

V&V Reference Report

L2 ASCDS Version : 10.5.2

Observation 18977 - L2 Version 2
Chandra X-Ray Center

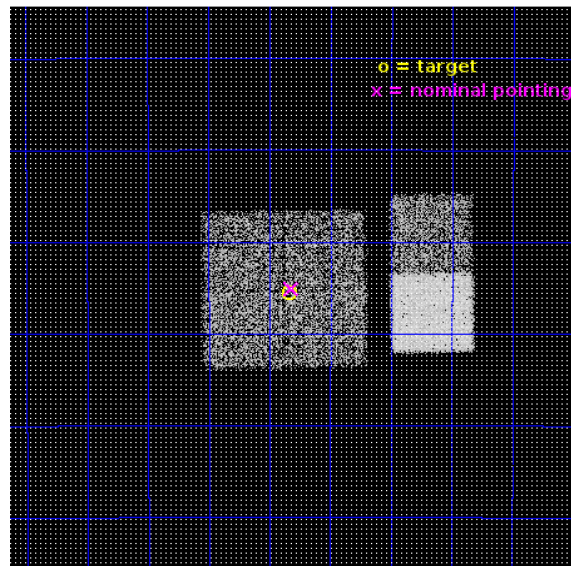
L2 Processing Date : Feb 3 2017

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
2.4.5	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

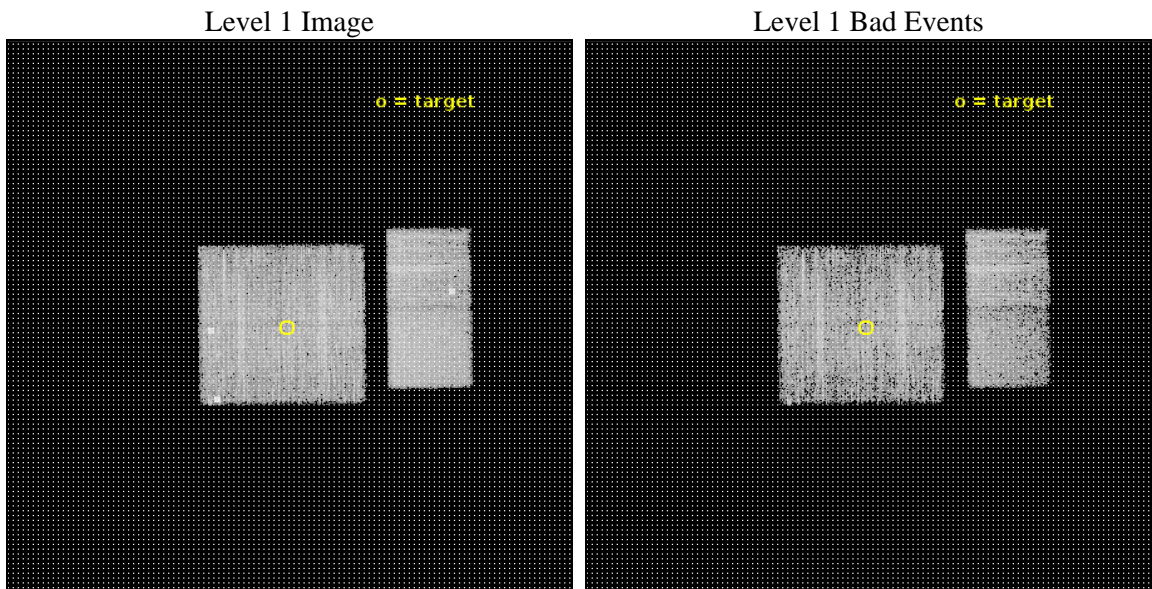
seq_num	401845	Sequence number
obs_id	18977	Observation id
title	The Nature of INTEGRAL Sources in the Galactic Plane	Proposal titl
observer	John Tomsick	Principal investigator
object	IGR J17118-3155	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	257.959167	Observer's specified target RA [deg]
dec_targ	-31.927	Observer's specified target Dec [deg]
ra_nom	257.95499076282	Nominal RA [deg]
dec_nom	-31.918468442567	Nominal Dec [deg]
roll_nom	89.206467340918	Nominal Roll [deg]
revision	2	Processing version of data
ontime	4943.4562770128	Sum of GTIs [s]
livetime	4880.8592570413	Livetime [s]
ontime0	4943.3331570625	Sum of GTIs [s]
ontime1	4940.1331267357	Sum of GTIs [s]
ontime2	4943.4152370691	Sum of GTIs [s]
ontime3	4943.4562770128	Sum of GTIs [s]
ontime6	4943.5383570194	Sum of GTIs [s]
ontime7	4943.4973170757	Sum of GTIs [s]
l2events	35346	Number of level 2 events



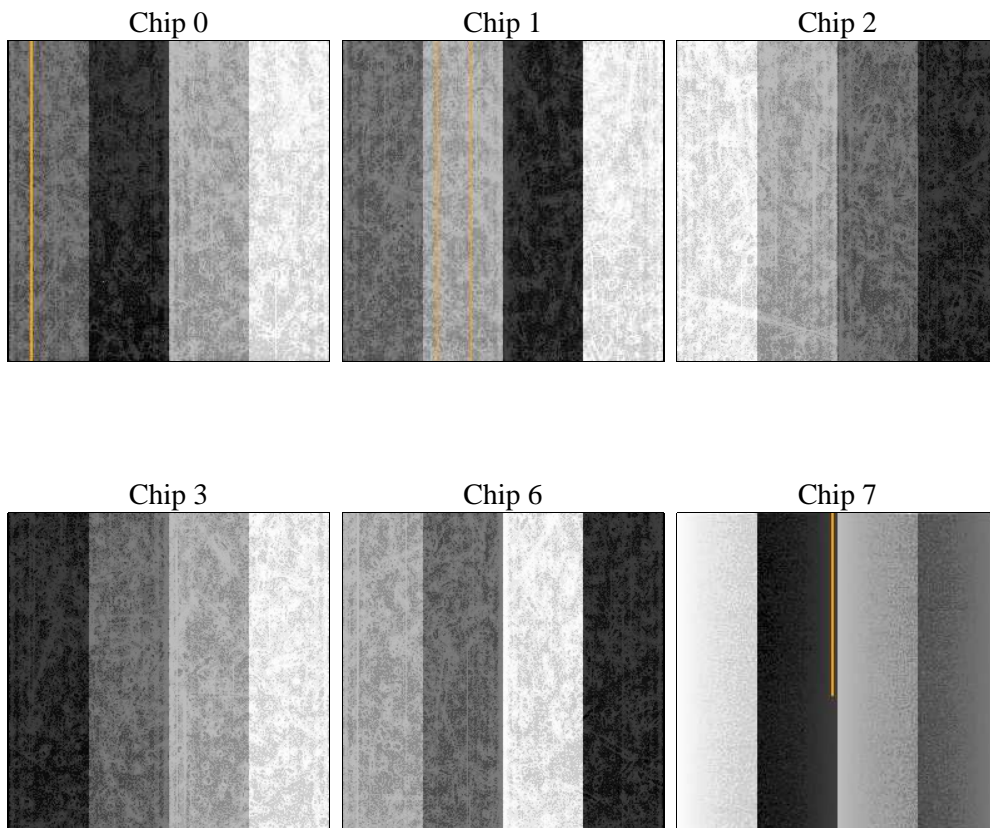
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.5.2	Processing system revision	ontime	4943.4562770128	Sum of GTIs [s]
caldbver	4.7.3	 	ontime0	4943.3331570625	Sum of GTIs [s]
date	2017-02-03T18:55:32	Date and time of file creation	ontime1	4940.1331267357	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	4943.4152370691	Sum of GTIs [s]
			ontime3	4943.4562770128	Sum of GTIs [s]
			ontime6	4943.5383570194	Sum of GTIs [s]
			ontime7	4943.4973170757	Sum of GTIs [s]
			l1events	222004	Number of level 1 events

