

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 9379 - L2 Version 3
Chandra X-Ray Center

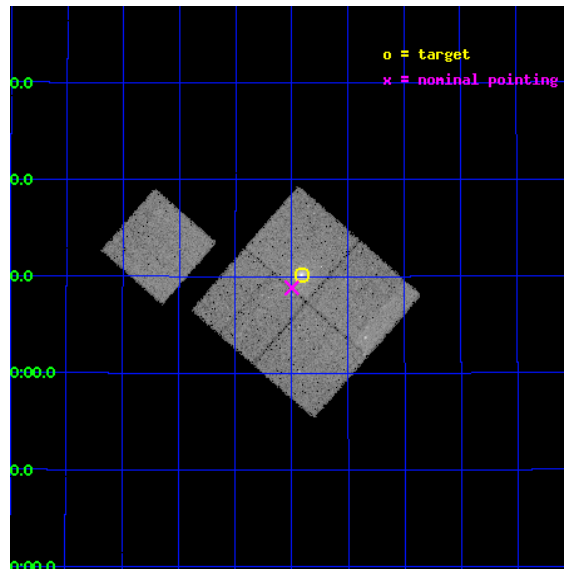
L2 Processing Date : May 24 2012

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1 Front

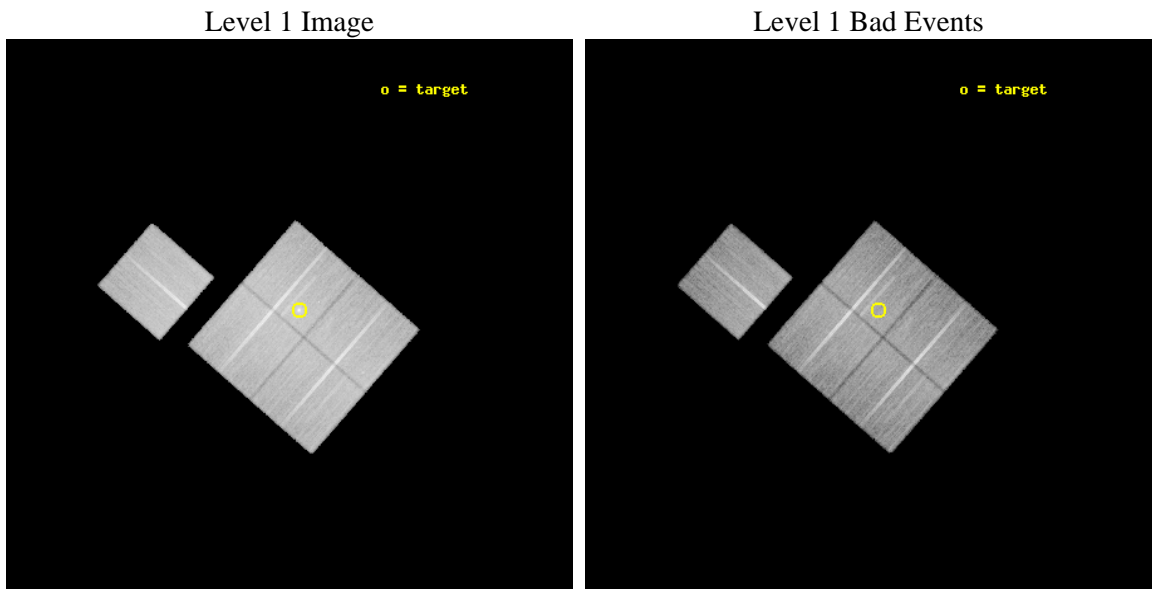
seq_num	800716	Sequence number
obs_id	9379	Observation id
title	Probing Dark Energy with Relaxed Galaxy Clusters	Proposal title
observer	Prof. Steven Allen	Principal investigator
object	MACS1621	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	245.353333	Observer's specified target RA [deg]
dec_targ	38.169167	Observer's specified target Dec [deg]
ra_nom	245.37480875146	Nominal RA [deg]
dec_nom	38.147103493793	Nominal Dec [deg]
roll_nom	311.1954328512	Nominal Roll [deg]
revision	3	Processing version of data
ontime	30310.946835399	Sum of GTIs [s]
livetime	29914.9120004	Livetime [s]
ontime0	30317.105695903	Sum of GTIs [s]
ontime1	30317.146735907	Sum of GTIs [s]
ontime2	30317.18777591	Sum of GTIs [s]
ontime3	30310.946835399	Sum of GTIs [s]
ontime6	30310.782645404	Sum of GTIs [s]
l2events	113483	Number of level 2 events



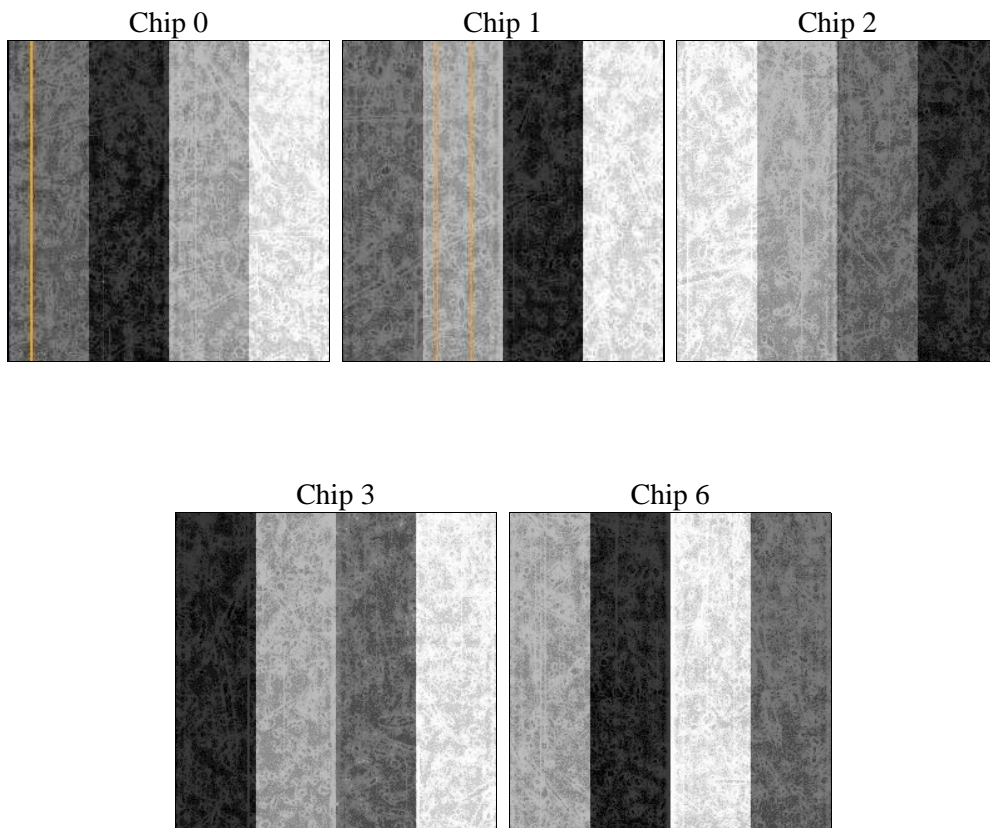
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30545.377000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	30310.946835399	Sum of GTIs [s]
caldbver	4.4.9	 	ontime0	30317.105695903	Sum of GTIs [s]
date	2012-05-24T19:12:04	Date and time of file creation	ontime1	30317.146735907	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	30317.18777591	Sum of GTIs [s]
			ontime3	30310.946835399	Sum of GTIs [s]
			ontime6	30310.782645404	Sum of GTIs [s]
			l1events	1238259	Number of level 1 events

