

V&V Reference Report

L2 ASCDS Version : 10.6.4.1

Observation 21065 - L2 Version 1
Chandra X-Ray Center

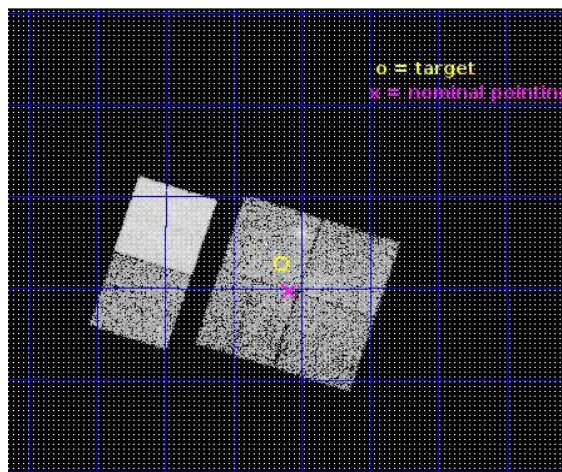
L2 Processing Date : Sep 30 2018

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1 Front

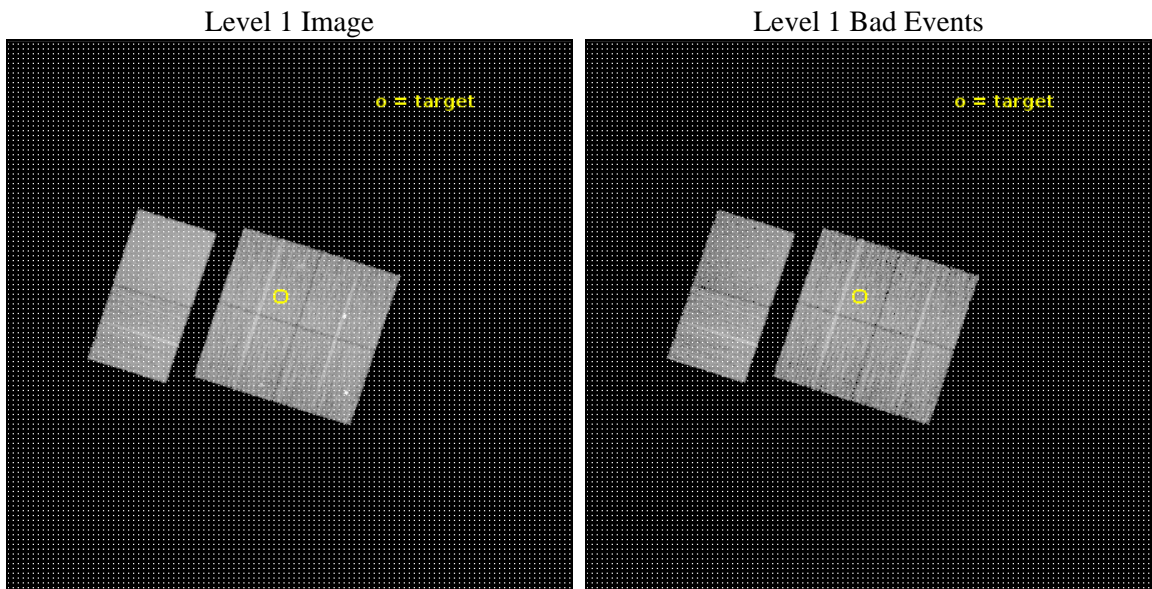
seq_num	801810	Sequence number
obs_id	21065	Observation id
title	Witnessing the culmination of structure formation in the Universe	
observer	Stefano Ettori	Principal investigator
object	PSZ2 G028.63+50.15	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	235.0375	Observer's specified target RA [deg]
dec_targ	17.878056	Observer's specified target Dec [deg]
ra_nom	235.02238638814	Nominal RA [deg]
dec_nom	17.829010482978	Nominal Dec [deg]
roll_nom	287.96536840714	Nominal Roll [deg]
revision	1	Processing version of data
ontime	9955.200148344	Sum of GTIs [s]
livetime	9829.1414097638	Livetime [s]
ontime0	9955.1257646084	Sum of GTIs [s]
ontime1	9948.684754014	Sum of GTIs [s]
ontime2	9955.200148344	Sum of GTIs [s]
ontime3	9955.200148344	Sum of GTIs [s]
ontime6	9955.200148344	Sum of GTIs [s]
ontime7	9955.200148344	Sum of GTIs [s]
l2events	80886	Number of level 2 events



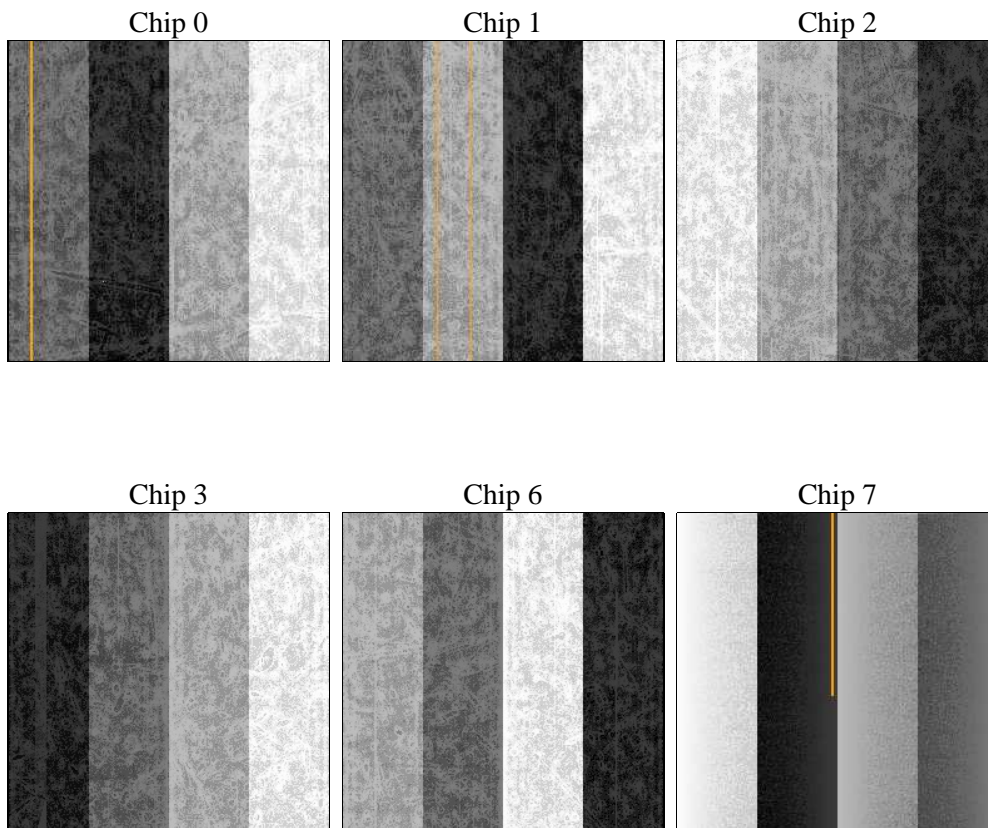
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.6.4.1	Processing system revision	ontime	9955.200148344	Sum of GTIs [s]
caldbver	4.8.0	 	ontime0	9955.1257646084	Sum of GTIs [s]
date	2018-09-30T03:41:43	Date and time of file creation	ontime1	9948.684754014	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	9955.200148344	Sum of GTIs [s]
			ontime3	9955.200148344	Sum of GTIs [s]
			ontime6	9955.200148344	Sum of GTIs [s]
			ontime7	9955.200148344	Sum of GTIs [s]
			l1events	474997	Number of level 1 events

