V&V Reference Report
L2 ASCDS Version : 7.6.7.1

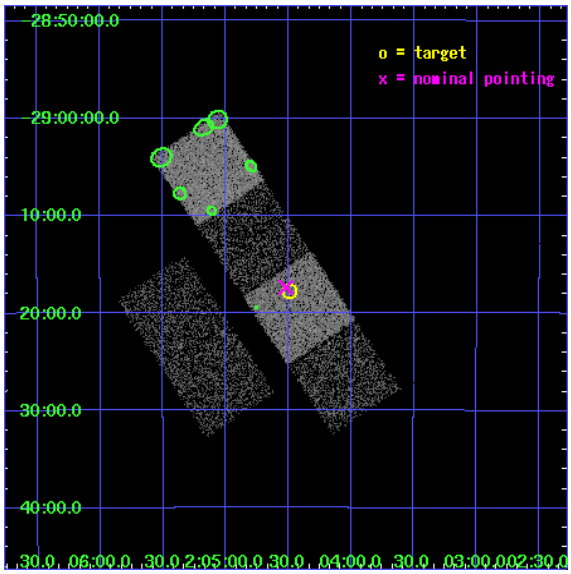
Observation 5391 - L2 Version 002
Chandra X-Ray Center

L2 Processing Date : Mar 25 2006

Contents

1 Front

seq_num	200326
obs_id	5391
title	The puzzle of X-ray emission from magnetic stars without convective envelopes
observer	Dr. Jurgen Schmitt
object	HD 12767
dtycycle	0
cycle	P
ra_targ	31.1225
dec_targ	-29.296806
ra_nom	31.130228765493
dec_nom	-29.289665240246
roll_nom	56.388218822451
revision	2
ontime	2959.9999889731
livetime	2922.5186868147
ontime2	2959.9999889731
ontime3	2959.9999889731
ontime5	2959.9999889731
ontime6	2959.9999889731
ontime7	2959.9999889731
ontime8	2959.9999889731
l2events	31879

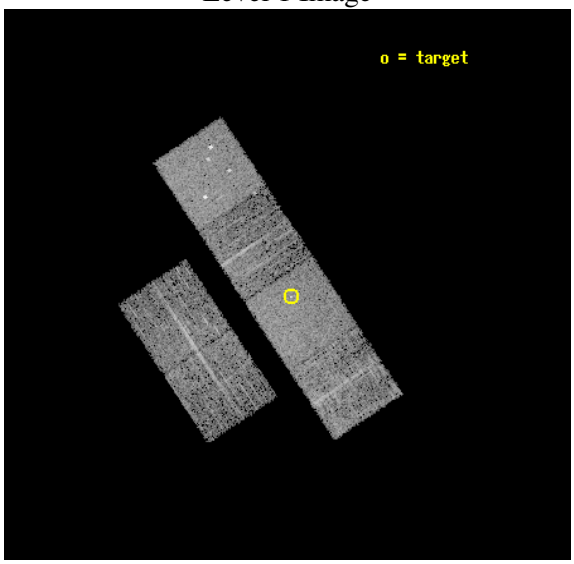


2 OBI

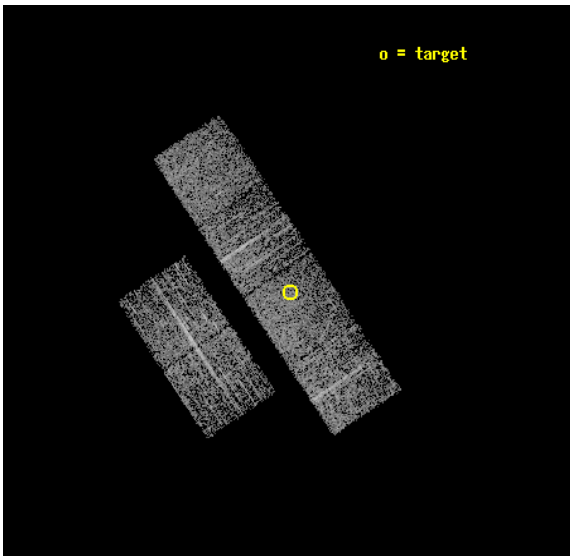
2.1 OBI

2.1.1 Images

Level 1 Image

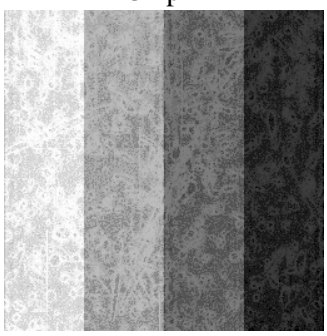


Level 1 Bad Events

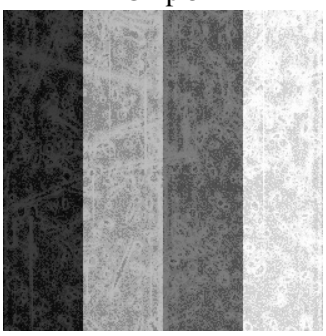


2.1.2 Bias

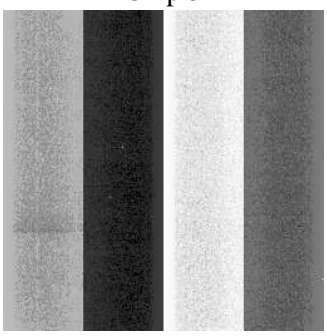
Chip 2



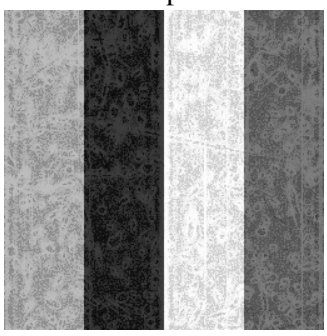
Chip 3



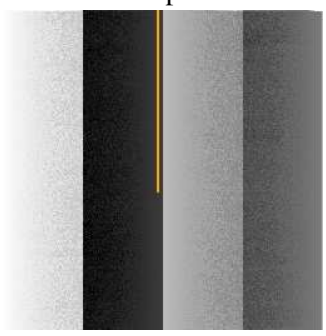
Chip 5



Chip 6



Chip 7



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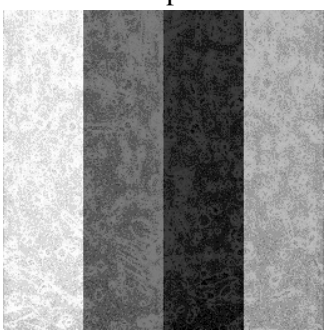


2.1.3 Parameters

obi_num	0
ascdsver	7.6.7.1
caldbver	3.2.1
date	2006-03-25T19:01:26
revision	2

sched_exp_time	3000.000000
ontime	2965.5291264951
ontime2	2965.5291065872
ontime3	2965.5291065872
ontime5	2965.5291065872
ontime6	2965.5291065872
ontime7	2965.5291264951
ontime8	2965.5291065872
l1events	140745

2.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	19689	18587	30707	19848	27638	24276
rejected events	17243	16187	16365	17344	16926	18736
rejected %	87%	87%	53%	87%	61%	77%

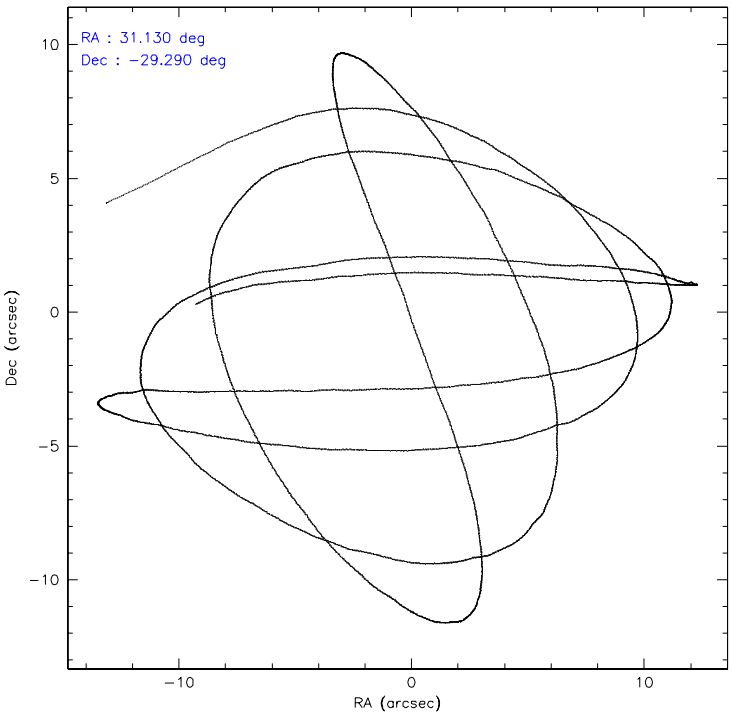
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	1083	1060	1976	970	645	1823
	5%	5%	6%	4%	2%	7%
grade 1 events	18	12	68	16	17	21
	0%	0%	0%	0%	0%	0%
grade 2 events	522	471	4372	578	2651	1195
	2%	2%	14%	2%	9%	4%
grade 3 events	200	237	278	220	517	583
	1%	1%	0%	1%	1%	2%
grade 4 events	225	240	263	216	533	568
	1%	1%	0%	1%	1%	2%
grade 5 events	786	822	1377	896	1732	1185
	3%	4%	4%	4%	6%	4%
grade 6 events	418	394	7480	521	6387	1405
	2%	2%	24%	2%	23%	5%
grade 7 events	16437	15351	14893	16431	15156	17496
	83%	82%	48%	82%	54%	72%

