

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 12427 - L2 Version 2
Chandra X-Ray Center

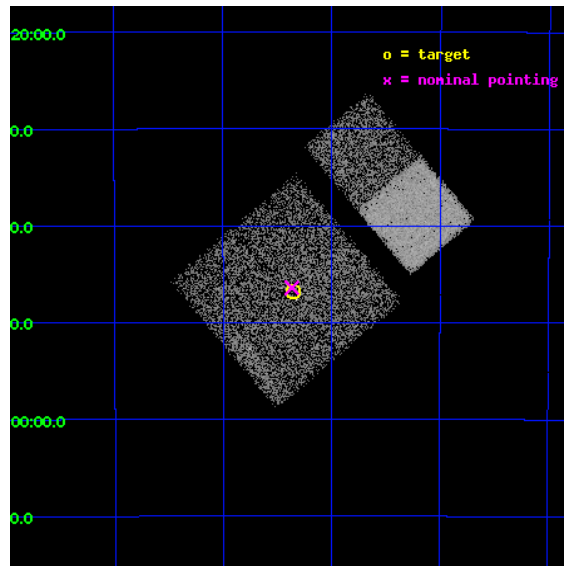
L2 Processing Date : Feb 9 2012

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

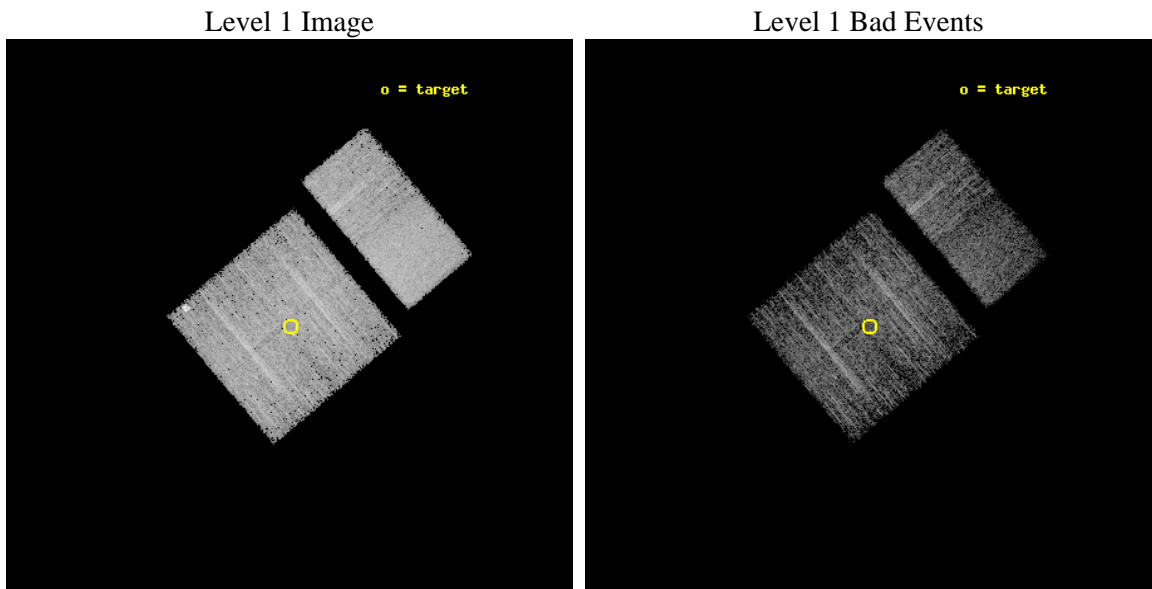
seq_num	401168	Sequence number
obs_id	12427	Observation id
title	The Nature of INTEGRAL Sources in the Galactic Plane	Proposal titl
observer	Dr. John Tomsick	Principal investigator
object	IGR J16413-4046	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	250.337083	Observer's specified target RA [deg]
dec_targ	-40.781	Observer's specified target Dec [deg]
ra_nom	250.34141374545	Nominal RA [deg]
dec_nom	-40.773889010481	Nominal Dec [deg]
roll_nom	49.752127890321	Nominal Roll [deg]
revision	2	Processing version of data
ontime	5054.9362902045	Sum of GTIs [s]
livetime	4990.9276431807	Livetime [s]
ontime0	5054.8131701946	Sum of GTIs [s]
ontime1	5054.8542101979	Sum of GTIs [s]
ontime2	5054.8952502012	Sum of GTIs [s]
ontime3	5054.9362902045	Sum of GTIs [s]
ontime6	5055.0183702111	Sum of GTIs [s]
ontime7	5054.9773302078	Sum of GTIs [s]
l2events	35170	Number of level 2 events



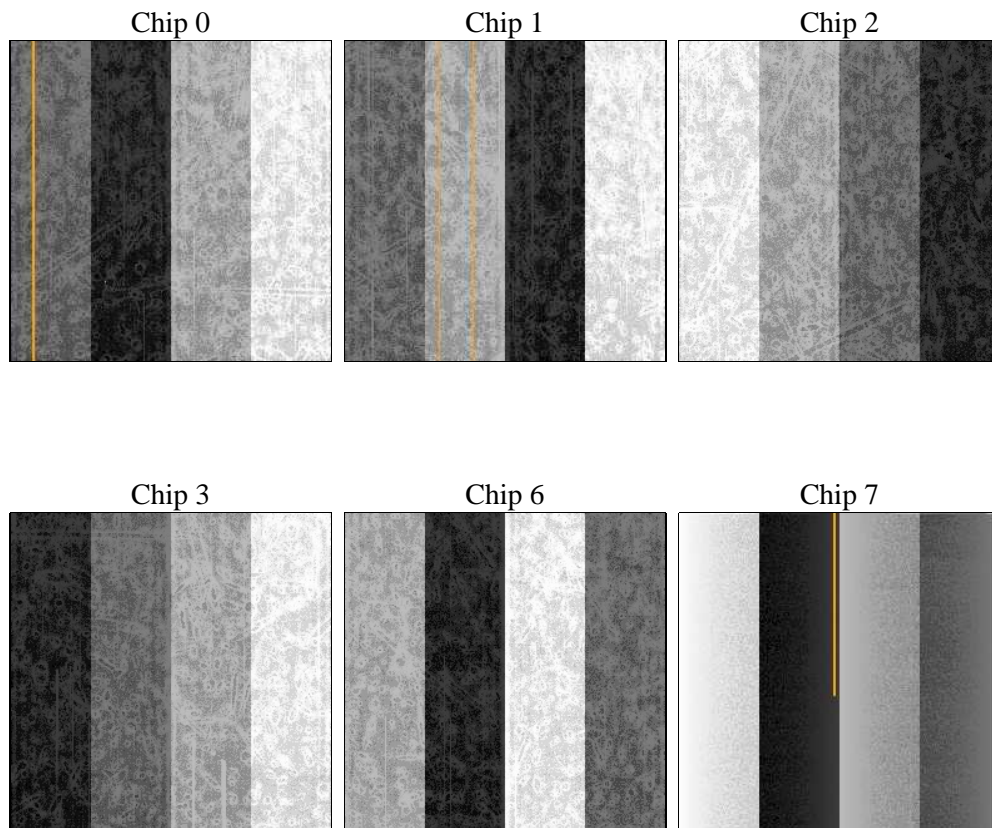
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.974000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	5054.9362902045	Sum of GTIs [s]
caldsver	4.4.7	 	ontime0	5054.8131701946	Sum of GTIs [s]
date	2012-02-09T14:48:08	Date and time of file creation	ontime1	5054.8542101979	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	5054.8952502012	Sum of GTIs [s]
			ontime3	5054.9362902045	Sum of GTIs [s]
			ontime6	5055.0183702111	Sum of GTIs [s]
			ontime7	5054.9773302078	Sum of GTIs [s]
			l1events	202413	Number of level 1 events