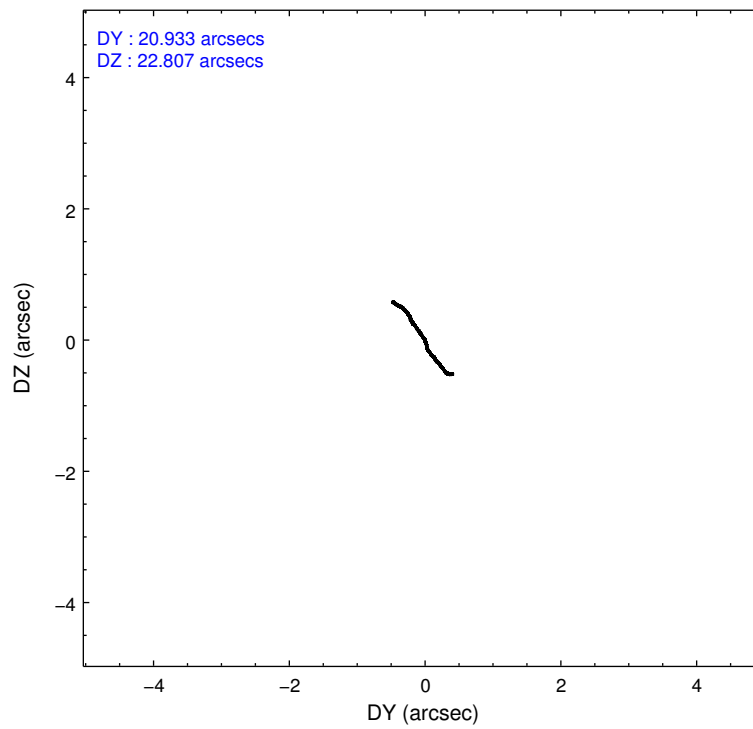
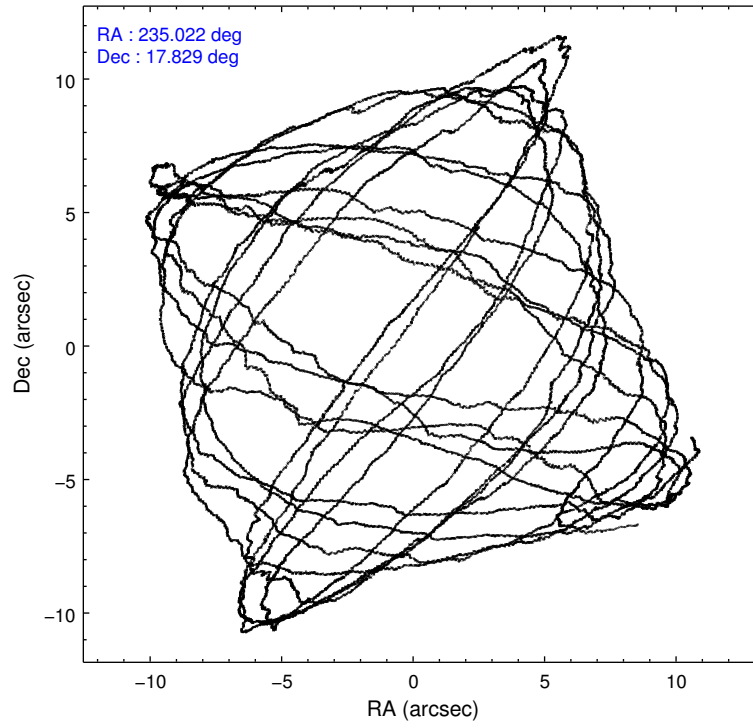
2.1.4 Events

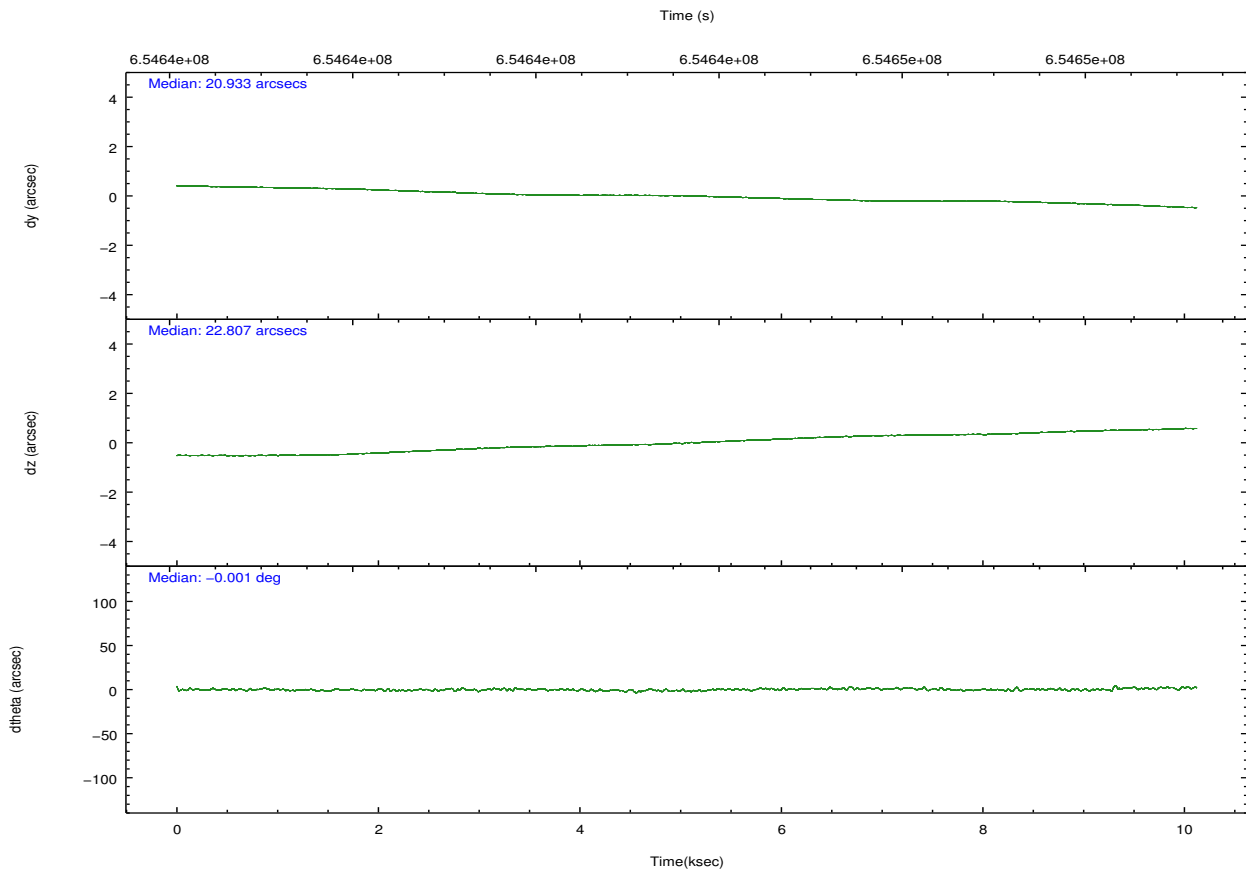
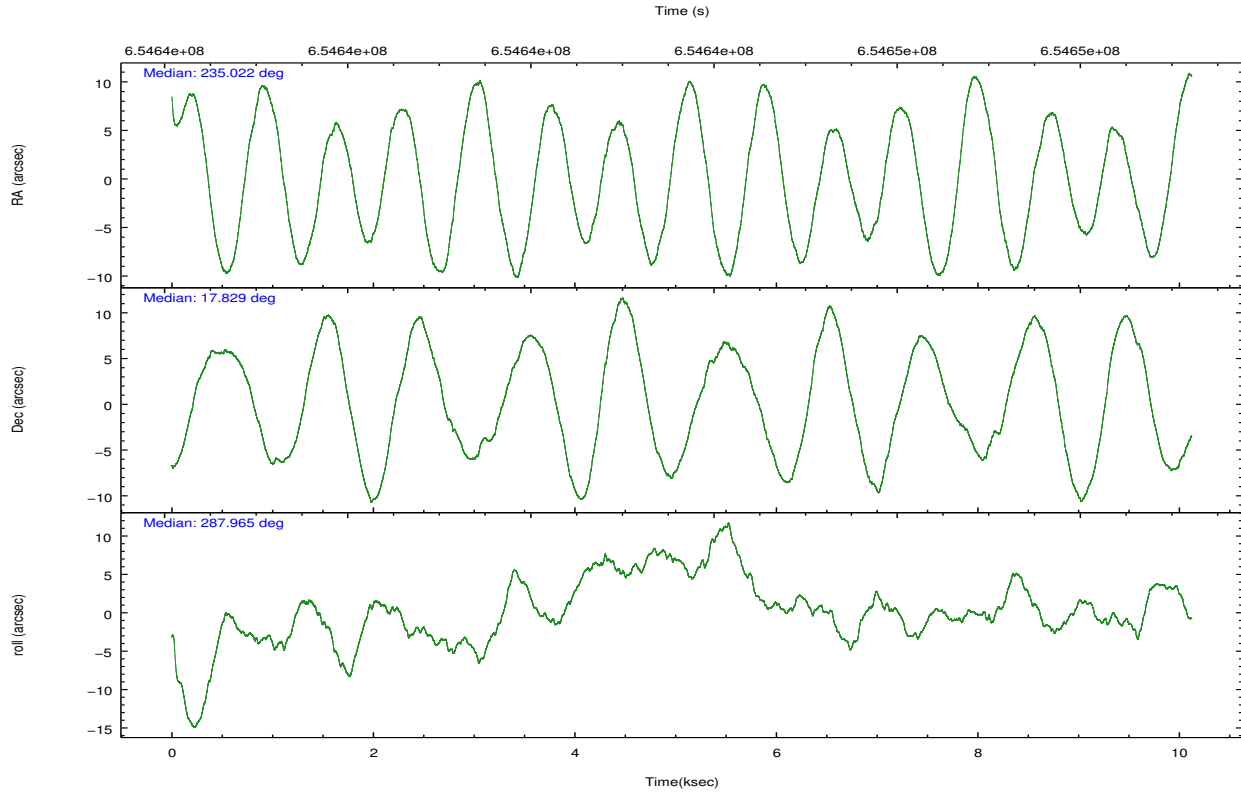
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	73179	75060	75465	75527	79662	96104	grade 0 events	3079	6576	3534	5093	2801	3585
rejected events	61526	61950	66845	64961	70856	54126		4%	8%	4%	6%	3%	3%
rejected %	84%	82%	88%	86%	88%	56%	grade 1 events	45	55	60	55	49	123
								0%	0%	0%	0%	0%	0%
							grade 2 events	5061	2602	1887	1967	2216	8929
								6%	3%	2%	2%	2%	9%
							grade 3 events	895	934	761	894	839	3381
								1%	1%	1%	1%	1%	3%
							grade 4 events	813	927	853	908	846	3199
								1%	1%	1%	1%	1%	3%
							grade 5 events	3059	3312	2847	3455	3522	9377
								4%	4%	3%	4%	4%	9%
							grade 6 events	1806	2075	1588	1707	2107	22898
								2%	2%	2%	2%	2%	23%
							grade 7 events	58421	58579	63935	61448	67282	44612
								79%	78%	84%	81%	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	235.000734	235.0223863881361	CCD I2 on	Y	Y
[deg] Pointing Dec	17.847429	17.82901048297822	CCD I3 on	Y	Y
[deg] Pointing Roll	287.763315	287.9653684071447	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	O2	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	654638699.184000	654637423.39039	CCD S5 on	N	N
Observation start date	2018-09-29T20:03:50	2018-09-29T19:43:43	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	654648699.184000	654649793.09112	On-chip summing requested	N	N
Observation end date	2018-09-29T22:50:30	2018-09-29T23:09:53	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect





