

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 20973 - L2 Version 3
Chandra X-Ray Center

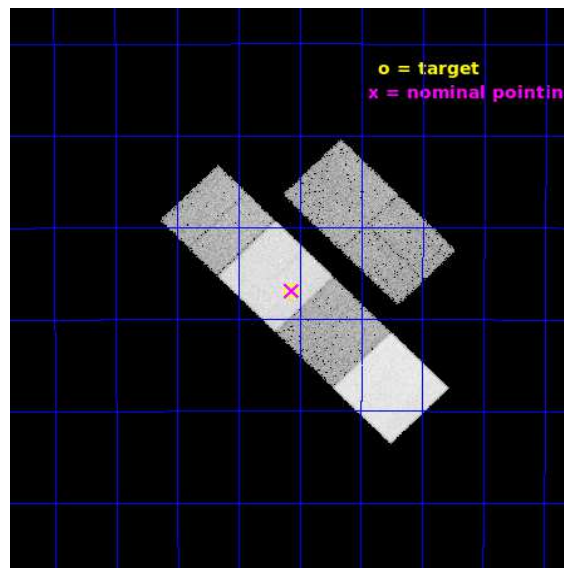
L2 Processing Date : Oct 25 2020

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1 Front

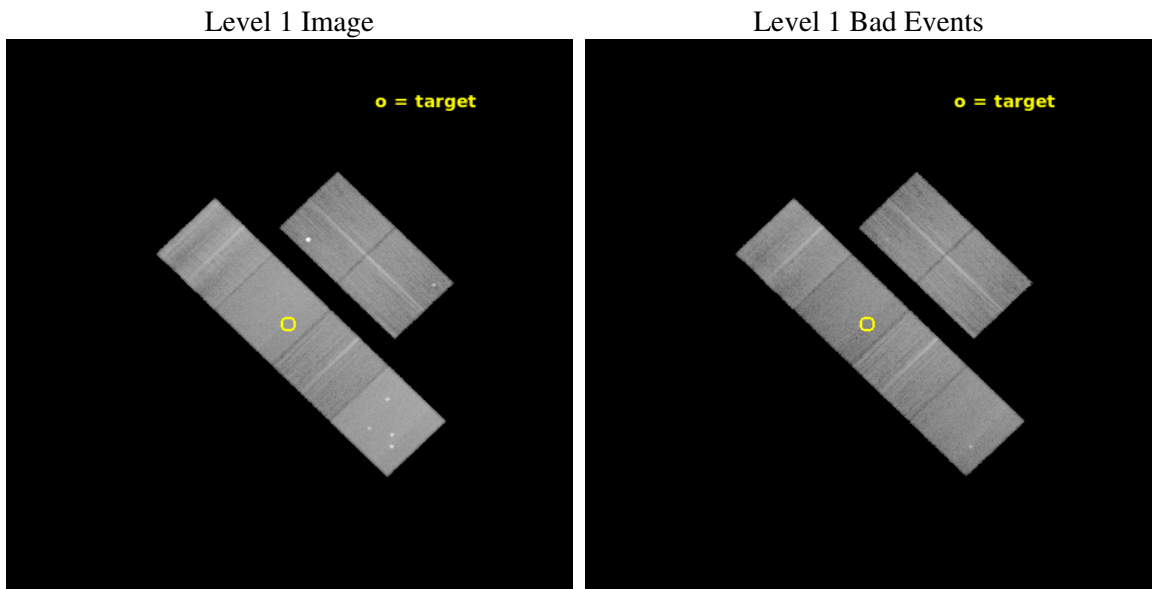
seq_num	601400	Sequence number
obs_id	20973	Observation id
title	The first X-ray study of NGC 2243, one of the most metal-poor Galactic open star clusters	Proposal title
observer	Dr Maureen van den Berg	Principal investigator
object	NGC 2243	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	97.391667	Observer's specified target RA [deg]
dec_targ	-31.283333	Observer's specified target Dec [deg]
ra_nom	97.391026103351	Nominal RA [deg]
dec_nom	-31.28163391482	Nominal Dec [deg]
roll_nom	225.20635423148	Nominal Roll [deg]
revision	3	Processing version of data
ontime	23953.812726498	Sum of GTIs [s]
livetime	23650.4951265	Livetime [s]
ontime2	23953.853766441	Sum of GTIs [s]
ontime3	23953.689606428	Sum of GTIs [s]
ontime5	23953.771686435	Sum of GTIs [s]
ontime6	23950.48962605	Sum of GTIs [s]
ontime7	23953.812726498	Sum of GTIs [s]
ontime8	23950.407546163	Sum of GTIs [s]
l2events	293542	Number of level 2 events



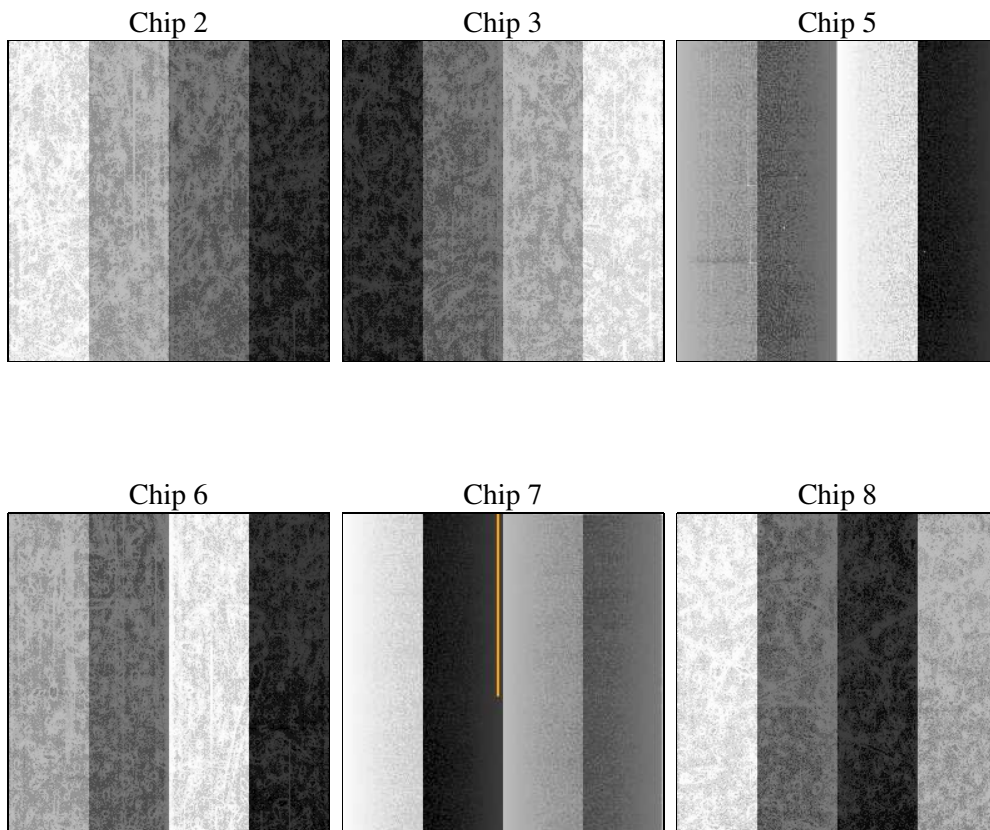
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	24000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	23953.812726498	Sum of GTIs [s]
caldbver	4.9.3	 	ontime2	23953.853766441	Sum of GTIs [s]
date	2020-10-25T23:29:30	Date and time of file creation	ontime3	23953.689606428	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	23953.771686435	Sum of GTIs [s]
			ontime6	23950.48962605	Sum of GTIs [s]
			ontime7	23953.812726498	Sum of GTIs [s]
			ontime8	23950.407546163	Sum of GTIs [s]
			l1events	1266424	Number of level 1 events

