

V&V Reference Report

L2 ASCDS Version : 10.5.2

Observation 19591 - L2 Version 2
Chandra X-Ray Center

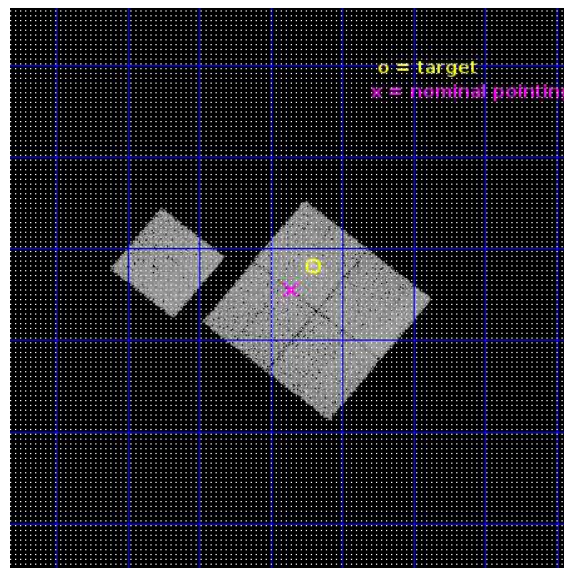
L2 Processing Date : Dec 5 2016

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
A	Summary	17
A.1	Status	17
A.2	Comments	17

1 Front

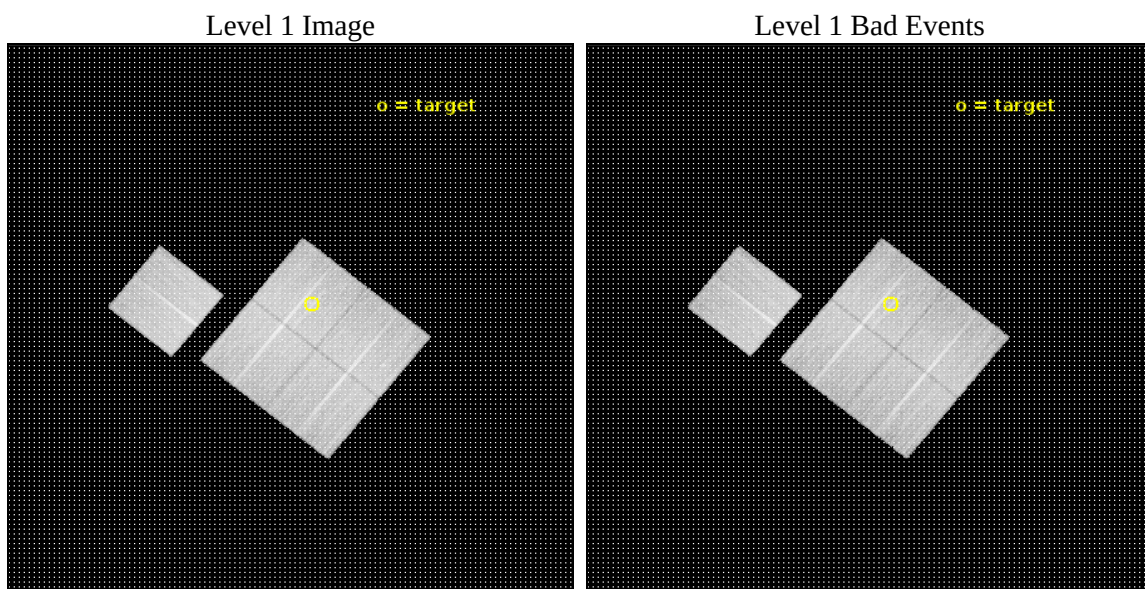
seq_num	801680	Sequence number
obs_id	19591	Observation id
title	A multiwavelength view of the intracluster medium at intermediate redshift in a mass-limited sample of ACTPol clusters	Proposal title
observer	Matt Hilton	Principal investigator
object	ACT-CL J0248.2+0238	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	42.05	Observer's specified target RA [deg]
dec_targ	2.634306	Observer's specified target Dec [deg]
ra_nom	42.08887349904	Nominal RA [deg]
dec_nom	2.5918307309053	Nominal Dec [deg]
roll_nom	308.90692466398	Nominal Roll [deg]
revision	2	Processing version of data
ontime	27061.540927052	Sum of GTIs [s]
livetime	26707.961972424	Livetime [s]
ontime0	27067.699927688	Sum of GTIs [s]
ontime1	27064.599937439	Sum of GTIs [s]
ontime2	27064.640987515	Sum of GTIs [s]
ontime3	27061.540927052	Sum of GTIs [s]
ontime6	27067.658887625	Sum of GTIs [s]
l2events	89539	Number of level 2 events



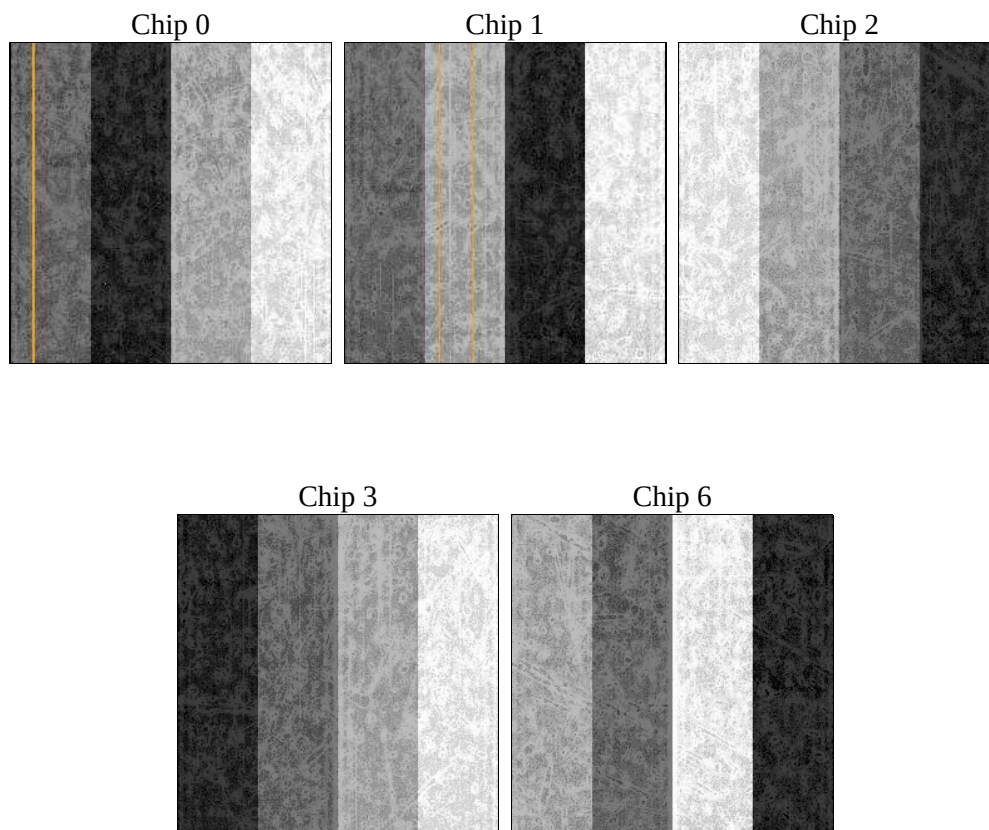
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	27000.000000	[s] Scheduled observation exposure time
ascdsver	10.5.2	Processing system revision	ontime	27061.540927052	Sum of GTIs [s]
caldsver	4.7.2	 	ontime0	27067.699927688	Sum of GTIs [s]
date	2016-12-05T18:41:20	Date and time of file creation	ontime1	27064.599937439	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	27064.640987515	Sum of GTIs [s]
			ontime3	27061.540927052	Sum of GTIs [s]
			ontime6	27067.658887625	Sum of GTIs [s]
			l1events	897560	Number of level 1 events