2.1.4 Events

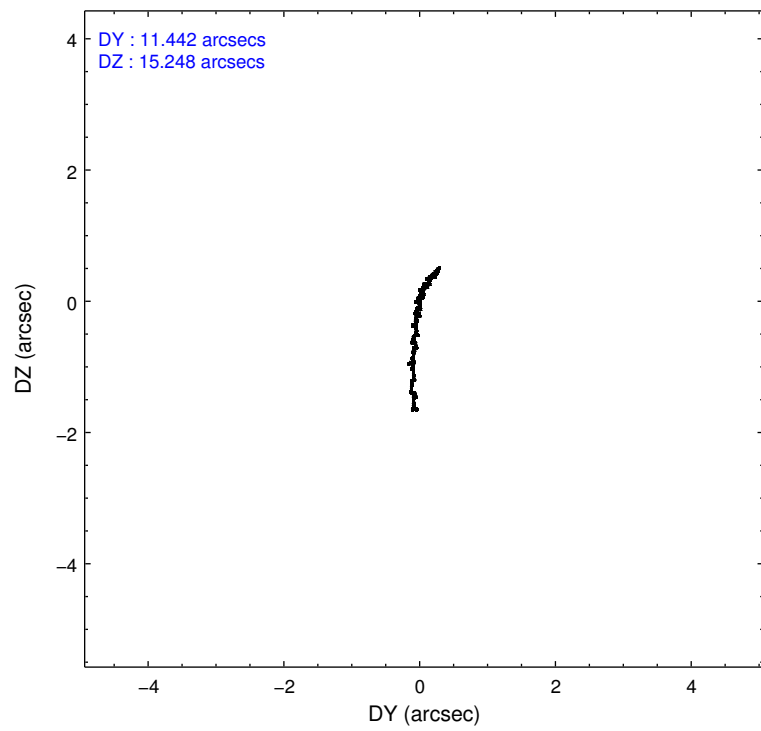
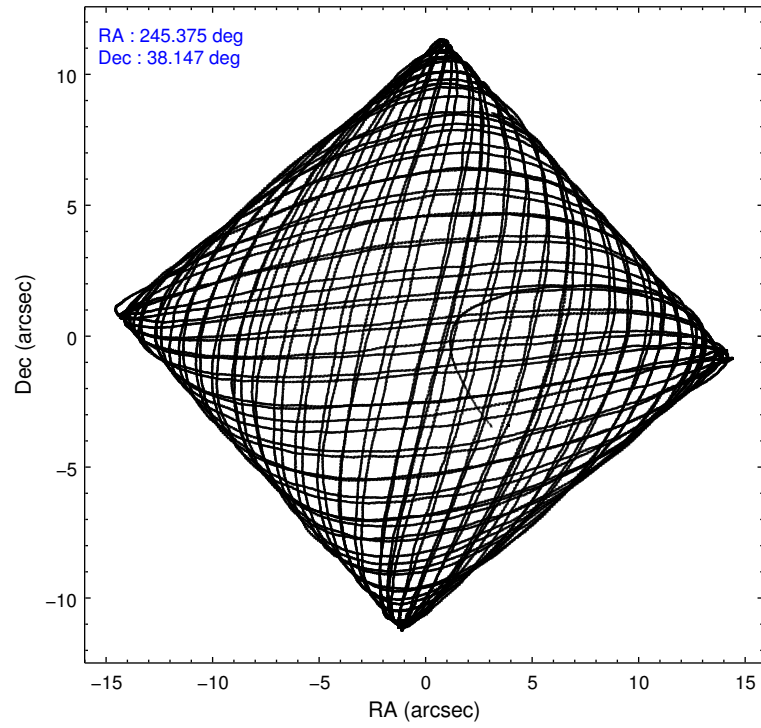
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	238002	234432	262245	254104	249476
rejected events	212014	205574	237058	224552	223430
rejected %	89%	87%	90%	88%	89%

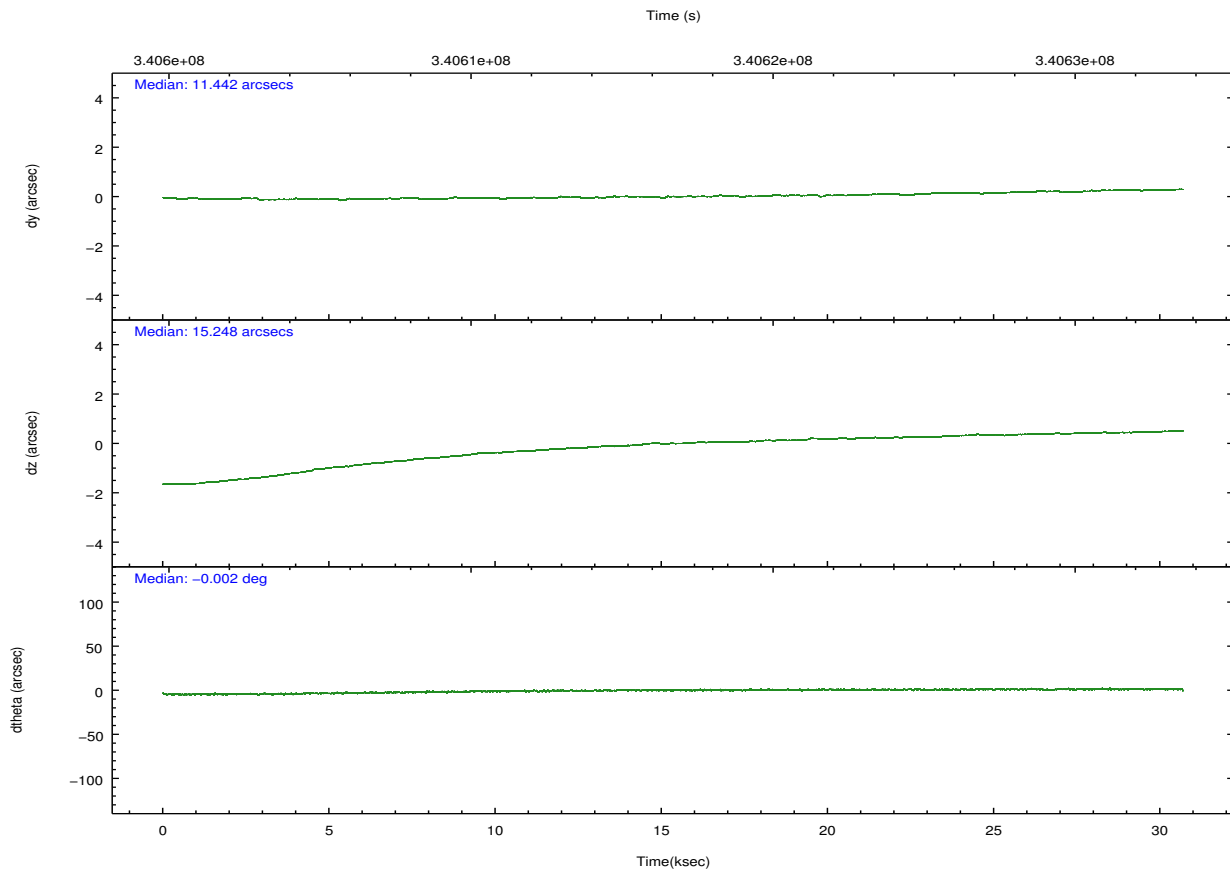
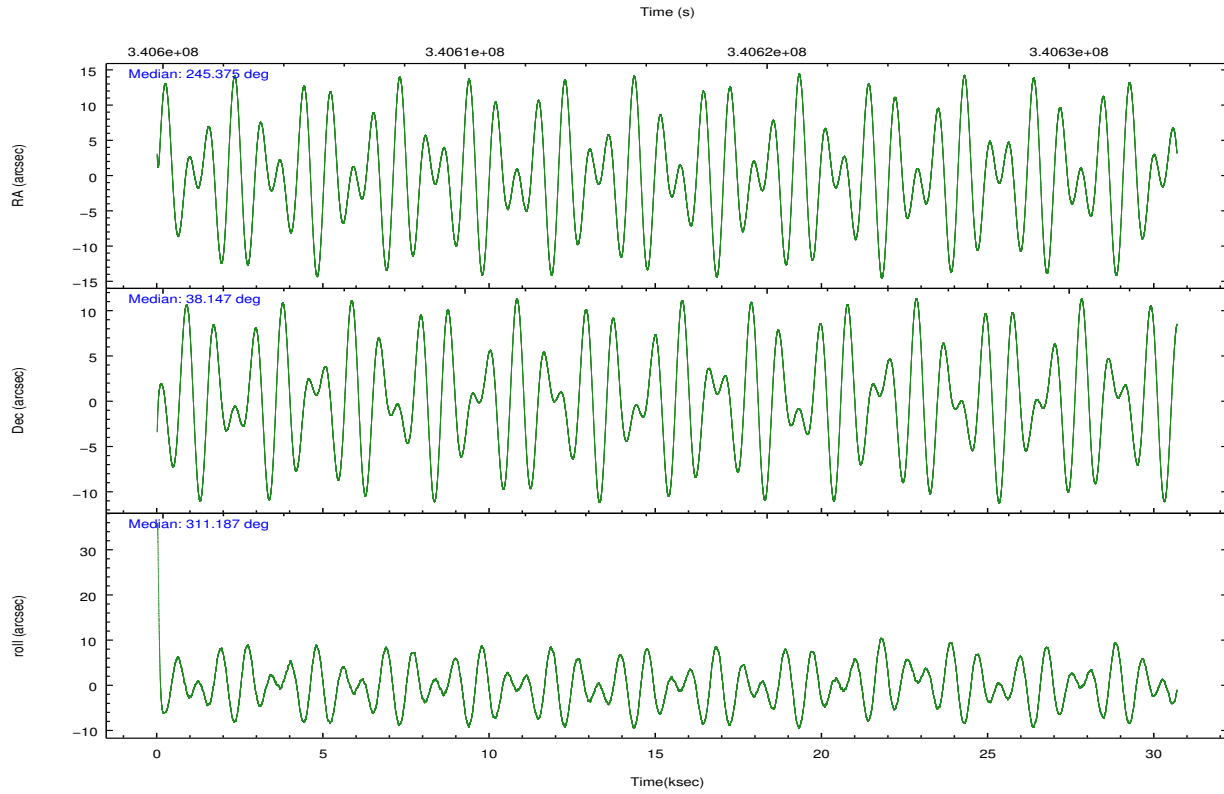
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	9113	10497	9173	12829	9033
	3%	4%	3%	5%	3%
grade 1 events	134	133	146	183	118
	0%	0%	0%	0%	0%
grade 2 events	6309	6528	5978	5922	5731
	2%	2%	2%	2%	2%
grade 3 events	2805	3032	2634	2929	2867
	1%	1%	1%	1%	1%
grade 4 events	2736	3033	2698	2801	2784
	1%	1%	1%	1%	1%
grade 5 events	8830	9834	8418	10411	10179
	3%	4%	3%	4%	4%
grade 6 events	5028	5775	4707	5075	5640
	2%	2%	1%	1%	2%
grade 7 events	203047	195600	228491	213954	213124
	85%	83%	87%	84%	85%

