

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 20780 - L2 Version 2
Chandra X-Ray Center

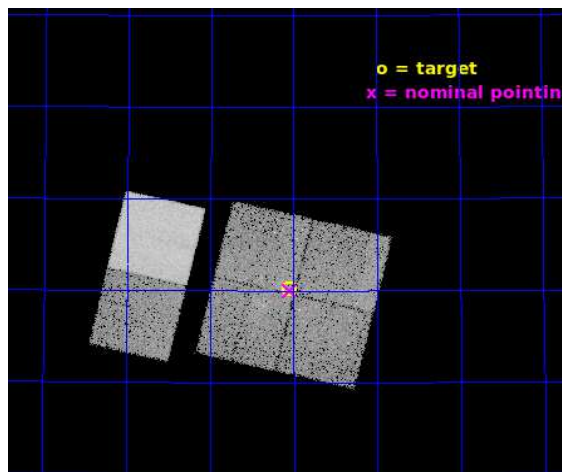
L2 Processing Date : Oct 26 2020

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1 Front

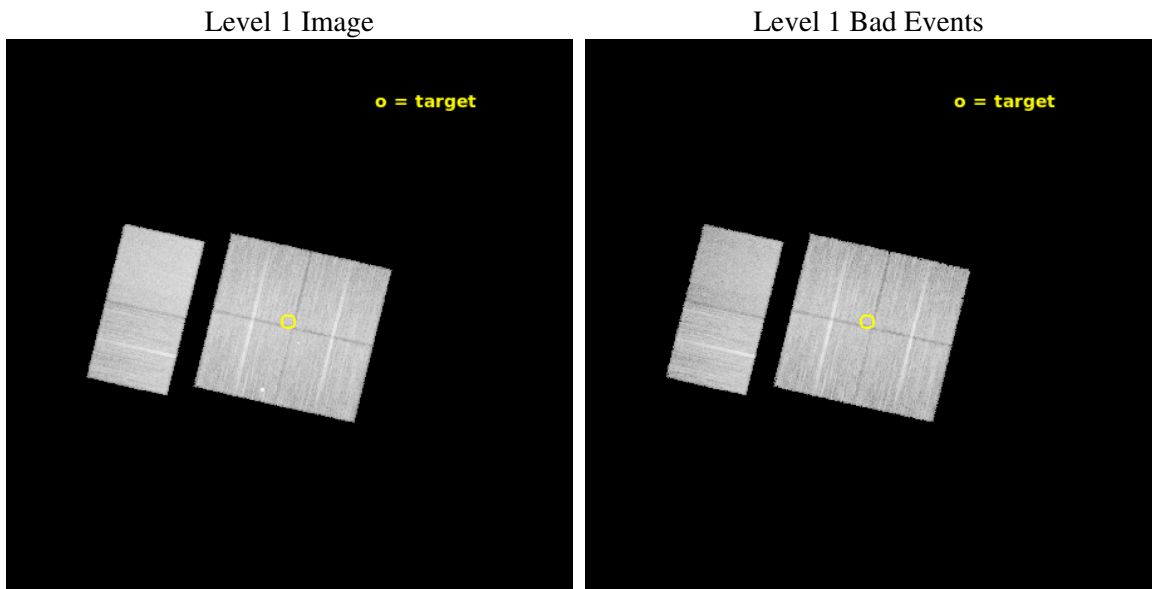
seq_num	801793	Sequence number
obs_id	20780	Observation id
title	A first characterization of galaxy clusters hosting diffuse low-frequency radio emission	Proposal title
observer	Ralph Kraft	Principal investigator
object	SDSS-C4-DR3 3088	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	146.7625	Observer's specified target RA [deg]
dec_targ	54.504444	Observer's specified target Dec [deg]
ra_nom	146.76126711564	Nominal RA [deg]
dec_nom	54.500234049801	Nominal Dec [deg]
roll_nom	283.24406022885	Nominal Roll [deg]
revision	2	Processing version of data
ontime	16956.800252676	Sum of GTIs [s]
livetime	16742.083037717	Livetime [s]
ontime0	16956.800252676	Sum of GTIs [s]
ontime1	16956.800252676	Sum of GTIs [s]
ontime2	16956.800252676	Sum of GTIs [s]
ontime3	16956.800252676	Sum of GTIs [s]
ontime6	16956.800252676	Sum of GTIs [s]
ontime7	16956.800252676	Sum of GTIs [s]
l2events	131928	Number of level 2 events



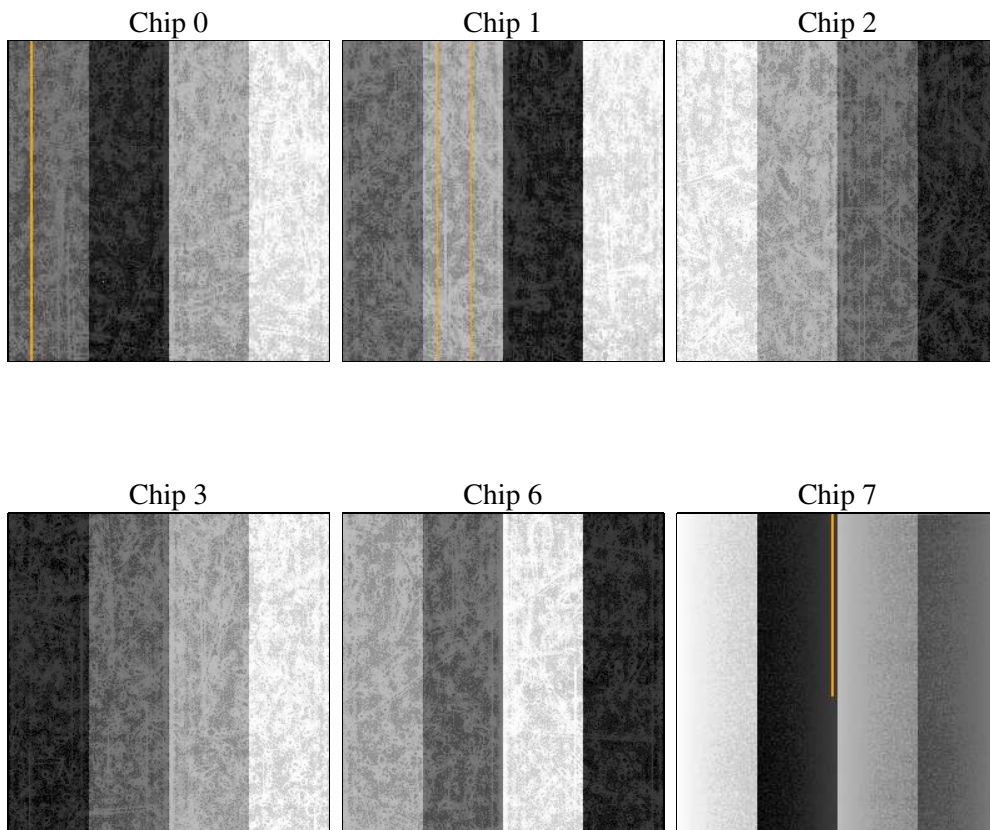
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	17000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	16956.800252676	Sum of GTIs [s]
caldsver	4.9.3	 	ontime0	16956.800252676	Sum of GTIs [s]
date	2020-10-26T09:49:26	Date and time of file creation	ontime1	16956.800252676	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	16956.800252676	Sum of GTIs [s]
			ontime3	16956.800252676	Sum of GTIs [s]
			ontime6	16956.800252676	Sum of GTIs [s]
			ontime7	16956.800252676	Sum of GTIs [s]
			l1events	768828	Number of level 1 events

