

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 22188 - L2 Version 2
Chandra X-Ray Center

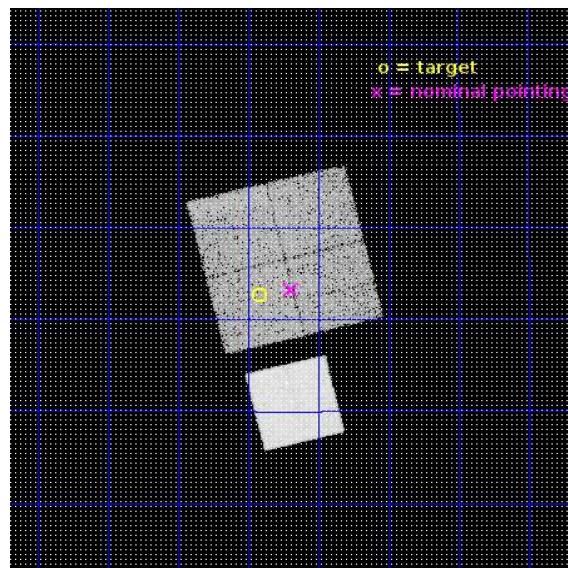
L2 Processing Date : Apr 29 2019

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1 Front

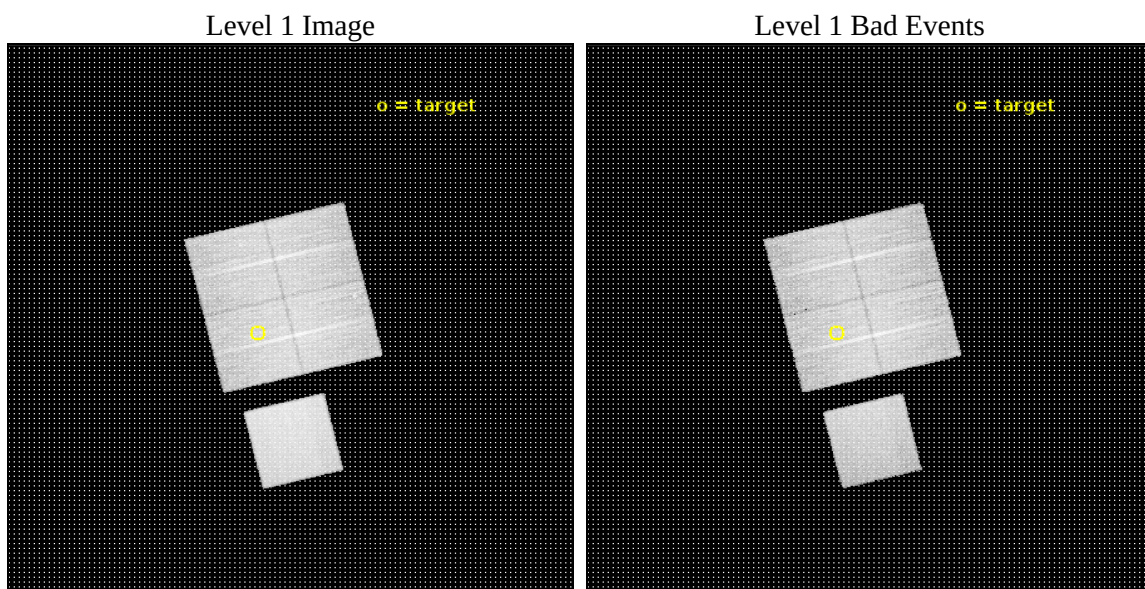
seq_num	801773	Sequence number
obs_id	22188	Observation id
title	The Chandra Strong Lens Sample: Revealing Baryonic Physics In Strong Lensing Selected Clusters	Proposal title
observer	Matthew Bayliss	Principal investigator
object	SDSSJ1429+1202	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	217.479167	Observer's specified target RA [deg]
dec_targ	12.043889	Observer's specified target Dec [deg]
ra_nom	217.42267750076	Nominal RA [deg]
dec_nom	12.054197522298	Nominal Dec [deg]
roll_nom	166.22043076721	Nominal Roll [deg]
revision	2	Processing version of data
ontime	17056.200131297	Sum of GTIs [s]
livetime	16833.34831999	Livetime [s]
ontime0	17049.917990804	Sum of GTIs [s]
ontime1	17053.05909121	Sum of GTIs [s]
ontime2	17056.200131297	Sum of GTIs [s]
ontime3	17056.200131297	Sum of GTIs [s]
ontime7	17056.200131297	Sum of GTIs [s]
l2events	125433	Number of level 2 events



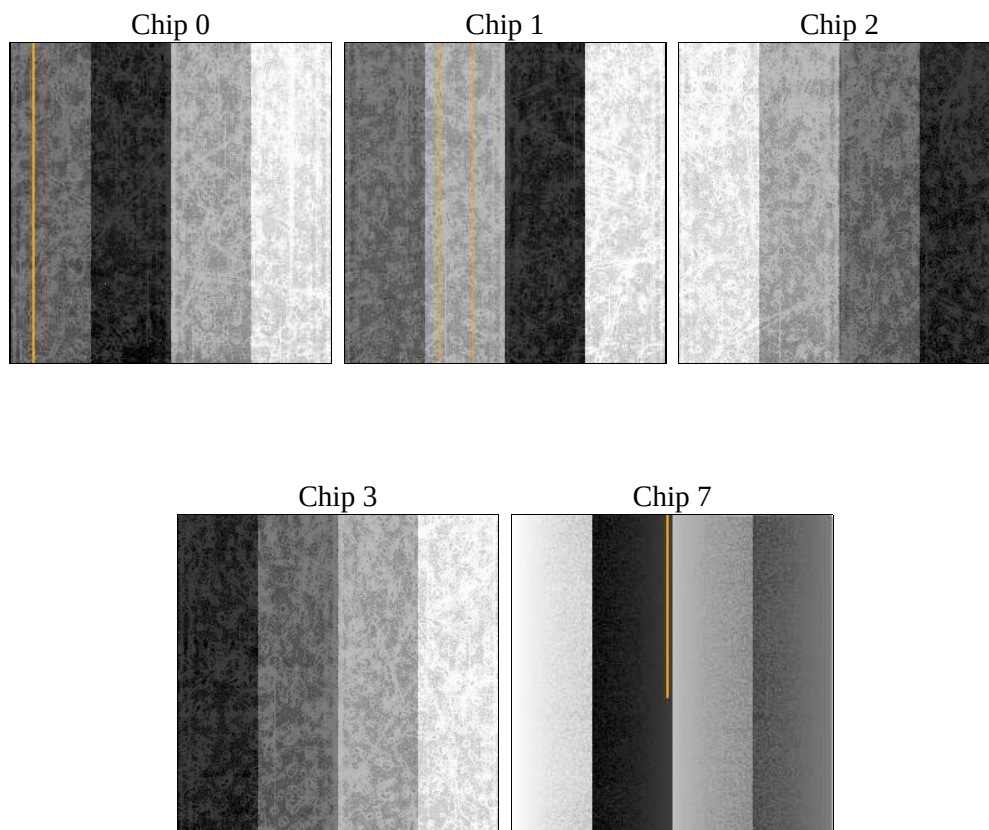
2 OBI

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	10.7.1	Processing system revision	ontime	17056.200131297	Sum of GTIs [s]
caldsver	4.8.2	 	ontime0	17049.917990804	Sum of GTIs [s]
date	2019-04-29T20:32:09	Date and time of file creation	ontime1	17053.05909121	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	17056.200131297	Sum of GTIs [s]
			ontime3	17056.200131297	Sum of GTIs [s]
			ontime7	17056.200131297	Sum of GTIs [s]
			l1events	676404	Number of level 1 events

2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	117859	122469	134227	129565	172284
rejected events	102236	105302	118775	115023	97311
rejected %	86%	85%	88%	88%	56%

