

V&V Reference Report

L2 ASCDS Version : 10.4.2.1

Observation 17431 - L2 Version 2
Chandra X-Ray Center

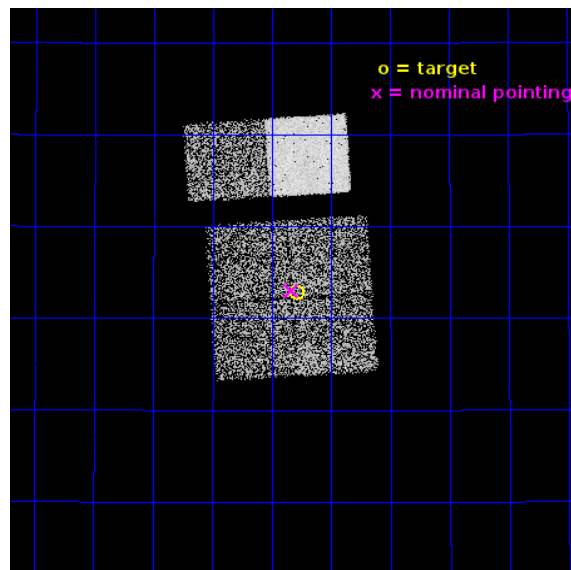
L2 Processing Date : Nov 4 2015

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1 Front

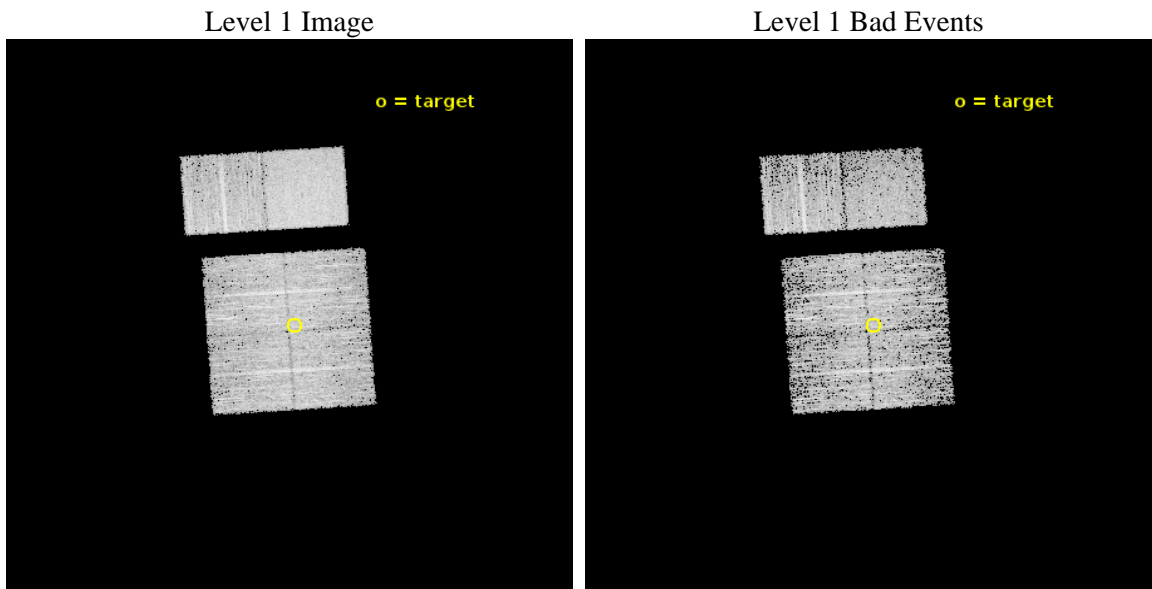
seq_num	901178	Sequence number
obs_id	17431	Observation id
title	A new moderate-depth contiguous layer of the Chandra Bootes field	
observer	Dr. Stephen Murray	Principal investigator
object	Bootes mod depth 3	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	217.197083	Observer's specified target RA [deg]
dec_targ	34.214222	Observer's specified target Dec [deg]
ra_nom	217.20878283167	Nominal RA [deg]
dec_nom	34.216872271169	Nominal Dec [deg]
roll_nom	356.20210943511	Nominal Roll [deg]
revision	2	Processing version of data
ontime	6008.2069491148	Sum of GTIs [s]
livetime	5932.1274150172	Livetime [s]
ontime0	6004.8428587914	Sum of GTIs [s]
ontime1	6008.1248691082	Sum of GTIs [s]
ontime2	5995.2020277977	Sum of GTIs [s]
ontime3	6008.2069491148	Sum of GTIs [s]
ontime6	6008.2890291214	Sum of GTIs [s]
ontime7	6008.2479891777	Sum of GTIs [s]
l2events	35032	Number of level 2 events



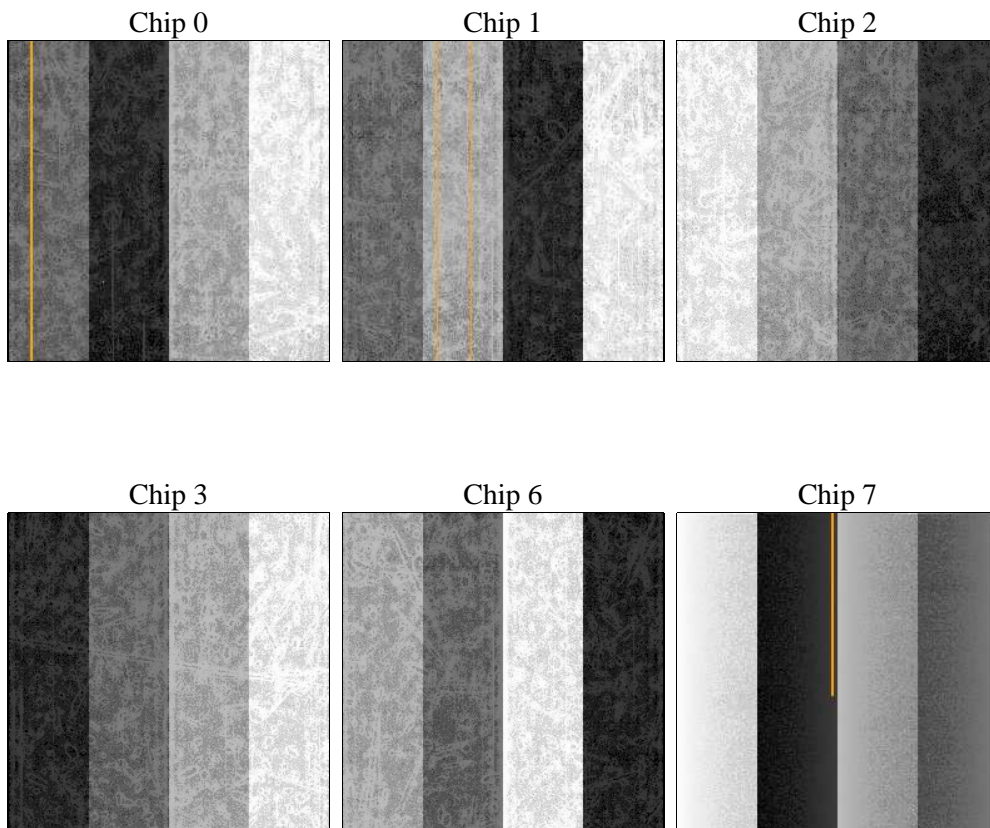
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	6250.000000	[s] Scheduled observation exposure time
ascdsver	10.4.2.1	Processing system revision	ontime	6008.2069491148	Sum of GTIs [s]
caldsver	4.6.10a	 	ontime0	6004.8428587914	Sum of GTIs [s]
date	2015-11-04T23:48:08	Date and time of file creation	ontime1	6008.1248691082	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	5995.2020277977	Sum of GTIs [s]
			ontime3	6008.2069491148	Sum of GTIs [s]
			ontime6	6008.2890291214	Sum of GTIs [s]
			ontime7	6008.2479891777	Sum of GTIs [s]
			l1events	205665	Number of level 1 events