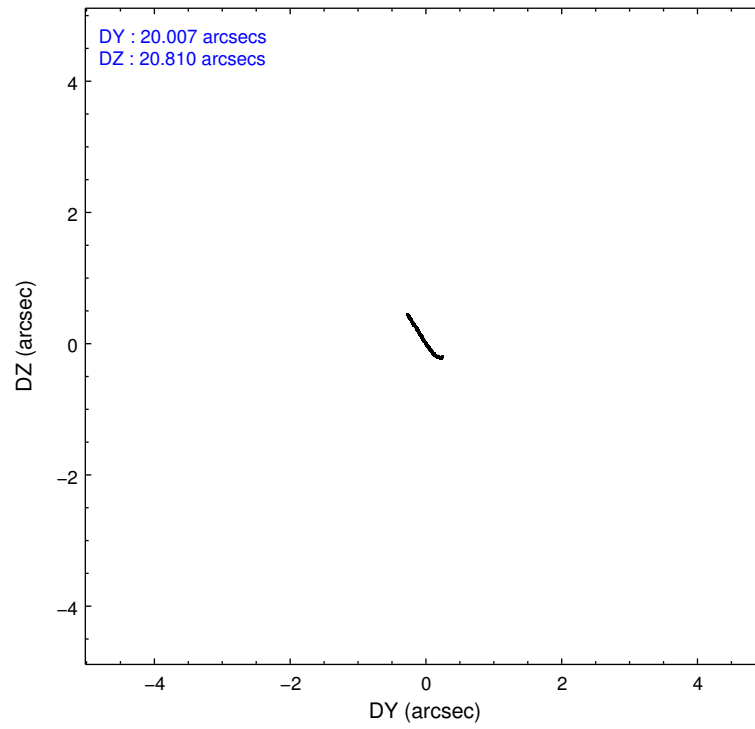
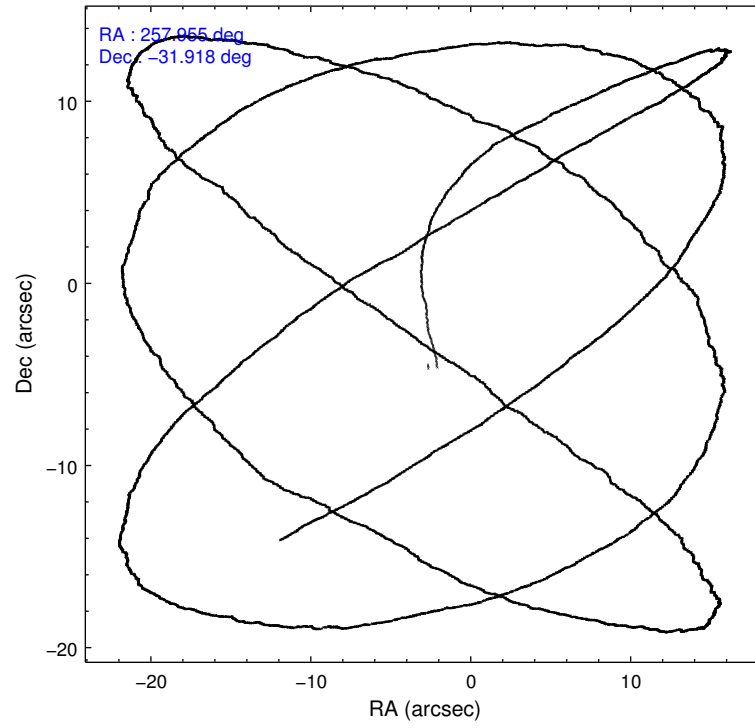
2.1.4 Events

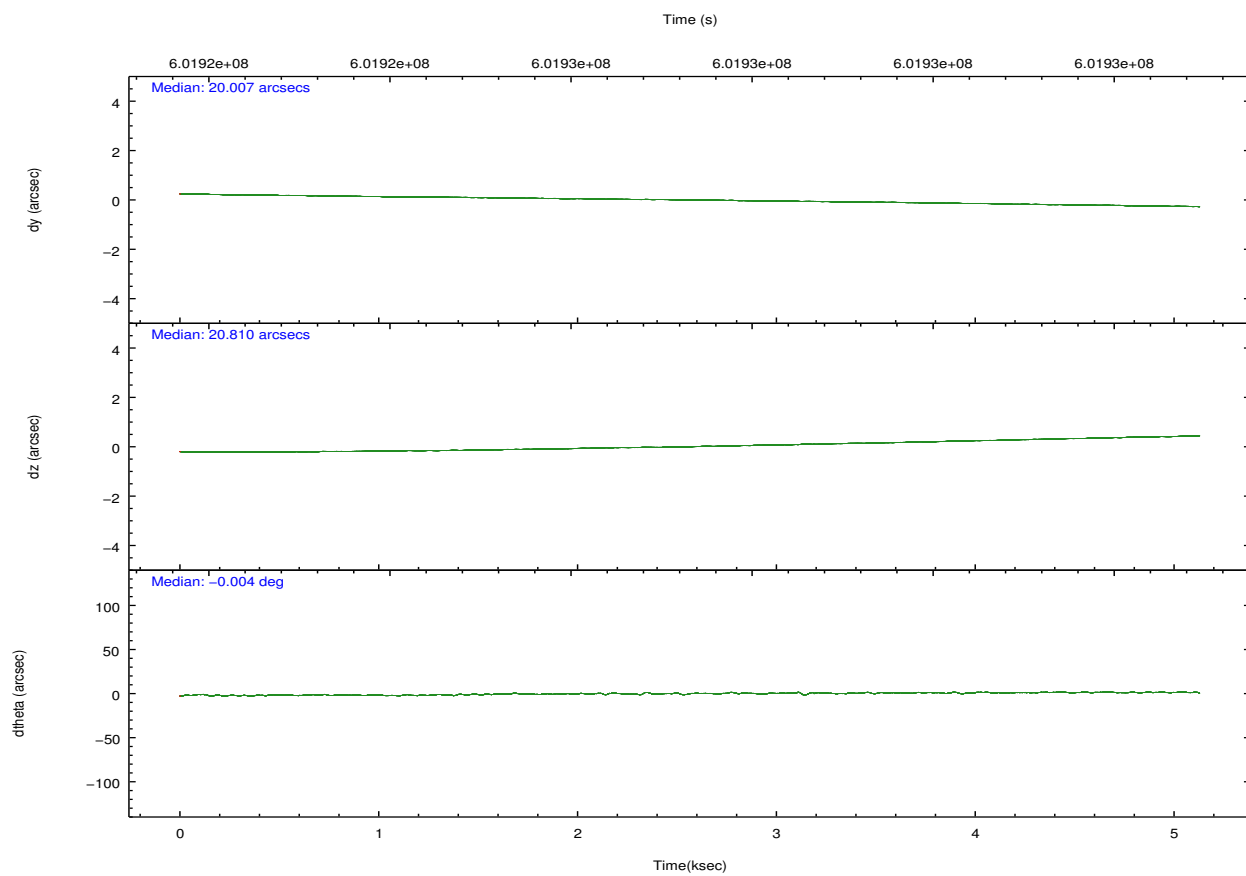
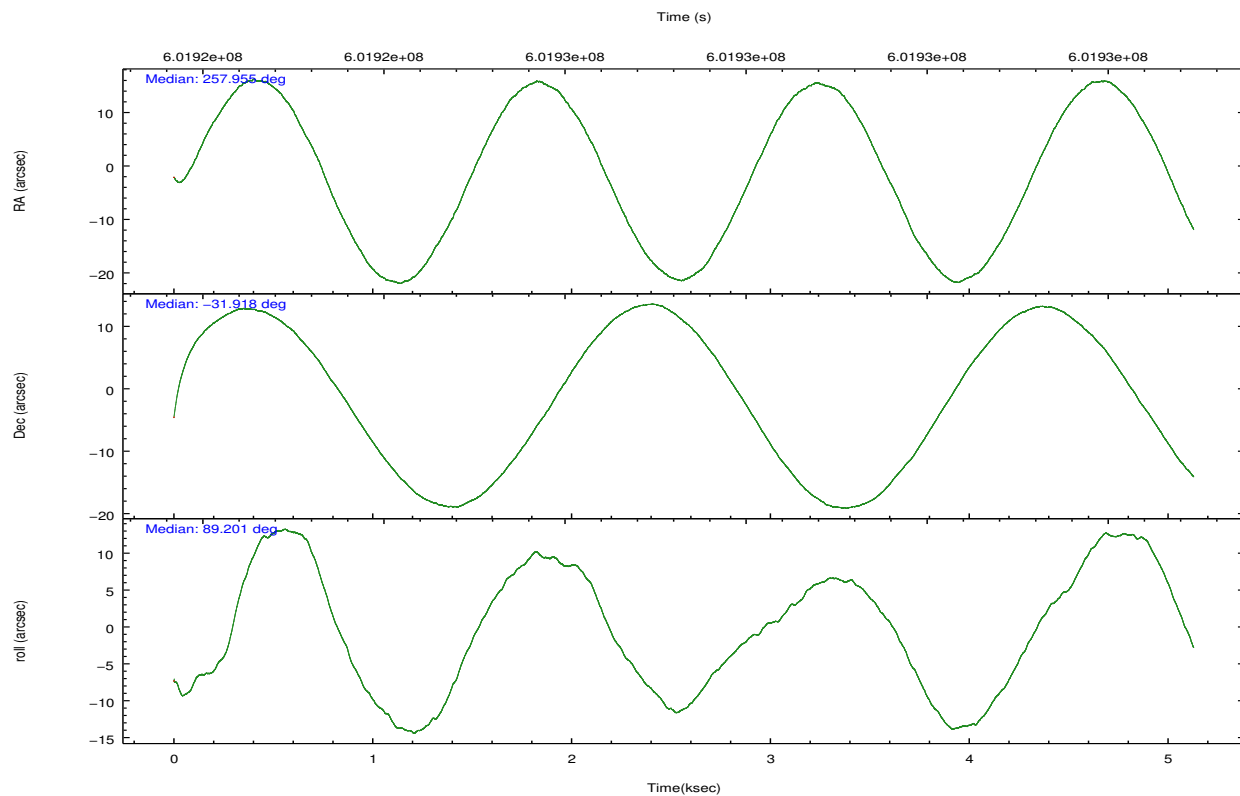
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	32804	35782	35134	33892	39873	44519	grade 0 events	1386	2603	1555	1398	2271	1526
rejected events	28913	28933	31327	30161	34903	25501		4%	7%	4%	4%	5%	3%
rejected %	88%	80%	89%	88%	87%	57%	grade 1 events	11	23	20	19	25	59
								0%	0%	0%	0%	0%	0%
							grade 2 events	980	2502	843	765	997	4083
								2%	6%	2%	2%	2%	9%
							grade 3 events	388	382	366	390	348	1390
								1%	1%	1%	1%	0%	3%
							grade 4 events	370	409	341	394	371	1348
								1%	1%	0%	1%	0%	3%
							grade 5 events	1360	1402	1235	1595	1551	4009
								4%	3%	3%	4%	3%	9%
							grade 6 events	778	964	703	789	994	10696
								2%	2%	2%	2%	2%	24%
							grade 7 events	27531	27497	30071	28542	33316	21408
								83%	76%	85%	84%	83%	48%