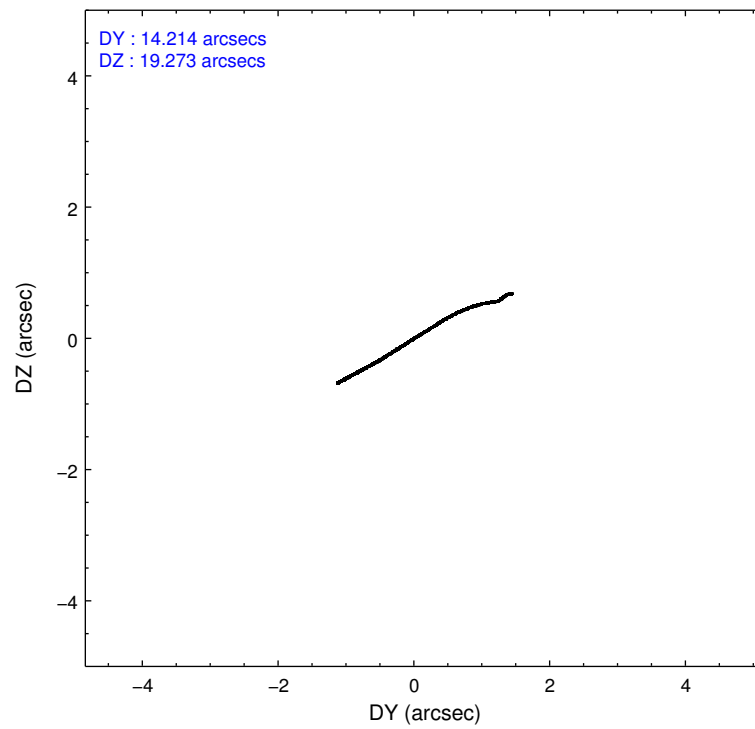
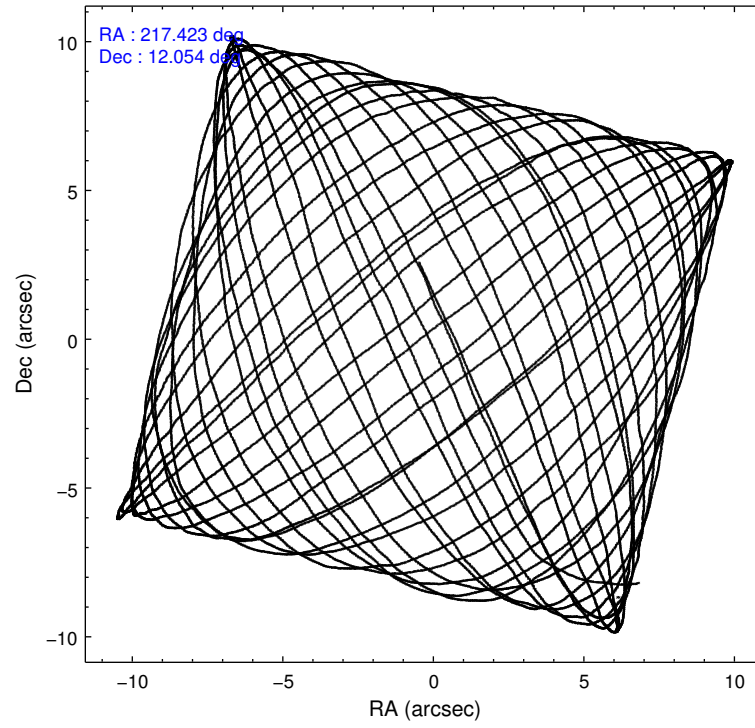
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	5564	6084	5893	5454	6310
	4%	4%	4%	4%	3%
grade 1 events	81	83	88	71	273
	0%	0%	0%	0%	0%
grade 2 events	3849	4234	3674	3163	16099
	3%	3%	2%	2%	9%
grade 3 events	1507	1581	1458	1452	5719
	1%	1%	1%	1%	3%
grade 4 events	1396	1555	1480	1451	5709
	1%	1%	1%	1%	3%
grade 5 events	5762	5891	5608	6226	16756
	4%	4%	4%	4%	9%
grade 6 events	3312	3722	2955	3028	41167
	2%	3%	2%	2%	23%
grade 7 events	96388	99319	113071	108720	80251
	81%	81%	84%	83%	46%

