V&V Reference Report
L2 ASCDS Version : 7.6.7.1

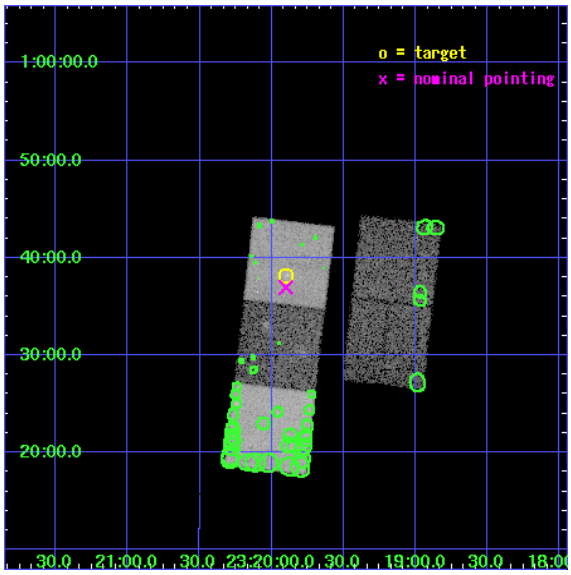
Observation 7172 - L2 Version 002
Chandra X-Ray Center

L2 Processing Date : Mar 26 2006

Contents

1 Front

seq_num	800465
obs_id	7172
title	Cluster Strong Lensing at High Redshift
observer	Dr Michael Gladders
object	RCS2319.9+0038
dtycycle	0
cycle	P
ra_targ	349.974583
dec_targ	0.636556
ra_nom	349.97527835623
dec_nom	0.61582481597644
roll_nom	276.66559855398
revision	2
ontime	18184.599965036
livetime	17947.004779185
ontime2	18181.459014654
ontime3	18181.458984792
ontime5	18184.599965036
ontime6	18184.599965036
ontime7	18184.599965036
l2events	147020

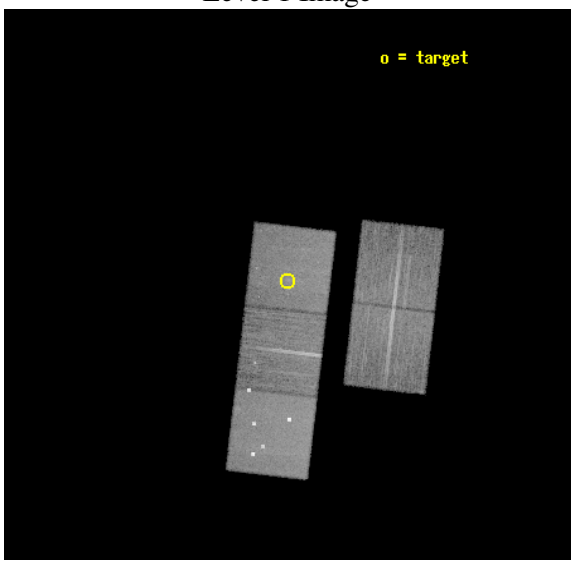


2 OBI

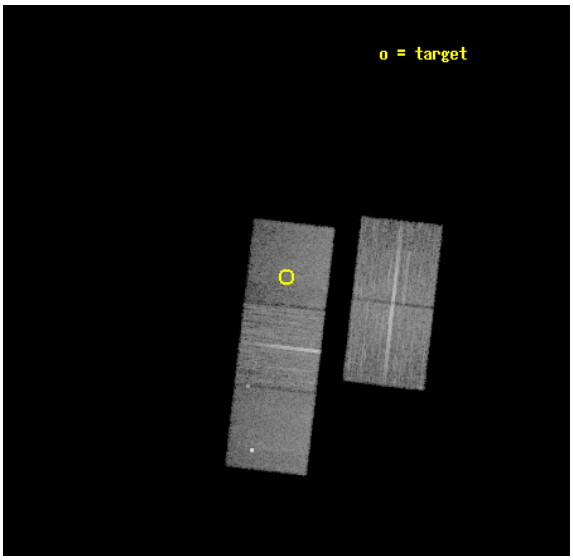
2.1 OBI

2.1.1 Images

Level 1 Image

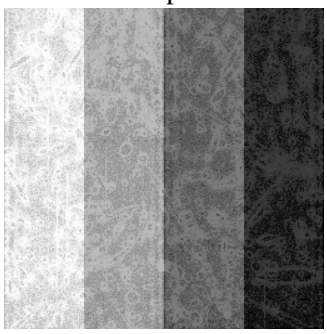


Level 1 Bad Events

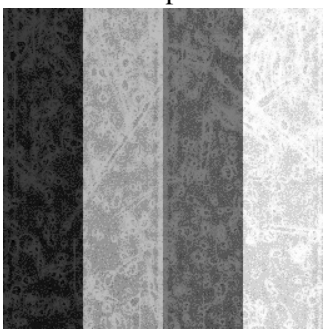


2.1.2 Bias

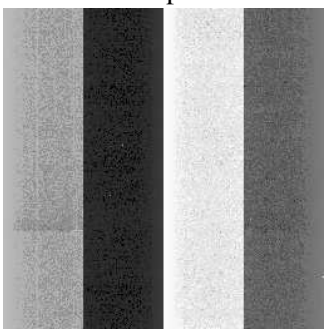
Chip 2



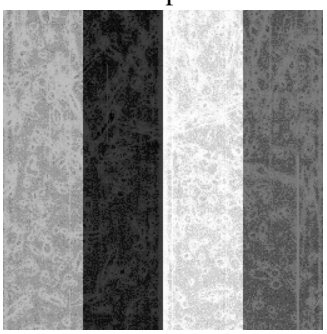
Chip 3



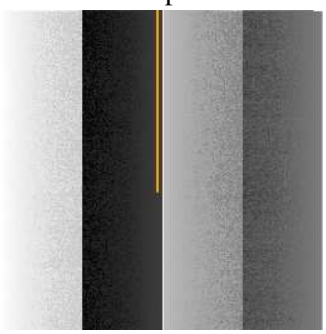
Chip 5



Chip 6



Chip 7



2.1.3 Parameters

obi_num	0
ascdsver	7.6.7.1
caldbver	3.2.1
date	2006-03-26T04:22:45
revision	2

sched_exp_time	18000.000000
ontime	18626.184887081
ontime2	18626.184936881
ontime3	18626.184926927
ontime5	18626.184887081
ontime6	18626.184887081
ontime7	18626.184887081
l1events	628362

2.1.4 Events

	ccd 2	**ccd 3**	**ccd 5**	**ccd 6**	**ccd 7**
level 1 events	113344	106028	166223	114935	127832
rejected events	102741	95893	84827	102474	75443
rejected %	90%	90%	51%	89%	59%

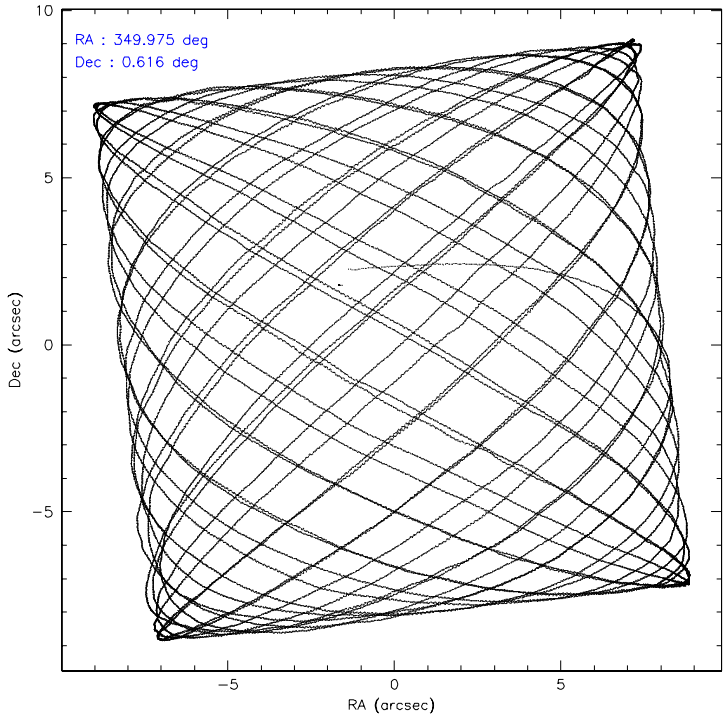
	ccd 2	**ccd 3**	**ccd 5**	**ccd 6**	**ccd 7**
grade 0 events	3780	3610	12104	4808	3445
	3%	3%	7%	4%	2%
grade 1 events	55	67	139	52	79
	0%	0%	0%	0%	0%
grade 2 events	2612	2316	24468	2681	13144
	2%	2%	14%	2%	10%
grade 3 events	1221	1146	2549	1324	2992
	1%	1%	1%	1%	2%
grade 4 events	1195	1183	2413	1285	2967
	1%	1%	1%	1%	2%
grade 5 events	3658	4528	9148	4666	9592
	3%	4%	5%	4%	7%
grade 6 events	2035	2118	41629	2615	31082
	1%	1%	25%	2%	24%
grade 7 events	98788	91060	73773	97504	64531
	87%	85%	44%	84%	50%

