

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 9744 - L2 Version 3
Chandra X-Ray Center

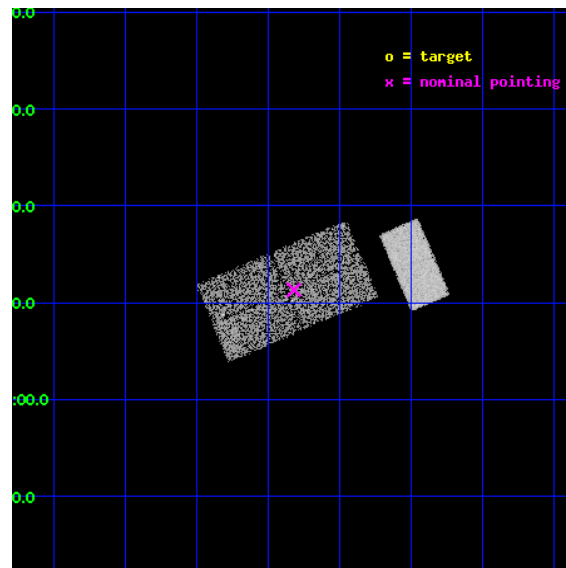
L2 Processing Date : May 17 2012

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 2	9
2.4.2	Slot 3	10
2.4.3	Slot 6	11
2.5	FID Slots	12
2.5.1	Slot 0	12
2.5.2	Slot 1	13
A	Summary	14
A.1	Status	14
A.2	Comments	14

1 Front

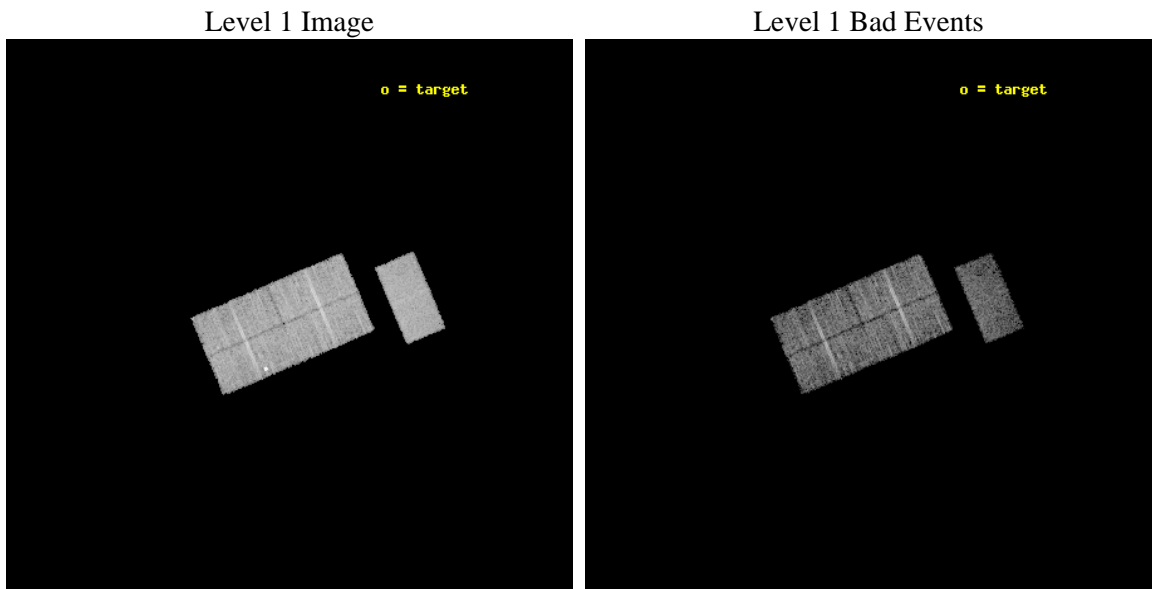
seq_num	100069	Sequence number
obs_id	9744	Observation id
title	Solar wind charge exchange induced X-rays at Venus during the Messenger flyby	Proposal title
observer	Dr. Konrad Dennerl	Principal investigator
object	Venus	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	168.733292	Observer's specified target RA [deg]
dec_targ	4.922889	Observer's specified target Dec [deg]
ra_nom	170.82987183754	Nominal RA [deg]
dec_nom	4.1888357542593	Nominal Dec [deg]
roll_nom	66.860871164028	Nominal Roll [deg]
revision	3	Processing version of data
ontime	6883.200045526	Sum of GTIs [s]
livetime	6729.7614836977	Livetime [s]
ontime0	6883.200045526	Sum of GTIs [s]
ontime1	6883.200045526	Sum of GTIs [s]
ontime2	6883.200045526	Sum of GTIs [s]
ontime3	6883.200045526	Sum of GTIs [s]
ontime7	6883.200045526	Sum of GTIs [s]
l2events	24190	Number of level 2 events



