V&V Reference Report
L2 ASCDS Version : 8.4.3

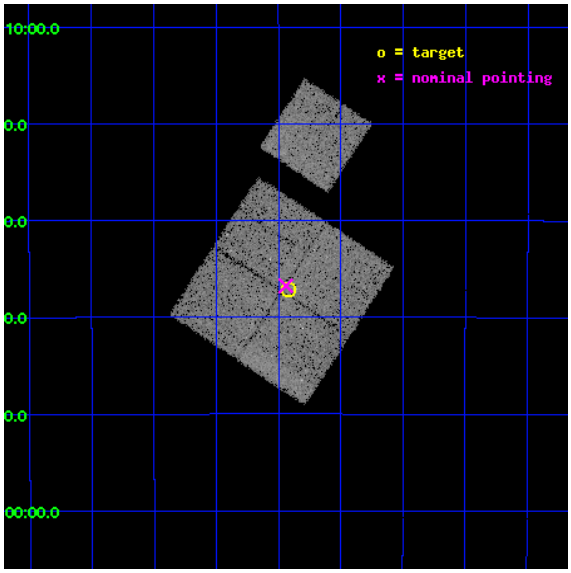
Observation 12176 - L2 Version 2
Chandra X-Ray Center

L2 Processing Date : Feb 6 2012

Contents

1 Front

seq_num	800942	Sequence number
obs_id	12176	Observation id
title	CLoGS I. - A Complete Local-volume Group Survey	Proposal title
observer	Dr Stephen Murray	Principal investigator
object	LGG351	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	201.979167	Observer's specified target RA [deg]
dec_targ	-29.618889	Observer's specified target Dec [deg]
ra_nom	201.98504627556	Nominal RA [deg]
dec_nom	-29.612635430452	Nominal Dec [deg]
roll_nom	33.29597614904	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20044.003350079	Sum of GTIs [s]
livetime	19782.11369013	Livetime [s]
ontime0	20047.021250665	Sum of GTIs [s]
ontime1	20053.344361067	Sum of GTIs [s]
ontime2	20047.103349984	Sum of GTIs [s]
ontime3	20044.003350079	Sum of GTIs [s]
ontime6	20053.26228106	Sum of GTIs [s]
l2events	65844	Number of level 2 events

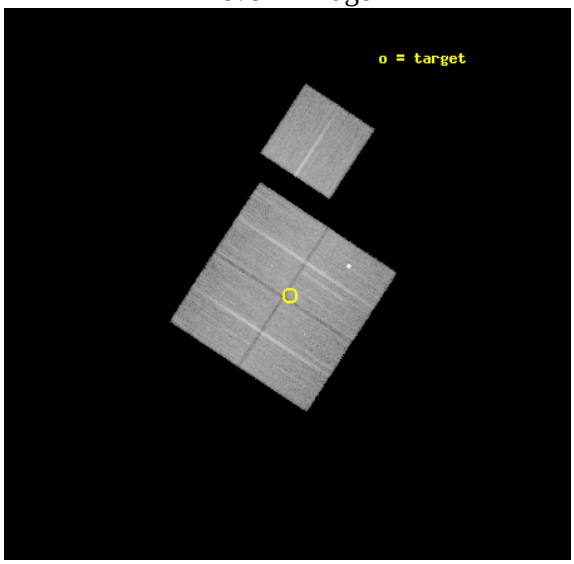


2 OBI

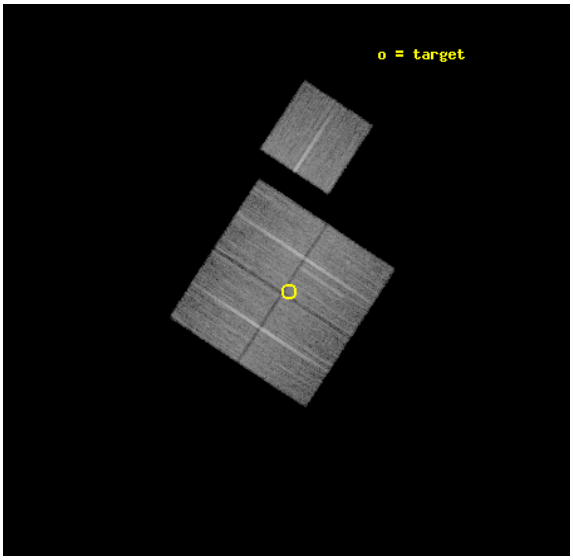
2.1 OBI

2.1.1 Images

Level 1 Image

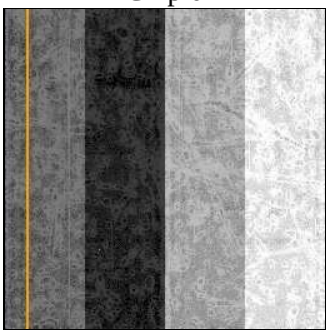


Level 1 Bad Events

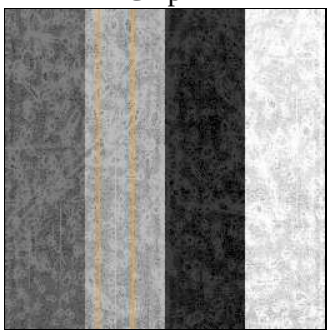


2.1.2 Bias

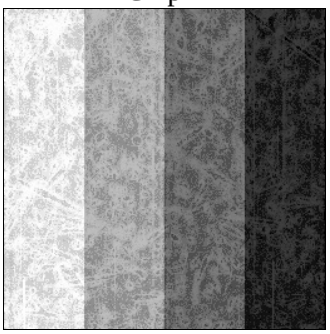
Chip 0



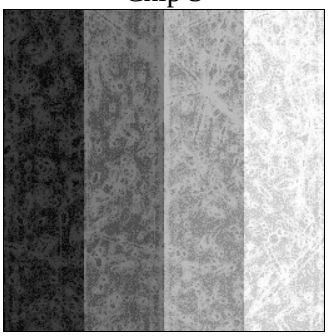
Chip 1



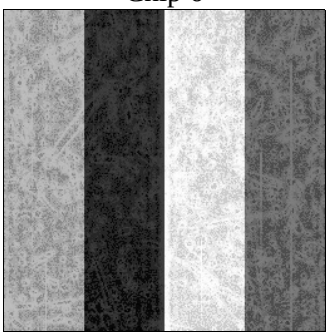
Chip 2



Chip 3



Chip 6



2.1.3 Parameters

obi_num	0	Obi number
ascdsver	8.4.3	Processing system revision
caldbver	4.4.7	
date	2012-02-06T22:03:40	Date and time of file creation
revision	2	Processing version of data

sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ontime	20044.003350079	Sum of GTIs [s]
ontime0	20047.021250665	Sum of GTIs [s]
ontime1	20053.344361067	Sum of GTIs [s]
ontime2	20047.103349984	Sum of GTIs [s]
ontime3	20044.003350079	Sum of GTIs [s]
ontime6	20053.26228106	Sum of GTIs [s]
l1events	661967	Number of level 1 events

2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	126745	124078	140027	141071	130046
rejected events	111421	106869	124626	120493	114410
rejected %	87%	86%	89%	85%	87%

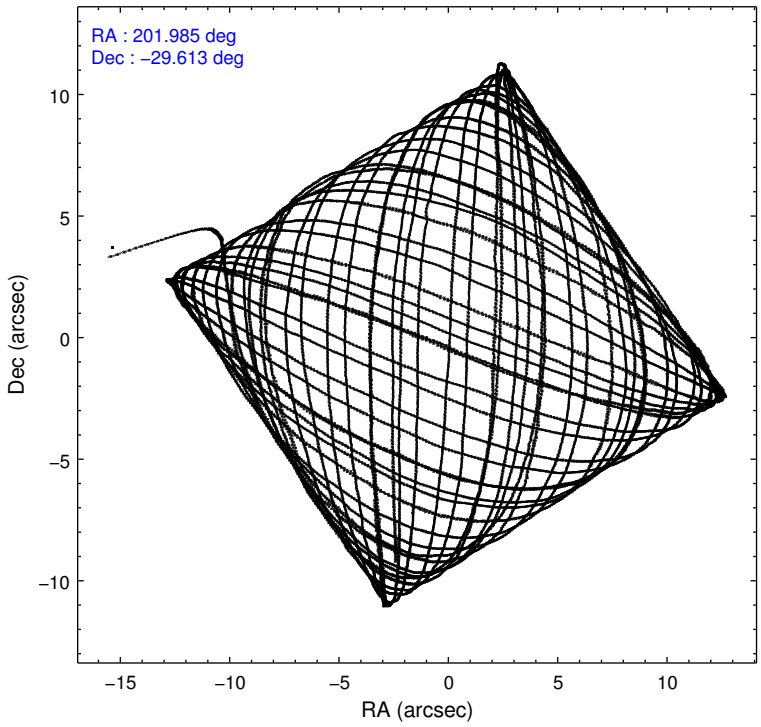
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	5315	6300	5575	11360	5447
	4%	5%	3%	8%	4%
grade 1 events	73	66	88	115	68
	0%	0%	0%	0%	0%
grade 2 events	3617	4003	3781	3116	3550
	2%	3%	2%	2%	2%
grade 3 events	1678	1725	1586	1615	1658
	1%	1%	1%	1%	1%
grade 4 events	1614	1761	1607	1562	1625
	1%	1%	1%	1%	1%
grade 5 events	5752	6101	5518	6536	6253
	4%	4%	3%	4%	4%
grade 6 events	3103	3426	2857	2933	3362
	2%	2%	2%	2%	2%
grade 7 events	105593	100696	119015	113834	108083
	83%	81%	84%	80%	83%