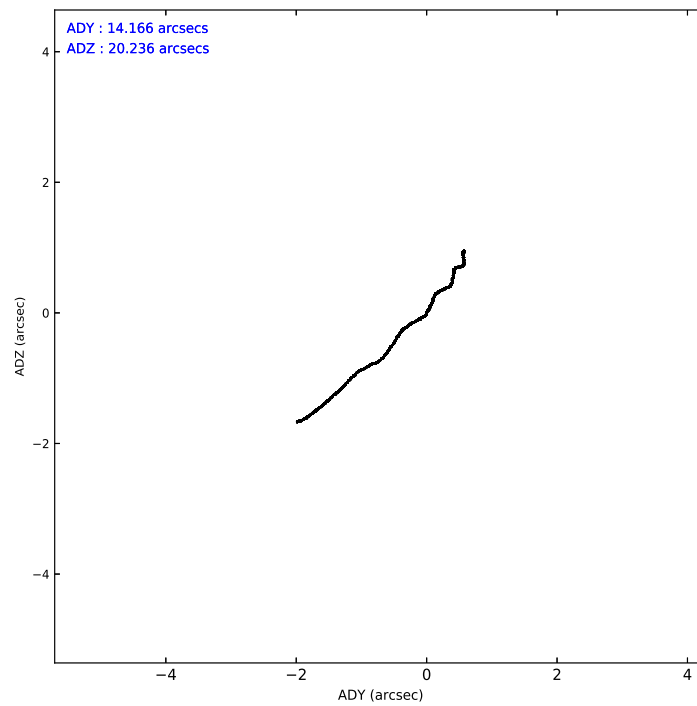
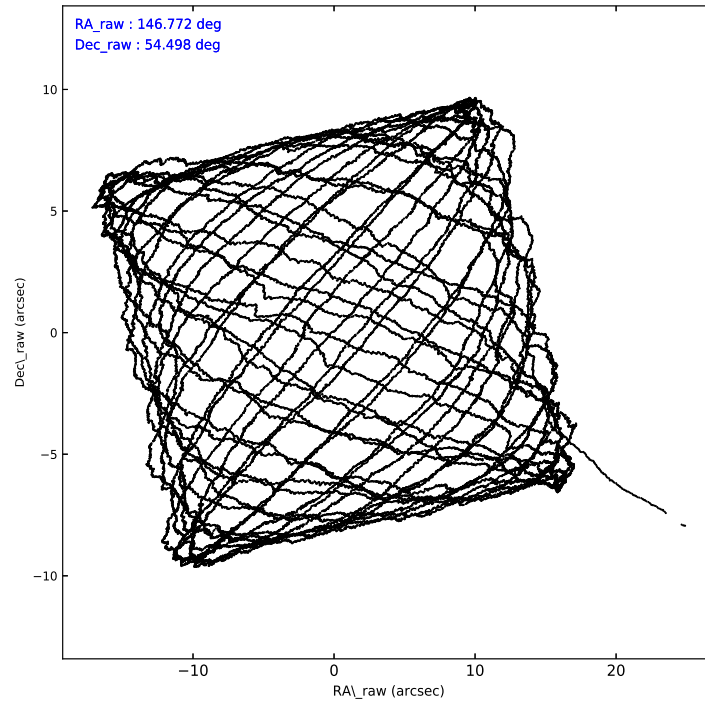
2.1.4 Events

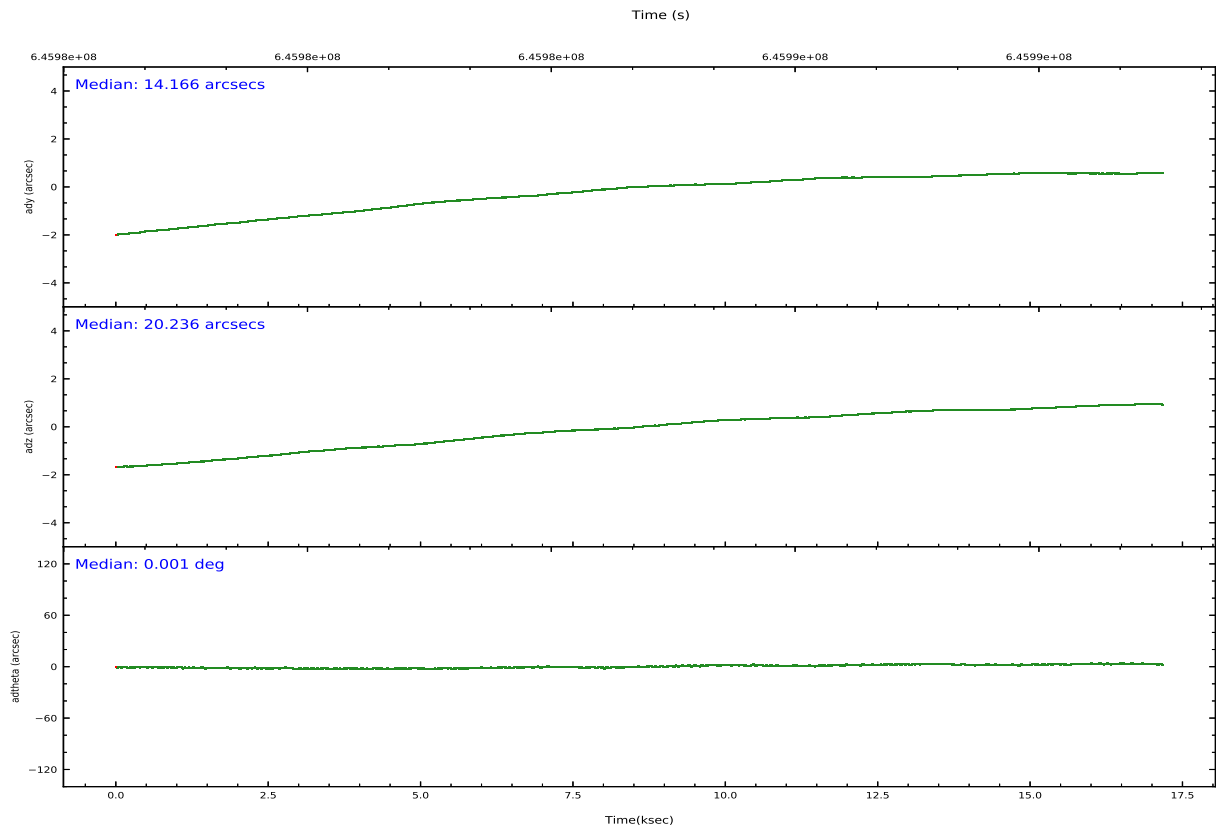
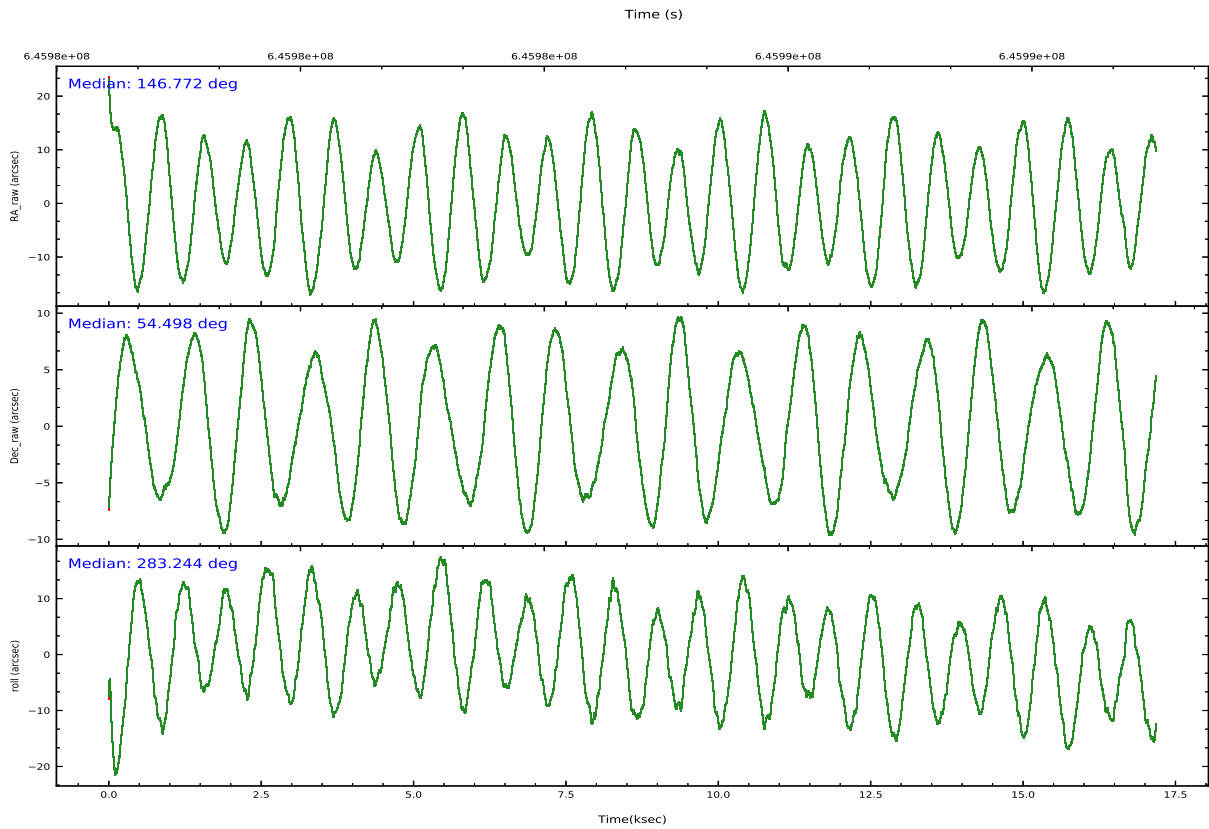
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	115254	115960	127116	119246	130521	160731	grade 0 events	5844	5985	7137	5589	4786	5971
rejected events	100100	99612	110740	105220	116076	90122		5%	5%	5%	4%	3%	3%
rejected %	86%	85%	87%	88%	88%	56%	grade 1 events	78	66	99	80	68	232
								0%	0%	0%	0%	0%	0%
							grade 2 events	3741	4092	3680	2879	3436	15183
								3%	3%	2%	2%	2%	9%
							grade 3 events	1363	1520	1355	1354	1393	5610
								1%	1%	1%	1%	1%	3%
							grade 4 events	1364	1463	1384	1435	1412	5736
								1%	1%	1%	1%	1%	3%
							grade 5 events	5342	5702	5066	6089	5926	16204
								4%	4%	3%	5%	4%	10%
							grade 6 events	2848	3297	2824	2778	3426	38142
								2%	2%	2%	2%	2%	23%
							grade 7 events	94674	93835	105571	99042	110074	73653
								82%	80%	83%	83%	84%	45%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
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	146.739856	146.76126711564	CCD I2 on	Y	Y
[deg] Pointing Dec	54.517624	54.500234049801	CCD I3 on	Y	Y
[deg] Pointing Roll	283.066608	283.24406022885	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)	645977038.184000	645976067.3016	CCD S5 on	N	N
Observation start date	2018-06-21T14:02:49	2018-06-21T13:47:47	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	645994038.184000	645994745.87771	On-chip summing requested	N	N
Observation end date	2018-06-21T18:46:09	2018-06-21T18:59:05	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect





