V&V Reference Report
L2 ASCDS Version : 10.6.4.1

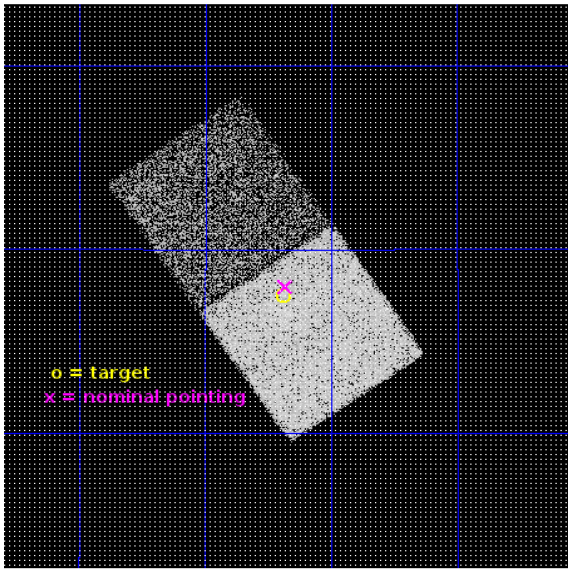
Observation 21863 - L2 Version 1
Chandra X-Ray Center

L2 Processing Date : Oct 4 2018

Contents

1 Front

seq_num	703549	Sequence number
obs_id	21863	Observation id
title	Do the outflow properties in the most luminous quasars correlate with X-ray radiative output and host dynamical state?	Proposal title
observer	Luca Zappacosta	Principal investigator
object	SDSS J0958+2827	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	149.671667	Observer's specified target RA [deg]
dec_targ	28.458194	Observer's specified target Dec [deg]
ra_nom	149.67038316368	Nominal RA [deg]
dec_nom	28.466147418654	Nominal Dec [deg]
roll_nom	55.657263020827	Nominal Roll [deg]
revision	1	Processing version of data
ontime	11232.0	Sum of GTIs [s]
livetime	11080.419856365	Livetime [s]
ontime6	11232.0	Sum of GTIs [s]
ontime7	11232.0	Sum of GTIs [s]
l2events	54736	Number of level 2 events

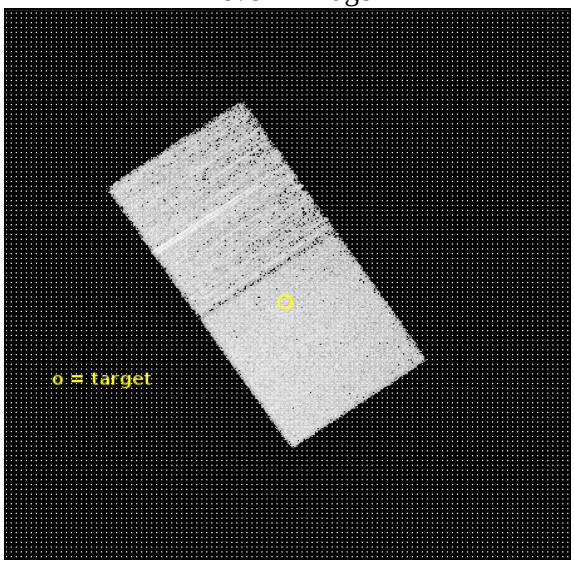


2 OBI

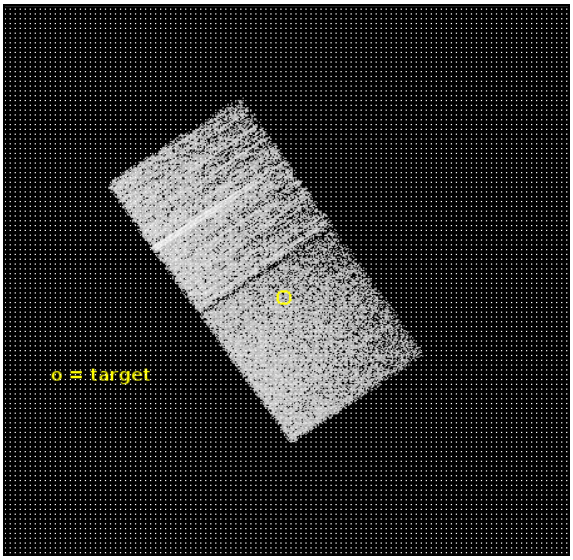
2.1 OBI

2.1.1 Images

Level 1 Image

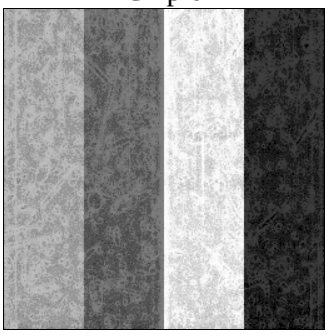


Level 1 Bad Events

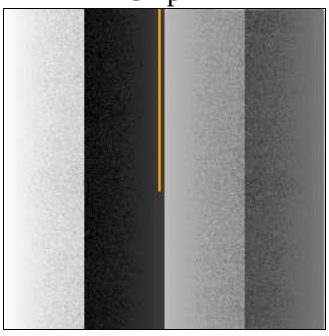


2.1.2 Bias

Chip 6



Chip 7



2.1.3 Parameters

obi_num	0	Obi number
ascdsver	10.6.4.1	Processing system revision
caldbver	4.8.0	
date	2018-10-04T05:22:26	Date and time of file creation
revision	1	Processing version of data

sched_exp_time	11150.000000	[s] Scheduled observation exposure time
ontime	11232.0	Sum of GTIs [s]
ontime6	11232.0	Sum of GTIs [s]
ontime7	11232.0	Sum of GTIs [s]
l1events	192472	Number of level 1 events

2.1.4 Events

	ccd 6	**ccd 7**
level 1 events	84902	107570
rejected events	75089	60146
rejected %	88%	55%

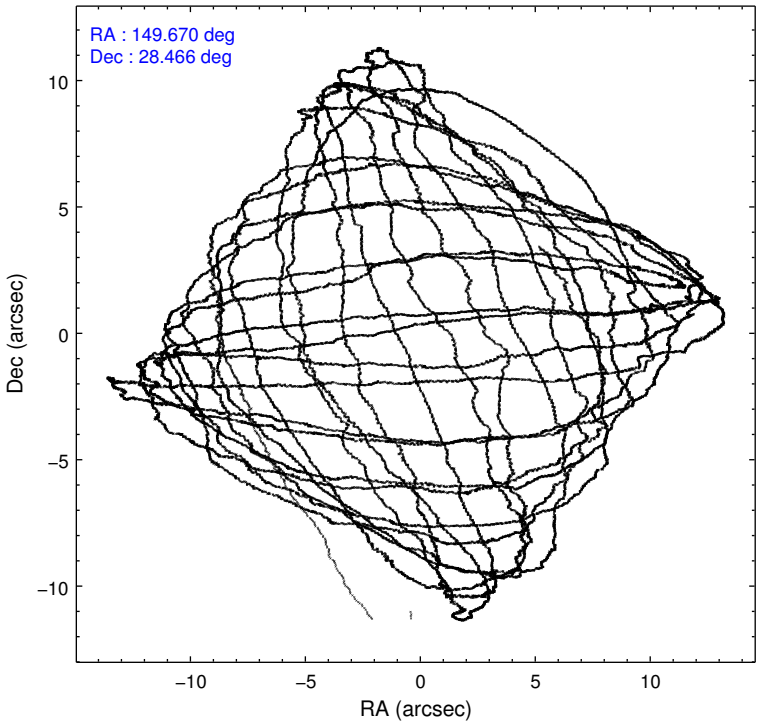
	ccd 6	**ccd 7**
grade 0 events	3271	3998
	3%	3%
grade 1 events	39	152
	0%	0%
grade 2 events	2344	10348
	2%	9%
grade 3 events	972	3812
	1%	3%
grade 4 events	982	3714
	1%	3%
grade 5 events	4005	10638
	4%	9%
grade 6 events	2247	25565
	2%	23%
grade 7 events	71042	49343
	83%	45%

