V&V Reference Report
L2 ASCDS Version : 7.6.8

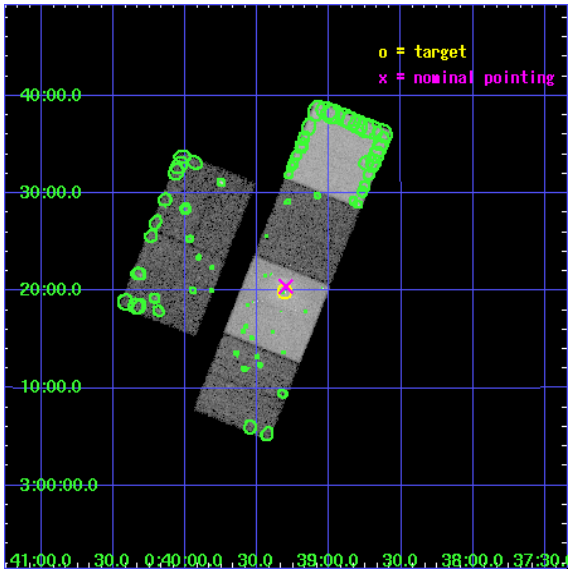
Observation 4053 - L2 Version 001
Chandra X-Ray Center

L2 Processing Date : Jul 7 2006

Contents

1 Front

seq_num	700732
obs_id	4053
title	CHANDRA IMAGING OF A COMPLETE SAMPLE OF LOW LUMINOSITY RADIO GALAXIES:JETS VS. DISKS IN THE BLACK HOLE PARADIGM
observer	Dr Christopher O'Dea
object	UGC 408
dtycycle	0
cycle	P
ra_targ	9.8275
dec_targ	3.331111
ra_nom	9.8255260484443
dec_nom	3.3405458919517
roll_nom	111.79381589634
revision	3
ontime	29436.676939577
livetime	29063.932011529
ontime2	29433.435929328
ontime3	29420.471978217
ontime5	29439.917919785
ontime6	29423.712978572
ontime7	29436.676939577
ontime8	29426.954018623
l2events	249780

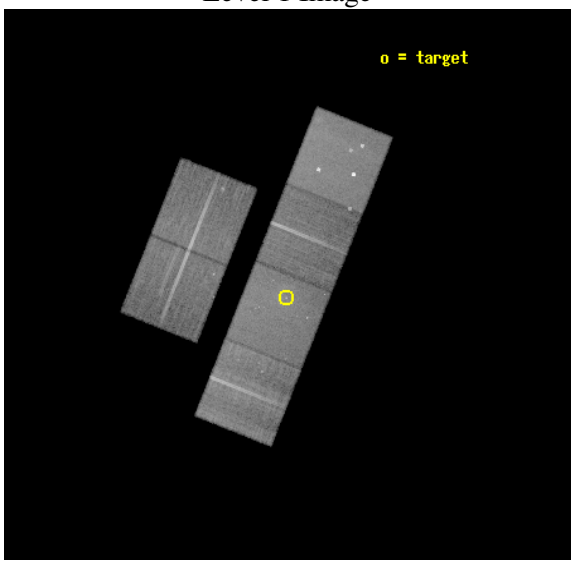


2 OBI

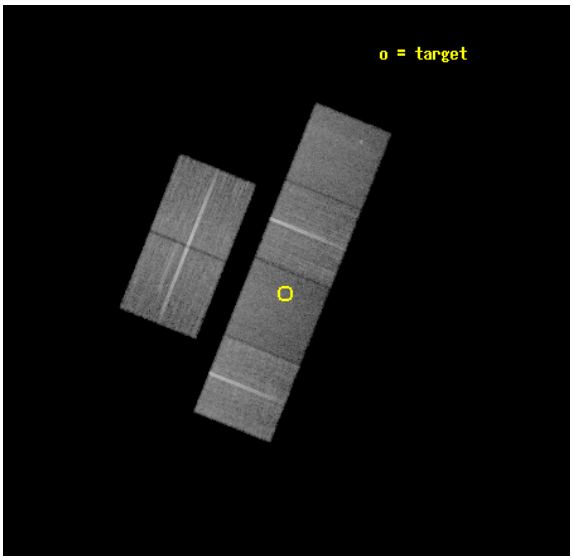
2.1 OBI

2.1.1 Images

Level 1 Image

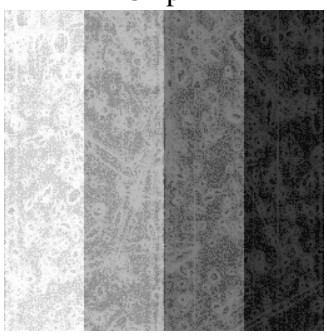


Level 1 Bad Events

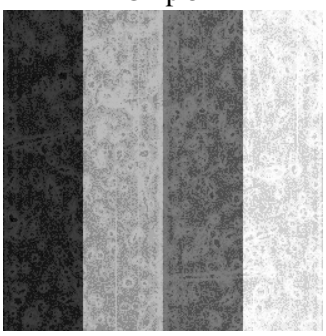


2.1.2 Bias

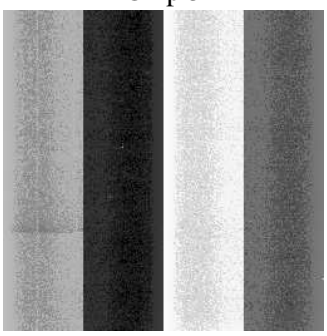
Chip 2



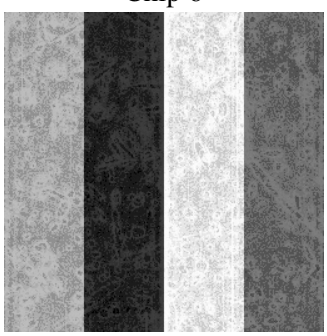
Chip 3



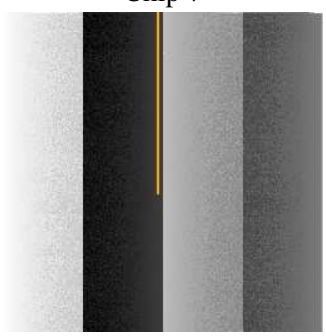
Chip 5



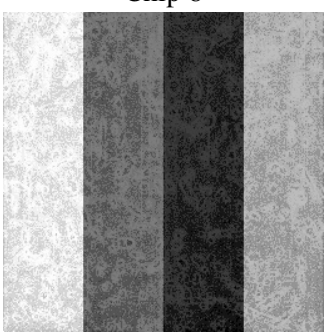
Chip 6



Chip 7



Chip 8



2.1.3 Parameters

obi_num	0
ascdsver	7.6.8
caldbver	3.2.2
date	2006-07-07T23:44:29
revision	3

sched_exp_time	29481.635000
ontime	29441.333940446
ontime2	29438.092930198
ontime3	29425.128979087
ontime5	29444.574940592
ontime6	29428.369979441
ontime7	29441.333940446
ontime8	29431.611019492
l1events	1071384

2.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	162379	149415	225150	153524	185335	195581
rejected events	145615	133506	106989	136202	96843	150565
rejected %	89%	89%	47%	88%	52%	76%

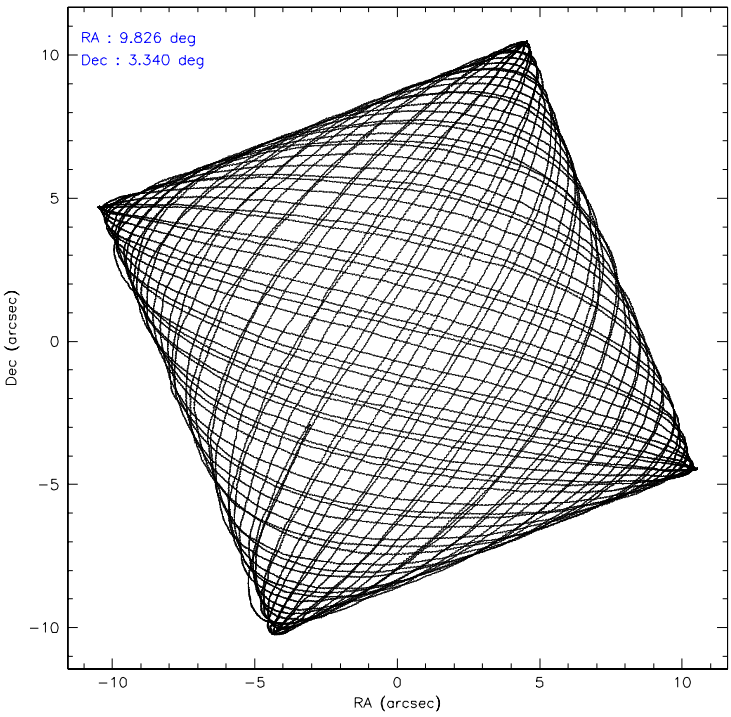
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	6961	6599	19169	6942	7879	14761
	4%	4%	8%	4%	4%	7%
grade 1 events	89	73	390	65	77	109
	0%	0%	0%	0%	0%	0%
grade 2 events	3631	3028	33607	3540	21318	9859
	2%	2%	14%	2%	11%	5%
grade 3 events	1616	1768	3086	1816	5792	4526
	0%	1%	1%	1%	3%	2%
grade 4 events	1790	1731	3121	1717	5513	4237
	1%	1%	1%	1%	2%	2%
grade 5 events	5156	5773	10901	6068	13001	8536
	3%	3%	4%	3%	7%	4%
grade 6 events	2773	2788	59202	3311	48003	11638
	1%	1%	26%	2%	25%	5%
grade 7 events	140363	127655	95674	130065	83752	141915
	86%	85%	42%	84%	45%	72%