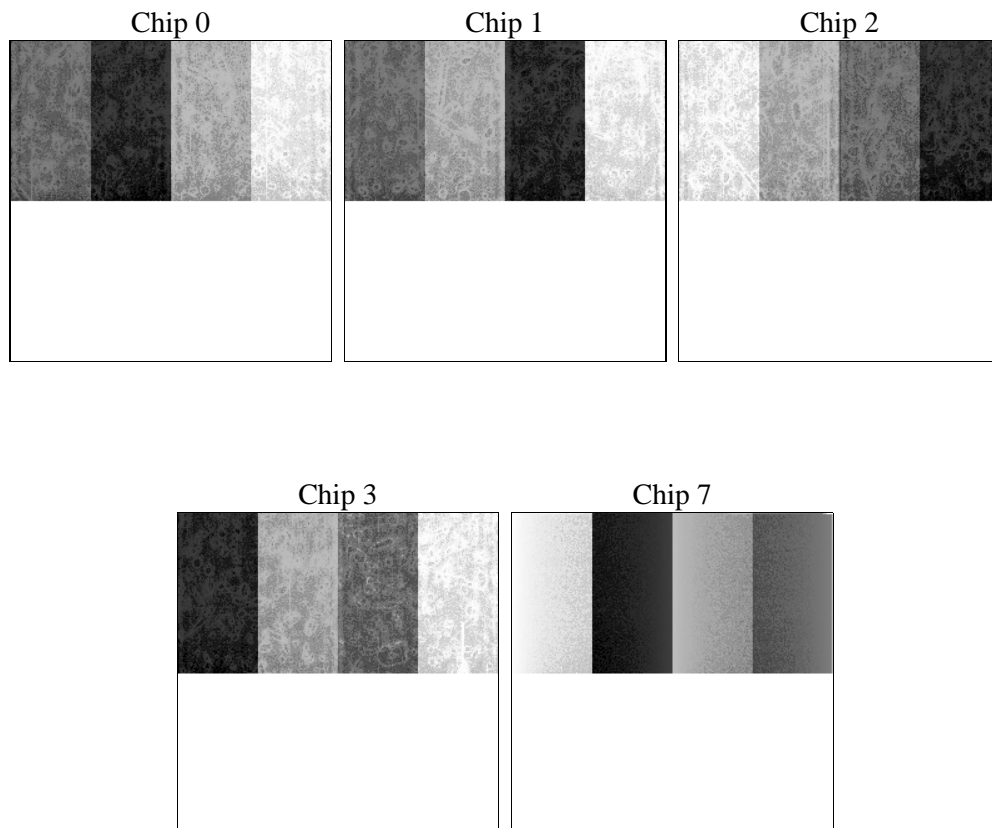
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	6700.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	6883.200045526	Sum of GTIs [s]
caldsver	4.4.9	 	ontime0	6883.200045526	Sum of GTIs [s]
date	2012-05-17T21:38:38	Date and time of file creation	ontime1	6883.200045526	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	6883.200045526	Sum of GTIs [s]
			ontime3	6883.200045526	Sum of GTIs [s]
			ontime7	6883.200045526	Sum of GTIs [s]
			l1events	161588	Number of level 1 events

2.1.4 Events

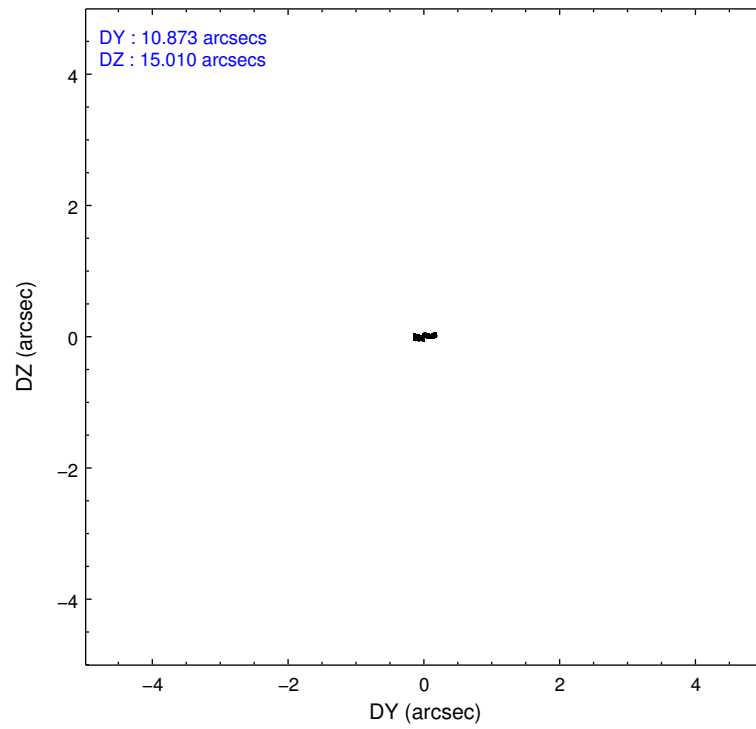
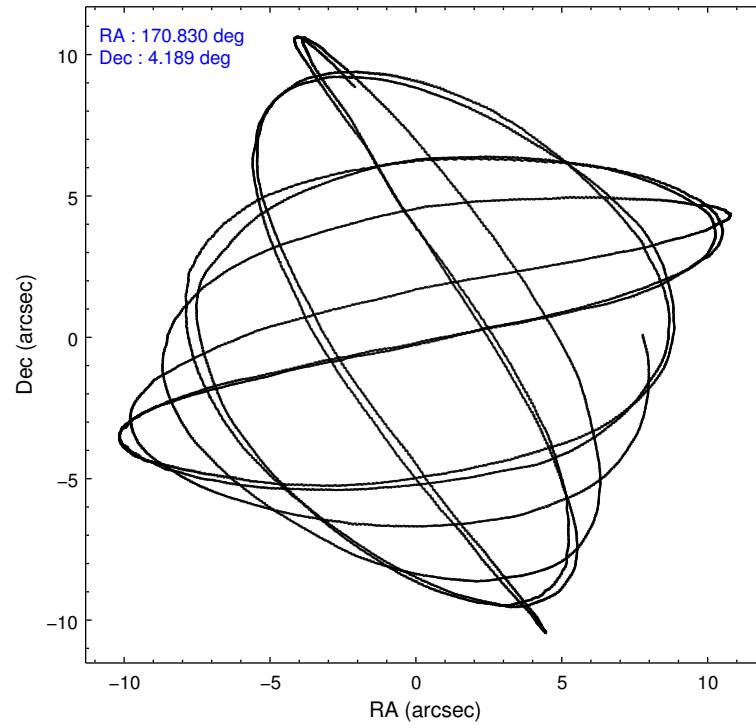
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	29167	30921	34645	32626	34229
rejected events	26193	26318	31586	29686	19299
rejected %	89%	85%	91%	90%	56%

