V&V Reference Report
L2 ASCDS Version : 7.6.9

Observation 3079 - L2 Version 001
Chandra X-Ray Center

L2 Processing Date : Sep 16 2006

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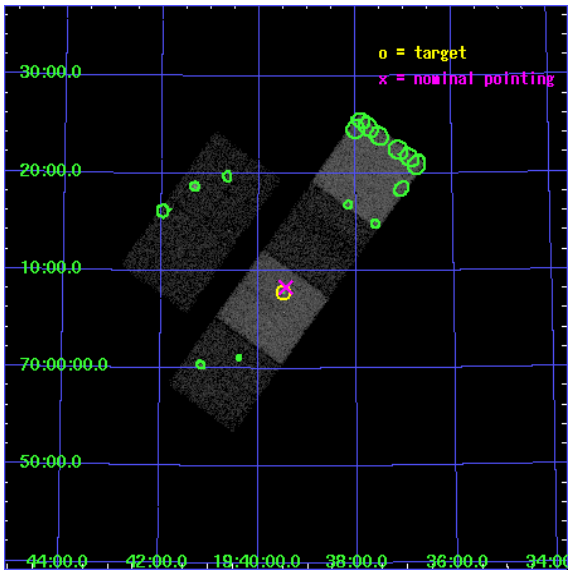
1 Front

seq_num	700518
obs_id	3079
title	X-RAY WEAK BROAD-LINE QUASARS: ABSORPTION OR INTRINSIC X_RAY WEAKNESS ?
observer	Dr Guido Risaliti
object	HS 1939+7000
dtycycle	0
cycle	P
ra_targ	294.872917
dec_targ	70.130278
ra_nom	294.860432456
dec_nom	70.139114328335
roll_nom	125.78467388847
revision	2
ontime	4972.7999814749
livetime	4909.8313938488
ontime2	4972.7999814749
ontime3	4972.7999814749
ontime5	4972.7999814749
ontime6	4972.7999814749
ontime7	4972.7999814749
ontime8	4969.5590013266
l2events	71509

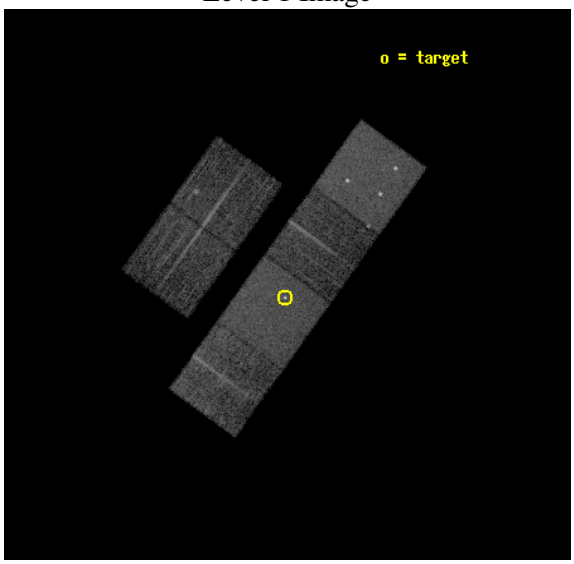


2 OBI

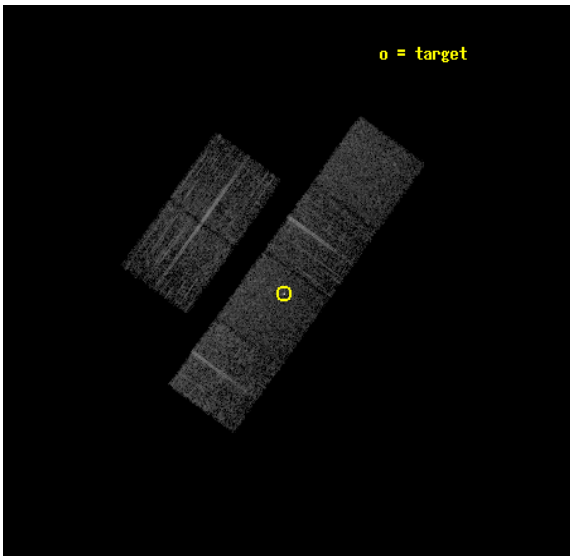
2.1 OBI

2.1.1 Images

Level 1 Image

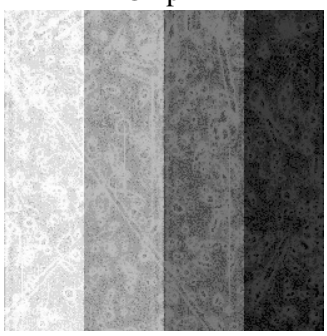


Level 1 Bad Events

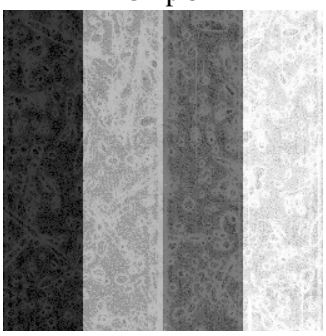


2.1.2 Bias

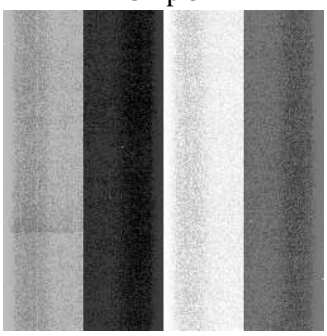
Chip 2



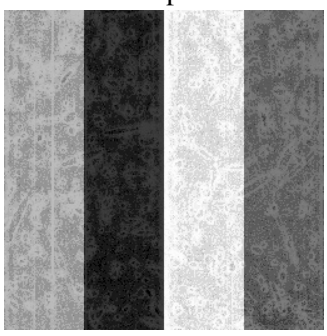
Chip 3



Chip 5

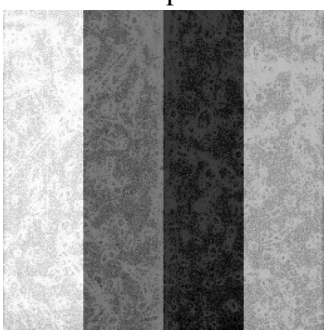


Chip 6



Chip 7

Chip 8



2.1.3 Parameters

obi_num	0
ascdsver	7.6.9
caldbver	3.2.3
date	2006-09-16T17:00:04
revision	2

sched_exp_time	5007.979000
ontime	4974.9334732294
ontime2	4974.9334732294
ontime3	4974.9334732294
ontime5	4974.9335031211
ontime6	4974.9334732294
ontime7	4974.9334732294
ontime8	4971.6924930811
l1events	244423

2.1.4 Events

	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	32290	31322	56716	31932	50894	41269
rejected events	26612	26162	25872	26150	26289	30362
rejected %	82%	83%	45%	81%	51%	73%

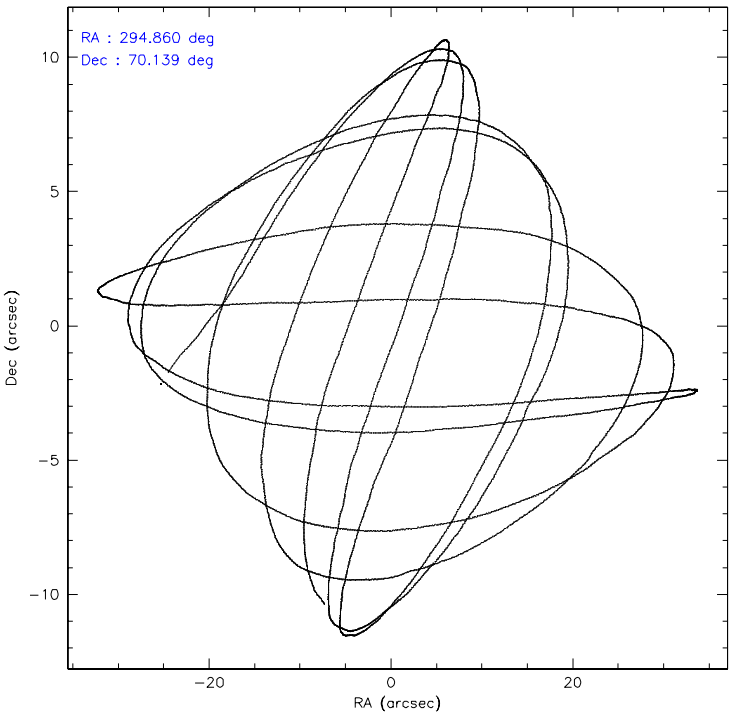
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	3017	2576	4862	2874	2098	4278
	9%	8%	8%	9%	4%	10%
grade 1 events	19	22	131	34	66	18
	0%	0%	0%	0%	0%	0%
grade 2 events	1163	1050	9307	1205	5667	2258
	3%	3%	16%	3%	11%	5%
grade 3 events	344	370	903	406	1417	1014
	1%	1%	1%	1%	2%	2%
grade 4 events	394	379	873	445	1398	1005
	1%	1%	1%	1%	2%	2%
grade 5 events	1044	1271	2255	1304	2888	1655
	3%	4%	3%	4%	5%	4%
grade 6 events	762	787	14918	856	14036	2356
	2%	2%	26%	2%	27%	5%
grade 7 events	25547	24867	23467	24808	23324	28685
	79%	79%	41%	77%	45%	69%

