

V&V Reference Report

L2 ASCDS Version : 10.5.2

Observation 18980 - L2 Version 2
Chandra X-Ray Center

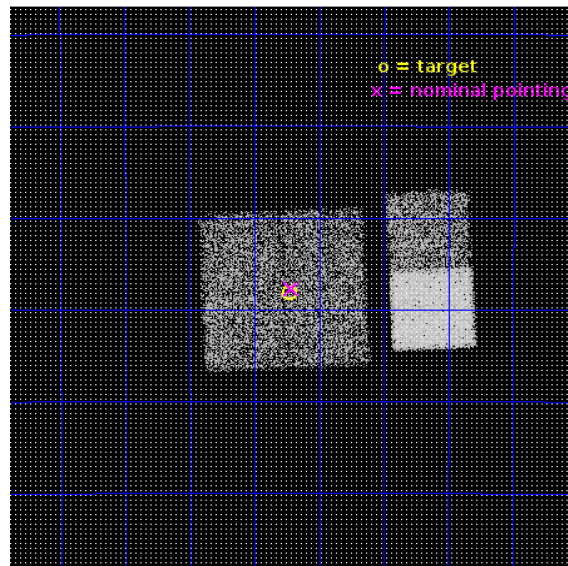
L2 Processing Date : Feb 7 2017

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

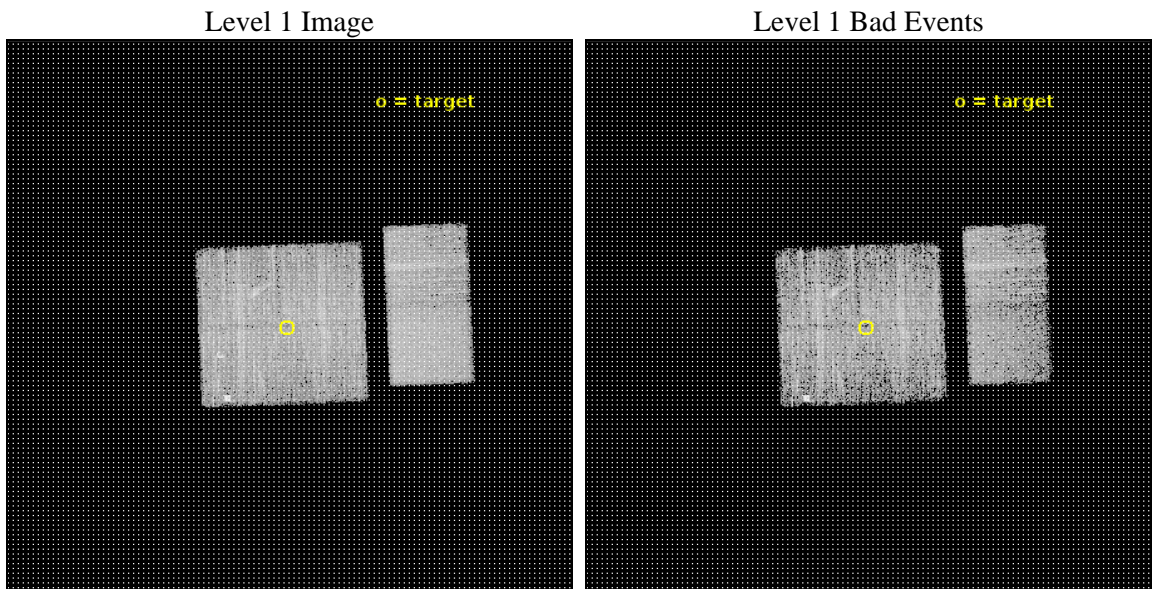
seq_num	401848	Sequence number
obs_id	18980	Observation id
title	The Nature of INTEGRAL Sources in the Galactic Plane	Proposal titl
observer	John Tomsick	Principal investigator
object	IGR J17096-2527	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	257.432083	Observer's specified target RA [deg]
dec_targ	-25.47	Observer's specified target Dec [deg]
ra_nom	257.42852473094	Nominal RA [deg]
dec_nom	-25.462109661007	Nominal Dec [deg]
roll_nom	87.570649781276	Nominal Roll [deg]
revision	2	Processing version of data
ontime	4902.4000730515	Sum of GTIs [s]
livetime	4840.3229314555	Livetime [s]
ontime0	4895.9179724455	Sum of GTIs [s]
ontime1	4902.4000730515	Sum of GTIs [s]
ontime2	4902.4000730515	Sum of GTIs [s]
ontime3	4902.4000730515	Sum of GTIs [s]
ontime6	4902.4000730515	Sum of GTIs [s]
ontime7	4902.4000730515	Sum of GTIs [s]
l2events	35358	Number of level 2 events



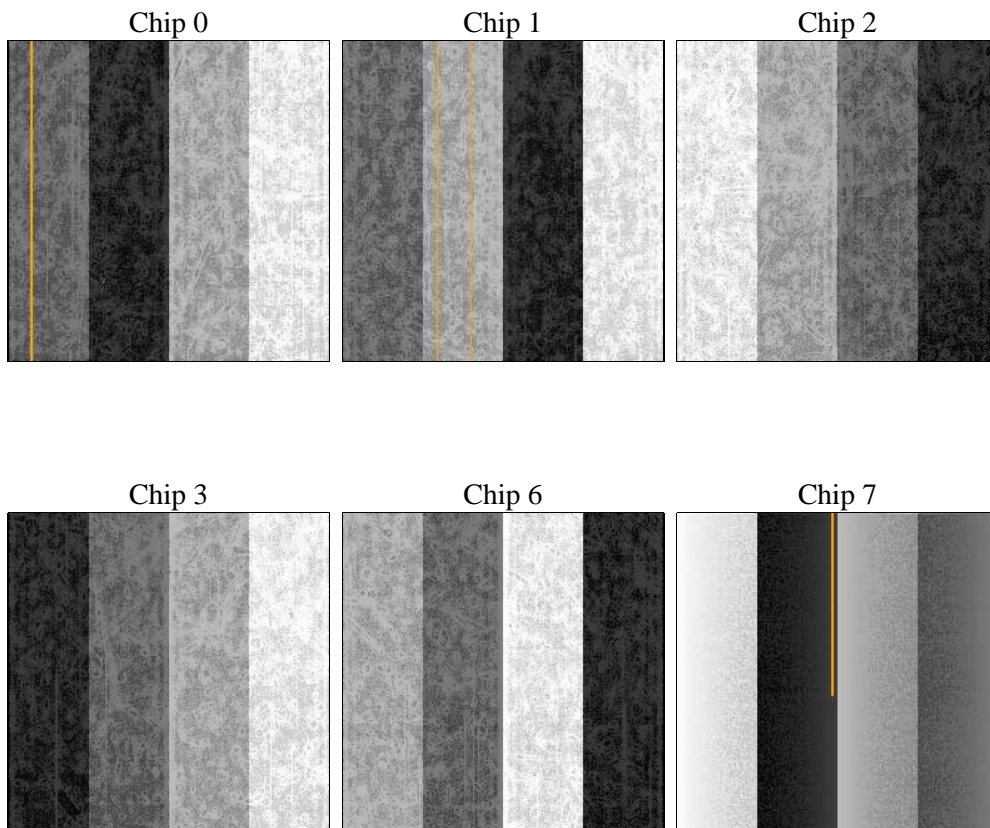
2 OBI

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	4902.4000730515	Sum of GTIs [s]
caldsver	4.7.3	 	ontime0	4895.9179724455	Sum of GTIs [s]
date	2017-02-07T22:21:25	Date and time of file creation	ontime1	4902.4000730515	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	4902.4000730515	Sum of GTIs [s]
			ontime3	4902.4000730515	Sum of GTIs [s]
			ontime6	4902.4000730515	Sum of GTIs [s]
			ontime7	4902.4000730515	Sum of GTIs [s]
			l1events	223394	Number of level 1 events