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	245.341634	245.3748087514632	CCD I2 on	Y	Y
[deg] Pointing Dec	38.155868	38.14710349379337	CCD I3 on	Y	Y
[deg] Pointing Roll	311.007227	311.1954328511994	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	-229.442463	-229.4438428438578	CCD S3 on	N	N
[mm] SIM translation stage offset	-4.15	-4.148610159071865	CCD S4 on	N	N
[s] Observation start time (MET)	340601496.184000	340600317.44902	CCD S5 on	N	N
Observation start date	2008-10-17T03:30:31	2008-10-17T03:11:57	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	340632041.184000	340632273.36309	On-chip summing requested	N	N
Observation end date	2008-10-17T11:59:36	2008-10-17T12:04:33	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



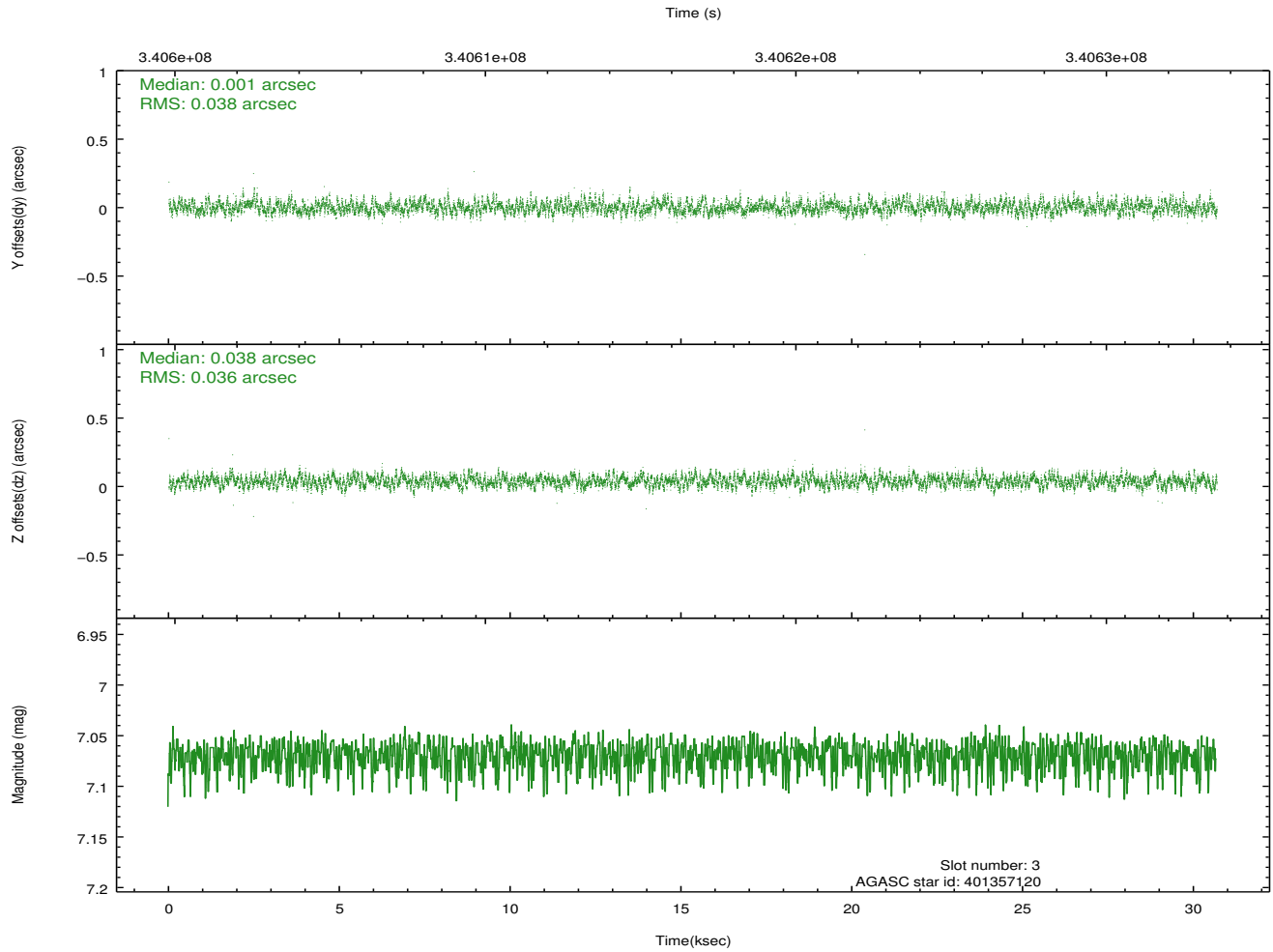
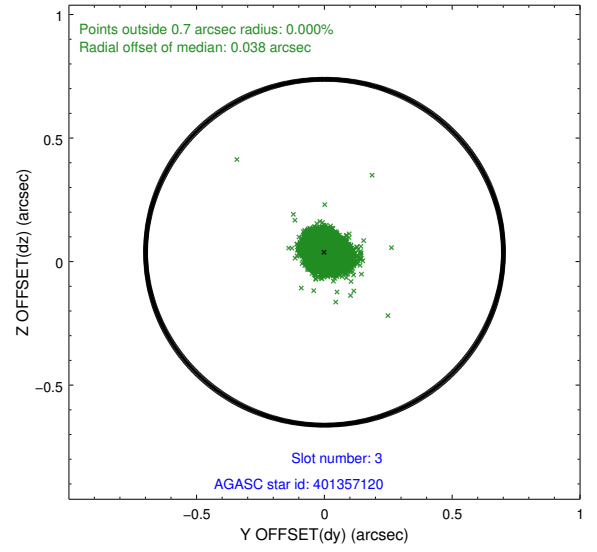
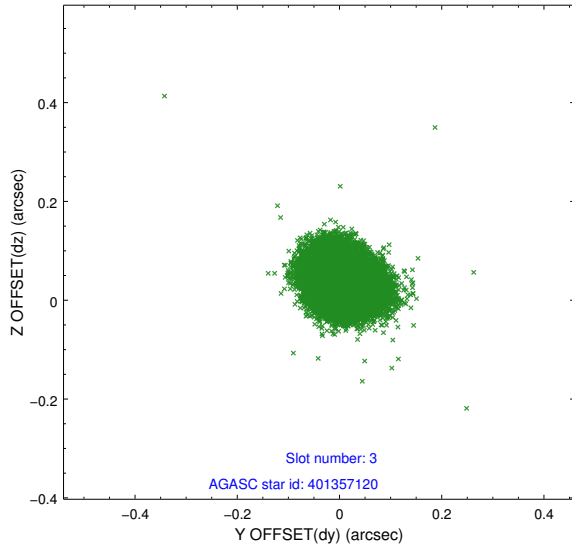