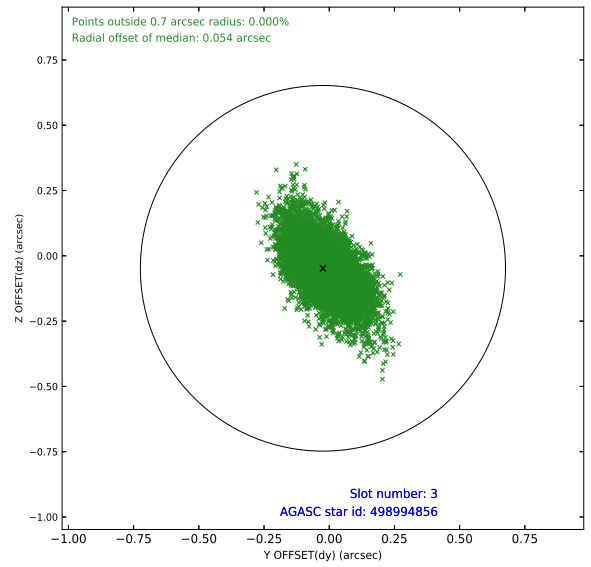
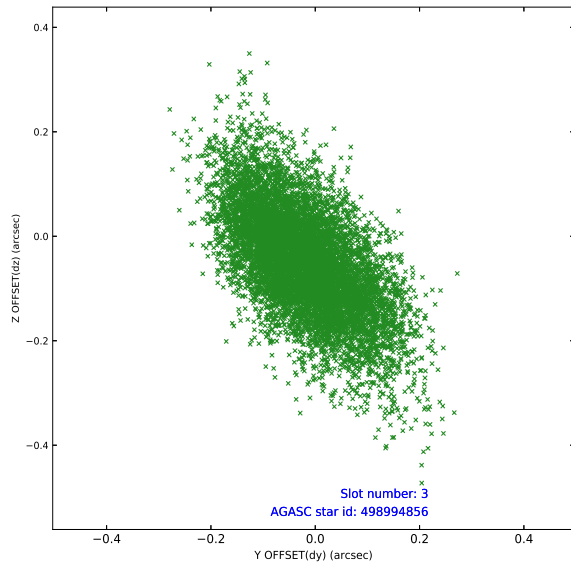
Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.09	4192	1.000	0.172	-0.120	0.036	0.053	0.000000	0.000000	925.72	-844
1	FID		ACIS-I-5	7.09	4191	1.000	-0.293	0.146	0.017	0.026	0.000000	0.000000	-1822.61	1053
2	FID		ACIS-I-6	7.09	4191	1.000	0.028	0.044	0.024	0.040	0.000000	0.000000	391.00	1698
3	GUIDE	used	498994856	6.90	8380	1.000	-0.024	-0.048	0.136	0.238	145.779010	54.363703	71.75	-2085
4	GUIDE	used	499916104	7.73	8380	1.000	0.044	-0.066	0.136	0.237	147.143721	54.264909	1076.36	620
5	GUIDE	used	499920952	7.87	8382	1.000	-0.009	0.027	0.149	0.251	147.224445	53.940521	2253.86	531
6	GUIDE	used	500313056	7.87	8378	1.000	-0.278	0.253	0.111	0.205	147.228953	55.127825	-1915.38	1478
7	GUIDE	used	498995016	7.27	8381	1.000	0.263	-0.167	0.135	0.248	146.032802	53.766768	2286.28	-2074

