

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 19416 - L2 Version 3
Chandra X-Ray Center

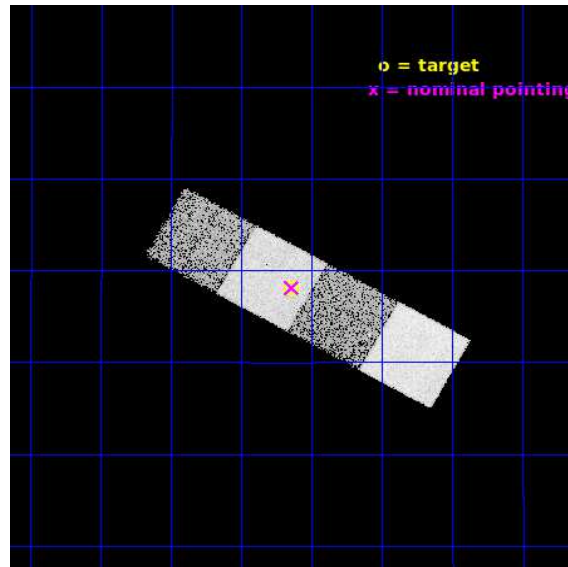
L2 Processing Date : Oct 26 2020

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1 Front

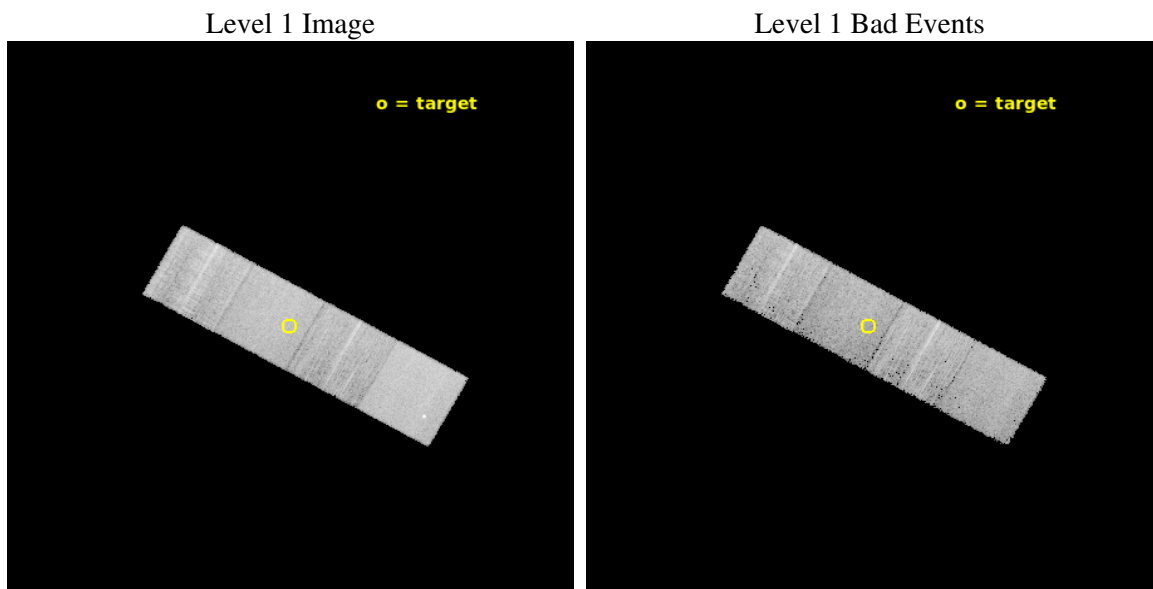
seq_num	601373	Sequence number
obs_id	19416	Observation id
title	Spiral galaxies of the Virgo cluster	Proposal title
observer	Roberto Soria	Principal investigator
object	NGC 4313	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	185.660417	Observer's specified target RA [deg]
dec_targ	11.800944	Observer's specified target Dec [deg]
ra_nom	185.66035657435	Nominal RA [deg]
dec_nom	11.802248883238	Nominal Dec [deg]
roll_nom	209.16032024349	Nominal Roll [deg]
revision	3	Processing version of data
ontime	8062.1390606165	Sum of GTIs [s]
livetime	7956.8012785291	Livetime [s]
ontime5	8062.0980206728	Sum of GTIs [s]
ontime6	8062.0569806099	Sum of GTIs [s]
ontime7	8062.1390606165	Sum of GTIs [s]
ontime8	8062.0159406662	Sum of GTIs [s]
l2events	88839	Number of level 2 events



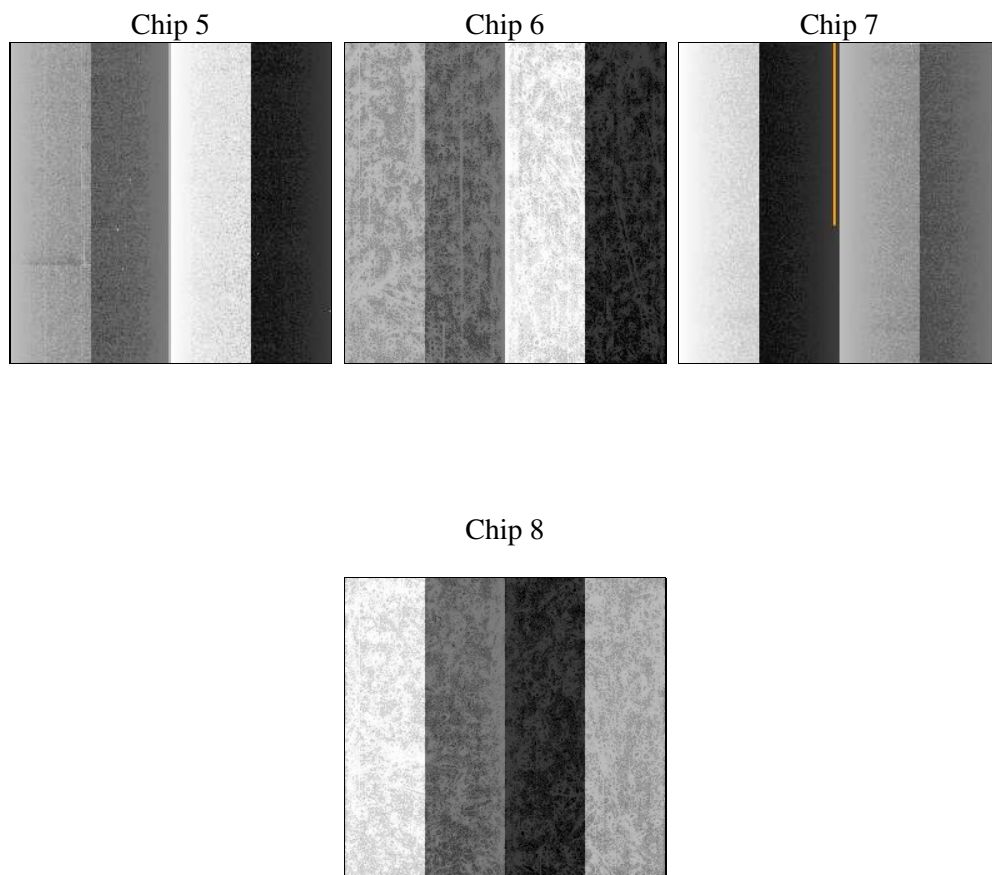
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	8000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	8062.1390606165	Sum of GTIs [s]
caldsver	4.9.3	 	ontime5	8062.0980206728	Sum of GTIs [s]
date	2020-10-27T00:48:12	Date and time of file creation	ontime6	8062.0569806099	Sum of GTIs [s]
revision	3	Processing version of data	ontime7	8062.1390606165	Sum of GTIs [s]
			ontime8	8062.0159406662	Sum of GTIs [s]
			l1events	313305	Number of level 1 events

2.1.4 Events

	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	94221	62567	77498	79019
rejected events	48844	55558	44140	57890
rejected %	51%	88%	56%	73%