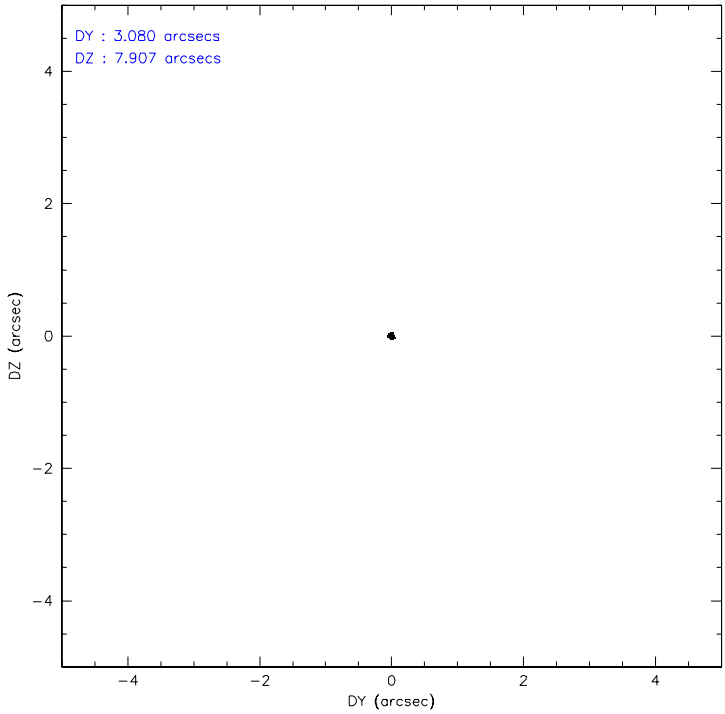
2.2 Compared Parameters

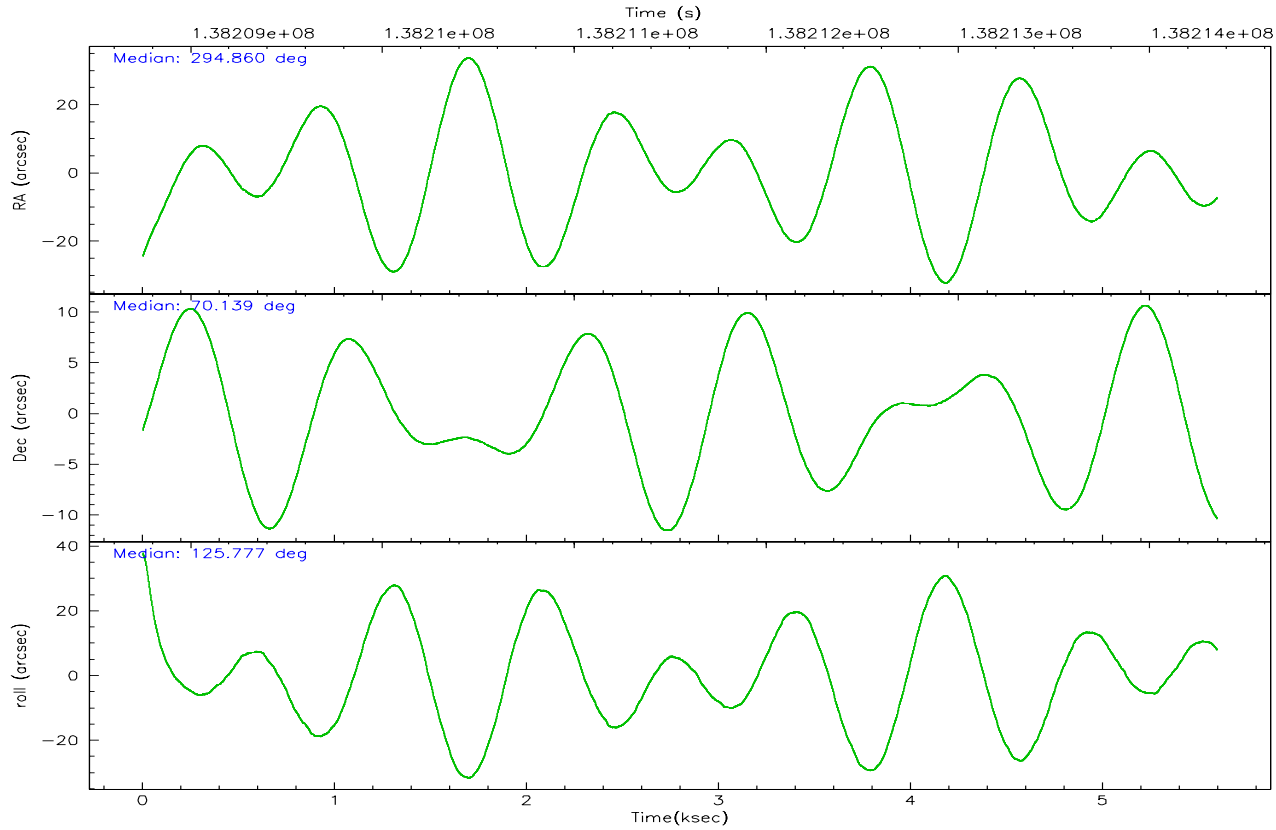
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-235678	ACIS-235678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
Pointing RA	294.934079	294.8604324560033
Pointing Dec	70.128132	70.139114328335
Pointing Roll	125.558756	125.7846738884705
SIM focus pos (mm)	-0.684267	-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	138209344.184000	138208179.58429
Observation start date	2002-05-19T15:28:00	2002-05-19T15:09:39
Observation end time	138214351.184000	138214666.29706
Observation end date	2002-05-19T16:51:27	2002-05-19T16:57:46
Read mode	TIMED	TIMED

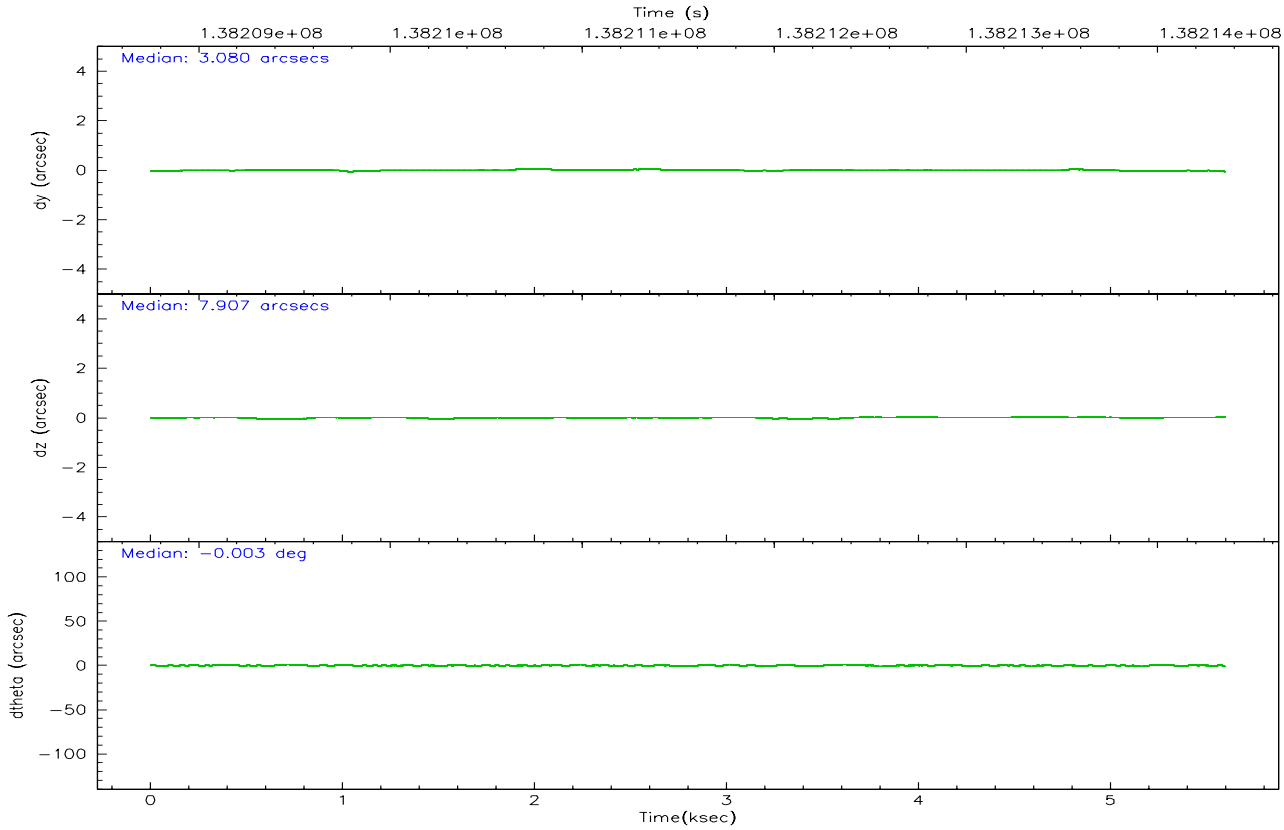
Parameter	Planned	Actual
Obspar format version number	6	6
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
Primary exposure time	0.000000	3.2

