V&V Reference Report
L2 ASCDS Version : 7.6.8

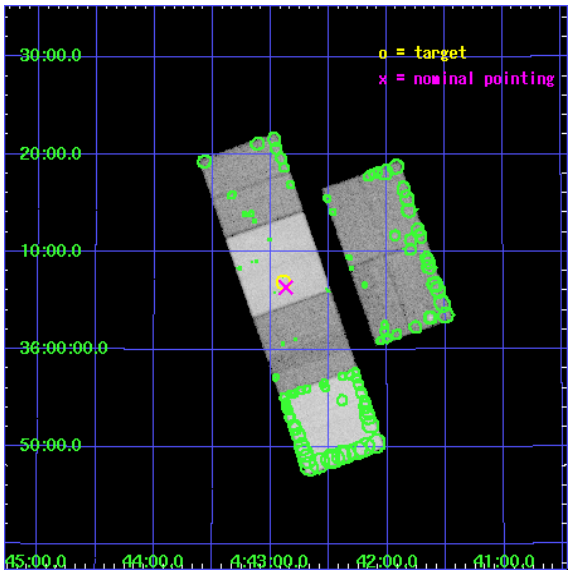
Observation 4507 - L2 Version 001
Chandra X-Ray Center

L2 Processing Date : Jun 22 2006

Contents

1 Front

seq_num	200276
obs_id	4507
title	Wind-Wind Interactions and Stellar Magnetic Fields in Pre-Planetary Nebulae
observer	Dr. Raghvendra Sahai
object	AFGL 618
dtycycle	0
cycle	P
ra_targ	70.723333
dec_targ	36.114889
ra_nom	70.717472821045
dec_nom	36.106469071893
roll_nom	250.76957345848
revision	2
ontime	46172.799827993
livetime	45588.132034649
ontime2	46172.799827993
ontime3	46172.799827993
ontime5	46172.799827993
ontime6	46172.799827993
ontime7	46172.799827993
ontime8	46172.799827993
l2events	521817

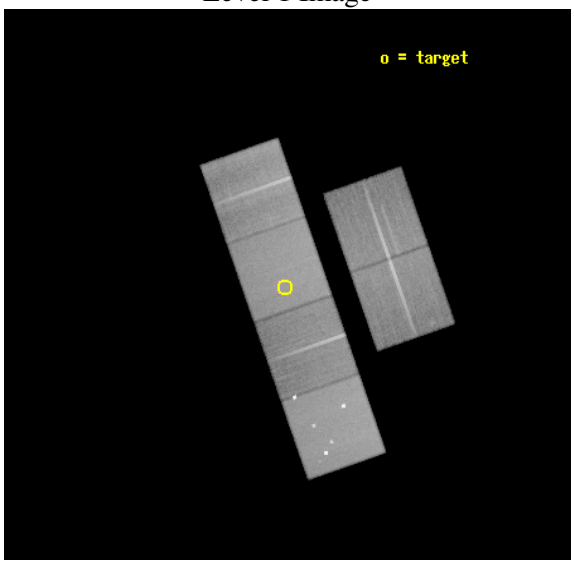


2 OBI

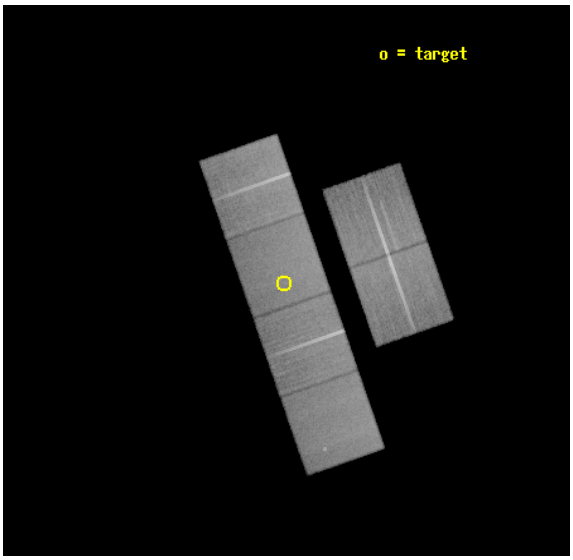
2.1 OBI

2.1.1 Images

Level 1 Image

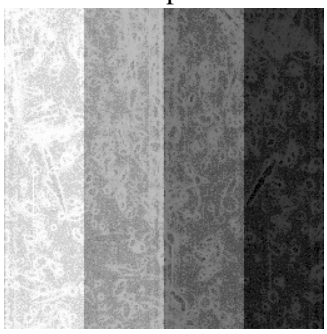


Level 1 Bad Events

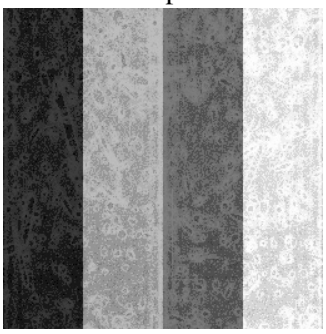


2.1.2 Bias

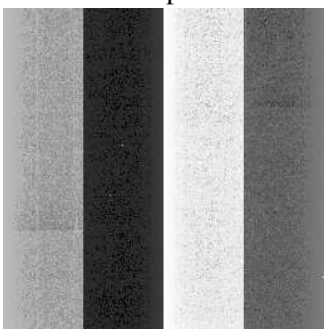
Chip 2



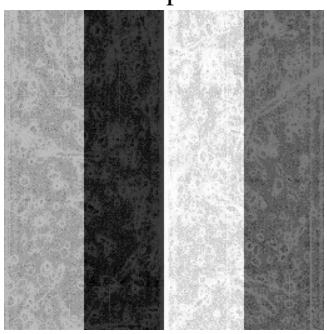
Chip 3



Chip 5

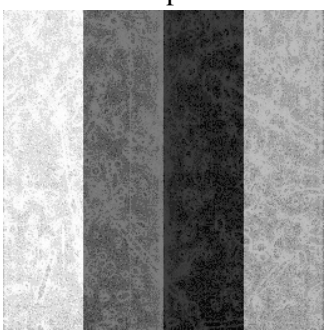


Chip 6



Chip 7

Chip 8



2.1.3 Parameters

obi_num	0
ascdsver	7.6.8
caldbver	3.2.2
date	2006-06-22T16:32:04
revision	2

sched_exp_time	46000.000000
ontime	46427.486079365
ontime2	46427.486079365
ontime3	46427.486079365
ontime5	46427.486079365
ontime6	46427.486079365
ontime7	46427.486079365
ontime8	46427.486079365
l1events	2160519

2.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	304613	292124	466658	304416	414202	378506
rejected events	257986	245739	248509	257342	250920	288917
rejected %	84%	84%	53%	84%	60%	76%

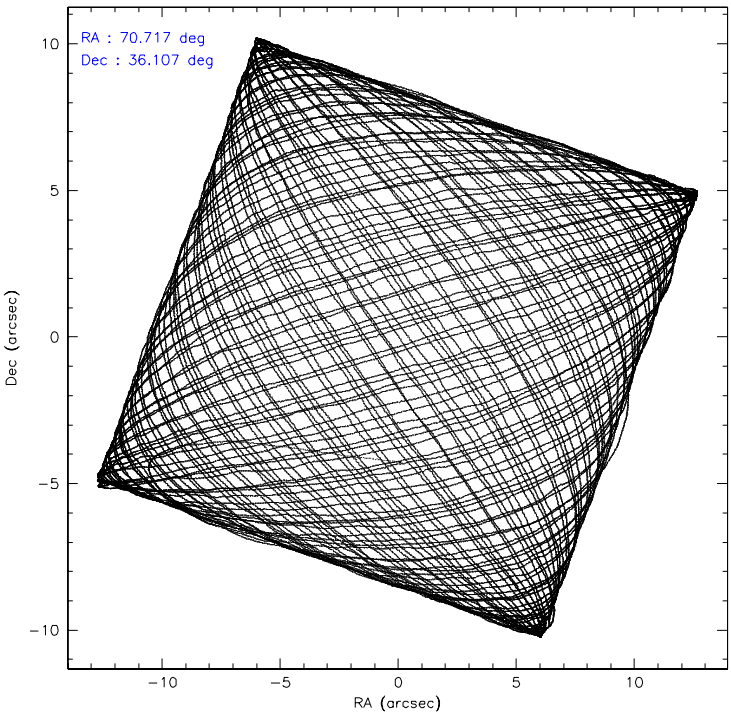
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	25167	24885	29990	23574	9288	35523
	8%	8%	6%	7%	2%	9%
grade 1 events	191	218	343	179	210	282
	0%	0%	0%	0%	0%	0%
grade 2 events	8109	7599	64224	8636	39075	18123
	2%	2%	13%	2%	9%	4%
grade 3 events	3642	3815	5054	3750	7944	8416
	1%	1%	1%	1%	1%	2%
grade 4 events	3672	3758	4267	3650	7915	7780
	1%	1%	0%	1%	1%	2%
grade 5 events	11752	12825	21171	13590	26324	17738
	3%	4%	4%	4%	6%	4%
grade 6 events	6215	6535	115856	7673	99939	20108
	2%	2%	24%	2%	24%	5%
grade 7 events	245865	232489	225753	243364	223507	270536
	80%	79%	48%	79%	53%	71%

