V&V Reference Report
L2 ASCDS Version : 8.5.1.1

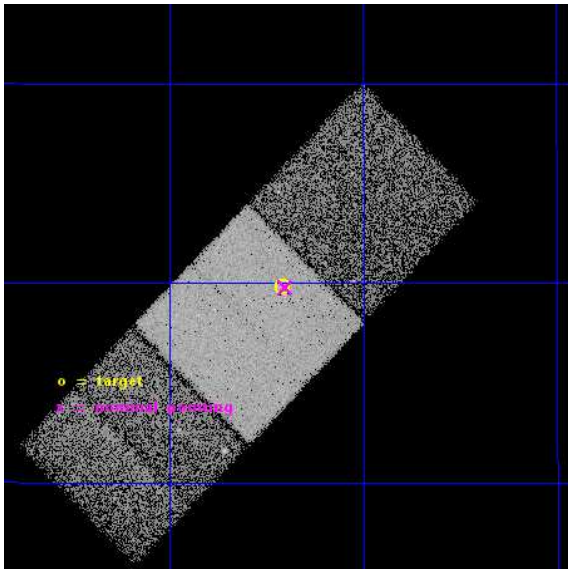
Observation 15016 - L2 Version 2
Chandra X-Ray Center

L2 Processing Date : Nov 30 2014

Contents

1 Front

seq_num	702824	Sequence number
obs_id	15016	Observation id
title	Testing the slim disk scenario for active intermediate mass black holes	Proposal title
observer	Elena Gallo	Principal investigator
object	SDSS J081825.15+472950.3	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	124.605	Observer's specified target RA [deg]
dec_targ	47.497306	Observer's specified target Dec [deg]
ra_nom	124.60059509448	Nominal RA [deg]
dec_nom	47.496680870063	Nominal Dec [deg]
roll_nom	134.48555004532	Nominal Roll [deg]
revision	2	Processing version of data
ontime	25996.600199938	Sum of GTIs [s]
livetime	25656.935479907	Livetime [s]
ontime6	25996.600199938	Sum of GTIs [s]
ontime7	25996.600199938	Sum of GTIs [s]
ontime8	25993.45917958	Sum of GTIs [s]
l2events	110899	Number of level 2 events

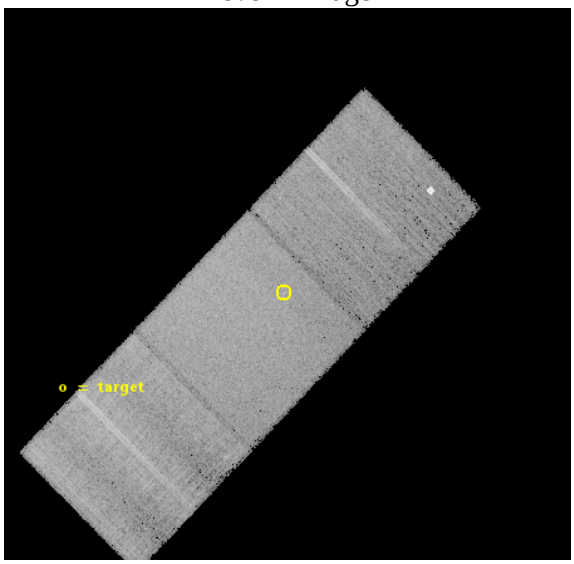


2 OBI

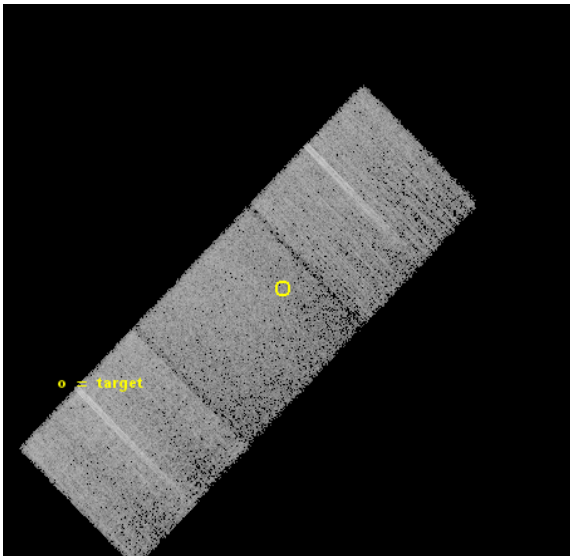
2.1 OBI

2.1.1 Images

Level 1 Image

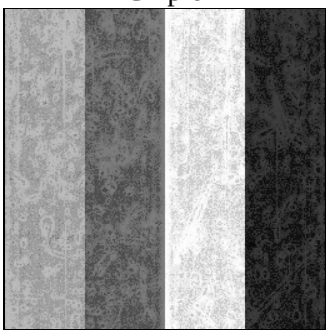


Level 1 Bad Events

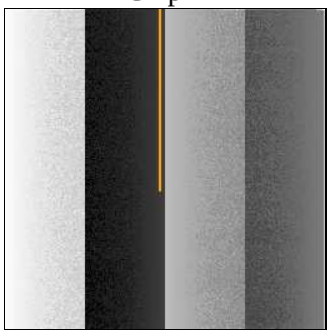


2.1.2 Bias

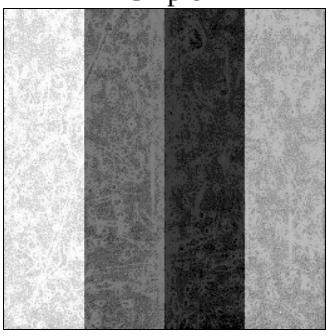
Chip 6



Chip 7



Chip 8



2.1.3 Parameters

obi_num	0	Obi number
ascdsver	10.3	Processing system revision
caldbver	4.6.4	
date	2014-12-01T03:15:05	Date and time of file creation
revision	2	Processing version of data

sched_exp_time	25917.966000	[s] Scheduled observation exposure time
ontime	25996.600199938	Sum of GTIs [s]
ontime6	25996.600199938	Sum of GTIs [s]
ontime7	25996.600199938	Sum of GTIs [s]
ontime8	25993.45917958	Sum of GTIs [s]
l1events	512937	Number of level 1 events

2.1.4 Events

	ccd 6	**ccd 7**	**ccd 8**
level 1 events	142112	184282	186543
rejected events	122045	102818	137763
rejected %	85%	55%	73%

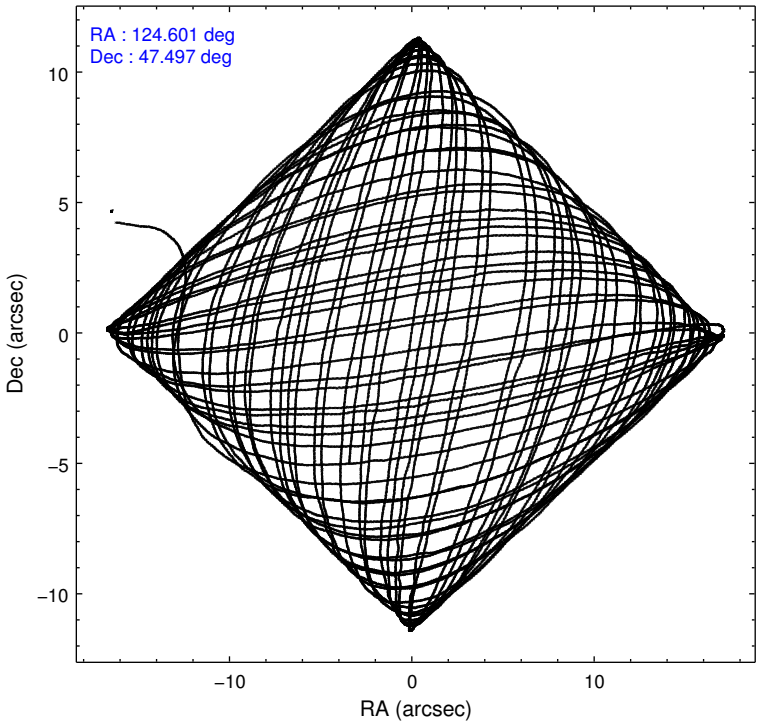
	ccd 6	**ccd 7**	**ccd 8**
grade 0 events	5534	7073	14127
	3%	3%	7%
grade 1 events	76	239	140
	0%	0%	0%
grade 2 events	7160	16705	11589
	5%	9%	6%
grade 3 events	1740	6972	5232
	1%	3%	2%
grade 4 events	1789	7011	4930
	1%	3%	2%
grade 5 events	7136	19295	10422
	5%	10%	5%
grade 6 events	3847	43716	12906
	2%	23%	6%
grade 7 events	114830	83271	127197
	80%	45%	68%