2.3 Aspect


RA : 294.860 deg
Dec : 70.139 deg
10
5
0
−5
−10
Dec (arcsec)
−20
0
20
RA (arcsec)


DY : 3.080 arcsecs
DZ : 7.907 arcsecs
4
2
0
−2
−4
DZ (arcsec)
−4
−2
0
2
4
DY (arcsec)


Time (s)
1.38209e+08
1.3821e+08
1.38211e+08
1.38212e+08
1.38213e+08
1.38214e+08
Median: 294.860 deg
RA (arcsec)
Median: 70.139 deg
Dec (arcsec)
Median: 125.777 deg
roll (arcsec)
Time(ksec)

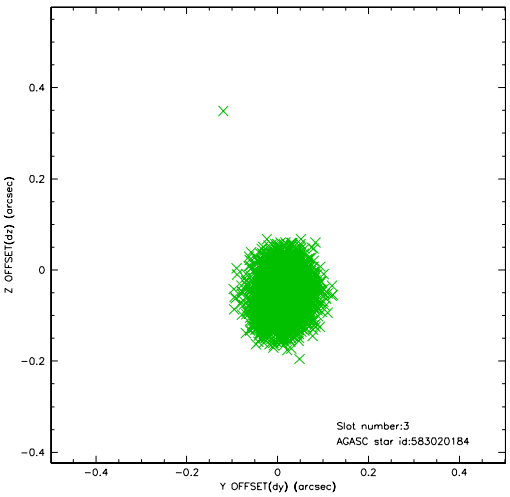

Time (s)
1.38209e+08
1.3821e+08
1.38211e+08
1.38212e+08
1.38213e+08
1.38214e+08
Median: 3.080 arcsecs
dy (arcsec)
Median: 7.907 arcsecs
dz (arcsec)
Median: −0.003 deg
dtheta (arcsec)
Time(ksec)

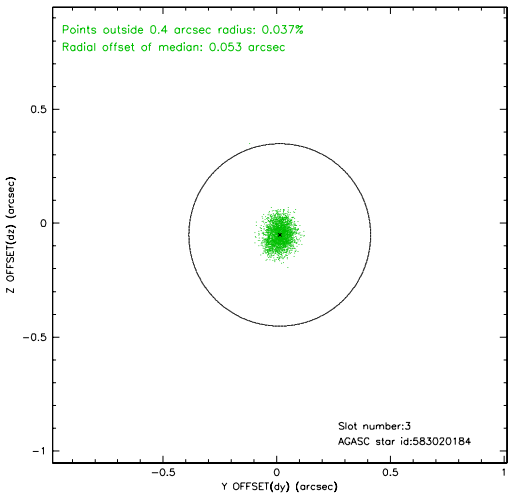
Slot Statistics

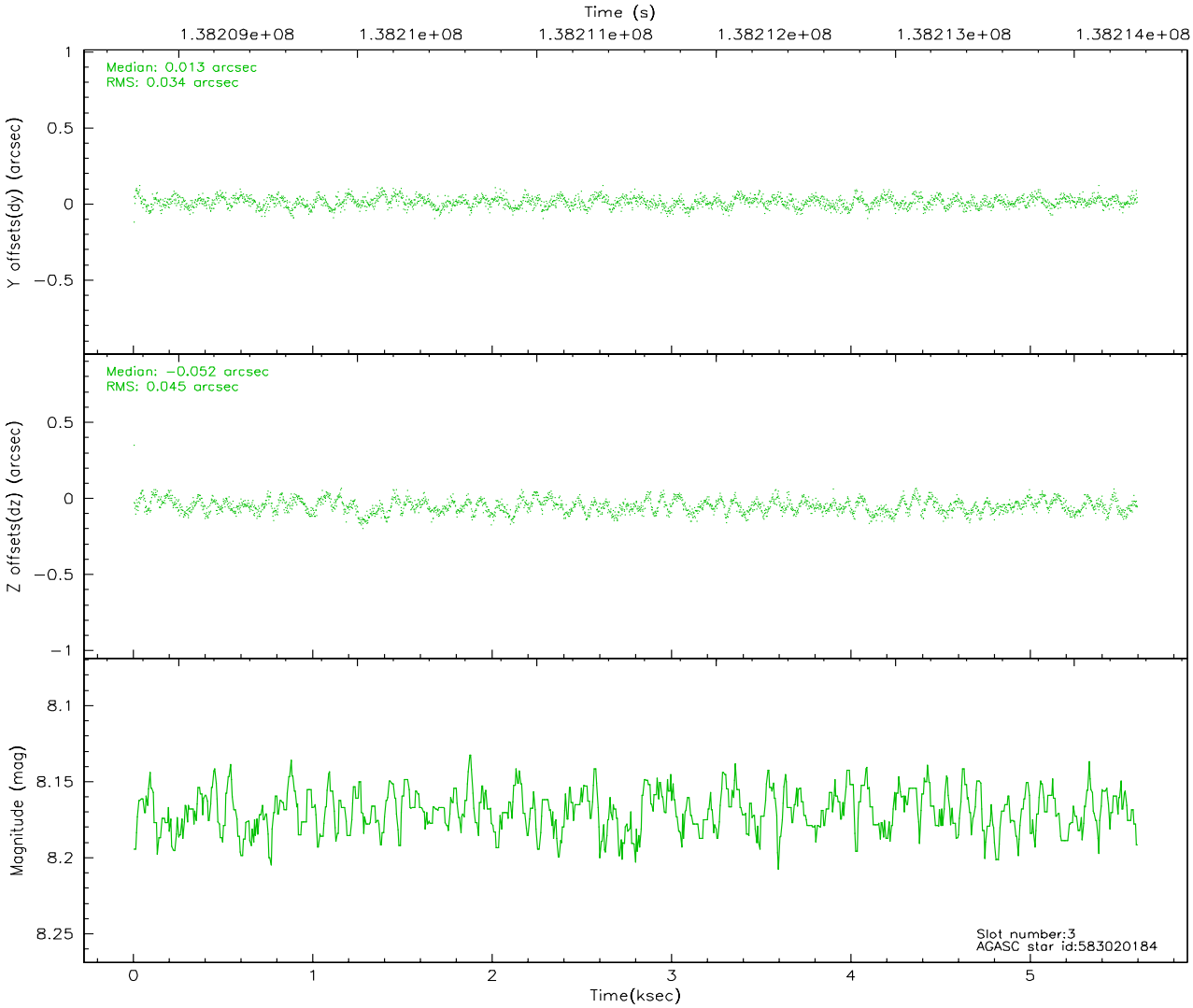
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	1365	0.008	0.022	0.006	0.009	0.000000	0.000000	-755.73	-1729.07
1	FID	ACIS-S-4	7.20	1365	-0.067	-0.010	0.005	0.008	0.000000	0.000000	2157.01	178.25
2	FID	ACIS-S-5	7.24	1364	0.028	-0.004	0.006	0.010	0.000000	0.000000	-1807.15	173.18
3	GUIDE	583020184	8.17	2726	0.013	-0.052	0.060	0.094	293.573245	70.259703	1362.72	1059.24
4	GUIDE	583147752	8.74	2730	0.061	0.071	0.060	0.098	296.288020	69.714483	-2177.95	-520.10
5	GUIDE	583151672	8.92	2729	0.012	-0.158	0.084	0.142	294.494525	69.462314	-1626.26	1843.11
6	GUIDE	583143752	9.14	2728	0.113	-0.007	0.092	0.150	295.552201	70.949752	1987.08	-2312.98
7	GUIDE	583144928	9.01	2730	-0.200	0.146	0.069	0.114	295.801788	70.748419	1224.80	-2142.02

