V&V Reference Report
L2 ASCDS Version : 7.6.8.1

Observation 4757 - L2 Version 002
Chandra X-Ray Center

L2 Processing Date : Aug 8 2006

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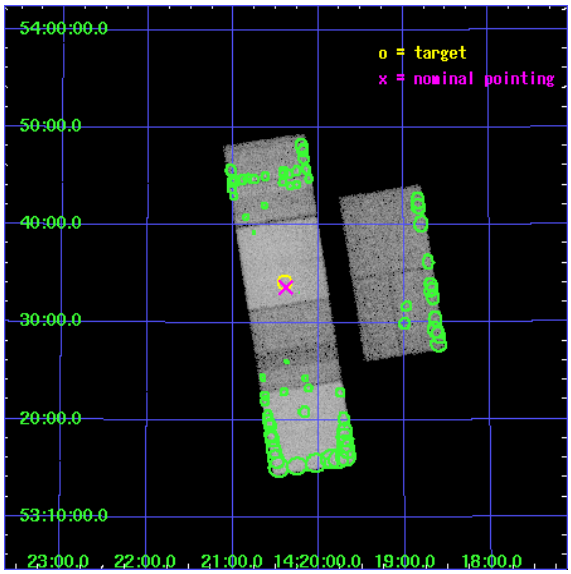
1 Front

seq_num	700843
obs_id	4757
title	Chandra follow-up of giant-amplitude X-ray flares
observer	Dr. Peter Predehl
object	RXJ1420+5334
dtycycle	0
cycle	P
ra_targ	215.100833
dec_targ	53.569722
ra_nom	215.09549462023
dec_nom	53.560538934355
roll_nom	261.18009428999
revision	4
ontime	6582.3999754786
livetime	6499.0496635437
ontime2	6582.3999754786
ontime3	6582.3984958231
ontime5	6582.3999754786
ontime6	6582.3999754786
ontime7	6582.3999754786
ontime8	6582.3574558496
l2events	211779

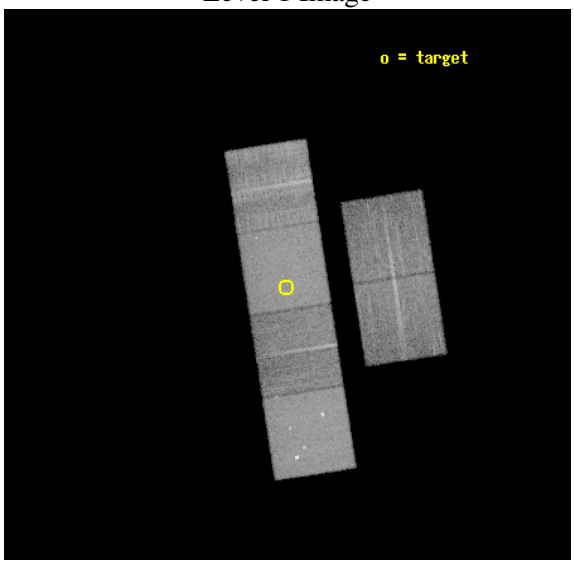


2 OBI

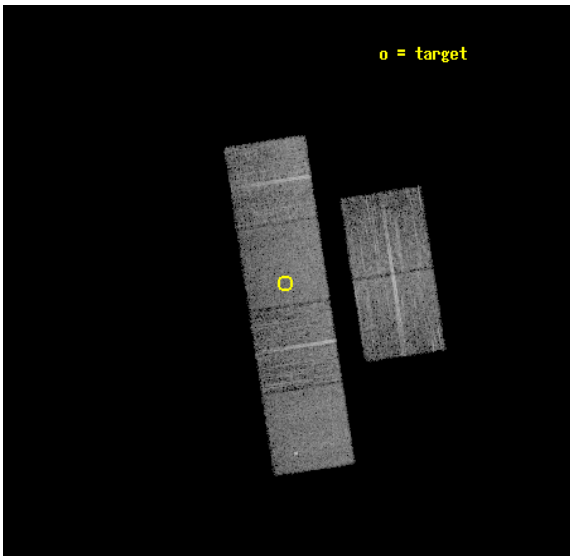
2.1 OBI

2.1.1 Images

Level 1 Image

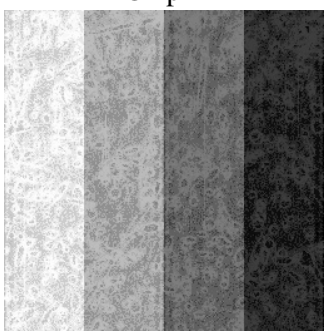


Level 1 Bad Events

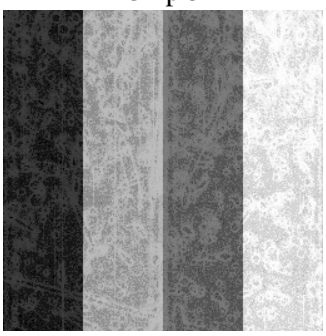


2.1.2 Bias

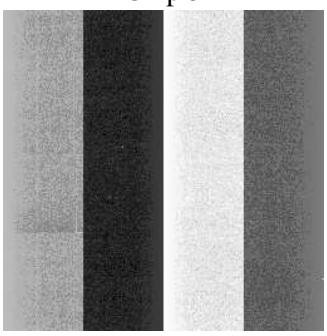
Chip 2



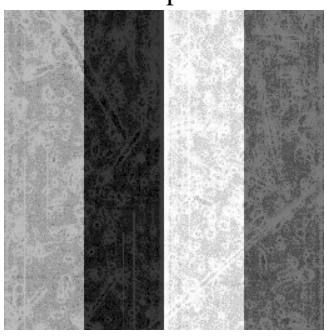
Chip 3



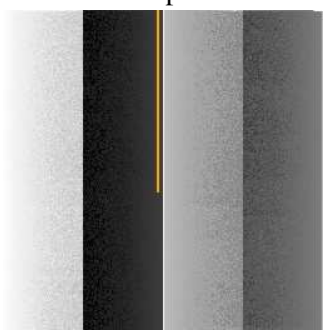
Chip 5



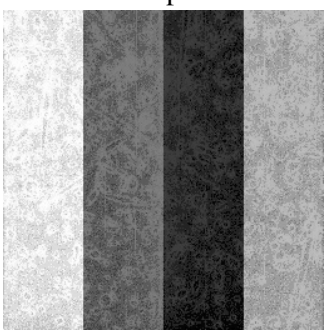
Chip 6



Chip 7



Chip 8



2.1.3 Parameters

obi_num	2
ascdsver	7.6.8.1
caldbver	3.2.2
date	2006-08-08T17:20:53
revision	4

sched_exp_time	10005.134000
ontime	6595.4363131225
ontime2	6595.4363131225
ontime3	6595.4363131225
ontime5	6595.4363131225
ontime6	6595.4363131225
ontime7	6595.4363131225
ontime8	6595.4363131225
l1events	508979

2.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	67685	63431	111728	68213	103439	94483
rejected events	45555	41437	45815	43027	44535	49565
rejected %	67%	65%	41%	63%	43%	52%

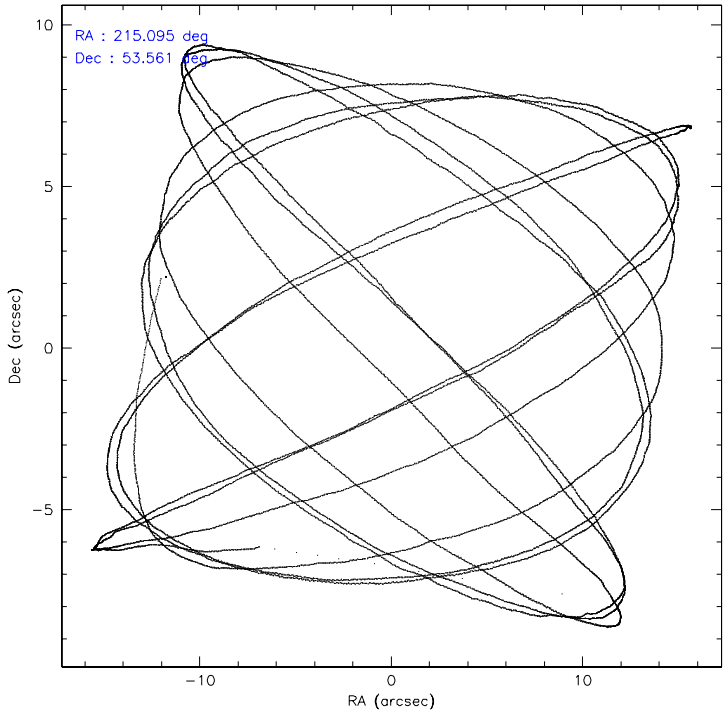
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	14042	13785	6129	15501	4304	22402
	20%	21%	5%	22%	4%	23%
grade 1 events	125	117	105	96	57	166
	0%	0%	0%	0%	0%	0%
grade 2 events	3580	3813	22901	4874	13985	7450
	5%	6%	20%	7%	13%	7%
grade 3 events	1087	1082	1671	1062	2785	4230
	1%	1%	1%	1%	2%	4%
grade 4 events	1142	1081	1589	1075	2703	3940
	1%	1%	1%	1%	2%	4%
grade 5 events	1891	2106	3803	2149	4520	2988
	2%	3%	3%	3%	4%	3%
grade 6 events	2434	2389	34090	2858	35595	7138
	3%	3%	30%	4%	34%	7%
grade 7 events	43384	39058	41440	40598	39490	46169
	64%	61%	37%	59%	38%	48%

