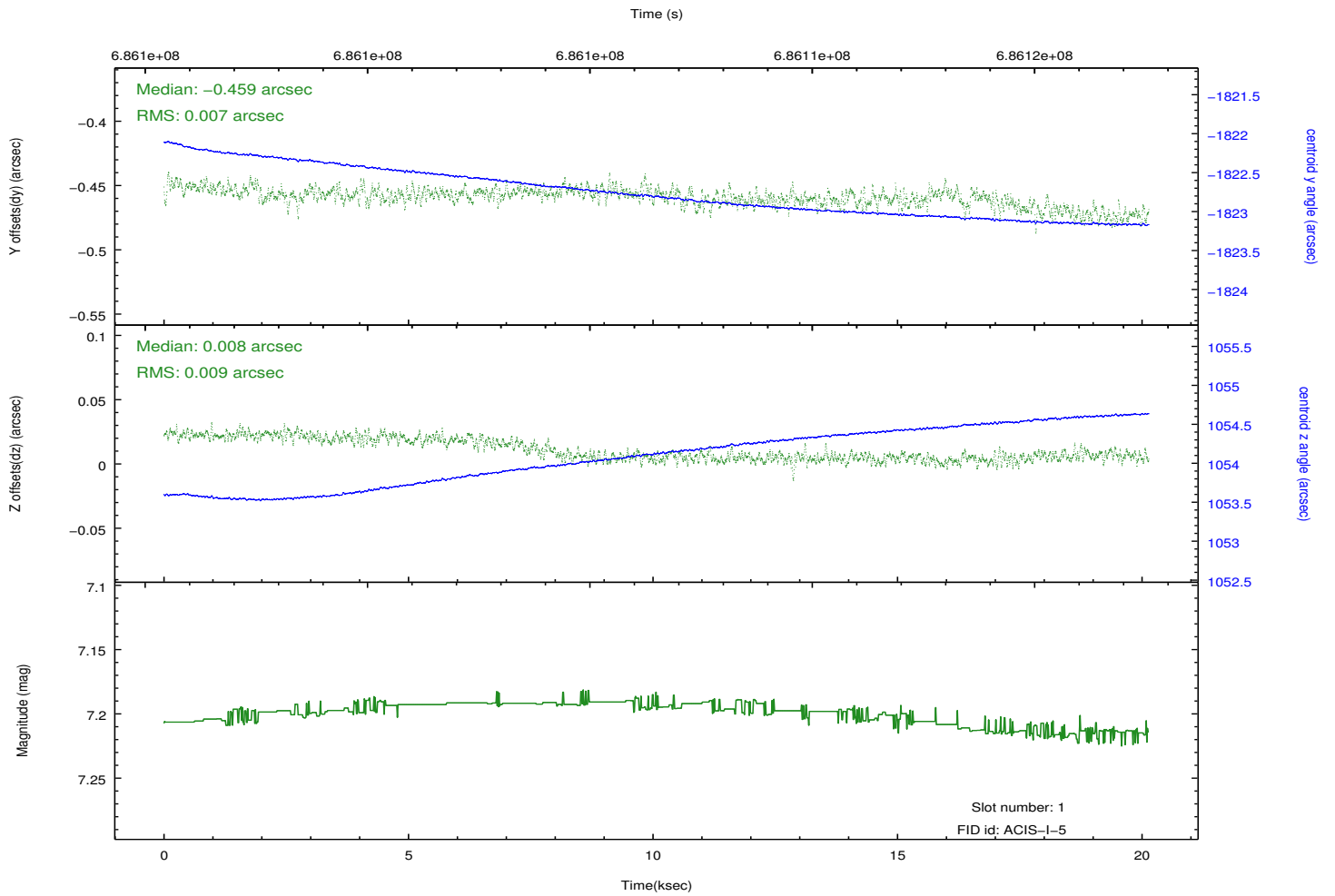
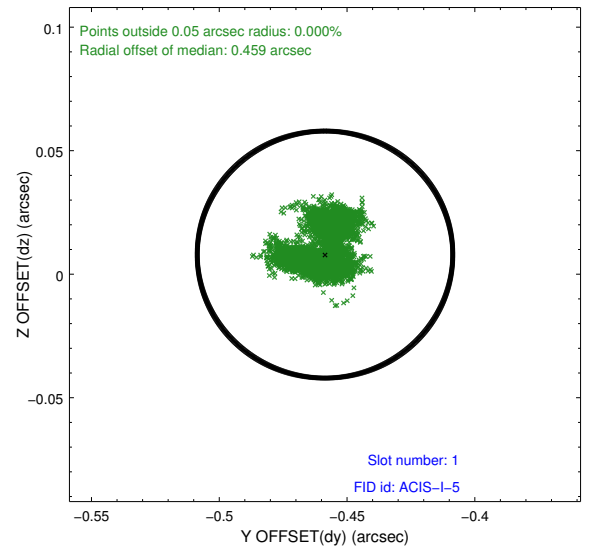
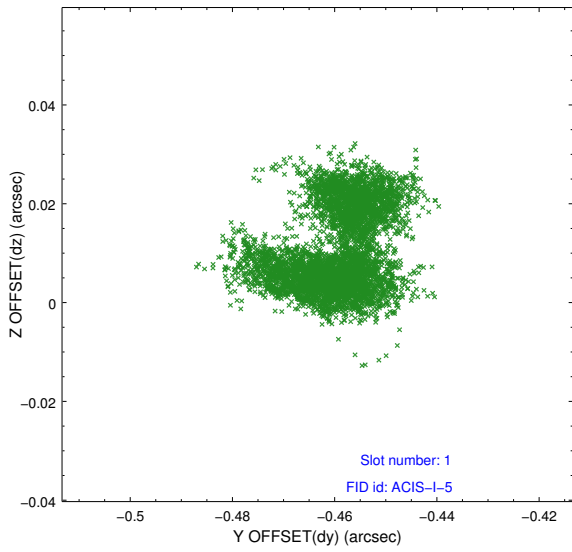