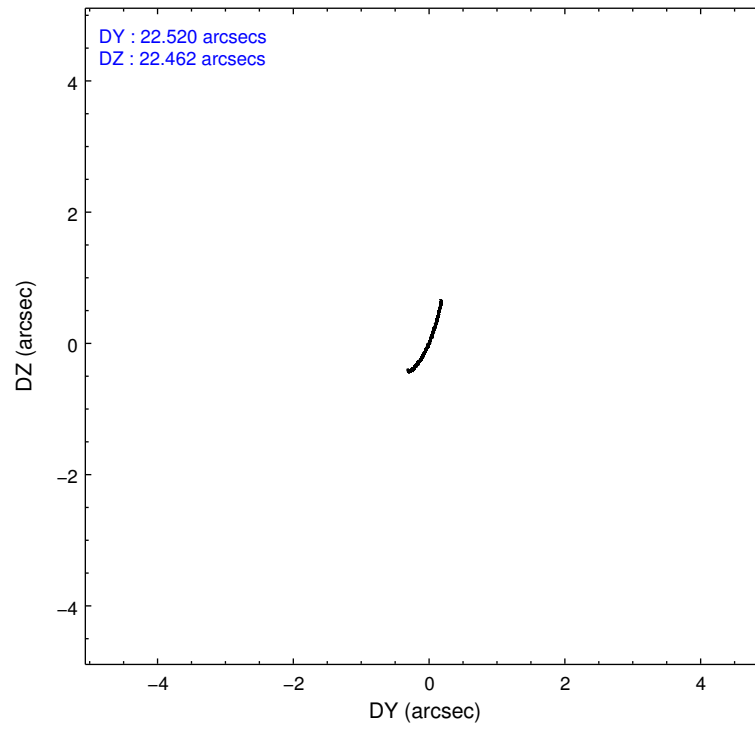
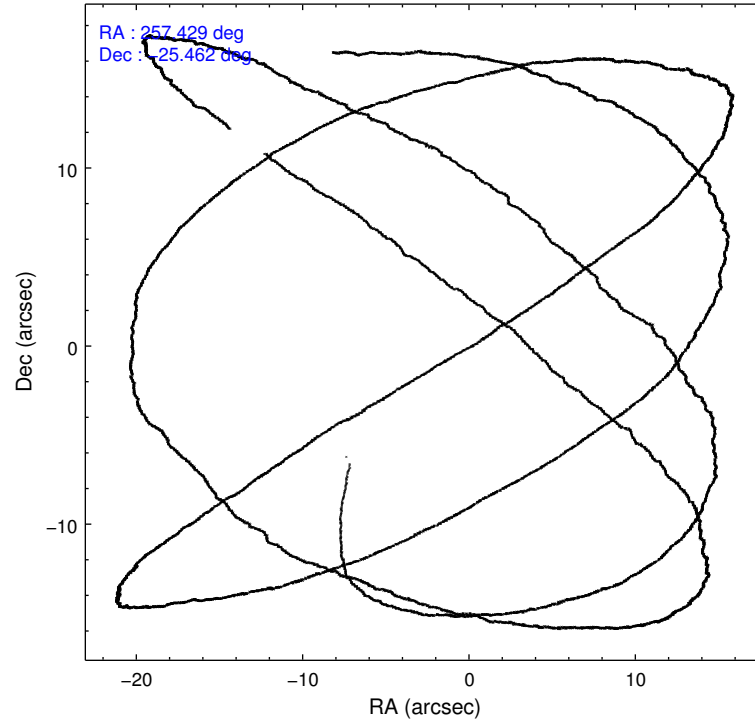
2.1.4 Events

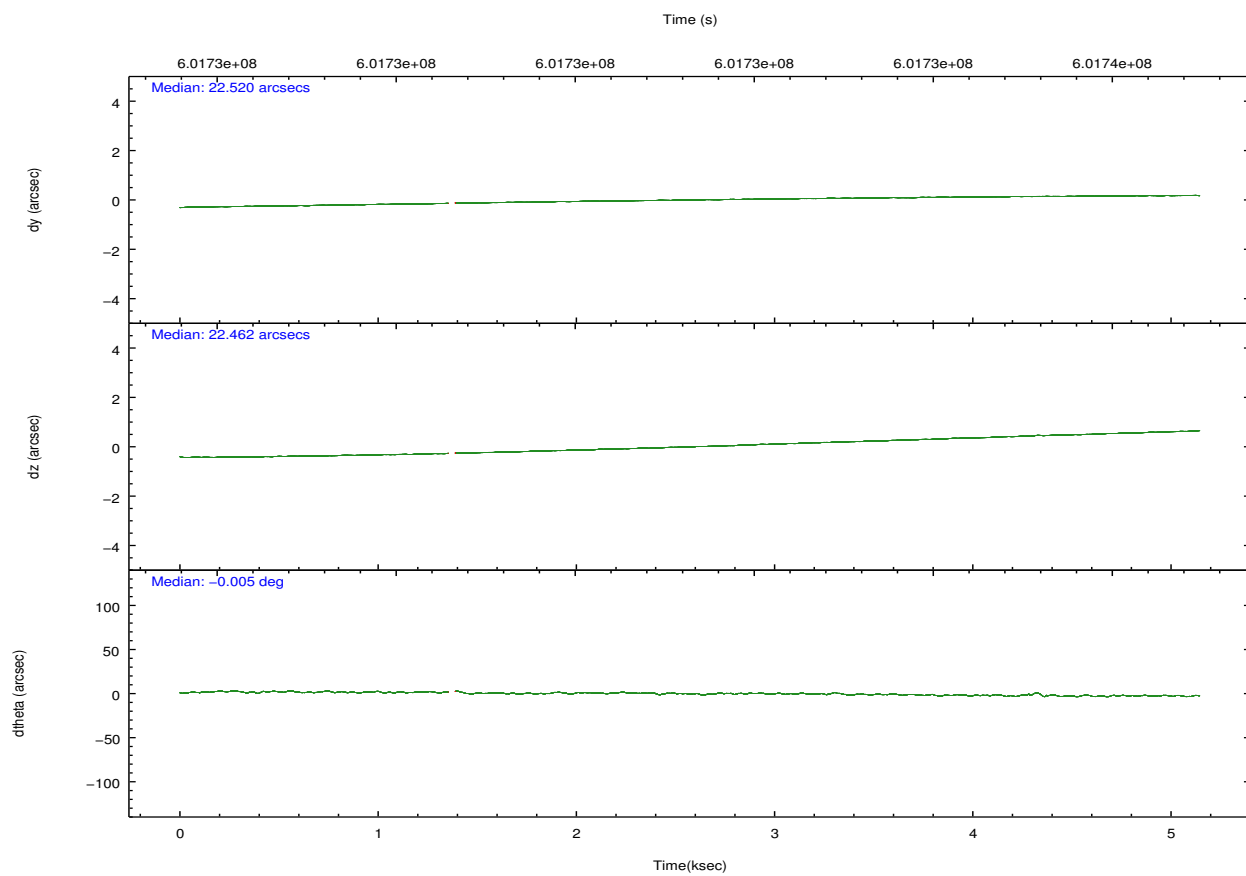
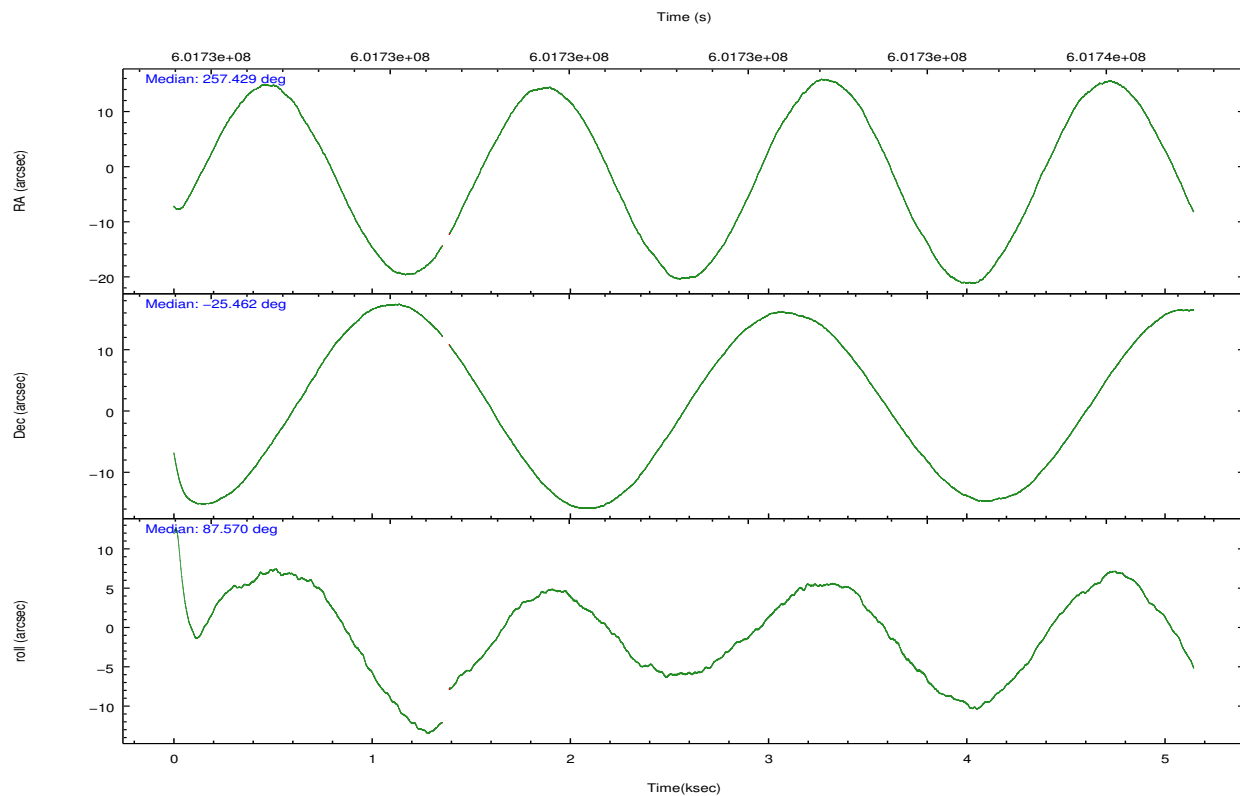
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	35080	37808	36414	32590	36608	44894	grade 0 events	1357	1983	1367	1282	1334	1600
rejected events	31153	33031	32736	28971	32484	25691		3%	5%	3%	3%	3%	3%
rejected %	88%	87%	89%	88%	88%	57%	grade 1 events	17	1486	22	23	15	47
								0%	3%	0%	0%	0%	0%
							grade 2 events	1020	1087	862	785	1036	4128
								2%	2%	2%	2%	2%	9%
							grade 3 events	383	408	387	360	371	1466
								1%	1%	1%	1%	1%	3%
							grade 4 events	373	372	375	411	406	1430
								1%	0%	1%	1%	1%	3%
							grade 5 events	1419	1432	1344	1639	1714	4261
								4%	3%	3%	5%	4%	9%
							grade 6 events	819	971	719	809	1019	10773
								2%	2%	1%	2%	2%	23%
							grade 7 events	29692	30069	31338	27281	30713	21189
								84%	79%	86%	83%	83%	47%