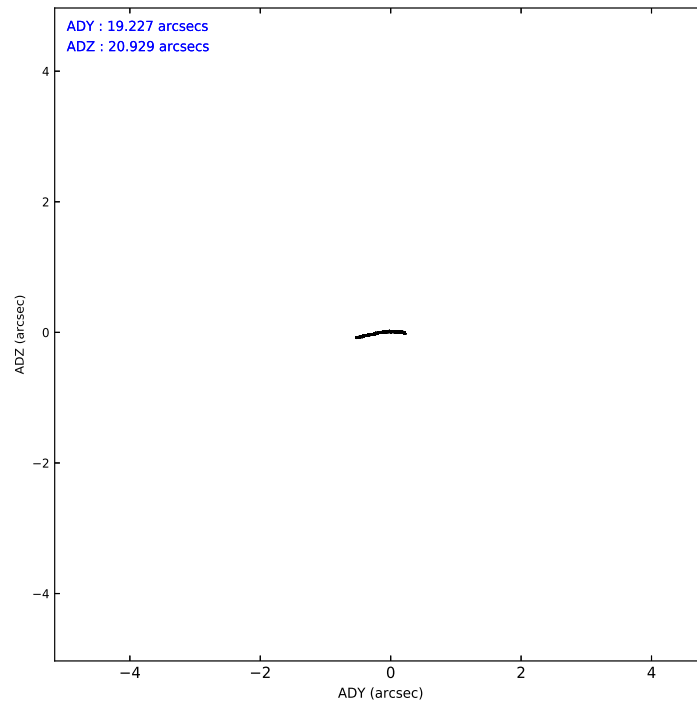
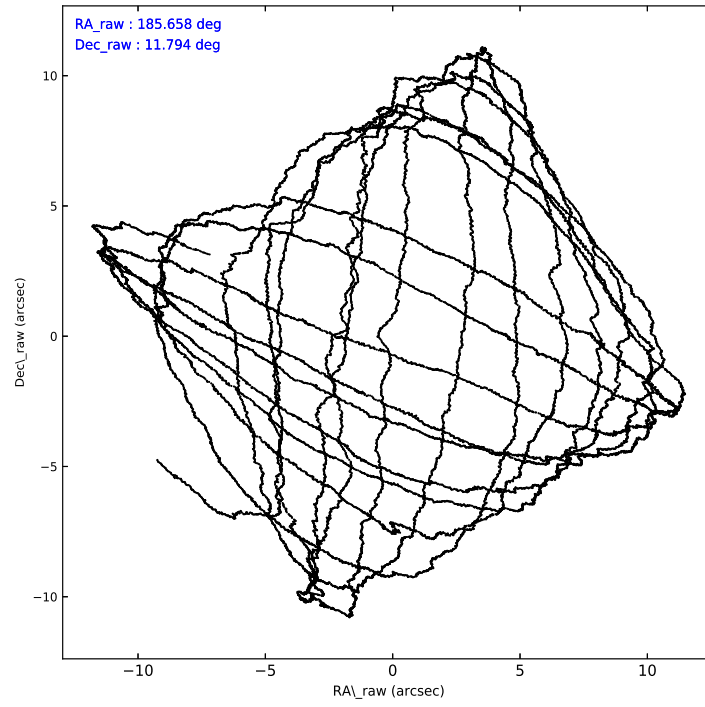
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	2702	2370	2917	6020
	2%	3%	3%	7%
grade 1 events	203	19	99	44
	0%	0%	0%	0%
grade 2 events	14613	1617	7121	5216
	15%	2%	9%	6%
grade 3 events	1433	694	2613	2102
	1%	1%	3%	2%
grade 4 events	1313	684	2625	2030
	1%	1%	3%	2%
grade 5 events	6360	2765	7722	4344
	6%	4%	9%	5%
grade 6 events	25336	1649	18093	5788
	26%	2%	23%	7%
grade 7 events	42261	52769	36308	53475
	44%	84%	46%	67%

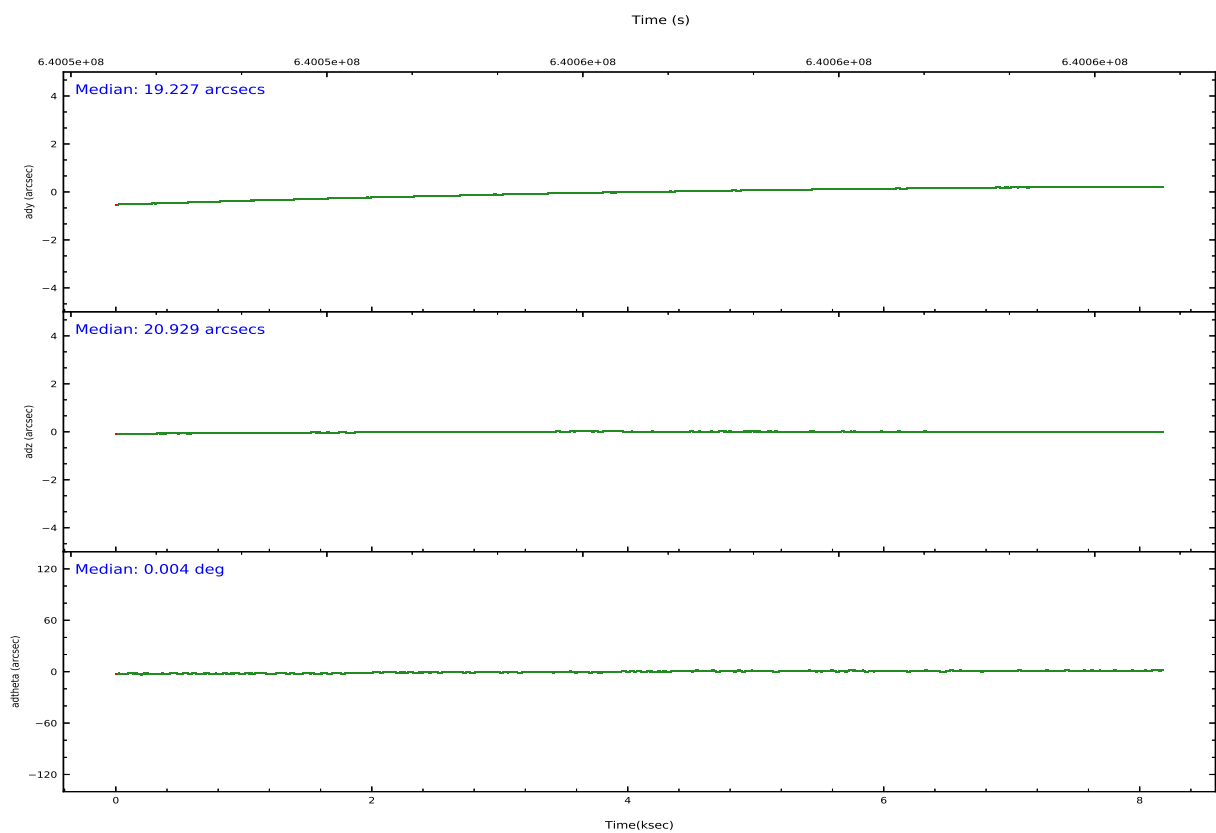
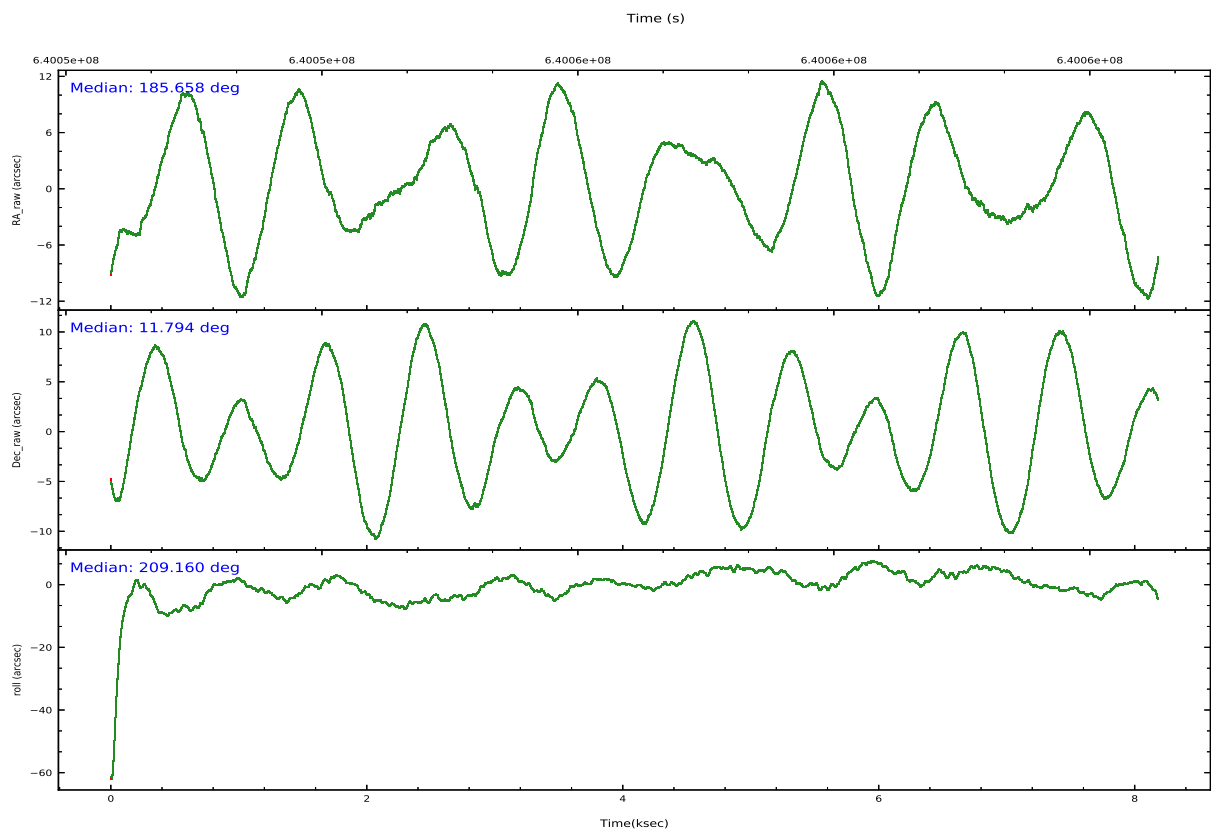
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-5678	ACIS-5678
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	185.672583	185.66035657435
[deg] Pointing Dec	11.818102	11.802248883238
[deg] Pointing Roll	208.997510	209.16032024349
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1425803651734
[mm] SIM translation stage offset	0	0.01005778216563158
[s] Observation start time (MET)	640052534.184000	640051422.93892
Observation start date	2018-04-14T00:21:05	2018-04-14T00:03:42
[s] Observation end time (MET)	640060534.184000	640060783.7519701
Observation end date	2018-04-14T02:34:25	2018-04-14T02:39:43
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar version number	8	8
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