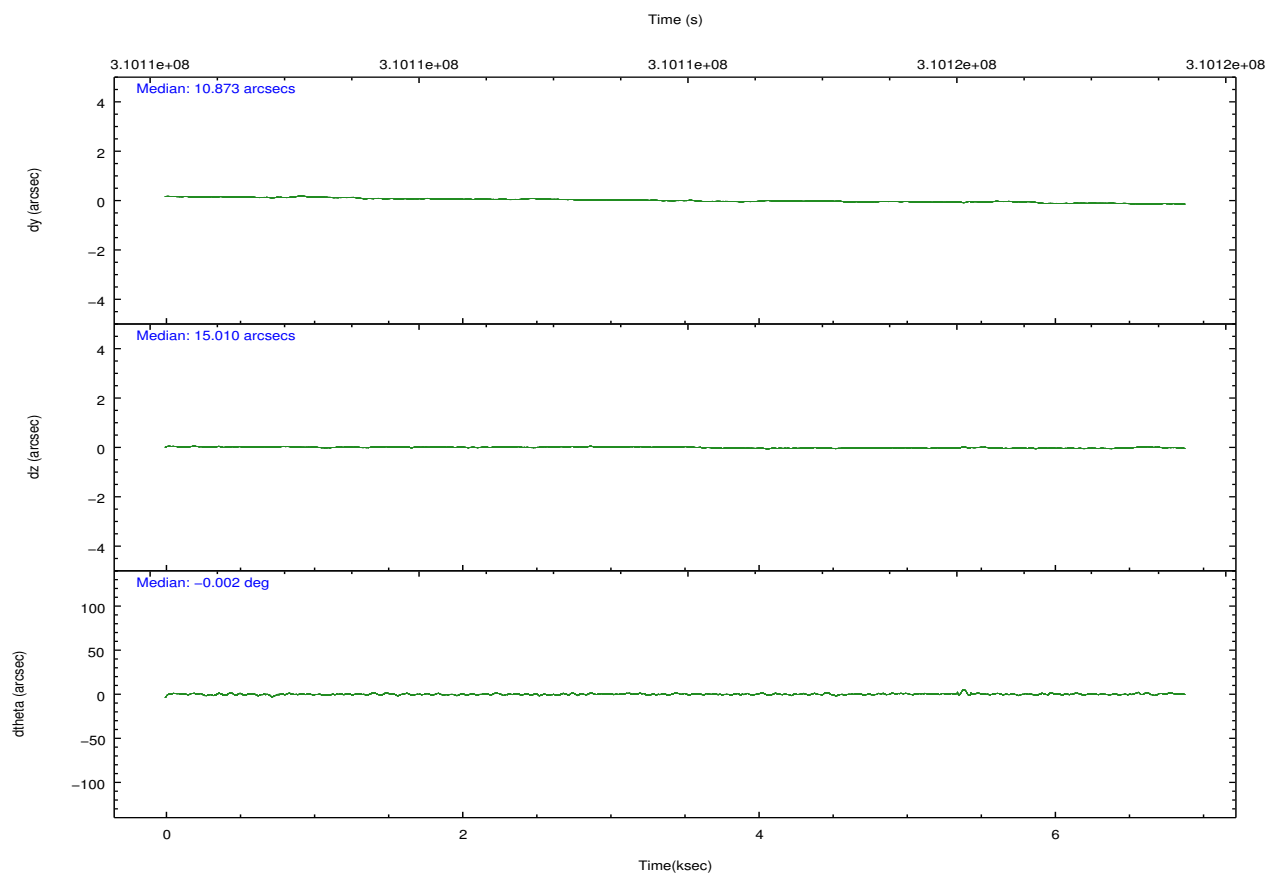
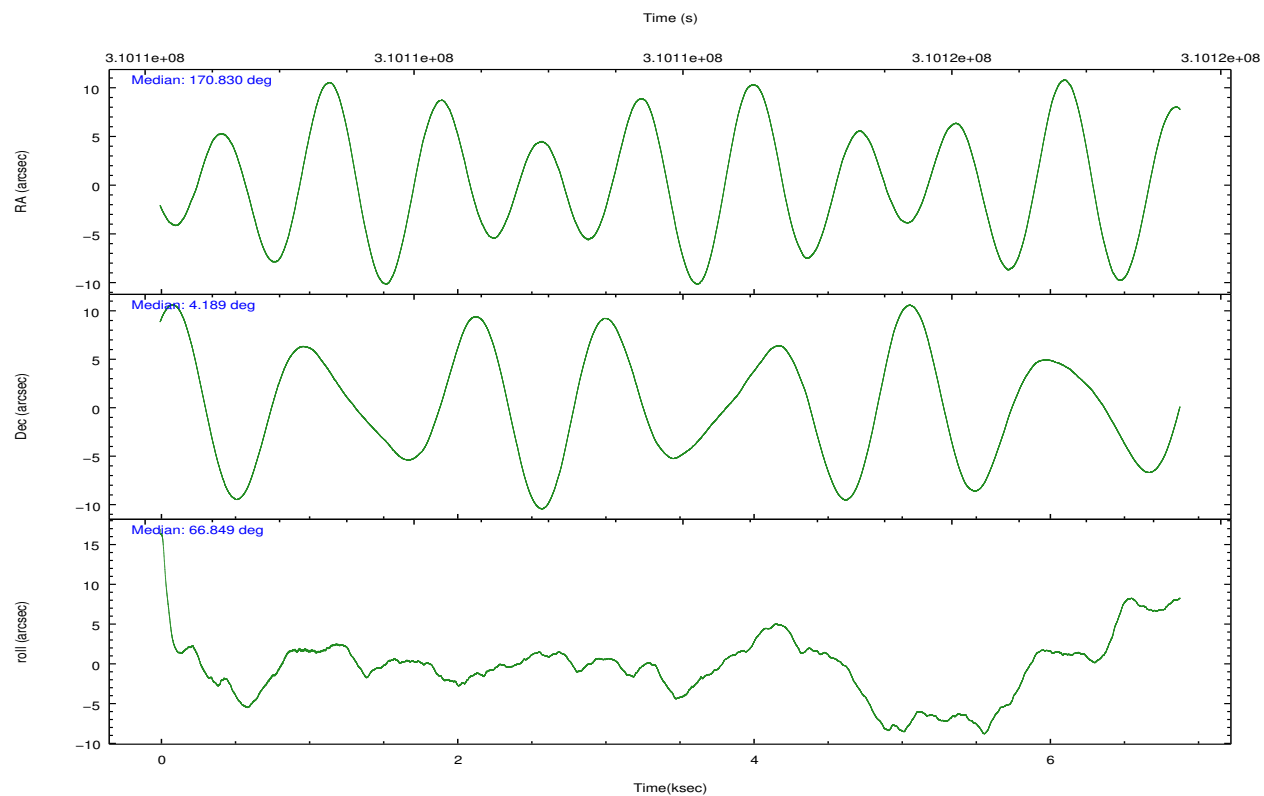
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	1057	2691	1059	1059	1493
	3%	8%	3%	3%	4%
grade 1 events	13	17	19	21	50
	0%	0%	0%	0%	0%
grade 2 events	710	676	746	574	3285
	2%	2%	2%	1%	9%
grade 3 events	434	376	382	390	1612
	1%	1%	1%	1%	4%
grade 4 events	374	412	416	403	1582
	1%	1%	1%	1%	4%
grade 5 events	1118	1167	1086	1355	3772
	3%	3%	3%	4%	11%
grade 6 events	530	665	591	621	7645
	1%	2%	1%	1%	22%
grade 7 events	24931	24917	30346	28203	14790
	85%	80%	87%	86%	43%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01237	ACIS-01237	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	170.833289	170.8298718375426	CCD I2 on	Y	Y
[deg] Pointing Dec	4.161571	4.188835754259322	CCD I3 on	Y	Y
[deg] Pointing Roll	66.651954	66.86087116402778	CCD S0 on	N	N
[s] Window start time (MET)	309398465.184000	309398465.184000	CCD S1 on	N	N
[s] Window stop time (MET)	310608065.184000	310608065.184000	CCD S2 on	O1	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S3 on	O2	Y
[mm] SIM defocus	0	0.001439871863259334	CCD S4 on	N	N
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S5 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	Number of optional ACIS chips dropped	1	1
[s] Observation start time (MET)	310110639.184000	310110262.85336	On-chip summing requested	N	N
Observation start date	2007-10-30T05:49:34	2007-10-30T05:44:22	Subarray requested	CUSTOM	1/2
[s] Observation end time (MET)	310117339.184000	310117473.2162	Subarray start row	513	513
Observation end date	2007-10-30T07:41:14	2007-10-30T07:44:33	Subarray row count	512	512
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	1.8