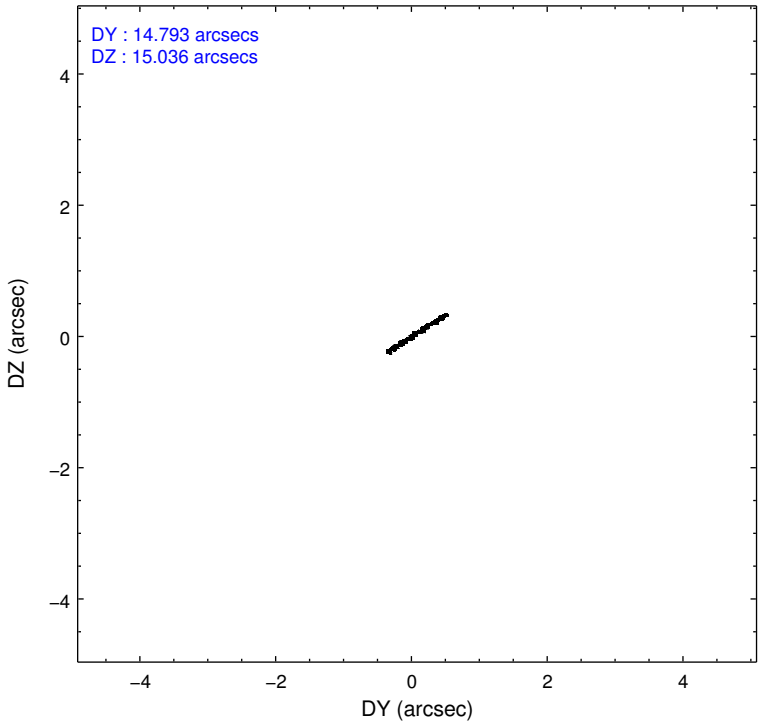
2.2 Compared Parameters

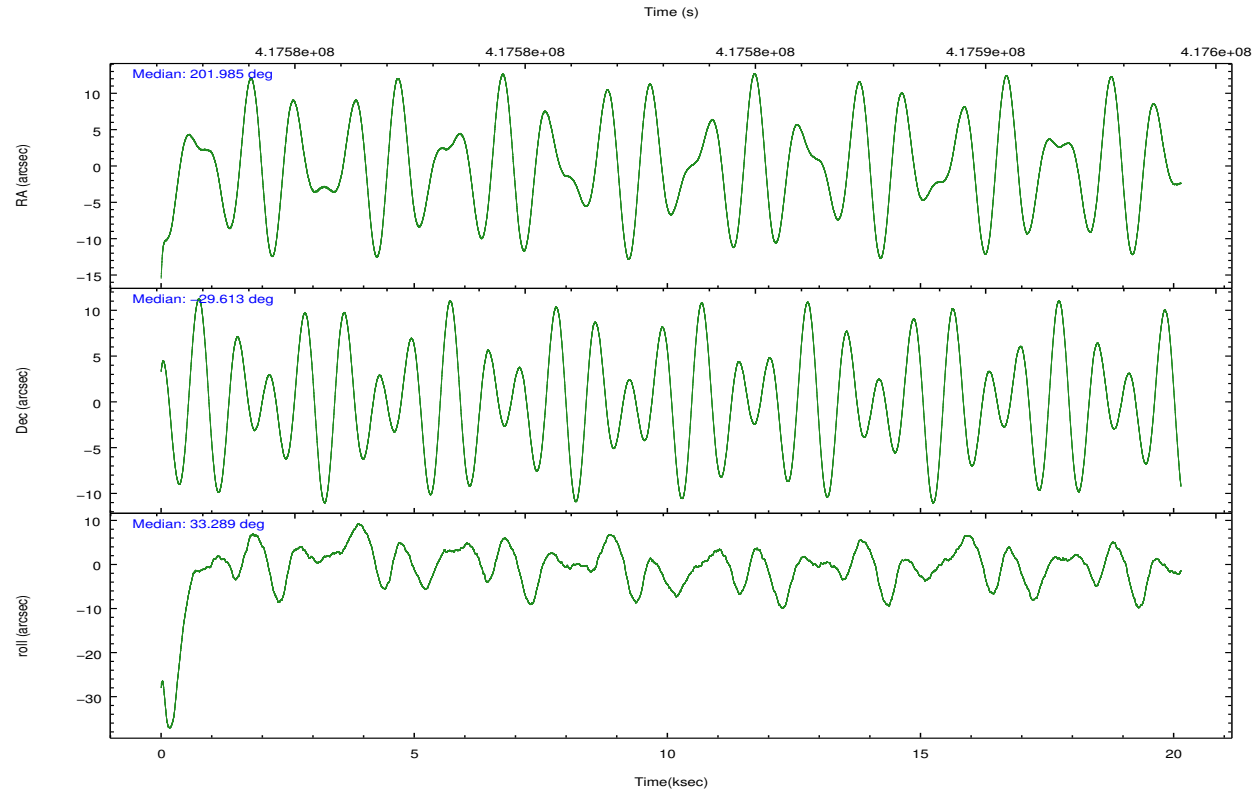
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-01236	ACIS-01236
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	201.970964	201.9850462755578
[deg] Pointing Dec	-29.637264	-29.61263543045242
[deg] Pointing Roll	33.080320	33.29597614903972
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-233.592463	-233.5874344608287
[mm] SIM translation stage offset	0	-0.005018542100998502
[s] Observation start time (MET)	417573231.184000	417572212.54016
Observation start date	2011-03-27T00:32:45	2011-03-27T00:16:52
[s] Observation end time (MET)	417593231.184000	417593866.69128
Observation end date	2011-03-27T06:06:05	2011-03-27T06:17:46
Read mode	TIMED	TIMED

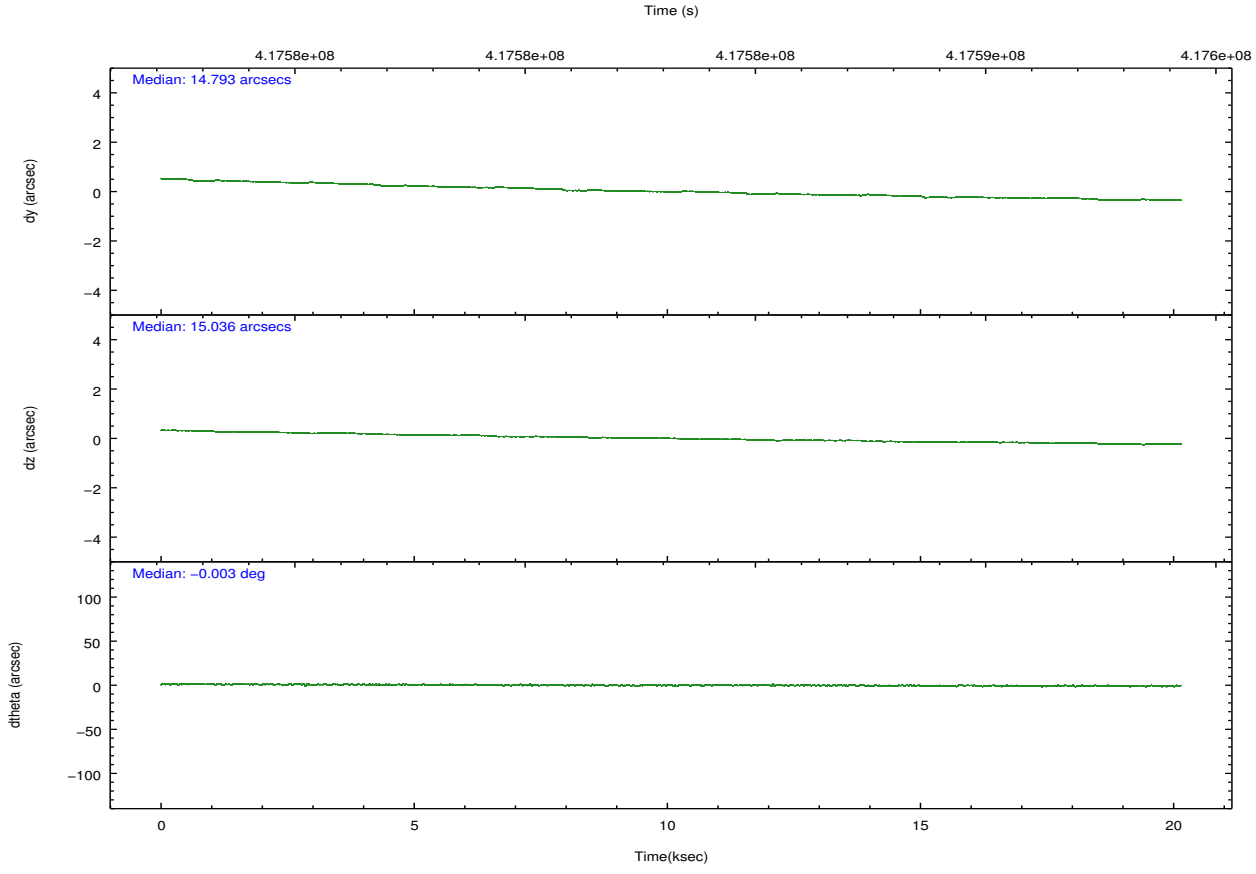
Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