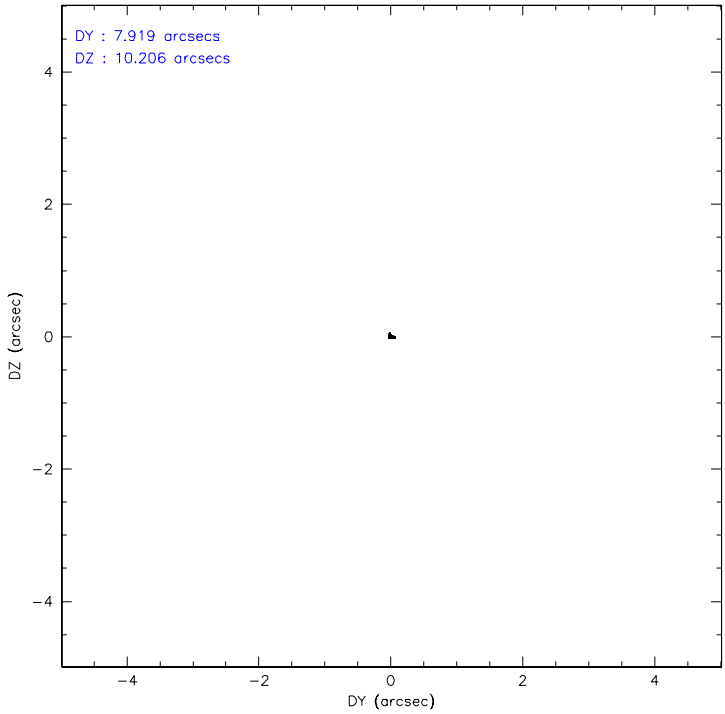
2.2 Compared Parameters

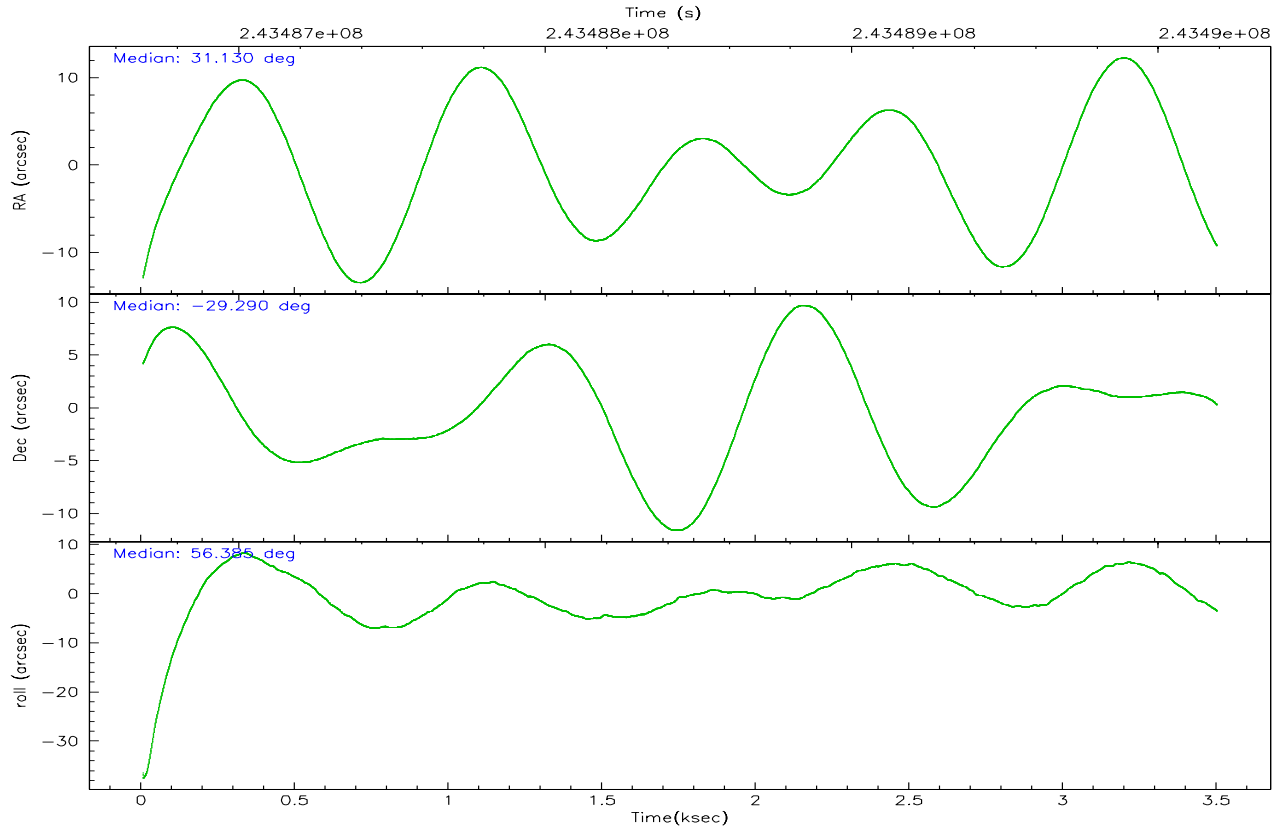
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-235678	ACIS-235678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
Pointing RA	31.128618	31.13022876549286
Pointing Dec	-29.317017	-29.2896652402462
Pointing Roll	56.230861	56.38821882245107
SIM focus pos (mm)	-0.684267	-0.6828225247311905
SIM defocus (mm)	0	0.0014449365687057 01
SIM translation stage pos (mm)	-190.132523	-190.1400660498719
SIM translation stage offset (mm)	0	0.00754346686406393
Observation start time	243487192.184000	243486075.1018
Observation start date	2005-09-19T03:18:48	2005-09-19T03:01:15
Observation end time	243490192.184000	243491105.80203
Observation end date	2005-09-19T04:08:48	2005-09-19T04:25:05
Read mode	TIMED	TIMED

