

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 13832 - L2 Version 2
Chandra X-Ray Center

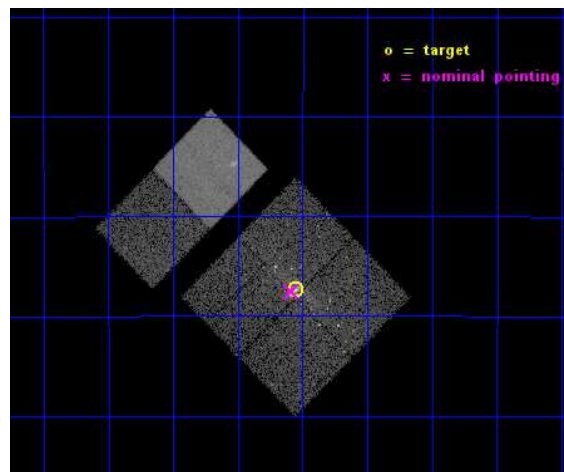
L2 Processing Date : Nov 29 2014

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1 Front

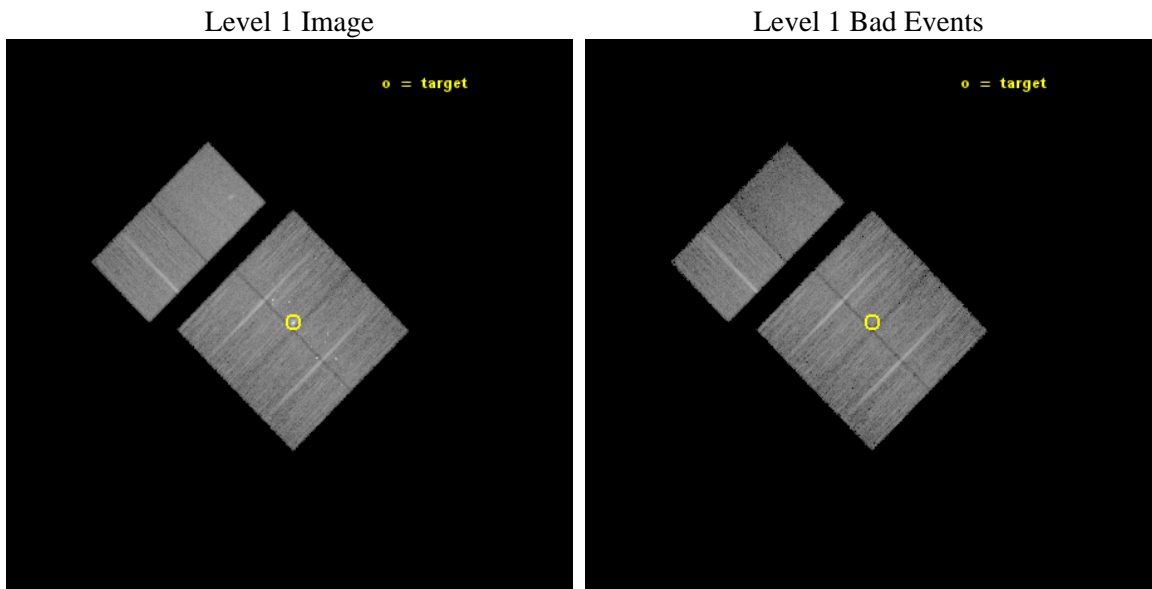
seq_num	601006	Sequence number
obs_id	13832	Observation id
title	Broad-band (0.5-30 keV) X-ray imaging of starburst galaxies with Chandra and NuSTAR	Proposal title
observer	Dr. Ann Hornschemeier	Principal investigator
object	NGC 253	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	11.88875	Observer's specified target RA [deg]
dec_targ	-25.288333	Observer's specified target Dec [deg]
ra_nom	11.896711750945	Nominal RA [deg]
dec_nom	-25.292062896043	Nominal Dec [deg]
roll_nom	315.14025030272	Nominal Roll [deg]
revision	2	Processing version of data
ontime	19971.199925661	Sum of GTIs [s]
livetime	19718.312566989	Livetime [s]
ontime0	19971.083548009	Sum of GTIs [s]
ontime1	19971.124588013	Sum of GTIs [s]
ontime2	19971.165628016	Sum of GTIs [s]
ontime3	19971.199925661	Sum of GTIs [s]
ontime6	19971.199925661	Sum of GTIs [s]
ontime7	19971.199925661	Sum of GTIs [s]
l2events	110216	Number of level 2 events



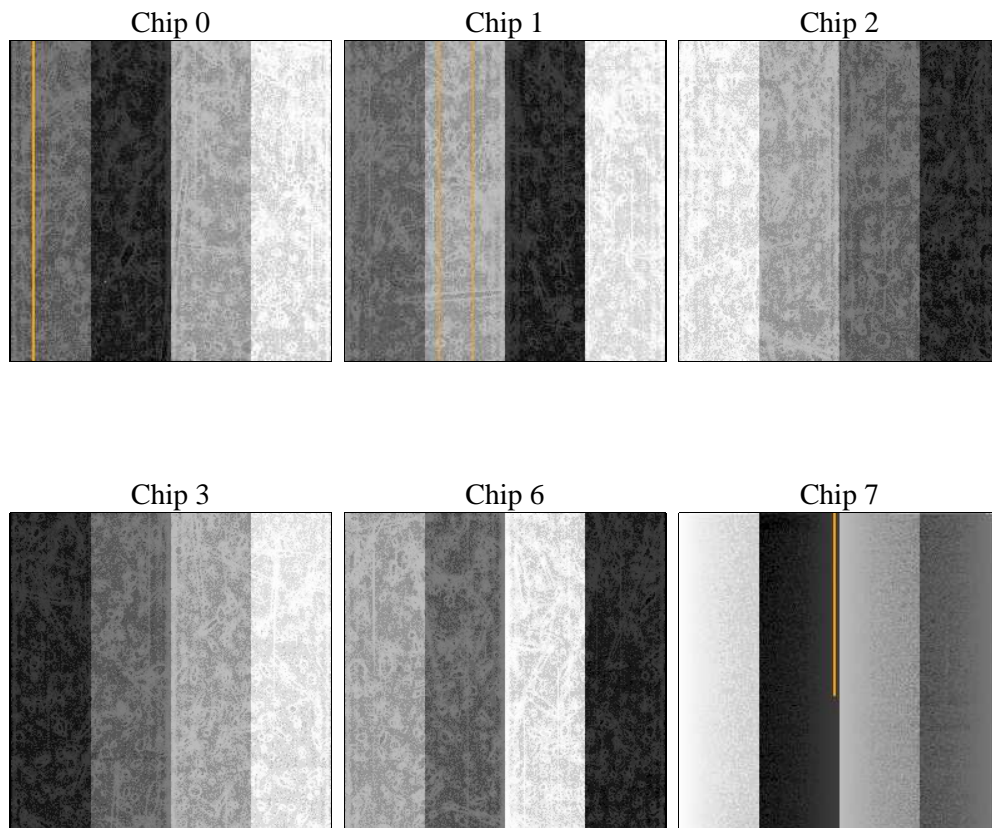
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	19971.199925661	Sum of GTIs [s]
caldbver	4.6.4	 	ontime0	19971.083548009	Sum of GTIs [s]
date	2014-11-29T15:19:19	Date and time of file creation	ontime1	19971.124588013	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	19971.165628016	Sum of GTIs [s]
			ontime3	19971.199925661	Sum of GTIs [s]
			ontime6	19971.199925661	Sum of GTIs [s]
			ontime7	19971.199925661	Sum of GTIs [s]
			l1events	597374	Number of level 1 events

