

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 12559 - L2 Version 5
Chandra X-Ray Center

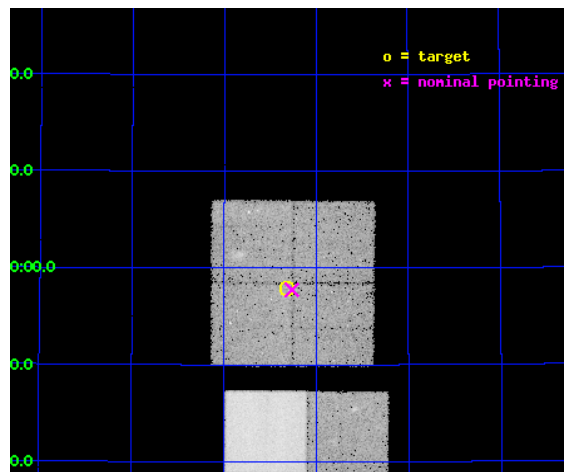
L2 Processing Date : Jul 25 2012

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1 Front

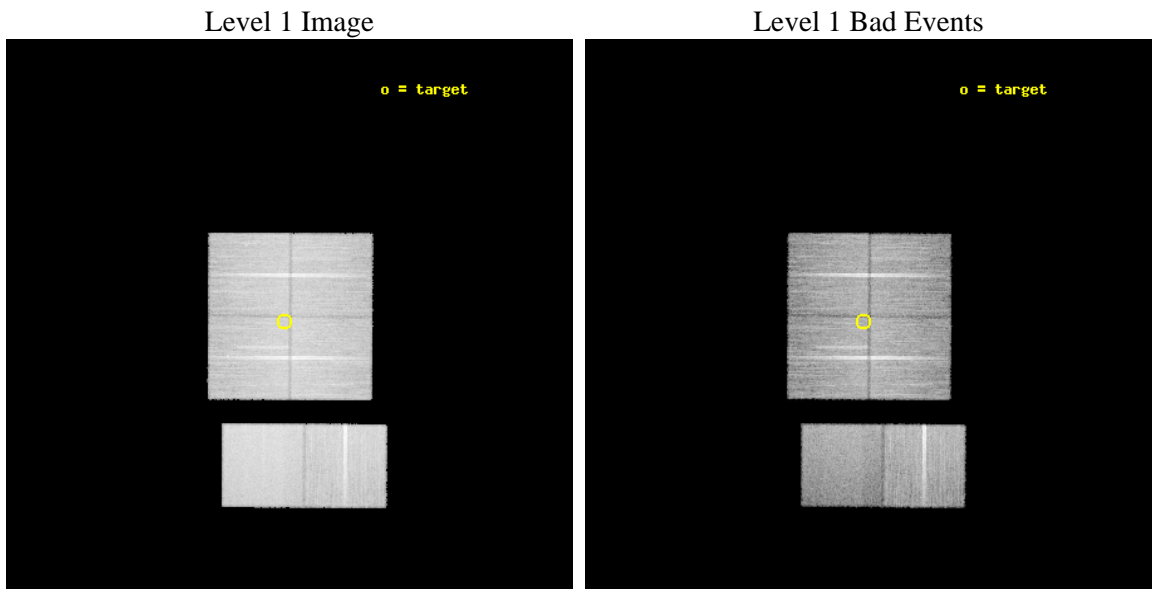
seq_num	501392	Sequence number
obs_id	12559	Observation id
title	X-ray Observations of the Optically Discovered Galactic Supernova Remnant G159.6+7.3	Proposal title
observer	Robert Fesen	Principal investigator
object	G159.6+7.3	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.577917	Observer's specified target RA [deg]
dec_targ	49.965	Observer's specified target Dec [deg]
ra_nom	83.56592671095	Nominal RA [deg]
dec_nom	49.962539423564	Nominal Dec [deg]
roll_nom	180.34437528996	Nominal Roll [deg]
revision	5	Processing version of data
ontime	29746.812679708	Sum of GTIs [s]
livetime	29370.140626177	Livetime [s]
ontime0	29753.171670139	Sum of GTIs [s]
ontime1	29753.212710142	Sum of GTIs [s]
ontime2	29753.253740072	Sum of GTIs [s]
ontime3	29746.812679708	Sum of GTIs [s]
ontime6	29753.376870155	Sum of GTIs [s]
ontime7	29753.335830152	Sum of GTIs [s]
l2events	202829	Number of level 2 events



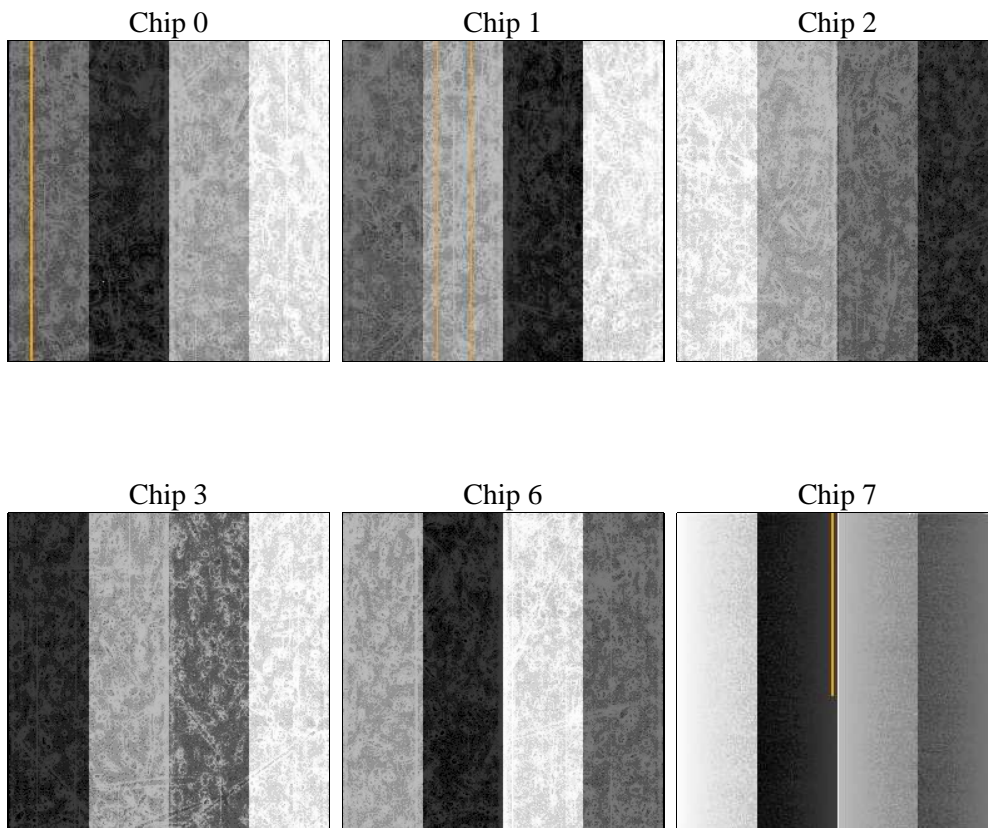
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	29746.812679708	Sum of GTIs [s]
caldbver	4.5.1	 	ontime0	29753.171670139	Sum of GTIs [s]
date	2012-07-25T16:25:08	Date and time of file creation	ontime1	29753.212710142	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	29753.253740072	Sum of GTIs [s]
			ontime3	29746.812679708	Sum of GTIs [s]
			ontime6	29753.376870155	Sum of GTIs [s]
			ontime7	29753.335830152	Sum of GTIs [s]
			l1events	1245573	Number of level 1 events