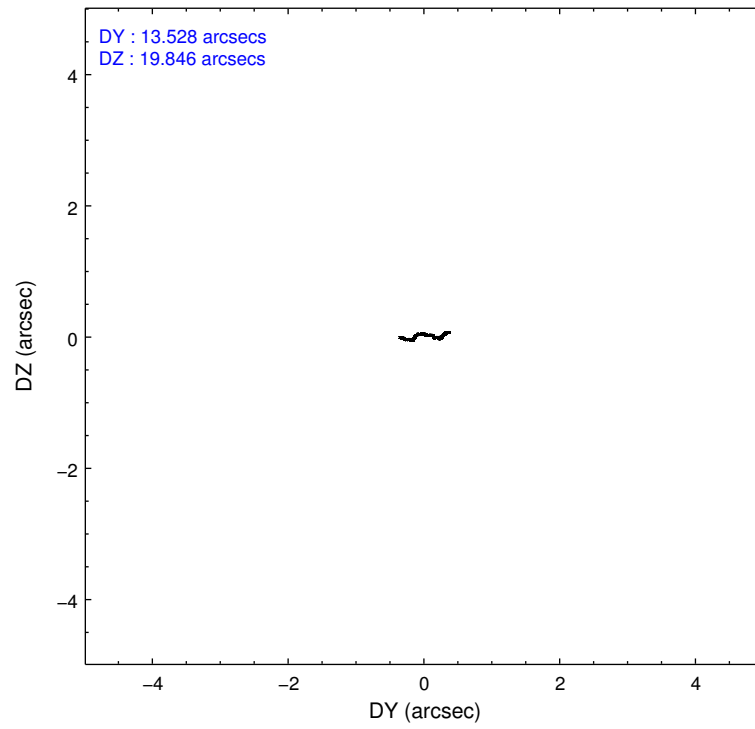
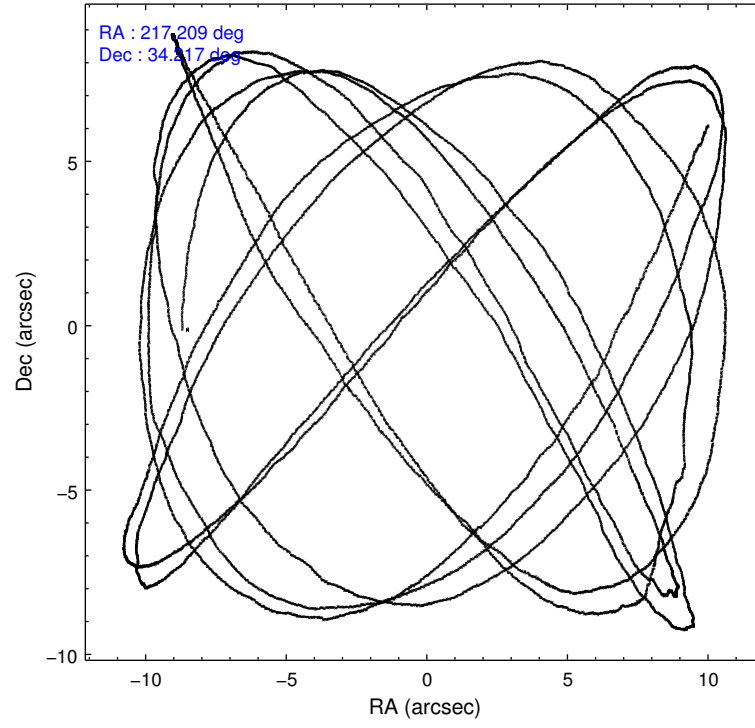
2.1.4 Events