2.1.4 Events

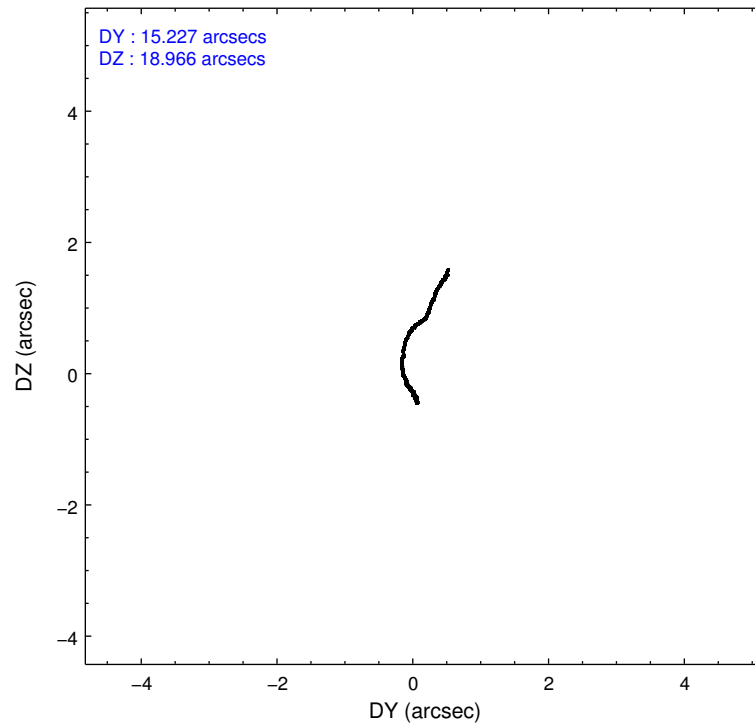
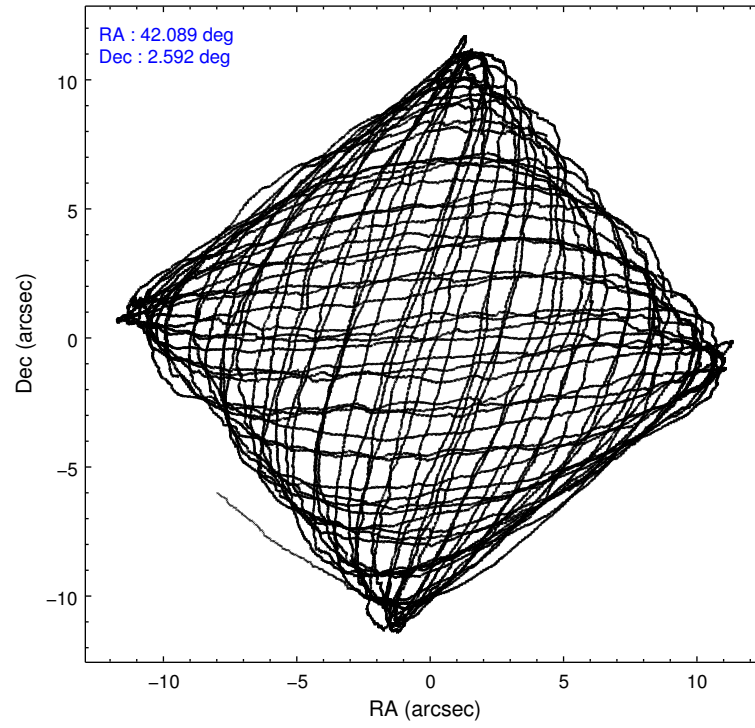
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	168703	172962	185611	182114	188170
rejected events	147772	150173	164832	160827	167296
rejected %	87%	86%	88%	88%	88%

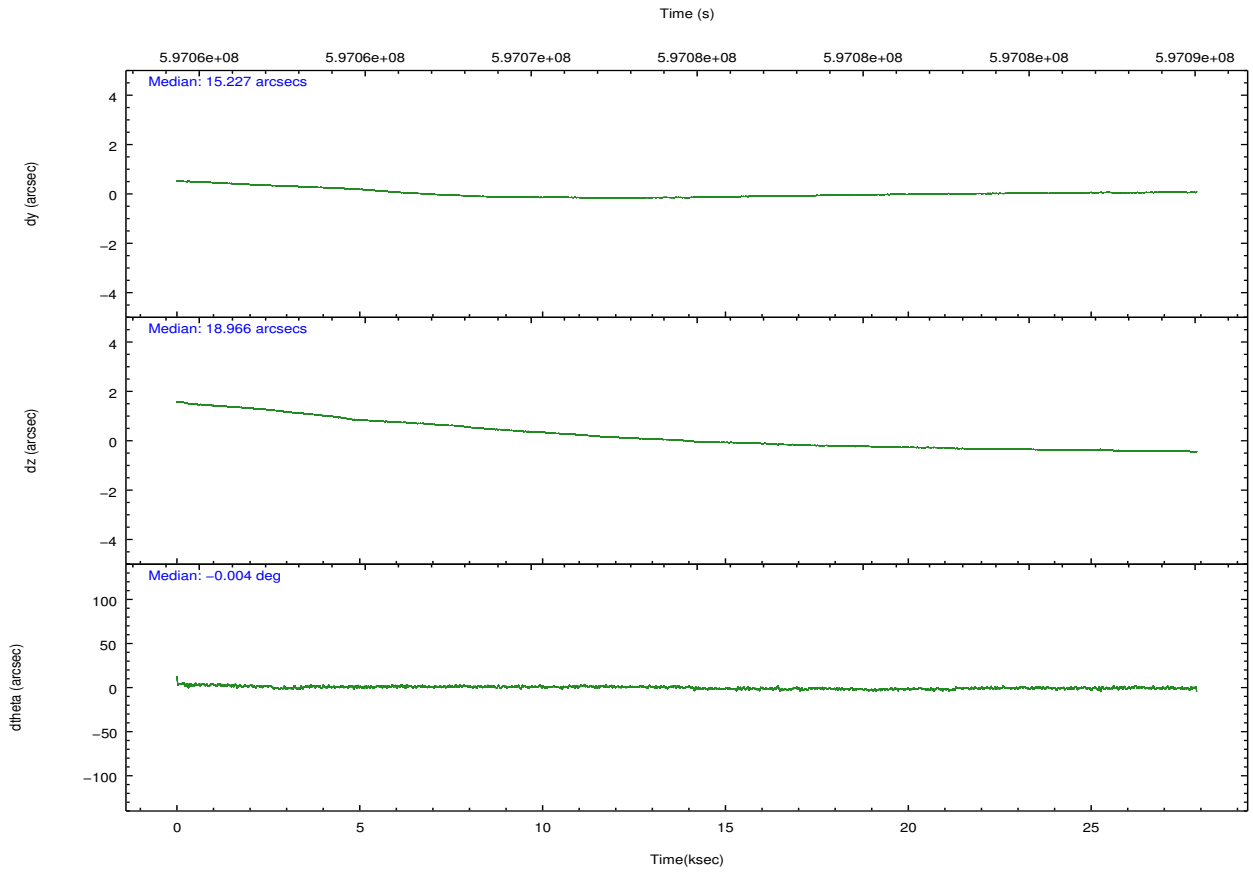
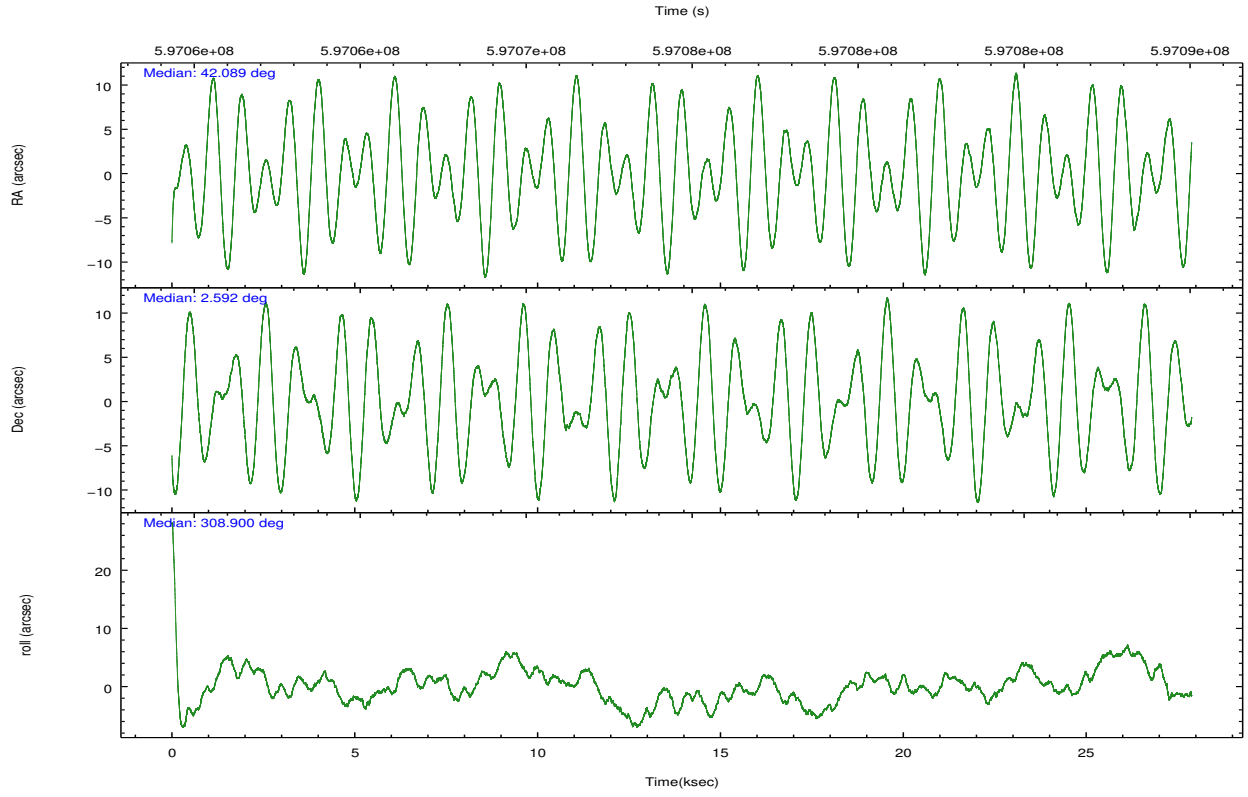
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	7300	7740	7421	8015	6918
	4%	4%	3%	4%	3%
grade 1 events	96	112	109	92	91
	0%	0%	0%	0%	0%
grade 2 events	5173	5575	5121	4586	4822
	3%	3%	2%	2%	2%
grade 3 events	2156	2171	2002	2127	2134
	1%	1%	1%	1%	1%
grade 4 events	2018	2184	2107	2171	2087
	1%	1%	1%	1%	1%
grade 5 events	8277	8709	7745	9044	8892
	4%	5%	4%	4%	4%
grade 6 events	4289	5129	4132	4393	4917
	2%	2%	2%	2%	2%
grade 7 events	139394	141342	156974	151686	158309
	82%	81%	84%	83%	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	42.063076	42.08887349903956	CCD I2 on	Y	Y
[deg] Pointing Dec	2.601677	2.591830730905327	CCD I3 on	Y	Y
[deg] Pointing Roll	308.699395	308.9069246639759	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	Y	Y
[mm] SIM translation stage pos	-225.792463	-225.7829997647864	CCD S3 on	O1	N
[mm] SIM translation stage offset	-7.8	-7.809453238143249	CCD S4 on	N	N
[s] Observation start time (MET)	597061626.184000	597059588.66559	CCD S5 on	N	N
Observation start date	2016-12-02T10:25:58	2016-12-02T09:53:08	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	597088626.184000	597089812.84234	On-chip summing requested	N	N
Observation end date	2016-12-02T17:55:58	2016-12-02T18:16:52	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