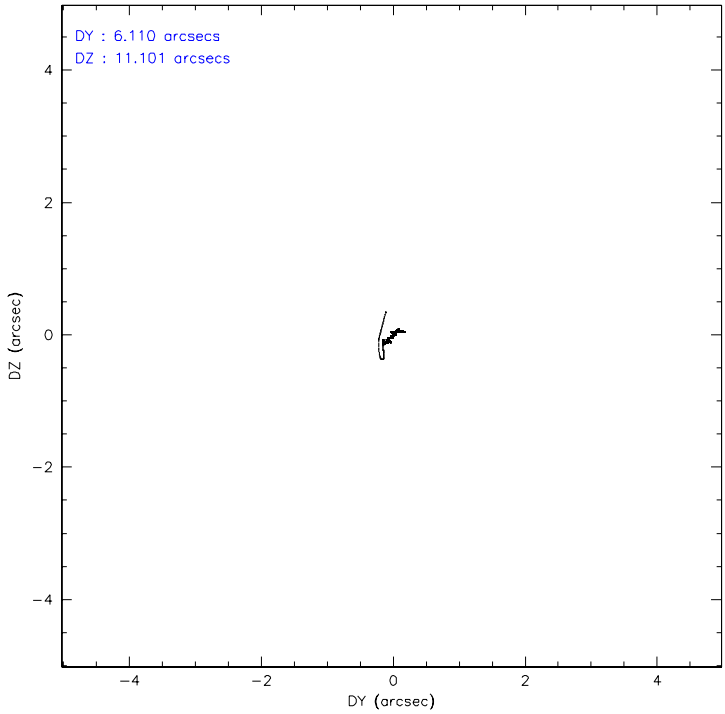
2.2 Compared Parameters

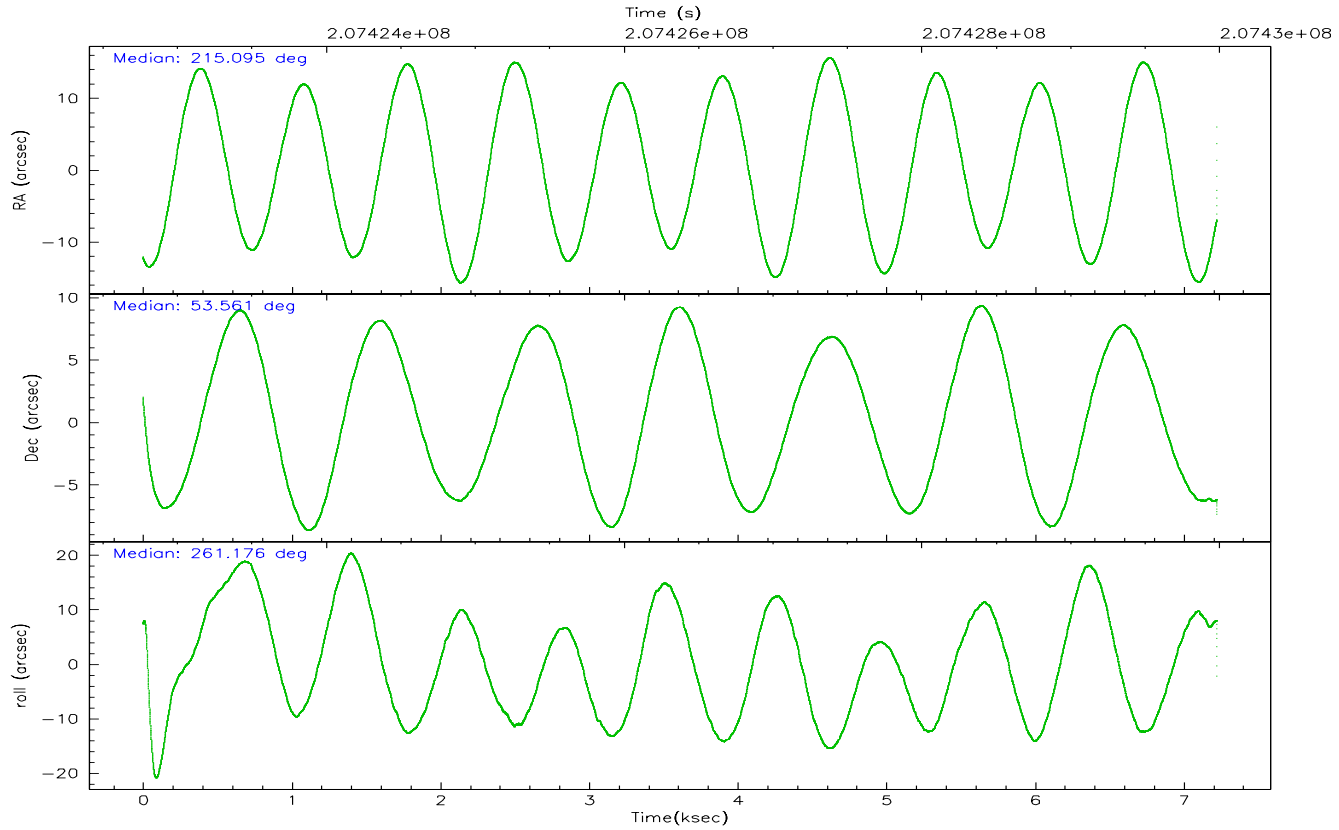
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-235678	ACIS-235678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
Pointing RA	215.078401	215.0954946202298
Pointing Dec	53.585822	53.56053893435509
Pointing Roll	261.037157	261.1800942899882
SIM focus pos (mm)	-0.684267	-0.6828225247311905
SIM defocus (mm)	0	0.001444936568705701
SIM translation stage pos (mm)	-190.132523	-190.1425803651734
SIM translation stage offset (mm)	0	0.01005778216563158
Observation start time	207423364.184000	207422196.20776
Observation start date	2004-07-28T17:35:00	2004-07-28T17:16:36
Observation end time	207433369.184000	207430006.19561
Observation end date	2004-07-28T20:21:45	2004-07-28T19:26:46
Read mode	TIMED	TIMED