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	257.970518	257.9549907628199	CCD I2 on	Y	Y
[deg] Pointing Dec	-31.942946	-31.91846844256727	CCD I3 on	Y	Y
[deg] Pointing Roll	89.006000	89.20646734091778	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	-233.592463	-233.5874344608287	CCD S3 on	O2	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	601924229.184000	601922963.33443	CCD S5 on	N	N
Observation start date	2017-01-27T17:09:20	2017-01-27T16:49:23	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	601929229.184000	601930251.08485	On-chip summing requested	N	N
Observation end date	2017-01-27T18:32:40	2017-01-27T18:50:51	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



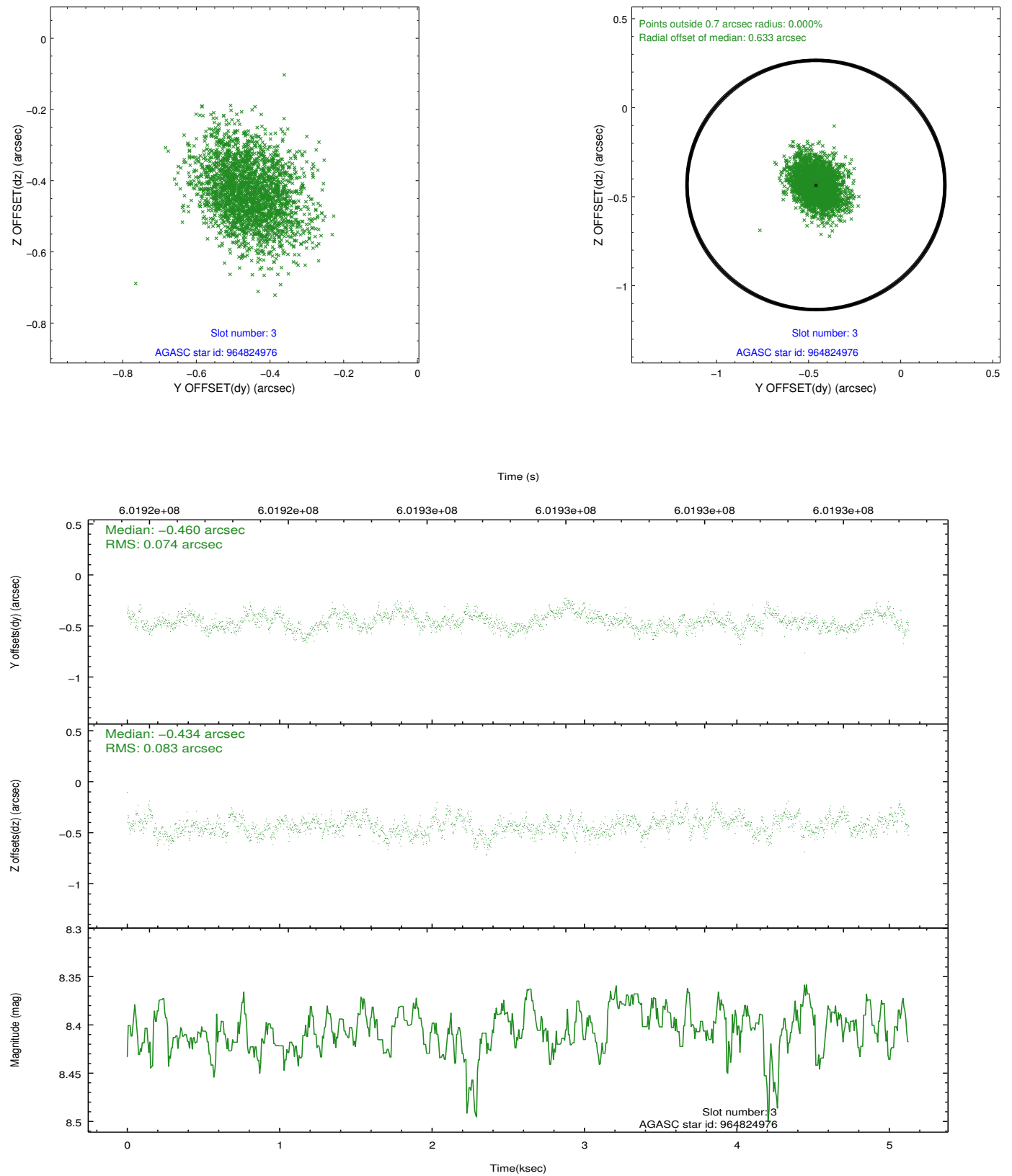


Slot Statistics

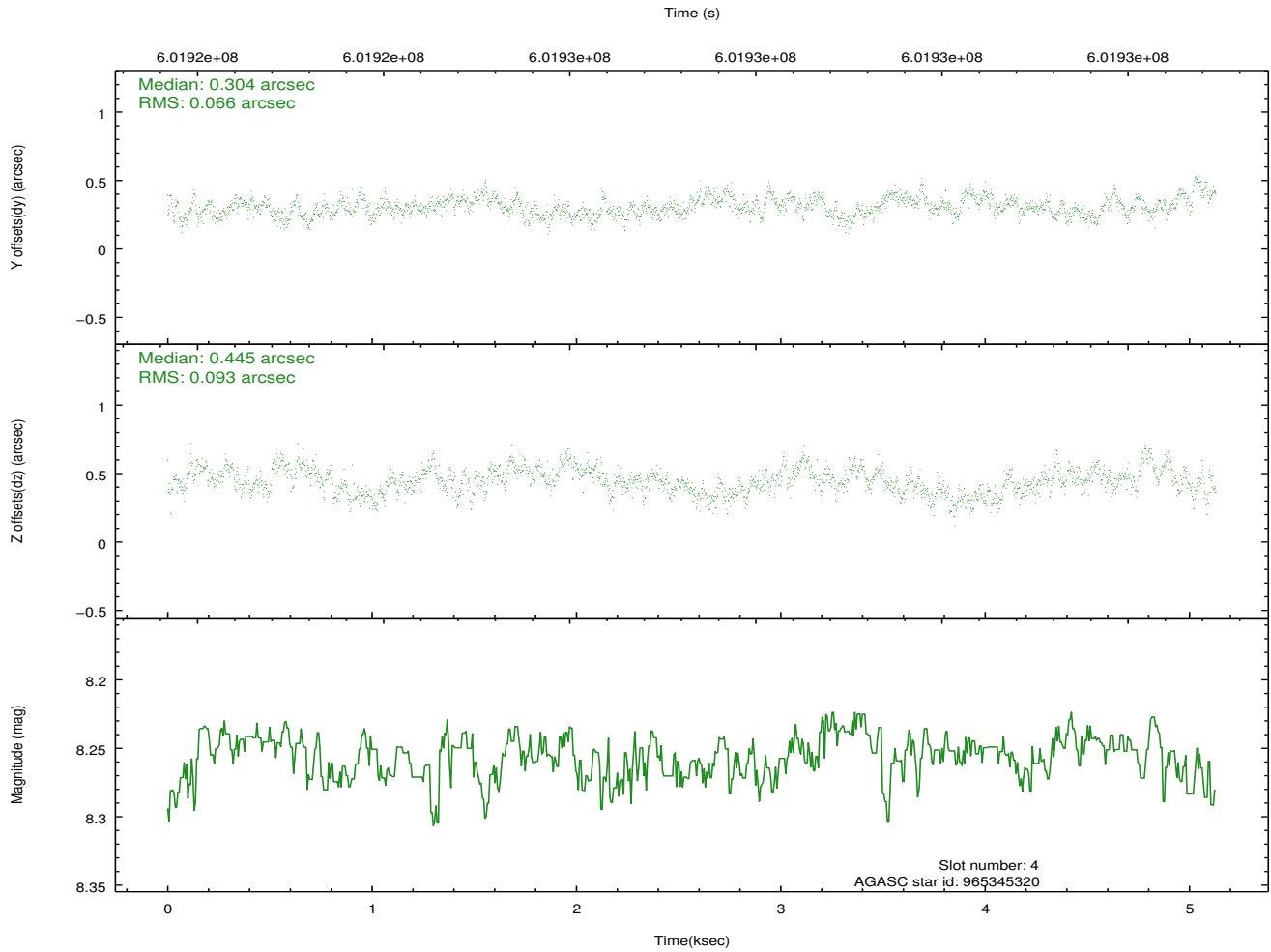
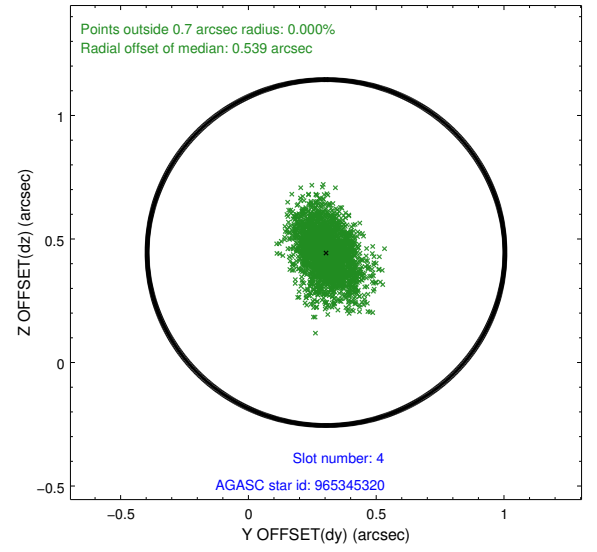
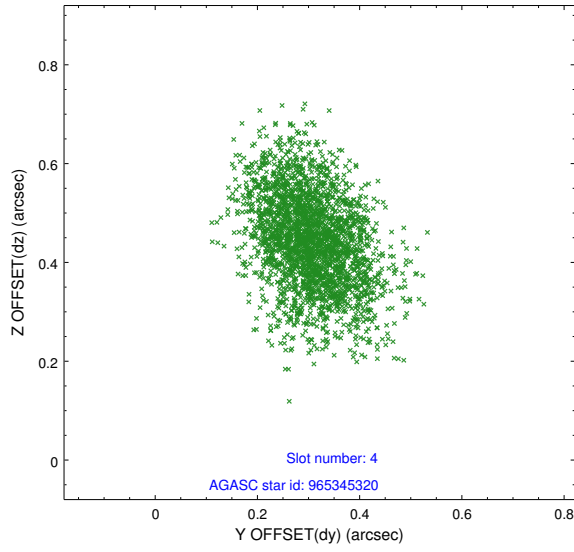
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.26	1252	0.087	-0.072	0.014	0.027	0.000000	0.000000	919.44	-844.64
1	FID		ACIS-I-5	7.26	1252	-0.393	0.031	0.011	0.017	0.000000	0.000000	-1828.57	1052.24
2	FID		ACIS-I-6	7.27	1252	0.216	0.112	0.012	0.020	0.000000	0.000000	383.72	1698.26
3	GUIDE	used	964824976	8.41	2501	-0.460	-0.434	0.116	0.195	257.688335	-31.561569	1354.83	890.48
4	GUIDE	used	965345320	8.25	2500	0.304	0.445	0.120	0.201	258.489027	-32.241241	-1050.38	-1595.08
5	GUIDE	used	965346352	8.49	2503	0.002	-0.032	0.100	0.168	257.699286	-32.389862	-1625.75	797.17
6	GUIDE	used	965351320	8.29	2503	0.116	-0.016	0.112	0.189	257.797026	-32.192483	-909.51	514.47
7	GUIDE	used	964955656	8.98	2498	0.024	0.040	0.210	0.381	258.765052	-31.327489	2247.54	-2402.81