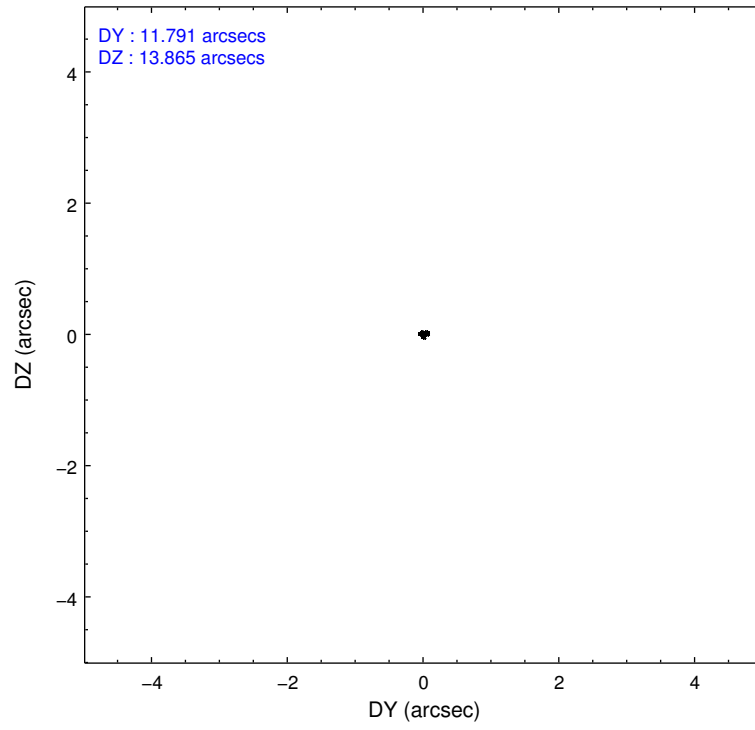
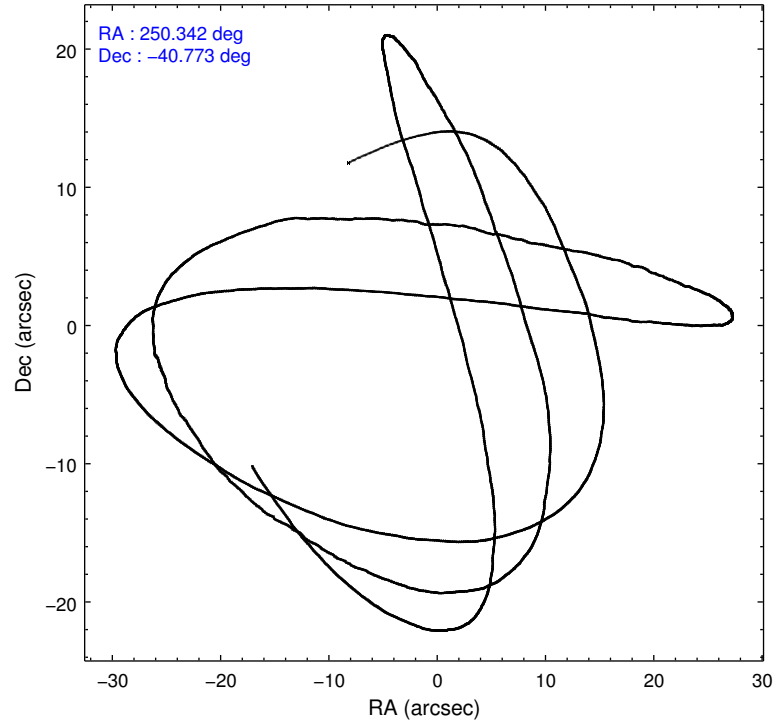
2.1.4 Events