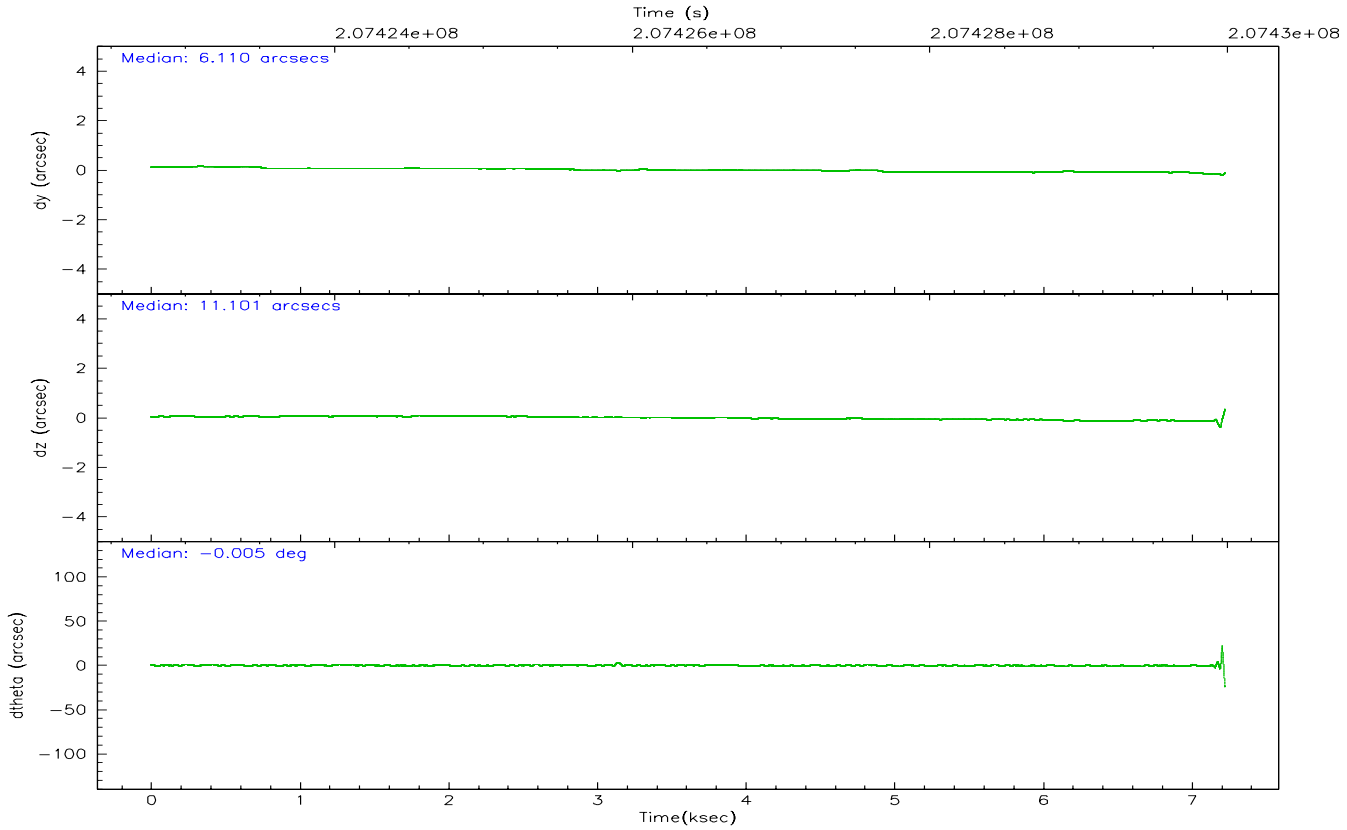
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
Primary exposure time	0.000000	3.2

2.3 Aspect


RA : 215.095 deg
Dec : 53.561 deg
10
5
0
−5
Dec (arcsec)
−10
0
10
RA (arcsec)


DY : 6.110 arcsecs
DZ : 11.101 arcsecs
4
2
0
−2
−4
DZ (arcsec)
−4
−2
0
2
4
DY (arcsec)


Time (s)
2.07424e+08
2.07426e+08
2.07428e+08
2.0743e+08
Median: 215.095 deg
RA (arcsec)
Median: 53.561 deg
Dec (arcsec)
Median: 261.176 deg
roll (arcsec)
Time(ksec)

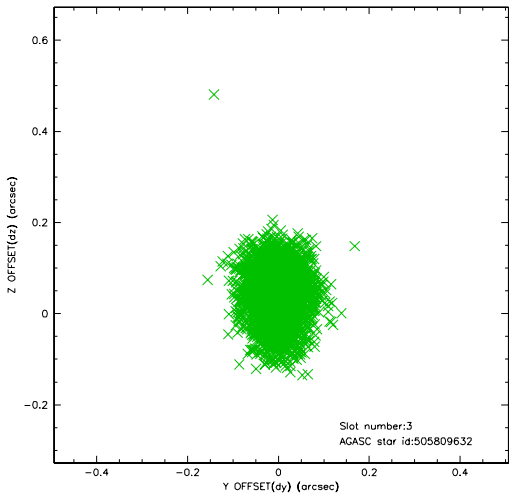

Time (s)
2.07424e+08
2.07426e+08
2.07428e+08
2.0743e+08
Median: 6.110 arcsecs
dy (arcsec)
Median: 11.101 arcsecs
dz (arcsec)
Median: −0.005 deg
dtheta (arcsec)
Time(ksec)

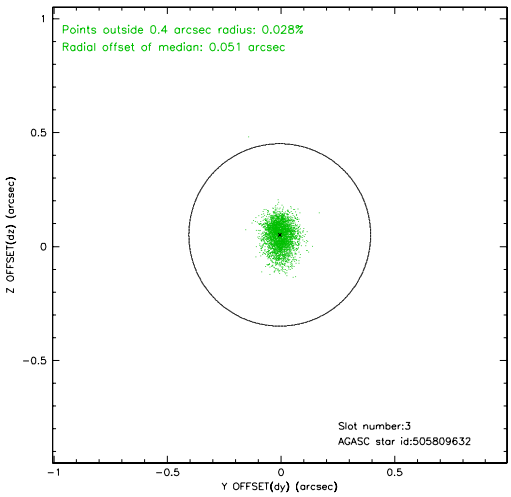
Slot Statistics

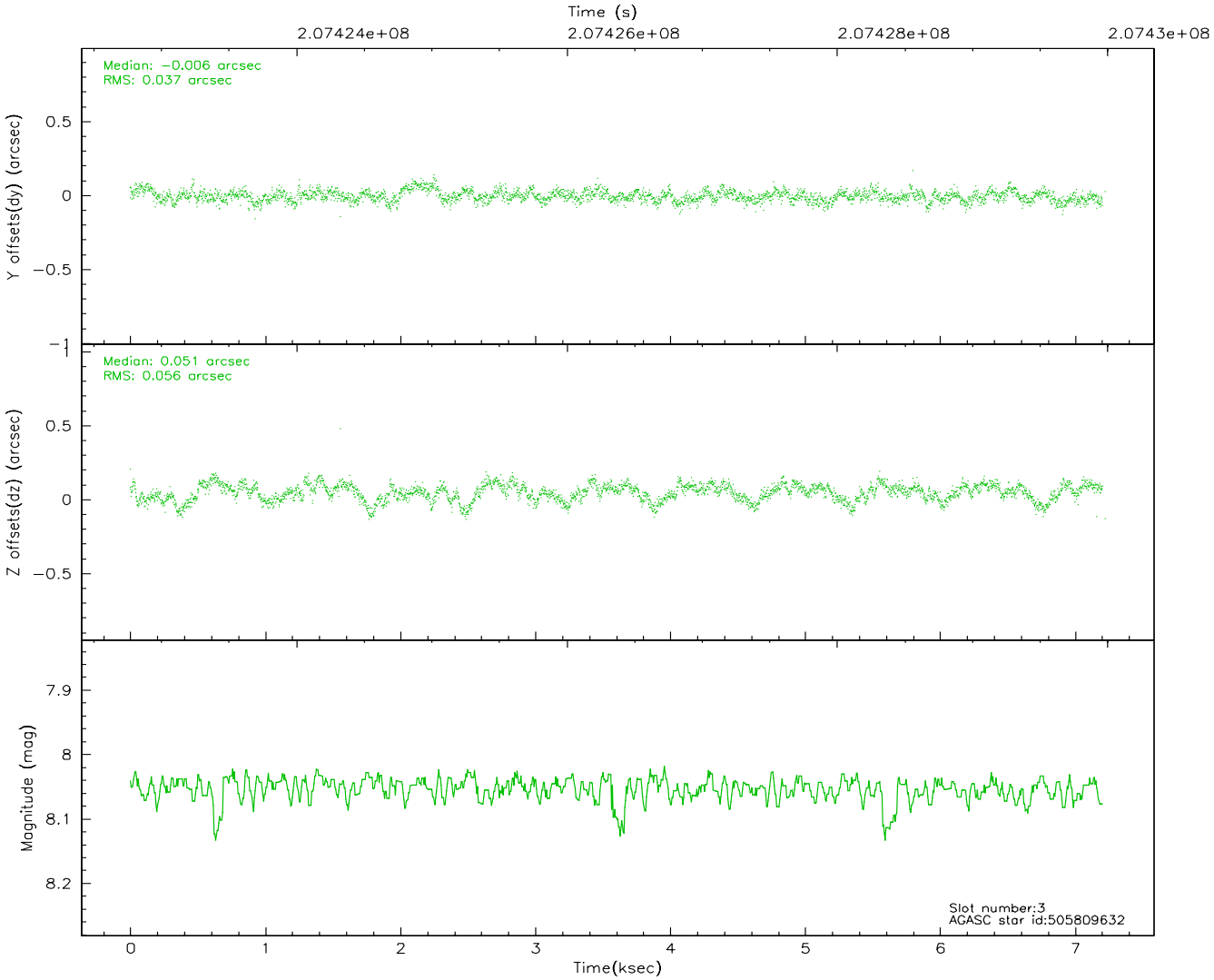
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1751	-0.048	0.009	0.007	0.012	0.000000	0.000000	-758.87	-1732.32
1	FID	ACIS-S-4	7.21	1757	0.036	0.020	0.006	0.011	0.000000	0.000000	2154.11	175.39
2	FID	ACIS-S-5	7.23	1761	-0.020	-0.021	0.006	0.010	0.000000	0.000000	-1810.68	169.88
3	GUIDE	505809632	8.05	3515	-0.006	0.051	0.069	0.117	215.499426	53.521185	86.96	926.32
4	GUIDE	505812088	8.16	3513	0.058	-0.139	0.084	0.139	214.186617	53.263562	1433.69	-1717.39
5	GUIDE	505814560	7.42	3516	-0.129	0.016	0.065	0.108	215.720521	53.810357	-1016.75	1221.18
6	GUIDE	505815008	10.44	3445	0.011	-0.069	0.199	0.390	215.914204	53.713651	-742.66	1686.14
7	GUIDE	505817616	10.15	3507	0.062	0.088	0.231	0.487	216.040487	53.402541	316.18	2140.97