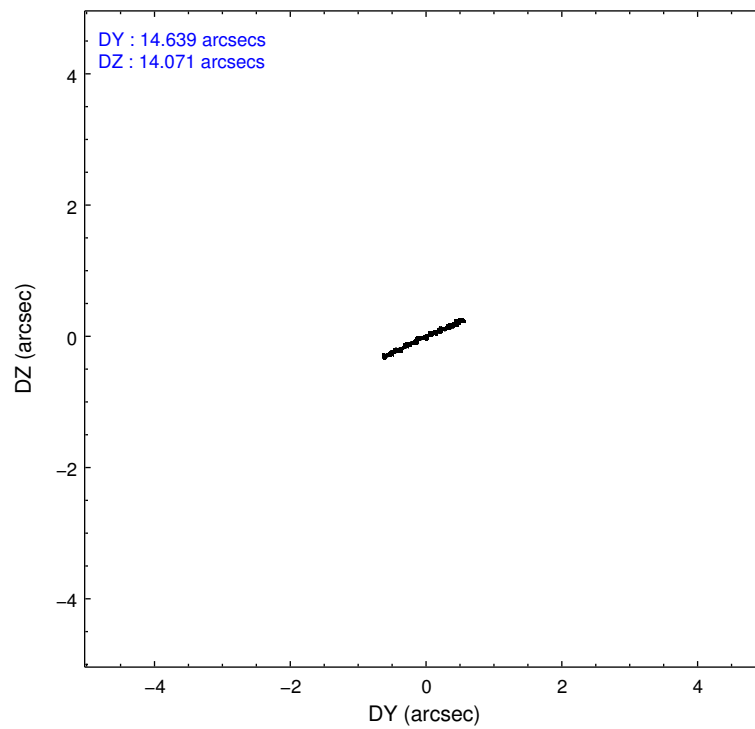
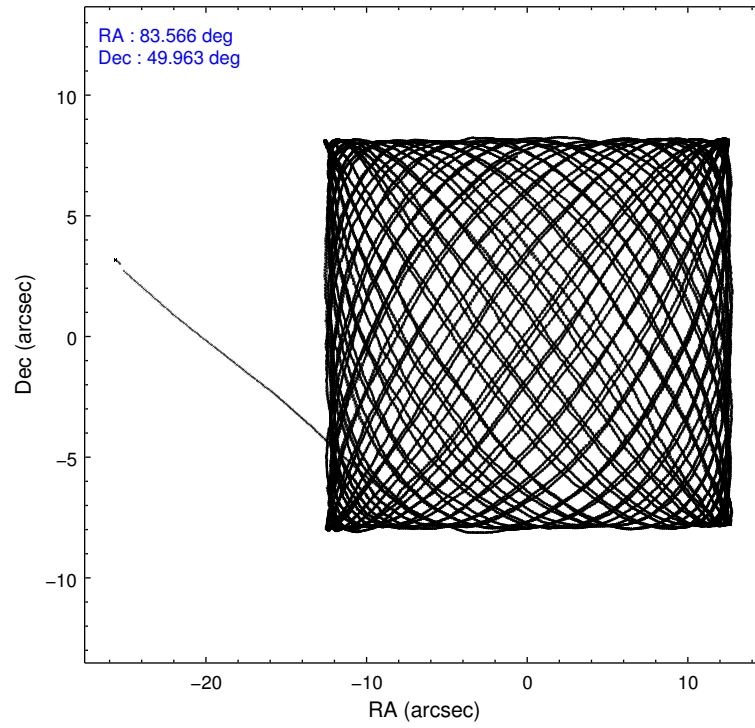
2.1.4 Events

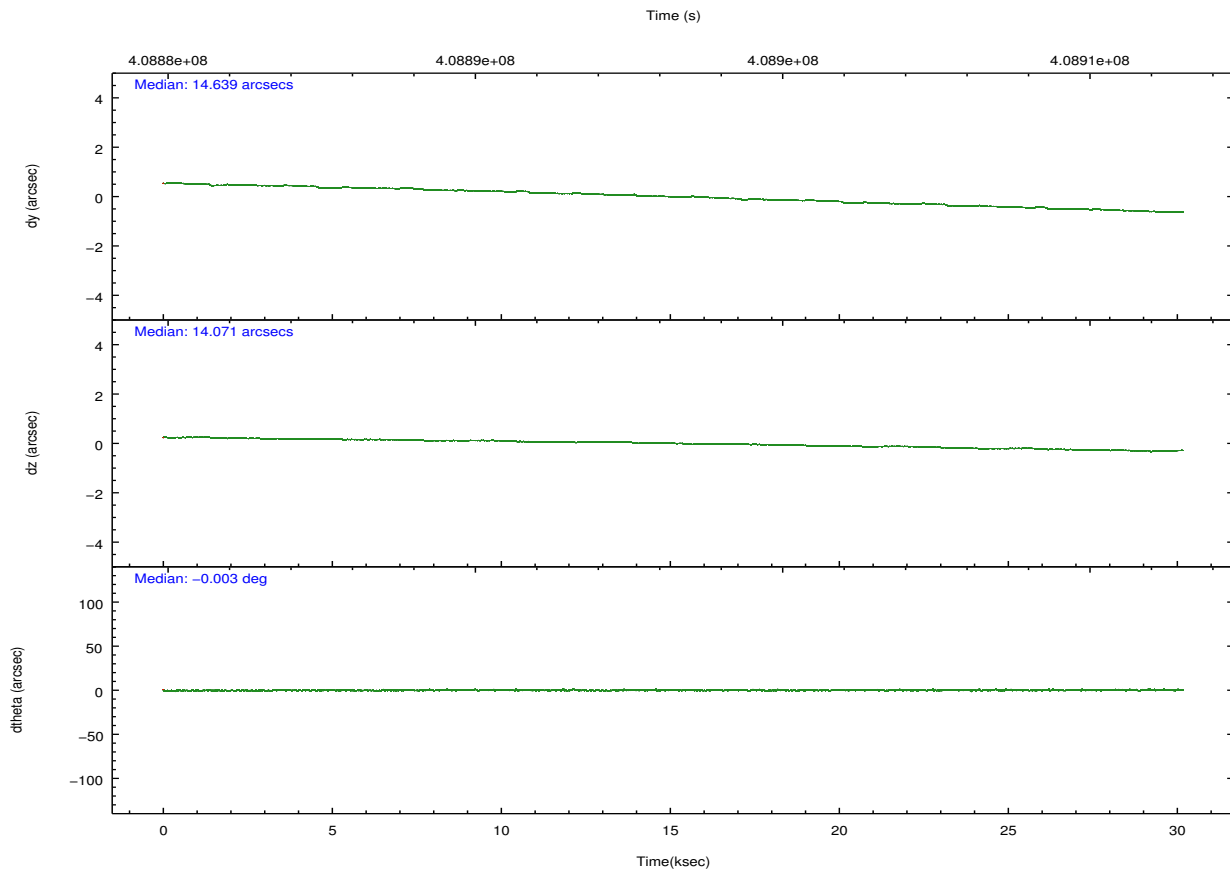
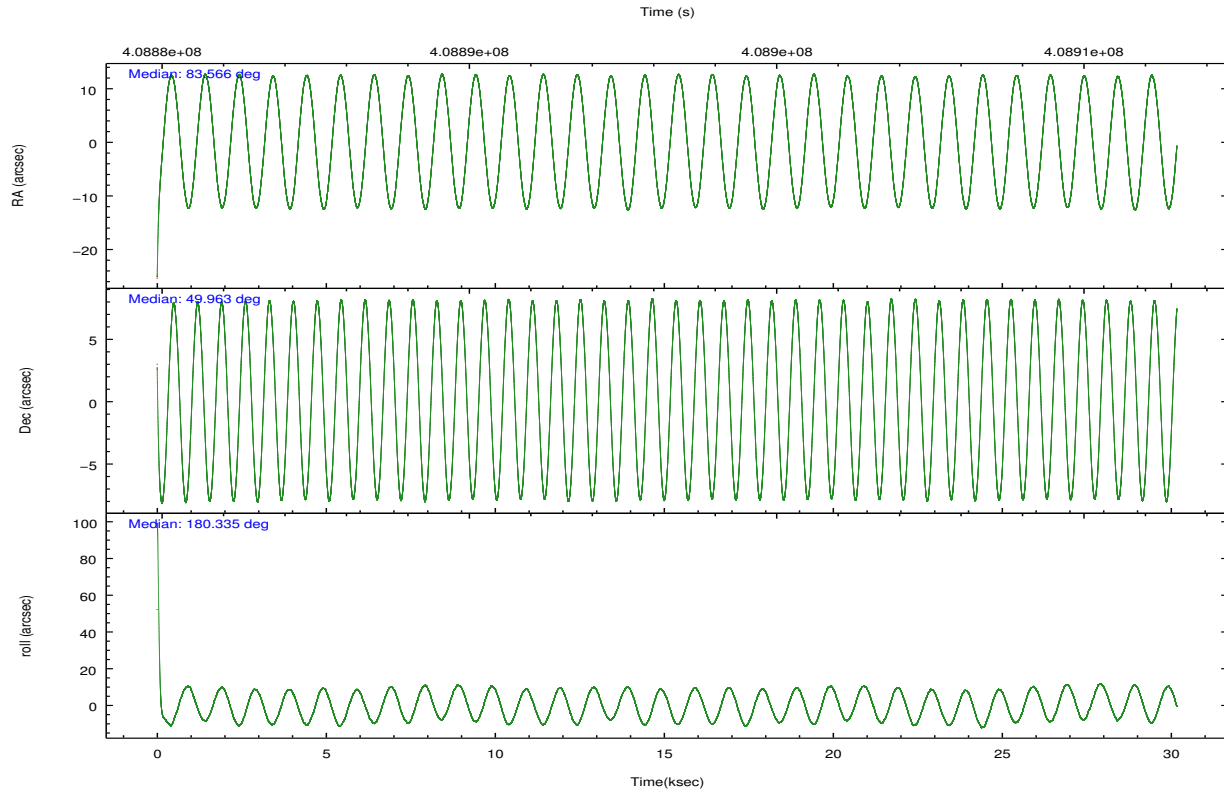
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	185881	190797	204329	197875	215450	251241	grade 0 events	7319	9046	7699	7564	7998	9623
rejected events	164115	166344	182928	176716	192406	139909		3%	4%	3%	3%	3%	3%
rejected %	88%	87%	89%	89%	89%	55%	grade 1 events	105	110	121	114	105	282
								0%	0%	0%	0%	0%	0%
							grade 2 events	5230	5316	5019	4596	5213	22902
								2%	2%	2%	2%	2%	9%
							grade 3 events	2421	2451	2225	2306	2350	9667
								1%	1%	1%	1%	1%	3%
							grade 4 events	2298	2427	2305	2313	2269	9382
								1%	1%	1%	1%	1%	3%
							grade 5 events	8545	8666	7879	9209	9314	25748
								4%	4%	3%	4%	4%	10%
							grade 6 events	4504	5223	4158	4389	5219	59778
								2%	2%	2%	2%	2%	23%
							grade 7 events	155459	157558	174923	167384	182982	113859
								83%	82%	85%	84%	84%	45%