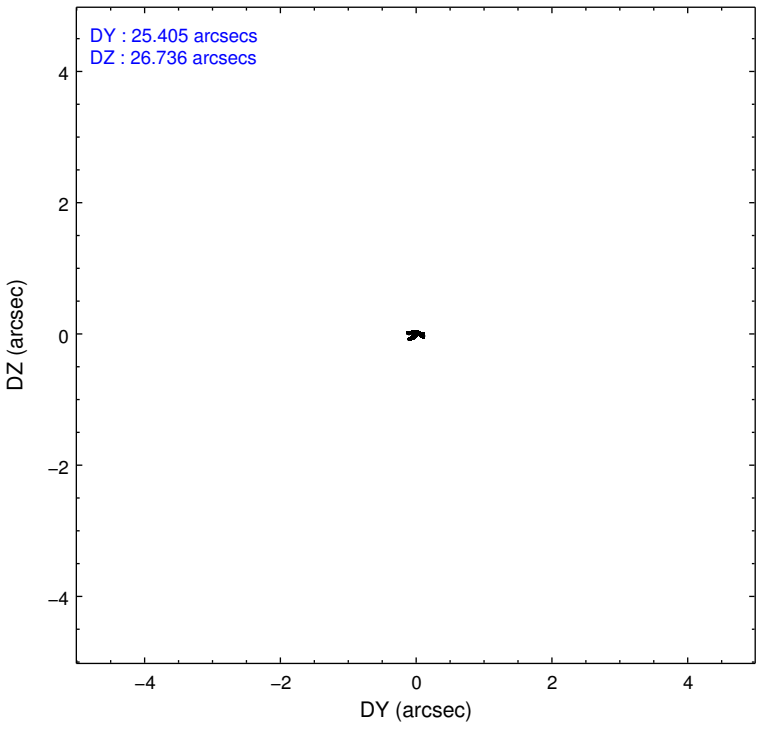
2.2 Compared Parameters

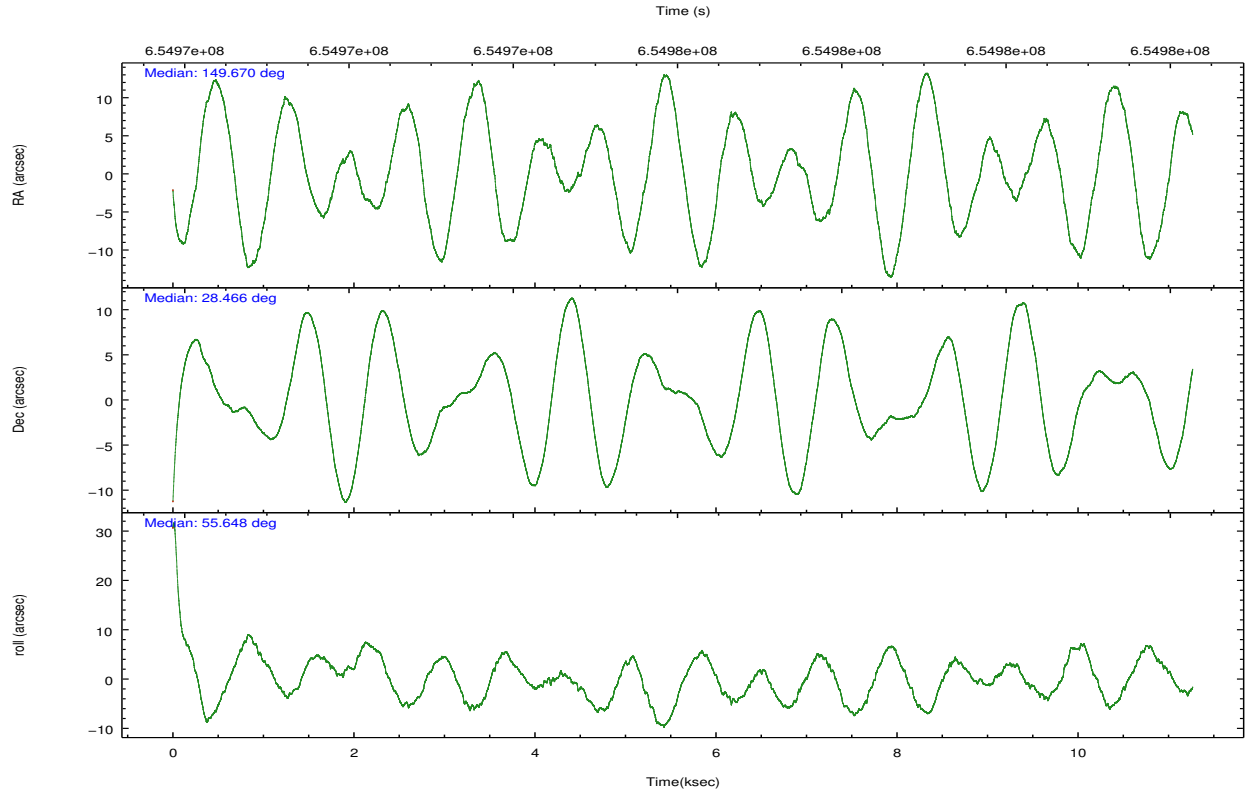
Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-67	ACIS-67
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	149.668434	149.6703831636812
[deg] Pointing Dec	28.438760	28.46614741865412
[deg] Pointing Roll	55.501540	55.65726302082655
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1425803651734
[mm] SIM translation stage offset	0	0.01005778216563158
[s] Observation start time (MET)	654970565.184000	654969427.06012
Observation start date	2018-10-03T16:14:56	2018-10-03T15:57:07
[s] Observation end time (MET)	654981715.184000	654982828.42342
Observation end date	2018-10-03T19:20:46	2018-10-03T19:40:28
Read mode	TIMED	TIMED

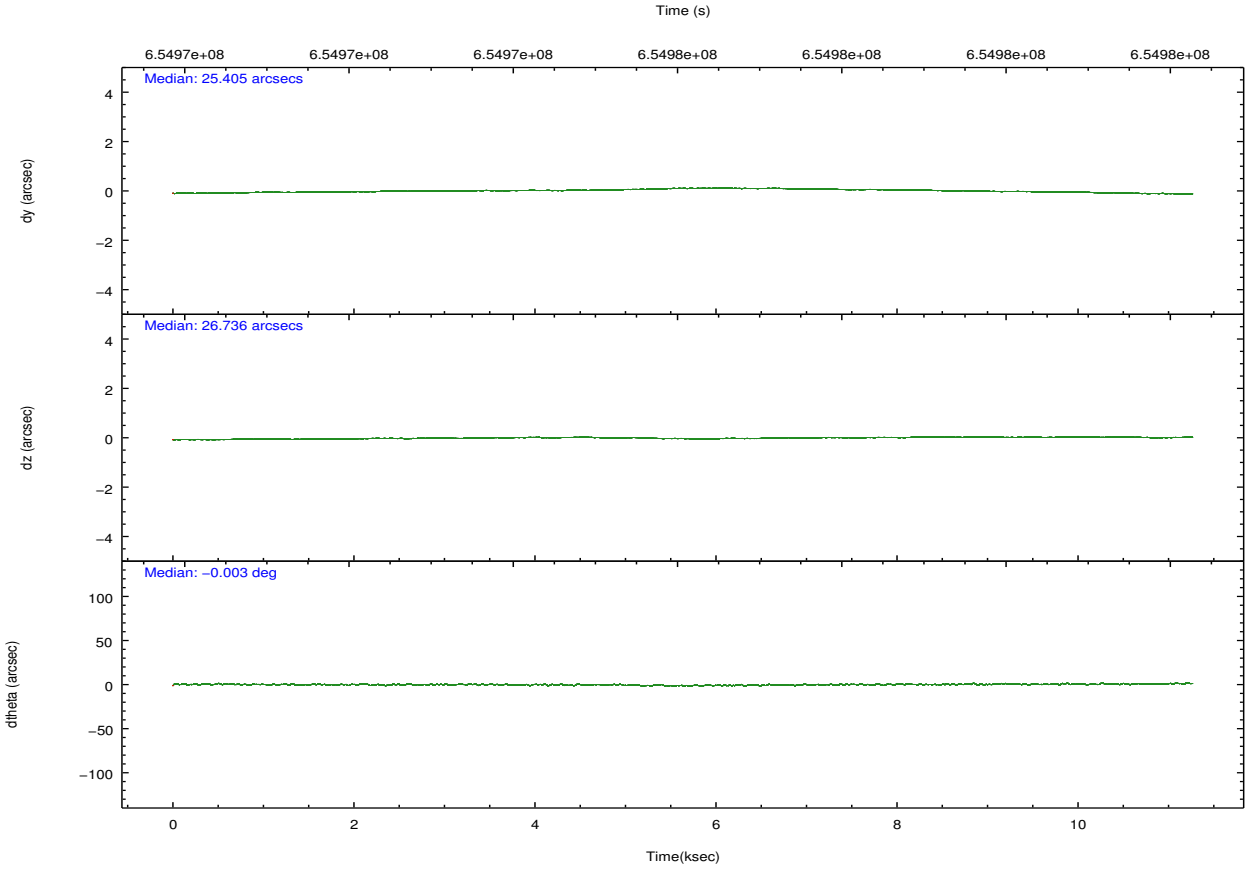
Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3

2.3 Aspect


RA : 149.670 deg
Dec : 28.466 deg
Dec (arcsec)
RA (arcsec)
10
5
0
−5
−10
−10
−5
0
5
10