2.5 FID Slots

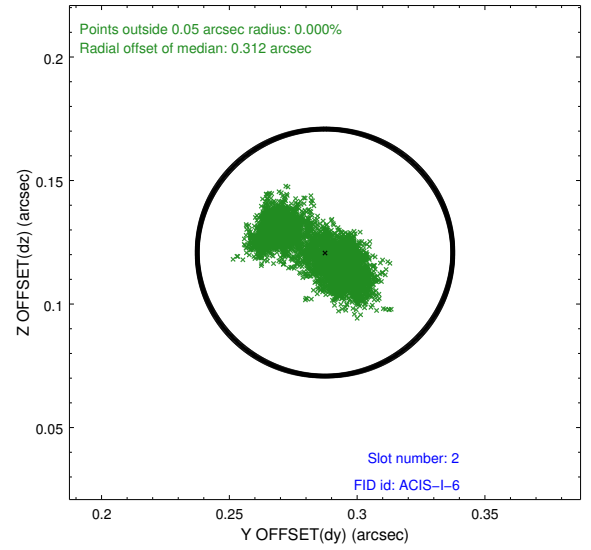
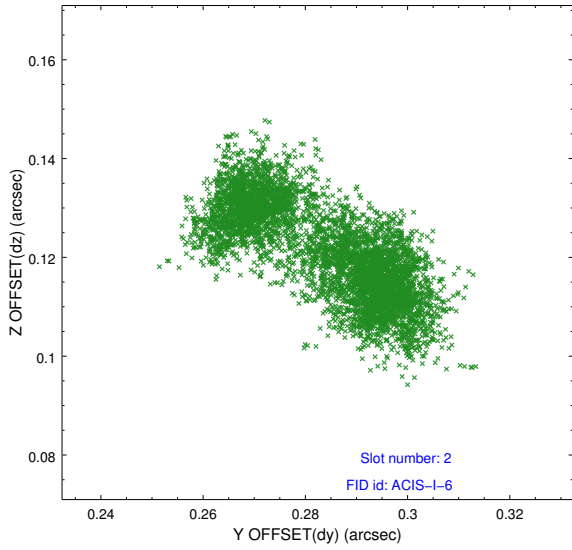
2.5.1 Slot 0