Slot Statistics

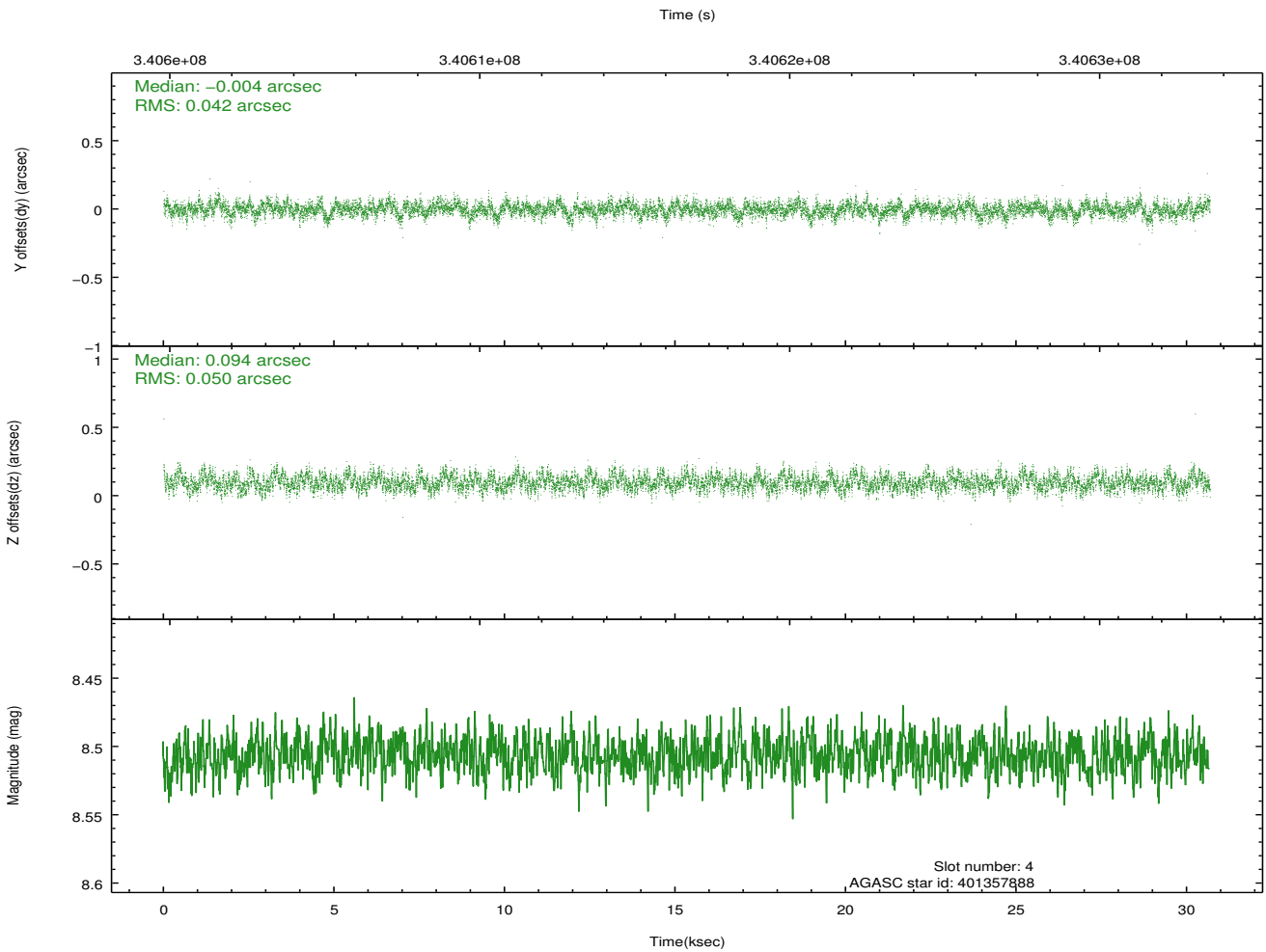
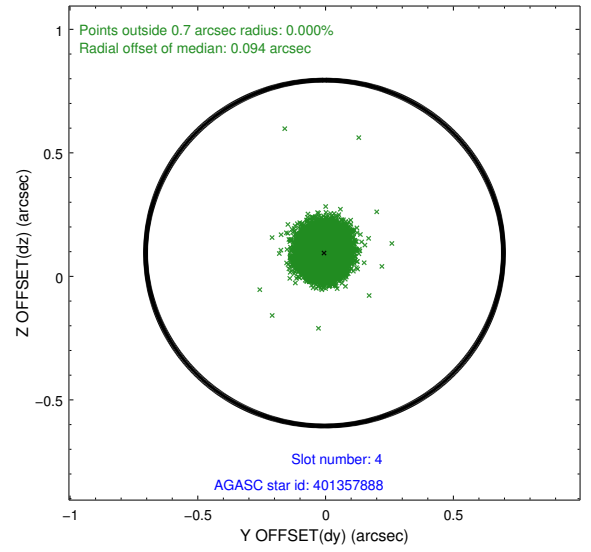
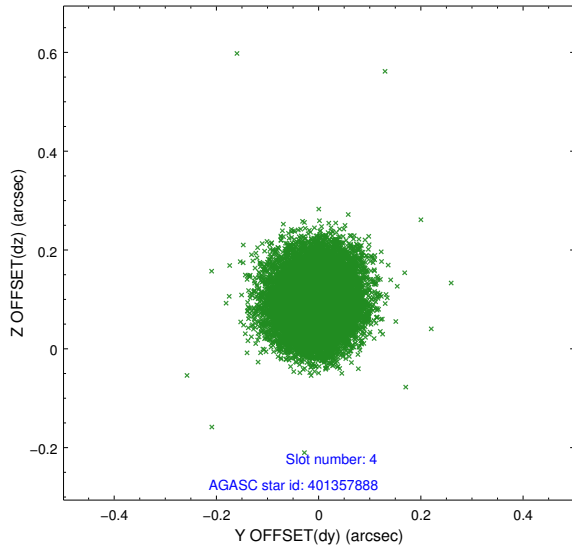
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.06	7483	0.090	-0.047	0.020	0.057	0.000000	0.000000	928.09	-923.78
1	FID	ACIS-I-5	7.05	7484	-0.216	0.092	0.015	0.029	0.000000	0.000000	-1820.27	973.80
2	FID	ACIS-I-6	7.06	7484	0.035	0.023	0.016	0.038	0.000000	0.000000	393.52	1618.31
3	GUIDE	401357120	7.07	14966	0.001	0.038	0.056	0.087	244.752378	37.765715	-43.70	-2183.69
4	GUIDE	401357888	8.51	14966	-0.004	0.094	0.070	0.113	244.567474	38.275306	-1766.58	-1363.01
5	GUIDE	401357920	8.39	14965	0.071	0.046	0.062	0.100	245.268524	37.658915	1213.64	-1330.69
6	GUIDE	401358992	8.94	14953	-0.006	0.020	0.086	0.144	245.392985	38.938928	-2032.92	1958.23
7	GUIDE	401356544	7.24	14966	-0.059	-0.200	0.060	0.095	246.068366	38.478292	461.39	2312.67