2.3 Aspect


RA : 201.985 deg
Dec : −29.613 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−15
−10
−5
0
5
10


DY : 14.793 arcsecs
DZ : 15.036 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
4.1758e+08
4.1758e+08
4.1758e+08
4.1759e+08
4.176e+08
Median: 201.985 deg
RA (arcsec)
Median: −29.613 deg
Dec (arcsec)
Median: 33.289 deg
roll (arcsec)
Time(ksec)

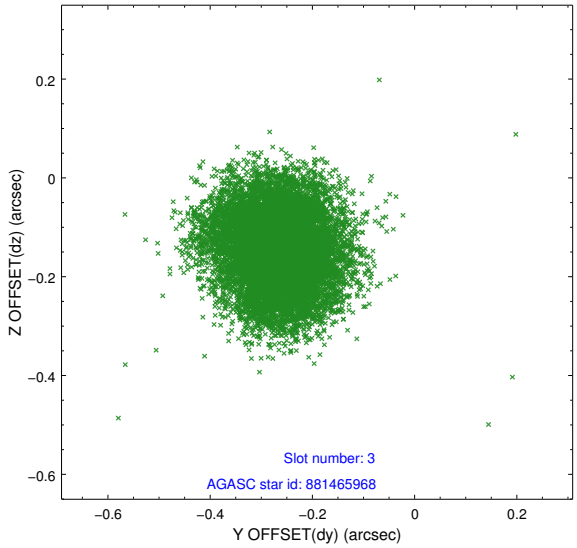

Time (s)
4.1758e+08
4.1758e+08
4.1758e+08
4.1759e+08
4.176e+08
Median: 14.793 arcsecs
dy (arcsec)
Median: 15.036 arcsecs
dz (arcsec)
Median: −0.003 deg
dtheta (arcsec)
Time(ksec)

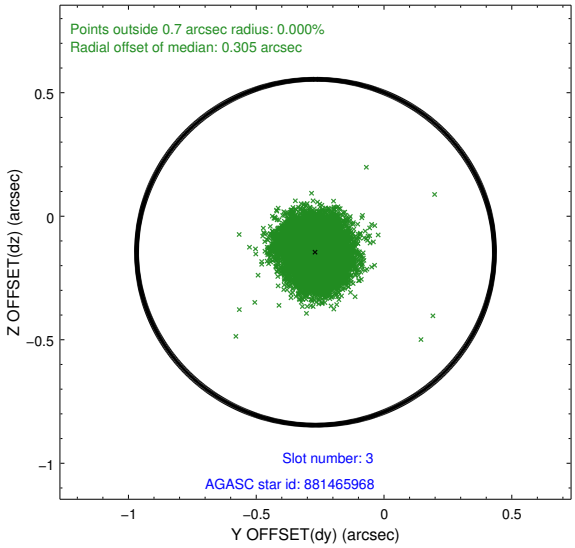
Slot Statistics

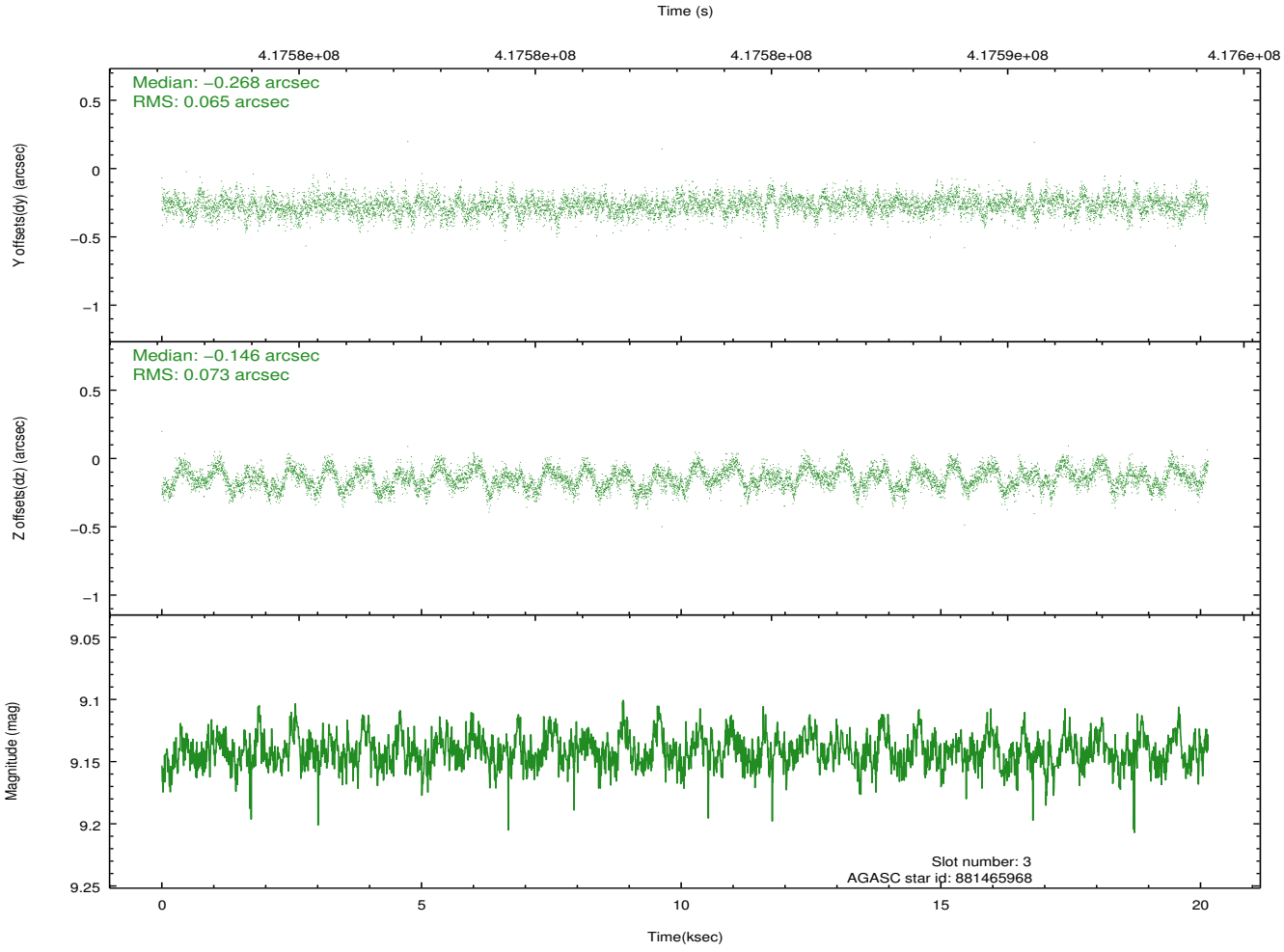
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.11	4913	0.046	-0.018	0.009	0.014	0.000000	0.000000	924.70	-838.65
1	FID	ACIS-I-5	7.11	4912	-0.233	0.042	0.009	0.015	0.000000	0.000000	-1823.60	1058.77
2	FID	ACIS-I-6	7.11	4913	0.097	0.046	0.008	0.014	0.000000	0.000000	390.07	1703.51
3	GUIDE	881465968	9.14	9815	-0.268	-0.146	0.105	0.163	202.485292	-29.187640	2236.03	471.15
4	GUIDE	881469416	9.29	9808	-0.225	-0.374	0.131	0.211	201.790251	-29.062401	652.96	2043.84
5	GUIDE	881475264	9.91	9817	0.257	0.308	0.216	0.313	201.527599	-29.916221	-1708.07	-88.44
6	GUIDE	952127304	7.99	9823	-0.024	0.155	0.087	0.133	202.300337	-30.160429	-169.31	-2138.78
7	GUIDE	952122976	9.45	9749	0.263	0.061	0.135	0.224	202.274547	-30.211405	-336.55	-2248.56