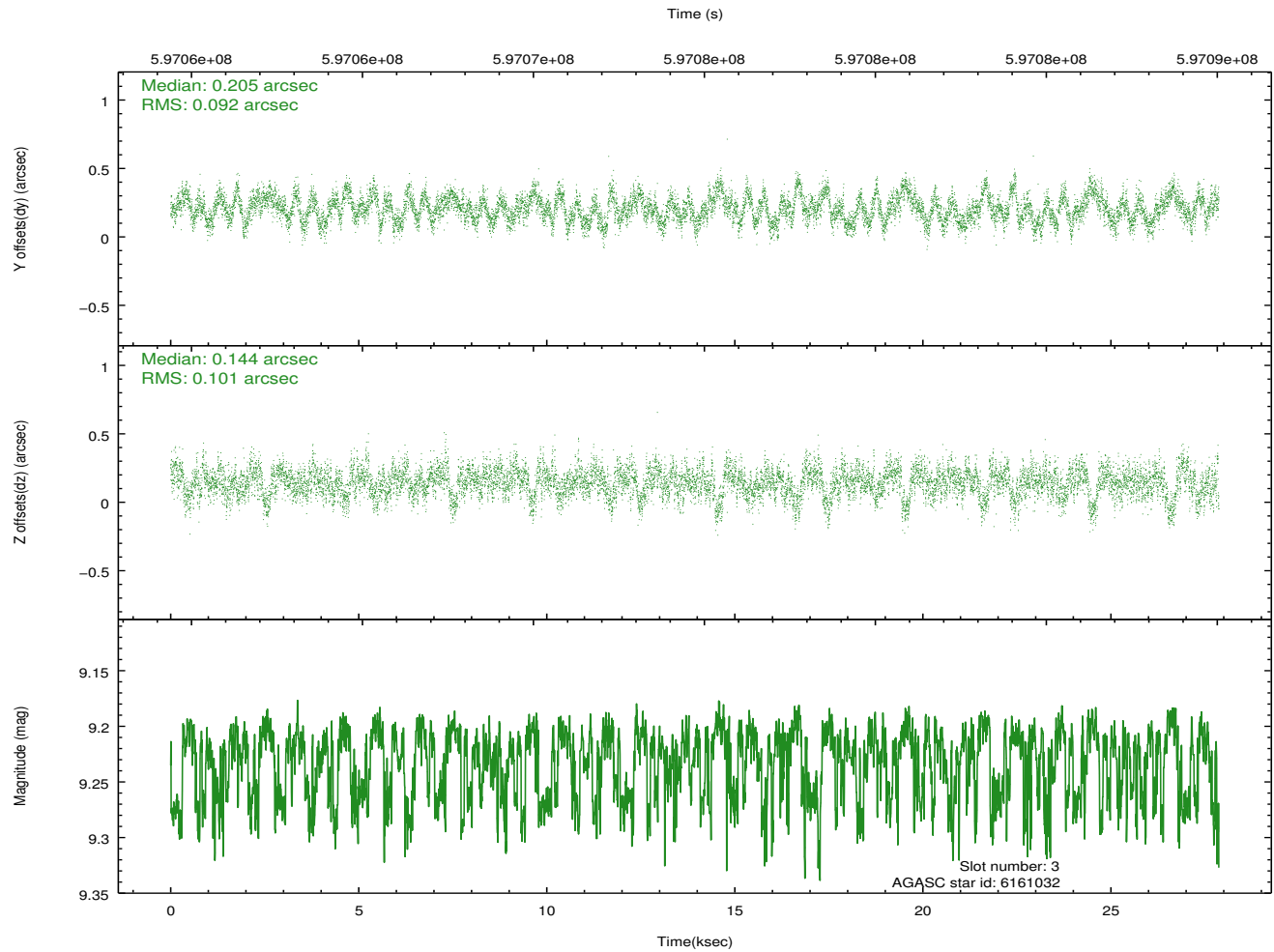
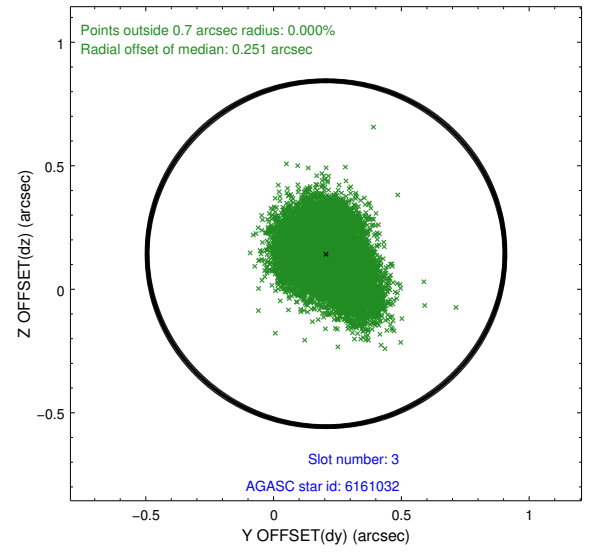
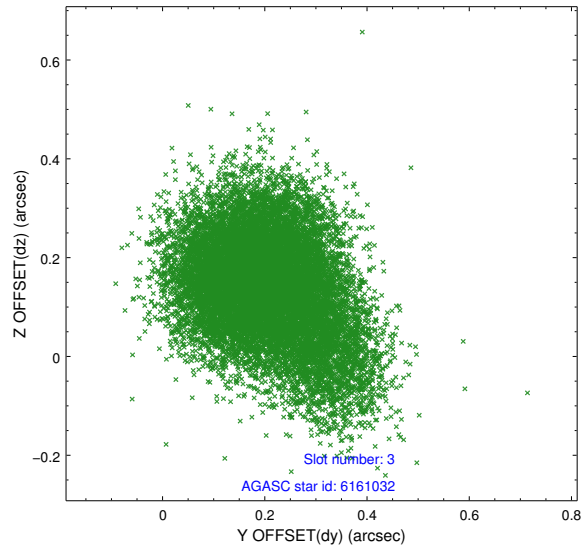