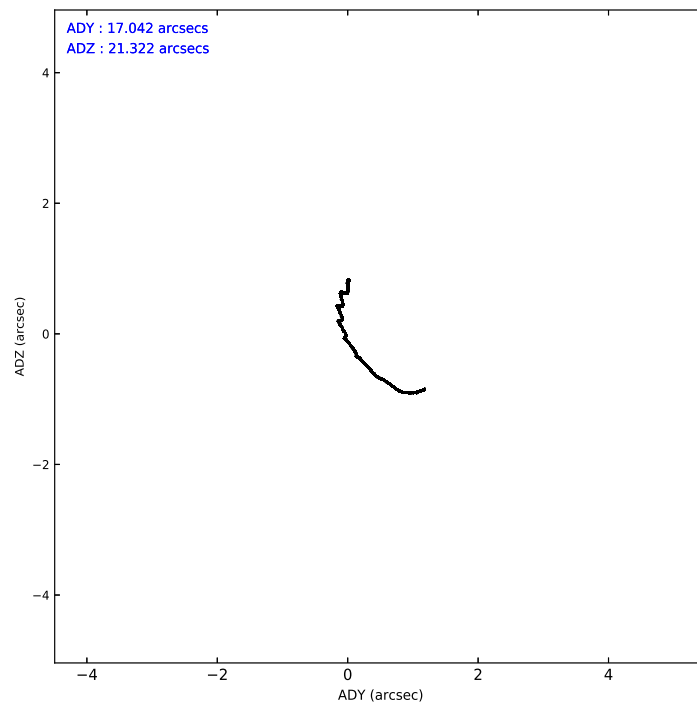
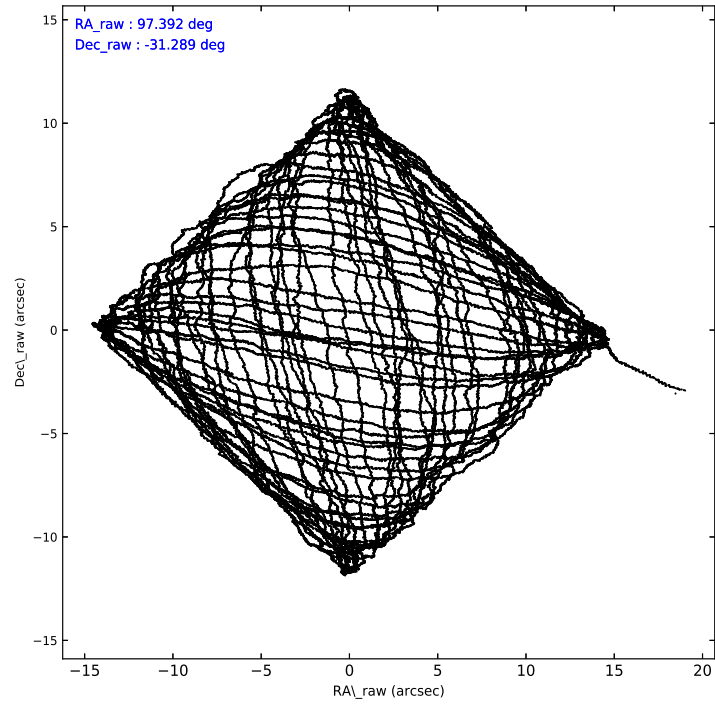
2.1.4 Events

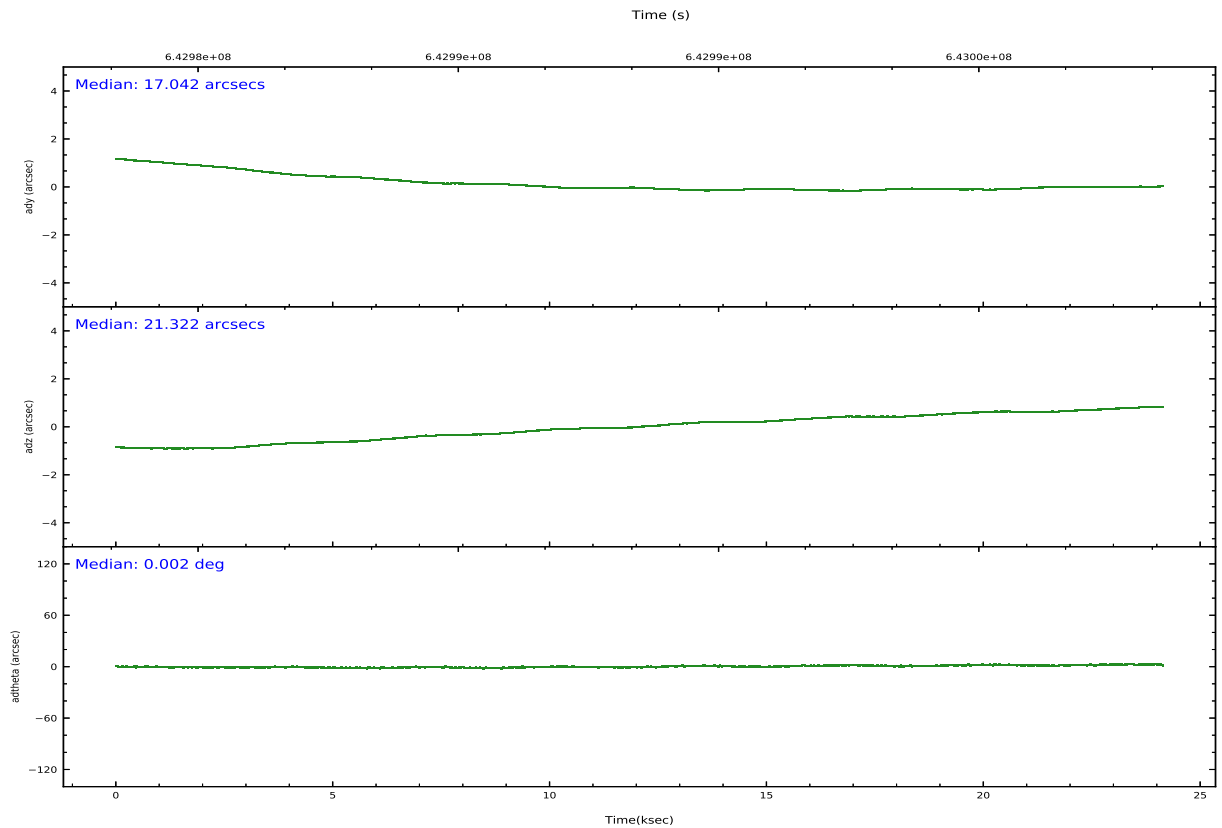
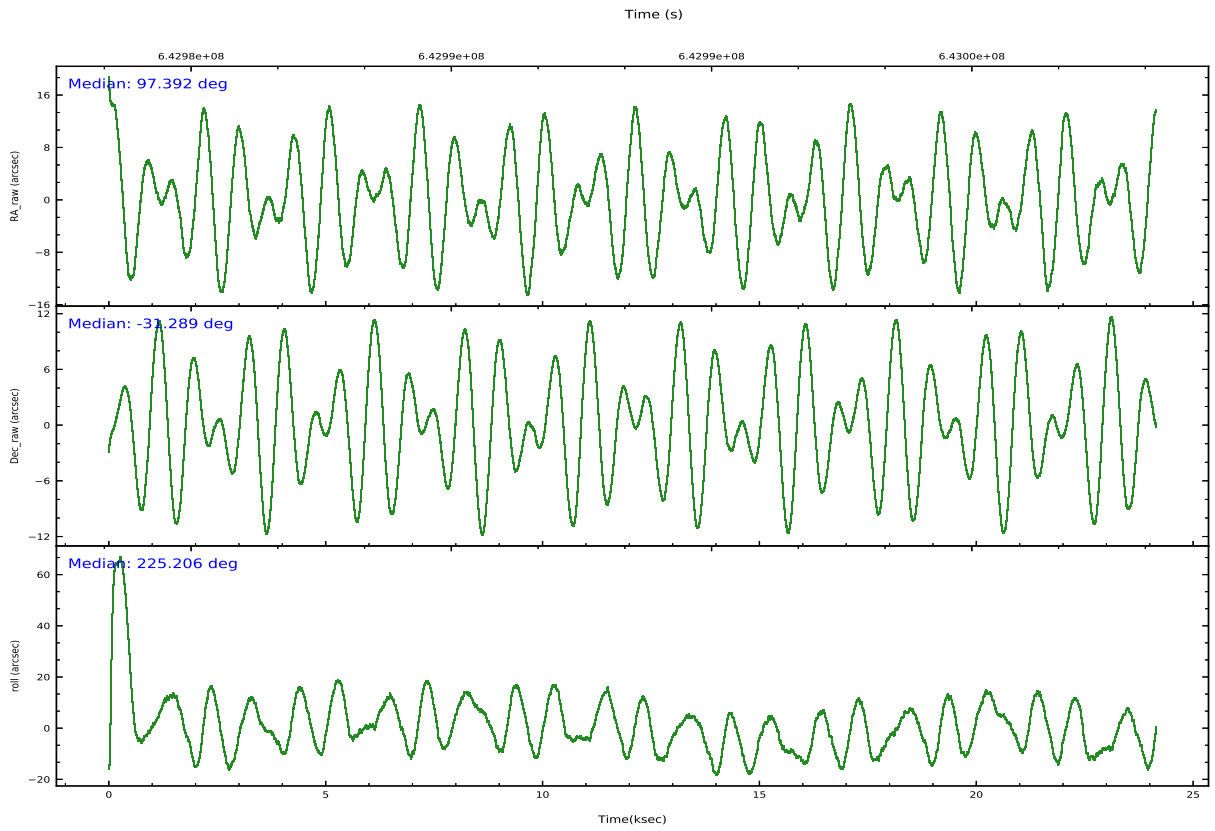
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	177963	176737	281222	177484	222595	230423	grade 0 events	7571	13695	14453	6698	8347	18874
rejected events	157775	144144	142309	157641	124204	165903		4%	7%	5%	3%	3%	8%
rejected %	88%	81%	50%	88%	55%	71%	grade 1 events	106	113	875	85	325	173
								0%	0%	0%	0%	0%	0%
							grade 2 events	4989	11155	43127	4652	21214	15309
								2%	6%	15%	2%	9%	6%
							grade 3 events	1845	1899	4299	1940	7851	6832
								1%	1%	1%	1%	3%	2%
							grade 4 events	1960	1965	4076	1935	7637	6275
								1%	1%	1%	1%	3%	2%
							grade 5 events	7131	8056	19401	8173	22186	12168
								4%	4%	6%	4%	9%	5%
							grade 6 events	3825	3884	72974	4620	53352	17233
								2%	2%	25%	2%	23%	7%
							grade 7 events	150536	135970	122017	149381	101683	153559
								84%	76%	43%	84%	45%	66%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	97.399771	97.391026103351	CCD I2 on	O2	Y
[deg] Pointing Dec	-31.262877	-31.28163391482	CCD I3 on	Y	Y
[deg] Pointing Roll	225.065396	225.20635423148	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	O1	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	642980250.184000	642979024.52434	CCD S5 on	N	N
Observation start date	2018-05-17T21:36:21	2018-05-17T21:17:04	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	643004250.184000	643005388.5509	On-chip summing requested	N	N
Observation end date	2018-05-18T04:16:21	2018-05-18T04:36:28	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect