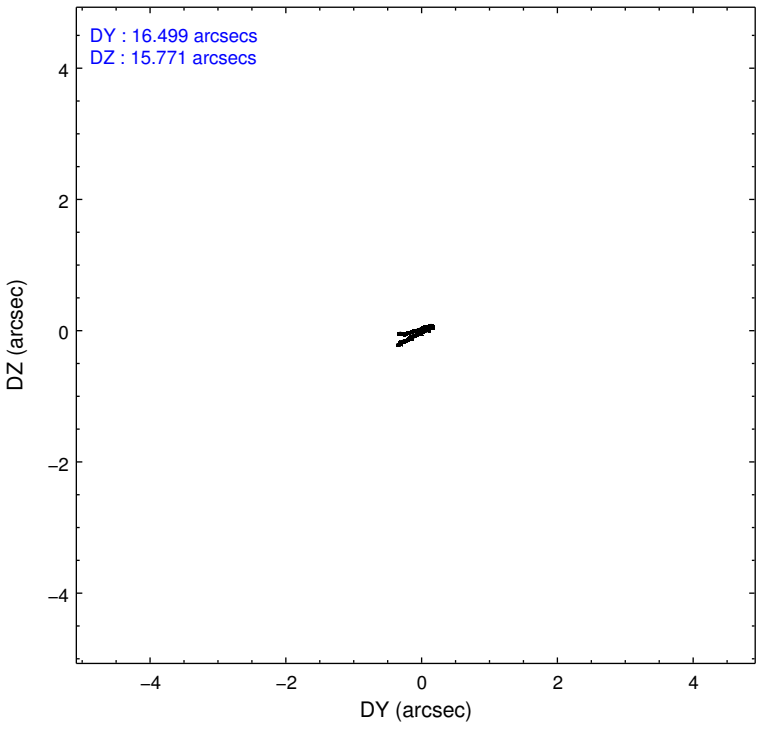
2.2 Compared Parameters

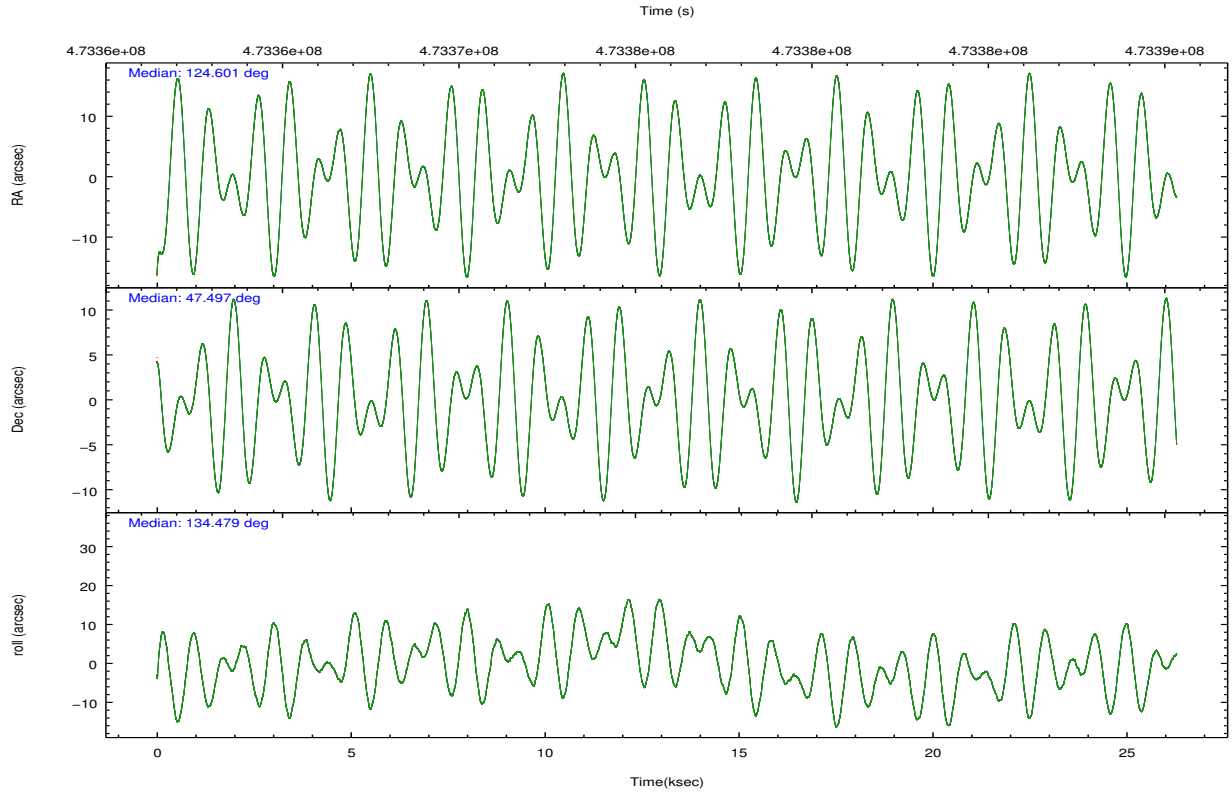
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-678	ACIS-678
Grating	NONE	NONE
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	124.639754	124.6005950944846
[deg] Pointing Dec	47.489712	47.49668087006261
[deg] Pointing Roll	134.300066	134.4855500453213
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1400660498719
[mm] SIM translation stage offset	0	0.00754346686406393
[s] Observation start time (MET)	473363116.184000	473362205.37742
Observation start date	2012-12-31T17:44:09	2012-12-31T17:30:05
[s] Observation end time (MET)	473389034.184000	473389259.74137
Observation end date	2013-01-01T00:56:07	2013-01-01T01:00:59
Read mode	TIMED	TIMED

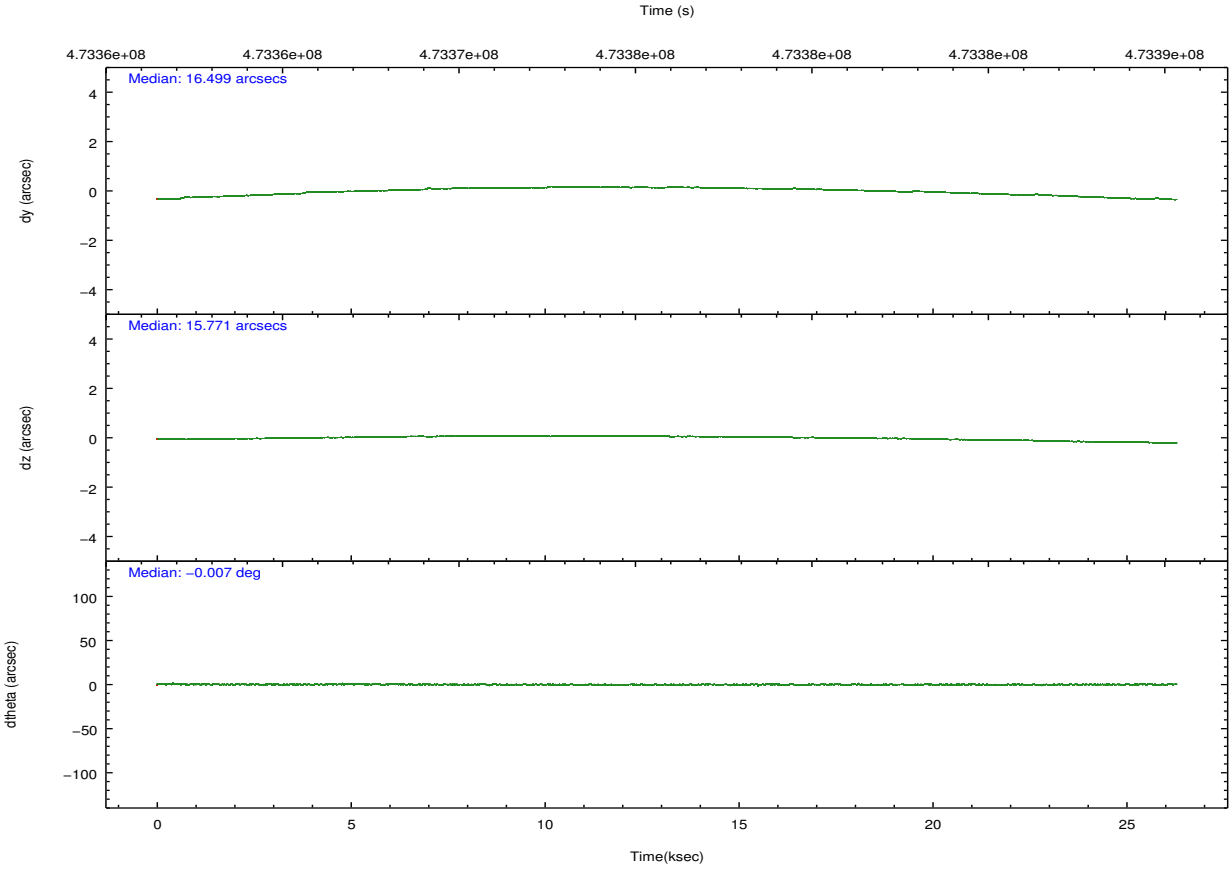
Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	N	N
CCD I1 on	N	N
CCD I2 on	N	N
CCD I3 on	N	N
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O1	Y
CCD S3 on	Y	Y
CCD S4 on	O2	Y
CCD S5 on	N	N
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

