

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 10964 - L2 Version 4
Chandra X-Ray Center

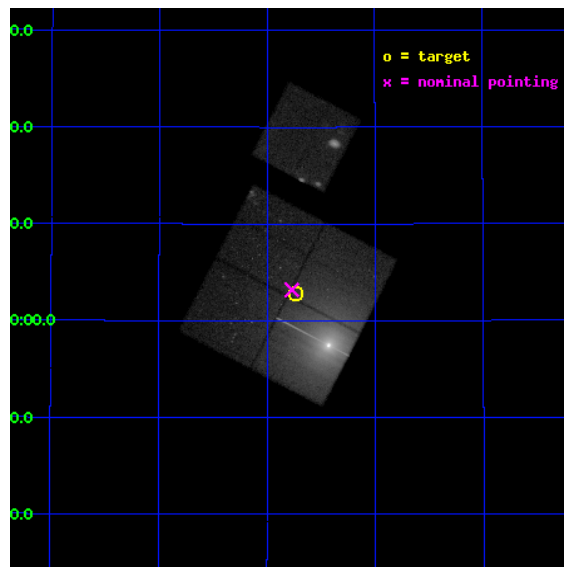
L2 Processing Date : Jun 22 2012

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1 Front

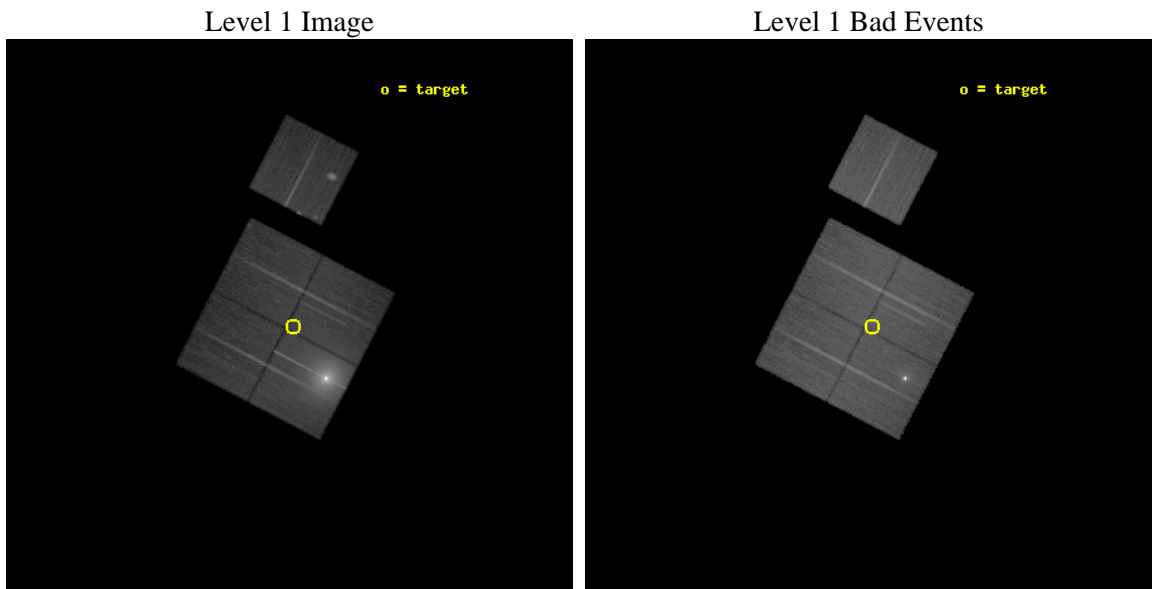
seq_num	200596	Sequence number
obs_id	10964	Observation id
title	The Chandra Cygnus OB2 Survey	Proposal title
observer	Dr. Jeremy Drake	Principal investigator
object	Cygnus OB2	Source name
dtycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	308.184879	Observer's specified target RA [deg]
dec_targ	41.047697	Observer's specified target Dec [deg]
ra_nom	308.19249920856	Nominal RA [deg]
dec_nom	41.053383666951	Nominal Dec [deg]
roll_nom	27.403683564938	Nominal Roll [deg]
revision	4	Processing version of data
ontime	30048.146911204	Sum of GTIs [s]
livetime	29655.545750685	Livetime [s]
ontime0	30044.882960379	Sum of GTIs [s]
ontime1	30048.064831197	Sum of GTIs [s]
ontime2	30038.682960153	Sum of GTIs [s]
ontime3	30048.146911204	Sum of GTIs [s]
ontime6	30047.982751191	Sum of GTIs [s]
l2events	811236	Number of level 2 events



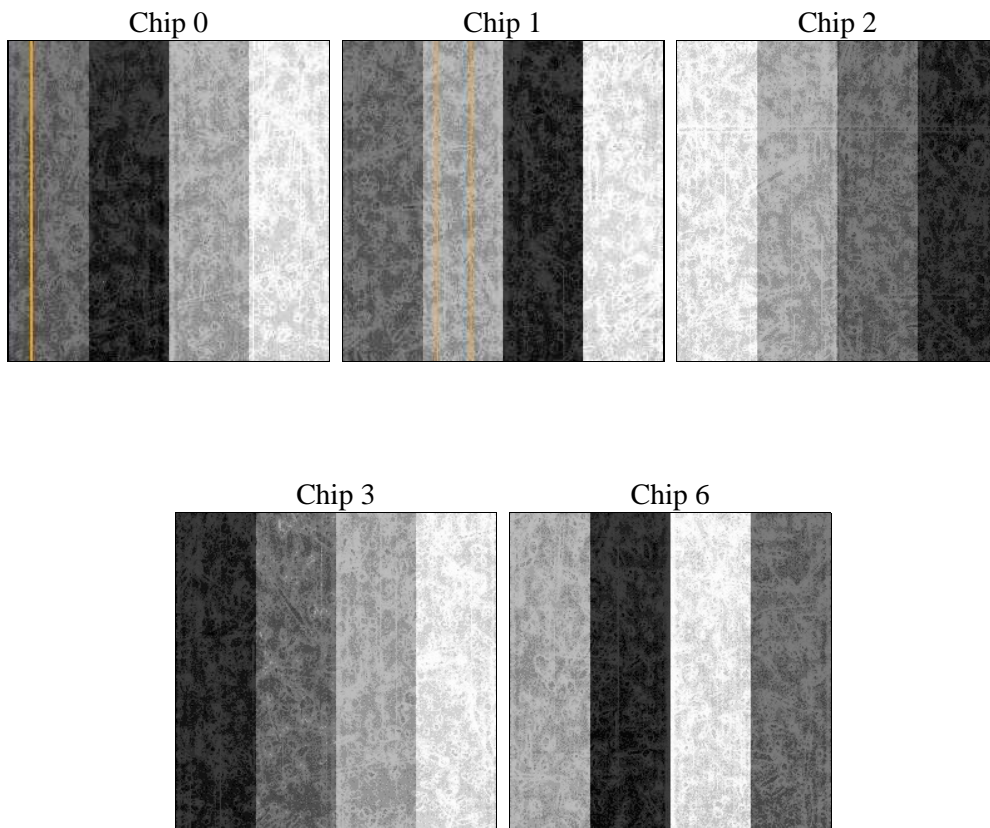
2 OBI

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	30048.146911204	Sum of GTIs [s]
caldbver	4.4.10	 	ontime0	30044.882960379	Sum of GTIs [s]
date	2012-06-22T04:19:51	Date and time of file creation	ontime1	30048.064831197	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	30038.682960153	Sum of GTIs [s]
			ontime3	30048.146911204	Sum of GTIs [s]
			ontime6	30047.982751191	Sum of GTIs [s]
			l1events	1998081	Number of level 1 events