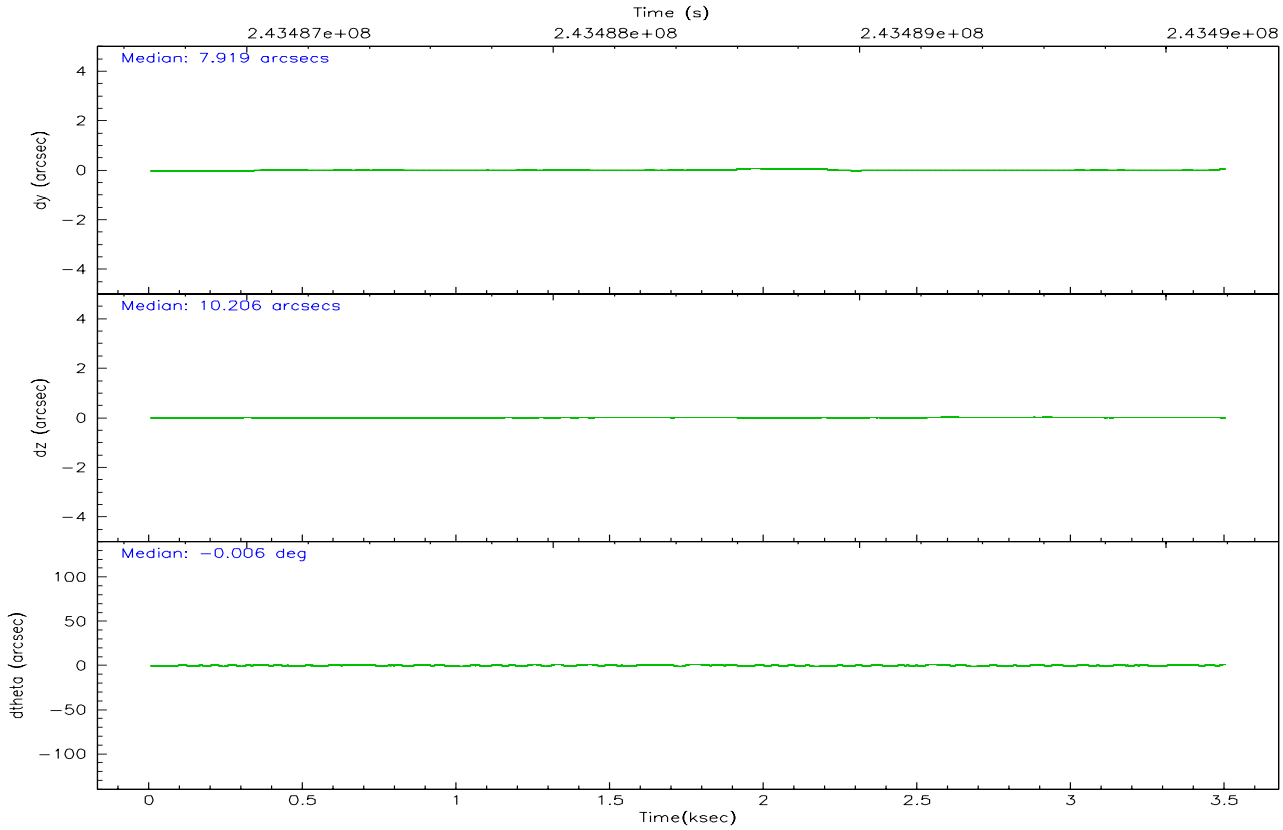
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
Primary exposure time	0.000000	3.2

2.3 Aspect


RA : 31.130 deg
Dec : −29.290 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−10
0
10


DY : 7.919 arcsecs
DZ : 10.206 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
2.43487e+08
2.43488e+08
2.43489e+08
2.4349e+08
Median: 31.130 deg
RA (arcsec)
Median: −29.290 deg
Dec (arcsec)
Median: 56.385 deg
roll (arcsec)
Time(ksec)

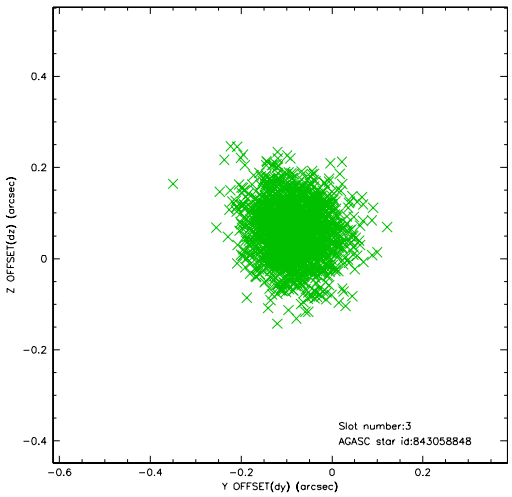

Time (s)
2.43487e+08
2.43488e+08
2.43489e+08
2.4349e+08
Median: 7.919 arcsecs
dy (arcsec)
Median: 10.206 arcsecs
dz (arcsec)
Median: −0.006 deg
dtheta (arcsec)
Time(ksec)

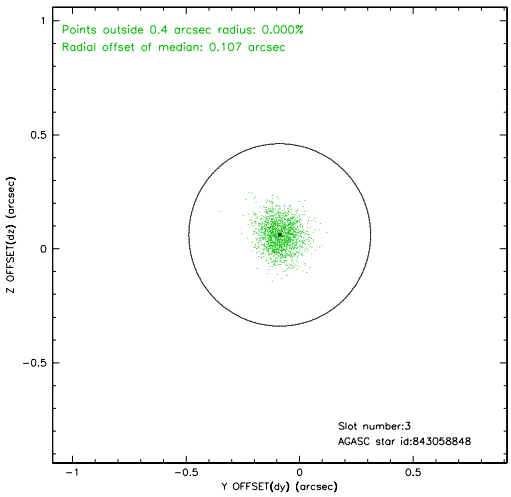
Slot Statistics

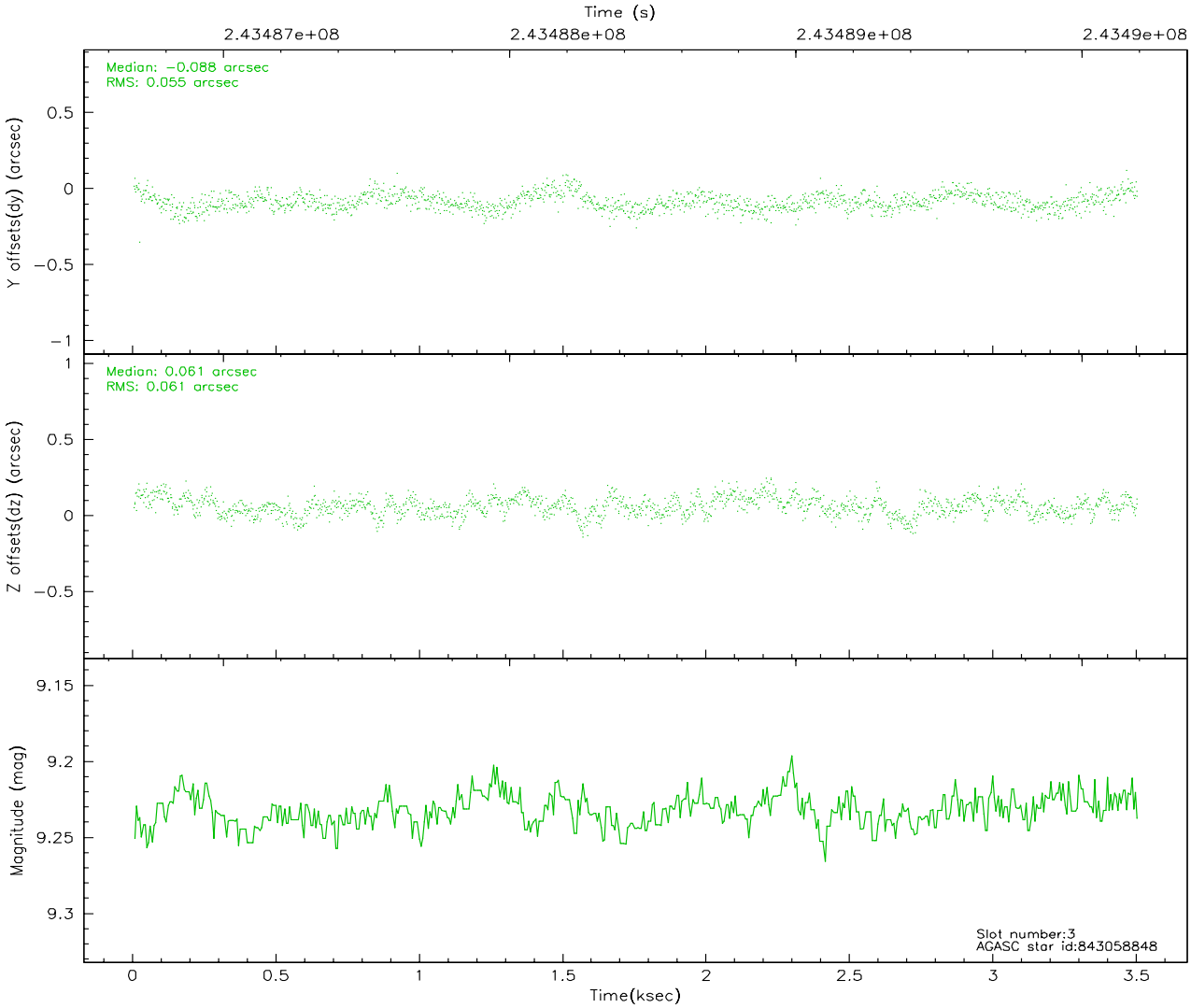
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.19	853	0.025	-0.027	0.006	0.009	0.000000	0.000000	935.38	-1727.11
1	FID	ACIS-S-5	7.24	853	-0.070	0.015	0.006	0.010	0.000000	0.000000	-1812.71	168.61
2	FID	ACIS-S-6	7.36	853	0.023	0.023	0.006	0.011	0.000000	0.000000	398.96	814.64
3	GUIDE	843058848	9.23	1706	-0.088	0.061	0.087	0.141	30.955187	-29.624817	-1223.72	-164.95
4	GUIDE	843059888	6.81	1707	0.043	-0.105	0.076	0.126	30.617770	-29.665638	-1935.65	628.69
5	GUIDE	843061744	9.44	1705	-0.119	-0.016	0.085	0.136	31.544540	-29.226062	994.92	-905.07
6	GUIDE	843061968	9.26	1707	0.223	-0.038	0.087	0.142	30.680996	-29.814180	-2266.51	165.18
7	GUIDE	843062384	9.47	1703	-0.058	0.087	0.124	0.330	31.894459	-29.334171	1276.49	-2036.45