2.4 Star Slots

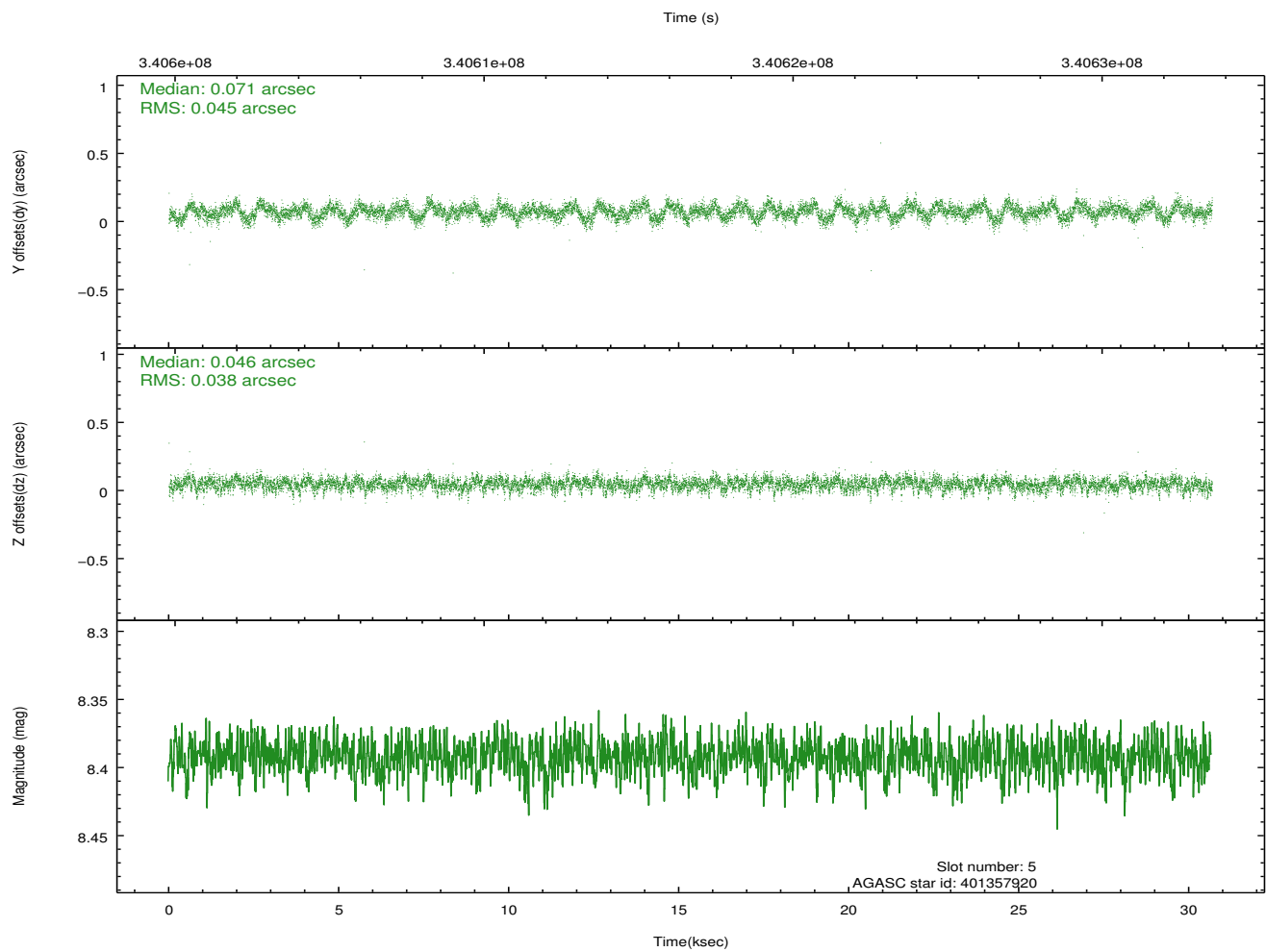
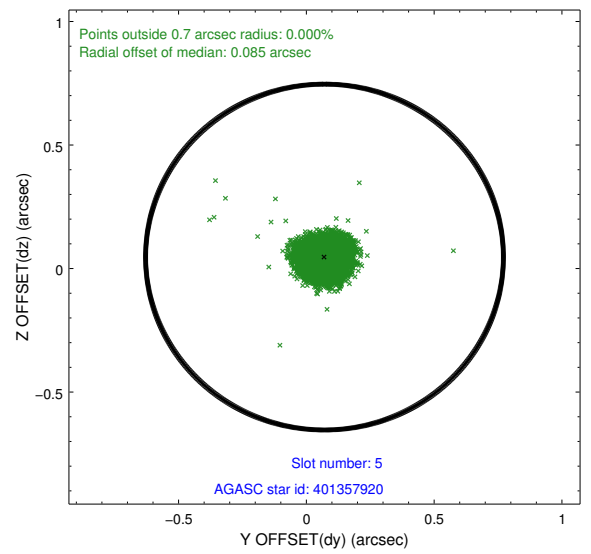
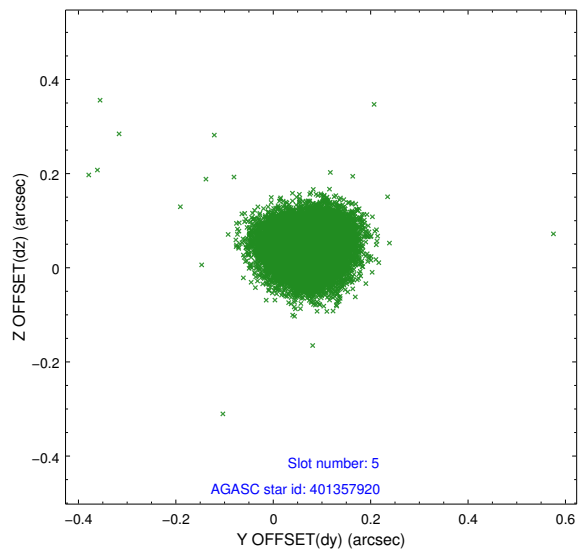
2.4.1 Slot 3



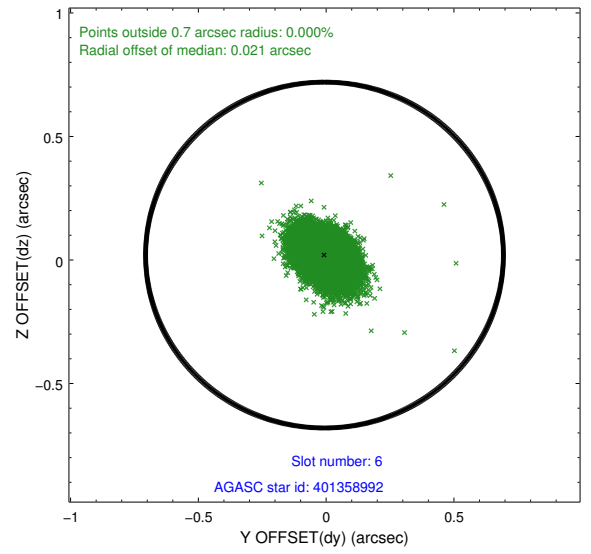
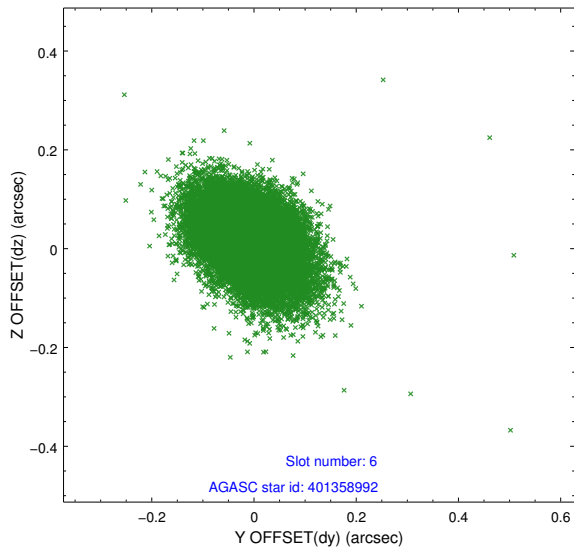
2.4.2 Slot 4