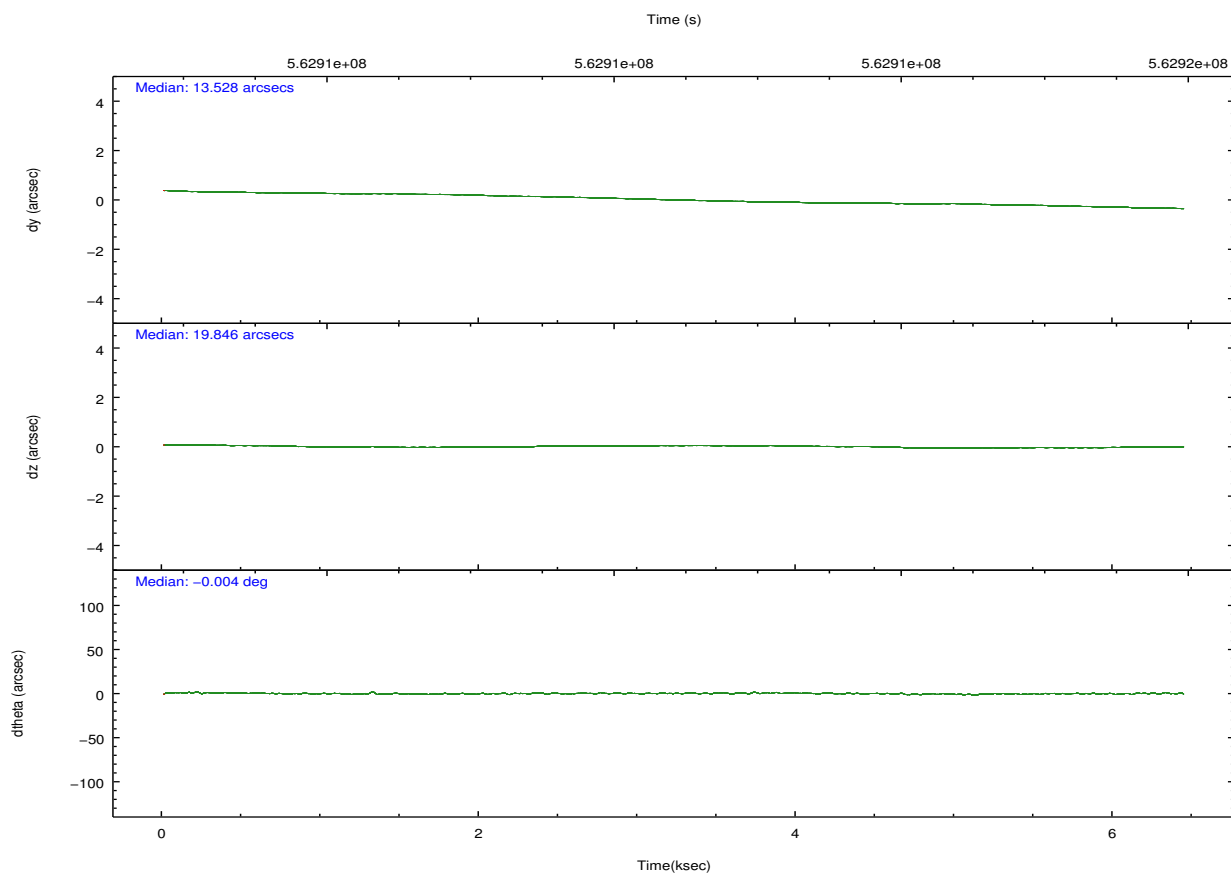
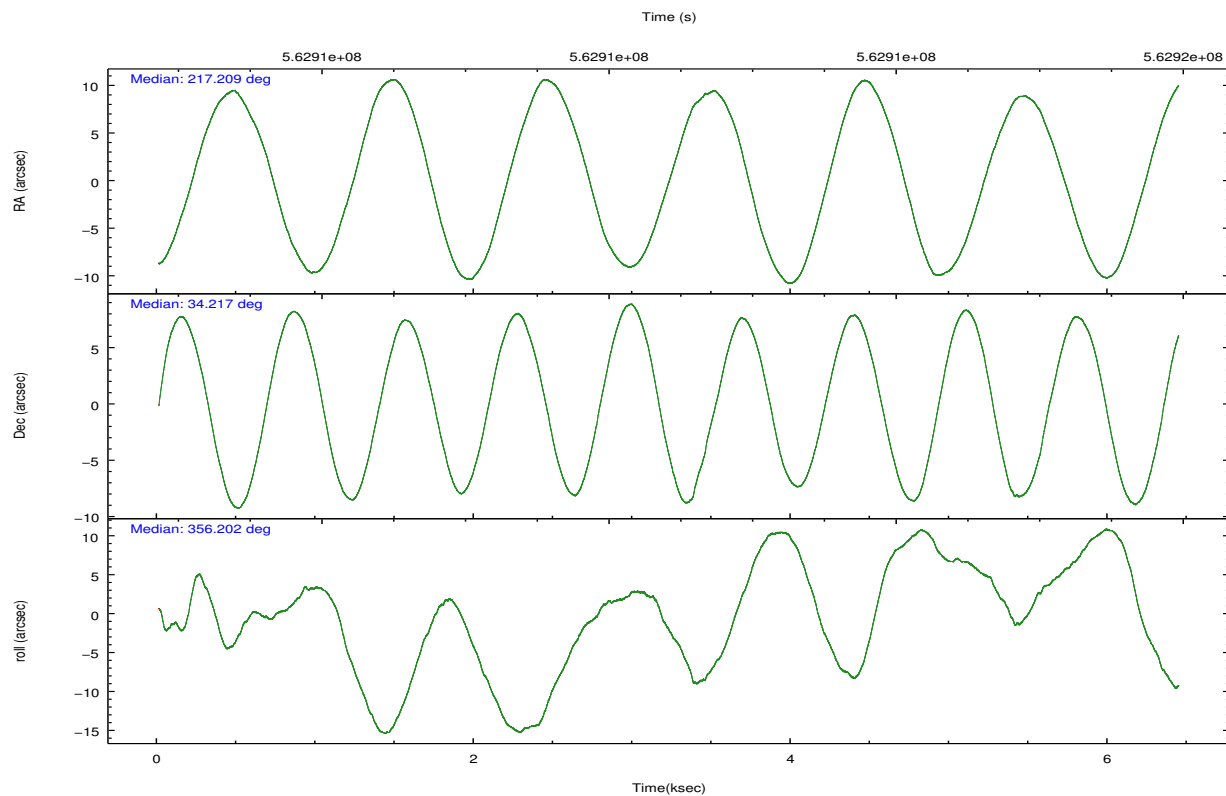
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	30736	30612	33780	31722	34124	44691	grade 0 events	1348	1483	1312	1324	1346	1633
rejected events	26915	26277	30070	28183	30172	25475		4%	4%	3%	4%	3%	3%
rejected %	87%	85%	89%	88%	88%	57%	grade 1 events	22	15	19	9	15	67
								0%	0%	0%	0%	0%	0%
							grade 2 events	920	1063	919	773	863	4024
								2%	3%	2%	2%	2%	9%
							grade 3 events	419	419	367	367	394	1570
								1%	1%	1%	1%	1%	3%
							grade 4 events	371	427	370	358	412	1565
								1%	1%	1%	1%	1%	3%
							grade 5 events	1492	1566	1294	1673	1726	4498
								4%	5%	3%	5%	5%	10%
							grade 6 events	767	945	747	720	938	10431
								2%	3%	2%	2%	2%	23%
							grade 7 events	25397	24694	28752	26498	28430	20903
								82%	80%	85%	83%	83%	46%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	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	217.178888	217.2087828316711	CCD I2 on	Y	Y
[deg] Pointing Dec	34.204582	34.21687227116885	CCD I3 on	Y	Y
[deg] Pointing Roll	356.010224	356.2021094351146	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	O2	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	562909387.184000	562908916.0892	CCD S5 on	N	N
Observation start date	2015-11-03T03:41:59	2015-11-03T03:35:16	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	562915637.184000	562916799.36465	On-chip summing requested	N	N
Observation end date	2015-11-03T05:26:09	2015-11-03T05:46:39	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