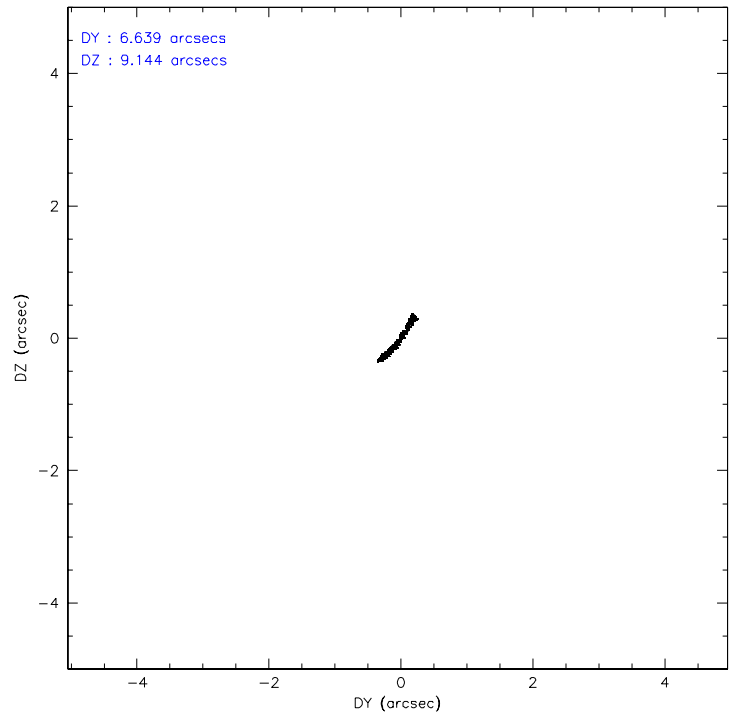
2.2 Compared Parameters

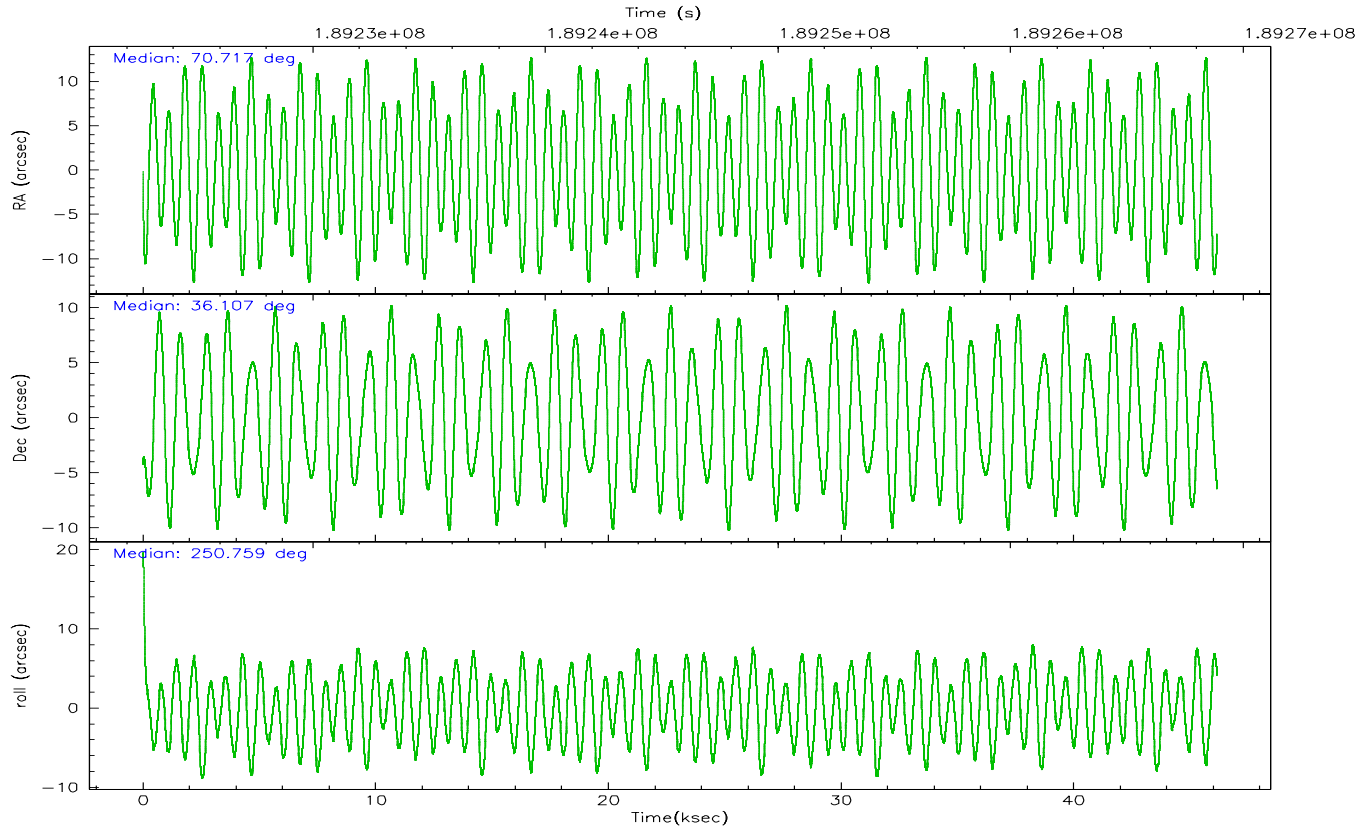
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-235678	ACIS-235678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
Pointing RA	70.710725	70.71747282104461
Pointing Dec	36.133138	36.10646907189289
Pointing Roll	250.616916	250.7695734584831
SIM focus pos (mm)	-0.684267	-0.6828225247311905
SIM defocus (mm)	0	0.001444936568705701
SIM translation stage pos (mm)	-190.132523	-190.1400660498719
SIM translation stage offset (mm)	0	0.00754346686406393
Observation start time	189222880.184000	189221688.60694
Observation start date	2003-12-31T01:53:36	2003-12-31T01:34:48
Observation end time	189268880.184000	189270340.74656
Observation end date	2003-12-31T14:40:16	2003-12-31T15:05:40
Read mode	TIMED	TIMED