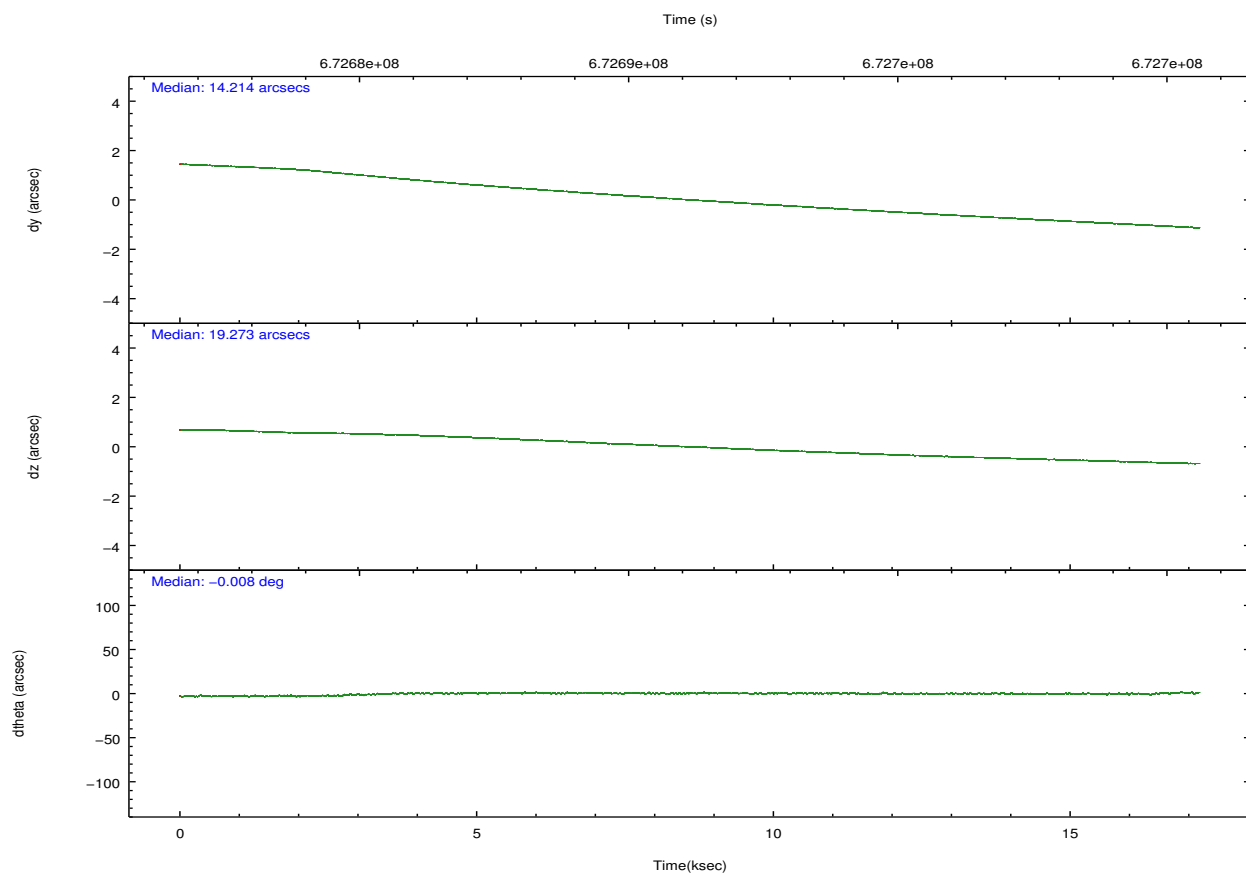
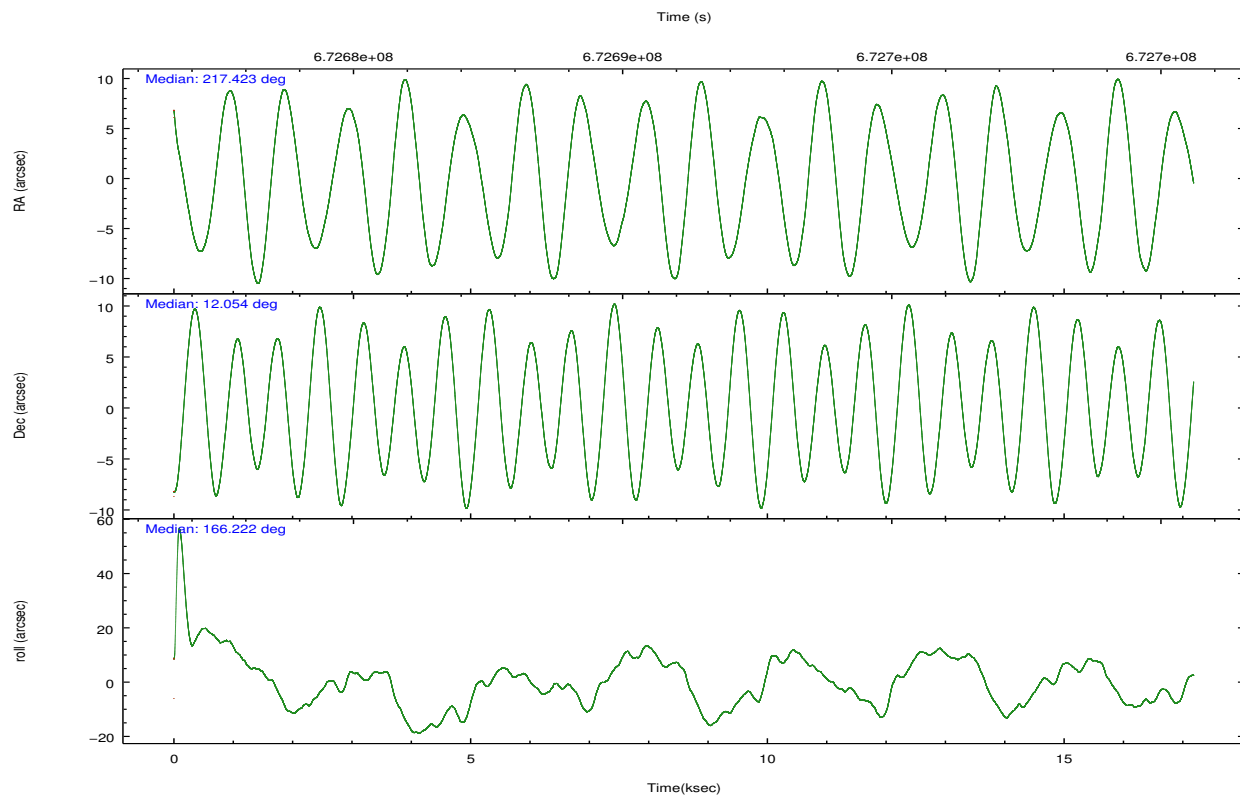
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-01237	ACIS-01237
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	217.449744	217.4226775007621
[deg] Pointing Dec	12.062022	12.05419752229775
[deg] Pointing Roll	166.006134	166.2204307672123
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-225.840463	-225.8433433320239
[mm] SIM translation stage offset	-7.752	-7.749109670905796
[s] Observation start time (MET)	672682736.184000	672681886.8846
Observation start date	2019-04-26T16:17:47	2019-04-26T16:04:46
[s] Observation end time (MET)	672699736.184000	672700244.1232001
Observation end date	2019-04-26T21:01:07	2019-04-26T21:10:44
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	Y	Y
CCD I1 on	Y	Y
CCD I2 on	Y	Y
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O1	N
CCD S3 on	O2	Y
CCD S4 on	N	N
CCD S5 on	N	N
Number of optional ACIS chips dropped	1	1
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