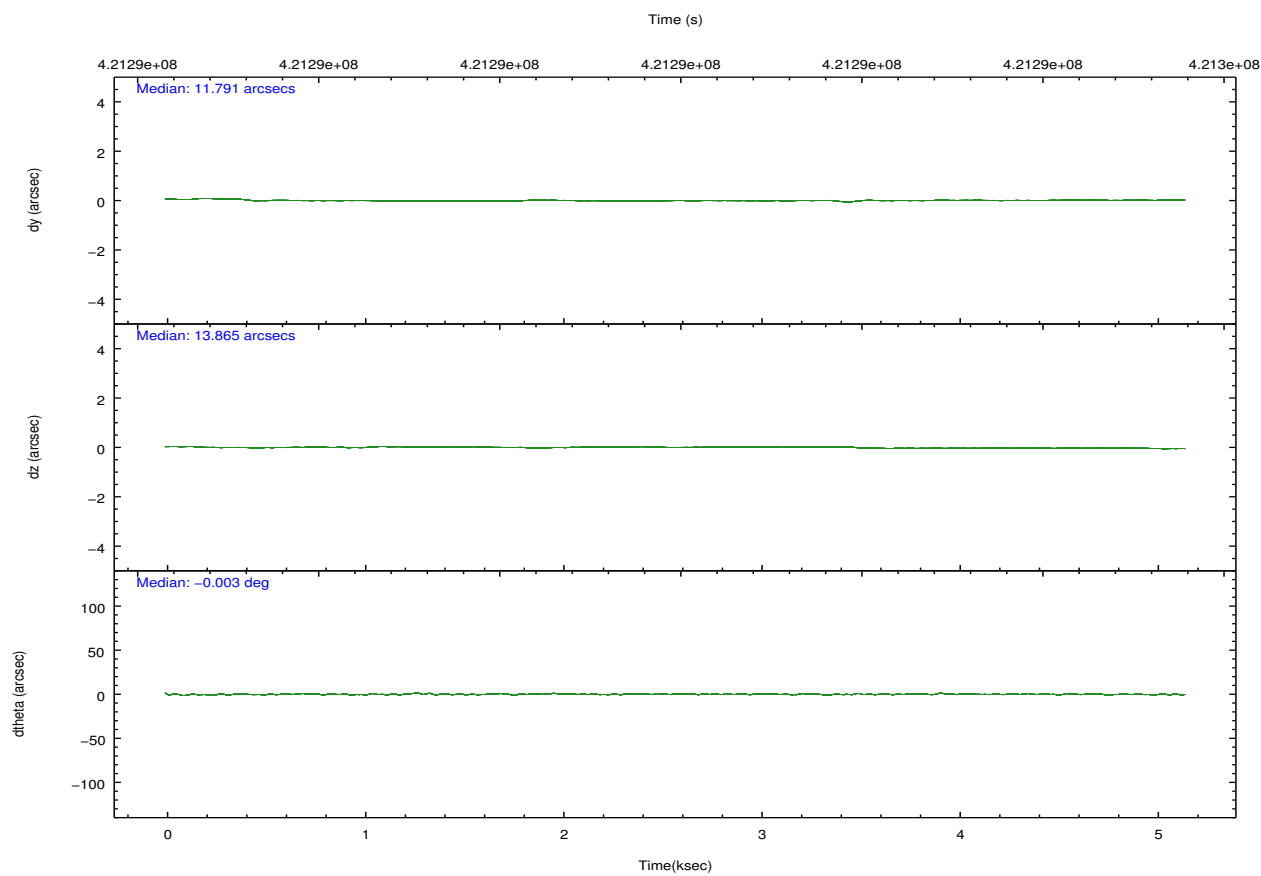
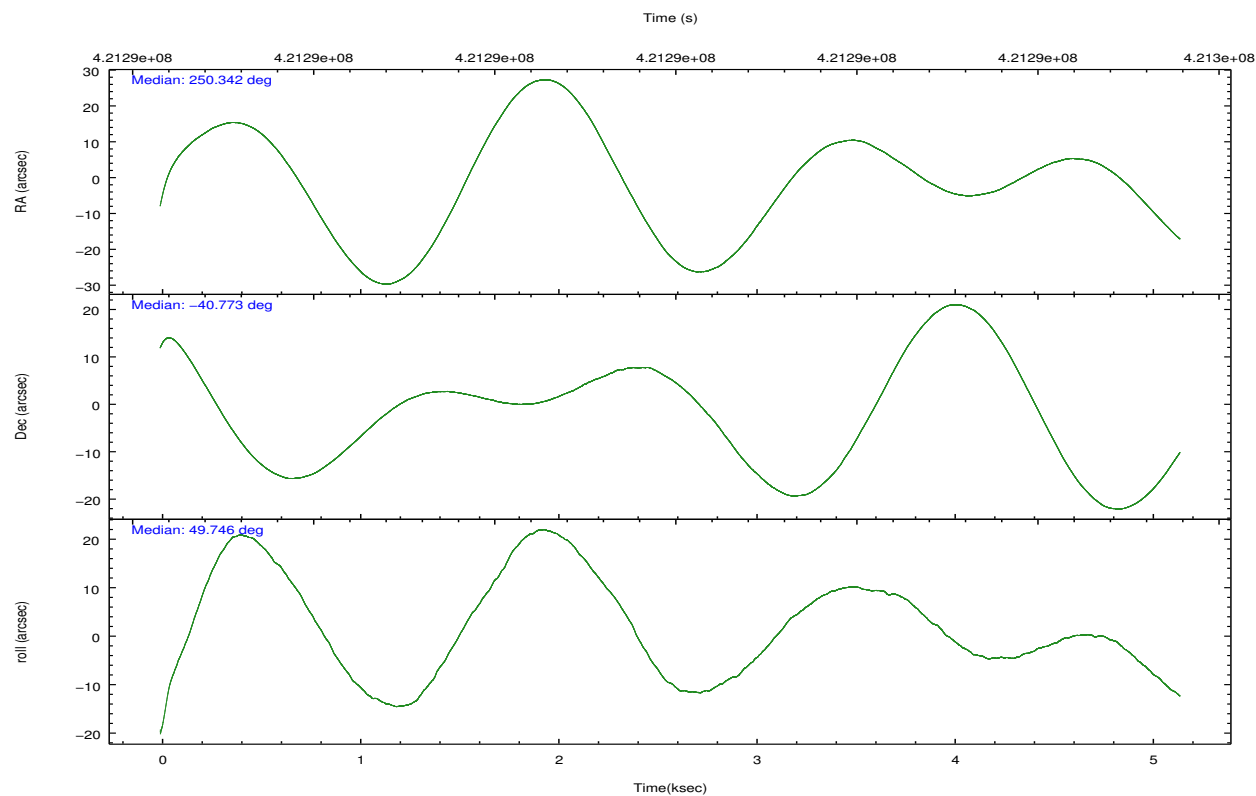
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	31358	31134	32151	31682	33773	42315	grade 0 events	2895	1669	1410	1614	1456	1797
rejected events	26053	26830	28473	27720	29797	23294		9%	5%	4%	5%	4%	4%
rejected %	83%	86%	88%	87%	88%	55%	grade 1 events	21	14	20	23	19	53
								0%	0%	0%	0%	0%	0%
							grade 2 events	896	945	850	872	900	3805
								2%	3%	2%	2%	2%	8%
							grade 3 events	414	428	339	411	399	1649
								1%	1%	1%	1%	1%	3%
							grade 4 events	382	385	373	351	394	1607
								1%	1%	1%	1%	1%	3%
							grade 5 events	1383	1471	1291	1574	1576	4293
								4%	4%	4%	4%	4%	10%
							grade 6 events	726	883	708	718	827	10181
								2%	2%	2%	2%	2%	24%
							grade 7 events	24641	25339	27160	26119	28202	18930
								78%	81%	84%	82%	83%	44%

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	FAINT	FAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	250.334920	250.3414137454501	CCD I2 on	Y	Y
[deg] Pointing Dec	-40.800634	-40.77388901048129	CCD I3 on	Y	Y
[deg] Pointing Roll	49.539211	49.75212789032068	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)	421289541.184000	421288210.83297	CCD S5 on	N	N
Observation start date	2011-05-09T00:51:15	2011-05-09T00:30:10	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	421294542.184000	421294779.03331	On-chip summing requested	N	N
Observation end date	2011-05-09T02:14:36	2011-05-09T02:19:39	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



