

V&V Reference Report

L2 ASCDS Version : 10.5.2

Observation 19761 - L2 Version 2
Chandra X-Ray Center

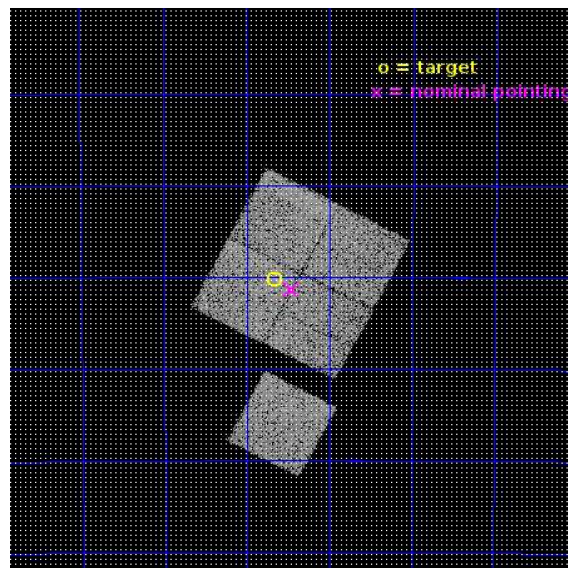
L2 Processing Date : Feb 28 2017

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
2.5	FID Slots	13
2.5.1	Slot 0	13
2.5.2	Slot 1	14
2.5.3	Slot 2	15
A	Summary	16
A.1	Status	16
A.2	Comments	16

1 Front

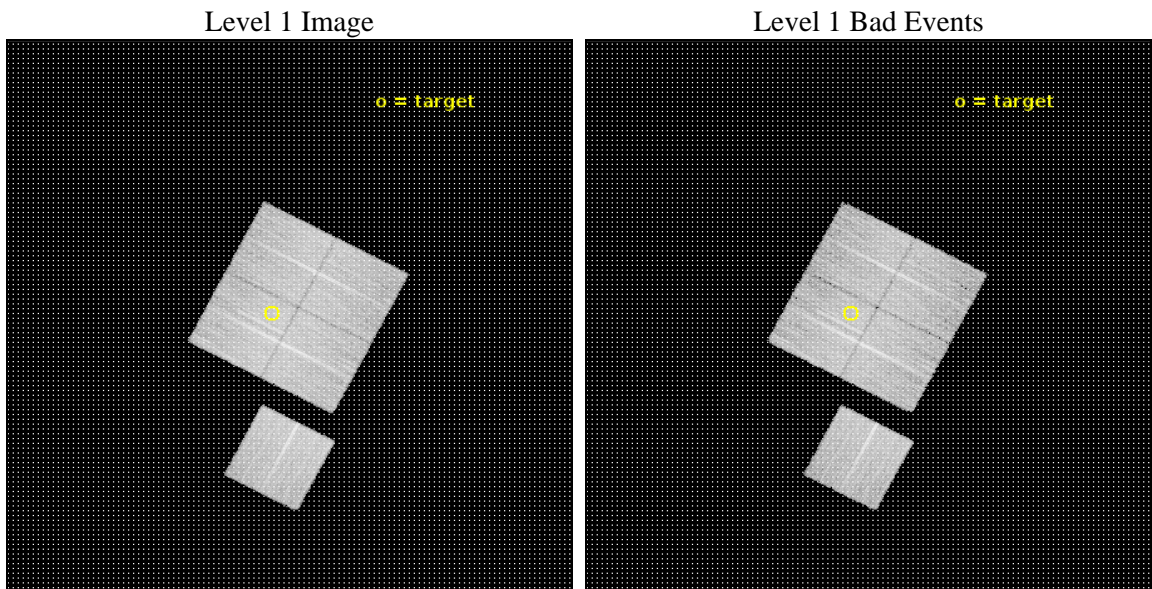
seq_num	801698	Sequence number
obs_id	19761	Observation id
title	A Chandra Survey of high-redshift ($0.7 < z < 0.8$) clusters selected in the 100 deg ² SPT-Pol Deep Field	Proposal title
observer	Gordon Garmire	Principal investigator
object	SPT-CLJ0001-5440	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	0.417083	Observer's specified target RA [deg]
dec_targ	-54.67	Observer's specified target Dec [deg]
ra_nom	0.3653240630905	Nominal RA [deg]
dec_nom	-54.689672846029	Nominal Dec [deg]
roll_nom	207.58508888073	Nominal Roll [deg]
revision	2	Processing version of data
ontime	14083.010292649	Sum of GTIs [s]
livetime	13899.005395414	Livetime [s]
ontime0	14086.028133035	Sum of GTIs [s]
ontime1	14086.069172978	Sum of GTIs [s]
ontime2	14086.110213041	Sum of GTIs [s]
ontime3	14083.010292649	Sum of GTIs [s]
ontime6	14082.846122503	Sum of GTIs [s]
l2events	48004	Number of level 2 events



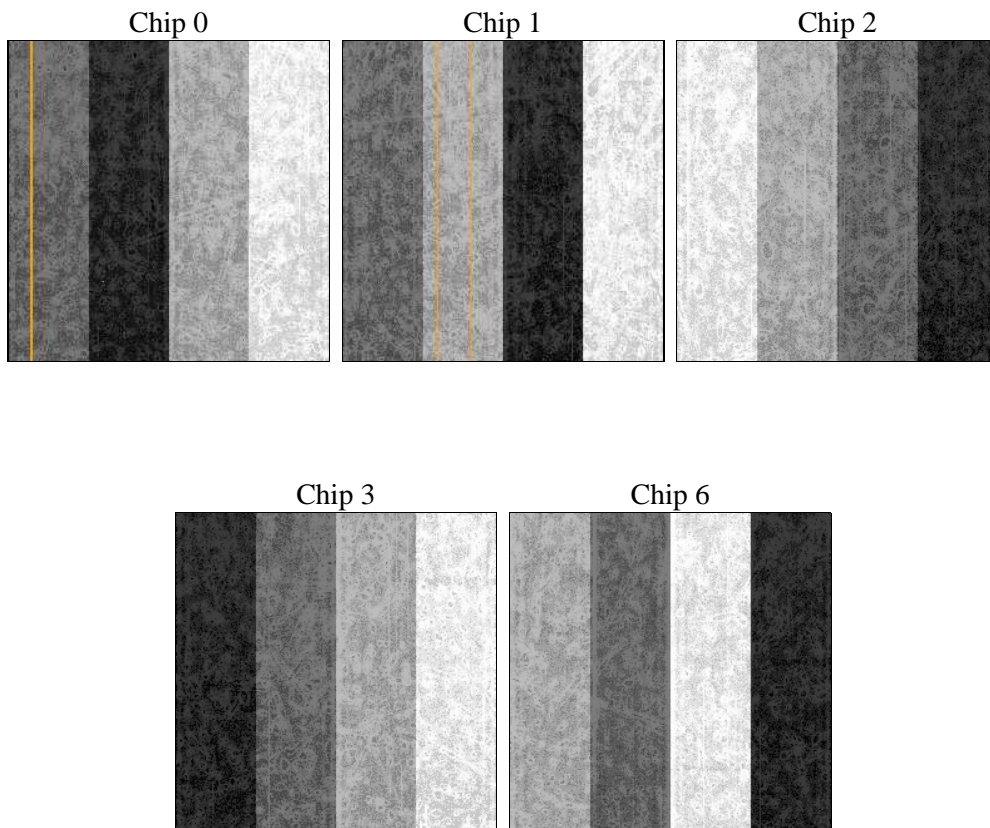
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14023.160000	[s] Scheduled observation exposure time
ascdsver	10.5.2	Processing system revision	ontime	14083.010292649	Sum of GTIs [s]
caldsver	4.7.3	 	ontime0	14086.028133035	Sum of GTIs [s]
date	2017-02-28T14:36:07	Date and time of file creation	ontime1	14086.069172978	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	14086.110213041	Sum of GTIs [s]
			ontime3	14083.010292649	Sum of GTIs [s]
			ontime6	14082.846122503	Sum of GTIs [s]
			l1events	487612	Number of level 1 events