2.4 Star Slots

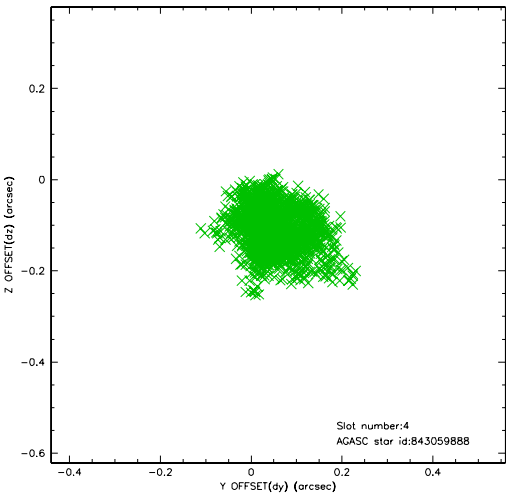
2.4.1 Slot 3

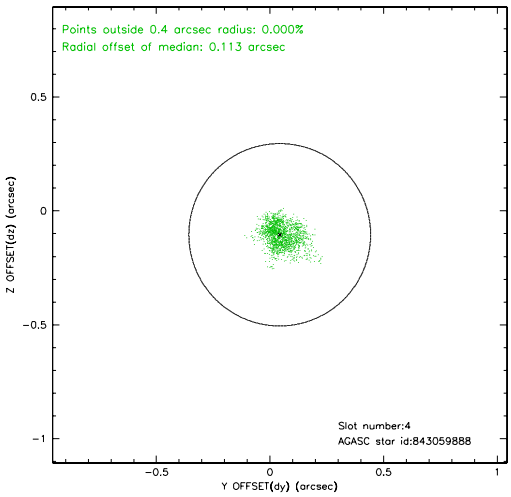


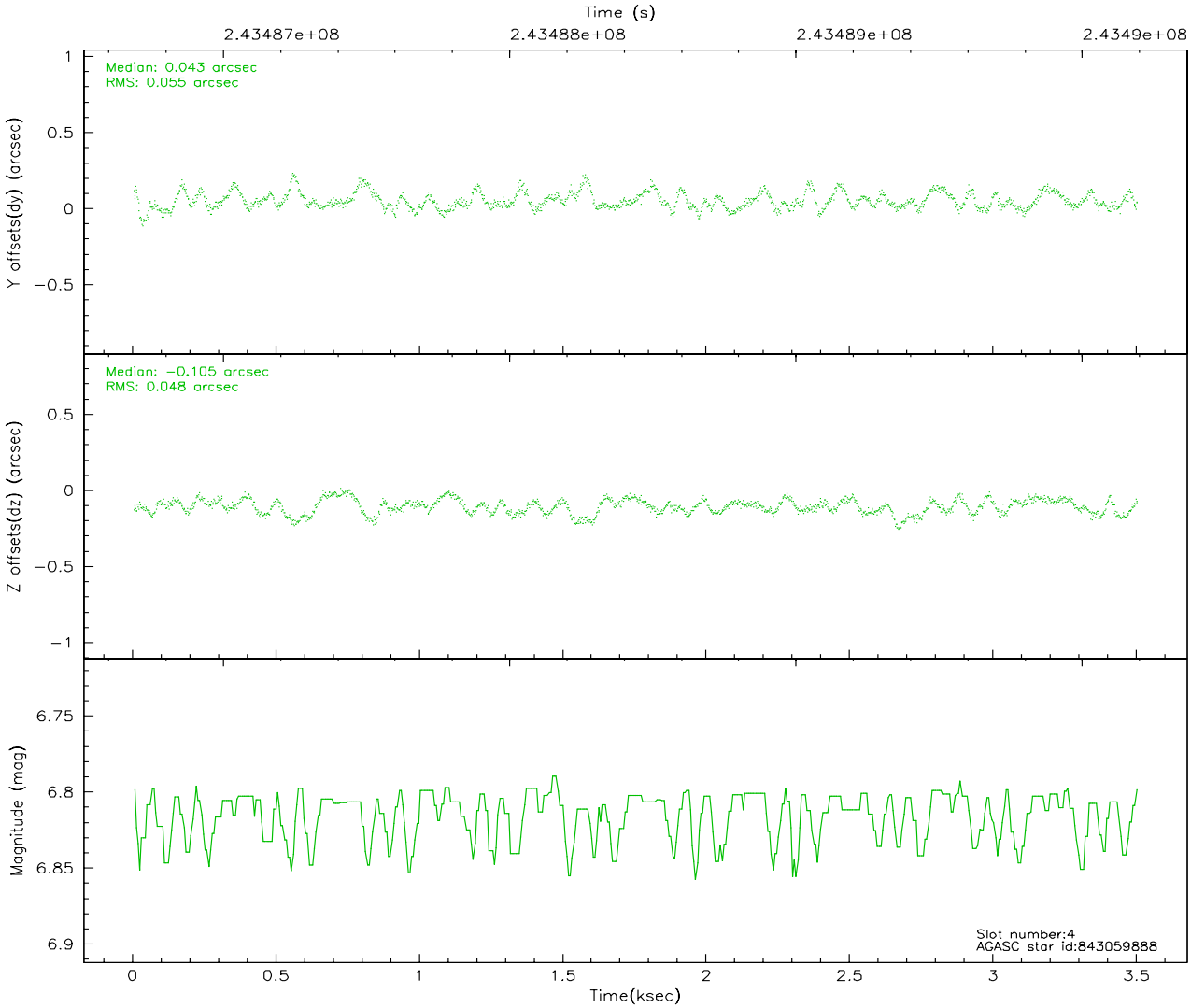




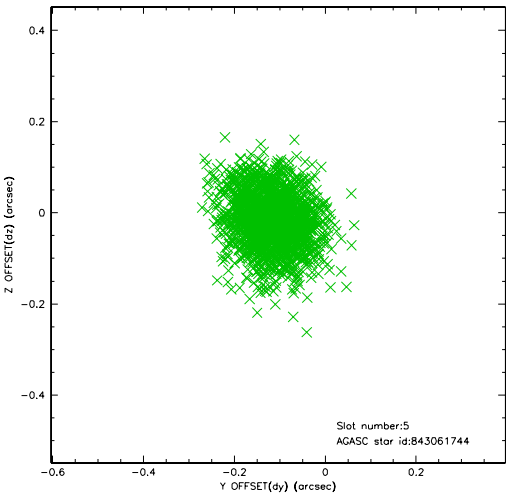
2.4.2 Slot 4

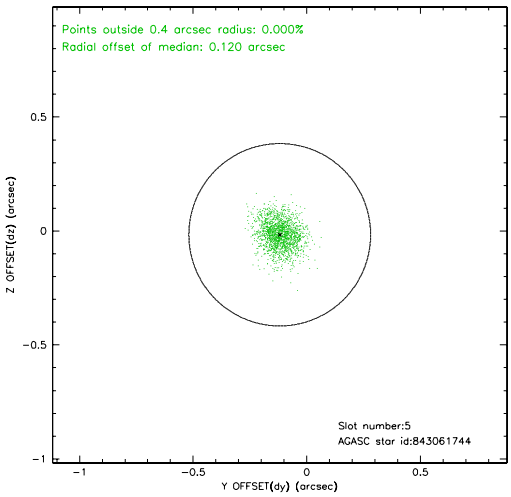

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:843059888

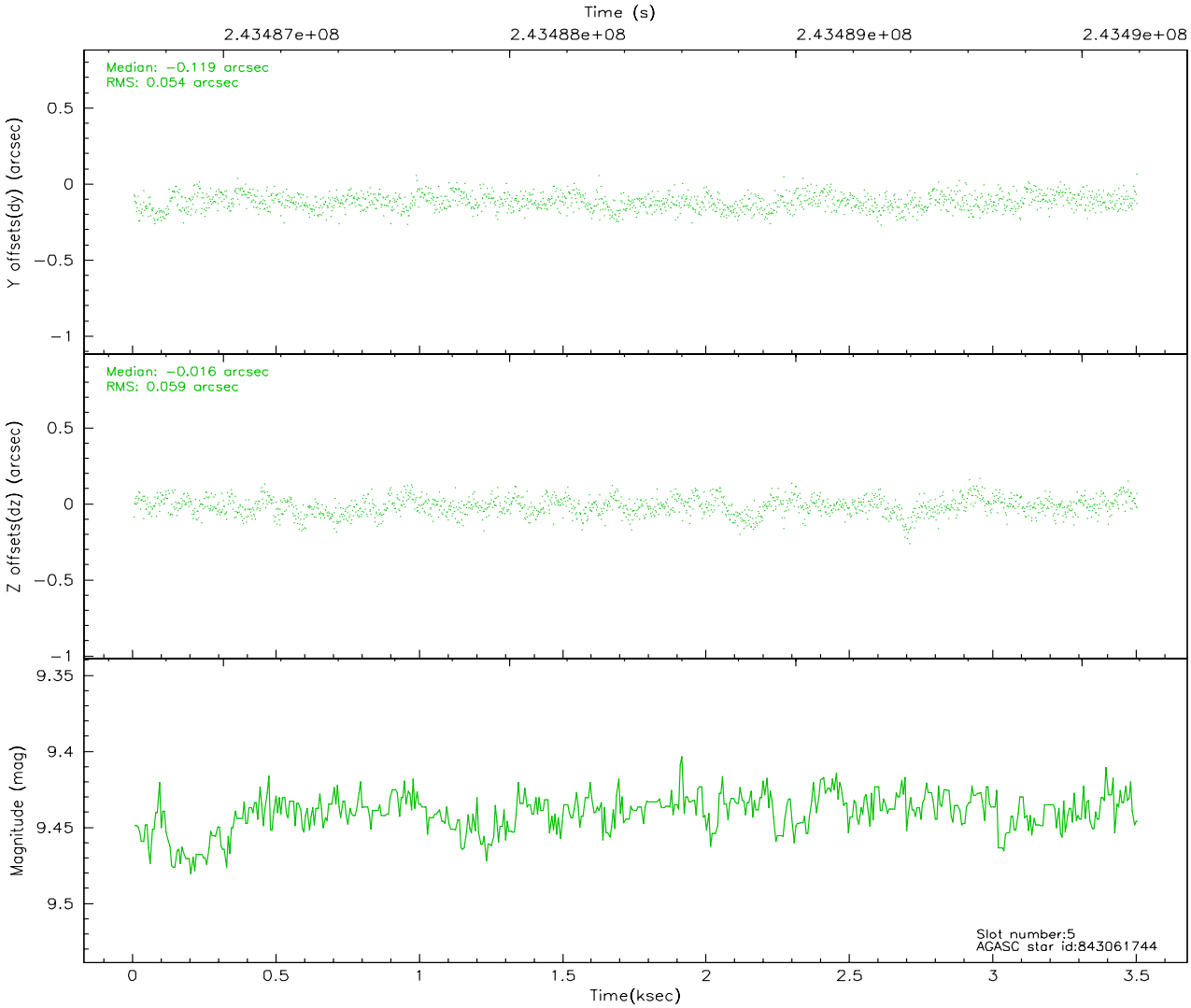

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.113 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:843059888


Time (s)
2.43487e+08
2.43488e+08