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	257.442367	257.4285247309385	CCD I2 on	Y	Y
[deg] Pointing Dec	-25.486467	-25.46210966100681	CCD I3 on	Y	Y
[deg] Pointing Roll	87.367879	87.57064978127605	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)	601730208.184000	601729064.5857	CCD S5 on	N	N
Observation start date	2017-01-25T11:15:39	2017-01-25T10:57:44	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	601735208.184000	601736225.23611	On-chip summing requested	N	N
Observation end date	2017-01-25T12:38:59	2017-01-25T12:57:05	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



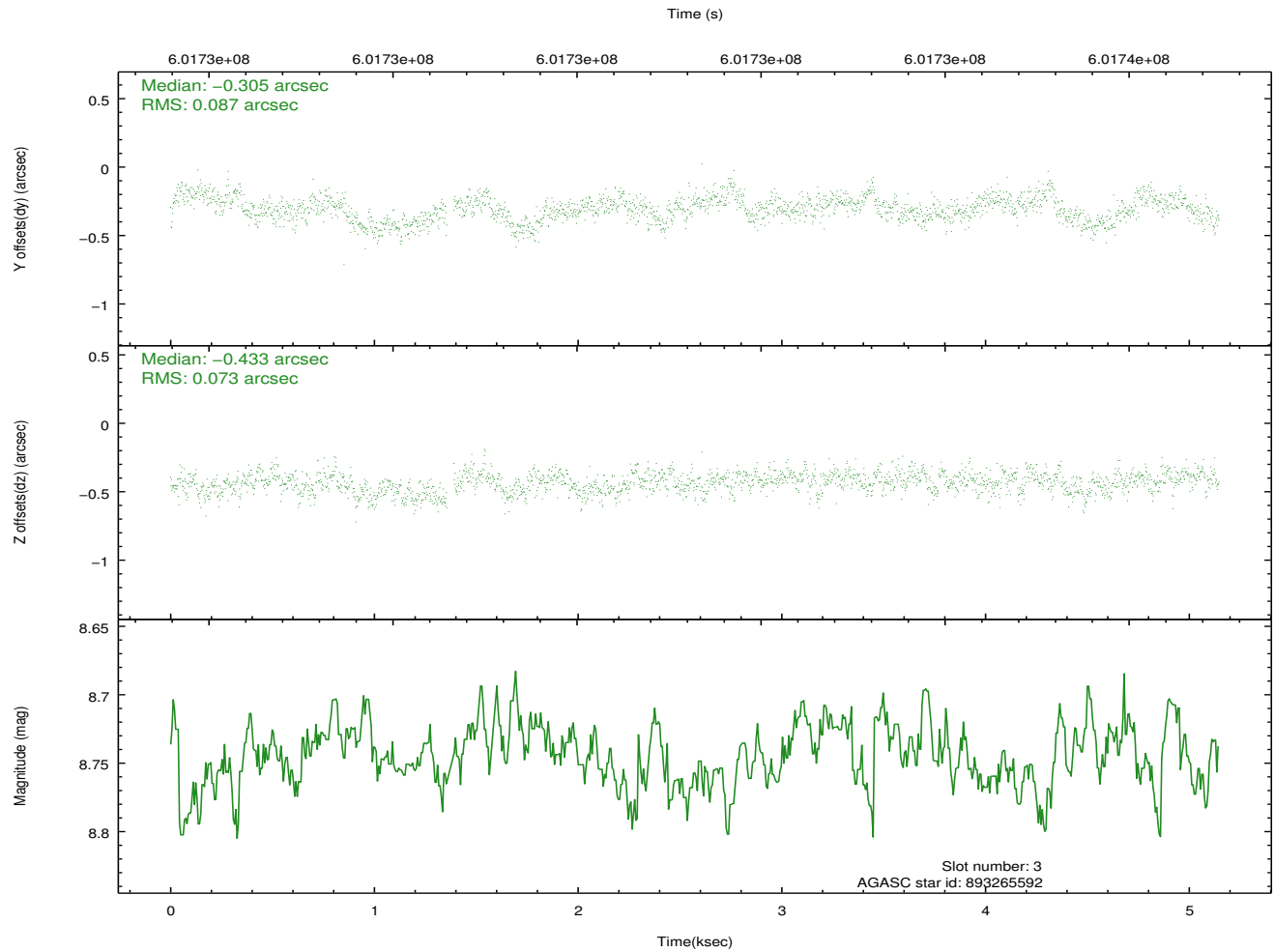
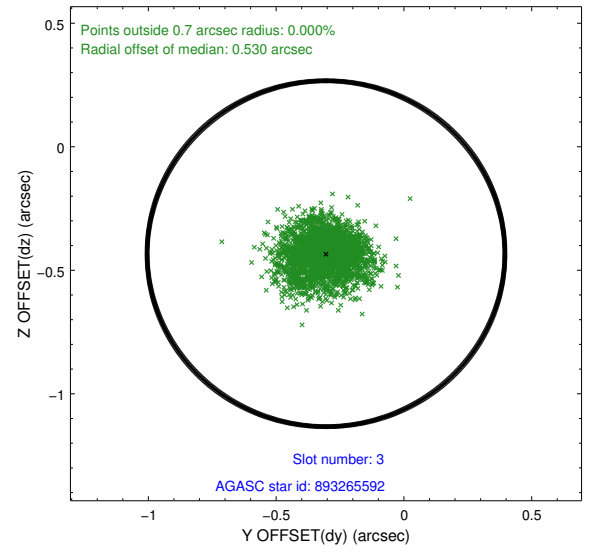
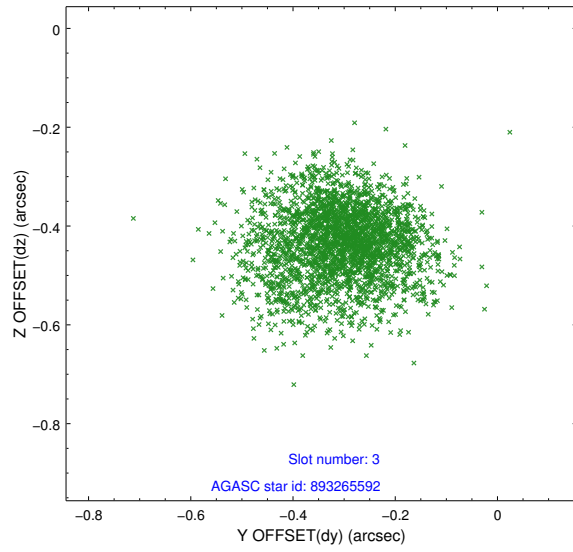