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	83.602751	83.56592671094963	CCD I2 on	Y	Y
[deg] Pointing Dec	49.976537	49.96253942356388	CCD I3 on	Y	Y
[deg] Pointing Roll	180.107451	180.3443752899595	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)	408881510.184000	408879850.77803	CCD S5 on	N	N
Observation start date	2010-12-16T10:10:44	2010-12-16T09:44:10	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	408911510.184000	408912333.54221	On-chip summing requested	N	N
Observation end date	2010-12-16T18:30:44	2010-12-16T18:45:33	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



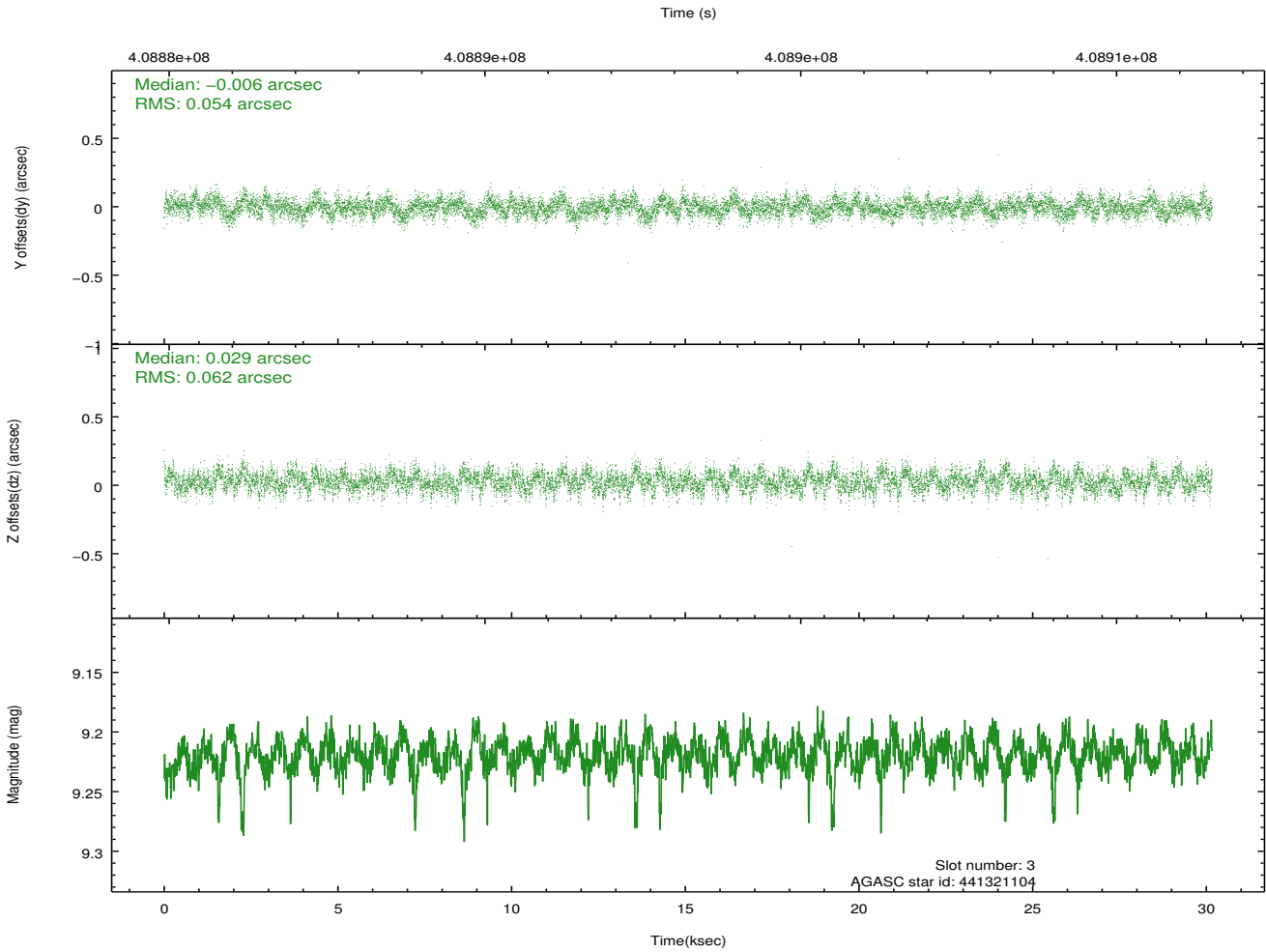
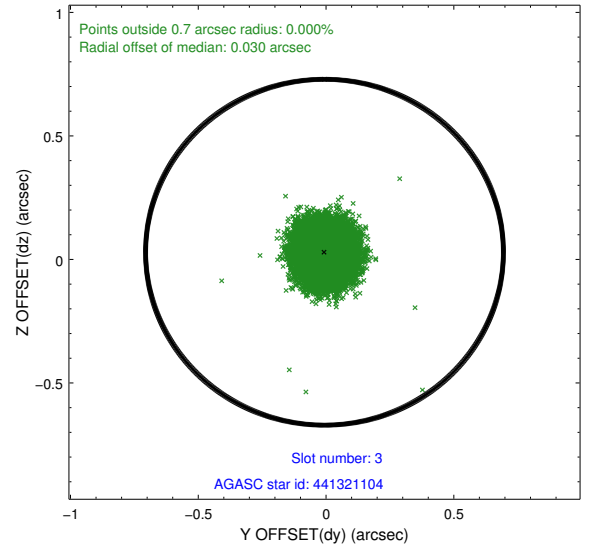
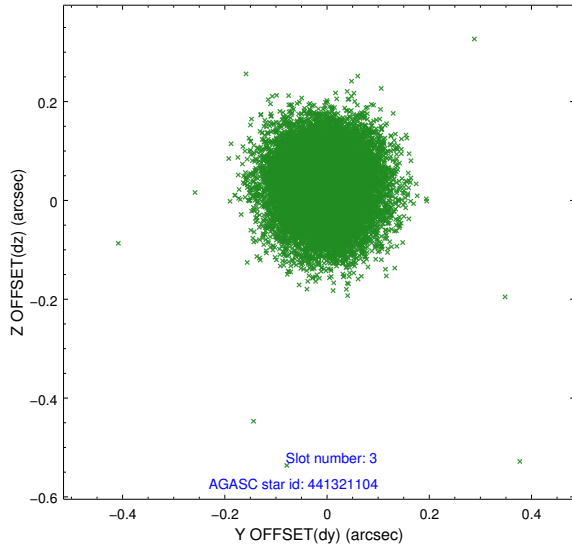