2.43489e+08
2.4349e+08
Median: 0.043 arcsec
RMS: 0.055 arcsec
Y offsets(dy) (arcsec)
Median: −0.105 arcsec
RMS: 0.048 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:843059888
Time(ksec)

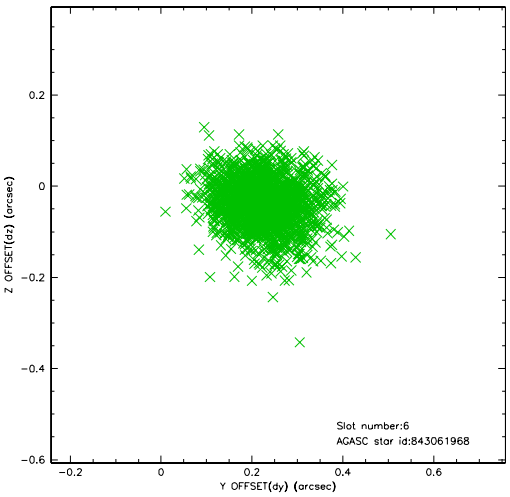
2.4.3 Slot 5

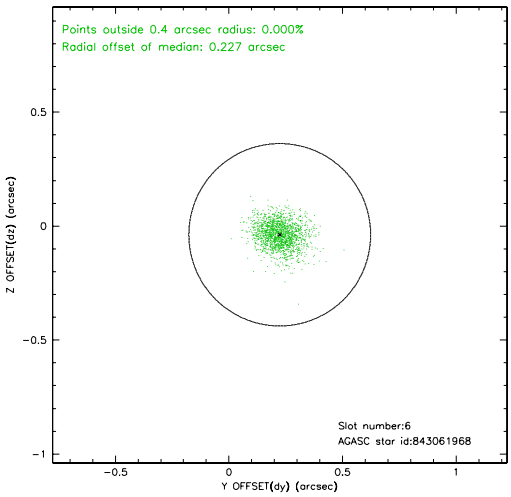

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:843061744

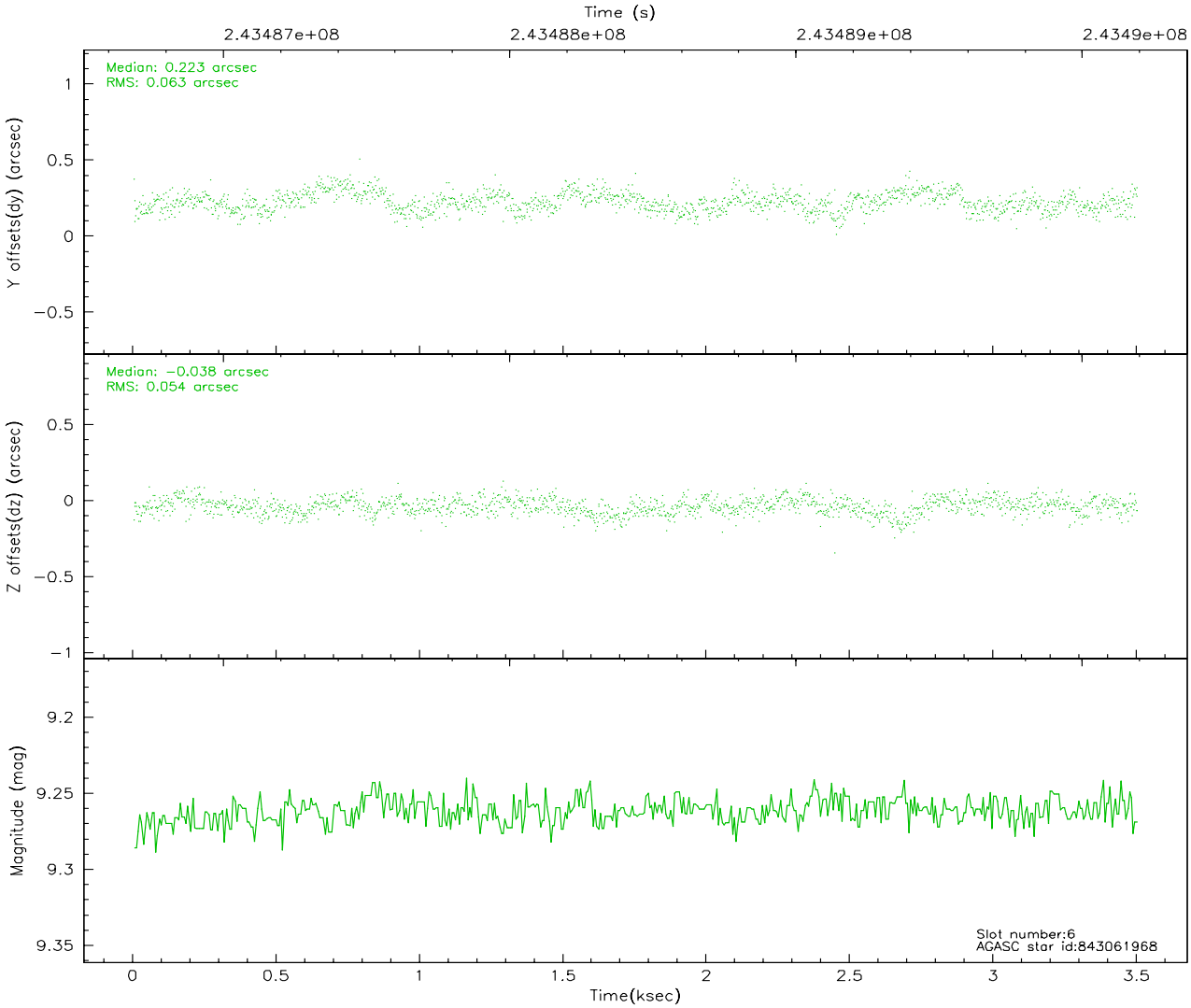

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.120 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:843061744