2.4 Star Slots

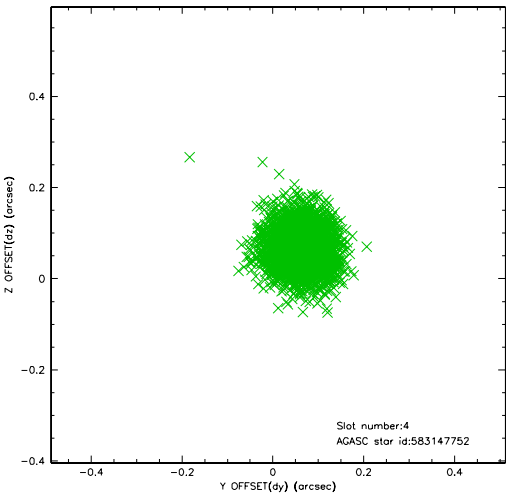
2.4.1 Slot 3

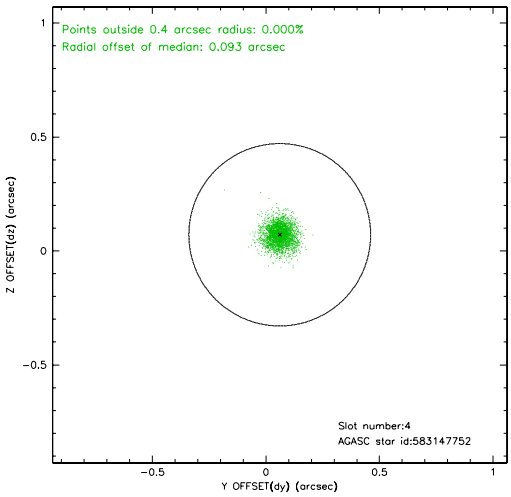


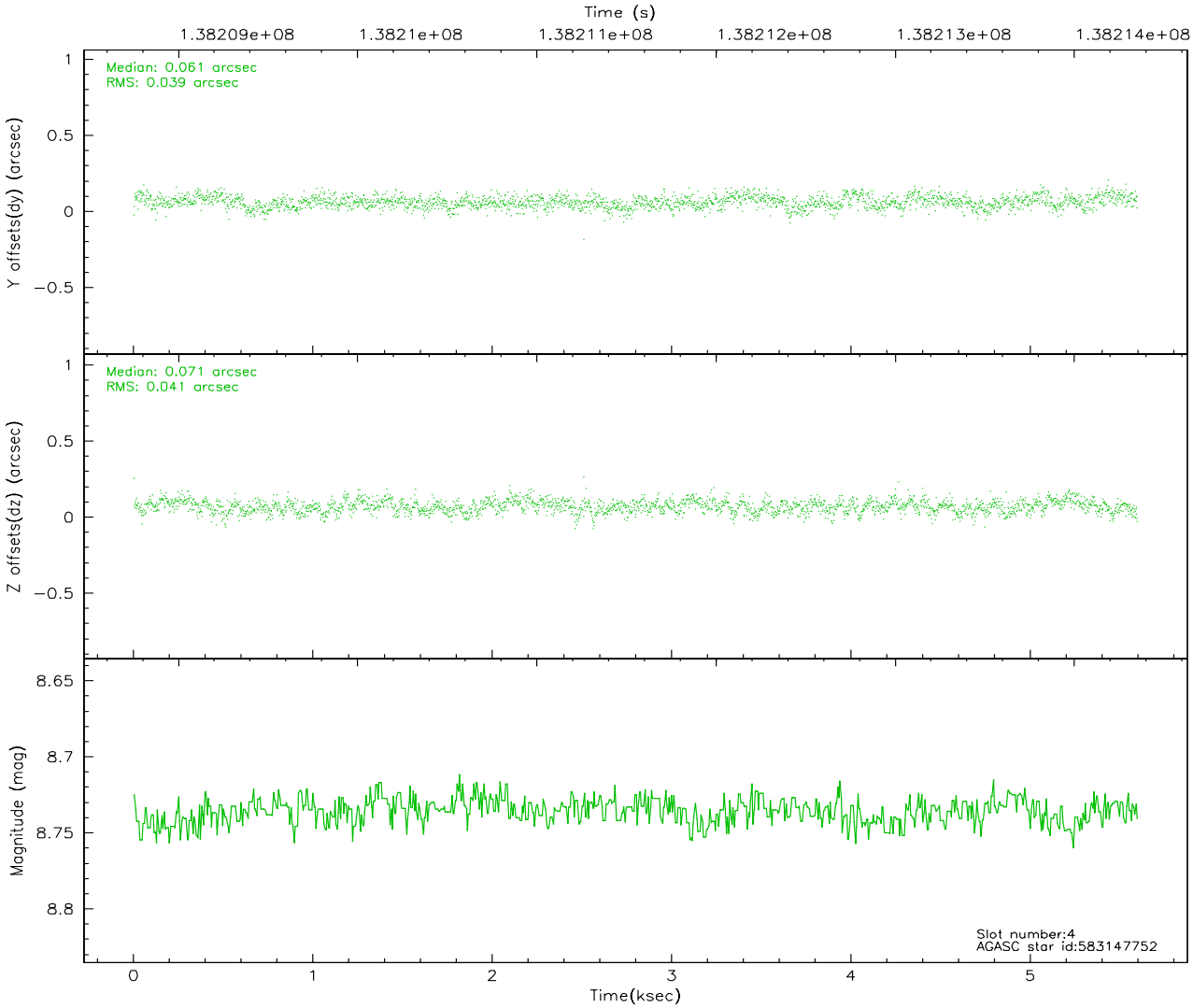




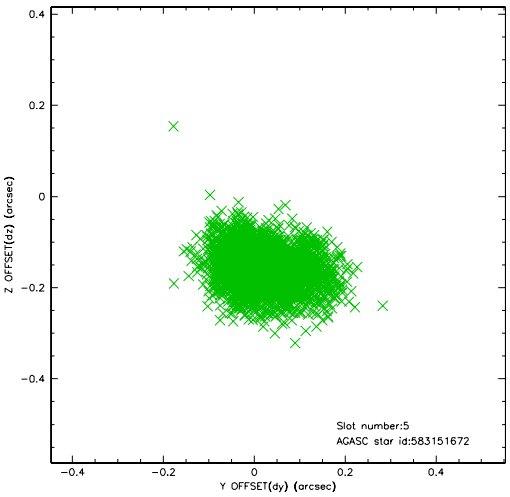
2.4.2 Slot 4

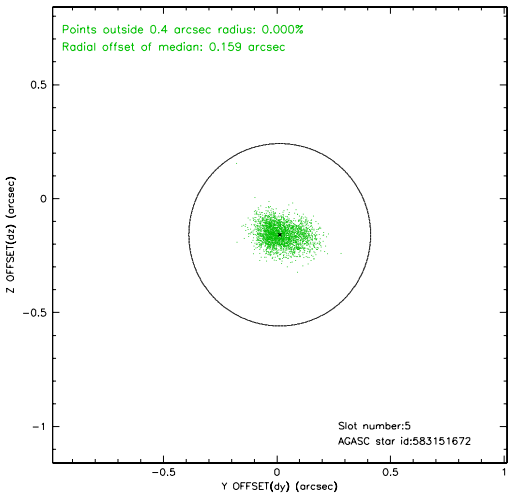

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:583147752

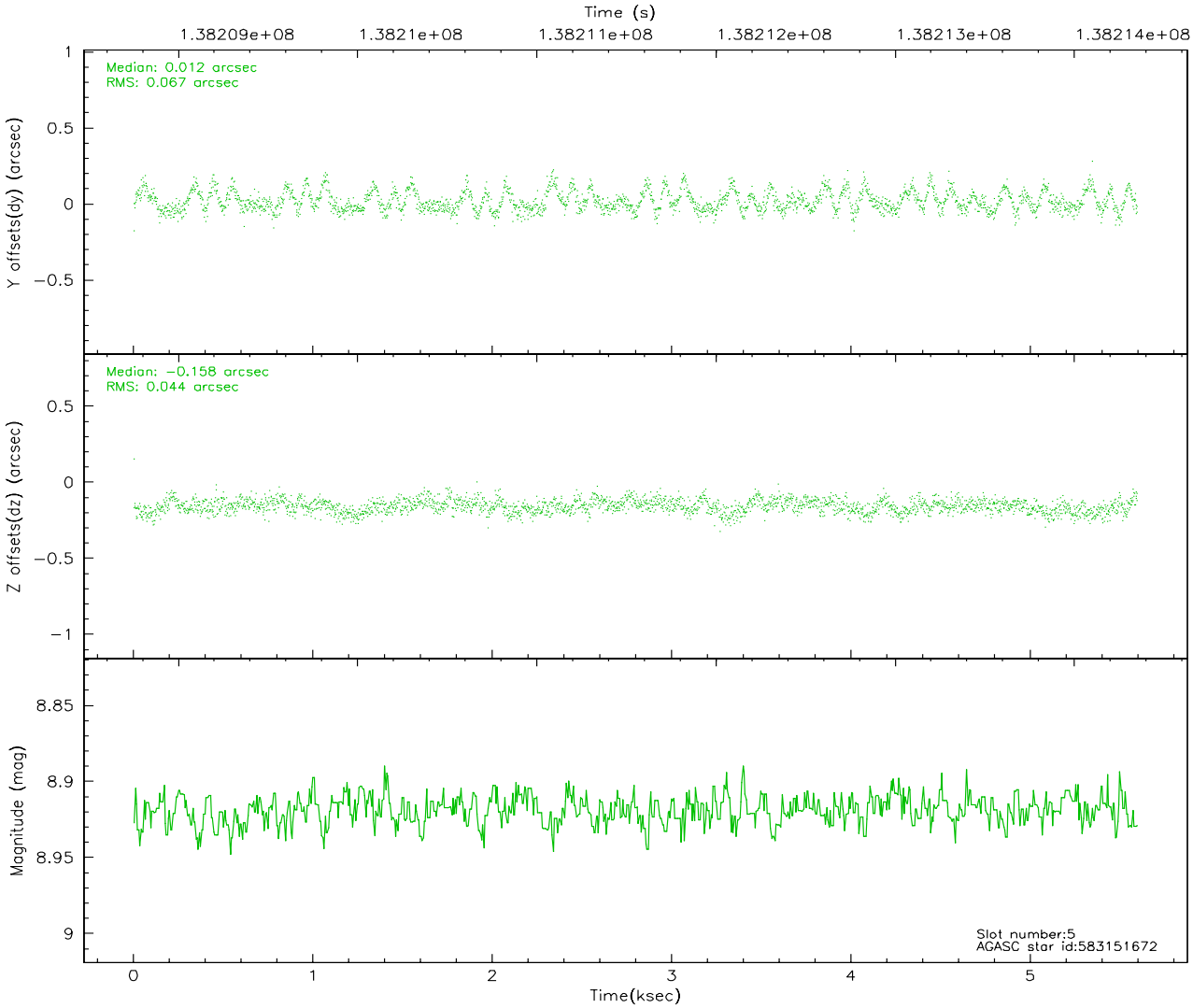

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.093 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:4
AGASC star id:583147752


Time (s)