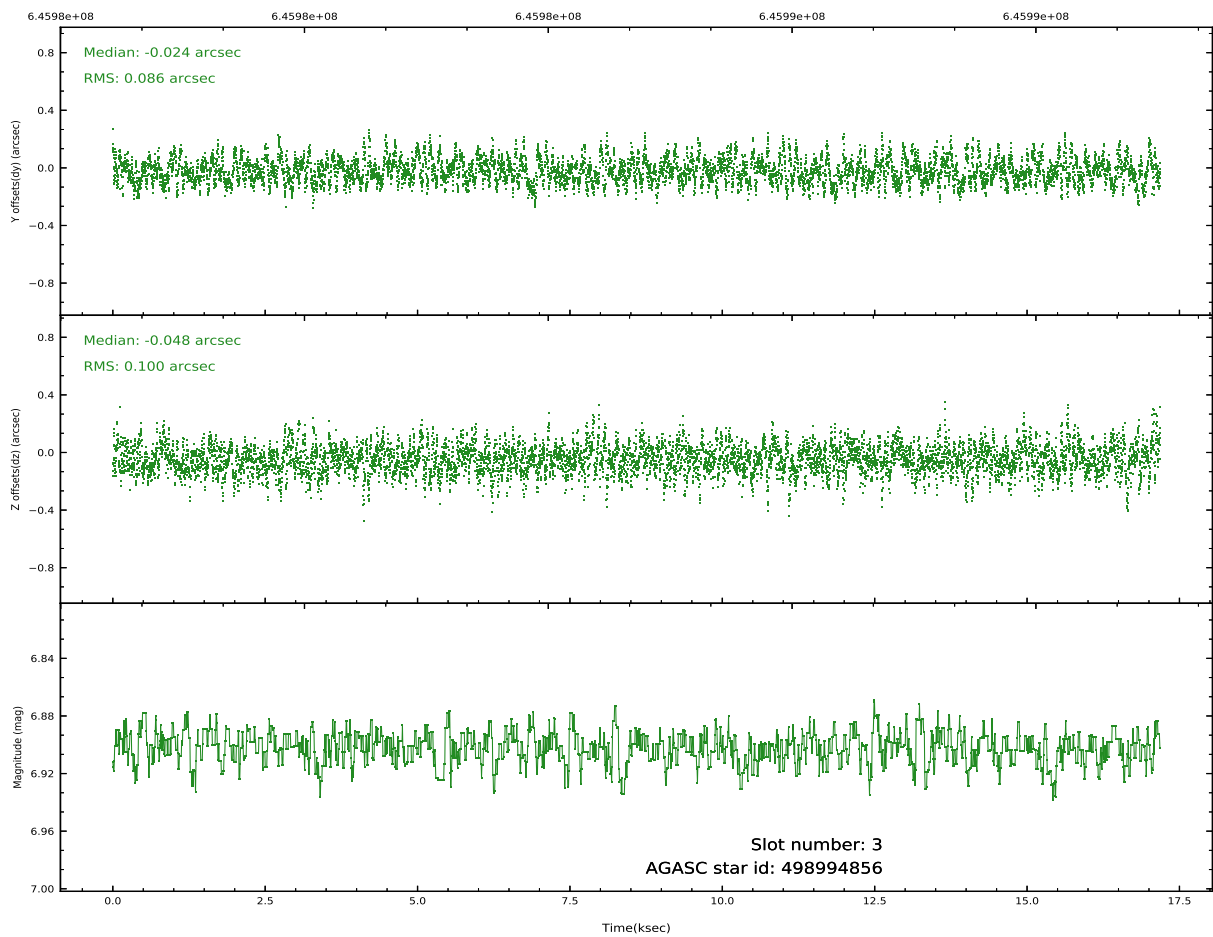
∞

2.4 Star Slots

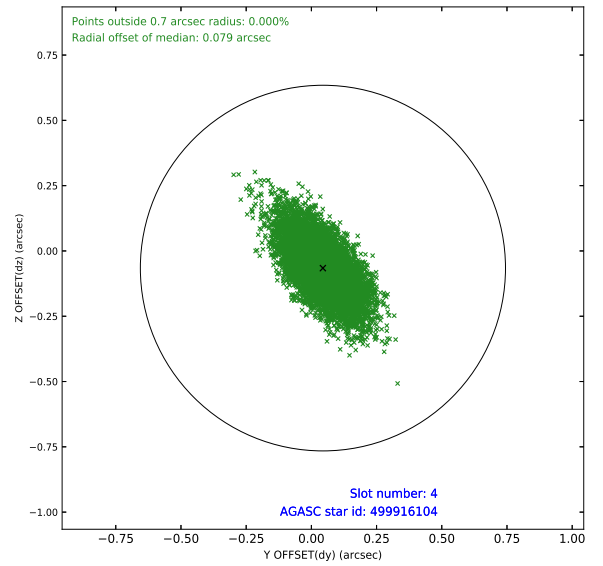
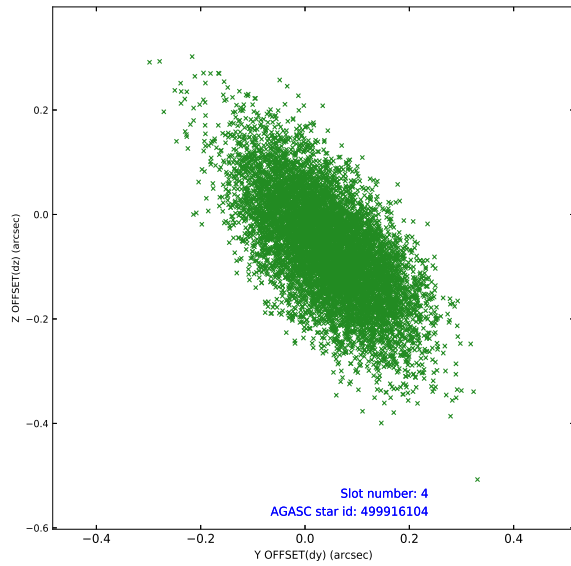
2.4.1 Slot 3



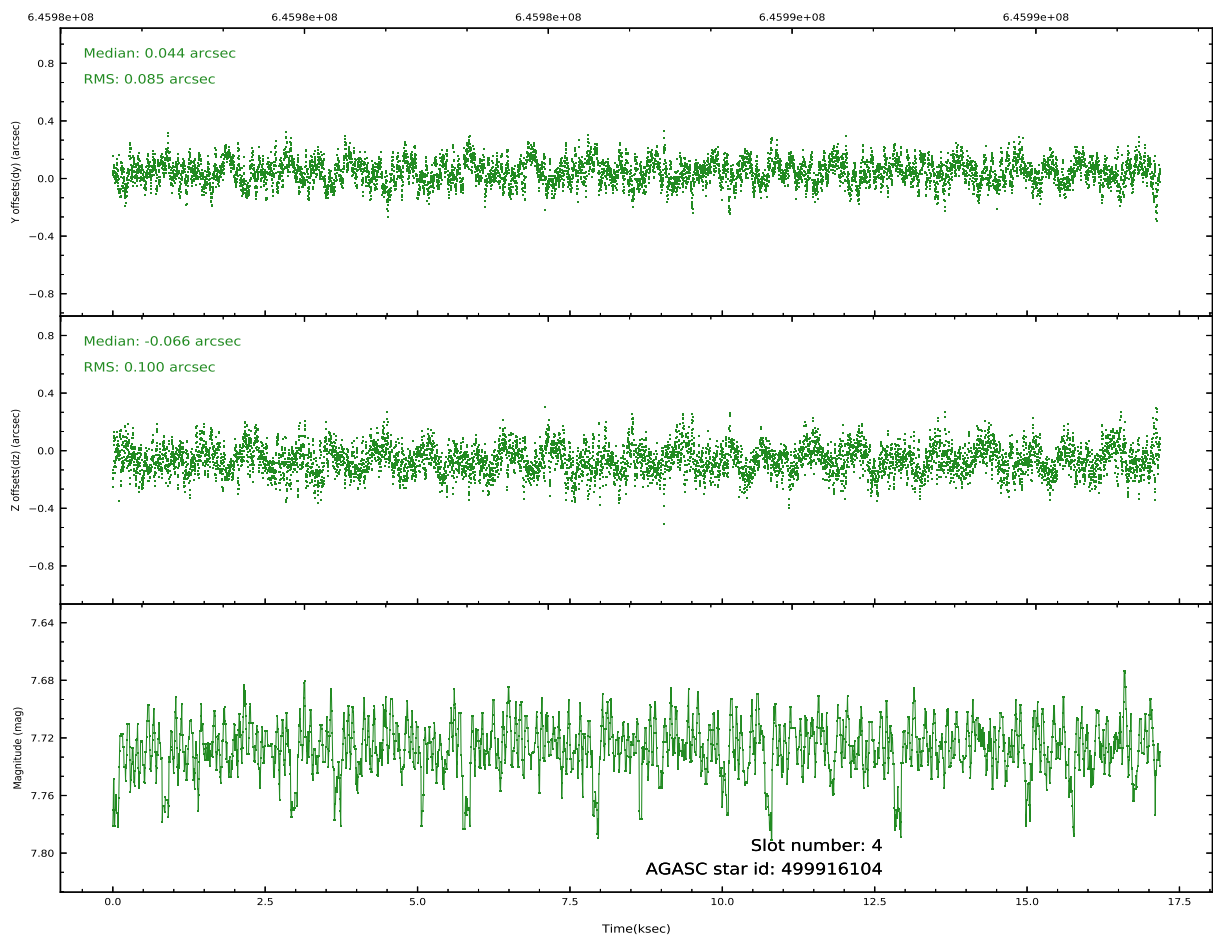
Time (s)



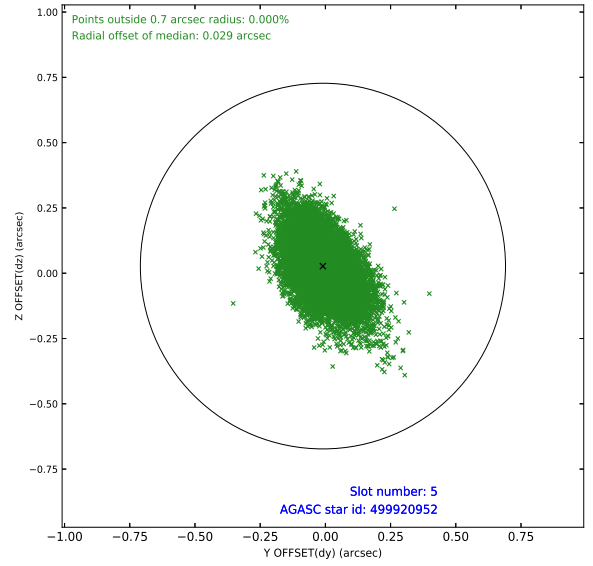
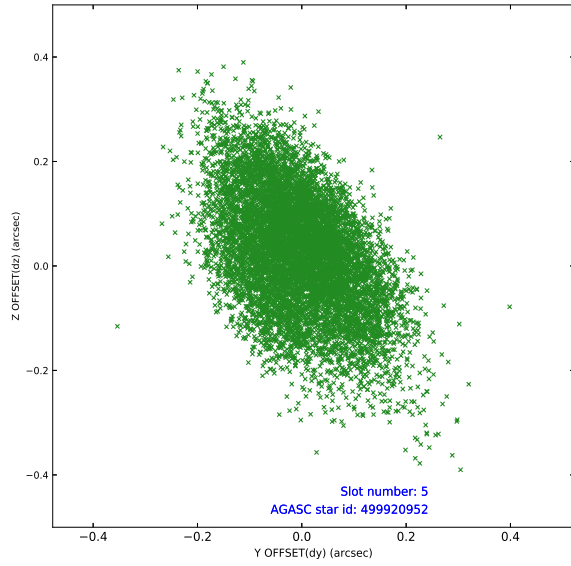
2.4.2 Slot 4