2.4 Star Slots

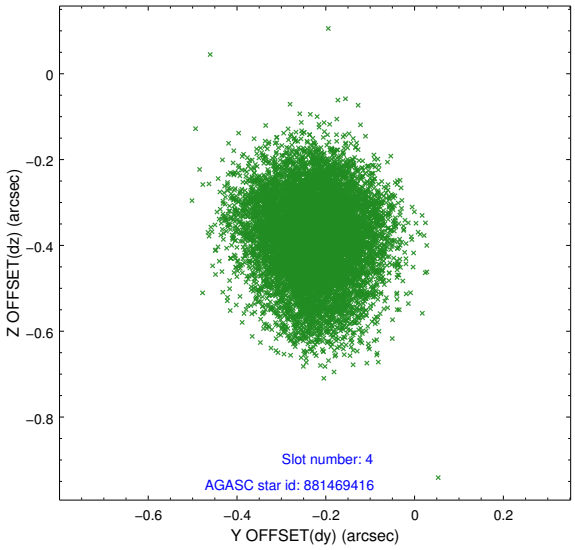
2.4.1 Slot 3

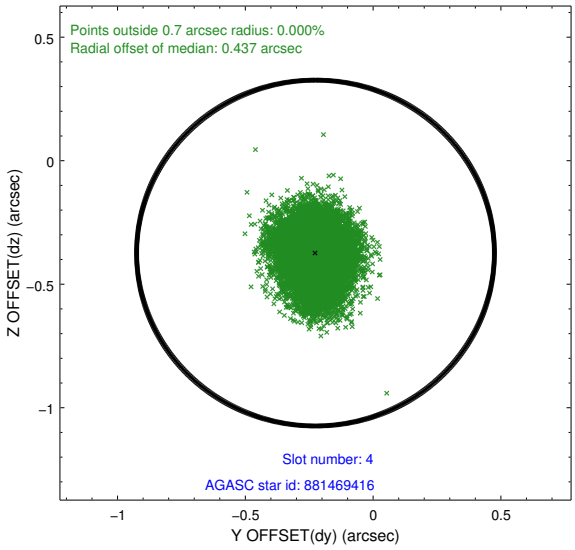


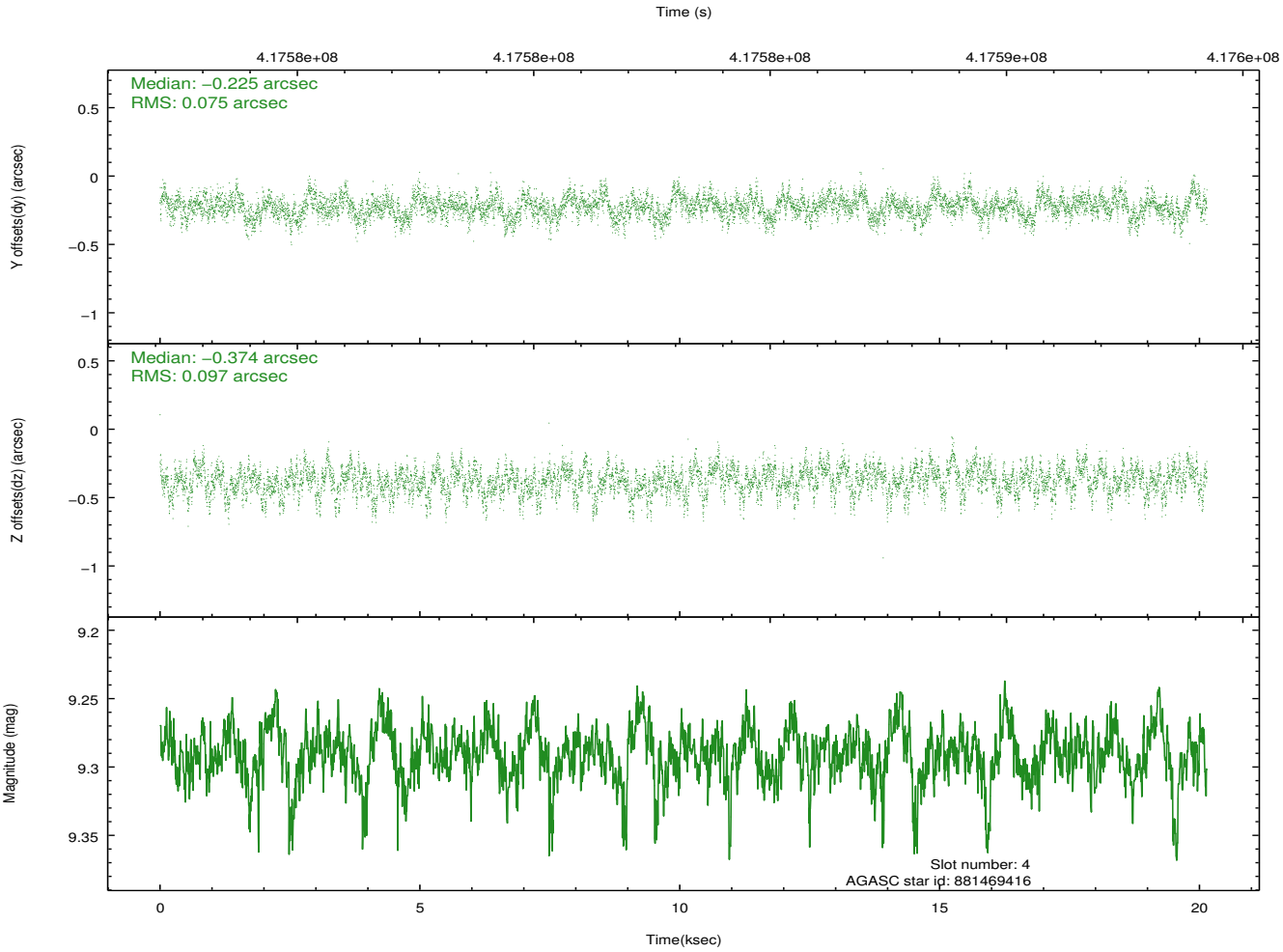




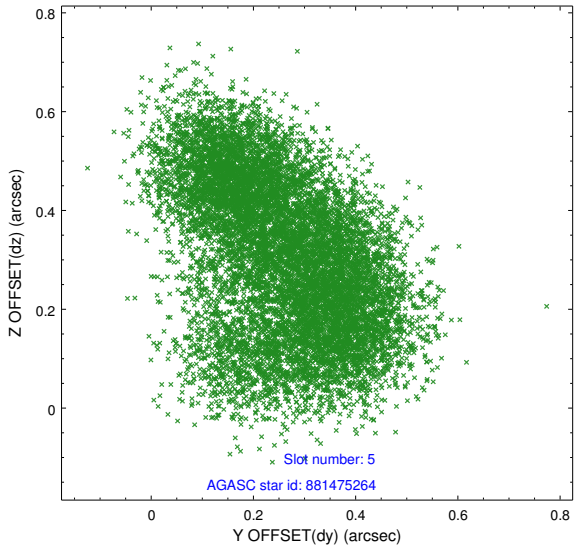
2.4.2 Slot 4

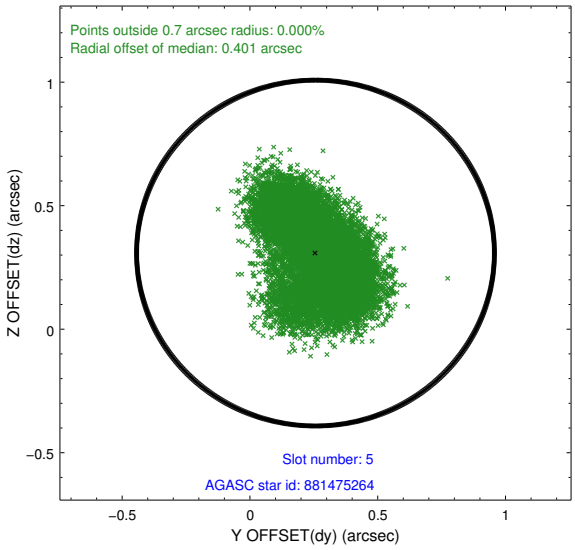

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 881469416

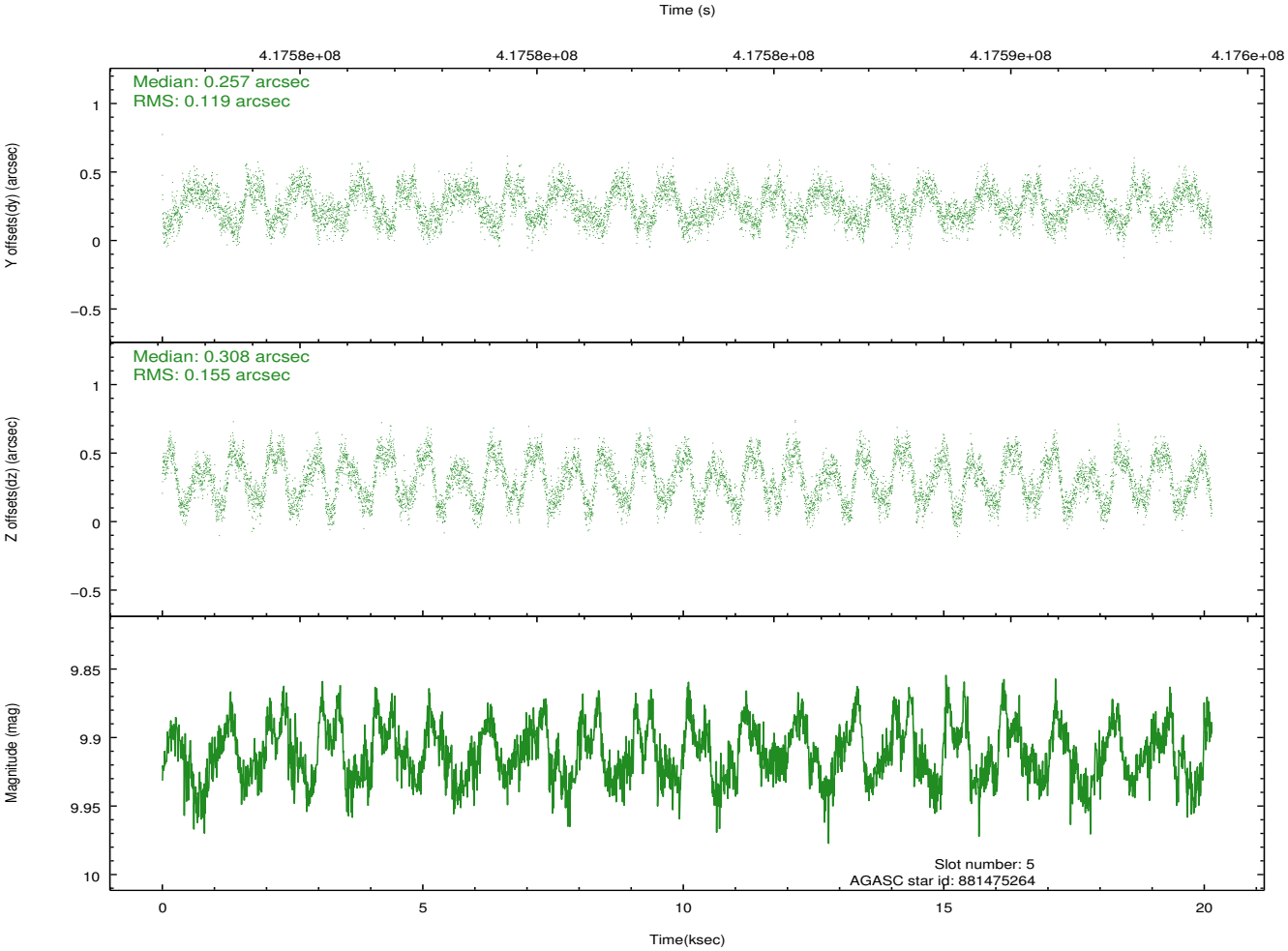

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.437 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 881469416


Time (s)