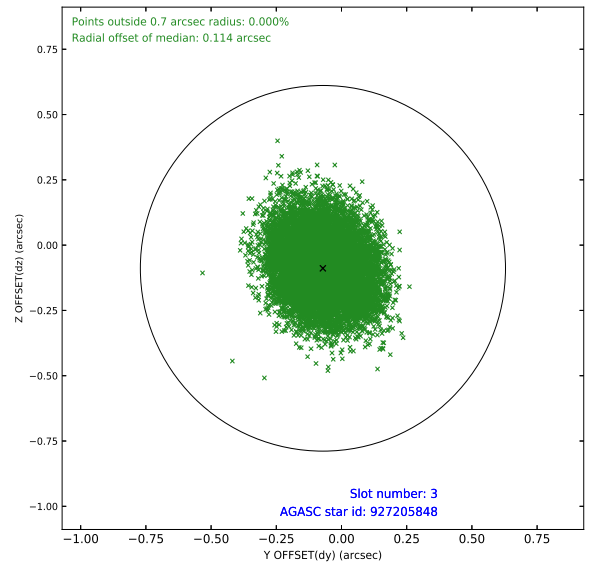
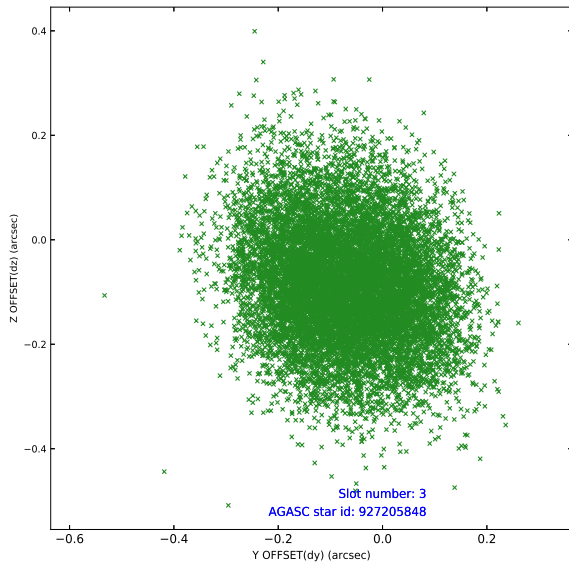
Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-2	6.98	5889	1.000	0.106	-0.079	0.011	0.017	0.000000	0.000000	-770.33	-1742
1	FID		ACIS-S-4	7.08	5890	1.000	0.098	-0.029	0.022	0.038	0.000000	0.000000	2143.10	165
2	FID		ACIS-S-5	7.07	5890	1.000	-0.236	0.117	0.018	0.036	0.000000	0.000000	-1823.14	159
3	GUIDE	used	927205848	9.15	11769	1.000	-0.071	-0.089	0.164	0.257	97.800577	-31.737487	344.29	2077
4	GUIDE	used	927210360	8.87	11771	1.000	-0.043	0.085	0.176	0.281	97.559173	-31.118939	-713.24	-17
5	GUIDE	used	927213352	8.01	11775	1.000	0.052	-0.216	0.142	0.233	97.502570	-31.174473	-448.35	-0
6	GUIDE	used	927217040	9.89	11764	1.000	0.065	0.221	0.262	0.396	97.274375	-30.731358	-1079.90	-1625
7	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0