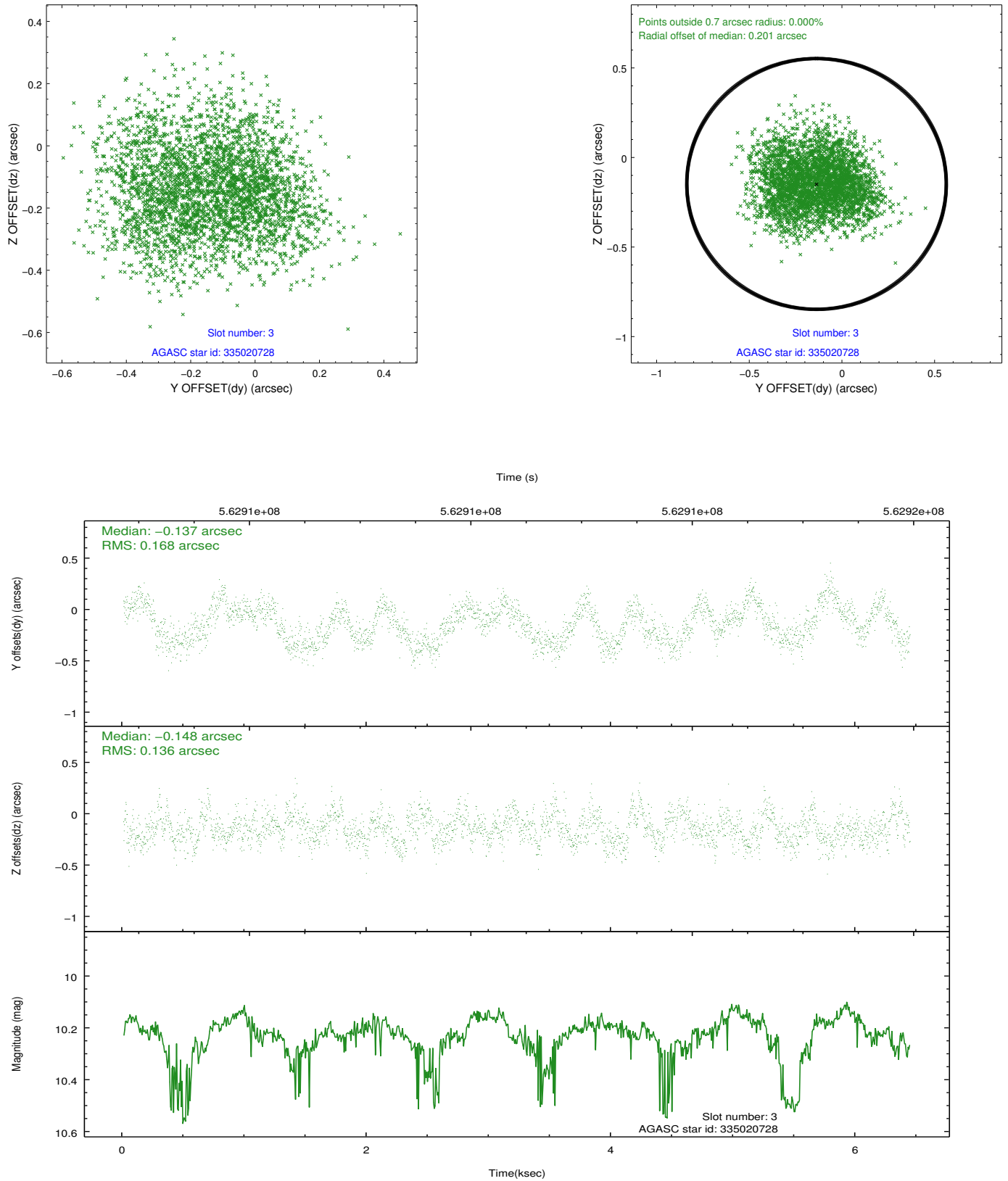


Slot Statistics

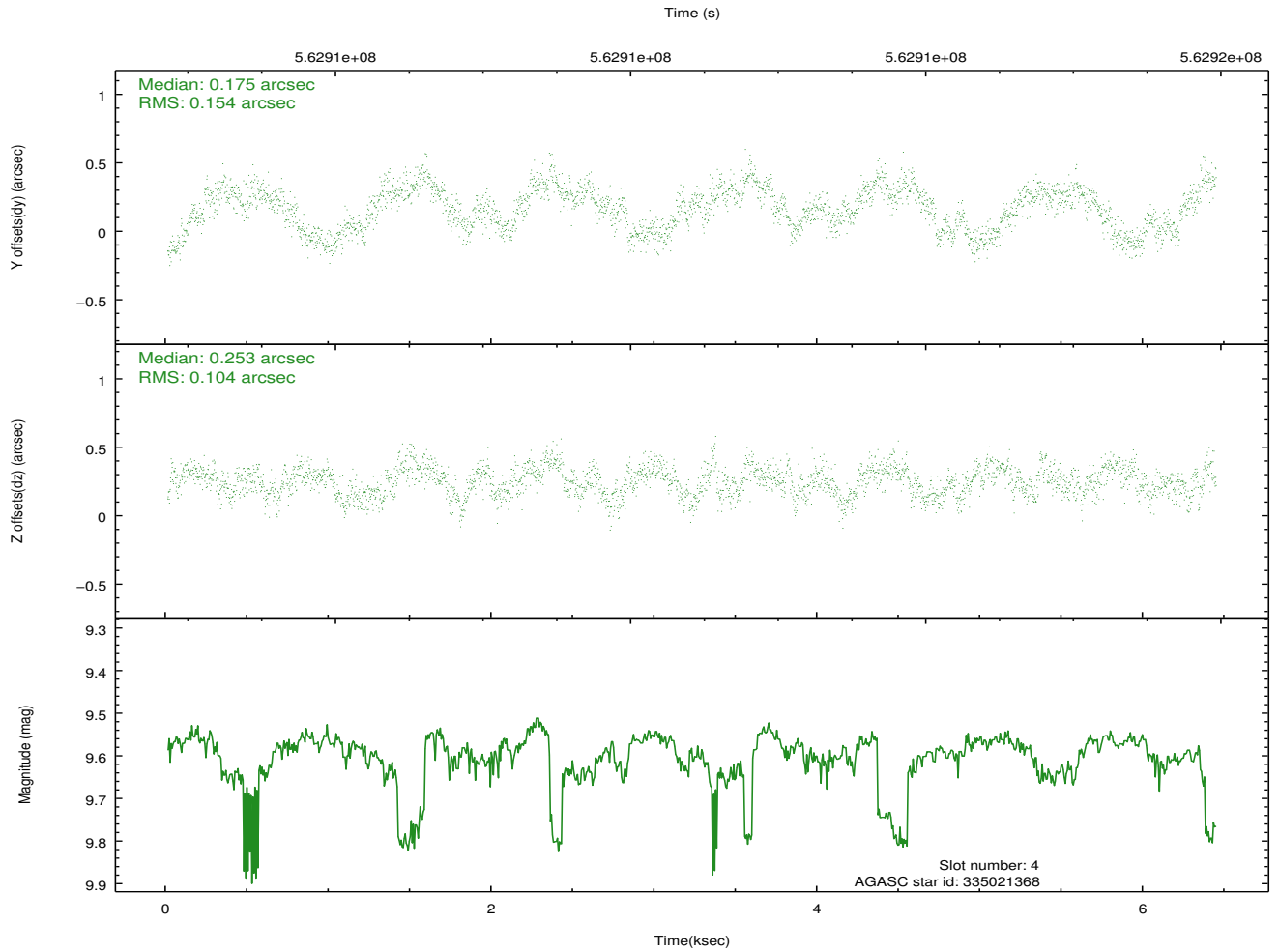
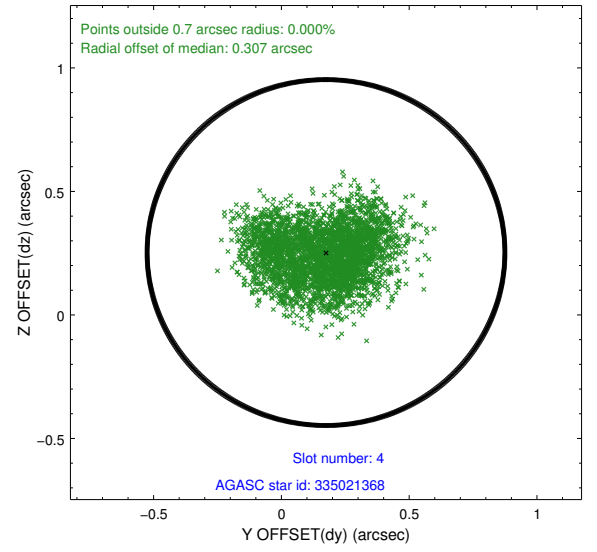
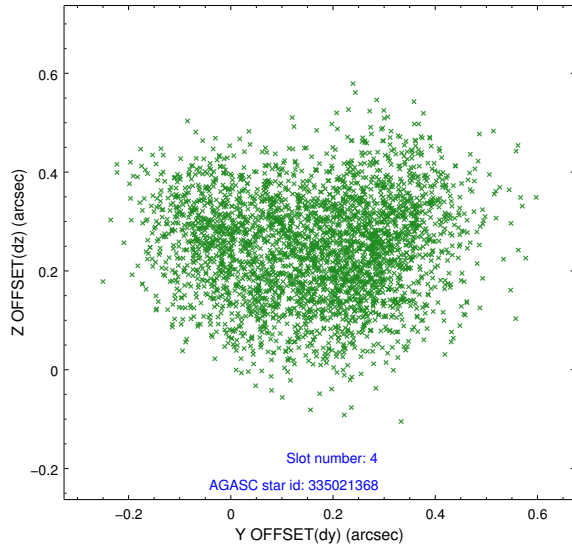
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.24	1571	0.075	-0.041	0.008	0.014	0.000000	0.000000	926.05	-843.60
1	FID		ACIS-I-5	7.25	1571	-0.312	0.048	0.008	0.013	0.000000	0.000000	-1822.00	1053.44
2	FID		ACIS-I-6	7.24	1571	0.146	0.064	0.008	0.015	0.000000	0.000000	390.60	1699.06
3	GUIDE	used	335020728	10.22	3114	-0.137	-0.148	0.238	0.356	217.586522	34.733044	1069.72	1983.46
4	GUIDE	used	335021368	9.60	3139	0.175	0.253	0.202	0.308	217.529643	33.934817	1113.01	-893.15
5	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
6	GUIDE	used	335028336	9.46	3138	0.196	-0.187	0.169	0.282	217.189840	34.665629	-82.65	1657.62
7	GUIDE	used	335028696	9.16	3139	-0.209	0.097	0.158	0.263	217.260519	33.844112	333.49	-1276.77