DY : 25.405 arcsecs
DZ : 26.736 arcsecs
DZ (arcsec)
DY (arcsec)
4
2
0
−2
−4
−4
−2
0
2
4


Time (s)
6.5497e+08
6.5497e+08
6.5497e+08
6.5498e+08
6.5498e+08
6.5498e+08
6.5498e+08
Median: 149.670 deg
RA (arcsec)
Median: 28.466 deg
Dec (arcsec)
Median: 55.648 deg
roll (arcsec)
Time(ksec)

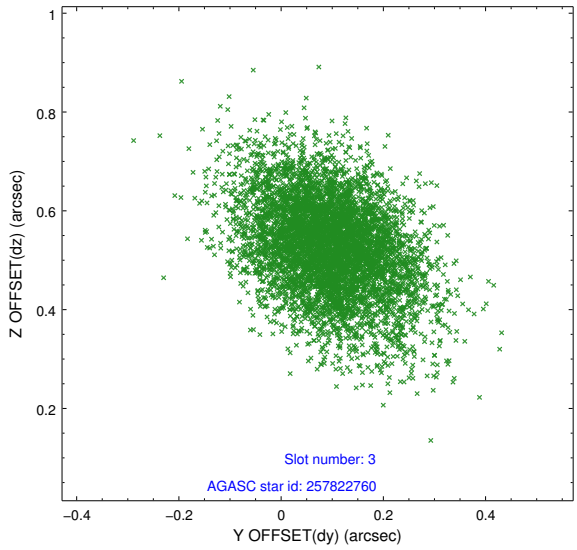

Time (s)
6.5497e+08
6.5497e+08
6.5497e+08
6.5498e+08
6.5498e+08
6.5498e+08
6.5498e+08
Median: 25.405 arcsecs
dy (arcsec)
Median: 26.736 arcsecs
dz (arcsec)
Median: −0.003 deg
dtheta (arcsec)
Time(ksec)

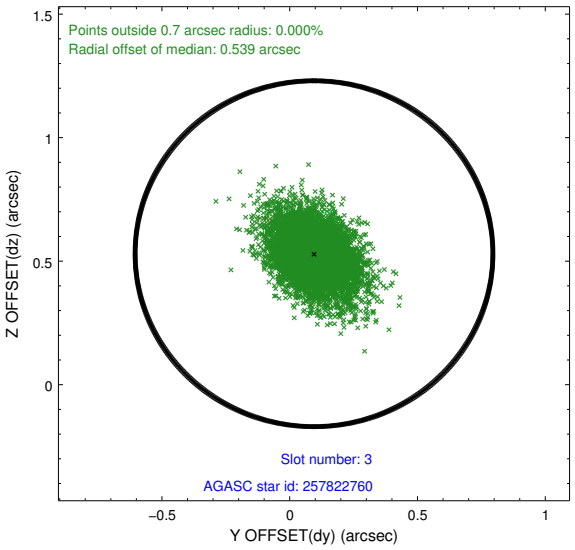
Slot Statistics

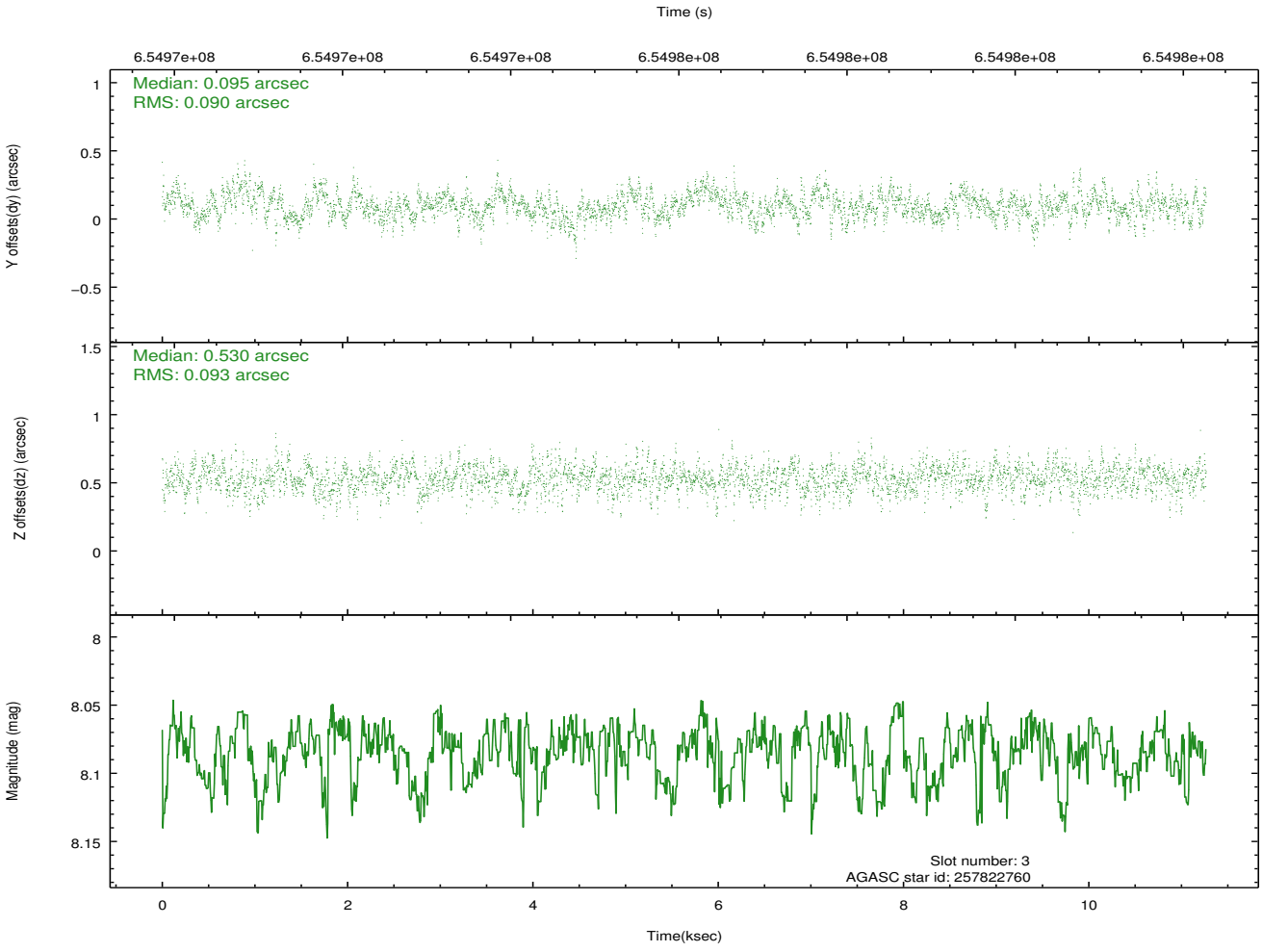
ot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.05	2749	1.000	0.167	0.076	0.007	0.012	0.000000	0.000000	917.45	-1743
1	FID		ACIS-S-2	6.96	2748	1.000	-0.268	-0.160	0.006	0.010	0.000000	0.000000	-778.64	-1749
2	FID		ACIS-S-6	7.21	2749	1.000	0.081	0.089	0.007	0.011	0.000000	0.000000	382.94	796
3	GUIDE	used	257822760	8.08	5496	1.000	0.095	0.530	0.135	0.232	150.166199	28.173652	108.95	-1840
4	GUIDE	used	257822928	7.21	5497	1.000	-0.115	-0.237	0.124	0.232	149.311326	28.561285	-274.70	1181
5	GUIDE	used	257823520	8.38	5489	1.000	-0.012	0.354	0.156	0.269	150.413966	28.521916	1589.30	-1768
6	GUIDE	used	257825600	7.86	5494	1.000	0.266	0.101	0.131	0.229	149.230872	28.096317	-1801.10	447
7	GUIDE	used	257828304	8.61	5491	1.000	-0.236	-0.736	0.139	0.236	149.365873	29.172027	1637.05	2279