2.3 Aspect


RA : 124.601 deg
Dec : 47.497 deg
10
5
0
−5
−10
Dec (arcsec)
−10
0
10
RA (arcsec)


DY : 16.499 arcsecs
DZ : 15.771 arcsecs
4
2
0
−2
−4
DZ (arcsec)
−4
−2
0
2
4
DY (arcsec)


Time (s)
4.7336e+08
4.7336e+08
4.7337e+08
4.7338e+08
4.7338e+08
4.7338e+08
4.7339e+08
Median: 124.601 deg
RA (arcsec)
Median: 47.497 deg
Dec (arcsec)
Median: 134.479 deg
roll (arcsec)
Time(ksec)

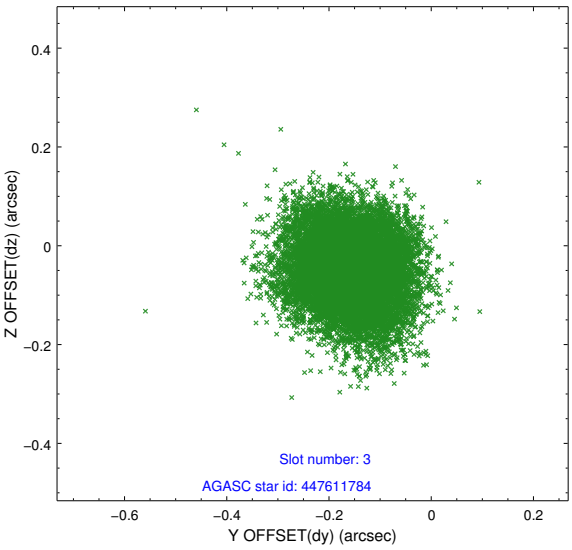

Time (s)
4.7336e+08
4.7336e+08
4.7337e+08
4.7338e+08
4.7338e+08
4.7338e+08
4.7339e+08
Median: 16.499 arcsecs
dy (arcsec)
Median: 15.771 arcsecs
dz (arcsec)
Median: −0.007 deg
dtheta (arcsec)
Time(ksec)

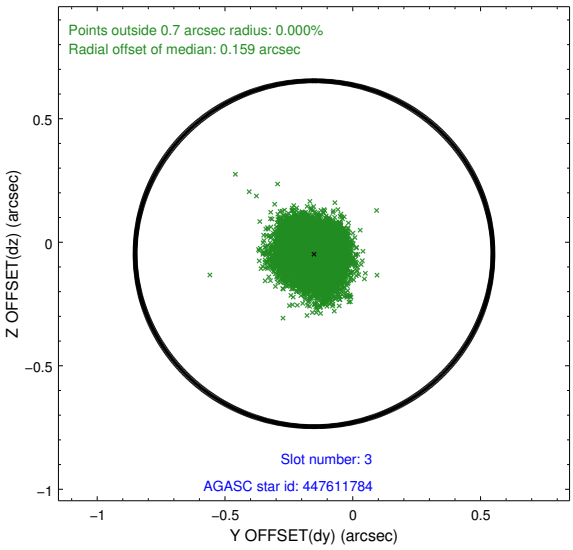
Slot Statistics

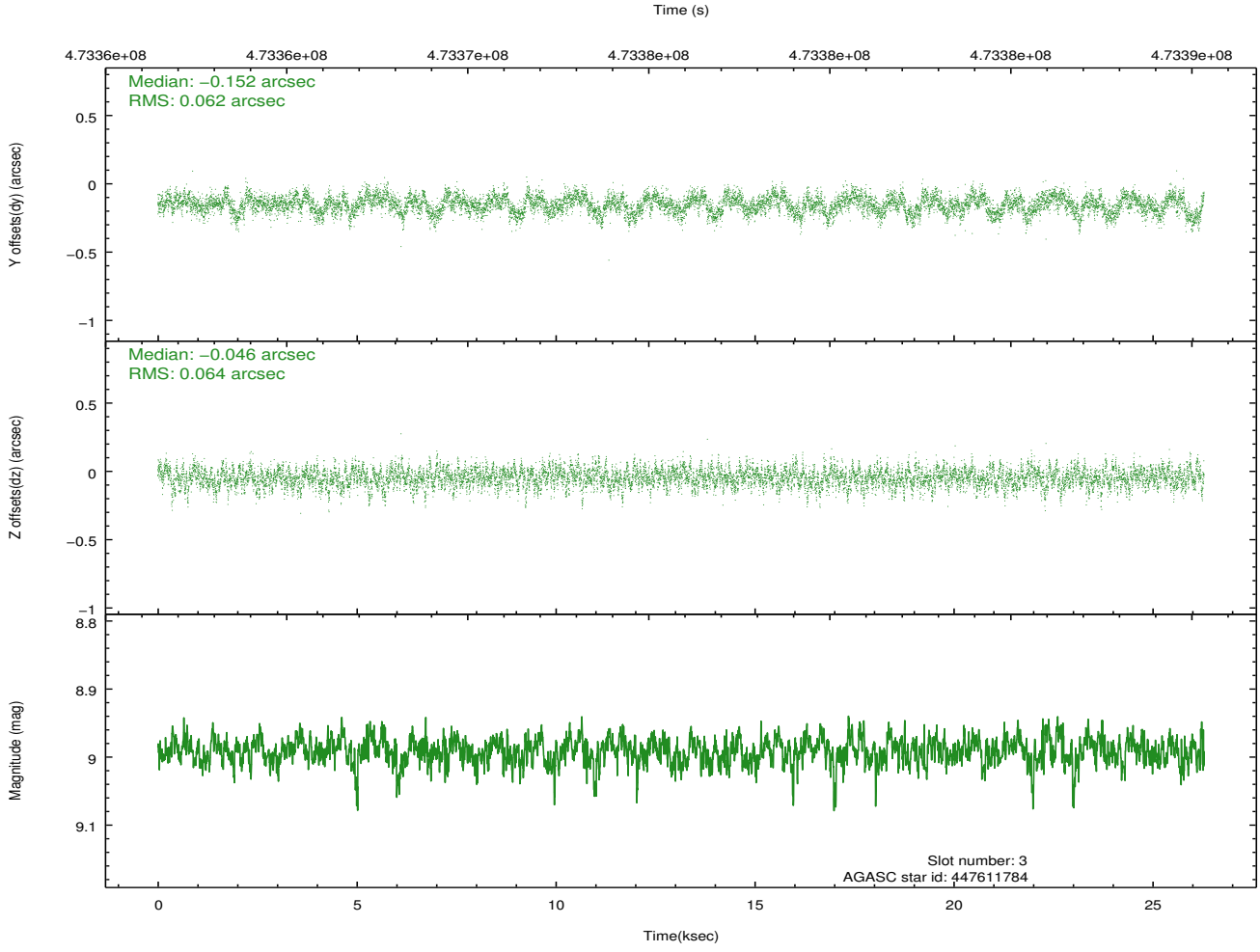
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.09	6413	0.081	-0.105	0.012	0.019	0.000000	0.000000	926.68	-1732.87
1	FID		ACIS-S-5	7.14	6413	-0.132	0.042	0.008	0.013	0.000000	0.000000	-1822.51	164.67
2	FID		ACIS-S-6	7.23	6413	0.030	0.074	0.008	0.012	0.000000	0.000000	392.01	808.82
3	GUIDE	used	447611784	8.99	12814	-0.152	-0.046	0.095	0.153	124.255834	47.313443	201.76	1112.40
4	GUIDE	used	447613688	7.90	12824	0.152	0.230	0.084	0.130	125.250245	47.419076	-1216.05	-890.38
5	GUIDE	used	447616696	7.30	12826	0.037	0.007	0.063	0.106	124.645603	47.034006	-1184.53	1136.00
6	GUIDE	used	448013856	9.12	12793	-0.197	-0.009	0.092	0.150	124.130710	47.533131	978.62	773.91
7	GUIDE	used	447616440	9.01	12753	0.167	-0.176	0.125	0.201	124.384968	46.723979	-1533.04	2374.53