Median: 0.061 arcsec
RMS: 0.039 arcsec
Y offsets(dy) (arcsec)
Median: 0.071 arcsec
RMS: 0.041 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:4
AGASC star id:583147752
Time(ksec)

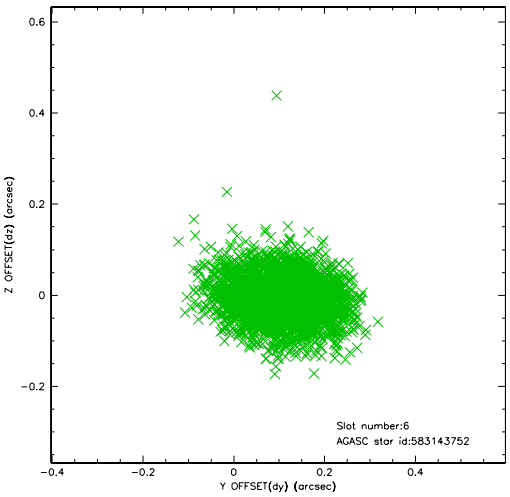
2.4.3 Slot 5

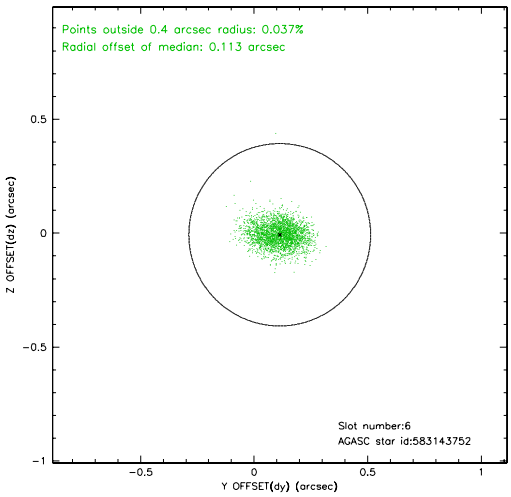

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:583151672

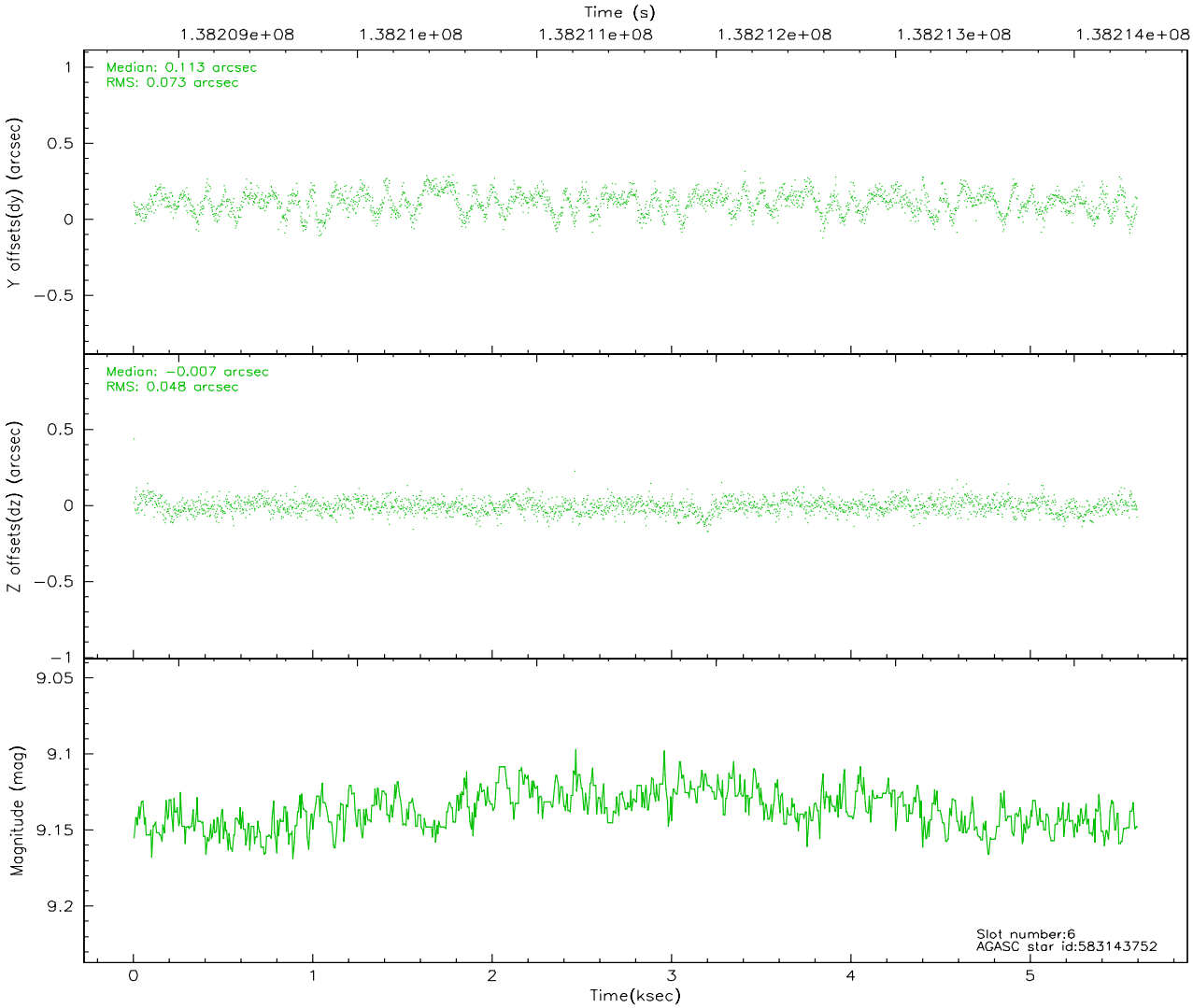

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.159 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:5
AGASC star id:583151672