Slot Statistics

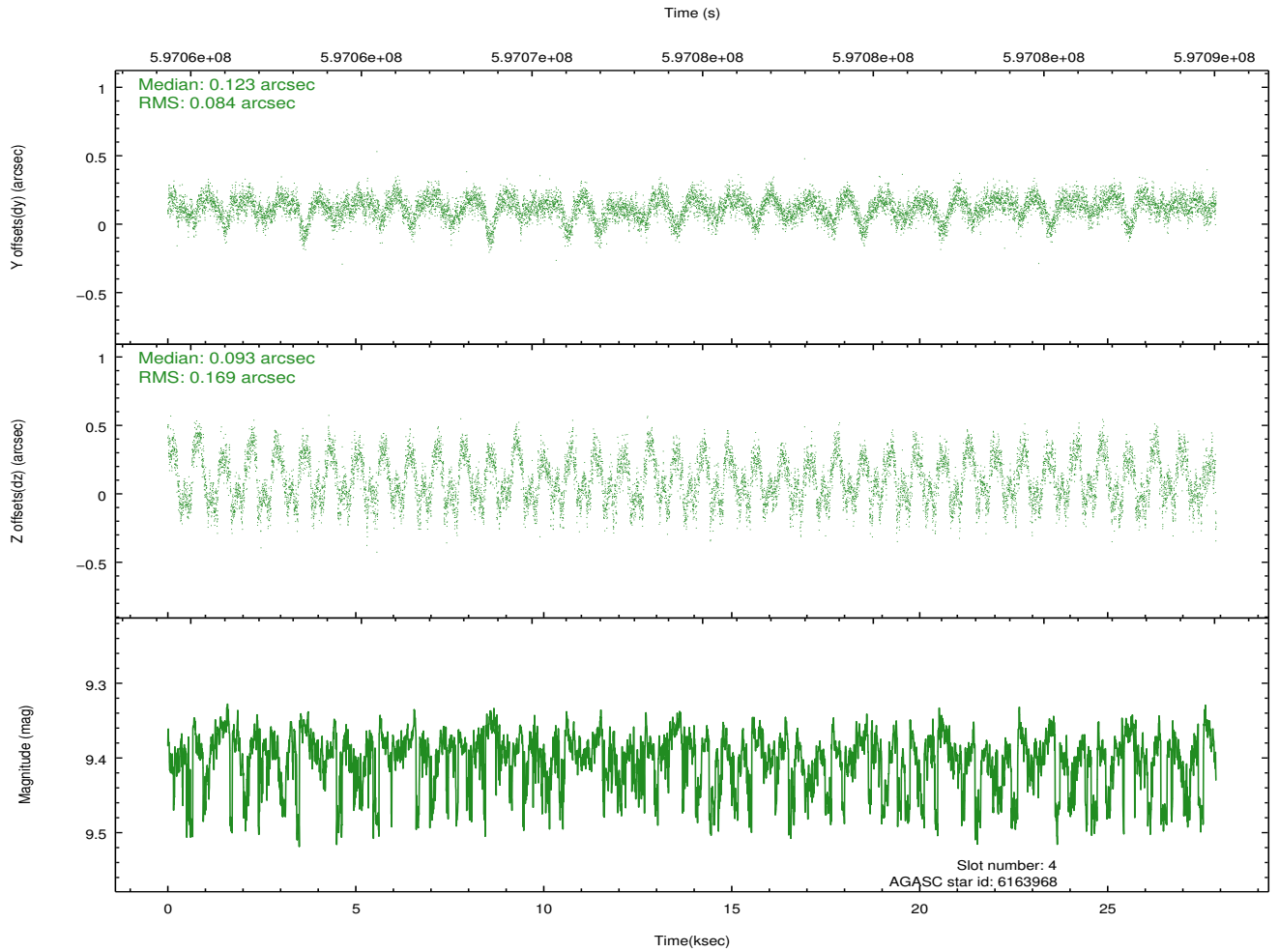
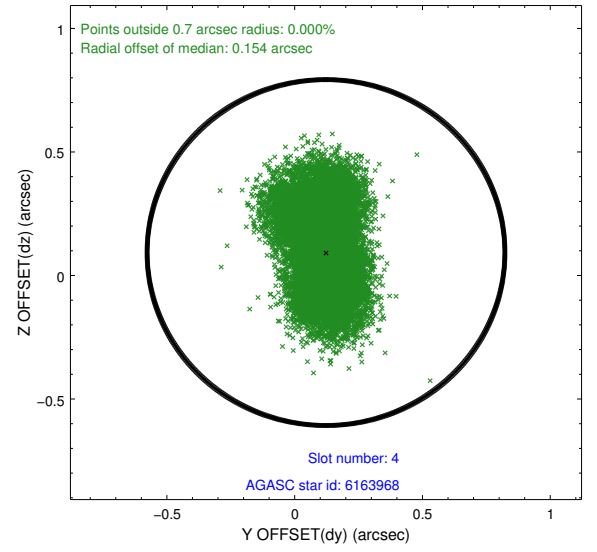
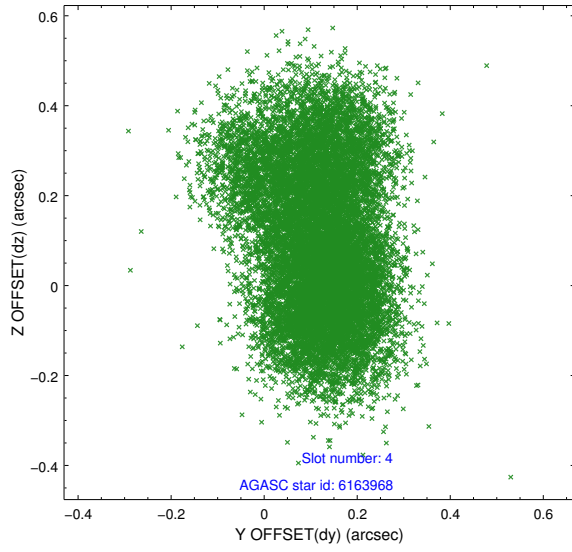
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.05	6802	0.127	-0.107	0.021	0.033	0.000000	0.000000	924.21	-1003.29
1	FID		ACIS-I-2	6.98	6799	-0.385	-0.054	0.011	0.032	0.000000	0.000000	-770.76	-1008.76
2	FID		ACIS-I-4	6.95	6802	0.163	0.228	0.018	0.029	0.000000	0.000000	2143.58	897.80
3	GUIDE	used	6161032	9.23	13576	0.205	0.144	0.143	0.241	41.580841	2.368339	-428.53	-1878.30
4	GUIDE	used	6163968	9.40	13582	0.123	0.093	0.206	0.321	41.326107	2.495468	-1358.89	-2307.06
5	GUIDE	used	6555680	9.27	13588	-0.038	0.017	0.134	0.224	41.982765	3.167192	-1768.99	1047.76
6	GUIDE	used	6685600	9.07	13593	-0.292	-0.463	0.144	0.237	42.593887	2.613360	1160.09	1516.72
7	GUIDE	used	6557304	9.67	13585	0.010	0.202	0.205	0.325	41.307638	2.715038	-2017.10	-1863.84