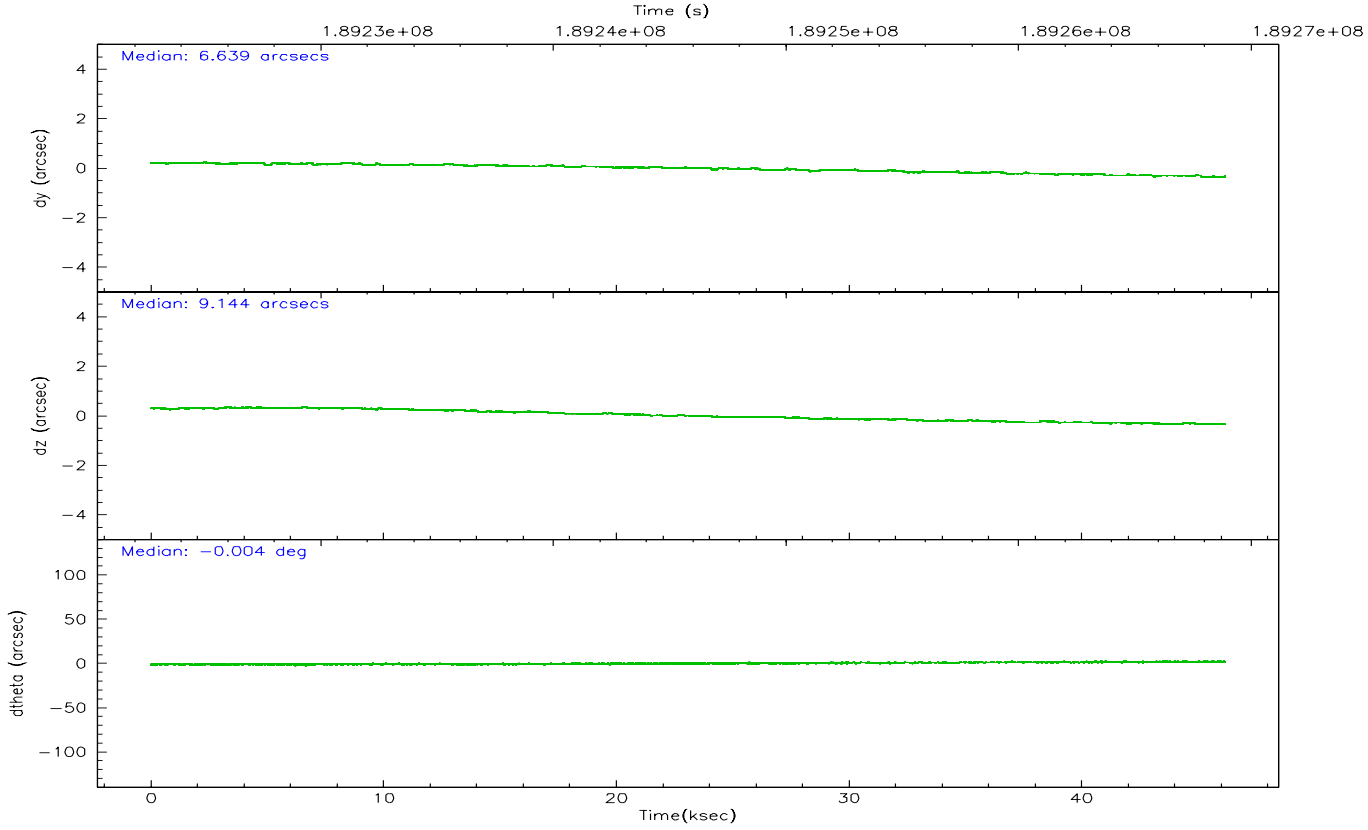
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
Primary exposure time	0.000000	3.2

2.3 Aspect


RA : 70.717 deg
Dec : 36.107 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−10
−5
0
5
10


DY : 6.639 arcsecs
DZ : 9.144 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
1.8923e+08
1.8924e+08
1.8925e+08
1.8926e+08
1.8927e+08
Median: 70.717 deg
RA (arcsec)
Median: 36.107 deg
Dec (arcsec)
Median: 250.759 deg
roll (arcsec)
Time(ksec)

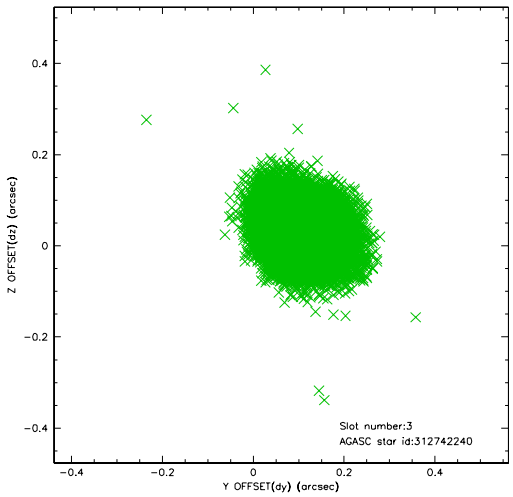

Time (s)
1.8923e+08
1.8924e+08
1.8925e+08
1.8926e+08
1.8927e+08
Median: 6.639 arcsecs
dy (arcsec)
Median: 9.144 arcsecs
dz (arcsec)
Median: −0.004 deg
dtheta (arcsec)
Time(ksec)

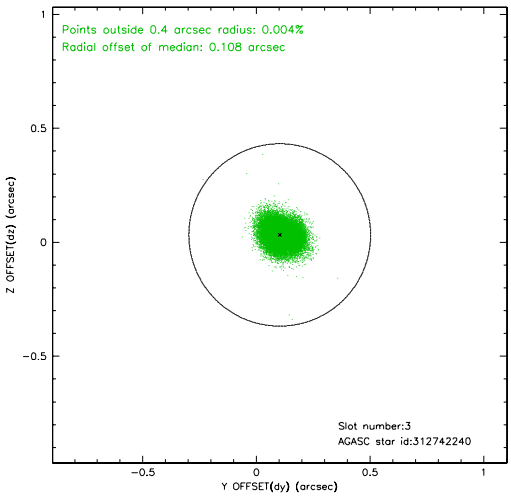
Slot Statistics

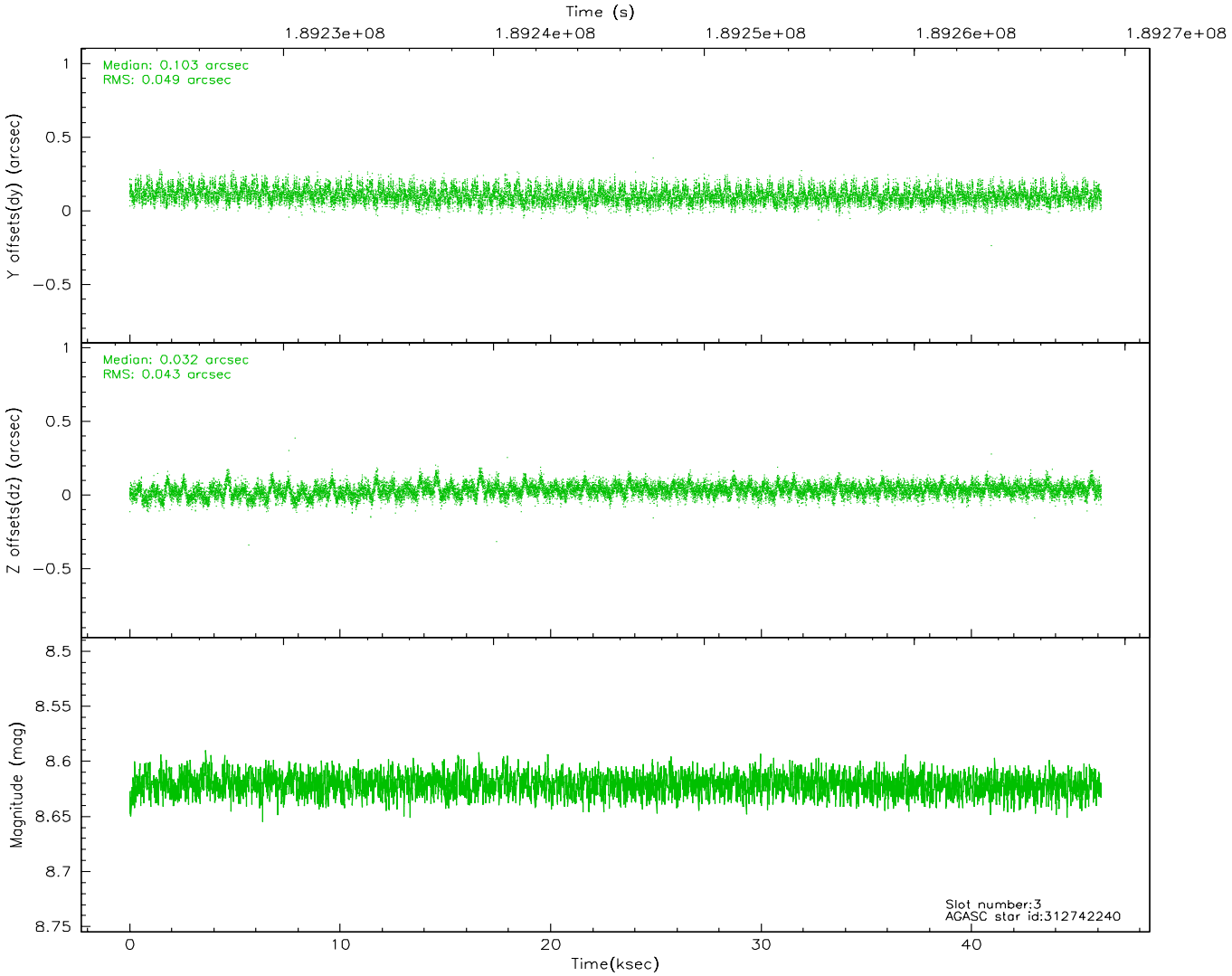
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	11261	-0.029	-0.019	0.011	0.026	0.000000	0.000000	-759.38	-1730.40
1	FID	ACIS-S-4	7.20	11264	0.036	0.019	0.010	0.024	0.000000	0.000000	2153.95	178.14
2	FID	ACIS-S-5	7.23	11263	-0.037	0.008	0.011	0.026	0.000000	0.000000	-1812.25	171.77
3	GUIDE	312742240	8.62	22522	0.103	0.032	0.069	0.112	71.496999	36.285377	-1283.00	1967.44
4	GUIDE	312746352	9.51	22515	0.021	0.051	0.091	0.150	69.967535	36.238633	350.77	-2163.95
5	GUIDE	312747416	8.29	22525	0.031	-0.045	0.079	0.125	69.854132	35.954270	1426.36	-2144.33
6	GUIDE	312750096	8.12	22524	-0.054	0.010	0.057	0.090	70.656711	36.311567	-553.64	-360.95
7	GUIDE	312748448	8.44	22518	-0.101	-0.047	0.085	0.131	71.381649	35.746317	656.40	2309.55