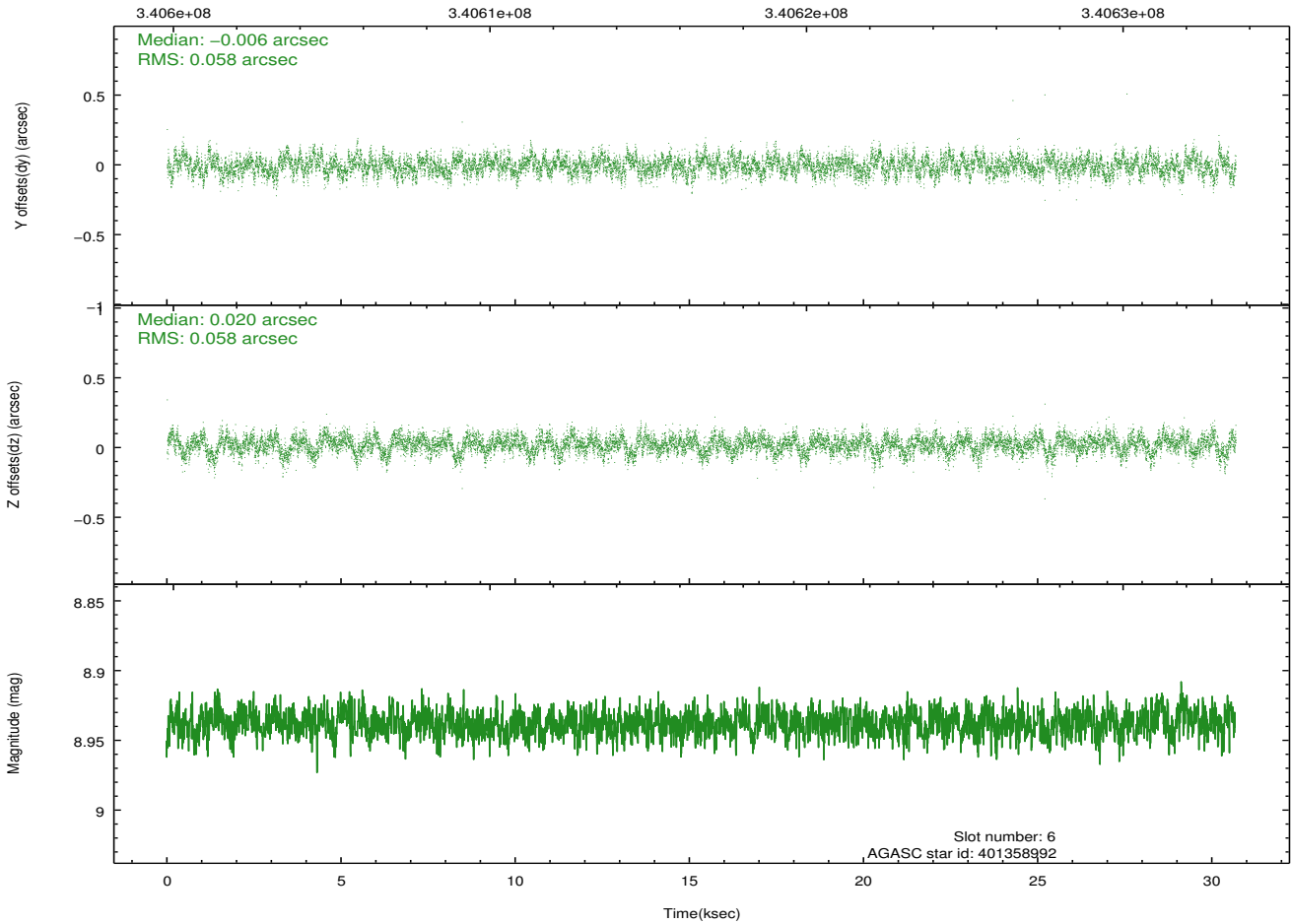
2.4.3 Slot 5



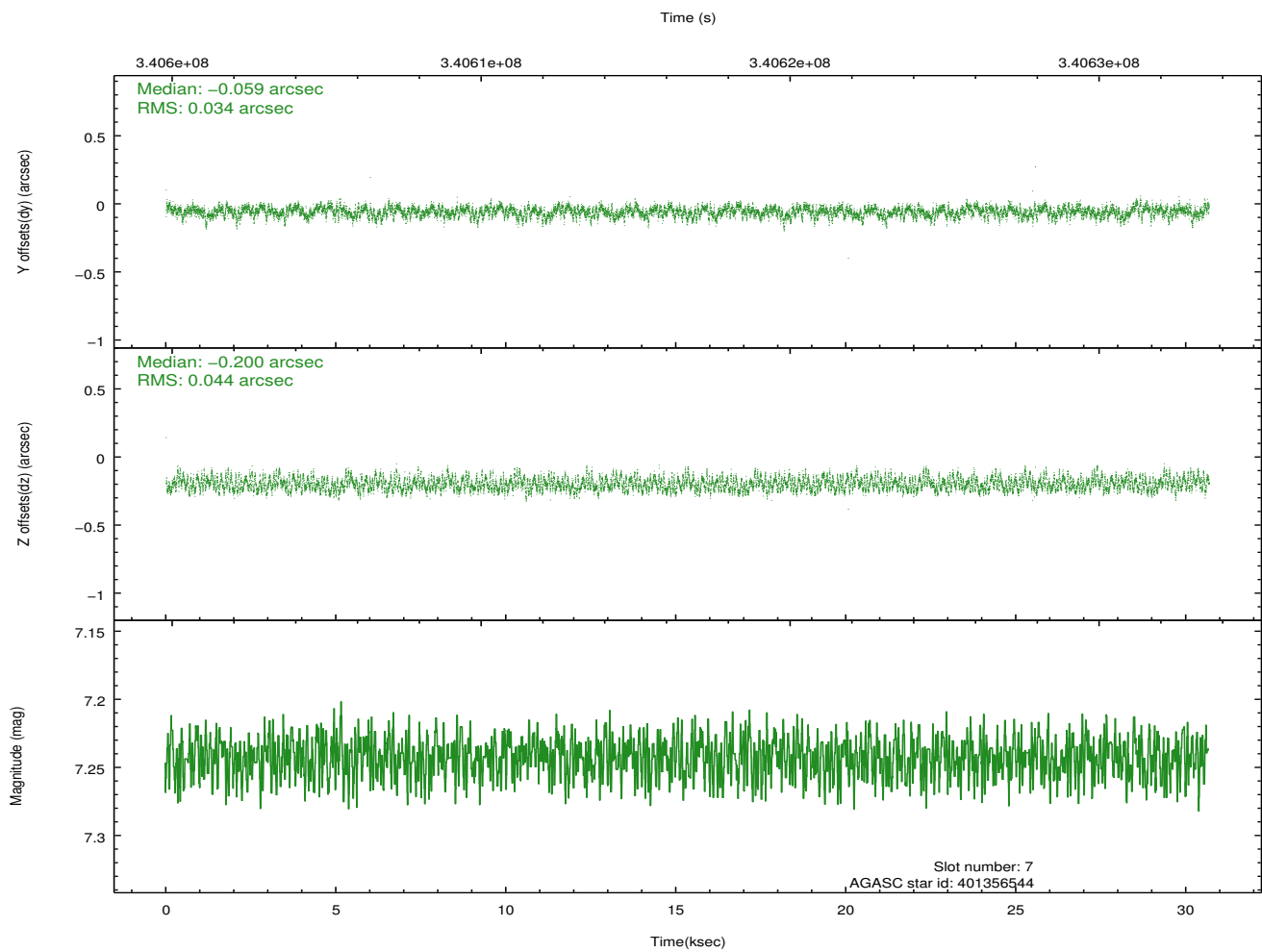
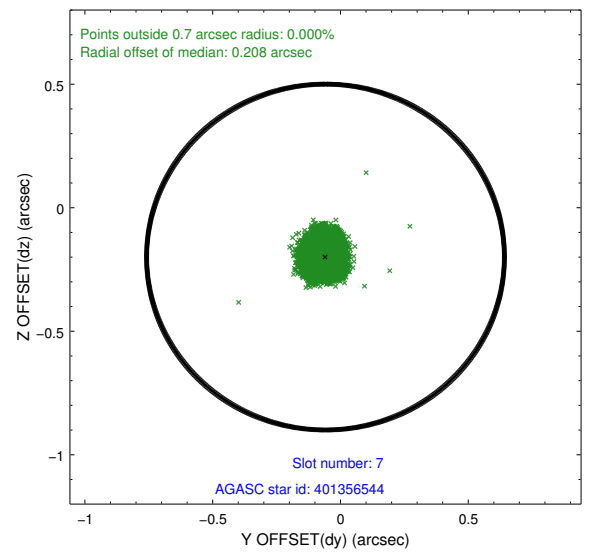
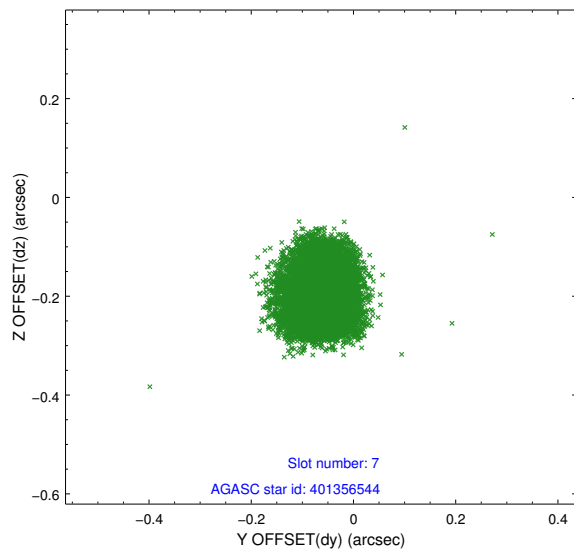
2.4.4 Slot 6



Time (s)