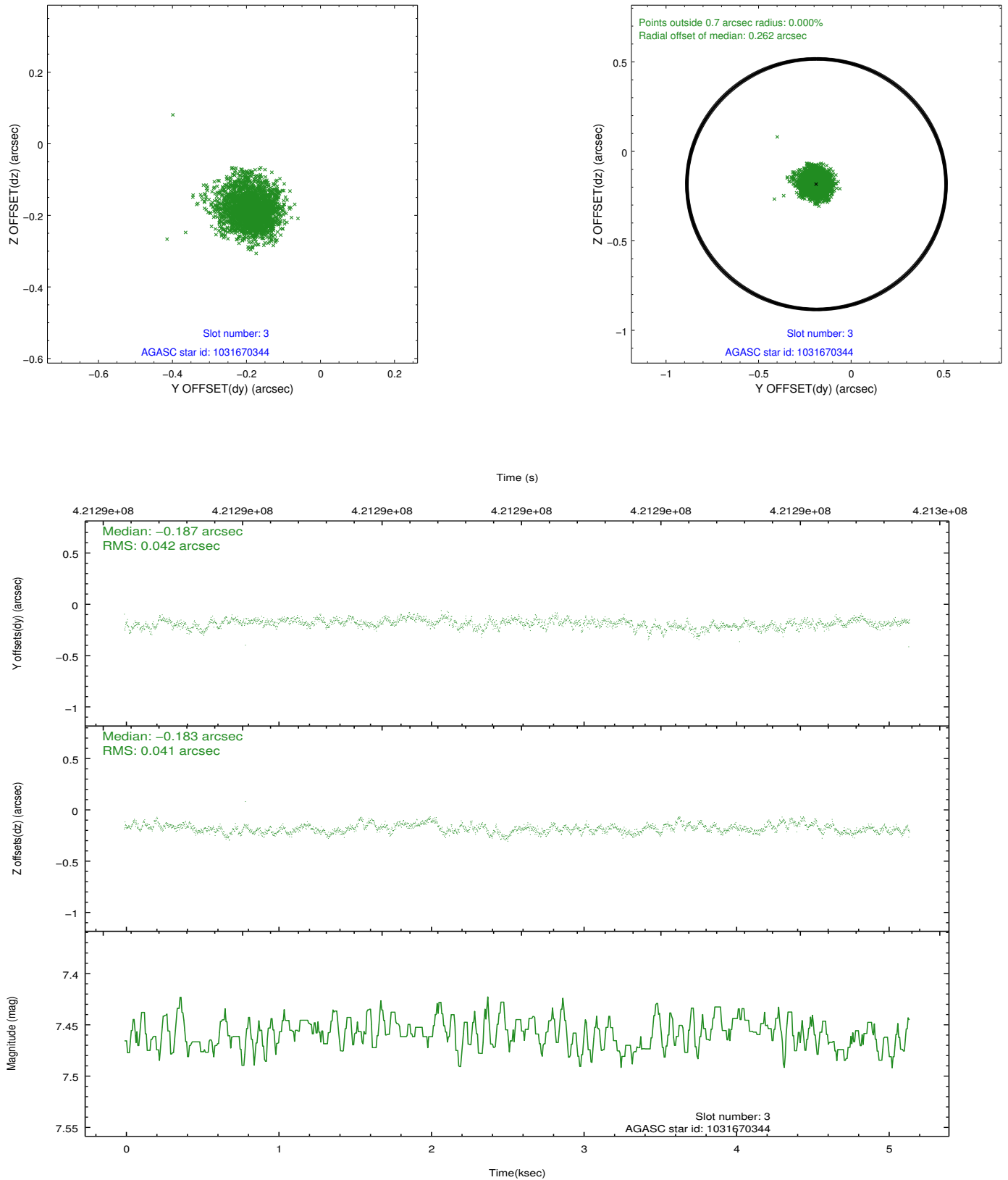


Slot Statistics

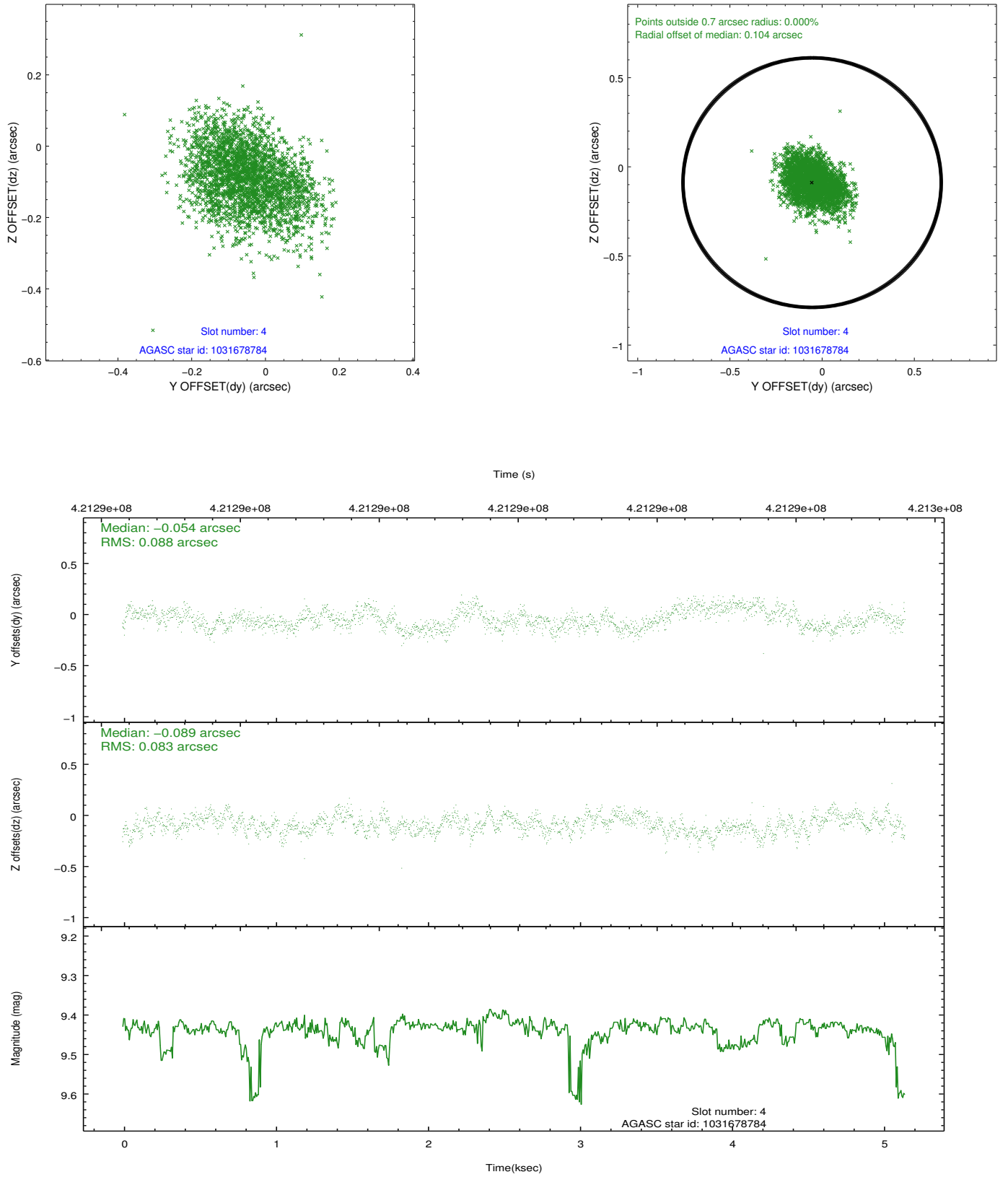
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.06	1256	0.023	0.026	0.006	0.011	0.000000	0.000000	927.79	-837.39
1	FID	ACIS-I-5	7.04	1256	-0.175	0.044	0.006	0.009	0.000000	0.000000	-1819.90	1059.48
2	FID	ACIS-I-6	7.05	1256	0.061	0.001	0.006	0.011	0.000000	0.000000	392.05	1705.31
3	GUIDE	1031670344	7.46	2512	-0.187	-0.183	0.062	0.100	250.708562	-40.289454	2064.79	413.30
4	GUIDE	1031678784	9.44	2499	-0.054	-0.089	0.130	0.207	250.209878	-40.294889	1163.75	1443.73
5	GUIDE	1031688072	8.33	2512	0.070	0.072	0.074	0.125	250.176913	-41.126966	-1170.64	-434.89
6	GUIDE	1031689912	6.64	2508	0.133	0.106	0.089	0.147	250.975325	-41.113349	266.34	-2055.18
7	GUIDE	1031692192	6.60	2511	0.031	0.091	0.084	0.145	250.940331	-41.119197	189.45	-1996.57