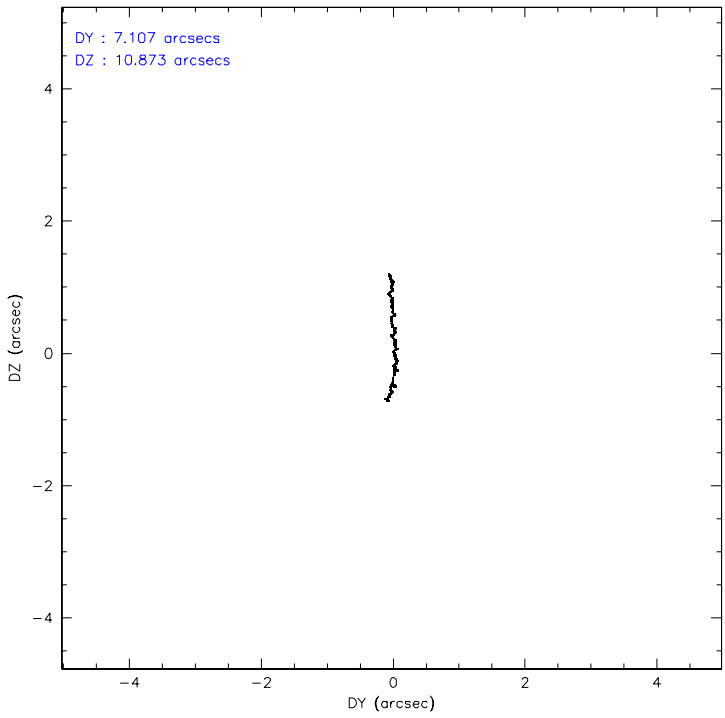
2.2 Compared Parameters

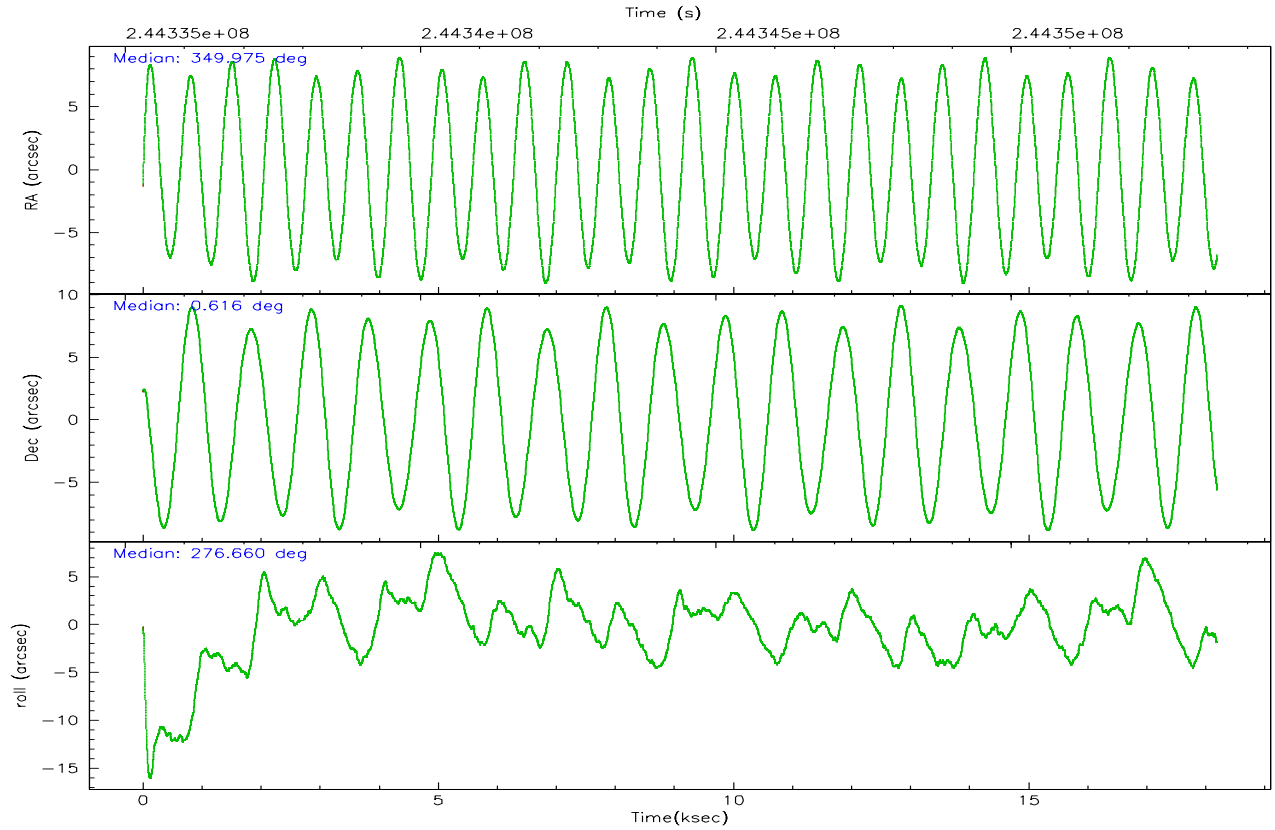
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-23567	ACIS-23567
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
Pointing RA	349.958713	349.9752783562311
Pointing Dec	0.637432	0.6158248159764385
Pointing Roll	276.509140	276.6655985539755
SIM focus pos (mm)	-0.684267	-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	244335488.184000	244334268.79081
Observation start date	2005-09-28T22:57:04	2005-09-28T22:37:48
Observation end time	244353488.184000	244353881.65421
Observation end date	2005-09-29T03:57:04	2005-09-29T04:04:41
Read mode	TIMED	TIMED

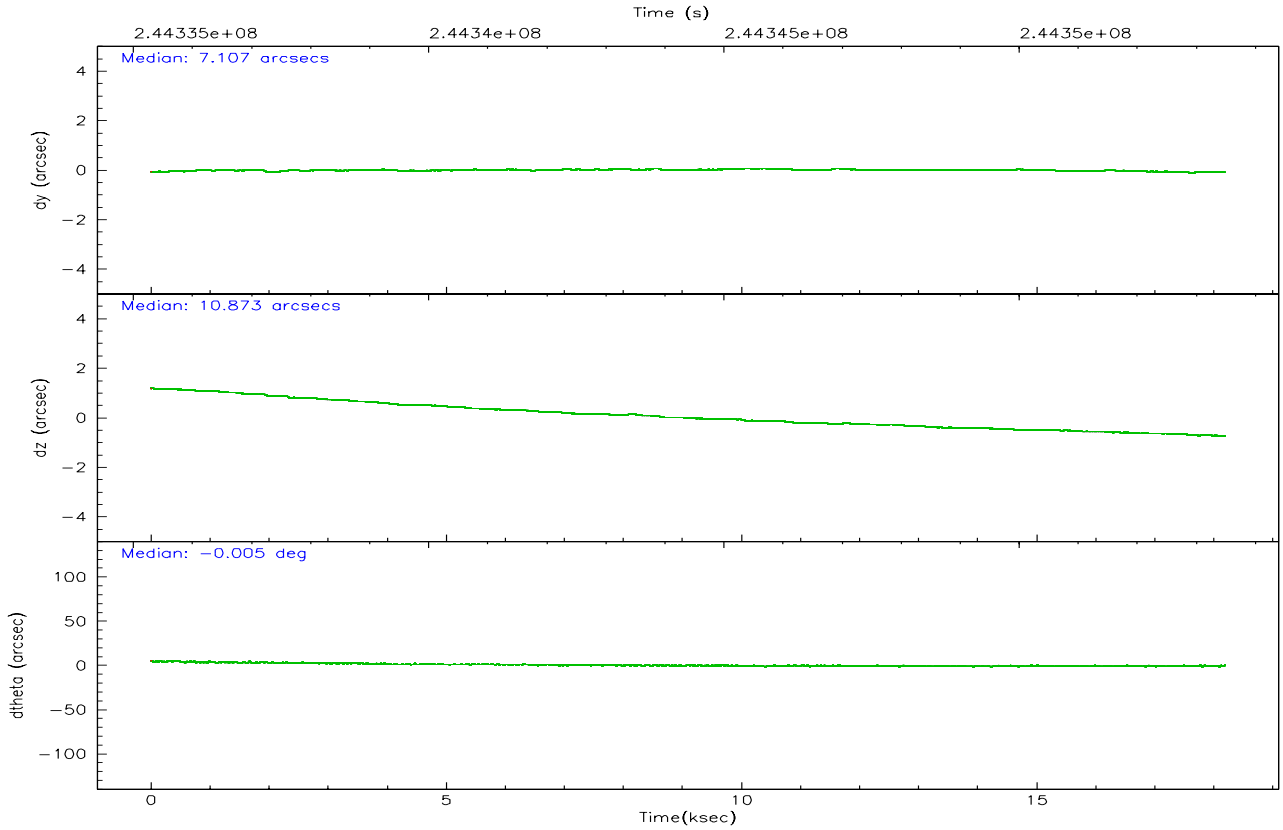
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
Primary exposure time	0.000000	3.1