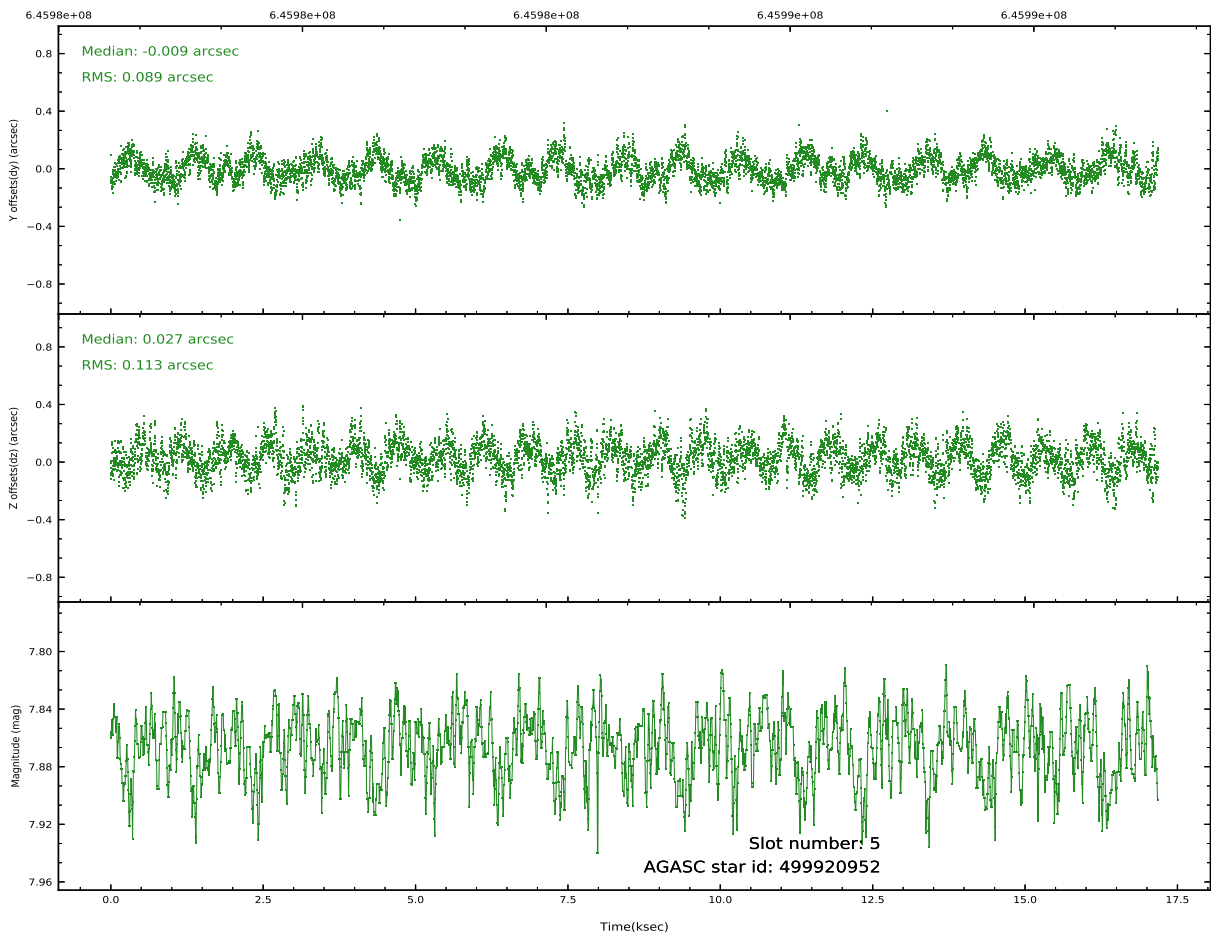
Time (s)



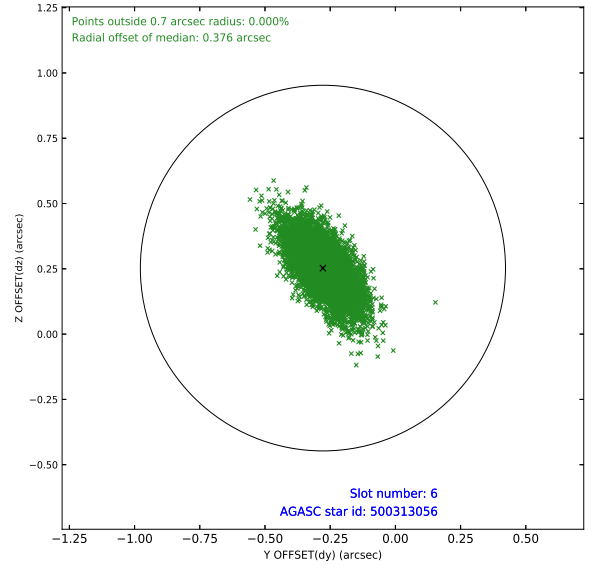
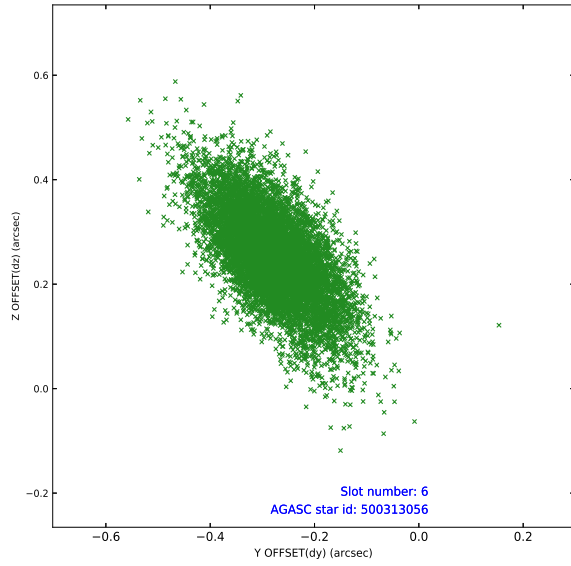
2.4.3 Slot 5



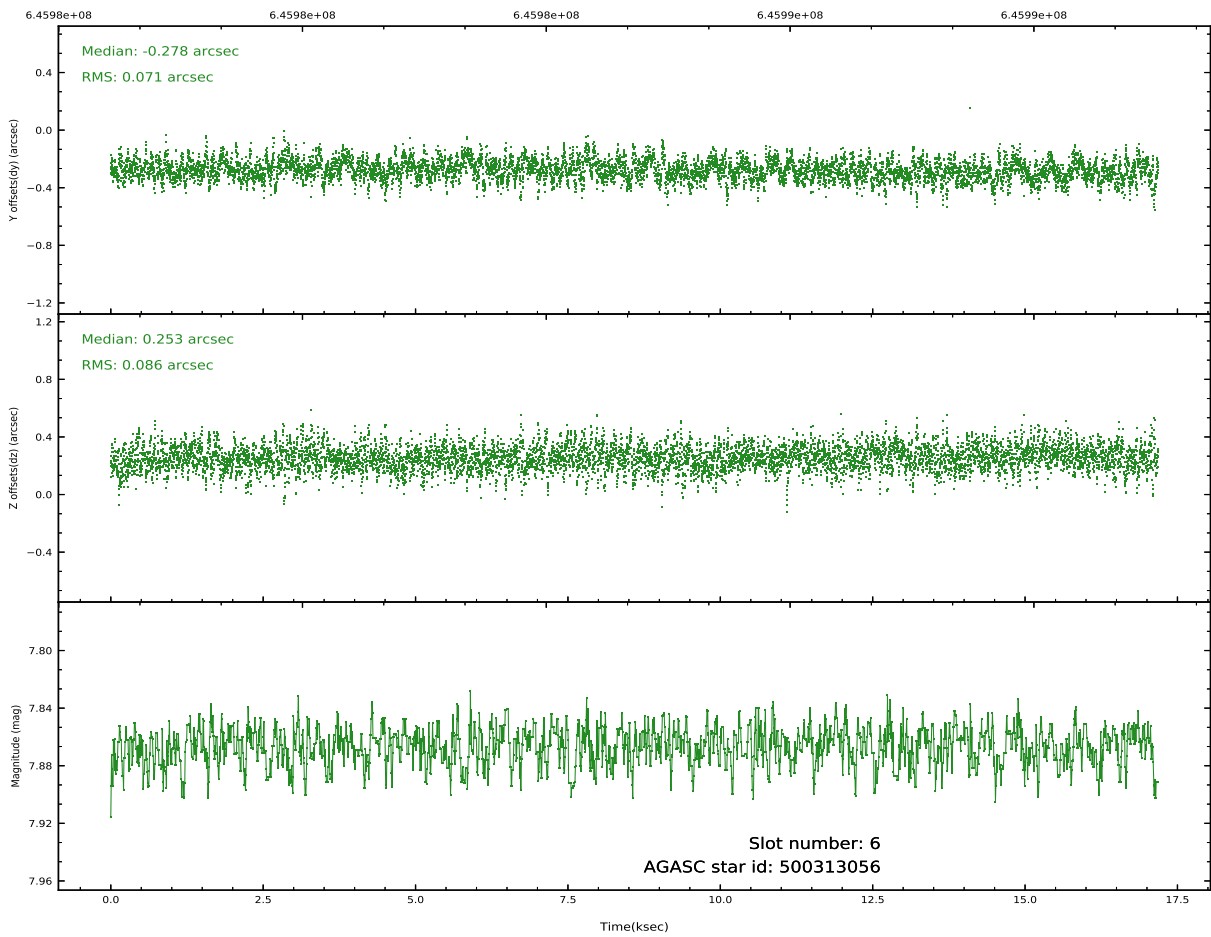
Time (s)