2.3 Aspect



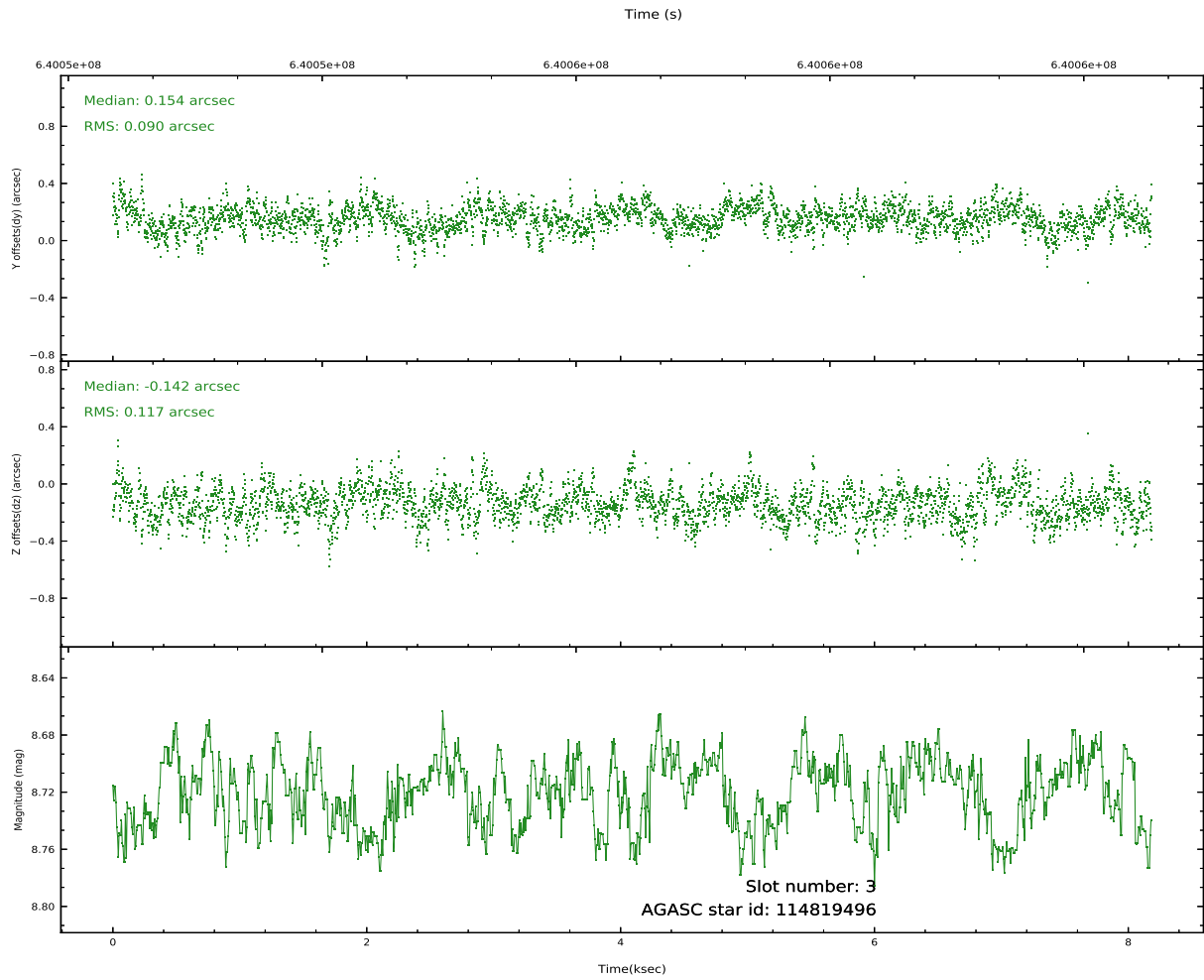
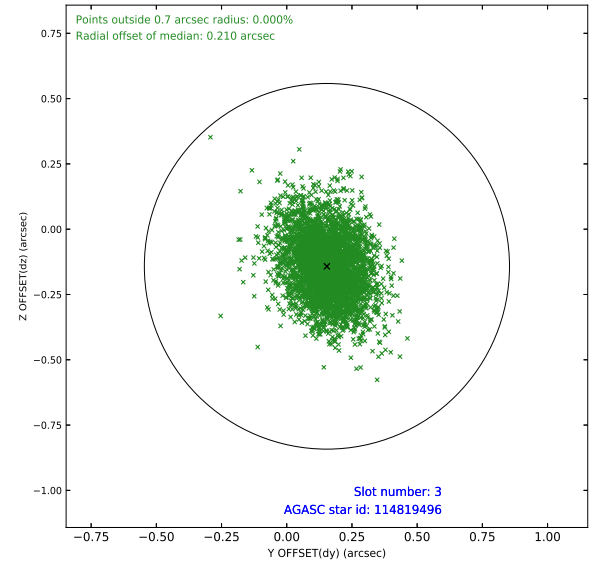
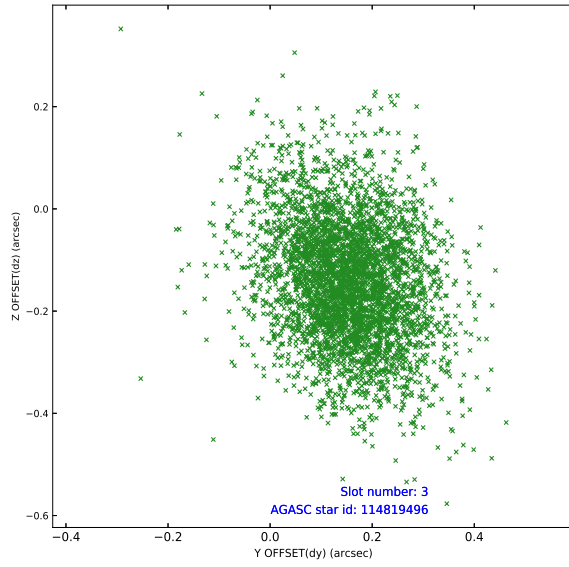