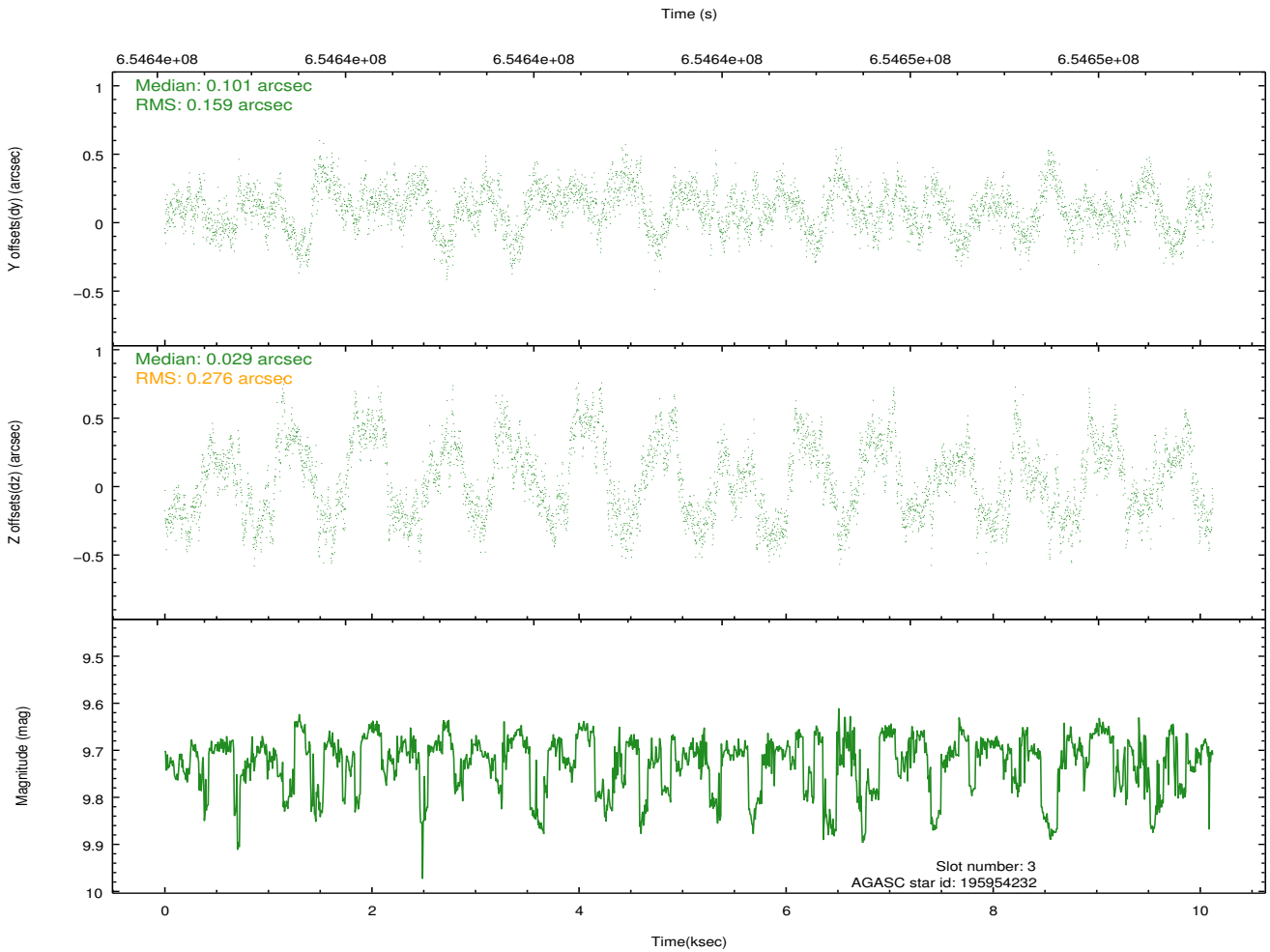
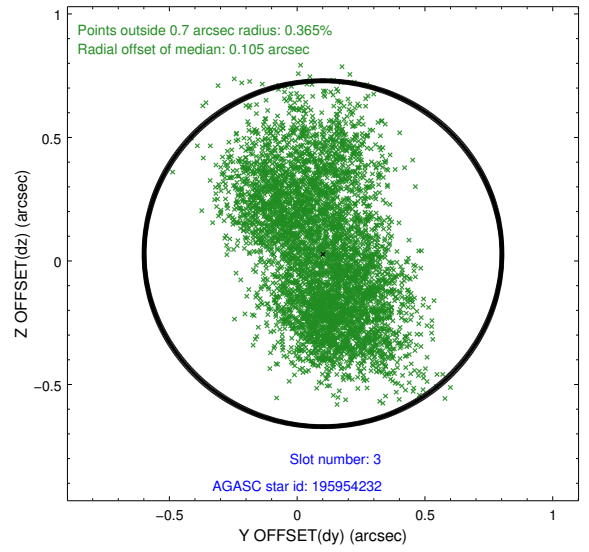
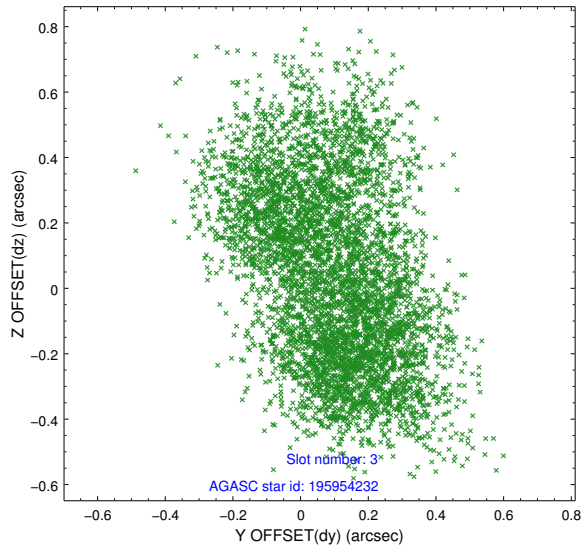
Slot Statistics