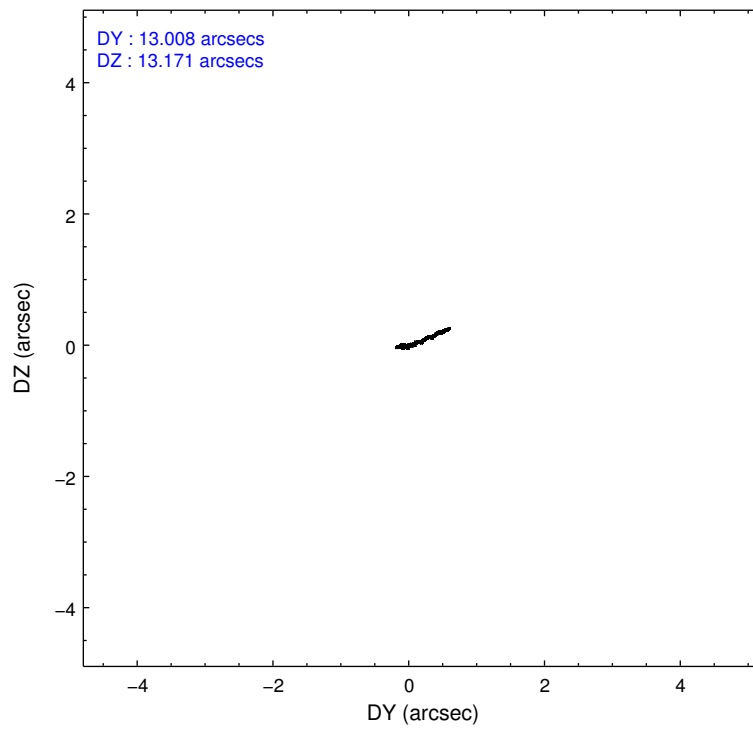
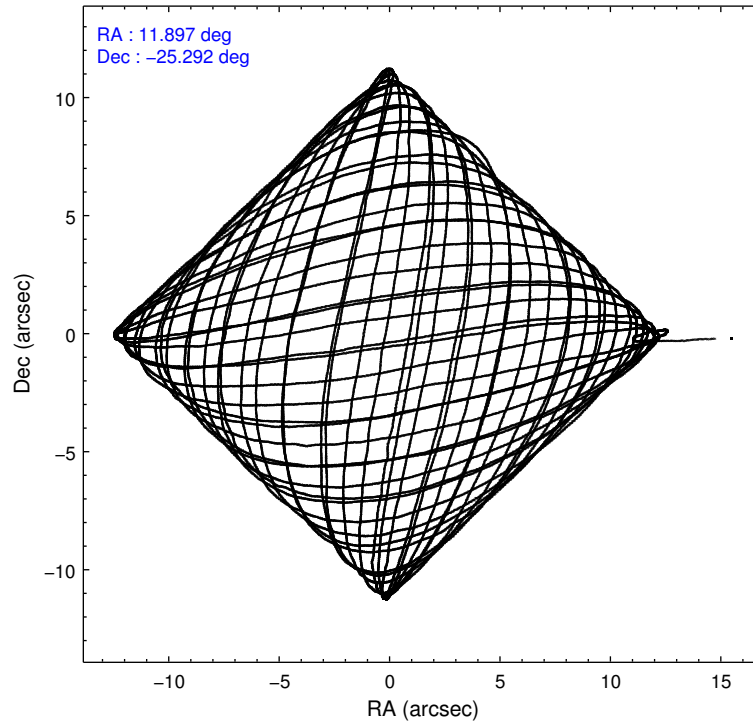
2.1.4 Events

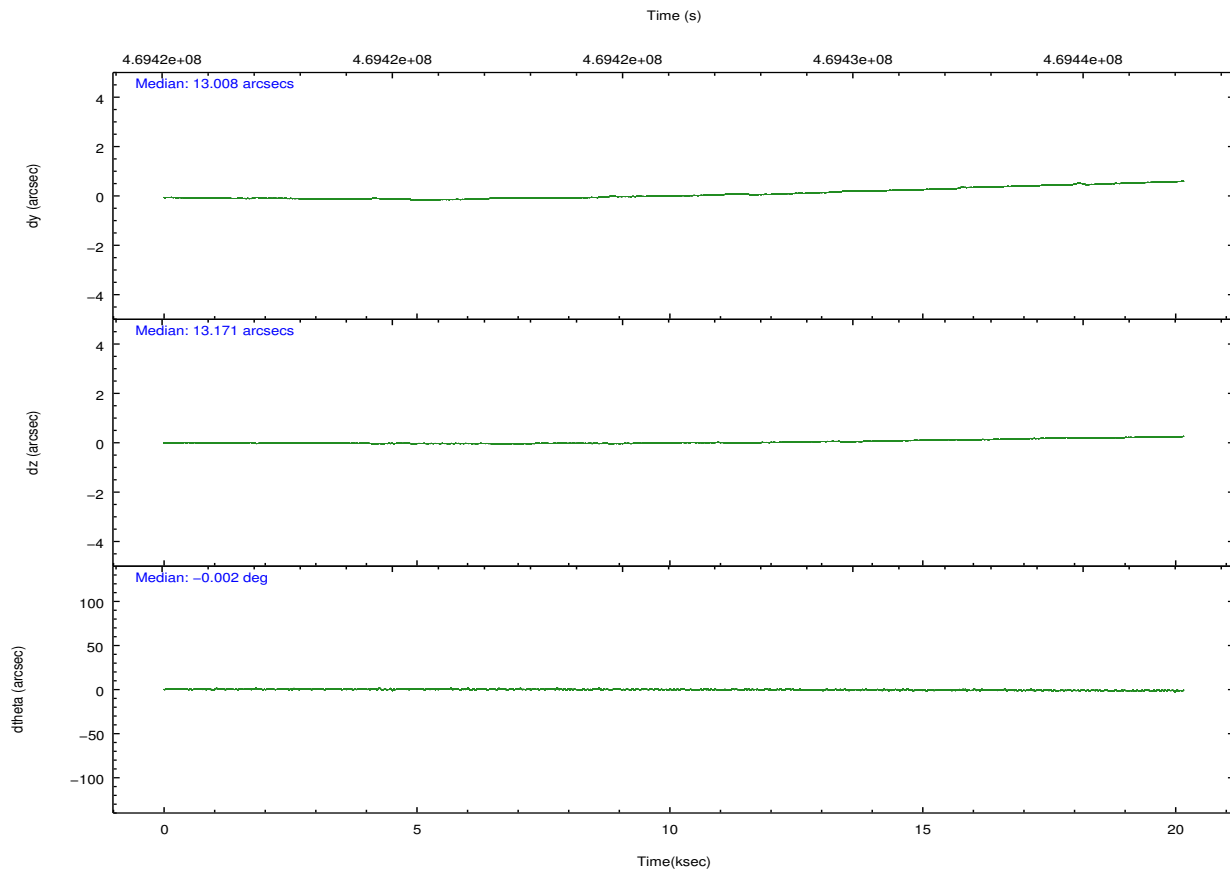
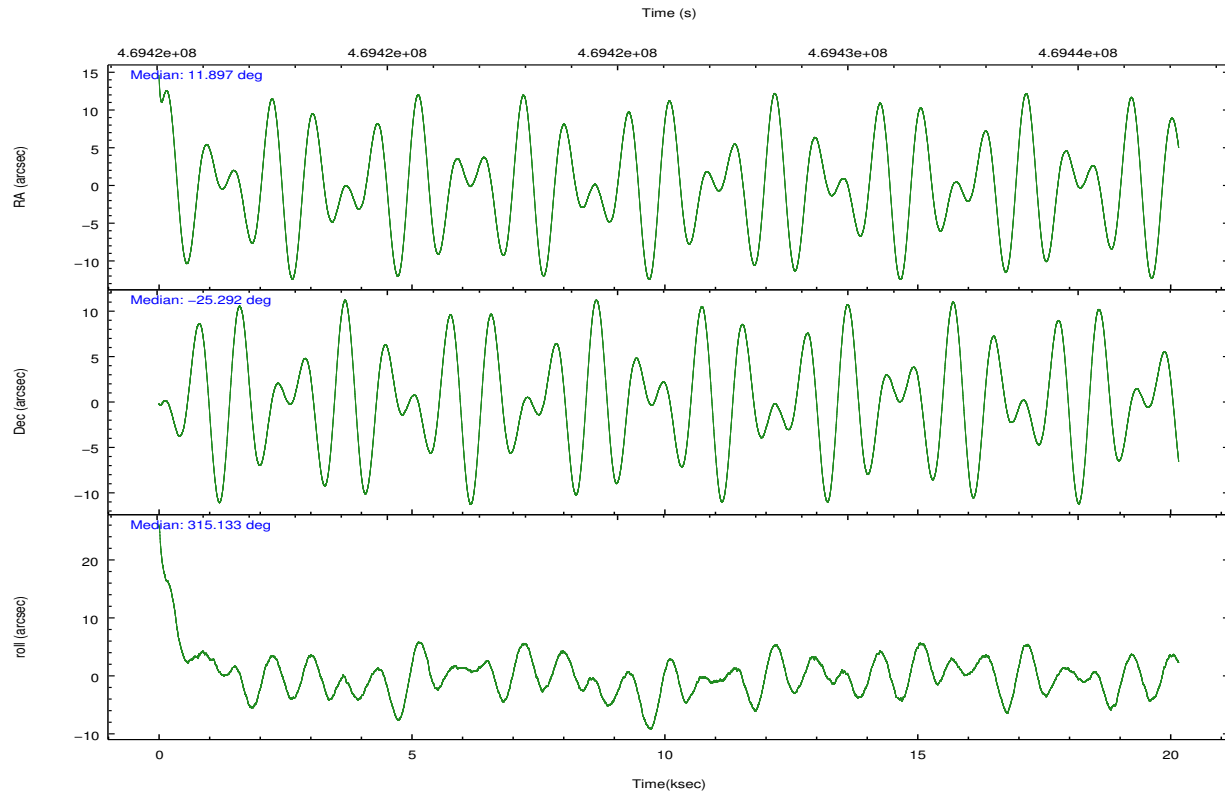
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	89678	90161	102440	104424	98989	111682	grade 0 events	4863	5668	4834	11419	4008	5010
rejected events	77497	76517	90950	84743	87500	59556		5%	6%	4%	10%	4%	4%
rejected %	86%	84%	88%	81%	88%	53%	grade 1 events	58	51	57	145	53	155
								0%	0%	0%	0%	0%	0%
							grade 2 events	2843	3006	2507	3192	2674	11190
								3%	3%	2%	3%	2%	10%
							grade 3 events	1238	1290	1097	1364	1115	4407
								1%	1%	1%	1%	1%	3%
							grade 4 events	1122	1226	1046	1355	1113	4240
								1%	1%	1%	1%	1%	3%
							grade 5 events	3724	3954	3443	4383	4268	11330
								4%	4%	3%	4%	4%	10%
							grade 6 events	2119	2460	2008	2354	2581	27283
								2%	2%	1%	2%	2%	24%
							grade 7 events	73711	72506	87448	80212	83177	48067
								82%	80%	85%	76%	84%	43%