2.4 Star Slots

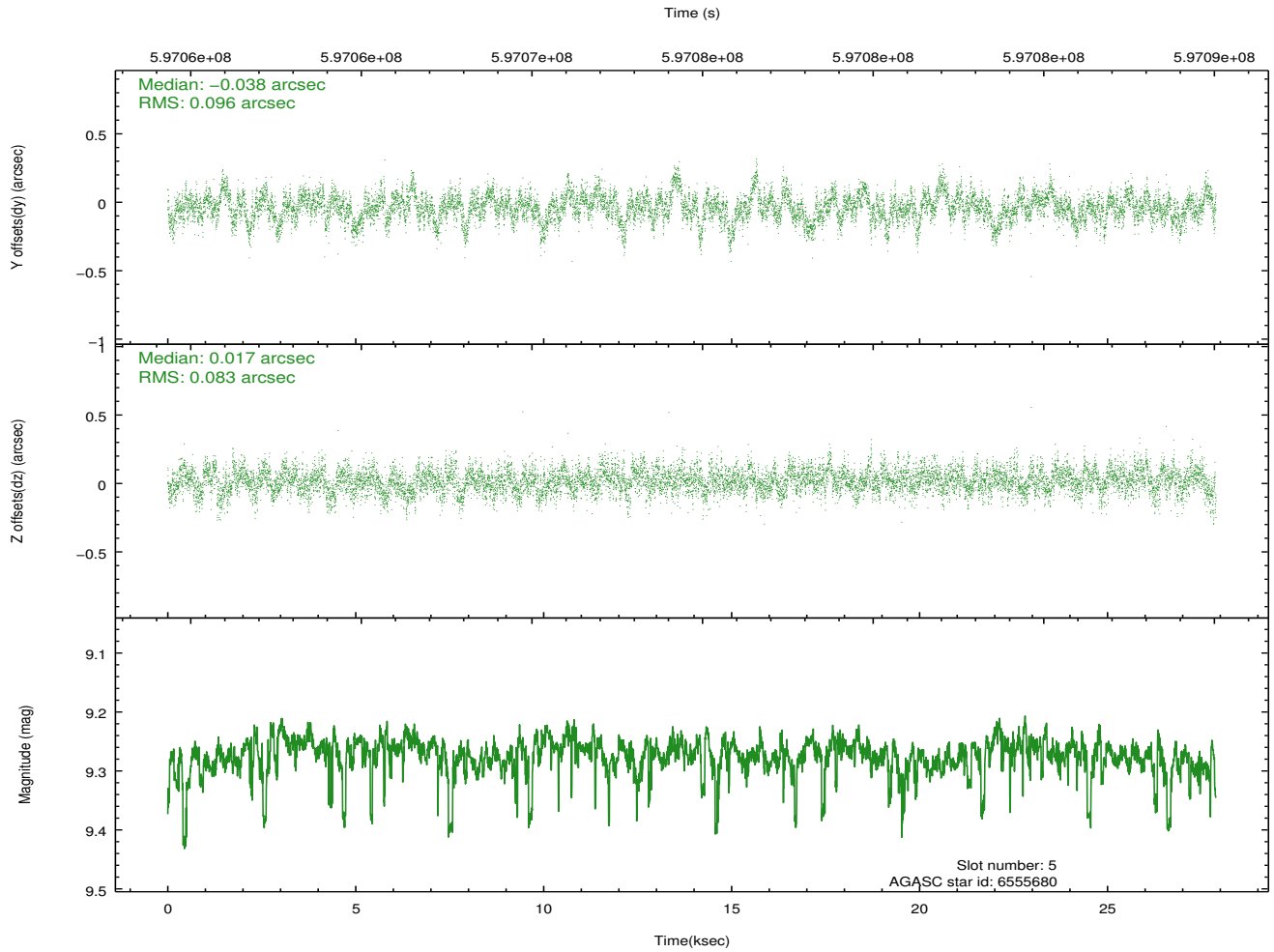
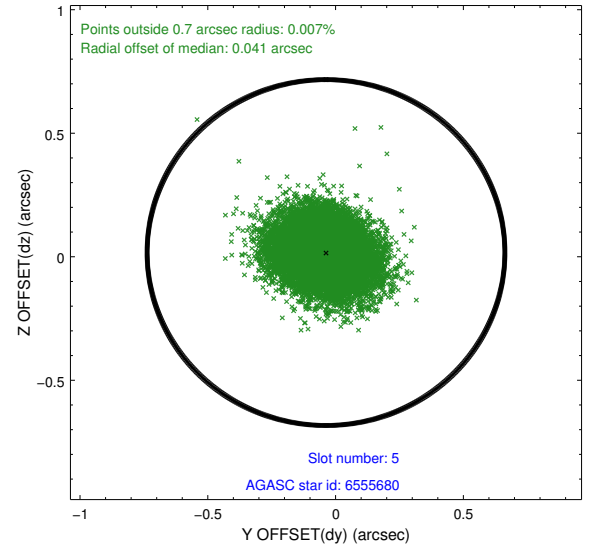
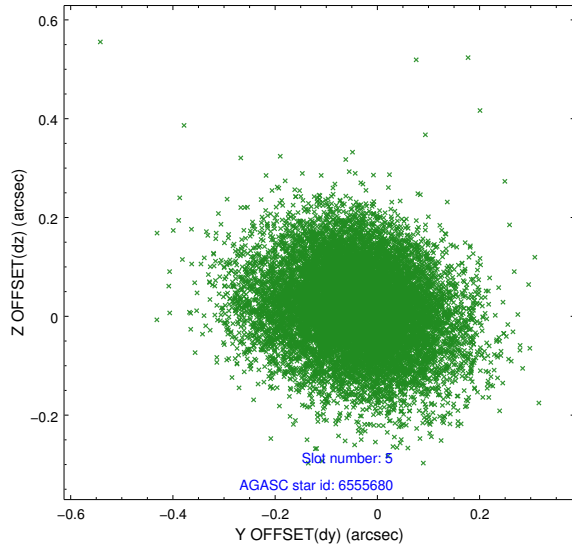
2.4.1 Slot 3