Slot Statistics

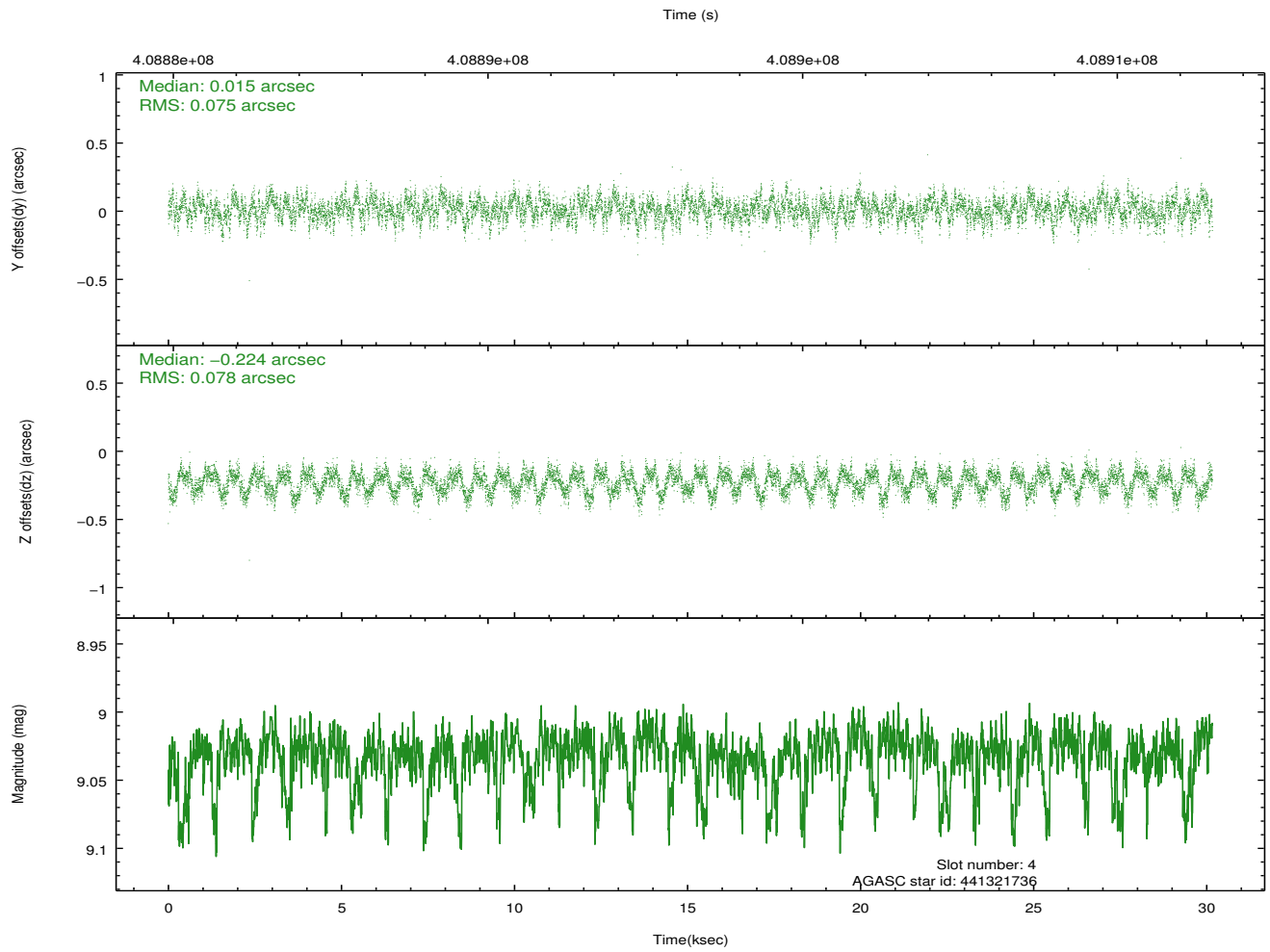
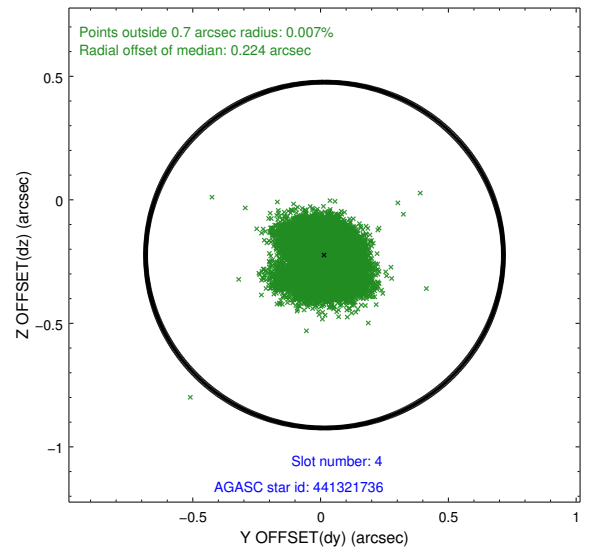
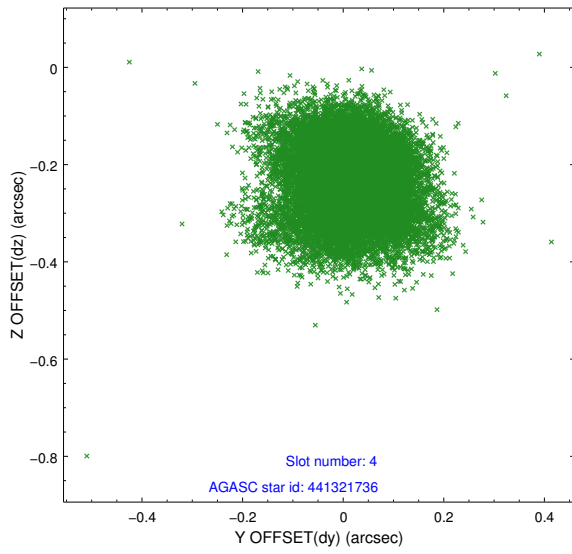
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.16	7359	0.050	-0.001	0.008	0.018	0.000000	0.000000	924.91	-837.61
1	FID	ACIS-I-5	7.15	7358	-0.241	0.049	0.008	0.016	0.000000	0.000000	-1823.48	1059.84
2	FID	ACIS-I-6	7.15	7359	0.101	0.022	0.009	0.016	0.000000	0.000000	390.38	1704.44
3	GUIDE	441321104	9.22	14707	-0.006	0.029	0.088	0.142	84.018530	50.061680	-961.08	-307.16
4	GUIDE	441321736	9.03	14655	0.015	-0.224	0.115	0.184	82.930124	50.373673	1542.39	-1439.03
5	GUIDE	441324280	7.82	14716	-0.073	0.642	0.075	0.118	83.233341	50.556983	841.72	-2092.26
6	GUIDE	441324576	9.12	14702	0.047	-0.224	0.086	0.137	83.075438	50.105611	1217.18	-471.06
7	GUIDE	441334184	8.52	14710	0.013	-0.213	0.070	0.115	84.072974	49.727979	-1092.29	893.36

2.4 Star Slots

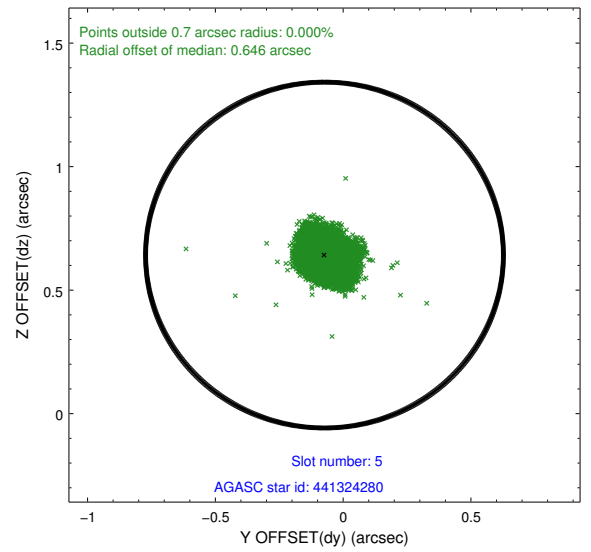
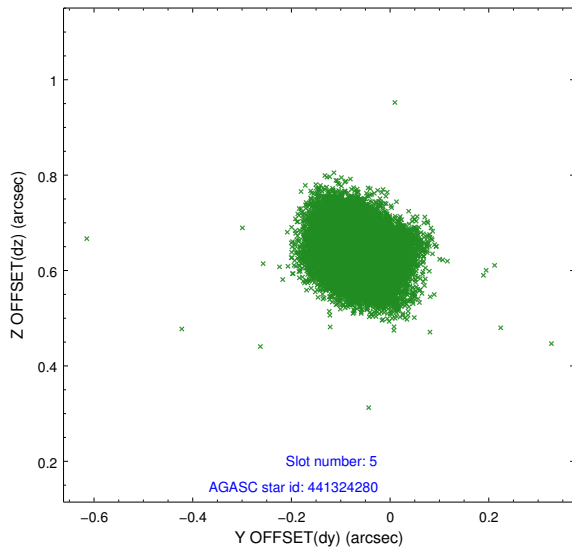
2.4.1 Slot 3