Slot Statistics

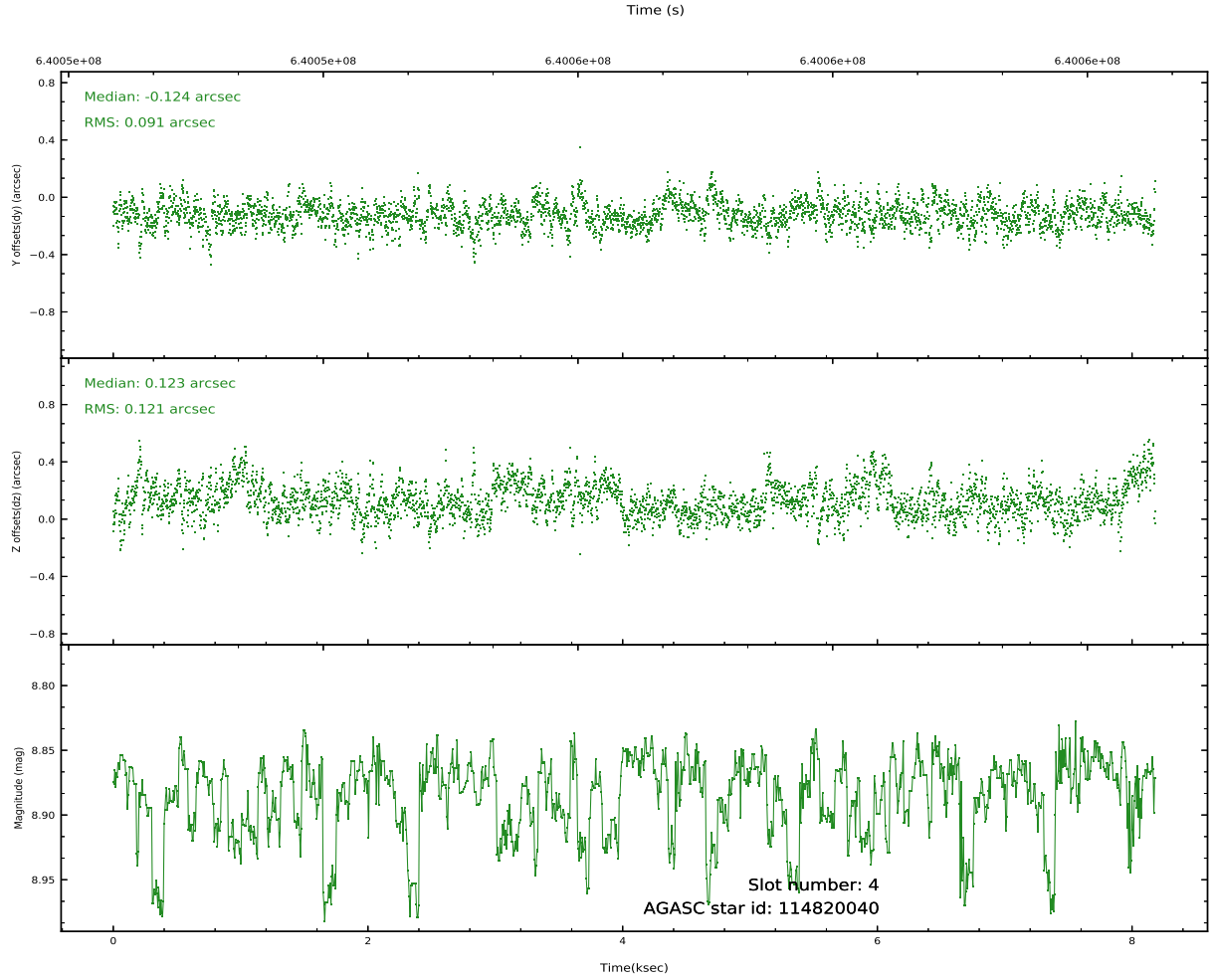
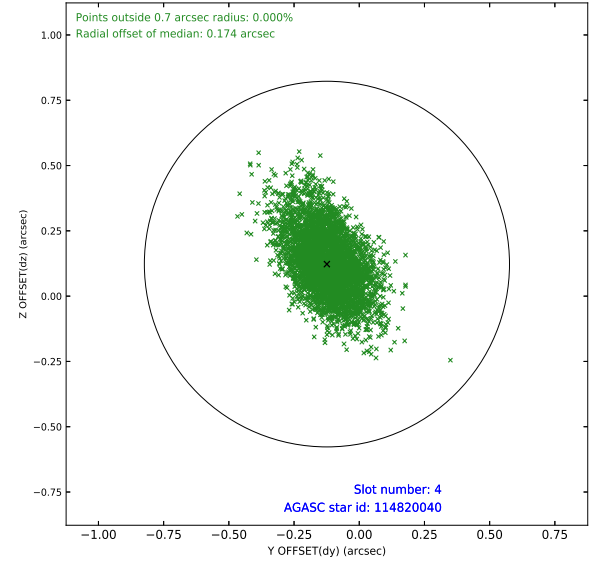
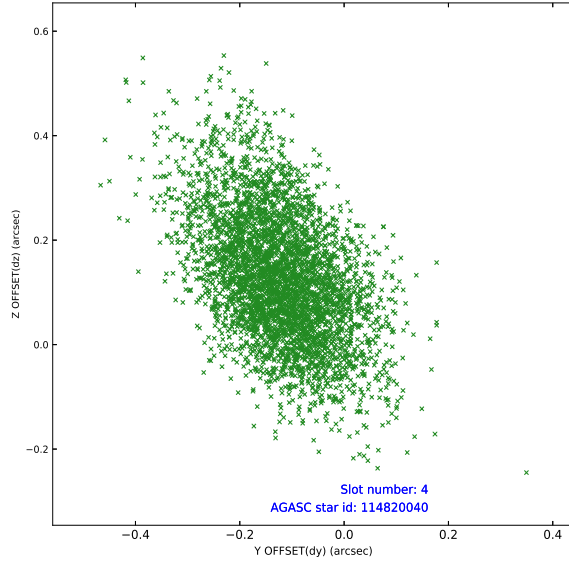
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.06	1997	1.000	0.108	-0.085	0.008	0.012	0.000000	0.000000	-772.39	-1742
1	FID		ACIS-S-4	7.18	1997	1.000	0.109	-0.029	0.011	0.016	0.000000	0.000000	2140.83	165
2	FID		ACIS-S-5	7.17	1996	1.000	-0.249	0.123	0.010	0.016	0.000000	0.000000	-1824.46	160
3	GUIDE	used	114819496	8.72	3990	1.000	0.154	-0.142	0.154	0.263	185.927253	11.920483	-963.13	112
4	GUIDE	used	114820040	8.88	3991	1.000	-0.124	0.123	0.155	0.277	186.336582	11.909860	-2207.17	843
5	GUIDE	used	114823032	9.70	3986	1.000	0.117	0.035	0.227	0.386	186.271088	11.937523	-2053.62	644
6	GUIDE	used	114823144	9.19	3987	1.000	-0.115	-0.020	0.160	0.279	185.759442	11.403801	454.51	1453
7	GUIDE	used	114819488	9.56	3983	1.000	-0.035	-0.003	0.221	0.356	185.439323	11.182195	1830.27	1603

2.4 Star Slots

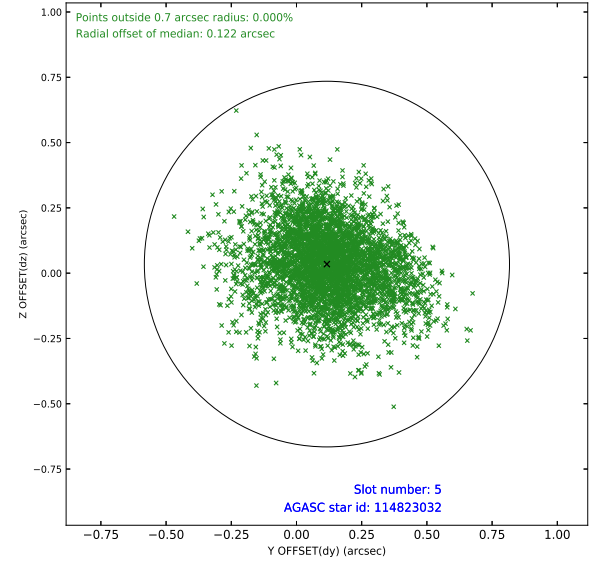
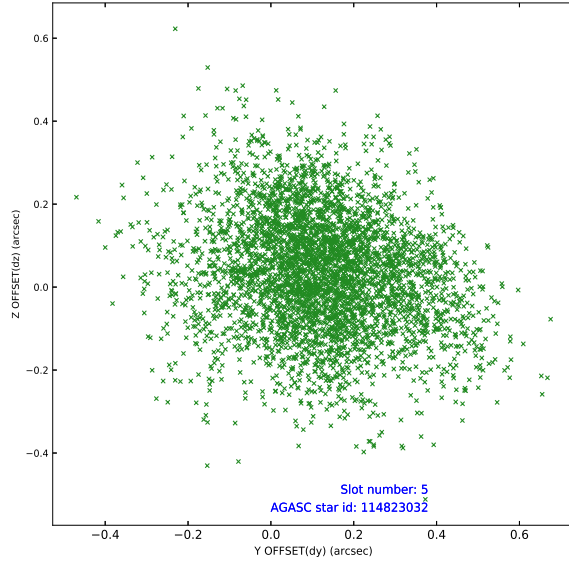
2.4.1 Slot 3