2.4 Star Slots

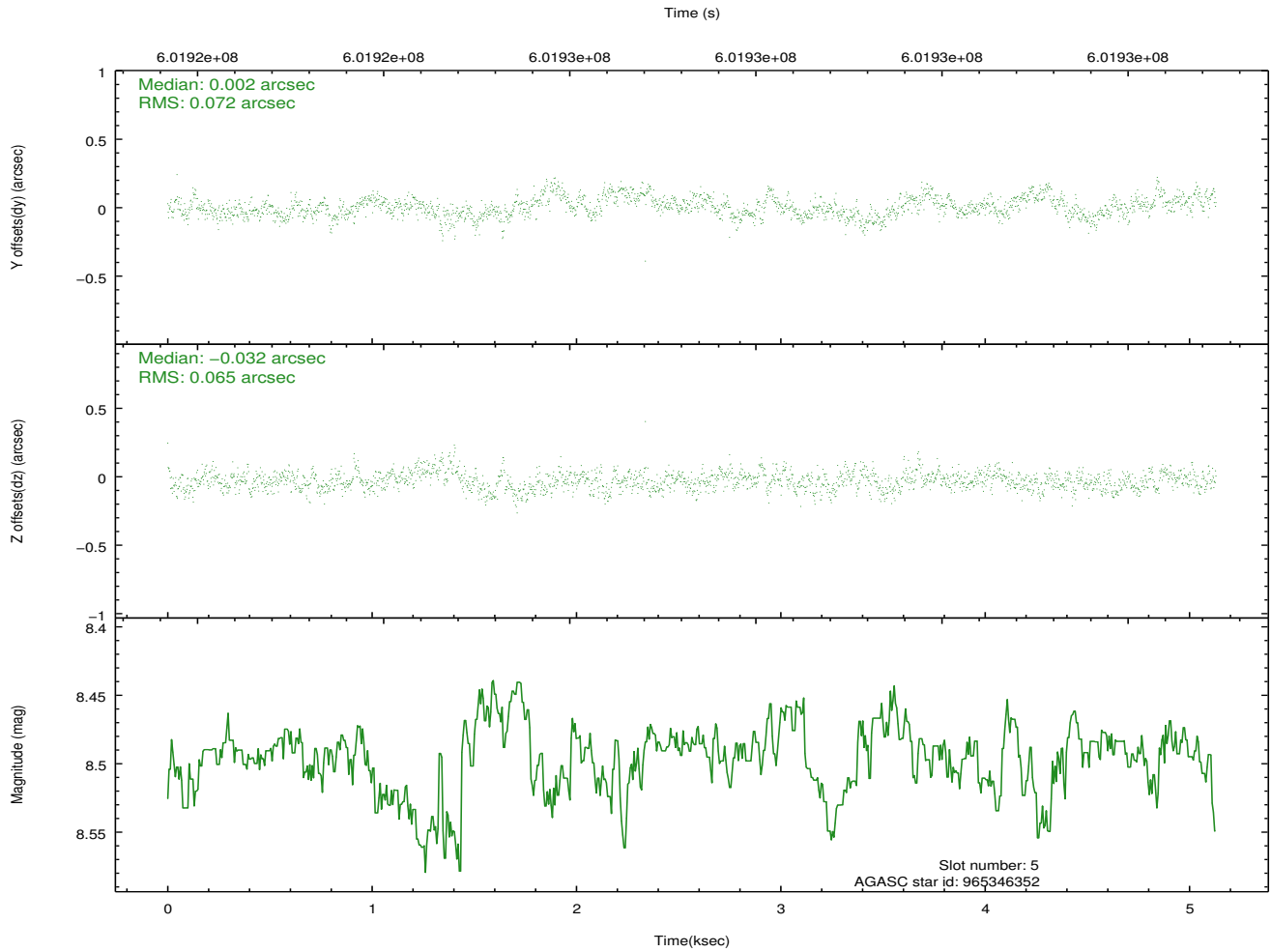
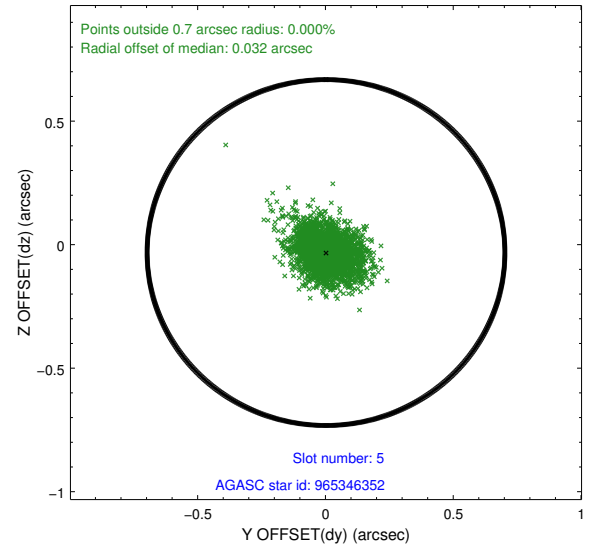
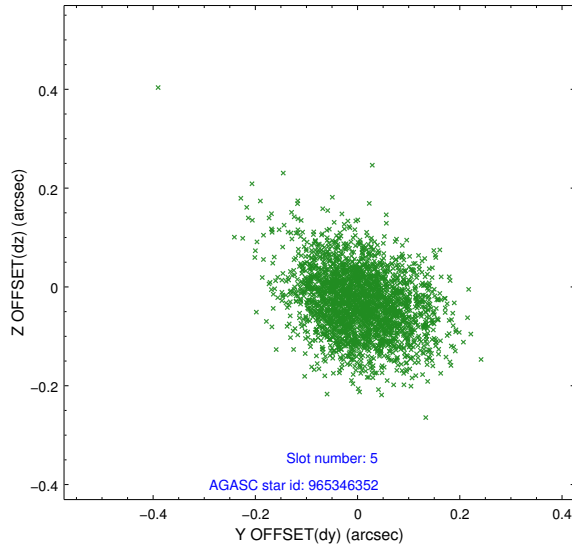
2.4.1 Slot 3