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	7.14	2469	1.000	-0.067	0.028	0.011	0.018	0.000000	0.000000	918.30	-846
1	FID		ACIS-I-2	7.04	2469	1.000	-0.346	-0.209	0.012	0.027	0.000000	0.000000	-775.79	-853
2	FID		ACIS-I-4	7.11	2469	1.000	0.313	0.248	0.019	0.034	0.000000	0.000000	2138.36	1053
3	GUIDE	used	195954232	9.71	4930	1.000	0.101	0.029	0.344	0.528	235.096904	17.398123	1641.06	-179
4	GUIDE	used	196226368	9.46	4928	1.000	0.308	0.491	0.239	0.395	234.206400	18.131310	-1806.77	-2274
5	GUIDE	used	196347904	9.15	4934	1.000	0.084	0.158	0.208	0.332	234.999312	18.181866	-1146.93	361
6	GUIDE	used	196347040	8.07	4866	1.000	-0.192	-0.327	0.180	0.307	235.612071	18.216087	-630.43	2396
7	GUIDE	used	195952648	10.07	4899	1.000	-0.301	-0.373	0.302	0.483	235.657539	17.371622	2315.92	1627

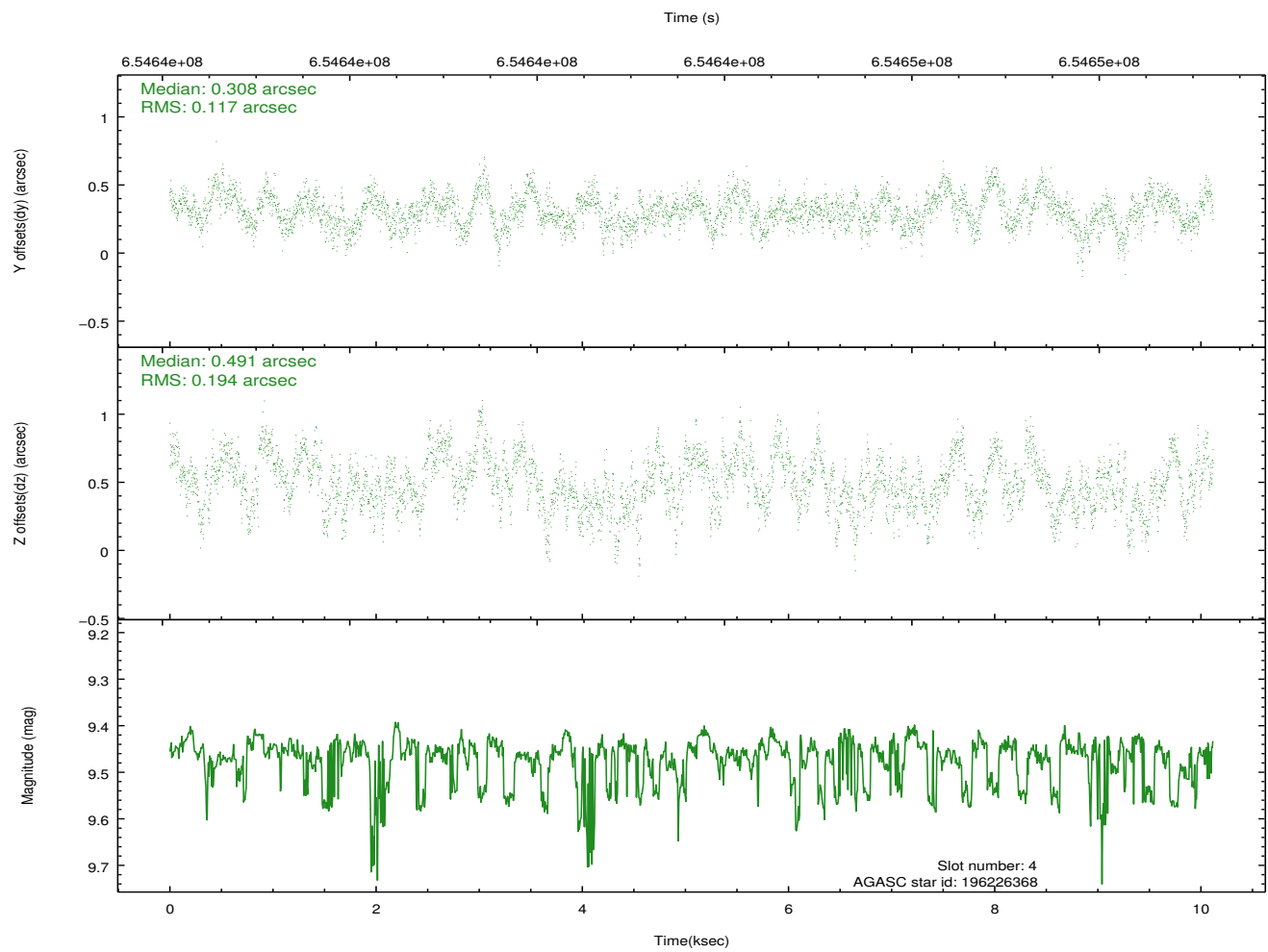
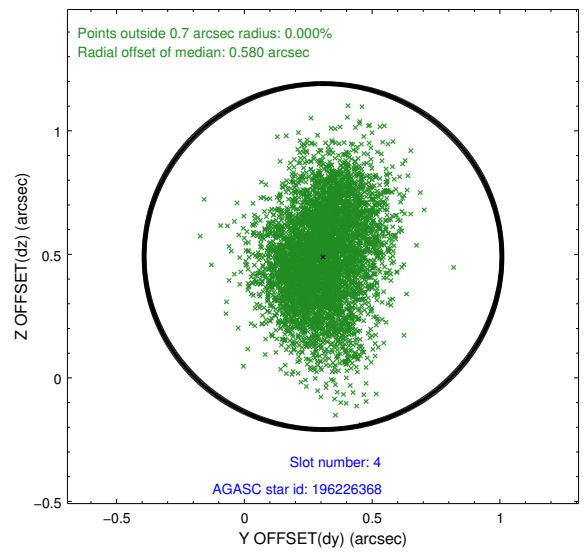
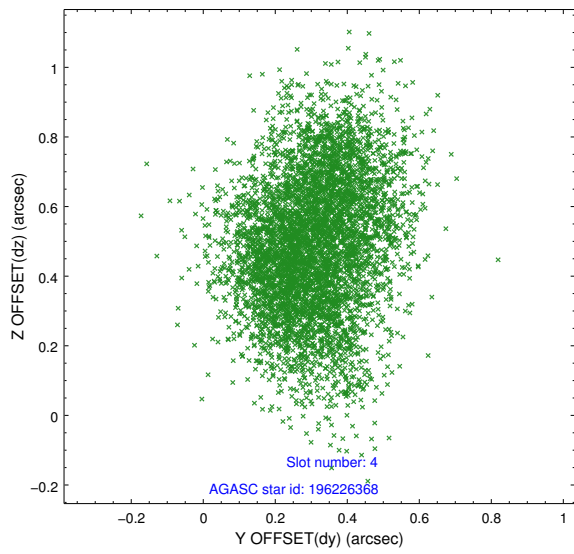
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2.4 Star Slots