2.4 Star Slots

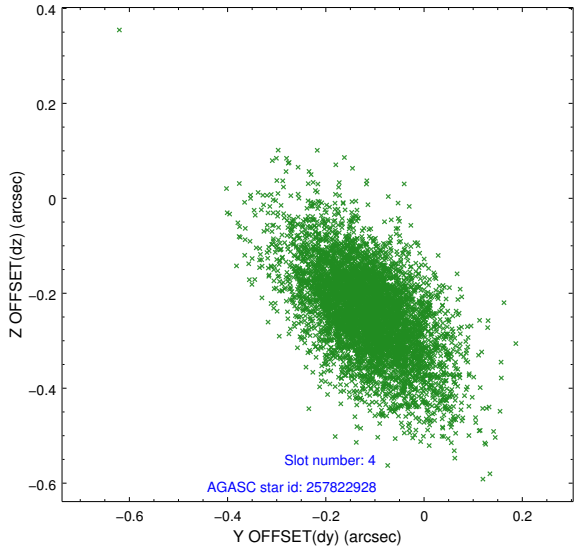
2.4.1 Slot 3

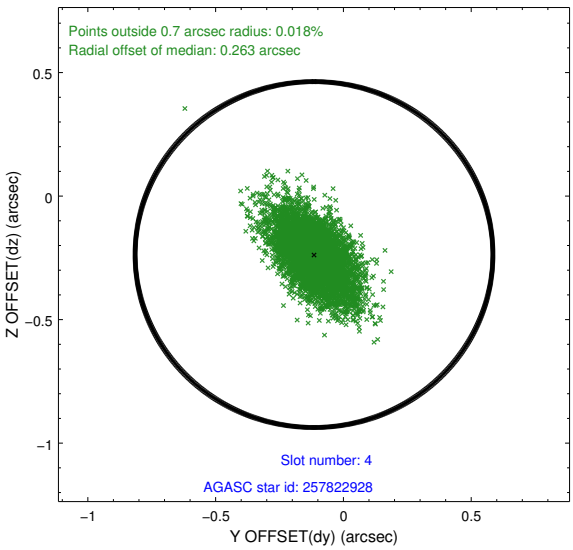


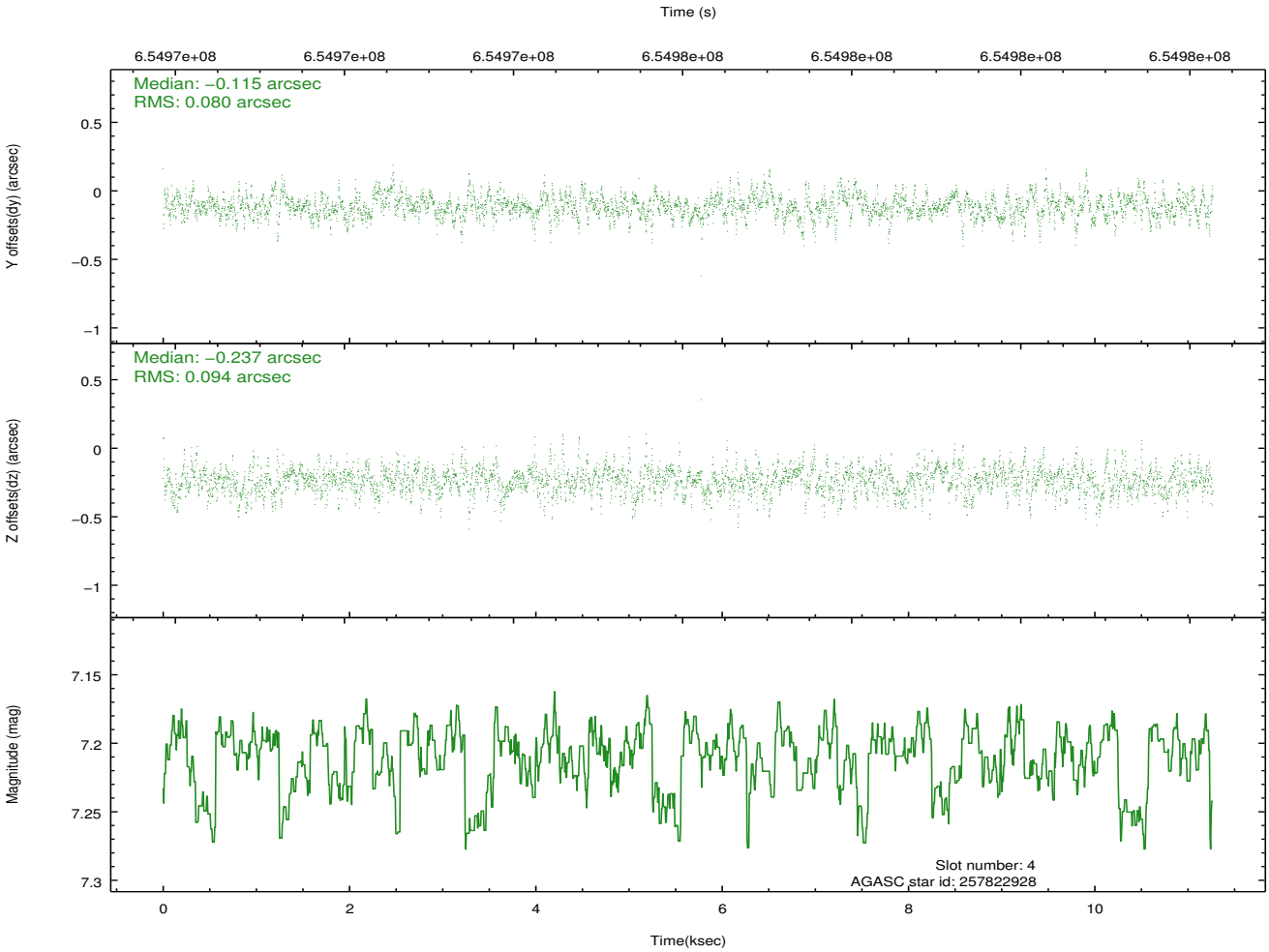




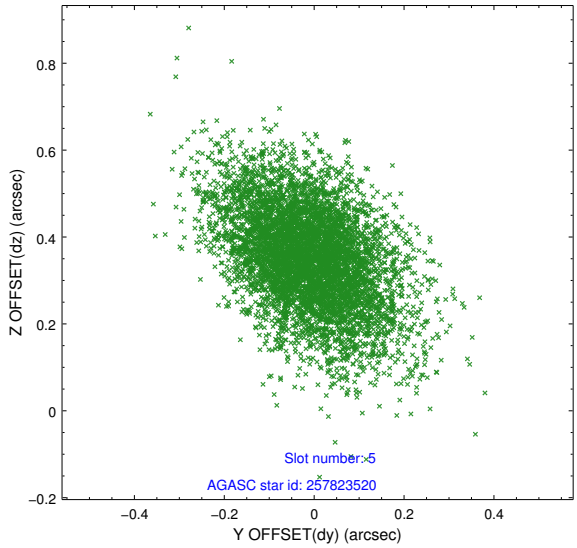
2.4.2 Slot 4

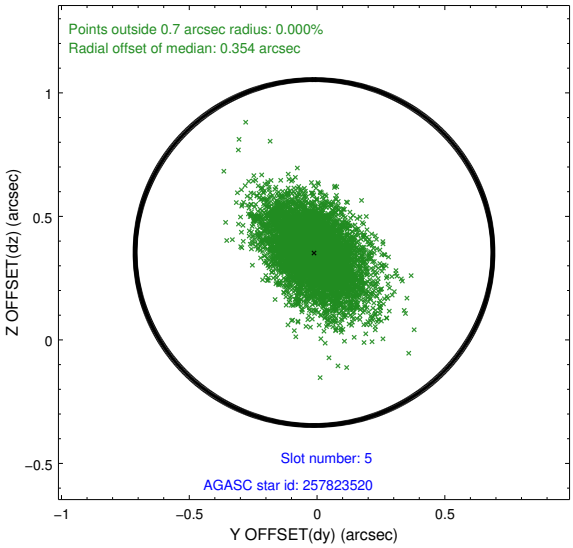

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 257822928

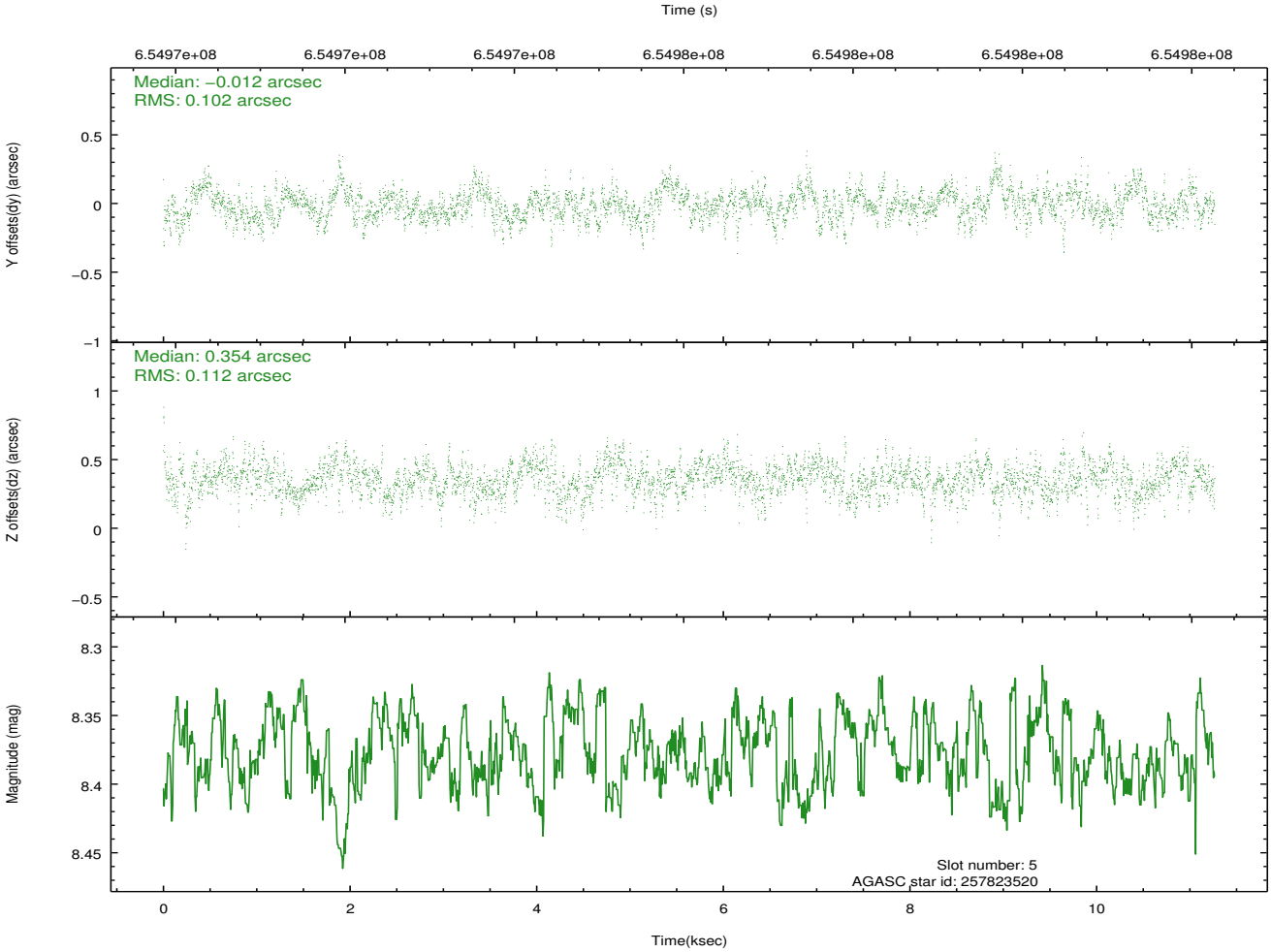

Points outside 0.7 arcsec radius: 0.018%
Radial offset of median: 0.263 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 4
AGASC star id: 257822928


Time (s)