Time (s)
2.43487e+08
2.43488e+08
2.43489e+08
2.4349e+08
Median: −0.119 arcsec
RMS: 0.054 arcsec
Y offsets(dy) (arcsec)
Median: −0.016 arcsec
RMS: 0.059 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:843061744
Time(ksec)

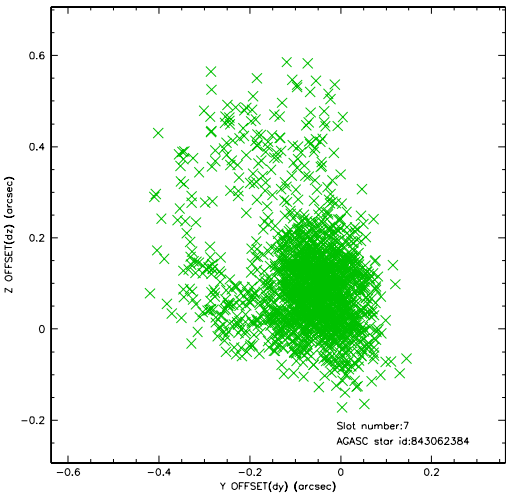
2.4.4 Slot 6

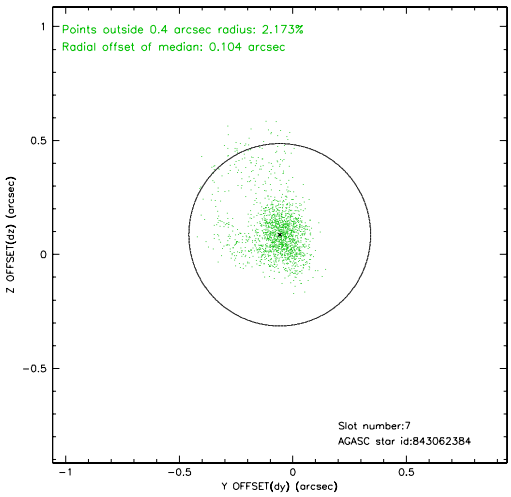

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:843061968

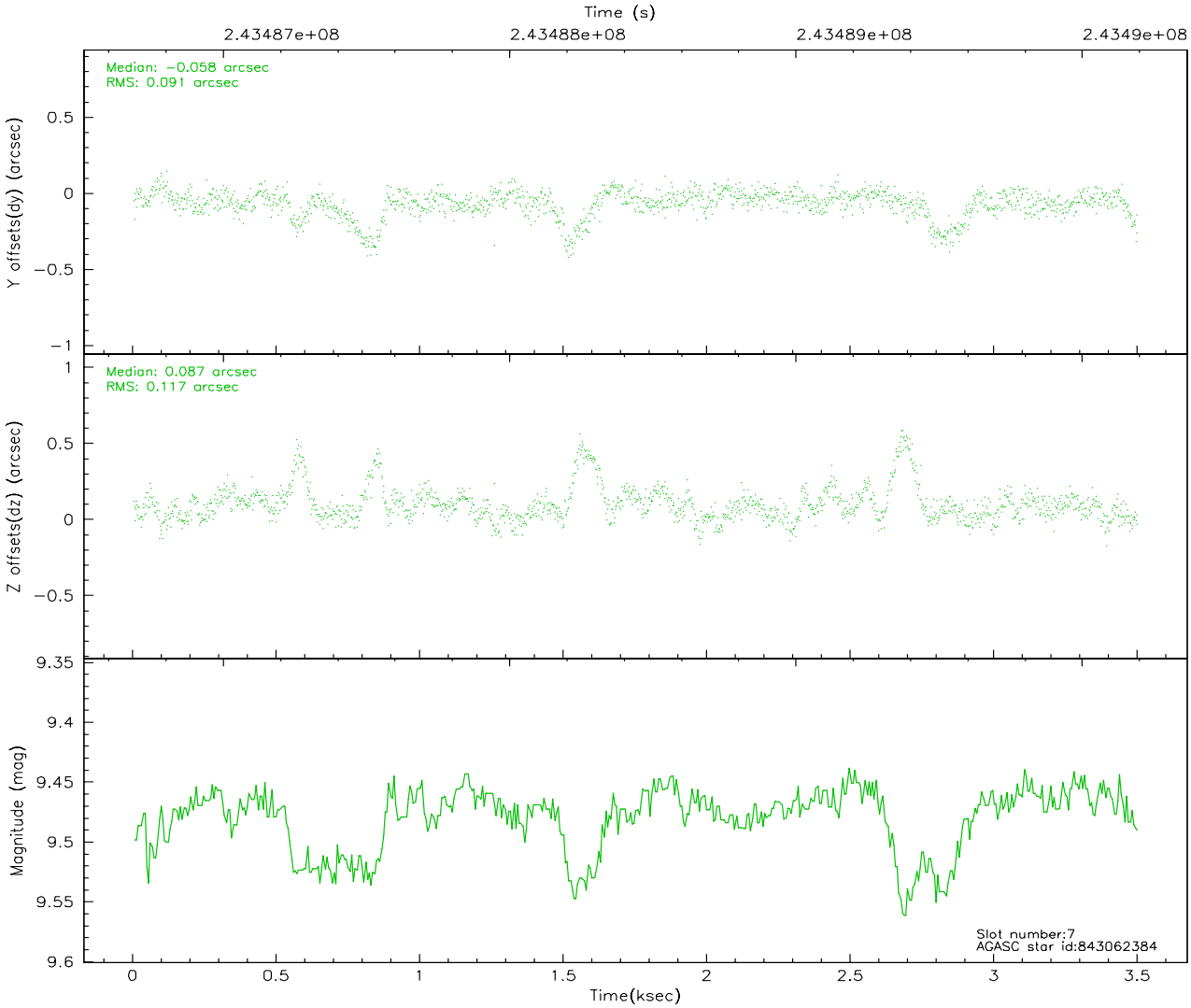

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.227 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:843061968


Time (s)
2.43487e+08
2.43488e+08
2.43489e+08
2.4349e+08
Median: 0.223 arcsec
RMS: 0.063 arcsec
Y offsets(dy) (arcsec)
Median: −0.038 arcsec
RMS: 0.054 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:843061968
Time(ksec)

2.4.5 Slot 7

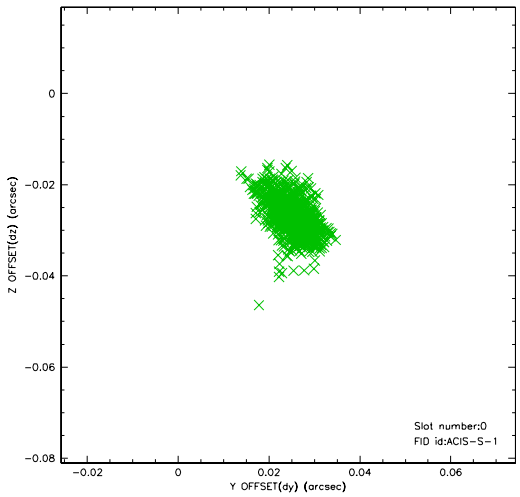

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:843062384

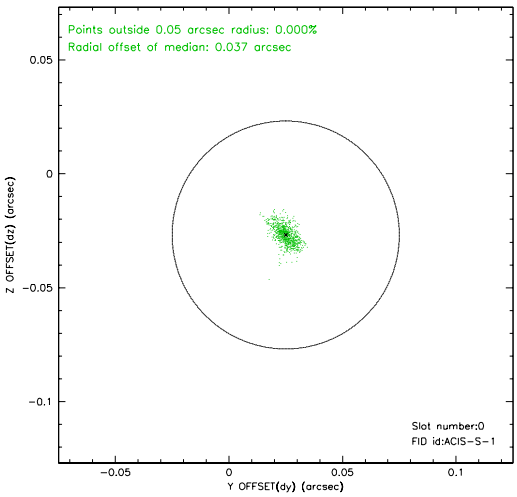

Points outside 0.4 arcsec radius: 2.173%
Radial offset of median: 0.104 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:843062384