2.1.4 Events

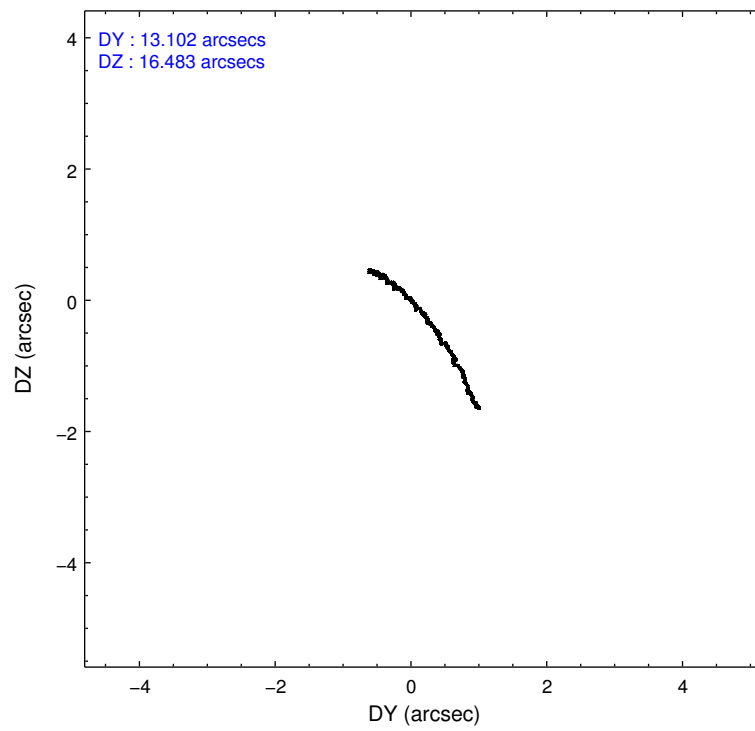
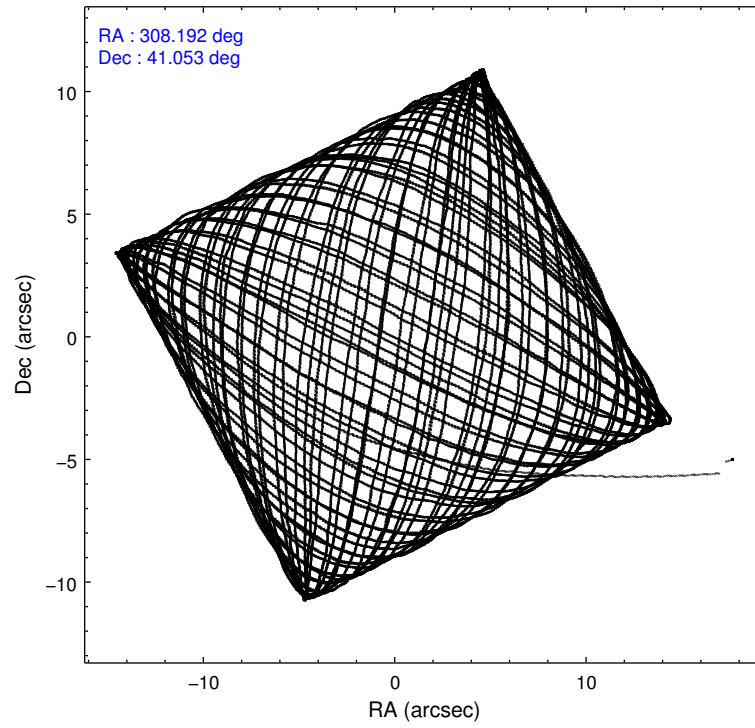
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	228786	981285	251912	284975	251123
rejected events	188101	294604	213475	207057	206362
rejected %	82%	30%	84%	72%	82%

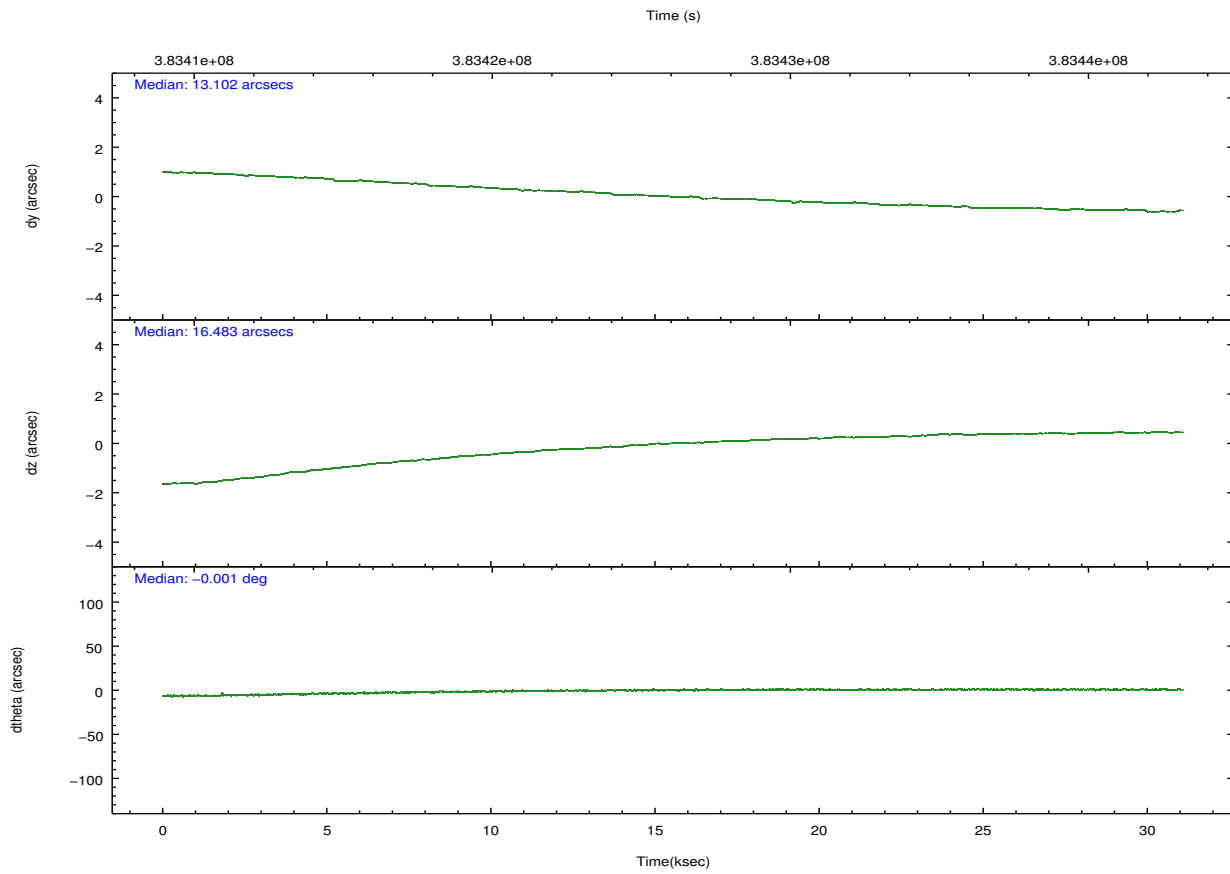
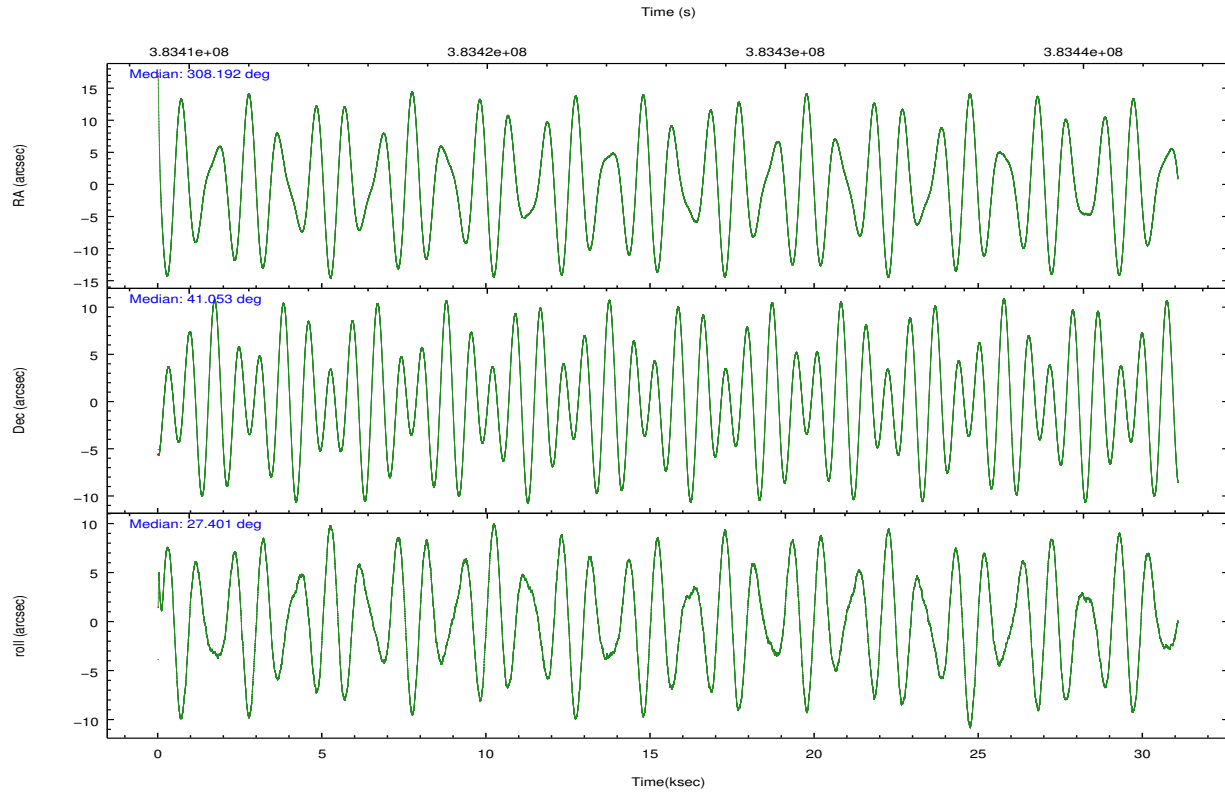
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	20845	443950	19911	49652	25380
	9%	45%	7%	17%	10%
grade 1 events	225	20997	246	421	225
	0%	2%	0%	0%	0%
grade 2 events	7988	105985	7541	11859	7642
	3%	10%	2%	4%	3%
grade 3 events	3346	36691	2976	4717	3207
	1%	3%	1%	1%	1%
grade 4 events	3112	36618	3098	4641	3185
	1%	3%	1%	1%	1%
grade 5 events	7666	31331	7600	8884	8253
	3%	3%	3%	3%	3%
grade 6 events	5406	63591	4915	7055	5354
	2%	6%	1%	2%	2%
grade 7 events	180198	242122	205625	197746	197877
	78%	24%	81%	69%	78%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	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	308.172983	308.1924992085598	CCD I2 on	Y	Y
[deg] Pointing Dec	41.030160	41.05338366695108	CCD I3 on	Y	Y
[deg] Pointing Roll	27.207810	27.40368356493792	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	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	383411613.184000	383409459.45062	CCD S5 on	N	N
Observation start date	2010-02-24T15:12:27	2010-02-24T14:37:39	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	383441613.184000	383441746.95226	On-chip summing requested	N	N
Observation end date	2010-02-24T23:32:27	2010-02-24T23:35:46	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