Median: −0.115 arcsec
RMS: 0.080 arcsec
Y offsets(dy) (arcsec)
Median: −0.237 arcsec
RMS: 0.094 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 4
AGASC star id: 257822928
Time(ksec)

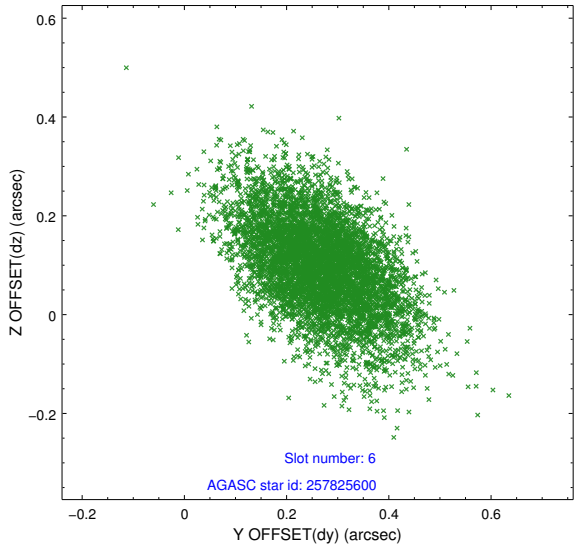
2.4.3 Slot 5

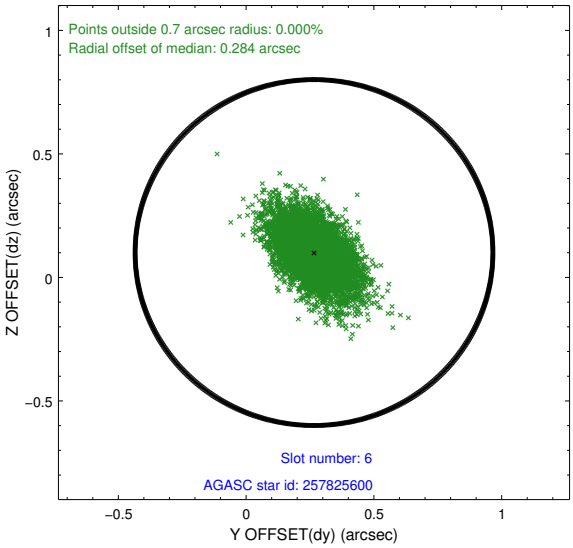

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 257823520

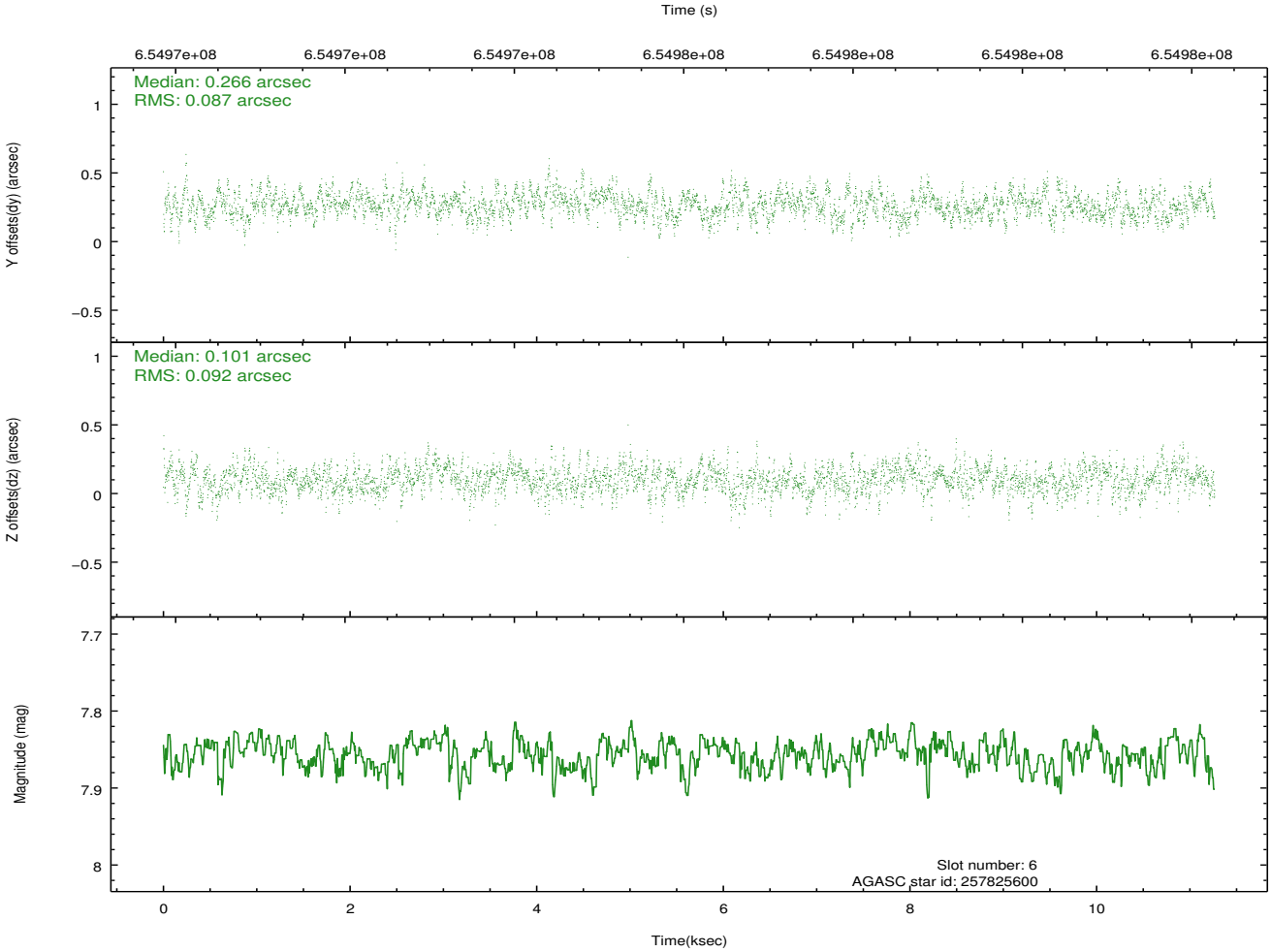

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.354 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 5
AGASC star id: 257823520