Median: −0.225 arcsec
RMS: 0.075 arcsec
Y offsets(dy) (arcsec)
Median: −0.374 arcsec
RMS: 0.097 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 4
AGASC star id: 881469416
Time(ksec)

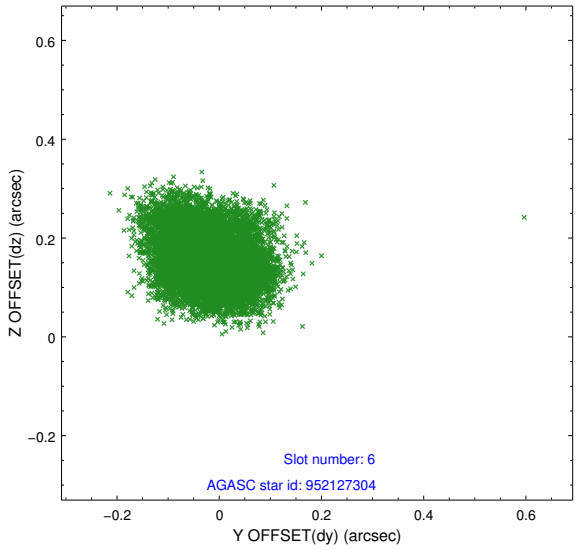
2.4.3 Slot 5

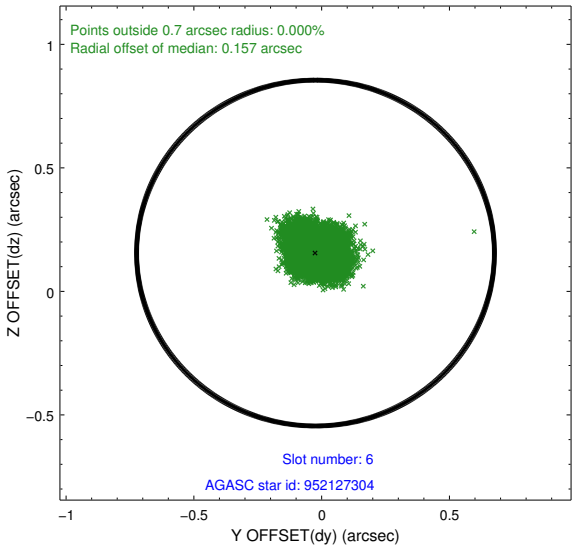

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 881475264

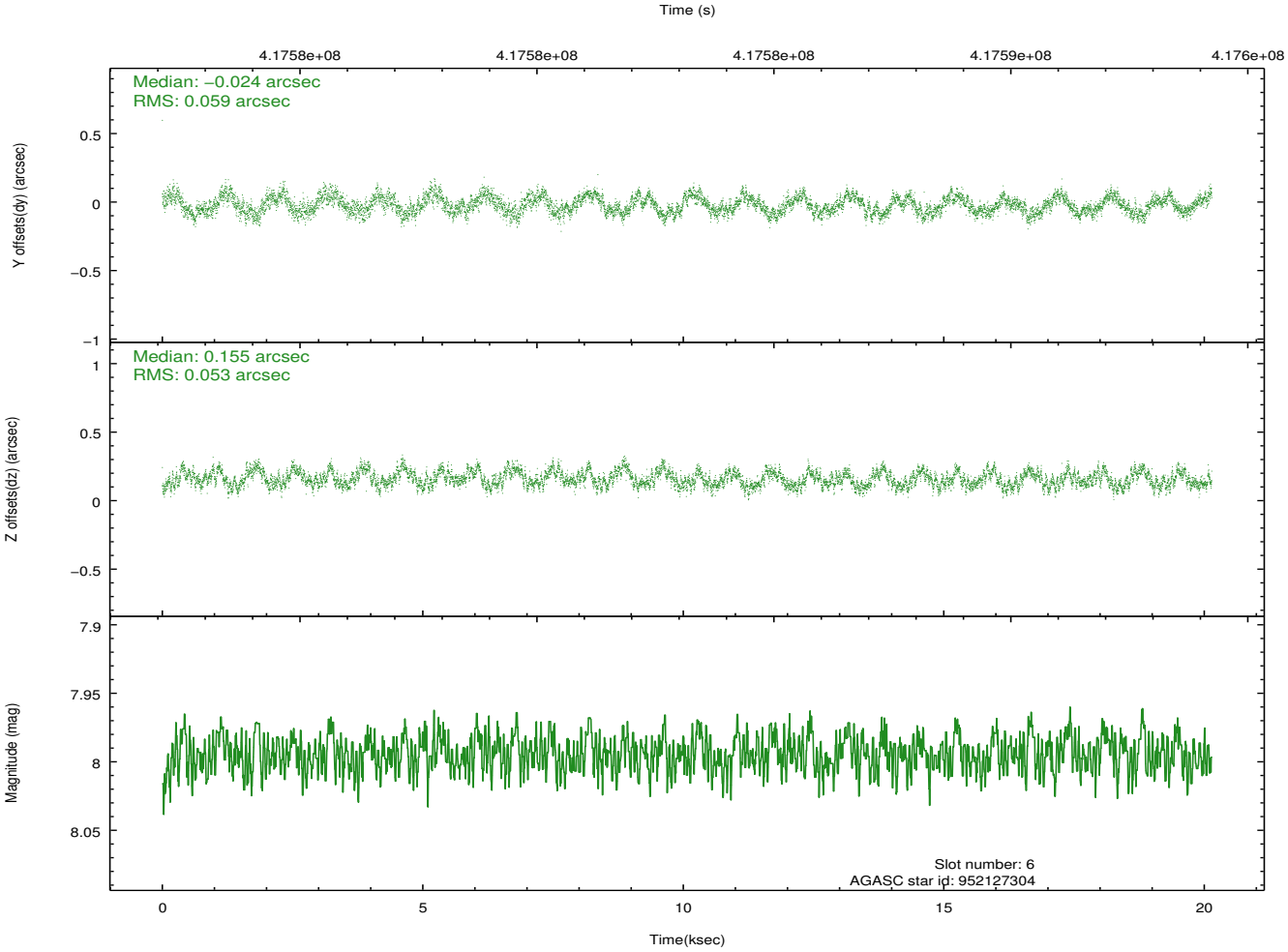

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.401 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 881475264