2.3 Aspect



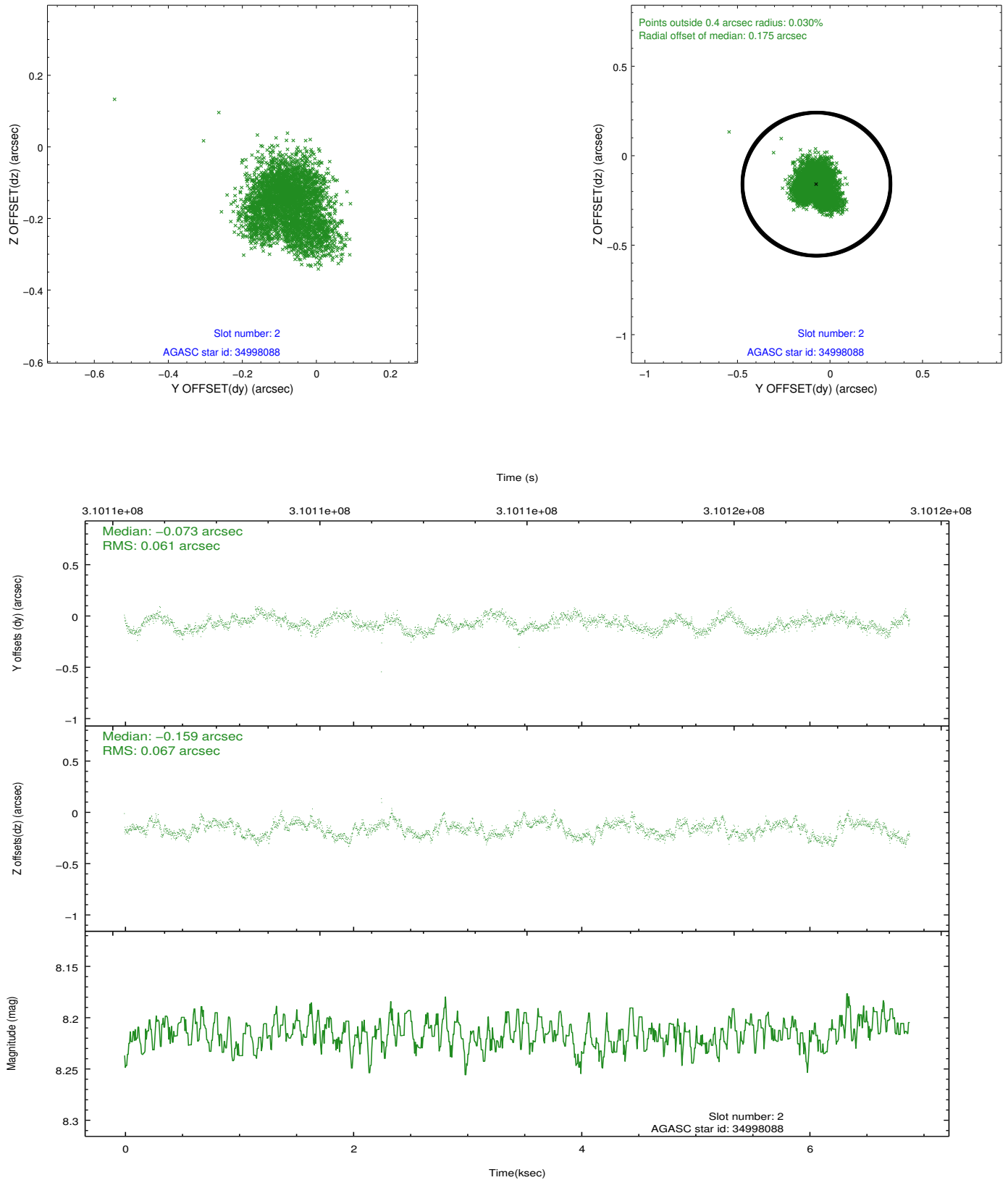


Slot Statistics

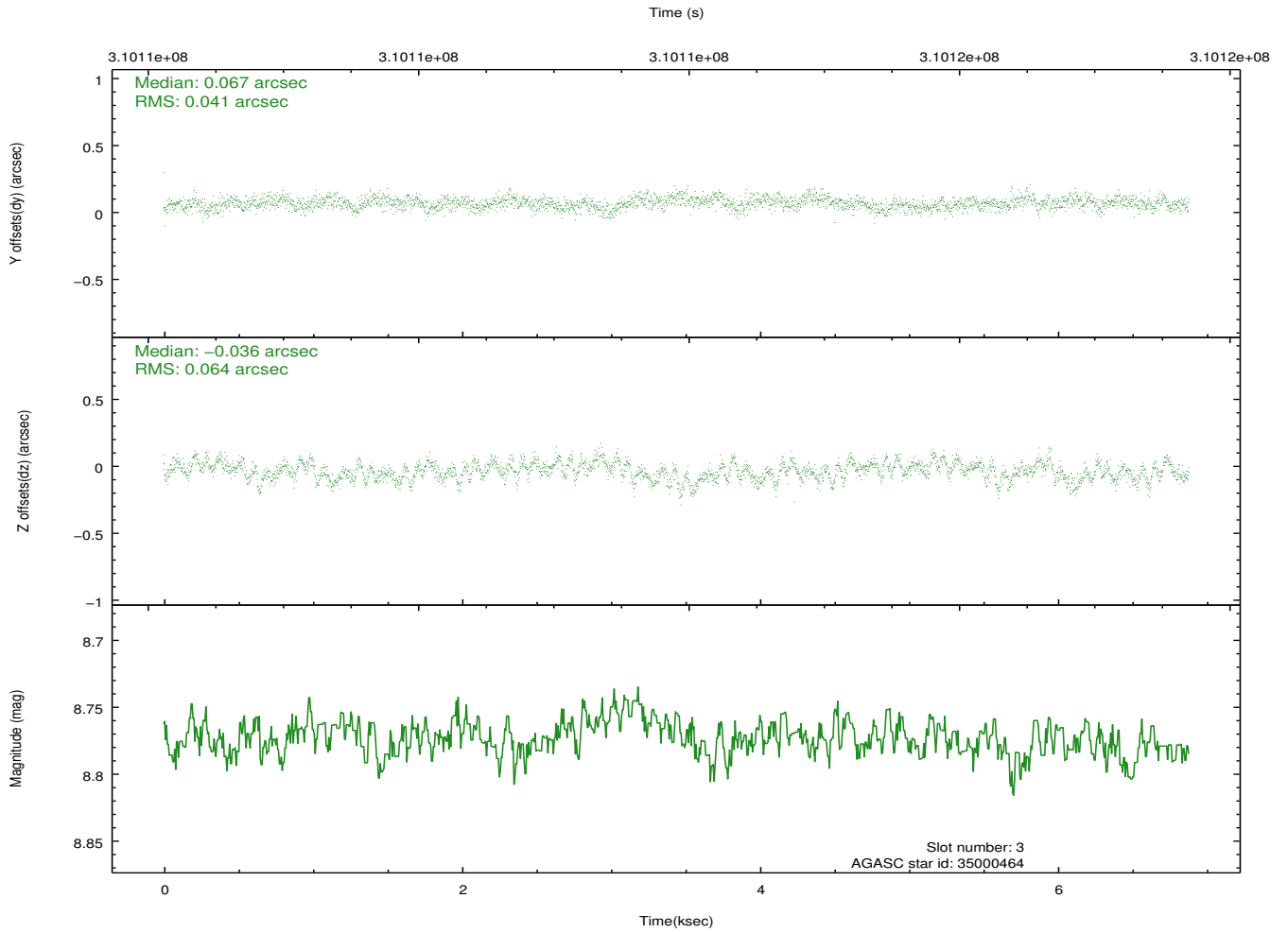
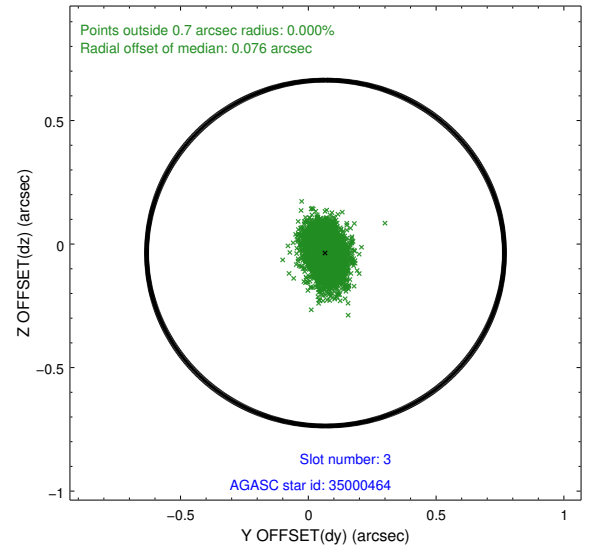
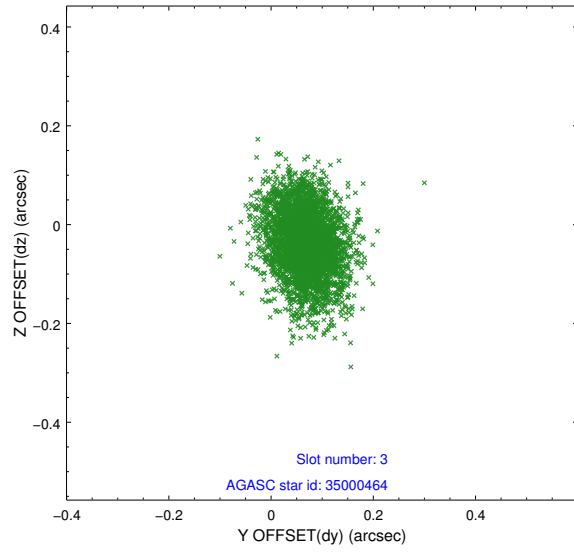
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.13	1678	0.014	-0.060	0.008	0.016	0.000000	0.000000	-765.47	-845.03
1	FID	ACIS-I-5	7.23	1678	-0.077	0.108	0.008	0.016	0.000000	0.000000	-1820.05	1058.55
2	GUIDE	34998088	8.22	3358	-0.073	-0.159	0.097	0.149	170.391115	4.208300	-474.72	1525.09
3	GUIDE	35000464	8.77	3357	0.067	-0.036	0.080	0.134	170.965623	3.618933	-1605.78	-1209.75
4	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
5	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00
6	GUIDE	35002848	9.93	3339	0.007	0.199	0.157	0.258	171.207329	3.477909	-1726.43	-2209.53
7	OMITTED		0.00	0	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0.00