2.3 Aspect


RA : 349.975 deg
Dec : 0.616 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−5
0
5


DY : 7.107 arcsecs
DZ : 10.873 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
2.44335e+08
2.4434e+08
2.44345e+08
2.4435e+08
Median: 349.975 deg
RA (arcsec)
Median: 0.616 deg
Dec (arcsec)
Median: 276.660 deg
roll (arcsec)
Time(ksec)

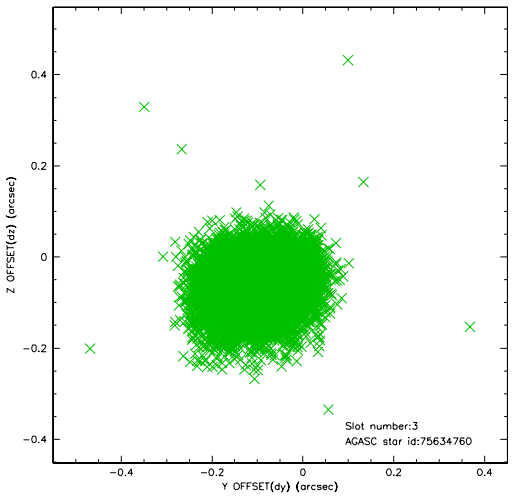

Time (s)
2.44335e+08
2.4434e+08
2.44345e+08
2.4435e+08
Median: 7.107 arcsecs
dy (arcsec)
Median: 10.873 arcsecs
dz (arcsec)
Median: −0.005 deg
dtheta (arcsec)
Time(ksec)

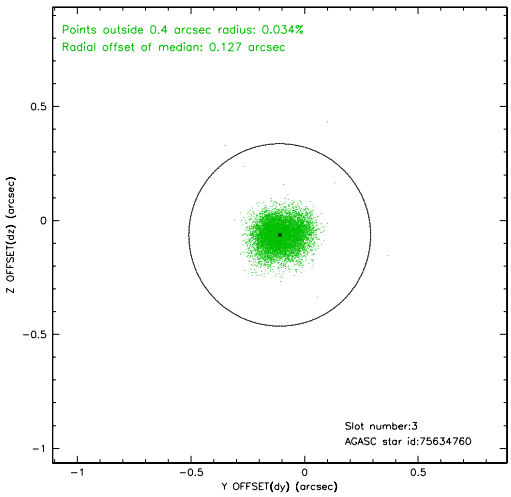
Slot Statistics

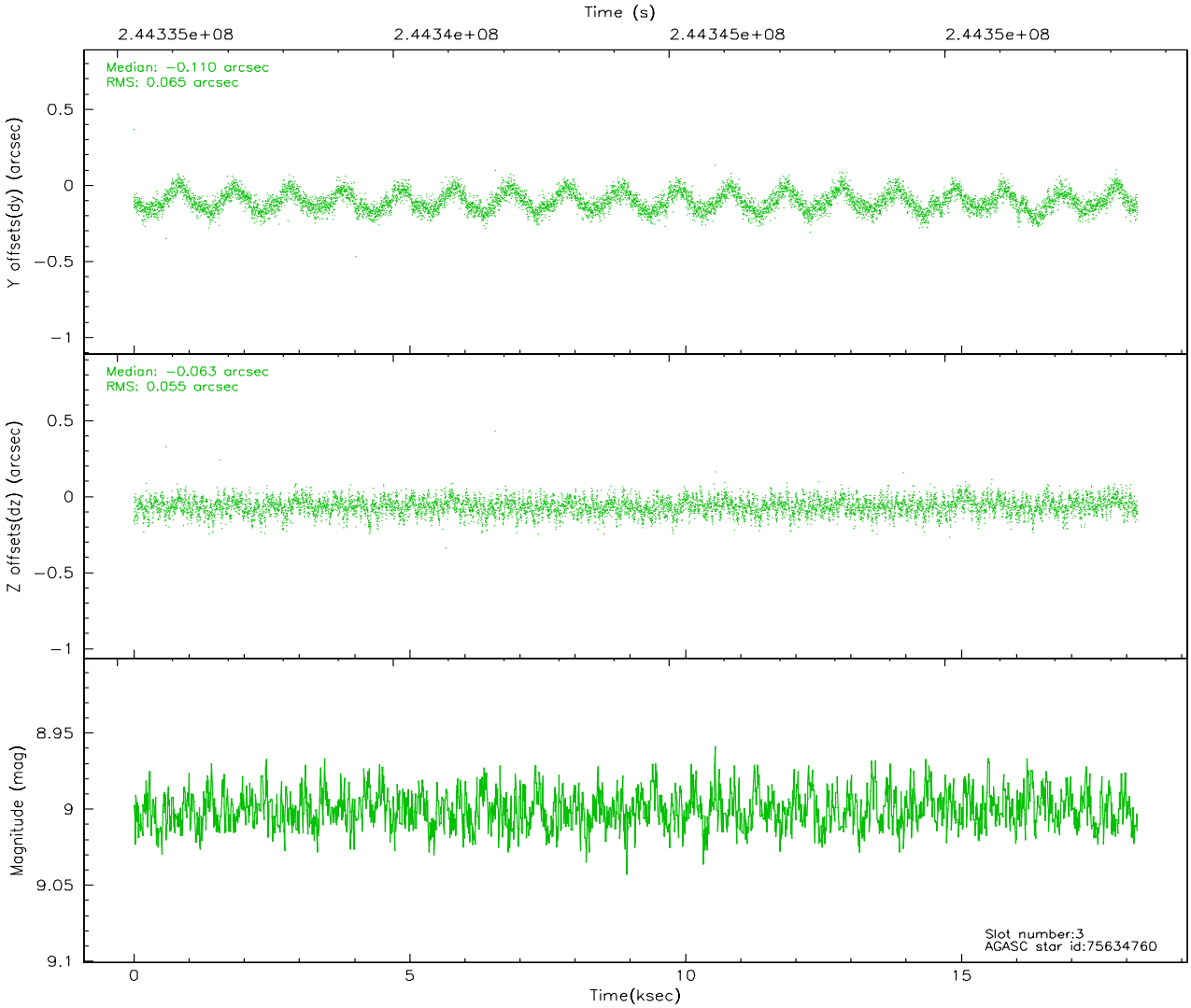
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	4438	-0.042	-0.002	0.013	0.029	0.000000	0.000000	-759.86	-1732.19
1	FID	ACIS-S-4	7.21	4438	0.058	0.021	0.015	0.030	0.000000	0.000000	2153.37	176.14
2	FID	ACIS-S-5	7.23	4438	-0.048	-0.009	0.008	0.014	0.000000	0.000000	-1812.47	169.95
3	GUIDE	75634760	9.00	8870	-0.110	-0.063	0.091	0.144	349.528153	0.494791	334.86	-1597.98
4	GUIDE	75636968	9.29	8865	-0.092	-0.035	0.113	0.183	349.584767	0.524969	250.04	-1383.25
5	GUIDE	75765576	10.01	8869	0.139	0.030	0.168	0.275	350.147829	0.719056	-214.36	709.76
6	GUIDE	75769624	9.40	8865	-0.082	0.100	0.092	0.148	350.180830	0.159527	1800.19	600.04
7	GUIDE	687220280	9.39	8867	0.158	-0.029	0.114	0.183	349.573474	-0.035729	2251.45	-1652.23