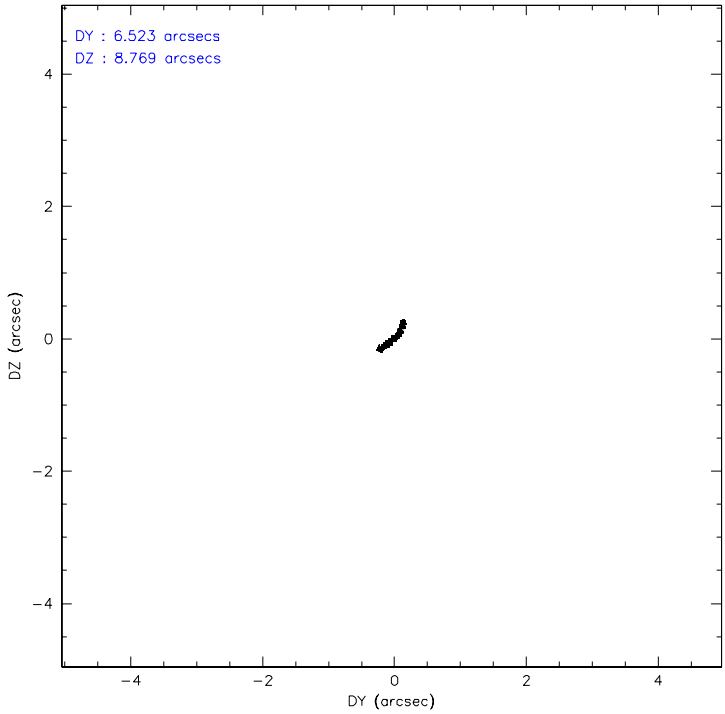
2.2 Compared Parameters

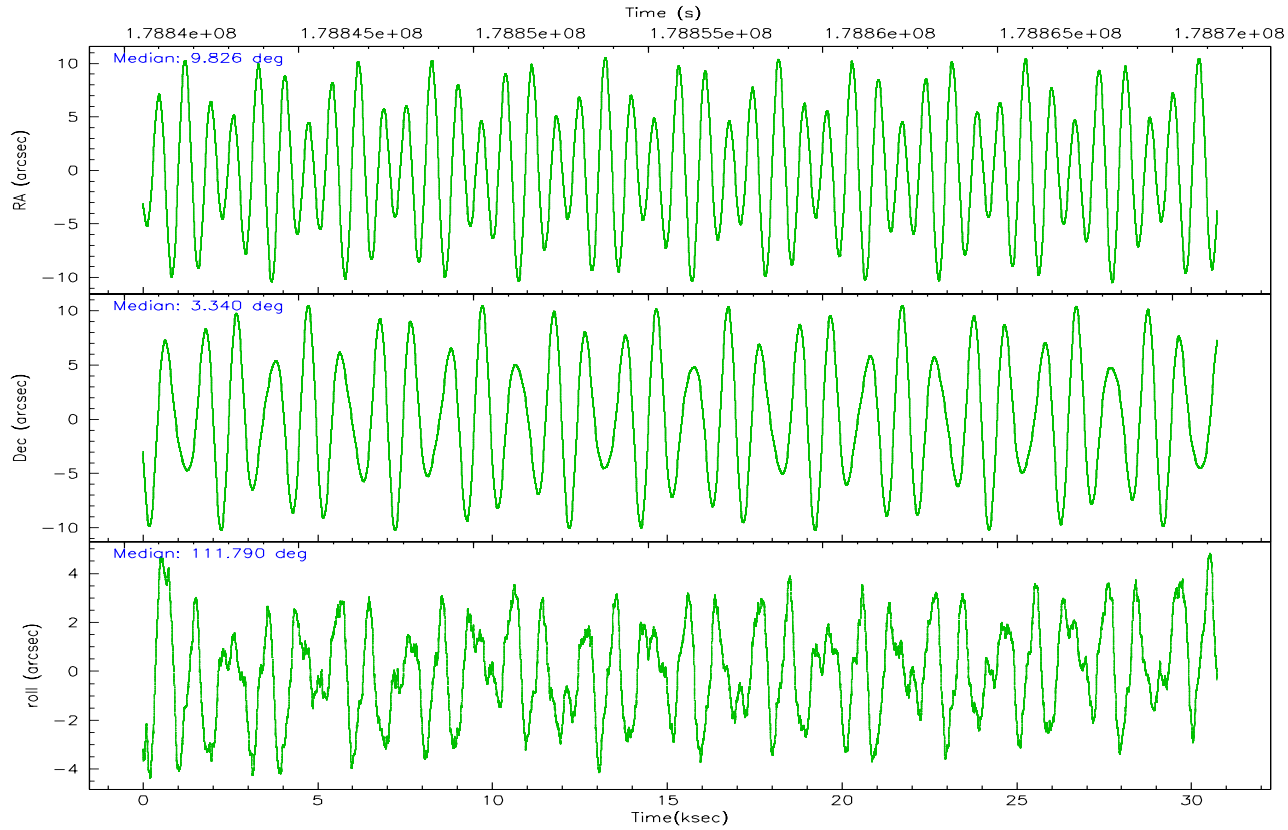
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-235678	ACIS-235678
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
Pointing RA	9.847201	9.825526048444315
Pointing Dec	3.324026	3.340545891951728
Pointing Roll	111.635922	111.7938158963369
SIM focus pos (mm)	-0.684267	-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	178841796.184000	178840302.63386
Observation start date	2003-09-01T22:15:32	2003-09-01T21:51:42
Observation end time	178871277.184000	178871592.2977
Observation end date	2003-09-02T06:26:53	2003-09-02T06:33:12
Read mode	TIMED	TIMED