2.4 Star Slots

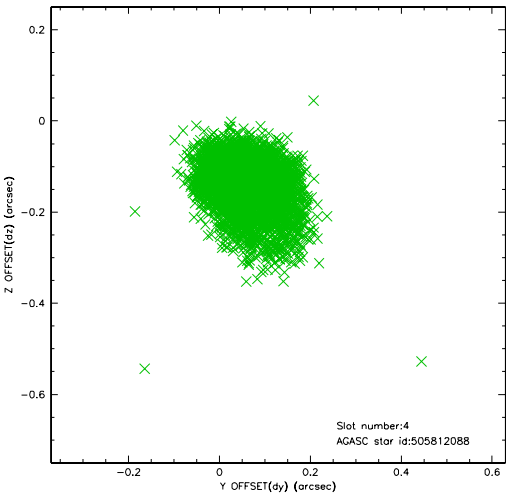
2.4.1 Slot 3

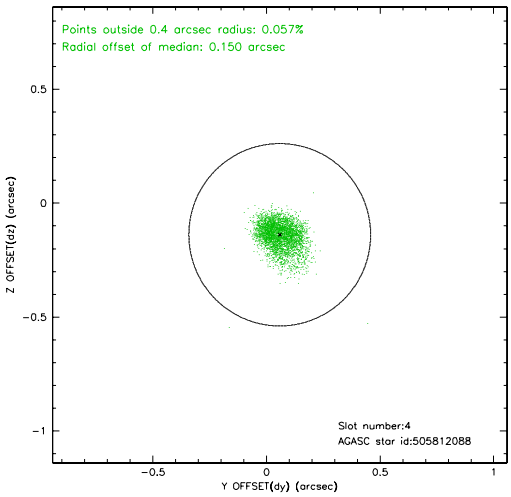


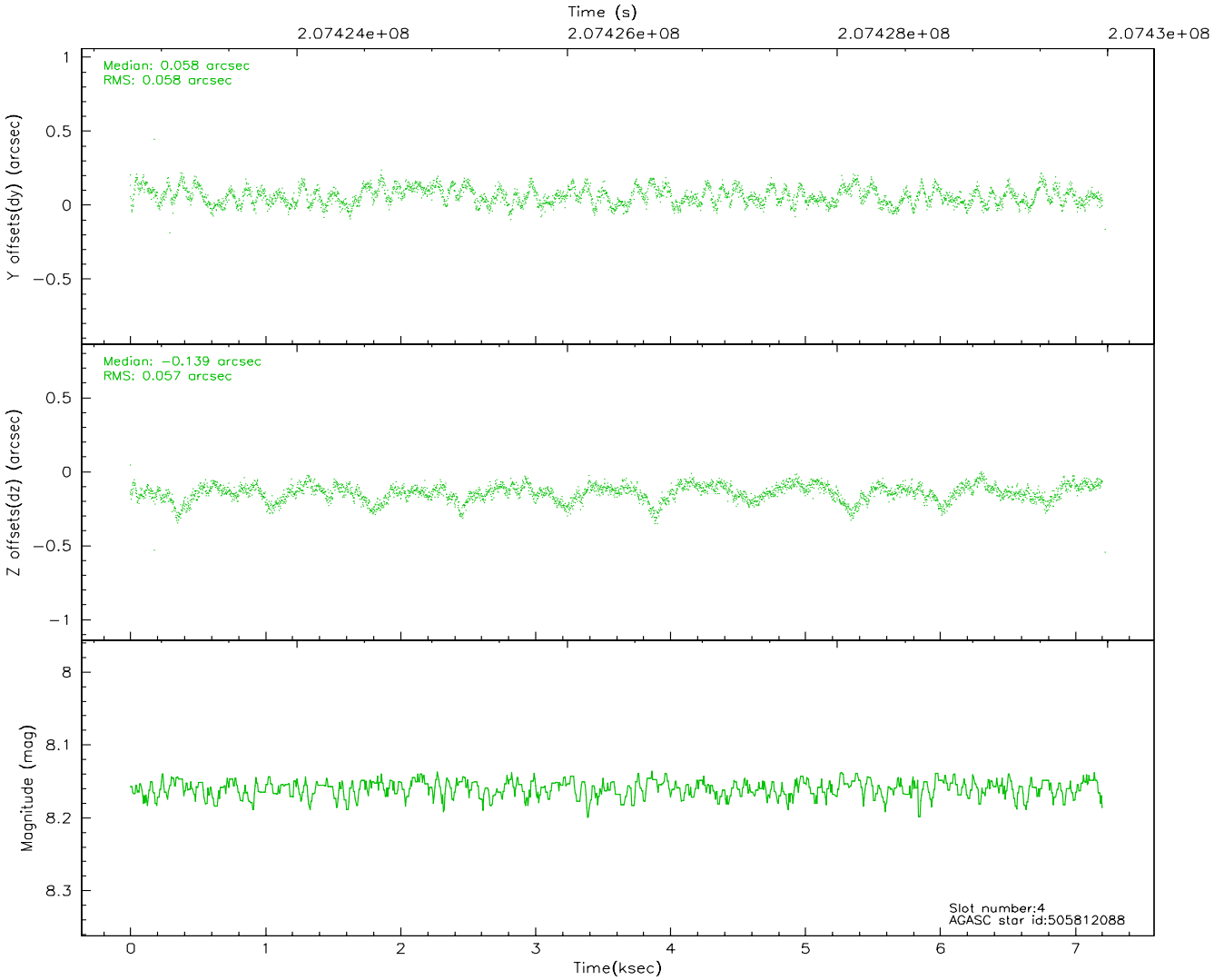




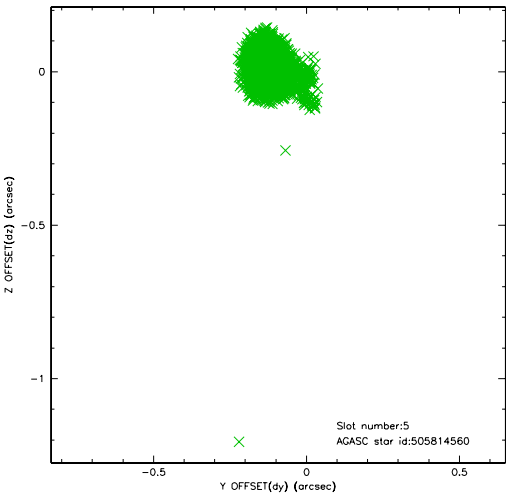
2.4.2 Slot 4

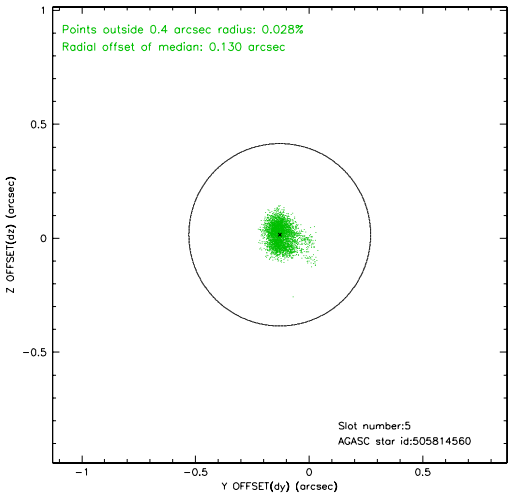

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:505812088

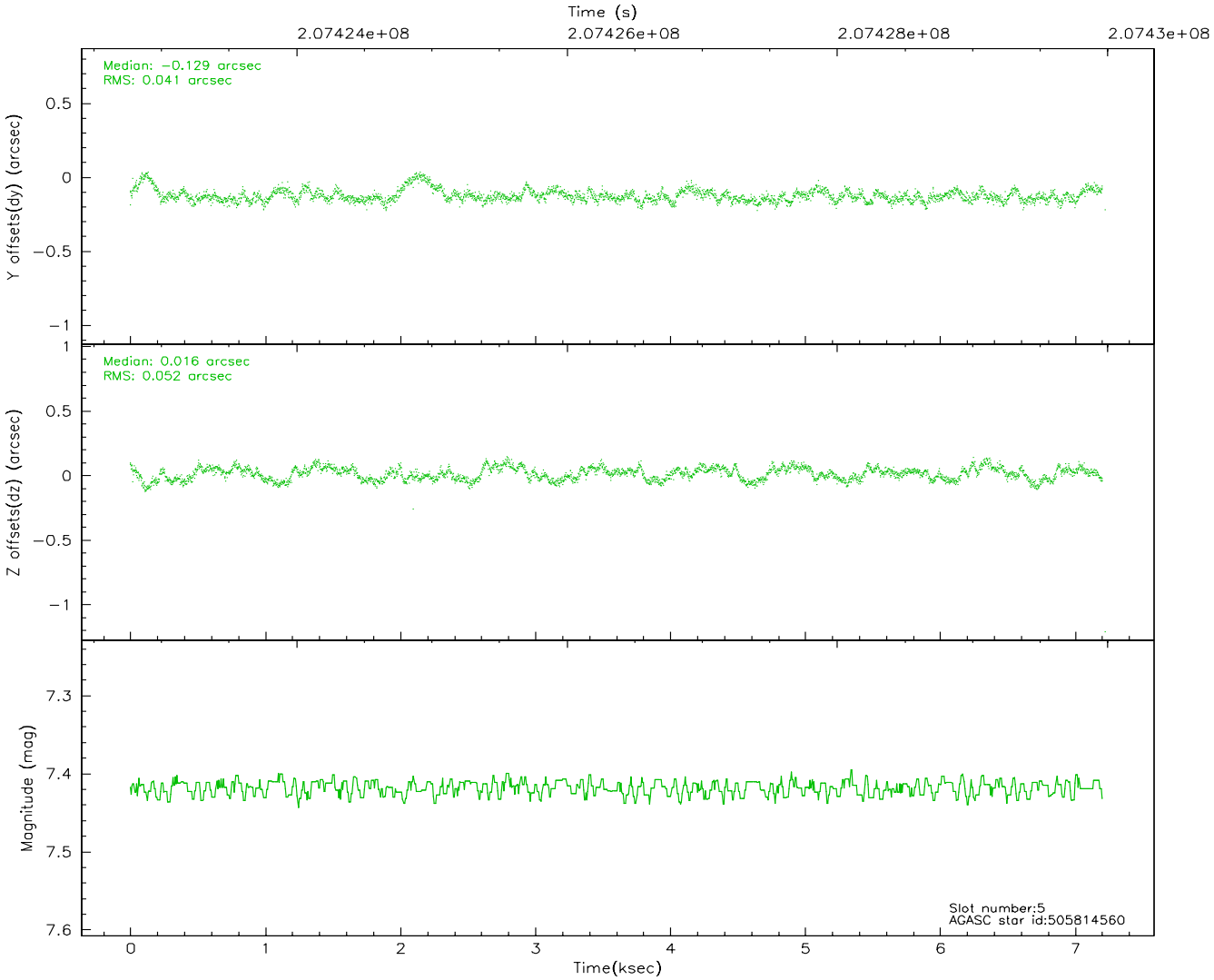

Points outside 0.4 arcsec radius: 0.057%
Radial offset of median: 0.150 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:505812088


Time (s)
2.07424e+08
2.07426e+08