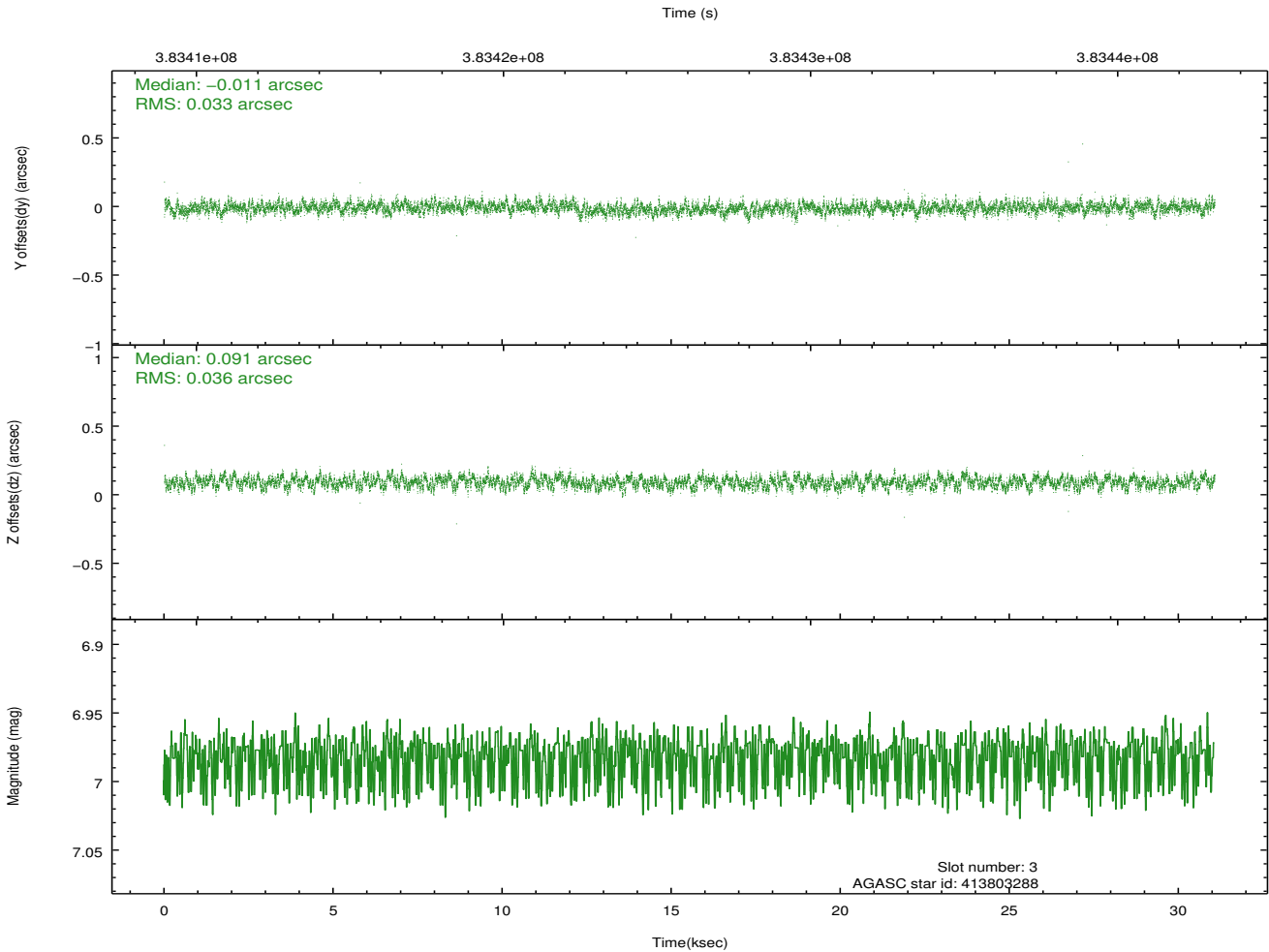
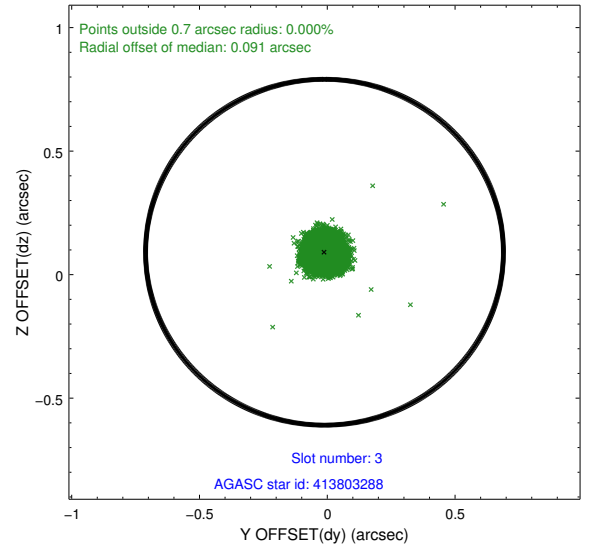
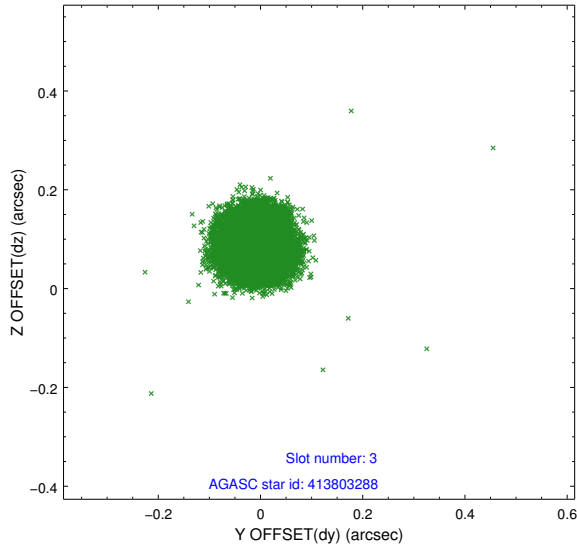