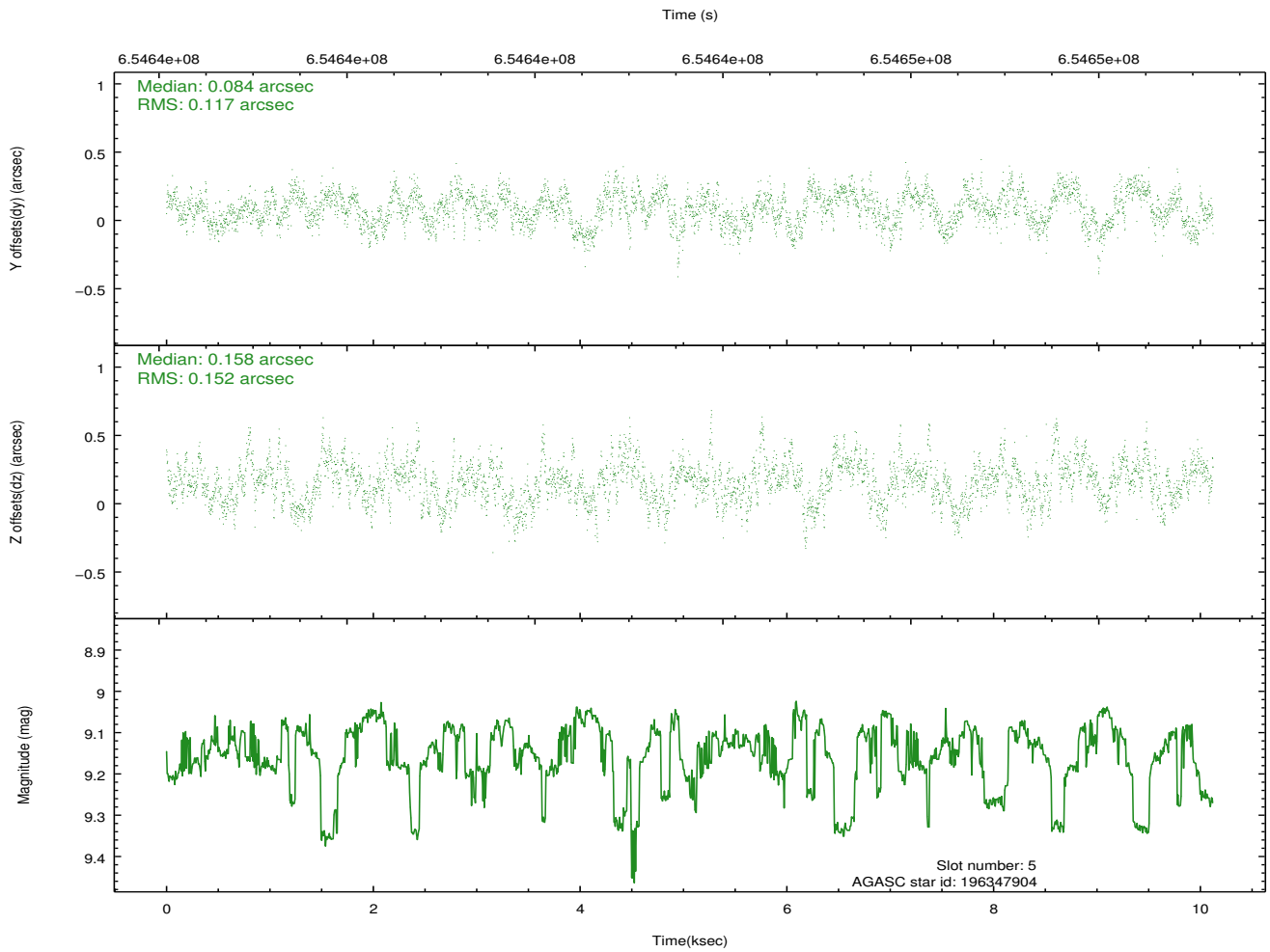
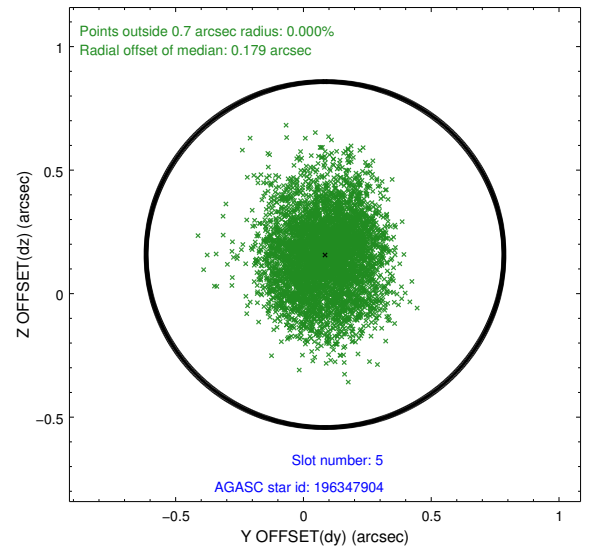
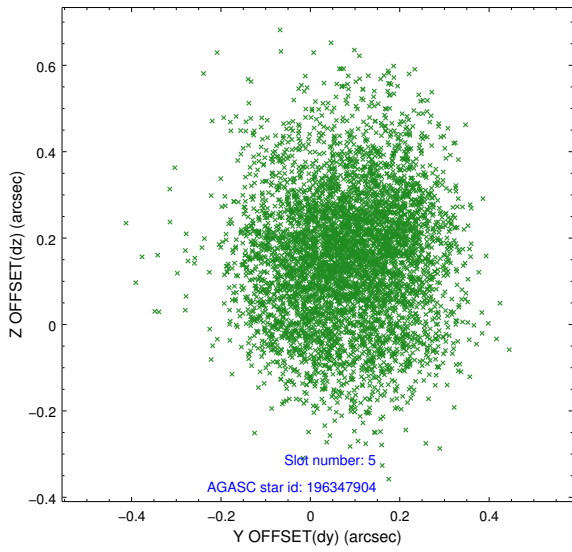
2.4.1 Slot 3



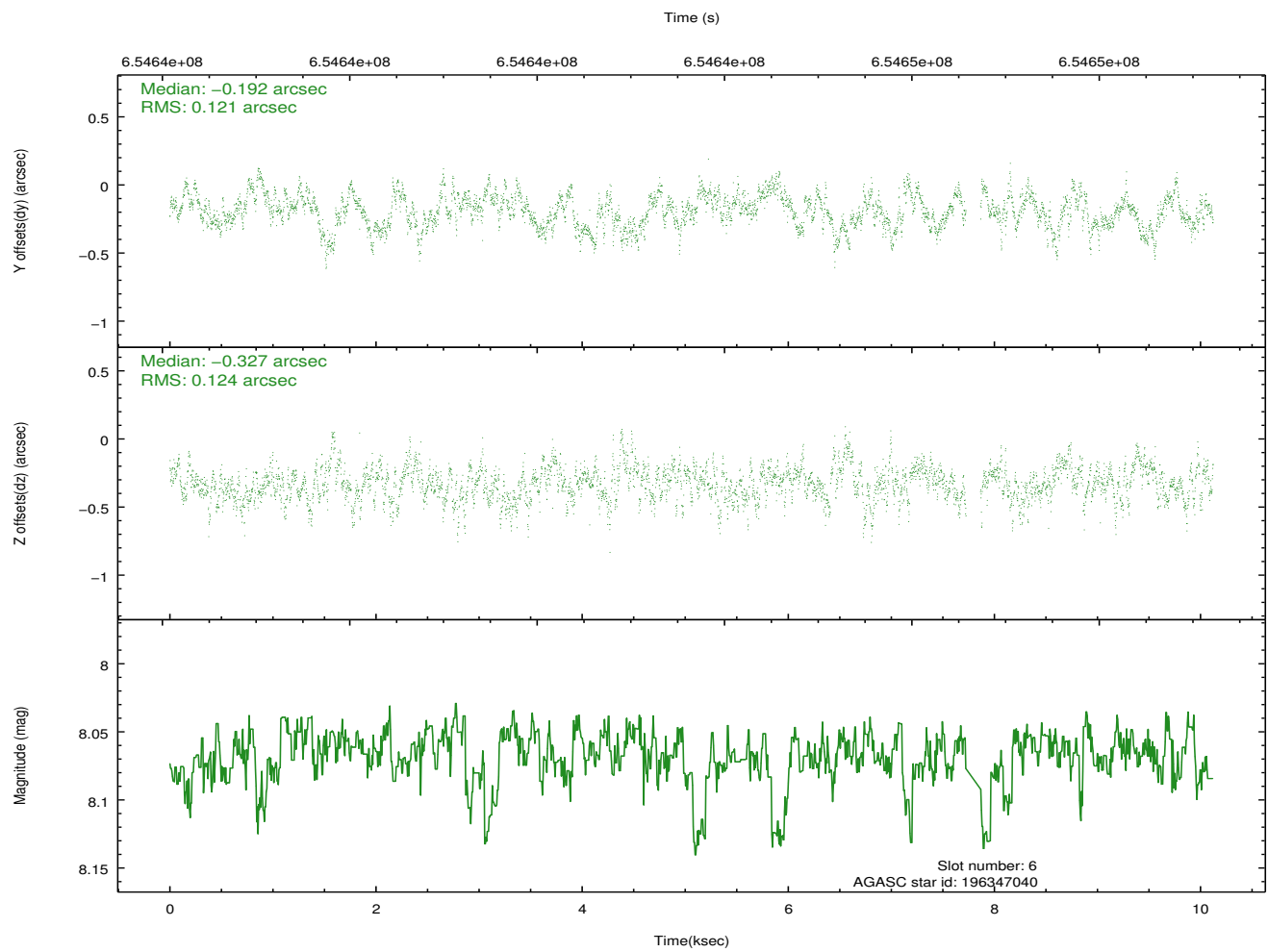
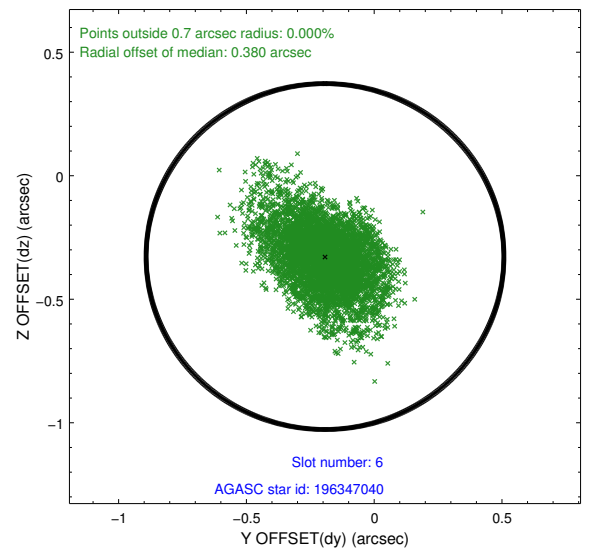
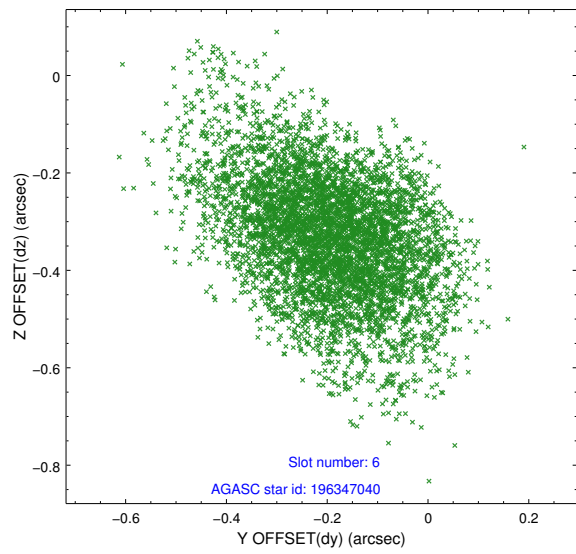
2.4.2 Slot 4