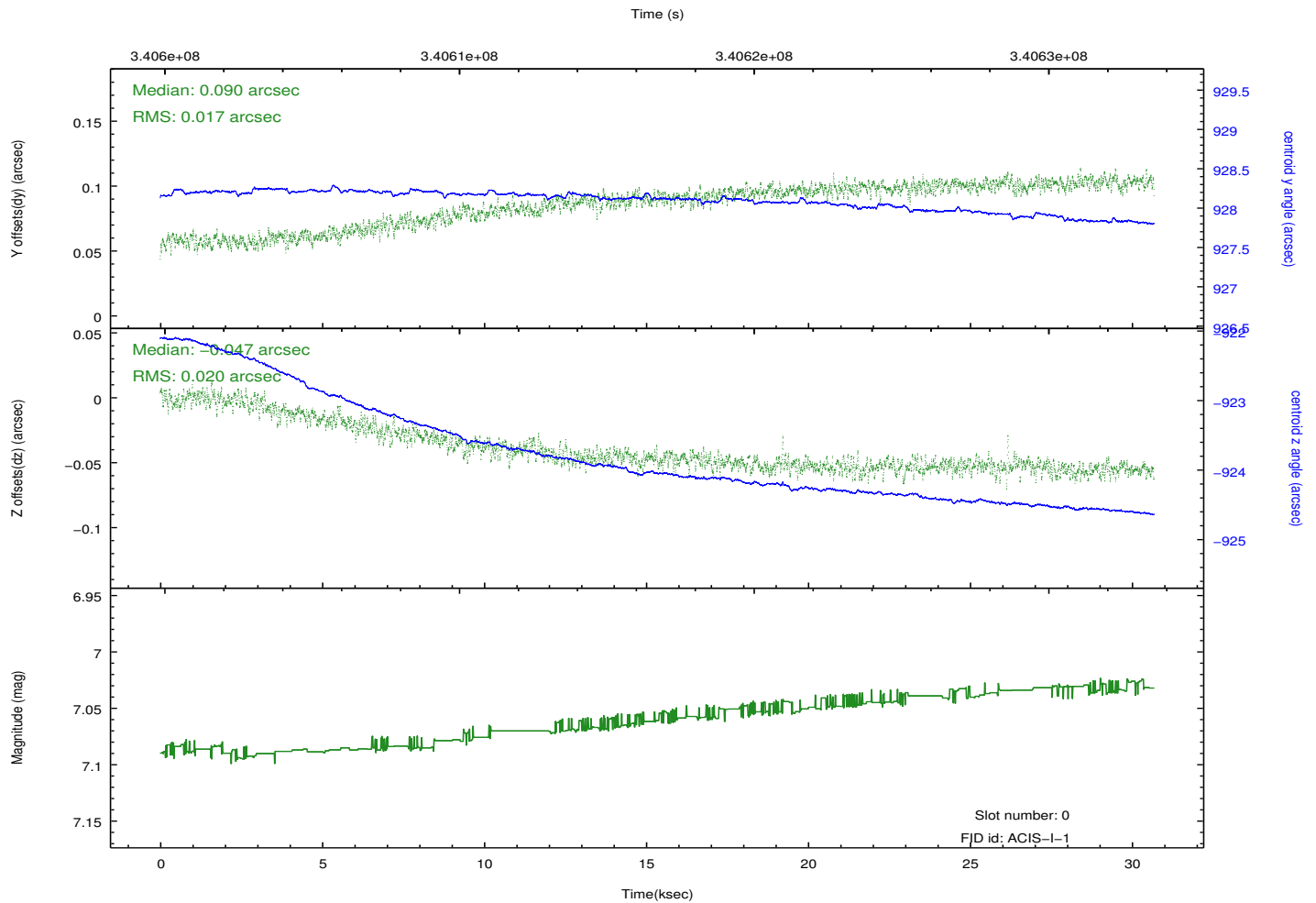
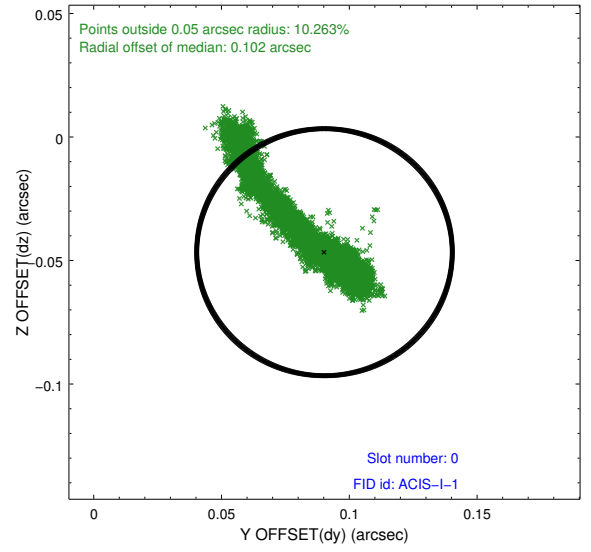
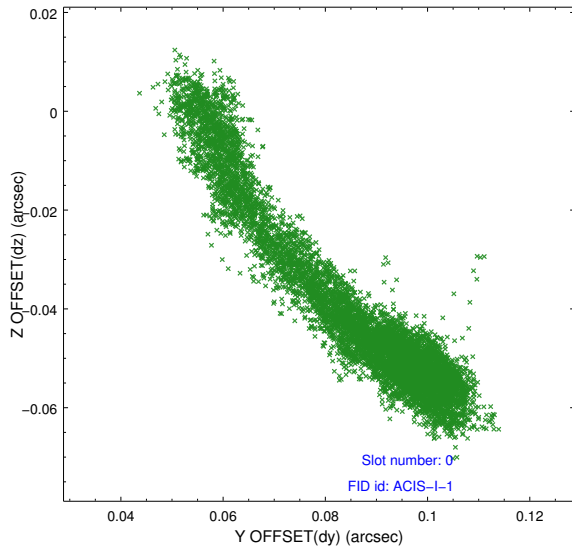


2.4.5 Slot 7

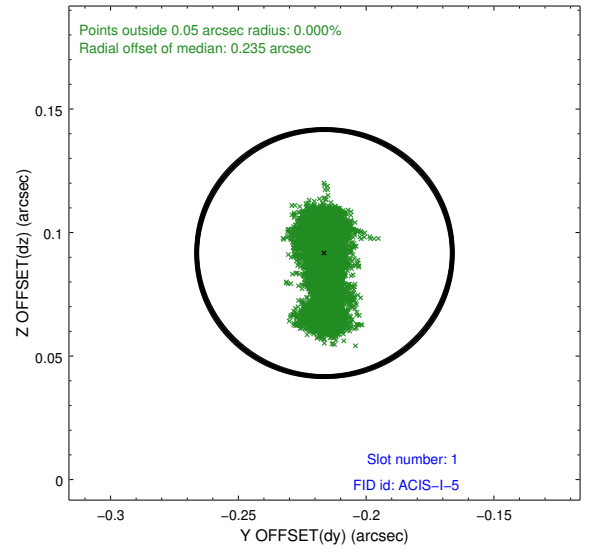
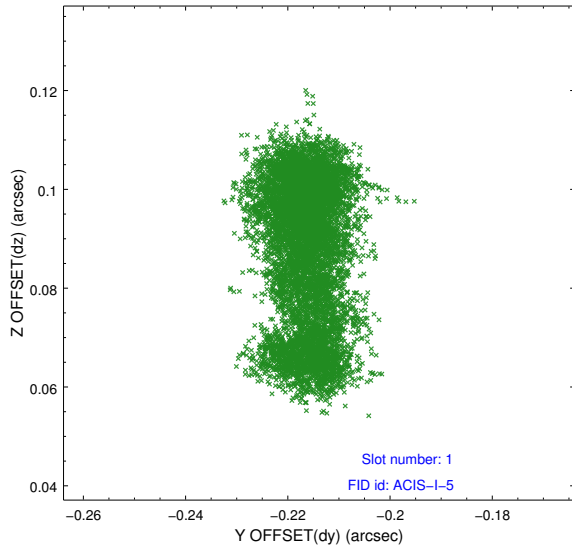