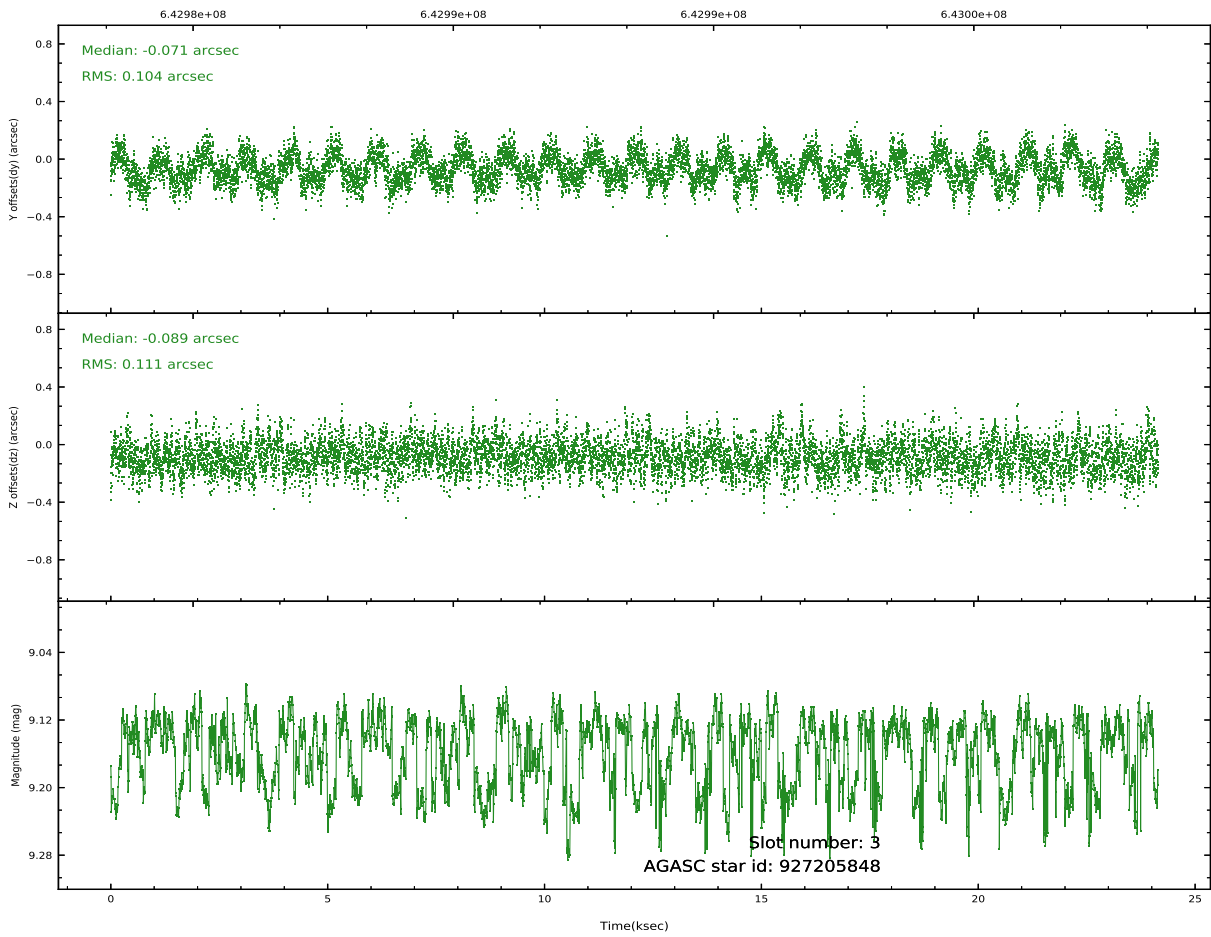
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2.4 Star Slots

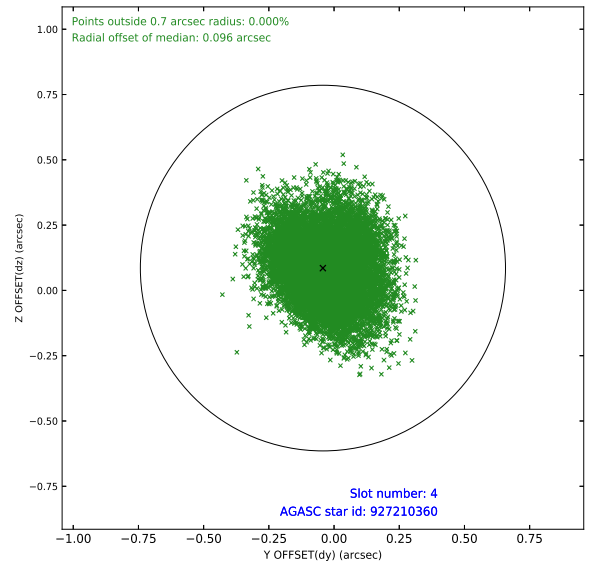
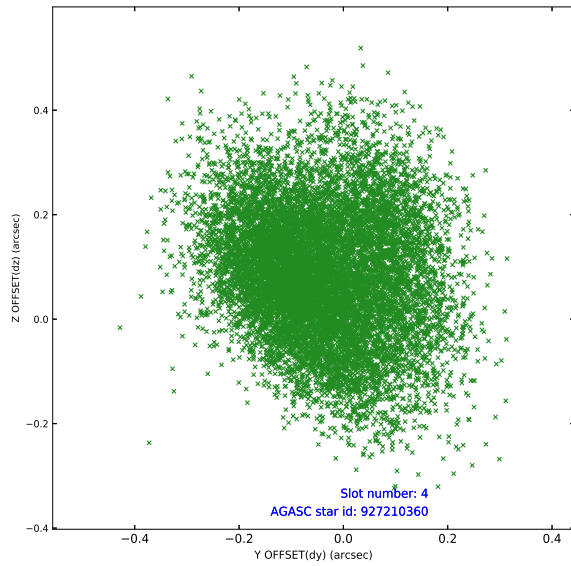
2.4.1 Slot 3



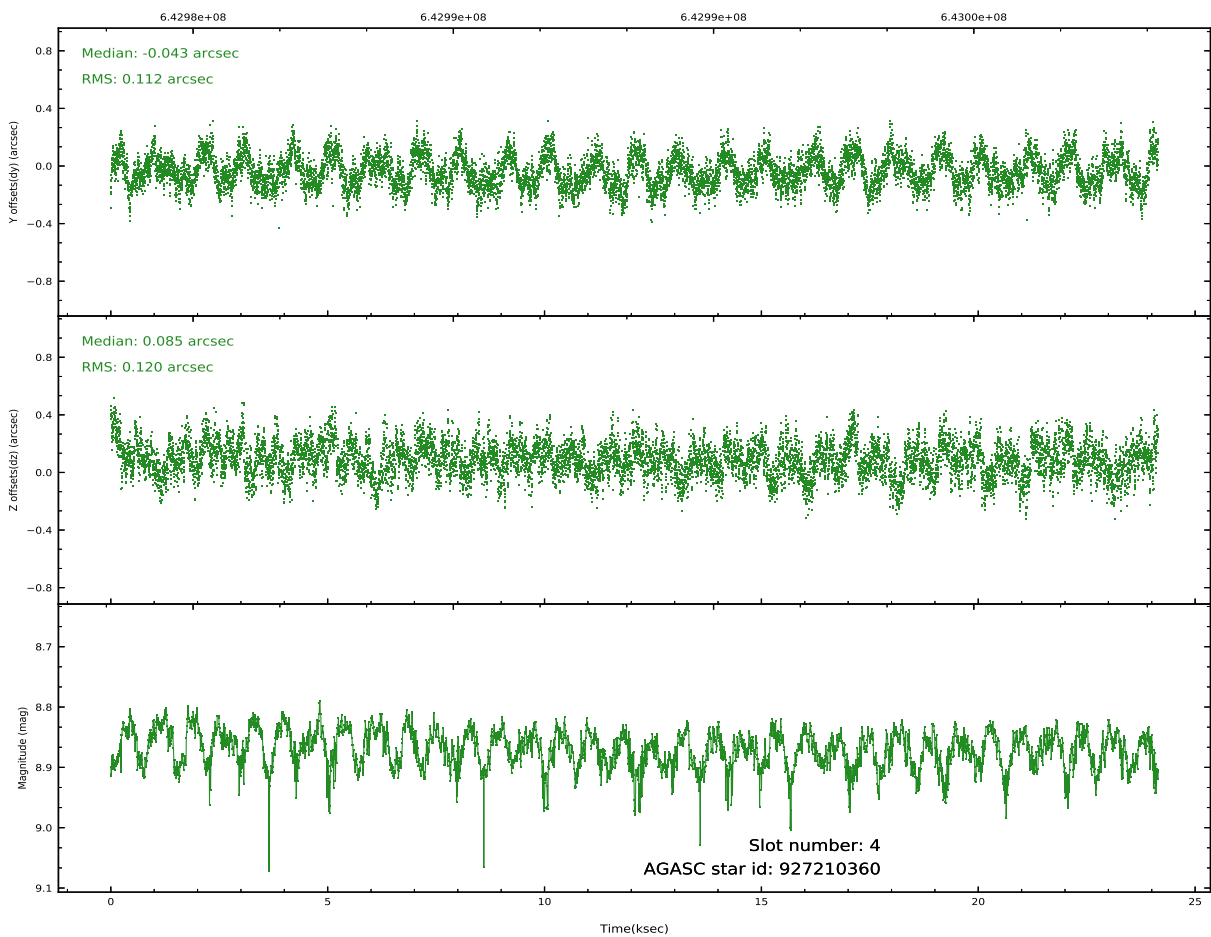
Time (s)