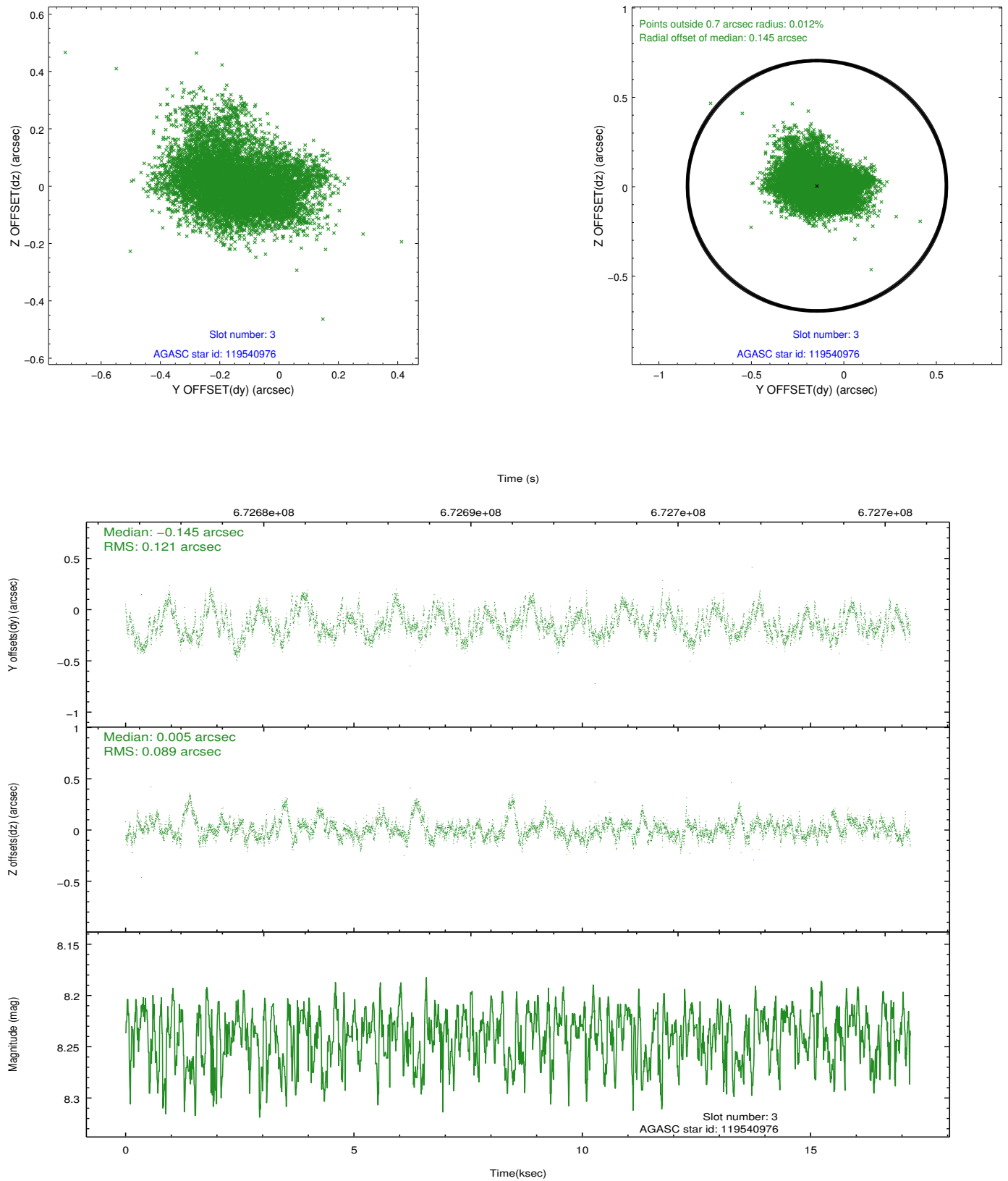


Slot Statistics

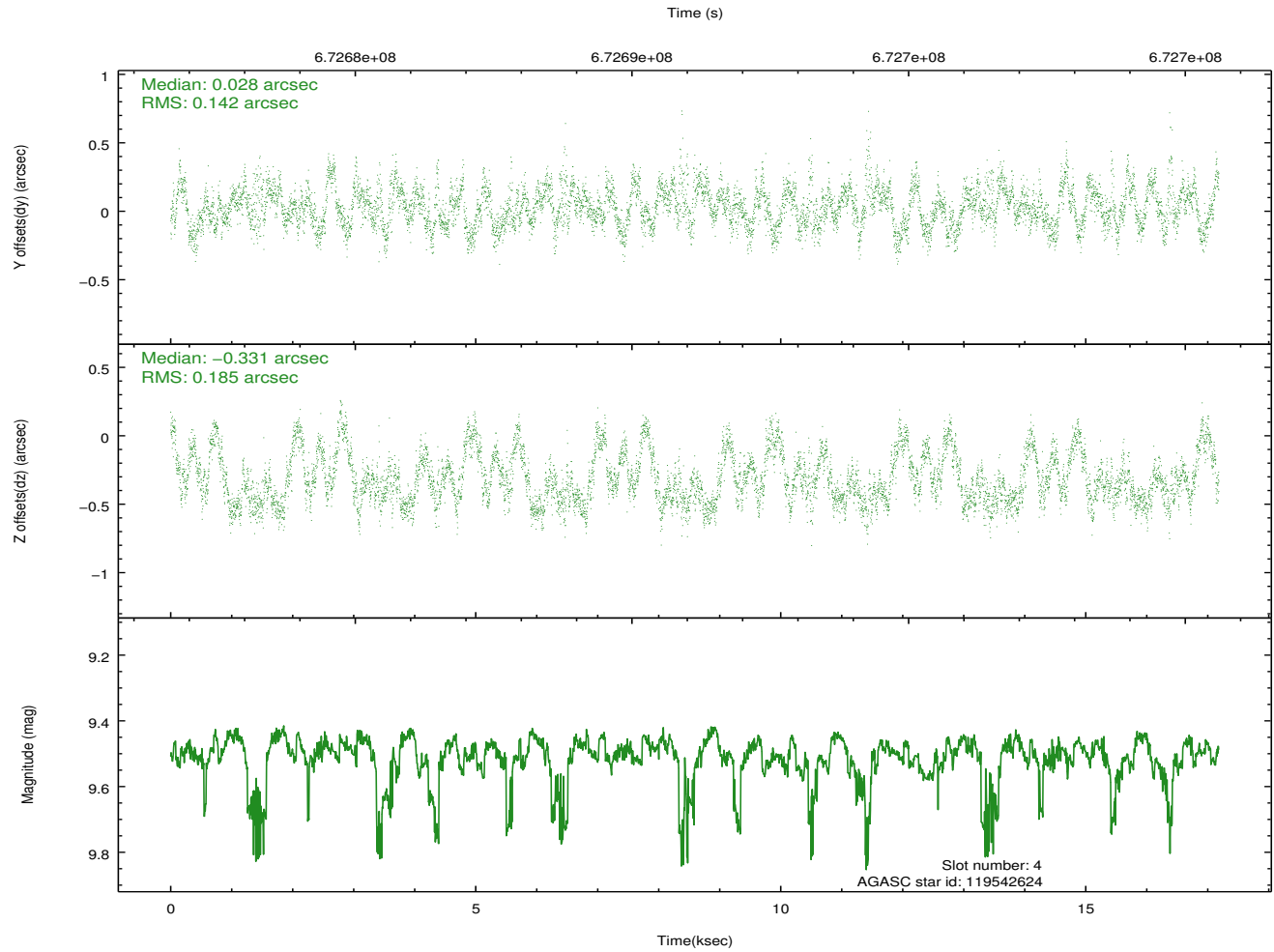
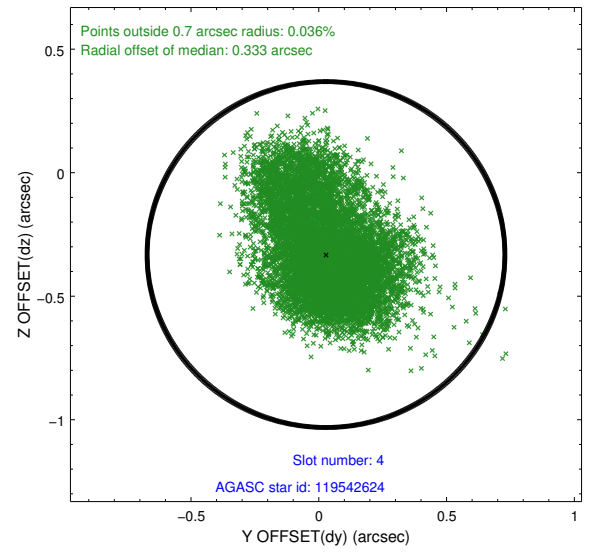
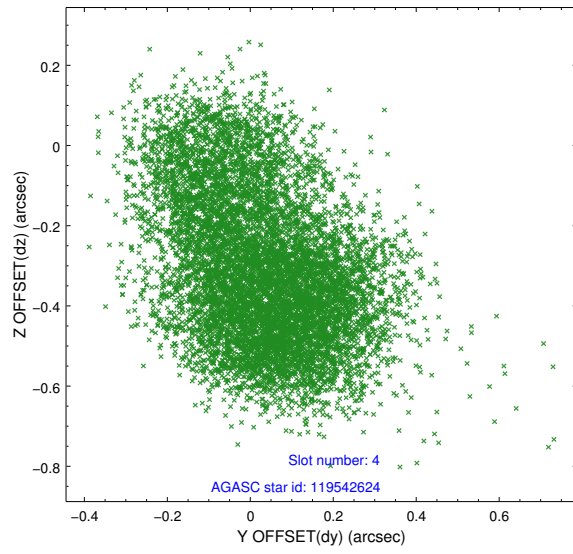
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.08	4191	1.000	0.127	-0.114	0.026	0.042	0.000000	0.000000	925.28	-1002
1	FID		ACIS-I-5	7.07	4192	1.000	-0.549	0.023	0.011	0.021	0.000000	0.000000	-1823.58	895
2	FID		ACIS-I-6	7.11	4192	1.000	0.327	0.167	0.028	0.037	0.000000	0.000000	390.47	1540
3	GUIDE	used	119540976	8.24	8378	1.000	-0.145	0.005	0.159	0.263	216.809810	12.382412	2462.13	-577
4	GUIDE	used	119542624	9.50	8354	1.000	0.028	-0.331	0.248	0.403	216.953656	12.106695	1733.20	264
5	GUIDE	used	119670784	8.41	8375	1.000	-0.236	0.050	0.170	0.247	217.254918	12.122292	720.11	-45
6	GUIDE	used	119676080	9.61	7803	1.000	0.166	-0.191	0.305	0.537	217.644149	11.995907	-721.34	65
7	GUIDE	used	120071528	9.08	8371	1.000	0.172	0.419	0.181	0.342	217.495625	12.606201	317.72	-1939