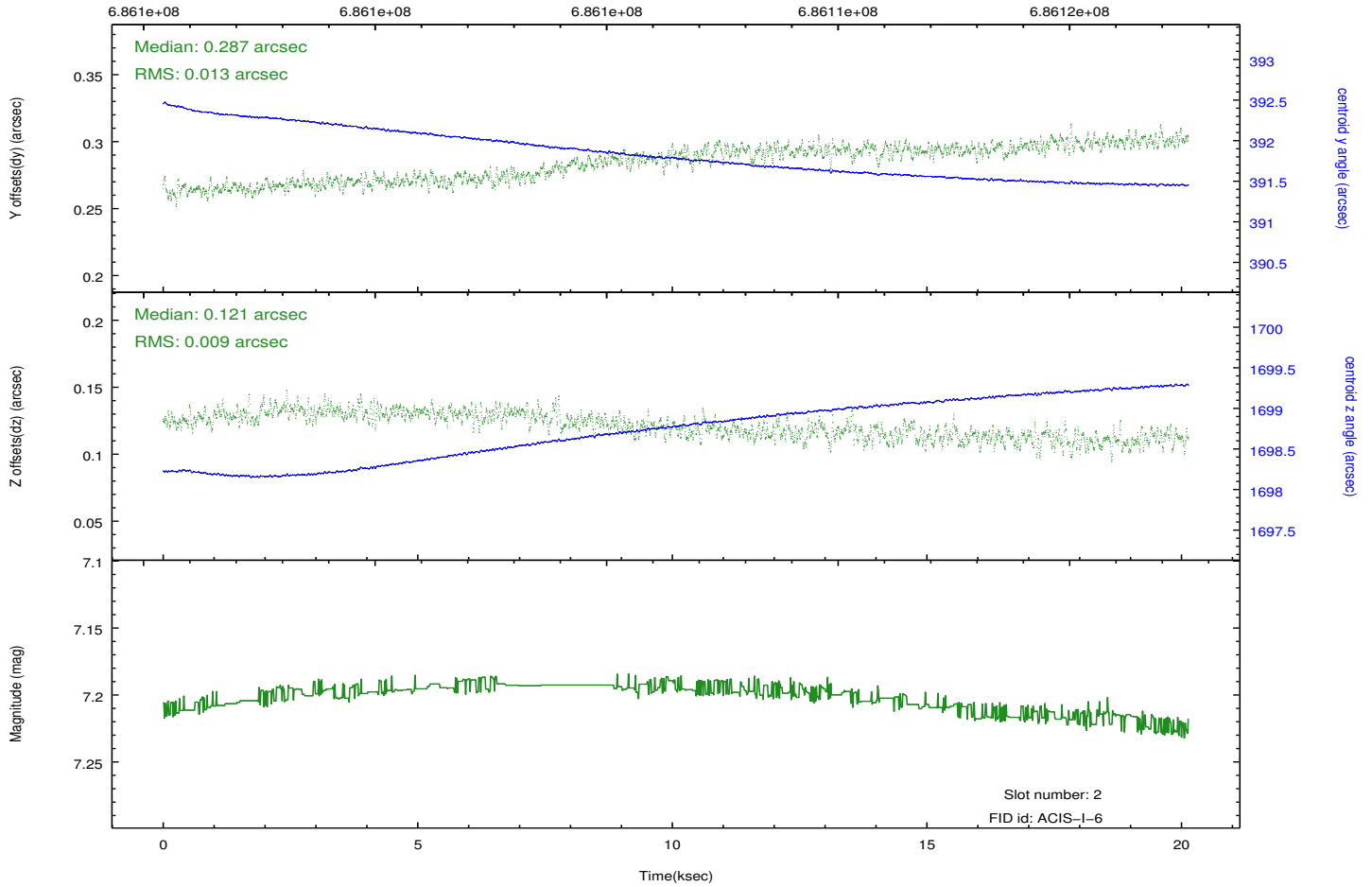
2.5.2 Slot 1



2.5.3 Slot 2



Time (s)



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2019.10.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.063200154424

A.2 Comments

A spatial region of the original bias map for CCD = 1 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~ 20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 1 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords: (34.55955,-3.86222), (34.56424,-3.86318), (34.57533,-3.81006), (34.57117,-3.80657).