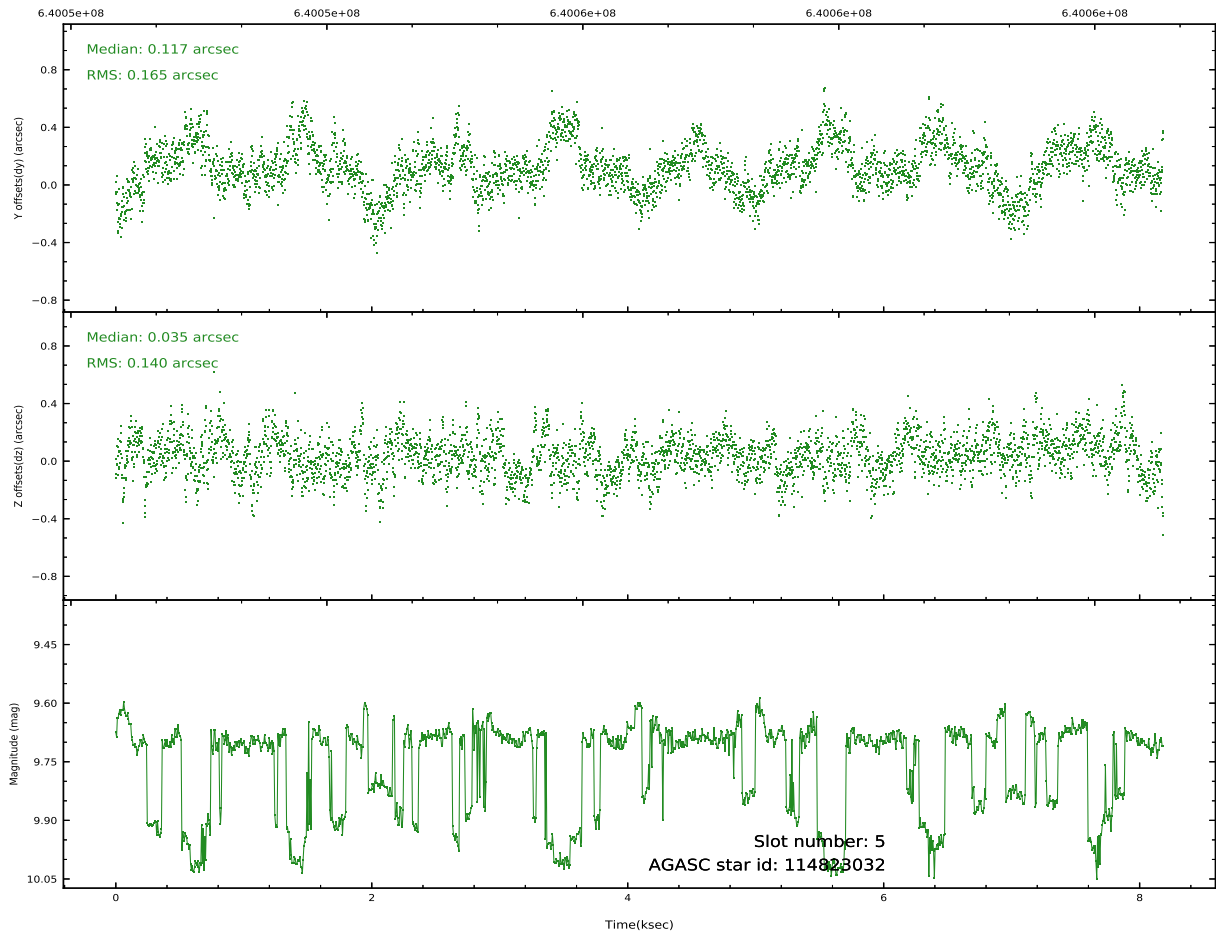
2.4.2 Slot 4



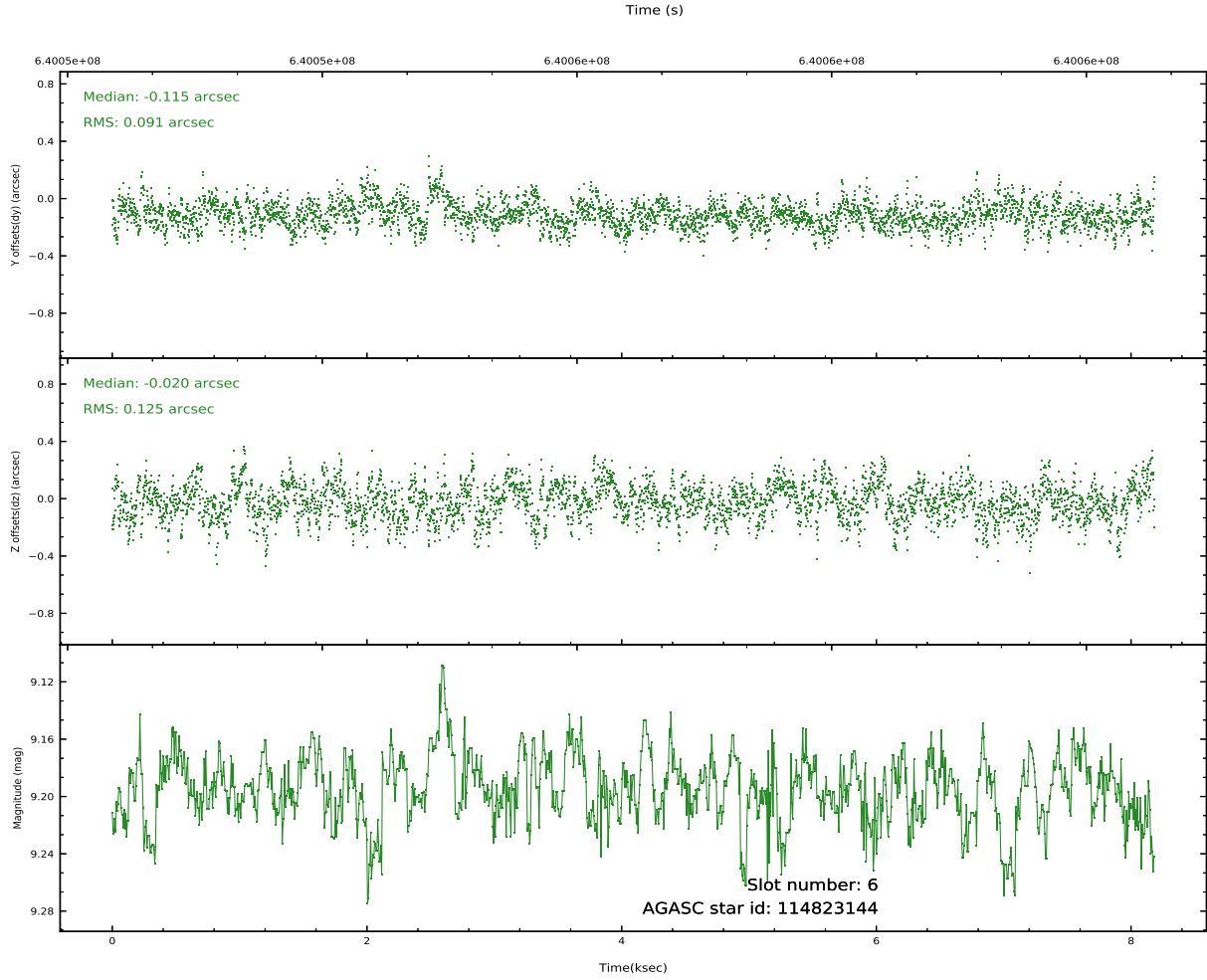
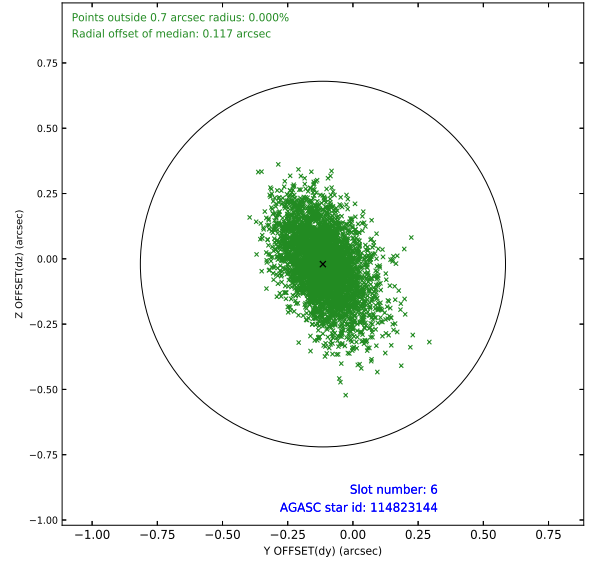
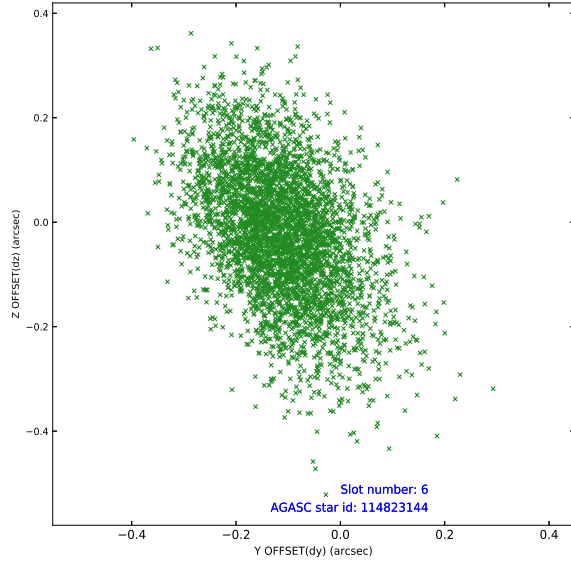
2.4.3 Slot 5