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	11.867242	11.89671175094458	CCD I2 on	Y	Y
[deg] Pointing Dec	-25.285127	-25.29206289604348	CCD I3 on	Y	Y
[deg] Pointing Roll	314.918967	315.1402503027209	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	-233.5899487761303	CCD S3 on	O2	Y
[mm] SIM translation stage offset	0	-0.002504226799430853	CCD S4 on	N	N
[s] Observation start time (MET)	469416190.184000	469415132.60256	CCD S5 on	N	N
Observation start date	2012-11-16T01:22:03	2012-11-16T01:05:32	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	469436190.184000	469437004.56623	On-chip summing requested	N	N
Observation end date	2012-11-16T06:55:23	2012-11-16T07:10:04	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect





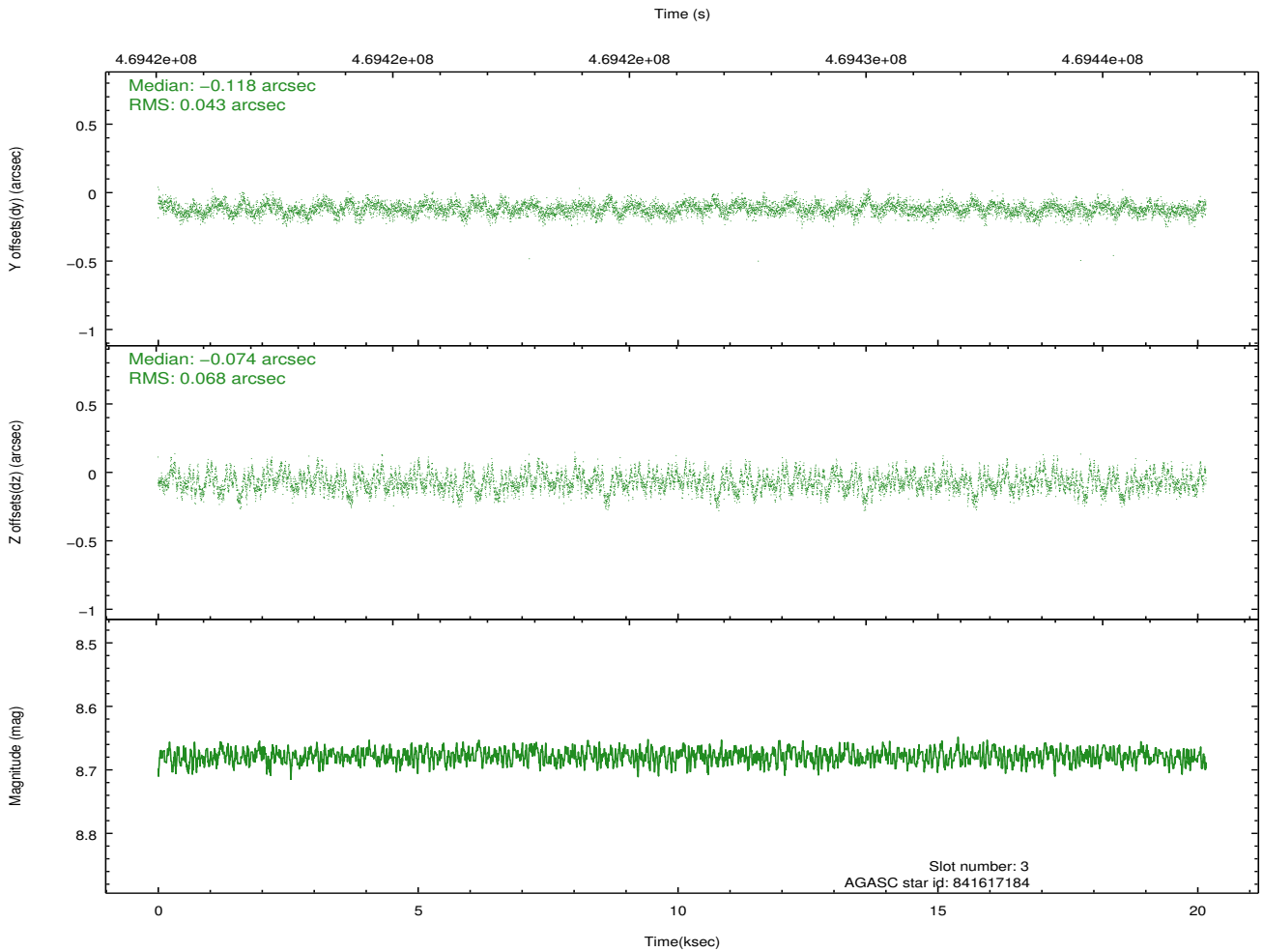
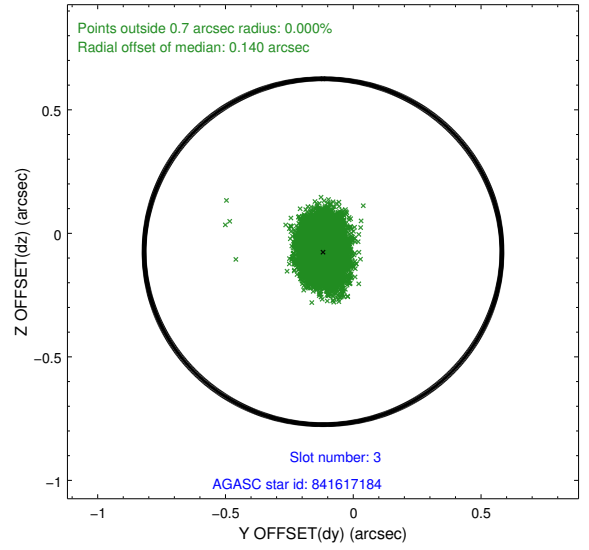
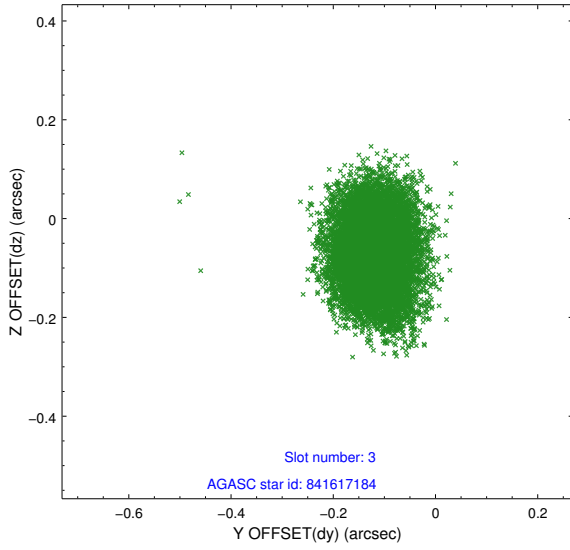
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.22	4918	0.047	-0.004	0.007	0.012	0.000000	0.000000	926.46	-836.72
1	FID		ACIS-I-5	7.21	4917	-0.213	0.054	0.008	0.014	0.000000	0.000000	-1821.81	1060.73
2	FID		ACIS-I-6	7.20	4918	0.074	0.021	0.008	0.013	0.000000	0.000000	391.83	1705.42
3	GUIDE	used	841617184	8.68	9835	-0.118	-0.074	0.084	0.139	11.510229	-25.379642	-577.50	-1063.42
4	GUIDE	used	841618568	8.88	9832	0.048	0.093	0.084	0.133	12.015403	-25.079155	-181.50	866.71
5	GUIDE	used	841621872	9.26	9823	0.123	0.006	0.090	0.144	12.339829	-25.439870	1481.52	692.97
6	GUIDE	used	841627288	8.97	9777	-0.258	-0.008	0.085	0.139	11.895050	-25.394961	344.05	-215.01
7	GUIDE	used	841628160	9.31	9818	0.209	-0.018	0.111	0.179	11.565969	-25.537708	-44.72	-1335.59