Slot Statistics

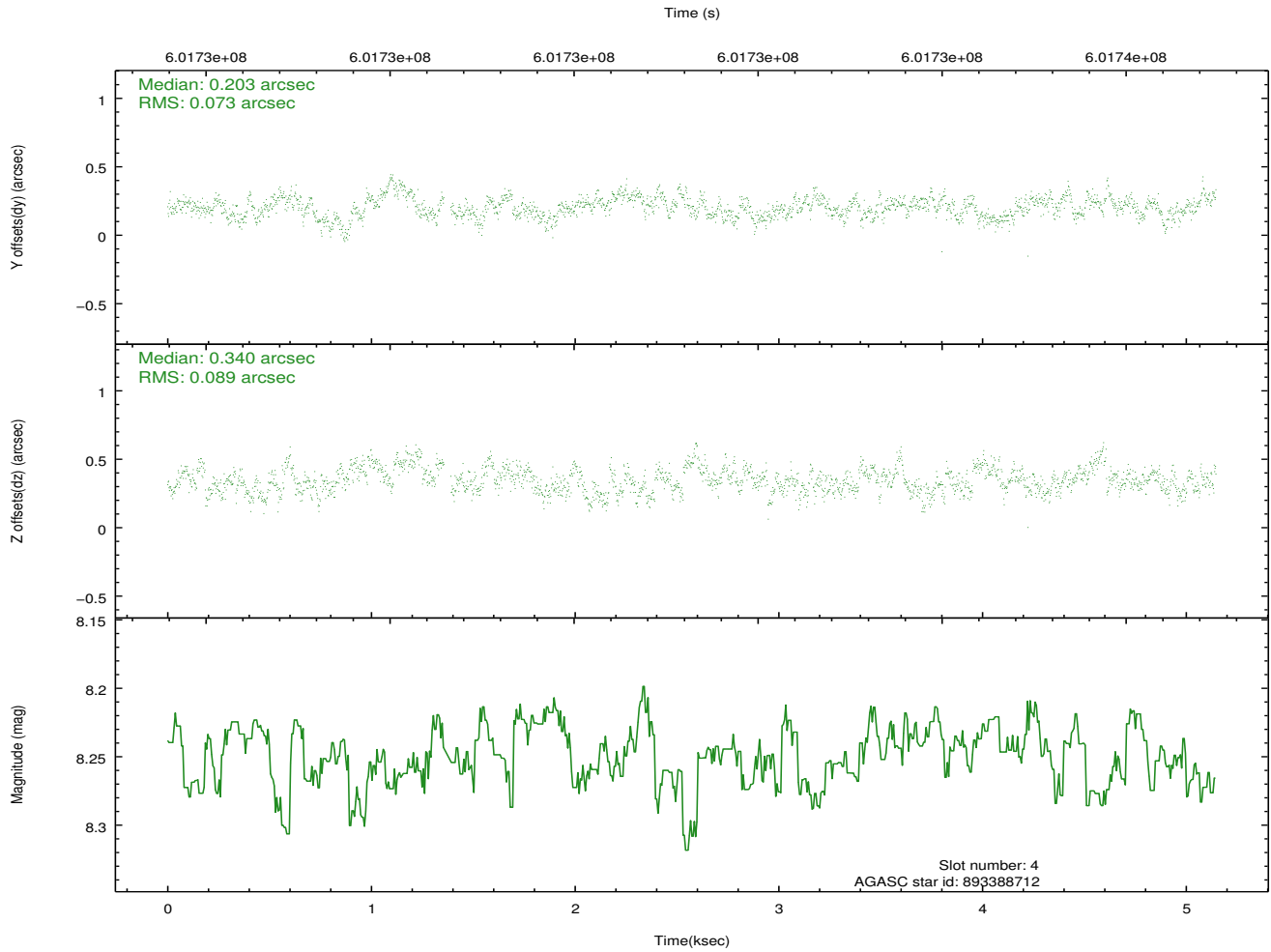
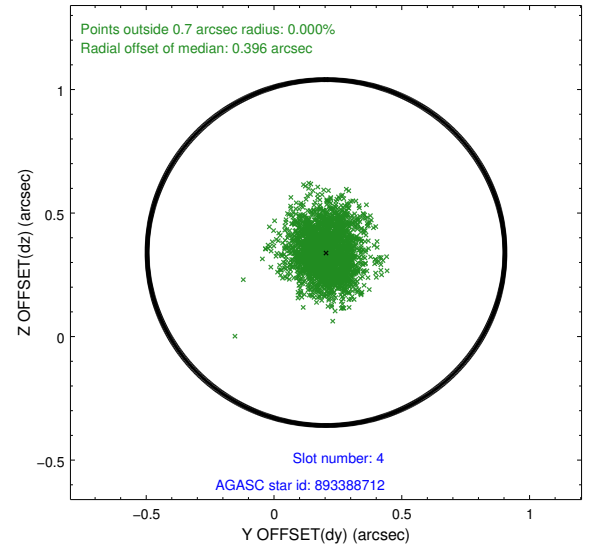
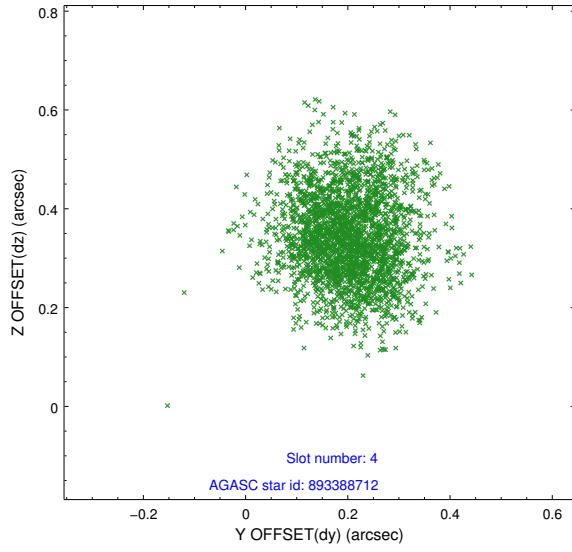
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.27	1245	-0.047	-0.043	0.016	0.027	0.000000	0.000000	916.76	-846.28
1	FID		ACIS-I-4	7.25	1247	0.522	0.076	0.009	0.015	0.000000	0.000000	2137.91	1053.11
2	FID		ACIS-I-5	7.26	1247	-0.573	0.038	0.014	0.024	0.000000	0.000000	-1830.36	1052.05
3	GUIDE	used	893265592	8.74	2493	-0.305	-0.433	0.122	0.194	257.299759	-24.841306	2298.65	573.22
4	GUIDE	used	893388712	8.25	2495	0.203	0.340	0.122	0.202	258.004969	-25.681677	-620.44	-1853.73
5	GUIDE	used	893388784	7.82	2494	0.530	0.471	0.100	0.169	257.881948	-25.992995	-1757.87	-1503.60
6	GUIDE	used	893390344	7.00	2495	0.249	0.259	0.121	0.196	258.056737	-25.255149	918.37	-1958.87
7	GUIDE	used	893284504	6.92	2494	-0.665	-0.636	0.113	0.182	256.984181	-24.998135	1685.10	1574.19