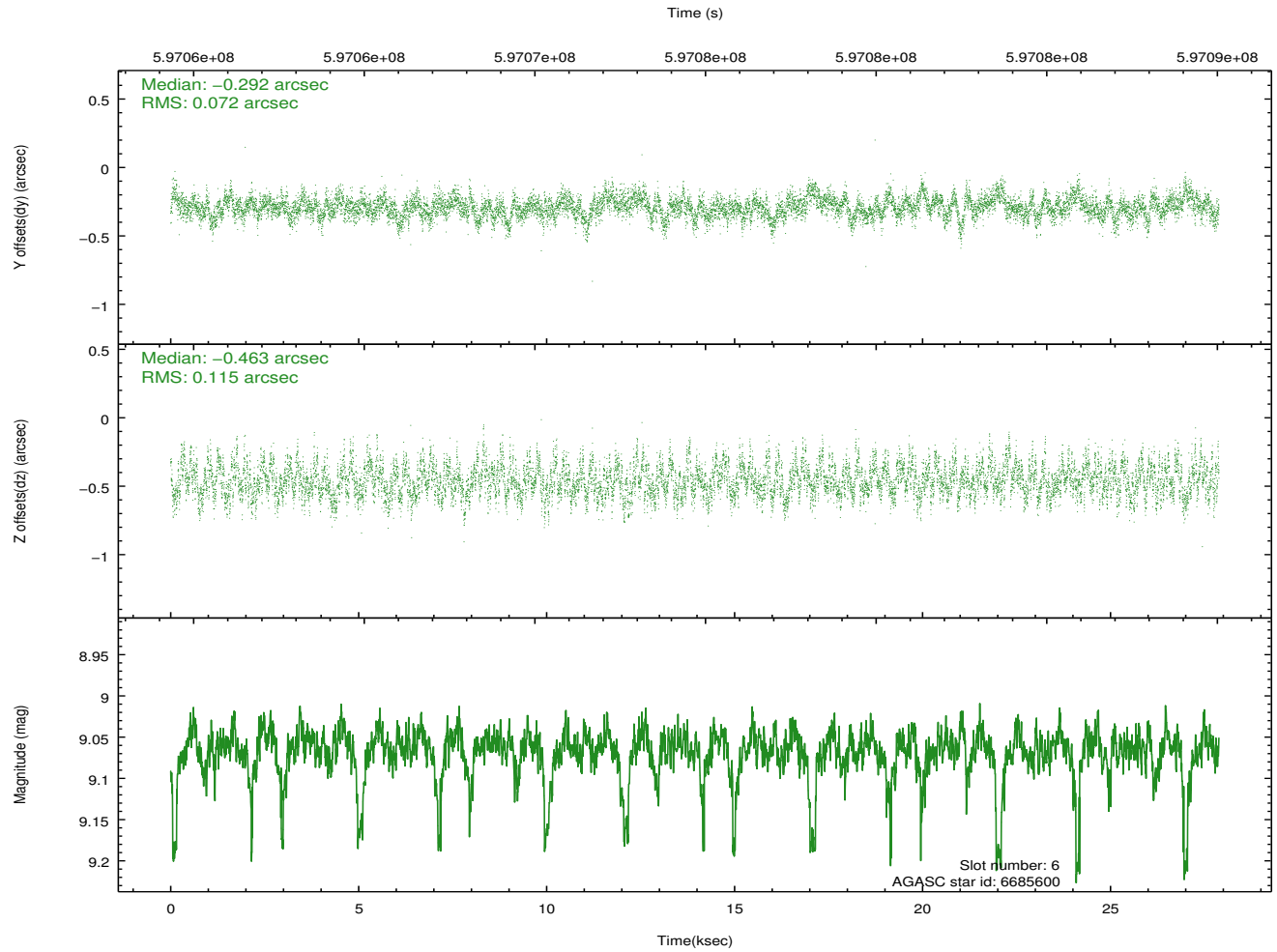
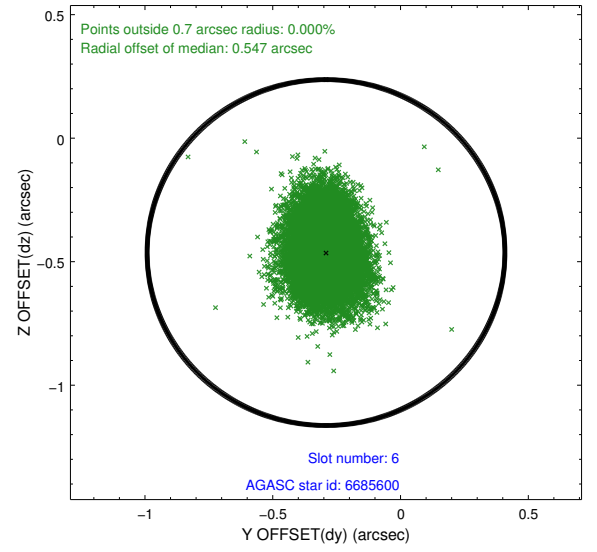
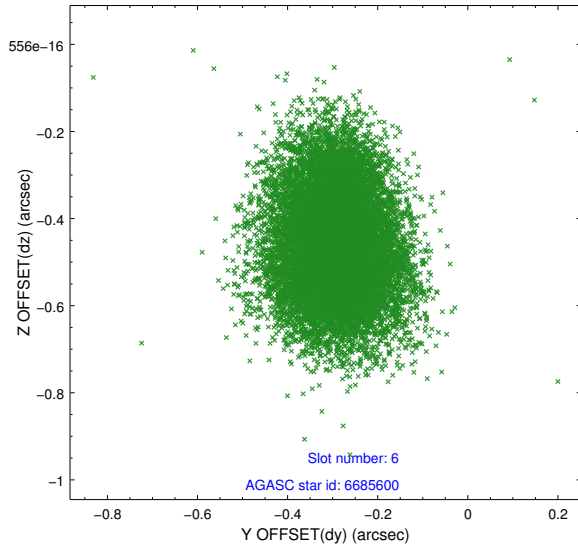
2.4.2 Slot 4



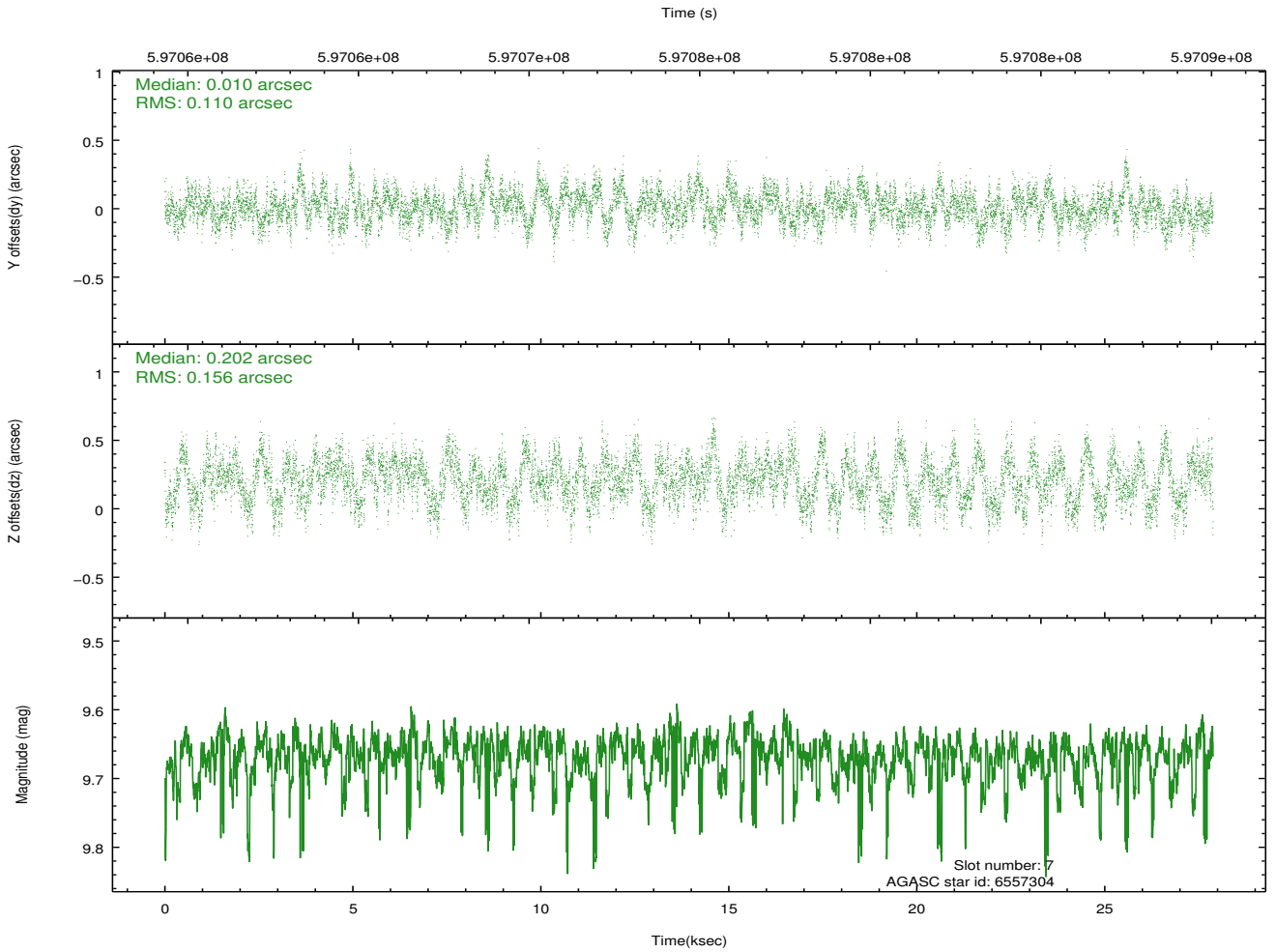
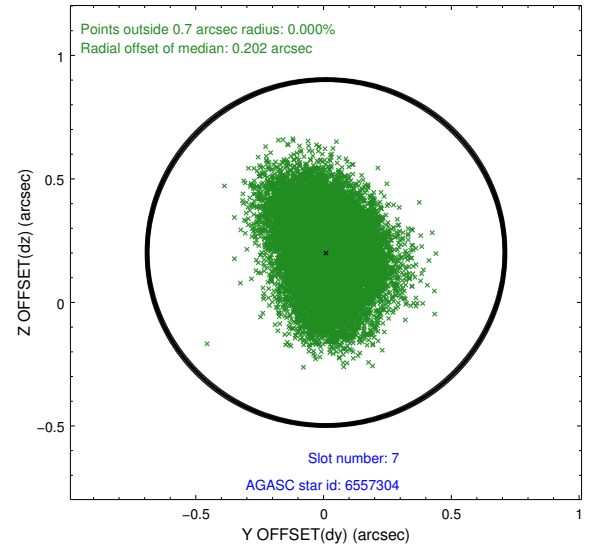
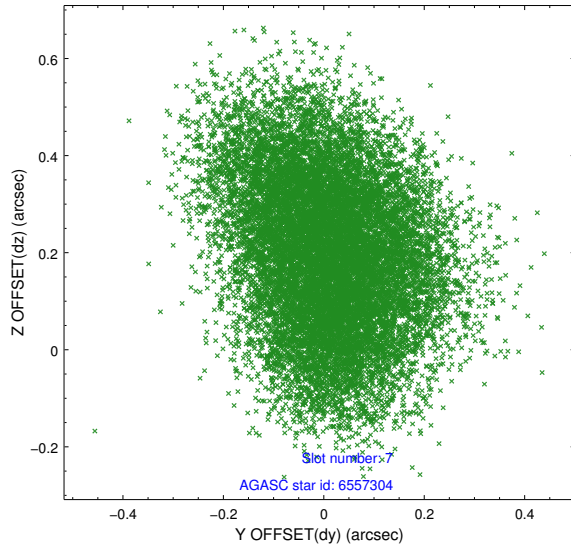
2.4.3 Slot 5