Time (s)
Median: 0.257 arcsec
RMS: 0.119 arcsec
Y offsets(dy) (arcsec)
Median: 0.308 arcsec
RMS: 0.155 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 5
AGASC star id: 881475264
Time(ksec)

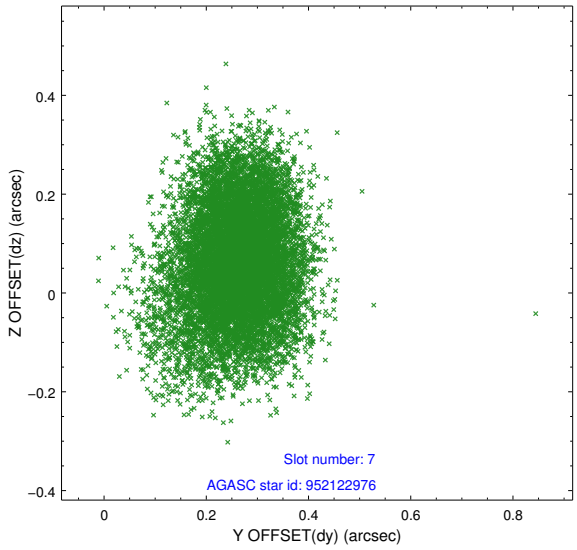
2.4.4 Slot 6

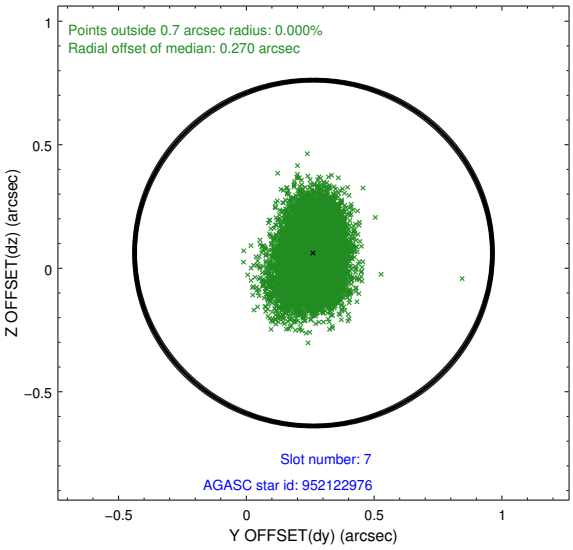

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 952127304

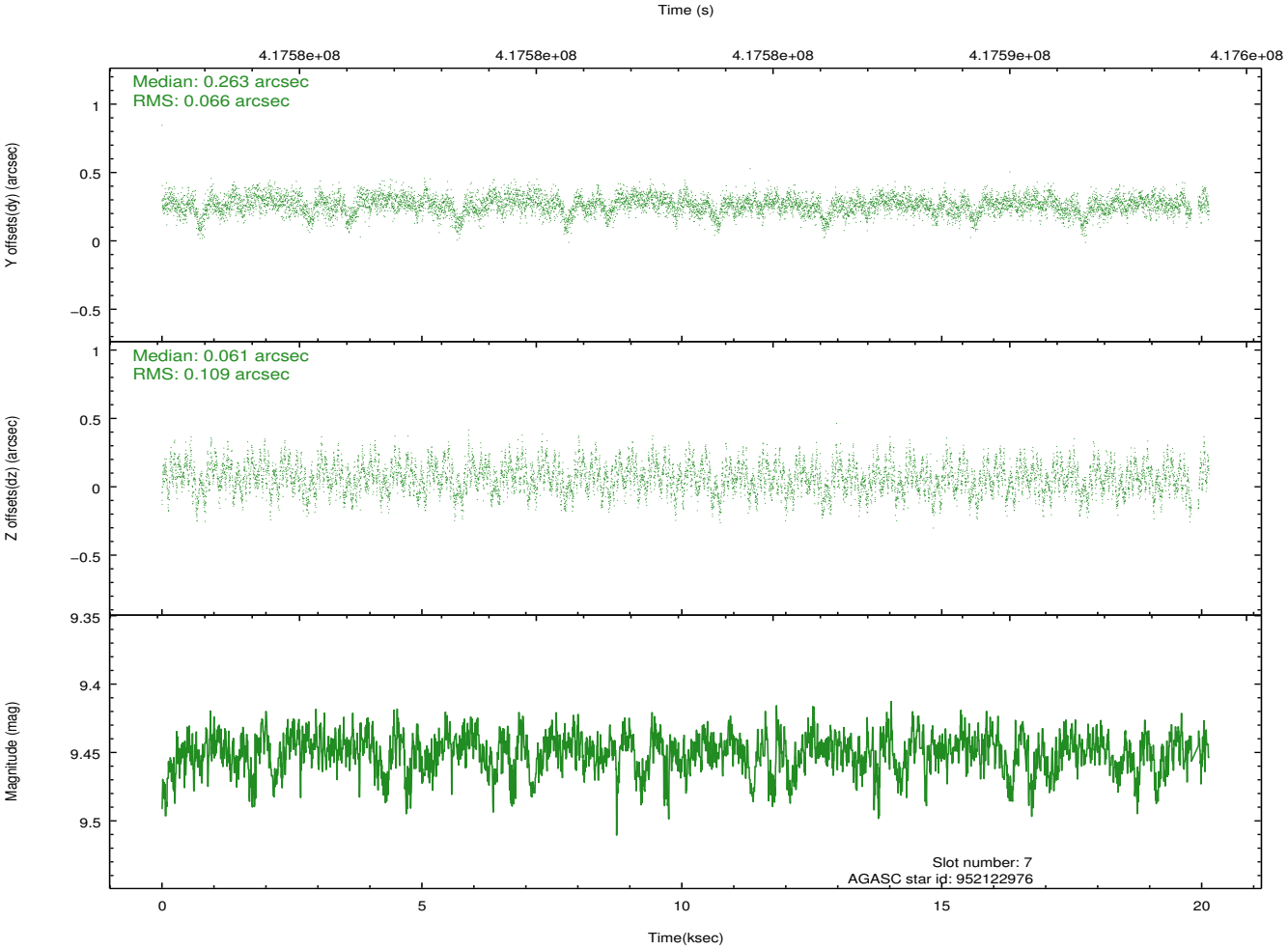

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.157 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 952127304


Time (s)
Median: −0.024 arcsec
RMS: 0.059 arcsec
Y offsets(dy) (arcsec)
Median: 0.155 arcsec
RMS: 0.053 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 6
AGASC star id: 952127304
Time(ksec)

2.4.5 Slot 7

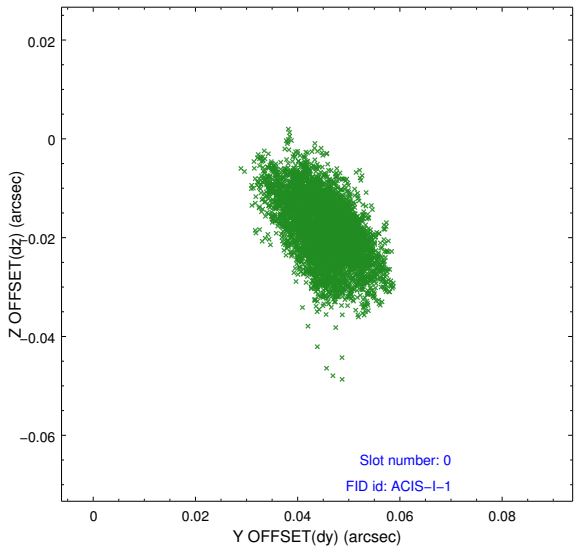

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 952122976

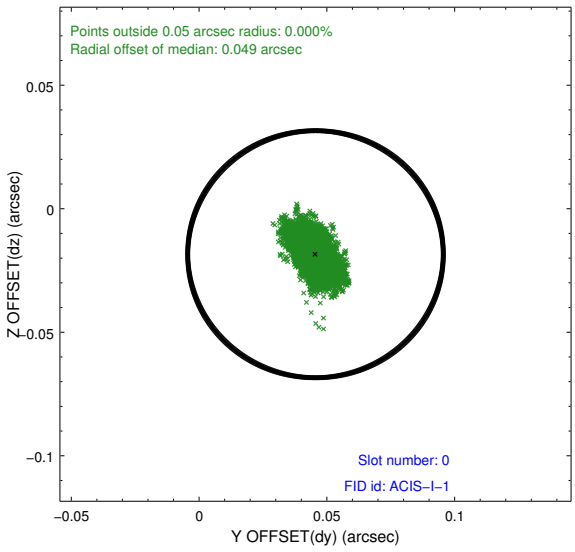

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.270 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 952122976