Time (s)
Median: 0.012 arcsec
RMS: 0.067 arcsec
Y offsets(dy) (arcsec)
Median: −0.158 arcsec
RMS: 0.044 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:5
AGASC star id:583151672
Time(ksec)

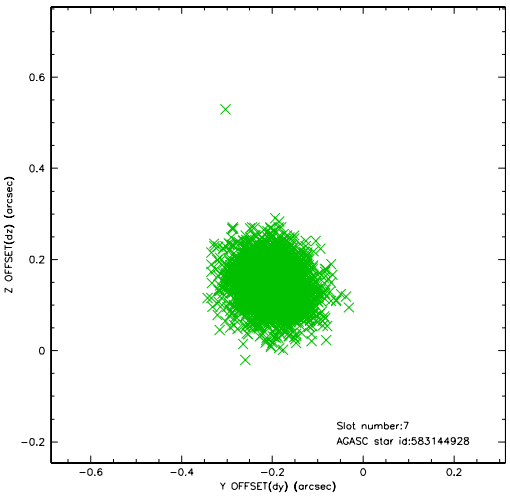
2.4.4 Slot 6

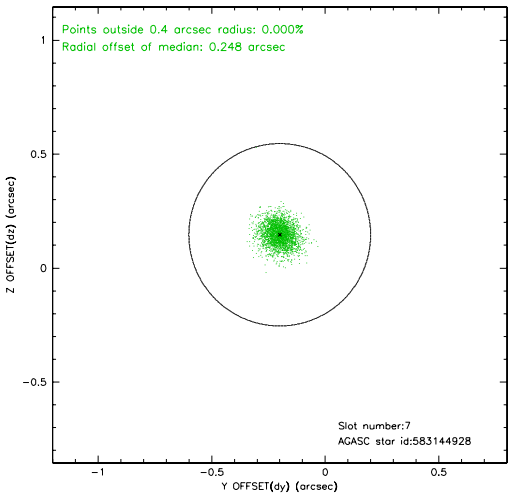

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:583143752

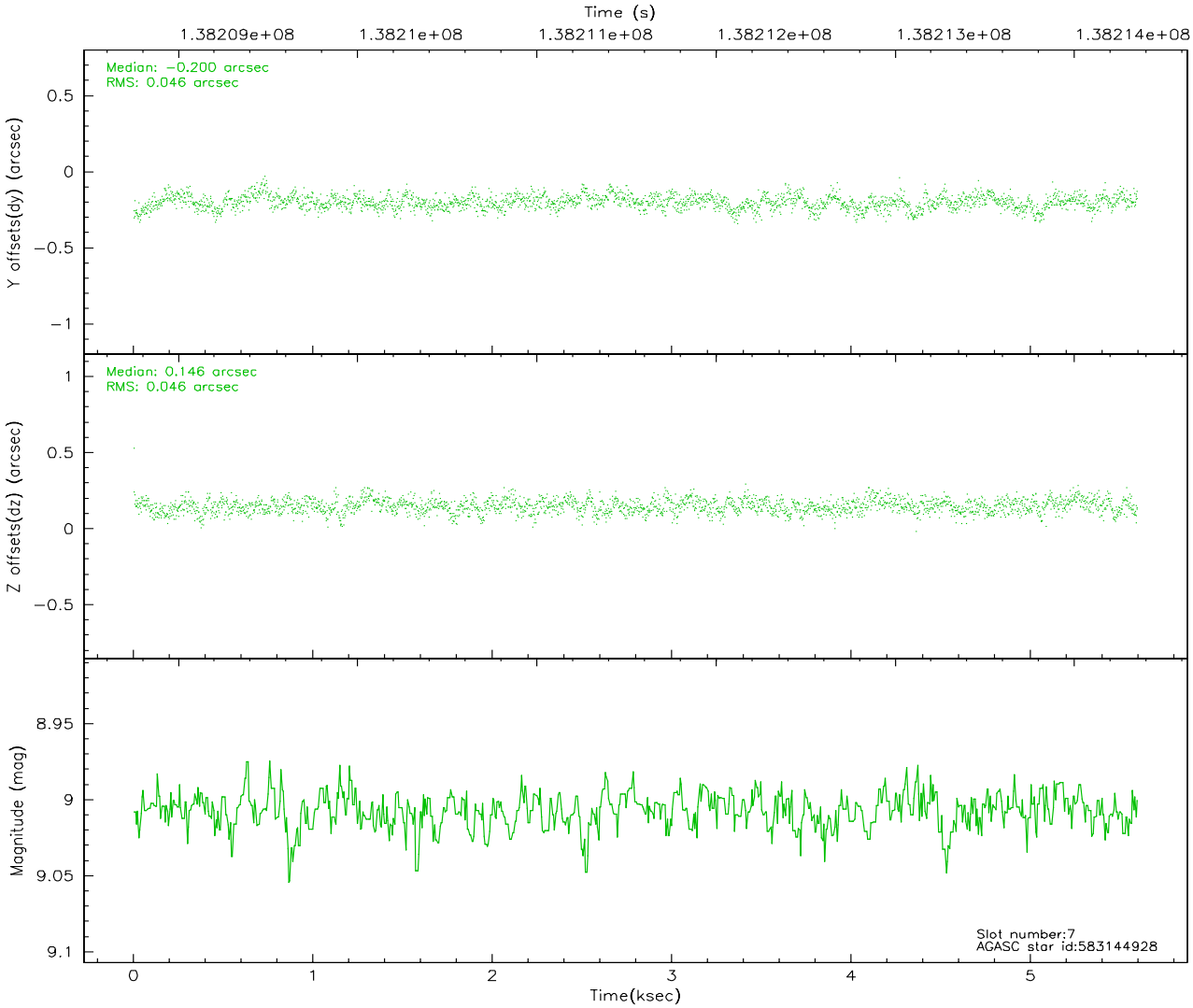

Points outside 0.4 arcsec radius: 0.037%
Radial offset of median: 0.113 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:6
AGASC star id:583143752


Time (s)
1.38209e+08
1.3821e+08
1.38211e+08
1.38212e+08
1.38213e+08
1.38214e+08
Median: 0.113 arcsec
RMS: 0.073 arcsec
Y offsets(dy) (arcsec)
Median: −0.007 arcsec
RMS: 0.048 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:6
AGASC star id:583143752
Time(ksec)

2.4.5 Slot 7

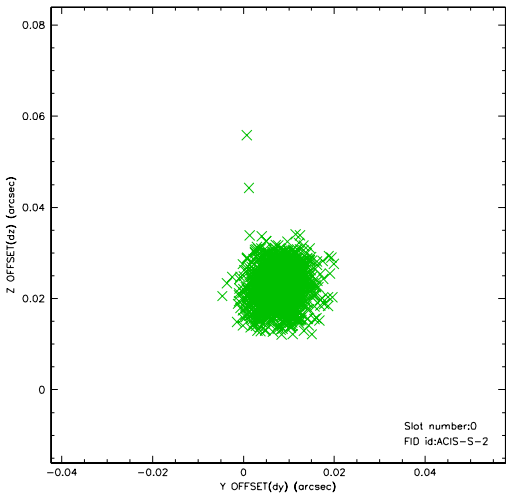

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:583144928

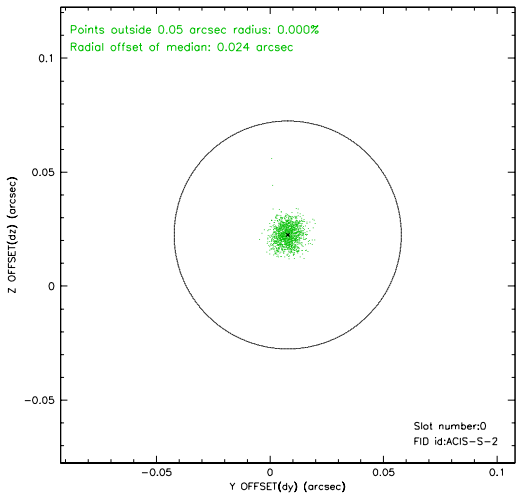

Points outside 0.4 arcsec radius: 0.000%
Radial offset of median: 0.248 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:7
AGASC star id:583144928