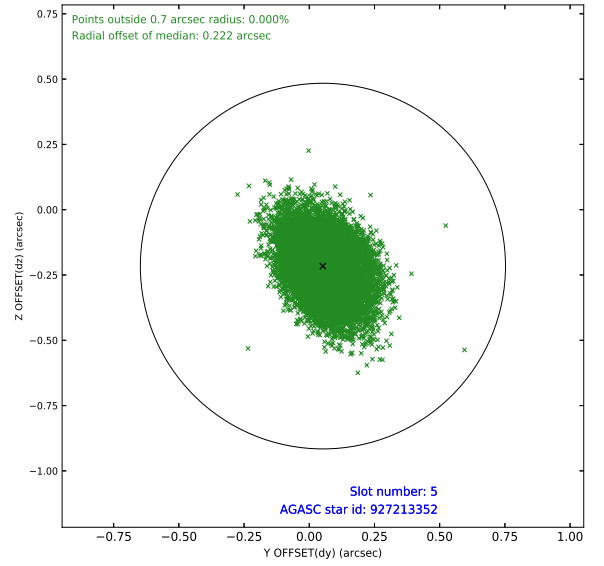
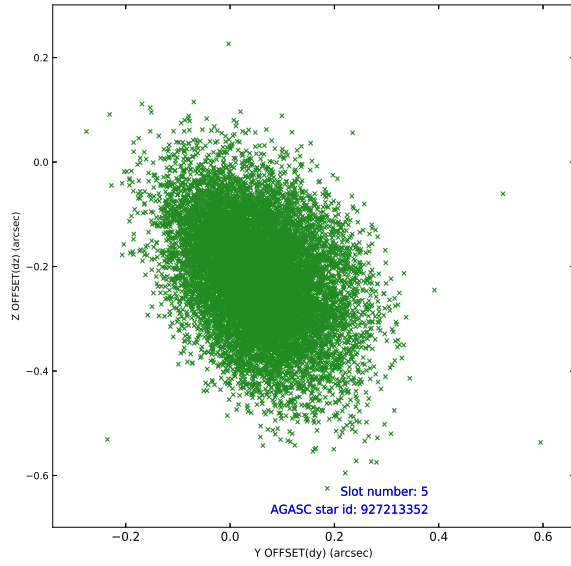
2.4.2 Slot 4



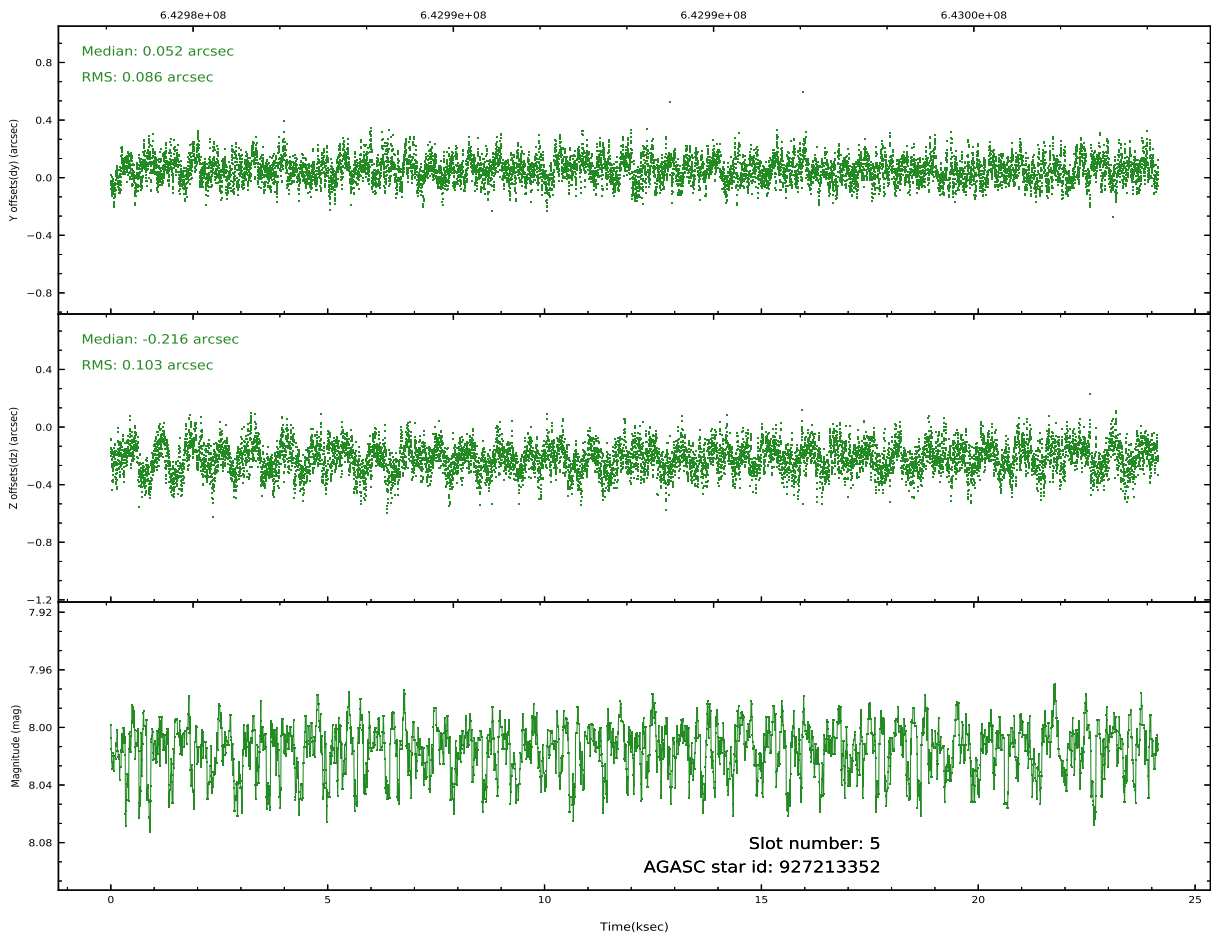
Time (s)