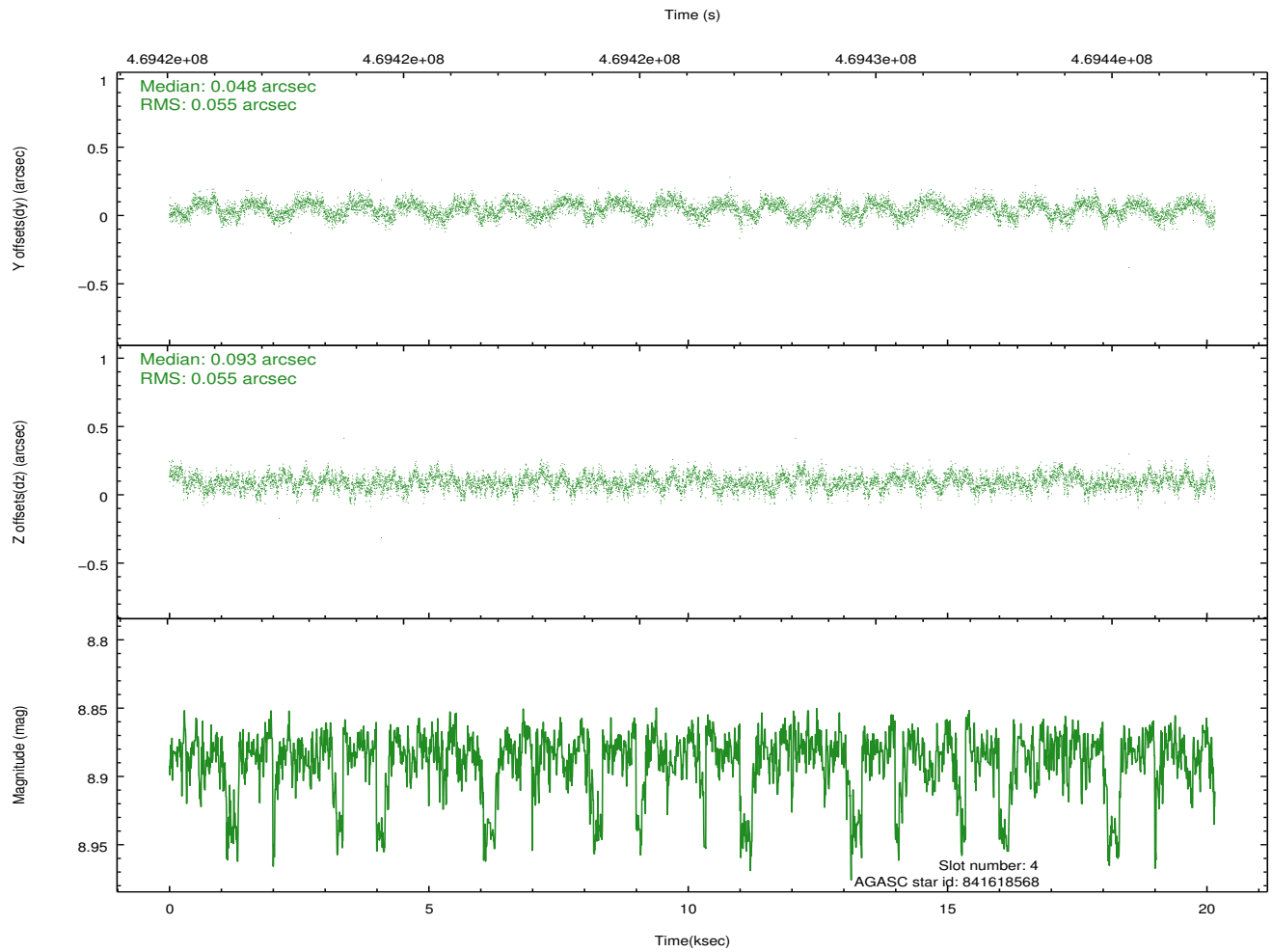
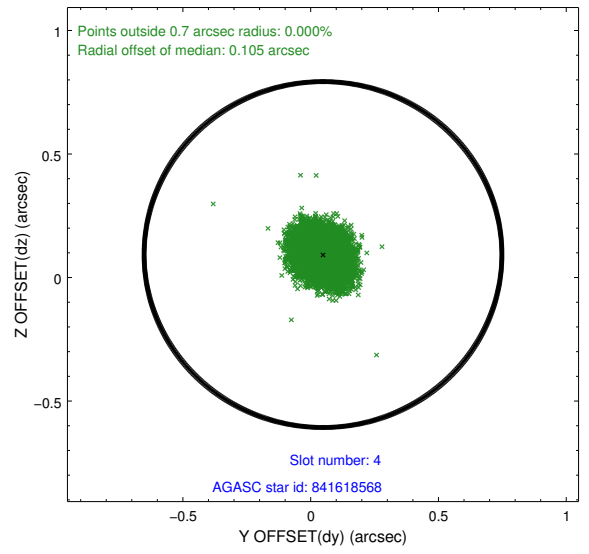
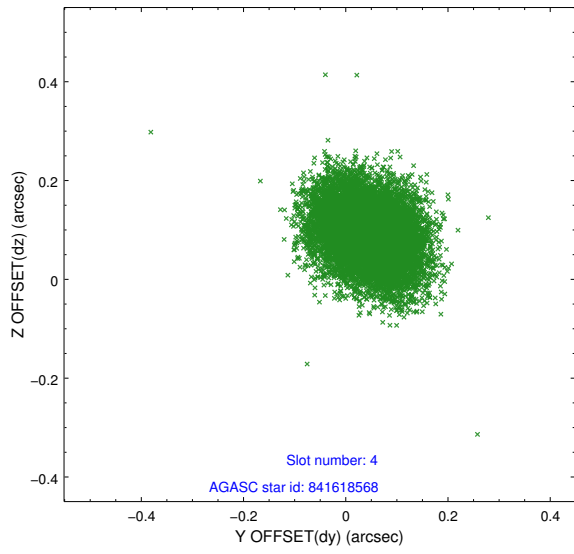
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2.4 Star Slots