2.4 Star Slots

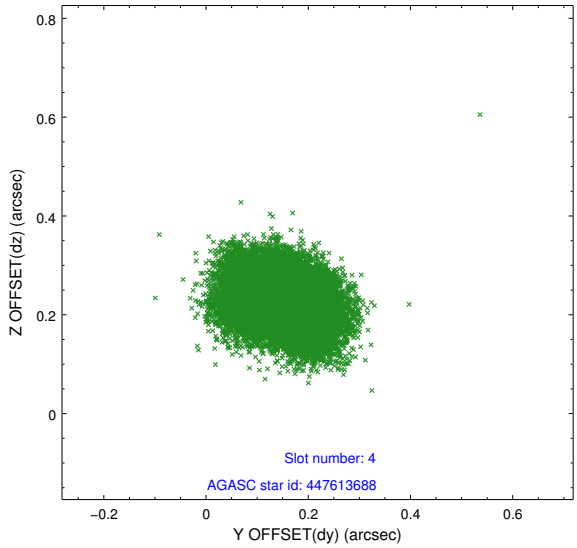
2.4.1 Slot 3

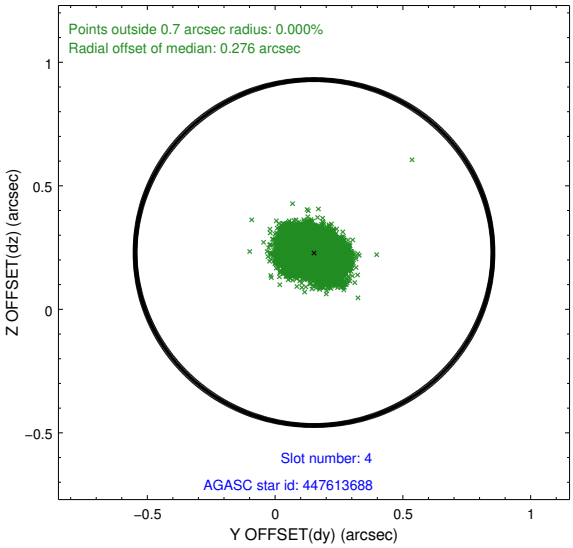


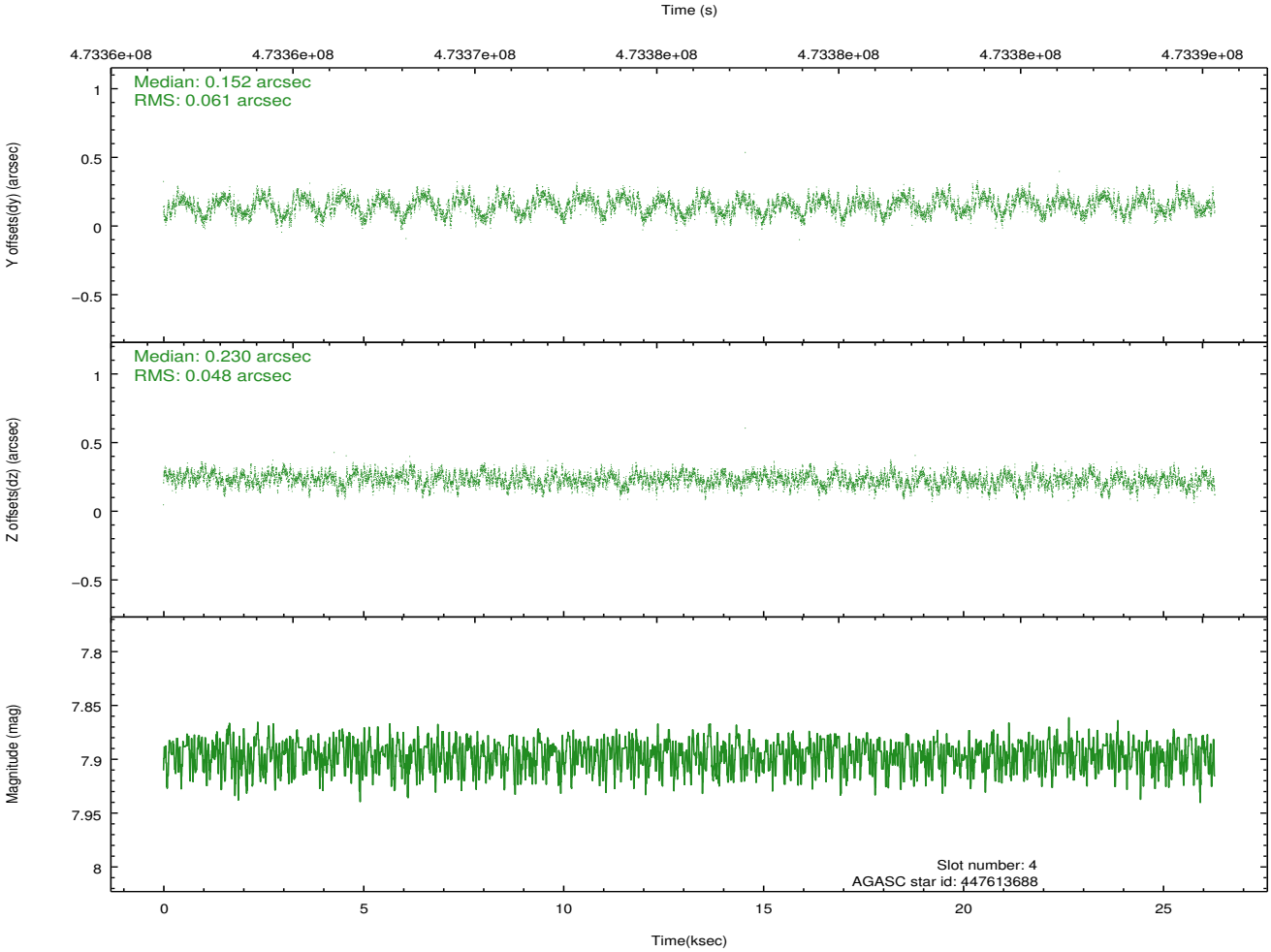




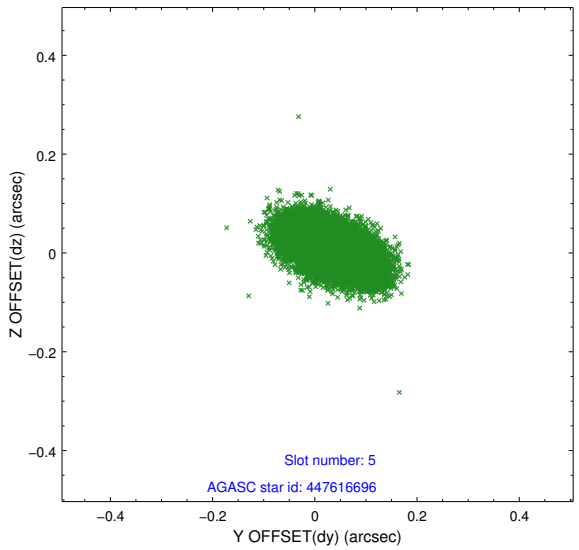
2.4.2 Slot 4

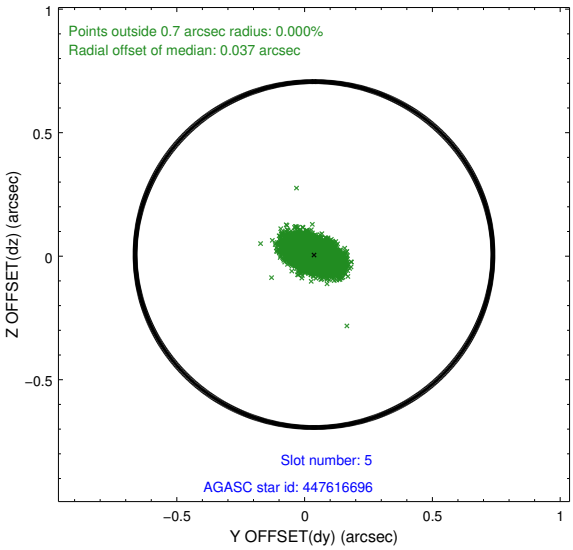

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 447613688

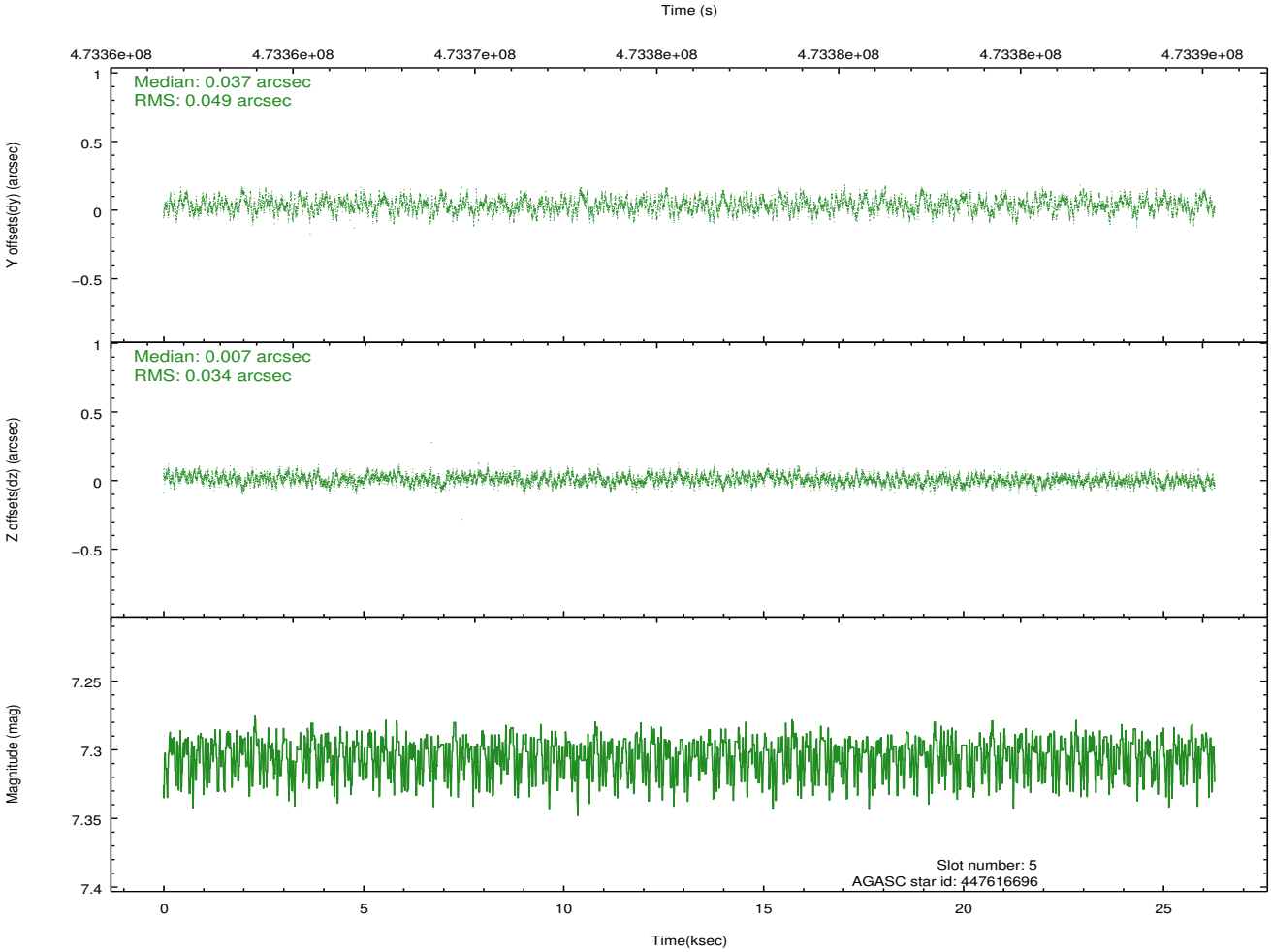

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.276 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 447613688


Time (s)