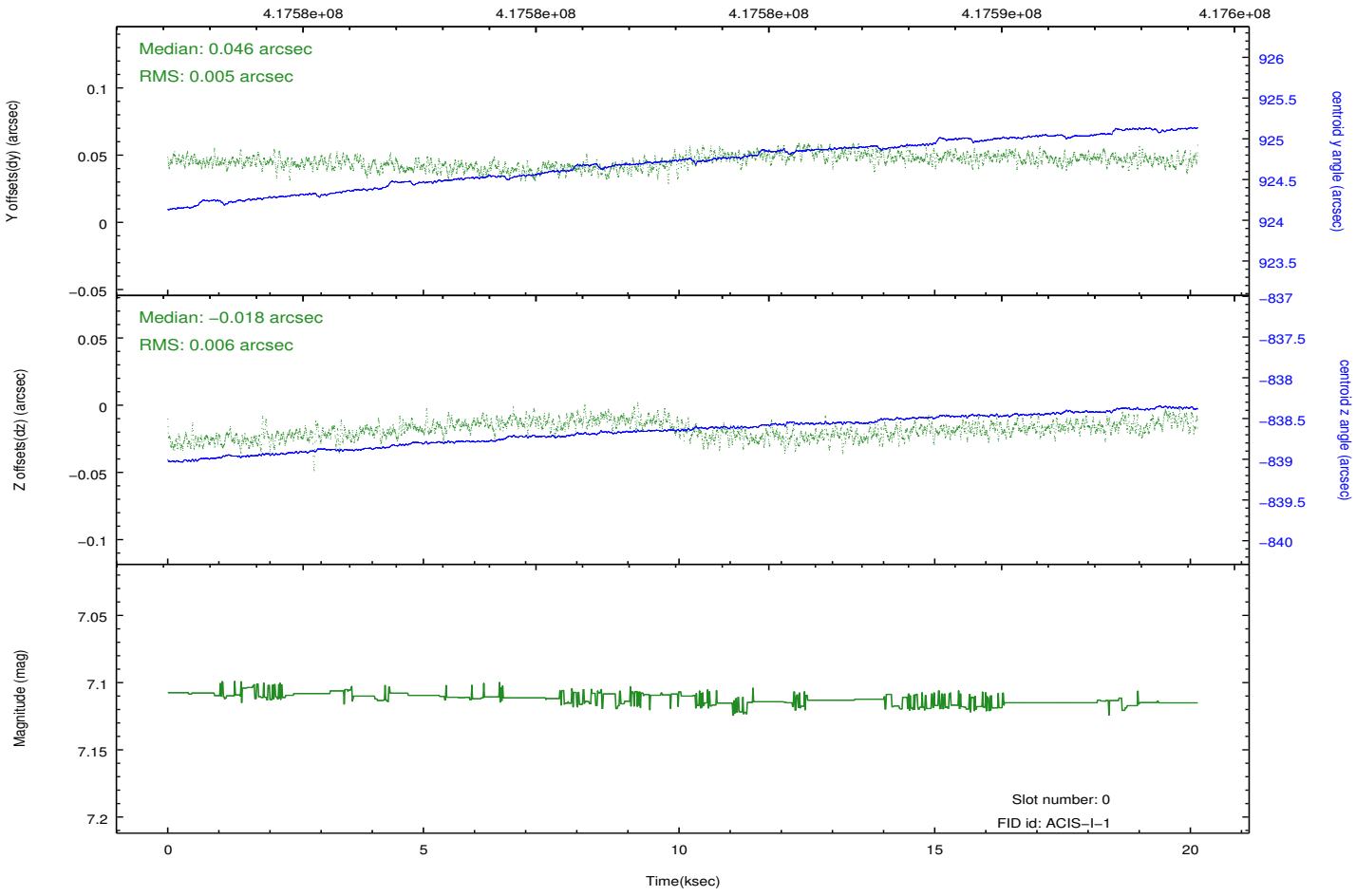

Time (s)
Median: 0.263 arcsec
RMS: 0.066 arcsec
Y offsets(dy) (arcsec)
Median: 0.061 arcsec
RMS: 0.109 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 7
AGASC star id: 952122976
Time(ksec)