Time (s)
Median: −0.012 arcsec
RMS: 0.102 arcsec
Y offsets(dy) (arcsec)
Median: 0.354 arcsec
RMS: 0.112 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 5
AGASC star id: 257823520
Time(ksec)

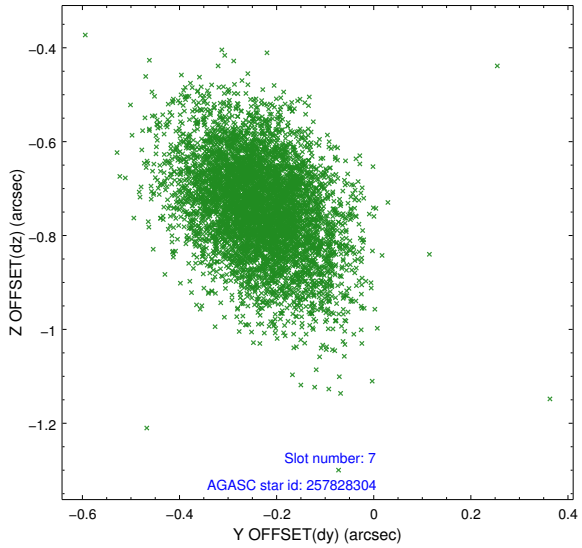
2.4.4 Slot 6

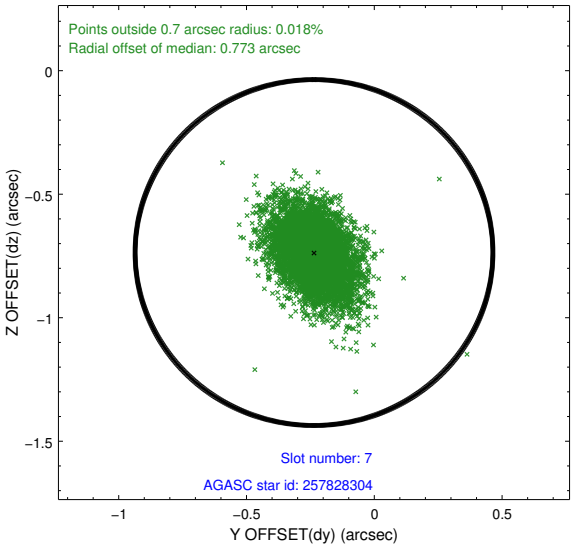

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 257825600

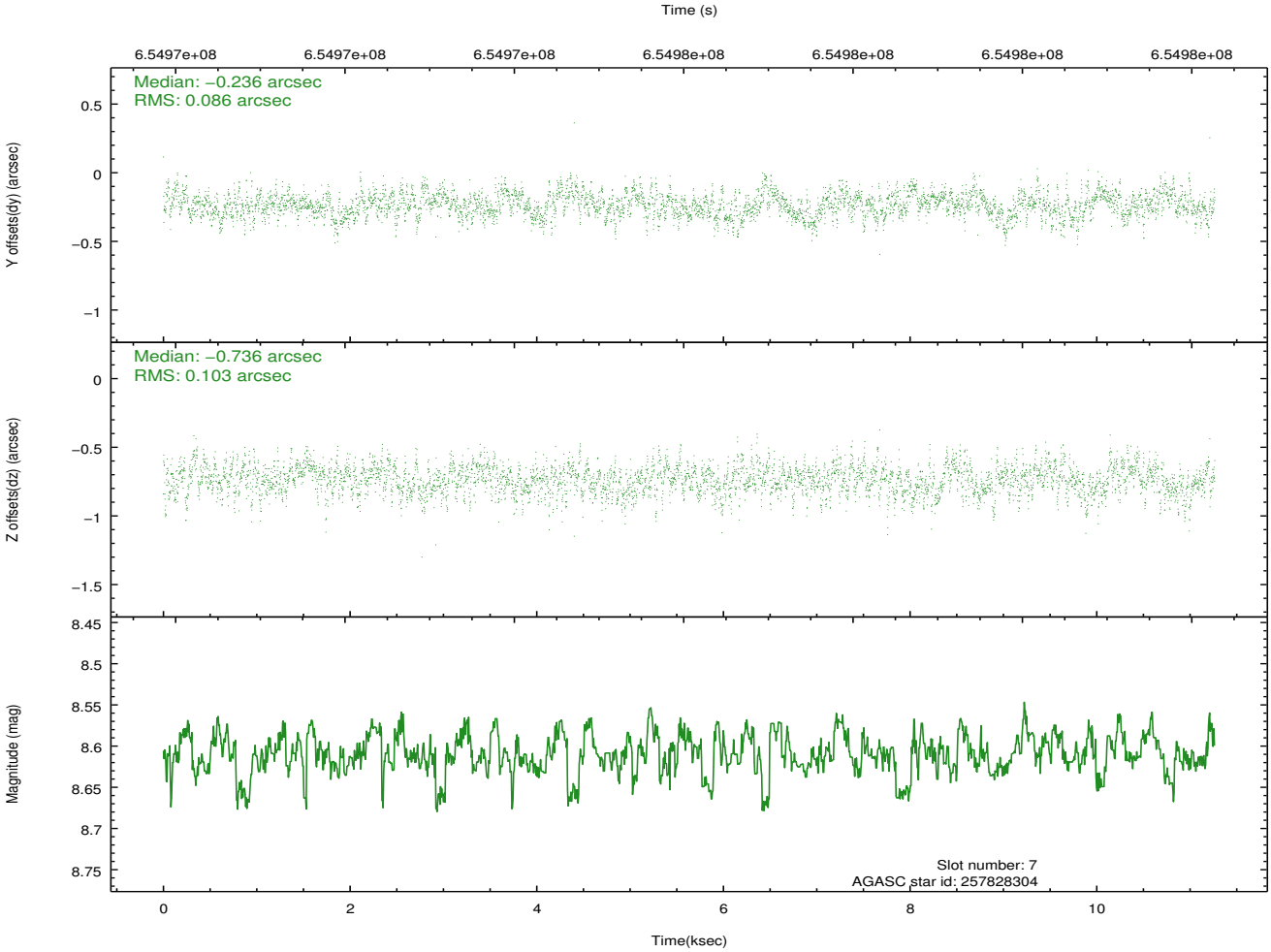

Points outside 0.7 arcsec radius: 0.000%
Radial offset of median: 0.284 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 6
AGASC star id: 257825600


Time (s)
Median: 0.266 arcsec
RMS: 0.087 arcsec
Y offsets(dy) (arcsec)
Median: 0.101 arcsec
RMS: 0.092 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 6
AGASC star id: 257825600
Time(ksec)

2.4.5 Slot 7

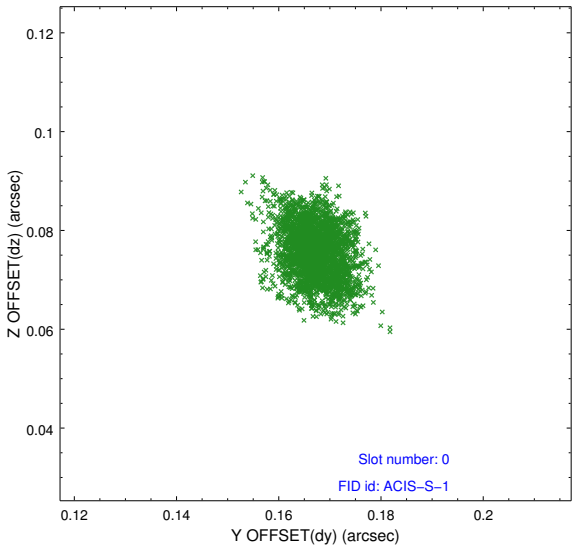

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 257828304

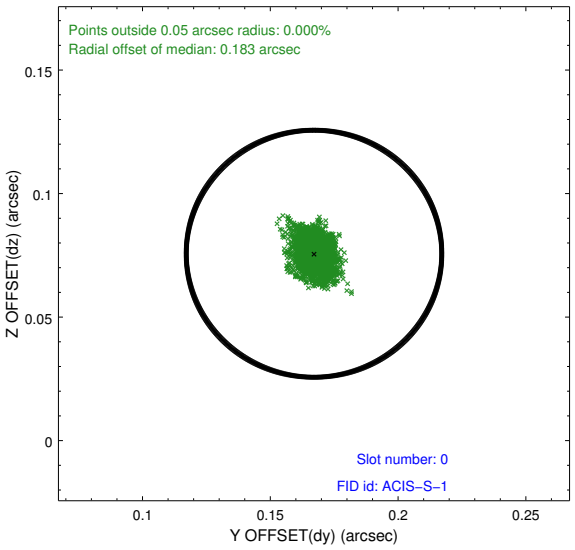

Points outside 0.7 arcsec radius: 0.018%
Radial offset of median: 0.773 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 7
AGASC star id: 257828304