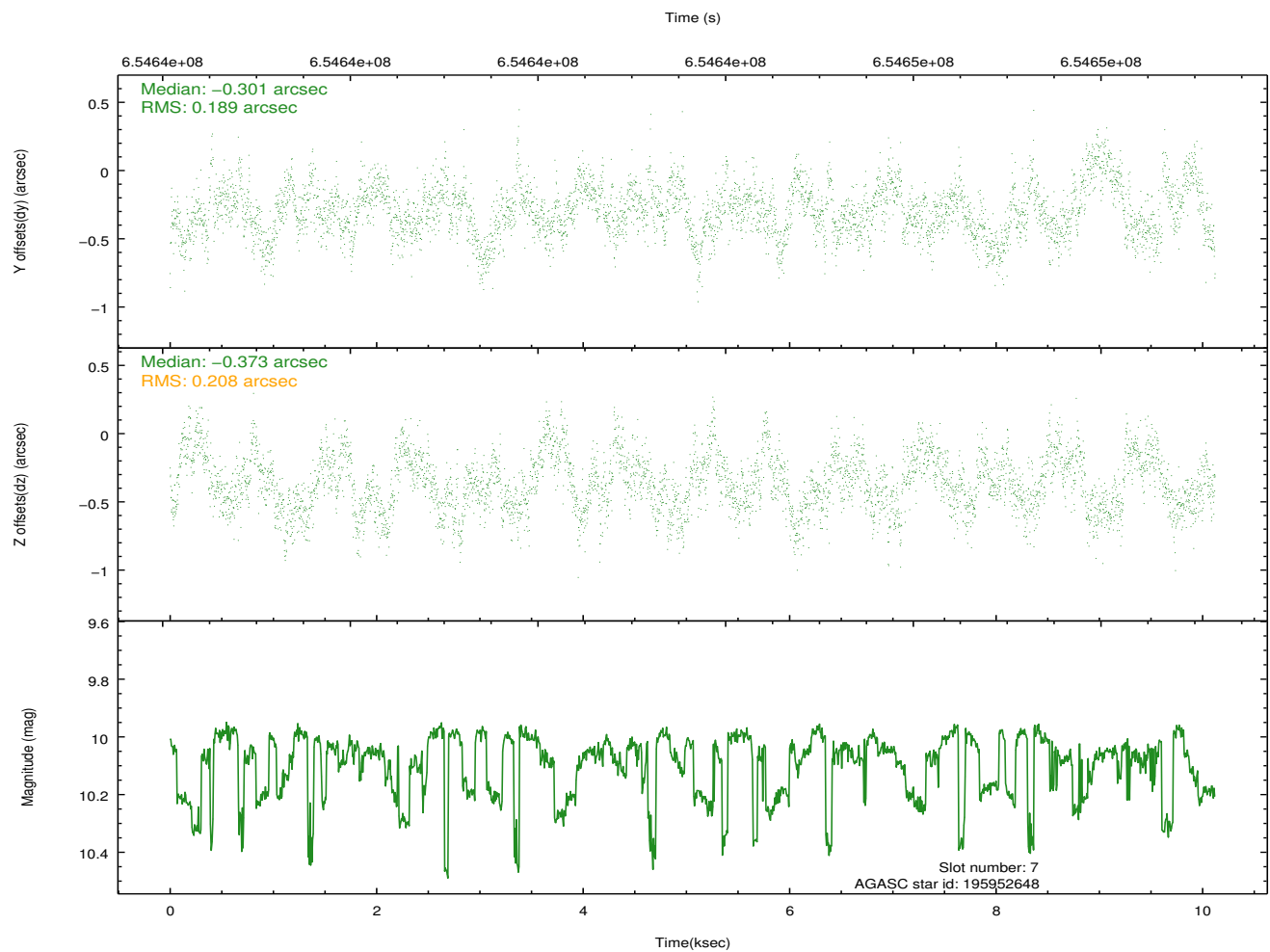
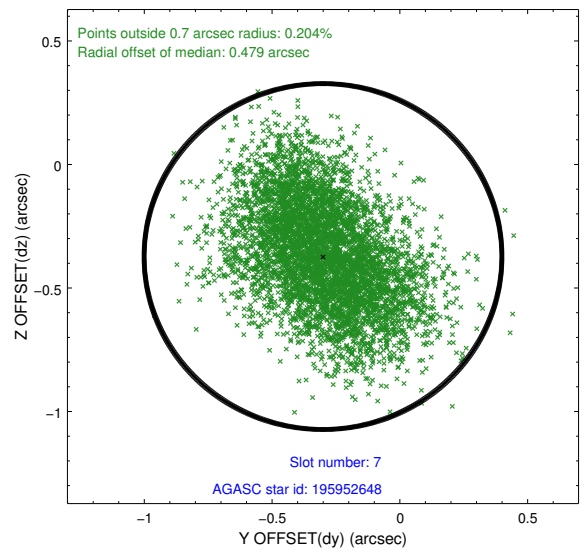
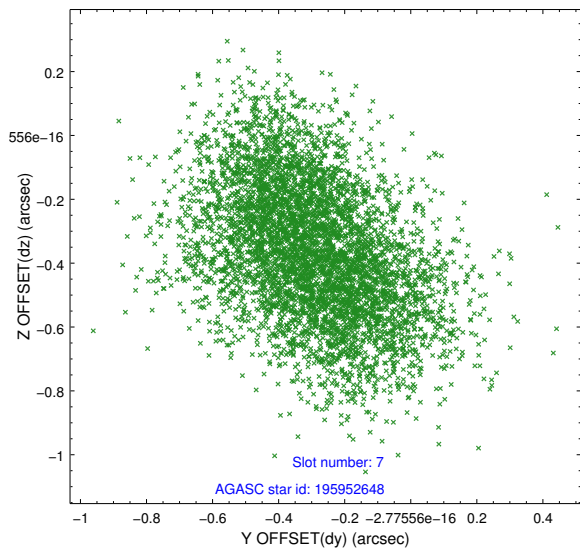
2.4.3 Slot 5