Median: 0.152 arcsec
RMS: 0.061 arcsec
Y offsets(dy) (arcsec)
Median: 0.230 arcsec
RMS: 0.048 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 4
AGASC star id: 447613688
Time(ksec)

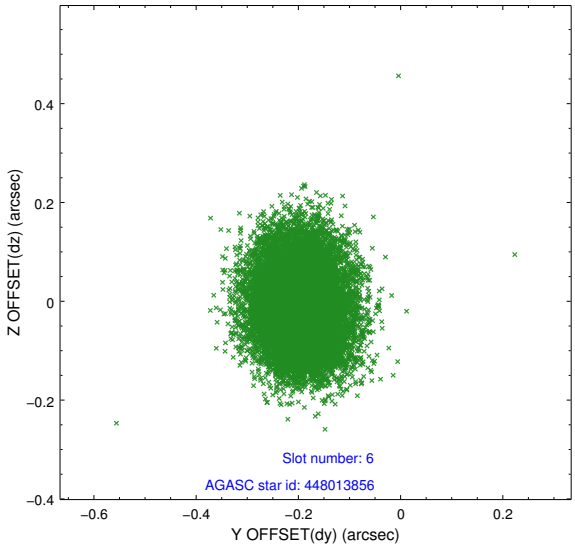
2.4.3 Slot 5

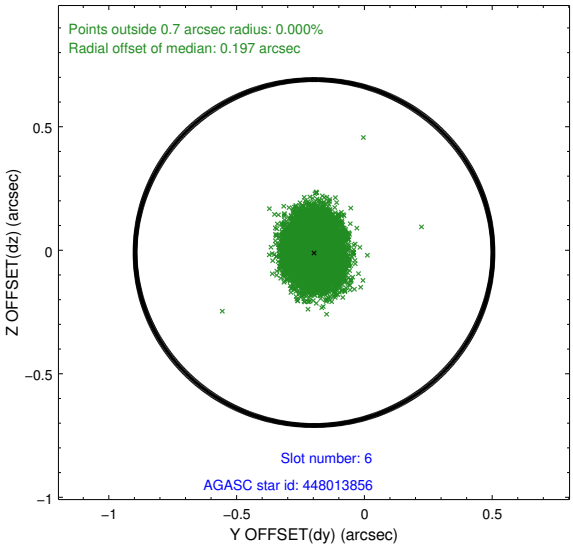

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 447616696

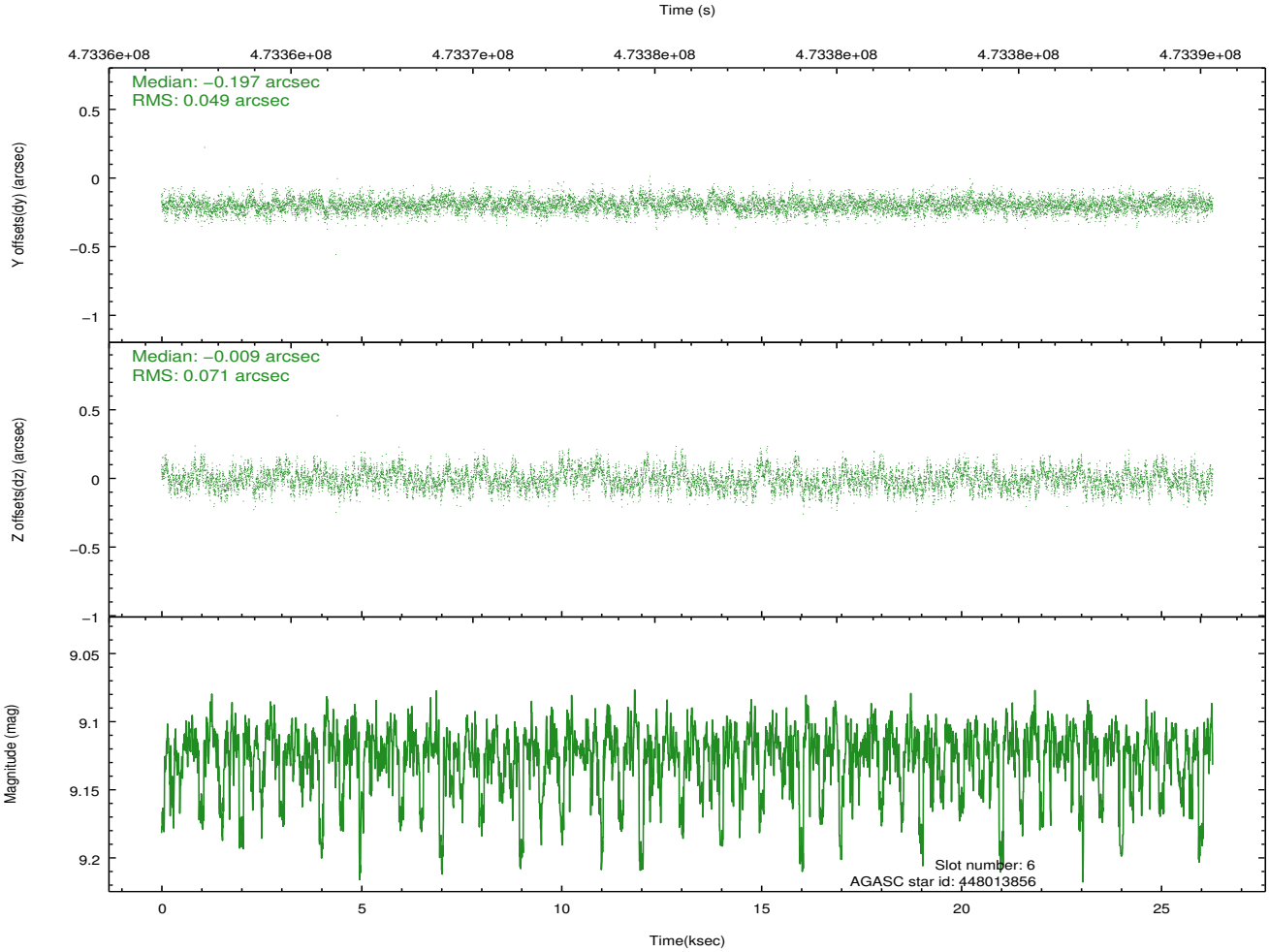

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.037 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 447616696