2.4 Star Slots

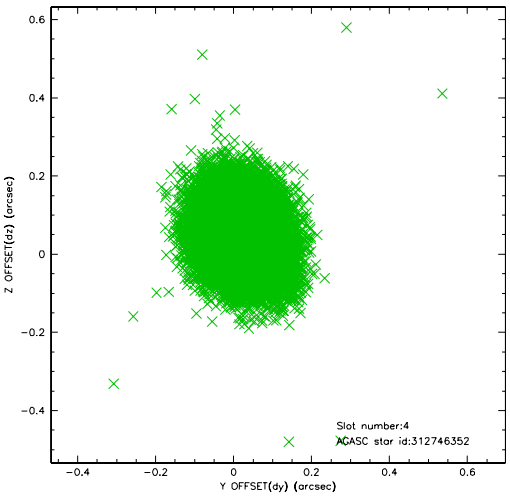
2.4.1 Slot 3

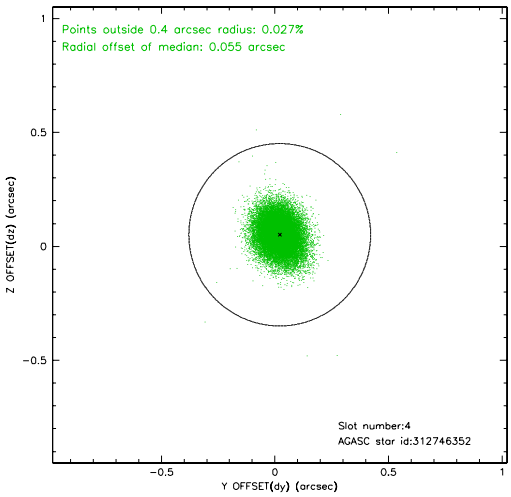


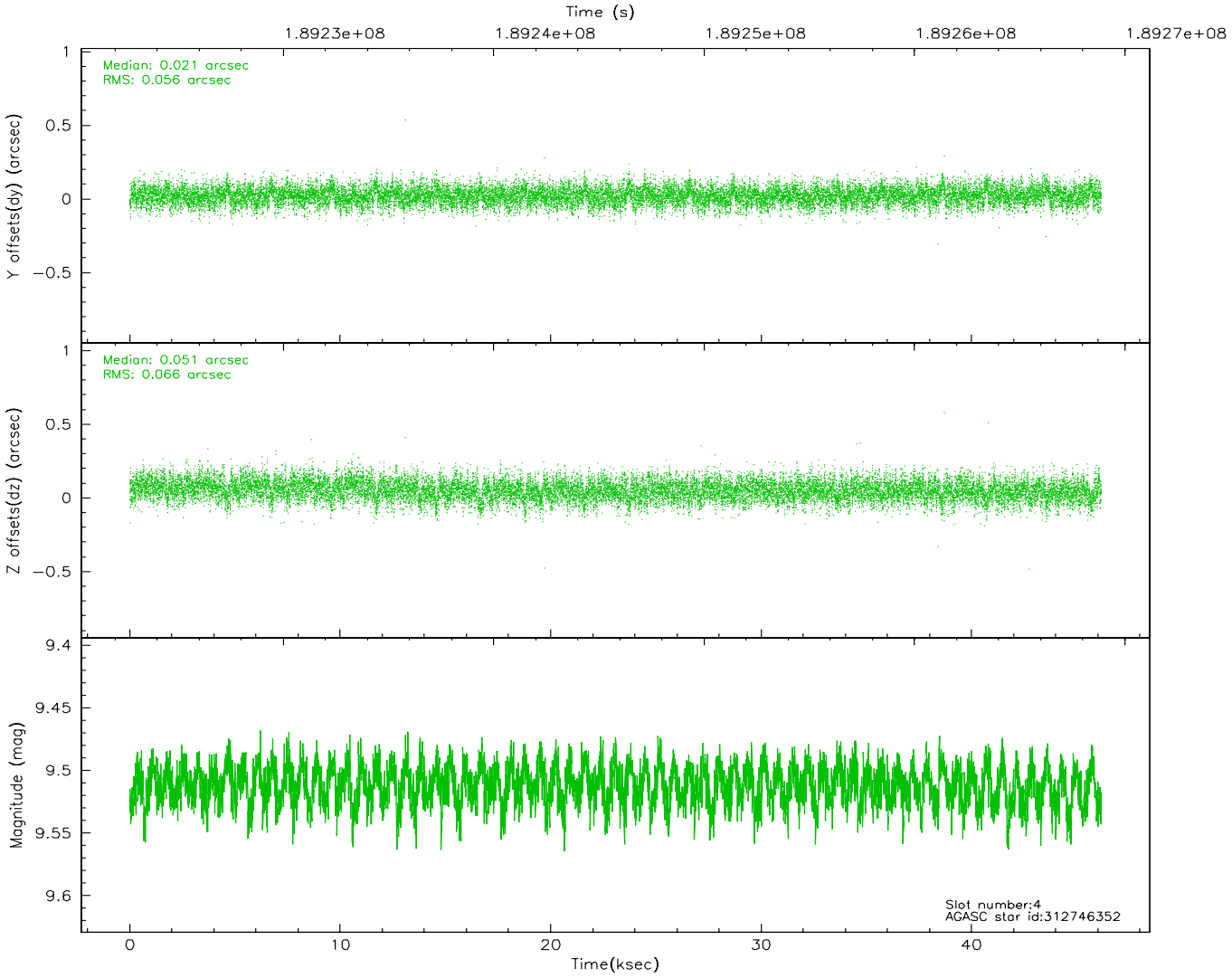




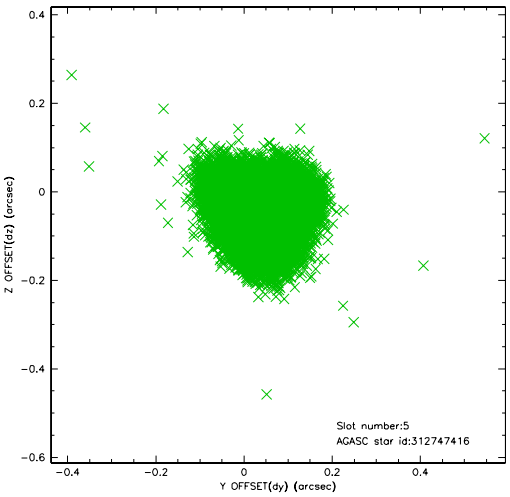
2.4.2 Slot 4

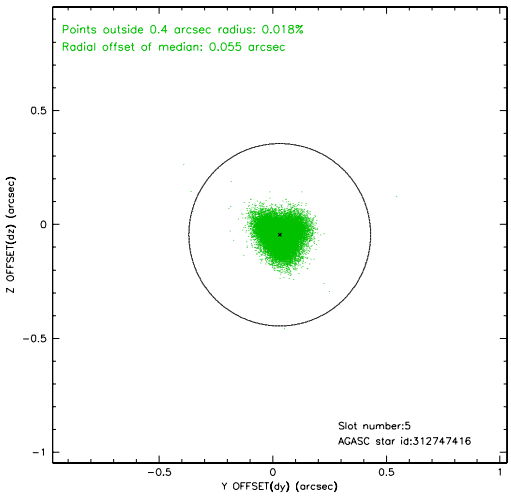

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:312746352

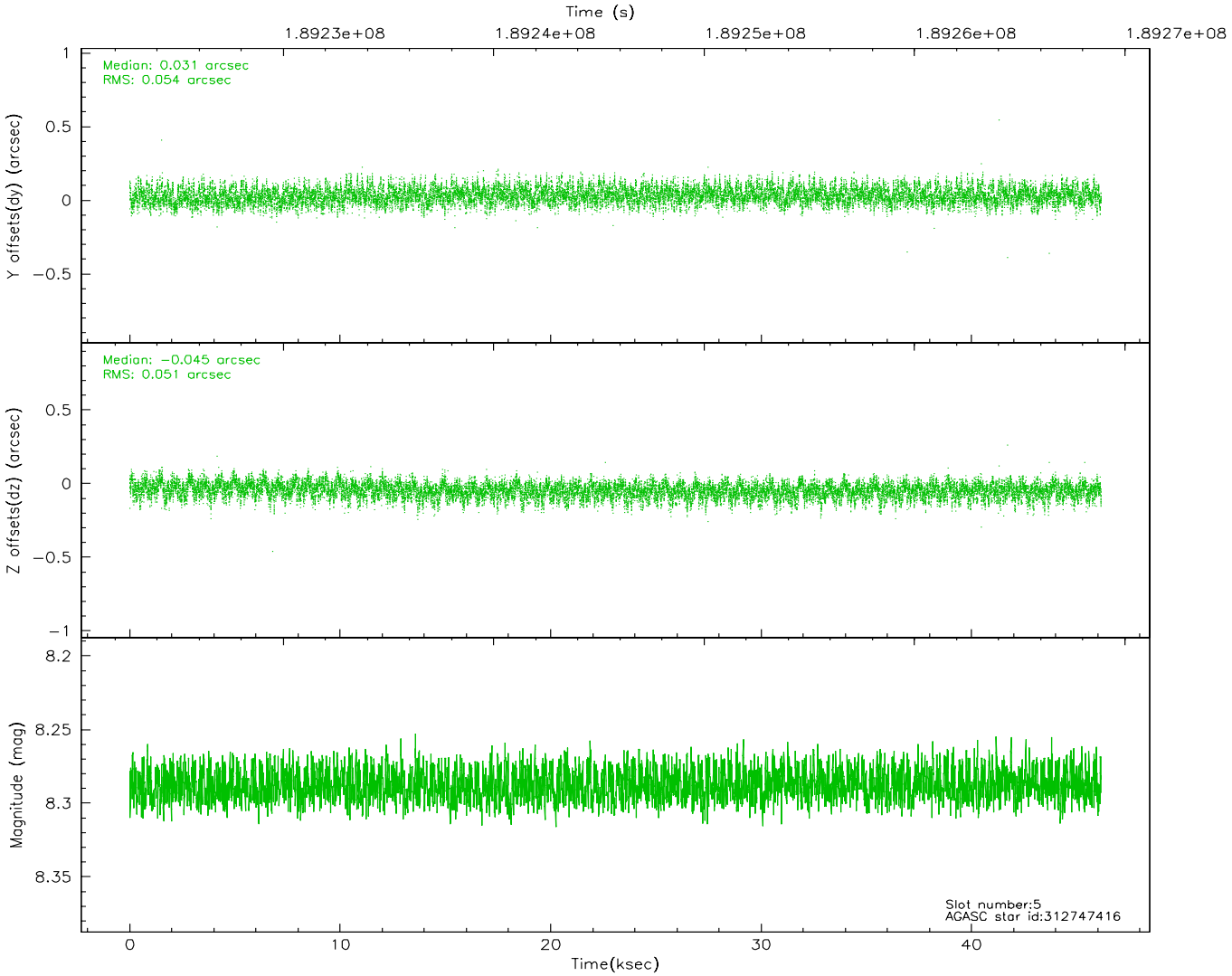

Points outside 0.4 arcsec radius: 0.027%
Radial offset of median: 0.055 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:312746352


Time (s)
1.8923e+08
1.8924e+08
1.8925e+08