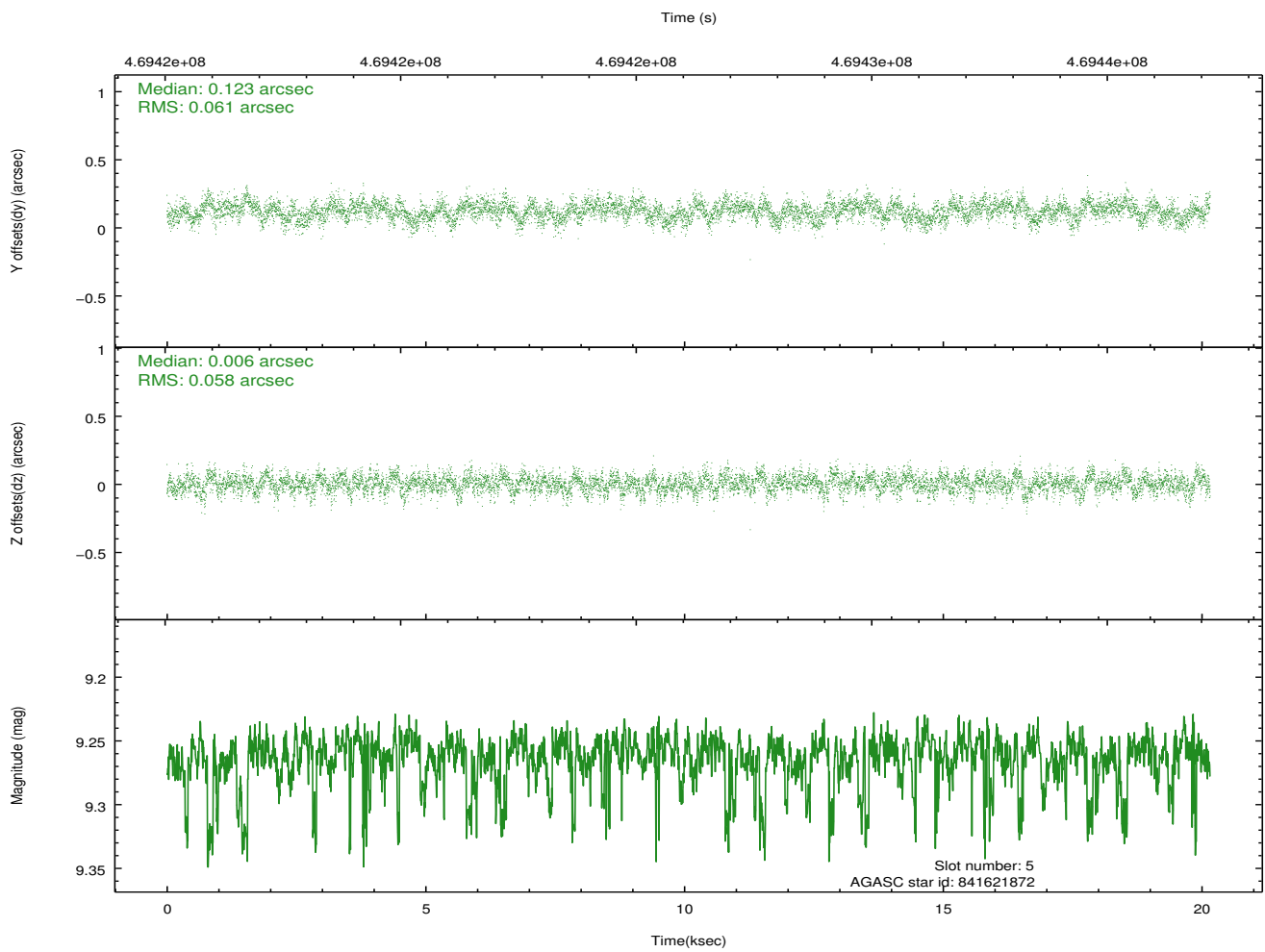
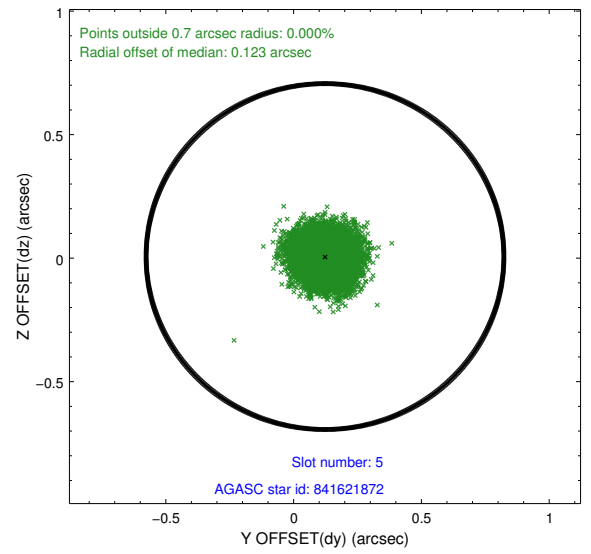
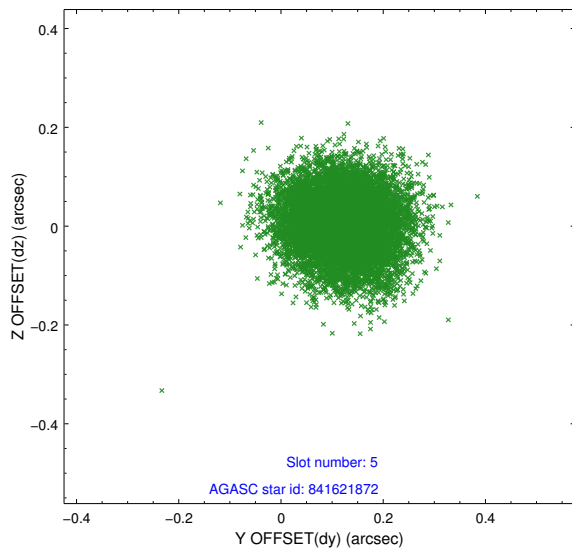
2.4.1 Slot 3



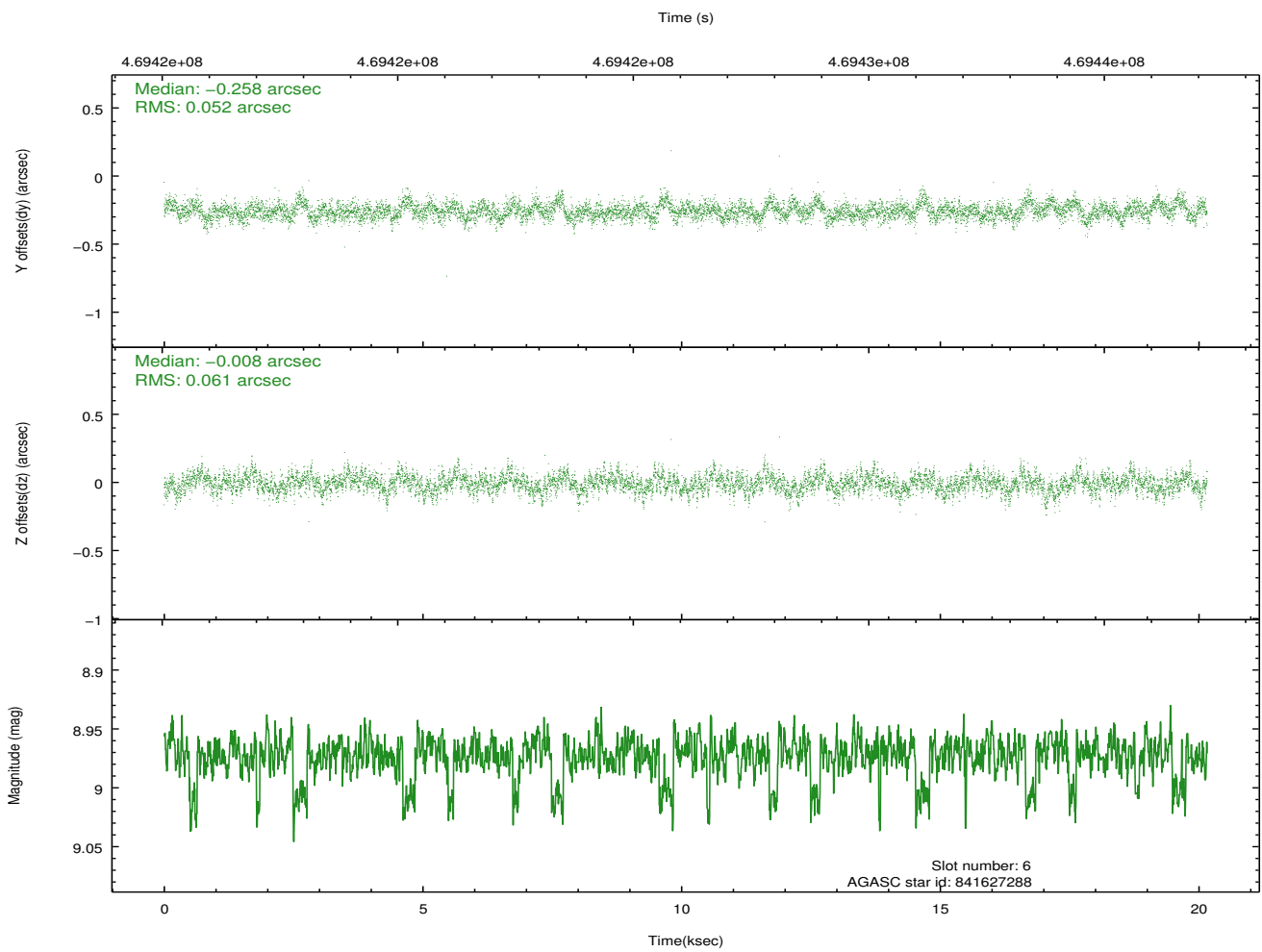
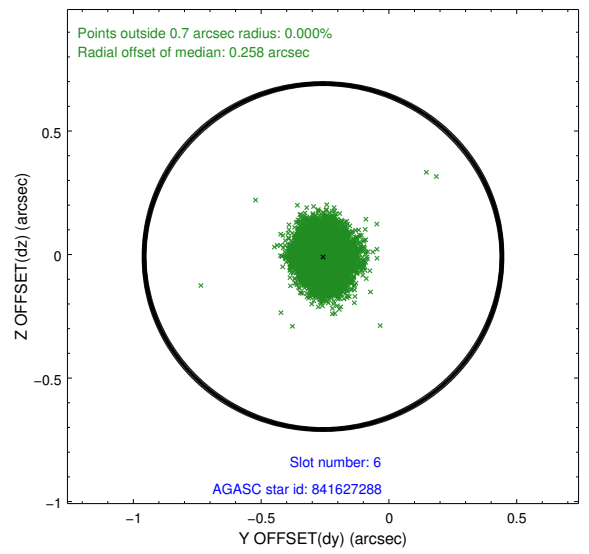
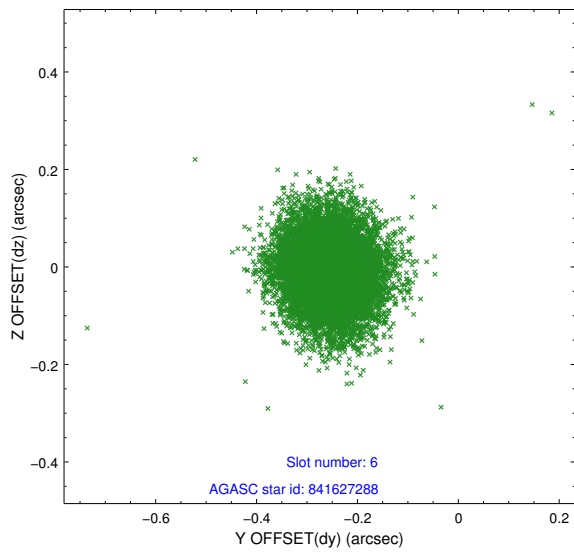
2.4.2 Slot 4