2.5 FID Slots

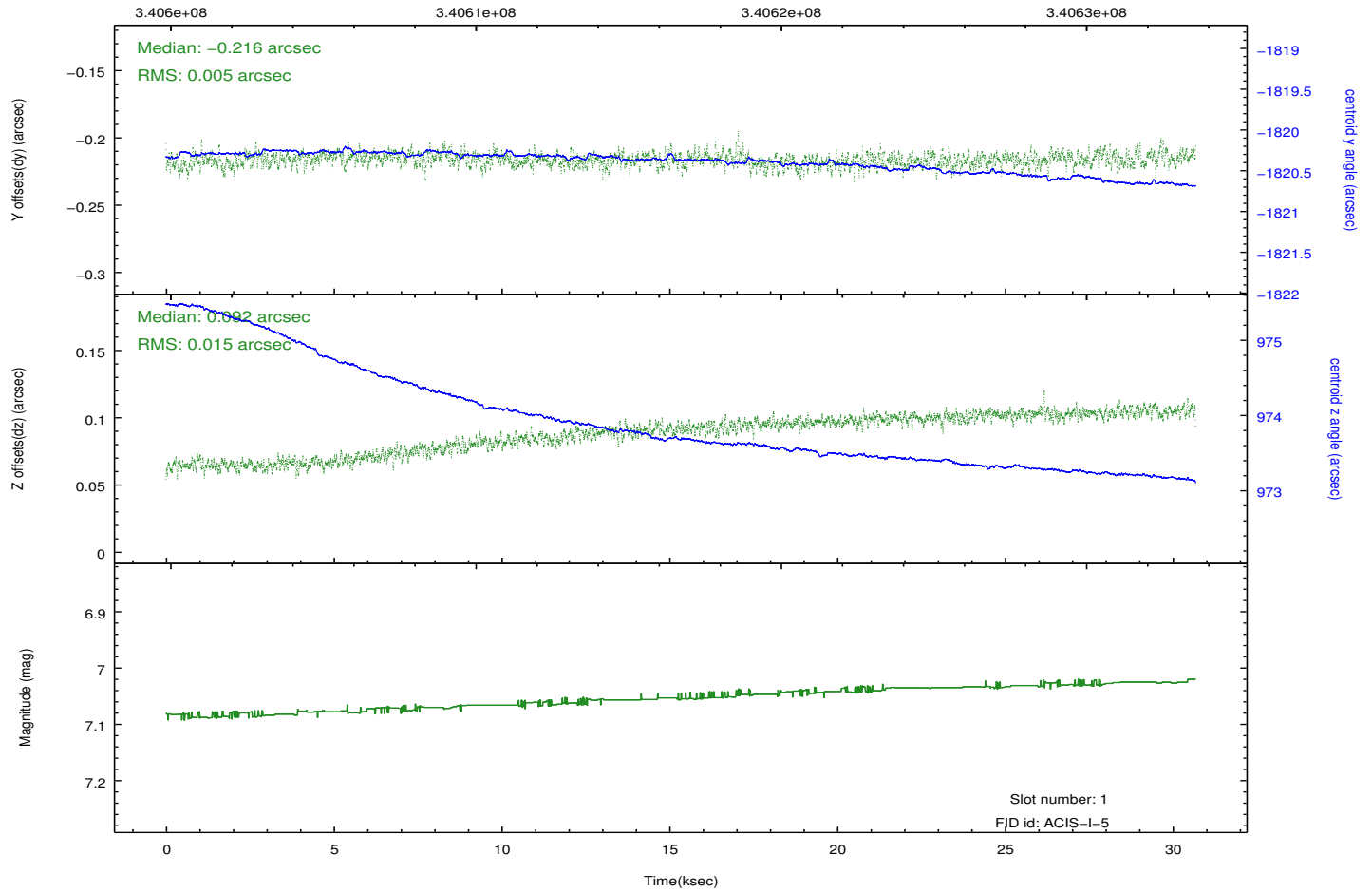
2.5.1 Slot 0



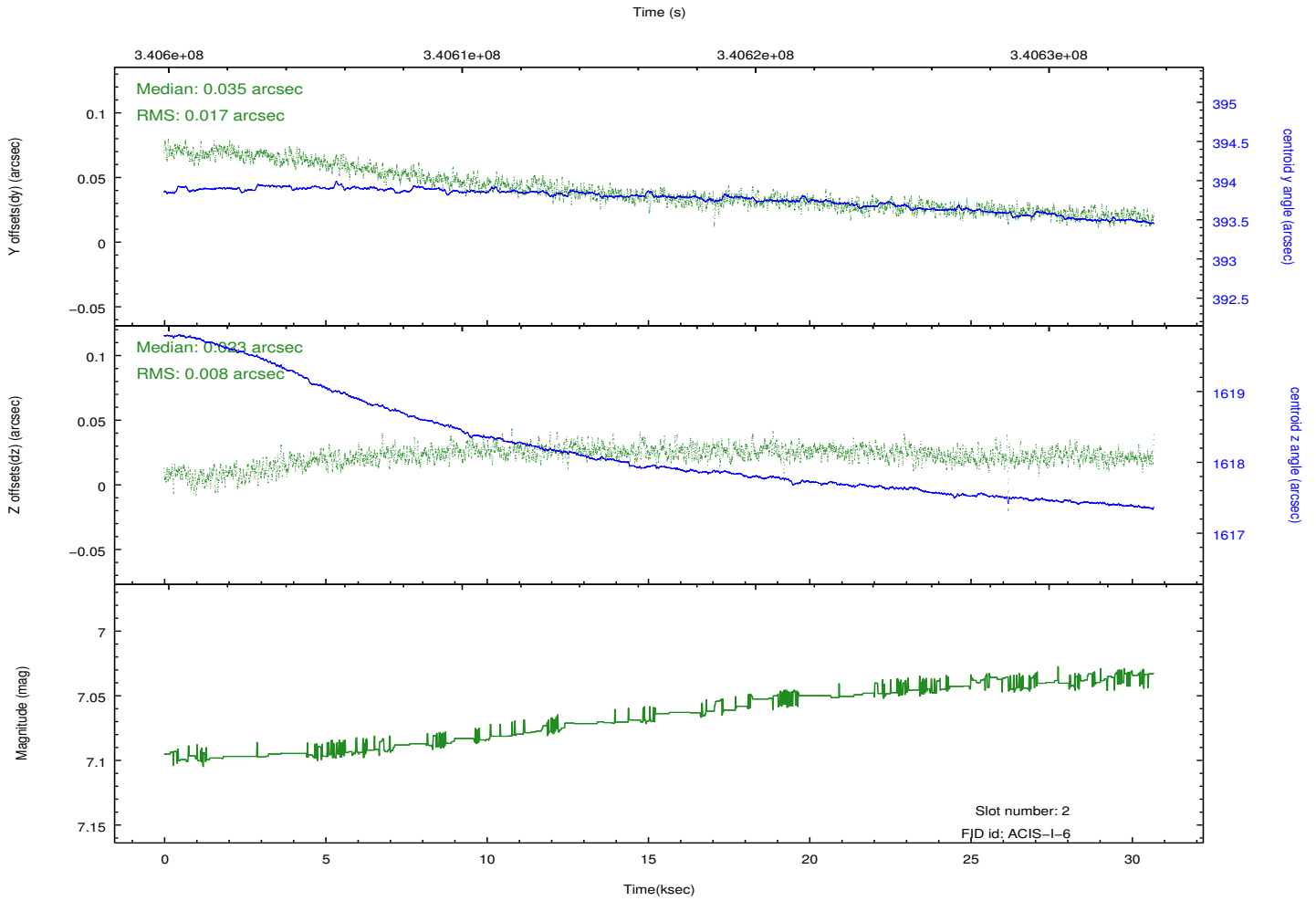
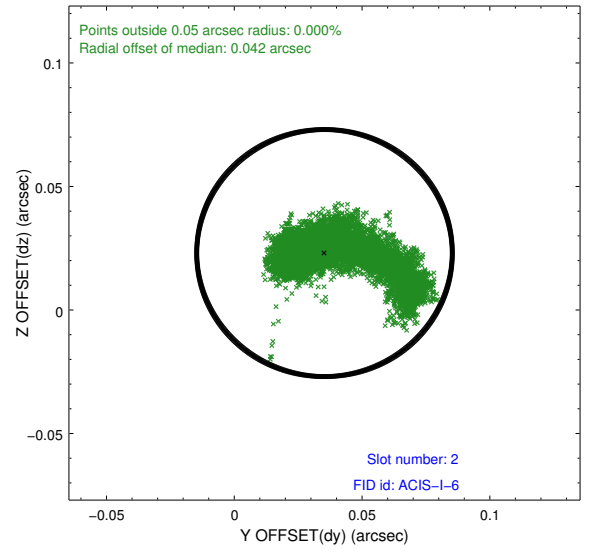
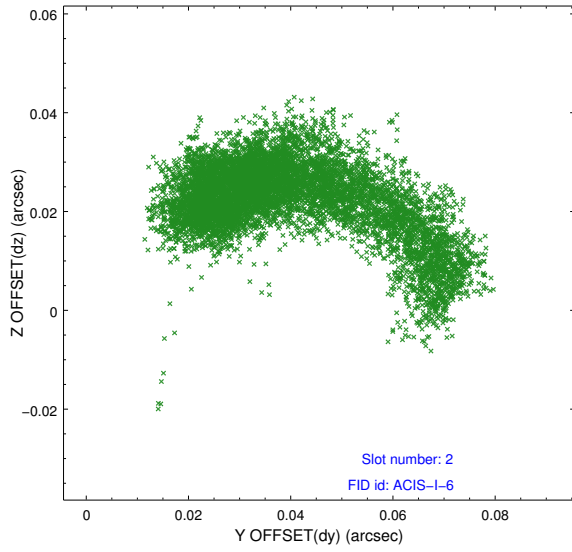
2.5.2 Slot 1



Time (s)



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.06.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.3117182

A.2 Comments

A spatial region of the original bias map for CCD = 1 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 = 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:
(245.17972,38.19704), (245.16815,38.18900), (245.17869,38.17958), (245.18763,38.18997)