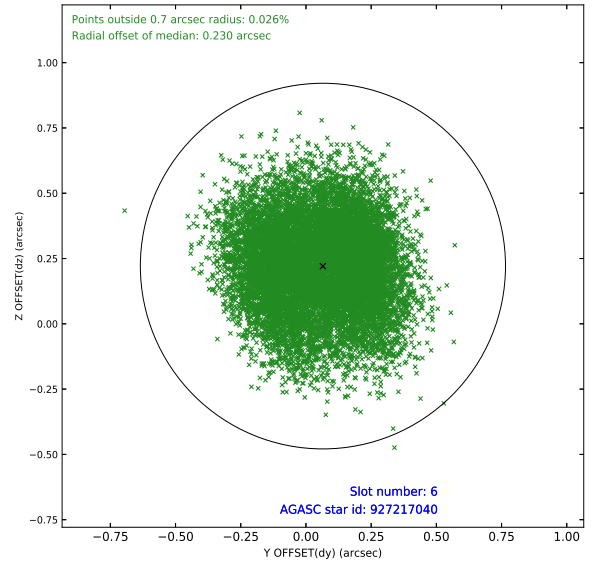
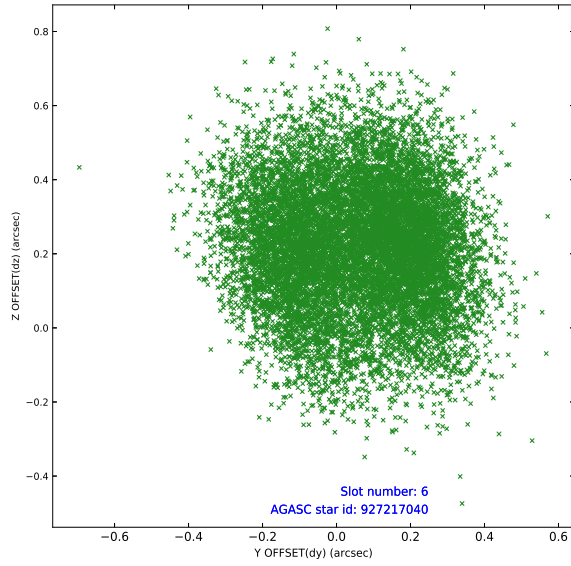
2.4.3 Slot 5



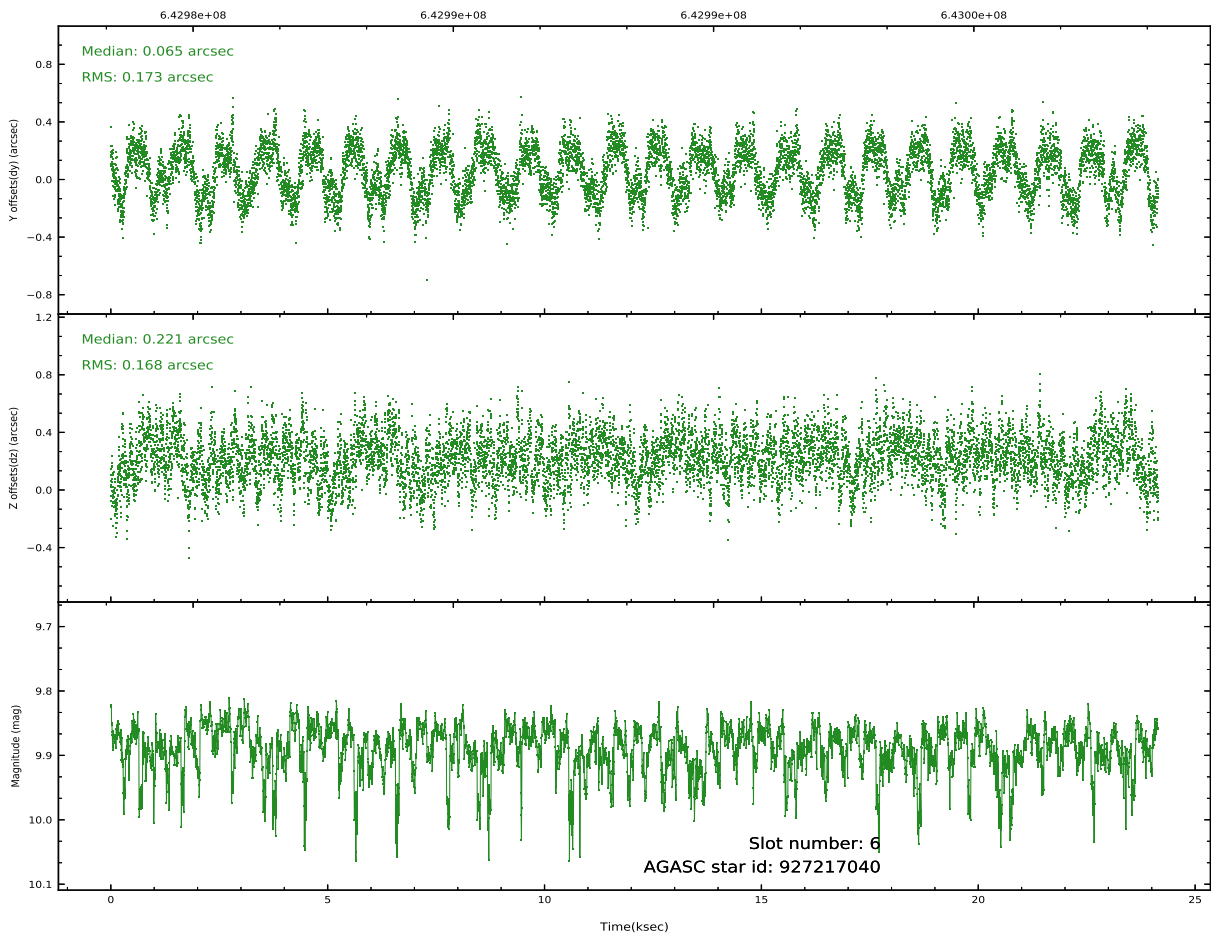
Time (s)