2.07428e+08
2.0743e+08
Median: 0.058 arcsec
RMS: 0.058 arcsec
Y offsets(dy) (arcsec)
Median: −0.139 arcsec
RMS: 0.057 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:505812088
Time(ksec)

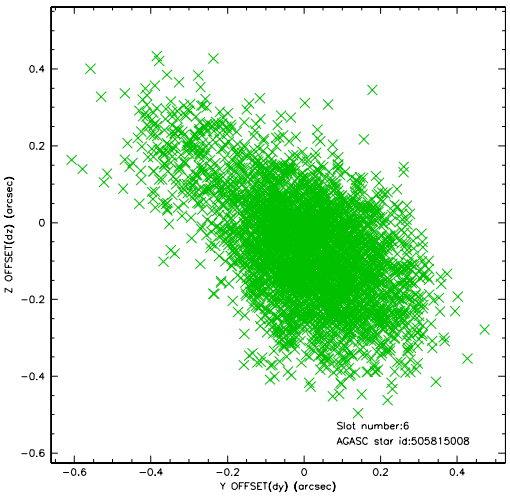
2.4.3 Slot 5

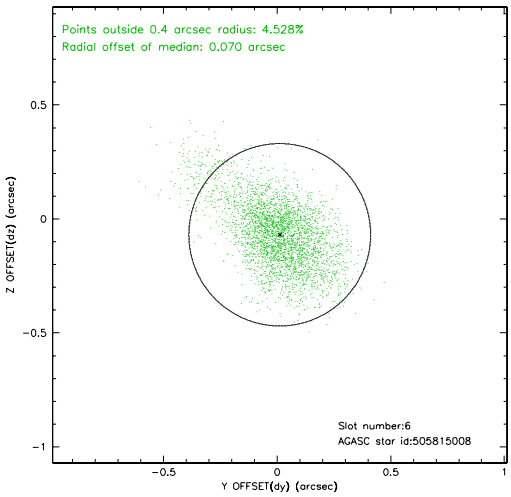

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:505814560

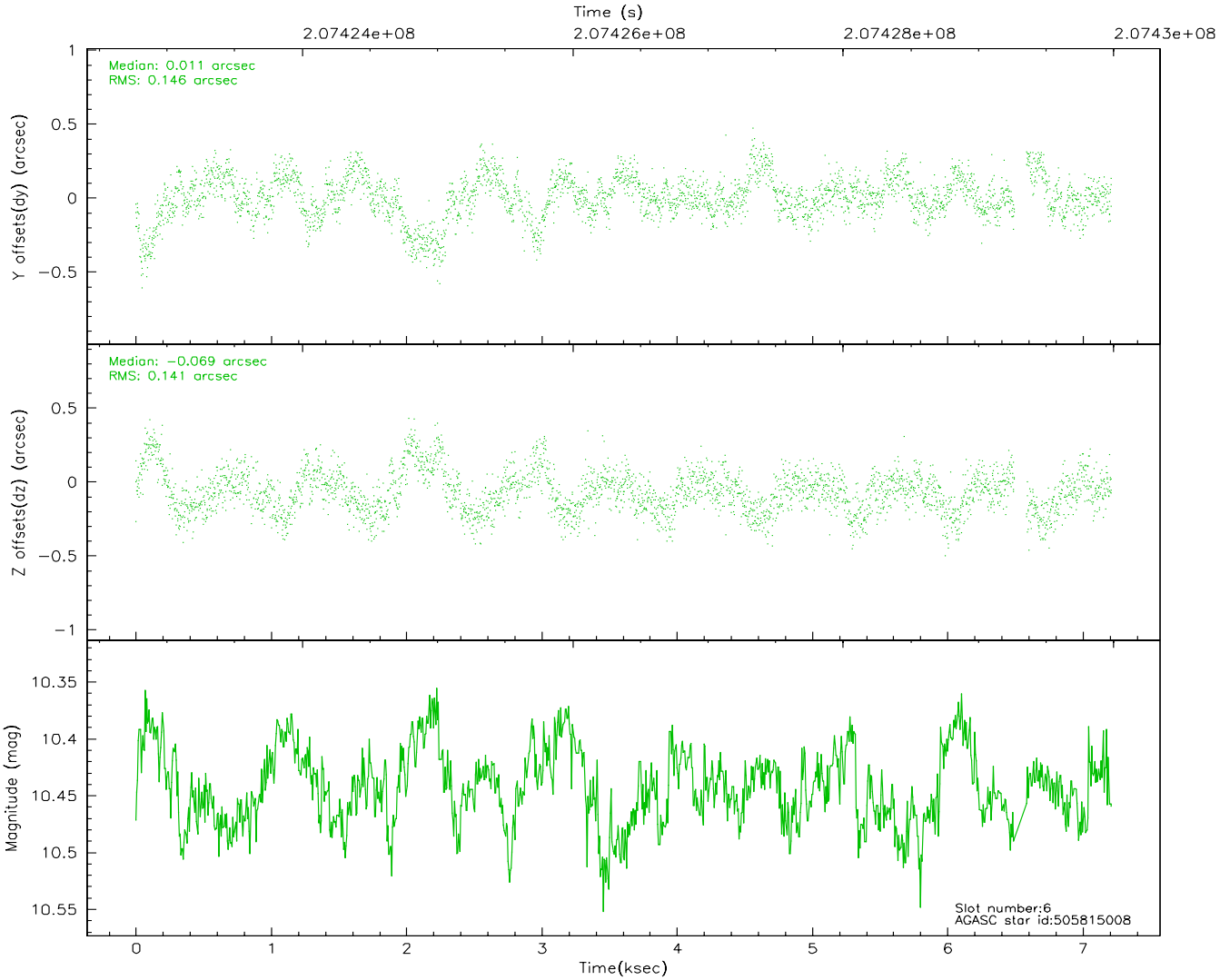

Points outside 0.4 arcsec radius: 0.028%
Radial offset of median: 0.130 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:505814560