Slot Statistics

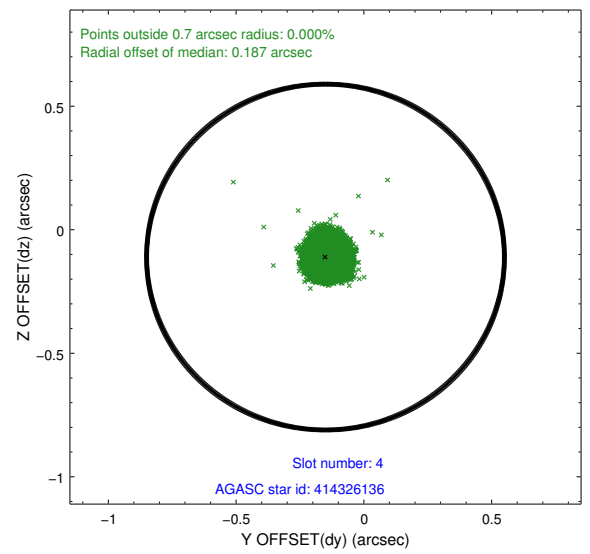
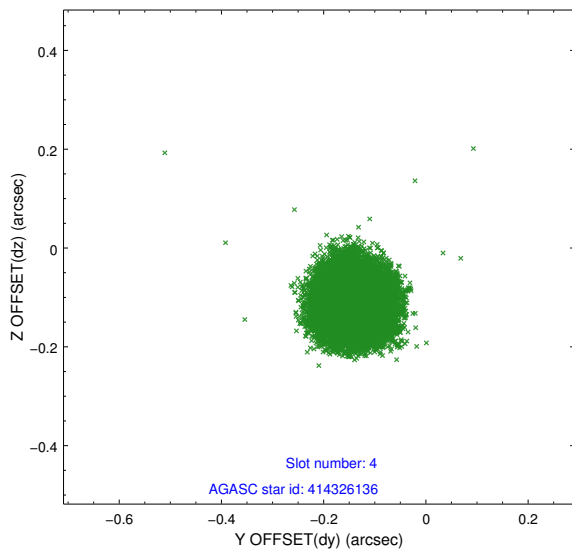
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.03	7579	0.059	-0.037	0.018	0.045	0.000000	0.000000	926.37	-839.93
1	FID	ACIS-I-5	7.03	7579	-0.205	0.066	0.022	0.033	0.000000	0.000000	-1821.94	1057.65
2	FID	ACIS-I-6	7.03	7579	0.049	0.047	0.023	0.043	0.000000	0.000000	391.87	1702.19
3	GUIDE	413803288	6.98	15155	-0.011	0.091	0.052	0.082	307.629978	40.506899	-2180.75	-991.53
4	GUIDE	414326136	7.35	15156	-0.150	-0.111	0.060	0.094	308.256176	41.473642	929.81	1317.64
5	GUIDE	414328464	9.17	15142	-0.034	-0.116	0.095	0.148	308.778827	41.333671	1958.94	228.24
6	GUIDE	413798504	8.10	15156	0.110	0.051	0.072	0.117	307.761525	40.426565	-1994.60	-1414.51
7	GUIDE	413798232	8.30	15151	0.082	0.090	0.071	0.116	309.116117	41.044272	2306.99	-1113.30

2.4 Star Slots

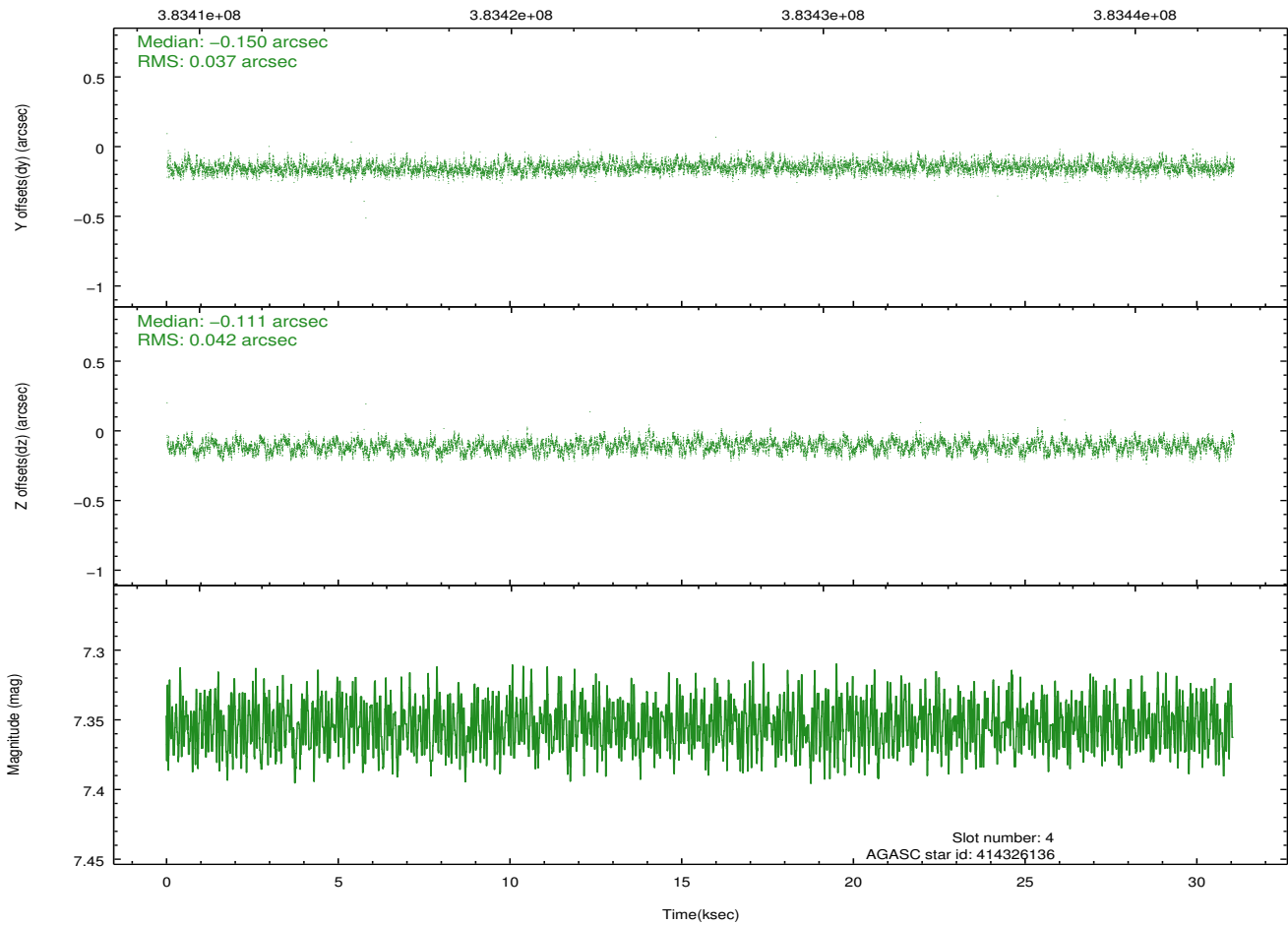
2.4.1 Slot 3



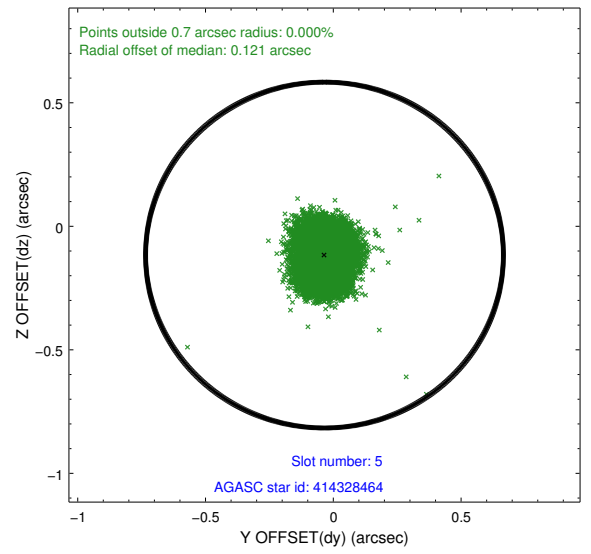
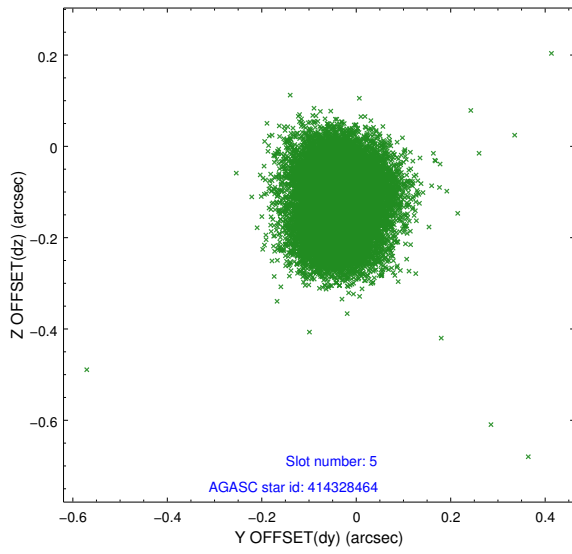
2.4.2 Slot 4