1.8926e+08
1.8927e+08
Median: 0.021 arcsec
RMS: 0.056 arcsec
Y offsets(dy) (arcsec)
Median: 0.051 arcsec
RMS: 0.066 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:312746352
Time(ksec)

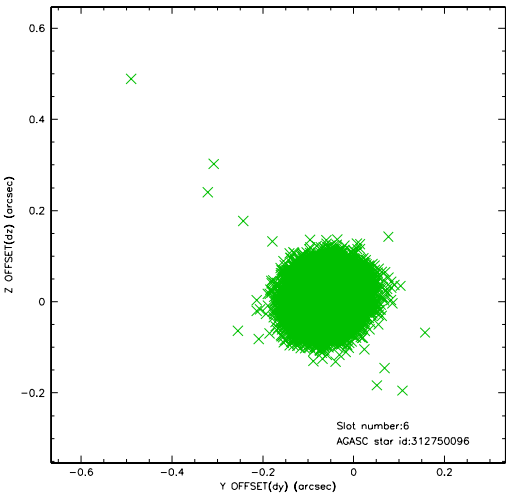
2.4.3 Slot 5

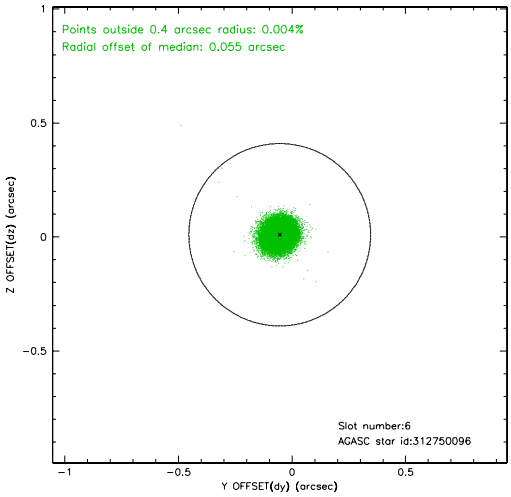

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:312747416

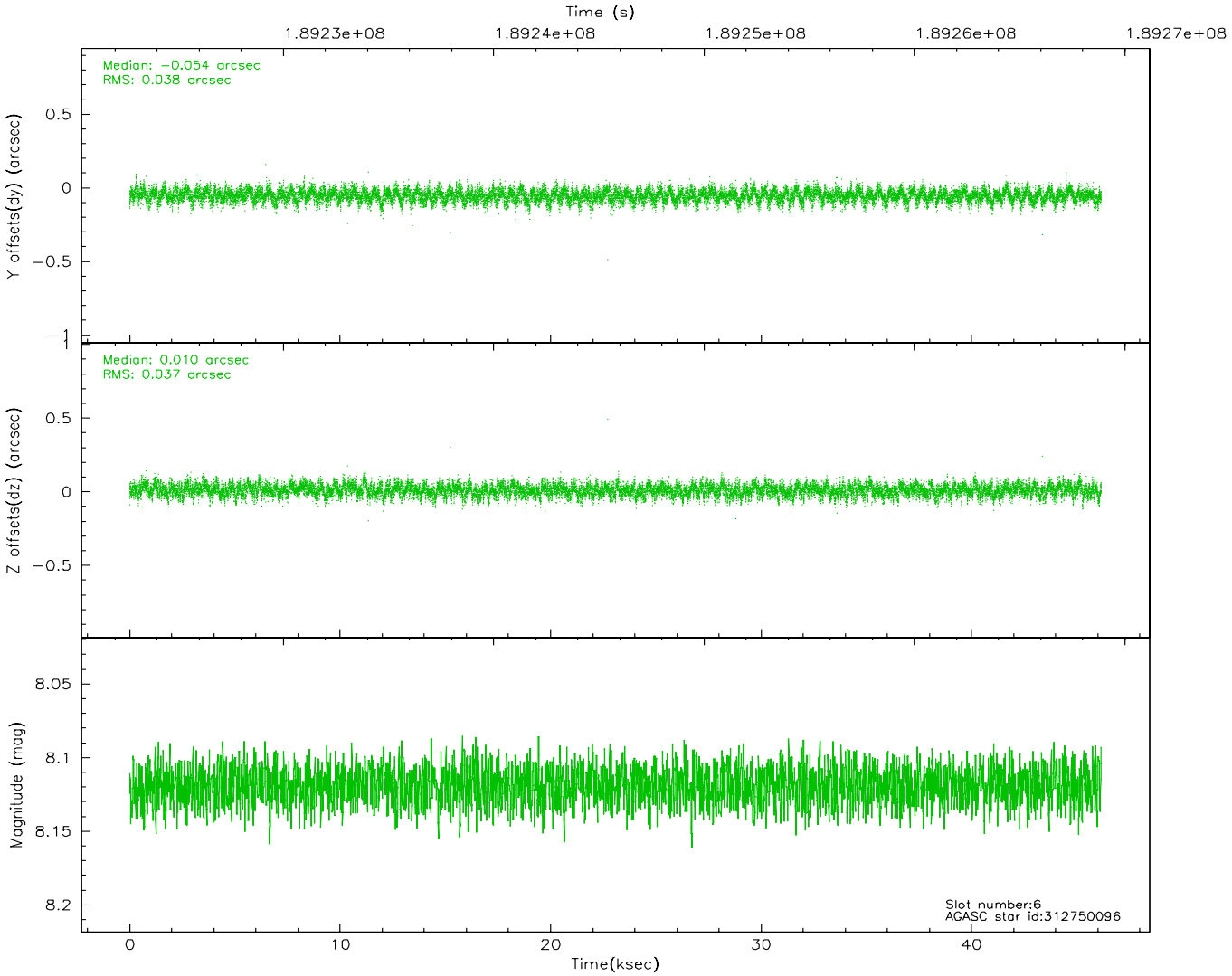

Points outside 0.4 arcsec radius: 0.018%
Radial offset of median: 0.055 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:312747416