2.1.4 Events

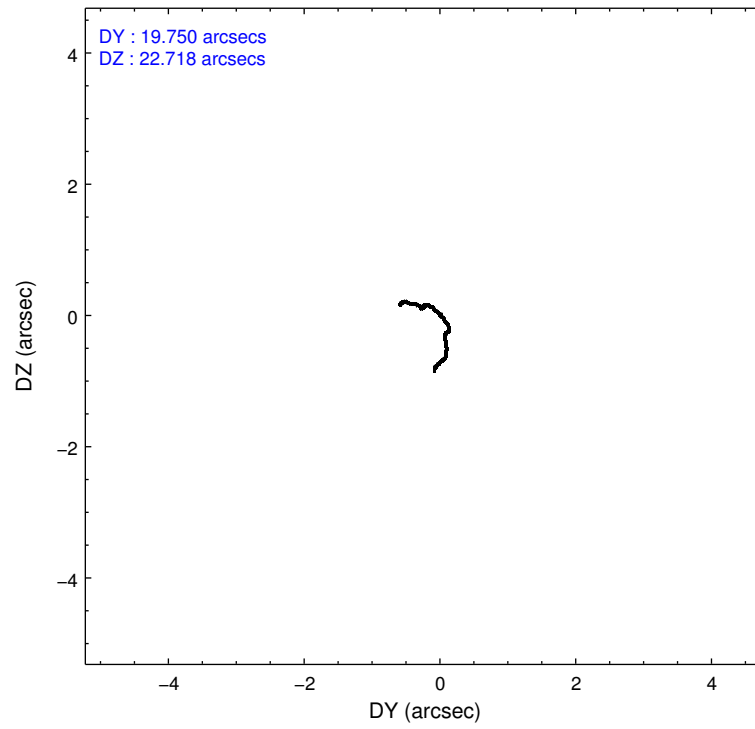
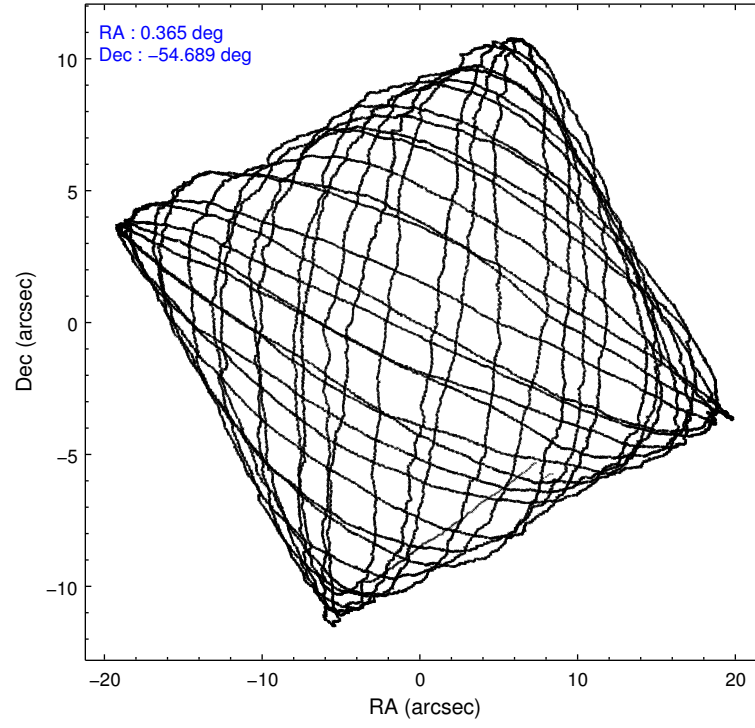
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	89842	92989	100885	102960	100936
rejected events	78628	80385	90162	91761	89608
rejected %	87%	86%	89%	89%	88%