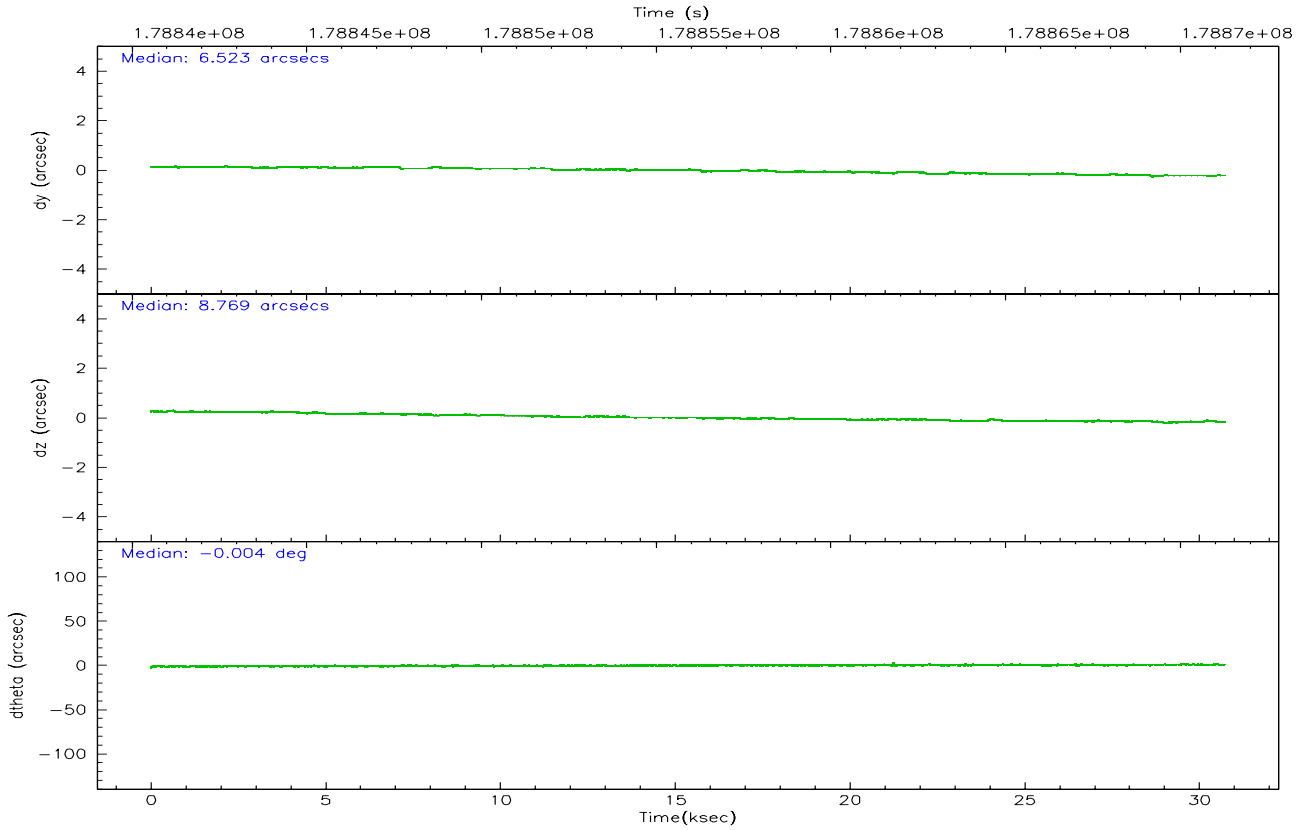
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
Primary exposure time	0.000000	3.2

2.3 Aspect


RA : 9.826 deg
Dec : 3.340 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−10
−5
0
5
10


DY : 6.523 arcsecs
DZ : 8.769 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
1.7884e+08
1.78845e+08
1.7885e+08
1.78855e+08
1.7886e+08
1.78865e+08
1.7887e+08
Median: 9.826 deg
RA (arcsec)
Median: 3.340 deg
Dec (arcsec)
Median: 111.790 deg
roll (arcsec)
Time(ksec)

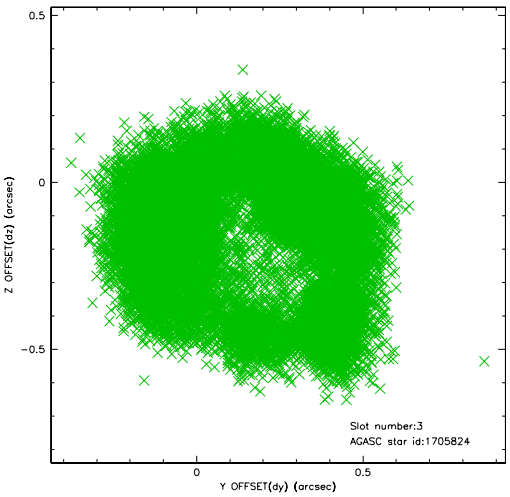

Time (s)
1.7884e+08
1.78845e+08
1.7885e+08
1.78855e+08
1.7886e+08
1.78865e+08
1.7887e+08
Median: 6.523 arcsecs
dy (arcsec)
Median: 8.769 arcsecs
dz (arcsec)
Median: −0.004 deg
dtheta (arcsec)
Time(ksec)

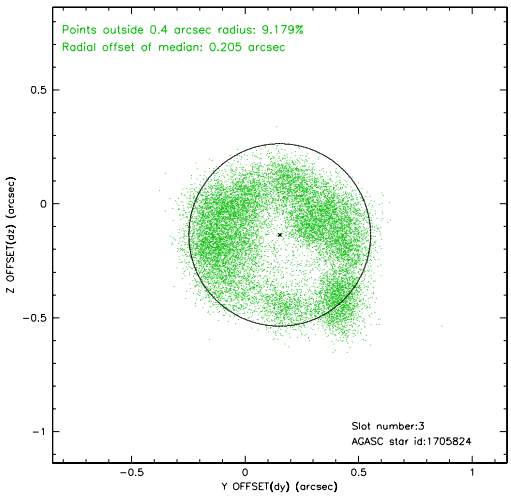
Slot Statistics

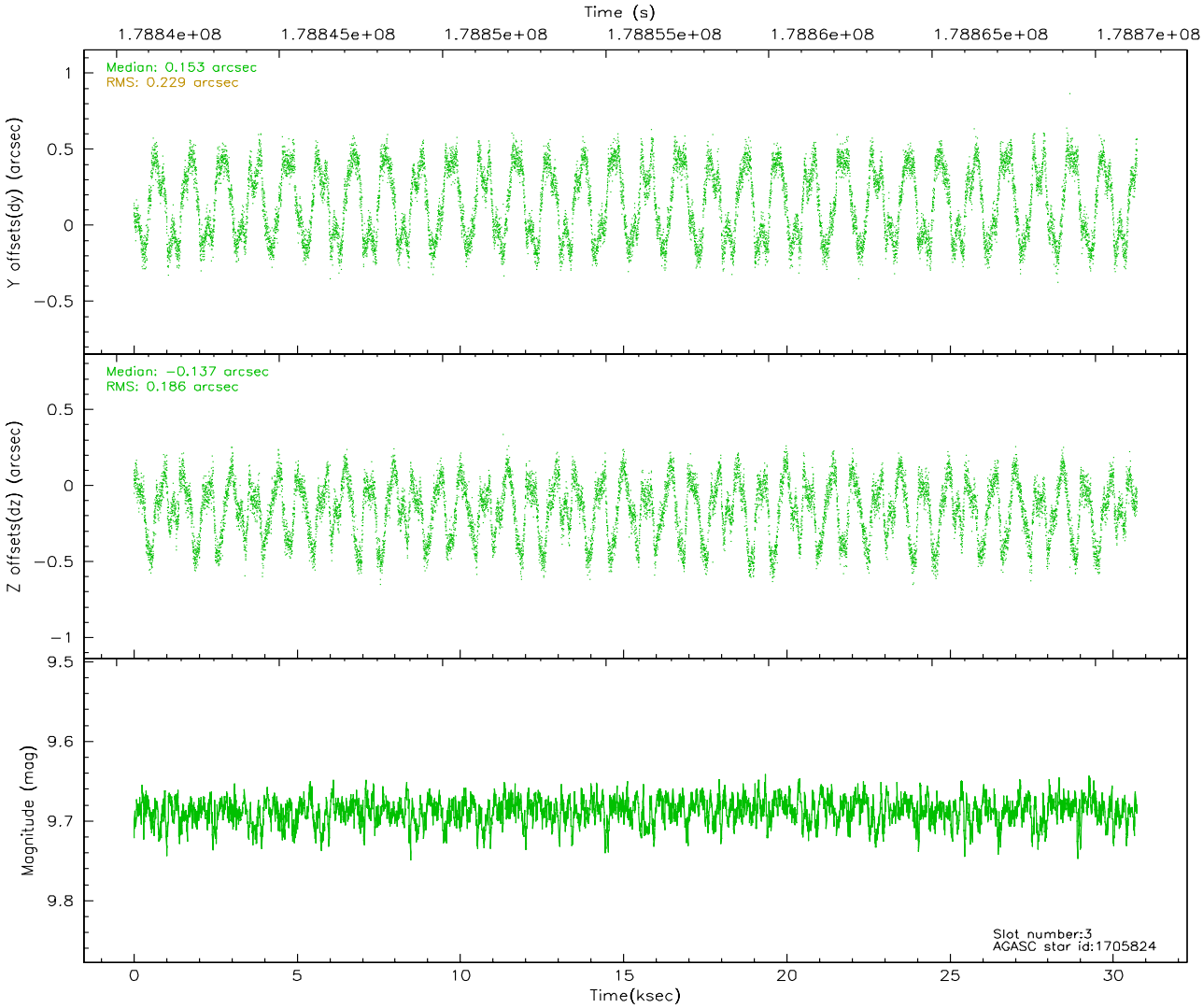
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	7487	-0.025	-0.017	0.007	0.011	0.000000	0.000000	-759.27	-1730.02
1	FID	ACIS-S-4	7.20	7485	0.020	0.017	0.006	0.010	0.000000	0.000000	2154.03	178.42
2	FID	ACIS-S-5	7.23	7485	-0.026	0.009	0.006	0.010	0.000000	0.000000	-1812.02	172.17
3	GUIDE	1705824	9.69	14969	0.153	-0.137	0.326	0.428	9.875251	2.713966	-2078.19	715.93
4	GUIDE	1711136	7.48	14978	-0.046	-0.003	0.096	0.138	9.945606	3.652670	969.74	-764.71
5	GUIDE	1836648	8.68	14972	0.072	0.049	0.113	0.162	10.519756	2.934463	-2193.92	-1730.83
6	GUIDE	1839128	7.83	14981	-0.115	0.038	0.095	0.134	10.338728	3.599397	271.03	-2007.13
7	GUIDE	1840280	9.78	14971	-0.057	0.072	0.122	0.197	10.096533	3.874641	1513.00	-1563.39