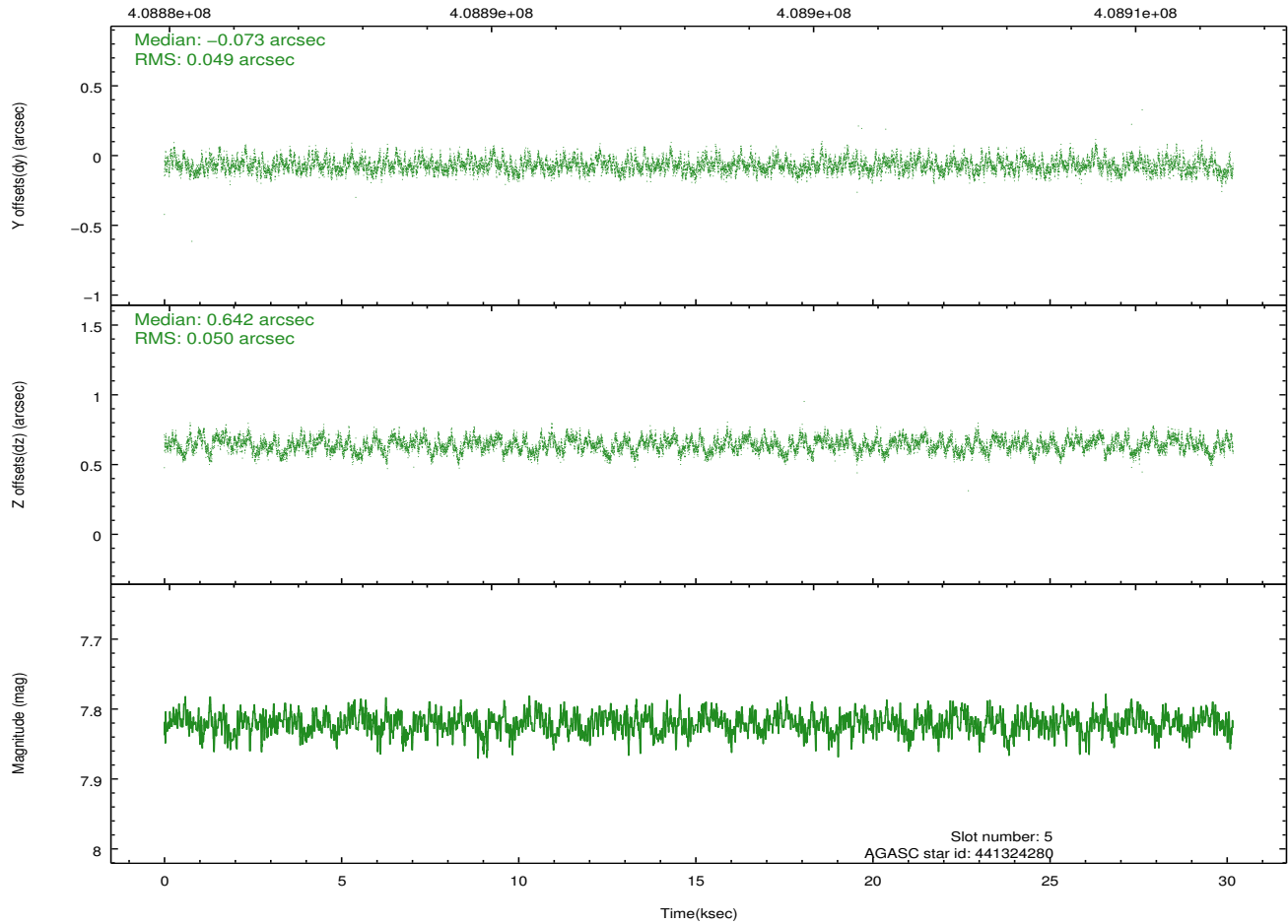
2.4.2 Slot 4



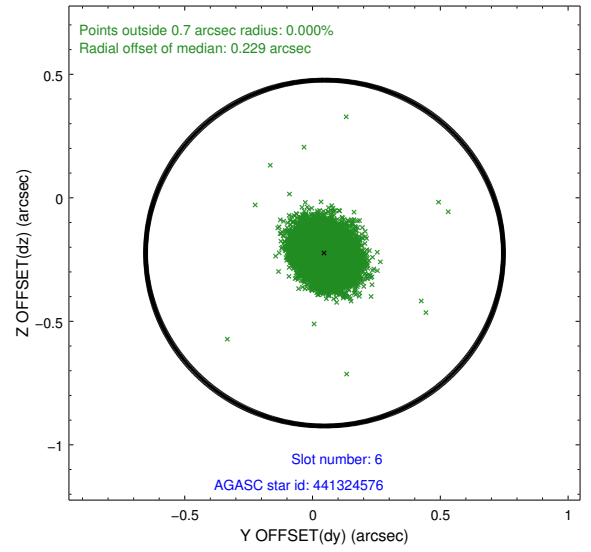
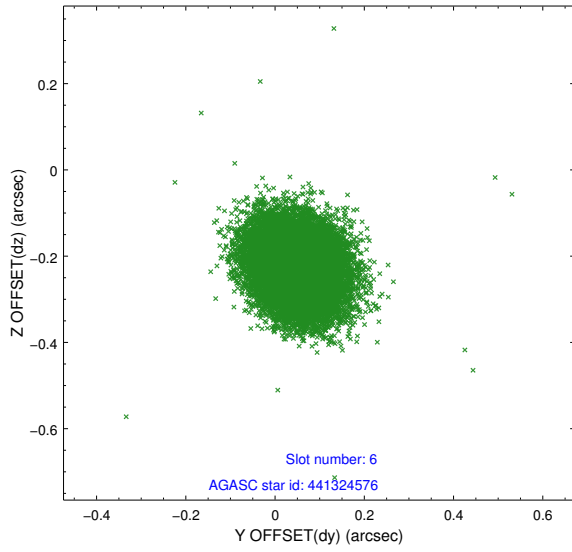
2.4.3 Slot 5



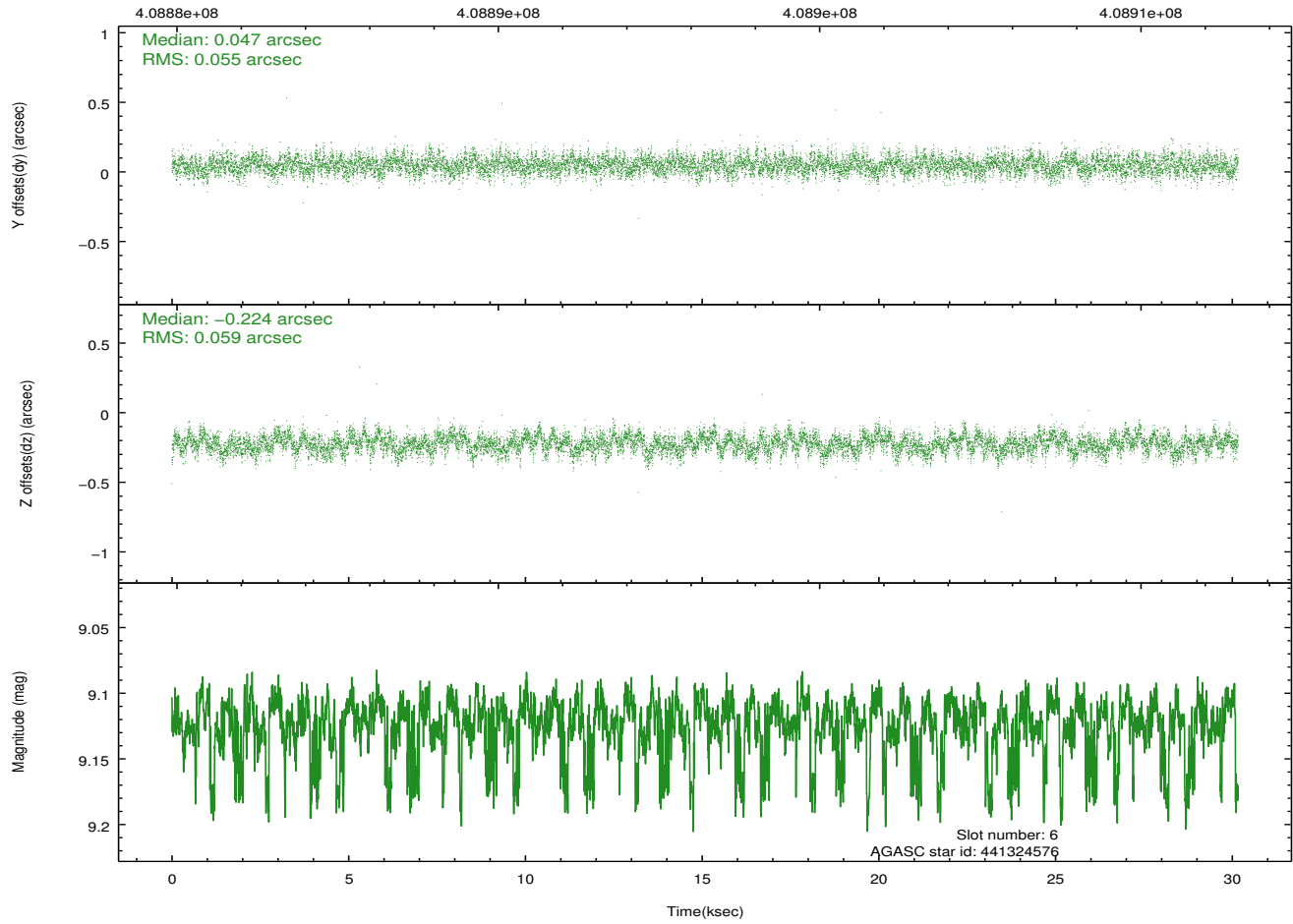
Time (s)