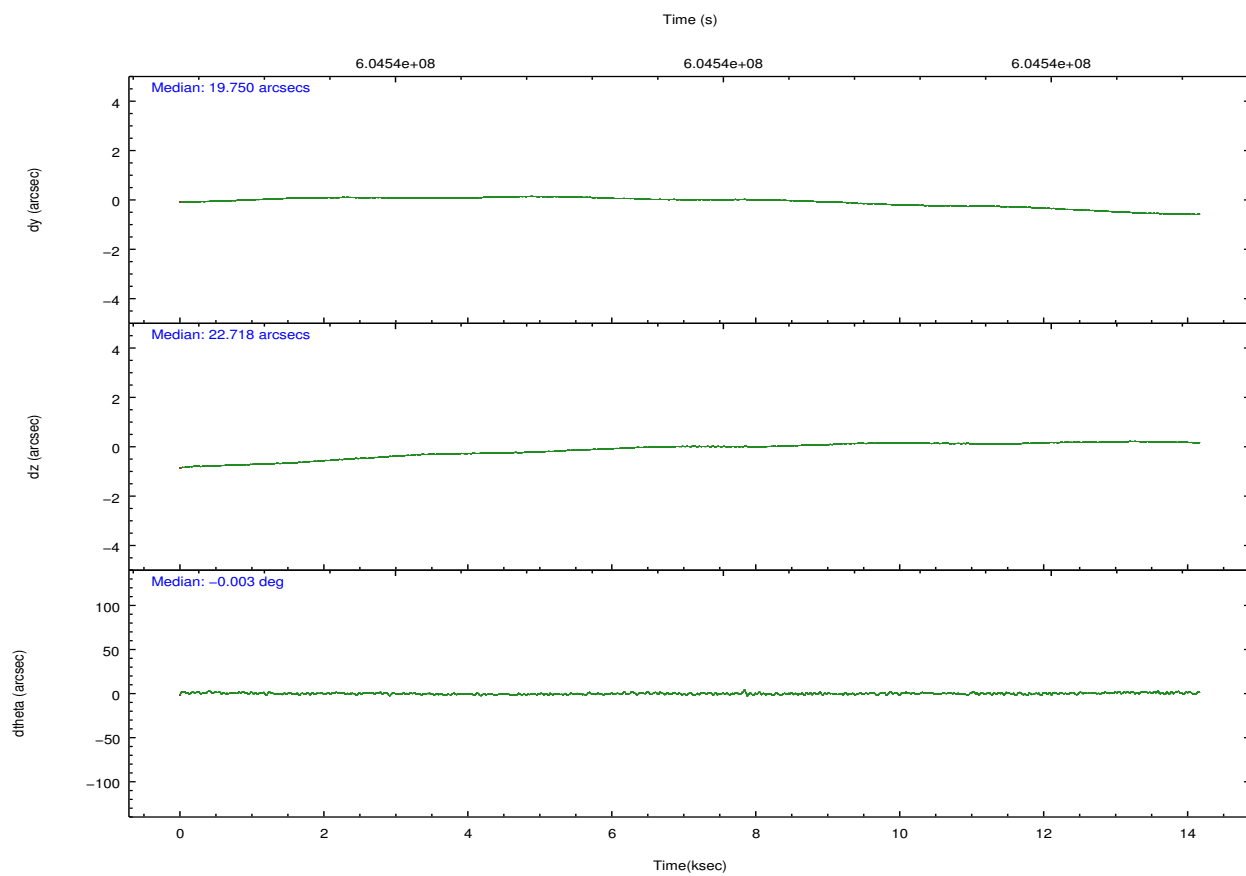
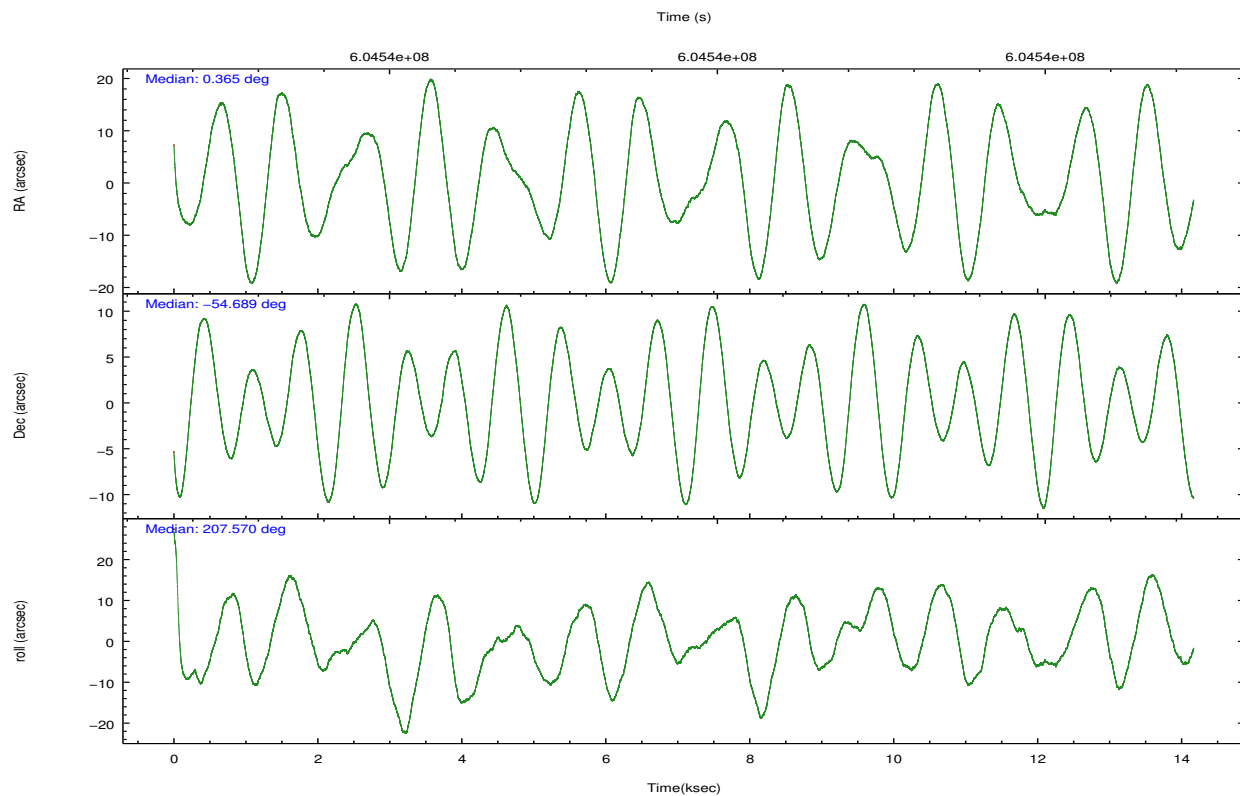
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	3895	4290	3765	4233	3742
	4%	4%	3%	4%	3%
grade 1 events	49	64	57	61	52
	0%	0%	0%	0%	0%
grade 2 events	2882	3215	2689	2448	2591
	3%	3%	2%	2%	2%
grade 3 events	1161	1135	1074	1162	1174
	1%	1%	1%	1%	1%
grade 4 events	1022	1214	1087	1106	1150
	1%	1%	1%	1%	1%
grade 5 events	4218	4525	3980	4847	4800
	4%	4%	3%	4%	4%
grade 6 events	2256	2757	2109	2251	2673
	2%	2%	2%	2%	2%
grade 7 events	74359	75789	86124	86852	84754
	82%	81%	85%	84%	83%

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	0.390803	0.3653240630904975	CCD I2 on	Y	Y
[deg] Pointing Dec	-54.666307	-54.68967284602869	CCD I3 on	Y	Y
[deg] Pointing Roll	207.397178	207.5850888807302	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	O1	Y
[mm] SIM translation stage pos	-230.082463	-230.0900218763587	CCD S3 on	N	N
[mm] SIM translation stage offset	-3.51	-3.502431126570968	CCD S4 on	N	N
[s] Observation start time (MET)	604532538.184000	604530848.4355201	CCD S5 on	N	N
Observation start date	2017-02-26T21:41:09	2017-02-26T21:14:08	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	604546561.184000	604546784.62395	On-chip summing requested	N	N
Observation end date	2017-02-27T01:34:52	2017-02-27T01:39:44	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