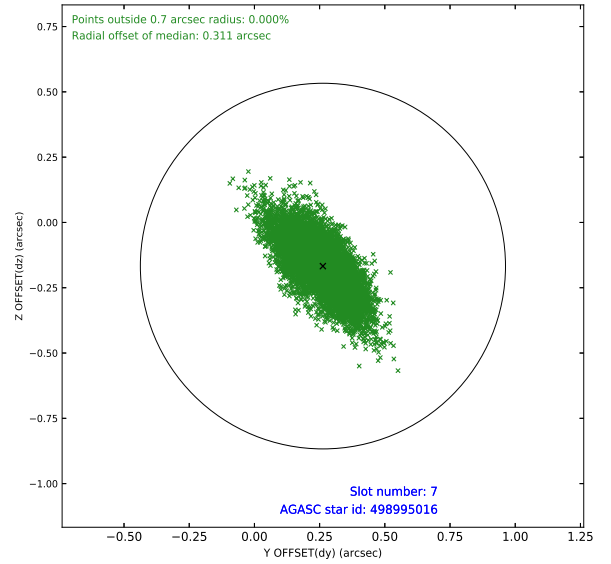
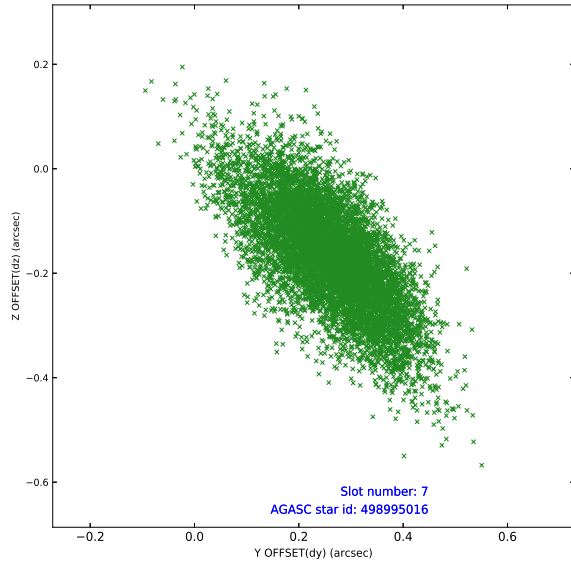
2.4.4 Slot 6



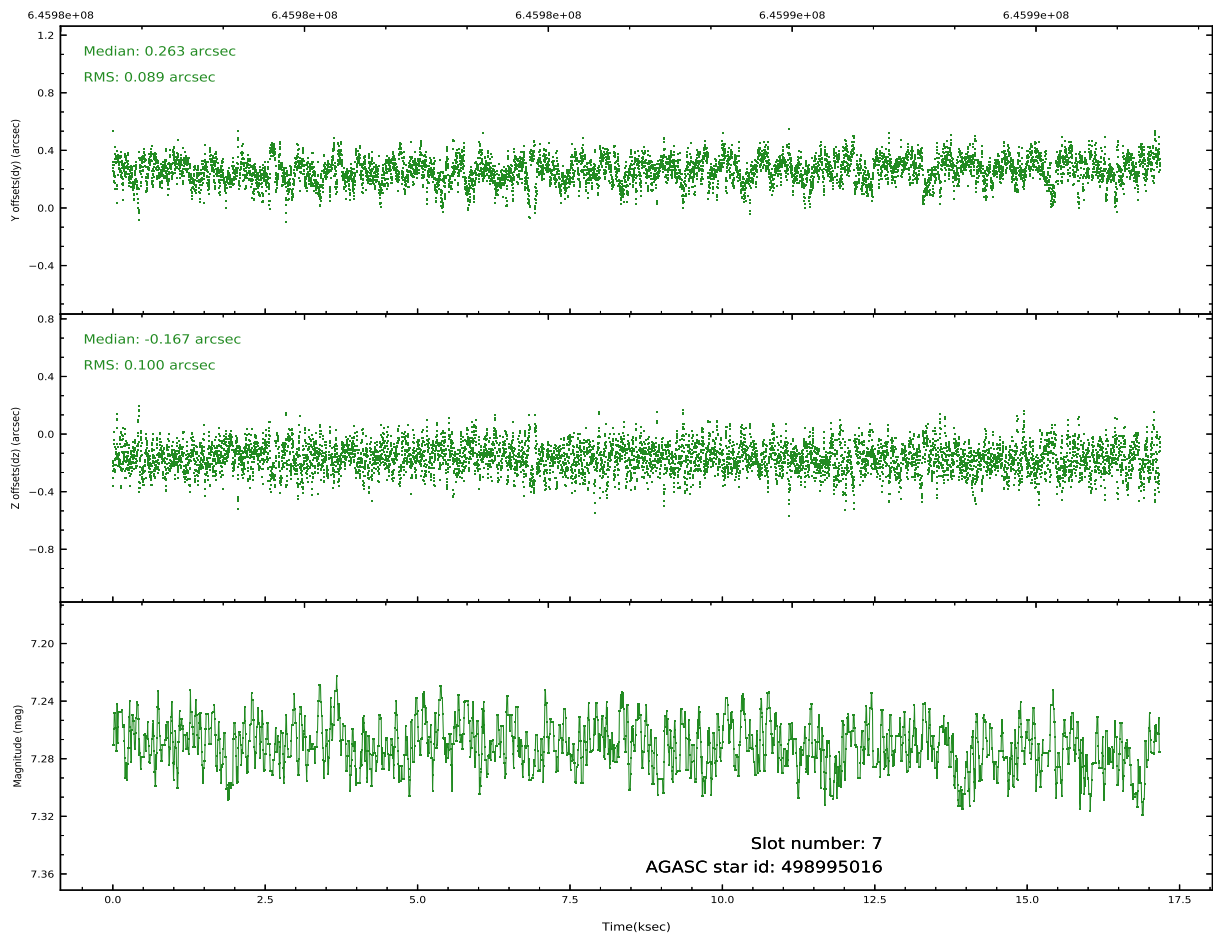
Time (s)



2.4.5 Slot 7

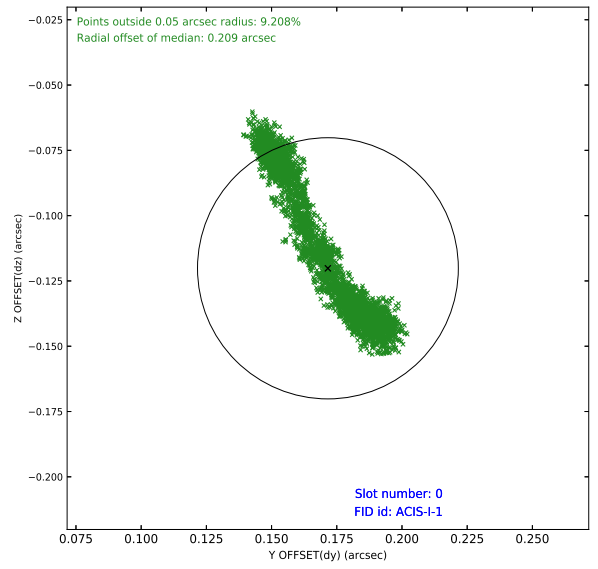
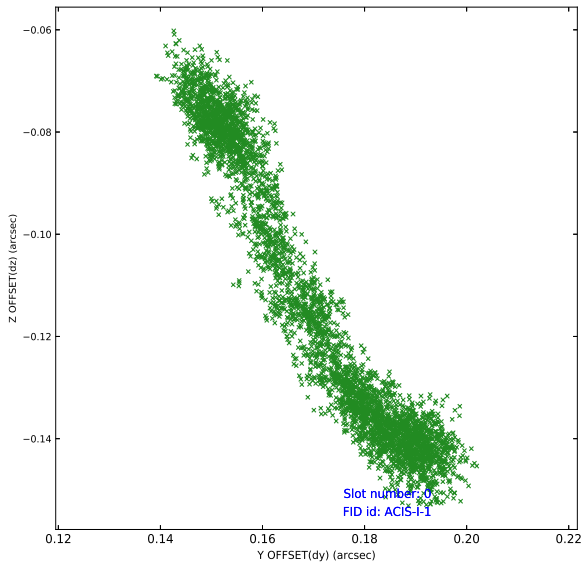