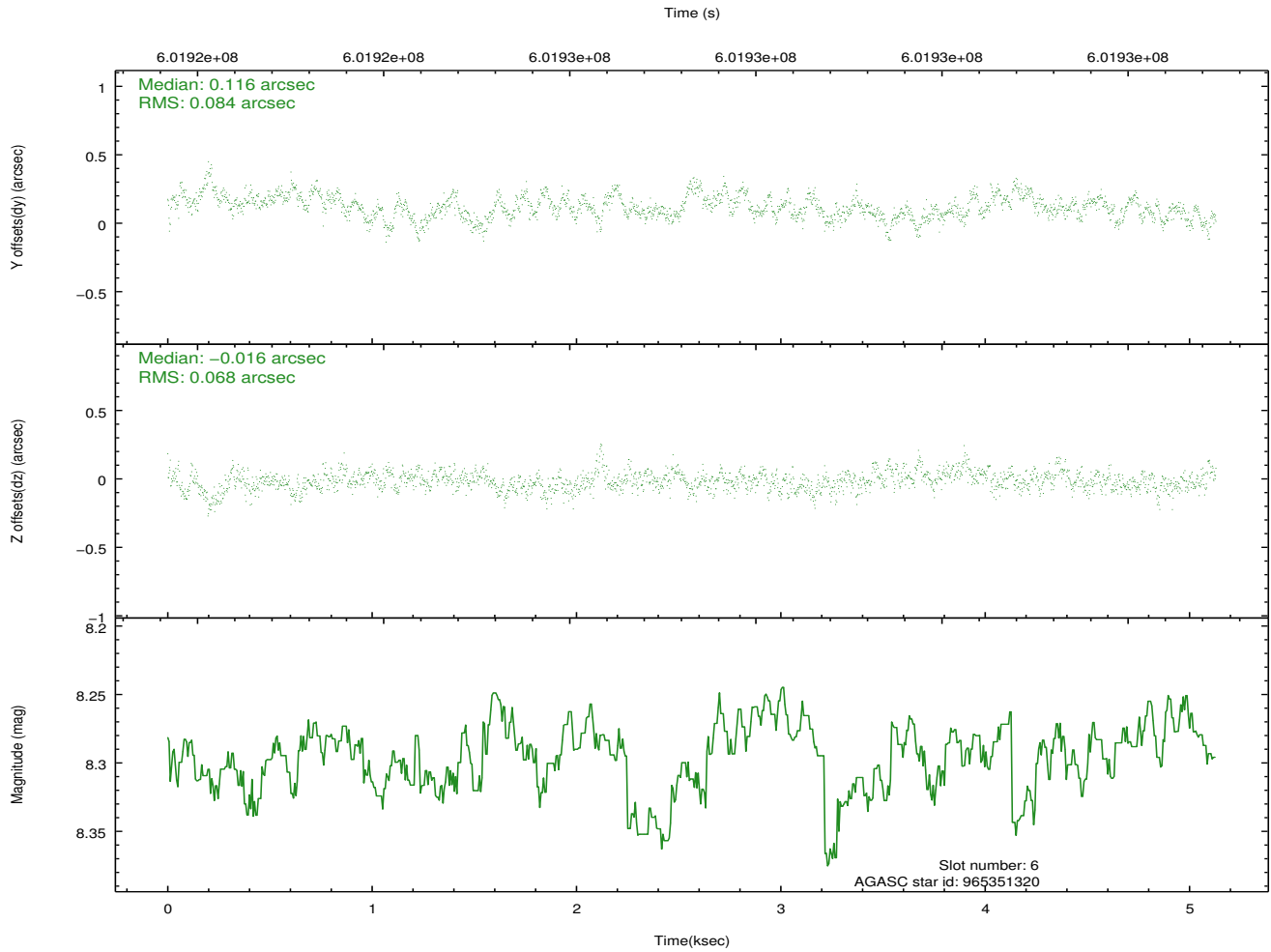
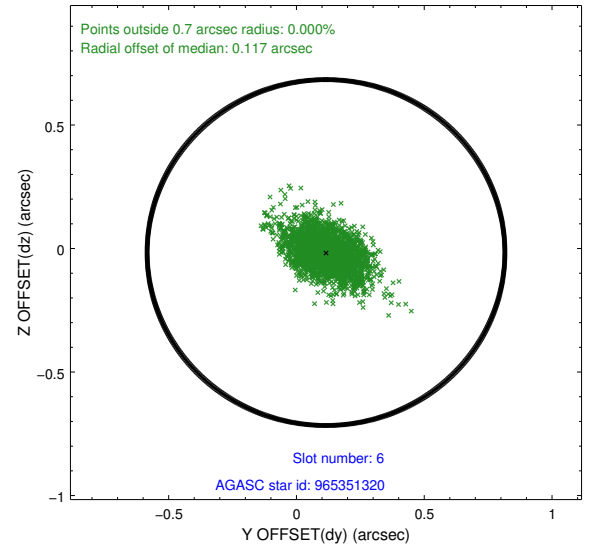
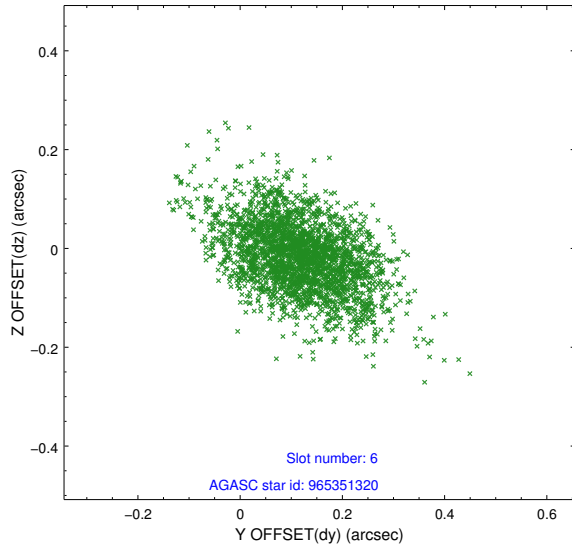
2.4.2 Slot 4