2.4 Star Slots

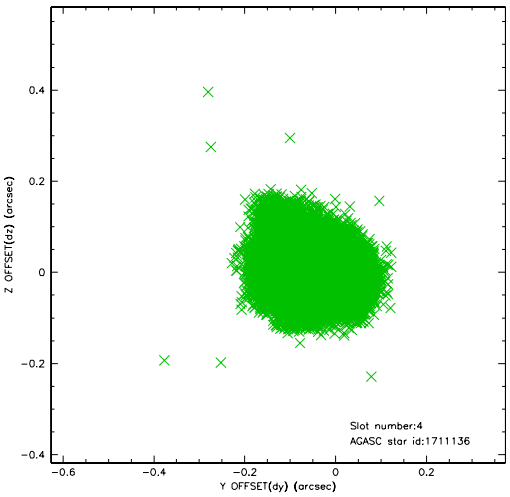
2.4.1 Slot 3

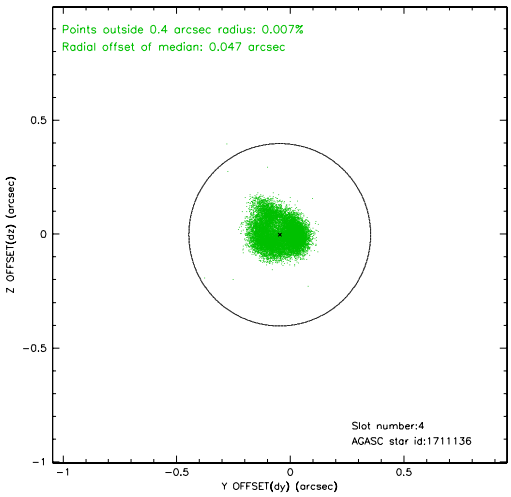


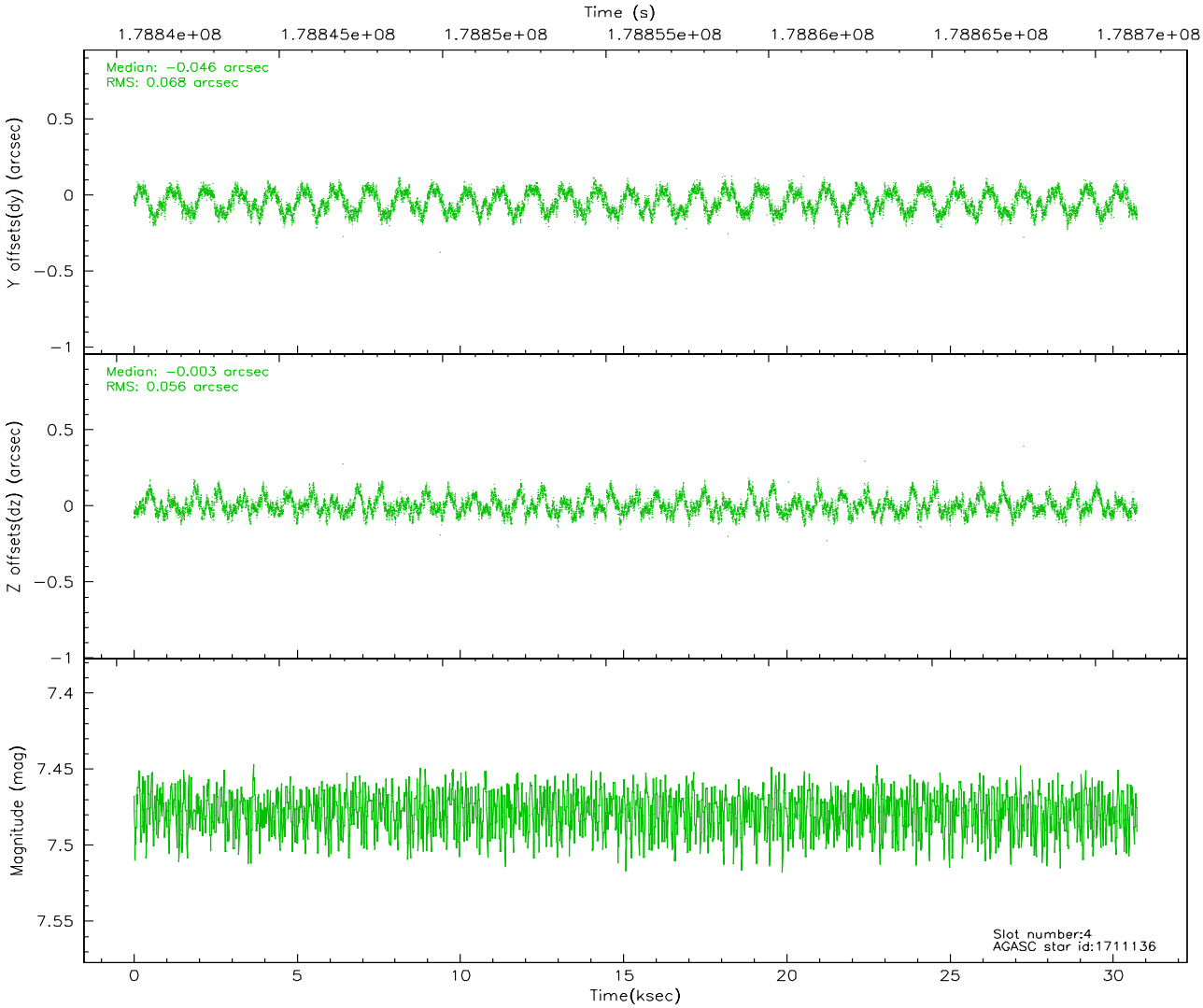




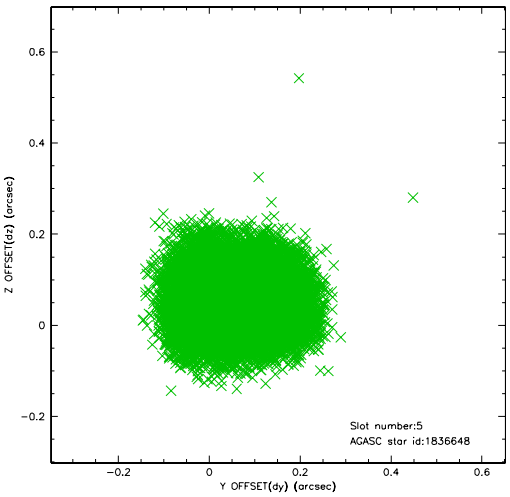
2.4.2 Slot 4

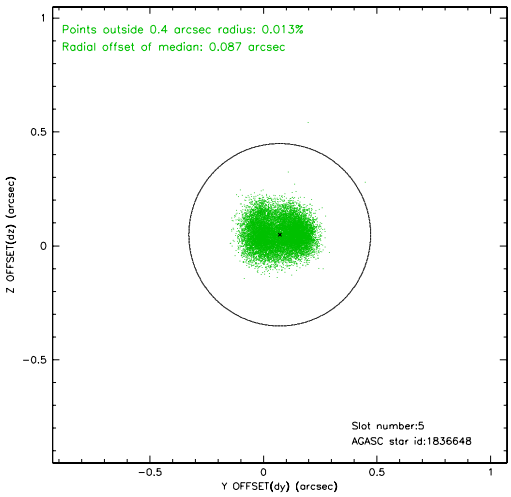

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:1711136

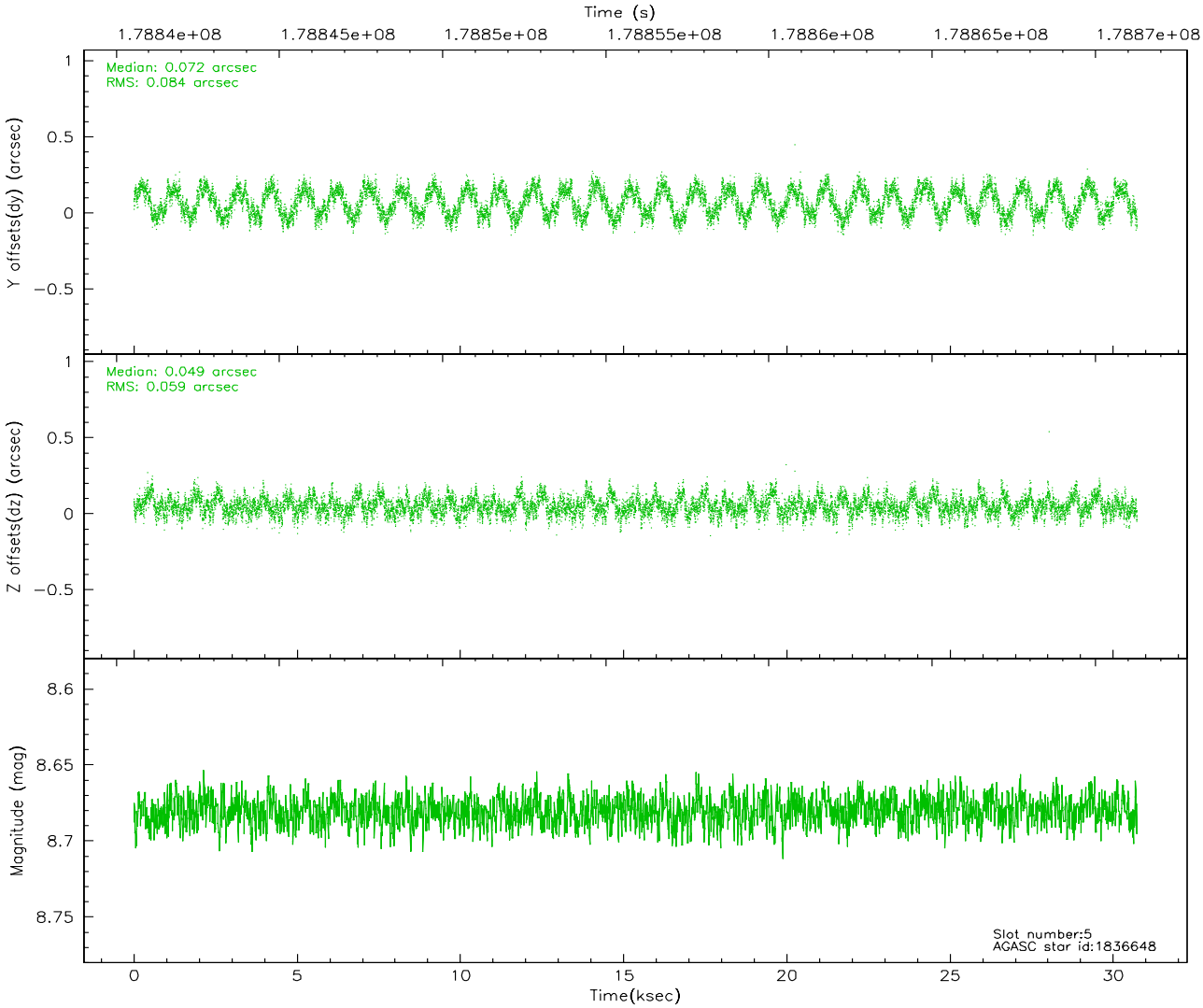

Points outside 0.4 arcsec radius: 0.007%
Radial offset of median: 0.047 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:1711136


Time (s)