2.4 Star Slots

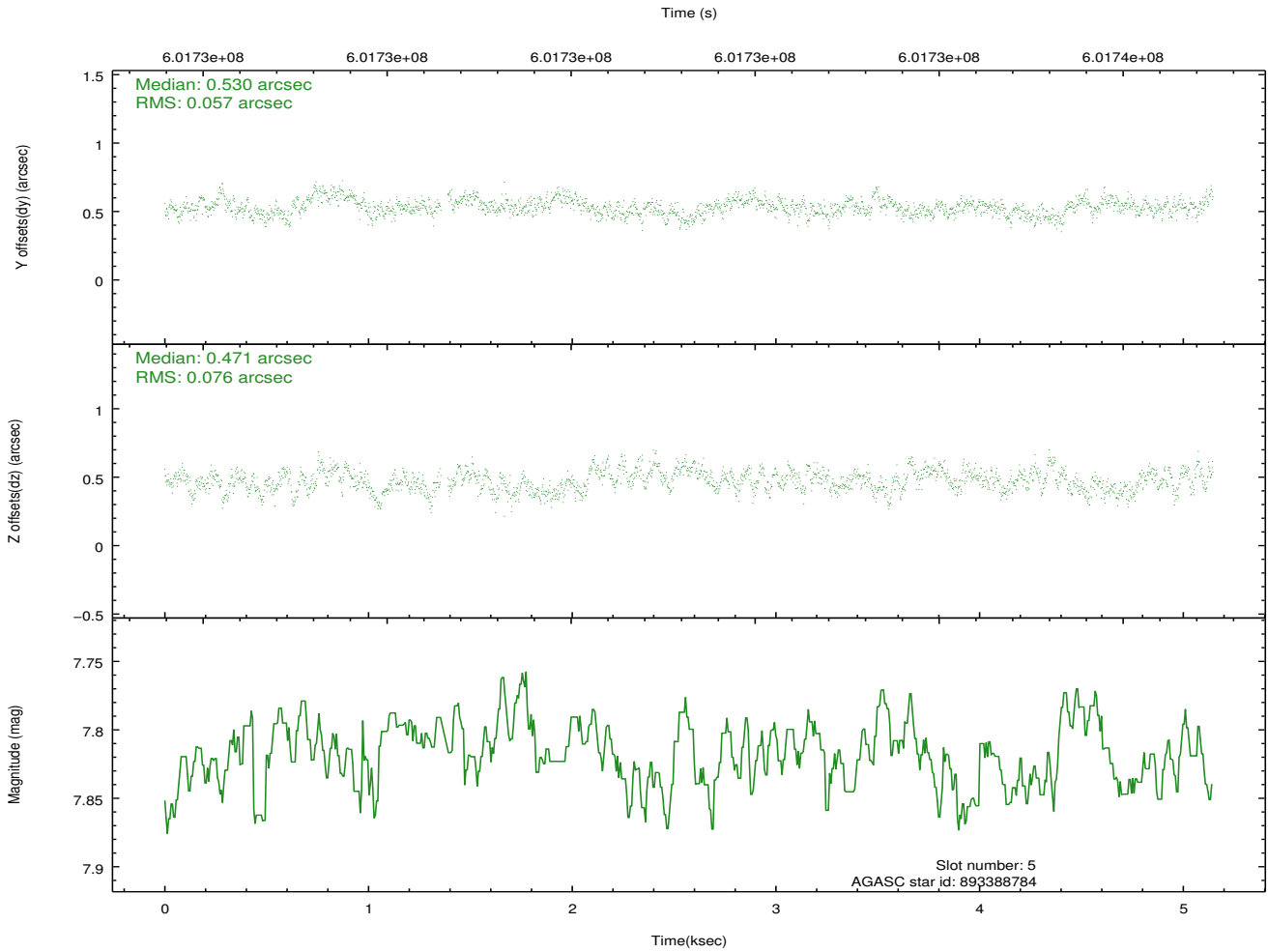
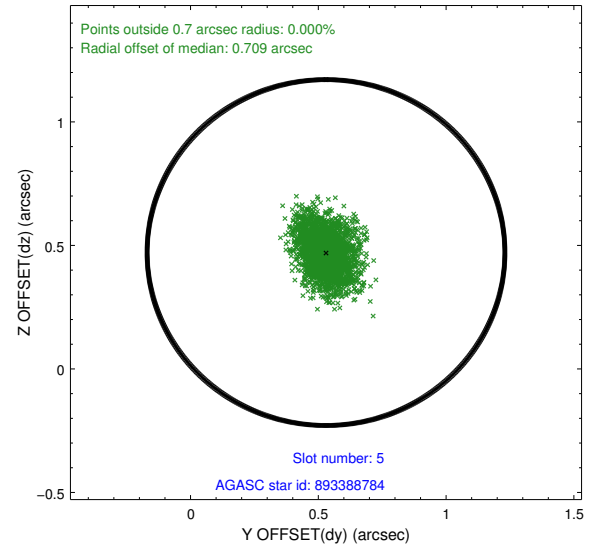
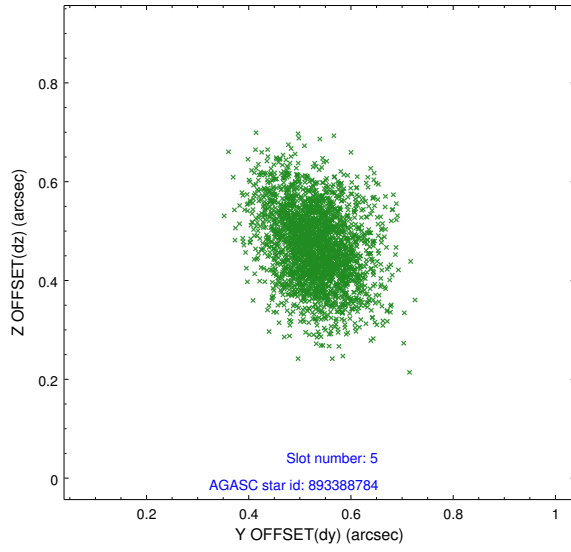
2.4.1 Slot 3