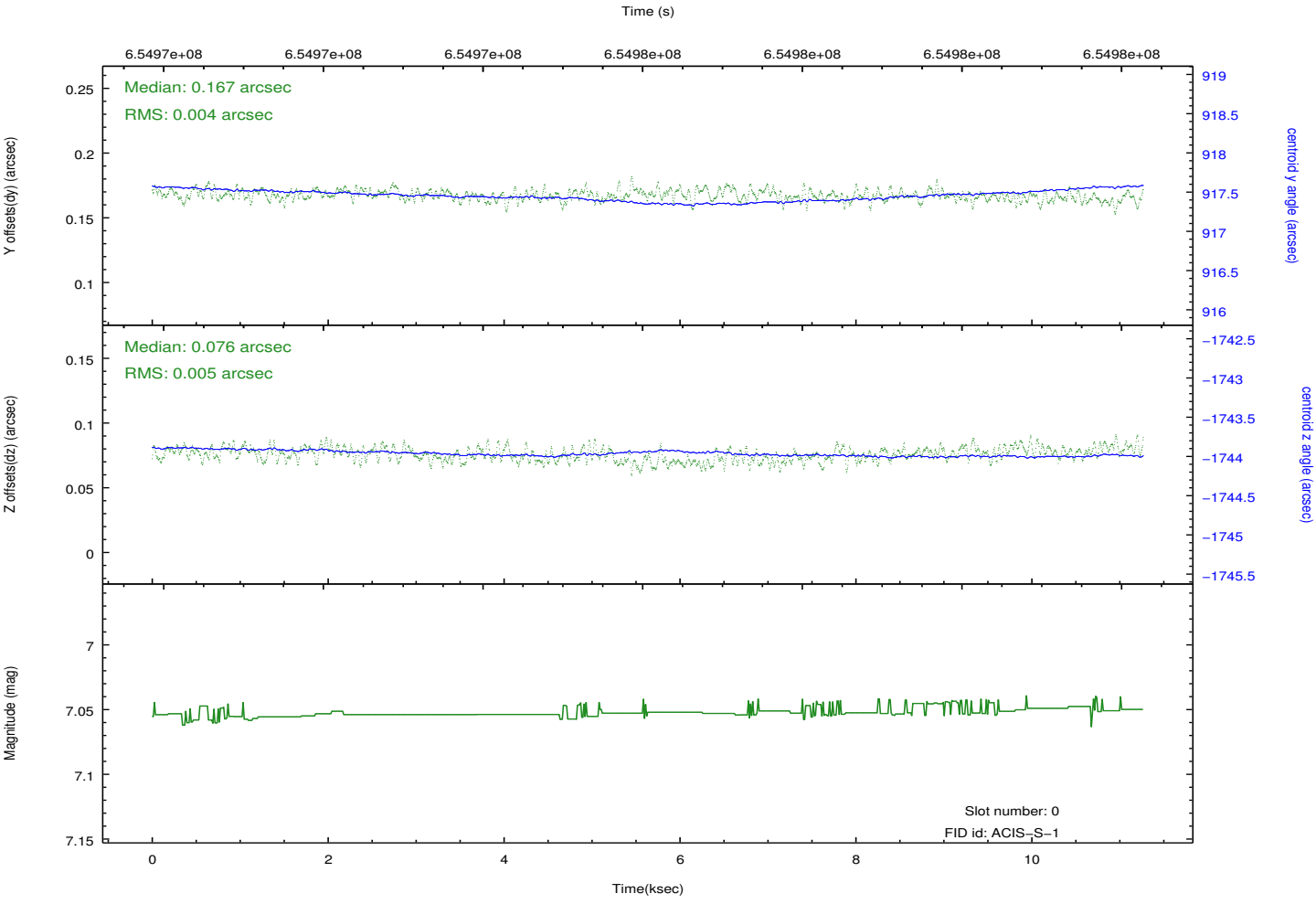

Time (s)
Median: −0.236 arcsec
RMS: 0.086 arcsec
Y offsets(dy) (arcsec)
Median: −0.736 arcsec
RMS: 0.103 arcsec
Z offsets(dz) (arcsec)
Magnitude (mag)
Slot number: 7
AGASC star id: 257828304
Time(ksec)