Median: −0.046 arcsec
RMS: 0.068 arcsec
Y offsets(dy) (arcsec)
Median: −0.003 arcsec
RMS: 0.056 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:1711136
Time(ksec)

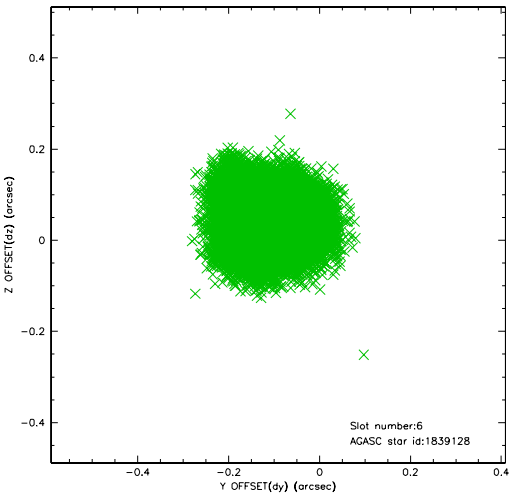
2.4.3 Slot 5

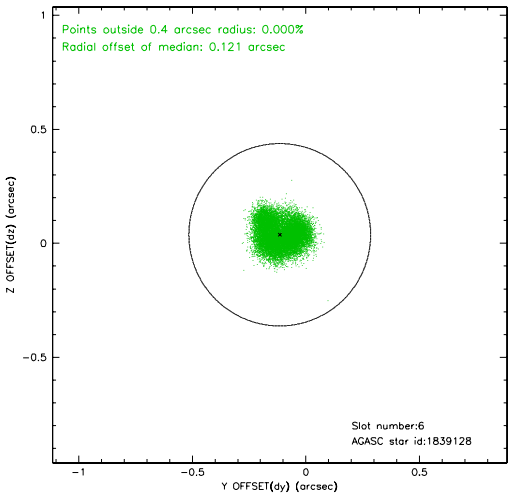

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:1836648

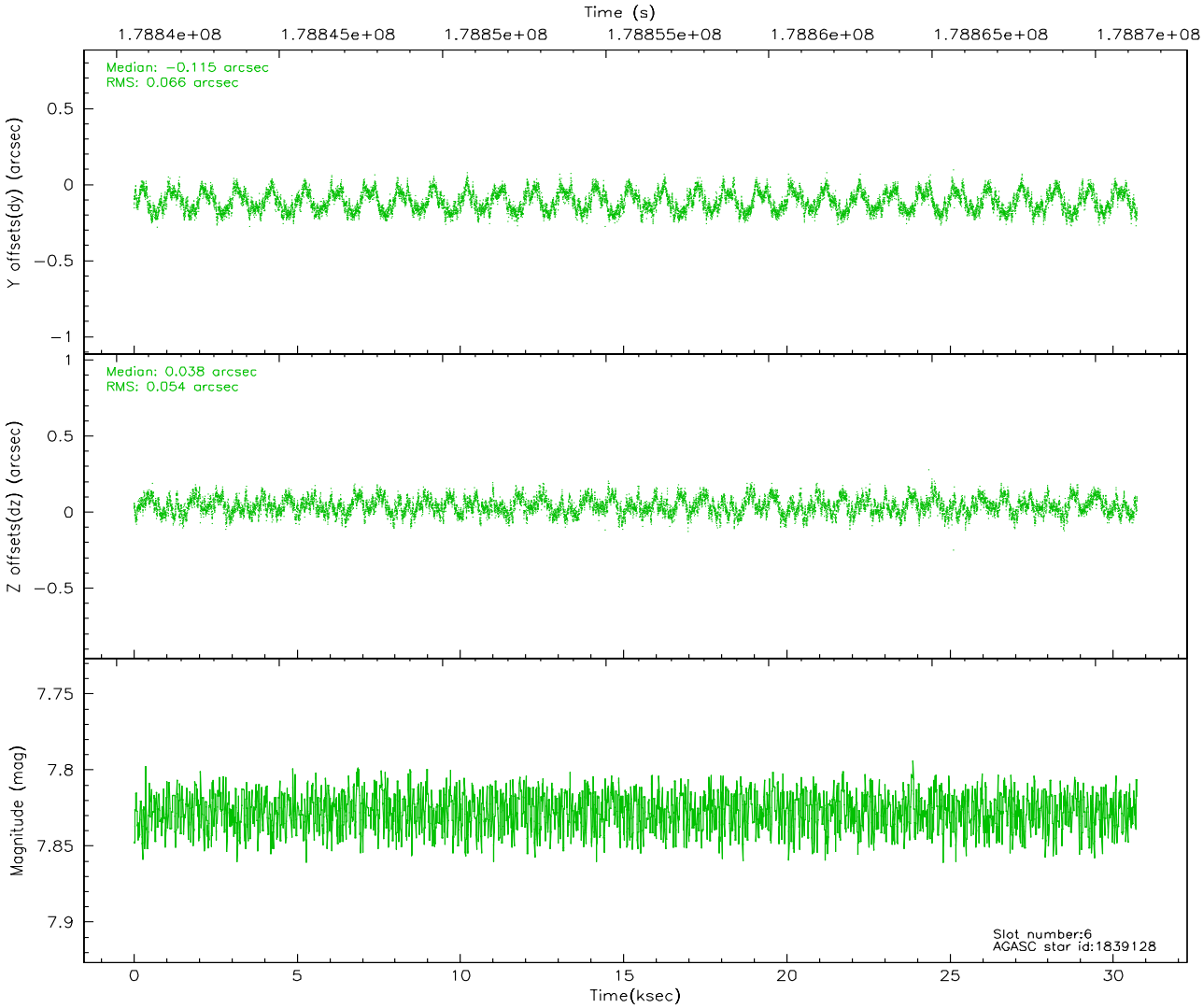

Points outside 0.4 arcsec radius: 0.013%
Radial offset of median: 0.087 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:1836648