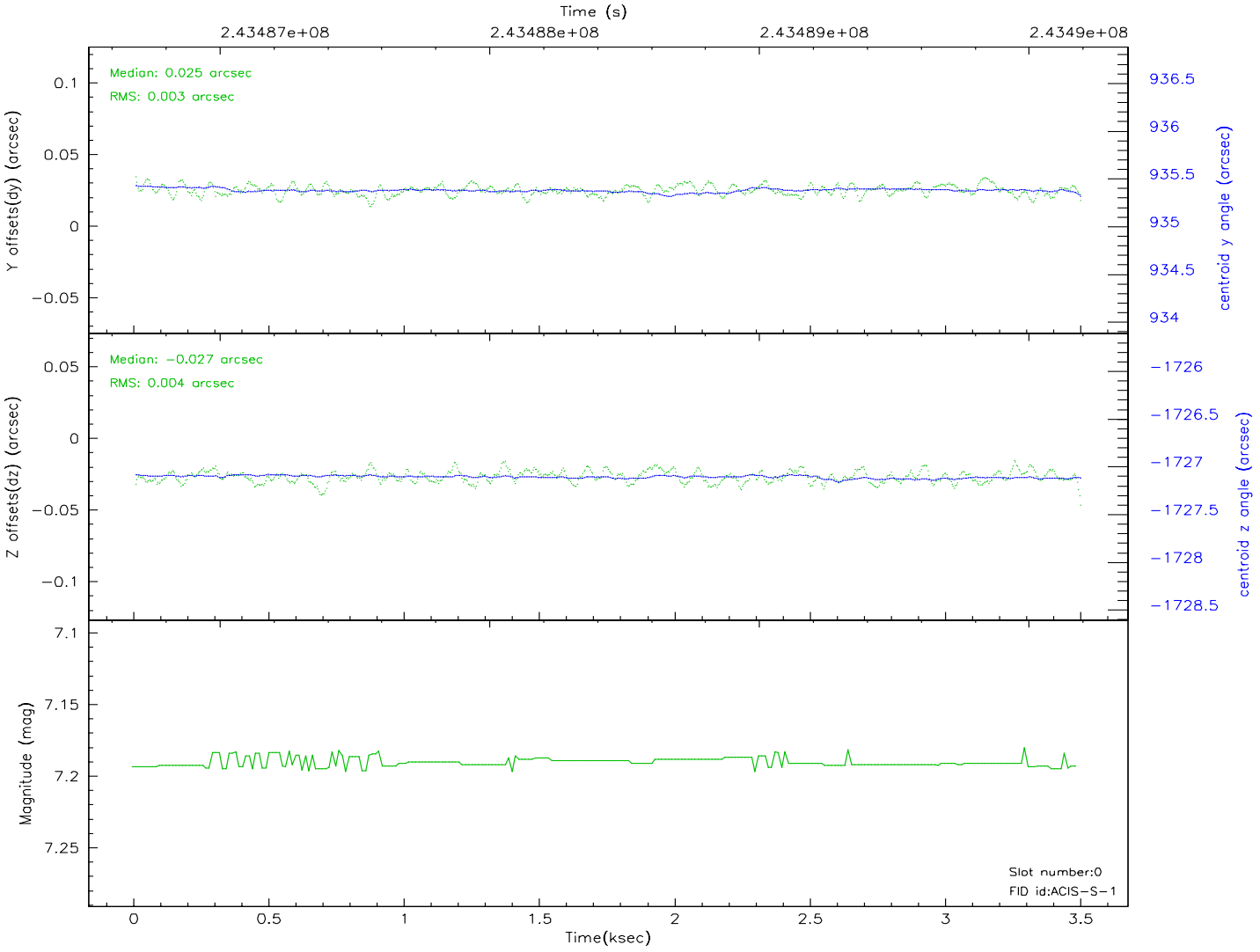

Time (s)
2.43487e+08
2.43488e+08
2.43489e+08
2.4349e+08
Median: −0.058 arcsec
RMS: 0.091 arcsec
Y offsets(dy) (arcsec)
Median: 0.087 arcsec
RMS: 0.117 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:843062384
Time(ksec)