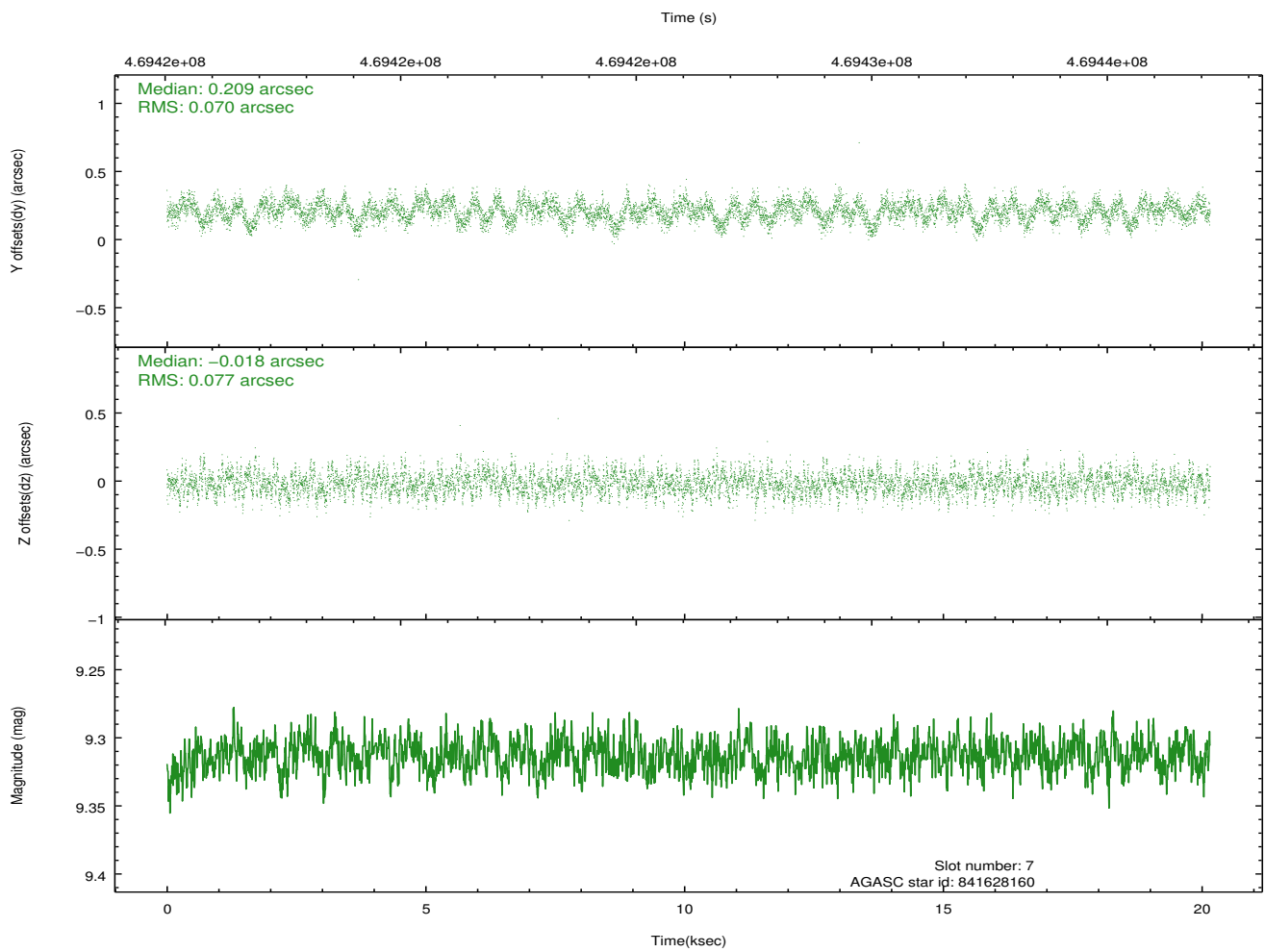
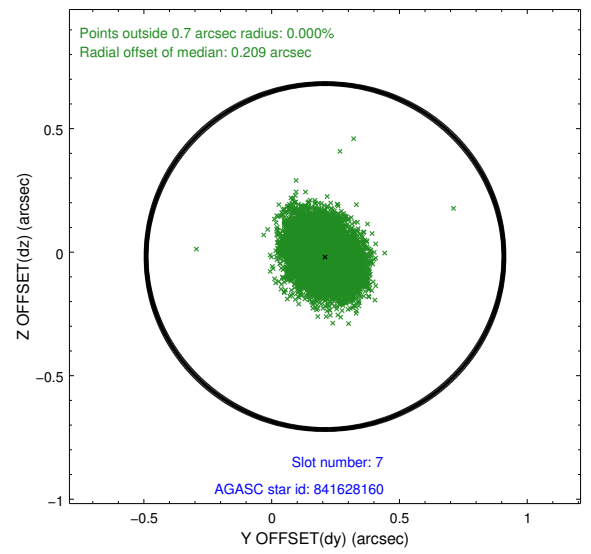
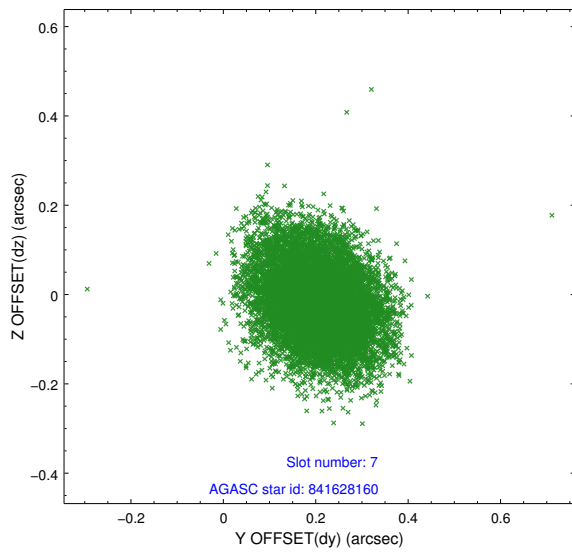
2.4.3 Slot 5