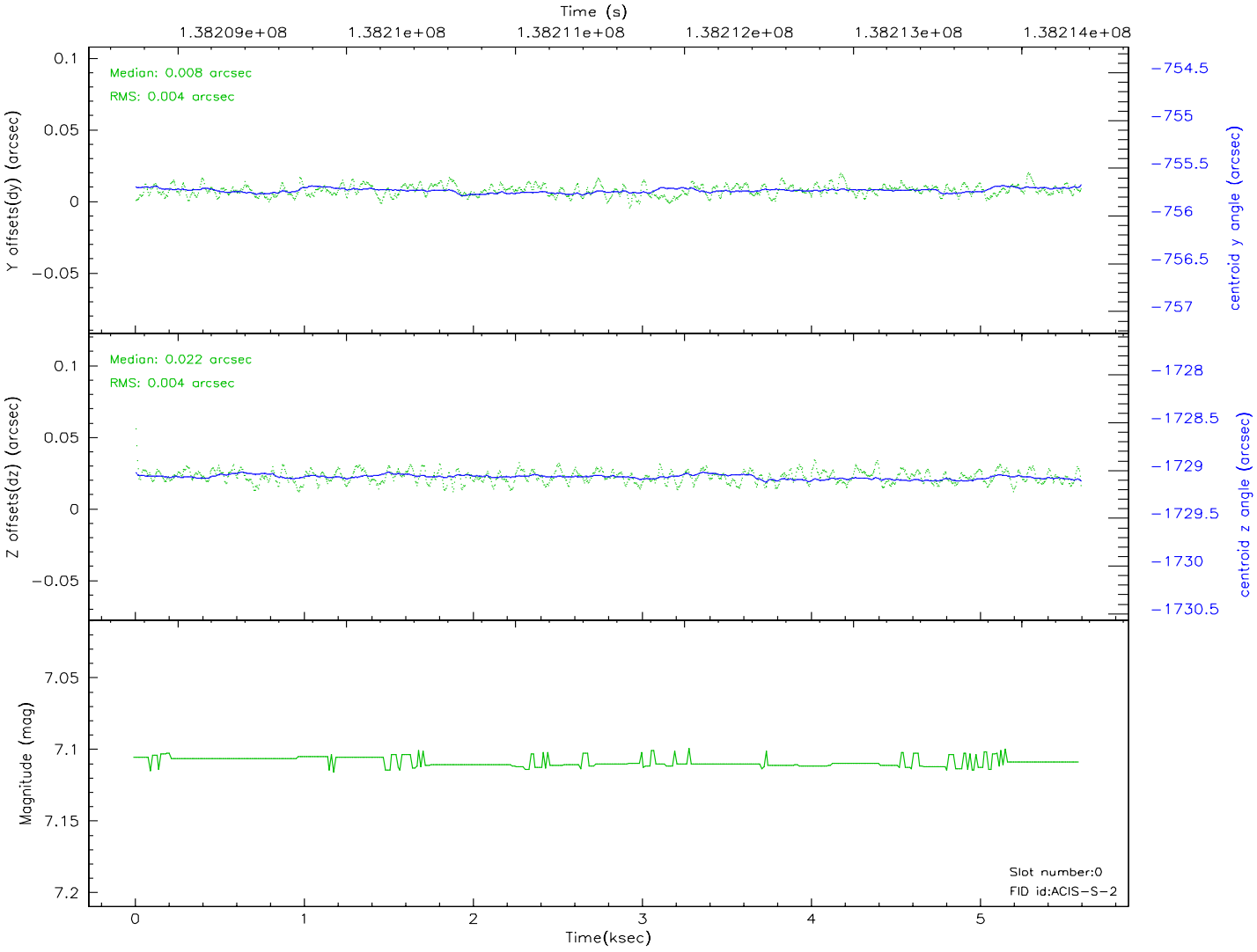

Time (s)
Median: −0.200 arcsec
RMS: 0.046 arcsec
Y offsets(dy) (arcsec)
Median: 0.146 arcsec
RMS: 0.046 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number:7
AGASC star id:583144928
Time(ksec)