2.5 FID Slots

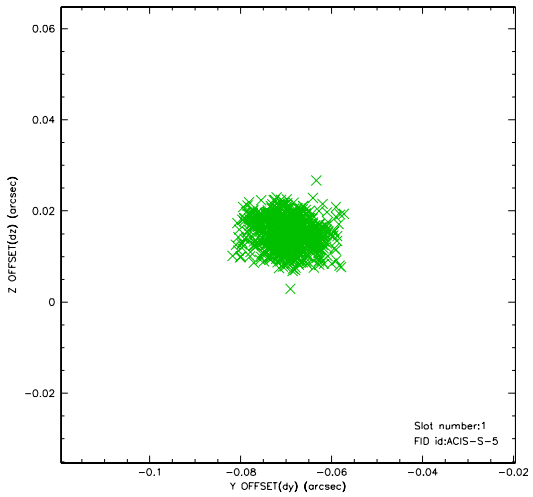
2.5.1 Slot 0

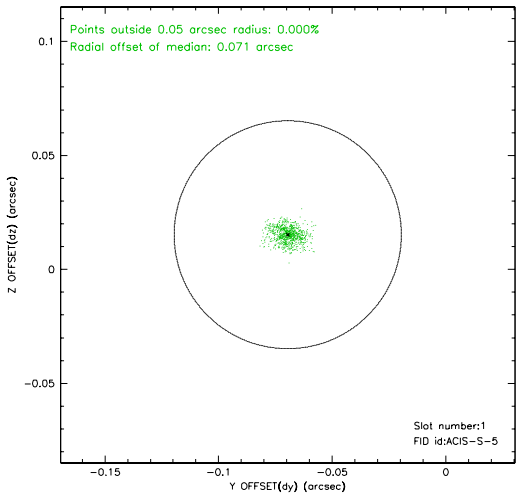


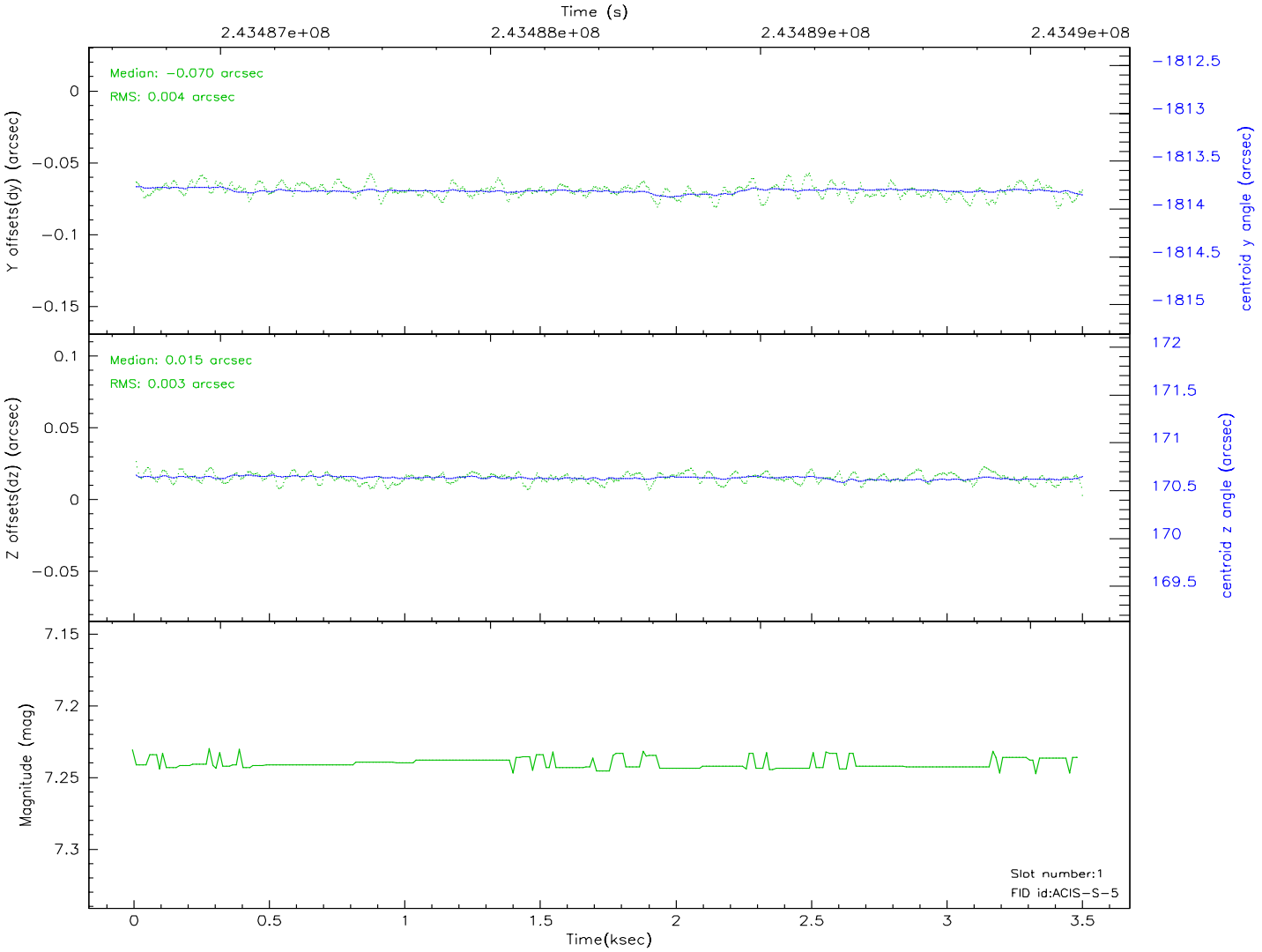




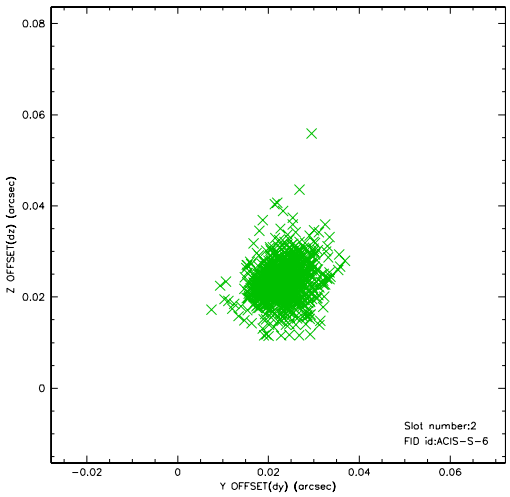
2.5.2 Slot 1

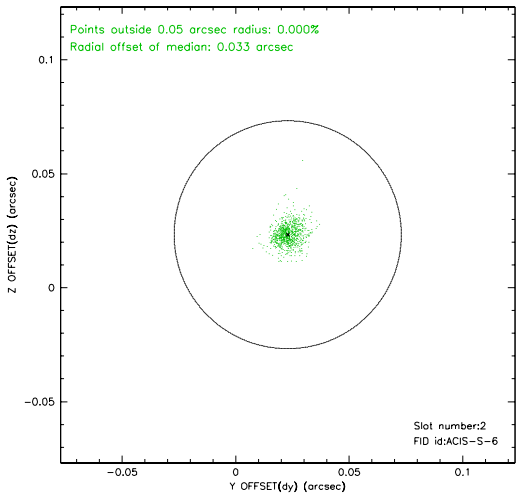

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-5

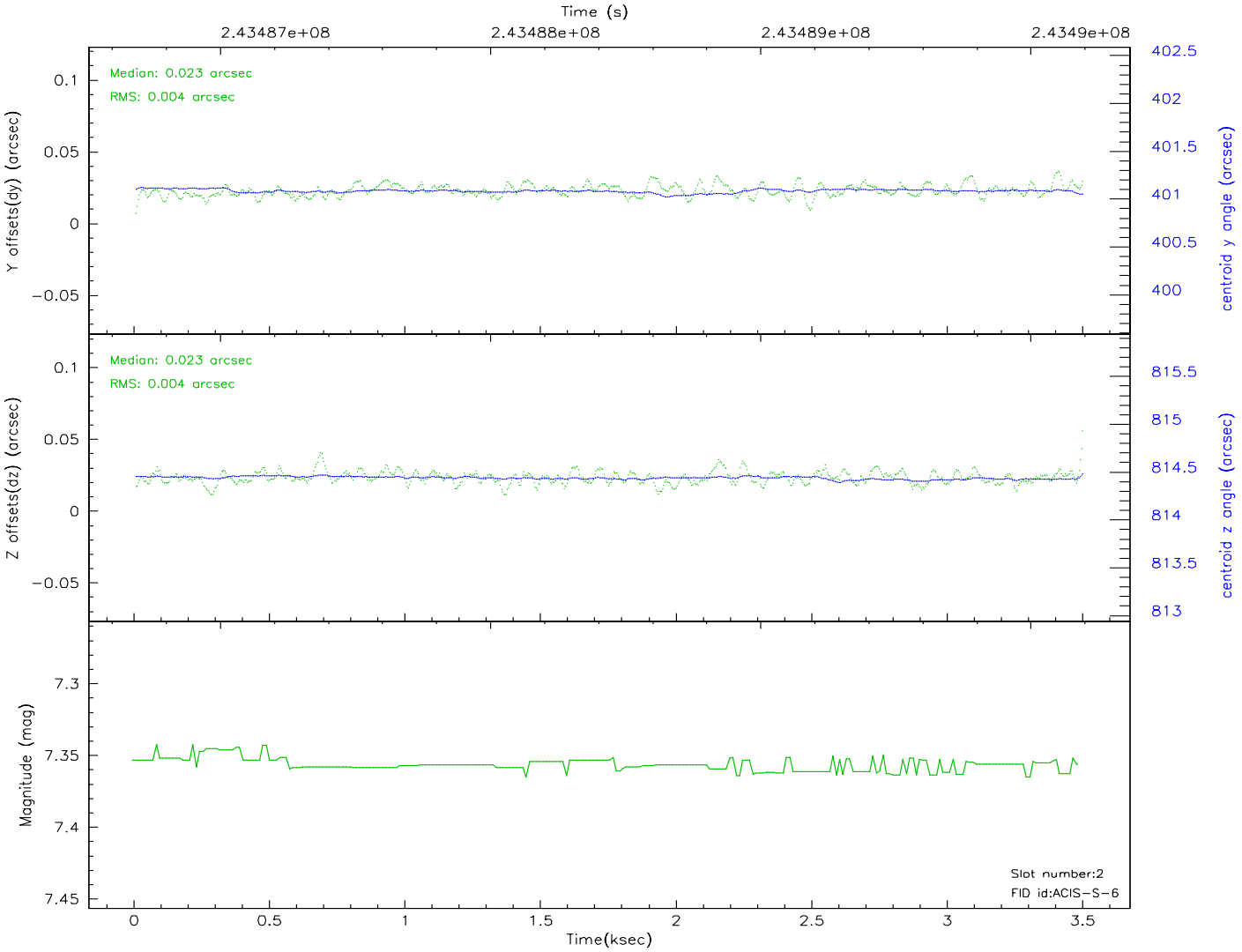

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.071 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-5


Time (s)
2.43487e+08
2.43488e+08
2.43489e+08
2.4349e+08
Median: −0.070 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.015 arcsec
RMS: 0.003 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:ACIS-S-5
Time(ksec)

2.5.3 Slot 2

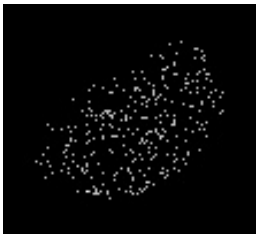

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:ACIS-S-6


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.033 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:ACIS-S-6

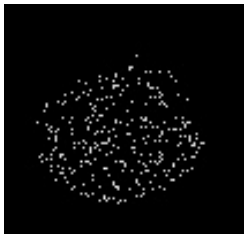

Time (s)
2.43487e+08
2.43488e+08
2.43489e+08
2.4349e+08
Median: 0.023 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.023 arcsec
RMS: 0.004 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:ACIS-S-6
Time(ksec)

3 Point Sources

18.48 arcmin



18.60 arcmin



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2006.03.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	2.959999

A.2 Comments

As a consequence of the DEA-A shutdown anomaly on Sep 15th (DOY258), the the reported value of the ACIS FP temperature was ~1.3 degrees warmer than the actual temperature. GOs should subtract 1.3 degrees from the reported temperature to determine the true temperature. In addition the FP temperature was not regulating during this period. The FP temperature fluctuated between -121.3 C and -118.8 C during this time. For analysis of line-dominated spectra from the FI CCDs, GOs might notice a systematic gain shift by up to 0.5%, either towards higher/lower energies depending on if the FP temperature was colder/warmer than -119.7 C. Analysis of line-dominated spectra on S3 are mostly unaffected (where mostly unaffected means that the changes are smaller than the current uncertainties in the calibration). Analysis of continuum-dominated spectra on both the FI and BI CCDs are mostly unaffected. Imaging analysis on both the FI and BI CCDs are mostly unaffected.