2.4 Star Slots

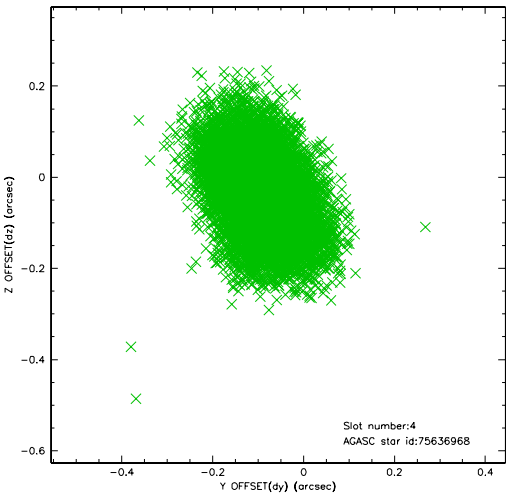
2.4.1 Slot 3

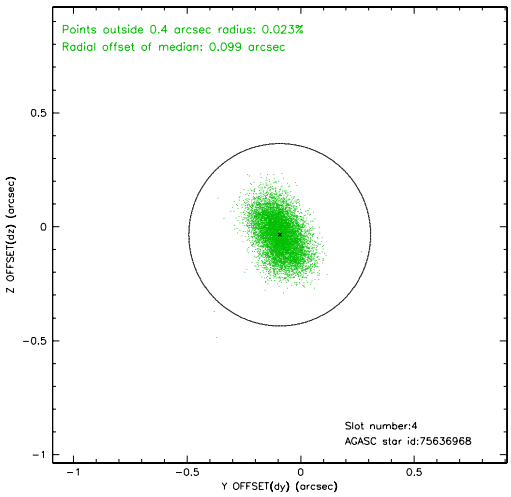


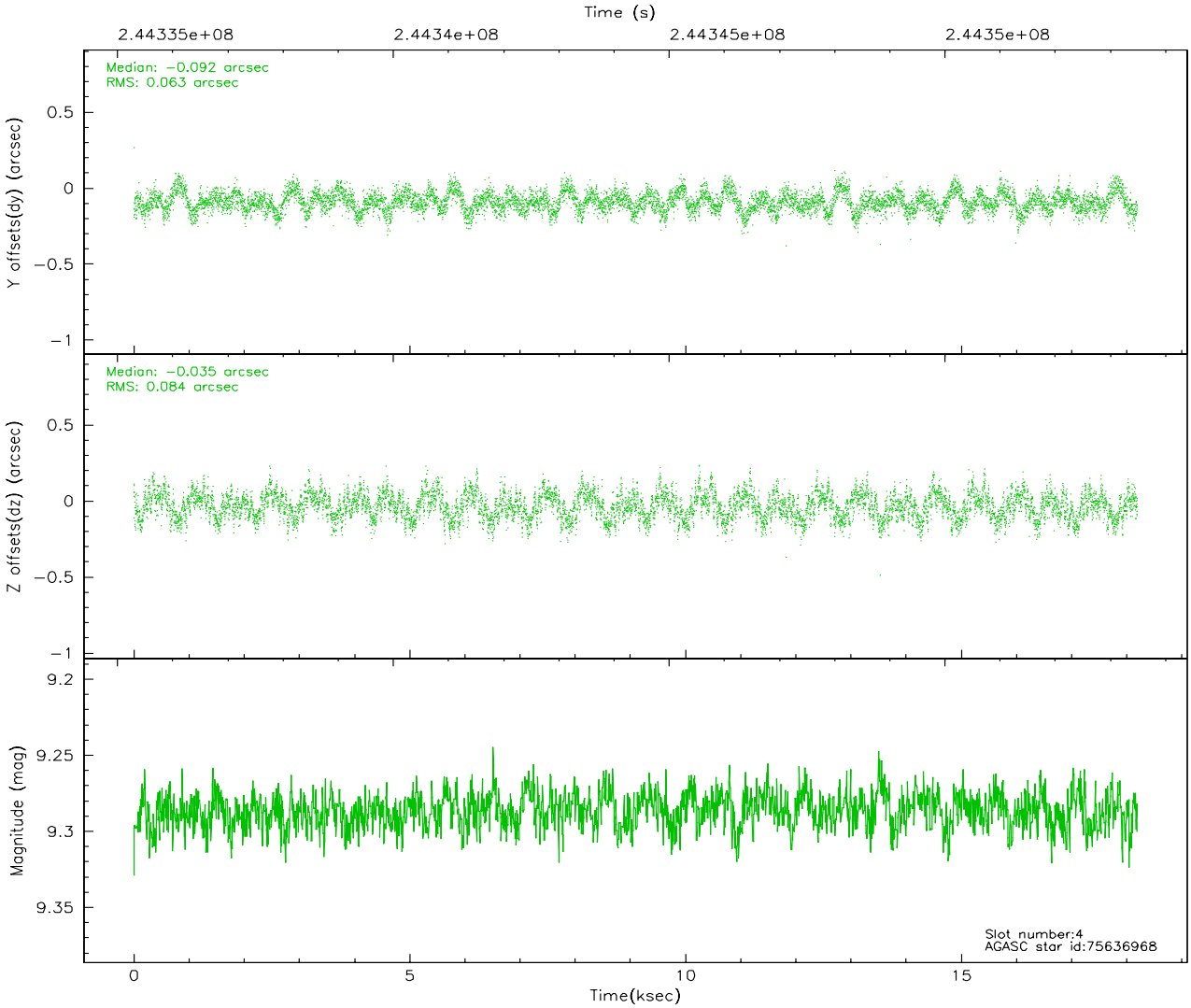




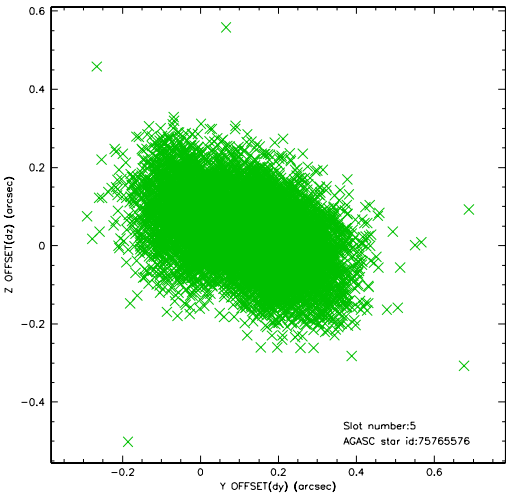
2.4.2 Slot 4

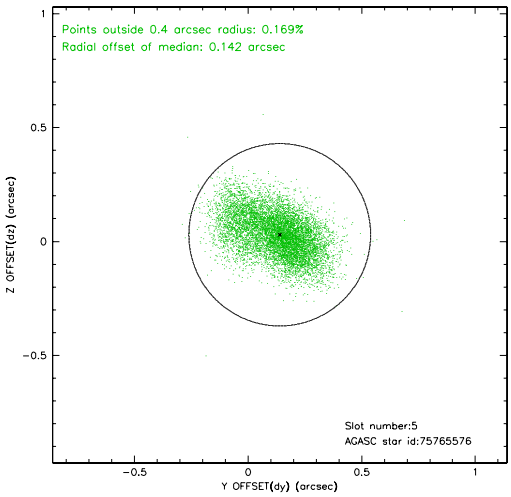

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:75636968

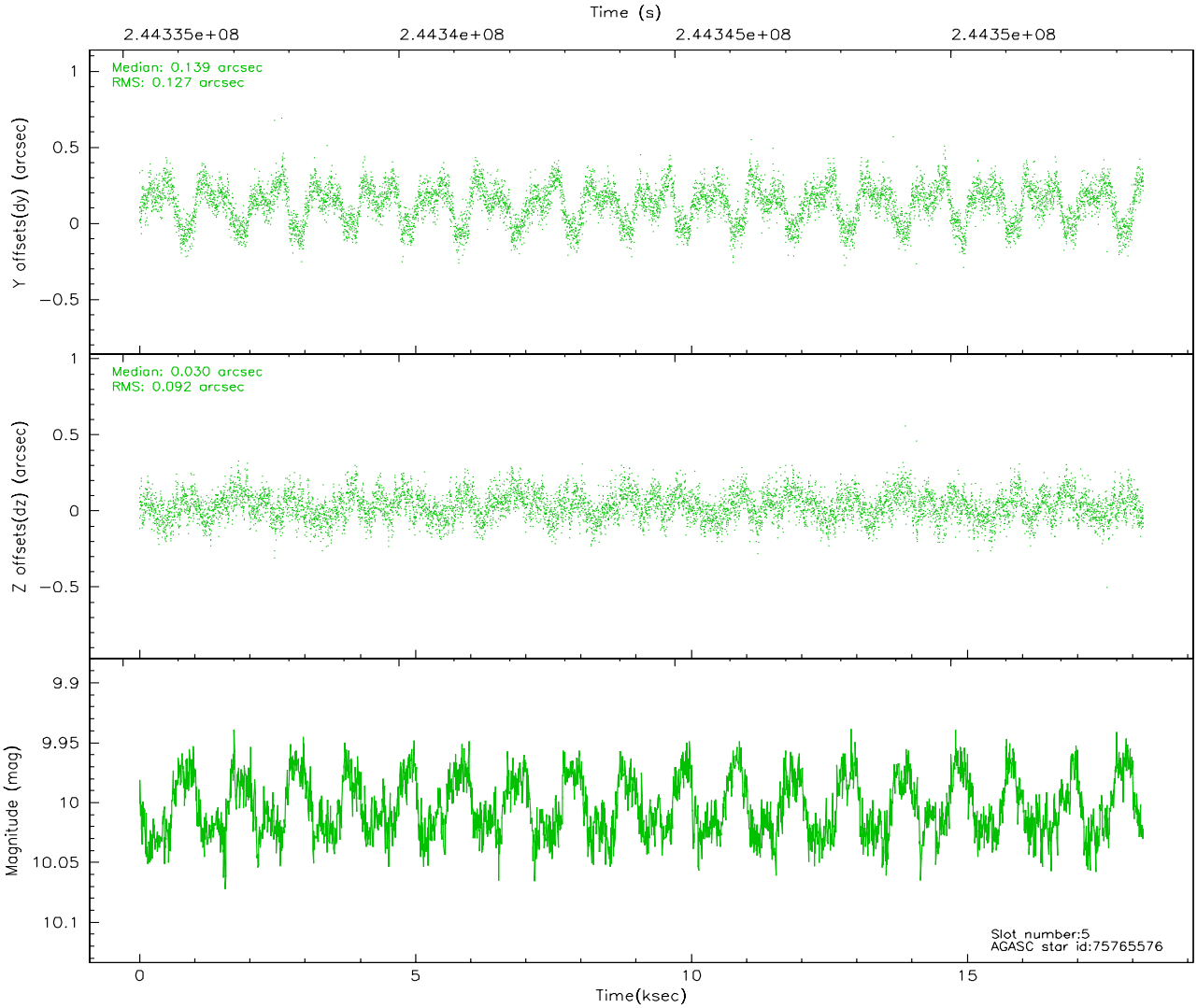

Points outside 0.4 arcsec radius: 0.023%
Radial offset of median: 0.099 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:75636968


Time (s)
2.44335e+08
2.4434e+08