Time (s)
2.07424e+08
2.07426e+08
2.07428e+08
2.0743e+08
Median: −0.129 arcsec
RMS: 0.041 arcsec
Y offsets(dy) (arcsec)
Median: 0.016 arcsec
RMS: 0.052 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:505814560
Time(ksec)

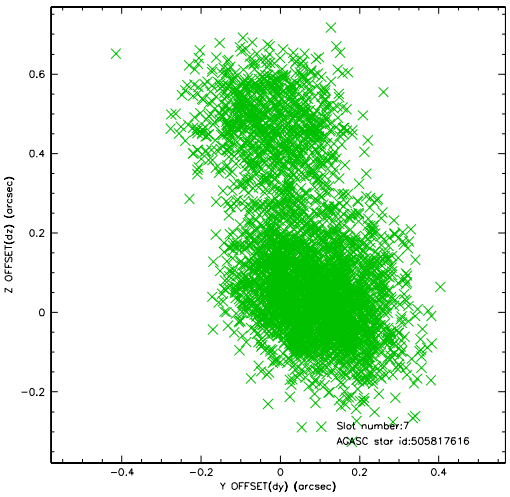
2.4.4 Slot 6

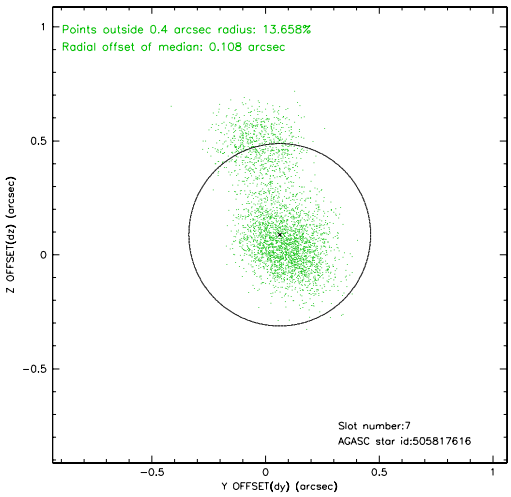

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:505815008

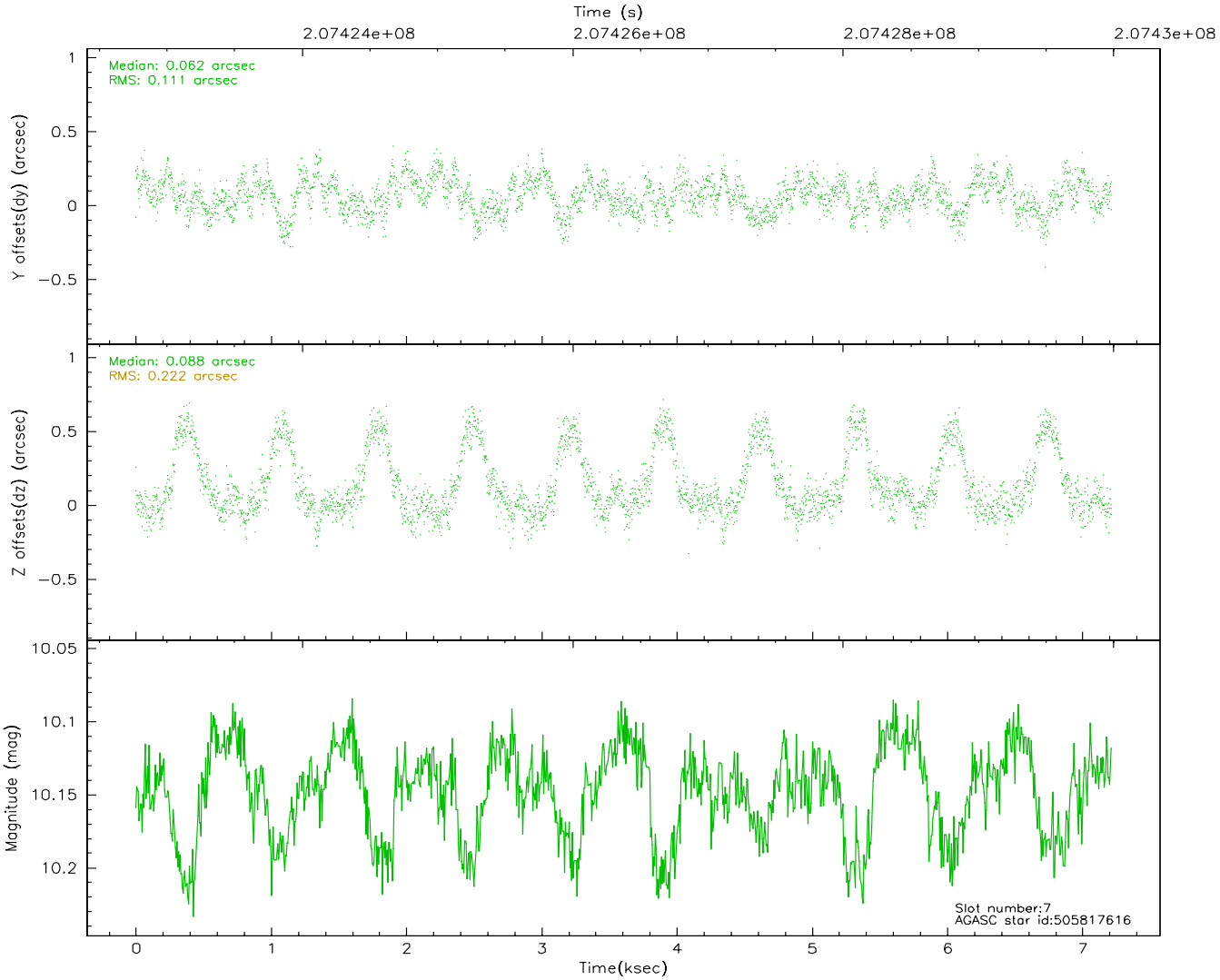

Points outside 0.4 arcsec radius: 4.528%
Radial offset of median: 0.070 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:505815008


Time (s)
2.07424e+08
2.07426e+08
2.07428e+08
2.0743e+08
Median: 0.011 arcsec
RMS: 0.146 arcsec
Y offsets(dy) (arcsec)
Median: −0.069 arcsec
RMS: 0.141 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:505815008
Time(ksec)

2.4.5 Slot 7

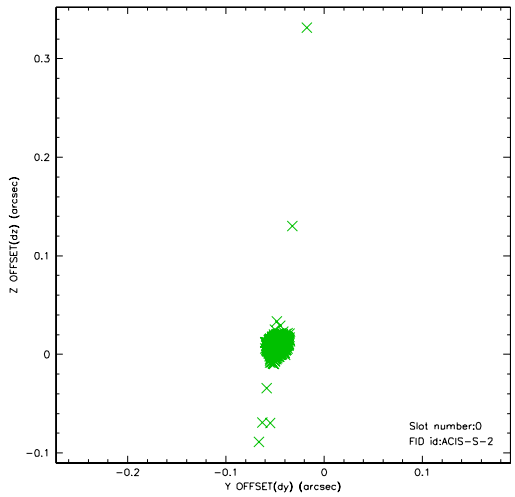

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:505817616

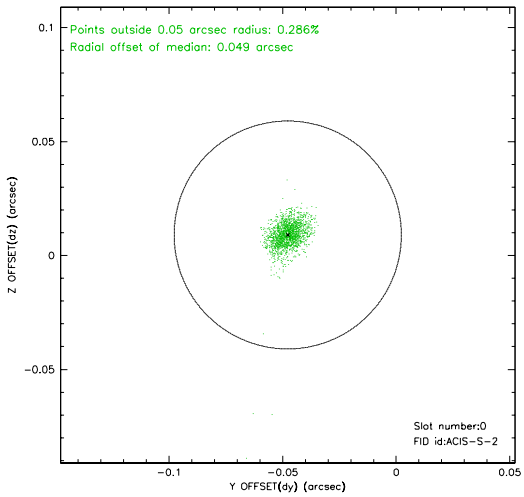

Points outside 0.4 arcsec radius: 13.658%
Radial offset of median: 0.108 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:505817616