2.4.4 Slot 6

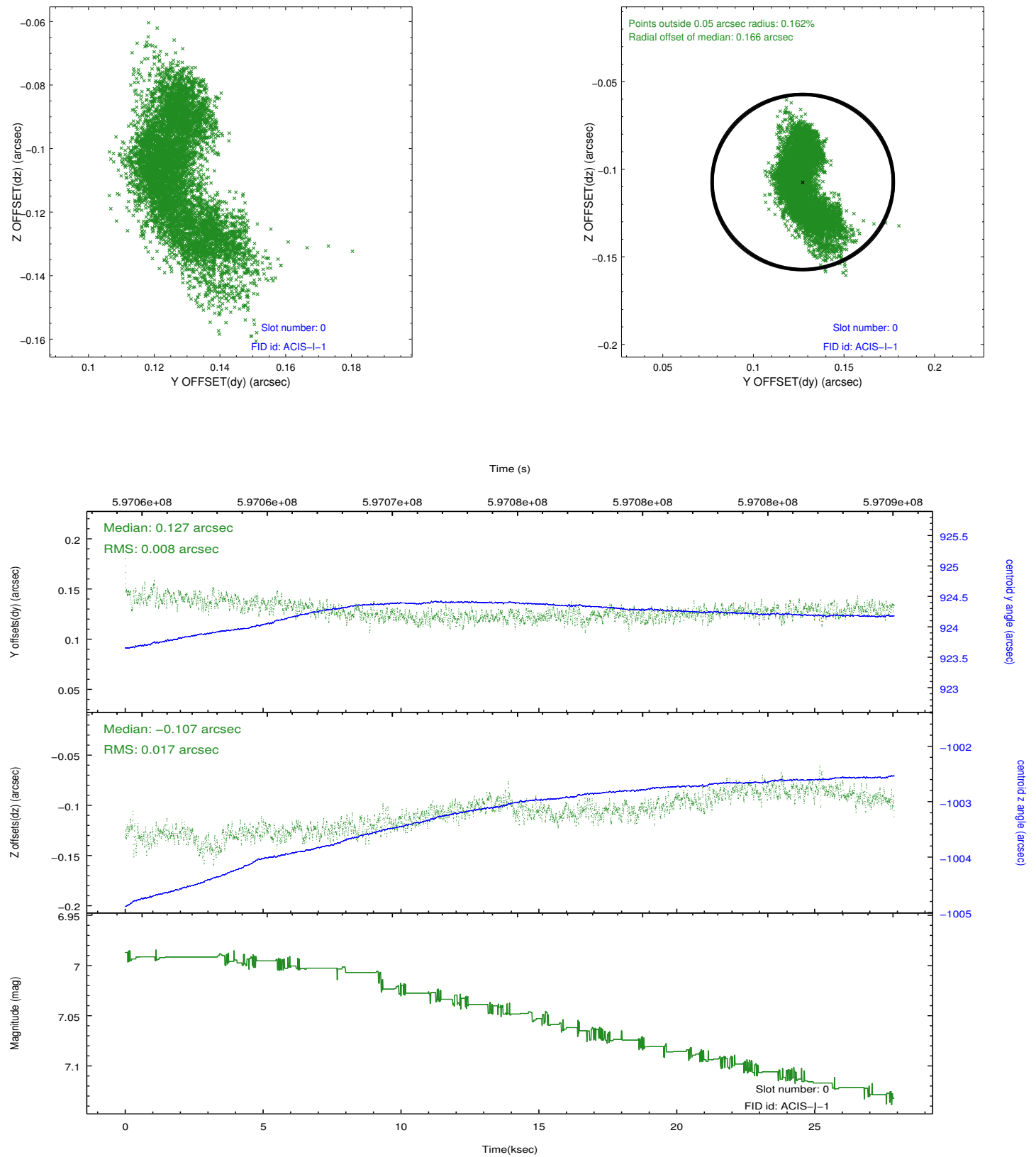


2.4.5 Slot 7

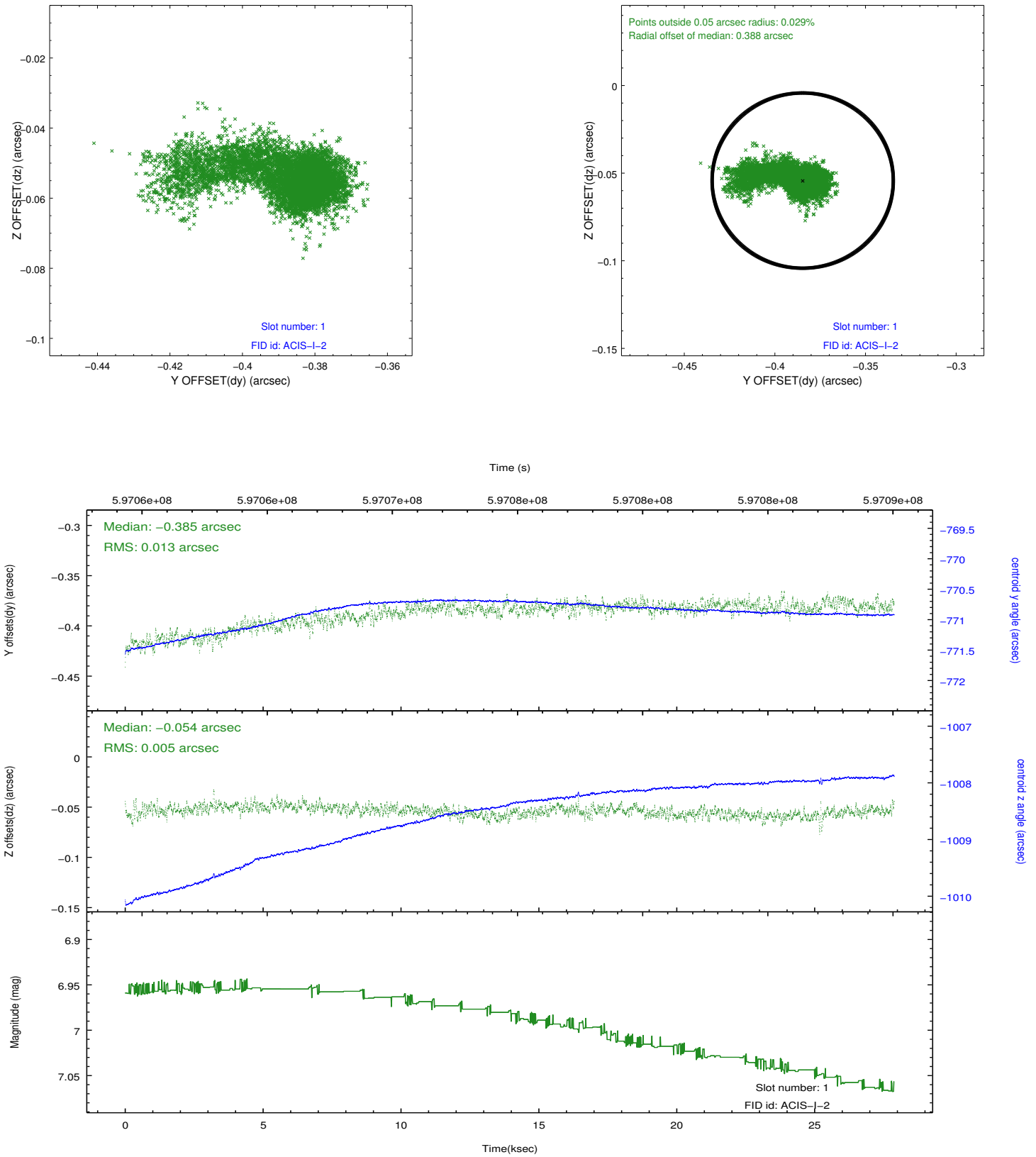


2.5 FID Slots

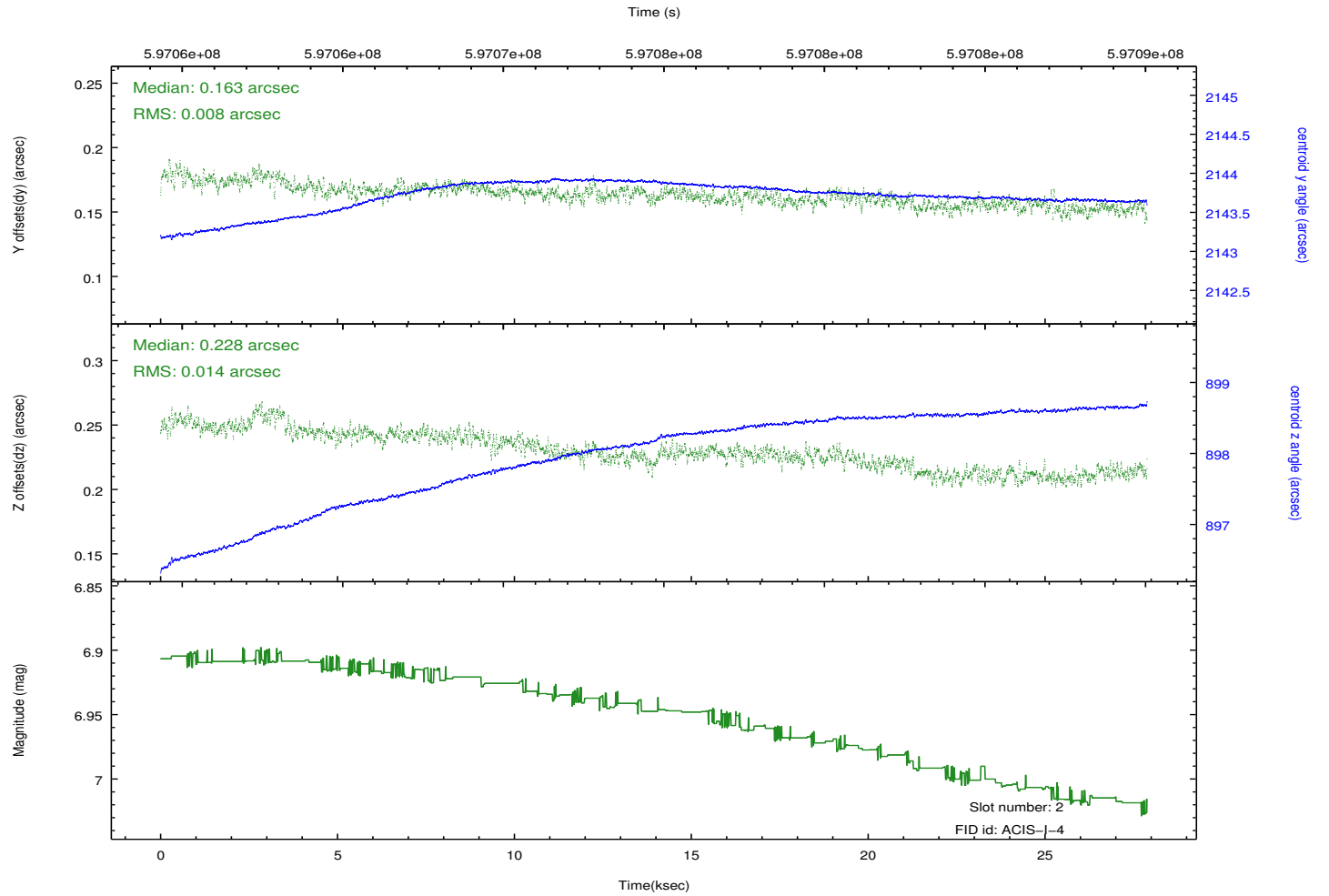
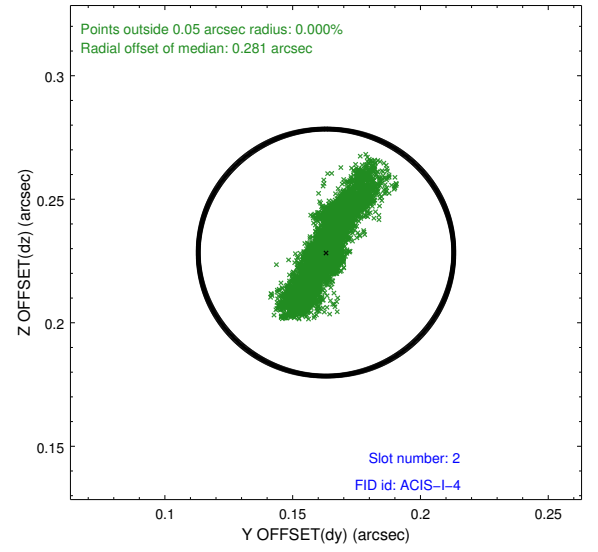
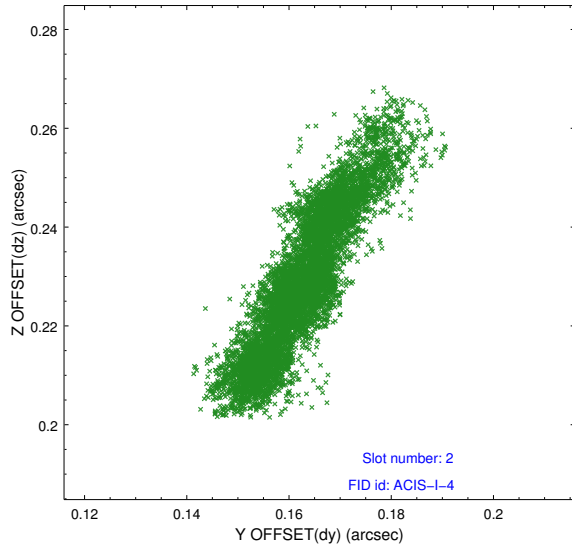
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2016.12.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	27.061540927052

A.2 Comments

One optional chip was dropped.

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 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: (41.94804,2.59582), (41.94338,2.59204), (42.00073,2.52109), (42.00540,2.52487).