Time (s)
Median: 0.072 arcsec
RMS: 0.084 arcsec
Y offsets(dy) (arcsec)
Median: 0.049 arcsec
RMS: 0.059 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:1836648
Time(ksec)

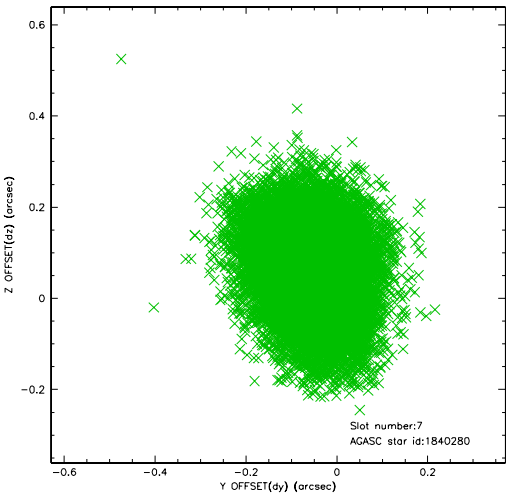
2.4.4 Slot 6

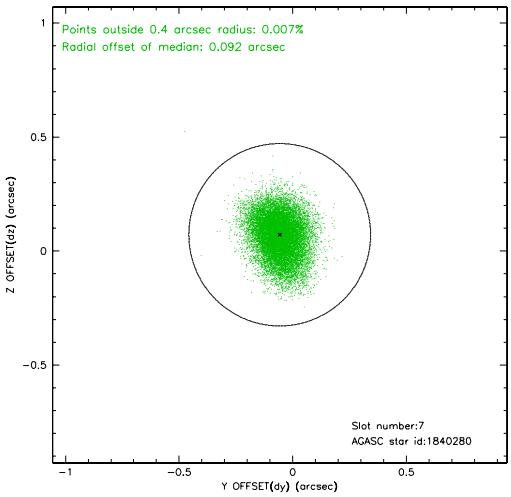

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:1839128

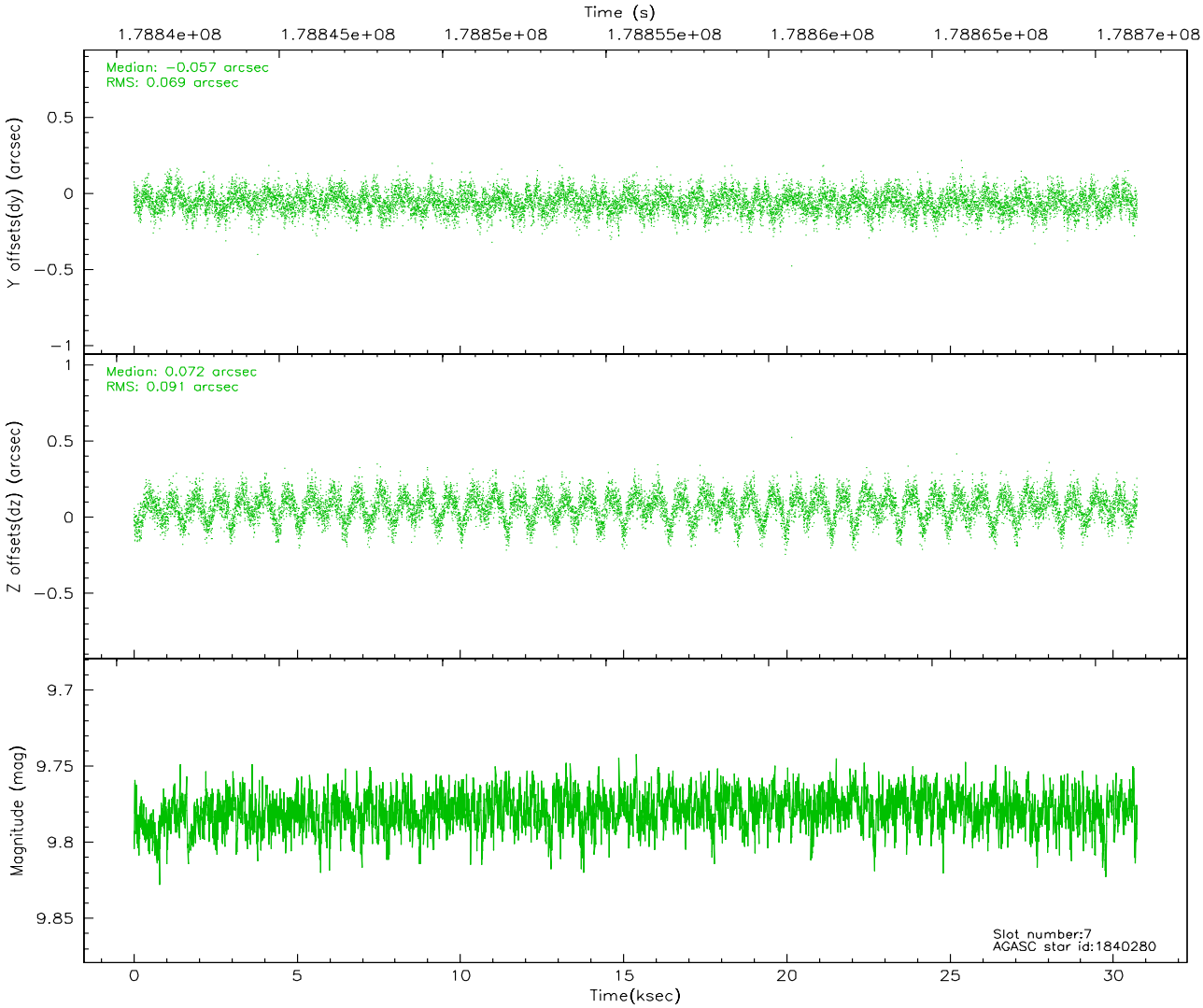

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.121 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:1839128


Time (s)
Median: −0.115 arcsec
RMS: 0.066 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:1839128
Time(ksec)

2.4.5 Slot 7

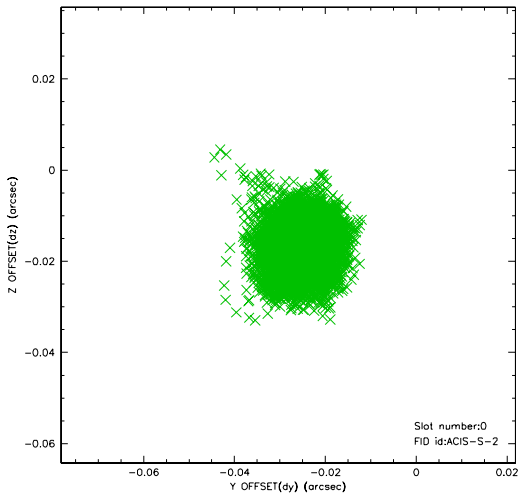

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:1840280

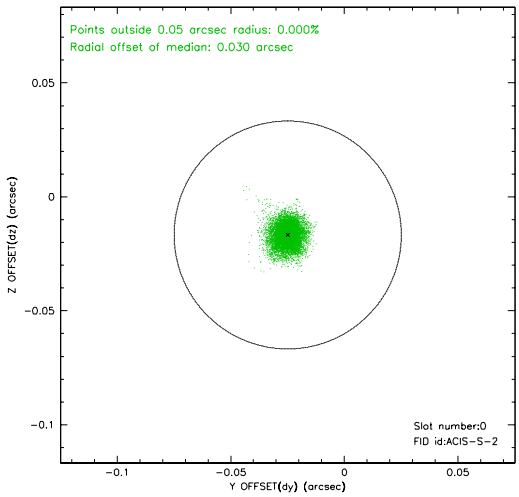

Points outside 0.4 arcsec radius: 0.007%
Radial offset of median: 0.092 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:1840280