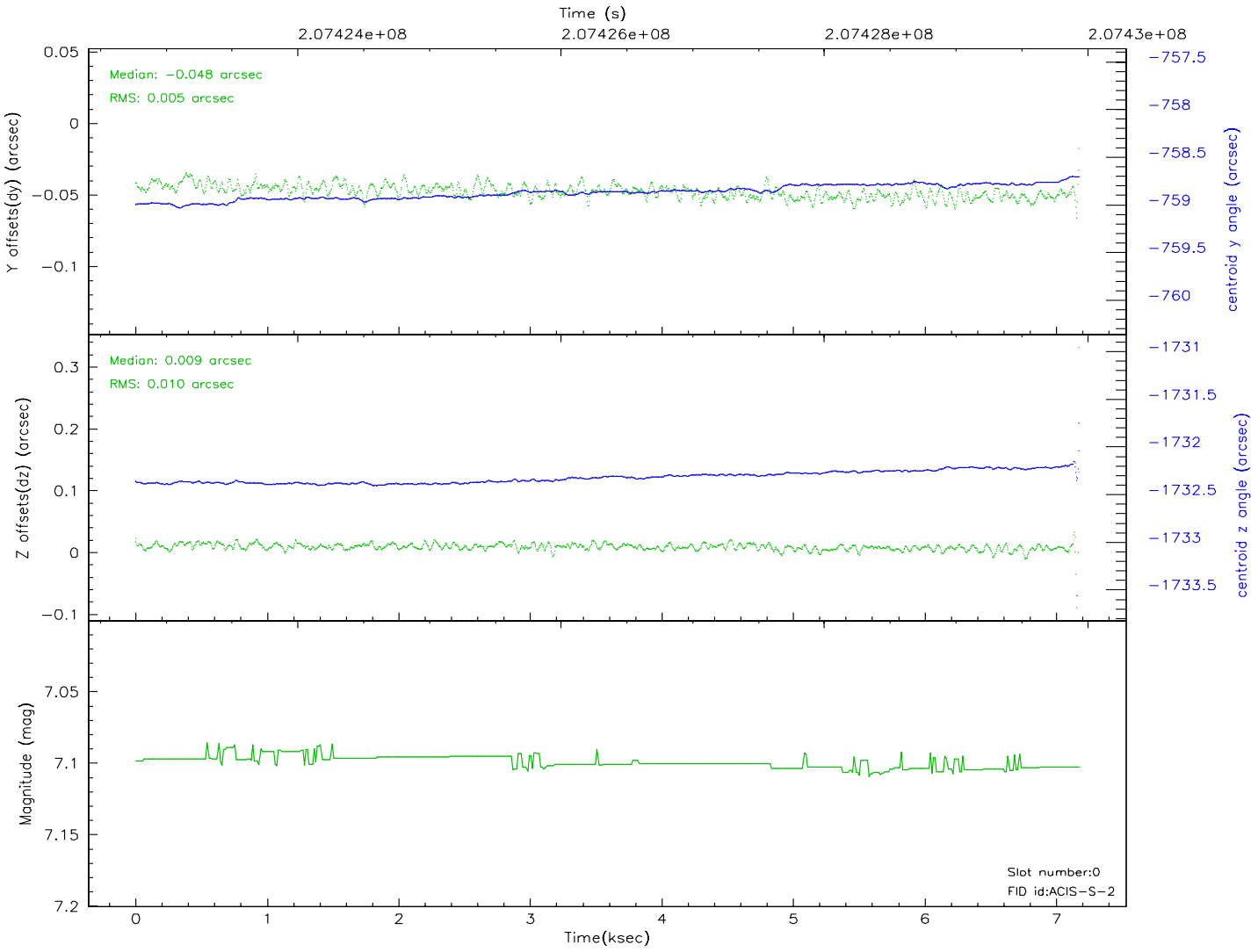

Time (s)
2.07424e+08
2.07426e+08
2.07428e+08
2.0743e+08
Median: 0.062 arcsec
RMS: 0.111 arcsec
Y offsets(dy) (arcsec)
Median: 0.088 arcsec
RMS: 0.222 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:505817616
Time(ksec)