Time (s)

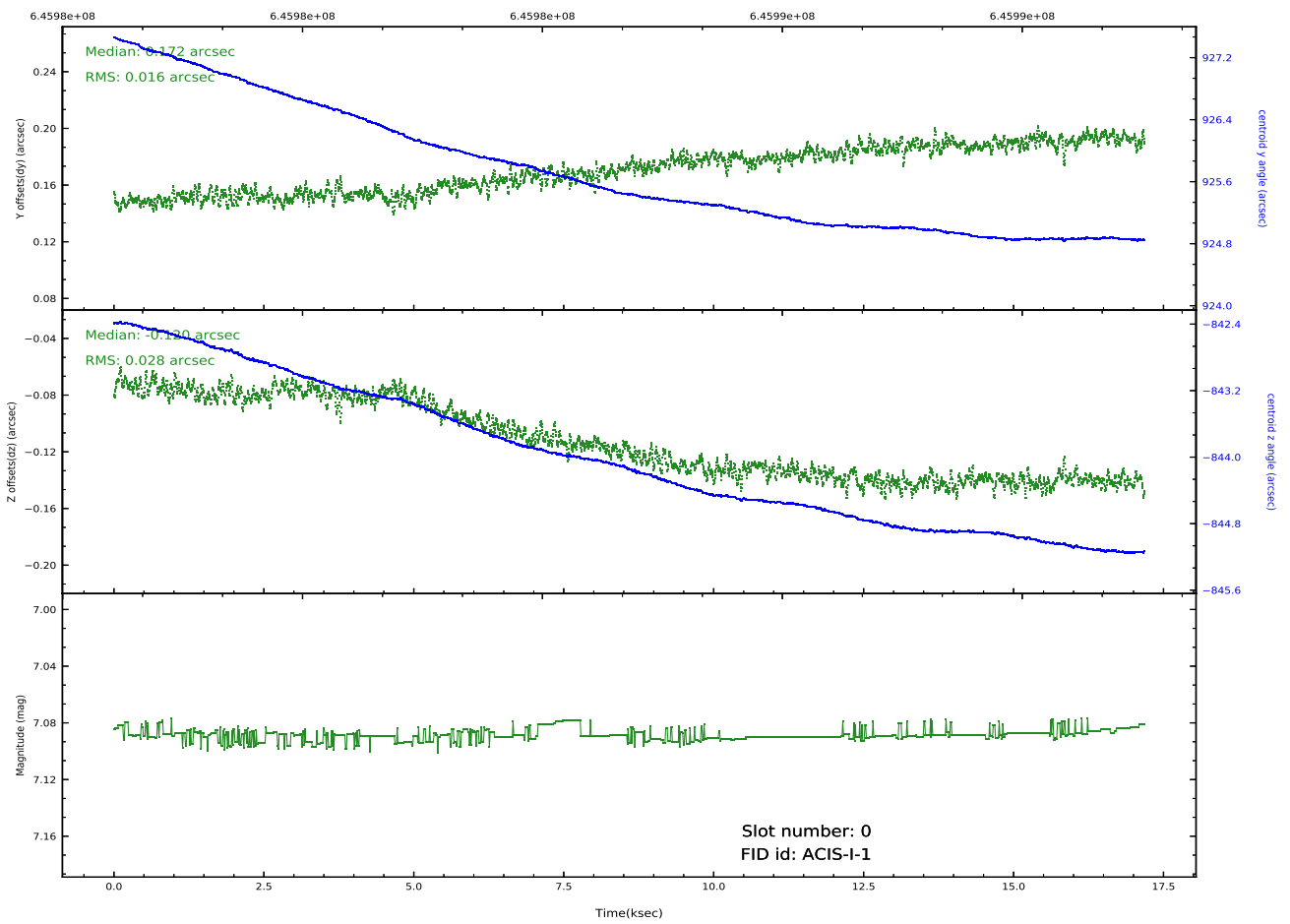


2.5 FID Slots

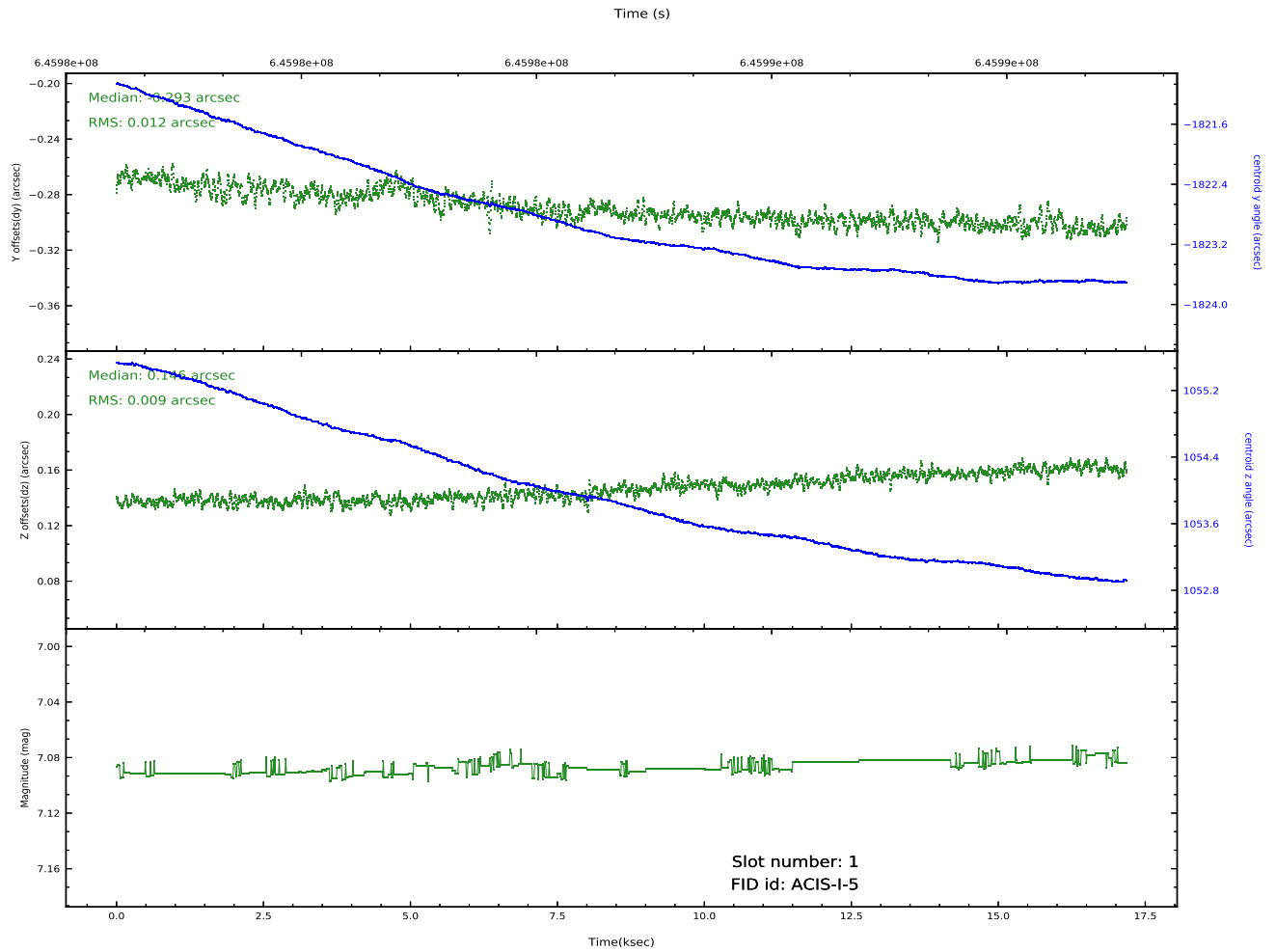
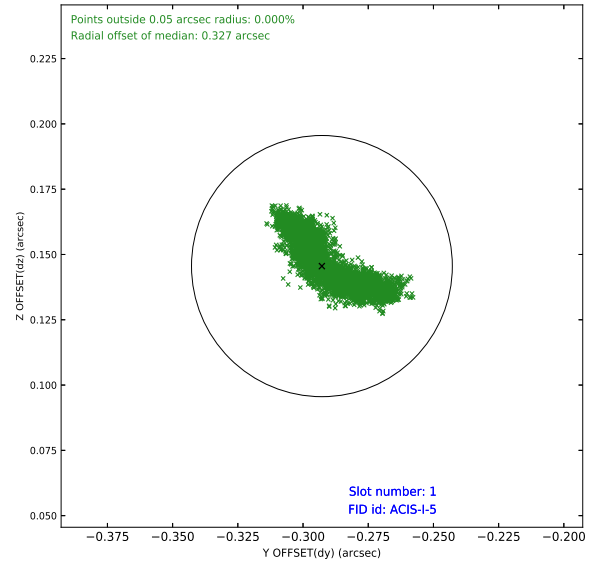
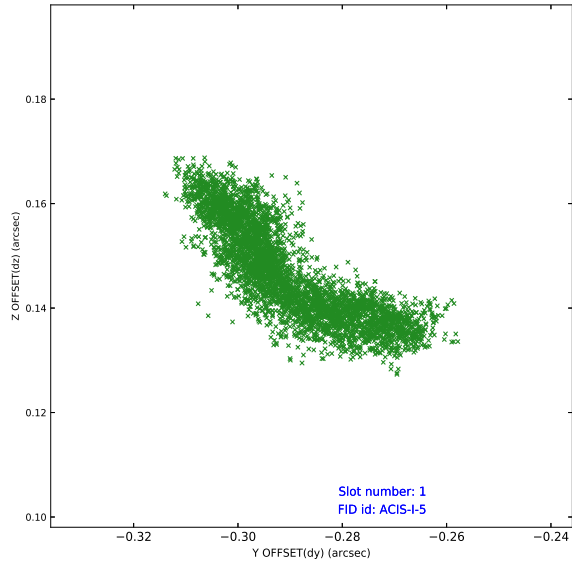
2.5.1 Slot 0