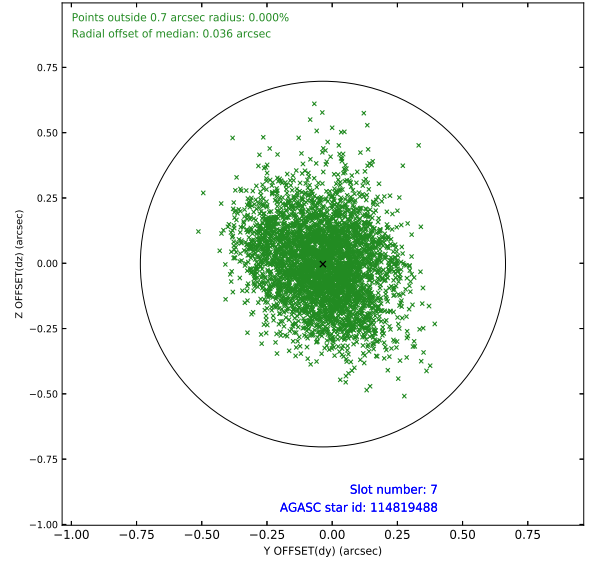
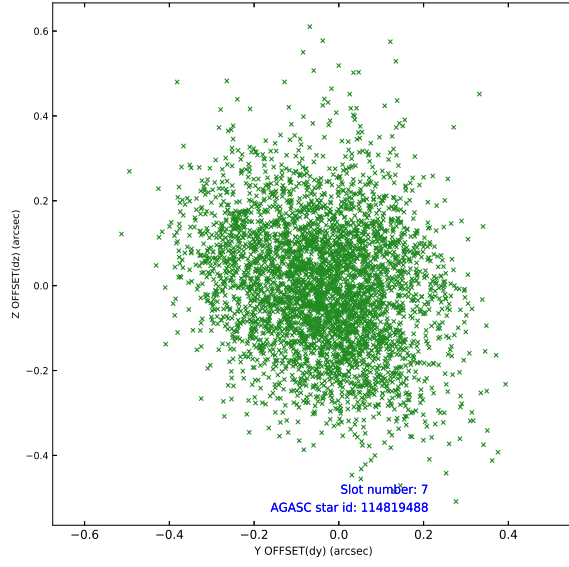
Time (s)