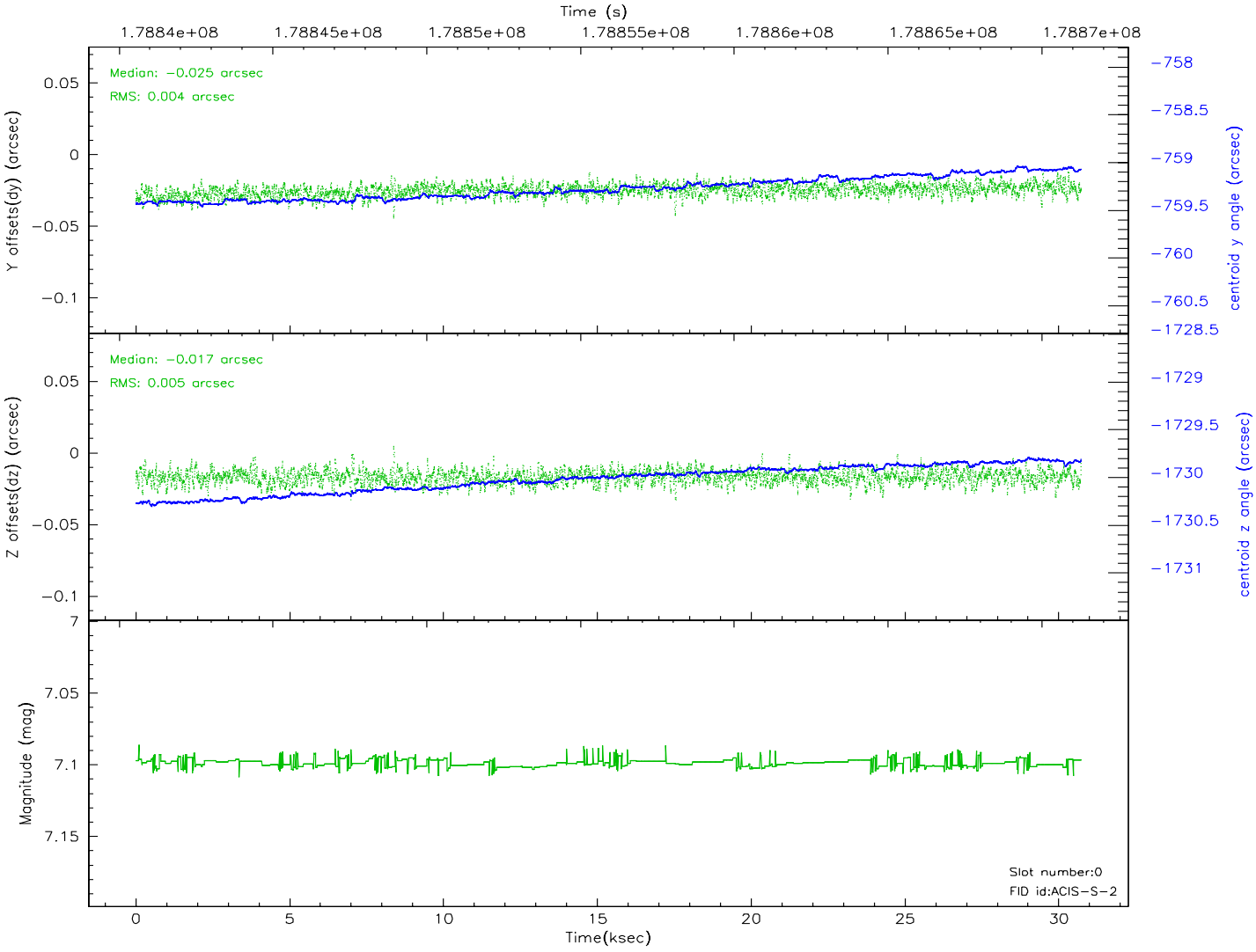

Time (s)
Median: −0.057 arcsec
RMS: 0.069 arcsec
Y offsets(dy) (arcsec)
Median: 0.072 arcsec
RMS: 0.091 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:1840280
Time(ksec)