Time (s)
1.8923e+08
1.8924e+08
1.8925e+08
1.8926e+08
1.8927e+08
Median: 0.031 arcsec
RMS: 0.054 arcsec
Y offsets(dy) (arcsec)
Median: −0.045 arcsec
RMS: 0.051 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:312747416
Time(ksec)

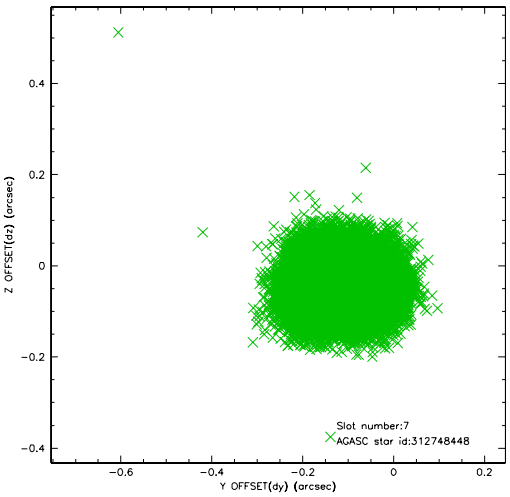
2.4.4 Slot 6

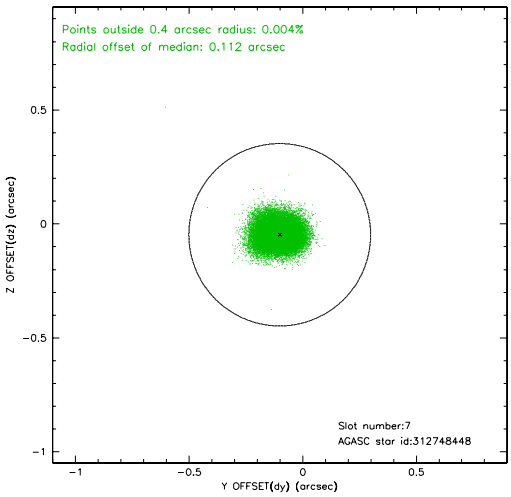

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:312750096

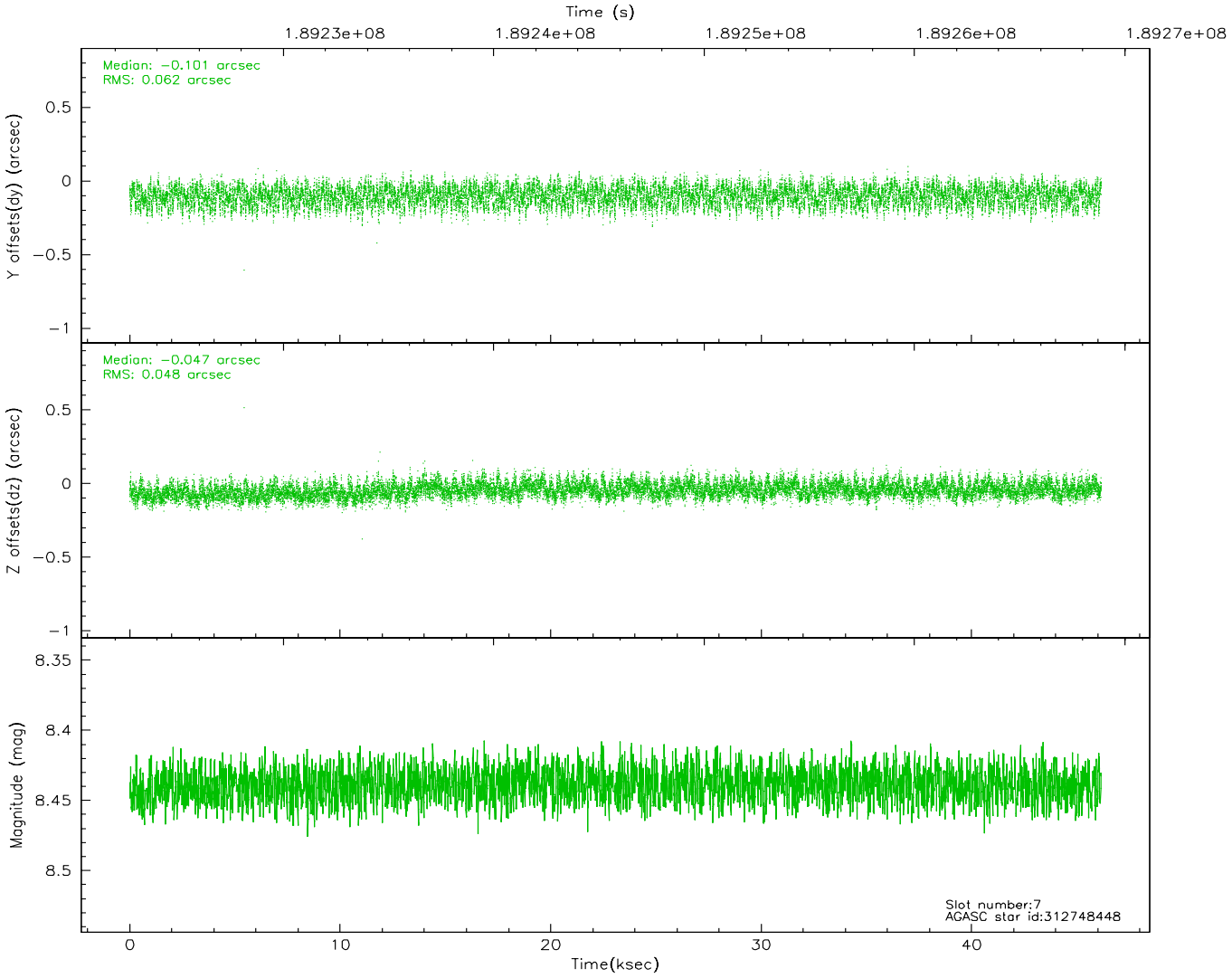

Points outside 0.4 arcsec radius: 0.004%
Radial offset of median: 0.055 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:312750096


Time (s)
Median: −0.054 arcsec
RMS: 0.038 arcsec
Y offsets(dy) (arcsec)
Median: 0.010 arcsec
RMS: 0.037 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:312750096
Time(ksec)

2.4.5 Slot 7

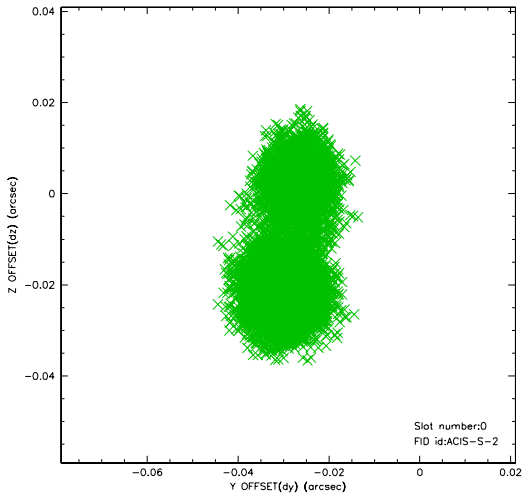

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:312748448

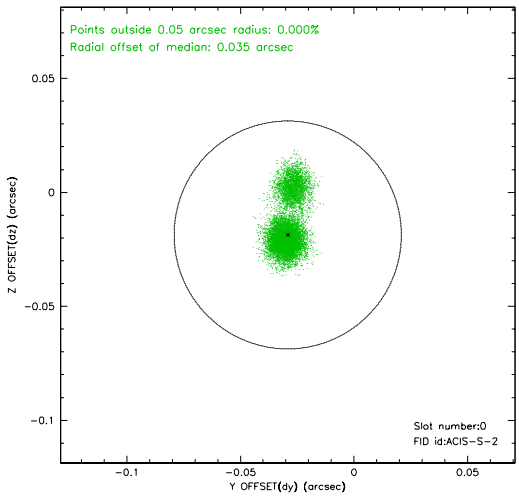

Points outside 0.4 arcsec radius: 0.004%
Radial offset of median: 0.112 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:312748448