2.4 Star Slots

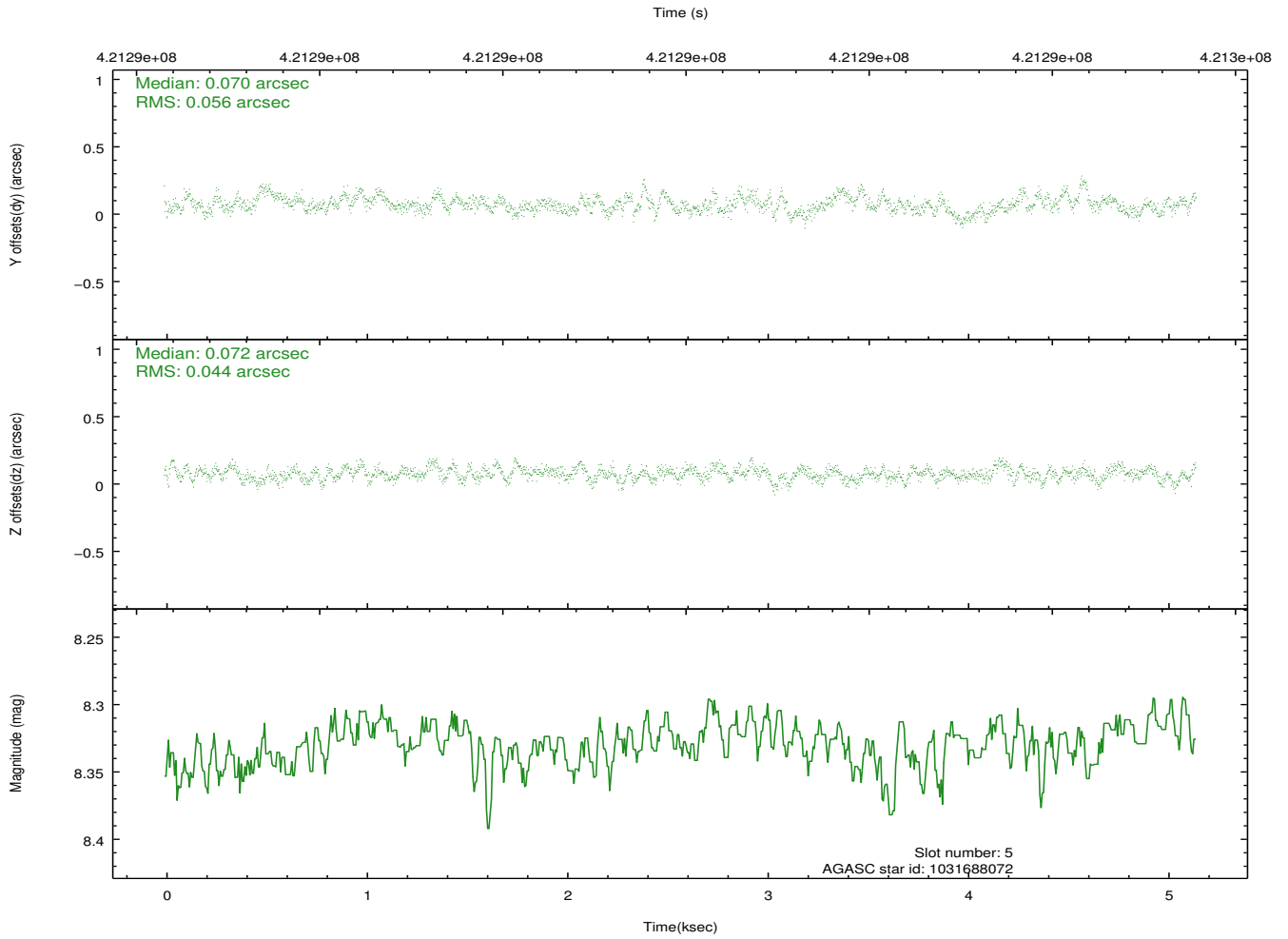
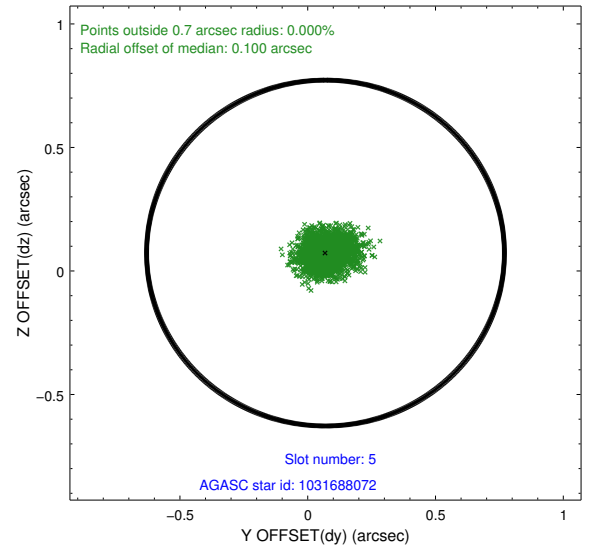
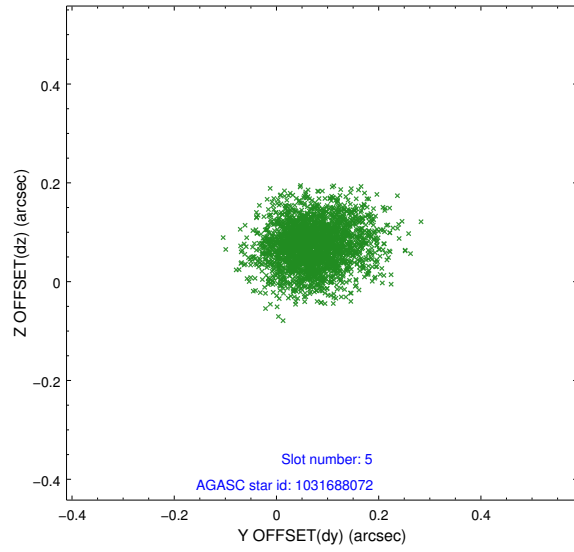
2.4.1 Slot 3