2.4 Star Slots

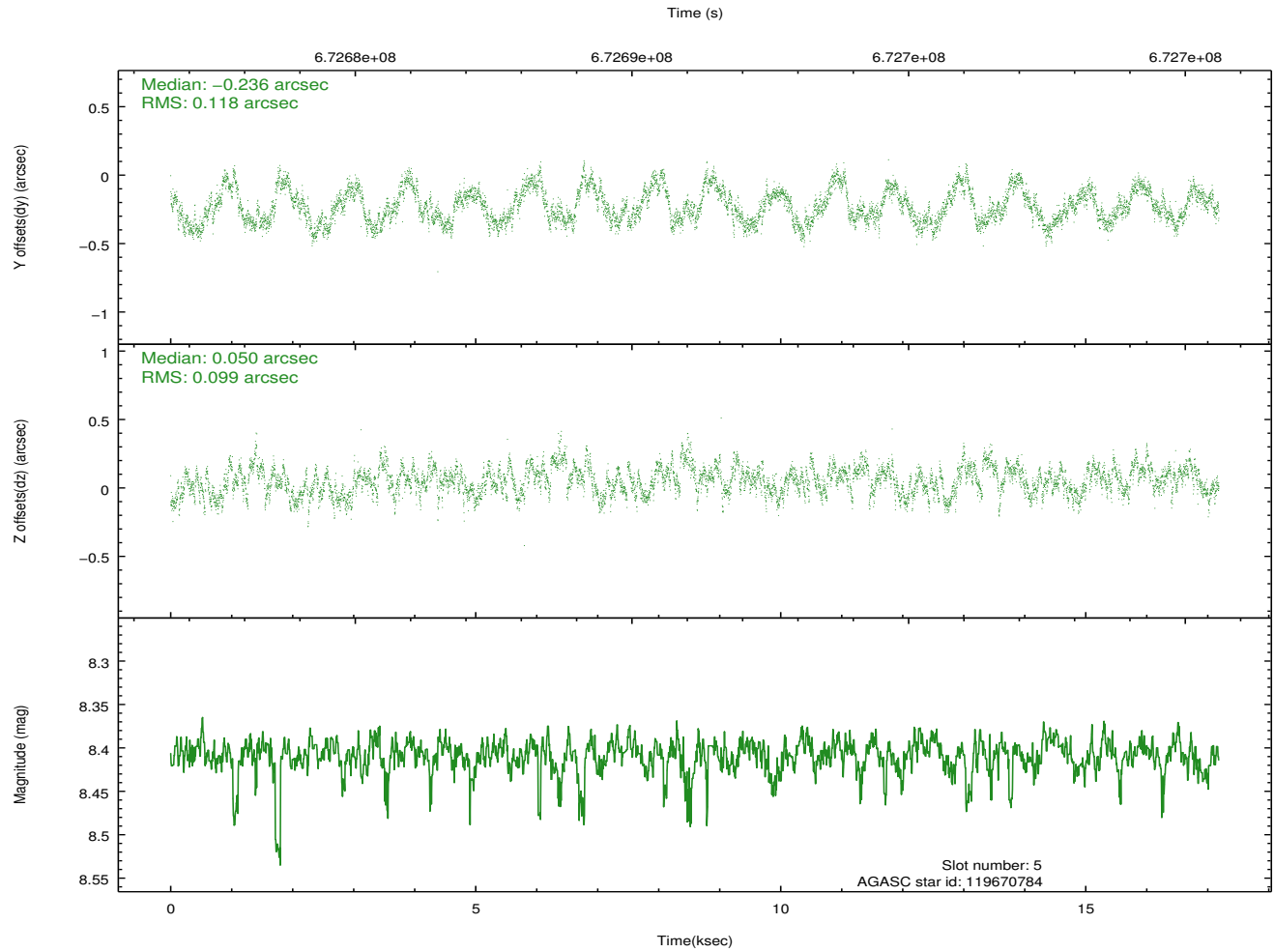
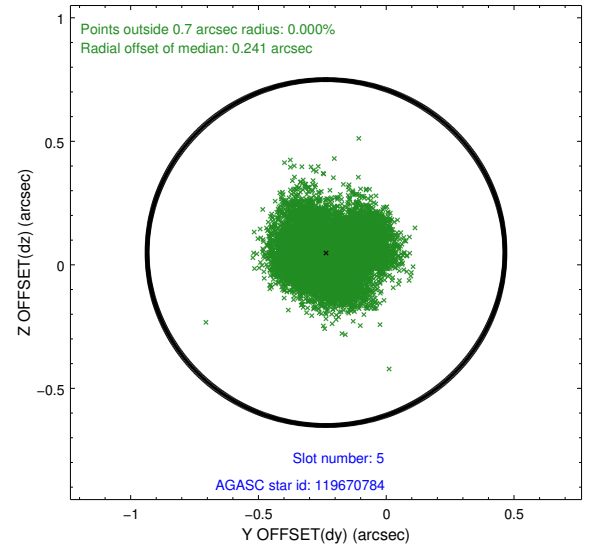
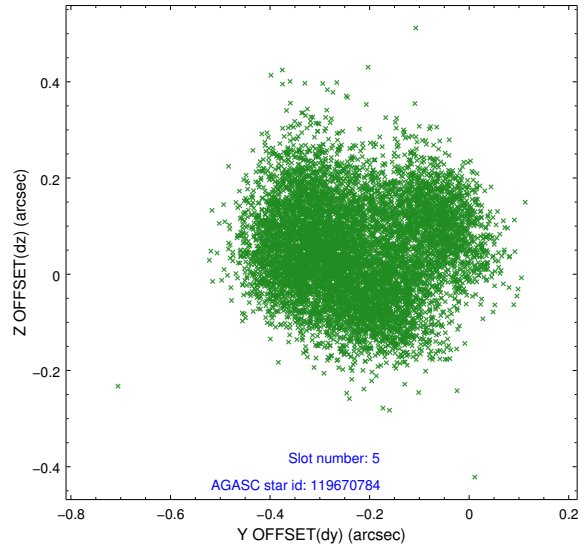
2.4.1 Slot 3