2.4.4 Slot 6

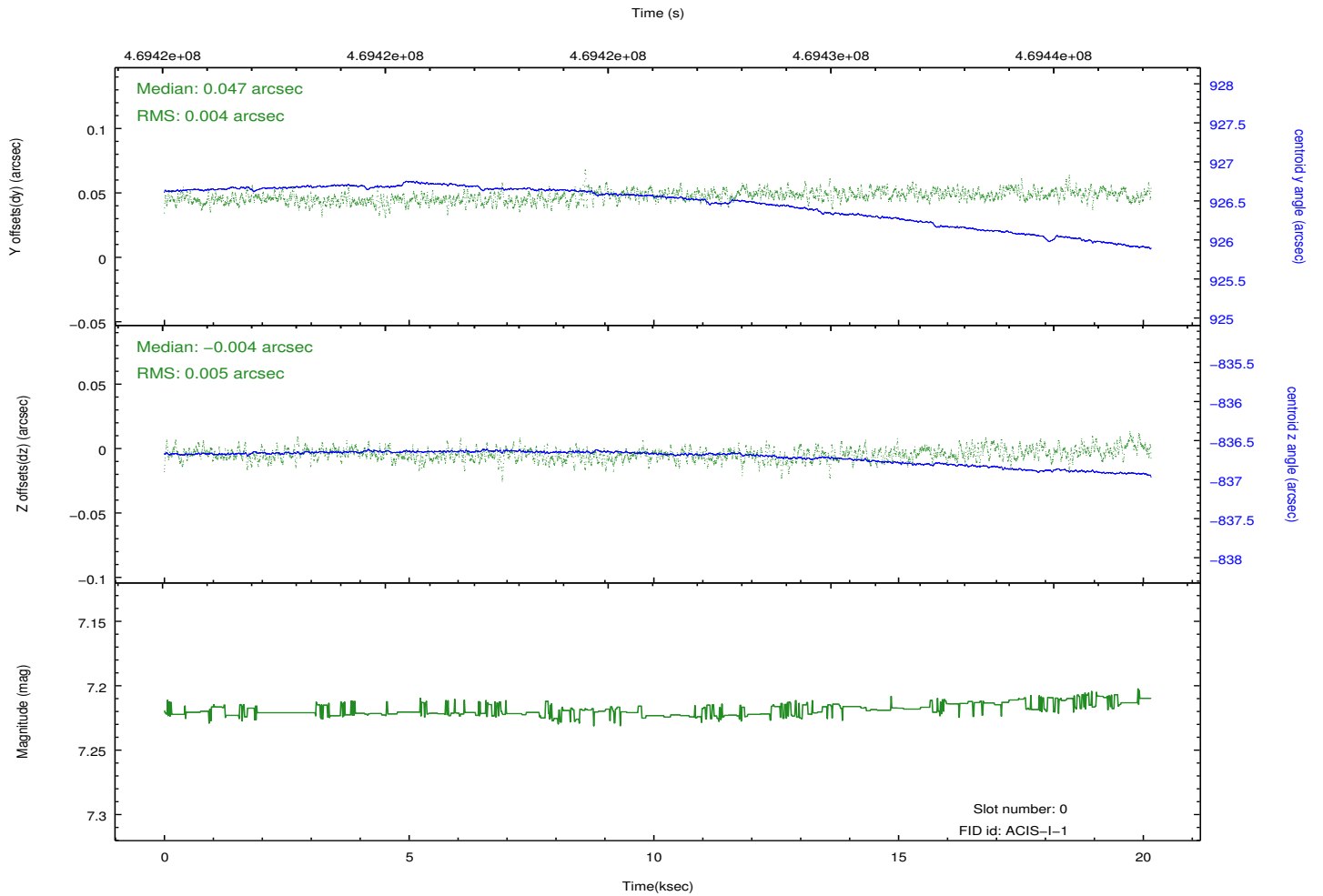
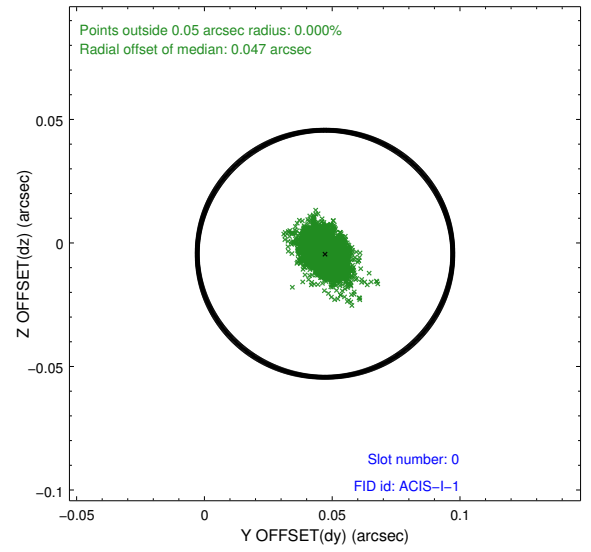
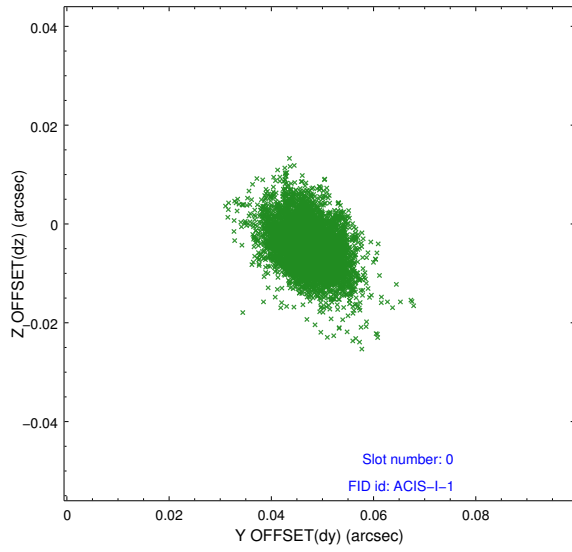


2.4.5 Slot 7

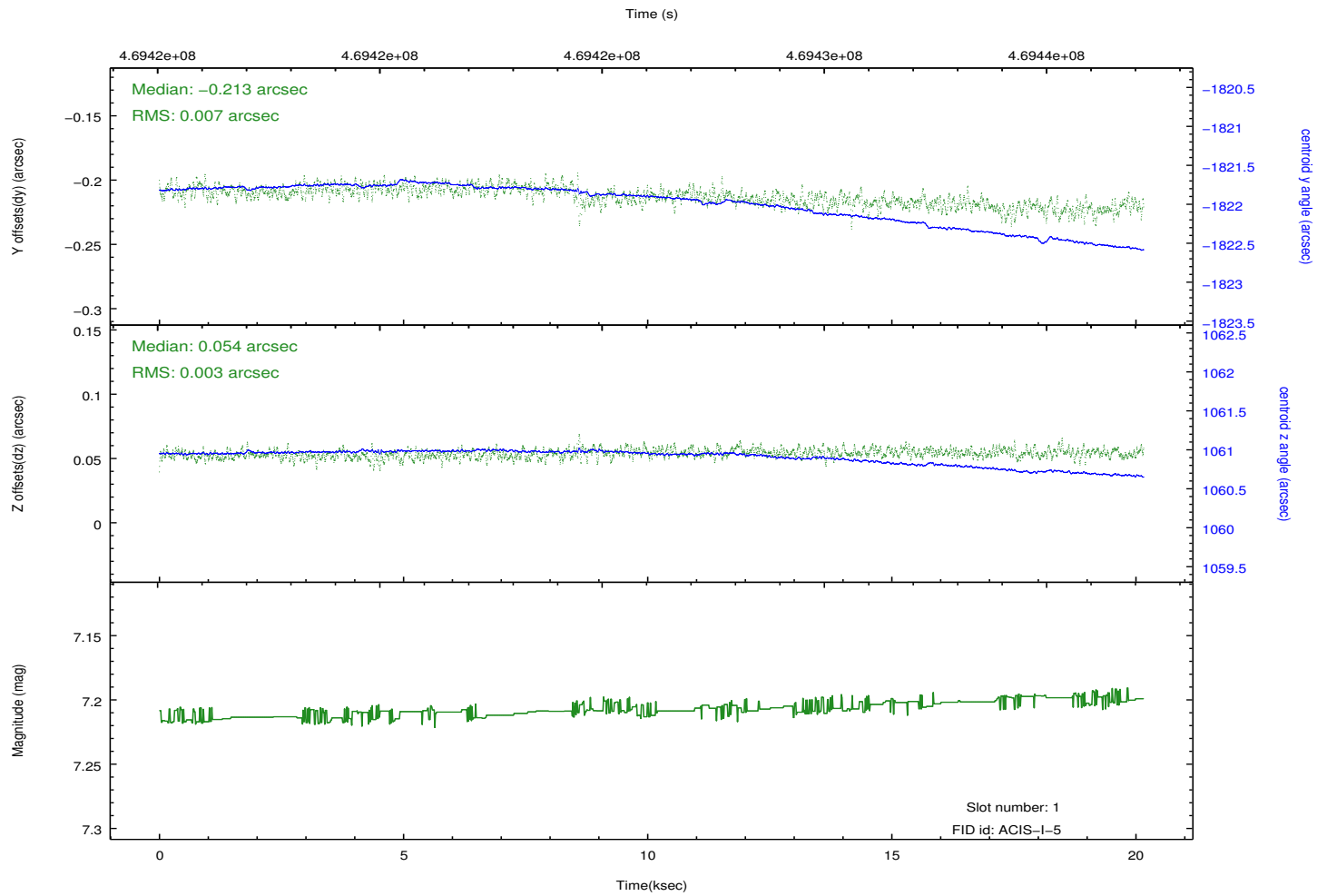
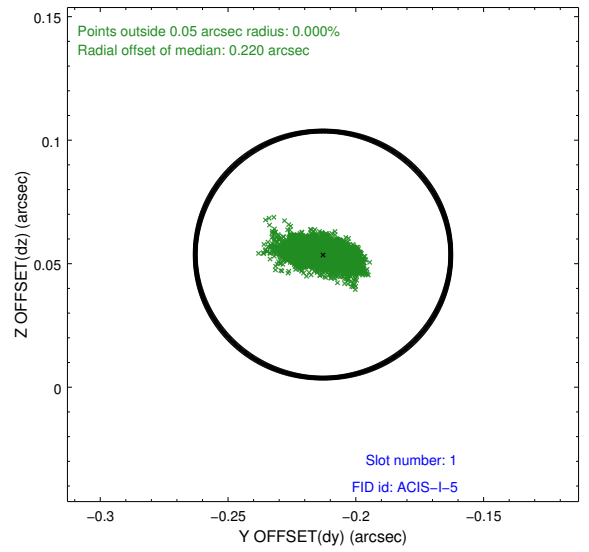
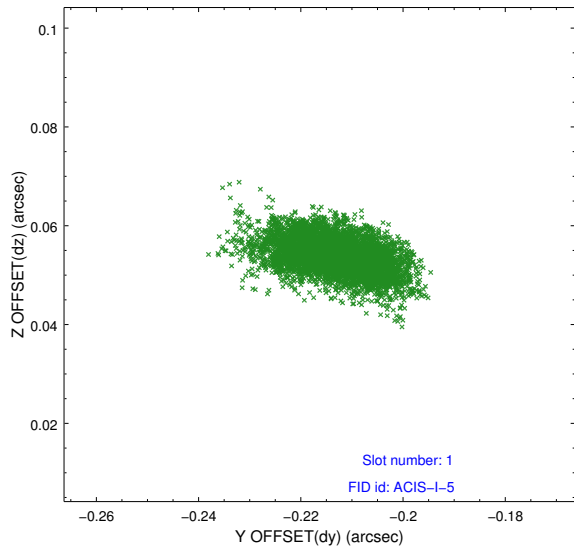