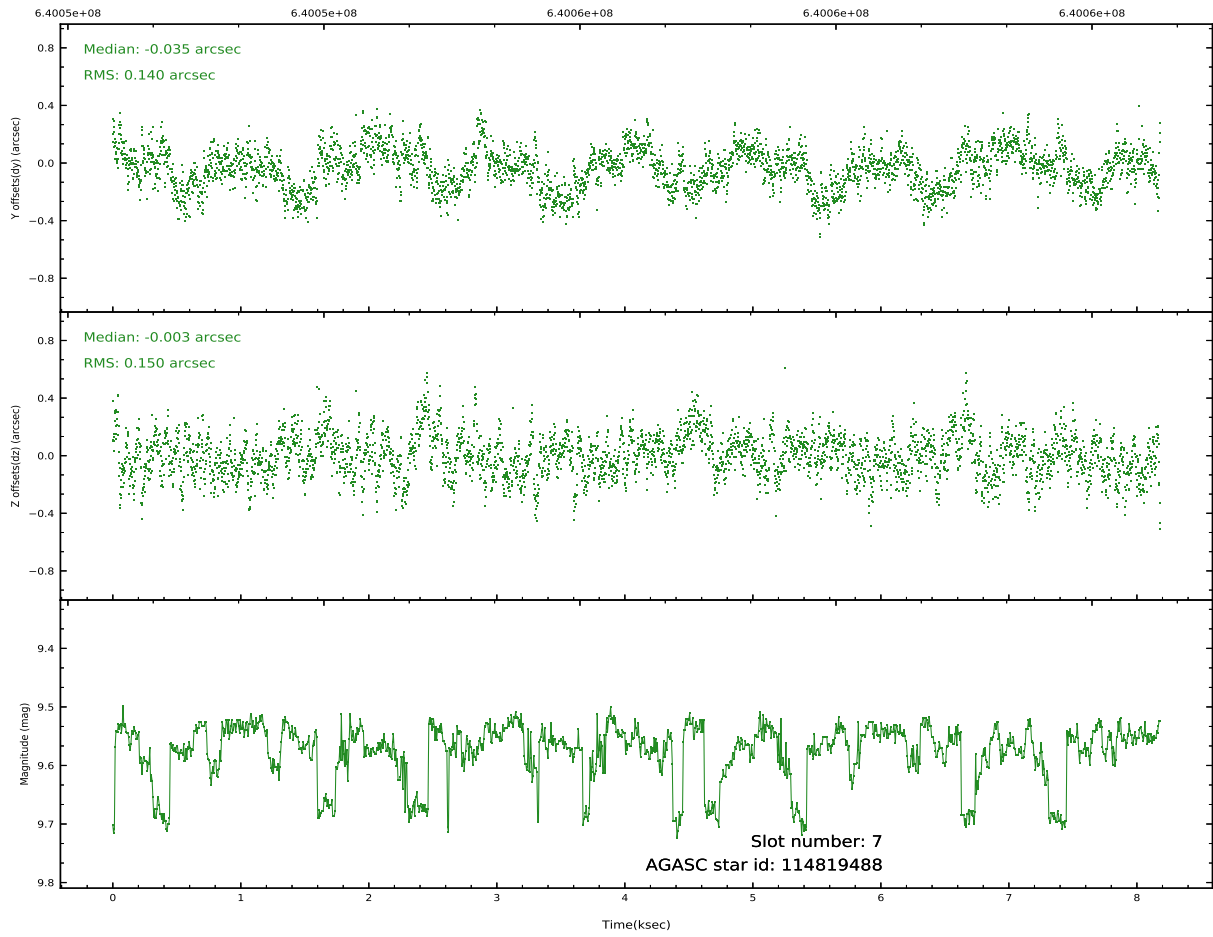
2.4.4 Slot 6



2.4.5 Slot 7

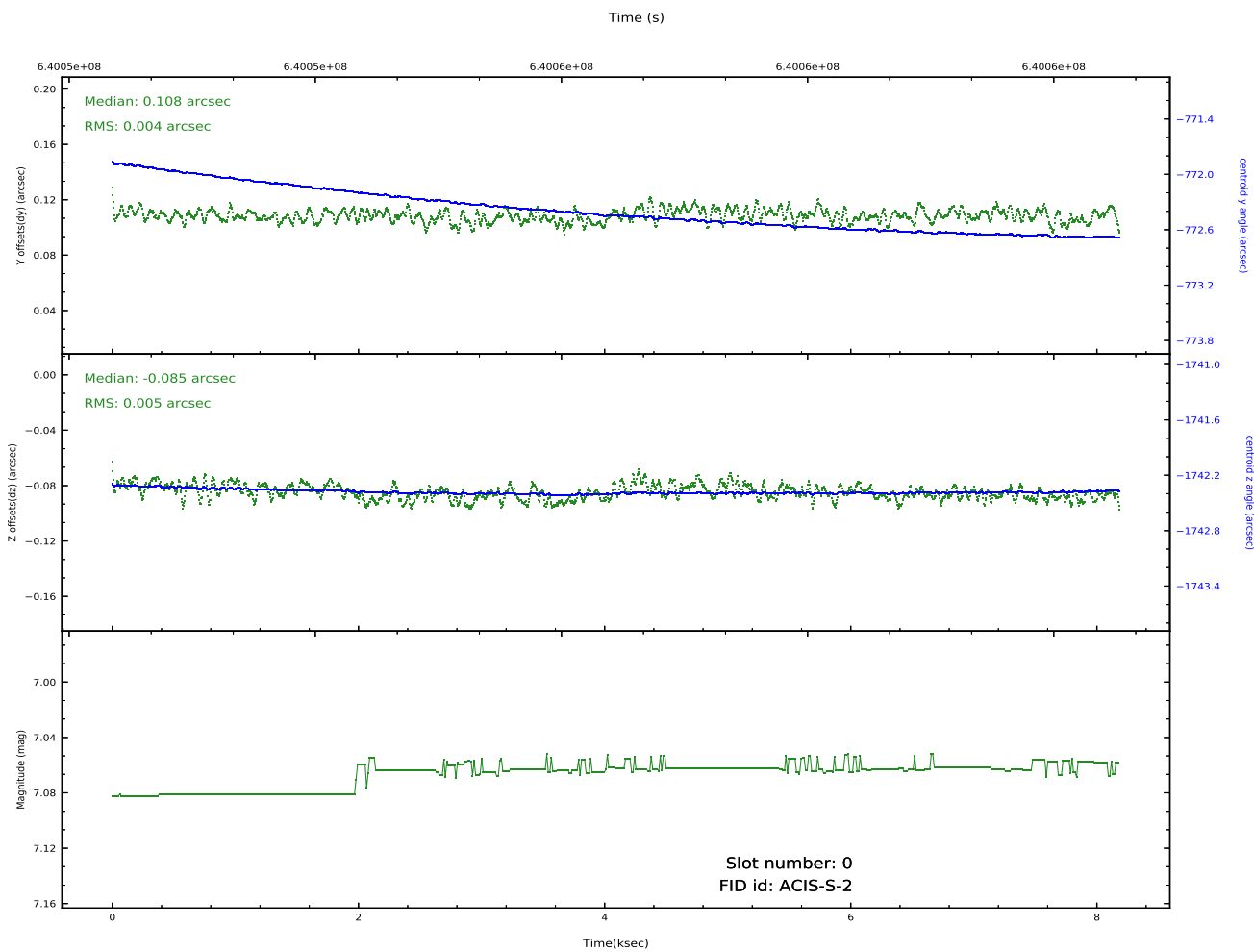
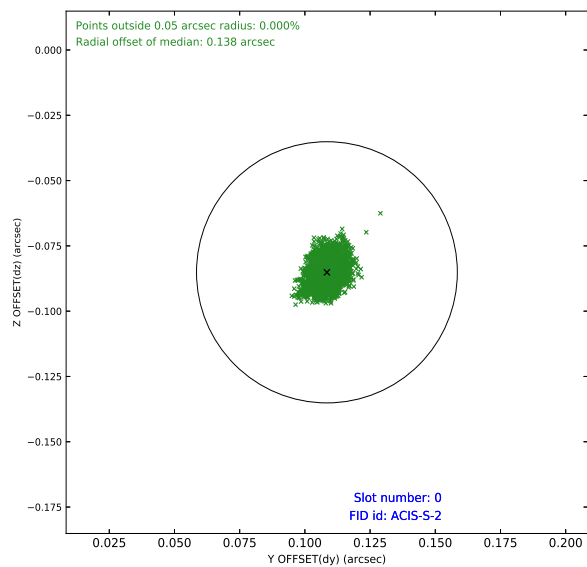
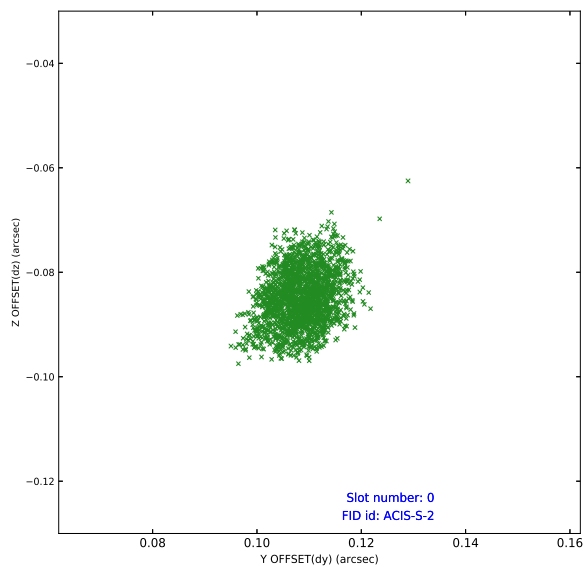


Time (s)

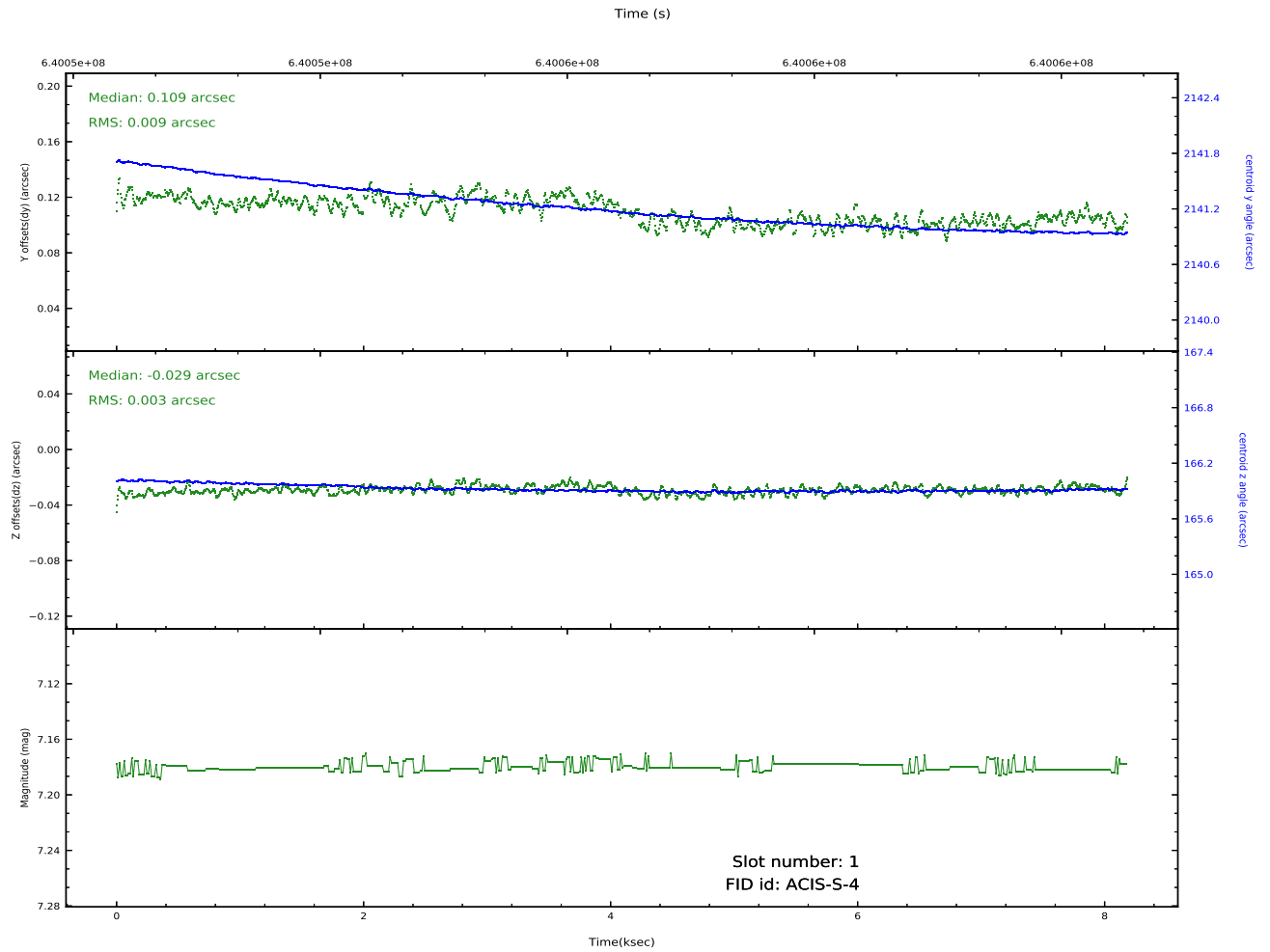
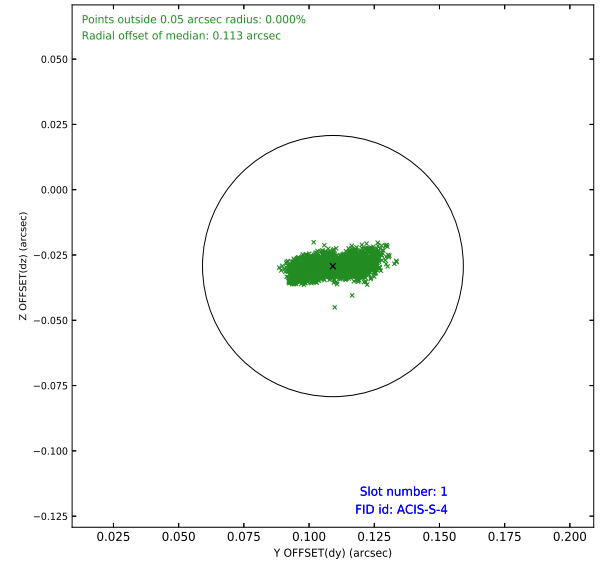
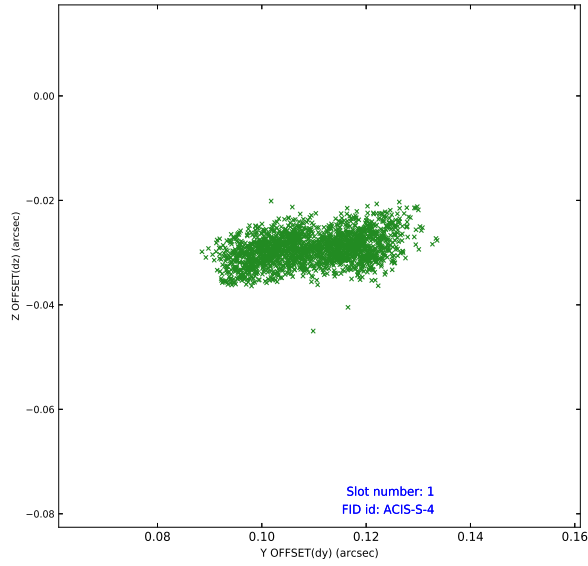