2.4 Star Slots

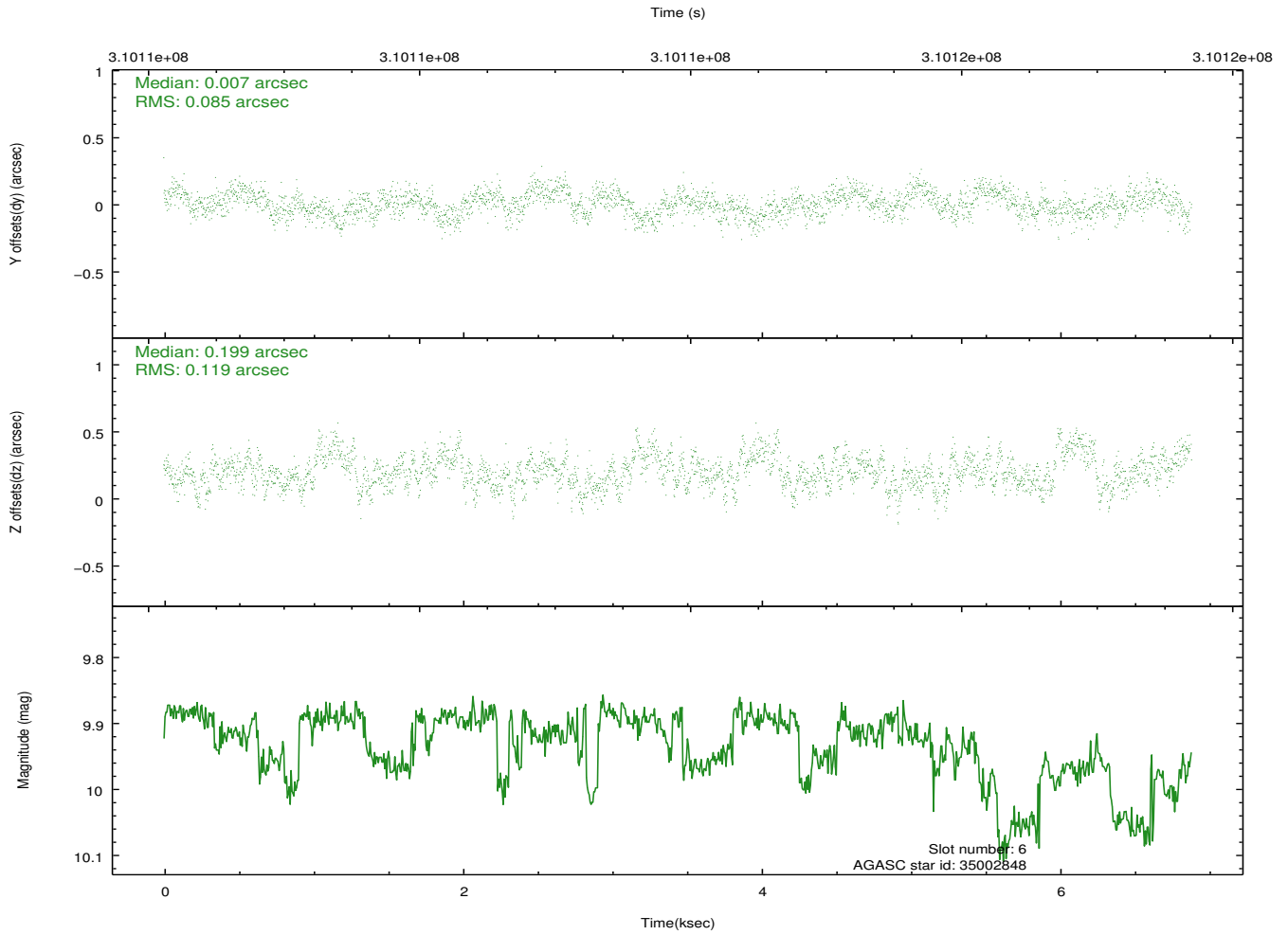
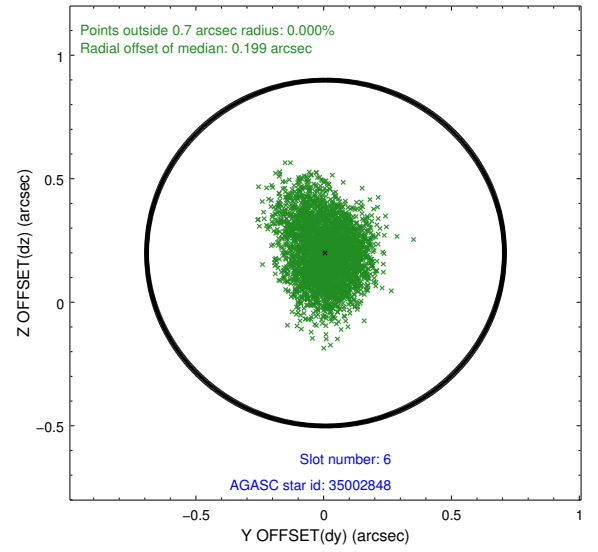
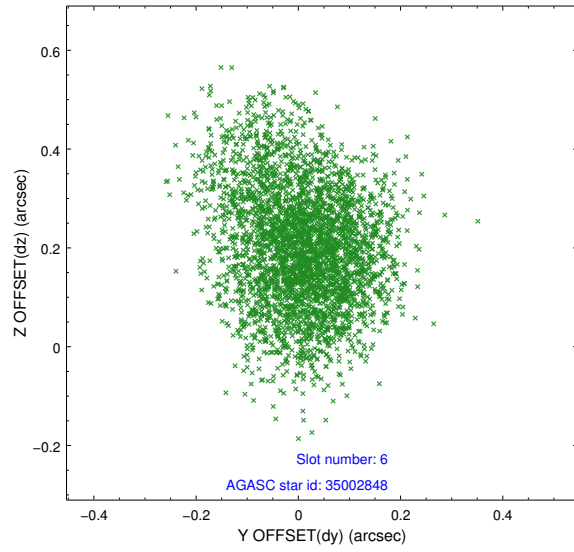
2.4.1 Slot 2