Time (s)
Median: 0.037 arcsec
RMS: 0.049 arcsec
Y offsets(dy) (arcsec)
Median: 0.007 arcsec
RMS: 0.034 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 5
AGASC star id: 447616696
Time(ksec)

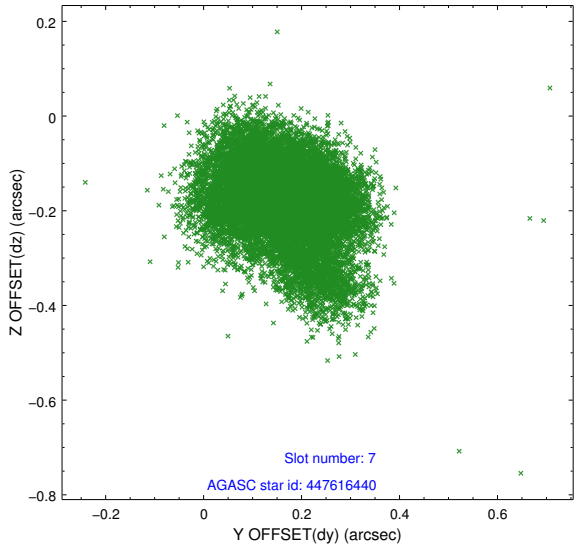
2.4.4 Slot 6

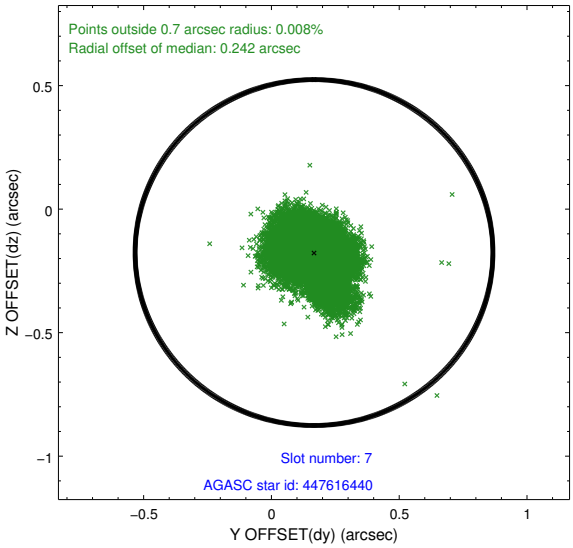

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 448013856

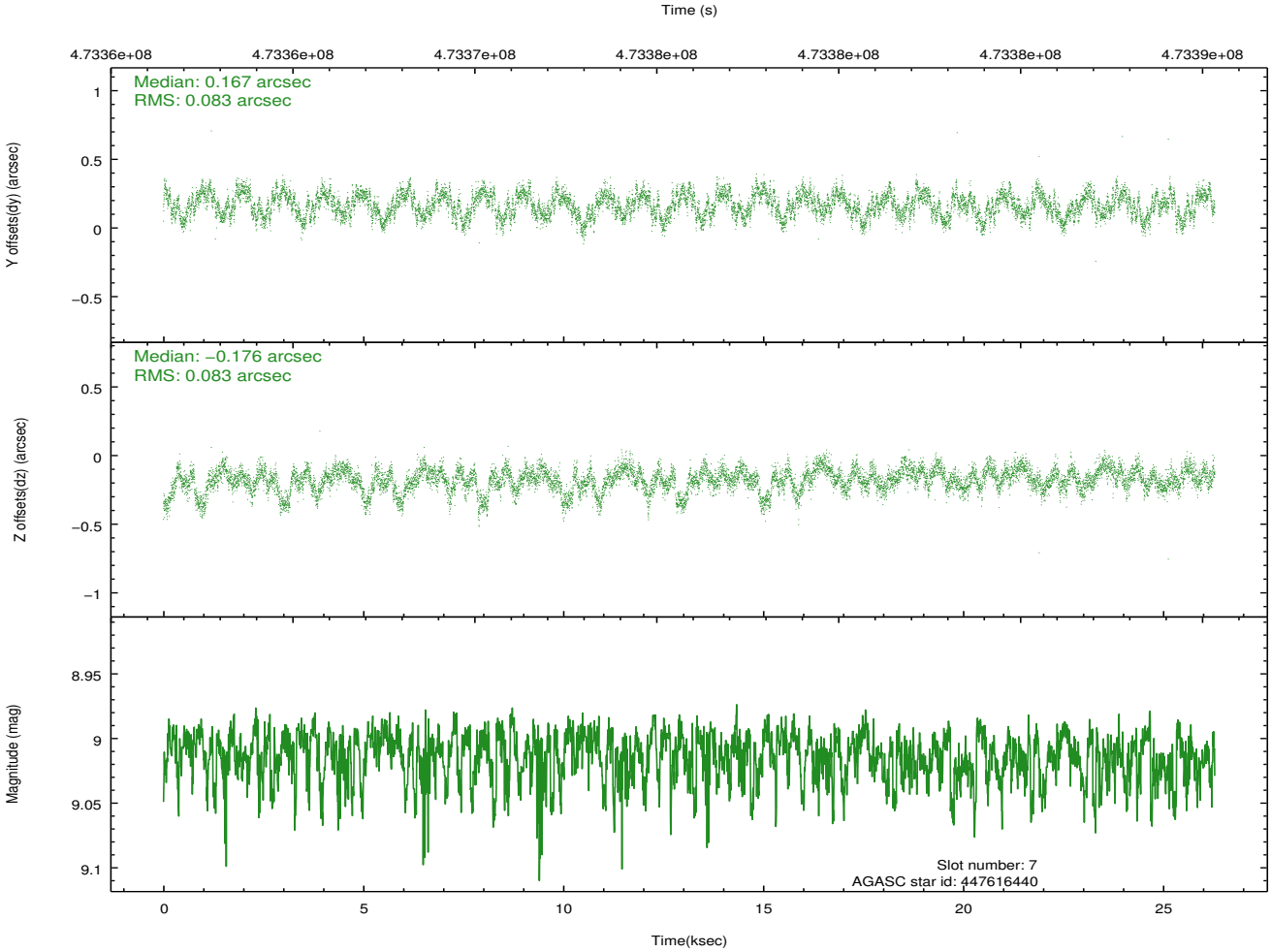

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.197 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 448013856


Time (s)
Median: −0.197 arcsec
RMS: 0.049 arcsec
Y offsets(dy) (arcsec)
Median: −0.009 arcsec
RMS: 0.071 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 6
AGASC star id: 448013856
Time(ksec)

2.4.5 Slot 7

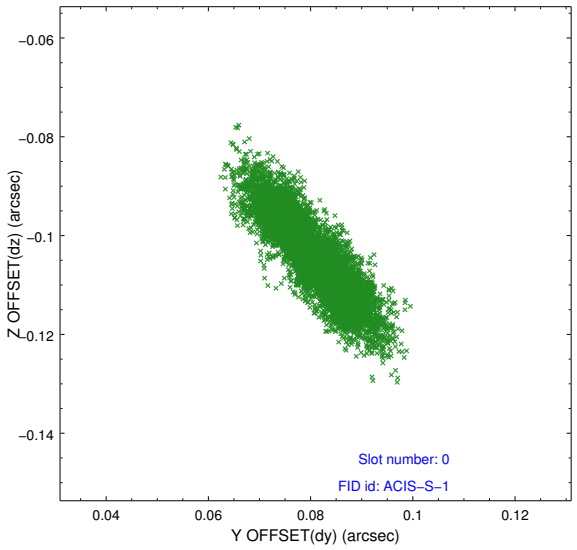

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 447616440

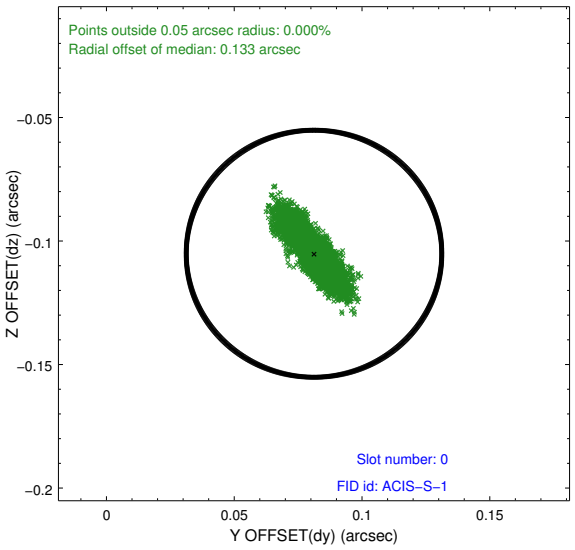

Points outside 0.7 arcsec radius: 0.008%
Radial offset of median: 0.242 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 447616440