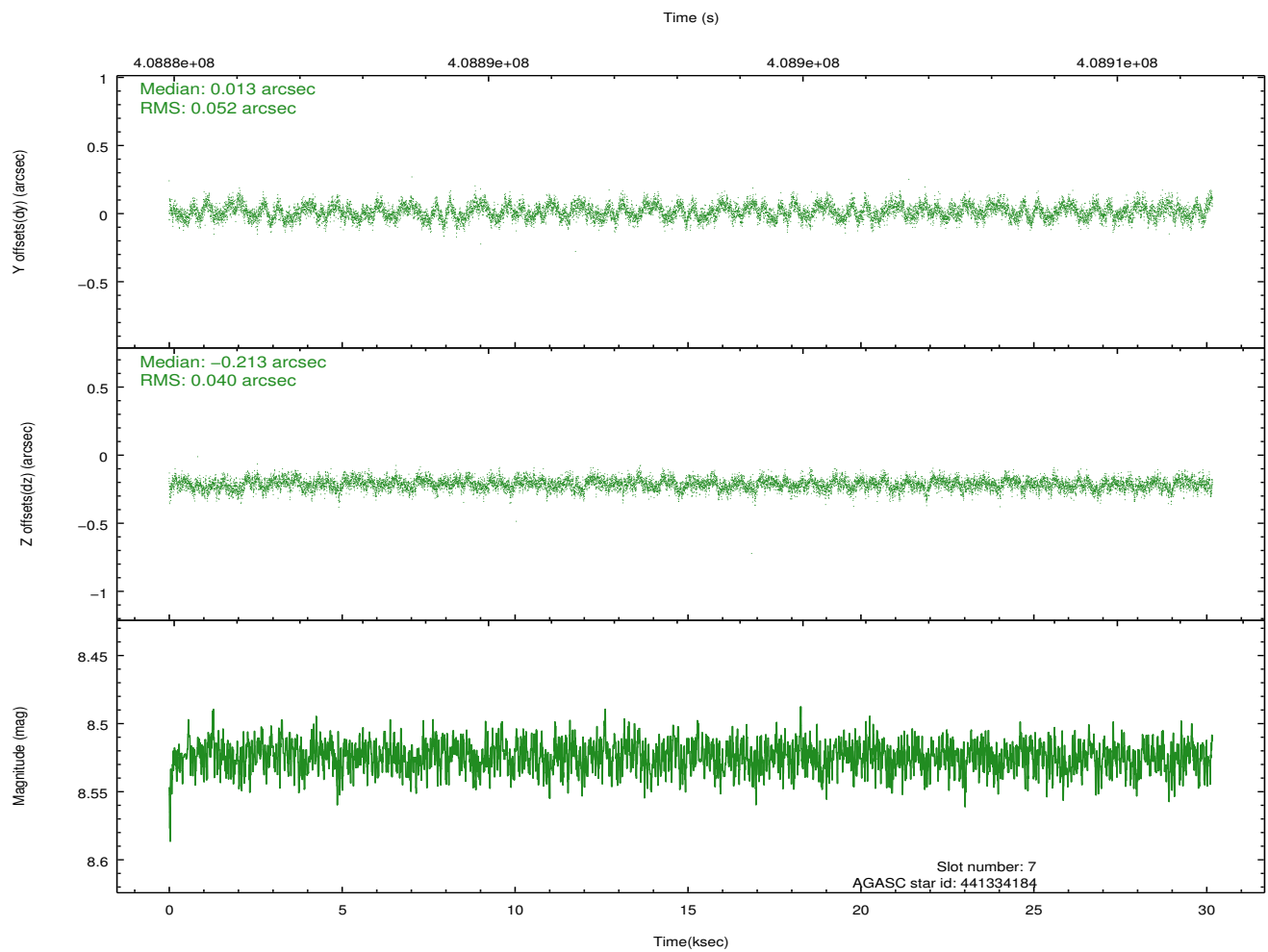
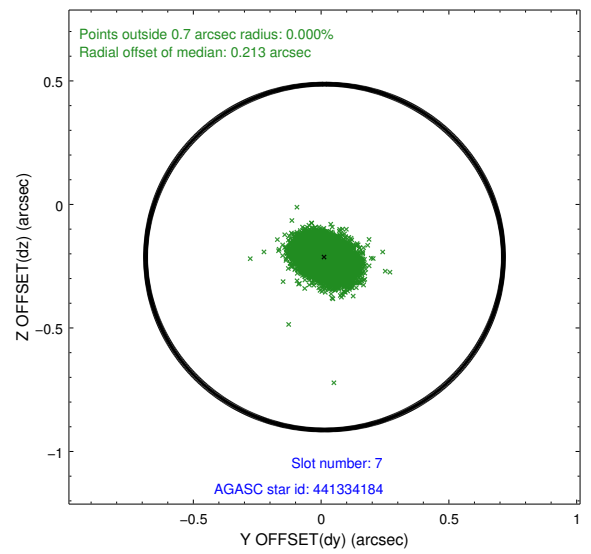
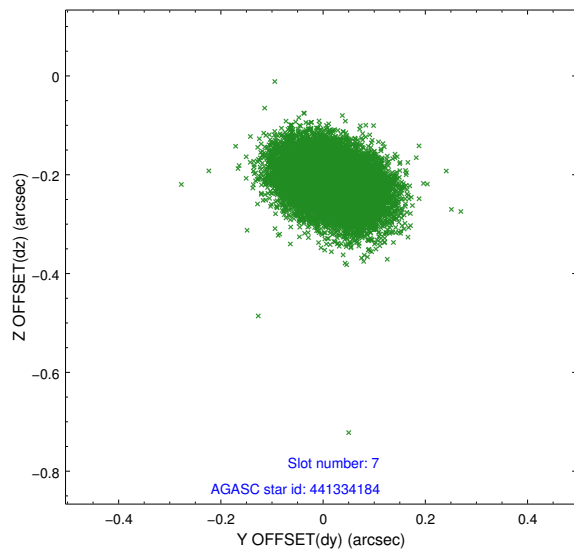
2.4.4 Slot 6



Time (s)