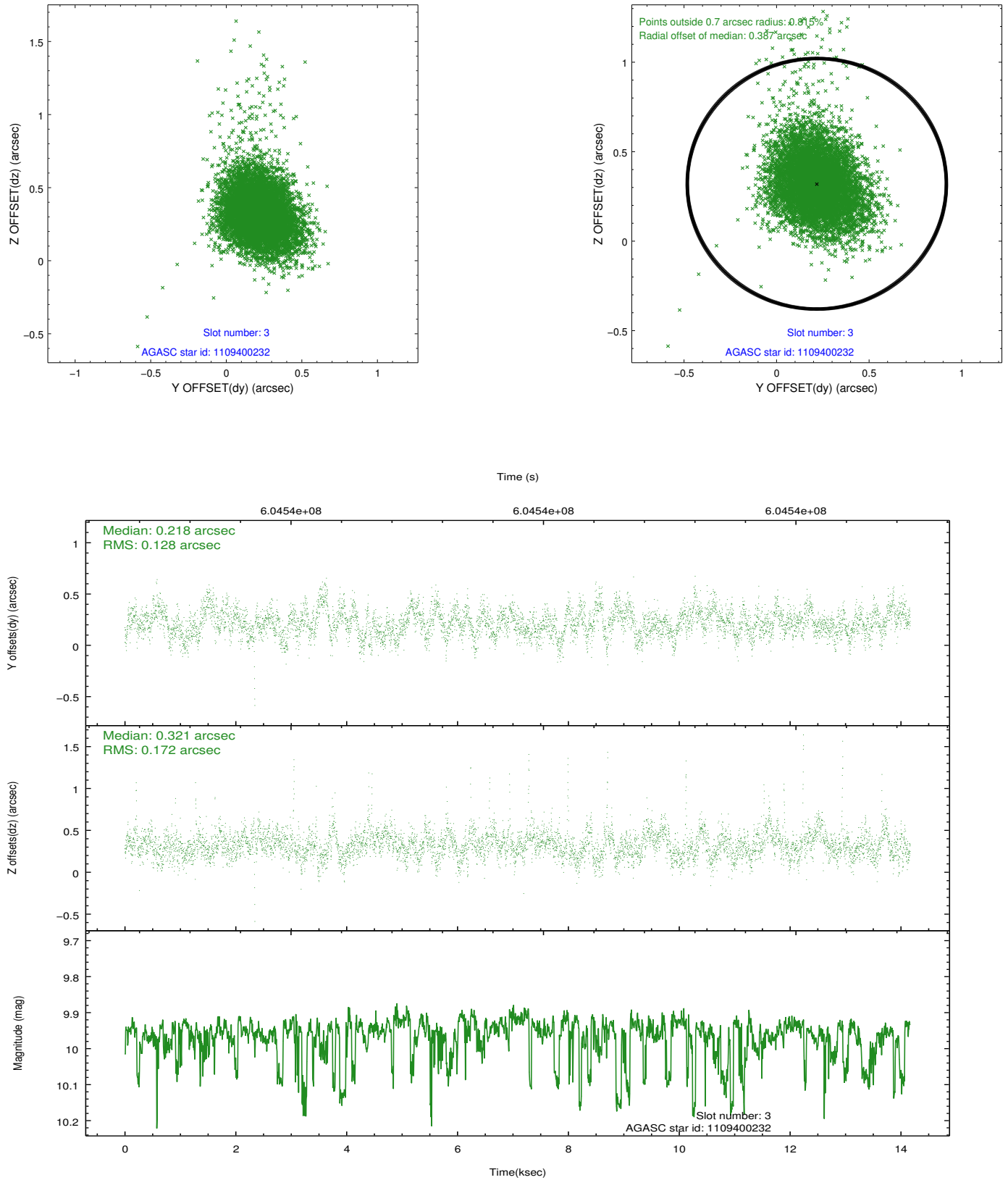


Slot Statistics

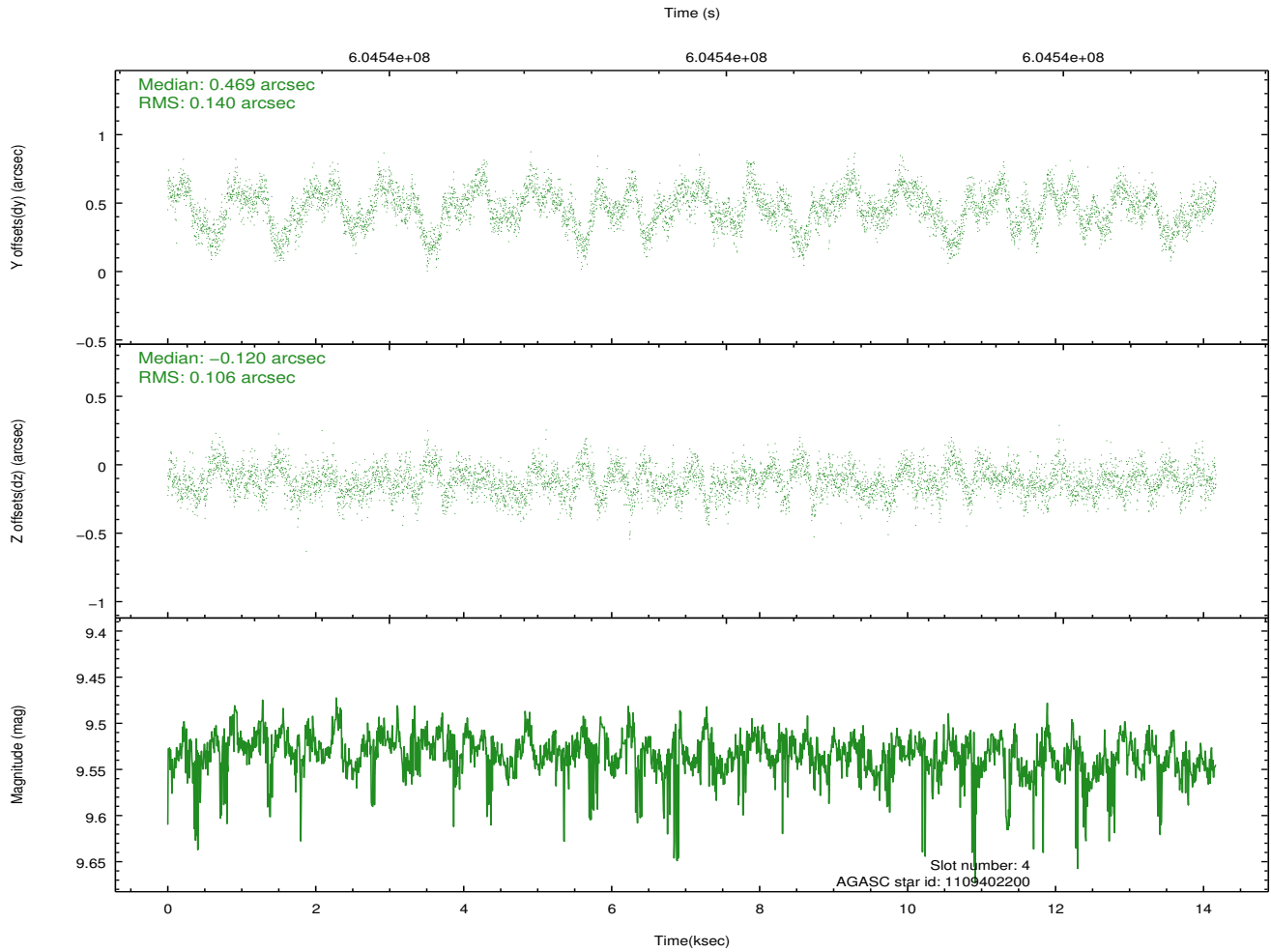
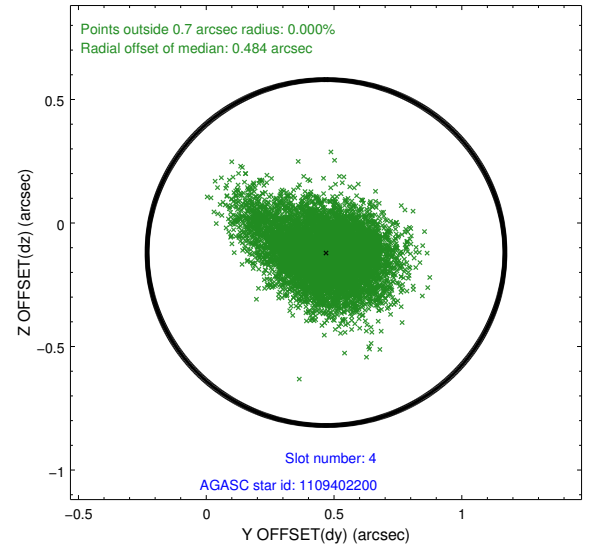
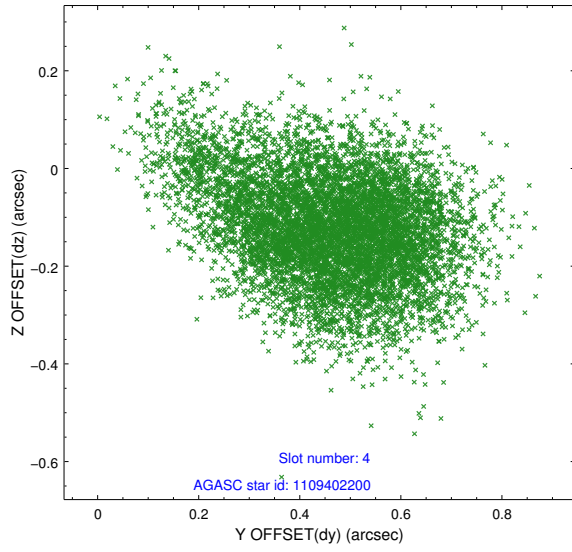
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-2	7.11	3455	-0.370	-0.192	0.008	0.015	0.000000	0.000000	-775.11	-924.34
1	FID		ACIS-I-4	7.09	3453	0.235	0.270	0.009	0.015	0.000000	0.000000	2139.36	982.12
2	FID		ACIS-I-6	7.16	3456	0.035	-0.014	0.011	0.019	0.000000	0.000000	385.94	1623.94
3	GUIDE	used	1109400232	9.96	6874	0.218	0.321	0.209	0.356	0.541505	-54.027839	-1339.32	-1893.06