2.5 FID Slots

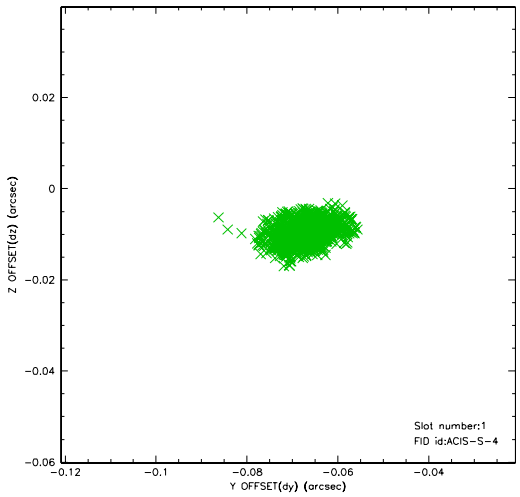
2.5.1 Slot 0

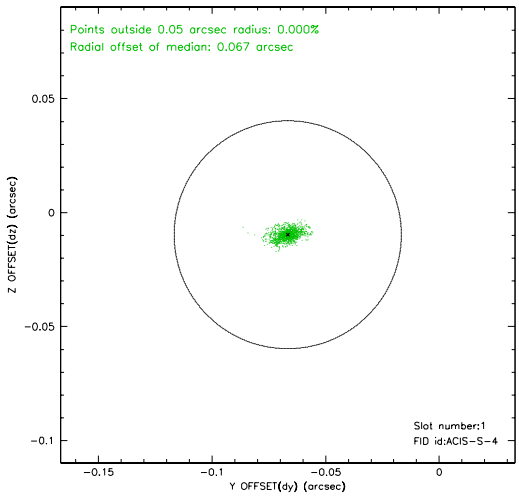


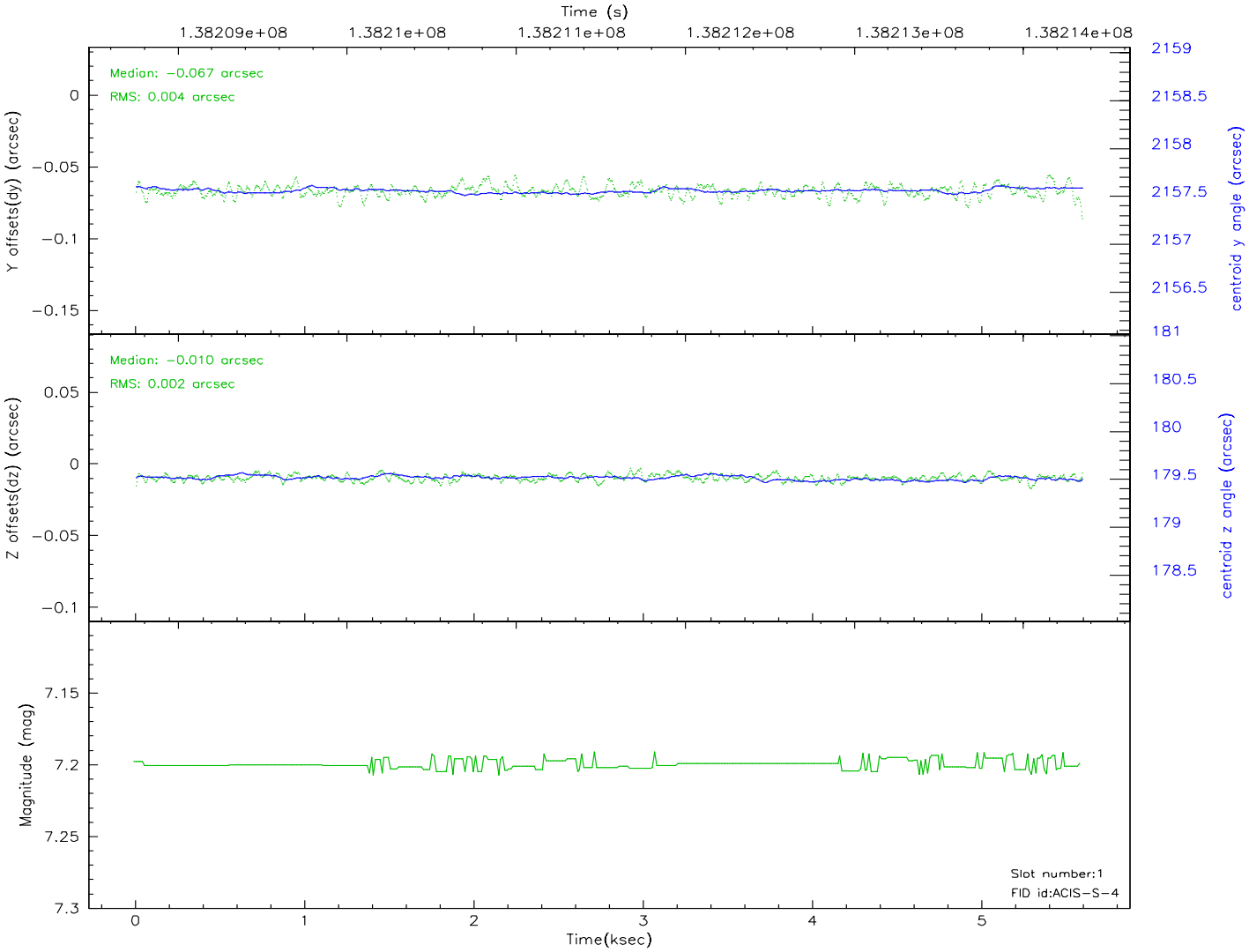




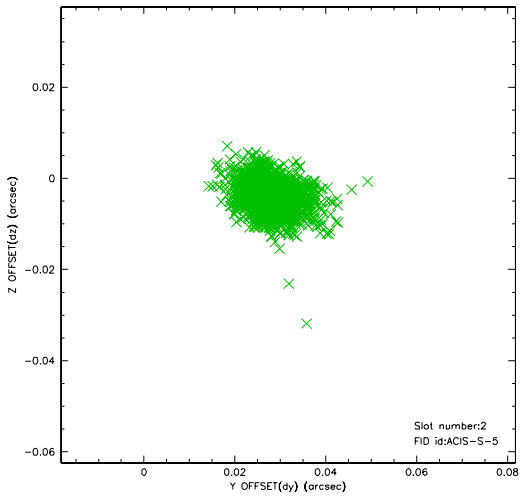
2.5.2 Slot 1

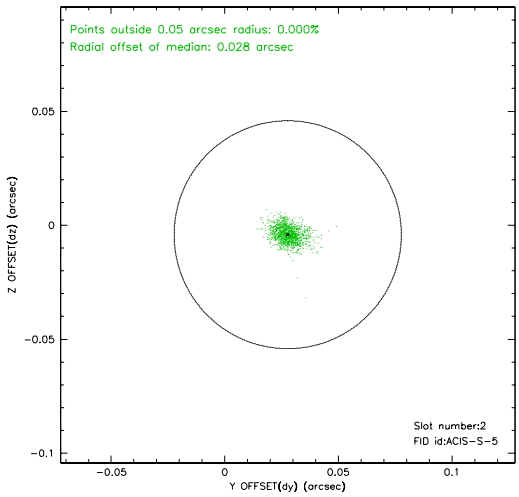

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4

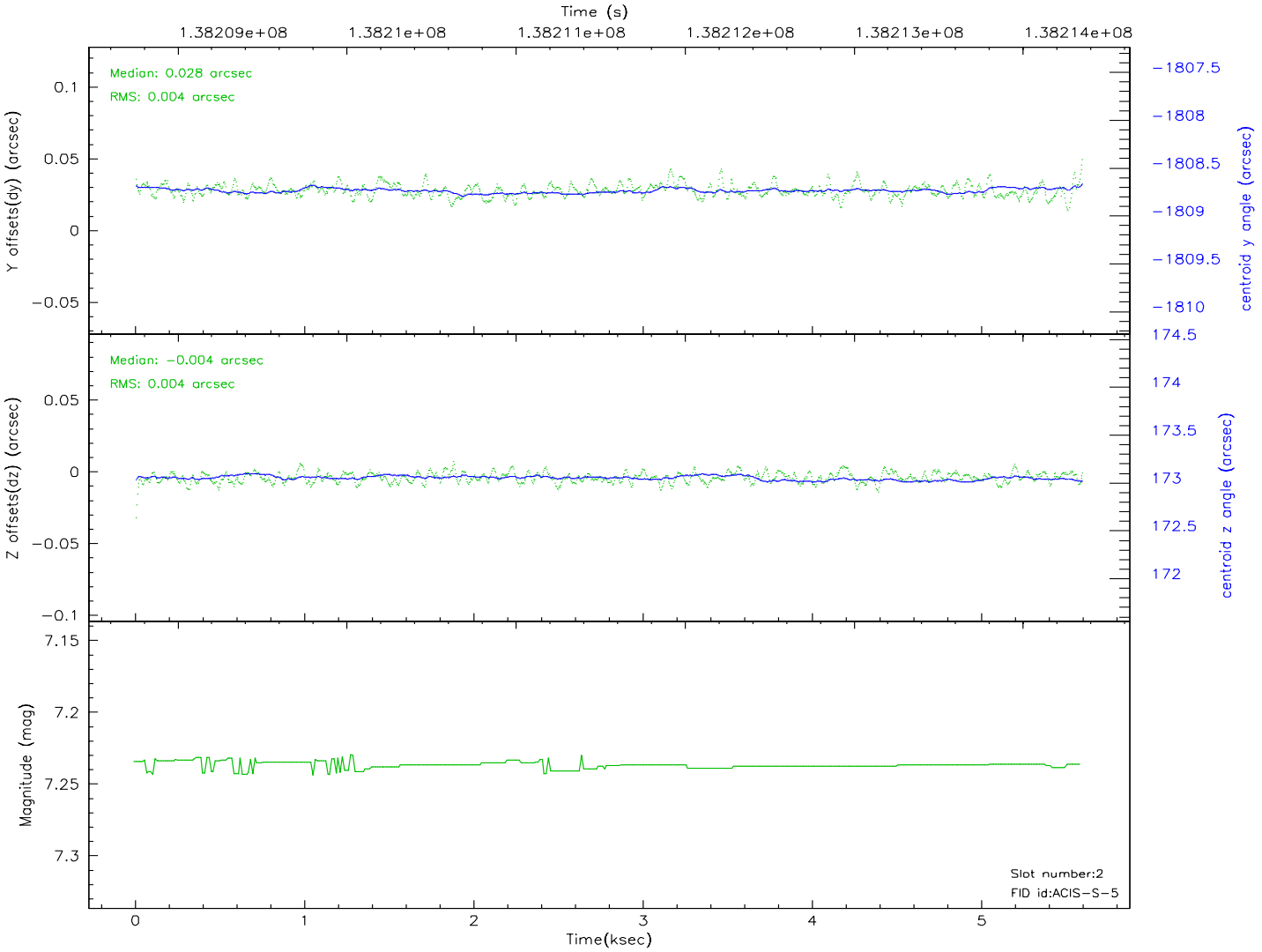

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.067 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number:1
FID id:ACIS-S-4


Time (s)
Median: −0.067 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.010 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)

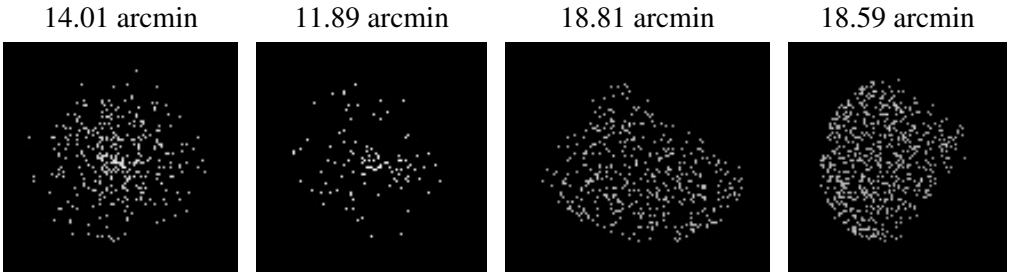
2.5.3 Slot 2


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


Time (s)
Median: 0.028 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
Median: −0.004 arcsec
RMS: 0.004 arcsec
Z offsets(dz) (arcsec)
centroid y angle (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)	2006.09.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.973

A.2 Comments