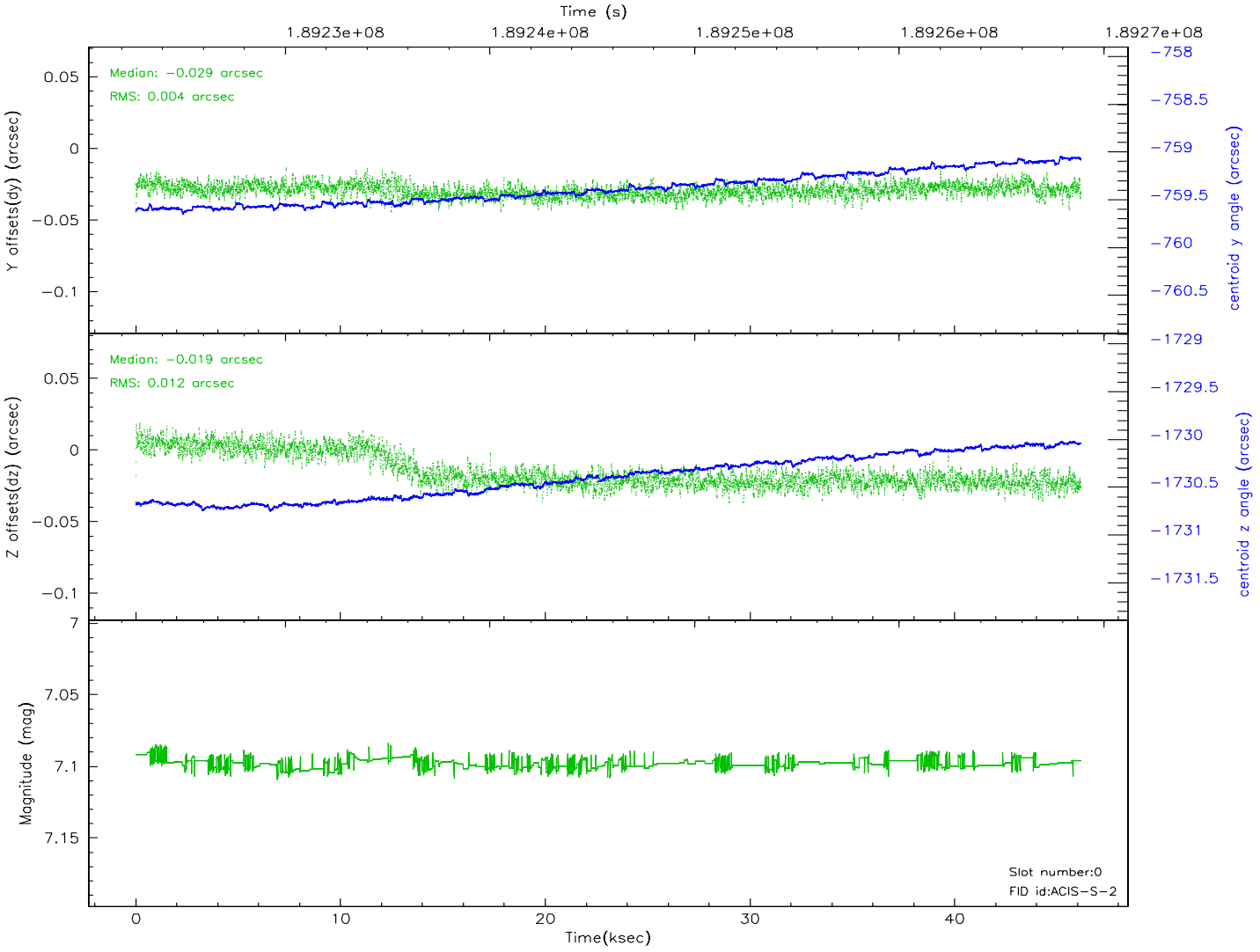

Time (s)
1.8923e+08
1.8924e+08
1.8925e+08
1.8926e+08
1.8927e+08
Median: −0.101 arcsec
RMS: 0.062 arcsec
Y offsets(dy) (arcsec)
Median: −0.047 arcsec
RMS: 0.048 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:312748448
Time(ksec)