2.5 FID Slots

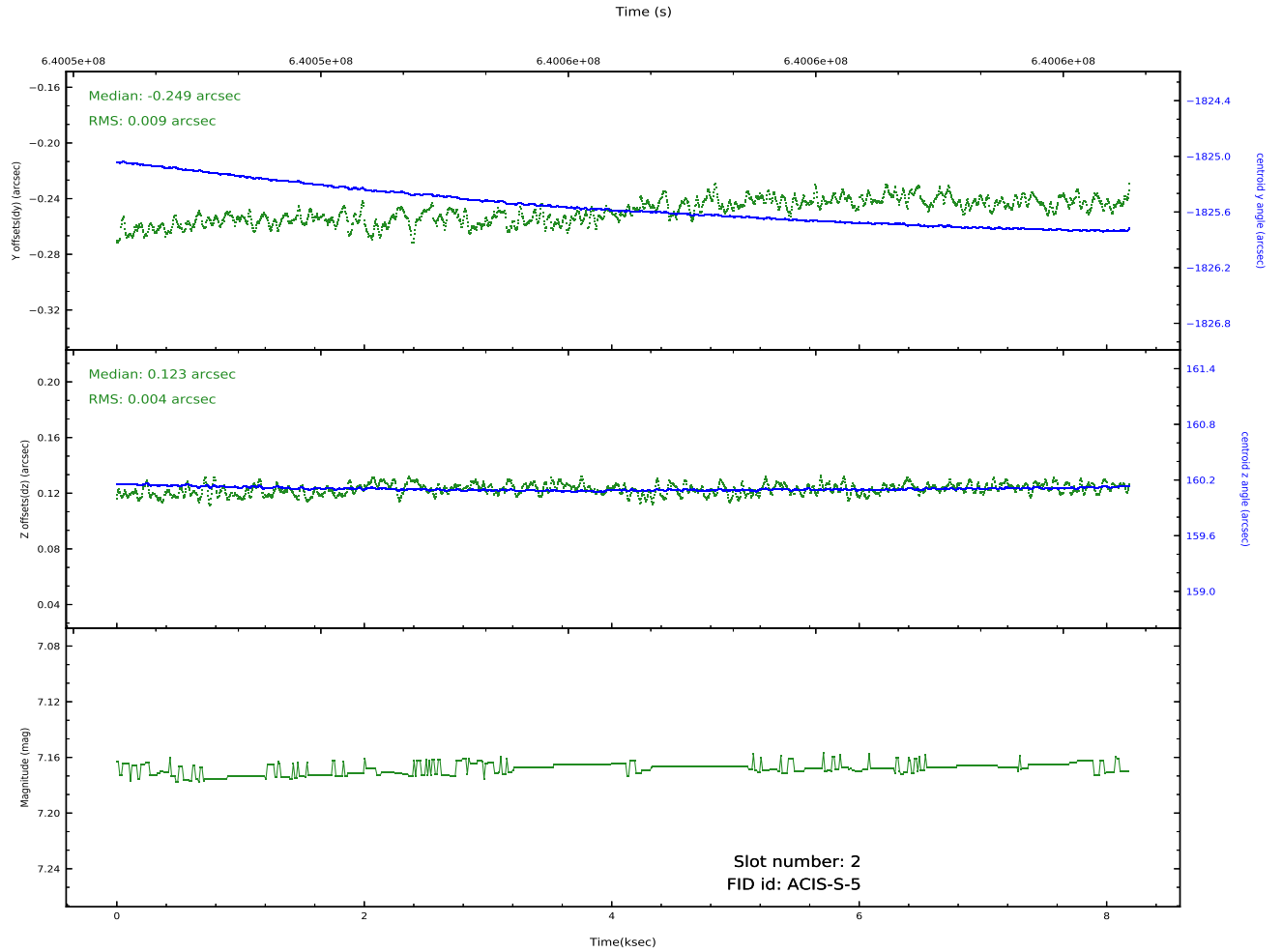
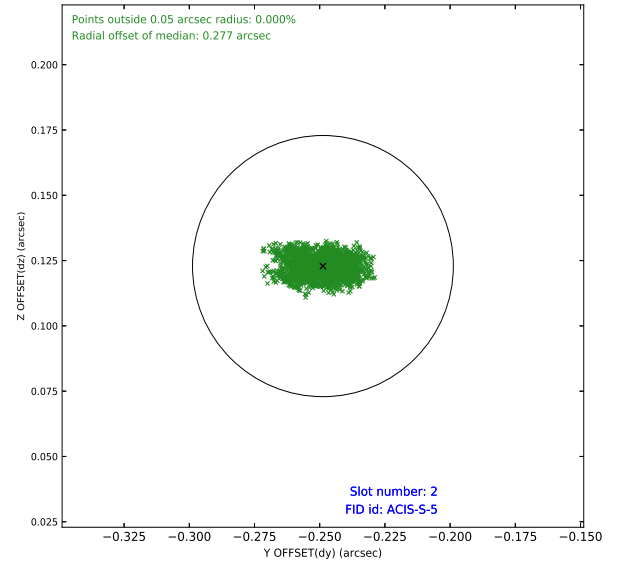
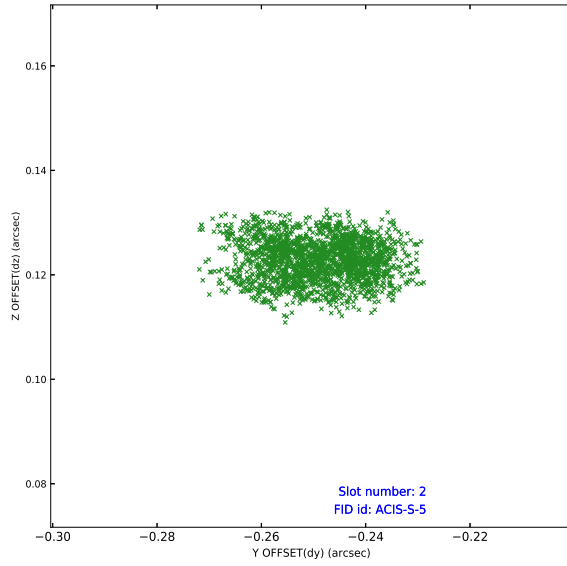
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	8.0621390589476

A.2 Comments

A spatial region of the original bias map for CCD = 6 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 = 6 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: (185.64442,11.71045), (185.64698,11.71185), (185.57736,11.83371), (185.57480,11.83231).