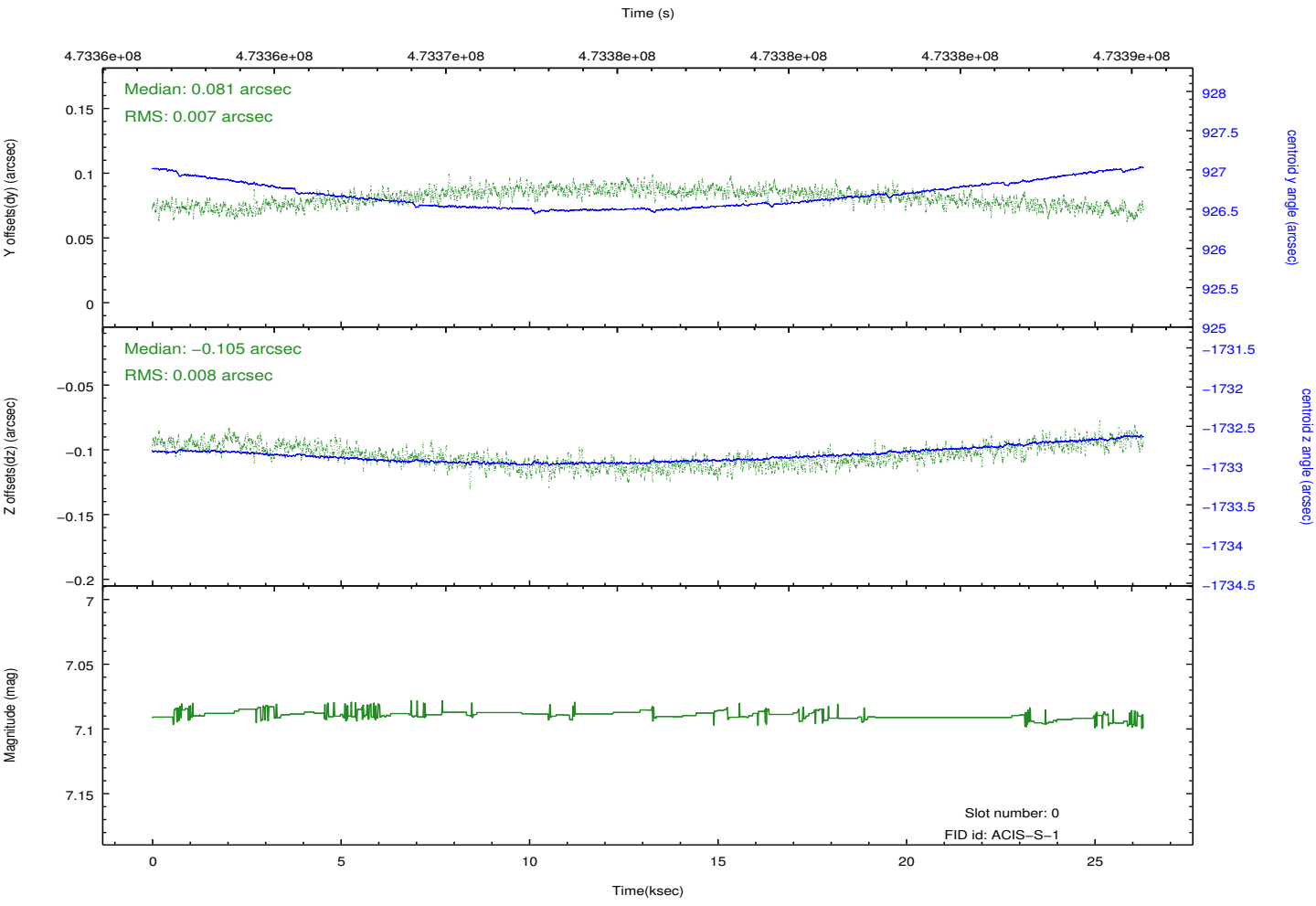

Time (s)
Median: 0.167 arcsec
RMS: 0.083 arcsec
Y offsets(dy) (arcsec)
Median: −0.176 arcsec
RMS: 0.083 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 7
AGASC star id: 447616440
Time(ksec)