2.5 FID Slots

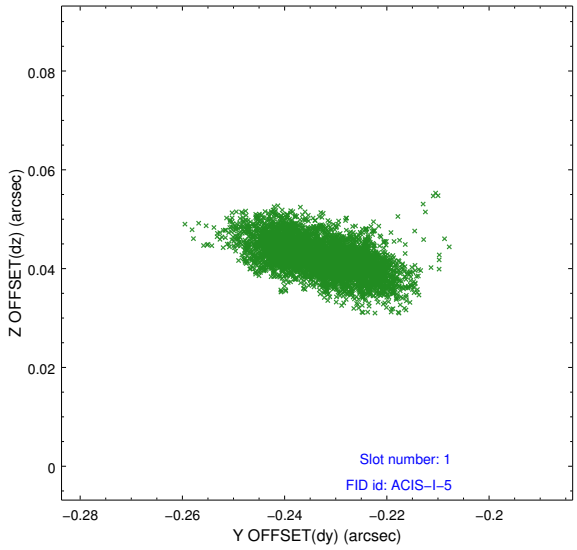
2.5.1 Slot 0

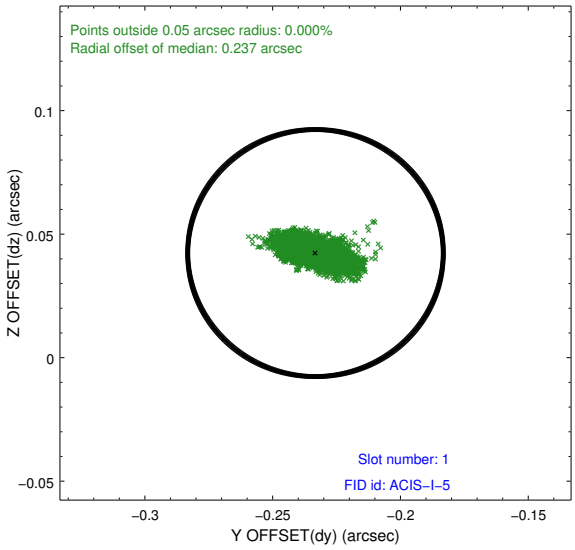


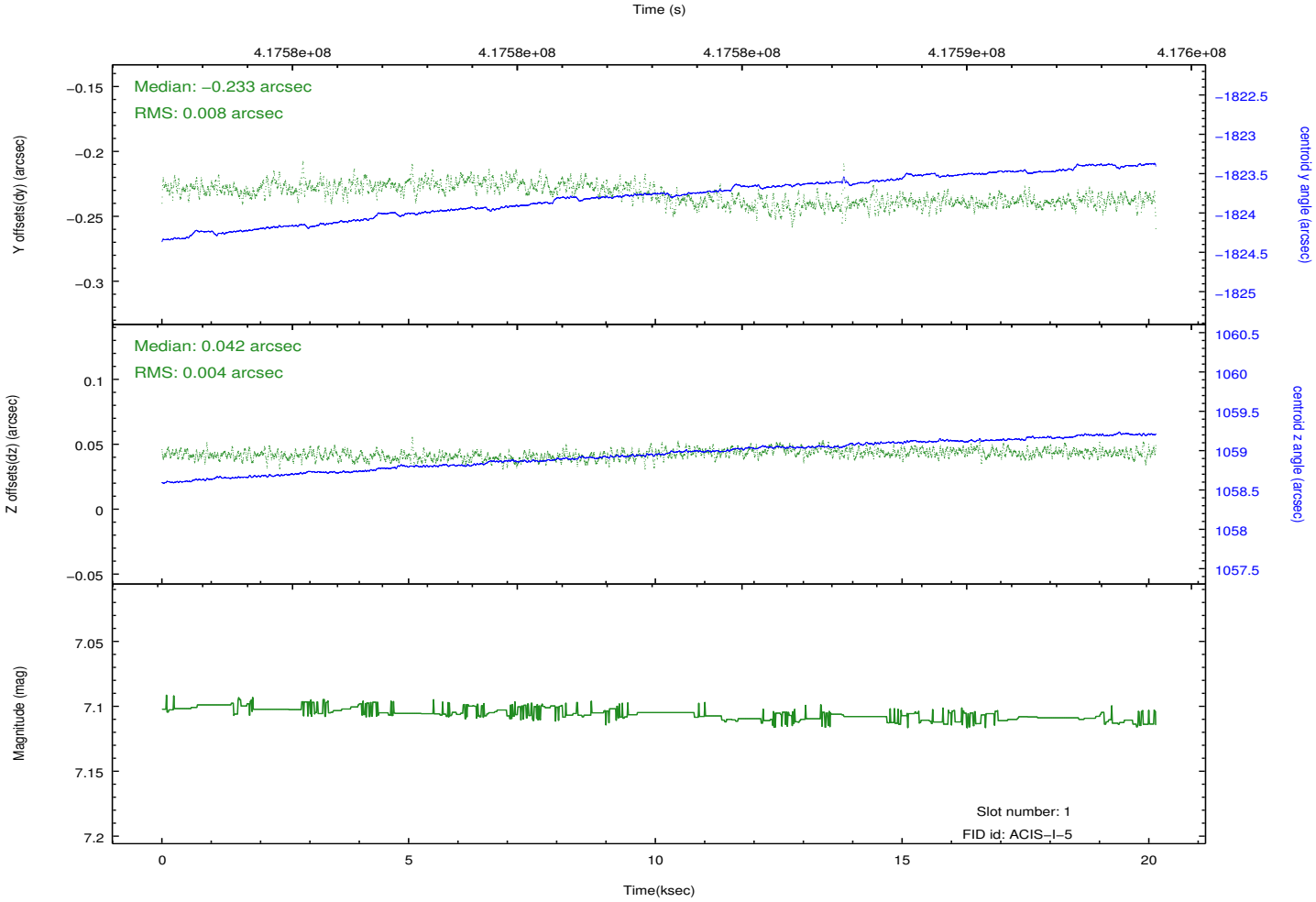




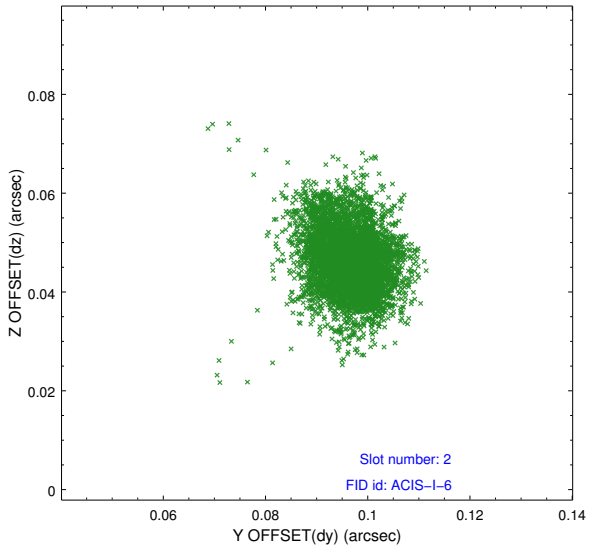
2.5.2 Slot 1

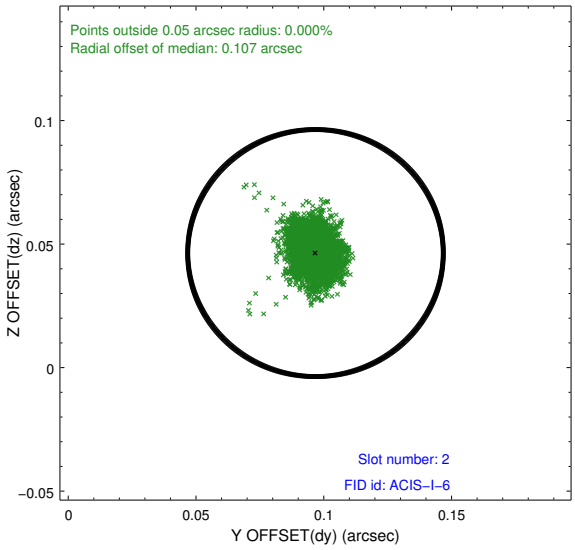

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−I−5

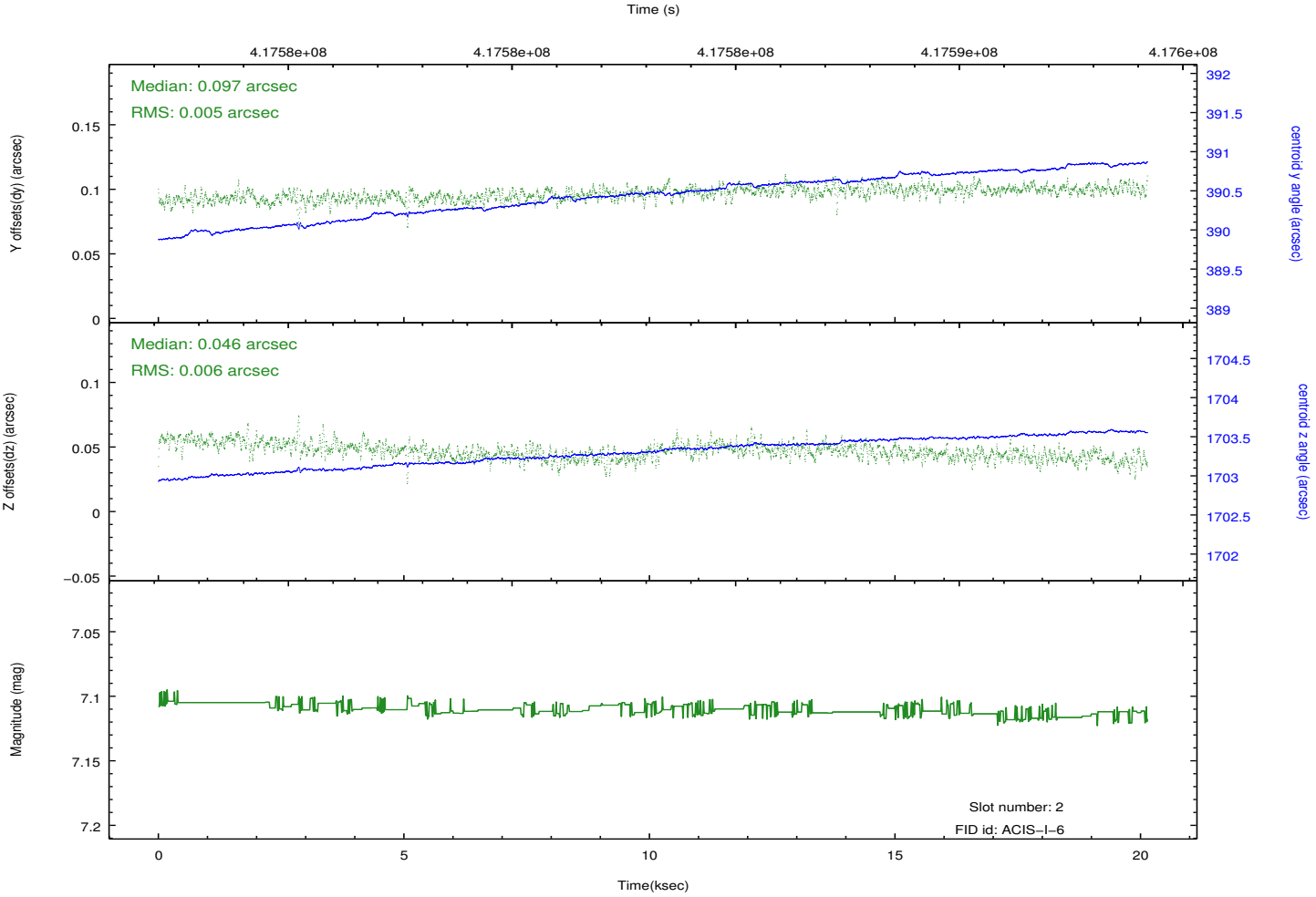

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.237 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−I−5


Time (s)
Median: −0.233 arcsec
RMS: 0.008 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.042 arcsec
RMS: 0.004 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 1
FID id: ACIS−I−5
Time(ksec)

2.5.3 Slot 2


Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: ACIS–I–6


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.107 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: ACIS–I–6


Time (s)
Median: 0.097 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.046 arcsec
RMS: 0.006 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 2
FID id: ACIS–I–6
Time(ksec)

A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.02.09
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.044003346026

A.2 Comments

The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use acis_process_events to reprocess the data with the parameter pix_adj=NONE or RANDOMIZE, respectively.