2.4.2 Slot 3

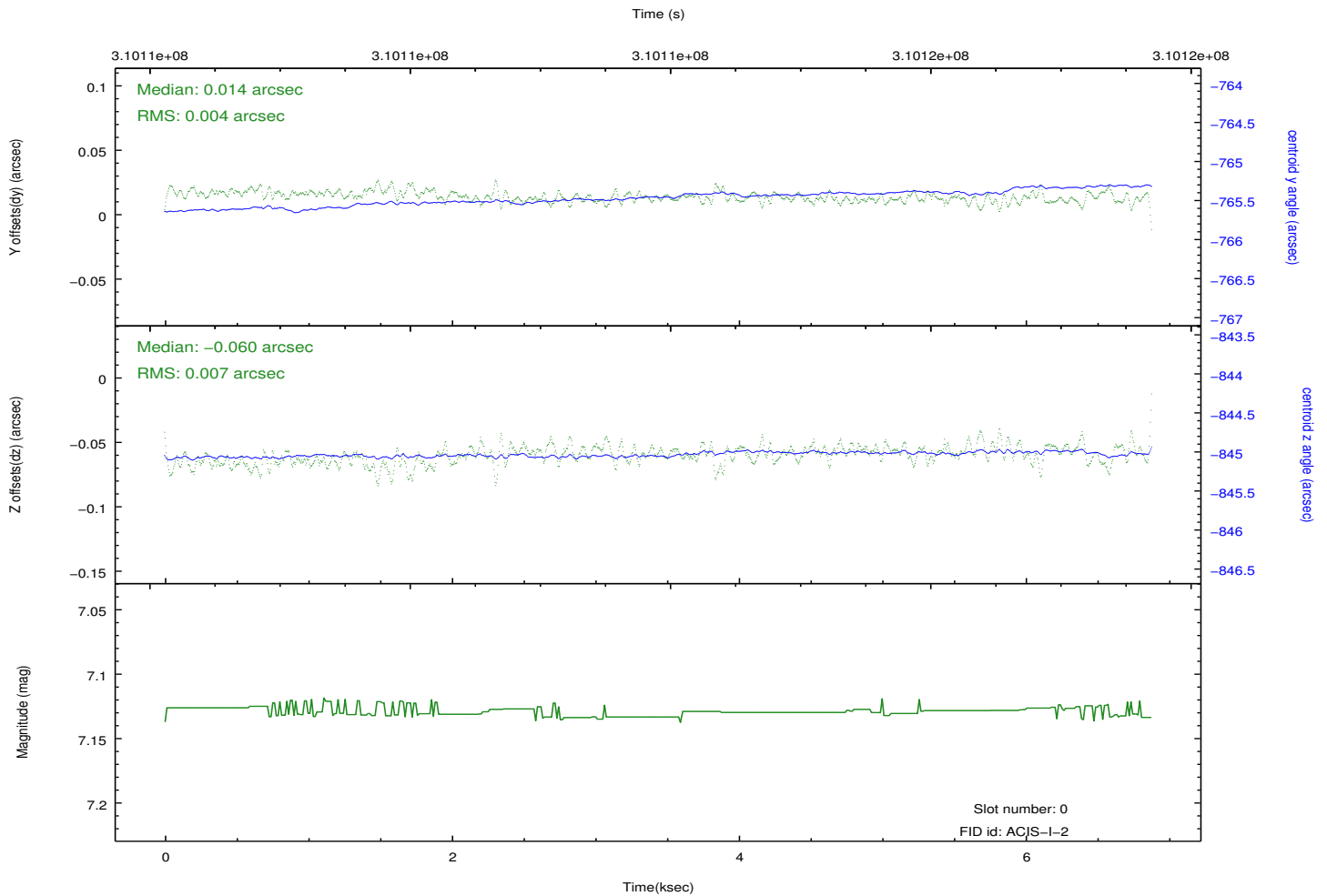
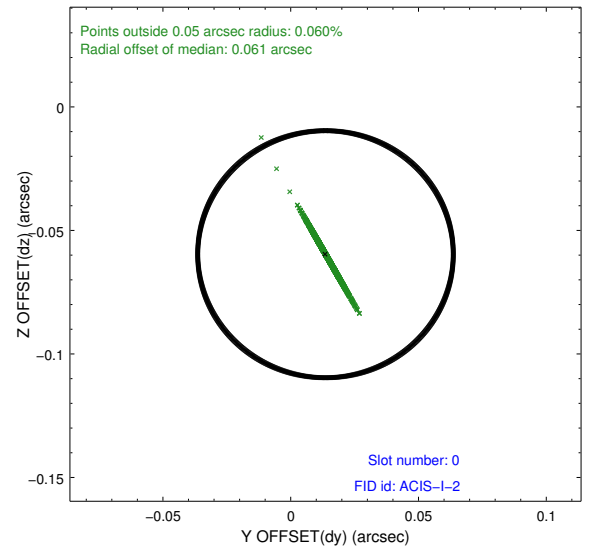
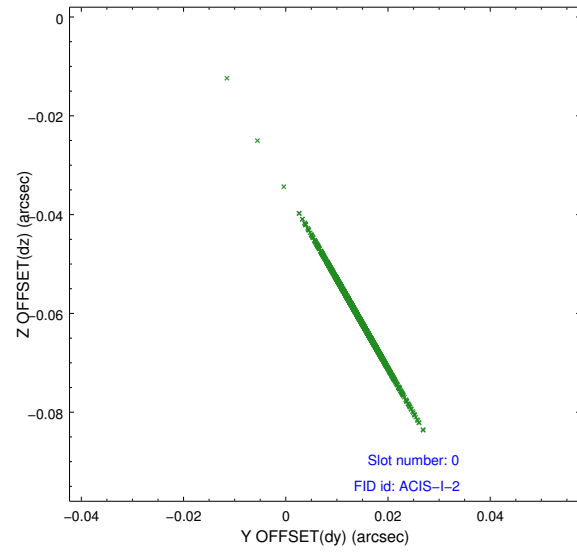