2.4.4 Slot 6

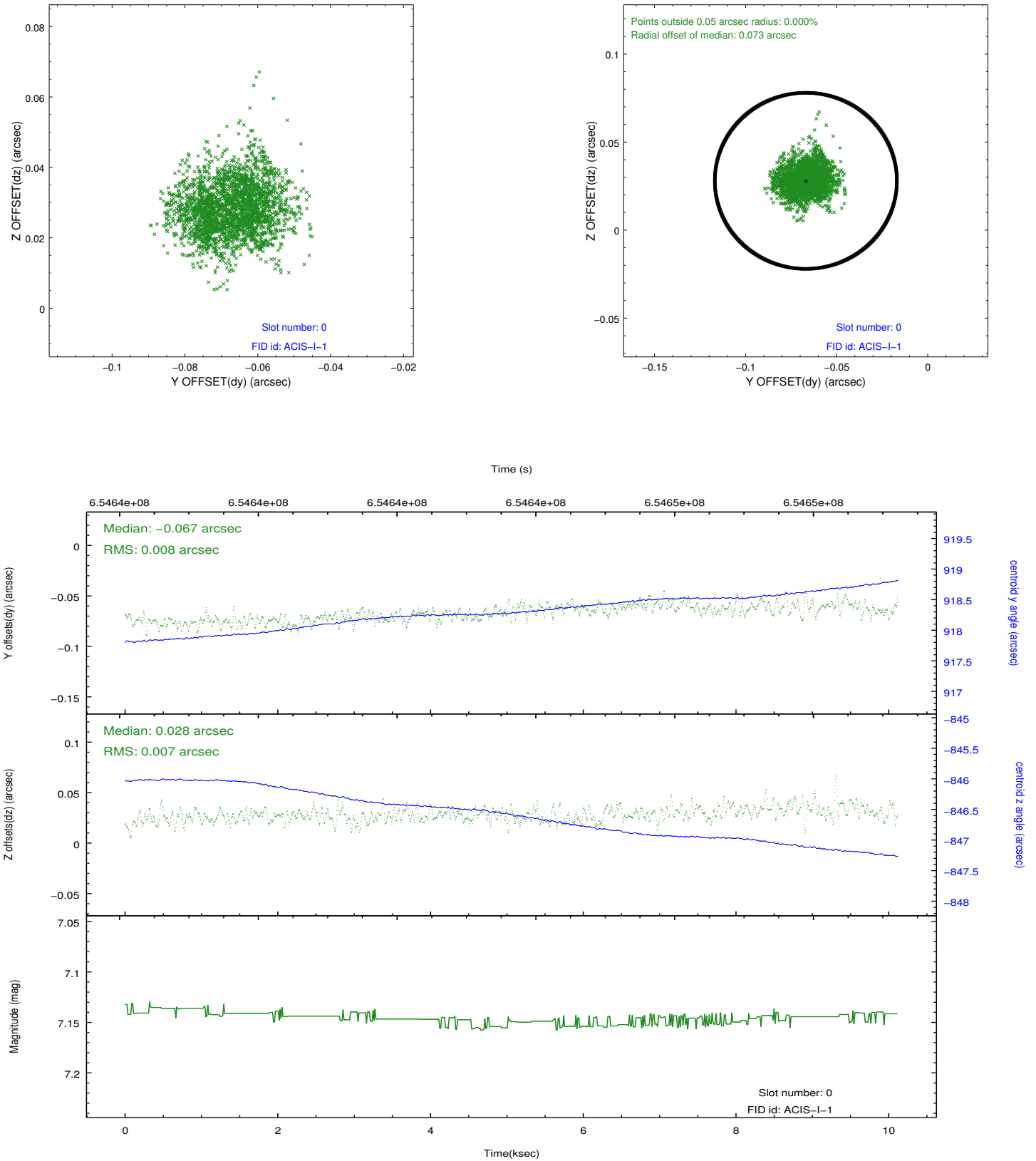


2.4.5 Slot 7

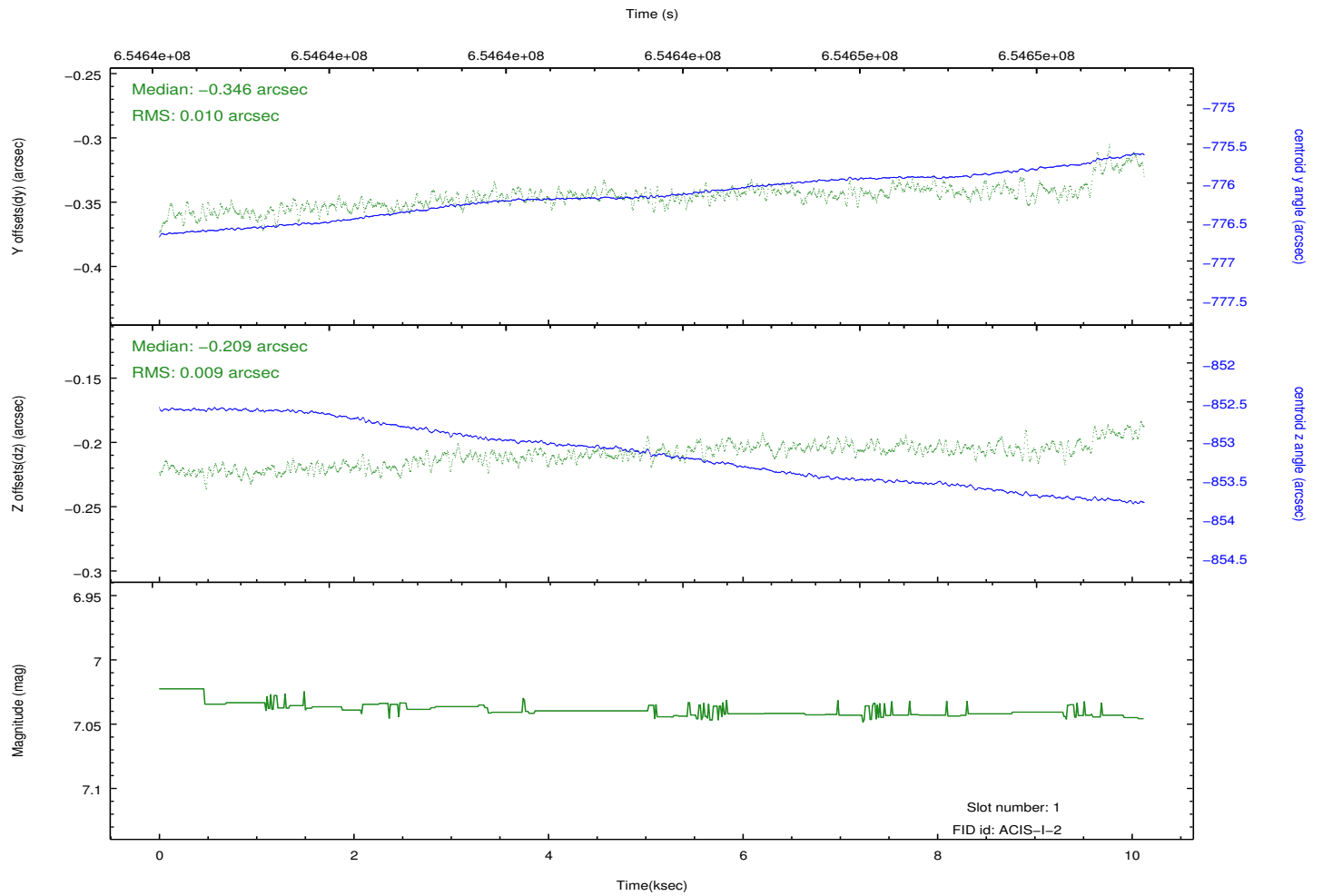
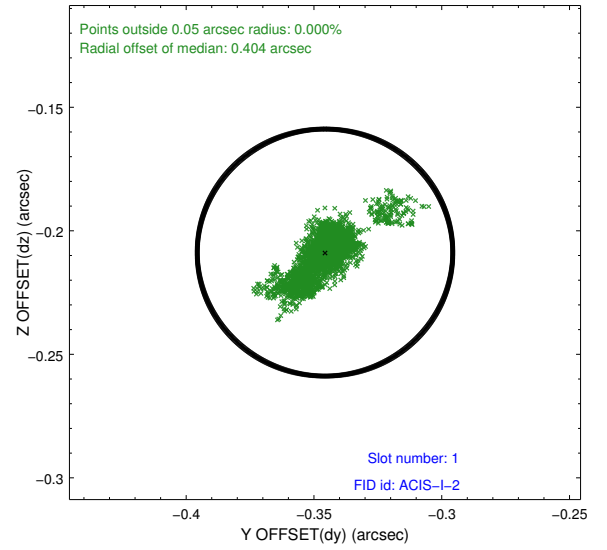
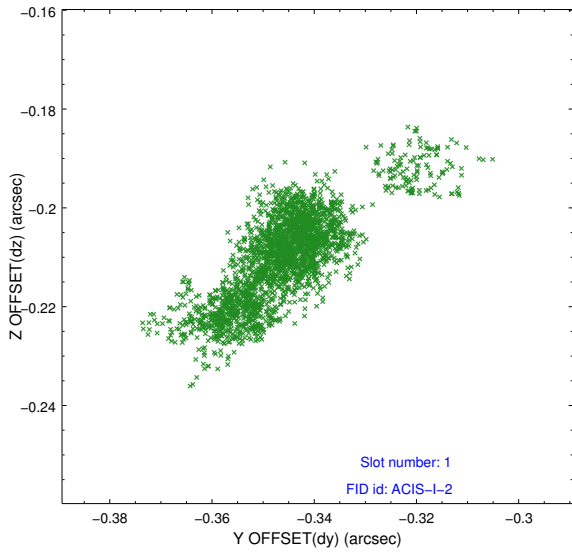