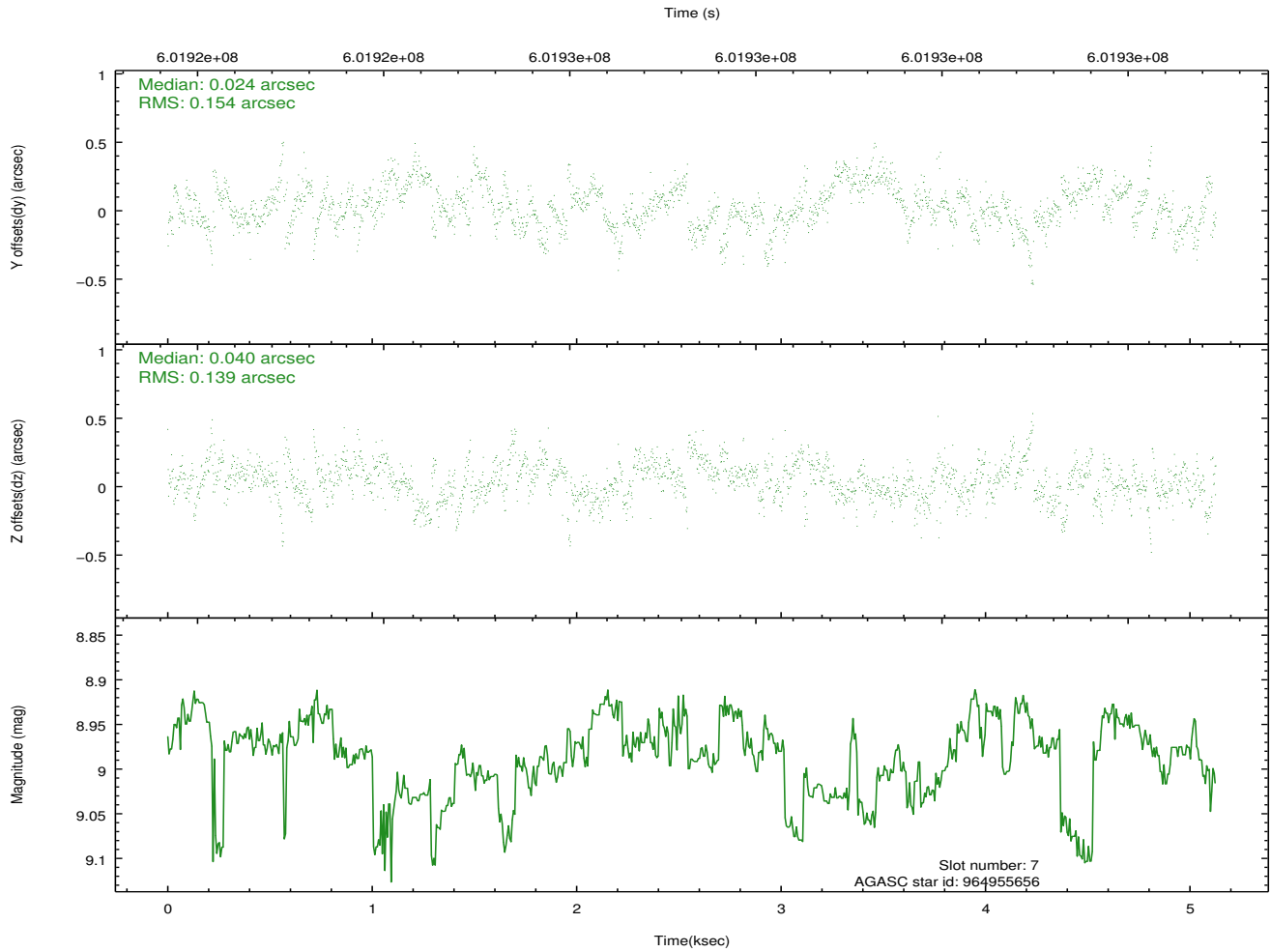
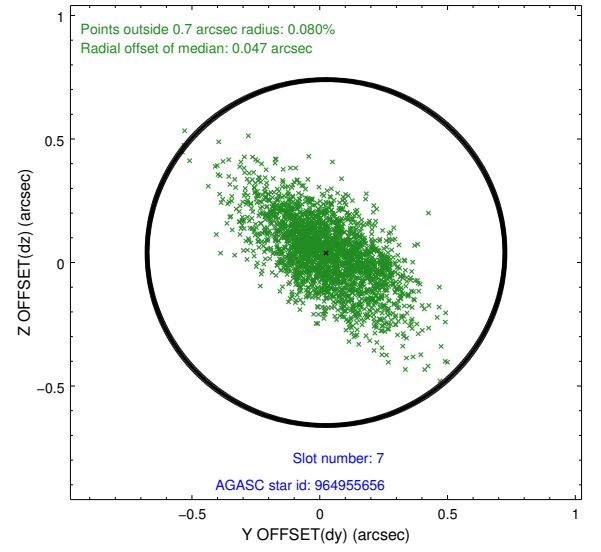
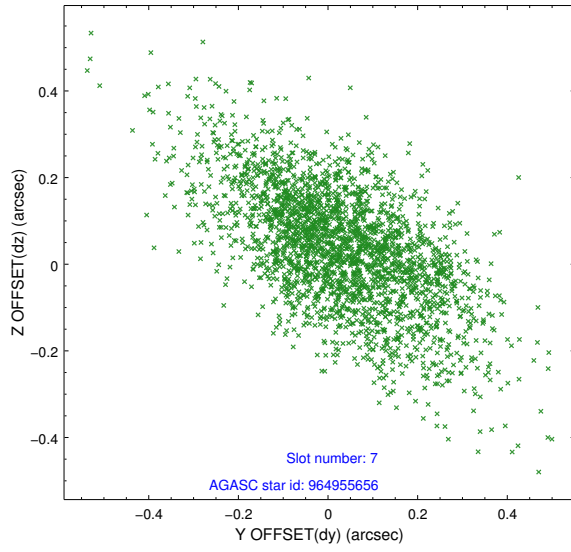
2.4.3 Slot 5