2.5 FID Slots

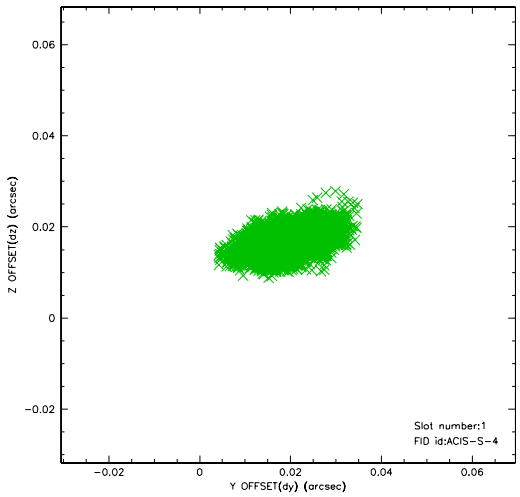
2.5.1 Slot 0

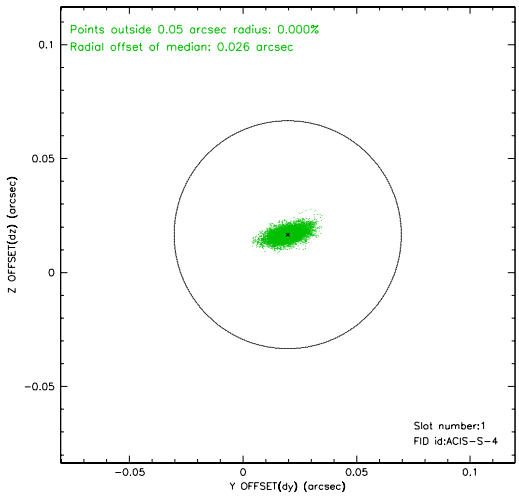


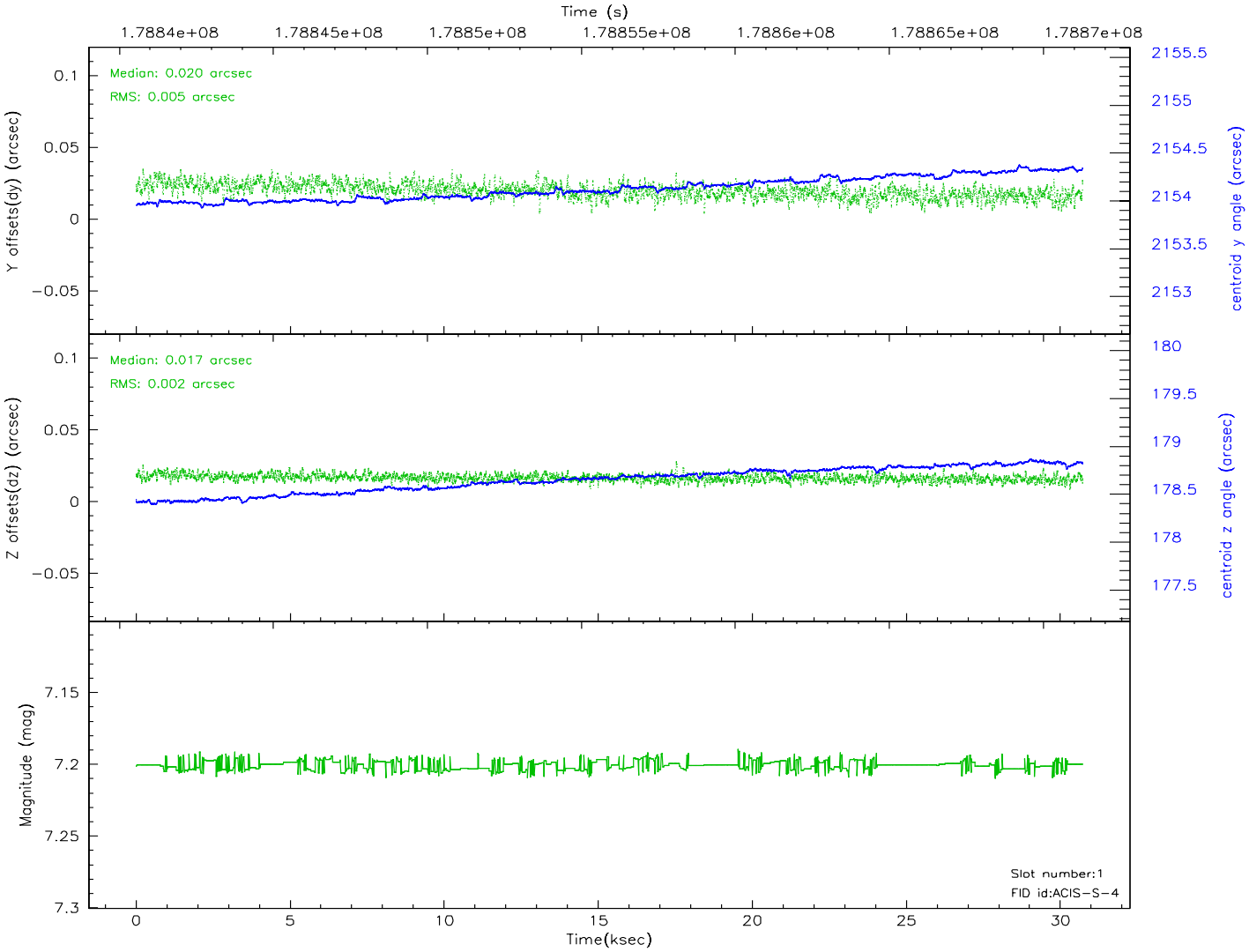




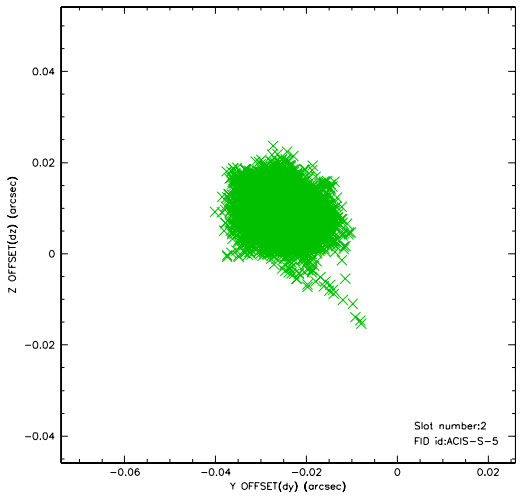
2.5.2 Slot 1

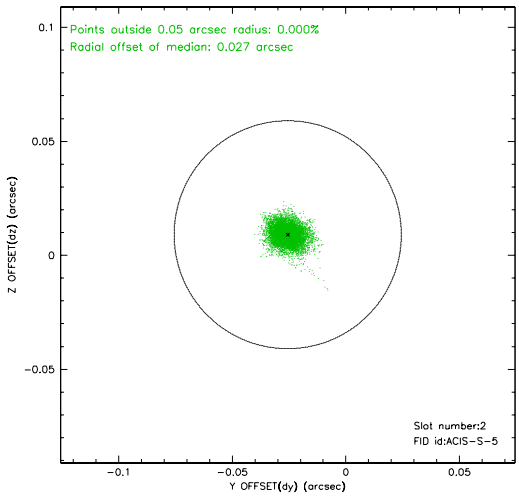

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4

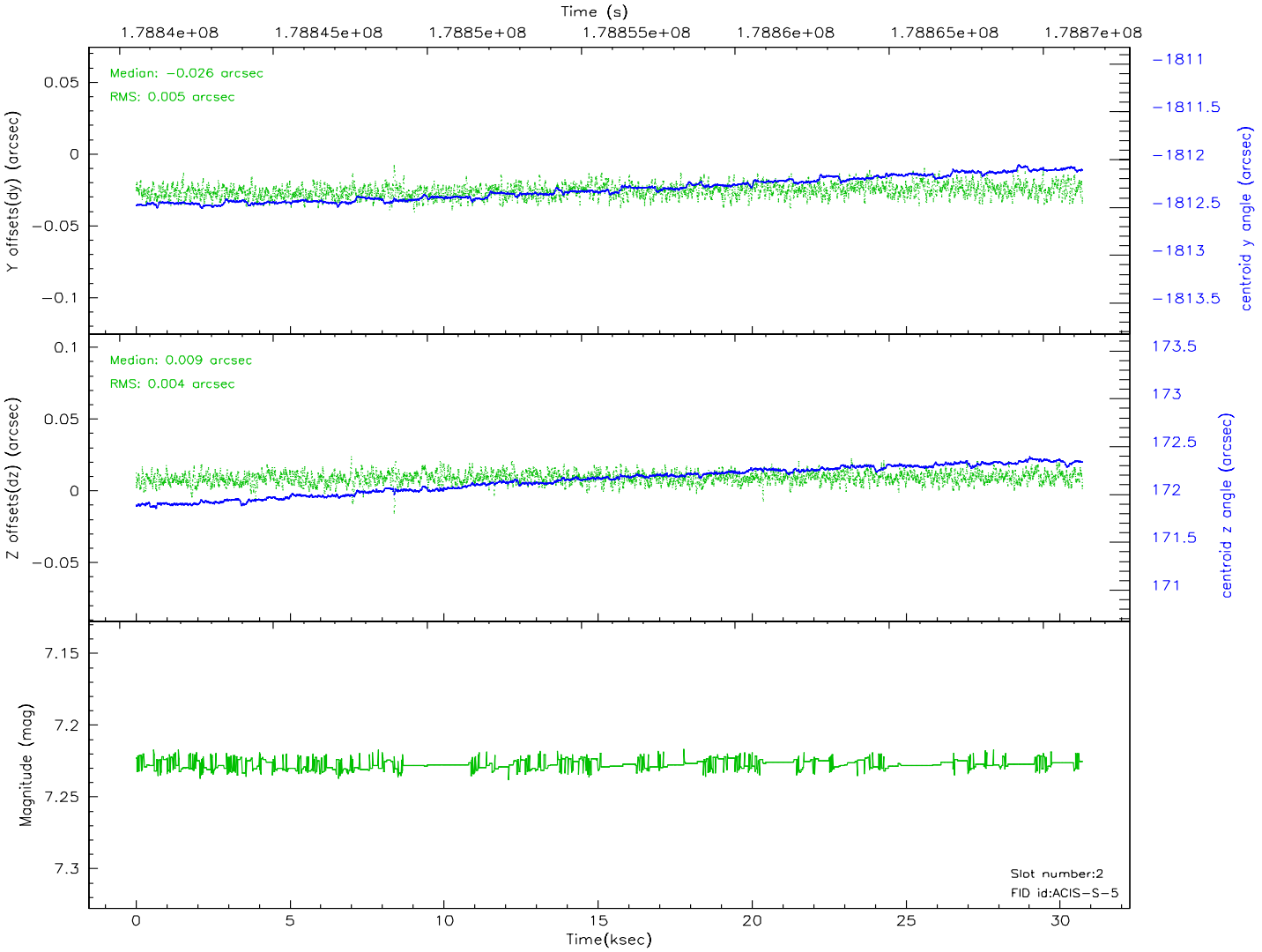

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.026 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4


Time (s)
Median: 0.020 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.017 arcsec
RMS: 0.002 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number:1
FID id:ACIS-S-4
Time(ksec)

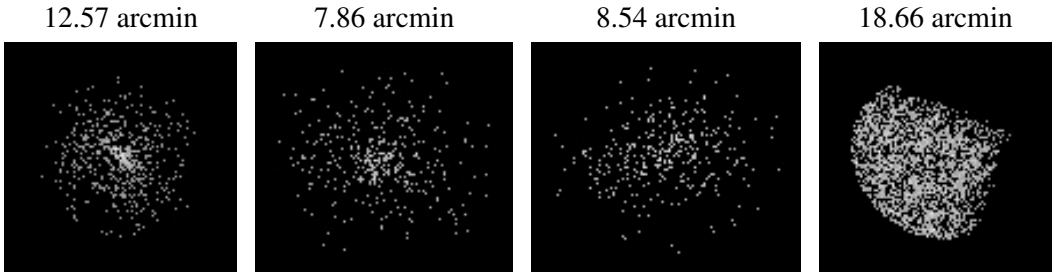
2.5.3 Slot 2


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


Time (s)
Median: −0.026 arcsec
RMS: 0.005 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.009 arcsec
RMS: 0.004 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)	2006.07.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	29.439

A.2 Comments