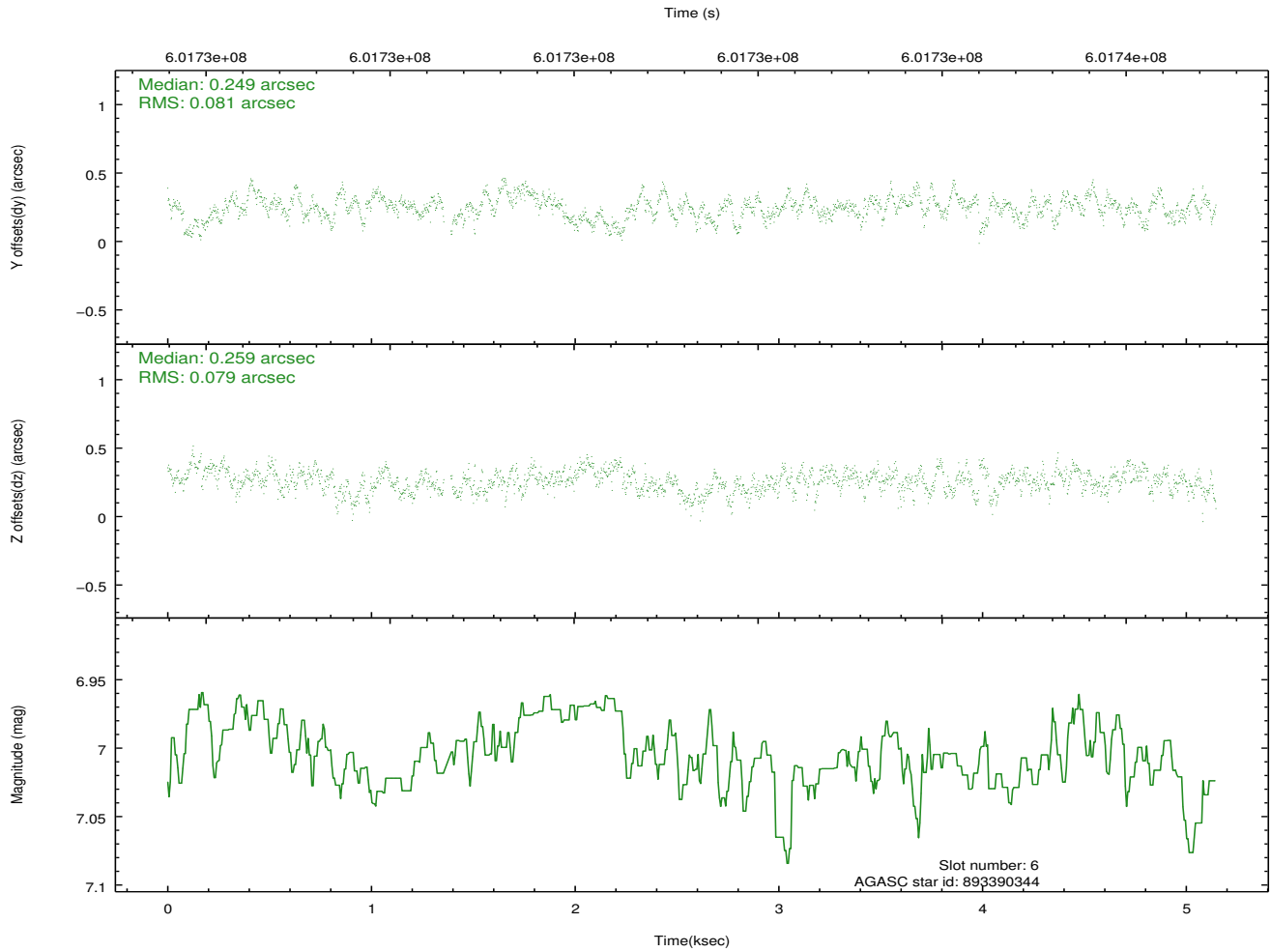
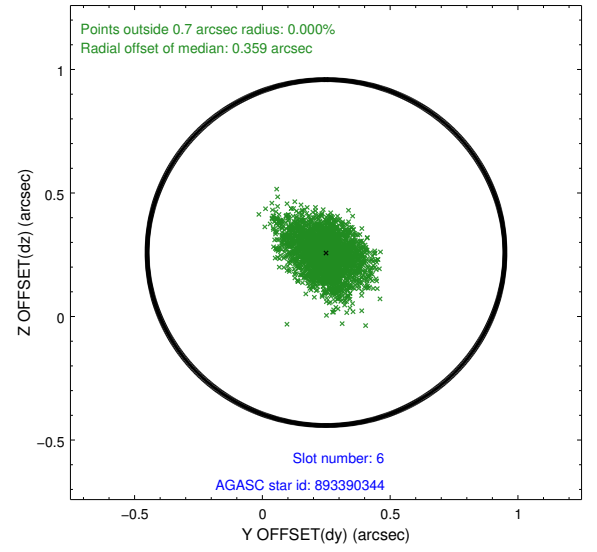
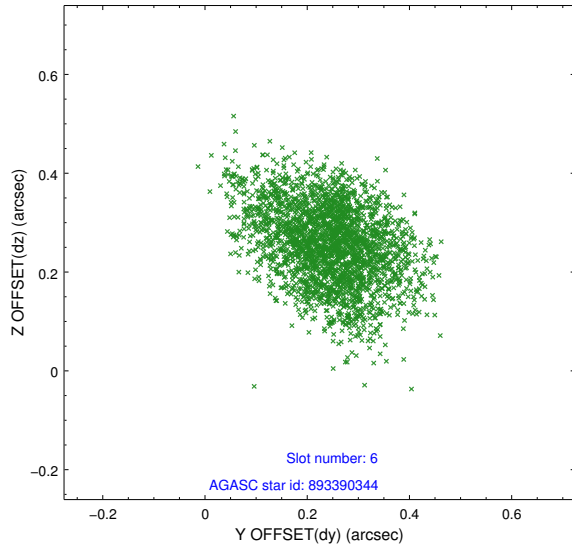
2.4.2 Slot 4



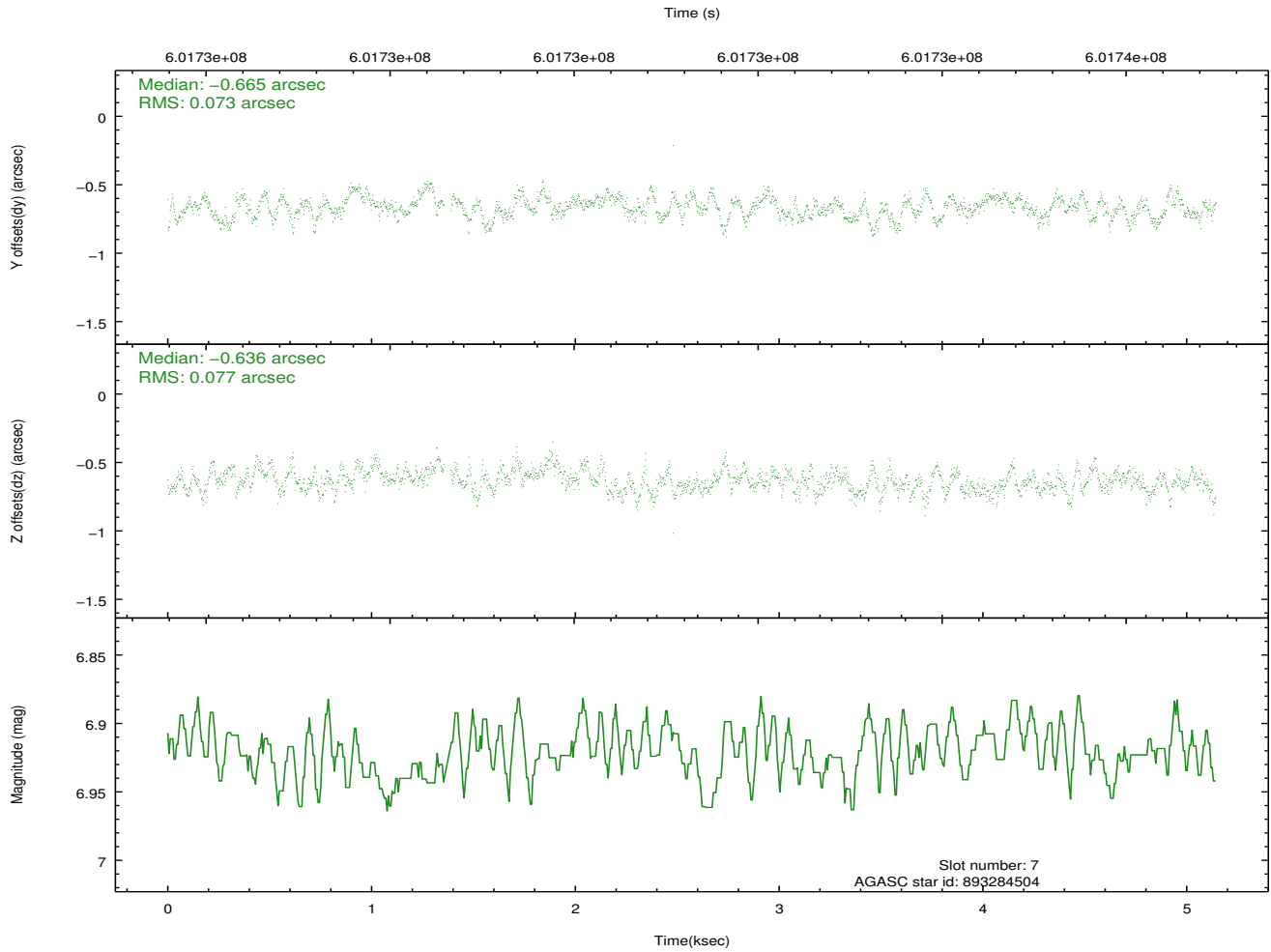
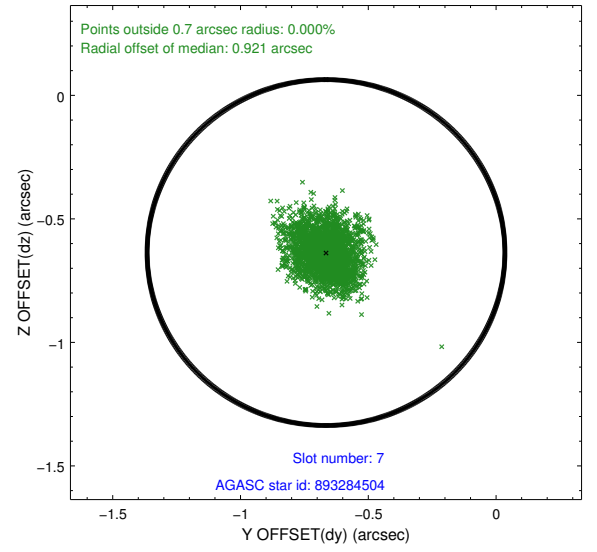
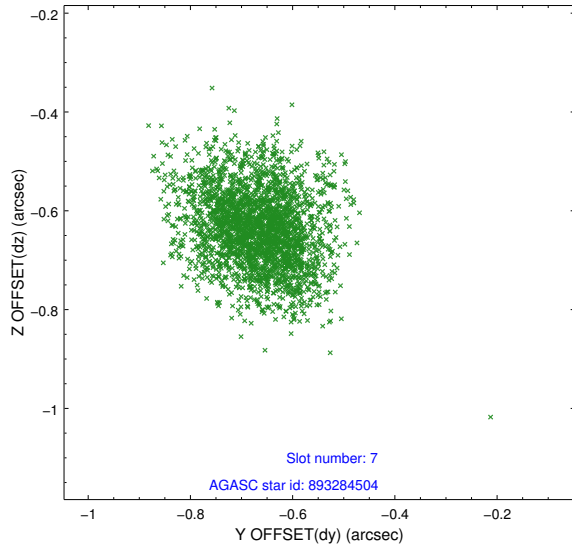
2.4.3 Slot 5