2.4.4 Slot 6

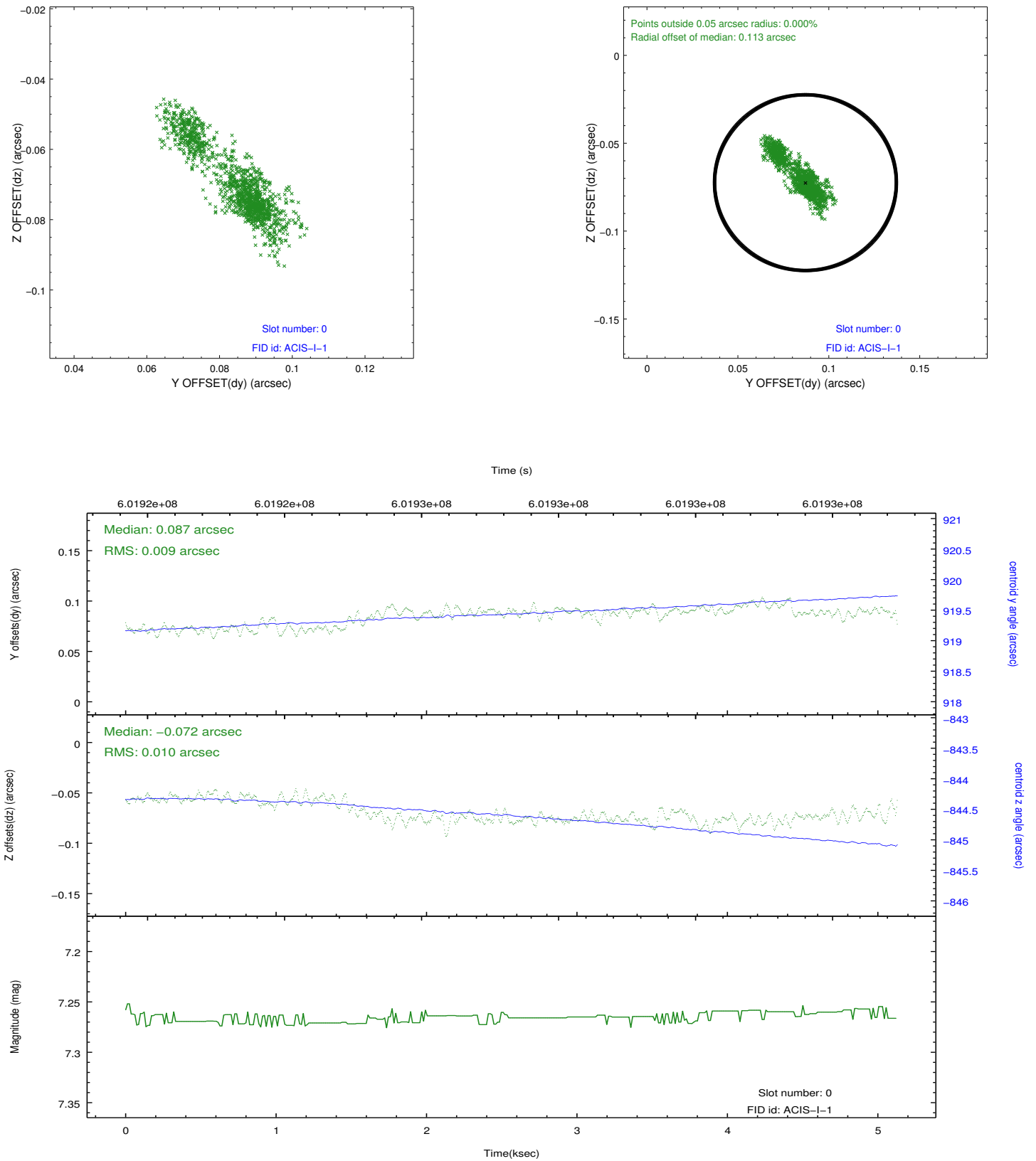


2.4.5 Slot 7

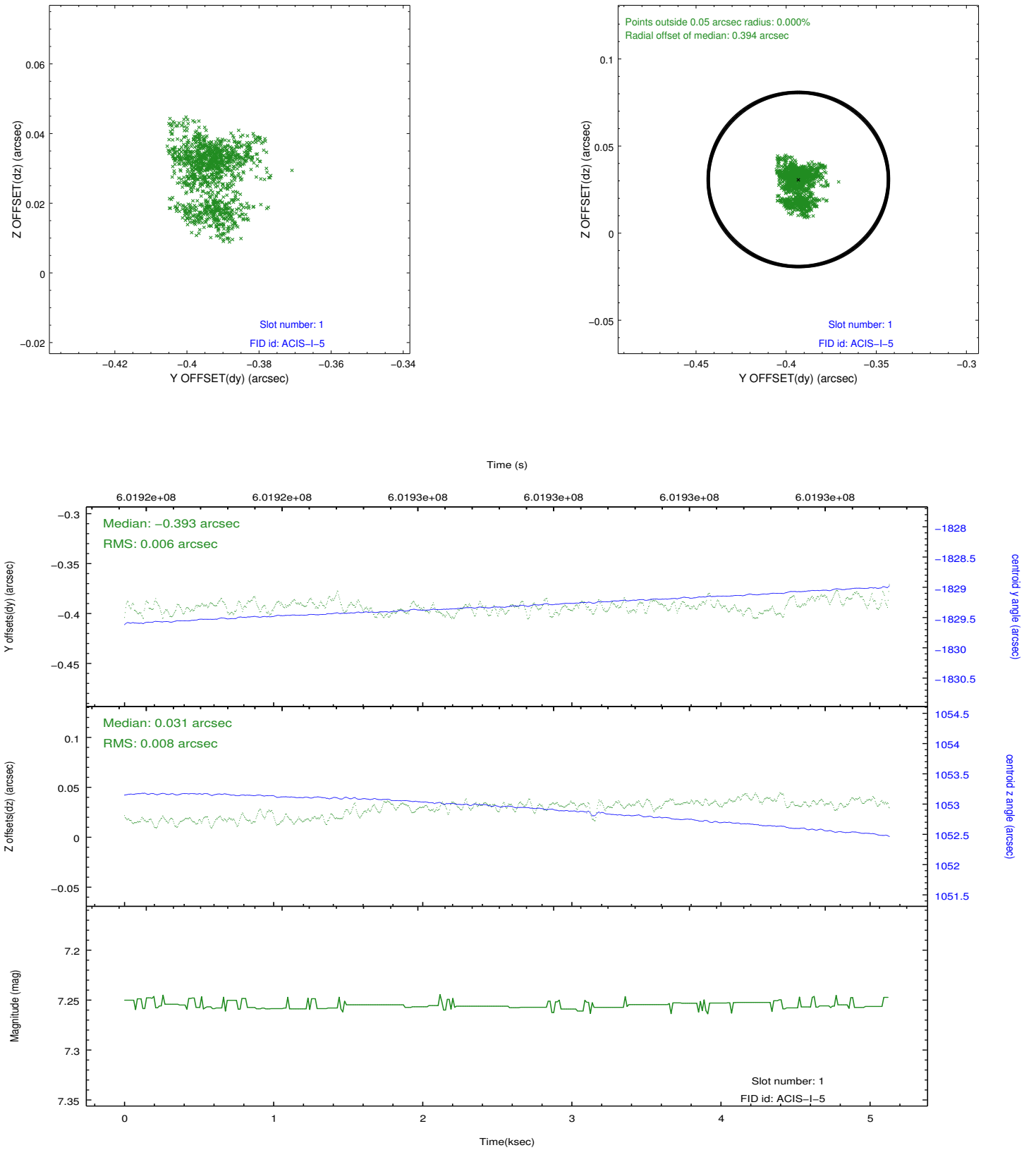


2.5 FID Slots

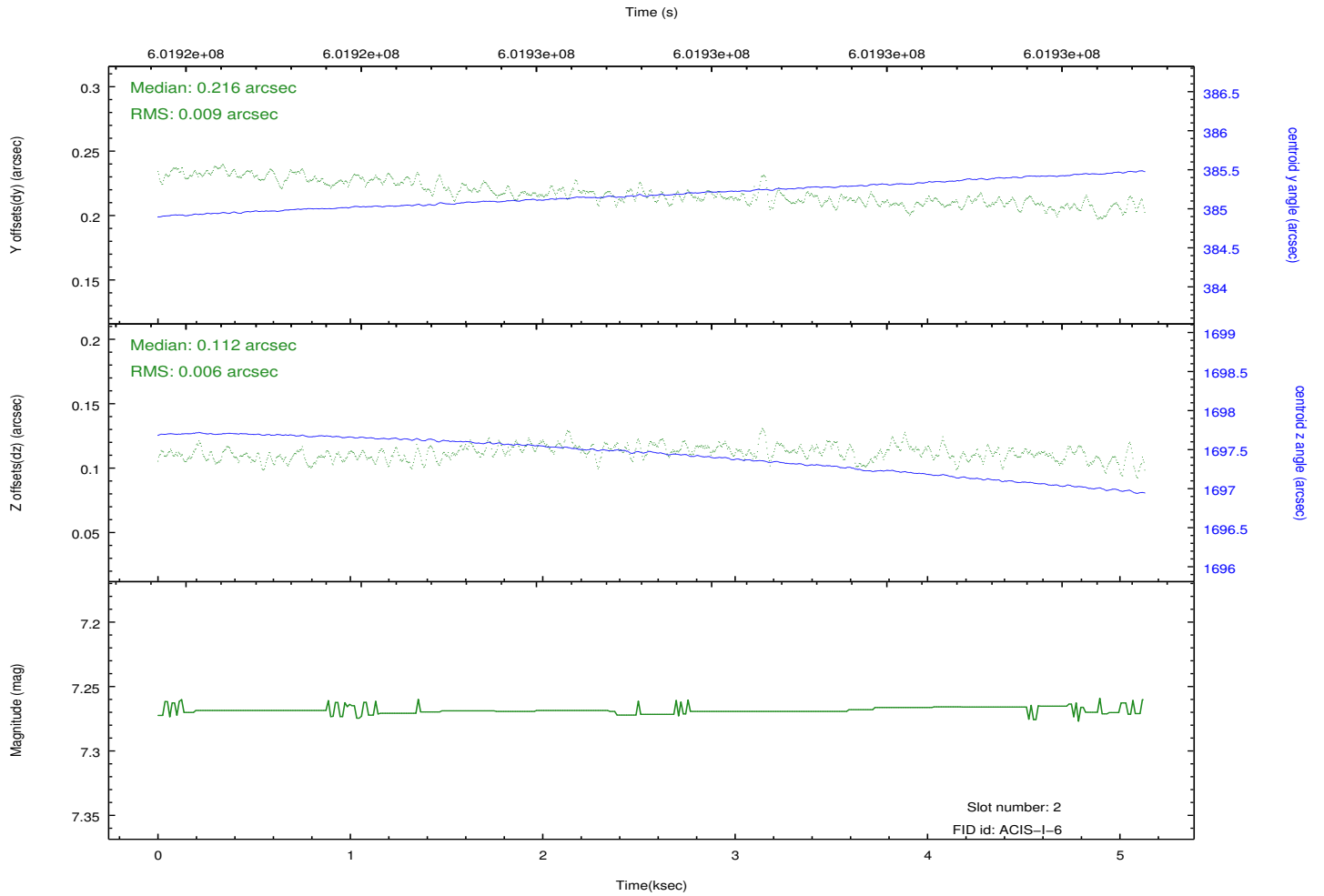
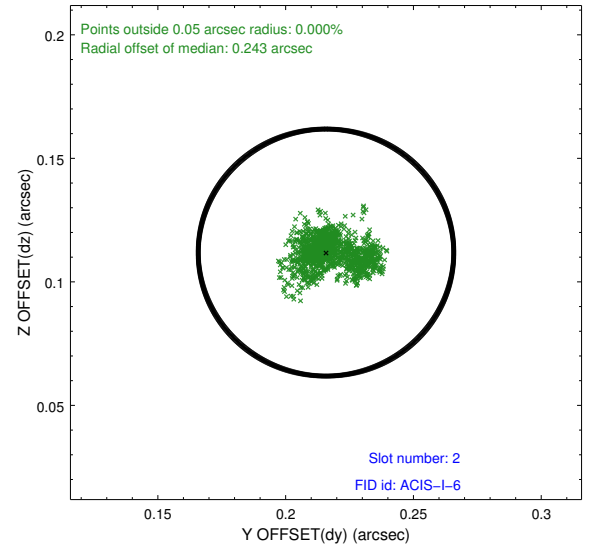
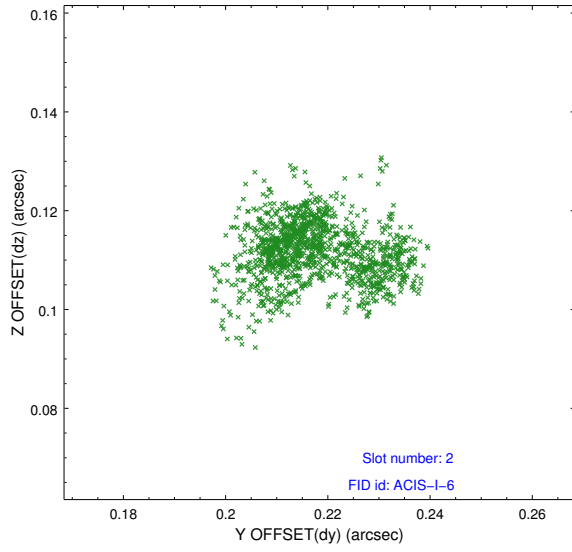
2.5.1 Slot 0



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)	2017.02.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.9434562770128

A.2 Comments

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:
(257.86411,-31.82902), (257.85882,-31.82896), (257.85781,-31.88758),
(257.86312,-31.88695).