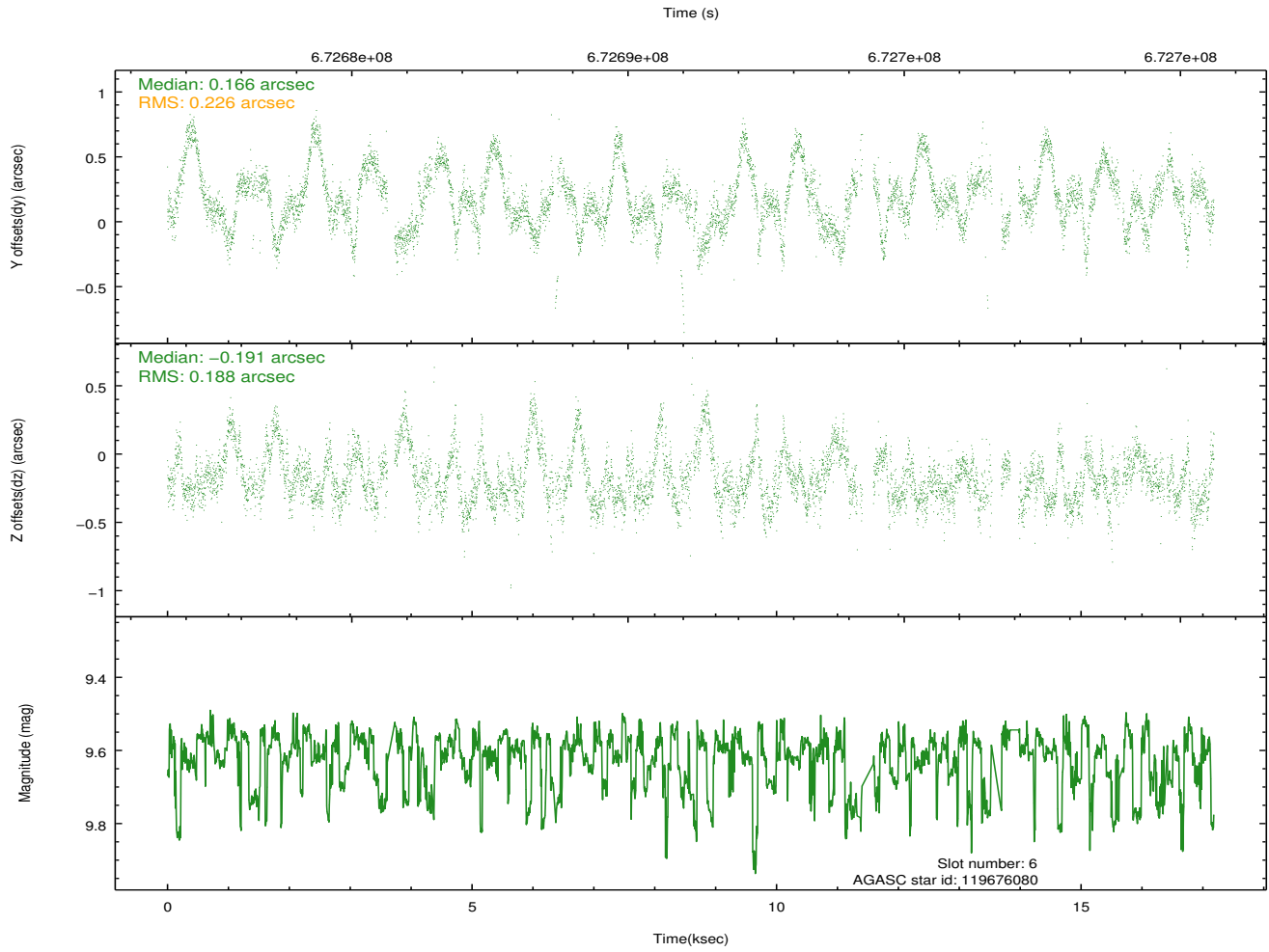
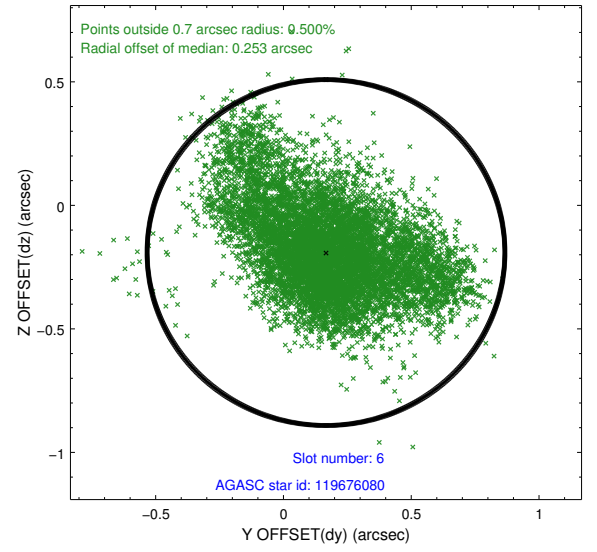
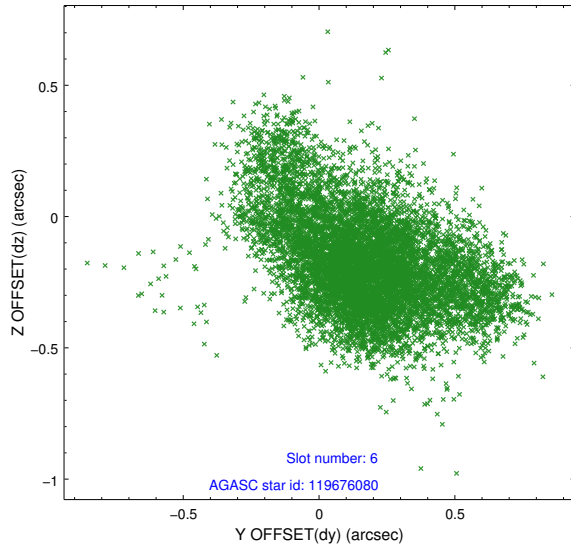
2.4.2 Slot 4



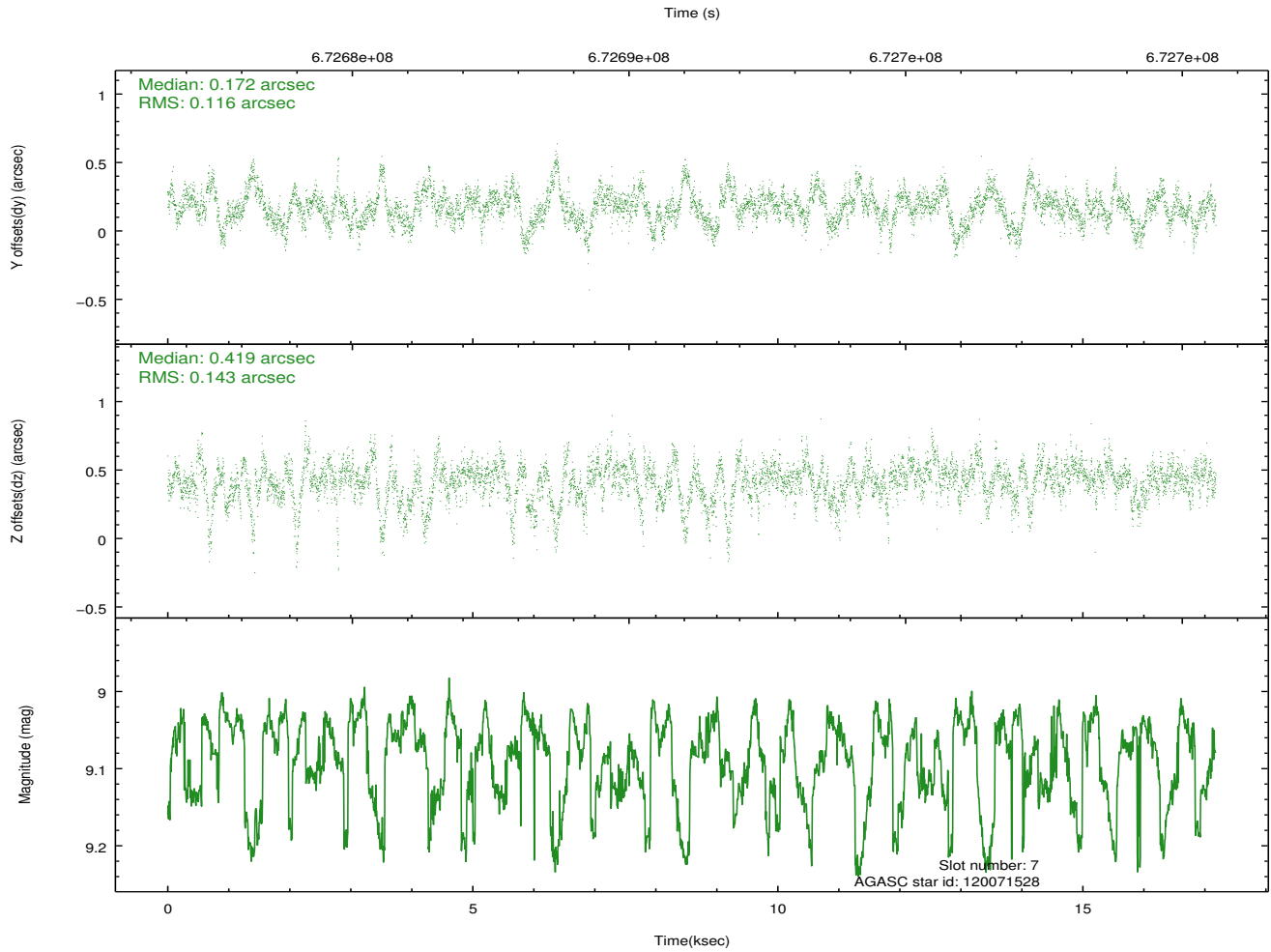
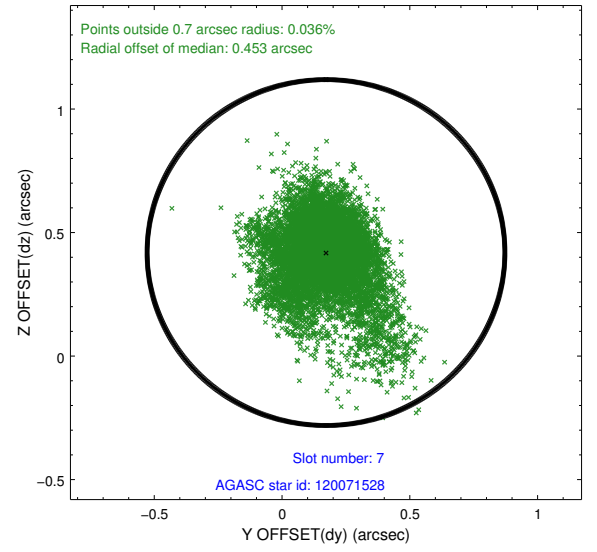
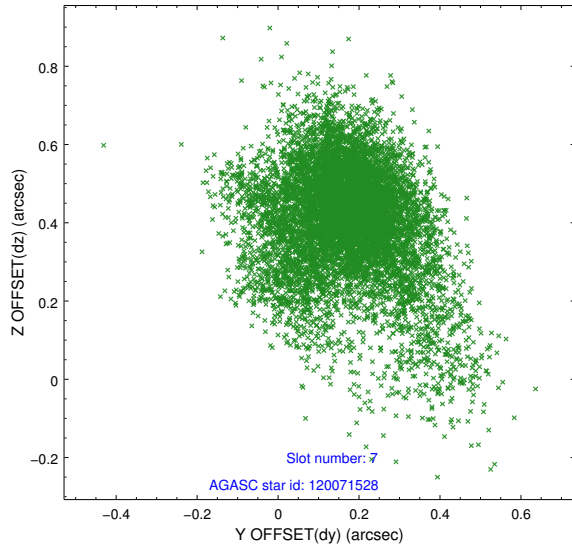
2.4.3 Slot 5