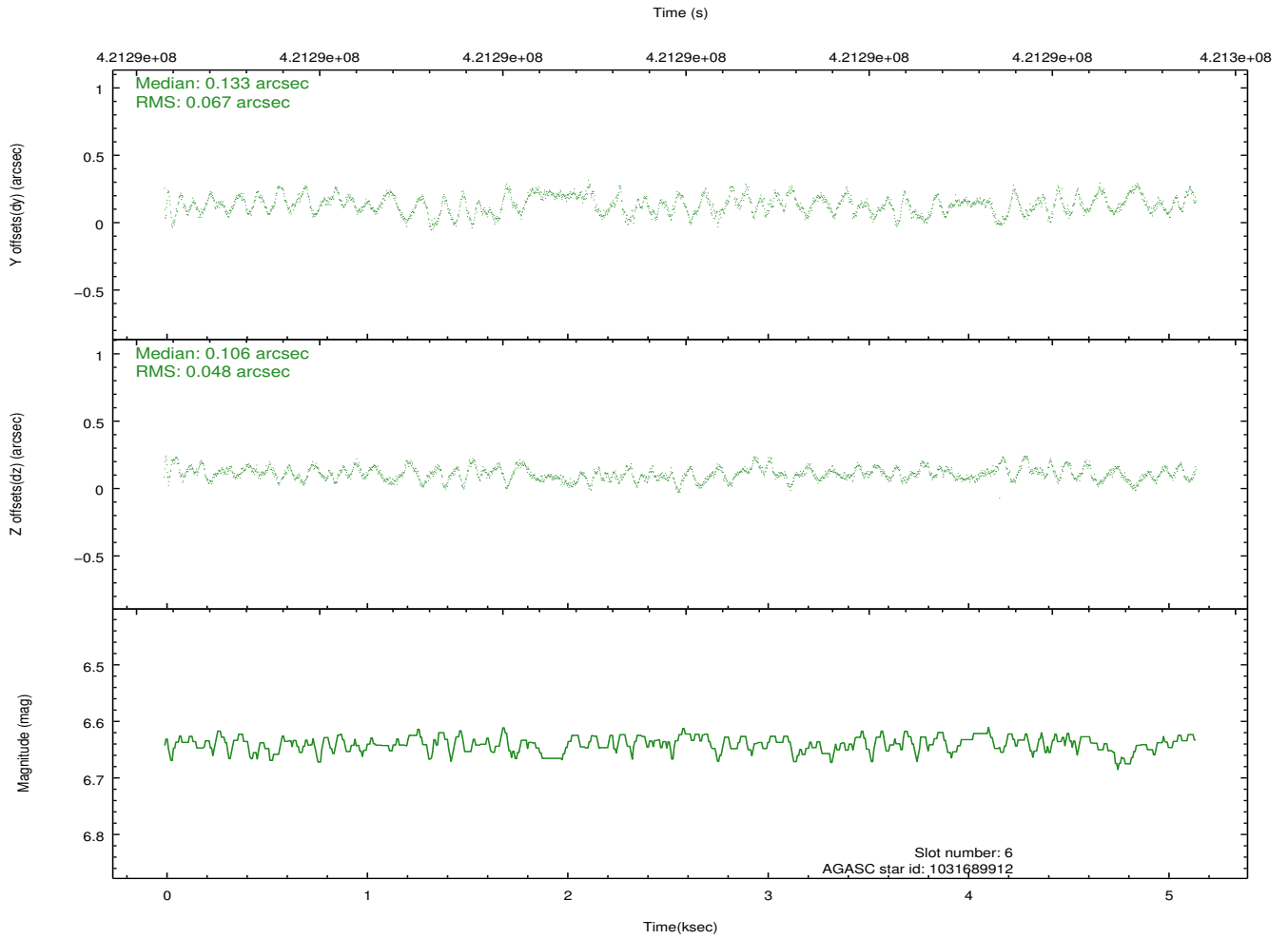
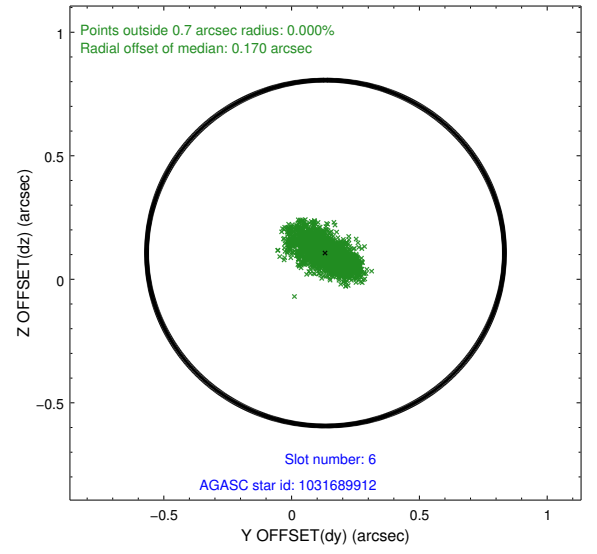
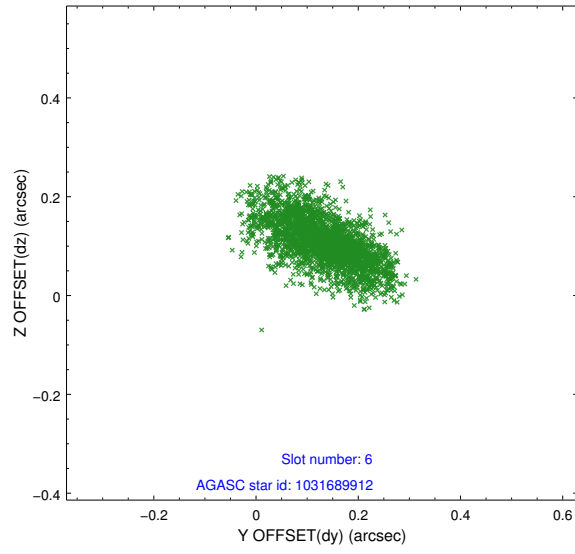
2.4.2 Slot 4