2.4 Star Slots

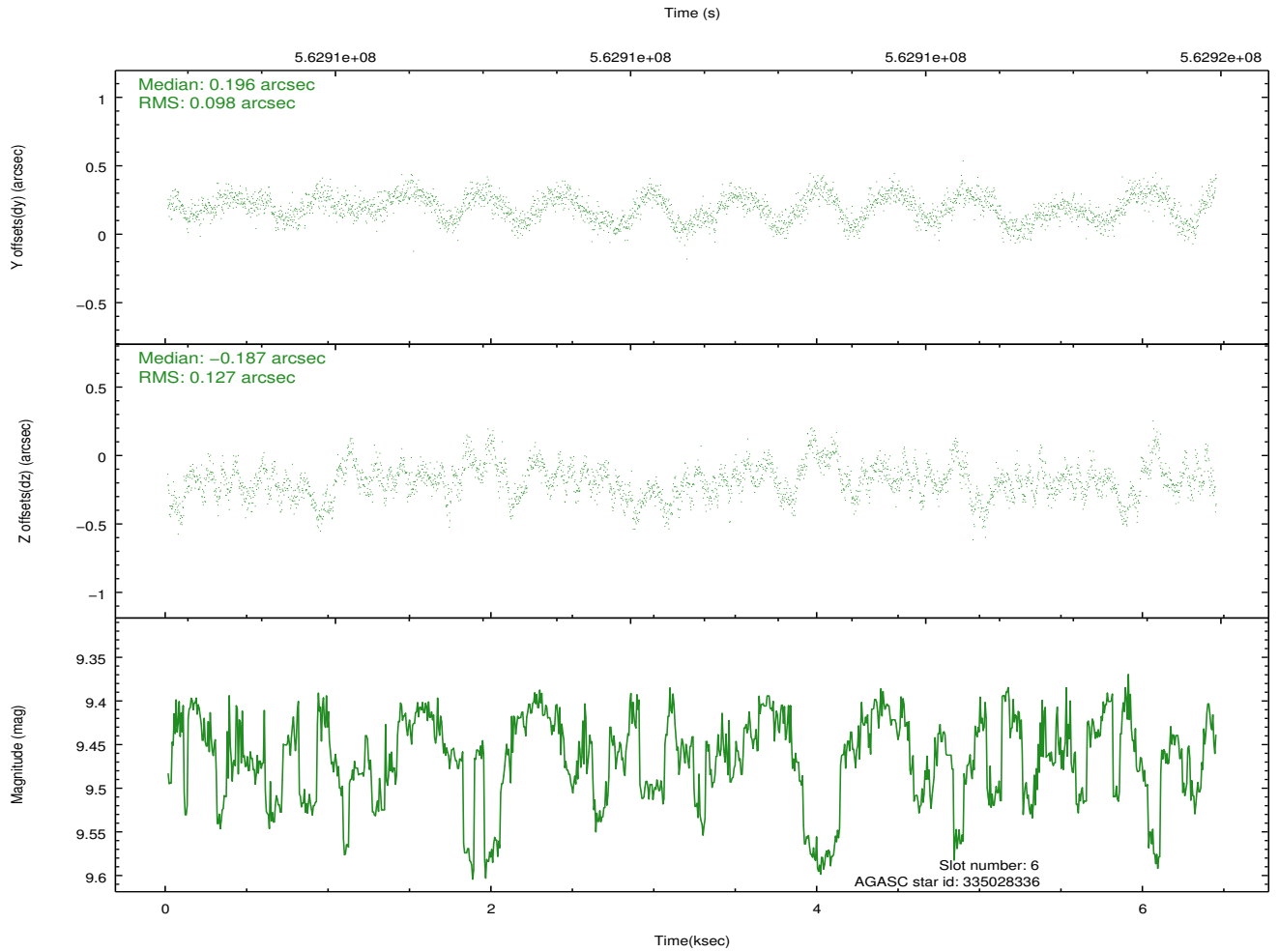
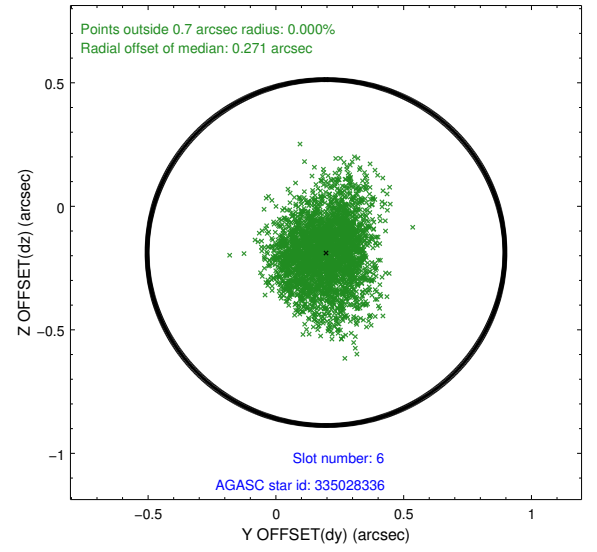
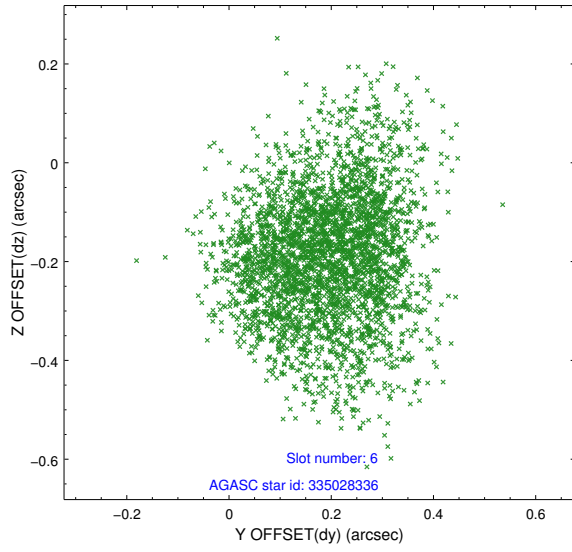
2.4.1 Slot 3