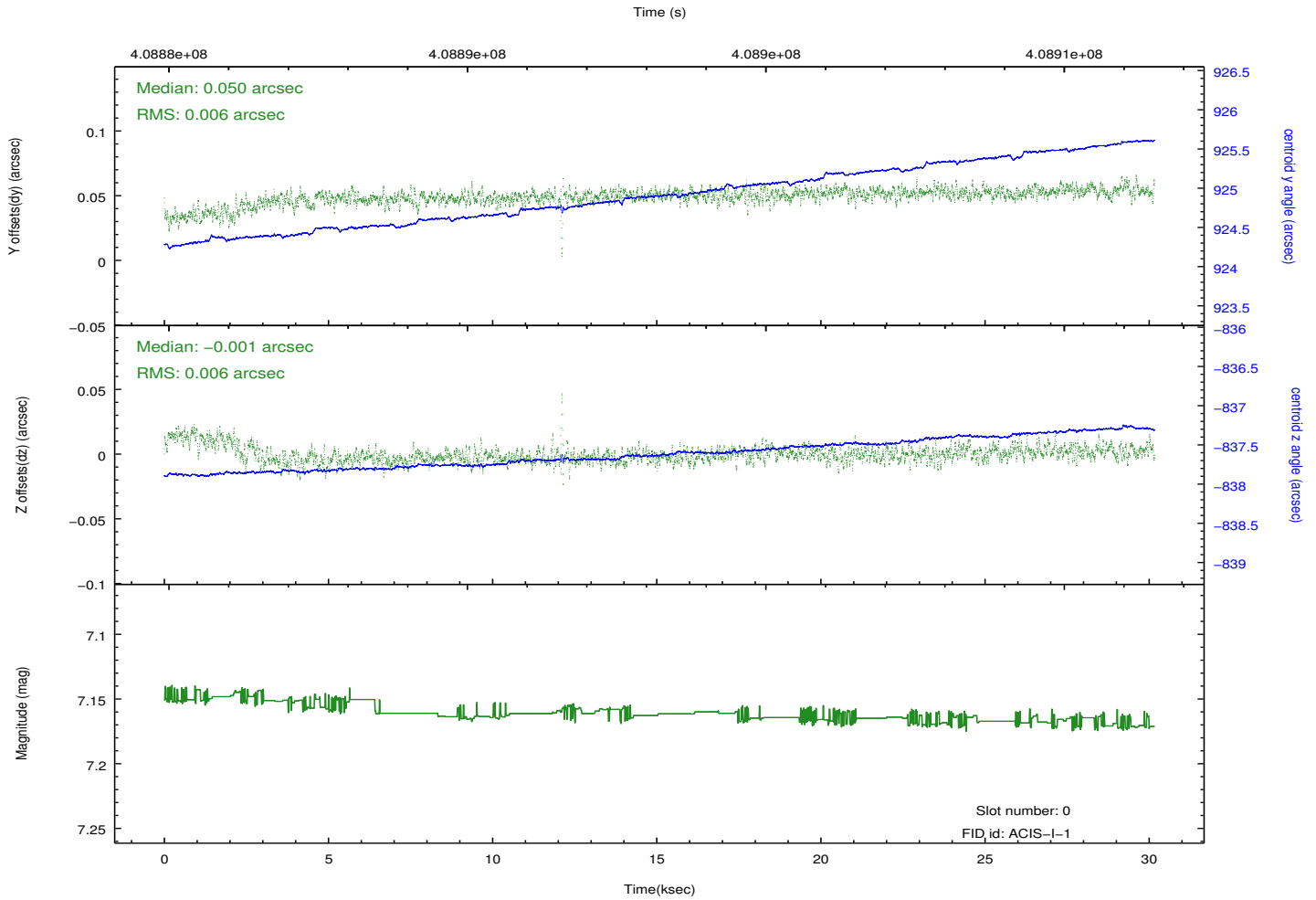
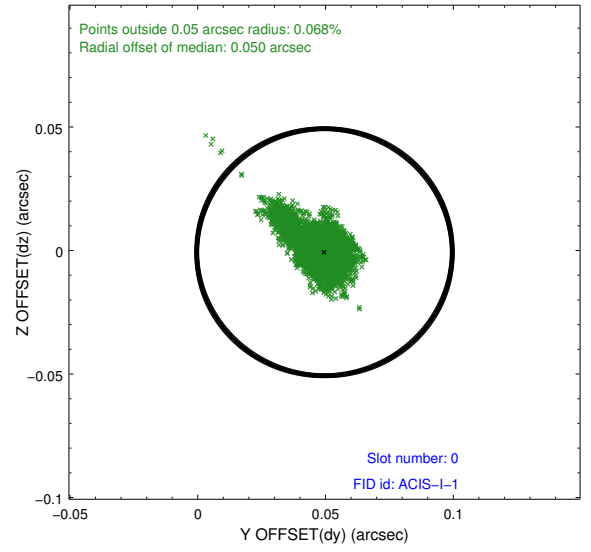
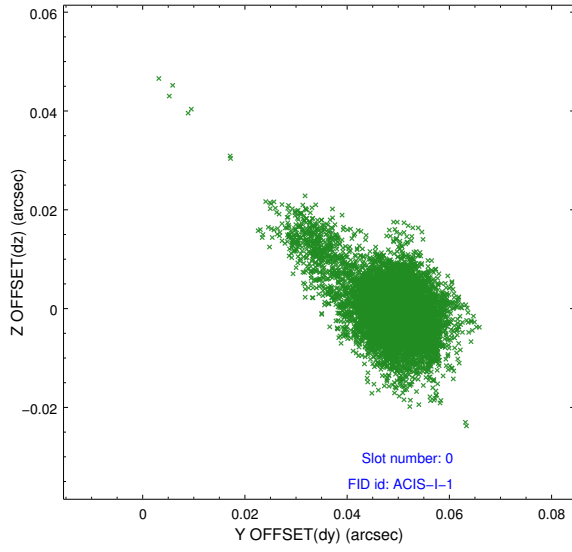


2.4.5 Slot 7

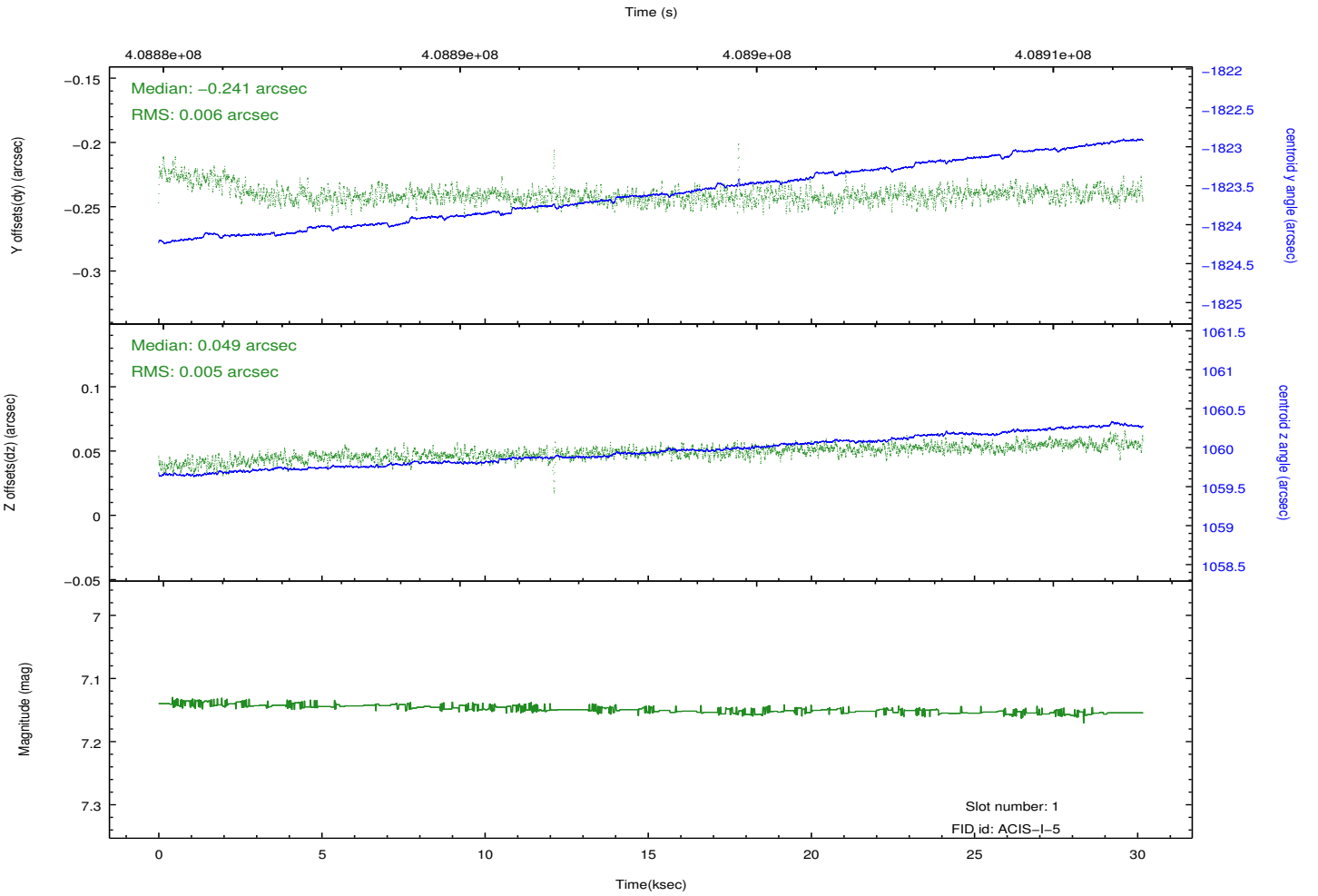
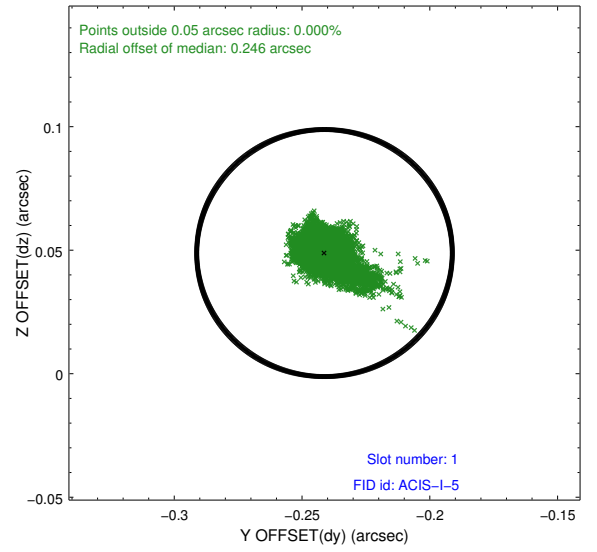
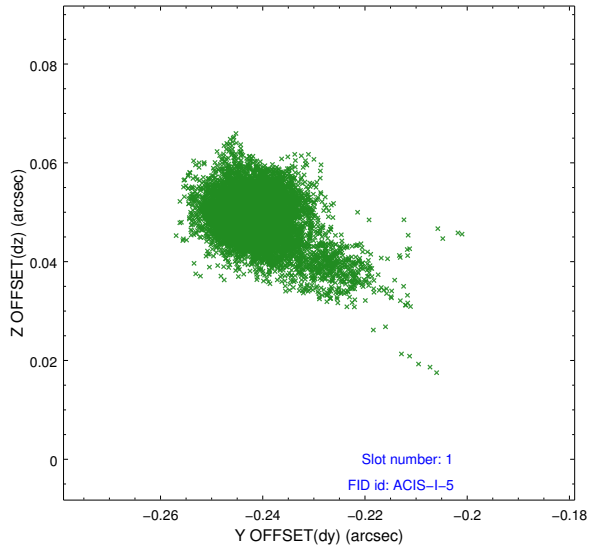