2.44345e+08
2.4435e+08
Median: −0.092 arcsec
RMS: 0.063 arcsec
Y offsets(dy) (arcsec)
Median: −0.035 arcsec
RMS: 0.084 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:75636968
Time(ksec)

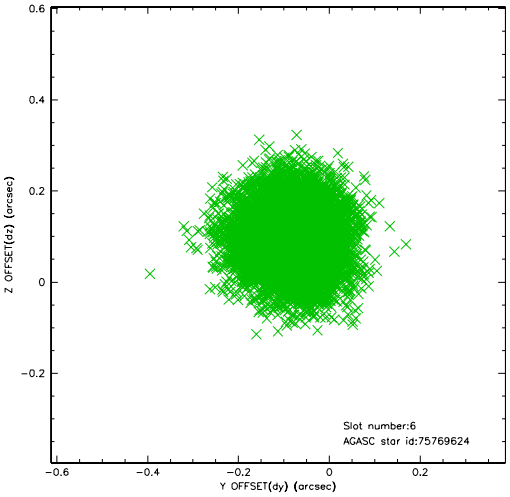
2.4.3 Slot 5

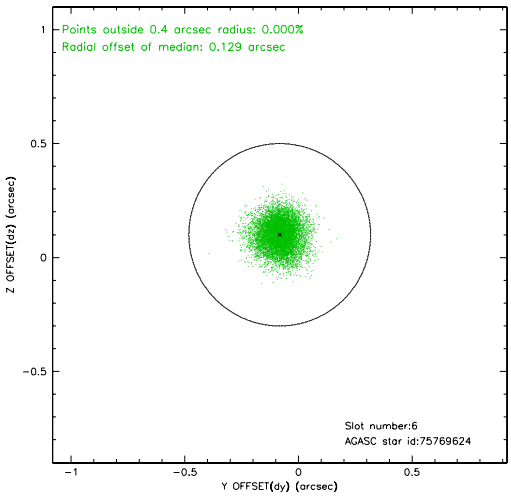

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:75765576

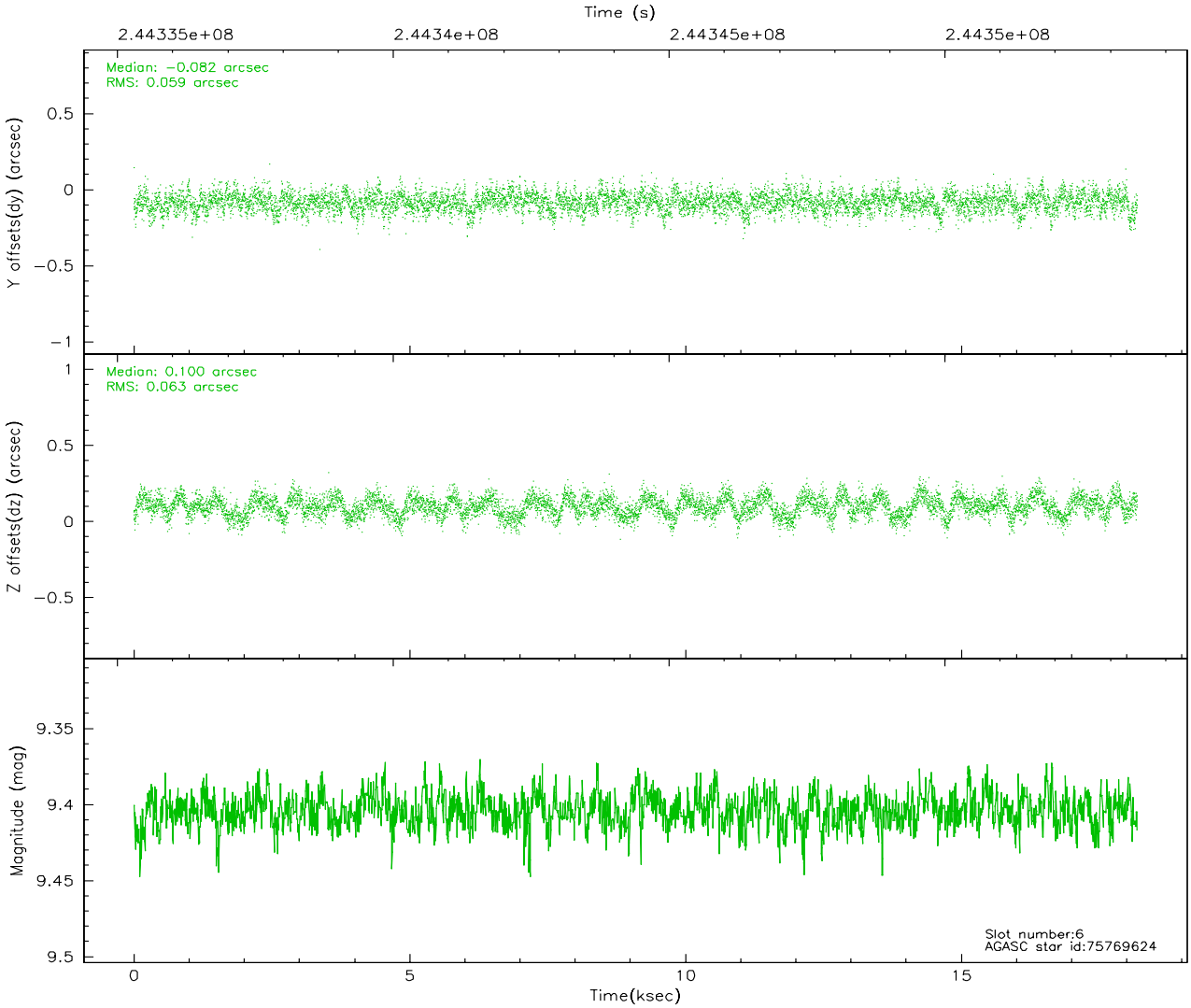

Points outside 0.4 arcsec radius: 0.169%
Radial offset of median: 0.142 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:75765576