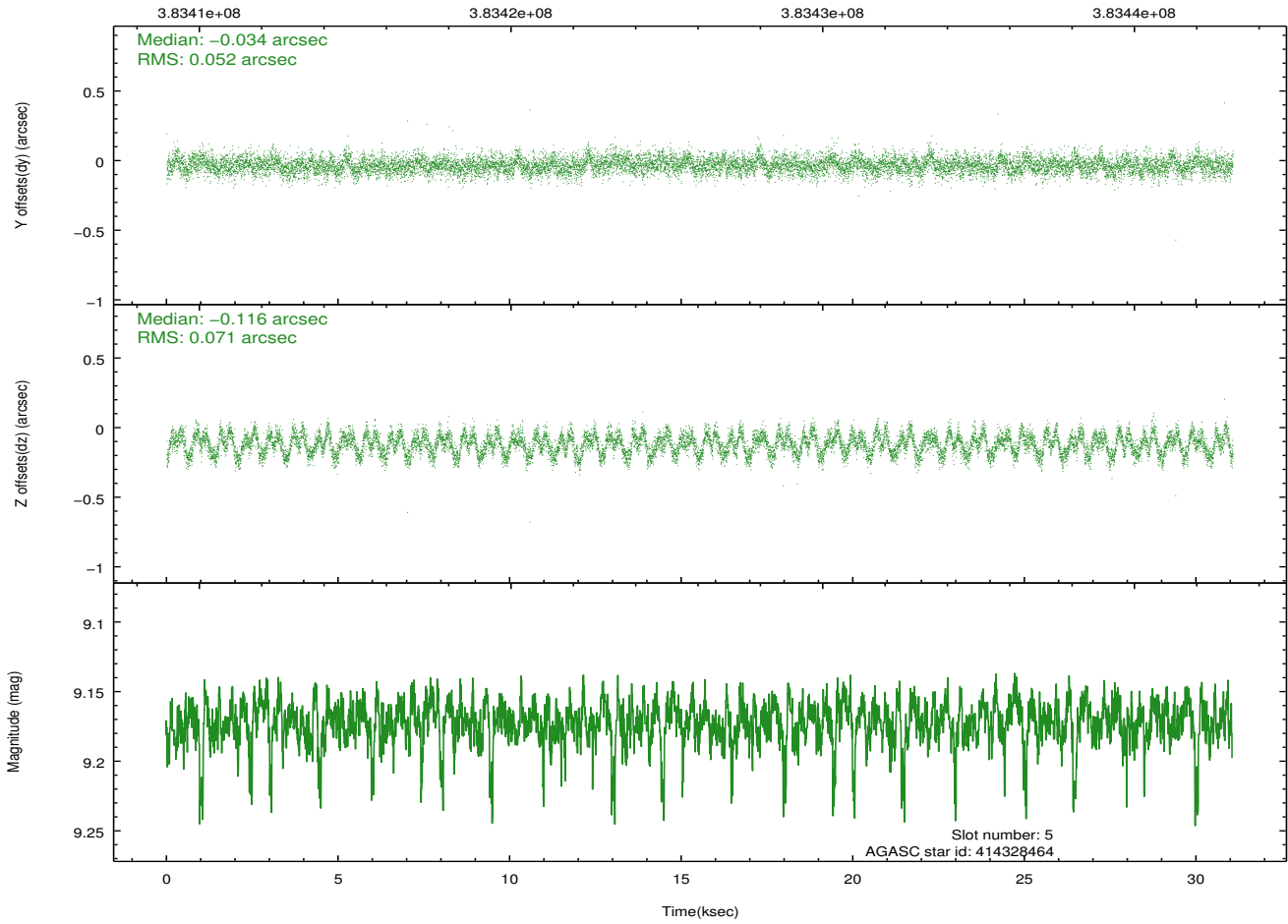
Time (s)



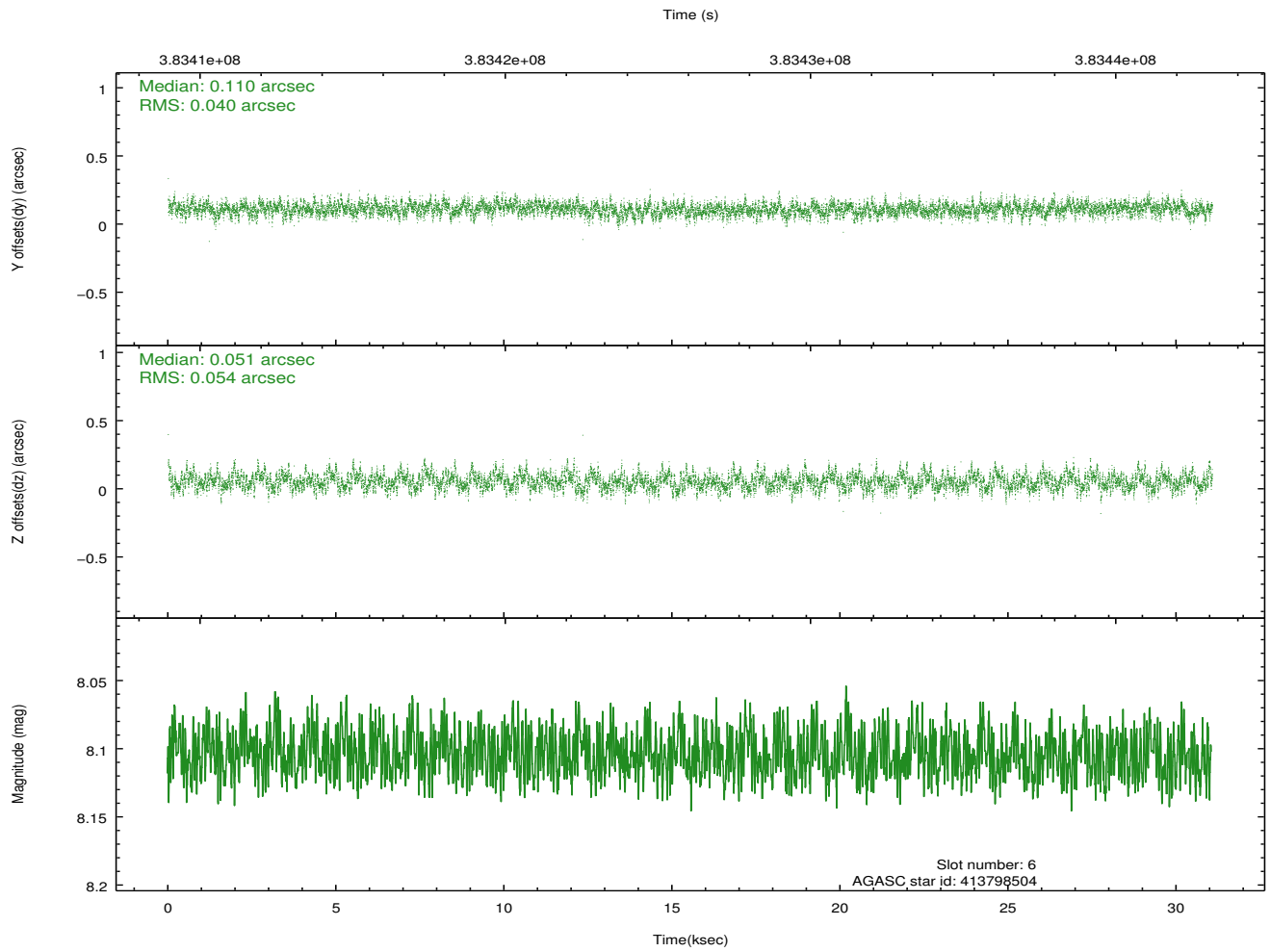
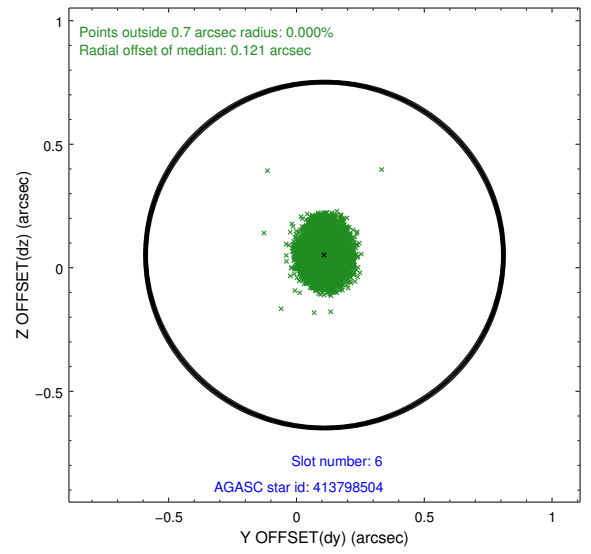
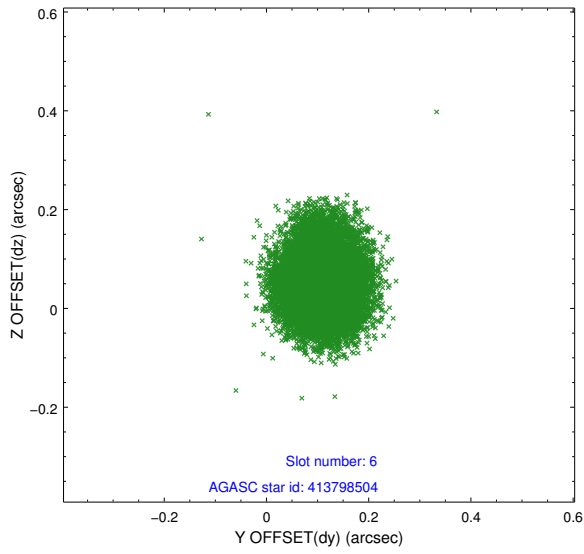
2.4.3 Slot 5