2.4.4 Slot 6

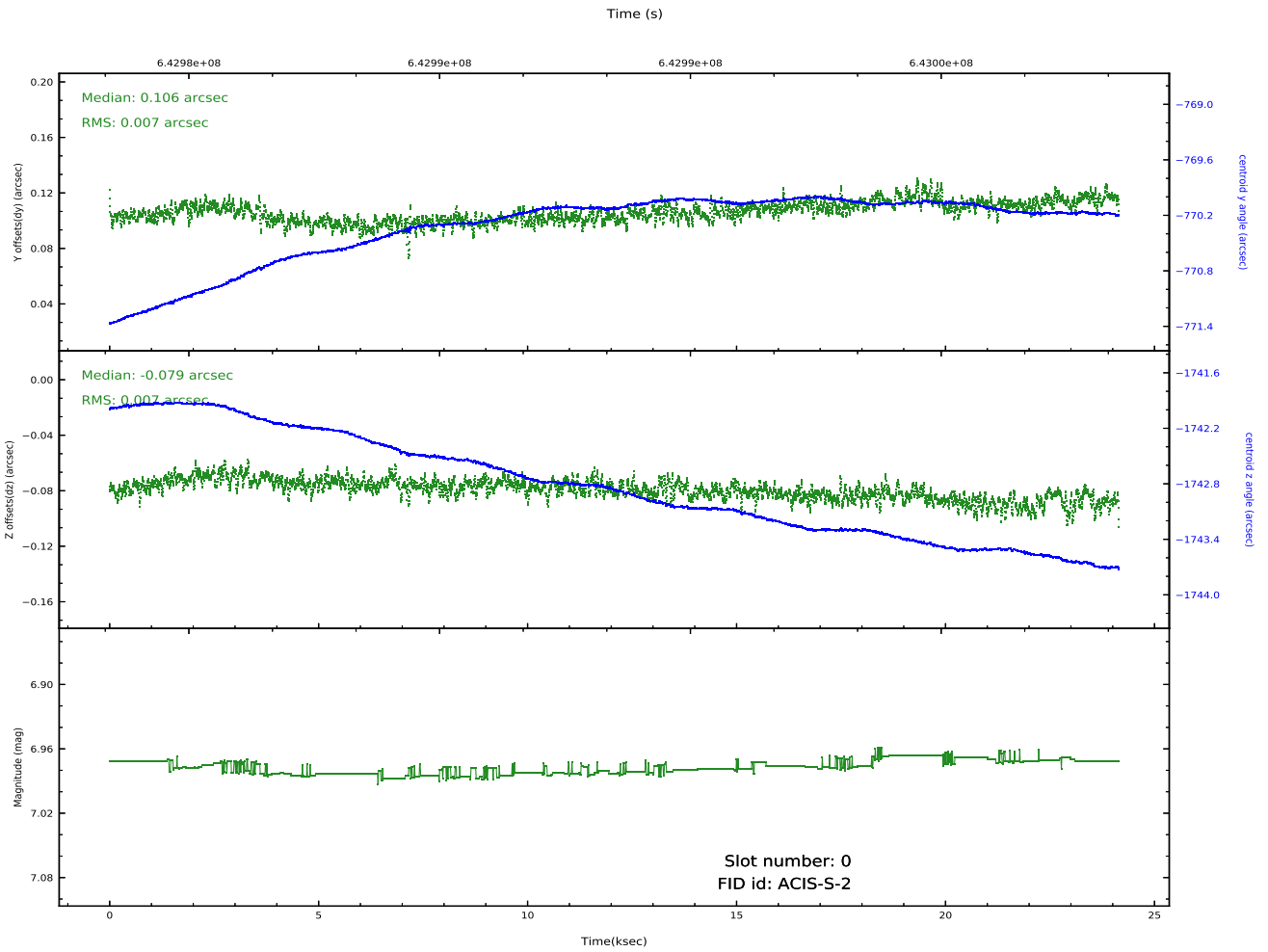
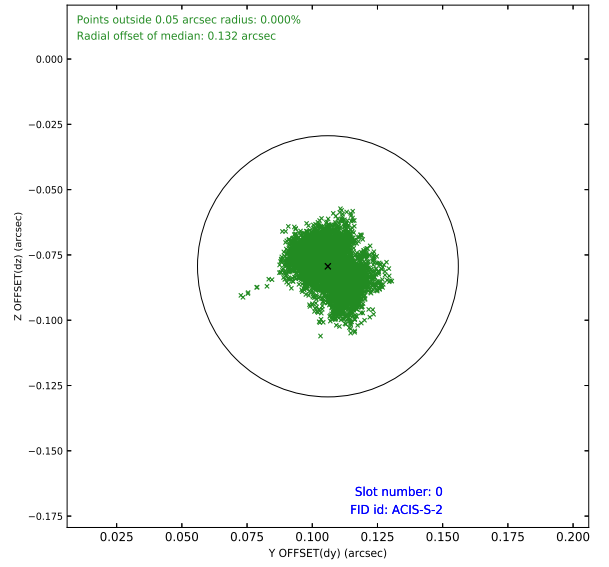
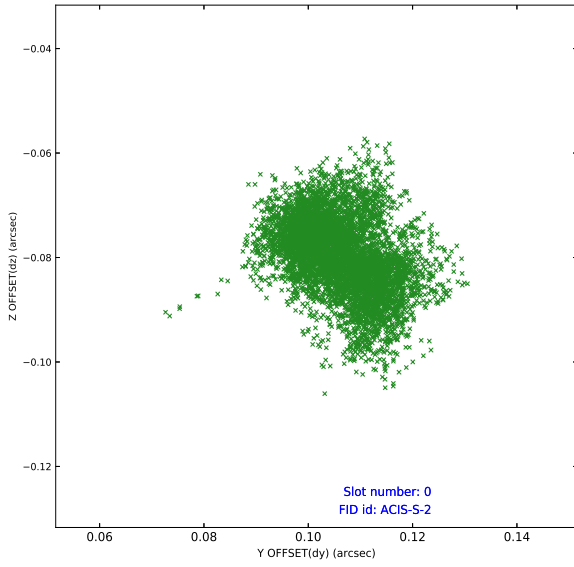


Time (s)

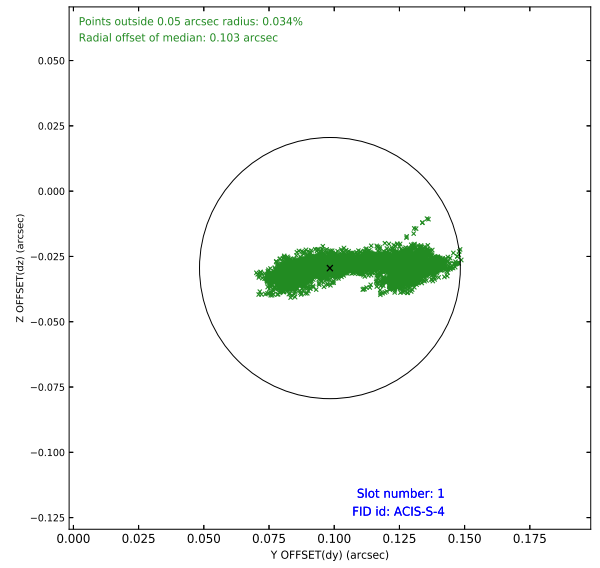
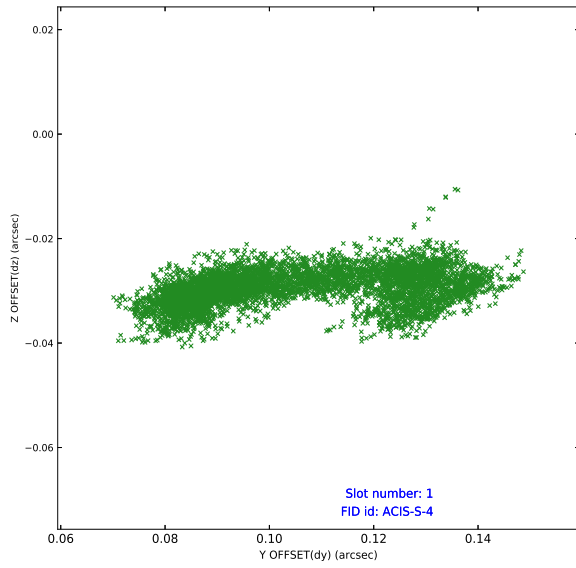