2.5 FID Slots

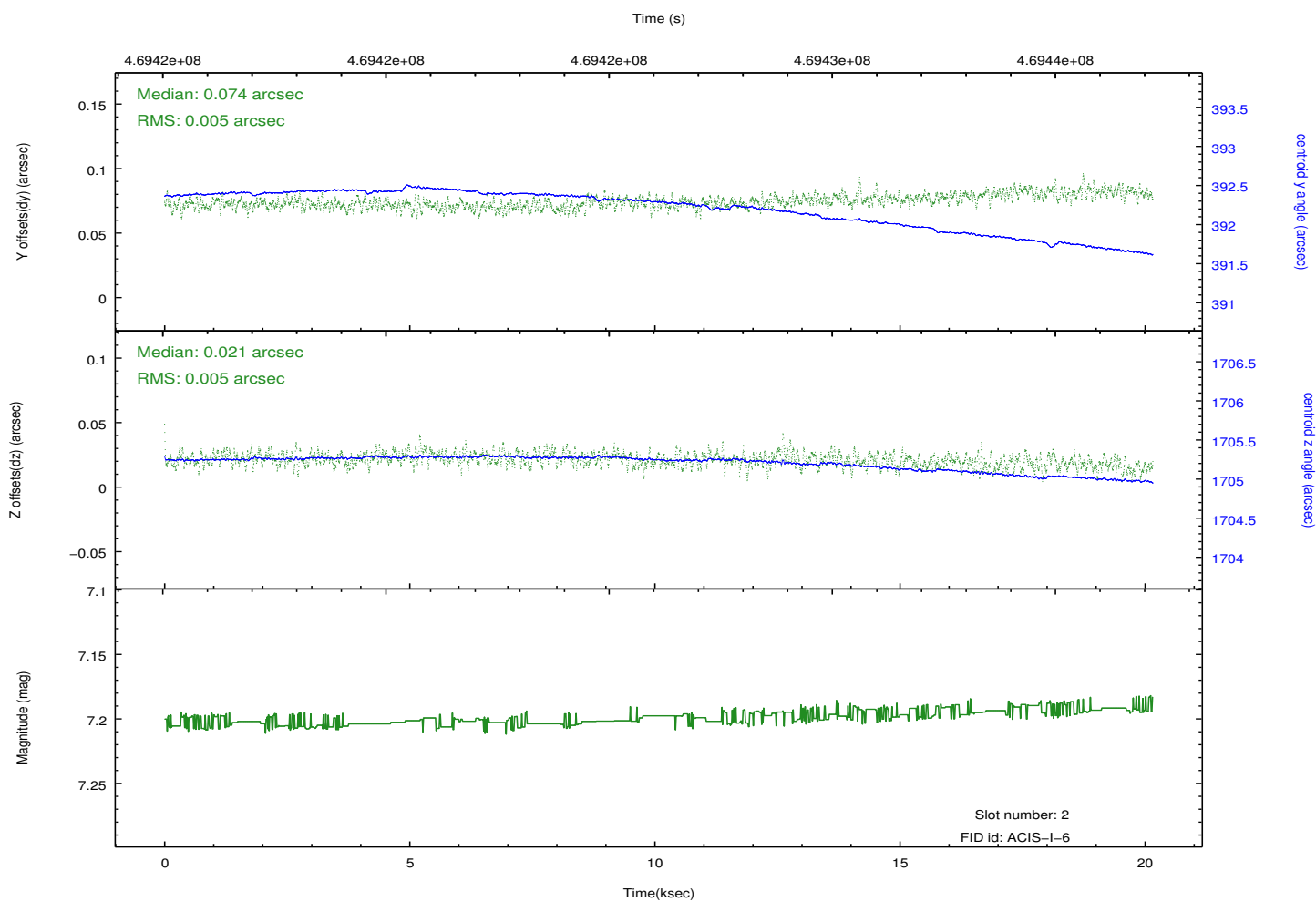
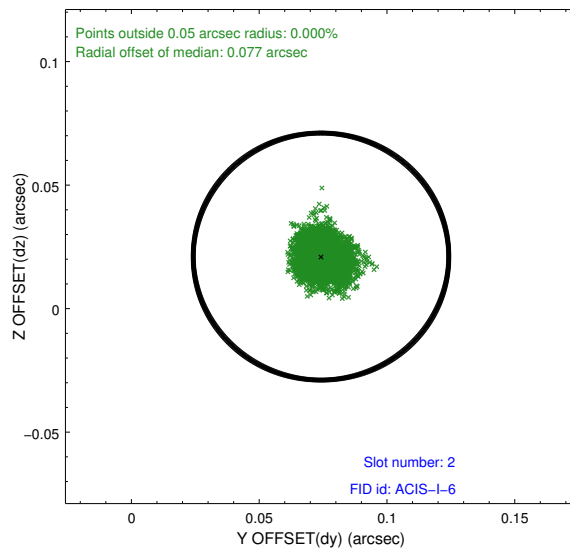
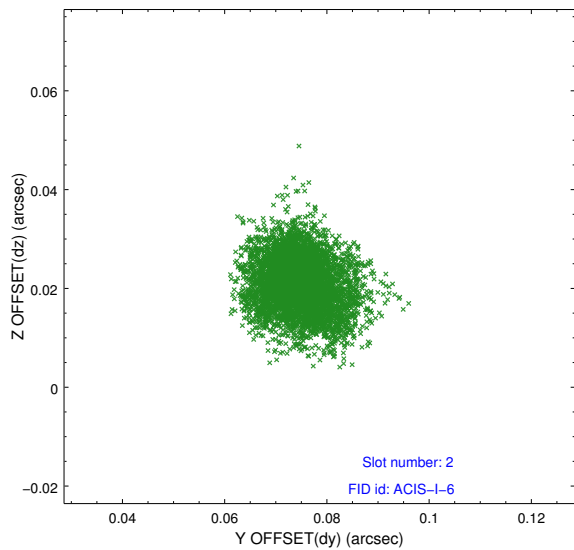
2.5.1 Slot 0



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)	2014.12.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	19.971199925661

A.2 Comments

Joint proposal with NRAO.

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.