4	GUIDE	used	1109402200	9.53	6906	0.469	-0.120	0.183	0.310	1.495564	-54.640618	-2076.65	992.94
5	GUIDE	used	1109404208	9.38	6900	-0.408	-0.002	0.137	0.222	0.949663	-54.996141	-476.83	1590.11
6	GUIDE	used	1157763184	8.50	6910	-0.259	-0.209	0.158	0.254	359.763393	-54.646333	1130.20	-659.00
7	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00

2.4 Star Slots

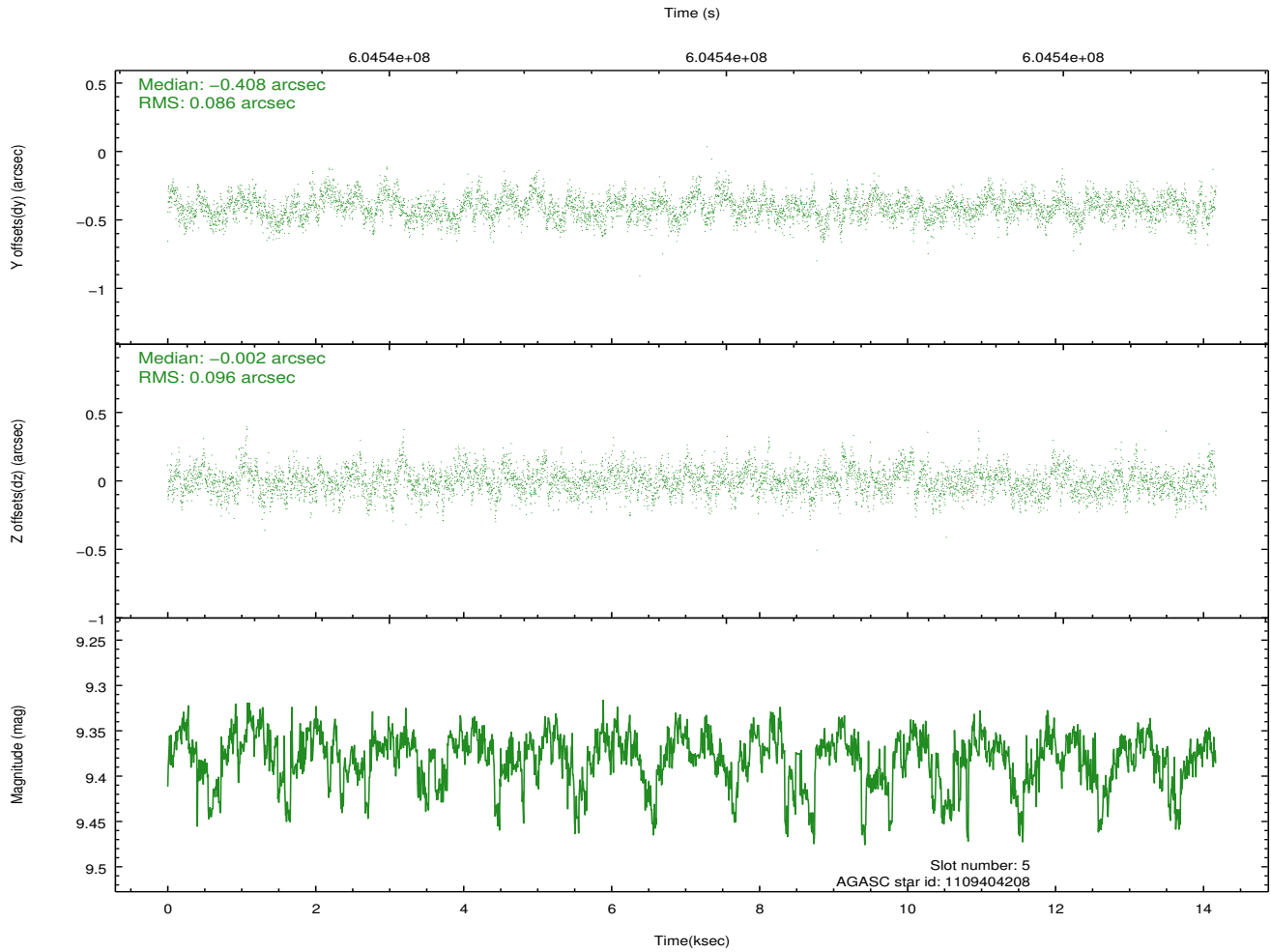
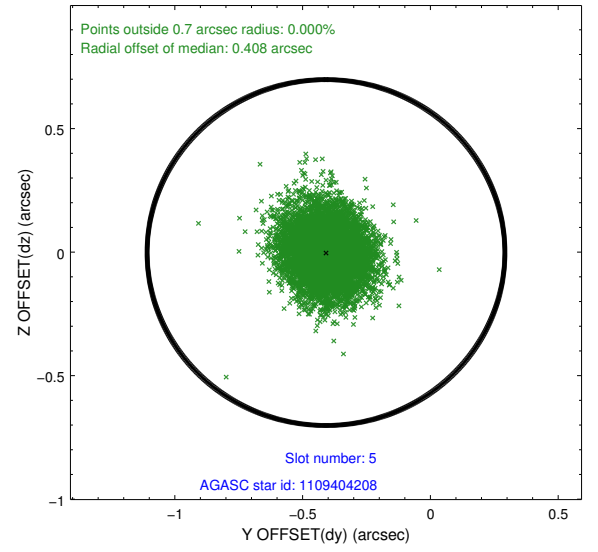
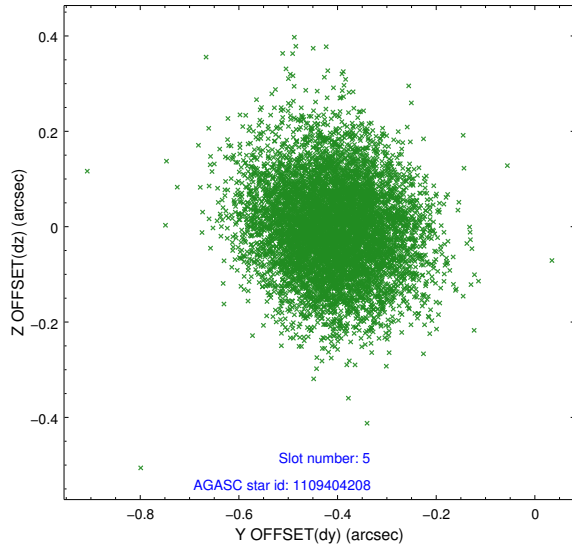
2.4.1 Slot 3