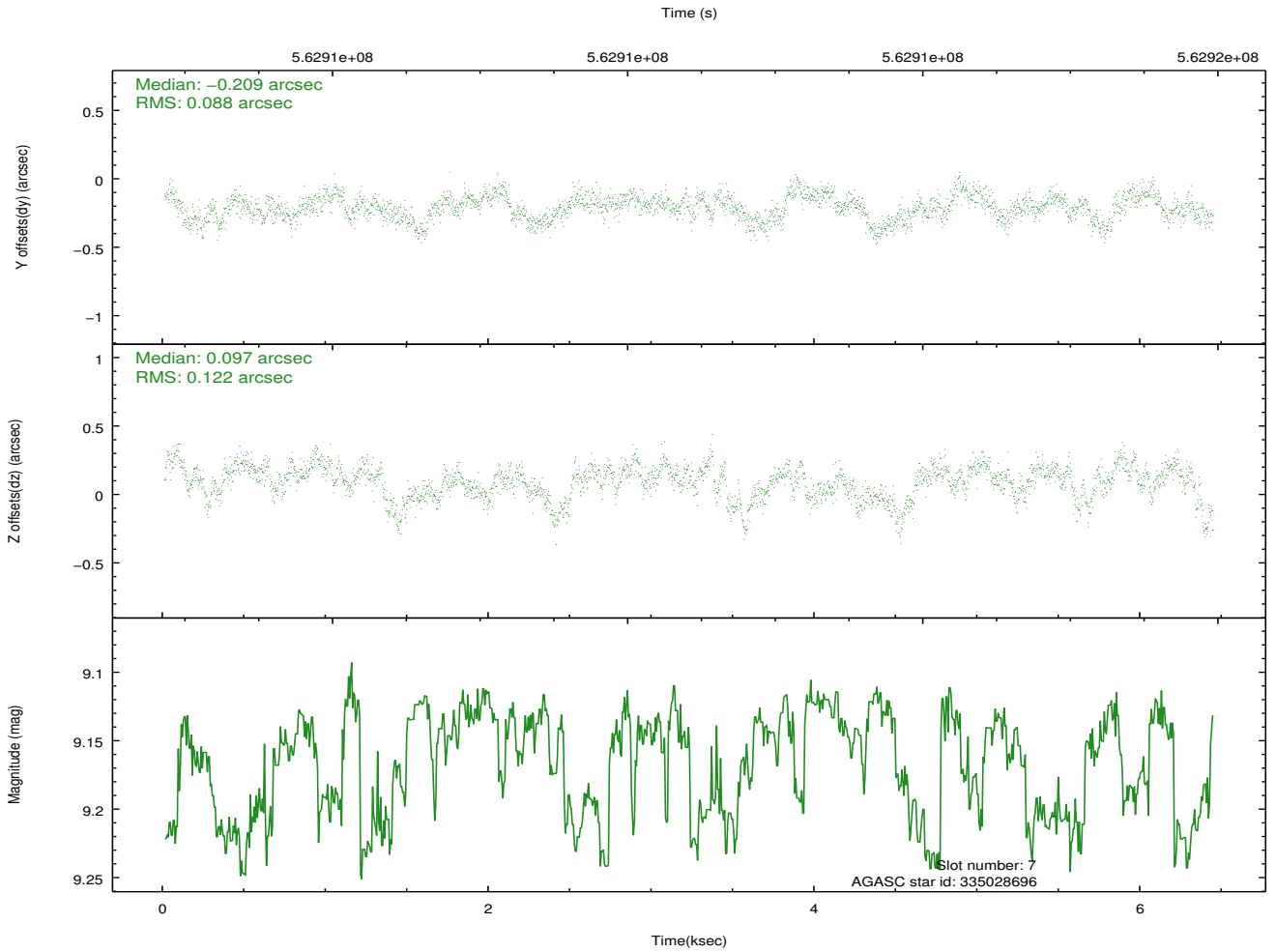
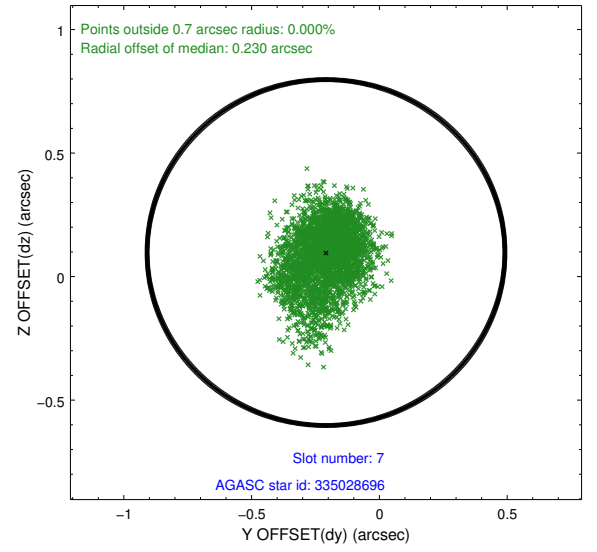
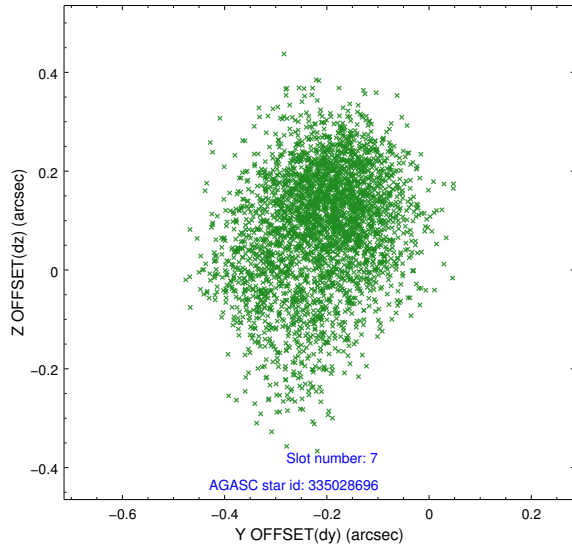
2.4.2 Slot 4