Time (s)
2.44335e+08
2.4434e+08
2.44345e+08
2.4435e+08
Median: 0.139 arcsec
RMS: 0.127 arcsec
Y offsets(dy) (arcsec)
Median: 0.030 arcsec
RMS: 0.092 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:75765576
Time(ksec)

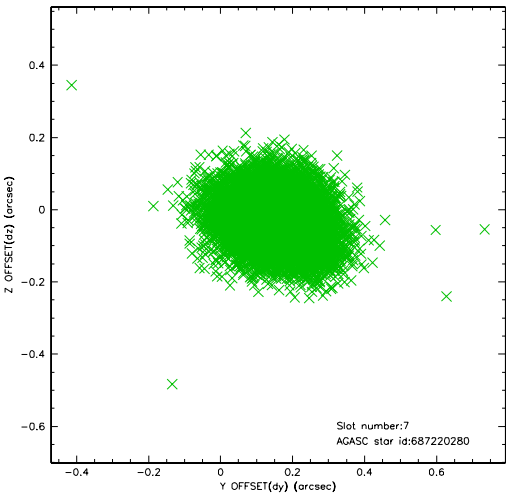
2.4.4 Slot 6

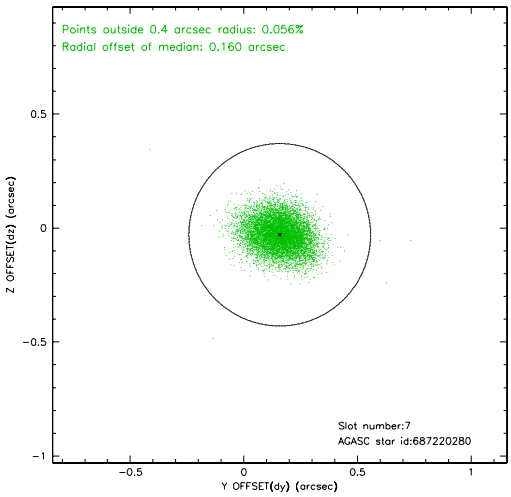

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:75769624

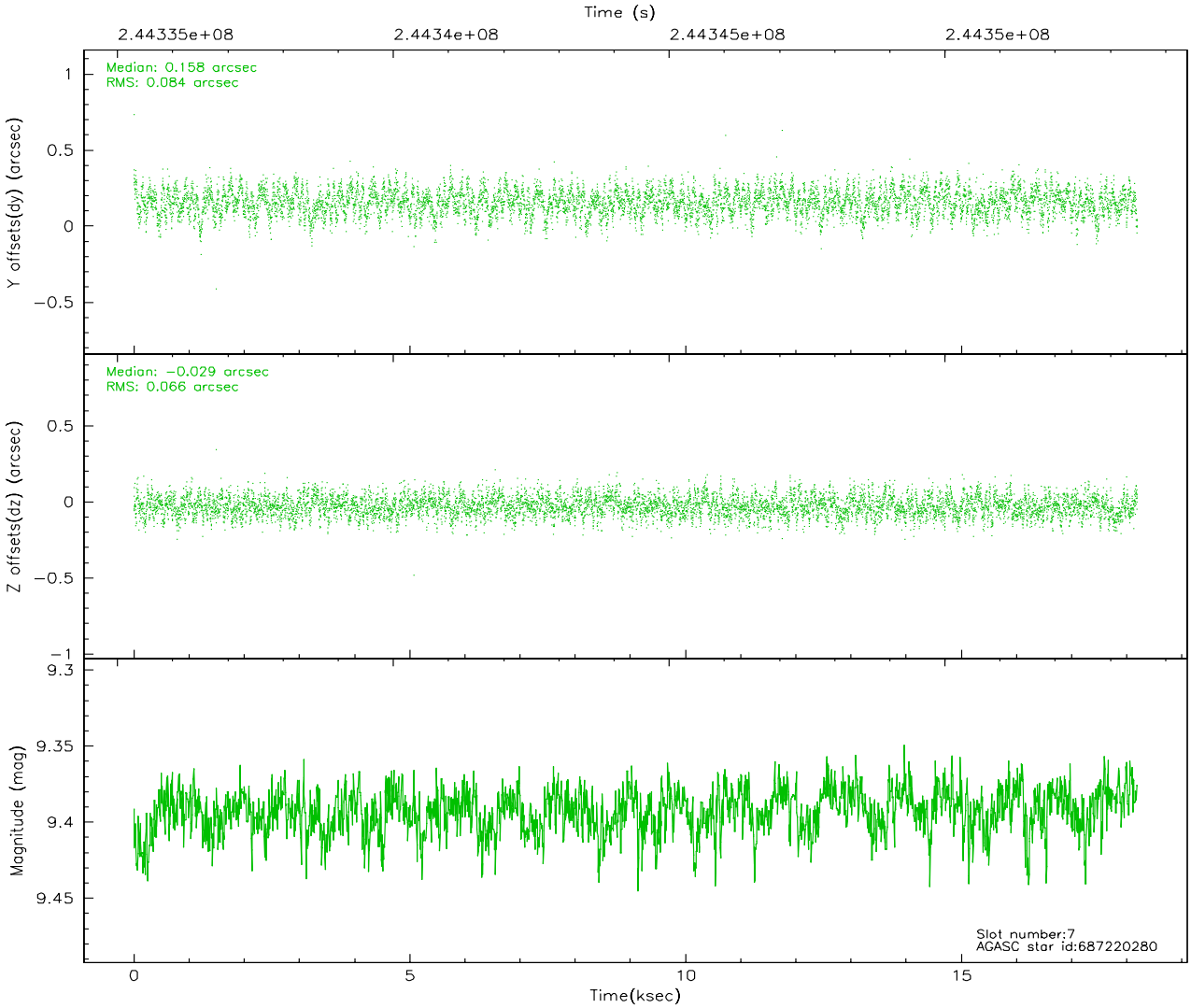

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.129 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:75769624


Time (s)
2.44335e+08
2.4434e+08
2.44345e+08
2.4435e+08
Median: −0.082 arcsec
RMS: 0.059 arcsec
Y offsets(dy) (arcsec)
Median: 0.100 arcsec
RMS: 0.063 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:75769624
Time(ksec)

2.4.5 Slot 7

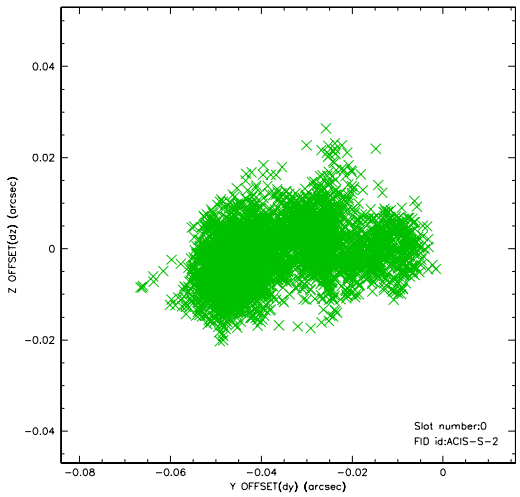

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:687220280

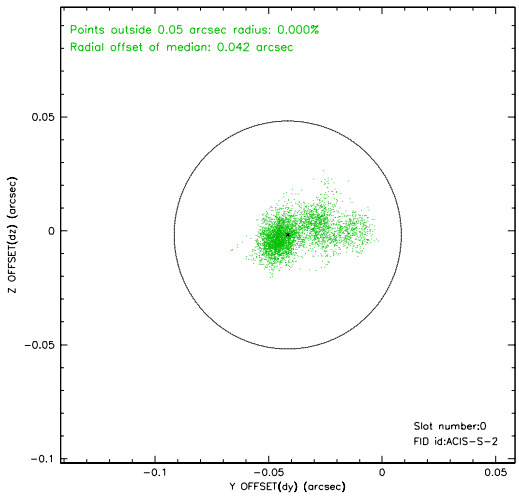

Points outside 0.4 arcsec radius: 0.056%
Radial offset of median: 0.160 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:687220280