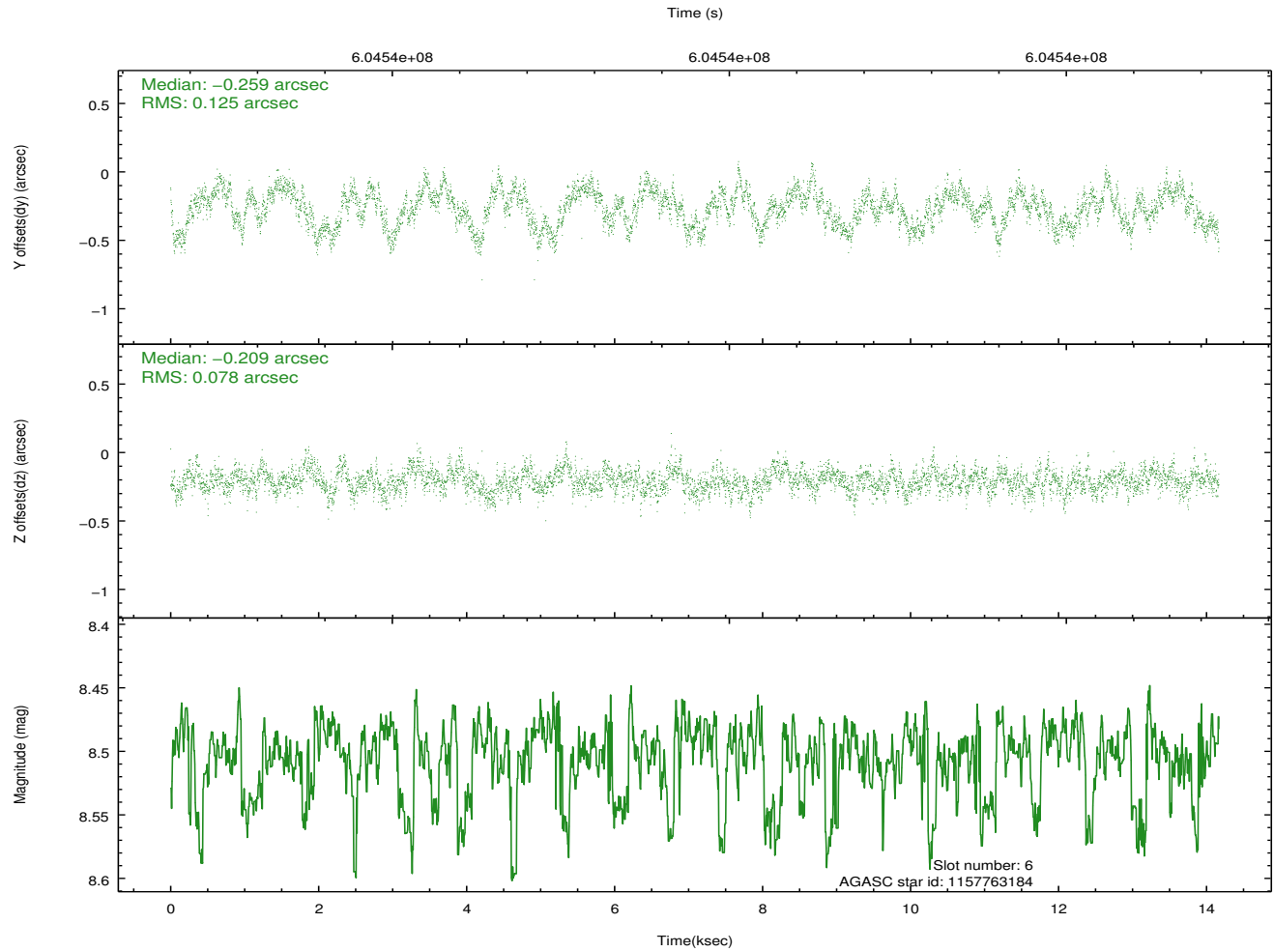
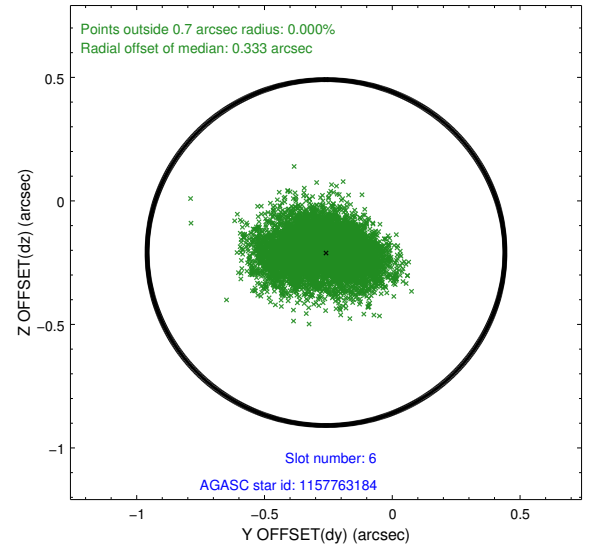
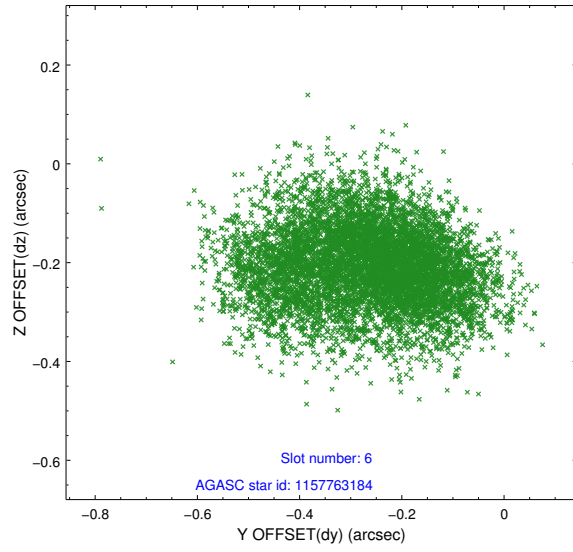
2.4.2 Slot 4