2.5 FID Slots

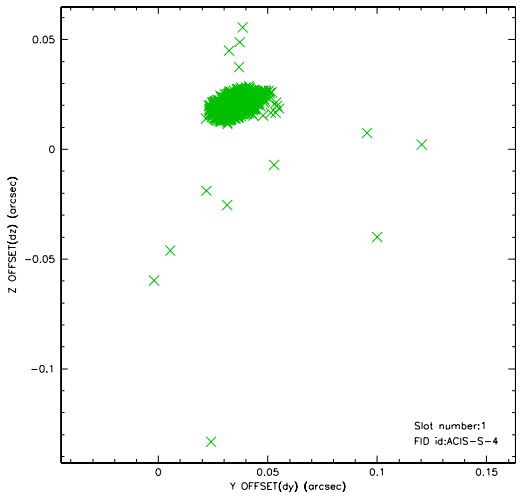
2.5.1 Slot 0

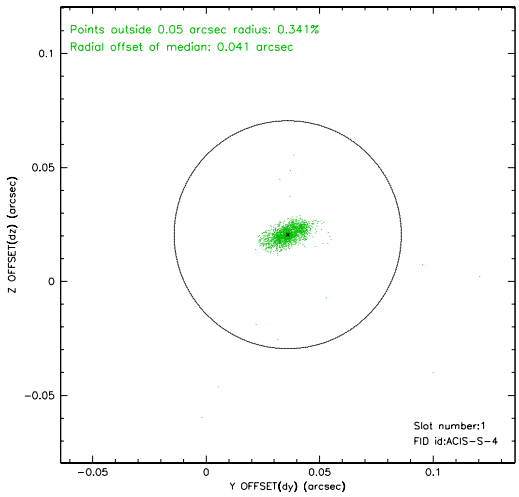


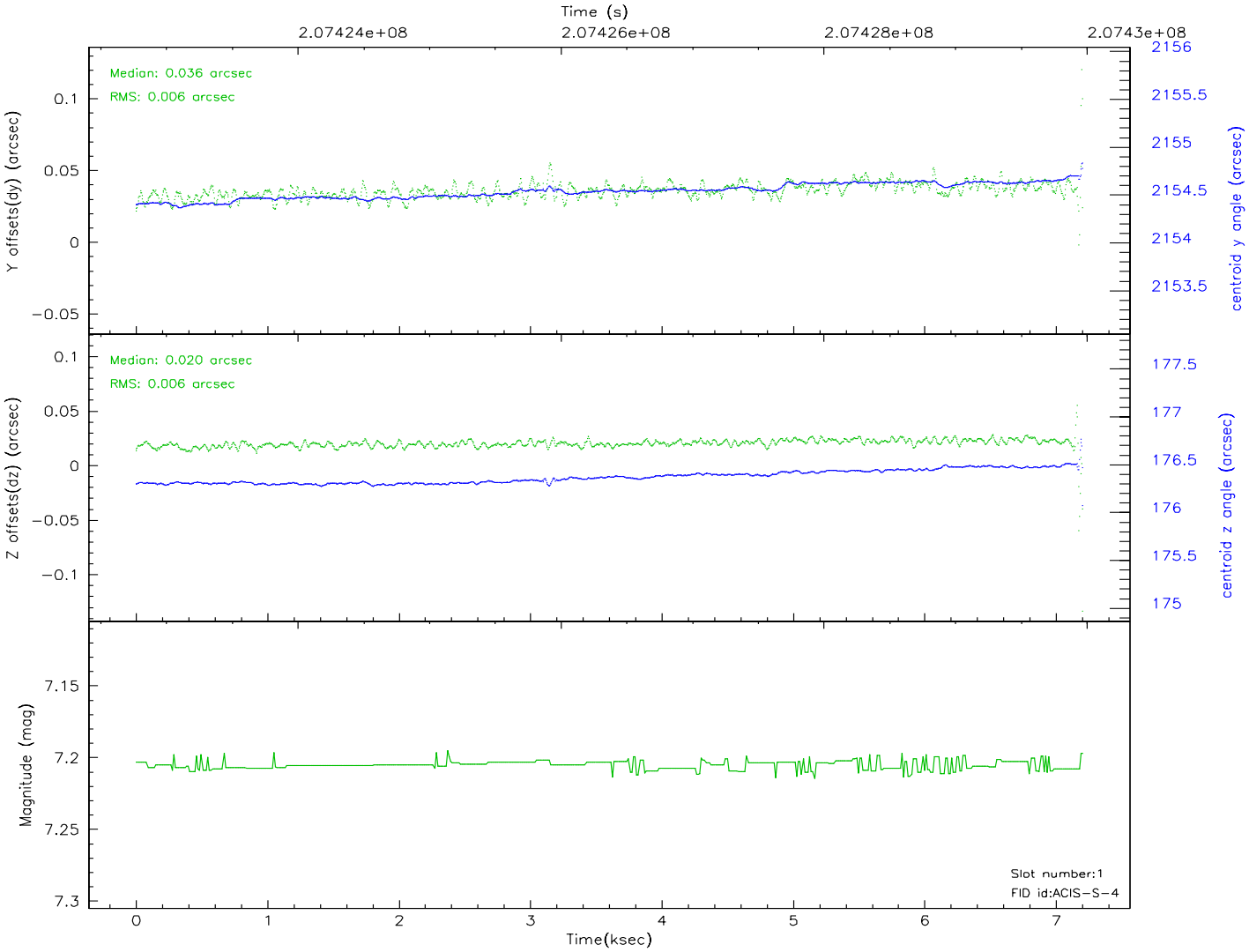




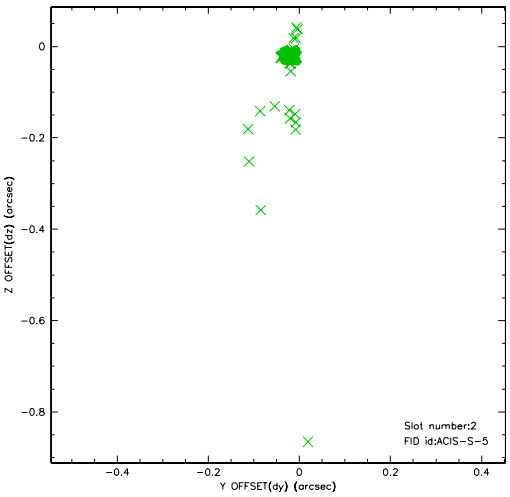
2.5.2 Slot 1

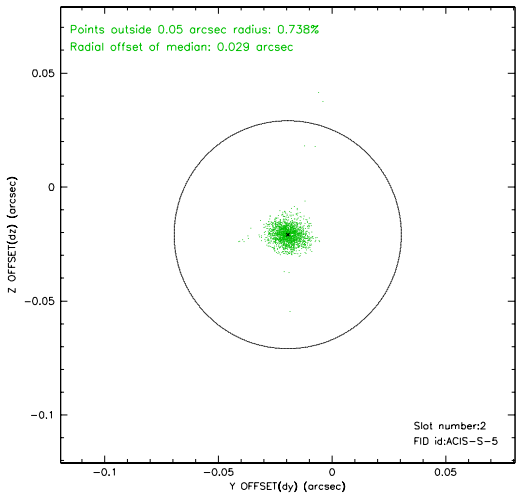

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4

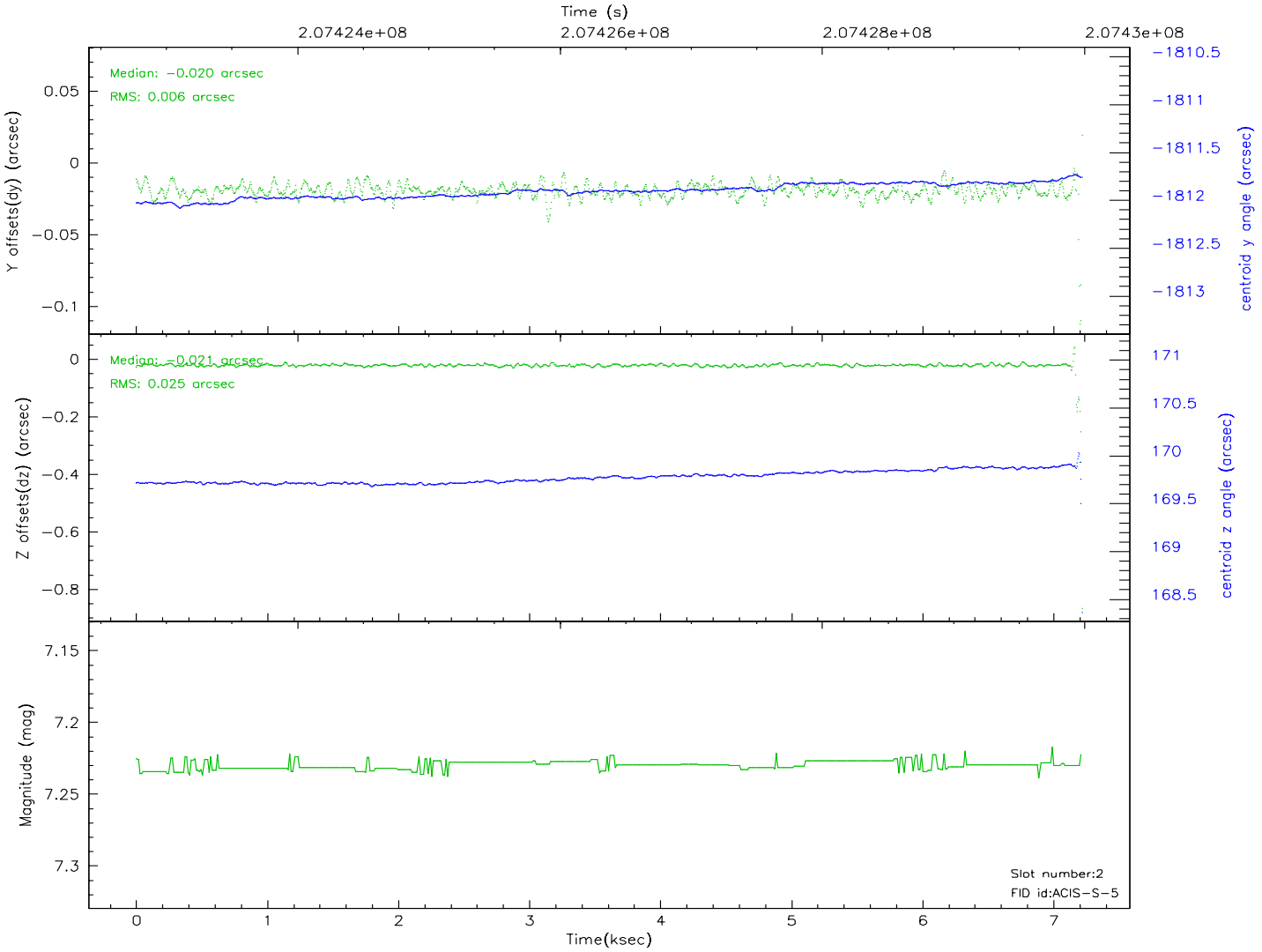

Points outside 0.05 arcsec radius: 0.341%
Radial offset of median: 0.041 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4


Time (s)
2.07424e+08
2.07426e+08
2.07428e+08
2.0743e+08
Median: 0.036 arcsec
RMS: 0.006 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.020 arcsec
RMS: 0.006 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:ACIS-S-4
Time(ksec)

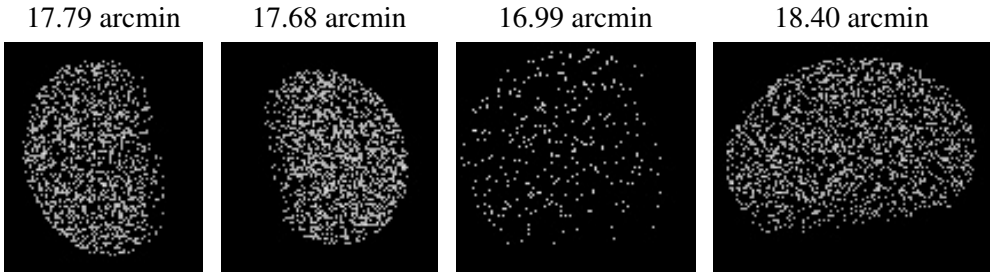
2.5.3 Slot 2


Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:ACIS-S-5


Points outside 0.05 arcsec radius: 0.738%
Radial offset of median: 0.029 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:ACIS-S-5


Time (s)
2.07424e+08
2.07426e+08
2.07428e+08
2.0743e+08
Median: −0.020 arcsec
RMS: 0.006 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.021 arcsec
RMS: 0.025 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:2
FID id:ACIS-S-5
Time(ksec)

3 Point Sources



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.08.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	6.582

A.2 Comments

This observation was interrupted by safing of the science instruments onboard Chandra due to high solar radiation environment. The observation was interrupted at 2004/07/28 19:28. In this version of the software, a few seconds of data are inadvertently included at the end of the observation after the spacecraft and its components began to move. Therefore, the aspect solution is not entirely correct. Software will be modified to correct this situation as soon as feasible. The aspect solution can be corrected in CIAO by removing data from the end of the *asol.fits file that has a timestamp equal to or later than the above interruption time. The Level 1 event file can be recreated using CIAO and the edited *asol.fits file.