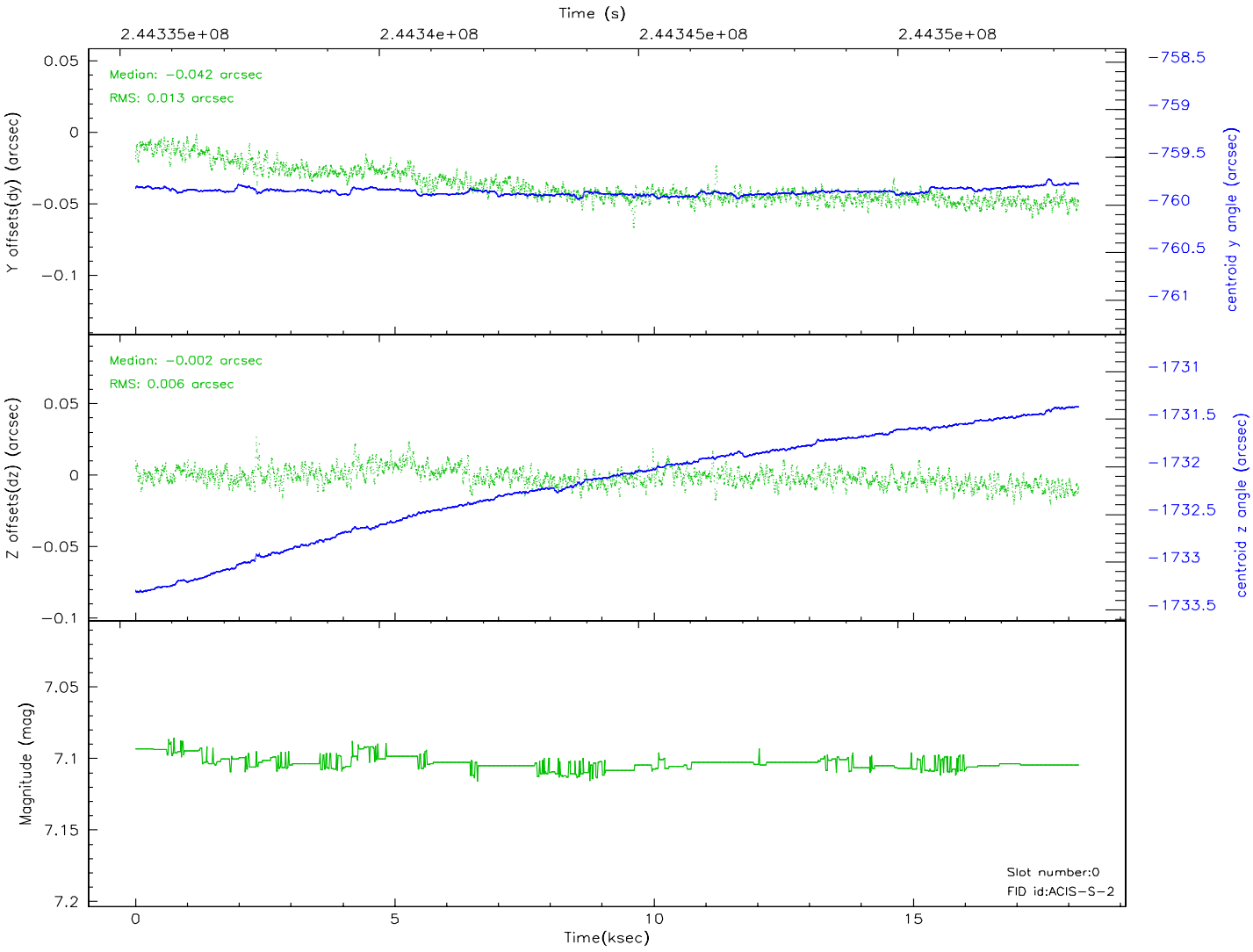

Time (s)
2.44335e+08
2.4434e+08
2.44345e+08
2.4435e+08
Median: 0.158 arcsec
RMS: 0.084 arcsec
Y offsets(dy) (arcsec)
Median: −0.029 arcsec
RMS: 0.066 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:687220280
Time(ksec)