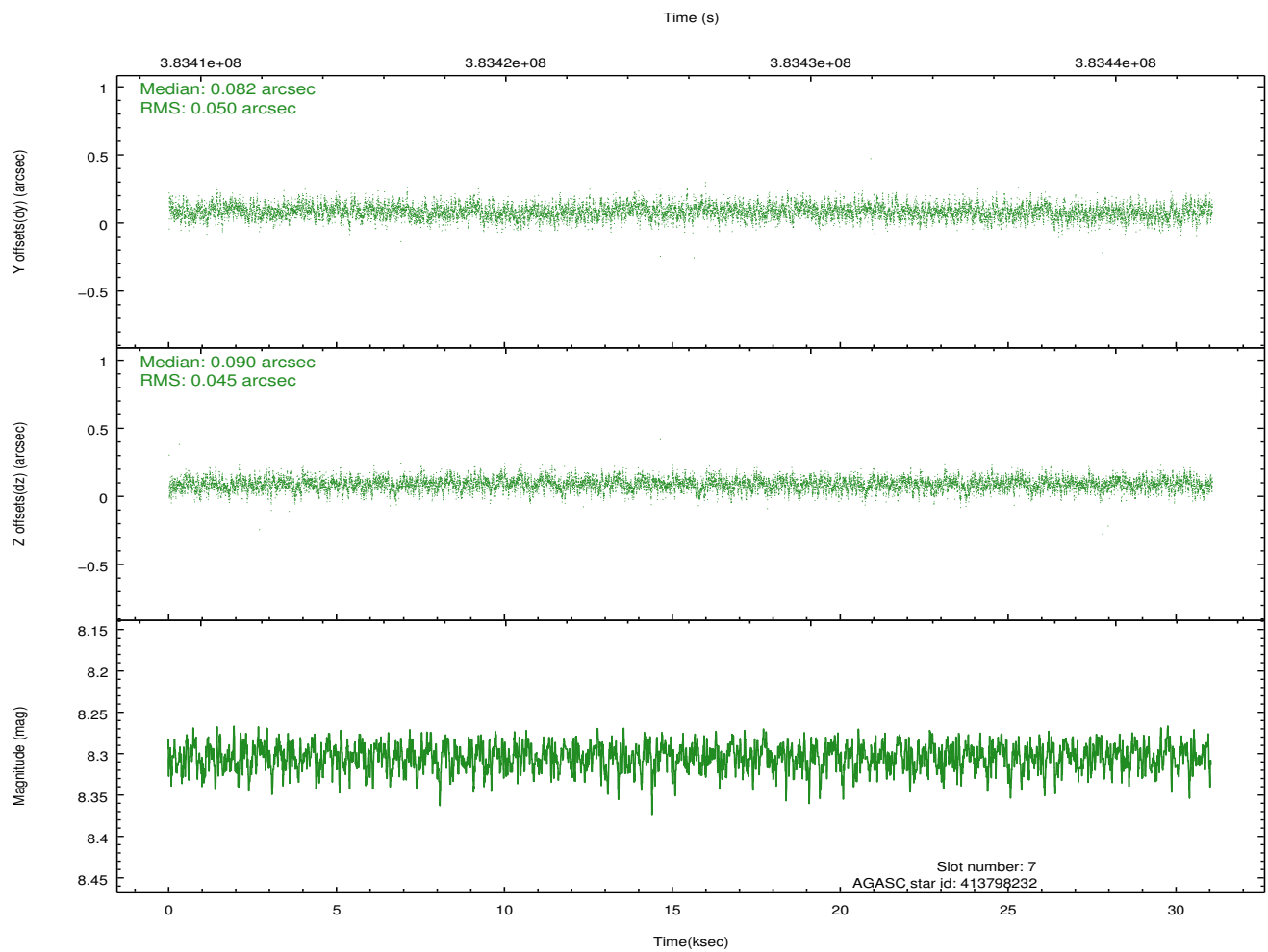
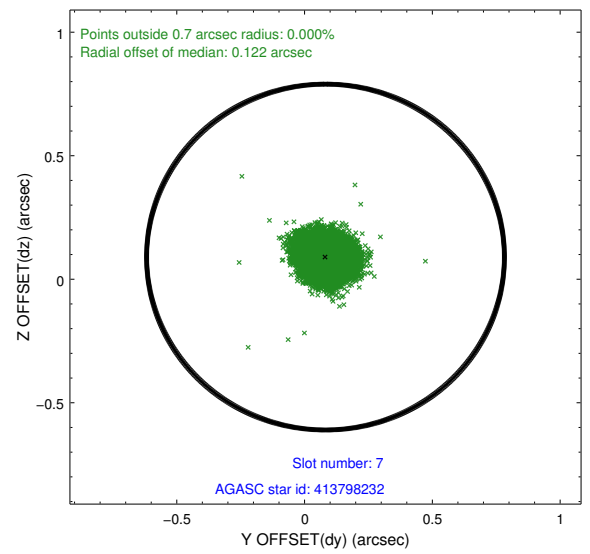
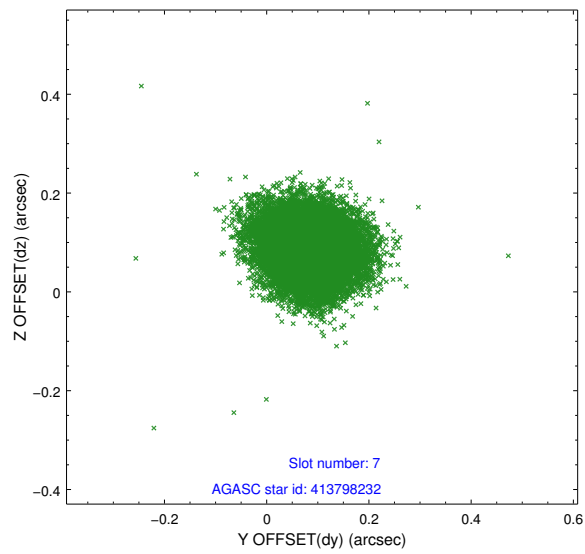
Time (s)