2.5 FID Slots

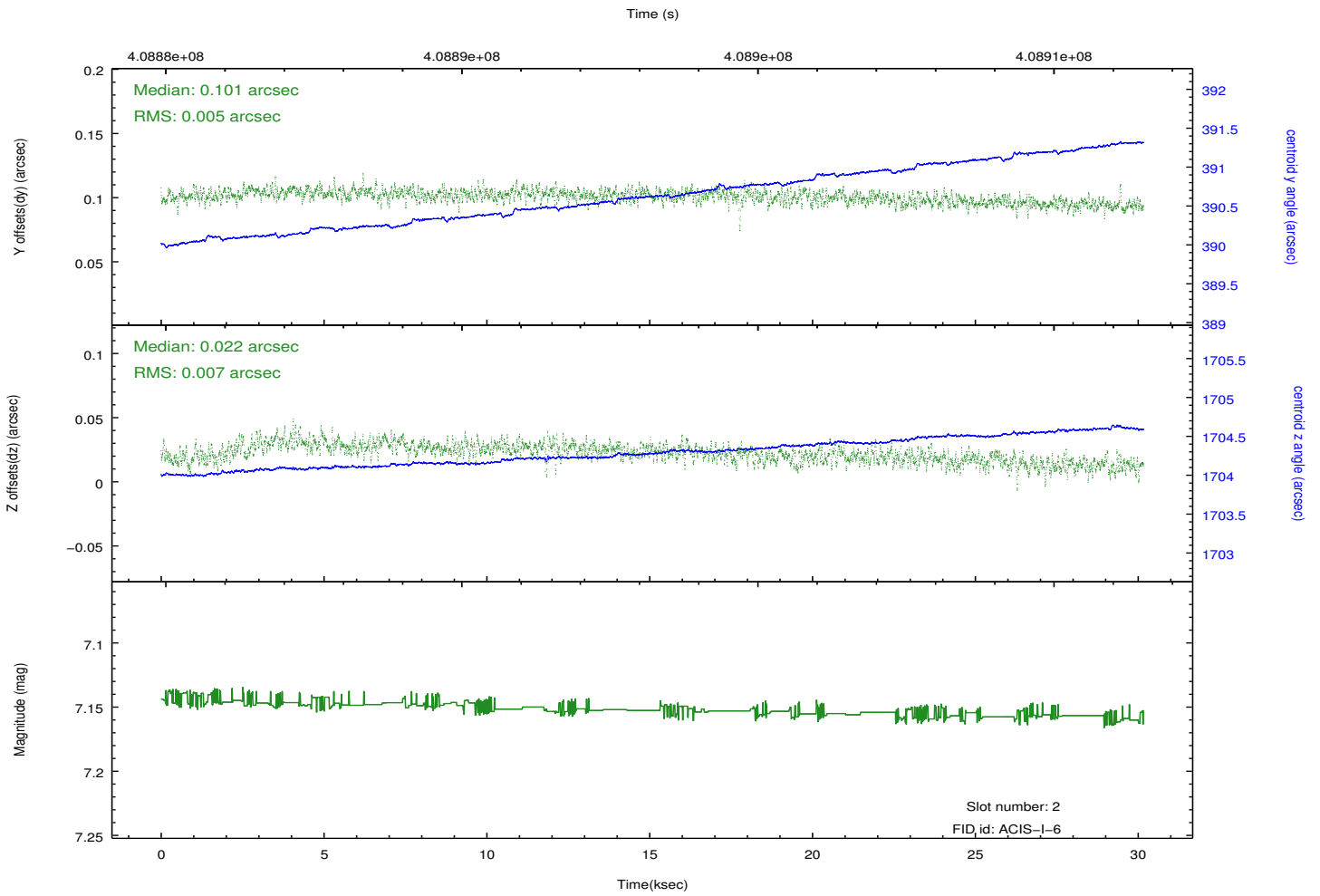
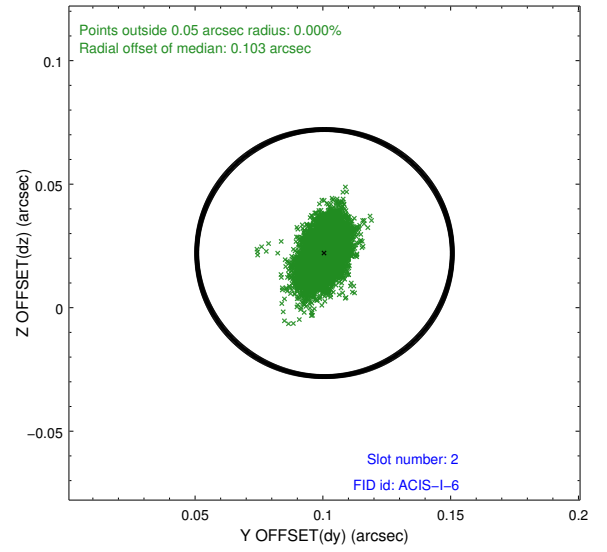
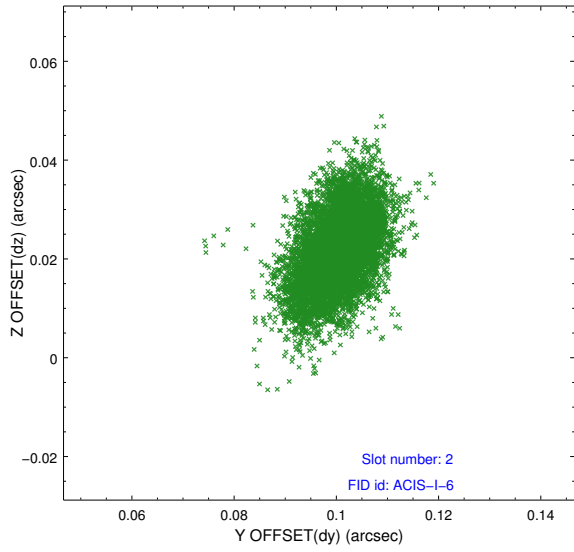
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.08.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	29.74681267941

A.2 Comments

A spatial region of the original bias map for CCD = 3 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 = 3 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:
(83.78299, 49.95707), (83.78298, 49.96280), (83.56619, 49.96216), (83.56623, 49.95643)