2.4.4 Slot 6

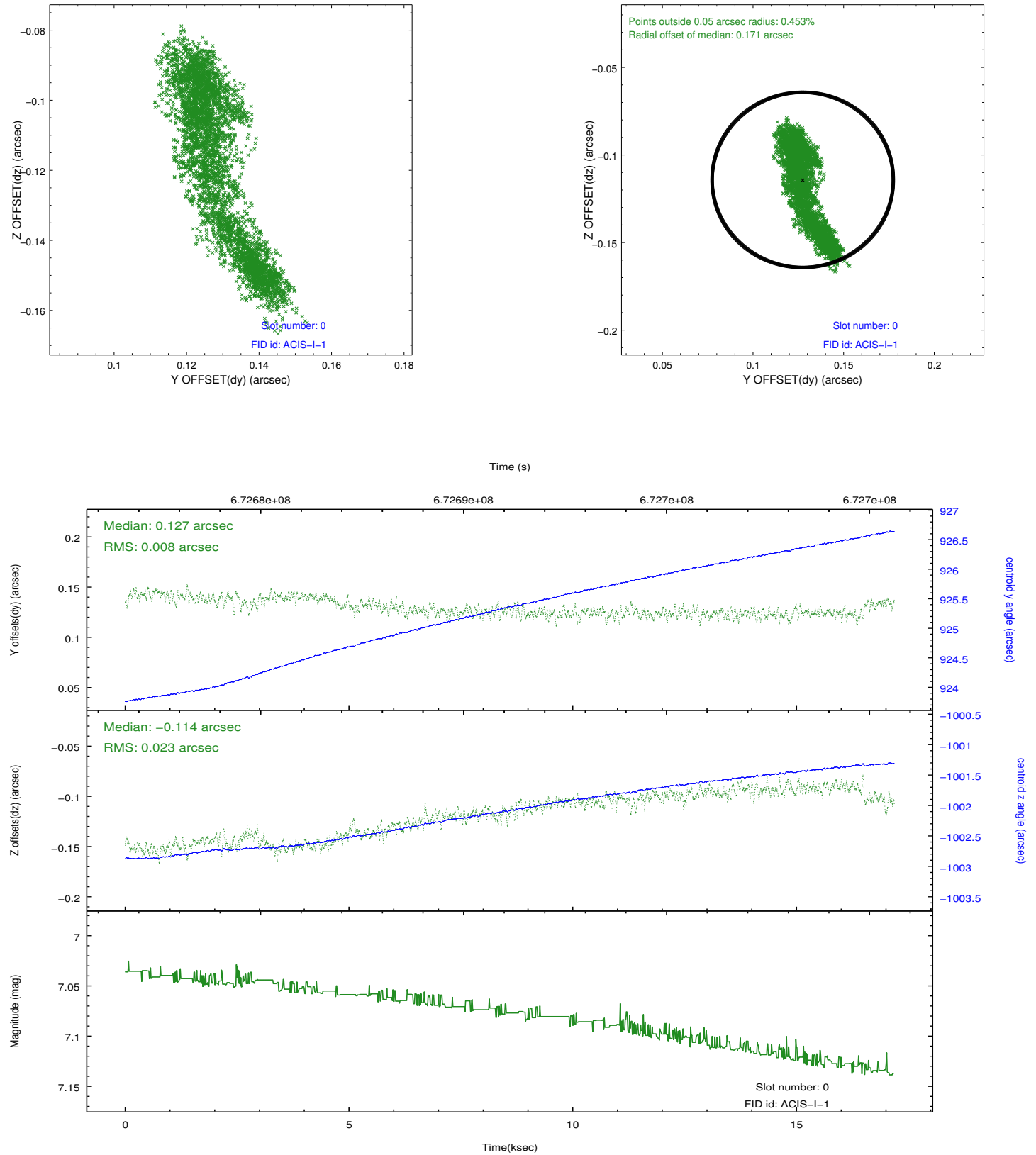


2.4.5 Slot 7

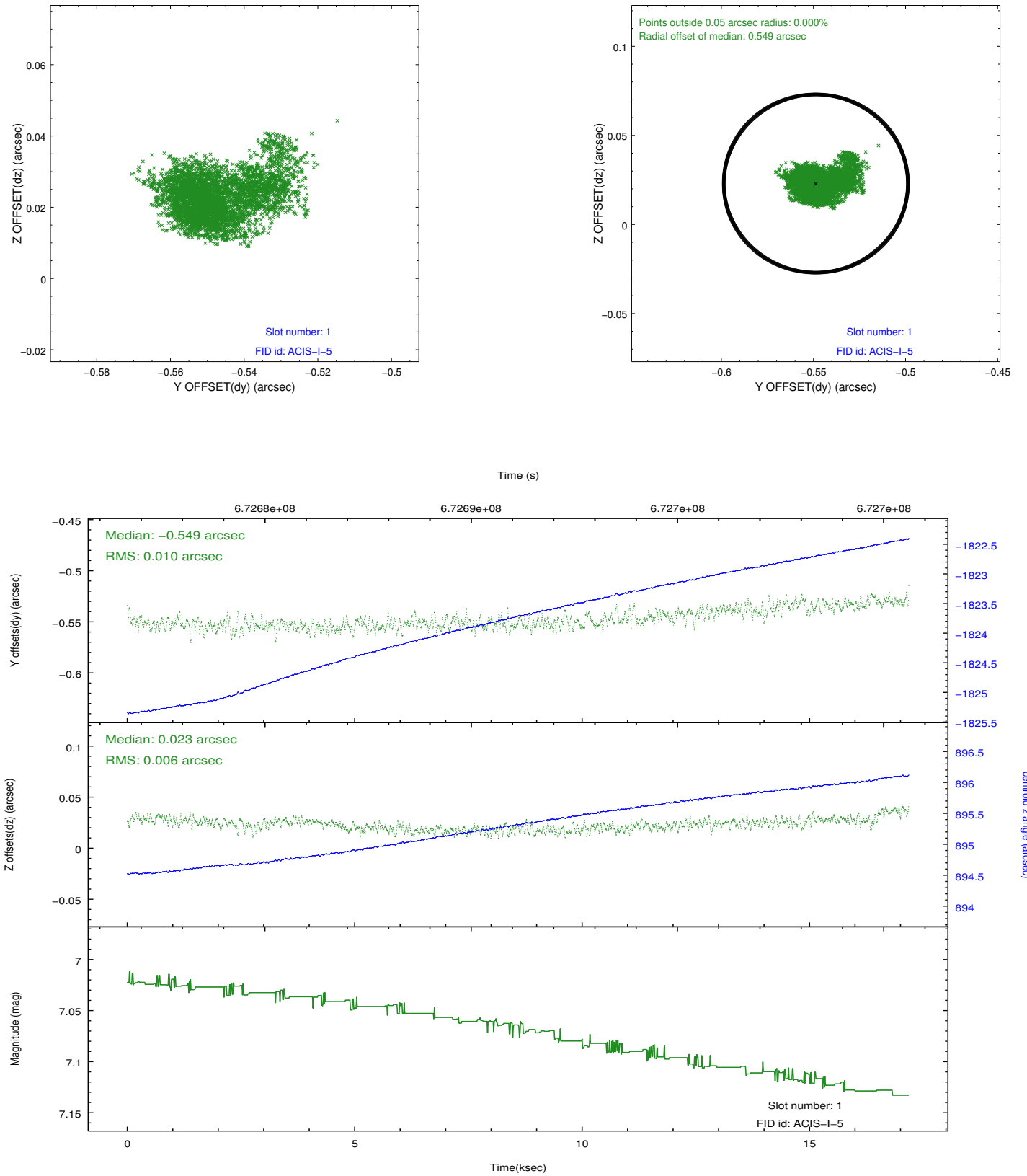


2.5 FID Slots

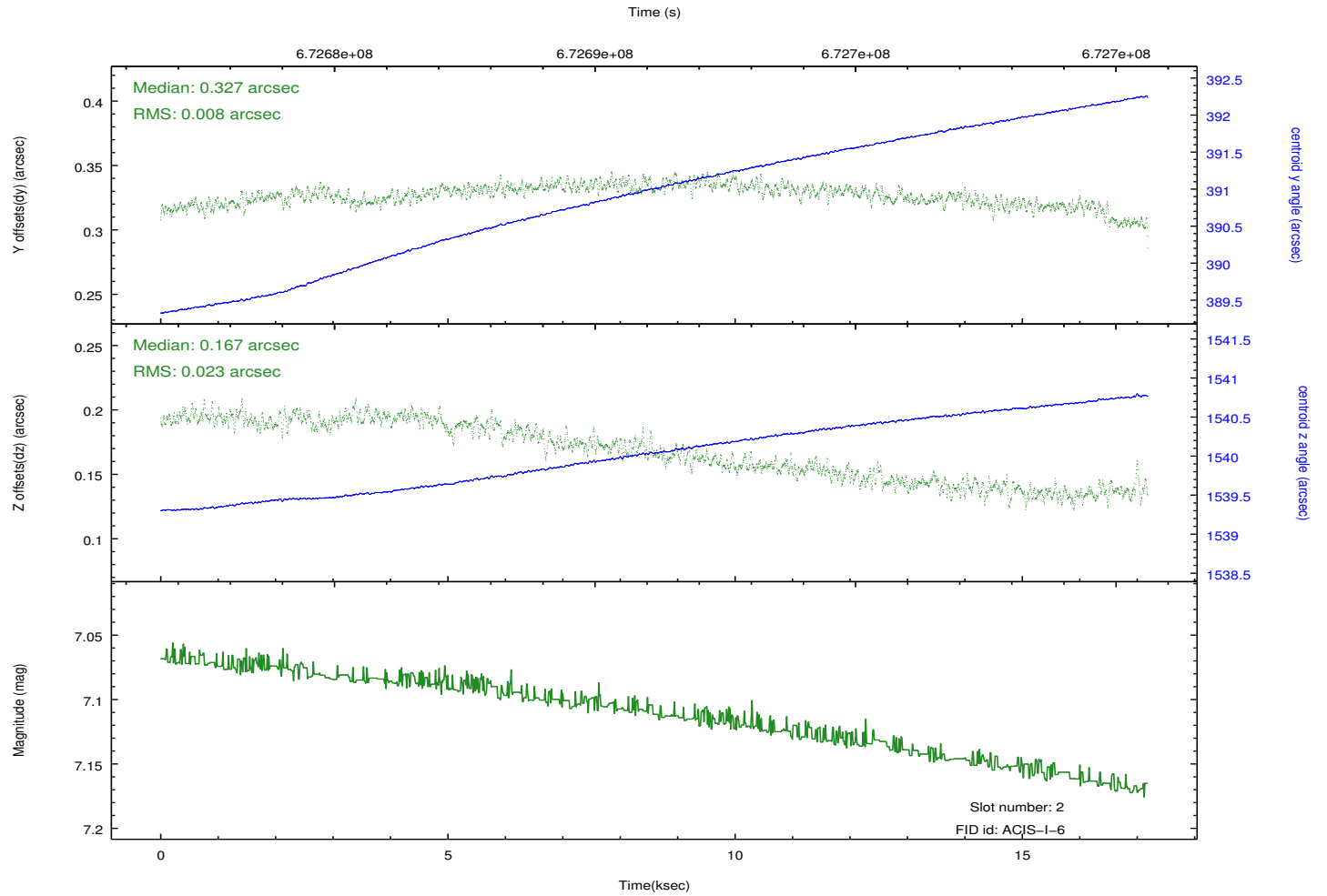
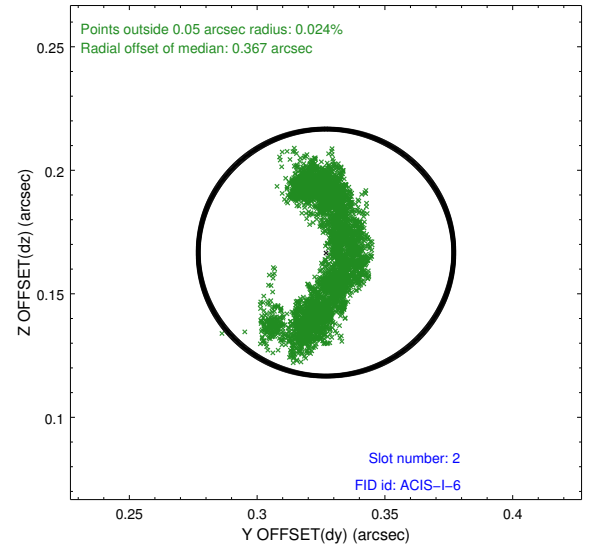
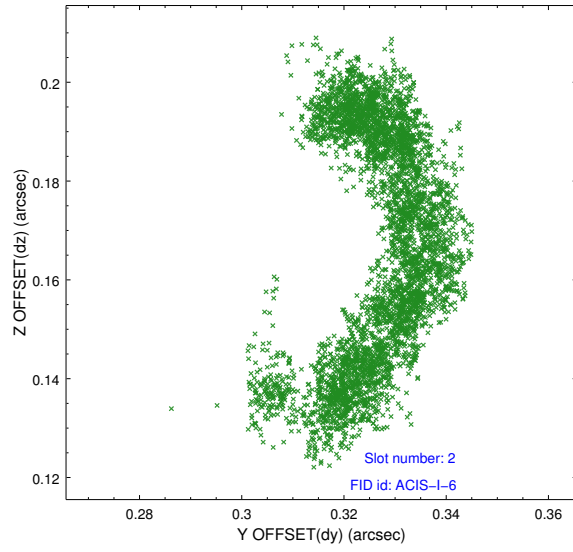
2.5.1 Slot 0



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)	2019.04.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	17.056200131297

A.2 Comments

Joint proposal with HST.

One optional chip was dropped.

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A spatial region of the original bias map for CCD = 2 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 = 2 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: (217.27426,12.06048), (217.27350,12.05743), (217.41202,12.02427), (217.41278,12.02732).