2.4.4 Slot 6

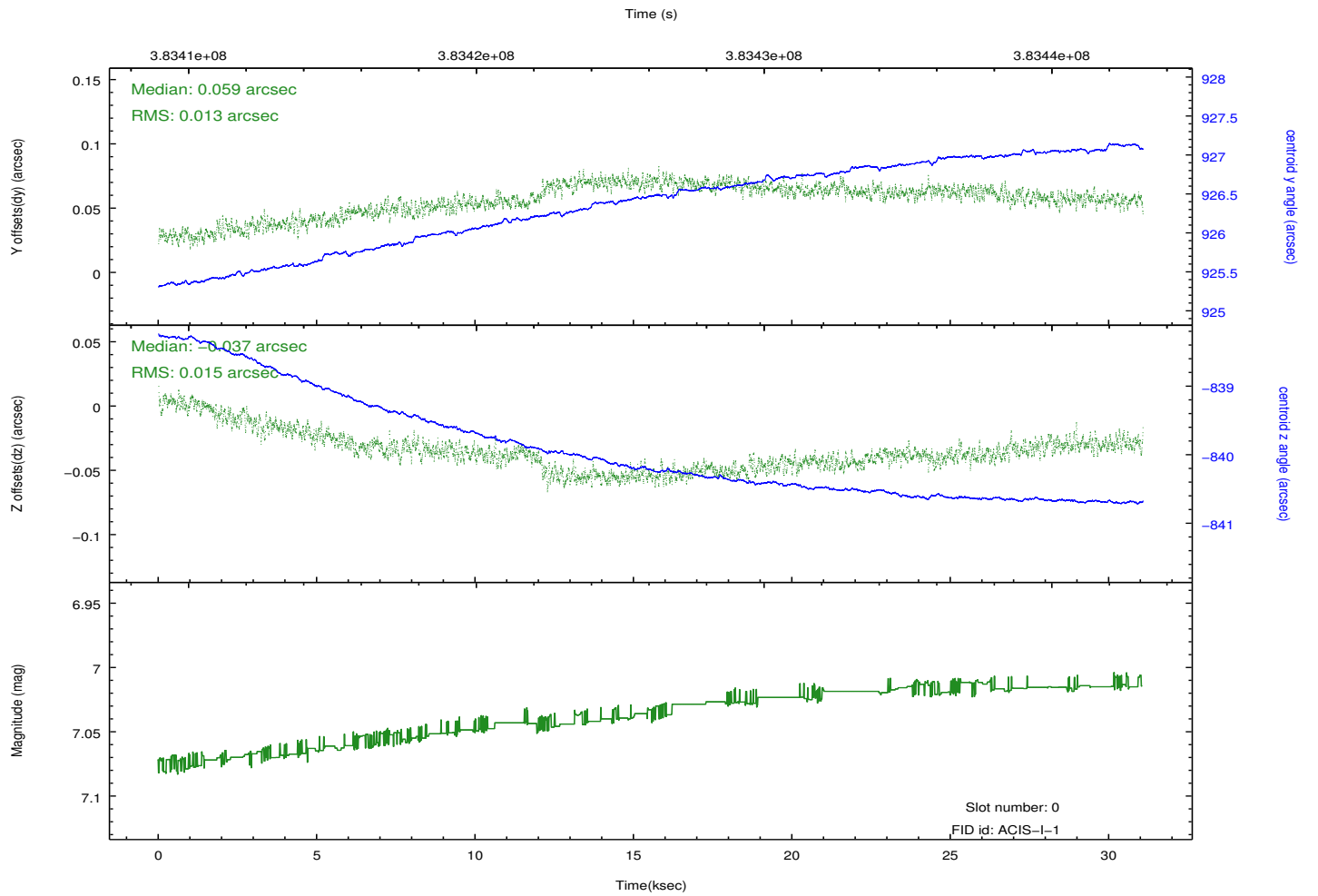
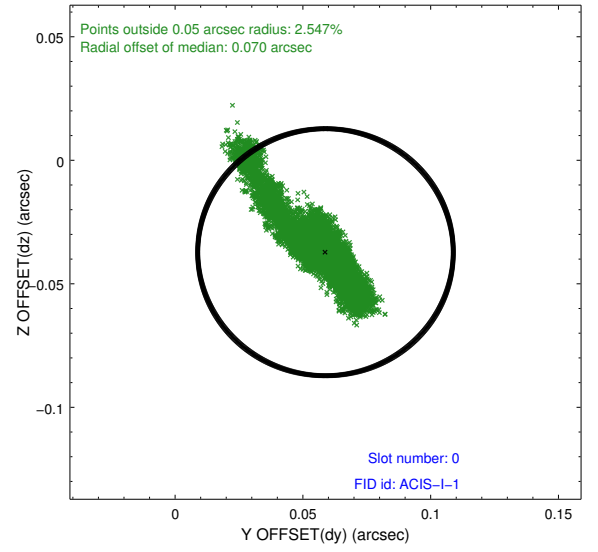
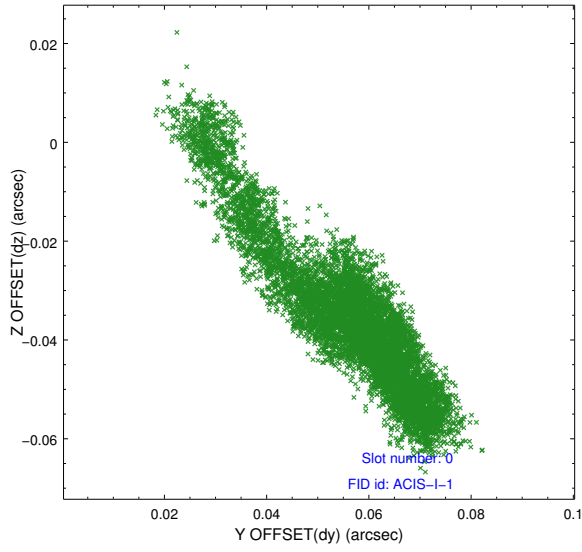


2.4.5 Slot 7

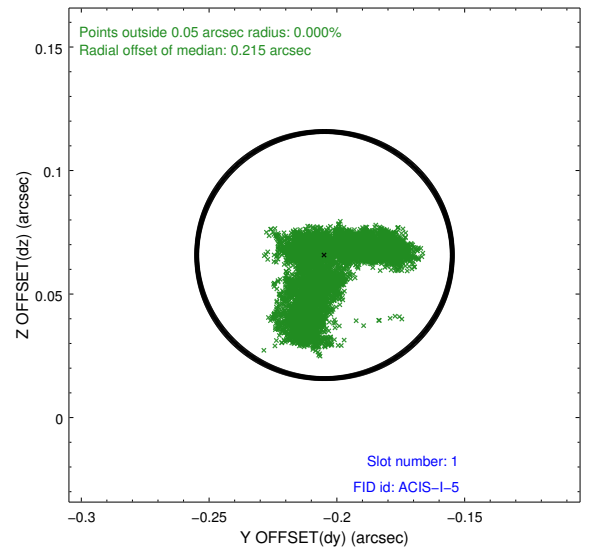
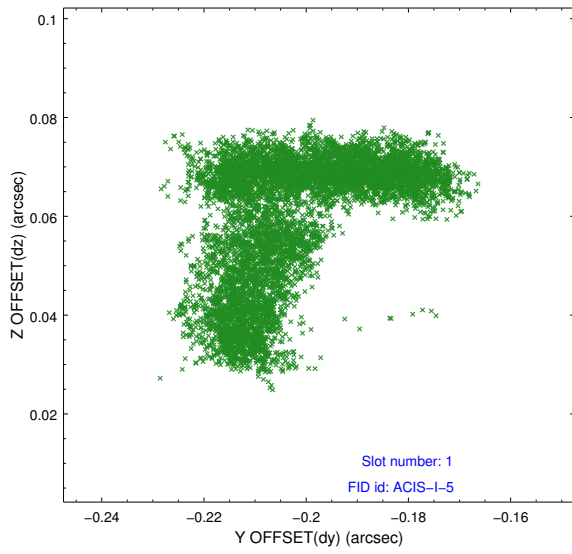