2.4.3 Slot 6

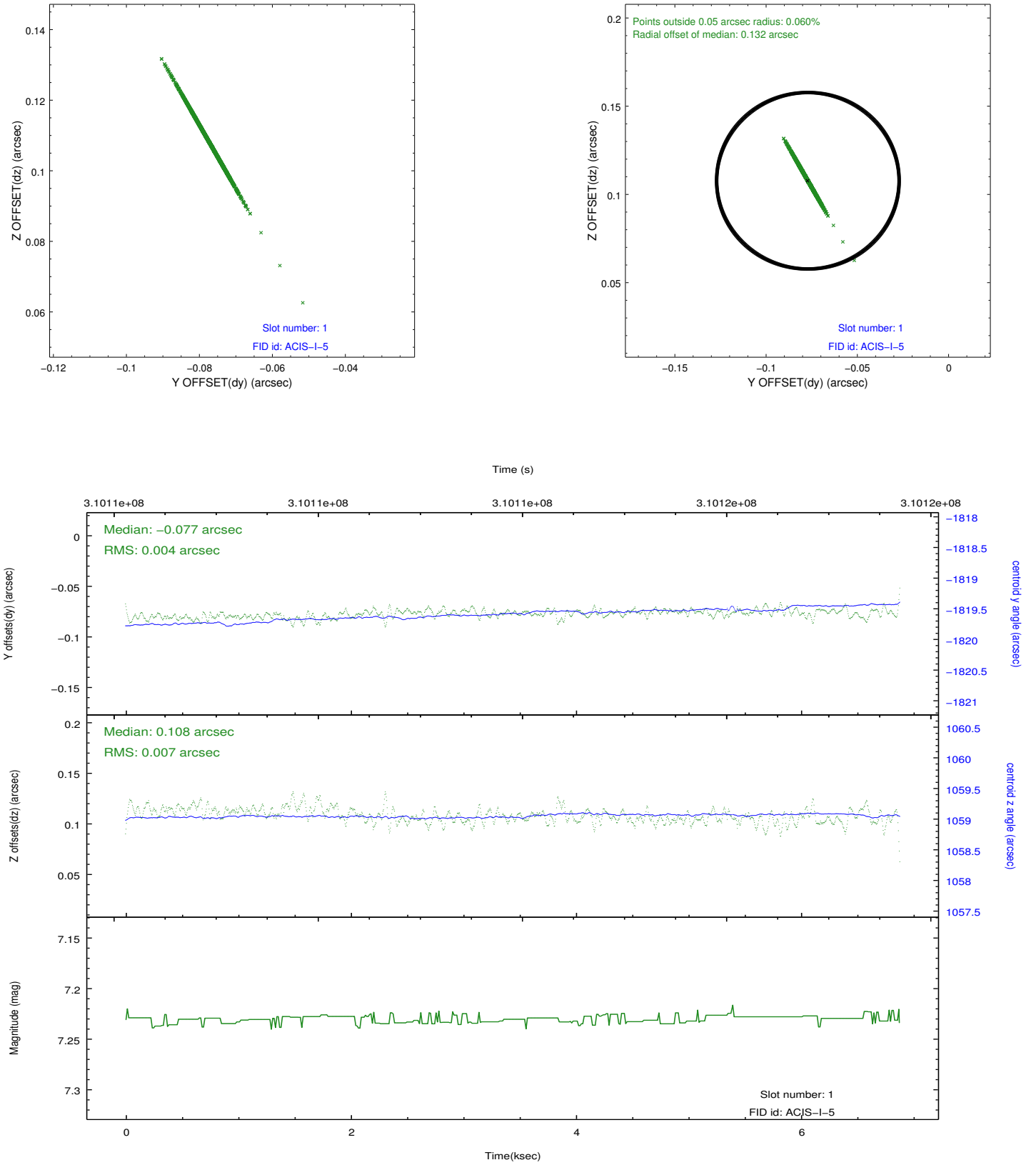


2.5 FID Slots

2.5.1 Slot 0



2.5.2 Slot 1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	6.88320004

A.2 Comments

Chandra does not track a moving target. The target trails across the image.

X-ray events must be corrected to Venus-centered coordinates using software such as `sso_freeze` in CIAO.

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Guide stars in slots 4, 5, and 7 were excluded from the aspect solution

due to poor data quality. There were a total of 6 guide stars for this observation since this is a moving target, so 3 guide stars are of good quality and were used in the aspect solution.