2.5 FID Slots

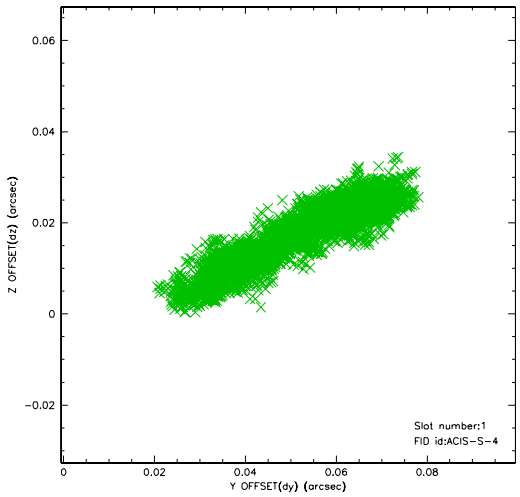
2.5.1 Slot 0

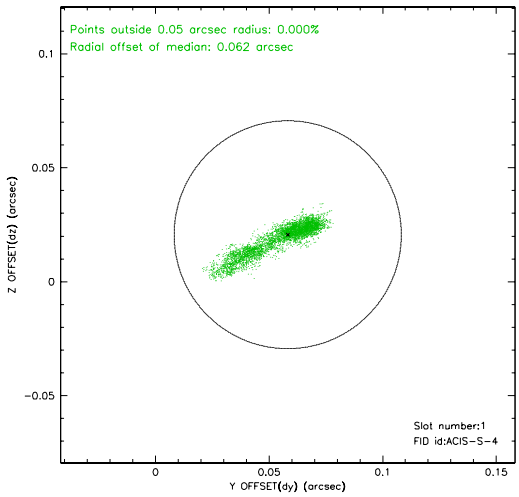


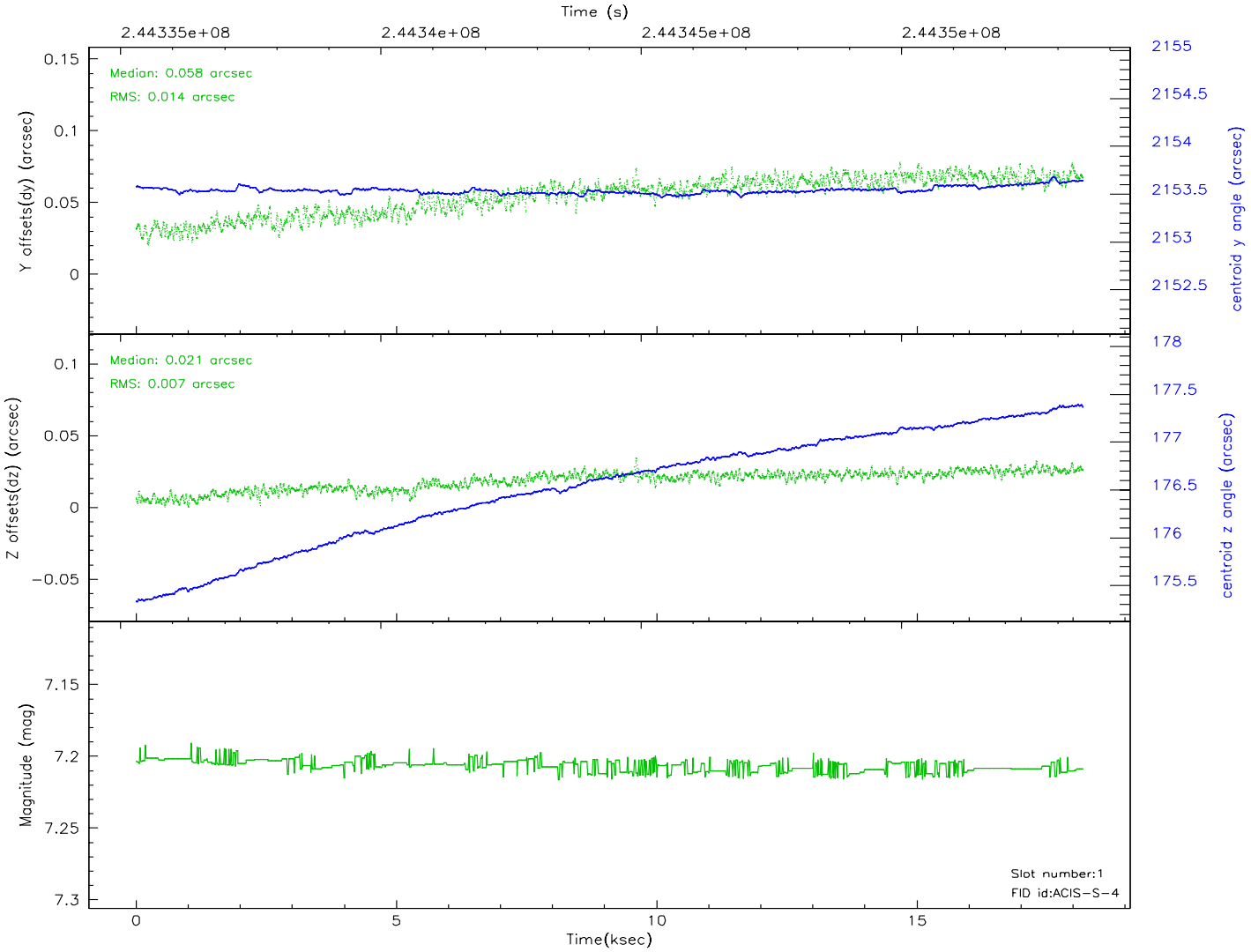




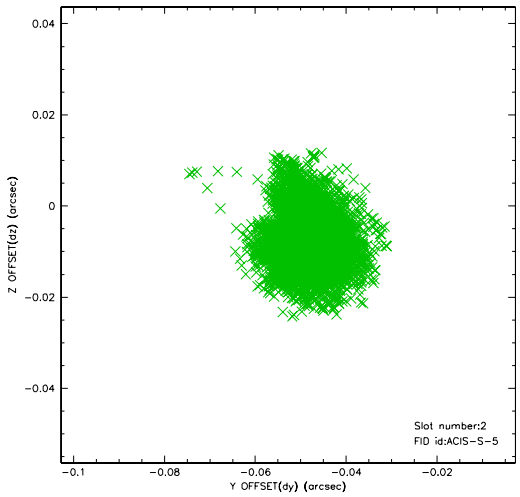
2.5.2 Slot 1

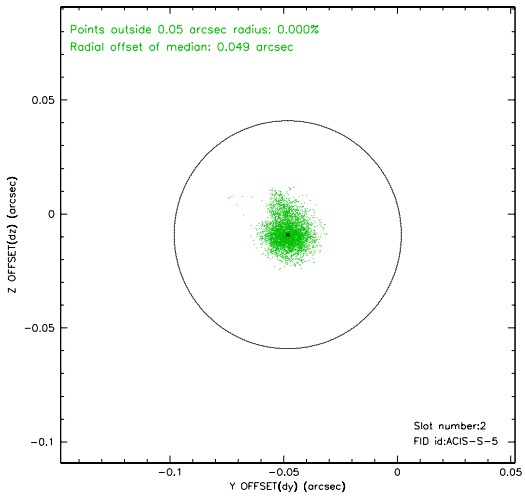

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4

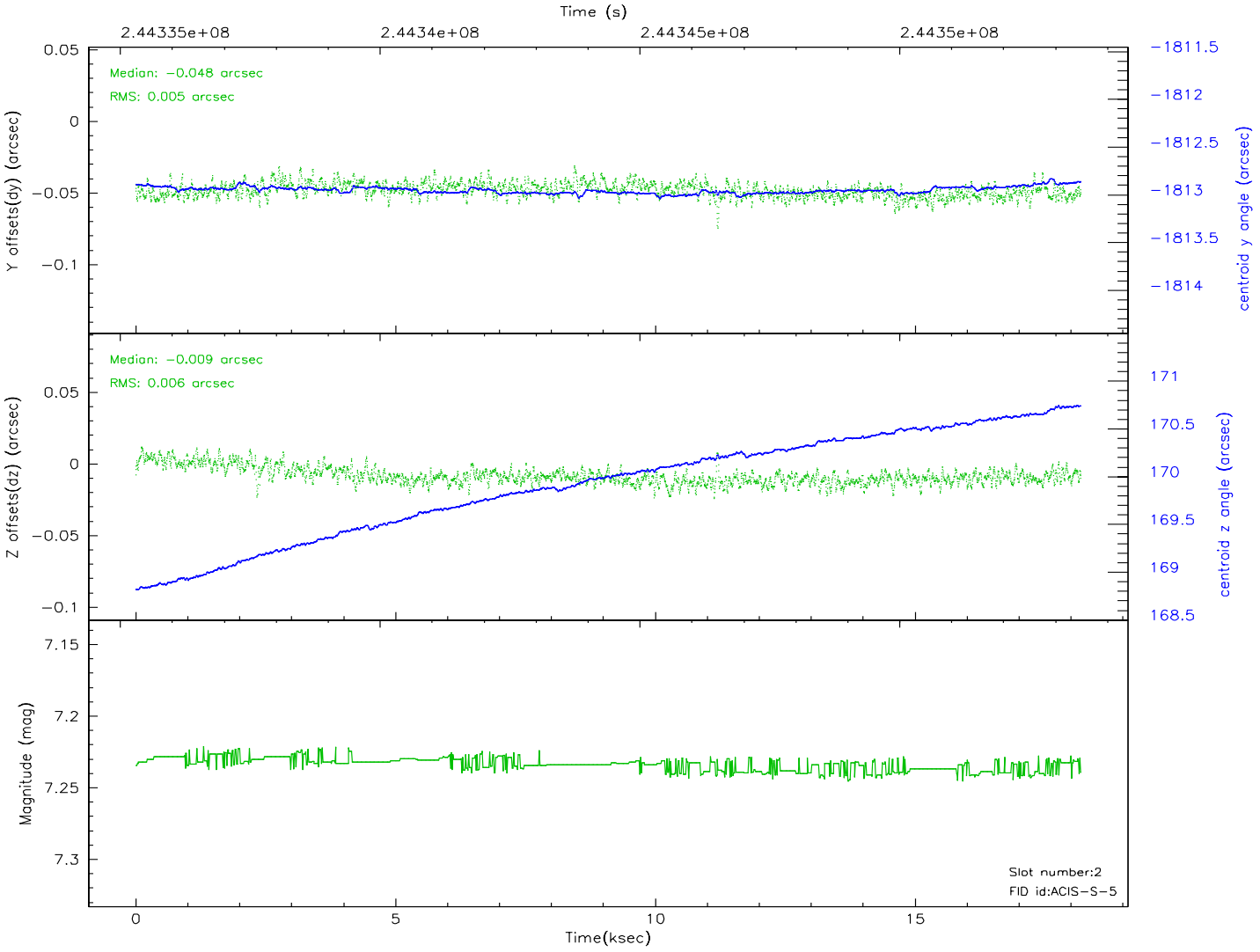

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.062 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4


Time (s)
Median: 0.058 arcsec
RMS: 0.014 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.021 arcsec
RMS: 0.007 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:ACIS-S-4
Time(ksec)

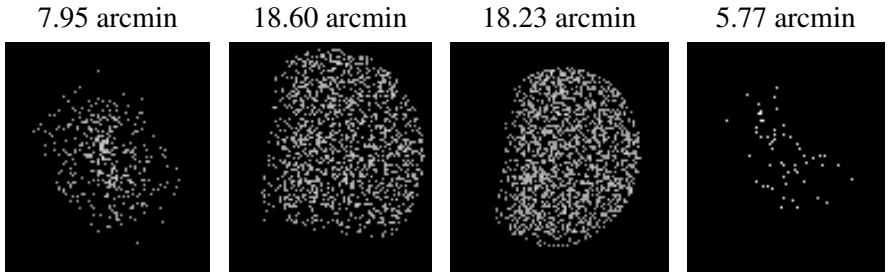
2.5.3 Slot 2


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


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.049 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:2
FID id:ACIS-S-5


Time (s)
2.44335e+08
2.4434e+08
2.44345e+08
2.4435e+08
Median: −0.048 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.009 arcsec
RMS: 0.006 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	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	18.18459

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.