2.5 FID Slots

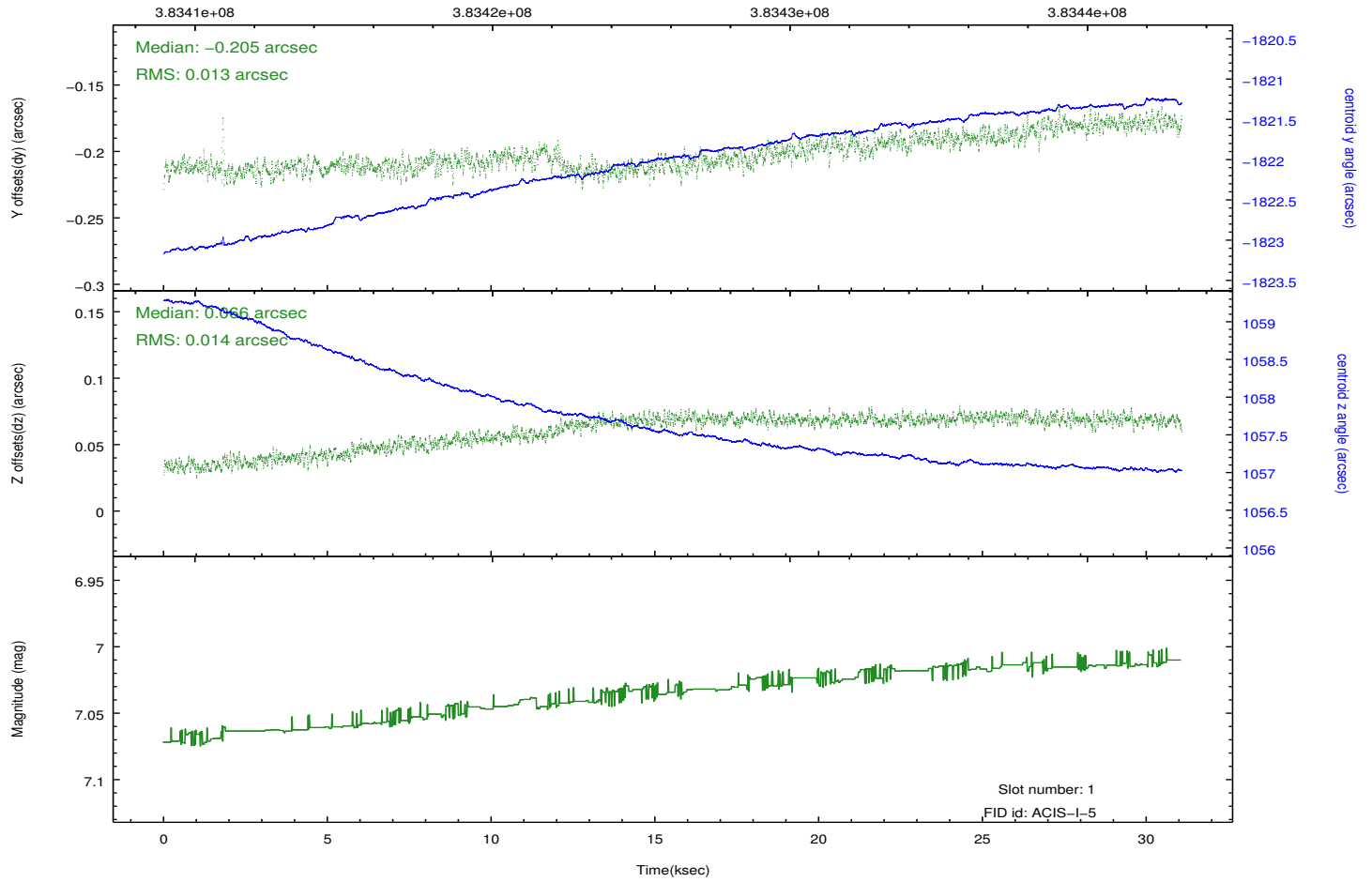
2.5.1 Slot 0



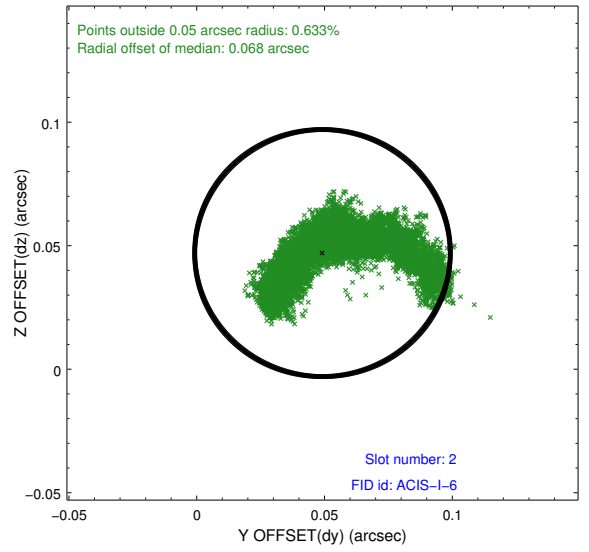
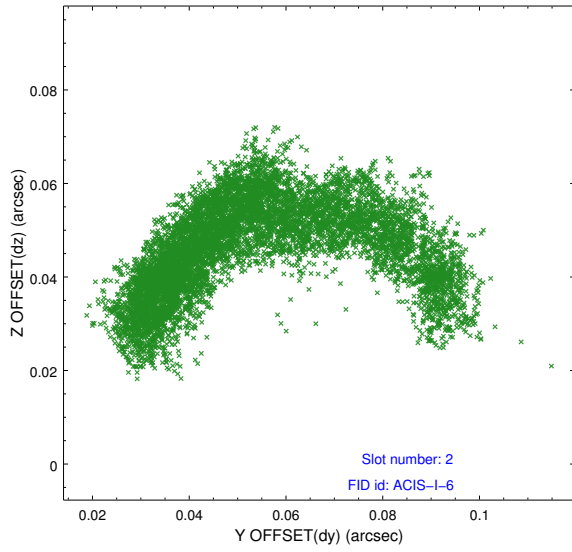
2.5.2 Slot 1



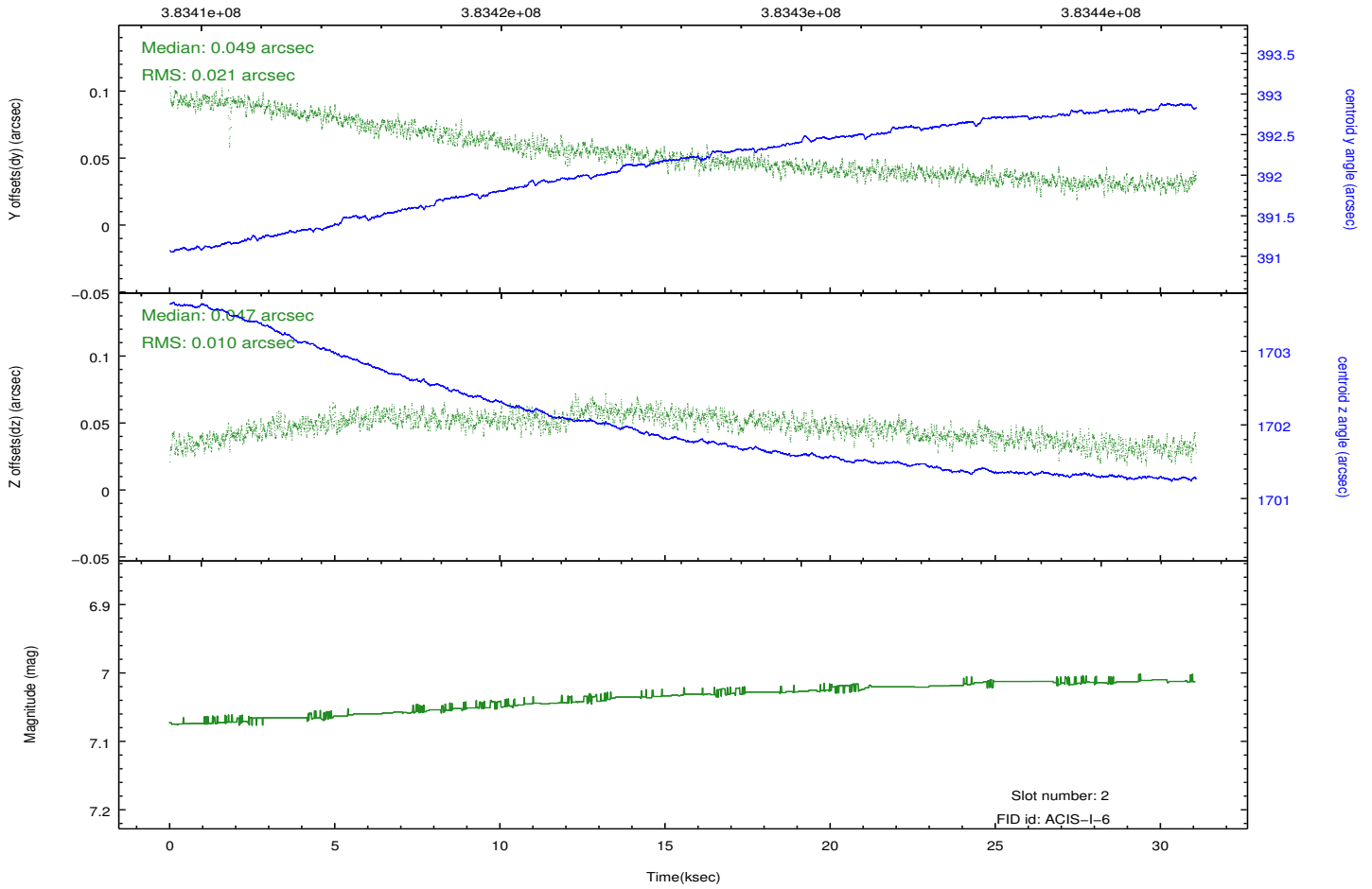
Time (s)



2.5.3 Slot 2



Time (s)



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.06.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.048146907032

A.2 Comments

Roll preference met.

=====

A spatial region of the original bias map for CCD = 1 suffered from strong source contamination on that chip. This results in many pixels near and on the strong source having a bad status value. 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 = 1 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: (308.10796,40.95855), (308.11139,40.95360), (308.11859,40.95643), (308.11517,40.96138)