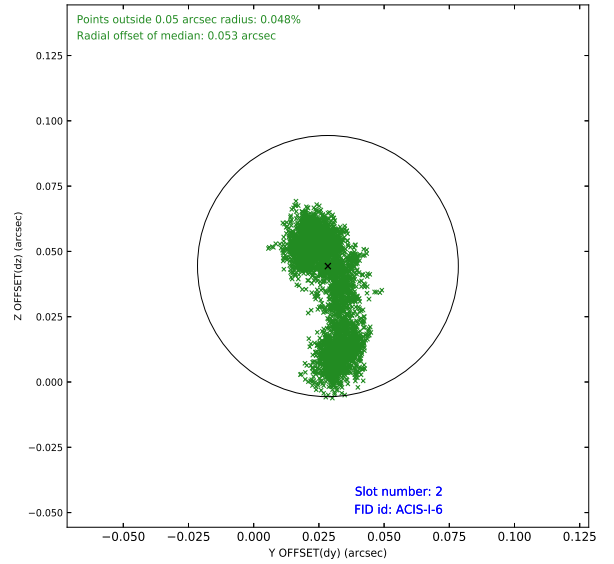
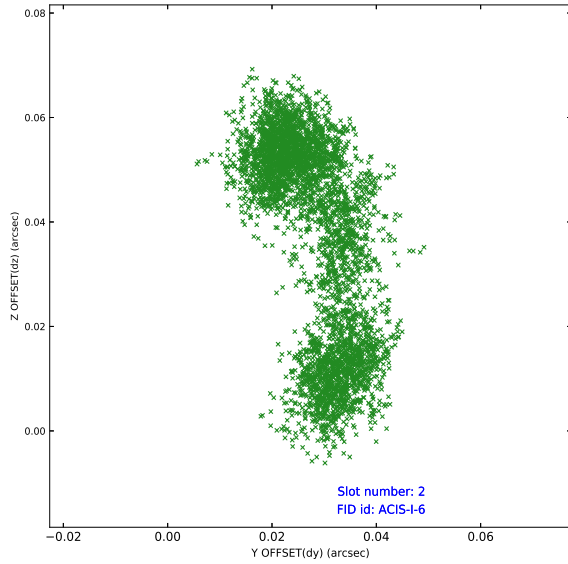
Time (s)



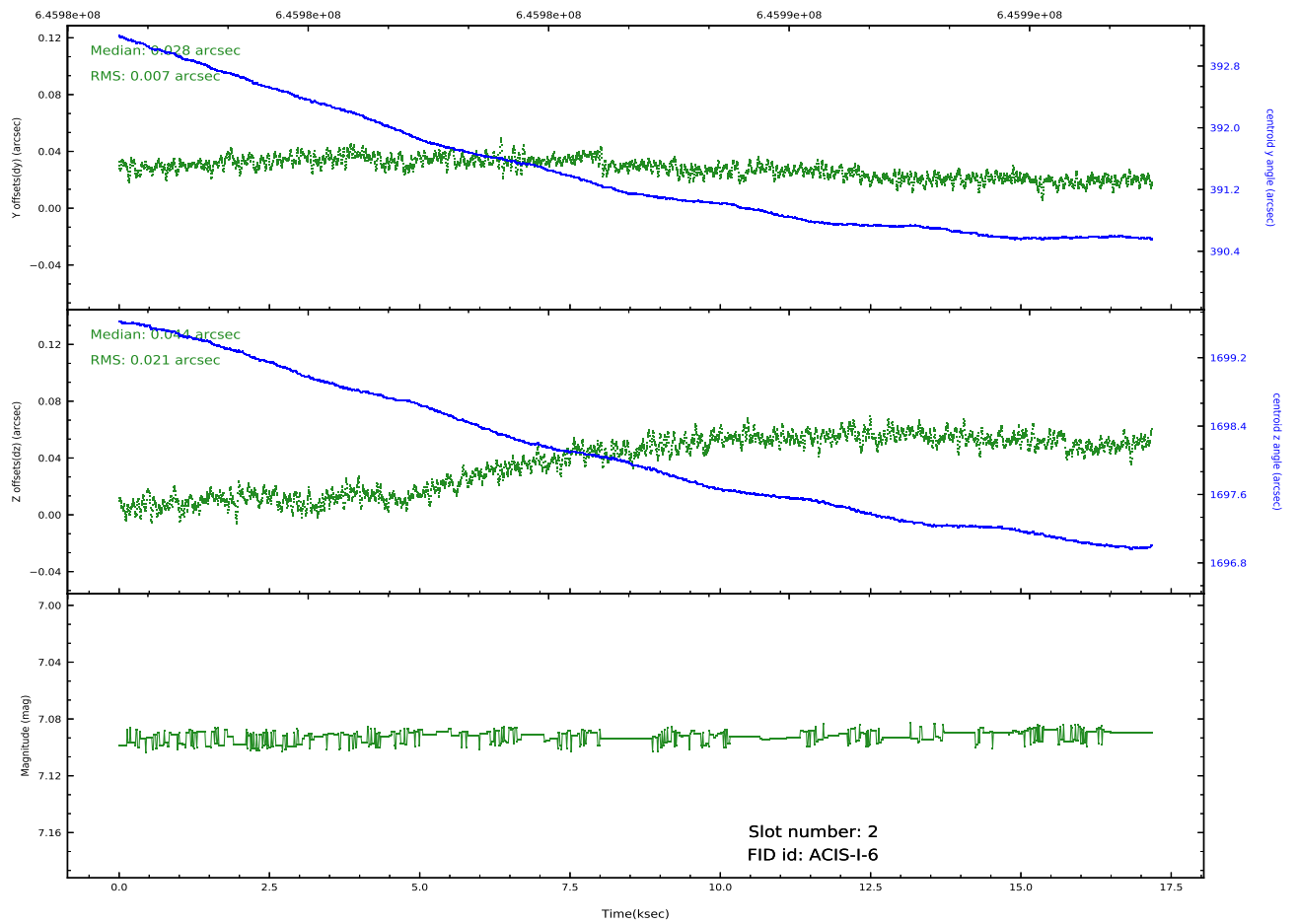
2.5.2 Slot 1



2.5.3 Slot 2



Time (s)



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.29
V&V Edition	2
V&V Disposition and Status	OK
V&V Charge Time	16.956800252676

A.2 Comments

A spatial region of the original bias map for CCD = 0 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 = 0 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.