2.5 FID Slots

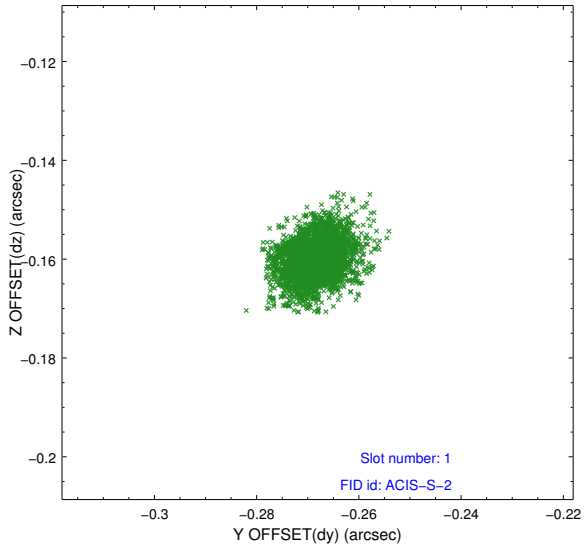
2.5.1 Slot 0

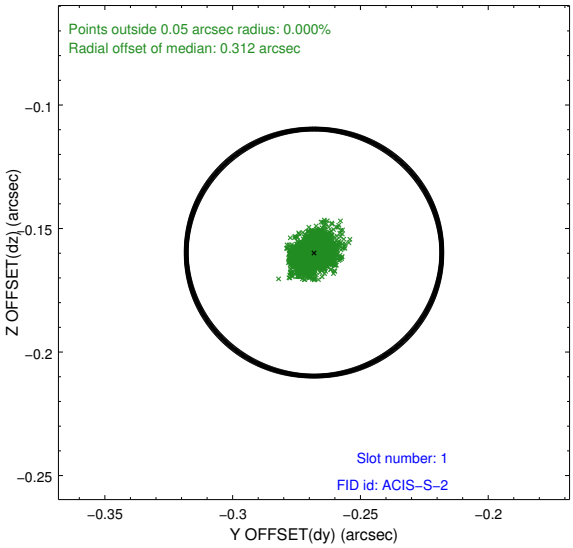


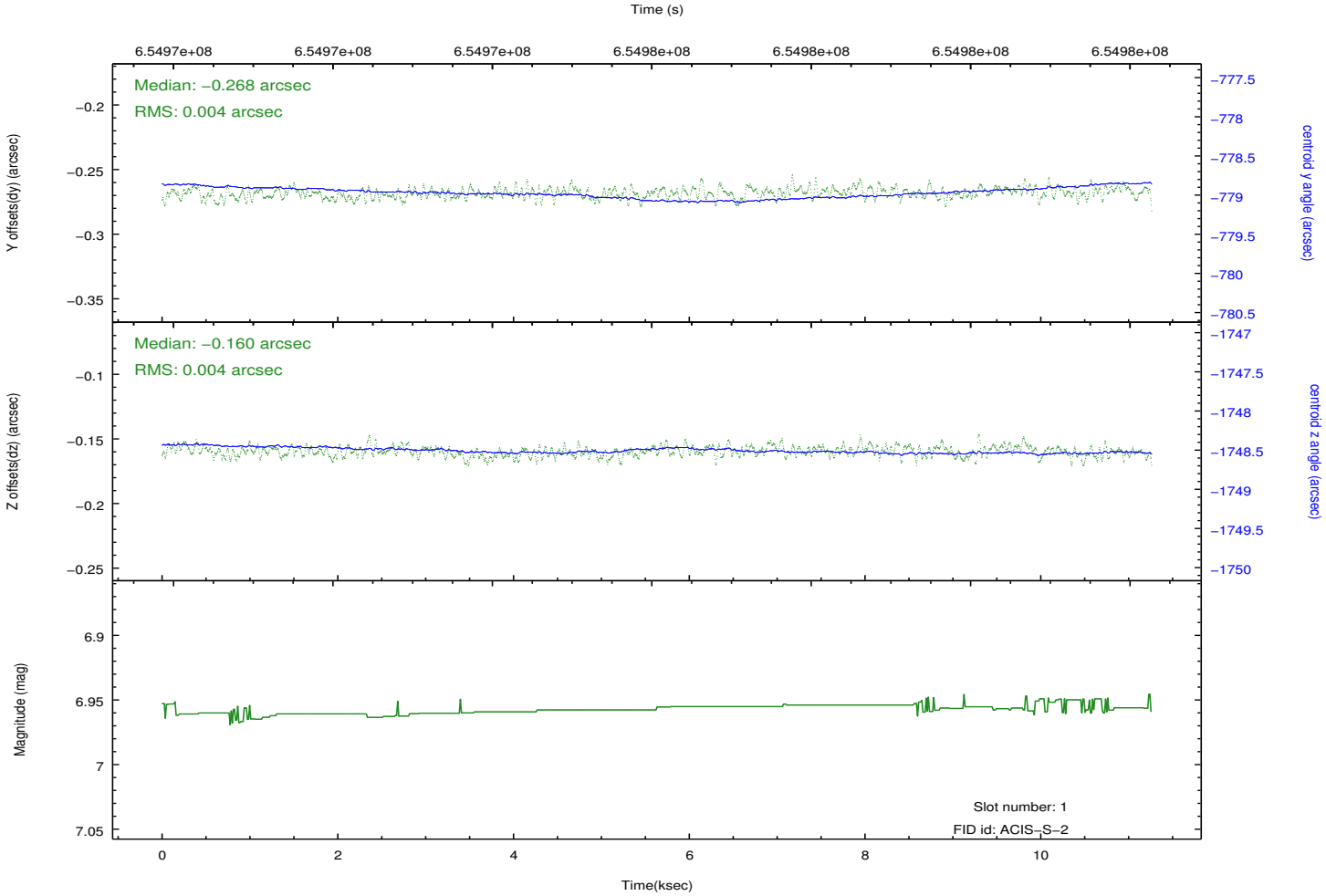




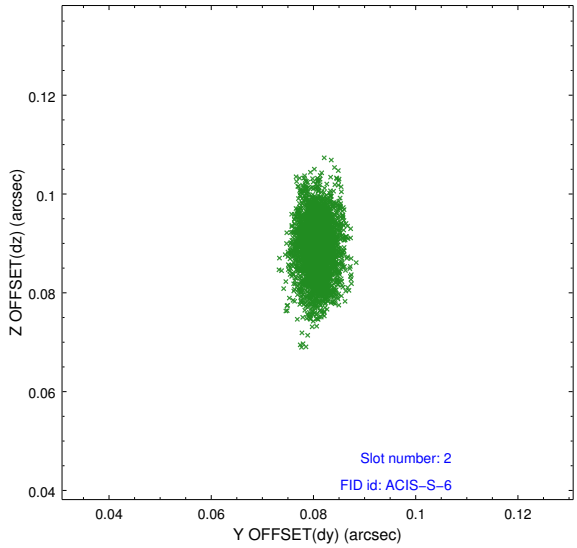
2.5.2 Slot 1

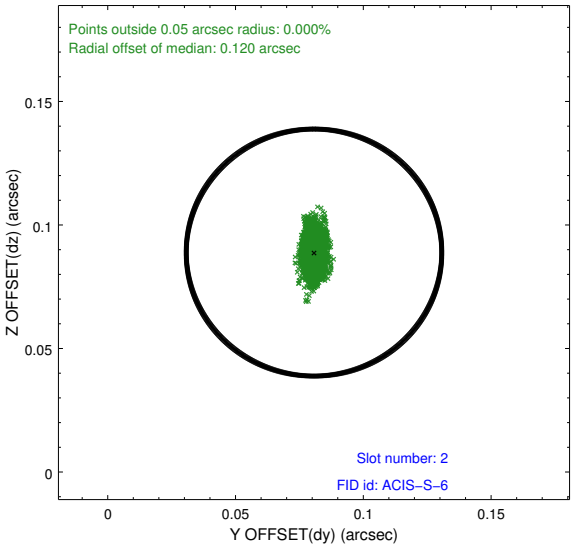

Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−2

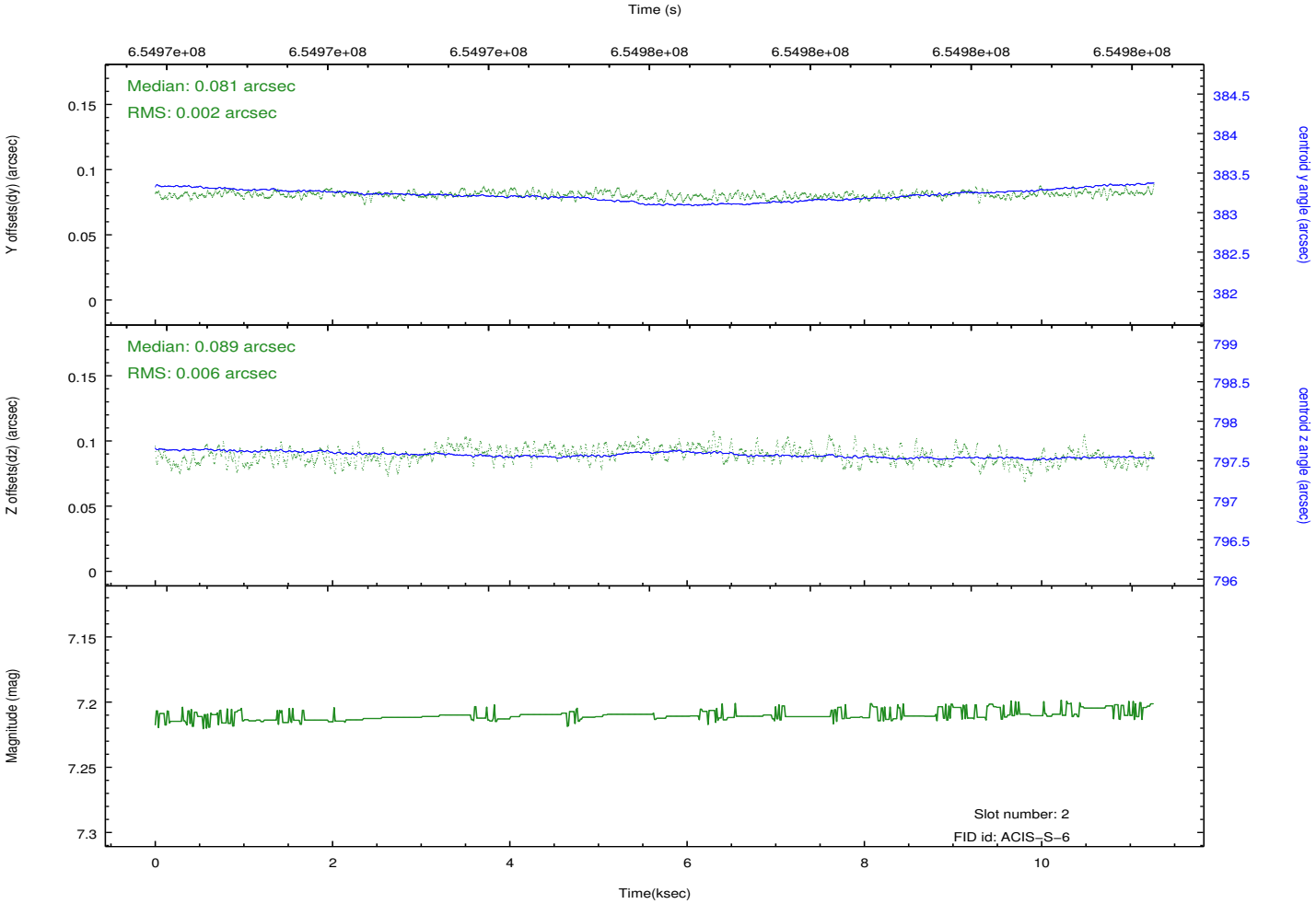

Points outside 0.05 arcsec radius: 0.000%
Radial offset of median: 0.312 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 1
FID id: ACIS−S−2


Time (s)
Median: −0.268 arcsec
RMS: 0.004 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: −0.160 arcsec
RMS: 0.004 arcsec
Z offsets(dz) (arcsec)
centroid z angle (arcsec)
Magnitude (mag)
Slot number: 1
FID id: ACIS−S−2
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: 0.120 arcsec
Z OFFSET(dz) (arcsec)
Y OFFSET(dy) (arcsec)
Slot number: 2
FID id: ACIS−S−6


Time (s)
Median: 0.081 arcsec
RMS: 0.002 arcsec
Y offsets(dy) (arcsec)
centroid y angle (arcsec)
Median: 0.089 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	Joy Nichols
V&V Date (YYYY-MM-DD)	2018.10.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	11.232

A.2 Comments