2.4.4 Slot 6

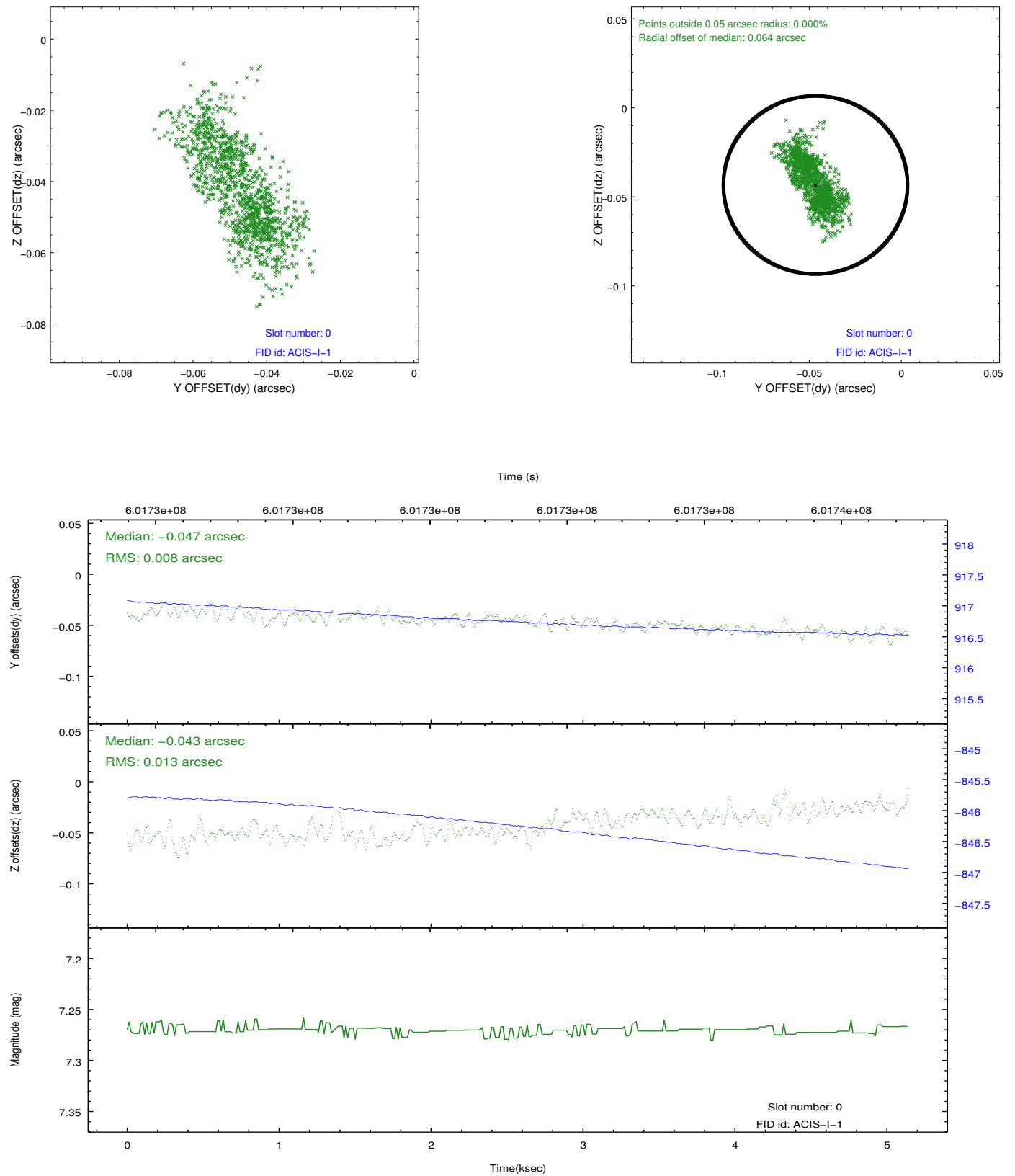


2.4.5 Slot 7

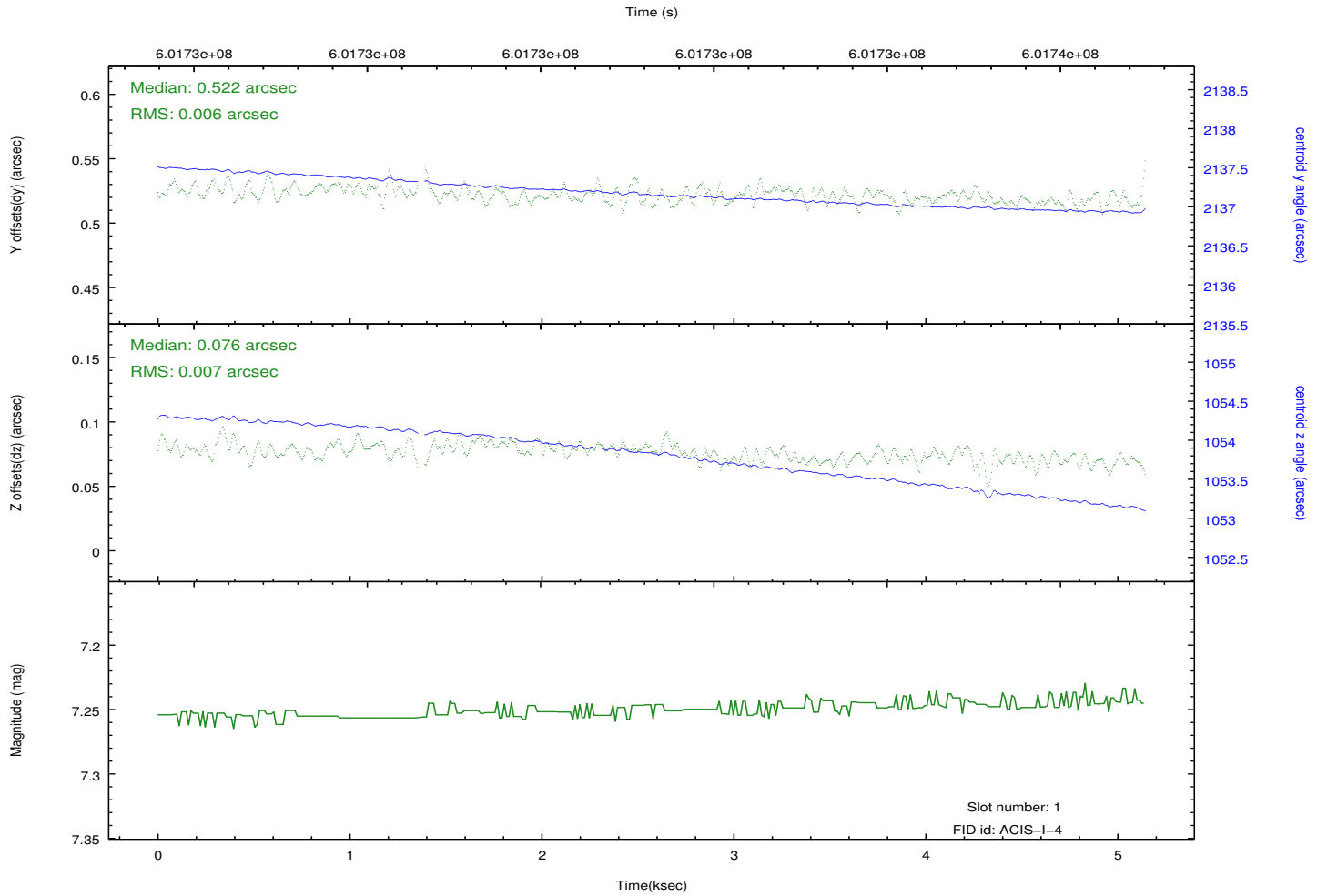
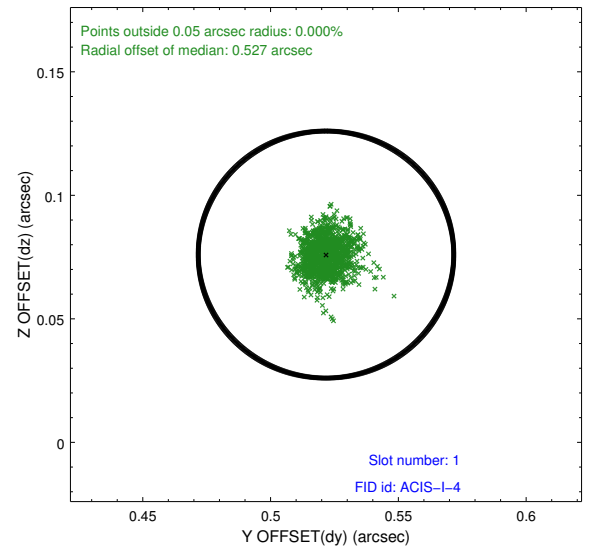
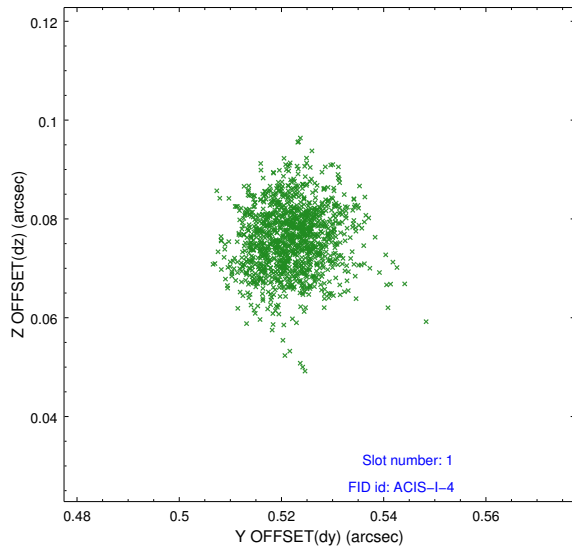


2.5 FID Slots

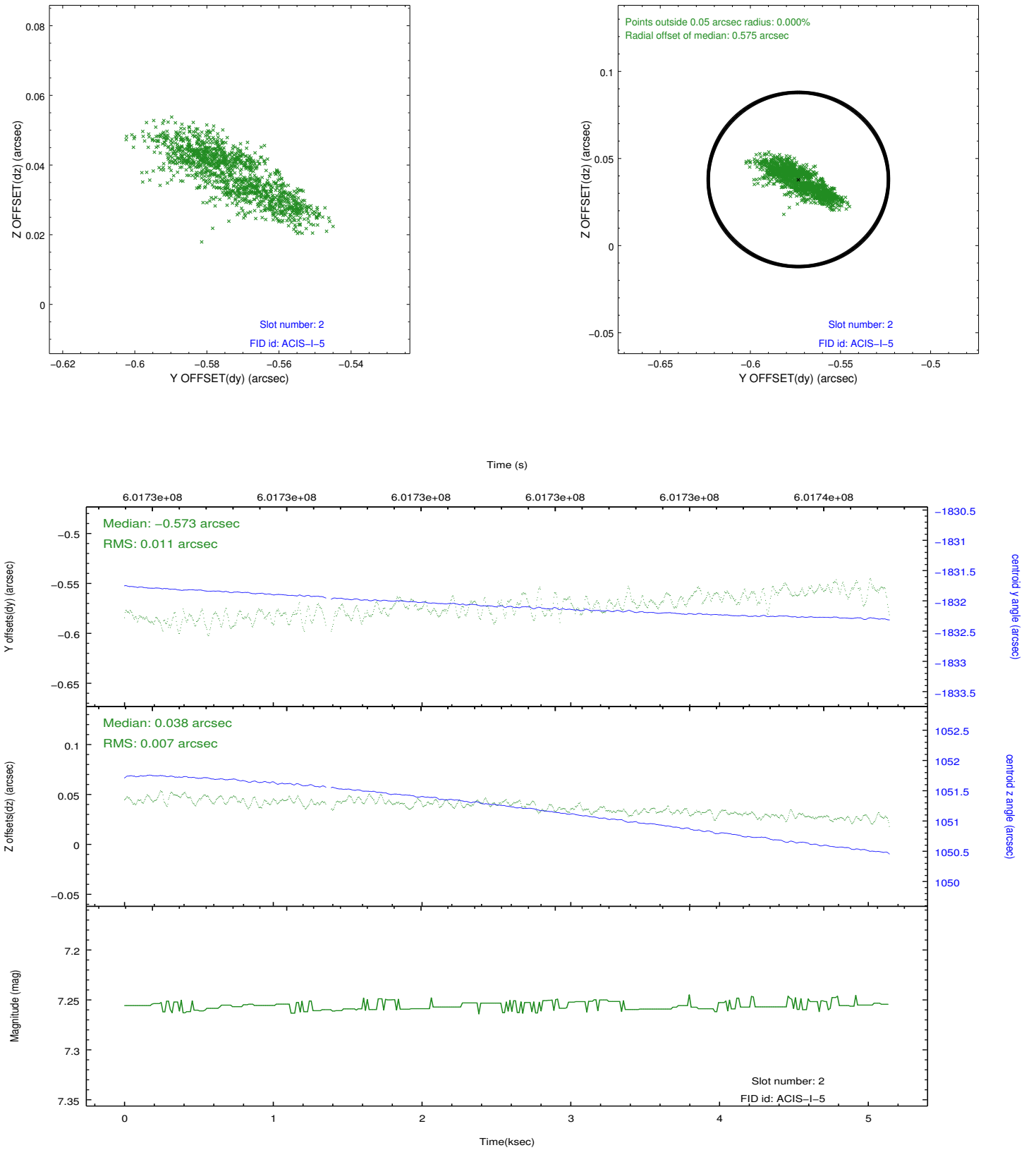
2.5.1 Slot 0



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)	2017.02.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.9024000730515

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:

(257.37769,-25.31985), (257.37347,-25.31969), (257.36688,-25.45903),
(257.37110,-25.45918).

==

An unusual artifact exists in the level 1 event file. The artifact is about 3 arcmin long and is possibly the result of a grazing cosmic ray hit. The artifact is filtered from the data and does not exist in the Level 2 event file.

Care should be taken when analyzing or reprocessing Level 1 events.