2.5 FID Slots

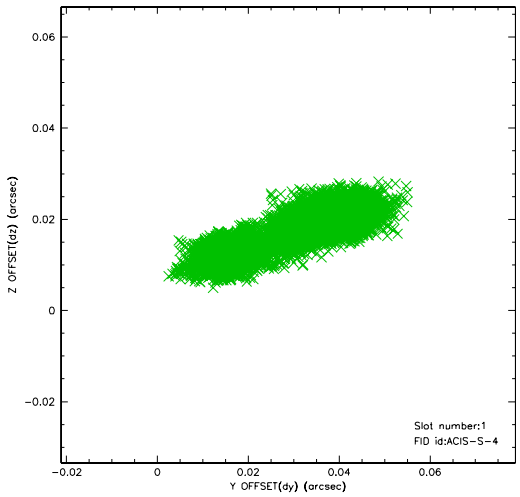
2.5.1 Slot 0

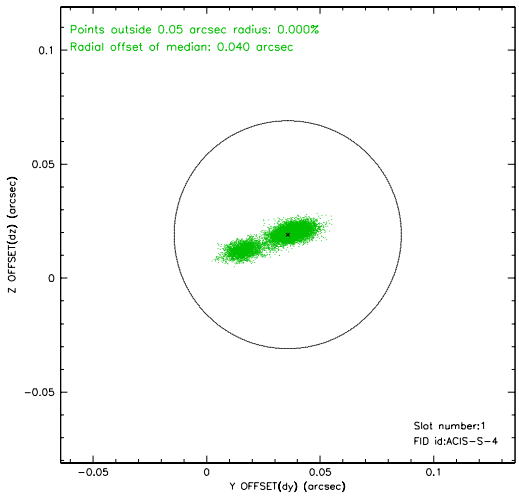


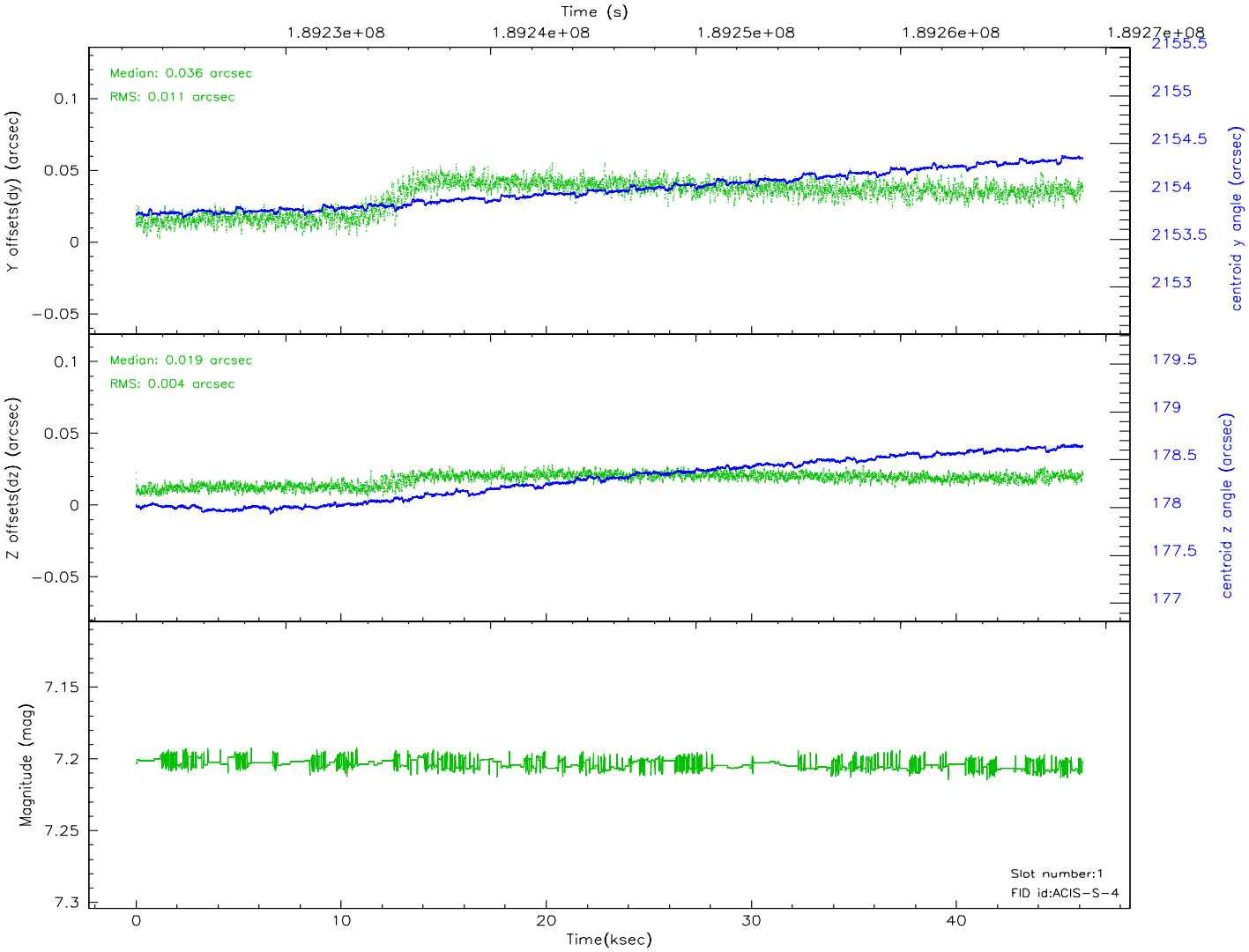




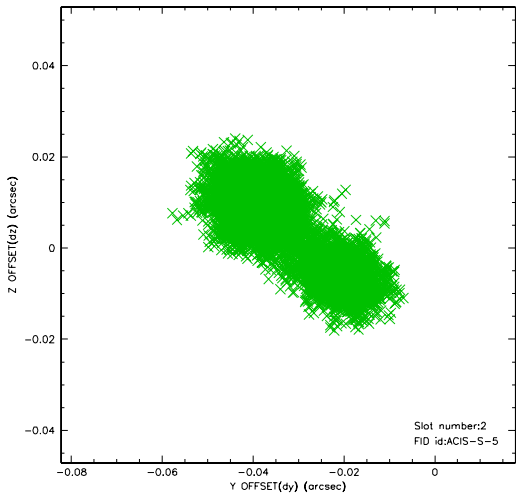
2.5.2 Slot 1

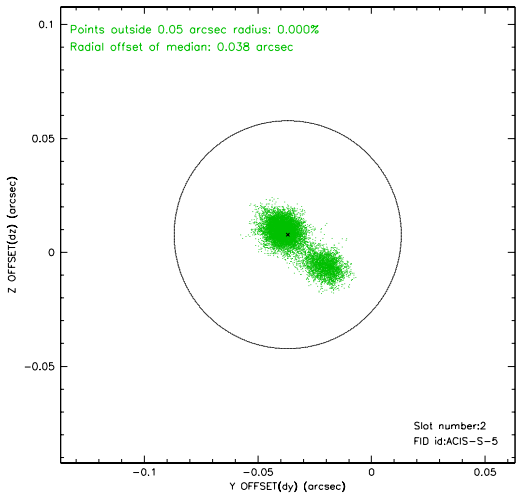

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4

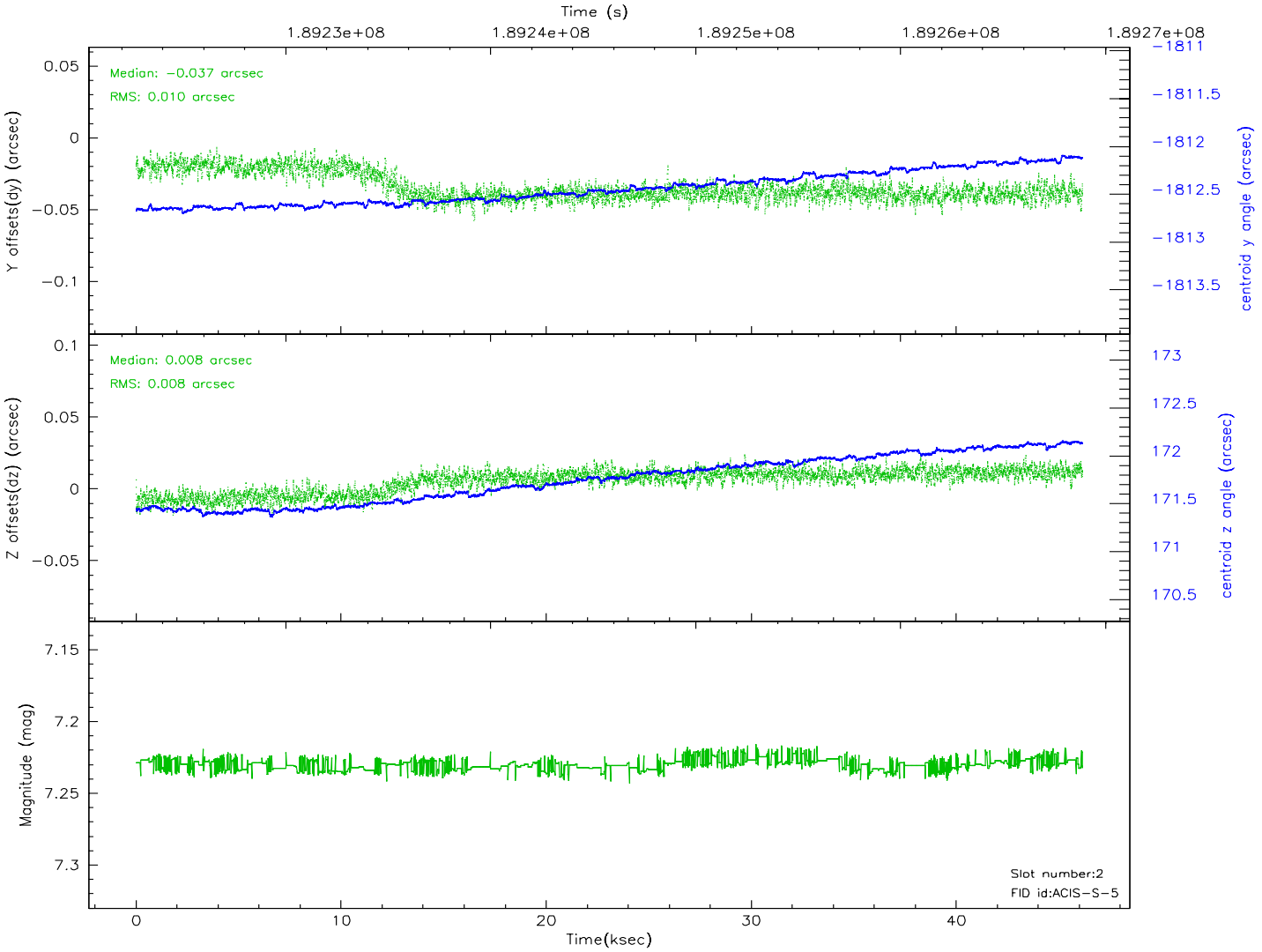

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.040 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4


Time (s)
Median: 0.036 arcsec
RMS: 0.011 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.019 arcsec
RMS: 0.004 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:ACIS-S-4
Time(ksec)

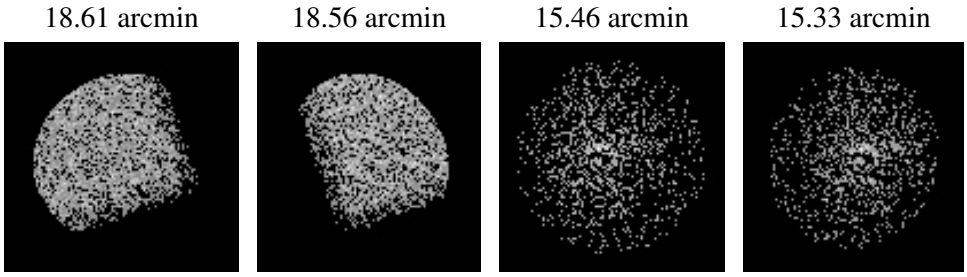
2.5.3 Slot 2


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


Time (s)
Median: −0.037 arcsec
RMS: 0.010 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.008 arcsec
RMS: 0.008 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)	2006.06.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	46.172

A.2 Comments

```
On day 356 at about 00:30, the OBA heater stuck in the 'on' position.
This situation affected obsid 4901 and all subsequent observations
to this point. The result of this anomaly could be a displacement
of the target on the chip in the z direction. The displacement
will be small because everything is still within spec, but the target
may be spatially displaced, have a different point spread function, or
trail across the chip.
```