2.5 FID Slots

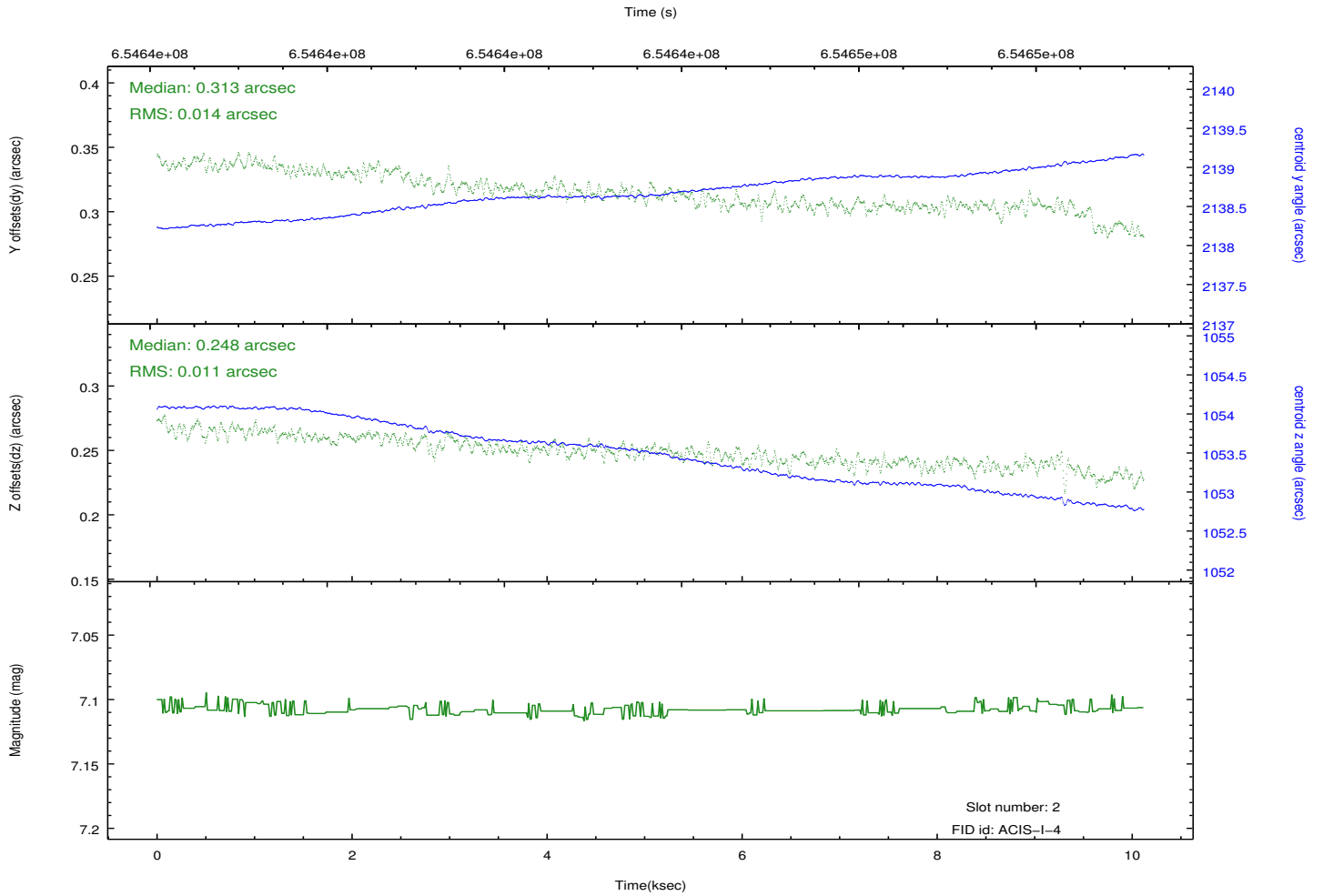
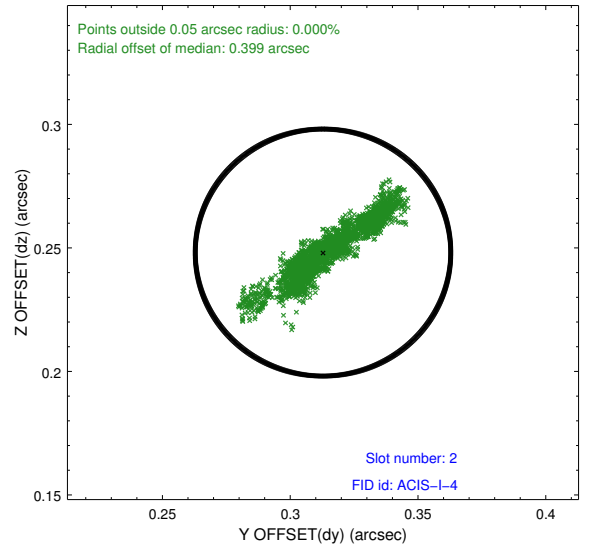
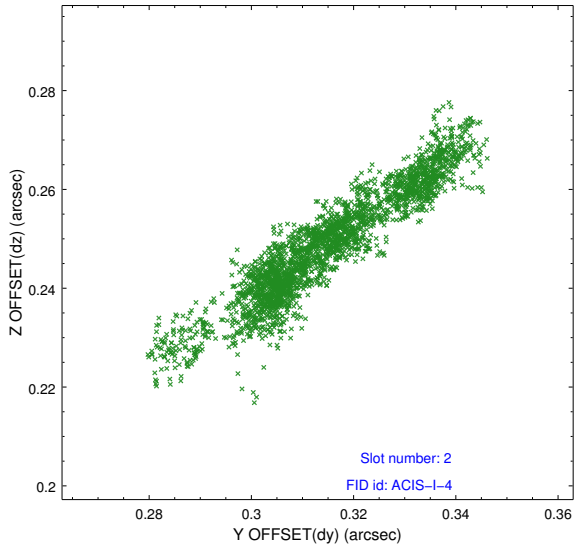
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Francesca Civano
V&V Date (YYYY-MM-DD)	2018.10.10
V&V Edition	2
V&V Disposition and Status	OK
V&V Charge Time	9.955200148344

A.2 Comments

A spatial region of the original bias map for CCD = 3 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. In this case, the bias map for CCD = 3 could not be improved because no suitable data at a compatible temperature and time range are available to use as replacement values. The bias map used in this processing is the original bias map telemetered with the observation.

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Joint proposal with XMM.