2.4.3 Slot 6

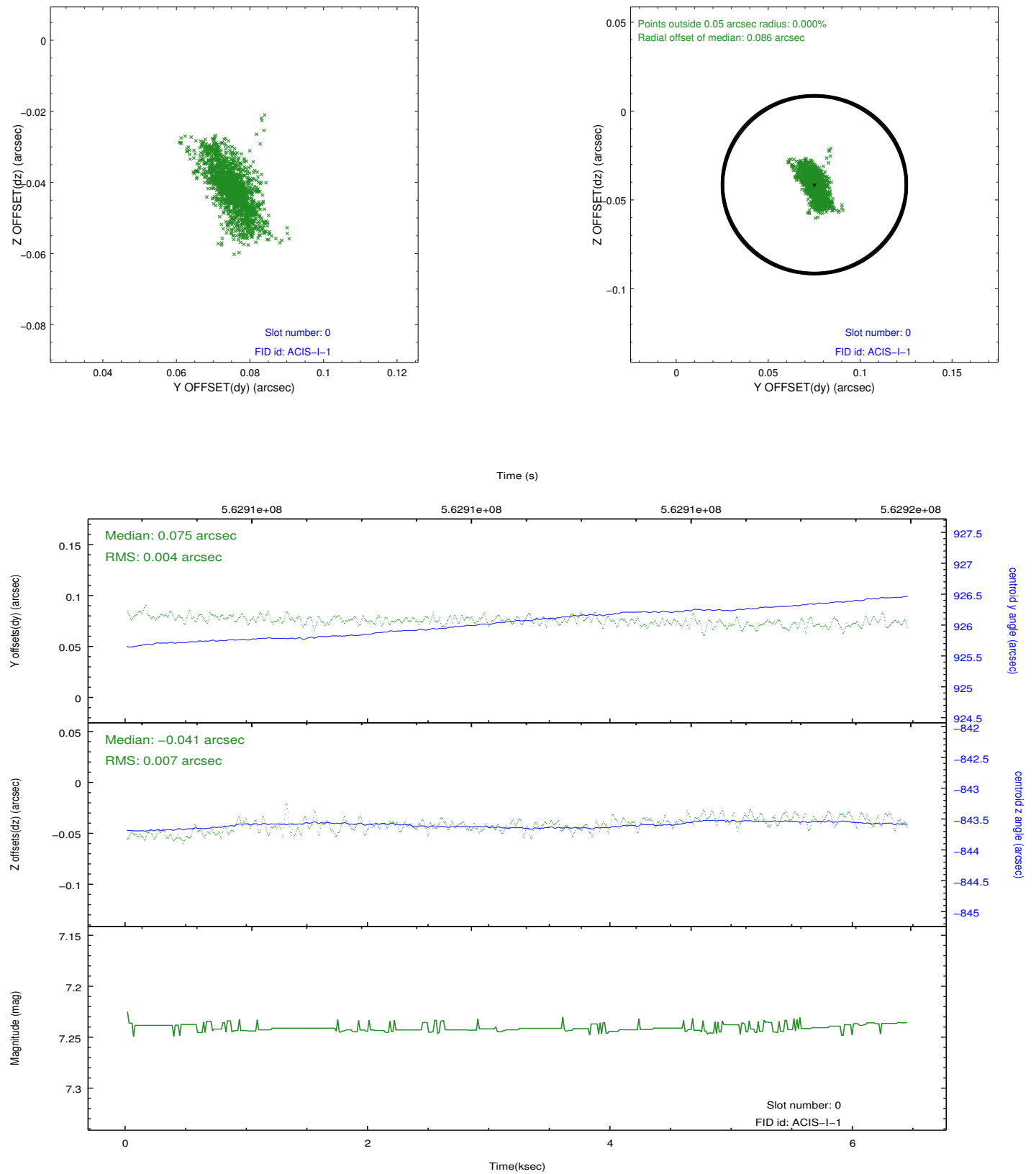


2.4.4 Slot 7

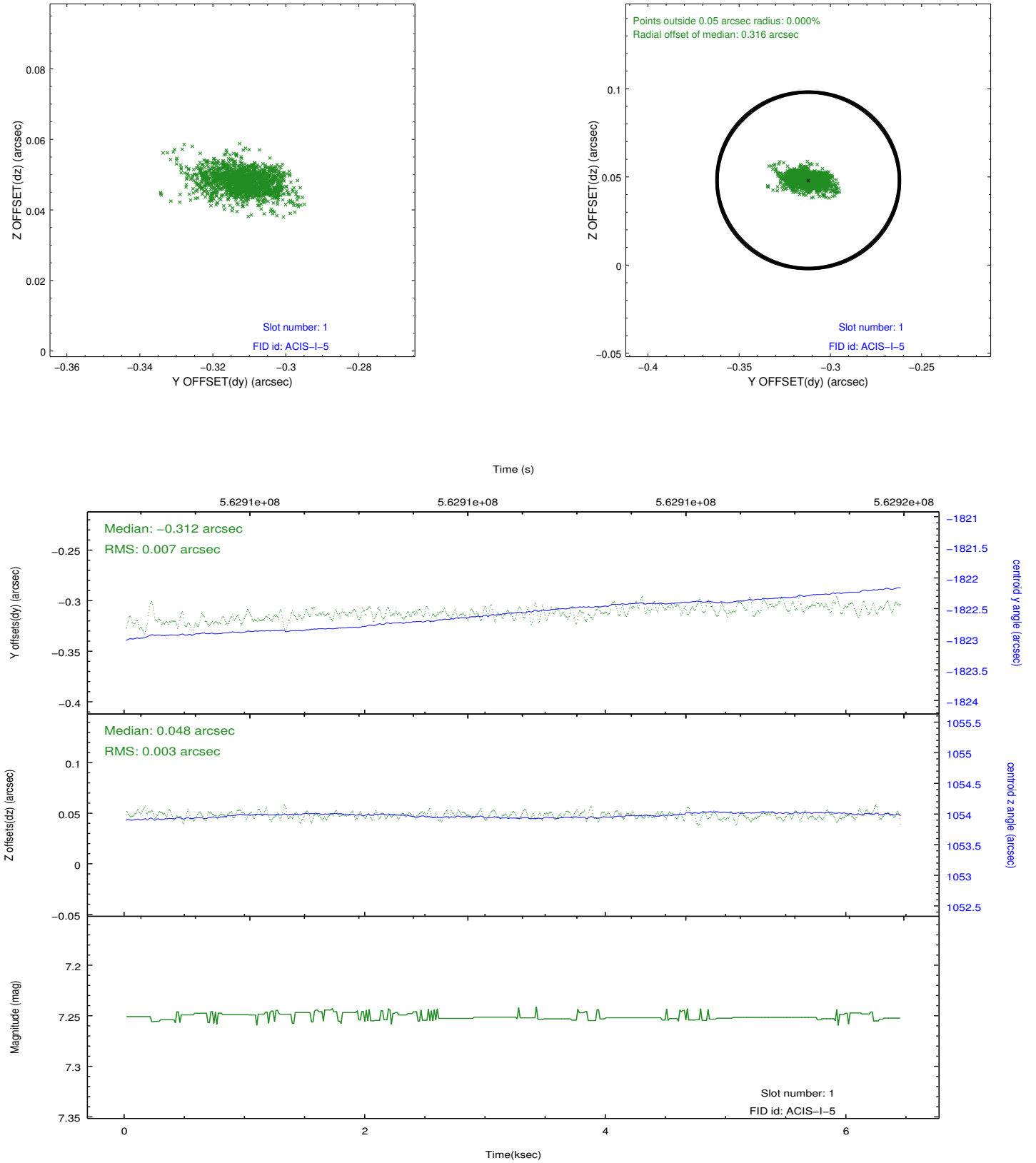


2.5 FID Slots

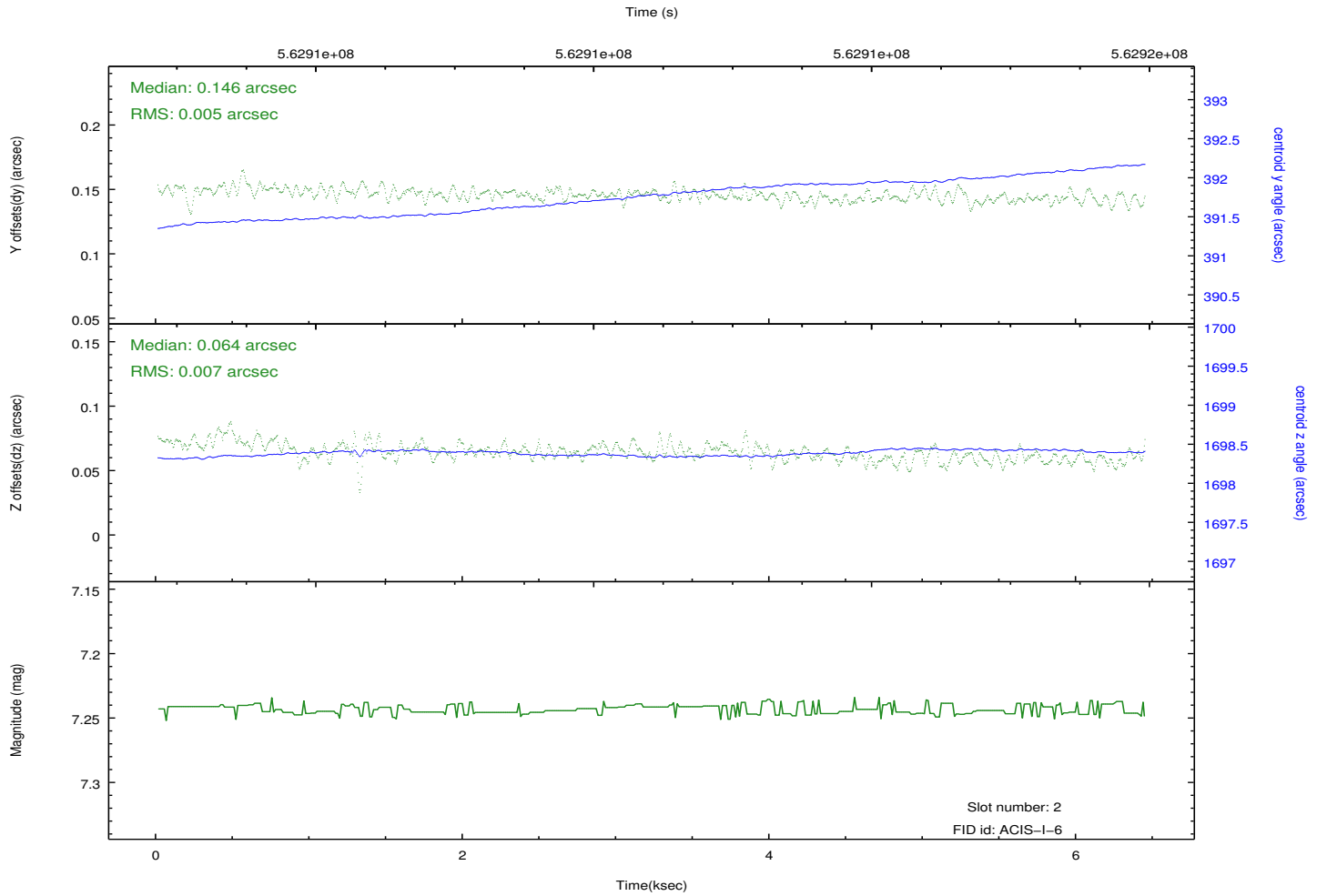
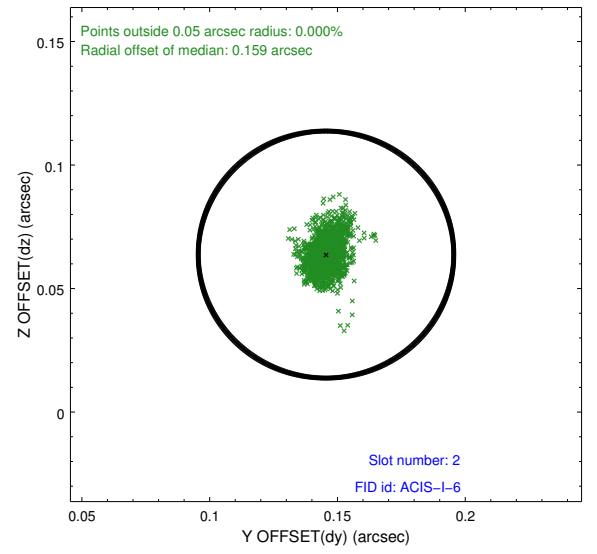
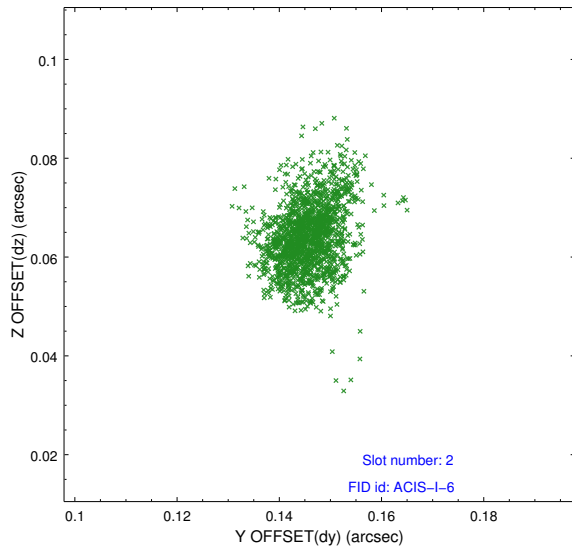
2.5.1 Slot 0



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)	2015.11.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	6.0082069491148

A.2 Comments

The guide star in slot 5 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this star 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:
(217.03790, 34.19070), (217.03758, 34.18648), (217.20580, 34.17738),
(217.20613, 34.18159).