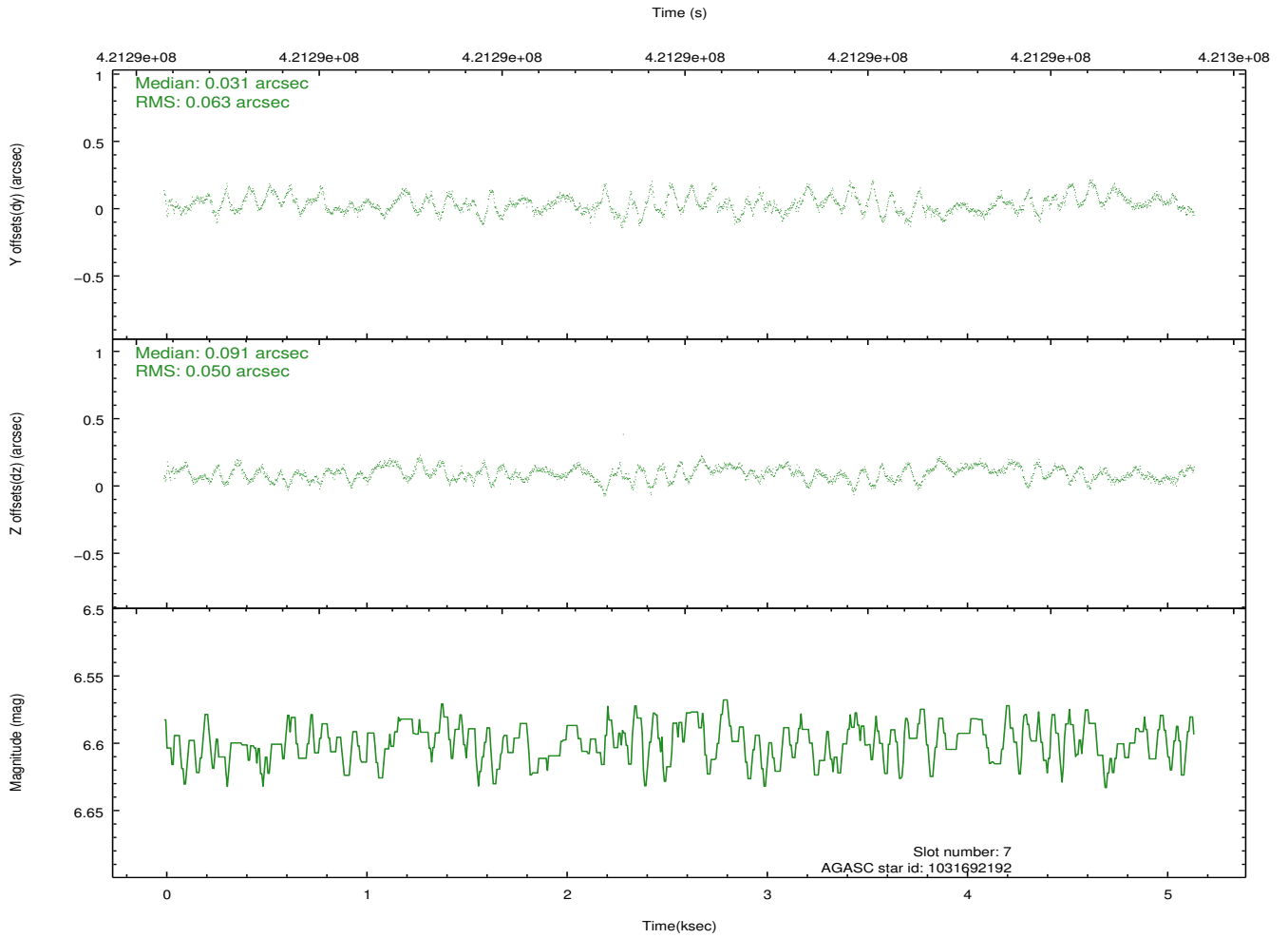
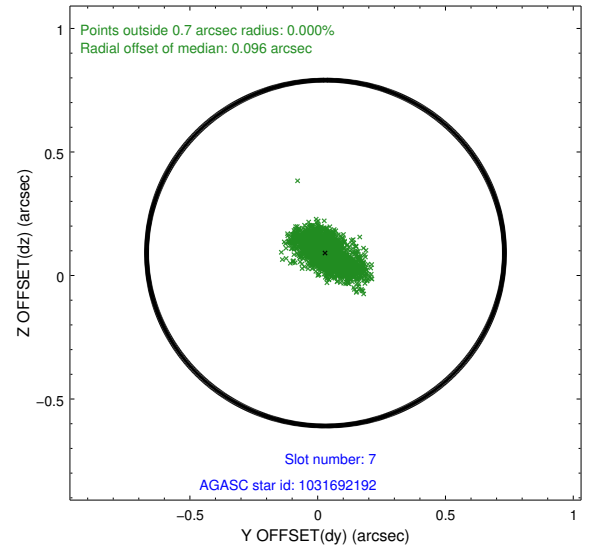
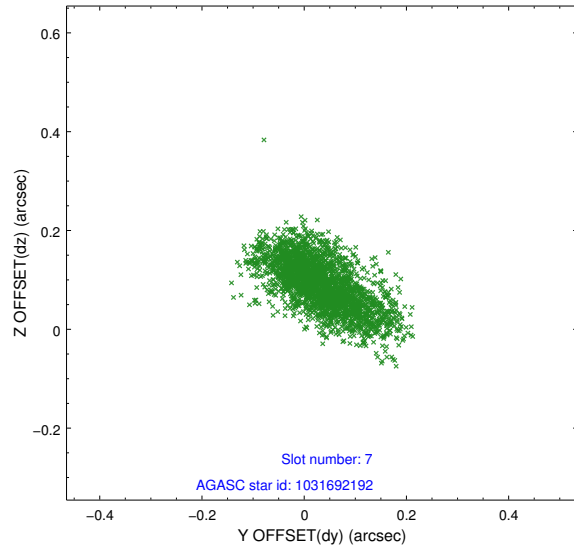
2.4.3 Slot 5