2.5 FID Slots

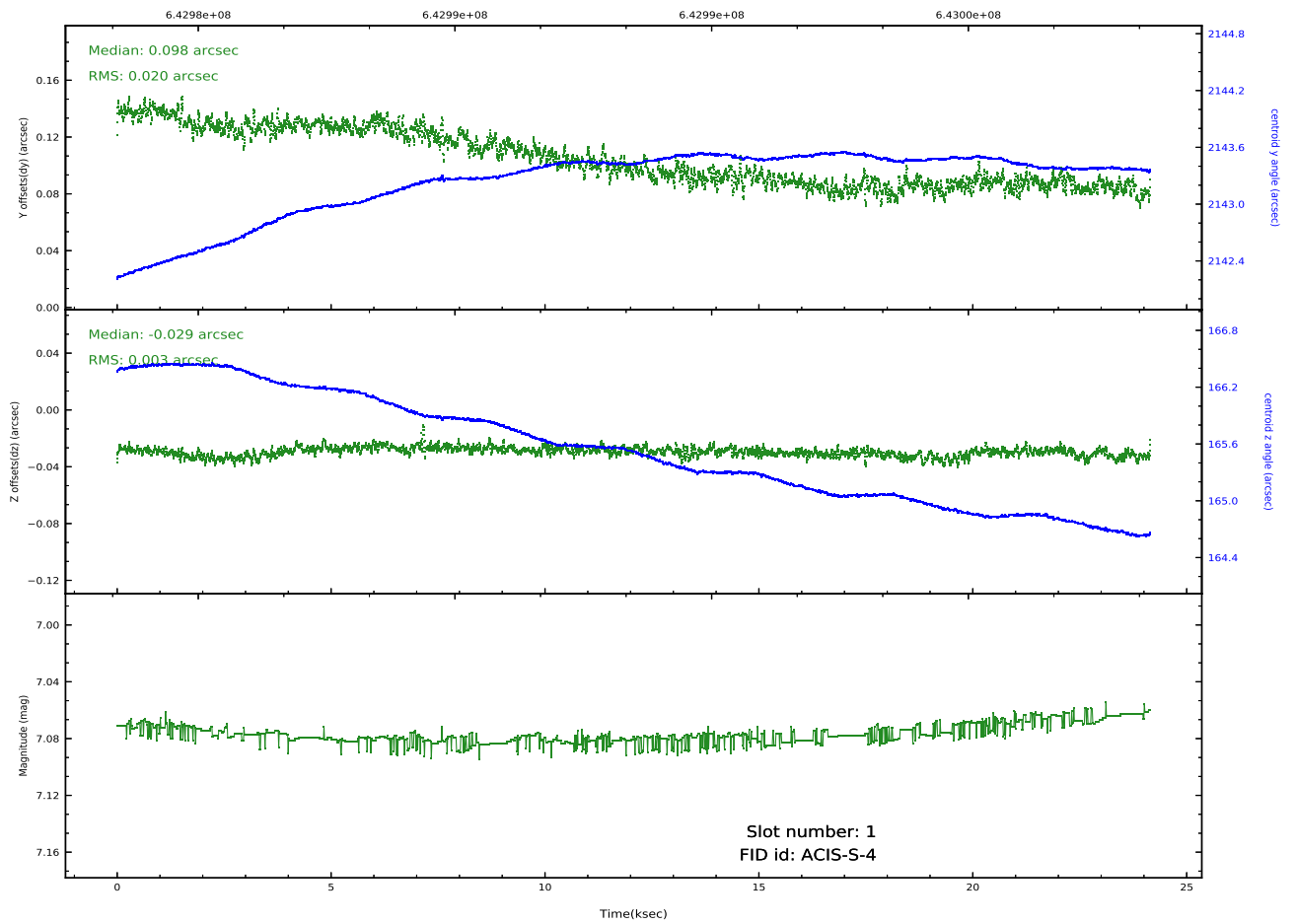
2.5.1 Slot 0



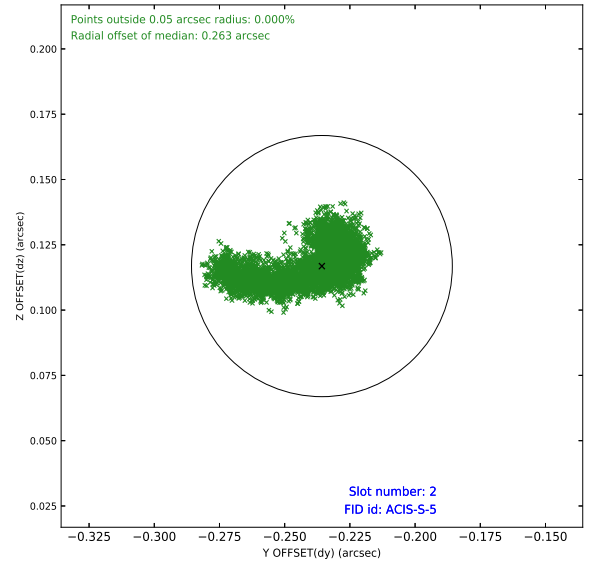
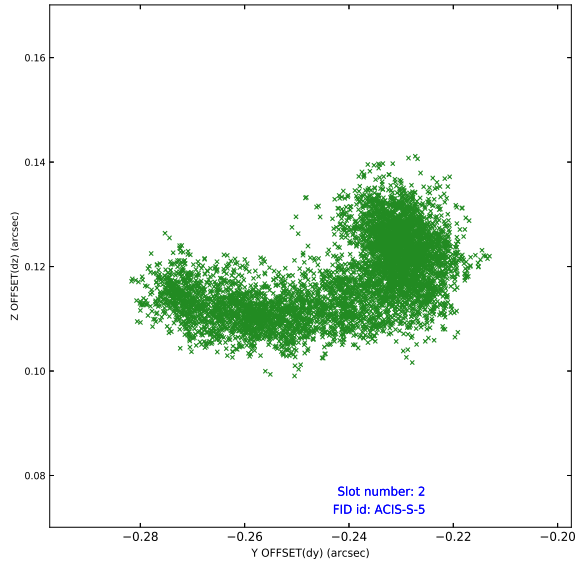
2.5.2 Slot 1



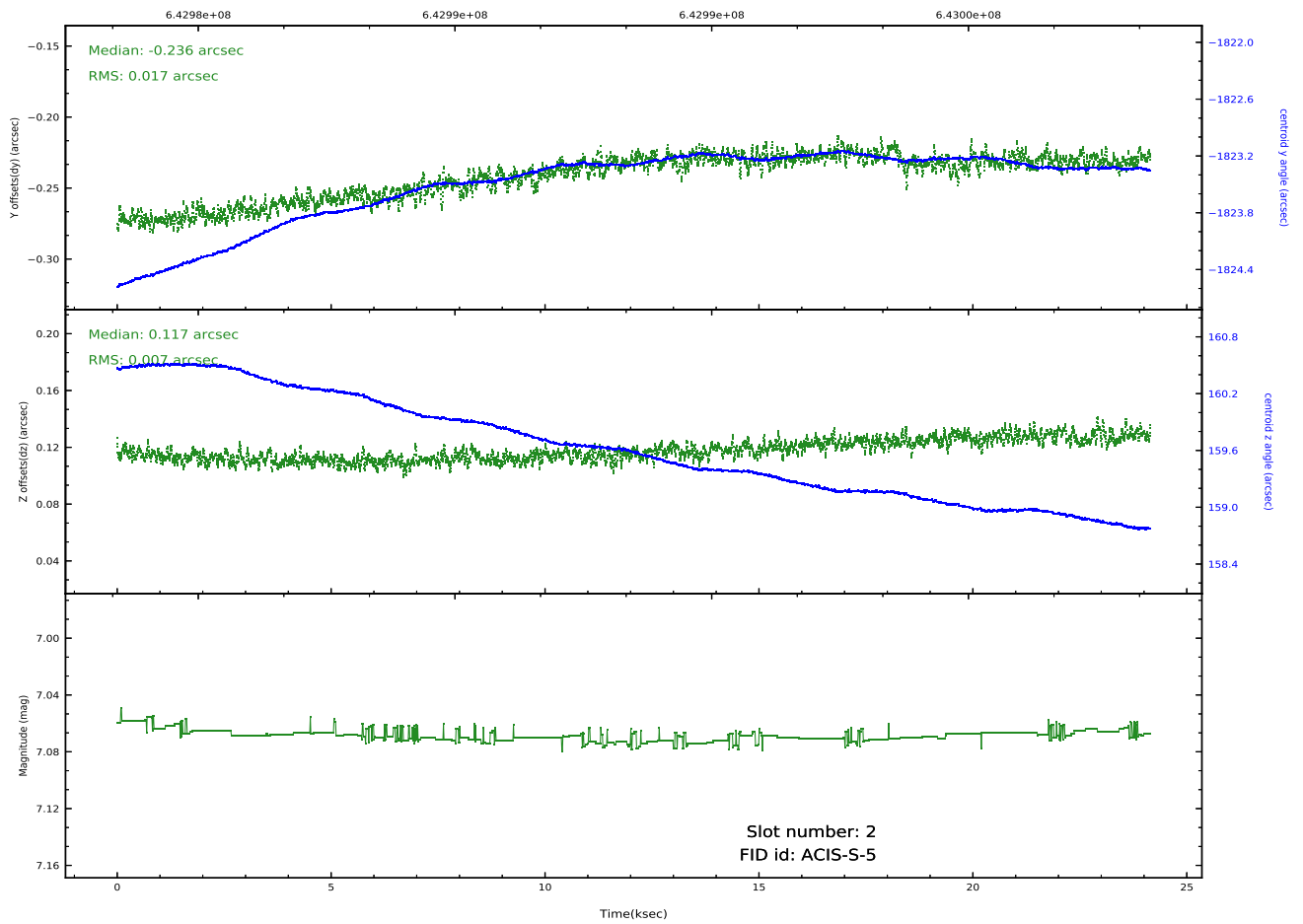
Time (s)



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	1
V&V Disposition and Status	OK
V&V Charge Time	23.953812732697

A.2 Comments

The guide star in slot 7 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this slot from the solution.