2.5 FID Slots

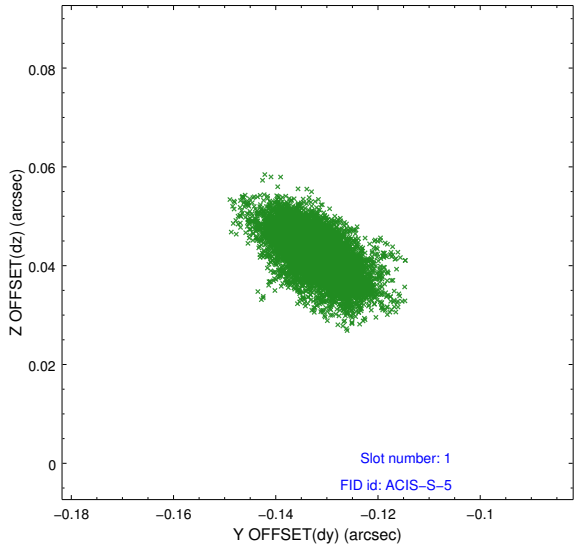
2.5.1 Slot 0

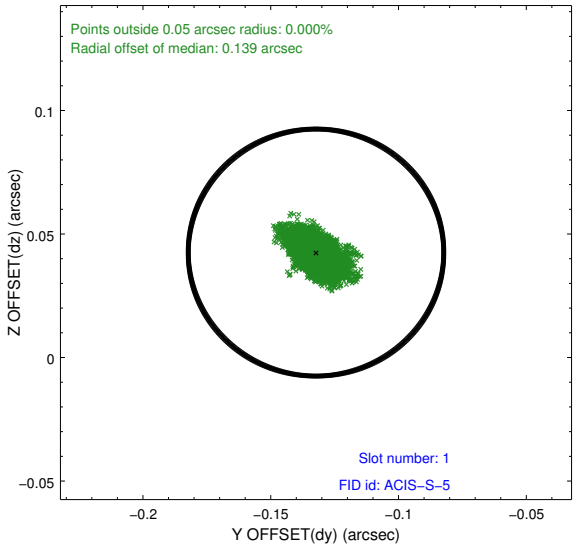


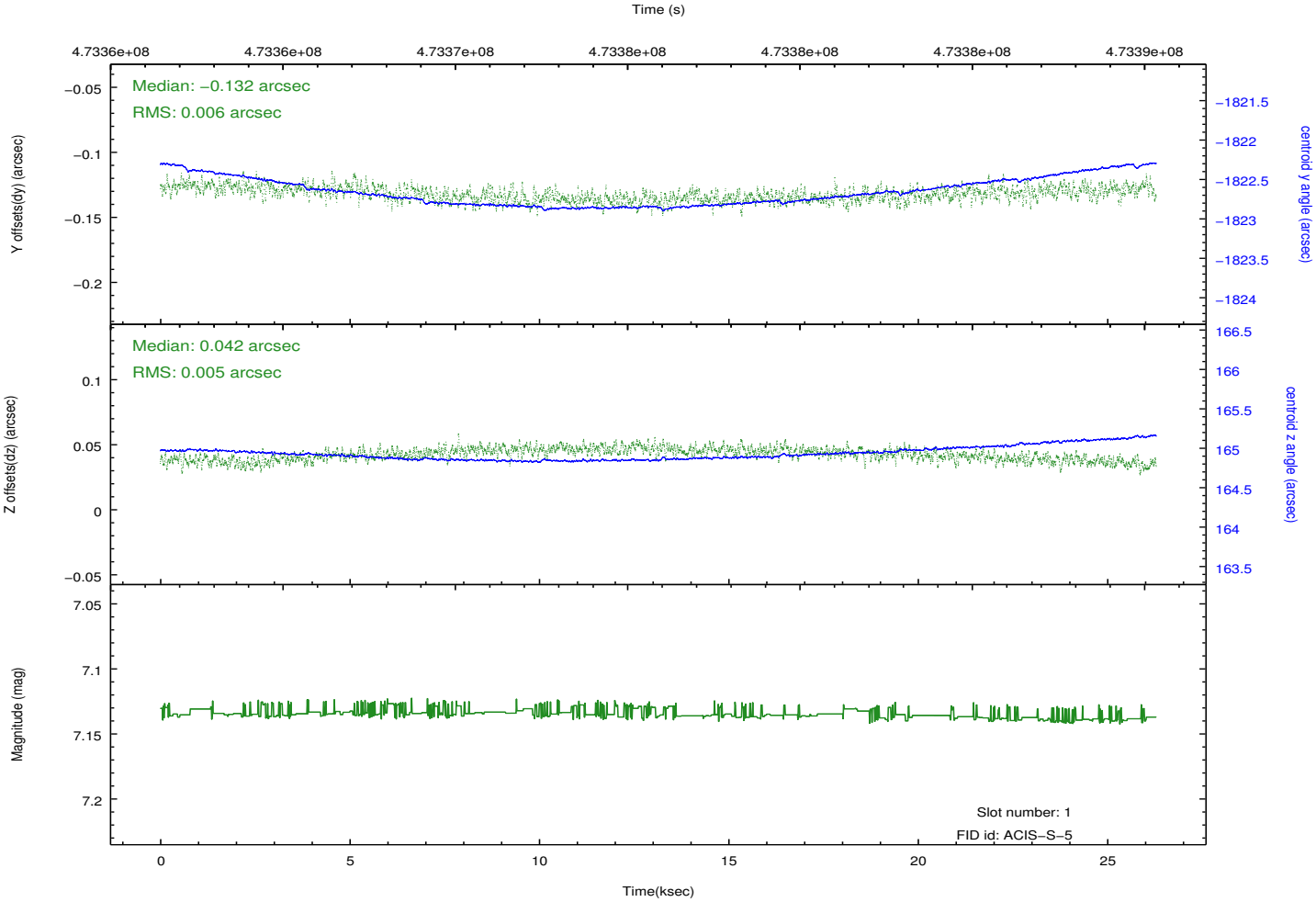




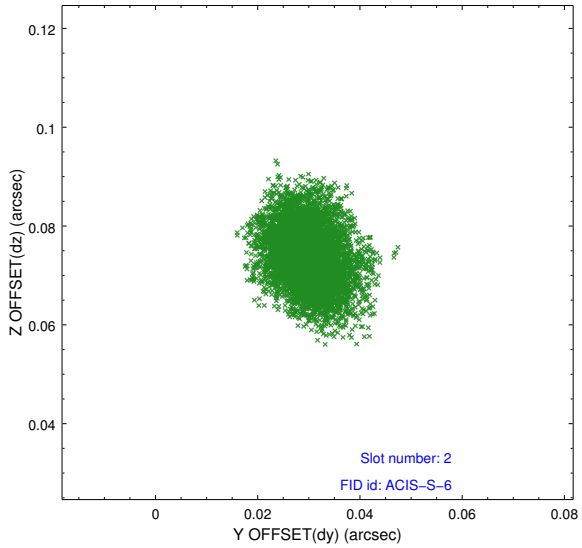
2.5.2 Slot 1

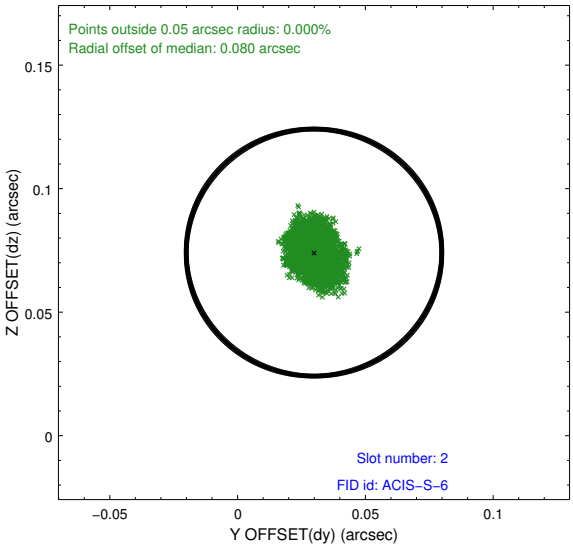

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−5

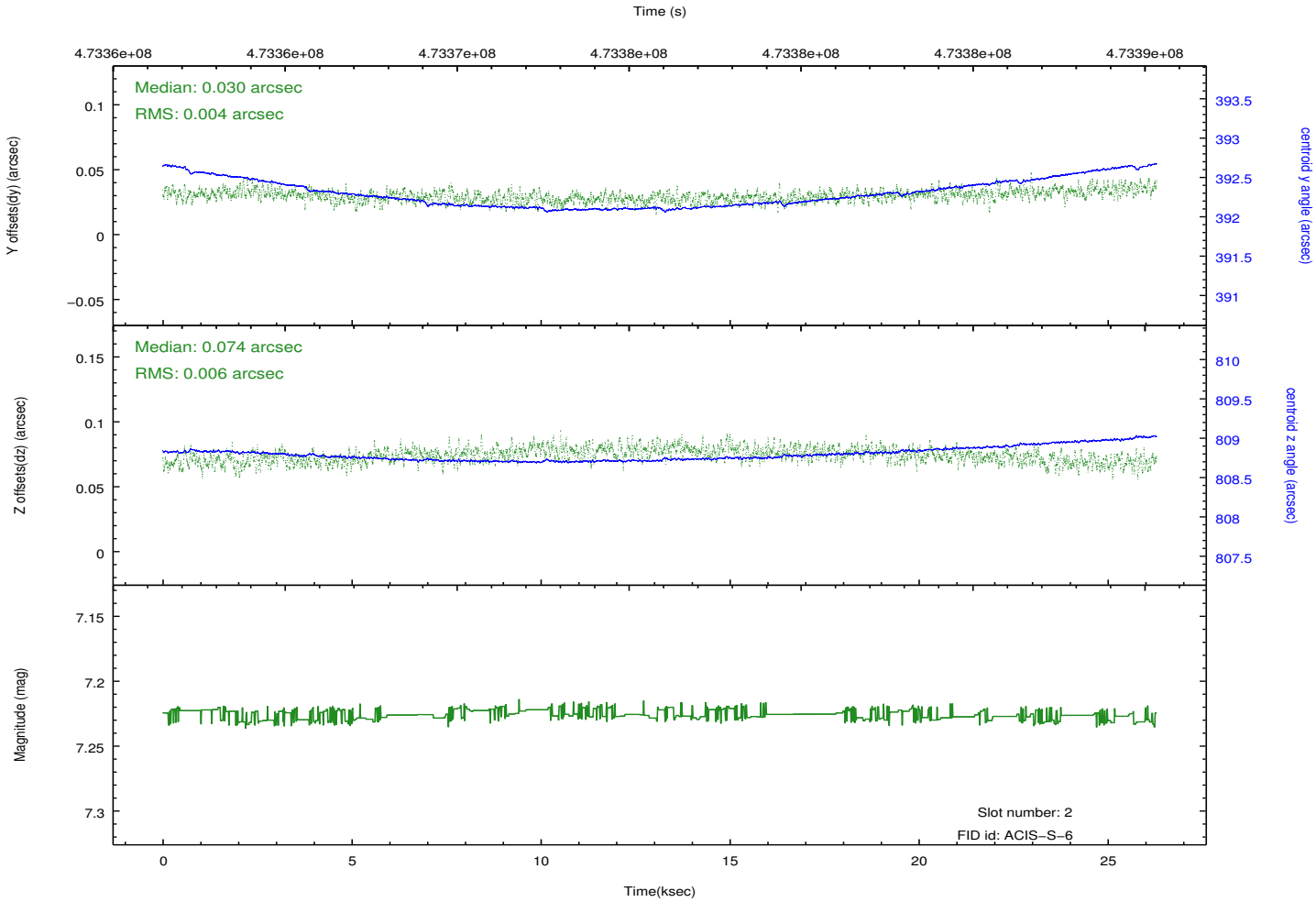

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.139 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−5


Time (s)
Median: −0.132 arcsec
RMS: 0.006 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.042 arcsec
RMS: 0.005 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 1
FID id: ACIS−S−5
Time(ksec)

2.5.3 Slot 2


Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: ACIS−S−6


Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.080 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: ACIS−S−6


Time (s)
Median: 0.030 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.074 arcsec
RMS: 0.006 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 2
FID id: ACIS−S−6
Time(ksec)

A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2014.12.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	25.996600199938

A.2 Comments

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.