2.4.4 Slot 6

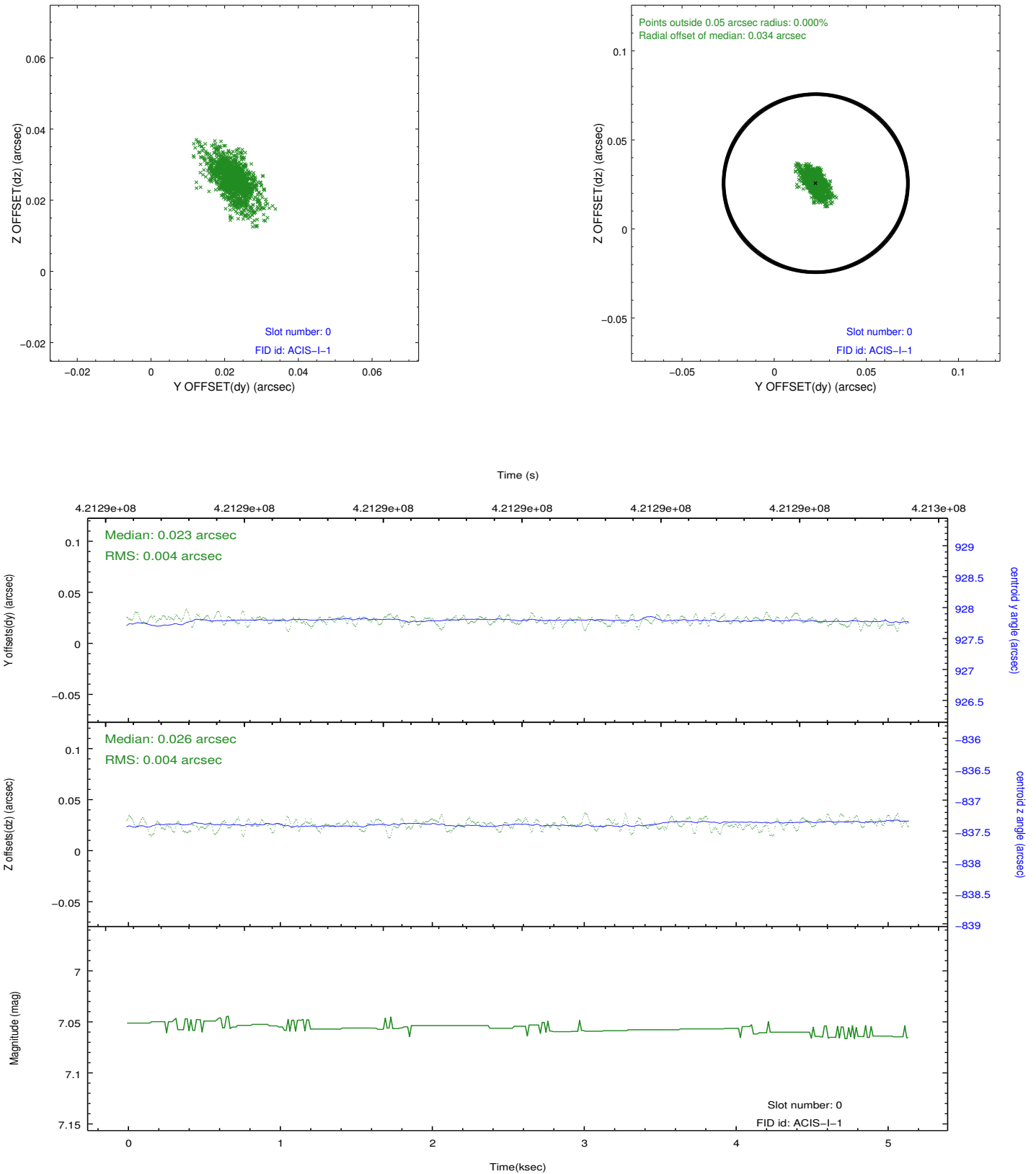


2.4.5 Slot 7

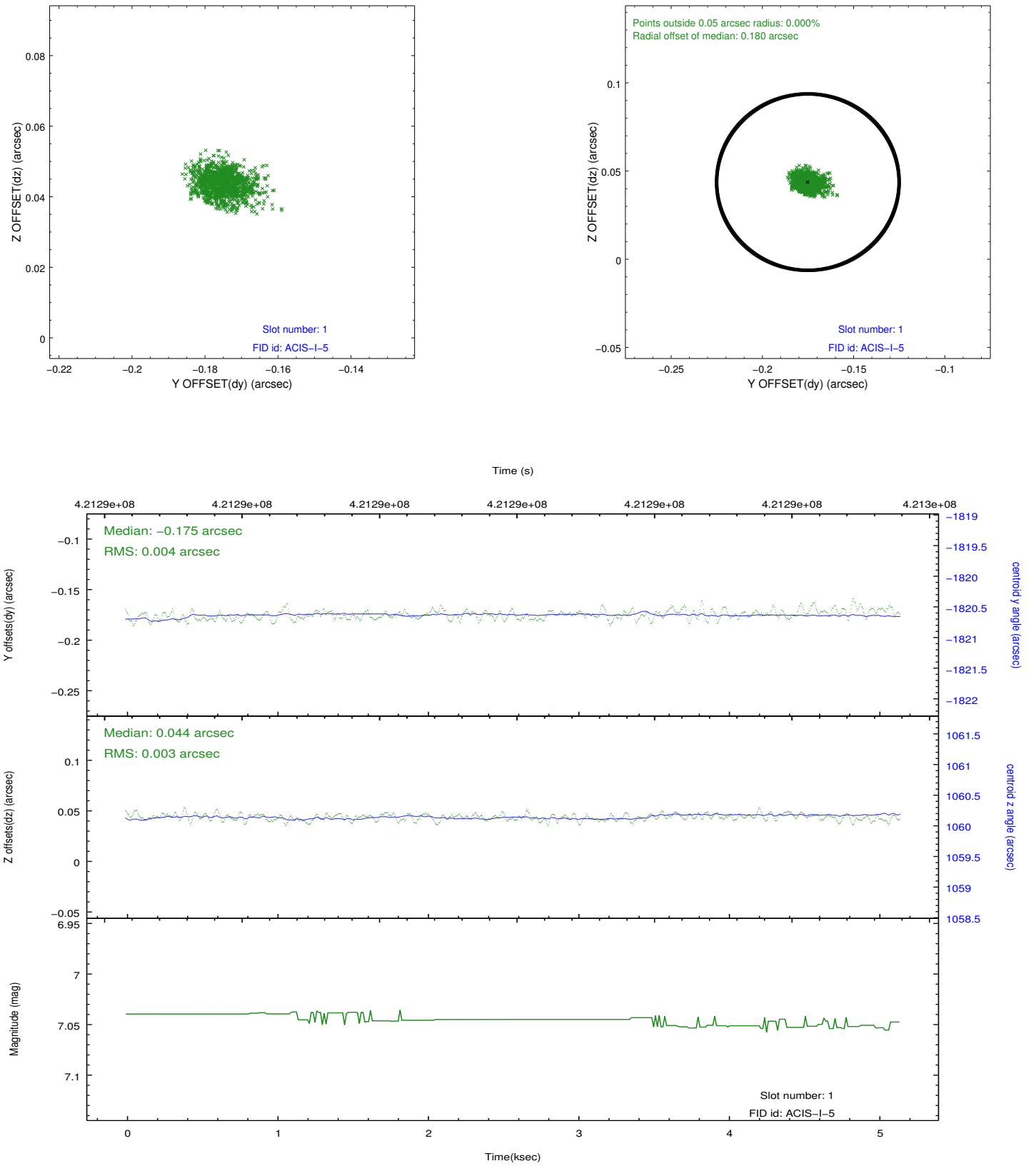


2.5 FID Slots

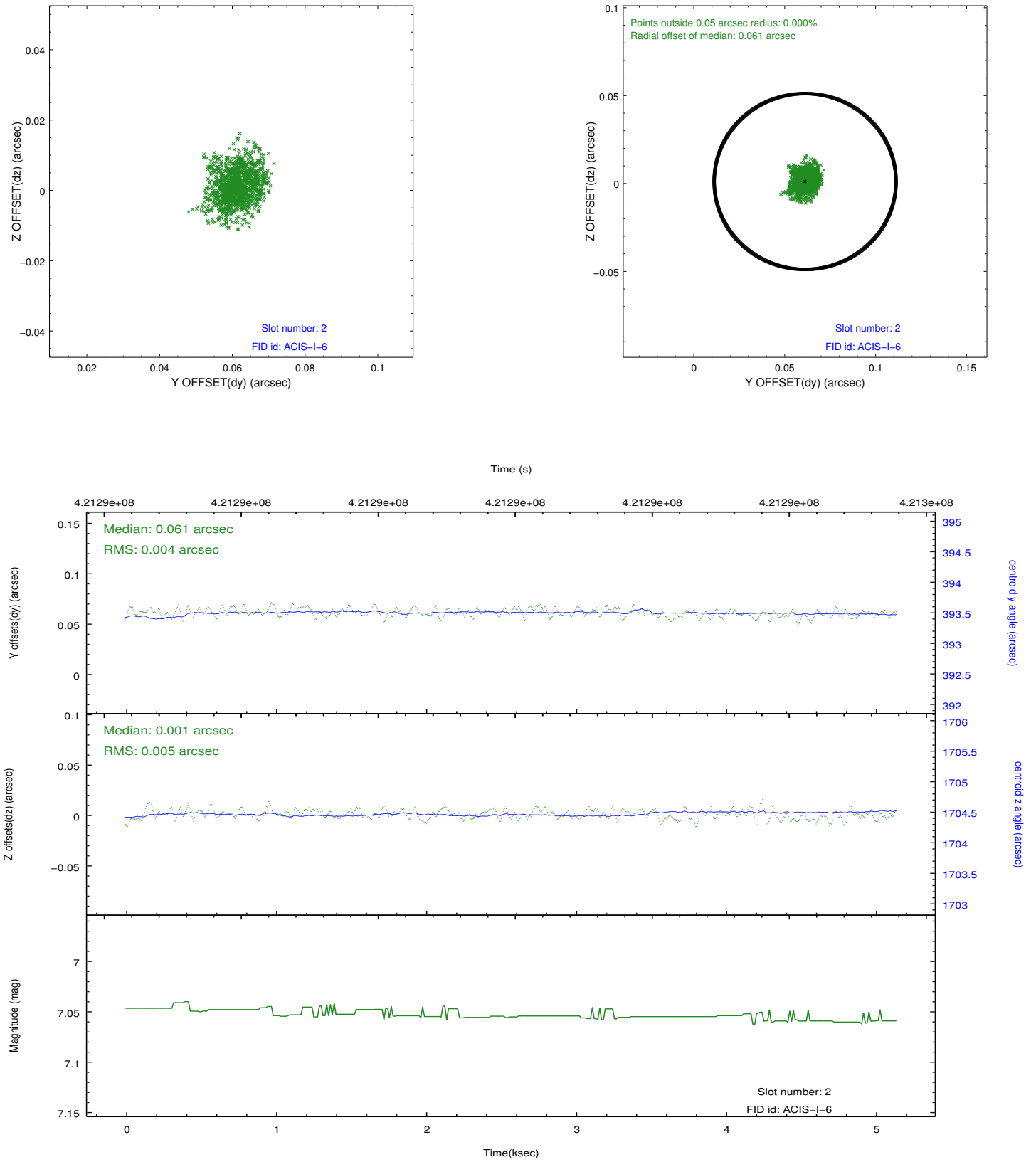
2.5.1 Slot 0



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)	2012.02.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.0549362949729

A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.