2.4.3 Slot 5

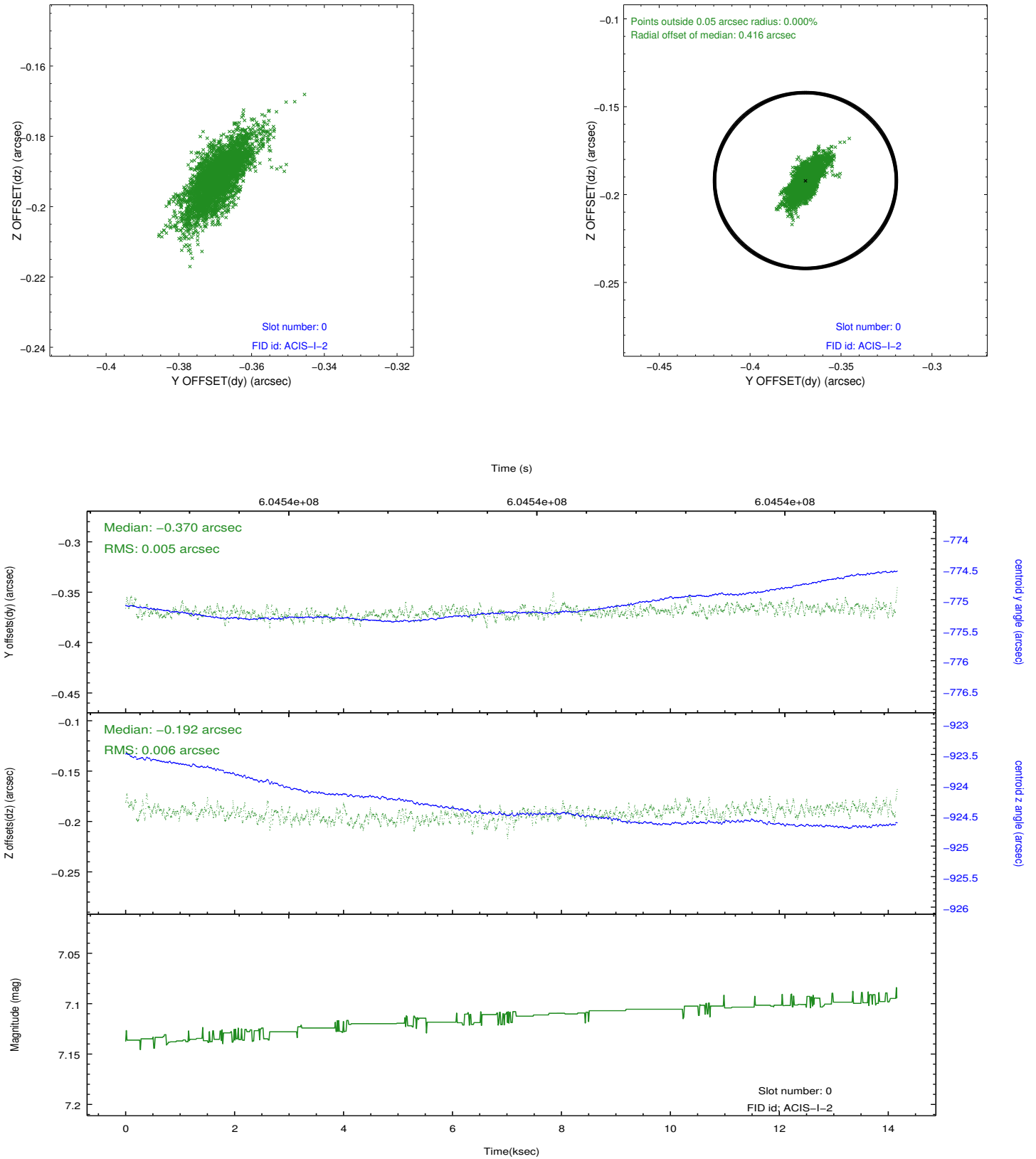


2.4.4 Slot 6

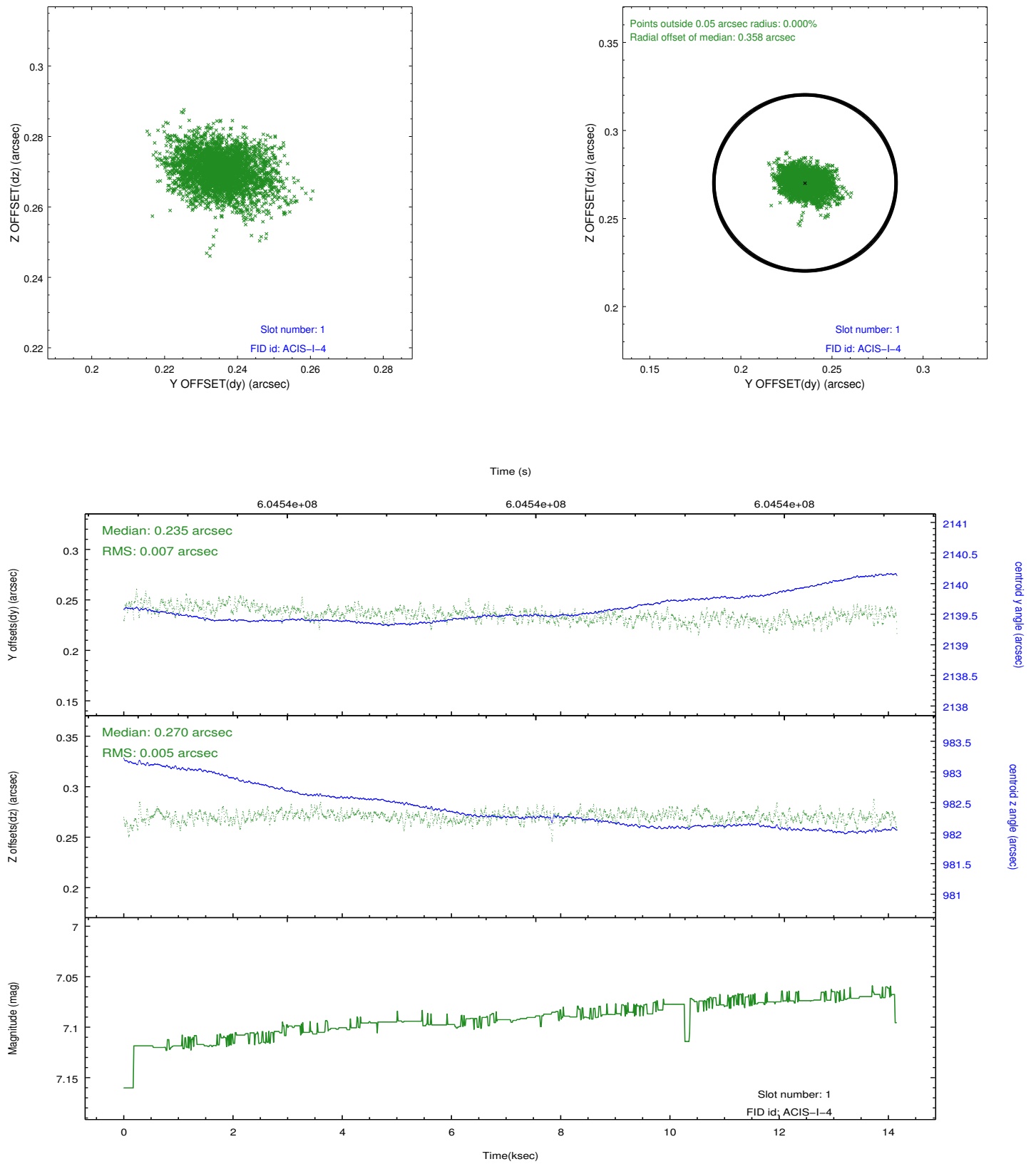


2.5 FID Slots

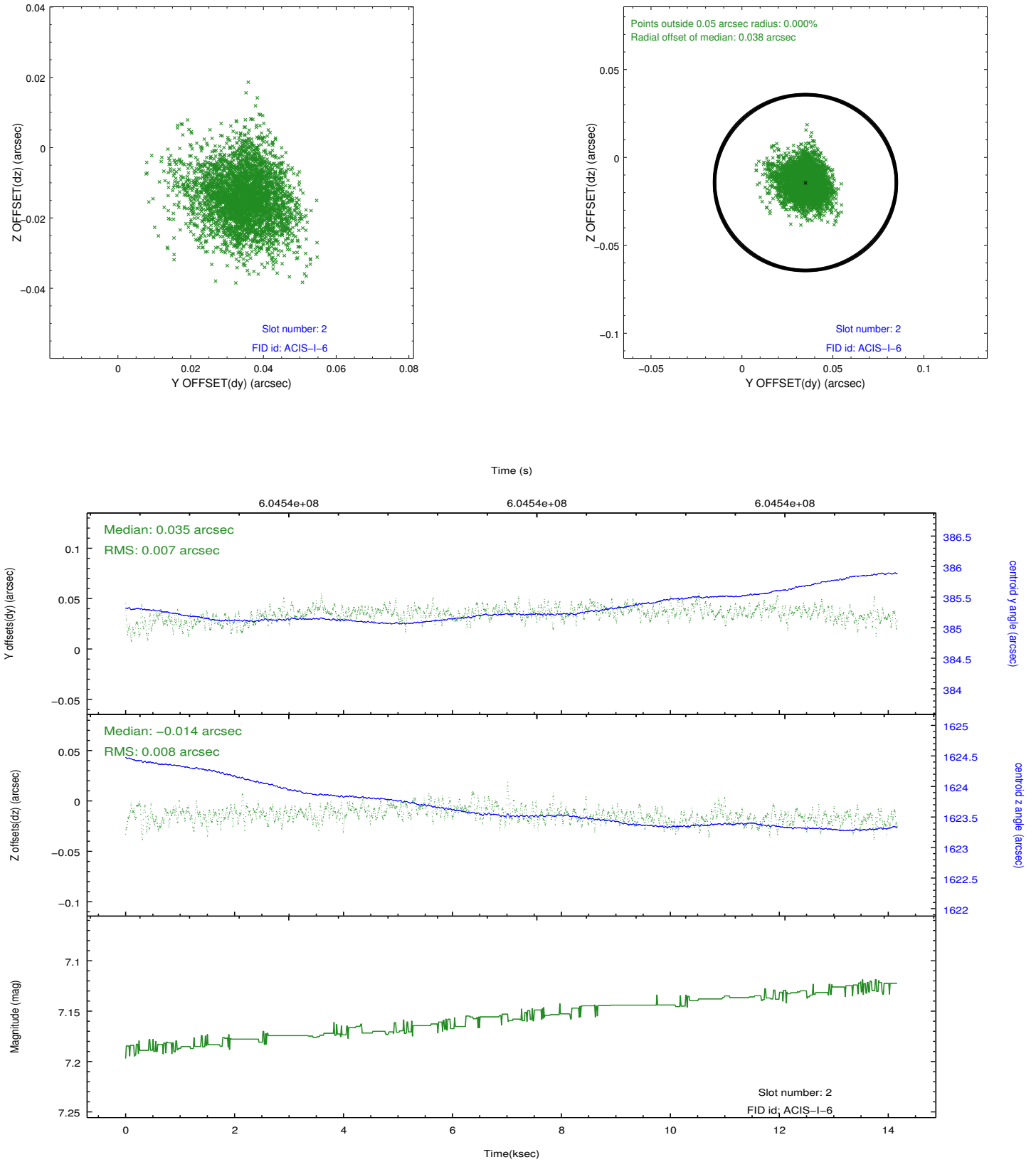
2.5.1 Slot 0



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)	2017.02.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.083010292649

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.

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 bias 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: (0.46328,-54.49438), (0.46000,-54.49077), (0.24700,-54.55535), (0.25028,-54.55898).